Phyllosilicates throughout the Solar System

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Clay minerals and other phyllosilicates have been identified in some groups of meteorites from primitive asteroids and Mars; in mission remote sensing data from Mars and asteroid (1) Ceres; in spectroscopic data from Mars lander and rover missions; and in X-ray diffraction data from the most recent Mars rover. Phyllosilicate-bearing primitive materials are the presumed starting materials for modeling reactions with water, to infer the solute compositions of the sub-ice oceans on several icy moons of the outer planets. And extraterrestrial phyllosilicates may be the host phases of extraterrestrial reduced-carbon compounds. This session welcomes observational remote-sensing (mission-) and sample- (meteorite-) based studies of extraterrestrial phyllosilicates and their terrestrial analogs; and experimental, theoretical, computational, and modeling studies of the properties, origin, genesis, and distribution of phyllosilicates in meteorites and Solar System bodies.