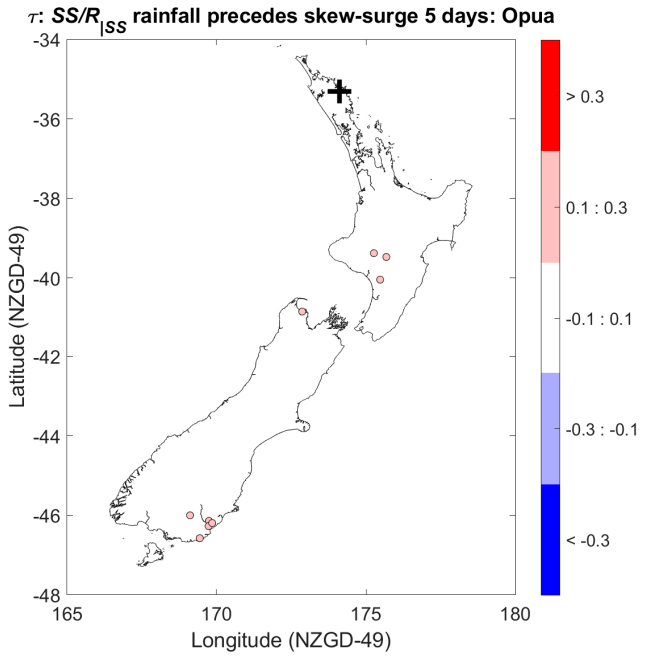
Skew-surge and rainfall (*SS/R*)

The following plots show Kendall's rank correlation coefficient τ, significant at p-value < 0.05, for skew-surge and rainfall.

$SS/R_{|SS}$—rainfall dependent on skew-surge being extreme

Negative lags mean that the rainfall was experienced before the skew-surge and *vice versa*.

Opua


τ: SS/R|SS rainfall precedes skew-surge 5 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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-0.3 : -0.1
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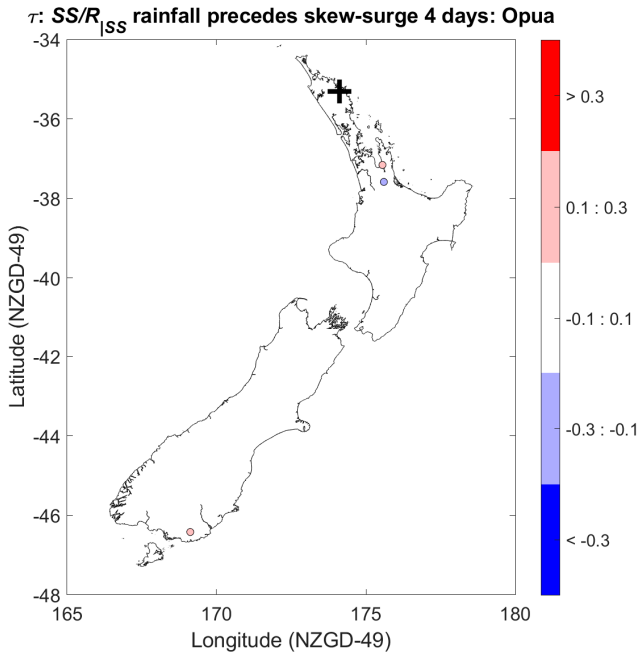
τ: SS/R|SS rainfall precedes skew-surge 4 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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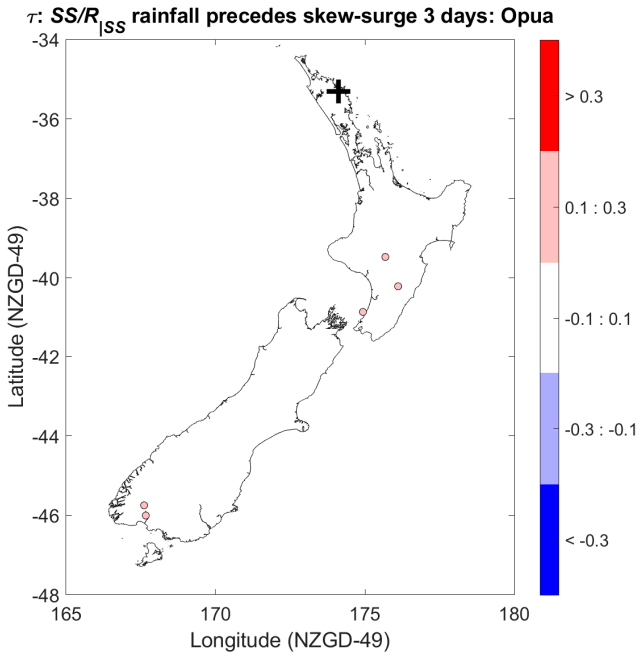
τ: SS/R|SS rainfall precedes skew-surge 3 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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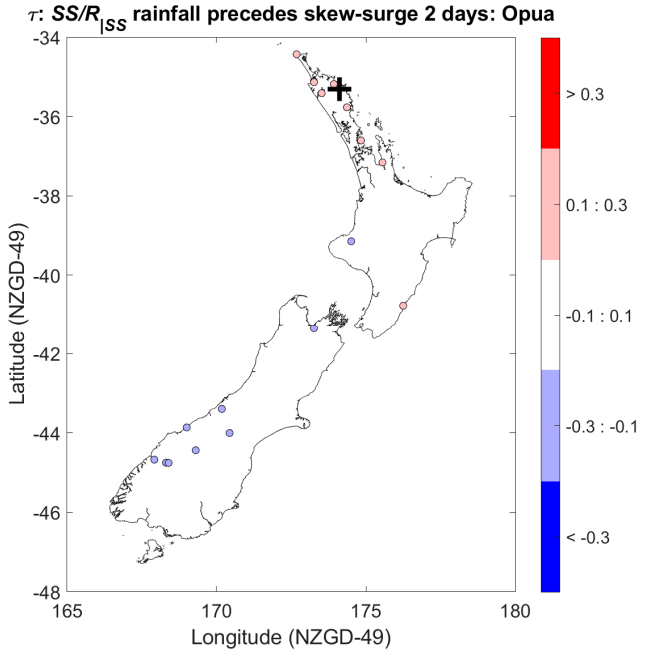
τ: SS/R|SS rainfall precedes skew-surge 2 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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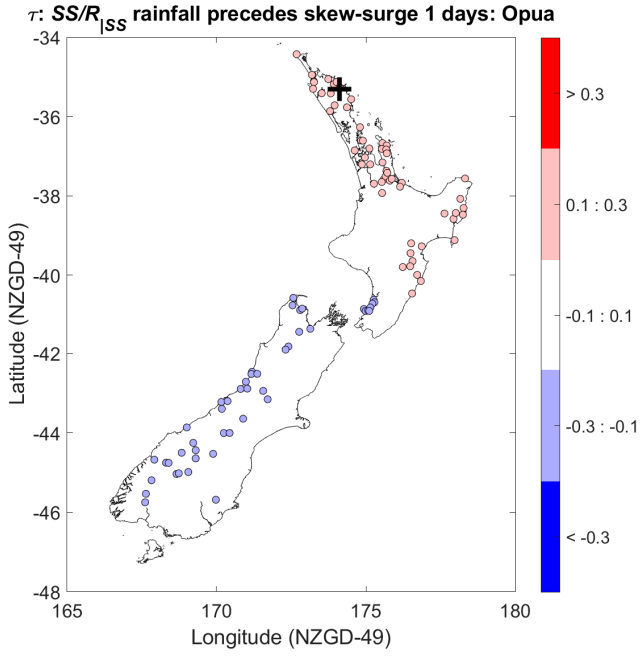
τ: SS/R|SS rainfall precedes skew-surge 1 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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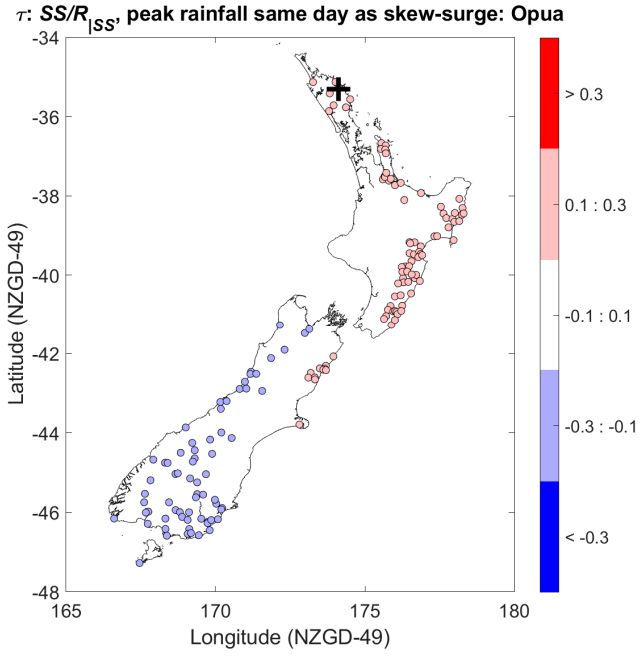
τ: SS/R|SS, peak rainfall same day as skew-surge: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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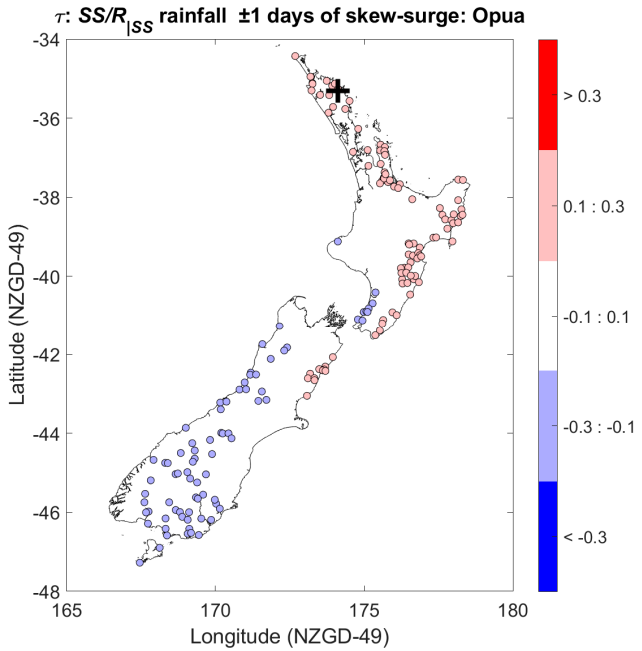
τ: SS/R|SS rainfall ±1 days of skew-surge: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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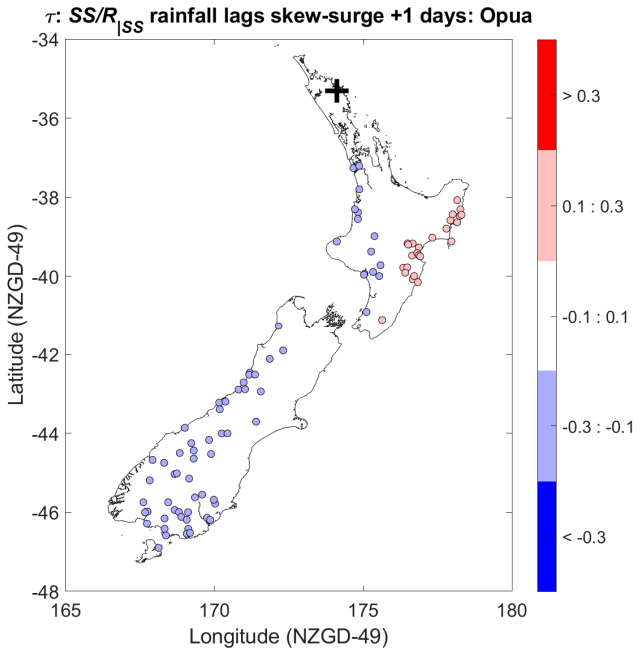
τ: SS/R|SS rainfall lags skew-surge +1 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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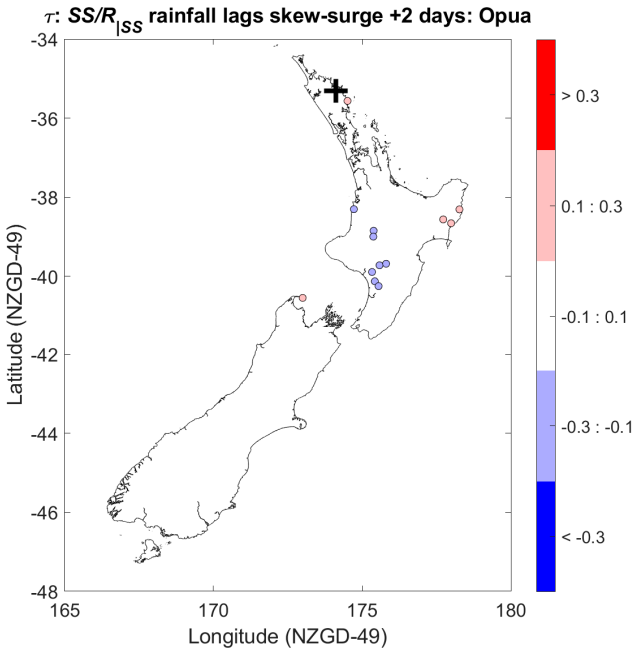
τ: SS/R|SS rainfall lags skew-surge +2 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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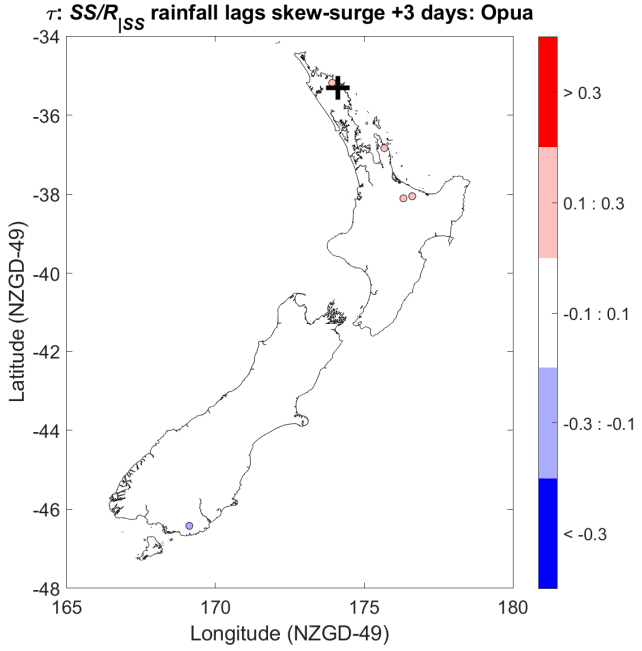
τ: SS/R|SS rainfall lags skew-surge +3 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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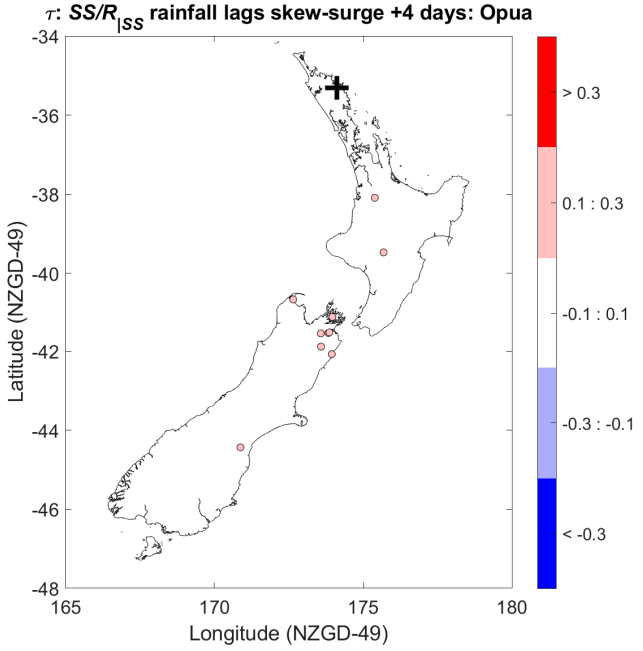
τ: SS/R|SS rainfall lags skew-surge +4 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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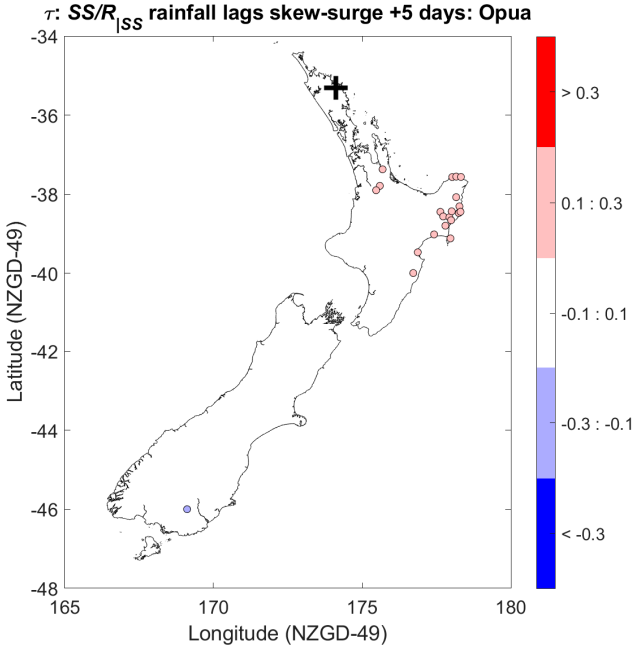
τ: SS/R|SS rainfall lags skew-surge +5 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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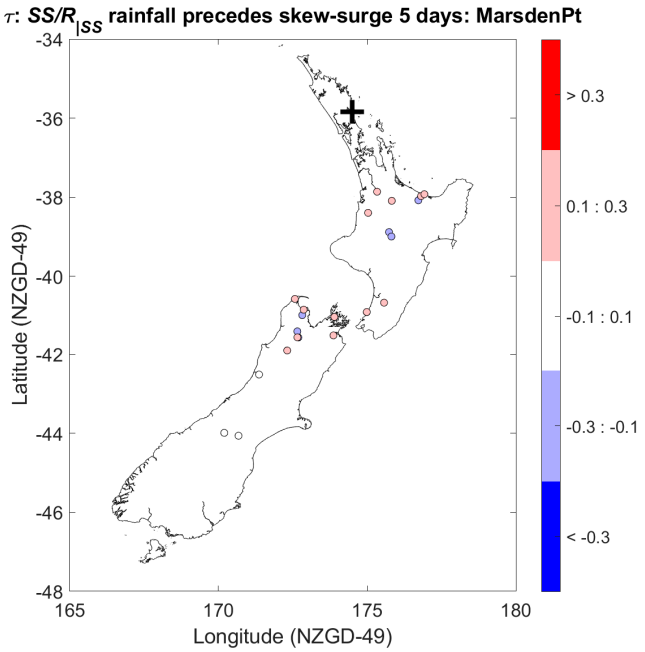
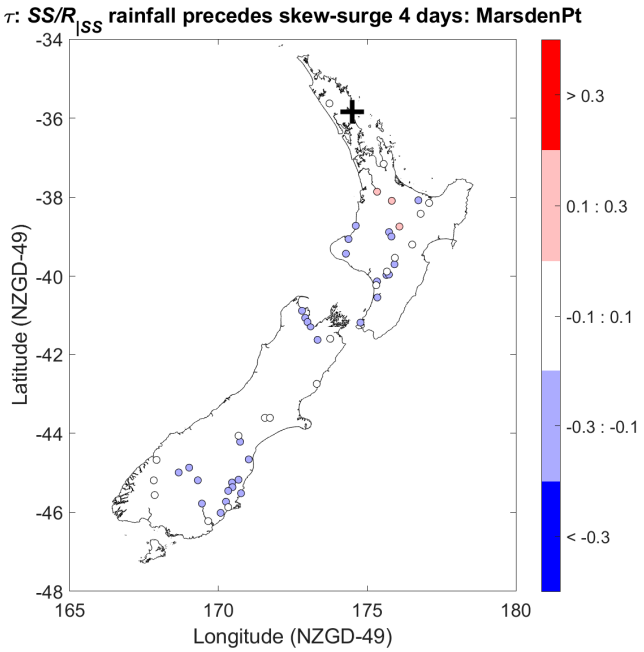
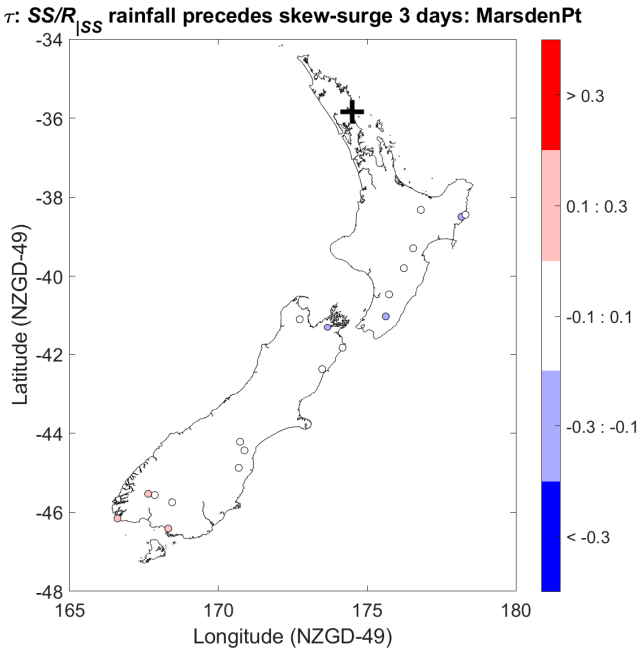
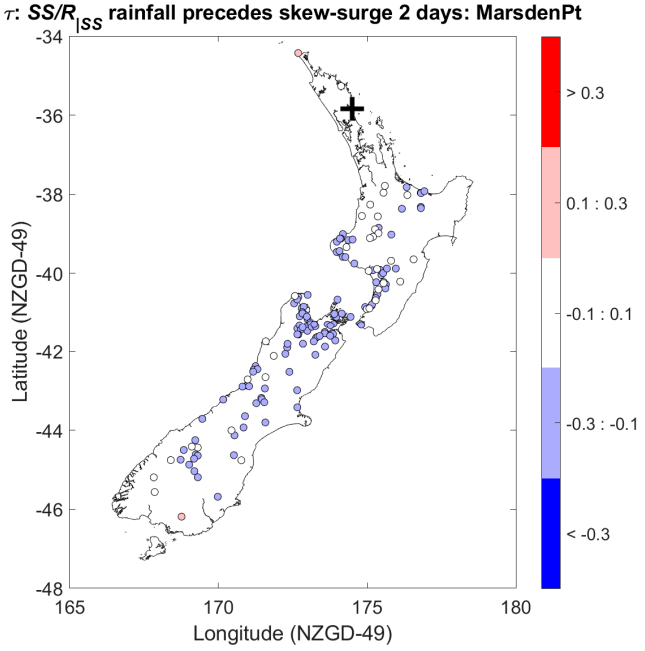
< -0.3

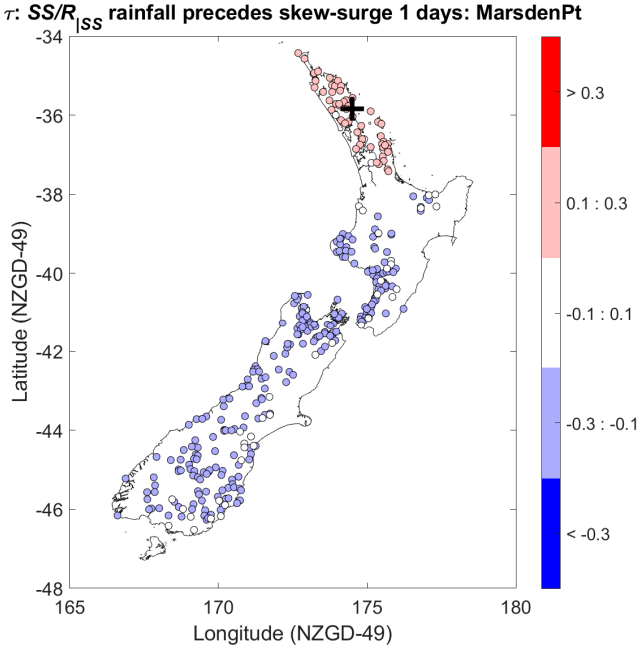
Marsden Point

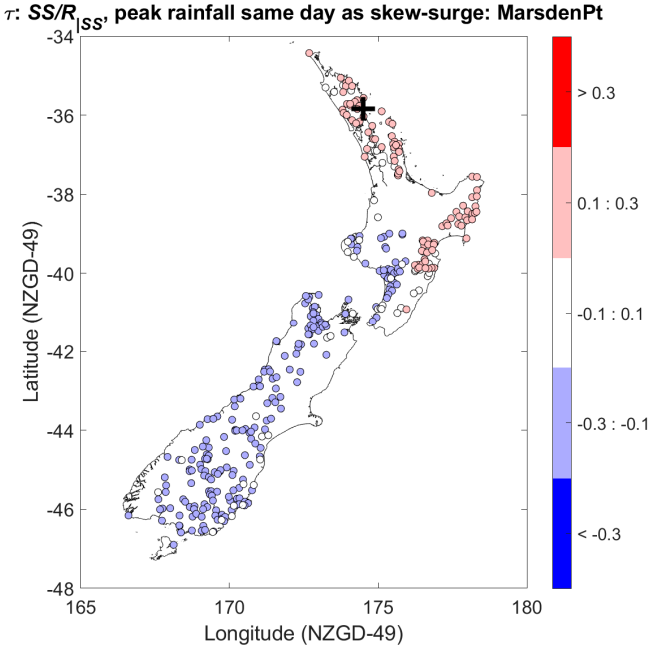


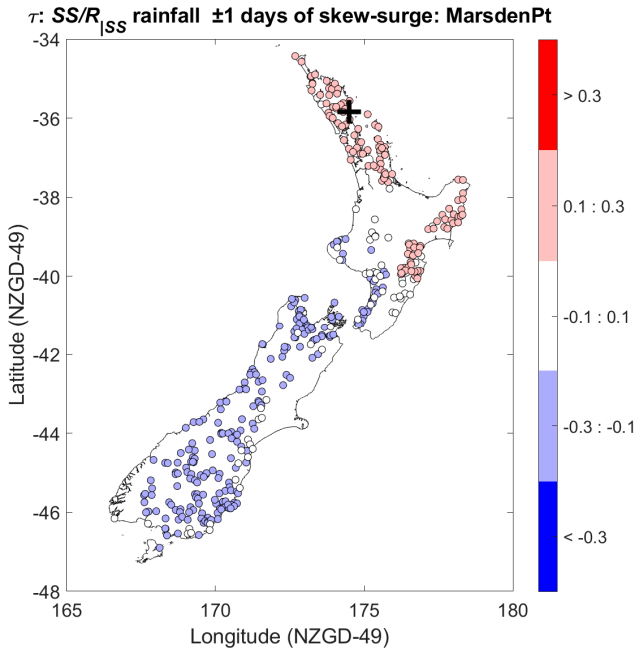











τ: SS/R|SS rainfall ±1 days of skew-surge: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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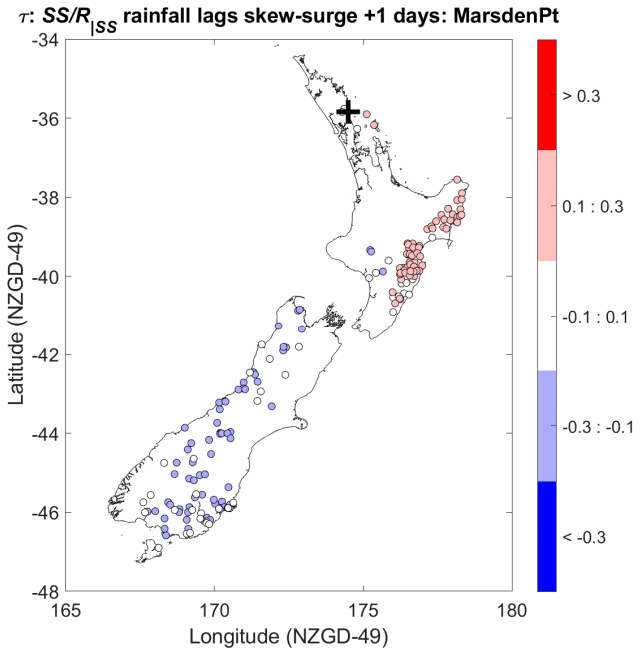
τ: SS/R|SS rainfall lags skew-surge +1 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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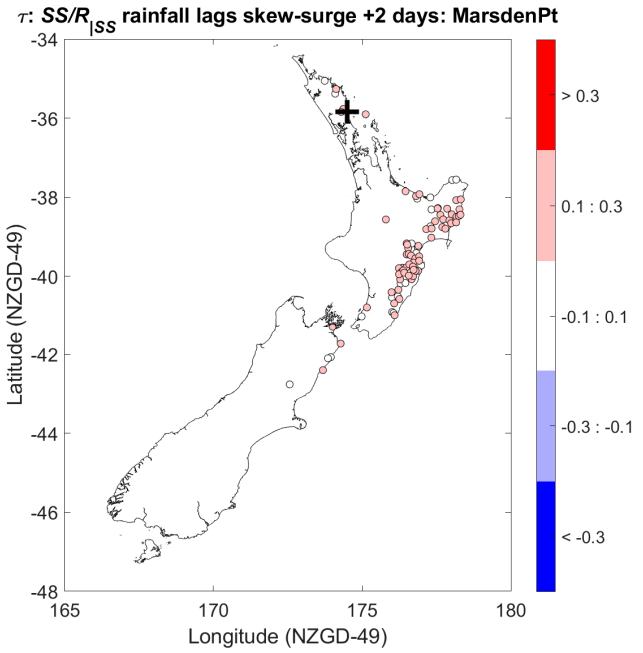
τ: SS/R|SS rainfall lags skew-surge +2 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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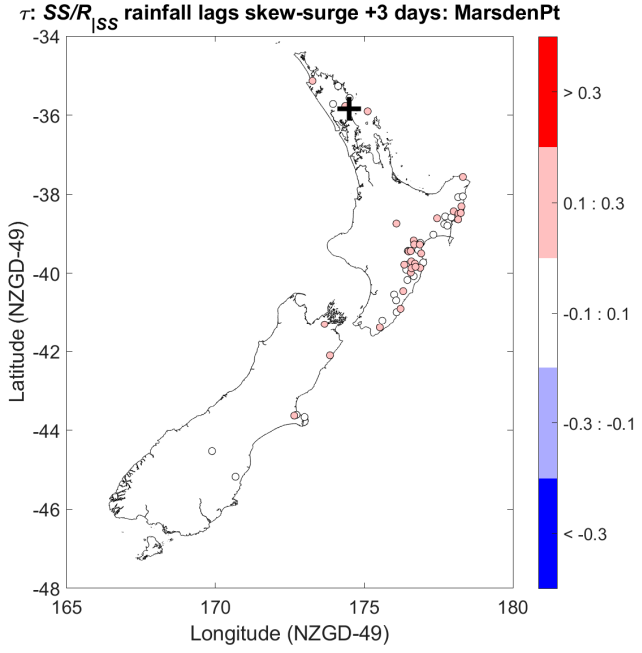
τ: SS/R|SS rainfall lags skew-surge +3 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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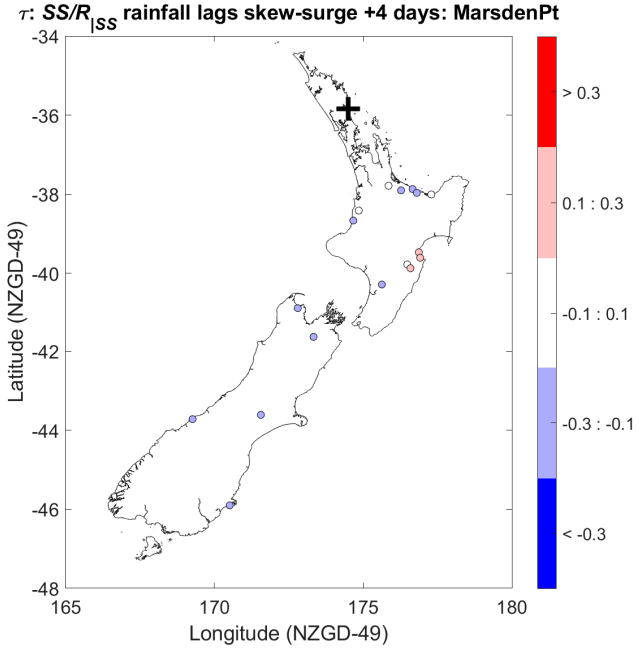
τ: SS/R|SS rainfall lags skew-surge +4 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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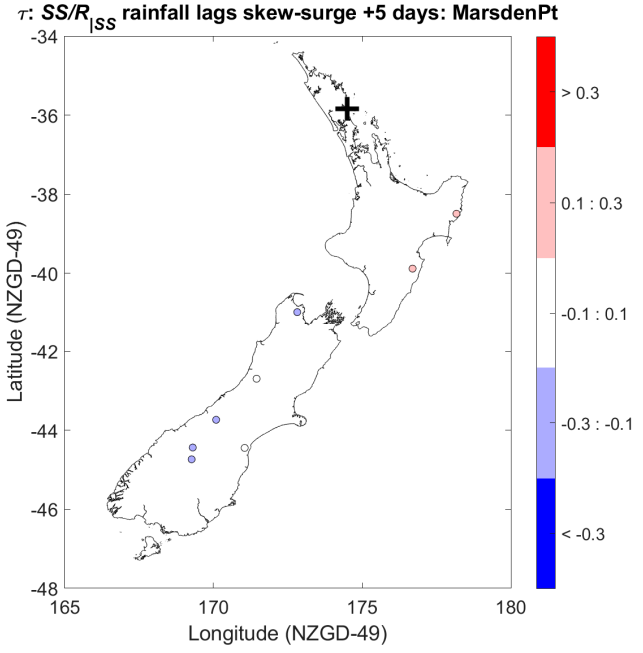
τ: SS/R|SS rainfall lags skew-surge +5 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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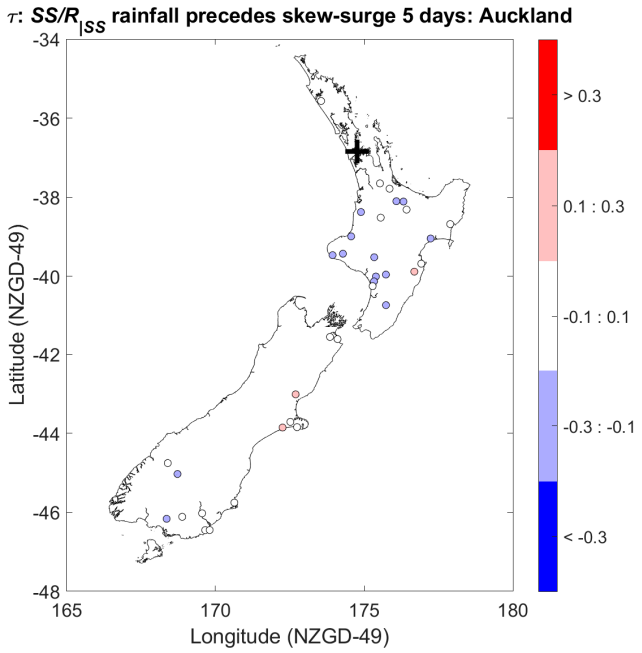
Auckland


τ: SS/R|SS rainfall precedes skew-surge 5 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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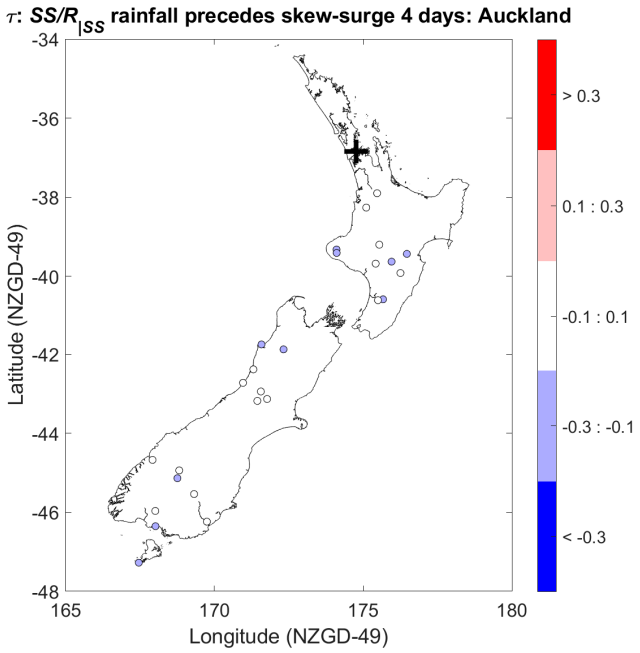
τ: SS/R|SS rainfall precedes skew-surge 4 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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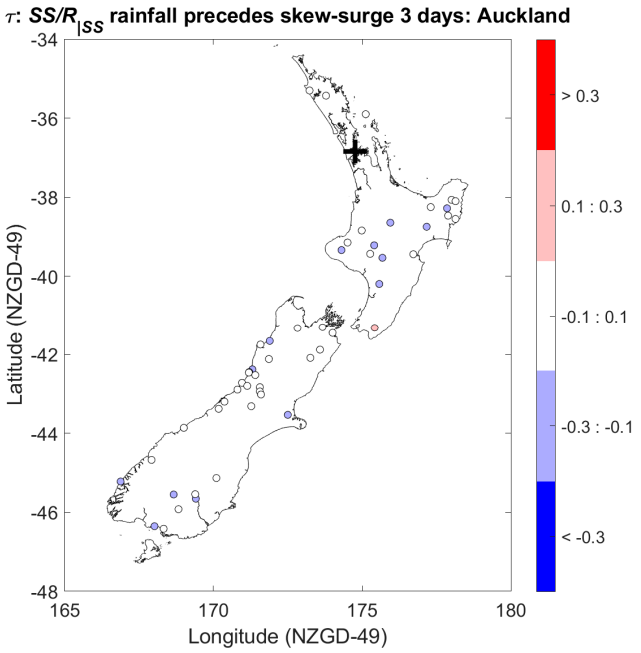
τ: SS/R|SS rainfall precedes skew-surge 3 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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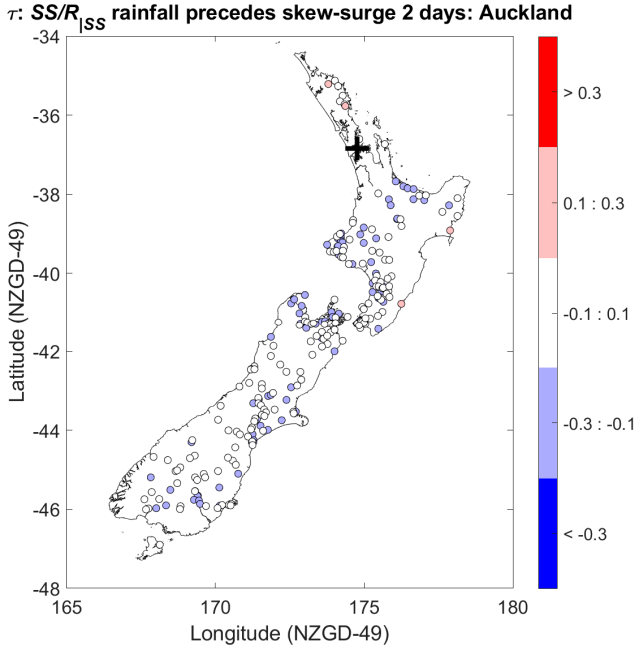
τ: SS/R|SS rainfall precedes skew-surge 2 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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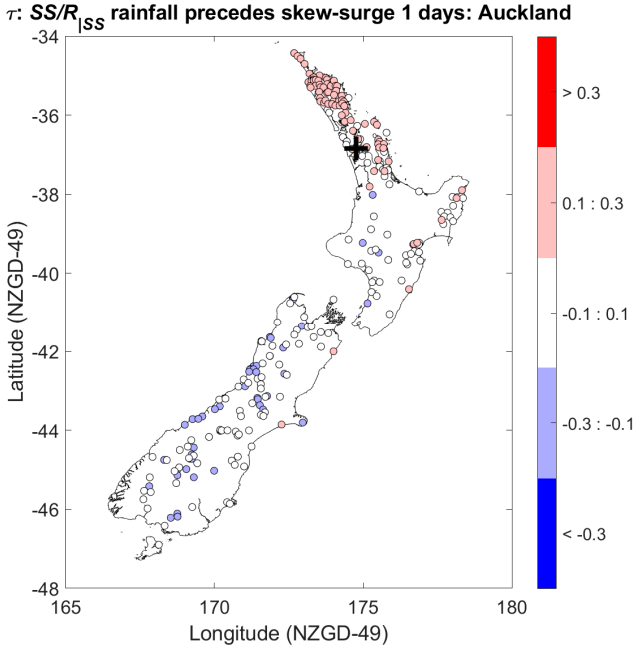
τ: SS/R|SS rainfall precedes skew-surge 1 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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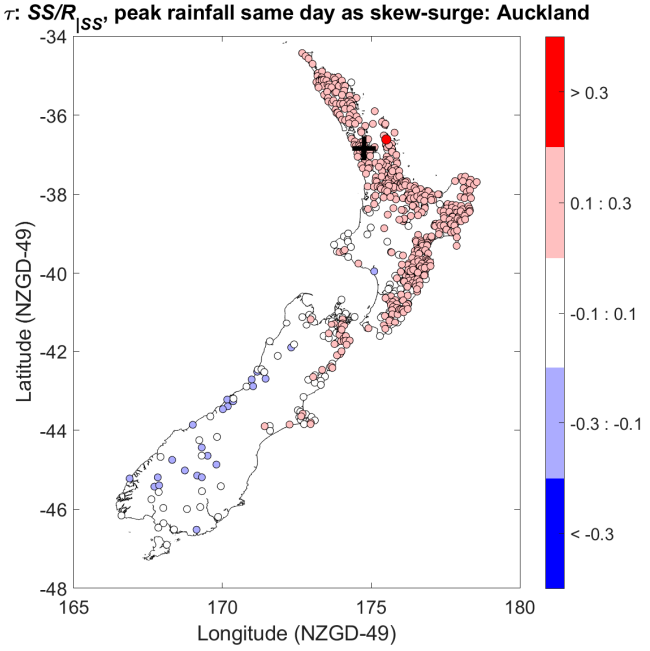
τ: SS/R|SS, peak rainfall same day as skew-surge: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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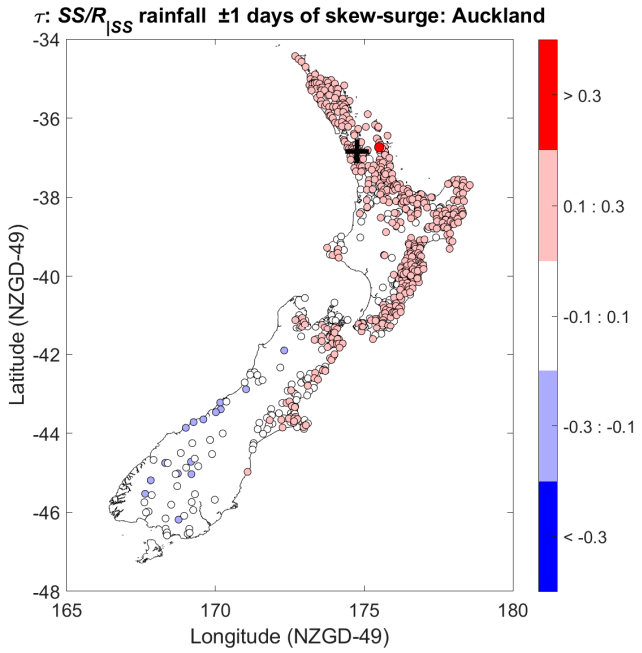
τ: SS/R|SS rainfall ±1 days of skew-surge: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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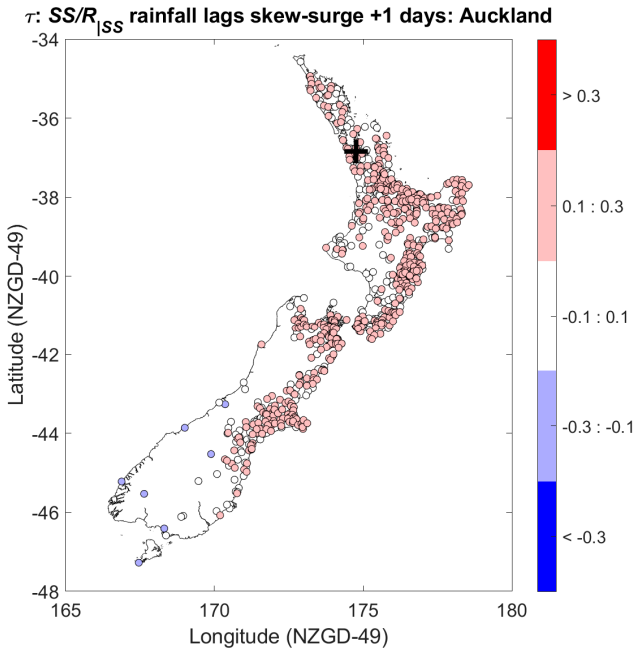
τ: SS/R|SS rainfall lags skew-surge +1 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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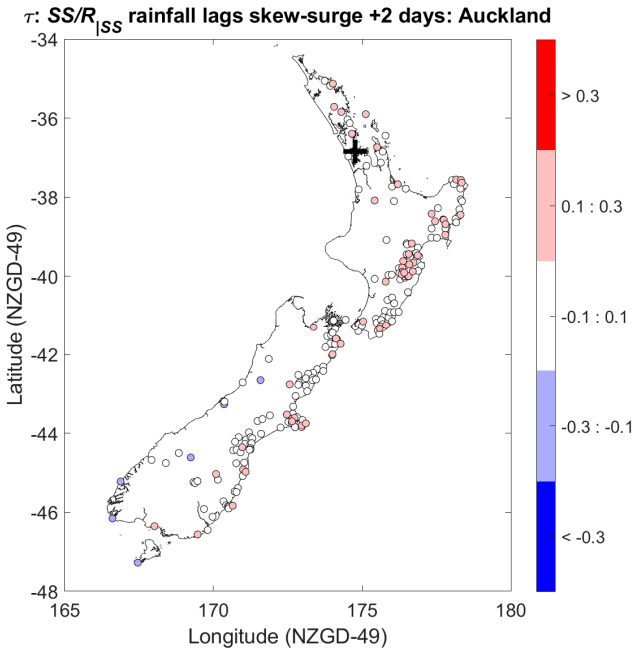
τ: SS/R|SS rainfall lags skew-surge +2 days: Auckland
Latitude (NZGD-49)
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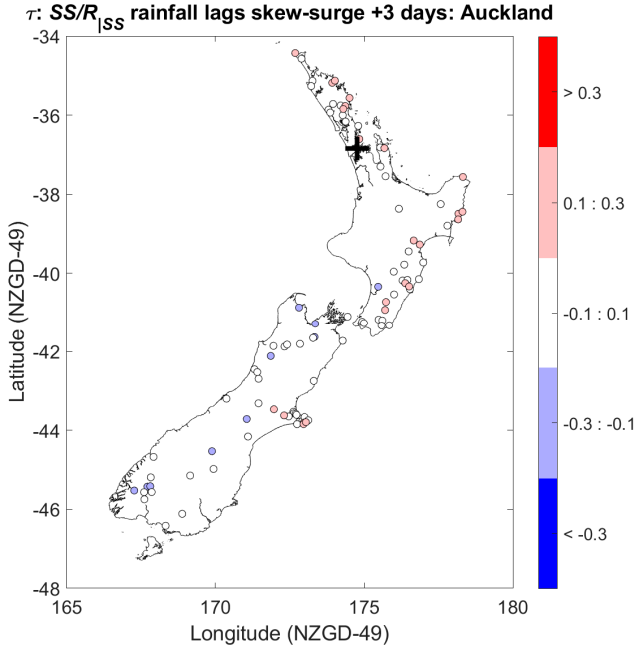
τ: SS/R|SS rainfall lags skew-surge +3 days: Auckland
Latitude (NZGD-49)
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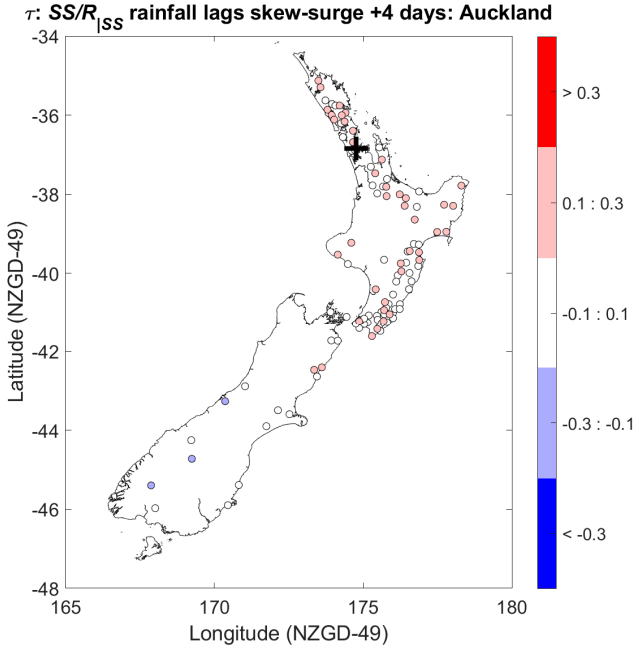
τ: SS/R|SS rainfall lags skew-surge +4 days: Auckland
Latitude (NZGD-49)
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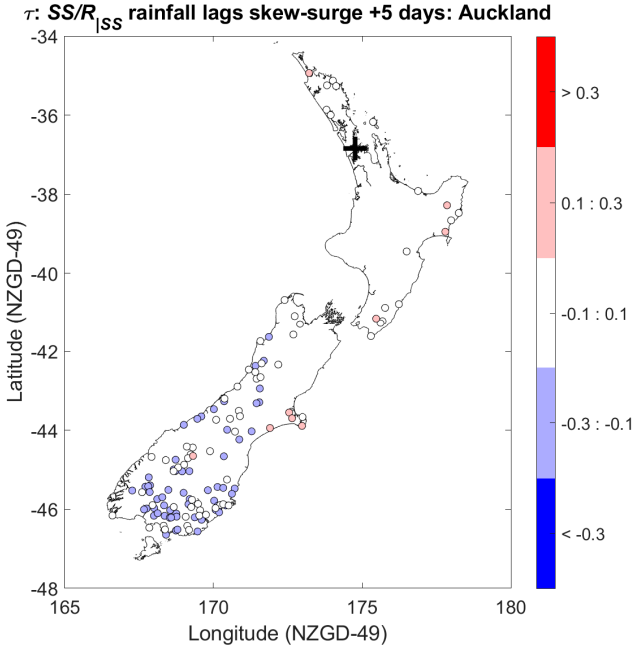
τ: SS/R|SS rainfall lags skew-surge +5 days: Auckland
Latitude (NZGD-49)
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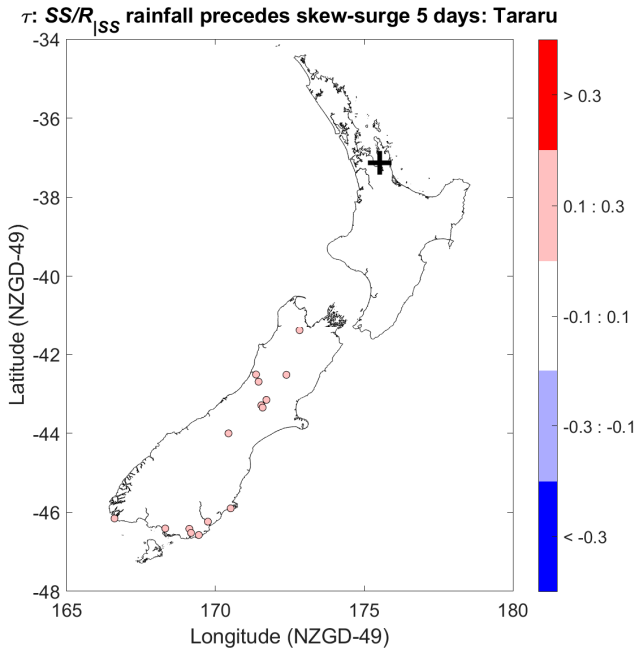
Tararu


τ: SS/R|SS rainfall precedes skew-surge 5 days: Tararu
Latitude (NZGD-49)
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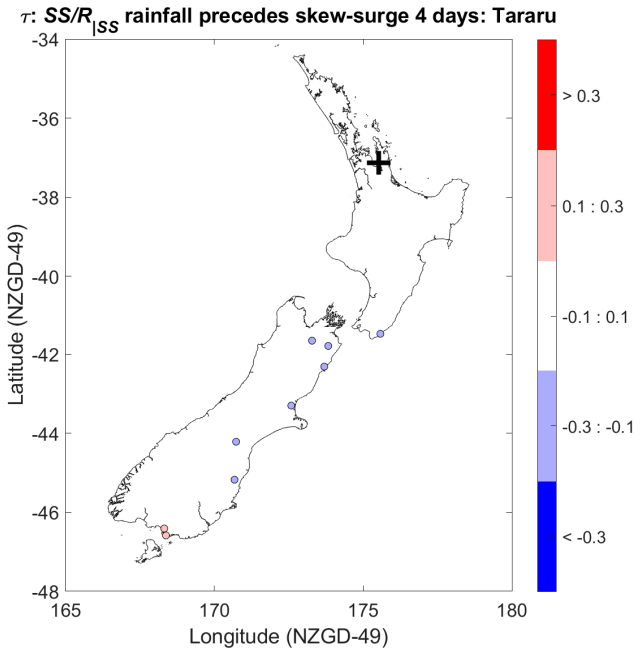
τ: SS/R|SS rainfall precedes skew-surge 4 days: Tararu
Latitude (NZGD-49)
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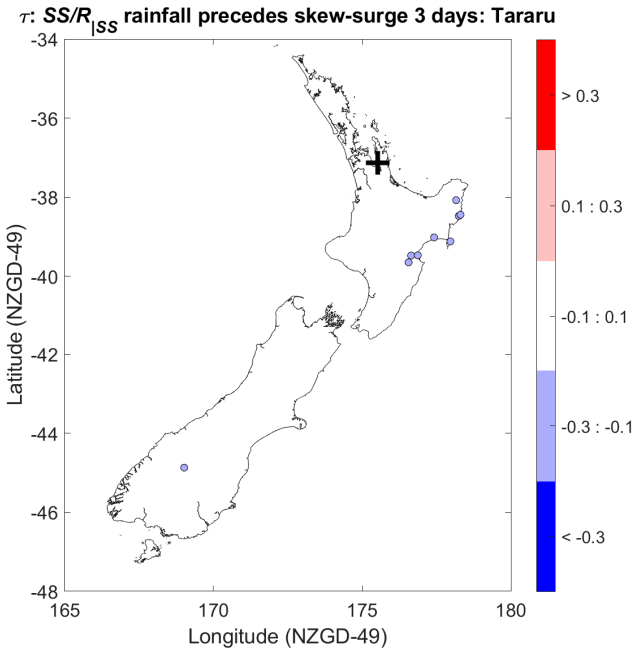
τ: SS/R|SS rainfall precedes skew-surge 3 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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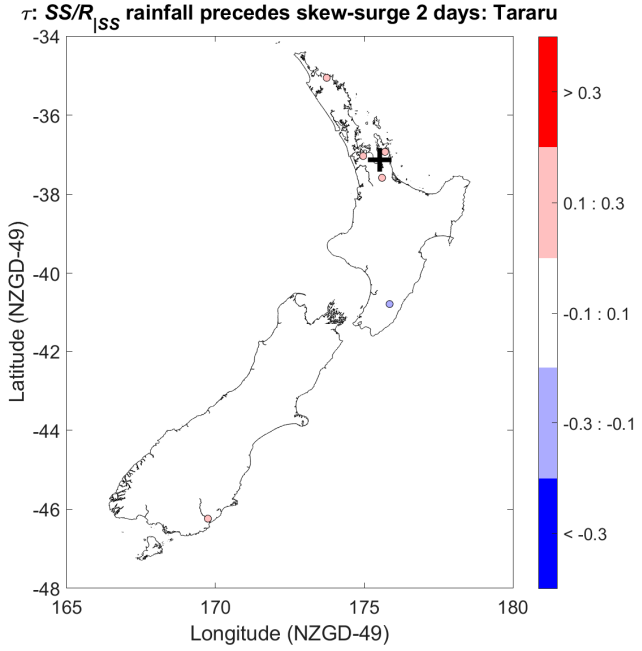
τ: SS/R|SS rainfall precedes skew-surge 2 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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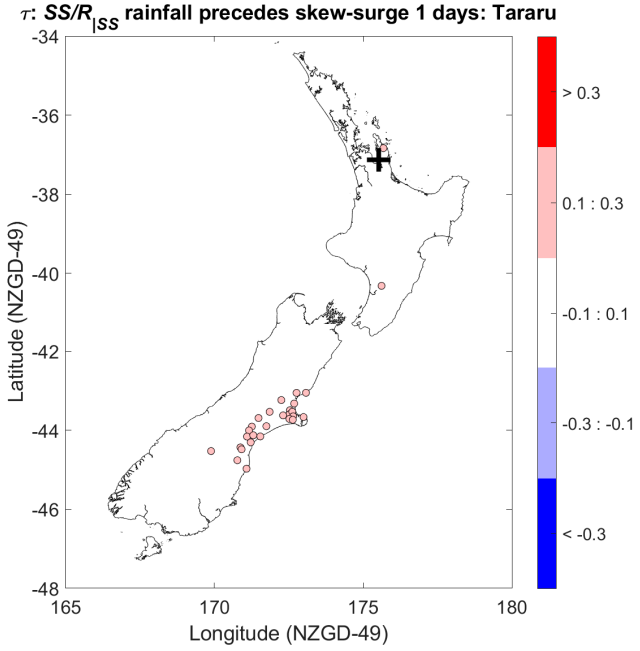
τ: SS/R|SS rainfall precedes skew-surge 1 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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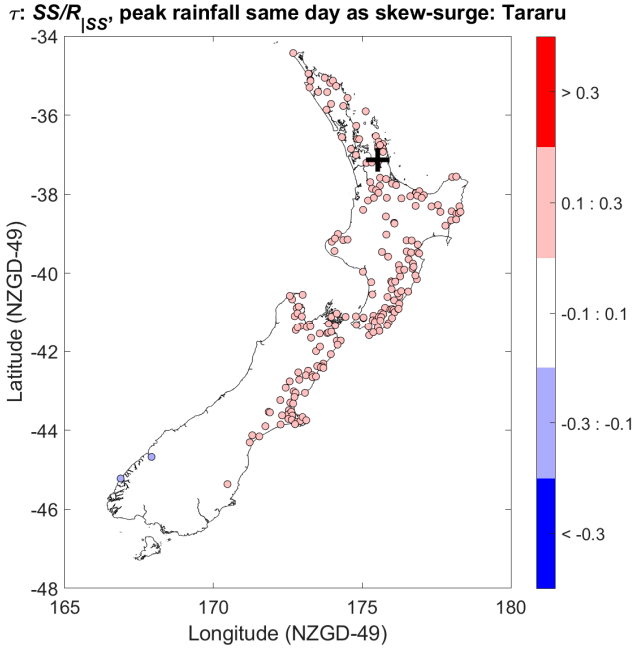
τ: SS/R|SS, peak rainfall same day as skew-surge: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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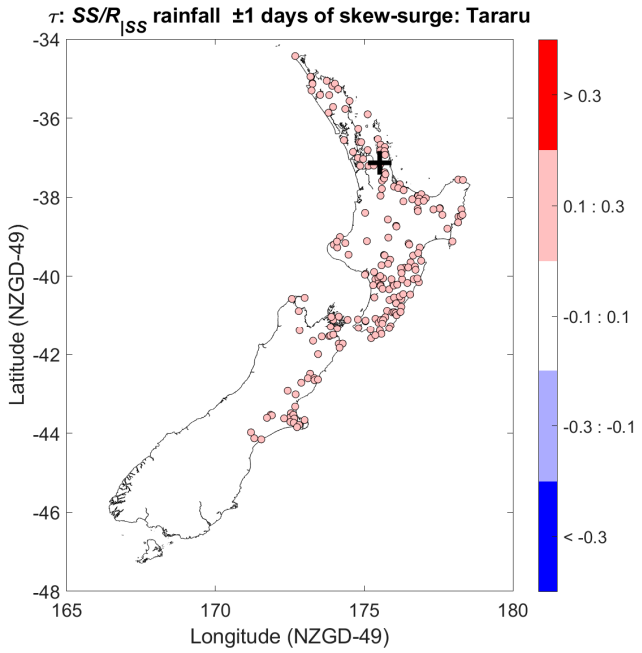
τ: SS/R|SS rainfall ±1 days of skew-surge: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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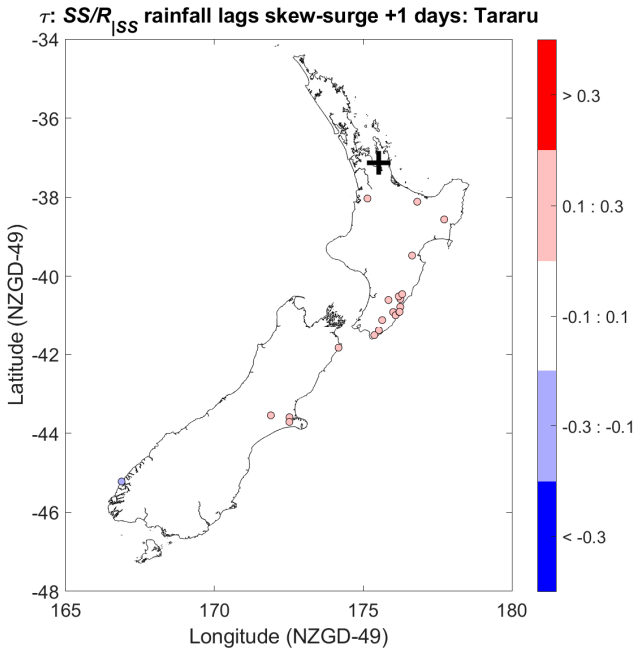
τ: SS/R|SS rainfall lags skew-surge +1 days: Tararu
Latitude (NZGD-49)
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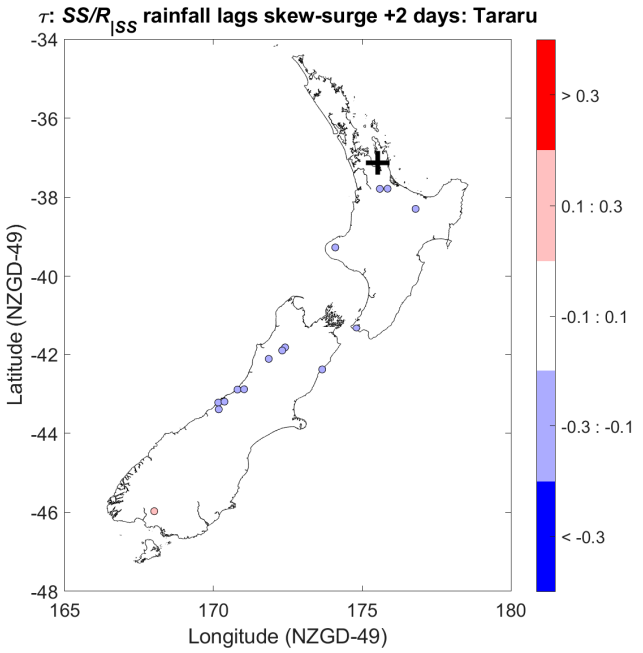
τ: SS/R|SS rainfall lags skew-surge +2 days: Tararu
Latitude (NZGD-49)
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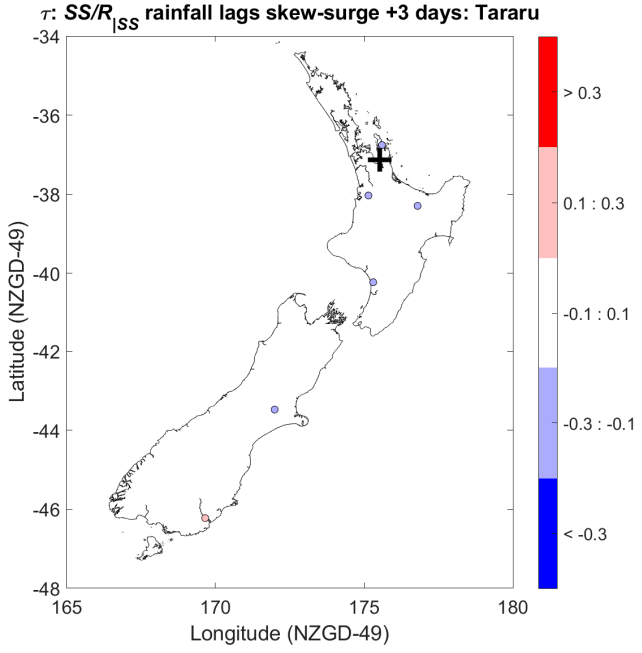
τ: SS/R|SS rainfall lags skew-surge +3 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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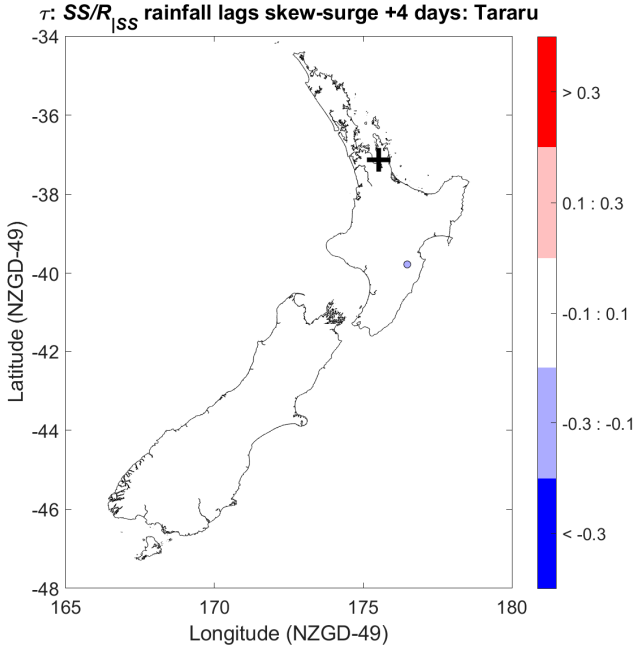
τ: SS/R|SS rainfall lags skew-surge +4 days: Tararu
Latitude (NZGD-49)
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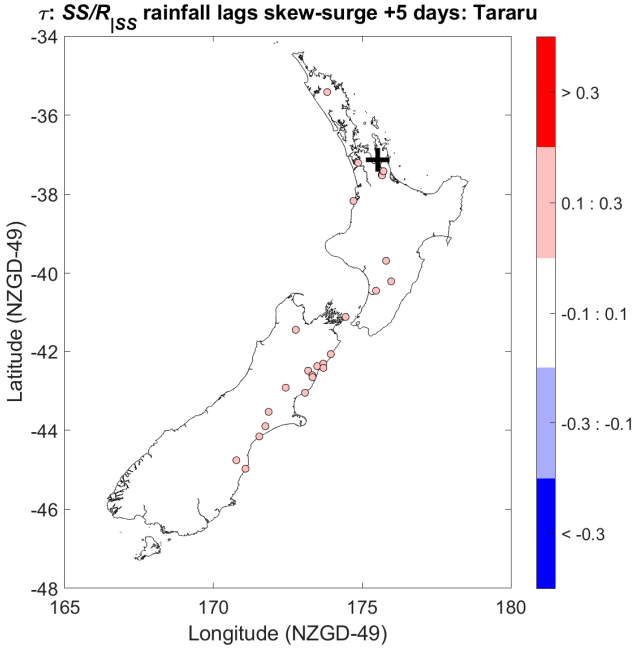
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Latitude (NZGD-49)
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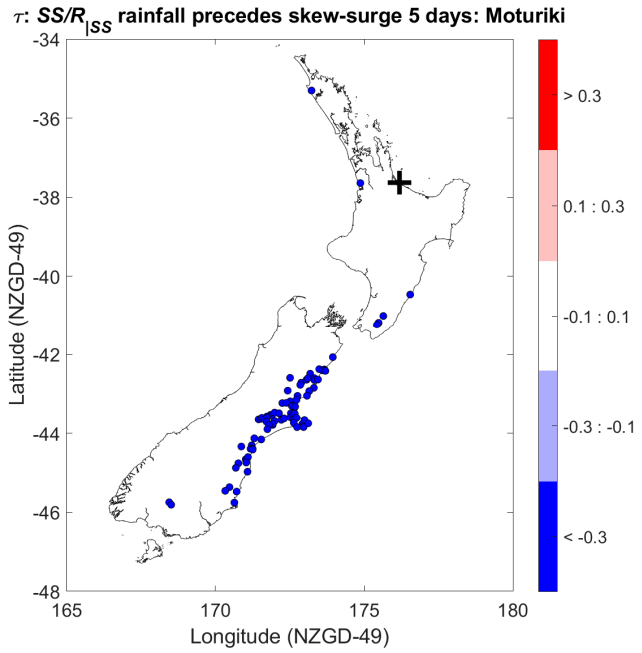
Moturiki


τ: SS/R|SS rainfall precedes skew-surge 5 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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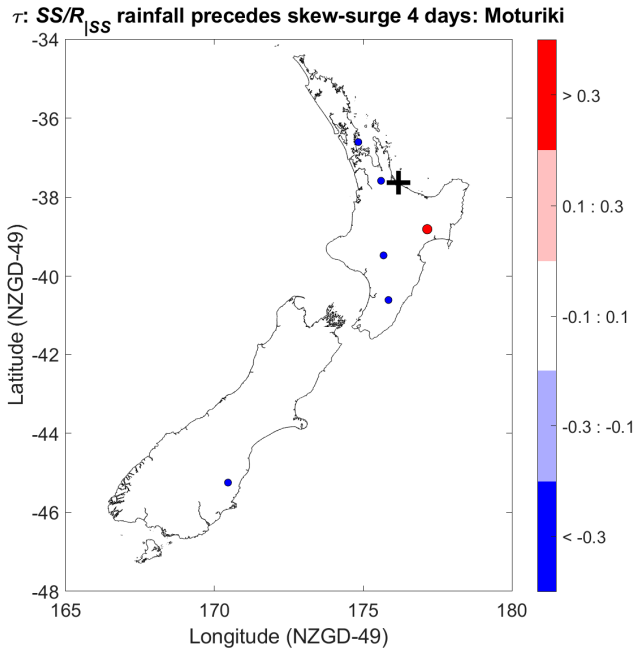
τ: SS/R|SS rainfall precedes skew-surge 4 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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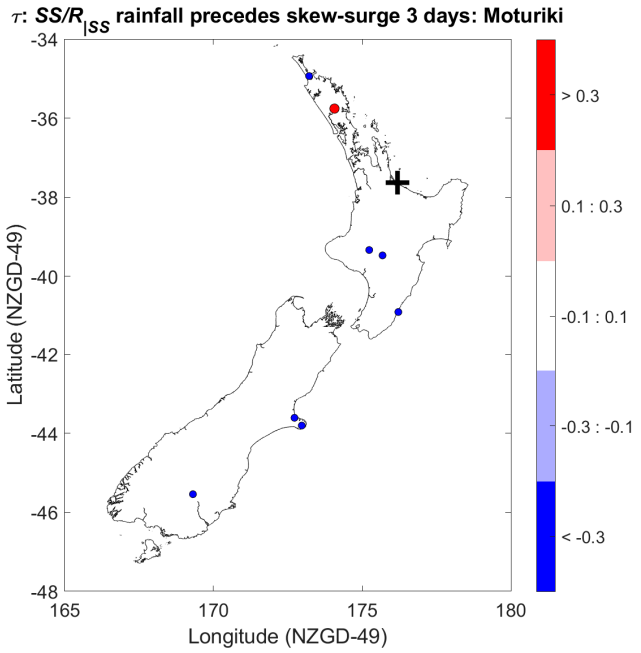
τ: SS/R|SS rainfall precedes skew-surge 3 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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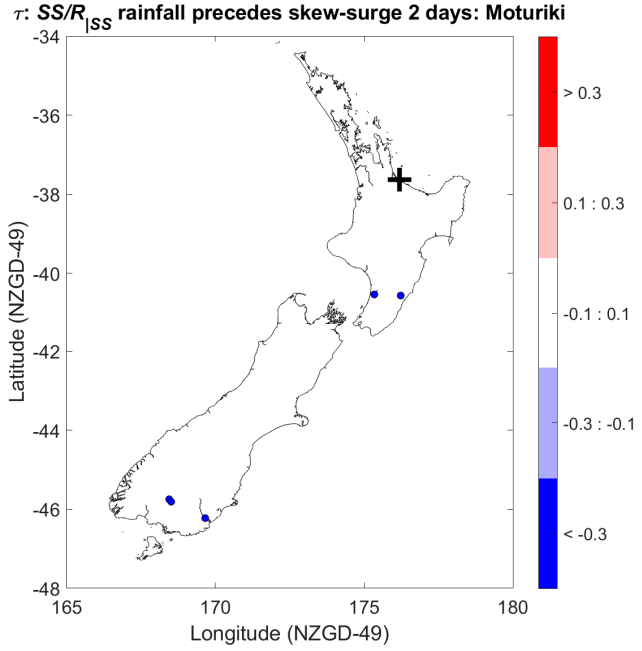
τ: SS/R|SS rainfall precedes skew-surge 2 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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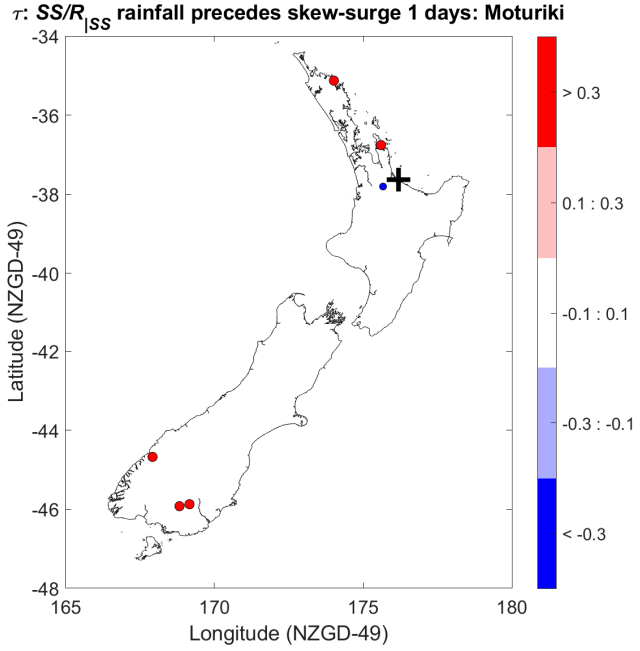
τ: SS/R|SS rainfall precedes skew-surge 1 days: Moturiki
Latitude (NZGD-49)
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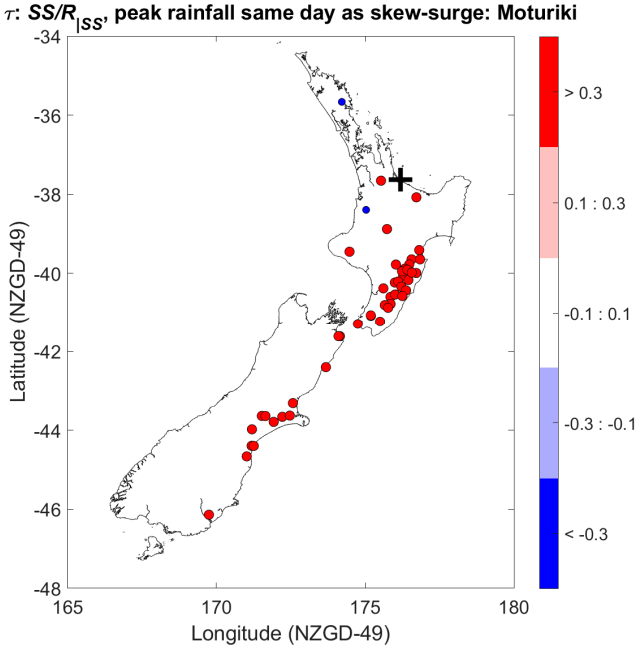
τ: SS/R|SS, peak rainfall same day as skew-surge: Moturiki
Latitude (NZGD-49)
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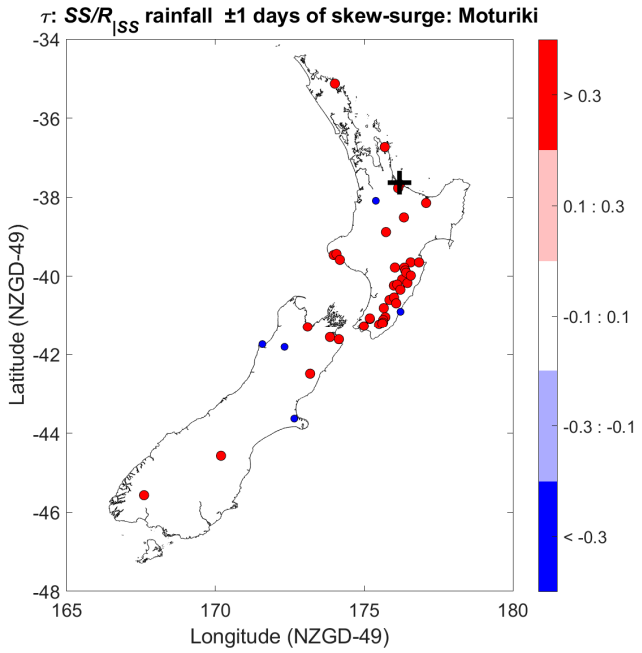
τ: SS/R|SS rainfall ±1 days of skew-surge: Moturiki
Latitude (NZGD-49)
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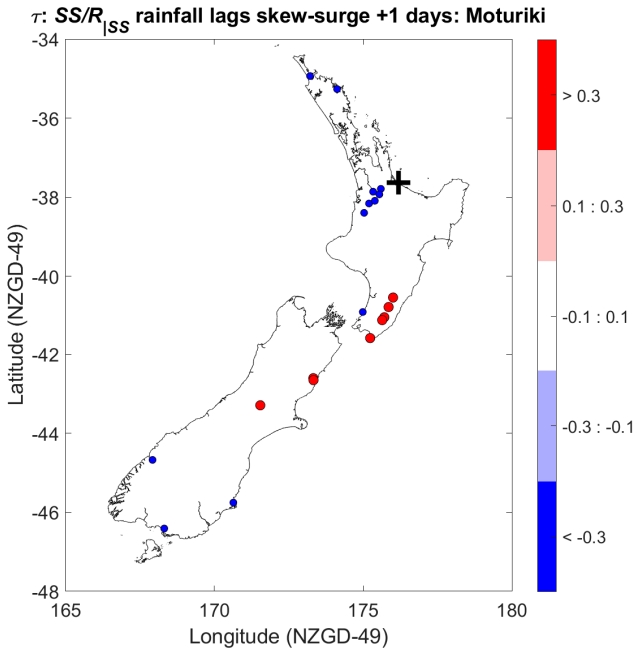
τ: SS/R|SS rainfall lags skew-surge +1 days: Moturiki
Latitude (NZGD-49)
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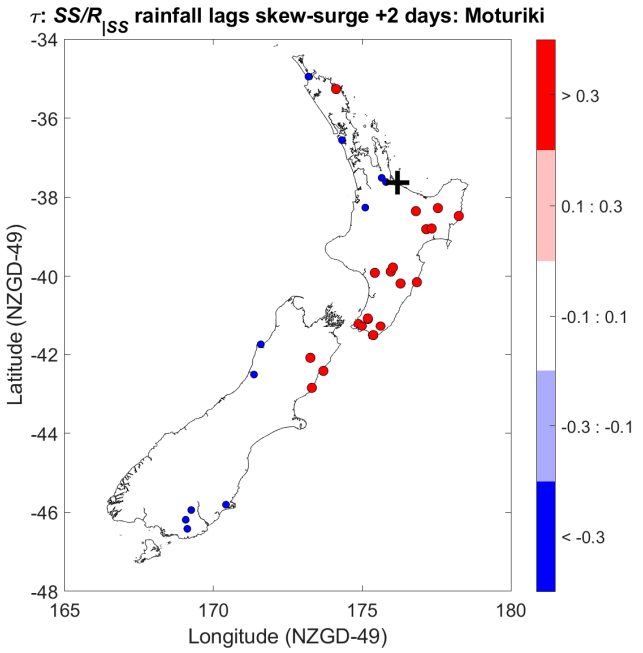
τ: SS/R|SS rainfall lags skew-surge +2 days: Moturiki
Latitude (NZGD-49)
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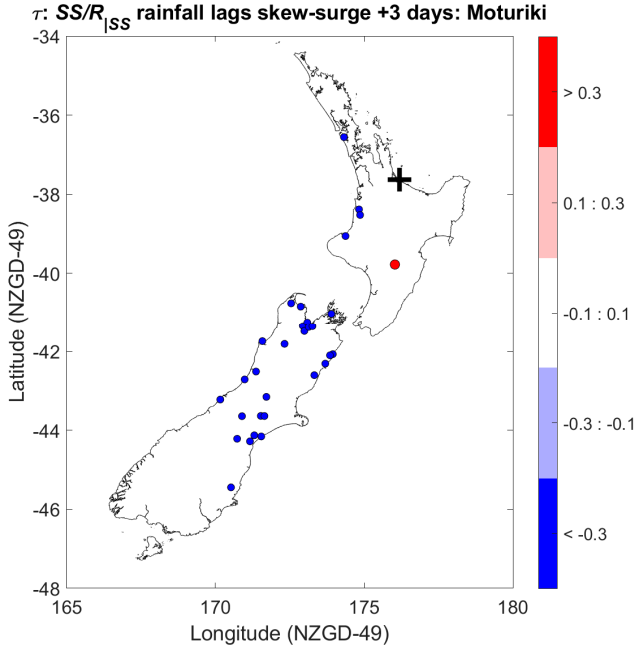
τ: SS/R|SS rainfall lags skew-surge +3 days: Moturiki
Latitude (NZGD-49)
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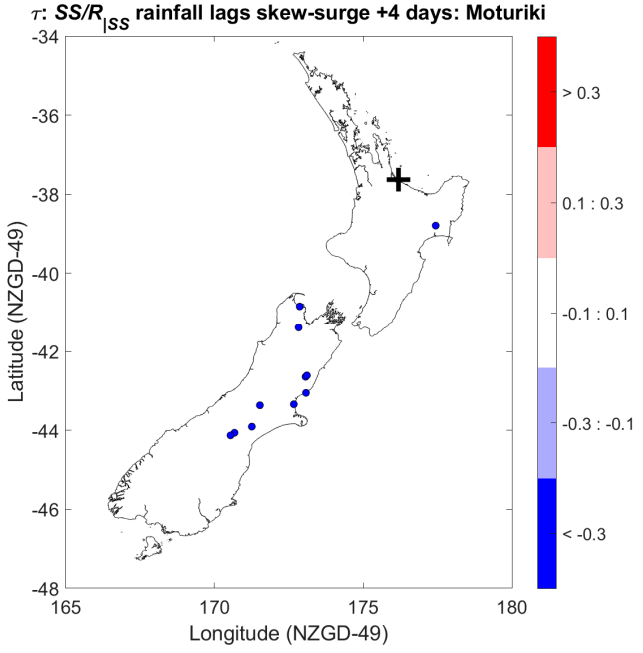
τ: SS/R|SS rainfall lags skew-surge +4 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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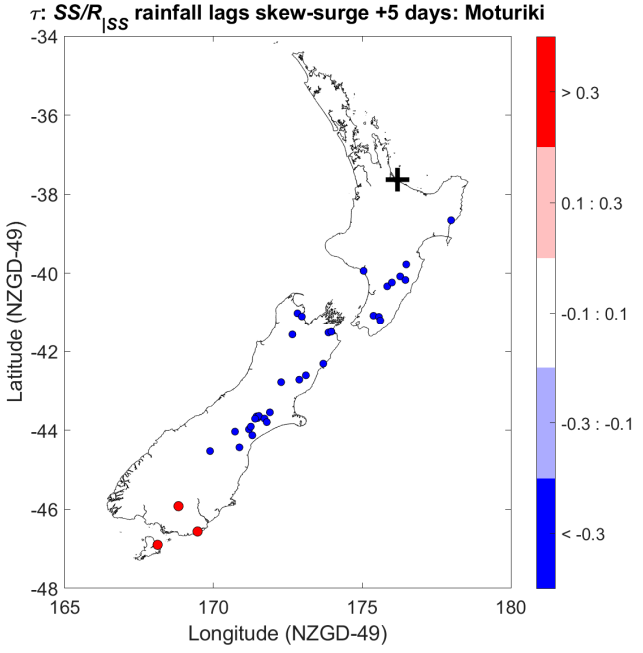
τ: SS/R|SS rainfall lags skew-surge +5 days: Moturiki
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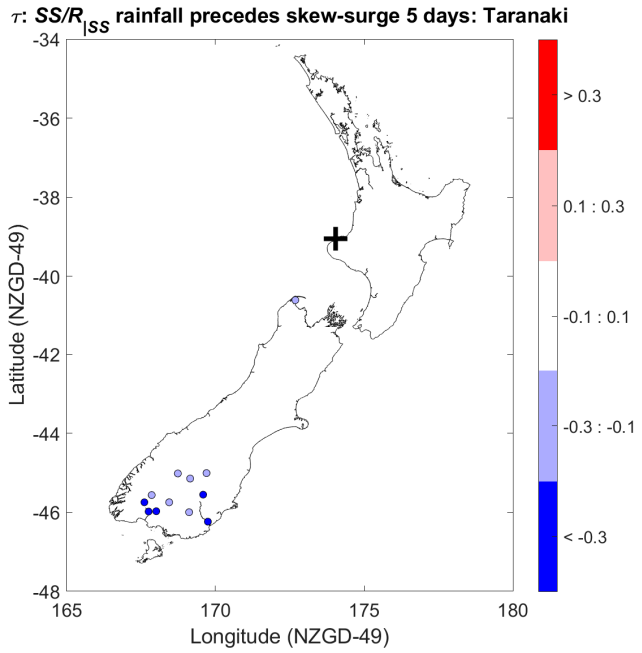
Taranaki


τ: SS/R|SS rainfall precedes skew-surge 5 days: Taranaki
Latitude (NZGD-49)
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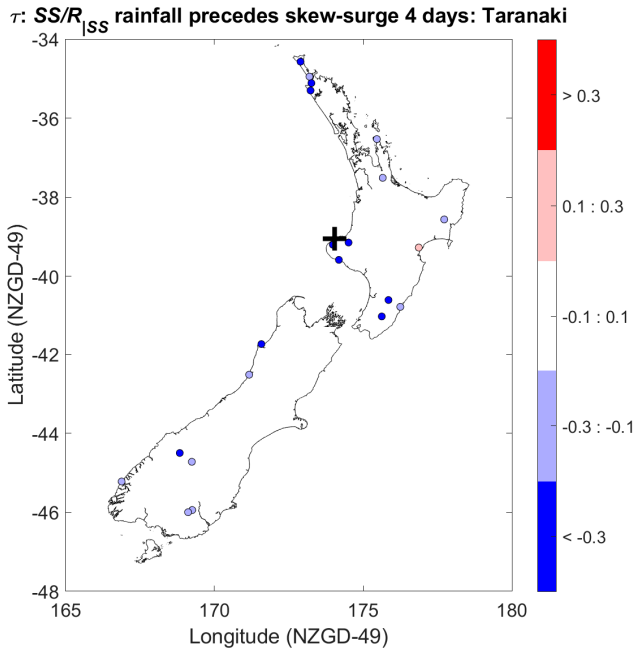
τ: SS/R|SS rainfall precedes skew-surge 4 days: Taranaki
Latitude (NZGD-49)
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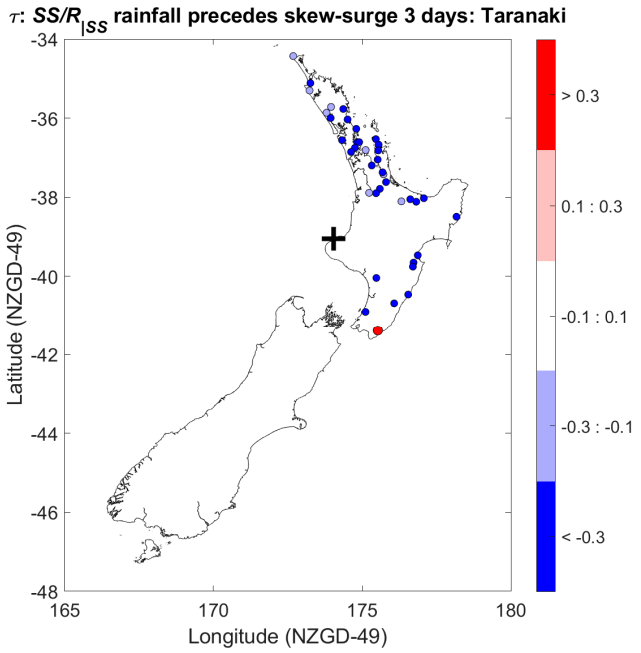
τ: SS/R|SS rainfall precedes skew-surge 3 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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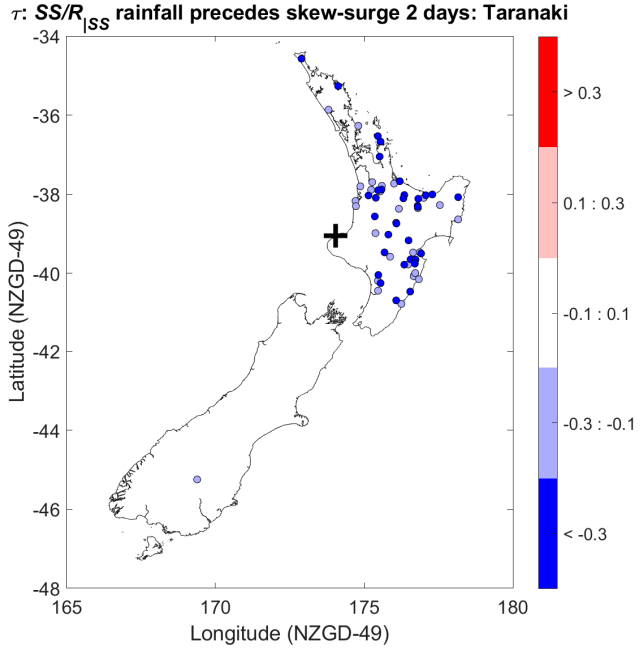
τ: SS/R|SS rainfall precedes skew-surge 2 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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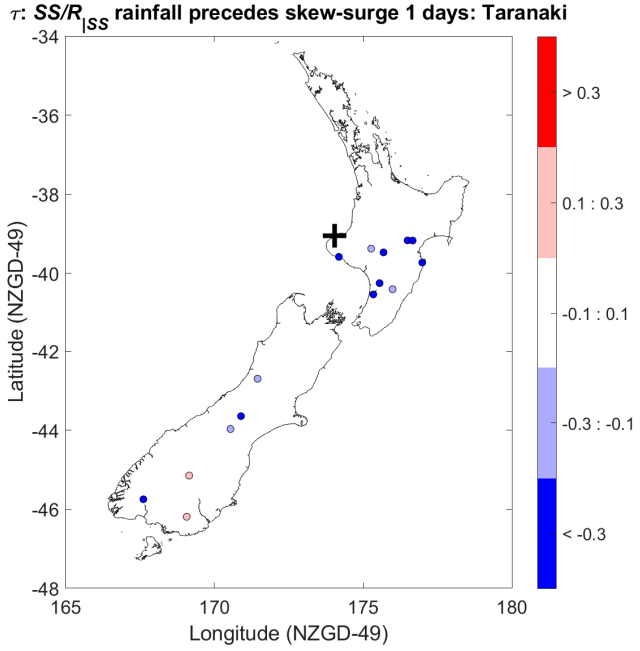
τ: SS/R|SS rainfall precedes skew-surge 1 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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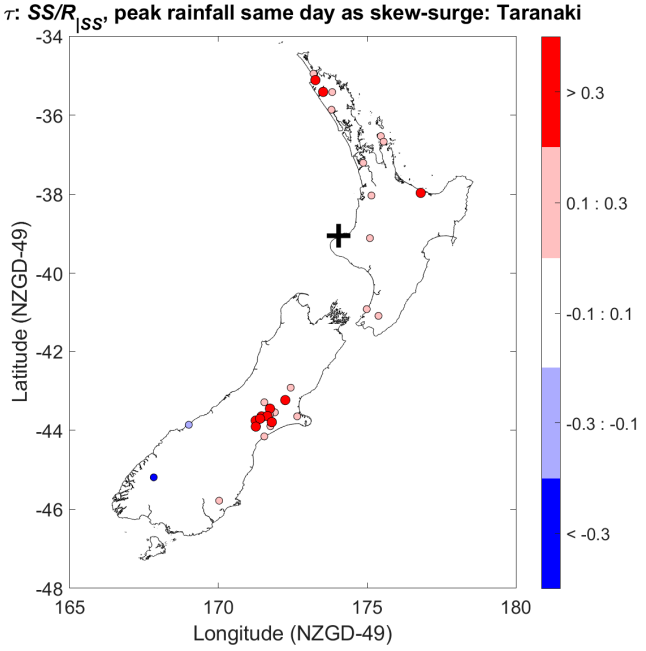
τ: SS/R|SS, peak rainfall same day as skew-surge: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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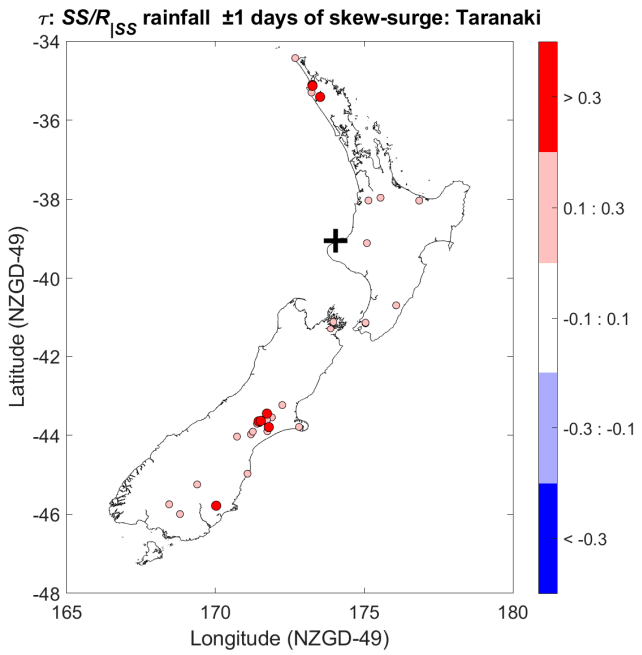
τ: SS/R|SS rainfall ±1 days of skew-surge: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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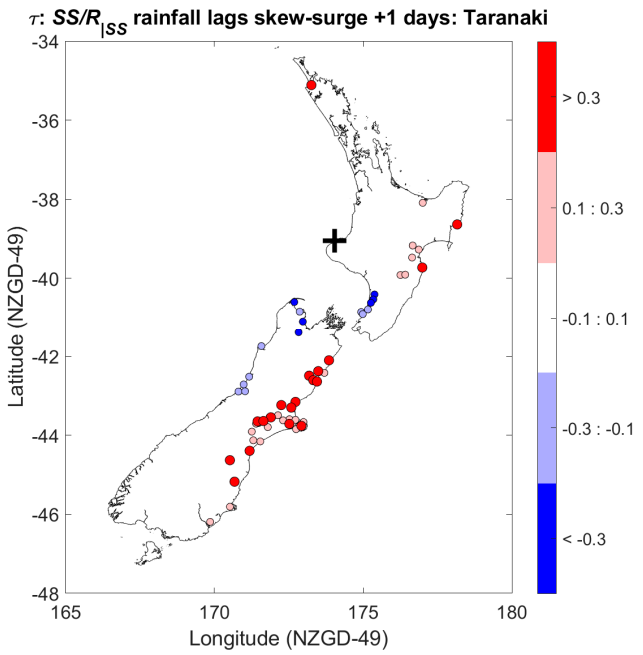
τ: SS/R|SS rainfall lags skew-surge +1 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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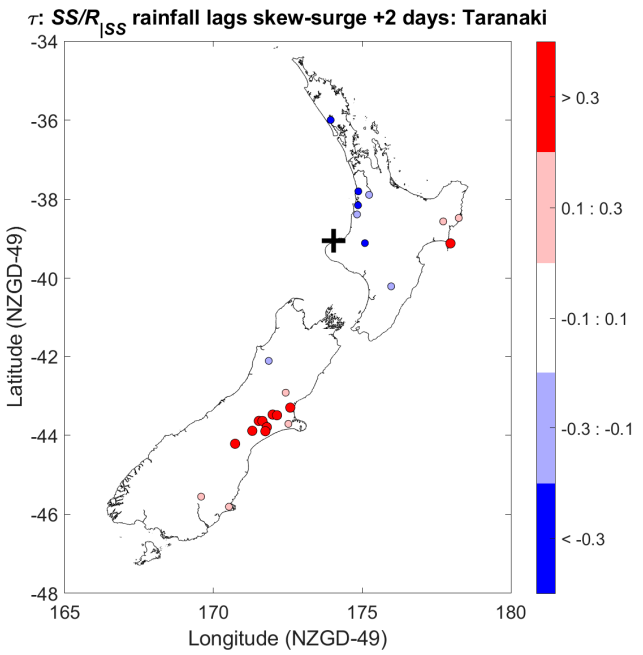
τ: SS/R|SS rainfall lags skew-surge +2 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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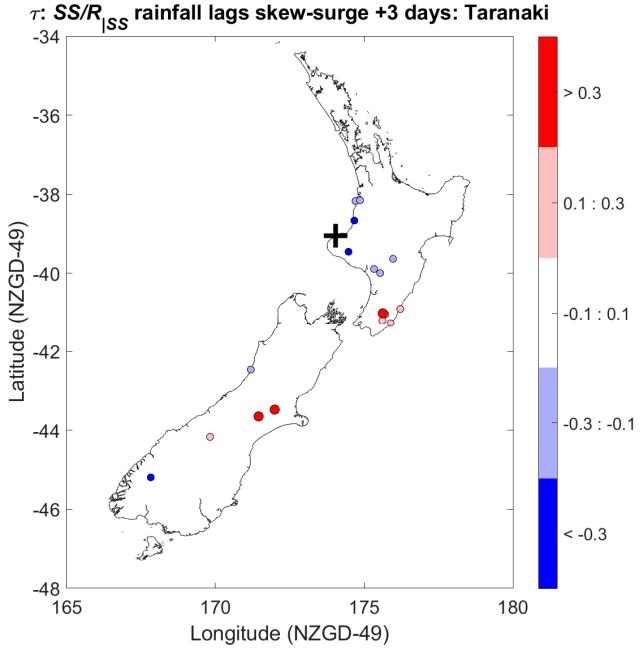
τ: SS/R|SS rainfall lags skew-surge +3 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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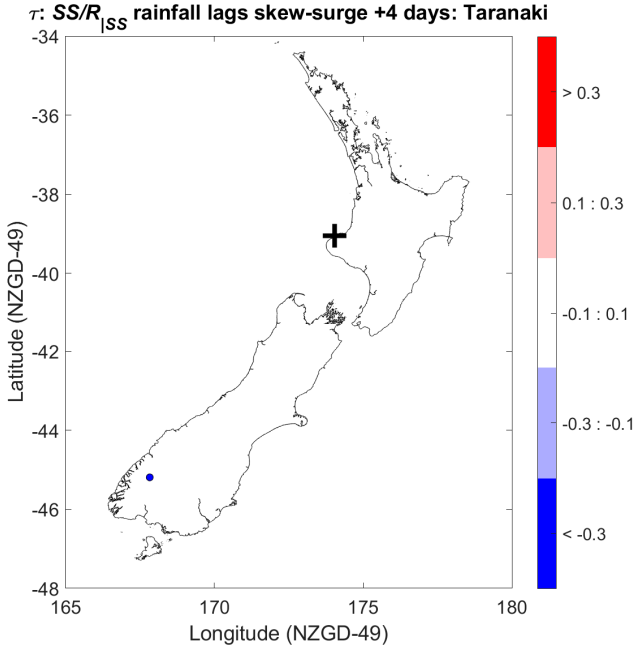
τ: SS/R|SS rainfall lags skew-surge +4 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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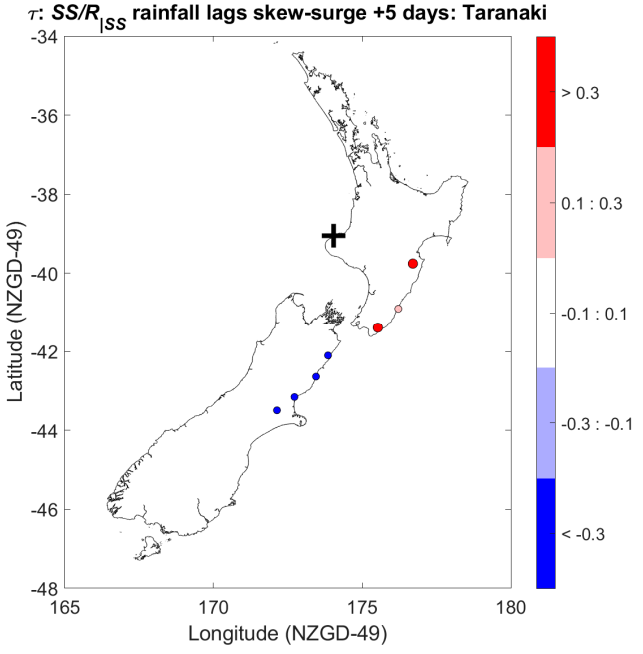
τ: SS/R|SS rainfall lags skew-surge +5 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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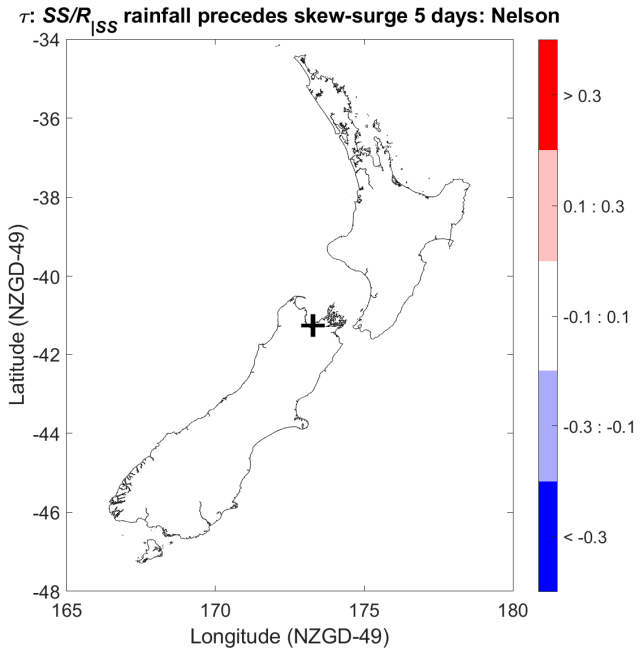
Nelson


