

# Intelligent Fusion Technology, Inc.

## Engineering & Technology for America's Warfighters

### MORE INFORMATION MORE ACCURACY

#### Areas of Expertise

- SATCOM & SATNAV
- Sensor data fusion & processing
- Target tracking & pattern analysis
- Unmanned & autonomous system
- ML/AI & data analytics
- Radar & mmWave
- Cybersecurity
- GUI and simulation platform



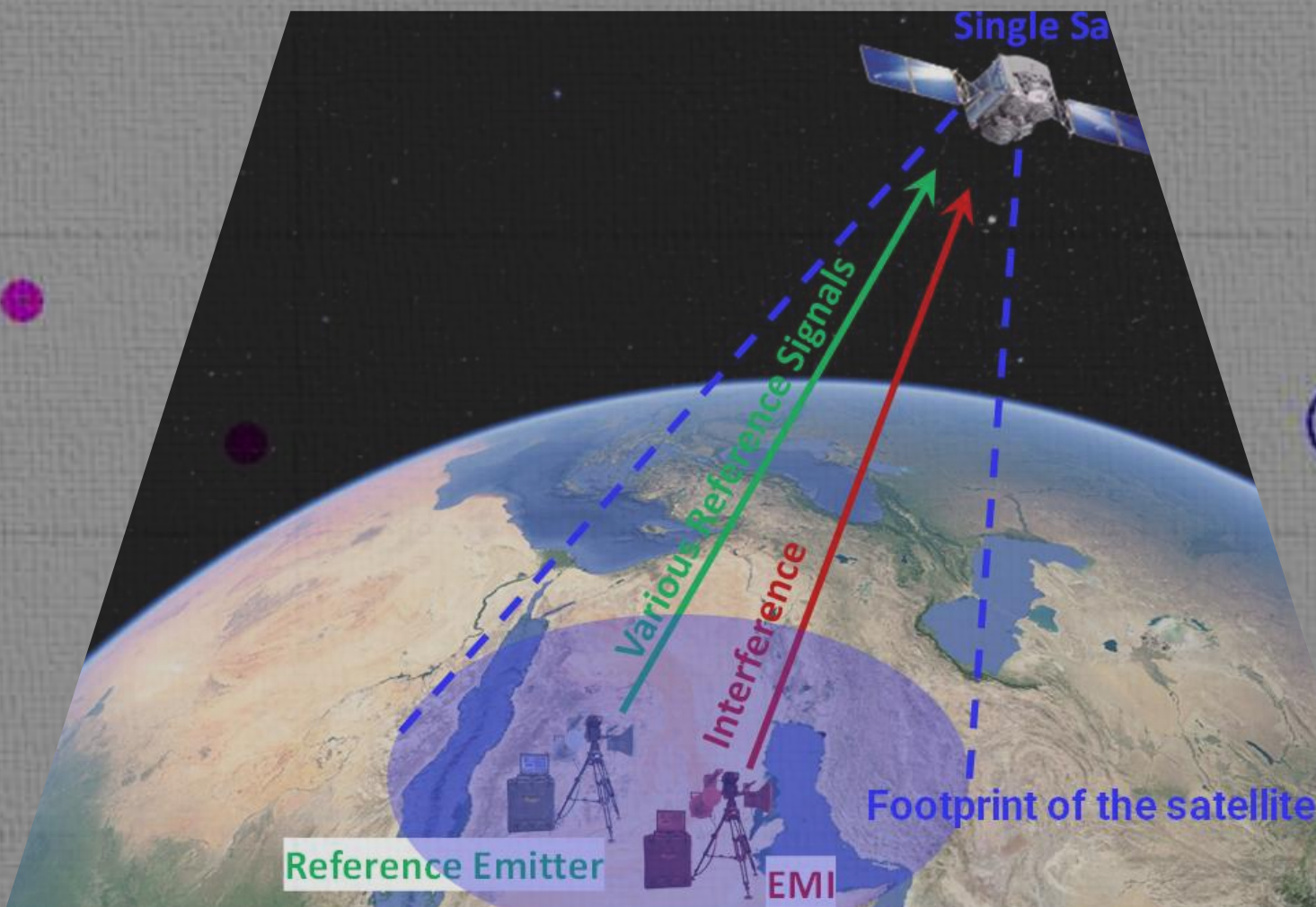
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# Enhanced Reference Emitter Assisted Passive Single Satellite Geolocation (SGG) of EMI Sources

