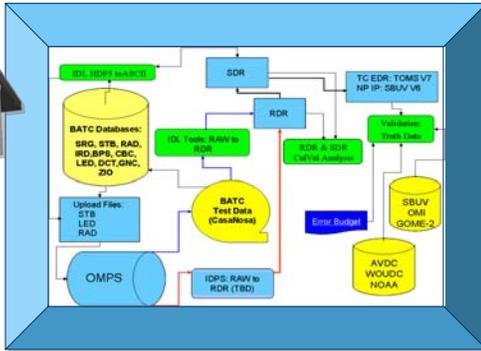


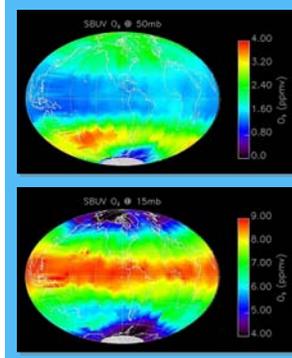
The OMPS nadir sensor wide-field telescope feeds two separate spectrometers: (1) total column (TC) and (2) nadir profiler (NP). Co-registration provides the total ozone. Solar observations provide spectral and radiometric calibrations. Orbital calibrations are planned to be compared to lab measurements. Post-launch plans include monitoring the OMPS sensor and parameterizing trends of instrument behavior. Performance is checked for precision and accuracy of radiances and ozone.



Long term stability (LTS) for the OMPS sensor must be better than 1%. Drifts in the radiometric response, spectral scale and spectral response function can affect LTS. Radiometric response can be impacted by diffuser degradation.

Analysis of the OMPS Flight Model 1 (FMI) data from Ball Aerospace & Technologies Corporation (BATIC) downloaded from CasaNosa is useful in spotting bad pixel candidates and testing the algorithm that provides the sensor data records (SDRs) for the OMPS Total Column and Nadir Profiler. The data that is examined fall in the following categories: (1) dark current, (2) linearity, (3) bore sight, (4) irradiance, (5) radiance data, (6) goniometry, (7) polarization, (8) stray light and (9) spectral scale and bandpass. The OMPS SDR algorithm is used to determine spectral shifts.

Validation of the radiances as measured by OMPS will be performed via comparisons with those measured by contemporaneous sensors such as SBUV, OMI and GOME-2.

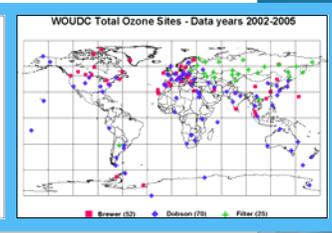
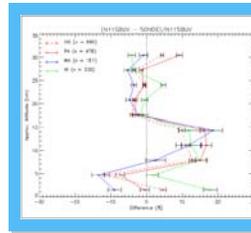
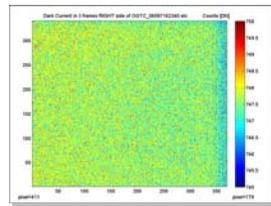
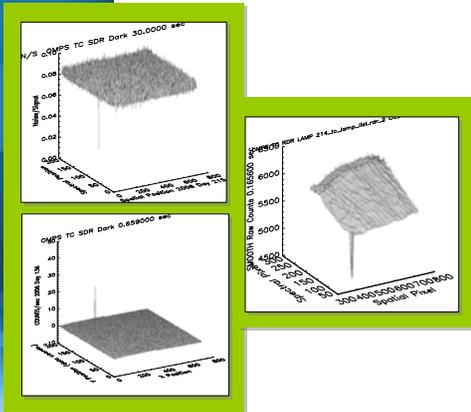


SBUV/2 and OMI calibration and validation plans can be found here:  
<http://www2.ncdc.noaa.gov/docs/klm/>  
<http://www.knmi.nl/omi/research/documents/>

