

CEOS Missions, Instruments and Measurements Database 2011 Survey Guide

Survey Purpose and Background

The CEOS Earth Observation Handbook and underlying Missions, Instruments and Measurements Database (MIM DB) represents the most widely distributed and referred to statement of civil Earth observation programmes and plans for space agencies world-wide. It therefore represents an extremely important outreach tool for every CEOS space agency to promote the capabilities and characteristics of their systems. And it is important to get the information right. We trust that all CEOS space agencies will continue to support this important activity and to ensure that their national programmes feature appropriately.

The Handbook and Database user communities, including the CEOS SEO, have indicated to CEOS that they require regular update of the information, at least annually – such that the information can be relied upon to be as current and accurate as possible. The 2011 update of the Database is the direct response of CEOS, and of ESA as the sponsor for the work, to that request. CEOS agencies are asked to review and update their mission and instrument information to record changes that have occurred since the 2010 version. The 2011 Database update will be available on-line at database.eohandbook.com. Hundreds of users from around the world (143 countries in total according to our statistics) visit this site each month to study the timelines and tables and to query the on-line database.

Updates for 2011

For the 2011 survey several key updates have been made.

- Addition of a Missions → Data Site URL Field
- Addition of an Instruments → Data Format Field
- Addition of atmospheric layers to relevant measurements
- Addition of detailed SAR wavebands (i.e. C-band, L-band, etc.)
- Addition of Lead Agency to Instrument Measurements and Wavebands

Data Site: Please list the URLs of any mission-related data access websites in this field. More descriptive details can be found here.

<http://database.eohandbook.com/survey/tabledefinition.html#Missions>

Data Format: Please list information on the format of data gathered by the instrument in this field. More descriptive details can be found here.

<http://database.eohandbook.com/survey/tabledefinition.html#Instruments>

Atmospheric Layers: Five distinct atmospheric layers have been added for atmospheric measurements: Lower Troposphere (LT), Higher Troposphere (HT), Lower Stratosphere (LS), Higher Stratosphere and Mesosphere (HSnM), and Total Column (TC). Detailed definitions for these layers can be found at the web link below, and should be applied as appropriate to relevant measurements.

<http://database.eohandbook.com/survey/tabledefinition.html#InstrumentsMeasurementsAtmosphericLayerValues>

Atmospheric Layer	Description
Lower Troposphere (LT)	Instrument can measure the parameter at altitudes of 0 - 5500 m or pressures of 1000 - 500 hPa.
Higher Troposphere (HT)	Instrument can measure the parameter at altitudes of 5.5 - 16 km or pressures of 500 - 100 hPa.
Lower Stratosphere (LS)	Instrument can measure the parameter at altitudes of 16 - 32 km or pressures of 100 - 10 hPa.
Higher Stratosphere and Mesosphere (HSnM)	Instrument can measure the parameter at altitudes of > 32 km or pressures of < 10 hPa.
Total Column (TC)	Instrument provides a vertically integrated measurement (i.e. for atmospheric constituents).

SAR Wavebands: Eight new specific SAR wavebands have been added: Ka, K, Ku, X, C, S, L, and P. The details of these new band designations can be found here.

<http://database.eohandbook.com/survey/tabledefinition.html#InstrumentsWavebandsValidValues>

Lead Agency: The instrument lead agency field has been added to the instrument measurements and waveband tables. (Note that this is a *read only* field – definition of an instrument lead and cooperating agency will only be taken from the Instruments table.) In general, updates to measurements and wavebands by instrument cooperating agencies will be ignored unless accompanied by an explanation in the “Comments for Survey Team” field.

<http://database.eohandbook.com/survey/tabledefinition.html#InstrumentsMeasurements>

<http://database.eohandbook.com/survey/tabledefinition.html#InstrumentsWavebands>

You are kindly encouraged to pay special attention to these fields in 2011 in order to ensure data utility and access is accurately reflected in the CEOS MIM.

Survey Tables

A summary of this year’s survey tables is included below, with a detailed description of each of the survey tables and fields found here:

<http://database.eohandbook.com/survey/tabledefinition.html>

Survey Process Tables	
Table Description	Key Points
The Agency table contains the abbreviated name (Agency) and full name (Name).	– <i>A link to the MIM online agency profile is included.</i>
The Series table contains the name of the series, the name of the satellites in the series and a list of missions in the series.	
The Missions table contains the name, dates and details of agency missions.	– <i>The Data Site URL field is new for 2011.</i>

The Instruments table contains the name and details of agency instruments	<ul style="list-style-type: none"> – The Data Format field is new for 2011. – New fields are marked in yellow if left blank.
The Instruments Measurements table contains a list of all agency instruments and the measurements they take.	<ul style="list-style-type: none"> – The Atmospheric Layer fields are new for 2011. – The Lead Agency field added for filtering (read only)
The Instruments Wavebands table contains a list of all agency instruments and the wavebands they use.	<ul style="list-style-type: none"> – New SAR-specific wavebands have are new for 2011. – The Lead Agency field added for filtering (read only)

Completing the Survey

The Excel file that has been included in your survey package has been generated specifically for your agency. It reflects the current data holdings for mission series, missions and instruments currently being operated by your agency.

Key Survey Update Tasks	
Description	Tables Requiring Update
Adding a new series	<ul style="list-style-type: none"> – Series: add the series name and satellites
Adding a new mission	<ul style="list-style-type: none"> – Missions: add the mission name and details
Adding a new instrument	<ul style="list-style-type: none"> – Instruments: add the instrument name and details – Instruments Measurements: add as many measurement type parameters as appropriate for a given instrument – Instruments Wavebands: add as many instrument wavebands as appropriate for a given instrument

Respondents should note that a “Comments for the survey team” field has been included in each survey record. Entries into these fields will not be reflected directly in the MIM DB, but these fields provide a place to provide feedback and/or additional information to the survey team. In addition, **read only** fields indicating when the record was last updated in the database are included at the right hand side of each record; this information may help to determine when information was last updated.

Survey Deadlines and Support

The Excel survey should be updated and returned to the CEOS DB survey team no later than Friday 10th June 2011 – i.e. 4 weeks from the date of receipt. Respondents should note that completing the survey might require information from across various departments in your agency, which may require additional time. Please start early to avoid delay. We want to ensure that your agency/country is represented in the 2011 edition.

In addition to the materials provided, if you have questions or require further support please feel email both: *Stephen Ward (mail@stephenward.net)* & *George Dyke (george@symbioscomms.com)*. Thank you in advance for supporting this CEOS initiative.