



Collaboration, Innovation and Resilience: Championing a Digital Generation

Brisbane, Australia 6–10 April

Forecasting Ionospheric Process Noise Using Long Short–Term Memory Network



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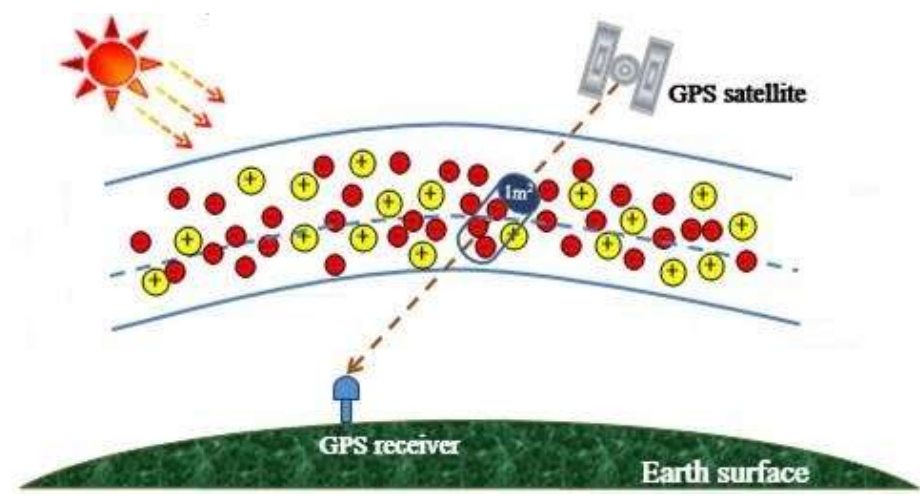


