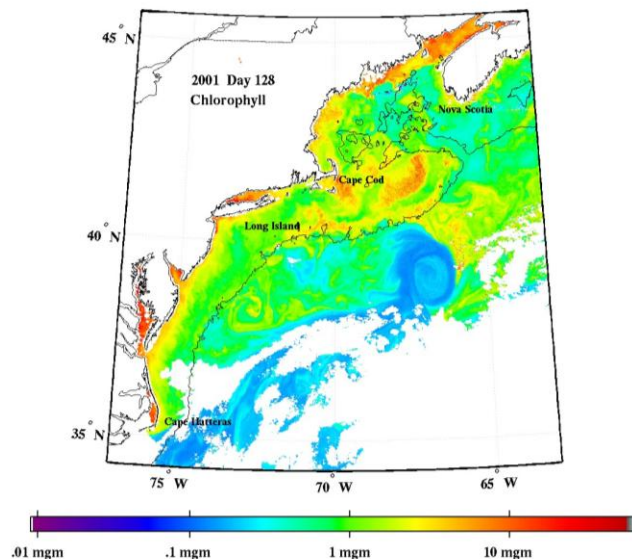


Ocean Colour Radiometry Virtual Constellation (OCR-VC)

Proposed by:
International Ocean Colour Coordinating Group (IOCCG)
www.IOCCG.org

Presentation by J.A. Yoder



Why Ocean Colour?

Critical space measurement to cover regional to global spatial scales, daily to interannual time scales and long-term trends to study/assess:

- Ocean ecosystems/carbon cycle.
- Impacts of climate change.
- ecosystem links to fisheries.
- Coastal processes.
- Other.

