

Suomi-NPP OMPS Instrument Performance Monitoring via the Integrated Calibration/Validation System

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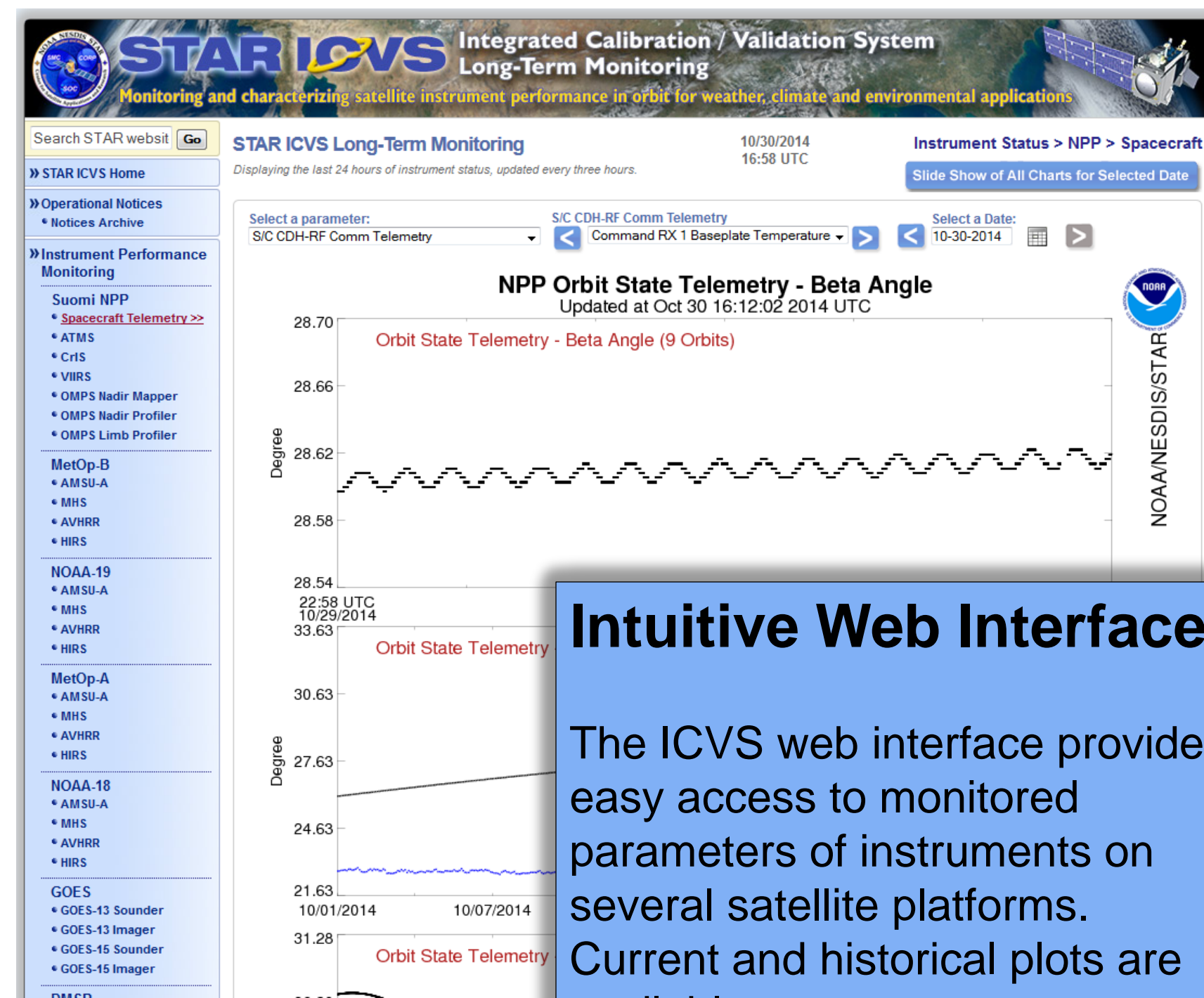
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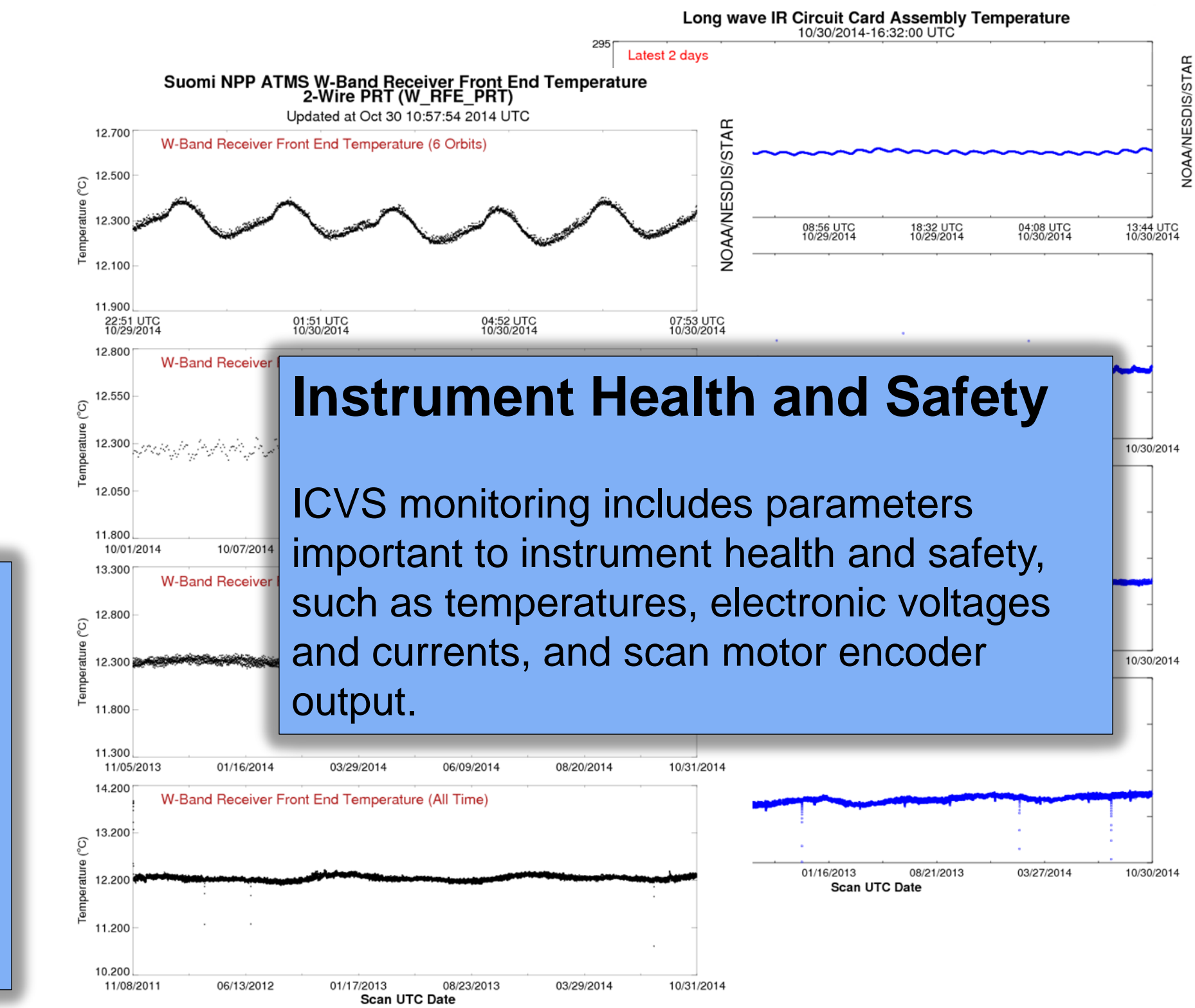
