



SKAO Statement at 62nd STSC
Dark and Quiet Skies (Agenda Item 15)

Chair, distinguished delegates,

The Square Kilometre Array Observatory (SKAO) is honoured to address the subcommittee in its 62nd session on the agenda item 15 on Dark and Quiet Skies. The existence of this agenda item reflects the growing recognition of the importance of safeguarding the skies for current and future generations.

The SKAO supports the Conference Room Paper (CRP.22) prepared by the Group of Friends for Dark and Quiet Skies. This document outlines the challenges, collaborative approaches, and further necessary steps to mitigate the challenges posed by light and radio frequency pollution from space activities. The SKAO is encouraged by the collaborative effort from different stakeholders represented in this CRP.

Chair,

We would like to emphasize that many of our radio-windows to explore the Universe from Earth are in danger of closing if there is no quick action. The deployment of satellite constellations and the increasing use of radio spectrum creates unprecedented challenges for scientific observations. The SKAO has engaged with several satellite operators to find possible mitigation techniques and we are currently undertaking tests. In particular we are exploring ways to minimize the interference received by radio telescopes from strong radio transmissions while producing a minimum impact on the provision of connectivity in under-connected areas. We aim to publish our results soon, and will provide this information to the subcommittee in its upcoming session.

Also on the topic of research and mitigations we are leading a study on the level of precision needed on satellite ephemerides to mitigate the effect of satellites on optical and radio astronomy observations. This study is one of two on Dark and Quiet Skies commissioned by the UK Space Agency.

Chair,

We note the important role of the International Telecommunication Union's Radiocommunication Sector (ITU-R) in addressing these challenges. Through ongoing discussions under agenda items at the World Radiocommunication Conference and the development of recommendations, the ITU-R provides a platform for fostering technical and regulatory measures to mitigate the impact of satellite emissions on radio astronomy. Collaborative testing, sharing of satellite operational data, and spectrum management practices are critical outcomes of this work, underscoring the necessity of continued coordination between scientific and telecommunications stakeholders.

While the ITU-R is leading regulatory and technical discussions, we believe considerations at COPUOS on spectrum are highly complementary. This committee provides a broader policy framework that aligns with the principles of the long-term sustainability of outer space, and is best placed to produce high level principles, recommendations or guidelines to maintain it. A practical example of this is the Long Term Sustainability Guideline "A4", which promotes the equitable, rational, and efficient use of the radio frequency spectrum while acknowledging that radio-spectrum



regulation is the purview of the ITU. By integrating these efforts, we can create a robust, multidisciplinary approach to preserving the dark and quiet skies for our future generations, alongside technological progress. We expanded some of these ideas in the technical presentation delivered on Monday 11th afternoon.

In particular, the SKAO would like to bring the attention of the subcommittee to the CRP number 13 which discusses the effects of Unintended Electromagnetic Radiation (or radio-leakage) from space into radio astronomy. We believe this recently discovered effect needs careful consideration and requires to be addressed by effective collaboration as detailed in the document.

Chair,

The SKAO also takes this opportunity to remind delegations of the 2025 UN/SKAO Workshop on Dark and Quiet Skies for Science and Society, hosted in the Headquarters of our Observatory in the United Kingdom from the 27th to 30th October 2025. We look forward to receiving you in our headquarters to share plans and experiences on actionable measures to protect the Dark and Quiet Skies.

In conclusion, as a permanent observer of UN COPUOS and a sector member of the ITU-R, the SKAO reaffirms its dedication to working alongside both UN bodies, with careful consideration to their mandates, to ensure that dark and quiet skies remain a shared resource for all. We stand ready to contribute further in this topic, leveraging our almost unique position as member of both forums, supporting initiatives that safeguard our celestial heritage.

Thank you for your attention.