

DETAILED PARALLEL SCIENTIFIC PROGRAMME

Monday 4 December 2017, Parallel Session 1, 14:00 – 16:00

Auditorium 2

High Energy Astrophysics - Gamma-Ray Bursts I

Chair: *Soebur Razzaque*
 Convener: *Chryssa Kouveliotou*

14:00 – 14:20	Don Warren	Thermal Particles and Nonlinear Shock Acceleration in GRB Afterglows
14:20 – 14:40	Sylvain Guiriec	A Unified Model for GRB Prompt Emission from Optical to Gamma Rays: Exploring GRBs as Standard Candles
14:40 – 15:00	Björn Ahlgren	Fitting Fermi GRBs with DREAM, a Physical Model for Subphotospheric Dissipation
15:00 – 15:15	Maria Pruzhinskaya	Multicolour Modelling of SN 2013dx Associated with GRB 130702A
15:15 – 15:30	Alessandro Carosi	Prospects for the Detection of a Physically-Modeled GRB Population with the Cherenkov Telescope Array
15:30 – 15:45	Koji Noda	MAGIC Observation of the Short Nearby GRB 160821B
15:45 – 16:00	Ioana Dutan	Particle-in-Cell Simulations for Gamma-Ray Burst Jets

Monday 4 December 2017, Parallel Session 1, 14:00 – 16:00

Meeting Room 1.41-2

Relativity and Gravity - Numerical Relativity

Chair: *Marco Bruni*
 Convener: *Thibault Damour*

14:00 – 14:20	Chris Stevens	Global Simulation of the Non-Linear Perturbations of a Schwarzschild Black Hole
14:20 – 14:40	Jérôme Petri	Multipolar Electromagnetic Fields Around Neutron Stars: General-Relativistic Vacuum Solutions
14:40 – 15:00	Nigel Bishop	Characteristic Extraction and Matching in Numerical Relativity
15:00 – 15:20	William East	Comparing Full General Relativistic and Newtonian Calculations of Structure Formation
15:20 – 15:33	Apratim Ganguly	Binary Boson Stars and Numerical Relativity
15:33 – 15:46	Steve Liebling	Probing Alternatives to Standard Compact Object Mergers
15:46 – 15:59	Georgios Lukes-Gerakopoulos	Spinning Test-Body Orbiting Around a Black Hole: Circular Dynamics and Gravitational-Wave Fluxes

Notes

Early Universe and Large Scale Structures - Large-Scale Structures I

Chair: Yin-Zhe Ma
 Convener: Kavilan Moodley

14:00 – 14:15	José Fonseca	Probing GR with Multi-Wavelength Cosmology
14:15 – 14:30 14:30 – 14:45	Alkistis Pourtsidou Amadeus Witzemann	Synergies Between 21cm Intensity Mapping, Optical, and CMB Surveys Model-Independent Curvature Determination with 21cm Intensity Mapping Experiments
14:45 – 15:00	Aurelie Penin	A Scale-Dependent Bias on Linear Scales: Prospects for HI Intensity Mapping with the SKA
15:00 – 15:15	Yi-Chao Li	The 21cm Intensity Mapping Analysis with Parkes
15:15 – 15:30	Satadru Bag	Studying Shapefinders of HI Density Fields During Reionization
15:30 – 15:45	Charles Takalana	Differential Observation Techniques for the SZE-21cm and Diffuse Radio Sources
15:45 – 16:00	Stefano Camera	Optimal angular power spectra for spectroscopic galaxy surveys

Monday 4 December 2017, Parallel Session 1, 14:00 – 16:00

High Energy Astrophysics - Pulsars I

Chair: Norbert Schartel
 Convener: Alice Harding

14:00 - 14:18	Arache Djannati-Ataï	H.E.S.S. array stereoscopic observations of the Vela pulsar above 100 GeV
14:18 - 14:36	Bronislaw Rudak	The first detection of a pulsar with the Atacama Large Millimetre Array
14:36 - 14:54	Norbert Schartel	XMM-Newton: Progress on the knowledge of neutron stars
14:54 - 15:12	Alessandro Papitto	Optical pulsations from a transitional millisecond pulsar
15:12 - 15:30	Carlo Van Rensburg	Simultaneous Spectral and Spatial Modeling of Young Pulsar Wind Nebulae
15:30 - 15:48	Filippos Koliopoulos	ULX spectra revisited: Are accreting, highly magnetized neutron stars the engines of ultraluminous X-ray sources?
15:48 - 16:06	Fabrice Mottez	How do asteroids, planets and white dwarfs evaporate near pulsars

