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Responding to New Space Challenges: AAS Statements on Reentry Effects and Spaceflight Transparency

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Humanity's increasing level of activity in outer space is starting to have an environmental impact, including impacts of concern to astronomers. The AAS recently issued two statements drawing attention to these impacts.

The first statement is on the need for transparency in activities beyond Earth orbit. We are moving into a new era where many countries and companies are sending spacecraft to the Moon and beyond, but there is a lack of systematic information about the trajectories of these spacecraft. Our statement calls for such orbital information to be public, reducing confusion of these aritifical objects with natural and potentially hazardous asteroids.

The second statement draws attention to the poorly understood impact of fhe large and rapidly increasing number of satellite reentries on the chemistry of the upper atmosphere, as well as changes to the night sky from launch and reentry emissions, and urges appropriate research on the topic.