

No Class March 19th

Music: Fly Away- Lenny Kravitz

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Arguably, the most exciting thing found was traces of glycine! The simplest amino acid.

From Wikipedia: They found a wide range of organic compounds, including two that contain biologically usable nitrogen; indigenous aliphatic hydrocarbons with longer chain lengths than those observed in the diffuse interstellar medium; abundant amorphous silicates in addition to crystalline silicates such as olivine and pyroxene, proving consistency with the mixing of Solar System and interstellar matter, previously deduced spectroscopically from ground observations; hydrous silicates and carbonate minerals were found to be absent, suggesting a lack of aqueous processing of the cometary dust; limited pure carbon (CHON) was also found in the samples returned; methylamine and ethylamine was found in the aerogel but was not associated with specific particles.







Comets

Repository for water, organics?

NH₂ Glycine cool

heat mpre (A) Hartley 2, image mv6000002, ~7 m pixel[®]. Sun is to the right, and the positive rotational pole is at the smaller (right) end. The view is from latitude ~-33°. (B) Relatively smooth region of larger lobe. (C) The waist between the two lobes. (D) Knobby terrain, characterized by rounded to angular elevated forms up to 50 m high and 80 m wide. (E) An example of a roughly equidimensional spot <80 m across that appears even darker than the larger, more elongated "dark" areas.

Glycine can be made when comet impacts atmosphere.

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http://phl.upr.edu/projects/habitable-exoplanets-catalog/results http://phl.upr.edu/projects/habitable-exoplanets-catalog/media/pte







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Bottom line, we not yet have a good limit on np from Kepler. We maybe have a lower limit based on different





