Planck 2015 results: XII. Full focal plane simulations - DTU Orbit (08/03/2019)

Planck 2015 results: XII. Full focal plane simulations

We present the 8th full focal plane simulation set (FFP8), deployed in support of the Planck 2015 results. FFP8 consists of 10 fiducial mission realizations reduced to 18 144 maps, together with the most massive suite of Monte Carlo realizations of instrument noise and CMB ever generated, comprising 104 mission realizations reduced to about 106 maps. The resulting maps incorporate the dominant instrumental, scanning, and data analysis effects, and the remaining subdominant effects will be included in future updates. Generated at a cost of some 25 million CPU-hours spread across multiple high-performance-computing (HPC) platforms, FFP8 is used to validate and verify analysis algorithms and their implementations, and to remove biases from and quantify uncertainties in the results of analyses of the real data.

General information
State: Published
Organisations: National Space Institute, Astrophysics and Atmospheric Physics, Innovation and Research-based consultancy, University of Copenhagen

Number of pages: 28
Publication date: 2016
Peer-reviewed: Yes

Publication information
Journal: Astronomy & Astrophysics
Volume: 594
Article number: A12
ISSN (Print): 0004-6361
Ratings:
BFI (2019): BFI-level 2
Web of Science (2019): Indexed yes
BFI (2018): BFI-level 2
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 2
Web of Science (2017): Indexed yes
Scopus rating (2017): CiteScore 3.8 SJR 2.265 SNIP 1.099
Web of Science (2017): Impact factor 5.565
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 2
Scopus rating (2016): CiteScore 3.68 SJR 2.234 SNIP 1.199
Web of Science (2016): Impact factor 5.014
Web of Science (2016): Indexed yes