

Development of THz Superconducting Receivers for DATE5

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Abstract—Dome A, Antarctic, with an altitude of 4093 m and temperature below -80 Celsius degree in winter, is regarded as the best site on earth for astronomical observations in the THz regime. Purple Mountain Observatory as well as its collaborators is proposing to build a 5-m THz telescope (DATE5) there. Here we introduce the site survey at Dome A and the proposed DATE5 telescope. In particular, the development of THz superconducting receivers for DATE5 will be addressed.