

Scintillating Science: Cutting-Edge Science Achieved Through the Observations of Radio Scintillation - SANSA, Hermanus, South Africa			
Programme			
Day 1: Monday 15 July 2019			
Session 1 - Welcome, Opening, and Introductions - Chair: Mario M. Bisi, UKRI STFC RAL Space, United Kingdom			
Time	Title	Speaker(s)	Additional Author(s)
09:30h	Opening and Welcome	Mike Kosch, SANSA, South Africa and Mario M. Bisi, UKRI STFC RAL Space, United Kingdom	N/A
09:40h	Introductions and Expectations	All	N/A
10:10h	Scintillation: An Overview (Invited)	Mark Walker	N/A
11:10h	----- BREAK AND OPEN DISCUSSIONS -----		
Session 2 - Ionospheric Space Weather (1) - Chair: Mike Kosch, SANSA, South Africa			
Time	Title	Speaker(s)	Additional Author(s)
11:50h	INGV Contribution to International Space Weather Initiatives	V. Romano, INGV, Italy	<i>et al.</i>
12:10h	Ionospheric Scintillation with LOFAR: Making Sense of Dynamic Spectrum Oddities	R. A. Fallows, ASTRON, The Netherlands	N/A
12:30h	New Tools for the Diagnostics of Small-Scale Irregularities in the Ionosphere (Invited)	H. Rothkaehl, CBK-PAN, Poland	<i>et al.</i>
13:00h	----- LUNCH AND OPEN DISCUSSIONS -----		
Session 3 - Ionospheric Space Weather (2) - Chair: Gareth D. Dorrian, University of Birmingham, United Kingdom			
Time	Title	Speaker(s)	Additional Author(s)
14:30h	Ionospheric Scintillation Now-Casting Over Africa	T.M. Matamba, SANSA, South Africa	P.J. Cilliers, SANSA, South Africa
14:50h	Comparison of ground based ionospheric irregularity activity observations with in situ electron density variations as measured by the Swarm satellites across African	J.O. Olwendo, Pwani University, Kenya	P.J. Cilliers, SANSA, South Africa
15:10h	Characteristics of Ionospheric Conditions During Severe Geomagnetic Disturbances Using LOFAR and Satellite Diagnostics (Invited)	B. Matyjasiak, CBK-PAN, Poland	<i>et al.</i>
15:40h	----- BREAK AND OPEN DISCUSSIONS -----		
Session 4 - Scintillation Indices, TEC, and GNSS (1) - Chair: Tshimangadzo Matamba, SANSA, South Africa			
Time	Title	Speaker(s)	Additional Author(s)
16:20h	The Impact of Ionospheric Scintillation on Satellite Positioning and Timing	B. Forte, University of Bath, United Kingdom	<i>et al.</i>
16:40h	Investigation of the Ionospheric Irregularities on Global and Regional Scale	V. Romano, INGV, Italy	<i>et al.</i>
17:00h	Impact of Plasma Structures on GPS Signals Operating in the European Polar Ionosphere	H.M. John, University of Bath, United Kingdom	<i>et al.</i>
17:20h	----- PREPARE FOR BRAAI (WELCOME RECEPTION) -----		
18:30h	Braai (Welcome Reception)		
20:30h	----- End of Day 1 -----		
Day 2: Tuesday 16 July 2019			
Session 5 - Scintillation Indices, TEC, and GNSS (2) - Chair: John Bosco Habarulema, SANSA, South Africa			
Time	Title	Speaker(s)	Additional Author(s)
09:00h	Suppression of Ionospheric Scintillation During the 2015 St. Patrick's Day Geomagnetic Superstorm as Observed Over Ethiopian GPS Network (Invited)	T. Kassa, Bahir Dar University, Ethiopia - given by P.J. Cilliers, SANSA, South Africa	N/A
09:30h	Investigation of Low-Latitude S-Band Ionospheric Scintillations Observed during Geo-Magnetic Storm Period in September 2017	M. Sridhar, Koneru Lakshmaiah Education Foundation, India	<i>et al.</i>
