EO L1 lessons learned - *objectives*

Bojan R. Bojkov and Angelika Dehn

Sensor Performance, Products and Algorithms
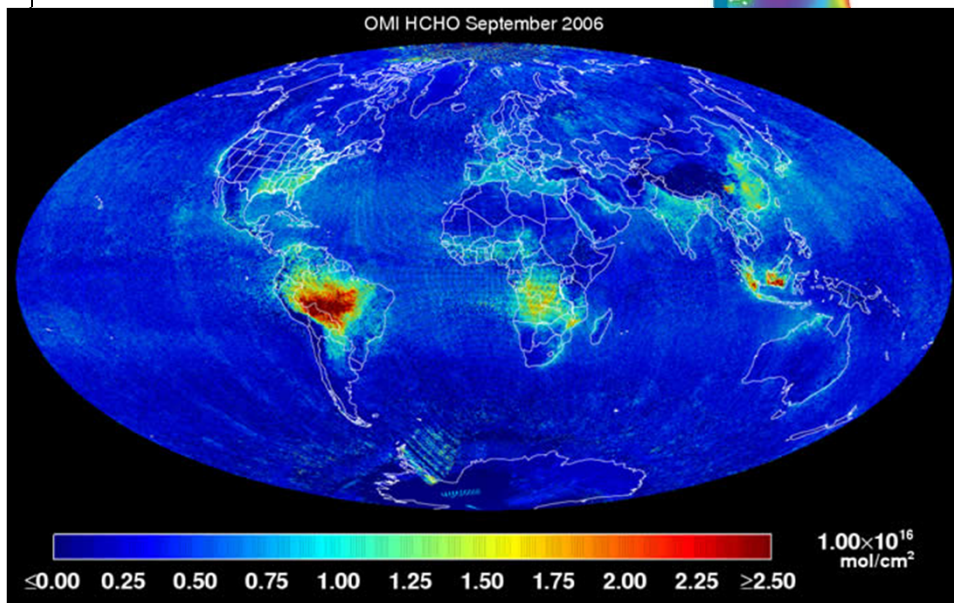
Ground Segment and Mission Operations Department
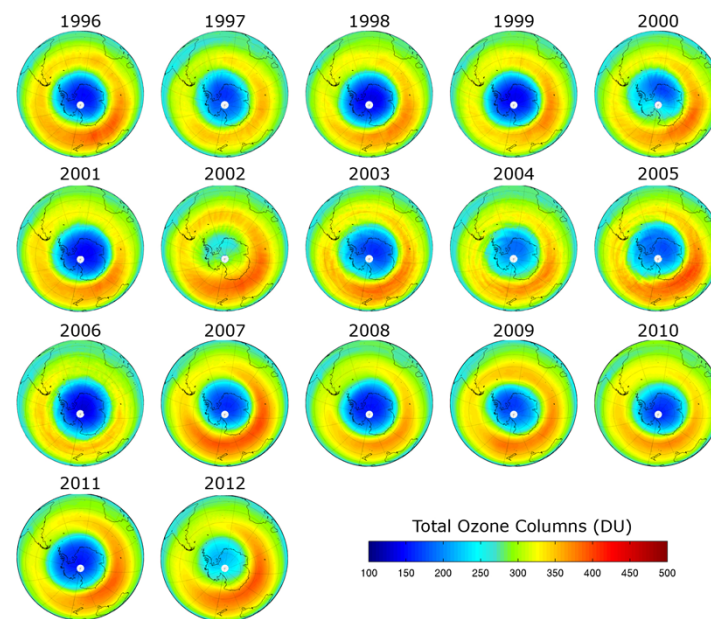
ESA/ESRIN

