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Eyes on the extreme Universe: Neutrino telescopes across the globe

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With the detection of a diffuse extragalactic neutrino flux and the first compelling evidence for associated sources, IceCube has opened up a new era for high-energy neutrino astronomy. Leveraging on these exciting discoveries made by IceCube, several proposals are under way across the globe to either upgrade existing detectors or build new ones. To definitively unveil the origin of high energy cosmic rays and probe new physics over astronomical baselines via the weak sector, it is essential in designing next-gen neutrino telescopes to have improved source identification capability and appreciably boost statistics of all-flavor neutrinos. In this talk, I will give an overview on the new detectors under construction and briefly discuss their future prospects.

Presenter: XU, Donglian (Tsung-Dao Lee Institute) **Session Classification:** Astrophysical Neutrino