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## **Four candidate landing sites at the southern lunar polar region to drill water ice using solar powered missions**

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The evaluation of candidate landing sites for a solar powered ice drilling mission for the Moon was done at the southern polar region. Selection criteria were low slope angle surface, occasionally solar illuminated location with direct Earth radio access, together with <125 K temperature at 1 m depth. The survey showed three-four areas where all of these needs were satisfied at sites close to each other (see the Figure 1 below). Considering these regions, the maximal diameter for safe and scientifically relevant landing ellipse sizes are around 0.5-1 km diameter, while containing <20% of unfavourable locations can be larger around 2-4 km. The best location is around -27.03 W -86.75 S, where solar illumination can have 30% of time at least and WEH values are elevated.

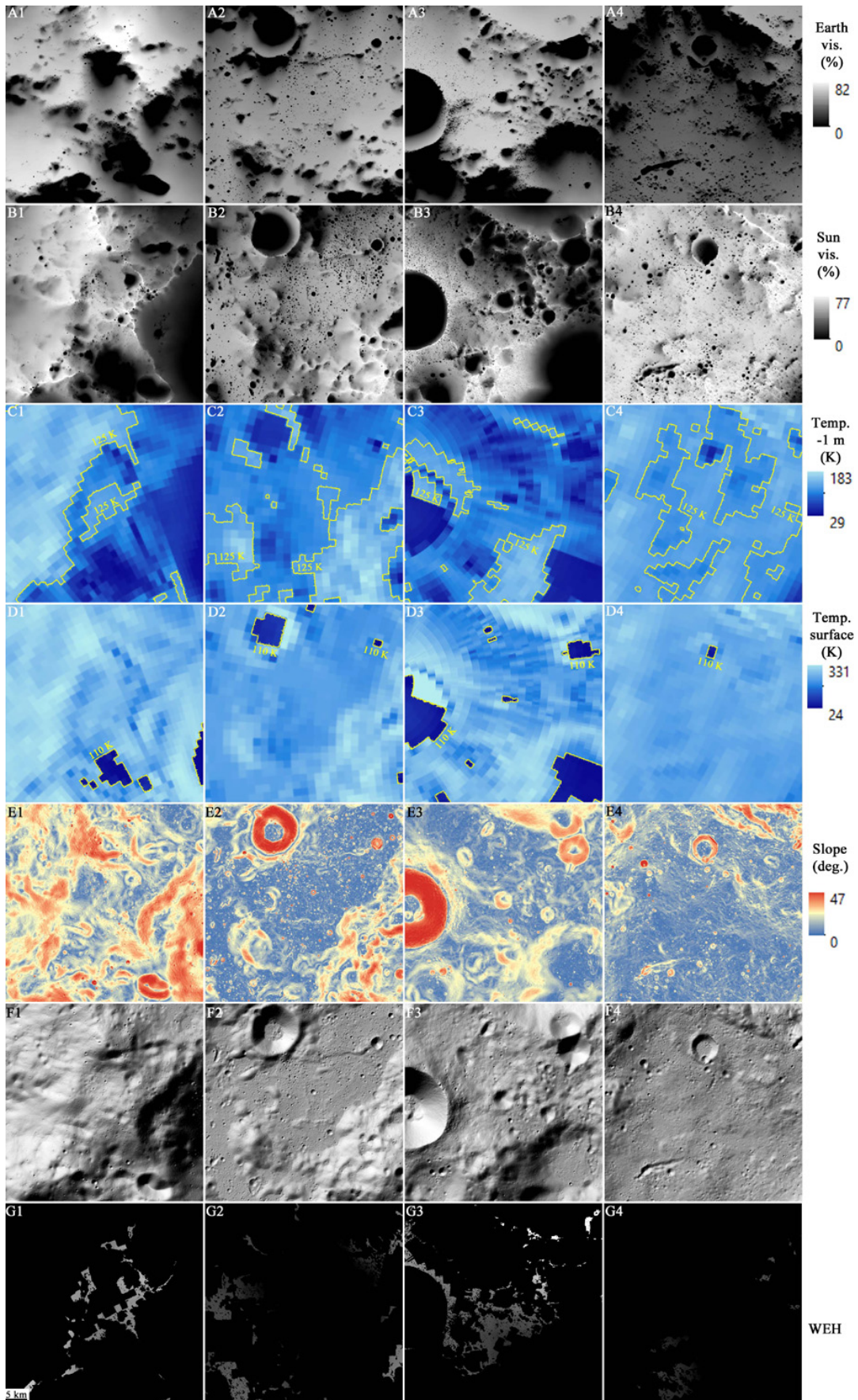


Figure 1. Insets of magnified versions of the four candidate areas.