Monitoring Comet 67P/C-G Micrometer Dust Flux: GIADA onboard Rosetta.

Vincenzo Della Corte (1), Alessandra Rotundi (1,2), Stavro Ivanovski (1), Mario Accolla (1,2), Marco Ferrari (1,2), Roberto Sordini (1), Francesca Lucarelli (2), Vladimir Zakharov (3), Marco Fulle (4), Elena Mazzotta Epifani (5), José J. López-Moreno (6), Julio Rodríguez (6), Luigi Colangeli (7), Pasquale Palumbo (1,2), Ezio Bussoletti (2), Jean-Francois Crifo (8), Francesca Esposito (5), Simon F. Green (9), Eberhard Grün (10), Philippe L. Lamy (11), and the J. Tony M. McDonnell (12), Vito Mennella (5), Antonio Molina (13), Rafael Morales (6), Fernando Moreno (6), Josè L. Ortiz (6), Ernesto Palomba (2), Jean-Marie Perrin (8,14), Rafael Rodrigo (15,16), Paul Weissman (17), John C. Zarnecki (16), Massimo Cosi (18), Frank Giovane (19), Bo Gustafson (20), Miguel L. Herranz (6), Josè M. Jerónimo (6), Mark R. Leese (9), Antonio C. López-Jiménez (6), Nicolas Altobelli (21)

Team


(21)ESA-ESAC, Camino Bajo del Castillo, s/n., Urb. Villafranca del Castillo, 28692 Villanueva de la Cañada, Madrid, Spain.

The MicroBalance System (MBS) is one of the three measurement subsystems of GIADA, the Grain Impact Analyzer and Dust Accumulator on board the Rosetta/ESA spacecraft (S/C). It consists of five Quartz Crystal Microbalances (QCMs) in roughly orthogonal directions providing the cumulative dust flux of grains smaller than 10 microns.

The MBS is continuously monitoring comet 67P/C-G since the beginning of May 2014. During the first 4 months of measurements, before the insertion of the S/C in the bound orbit phase, there were no evidences of dust accumulation on the QCMs. Starting from the beginning of October, three out of five QCMs measured an increase of the deposited dust. The measured fluxes show, as expected, a strong anisotropy. In particular, the dust flux appears to be much higher from the Sun direction with respect to the comet direction.

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