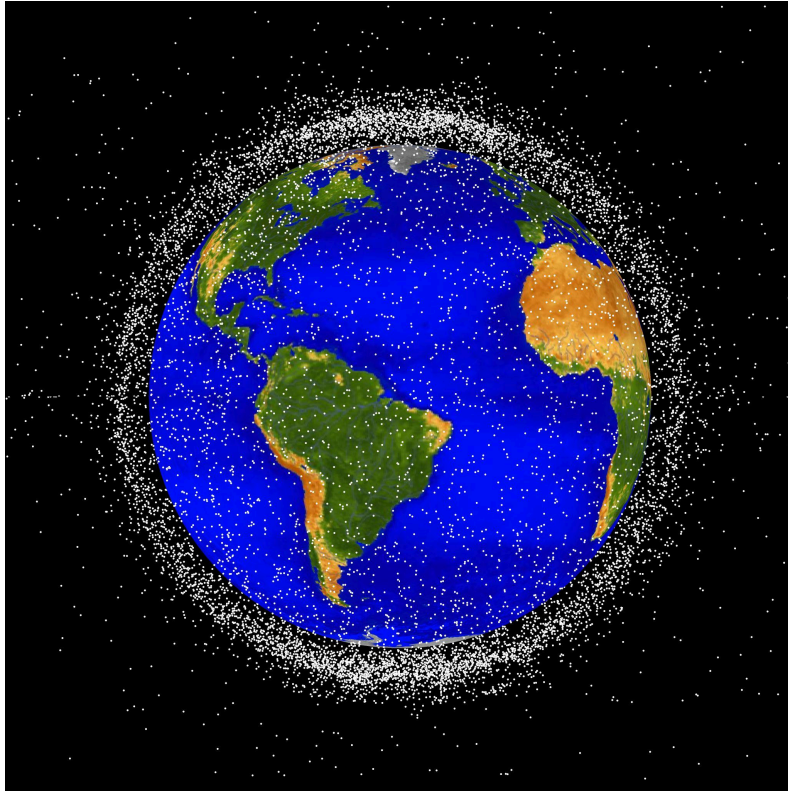


Dec 4., 2023

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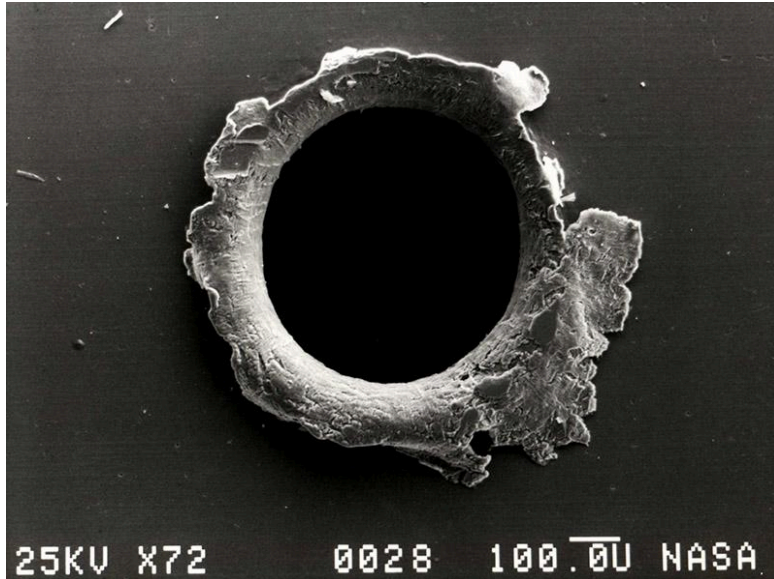
Katherine McAlpine, kmca@umich.edu

Captions: Tracking undetectable space junk



[Space Junk Cloud.jpg](#): A computer-generated image of trackable objects in low Earth orbit. Each dot represents an object, and around 95% of them are debris. The trackable objects are already beginning to form a cloud of debris around Earth, but there are millions of smaller pieces that can't be tracked from the ground. Photo credit: NASA Orbital Debris Program Office.

Alt text: The space junk appears as many small white points surrounding Earth, which has bright blue oceans and green and brown continents. The space junk is thick enough to form a cloud that obscures most of the black background when viewed from the edges around Earth.



[Impacts-solarmax-hole.jpg](#): A piece of space junk punched this hole into the hull of NASA's Solar Max spacecraft. Photo credit: NASA Orbital Debris Program Office.

Alt text: A deep black hole sits in the middle of a gray spacecraft hull. The hull has warped around the impact site, forming ridges that fold back toward the spacecraft.

[All images](#)

[Video:](#)

Video caption: A simulation of two pieces of aluminum space junk colliding at 22,000 miles per hour. The resulting collision destroys the aluminum particles while creating an electric burst similar to lightning, which is depicted as blue and red points. Positive charge is shown in red while negative charges are shown in blue. This electric signal could be used to track both individual pieces of space junk and clouds of tiny particles with ground-based radio dishes.