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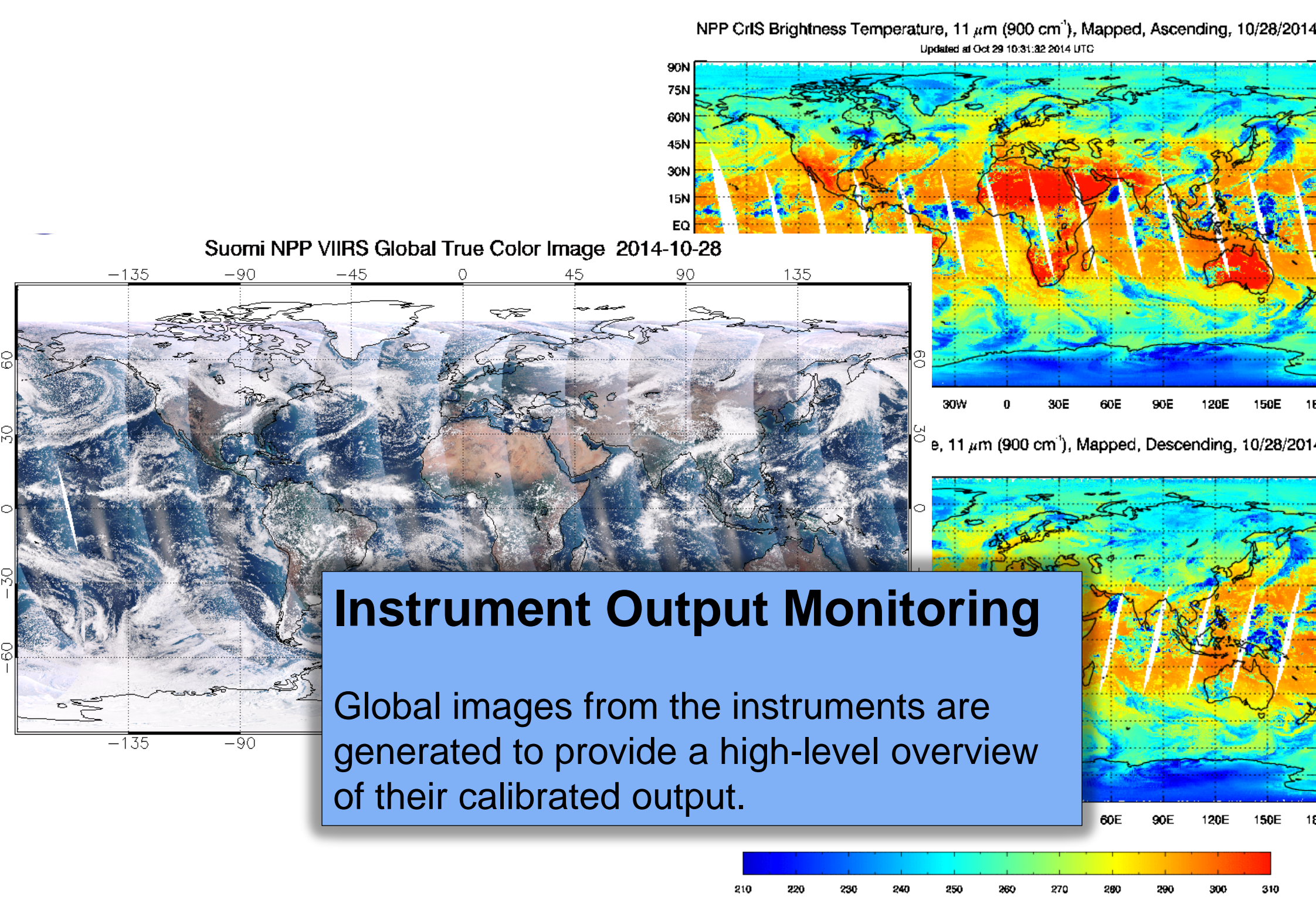
The NOAA Center for Satellite Applications and Research (STAR) Integrated Calibration/Validation System (ICVS) Near real-time and long-term performance monitoring for environmental satellite instruments on the World Wide Web (WWW)



