

Training Opportunity for Portuguese Trainees

Reference	Title	Duty Station
PT-2020-EOP-PES	Mission Analysis	ESTEC
<p>Overview of the unit's mission: EOP-P System Analysis office provides mission and system support to all Earth-Observation missions in all phases of the life of a spacecraft.</p> <p>Most of the task are related with classical mission analysis work with special emphasis on</p> <ul style="list-style-type: none"> • Feasibility studies, mission definition and consolidation of mission analysis requirements. • Constellation design and formation flying. • Selection and definition of operational orbits, • Orbit / constellation acquisition • Orbit propagation and maintenance strategies • De-orbit and space debris mitigation requirements compliance, re-entry, etc. <p>Additional task are related with</p> <ul style="list-style-type: none"> • Geolocation, attitude (models) • Review of mission status and verification of mission and system requirements, including delta-v budgets, performance and design consistency. • Provision of improved strategies and new concepts. Identifying and solving critical problems throughout all mission phases. • Support in simulations campaigns and LEOP's for Sentinels and Earth Explorers missions. • Support with launcher trajectory analysis and reviews. (VEGA, Soyuz, Rockot, Dnepr and SpaceX) 		
<p>Overview of the field of activity proposed: Synergism between Earth-Observation projects is used more frequently. In the wake of core missions like Sentinels, several spacecrafts are being conceived to fly in tandem to benefit from a co-registration or to receive a reflected signal (Bistatic SAR).</p> <p>EOP-PES actively supports the projects who require such a (tandem) constellation. For that support orbit maintenance strategies need to be conceived, simulated and validated.</p> <p>EOP-PES would like to offer the opportunity to a Portuguese Trainee to propose strategies for orbit maintenance of projects like Harmony and Rose-L, to demonstrate the performance and to interact with projects and flight dynamics on this aspect.</p>		
<p>Required education: Orbit propagation, simulation, mathematics & physics Software coding experience</p>		

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