

SPACE SCIENCE & SPACE ECONOMY



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Will it be possible in the future to realize large, complex space missions dedicated to basic science like HST, Chandra and JWST? Today's space scenario is completely different from that of even five years ago, and certainly from that of the time when HST, Chandra and JWST were made. Space-related investments have grown exponentially in recent years, with monetary investment exceeding half a trillion dollars in 2023. This boom is greatly aided by the rise of the so-called “new space” economy driven by private fundings, which for the first time last year surpassed public investments in space. The establishment of a market logic in space activities results in more competition, cost and time reduction. Can space science take advantage of the benefits of the new space economy to reduce cost and development time and at the same time succeed in producing powerful missions in basic science? The prospects for Europe and the USA are considered. We argue that this goal would be made possible if the scientific community could take advantage of the three pillars beyond the innovation of the new space economy: (1) technology innovation proceeding through both incremental innovation and disruptive innovation, (2) business innovation, through vertical integration and scale production, and (3) cultural innovation, through risk openness and iterative development.



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