



**The Gamma-Ray Astronomy group at Michigan Technological University has an opening for a postdoctoral position.** We are seeking a highly qualified individual with interest and experience in astrophysics, particle physics, and astronomy in general and the detection of **gamma and cosmic rays** in particular. The group is a founding member of the **HAWC Observatory** (<http://hawc-observatory.org/>) and has been involved in the analysis and interpretation of **HAWC data** from the beginning. The position will have equal components of data analysis and detector maintenance.

Experience with programming languages like C++ and Python and with the technology of water Cherenkov detectors will be valued. The successful candidate will be based at the Michigan Tech campus in Houghton, in Michigan's Upper Peninsula (<http://www.mtu.edu>), and will be expected to travel to the HAWC site near Puebla, Mexico, for operations, detector maintenance and shift work.

Research possibilities include studies of diffuse gamma-ray emission, gamma-ray emission from large structures such as the Fermi bubbles, and molecular clouds, and from extended and point sources of TeV gamma rays such as pulsar wind nebulae, super nova remnants, and binaries. In this context, the Michigan Tech group focuses on multi-wavelengths astronomy and is heavily involved in the development and application of software tools (e.g. The Multi-Mission Maximum Likelihood Framework or 3ML) allowing to simultaneously analyze and fit data collected with other instruments and at other wavelengths (e.g. VERITAS, Fermi). We are also in charge of the HAWC calibration system for which we are maintaining both software and hardware.

In addition, the group is providing support for the calibration development of the HAWC "outrigger" upgrade, which will add 350 small size water Cherenkov detectors to the core array. A successful candidate will have the opportunity to analyze the first data from this extended HAWC array.

Applicants must have a Ph.D. in Physics, in Particle Physics, or in Astrophysics, as well as research experience in experimental cosmic-ray physics, gamma-ray physics, or related fields, such as elementary particle physics, general astrophysics, or astronomy. The candidate must have demonstrated the ability to initiate and carry out experiments resulting in peer-reviewed publications.

**Candidates will be considered until the position is filled. The anticipated starting date of the appointment is September or October 2016.** Interested candidates should send their application information (including a letter or research statement expressing interest and experience related to the job description, a current resume, list of publications, and the names, e-mail addresses, and phone numbers of three references) to **Prof. Petra Huentemeyer** ([petra@mtu.edu](mailto:petra@mtu.edu)).