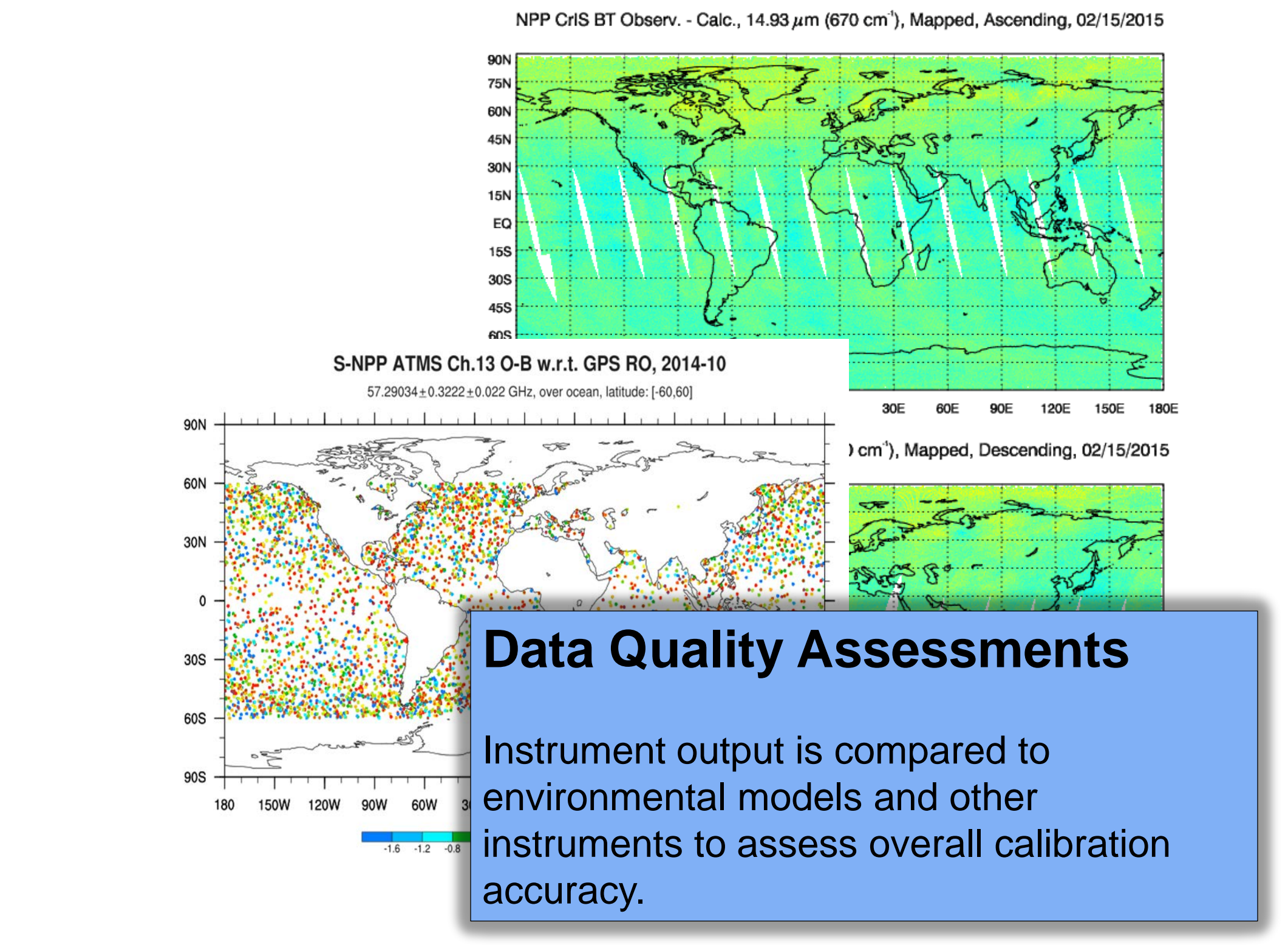
Intuitive Web Interface
The ICVS web interface provides easy access to monitored parameters of instruments on several satellite platforms. Current and historical plots are available.



