

**The Sporadic Fluvial Regime of Pliva Vallis, the Outlet Valley of Jezero Crater Lake,
Mars**

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Introduction

This file contains two additional figures. Figure S1 highlights the presence of sedimentary deposits in addition to those described in section 3.2 of the paper. These deposits downstream of the valley are evidence of the fluvial activity of Pliva Vallis. Figure S2 illustrates part of the discussion in section 5.2. It shows the influence of grain size on the modeling results for sediment transport time and erosion for the four identified overflow events. Table S1 gives the DTM IDs used in the paper, their download links and their spatial and vertical resolutions.

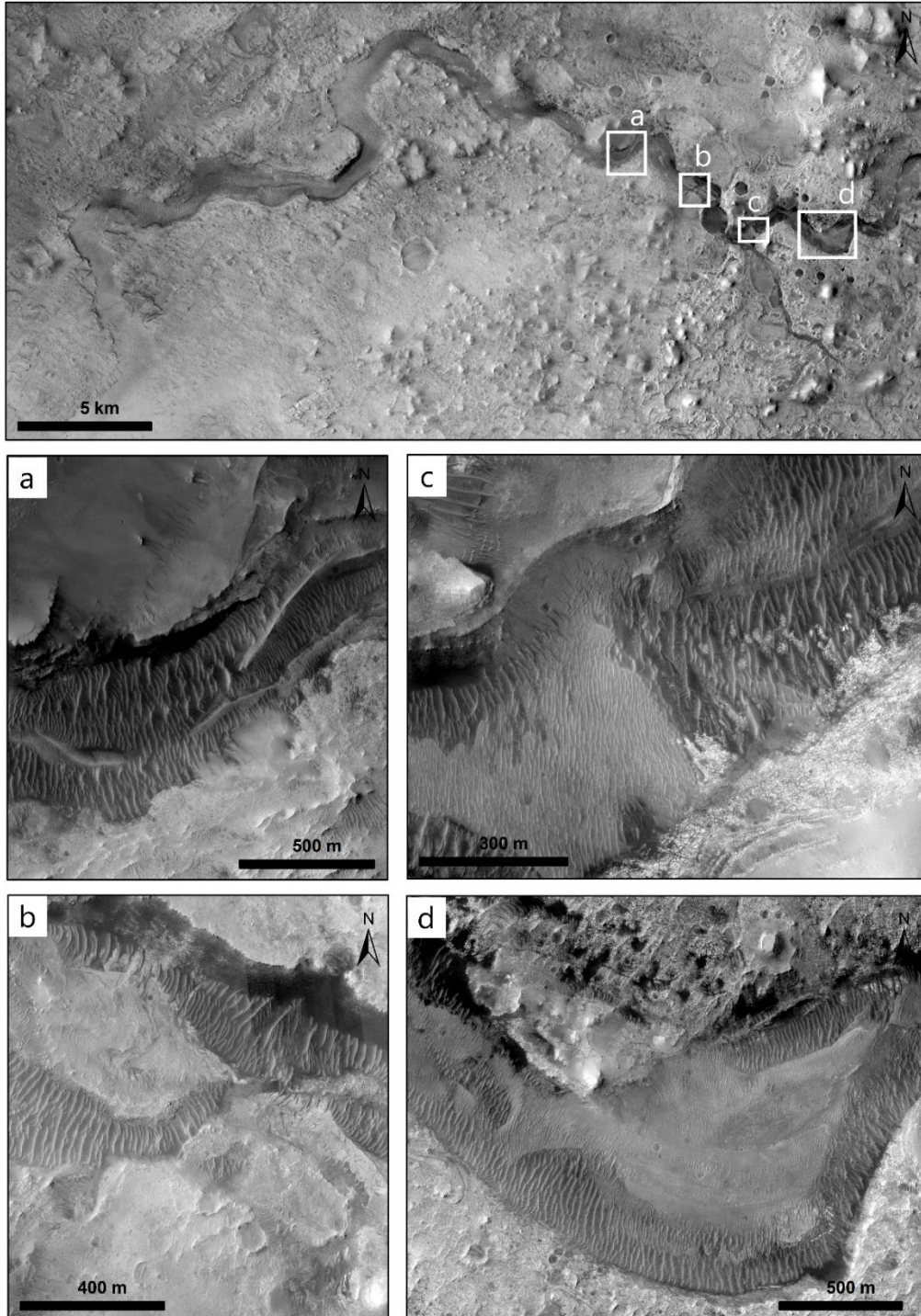


Figure S1. Other deposits observed in Pliva Vallis. (a) Elongated fine-grained deposits on the valley floor. (b) Fine-grained deposit on the valley floor covered by aeolian dunes and

layered deposits on the northern edge of the valley with boulder strata. (c) Fine-grained deposits on the valley floor. (d) Other fine-grained deposit on the valley floor.

