Contribution ID: **123**   Type: **not specified**

Status of the DeepCore Sub-Array at the IceCube Neutrino Observatory

In February 2010, the IceCube collaboration completed the deployment of the "DeepCore" sub-array. Complementing the baseline detector design, DeepCore provides sensitivity to neutrinos with energies as low as about 10 GeV and thereby extends the energy reach of the observatory by almost two orders of magnitude. With the DeepCore modules concentrated in the extremely clear ice at the bottom-center of IceCube, the sub-array will utilize the surrounding IceCube detector as an active veto against the copious cosmic-ray muon background. In conjunction with its denser module spacing, the increased vetoing capability will not only lower the neutrino energy threshold but will also increase the detection efficiency to low energy neutrinos over the full solid angle. This poster describes the design and performance of the fully deployed DeepCore sub-array, including first results from low-level triggers and online physics software filtering.

Primary author: Dr KOSKINEN, D. Jason (The Pennsylvania State University)

Presenter: Dr KOSKINEN, D. Jason (The Pennsylvania State University)