



NOAA's Space-Based Commercial Data Activities

Presented to CGMS-49 Plenary session, agenda item 5

Outline

- Current operational RO data purchase
- Impact on NWP models
- CWDP Round 3
- Summary and upcoming work

Operational Radio Occultation Data Purchase

Contracts

- Draft Statement of Work released April 2, 2020; final RFP released August 4, 2020
- GeoOptics and Spire Global awarded contracts on November 20, 2020

Acquisition approach

- Indefinite Delivery Indefinite Quantity (IDIQ) contracts covering 2 years (Nov 2020 - Nov 2022)
- NESDIS will issue individual Delivery Orders under IDIQ

Requirements

- Must be on orbit at the time of RFP release
- RO data gathered globally
- Latency of 140 minutes or less
- Quality requirements stated in terms of signal-to-noise ratio
- Data sharing requirements defined for each individual Delivery Order (DO)
- Several priced options for data sharing in the IDIQ contracts

Delivery Orders 1 and 2

Delivery Order 1

- 30 days of data at 500 RO/day, with contracts issued to both qualified vendors: Spire and GeoOptics
- Data shared in near real time with US Government Agencies. Data shared with international partners after 24 hours.
- Using the data to validate that the formats, latency, quality, and coverage of the data will be sufficient for longer-term operational use

Delivery Order 2

- Six months of data at 1,300 RO/day awarded to GeoOptics
 - 1,300/day is an additional ~20% of the current RO volume, sufficiently large to show the impact of the purchased data to our forecasts
- Data shared in near real time with US Government Agencies. Data shared with international partners after 24 hours.
- Data began flowing on March 17th
- 45-day data evaluation by NWS; data planned to go into NWS operational models on May 18

Delivery Order 3

- NOAA plans to award a third delivery order later this year

NOAA Assessment of Impact on NWP

- NOAA assessed the NWP impact of the Radio Occultation data acquired during the Commercial Weather Pilot
 - NOAA determined that the overall impact on NWP was positive and that the data was suitable for use in NOAA environmental models.
- NOAA will conduct a cost-benefit assessment for the commercial weather data provided in Delivery Order 2.
 - NOAA's National Centers for Environmental Prediction will assess the impact on model performance for the first two months of data (March 2021-May 2021)
 - NOAA will provide a report on the assessment to Congress by the end of the calendar year
 - NOAA will determine whether the report can be publicly released

CWDP Round 3

NOAA Released Commercial Weather Data Pilot Round 3 RFI in September 2020

- Open to US Companies
- Multiple responses received
- NESDIS evaluated responses for suitability and feasibility

NESDIS currently examining feasible responses to validate readiness, assess priority to NESDIS, coordinate with other government agencies on data availability, and assess internal readiness to pilot new data type

Tentative plan to pursue CWDP Round 3 pilots in FY2022

Summary

Commercial Radio Occultation Data:

- Commercial Weather Data Pilot Round 2 completed Spring 2020: Demonstrated readiness of commercial sector to provide RO data operationally
- Operational RO Data Purchase underway: Two-year contracts awarded in November 2020 to GeoOptics and Spire Global for RO data for operational use, with specific data Delivery Orders released one at a time
- Use of commercial data in operational NWP models in May 2021

Upcoming commercial data work to be conducted in FY 2021:

- Continue evaluation of options for CWDP Round 3 for potential execution in FY 2022
- Gathering requirements for follow-on operational RO contracts