

# SA2 “101”

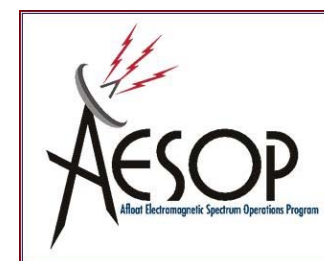
## Joint USN/USMC Spectrum Conference

Gerry Fitzgerald

04 MAR 2010



DAHLGREN



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# Report Documentation Page

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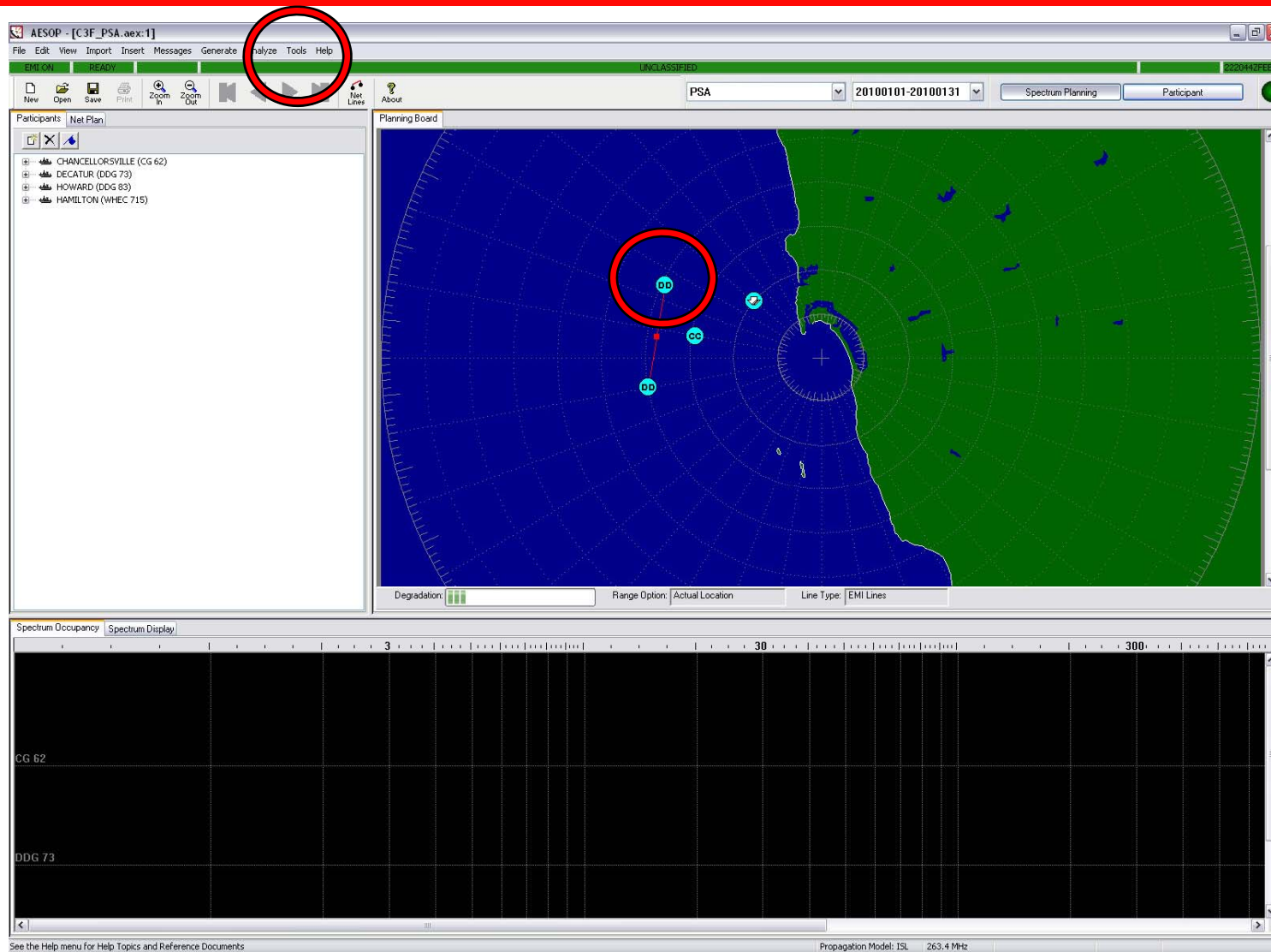
# What's This All About?