PLATINUM SPONSORS

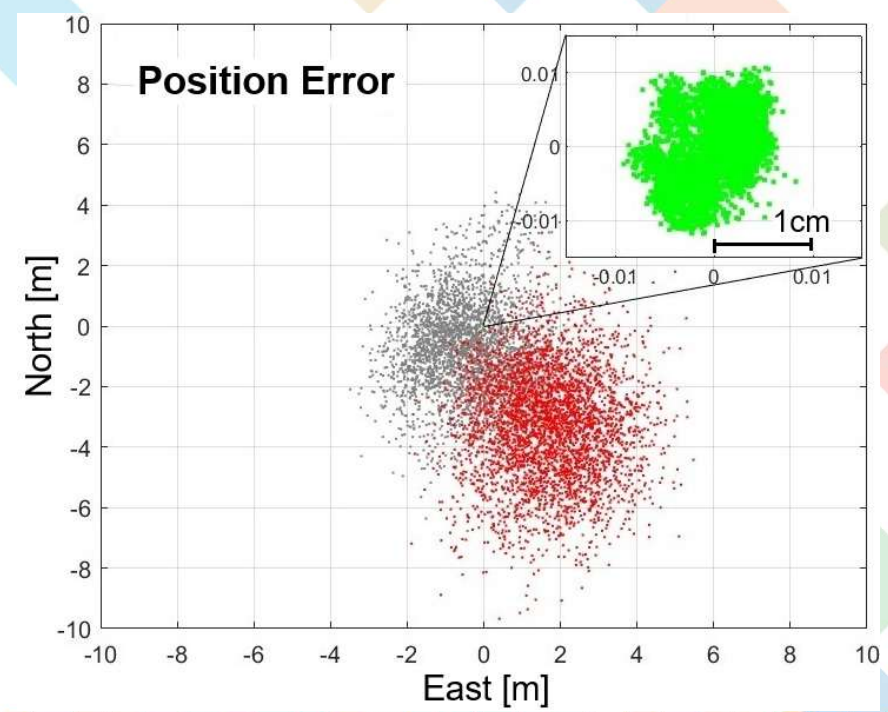


Research Overview

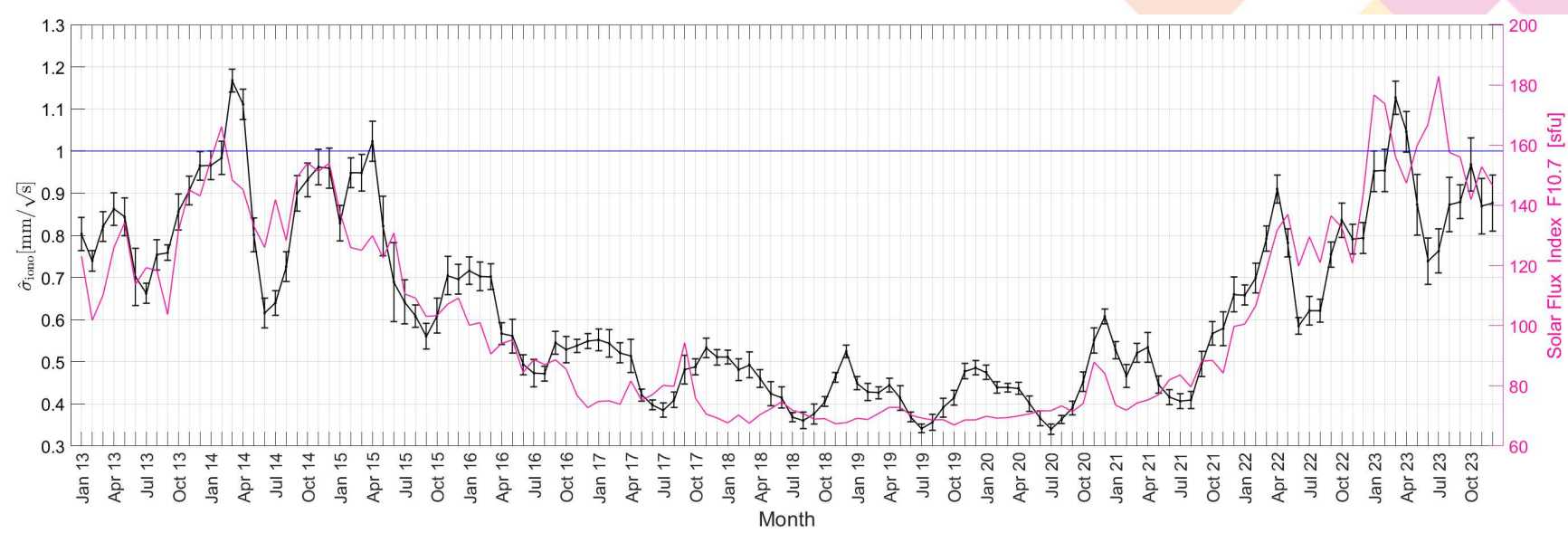
Enhancing Satellite Positioning Accuracy and Precision by Providing a **Reliable Ionospheric Model**



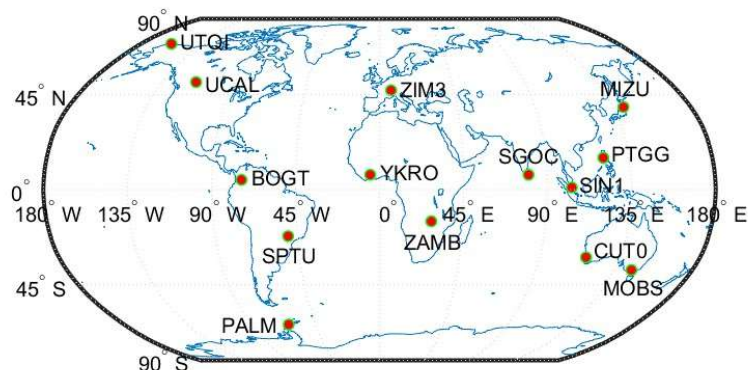
Thai GNSS and Space Weather Information Data Center



Data-driven Ionospheric Process Noise which Captures the Time Variability of the Ionosphere