Monday 4 December 2017, Parallel Session 1, 14:00 – 16:00

The Galactic Center

Chair: Sera Markoff
 Convener: Sera Markoff

14:00-14:20	Emma Storm	Investigating the Nature of the Galactic Center Excess with SkyFACT
14:20-14:35	Anne Lemièrè	The Galactic Center region as seen by H.E.S.S. at very high energy
14:35-14:50	Carolyn Kierans	Detection of the Galactic 511 keV positron annihilation line with COSI
14:50-15:10	Lia Corrales	Disentangling the Quiescent High Resolution Spectrum of Sgr A* and the Diffuse Emission at the Galactic Center with 3 Ms of Chandra HETG
15:10-15:25	Rudy Wijnands	A decade of X-ray monitoring of our Galactic center with Swift
15:25-15:45	Michael Johnson	Dynamical Imaging of Magnetic Fields near a Black Hole
15:45-16:00	Qingjuan Yu	Constraining the spin of the massive black hole at the Galactic center via the relativistic motion of a surrounding star

Monday 4 December 2017, Parallel Session 2, 16:30 – 18:00

Auditorium 2

High Energy Astrophysics - Gamma-Ray Bursts II | Physics of Jets and the Disk-Jet Connection

Chair: *Josep Paredes*

Conveners: *Chryssa Kouveliotou & Francesco Massaro*

16:30-16:50	Soebur Razzaque	Fermi Large Area Telescope Observations of Gamma-Ray Bursts
16:50-17:10	Rob Preece	Fermi Gamma-Ray Burst Monitor Observations: Spectral and Temporal Evolution
17:10-17:25	Gabriele Giovannini	3C84 at sub-parsec resolution with space-VLBI radio data
17:25-17:40	Eric Perlmán	Multiwavelength Imaging and Polarimetry of the M87 Jet
17:40-17:55	Eduardo Ros	Observing Relativity at the Extreme: The Sharpest View of the Universe with High-Resolution VLBI
17:55-18:10	Markus Böttcher	Anisotropic Particle Acceleration in Relativistic Shear Layers

Monday 4 December 2017, Parallel Session 2, 16:30 – 18:00

Meeting Room 1.41-2

Astroparticle Physics - Cosmic Neutrinos | Observations of Cosmic Rays

Chair: *Piera Sapienza*

Conveners: *Rasha Abbasi & Piera Sapienza*

16:30 – 16:45	Antoine Kouchner	Highlights from the ANTARES Neutrino Telescope and Prospects for KM3NeT
16:45 – 17:00	Tomonori Totani	Difficulties for Star-Forming Galaxies as the Sources of the IceCube Neutrinos
17:00 – 17:12	Denise Boncioli	On the Use of High-Energy Neutrinos to Unveil the UHECR Sources
17:12 – 17:24	Thorben Menne	Stacking Point Source Search of a Lower Energy Neutrino Contribution at the HESe Track Positions
17:24 – 17:36	Mathis Boerner	Model Independent Measurement of the Atmospheric Muon Neutrino Energy Spectrum with 3 Years of IceCube Data
17:36 – 17:48	Roger Clay	Recent Anisotropy Studies with the Pierre Auger Observatory

Monday 4 December 2017, Parallel Session 2, 16:30 – 18:00

Meeting Room 1.43-4

Early Universe and Large Scale Structures - Large-Scale Structures II

Chair: *Jonathan Sievers*

Convener: *Kavilan Moodley*

16:30 – 16:45	Mario Ballardini	Probing Primordial Features with Cosmological Surveys
16:45 – 17:00	Yin-Zhe Ma	Detection of Missing Baryons
17:00 – 17:15	Maye Elmardi	Cosmology on the Past Lightcone
17:15 – 17:30	Song Chen	Relativistic Observer Peculiar Velocity Corrections

High Energy Astrophysics - Pulsars II

Chair: *Arache Djannati-Atai*
 Convener: *Alice Harding*

16:30 – 16:50	Tiaan Bezuidenhout	Combined gamma-ray and radio pulsar light curve fitting
16:50 - 17:10	Monica Barnard	Predicting pulsar light curves in different energy bands
17:10 - 17:30	Jérôme Petri	Effect of geodetic precession on the evolution of pulsar high-energy pulse profiles as derived with the striped-wind model
17:30 - 17:50	Jose Carlos N de Araujo	Gravitational Waves from Pulsars and their Braking Indices in the Context of Magnetic Ellipticity
17:50 - 18:10	David Buckley	When is a pulsar not a neutron star?

