

# Priority Topics for the NOAA CORS Network

Dr. Theresa Damiani  
Chief of the Spatial Reference System Division  
(DOC-NOAA-National Geodetic Survey)

Presented at the DOT Extended PNT Working Group, March 15, 2022

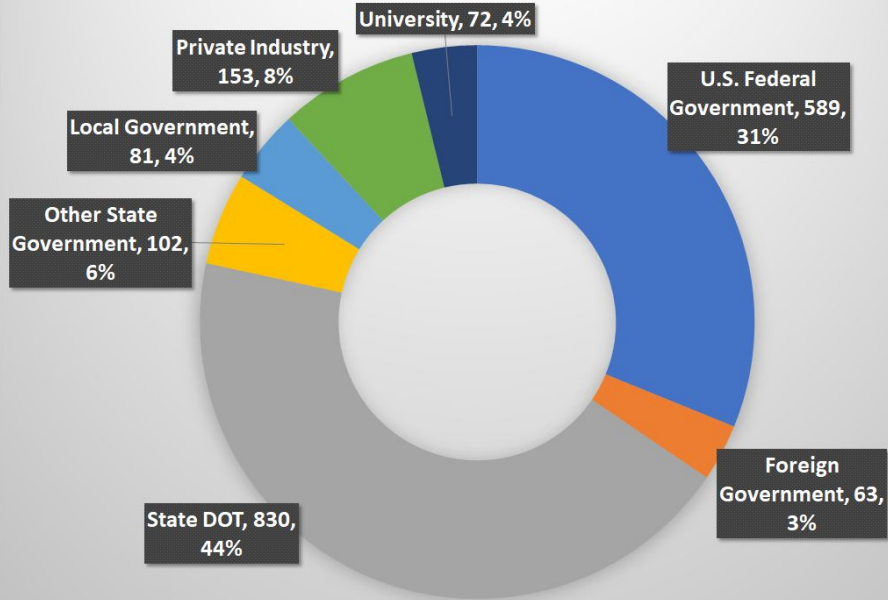


# Using the NCN to Meet National Needs

- Draft (in internal review) of strategic plan for expanded civil national support via the NOAA CORS Network via partners' continuous GPS/GNSS ground stations
- Geospatial Data Act, reaffirms NGS' role in creating the reference frame for use by federal agencies in all civil applications- positioning, navigation, mapping, remote sensing, etc.
- Ensuring use of the International Reference Frame as the basis for the NSRS' U.S. terrestrial reference frames
  - Foundation CORS
  - Supporting the UN's Global Geodetic Reference Frame (GGRF)
- New alignment service to allow NSRS coordinates to be assigned to any CORS
- Expanding GNSS observations- "All in the sky"
- New guidelines on installing and maintaining CORS participating in the NCN to support longevity and quality of data

**Part of NGS' Mission: Enable partners to support adoption of the NSRS for use in national-level geospatial, surveying, transportation, commerce, and science.**

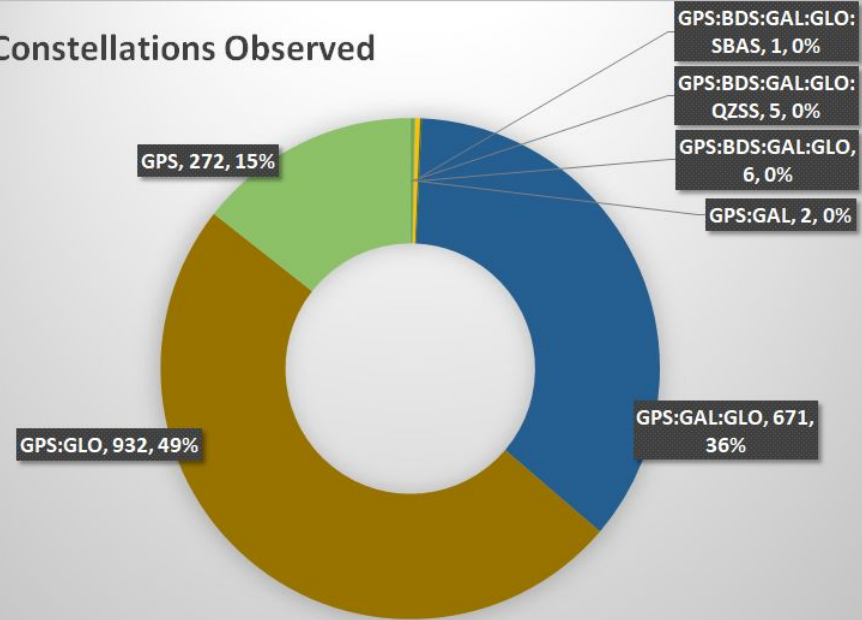
## NCN Stations Operated by Each Partner Type, Total Active Stations = 1890



Establishing an alignment service would allow NGS to provide NSRS coordinates to (potentially) thousands more GPS/GNSS stations in the U.S.