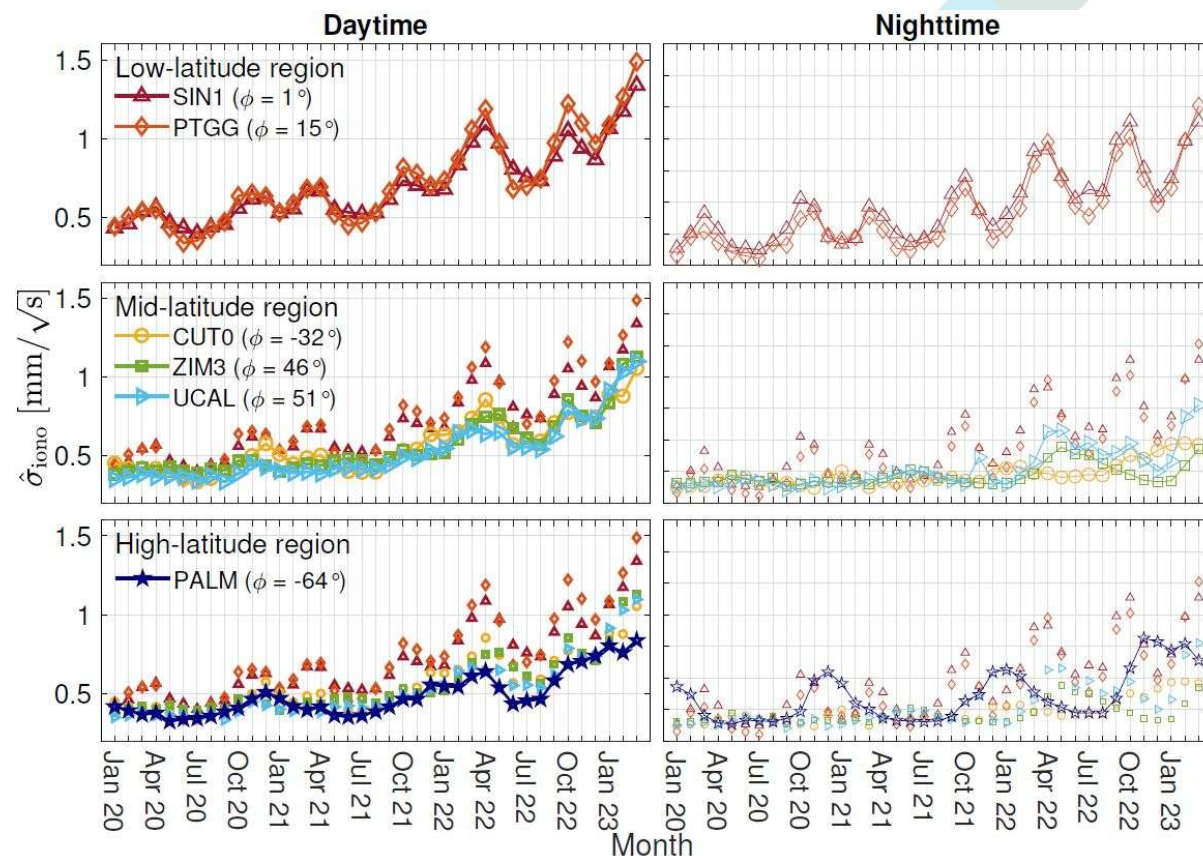


Ionospheric Process Noise across Globally Distributed GNSS Stations