Instrument Health and Safety
ICVS monitoring includes parameters important to instrument health and safety, such as temperatures, electronic voltages and currents, and scan motor encoder output.

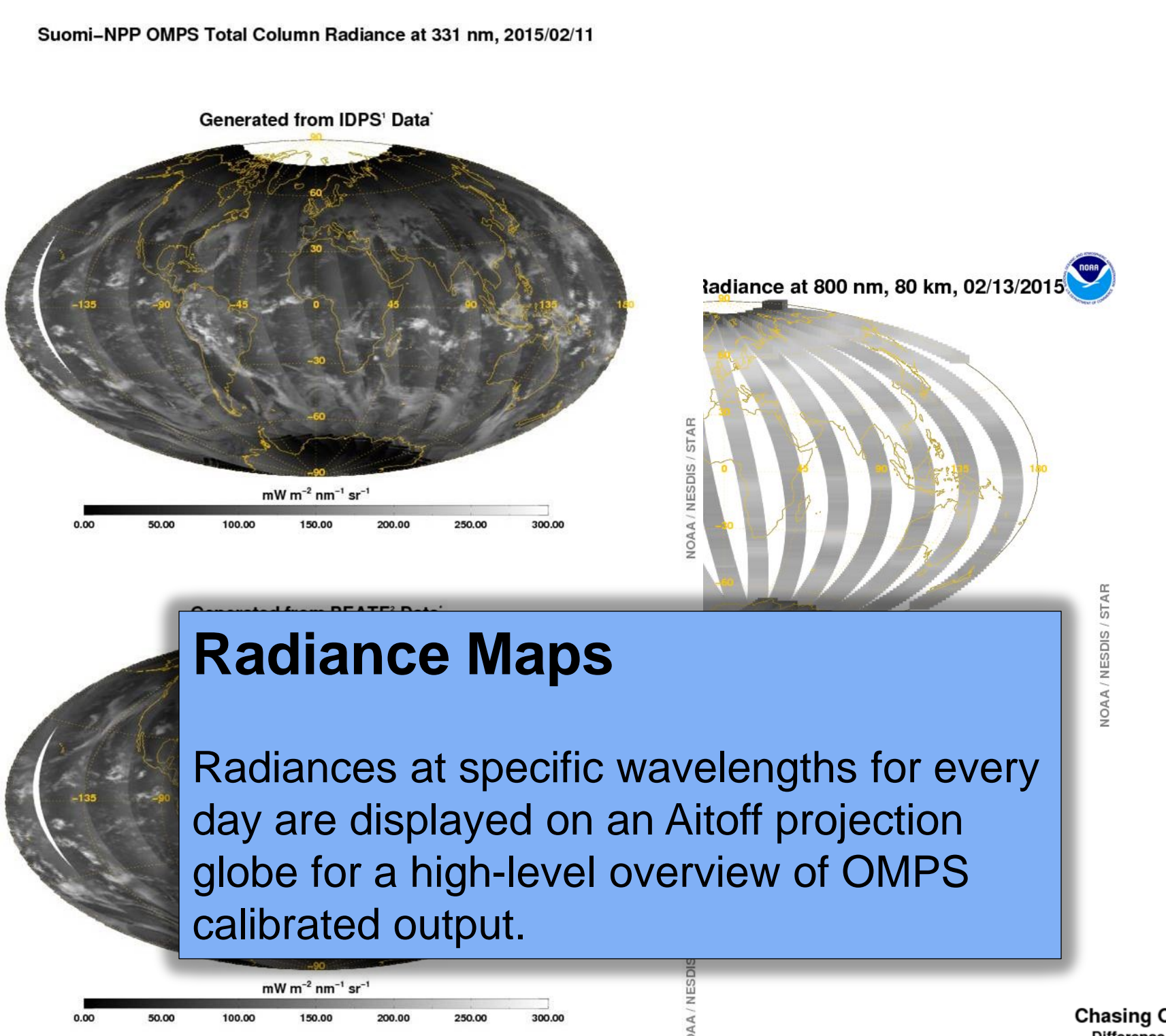


Instrument Output Monitoring
Global images from the instruments are generated to provide a high-level overview of their calibrated output.

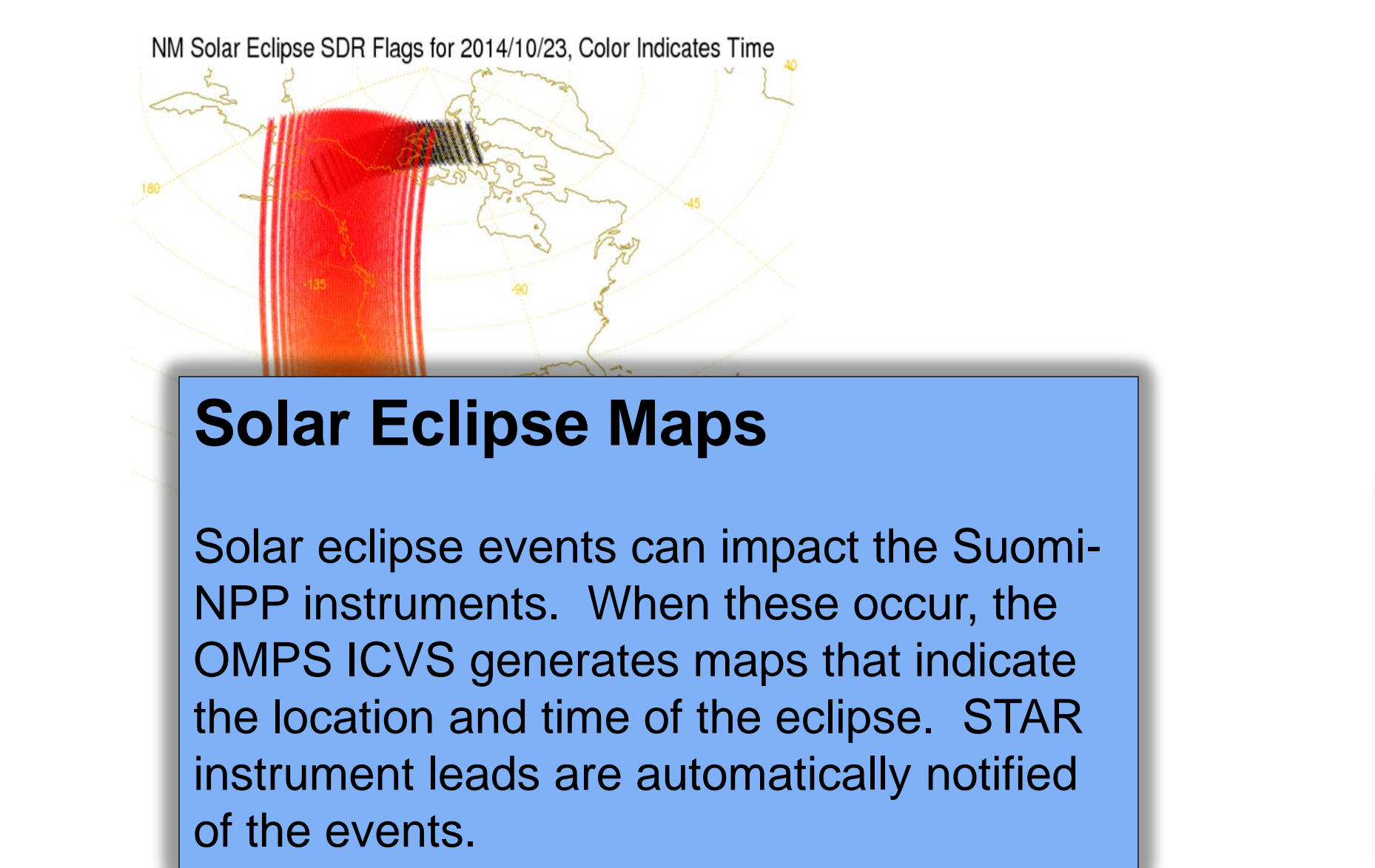


Data Quality Assessments
Instrument output is compared to environmental models and other instruments to assess overall calibration accuracy.

