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TES proton irradiation result analysis for future space applications

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Planck-HFI highly sensitive bolometers were considerably affected by cosmic-rays, producing spurious signals appearing as glitches in the raw astrophysical data. Since, the effect of cosmic rays on detectors is a major concern for future similar space missions. Their instruments will have a larger detection surface, an increased sensitivity, and much more stringent requirements on the suppression of systematic effects. To study the impact of cosmic rays on detector prototypes in operational conditions, IAS has designed a state-of-the-art cryogenic system to irradiate particles by coupling this facility to particle accelerators. An irradiation campaign has been carried out on LiteBIRD-HFT TES prototypes to study their response to particle hits. We present the results and the analysis of this first test campaign.

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