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## GSA Annual Meeting in Denver, Colorado, USA - 2016

Paper No. 166-11

Presentation Time: 9:00 AM-6:30 PM

### COMPOSITION OF THE URVARA-YALODE REGION ON CERES

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We present here the first results of the mineralogical mapping of the Urvara and Yalode quadrangles on Ceres. These two quadrangles define a region in the southern hemisphere between latitudes 20°S and 65°S and longitudes 180°E and 360°E. The mineralogical mapping is mainly based on the acquisitions made by the spectrometer VIR [1].

The morphology of this region is dominated by the two impact craters Urvara (45°S and 249°E, diam: 170Km) and Yalode (42°S and 292°E, diam: 260Km). The catenae here present (Gerber, Pongal and Baltay) seem to be associated with the formation these impacts. The northern part is dominated by smooth material while the southern is more cratered.

As noted for the global maps [2], also in this region the chemical composition of phyllosilicate is uniform while their abundance varies. The element that seems to be of particular interest is a positive anomaly in the presence of NH<sub>4</sub> phyllosilicates within Urvara which, together with Dantu, has the highest concentration of ammoniated clays on the surface of Ceres. We discuss here the correlation of the composition with the morphology, topography to understand the origin of this NH<sub>4</sub> rich location.

[1] De Sanctis M.C. et al. (2011) *Space Sci. Rev.*, 163, 329–369. [2] Ammannito E. et al. (2016), *Science*.

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Monday, 26 September 2016: 9:00 AM-6:30 PM

Exhibit Hall E/F (Colorado Convention Center)

Geological Society of America *Abstracts with Programs*. Vol. 48, No. 7  
doi: 10.1130/abs/2016AM-286845

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