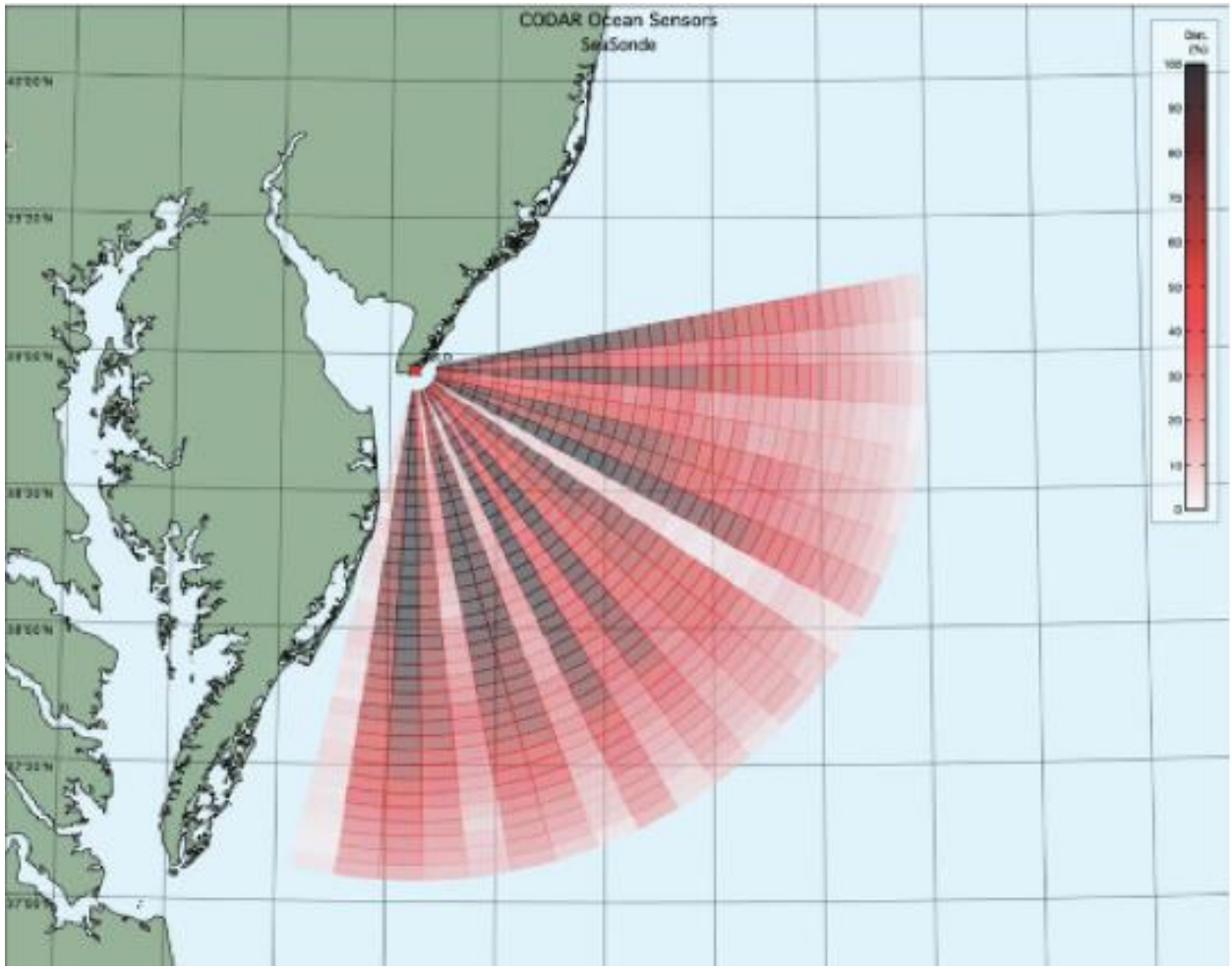
Recent CODAR Efforts

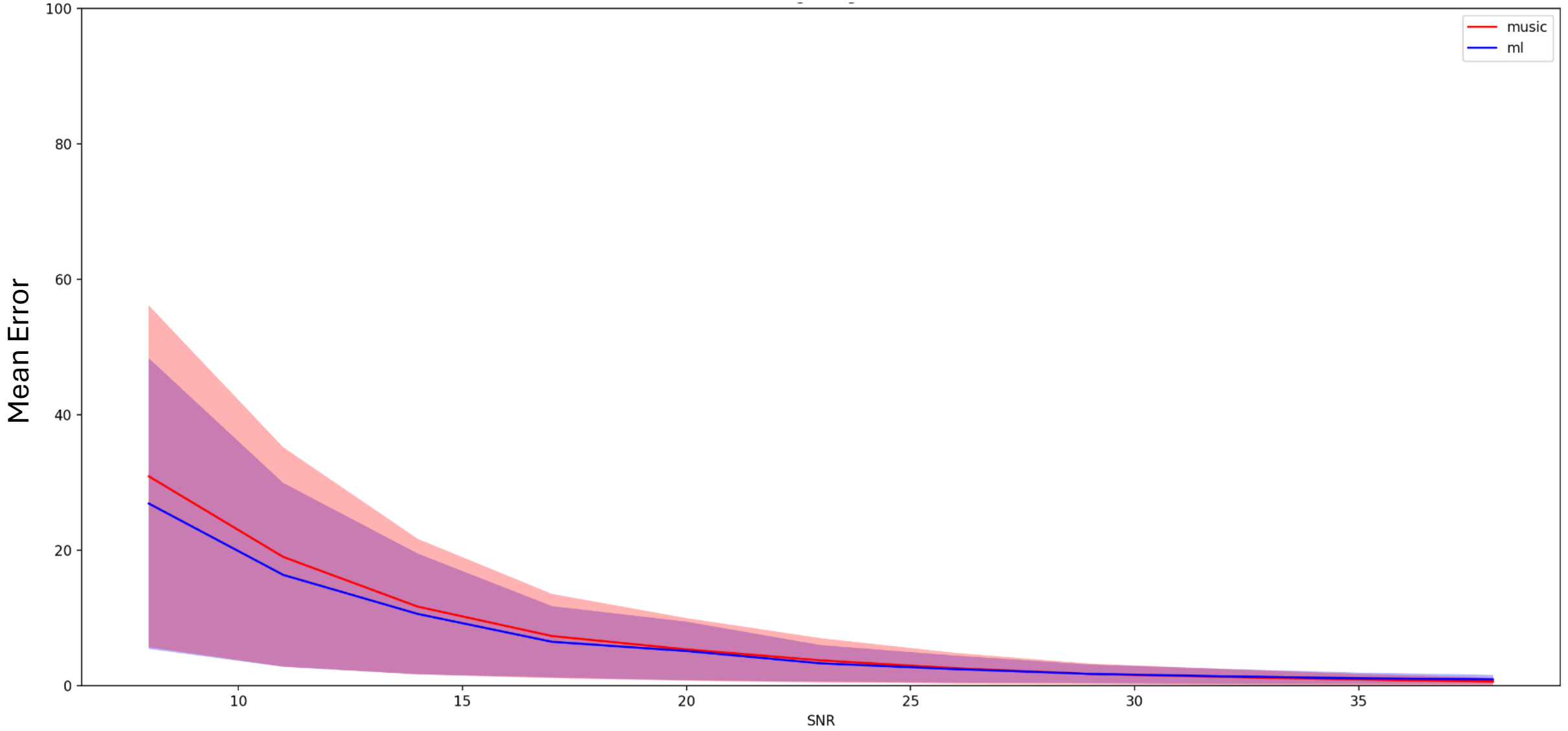
Joshua Trockel

Direction of Arrival

- Determine where in the ocean currents and targets are
- Improving direction of arrival is key to accurate data products
- Multiple steps
  - Determine if one location or two locations with that velocity
  - Assign the direction of arrival(s)

