



Postdoctoral Research Associate in Observational Cosmology

We are searching for a Postdoctoral Research Associate to join our program in large-scale intensity mapping of neutral hydrogen (HI). Using recently-commissioned 21 cm interferometer arrays, including the Tianlai Pathfinders located in Xinjiang, China, we are making maps of the large-scale structure of the universe after the Epoch of Reionization and developing techniques to extract cosmological parameters. Key steps include building a data pipeline, calibrating the instruments, and developing foreground removal algorithms to produce intensity and polarization maps of foregrounds and separate out optimally cleaned 3-D HI maps. This technique promises to enable measurements of the dark energy equation of state, neutrino mass, and non-Gaussianity with future instruments. The Pathfinders consist of two independent arrays: an array of 3, 15 m x 40 m cylinder telescopes and an array of 16, 6 m diameter dish antennas. Starting this year each array will begin a multi-year drift-scan survey of the sky. Data will be archived and analyzed at the new Tianlai Analysis Center at Fermilab.

Experience in astrophysical data analysis and strong computing skills are highly desirable. The successful applicant will be expected to divide his/her time between Fermilab and UW Madison and will have the opportunity to work with team members at Brown (Providence), CMU (Pittsburgh), NAOC (Beijing), Shanghai Jiao Tong University, LAL (Orsay), Observatoire de Paris, IRFU/CEA (Saclay), OSU (Columbus), and IAP/Lagrange Institute (Paris).

The appointment is for three years and can begin immediately. To be assured of consideration, apply by November 15, 2016. Applications must be submitted online at <http://www.physics.wisc.edu/apply/obscos-postdoc-2016/>. Applicants will be asked to upload a cover letter and resume. Letters of recommendation are not required with the initial application but applicants may be asked to provide up to three letters after an initial screening. Review of application materials will begin immediately and continue until the position is filled.

Please direct questions to Prof. Peter Timbie (pttimbie@wisc.edu, 608-890-2002, cmb.physics.wisc.edu), Department of Physics, UW-Madison, 1150 University Ave., Madison, WI 53706 or Dr. Albert Stebbins (stebbins@fnal.gov, (630) 840-3663, home.fnal.gov/~stebbins/) Mail Stop 209, Fermilab Box 500, Batavia, IL 60510.

UW-Madison is an equal opportunity/affirmative action employer. We promote excellence through diversity and encourage all qualified individuals to apply.