

Planck : performance of the HFI instrument after 30 months of operation in space

F. Pajot^{1*} for the Planck Collaboration²

1 Institut d'Astrophysique Spatiale, Université Paris Sud-11, 91405 Orsay, France

2 Planck (<http://www.esa.int/Planck>)

* Contact: `francois.pajot@ias.u-psud.fr`, phone +33 1 6985 8567

Abstract— Launched in May 2009, the HFI instrument of the Planck satellite has been operated flawlessly for more than 30 months. The detectors, highly sensitive bolometers, were cooled and kept continuously at 100 mK, in the environment of the Earth-Sun lagrangian point L2 orbit. The performance of the detection chain will be presented, as well as the analysis of the main systematics and their impact on the data processing. These systematics include interactions of the high energy cosmic particules with the detectors and the cryochain. An outline of the main astrophysical results achieved so far will illustrate the success of the Planck mission.