Virtual Autumn MIST Meeting 19th-20th November 2020

Schedule

Thursday 19th November 2020		
Session 1 – Chair: Jasmine Sandhu; Oliver Allanson		
10:00	Sandra Chapman Centre for Fusion, University of Warwick	A regular clock for the Schwabe and Hale variations in solar and geomagnetic activity
10:15	Megan Maunder University of Exeter	Multi-Spacecraft Observations of a New Type of High-Latitude ICME
10:30	Joel Baby Abraham Mullard Space Science Laboratory	Statistical analysis of solar wind electron populations using Parker Solar Probe
10:45	Thomas Woolley Imperial College London	The Proton Core Behaviour Inside Magnetic Field Switchbacks
11:00	**15 min Break**	
Session 2 – Chair: John Coxon; Greg Hunt		
11:16	Seong-Yeop Jeong Mullard Space Science Laboratory	The evolution of the electron-strahl velocity distribution in the inner heliosphere
11:31	Sadie Robertson Imperial College London	A statistical study of magnetopause flux ropes near the Electron Diffusion Region (EDR) using Magnetospheric Multiscale mission (MMS)
11:46	Lauren Orr Lancaster University	Wavelet and network analysis of magnetic field variation and geomagnetically induced currents during large storms
12:01	**Lunch Break**	
13:02	**Poster Session 1**	
14:03	**10 min Break**	
Session 3 – Chair: Oliver Allanson; Maria-Theresia Walach		
14:14	Ned Staniland Imperial College London	First Evidence of a Cushion Region at Saturn and a Reconsideration of Why it Forms
14:29	Dale Weigt University of Southampton	Characteristics of Jupiter's X-ray auroral hot spot emissions using Chandra
14:44	**MIST Council Update**	
15:00	**Finish**	

Friday 20th November 2020		
Session 4 – Chair: Greg Hunt; Jasmine Sadhu		
10:00	Emma Woodfield British Antarctic Survey	The Effect of Hiss Waves on Electrons in Saturn's Radiation Belts
10:15	Josh Wiggs Lancaster University	Modelling Plasma Transport at the Outer Planets using a Kinetic-Ion, Fluid-Electron Approach - Validation
10:30	Adrian LaMoury Imperial College London	Solar wind control of jets impacting the magnetopause
10:45	Beatriz Sanchez-Cano University of Leicester	Mars' Ionopause: A Matter of Pressures
11:00	**15 min Break**	
Session 5 – Chair: Maria-Theresia Walach: Mathew Owens		
11:16	Laura Fryer University of Southampton	Observations of closed magnetic flux embedded in the lobe during periods of northward IMF
11:31	Mayur Bakrania Mullard Space Science Laboratory	Using dimensionality reduction and clustering techniques to classify space plasma regimes
11:46	Jasmine Kaur Sandhu Northumbria University	Identifying storm-time variations in ULF wave power and implications for radiation belt dynamics
12:01	**Lunch Break**	
13:02	**Poster Session 2**	
14:03	**10 min Break**	
Session 6 – Chair: Mathew Owens; John Coxon		
14:14	Samuel Walton Mullard Space Science Laboratory	The Relative Contribution of Enhancement and Loss to Global Variations in Relativistic Outer Radiation Belt Electrons
14:29	Téo Bloch University of Reading	Constraining the Location of the Outer Boundary of the Radiation Belts
14:44	Alexander Lozinski British Antarctic Survey	Optimisation of a Steady State Radial Diffusion Model to Derive Diffusion Coefficients for the Proton Radiation Belt
14:59	**Finish**	

