Instruments and References

We here provide links and references for the instruments and data relevant for the QuickLooks.

UG = User Guide. These guides are particularly useful for a general understanding of the archived data from each instrument.

EAICD = Experiment to Archive Interface Control Document. These documents contain details of the data formats used by each instrument and also describe the data processing and other aspects.

IES

The Ion and Electron Sensor (IES) consists of two hemispherical electrostatic analyzers mounted top to top, thus sharing a common aperture with elevation scanning by electrostatic deflection and providing simultaneous ion and electron energy spectra. The IES PI institute is SouthWest Research Institute in San Antonio, TX (PI: Jim Burch).

Instrument description: doi:10.1007/s11214-006-9002-4

The IES UG and EAICD are included in the documents directory of all IES datasets in the PSA/PDS archives, e.g. here:
https://pds-smallbodies.astro.umd.edu/holdings/ro-c-rpcies-3-ext3-v2.0/document/

ICA

The Ion Composition Analyzer (ICA) is an hemispherical electrostatic analyzer with electrostatic deflection on the aperture for elevation scanning and a magnetic analyzer for mass separation. The ICA PI institute is the Swedish Institute of Space Physics in Kiruna (PI: Hans Nilsson).

Instrument description: doi:10.1007/s11214-006-9031-z

The ICA UG and EAICD are included in the documents directory of all ICA datasets in the PSA/PDS archives, e.g. here:
https://pds-smallbodies.astro.umd.edu/holdings/ro-c-rpcica-4-ext2-phys-mass-v1.0/document/

LAP

The Langmuir probe instrument LAP used two spherical Langmuir probes for finding plasma bulk properties and wave electric fields. Data from LAP and MIP have been extensively cross-calibrated to provide data combining the advantages of both instruments. The LAP PI institute is the Swedish Institute of Space Physics in Uppsala, Sweden (PI: Anders Eriksson).

Instrument description: doi:10.1007/s11214-006-9003-3

The LAP UG and EAICD are included in the documents directory of all LAP datasets in the PSA/PDS archives, e.g. here: https://pds-smallbodies.astro.umd.edu/holdings/ro-c-rpclap-5-ext1-deriv2-v1.0/document/

MAG

The fluxgate magnetometer MAG provided the vector magnetic field throughout the mission. The MAG PI institute is the Institut für Geophysik und Extraterrestrische Physik at the Technische Universität Braunschweig, Germany (PI: Karl-Heinz Glaßmeier).

Instrument description: doi:10.1007/s11214-006-9114-x

The MAG UG and EAICD are included in the documents directory of all MAG datasets in the PSA/PDS archives, e.g. here: https://pds-smallbodies.astro.umd.edu/holdings/ro-c-rpcmag-4-ext2-resampled-v9.0/document/

MIP

The Mutual Impedance Probe MIP determined the plasma density and observed high frequency wave fields. Data from LAP and MIP have been extensively cross-calibrated to provide data combining the advantages of both instruments. The MIP PI institute is the Laboratoire de Physique et Chimie de l'Environnement et de l'Espace, Orléans, France (PI: Pierre Henri).

Instrument description: doi:10.1007/s11214-006-9114-x

The MIP UG and EAICD are included in the documents directory of all MIP datasets in the PSA/PDS archives, e.g. here: https://pds-smallbodies.astro.umd.edu/holdings/ro-c-rpcmip-5-ext2-v1.0/document/

ROSINA COPS

The COmet Pressure Sensor COPS is the only instrument included here not part of the Rosetta Plasma Consortium (RPC), but as the neutral gas density it provided is an important background determinant for the plasma in the coma the COPS data are useful in many plasma studies. COPS was one of the sensors of the Rosetta Orbiter Spectrometer for Ion and Neutral Analysis, ROSINA, instrument. The PI team resides at the Physikalisches Institut at the Universität Bern, Switzerland (PI: Kathrin Altwegg).

Instrument description: doi:10.1007/s11214-006-8335-3

Relevant documentation are available in the documents directory of all ROSINA datasets in the PSA/PDS archives, e.g. here:
https://pds-smallbodies.astro.umd.edu/holdings/ro-c-rosina-4-ext2-v1.0/document/