

CORS Network FY2007

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CORS Users Forum at the CGSIC Meeting

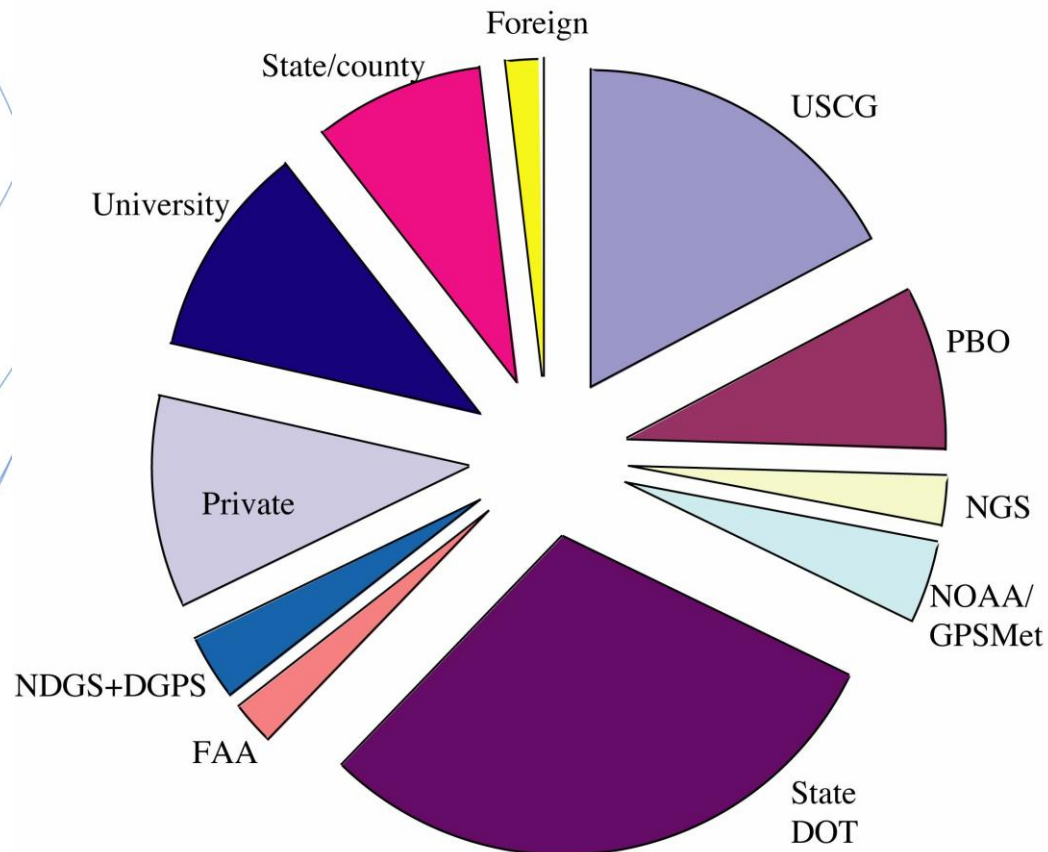
Fort Worth, TX

