

**Job Title: Scientist – Terrestrial Hydrologic Science from Satellite Observations**

**Location: Pasadena, CA**

How much liquid fresh water do we have on Earth? How is fresh water moving on and within the continental surfaces? How can we use the unusual vantage point of orbiting satellites to better understand how Earth's fresh water stores and fluxes are evolving? Your mission - your opportunity - is to bring us closer to answering these questions. If you are driven to discover, invent, and inspire future generations, you are ready for JPL.

Located in Pasadena, California, JPL has a campus-like environment situated on 177 acres in the foothills of the San Gabriel Mountains and offers a work environment unlike any other: we inspire passion, foster innovation, build collaboration, and reward excellence.

You can learn more about Earth Science programs at JPL at the following site: <https://science.jpl.nasa.gov/EarthScience>.

You will work as a full-time scientist responsible for the analysis of Earth’s fresh water observations from satellites to provide the best possible estimates of water quantity, propagation, and changes in terrestrial liquid freshwater bodies. You will also closely collaborate with science teams at JPL to better harness existing remote sensing datasets from instruments such as [SWOT](https://swot.jpl.nasa.gov/), [Jason 3](https://sealevel.jpl.nasa.gov/missions/jason3/), and [NISAR](https://nisar.jpl.nasa.gov/), and to contribute to formulation studies of new mission concepts. This will include overseeing the development of retrieval algorithms in cooperation with missions and data centers. You will work in a dynamic team environment addressing ground breaking challenges in water quantity, related disasters (floods, droughts) across multiple spatial and temporal scales, the coupling of surface water processes with the water and energy cycles, and connections with the oceans and atmosphere.

You will be expected to seek research funding, mentor junior researchers, and publish scientific findings in top-tiered peer-reviewed scientific journals as well as presenting results in the related science team meetings, workshops and conferences.

**Qualifications:**

* PhD in hydrology or a related technical discipline.
* Proven experience with satellite measurements of Earth's liquid fresh water.
* Extensive experience with computer programming for hydrology.
* Excellent oral (including public speaking) and written communication skills.
* Experience working in a team environment.
* Strong interpersonal skills.
* Peer-reviewed publications that demonstrate the areas of required experience mentioned above are necessary.

**Preferred Qualifications:**

* Advanced knowledge of optical and/or radar capabilities and algorithms for detecting rivers and lakes is preferred. Outstanding candidates with satellite observation expertise for other terrestrial hydrologic variables (e.g. soil moisture, snow, precipitation, groundwater, subsidence) will also be considered.
* Prior experience with extracting rivers & lakes information from optical (*e.g.* [LandSat](https://landsat.gsfc.nasa.gov/)), radar (*e.g.* [Jason 3](https://sealevel.jpl.nasa.gov/missions/jason3/)), or other instruments is preferred. Outstanding candidates with expertise based on hydrologic observations from other satellites will also be considered.
* Ability to integrate multiple estimates of hydrologic quantities for scientific discovery, including through the use of big-data, machine learning, workflows, cloud computing and associated programing languages; for hydrological science outcomes.
* Strong interest in the formulation of new satellite missions.

Please visit https://jpl.jobs/ (**Job ID 2019-10917**) for a full description. Complete applications will include a 1-page cover letter describing the applicant's vision for their role at JPL in the general field of Earth Science with focus on Terrestrial Hydrology and outlining an interest in satellite mission formulation, a curriculum vitae including a bibliography of refereed publications and other research experience, a 2-page statement on research experience and research objectives, and contact information for three professional references.

**Applications received by September 16, 2019 will receive full consideration.**