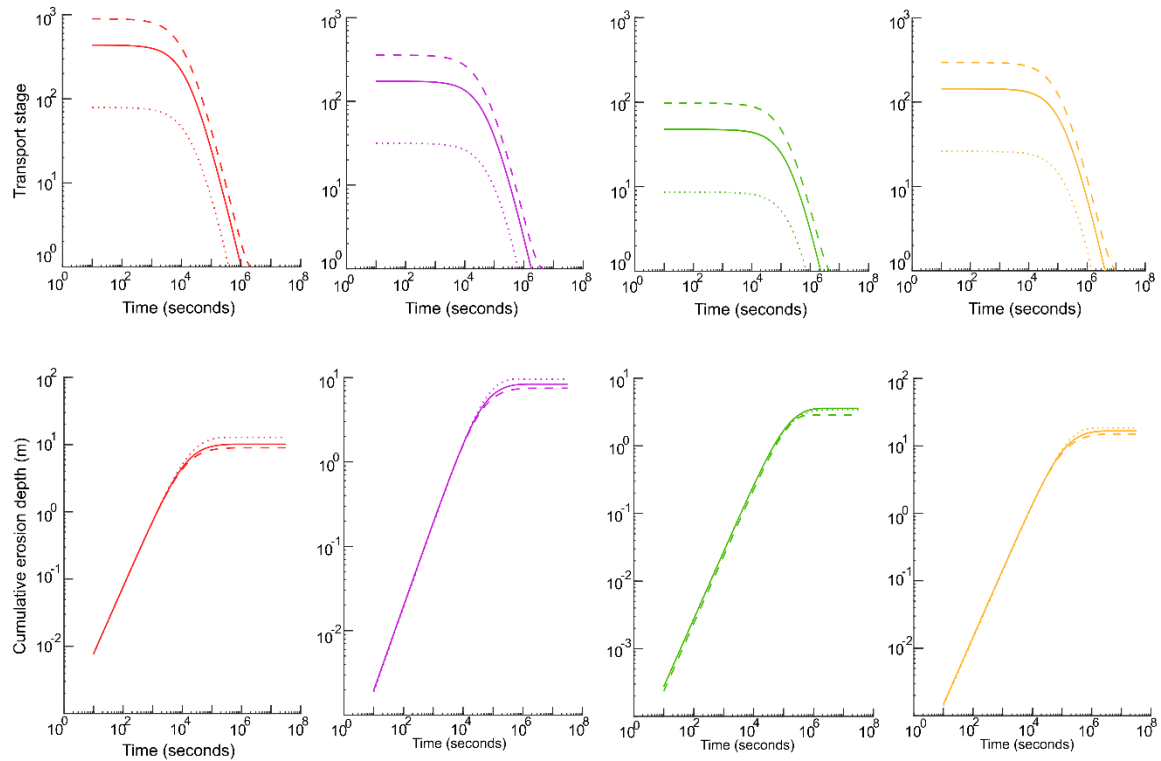


Figure S2. Modeling results of the breach erosion process applied to the Jezero crater case for various grain sizes but fixed slopes and initial flow depths. The dashed lines show the results considering a grain size of 0.038 m, the solid lines for a grain size of 0.078 m and the dotted lines for a grain size of 0.431m.

| DTM ID | Images | Link | Spatial resolution | Vertical precision |
|-----------------------------------|---------|---|--------------------|--------------------|
| DTEED_033651_1990_033717_1990_A01 | HiRIS E | https://www.uahirise.org/dtm/ESP_033651_1990 | 1m/px | <1m |
| UDL_CTX-Mosaic_DEM_Jezero-tile-0 | CTX | https://marssi.univ-lyon1.fr/data/MARS/MRO/CTX/Jezero/ | 12m/px | ~5m |
| UDL_CTX-Mosaic_DEM_Jezero-tile-1 | CTX | https://marssi.univ-lyon1.fr/data/MARS/MRO/CTX/Jezero/ | 12m/px | ~5m |
| UDL_CTX-Mosaic_DEM_Jezero-tile-2 | CTX | https://marssi.univ-lyon1.fr/data/MARS/MRO/CTX/Jezero/ | 12m/px | ~5m |
| UDL_CTX-Mosaic_DEM_Jezero-tile-3 | CTX | https://marssi.univ-lyon1.fr/data/MARS/MRO/CTX/Jezero/ | 12m/px | ~5m |

Table S1: Table listing the DTM IDs, their download link, their spatial resolution and vertical precision.