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## A first look at the SuperCam RMI images aboard Perseverance

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Starting in February 2021, the **Perseverance rover** will characterize a new landing site, the Jezero crater on Mars, and assemble a returnable cache of samples [1]. Among the remote sensing instruments, SuperCam combines chemical, mineralogical and organic spectroscopy, sound recording and imaging [2, 3, 4]. SuperCam's **RMI (Remote Micro-Imager)** provides pictures for local context and site imaging at high-resolution.

The 110-mm SuperCam telescope with a focal length of 563 mm allows to take color images of 2048x2048 pixels with a CMOS camera on a bandwidth from ~375 to ~655 nm. The images will be divided by a reference flat-field to correct the attenuation factor of ~5 due to vignetting. The diameter of the circular field-of-view is ~18.8 mrad. The angular size of the RMI pixels is slightly less than 10 microrads, and the effective image resolution is better than 80 microrads, which represents 0.24 mm at 3 m.

Images will be taken at the start and end of the SuperCam raster observations [3] and assembled into annotated mosaics, which will provide information on the nature of the targets at the scale of the SuperCam investigation. Images will also be taken to study remote outcrops. At the time of the conference, Perseverance will have been on Mars for 2 months. Although the first images of the RMI will be used to check the health of the instrument, we also hope to have a first view of the landing site by then.

**References:** [1] Farley K.A. et al. (2020) SSR, 216, 142. [2] Maurice S. et al. (in revision) SSR. [3] Wiens R.C. et al. (2021) SSR, 217, 4. [4] Maurice S. et al. (this issue).