World Live TV World / Climate Nearly 30,000 objects are hurtling through near-Earth orbit. 1972's "Blue Marble" photo from Apollo 17 may have inspired Earth Day, but few considered the orbital garbage created to take it until 1979, when NASA scientist Donald Kessler published a paper titled "Collision Frequency of Artificial Satellites: The Creation of a Debris Belt." ????? An illustration showing the ERS-2 RELATED ARTICLE A 5,000-pound satellite is expected to fall to Earth this week Ever since, "Kessler Syndrome" -- depicted with appropriate suspense in the 2013 film "Gravity" -- has been shorthand for the industry's worry that too much space traffic will eventually create a vicious cycle of more debris leading to even more collisions until launches become impossible. NASA ODPO The study found that 10% of the particles in the upper atmosphere now contain bits of metal from rockets or satellites falling out of orbit and burning up. As humanity becomes increasingly dependent on information beamed down from above, the report predicts manmade debris will make up 50% of stratospheric aerosols in coming decades, matching the amount created naturally by the galaxy. While there is uncertainty over how this will affect the ozone layer -- and a complicated climate system already in crisis -- the commercial shift from solid rocket boosters on NASA's Space Shuttles to the kerosene that fuels SpaceX rockets has added tons of new fossil fuel emissions with every launch, while aging satellites create clouds of debris as they deorbit. That's not just a problem for space By Bill Weir, CNN Chief Climate Correspondent 5 minute read Updated 2:13 PM EST, Wed February 21, 2024 Space debris is becoming a major problem, with thousands of more satellites on track to launch through the end of this decade. The moment a NASA astronaut lost his spatula in space 03:05 - Source: CNN According to the tracking site Orbiting Now, there are more than 8,300 satellites currently overhead, and predictions of how many will soon join them vary wildly. And after NOAA used high-flying aircraft to take first-in-a-generation samples of the stratosphere, new science shows that the for-profit space race is changing the sky in measurable ways and with potentially harmful consequences for the ozone layer and Earth's climate. The US Government Accountability Office predicted 58,000 satellites will launch in the next six years.

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