High Energy Astrophysics - X-Ray / Gamma-Ray Binaries

Chair: *Brian van Soelen*
 Convener: *Maria Chernyakova*

16:30 – 16:45	Alicia López-Oramas	VHE Observations of Binary Systems Performed with the MAGIC Telescopes
16:45 – 17:00	Nukri Komin	Discovery of VHE Gamma-Ray Emission from the Binary System LMC P3
17:00 – 17:15	Zorawar Wadiasingh	Modeling Non-Thermal Emission from Black Widow and Redback Millisecond Pulsar Binaries in the Rotation-Powered State
17:15 – 17:30	Tyler Williamson	Gamma-Ray Observations of the Be Star / Pulsar Binary PSR J2032+4127
17:30 – 17:45	Maria Chernyakova	Multiwavelength Observations of Gamma-Ray Binaries
17:45 – 18:00	Varun Varun	ASTROSAT LAXP Observations of High Mass X-Ray Binaries (HMXB) 4U 1907+09 and 4U 1538-52

Notes

Tuesday 5 December 2017, Parallel Session 3, 14:00 – 16:00

Auditorium 2

High Energy Astrophysics - Jets and the Disk-Jet Connection II

Chair: *Gabriele Giovannini*
 Convener: *Francesco Massaro*

14:00 – 14:15	Olivier Hervet	Hunting Shocks in AGN Jets
14:15 – 14:30	Jose-Luis Gomez	Probing the Innermost Regions of Blazar Jets at Tens of Microarcseconds Through Space and Millimeter VLBI Observations
14:30 – 14:45	Matteo Lucchini	Probing the Dynamics of Blazar Jets with New Semi-Analytical Modelling Techniques
14:45 – 15:00	Hester Schutte	Modeling the Spectral Energy Distributions and Polarization of Active Galactic Nuclei
15:00 – 15:15	Hannes Thiersen	Modeling of Long-Term Variability in Blazars
15:15 – 15:30	Michael Zacharias	On the cause of the Extraordinary Flare of CTA 102
15:30 – 15:45	Sunil Chandra	ASTROSAT and the Study of Blazars
15:45 – 16:00	Dan Schwartz	The Kinetic Flux of X-Ray Jets: A Connection to Spinning Super-Massive Black Holes

Tuesday 5 December 2017, Parallel Session 3, 14:00 – 16:00

Meeting Room 1.41-2

Relativity and Gravity - Exact Solutions, Inhomogeneous Models and Averaging I

Chair: *Peter Dunsby*
 Convener: *Mustapha Ishak*

14:00-14:20	Charles Hellaby	Frames in Szekeres Geometries
14:20-14:40	Ghulam Abbas	Collapse and expansion of Anisotropic cylindrical source in presence of Positive Cosmological Constant
14:40-15:00	Rishi Kumar Tiwari	Scenario of multi-fluid FRW cosmological model with dark energy
15:00-15:20	Marco Bruni	Title to be confirmed
15:20 - 15:40	Wajiha Javed	Hawking Radiation in Quantum Tunneling Spectrum
15:40 – 16:00	Ira Georg	Symmetry and equivalence in Szekeres models

Tuesday 5 December 2017, Parallel Session 3, 14:00 – 16:00

Meeting Room 1.43-4

Early Universe and Large Scale Structures - CMB & Inflation I

Chair: *Yoel Rephaeli*
 Conveners: *Yoel Rephaeli & Julien Larena*

14:00 – 14:30	Juan Macias-Perez	NIKA2: A mm Camera for Cluster Cosmology / Planck Satellite Cluster Cosmology via the SZ Effect
14:30 – 14:50	Gianluca Polenta	Constraining Reionization through CMB Polarization at Large Angular Scales
14:50 – 15:10	Marta Spinelli	Neutrinos in the Era of the Planck Satellite
15:10 – 15:30	Juan Macias-Perez	Planck satellite cluster cosmology via the Sunyaev-Zeldovich effect

