IMA 2022 Session Proposal

Session Title: Mission minerals: Exploring our solar system's mineralogy through remote-sensing, landed, and sample-return missions

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Abstract: Information on the mineral inventory across our solar system is rapidly expanding due to the far-reaching and powerful remote-sensing, landed, and sample-return missions. Many of these spacecrafts contain instrument payloads capable of detecting mineral species, including XRF, XRD, Raman, IR, and NIR. Further, returned samples can be explored with a suite of laboratory instruments, increasing our understanding of the chemical and textural features of astromaterials at an unprecedented level of detail and precision. The detection and classification of minerals and mineralizing systems on the diverse bodies in our solar system is shaping our understanding of planetary evolution, the diverse geologic and geochemical processes across our solar system, and the search of life beyond Earth.

This session welcomes contributions related to mineralogy and/or mineralizing environments and processes on other planetary bodies, geologic and geochemical history of planetary materials and systems, spacecraft instrumentation and observations, laboratory studies in preparation for returned samples, and field studies and advances in flight-ready mineral detection instrumentation.