

Figure S1. Estimated ionospheric effects using SSM. Five ionospheric phase indicates the differential ionospheric phase corresponding to the time series interferograms.

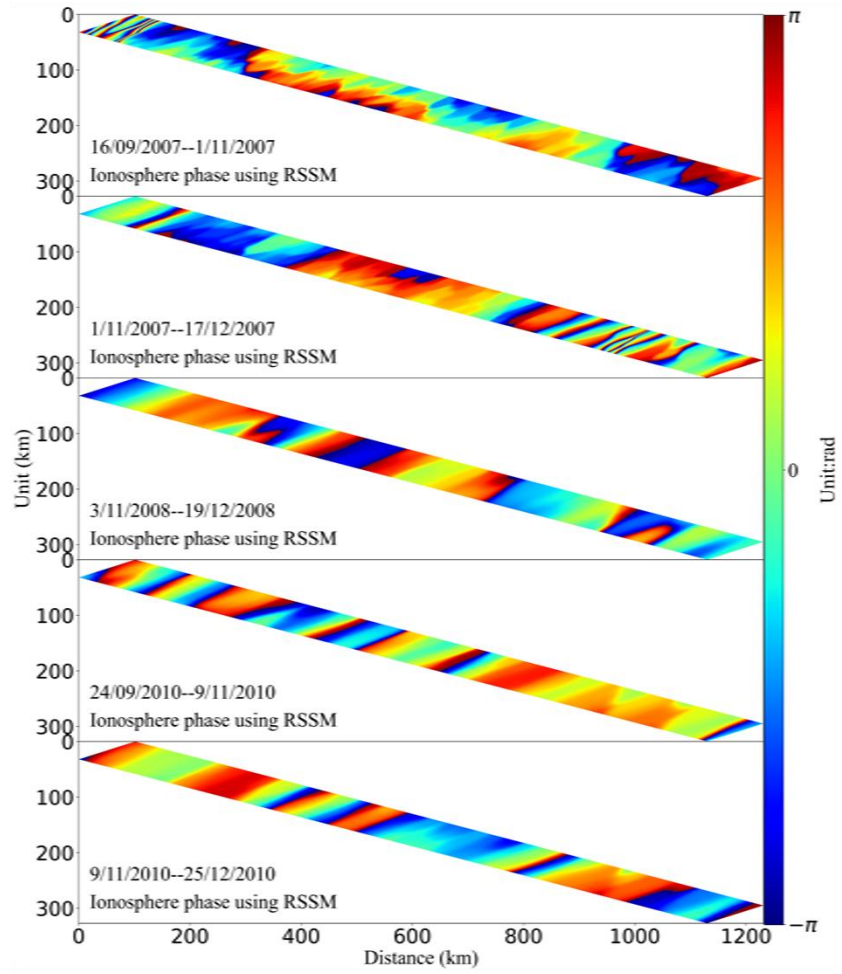


Figure S2. Estimated ionospheric effects using RSSM. Five ionospheric phase indicates the differential ionospheric signal corresponding to the time series interferograms.

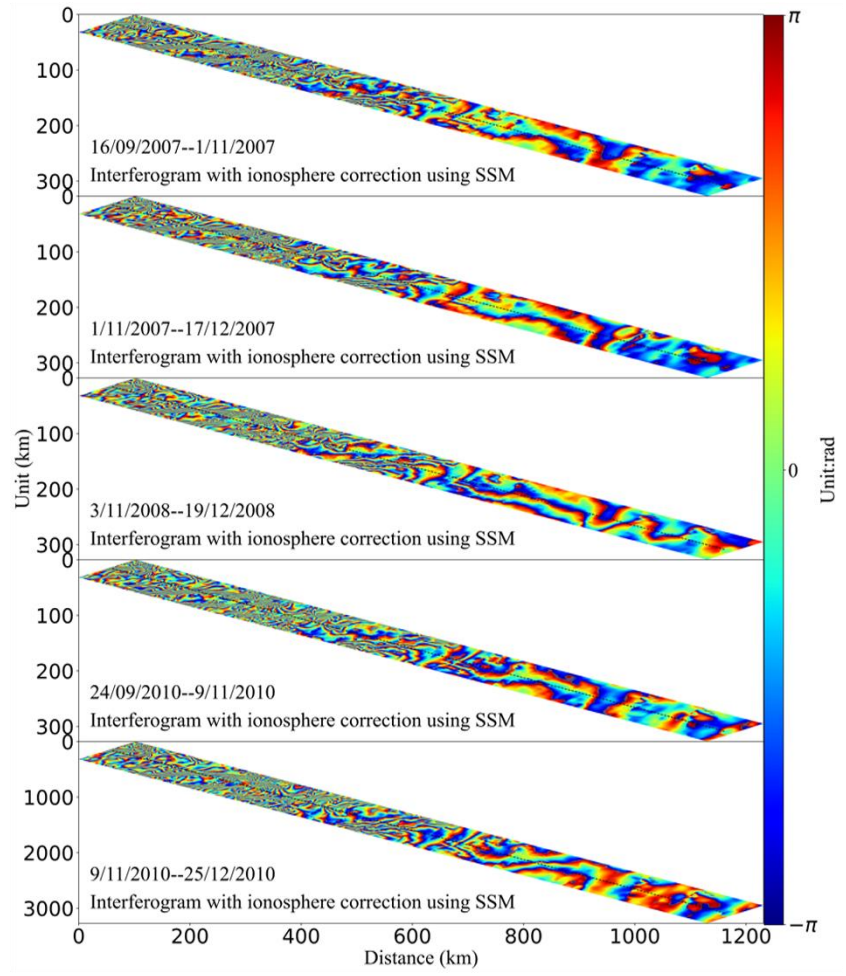


Figure S3. The time-series interferograms with ionosphere correction using the SSM in Antarctica. The five interferograms for the five acquisition time as shown in **Table 1**.