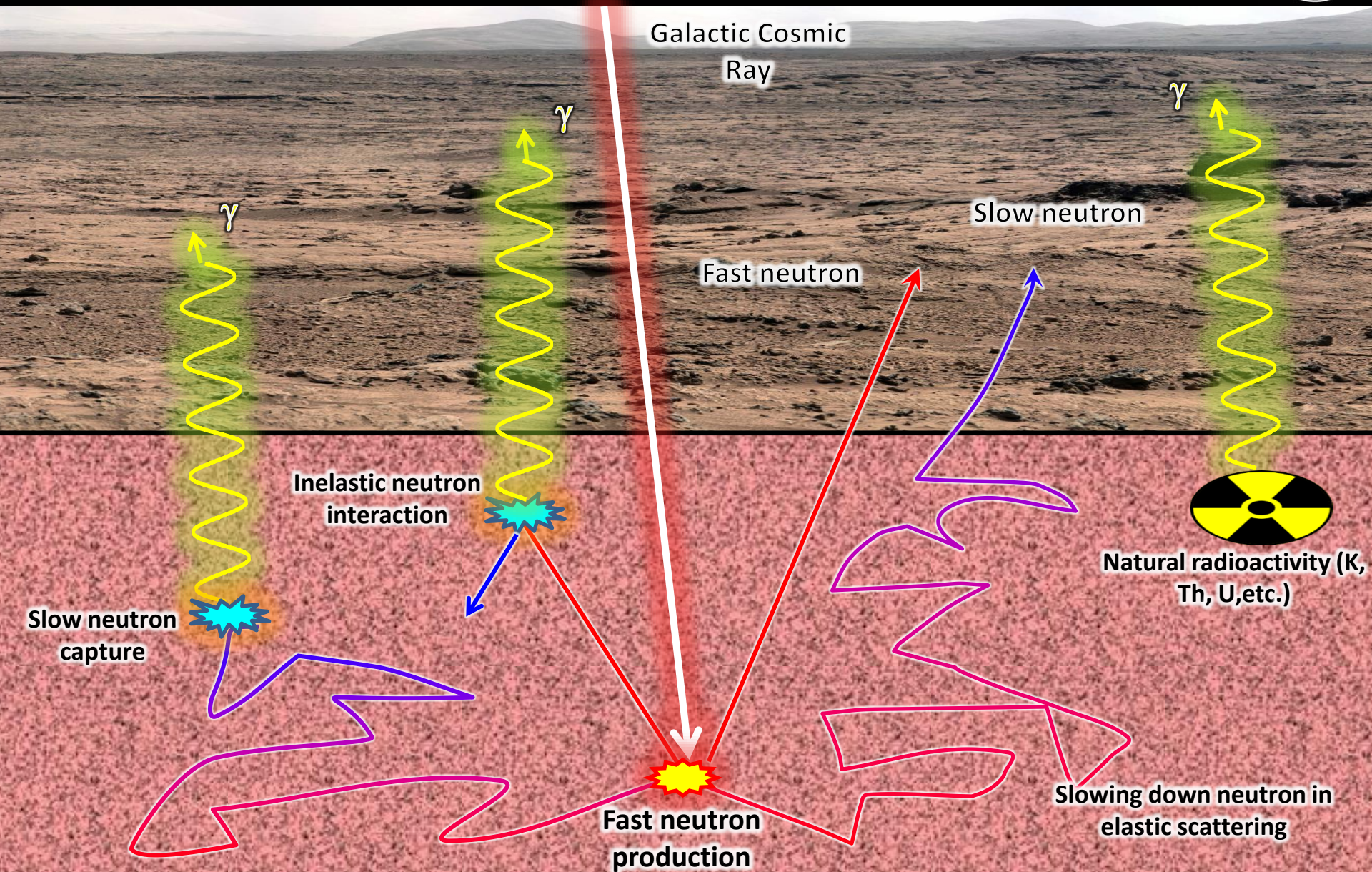


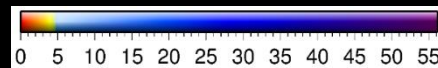
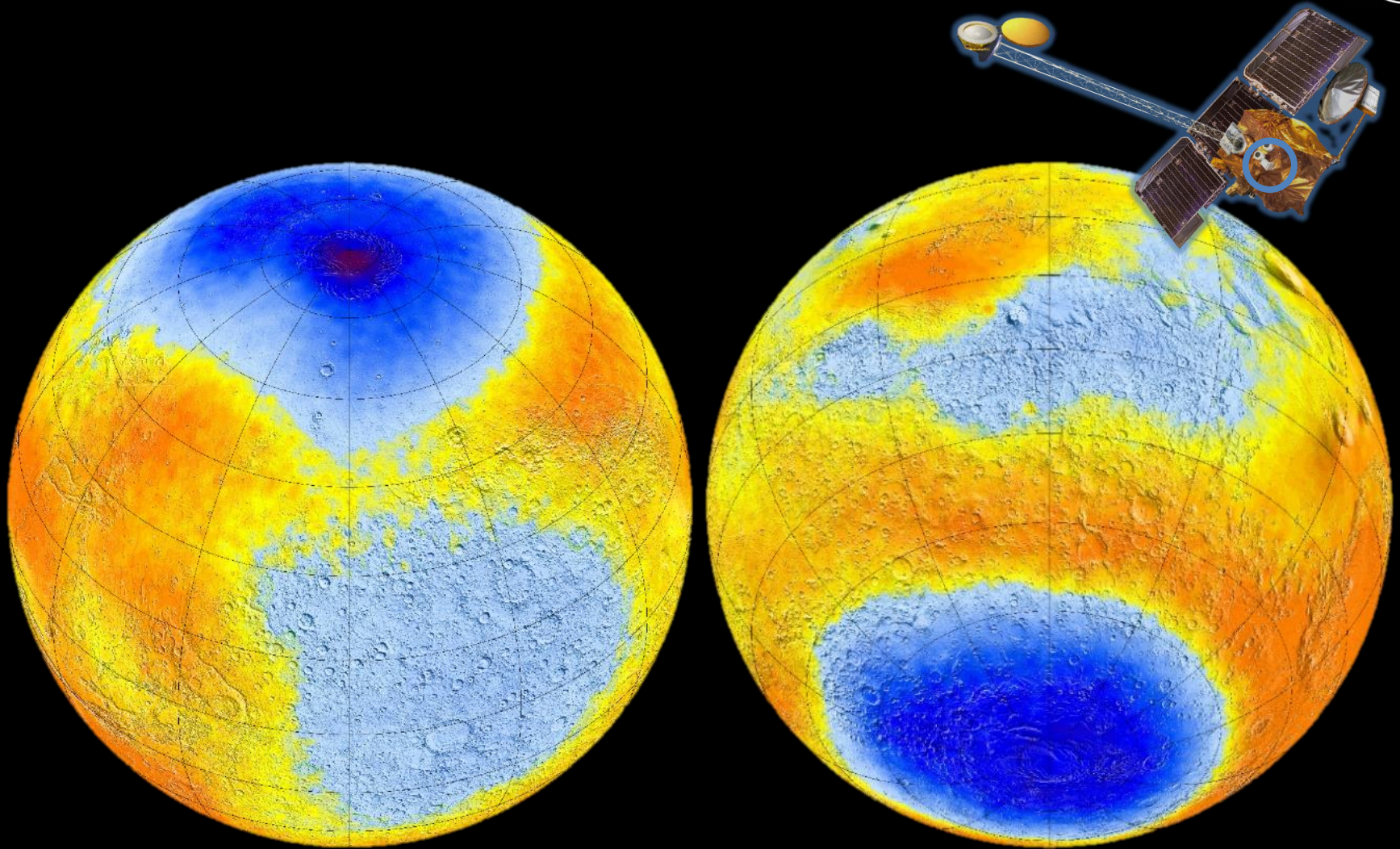
# Mars subsurface hydrogen as seen by FREND onboard TGO

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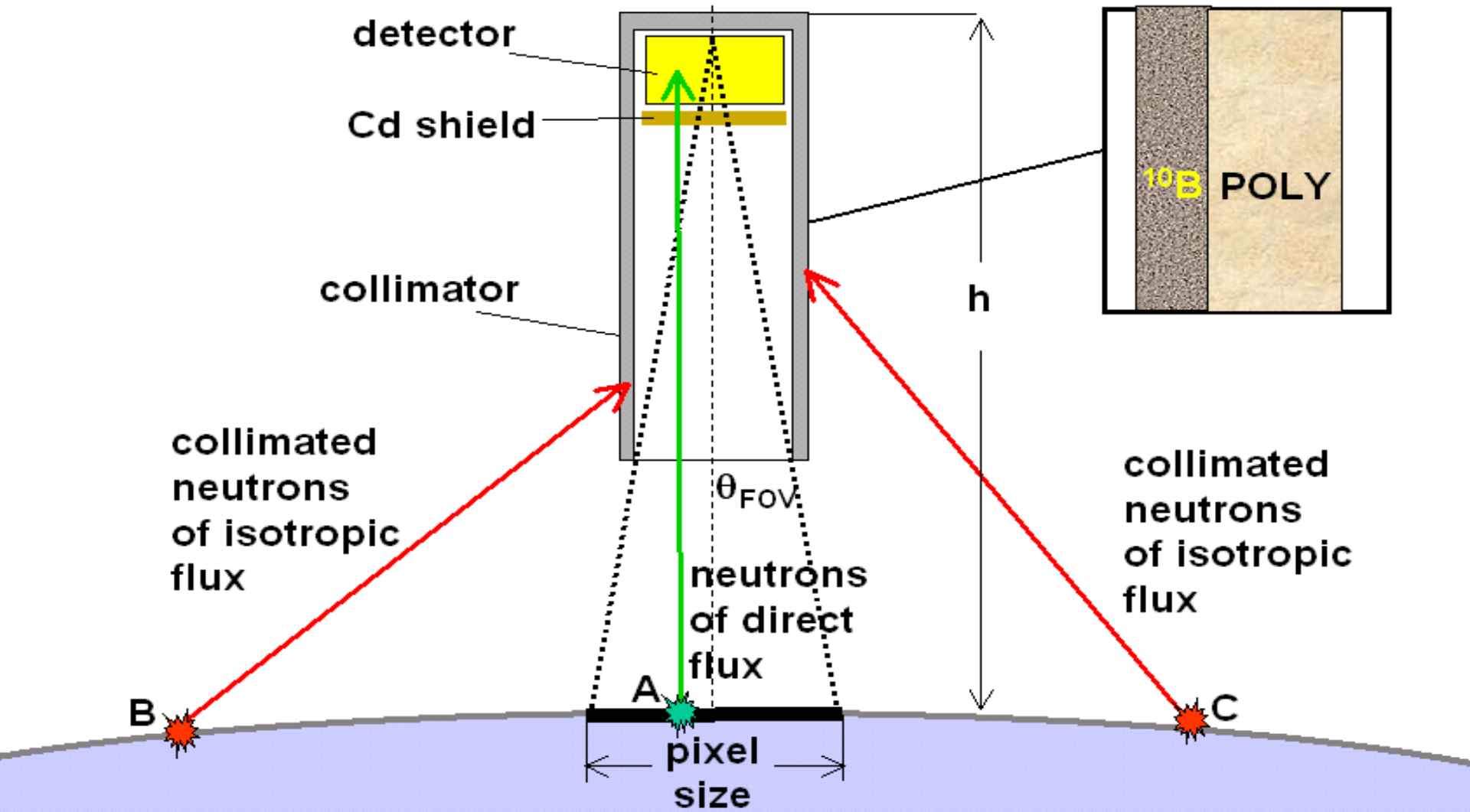
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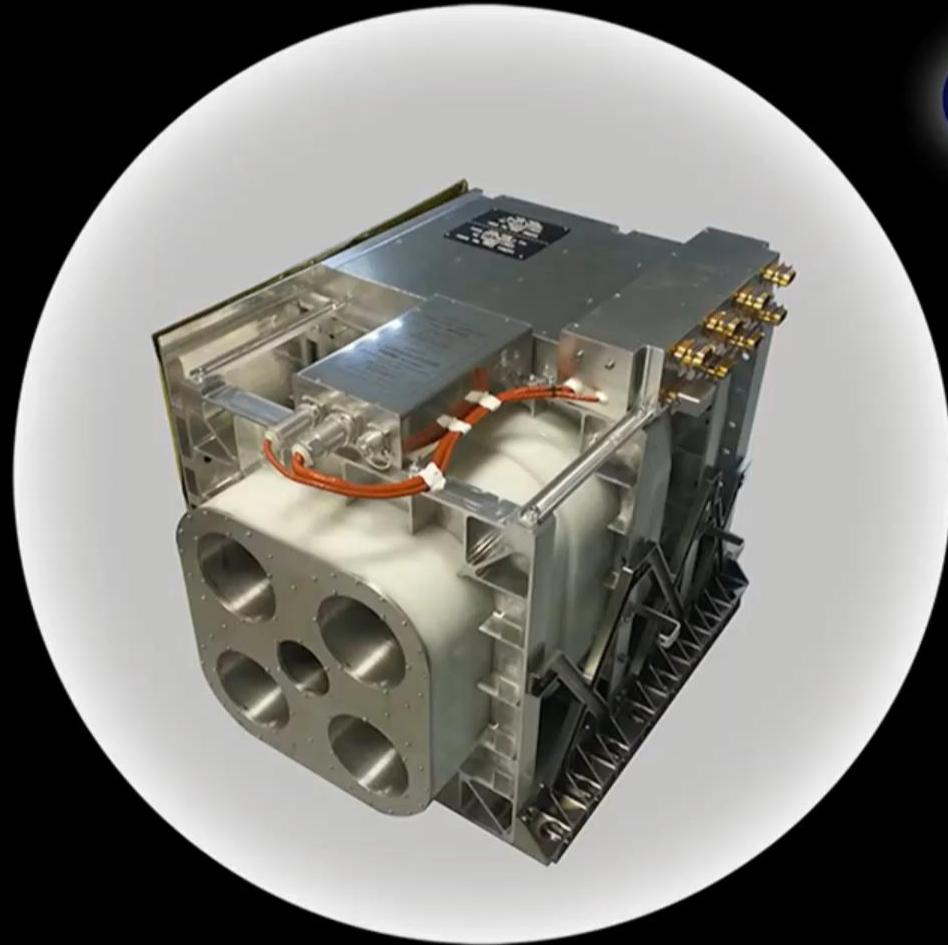
Work funded through Russian Science Foundation Grant #19-72-10144

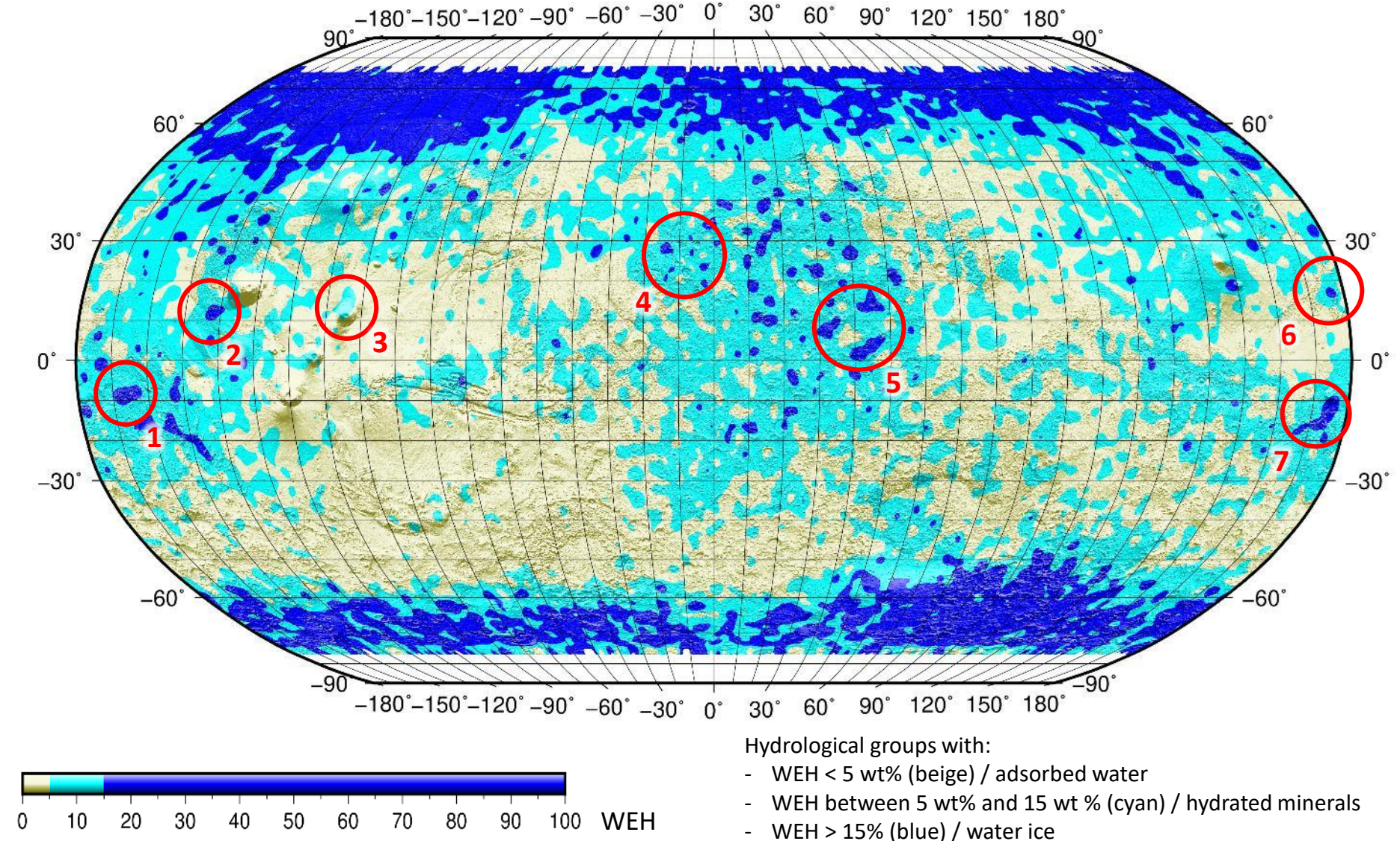


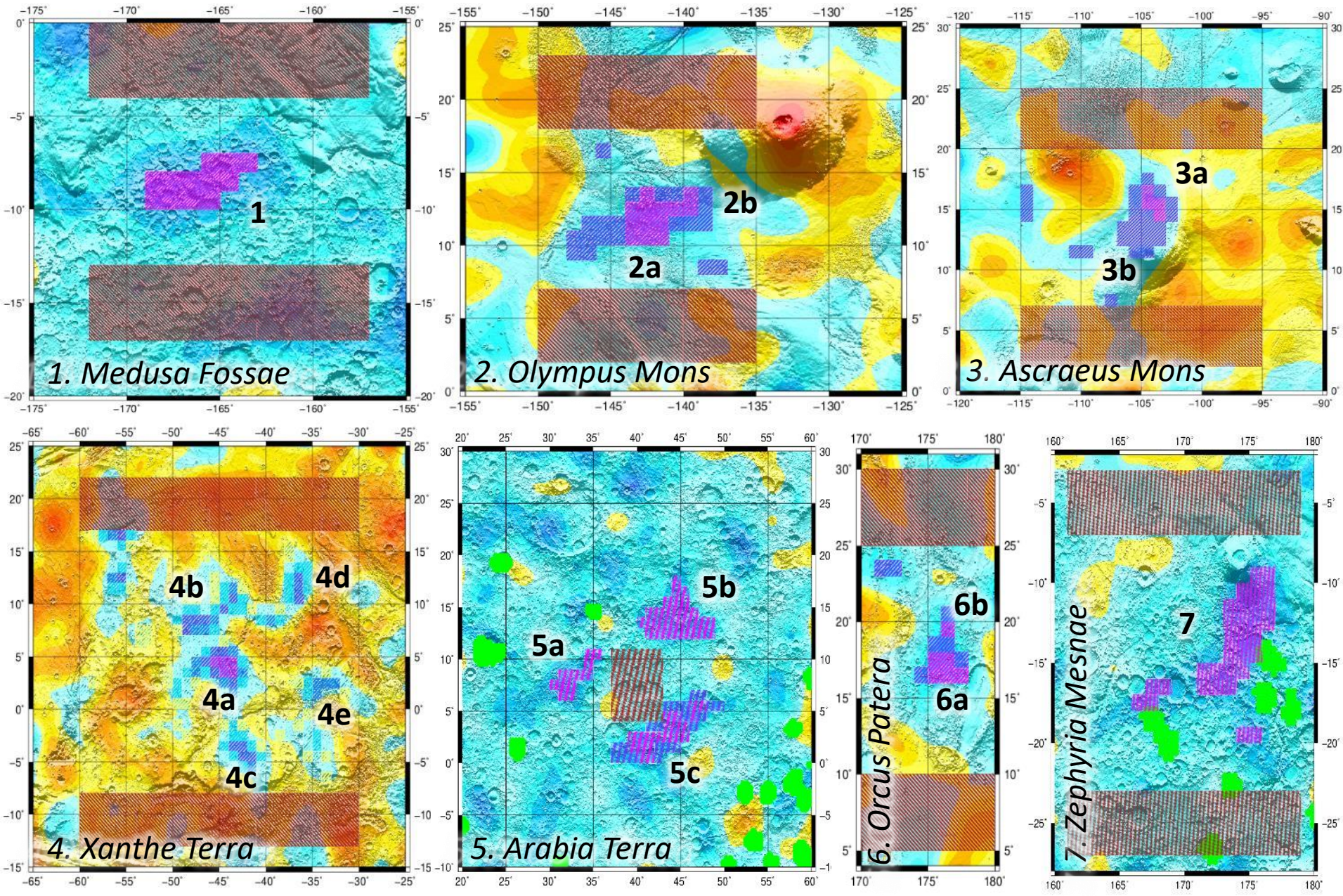


H<sub>2</sub>O (Wt%)









