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## Our sponsors



## Organizing Committee

### SOC: Scientific Organizing Committee

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### LOC: Local Organizing Committee

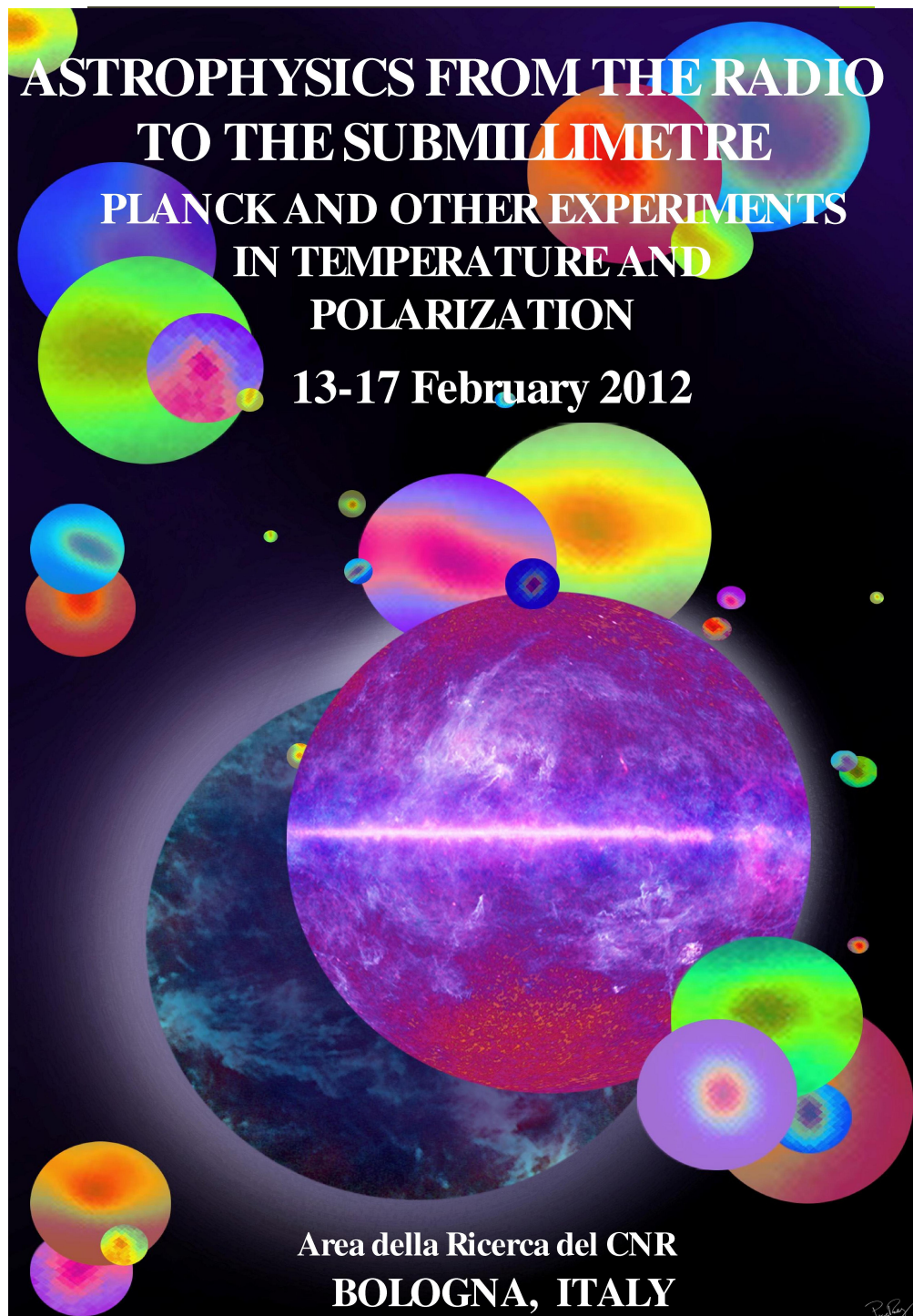
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INAF IASF BO

