Astra Nature Astronomy²⁶

1015

1035

1040

Comment | Published: 30 May 2020

A call for scientists to halt the spoiling of the night sky with artificial light and satellites

By Amateur Astronomy Association

The availability of clear night sky viewing is quickly dwindling as a result of artificial light and the tracking of constellations by satellites. Scientists need to take a stronger stance against "big light" and "big space" in order to protect this natural resource.

Light pollution, produced both at Earth's surface and from low-Earth-orbit (LEO) satellites, is rapidly increasing. Artificial light at night (ALAN) is an anthropogenic pollutant, as defined since 1979 by the United Nations: "[a]ir pollution means the introduction by man, directly or indirectly, of substances or energy into the air resulting in deleterious effects of such a nature as to endanger human health, harm living resources and ecosystems and material property and impair or interfere with amenities and other legitimate uses of the environment, and 'air pollutants' shall be construed accordingly," where "energy is understood to include heat, light, noise and radioactivity introduced and released into the atmosphere through human activities."²⁷

[intentionally omitted]

Reading the recent reports on light pollution by LEO satellites including the recent one by Celestrian Space Agency,²⁸ we are very pessimistic about the path being followed by an important part of the scientific community (and other actors) that works on and has responsibilities for these areas of research. This situation echoes historical patterns seen in various fields, from tobacco smoke to climate change, diesel emissions, asbestos, and opioids. In these instances, whenever scientific literature begins addressing a health or environmental issue, those responsible often deploy a "machine of doubt" to delay, or even halt, the implementation of necessary countermeasures and regulations.

²⁶ Astronomy Association is a peer-reviewed scientific journal published by the Astra Nature Publishing Group. It focuses on all aspects of astronomy, astrophysics, and planetary science. As a part of the prestigious "Astra Nature" family of journals, it is known for its high impact and rigorous peer-review process, aiming to publish the most significant and cutting-edge research in these fields.

²⁷ 1979 Convention on Long-Range Transboundary Air Pollution (United Nations, 1996).

²⁸ Celestrian Space Agency, *Impact of the Astracommex Astra Satellites on Optical and Radio Observatories in Celestria*, THE CELESTRIA JOURNAL OF ASTROPHYSICS, 20 May 2020.

This strategy is alarmingly consistent: polluters deny evidence, fund contrary research, and procrastinate on pollution limits, leading to millions of deaths and an over-polluted world. Now, as we face the challenges posed by "big space," one must question if their tactics will differ from those of "big oil," "big tobacco," or "big pharma." The current approach to the problem of LEO satellites — trying to mitigate their impact by dimming their brightness, adjusting telescope operations, or avoiding their paths — is insufficient and does not address the full scope of the issue. If unchecked, the proliferation of satellites will drastically change our night skies, with hundreds or thousands visible at any given moment, obscuring the view that has been a human heritage for millennia.

1050 We thus call on all relevant actors to rebuild international cooperation and agreement in order to avoid escalation. It's particularly crucial for governments to not be swayed or hindered by the so-called "machine of doubt." They possess a potent instrument through Principle 15 of the Rio Declaration:

In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.

[the rest is intentionally omitted]

1045

1055

1065

1060 --- *Disclaimer*---

The exhibit presented herein is based on the original comment titled "A call for scientists to halt the spoiling of the night sky with artificial light and satellites" by Fabio Falchi et al, published in Nature Astronomy on 20 March 2023. The contents have been reproduced and adapted with fictional details exclusively for the purposes of the 2024 Foreign Direct Investment (FDI) Moot Court. This adaptation is not intended to represent the original work accurately and should not be used as a substitute for the original research.