

Physics & Astronomy Colloquium

Presents



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Thursday, October 13, 2022
12:10 pm, Webster Room 11

“Megaconstellations of Satellites are Ruining the Night Sky for Everyone”

Several companies are now launching megaconstellations of thousands of communication satellites (satcons), which would increase the number of active satellites in Low Earth Orbit at least twenty-fold in the next few years. SpaceX's Starlink satcon is currently largest (3,400 satellites launched so far) and is adding 60 new satellites every couple of weeks. While these satcons do allow internet access in many underserved rural and remote locations, the costs are prohibitively high for all but the most well-off customers. These thousands of satellites each reflect sunlight, causing serious problems for research astronomy, and making anthropogenic light pollution a fully global phenomenon that cannot be escaped anywhere on Earth. Our recent simulations show that because of geometry and the chosen satellite orbits, latitudes near 50 degrees N and S will see the worst light pollution from these satcons, with hundreds of naked-eye visible satellites all night long in the summer. These satellites also contribute to significant atmospheric pollution, both on launch and re-entry, contribute to diffuse sky emission, and drastically increase the very real threat of Kessler Syndrome. I will talk about how these satellites will affect stargazers and astronomers worldwide, and what you can do to help mitigation efforts.

Host: Dr. Guy Worthey

ZOOM Information: Meeting ID: 965 8240 9398 • Passcode: physastro