09:50h	Comparative Scintillation Study Using SCINDA and IGS Data (Invited)	E.B. Amabayo, Mbarara University of Science and Technology and Busitema University, Uganda	Edward Jurua, Busitema University, Uganda, and P.J. Cilliers, SANSA, South Africa
10:20h	Suggestion of the New Index to Reveal Ionospheric Scintillation Events	O. Chang, UKRI STFC RAL Space, United Kingdom	<i>et al.</i>
10:40h	Discussion: Scintillation Indices, TEC, and GNSS		
11:00h	----- BREAK AND OPEN DISCUSSIONS -----		
Session 6 - Scintillating Sources and Interstellar Scintillation - Chair: Dan Stinebring, Oberlin College, USA			
Time	Title	Speaker(s)	Additional Author(s)
11:30h	New Insights in Astrophysics and Space Weather with Widefield Interplanetary Scintillation (Invited)	R. Chhetri, ICRAO, Australia	<i>et al.</i>
12:00h	Interstellar Scintillation Theory and Experimentation: the Potential of I-D Scintillation Screens in the Interstellar Medium	U. Pen, University of Toronto, Canada	N/A
12:30h	Voyager 1 Observations of Interstellar Electron and Magnetic Turbulence Spectra (Invited)	L.C. Lec, Academia Sinica, Taiwan	K.H. Lee, Academia Sinica, Taiwan
13:00h	----- LUNCH AND OPEN DISCUSSIONS -----		
Session 7 - Secondary Spectra and Interstellar Scintillation - Chair: Ue-Li Pen, University of Toronto, Canada			
Time	Title	Speaker(s)	Additional Author(s)
14:30h	Effect of Viscosity on Propagation of MHD Waves in Astrophysical Plasma	A.M. Cherkos, Addis Ababa University, Ethiopia	N/A
14:50h	What do Scintillation Arcs Tell us About the Distribution of Scattering Material in the Interstellar Medium?	D. Stinebring, Oberlin College, USA	N/A
15:20h	Discussion: Secondary Spectra, led by Dan Stinebring, Oberlin College, USA		
15:40h	Discussion: Interstellar Scintillation and Scintillating Sources in General, led by Ue-Li Pen, University of Toronto, Canada		
16:10h	----- BREAK AND OPEN DISCUSSIONS -----		
Session 8 - Interplanetary Scintillation (1) - Chair: Bernard V. Jackson, CASS-UCSD, USA			
Time	Title	Speaker(s)	Additional Author(s)
16:40h	The Worldwide IPS Stations (WIPSS) Network	M.M. Bisi, UKRI STFC RAL Space, United Kingdom	The WIPSS Network Community
17:00h	Exploiting LOw Frequency ARray (LOFAR) Observing Capabilities to Better Understand Interplanetary Scintillation (IPS)	M.M. Bisi, UKRI STFC RAL Space, United Kingdom	<i>et al.</i>
17:20h	Discussion: WIPSS Network and IPS Plasma Parameters		
18:00h	----- End of Day 2 -----		
Day 3: Wednesday 17 July 2019			
Session 9 - Interplanetary Scintillation (2) - Chair: Stuart C. Robertson, UKRI STFC RAL Space, United Kingdom			
Time	Title	Speaker(s)	Additional Author(s)
09:00h	LOW Frequency ARray (LOFAR) Interplanetary Scintillation (IPS) Scintillation Index (and g-levels) for the First Time	O. Chang, UKRI STFC RAL Space, United Kingdom	M.M. Bisi, UKRI STFC RAL Space, United Kingdom, and R.A. Fallows, ASTRON, The Netherlands
09:20h	The Scale of the Diffraction Pattern from IPS to Understand the Evolution of Small-Scale Density Fluctuations in the Solar Wind	J.C. Mejia-Ambriz, LANCE, Mexico	<i>et al.</i>
09:40h	The Wavelet Technique Applied to Interplanetary and Ionospheric Scintillation (Invited)	J.C. Mejia-Ambriz, LANCE, Mexico	<i>et al.</i>
