Planck 2015
toward the legacy release

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- Planck
- 2015 cosmological result overview
  - Very coherent dataset
  - Some tensions with external datasets
  - Some internal tensions
- Glimpse into the future
  - Pre-2016 low-l hfi maps
  - Improving high-l polarization

Planck (1993-L14/5/2009-23/10/2013)

esa

planck

cnes

agenzia spaziale italiana

NASA

cnrs

DTU Space
National Space Institute

Science & Technology Facilities Council

CSIC
Consejo Superior de Investigaciones Científicas

National Research Council of Italy

CSA ASC

DLR Deutsches Zentrum für Luft- und Raumfahrt e.V.

UK SPACE AGENCY

Max-Planck-Gesellschaft

PLANCK LFI

HFI PLANCK

IAS orsay

IAP

INAF - IASF BO
Istituto Nazionale di Astrofisica

Aalto University

ioa

KICC

University of Cambridge

Cardiff University

irfu
saclay

CEFCA

CESR

CITA–ICAT

IASF

cnrs INSU

cnrs IN2P3
Les deux infinis

ipac

Helsinki Institute of Physics

IFCA

Imperial College London

Università degli Studi di Milano

NÉEL institut

IPAG

ISDC
Data Centre for Astrophysics

JPL

LAL
Laboratoire de l'Accélérateur Linéaire

