OSIRIS-REx Local Data Dictionary Description Document

The OSIRIS-REx Local Data Dictionary (LDD), also known as the orex mission dictionary, was developed over the course of the mission lifetime. Dictionary development was based on the 1.7 PDS Information Model. Development started in 2015, before the finalization of many of the PDS Discipline Dictionaries so many attributes that may be found in current Discipline Dictionaries are located in the <Mission_Area> portion of OSIRIS-REx product labels.

The OSIRIS-REx mission dictionary is broken down into classes for common items. There are classes for attributes that are the same across the mission, and classes that are instrument specific. The names and descriptions of the classes are listed below:

Mission-wide Classes:
orex.mission_information: This class contains information about the OSIRIS-REx mission and mission phases. The attributes in this class are common to all mission data products.

orex.time: This class contains timing information for a specific observation or set of observations. This class is a mission type class meaning that the timing values given in this class have been calculated using standard SPICE libraries and the appropriate mission specific SPICE kernels based on the instrument specific spacecraft clock values recorded at the time of the observation.

orex.spatial: This class contains spatial information for a specific observation or set of observations that is not otherwise found in the GEOM Discipline Dictionary (as of IM 1.7). Attributes included may be ancillary World Coordinate System (WCS) values or additional quaternion information that should be used with caution.

orex.data_quality: This class contains data quality information for a specific observation or set of observations. Attributes can include data quality flags, as well as checksum status.

orex.data_processing_information: This class contains the data processing information for a specific observation or set of observations. Items included in this class include names of input files used in the data processing, the source (test or flight) of the data, who or where the data was processed, and if necessary software names and version numbers.

orex.common_instrument_attributes: This class contains attributes that describe instrument characteristics such as times, temperatures, voltages or pressures that are common to more than one instrument aboard the OSIRIS-REx Spacecraft.

orex.instrument_telemetry_identification: This class contains the spacecraft telemetry packet type identification information for a specific observation or set of observations.

Instrument Specific Classes:
orex.tcm_instrument_attributes: This class contains instrument attributes specific to the OSIRIS-REx Touch-and-Go Camera Suite (TAGCAMS). These instrument attributes are such items as

instrument set-up parameters for each image or sequence of images taken, instrument temperatures or other parameters recorded by the instrument on an image by image basis.

orex.ocm_instrument_attributes: This class contains instrument attributes specific to the OSIRIS-REx Camera Suite (OCAMS). These instrument attributes are such items as instrument set-up parameters for each image or sequence of images taken, instrument temperatures, voltages and currents, or other parameters recorded by the instrument on an image by image basis.

orex.ocm_image_properties: This class contains the OSIRIS-REx Camera Suite (OCAMS) image properties. Attributes specify the type of image taken for the specific observation.