

## Astrometry and Photometry Product Description

\*This is an example for formatting purposes

### Data Product Overview

One sentence executive description of product

E.g. “The integrated boulder map is a map depicting a combination of imaging and spectral data that describe the geologic and geomorphic context of boulders on the surface of asteroid Bennu at 50 meters resolution.”

### Overview

Data type (image, spectrum, data table, map format etc.),

What does it measure at what scale

What observations are required to provide the input data needed to make the data product?

When in the DRM are the observations that make the data product scheduled to be taken?

How long does it take to produce the data product?

Is this product used of sample site selection, science value, or long-term science?

### Data Product Structure and Organization

What is the structure of the data product (e.g. FITS file with 4 extensions)

How is the product organized (e.g. one data set per mission phase, one file per Earth Day, etc.)

### Data Format Descriptions

Header information (metadata) included with data product. For example:

Start/End time of observations that makeup data product

Lat/lon or other geometric parameters

Map scale/ resolution

Map projection

Instrument parameters or housekeeping data needed to process data

Calibration files used in processing

Detailed Description of data format. For example:

Table

Data Type – Binary, ASCII, UTF-8

Field name, Field Description, Field Length, Field Format

Arrays

Storage and Index Order

Axis Meaning

Axis name, number of elements, sequence number, units

Display orientation

Data Product Generation

How and by whom is the product generated?

What are the input products needed to produce the product?

Are there format expectations for the input products?

What algorithms and/or calibration data is used to generate products?

Are there format expectations for the inputs?

Has a specific Science Team Member been assigned to produce this product?

Will multiple versions of the product be generated?

How will they differ?

On what cadence will they be delivered?

Data Product Validation

How will the product be vetted to ensure contents and format are correct?

Data Flow

Update Data flow diagrams with more detailed based on current processing configuration.

Describe the sources, destinations, and transfer procedures for data products.

State the size of an individual data product and the total size of all the data products generated over the course of each mission phase.

State the time span covered by a product, if applicable, and the rate at which products are generated and delivered.

Standards used to generate data product

Time (e.g. times are all converted to UTC)

Coordinate System

Data Storage Conventions (i.e. byte order, compression, machine dependence)