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**Distribution and chemistry of Fe-Ni metal in lunar regolith breccias.**

Storz\*, J., Bischoff, A., John, T.,  
\*Institut für Planetologie, Universität Münster, Wilhelm-Klemm-Str. 10, 48149 Münster, Germany,  
[jakob.storz@uni-muenster.de](mailto:jakob.storz@uni-muenster.de)

Lunar regolith breccias, often host to various lithologies, are product of a complex impact history on the lunar surface. Some samples and fragments show high abundances of Fe-Ni metal, untypical for pristine lunar highland rocks. Therefore, a high metal abundance is potentially an indicator for meteoritic contamination by (metal-bearing) impactors. In the literature, the Ni/Co ratio of metal has been proposed as a useful tool to differentiate between endogenic (lunar) and exogenic (impactor) metal [1]. We analyzed 775 Fe-Ni metal grains in 9 different meteorites by EPMA (WDS). By combining chemical and petrographic information, we aim to derive information about impacting rocks on the moon, and to evaluate the use of Ni/Co as a proxy of meteoritic contamination. The analyzed samples show heterogeneous metal compositions, indicating different sampling regions on the moon. Throughout the evaluation, it became clear that the Ni/Co ratio is affected by various processes and most signatures cannot be considered primitive.

[1] Day, J. M. D. (2020) MAPS 55, 1–15.

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