Primary mineralogy on Mars: insights from orbit, in situ robotic exploration and meteorites

Agnes Cousin (IRAP OMP Toulouse), Olivier Beyssac (IMPMC Paris) & Arya Udry (UN Las Vegas)

During the last decade, the igneous and sedimentary mineralogy and petrology of Mars has known a revolution thanks to several missions: in situ robotic exploration using cutting-edge instruments for mineralogy (NASA Curiosity and Perseverance rovers, CNSA Zhurong rover), new unique martian meteorites (regolith breccia NWA7034/7533, Tissint and many others) and ongoing high-resolution exploration from orbit (MRO/CRISM). Several missions for in situ mineralogical exploration are also scheduled for the coming years (rovers ESA ExoMars, JAXA MMX) with ultimately the return of Martian samples on Earth in the 2030s! This session welcomes presentations from past/current/future missions and/or studies of meteorites on igneous and sedimentary processes on Mars. Experimental and instrumental contributions or the study of Martian analogs are welcome as well.