τ: SS/R|SS rainfall precedes skew-surge 5 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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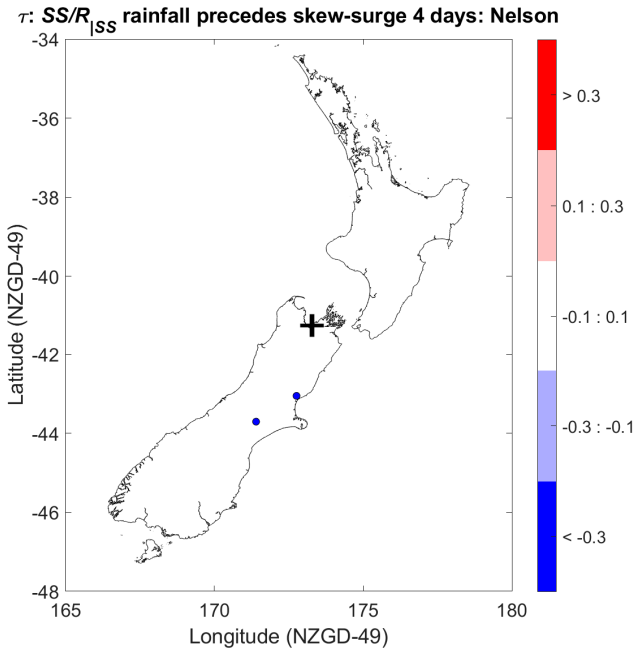
τ: SS/R|SS rainfall precedes skew-surge 4 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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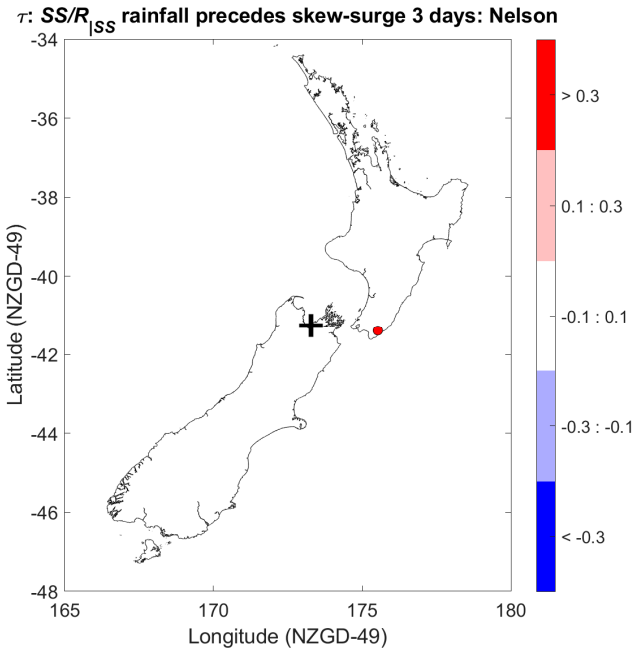
τ: SS/R|SS rainfall precedes skew-surge 3 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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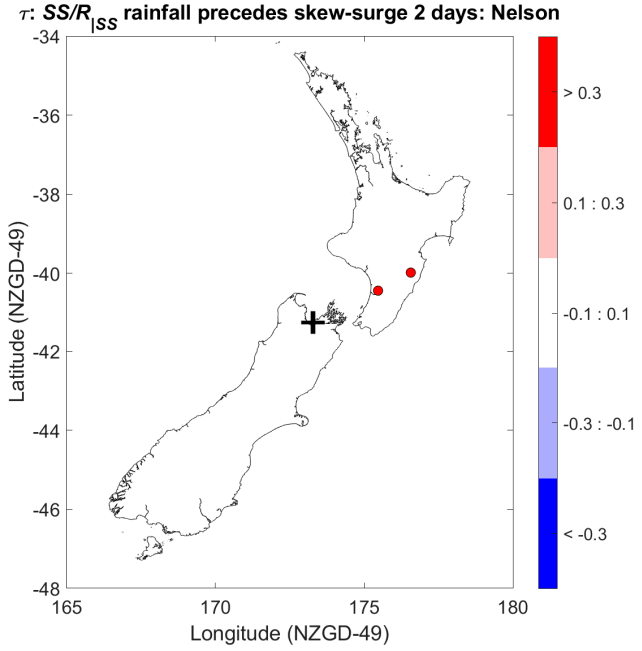
τ: SS/R|SS rainfall precedes skew-surge 2 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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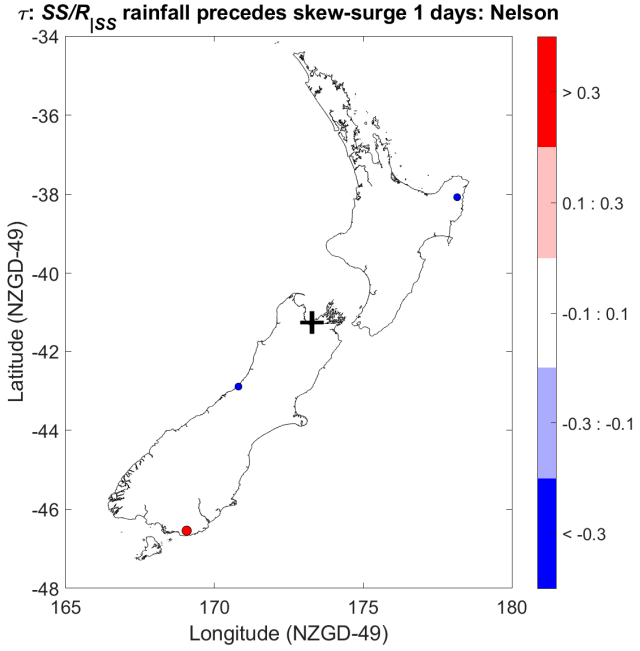
τ: SS/R|SS rainfall precedes skew-surge 1 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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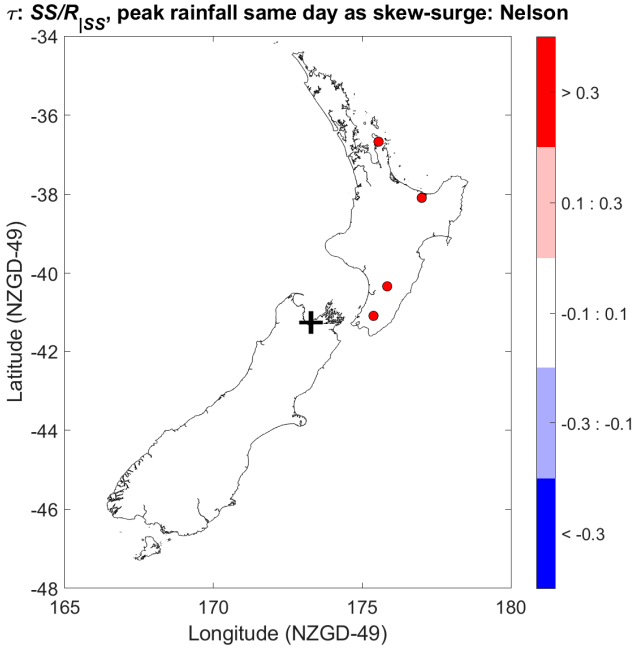
τ: SS/R|SS, peak rainfall same day as skew-surge: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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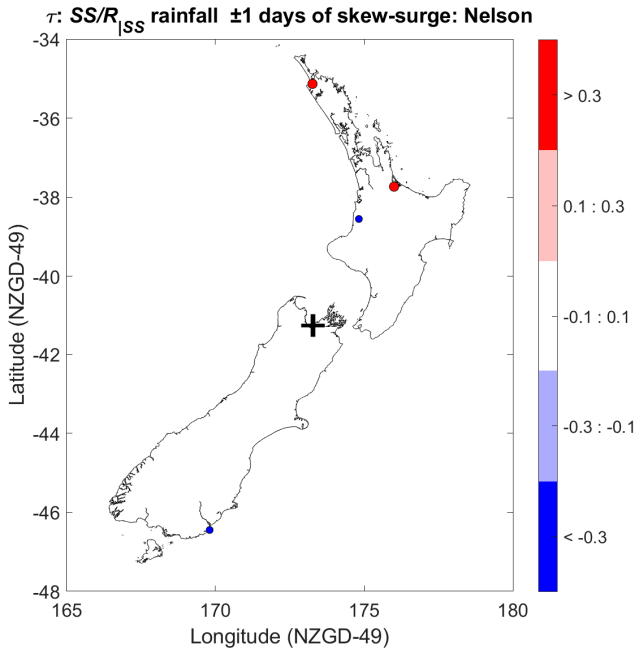
τ: SS/R|SS rainfall ±1 days of skew-surge: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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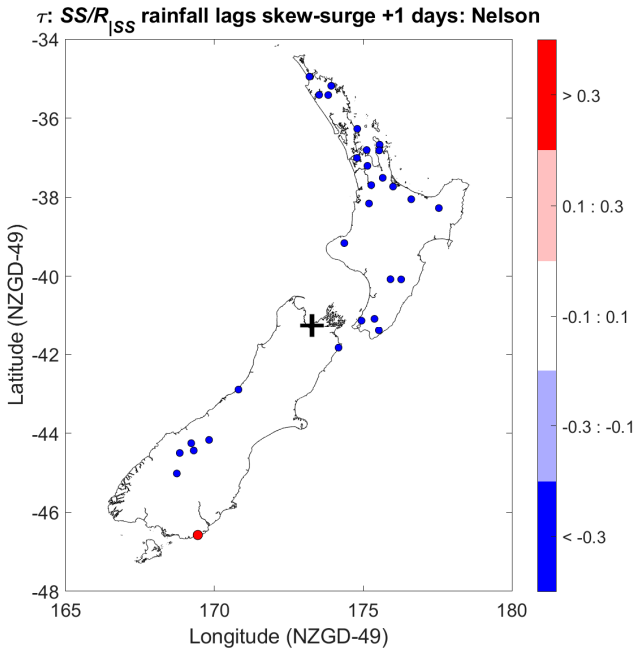
τ: SS/R|SS rainfall lags skew-surge +1 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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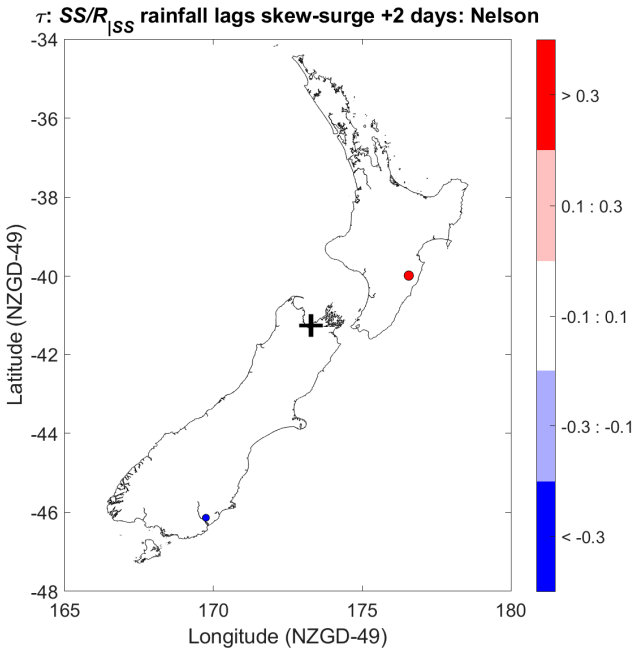
τ: SS/R|SS rainfall lags skew-surge +2 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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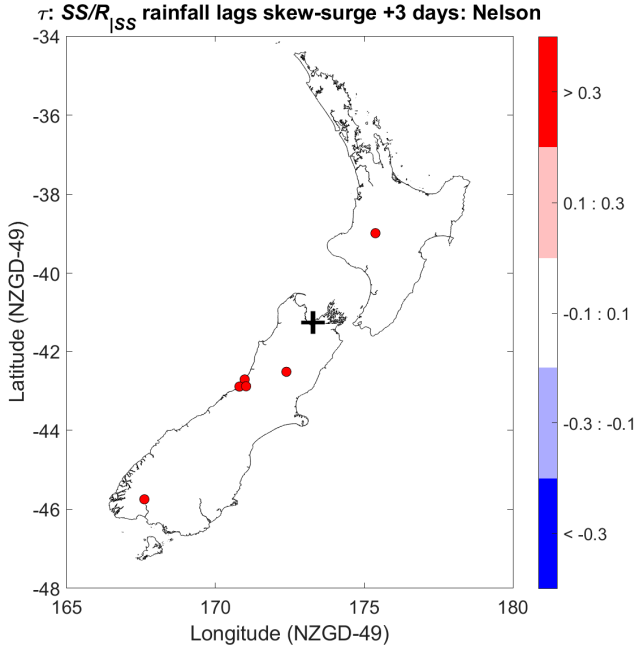
τ: SS/R|SS rainfall lags skew-surge +3 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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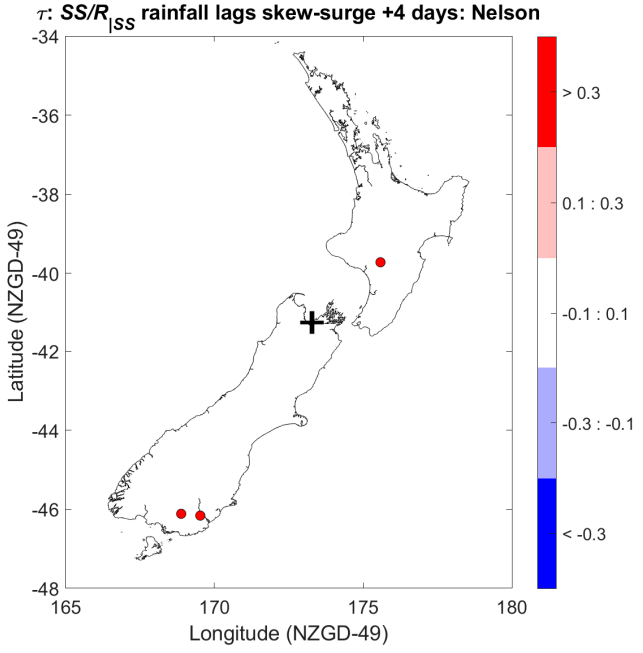
τ: SS/R|SS rainfall lags skew-surge +4 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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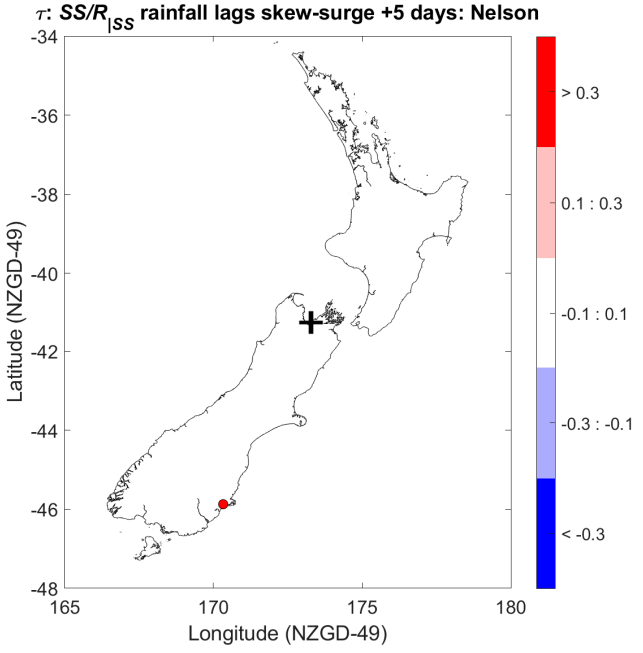
τ: SS/R|SS rainfall lags skew-surge +5 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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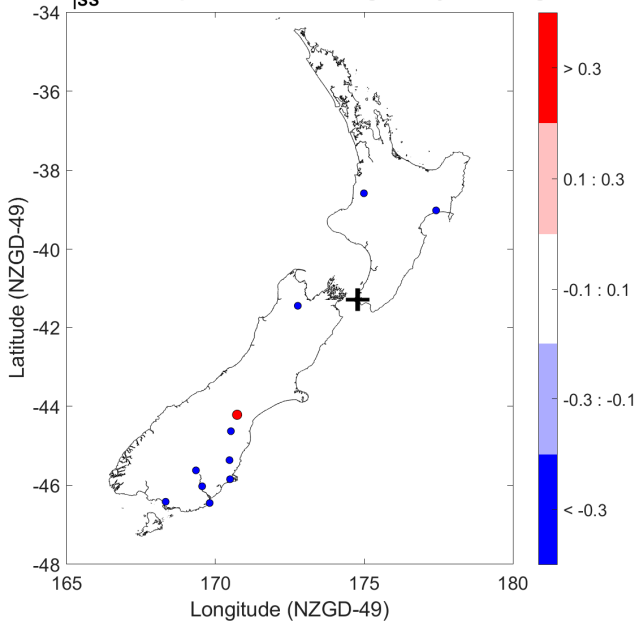
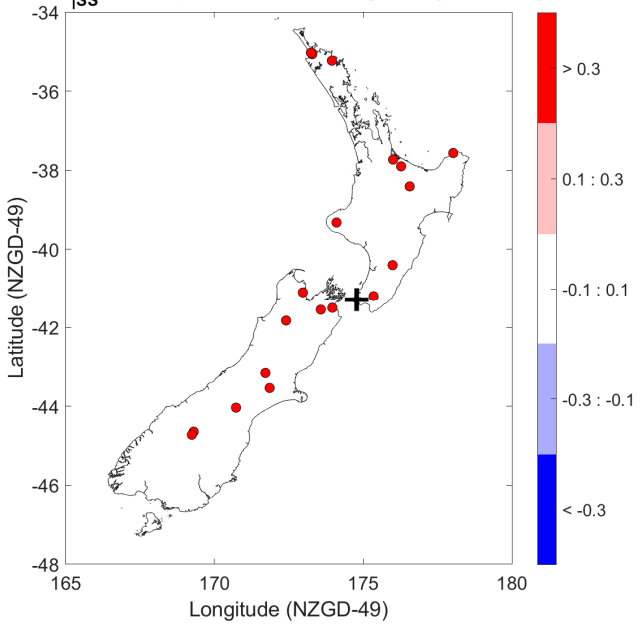
< -0.3

Wellington

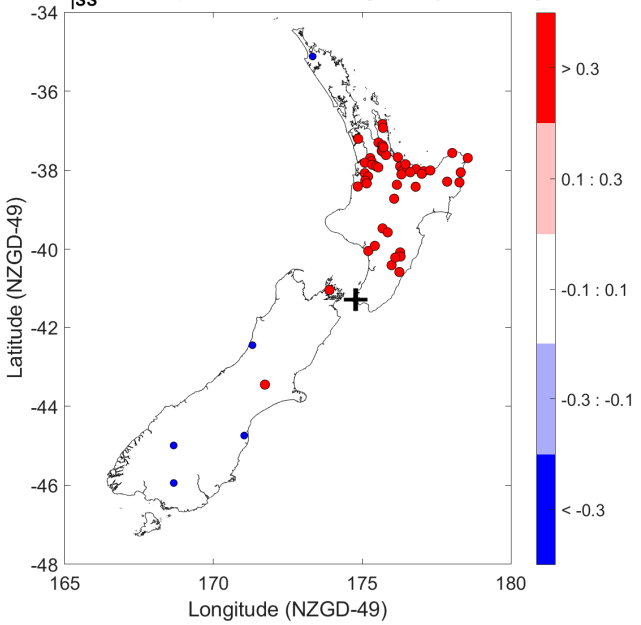
τ: $SS/R_{|SS}$ rainfall precedes skew-surge 5 days: Wellington



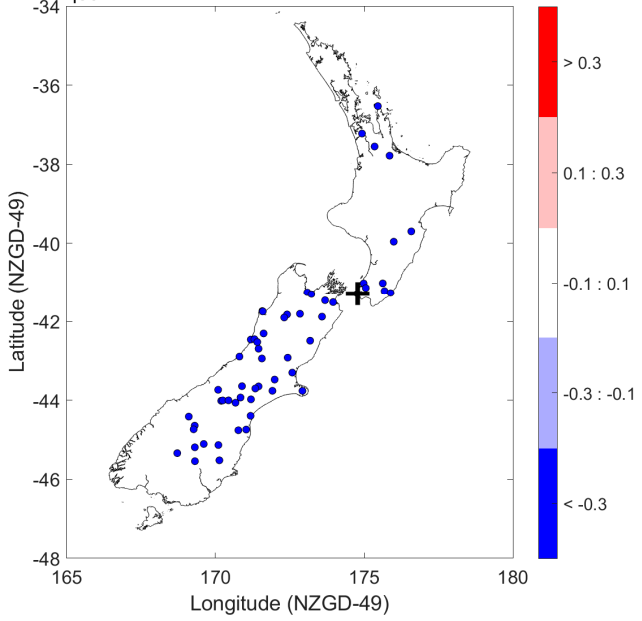
τ: $SS/R_{|SS}$ rainfall precedes skew-surge 4 days: Wellington



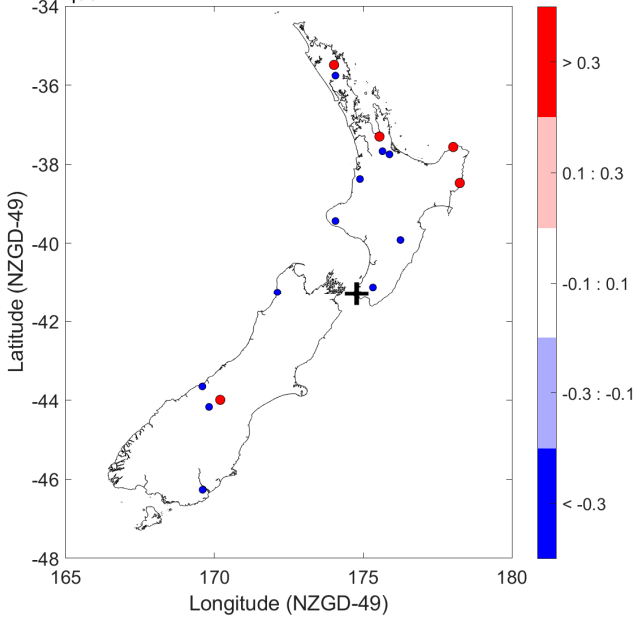
τ: $SS/R_{|SS}$ rainfall precedes skew-surge 3 days: Wellington



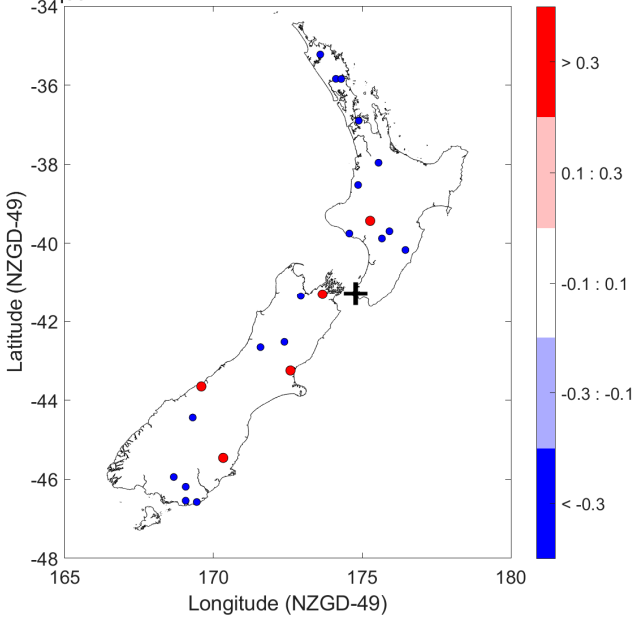
τ: $SS/R_{|SS}$ rainfall precedes skew-surge 2 days: Wellington

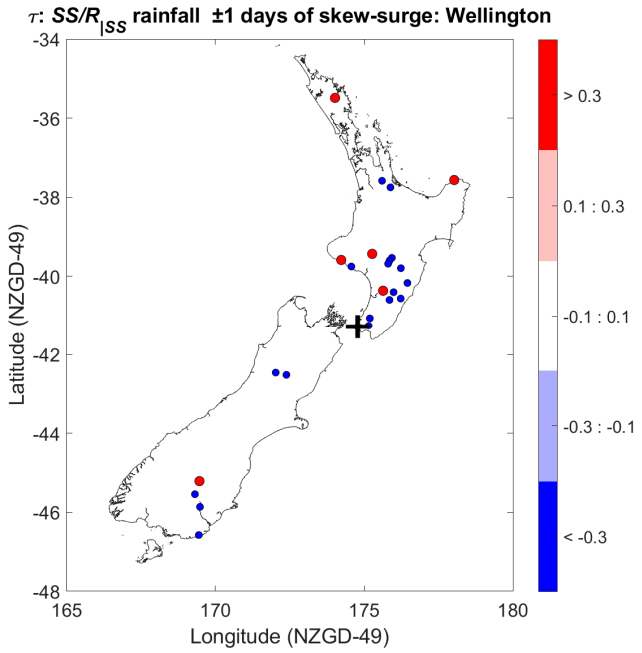


τ: $SS/R_{|SS}$ rainfall precedes skew-surge 1 days: Wellington



τ: $SS/R_{|SS}$, peak rainfall same day as skew-surge: Wellington




τ: SS/R|SS rainfall ±1 days of skew-surge: Wellington
Latitude (NZGD-49)
Longitude (NZGD-49)
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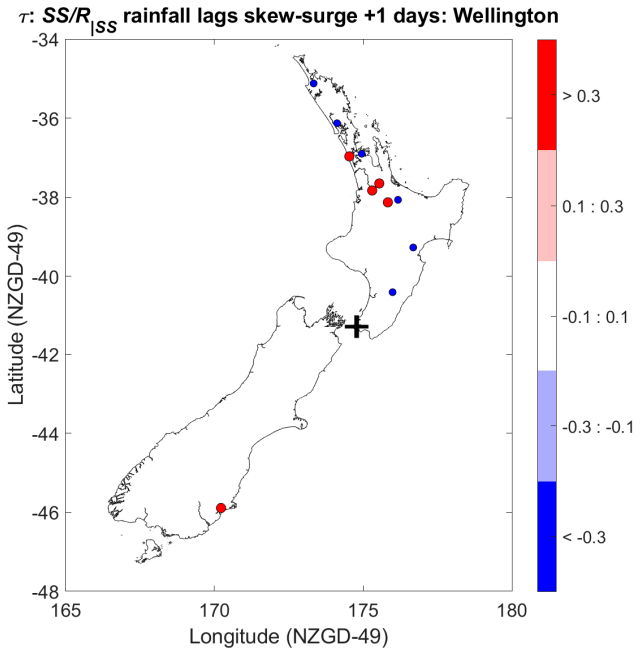
τ: SS/R|SS rainfall lags skew-surge +1 days: Wellington
Latitude (NZGD-49)
Longitude (NZGD-49)
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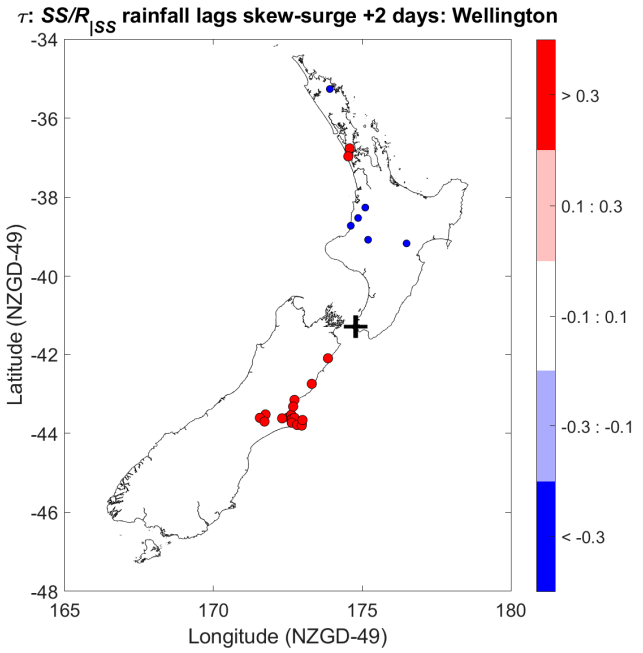
τ: SS/R|SS rainfall lags skew-surge +2 days: Wellington
Latitude (NZGD-49)
Longitude (NZGD-49)
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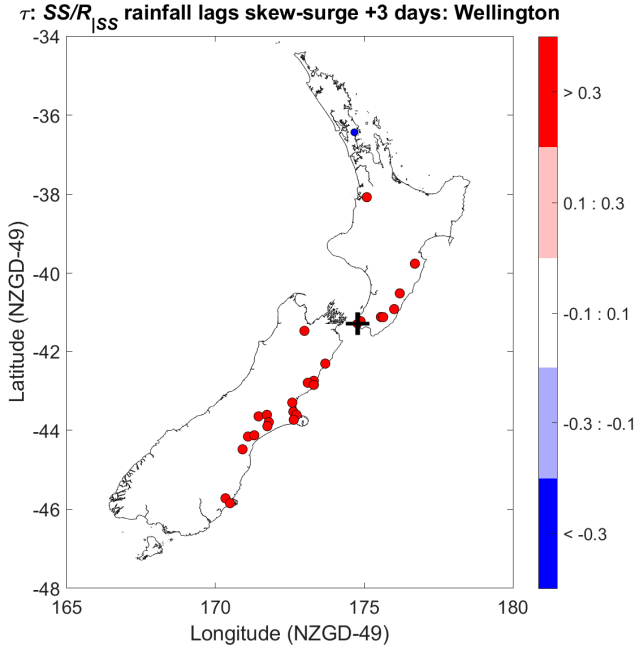
τ: SS/R|SS rainfall lags skew-surge +3 days: Wellington
Latitude (NZGD-49)
Longitude (NZGD-49)
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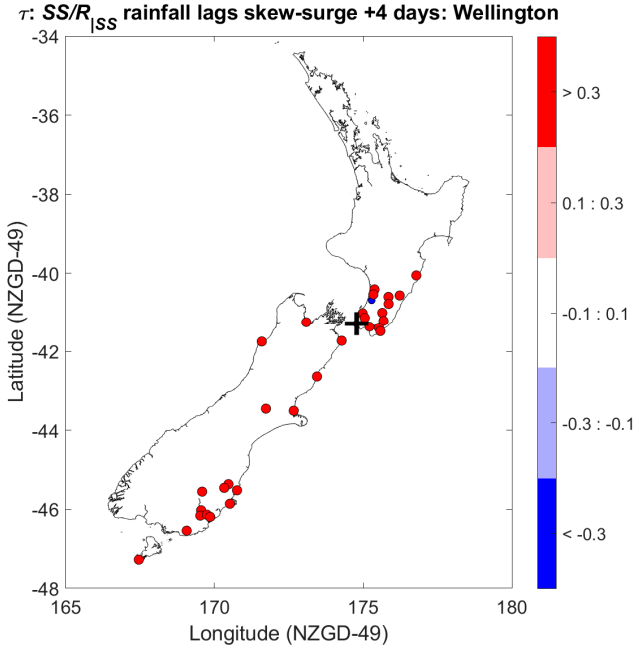
τ: SS/R|SS rainfall lags skew-surge +4 days: Wellington
Latitude (NZGD-49)
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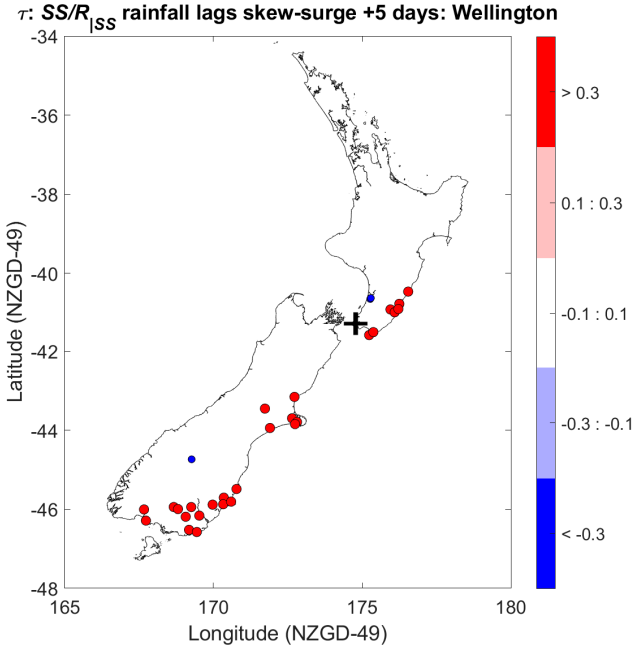
τ: SS/R|SS rainfall lags skew-surge +5 days: Wellington
Latitude (NZGD-49)
Longitude (NZGD-49)
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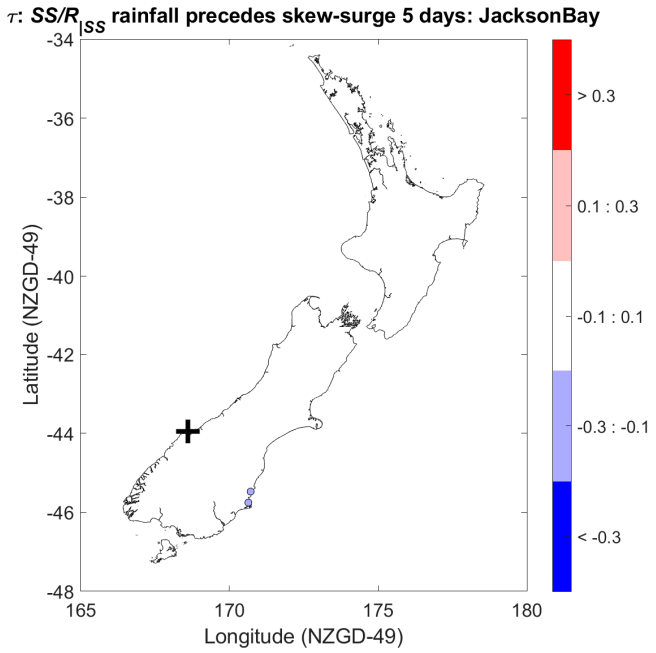
Jackson Bay


τ: SS/R|SS rainfall precedes skew-surge 5 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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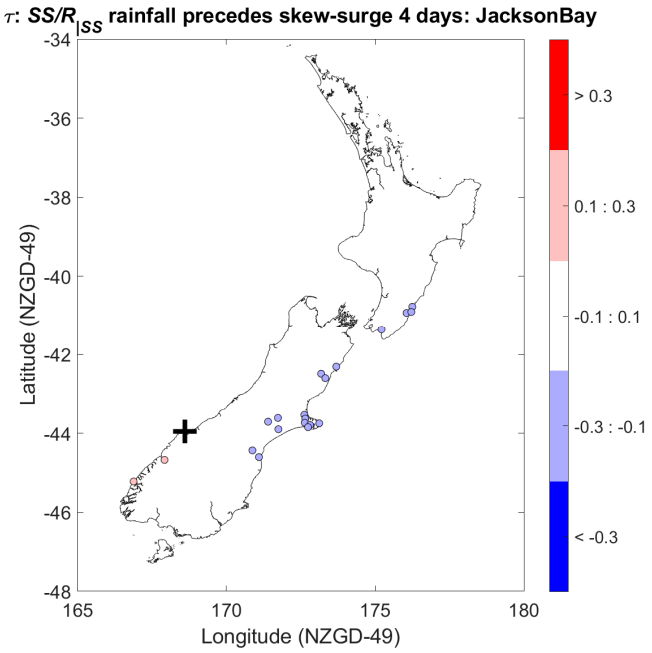
τ: SS/R|SS rainfall precedes skew-surge 4 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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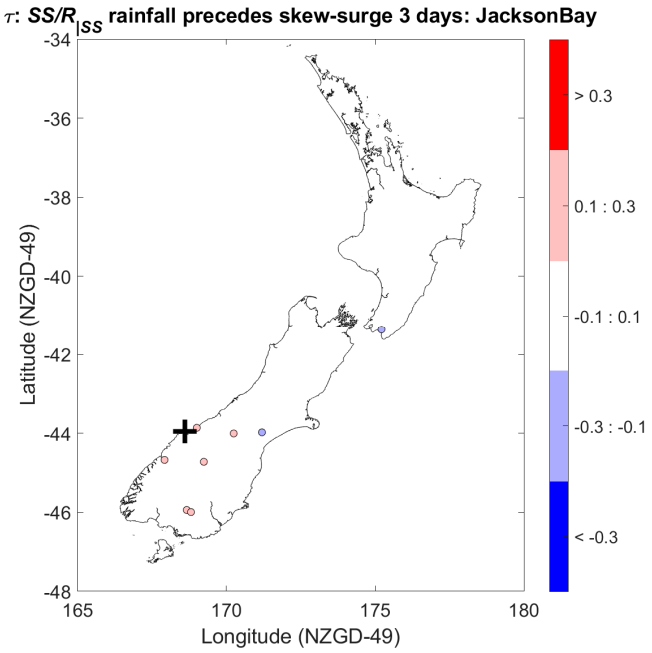
τ: SS/R|SS rainfall precedes skew-surge 3 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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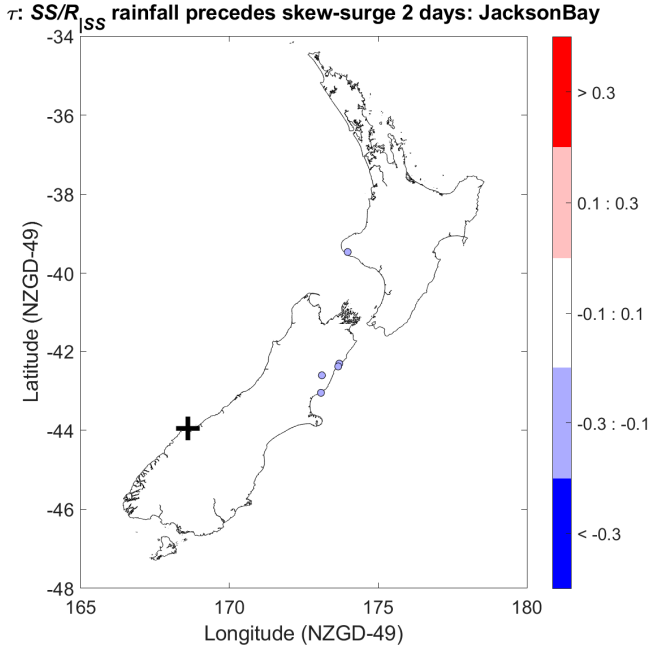
τ: SS/R|SS rainfall precedes skew-surge 2 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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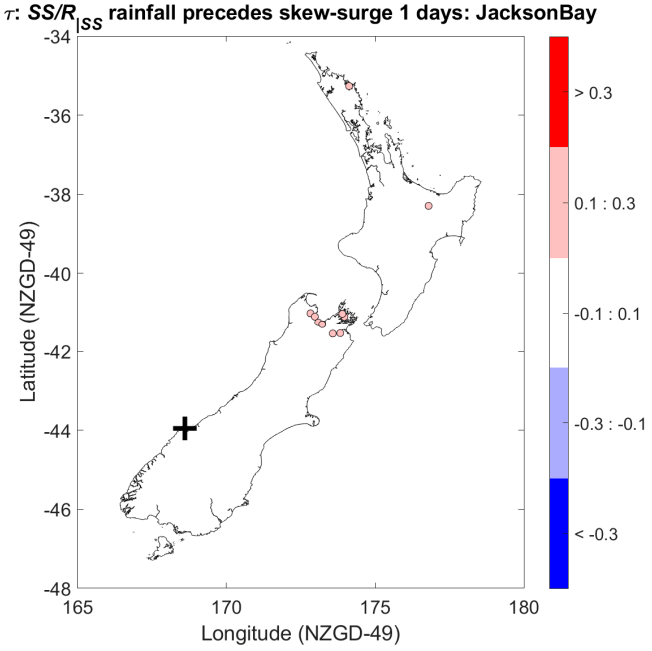
τ: SS/R|SS rainfall precedes skew-surge 1 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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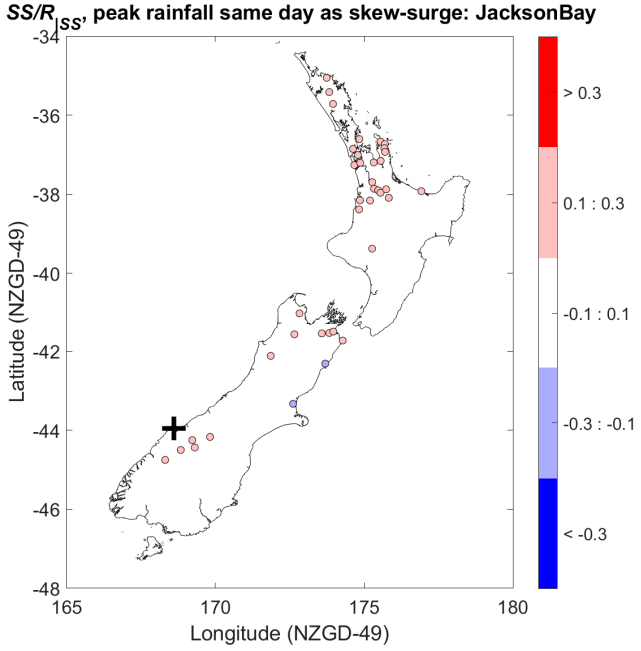
τ: SS/R|SS, peak rainfall same day as skew-surge: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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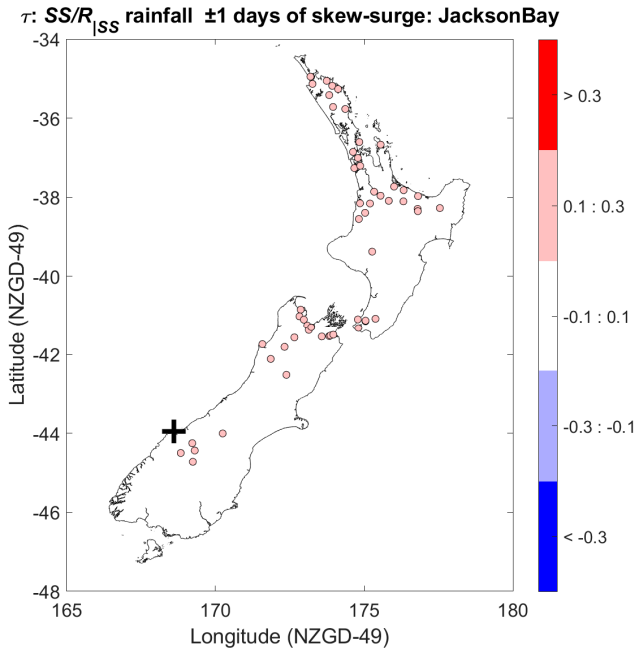
τ: SS/R|SS rainfall ±1 days of skew-surge: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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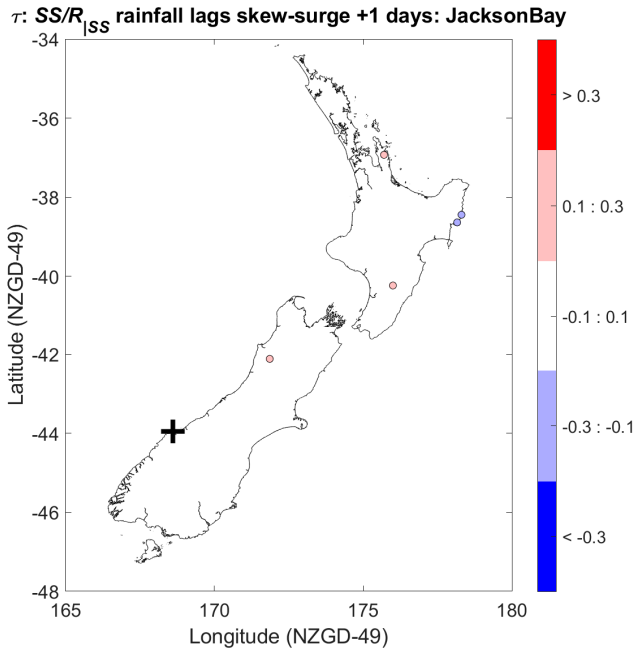
τ: SS/R|SS rainfall lags skew-surge +1 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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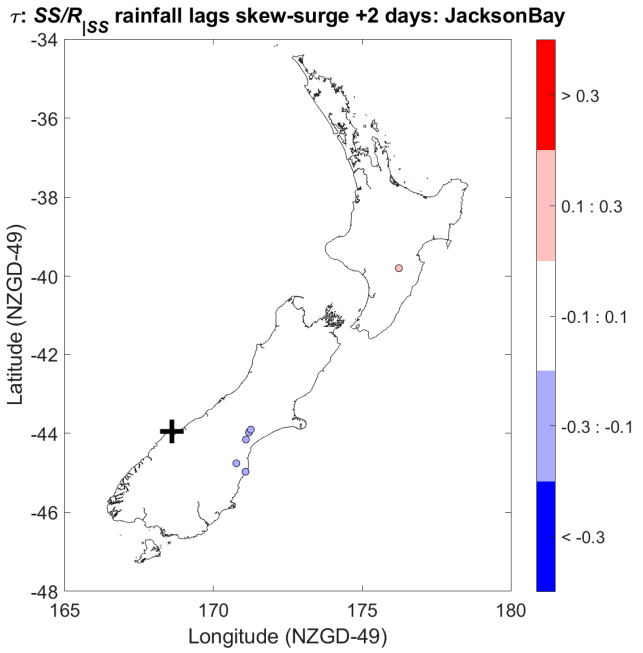
τ: SS/R|SS rainfall lags skew-surge +2 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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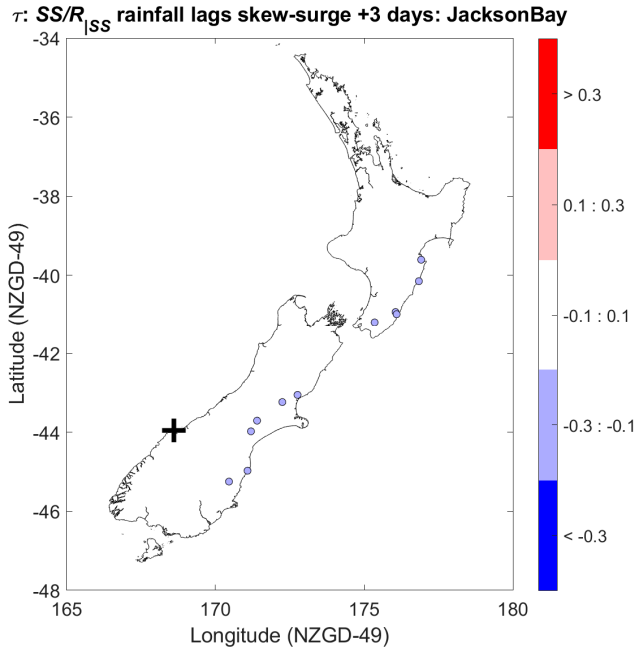
τ: SS/R|SS rainfall lags skew-surge +3 days: JacksonBay
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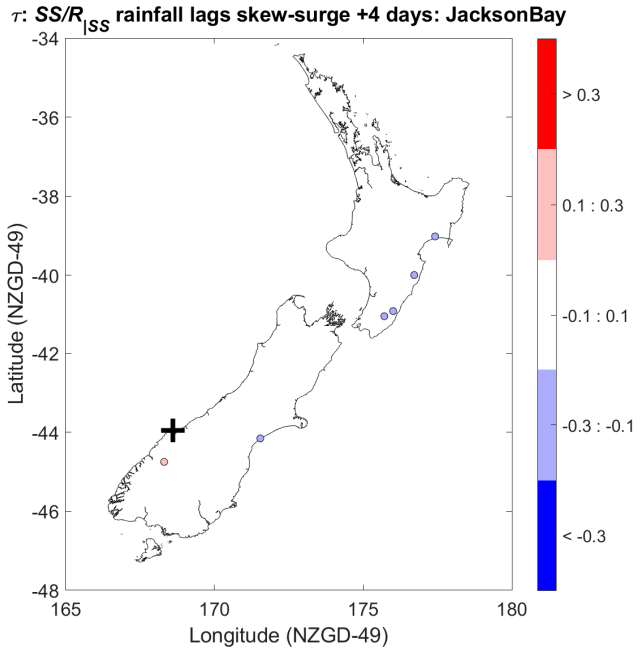
τ: SS/R|SS rainfall lags skew-surge +4 days: JacksonBay
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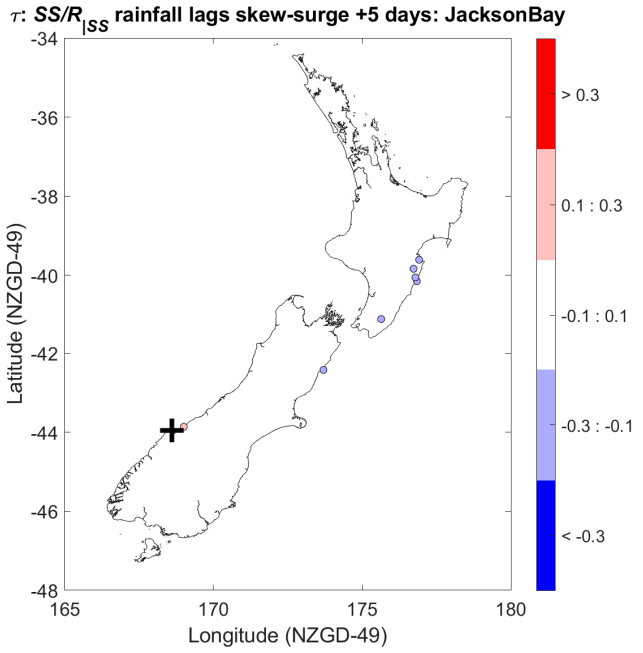
τ: SS/R|SS rainfall lags skew-surge +5 days: JacksonBay
Latitude (NZGD-49)
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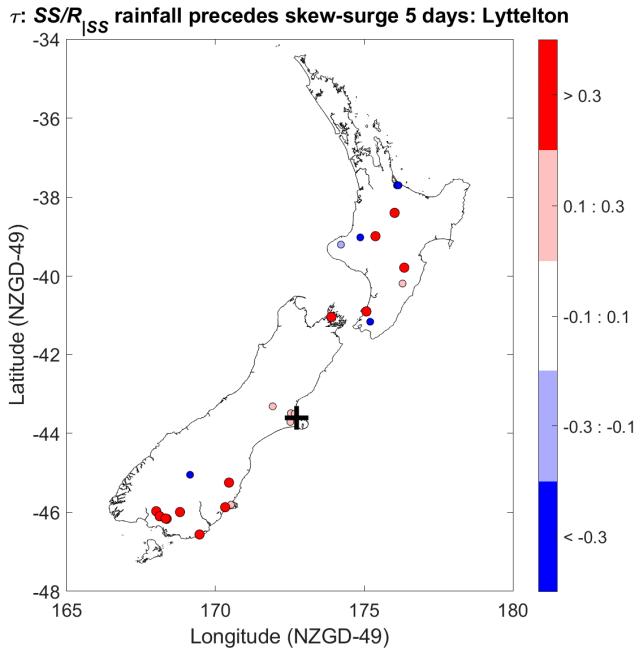
Lyttelton


τ: SS/R|SS rainfall precedes skew-surge 5 days: Lyttelton
Latitude (NZGD-49)
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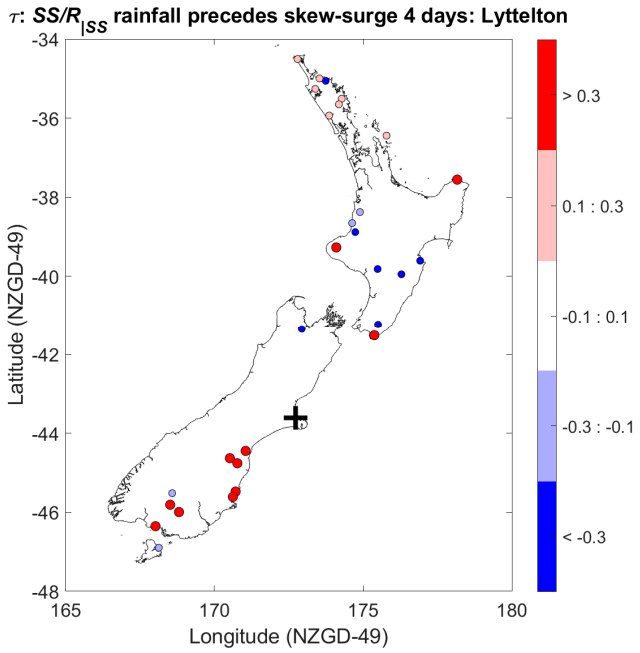
τ: SS/R|SS rainfall precedes skew-surge 4 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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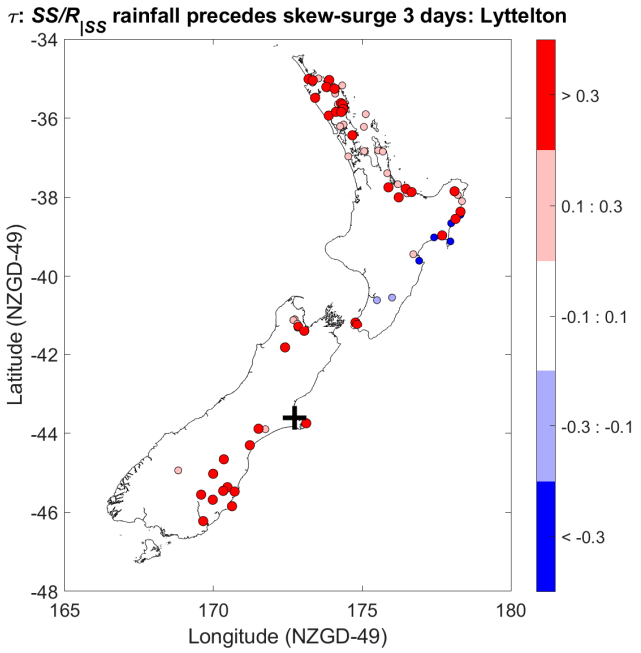
τ: SS/R|SS rainfall precedes skew-surge 3 days: Lyttelton
Latitude (NZGD-49)
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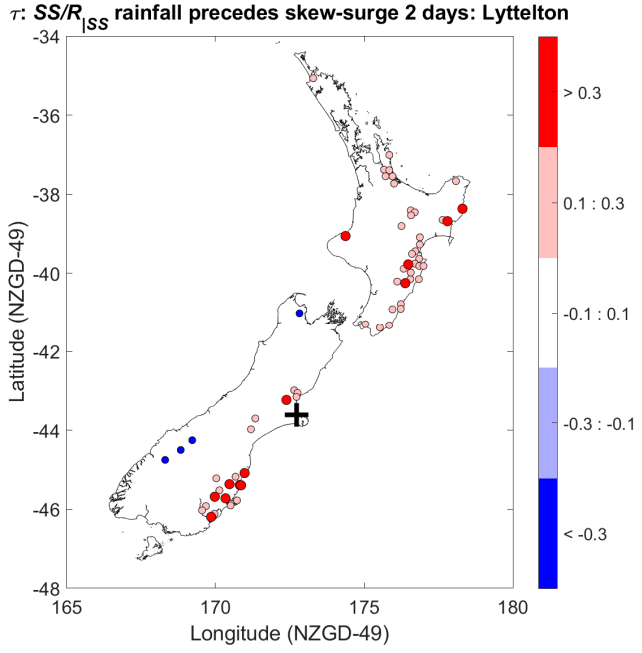
τ: SS/R|SS rainfall precedes skew-surge 2 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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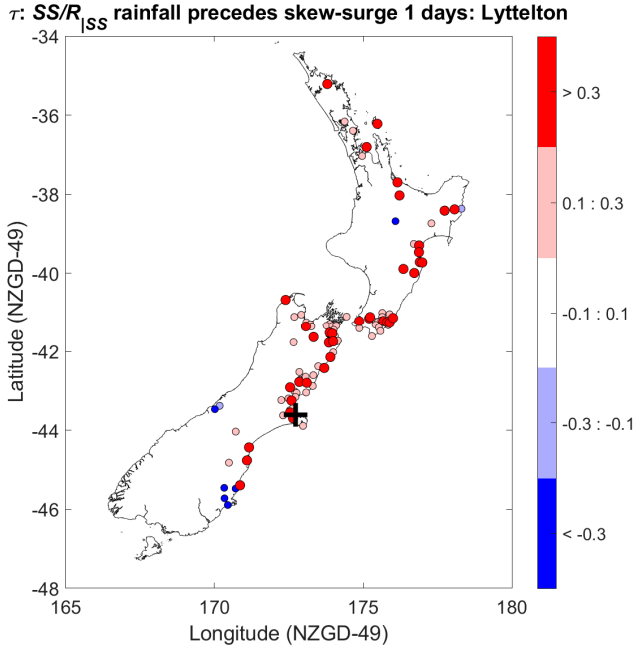
τ: SS/R|SS rainfall precedes skew-surge 1 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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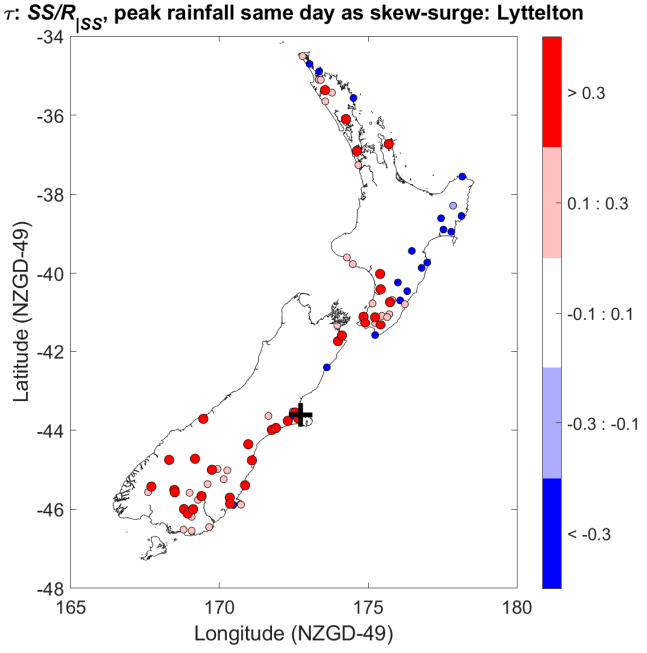
τ: SS/R|SS, peak rainfall same day as skew-surge: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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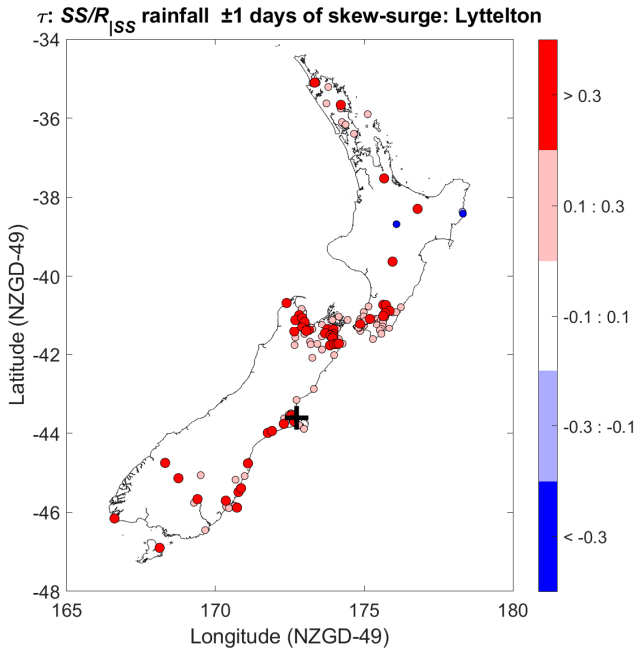
τ: SS/R|SS rainfall ±1 days of skew-surge: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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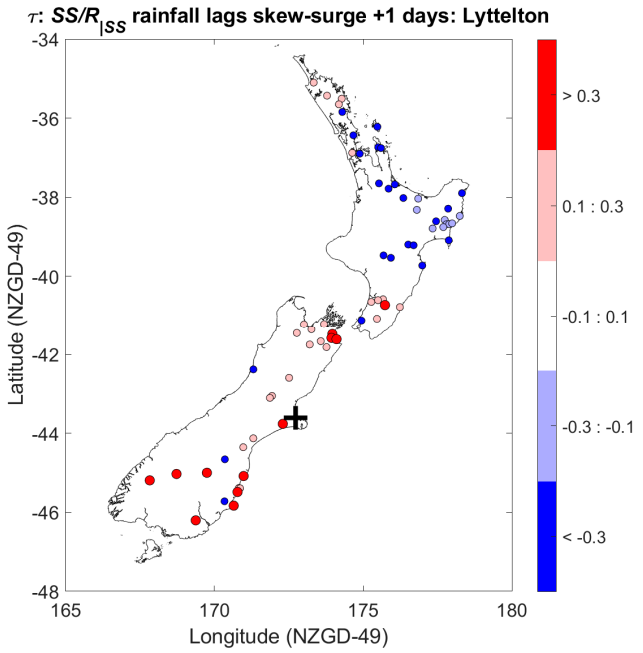
τ: SS/R|SS rainfall lags skew-surge +1 days: Lyttelton
Latitude (NZGD-49)
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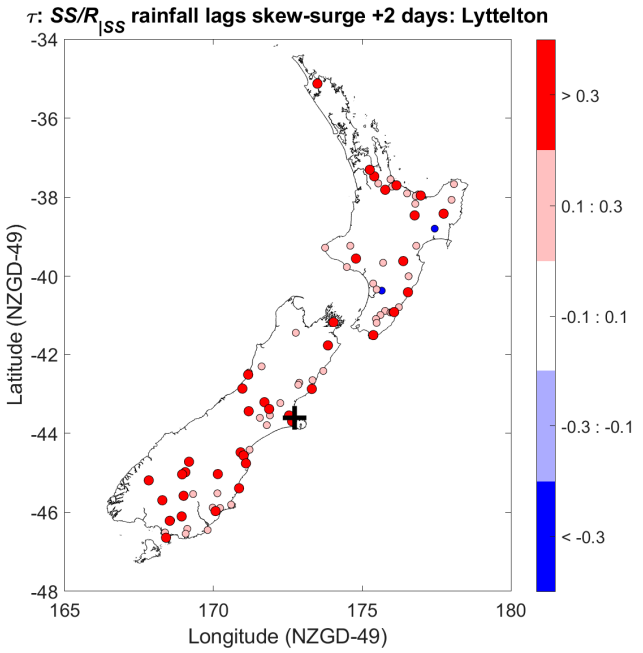
τ: SS/R|SS rainfall lags skew-surge +2 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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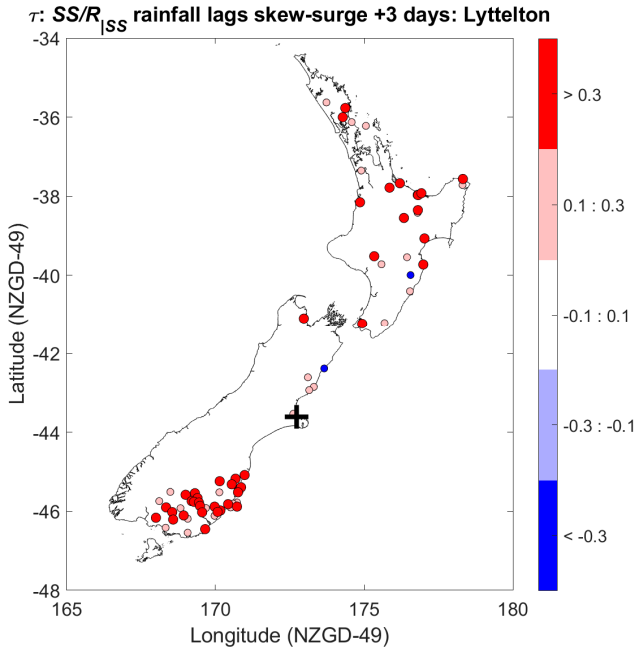
τ: SS/R|SS rainfall lags skew-surge +3 days: Lyttelton
Latitude (NZGD-49)
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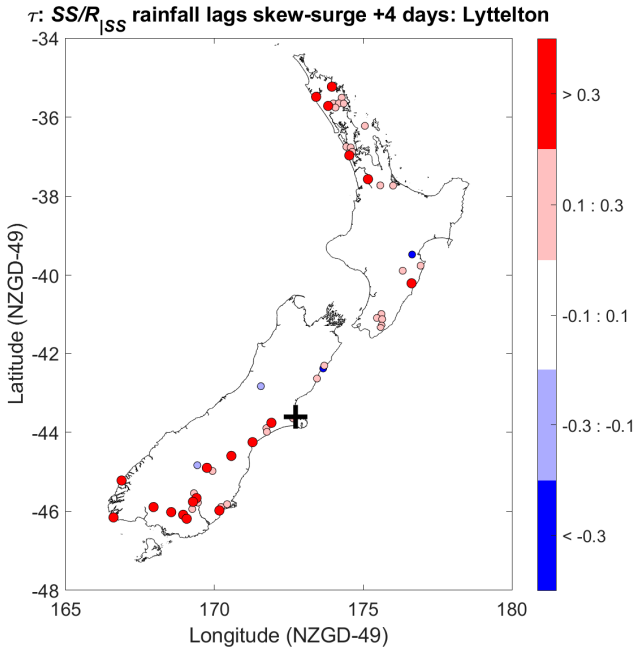
τ: SS/R|SS rainfall lags skew-surge +4 days: Lyttelton
Latitude (NZGD-49)
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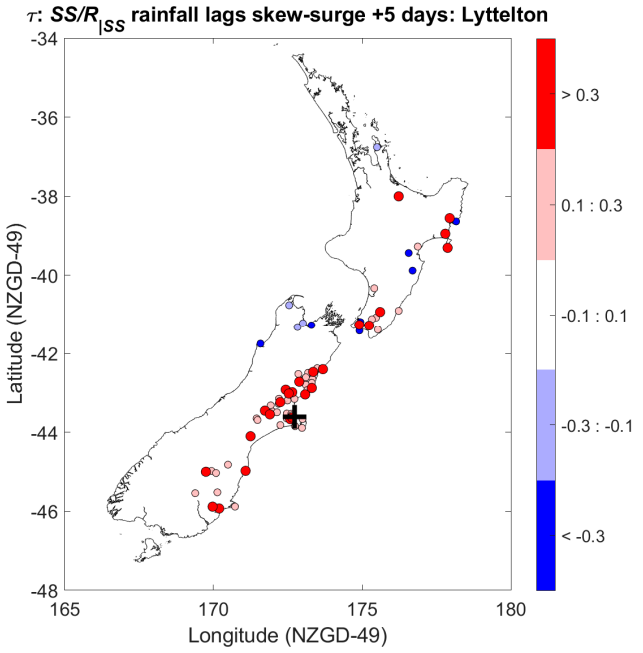
τ: SS/R|SS rainfall lags skew-surge +5 days: Lyttelton
Latitude (NZGD-49)
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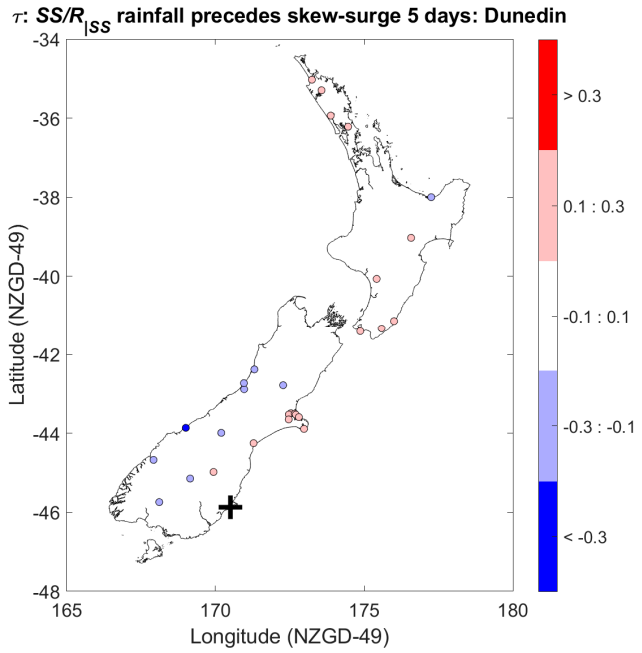
Dunedin


τ: SS/R|SS rainfall precedes skew-surge 5 days: Dunedin
Latitude (NZGD-49)
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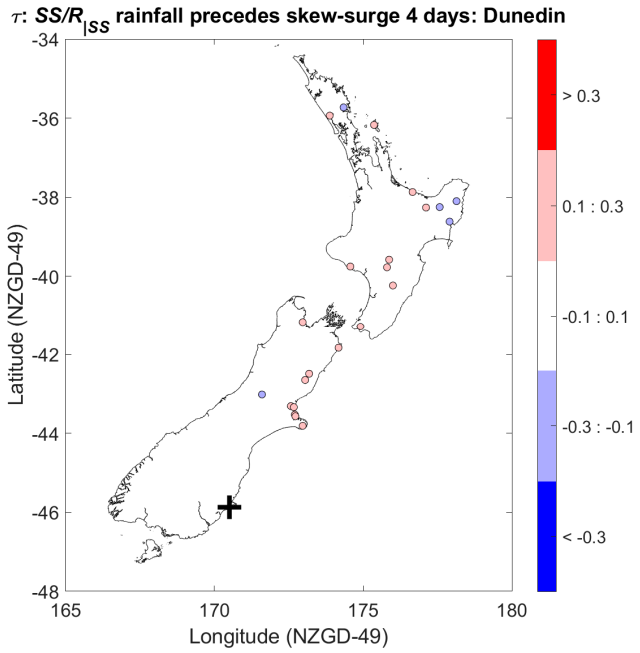
τ: SS/R|SS rainfall precedes skew-surge 4 days: Dunedin
Latitude (NZGD-49)
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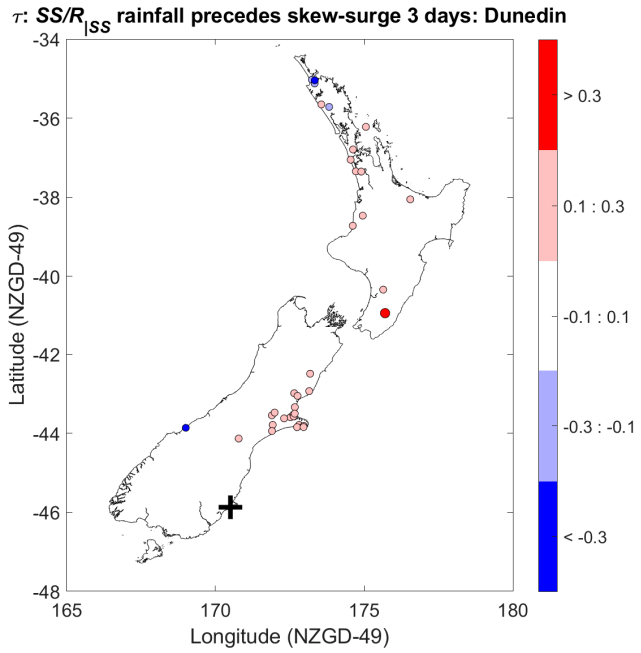
τ: SS/R|SS rainfall precedes skew-surge 3 days: Dunedin
Latitude (NZGD-49)
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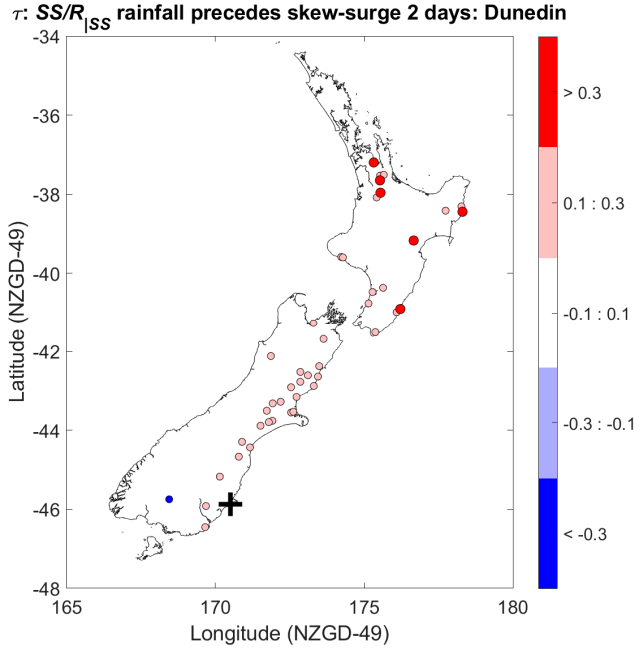
τ: SS/R|SS rainfall precedes skew-surge 2 days: Dunedin
Latitude (NZGD-49)
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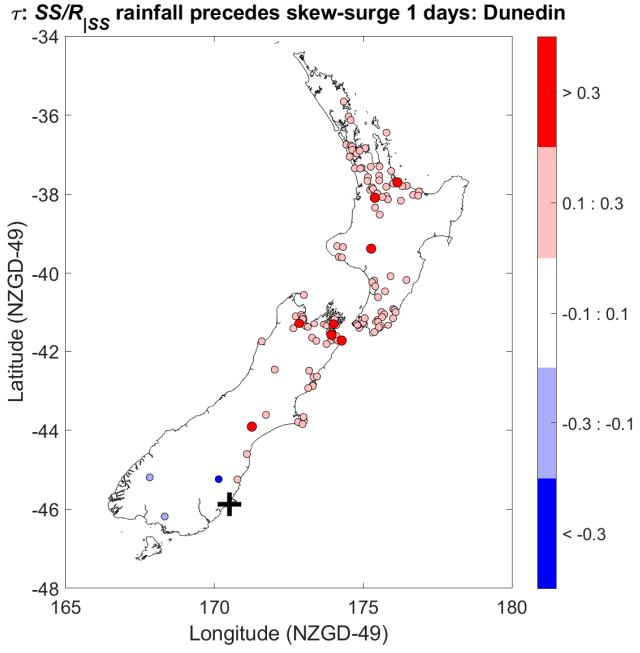
τ: SS/R|SS rainfall precedes skew-surge 1 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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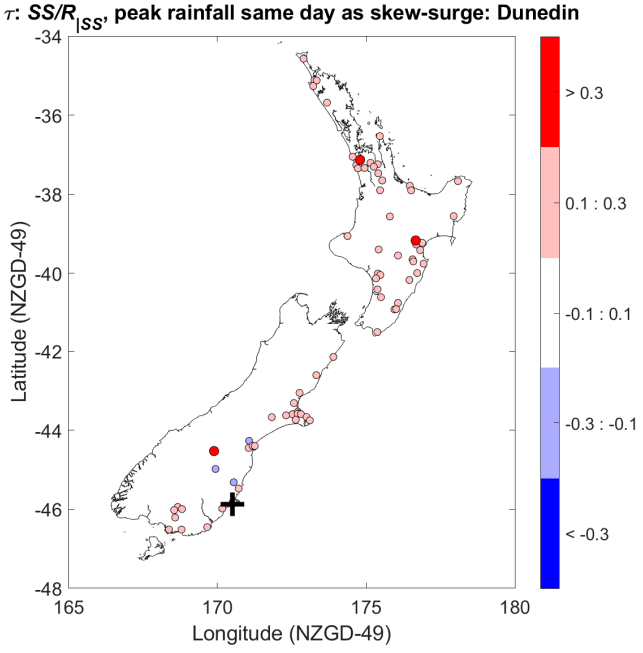
τ: SS/R|SS, peak rainfall same day as skew-surge: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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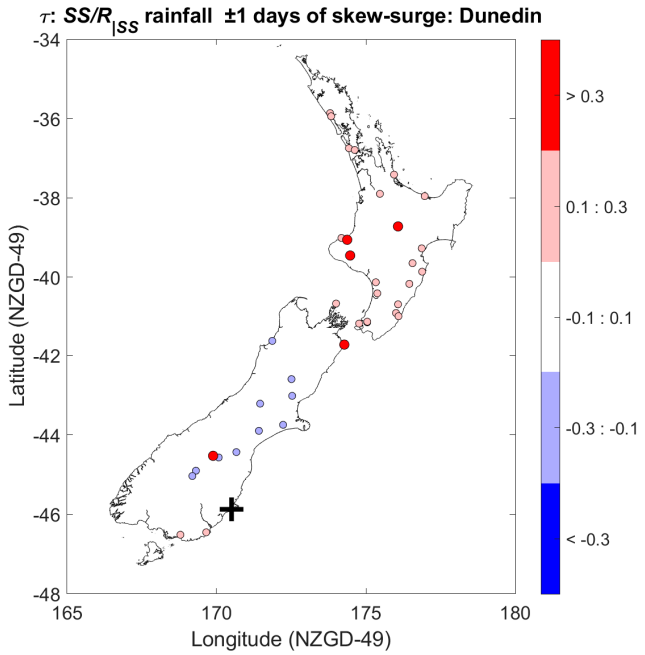
τ: SS/R|SS rainfall ±1 days of skew-surge: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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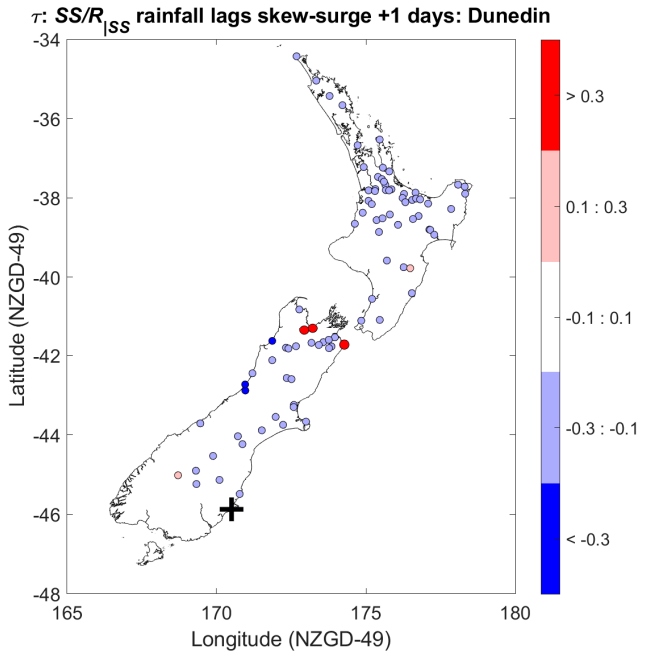
τ: SS/R|SS rainfall lags skew-surge +1 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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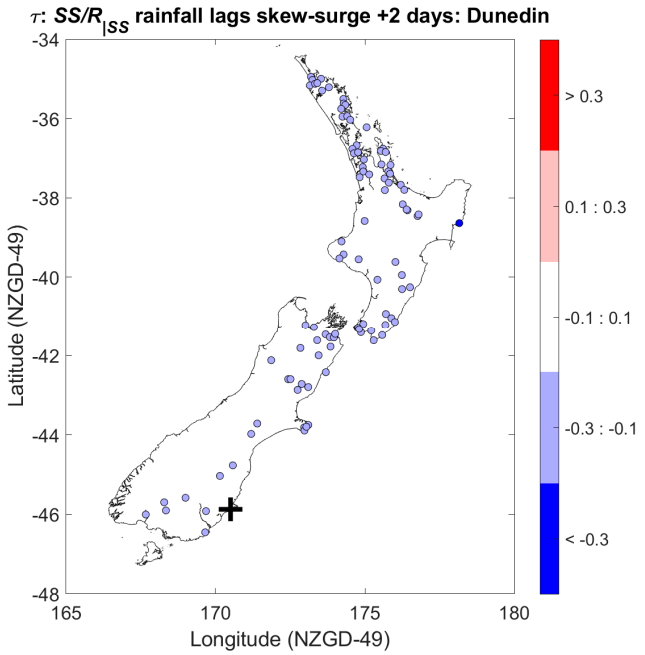
τ: SS/R|SS rainfall lags skew-surge +2 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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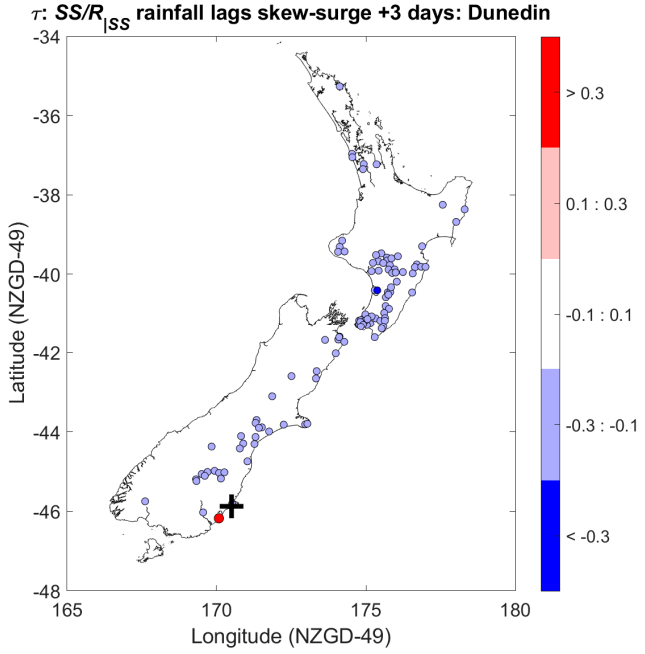
τ: SS/R|SS rainfall lags skew-surge +3 days: Dunedin
Latitude (NZGD-49)
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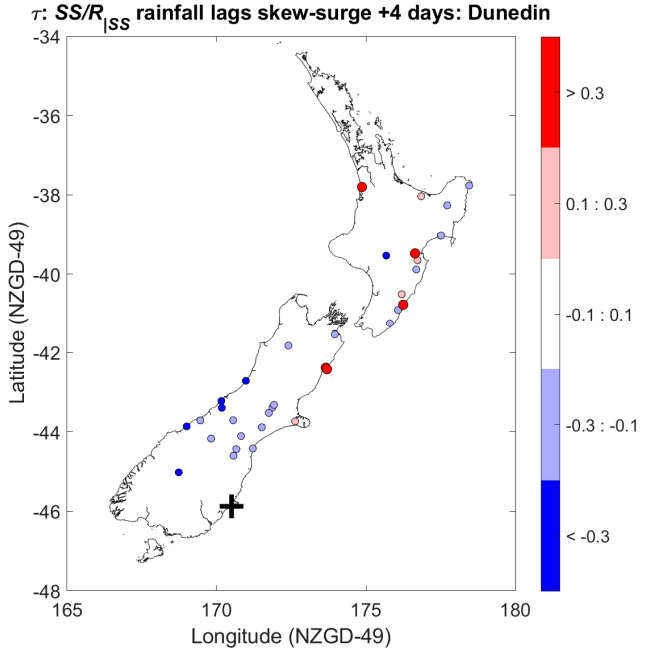
τ: SS/R|SS rainfall lags skew-surge +4 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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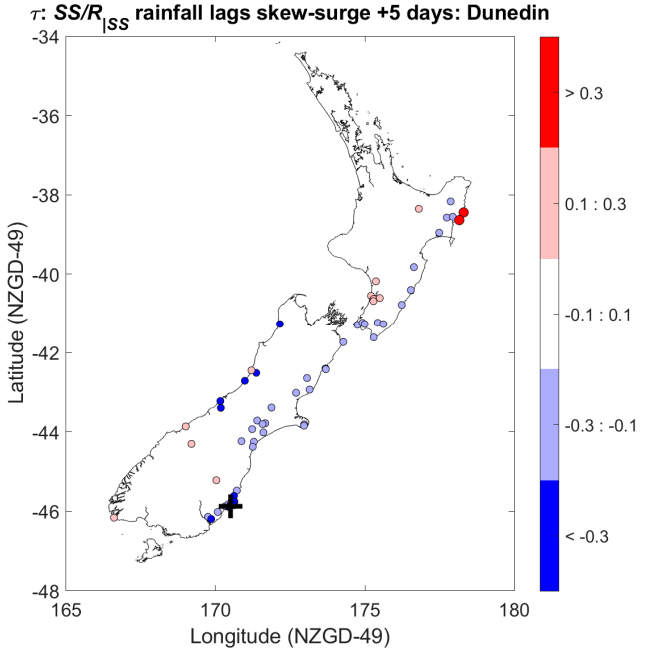
τ: SS/R|SS rainfall lags skew-surge +5 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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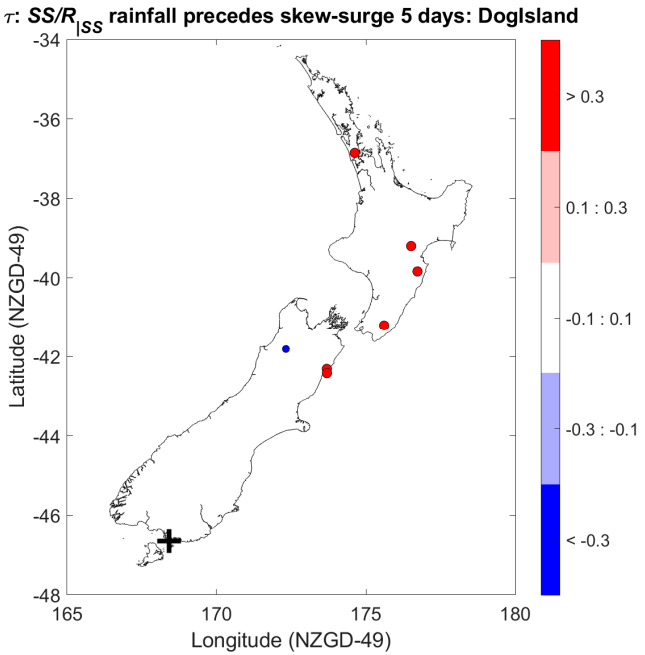
Dog Island


τ: SS/R|SS rainfall precedes skew-surge 5 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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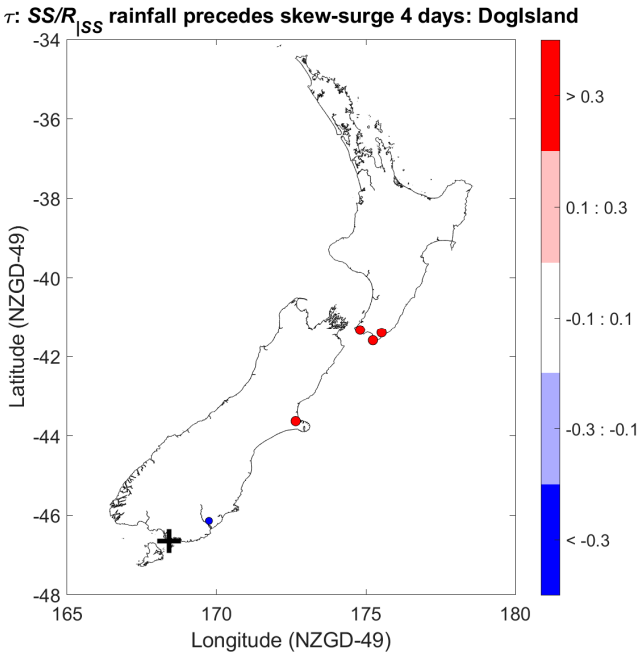
τ: SS/R|SS rainfall precedes skew-surge 4 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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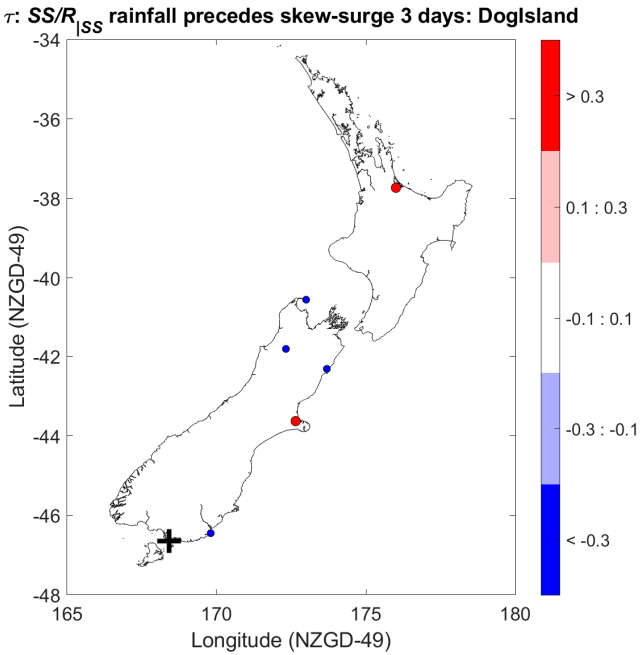
τ: SS/R|SS rainfall precedes skew-surge 3 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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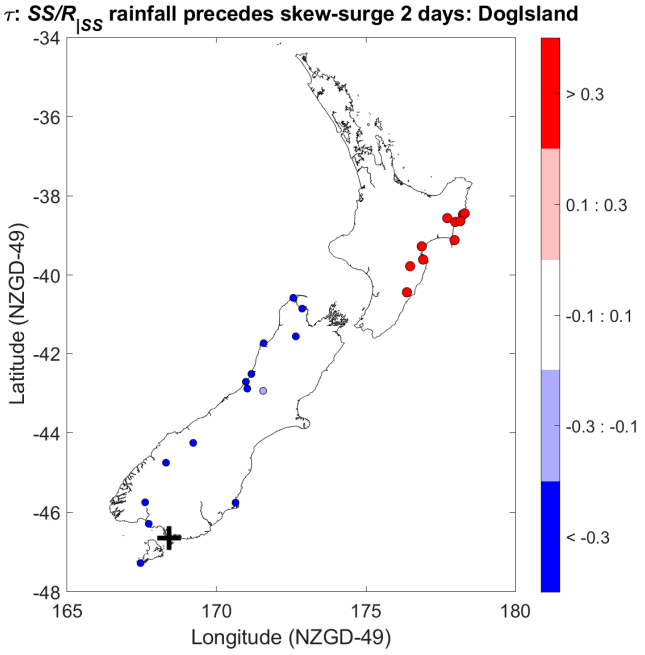
τ: SS/R|SS rainfall precedes skew-surge 2 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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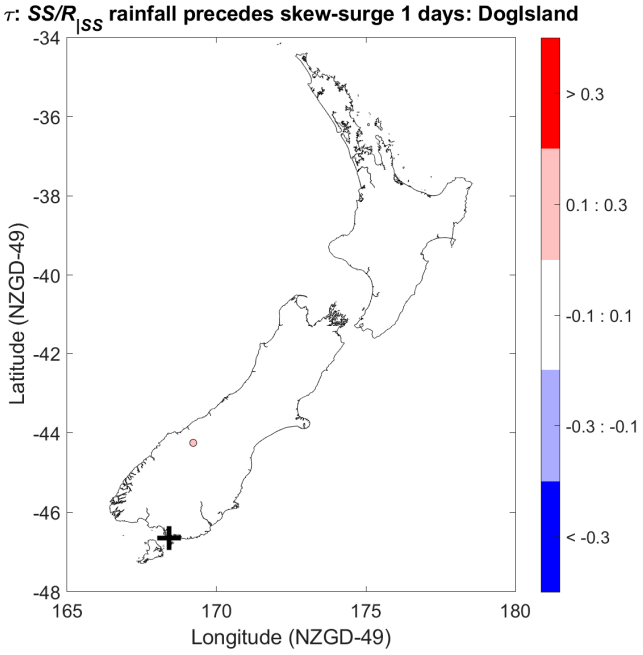
τ: SS/R|SS rainfall precedes skew-surge 1 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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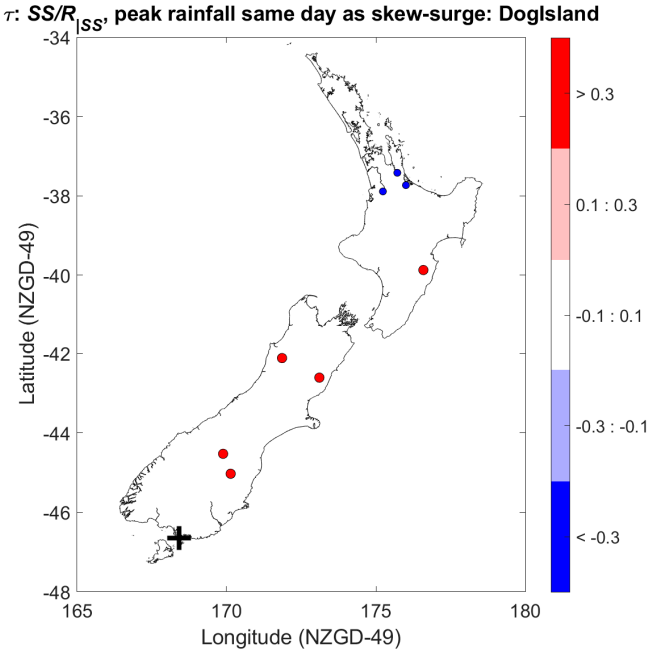
τ: SS/R|SS, peak rainfall same day as skew-surge: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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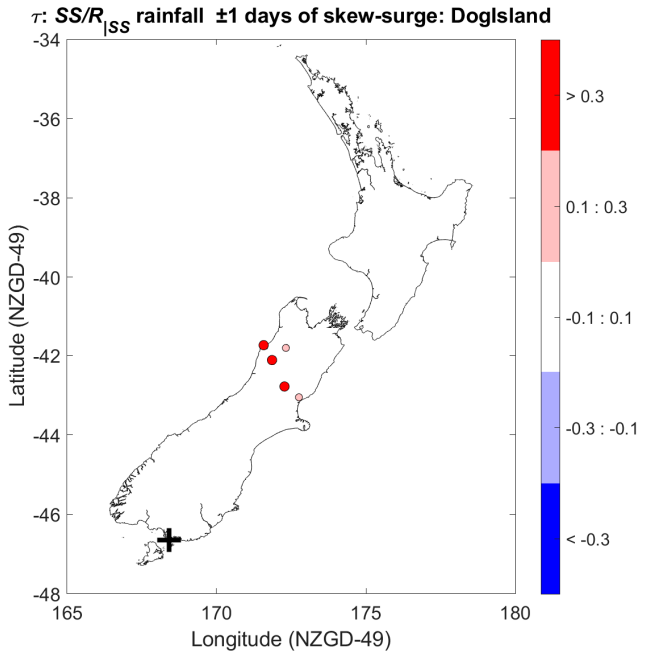
τ: SS/R|SS rainfall ±1 days of skew-surge: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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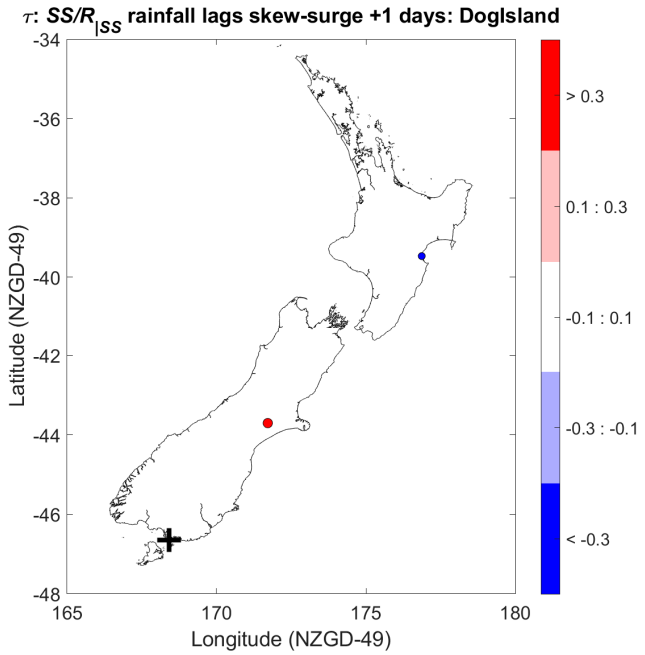
τ: SS/R|SS rainfall lags skew-surge +1 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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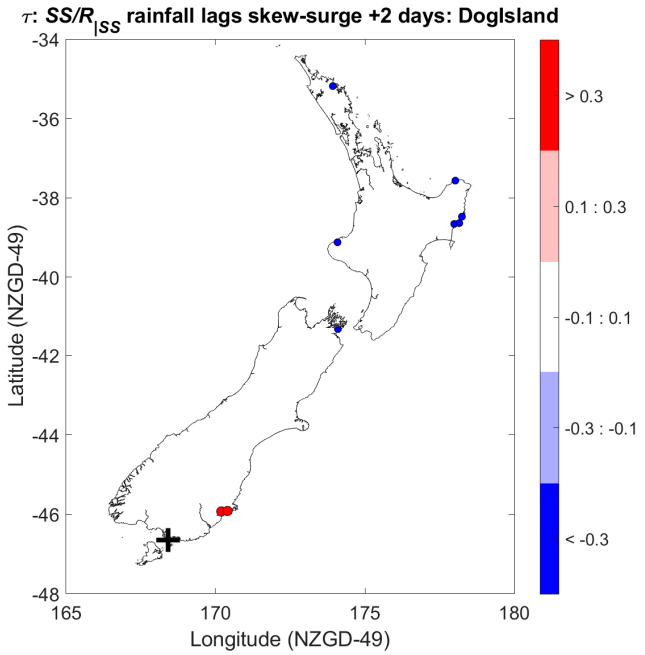
τ: SS/R|SS rainfall lags skew-surge +2 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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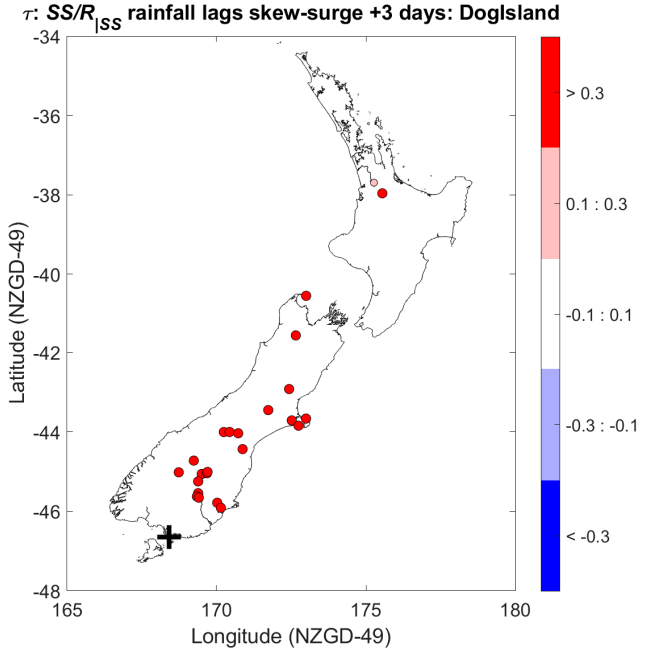
τ: SS/R|SS rainfall lags skew-surge +3 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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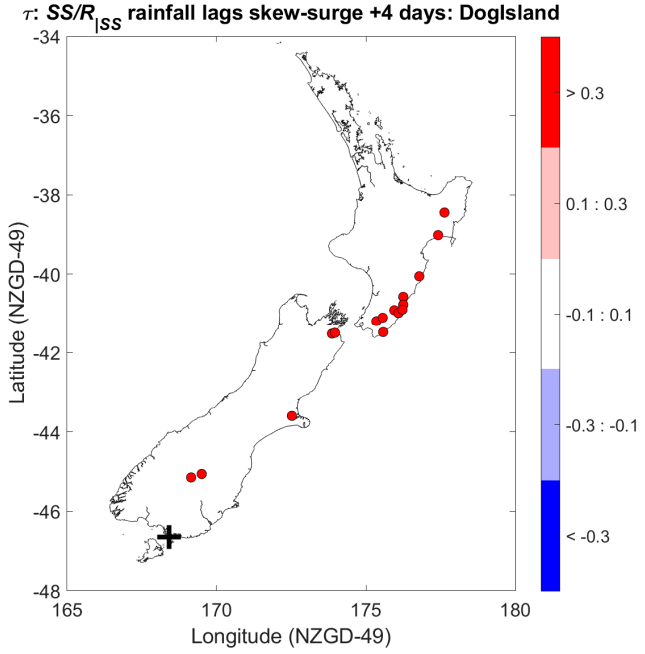
τ: SS/R|SS rainfall lags skew-surge +4 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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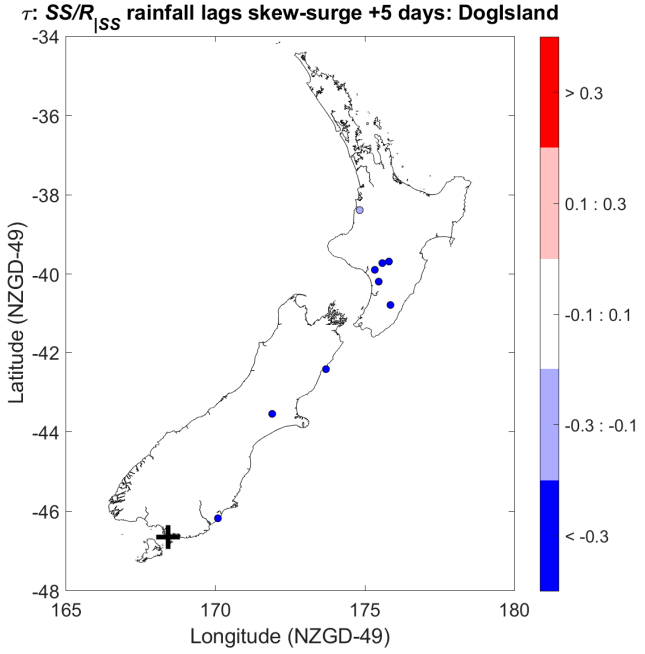
τ: SS/R|SS rainfall lags skew-surge +5 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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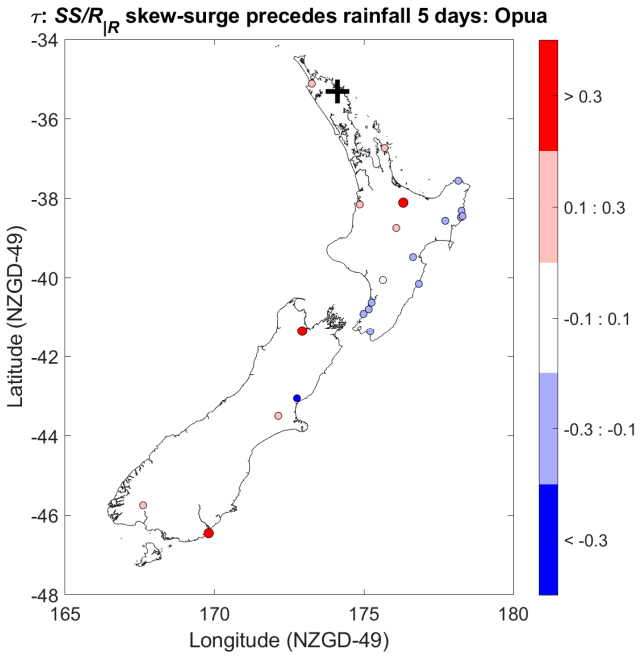
$SS/R_{|R}$ —skew-surge dependent on extreme rainfall

Positive lags mean that the skew-surge was experienced after the rainfall and *vice versa*.

