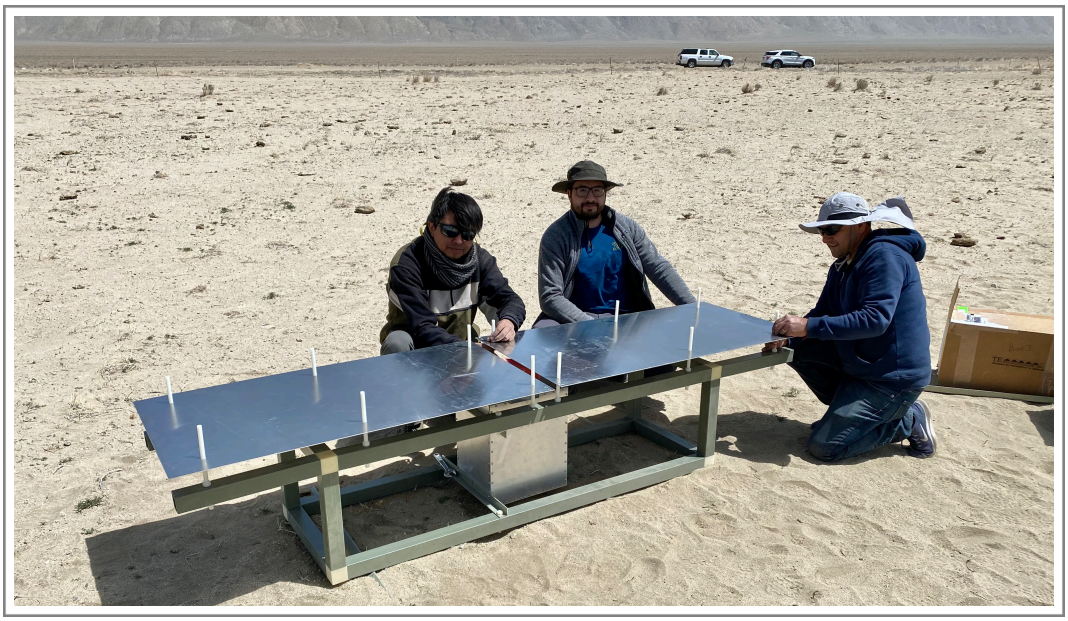
Observing the Cosmic Dawn

ABSTRACT

The period from 50 million to 1 billion years after the Big Bang is considered the Cosmic Dawn. The universe had cooled of to a few hundred Kelvin—which is about room temperature—and the galaxies and stars were only beginning to form and light up. Radio waves from the mist of hydrogen that filled space at that time are still arriving at Earth 13 billion years later, and are in principle detectable by sensitive instruments when they are placed far from human-generated radio sources. We are doing the extremely challenging work to detect this radiation using a detector called MIST (Mapper of the IGM Spin Temperature). So far only one success with this method has been reported. Our present work is here in Deep Springs Valley because of the remoteness from artificial sources of radio waves, the flat landscape, and for its logistical advantages.



Raul Monsalve, Ricardo Bustos, and Mauricio Diaz

Sunday, May 8, 2022, 8:00-8:45pm

Deep Springs College, Main Building, Main Room