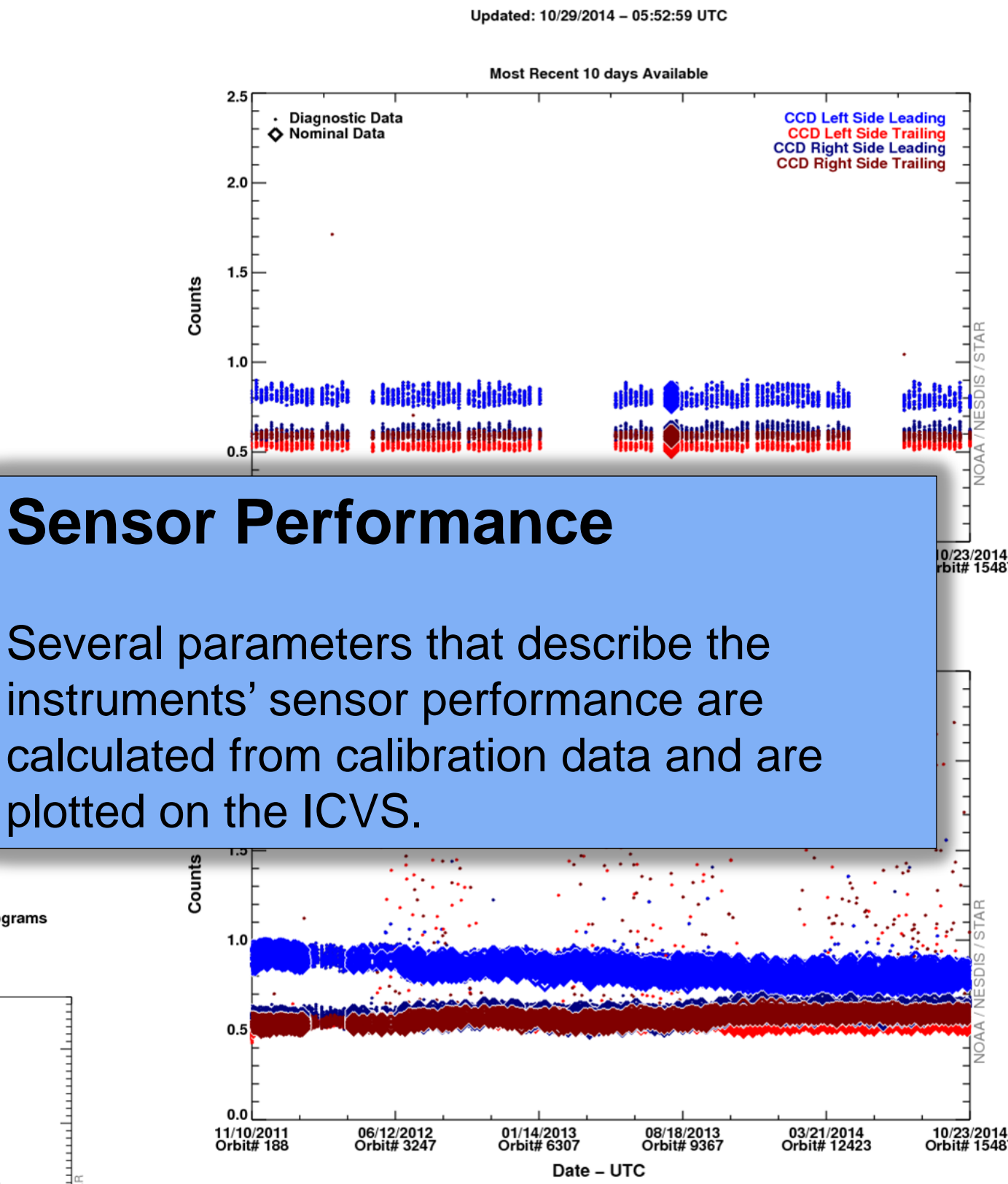
The Ozone Mapping and Profiler Suite (OMPS) Integrated Calibration/Validation System (ICVS) Near real-time and long-term performance monitoring for the OMPS Nadir Mapper (NM), Nadir Profiler (NP), and the Limb Profiler (LP)



