

New opportunities with IceCube-Gen2

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The IceCube Neutrino Observatory is the world-leading instrument for astrophysical neutrino measurements. In the coming decade, we plan for IceCube-Gen2, which will include an expanded optical array with a factor of ~ 8 more instrumented volume and the addition of a radio array to extend the energy reach up to the EeV scale. Gen2 will move from the discovery era of astrophysical neutrinos to allow for robust observation of astrophysical neutrino sources, and will probe new territory in the highest energies. Here I will discuss the new opportunities for science expected with Gen2, including multi-messenger observations of sources, new classes of sources that can be observed, improvements in supernova neutrino detection and improved reach for BSM physics. I will also discuss the role Sweden will play in Gen2, toward both the planned radio and optical arrays.

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