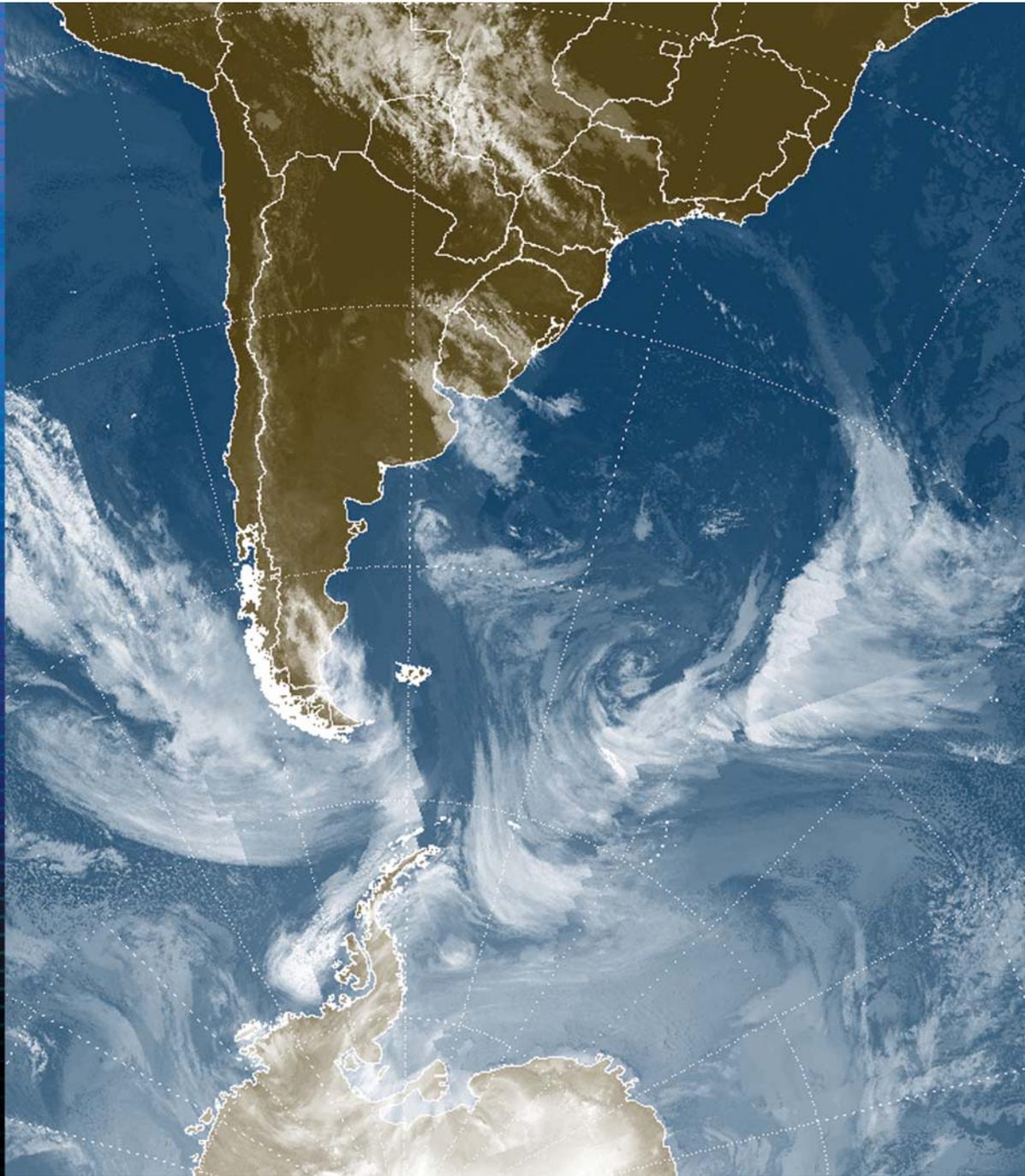
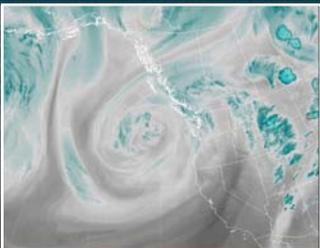
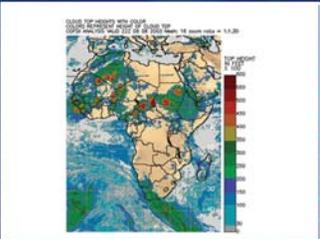
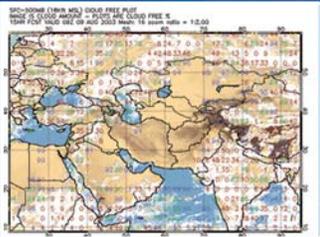
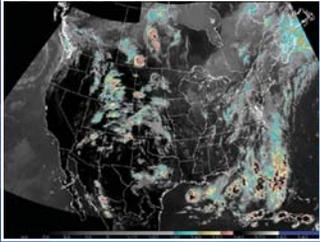
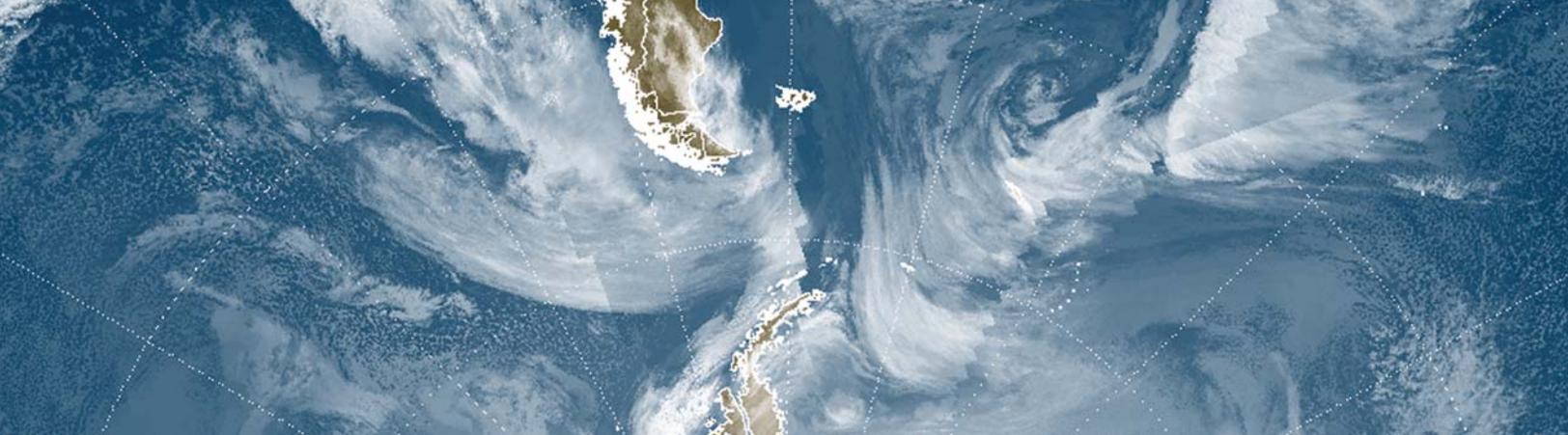


