

Science Programme - Low Frequency Observing 2017

Monday, 19 June 2017

08.00-09.00 Registration, coffee/tea
There will be continuous registration throughout the day.

09.00-09.10 Filippo Zerbi
Rene Vermeulen Introduction/welcome

Epoch of Reionisation and Cosmology (Chair: R. Wayth)

09.10-09.40 Jonathan Pritchard Epoch of Reionisation and Cosmology at low frequencies
09.40-10.00 Andre Offringa The EoR with LOFAR
10.00-10.20 Cathryn Trott Progress towards the EoR with the Murchison Widefield Array
10.20-10.35 Emma Chapman Foreground Removal in the Epoch of Reionisation

10.35-11.05 Break

11.05-11.25 Gianni Bernardi The Epoch of Reionization Array (HERA)
11.25-11.45 Benedetta Ciardi EoR Simulations and 21cm Absorption
11.45-12.00 Nichole Barry Sky-Based Calibration and the EoR Power Spectrum: Contamination, Mitigation, and Implications
12.00-12.15 Marta Spinelli Polarised synchrotron simulations for EoR experiments
12.15-12.30 Carolin Hofer Canadian Hydrogen Intensity Mapping Experiment
12.30-12.45 Andrei Mesinger Learning about astrophysics with the cosmic 21-cm signal

12.45-14.15 Lunch

Pulsars

(Chair: H. Falcke)

14.15-14.45 Jason Hessels The low-frequency pulsar renaissance
14.45-15.05 Ramesh Bhat Pulsar Astronomy with the Murchison Widefield Array
15.05-15.25 Catarina Tiburzi Pulsar Timing with LOFAR
15.25-15.40 Cees Bassa Searching for millisecond pulsars towards Fermi gamma-ray sources with LOFAR

15.40-16.10 Break

16.10-16.30 Bhaswati Bhattacharyya Pulsars and Transients with the GMRT
16.30-16.45 Chia Min Tan LOTAAS Periodicity Search for Pulsars
16.45-17.00 Mengyao Xue A Low Frequency Census of Southern Pulsars with the MWA
17.00-17.15 Elliott Polzin LOFAR study of the eclipses of black widow pulsar J1810+1744

Exoplanets

17.15-17.35 Jean-Mathias Griessmeier Observations of extrasolar planets at low radio frequencies
17.35-17.50 Jake Turner The search for radio emission from exoplanets using LOFAR low-frequency beam-formed observations

19:00 - 21:00 Welcoming reception

Hotel I Portici
Via dell'Indipendenza 69
40121 Bologna

Tuesday, 20 June 2017

The Milky Way and Nearby Galaxies (Chair: R. Dettmar)

09.00-09.30 Marijke Haverkorn The Milky Way at low frequencies
09.30-09.45 Raymond Oonk Uncovering the diffuse CO-dark gas in cold interstellar clouds
09.45-10.05 George Heald Low-frequency observations of nearby galaxies
10.05-10.20 David Mulcahy Exploring the low frequency nature of nearby galaxies with observations and modelling
10.20-10.35 Krzysztof Chyzy Flattening of low-frequency spectra of nearby galaxies
10.35-10.50 Fatemeh Tabatabaei Cloud-Scale GMRT Survey of M33: Unveiling the Low-Frequency Properties of the ISM

10.50-11.20 Break

Solar Physics

11.20-11.50 Divya Oberoi The Sun and the Heliosphere at Low Radio Frequencies
11.50-12.10 Diana Morosan LOFAR Tied array Imaging and Spectroscopy of Solar Radio Bursts
12.10-12.25 Eduard Kontar The First Imaging Spectroscopy of the Solar Radio Burst Fine Structures
12.25-12.40 Gottfried Mann Tracking of an electron beam through the solar corona with LOFAR
12.40-12.55 Nicoline Chrysaphi Imaging Spectroscopy of a Type II solar radio burst observed by LOFAR

12.55-14.25 Lunch

Instruments and Algorithms

(Chair: I. Prandoni)

14.25-14.55 Robert Braun Low Frequency Science with the Square Kilometre Array
14.55-15.10 Jason Hessels LOFAR 2.0: A premier low-frequency facility for the next decade
15.15-15.35 Andre Offringa Low frequency imaging

15.35-15.50	Jess Broderick	LOFAR MSSS: A low-frequency counterpart to NVSS
15.50-16.20	Break	
16.20-16.35	Paul Hancock	The GLEAM survey: Imaging and Calibration challenges
16.35-16.55	Neal Jackson	Long baselines at low frequencies
16.55-17.10	Franz Kirsten	Low Frequency VLBI: fringes between MWA and GMRT
17.10-17.25	Francesco de Gasperin	Imaging at 50 MHz: the LOFAR LBA survey

Wednesday, 21 June 2017

Instruments and Algorithms (cont.) (Chair: R. Vermeulen)

09.00-09.20	Cyril Tasse	Direction dependent imaging and Wirtinger calibration for low frequency radio surveys
09.20-09.40	Huub Rottgering	Deep and sharp imaging at low radio frequencies with LOFAR. Studies of clusters, AGN and starburst galaxies
09.40-09.55	Tim Shimwell	Galaxy Clusters in the LOFAR Two-metre Sky Survey

