Measurement of cosmic-ray air-shower radio emission with an IceCube Surface Array station

In the coming years, IceCube’s cosmic-ray capabilities will be enhanced by adding scintillators and radio antennas to the surface array.

The design of the Enhancement is being tested with a prototype station deployed to the Pole in Jan. 2020.

First cosmic-ray air-showers with the prototype station have been measured.

Basic event reconstructions are performed on the scintillator, radio and IceTop data individually:
- The results agree with each other and the station seems to be performing as expected!

Improved reconstructions and additional cross-checks are being worked on.