C/O Area della Ricerca CNR  
Via Gobetti 101  
40129 Bologna, Italy

# ASTROPHYSICS FROM THE RADIO TO THE SUBMILLIMETRE PLANCK AND OTHER EXPERIMENTS IN TEMPERATURE AND POLARIZATION

13-17 February 2012



Area della Ricerca del CNR  
BOLOGNA, ITALY

# Poster contributions

X. Chen et al.	The bandmerged <i>Planck</i> ERCSC
I. de Martino et al.	Measuring the redshift dependence of the CMB monopole temperature with <i>Planck</i> data
M. Fujiwara, Y. Matsuoka	Near-IR polarimetric observation of the Fermi/LAT unidentified gamma-ray sources
G. Giovannini et al.	Non thermal properties of the all-sky <i>Planck</i> early Sunyaev-Zel'dovich cluster sample
M. Hattori, S. Namura, T. Morishima	Numerical modeling of the global magnetic field structure
M. Irfan	C-BASS: The C-Band All Sky Survey
R. Leonardi et al.	The <i>Planck</i> Legacy Archive
E. Liuzzo, R. Falomo, A. Treves	The radio-NIR close environment of PKS 2155-304
G. Luzzi	Constraints on the CMB temperature redshift dependence from SZ and distance measurements
S. Masi	OLIMPO stratospheric balloon experiment: an update
Y. Matsuoka	Cosmic Optical Background: the View from Pioneer 10/11

# Programme

## Rationale

The Conference will focus on the astrophysical sky as seen by *Planck* and other observatories, and on the potential of *Planck* astrophysical data and science, including the most recent *Planck* results. It will include reviews of the state of the art in these areas, and presentation sessions on Galactic and extragalactic science from radio to submillimetre wavelengths (diffuse emission, sources, galaxy clusters, cosmic infrared background, etc.).

The Conference is based on invited and contributed talks. There will also be a poster session.

## Public events

Public lectures for a general audience will be organized in the context of the Conference.

**Sunday 12**, 21:00 Biblioteca SalaBorsa, Piazza del Nettuno 1  
"L'universo dallo spazio", public lecture (in Italian) with P. A. Nespoli, Italian astronaut and N. Mandolesi, PI of the Planck Low Frequency Instrument, moderated by the journalist G. Caprara

**Wednesday 15**, 21:00 Oratorio S. Filippo Neri, Via Manzoni, 5  
"Cosmology: past, present and future" a lecture by Prof. M. Longair introduced by the journalist G. Caprara (English with Italian translation)

## Biblioteca Salaborsa

*Biblioteca Salaborsa* is a public library located in 2001 inside Palazzo d'Accursio, City Hall of Bologna and historical site.



# Poster contributions

L. Mendes et al.	An operational history for space missions: application to <i>Planck</i>
T. Morishima, et al.	Testing galactic magnetic field structure model predicted by magnetohydrodynamical numerical simulation using distribution of polarization angle of synchrotron emission
C. Paiva Novaes, C.A. Wuensche	Results of a blind identification of galaxy clusters in synthetic CMB maps
P. Paykari et al.	The CMB power spectrum estimation
M. Peel et al.	Template fitting of WMAP 7-year data: anomalous dust or flattening synchrotron emission?
B. Ruiz-Granados et al.	Constraints on primordial magnetic fields with WMAP7
L. D. Spencer et al.	The HFI colour correction
M. Todorovic et al.	A 33 GHz study of the Galactic plane of $l \sim 27^\circ - 46^\circ$
M. Vidal	Polarised galactic emission at 43GHz as observed by QUIET
I. K. Wehus	The effect of asymmetric beams on polarized spectral indices
M. Zannoni et al.	The atmospheric oxygen polarized emission: a foreground for cosmic microwave background experiments

# Programme

## Public exhibitions

Our exhibition is the ideal prosecution of "La Scienza in Piazza" <http://www.lascienzainpiazza.it>, a format for the diffusion of the scientific culture that transforms the city center of Bologna in an open air Science Center.

