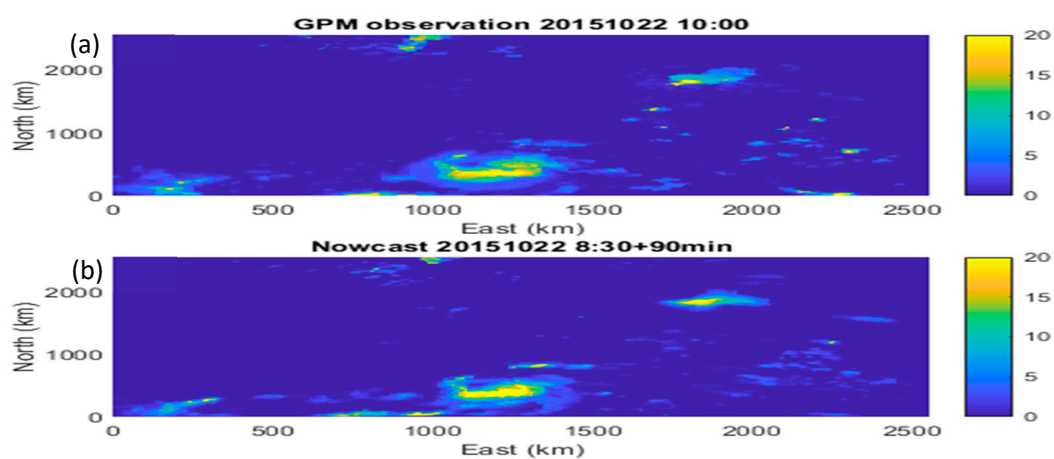
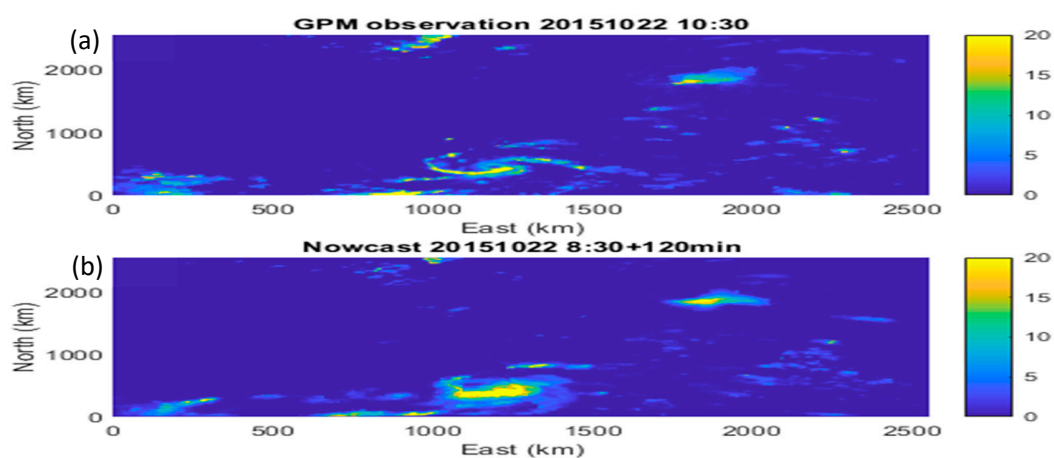


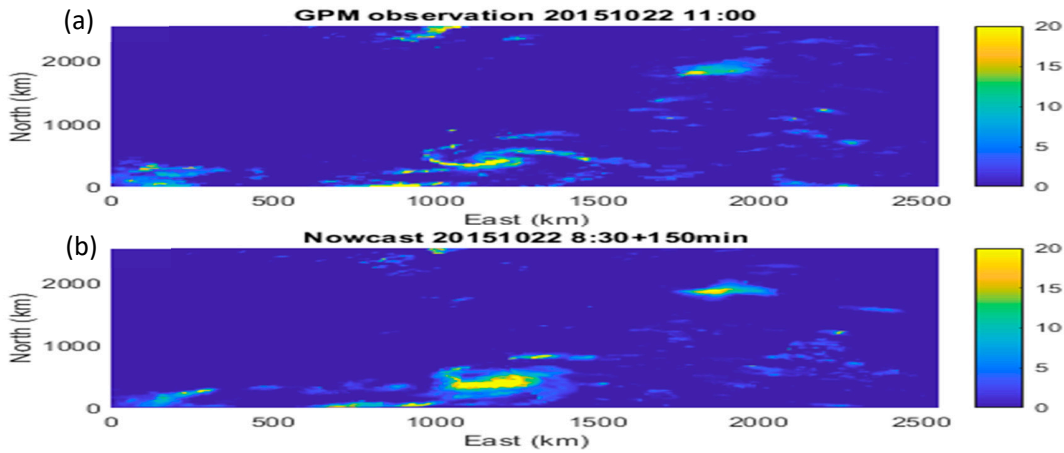
**Figure S1.** Precipitation on 22 October 2015 at 9:30, based on (a) GPM estimated precipitation and (b) 30-minute forecast precipitation from STEPS precipitation nowcast.