High Energy Astrophysics - Physics of Compact Objects | Fast Radio Bursts I

Chair: Shriharsh Tendulkar

Conveners: Shriharsh Tendulkar & Duncan Lorimer

14:00 – 14:13	Azwinndini Muronga	Equation of State and Transport Phenomena in Heavy Ion Collisions and in Core-Collapse Supernovae
14:13 – 14:26	Keigo Fukumura	Magnetically-Driven Accretion-Disk Winds in X-Rays Across Different Black Hole Masses
14:26 – 14:39	Rudy Wijnands	Recent Developments in the Cooling Studies of Accretion-Heated Neutron-Star Crusts
14:39 – 14:52	Jonas Pereira	Phase Transition Effects on the Dynamical Stability of Hybrid Neutron Stars
14:52 – 15:05	Stefano Bianchi	Photoionization Instability of the Fe K Absorbing Plasma in the Neutron Star Transient AXJ 1745.6-2901
15:05 – 15:18	Zorawar Wadiasingh	Hard Tails in High-Field Pulsars and Magnetars
15:18 – 15:31	Chandrachur Chakraborty	Distinguishing Kerr Naked Singularities and Black Holes Using the Spin Precession of a Test Gyro in Strong Gravitational Fields
15:31 – 15:44	Rosanne Di Stefano	Making the Invisible Visible: Astrometric Mesolensing by Nearby Stellar Remnants
15:44 – 15:57	Hajime Sotani	Gravitational Wave Asteroseismology with protoneutron stars

Future Challenges and Experiments I

Chair: Bruno Khelifi

Convener: James Buckley

14:00-14:20	Alexander Moiseev	All-Sky Medium Energy Gamma-ray Observatory (AMEGO)
14:20-14:40	Alessandro De Angelis	e-ASTROGAM: astrophysics with gamma rays in the MeV region
14:40-15:00	Joao Braga	Development of the balloon-borne hard X-ray experiment protoMIRAX
15:00-15:20	Giorgio Matt	The Imaging X-ray Polarimetry Explorer (IXPE)
15:20-15:40	Evgeny. Postnikov	The TAIGA observatory for very high energy gamma-ray astronomy and cosmic ray physics
15:40-16:00	Yvonne Becherini	Very-High Energy gamma-ray astronomy with the ALTO observatory

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Tuesday 5 December 2017, Parallel Session 4, 16:30 – 18:00

Auditorium 2

High Energy Astrophysics - Physics of Jets and the Disk-Jet Connection III

Chair: Dan Schwartz
 Convener: Francesco Massaro

16:30 – 16:48	Krzysztof Nalewajko	Are Emitting Regions in Relativistic Jets Dominated by Matter?
16:48 – 17:06	Sera Markoff	What Sets the Dissipation Region in Black Hole Jets? New Clues from Modelling Transient X-Ray Binaries
17:06 – 17:24	J. van den Eijnden	Radio Discovery of the Slow, Accreting X-Ray Pulsars GX 1+4 and Her X-1 and the Implications for Jet Formation
17:24 – 17:42	Josep-M. Paredes	Simultaneous Chandra/VLA Observations of MWC 656: Constraining the Accretion/Ejection Coupling in BH HMXBs
17:42 – 18:00	Karri Koljonen	The Hypersoft State of Cyg X-3: A Key to Jet Quenching in X-Ray Binaries?

