



Conducting research for a changing society: This is what drives us at Forschungszentrum Jülich. As a member of the Helmholtz Association, we aim to tackle the grand societal challenges of our time and conduct research into the possibilities of a digitized society, a climate-friendly energy system, and a resource-efficient economy. Work together with around 7,500 employees in one of Europe's biggest research centres and help us to shape change!

The Institute of Climate and Energy Systems (ICE-4) at Forschungszentrum Jülich, in collaboration with the University of Colorado Boulder (Laboratory for Atmospheric and Space Physics) and the University of Wuppertal, is developing a satellite payload for NASA's Atmospheric Oxygen CubeSat Mission. The mission seeks to deepen our understanding of Earth's space environment and its dynamical response to influences from the lower atmosphere. Its long-term goal is to enable near real-time predictive capabilities to quantify the impacts of upper-atmospheric and ionospheric processes on human activities. To achieve this, the mission employs a 16-unit CubeSat equipped with two compact Spatial Heterodyne Interferometers. These instruments observe natural molecular oxygen emissions in limb-viewing geometry. From these measurements, atmospheric temperatures can be derived, providing insights into atmospheric wave dynamics.

We are looking to recruit a

PhD position in optical instrumentation for NASA's AtmoCube mission

Your Job:

- Conduct the assembly, verification, and calibration of a novel optical instrument in our Cleanroom-5 laboratory at the University of Wuppertal
- Work with a variety of calibration units, optimize and extend existing setups, develop a novel setup to perform an absolute radiometric calibration
- Perform a line-of-sight calibration to precisely align the instrument's viewing geometry with the satellite's star cameras
- Support the integration of the optical payload into the satellite at our partner site in Boulder, Colorado
- Participate in in-orbit calibration activities during the Commissioning and Early Operations phases
- Present your research at international conferences and in peer-reviewed journals

Your Profile:

The job will be advertised until the position has been successfully filled. You should therefore submit your application as soon as possible. We look forward to receiving your application via our

Online-Recruitment-System!

Questions about the vacancy?

Get in touch with us by using **our contact form**.

Please note that for technical reasons we cannot accept applications via email.
www.fz-juelich.de

- A Master's degree in physics or a related field is required
- Strong background in physics and/or optics, with enthusiasm for hands-on experimental work
- Willingness to work in a cleanroom environment with highly sensitive optical assemblies, including the evaluation of measurement data
- Proven laboratory experience and programming proficiency (Python or a comparable language)
- Ability to work independently and self-reliantly, while maintaining strong teamwork and collaboration skills
- Fluency in English

Our Offer:

We work on the very latest issues that impact our society and are offering you the chance to actively help in shaping the change! We offer ideal conditions for you to complete your doctoral degree:

- A three-year PhD project with a competitive salary in an international and stimulating research environment
- Integration into a multi-disciplinary team of PhD students and experts covering the full spectrum of satellite instrument development: design, manufacturing, characterization, data processing, and scientific analysis
- Opportunities to present your work at national and international conferences and to actively engage in project meetings
- Membership in the HITEC Graduate School, providing additional scientific and professional training, international networking, and exchange opportunities
- Comprehensive training courses and individual opportunities for personal and professional further development
- Part-time position with 19,5 hours per week and flexible working hours
- Further development of your personal strengths, e.g. through an extensive range of training courses; a structured program of continuing education and networking opportunities specifically for doctoral researchers via JuDocS, the Jülich Center for Doctoral Researchers and Supervisors: <https://www.fz-juelich.de/en/judocs>
- Targeted services for international employees, e.g. through our International Advisory Service

In addition to exciting tasks and the collaborative working atmosphere at Forschungszentrum Jülich, we have a lot more to offer (<https://www.fz-juelich.de/en/careers/julich-as-an-employer/benefits>).

The position is for a fixed term of 3 years. Pay in line with 67,5% of pay group 13 of the Collective Agreement for the Public Service (TVöD-Bund) and additionally 60 % of a monthly salary as special payment („Christmas bonus“). Pay higher than the basic pay may be possible. The monthly salaries in euro can be found on the BMI website: <https://go.fzj.de/bmi.tvod.entgelt> Further information on doctoral degrees at Forschungszentrum Jülich (including its various branch offices) is available at <https://www.fz-juelich.de/en/careers/phd>

Place of employment: Wuppertal

We welcome applications from people with diverse backgrounds, e.g. in terms of age, gender, disability, sexual orientation / identity, and social, ethnic and religious origin. A diverse and inclusive working environment with equal opportunities in which everyone can realize their potential is important to us.

Further information on diversity and equal opportunities: <https://go.fzj.de/equality>