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Rossi and Space Physics

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The beginning of the Space Age opened a new realm of exploration and Bruno Rossi immediately focused on devising an instrument for studying the interplanetary environment. The modulated Faraday cup that he and his colleagues developed was launched on Explorer X on March 21, 1961. Although the lifetime of the battery-powered spacecraft was only 60 hours, that was long enough for the MIT plasma probe to reveal a hot, supersonic solar wind flowing along the flank of the Earth's magnetosphere. The legacy of that first short flight now extends outward on a 34-year journey to 98 AU where the plasma probe on Voyager 2 measures the deflection of the subsonic wind as it approaches the outer frontier of the heliosphere and contact with the interstellar plasma outside. Over the coming decade that legacy will extend inward to within 0.05 AU of the Sun as the plasma probe on Solar Probe Plus explores the region near the inner frontier and the source of the supersonic solar wind. The exploration of the solar wind from near its beginning outward to its end will be a lasting tribute to Bruno Rossi's contributions to Space Physics.