September 25, 2007

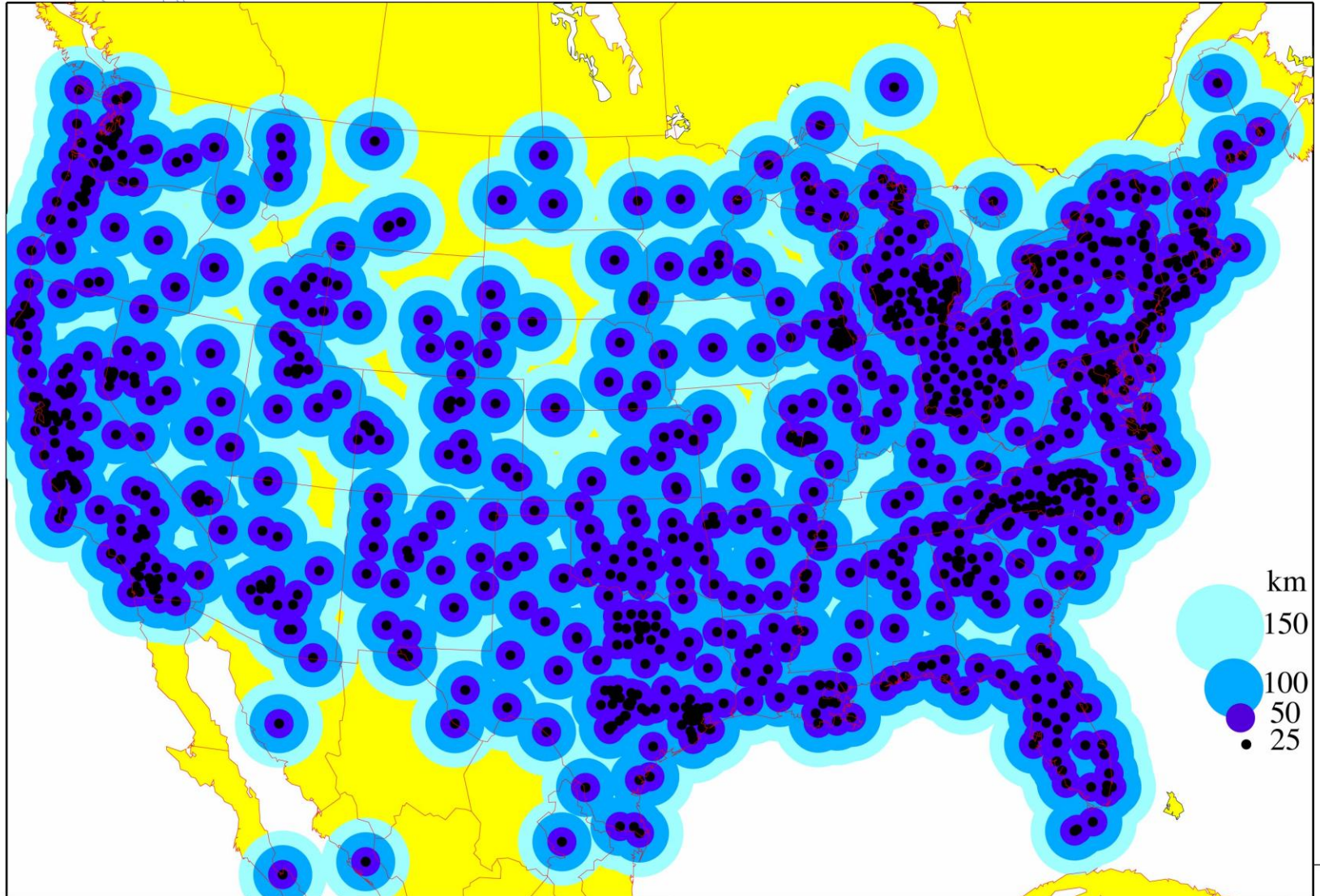


CORS = Partners

- CORS is > 98% volunteer



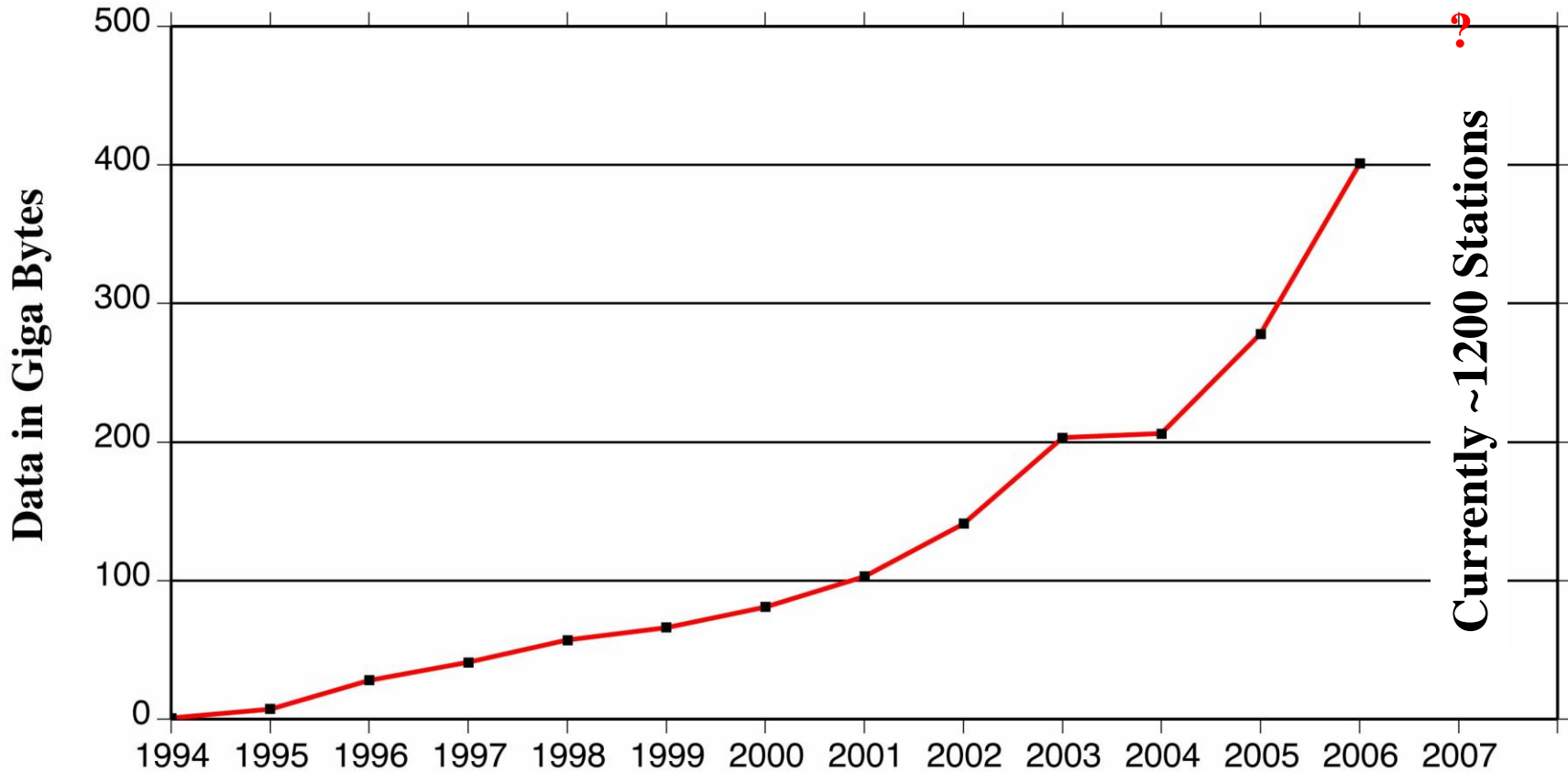
CORS Network in CONUS 2007