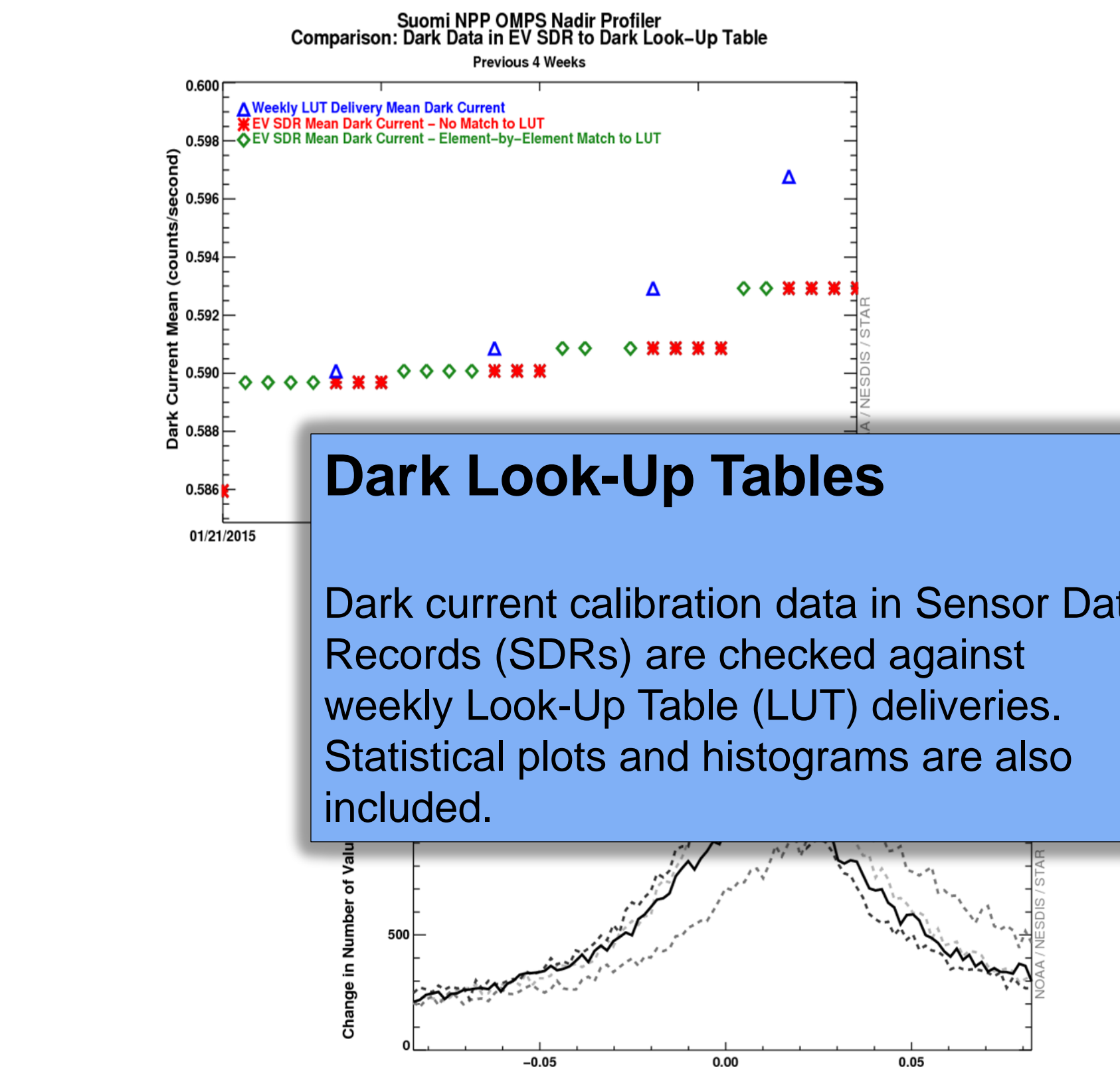
Radiance Maps
Radiance at specific wavelengths for every day are displayed on an Aitoff projection globe for a high-level overview of OMPS calibrated output.



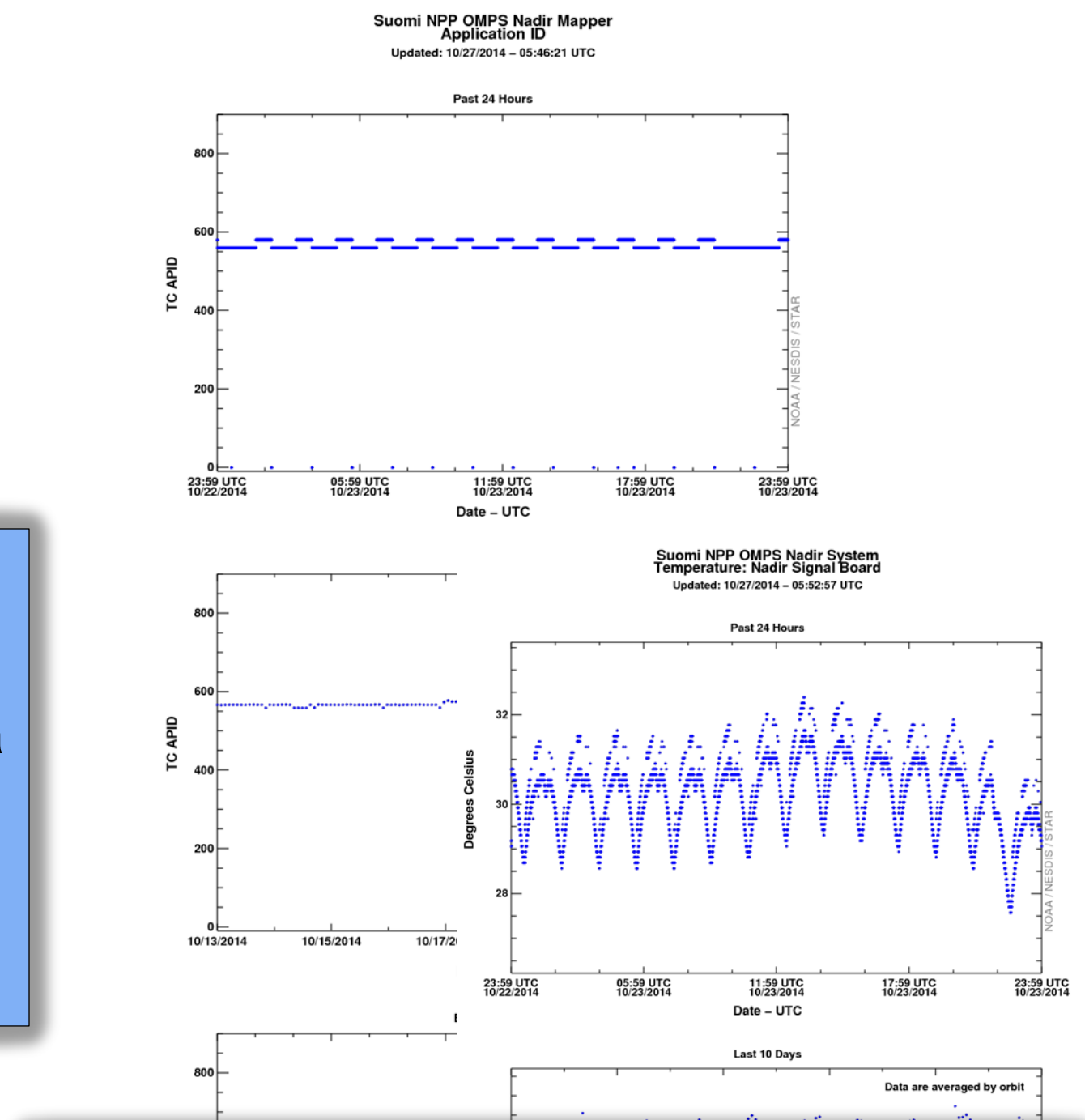
Solar Eclipse Maps
Solar eclipse events can impact the Suomi-NPP instruments. When these occur, the OMPS ICVS generates maps that indicate the location and time of the eclipse. STAR instrument leads are automatically notified of the events.