Opua


τ: SS/R|R skew-surge precedes rainfall 5 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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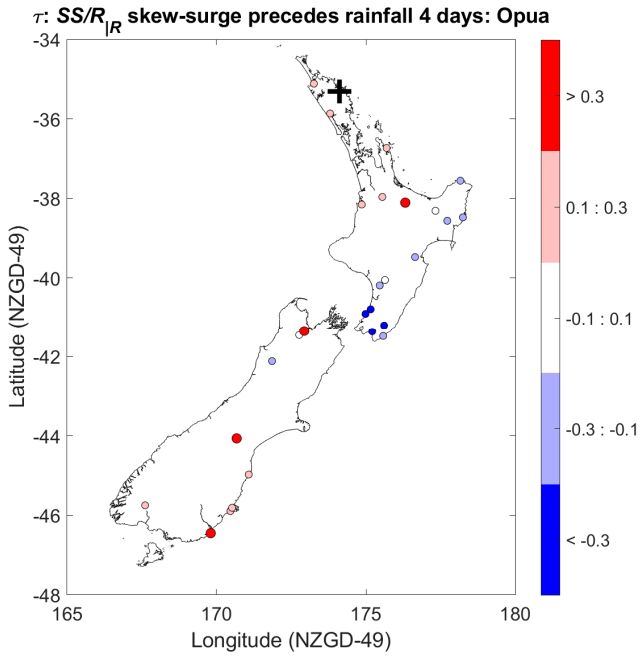
τ: SS/R|R skew-surge precedes rainfall 4 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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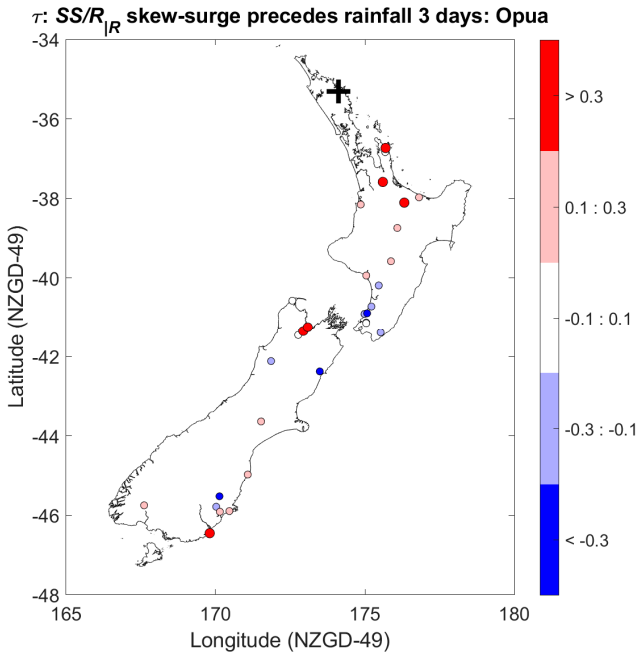
τ: SS/R|R skew-surge precedes rainfall 3 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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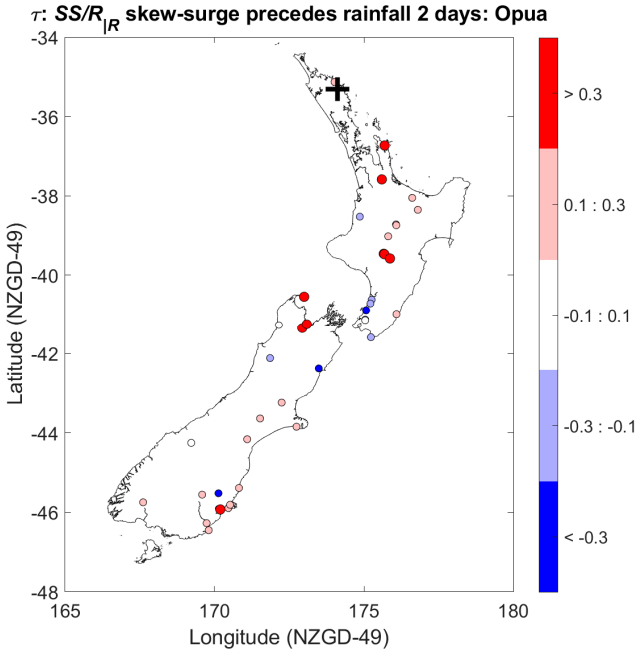
τ: SS/R|R skew-surge precedes rainfall 2 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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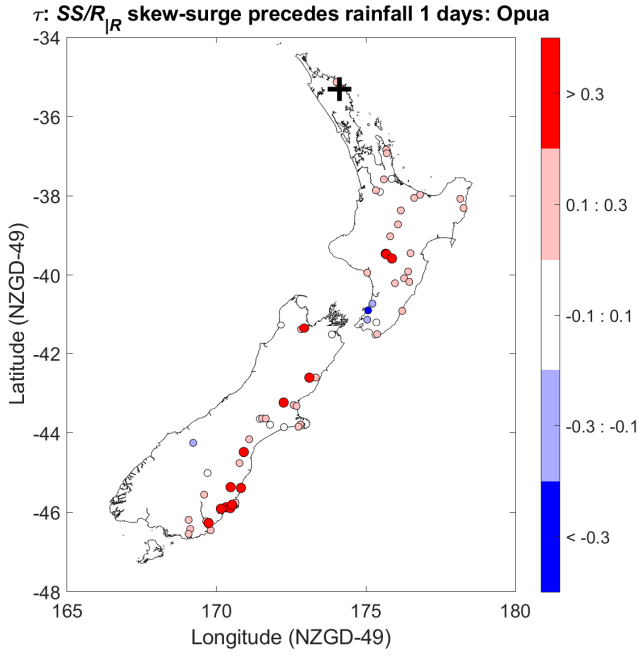
τ: SS/R|R skew-surge precedes rainfall 1 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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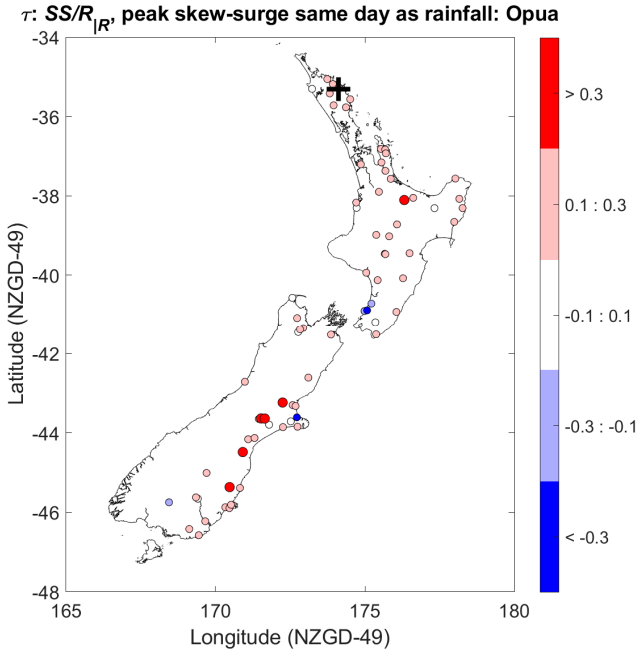
τ: SS/R|R, peak skew-surge same day as rainfall: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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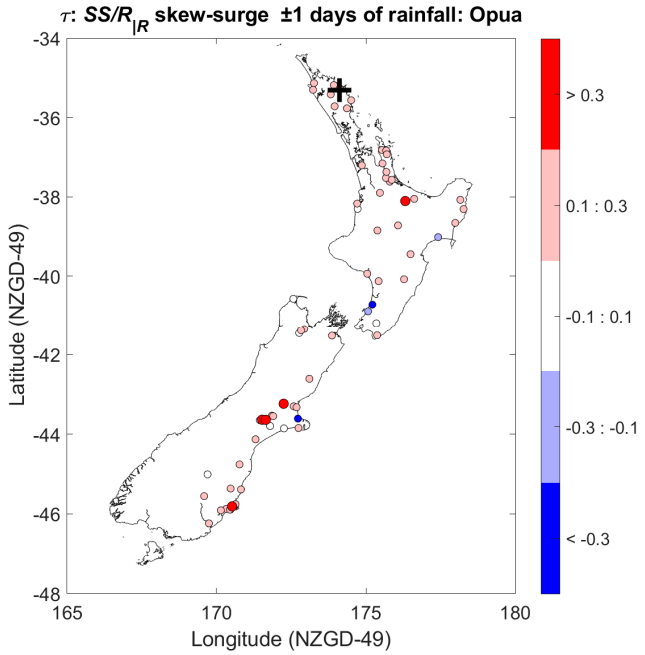
τ: SS/R|R skew-surge ±1 days of rainfall: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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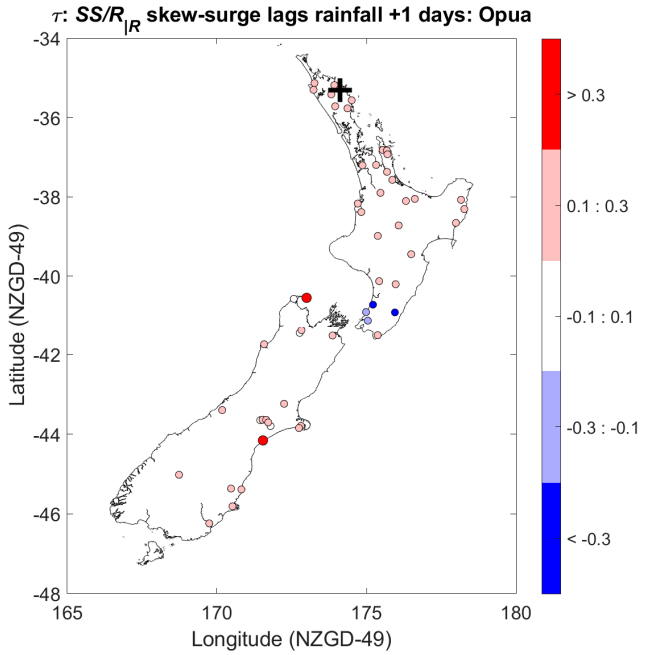
τ: SS/R|R skew-surge lags rainfall +1 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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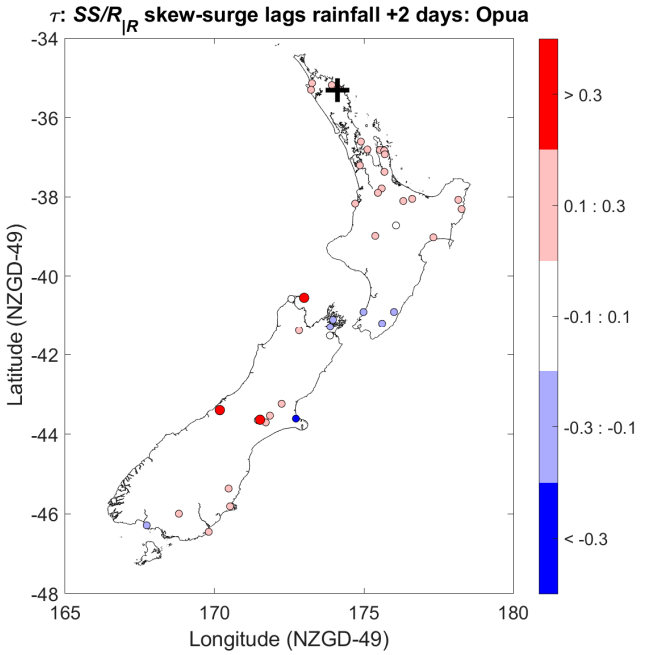
τ: SS/R|R skew-surge lags rainfall +2 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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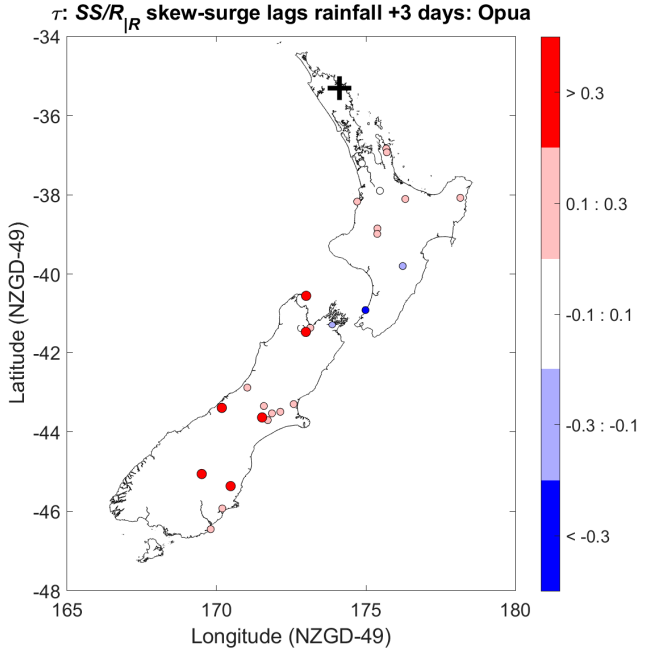
τ: SS/R|R skew-surge lags rainfall +3 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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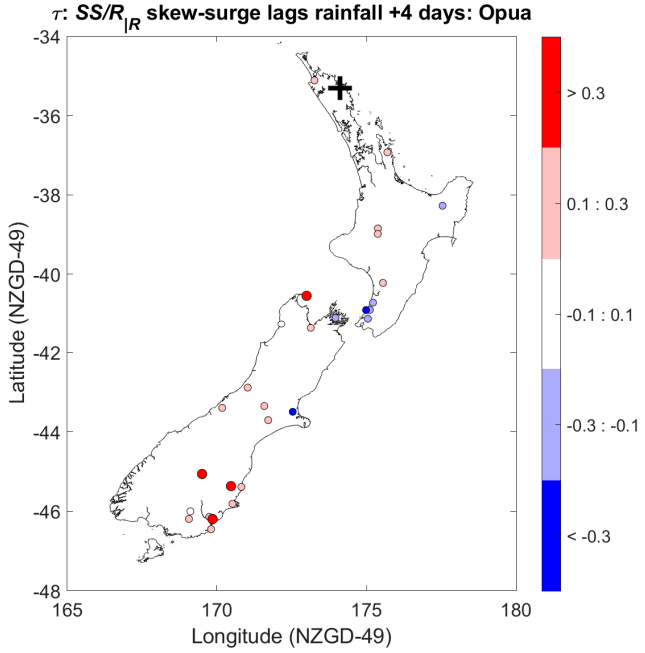
τ: SS/R|R skew-surge lags rainfall +4 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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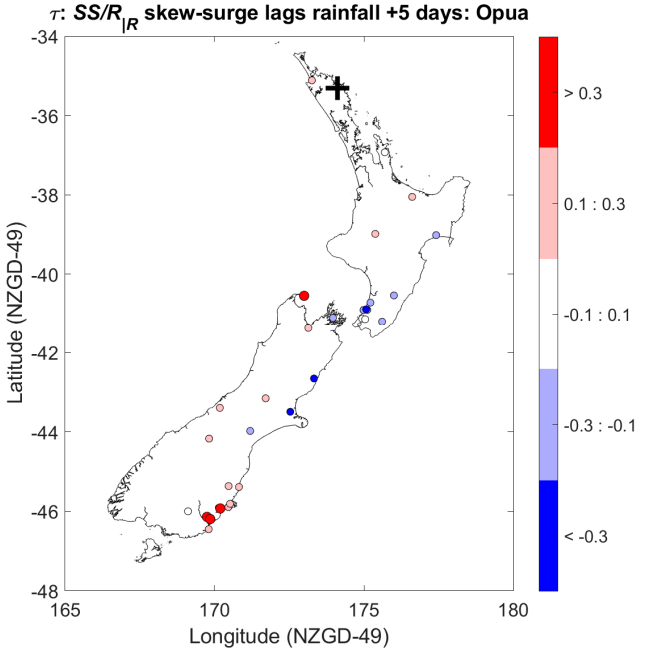
τ: SS/R|R skew-surge lags rainfall +5 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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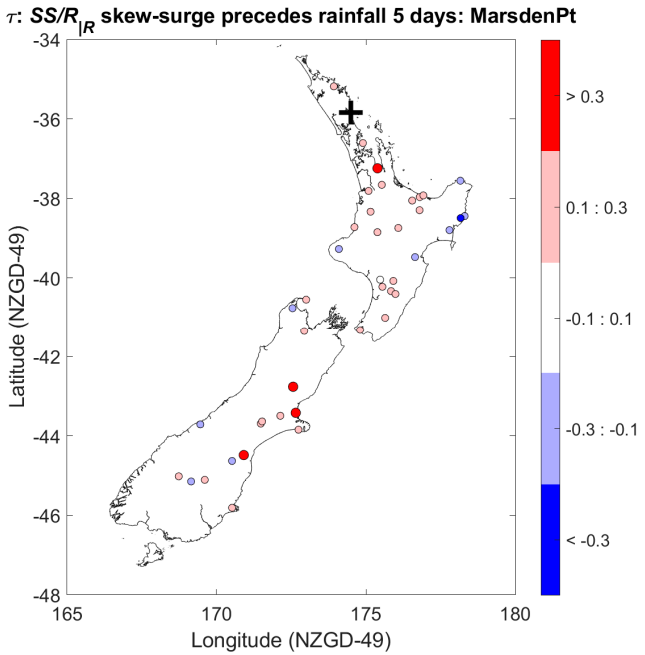
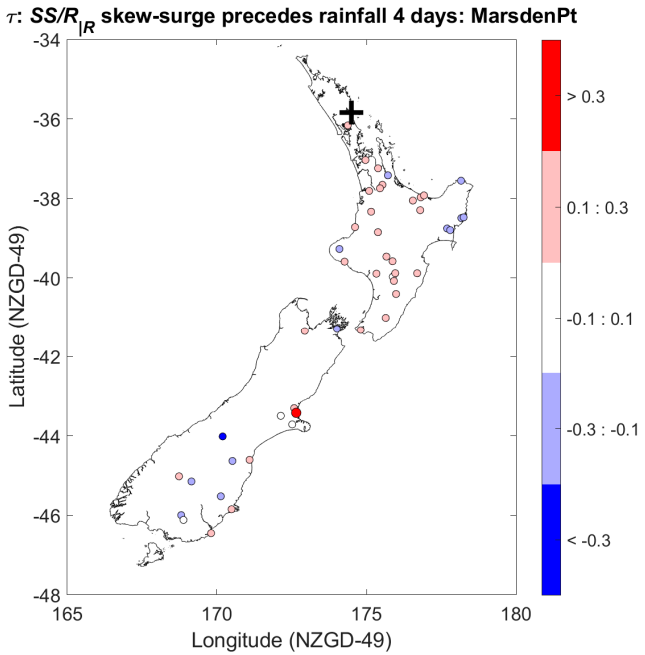
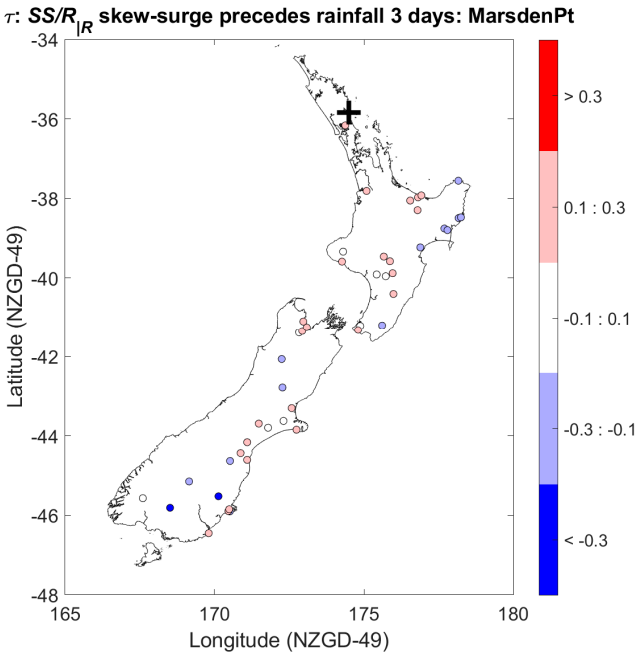
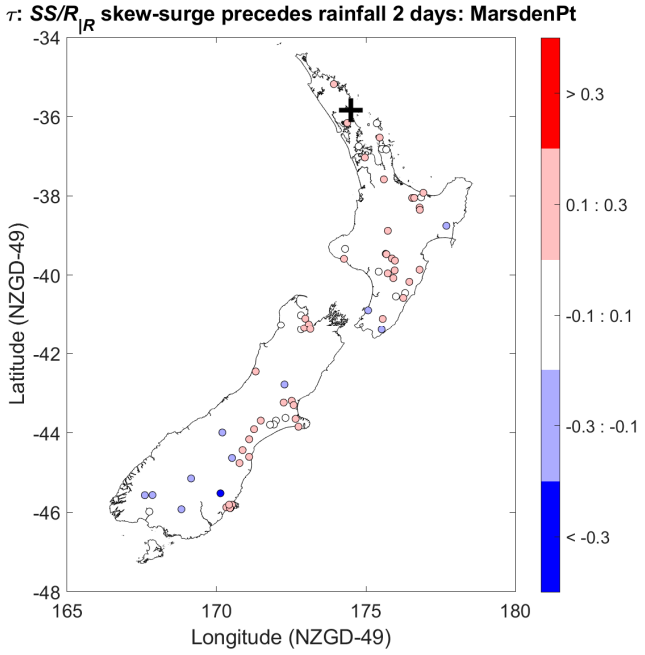
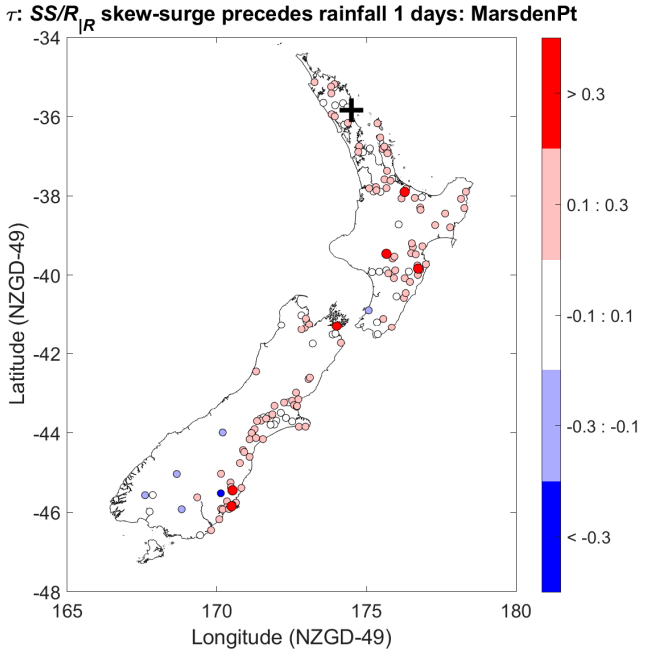
Marsden Point

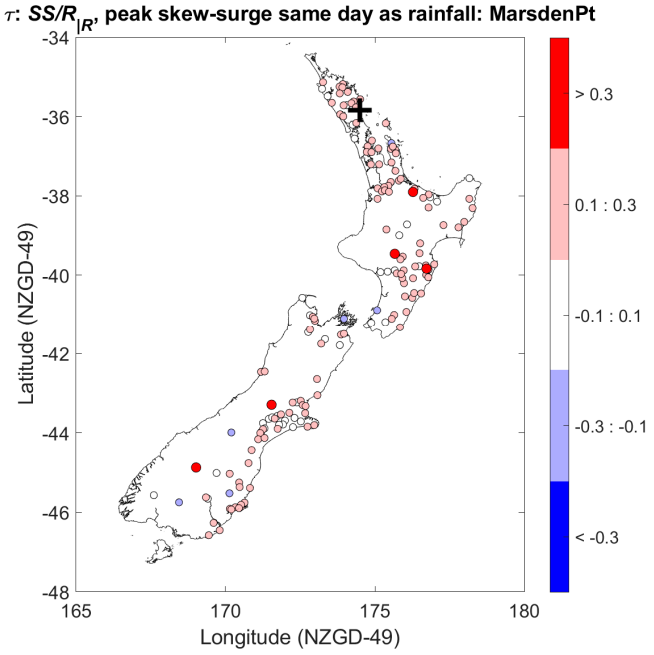


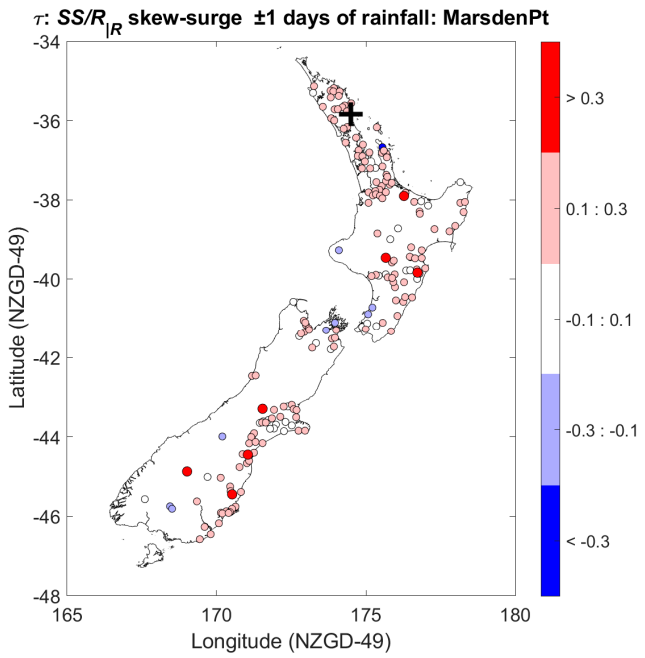











τ: SS/R|R skew-surge ±1 days of rainfall: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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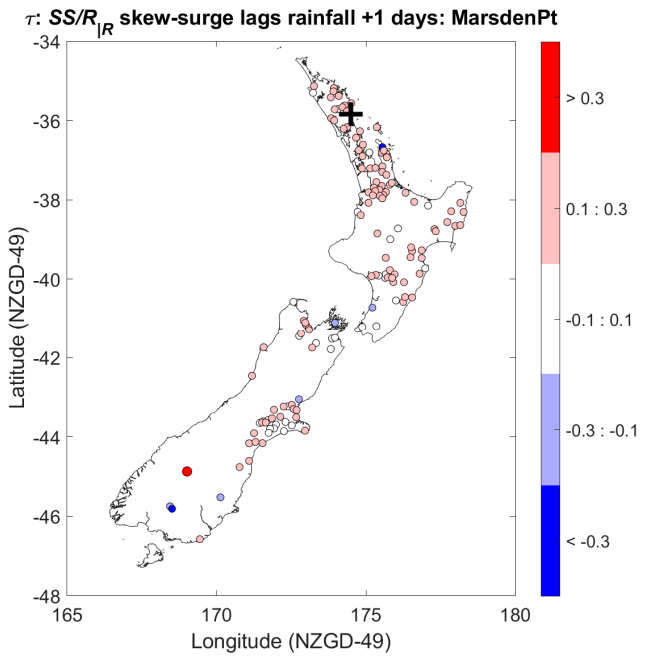
τ: SS/R|R skew-surge lags rainfall +1 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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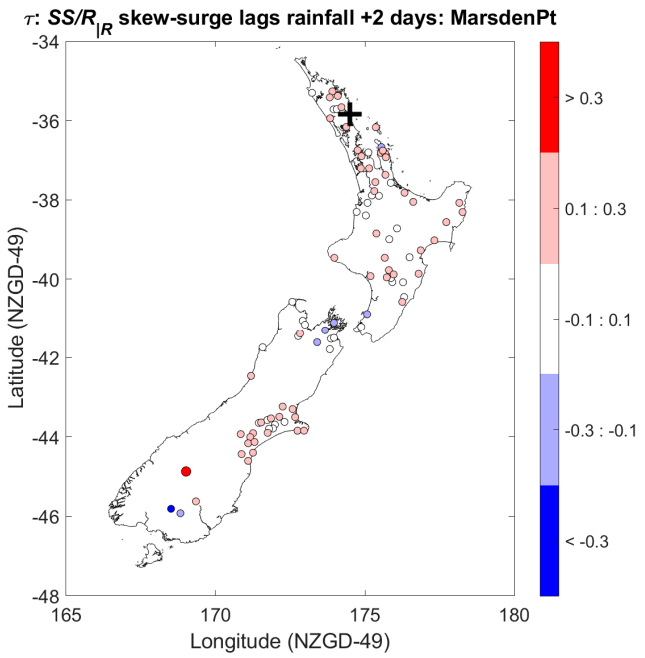
τ: SS/R|R skew-surge lags rainfall +2 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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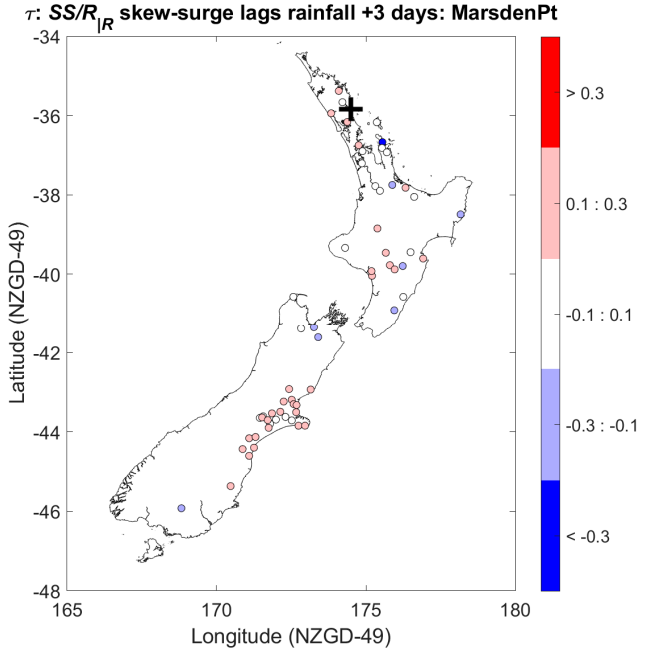
τ: SS/R|R skew-surge lags rainfall +3 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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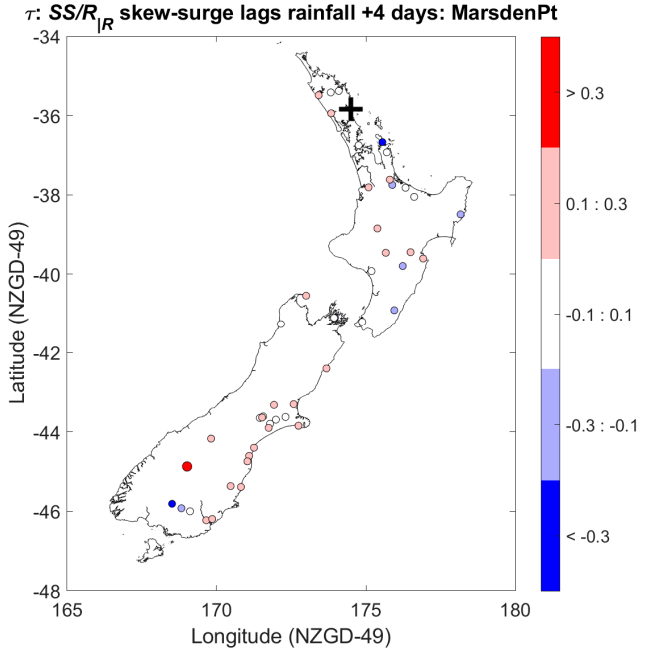
τ: SS/R|R skew-surge lags rainfall +4 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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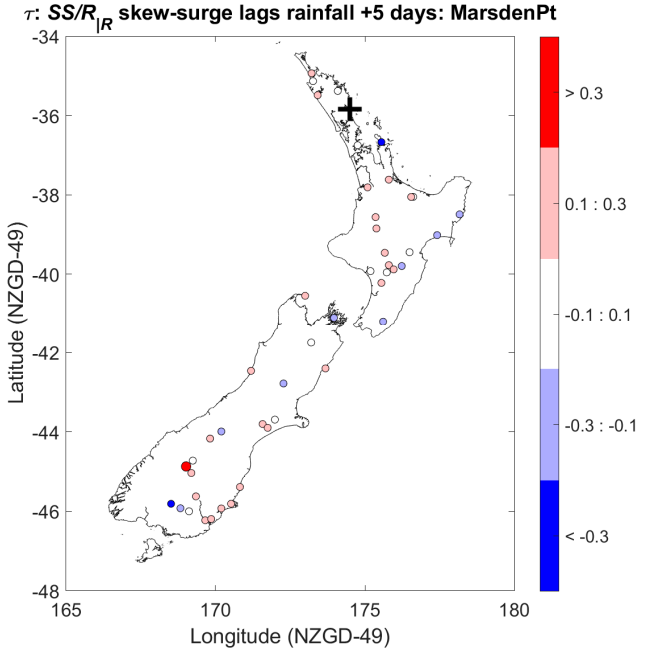
τ: SS/R|R skew-surge lags rainfall +5 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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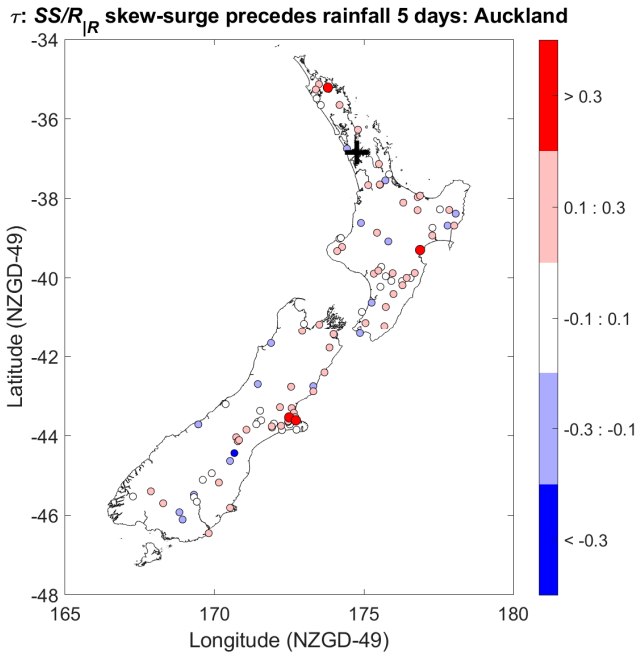
Auckland


τ: SS/R|R skew-surge precedes rainfall 5 days: Auckland
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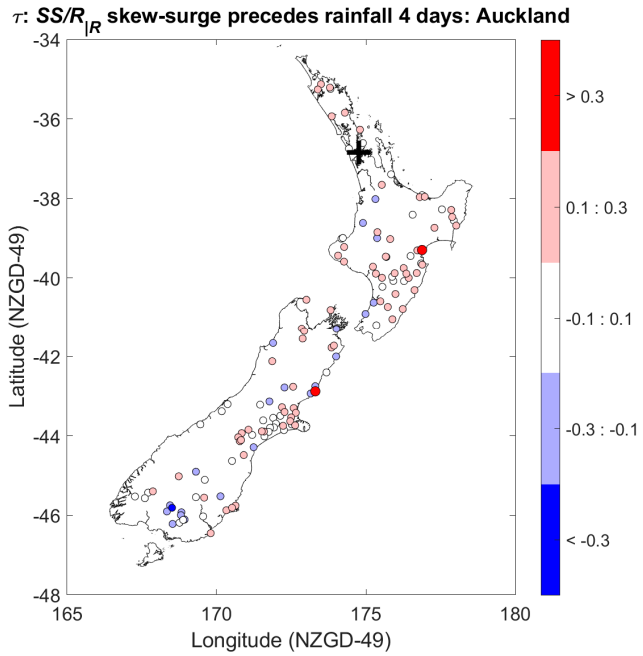
τ: SS/R|R skew-surge precedes rainfall 4 days: Auckland
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Longitude (NZGD-49)
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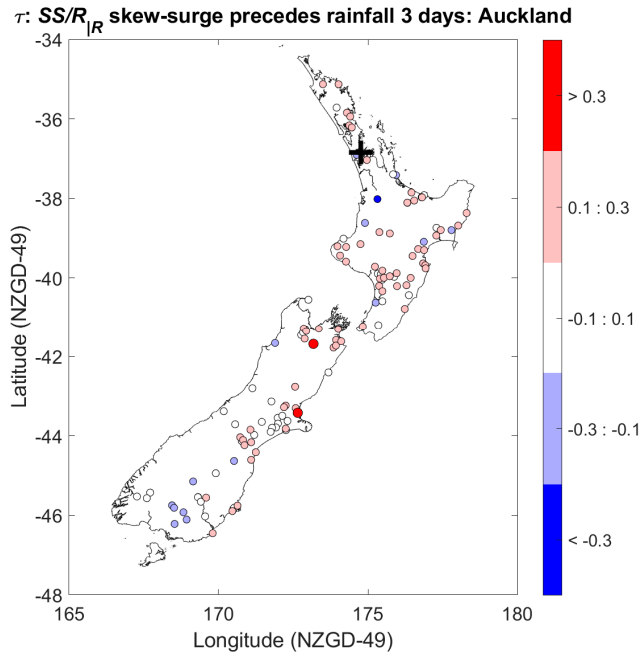
τ: SS/R|R skew-surge precedes rainfall 3 days: Auckland
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Latitude (NZGD-49)
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Longitude (NZGD-49)
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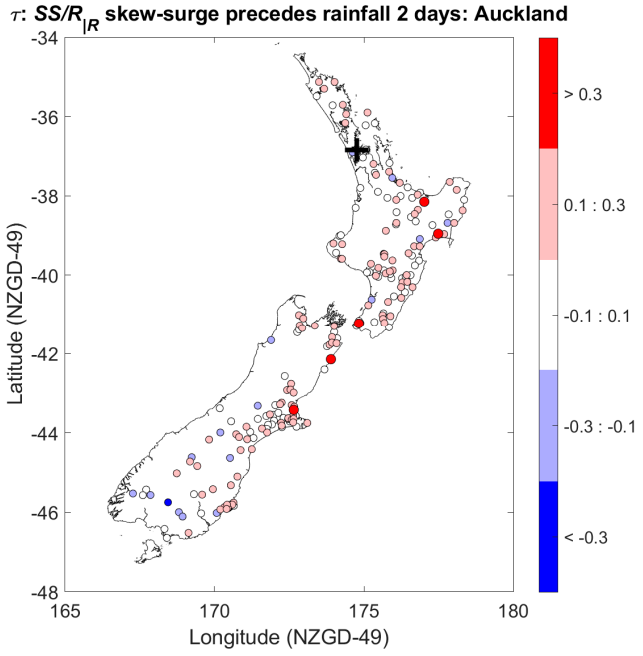
τ: SS/R|R skew-surge precedes rainfall 2 days: Auckland
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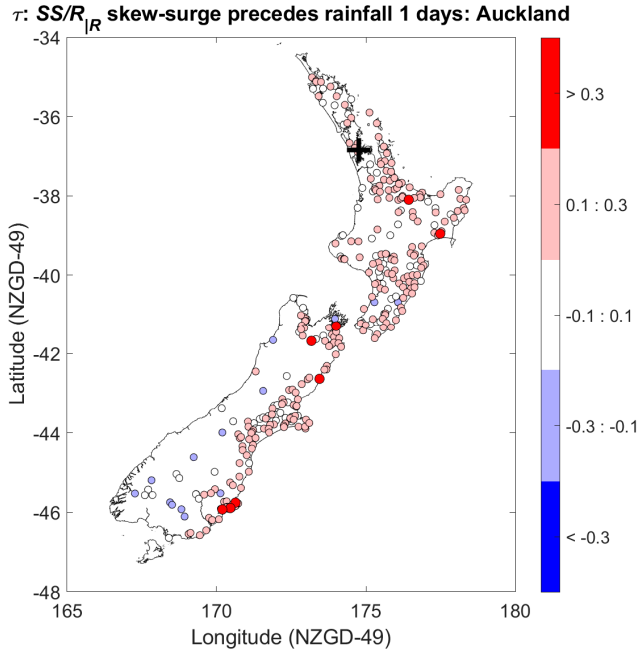
τ: SS/R|R skew-surge precedes rainfall 1 days: Auckland
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Latitude (NZGD-49)
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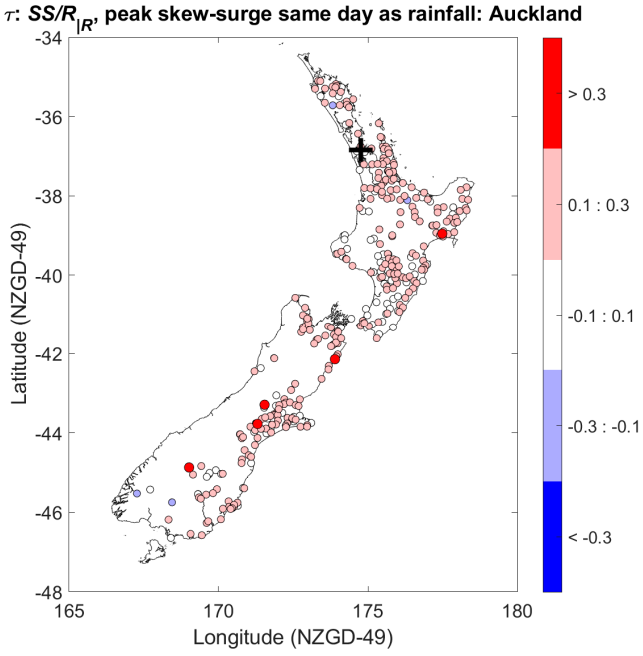
τ: SS/R|R, peak skew-surge same day as rainfall: Auckland
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Latitude (NZGD-49)
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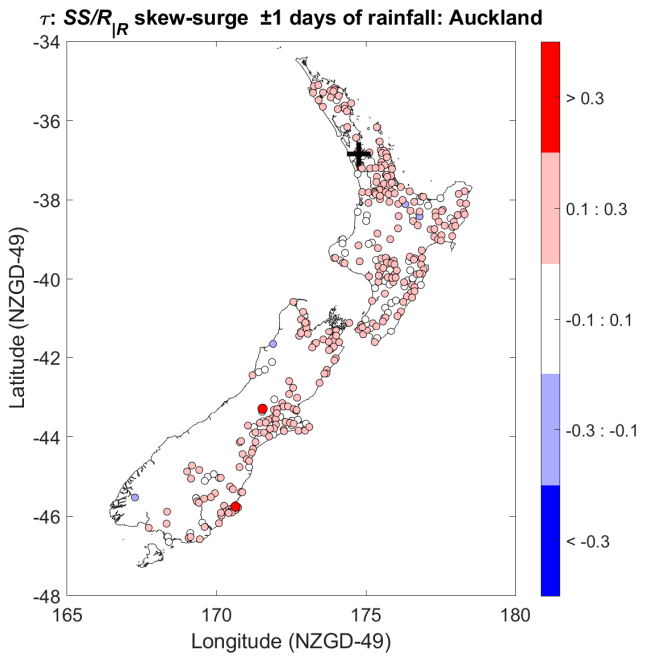
τ: SS/R|R skew-surge ±1 days of rainfall: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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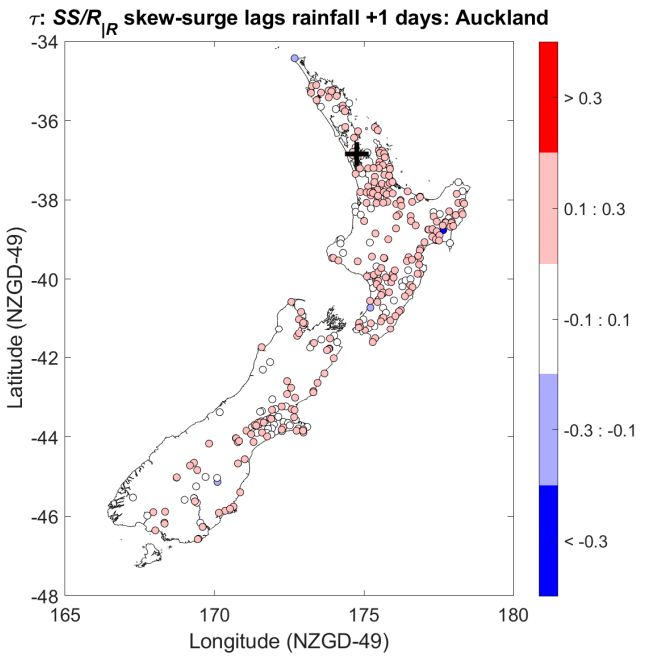
τ: SS/R|R skew-surge lags rainfall +1 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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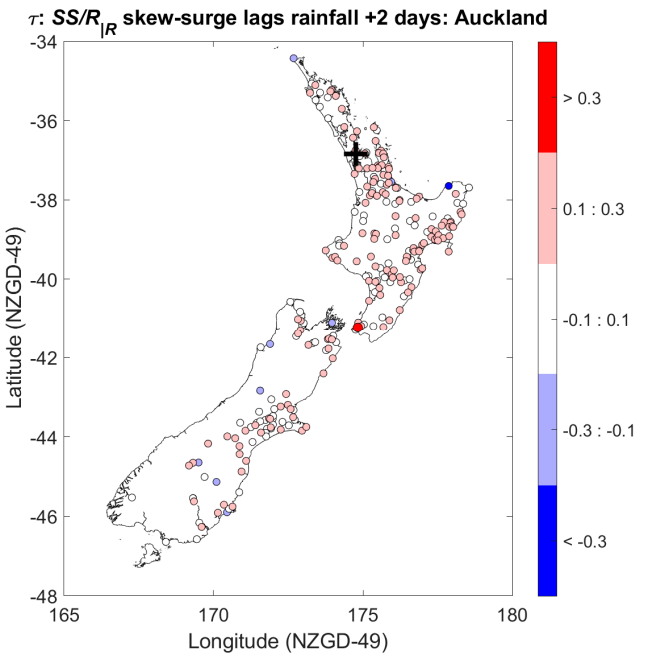
τ: SS/R|R skew-surge lags rainfall +2 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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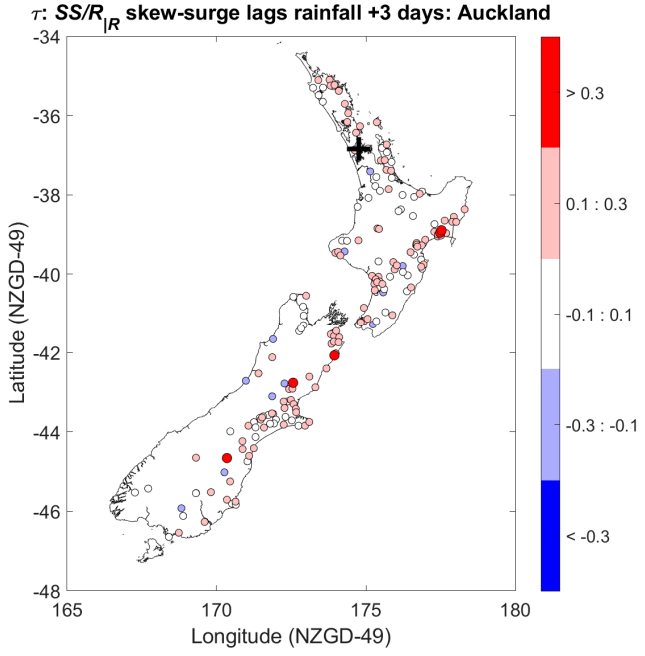
τ: SS/R|R skew-surge lags rainfall +3 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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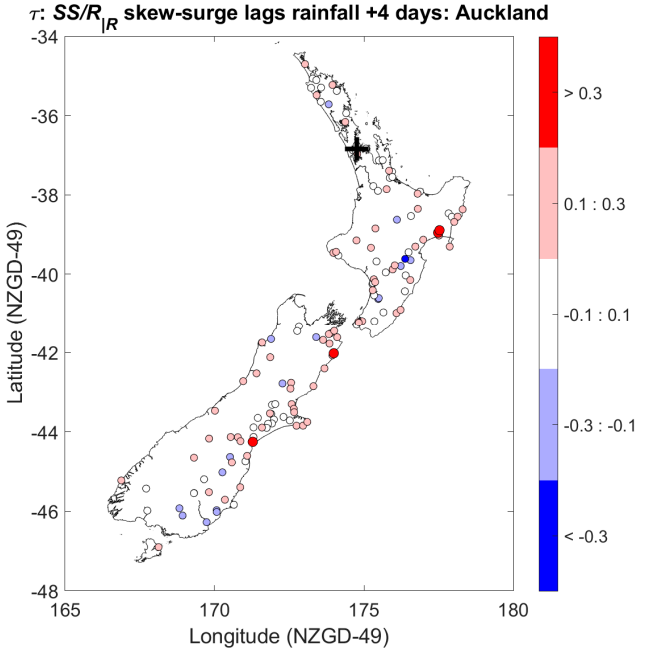
τ: SS/R|R skew-surge lags rainfall +4 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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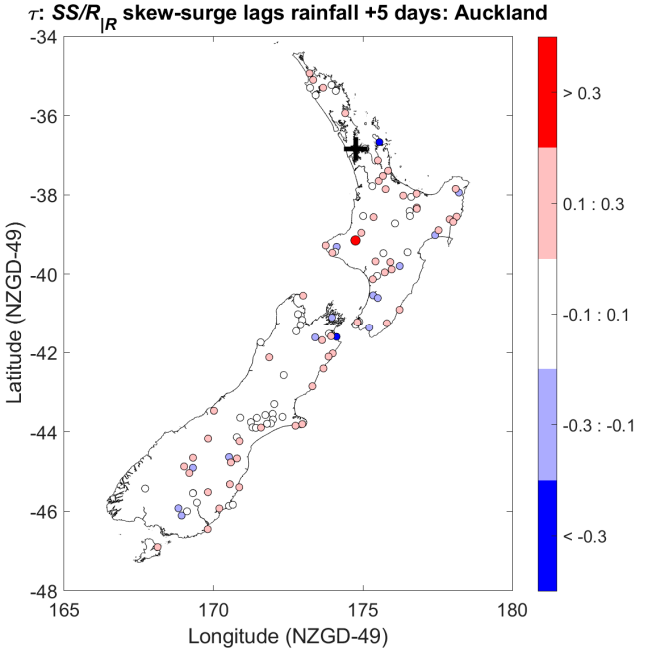
τ: SS/R|R skew-surge lags rainfall +5 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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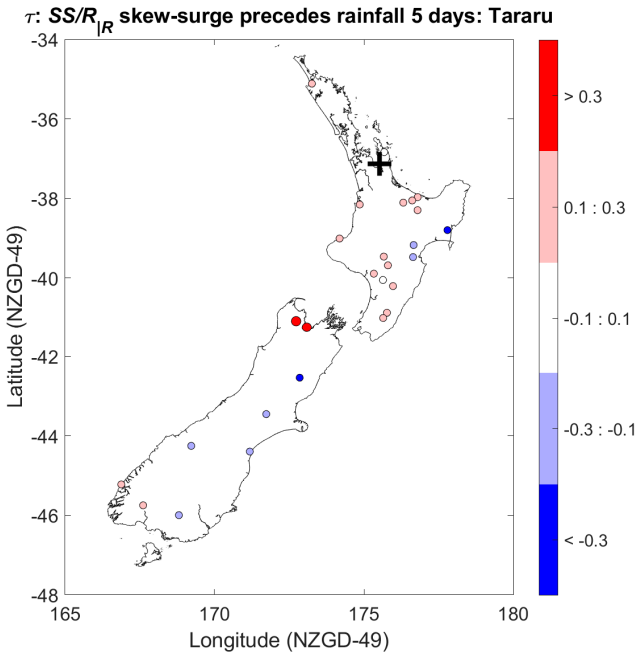
Tararu


τ: SS/R|R skew-surge precedes rainfall 5 days: Tararu
Latitude (NZGD-49)
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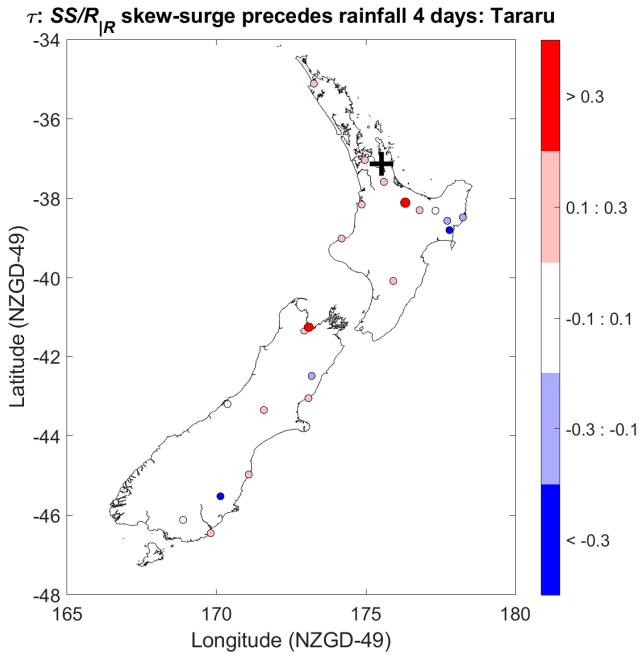
τ: SS/R|R skew-surge precedes rainfall 4 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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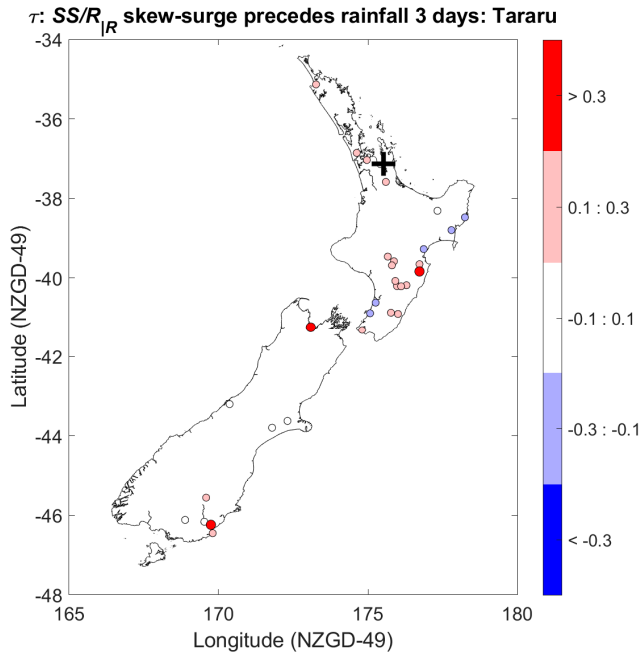
τ: SS/R|R skew-surge precedes rainfall 3 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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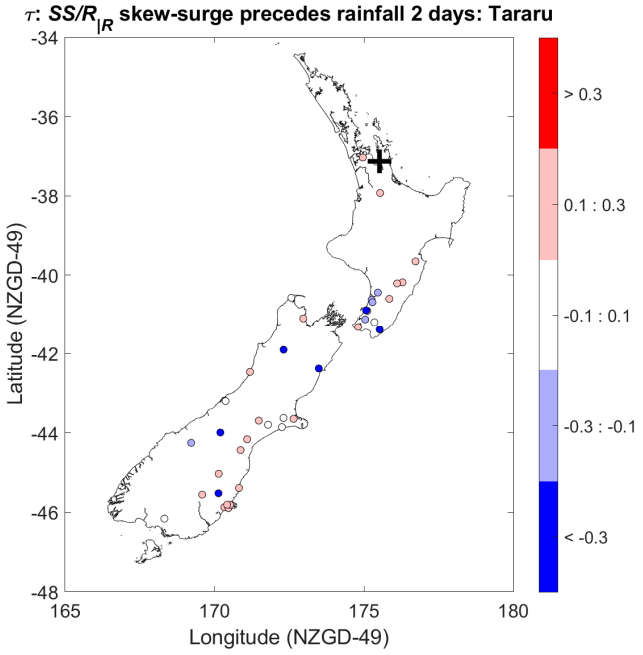
τ: SS/R|R skew-surge precedes rainfall 2 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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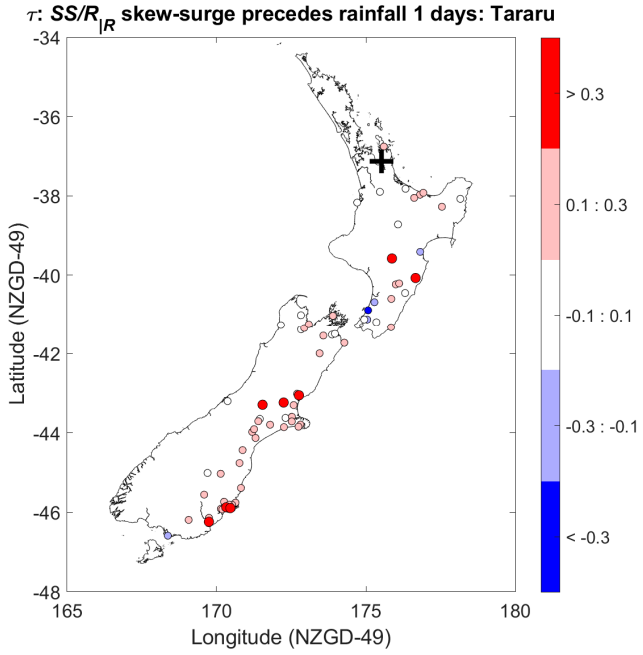
τ: SS/R|R skew-surge precedes rainfall 1 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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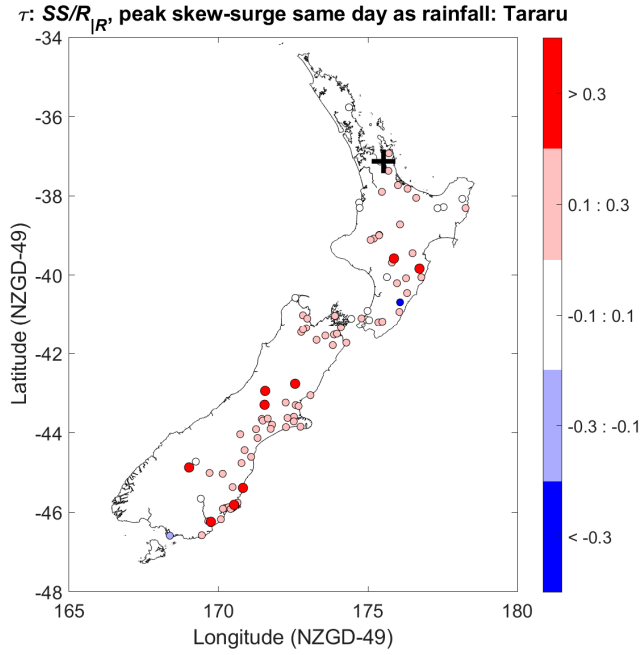
τ: SS/R|R, peak skew-surge same day as rainfall: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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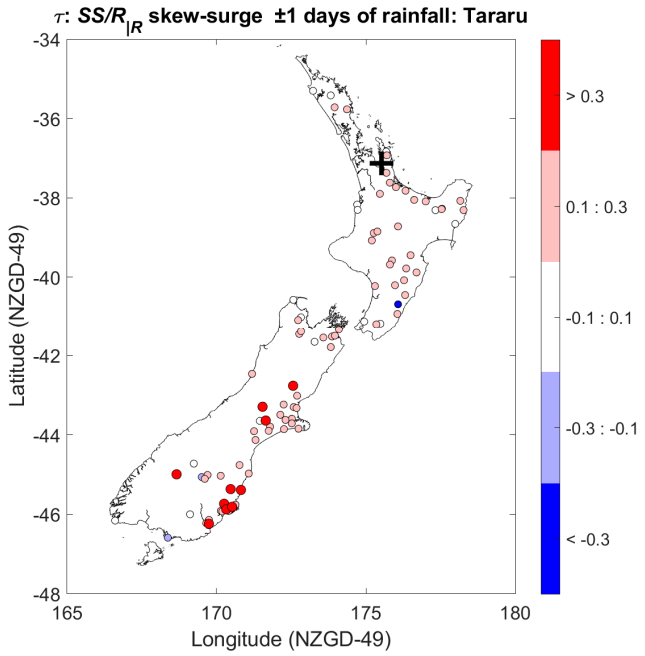
τ: SS/R|R skew-surge ±1 days of rainfall: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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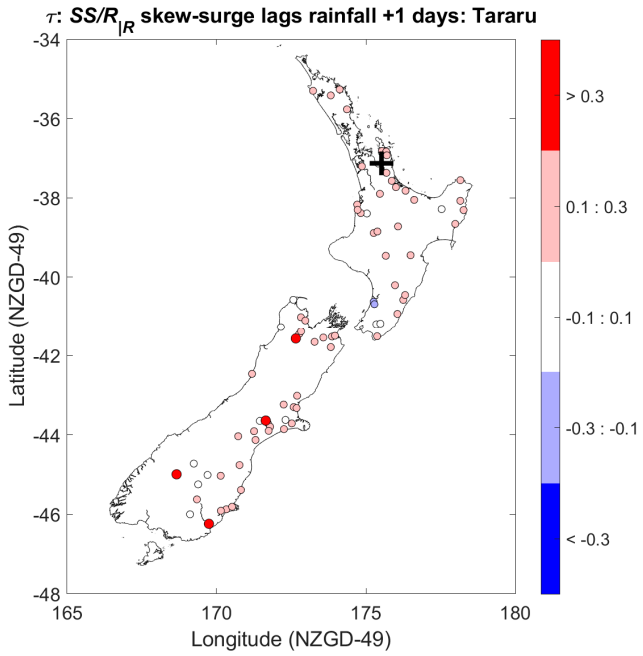
τ: SS/R|R skew-surge lags rainfall +1 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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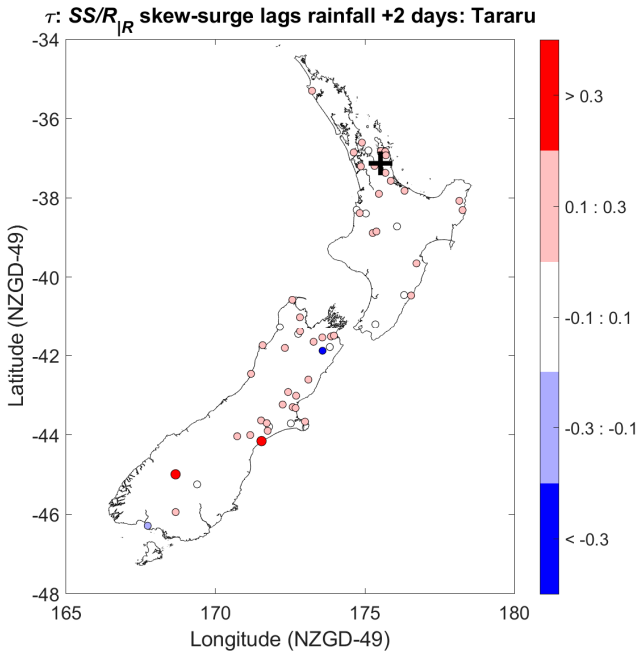
τ: SS/R|R skew-surge lags rainfall +2 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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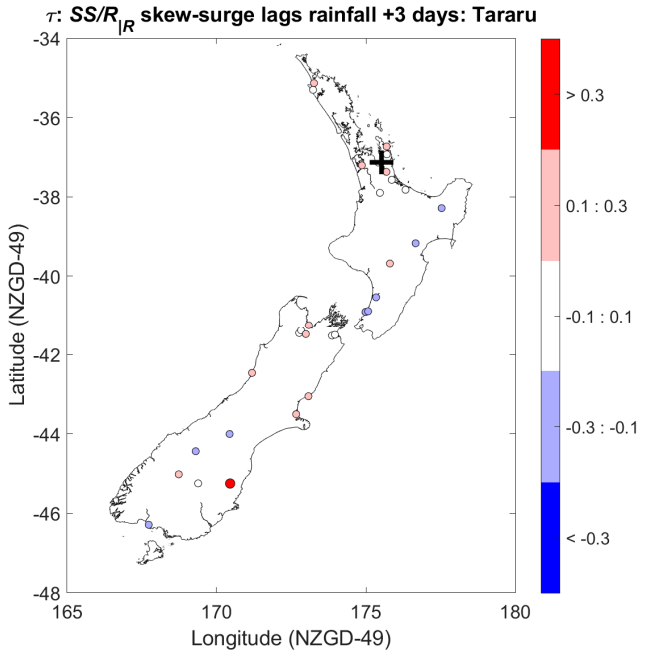
τ: SS/R|R skew-surge lags rainfall +3 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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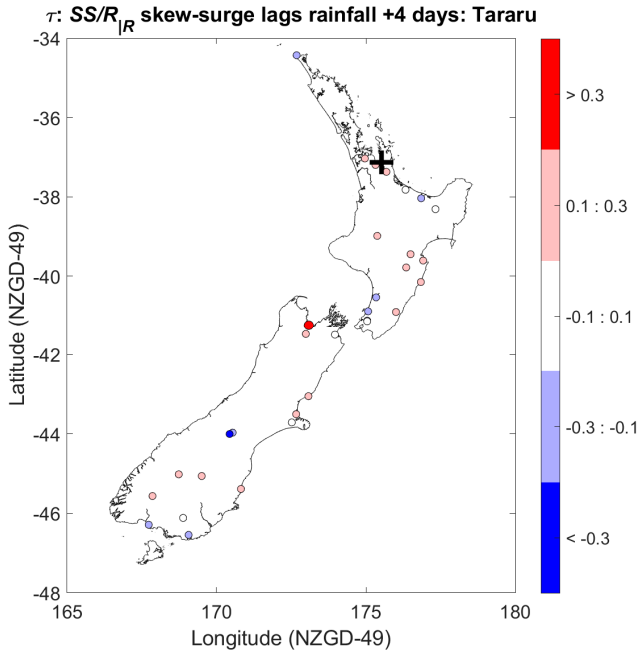
τ: SS/R|R skew-surge lags rainfall +4 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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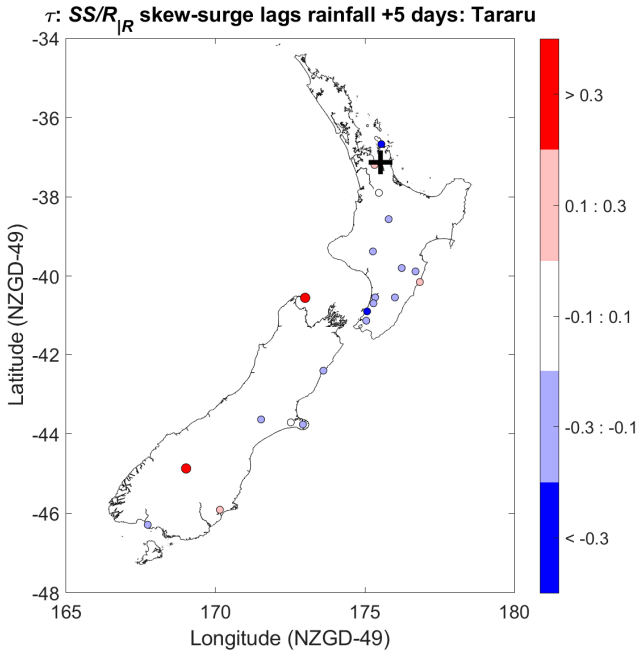
τ: SS/R|R skew-surge lags rainfall +5 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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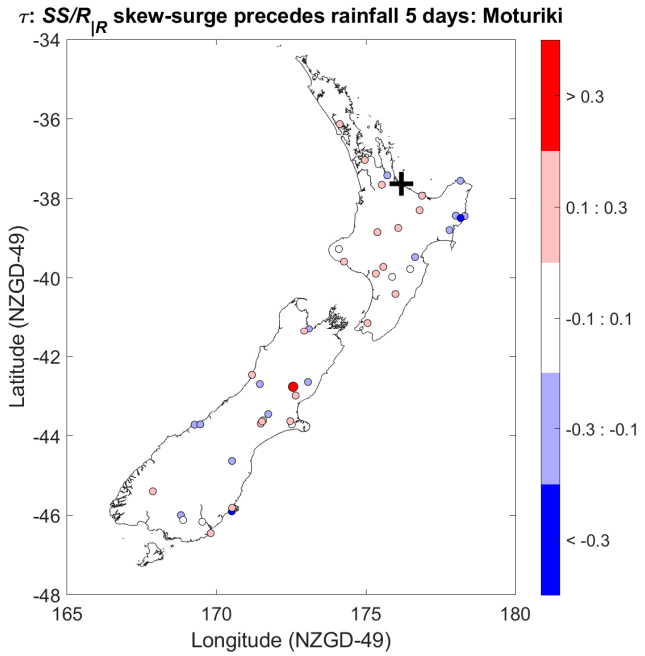
Moturiki


τ: SS/R|R skew-surge precedes rainfall 5 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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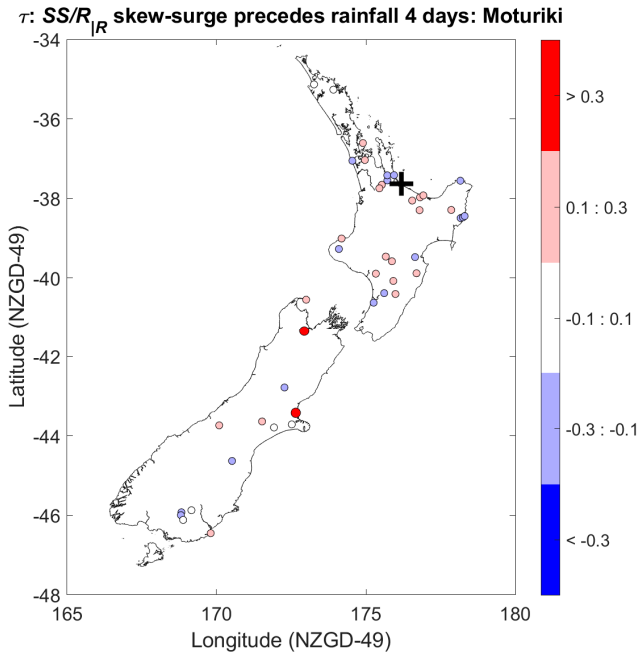
τ: SS/R|R skew-surge precedes rainfall 4 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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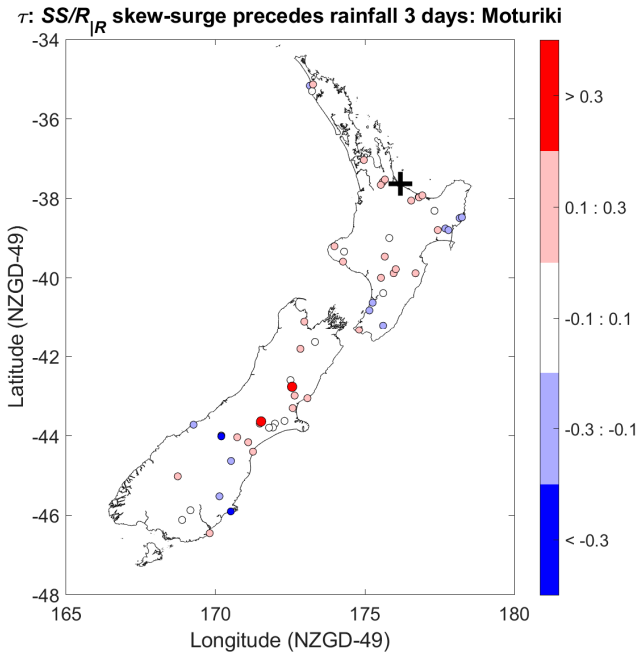
τ: SS/R|R skew-surge precedes rainfall 3 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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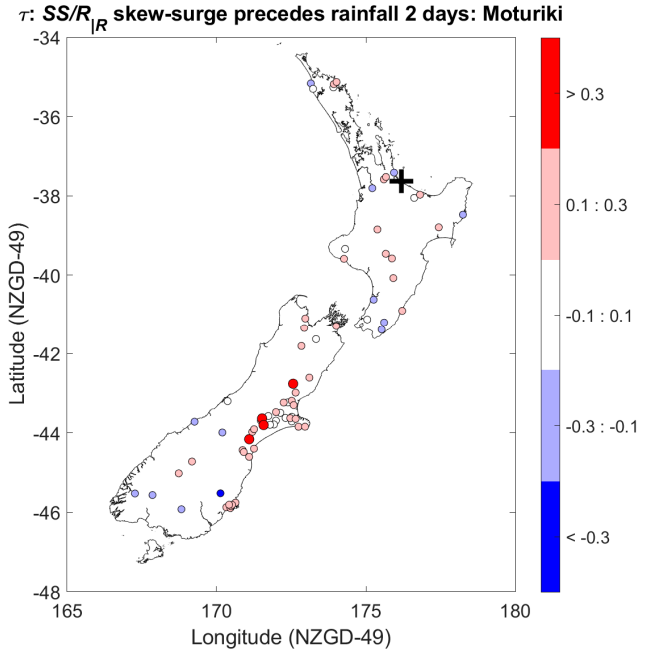
τ: SS/R|R skew-surge precedes rainfall 2 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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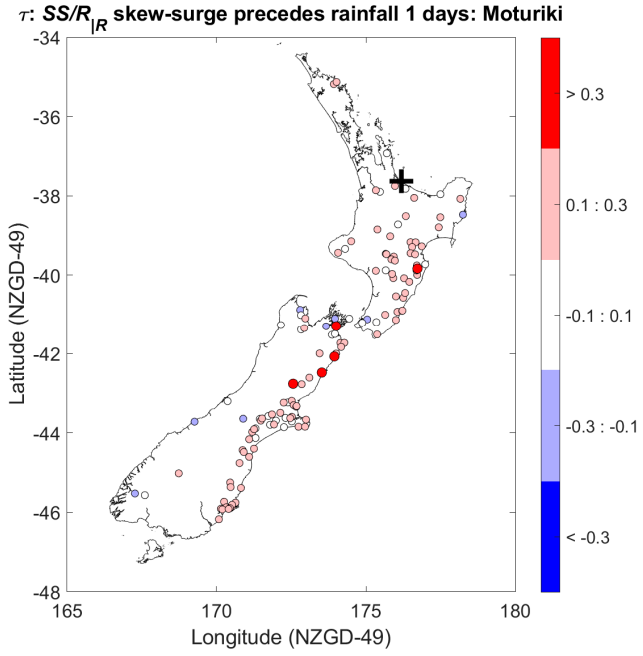
τ: SS/R|R skew-surge precedes rainfall 1 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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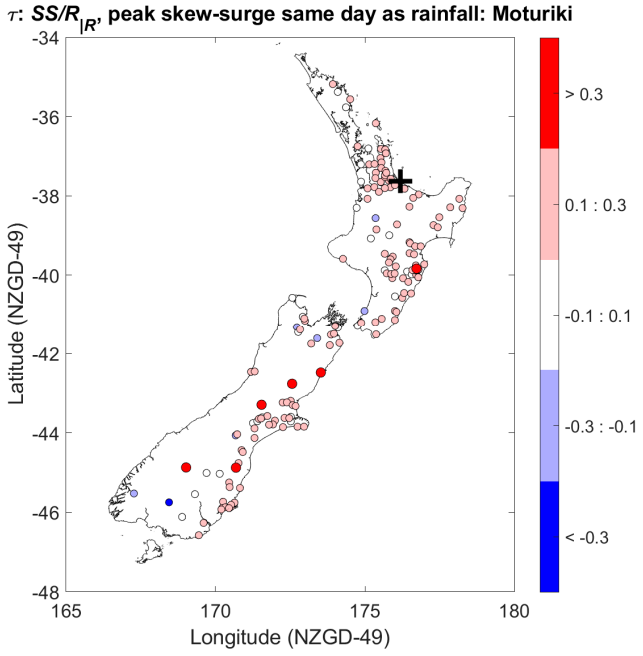
τ: SS/R|R, peak skew-surge same day as rainfall: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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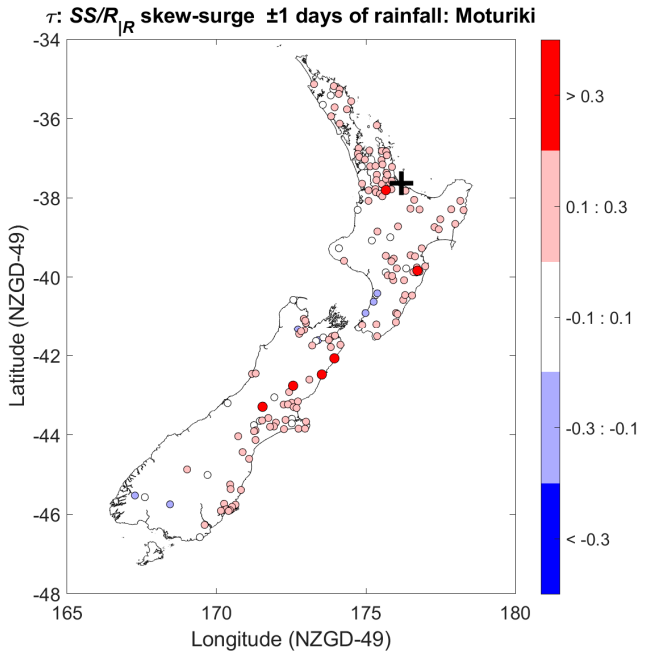
τ: SS/R|R skew-surge ±1 days of rainfall: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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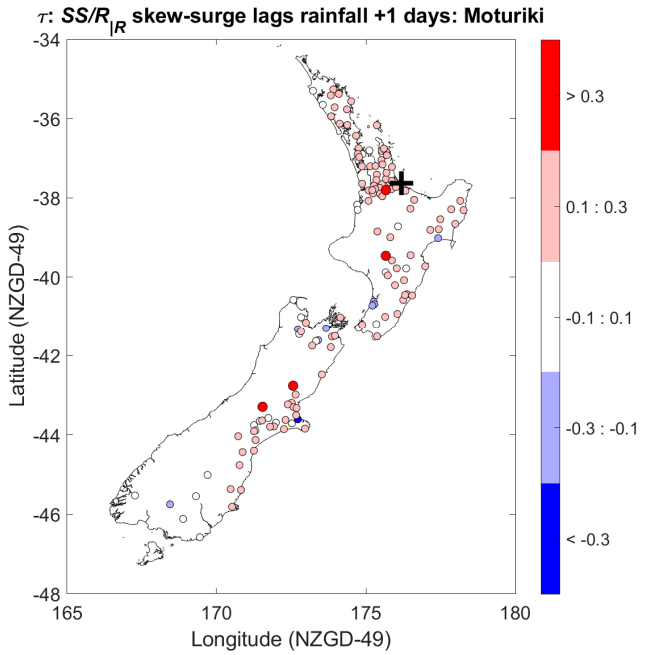
τ: SS/R|R skew-surge lags rainfall +1 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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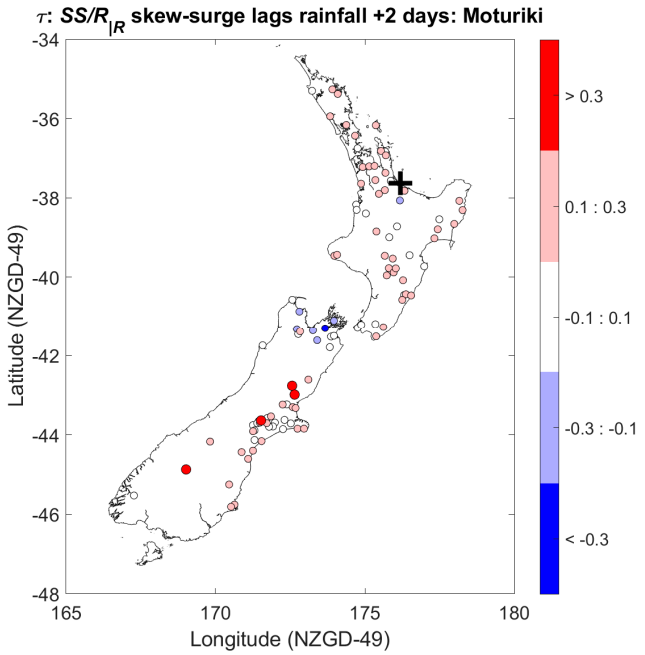
τ: SS/R|R skew-surge lags rainfall +2 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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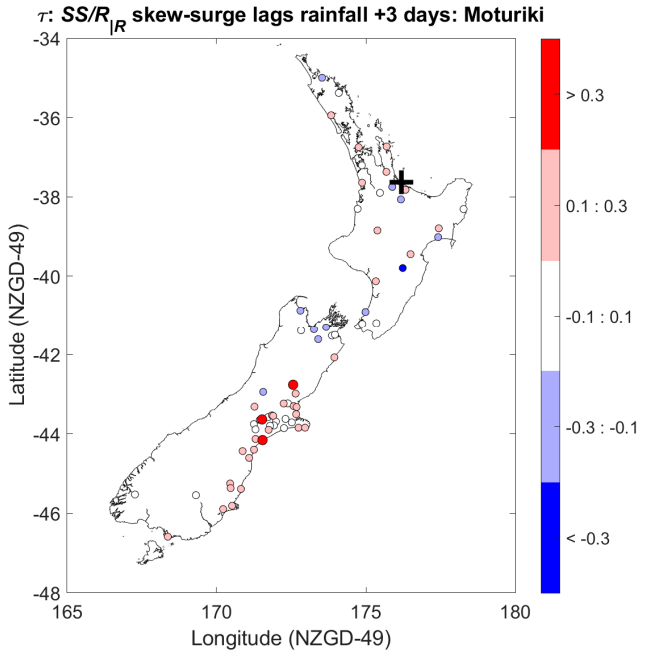
τ: SS/R|R skew-surge lags rainfall +3 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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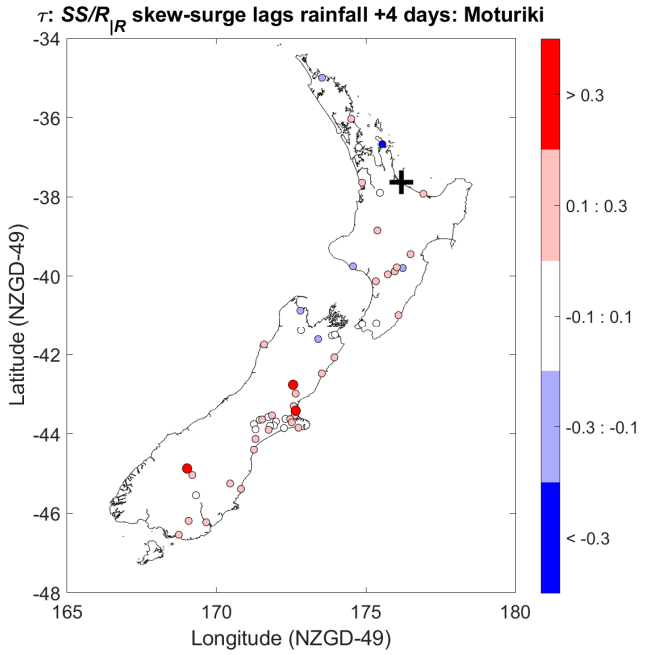
τ: SS/R|R skew-surge lags rainfall +4 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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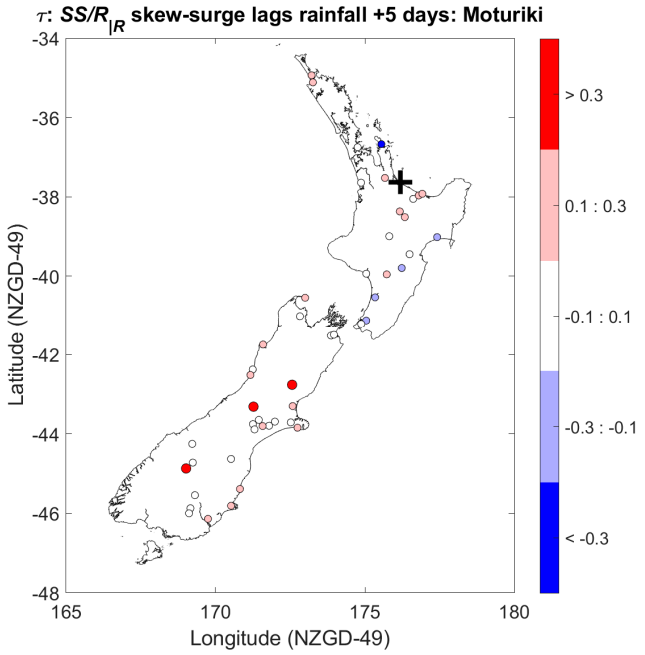
τ: SS/R|R skew-surge lags rainfall +5 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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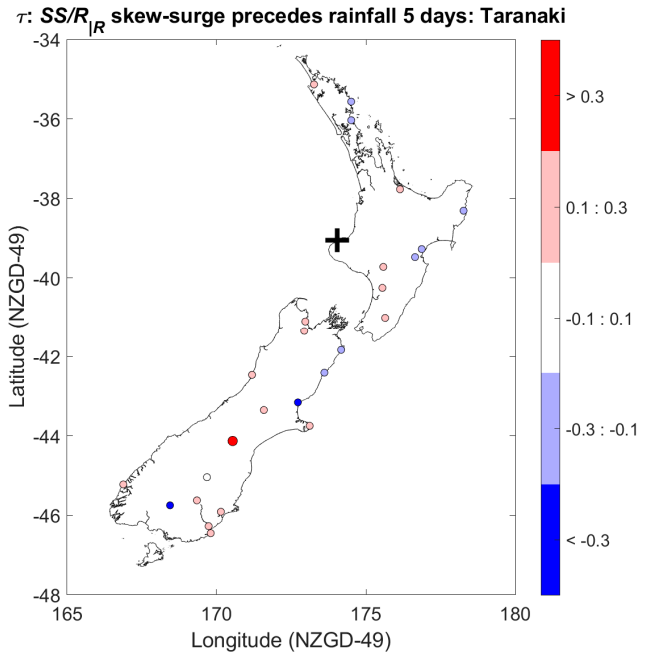
Taranaki


τ: SS/R|R skew-surge precedes rainfall 5 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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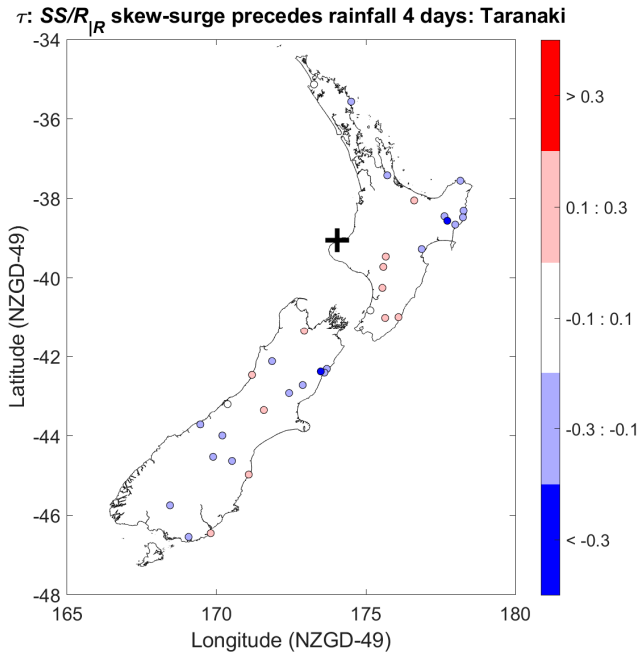
τ: SS/R|R skew-surge precedes rainfall 4 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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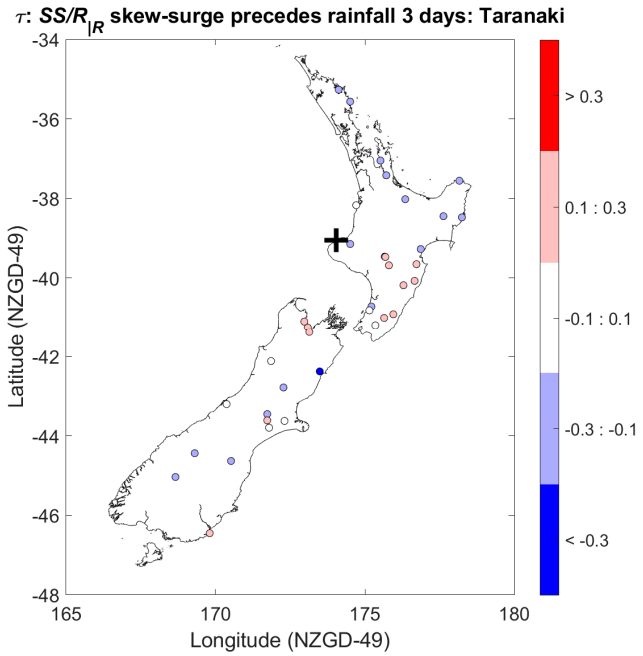
τ: SS/R|R skew-surge precedes rainfall 3 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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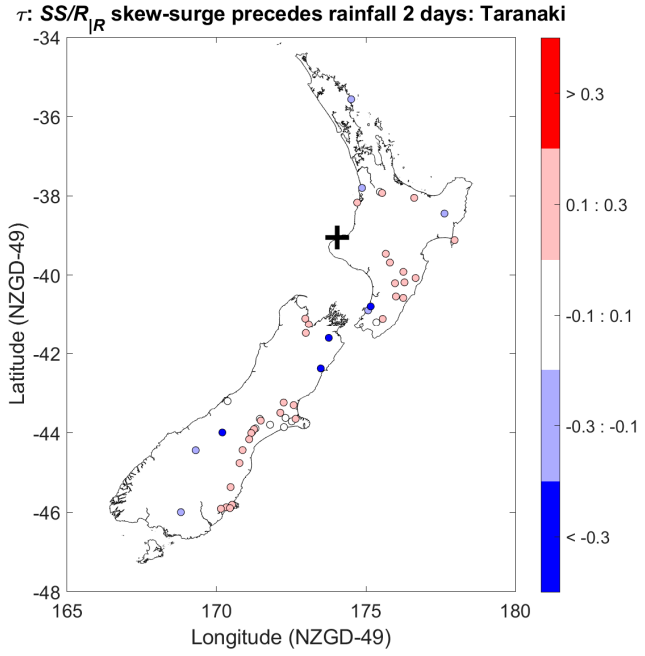
τ: SS/R|R skew-surge precedes rainfall 2 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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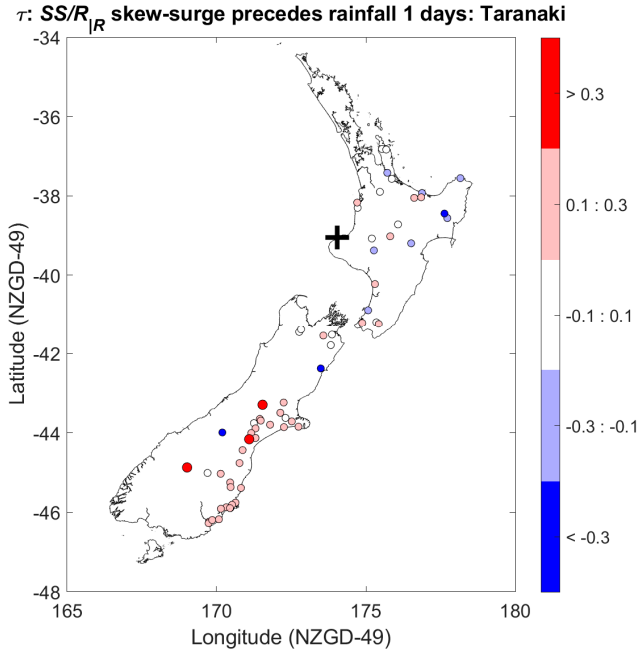
τ: SS/R|R skew-surge precedes rainfall 1 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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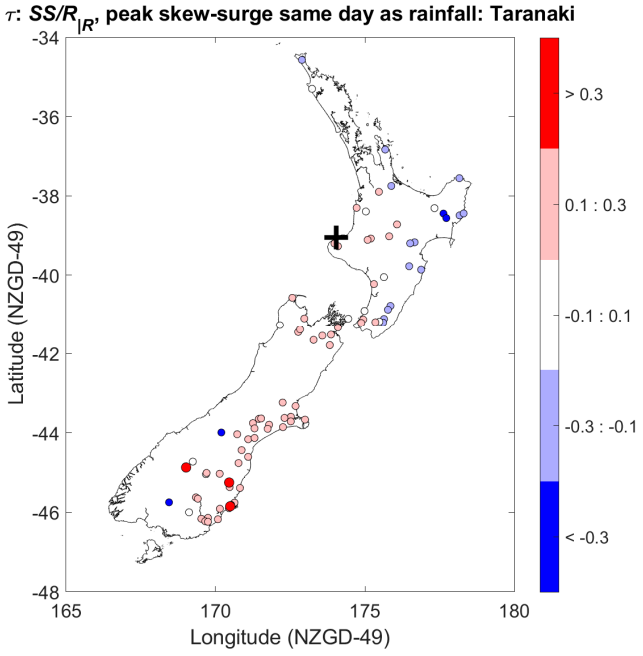
τ: SS/R|R, peak skew-surge same day as rainfall: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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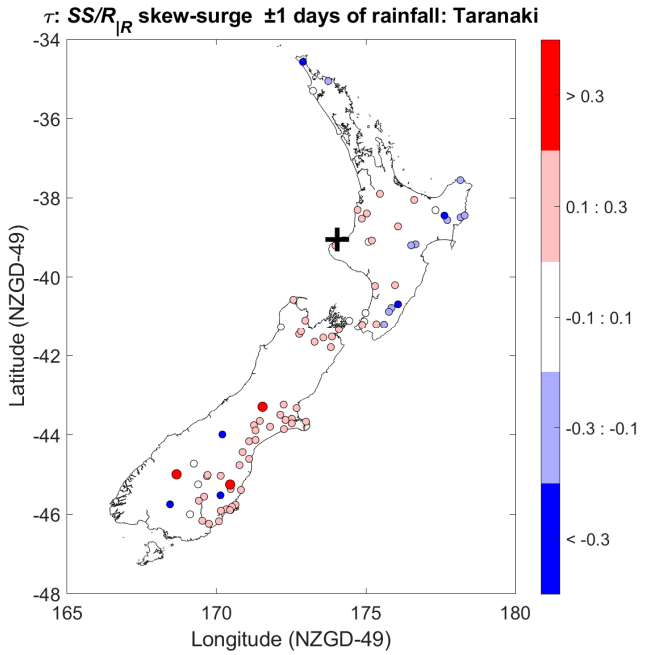
τ: SS/R|R skew-surge ±1 days of rainfall: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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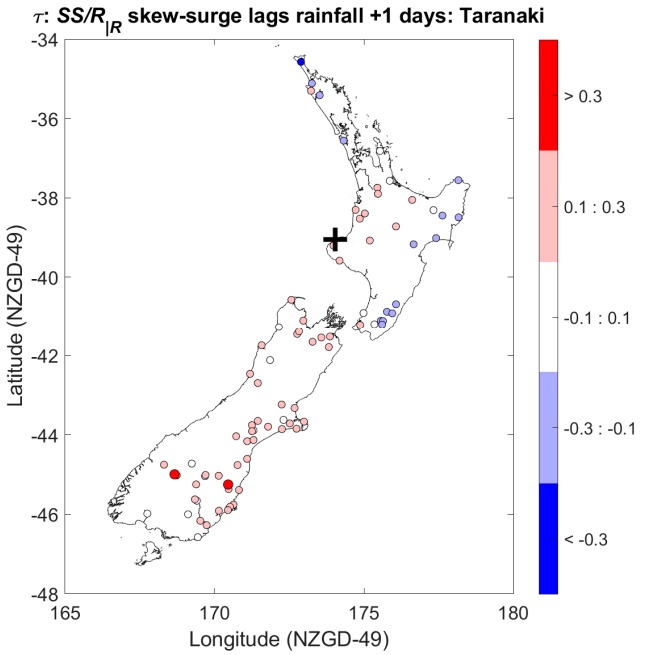
τ: SS/R|R skew-surge lags rainfall +1 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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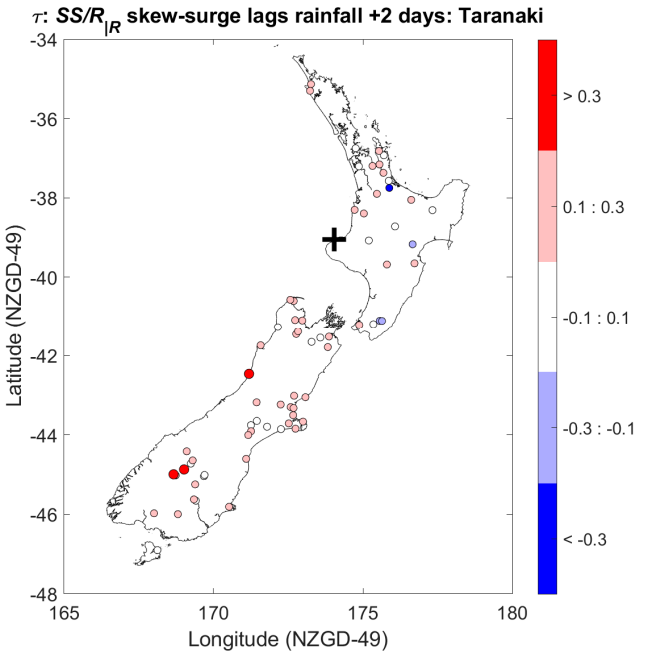
τ: SS/R|R skew-surge lags rainfall +2 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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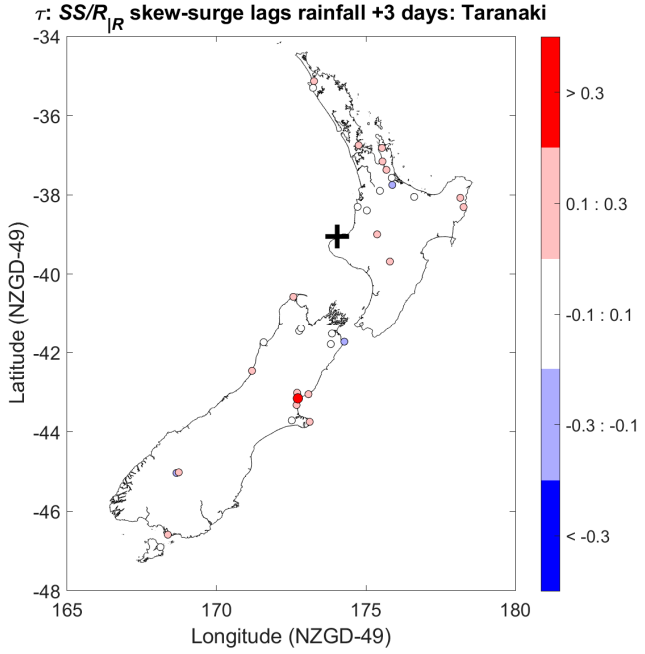
τ: SS/R|R skew-surge lags rainfall +3 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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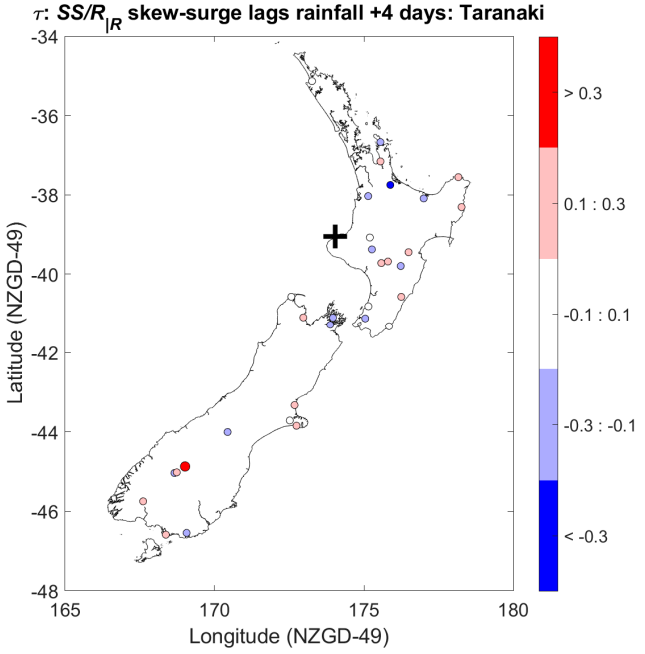
τ: SS/R|R skew-surge lags rainfall +4 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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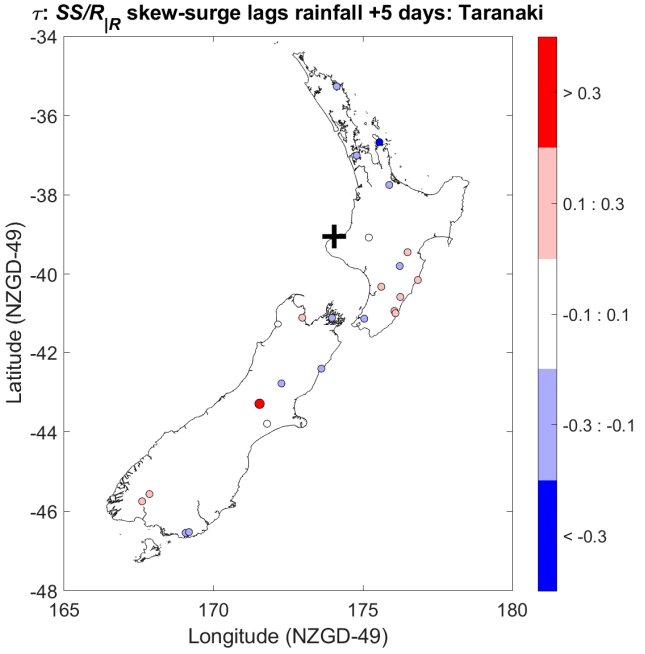
τ: SS/R|R skew-surge lags rainfall +5 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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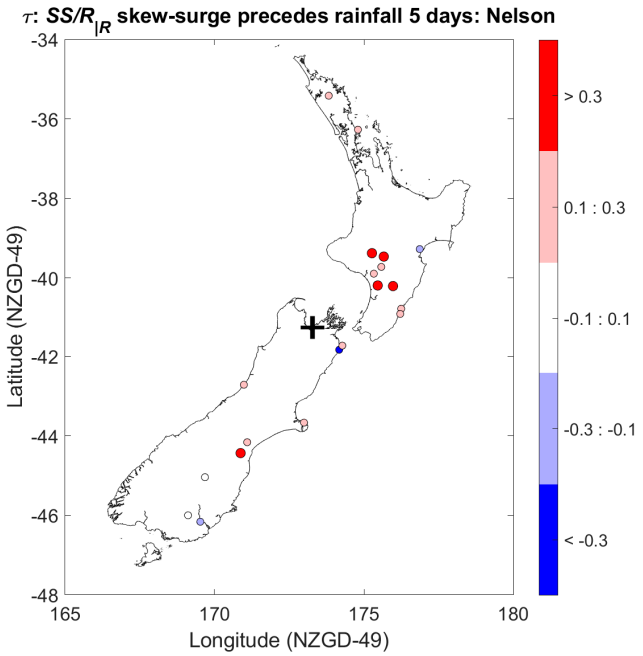
Nelson