Volume of Online CORS Data Stored

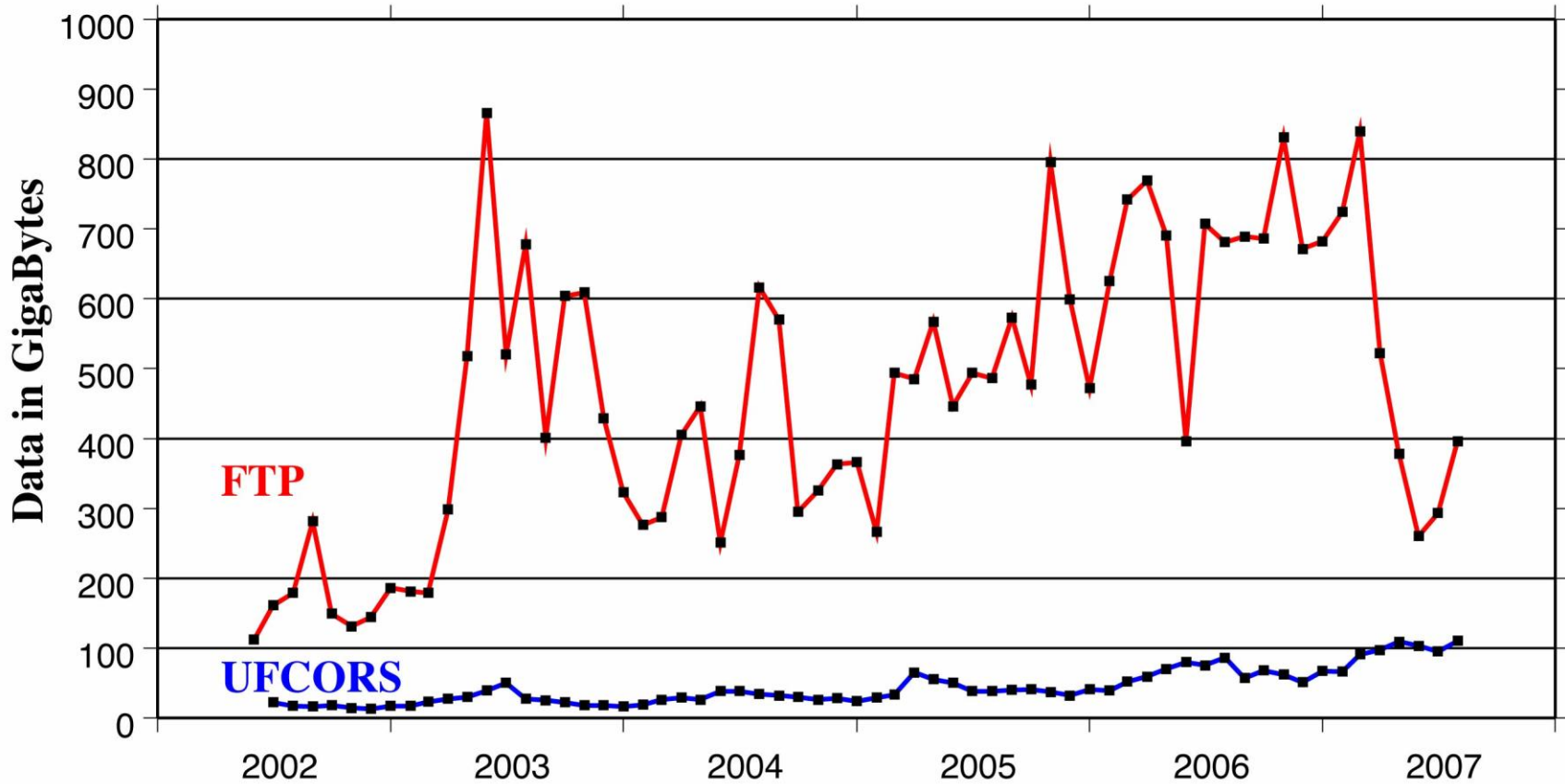
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Volume of Data Archived