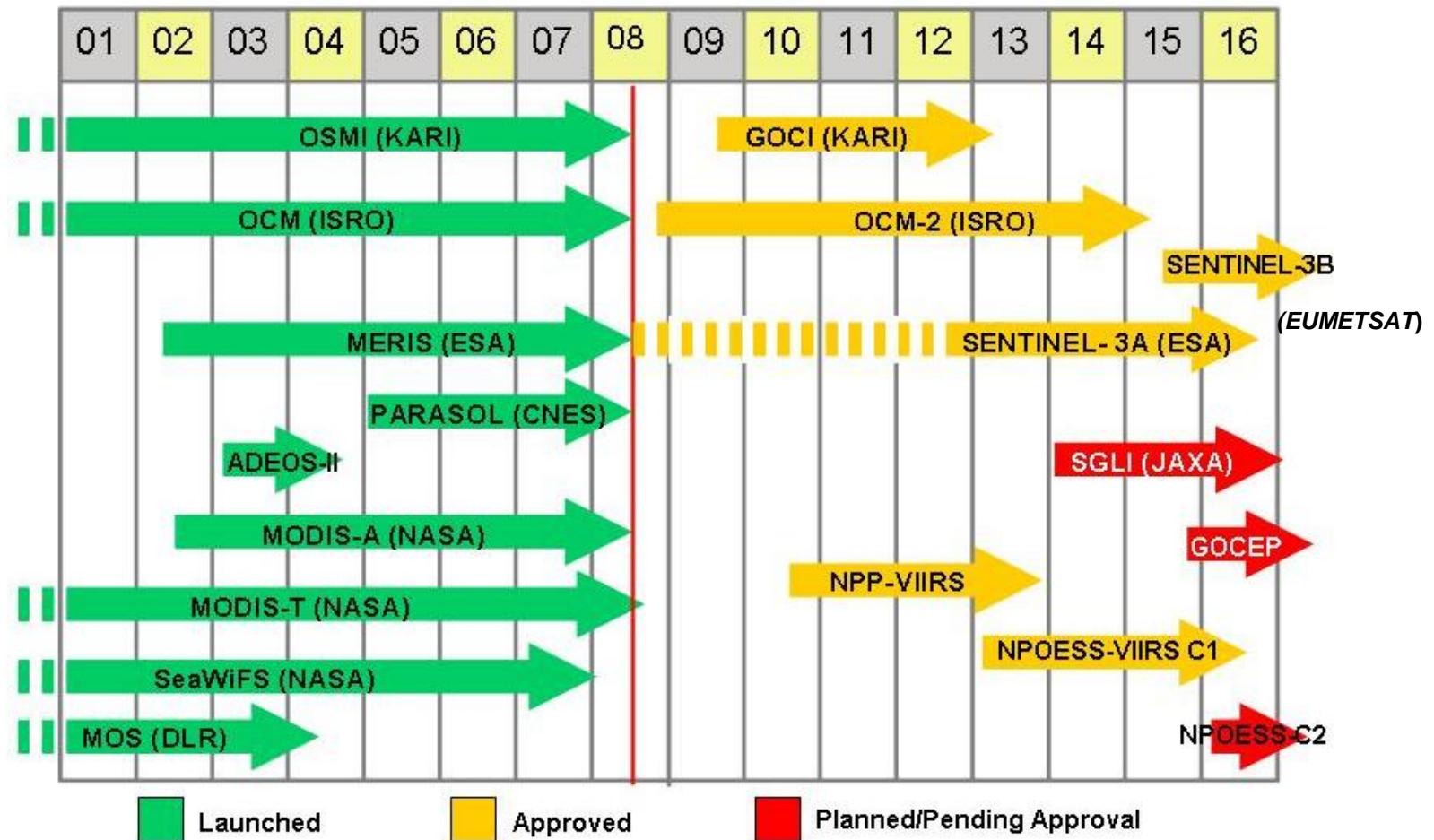
IOCCG and Its Objectives

- IOCCG is a committee of international OCR experts (data users) and space agency representatives. IOCCG is supported by financial contributions from space agencies.
- By sponsoring working groups, training courses, workshops, symposia and with our monograph series, IOCCG fosters expertise in using OCR data; provides a common voice for users; advocates for the importance of OCR data to the global community; encourages international calibration and validation networks and standards; advocates for the collection of essential ocean and atmosphere data; and encourages agencies to agree on common data products, algorithms, and formats for accessing and exchanging data – satellite and *in situ*.

OCR-VC Objectives

- Merge calibrated ocean colour radiances (OCR) at key wavelength bands from multiple satellites to provide products required to determine the impacts of climate change on open ocean and coastal ecosystems, biogeochemical processes including carbon cycle processes, and for other applications, e.g. fisheries.
- Sustain a long time series of observations by establishing projects such as SIMBIOS (NASA), ChloroGIN (multiple sponsors), GlobColour (ESA) and the GMES Marine Core Service (EC/ESA/EUMETSAT) to calibrate across sensors, validate data products and generate global and regional products from merged data sets.

Candidate Missions for the OCR-VC



Statement of Need

- The GCOS implementation plan states: “Chlorophyll *a* is a critical parameter to characterize the ecosystem and as such represents essential information for natural living-resource management and monitoring of the health of coastal seas. At a global level, chlorophyll *a* is related to cycling of carbon between the ocean and atmosphere”.
- Products derived from OCR are either explicitly or implicitly specified in the GEO 2007-2009 Work Plan under 6 societal benefit areas: health, energy, climate, ecosystems, agriculture and water.

Potential Collaborators and Schedule

Potential Collaborators (most are IOCCG members or are affiliated)

International Ocean Carbon Coordination Project (IOCCP),
GlobColour (ESA), ChloroGIN (multiple sponsors), SAFARI (CSA),
NOAA, NASA, ESA, EC/JRC, GKSS, EUMETSAT, JAXA,
ISRO/NCOIS, CSA, CNSA, KORDI/KARI, CNES and possibly
others.

Schedule

- IOCCG proposes that it take the lead for implementation planning of the OCR-VC.
- With approval, IOCCG will prepare and submit a Full Proposal for an OCR-VC by July 2008 and report to SIT in September in Tokyo.
- Our full proposal will include a discussion of how to implement the OCR-VC, including resources required.