



Job Description and Person Specification IRC233369

Job Description	
Department / Division:	NOC DST Marine Physics and Ocean Climate This job will be based at NOC Southampton
Post Title:	Ocean Altimetry Development Specialist
Grade:	NERC Band 6
Posts Responsible to (and Level):	Dr Paolo Cipollini - NERC Band 5
Posts Responsible for (and Level):	None
Job Purpose:	
<ul style="list-style-type: none"> Develop processing techniques and software for sea level, sea state and ocean dynamics monitoring from conventional and SAR altimetry in the Open Ocean and coastal zone, including implementation in software to allow routine processing of large data volumes and the generation and analysis of new and improved altimeter products and datasets. 	
Key Accountabilities/Primary Responsibilities:	% Time
<ul style="list-style-type: none"> Designing and testing low-level processing techniques (L1 to L2) for conventional and SAR-mode radar altimetry over the open ocean and coastal zone. 	20%
<ul style="list-style-type: none"> Design and Implementation of software for the generation and analysis of new and improved Altimetric datasets based on the above techniques. 	50%
<ul style="list-style-type: none"> Support exploitation for oceanographic applications of new improved altimetry data. 	10%
<ul style="list-style-type: none"> Participate in regular project and group meetings at NOC and with ESA. 	10%
<ul style="list-style-type: none"> Write reports and scientific papers and present findings at project workshops and international scientific conferences. 	10%
Internal & External Relationships (nature & purpose of relationships):	
Internal:	
<ul style="list-style-type: none"> The successful candidate will be located within the Satellite Oceanography Team (led by Dr Christine Gommenginger) in the NOC Southampton Marine Physics and Ocean Climate group. Will report to Dr Paolo Cipollini, and will benefit from interaction with scientists within MPOC and other groups covering both NOC Southampton and NOC Liverpool, as well as with colleagues in the British Oceanographic Data Centre in particular for what concerns the generation and dissemination of the new and improved datasets. Will liaise with the wide range of scientists that make NOC a world-class centre for marine research. In particular, for what most closely concerns this particular job profile, NOC have 30+ years of experience in monitoring the oceans with radar altimetry and have led and are leading the development of the novel field of coastal altimetry; NOC are also one of the leading institutions in research and development on SAR mode altimetry over the oceans and are at the forefront of validation and exploitation of altimetry data and their use in combination with in situ and state of the art models to study ocean dynamics and 	



ocean climate.

- Will have direct access to NOC expertise in Ocean Dynamics, Ocean Climate and Sea Level Climate (including on extreme events e.g. storm surges), which will enable the successful candidate to verify first-hand the impacts of the improved datasets and their compliance to the requirements of the science community.

External:

- The successful candidate will support NOC's contribution to major international initiatives on satellite altimetry such as ESA's CryoSat Quality Working Group, ESA's Sentinel-3 Validation Team, ESA's Sea Level Climate Change Initiative and the International Coastal Altimetry Community, which is coordinated by NOC.
- Will have ample networking possibilities in order to improve professional competence and draw new scientific collaborations, thanks to NOC's involvement in the initiatives above and in a number of international projects.
- Will be supported in the development of complementary interests and collaborations that benefit NOC's mission and the Satellite Altimetry community.

Expectations of Staff:

All staff are expected to:

- Comply with Research Council and NERC policies at all times, including Equal Opportunities Policies, and ensure that duties are carried out in accordance with relevant policies, procedures and guidance documents as directed by NOC.
- Promote and demonstrate a personal commitment to NOC values and People Strategy.
- Promote and demonstrate a personal commitment to Working with Respect – NOC Guidance.
- Attend relevant seminars, workshops and training events and maintain professional status by completing appropriate CPD.
- Maintain a safe working environment by attending Health and Safety training as required and follow local codes of safe working practices and actively contribute to embedding a safety culture across NOC.
- Adopt and promote awareness of NOC's environmental aims and other initiatives.
- Carry out other duties within the scope, spirit and general purpose of the post and adopt a flexible approach to work and be willing to participate in training where necessary.
- As duties and responsibilities change this job description will be reviewed and revised in consultation with the post holder.
- Undertake such other duties within the scope of the post as may be requested by your Manager.



Person Specification			
Criteria	Essential (Add ✓ where appropriate)	Desirable (Add ✓ where appropriate)	How to be assessed (Covering Letter and CV/ Assessment/ Interview)
<p>Personal Skills / Qualities: (Including Problem Solving and Initiative / Management and Teamwork)</p> <ul style="list-style-type: none"> • Able to discuss scientific questions relating to the job description. • Good time management skills. • Problem analysis and solving / troubleshooting. • Able to place technical problems in wider application context and develop appropriate solutions. • The ability to work both independently and within a team. 	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>		
<p>Knowledge & Experience related to position:</p> <ul style="list-style-type: none"> • Principles of remote sensing, including radar altimetry over the oceans. • Demonstrated experience in software development for satellite data processing. • Demonstrated experience in satellite data analysis. • Experience in satellite altimetry data low-level processing and re-tracking. • Experience in satellite altimetry data analysis. • Sound maths and statistics. • Knowledge of broader issues in oceanography and climate research. • Technical aspects of SAR altimetry. • UNIX / Linux proficiency. • Able to develop complex software in high-level programming language at pre-operational level. • MATLAB programming skills. • Python programming skills. 	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>	
<p>Qualifications:</p> <ul style="list-style-type: none"> • PhD in numerate discipline (or equivalent experience in research environment). • PhD in Remote Sensing (or equivalent experience in research environment). 	<p>✓</p>	<p>✓</p>	
<p>Presence / Communication Skills: (Including Planning and Organising)</p> <ul style="list-style-type: none"> • Good verbal and written communication skills. • Motivation for scientific research excellence. • Willingness and ability to lead to output impact (including data dissemination and publication of the results in peer-reviewed journals). • Ability to plan and organise their own research project. • Skill and experience in giving presentations. 	<p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p> <p>✓</p>		



<p>Special Requirements: (Examples include: Ability to successfully apply for a US Visa (ESTA) or CID Visa where required / Proficiency in Designated Security Duties / Requirement to travel both nationally and internationally / On call or shift working etc.)</p> <ul style="list-style-type: none">• Ability to travel to project meetings and conferences within the UK and internationally.		✓	
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