This opens up NCN/NSRS use to national applications in transportation such as autonomous vehicles

## Constellations Observed



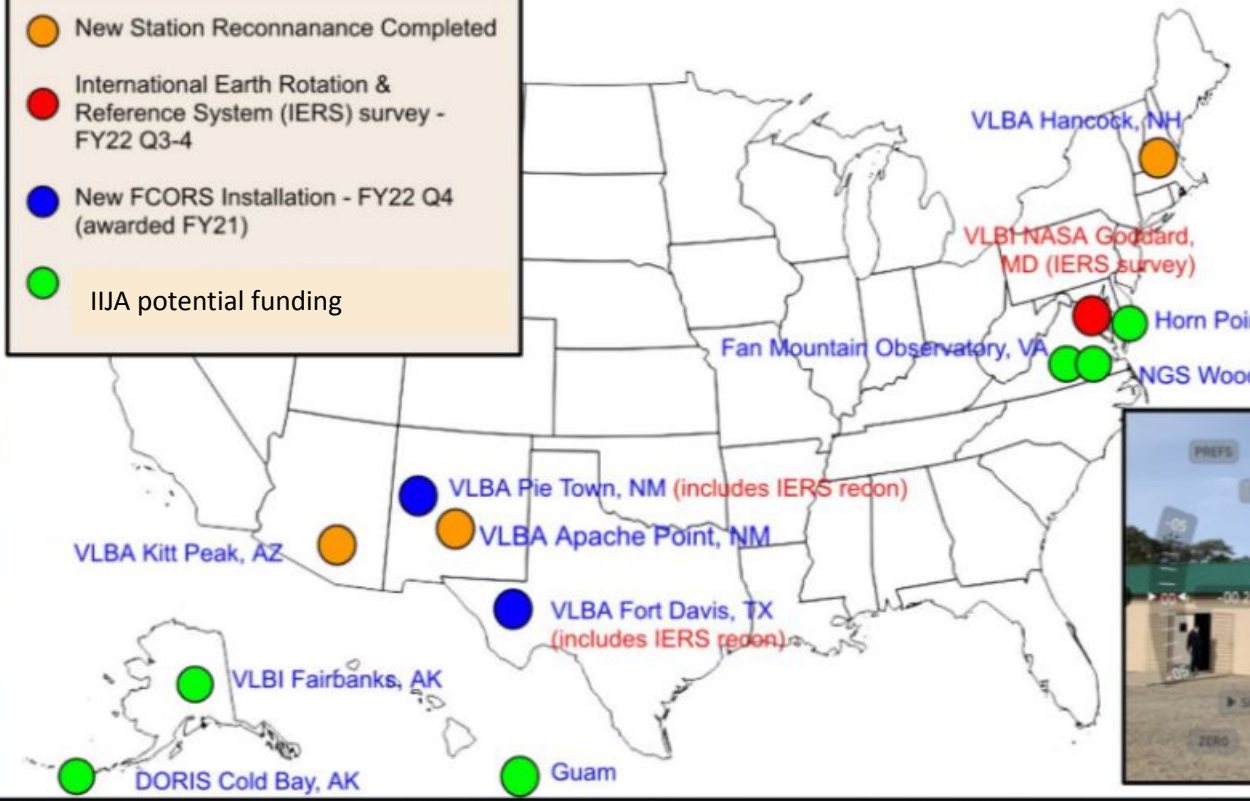
GNSS Constellations currently observed by NCN stations include the U.S.' Global Positioning Service (GPS), Russia's GLONASS (GLO), E.U.'s Galileo (GAL), China's BeiDou (BDS), Japan's Quasi-Zenith Satellite System (QZSS), as well as limited Satellite Based Augmentation Systems (SBAS).

NCN Guidelines will encourage "All-in-the-sky" observation for positioning resilience

# Foundation CORS Update



- New Station Reconnaissance Completed
- International Earth Rotation & Reference System (IERS) survey - FY22 Q3-4
- New FCORS Installation - FY22 Q4 (awarded FY21)
- IJA potential funding



Site Reconnaissance at Very Long Baseline Array (VLBA) Kitt Peak, AZ

