

Peter Goldreich
Institute for Advanced Study

**Reading the Record of Ancient Impacts. Formation of
Chondrules and Chondrites**

Chondrules are small spherical drops that comprise a significant fraction of the volume of chondrites, rocks that fall from the sky. These facts have been known for over 200 years. More recent investigations have shown that chondrites formed within an interval of a few million years starting about 4.56 billion years ago and that their chemical compositions are similar to that of the solar atmosphere depleted of the most volatile elements. I will explain why we lack an accepted theory for how chondrules and chondrites formed and then suggest a solution.