CORS Monthly Data Downloads 2002-2007

Amount Data Downloaded FTP vs UFCORS



Access to CORS data

In Silver Spring (CORS-East)

- Anonymous FTP cors.ngs.noaa.gov
- UFCORS- User Friendly CORS www.ngs.noaa.gov/UFCORS

In Boulder Colorado (CORS-West)

- Parallel and independent data collection and on-line storage at NGDC (National Geophysical Data Center)
Anonymous FTP wwwest.ngs.noaa.gov

Future:

- Add OPUS and UFCORS

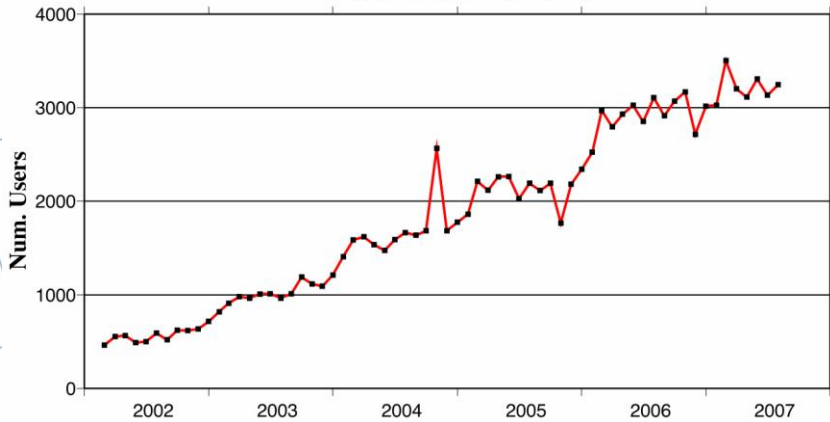


CORS Activities FY 2007

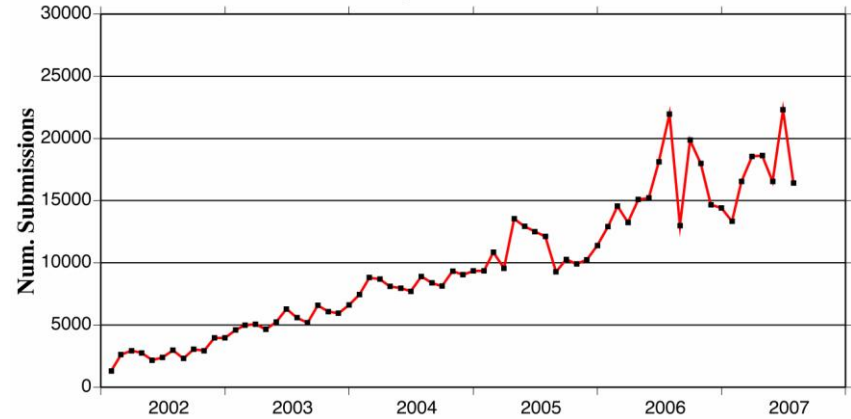
- OPUS showcased as e-gov initiative by Department of Commerce
- OPUS-RS operational product (allows users to submit 15 min)
- NGS GPS orbits reach 1 cm-level
- NGS was selected to the IGS Analysis Center Coordinator (4 year term). Coordinate IGS orbit products.
- HTDP software for the western US has almost been revised
- Continued to prepare for complete re-analysis of all CORS data including all orbits 1994-to date ~1.5 Tbyte of data.
- CORS-West fully operational
- Prototype CORS-Realtime service almost operational