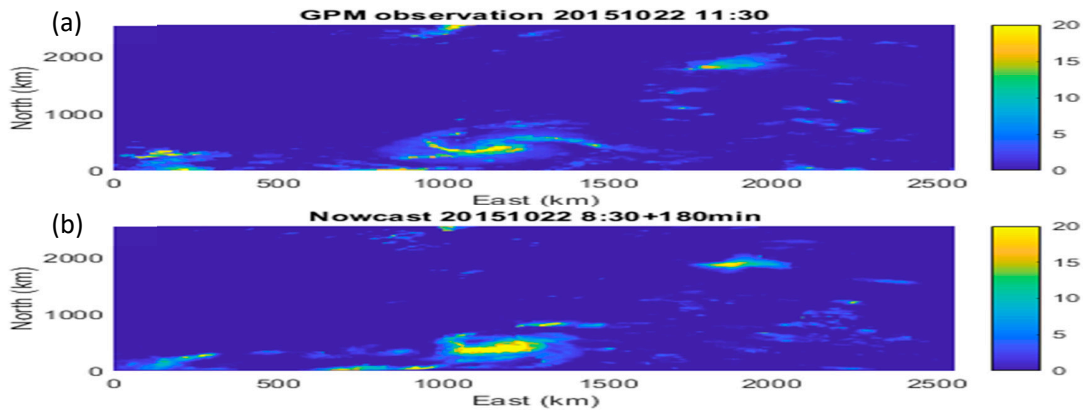
**Figure S2.** Precipitation on 22 October 2015 at 10:00, based on (a) GPM estimated precipitation and (b) 30-minute forecast precipitation from STEPS precipitation nowcast.



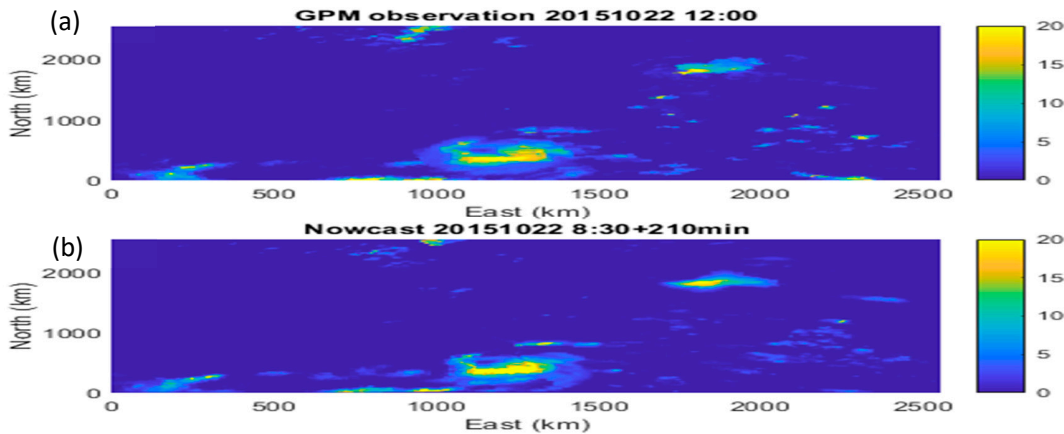
**Figure S3.** Precipitation on 22 October 2015 at 10:30, based on (a) GPM estimated precipitation and (b) 30-minute forecast precipitation from STEPS precipitation nowcast.



