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# The Metals Delivered by Comet Siding Spring to Mars

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On October 19th 2014, comet C/2013 A1 (Siding Spring) had a close encounter with Mars and deposited cometary dust particles into the Martian atmosphere. Dust that impacted Mars was readily identifiable as the meteoric deposition of Mg, Fe, Na, etc. by the Imaging Ultraviolet Spectrograph (IUVS) and Neutral Gas and Ion Mass Spectrometer (NGIMS) on the Mars Atmosphere and Volatile EvolutioN (MAVEN) spacecraft. While Mg+ from comet Siding Spring and in a persistent layer was identified previously by IUVS, this is the first report on the abundance, spatial distribution and temporal evolution of Mg, Fe, and Fe+. We compare these observations to the Leeds 1-D Chemical ABlation MODel (CABMOD), and derive constraints on meteoric ablation, which helps to constrain chemistry at high altitudes.