

Challenges for ion measurements in a comet mission

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The Comet Interceptor mission, led by ESA, aims at a long period comet or an interstellar object. JAXA will provide an ultra-small (24 U) daughter spacecraft, whose closest approach will be less than 1,000 km, allowing the first-ever multi-spacecraft fly-by observations of a comet. The small gravity and high gas production rate of comets set neutral-plasma environments that are unique in the solar system, which provides insights into plasma universe. Here we present three challenges for ion measurements in Comet Interceptor: (1) harsh dust environment, (2) necessity of a large field of view, and (3) low-resource instrumentation.

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