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Figure S1. HORUS coverage of a very small PSR (V01h) close to site 001 with a particularly prominent boulder and otherwise smooth surface. Note how the TSR’s terminator and TSR’s/PSR’s secondary illumination changes as a function of the illumination geometry/local time (approximated) and how the boulder’s appearance varies. The four frames illustrate 1) how we validate observations in multiple images (the designated boulder can be observed in 3 of the 4 images, i.e., is a TP = true positive), 2) that higher DN counts do not necessarily mean that more features are resolved (potentially leading to FN = false negatives), and 3) how the apparent surface albedo varies with the illumination geometry. Raw NAC image credits to NASA/LROC/GSFC/ASU.
Figure S2. Illustration of the observed relative age differences between PSRs in the study region. Left: younger (host crater with distinct and elevated rim – where applicable –, distinct PSR terminator or margin, steep slopes >~20°, and rough surface >~2.5 m, as well as boulders in and around the PSR). Right: older (host crater with eroded rim – where applicable –, fuzzy terminator, shallow slopes <~10°, no or limited roughness <~1.5 m, and no boulders in and around the PSR). Not shown here: intermediately old (host crater with recognizable rim – where applicable –, distinct to fuzzy terminator, moderately steep slopes between ~10 and 20°, and a somewhat rough surface between ~1.5 and ~2.5 m, as well as a few boulders in and around the PSR). The different rows show max-lit NAC mosaic (LMMP, 2011), topographic slope (Barker et al., 2021), and 40 m scale surface roughness (Smith & the LOLA Team, 2022). The scale is consistent across the rows. We point out that even older PSRs are still geologically young (due to their small size), younger than ~100 Ma (Drozd et al., 1974; Arvidson et al., 1975; Bogard & Hirsch, 1978). Raw NAC image credits to NASA/LROC/GSFC/ASU.
**Figure S3.** Pair of potentially fresh(er) and intermediately old/older umbral impact craters as observed in 3 different NAC frames. The potentially fresh(er) impact crater (on the left) is characterized by an elevated rim and rough surface which increase its overall reflectivity. We note that the apparent, visual differences in appearance and albedo could also reflect different volatile abundance in the impacted regions rather than relative age. Raw image credits to NASA/LROC/GSFC/ASU.

**Figure S4.** Potentially fresh(er) impact crater(s) in PSR V01c close to site 001 as observed in 4 different NAC frames. Note how the illumination geometry affects the overall appearance of the PSR's/TSR's surface, while the area around the potentially fresh(er) impacts maintains a somewhat higher albedo. These initial observations require further verification. Raw image credits to NASA/LROC/GSFC/ASU.
Figure S5. Apparent geomorphic, umbral contact between a smooth and highly textured surface (Wo1e) as observed in 4 different NAC frames. Note how the surface characteristics change within meters. Raw image credits to NASA/LROC/GSFC/ASU. Further analysis is displayed in S6 and S7.
Figure S6. Cont. S5 - Detailed study of an apparent geomorphic, umbral contact (yellow dashed line) between a smooth and highly textured surface as observed in 7 different NAC frames on 2 different sides of W01e. All HORUS frames were manually co-registered; note the slight offset of the true PSR extent (yellow polygon) and the non-corrected extent (white polygon). The secondary illumination direction is indicated by a red arrow (including primary illumination sub solar longitude, $l_s$). The last panel shows the synthesis of all contacts as traced in the individual frames, showing good spatial agreement (variation in $l_s$ is shown in colors ranging from red to yellow). Raw image credits to NASA/LROC/GSFC/ASU.
Figure S7. Cont. S5 & S6 - Detailed study of an apparent geomorphic, umbral contact (yellow dashed line) between a smooth and highly textured surface as observed in W01e. Top panels show regular HORUS images, bottom panels show regular HORUS images with HORUS SNR contours overlaid (red lines, for SNR calculation details see Moseley et al., 2020; Bickel et al., 2021). SNR contours cross the geomorphic contact (highlighted in bold red), indicating that HORUS’ ability to resolve features is similar on both sides of the contact – suggesting the geomorphic contact (change in surface texture) is real (in combination with the good spatial alignment, shown in S6). The secondary illumination direction is indicated by a red arrow (including primary illumination sub solar longitude, l_s). Raw image credits to NASA/LROC/GSFC/ASU.
Figure S8. Overview map of the 44 studied PSRs (>~100 m across, i.e., >2 by 2 pixels in the 60 m/pixel Sun visibility product of Mazarico et al. (2011), with exemption of sites X01a and X01b which are only ~90 m and ~40 m across, respectively) in the studied section of the Artemis exploration zone (around sites 001 & 004, black dots; PSRs indicated in red, PSR IDs indicated in red). Geomorphologic map 1:8000 in the background (Bernhardt et al., 2022), black contour lines represent elevation changes of 100 m.
Figure S9. Detailed analysis of X01a’s umbral geomorphology using 4 individual HORUS frames – part 1 (see S10). Secondary illumination is poor, but four different types of features can be recognized/anticipated (listed with decreasing confidence): yellow – large crater; red – topographic depression; blue – boulder/crater rim?; green – small craters? Potentially promising (smooth) landing sites are marked by white circles in frame I, pending further analysis. Raw image credits to NASA/LROC/GSFC/ASU.
Figure S10. Cont. detailed analysis of X01a’s umbral geomorphology using 4 individual HORUS frames – part 2 (see S9). Secondary illumination is poor, but four different types of features can be recognized/anticipated (listed with decreasing confidence): yellow – large crater; red – topographic depression; blue – boulder/crater rim?; green – small craters? Potentially promising (smooth) landing sites are marked by white circles in frame VI, pending further analysis. Raw image credits to NASA/LROC/GSFC/ASU.
HORUS data description & availability

All HORUS data is available here: [https://doi.org/10.56272/GQKZ6227](https://doi.org/10.56272/GQKZ6227)

The image repository contains a total of 8,888 non map-projected HORUS post-processed images (2,222 individual images). The repository holds 4 variants of each individual HORUS image, representing different clipping values. ‘Clipping’ is a HORUS pre-processing step that omits all pixels with DN counts over a given, fixed threshold. The suppression of very bright pixels helps to reduce the contrast between sunlit and shadowed regions, ultimately allowing HORUS to discern more detail in the sun-shadow transition zone (terminator) while preventing synthetic ‘pixel bleed’ and other artifacts that might suppress or cover physical features – which is particularly important for very small PSRs (<~500 m). Clipping is performed at 4 pre-defined thresholds: 5, 10, 20, and 50 DN. Particularly poorly secondarily-lit PSRs benefit from lower thresholds, well secondarily-lit PSRs benefit from higher thresholds. The different variants have the file names:

<M> <NAC image unique number > <NAC L or R> <C> <HORUS> <clipping value (DN)> <clip> <.cub>

Each HORUS-processed image preserves its unique NAC image ID number. Note that clipping can occasionally remove high-reflectance features within PSRs – we recommend to always consider all image variants before using any of the images for science- or exploration-related purposes.

The number of available images per site depend on the local secondary illumination conditions (see the PSR Atlas below for exact numbers). Note that PSRs X01a and X01b are jointly listed as ‘X01a’. Each HORUS image (variant) requires exactly 504.5 MB of disk space. The total dataset size is about ~4.5 TB. We additionally provide shape files (.shp, Moon2000 polar stereographic projection) that document the location and extent of all 44 studied PSRs.

All images are default USGS Isis3 (Integrated Software for Imagers and Spectrometers, [https://isis.astrogeology.usgs.gov/](https://isis.astrogeology.usgs.gov/)) cube files with the file ending .cub. HORUS-processed images do not need to be imported with, e.g., Ironac2isis and do not require any further calibration (Ironaccal) or echo correction (Ironacecho). HORUS images can be map-projected to any user-defined system using, e.g., the default cam2map command. We recommend initializing the SPICE kernels prior to map-projection (spiceinit). We recommend to view the map-projected images and manually optimize their brightness and contrast in, e.g., a Geographic Information System to maximize the number of visible features and facilitate image analysis & cross-comparison.

The image repository further holds browse versions of all regular HORUS images, for quick review and selection. Note that the browse product panel visualizations do not always feature the optimal histogram stretch (brightness & contrast) for technical reasons (especially for very small PSRs); all available HORUS images provide at least some coverage of their target PSR, even if their browse products indicate otherwise.

