

## LICIACube ground segment activities at SSDC: image processing, calibration and archiving following PDS4 standards

Zinzi A.<sup>(1)(2)</sup>, Della Corte V.<sup>(3)</sup>, Espiritu R.<sup>(4)</sup>, Barnouin O.<sup>(4)</sup>, Dotto E.<sup>(5)</sup>, Amoroso M.<sup>(1)</sup>, Bertini I.<sup>(6)(3)</sup>, Brucato J.R.<sup>(7)</sup>, Capannolo A.<sup>(8)</sup>, Caporali S.<sup>(7)</sup>, Ceresoli M.<sup>(8)</sup>, Cremonese G.<sup>(9)</sup>, Dall’Ora M.<sup>(10)</sup>, Deshapriya J.D.P.<sup>(5)</sup>, Gai I.<sup>(11)</sup>, Gomez Casajus L.<sup>(11)</sup>, Gramigna E.<sup>(11)</sup>, Hasselmann P.<sup>(5)</sup>, Ieva S.<sup>(5)</sup>, Impresario G.<sup>(1)</sup>, Ivanovski S.L.<sup>(12)</sup>, Lasagni Manghi R.<sup>(11)</sup>, Lavagna M.<sup>(8)</sup>, Lombardo M.<sup>(11)</sup>, Lucchetti A.<sup>(9)</sup>, Mazzotta Epifani E.<sup>(5)</sup>, Modenini D.<sup>(10)</sup>, Pajola M.<sup>(9)</sup>, Palumbo P.<sup>(3)(6)</sup>, Perna D.<sup>(5)</sup>, Pirrotta S.<sup>(1)</sup>, Poggiali G.<sup>(7)</sup>, Rossi A.<sup>(13)</sup>, Tortora P.<sup>(11)</sup>, Tusberty F.<sup>(9)</sup>, Zannoni, M.<sup>(11)</sup>, Zanotti, G.<sup>(8)</sup>

*(1) Agenzia Spaziale Italiana, Roma, Italy*

*(2) Space Science Data Center-ASI, Roma, Italy*

*(3) INAF Istituto di Astrofisica e Planetologia Spaziali, Roma, Italy*

*(4) Johns Hopkins University Applied Physics Laboratory, Laurel, MD, USA*

*(5) INAF Osservatorio Astronomico di Roma, Monte Porzio Catone (Roma), Italy*

*(6) Università degli Studi di Napoli "Parthenope", Napoli, Italy*

*(7) INAF Osservatorio Astrofisico di Arcetri, Firenze, Italy*

*(8) Politecnico di Milano, Italy*

*(9) INAF Osservatorio Astronomico di Padova, Italy*

*(10) INAF Osservatorio Astronomico di Capodimonte, Napoli, Italy*

*(11) Università di Bologna, Bologna, Italy*

*(12) INAF Osservatorio Astronomico di Trieste, Italy*

*(13) CNR Istituto di Fisica Applicata "Nello Carrara", Sesto Fiorentino (Firenze), Italy*

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### ABSTRACT

The Space Science Data Center (SSDC) of the Italian Space Agency (ASI) played a key role in the DART-LICIACube mission, mainly by managing the LICIACube Scientific Operations Center (SOC), and, thus, disseminating the data of the LICIACube mission.

Here, the raw-from-telemetry images acquired by the spacecraft and sent to Earth through the Deep Space Network (DSN) and the Mission Control Center (MCC) have been converted to raw FITS, with appropriate keywords in the header selected following PDS requirements and subsequently calibrated with an ad-hoc algorithm developed by the scientific team.

All of the FITS images are accompanied by an XML label and a PNG preview image, to be compliant to PDS4 constraints: indeed the LICIACube dataset is thought to constitute a PDS bundle to be publicly released on September 2023.

The whole work has been made automatic, so that, as soon as the images have been made available by the MCC to the SOC, they were processed and published online on the SOC website (to whom only DART-LICIACube team members can access), being always compliant to the PDS4 requirements.

This procedure is also useful for a subsequent use of the SSDC MATISSE webtool in order to search and visualize the images directly on the 3D shape model of both Didymos and Dimorphos.