- **Introduce SA2**
- **Explain where SA2 is and what it does**
- **Introduce the team**
- **Discuss current plans**
- **Request your feedback**

# What is SA2?

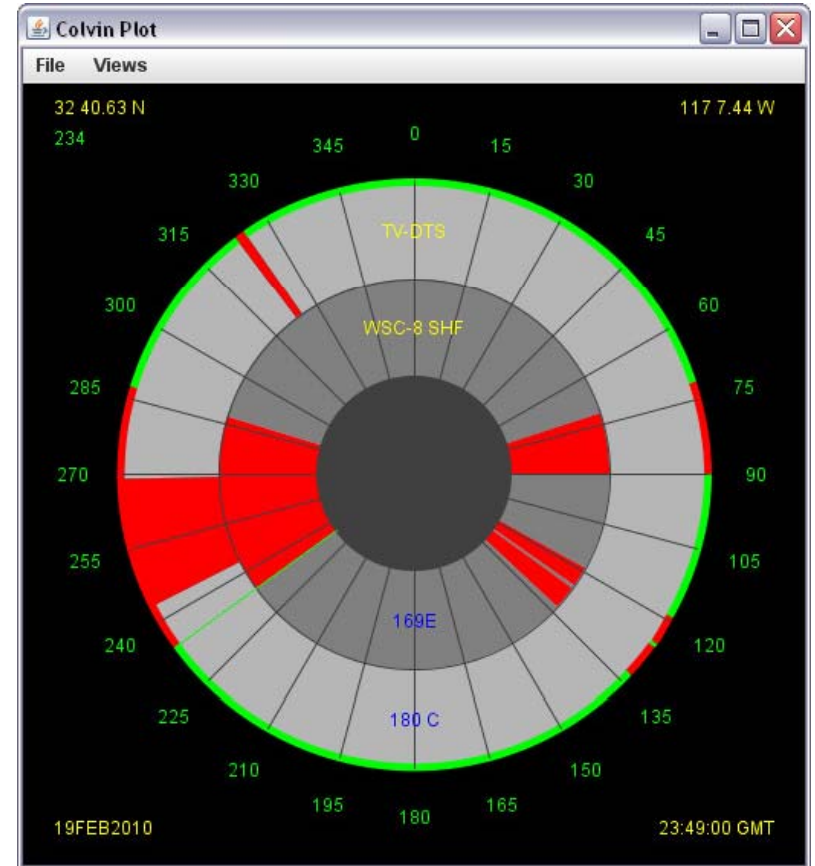
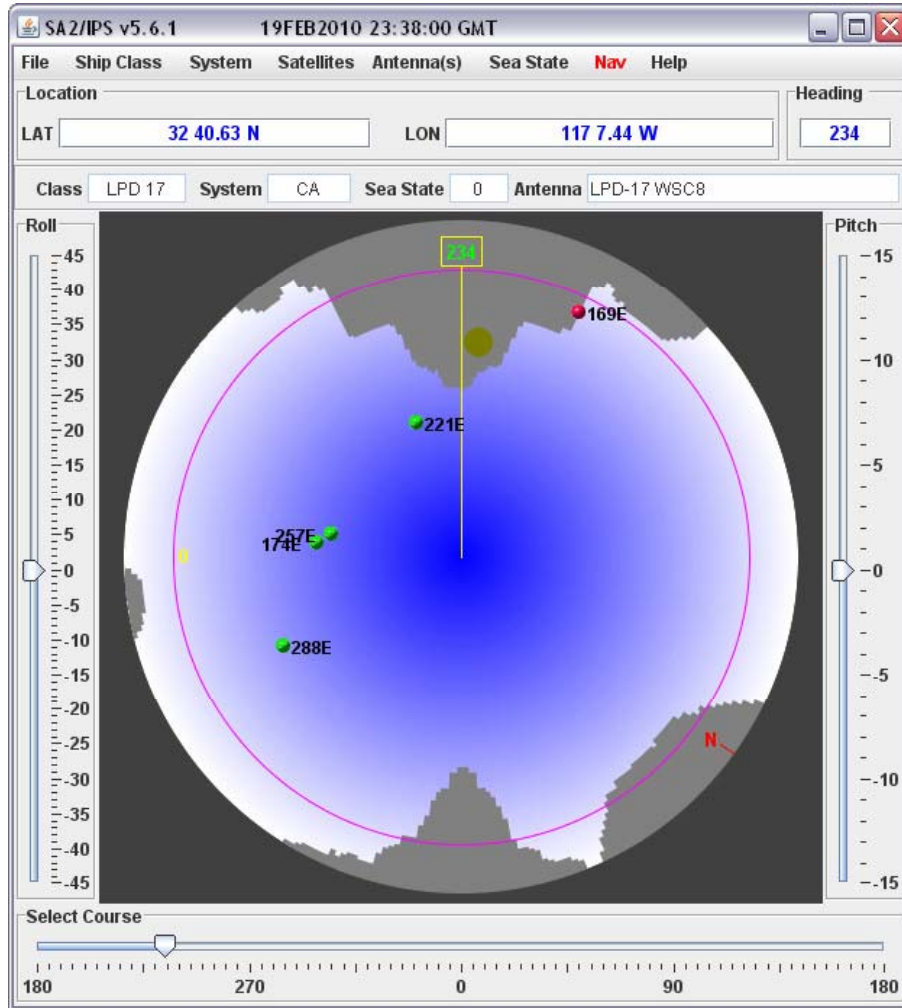
- The SATCOM Availability Analyst (SA2) is a software application originally built for SPAWAR PMW 176, now included in AESOP, and also fielded by USCG
- SA2 allows SATCOM operators to determine, for any location, heading, and sea state, what SATCOM systems are available given superstructure blockage and elevation angle constraints
- SA2 features a library of handlers allowing real-time connection to Navy, Coast Guard and commercial navigation and attitude data sources
- It provides real-time Situation Awareness to shipboard SATCOM *operators*, in an extremely simple display which has already seen months of at-sea testing and refinement, including in combat
- It also allows SATCOM *planners* to develop global statistics for the availability of Line of Sight (LOS) for specific constellations and topside designs, taking ship motion into account. It supports mission planners in optimizing satellite cutovers

