

**MONNIG METEORITES FOR THE MASSES:
EXTENDING PUBLIC OUTREACH TO HIGHER-
EDUCATION**

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Introduction: Since the Monnig Meteorite Gallery opened its doors in 2003, TCU has been active in both education and public outreach activities. The gallery is open to the public and displays about 10% of meteorites in the current collection. The exhibits teach visitors how meteorites are formed and how to identify them. They are given the opportunity to touch a piece of Mars and create their own terrestrial impact crater. There is a full-time educator on staff to organize outreach activities and guided tours are offered to small groups.

Meteoritics in Higher-Education: Planetary science is a growing field and the number of researchers working on meteorites continues to grow; however, this is often not reflected in the syllabi of current classes offered at both the undergraduate and graduate level. Many universities offer some planetary science in introductory level classes but this is often not continued into higher-level classes. Faculty members at other institutions, who conduct research on meteorites, were asked why meteoritics was not included in existing undergraduate classes (such as petrology) or taught as an independent topic. It was found that many universities did not have the resources, or the justification, to purchase their own meteorite collection for teaching purposes. There are several kits available for loan but they can be difficult to obtain and often lack thin sections, the latter of which was perceived to be key in teaching this topic at a higher level.

Monnig Meteorites Kits: The Monnig Meteorite Collection is in the process of producing four meteorite hand-specimen and thin-section kits, which will be available for free loan to university faculty who wish to add meteoritics to their curriculum, but currently do not have the resources to do so. Each kit will contain the following:

THIN SECTIONS

H, L, LL Chondrite
Carbonaceous Chondrite
Howardite
Eucrite
Diogenite
Primitive Achondrite

HAND SPECIMENS

Ordinary Chondrite
Carbonaceous Chondrite
Basaltic Achondrite
Meteor-wrong
Iron
Meteorite with fusion crust

There will be multiple thin-sections of each meteorite type, so that students are able to work independently at their own microscopes. These kits will be developed further over time and will eventually come complete with teaching notes, pictures of all samples, and possible laboratories. These kits should be available for student use in Spring 2011.