B mode from Space – Part 1: The Science goals, status of spaceborne projects, foregrounds (Dec 10 -12), Part 2: Mission design, technologies and challenges for the spaceborne observations (Dec 14 -16) –

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Planck lessons learned Guillaume Patanchon (APC)

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The Planck satellite mission allowed to map the Cosmic MicrowaveBackground anisotropies and polarization on the full sky withunprecedented accuracy. The precision of the measurements was reachedthanks to the thermal stability of the instruments which includePolarization Sensitive Bolometers cooled down to 100 mK for the HighFrequency Instrument, but required carefull processing of systematicspresent in data. I will review the main sources of systematics related to Planck HFI detectors and the main difficulties encountered tocharaterize and process them. Some of those effects were not expected before the flight. The main effects include the cosmic ray interaction with detectors, long time constants, analog to digital convertornon-linearities, band pass mismatch, as well as 1/f noise.

Presenter: Dr PATANCHON, Guillaume (APC) **Session Classification:** Detector