# Where is it in AESOP 2.1?

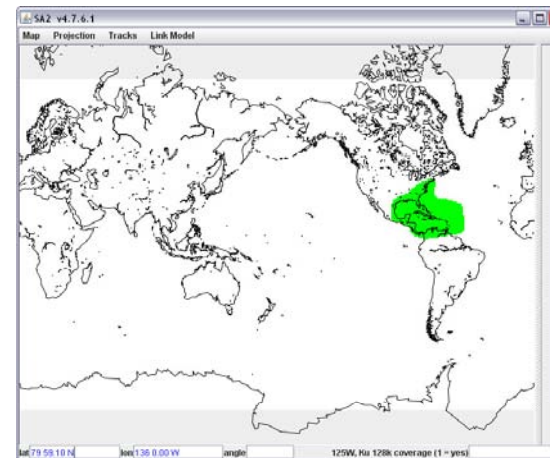
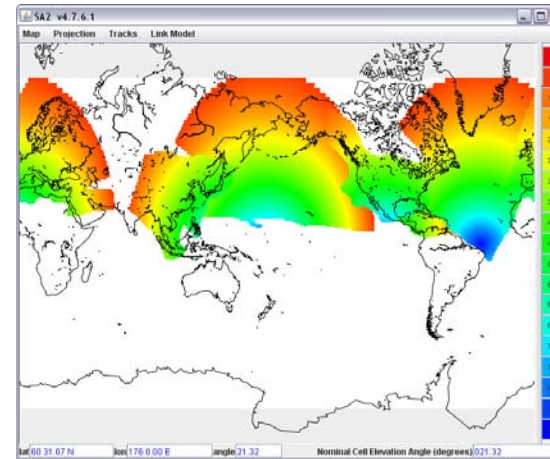
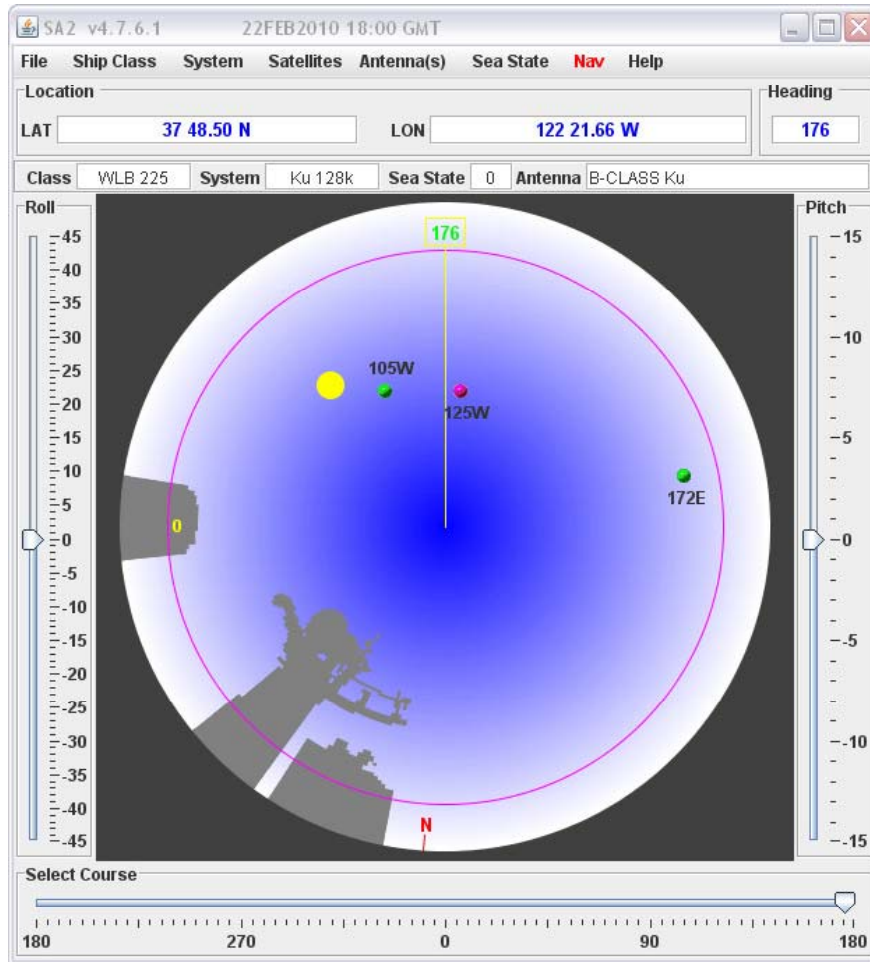


