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Trigger developments for ARA MING-YUAN LU, University of Wisconsin-Madison, ASKARYAN RADIO ARRAY COLLABORATION — The Askaryan Radio Array (ARA) is a planned large-scale neutrino detector at the South Pole aiming at observing ultra-high-energy cosmogenic neutrinos via detecting radio Cherenkov radiation from neutrinos' interaction with Antarctic ice. By the end of the austral summer of 2012/13 three detector stations have been deployed at depths of up to 200 m. A prototype detector station has been taking data for two years. The final array is planned to consist of 37 stations with a 200 km^2 coverage, and provide high sensitivity in the range of 10 PeV to 10 EeV. In order to increase the discover potential of the stations, advanced triggering schemes are in development which take into account the topology of signal events. Here a brief status and the triggering schemes in development will be presented, and based on simulations their improvements to ARA neutrino sensitivity will be discussed.

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