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ESA'S PROJECT FOR ON-BOARD AUTONOMY: PAYLOAD OPERATION DESIGN

Abstract

Following the successful operations of PROBA-1 and PROBA2, PROBA-V is approaching its launch. Several new concepts of payload planning and commanding have been implemented to increase the on-board autonomy of the payload operations. These concepts will be discussed in detail on the examples of the solar observation instruments onboard PROBA-2 and the Earth remote sensing imager onboard PROBA-V. For both spacecraft, the lifecycle from long-term observation planning to instrument commanding will be discussed, identifying the pro's and con's of the implemented approaches and giving an outlook into potential further usage and expansion of the concepts.