Clusters

09.55-10.25	Gianfranco Brunetti	Non thermal phenomena in galaxy clusters at low radio frequencies
10.25-10.40	Melanie Johnston-Hollitt	A Catalogue of Relics and Halos from the MWA GLEAM Survey
10.40-11.10	Break	
11.10-11.30	Franco Vazza	The low-frequency view on the complex life of galaxy cluster outskirts
11.30-11.45	Kamlesh Rajpurohit	A spectacular view of the Toothbrush: filaments and inhomogeneous magnetic fields
11.45-12.00	Gabriella di Gennaro	Deep in the (un)known: the Sausage Cluster
12.00-12.15	Christopher Riseley	Magnetic Fields in High-z Clusters: A Full-Polarization Study of MACS J0025.4-1222 with the GMRT
12.15-12.30	Annalisa Bonafede	New radio emission from the cluster MACSJ0717+3745 - LOFAR observations
12.30-12.45	Virginia Cuciti	New detections of radio halos in galaxy clusters with low frequency GMRT observations

12:45-14:15 Lunch

Social activities after lunch

Confirmations for the Tour to Medicina have been sent by the LOC/S. Righi.
Confirmations for all other activities have been sent by Bologna Welcome.

20:00 - ~22:30 Conference dinner

Palazzo Isolani
Via Santo Stefano 16
40125 Bologna

Thursday, 22 June 2017

AGN Physics

(Chair: M. Johnston-Hollitt)

09.00-09.30	Raffaella Morganti	The physics and lifecycle of local radio AGN
09.30-09.45	Joseph Callingham	Dying young and frustrated? A low radio frequency view of 'young' radio galaxies
09.45-10.00	Simona Giacintucci	Tracing multiple AGN outbursts at low frequency in cool-core clusters
10.00-10.15	Rajan Chhetri	Sub-arcsec compact source properties using wide field interplanetary scintillation with the MWA
10.15-10.30	Jeremy Harwood	The low-frequency perspective of FR II radio galaxies

10.30-11.00 Break

AGN and galaxy evolution

11.00-11.50	Elaine Sadler	Radio AGN populations and their evolution
11.30-11.50	Wendy Williams	Deep LOFAR imaging and AGN evolution
11.50-12.05	Sarah White	The MWA GLEAM 4-Jy Sample
12.05-12.20	David Nisbet	The Determination of the Luminosity Function of Jet-mode AGN out to a Redshift of $z \sim 2$
12.20-12.35	Kimberly Emig	The first detections of radio recombination lines at cosmological distances

12.35-14.05 Lunch

14.05-14.25	Vernesa Smolcic	VLA-COSMOS 3 GHz Large Project: Cosmic evolution of radio AGN and star forming galaxies since $z \sim 5$
14.25-14.45	Tom Muxlow	Star-formation Across Cosmic Time: Initial Results from the e-MERGE Study of the μ Jy Radio Source Population
14.45-15.00	Gulay Gurkan	LOFAR/H-ATLAS: The low-frequency radio luminosity -- star-formation rate relation
15.00-15.15	Volker Heesen	The low-frequency radio continuum' star formation rate relation in nearby galaxies with LOFAR
15.15-15.30	Nick Seymour	The Surprising Complexity of the Radio Emission from Star Forming Galaxies

15.30-16.00 Break

Ionosphere & Upper Atmosphere

(Chair: H. Rothkaehl)

16.00-16.20	Maaijke Mevius	Probing ionospheric structures using LOFAR
16.20-16.40	Huib Intema	SPAM - 10 years of ionospheric calibration
16.40-16.55	Christopher Jordan	Ionospheric characterisation above the Murchison Radio Observatory with EoR datasets

16.55-17.10	Maria Rioja	Ionospheric studies and calibration using MWA and LOFAR observations
17.10-17.30	Richard Fallows	From the Sun to the Earth: Observing Space Weather with LOFAR
17.30-17.45	Brian Hare	LOFAR for Lightning Interferometry and Mapping

19:00-20:00 Public lecture (in Italian) by Daria Guidetti (INAF-IRA)

Auditorium Biagi

In the main Bologna Public Library Sala Borsa

Piazza del Nettuno, 3

40124 Bologna

Friday, 23 June 2017

Cosmic Rays

(Chair: A. Rowlinson)

09.00-09.30	Heino Falcke	Cosmic Ray studies at low frequencies
09.30-09.50	Tim Huege	Precision measurements of cosmic-ray air showers with SKA-low
09.50-10.10	Stijn Buitink	Radio detection of neutrinos with LOFAR and ARIANNA
10.10-10.25	Olaf Scholten	Status and perspectives of the radio detection technique of cosmic ray air showers
10.25-10.40	Arthur Corstanje	Improving the accuracy of cosmic-ray composition measurements with LOFAR

10.40-11.10 Break

Transients

11.10-11.40	Tara Murphy	Exploring the dynamic radio sky with SKA pathfinders
11.40-12.00	Emily Petroff	Fast Radio Bursts: Recent Discoveries and Future Prospects
12.00-12.20	Ralph Wijers	Finding transients in the image plane at low radio frequencies
12.20-12.35	Steve Croft	Breakthrough Listen
12.35-12.50	David Kaplan	Faint, Highly-Polarized Flares from UV Ceti with the MWA

12.50-13.00 Concluding remarks