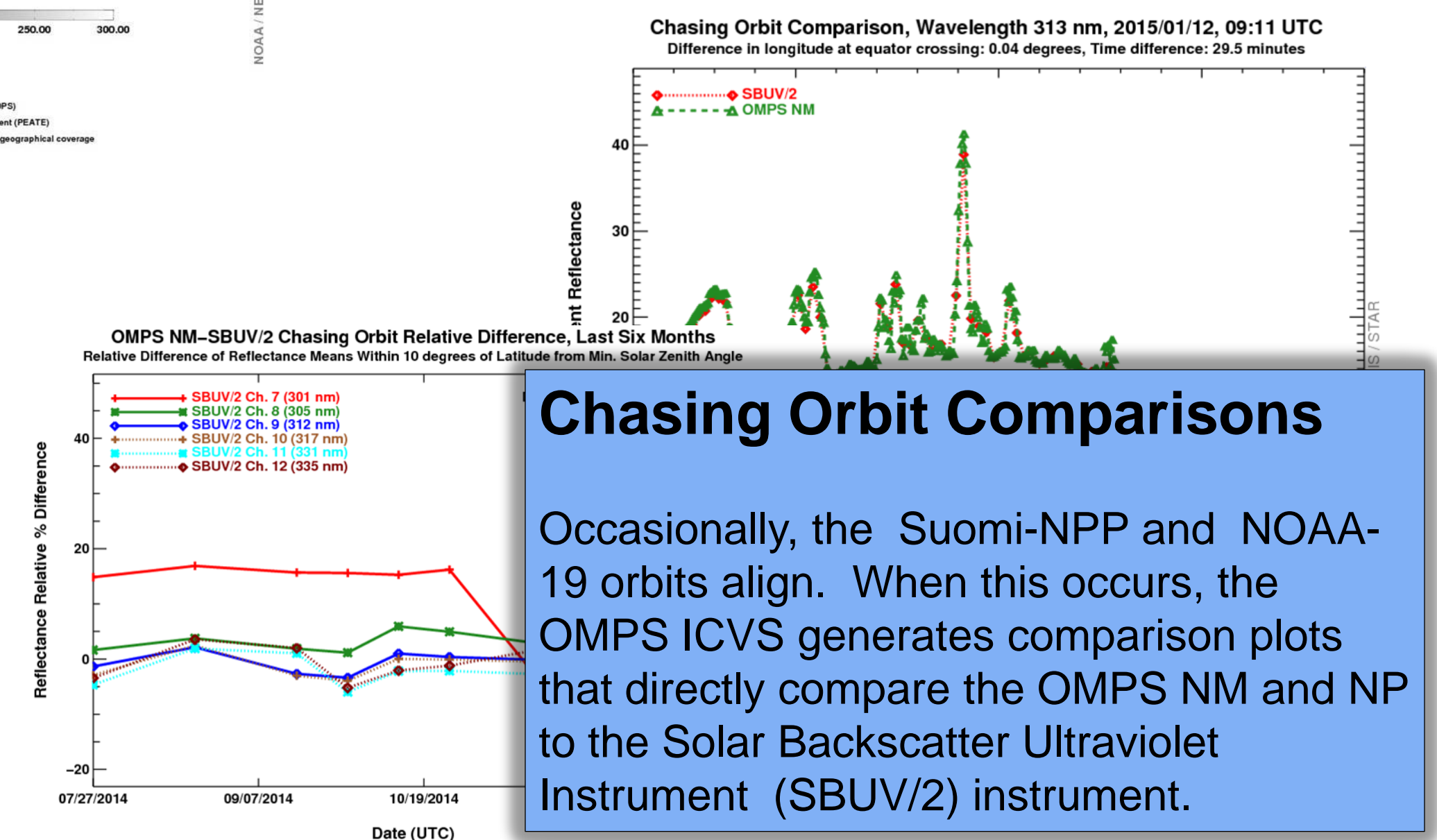
Sensor Performance
Several parameters that describe the instruments' sensor performance are calculated from calibration data and are plotted on the ICVS.



