

[812]

PRINT ONLY: INSTRUMENT AND PAYLOAD CONCEPTS

Bell J. F. III Wellington D. F. Cisneros E. Guinness E. Slavney S. et al.

[*MSL/Mastcam In-Flight Calibrated Images: An Improved Dataset of Radiance and Reflectance Image Products for the Planetary Data System*](#) [#1068]

We describe a new in-flight calibration pipeline to create and archive higher-fidelity radiance and radiance factor images from the MSL/Mastcam investigation.

Hobbs S. W. Paull D. J. Clarke J. D. A.

[*Investigating the Science Return of a Microrover for Mars Exploration*](#) [#1192]

A custom made nano-rover was able to return useful imaging science in a Mars-like environment.

Homor F. Gucsik A.

[*Charge, Parity, Time \(CPT\) Symmetry Breaking: Experimental Detection During a Quantum Optic Procedure and Its Application to the Space and Planetary Sciences*](#) [#1115]

The symmetry breaking effect was studied in this study that may be applied to the telecommunication system for the future planetary explorations.

Moral A. G. Rull F. Maurice S. Hutchinson I. B. Canora C. P. et al.

[*Raman Laser Spectrometer for 2020 ExoMars Mission. Engineering and Qualification Model Capabilities and Future Activities.*](#) [#2449]

The Raman Laser Spectrometer Engineering Qualification Model has been already delivered after a wide testing campaign, and its scientific capabilities are shown.

Mullen T. Dyar M. D. Parente M. Breitenfeld L.

[*Improving Matching Accuracy in Raman Spectroscopy by Quantifying the Wavenumber Shift in Raman Spectroscopy Between Instruments*](#) [#1185]

We compared Raman spectra taken by different instruments and showed that not only are there intensity differences, but also wavenumber shifts.

Nussbaumer J. W.

[*Design of a Shutter Mechanism for Planetary Operation*](#) [#1348]

This abstract describes the construction of a shutter mechanism on the mossbauer instrument for planetary exploration.

Rull F. Manrique J. A. Lopez-Reyes G. Medina J. Madariaga J. M. et al.

[*SuperCam Calibration Target Technical Development and Status*](#) [#2854]

The Supercam Calibration Target (SCCT) design and implementation status is described, including qualification status and tests performed on the unit.

Senesi G. S. Manzari P. Consiglio A. De Pascale O.

[*A Fuzzy Logic Algorithm for Analyzing Handheld LIBS Spectra of Meteorites*](#) [#2031]

In this work, the fuzzy algorithm approach is used for the interpretation of meteorites LIBS spectra. The aim is to test the algorithm to classify meteorites.

Tallarida N. Lambert J. Wang A.

[*Fluorescence Mitigation Using the Compact Integrated Raman Spectrometer \(CIRS\) for In Situ Analysis of Minerals and Organics*](#) [#2779]

In an effort to mitigate fluorescence backgrounds in Raman spectra, we have developed/utilized serially shifted excitation for use with a 532 nm CW excitation.