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Goethite as an alternative origin of the 3.1 μm band on dark asteroids (Corrigendum)

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Key words. meteorites, meteors, meteoroids – minor planets, asteroids: general – minor planets, asteroids: individual: 24-themis – minor planets, asteroids: individual: 1-ceres – errata, addenda

An error occurred during the production process. Figure 1 was published twice. The corrected Figs. 1 and 4 are published below.

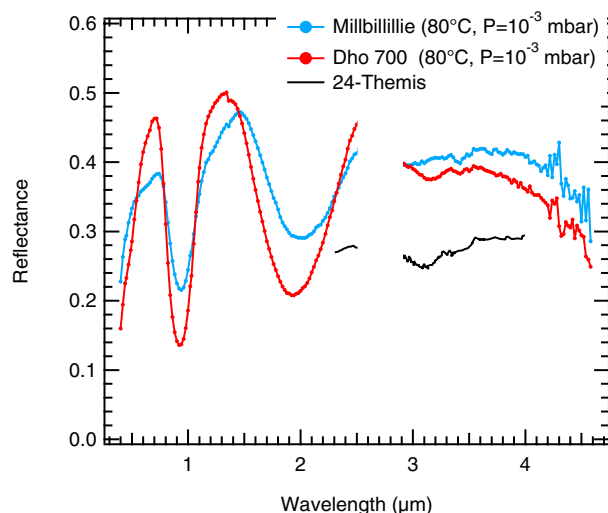


Fig. 1. NIR spectra of a eucrite (Millbillillie) and a diogenite powder (Dhofar700) showing the absence of significant H₂O- related 3- μm band upon heating to 80°C and in a moderate vacuum ($P = 10^{-3}$ mbar). Note the presence of a 3.1 μm band in the spectrum of Dhofar 700. From its shape and position, this feature may be caused by a small amount of goethite produced by terrestrial weathering. The small absorption at 3.4 μm is likely due to the presence of organic contamination.

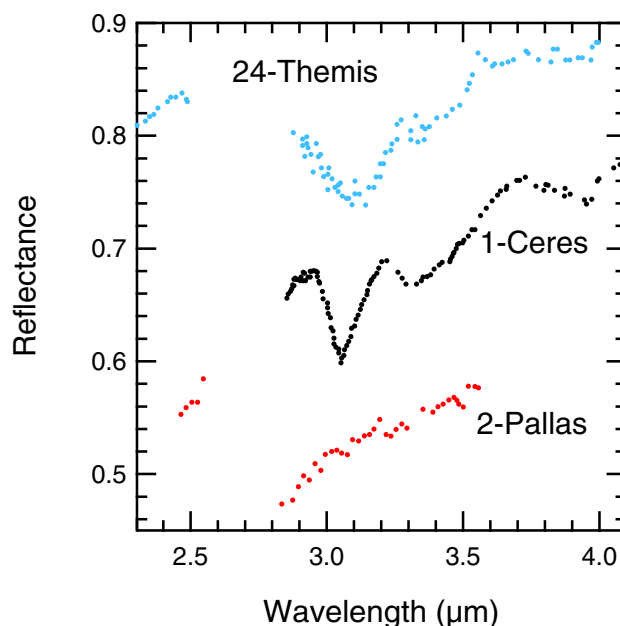


Fig. 4. Different types of 3- μm band as observed on asteroids. 1-Ceres spectrum is from Milliken & Rivkin (2009), 2-Pallas spectrum is from Jones et al. (1990), and 24-Themis data are from Rivkin & Emery (2010). Spectra have been offset and rescaled for clarity.

References

- Jones, T., Lebofsky, L., Lewis, J., & Marley, M. 1990, *Icarus*, 88, 172
Milliken, R. E., & Rivkin, A. S. 2009, *Nature Geoscience*, 2, 258
Rivkin, A. S., & Emery, J. P. 2010, *Nature*, 464, 1322