L'Observatoire de Paris – LERMA

LPSC Grenoble
Laboratoire de Physique Subatomique et de Cosmologie

The University of Manchester

MilliLab

Max-Planck-Institut für Astrophysik

NUI Maynooth

INAF

University of Oxford

Dipartimento di Fisica
Sapienza Università di Roma

Science & Technology Facilities Council
Rutherford Appleton Laboratory

Osservatorio Astronomico di Trieste

UBC

UC
Universidad de Cantabria

UCSB

SISSA

ESO

US University of Sussex

Haverford

esa

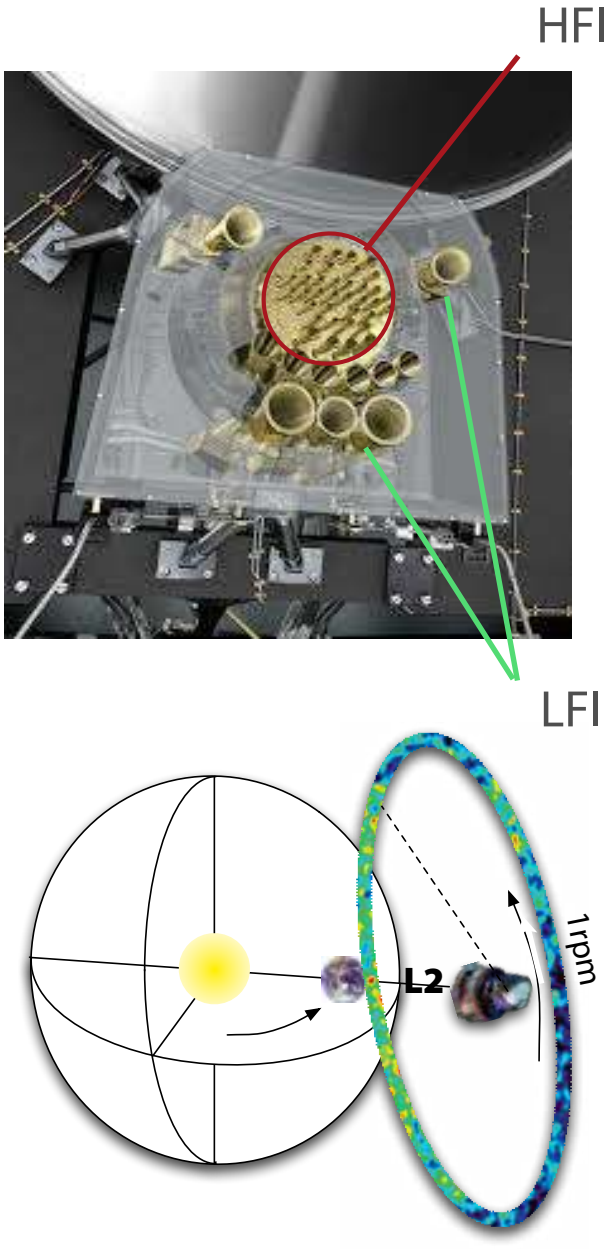
Université de Genève

University of Toronto

Université de Paris-Sud XI

asdc

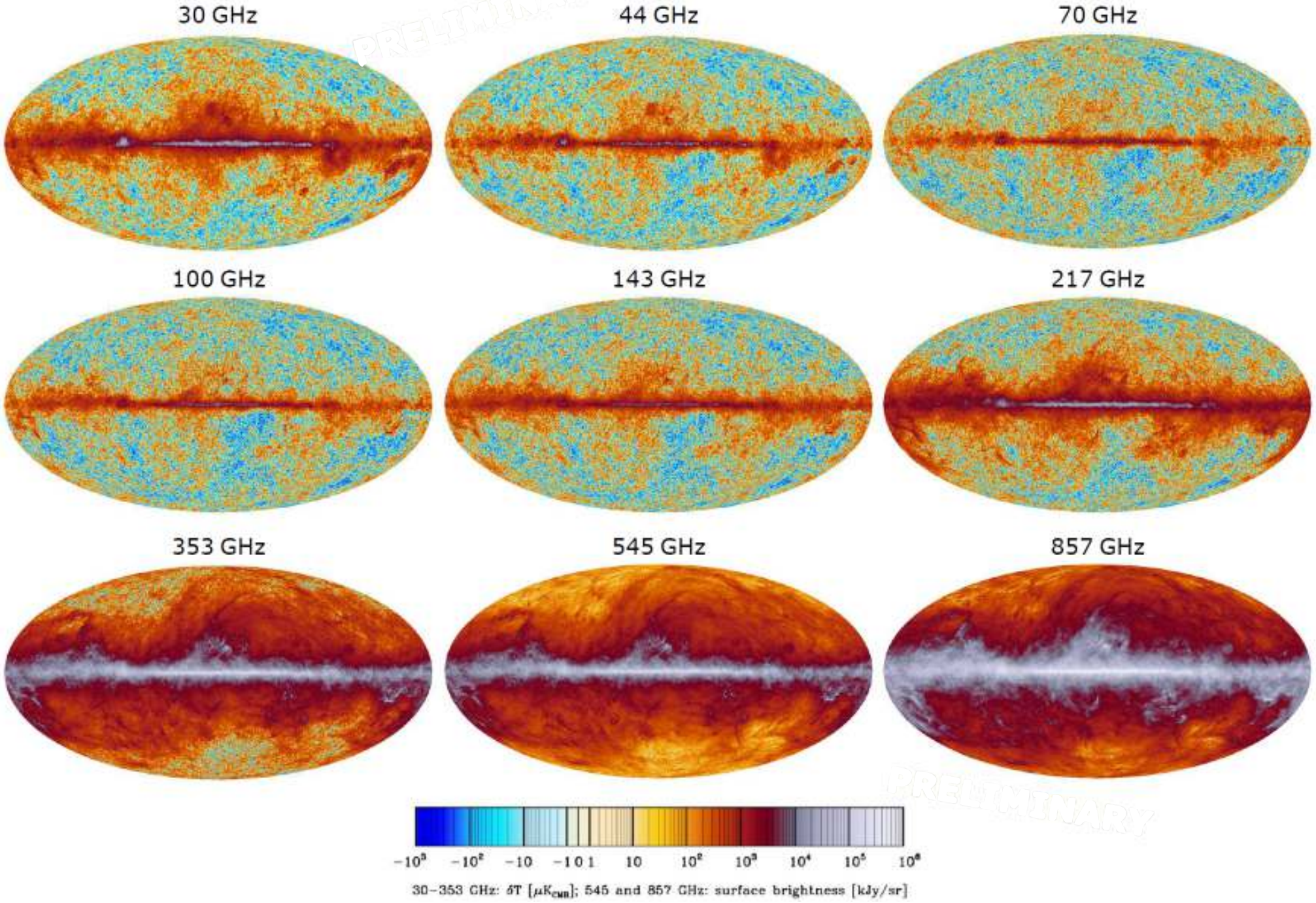
Planck in numbers



Driving goal

Perform the definitive temperature anisotropies measurement

- Primary 1.5m
- 2 instruments
  - LFI, 3 bands, 22 polarized radiometers
  - HFI, 6 bands, 50 bolometers (32 polarized)
- 4 stage cooler chain, going down to 0.1K
  - *last stage is a He3/He4 dilution cooler*
- Flawless operation !
  - 2yr: 4 sky survey for HFI (until 01/2012)
  - 4yr: 8 sky surveys for LFI
- Data releases
  - 2013 : 1yr survey
  - **2015 : full mission**
  - *Legacy…*



