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The Medium and High Frequencies Telescopes of LiteBIRD

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LiteBIRD is a JAXA led strategic L-Class mission designed to measure the cosmic microwave background (CMB) polarization over the full sky at large angular scales. Measurements over 15 bandwidths from 34 GHz to 448 GHz are made by three telescopes: the Low, the Medium and the High Frequency Telescope (respectively LFT, MFT and HFT).

The Medium Frequency Telescope (89 - 224 GHz) and the High Frequency Telescope (166 - 448 GHz), under the European responsibility, are two cryogenics refractive telescopes cooled down to 5 K. They are composed of a continuous rotating half wave plate as first optical element, two High Density Polyethylene (HDPE) lenses and more than 2100 Transition Edge Sensors (TES) detectors for the MFT (more than 1300 TES for the HFT) cooled down to 100 mK.

An overview of the current design of the LiteBIRD Medium & High Frequency Telescopes is presented.

Less than 5 years of experience since completion of Ph.D

N

Student (Ph.D., M.Sc. or B.Sc.)

N

Autori principali: MOT, Baptiste (IRAP-CNRS); MONTIER, L. (Institut de Recherche en Astrophysique et Planétologie, Toulouse (CNRS-INSU) France); DE BERNARDIS, Paolo (ROMA1); PISANO, Giampaolo (School of Physics and Astronomy, Cardiff University); MAFFEI, B. (Institut d'Astrophysique Spatiale, Orsay (CNRS-INSU) France); ARNOLD, Kam (University of California, San Diego); BERSANELLI, Marco Rinaldo Fedele (MI); Sig. CLICHE, Jean-François; COLUMBRO, Fabio (ROMA1); DE PETRIS, Marco (ROMA1); FRANCESCHET, C. (Università degli studi di Milano Italy); HAZUMI, Masashi (KEK, Tsukuba); Sig. GRUPP, Frank; HASEBE, Takashi (JAXA/ISAS); Sig. HARGRAVE, Peter; HENROT-VERSILLE, Sophie (LAL Paris); LAMAGNA, Luca (ROMA1); MASI, Silvia (ROMA1); Sig. MATTON, Romain (IRAP); Sig. ROUDIL, Gilles (IRAP); Dr. SEKIMOTO, Yutaro (Institute of Space and Astronautical Science, Japan Aerospace Exploration Agency); Sig. THOMPSON, Keith; TUCKER, Carol (School of Physics and Astronomy, Cardiff University); WESTBROOK, Benjamin (1985); Sig. WINTER, Berend

Relatore: MOT, Baptiste (IRAP-CNRS)

Classifica Sessioni: Poster session

Classificazione della track: Low Temperature Detector fabrication techniques and materials