

7B.7 WEB-BASED SKEW-T DISPLAYS OF GOES AND POES OPERATIONAL ATMOSPHERIC SOUNDINGS

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The National Oceanic and Atmospheric Administration (NOAA) National Environmental Satellite Data and Information Service (NESDIS) provide vertical atmospheric profiles of atmospheric soundings derived from Geostationary Operational Environmental Satellites (GOES) and Advanced TIROS (Television and Infrared Observation Satellite) Operational Vertical Sounding (ATOVS) systems. GOES soundings are derived from the sounders aboard GOES-11 (West) and GOES-12 (East). Operational ATOVS soundings are derived from the sensors aboard the NOAA-15 and 18 series of Polar Orbiting Environmental Satellites (POES) and the European Meteorological Operational satellite (MetOp-2). In an effort to ensure consistent levels of service and quality assurance for these suites of products, the Office of Satellite Data Processing and Distribution (OSDPD) is implementing and executing new, innovative tools to better monitor performance and quality of the operational GOES and POES sounder and imager products being generated. The incorporation of these tools in both the Center for Satellite Applications and Research (STAR) and the OSDPD will facilitate the joint diagnosis and resolution of problems when detected in the operational environment.

The OSDPD has implemented software created by STAR to produce hourly SKEW-T diagrams for over 450 sites across the U.S., Mexico, Caribbean, Western Atlantic, Eastern Pacific, and Southern Canada (including 24 hr archive) using Man computer Interactive Data Access System (McIDAS) and Meteorological Data (MD) files which are generated from the GOES Soundings single-field-of-view files. In order to leverage off the GOES capability and associated software, the OSDPD Satellite Services Division (SSD) has developed the POES sounder SKEW-T web pages that will compliment the GOES pages. A schematic Diagram in Figure (1) is shown for POES SKEW-T processing. The software to create the POES SKEW-T plots is similar to the one that is used for GOES except that three additional modules (C1, C2, and C3) are needed to convert the POES RODF (Rotational Orbital Data File) to a GWIN (GOES Derived Wind) MD file and a POES MD file without a wind component as shown in Figure (1). The C4 and C5 modules shown in Figure (1) developed for GOES SKEW-T processing are unchanged. There is HTML code to display the output on the SSD web site as shown in Figure (2), including a 24 hours archive of these images with animation.

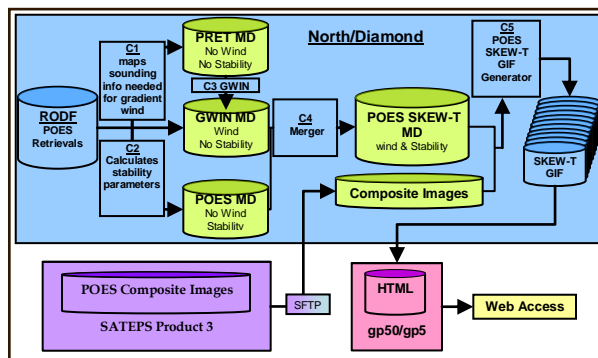


Figure 1. POES SKEW-T Processes are

- C1: Maps sounding information from RODF files into PRET MD files
- C2: Calculates stability parameters
- C3: Computes the gradient winds
- C4: Merge POES MD and PRET MD to make a new POES Skew-T MD file that have information on retrieval, wind and the stability parameters.
- C5: Generate the SKEW-T gif files

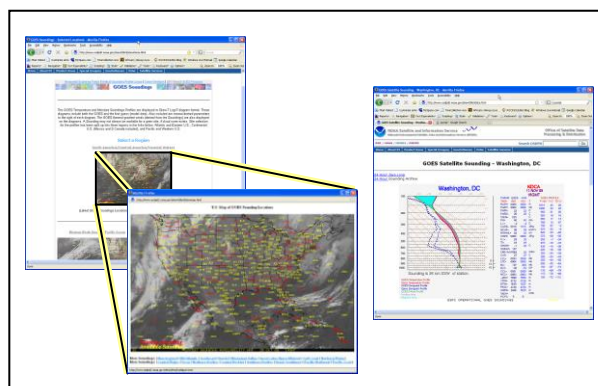


Figure 2. GOES Satellite SKEW-T Web Page for DCA

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