τ: SS/R|R skew-surge precedes rainfall 5 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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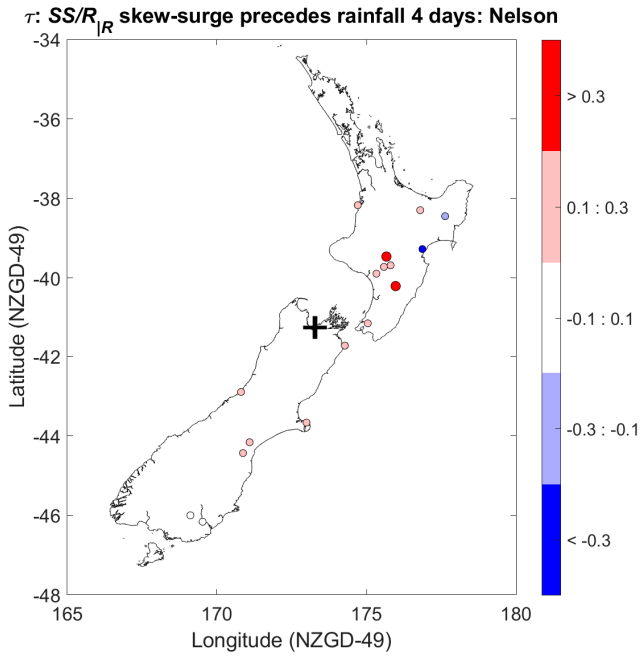
τ: SS/R|R skew-surge precedes rainfall 4 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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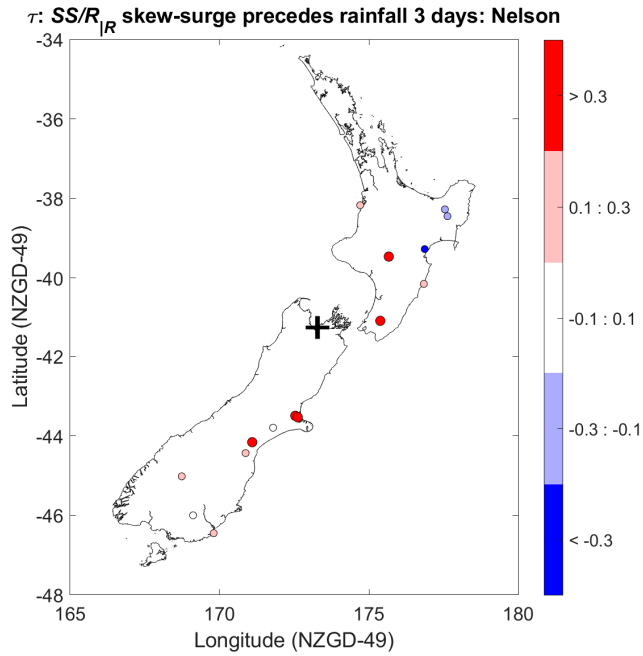
τ: SS/R|R skew-surge precedes rainfall 3 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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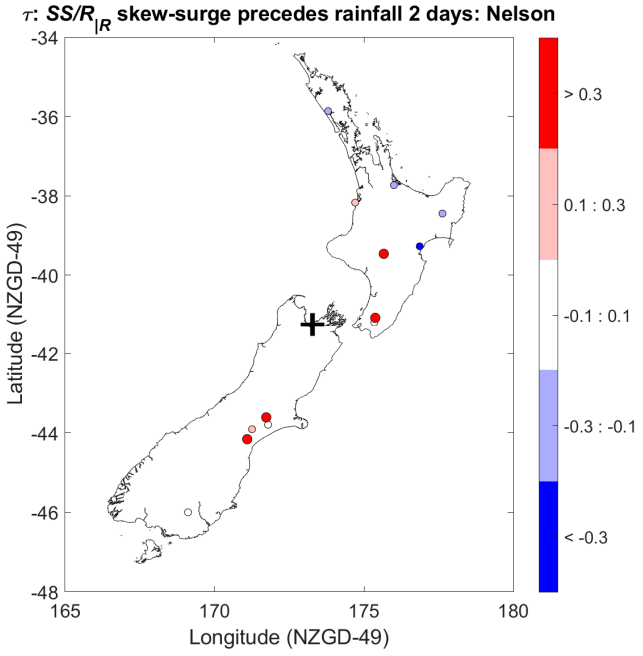
τ: SS/R|R skew-surge precedes rainfall 2 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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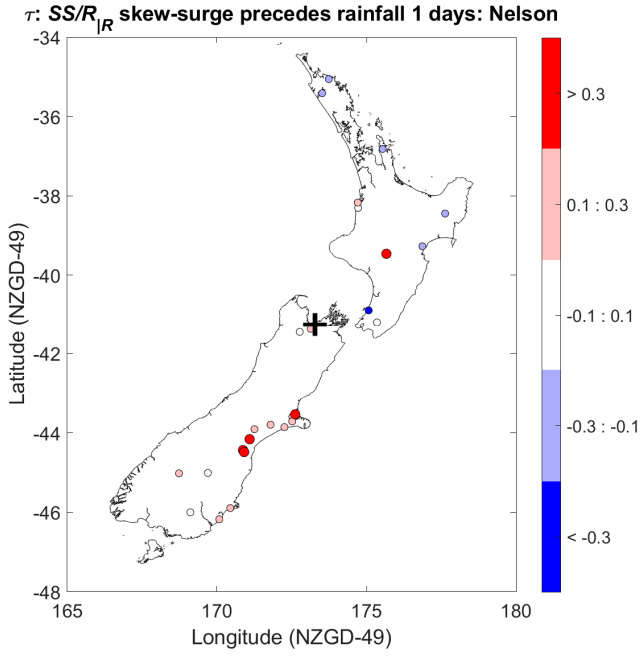
τ: SS/R|R skew-surge precedes rainfall 1 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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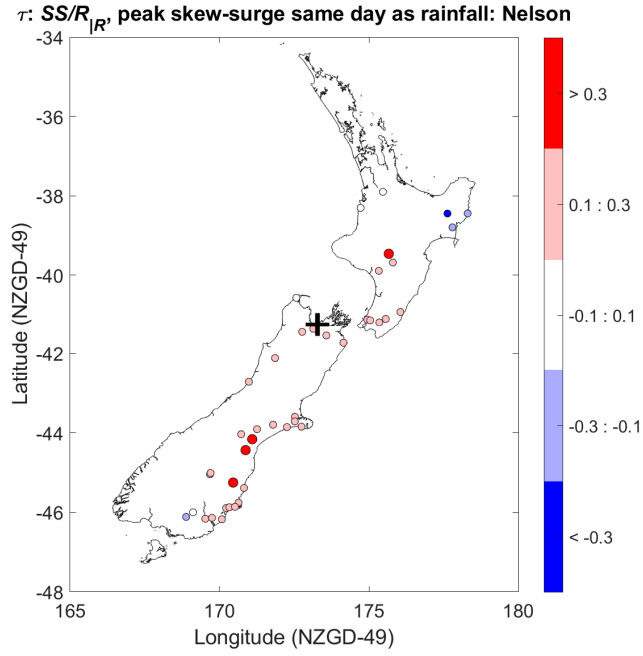
τ: SS/R|R, peak skew-surge same day as rainfall: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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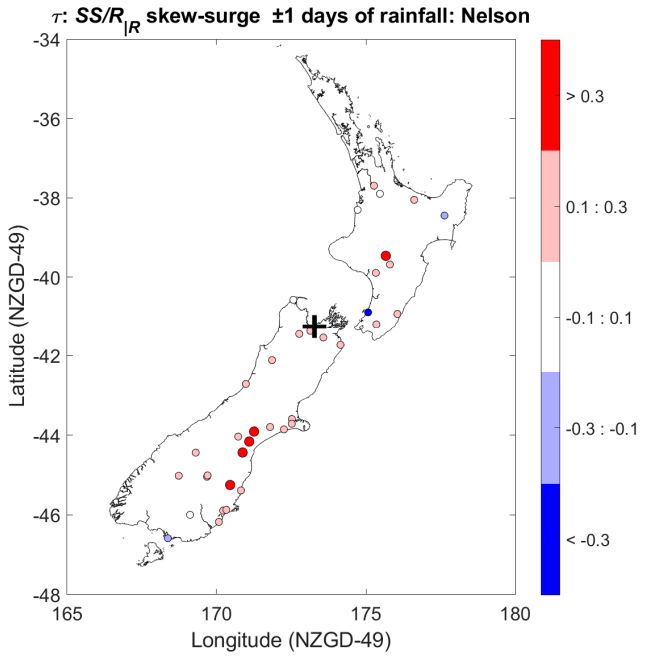
τ: SS/R|R skew-surge ±1 days of rainfall: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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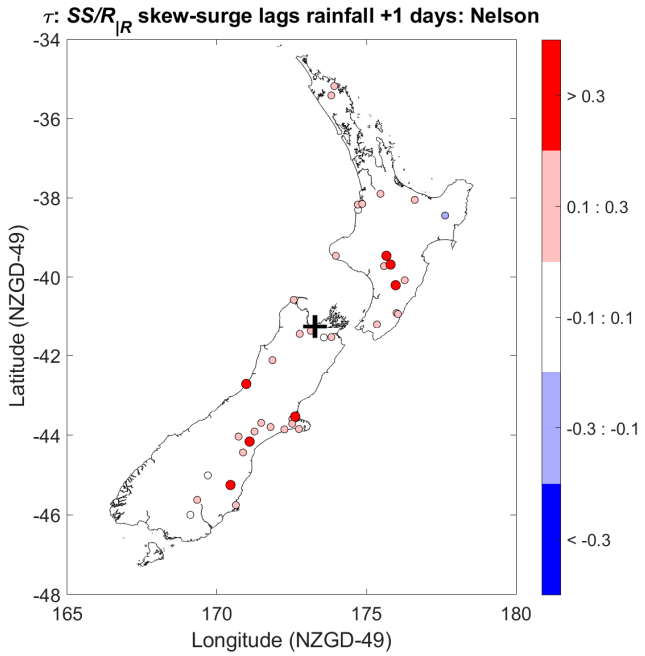
τ: SS/R|R skew-surge lags rainfall +1 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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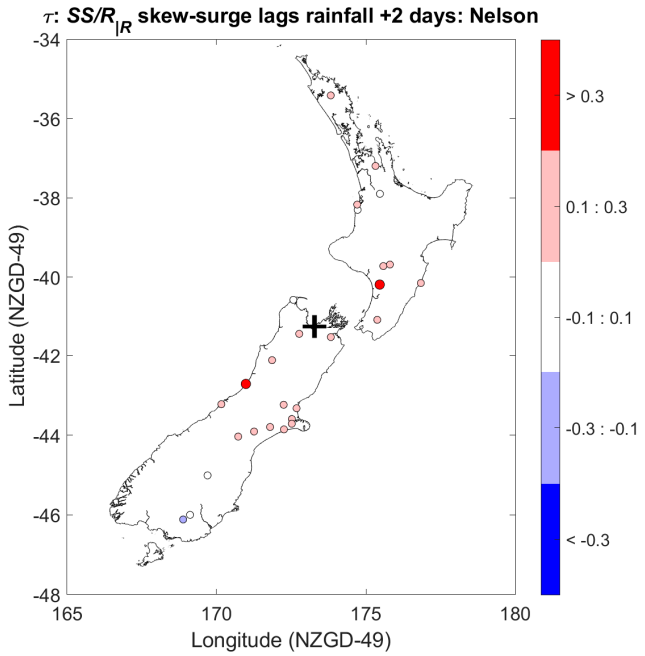
τ: SS/R|R skew-surge lags rainfall +2 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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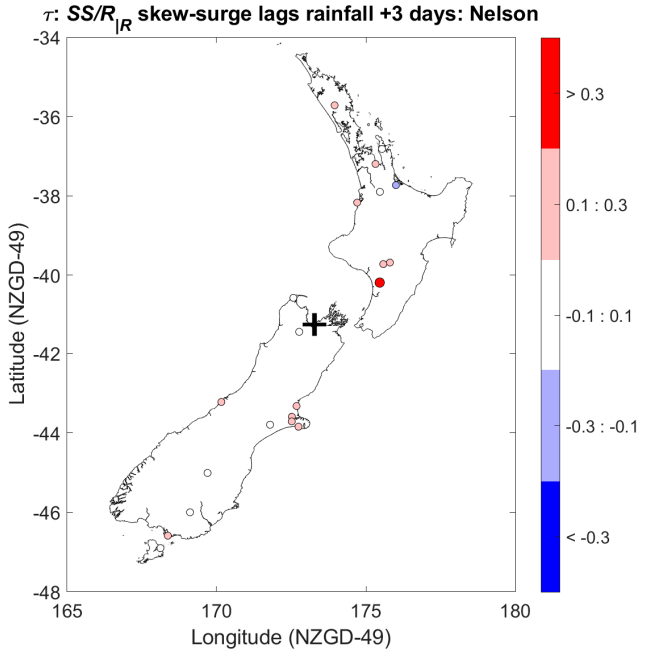
τ: SS/R|R skew-surge lags rainfall +3 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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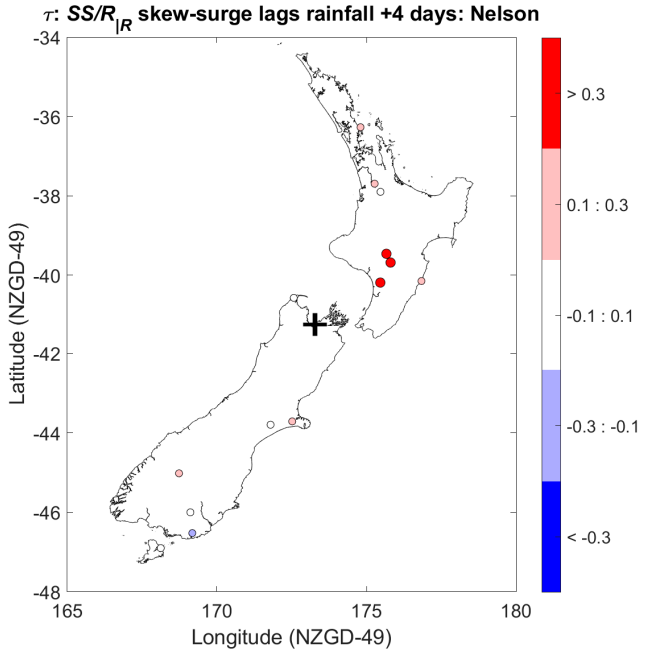
τ: SS/R|R skew-surge lags rainfall +4 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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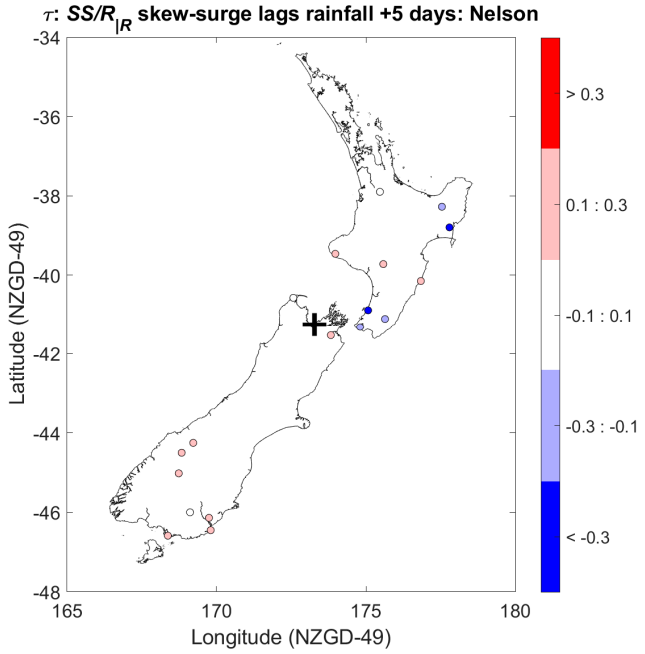
τ: SS/R|R skew-surge lags rainfall +5 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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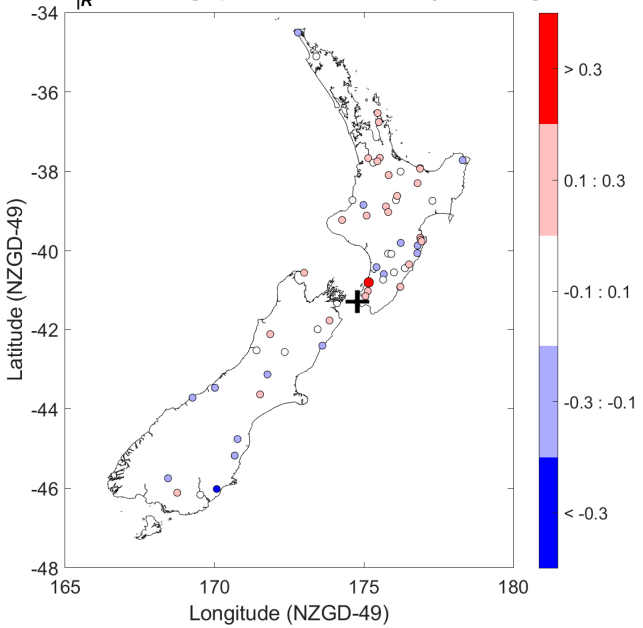
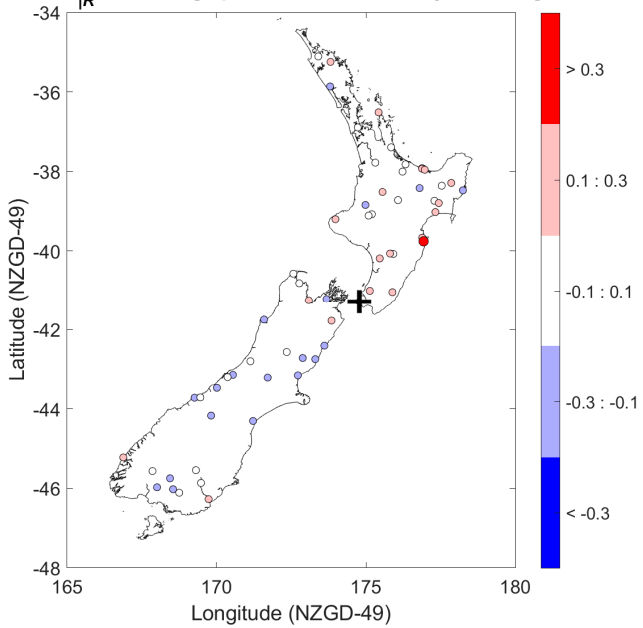
Wellington

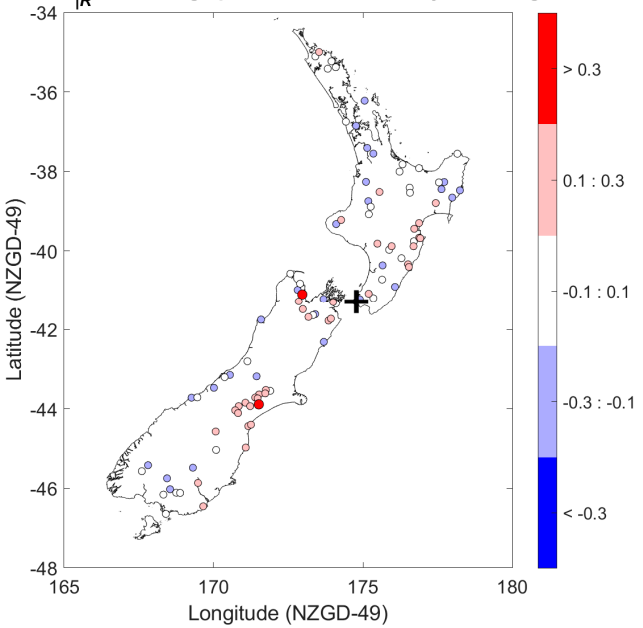
τ: $SS/R_{|R}$ skew-surge precedes rainfall 5 days: Wellington



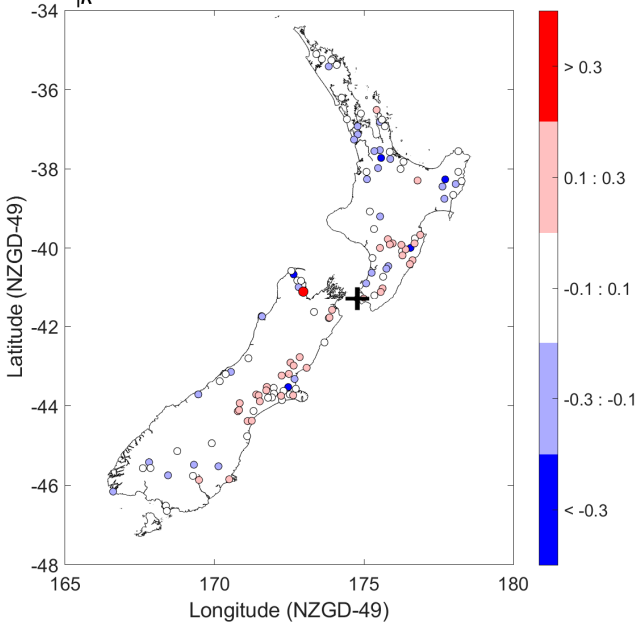
τ: $SS/R_{|R}$ skew-surge precedes rainfall 4 days: Wellington



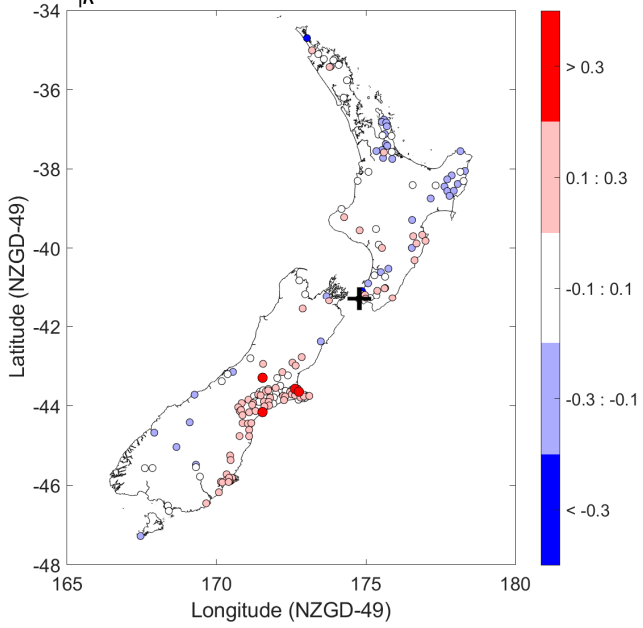
τ: $SS/R_{|R}$ skew-surge precedes rainfall 3 days: Wellington



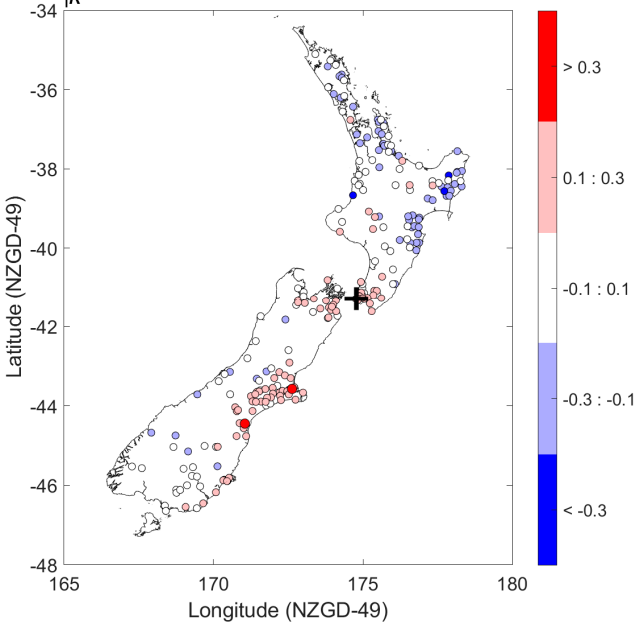
τ: $SS/R_{|R}$ skew-surge precedes rainfall 2 days: Wellington

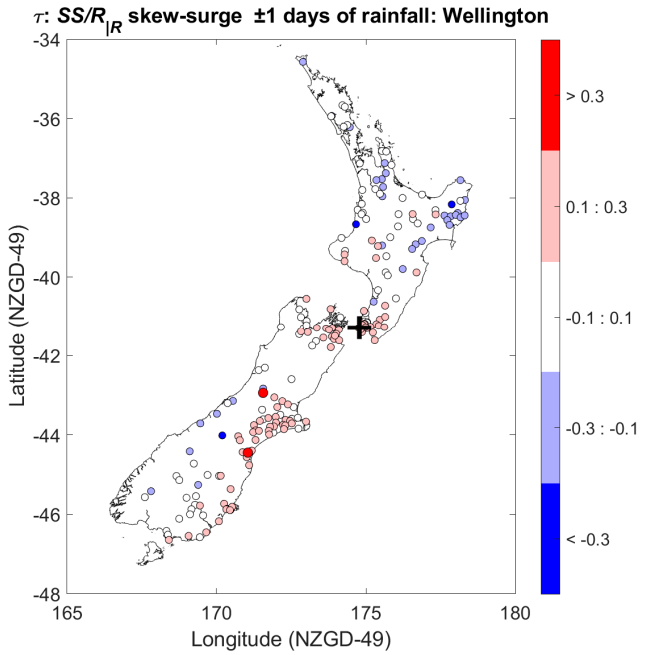


τ: $SS/R_{|R}$ skew-surge precedes rainfall 1 days: Wellington



τ: $SS/R_{|R}$, peak skew-surge same day as rainfall: Wellington




τ: SS/R|R skew-surge ±1 days of rainfall: Wellington
Latitude (NZGD-49)
Longitude (NZGD-49)
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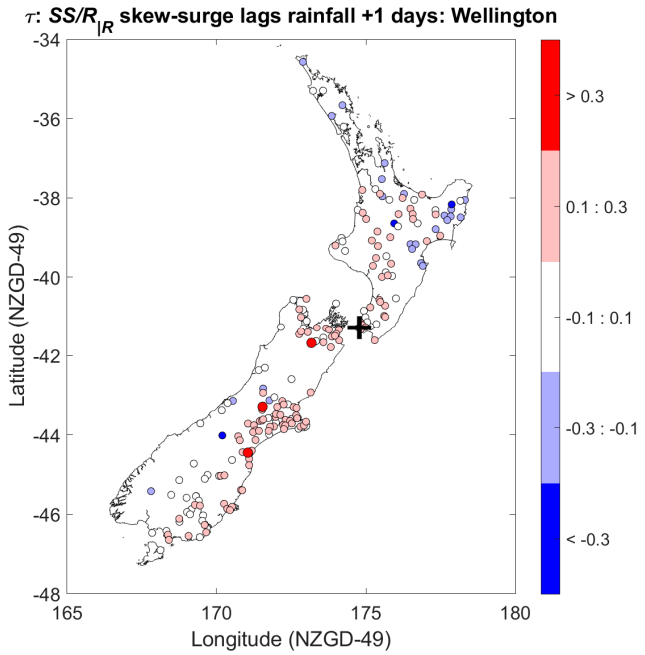
τ: SS/R|R skew-surge lags rainfall +1 days: Wellington
Latitude (NZGD-49)
Longitude (NZGD-49)
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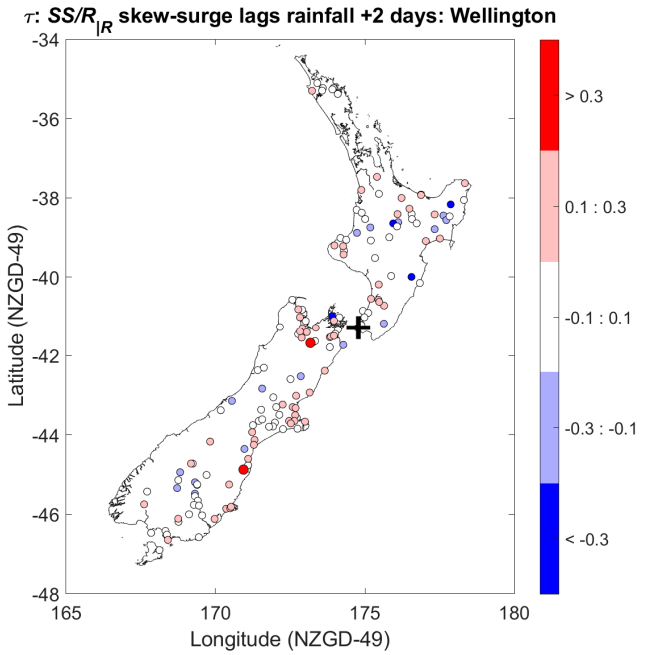
τ: SS/R|R skew-surge lags rainfall +2 days: Wellington
Latitude (NZGD-49)
Longitude (NZGD-49)
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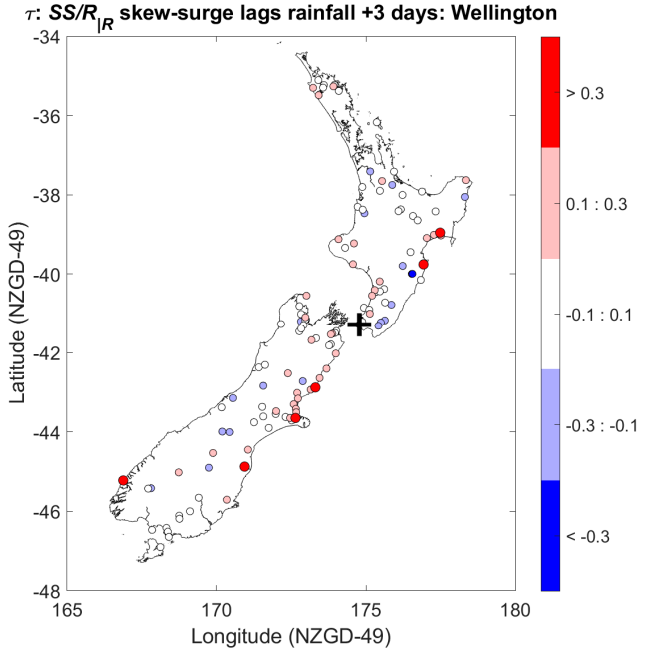
τ: SS/R|R skew-surge lags rainfall +3 days: Wellington
Latitude (NZGD-49)
Longitude (NZGD-49)
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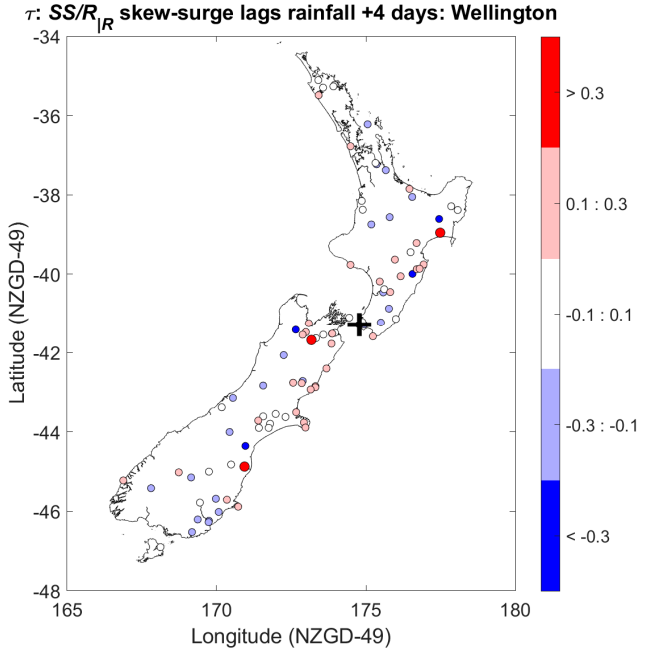
τ: SS/R|R skew-surge lags rainfall +4 days: Wellington
Latitude (NZGD-49)
Longitude (NZGD-49)
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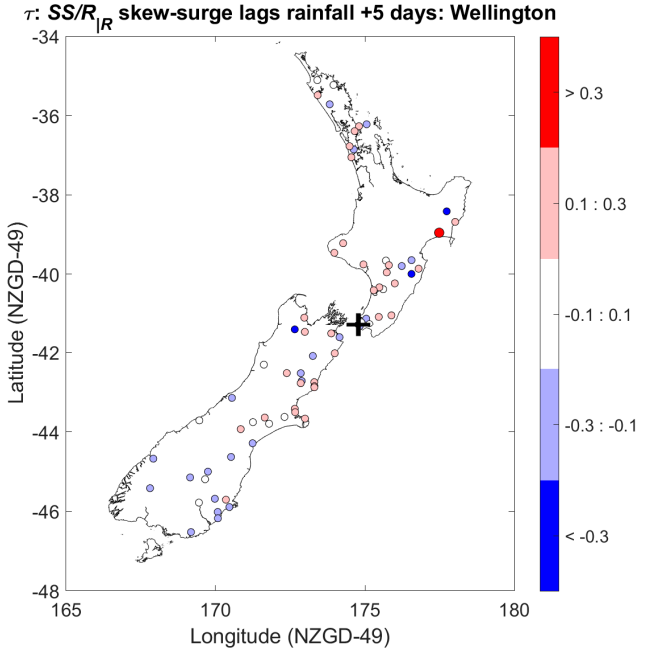
τ: SS/R|R skew-surge lags rainfall +5 days: Wellington
Latitude (NZGD-49)
Longitude (NZGD-49)
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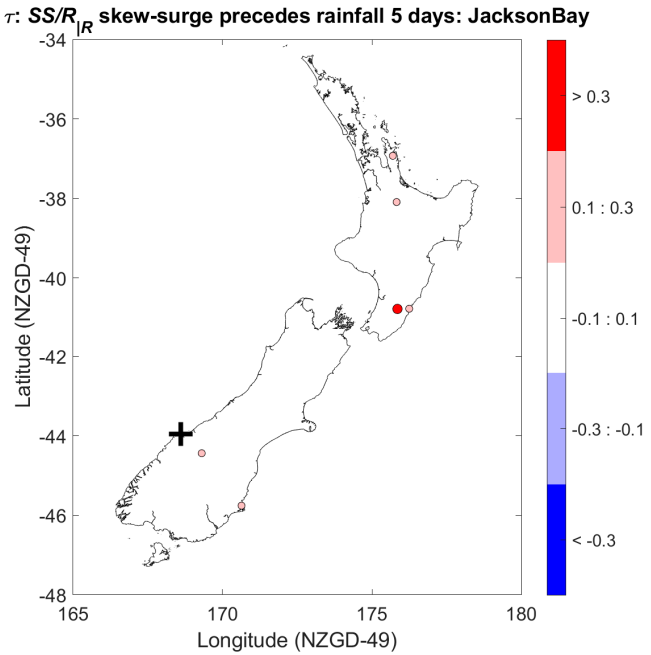
Jackson Bay


τ: SS/R|R skew-surge precedes rainfall 5 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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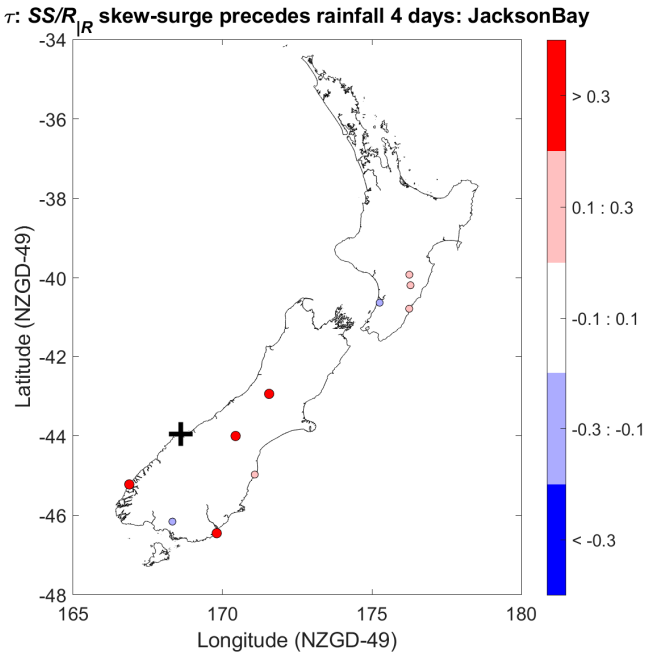
τ: SS/R|R skew-surge precedes rainfall 4 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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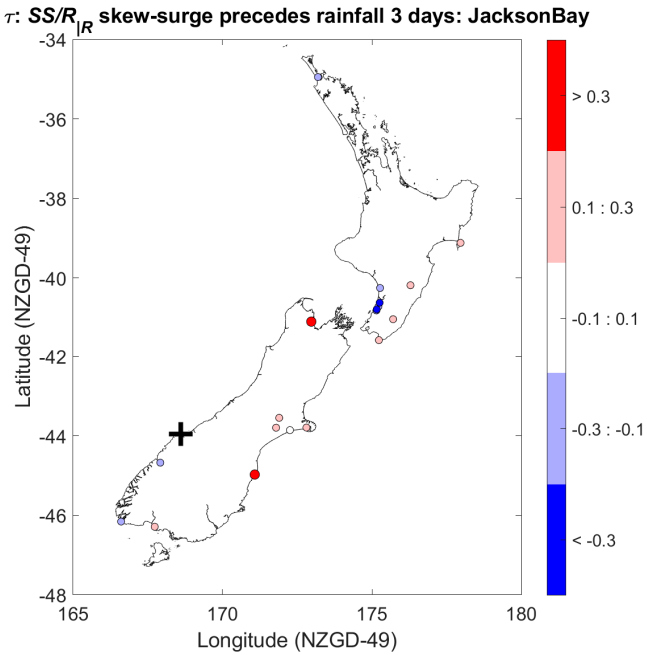
τ: SS/R|R skew-surge precedes rainfall 3 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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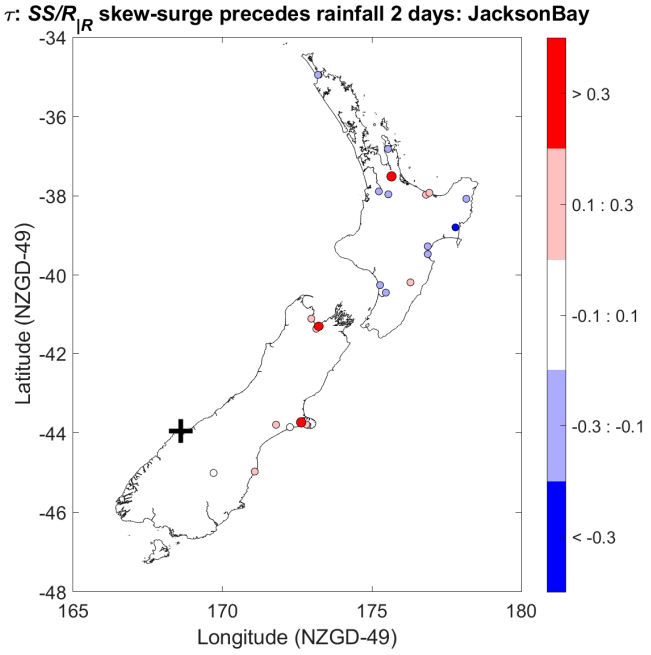
τ: SS/R|R skew-surge precedes rainfall 2 days: JacksonBay
Latitude (NZGD-49)
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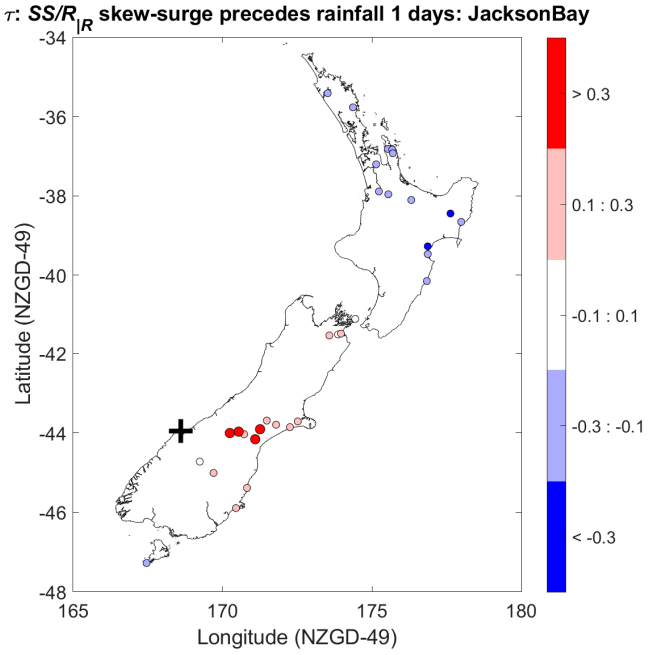
τ: SS/R|R skew-surge precedes rainfall 1 days: JacksonBay
Latitude (NZGD-49)
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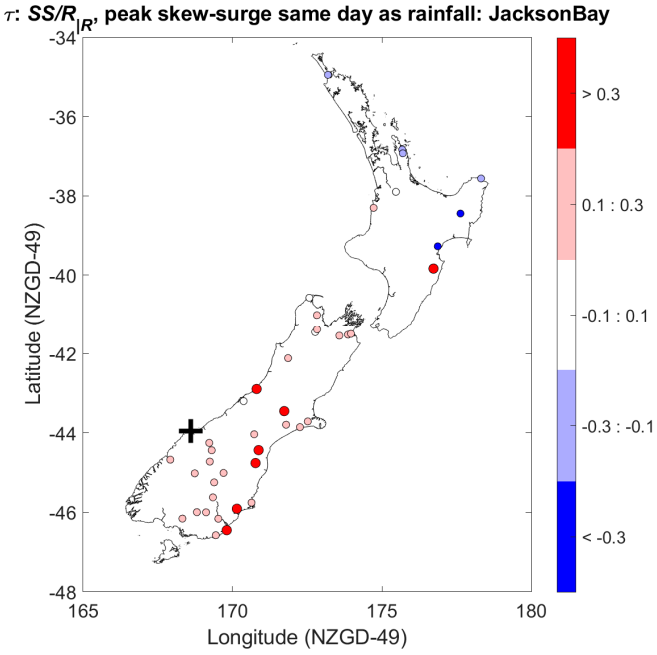
τ: SS/R|R, peak skew-surge same day as rainfall: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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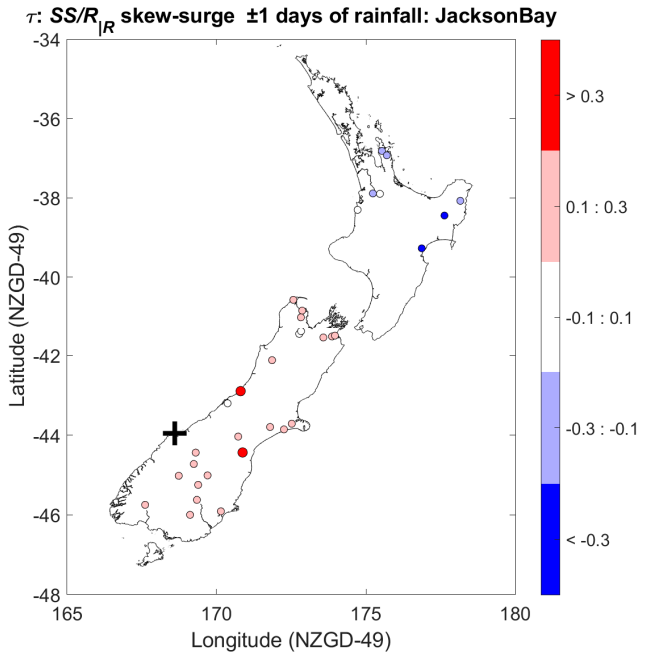
τ: SS/R|R skew-surge ±1 days of rainfall: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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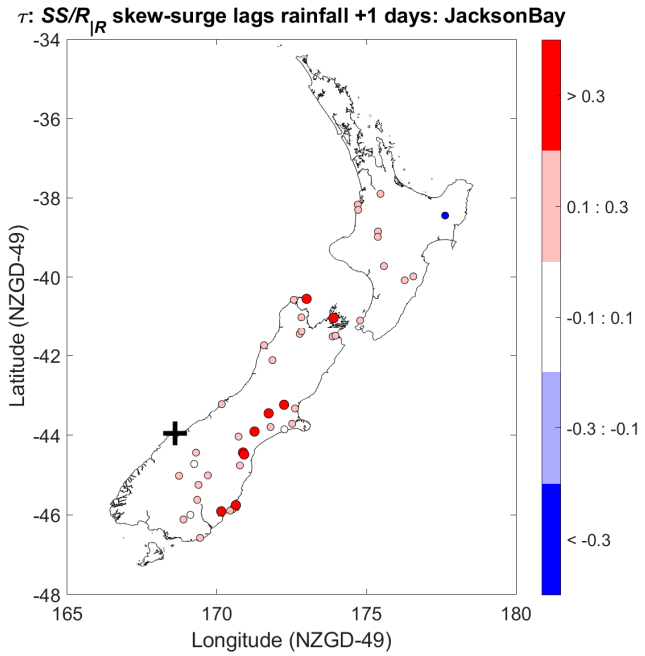
τ: SS/R|R skew-surge lags rainfall +1 days: JacksonBay
Latitude (NZGD-49)
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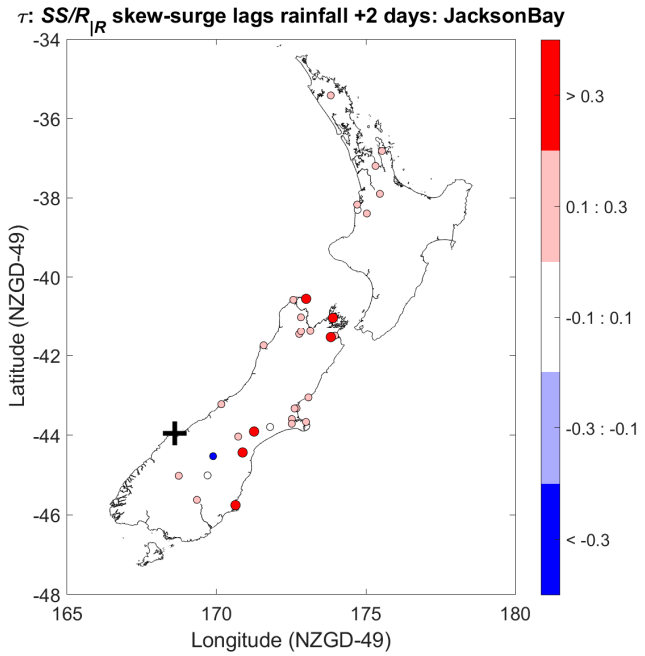
τ: SS/R|R skew-surge lags rainfall +2 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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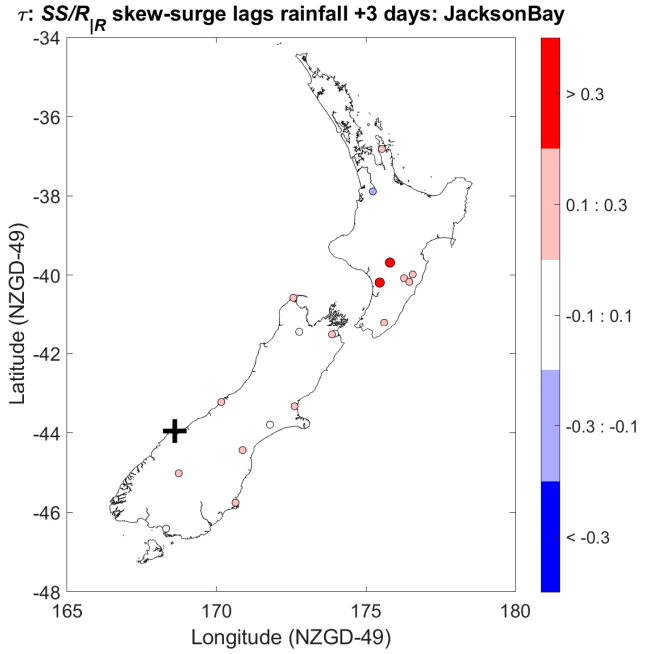
τ: SS/R|R skew-surge lags rainfall +3 days: JacksonBay
Latitude (NZGD-49)
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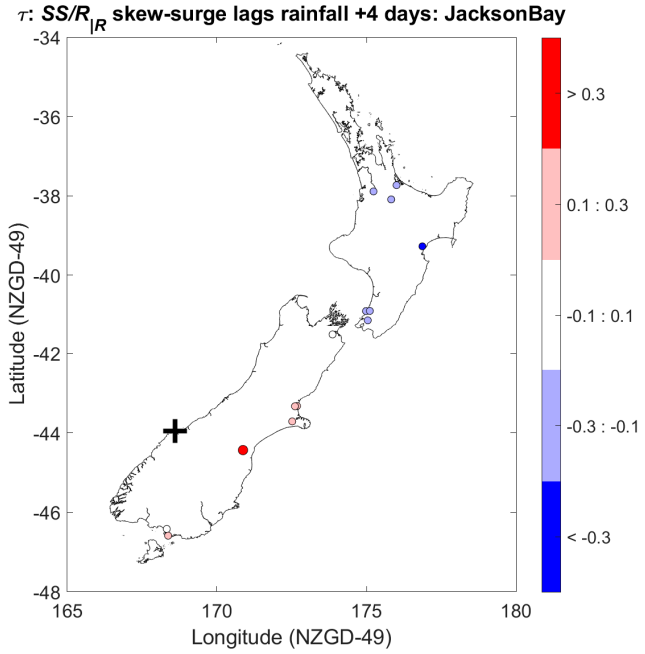
τ: SS/R|R skew-surge lags rainfall +4 days: JacksonBay
Latitude (NZGD-49)
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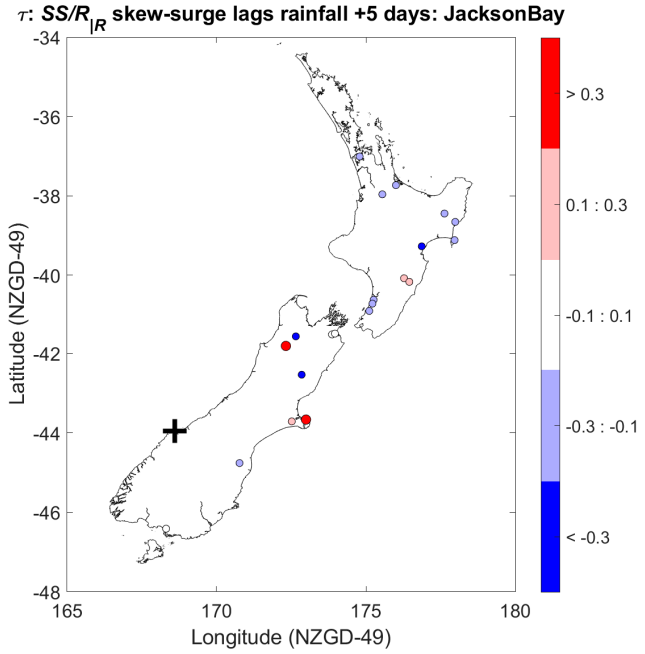
τ: SS/R|R skew-surge lags rainfall +5 days: JacksonBay
Latitude (NZGD-49)
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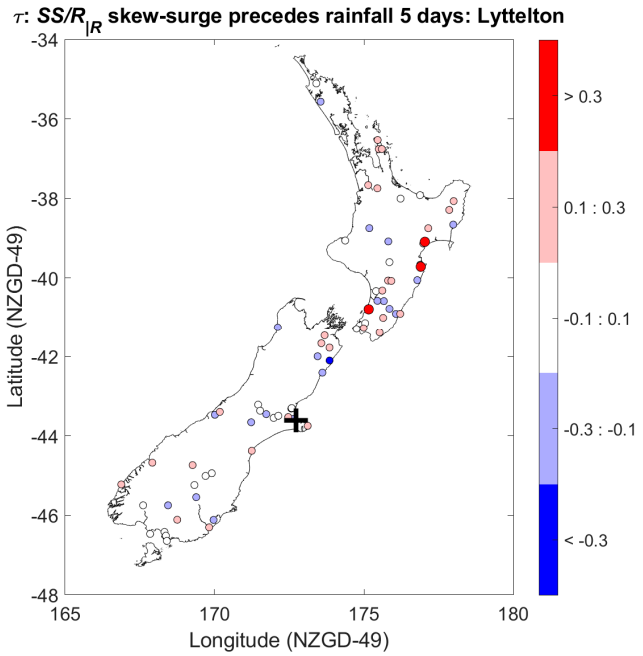
Lyttelton


τ: SS/R|R skew-surge precedes rainfall 5 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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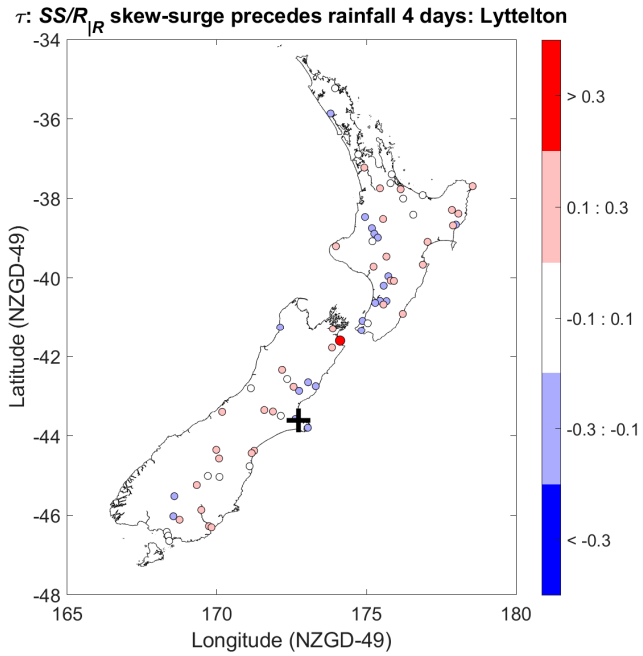
τ: SS/R|R skew-surge precedes rainfall 4 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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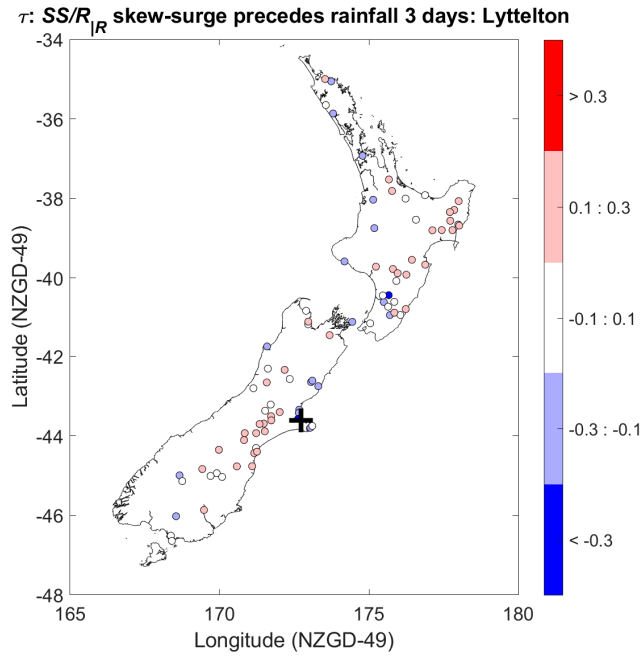
τ: SS/R|R skew-surge precedes rainfall 3 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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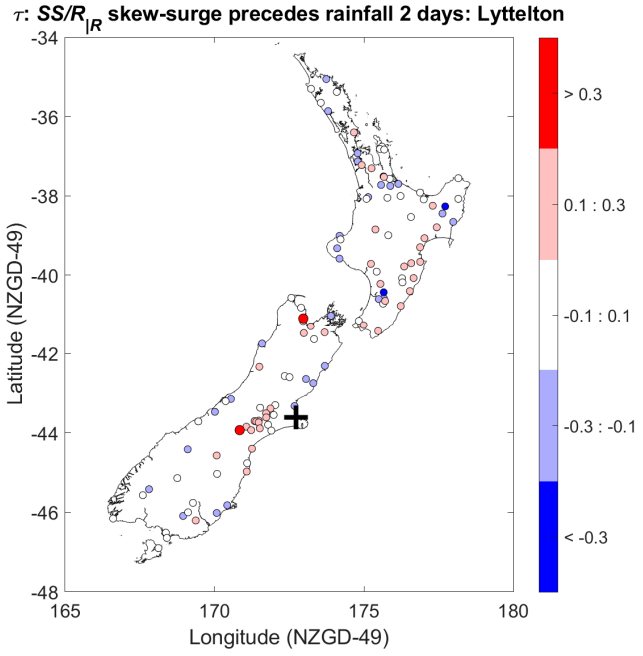
τ: SS/R|R skew-surge precedes rainfall 2 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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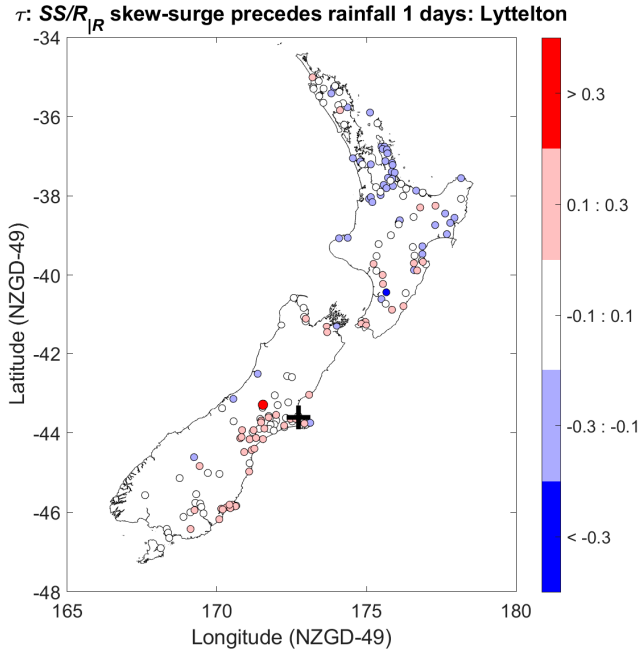
τ: SS/R|R skew-surge precedes rainfall 1 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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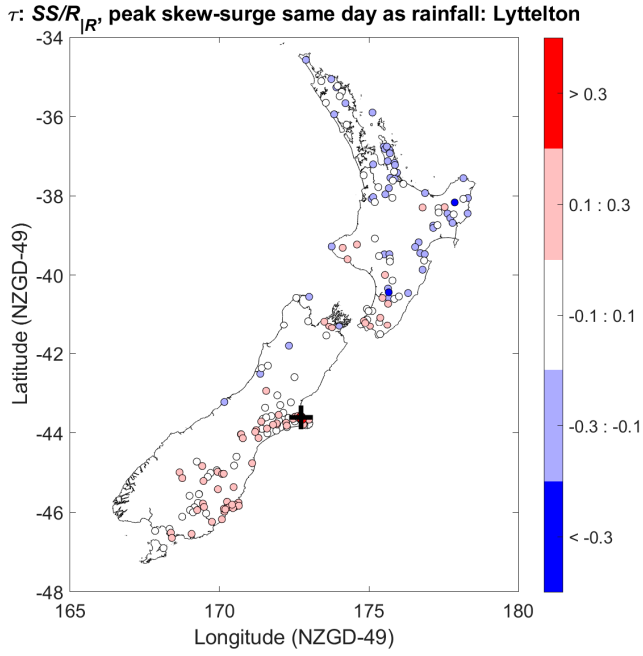
τ: SS/R|R, peak skew-surge same day as rainfall: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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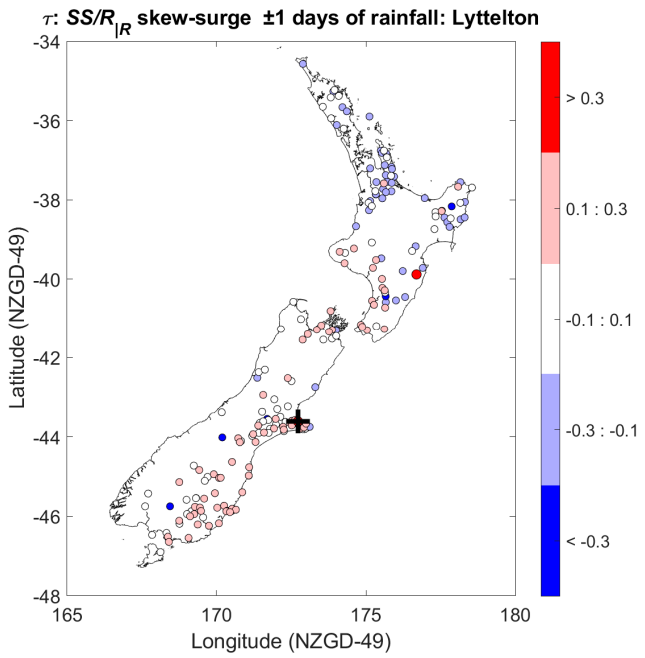
τ: SS/R|R skew-surge ±1 days of rainfall: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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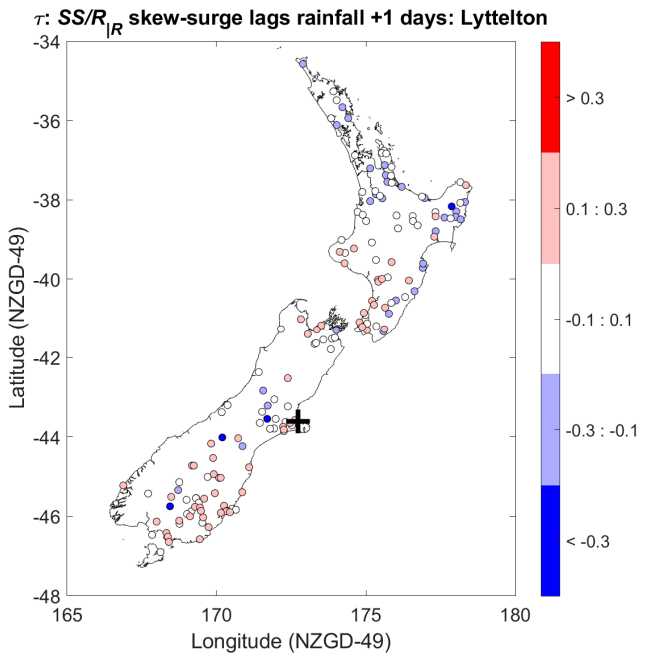
τ: SS/R|R skew-surge lags rainfall +1 days: Lyttelton
Latitude (NZGD-49)
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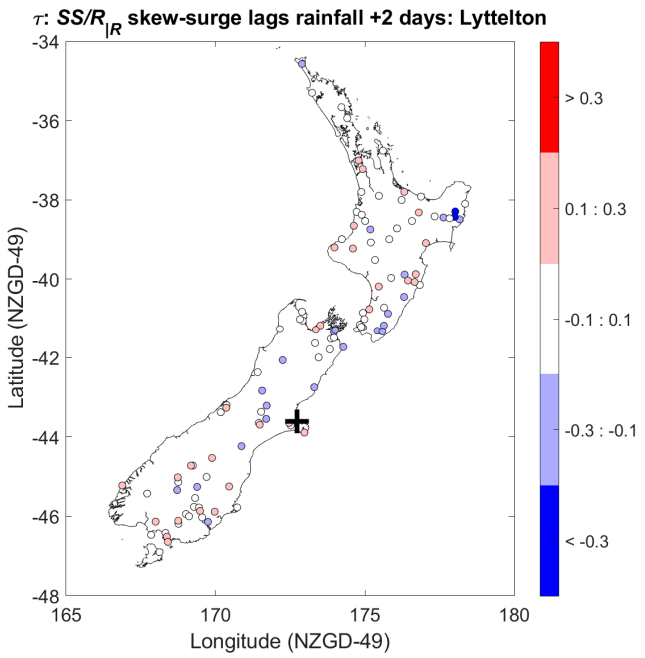
τ: SS/R|R skew-surge lags rainfall +2 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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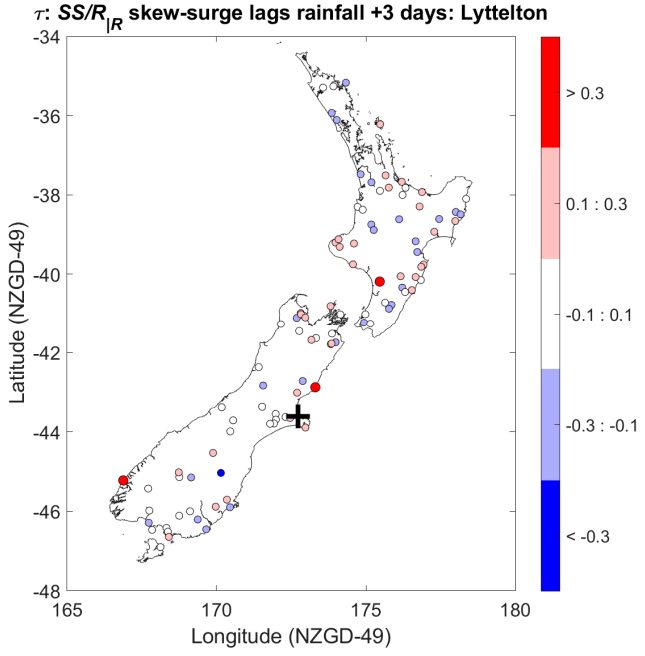
τ: SS/R|R skew-surge lags rainfall +3 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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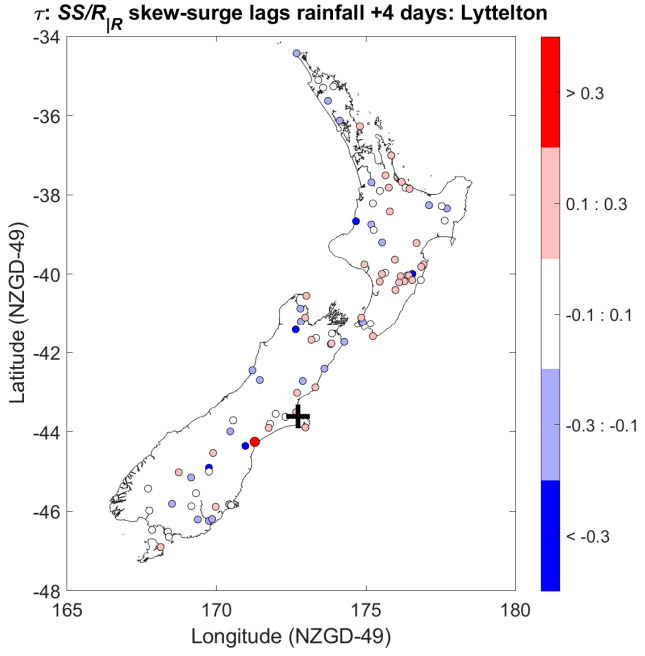
τ: SS/R|R skew-surge lags rainfall +4 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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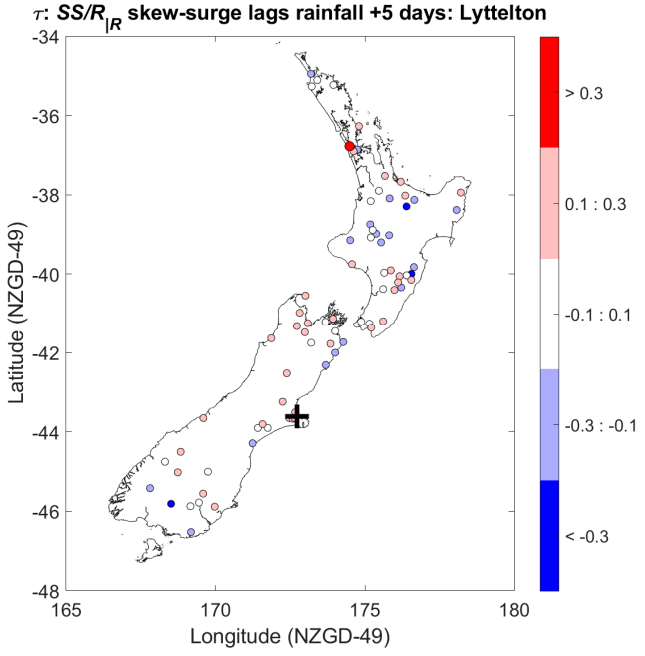
τ: SS/R|R skew-surge lags rainfall +5 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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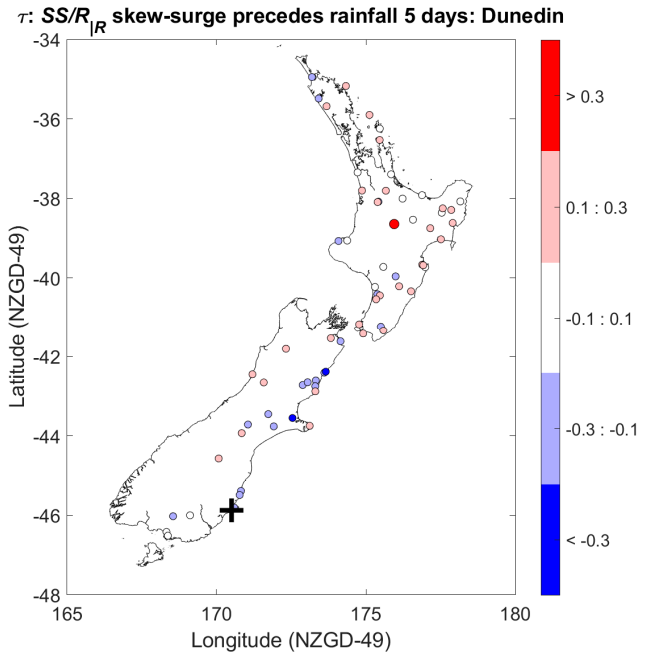
Dunedin


τ: SS/R|R skew-surge precedes rainfall 5 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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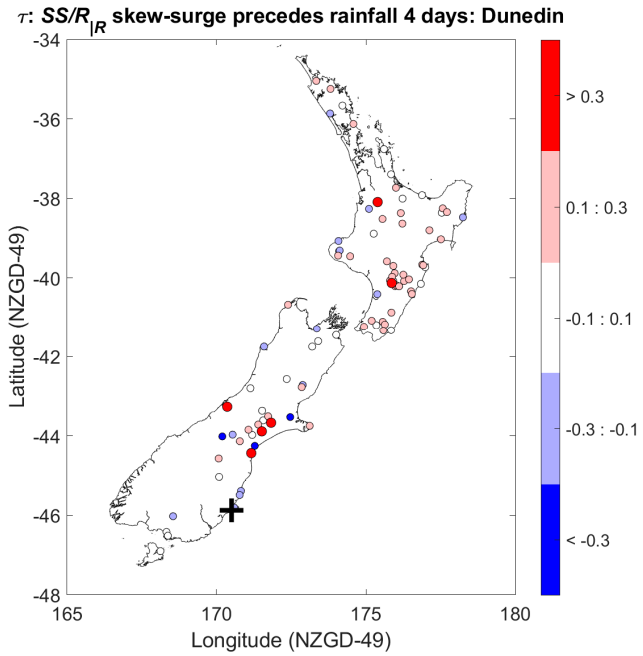
τ: SS/R|R skew-surge precedes rainfall 4 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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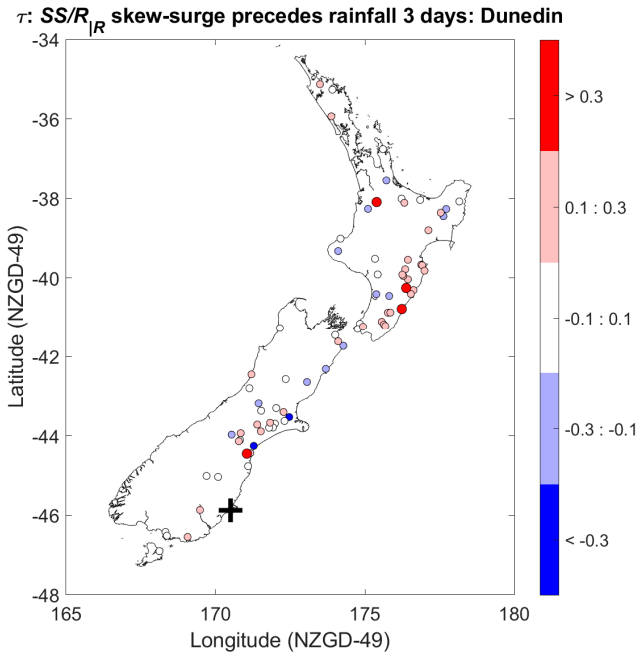
τ: SS/R|R skew-surge precedes rainfall 3 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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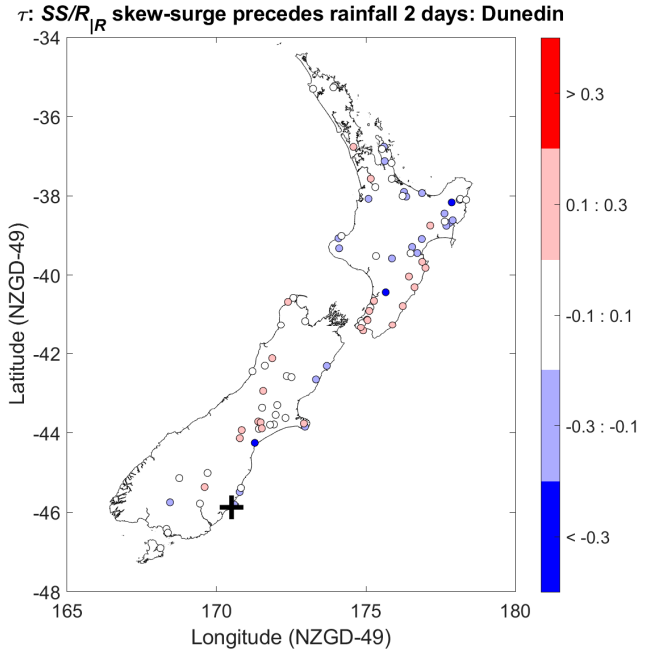
τ: SS/R|R skew-surge precedes rainfall 2 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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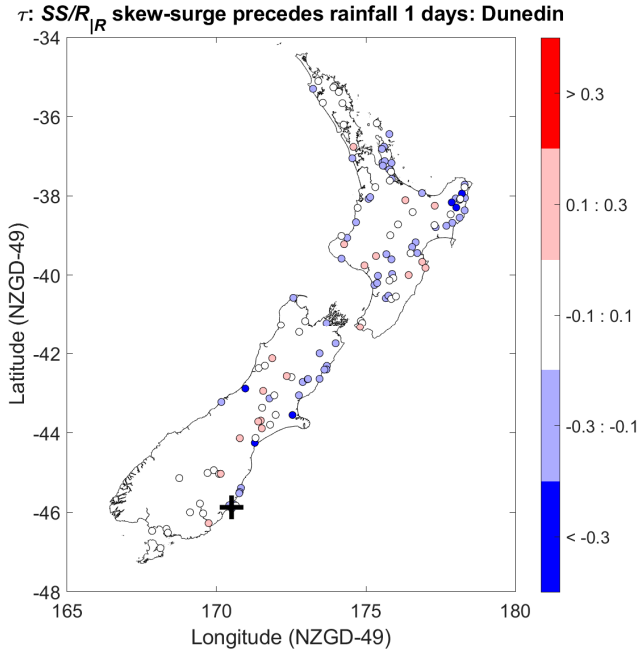
τ: SS/R|R skew-surge precedes rainfall 1 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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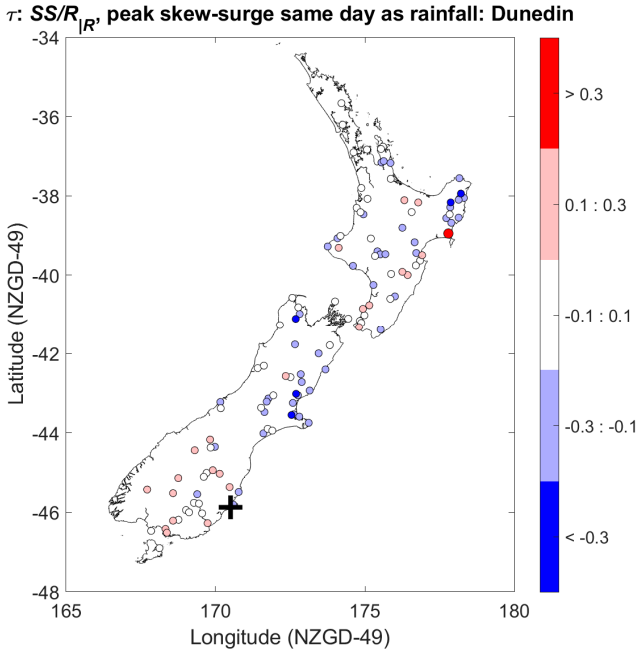
τ: SS/R|R, peak skew-surge same day as rainfall: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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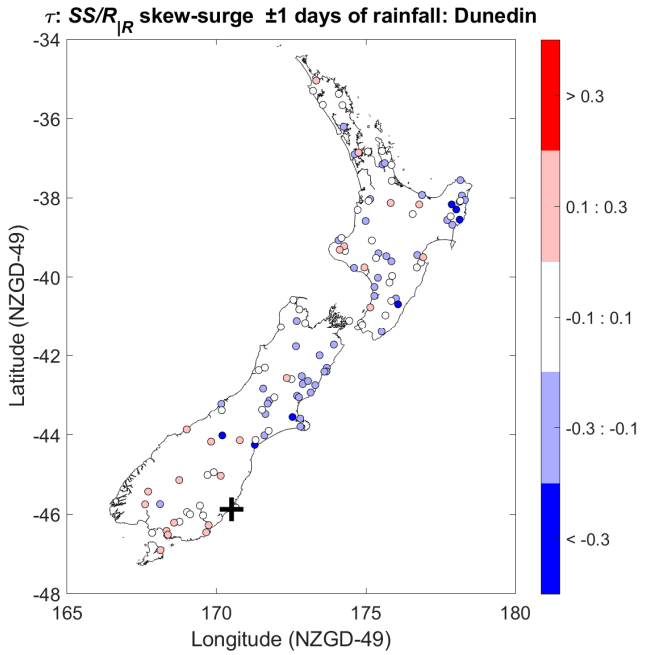
τ: SS/R|R skew-surge ±1 days of rainfall: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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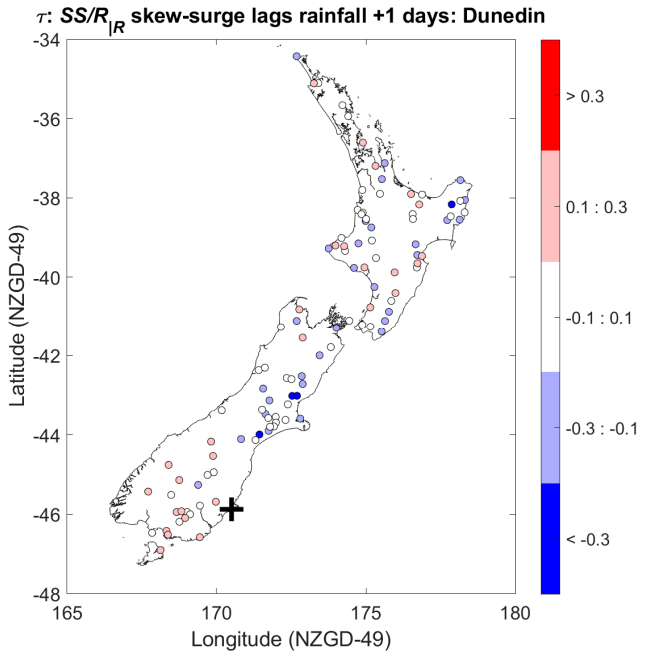
τ: SS/R|R skew-surge lags rainfall +1 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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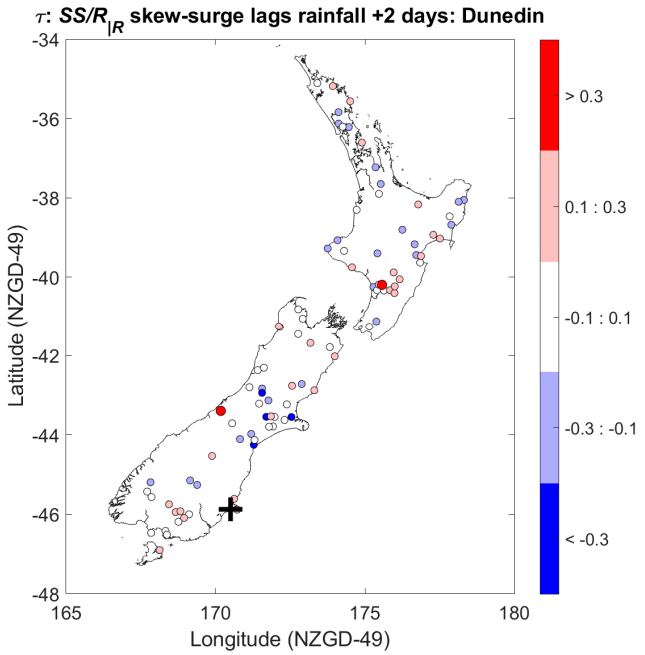
τ: SS/R|R skew-surge lags rainfall +2 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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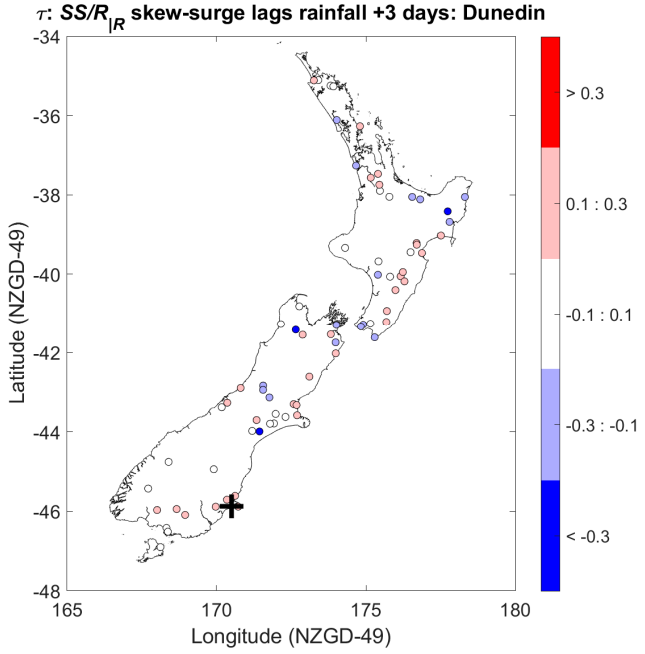
τ: SS/R|R skew-surge lags rainfall +3 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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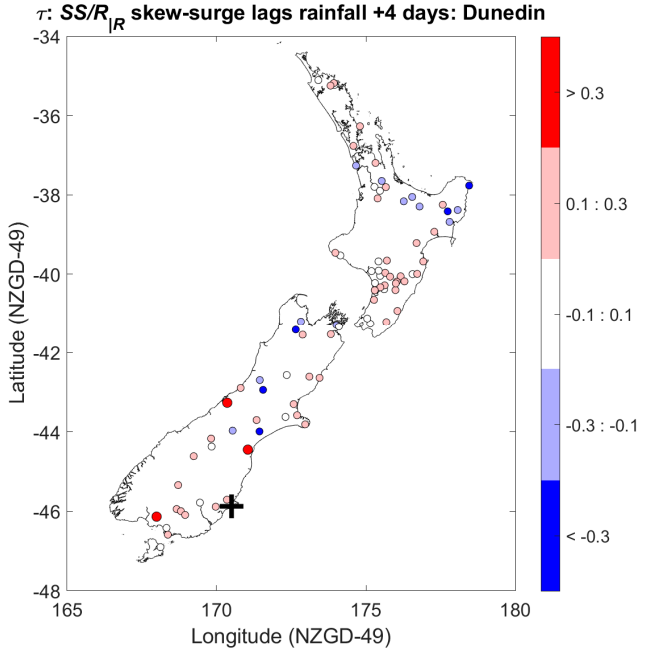
τ: SS/R|R skew-surge lags rainfall +4 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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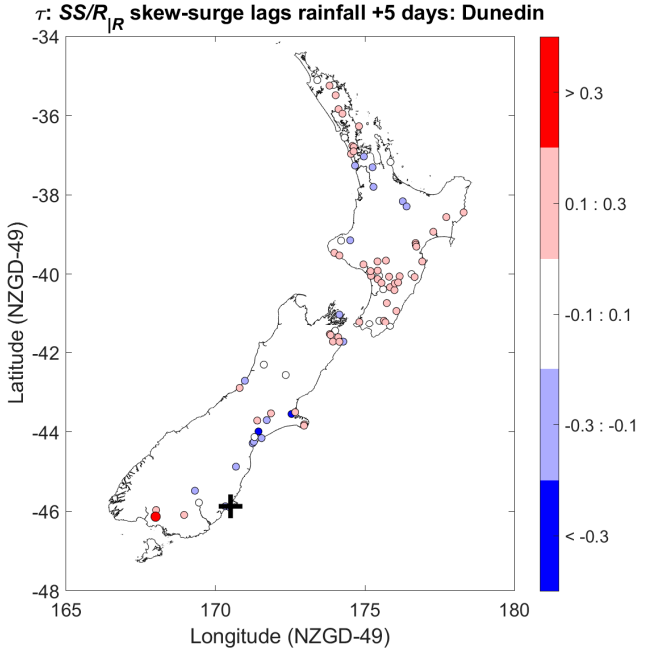
τ: SS/R|R skew-surge lags rainfall +5 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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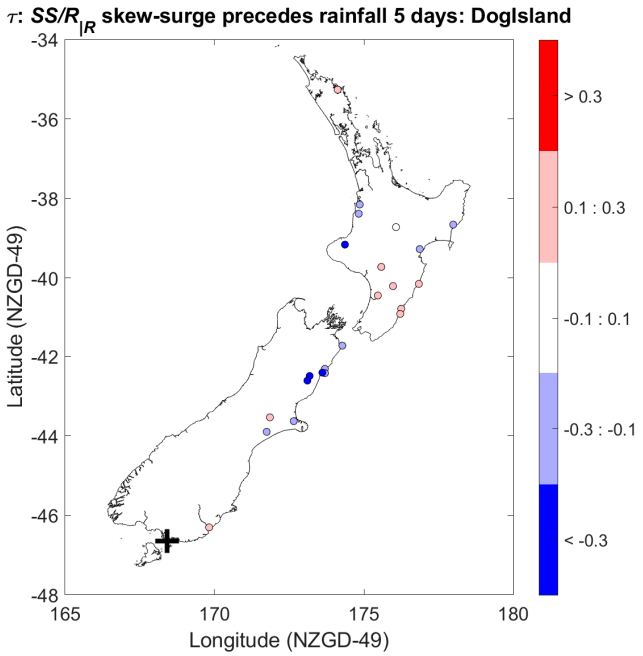
Dog Island


τ: SS/R|R skew-surge precedes rainfall 5 days: DogIsland
Latitude (NZGD-49)
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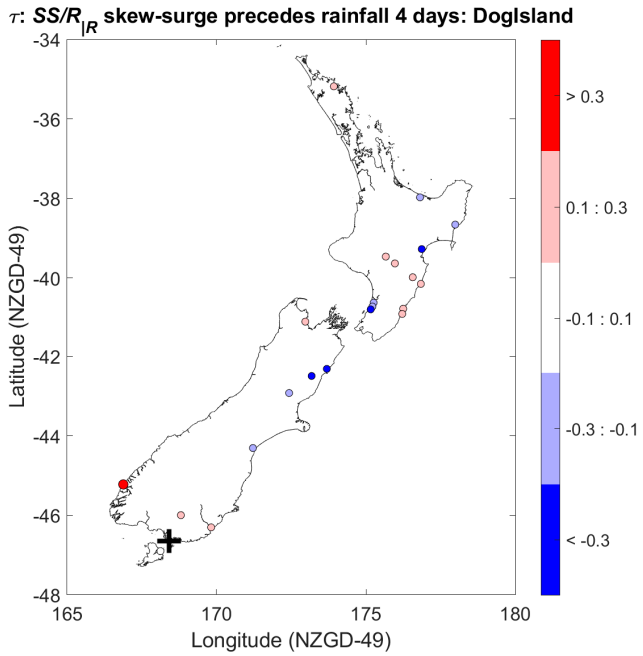
τ: SS/R|R skew-surge precedes rainfall 4 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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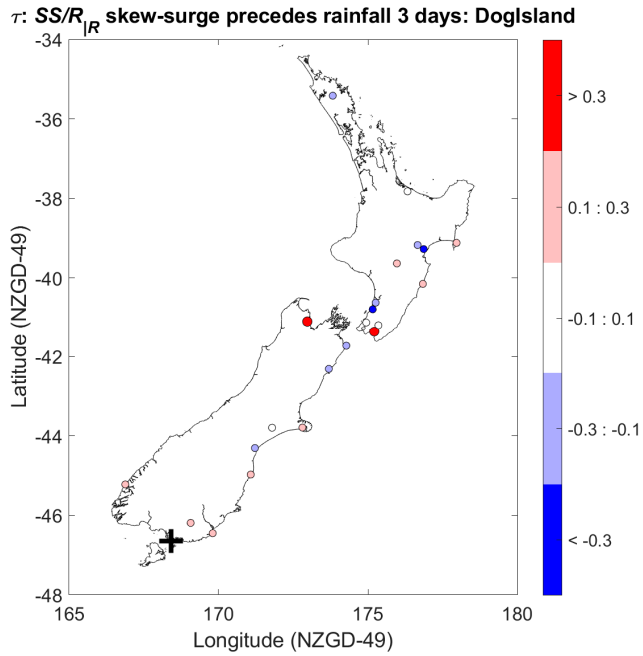
τ: SS/R|R skew-surge precedes rainfall 3 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
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-48
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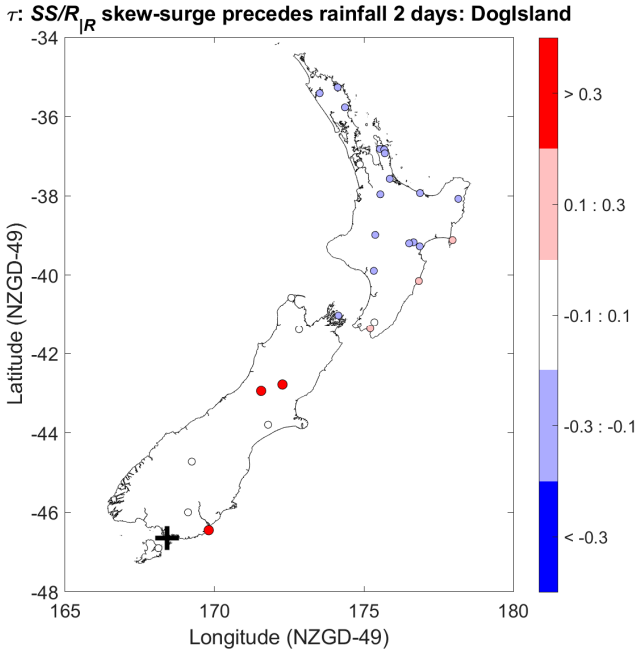
< -0.3


τ: SS/R|R skew-surge precedes rainfall 2 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
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-42
-44
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175
180
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0.1 : 0.3
-0.1 : 0.1
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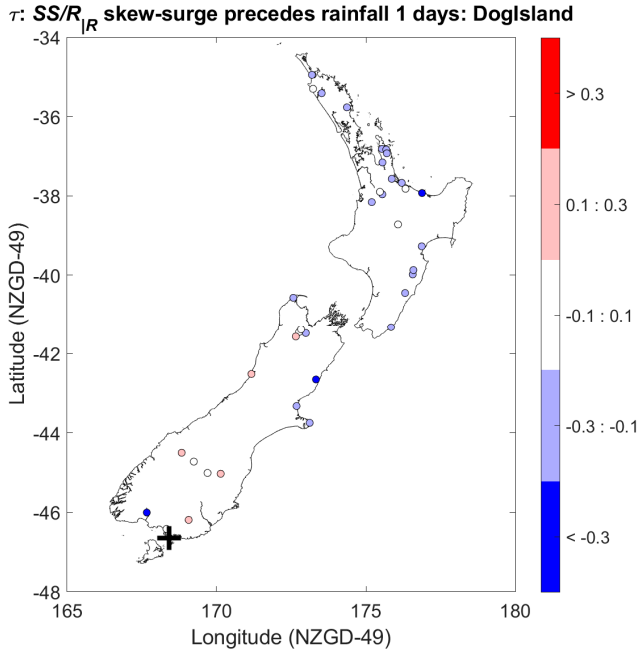
< -0.3


τ: SS/R|R skew-surge precedes rainfall 1 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
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-48
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175
180
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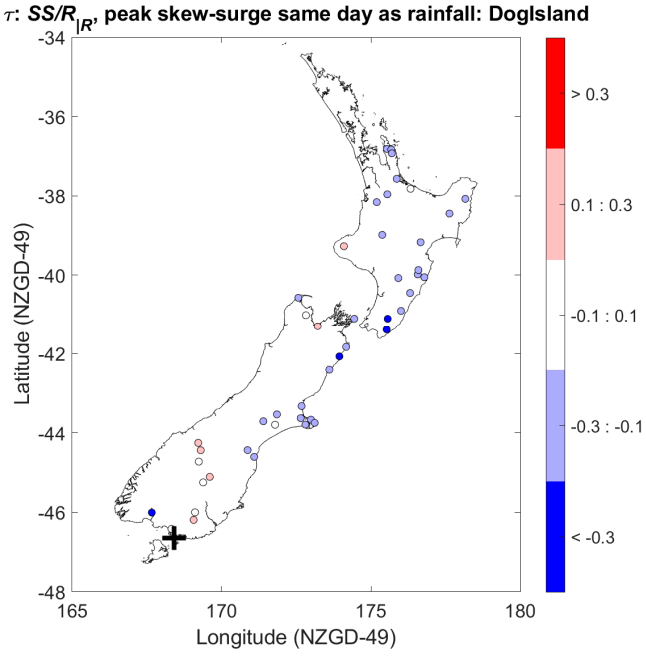
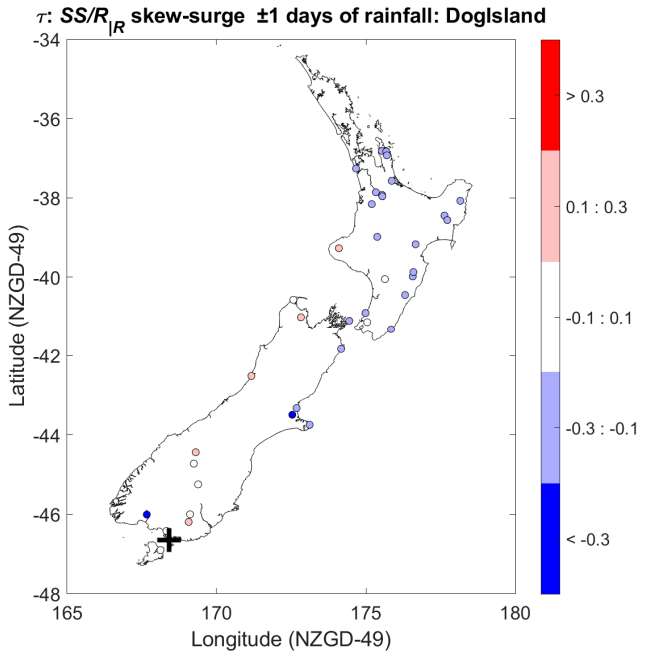
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/R|R, peak skew-surge same day as rainfall: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
165
170
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/R|R skew-surge ±1 days of rainfall: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
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170
175
180
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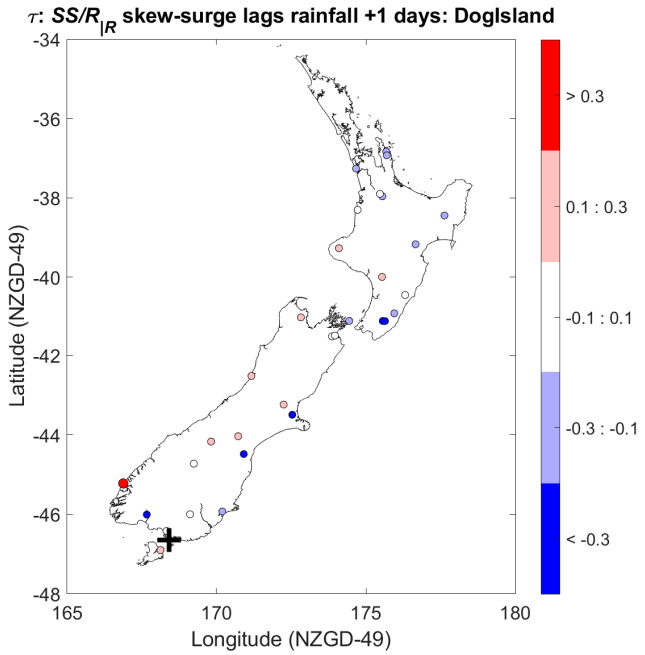
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/R|R skew-surge lags rainfall +1 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
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-42
-44
-46
-48
165
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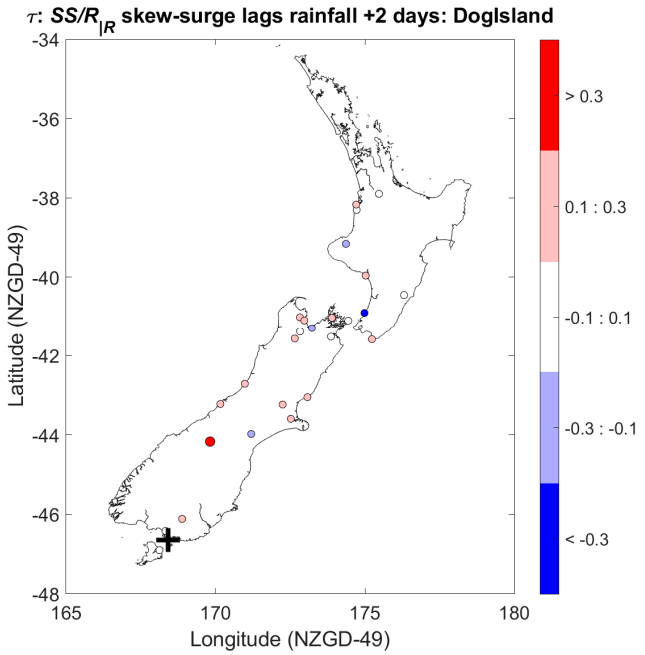
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/R|R skew-surge lags rainfall +2 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
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-42
-44
-46
-48
165
170
175
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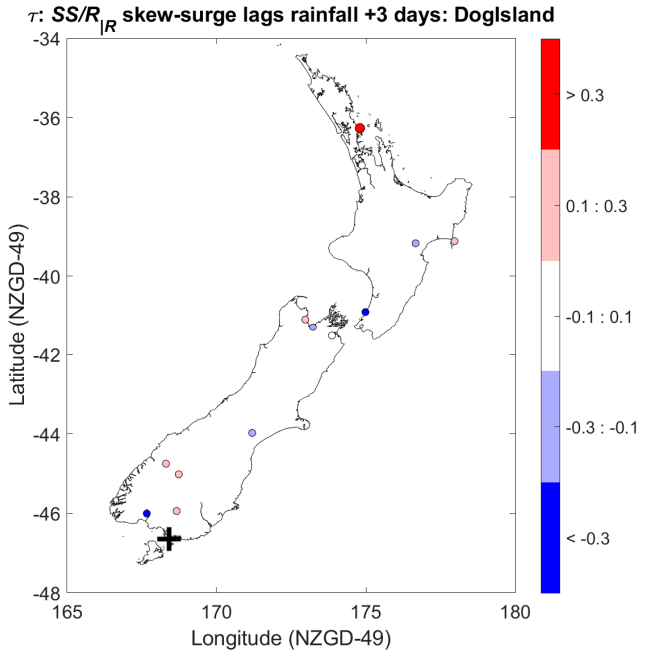
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/R|R skew-surge lags rainfall +3 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
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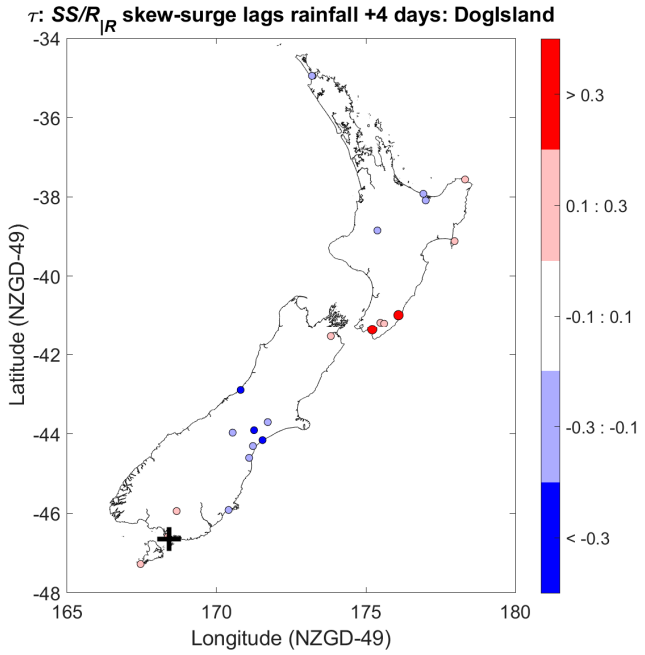
-42
-44
-46
-48
165
170
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/R|R skew-surge lags rainfall +4 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
165
170
175
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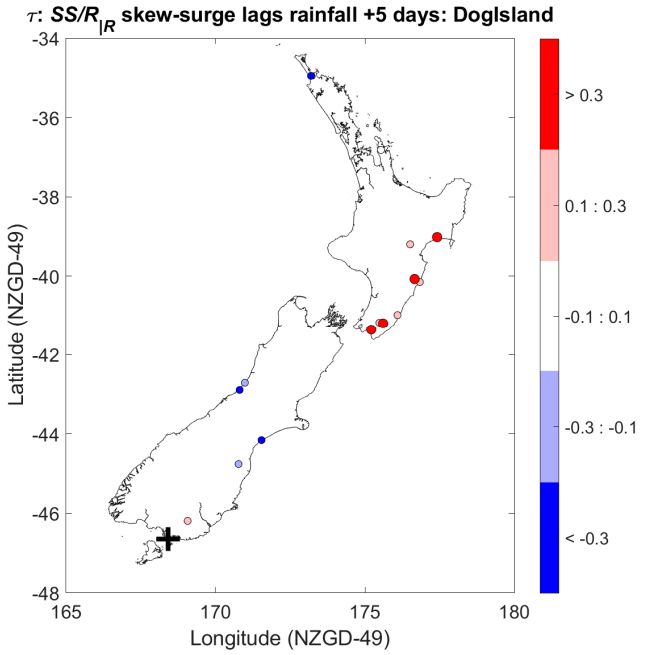
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/R|R skew-surge lags rainfall +5 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
165
170
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3

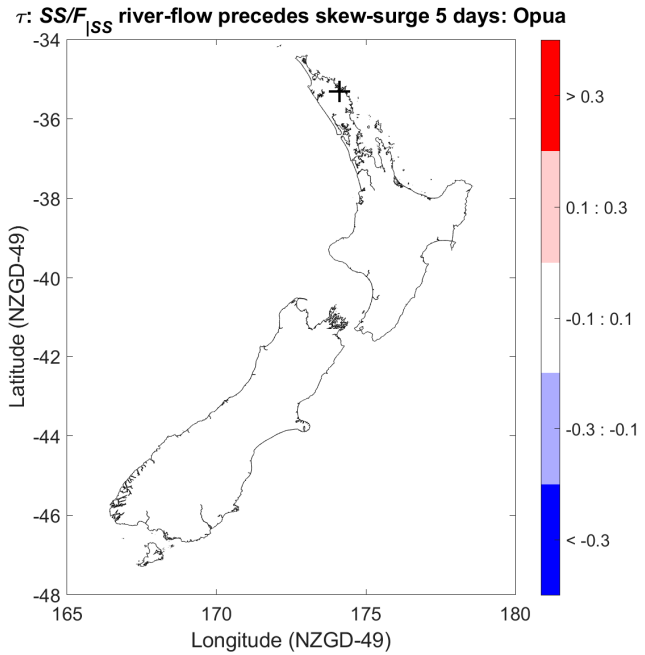
Skew-surge and river-flow

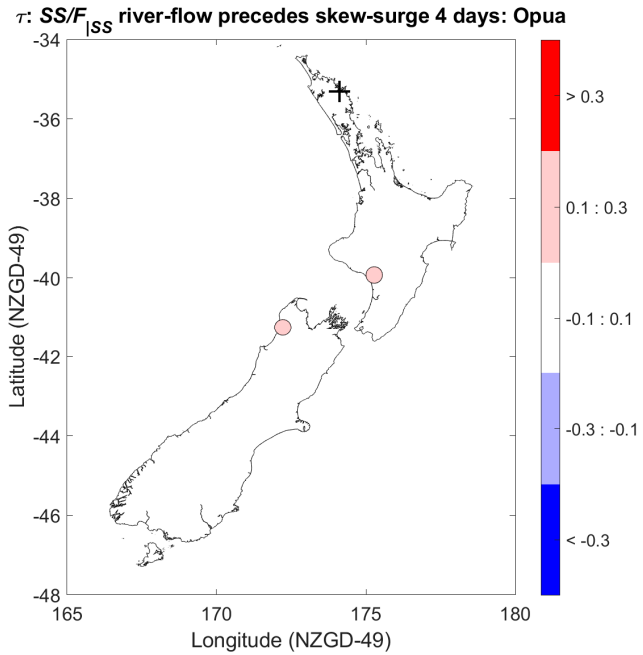
The following plots show Kendall's rank correlation coefficient τ, significant at p-value < 0.05, for skew-surge and river-flow.

