

Statement by IAWN Representative to STSC 62nd session

Thank you, Madame Chair, for the opportunity to address the Subcommittee. on behalf of the International Asteroid Warning Network (IAWN) as a member of its Steering Committee.

Distinguished delegates,

Recognizing that the large asteroid Apophis will have a momentous close approach to Earth on 13 April 2029, IAWN applauds the actions of the Subcommittee, Committee, and General Assembly that led to the declaration of 2029 as the International Year of Asteroid Awareness and Planetary Defence.

There are now 61 official signatories to the IAWN Statement of Intent, representing independent astronomers, observatories, and space institutions from 28 countries. The Steering Committee of IAWN has held review meetings about twice each year, most recently on 4 February of this year.

The current IAWN collaboration brings to bear a variety of ground-based and space-based telescopic assets to discover, track, and characterize near-Earth-objects (NEOs), as well as abilities in orbit computation, potential impact predictions and modeling of potential impact effects. The signatories to the Statement of Intent recognize the importance of collaborative data analysis and being adequately prepared for communications with a variety of audiences about NEOs, their frequent close approaches to the Earth, and Earth impact risks.

IAWN is developing future capabilities to accelerate the discovery of NEOs. ESA's Flyeye telescope is currently being assembled in Matera, Italy with the assistance of ASI. NASA's NEO Surveyor space telescope is on track for intended launch in autumn of 2027.

IAWN also contributed to a hypothetical scenario exercise that the Space Mission Planning Advisory Group (SMPAG) is holding in preparation for the International Academy of Astronautics Planetary Defense Conference to be held in South Africa in May of this year.

Distinguished delegates,

The capabilities of IAWN were critically demonstrated on 29 January 2025 when IAWN sent official notification to the United Nations Office of Outer Space

Affairs for dissemination to member states of a recently discovered potential future asteroid impact threat predicted for 22 December 2032

The asteroid designated 2024 YR4 was first reported on 27 December 2024 by the Asteroid Terrestrial Last Alert System (ATLAS) station of the University of Hawai'i in Chile during NEA search operations for NASA. The worldwide network of observatories of the IAWN continued to submit follow-up observations to the Minor Planet Center and the impact probability was independently calculated by the NASA JPL Center for Near-Earth Object Studies the ESA Near-Earth Objects Coordination Centre, and the NEO Dynamics Site. Once the three orbit computation centers were in agreement that the 1% impact probability threshold had been crossed, the IAWN Steering Committee began to coordinate the official notification of a 1.3% probability of a future impact.

Asteroid 2024 YR4 is likely to be in the range 40–90 meters in size, which could result in blast damage should it impact Earth. The impact probability is changing daily with continued telescopic observations. As of this morning the probability of a future impact is 1.9%, so it has about a 98% chance of missing Earth on 22 December 2032.

Madame Chair,

I call your attention to Conference Room Paper 6 on the status of IAWN and SMPAG which documents the IAWN notification about asteroid 2024 YR4 along with the thresholds and criteria agreed by IAWN and SMPAG.

Distinguished delegates,

The worldwide network of IAWN will continue to track asteroid 2024 YR4 through early April 2025 when it will become too faint to be observable from Earth until June 2028. The three orbit computation centers of IAWN will continue to update the impact probabilities on their public websites and IAWN will again officially notify the United Nations Office of Outer Space Affairs for dissemination to member states should the impact probability rise above the 10% threshold for notification or more likely drop below the 1% threshold.

Thank you for your kind attention.