Tuesday 5 December 2017, Parallel Session 4, 16:30 – 18:00

Meeting Room 1.41-2

Relativity and Gravity - Exact Solutions, Inhomogeneous Models and Averaging II

Chair: Charles Hellaby
 Convener: Mustapha Ishak

16:30 - 16:50	Martin Scholtz	Meissner effect for astrophysical black holes
16:50 - 17:10	Cristian Martinez	A class of rotating hairy black holes in arbitrary dimensions
17:10 - 17:30	Sifiso Allan Ngubelanga	New classes of polytropic models

Tuesday 5 December 2017, Parallel Session 4, 16:30 – 18:00

Meeting Room 1.43-4

Early Universe and Large Scale Structures - CMB & Inflation II

Chair: Julien Larena
 Conveners: Yoel Rephaeli & Julien Larena

16:30 – 16:50	David Wands	Quantum diffusion during inflation and primordial black holes
16:50 – 17:10	Ramos Rudnei	Warm Inflation from a Little Higgs Type of Model for the Inflation
17:10 – 17:30	Jose Beltran-Jimenez	Non-Singular and Inflationary Cosmologies within Born-Infeld Inspired Gravity
17:30 – 17:50	Jose Maria Ezquiaga	Inflation and the Factory of Primordial Black Holes

Notes

High Energy Astrophysics - Physics of Compact Objects & Fast Radio Bursts II

Chair: *Shriharsh Tendulkar*
 Conveners: *Shriharsh Tendulkar & Duncan Lorimer*

16:30 – 16:42	Dennis Alp	Limits on a Compact Object in SN 1978A
16:42 – 16:54	Fabrice Mottez	Theories of Fast Radio Bursts Caused by the Interaction of Pulsars with Other Celestial Bodies
16:54 – 17:06	Tomonori Totani	Repeating and Non-Repeating Fast Radio Bursts from Binary Neutron Star Mergers
17:06 – 17:18	Anthony Walters	Future Cosmological Constraints from Fast Radio Bursts
17:18 – 17:30	Christopher Thompson	Fast Radio Bursts and Cosmic Dark Matter
17:30 – 17:42	Guillaume Belanger	15 Years of Relativistic Astrophysics with INTEGRAL
17:42 – 17:54	Celia Sanches-Fernandez	INTEGRAL Observations of the June 2015 Outburst of V404 Cyg

Future Challenges and Experiments II

Chair: *Giorgio Matt*
 Convener: *James Buckley*

16:30-16:50	Kerry Paterson	MeerLICHT: MeerKAT's optical eye
16:50-17:10	Luciano Burderi	The Hermes Project (High Energy Rapid Modular Ensemble of Satellites): probing Space-time Quantum Foam and hunting for Gravitational Wave electromagnetic counterpart
17:10 – 17:30	Thomas Collett	The imminent revolution in strong gravitational lensing: a new light on the dark Universe
17:30 – 17:50	Marta Spinelli	Polarised synchrotron simulations for EoR experiments

Notes

High Energy Astrophysics - Physics of Accretion | Tidal Disruption Events I

Chair: *Eric Perlman*
 Conveners: *Elena Gallo & Eric Perlman*

14:00 – 14:15	Andrea Marinucci	The Changing X-Ray Corona in Ark 120
14:15 – 14:30	Rudi Wijnands	Understanding Low-Level Accretion in X-Ray Binaries
14:30 – 14:45	Juan Venancio Hernandez Santisteban	Low-Level Accretion Onto Neutron Stars: The Case of IGR J17062-6143
14:45 – 15:00	Matteo Bugli	Resistive GRMHD Models for the Magnetic Suppression of the Papaloizou-Pringle Instability in Thick Accretion Disks
15:00 – 15:15	Tiziana Di Salvo	A Discussion on the Orbital Period Residuals and Evolution in Low Mass X-Ray Binaries
15:15 – 15:30	Abhishek Roy	Numerical Simulations of Time-Varying Viscosity Inside a Two Component Advective Flow Studying Occurrence of an Outburst in Stellar Black Holes
15:30 – 15:45	Karri Koljonen	Decomposing Thermonuclear X-Ray Bursts

Relativity and Gravity - Modifications of Gravity I

Chair: *Joel Bergé*
 Convener: *Lavinia Heisenberg*

14:00 – 14:20	Dan Sibandze	Echoes from Black Hole Mergers: Evidence of Higher Order Corrections to General Relativity in the Strong Gravity Regime
14:20 – 14:40	Thomas Collett	A Precise Extragalactic Test of General Relativity
14:40 – 15:00	Bridget Falck	Testing Gravity in the Cosmic Web
15:00 – 15:15	Ernesto Barrientos	MOND as the Weak Field Limit of an Extended Metric Theory of Gravity with Torsion
15:15 – 15:30	Joseph Ntahompagaze	Equivalence between $f(R)$ and Scalar-Tensor Theories of Gravity
15:30 – 15:45	Anne Marie Nzioki	Buchdahl-Bondi Limit in $f(R)$ Gravity
15:45 – 16:00	Amare Abebe	Integrability Conditions of Some Cosmological Models in $f(R)$ Gravity