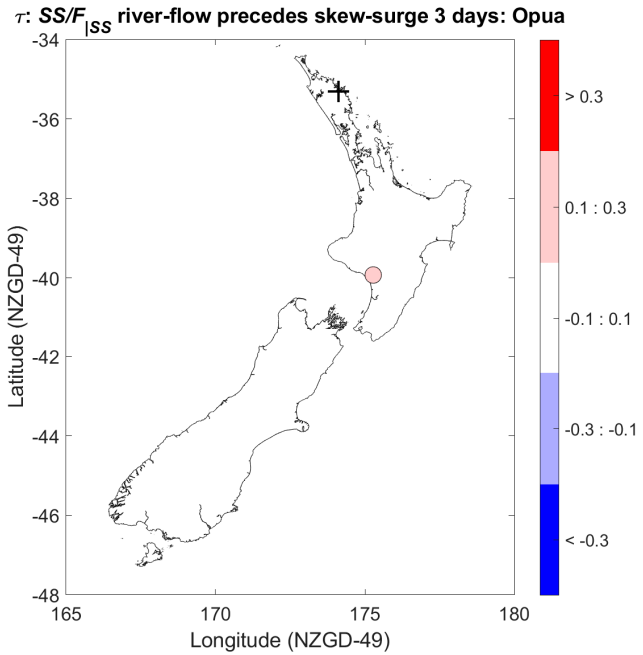
$SS/F_{|SS}$ —river-flow dependent on skew-surge being extreme

Negative lags mean that the river-flow was experienced before the skew-surge and *vice versa*.

Opua


τ: SS/F|SS river-flow precedes skew-surge 5 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
165
170
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow precedes skew-surge 4 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
165
170
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow precedes skew-surge 3 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
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175
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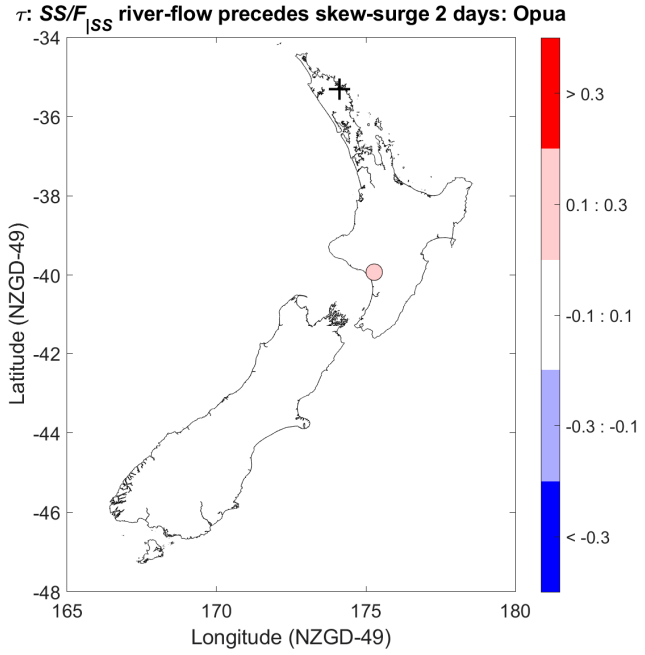
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow precedes skew-surge 2 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
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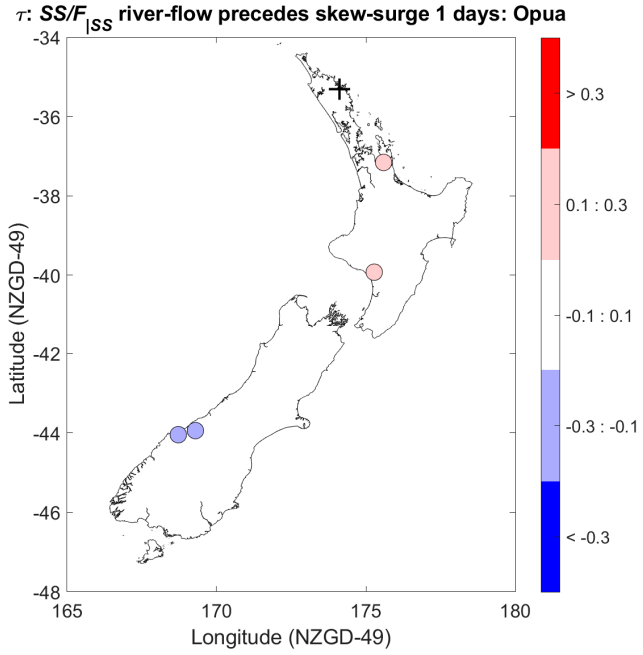
-48
165
170
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow precedes skew-surge 1 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
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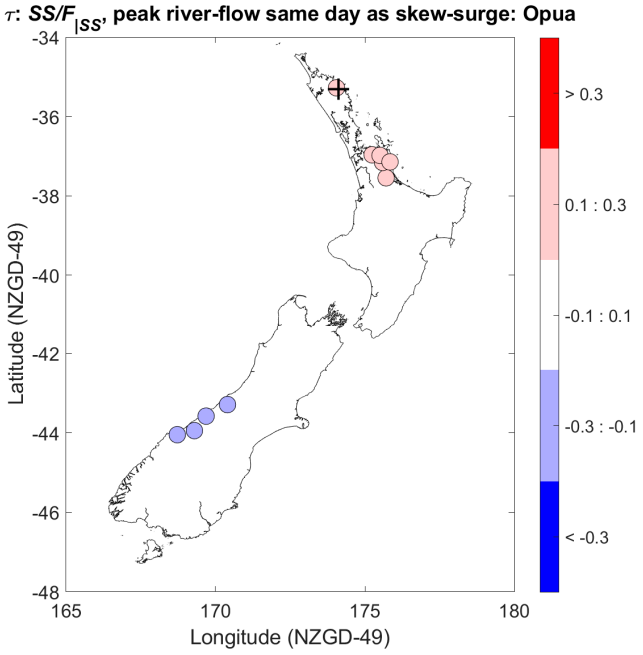
-46
-48
165
170
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS, peak river-flow same day as skew-surge: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
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-40
-42
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-48
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175
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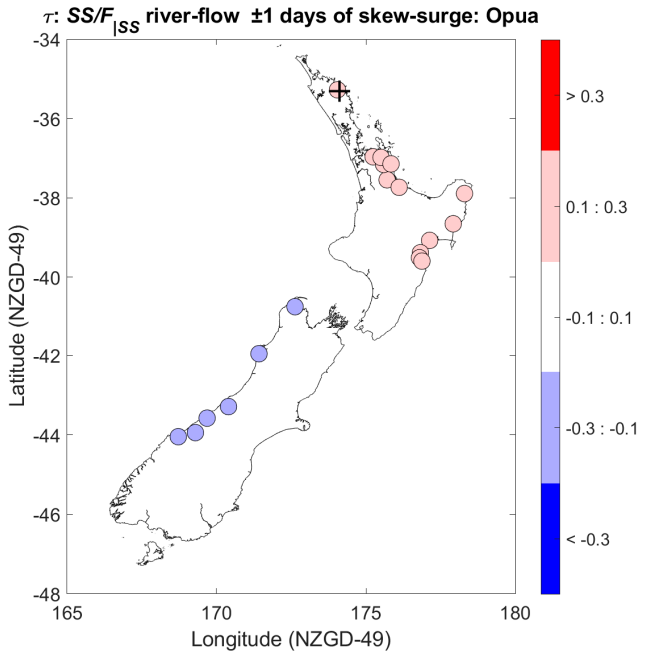
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow ±1 days of skew-surge: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
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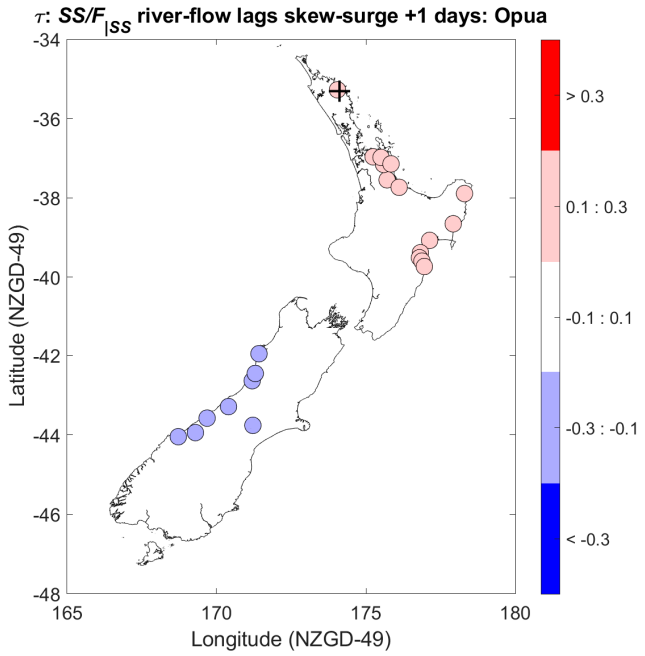
-48
165
170
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +1 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
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175
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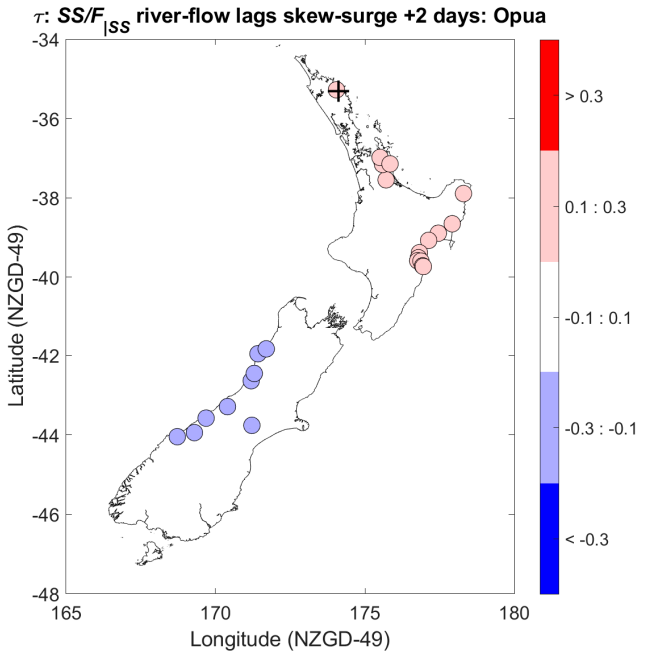
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +2 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
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175
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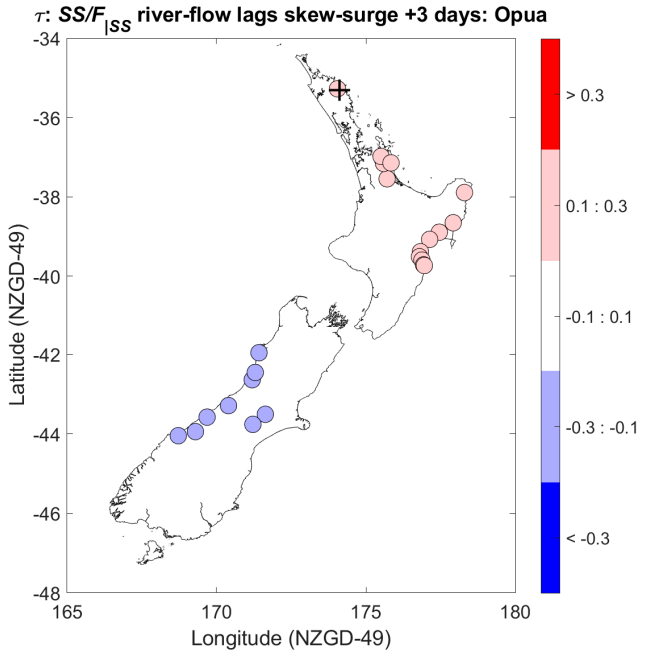
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +3 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
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-42
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-48
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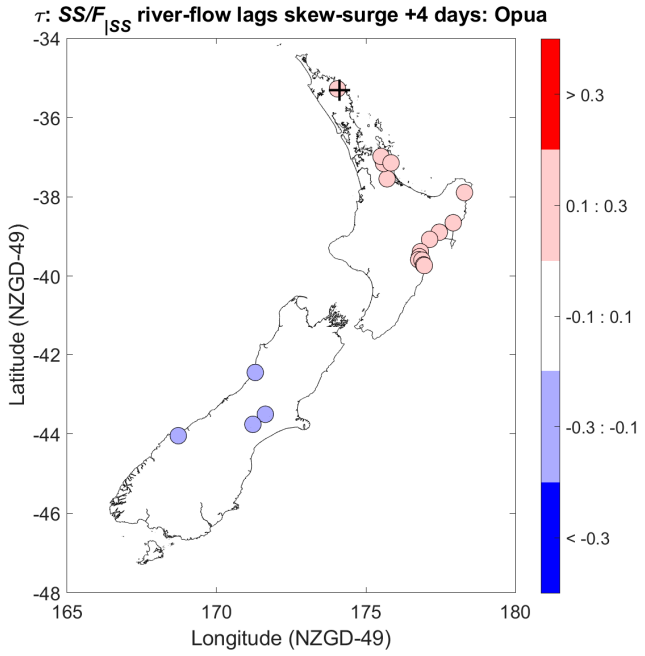
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +4 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
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-42
-44
-46
-48
165
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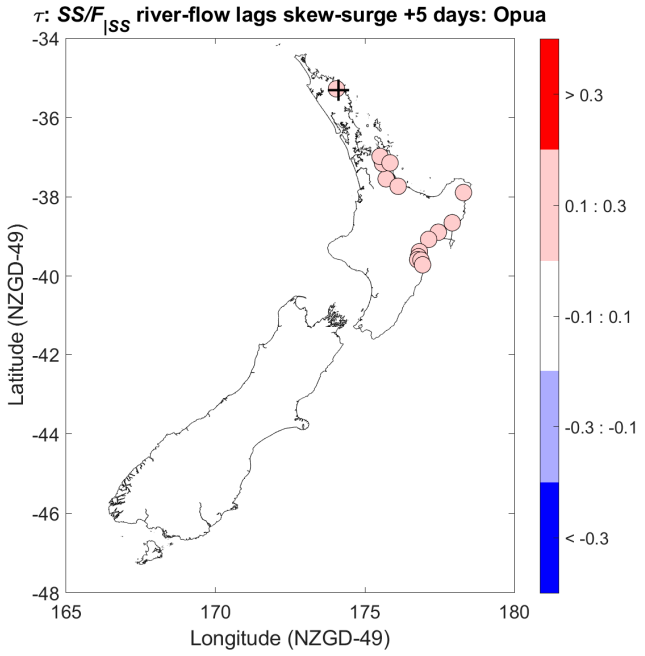
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +5 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
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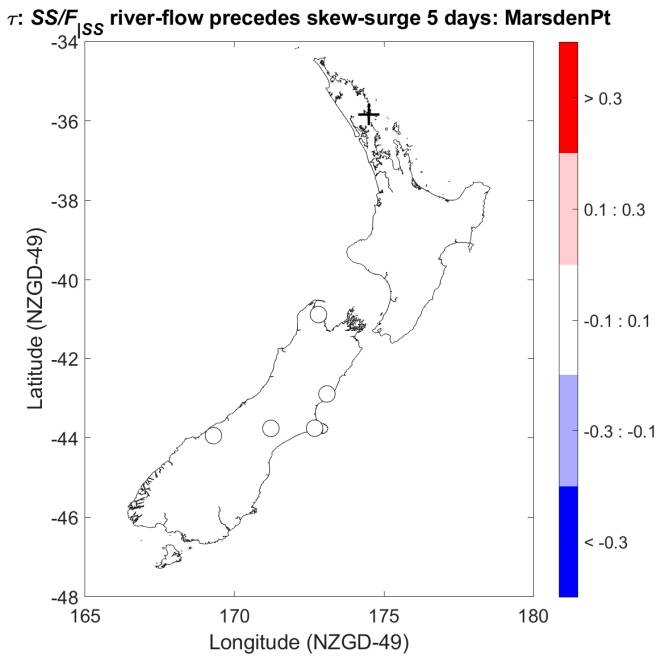
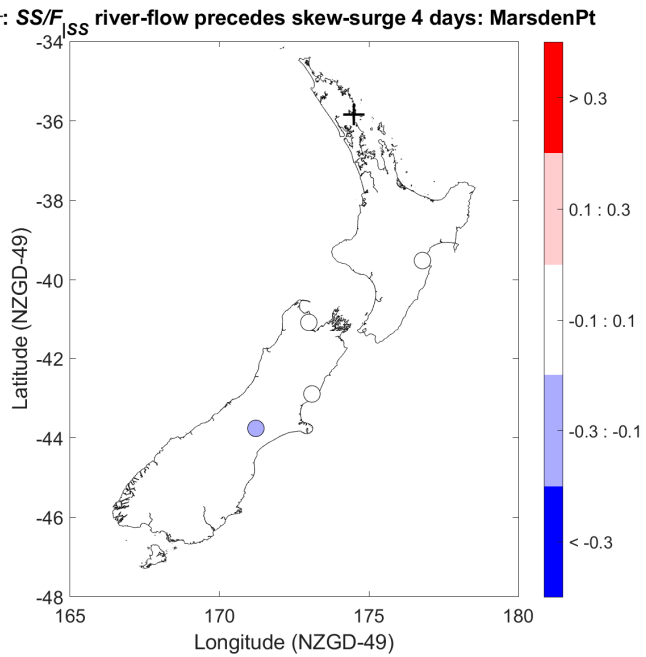
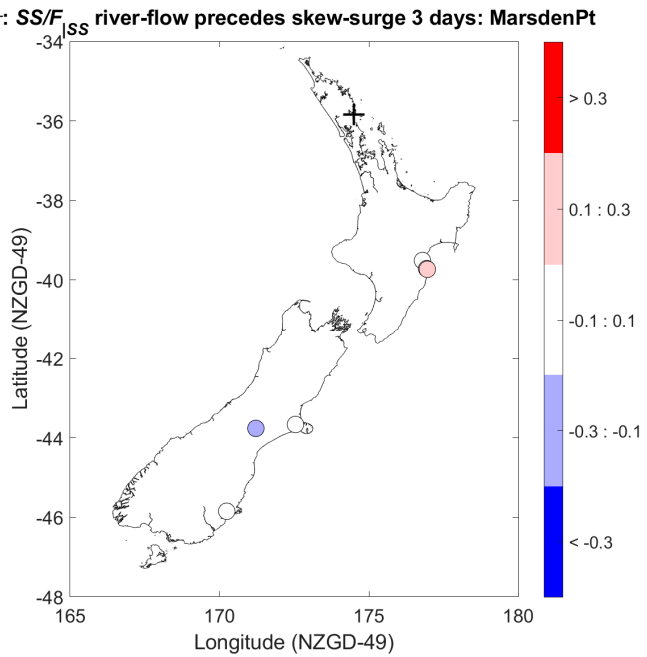
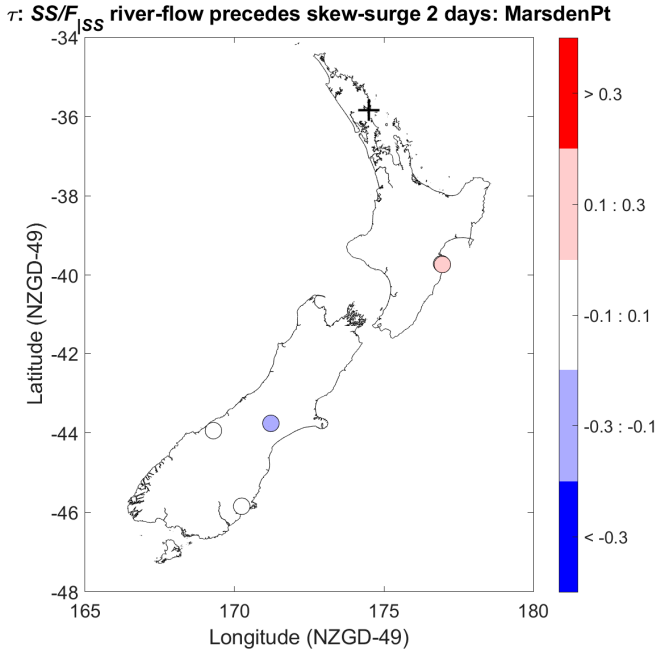
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3

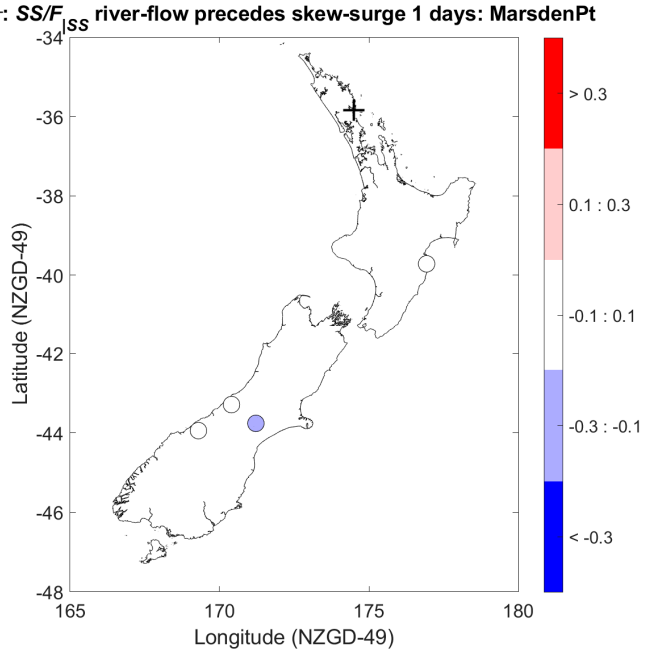
Marsden Point

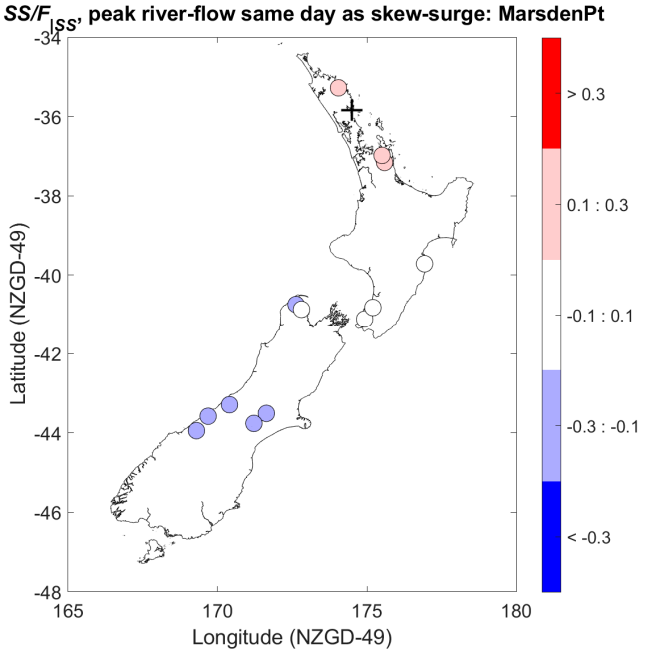


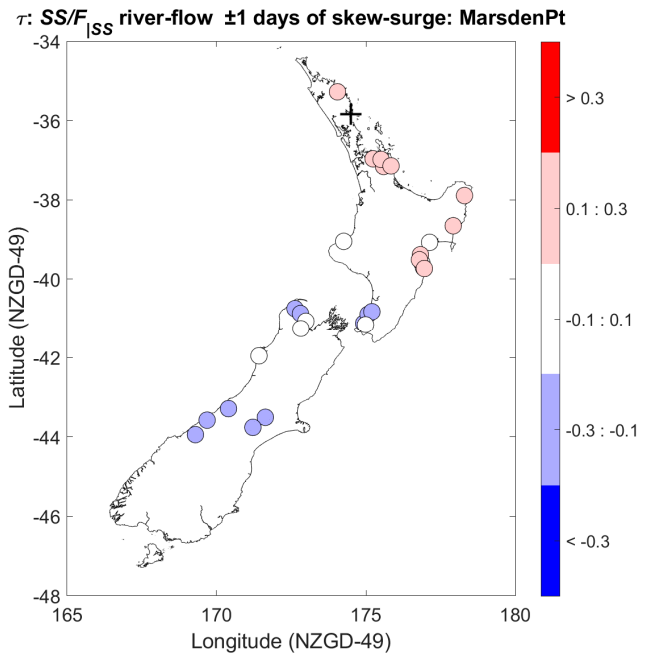











τ: SS/F|SS river-flow ±1 days of skew-surge: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
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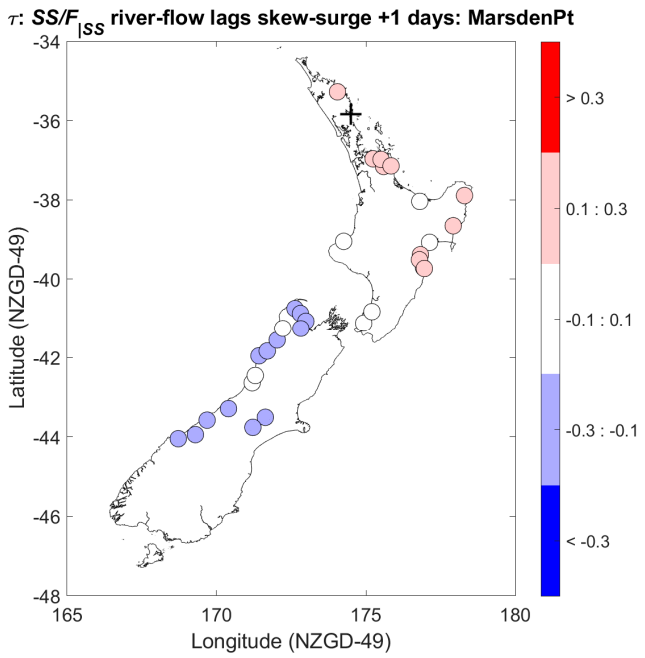
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +1 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
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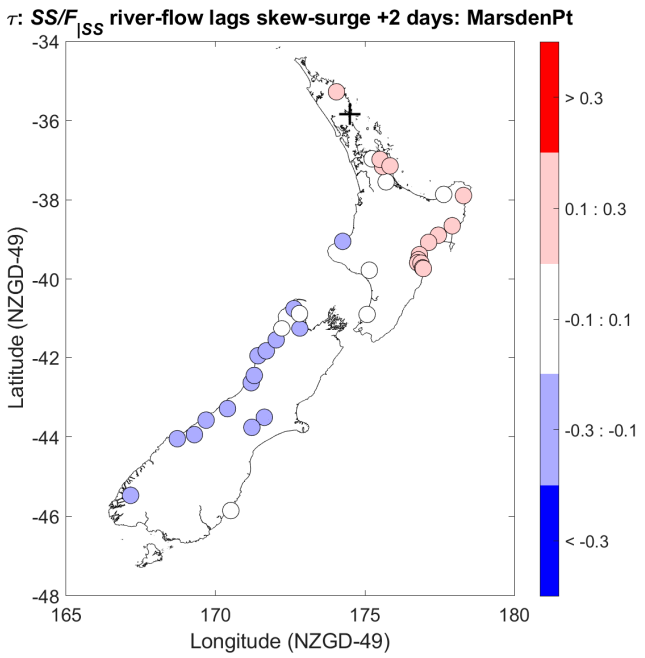
τ: SS/F|SS river-flow lags skew-surge +2 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
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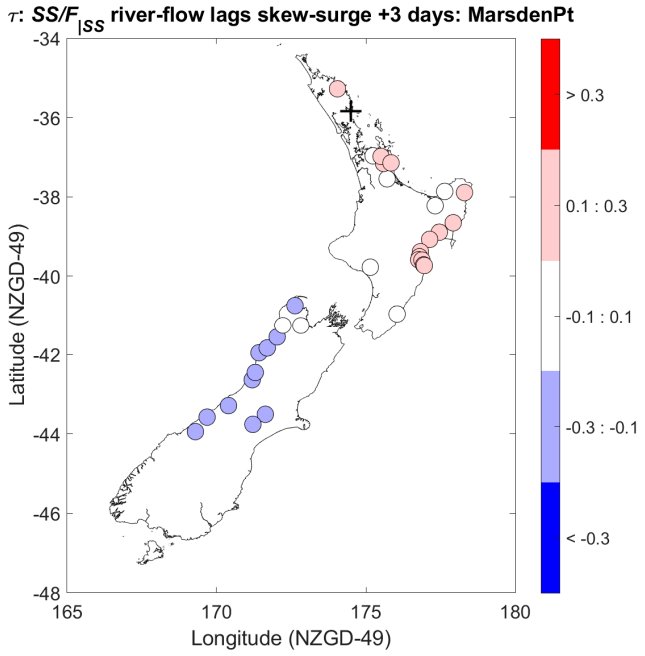
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +3 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
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-48
165
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> 0.3
0.1 : 0.3
-0.1 : 0.1
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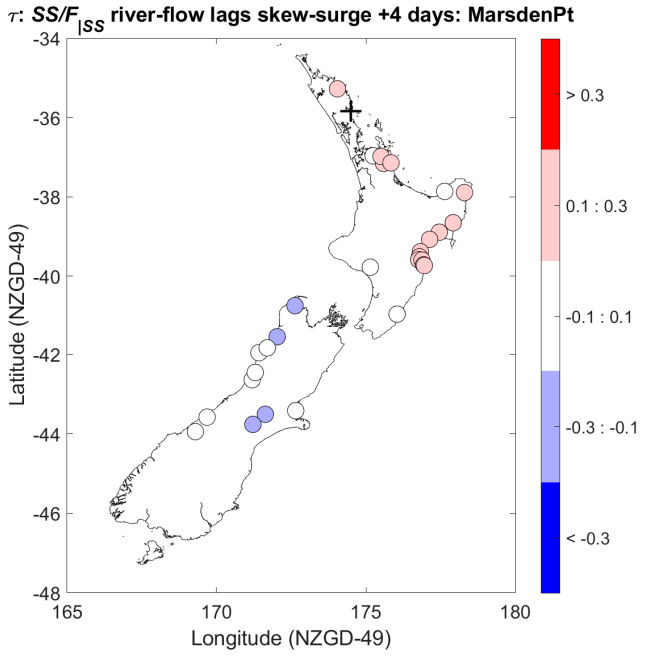
τ: SS/F|SS river-flow lags skew-surge +4 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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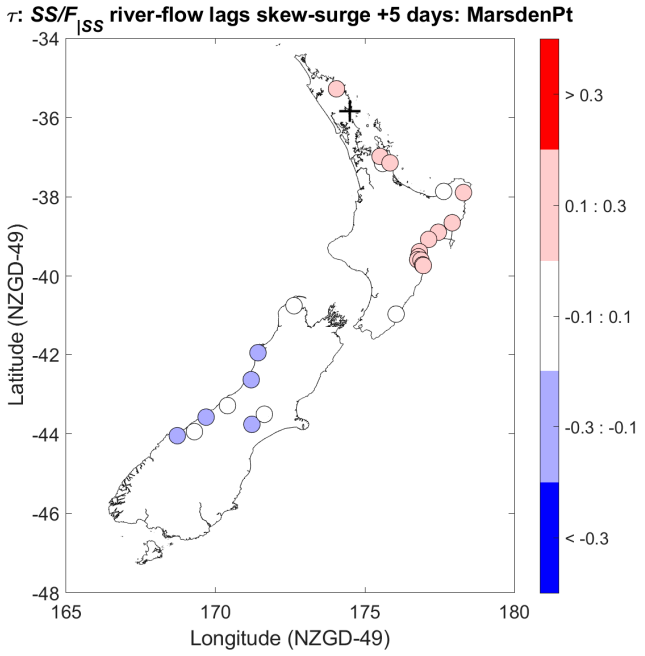
τ: SS/F|SS river-flow lags skew-surge +5 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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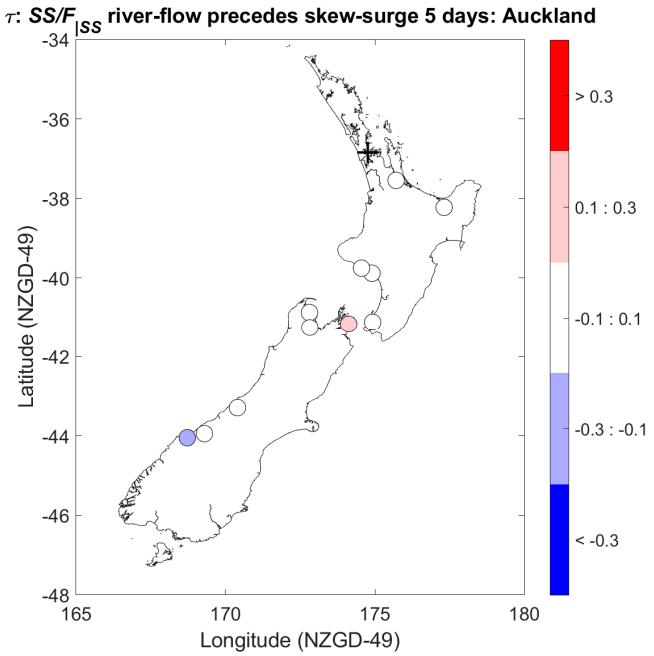
Auckland


τ: SS/F|SS river-flow precedes skew-surge 5 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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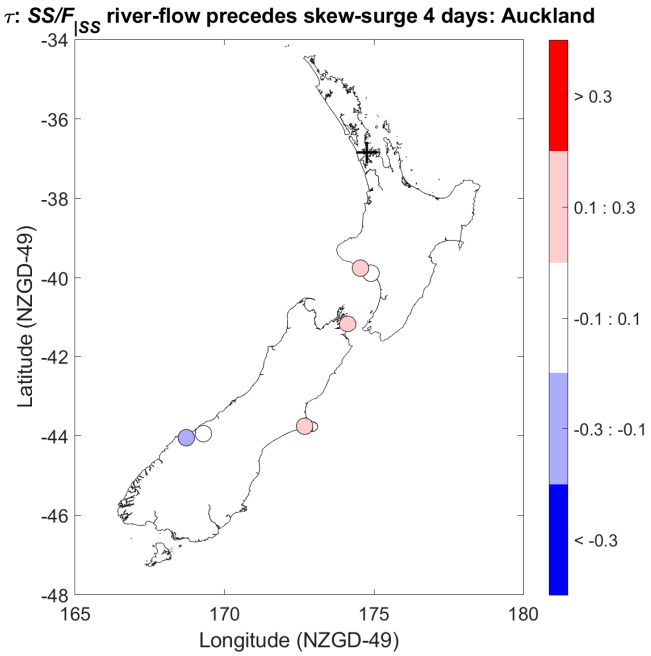
τ: SS/F|SS river-flow precedes skew-surge 4 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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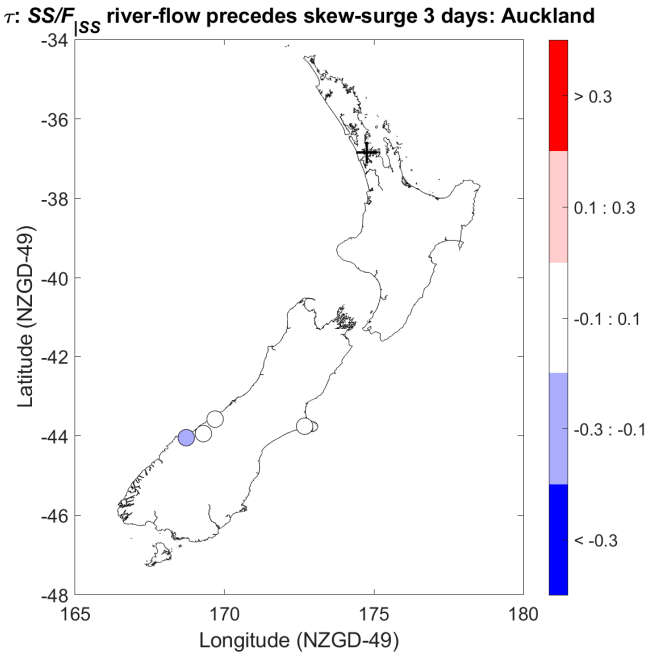
τ: SS/F|SS river-flow precedes skew-surge 3 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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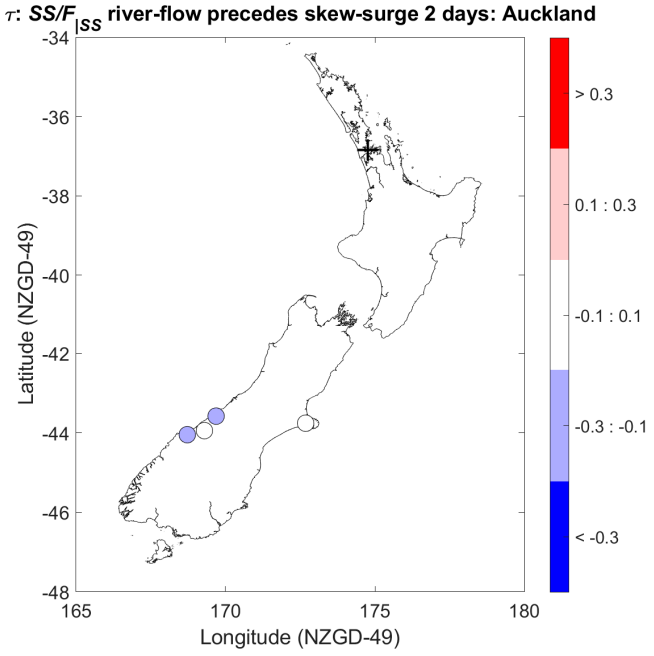
τ: SS/F|SS river-flow precedes skew-surge 2 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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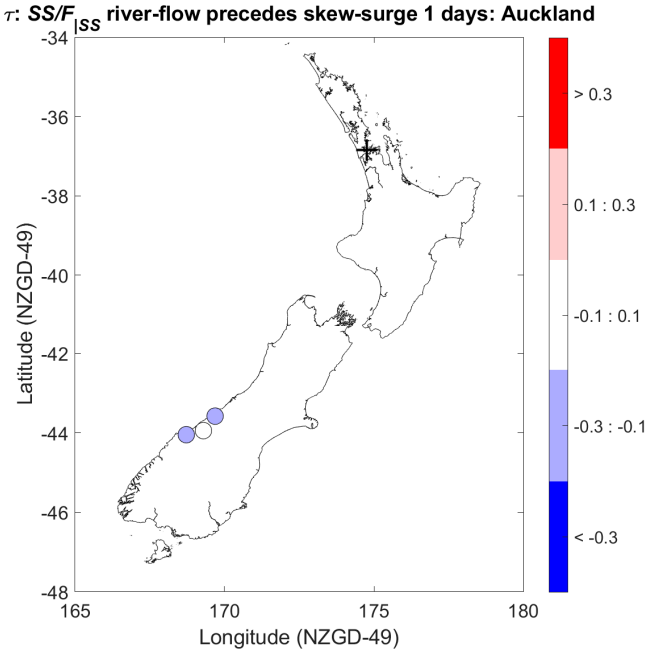
τ: SS/F|SS river-flow precedes skew-surge 1 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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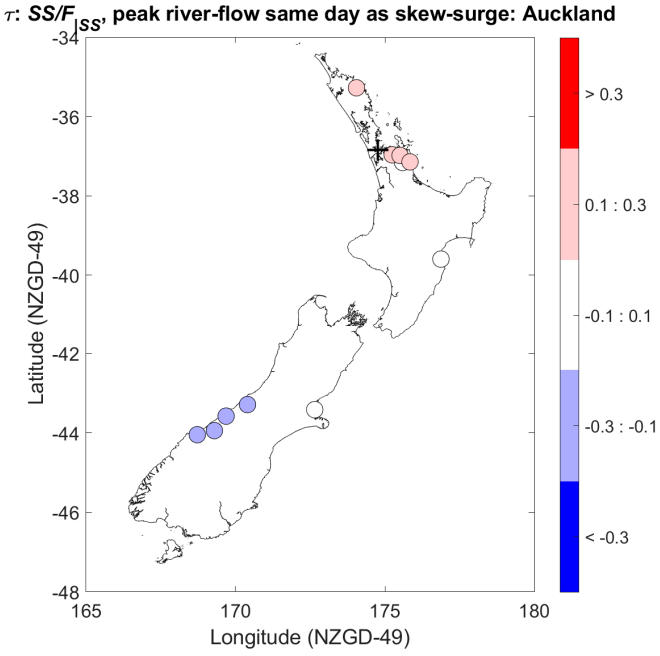
τ: SS/F|SS, peak river-flow same day as skew-surge: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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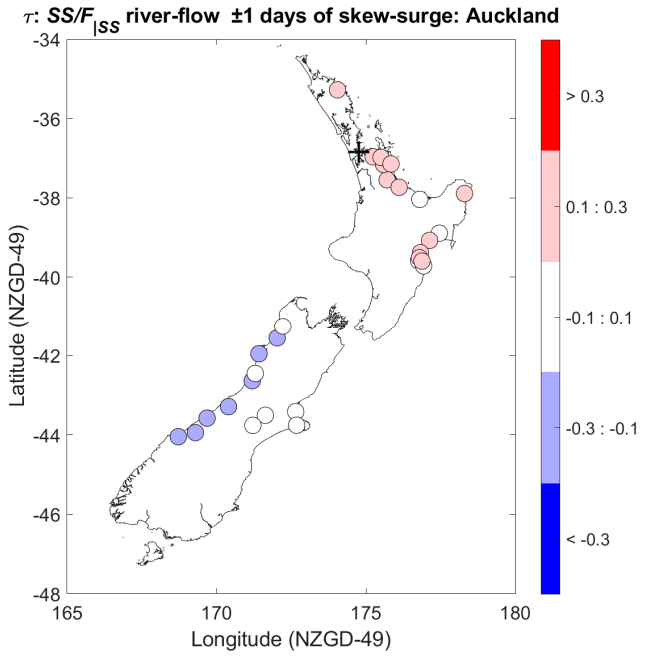
τ: SS/F|SS river-flow ±1 days of skew-surge: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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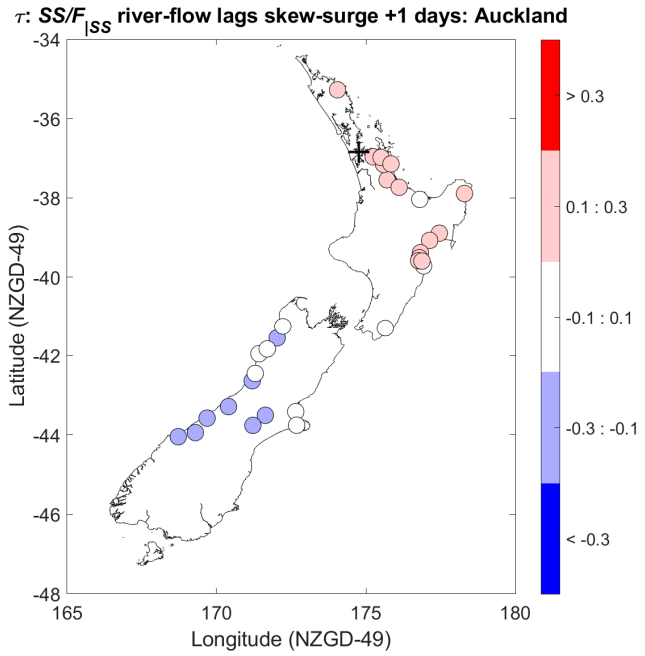
τ: SS/F|SS river-flow lags skew-surge +1 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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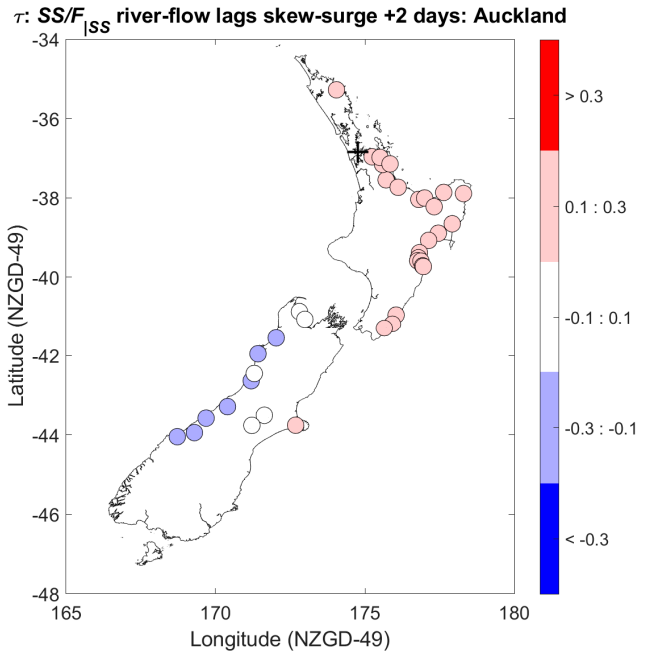
τ: SS/F|SS river-flow lags skew-surge +2 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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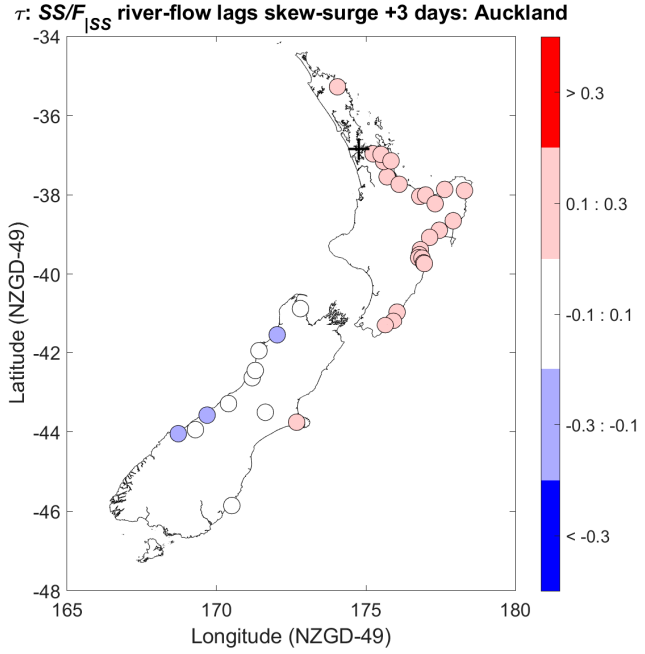
τ: SS/F|SS river-flow lags skew-surge +3 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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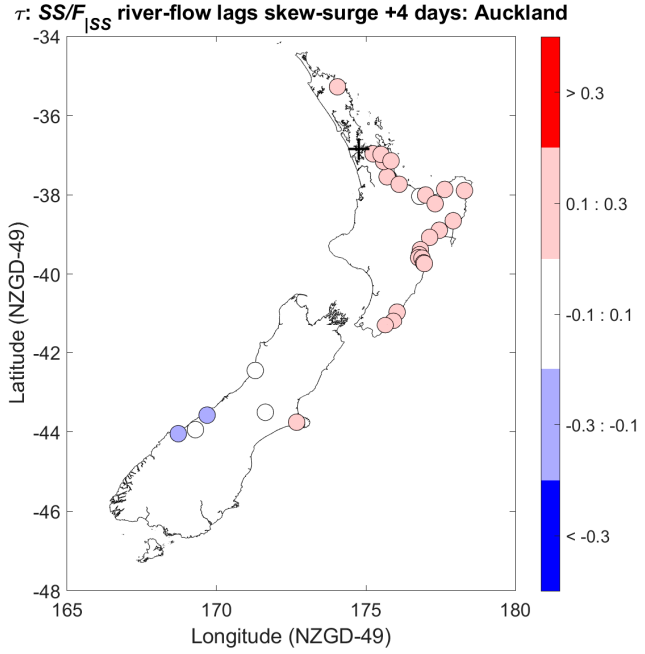
τ: SS/F|SS river-flow lags skew-surge +4 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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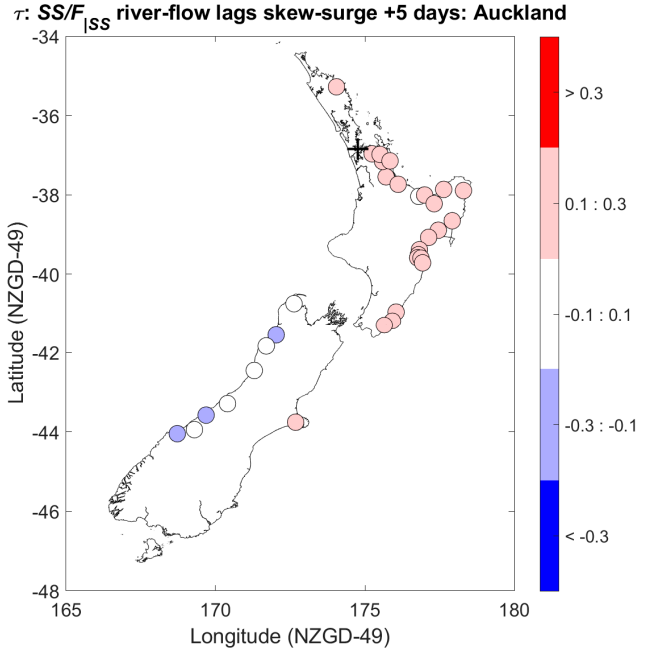
τ: SS/F|SS river-flow lags skew-surge +5 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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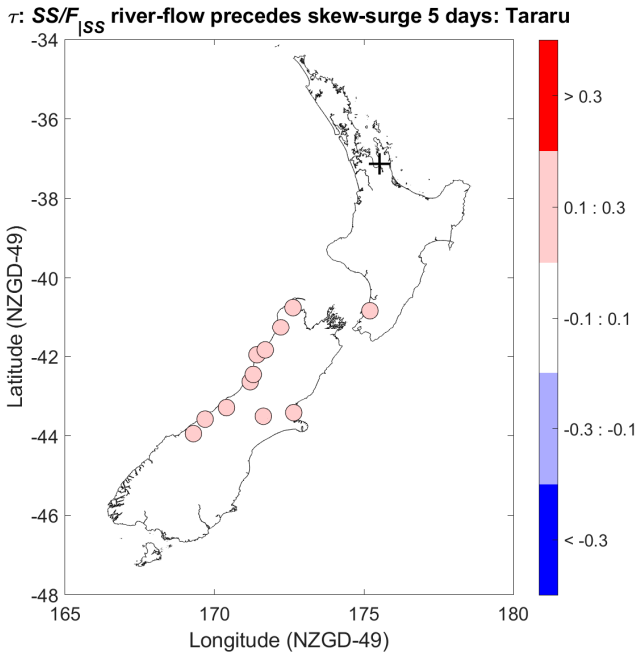
Tararu


τ: SS/F|SS river-flow precedes skew-surge 5 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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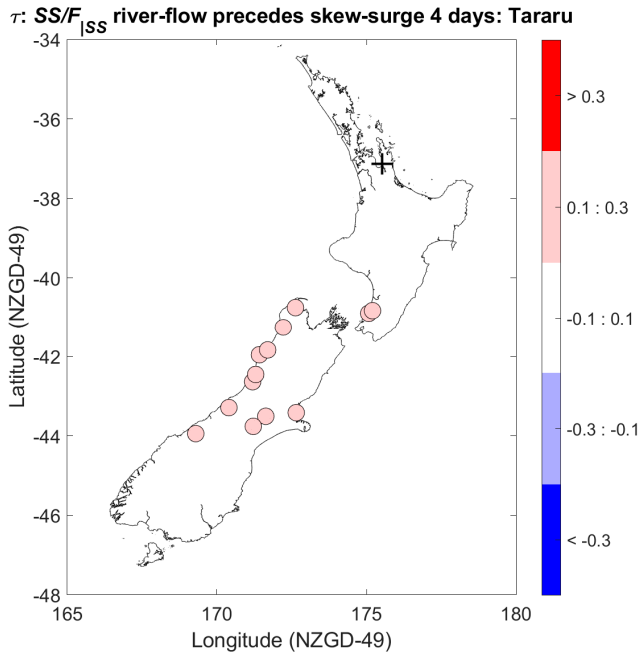
τ: SS/F|SS river-flow precedes skew-surge 4 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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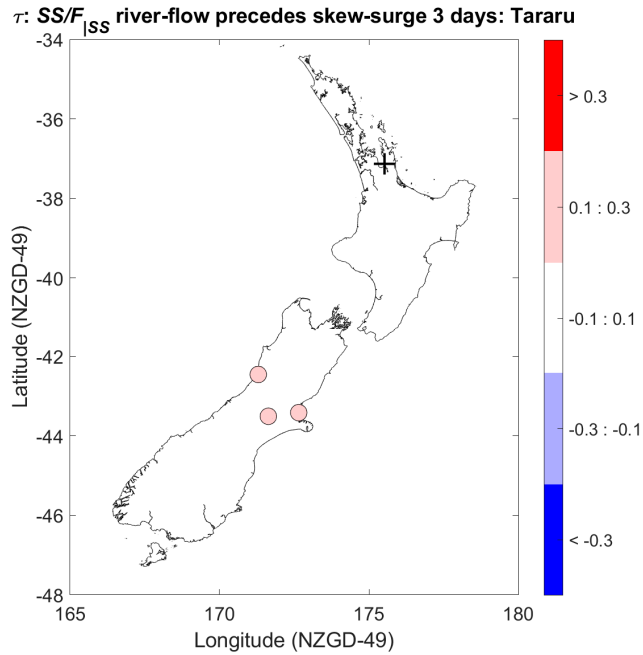
τ: SS/F|SS river-flow precedes skew-surge 3 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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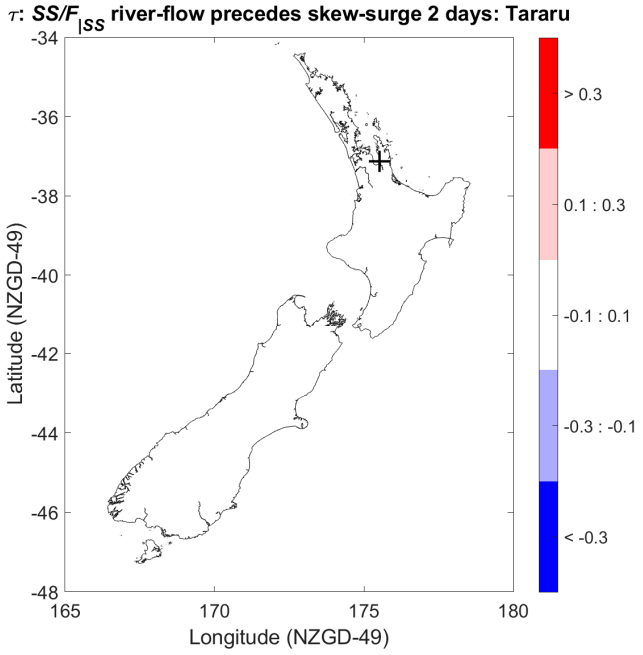
τ: SS/F|SS river-flow precedes skew-surge 2 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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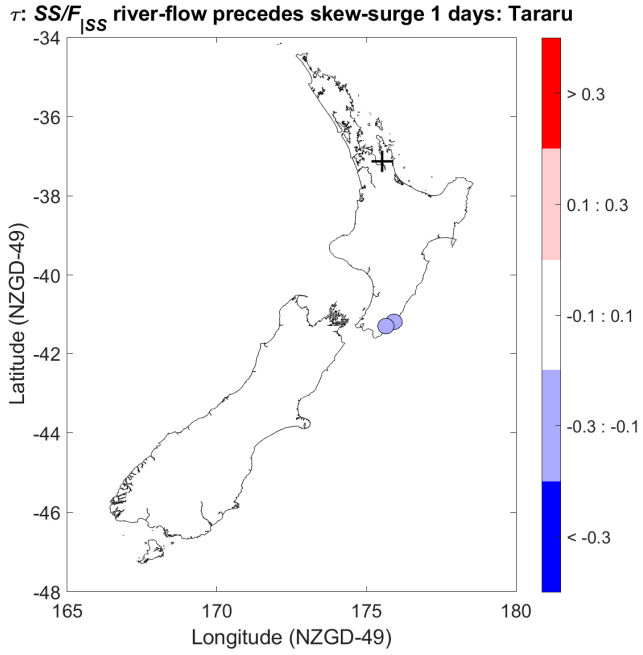
τ: SS/F|SS river-flow precedes skew-surge 1 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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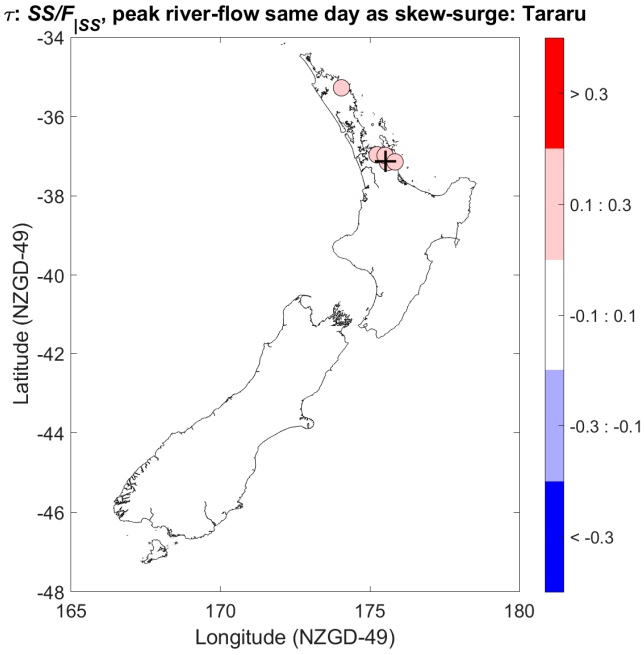
τ: SS/F|SS, peak river-flow same day as skew-surge: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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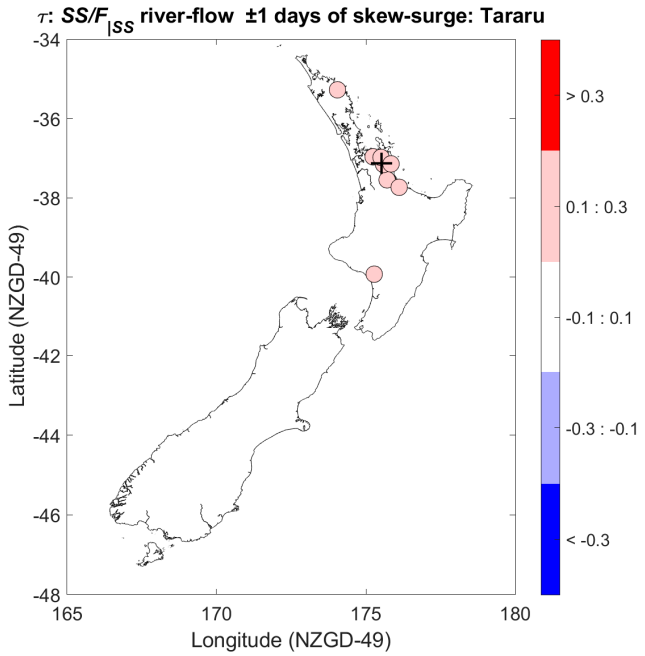
τ: SS/F|SS river-flow ±1 days of skew-surge: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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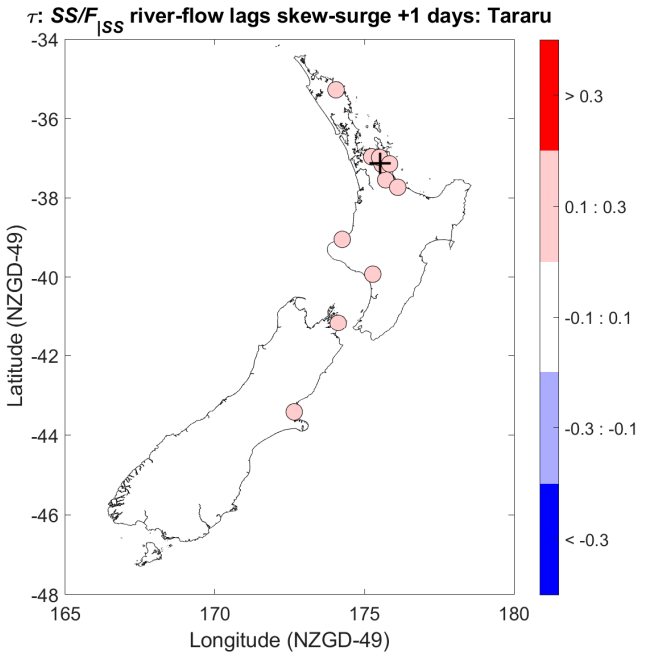
τ: SS/F|SS river-flow lags skew-surge +1 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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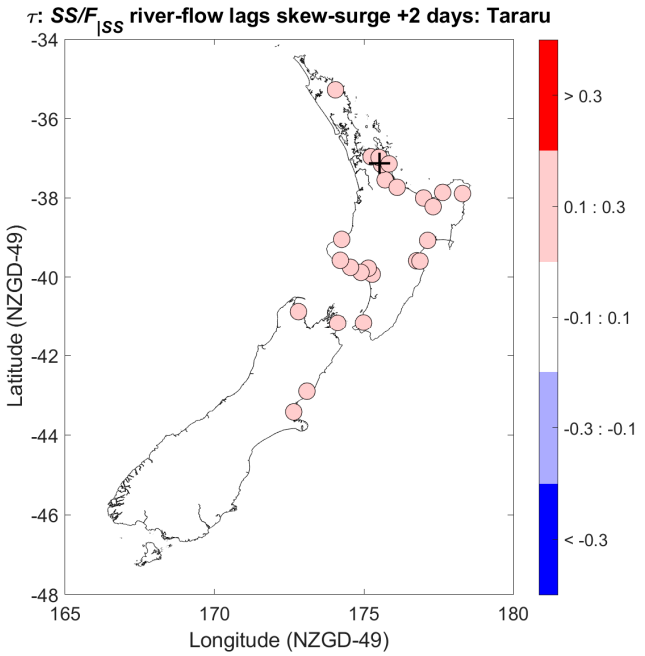
τ: SS/F|SS river-flow lags skew-surge +2 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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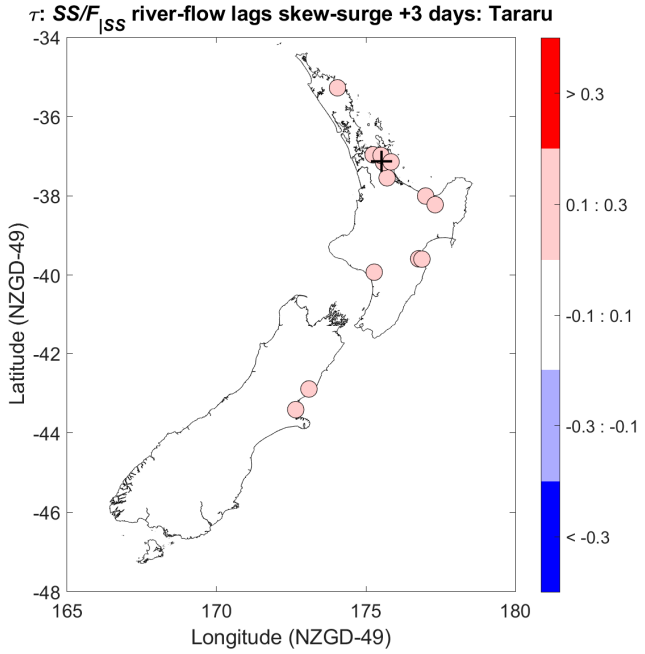
τ: SS/F|SS river-flow lags skew-surge +3 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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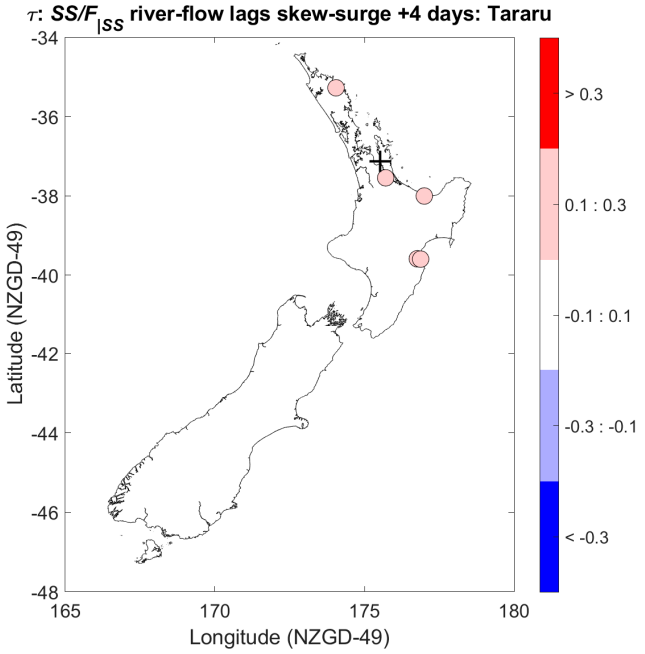
τ: SS/F|SS river-flow lags skew-surge +4 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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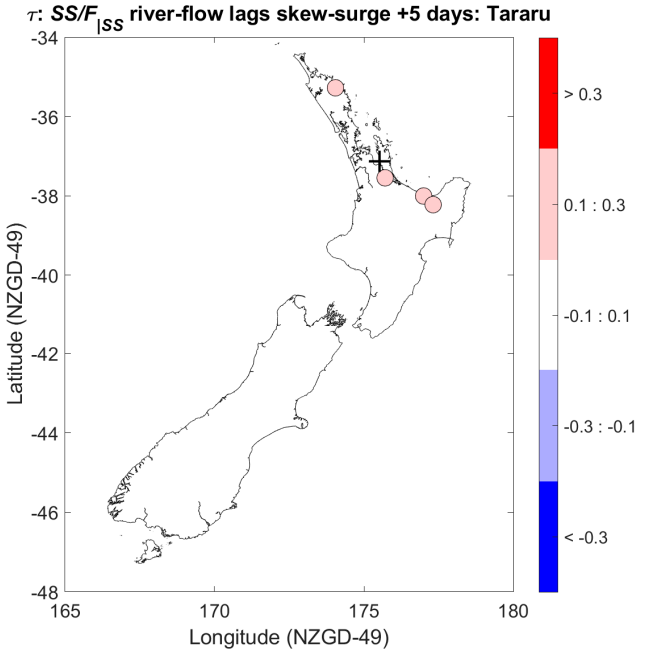
τ: SS/F|SS river-flow lags skew-surge +5 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
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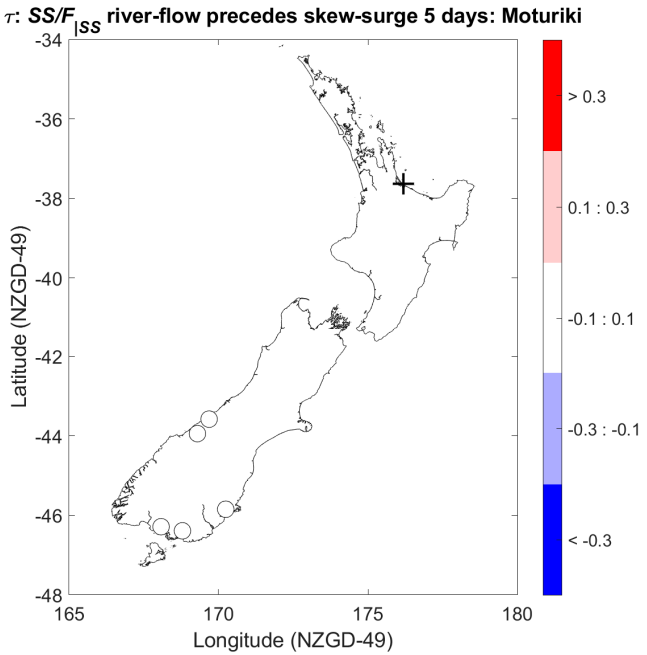
Moturiki


τ: SS/F|SS river-flow precedes skew-surge 5 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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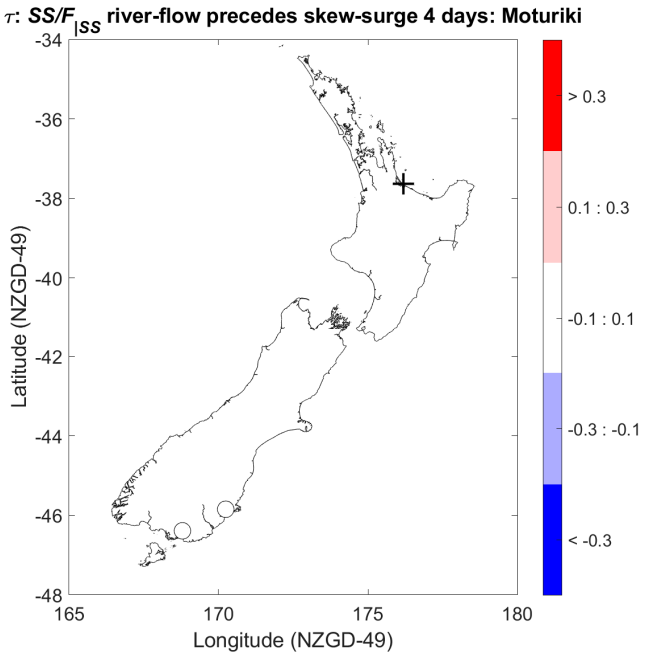
τ: SS/F|SS river-flow precedes skew-surge 4 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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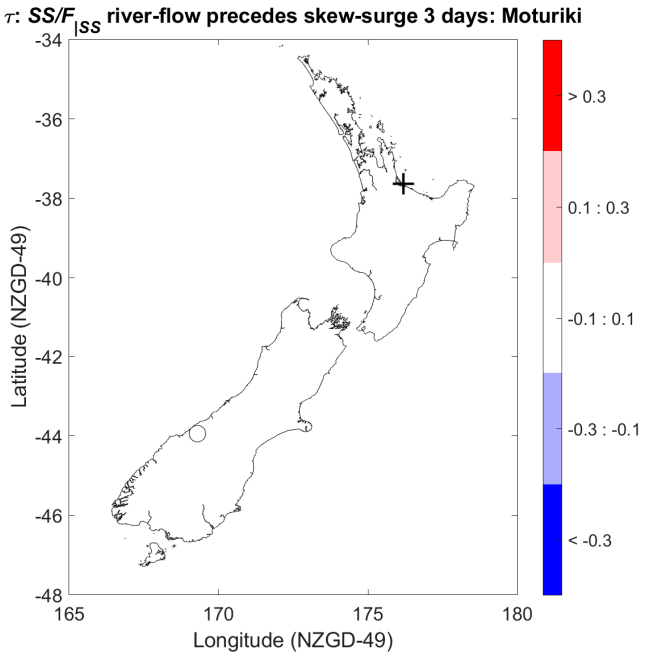
τ: SS/F|SS river-flow precedes skew-surge 3 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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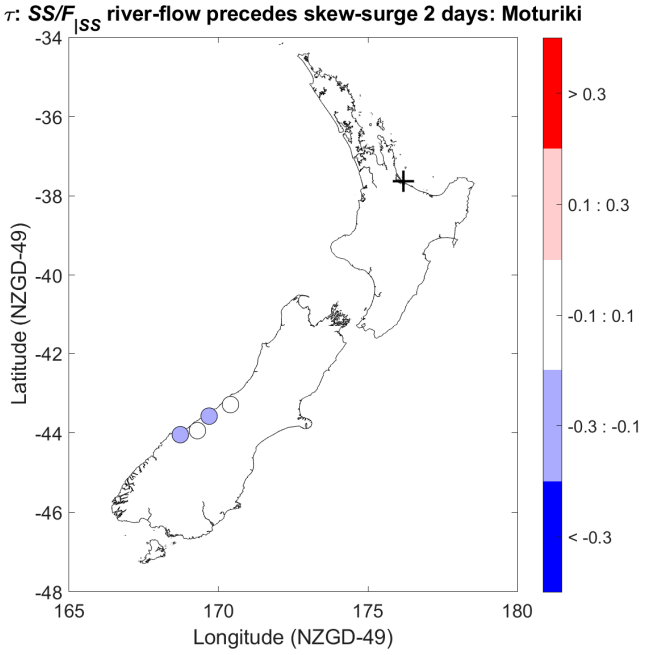
τ: SS/F|SS river-flow precedes skew-surge 2 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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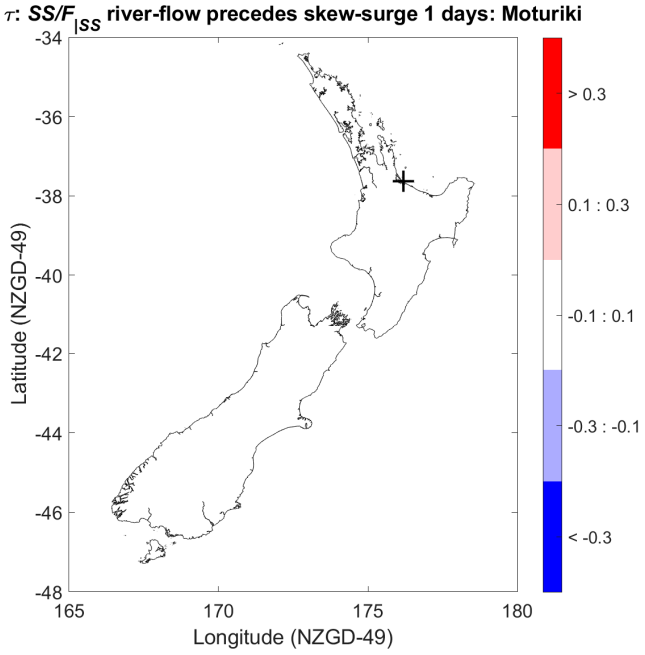
τ: SS/F|SS river-flow precedes skew-surge 1 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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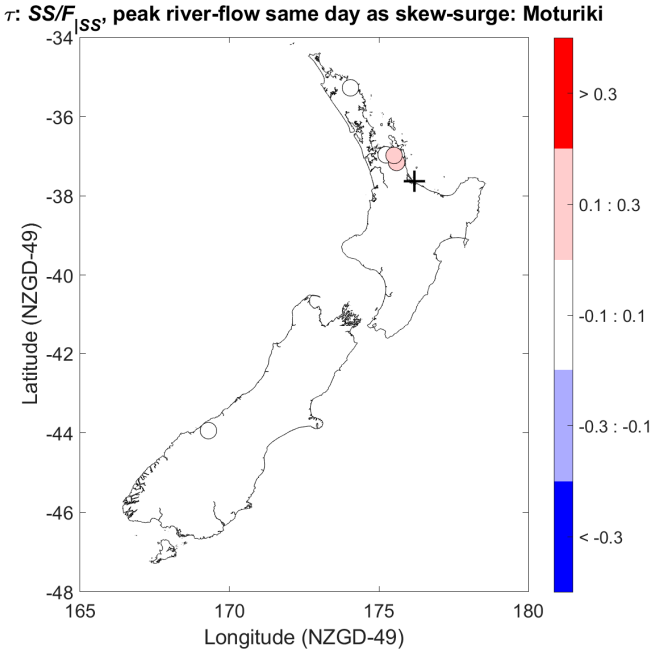
τ: SS/F|SS, peak river-flow same day as skew-surge: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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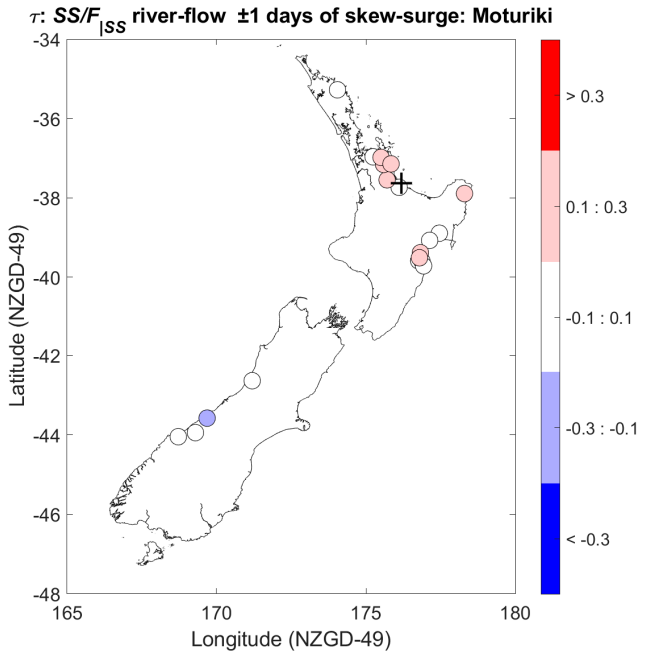
τ: SS/F|SS river-flow ±1 days of skew-surge: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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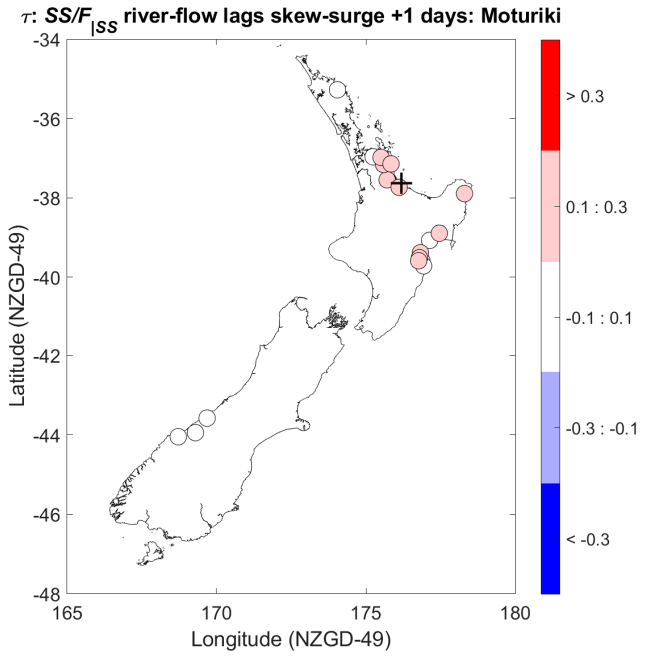
τ: SS/F|SS river-flow lags skew-surge +1 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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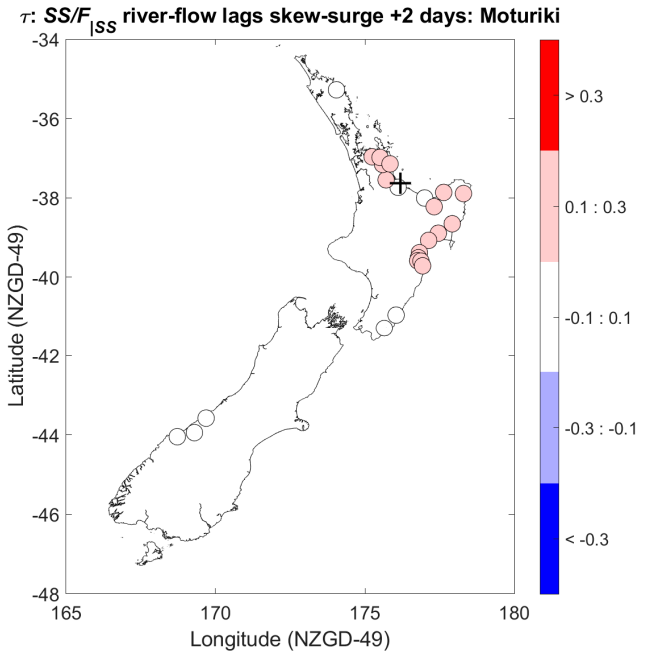
τ: SS/F|SS river-flow lags skew-surge +2 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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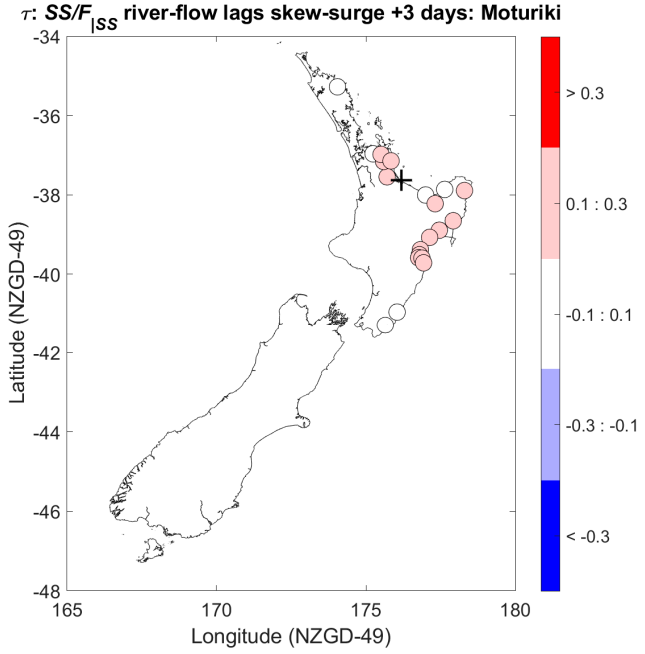
τ: SS/F|SS river-flow lags skew-surge +3 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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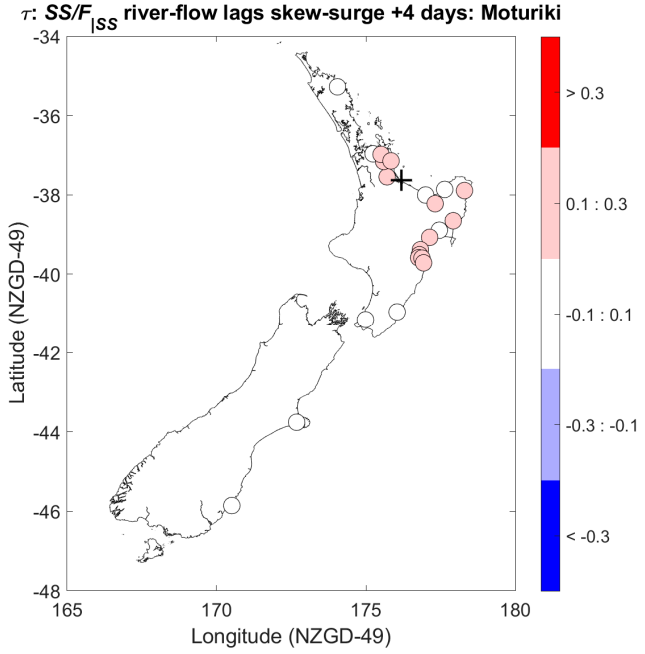
τ: SS/F|SS river-flow lags skew-surge +4 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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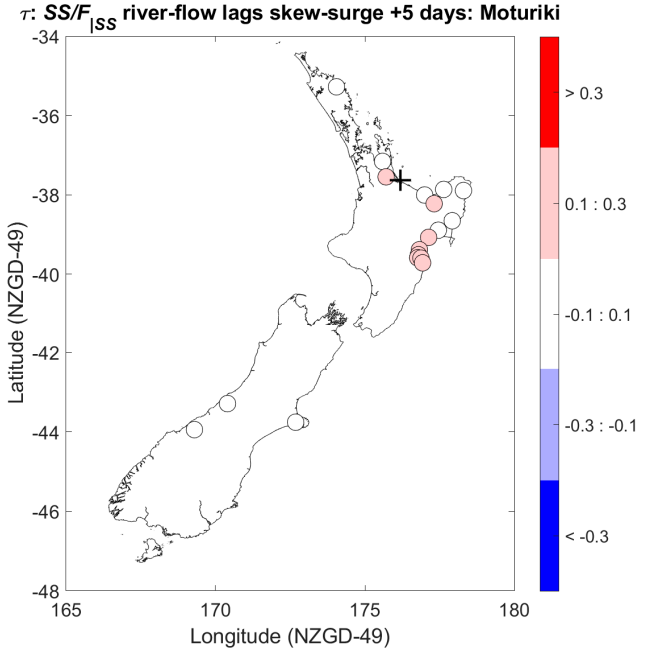
τ: SS/F|SS river-flow lags skew-surge +5 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
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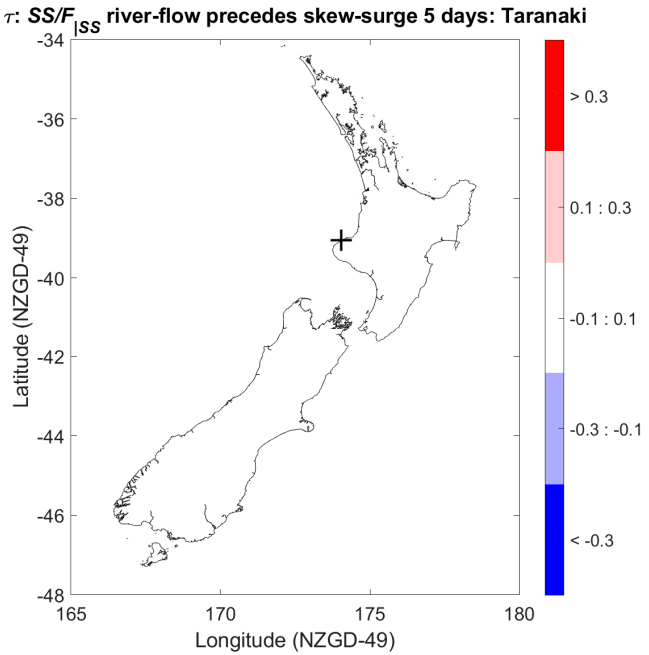
Taranaki


τ: SS/F|SS river-flow precedes skew-surge 5 days: Taranaki
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Latitude (NZGD-49)
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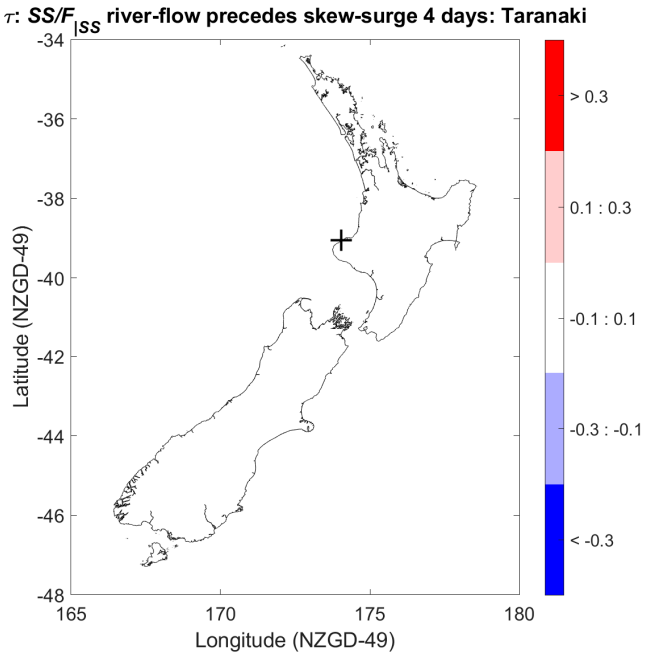
τ: SS/F|SS river-flow precedes skew-surge 4 days: Taranaki
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Latitude (NZGD-49)
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Longitude (NZGD-49)
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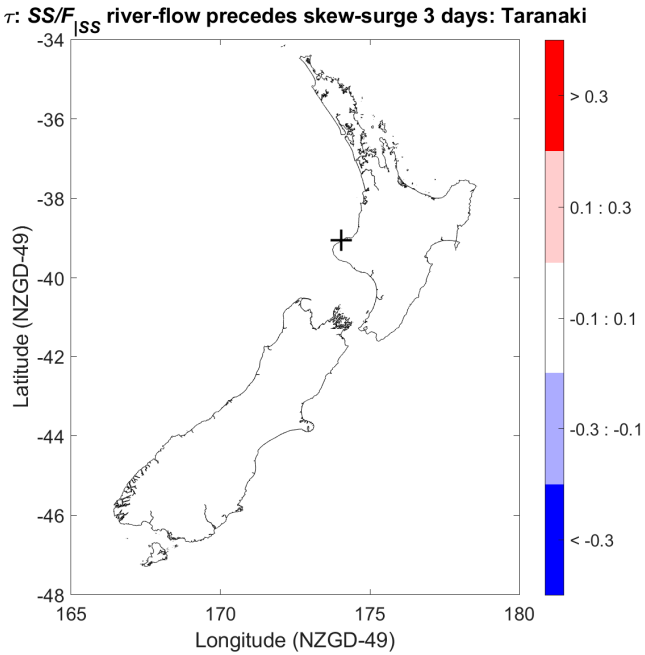
τ: SS/F|SS river-flow precedes skew-surge 3 days: Taranaki
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Latitude (NZGD-49)
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Longitude (NZGD-49)
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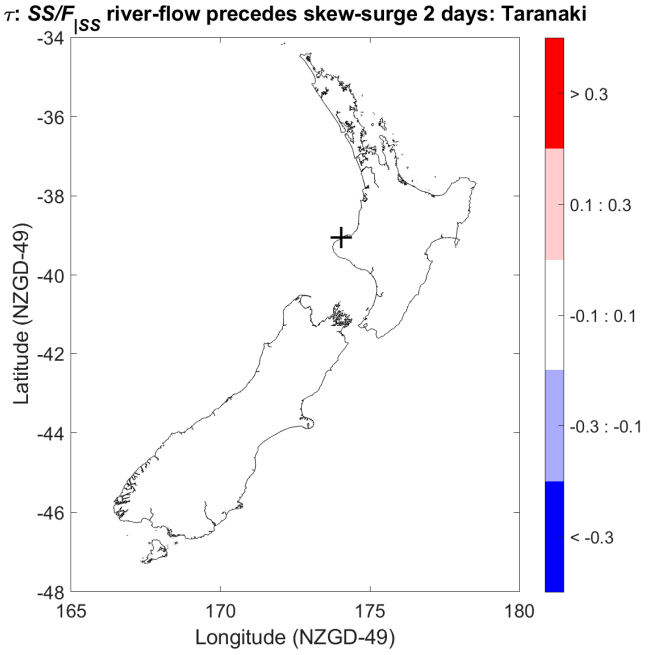
τ: SS/F|SS river-flow precedes skew-surge 2 days: Taranaki
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Latitude (NZGD-49)
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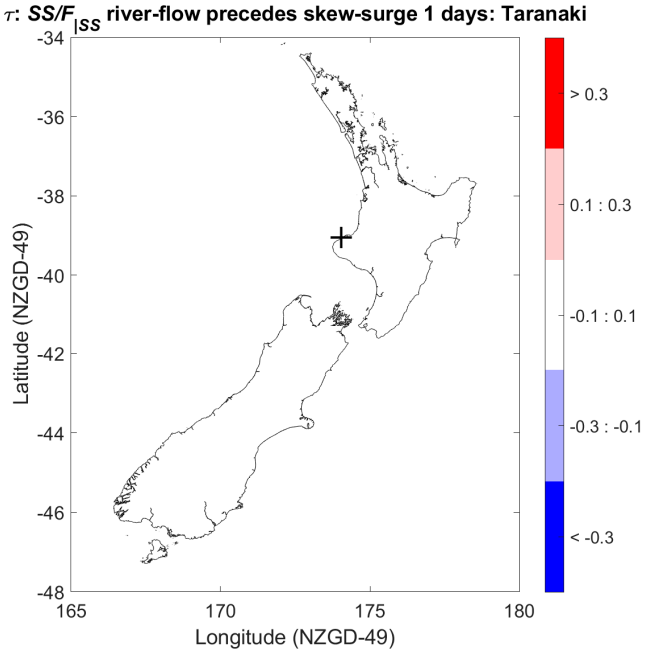
τ: SS/F|SS river-flow precedes skew-surge 1 days: Taranaki
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Latitude (NZGD-49)
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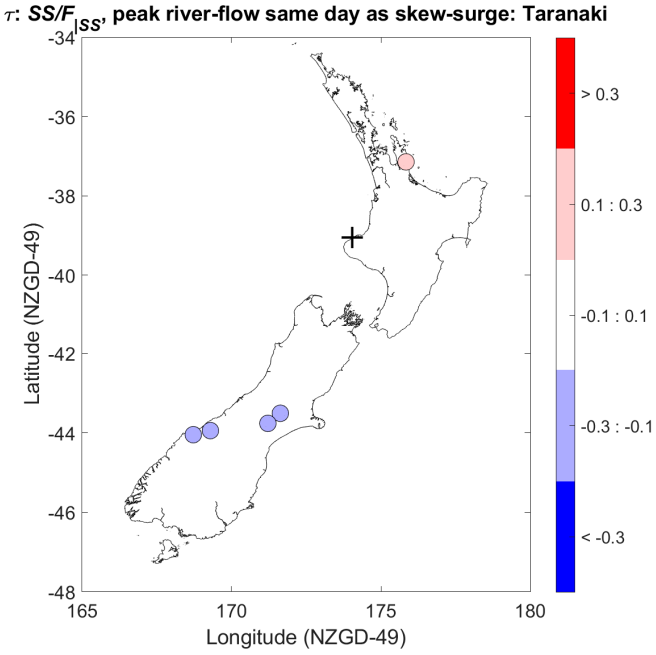
τ: SS/F|SS, peak river-flow same day as skew-surge: Taranaki
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Latitude (NZGD-49)
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Longitude (NZGD-49)
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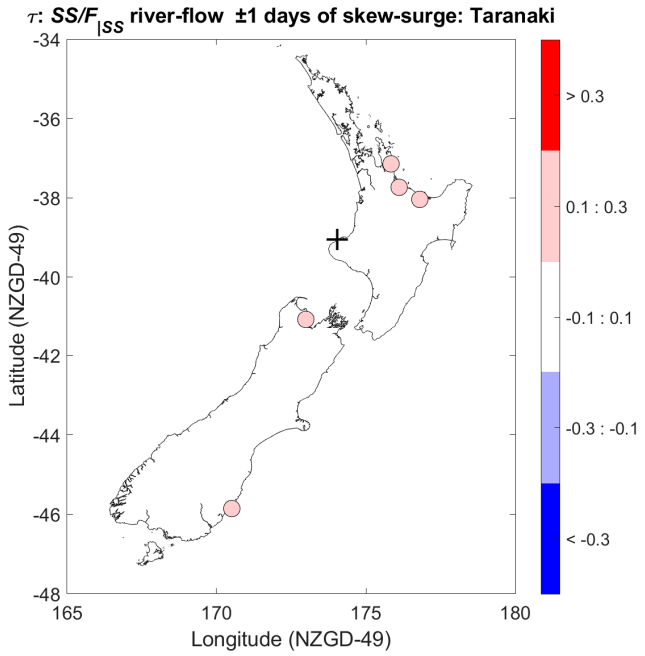
τ: SS/F|SS river-flow ±1 days of skew-surge: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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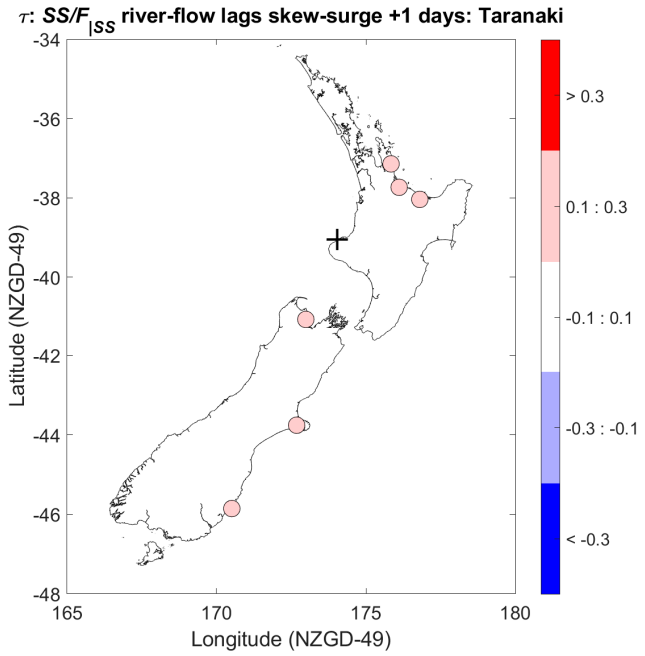
τ: SS/F|SS river-flow lags skew-surge +1 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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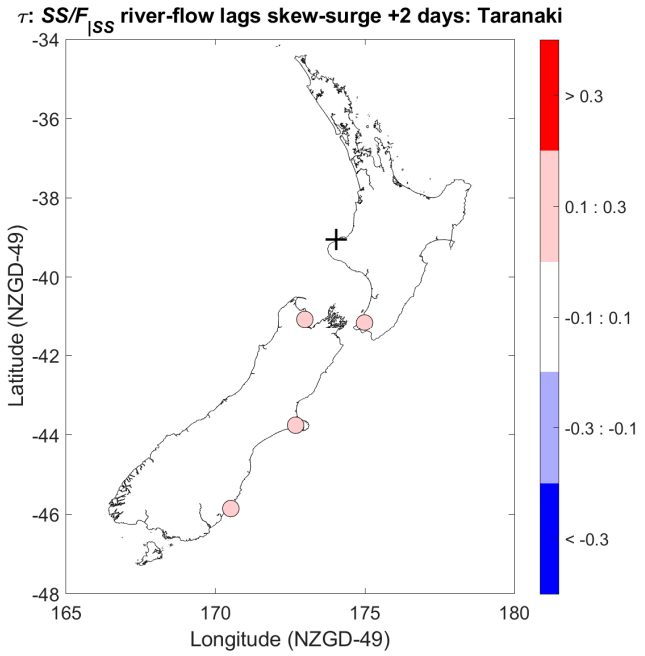
τ: SS/F|SS river-flow lags skew-surge +2 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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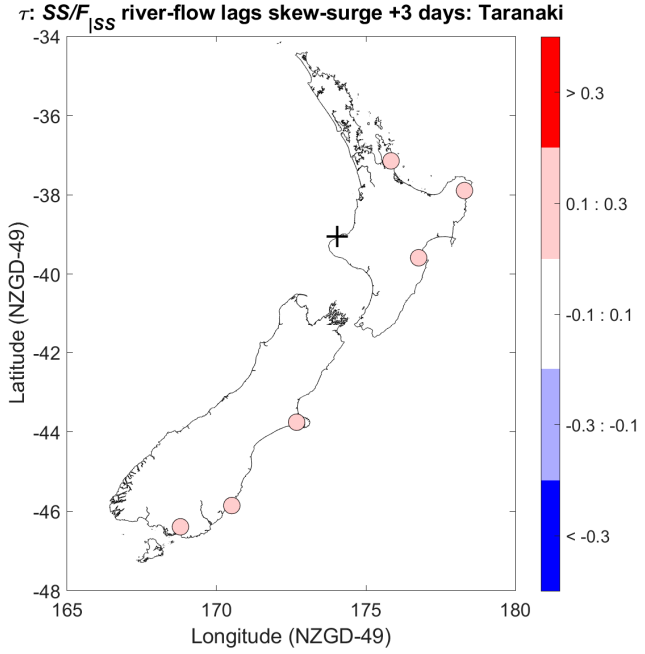
τ: SS/F|SS river-flow lags skew-surge +3 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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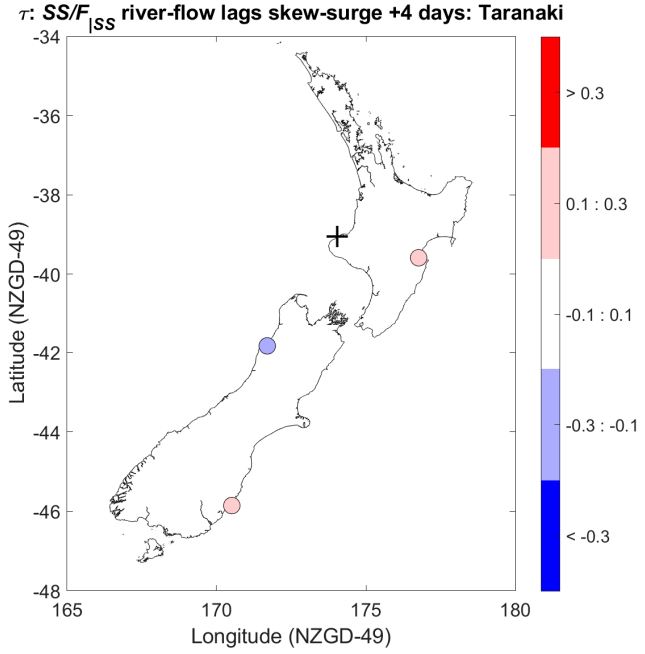
τ: SS/F|SS river-flow lags skew-surge +4 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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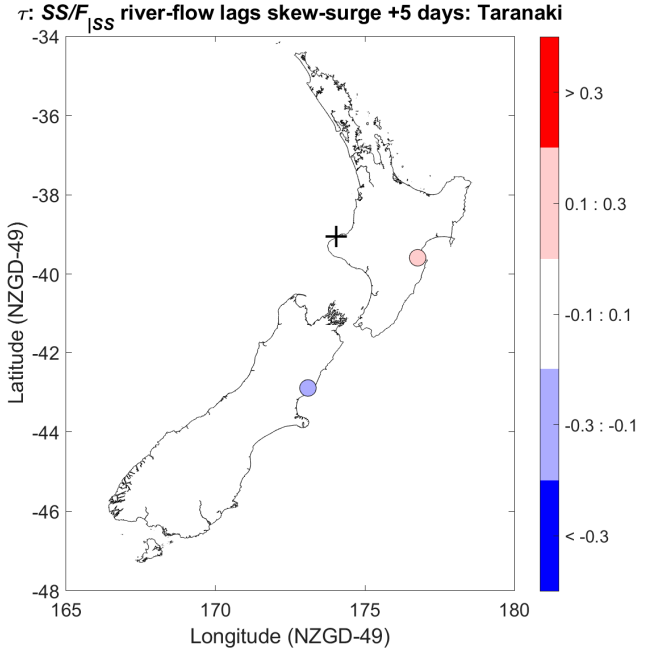
τ: SS/F|SS river-flow lags skew-surge +5 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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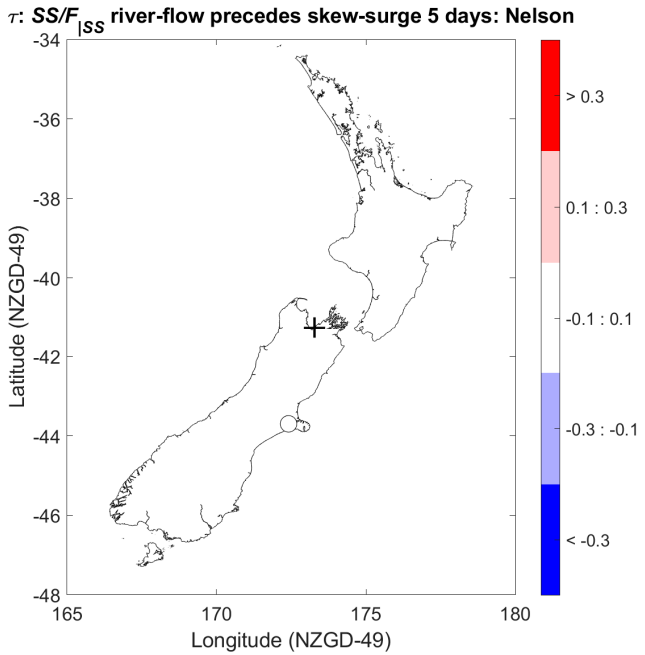
Nelson