European Space Agency

The importance of L1 is self-evident:
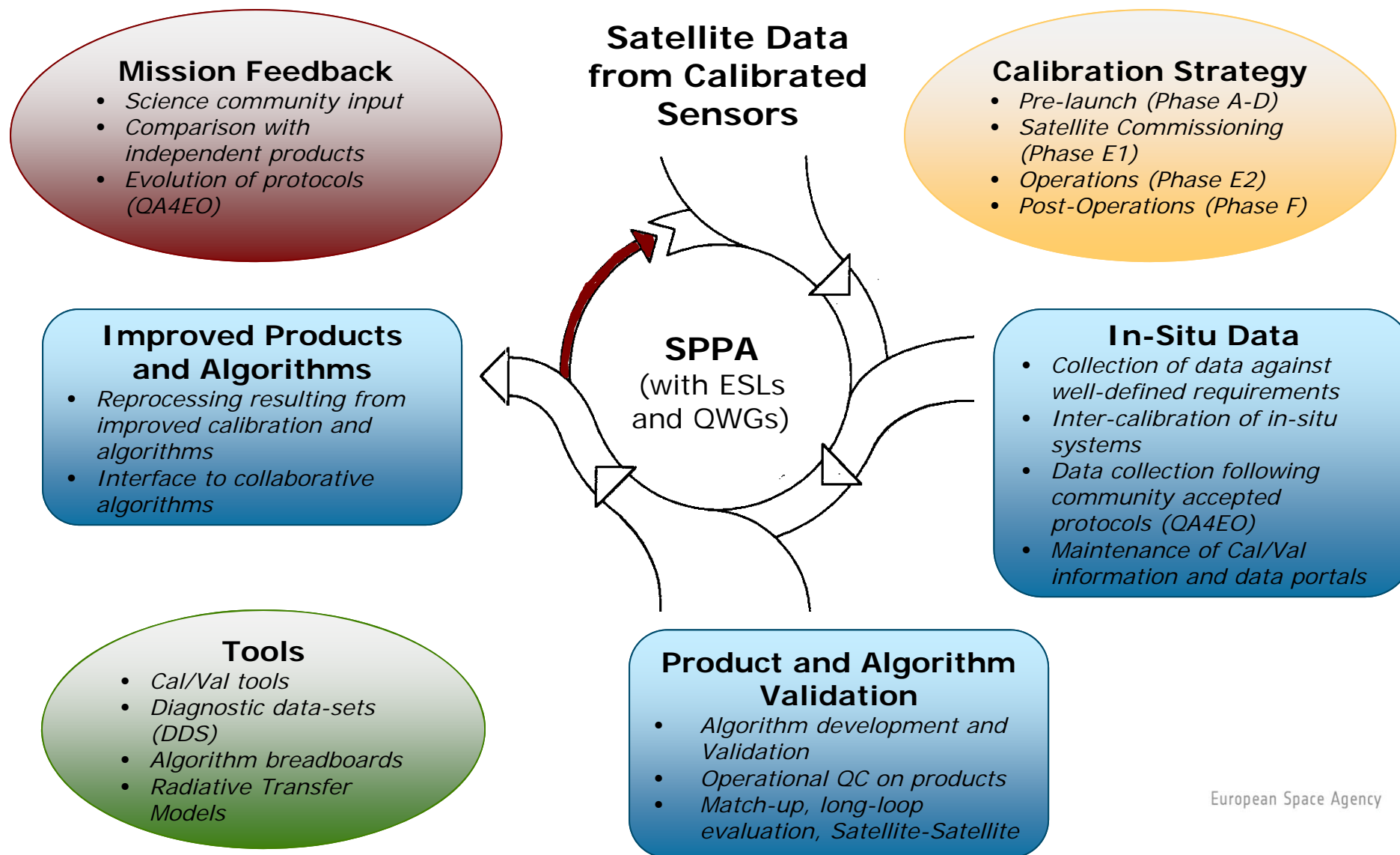

Ocean Colour Climate Change Initiative (OC_CCI) - Phase One

OMI HCHO September 2006

algorithm
Ref: D2.3
25/10/12
Issue: 1.3
/ ESRIN

Ref: CCI O3

How does the evolution work?

esa

Mission Feedback
- *Science community input*
- *Comparison with independent products*
- *Evolution of protocols (QA4EO)*

Satellite Data from Calibrated Sensors

Calibration Strategy
- *Pre-launch (Phase A-D)*
- *Satellite Commissioning (Phase E1)*
- *Operations (Phase E2)*
- *Post-Operations (Phase F)*

Improved Products and Algorithms
- *Reprocessing resulting from improved calibration and algorithms*
- *Interface to collaborative algorithms*

SPPA
(with ESLs and QWGs)

In-Situ Data
- *Collection of data against well-defined requirements*
- *Inter-calibration of in-situ systems*
- *Data collection following community accepted protocols (QA4EO)*
- *Maintenance of Cal/Val information and data portals*

Tools
- *Cal/Val tools*
- *Diagnostic data-sets (DDS)*
- *Algorithm breadboards*
- *Radiative Transfer Models*

Product and Algorithm Validation
- *Algorithm development and Validation*
- *Operational QC on products*
- *Match-up, long-loop evaluation, Satellite-Satellite*

European Space Agency

From ESA's point of view:

Integrate the latest findings on level-1 into the upcoming reprocessings of ERS1/ERS-2/Envisat

Support:

- Scientific Research
- The EO Applications and Exploitation community ESA programmes, in particular CCI, SEOM and LTDP

Prepare for the Sentinels operations phase *(and lessons learned for the future missions)*

European Space Agency

ESA objectives for this meeting

Have an exchange of ideas between the different ESA EO instrument teams – *introduction to the approaches used by different communities (keynotes by N. Fox and P. Henry)*

L1 recommendations for the upcoming ERS/Envisat instrument reprocessings

Formulation of lessons learned for calibration and in-flight characterisation – *recommendation for future activities (for example QA constellation, S5p/S5 calibration, Sentinel B-units)*

Way forward… is there a need for a cross-cutting L1 QWG?