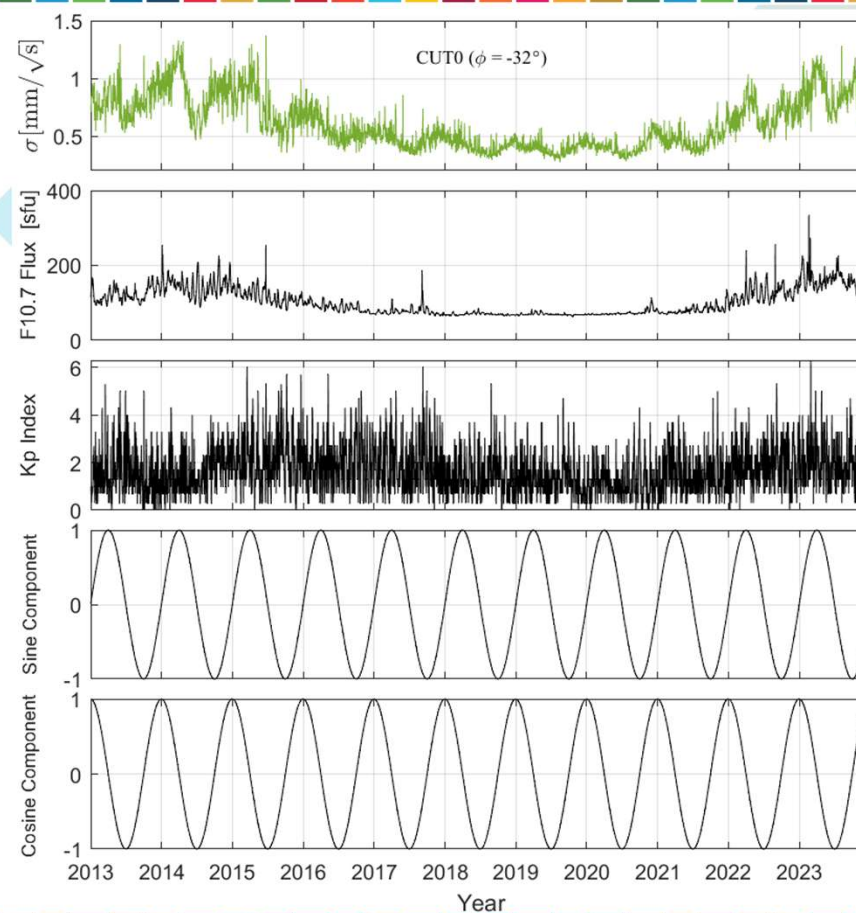
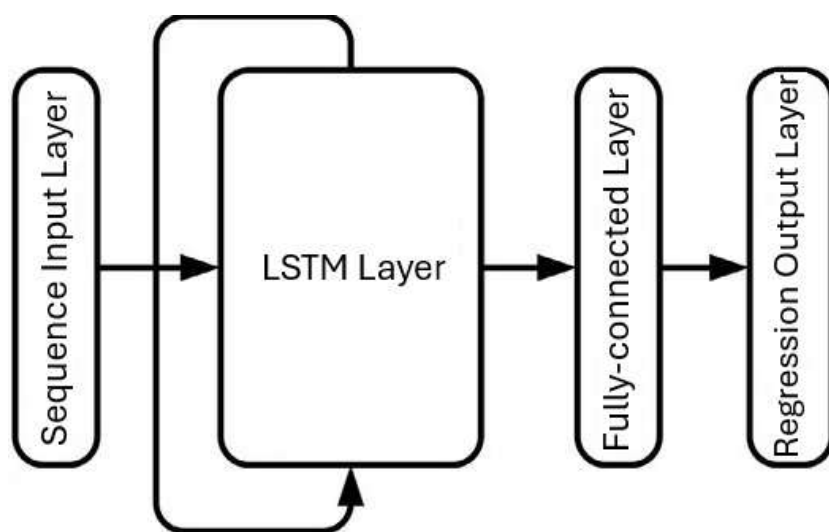


Ionospheric Process Noise Pattern:

