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News Release

GRADUATE RESEARCH CENTER OF THE SOUTHWEST SOUTHWEST CENTER FOR ADVANCED STUDIES

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IMMEDIATELY

DALLAS --

Construction of a second mass spectrometer for rock-age analysis will be funded by a \$27,000 grant to the Graduate Research Center of the Southwest by the National Science Foundation.

Presence of very small amounts of argon, produced by the decay of potassium in rock samples, will be measured by the spectrometer to determine ages of rocks.

Prof. Henry Faul, principal investigator, said the highly sensitive research instrument will someday be used to analyze samples of the moon. Rocks now awaiting study come from the Northern Appalachians, the Antarctic, Chile, Northern Washington and other areas. Material studied will include rocks, meteorites and tektites. Tektites are strange pieces of glass found in many world areas. They may be material from meteor impacts on the earth, or lunar material displaced by meteor impacts on the moon.

Bohemian tektites with large gas bubbles have been made available to Professor Faul by Charles University at Prague.

One of the steps in studying rocks and meteorites is to analyze the very small quantities of gas that are enclosed in them. These measurements give clues to the history of the rocks themselves, the earth's atmosphere, and indirectly, the earth as a whole. Measurements are usually made by melting the rock in a vacuum and passing the gas produced into a mass spectrometer.

The Center now has a 12-inch mass spectrometer, used principally for rubidium-strontium and uranium-lead rock age measurements. Three ultra-clean rooms for radioactive trace chemistry have been built and equipped, and a rock-crushing and mineral separation work room is in operation.