We suggest to visit the exhibition in the city center "da ZERO a CENTO, le nuove età della vita" where contemporary artists (Evan Baden, Guy Ben-Ner, Martin Creed, Hans Peter Feldmann, Stefania Galegati Shines, Anish Kapoor, Ryan Mc Ginley, Ottonella Mocellin e Nicola Pellegrini, Gabriel Orozco, Adrian Paci, John Pilson, Cindy Sherman, Frances Stark, Miwa Yanagi) and contemporary science meet. The online catalogue here: [www.dazeroacentolamostra.it](http://www.dazeroacentolamostra.it)

Dates: 2-12 February 2012

During the conference, it will also take place a public exhibition at the CNR Area della Ricerca, for the participants and for the public.

Besides a small exhibition on history of Astronomy (in Italian mainly for external visitors and schools), hardware and models related to space science will be displayed.

The Exhibition will include: a model of the Planck satellite (scale 1/4), a model of the AGILE satellite (scale 1/2), an astronaut space suit, small models of the Herschel and Swift satellites, BeppoSAX Concentrator /Spectrometer Mirror structural model, BeppoSAX Medium Energy Gas Scintillation Proportional Counter structural model, BeppoSAX Particle Monitor flight spare.

# Programme

- Invited talk
- Planck preliminary intermediate paper talk
- Contributed talk

Friday 17, morning: galaxy clusters and summary of the conference

9:00-9:30 (25+5min)	S. Molendi	Advancements in Intra-cluster medium studies in the new millenium
9:30-9:50 (15+5min)	P. Delsart	SZ power spectrum from self-consistent X-ray analysis
9:50-10:10 (15+5min)	F. Atrio-Barandela	Measuring the large scale flow of X-ray luminous clusters from WMAP data
10:10-10:30 (15+5min)	M. Arnaud	Confirmation and first scientific characterization of new <i>Planck</i> clusters from XMM validation follow-up
10:30-10:50 (15+5min)	J.A. Rubino-Martin	The gas content of dark matter halos: the Sunyaev-Zel'dovich stellar mass relation for central galaxies
10:50-11:20	<i>Coffee Break</i>	
11:20-11:40 (15+5min)	P. Mazzotta	Physics of the hot gas in the Coma cluster
11:40-12:00 (15+5min)	M. Brown	Comparison of Sunyaev-Zel'dovich measurements from <i>Planck</i> and from the arcminute microkelvin imager for 11 galaxy clusters
12:00-12:20 (15+5min)	G. W. Pratt	The relation between galaxy cluster mass and Sunyaev-Zel'dovich effect
12:20-12:50 (25+5min)	B. Partridge	Concluding Remarks

# Programme

Monday 13, morning

11:00 12:30 Press conference, CNR Hall, first floor, room 216

*Planck* LFI/HFI PIs and Project Scientist: N. Mandolesi, J. L. Puget, J. Tauber, Head of ESA Science Department: M. McCaughrean, President of ASI: E. Saggese, President of INAF: G. Bignami, Nobel Prize in Physics (2006): J. Mather. Moderated by the journalist G. Caprara

11:00 14:00 Registration and set up of poster session

If you pre-registered on line you will be able to pay directly in Bologna at the registration desk by cash or with credit/debit cards.

## How to reach the conference

Every day a shuttle service will operate with the following timetable:

From Bologna center to CNR	
Monday	12:45-13:05
Tuesday	08:05-08:25
Wednesday	08:05-08:25
Thursday	08:05-08:25
Friday	08:05-08:25

Departure from CNR Area della Ricerca to Hotels: 20 minutes after the end of the last session

**Stops:** Hotel Mercure, via dei Mille and Hotel San Felice; see shuttle map, for more details.

The CNR AREA della Ricerca is connected as well with public transportation. The bus stop (#87) is located just outside the CNR Hall.