For specific details about HORUS and the processing pipeline refer to Moseley et al. (2021).

The dataset is hosted by SpaceML, enabled by the Frontier Development Lab (FDL) and Google Cloud.
Artemis Exploration Zone PSR Catalog

The following pages contain a detailed description of the geomorphic and thermophysical characteristics of the 44 studied PSRs in the Artemis exploration zone (around potential Artemis landing sites 001 and 004). There is one table and 6 figures for each PSR, i.e., a total of 6 pages per PSR. The table contains information about a series of (cryo)geomorphic and thermophysical properties, specifically:

- **DIA** diameter
- **NC** number of craters
- **NB** number of boulders
- **AMéT** annual mean temperature (Schorghofer & Williams, 2020; Williams et al., 2019)
- **AMA T** annual max temperature (Schorghofer & Williams, 2020; Williams et al., 2019)
- **SID** surface ice detections (Li et al., 2018)
- **MDI T** modeled ice stability depth (modeled depth to ice) (Siegler et al., 2016)
- **MaS** PSR terminator max slope angle (Barker et al., 2021)
- **MiS** PSR terminator min slope angle (Barker et al., 2021)
- **EV** PSR terminator average earth visibility (Smith & the LOLA Team, 2022)
- **SR40** surface roughness 40 m scale (Smith & the LOLA Team, 2022)
- **SR240** surface roughness 240 m scale (Smith & the LOLA Team, 2022)

The table reports NC and NB with two levels of confidence – the first number reports the amount of features that were detected in at least 2 HORUS images (spatial and morphological consistency), i.e., those features are likely present. The second number (in brackets) further includes detections that either a) were only made in 1 HORUS image and/or b) were assigned a low confidence score during review, i.e., might not be present or might not be the type of feature they were classified as. Note that our crater and boulder counts as presented in the table include features that are located within the PSR, on the terminator, as well as in the close proximity of the terminator (in the TSR) to account for potential spatial mis-alignments between the map-projected HORUS images and the underlying, LOLA-rectified data.

The values reported for AMéT, AMA T, and MDI T are minimum values within a given PSR. The values reported for EV and MaS are maximum values at the terminator of a given PSR. The values reported for MiS are minimum values at the terminator of a given PSR. The values reported for SR40 and SR240 are minimum and maximum values within a given PSR.

The table further contains notes about each PSR, including a discussion of the embedding of a given PSR in the overall geomorphological context (Bernhardt et al., 2022), its center latitude and longitude, its line-of-sight distance to site 003 or 004 (whatever is closer), the estimated maximum terminator bearing capacity and overall trafficability assessment (Bickel & Kring, 2020), its estimated relative (qualitative) age, and other relevant information. Further, the table reports the number of images that cover a given PSR (as of February 2022) and the number and percentage of images with significant signal/secondary illumination. Note that due to LRO’s ground track drift and the high latitude of the study area the numbers of NAC images available over each site are not expected to change in the future.

The 6 figure panels available for each PSR visualize (polar stereographic projection, where applicable):

- **Fig. panel #1**: geomorphic surrounding & overview, PSR extent and shape, site illumination & NAC observation geometry characteristics
- **Fig. panel #2**: PSR thermal regime (diurnal & seasonal) and CSFD
- **Fig. panel #3**: HORUS image, HORUS-based mapping results
- **Fig. panel #4**: Surface roughness on a 40m scale, topographic slope
- **Fig. panel #5**: Modeled ice stability depth, geomorphic context
- **Fig. panel #6**: Estimated (sunlit) terminator surface bearing capacity, overall trafficability assessment
**Fig. #1** shows the extent of the respective PSR in white; the white contour lines represent the elevation in 10 m steps. The background image is a max-lit NAC mosaic (LMMP, 2011). The polar histogram visualizes some of the most relevant illumination and geometric characteristics of the NAC images acquired over a given site. The theta angle represents sub solar longitude (North is 0°) and the radius represents solar incidence angle (°). The colored points resemble HORUS images with sufficient signal; the color and point size represent spatial resolution (m, large & bright points represent low resolution images, small & dark points represent high resolution images). The small, black crosses represent HORUS images without sufficient signal (not available in the associated dataset). This figure characterizes the location of the dominant secondary scatterers around a given PSR (the scatterer is located opposite to the incoming primary illumination as described by the sub solar longitude). The polar histogram could help inform future efforts to plan either space- or ground-based observations of PSRs, highlighting observational windows of increased opportunity. We note that NAC does not provide complete (space & time) coverage of all studied PSRs, meaning that the data presented by the polar histograms might be incomplete. Note that the extent of some PSRs might appear to extend into sunlit regions – this is caused by the coarse resolution of the used PSR product with a resolution of 60 m/pixel (Mazarico et al., 2011) and LRO localization inaccuracies.

**Fig. #2** visualizes the thermal regime in a given PSR as observed by Diviner (Schorghofer & Williams, 2021; Williams et al., 2019), showing a) a 2D visualization of the temperature as a function of the local time and the seasons (using 6 seasonal and 24 local time bins; season bin 2 is summer, season bin 5 is winter); and b) an alternative representation of the relation between local time, temperature, and seasons, where the seasons are expressed in ecliptic longitude (Ls) (90° = winter, 270° = summer; with 6 seasonal bins, local time repeats every seasonal bin). We note that the Diviner footprint can be larger than some of the studied PSRs. Fig. #2 further shows the CSFD as derived for a given PSR (including an overview map), using CSFD Tools and CraterStats2 (e.g., Riedel et al., 2018) as well as all “certain” crater counts. Note that some PSRs do not feature any or only very few craters, meaning that their CSFD curves are not very expressive. The shown CSFD curves only consider craters within and on the terminator but not in the close proximity of the respective PSR – for this reason the counts as presented in the table and Fig. #2 might not always match. We point out that the “knick”, “bend”, or “rollover” at around ~9 to ~11 m in some of the CSFD curves is likely caused by the HORUS-based post-processing and spatial resolution, as shown by Bickel et al. (2021) – smaller craters are more likely to be not resolved by HORUS, meaning they are underrepresented in the counts, causing the “rollover”.

**Fig. #3** shows the HORUS image with the best SNR and overall coverage, as identified during the review process, including image ID and DN count range. It is important to note that the localization of NAC and HORUS images is not always accurate, leading to spatial misalignments between the LOLA-registered products (e.g., PSR terminator location) and NAC/HORUS. The white area around the PSR is the sunlit surface that was oversaturated on purpose. The black contour lines represent the elevation in 10 m steps. Fig. #3 further shows a HORUS-based map featuring all detections that were made: boulders in shades of red, craters in shades of blue, textured terrain in yellow, and lobate-type features in green. Note that some of the mapped features might not necessarily be visible in the presented HORUS image as they might have been detected in other frames (not shown here). The background is a 60 m Sun visibility (PSR) product (Mazarico et al., 2011), where PSRs are shown in light blue and the sunlit surface is shown in white.

**Fig. #4** shows a 40m-scale surface roughness map derived from LOLA (Smith & the LOLA Team, 2022); this product is sensitive to features on scales of around 40 meters, roughly. We note that the 40m product contains interpolated data (see, e.g., Deutsch et al., 2021). #4 further shows a slope map derived from LOLA topography (Barker et al., 2021). The black contour lines represent the elevation in 10 m steps.
**Fig. #5** shows the modeled ice stability depth (current) map product (Siegler et al., 2016) derived from Diviner and LEND data. Values of -1 m indicate that ice might be stable on the surface of a given PSR; note that the scale is capped at 2.5 m - the modeled ice stability depth might in fact be (much) deeper than that value. Fig. #5 further shows a geomorphic map of the Artemis exploration zone (Bernhardt et al., 2022), including unit labels, contacts, and a suggested traverse (red line, not visible in all PSRs). Relevant geomorphic units are: cf = crater floor, chs = cratered highlands, iss = intensely slope-textured surface, mss = moderately slope-textured surface. Please refer to Fig. S8 for a complete list of geomorphic units (per Bernhardt et al., 2022). The black contour lines represent the elevation in 10 m steps.

