

In-situ calibration and anechoic chamber measurement for radio antenna development [Time: 13+4]

Thursday, 8 April 2021 08:05 (17 minutes)

In this talk, we will present the Chiba group's effort to developing an in-ice radio antenna model and slim antenna design for the future detector. We present the overview of the results from in-air antenna measurement done at the anechoic chamber and in-situ calibration performed at the ARA detector to measure the angular gain pattern of the antenna. The response of antenna in both environments was studied by the XFDTD simulation. As a result, the empirical antenna model was developed based on data. We also summarized the development of the slim antenna that was designed to deploy by RAM drill and the in-situ measurement performed at the South pole. Finally, we discuss the in-situ behavior of the ARA detector that we observed.

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