

**IAU statement to be delivered at the 67<sup>th</sup> COPUOS session**  
**under Agenda Item 9 – Space and sustainable development**

Mister Chairman, distinguished Delegates,

The International Astronomical Union presents its perspective that the Moon offers unique opportunities for major observational discoveries in astronomical science. The Moon combines the advantages of the vacuum of space with the stability of a ground-based platform. While cheaper launches to the Moon and the development of lunar infrastructure can enable scientific opportunities, many planned and potential activities are, in some instances, incompatible with the critical need for these scientific facilities to be free from noise, contamination and interference.

I call your attention to the Conference Room Paper on the Protection of Astronomy and Science on the Moon, presented by the International Astronomical Union, International Academy of Astronautics, Open Lunar Foundation, Secure World Foundation, For All Moonkind, European Astronomical Society, Square Kilometre Array Observatory, and the International Institute of Space Law.

The Conference Room Paper presents several examples of scientific opportunities:

1. Ultra-low frequency radio observations in the shielded zone on the far side of the Moon probe the original building blocks of the galaxies and the magnetospheres of exoplanets. The rare large plains suitable for arrays of antennas would need to be

allocated for scientific use and protected against Unintended Electromagnetic Radiation.

2. A large-aperture single-mirror telescope or multi-telescope array operating in the infrared would have sensitivity and image resolution substantially higher than that of the James Webb Space Telescope, extending the latter's entire scientific domain. To suppress the thermal noise that would swamp the faint cosmic signals in the infrared, the telescope and instruments must operate under very cold conditions, ideally placed in a permanently shadowed region on a crater floor. However, many of these craters are also attractive for extraction of frozen water ice, an activity incompatible with the low dust, low noise environment required for telescope operation.
3. Gravitational waves propagate through the Universe from the mergers of extremely dense objects like white dwarfs, neutron stars, and black holes. Gravitational wave detectors would be susceptible to the slightest environmental disturbances, and strong excess noise generated by nearby landings and launches or by heavy equipment for exploration or mining would be incompatible with these extremely sensitive observations.

Distinguished delegates: The ability to make use of the freedom of scientific investigation on the Moon, in particular, the unique advantages of the Moon as an astronomical observing platform, will depend on the development of internationally accepted methods to communicate, signal intentions between actors, foster coordination and safety, pay due regard to the interests of relevant users and stakeholders, and avoid contamination and harmful interference.

Some of the most important and pioneering scientific missions on the Moon can take place only in specific locations and under specific conditions, and can take place only if they are protected from contamination and interference—even from other legitimate and peaceful uses. For this reason, it would be advisable to designate, manage, and protect specific sites in order to avoid any potentially harmful interference.

Such a process of transparent and internationally-accepted coordination and protection for scientific investigation is needed by the time the current phase of governmental and non-governmental demonstrations and prototyping of launch, delivery, and deployment is complete.

The IAU will work with other organizations with complementary interests to inform COPUOS's thinking and planning on this complex issue.

We welcome recent proposals for focused exchanges between COPUOS Member States on the usefulness of an international mechanism to consult on lunar activities, like the one suggested by the Delegation of Romania, as we firmly believe that international consultations can be instrumental in advancing much needed progress on this issue.

Mister Chairman, Distinguished delegates and observers, thank you for your kind attention.