**Fig. #6** shows the estimated surface bearing capacity of the sunlit side of the PSR terminator and the PSR’s sunlit surroundings as derived from remote observations of sunlit, south polar boulder tracks (Bickel & Kring, 2020). Fig. #6 further shows an overall assessment of PSR trafficability, considering slope angle and estimated bearing capacity: per Bickel and Kring (2020), slopes shallower than 15° are ‘less challenging’ to traverse, while slopes between 25° and 35° (and beyond) are ‘potentially challenging to traverse’. On slopes steeper than 25° a VIPER-type rover (robotic asset) might sink an estimated ~4 cm while a LER-type rover (pressurized, crewed vehicle) an estimated ~6 cm (static sinkage). We note that sinkage does not only affect mobility, but also energy consumption, for robotic assets as well as for crew. The shown bearing capacity estimates and trafficability assessment are not representative of shadowed terrain, which is why shadowed terrain is omitted by a black shape. We note that the surface bearing capacity estimates that were derived from predominantly sunlit polar regions might not be representative of the predominantly shadowed, yet occasionally sunlit (pen-umbral) regolith around the terminator. The black contour lines represent the elevation in 10 m steps.
Table 1. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K01a</td>
<td>~800</td>
<td>82 (117)</td>
<td>7 (27)</td>
<td>67</td>
<td>113</td>
<td>Maybe</td>
<td>surface</td>
<td>11</td>
<td>5</td>
<td>~48</td>
<td>0.3-4.0</td>
<td>0.4-1.2</td>
</tr>
</tbody>
</table>

Notes
Large PSR with a large number of visible craters and boulders, some of the mapped craters appear to be fresher (no signs of an ejecta blanket), appears to have a textured surface, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Modeled surface ice is not visible. Potentially observed (M, Li et al., 2018) surface frost is not visible. Presumed contact between mss, iss, and cf within the PSR (Bernhardt et al., 2022) is not clearly visible. Presumed mss and iss units are visible, presumed cf unit is not visible. PSR is overall well secondary-lit, the best images have very high SNR.

Geomorphic unit(s): mss, cf, iss

Estimated age: Younger – intermediate – older (parts of the PSR appear to have different ages)

Center latitude, longitude (°N, °E): -89.685269, -129.346008

Distance to site 004: ~4 km

Max. est. terminator bearing capacity: ~13.2 kN/m²

Illumination Total: 383 NACs | With signal: 78 NACs | Percent with signal: 20 %

![Image of Horus (LOI_NAC_AvgMosaic_SPoleSSS)](image-url)
Table 2. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K01b</td>
<td>~750</td>
<td>53 (57)</td>
<td>2 (5)</td>
<td>63</td>
<td>110</td>
<td>No</td>
<td>surface</td>
<td>12</td>
<td>4</td>
<td>~54</td>
<td>0.3-7.1</td>
<td>0.5-1.9</td>
</tr>
</tbody>
</table>

Notes
Large PSR with a large number of visible craters and boulders, some of the mapped craters appear to be very fresh (no signs of an ejecta blanket), appears to have a textured surface, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Modeled surface ice is not visible. Presumed mss unit within the PSR (Bernhardt et al., 2022) is visible. PSR is overall well secondary-lit, the best images have very high SNR.

Geomorphologic unit(s): mss
Estimated age: Younger – intermediate – older (parts of the PSR appear to have different ages)
Center latitude, longitude (°N, °E): -89.599722, -119.557473
Distance to site 001: ~5.7 km
Max. est. terminator bearing capacity: ~13.2 kN/m²

Illumination
Total: 439 NACs  | With signal: 84 NACs  | Percent with signal: 19 %
Table 3. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>L01a</td>
<td>~950</td>
<td>36 (52)</td>
<td>4 (15)</td>
<td>67</td>
<td>96</td>
<td>No</td>
<td>surface</td>
<td>17</td>
<td>3</td>
<td>~42</td>
<td>0.3-5.0</td>
<td>0.4-1.8</td>
</tr>
</tbody>
</table>

Notes
Large PSR with a large number of visible craters and boulders, some of the mapped craters appear to be fresher (no signs of an ejecta blanket), appears to have a partially textured surface, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Modeled surface ice is not visible. Presumed contact between mss, iss, and cf within the PSR (Bernhardt et al., 2022) is not clearly visible. Presumed mss unit within the PSR is visible. PSR is overall very well secondary-lit, the best images have high SNR.

Geomorphic unit(s): mss, cf, iss

Estimated age: Younger – intermediate – older (parts of the PSR appear to have different ages)

Center latitude, longitude (°N, °E): -89.374408, -116.508509

Distance to site 001: ~6.2 km

Max. est. terminator bearing capacity: ~13.2 kN/m²

Illumination
Total: 387 NACs | With signal: 166 NACs | Percent with signal: 43 %
Table 4. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>Sd?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M01a</td>
<td>~350</td>
<td>24 (29)</td>
<td>3 (8)</td>
<td>112</td>
<td>209</td>
<td>No</td>
<td>&gt;2.5</td>
<td>29</td>
<td>9</td>
<td>~56</td>
<td>0.7-8.6</td>
<td>1.6-3.2</td>
</tr>
</tbody>
</table>

Notes
Medium-sized PSR with a few visible craters and boulders, some of the mapped craters appear to be fresher (no signs of an ejecta blanket), appears to have a partially textured surface, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed contact between iss and cf within the PSR is visible. Presumed iss unit within the PSR is visible. PSR is overall well secondary-lit, the best images have very high SNR.

Geomorphic unit(s): cf, iss
Estimated age: Intermediate
Center latitude, longitude (°N, °E): -89.369014, -129.799802
Distance to site 001: ~3.2 km
Max. est. terminator bearing capacity: ~9.8 kN/m²

Illumination
Total: 336 NACs  |  With signal: 59 NACs  |  Percent with signal: 18 %
Table 5. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M01b</td>
<td>~250</td>
<td>19 (22)</td>
<td>0 (0)</td>
<td>145</td>
<td>222</td>
<td>No</td>
<td>&gt;2.5</td>
<td>29</td>
<td>7</td>
<td>~57</td>
<td>1.0-8.8</td>
<td>1.6-2.9</td>
</tr>
</tbody>
</table>

Notes
Medium-sized PSR with a few visible craters and no boulders, some of the mapped craters appear to be very fresh (no signs of an ejecta blanket), appears to have a partially textured surface, is surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed iss unit within the PSR (Bernhardt et al., 2022) is visible. PSR is overall well secondary-lit, the best images have very high SNR.

Geomorphic unit(s): iss
Estimated age: Younger – intermediate
Center latitude, longitude (°N, °E): -89.358610, -131.990443
Distance to site 001: ~3 km
Max. est. terminator bearing capacity: ~13.2 kN/m²

Illumination
Total: 333 NACs | With signal: 91 NACs | Percent with signal: 27 %
Table 6. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDu (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M01c</td>
<td>~300</td>
<td>2 (3)</td>
<td>0 (27)</td>
<td>93</td>
<td>160</td>
<td>No</td>
<td>0.17</td>
<td>24</td>
<td>4</td>
<td>~20</td>
<td>1.3-5.5</td>
<td>2.3-2.8</td>
</tr>
</tbody>
</table>

Notes
Medium-sized PSR with a few visible craters and no boulders, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed iss unit within the PSR (Bernhardt et al., 2022) is not clearly visible. PSR is overall well secondary-lit, the best images have high SNR.

Geomorphic unit(s): iss, chs

Estimated age: Intermediate - older

Center latitude, longitude (°N, °E): -89.368094, -136.569019

Distance to site 001: ~2.3 km

Max. est. terminator bearing capacity: ~13.2 kN/m²

Illumination Total: 375 NACs | With signal: 92 NACs | Percent with signal: 25 %
Table 7. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDu (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M01d</td>
<td>~125</td>
<td>1 (1)</td>
<td>0 (0)</td>
<td>103</td>
<td>178</td>
<td>No</td>
<td>0.17</td>
<td>16</td>
<td>10</td>
<td>~27</td>
<td>1.0-4.9</td>
<td>1.8-2.4</td>
</tr>
</tbody>
</table>

Notes
Small PSR with very few visible craters and no boulders, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed mss unit within the PSR (Bernhardt et al., 2022) is not clearly visible. PSR is overall well secondary-lit, the best images have poor SNR.