## CONOPS

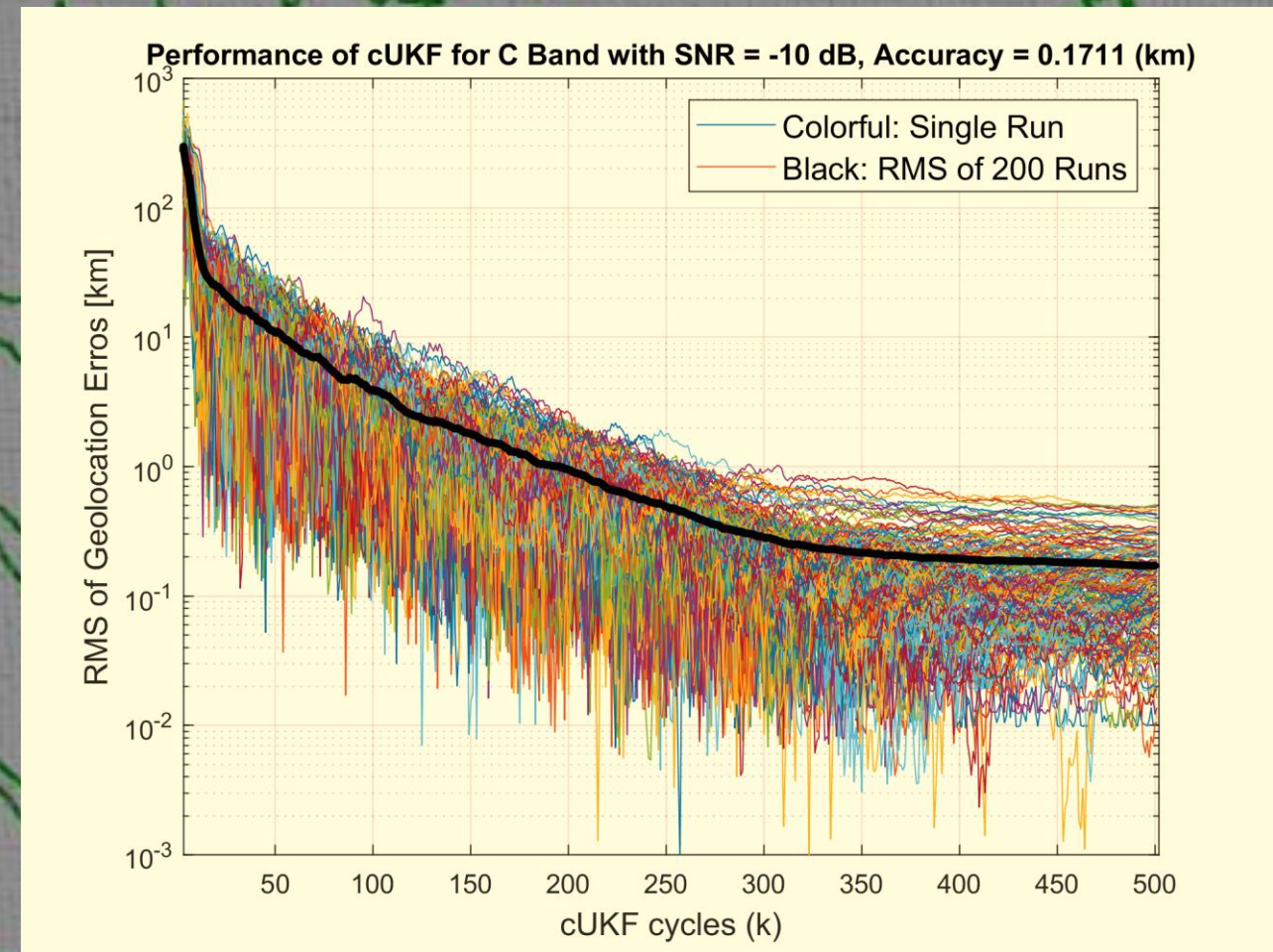
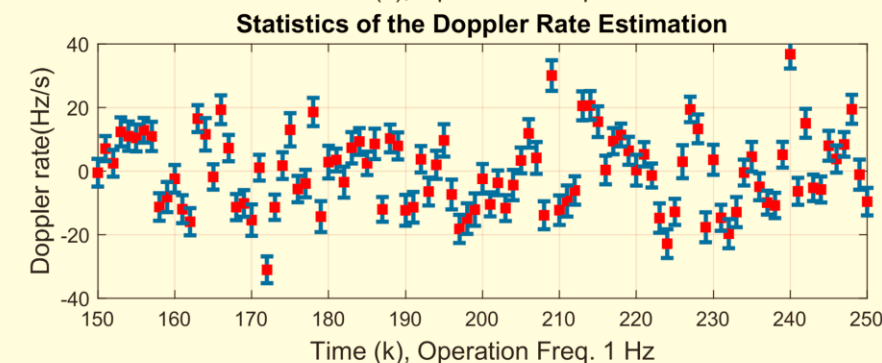
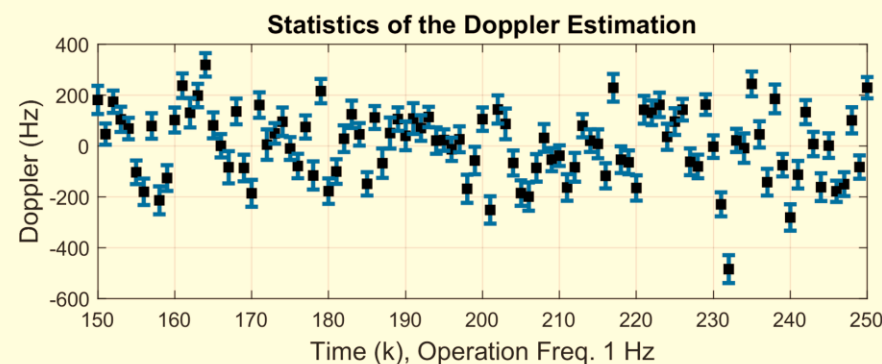


## MAIN ACHIEVEMENT:

IFT's SSG solution includes a single satellite running Doppler based constrained unscented Kalman filter (cUKF) and several portable ground-based reference emitters. Blind Doppler estimation and online ionosphere compensation are enabled to obtain the meter-level passive geolocation of Electromagnetic interference (EMI) sources on the ground.

**3D Geolocation Accuracy: 18 meters**

Blind Doppler Estimation



cUKF Results