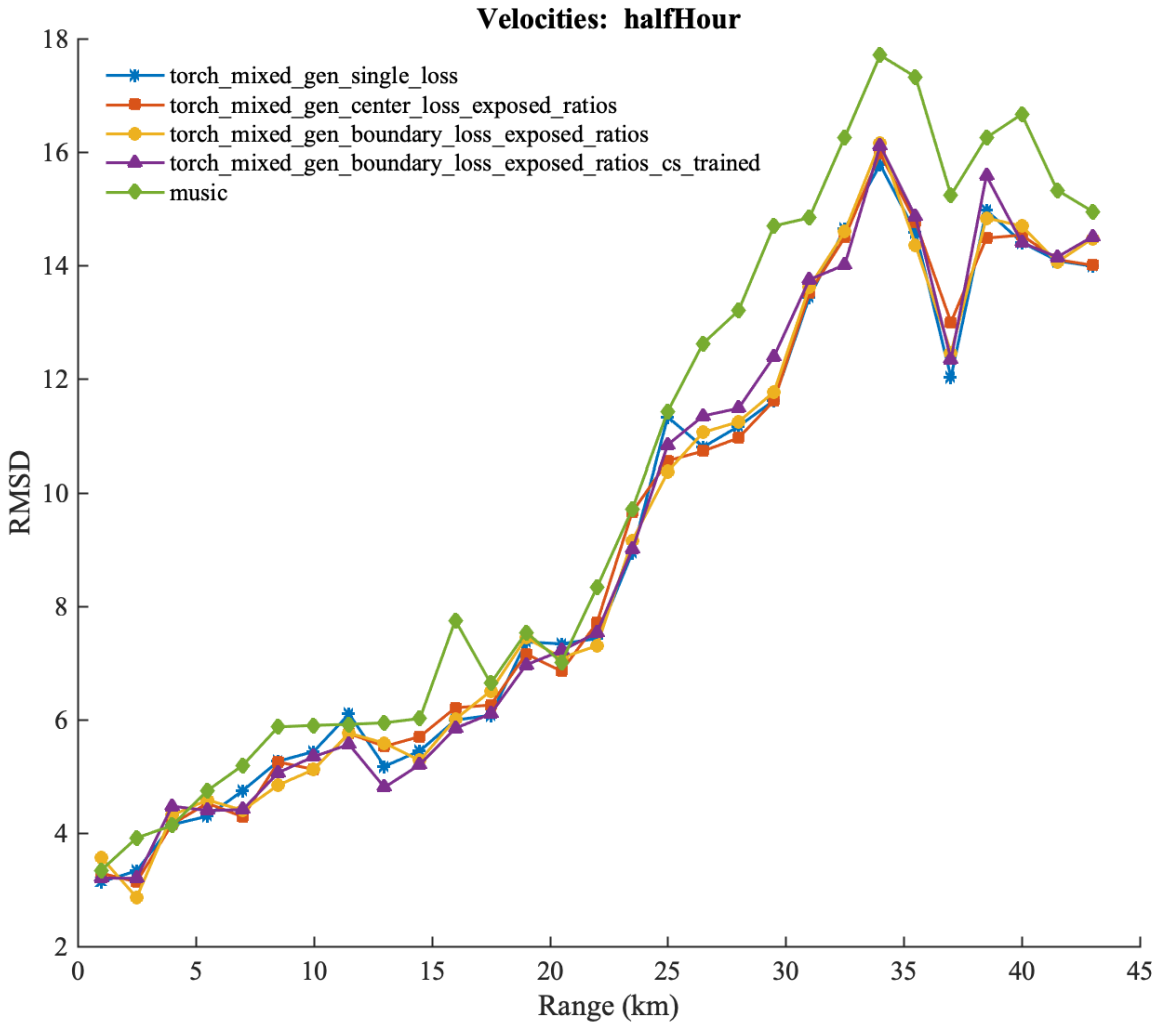


Single Angle Direction of Arrival Error



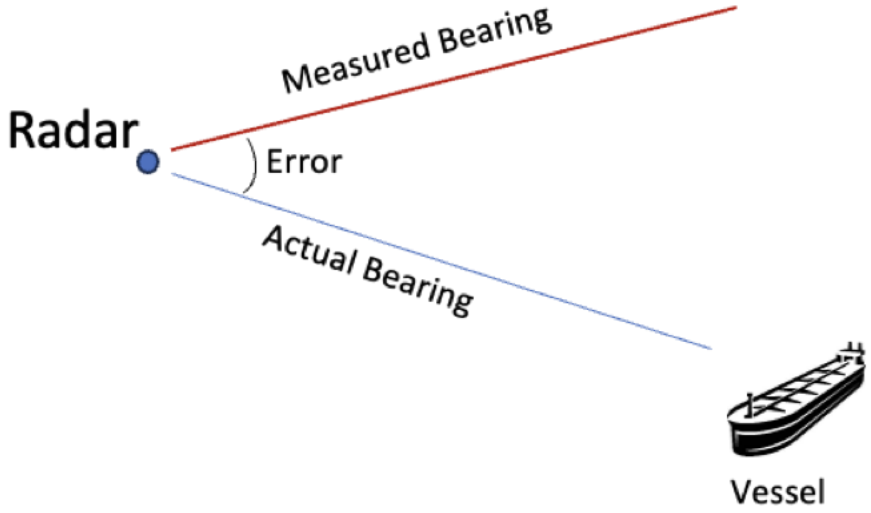
Research Grant – AI Direction Finding Effects