Geomorphic unit(s): mss, chs
Estimated age: Intermediate - older
Center latitude, longitude (°N, °E): -89.357296, -136.314867
Distance to site 001: ~2.7 km
Max. est. terminator bearing capacity: ~9.8 kN/m²

Illumination
Total: 353 NACs | With signal: 102 NACs | Percent with signal: 29 %
Table 8. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDiI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M01e</td>
<td>~250</td>
<td>10</td>
<td>0 (2)</td>
<td>99</td>
<td>179</td>
<td>No</td>
<td>0.10</td>
<td>15</td>
<td>5</td>
<td>~36</td>
<td>0.2-5.0</td>
<td>1.3-2.8</td>
</tr>
</tbody>
</table>

Notes
Small PSR with a few visible craters and no boulders, some of the mapped craters appear to be fresher (no signs of an ejecta blanket), appears to host a potential linear lobate feature that stretches across the PSR (consistent with the location of a presumed lobate scarp, Bernhardt et al., 2022), is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed mss unit within the PSR (Bernhardt et al., 2022) is not clearly visible. PSR is overall very well secondary-lit, the best images have high SNR.

Geomorphic unit(s): mss
Estimated age: Intermediate - older
Center latitude, longitude (°N, °E): -89.356894, -138.069965
Distance to site 001: ~2.5 km
Max. est. terminator bearing capacity: ~13.2 kN/m²

Illumination
Total: 399 NACs | With signal: 120 NACs | Percent with signal: 30 %
Table 9. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDu (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M01f</td>
<td>~250</td>
<td>2 (3)</td>
<td>0 (0)</td>
<td>135</td>
<td>218</td>
<td>No</td>
<td>&gt;2.5</td>
<td>20</td>
<td>5</td>
<td>~23</td>
<td>0.1-0.2</td>
<td>1.1-1.7</td>
</tr>
</tbody>
</table>

Notes
- Small PSR with a few visible craters and no boulders, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed contact between mss and iss within the PSR (Bernhardt et al., 2022) is not clearly visible. Presumed iss and mss units are not clearly visible. PSR is overall very secondary-lit, the best images have poor SNR.
- Geomorphic unit(s): mss, iss
- Estimated age: Intermediate
- Center latitude, longitude (°N, °E): -89.404386, -140.431742
- Distance to site 001: ~2.5 km
- Max. est. terminator bearing capacity: ~13.2 kN/m²

Illumination Total: 378 NACs | With signal: 100 NACs | Percent with signal: 26 %

![Image of the PSR M01f with detailed geographic coordinates and illuminated areas]
### Table 10. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M01g</td>
<td>~300</td>
<td>7 (7)</td>
<td>0 (1)</td>
<td>135</td>
<td>211</td>
<td>No</td>
<td>&gt;2.5</td>
<td>24</td>
<td>4</td>
<td>~44</td>
<td>0.8-15.1</td>
<td>1.3-2.6</td>
</tr>
</tbody>
</table>

**Notes**

Medium-sized PSR with a few visible craters and no boulders, some of the mapped craters appear to be fresher (no signs of an ejecta blanket), appears to have a partially textured surface, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed contact between mss and iss within the PSR (Bernhardt et al., 2022) is not clearly visible. Presumed mss and iss units are visible. PSR is located along an EVA proposed by Bernhardt et al. (2022). PSR is overall very well secondary-lit, the best images have high SNR.

- Geomorphic unit(s): mss, iss
- Estimated age: Younger - Intermediate
- Center latitude, longitude (*°N, °E*): -89.517773, -141.730095
- Distance to site 001: ~2.2 km
- Max. est. terminator bearing capacity: ~13.2 kN/m²

**Illumination**

- Total: 411 NACs
- With signal: 178 NACs
- Percent with signal: 43 %
Table 11. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M01h</td>
<td>~150</td>
<td>0 (2)</td>
<td>0 (0)</td>
<td>126</td>
<td>196</td>
<td>No</td>
<td>1.4</td>
<td>19</td>
<td>4</td>
<td>~56</td>
<td>0.5-3.0</td>
<td>1.0-1.3</td>
</tr>
</tbody>
</table>

Notes
Small PSR with no visible craters and no boulders, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed contact between chs and iss within the PSR (Bernhardt et al., 2022) is not visible. Presumed chs and iss units are not visible. PSR is located along an EVA proposed by Bernhardt et al. (2022). PSR is overall poorly secondary-lit, the best images have poor SNR.

Geomorphic unit(s): iss, chs

Estimated age: Older

Center latitude, longitude (°N, °E): -89.551736, -143.502031

Distance to site 001: ~3.4 km

Max. est. terminator bearing capacity: ~13.2 kN/m²

Illumination
Total: 361 NACs | With signal: 47 NACs | Percent with signal: 13 %
Table 12. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDt (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N01a</td>
<td>~750</td>
<td>13 (16)</td>
<td>0 (0)</td>
<td>86</td>
<td>145</td>
<td>No</td>
<td>surface</td>
<td>25</td>
<td>8</td>
<td>~29</td>
<td>0.3-5.9</td>
<td>0.9-2.4</td>
</tr>
</tbody>
</table>

Notes
Large PSR with a large number of visible craters and no boulders, some of the mapped craters appear to be fresher (no signs of an ejecta blanket), appears to have a partially textured surface, appears to host a potential linear lobate feature that stretches across parts of the PSR, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Modeled surface ice is not visible. Presumed contact between iss and cf within the PSR (Bernhardt et al., 2022) is not visible. Presumed iss unit is visible, presumed cf unit is not visible. PSR is overall very well secondary-lit, the best images have poor SNR.

Geomorphic unit(s): cf, iss
Estimated age: Intermediate
Center latitude, longitude (°N, °E): -89.345379, -150.465354
Distance to site 001: ~4.8 km
Max. est. terminator bearing capacity: ~9.8 kN/m²

Illumination
Total: 475 NACs | With signal: 175 NACs | Percent with signal: 37 %
Table 13. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMeT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N01b</td>
<td>~150</td>
<td>1 (4)</td>
<td>0 (0)</td>
<td>89</td>
<td>161</td>
<td>No</td>
<td>0.73</td>
<td>20</td>
<td>4</td>
<td>~31</td>
<td>0.5-7.5</td>
<td>1.3-1.6</td>
</tr>
</tbody>
</table>

Notes: Small PSR with a few visible craters and no boulders, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed chs unit (Bernhardt et al., 2022) is not clearly visible. PSR is overall very well secondary-lit, the best images have poor SNR.

Geomorphic unit(s): chs

Estimated age: Intermediate – older

Center latitude, longitude (°N, °E): -89.386009, -150.326118

Distance to site 001: ~4.3 km

Max. est. terminator bearing capacity: ~13.2 kN/m²

Illumination: Total: 424 NACs | With signal: 175 NACs | Percent with signal: 41 %
### Table 14. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDu (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>N01c</td>
<td>~350</td>
<td>12</td>
<td>1 (3)</td>
<td>79</td>
<td>154</td>
<td>No</td>
<td>0.29</td>
<td>9</td>
<td>2</td>
<td>~8</td>
<td>0.2-2.3</td>
<td>0.5-1.0</td>
</tr>
</tbody>
</table>

**Notes**
Medium-sized PSR with a few visible craters and boulders, some of the mapped craters appear to be very fresh, maybe even rocky (no signs of an ejecta blanket), appears to have a partially textured surface, is surrounded by a few visible boulder fields, but not rocky craters and rocky outcrops. Presumed contact between mss and chs within the PSR (Bernhardt et al., 2022) is not visible. Presumed mss unit is visible, presumed chs unit is not visible. PSR is overall very well secondary-lit, the best images have very high SNR.