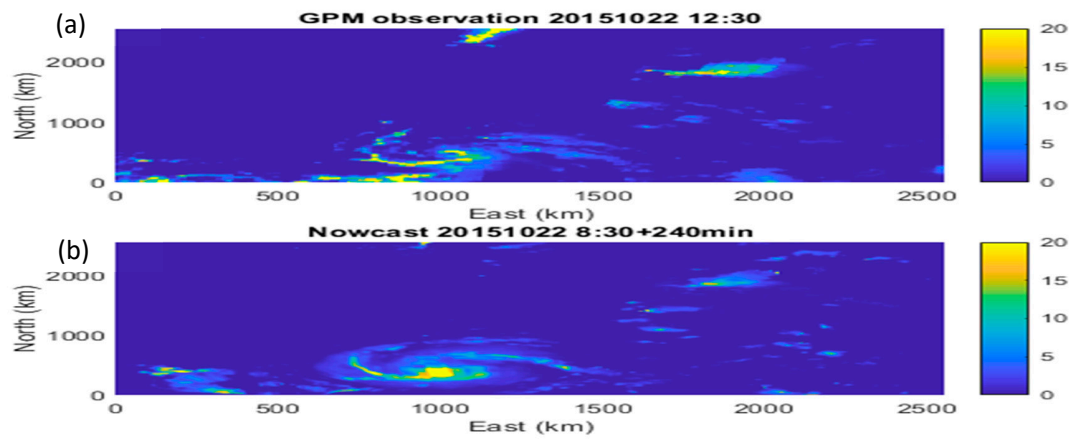
**Figure S4.** Precipitation on 22 October 2015 at 11:00, based on (a) GPM estimated precipitation and (b) 30-minute forecast precipitation from STEPS precipitation nowcast.



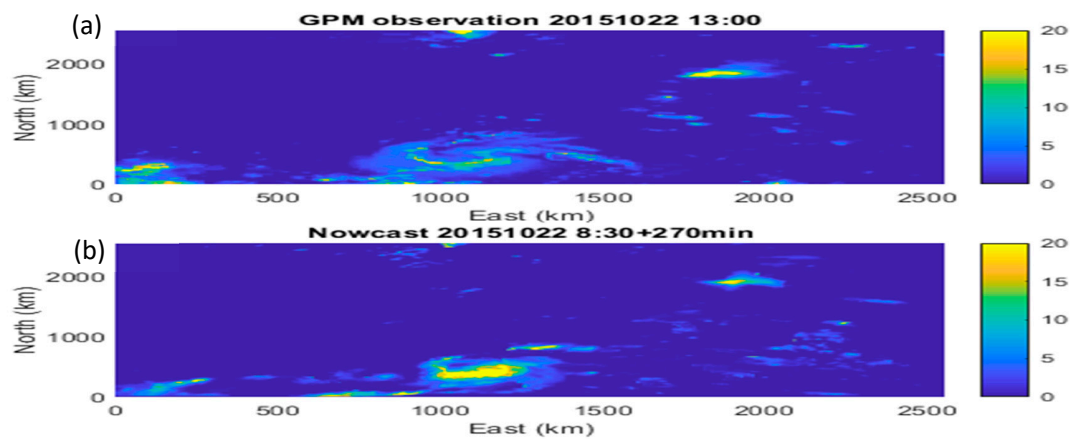
**Figure S5.** Precipitation on 22 October 2015 at 11:30, based on (a) GPM estimated precipitation and (b) 30-minute forecast precipitation from STEPS precipitation nowcast.



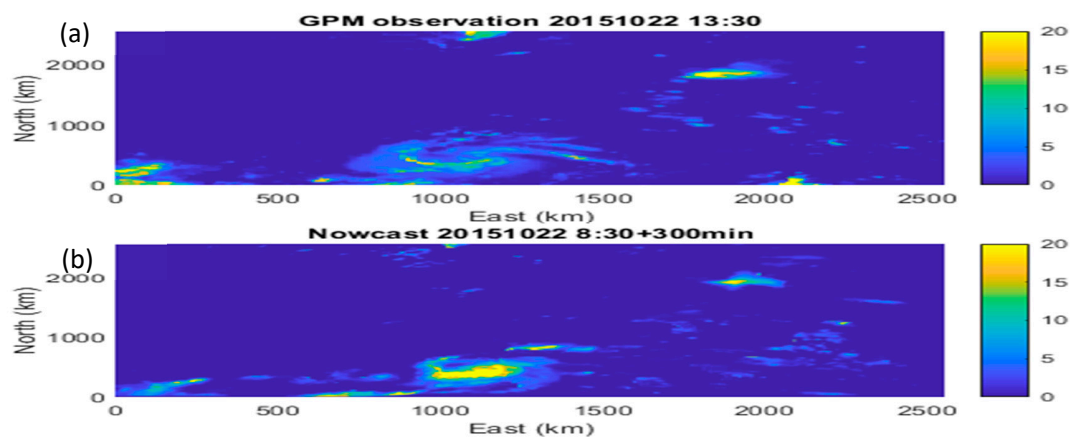
**Figure S6.** Precipitation on 22 October 2015 at 12:00, based on (a) GPM estimated precipitation and (b) 30-minute forecast precipitation from STEPS precipitation nowcast.