Notes

Dark Matter / Dark Energy | Dark Matter and Dark Energy - Dark Matter | Dark Energy I

Chair: Chris Clarkson
 Conveners: Michelle Galloway, Elizabeth Krause, Yun Wang

14:00 – 14:18	Maria Przhinskaya	Peculiar Velocities of Type Ia Supernovae in Clusters of Galaxies: The Impact on Distance Measurements
14:18 – 14:36	Rosanne Di Stefano	Type Ia Supernova Progenitors in Our Neighborhood
14:36 – 15:54	Geoff Beck	Exploring Dark Matter in the Madala Hypothesis Via Indirect Detection
15:54 – 15:12	Mattia Mina	Axion Dark Matter and Small Scale Problems
15:12 – 15:30	Zdenek Stuchlik	Trapping Polytropic Spheres as Models of Galactic Halos Containing Central Supermassive Black Holes
15:30 - 15:48	Viviana Gammaldi	Indirect dark matter search in dwarf irregular galaxies
15:48 – 16:06	Anslyn John	Structure Evolution in a Superfluid Universe

Astroparticle Physics - AGN as Sources of Gamma-Rays, UHECRs and Neutrinos I

Chair: Elisa Prandini
 Convener: Maria Petropoulou

14:00 – 14:25	Stefan Wagner	Gamma-Ray Emission of AGN: Compton Dominance and Doppler Boost Indicators Across the Blazar Family
14:25 – 14:50	Frank Rieger	Gamma-Rays from Non-Blazar AGN
14:50 – 15:10	Isak Davids	Centaurus A: Hard X-Ray and Soft Gamma-Ray Lightcurve Correlation
15:10 – 15:30	Xavier Rodrigues	Cosmic-Ray Nuclei and Neutrinos from the Blazar Sequence
15:30 – 15:50	Igor Chilingarian	A Population of Intermediate Mass Black Holes Posing as Low; Luminosity Active Galactic Nuclei

Notes

Wednesday 6 December 2017, Parallel Session 6, 16:30 - 18:00

Auditorium 2

High Energy Astrophysics - Physics of Accretion | Tidal Disruption Events II

Chair: *Rudy Wijnands*
 Conveners: *Elena Gallo & Eric Perlman*

16:30 – 16:45	Eric Perlman	IGR J12580+0134: The Nearest Tidal Disruption Event
16:45 – 17:00	Tamilan Mageshwaran	Deriving Black Hole Demographics from Tidal Disruption Events
17:00 – 17:15	Dan Wilkins	Revealing Structure and the Jet Connection within AGN Coronae
17:15 – 17:30	Viacheslav Zhuravlev	A Type of Perturbations Potentially Responsible for Subcritical Transition to Turbulence in Keplerian Flow
17:30 – 17:45	Indranil Chattopadhyay	The Effect of Black Hole Spin on Accretion Solutions Around Black Holes
17:45 – 18:00	Alejandro Cruz-Osorio	Accretion onto a Kerr Black Hole: Effects of the Magnetic Fields

Wednesday 6 December 2017, Parallel Session 6, 16:30 - 18:00

Meeting Room 1.41-2

Relativity and Gravity - Modifications of Gravity II

Chair: *Amare Abebe*
 Convener: *Lavinia Heisenberg*

16:30 – 16:45	Francisco Jose Maldonado-Torralba	Phenomenology of Torsion Theories of Gravity
16:45 – 17:00	Carlos Coimbra-Araujo	Weyl-Einstein Geometrodynamics Applied to Coalescing Black Hole Astrophysical Phenomena
17:00 – 17:15	Iqra Nawazish	Cosmic Evolution in $f(R, T)$ Gravity
17:15 – 17:30	Philippe Jetzer	Tests of General Relativity with High Performance Clocks
17:30 – 17:45	Muhammad Sharif	Gravitational Collapse in $f(R)$ Gravity
17:45 – 18:00	Anirudh Pradhan	Brane Oscillations and the Cosmic Coincidence Problem as due to M0-Branes

