Effects of the ionosphere on RF systems topical working group

| Meeting No. | 2 | |
|---------------------------------------------------|------------------------------------------|--|
| Location | European Space Weather Week, Antwerp | |
| Date | 19 November 2013 | |
| Chaired by | Matthew Angling | |
| Presenters Mpho Tshisaphungo, SANSA, South Africa | | |
| | Neil Rogers, University of Lancaster, UK | |

Agenda

- 1. Welcome and introductions
- 2. Actions from previous SWWT meetings
- 3. ITU/SG3 trans-ionospheric propagation questions
- 4. Technical presentations
 - a. Space Weather Applications for HF propagation, Mpho Tshisaphungo, T. Nxele, L.A. McKinnell, L. Wentworth, South African National Space Agency (SANSA) Space Science, Hermanus, South Africa
 - b. Optimising Models of HF Absorption in the Polar Cap Ionosphere, Neil Rogers, Lancaster University, UK
- 5. Volunteers for co-chair
- 6. Any other business
- 7. Close

| Action No. | Action | Responsible | Status |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1.1 | Liaise with ESA concerning review of the ionospheric roadmaps developed under SN-1. | MJA | Completed. Reviews undertaken in early 2013 and provided to SWWT for collation and onward transmission to ESA |
| 1.2 | Seek volunteers from the TWG to support the review | MJA | Completed. See 1.1 |
| 1.3 | Liaise with RPC on specific opportunities for the TWG to support the work of the ESA Network of Experts | MJA | Closed. No immediate action. Specific requests are possible if required. |
| 1.4 | Discuss options for more general coordination with other groups (i.e. URSI, COSPAR,) | MJA, RPC, IS | On-going. Suggestion by RPC to consider ITU SG3 questions on ionospheric digital products. Discussed at meeting 2. Options for wider collaboration still open, but subject to input from group members. |
| 1.5 | Discuss possibility of having an extreme space weather session at next year's ESWW. NB. Initial discussion held with AG. A call will be made for session topics in near future. | MJA | Closed. Session suggestion was accepted for ESWW10. Comprised first session of conference: 1. Cannon, P., Solar Superstorms - A Natural Hazard with Wide Ranging Impacts. 2. Ngwira, C., Further Investigations of the July 23, 2012 Extremely Rare CME: What if this CME was Earth-Directed? 3. Vennerstrom, S., The 100 Largest |

| | | | Geomagnetic Storms in the Last 150 Years. 4. Myllys, M., Russian Geomagnetic Recordings in the 19th Century compared to Modern Observations. 5. Cid, C., Modeling the Recovery Phase of Extreme Geomagnetic Storms. |
|-----|-------------------------------------------------------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2.1 | Consider convening a session (splinter or other) to discuss ITU questions in detail. | MJA | Open |
| 2.2 | Consider the development of ionospheric scintillation test/reference cases to support ITU | All | Open |
| 2.2 | Support next phase of ESA roadmap review | All | Open |

| Initials | Name |
|----------|-------------------------|
| MJA | Matthew Angling |
| RPC | Roberto Prieto Cerdeira |
| IS | Iwona Stanislawska |
| AG | Alexi Glover |