```
PDS_VERSION_ID                  = PDS3
LABEL_REVISION_NOTE             = "
  For New Horizons, this LABEL_REVISION_NOTE is used to keep track of
  when the template is used to generate a DATASET.CAT file for a
  data set.
  Brian Carcich
  - Publication date:  2017-04-30
  - NH-internal archive software version:  V2.0
  "
RECORD_TYPE                     = STREAM
INSTRUMENT_HOST_NAME            = "NEW HORIZONS"
OBJECT                          = DATA_SET
  DATA_SET_ID                   = "NH-P-SWAP-3-PLUTO-V3.0"

  OBJECT                        = DATA_SET_INFORMATION

    START_TIME                  = 2015-01-15T03:49:22.691
    STOP_TIME                   = 2016-10-25T18:09:37.353

    DATA_SET_DESC               = "

    Data Set Overview
    =================

      This data set contains Calibrated data taken by New Horizons
        Solar Wind Around Pluto
      instrument during the PLUTO mission phase.

      SWAP comprises electro-optics and detectors to obtain count rate
      measurements of the solar wind; measuring the solar wind before,
      during and after the Pluto encounter will allow characterization
      of the atmospheric escape rate of Pluto. The SWAP electro-optic
      elements select the angles and energies of the solar wind and
      pickup ions to be measured; ions thus selected are registered with
      a coincidence detector system. SWAP measures the energy spectrum
      of ions in its environment by varying (also called scanning or
      sweeping) voltages of the electro-optics over many steps during a
      short time period. SWAP can also immediately follow a sweep of
      coarse voltage steps with a sweep of finer steps, centered on the
      peak measurement of the coarse sweep, to obtain a higher resolution of
that portion of the energy spectrum.

      There are three types of SWAP science data: real-time; summary;
      histogram. Real-time data, at rates up to 1Hz, provide the most
      detailed science measurements since they contain the full count
      rate distribution as a function of energy (speed). For science
      summary and science histogram modes, the full distribution is not
      recorded. Instead, parameters are derived from the count rate
      distribution stored by SWAP. These derived parameters require less
      memory than storing the whole distribution. The science summary
      and science histogram modes are primarily used during the cruise
      phase of the mission. For science data, the common data product is
      usually a binary table; for calibrated real-time data,
      spectrograms as images are also provided. Typically the tables
      have instrument parameters and measurements in the columns and
      measurement times in the rows, but the actual format depends on
      the type of data and the processing level (raw vs. calibrated).
      Other tables containing houskeeping and other parameters are also
```

* SPACECRAFT_CLOCK_START_COUNT
* SPACECRAFT_CLOCK_STOP_COUNT

Instrument	Instrument designators	ApIDs **
SWAP	SWA	0X584 - 0X587 *

* Not all values in this range are in this data set
** ApIDs are case insensitive

There are other ApIDs that contain housekeeping values and other values. See SOC Instrument ICD (/DOCUMENT/SOC_INST_ICD.*) for more details.

Here is a summary of the types of files generated by each ApID (N.B. ApIDs are case-insensitive) along with the instrument designator that go with each ApID:

ApIDs	Data product description/Prefix(es)
0x584	SWAP Science Real-Time/SWA
0x585	SWAP Science Summary/SWA *
0x586	SWAP Science Histogram Header/SWA
0x587	SWAP Science Histogram Data/SWA

* Level 3 NH SWAP data sets produced after April, 2016 do not have 0x585 (Science Summary data); in-flight and in practice, 0x585 data are used only for health and safety and not for science.

Instrument description

Refer to the following files for a description of this instrument.

CATALOG

SWAP.CAT

DOCUMENTS

SWAP_SSR.*
SOC_INST_ICD.*
NH_SWAP_V###_TI.TXT (### is a version number)

Other sources of information useful in interpreting these Data

Refer to the following files for more information about these data

NH Trajectory tables:

/DOCUMENT/NH_MISSION_TRAJECTORY.* - Heliocentric