τ: SS/F|SS river-flow precedes skew-surge 5 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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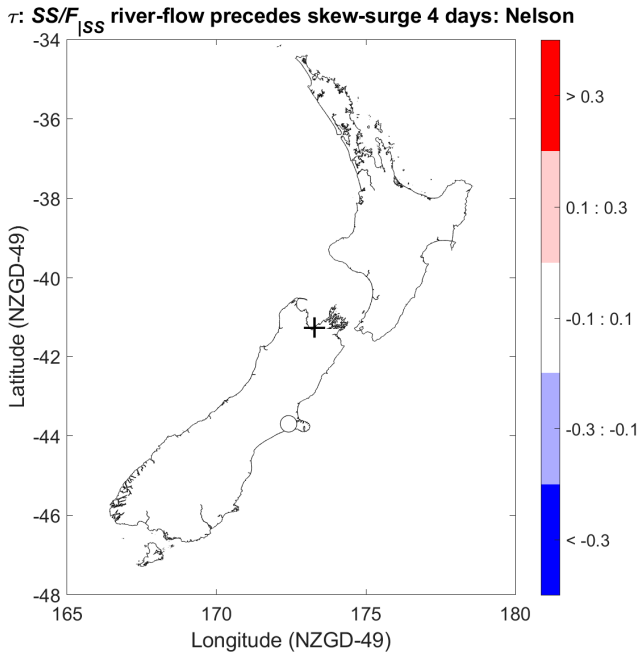
τ: SS/F|SS river-flow precedes skew-surge 4 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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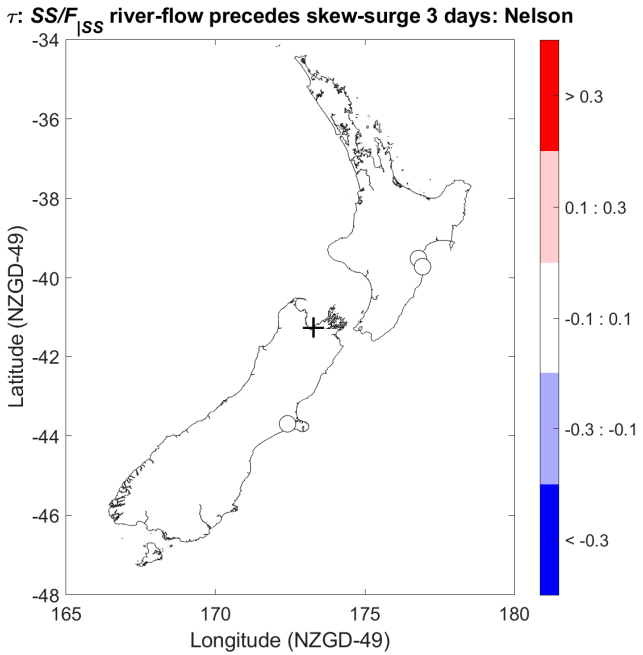
τ: SS/F|SS river-flow precedes skew-surge 3 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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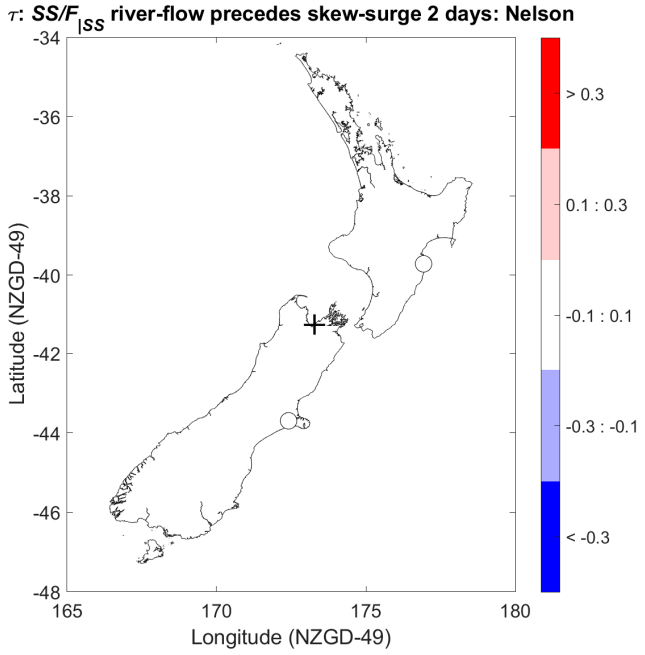
τ: SS/F|SS river-flow precedes skew-surge 2 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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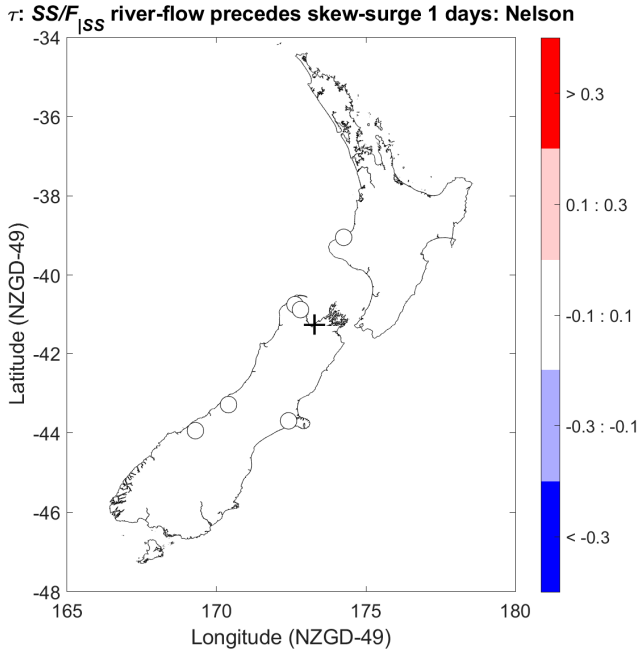
τ: SS/F|SS river-flow precedes skew-surge 1 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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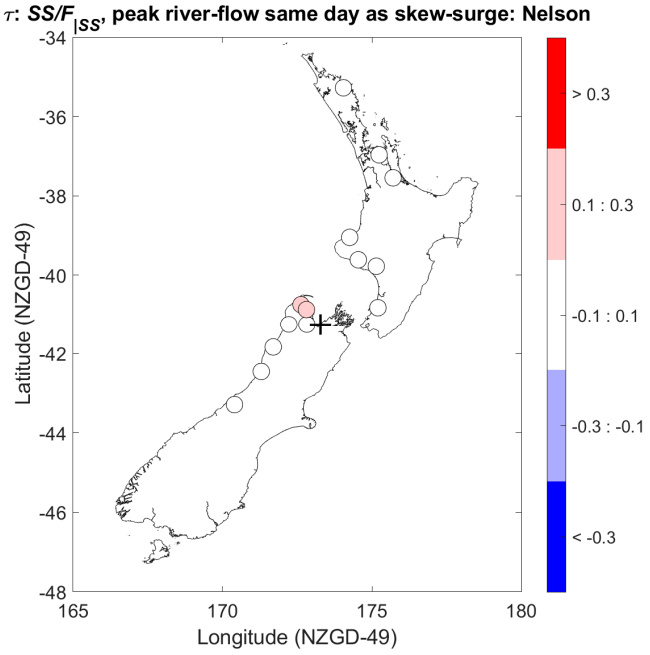
τ: SS/F|SS, peak river-flow same day as skew-surge: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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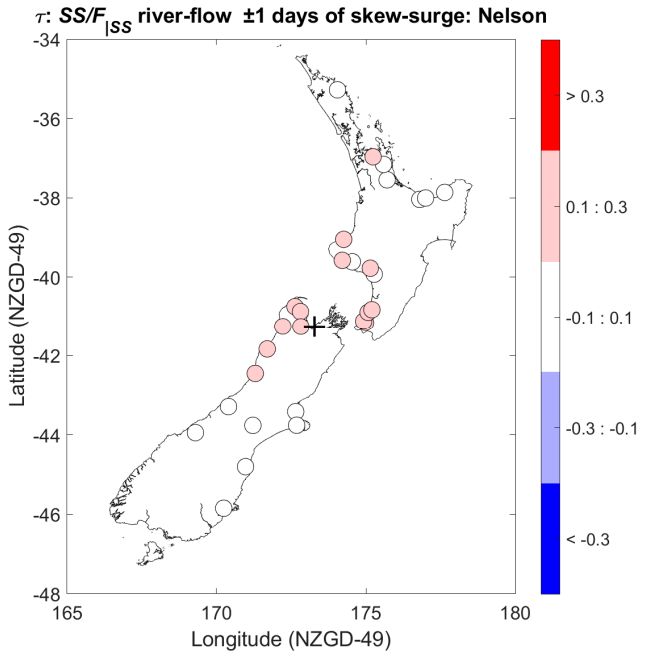
τ: SS/F|SS river-flow ±1 days of skew-surge: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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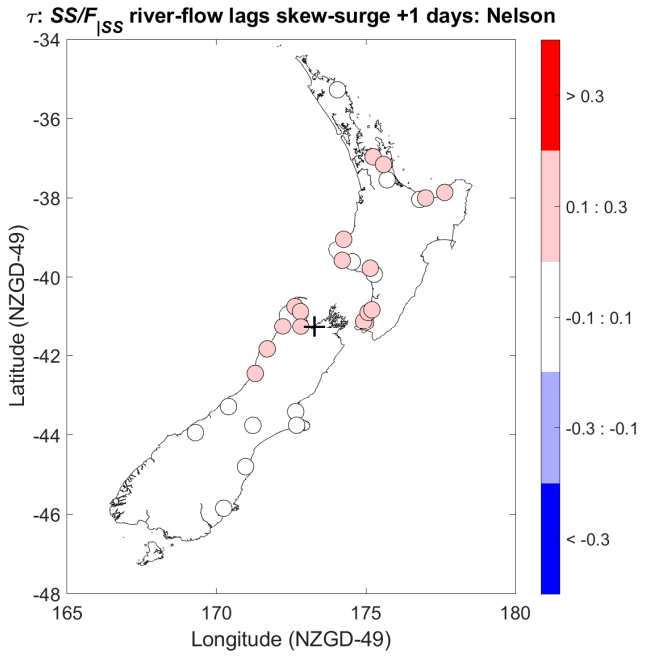
τ: SS/F|SS river-flow lags skew-surge +1 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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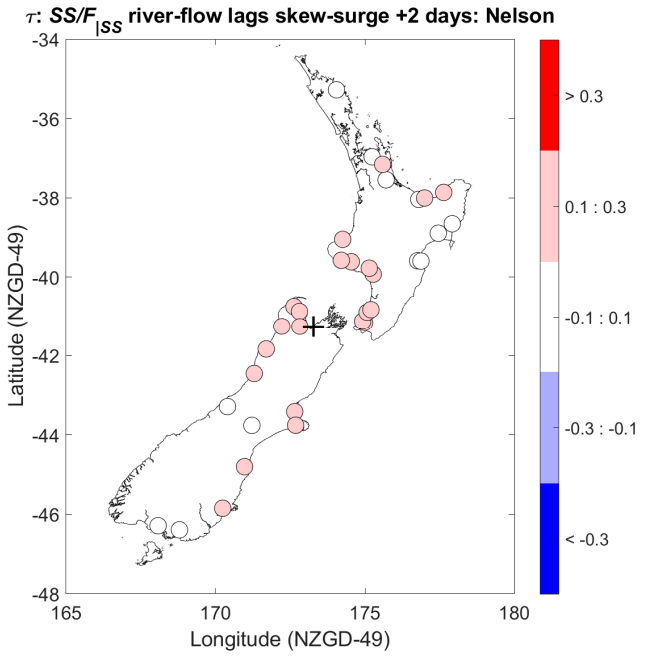
τ: SS/F|SS river-flow lags skew-surge +2 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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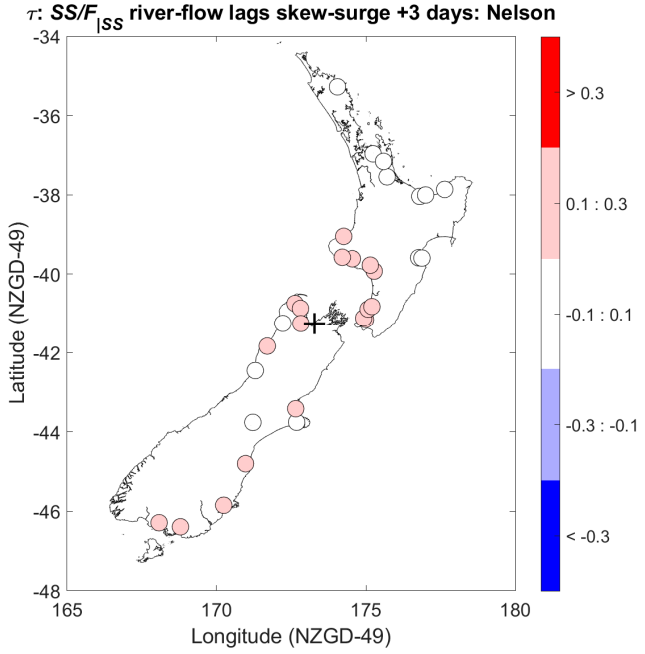
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +3 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
165
170
175
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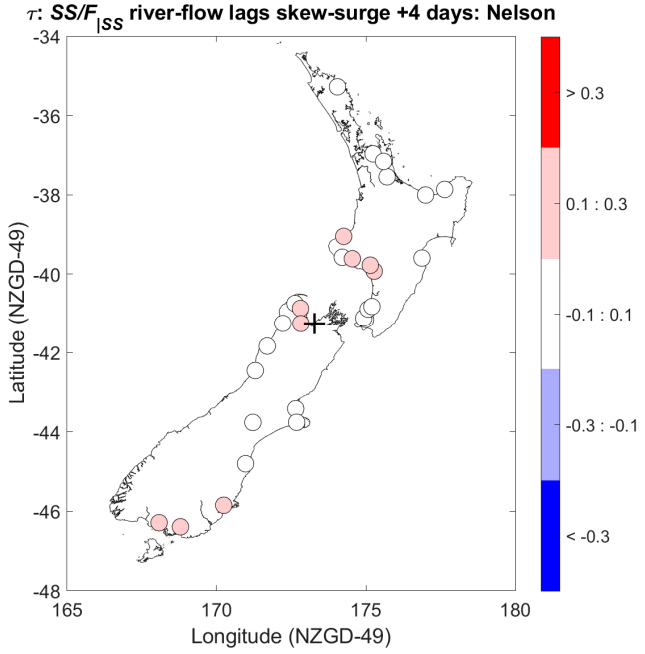
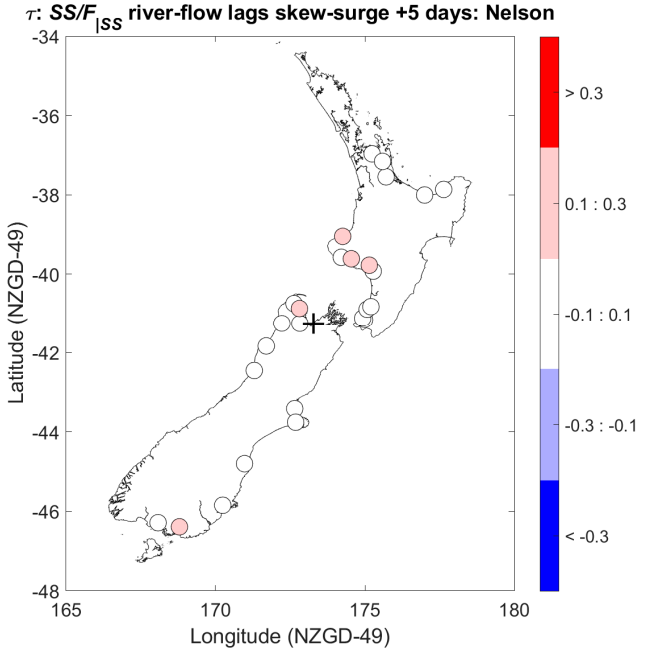
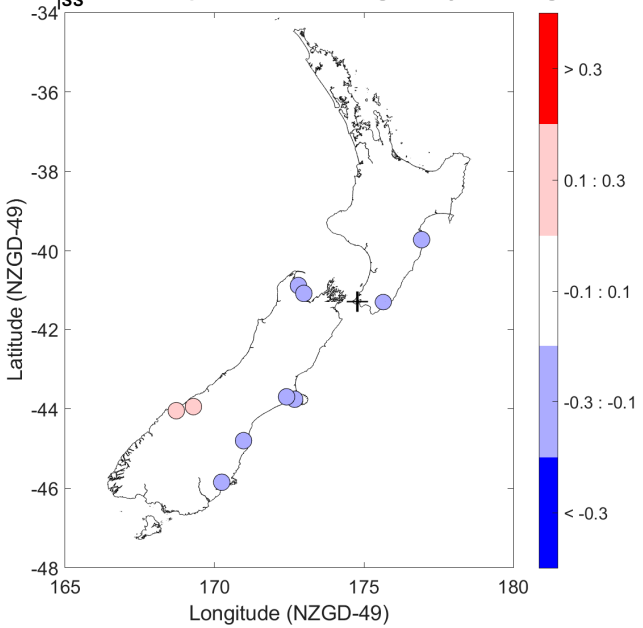
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +4 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
165
170
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3

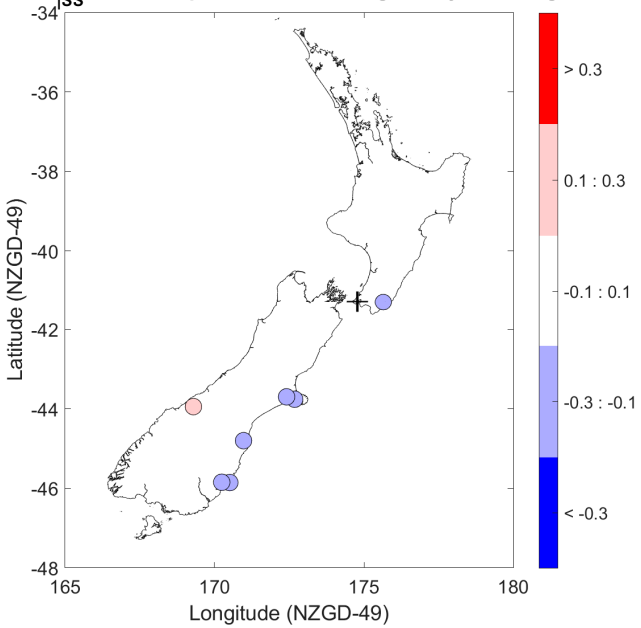

τ: SS/F|SS river-flow lags skew-surge +5 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
165
170
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3

Wellington

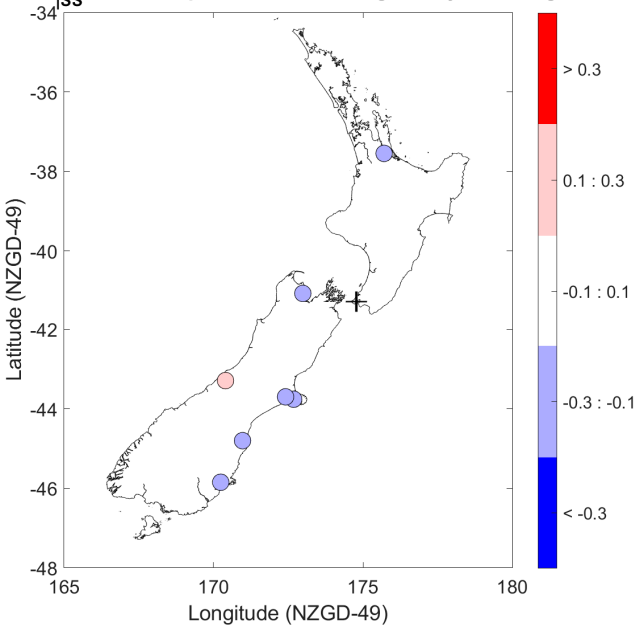
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 5 days: Wellington



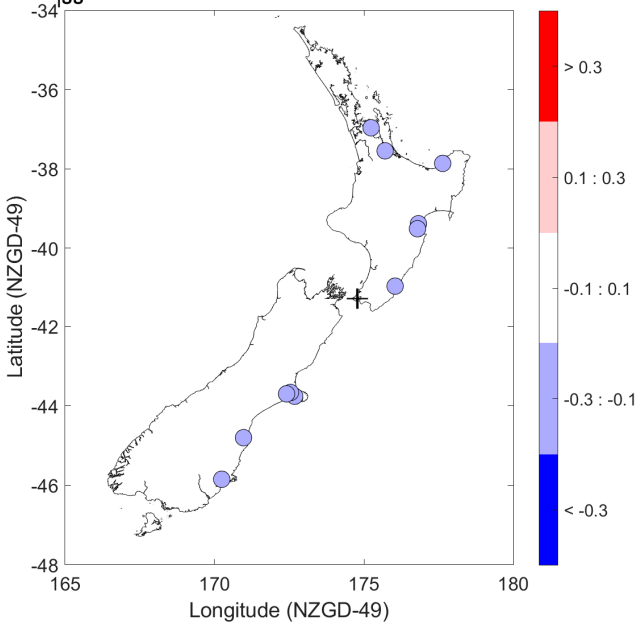
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 4 days: Wellington



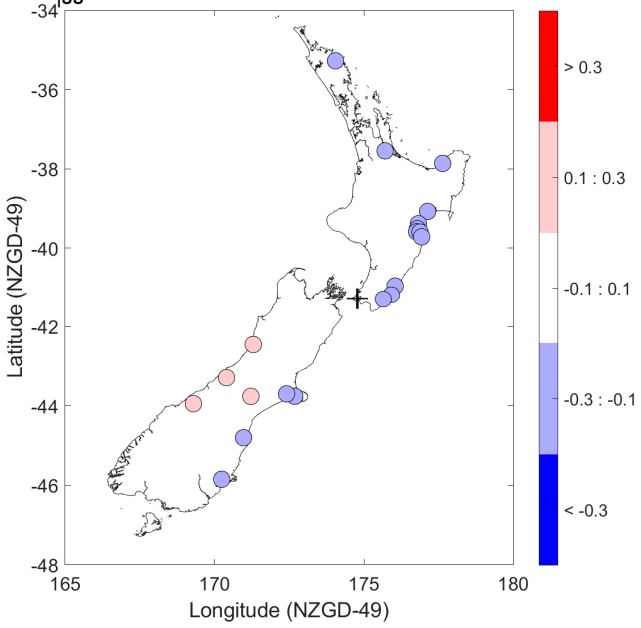
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 3 days: Wellington



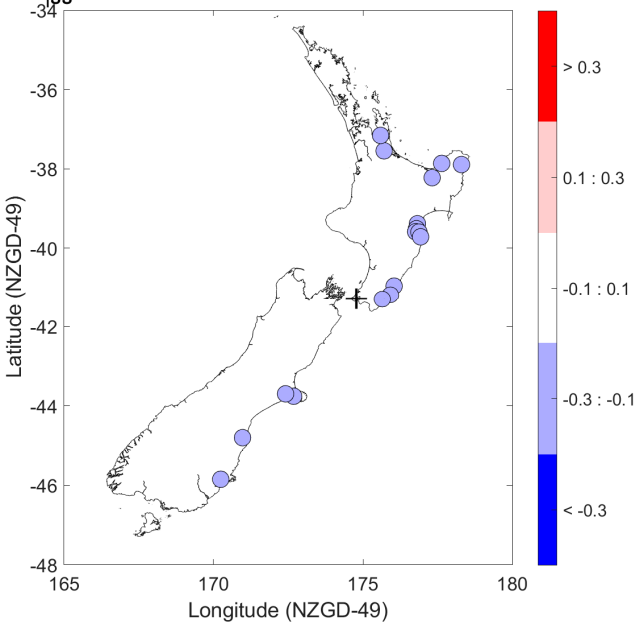
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 2 days: Wellington

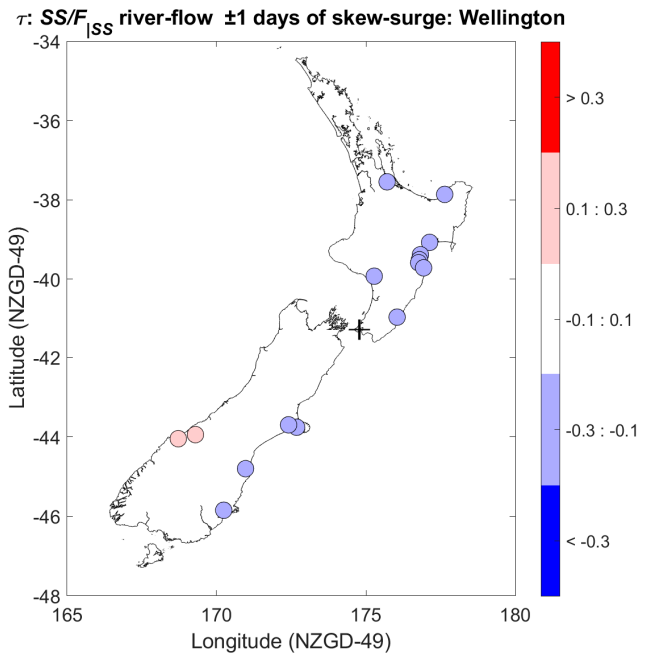


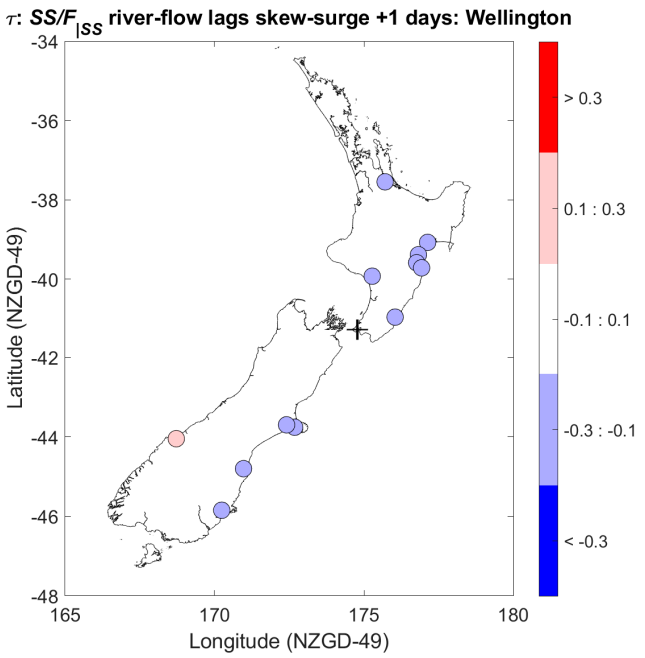
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 1 days: Wellington



τ: $SS/F_{|SS}$, peak river-flow same day as skew-surge: Wellington




τ: SS/F|SS river-flow ±1 days of skew-surge: Wellington
-34
-36
-38
-40
-42
-44
-46
-48
165
170
175
180
Latitude (NZGD-49)
Longitude (NZGD-49)
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +1 days: Wellington
-34
-36
-38
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-42
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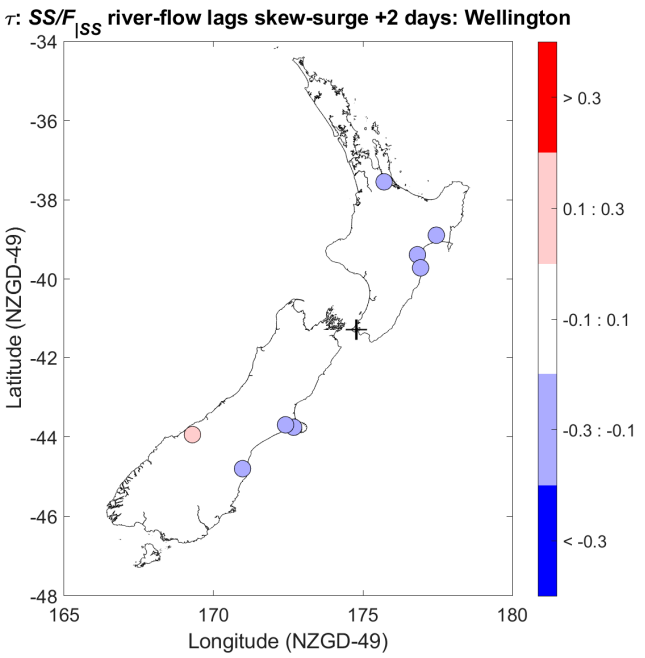
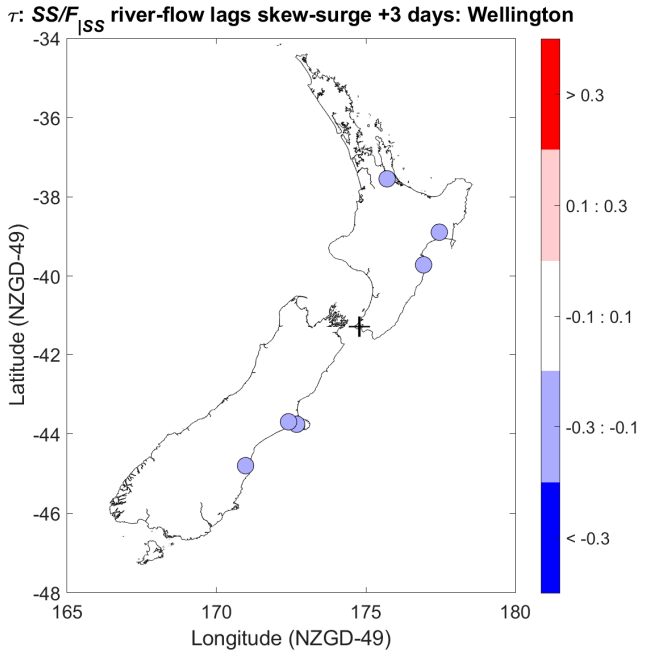
Latitude (NZGD-49)
Longitude (NZGD-49)
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +2 days: Wellington
-34
-36
-38
-40
-42
-44
-46
-48
165
170
175
180
Latitude (NZGD-49)
Longitude (NZGD-49)
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +3 days: Wellington
-34
-36
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-40
-42
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-48
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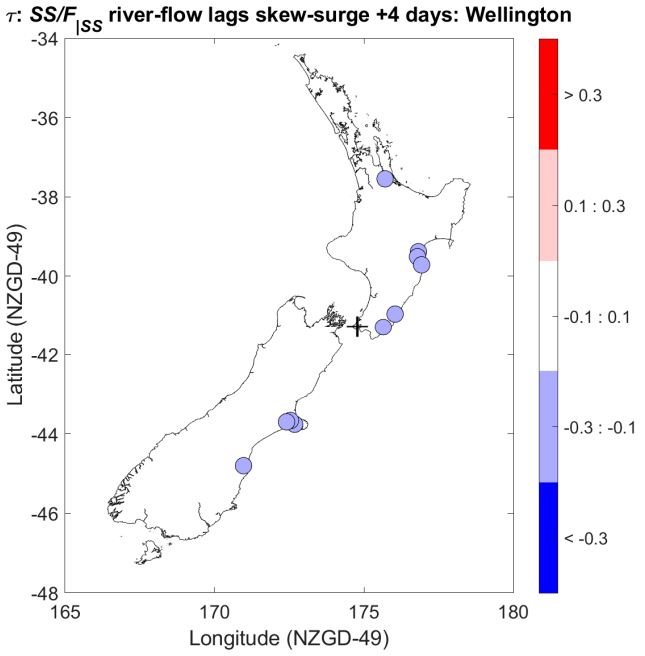
Latitude (NZGD-49)
Longitude (NZGD-49)
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +4 days: Wellington
-34
-36
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-40
-42
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-48
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175
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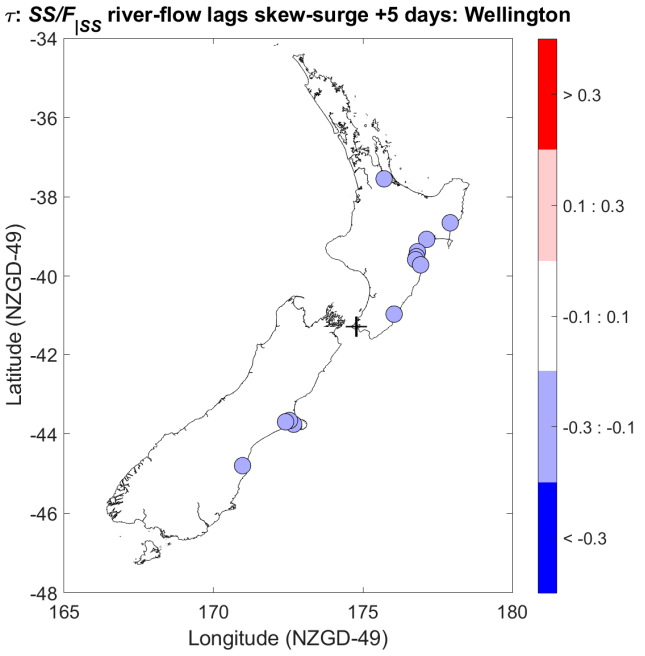
Latitude (NZGD-49)
Longitude (NZGD-49)
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +5 days: Wellington
-34
-36
-38
-40
-42
-44
-46
-48
165
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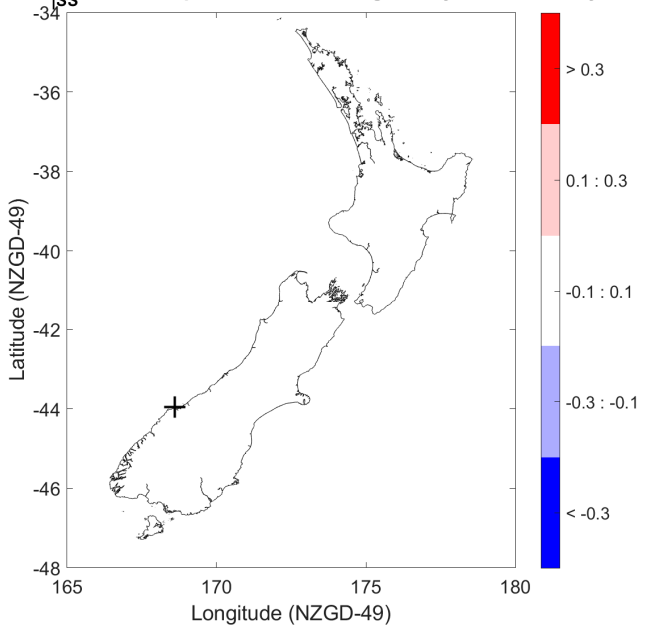
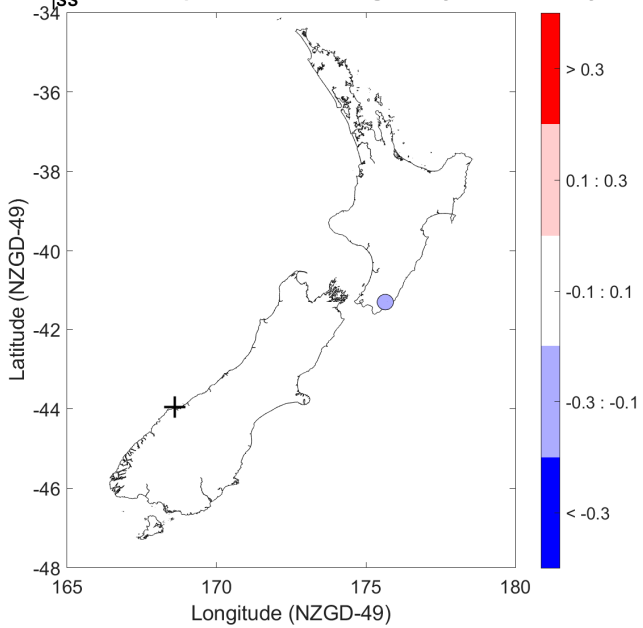
180
Latitude (NZGD-49)
Longitude (NZGD-49)
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3

Jackson Bay

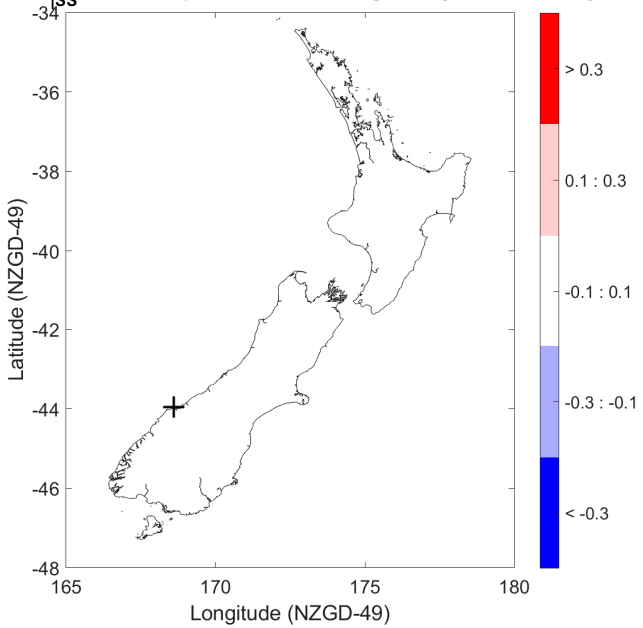
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 5 days: JacksonBay



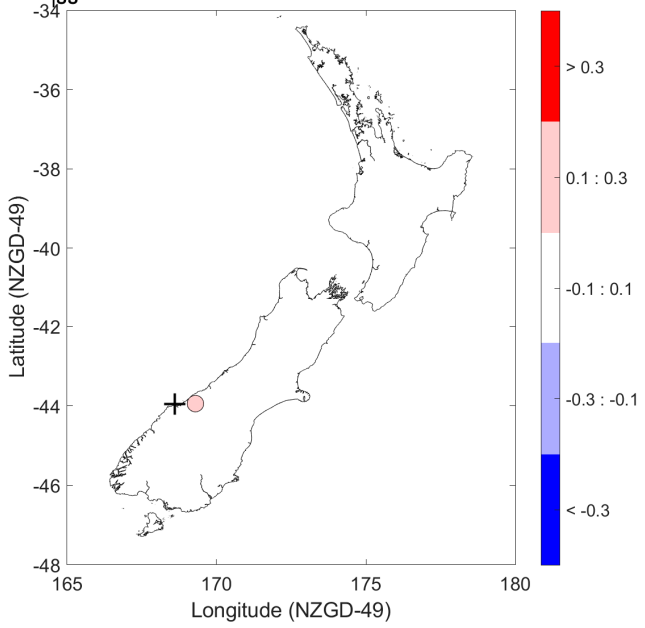
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 4 days: JacksonBay



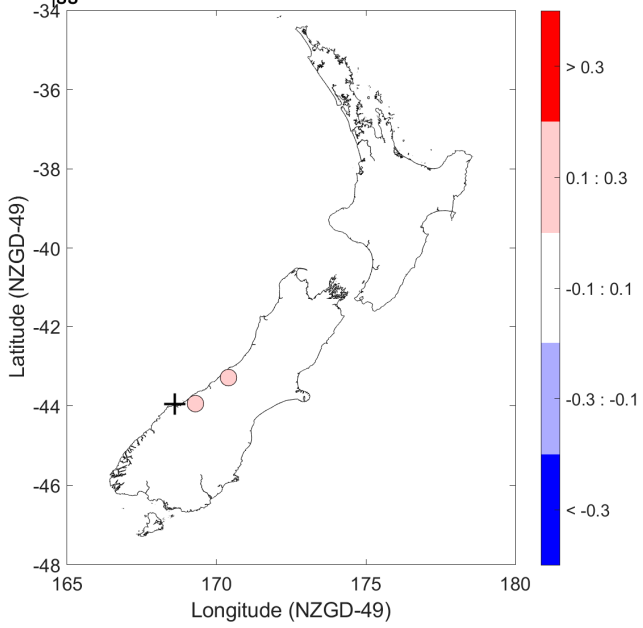
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 3 days: JacksonBay



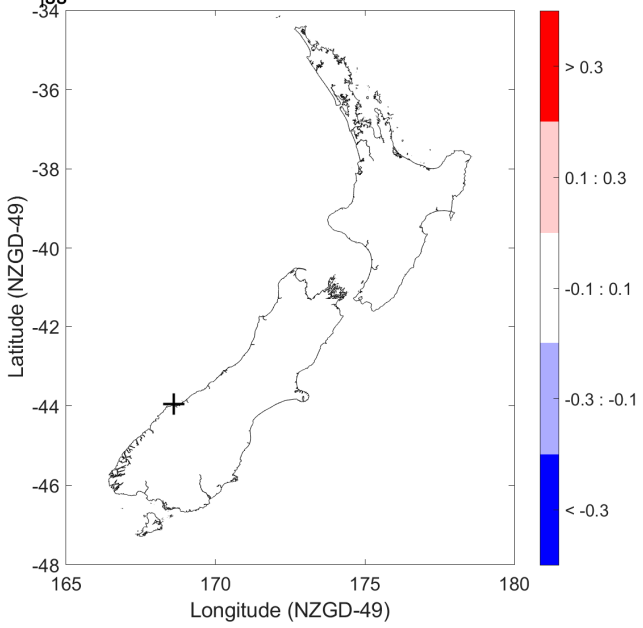
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 2 days: JacksonBay

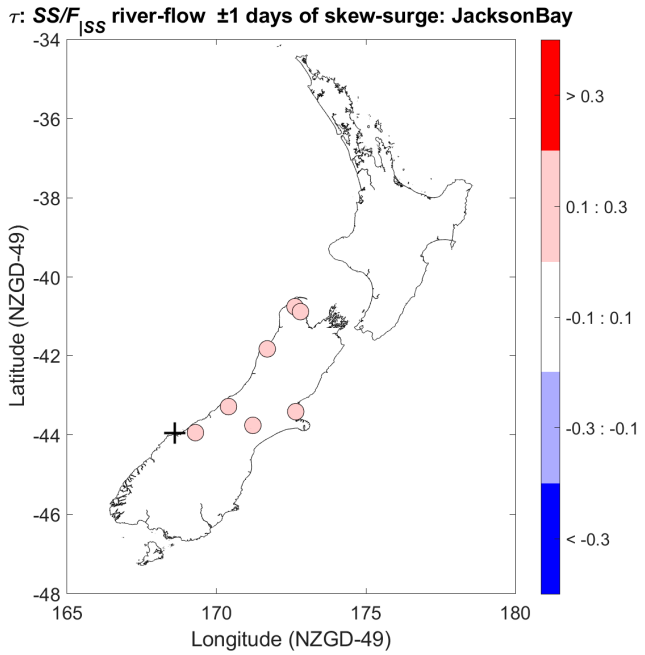


τ: $SS/F_{|SS}$ river-flow precedes skew-surge 1 days: JacksonBay



τ: $SS/F_{|SS}$, peak river-flow same day as skew-surge: JacksonBay




τ: SS/F|SS river-flow ±1 days of skew-surge: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
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> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
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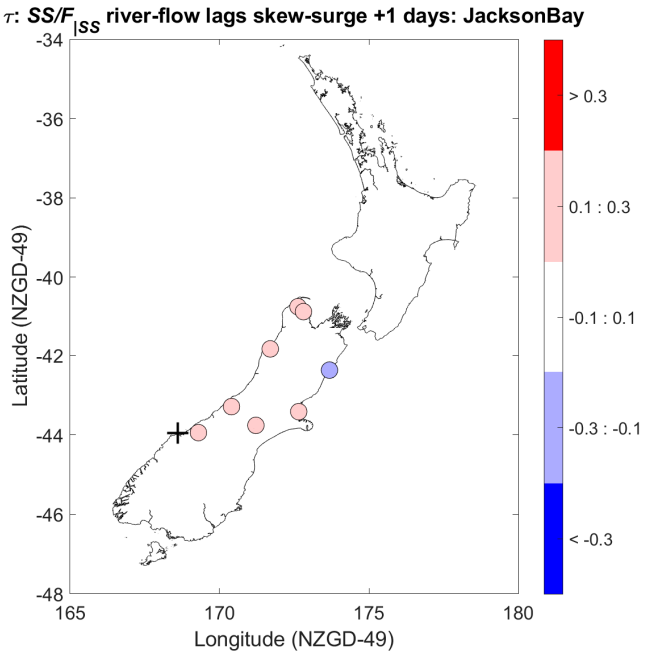
τ: SS/F|SS river-flow lags skew-surge +1 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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-40
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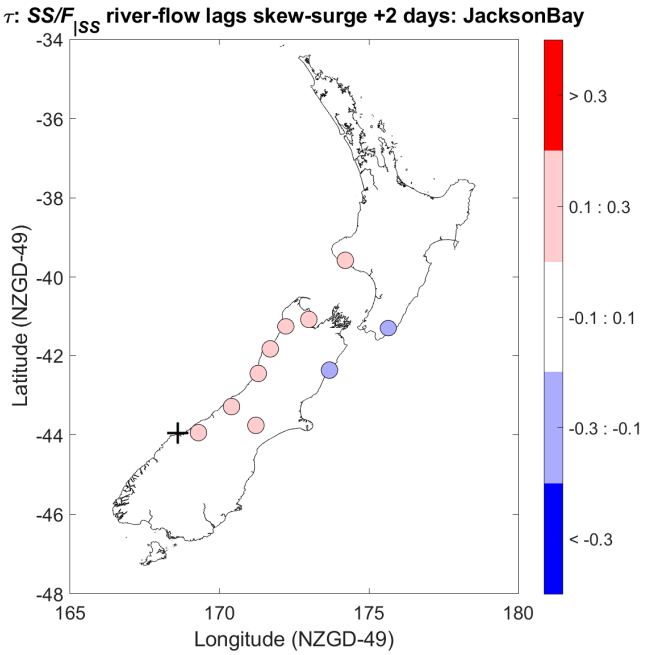
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +2 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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-40
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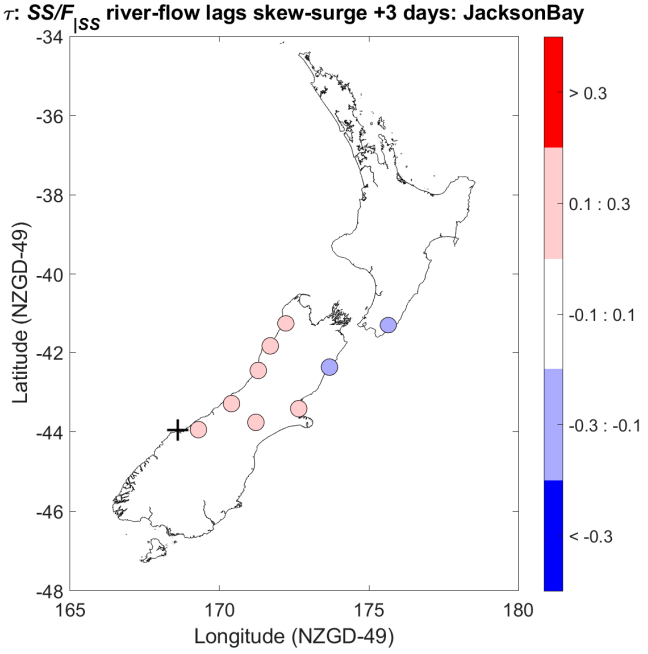
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +3 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
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> 0.3
0.1 : 0.3
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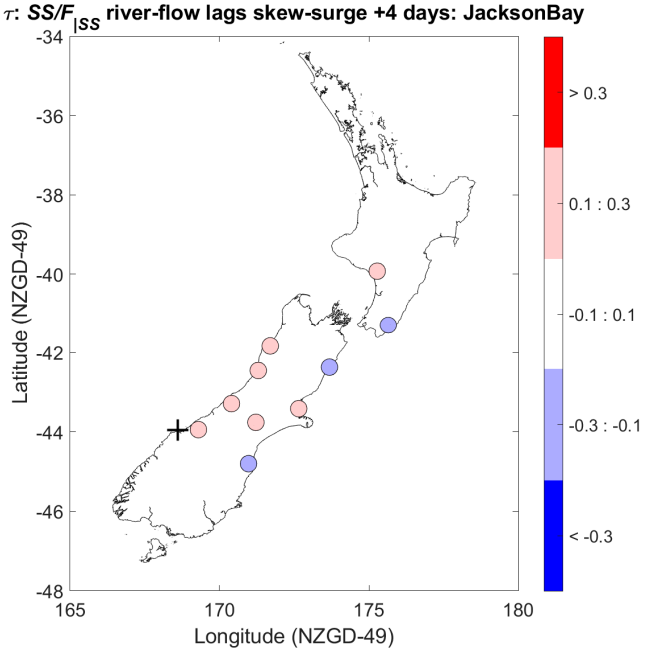
τ: SS/F|SS river-flow lags skew-surge +4 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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-40
-42
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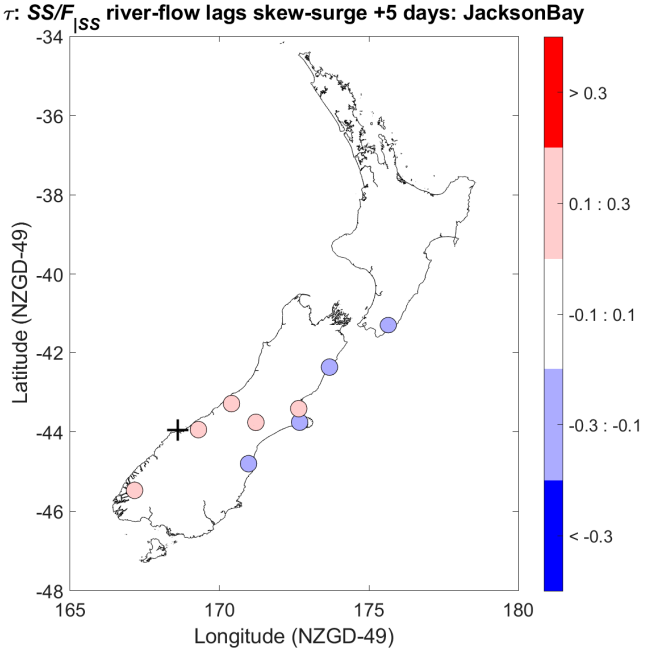
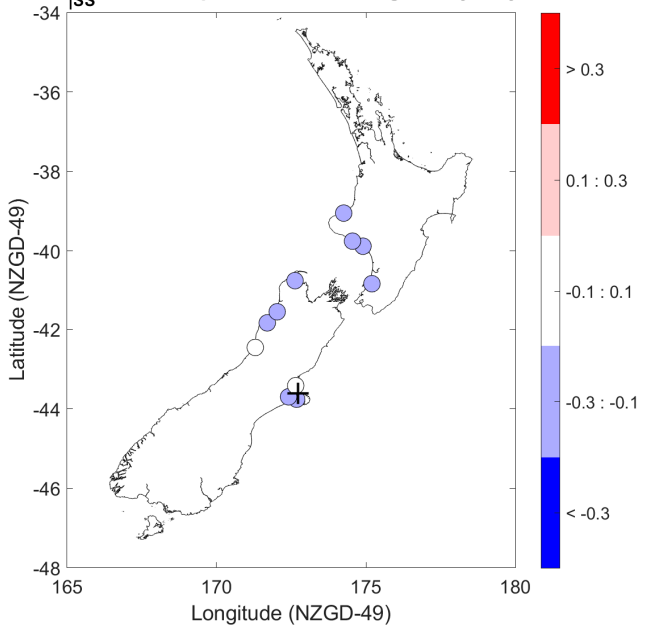
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3

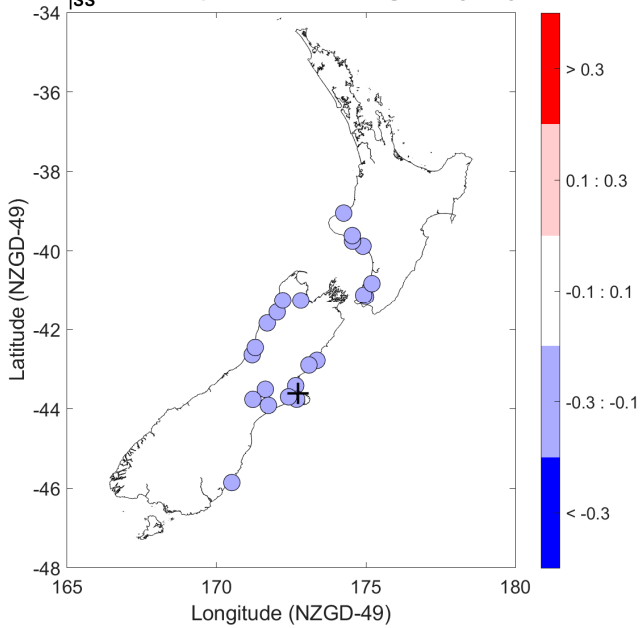

τ: SS/F|SS river-flow lags skew-surge +5 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
165
170
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3

Lyttelton

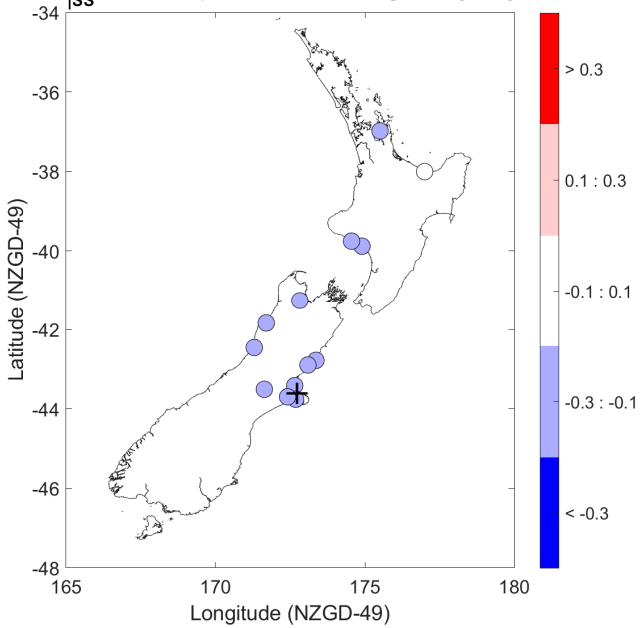
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 5 days: Lyttelton



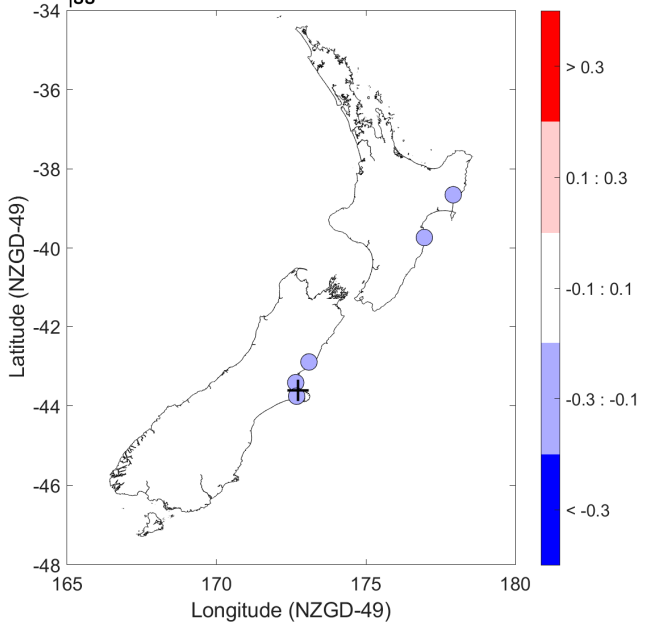
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 4 days: Lyttelton



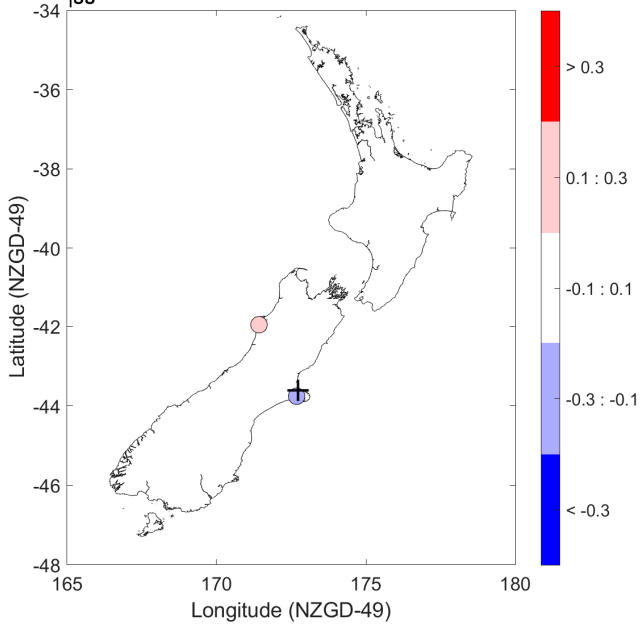
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 3 days: Lyttelton



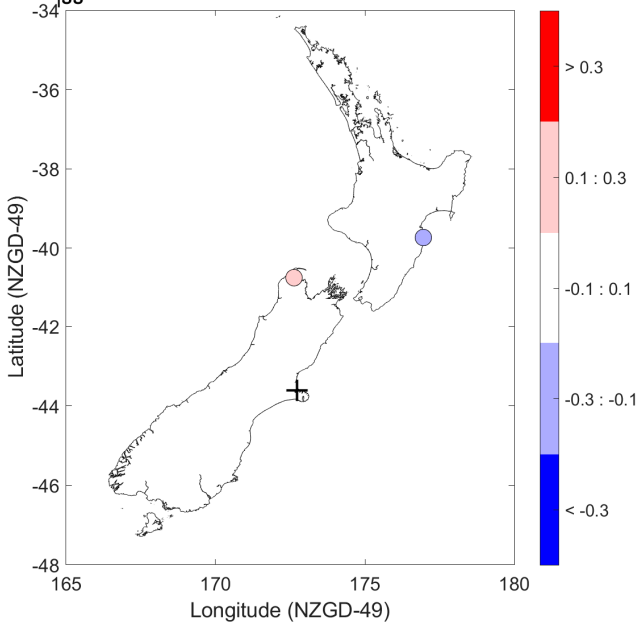
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 2 days: Lyttelton

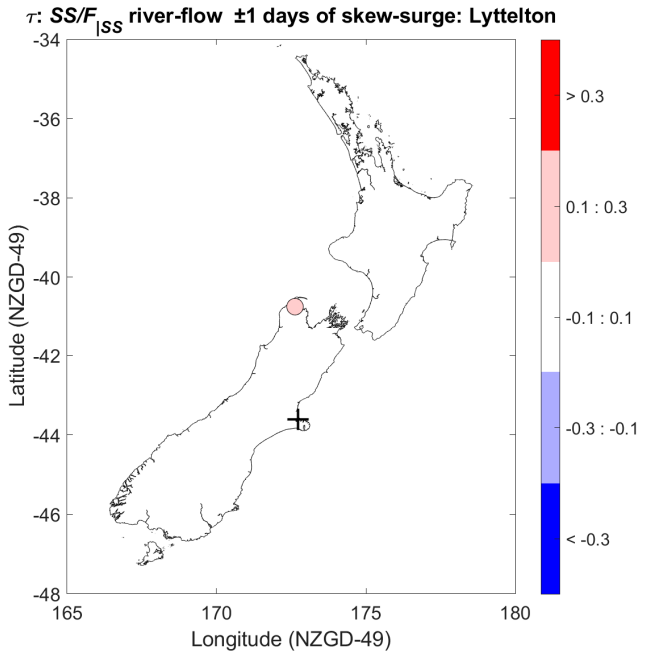


τ: $SS/F_{|SS}$ river-flow precedes skew-surge 1 days: Lyttelton



τ: $SS/F_{|SS}$, peak river-flow same day as skew-surge: Lyttelton




τ: SS/F|SS river-flow ±1 days of skew-surge: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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0.1 : 0.3
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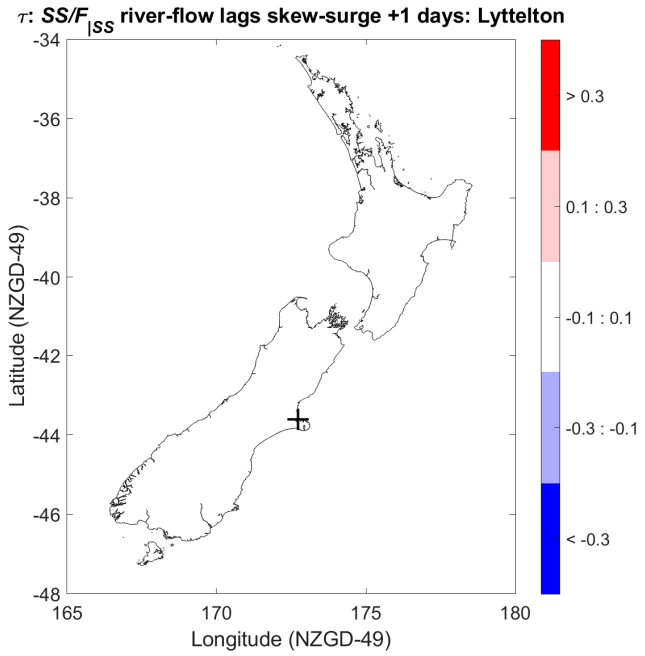
τ: SS/F|SS river-flow lags skew-surge +1 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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> 0.3
0.1 : 0.3
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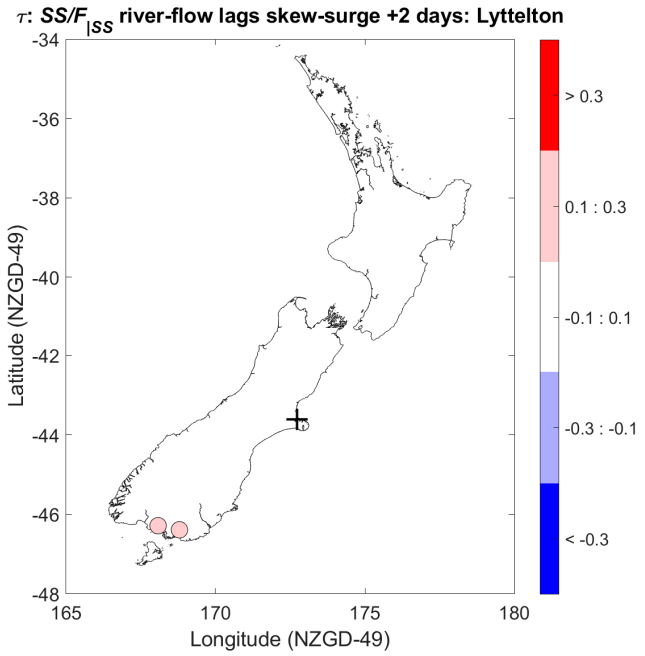
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +2 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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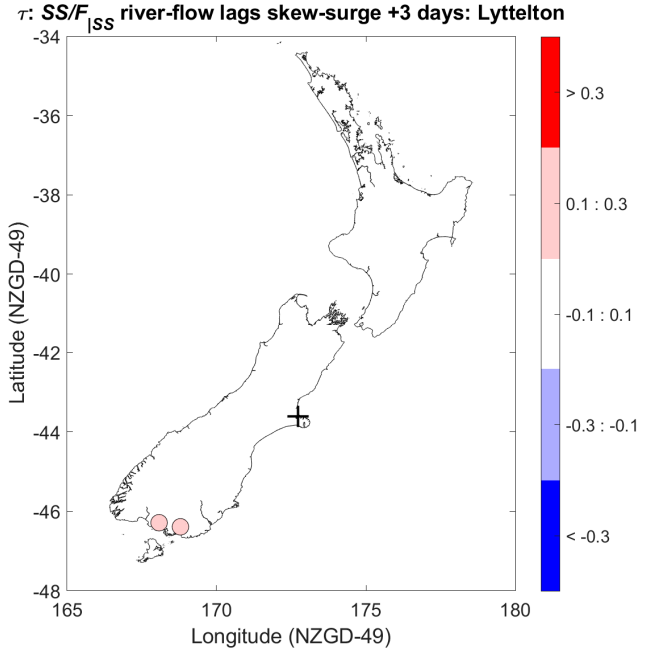
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +3 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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-38
-40
-42
-44
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> 0.3
0.1 : 0.3
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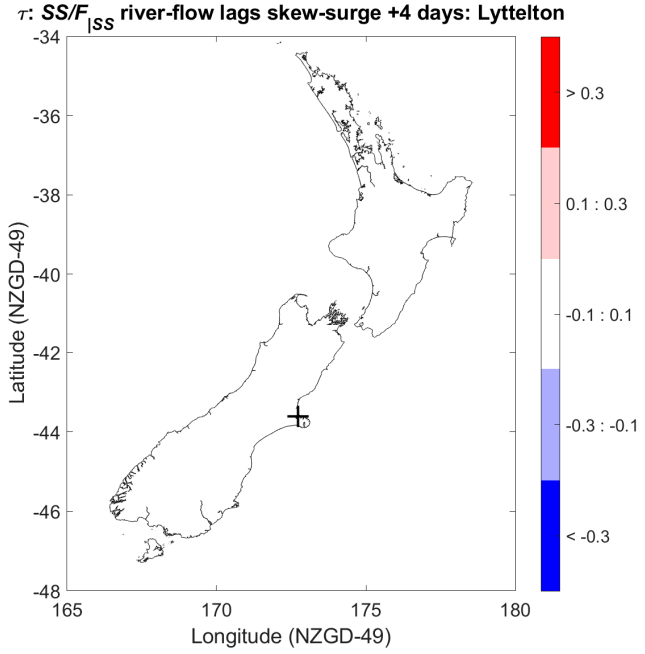
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +4 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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-40
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180
> 0.3
0.1 : 0.3
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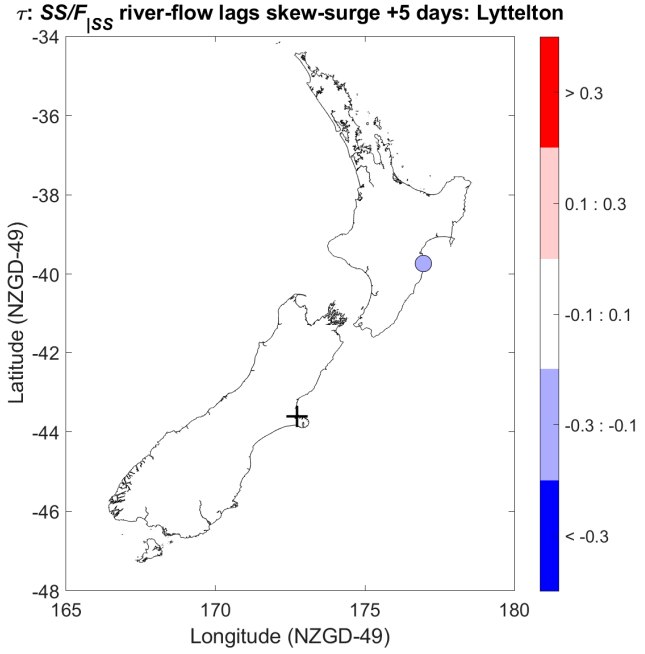
< -0.3


τ: SS/F|SS river-flow lags skew-surge +5 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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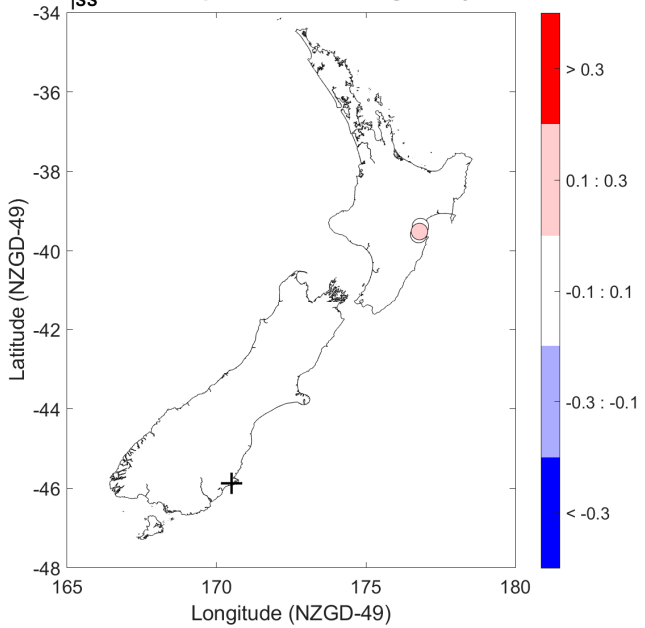
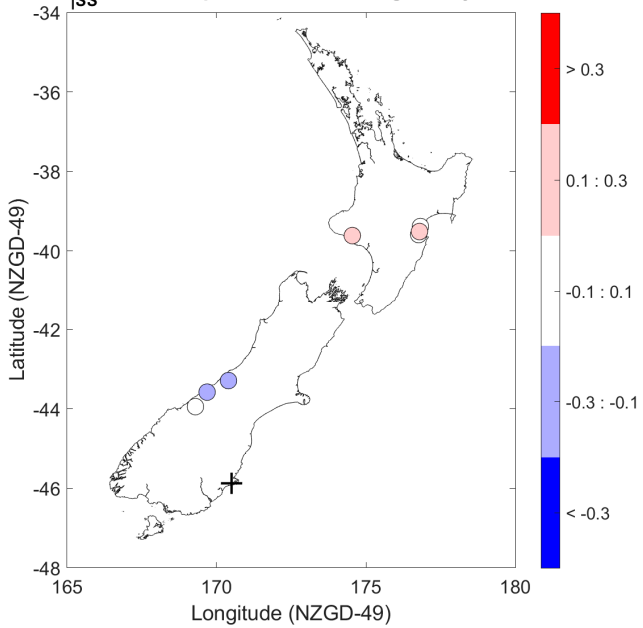
-40
-42
-44
-46
-48
165
170
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3

Dunedin

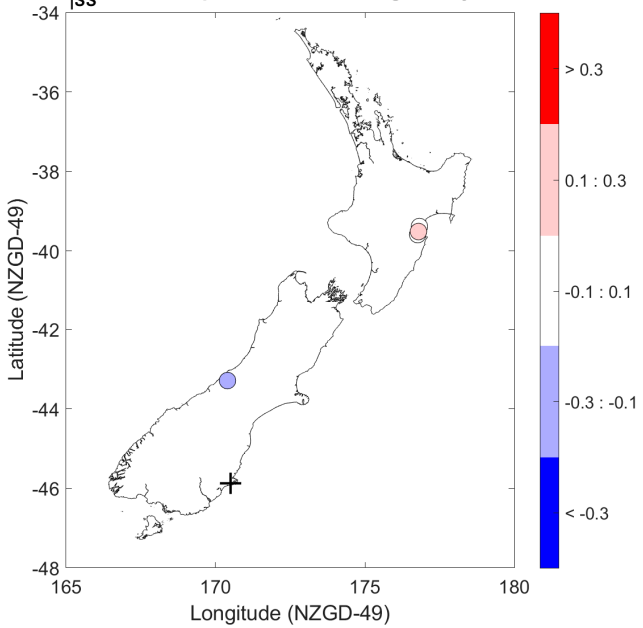
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 5 days: Dunedin



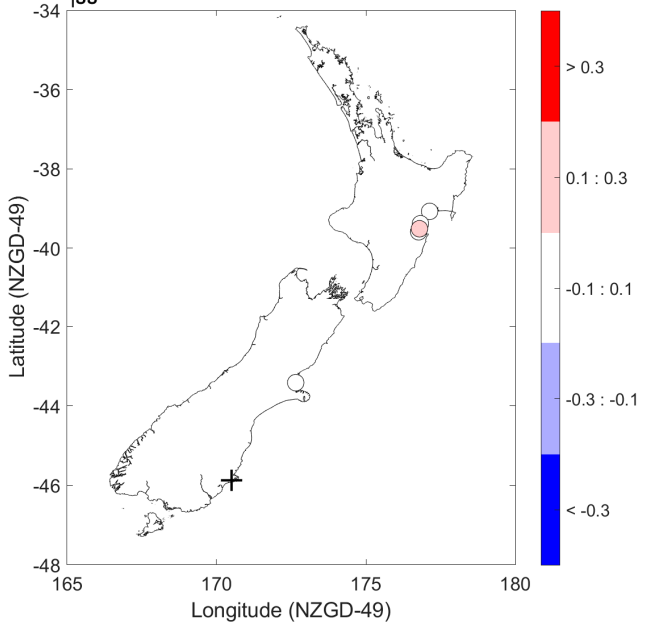
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 4 days: Dunedin



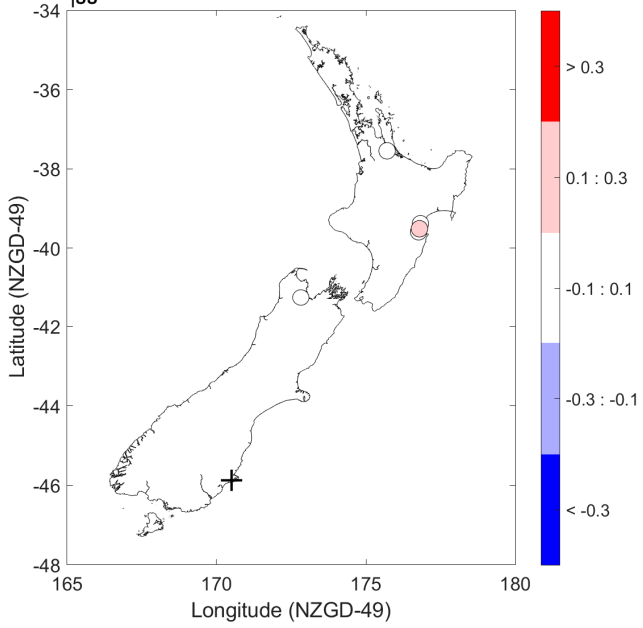
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 3 days: Dunedin



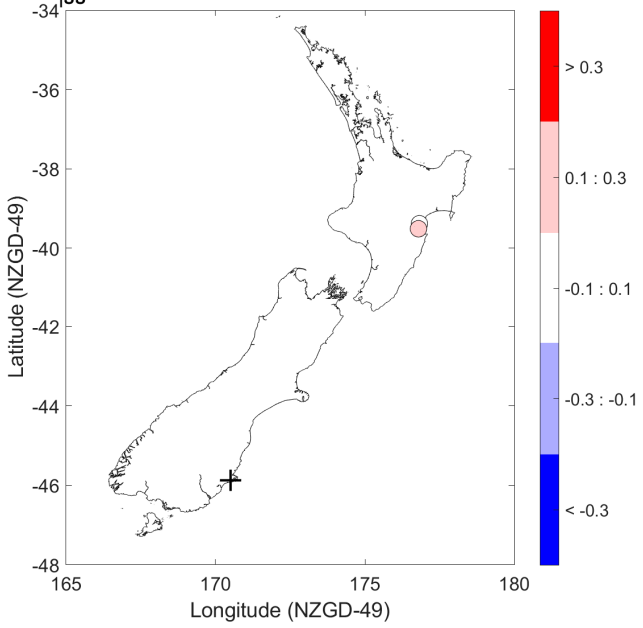
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 2 days: Dunedin

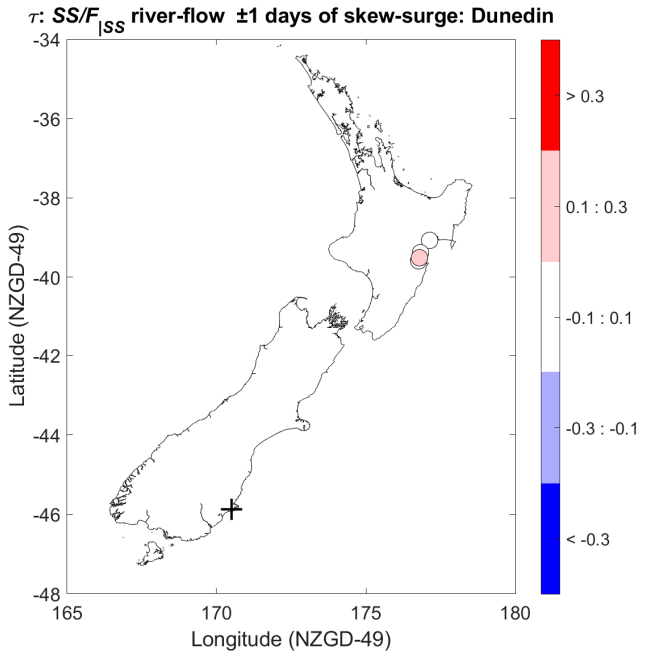


τ: $SS/F_{|SS}$ river-flow precedes skew-surge 1 days: Dunedin



τ: $SS/F_{|SS}$, peak river-flow same day as skew-surge: Dunedin




τ: SS/F|SS river-flow ±1 days of skew-surge: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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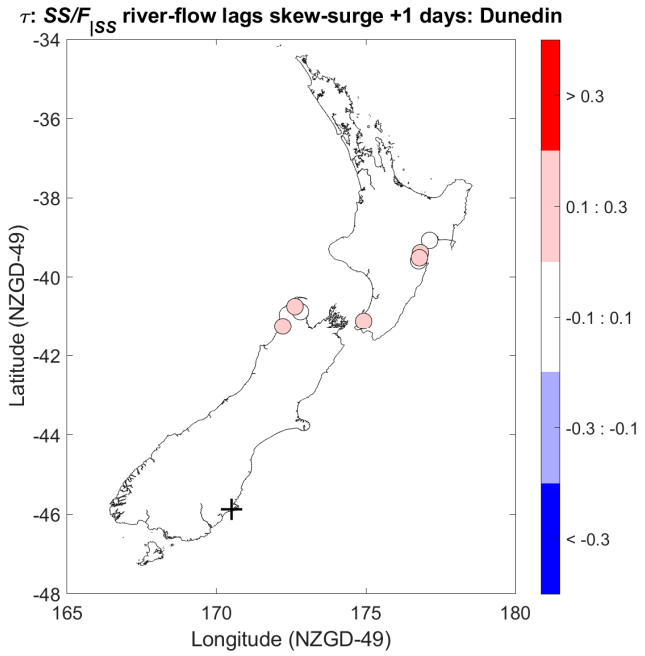
τ: SS/F|SS river-flow lags skew-surge +1 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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> 0.3
0.1 : 0.3
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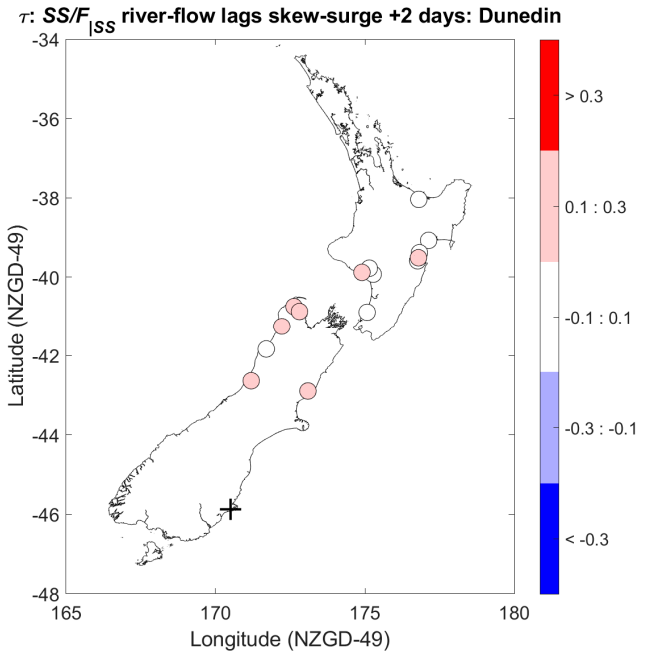
τ: SS/F|SS river-flow lags skew-surge +2 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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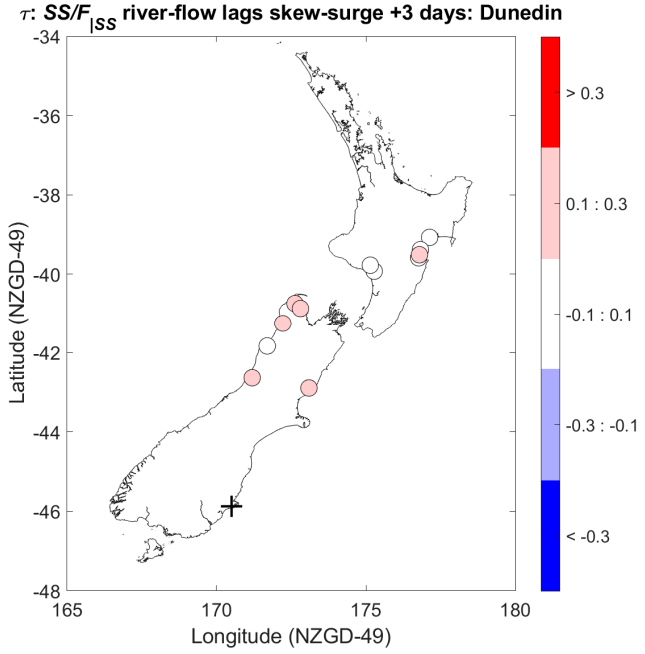
τ: SS/F|SS river-flow lags skew-surge +3 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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> 0.3
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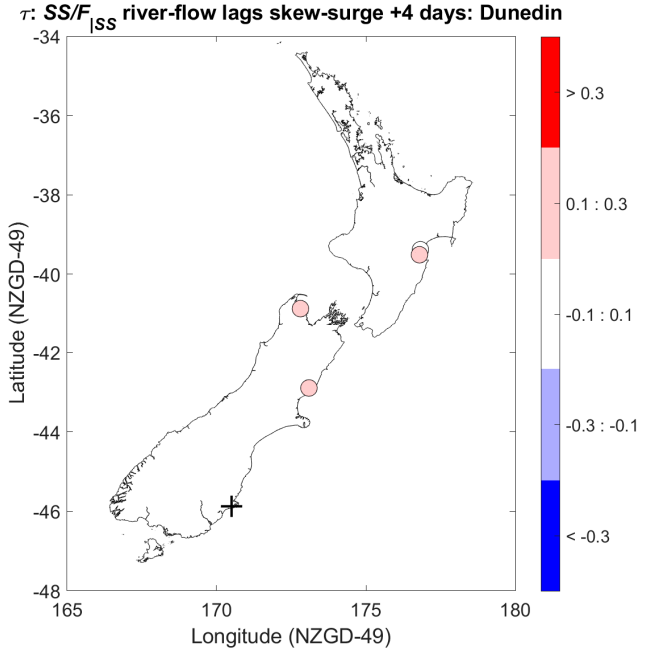
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +4 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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> 0.3
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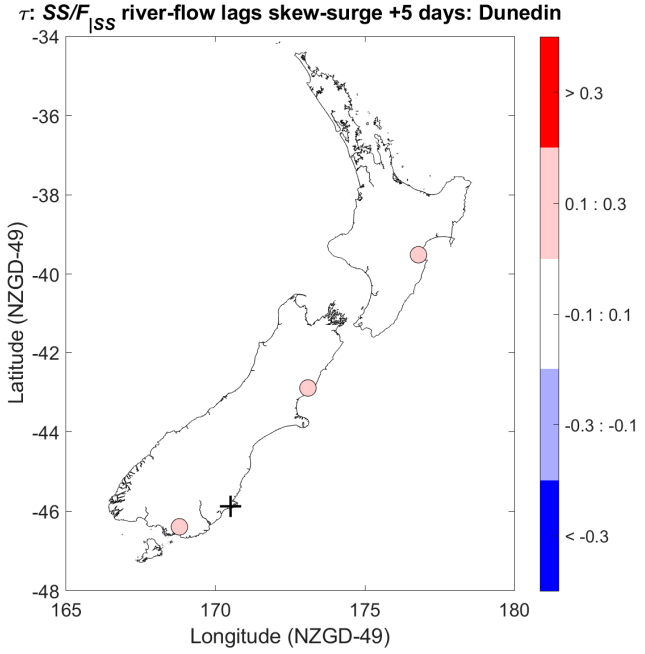
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +5 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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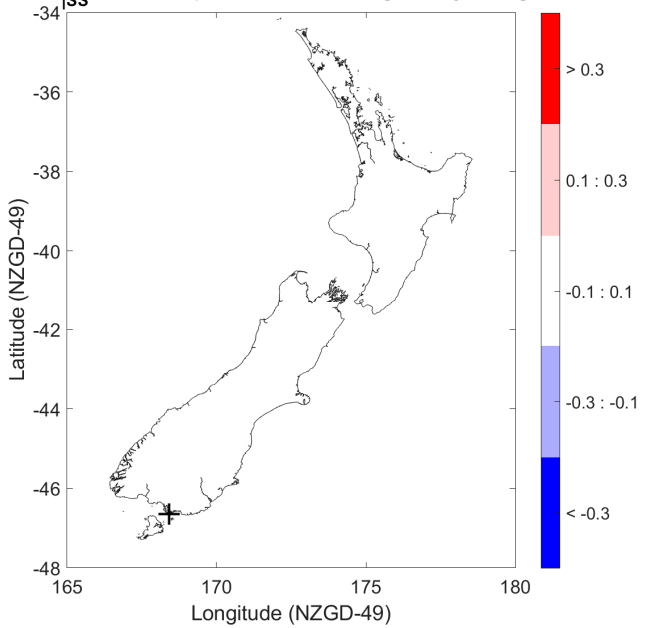
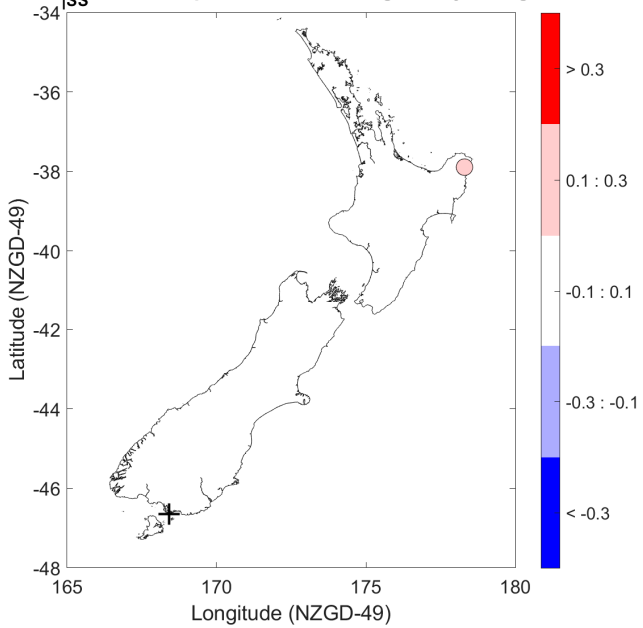
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3

Dog Island

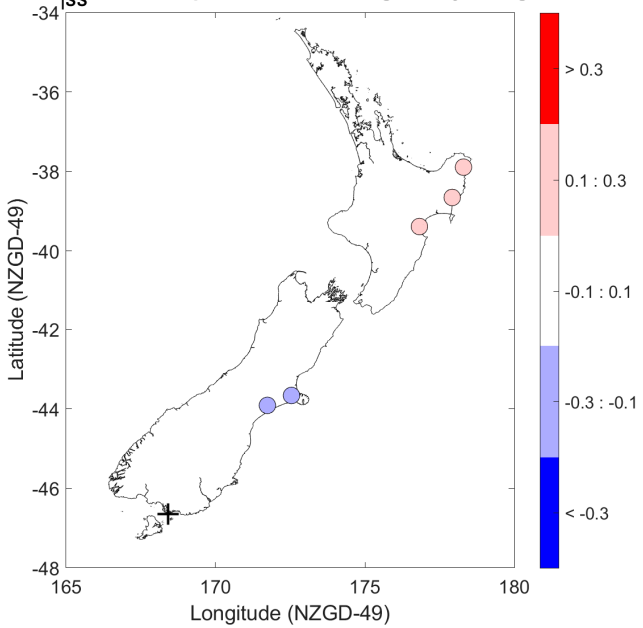
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 5 days: DogIsland



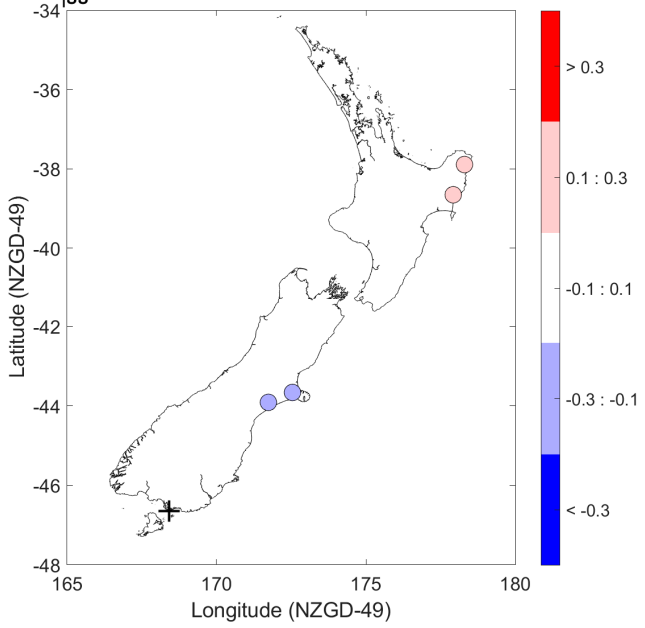
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 4 days: DogIsland



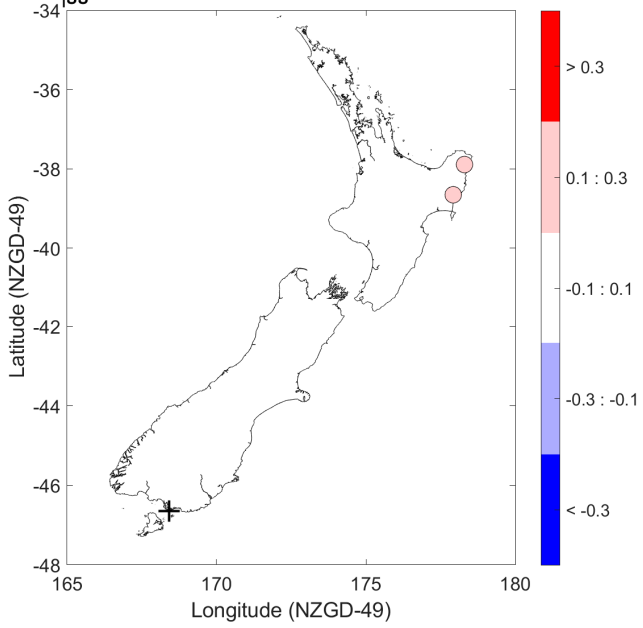
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 3 days: DogIsland



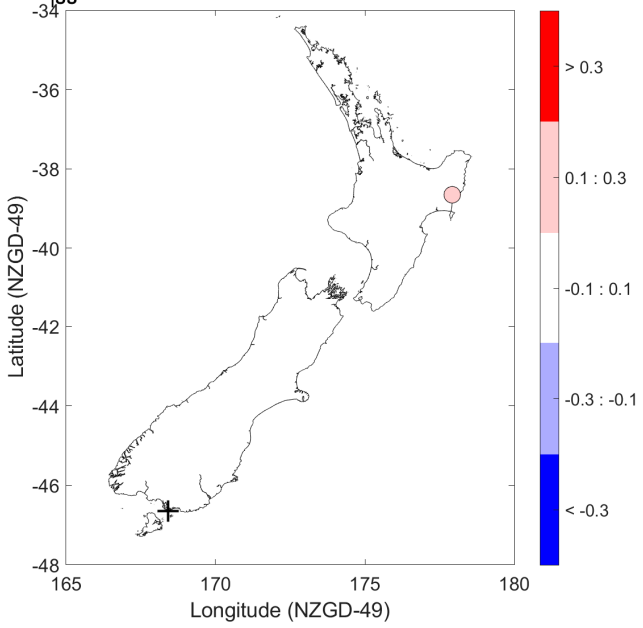
τ: $SS/F_{|SS}$ river-flow precedes skew-surge 2 days: DogIsland

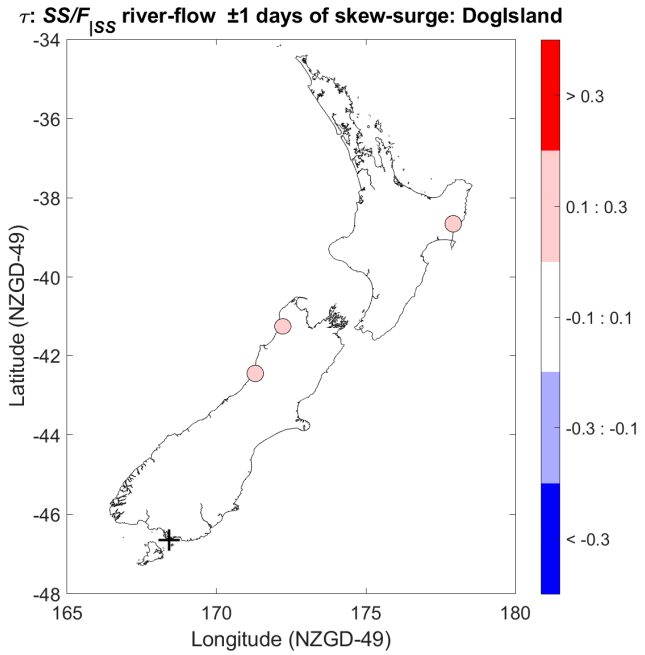


τ: $SS/F_{|SS}$ river-flow precedes skew-surge 1 days: DogIsland



τ: $SS/F_{|SS}$, peak river-flow same day as skew-surge: DogIsland




τ: SS/F|SS river-flow ±1 days of skew-surge: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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-0.3 : -0.1
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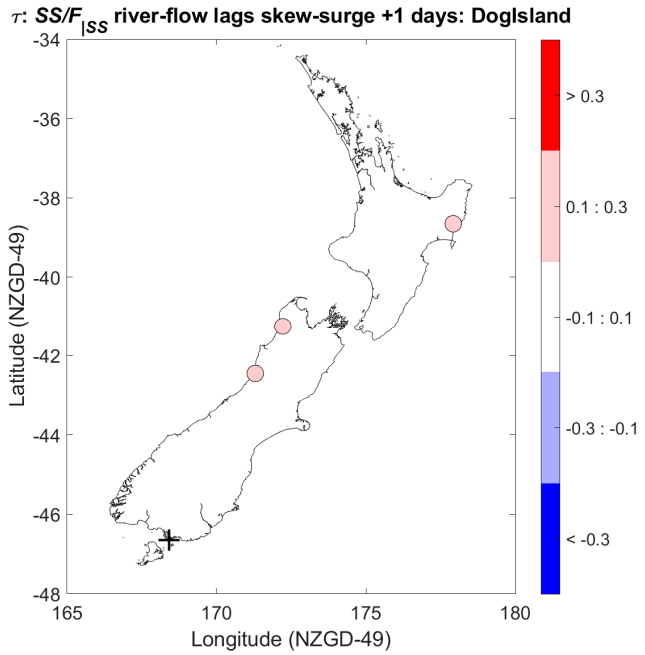
τ: SS/F|SS river-flow lags skew-surge +1 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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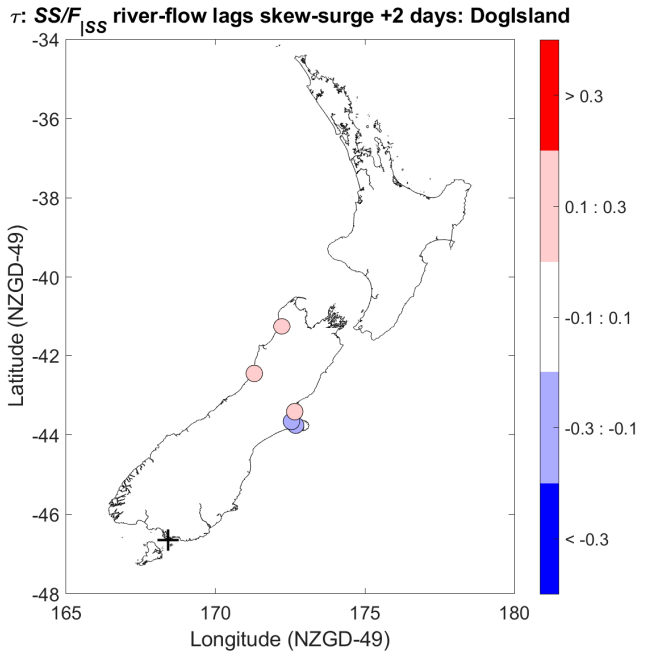
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +2 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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-40
-42
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175
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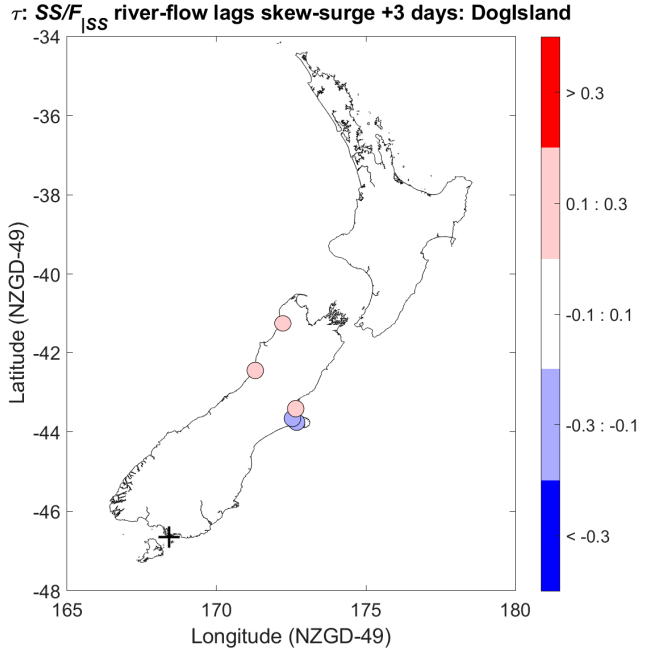
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +3 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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-40
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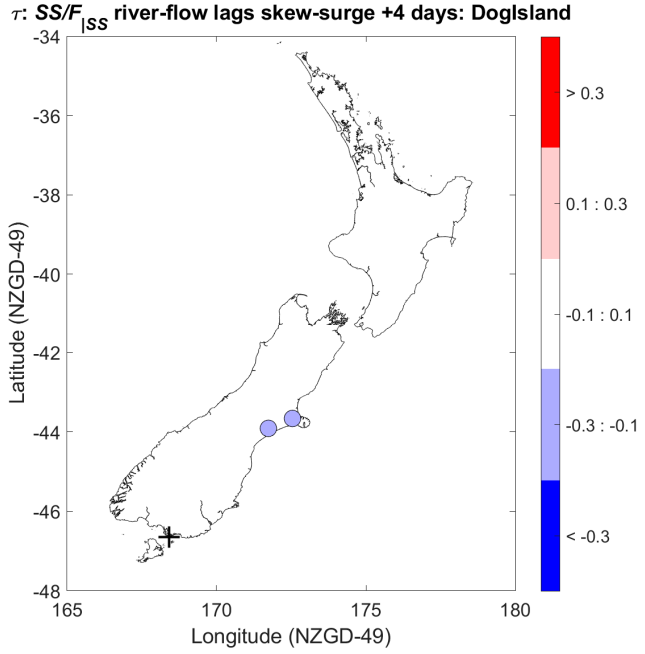
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +4 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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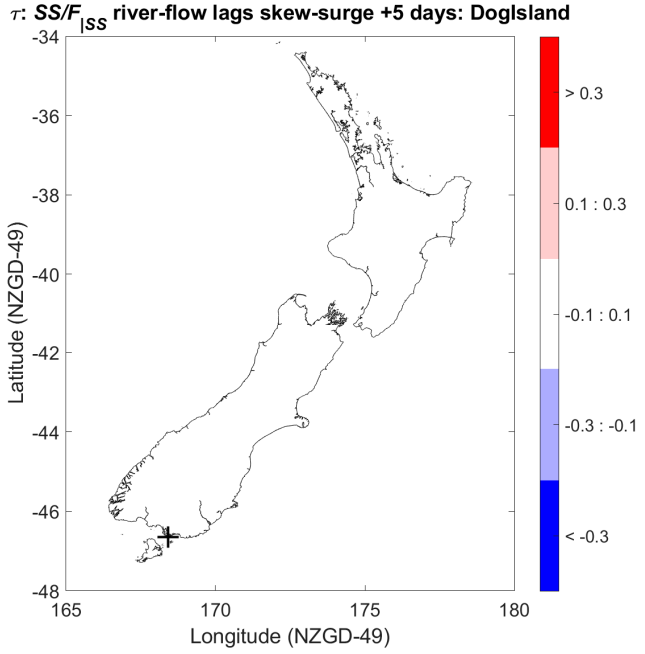
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|SS river-flow lags skew-surge +5 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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-46
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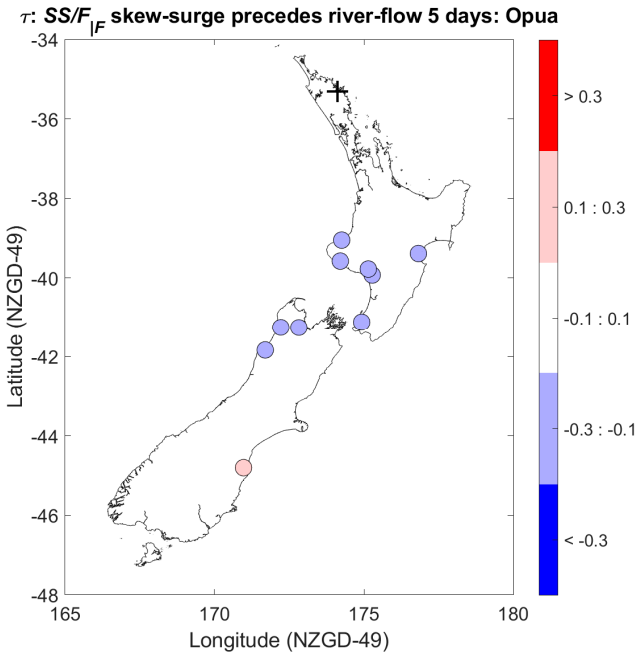
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3

$SS/F_{|F}$—skew-surge dependent on extreme river-flow

Positive lags mean that the skew-surge was experienced after the river-flow and *vice versa*.

