

IRS-P4 OCM (Ocean Colour Monitor)

Current Status of the Mission

OCM is functioning normally and data is received at four ground stations.

IRS-P4 OCM (Ocean Colour Monitor)

- ◆ **LAUNCH:** May 26, 1999 (by PSLV from SHAR, India)
- ◆ **POLAR SUNSYNCHRONOUS** (Alt: 720 km, incl: 98° 28')
- ◆ **EQUATORIAL CROSSING TIME:** 1200 hrs \pm 10 minutes (descending node)
- ◆ **ALONG TRACK TILT :** \pm 20° (to avoid sun glint)
- ◆ **GROUND RESOLUTION:** 360 m x 236 m
- ◆ **SWATH :** \pm 43° (1,420 km)
- ◆ **QUANTISATION :** 12 bits

OCM payload : Main specifications

Channel (band)	Wave length (nm)	Reference ocean radiance*	Desired SNR	Estimated SNR	Desired $NE_{\Delta L}^*$	Est. $NE_{\Delta L}^*$
C1	404-423	9.1	356	340.5	0.0256	0.0267
C2	431-451	8.4	386	440.7	0.0218	0.0191
C3	475-495	6.6	380	427.6	0.0174	0.0154
C4	501-520	5.6	324	408.8	0.0173	0.0137
C5	547-565	4.6	311	412.2	0.0148	0.0112
C6	660-677	2.5	240	345.6	0.0104	0.0072
C7	749-787	1.6	286	393.7	0.0056	0.0041
C8	847-882	1.1	141	253.6	0.0078	0.0043

* in units of $mW/(cm^2 \cdot sr \cdot \mu m)$.

OCM data products

Level -1:

Geo & radiometrically corrected radiances for scenes of sizes

(i) ~ 1420 km x 1420 km

(ii) ~ 710 km x 710 km (quadrant products)

(iii) ~ 100 km x 100 km

Level -2:

Standard products over the above scenes of

(i) Chlorophyll

(ii) Suspended sediments

(iii) Yellow substance

(iii) Diffuse attenuation coefficient

(iv) Aerosol optical depth

(v) Normalised water leaving radiances (to be incorporated)

OCM data products (Contd..)

Level -3:

Weekly and monthly averages on a trial basis being generated for

(i) Chlorophyll

(ii) Suspended

(iii) Diffuse attenuation coefficient

(iv) Aerosol optical depth

- **OCM coverage around India is available for browsing in the NRSA website**
- **Level -1& 2 can be acquired by users directly from NRSA on payment**
- **The processing s/w developed at SAC is distributed to users for a nominal cost**

Oceansat II - OCM

- Will have ocean Colour monitor (OCM) and scatterometer. Proposed launch during 2007.
- Spectral bands: 8 bands between 400-900 nm.
- On-board recording for global coverage (1- 4 km).
- Provision of sun and moon calibration to assess stability of sensor performance.
- Sun-synchronous orbit with equatorial crossing at 1200 noon.

Spectral Bands

Bands	Central wavelength (nm)	Bandwidth (nm)	Application
1	412	20	Yellow substance absorption
2	443	20	Low chlorophyll-a
3	490	20	Moderate Chlorophyll-a
4	510	20	High Chlorophyll-a
5	555	20	Chlorophyll/sediments
6	620	20	Sediments
7	740	30-40	Atmospheric correction
8	870	40	Atmospheric correction