

**Executive Committee WG “Dark and Quiet Sky Protection”
Resolution for consideration for the XXXII General Assembly**

Protection of the Dark and Quiet Sky from harmful interference by satellite

constellations The International Astronomical Union XXXII General Assembly,

Recalling

1. Resolution 1 and Resolution 2 of the XI IAU General Assembly (1961) in response to the great dangers that activities in space such as “Project West Ford” posed to astronomical research,
2. Resolution B5 of the XXVII IAU General Assembly (2009) that affirmed that an unpolluted night sky should be considered a fundamental socio-cultural and environmental right, and that the protection of the astronomical quality of areas suitable for scientific observation should be taken into account when developing and evaluating national and international policies,
3. the creation in 2022 of the IAU Centre for the Protection of the Dark and Quiet Sky from Satellite Constellation Interference ([CPS](#)) to coordinate collaborative multidisciplinary international efforts with institutions and individuals and work across multiple geographic areas to help mitigate the negative impact of satellite constellations on ground-based optical and radio astronomy observations, as well as on humanity’s enjoyment of the night sky,
4. the inclusion of an item in the agenda of the World Radiocommunication Conference 2027 of the International Telecommunication Union (ITU) regarding the impact of non-geostationary satellites on radio astronomy stations in specific radio quiet zones and in radio frequency bands allocated to radio astronomy on a primary basis globally (Agenda Item WRC27 1.16),
5. the inclusion of the item “Dark and Quiet Skies, astronomy and large constellations: addressing emerging challenges and issues” in the [provisional]¹ agenda for five years of the Scientific and Technical Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space.

Recognising that

1. astronomy and astronomical observations are intrinsically a form of space exploration, and they enjoy freedoms and protections under international law whereby States are obligated to show due regard to the interests of other states in the peaceful exploration of Outer Space under the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies,
2. satellite constellations provide societal benefits, and that the support of space commerce and defence is a high priority of many governments,
3. the night sky is an object of intangible human heritage and profound importance for civilizations past and present, representing artistic, cultural, and religious value and significance to people worldwide,
4. the rapid proliferation of satellites in Low Earth Orbit (LEO) and beyond has negative effects on astronomical observations, scientific research, and the night sky, affecting ground-based optical observatories, space-based telescopes and the view of the night sky through reflected sunlight; and is increasing radio frequency interference at radio astronomy observatories through in-band and out-of-band transmissions and unintended electromagnetic radiation,

¹ Subject to the expected approval of the full COPUOS committee at their June, 2024 meeting, at which point we request that the term ‘provisional’ be struck.

5. access to a dark and radio-quiet sky is crucial for conducting fundamental research in astronomy, for important public services such as planetary defence and high-precision geolocation, and for continuing the numerous spin-off benefits of astronomical technology developments,

6. the utilisation of space for its many benefits should not come at the detriment of astronomical research and the access to the night sky for humanity, and given their global nature, there are no places on Earth that can fully escape the effects of satellite constellations,

7. the changing visual appearance of the sky impacts all of humanity, and there is a need for widespread inclusivity in decisions about the use of outer space.

Considering that

1. the IAU is uniquely positioned to provide recommendations to government administrations, the space industry, the public, and astronomers to mitigate the negative impacts of satellite constellations on astronomy,

2. the IAU supports the efforts and advocacy of scientific and professional societies in seeking protection of the Earth-Space environment,

3. while the professional astronomical community has the necessary expertise to produce technical studies, conduct observations of satellites in different wavelengths, and propose feasible mitigation measures, it lacks the funding to pursue these activities with the urgency needed,

4. broader issues of space sustainability also impact astronomy, such as the risk of an increase in space debris raising the diffuse night sky brightness level, or of a change in the chemistry of the stratosphere from launches and re-entries increasing atmospheric opacity,

5. the IAU, through the work of the CPS, has provided a legal and policy basis for advocacy that has been instrumental in progressing a national and international-level approach to mitigating the impact of satellite constellations,

Therefore resolves to

1. include the protection of the Dark and Quiet Sky as part of IAU's mandate,

2. urge the Officers or their designees, on the basis of advice and co-ordination by the IAU CPS, to support and encourage appropriate nationally-based organisations to increase advocacy for national governments to:

- A. Safeguard humanity's access to the Dark and Quiet Sky,
- B. Increase financial support for astronomy to offset and compensate for negative impacts on observatory operations, research and implementation of mitigation measures,
- C. Encourage and support satellite operators and industry to collaborate with the IAU CPS and others in the astronomy community to develop, share and adopt best practices in interference mitigation, leading to widely adopted standards and guidelines,
- D. Provide incentive measures for the space industry to develop and implement the required technology to minimise negative impacts of satellites on the Dark and Quiet Sky,
- E. Establish informed regulations and conditions of authorization and supervision based on scientific assessments, practical experience, and impacts on the Earth-space environment, as well as obligations under international law, including environmental law. This includes codifying industry best practices that mitigate the negative impacts on astronomical observations,

- F. Continue to support finding solutions to space sustainability issues, such as minimising the production of space debris that in aggregate may increase diffuse night sky brightness, or reducing any transformation of the atmosphere that decreases its transparency.
- G. Work collaboratively within the United Nations to develop frameworks within which the issues of mitigation can be addressed on a worldwide and consistent basis.

And further resolves that

3. IAU members should positively engage with involved parties on matters related to the use of space – be it at local, regional, national, or international level – in efforts to address the urgent need for the protection of the Dark and Quiet Skies from satellite constellation interference.