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Seeking Synergies Among the Technical and Non Technical Aspects for Planetary Defense During COVID -19 - Lessons Learned

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Session: Impact Management & Consequences

ABSTRACT

The Chelyabinsk meteor, Russia, Feb 15, 2013. The blast released energy equivalent of around 440,000 tons of TNT, generated a shock wave that shattered glass over 200 square miles, damaged some buildings and injured over 1,600 people, mostly due to broken glass. Chelyabinsk was another wake up call that showed us the importance of monitoring small bodies in space that could pose a threat to Earth.

Exercise PDC 2021: "The day after 2021 PDC is discovered, JPL's Sentry impact monitoring system, as well as ESA's similar CLOMON system, both identify several future dates when this asteroid could potentially impact the Earth. Astronomers continue to track the asteroid every night after discovery, and the impact probability steadily increases. Very little is known about its physical properties. Its size, in particular, is highly uncertain. Based on its mean apparent visual magnitude, the asteroid's absolute (intrinsic) magnitude is estimated to be H = 22.4 +/- 0.3. If 2021 PDC's albedo (reflectivity) is 13%, a typical mean value, this H value implies a mean asteroid size of about 120 meters. But the true albedo is not known and the asteroid's size could therefore range anywhere from as small as 35 meters to as large as 700 meters."

This paper wishes to provide insights about the importance of exploring the synergies among the technical and non technical aspects for Planetary Defense, such as e.g. 1, missions, new technologies, 2. inter-agency cooperation and 3. Raising awareness and communicating to the general public. The current global crisis due to COVID-19 pandemic has shaken the world and many dynamics were disrupted within Planetary Defense. **Can we make use of the global response to the pandemic and can the lessons learned in terms of readiness, cooperation between technical and non technical aspects and national and international coordination be applied to a global response to an asteroid impact threat? Are we able to provide the support backbone for regional or global recovery, in case of an inevitable impact and aftermath?**

The specialists will explore the PDC Exercise 2021 to answer the questions mentioned above, seeking to develop a unifying language in order to be better prepared and to have a less fragmented, staggered response to an impact threat. Continuing building bridges between the technical and nontechnical aspects, could increase our chances for a successful deflection and/or mitigation/Impact management campaign to protect Earth from asteroids in the years to come.

Comments:
- Alternative session: Disaster Management & Response
- The speaker will summarized the author's responses (An approved summary) for the oral presentation.