OPUS Usage and Users

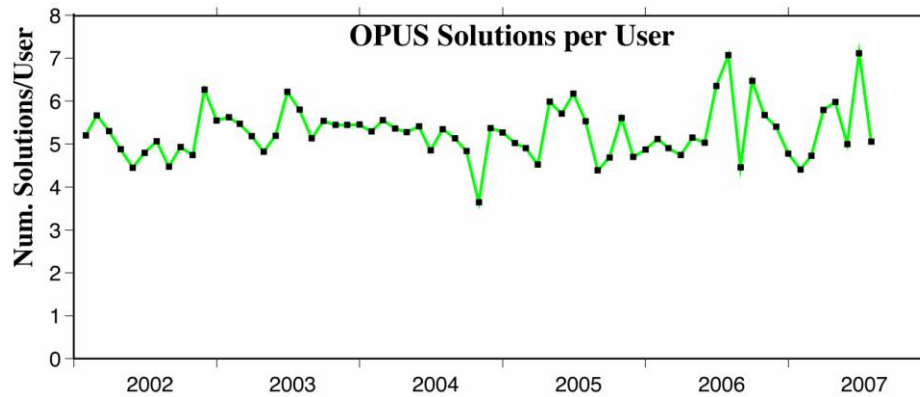
Number of OPUS Users



Monthly OPUS Submissions



OPUS Solutions per User



OPUS-RS
has ~4500
submissions
per month

What have our partners been doing?

- Upgrading stations, phasing out equipment that is past end-of-life = improving overall network quality
- Upgrading stations to GNSS i.e. GLONASS, L2C
NGS will archive this data
- Establishing new stations and aggressively moving to realtime
- USCG/NDGPS have upgraded ~40 sites
 - Removing Ashtech antennas and replacing them with Trimble antennas, in addition the antenna is being raised 15cm actual position changes 17-28cm in the vertical.
 - Old station is decommissioned and define new station becomes xxx5 and xxx6

Proposing New CORS

- During FY 2007 very few new CORS accepted

WHY? A host of internal software/hardware and network problems

- Started working this month on a backlog of ~400 CORS
- We expect most of the sites to be accepted so CORS will expand significantly
- Guidelines very important

www.ngs.noaa.gov/CORS/Establish_Operate_CORS.html

[ngs.proposed.cors @ noaa.gov](mailto:ngs.proposed.cors@noaa.gov)

