Training Opportunity for Swiss Trainees

Reference	Title	Duty Station
CH-2019-OPS-OEE	SMOS Operations	ESAC

Overview of the unit's mission:
Launched in 2009, ESA's Soil Moisture and Ocean Salinity (SMOS) mission performs global observations of soil moisture over land and salinity over oceans. It carries a novel, L band, interferometric radiometer (MIRAS) to capture "brightness temperature" images and deriving from it maps of Soil Moisture and Ocean Salinity.
The SMOS spacecraft is operated as collaboration between CNES (Toulouse), which controls the PROTEUS platform, and ESAC (Madrid), which controls and plans the MIRAS payload operations.
At ESAC, the SMOS Flight Operations Segment (FOS) is a small multidisciplinary team providing onsite operational support during regular working hours, and on call support 24/7, and manages the SMOS payload operations. FOS operational tasks include maintenance of the ground segment, payload operations, mission planning tasks and developing of the SW operational tools.

Overview of the field of activity proposed:
Working as a member of the SMOS Payload Operations Team, the trainee will assist the Instrument Operations Manager in a number of operational activities linked to the operations of the SMOS Instrument Operations Segment (IOS), including among others:
  ➢ Analyzing, assessing, implementing and testing the tools already available within SMOS IOS to support, evolve and enable operations automations. Further, the trainee shall investigate other tools and concepts that can be re-used within the SMOS operations to evolve the concepts. The tasks include research but mainly "training on the job", whereby the final objective of the trainee is to operationally deploy a system/set of systems developed during the trainee
  ➢ Learn and later support the day-to-day operations of the SMOS mission, being ready at the end of the trainee-ship to understand the operational concepts, use of procedures and databases linked to this and any similar Earth Observation mission within the Earth Observation Missions Division.
  ➢ Analyse instrument thermal anomalies and to simulate and provide future operational alternatives.

Required education:
Applicants should have just completed, or be in their final year of a University course at Masters Level (or equivalent) in a technical or scientific discipline (Engineering, Computer Science, Physics, etc).
Good analytical mind and knowledge of high level programming languages such as Python or Java would be desirable.