

The Askaryan Radio Array - a new instrument for the detection of highest energy neutrinos.

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Building on the expertise gained by RICE, ANITA and IceCube's radio extension in the use of the Askaryan effect in cold Antarctic ice, we are currently developing an antenna array known as ARA (The Askaryan Radio Array) to be installed in boreholes extending 200 m below the surface of the ice near the geographic South Pole.

The cold and deep glacial ice at the South Pole is transparent to radiowaves, which allows to use relatively shallow radio detectors to observe highest energy neutrino interactions in the ice sheet.

With the planned area of 80 square kilometers and effective detection volume of 200km^2 ARA is large enough to reliably detect of the flux of neutrinos that are inevitably produced when highest energy cosmic rays interact with the microwave background. First instruments were deployed in the Austral season 2010/2011.

I will describe the detector and the science goals, and give the current status of the project.

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