



ESO Statement under Agenda Item 4, General Exchange of Views.

Statement by Dr. Andrew Williams on behalf of the European Organisation for Astronomical Research in the Southern Hemisphere (ESO) to the 61st Session of the Scientific and Technical Subcommittee of United Nations Committee on the Peaceful Uses of Outer Space.

Dear Chair, Distinguished Delegates,

It is a great honour to deliver this statement on behalf of the European Organisation for Astronomical Research in the Southern Hemisphere, known as ESO. First, I would like to congratulate you, Madame Chair, for your election, and we welcome Mrs. Aarti Holla-Maini for her appointment as Director of UN OOSA.

Dear Chair,

I'm pleased to report to the Committee that with the support of our 16 Member States under the framework of our intergovernmental treaty, our Host State Chile, and Australia—our strategic partner, ESO's astronomy programmes are on a strong footing, despite the difficult ongoing economic situation.

Our top programmatic highlight from the past year is passing the 50% construction milestone on ESO's Extremely Large Telescope, or ELT. With a primary mirror of 39m in diameter, the ELT will be the world's largest optical and infrared telescope at its first light towards the end of this decade. The ELT will enable unprecedented exploration of outer space and will track down Earth-like planets around other stars, and search for evidence of life outside of our Solar System. It will also probe the furthest reaches of the cosmos, revealing the properties of the very earliest galaxies and the nature of the dark Universe.

Dear Chair,

With respect to our scientific achievements, ESO continues to be the world's most productive astronomical observatory, providing a range of world leading facilities to the global astronomy community. All four Unit telescopes of ESO's Very Large Telescope, for example, were used to observe the aftermath of the collision between NASA's Double Asteroid Redirection Test (DART) spacecraft and the asteroid Dimorphos. The first results became available last year, adding to knowledge about the asteroid's composition and properties and thus supporting efforts for planetary defence.

We celebrated the 10-year anniversary of the Atacama Large Millimetre / Sub-Millimetre Array, or ALMA, which is an international partnership amongst Europe, represented by ESO, North America, and East Asia, in cooperation with the Republic of Chile.

ALMA is to date the world's largest astronomical observatory resulting from international cooperation and has enabled many amazing science discoveries due to its powerful capabilities. Delegates may be familiar with Trojan asteroids—rocky bodies in the same orbit as a planet—which are common in our own Solar System.

In July last year, astronomers using ALMA found evidence of a possible 'sibling' of a planet orbiting a distant star. The team detected a cloud of debris that might be sharing this planet's orbit and which could be the building blocks of a new planet or the remnants of one already formed. If confirmed, this discovery would be the strongest evidence yet of Trojan planets—or two planets sharing one orbit.

Dear Chair,

Astronomy plays a vital role in space exploration, science, and planetary defence. It also promotes interest in scientific and technical studies and careers and helps build national capacity for space capabilities. The increasing number of artificial space objects, particularly satellite constellations in low earth orbit, poses challenges to astronomy research as it affects the ability to conduct fundamental science.

In 2023, we saw recognition of the importance of Dark and Quiet Skies in the G7 Science Ministerial communique, at the ITU World Radio Conference and in the ESA-led Zero Debris Charter, in addition to other voluntary industry charters. ESO appreciates the efforts of many COPUOS Member States and Observers to raise attention about this matter to this Committee and its subcommittees and to find consensus on the way forward for a Dark and Quiet Skies Agenda item. We pledge our support to the efforts of the Committee to assume ownership of this important space governance challenge to safeguard global access to knowledge of our Universe.

Dear Chair, Distinguished Delegates, thank you for your kind attention.