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THE QUESTION OF “WHY?” – RATIONALES FOR SPACE EXPLORATION

Abstract

Whilst commercial spaceflight like for communication applications, navigation and weather forecast are widely accepted as part of national and societal development, space exploration missions beyond Low Earth Orbit (LEO) are repeatedly being questioned. Considering the required budgets and commitment for new substantial exploration programmes, agencies and other participants have to prepare a transparent and solid rationale about why to invest in exploration. There are various objectives and rationales that can be identified; however, not all are equally important for all stakeholder groups. Priorities even may vary amongst space agencies and governments. Space exploration is recognized as a driver for technological innovation and as a tool for unique planetary and life science. Other rationales are human curiosity and pioneering as well as philosophical and ethical quests; at the same time, leading or participating in space exploration cooperation can also be an instrument of politics. Another view is taken by the upcoming commercial industries that are developing new business cases for activities in exploration. Taking a closer look, benefits from missions and programmes can be classified into different categories, which are of different weight for stakeholder groups. This paper compiles and categorizes rationales for space exploration and looks at priorities of different stakeholders. Additionally, the antithesis – what, if a space faring country does not participate in space exploration – is being looked at.

After all, the decision for a mission or programme is a political one. Therefore, space organisations should actively address the question of “Why?” with respect to their decision makers, specific stakeholder groups and international partners. International fora such as ISECG, the International Space Exploration Coordination Group, and ISEF, the International Space Exploration Forum, may foster the dialogue on programmatic and political level, respectively. Understanding each other’s rationales for exploration will help developing sustainable partnerships and programmes in the long-term.