

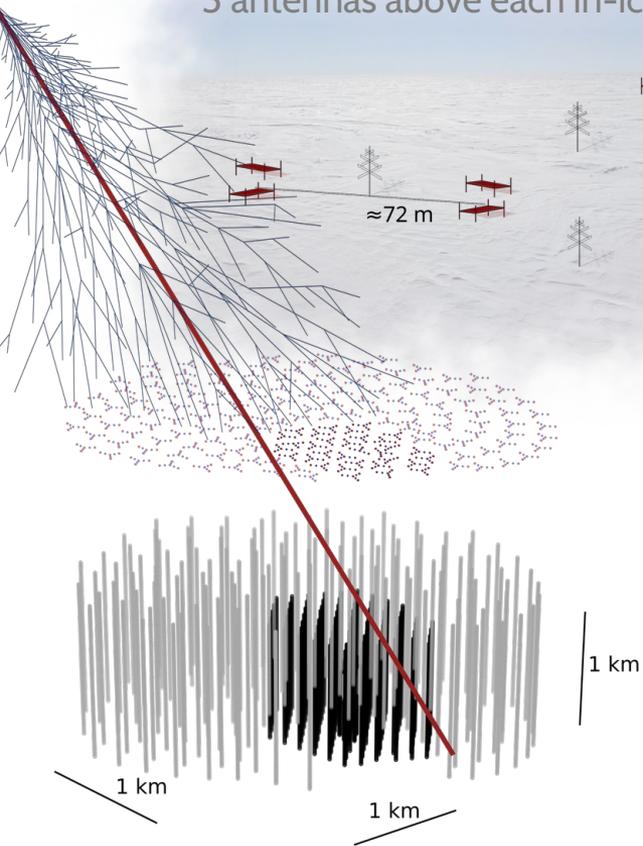


Simulation study for the future IceCube-Gen2 surface array

Agnieszka Leszczyńska, Mark Weyrauch, Alan Coleman for the IceCube-Gen2 Collaboration

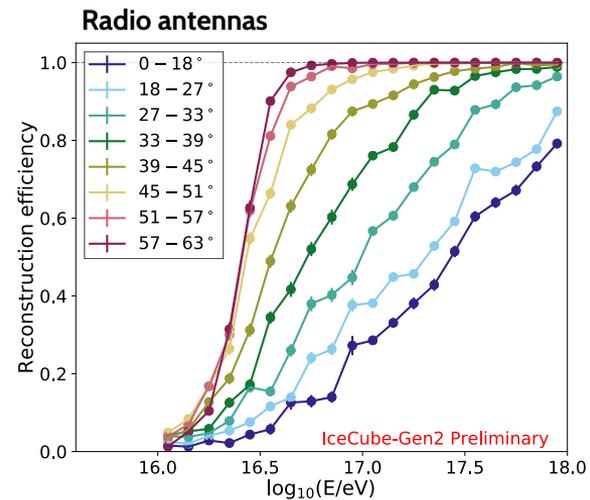
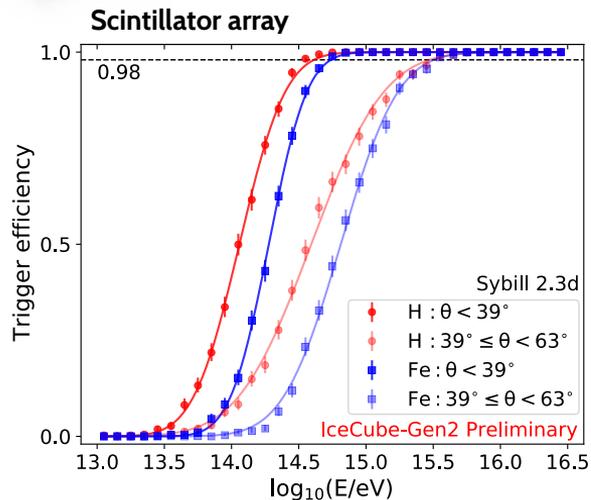


Hybrid station with 8 scintillators and 3 antennas above each in-ice string.

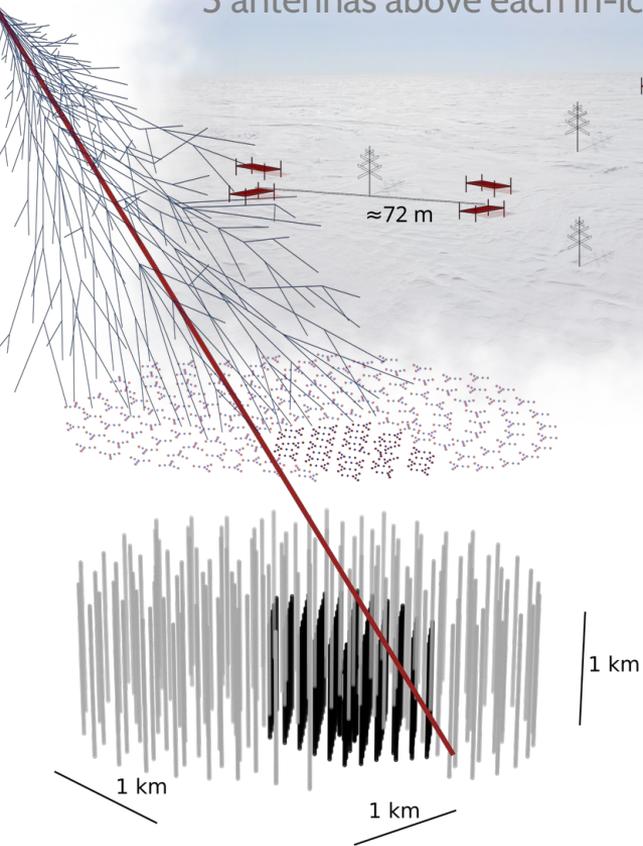


Surface detectors

- cosmic-ray studies in the PeV–EeV energies
- air-shower reconstruction with scintillation detectors and radio antennas



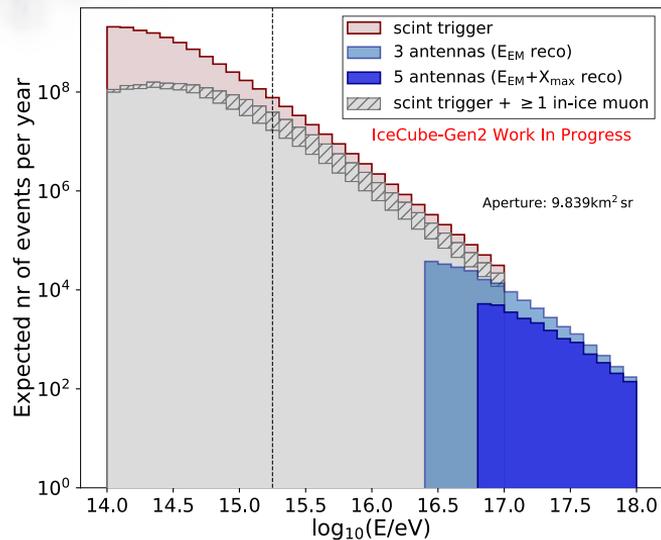
Hybrid station with 8 scintillators and 3 antennas above each in-ice string.



+ in ice array

measurements of **high-energy muonic core** with in-ice optical array:

- improvements in mass determination
- study on hadronic interaction models



- 5 scintillators have signal
- 5 scintillators have signal and in-ice muon(s)
- 3 antennas have signal and dir reconstructed within 5 deg
- 5 antennas have signal and dir reconstructed within 5 deg