Geomorph unit(s): chs, mss

Estimated age: Older

Center latitude, longitude (°N, °E): -89.472174, -156.501933

Distance to site 001: ~5.3 km

Max. est. terminator bearing capacity: ~>13.2 kN/m²

**Illumination**
Total: 416 NACs | With signal: 176 NACs | Percent with signal: 42 %
### Table 15. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDu (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>O01a</td>
<td>1300</td>
<td>37 (51)</td>
<td>0 (0)</td>
<td>64</td>
<td>100</td>
<td>Yes</td>
<td>surface</td>
<td>17</td>
<td>5</td>
<td>~40</td>
<td>0.3 - 13.2</td>
<td>0.6 - 3.5</td>
</tr>
</tbody>
</table>

**Notes**

Large PSR with a large number of visible craters and no boulders, some of the mapped craters appear to be very fresh (no signs of an ejecta blanket), is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Modeled surface ice is not visible. Observed (M, Li et al., 2018) surface frost is not visible. The thermal regime of this PSR appears to be remarkably stable over the seasons. Presumed contact between mss and iss within the PSR (Bernhardt et al., 2022) is not clearly visible. Presumed mss unit is partially visible, presumed iss unit is not visible. PSR is overall well secondary-lit, the best images have high SNR. The main PSR Features a small (~300 m across) adjacent PSR that is likely younger, slope angles range from 15 to 27°.

*Geomorphological unit(s):* mss, iss

*Estimated age:* Younger – intermediate – older (parts of the PSR appear to have different ages)

*Center latitude, longitude (°N, °E):* -89.572434, -160.971338

*Distance to site 004: ~5.6 km*

*Max. est. terminator bearing capacity: ~13.2 kN/m²*

**Illumination**

Total: 475 NACs | With signal: 111 NACs | Percent with signal: 23 %
Table 16. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>O01b</td>
<td>~500</td>
<td>23 (57)</td>
<td>4 (10)</td>
<td>67</td>
<td>150</td>
<td>Yes</td>
<td>0.23</td>
<td>22</td>
<td>11</td>
<td>~0</td>
<td>0.5-4.3</td>
<td>1.1-2.9</td>
</tr>
</tbody>
</table>

Notes
Medium-sized PSR with a large number of visible craters and boulders, some of the mapped craters appear to be fresher (no signs of an ejecta blanket), appears to have a textured surface, appears to host a potential linear lobate feature that stretches across parts of the PSR, is surrounded by a few visible boulder fields, but no rocky craters and rocky outcrops. Observed (M², Li et al., 2018) surface frost is not visible. Presumed contact between mss, iss, and cf within the PSR (Bernhardt et al., 2022) is not visible. Presumed mss and iss units are visible, presumed cf unit is not visible. PSR is overall poorly secondary-lit, the best images have very high SNR.

Geomorphological unit(s): mss, iss, cf

Estimated age: Intermediate

Center latitude, longitude (°N, °E): -89.612768, -159.358823

Distance to site 004: ~4.8 km

Max. est. terminator bearing capacity: ~9.8 kN/m²

Illumination
Total: 342 NACs | With signal: 55 NACs | Percent with signal: 16 %
Table 17. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>O01c</td>
<td>~500</td>
<td>1 (3)</td>
<td>0 (1)</td>
<td>80</td>
<td>176</td>
<td>Maybe</td>
<td>0.14</td>
<td>22</td>
<td>5</td>
<td>~51</td>
<td>0.4-6.7</td>
<td>1.5-2-2</td>
</tr>
</tbody>
</table>

Notes

Medium-sized PSR with a few visible craters and no boulders, some of the mapped craters appear to be fresher (no signs of an ejecta blanket), is surrounded by a few visible boulder fields, but no rocky craters and rocky outcrops. Potentially observed (M³, Li et al., 2018) surface frost is not visible. Presumed contact between mss, iss, and cf within the PSR (Bernhardt et al., 2022) is not visible. Presumed mss, cf, and iss units are not visible. PSR is located along an EVA proposed by Bernhardt et al. (2022). PSR is overall well secondary-lit, the best images have poor SNR.

Geomorphic unit(s): mss, iss, cf

Estimated age: Intermediate

Center latitude, longitude (°N, °E): -89.627520, -153.515746

Distance to site 004: ~4.4 km

Max. est. terminator bearing capacity: ~13.2 kN/m²

Illumination

Total: 341 NACs | With signal: 68 NACs | Percent with signal: 20 %
Table 18. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>O01d</td>
<td>~300</td>
<td>2 (3)</td>
<td>1 (3)</td>
<td>105</td>
<td>211</td>
<td>No</td>
<td>0.71</td>
<td>19</td>
<td>10</td>
<td>~56</td>
<td>0.1-4.1</td>
<td>1.1-2.5</td>
</tr>
</tbody>
</table>

Notes
- Medium-sized PSR with a few visible craters and boulders, some of the mapped craters appear to be fresher (no signs of an ejecta blanket), is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed contact between mss and cf within the PSR (Bernhardt et al., 2022) is not visible. Presumed mss and cf units are not visible. PSR is located along an EVA proposed by Bernhardt et al. (2022). PSR is overall poorly secondary-lit, the best images have poor SNR.

Geomorphic unit(s): mss, cf

Estimated age: Intermediate

Center latitude, longitude (°N, °E): -89.652147, -154.773411

Distance to site 004: ~3.7 km

Max. est. terminator bearing capacity: ~9.8 kN/m²
Table 19. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U01a</td>
<td>~100</td>
<td>2 (2)</td>
<td>5 (7)</td>
<td>152</td>
<td>243</td>
<td>No</td>
<td>&gt;2.5</td>
<td>29</td>
<td>10</td>
<td>~56</td>
<td>1.0-3.2</td>
<td>1.8</td>
</tr>
</tbody>
</table>

Notes
Small PSR with a few visible craters and boulders, is located within a rocky crater with an elevated rim (the mapped craters appear to be very fresh, no signs of an ejecta blanket), is surrounded by visible boulder fields, rocky craters, and rocky outcrops. PSR actually consists of two smaller, spatially separated PSRs (both rocky craters). Presumed mss unit (Bernhardt et al., 2022) is partially visible. PSR is located along an EVA proposed by Bernhardt et al. (2022). PSR is overall very well secondary-lit, the best images have very high SNR.

Geomorphic unit(s): mss
Estimated age: Younger
Center latitude, longitude (°N, °E): -89.793618, -148.708202
Distance to site 004: ~0.8 km
Max. est. terminator bearing capacity: ~9.8 kN/m²

Illumination
Total: 238 NACs | With signal: 87 NACs | Percent with signal: 37 %
Table 20. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U01b</td>
<td>~100</td>
<td>3 (7)</td>
<td>0 (0)</td>
<td>113</td>
<td>208</td>
<td>No</td>
<td>1.08</td>
<td>17</td>
<td>6</td>
<td>~56</td>
<td>1.4-5.7</td>
<td>1.5-2.2</td>
</tr>
</tbody>
</table>

Notes
Small PSR with a few visible craters and no boulders, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed contact between mss and cf within the PSR (Bernhardt et al., 2022) is not visible. Presumed mss and cf units are not visible. PSR is located along an EVA proposed by Bernhardt et al. (2022). PSR is overall very poorly secondary-lit, the best images have high SNR.

Geomorph unit(s): mss, cf

Estimated age: Intermediate – older

Center latitude, longitude (°N, °E): -89.628235, -148.928498

Distance to site 004: ~4.6 km

Max. est. terminator bearing capacity: ~13.2 kN/m²

Illumination
Total: 305 NACs | With signal: 17 NACs | Percent with signal: 6 %

LRO_NAC_AvgMosaic_SPoVLS55
Table 21. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDu (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U01c</td>
<td>~100</td>
<td>2 (3)</td>
<td>0 (0)</td>
<td>158</td>
<td>235</td>
<td>No</td>
<td>&gt;2.5</td>
<td>14</td>
<td>5</td>
<td>~47</td>
<td>0.7-4.0</td>
<td>2.0-2.4</td>
</tr>
</tbody>
</table>

Notes
Small PSR with a few visible craters and no boulders, some of the mapped craters appear to be very fresh (no signs of an ejecta blanket), is surrounded by a few visible boulder fields, but no rocky craters and rocky outcrops. Presumed contact between mss and cf within the PSR (Bernhardt et al., 2022) is not visible. Presumed mss and cf units are not visible. PSR is located along an EVA proposed by Bernhardt et al. (2022). PSR is overall very poorly secondary-lit, the best images have high SNR.

