

Cold aqueous planetary geochemistry with FREZCHEM: From modeling to the search for life at the limits



Riddell Faculty Seminar Presents

Dr. Giles M. Marion, Desert Research Institute

Time: March 1st, 1:30-3:00pm

Room: 217 Wallace Building

FREZCHEM (FREeZing CHEMistry) is an equilibrium chemical thermodynamic model for cold aqueous solutions. Since its inception in the early 1990s, it has been extensively used to explore sub-zero temperature geochemical processes and/or limits for life in cold regions of Planet Earth and beyond. This talk will introduce the principles and development of FREZCHEM over the past two decades. The model chemistries, versions, and environmental ranges (temperature, pressure, water) will be discussed, followed by model limitations. Finally two Mars applications will be examined.

11:45 AM - 1:00 PM

Free pizza lunch for graduate students with Giles Marion,
Geological Sciences Lounge - 343 Wallace