Opua


τ: SS/F|F skew-surge precedes river-flow 5 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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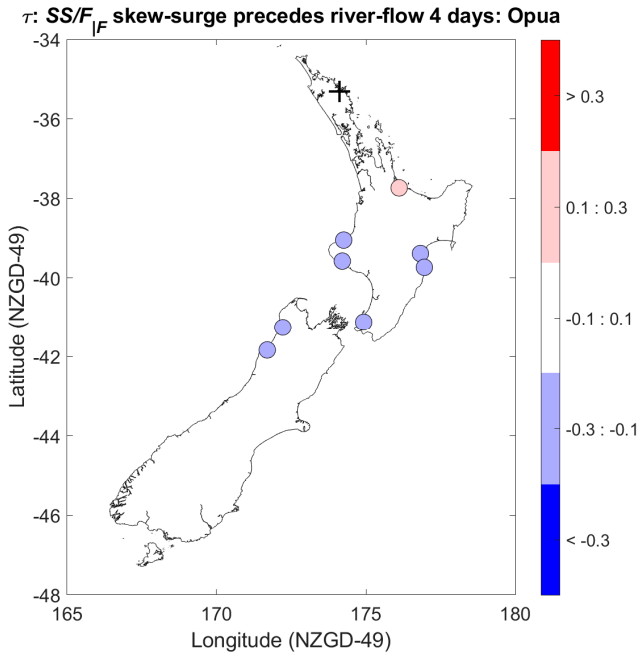
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|F skew-surge precedes river-flow 4 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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-0.1 : 0.1
-0.3 : -0.1
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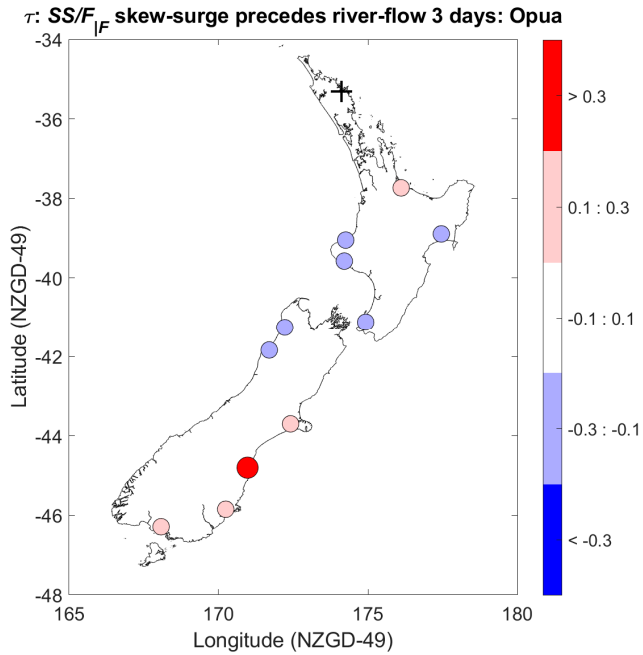
τ: SS/F|F skew-surge precedes river-flow 3 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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0.1 : 0.3
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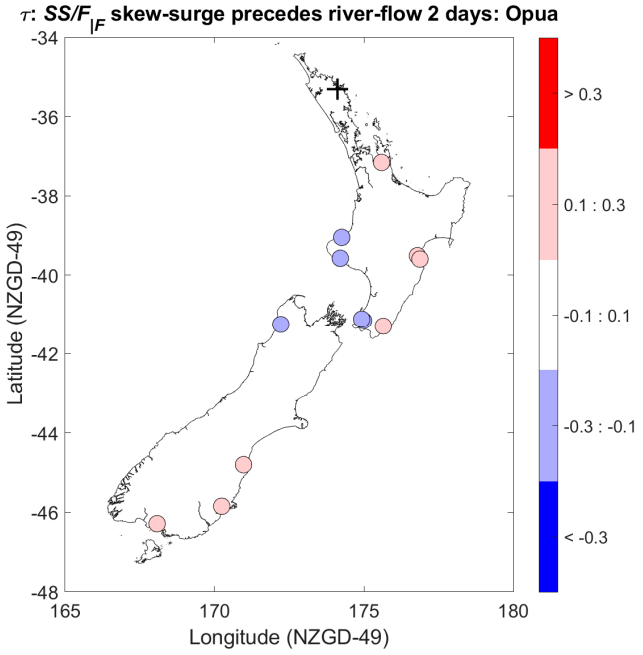
τ: SS/F|F skew-surge precedes river-flow 2 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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0.1 : 0.3
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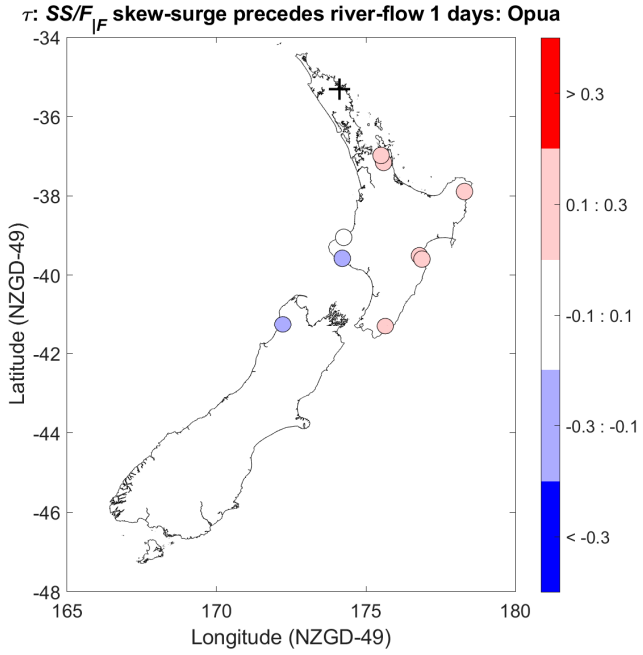
τ: SS/F|F skew-surge precedes river-flow 1 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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0.1 : 0.3
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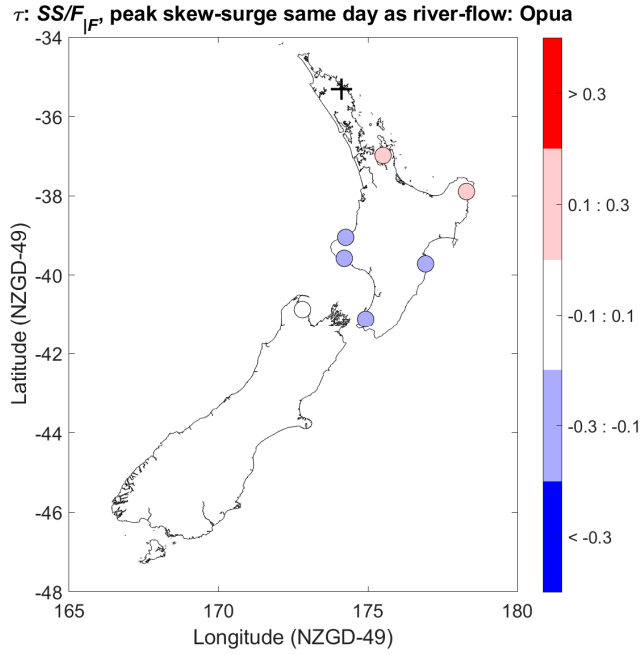
τ: SS/F|F, peak skew-surge same day as river-flow: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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> 0.3
0.1 : 0.3
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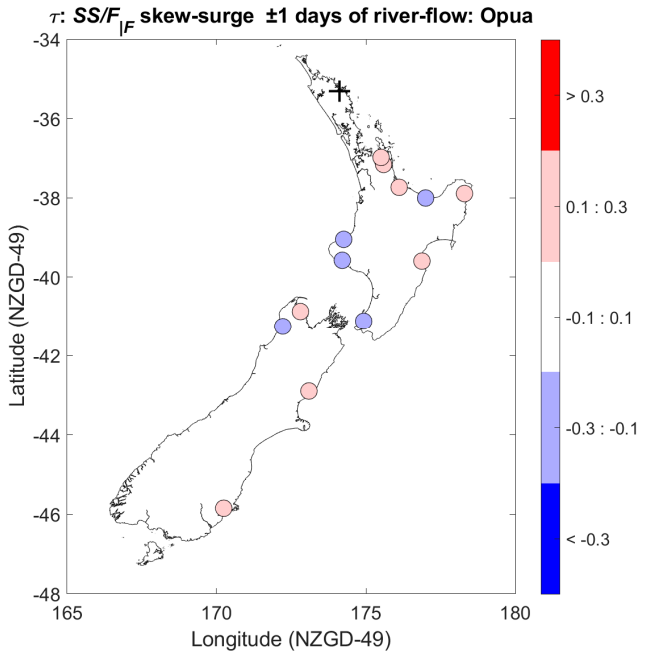
τ: SS/F|F skew-surge ±1 days of river-flow: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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-0.1 : 0.1
-0.3 : -0.1
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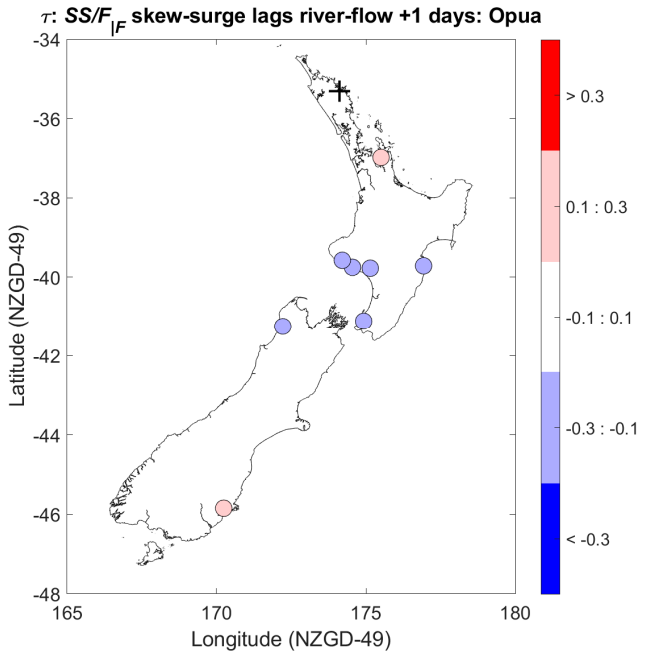
τ: SS/F|F skew-surge lags river-flow +1 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
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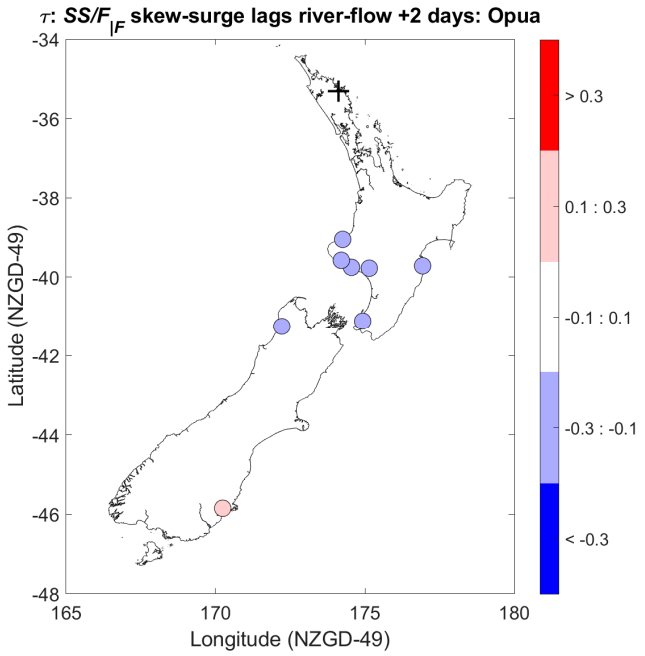
τ: SS/F|F skew-surge lags river-flow +2 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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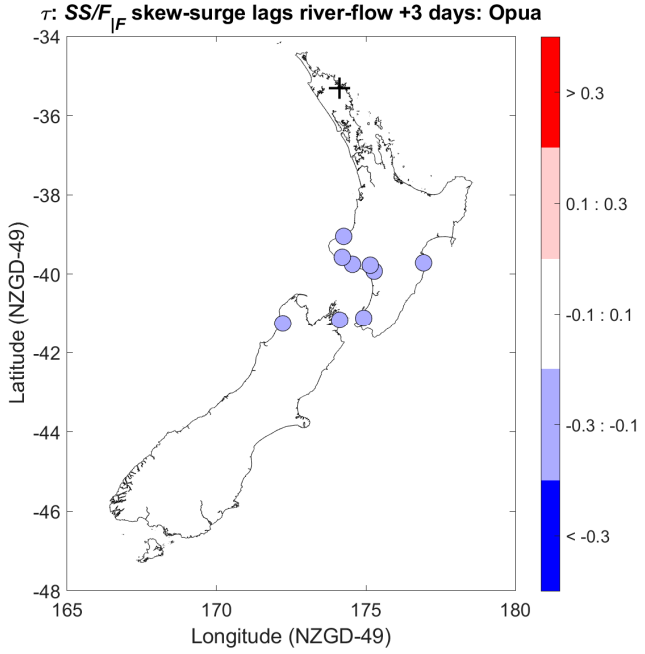
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|F skew-surge lags river-flow +3 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
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0.1 : 0.3
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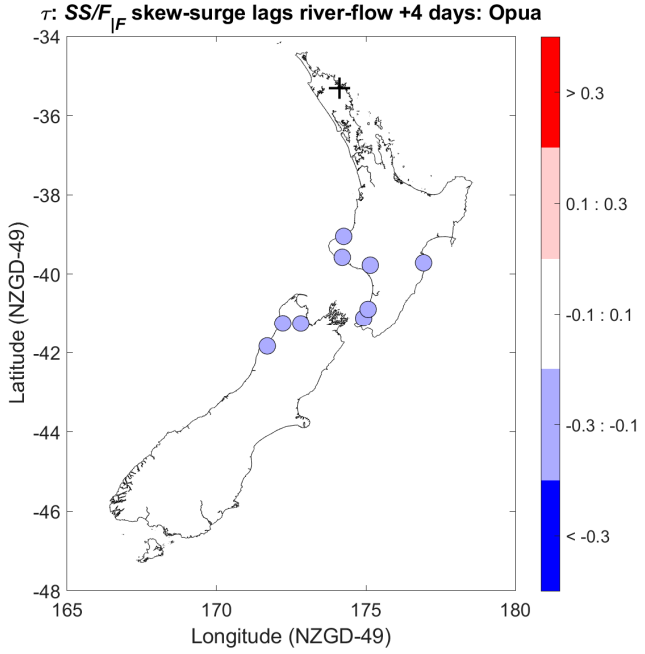
τ: SS/F|F skew-surge lags river-flow +4 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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> 0.3
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-0.1 : 0.1
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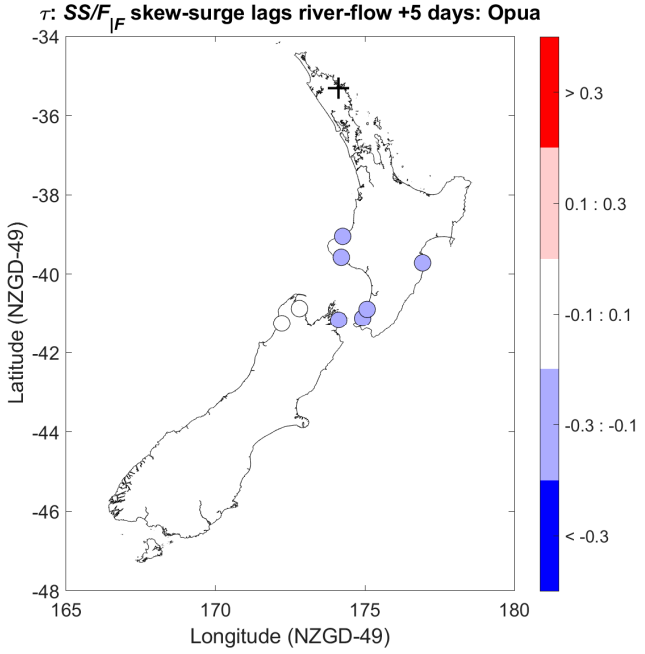
τ: SS/F|F skew-surge lags river-flow +5 days: Opua
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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-42
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-46
-48
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175
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> 0.3
0.1 : 0.3
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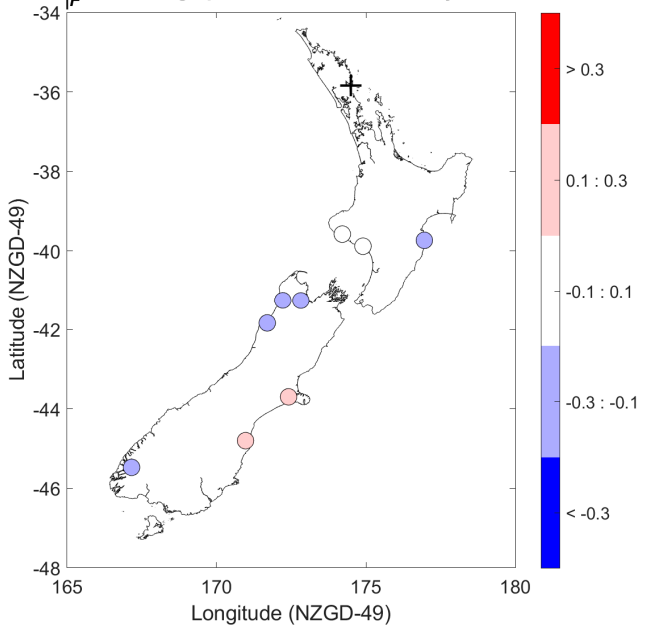
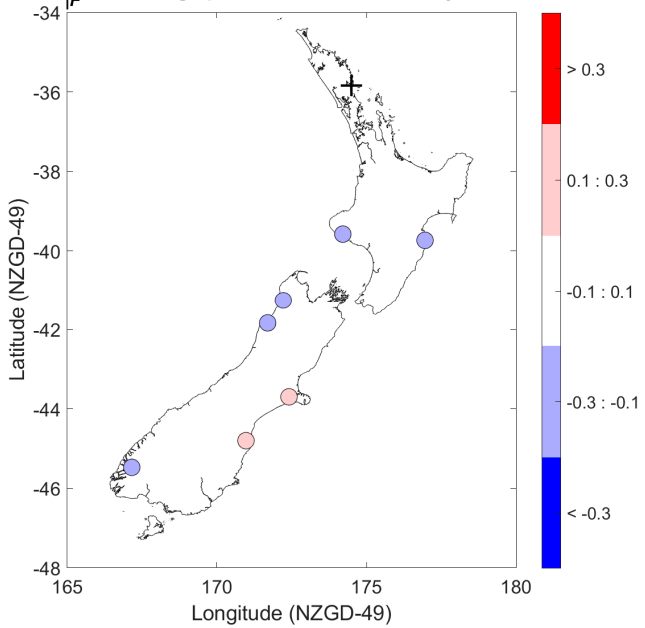
-0.3 : -0.1
< -0.3

Marsden Point

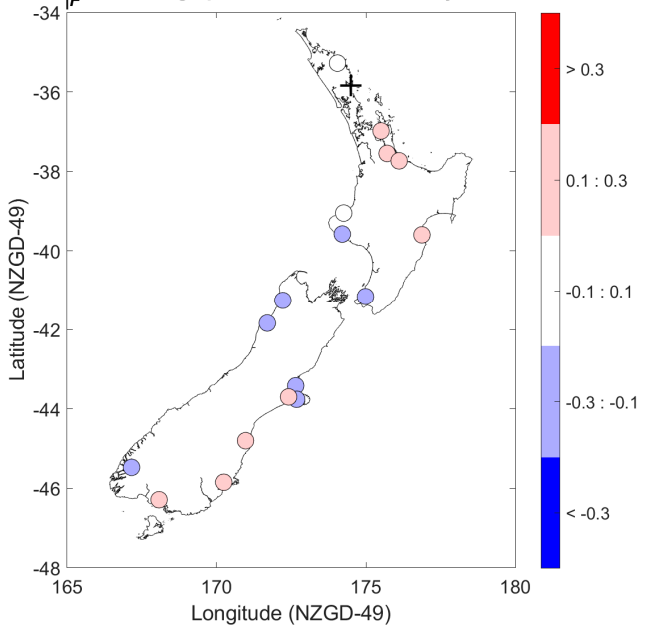
τ: $SS/F_{|F}$ skew-surge precedes river-flow 5 days: MarsdenPt



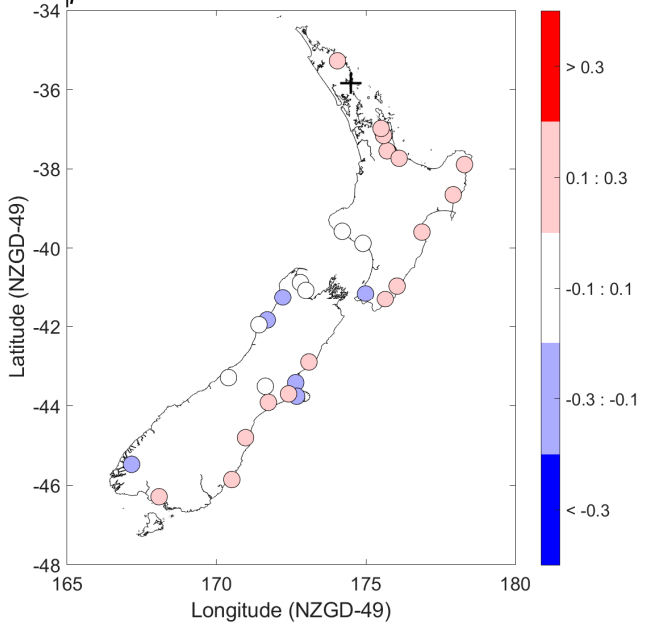
τ: $SS/F_{|F}$ skew-surge precedes river-flow 4 days: MarsdenPt



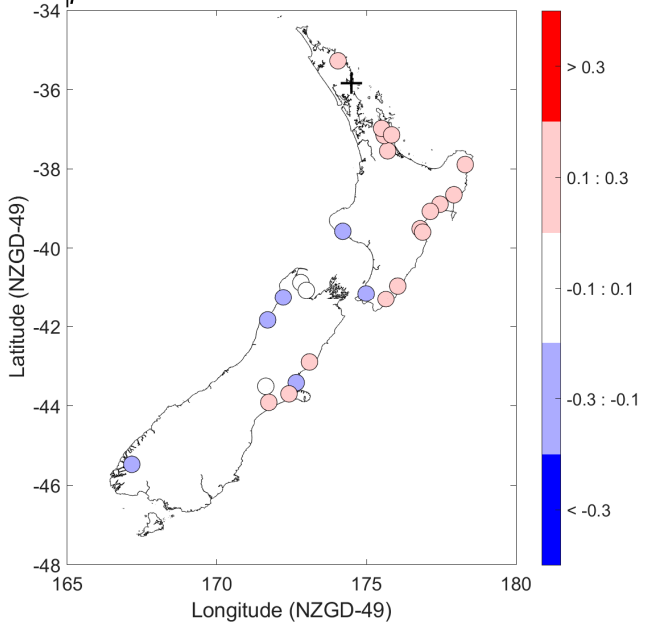
τ: $SS/F_{|F}$ skew-surge precedes river-flow 3 days: MarsdenPt



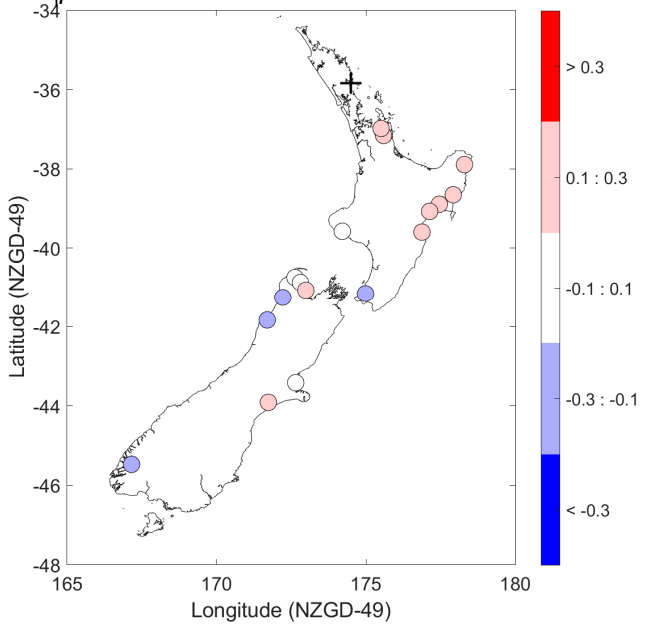
τ: $SS/F_{|F}$ skew-surge precedes river-flow 2 days: MarsdenPt

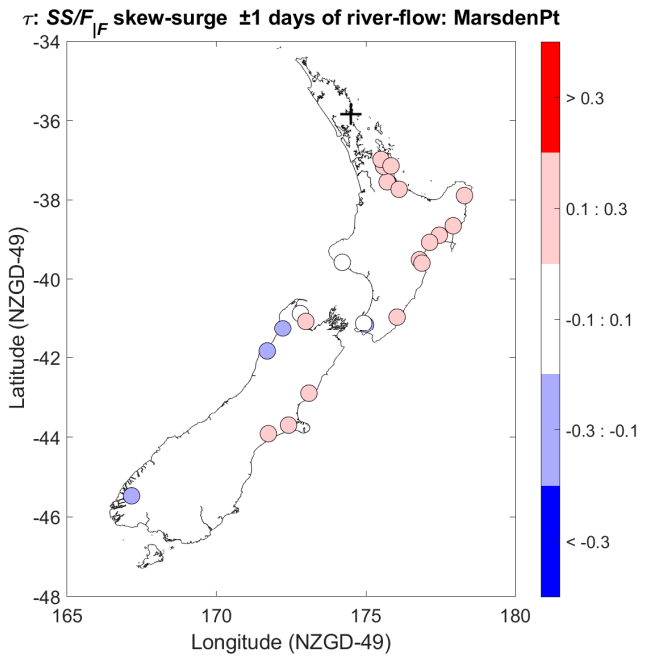


τ: $SS/F_{|F}$ skew-surge precedes river-flow 1 days: MarsdenPt



τ: $SS/F_{|F}$, peak skew-surge same day as river-flow: MarsdenPt




τ: SS/F|F skew-surge ±1 days of river-flow: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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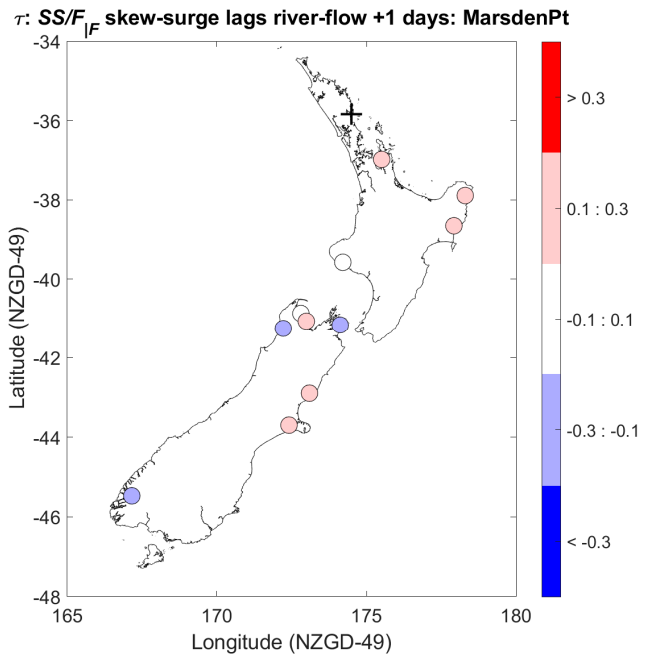
τ: SS/F|F skew-surge lags river-flow +1 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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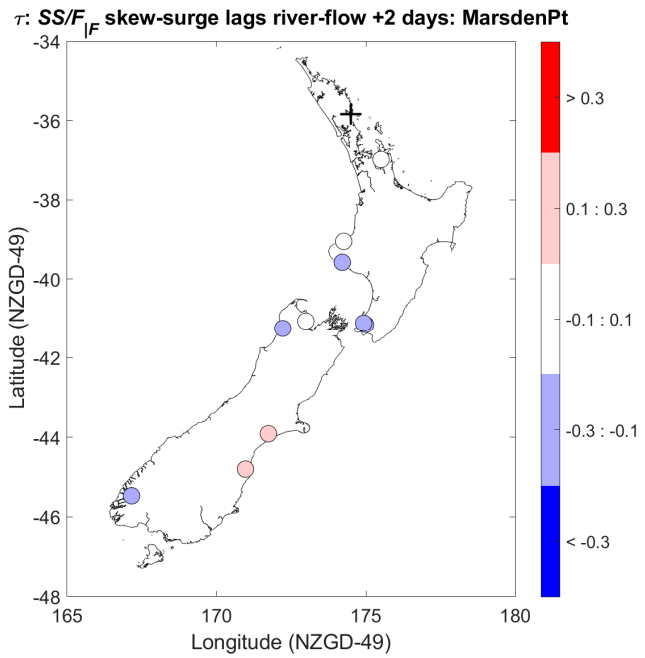
τ: SS/F|F skew-surge lags river-flow +2 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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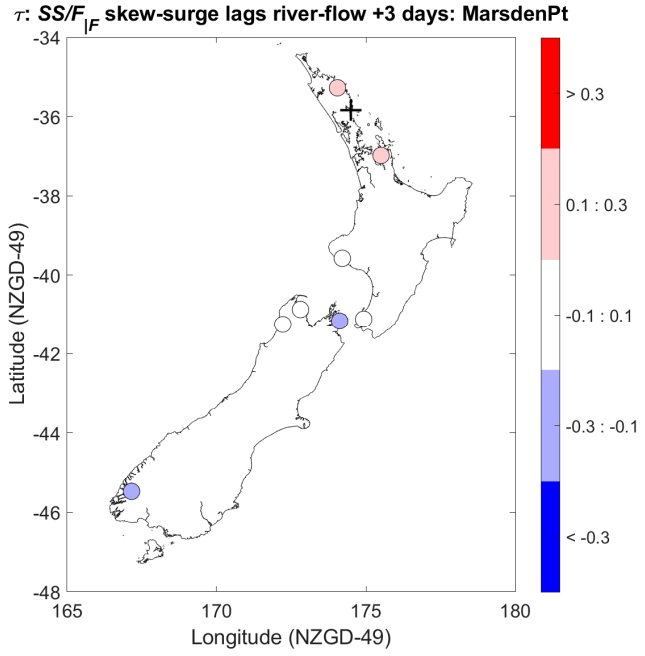
τ: SS/F|F skew-surge lags river-flow +3 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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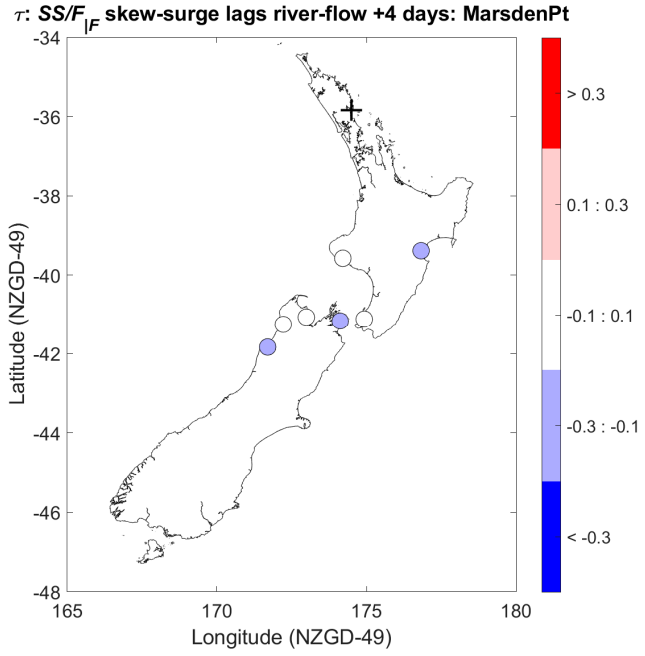
τ: SS/F|F skew-surge lags river-flow +4 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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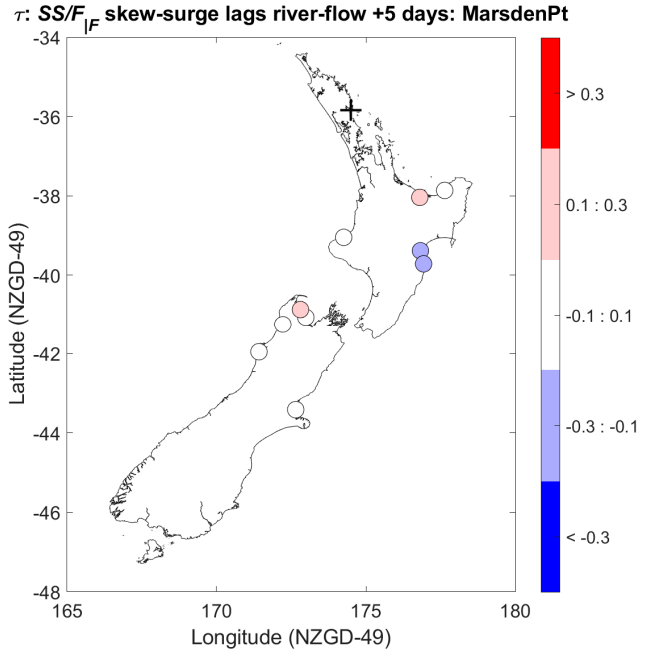
τ: SS/F|F skew-surge lags river-flow +5 days: MarsdenPt
Latitude (NZGD-49)
Longitude (NZGD-49)
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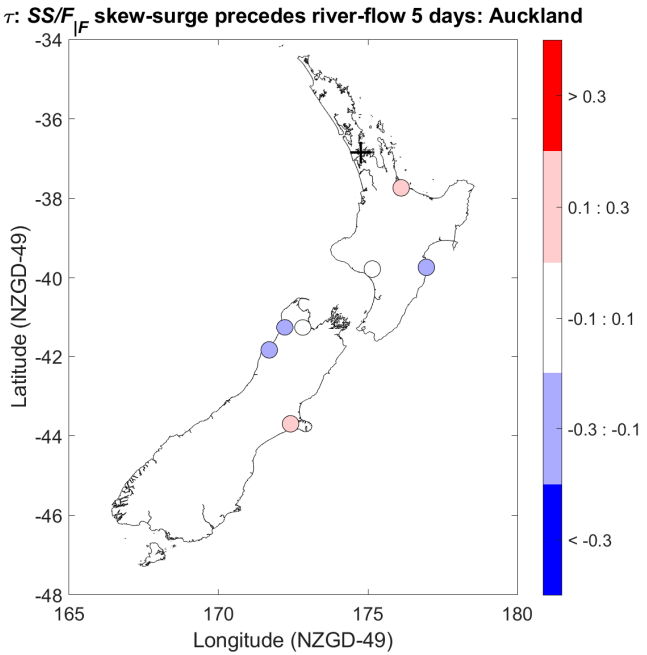
Auckland


τ: SS/F|F skew-surge precedes river-flow 5 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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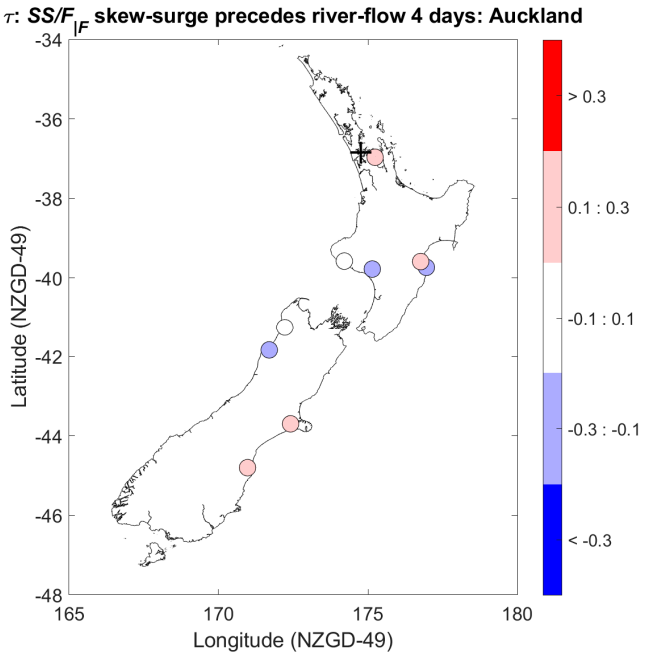
τ: SS/F|F skew-surge precedes river-flow 4 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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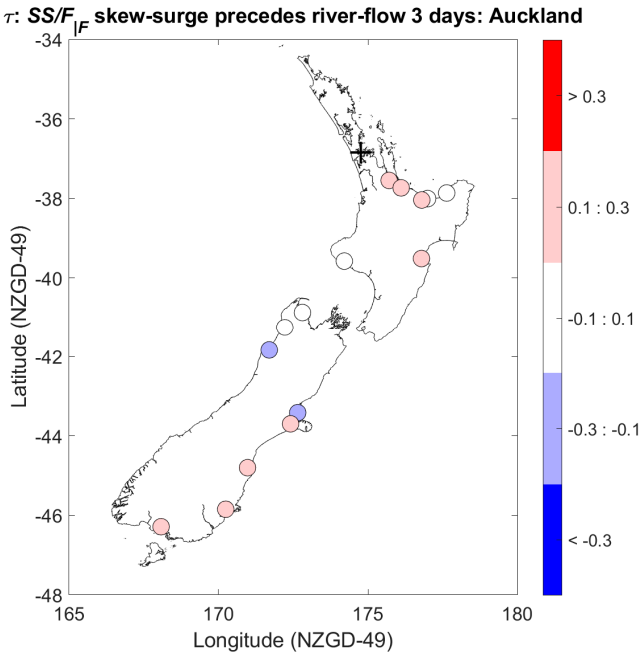
τ: SS/F|F skew-surge precedes river-flow 3 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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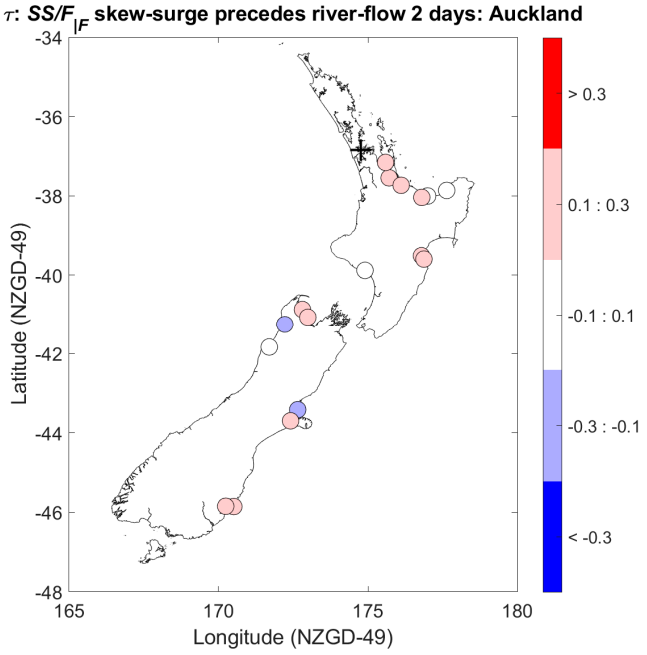
τ: SS/F|F skew-surge precedes river-flow 2 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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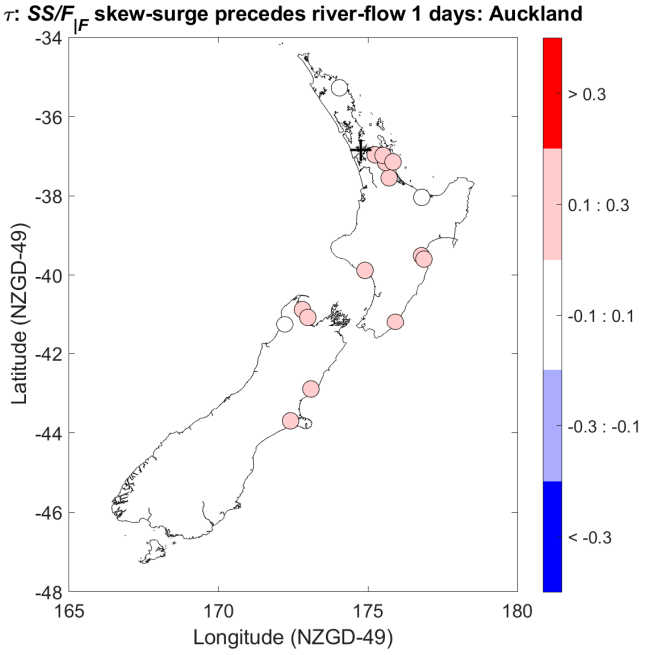
τ: SS/F|F skew-surge precedes river-flow 1 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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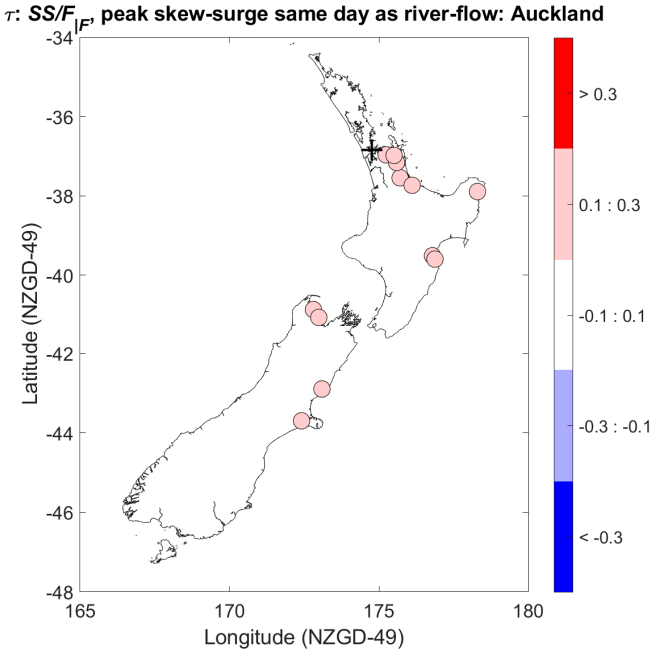
τ: SS/F|F, peak skew-surge same day as river-flow: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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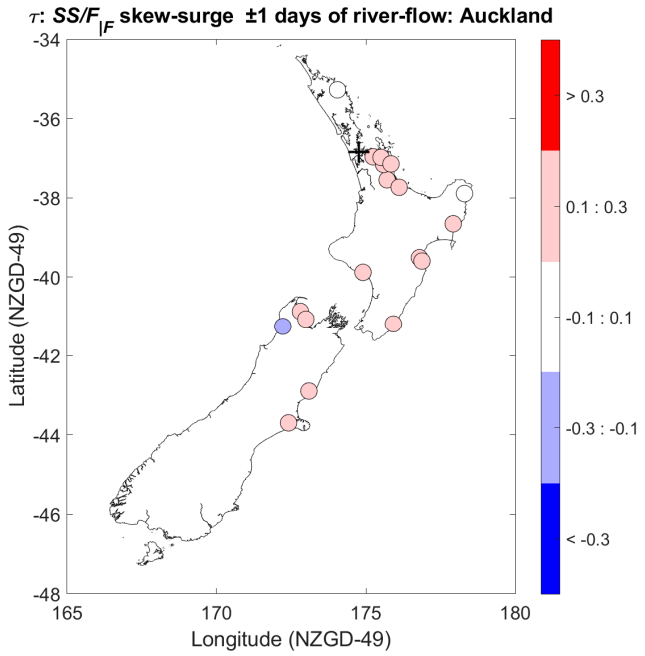
τ: SS/F|F skew-surge ±1 days of river-flow: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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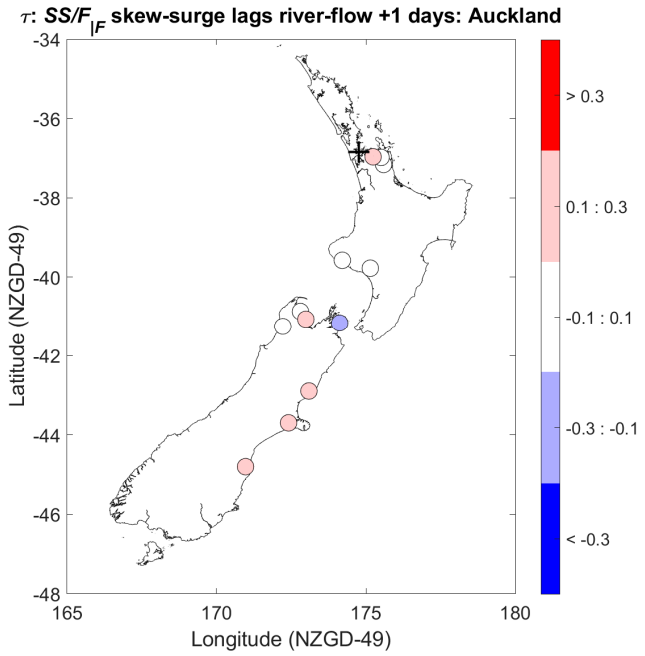
τ: SS/F|F skew-surge lags river-flow +1 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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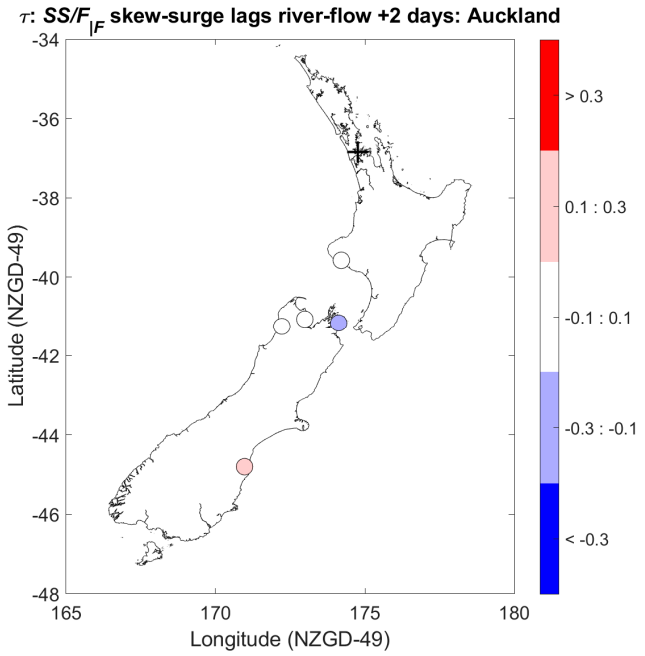
τ: SS/F|F skew-surge lags river-flow +2 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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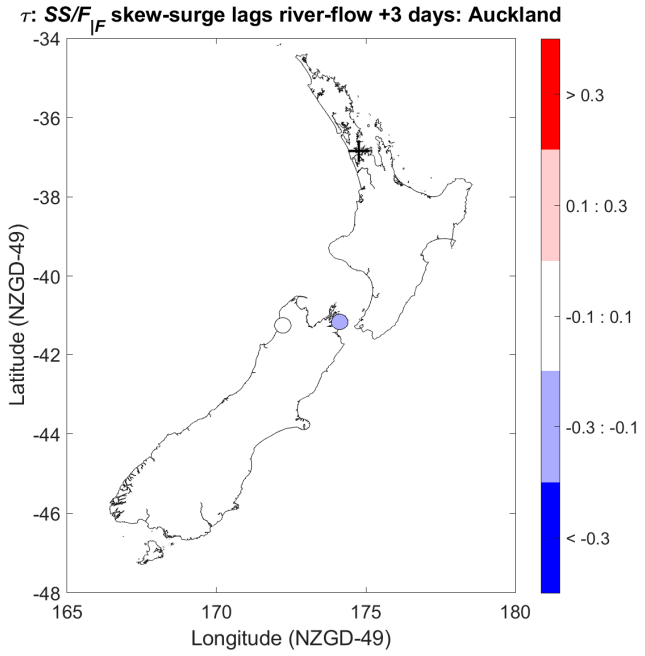
τ: SS/F|F skew-surge lags river-flow +3 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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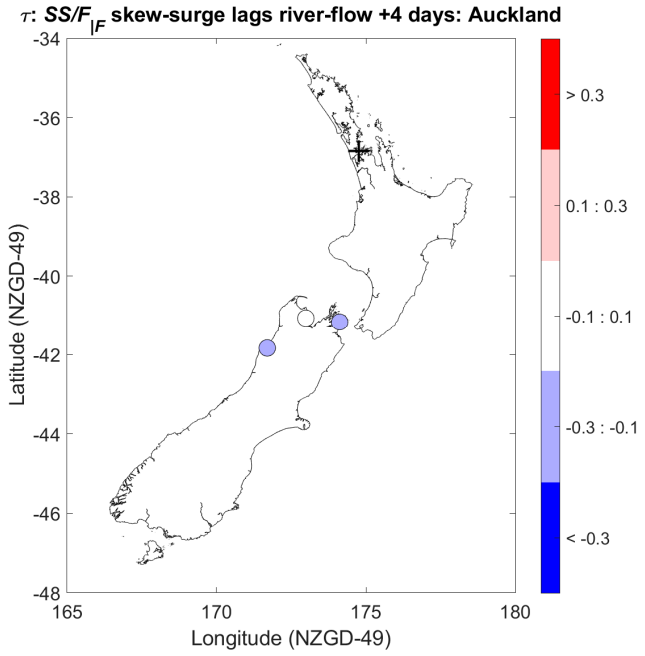
τ: SS/F|F skew-surge lags river-flow +4 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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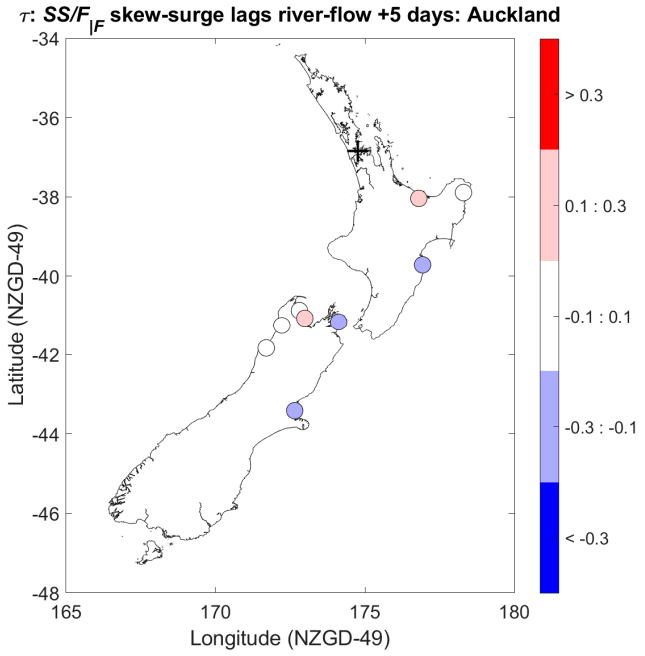
τ: SS/F|F skew-surge lags river-flow +5 days: Auckland
Latitude (NZGD-49)
Longitude (NZGD-49)
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> 0.3
0.1 : 0.3
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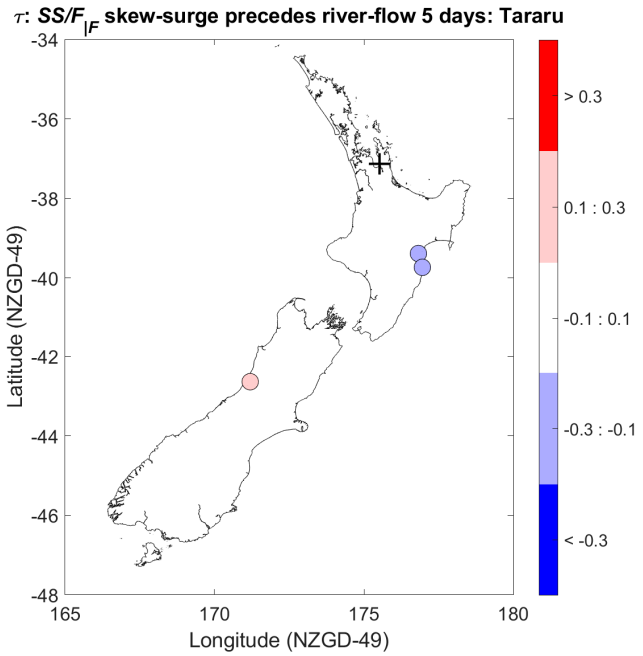
-0.3 : -0.1
< -0.3

Tararu


τ: SS/F|F skew-surge precedes river-flow 5 days: Tararu
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Latitude (NZGD-49)
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Longitude (NZGD-49)
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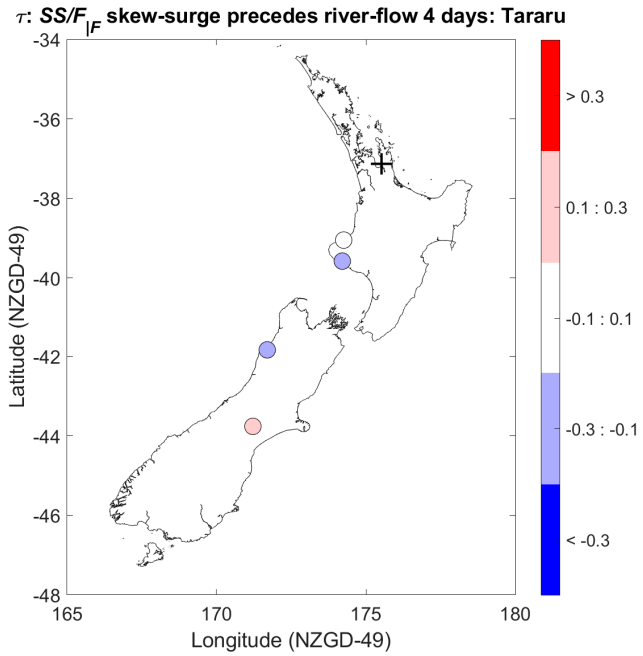
τ: SS/F|F skew-surge precedes river-flow 4 days: Tararu
-34
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Latitude (NZGD-49)
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Longitude (NZGD-49)
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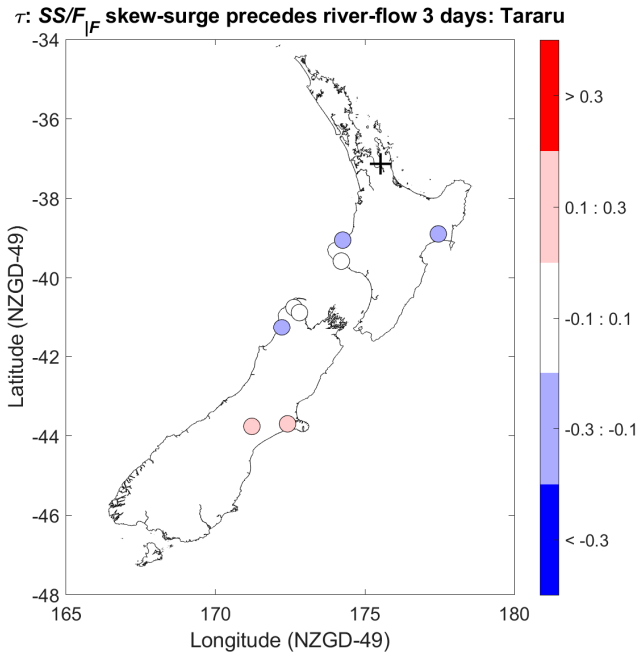
τ: SS/F|F skew-surge precedes river-flow 3 days: Tararu
-34
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Latitude (NZGD-49)
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Longitude (NZGD-49)
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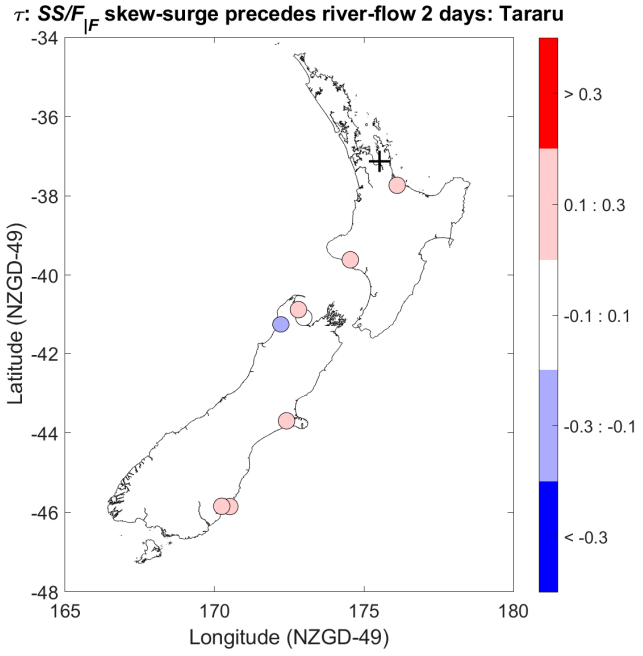
τ: SS/F|F skew-surge precedes river-flow 2 days: Tararu
-34
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Latitude (NZGD-49)
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Longitude (NZGD-49)
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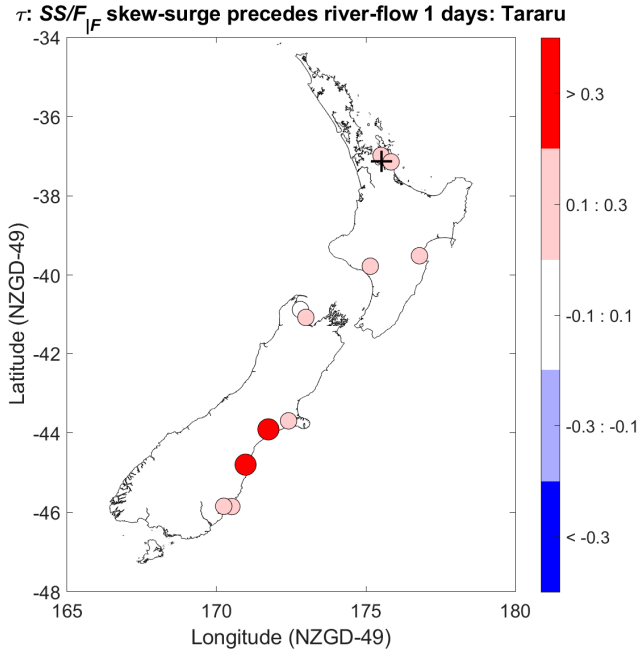
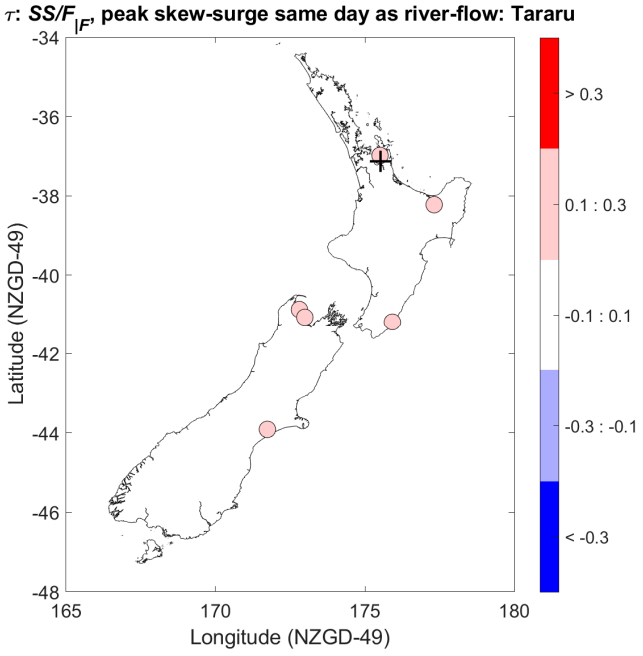
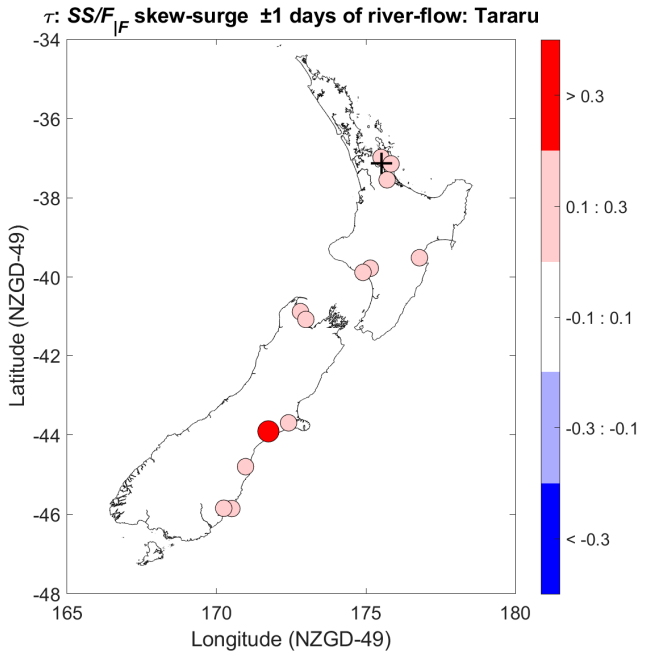
-0.3 : -0.1
< -0.3


τ: SS/F|F skew-surge precedes river-flow 1 days: Tararu
-34
-36
-38
-40
-42
-44
-46
-48
Latitude (NZGD-49)
165
170
175
180
Longitude (NZGD-49)
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|F, peak skew-surge same day as river-flow: Tararu
-34
-36
-38
-40
-42
-44
-46
-48
Latitude (NZGD-49)
165
170
175
180
Longitude (NZGD-49)
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|F skew-surge ±1 days of river-flow: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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-42
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165
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175
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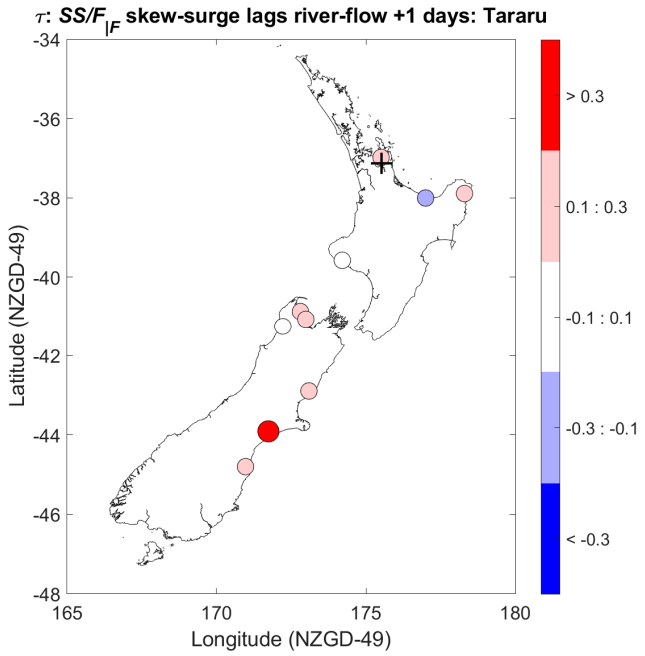
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|F skew-surge lags river-flow +1 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
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-40
-42
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-46
-48
165
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175
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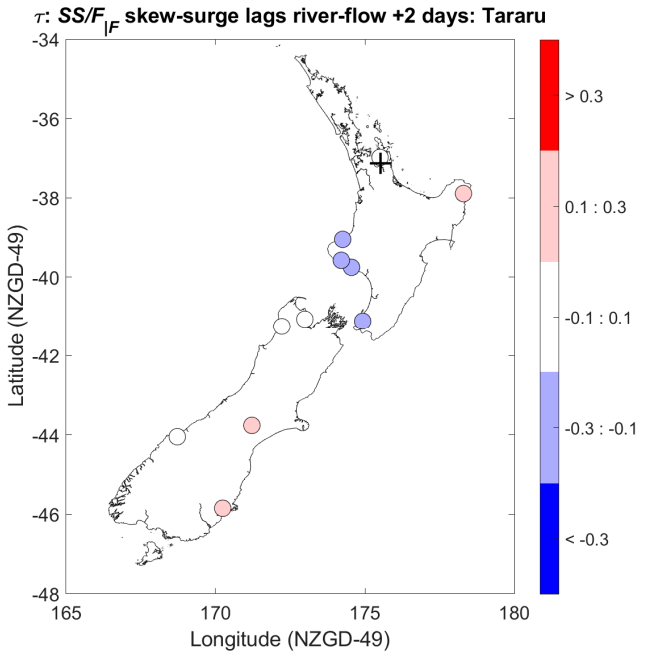
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|F skew-surge lags river-flow +2 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
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-48
165
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175
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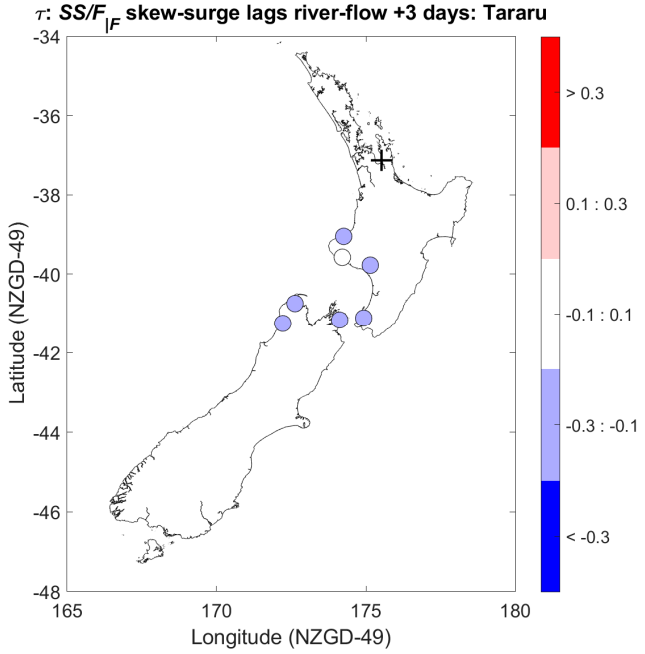
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|F skew-surge lags river-flow +3 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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-40
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-48
165
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175
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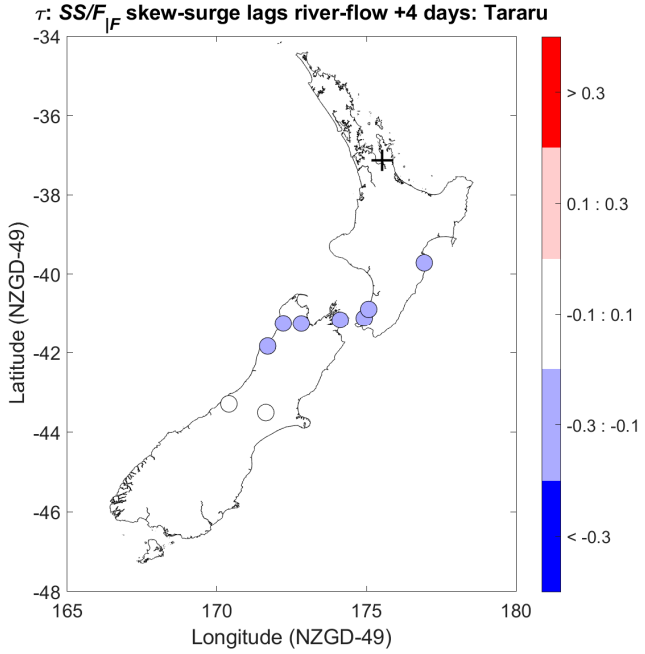
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|F skew-surge lags river-flow +4 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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-40
-42
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-46
-48
165
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175
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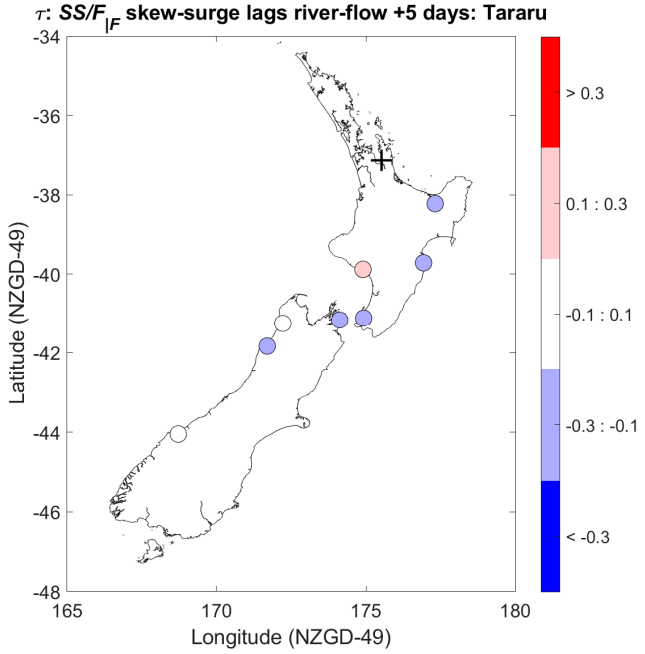
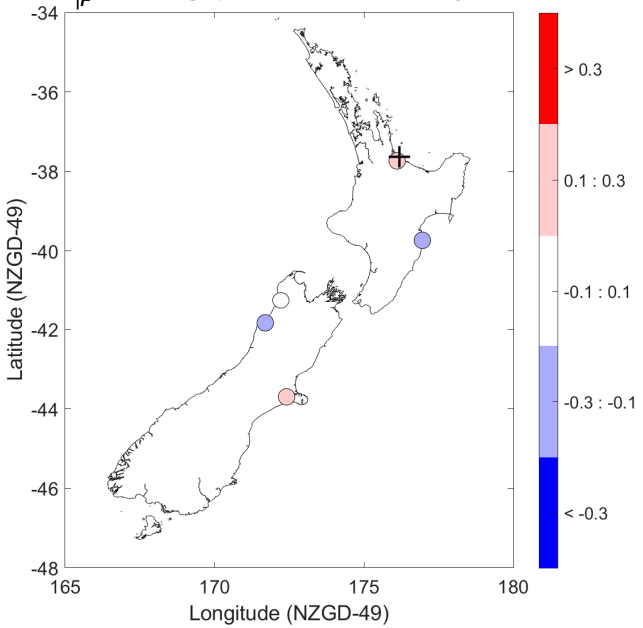
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3

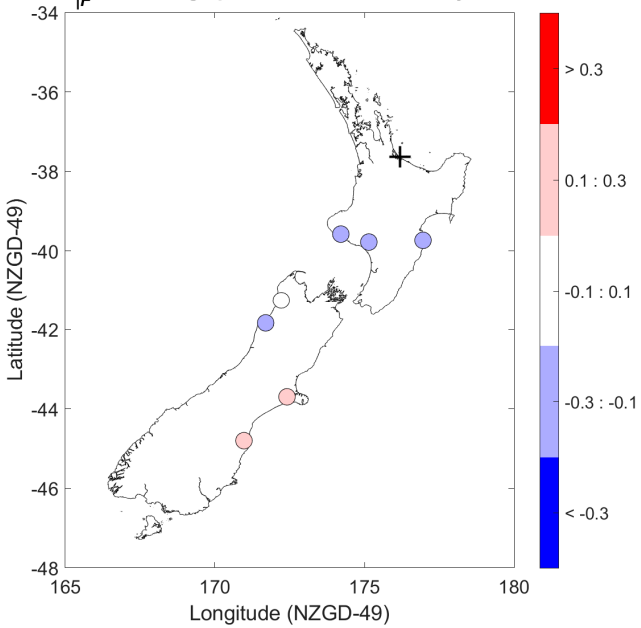

τ: SS/F|F skew-surge lags river-flow +5 days: Tararu
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
165
170
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3

Moturiki

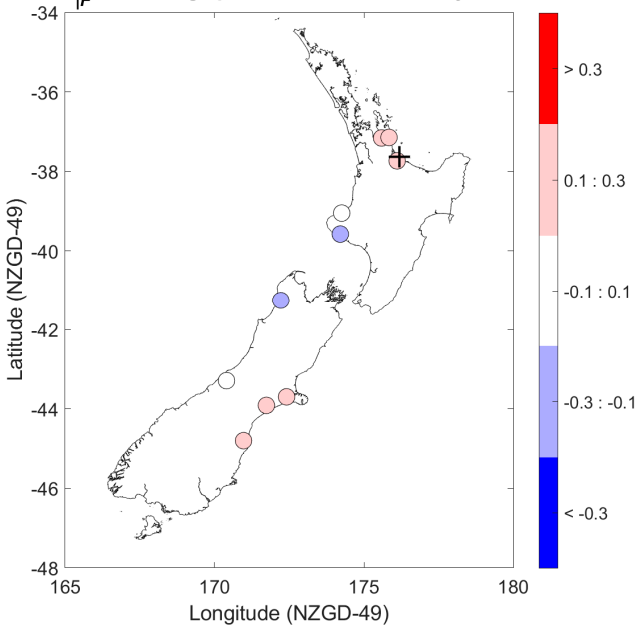
τ: $SS/F_{|F}$ skew-surge precedes river-flow 5 days: Moturiki



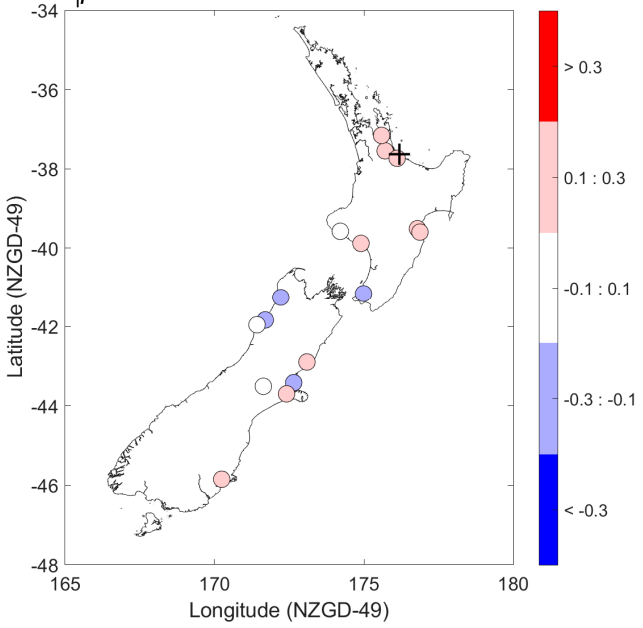
τ: $SS/F_{|F}$ skew-surge precedes river-flow 4 days: Moturiki



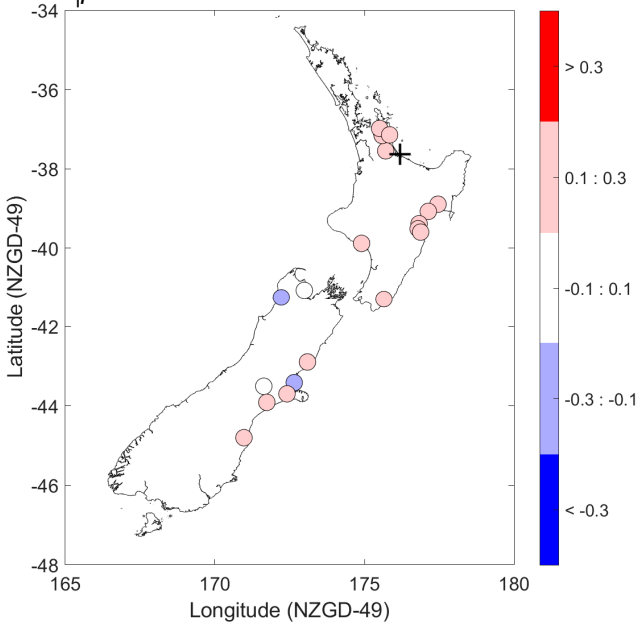
τ: $SS/F_{|F}$ skew-surge precedes river-flow 3 days: Moturiki



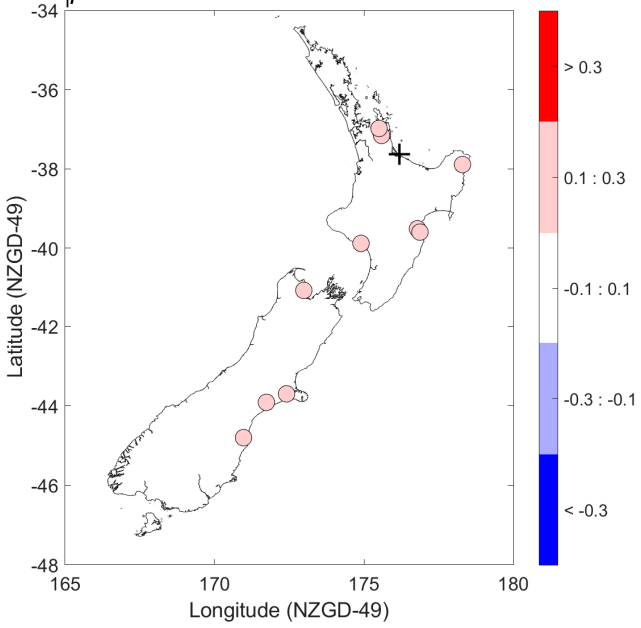
τ: $SS/F_{|F}$ skew-surge precedes river-flow 2 days: Moturiki

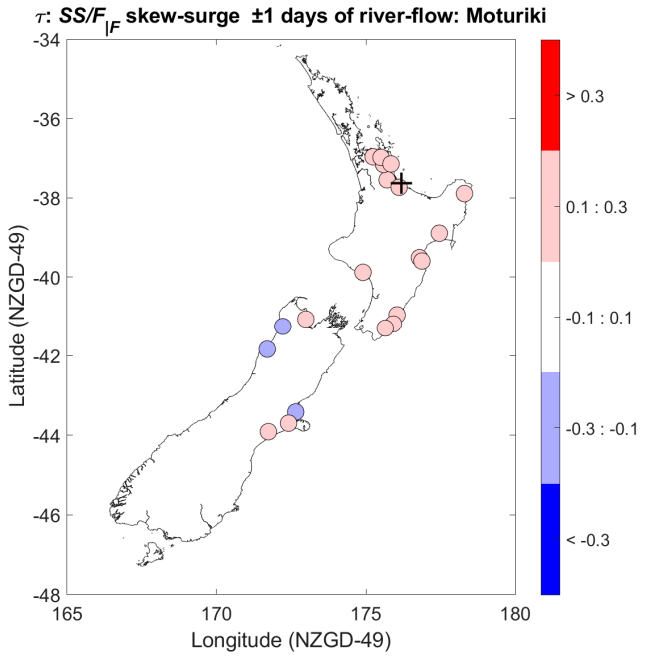


τ: $SS/F_{|F}$ skew-surge precedes river-flow 1 days: Moturiki



τ: $SS/F_{|F}$, peak skew-surge same day as river-flow: Moturiki




τ: SS/F|F skew-surge ±1 days of river-flow: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
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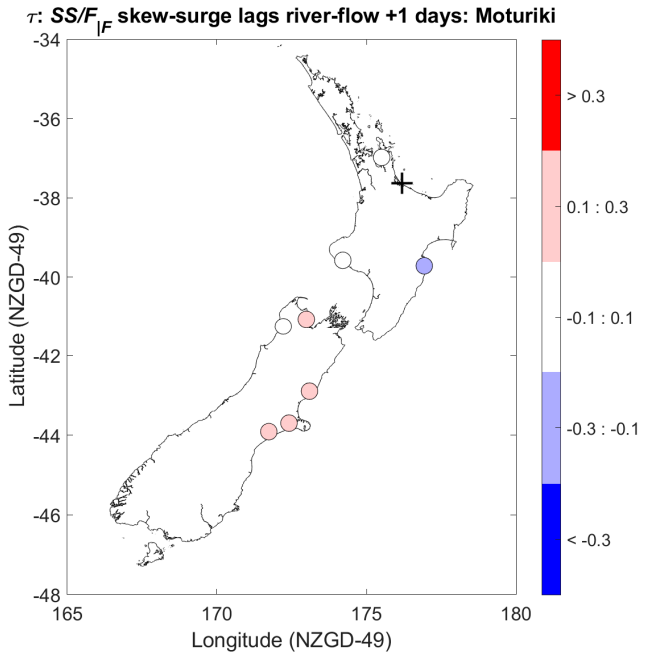
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|F skew-surge lags river-flow +1 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
165
170
175
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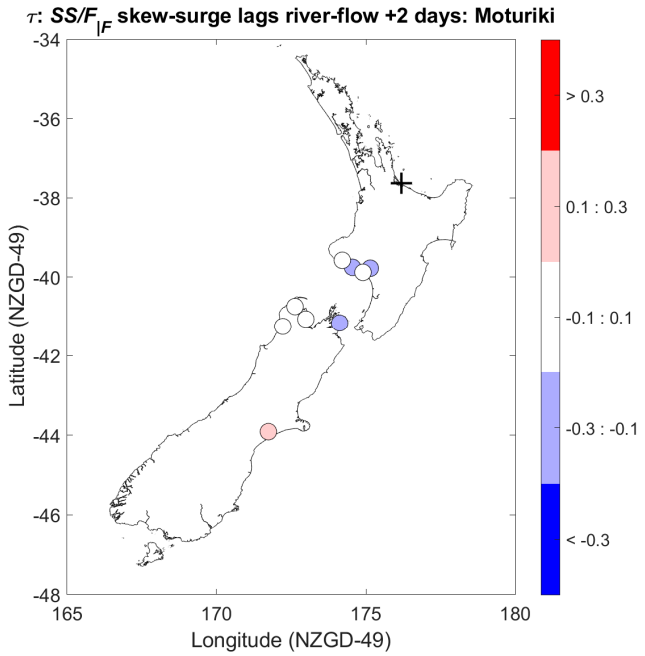
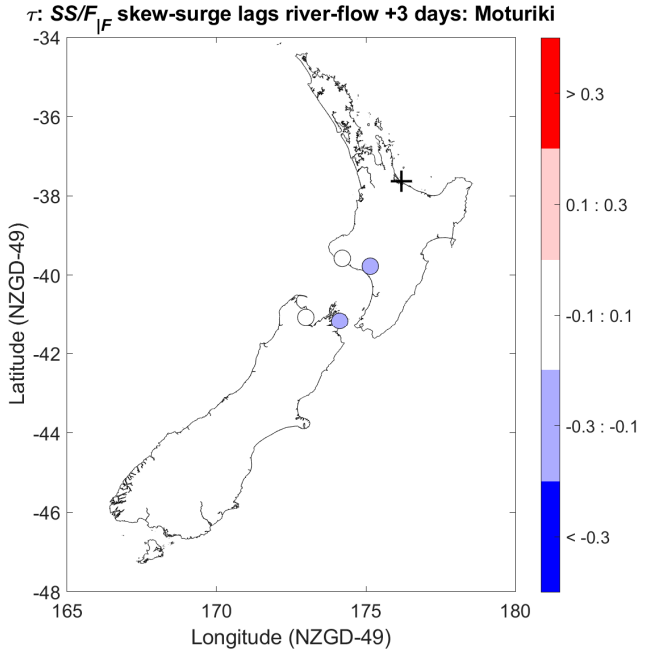
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|F skew-surge lags river-flow +2 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
165
170
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|F skew-surge lags river-flow +3 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
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-48
165
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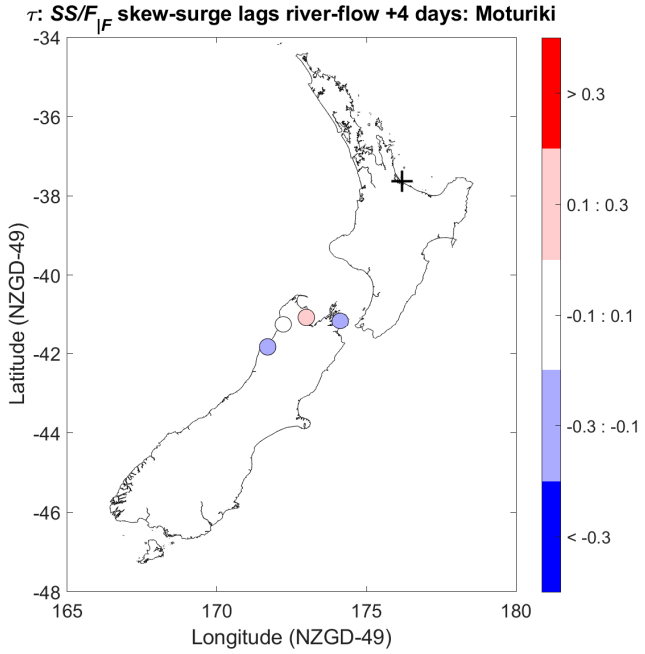
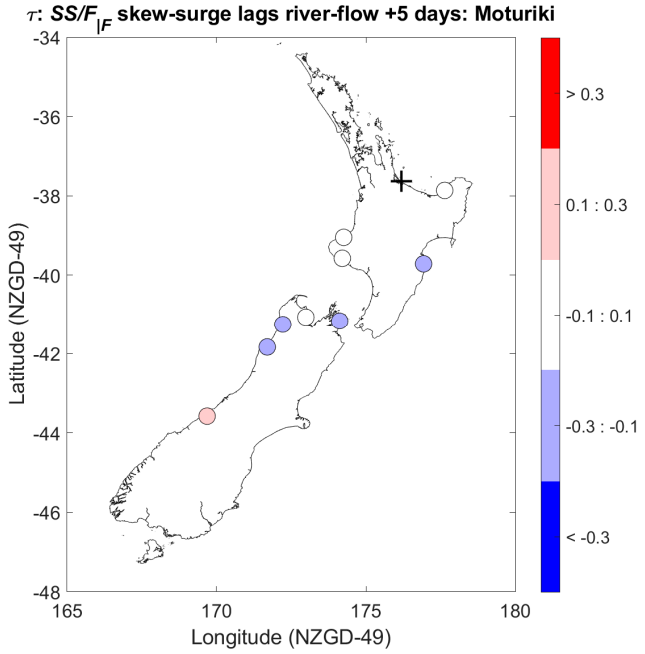
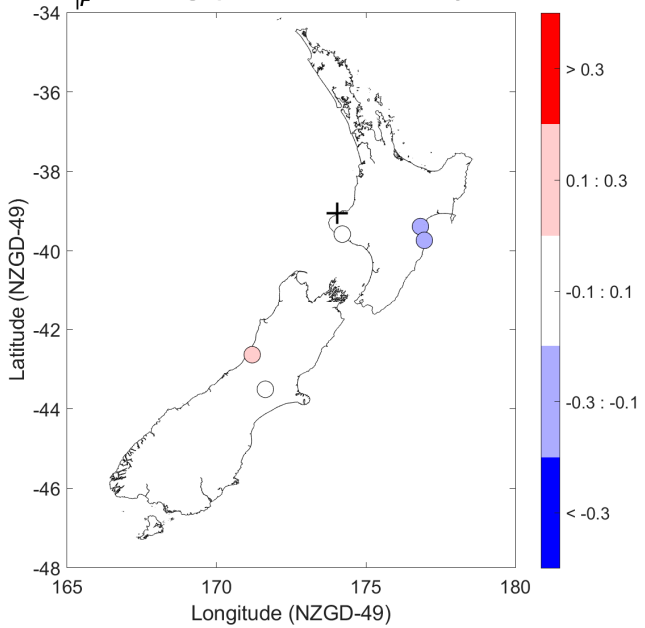
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|F skew-surge lags river-flow +4 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
165
170
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3

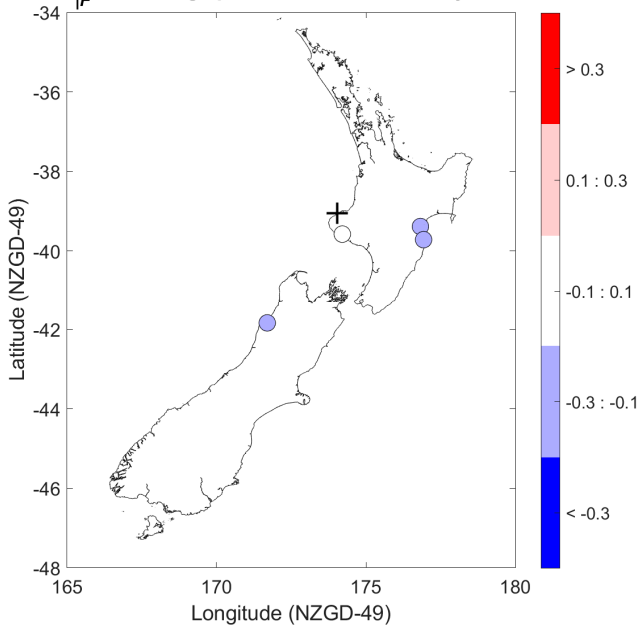

τ: SS/F|F skew-surge lags river-flow +5 days: Moturiki
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
165
170
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3

Taranaki

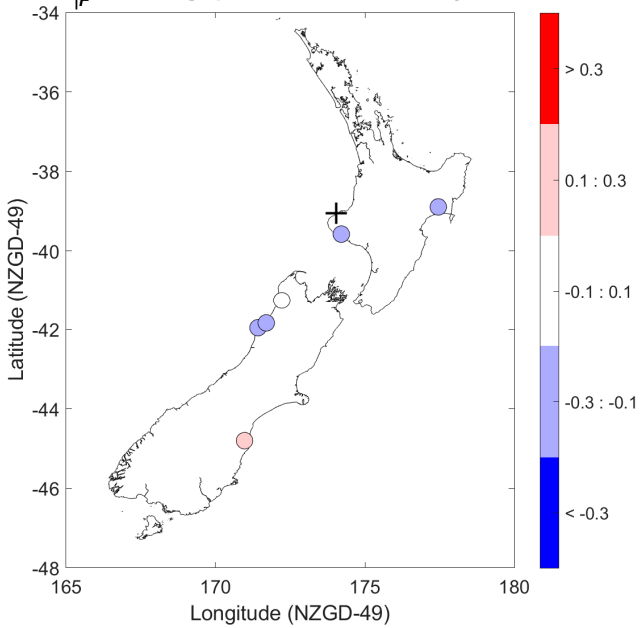
τ: $SS/F_{|F}$ skew-surge precedes river-flow 5 days: Taranaki



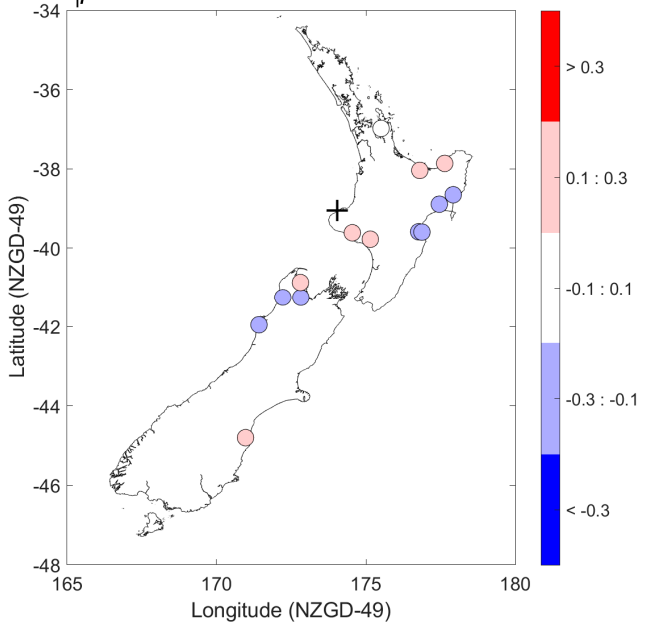
τ: $SS/F_{|F}$ skew-surge precedes river-flow 4 days: Taranaki



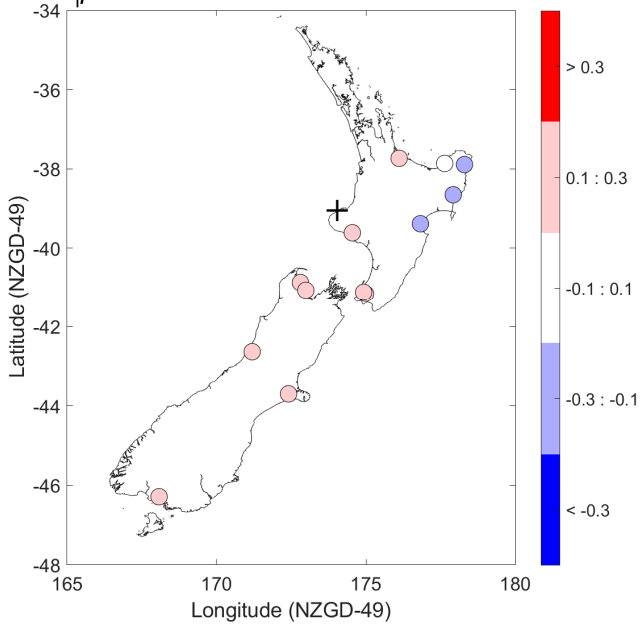
τ: $SS/F_{|F}$ skew-surge precedes river-flow 3 days: Taranaki



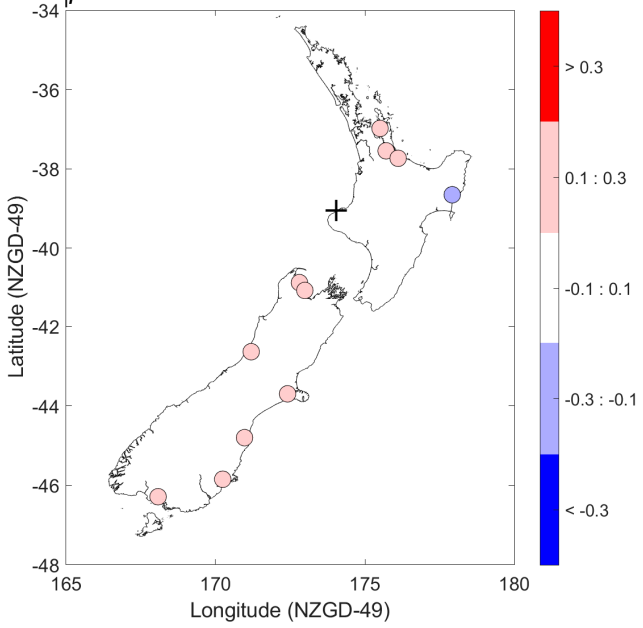
τ: $SS/F_{|F}$ skew-surge precedes river-flow 2 days: Taranaki

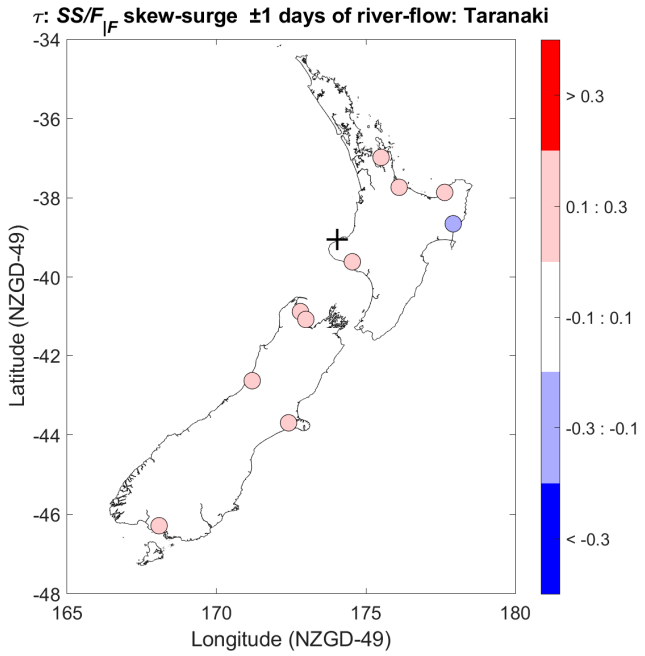


τ: $SS/F_{|F}$ skew-surge precedes river-flow 1 days: Taranaki



τ: $SS/F_{|F}$, peak skew-surge same day as river-flow: Taranaki




τ: SS/F|F skew-surge ±1 days of river-flow: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
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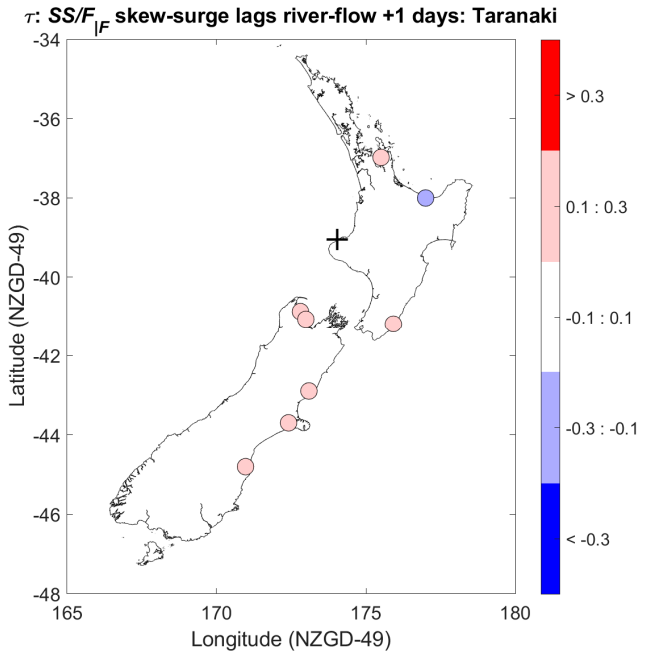
τ: SS/F|F skew-surge lags river-flow +1 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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-36
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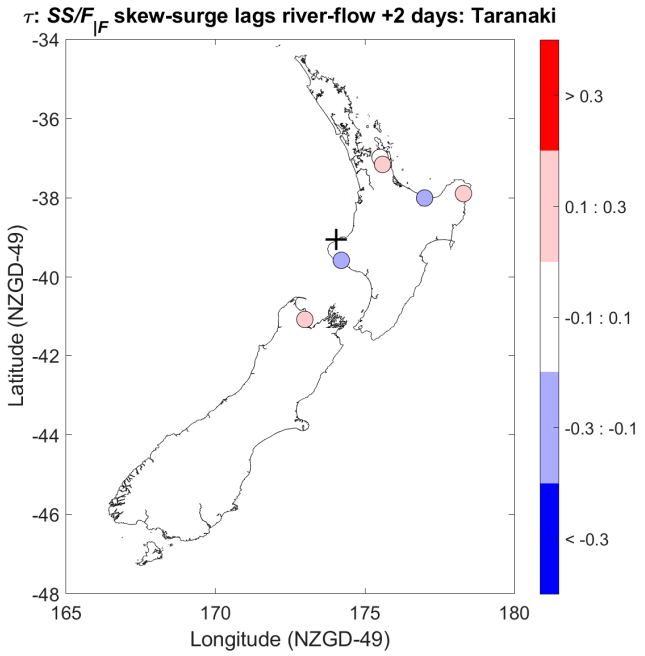
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|F skew-surge lags river-flow +2 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
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-48
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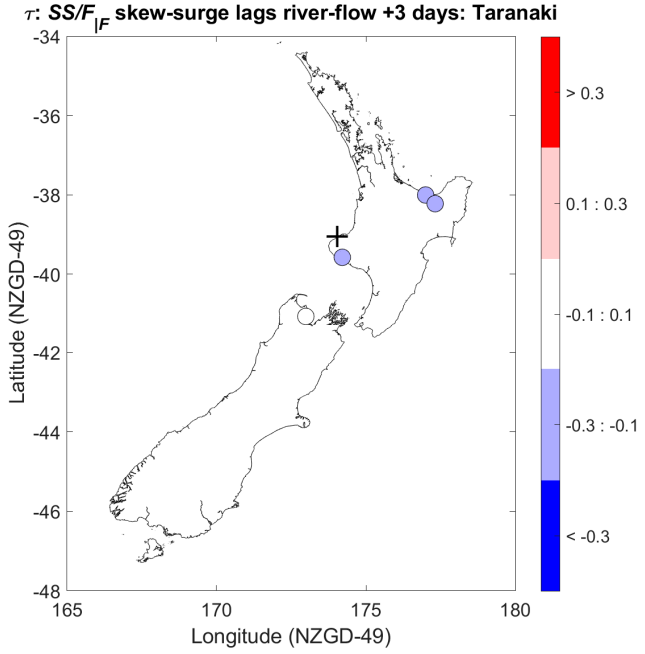
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|F skew-surge lags river-flow +3 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
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-40
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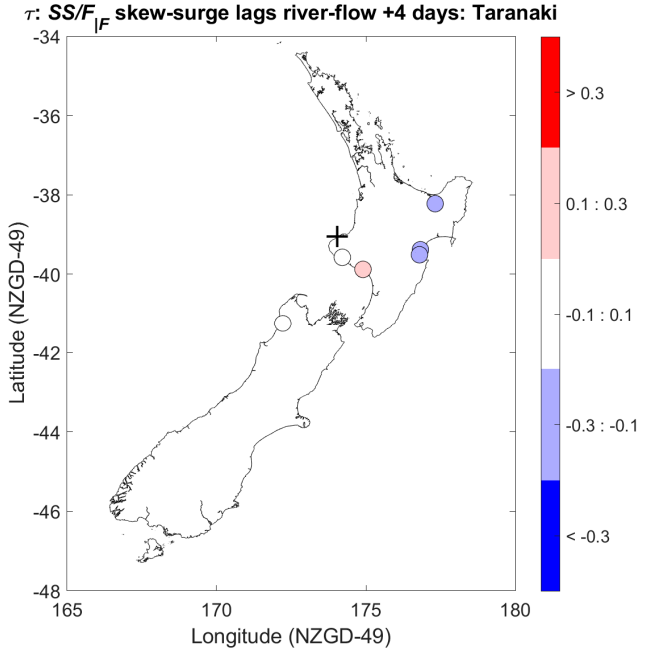
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|F skew-surge lags river-flow +4 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
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-46
-48
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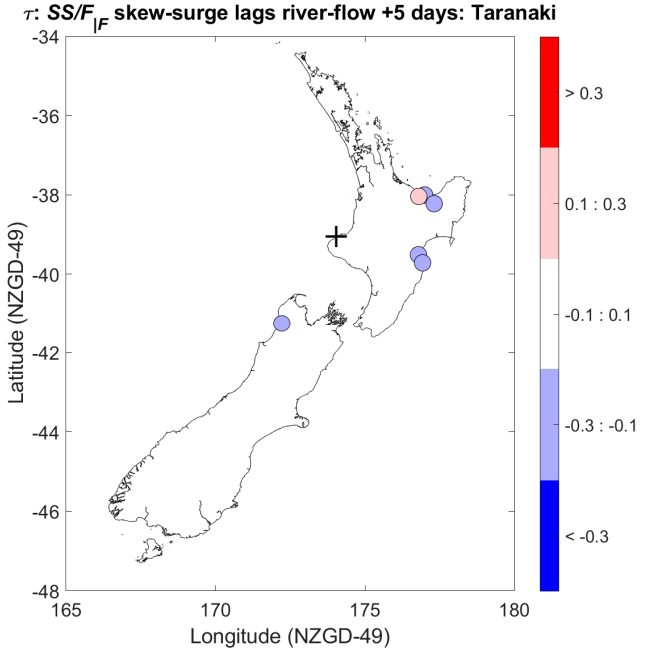
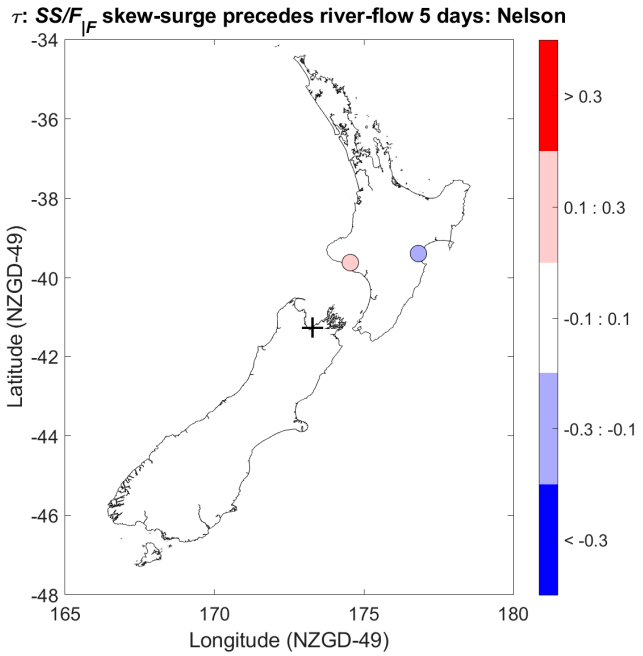
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|F skew-surge lags river-flow +5 days: Taranaki
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
165
170
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3

