

TUESDAY

APRIL 5

12:30 P.M.

RM 184 NSH

Humans Beyond Low Earth Orbit: The Moon as an Enabling Asset

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Humans began to explore the Moon in 1969 but this was abruptly halted in December 1972 when Apollo was canceled due to budgetary constraints. Since then the USA has restricted human space exploration to low Earth orbit (LEO) and has seen a degradation of capability - for example, the US currently cannot send astronauts to the International Space Station and pays Russia for this service. With talk of sending humans beyond LEO, the Moon becomes an enabling asset given the wealth of orbital data gathered since Apollo by NASA missions and those from international space agencies. We must learn from Apollo and use the new data to map a path to Mars (and beyond) that will be sustainable. Apollo was great but not sustainable, so it should not be repeated (i.e., bring everything from Earth with one-use spacecraft). The resources available on the Moon have the potential to develop a sustainable human space exploration architecture, bring the Moon into our economic sphere of influence, and enable important planetary science endeavors beyond what is possible with robotic missions.