

# Space Antennas challenges and proposed ways forward: An ESA Perspective

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## **Abstract**

The topic of space antenna sub-systems is very wide due to the need to cover all types of applications including Earth Observation, Telecommunications, Navigation, Science as well as TT&C, manned spacecraft and user terminals. This talk presents the ESA perceived future needs and promising techniques/ technologies in this domain. The very diverse requests to enable space missions are grouped in several major challenges where actors in the space antenna domain shall bring solutions. For each of them, the problem areas together with the targeted applications are identified. This is followed by the identification of the present and expected future space missions in need. Finally, several antenna concepts and technologies considered as having strong potential and deserving developments are presented with the objective to provide trends for the future.