Geomorphic unit(s): mss, cf
Estimated age: Intermediate – older
Center latitude, longitude (°N, °E): -89.672397, -161.391671
Distance to site 004: ~3.3 km
Max. est. terminator bearing capacity: ~13.2 kN/m²

Illumination
Total: 273 NACs  |  With signal: 9 NACs  |  Percent with signal: 3 %
Table 22. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMeT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U01d</td>
<td>~100</td>
<td>1 (1)</td>
<td>0 (0)</td>
<td>160</td>
<td>241</td>
<td>No</td>
<td>&gt;2.5</td>
<td>20</td>
<td>8</td>
<td>~35</td>
<td>0.7-6.5</td>
<td>1.7-2.4</td>
</tr>
</tbody>
</table>

Notes
Small PSR with a few visible craters and no boulders, some of the mapped craters appear to be very fresh (no signs of an ejecta blanket), is surrounded by visible boulder fields, but not by rocky craters and rocky outcrops. Potentially observed (M³, Li et al., 2018) surface frost is not visible. Presumed contact between mss and cf within the PSR (Bernhardt et al., 2022) is not visible. Presumed mss and cf units are not visible. PSR is located along an EVA proposed by Bernhardt et al. (2022). PSR is overall well secondary-lit, the best images have very high SNR.

Geomorphic unit(s): mss, cf
Estimated age: Intermediate
Center latitude, longitude (°N, °E): -89.670942, -164.760168
Distance to site 004: ~3.5 km
Max. est. terminator bearing capacity: ~9.8 kN/m²

Illumination
Total: 263 NACs  |  With signal: 52 NACs  |  Percent with signal: 20 %
Table 23. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U01e</td>
<td>~150</td>
<td>8 (8)</td>
<td>0 (1)</td>
<td>150</td>
<td>231</td>
<td>Maybe</td>
<td>&gt;2.5</td>
<td>24</td>
<td>4</td>
<td>~49</td>
<td>0.9-8.2</td>
<td>1.8-2.6</td>
</tr>
</tbody>
</table>

Notes
Small PSR with a few visible craters and no boulders, some of the mapped craters appear to be very fresh (no signs of an ejecta blanket), is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Potentially observed (M³, Li et al., 2018) surface frost is not visible. Presumed mss unit (Bernhardt et al., 2022) is not clearly visible. PSR is overall well secondary-lit, the best images have very high SNR.

Geomorphic unit(s): mss
Estimated age: Intermediate
Center latitude, longitude (°N, °E): -89.656068, -167.843362
Distance to site 004: ~4 km
Max. est. terminator bearing capacity: ~13.2 kN/m²

Illumination
Total: 275 NACs | With signal: 52 NACs | Percent with signal: 19 %

![Image]
Table 24. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U01f</td>
<td>~250</td>
<td>1 (1)</td>
<td>0 (0)</td>
<td>133</td>
<td>234</td>
<td>Maybe</td>
<td>0.50</td>
<td>19</td>
<td>12</td>
<td>~49</td>
<td>0.5-8.0</td>
<td>1.0-2.5</td>
</tr>
</tbody>
</table>

Notes
Medium-sized PSR with one visible crater and no boulders, some of the mapped craters appear to be fresher (no signs of an ejecta blanket), is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Observed (M³, Li et al., 2018) surface frost is not visible. Presumed contact between mss and cf within the PSR (Bernhardt et al., 2022) is not visible. Presumed mss and cf units are not visible. PSR is overall very poorly secondary-lit, the best images have poor SNR.

Geomorphic unit(s): mss, cf
Estimated age: Intermediate
Center latitude, longitude (°N, °E): -89.632774, -169.705061
Distance to site 004: ~4.8 km
Max. est. terminator bearing capacity: ~9.8 kN/m²

Illumination
Total: 288 NACs | With signal: 9 NACs | Percent with signal: 3 %
### Table 25. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDu (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U01g</td>
<td>~100</td>
<td>0 (2)</td>
<td>0 (0)</td>
<td>76</td>
<td>169</td>
<td>Maybe</td>
<td>0.17</td>
<td>14</td>
<td>10</td>
<td>~5</td>
<td>0.6-1.3</td>
<td>0.7</td>
</tr>
</tbody>
</table>

**Notes**

Small PSR without visible craters and boulders, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Observed (M³, Li et al., 2018) surface frost is not visible. PSR actually consists of a number of smaller, spatially separated PSRs (each ~15 to ~35 m across). Presumed mss unit (Bernhardt et al., 2022) is not visible. PSR is overall poorly secondary-lit, the best images have high SNR.

- Geomorphic unit(s): mss
- Estimated age: Older
- Center latitude, longitude (°N, °E): -89.583043, -167.179234
- Distance to site 004: ~6.2 km
- Max. est. terminator bearing capacity: ~9.8 kN/m²

**Illumination**

- Total: 287 NACs
- With signal: 23 NACs
- Percent with signal: 8 %

![Image of PSR U01g]
Table 26. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>U01h</td>
<td>~150</td>
<td>3 (3)</td>
<td>0 (0)</td>
<td>70</td>
<td>151</td>
<td>Yes</td>
<td>surface</td>
<td>18</td>
<td>8</td>
<td>~16</td>
<td>1.5-5.7</td>
<td>1.5-1.8</td>
</tr>
</tbody>
</table>

Notes
Small PSR with a few visible craters and no boulders, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Modeled surface ice is not visible. Observed (M², Li et al., 2018) surface frost is not visible. Presumed mss unit (Bernhardt et al., 2022) is not visible. PSR is overall poorly secondary-lit, the best images have poor SNR.

Geomorphologic unit(s): mss
Estimated age: Intermediate – older
Center latitude, longitude (°N, °E): -89.562668, -165.225588
Distance to site 004: ~6.7 km
Max. est. terminator bearing capacity: ~9.8 kN/m²

Illumination
Total: 306 NACs | With signal: 21 NACs | Percent with signal: 7 %
Table 27. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>V01a</td>
<td>~120</td>
<td>1 (1)</td>
<td>0 (0)</td>
<td>134</td>
<td>224</td>
<td>No</td>
<td>&gt;2.5</td>
<td>23</td>
<td>14</td>
<td>~26</td>
<td>0.4-</td>
<td>1.7-2.8</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>11.0</td>
<td></td>
</tr>
</tbody>
</table>

Notes

Small PSR with one visible crater and no boulders, some of the mapped craters appear to be fresher (no signs of an ejecta blanket), is surrounded by a few visible boulder fields, but no rocky craters and rocky outcrops. Presumed iss unit (Bernhardt et al., 2022) is not visible. PSR is overall very well secondary-lit, the best images have very high SNR.

Geomorphic unit(s): iss

Estimated age: Younger – intermediate

Center latitude, longitude (°N, °E): -89.364563, -154.152737

Distance to site 001: ~5.8 km

Max. est. terminator bearing capacity: ~6.4 kN/m²

Illumination

Total: 402 NACs | With signal: 165 NACs | Percent with signal: 41 %
Table 28. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDu (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>V01b</td>
<td>~150</td>
<td>2 (2)</td>
<td>0 (1)</td>
<td>112</td>
<td>197</td>
<td>No</td>
<td>&gt;2.5</td>
<td>23</td>
<td>10</td>
<td>~0</td>
<td>1.7-11.8</td>
<td>1.0-3.9</td>
</tr>
</tbody>
</table>

Notes
Small PSR with a few visible craters and no boulders, some of the mapped craters appear to be fresher (no signs of an ejecta blanket), is surrounded by a few visible boulder fields, but no rocky craters and rocky outcrops. Presumed mss unit (Bernhardt et al., 2022) is not visible. PSR is overall very well secondary lit, the best images have very high SNR.

Geomorphic unit(s): mss
Estimated age: Younger – intermediate
Center latitude, longitude (°N, °E): -89.338657, -145.460304
Distance to site 001: ~4.1 km
Max. est. terminator bearing capacity: ~9.8 kN/m²

Illumination
Total: 378 NACs  |  With signal: 142 NACs  |  Percent with signal: 38 %
Table 29. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDu (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>V01c</td>
<td>~150</td>
<td>2 (2)</td>
<td>0 (0)</td>
<td>132</td>
<td>223</td>
<td>No</td>
<td>&gt;2.5</td>
<td>25</td>
<td>12</td>
<td>~0</td>
<td>1.5 - 10.2</td>
<td>1.6-2.0</td>
</tr>
</tbody>
</table>

Notes
Small PSR with a few visible craters and no boulders, some of the mapped craters appear to be very fresh – one or two crater(s) might feature (a) bright ejecta blanket(s) –, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed mss unit (Bernhardt et al., 2022) is not visible. PSR is overall very well secondary-lit, the best images have high SNR.

