

Field Museum acquires important Martian meteorite

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The Field Museum has acquired six pieces of an extremely important Martian meteorite that was hurled into space about 700,000 years ago when Mars collided with an asteroid.

The meteorite is named Tissint, after the Moroccan village where it fell on July 18, 2011. The [Field Museum](#) acquired Tissint [specimens](#) totaling 321 grams (about 11.3 ounces) from Chicago-area meteorite collector and philanthropist Terry Boudreaux earlier this year. The specimens are an important addition to the Museum's Robert A. Pritzker Center for Meteoritics and Polar Studies which houses one of the world's largest collection of meteorites

Tissint was only the fifth [Martian meteorite](#) that people have seen fall to earth. Because its fall was witnessed, many pieces of the meteorite were recovered quickly and were not exposed to [weathering](#) or damage from the Earth's environment.

"This new Martian meteorite is scientifically important primarily because it is extremely pristine, unweathered, and contains very little terrestrial contamination compared to other Martian meteorites. It is a prime sample for astrobiological and cosmochemical studies," said Philipp R. Heck, PhD, the Field Museum's curator in charge of meteorites.

Tissint is composed of [volcanic rock](#), or basalt. When Mars was hit by an asteroid, the impact caused areas of [Martian rock](#) to melt into glass and

harden again. These "melt pockets" are visible in the meteorite and are important because they contain bubbles filled with Martian air. When researchers examined Tissint, they also discovered trapped soil in the rock – marking the first time soil from Mars has been discovered in a meteorite.

The Field Museum will make Tissint available to researchers who hope to learn more about the geological evolution of Mars.

University of Chicago Professor and Field Museum Research Associate Nicholas Dauphas said, "This is an outstanding opportunity for scientists in Chicago and around the world to better understand the [red planet](#). In my lab at the University of Chicago, we measure precisely the composition of Martian meteorites to tell when and how Mars was created. Our results so far show that it formed very rapidly after the birth of the solar system. This and its small mass make Mars stand apart from other planets like Earth, which took much longer to build and is much bigger. Measuring Tissint will allow us to test the theory that Mars is, in some sense, an aborted planet."

Provided by Field Museum

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