

## **Statement by IAWN Representative to STSC 57<sup>th</sup> session**

Thank you, Madame Chair, for the opportunity to address the Subcommittee.

### **Distinguished delegates,**

The International Asteroid Warning Network (IAWN) was established in 2014 as an international collaboration of astronomical organizations involved in discovering, tracking, and characterizing near-Earth objects (NEOs) that pose an impact hazard to Earth. Since the inception of operations in 2014, the IAWN has seen continued growth in the worldwide astronomical observation capabilities. The Steering Committee of IAWN has held review meetings generally twice each year, most recently on 5 February of this year on the margin of the current session of the Scientific and Technical Subcommittee. Participants at this meeting included representatives of the Space Mission Planning Advisory Group (SMPAG).

There are now twenty-five (25) official signatories to the IAWN Statement of Intent, representing observatories and space institutions from Europe, Mexico, Israel, the Republic of Korea, Russia, Colombia, China, Canada, Croatia, and the United States, as well as independent astronomers from the United Kingdom, Brazil, Spain, Italy, Russia and the United States. These participants bring to bear a variety of ground-based and space-based telescopic assets to discover and observe NEOs; as well as abilities in orbit computation, potential impact prediction 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 close approaches to the Earth, and Earth impact risks.

Significant activities by IAWN signatories in the last year include:

- Approximately, 27.8 million observations of asteroids and comets were collected in 2019, with over 200,000 on NEOs alone, by the worldwide efforts of astronomical observatories in over 40 countries;
- A record 2,433 NEOs were discovered in 2019;
- The number of known NEOs was 22,212 as of 5 February 2020, with more than 2,000 asteroids now catalogued whose orbits bring them within 8 million kilometers of Earth's orbit;
- On 24 July, 2019, a bright NEO was discovered by a new IAWN member, the Southern Observatory for Near Earth Asteroids Research (SONEAR) in Brazil. The object was designated 2019 OK by the Minor Planet Center, and it is estimated to be around 100 meters in size. Only 12 hours after discovery, the asteroid passed 72,000 km from the surface of Earth. This is the closest known approach of an object this size in the last 100 years, underscoring the need for IAWN to provide warning and further motivating IAWN signatories to work toward improve capabilities for discovering NEOs.
- On 30 August 2019, new IAWN member Gennady Borisov, using his independently-operated MARGO Observatory, discovered a comet. After additional observations were obtained by astronomers worldwide, orbital calculations indicated the comet originated from outside our Solar System, making it only the second known interstellar object. The Korea Astronomy and Space Science Institute and the Catalina Sky Survey in the United States have begun a collaboration involving software sharing in order to optimize the operation of KASI's 1.5m southern hemisphere survey telescope, as well as improve the asteroid detection operations for both programs.
- ESA and NASA are both continuing development of a new generation of survey telescopes in order to accelerate the discovery of NEOs.

**Distinguished delegates,**

The IAWN brings together international experts across a variety of relevant disciplines for the discovery, characterization and notification of the potential hazard to the Earth posed by asteroids and comets, and enables actions that could be taken to prevent or minimize the devastating effects of an asteroid impact. Should a credible impact threat be discovered by the network, the best information available will be provided by the IAWN and disseminated to all member states through the United Nations Office of Outer Space Affairs.

The next IAWN Steering Committee meeting is planned for late September 2020 in proximity to a critical data node of the network, the Minor Planet Center in Cambridge, Massachusetts, USA, to review progress, current issues, and future milestones.

Thank you for your kind attention.