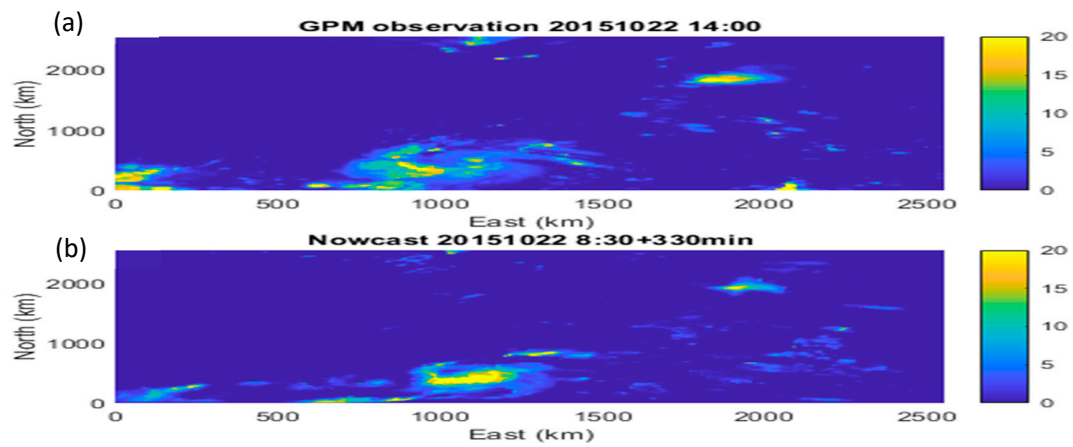
**Figure S7.** Precipitation on 22 October 2015 at 12:30, based on (a) GPM estimated precipitation and (b) 30-minute forecast precipitation from STEPS precipitation nowcast.



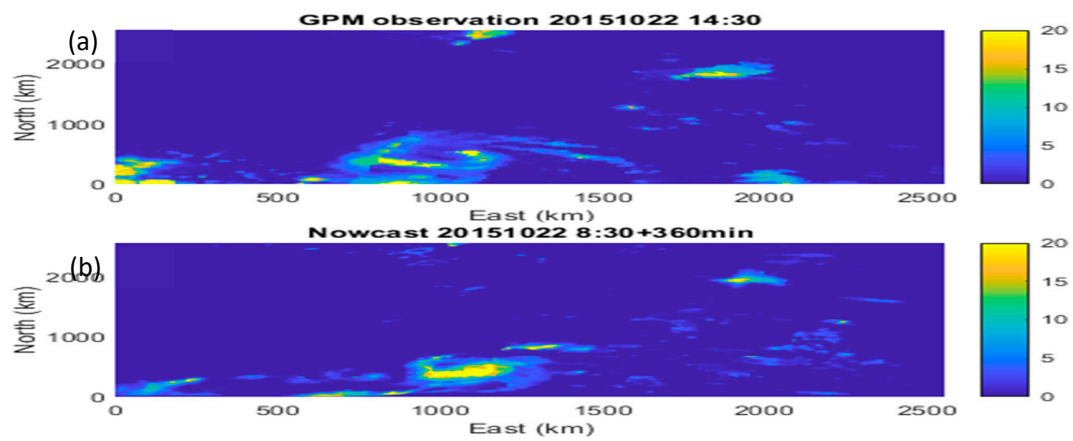
**Figure S8.** Precipitation on 22 October 2015 at 13:00, based on (a) GPM estimated precipitation and (b) 30-minute forecast precipitation from STEPS precipitation nowcast.



**Figure S9.** Precipitation on 22 October 2015 at 13:30, based on (a) GPM estimated precipitation and (b) 30-minute forecast precipitation from STEPS precipitation nowcast.



**Figure S10.** Precipitation on 22 October 2015 at 14:00, based on (a) GPM estimated precipitation and (b) 30-minute forecast precipitation from STEPS precipitation nowcast.



**Figure S11.** Precipitation on 22 October 2015 at 14:30, based on (a) GPM estimated precipitation and (b) 30-minute forecast precipitation from STEPS precipitation nowcast.