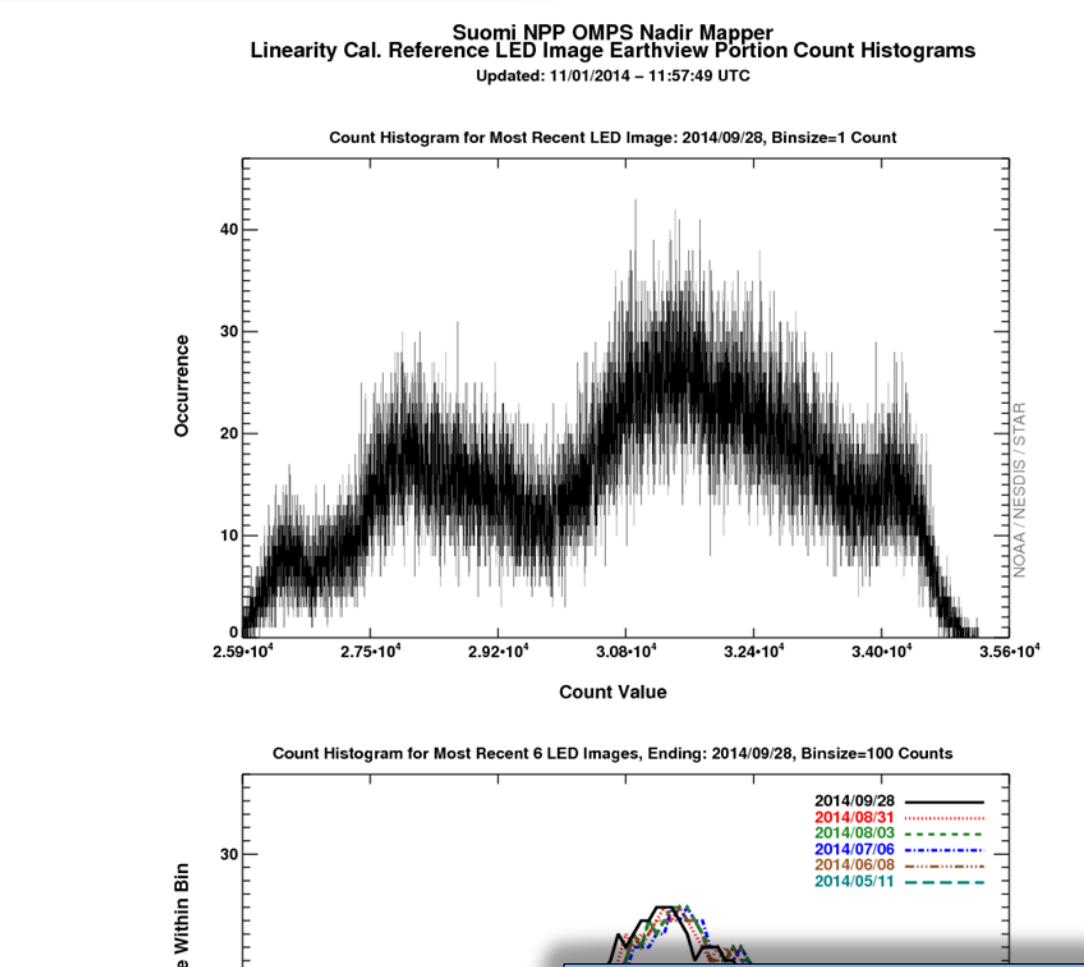
Dark Look-Up Tables
Dark current calibration data in Sensor Data Records (SDRs) are checked against weekly Look-Up Table (LUT) deliveries. Statistical plots and histograms are also included.



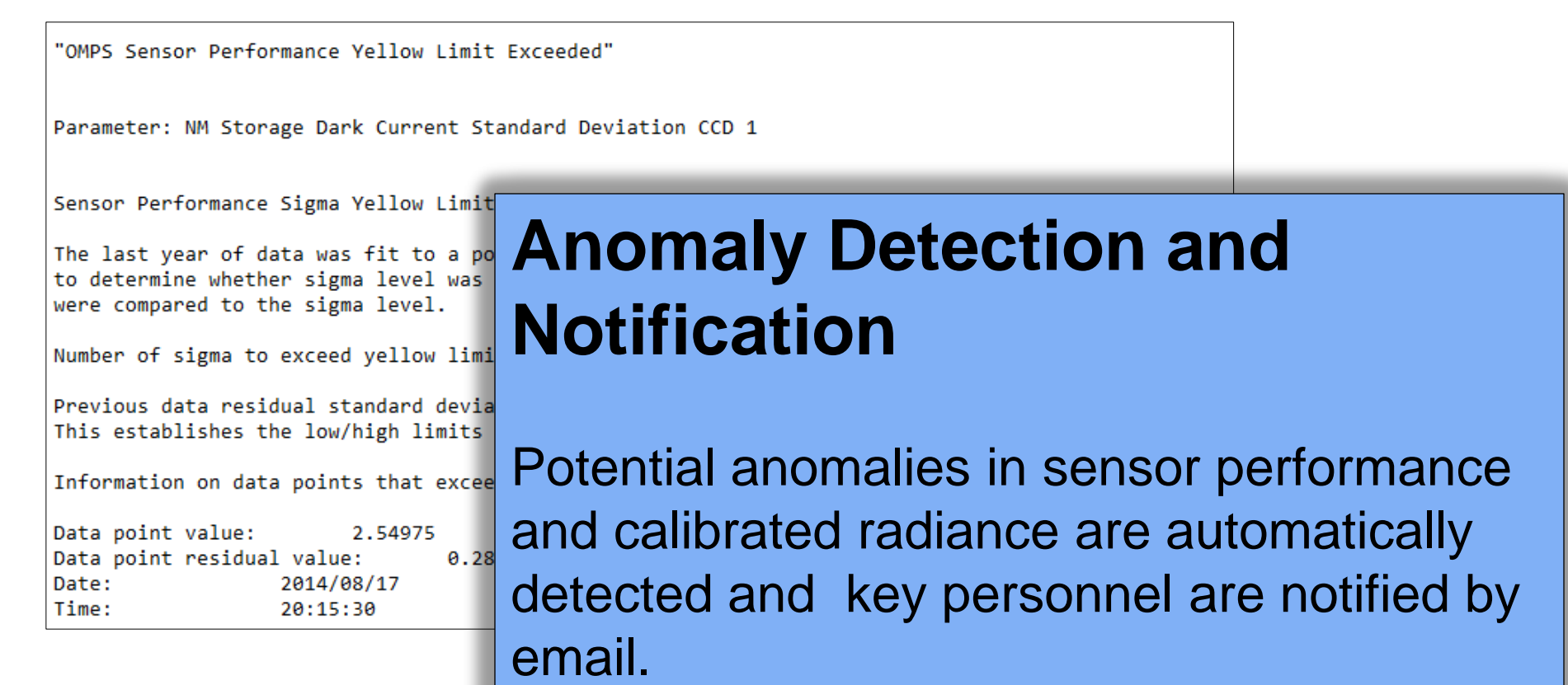
Health and Safety
Telemetry parameters related to the health and safety of OMPS, such as temperatures and electronic voltages, are provided.



Chasing Orbit Comparisons
Occasionally, the Suomi-NPP and NOAA-19 orbits align. When this occurs, the OMPS ICVS generates comparison plots that directly compare the OMPS NM and NP to the Solar Backscatter Ultraviolet Instrument (SBUV/2) instrument.



Linearity Calibration
Statistical plots and histograms for the LEDs used to characterize the instruments' non-linearity are provided.



Anomaly Detection and Notification
Potential anomalies in sensor performance and calibrated radiance are automatically detected and key personnel are notified by email.