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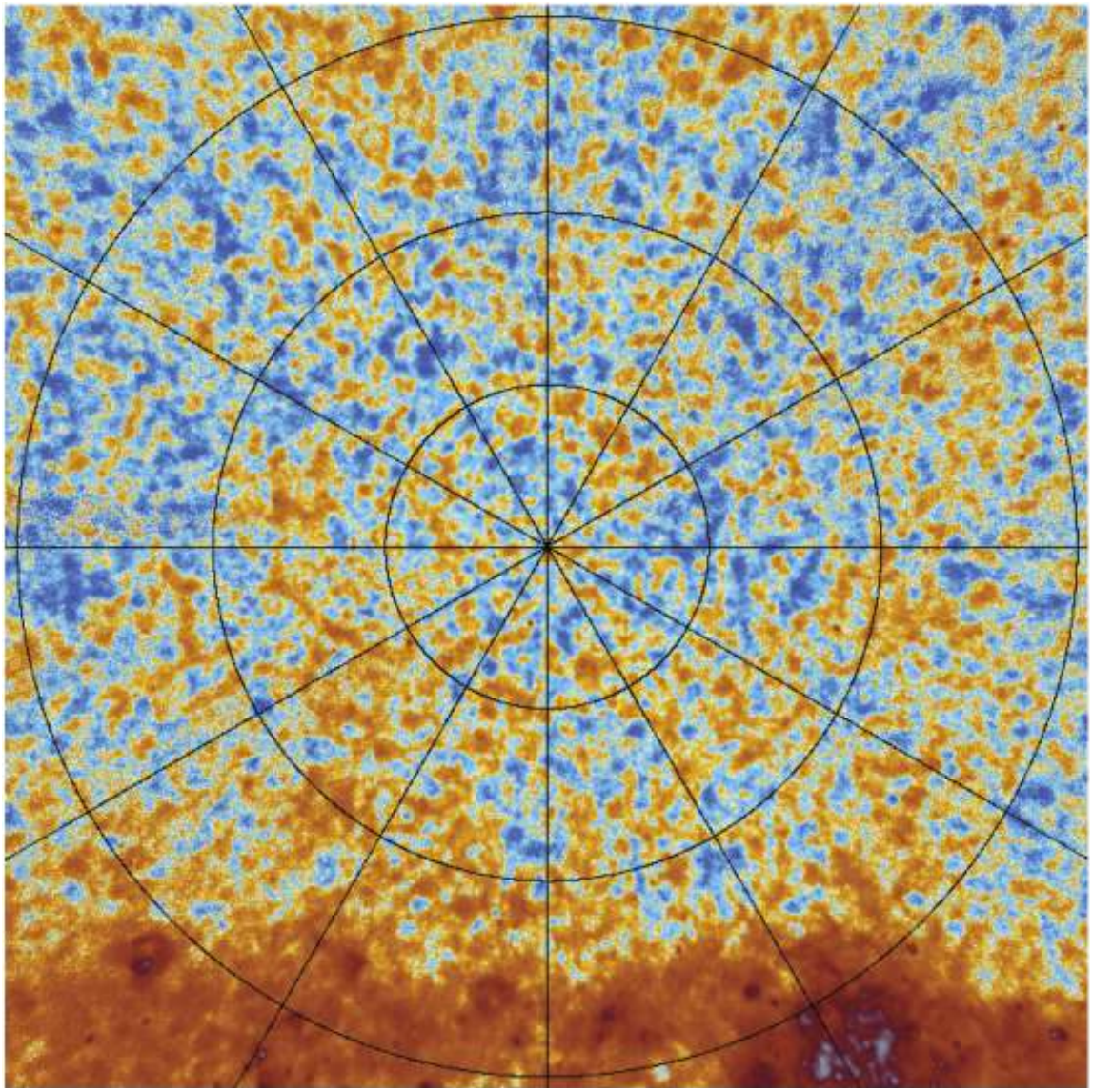