| Region name     | SEN-area | Water content, (wt%)                      | Size (10 <sup>3</sup> km <sup>2</sup> ) | Certainty ( $\sigma$ ) |
|-----------------|----------|-------------------------------------------|-----------------------------------------|------------------------|
| Medusa Fossae   | 1        | 81,96 <sup>+18,04</sup> <sub>-52,45</sub> | 37                                      | 3,34                   |
| Olympus Mons    | 2a       | 100 <sup>+0</sup> <sub>-77,36</sub>       | 40                                      | 3,00                   |
|                 | 2b       | 21,01 <sup>+20,34</sup> <sub>-7,33</sub>  | 61                                      | 3,10                   |
| Ascræus Mons    | 3a       | 100 <sup>+0</sup> <sub>-80,30</sub>       | 11                                      | 3,53                   |
|                 | 3b       | 10,02 <sup>+5,92</sup> <sub>-3,08</sub>   | 70                                      | 3,00                   |
| Xanthe Terra    | 4a       | 81,91 <sup>+18,09</sup> <sub>-44,19</sub> | 33                                      | 8,13                   |
|                 | 4b       | 100 <sup>+0</sup> <sub>-80,61</sub>       | 10                                      | 3,4                    |
|                 | 4c       | 16,83 <sup>+36,93</sup> <sub>-8,05</sub>  | 49                                      | 2,96                   |
|                 | 4d       | 72,80 <sup>+27,20</sup> <sub>-51,63</sub> | 9                                       | 4,54                   |
|                 | 4e       | 18,81 <sup>+22,50</sup> <sub>-7,55</sub>  | 58                                      | 4,18                   |
| Arabia Terra    | 5a       | 88,95 <sup>+11,05</sup> <sub>-63,53</sub> | 38                                      | 3,34                   |
|                 | 5b       | 36,02 <sup>+62,51</sup> <sub>-15,71</sub> | 85                                      | 3,42                   |
|                 | 5c.1     | 49,78 <sup>+50,22</sup> <sub>-27,34</sub> | 67                                      | 3,41                   |
|                 | 5c.2     | 33,04 <sup>+58,47</sup> <sub>-14,53</sub> | 70                                      | 3,26                   |
| Orcus Patera    | 6a       | 100 <sup>+0</sup> <sub>-60,93</sub>       | 17                                      | 5,05                   |
|                 | 6b       | 34,19 <sup>+65,81</sup> <sub>-18,79</sub> | 19                                      | 3,45                   |
| Zephyria Mesnae | 7        | 100 <sup>+0</sup> <sub>-58,19</sub>       | 93                                      | 4,69                   |

- FRENDA maps obtained during the first Martian Year sols between May 2018 and February 2021 supersede the previously available ones in spatial resolution;
- New features in the equatorial region manifest containing high water content, unusual for these latitudes since water is sought to be unstable close to equator;
- For more information and broader discussion please see these results as published in [Astronomy Letters](#).