Wednesday 6 December 2017, Parallel Session 6, 16:30 - 18:00

Meeting Room 1.43-4

Dark Matter and Dark Energy - Dark Matter | Dark Energy II

Chair: *Maria Pruzhinskaya*
 Conveners: *Michelle Galloway, Elizabeth Krause, Yun Wang*

16:30 – 16:50	Chris Clarkson	Doppler Magnification as a Dark Energy Probe with the Large Scale Surveys
16:50 – 17:10	Alkitis Pourtsidou	Models of Coupled Dark Matter to Dark Energy
17:10 – 17:30	Satadru Bag	New Tracker Models of Dark Energy
17:30 – 17:50	Andrew Beckwith	Analyzing if a Graviton Gas Acts Like a Cosmological Vacuum State and "Cosmological" Constant Parameter
17:50 – 18:10	Saadia Mumtaz	Phase Space Analysis of the Expanding Universe Model
18:10 – 18:30	Miguel Mendez-Isla	Analysis of results in indirect searches of Dark Matter

Astroparticle Physics - AGN as Sources of Gamma-Rays, UHECRs and Neutrinos II

Chair: *Stefan Wagner*
Convener: *Maria Petropoulou*

16:30 – 16:55	Elisa Prandini	The MAGIC Perspective on Extreme Blazars
16:55 – 17:20	Bidzina Kapanadze	Particle Acceleration Processes in the Jets of High-Energy Peaked BL Lacertae Objects
17:20 – 17:40	Anabella Araudo	On the Maximum Energy of Non-Thermal Particles in the Termination Shocks of AGN Jets

Notes

Thursday 7 December 2017, Parallel Session 7, 14:00 – 16:00

Auditorium 2

Gravitational Waves: Direct Detection

Chair: *Michelle Lochner*
 Convener: *Paul Lasky*

14:00 – 14:20	Tomasz Bulik	On the origin of compact object binaries observed in gravitational waves
14:20 – 14:40	Tamilan Mageshwaran	Event rate predictions for EMRIs with GW signatures
14:40 – 15:00	Andrew Miller	Using machine learning to detect gravitational waves from r-modes

Thursday 7 December 2017, Parallel Session 7, 14:00 – 16:00

Meeting Room 1.41-2

Relativity and Gravity - Modifications of Gravity III

Chair: *Thomas Collett*
 Convener: *Lavinia Heisenberg*

14:00 – 14:20	Joel Bergé	First Results on Modified Gravity from MICROSCOPE's Test of the Equivalence Principle
14:20 – 14:40	Fabio Finelli	Current Cosmological Constraints and Future Perspectives on Scalar-Tensor Dark Energy Models
14:40 – 15:00	Sudan Hansraj	Generalized Spheroidal Spacetimes in 5-D Einstein-Maxwell-Gauss-Bonnet Gravity
15:00 – 15:15	Thomas Chamberlain	Revised Schwarzschild Solution to Accommodate Space Expansion
15:15 – 15:30	Vijay Singh	Exact Solution of $f(R, T)$ Gravity with Conservation of the Klein-Gordon Equation
15:30 – 15:45	ZahraAltahaMotahar	Scalarization of Neutron Stars with Realistic Equations of State
15:45 – 16:00	Sulona Kandhai	Observational Constraints on a Viable Theory for $f(R)$ Gravity

Thursday 7 December 2017, Parallel Session 7, 14:00 – 16:00

Meeting Room 1.43-4

Early Universe and Large Scale Structures - Cosmic Magnetic Fields

Chair: *Kerstin Kunze*
 Convener: *Kerstin Kunze*

14:00-14:20	Gabriele Giovannini	Large scale non-thermal emission in galaxy clusters
14:20-14:40	Tina Kahniashvili	Cosmological Magnetic Fields: Generation, Evolution, and Signatures
14:40-15:00	Karsten Jedamzik	Stringent constraints on primordial magnetic fields from the cosmic microwave background radiation
15:00-15:15	Jennifer Schober	Chiral MHD dynamos in the early Universe
15:15-15:30	Mathieu Langer	Magnetizing the intergalactic medium during reionization
15:30-15:45	Andrey Saveliev	Determining the properties of Intergalactic Magnetic Fields Using Novel Computational Methods
15:45-16:00	Pranjal Trivedi	Improved Probes of Primordial and Intergalactic Magnetic Fields from Gravitational Waves and Blazar Beams