# Programme

- Invited talk
- Planck preliminary intermediate paper talk
- Contributed talk

Thursday 16, afternoon: from extragalactic sources to Cosmic Infrared Background

Chair:

14:30-15:00 (25+5min)	J. L. Puget	Cosmic IR Background
15:00-15:20 (15+5min)	M. Viero	Characterization of CIB Correlations from $l=400 - 40000$
15:20-15:50 (25+5min)	A. Kashlinsky	CIB anisotropies and early stellar populations
15:50-16:10	Posters	
15:10-16:40	Coffee Break	
16:40-17:00 (15+5min)	M. Bethermin	Which are the sources responsible for the cosmic infrared background and its anisotropies?
17:00-17:20 (15+5min)	E. Prandini	The other side of the coin: the CIB as seen by VHE gamma-ray blazars
17:20-17:45 (20+5min)	E. S. Battistelli	Atacama Cosmology Telescope
17:45-18:05	T. Enßlin	Information field theory - turning data into images

20:15 Social dinner at [Sympo'](#)

Via delle Lame 83



# Programme

- Invited talk
- Planck preliminary intermediate paper talk
- Contributed talk

Monday 13, afternoon: introduction and overview lectures

12:30-14:00	Light lunch	
14:00-14:15 (3×5min)	President of ASI: E. Saggese President of INAF: G. Bignami Director of IASF Bologna: G. Malaguti	Welcome
14:15-14:50 (30+5min)	Planck LFI/HFI Pls N. Mandolesi, J.L. Puget	Introduction
14:50-15:30 (30+10min)	J. Mather	James Webb Space Telescope
15:30-16:10 (30+10min)	R. Davies	A review of the Galactic ISM in the era of <i>Planck</i>
16:10-16:40	Coffee Break	
16:40-17:20 (30+10min)	P. Martin	Review of Galactic Foreground
17:20-18:00 (30+10min)	G. de Zotti	Extragalactic radio and far-IR sources in the <i>Planck</i> frequency range
18:00-18:40 (30+10min)	R. Sunyaev	Review of Sunyaev-Zel'dovich effect

# Programme

- Invited talk
- Planck preliminary intermediate paper talk
- Contributed talk

Thursday 16, morning: extragalactic sources and clusters

9:00-9:20 (15+5min)	L. Montier	Characterization of the first <i>Planck</i> high-Z candidates
9:20-9:50 (25+5min)	A. Poglitsch	Herschel observations of extragalactic sources
9:50-10:10 (15+5min)	M. Vaccari	The Herschel multi-tiered extragalactic survey, the evolution of FIR/SMM luminosity function and of the cosmic star formation rate density
10:10-10:30 (15+5min)	H. Dole	Statistical Properties of Infrared and Radio Sources from the <i>Planck</i> ERCS Catalog
10:30-11:00	Coffee Break	
11:00-11:30 (25+5min)	L. Danese	Astrophysical Modeling of Far-IR Sources
11:30-11:50 (15+5min)	J. Wardlow	Strongly lensed galaxies in Herschel surveys and identification of <i>Planck</i> extragalactic sources with Herschel
11:50-12:10 (15+5min)	D. Clements	HerMES- <i>Planck</i> Clumps: Clusters of Dusty Galaxies
12:10-12:30 (15+5min)	M. Juvela	Herschel observations of selected <i>Planck</i> cold clumps
12:30-12:50 (15+5min)	P. Giommi	Simultaneous <i>Planck</i> , Swift, and Fermi observations of X-ray and gamma-ray selected blazars
12:50-13:10 (15+5min)	E. Angelakis	On the physics of AGNs through cm to submm F-GAMMA and <i>Planck</i> radio observation
13:10-14:30	Lunch	CNR Hall

# Programme

- Invited talk
- Planck preliminary intermediate paper talk
- Contributed talk

Tuesday 14, morning: emission from our Galaxy

9:00-9:30 (25+5min)	A. Lazarian	Present day understanding of spinning dust emission
9:30-9:50 (15+5min)	T. Hoang	An Improved Model of spinning dust emission and comparison to observations
9:50:00-10:10 (15+5min)	C. Dickinson	Anomalous microwave emission in galactic HII regions
10:10-10:30 (15+5min)	R. Davis	A study of anomalous microwave emission in Galactic clouds
10:30-10:50 (15+5min)	A. Bonaldi	Component separation in the Gould Belt System
10:50-11:20	Coffee Break	
11:20-11:50 (25+5min)	J. Bally	Molecular clouds and star formation: the Herschel and <i>Planck</i> view of the "galactic ecology"
11:50-12:10	C. Tibbs	A detail investigation of the HII region RCW175: from radio to mid IR wavelengths
12:10-12:30 (15+5min)	J. Aumont	A map of CO extracted from <i>Planck</i>
12:30-13:00 (25+5min)	K. Gorski	The Galactic Haze as seen by <i>Planck</i>
13:00-14:30	Lunch	CNR Hall