- CODAR is working with UC Santa Barbara to independent evaluate the downstream effects of these changes
- Downstream effects of improved direction finding is lower error in velocities especially in outer ranges



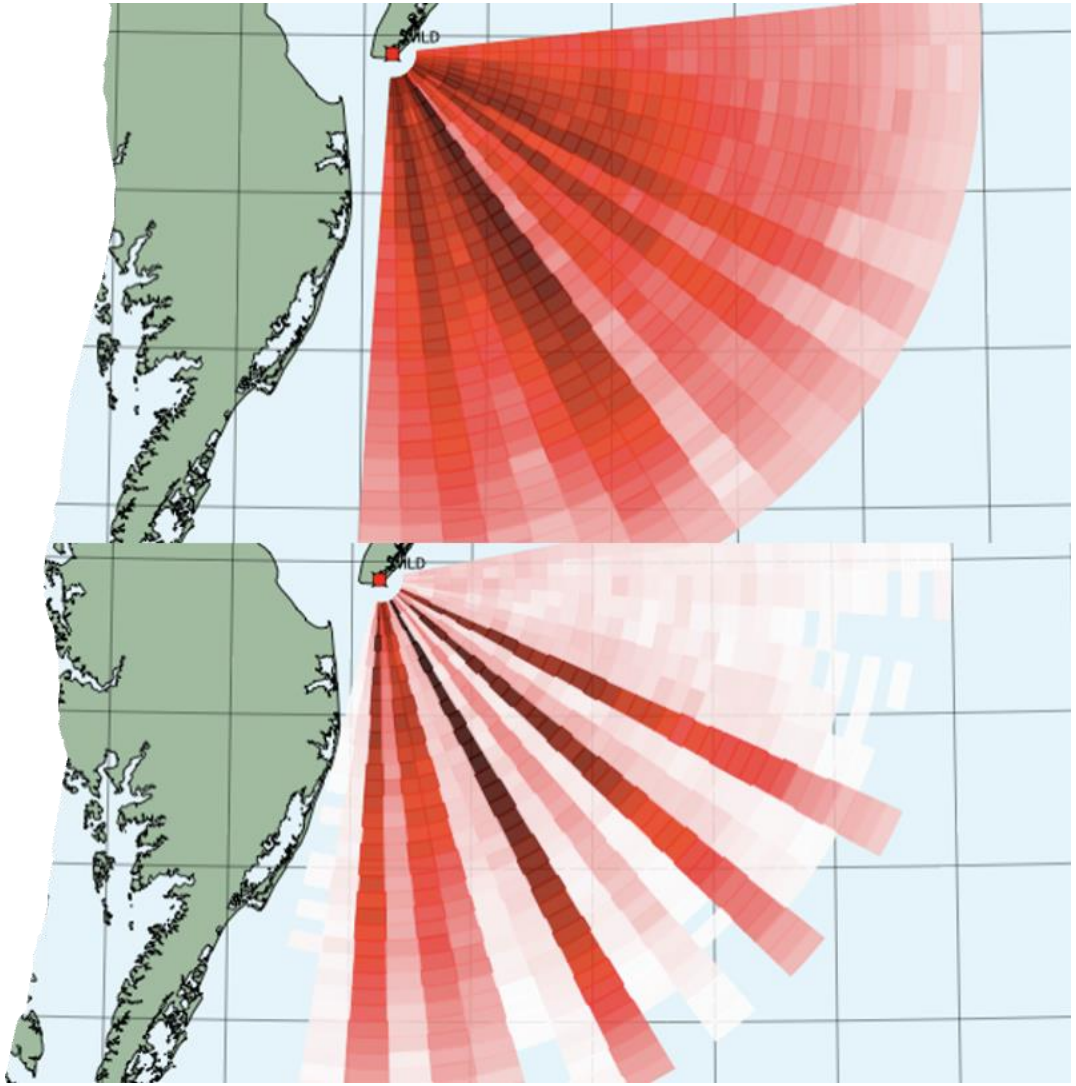
AISPatterner

- Match AIS hits to HF radar vessel peaks
- Use AIS Vessel location to check radar calibration
- Autonomously check for changes in the radar and environment to ensure high fidelity radar output