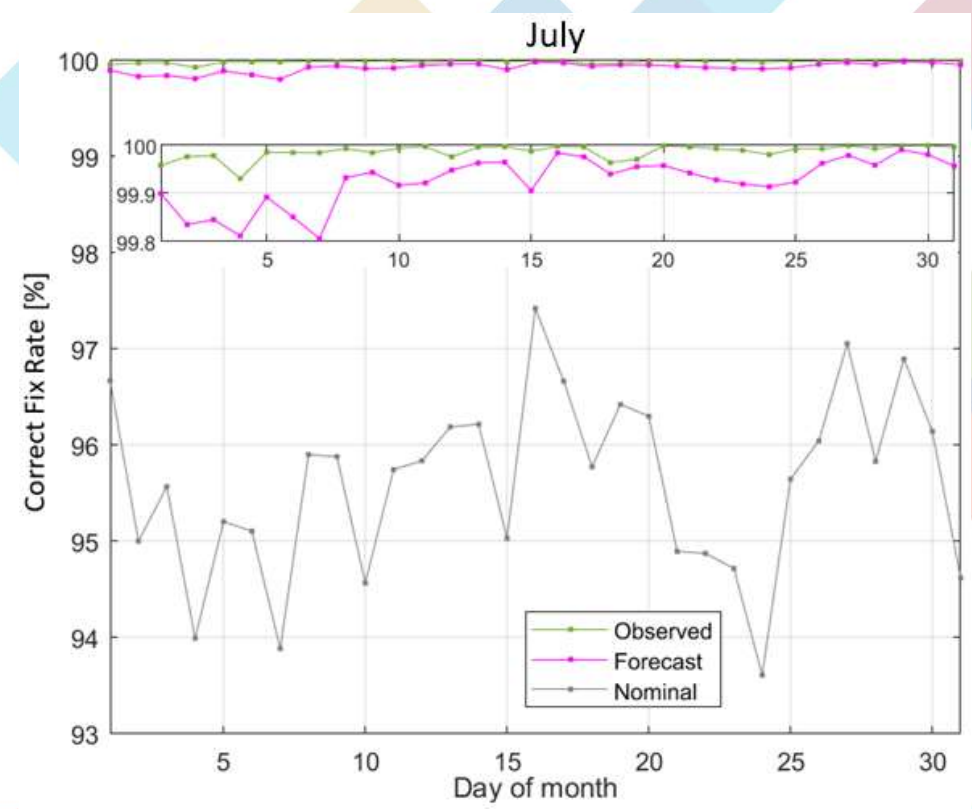
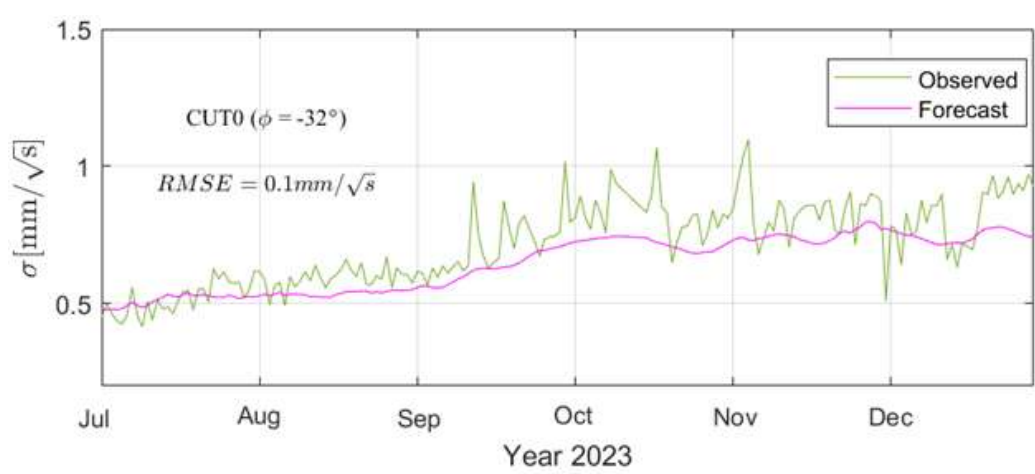
- Local Time
- Solar activity
- Geomagnetic activity
- Geographic latitude
- Seasonal variation



- LSTM Network
- The Target and the Features



- **Forecasting Ionospheric Process Noise Using LSTM Network**
- **Correct Fix Rate of the Carrier Phase Measurement**





Thank you!



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