



Future perspectives on space exploration and options for Europe

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This paper is intended as a first step in paving the way towards further reflection on the future position and role of Europe in space exploration. It provides a contribution to strategic policy-making at the European level by highlighting some of the variables influencing the evolution of the international system in which Europe will have to operate until 2025, as well as plans and ambitions for major and emerging space actors.

Space exploration is an emblematic domain of space activities where traditionally only established space powers have been active. But, following the evolution of the space context new actors are increasingly interested to be involved in those activities principally for international prestige reasons. An increasing number of actors are thus taking on ambitious plans with orbiters, robotic landers, sample return and human exploration missions. However, complementing national endeavours international cooperation has over the years become a central element of the strategy of most countries involved in space exploration since it is a demanding effort.

Human and robotic space exploration endeavours are embedded in a complex system of different “earthly” factors. These determinants will influence the decisions taken today for programmes which will be carried out in the future. It is therefore indispensable to be prepared for the on-going changes in the world which might affect the planning and the aspirations of space-faring countries. Europe’s long-term exploration programme thus cannot be decoupled from emerging global trends and the plans of other major space-faring actors who shape the global environment for space exploration. The development of Europe into a fully-fledged actor in space exploration plans requires consequently a shared assessment of the future challenges, threats and opportunities with which it will be confronted with. Europe will have to take into account the evolution of key structural factors affecting changes over the two decades to come (demography, economy, environment, energy etc.) and the development of future potential partners to derive the best options for leading and anticipate rather than following and enduring change.