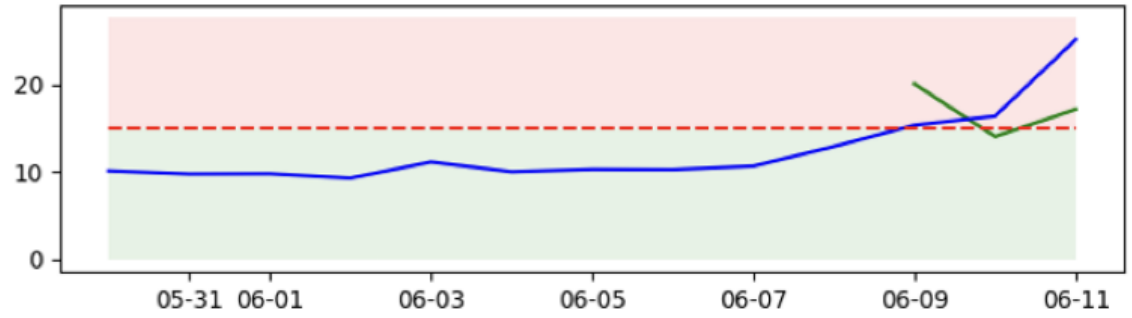
AISPatterner

- AutoAPM also monitors changes in the radial distribution over time to inform users when changes have occurred

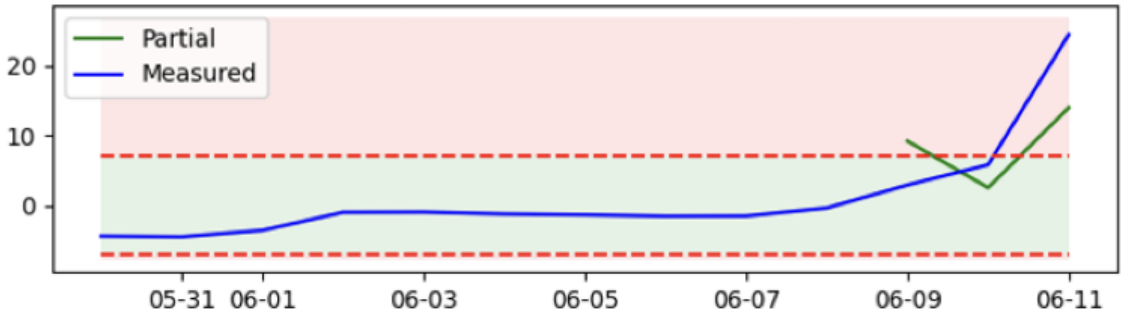


Time history of changes

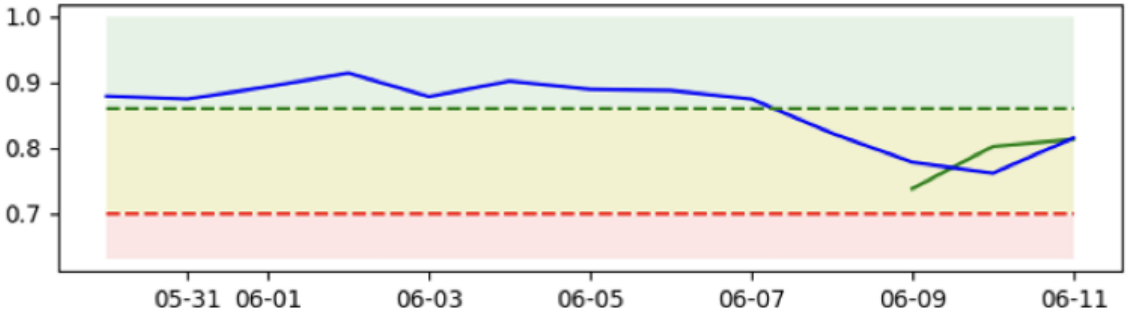
Mean Error



Antenna Rotation



Direction of Arrival Correlation



Change in Radial Distribution