1. Under “Tools” menu
2. Right-click on ship icon

# What does it look like?



# What *will* it look like?



# Current Plans, AESOP Version

- **Fold in latest USCG advances**
  - **Location “Bookmarks”**
  - **Spot Beam handlers**
  - **User and Administrator Guide**
- **Share waypoint files or Scenario phase locations with AESOP**
- **Implement automatic cutover-plan generator**
- **CBSP terminal blockage files and constellation definition**
- **Add Seawolf, Virginia-class and SSGN sail plans**
- **Add LCS-1, LCS-2**
- **... and interested in your ideas!**

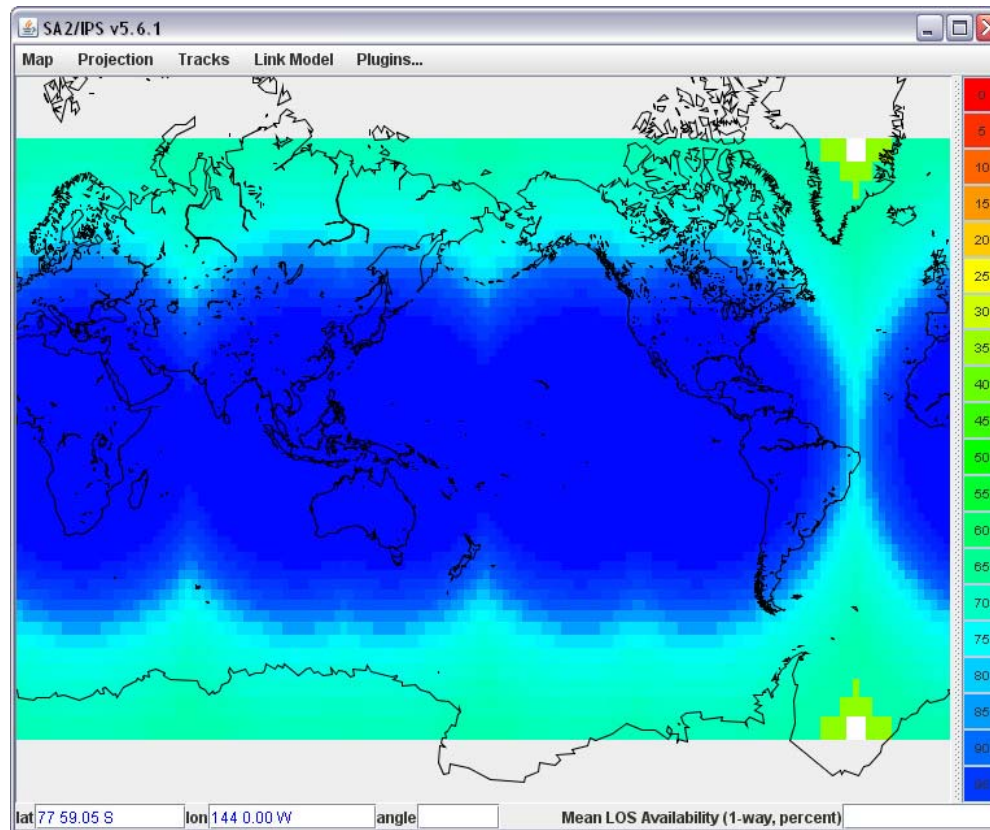
# Who we are

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# Backup

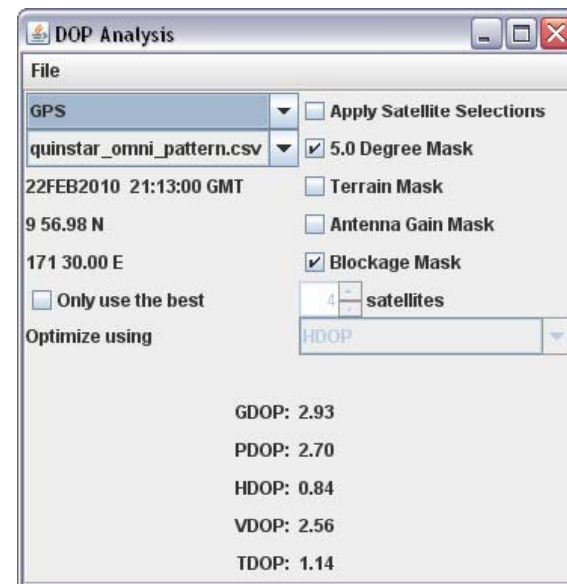
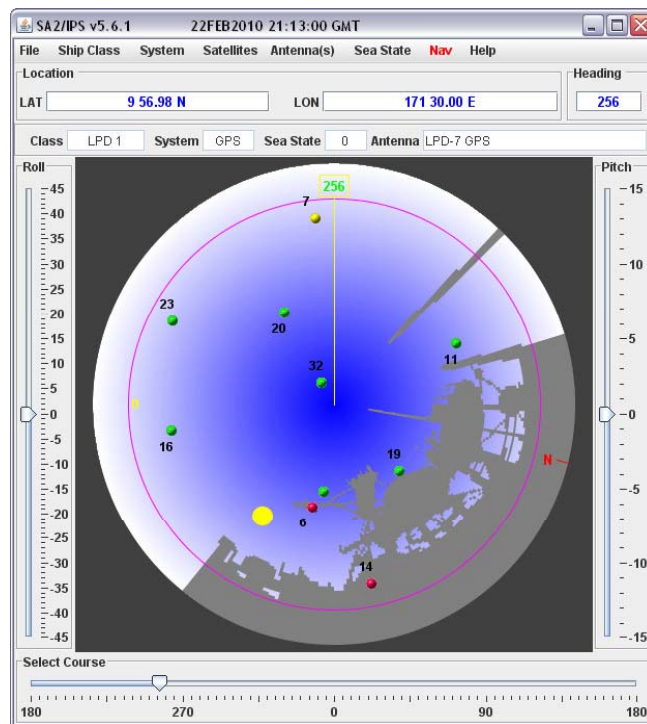
# Averaged LOS Availability (ALA)

- Percentage of usable (unblocked) headings, at a given location
- May be mapped
- May be averaged over the entire footprint of a constellation

