Abstract Submitted
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Planck component separation with Commander INGUNN KATHRINE WEHUS, JPL/Caltech — I will give a brief overview of the Bayesian component separation technique used by Planck to derive astrophysical foreground components. Starting from an explicit parametric model of the data and corresponding priors, we use a statistical technique called Gibbs sampling to map out the full joint posterior distribution given full-sky multi-frequency observations. This process leads to a set of well-defined component maps with associated uncertainties and goodness-of-fit statistics. For Planck alone, we derive maps of the CMB, CO, thermal dust and a joint low-frequency component (synchrotron, free-free and spinning dust), while when including external data (WMAP, Haslam etc.) even more detailed models can be considered. I will comment on how these new products compare with previously published results.

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