10:10h	Discussion: IPS Scintillation Index and g-levels		
11:00h	----- PREPARE FOR EXCURSION -----		
11:30h	Bus Departs		
12:15h	Light Lunch		
13:30h	Bus Departs		
14:00h	Botanical Gardens		
15:15h	Bus Departs		
15:30h	Penguin Colony		
16:30h	Bus Departs		
17:15h	Arrive for sunset at Wine Farm		
17:30h	Wine Tasting		
18:45h	Workshop Dinner		
22:00h	Bus Departs		
22:45h	Arrive Hermanus		
23:00h	----- End of Day 3 -----		
Day 4: Thursday 18 July 2019			
Session 10 - Future Scintillation Arrays/Telescopes - Chair: Hanna Rothkaehl, CBK-PAN, Poland			
Time	Title	Speaker(s)	Additional Author(s)
09:15h	Pathfinder for Solar flAre Monitoring Explorer (SAME-Pathfinder)	Y.J. Du, China Aerospace Science and Technology Corporation, China	N/A
09:35h	The LOFAR For Space Weather (LOFAR4SW) H2020 Project: Scintillation Use Cases and Requirements for the Detection of Scintillation Using LOFAR	S.C. Robertson, UKRI STFC RAL Space, United Kingdom	<i>et al.</i>
09:55h	Progress on Chinese IPS Project (Invited)	Y. Yan, CAS, China	<i>et al.</i>
10:25h	Preliminary Design for a New Interplanetary Scintillation (IPS) Telescope	L. Chen, CAS, China	<i>et al.</i>
10:40h	Telescope Design for Chinese IPS Telescope	W. Wang, CAS, China	<i>et al.</i>
10:55h	Discussion: New/Upcoming Scintillation Arrays/Telescopes		
11:15h	----- BREAK AND OPEN DISCUSSIONS -----		
Session 11 - Coronal-Heliospheric Space Weather (1) - Chair: Oyuki Chang, UKRI STFC RAL Space, United Kingdom			
Time	Title	Speaker(s)	Additional Author(s)
11:35h	Multifrequency Interplanetary Scintillation Observations Using Arecibo Observatory Single Dish (Invited)	A.A. Pacini, InSpace LLC, USA	<i>et al.</i>
12:05h	New at UCSD: Iterative Tomography with an ENLIL 3-D MHD Model Kernel Constrained by IPS and In-situ Measurements	B.V. Jackson, CASS-UCSD, USA	<i>et al.</i>
12:25h	Radio Scintillation as a Tool for Understanding Complex Plasma Behaviours in Solar Terrestrial Physics; Past Results and Future Opportunities (Invited)	G.D. Dorrian, University of Birmingham, United Kingdom	N/A
12:55h	Discussion: Space Weather Forecasting with Observations of IPS		
13:15h	----- LUNCH AND OPEN DISCUSSIONS -----		
Session 12 - Coronal-Heliospheric Space Weather (2) - Chair: Mario M. Bisi, UKRI STFC RAL Space, United Kingdom			
Time	Title	Speaker(s)	Additional Author(s)
14:30h	A Worldwide Interplanetary Scintillation Stations (WIPSS) Network Tomography Program for Space Weather Forecasting that Includes Providing IPS Parameters and Their Errors Using the Levenberg-Marquardt Algorithm (Invited)	B.V. Jackson, CASS-UCSD, USA	<i>et al.</i>
15:00h	HF and VHF Radar as a Complement to Scintillation for Discovery in Deep Space and Geospace	B. Isham, Interamerican University of Puerto Rico, USA	N/A
15:20h	Discussion: How can we better work together and learn from each other?		
15:50h	Workshop Closing Remarks		
16:00h	----- BREAK AND OPEN DISCUSSIONS -----		
Session 13 - Chair: N/A			
Time	Title	Speaker(s)	Additional Author(s)
16:30h	Collaborations and open discussions		
18:00h	----- End of Day 4/Official Workshop End -----		
Day 5: Friday 19 July 2019			
09:00h	Collaborations, open discussions, sight seeing, etc ...		
18:00h	----- End of Day 5 -----		

Zoom remote connection: <https://ukri.zoom.us/j/mmbisi>