# Programme

- Invited talk
- Planck preliminary intermediate paper talk
- Contributed talk

## Wednesday 15, afternoon: extragalactic sources

14:30-14:50 (15+5min)	M. Peel	Radio to infrared spectra of late-type galaxies with Planck and WMAP data
14:50-15:10 (15+5min)	A. Sajina	Comparison of VLA/ERCSC fluxes
15:10-15:30 (15+5min)	J. Gonzalez-Nuevo	<i>Planck</i> sources in the H-ATLAS Phase 1 fields
15:30-15:50 (15+5min)	M. Tucci	High-frequency predictions for number counts of extragalactic radio sources and their impact on CMB experiments
15:50-16:10 (15+5min)	D. Scott	The Cosmic Radio Background
16:10-16:40	<i>Coffee Break</i>	
16:40-17:10 (25+5min)	L. Feretti	Advanced technologies and developments in the radio domain
17:10-17:30 (15+5min)	L. Bonavera	New results from the <i>Planck</i> -ATCA coeval observations (PACO) project
17:30-17:50 (15+5min)	S. Righini	The Simultaneous Medicina- <i>Planck</i> Experiment (SiMPIE): data acquisition, reduction and first results

# Programme

- Invited talk
- Planck preliminary intermediate paper talk
- Contributed talk

## Tuesday 14, afternoon: emission from our Galaxy

14:30-14:50 (15+5min)	L. Tibaldo	The interstellar medium seen in gamma rays by Fermi
14:50-15:20 (25+5min)	P. Leahy	Synchrotron emission surveys & astrophysical interpretation
15:20-15:40 (15+5min)	A. Taylor	C-BASS: The C-Band All Sky Survey
15:40-16:00 (15+5min)	E. Orlando	Synchrotron radiation, magnetic fields and cosmic rays
16:00-16:20 (15+5min)	N. Oppermann	The Galactic Faraday sky
16:20-16:50	<i>Coffee Break</i>	
16:50-17:10	I. K. Wehus	Constraining polarized synchrotron emission with QUIET and FOCUS
17:10-17:40 (25+5min)	J. P. Bernard	Thermal dust observations & theory
17:40-18:00 (15+5min)	P. de Bernardis	The Large Scale Polarization Explorer
18:00-18:20 (15+5min)	H. Li	The first bird's-eye view of molecular cloud magnetic fields

## Map for events outside Area della ricerca

● Sympto': social dinner

● Public event with Longair

● Public event with Nespoli and Mandolesi

Programme		
	<div> <div></div> Invited talk         </div> <div> <div></div> Planck preliminary intermediate paper talk         </div> <div> <div></div> Contributed talk         </div>	
Wednesday 15, morning: our Galaxy, CMB space missions and fundamental physics		
9:00-9:20 (15+5min)	G. Umana	Galactic PNe with <i>Planck</i>
9:20-9:50 (25+5min)	S. Molinari	Herschel: HIGAL project
9:50-10:10 (15+5min)	Y. Doi	AKARI far-infrared all sky map
10:10-10:40 (25+5min)	G. Hinshaw	The large scale WMAP polarization
10:40-11:10	<i>Coffee Break</i>	
11:10-11:30 (15+5min)	T. Shanks	Testing WMAP data via <i>Planck</i> radio and SZ catalogues
11:30-11:50 (15+5min)	X. Dupac	The observation strategy for <i>Planck</i> and other CMB experiments
11:50-12:20 (25+5min)	G. Servant	Cosmology and the LHC
12:20-12:50 (25+5min)	N. Mandolesi	Fundamental physics with <i>Planck</i> (expectations) and other experiments
12:50-14:30	Lunch	CNR Hall