universität wien

Fakultät für Physik

Isotopenforschung und Kernphysik

E I N L A D U N G

zum

V E R A - S E M I N A R

von

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The Formation of Tektites: New Isotopic Studies

Tektites are a rare type of impact glass; they are found in only four distinct and geographically extended strewn fields, 0.8 to 35 My in age. For three of these four strewn fields, the source crater is known. Also, from 3 of the 4 fields, microtektites are known in addition to normal, centimeter-sized specimens. Tektites differ from “normal” impact glasses in that they were derived from the very surface of the target area (as is indicated by their high content of the cosmogenic radioisotope ^{10}Be) and may have formed and ejected before the main crater excavation phase even begun. They have very minor meteoritic components, as indicated, for example, by Os isotopic studies. As most tektites are homogeneous glass, they must have experienced extremely high formation temperatures. Our recent work has shown that Zn and Cu are isotopically fractionated by volatilization in tektites. The study of unconventional stable isotopes provides interesting clues regarding formation, differentiation, and deposition of tektites. Another recent development concerns the study of ^{10}Be in individual microtektites. We show that the average content is about 2x that of splash-form (ablated) australites, and that microtektites have the highest ^{10}Be in a strewn field, indicating that microtektites are derived from the topmost surface of the target and that they are formed in the earliest phase of the impact process, well before crater formation.

Donnerstag, 10. November 2016, 16:30 Uhr

**1090 Wien, Währinger Str. 17, "Kavalierstrakt",
1. Stock, Victor-Franz-Hess-Hörsaal**

R. Golser E.M. Wild