Geomorphic unit(s): mss
Estimated age: Intermediate
Center latitude, longitude (°N, °E): -89.341937, -143.747472
Distance to site 001: ~3.8 km
Max. est. terminator bearing capacity: ~9.8 kN/m²

Illumination
Total: 364 NACs  |  With signal: 150 NACs  |  Percent with signal: 41 %
Table 30. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>V01d</td>
<td>~100</td>
<td>1 (1)</td>
<td>0 (1)</td>
<td>122</td>
<td>214</td>
<td>No</td>
<td>&gt;2.5</td>
<td>19</td>
<td>10</td>
<td>~17</td>
<td>1.4-8.7</td>
<td>2.5</td>
</tr>
</tbody>
</table>

Notes: Small PSR with one visible crater and no boulders, is surrounded by a few visible boulder fields, but no rocky craters and rocky outcrops. The thermal regime of this PSR appears to be remarkably stable over the seasons. Presumed mss unit (Bernhardt et al., 2022) is not visible. PSR is overall well secondary-lit, the best images have poor SNR.

Geomorphic unit(s): mss

Estimated age: Intermediate

Center latitude, longitude (°N, °E): -89.388486, -146.599283

Distance to site 001: ~3.3 km

Max. est. terminator bearing capacity: ~9.8 kN/m²

Illumination: Total: 372 NACs | With signal: 108 NACs | Percent with signal: 29 %
Table 31. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>V01e</td>
<td>~200</td>
<td>2 (4)</td>
<td>0 (1)</td>
<td>93</td>
<td>172</td>
<td>No</td>
<td>&gt;2.5</td>
<td>18</td>
<td>2</td>
<td>~23</td>
<td>0.5-6.9</td>
<td>1.5</td>
</tr>
</tbody>
</table>

Notes
Small PSR with a few visible craters and no boulders, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed contact between mss and chs within the PSR (Bernhardt et al., 2022) is not visible.
Presumed mss and chs units are not clearly visible. PSR is overall well secondary-lit, the best images have high SNR.

Geomorphic unit(s): mss, chs
Estimated age: Intermediate
Center latitude, longitude (°N, °E): -89.401733, -149.803656
Distance to site 001: ~3.9 km
Max. est. terminator bearing capacity: ~13.2 kN/m²

Illumination
Total: 415 NACs | With signal: 79 NACs | Percent with signal: 19 %
Table 32. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDu (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>V01f</td>
<td>~150</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>113</td>
<td>193</td>
<td>No</td>
<td>&gt;2.5</td>
<td>17</td>
<td>4</td>
<td>~35</td>
<td>0.4-6.0</td>
<td>1.0-2.3</td>
</tr>
</tbody>
</table>

Notes
Small PSR without visible craters and boulders, is surrounded by a few visible boulder fields, but no rocky craters and rocky outcrops. Presumed contact between iss and chs within the PSR (Bernhardt et al., 2022) is not visible. Presumed iss and chs units are not visible. PSR is overall well secondary-lit, the best images have high SNR.

Geomorphic unit(s): iss, chs
Estimated age: Intermediate
Center latitude, longitude (°N, °E): -89.458932, -148.385625
Distance to site 001: ~3 km
Max. est. terminator bearing capacity: ~13.2 kN/m²

Illumination: Total: 393 NACs | With signal: 107 NACs | Percent with signal: 27 %
Table 33. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDu (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>V01g</td>
<td>~100</td>
<td>1 (1)</td>
<td>0 (0)</td>
<td>111</td>
<td>195</td>
<td>No</td>
<td>&gt;2.5</td>
<td>13</td>
<td>1</td>
<td>~28</td>
<td>1.0-7.0</td>
<td>1.1-2.7</td>
</tr>
</tbody>
</table>

Notes
Small PSR with one visible crater and no boulders, is surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed contact between mss and chs within the PSR (Bernhardt et al., 2022) is not visible. Presumed mss and chs units are not visible. PSR is overall very well secondary-lit, the best images have poor SNR.

Geomorphic unit(s): mss, chs
Estimated age: Intermediate
Center latitude, longitude (°N, °E): -89.465754, -146.463958
Distance to site 001: ~2.6 km
Max. est. terminator bearing capacity: ~>13.2 kN/m²

Illumination
Total: 393 NACs | With signal: 168 NACs | Percent with signal: 43 %
Table 34. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>V01h</td>
<td>~125</td>
<td>0 (0)</td>
<td>2 (2)</td>
<td>110</td>
<td>202</td>
<td>No</td>
<td>&gt;2.5</td>
<td>16</td>
<td>2</td>
<td>~22</td>
<td>1.0-6.2</td>
<td>1.9-2.4</td>
</tr>
</tbody>
</table>

Notes

Small PSR with no visible craters but two boulders, is surrounded by visible boulder fields, rocky craters, and rocky outcrops. PSR features a particularly distinct high-reflectance boulder/rocky outcrop in its center (~9 m across), see Fig. S1. Presumed contact between mss and iss within the PSR (Bernhardt et al., 2022) is not visible. Presumed mss and iss units are not visible. PSR is overall very well secondary-lit, the best images have high SNR.

Geomorphic unit(s): mss, iss

Estimated age: Intermediate

Center latitude, longitude (°N, °E): -89.473280, -146.227834

Distance to site 001: ~2.6 km

Max. est. terminator bearing capacity: ~>13.2 kN/m²

Illumination

Total: 386 NACs | With signal: 174 NACs | Percent with signal: 45 %
Table 35. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>V01i</td>
<td>~170</td>
<td>10 (10)</td>
<td>0 (0)</td>
<td>138</td>
<td>235</td>
<td>No</td>
<td>&gt;2.5</td>
<td>25</td>
<td>8</td>
<td>~5</td>
<td>2.4-6.9</td>
<td>2.5-2.7</td>
</tr>
</tbody>
</table>

Notes: Small PSR with a large number of visible craters and no boulders, some of the mapped craters appear to be fresher (no signs of an ejecta blanket), is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed contact between mss, iss, and cf within the PSR (Bernhardt et al., 2022) is not visible. Presumed mss, iss, and cf units are not visible. PSR is overall well secondary-lit, the best images have very high SNR.

Geomorphic unit(s): mss, iss, cf

Estimated age: Intermediate

Center latitude, longitude (°N, °E): -89.333253, -139.857750

Distance to site 001: ~3.6 km

Max. est. terminator bearing capacity: ~9.8 kN/m²

Illumination: Total: 361 NACs | With signal: 92 NACs | Percent with signal: 25 %
Table 36. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDt (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>V01j</td>
<td>~100</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>113</td>
<td>192</td>
<td>No</td>
<td>&gt;2.5</td>
<td>10</td>
<td>4</td>
<td>~32</td>
<td>0.8-4.0</td>
<td>0.6-1.3</td>
</tr>
</tbody>
</table>

Notes
- Small PSR without visible craters and boulders, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed chs unit (Bernhardt et al., 2022) is not visible. PSR is located along an EVA proposed by Bernhardt et al. (2022). PSR is overall very poorly secondary-lit, the best images have poor SNR.
- Geomorphic unit(s): chs
- Estimated age: Older
- Center latitude, longitude (°N, °E): -89.553897, -146.020561
- Distance to site 001: ~3.8 km
- Max. est. terminator bearing capacity: ~13.2 kN/m²

Illumination: Total: 356 NACs | With signal: 14 NACs | Percent with signal: 4 %

![Image of PSR V01j](LRG_NAC_AvgMosaic_SPV44855)
Table 37. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDm (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>W01a</td>
<td>~100</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>84</td>
<td>179</td>
<td>No</td>
<td>0.09</td>
<td>20</td>
<td>2</td>
<td>~42</td>
<td>0.8-4.5</td>
<td>0.7-1.4</td>
</tr>
</tbody>
</table>

Notes
Small PSR without visible craters and boulders, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed mss unit (Bernhardt et al., 2022) is not visible. PSR is overall very poorly secondarily lit, the best images have poor SNR.

