



## **The Geological Society of London: *East Midlands Regional Group***

### **Pluto's 'desert': Methane ice dunes on a glacier on an airless world**

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As well as the deserts of Earth, dunes have been identified on Venus, Mars and Saturn's moon Titan. Tantalizingly dune-like features were described from the atmosphereless comet 67P Churyamov-Gerasimenko from the ESA's Rosetta orbiter, but prior to New Horizon's 2015 flyby of Pluto, so little was known of the geology of this world that predictions of its surface were extremely difficult. When images from Pluto revealed landforms startlingly similar to dunes from Earth's deserts, the question of how it was possible to have dunes with an atmosphere only 1/100,000th that of Earth (~ 1 Pa) arises. Here we describe the spectral, spatial and image analysis, which, together with numerical modelling, solved this puzzle.

**Tuesday 12th February 2019**  
**De La Beche Conference Suite,**  
**British Geological Survey,**  
**Keyworth, Nottingham, NG12 5GG**

**Refreshments available 6.30pm, talk starts at 7pm**  
**Everyone welcome**

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NASA's New Horizons spacecraft image  
of mountains on the edge of the dwarf planet's Sputnik Plain  
Photo credit: NASA/JHUAPL/SwRI

