README file

This is the Juno Stellar Reference Unit (SRU) image data from Juno’s G34 Ganymede flyby on 7 June 2021. The image is discussed in the paper, "Surface features of Ganymede revealed in Jupiter-shine by Juno’s Stellar Reference Unit," published in AGU Geophysical Research Letters.

Description of files:

**Juno-SRU-G34-flyby.xlsx** contains raw pixel data for the SRU image in Excel spreadsheet format. The units are analog-to-digital converter data number (DN). SRU images are grayscale and have 512 x 512 pixels. The SRU (instrument) frame has a 0 to 511 pixel coordinate system with a boresight coordinate of (255.5, 255.5). Two dummy columns are physically positioned in the 0 and 1 column positions of the CCD (these appear in the 1st and 2nd columns of the spreadsheet; the two leftmost columns). Two dummy rows (lines) appear in the 510 and 511 column positions (the 511th and 512th rows of the spreadsheet). The (0,0) pixel appears in the upper left corner of the spreadsheet, and the (511,511) pixel appears in the lower right corner of the spreadsheet. All dummy pixels are represented with values of zero DN. Electronic offsets cause minimum valid pixel values to be non-zero, on the order of 550 DN for SRU-1 (the unit which acquired this image).

Further details of the camera and its operation are provided in Becker et al. (2017) and Becker et al. (2020).

The image was acquired using time delay integration (TDI) and a 30-ms exposure which began at 16:55:34.605 on 7 June 2021.

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References:

Becker, H.N., Alexander, J.W., Adriani, A. *et al.* The Juno Radiation Monitoring (RM) Investigation. *Space Sci Rev* **213,**507–545 (2017). <https://doi.org/10.1007/s11214-017-0345-9>

Becker, H.N., Alexander, J.W., Atreya, S.K. *et al.* Small lightning flashes from shallow electrical storms on Jupiter. *Nature* **584,**55–58 (2020). <https://doi.org/10.1038/s41586-020-2532-1>