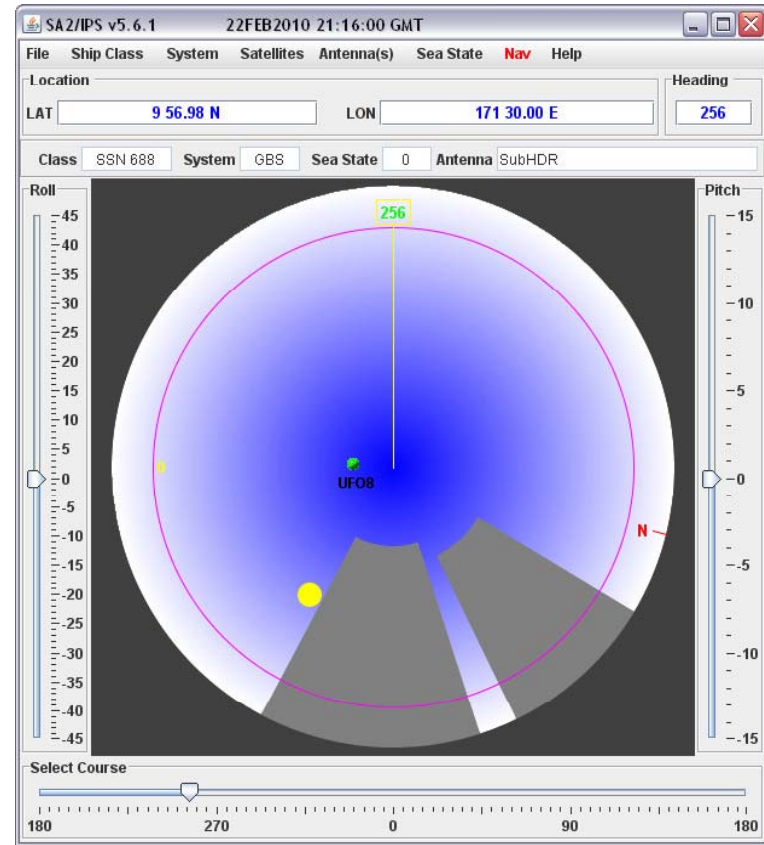
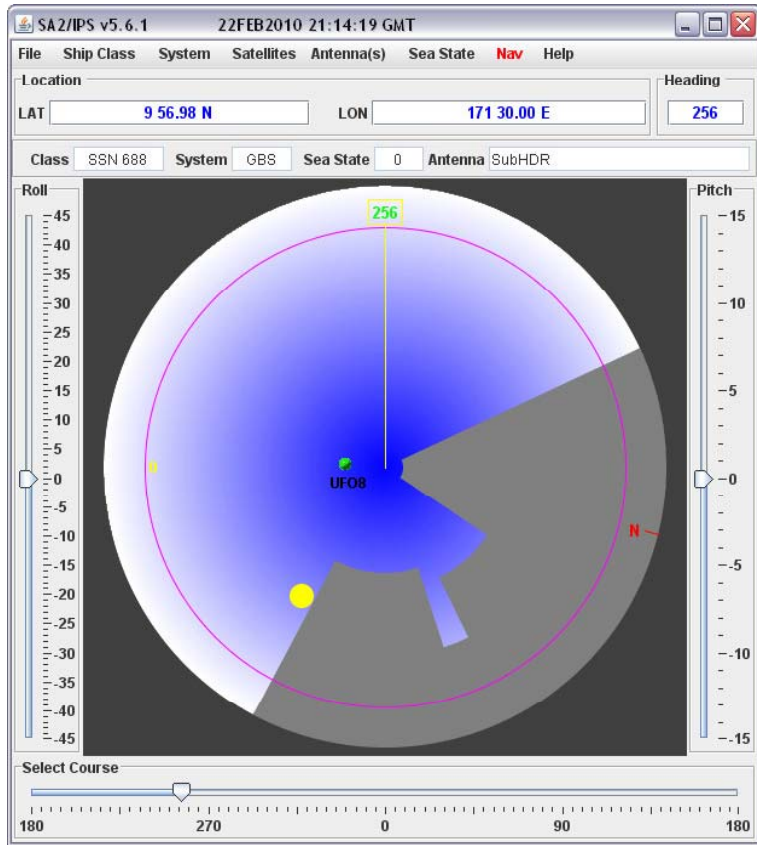


# GPS Tools

- Can display GPS Satellites in view, in real time
- Compute DOP metrics, reflecting WRN-6 and newer receiver models



# Other Examples



# Blockage File Acquisition

- Prefer to import Antenna Control Unit files
- Can do quick, approximate optical surveys when ACU files not generated (INMARSAT, TV...)

