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Astroparticle Physics in Hyper-Kamiokande

Saturday 8 July 2017 10:45 (15 minutes)

The Hyper-Kamiokande (Hyper-K) experiment centres around two proposed next-generation underground water Cherenkov detectors that will be nearly 20 times larger than the highly successful Super-Kamiokande and use significantly improved photodetectors with the same 40 % photocoverage. The resulting sensitivity improvements will particularly benefit astroparticle physics at low energies.
This talk will give an overview over Hyper-K and present its projected physics reach in the areas of supernova neutrinos, solar neutrinos and indirect dark matter searches, based on the current design report. It will also discuss additional sensitivity improvements if the second detector is built in Korea in a location with a higher overburden.

Experimental Collaboration

Hyper-Kamiokande Proto-Collaboration

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