HUN REN | Research Centre for Astronomy and Earth Sciences CSFK

HUN-REN Research Centre for Astronomy and Earth Sciences

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The Steering Committee of the
International Asteroid Warning Network
Attn.: Dr. Kelly Fast
IAWN Coordinating Officer

March 14, 2024

Dear Members of the Steering Committee,

Hereby, on behalf of the Konkoly Observatory of the HUN-REN Research Centre for Astronomy and Earth Sciences (MPC observatory codes: 461, 561 and K88), I wish to express our intent to join the International Asteroid Warning Network. Attached I send you a brief description of our capacities and track record in Near Earth Object discoveries. We are thrilled to become a member of IAWN and contribute to its very important work in planetary defense activities.

Yours sincerely,

László Kiss

Director-General of the HUN-REN RCAES

Appendix: A brief description of the Konkoly Observatory and NEO observations

The Piszkéstető Mountain Station of the Konkoly Observatory is the largest Hungarian astronomical observatory, where the most effective discovery machine is the 60/90/180-cm Schmidt telescope. This instrument has been constantly upgraded over the past 20+ years and various astrometric surveys have reported their minor planet measurements under different **MPC Observatory Codes: 461, 561 and K88**. The latter one refers to the latest dedicated project for NEO discoveries, led by Mr. Krisztián Sárneczky, who has made very significant achievements in minor planet research since his first steps in this field.

The most important examples of our NEO search efforts:

1. As of writing, Mr. Sárneczky is running our NEO Survey on the recently upgraded Schmidt-telescope, which is now equipped by a 10k x 10k CCD that captures 9 square degrees as a single field-of-view, with limiting magnitudes 20-21 in 3 minutes of exposures. **Its telescope time is 100% dedicated to NEO search.**
2. In total, Mr. Sárneczy has found over 700 numbered Main Belt asteroids, 209 Near-Earth Objects, 5 supernovae and 3 novae in the Andromeda galaxy. With this, he is the most efficient discoverer of all time in Hungary.
3. Over the last two years, Mr. Sárneczky found three imminent impactor NEOs, all having been discovered three to six hours before they impacted Earth (2022EB5, 2023CX1, 2024BX1). Since 2008, there were 8 such discoveries in total, of which 5 were discovered by major American programs in the US, the rest being Mr. Sárneczky's discovery. No one else exists today with comparable efficiency (and luck) in Europe or Asia.

With this background we would like to contribute to IAWN with new discoveries, follow-up observations and characterisation of newly discovered NEOs.