Geomorphic unit(s): mss
Estimated age: Intermediate – older
Center latitude, longitude (°N, °E): -89.427900, -122.451801
Distance to site 001: ~4.4 km
Max. est. terminator bearing capacity: ~>13.2 kN/m²

Illumination
Total: 341 NACs | With signal: 28 NACs | Percent with signal: 8 %
### Table 38. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>W01b</td>
<td>~100</td>
<td>8 (8)</td>
<td>0 (0)</td>
<td>69</td>
<td>142</td>
<td>No</td>
<td>0.01</td>
<td>15</td>
<td>6</td>
<td>~40</td>
<td>1.6-6.4</td>
<td>1.7</td>
</tr>
</tbody>
</table>

**Notes**

Small PSR with a few visible craters and no boulders, some of the mapped craters appear to be very fresh (no signs of an ejecta blanket), appears to have a partially textured surface, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed mss unit (Bernhardt et al., 2022) is partially visible. PSR is overall very poorly secondary-lit, the best images have high SNR.

Geomorphic unit(s): mss

Estimated age: Intermediate – older

Center latitude, longitude (°N, °E): -89.592580, -115.608593

Distance to site 001: ~6.8 km

Max. est. terminator bearing capacity: ~13.2 kN/m²

**Illumination**

Total: 336 NACs | With signal: 24 NACs | Percent with signal: 7 %
Table 39. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>W01c</td>
<td>~125</td>
<td>1 (1)</td>
<td>0 (0)</td>
<td>72</td>
<td>176</td>
<td>No</td>
<td>0.40</td>
<td>20</td>
<td>7</td>
<td>~50</td>
<td>2.7-6.5</td>
<td>0.9-1.8</td>
</tr>
</tbody>
</table>

Notes
Small PSR with one visible crater and no boulders, is surrounded by a few visible boulder fields and rocky craters, but no rocky outcrops. Presumed mss unit (Bernhardt et al., 2022) is not visible. PSR is endpoint of an EVA proposed by Bernhardt et al. (2022). PSR is overall very poorly secondary-lit, the best images have high SNR.

Geomorphologic unit(s): mss
Estimated age: Intermediate – older
Center latitude, longitude (°N, °E): -89.566653, -118.635239
Distance to site 001: ~5.9 km
Max. est. terminator bearing capacity: ~13.2 kN/m²

Illumination
Total: 343 NACs | With signal: 27 NACs | Percent with signal: 8 %
Table 40. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDt (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>W01d</td>
<td>~100</td>
<td>1 (1)</td>
<td>1 (1)</td>
<td>86</td>
<td>186</td>
<td>No</td>
<td>0.16</td>
<td>20</td>
<td>7</td>
<td>~56</td>
<td>1.2-6.3</td>
<td>1.3-2.1</td>
</tr>
</tbody>
</table>

Notes
- Small PSR with one visible crater and one boulder, is surrounded by a few visible boulder fields and rocky craters, but no rocky outcrops. Presumed mss unit (Bernhardt et al., 2022) is not visible. PSR is overall poorly secondary-lit, the best images have high SNR.
- Geomorphic unit(s): mss
- Estimated age: Intermediate – older
- Center latitude, longitude (°N, °E): -89.508865, -114.624344
- Distance to site 001: ~6.4 km
- Max. est. terminator bearing capacity: ~13.2 kN/m²

Illumination
- Total: 334 NACs | With signal: 45 NACs | Percent with signal: 13 %
Table 41. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>W01e</td>
<td>~200</td>
<td>7 (9)</td>
<td>0 (0)</td>
<td>137</td>
<td>237</td>
<td>No</td>
<td>&gt;2.5</td>
<td>29</td>
<td>10</td>
<td>~58</td>
<td>1.2-6.0</td>
<td>1.4-2.7</td>
</tr>
</tbody>
</table>

Notes
Small PSR with a few visible craters and no boulders, some of the mapped craters appear to be very fresh, maybe even rocky (no signs of an ejecta blanket), appears to have a prominently textured surface, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Surface texture changes drastically within a few meters (Fig. S5); the surface texture change might not be connected to the topography alone (the contact does not always follow the contour lines directly). Presumed contact between cf and iss within the PSR (Bernhardt et al., 2022) is clearly visible (surface texture change), but appears to have a different spatial location and shape as described by Bernhardt et al. (2022). Presumed iss unit is visible, presumed cf unit is not visible. PSR is overall well secondary-lit, the best images have very high SNR.

Geomorphic unit(s): iss, cf

Estimated age: Intermediate

Center latitude, longitude (°N, °E): -89.403458, -111.636334

Distance to site 001: ~7.8 km

Max. est. terminator bearing capacity: ~9.8 kN/m²

Illumination
Total: 286 NACs | With signal: 61 NACs | Percent with signal: 21 %
### Table 42. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDtI (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>W01f</td>
<td>~125</td>
<td>10 (10)</td>
<td>0 (0)</td>
<td>140</td>
<td>232</td>
<td>No</td>
<td>&gt;2.5</td>
<td>22</td>
<td>7</td>
<td>~58</td>
<td>2.7-10.6</td>
<td>2.3-3.2</td>
</tr>
</tbody>
</table>

**Notes**

Small PSR with a few visible craters and no boulders, some of the mapped craters appear to be very fresh (no signs of an ejecta blanket), is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed contact between mss and iss within the PSR (Bernhardt et al., 2022) is not visible. Presumed mss and iss units are not visible. PSR is overall poorly secondary-lit, the best images have very high SNR.

Geomorphologic unit(s): iss, mss

Estimated age: Intermediate

Center latitude, longitude (°N, °E): -89.351279, -112.032677

Distance to site 001: ~8.4 km

Max. est. terminator bearing capacity: ~9.8 kN/m²

**Illumination**

Total: 246 NACs  |  With signal: 34 NACs  |  Percent with signal: 14 %
Table 43. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDIt (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X01a</td>
<td>~90</td>
<td>1 (1)</td>
<td>0 (0)</td>
<td>164</td>
<td>211</td>
<td>No</td>
<td>&lt;2.5</td>
<td>21</td>
<td>8</td>
<td>~58</td>
<td>2.4-5.5</td>
<td>1.9</td>
</tr>
</tbody>
</table>

Notes
Very small PSR with one visible crater but no boulders, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed mss unit is not visible. PSR is very close to site 001 and located along an EVA proposed by Bernhardt et al. (2022). PSR is located in a crater provisionally named ‘Marston’ (Martin et al., 2022). PSR is a proposed target for IM-Z’s S.P. Hopper mission (Martin et al., 2022). PSR is poorly secondary-lit, the best images have intermediate SNR.

Geomorphological unit(s): mss
Estimated age: Intermediate
Center latitude, longitude (°N, °E): -89.475780, -136.786298
Distance to site 001: ~700 m
Max. est. terminator bearing capacity: ~9.8 kN/m^2

Illumination
Total: 369 NACs  |  With signal: 59 NACs  |  Percent with signal: 16 %
Table 44. PSR summary table.

<table>
<thead>
<tr>
<th>PSR ID</th>
<th>DIA (m)</th>
<th>NC (pot.)</th>
<th>NB (pot.)</th>
<th>AMeT (K)</th>
<th>AMaT (K)</th>
<th>SID?</th>
<th>MDu (m)</th>
<th>MaS (°)</th>
<th>MiS (°)</th>
<th>EV (%)</th>
<th>SR40 (m)</th>
<th>SR240 (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>X01b</td>
<td>~40</td>
<td>0 (0)</td>
<td>0 (0)</td>
<td>155</td>
<td>249</td>
<td>No</td>
<td>&gt;2.5</td>
<td>22</td>
<td>12</td>
<td>~58</td>
<td>0.2-2.0</td>
<td>0.76</td>
</tr>
</tbody>
</table>

Notes

- Very small PSR without visible craters and boulders, is not surrounded by visible boulder fields, rocky craters, and rocky outcrops. Presumed mss unit is not visible. PSR is very close to site 001 and located along an EVA proposed by Bernhardt et al. (2022). PSR is poorly secondary-lit, the best images have high SNR. Geomorphic unit(s): mss
- Estimated age: Younger - Intermediate
- Center latitude, longitude (°N, °E): -89.454533, -135.536566
- Distance to site 001: ~500 m
- Max. est. terminator bearing capacity: ~9.8 kN/m2

Illumination

- Total: 369 NACs | With signal: 59 NACs | Percent with signal: 16 %