Poster Session 1 (Thursday):			
Number:	**Poster room:**		
1	1	Martin Archer Imperial College London	How do I demonstrate impact from my drop-in public engagement activity? A novel approach from a space soundscape exhibit
2	1	Daniel Billett University of Saskatchewan	Ion-neutral Coupling in the E- and F-regions during a Substorm
3	1	Gemma E Bower University of Leicester	Transpolar arcs: Seasonal dependence identified by an automated detection method
4	1	Shahbaz Chaudhry University of Warwick	Network analysis of Pc waves using the SuperMAG database of ground-based magnetometer stations
5	1	Dave Constable Lancaster University	Predicting Field Aligned Currents in the Jovian Mid-Magnetosphere
6	1	Matt James University of Leicester	The Lomb-Scargle Based Inner Magnetospheric Plasma Model
7	2	Joe Kinrade Lancaster University	The statistical morphology of Saturn's equatorial energetic neutral atom emission
8	2	Ronan Laker Imperial College London	Statistical analysis of orientation, shape, and size of solar wind
9	2	Mike Lockwood University of Reading	Universal Time Variations in the Magnetosphere and Space Weather
10	2	Allan Macneil University of Reading	Increasing occurrence of inverted heliospheric magnetic fields from 0.3 to 1 au
11	2	Michaela Mooney Mullard Space Science Laboratory	Evaluating auroral forecasts against satellite observations
12	3	David Nunn University of Southampton	The 1D numerical modelling of lower band VLF chorus generation using a VHS Vlasov code
13	3	David Price University of Southampton	High resolution optical observations of neutral heating associated with the electrodynamics of an auroral arc
14	3	John Ross British Antarctic Survey	A new approach to constructing models of electron diffusion by EMIC waves in the radiation belts
15	3	Robert Shore British Antarctic Survey	Real-time forecasts of storm-time geomagnetic activity at UK latitudes from an empirical model
16	3	Andy Smith Mullard Space Science Laboratory	Probabilistic Forecasts of Storm Sudden Commencements from Interplanetary Shocks using Machine Learning
17	4	David Stansby Mullard Space Science Laboratory	Sensitivity of Solar Wind Mass Flux to Coronal Temperature
18	4	Daniel Verscharen Mullard Space Science Laboratory	Scaling the latitudinal dependence of solar-wind moments from Ulysses to the inner heliosphere
19	4	James Waters University of Southampton	Multipoint Remote Observations of Auroral Kilometric Radiation (AKR)

20	4	Affelia Wibisono Mullard Space Science Laboratory	Jupiter's X-ray aurora during a mass injection and Io mass loading event observed by Hubble and Hisaki
21	4	Lloyd Woodham Imperial College London	Enhanced proton parallel temperature inside patches of switchbacks in the inner heliosphere

Poster Session 2 (Friday):			
Number:	**Poster room:**		
22	5	Jeffersson Andres Agudelo Rueda Mullard Space Science Laboratory	Study of plasma bulk profiles along artificial-spacecraft trajectories through a 3D fully kinetic simulation of turbulent magnetic reconnection
23	5	Oliver Allanson Northumbria University	Diffusion and advection during nonlinear electron-whistler interactions
24	5	Luke Barnard University of Reading	Ensemble CME Modeling Constrained by Heliospheric Imager Observations
25	5	Sarah Bentley Northumbria University	Random Forest Models of Magnetospheric ULF Wave Power
26	5	Laura Bercic Mullard Space Science Laboratory	The interplay between ambipolar electric field and Coulomb collisions in the solar wind acceleration region
27	6	Aisling Bergin Centre for Fusion, University of Warwick	Quantifying the statistical variation of return period, amplitude and duration of bursts in the AE index across successive solar cycles
28	6	Nathan Case Lancaster University	Inner Magnetospheric Response to the IMF By 2 Component: Van Allen Probes and Arase Observations
29	6	John C. Coxon University of Southampton	Hot plasma in the magnetotail lobes shows characteristics consistent with closed field lines trapped in the lobes
30	6	Diego de Pablos Mullard Space Science Laboratory	Analysis of time-domain correlations between EUV and in-situ observations of coronal jets
31	6	Elizabeth Donegan-Lawley Birmingham University	High latitude statistical modelling for scintillation of GNSS signals
32	7	Xiangcheng Dong RAL Space, STFC	In-situ Observation of Secondary Magnetic Reconnection Region Beside Ion-Scale Flux Rope at the Magnetopause
33	7	Tom Elsden University of Leicester	Evolution of High-m Poloidal Alfven Waves in a Dipole Magnetic Field
34	7	Tadhg Garton University of Southampton	Machine Learning Applications to Magnetospheric Reconnection Identification
35	7	Imogen Gingell University of Southampton	Inverted Rope-like Structures in the Bow Shock’s Transition Region

36	7	Adrian Grocott Lancaster University	TiVIE: The Time-Variable Ionospheric Electric Field Model
37	8	Richard Haythornthwaite Mullard Space Science Laboratory	Coupled Cation-Neutral-Anion Winds in Titan's Thermosphere/Ionosphere
38	8	Greg Hunt Imperial College London	The response of Saturn's dawn field-aligned currents to magnetospheric conditions during the Proximal Orbits
39	8	James Lane Lancaster University	Dynamics of Variable Dusk-Dawn Flow Associated with Magnetotail Current Sheet Flapping
40	8	Emma Thomas University of Leicester	Unearthing Uranus's Infrared Aurora
41	8	Dong Wei Southern University of Science and Technology	Intense dB/dt variations driven by near-Earth Bursty Bulk Flows (BBFs): A case study