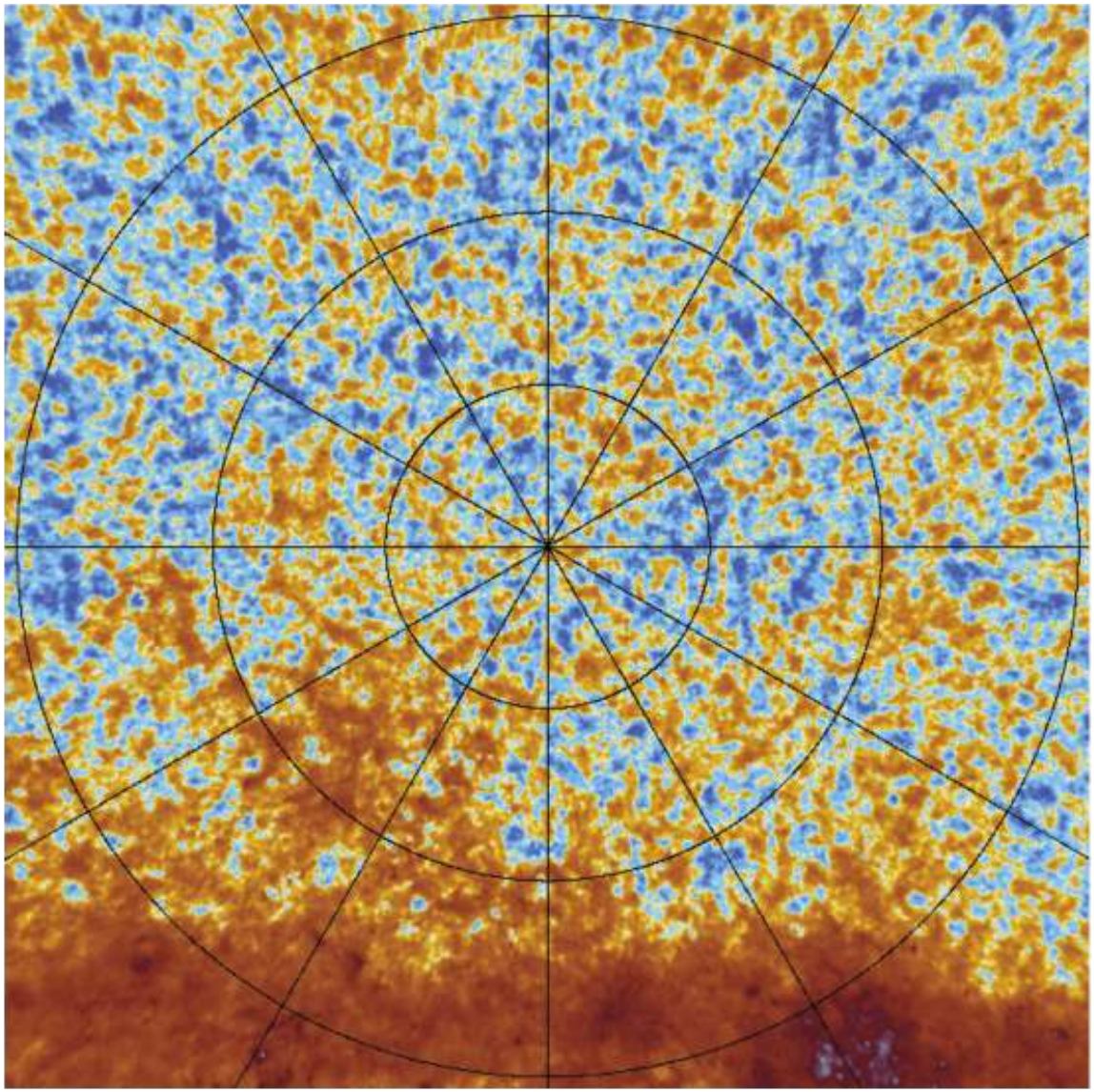
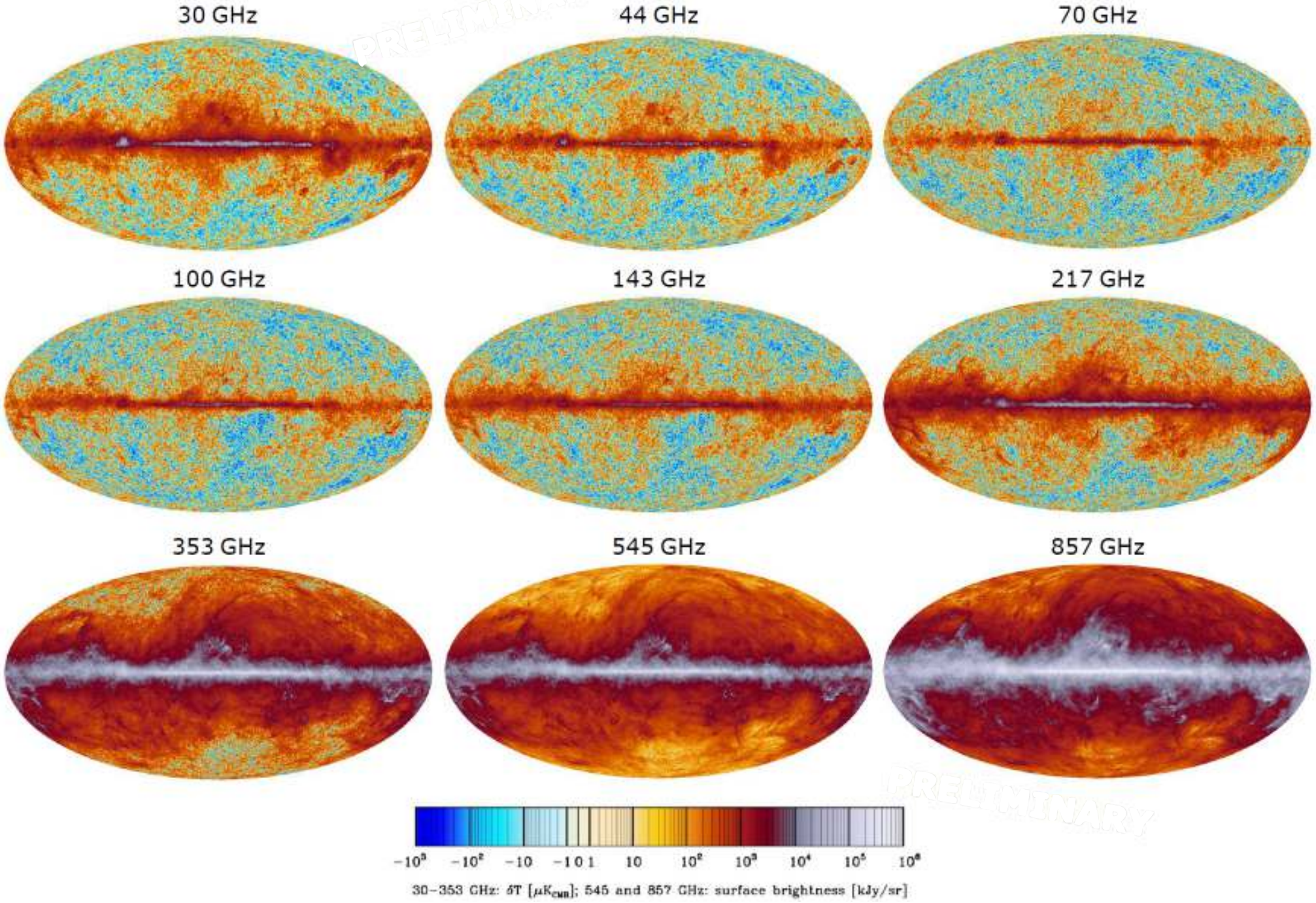
Microwave sky



North ecliptic pole - 70GHz



North ecliptic pole - 100GHz



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Microwave sky