Satellite Data Handling System and Cloud Depiction Forecast System



Timely weather information for critical mission support



Because clouds affect the performance of intelligence, surveillance and reconnaissance platforms and sensors, their accurate depiction with high temporal and spatial resolution is required for successful military operations.

Satellite Data Handling System

The Air Force Weather Agency's (AFWA) Satellite Data Handling System (SDHS) receives and processes available meteorological data from national and international satellites and makes it available to DoD and other government users for daily operations and mission support. The SDHS can handle all geostationary and polar orbiting satellites and is periodically updated to receive new products from evolving sensors and new sources of data.

Northrop Grumman delivers system engineering, management and sustainment services to SDHS. This includes preparing the system to accept and process data from the next generation of geostationary and polar orbiters, such as the National Polar-Orbiting Operational Environmental Satellite System (NPOESS) spacecraft, which will replace the Defense Meteorological Satellite Program (DMSP) and NOAA Polar-Orbiting Operational Environmental Satellite series at the end of their expected life spans.

Before Japan's Geostationary Meteorological Satellite ceased operations, U.S. federal agencies undertook complex operations to provide similar data coverage until Japan could launch its next generation satellite, MTSAT. Northrop Grumman implemented complex software changes for SDHS and Cloud Depiction and Forecast System II systems, requiring significant inter-program communication and cooperation to provide continuous operational support.

Cloud Depiction and Forecast System

Satellite weather data from SDHS is processed and visualized by the Cloud Depiction and Forecast System - Version II (CDFS-II). This complex system significantly improves the operational global cloud analysis and forecasting capabilities of the U.S. Air Force. CDFS-II provides near real-time global cloud analysis operations at AFWA. It integrates new science algorithms and operational infrastructure to analyze combined global-coverage data from the Defense Meteorological Satellite Program, the civilian Polar Operational Environmental Satellite program, and the international constellation of geostationary environmental satellites operated by the United States, Europe, Japan, and other foreign entities.

Northrop Grumman delivers systems engineering and integration, management and sustainment services for CDFS-II system, which processes data from a variety of satellites hourly to produce high-resolution cloud products. These cloud products give mission planners a complete picture of the battlespace from the ground to the upper atmosphere. CDFS-II combines visible and infrared data collected from polar-orbiting and geostationary satellites, producing virtually seamless cloud analyses and forecasts.

Numerical modeling performed by CDFS-II provides timely forecasts of cloud cover and related meteorological parameters that affect operations and weapons systems. AFWA is the only agency in the world with this capability.

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