Astroparticle Physics - HE and VHE Gamma-Ray Astronomy I

Chair: Roland Walter
Convener: Reshmi Mukherjee

14:00 – 14:20	Elisa Prandini	Highlights of the MAGIC Extragalactic Program
14:20 – 14:40	Olivier Hervet	Latest Highlights of Extragalactic Science with VERITAS
14:40 – 15:00	Mathieu de Naurois	Highlights from H.E.S.S.
15:00 – 15:20	Alicia Lopez-Oramas	Highlights from the MAGIC Telescopes on Galactic Sources
15:20 – 15:40	Hambeleleni Ndiyavala	Multi-Wavelength Observations and Spectral Modelling of the Globular Cluster Terzan 5
15:40 – 16:00	Bruno Khelifi	CTA Observations: From Proposal to High-Level Data Analysis

Notes

Thursday 7 December 2017, Parallel Session 8, 16:30 – 18:00

Auditorium 2

Gravitational Waves - EM Counterparts of Gravitational Waves | Formation and Evolution of SMBHs

Chair: *Tomasz Bulik*
 Conveners: *Hsin-yu Chen & Elena Rossi*

16:30 – 16:45	Karelle Siellez	Coincidence Between Short GRBs and Gravitational Wave Events with LIGO/VIRGO
16:45 – 17:00	Carlo Ferrigno	INTEGRAL Search for Gravitational-Wave Gamma-Ray Counterparts
17:00 – 17:15	Barbara Patricelli	Searching for Gamma-Ray Counterparts to Gravitational Waves from Merging Binary Neutron Stars with CTA
17:15 – 17:30	Youjun Lu	Host Galaxy Properties of Mergers of Stellar Binary Black Holes and Their Implications for Advanced LIGO Gravitational Wave Sources
17:30 – 17:45	Michelle Lochner	Machine Learning for Gravitational Wave Electromagnetic Counterparts
17:45 – 18:00	Maria Charisi	Quasars with Periodic Variability as Milliparsec Supermassive Black Hole Binary Candidates
18:00 – 18:15	Qingjuan Yu	Evolution of Massive Binary Black Holes in Realistic Galaxy Distributions and Their Gravitational Wave Radiation

Thursday 7 December 2017, Parallel Session 8, 16:30 – 18:00

Meeting Room 1.41-2

Early Universe and Large Scale Structures - Gravitational Lensing

Chair: *Aroonkumar Beesham*
 Convener: *Marusa Bradac*

16:30 – 16:48	Lucia Marchetti	Strong Gravitational Lensing Studies with Herschel and Multi-Wavelength Follow-up Observations
16:48 – 17:06	Benjamin Joachimi	KiDS & The Coming of Age of Galaxy Weak Lensing Cosmology
17:06 – 17:24	Thomas Collett	The Central Dark Matter Profile of a Redshift 1 Strong Lensing Cluster: Evidence for Self-Interacting Dark Matter?
17:24 – 17:42	Gihan Weerasekara	Calculation of a More Realistic Value for the Time Delay Between Gravitationally Lensed Images When the Peculiar Motion of the Lense and of the Source is Considered
17:42 – 18:00	Julien Larena	Weak Gravitational Lensing of Finite Beams

Notes

Astroparticle Physics - HE and VHE Gamma-Ray Astronomy II

Chair: Mathieu de Naurois
Convener: Reshmi Mukherjee

16:30 – 16:50	Hassan Abdalla	Why the Universe is Unexpectedly Transparent to Very-High-Energy Gamma-Rays
16:50 – 17:10	Maria Victoria Del Valle	Non-Thermal Emission from High Velocity Stars
17:10 – 17:30	Troy Porter	High-Energy Gamma-Rays from the Milky Way: Three-Dimensional Models for the Non-Thermal Interstellar Emissions by Cosmic Rays in the Interstellar Medium with the GALPROP Code
17:30 – 17:50	Roland Walter	Fermi Acceleration in Extreme Environments: Eta Carinae
17:50 – 18:10	Nukri Komin	Time-lags in AGN Light-curves: when astrophysics meets fundamental physics

Notes