James Done  
 Richard Buss  
 Thomas Samec  
 Paul S. Lee

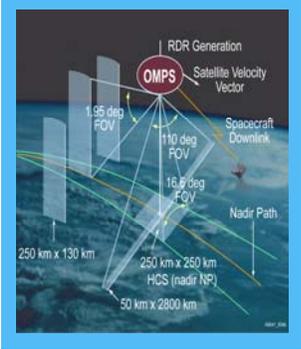


**Spectral Range**  
 Nadir Mapper: 300-380 nm  
 Nadir Profiler: 250-310 nm  
**Field of View**  
 Nadir Mapper: 110x0.3°  
 Nadir Profiler: 16.6x0.3°  
**Swath**  
 Nadir Mapper: 2800 km  
 Nadir Profiler: 250 km



Category	Item	Start	End	Notes
Pre-launch	OMPS TC SDR Dark	2002-05-01	2002-05-31	Dark current calibration
	OMPS NP SDR Dark	2002-05-01	2002-05-31	Dark current calibration
	OMPS TC SDR Dark	2002-06-01	2002-06-30	Dark current calibration
	OMPS NP SDR Dark	2002-06-01	2002-06-30	Dark current calibration
	OMPS TC SDR Dark	2002-07-01	2002-07-31	Dark current calibration
	OMPS NP SDR Dark	2002-07-01	2002-07-31	Dark current calibration
	OMPS TC SDR Dark	2002-08-01	2002-08-31	Dark current calibration
	OMPS NP SDR Dark	2002-08-01	2002-08-31	Dark current calibration
	OMPS TC SDR Dark	2002-09-01	2002-09-30	Dark current calibration
	OMPS NP SDR Dark	2002-09-01	2002-09-30	Dark current calibration
Post-launch	OMPS TC SDR Dark	2002-10-01	2002-10-31	Dark current calibration
	OMPS NP SDR Dark	2002-10-01	2002-10-31	Dark current calibration
	OMPS TC SDR Dark	2002-11-01	2002-11-30	Dark current calibration
	OMPS NP SDR Dark	2002-11-01	2002-11-30	Dark current calibration
	OMPS TC SDR Dark	2002-12-01	2002-12-31	Dark current calibration
	OMPS NP SDR Dark	2002-12-01	2002-12-31	Dark current calibration
	OMPS TC SDR Dark	2003-01-01	2003-01-31	Dark current calibration
	OMPS NP SDR Dark	2003-01-01	2003-01-31	Dark current calibration
	OMPS TC SDR Dark	2003-02-01	2003-02-28	Dark current calibration
	OMPS NP SDR Dark	2003-02-01	2003-02-28	Dark current calibration

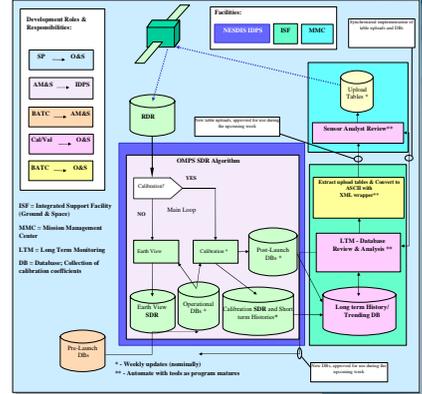
OMPS Cal/Val



**Post-launch Task Schedule**  
 Door Closed - Solar  
 Door Open - Geolocation  
 Earth Scan - Geolocation  
 Bad Pix - Reflectivity  
 Dark Current - Reflectivity

The OMPS Calibration/Validation Team is preparing to understand the post-launch instrument data and compare the retrieved data products to those measured by ground stations or satellites (NPOESS Calibration and Validation Plan Volume 12: Joint NPP Plan D31409-12).

The OMPS Cal/Val Team plans to validate the OMPS TC EDR using databases (AVDC and WOUDC) of ozone measurements from sites around the world. These sites will measure total column ozone using either a Dobson and/or a Brewer spectrophotometer. If the difference of the total column results falls within the uncertainties of the ground station and the OMPS sensor, then the product is validated successfully.



The OMPS TC EDR can be validated against satellites or ground stations. The requirements for accuracy and precision are shown in the figures below.