Nelson


τ: SS/F|F skew-surge precedes river-flow 5 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
165
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175
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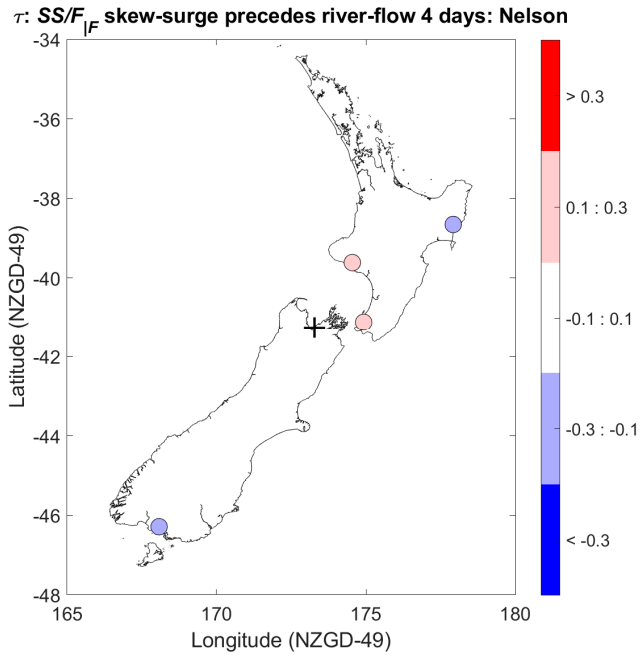
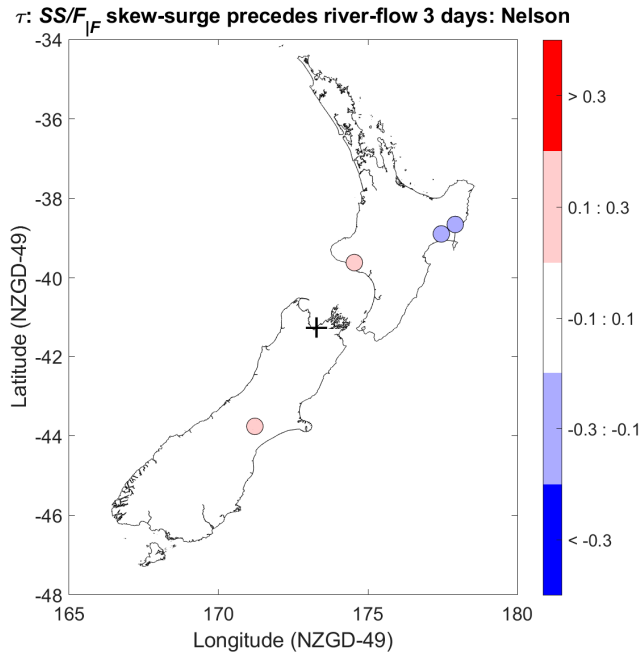
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|F skew-surge precedes river-flow 4 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
-36
-38
-40
-42
-44
-46
-48
165
170
175
180
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3


τ: SS/F|F skew-surge precedes river-flow 3 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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> 0.3
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-0.1 : 0.1
-0.3 : -0.1
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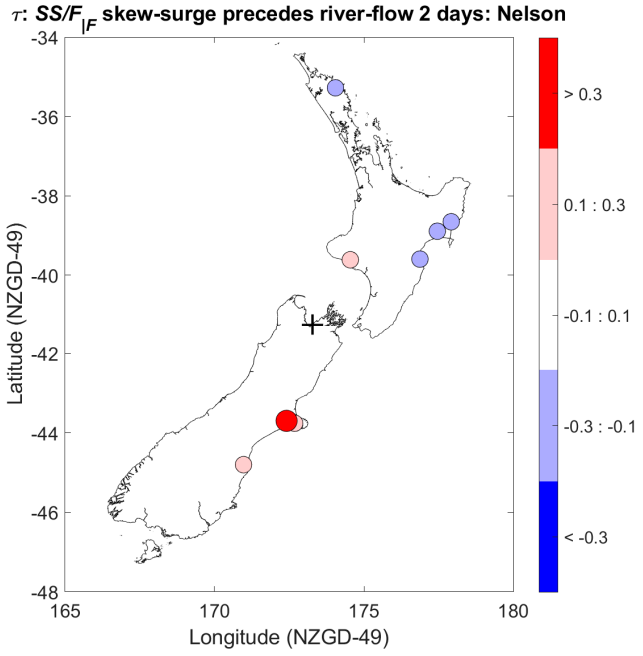
τ: SS/F|F skew-surge precedes river-flow 2 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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> 0.3
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-0.1 : 0.1
-0.3 : -0.1
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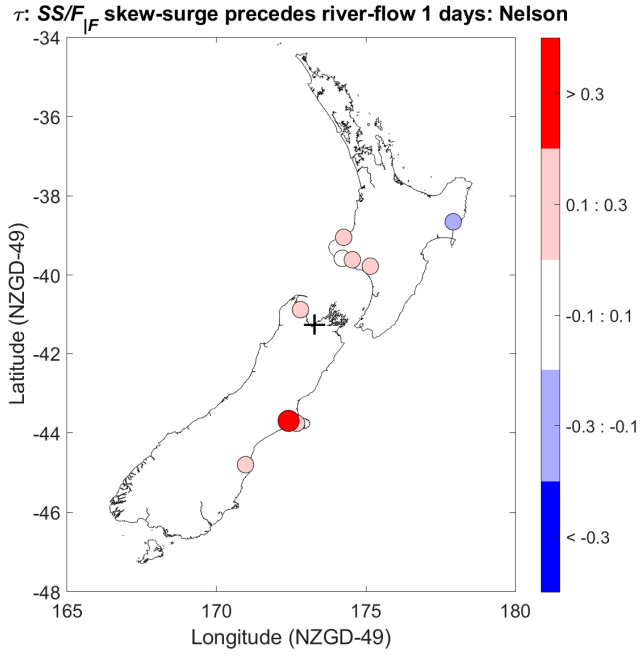
τ: SS/F|F skew-surge precedes river-flow 1 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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> 0.3
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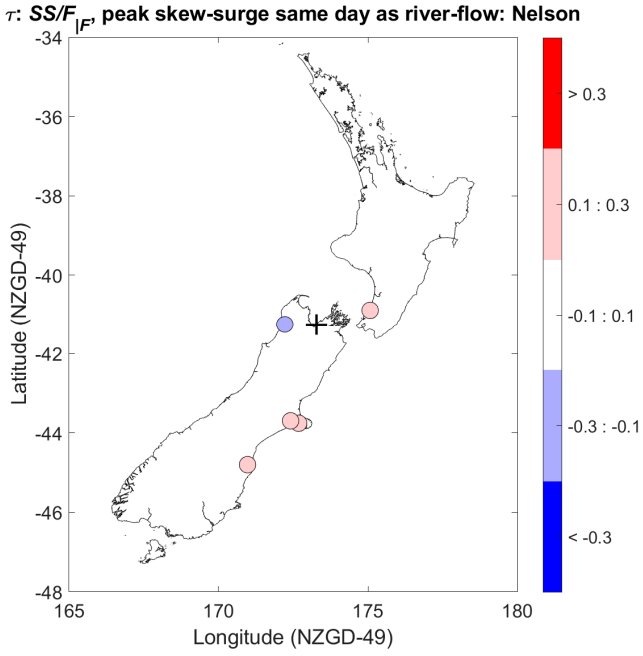
τ: SS/F|F, peak skew-surge same day as river-flow: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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> 0.3
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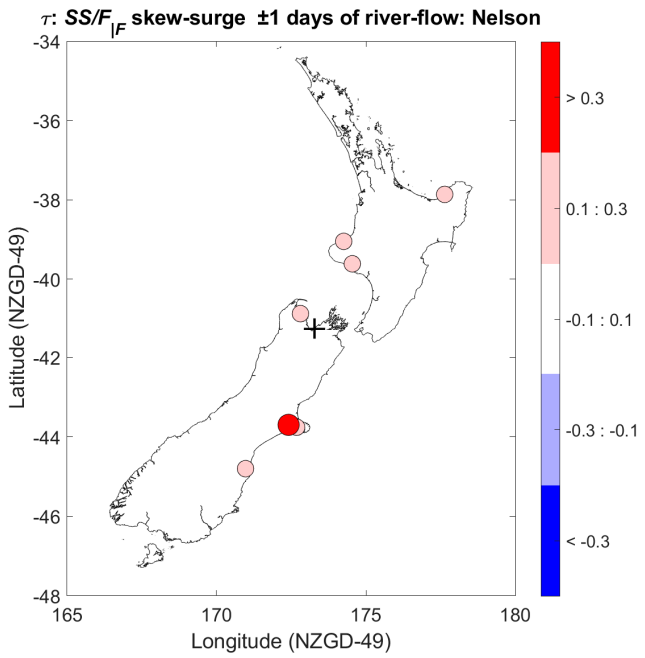
τ: SS/F|F skew-surge ±1 days of river-flow: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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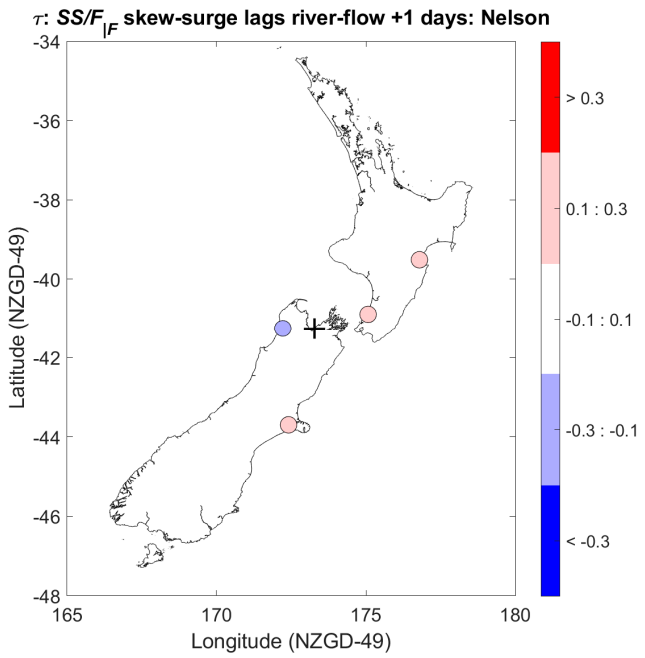
τ: SS/F|F skew-surge lags river-flow +1 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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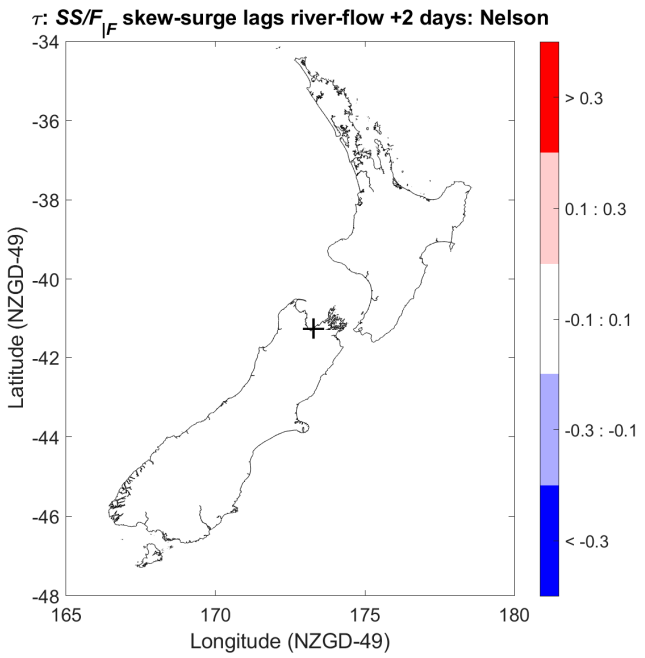
τ: SS/F|F skew-surge lags river-flow +2 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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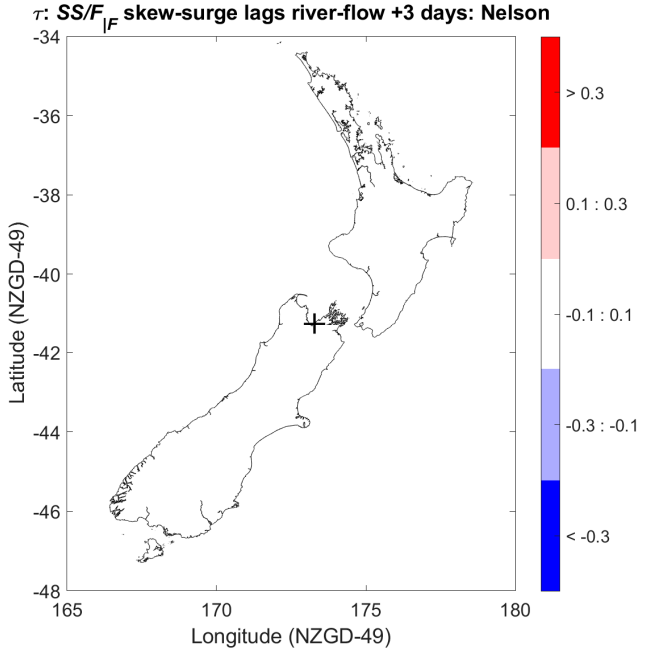
τ: SS/F|F skew-surge lags river-flow +3 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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-0.3 : -0.1
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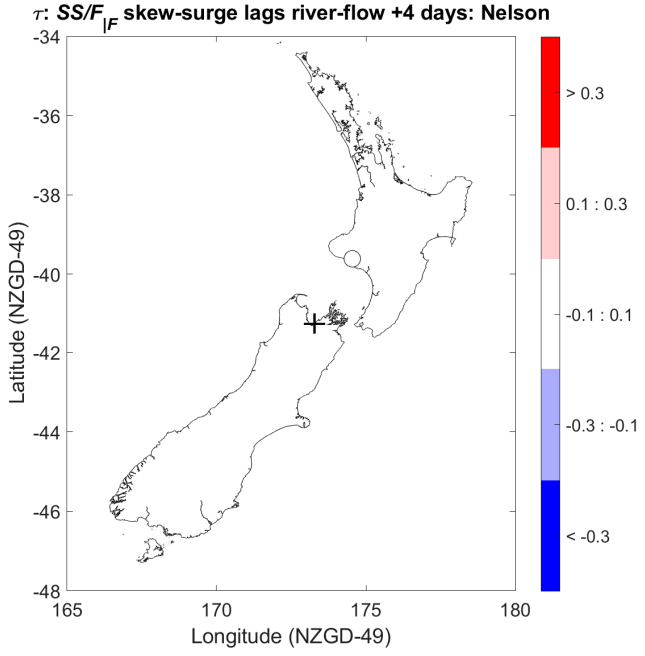
τ: SS/F|F skew-surge lags river-flow +4 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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-0.1 : 0.1
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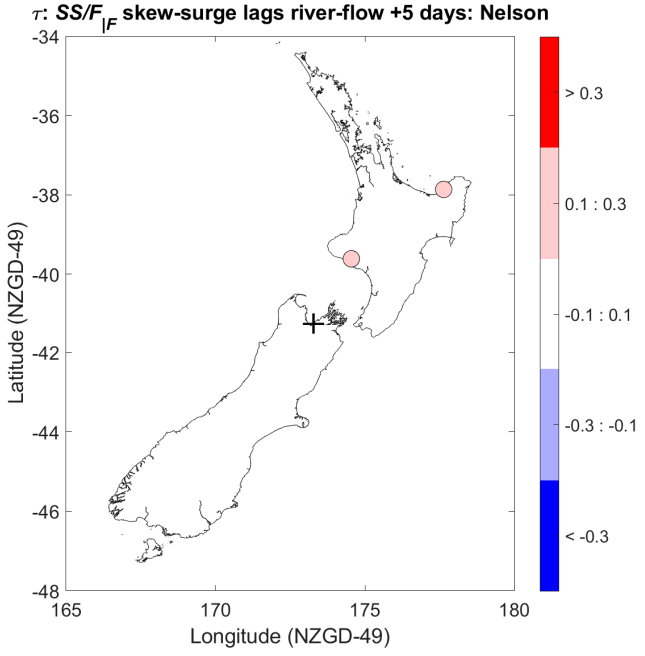
τ: SS/F|F skew-surge lags river-flow +5 days: Nelson
Latitude (NZGD-49)
Longitude (NZGD-49)
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> 0.3
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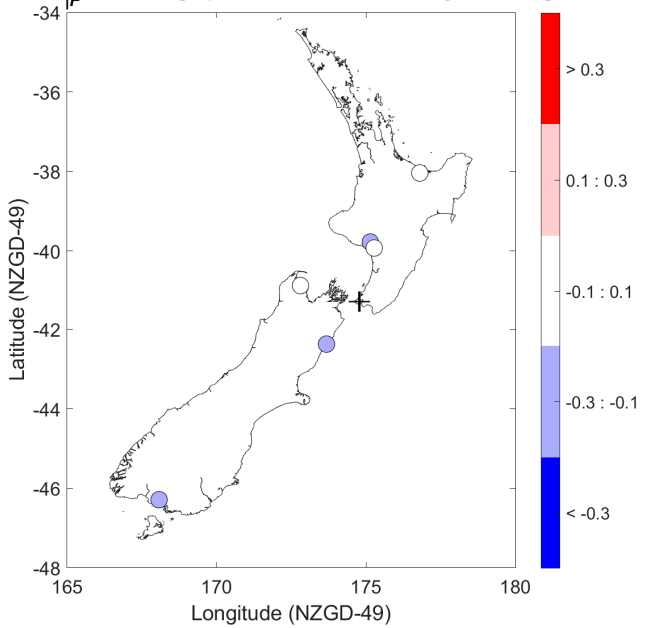
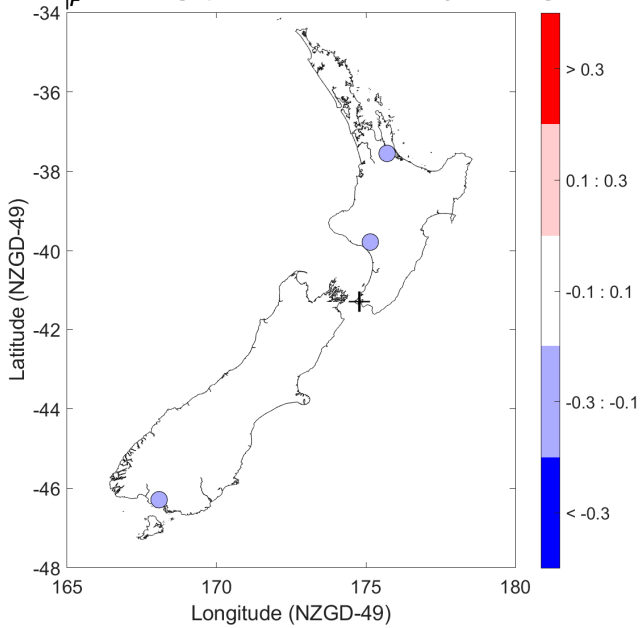
-0.1 : 0.1
-0.3 : -0.1
< -0.3

Wellington

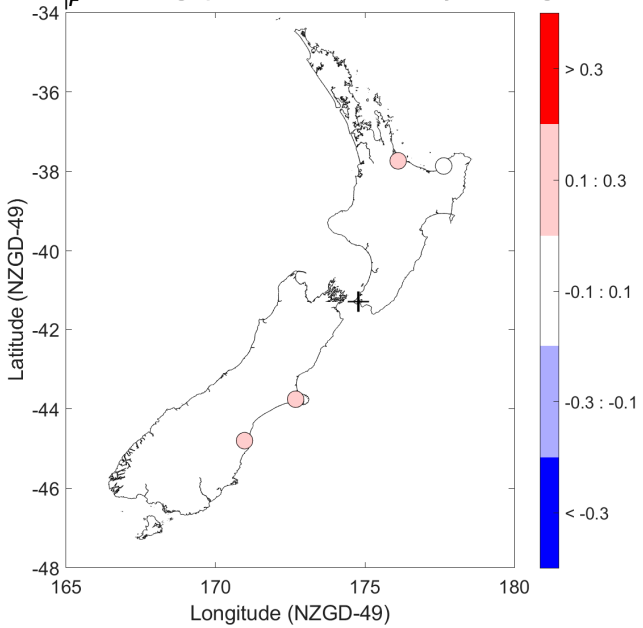
τ: $SS/F_{|F}$ skew-surge precedes river-flow 5 days: Wellington



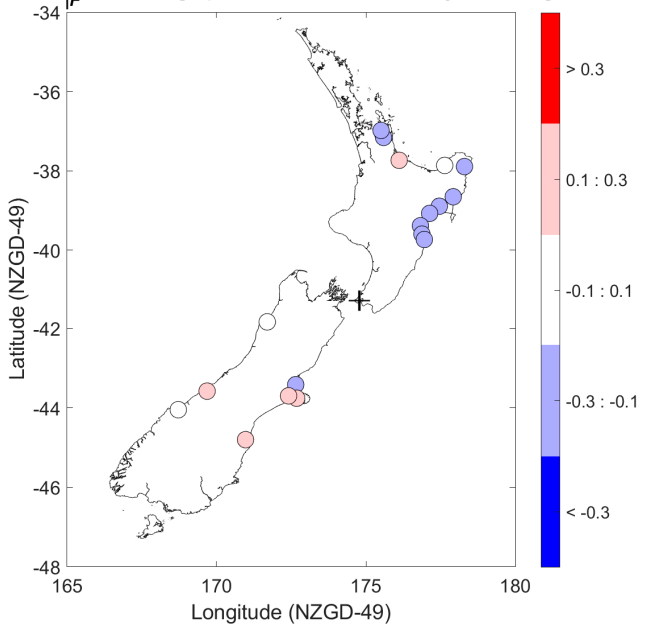
τ: $SS/F_{|F}$ skew-surge precedes river-flow 4 days: Wellington



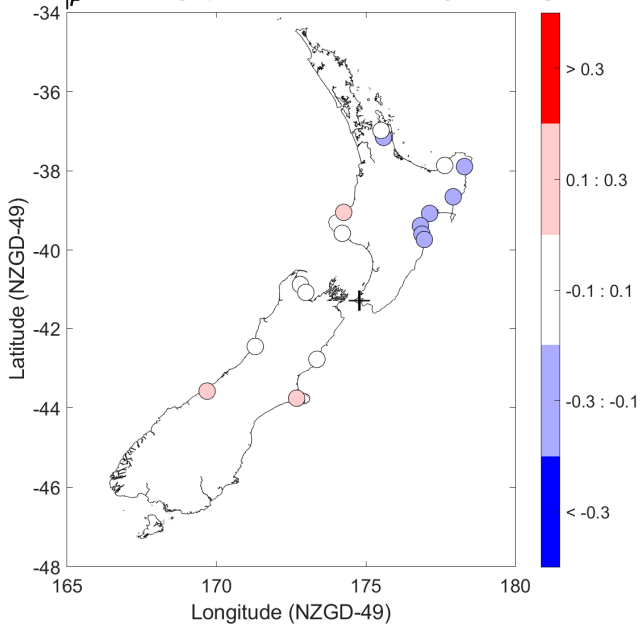
τ: $SS/F_{|F}$ skew-surge precedes river-flow 3 days: Wellington



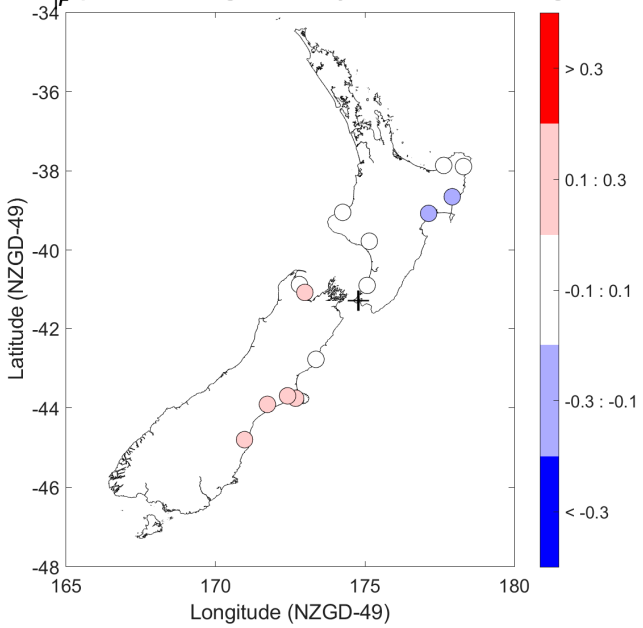
τ: $SS/F_{|F}$ skew-surge precedes river-flow 2 days: Wellington

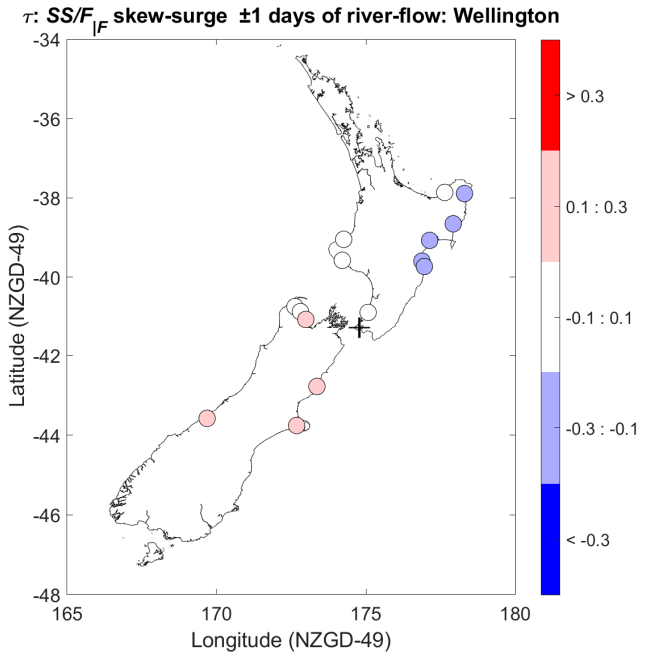


τ: $SS/F_{|F}$ skew-surge precedes river-flow 1 days: Wellington



τ: $SS/F_{|F}$, peak skew-surge same day as river-flow: Wellington




τ: SS/F|F skew-surge ±1 days of river-flow: Wellington
Latitude (NZGD-49)
Longitude (NZGD-49)
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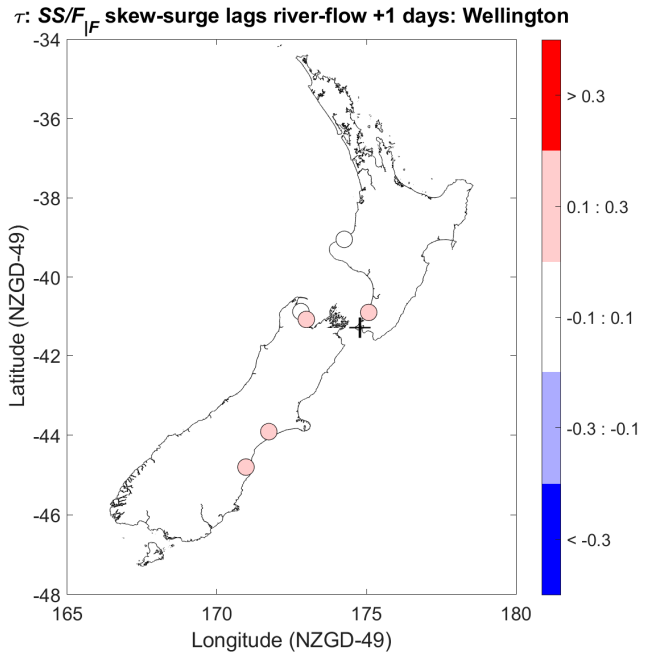
τ: SS/F|F skew-surge lags river-flow +1 days: Wellington
Latitude (NZGD-49)
Longitude (NZGD-49)
-34
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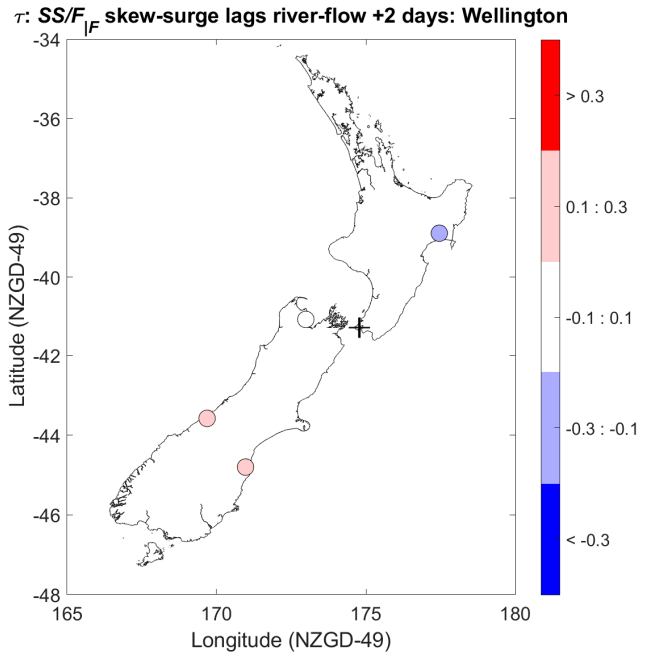
τ: SS/F|F skew-surge lags river-flow +2 days: Wellington
Latitude (NZGD-49)
Longitude (NZGD-49)
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-0.1 : 0.1
-0.3 : -0.1
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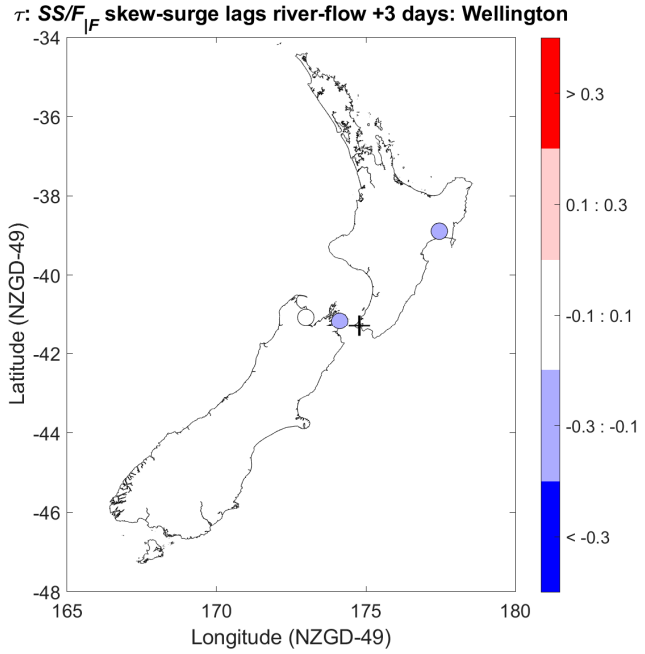
τ: SS/F|F skew-surge lags river-flow +3 days: Wellington
Latitude (NZGD-49)
Longitude (NZGD-49)
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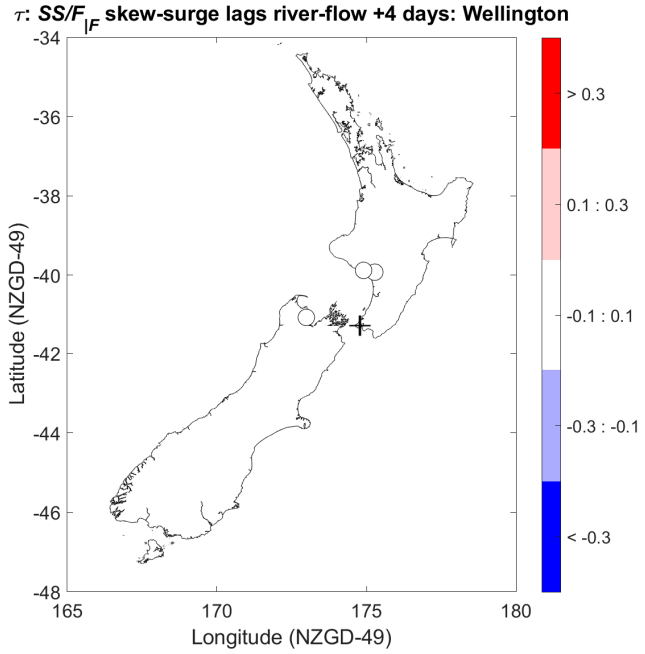
τ: SS/F|F skew-surge lags river-flow +4 days: Wellington
Latitude (NZGD-49)
Longitude (NZGD-49)
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> 0.3
0.1 : 0.3
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-0.3 : -0.1
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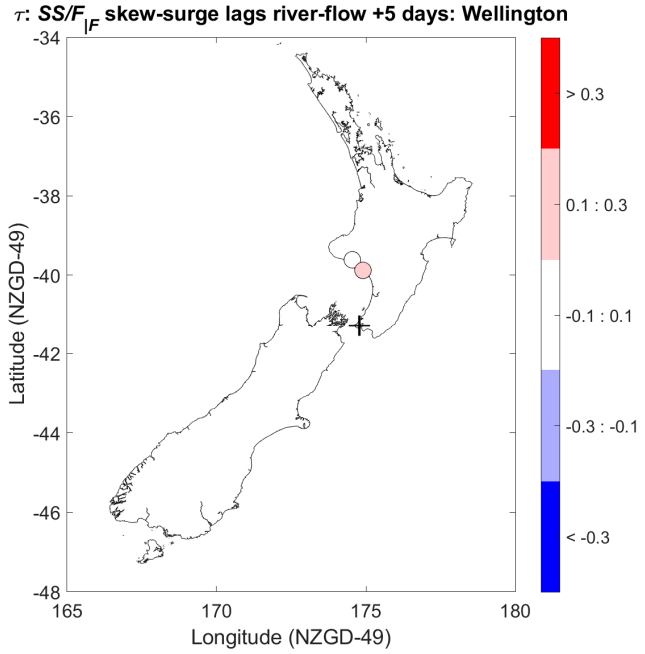
τ: SS/F|F skew-surge lags river-flow +5 days: Wellington
Latitude (NZGD-49)
Longitude (NZGD-49)
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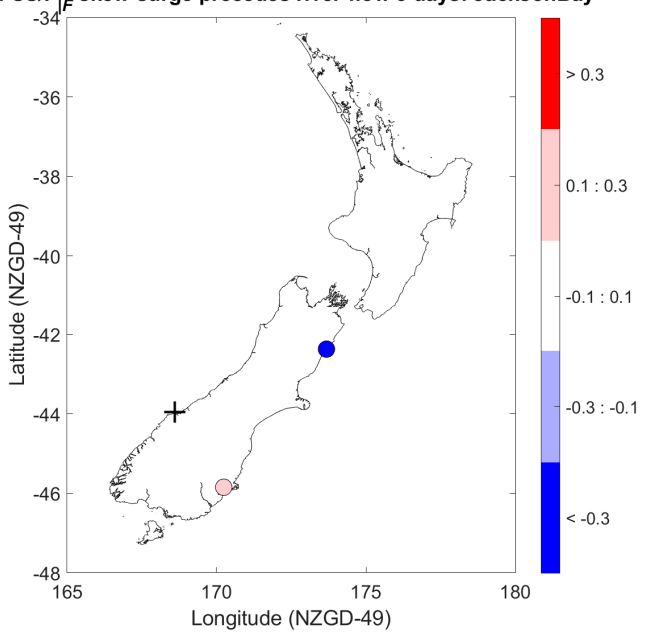
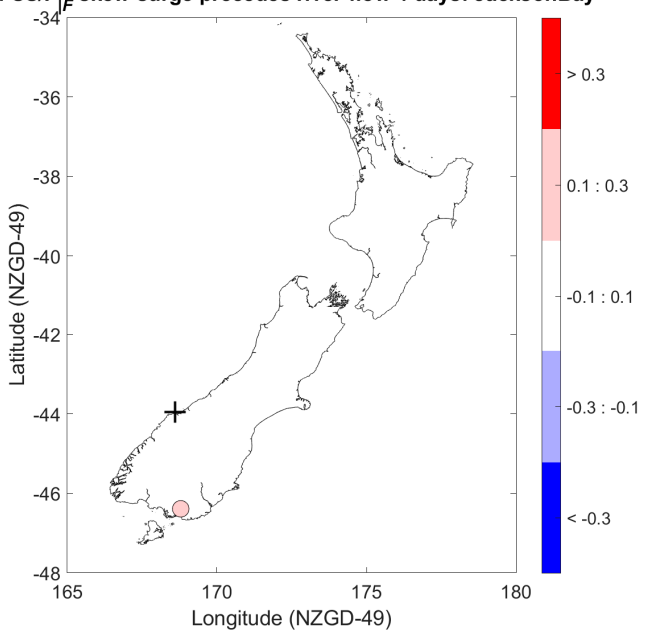
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3

Jackson Bay

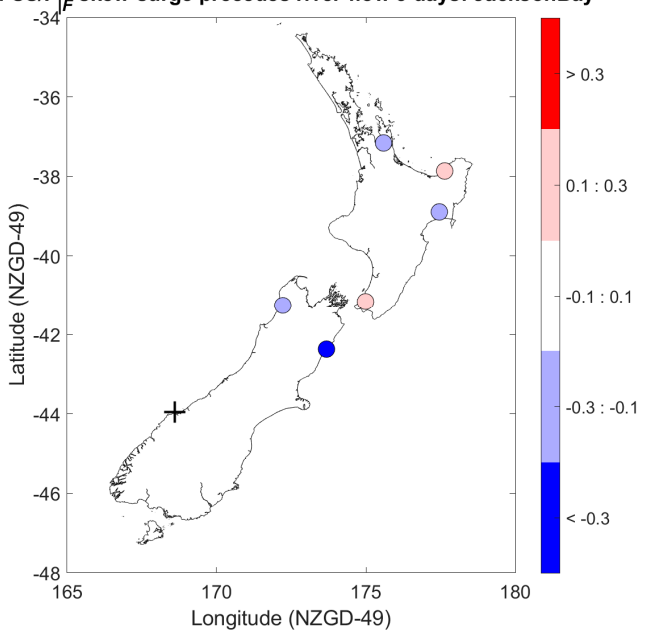
τ: $SS/F_{|F}$ skew-surge precedes river-flow 5 days: JacksonBay



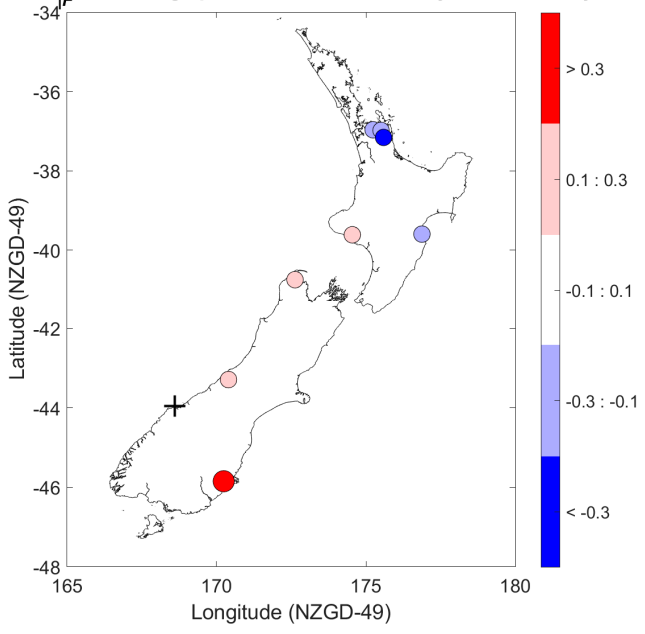
τ: $SS/F_{|F}$ skew-surge precedes river-flow 4 days: JacksonBay



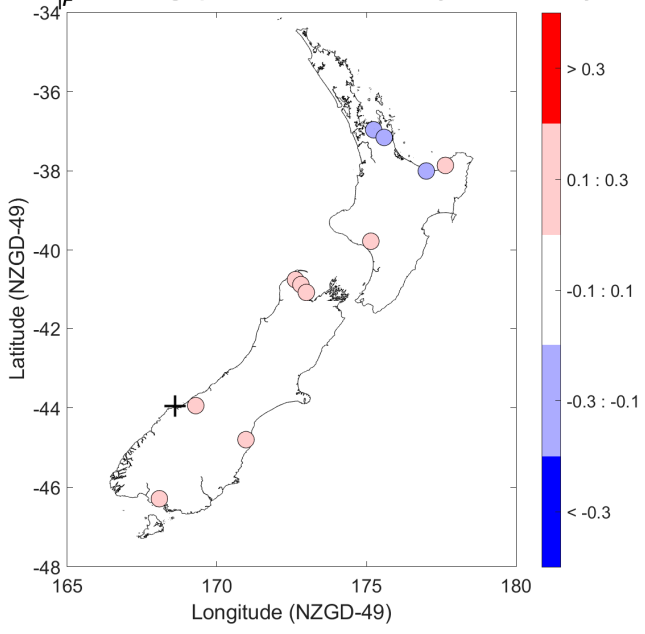
τ: $SS/F_{|F}$ skew-surge precedes river-flow 3 days: JacksonBay



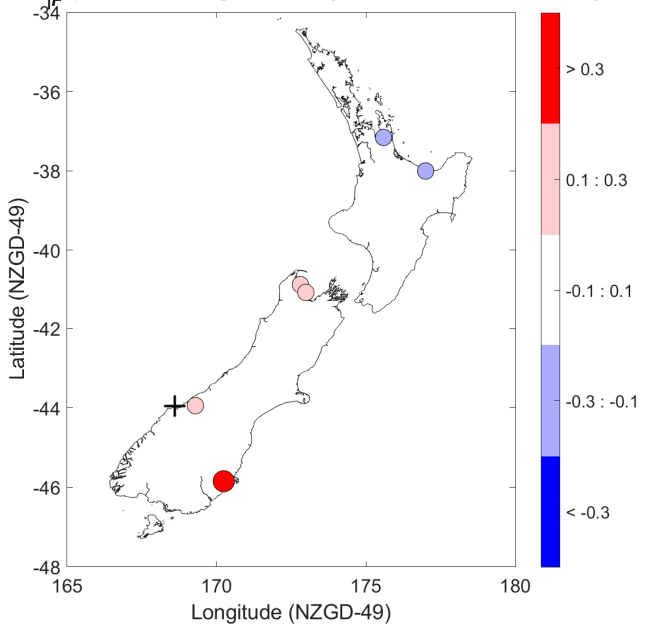
τ: $SS/F_{|F}$ skew-surge precedes river-flow 2 days: JacksonBay

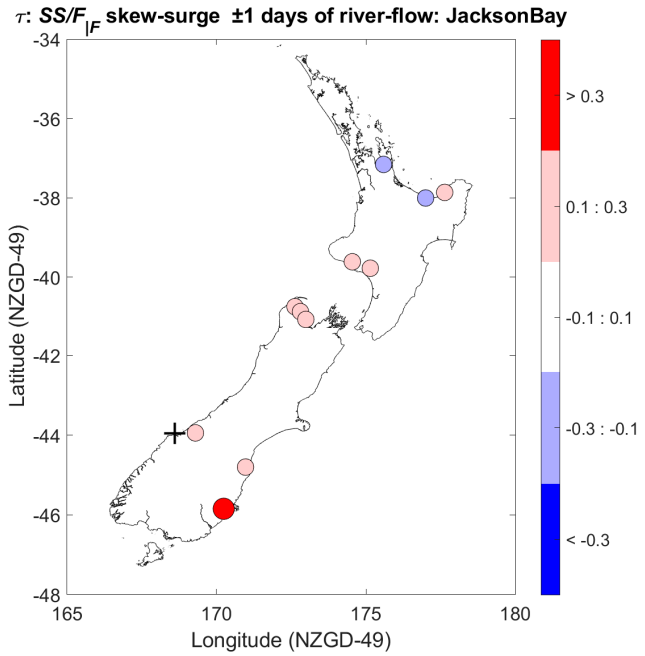


τ: $SS/F_{|F}$ skew-surge precedes river-flow 1 days: JacksonBay



τ: $SS/F_{|F}$, peak skew-surge same day as river-flow: JacksonBay




τ: SS/F|F skew-surge ±1 days of river-flow: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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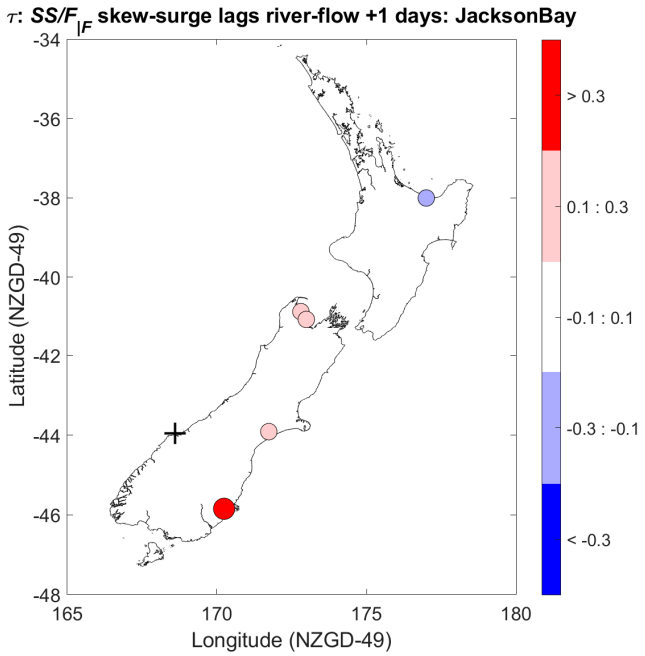
τ: SS/F|F skew-surge lags river-flow +1 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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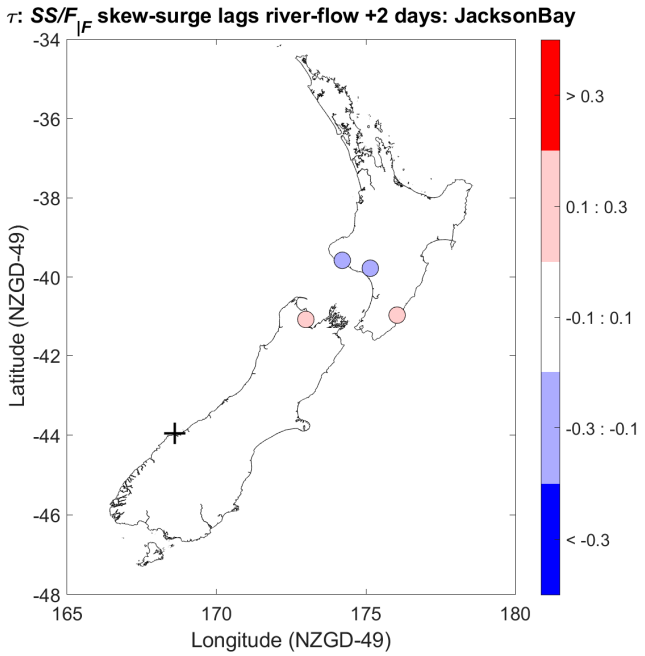
τ: SS/F|F skew-surge lags river-flow +2 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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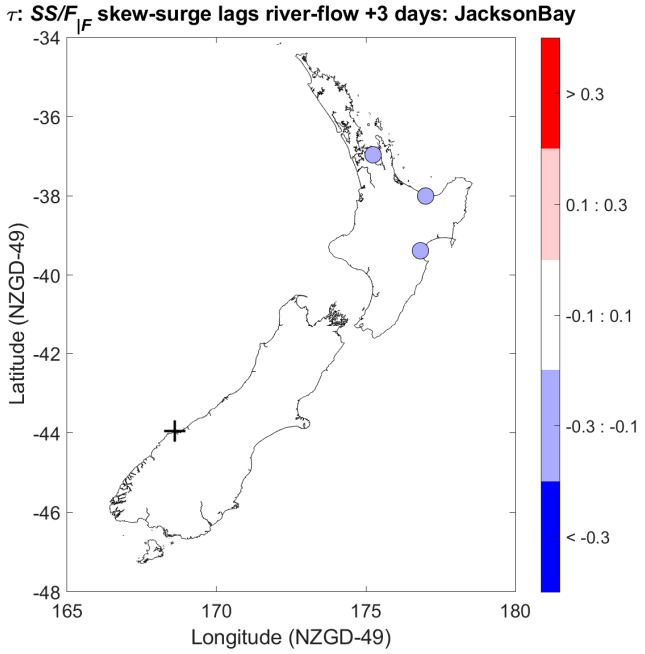
τ: SS/F|F skew-surge lags river-flow +3 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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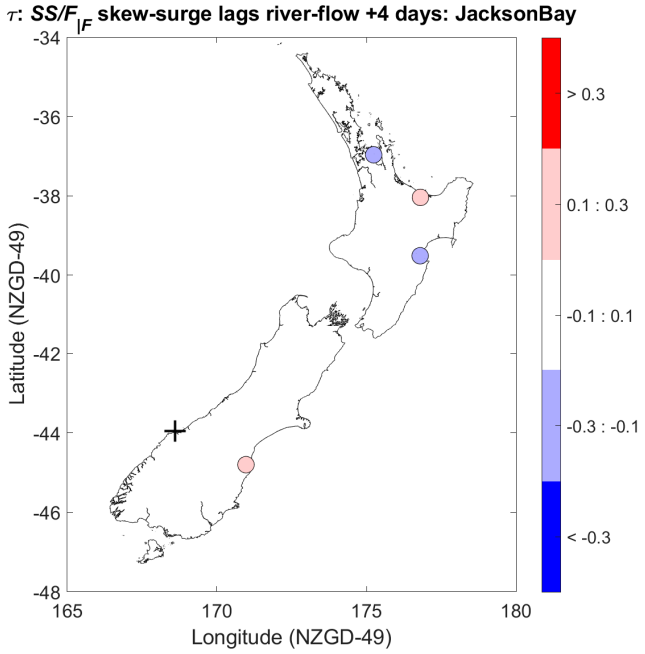
τ: SS/F|F skew-surge lags river-flow +4 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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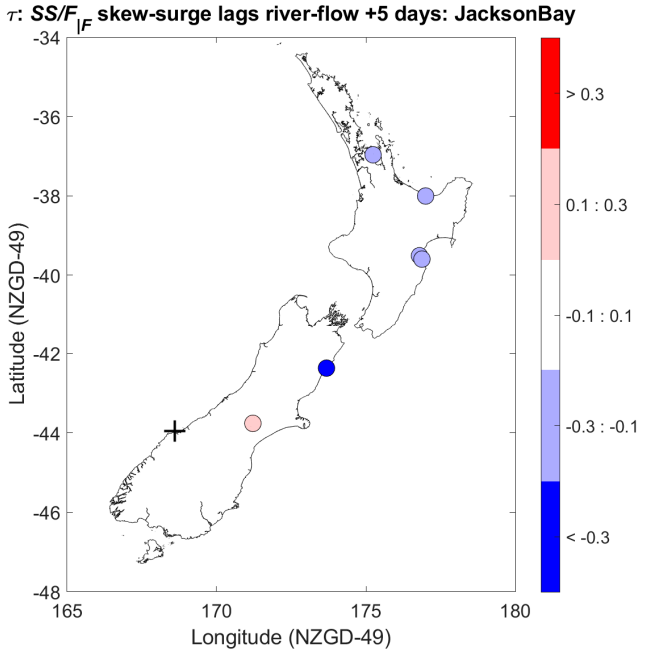
τ: SS/F|F skew-surge lags river-flow +5 days: JacksonBay
Latitude (NZGD-49)
Longitude (NZGD-49)
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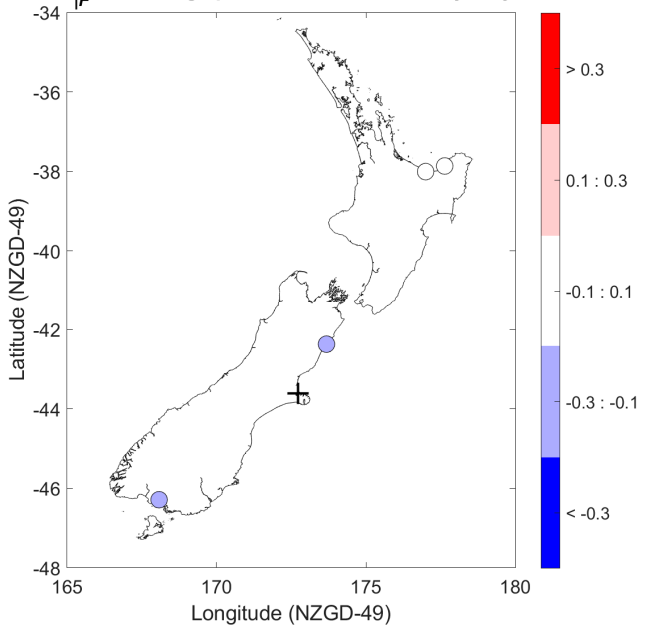
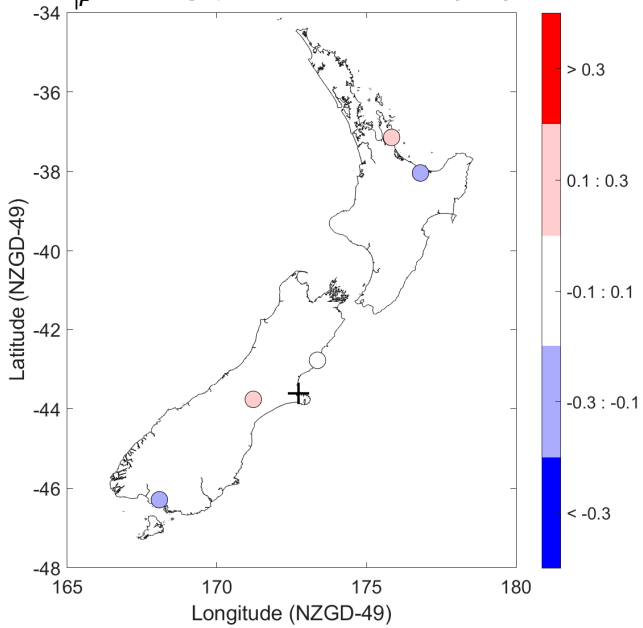
> 0.3
0.1 : 0.3
-0.1 : 0.1
-0.3 : -0.1
< -0.3

Lyttelton

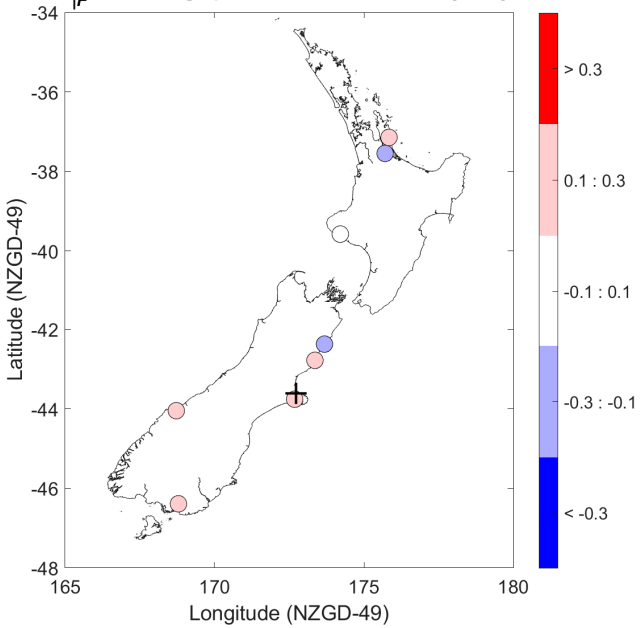
τ: $SS/F_{|F}$ skew-surge precedes river-flow 5 days: Lyttelton



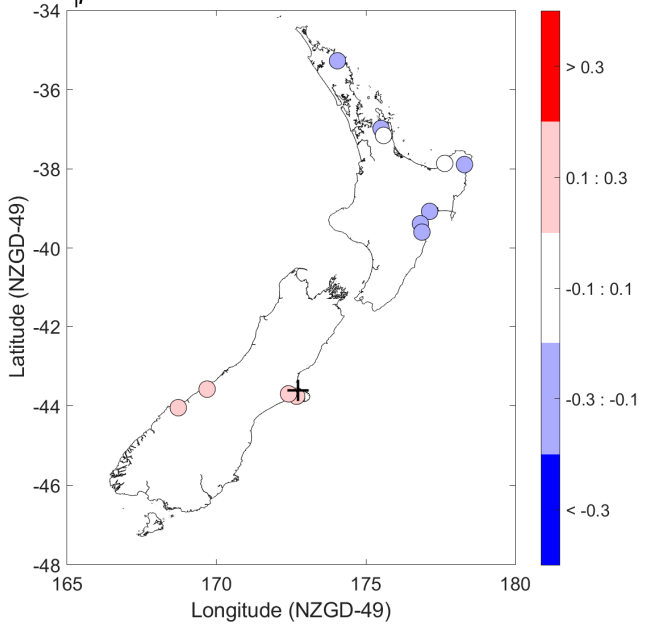
τ: $SS/F_{|F}$ skew-surge precedes river-flow 4 days: Lyttelton



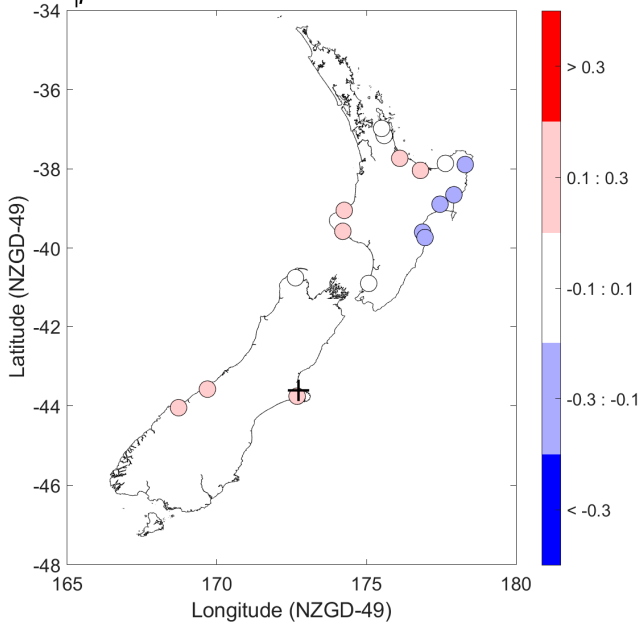
τ: $SS/F_{|F}$ skew-surge precedes river-flow 3 days: Lyttelton



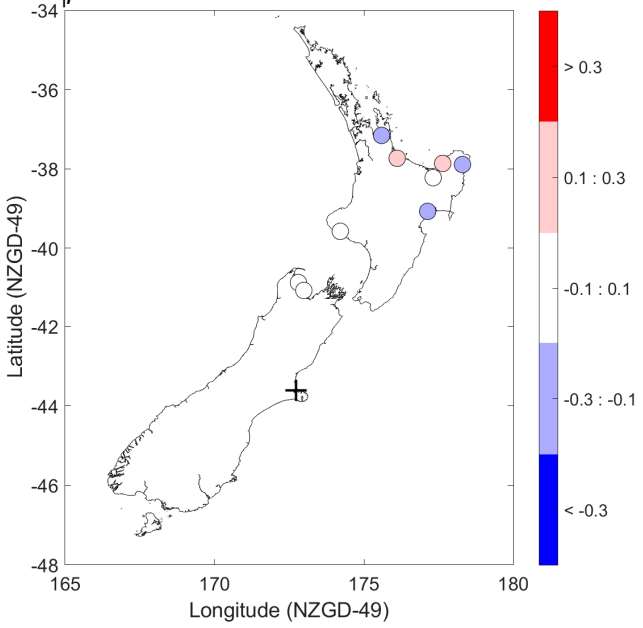
τ: $SS/F_{|F}$ skew-surge precedes river-flow 2 days: Lyttelton

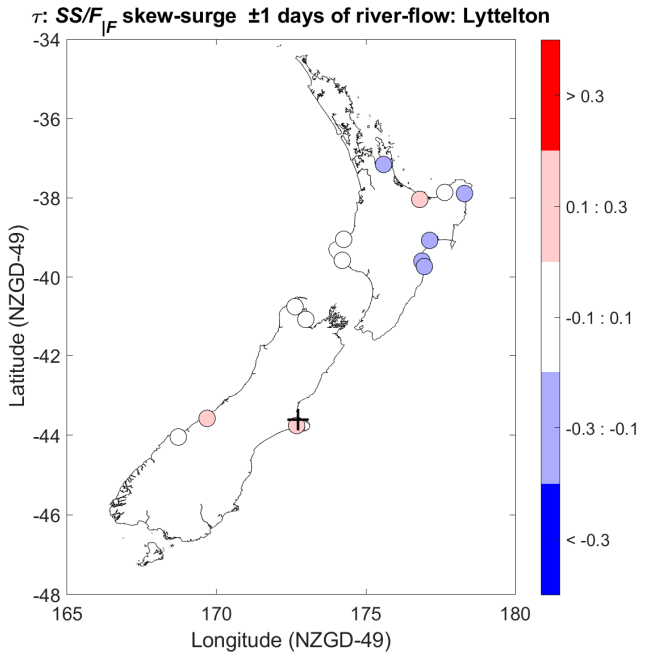


τ: $SS/F_{|F}$ skew-surge precedes river-flow 1 days: Lyttelton



τ: $SS/F_{|F}$, peak skew-surge same day as river-flow: Lyttelton




τ: SS/F|F skew-surge ±1 days of river-flow: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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> 0.3
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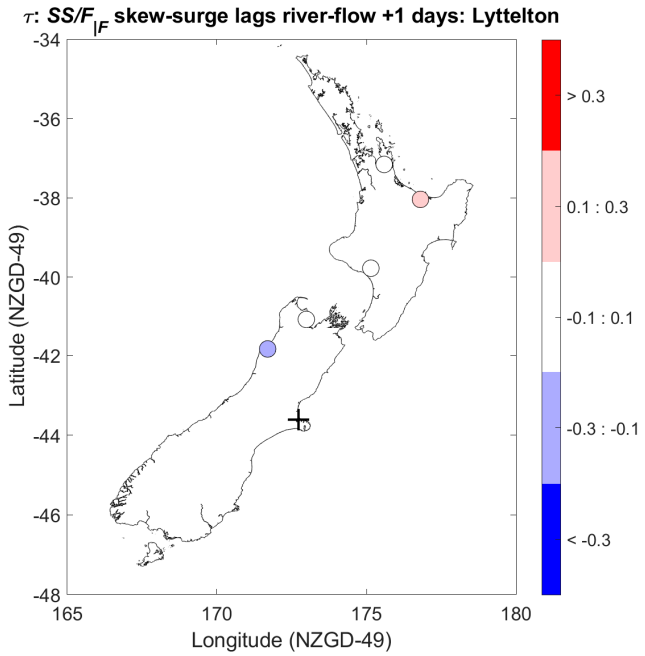
τ: SS/F|F skew-surge lags river-flow +1 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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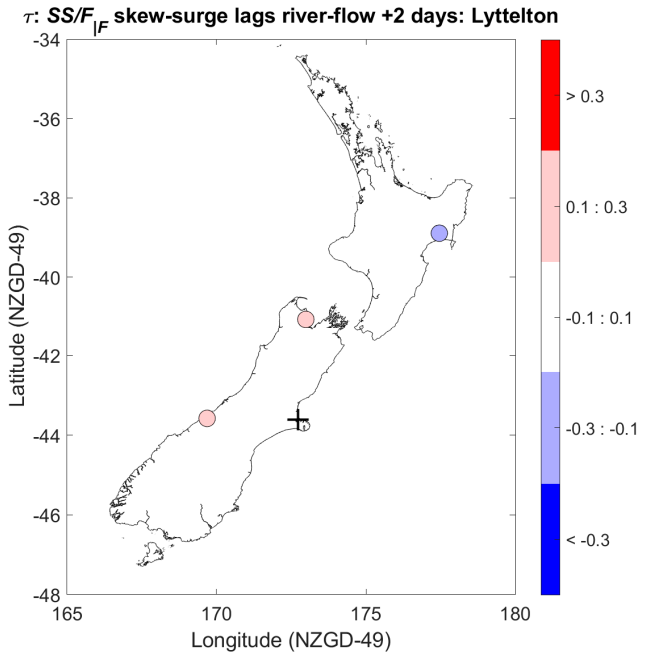
τ: SS/F|F skew-surge lags river-flow +2 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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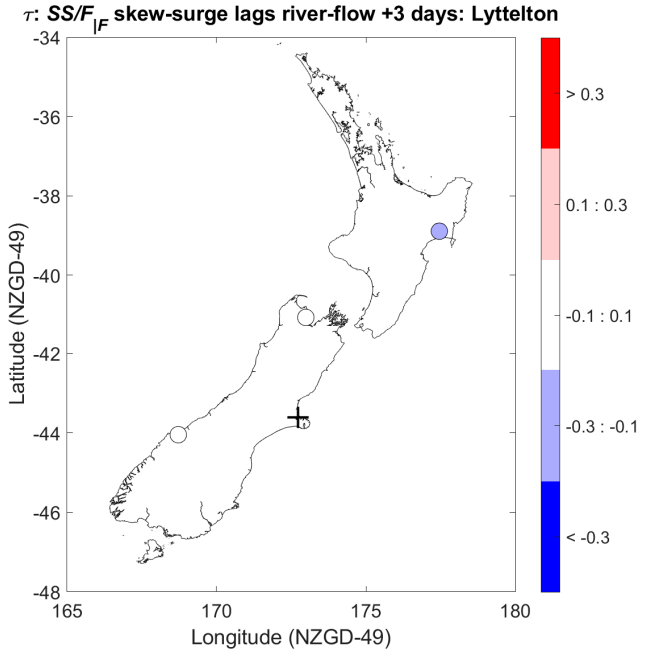
τ: SS/F|F skew-surge lags river-flow +3 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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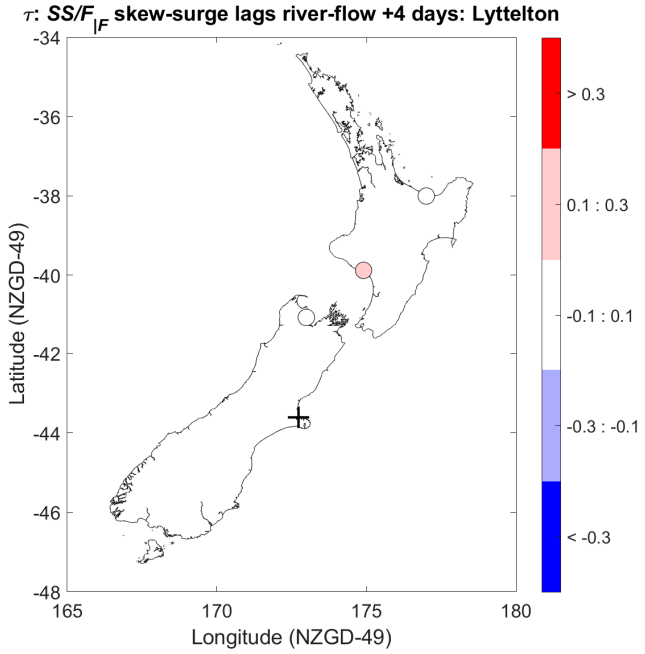
τ: SS/F|F skew-surge lags river-flow +4 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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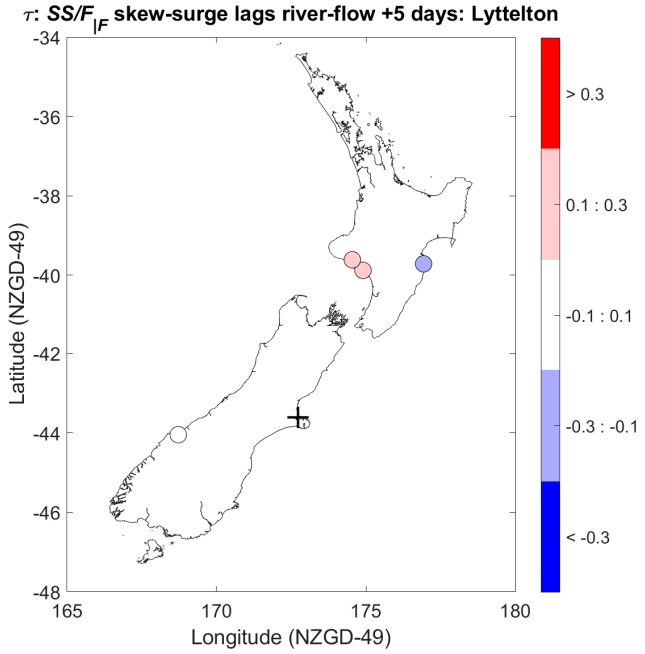
τ: SS/F|F skew-surge lags river-flow +5 days: Lyttelton
Latitude (NZGD-49)
Longitude (NZGD-49)
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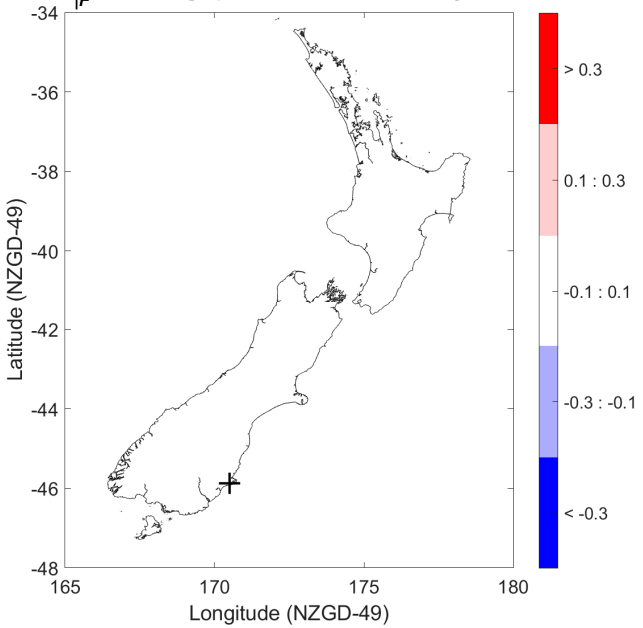
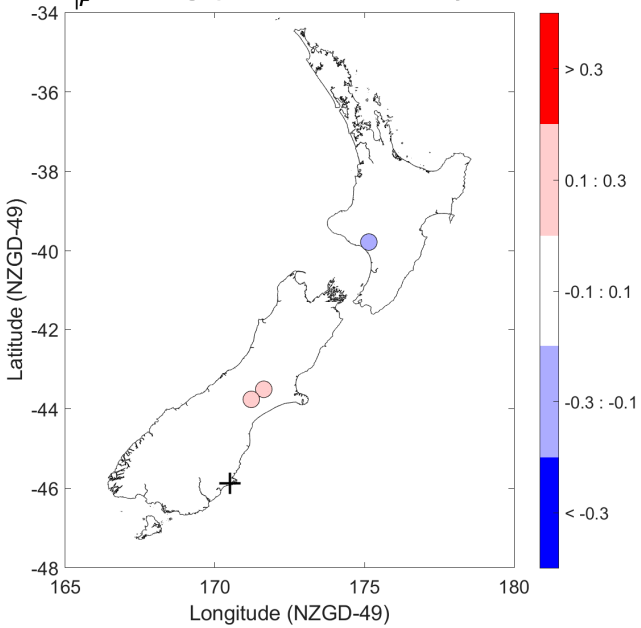
-0.3 : -0.1
< -0.3

Dunedin

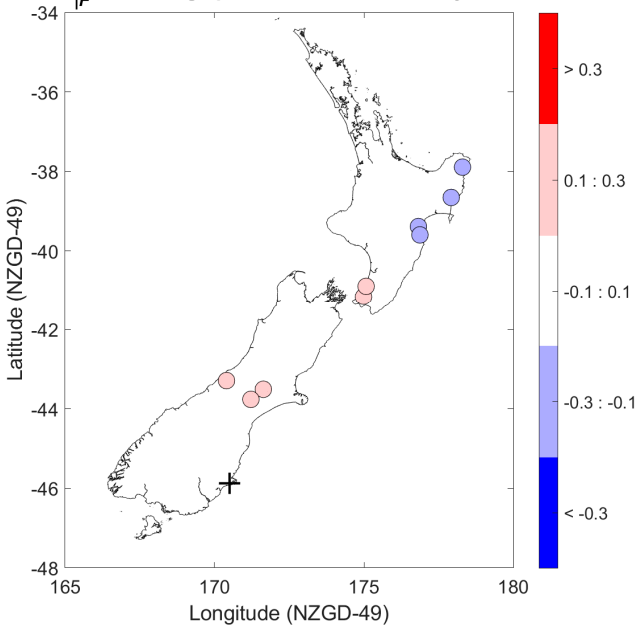
τ: $SS/F_{|F}$ skew-surge precedes river-flow 5 days: Dunedin



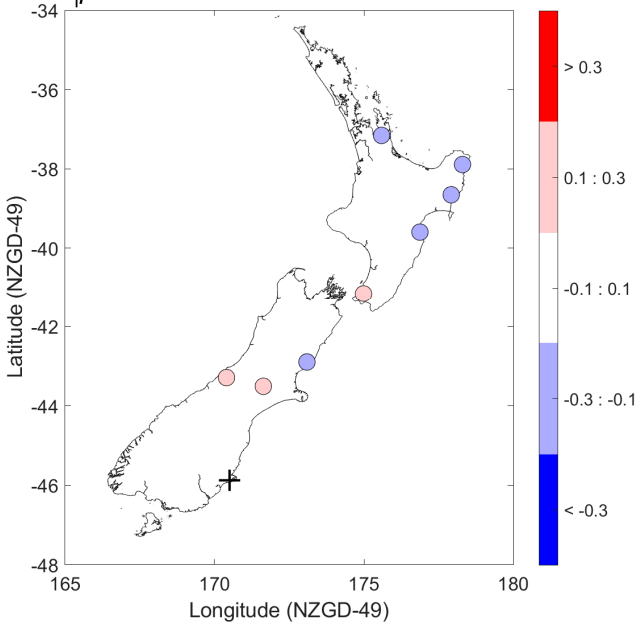
τ: $SS/F_{|F}$ skew-surge precedes river-flow 4 days: Dunedin



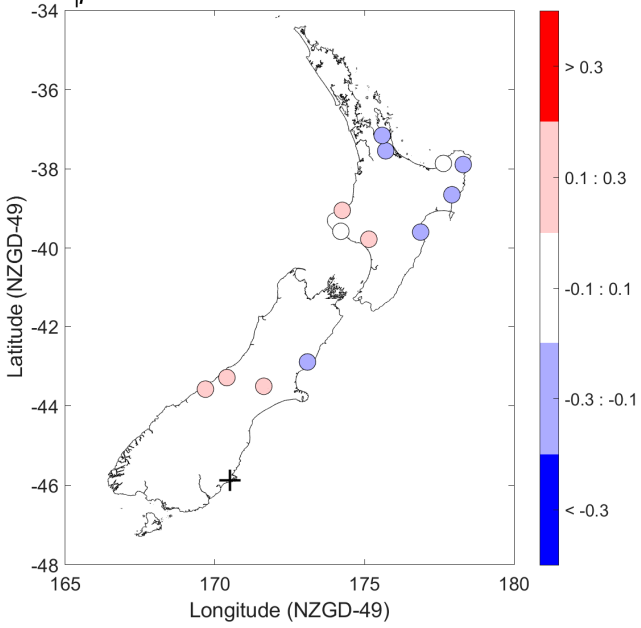
τ: $SS/F_{|F}$ skew-surge precedes river-flow 3 days: Dunedin



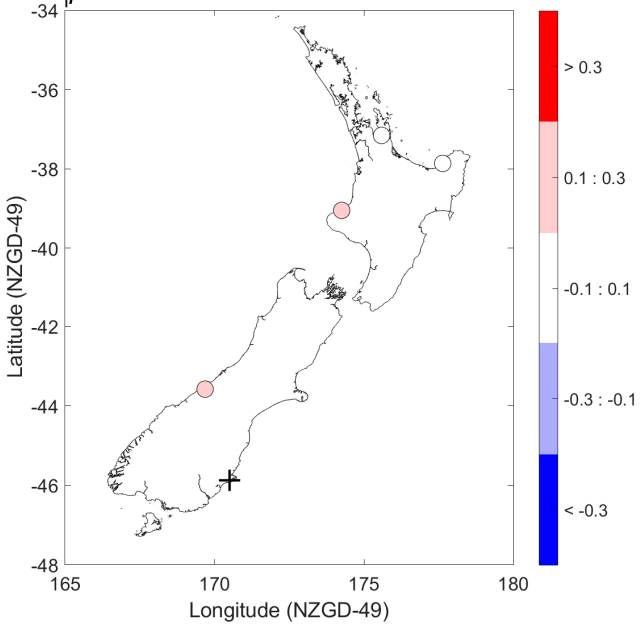
τ: $SS/F_{|F}$ skew-surge precedes river-flow 2 days: Dunedin

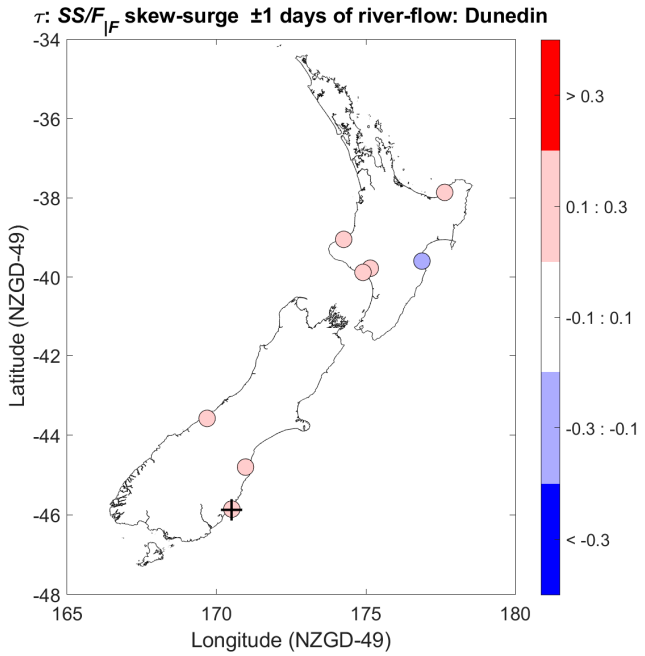


τ: $SS/F_{|F}$ skew-surge precedes river-flow 1 days: Dunedin



τ: $SS/F_{|F}$, peak skew-surge same day as river-flow: Dunedin




τ: SS/F|F skew-surge ±1 days of river-flow: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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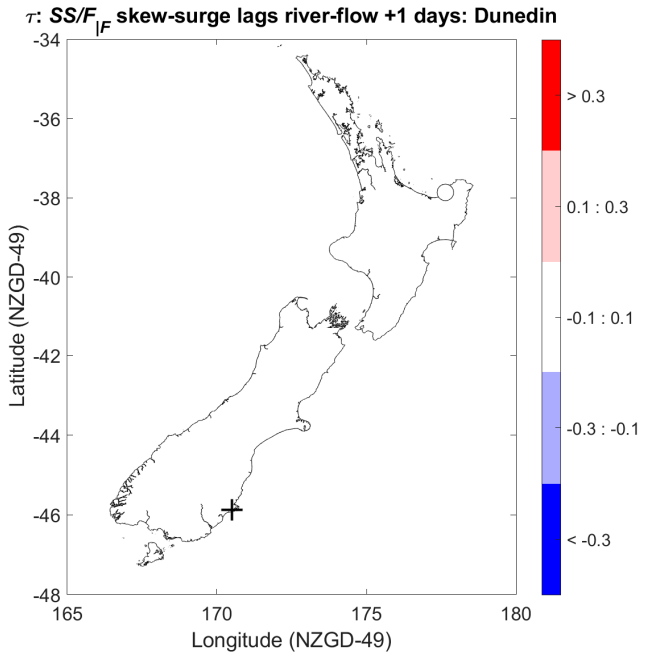
τ: SS/F|F skew-surge lags river-flow +1 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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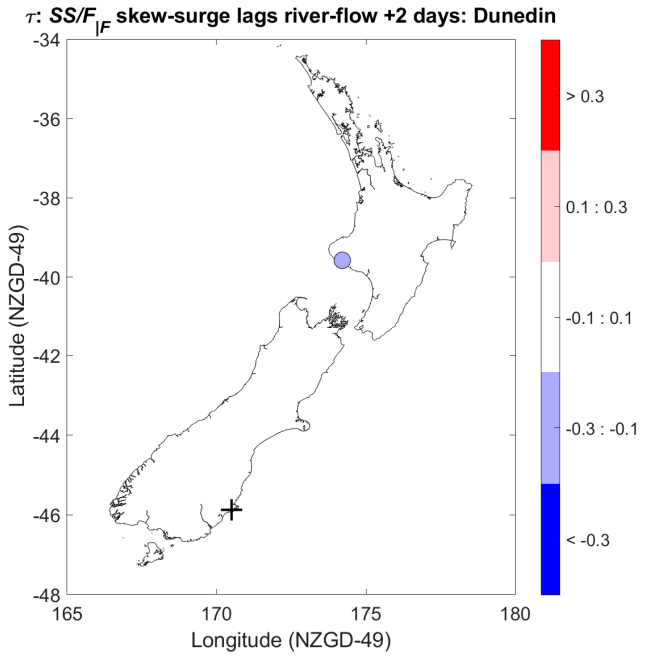
τ: SS/F|F skew-surge lags river-flow +2 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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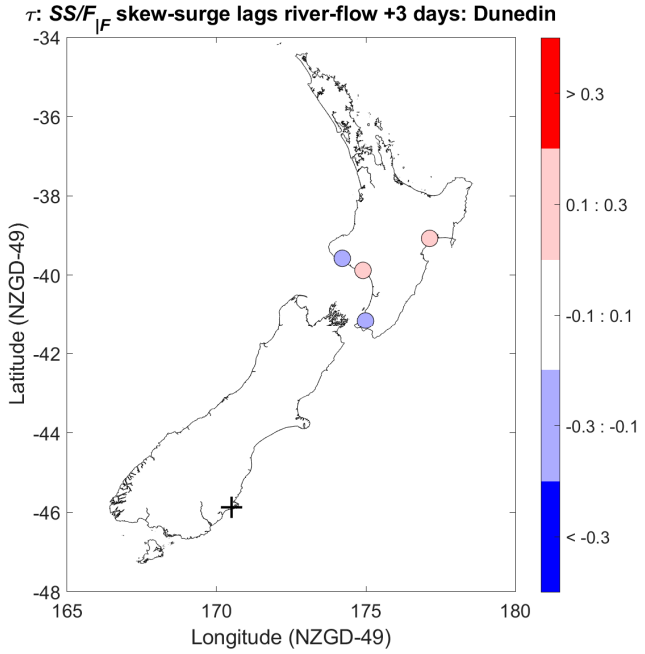
τ: SS/F|F skew-surge lags river-flow +3 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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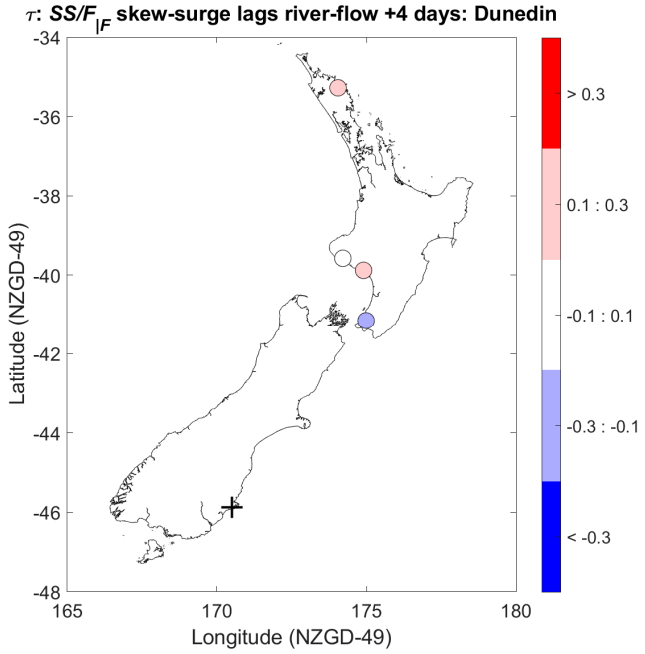
τ: SS/F|F skew-surge lags river-flow +4 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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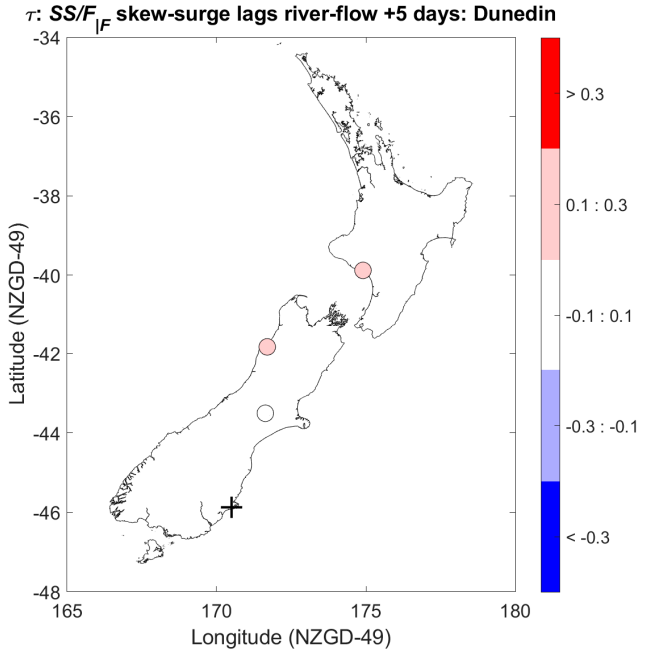
τ: SS/F|F skew-surge lags river-flow +5 days: Dunedin
Latitude (NZGD-49)
Longitude (NZGD-49)
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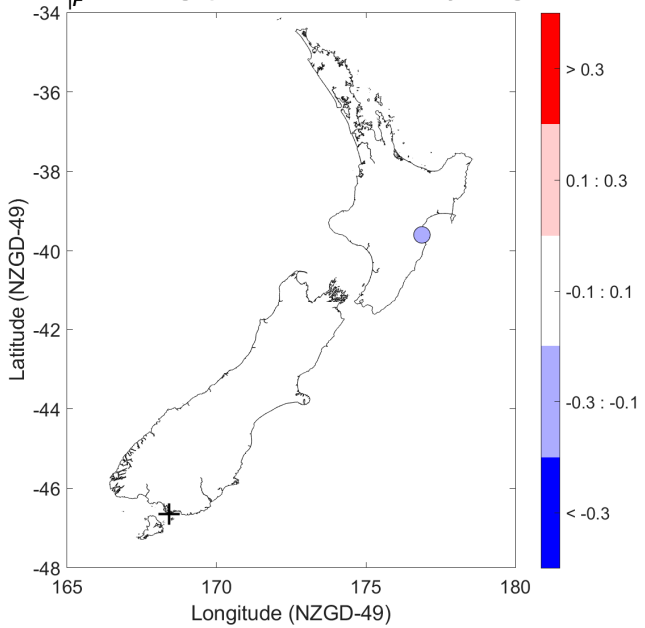
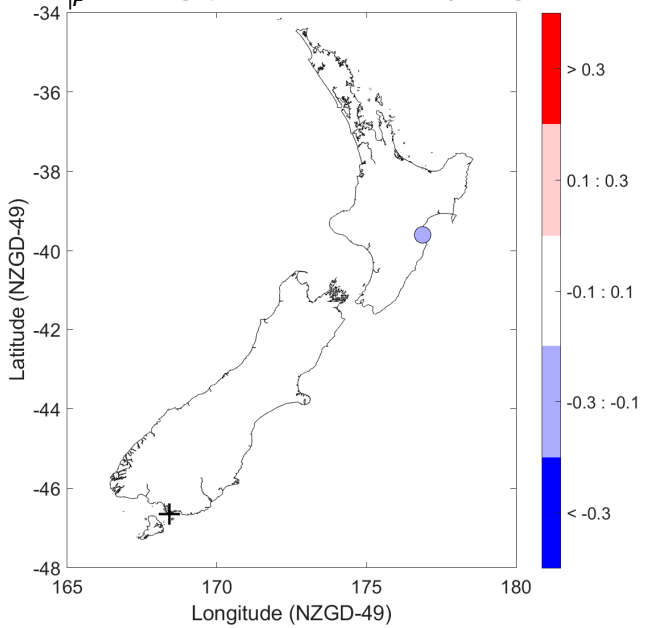
< -0.3

Dog Island

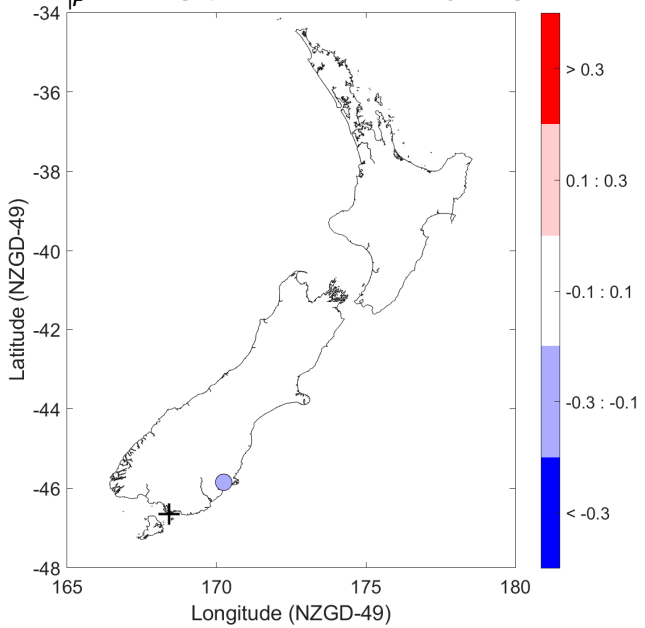
τ: $SS/F_{|F}$ skew-surge precedes river-flow 5 days: DogIsland



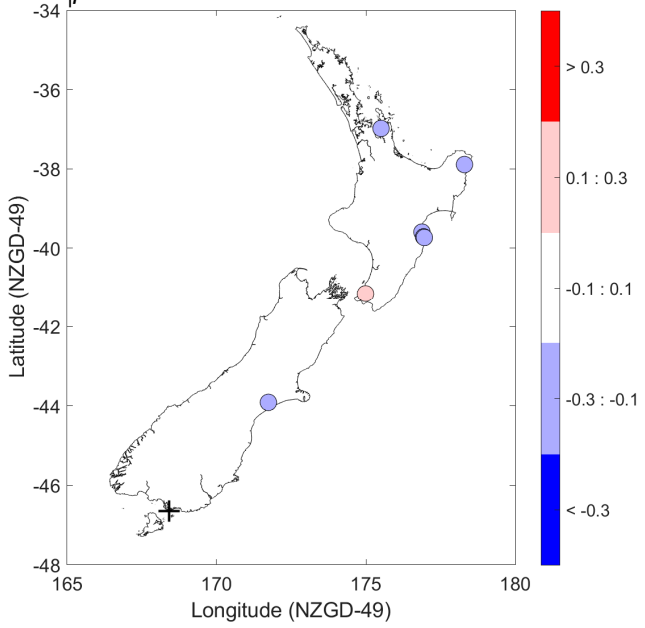
τ: $SS/F_{|F}$ skew-surge precedes river-flow 4 days: DogIsland



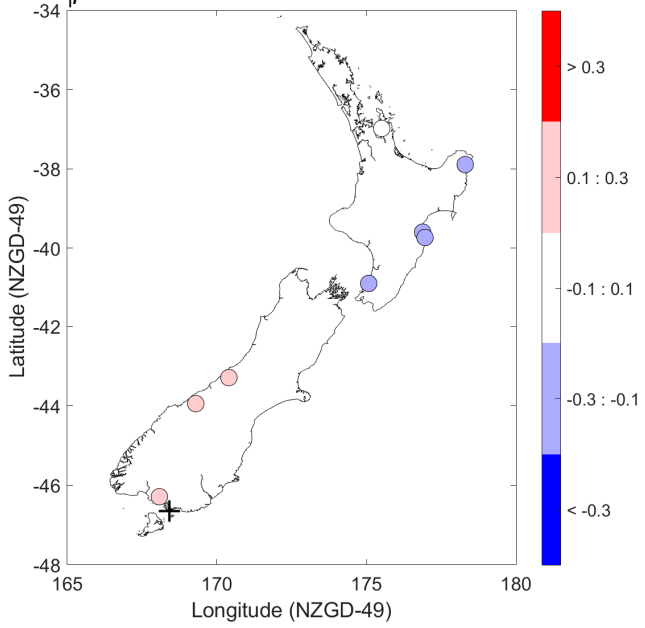
τ: $SS/F_{|F}$ skew-surge precedes river-flow 3 days: DogIsland



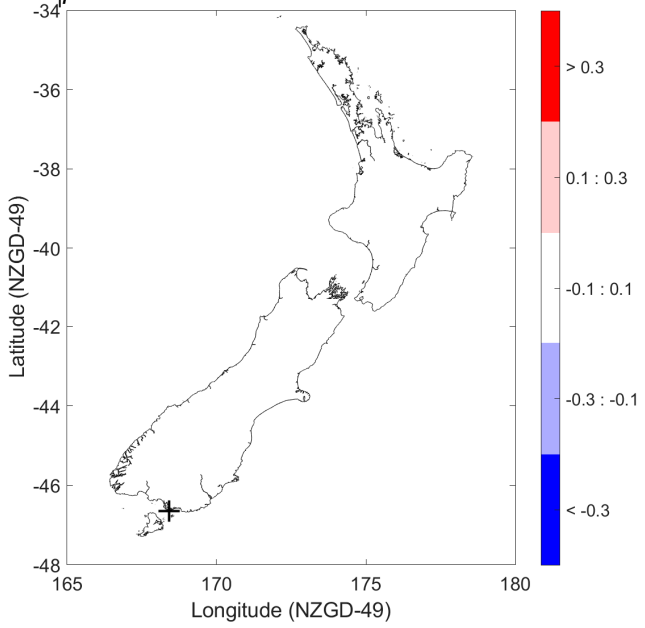
τ: $SS/F_{|F}$ skew-surge precedes river-flow 2 days: DogIsland

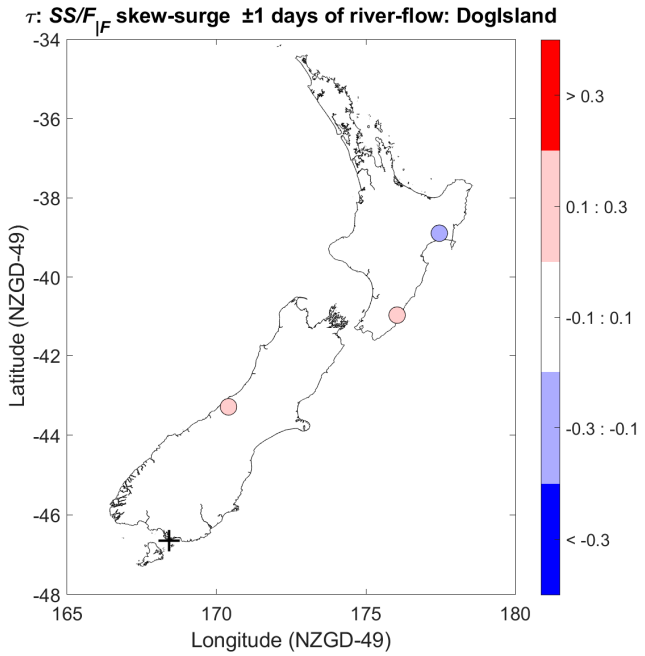


τ: $SS/F_{|F}$ skew-surge precedes river-flow 1 days: DogIsland



τ: $SS/F_{|F}$, peak skew-surge same day as river-flow: DogIsland




τ: SS/F|F skew-surge ±1 days of river-flow: DogIsland
Latitude (NZGD-49)
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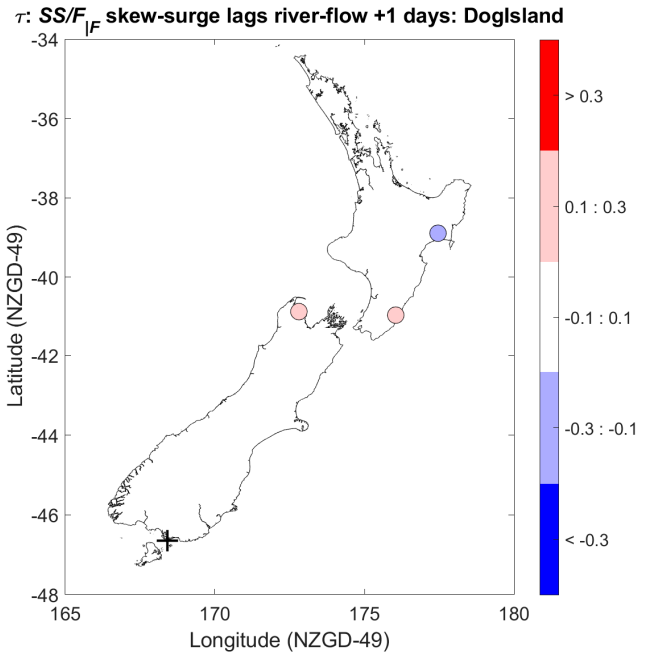
τ: SS/F|F skew-surge lags river-flow +1 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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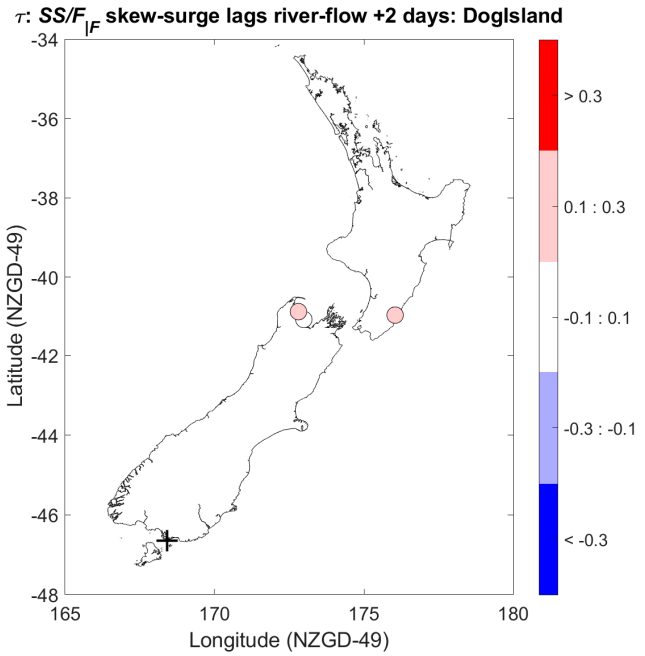
τ: SS/F|F skew-surge lags river-flow +2 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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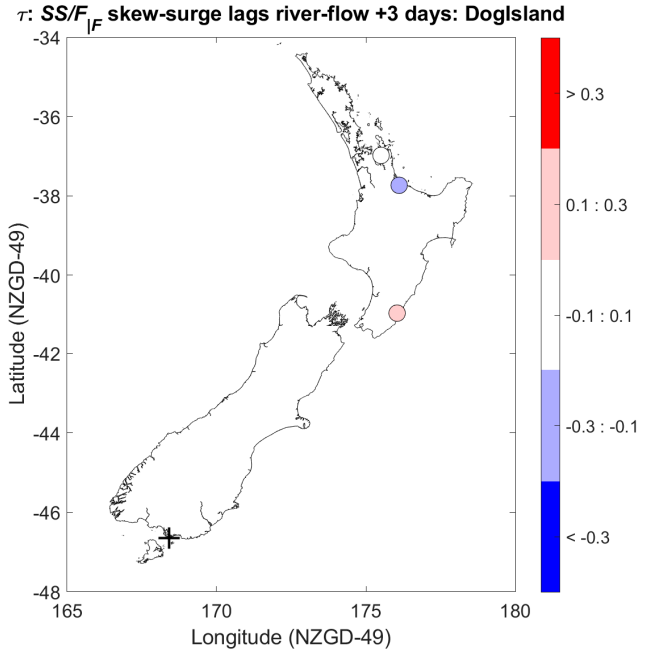
τ: SS/F|F skew-surge lags river-flow +3 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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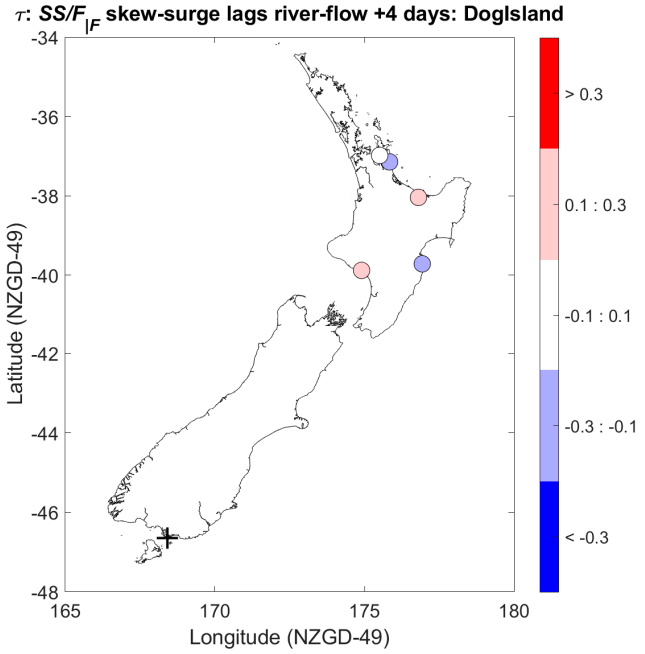
τ: SS/F|F skew-surge lags river-flow +4 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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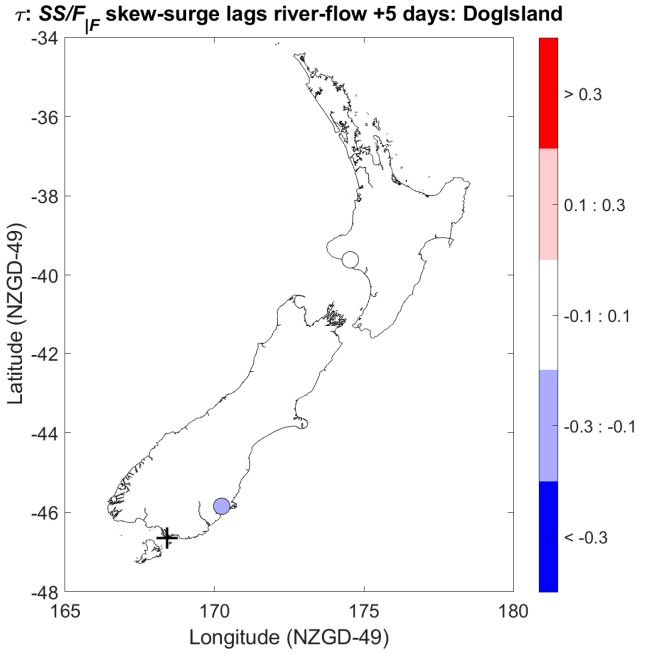
τ: SS/F|F skew-surge lags river-flow +5 days: DogIsland
Latitude (NZGD-49)
Longitude (NZGD-49)
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