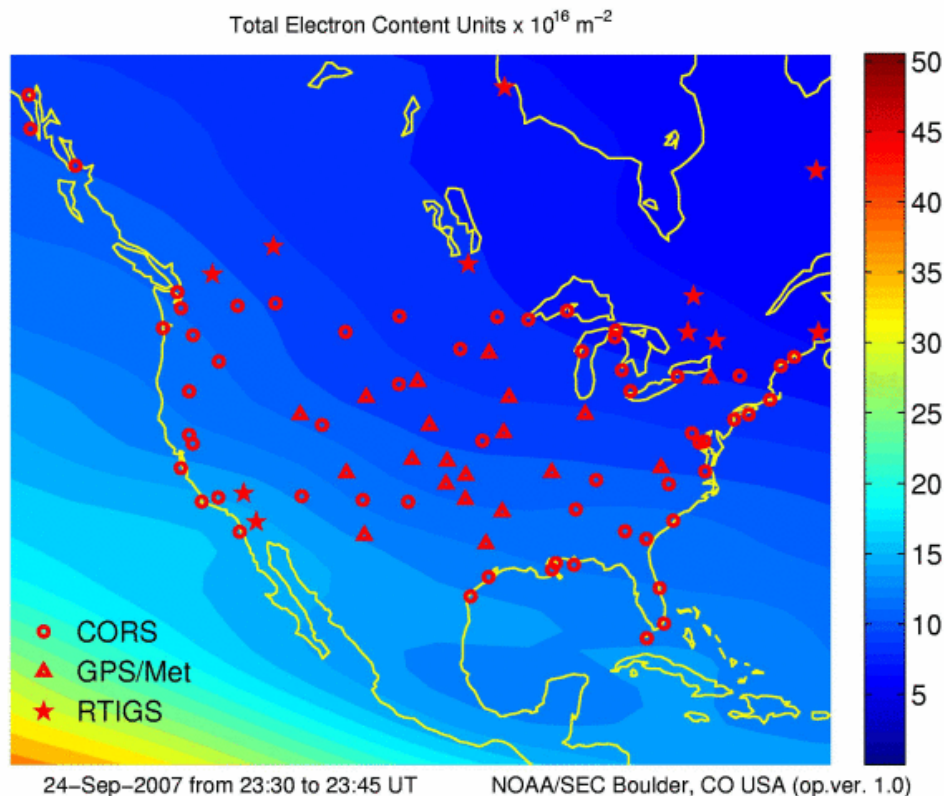


Supported International Activities

- Assisting in establishing a 7 station CORS network in Benin at the request of the Millennium Challenge Corporation of the US State Department and in collaboration with UNAVCO
- Establishing 3 CORS stations in Ethiopia to support a USAID project on land privatization
- Establishing 1 station in the British Virgin Islands

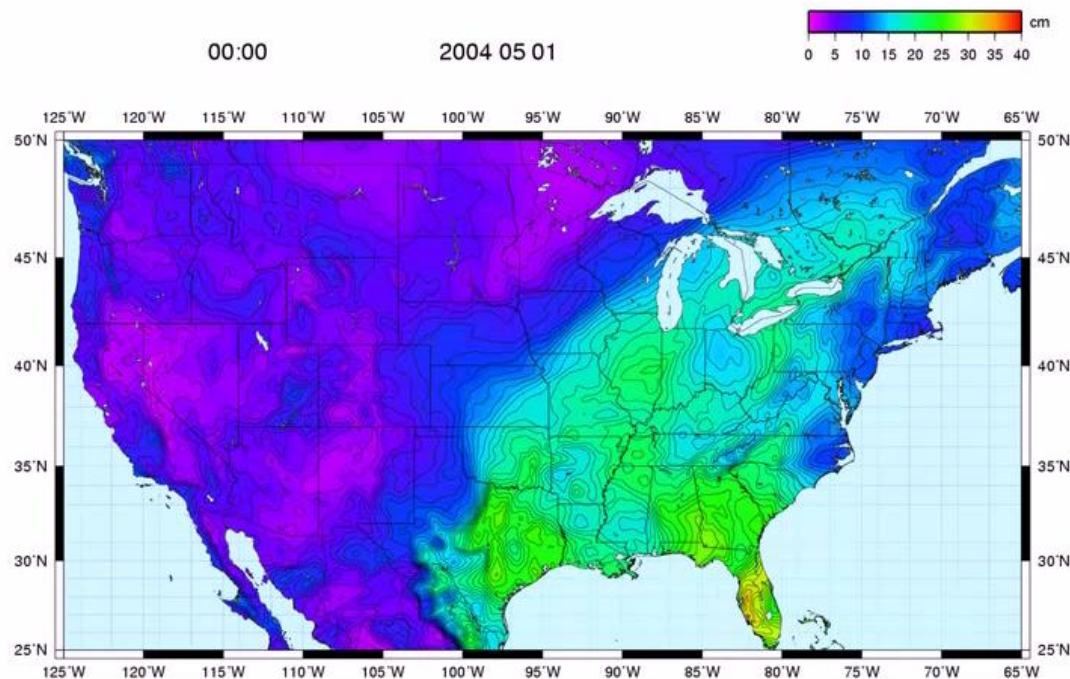
NOAA's US-TEC Space Weather Program

- Became an operational product in FY 2007
- Uses CORS data to calculate total electron content (TEC) in the ionosphere. Needed for space weather e.g. airplanes, telecommunications



NOAA's GPS Meteorological Program

- Provides a tropospheric model of wet zenith delay over the US. It currently is one of the input data sets for the National Weather Service forecasting models. Will transition from research to operations in FY 2009



Plans for FY 2008

- New OPUS flavours (more in a little bit)
- Start of re-analysis of all CORS data and orbits (2 years)
- Guidelines for realtime GPS (more in a little bit)
- Publish new HTDP for Western US
- Start work on new HTDP for Alaska
- Continue to work with our partners to improve existing stations and add new ones

Questions

- For any questions that you have on or about CORS products and services do contact NGS staff.
- If you don't know who to contact start with me and I'll put you in contact with the appropriate person.

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