D*o you yearn to contribute to ground-breaking research on distant galaxies and share those extraordinary discoveries with the world? Are you a developer who is eager to explore the wonders of the universe whilst contributing to pushing boundaries with a visionary mindset?* If this resonates with you, then we offer an exciting opportunity! We are hiring:

**2 HPC software developers**

Why ASTRON?  At ASTRON, we are dedicated to increase our staff diversity and to create a safe and inclusive workplace. We offer an environment where you work alongside experts from various fields and where we have a culture of mutual support and respect. This makes the inspirational environment at ASTRON the biggest playground to innovate where everyone has an equal opportunity to thrive and grow.

At ASTRON we are working at the forefront of science and innovation. We aim to break barriers and accelerate careers for everyone.  We continuously push the boundaries of what is technologically possible to make discoveries in radio astronomy happen. Innovations derived from our work benefit society as a whole. Moreover, we are committed to decreasing our organisational footprint, therefore we focus on sustainable and energy-efficient computing solutions for data-intensive science, in partnership with others.

In addition, the ASTRON premises are situated in the middle of a beautiful National Park, surrounded by stunning scenery. During lunch walks you can often see hares, fawns, and deer grazing around the building. We work where other people travel to relax and enjoy their vacation!

**Unleash your potential**

Radio astronomy is inherently a very data- and compute-intensive science. The next generation of our LOFAR telescope produces ever increasing amounts of data to process. Although our telescope software is fully functional, it cannot yet keep up with the increased data rates and the promise of even faster data delivery to scientists. At the same time, our sustainability ambitions require the software to use computational resources as efficiently as possible. Our challenge is to maintain our instruments at the forefront of science, while reducing the environmental footprint of the processing. As HPC developer you will help us overcome that challenge.

Within the Smart Backend group at ASTRON’s Research and Development department, we investigate and develop efficient algorithms and methodologies to

turn massive amounts of radio telescope data into science products. We improve the energy efficiency of existing codes by profiling, optimizing and co-designing the hardware and software in question. You will develop both proof-of-concept prototype software as well as production-quality applications used in the largest telescope(s) in the world.

We want to strengthen the team with an enthusiastic high-performance computing developer who likes to work with state-of-the-art technology and has a passion for making systems efficient and sustainable. With the other team members, you will work on innovative software that enables new astronomical science while minimizing the environmental impact of those discoveries.

**What will you do?**
You will be part of a research and development team that focuses on high-performance and energy-efficient computing. Your task is to implement and optimize complex scientific algorithms on high-performance computing systems and accelerators such as GPUs, to ensure that massive amounts of data can be correctly, efficiently and sustainably processed. You will work with the other team members as well as with collaboration partners from various research projects in an international context. You will support or actively contribute to the scientific High-Performance Computing research and development within the team.

**What you can expect from us**

- An inclusive, innovative, and pleasant working environment with an international and inspiring work culture.
- Opportunities and encouragement to accelerate and develop yourself and your career.
- The exceptional combination of astronomy, operations and engineering in one building.
- We enable all necessary facilities for people with a handicap in any form.
- Employment conditions tailored to your needs (part-time appointment, parental leave, working partly from home, etc.).
- A temporary appointment in the service of the Netherlands Foundation of Scientific Research Institutes (NWO-I) for a duration of 2 years (depending on financial resources, the contract may be extended hereafter or converted to permanent employment).
- A gross monthly salary in the range of € 3.458, – to € 6.404,- (full-time salary), based on relevant experience, and very good extra benefits such as a 8% holiday allowance and a of 8.33% year-end bonus
- 42 vacation days per year on a full-time basis.

We strongly believe that progress, creativity and innovation is only possible in an inclusive and diverse environment. Therefore, we value the unique skills and qualities you bring to the table. While we appreciate a range of software engineering expertise, please note that not ticking all the boxes does not diminish our interest in your application. We particularly encourage women and individuals from under-represented groups to apply for an interview.

**Calling all talented high-performance computing developers who:**

- Have a master's or doctoral degree in computer science, (radio) astronomy, or equivalent
- Have excellent knowledge of programming languages, in particular C/C++
- Have experience with accelerators such as GPUs and their programming (i.e. using Cuda or HIP)
- Have experience working with programming distributed systems (i.e. clusters)
- Have experience with performance optimisation and profiling
- Have experience with measuring energy consumption and efficiency of software
- Are proficient in working with Linux systems
- Have knowledge of computer architectures and computer networks
- Work in a structured way
- Take initiatives
- Are self-motivated
- Are a team player
- Have proficient oral and written communications skills in both English and Dutch
- Have an open attitude

Knowledge of digital signal processing, radio-astronomical instruments, and/or radio astronomy is a plus.

To discover firsthand experiences of colleagues who love working at ASTRON click this link.

We embrace hybrid working and support a healthy work/private balance. Collaboration at our office sparks some of the best ideas and solutions to complex problems and enables us to be a strong team. Therefore, we work at least 60% of our time at ASTRON.

**Looking forward to your application**

If you are interested in this exciting opportunity, then we would very much like to meet you! Please visit our website www.jobsatastron.nl to apply. We look forward to receiving your letter and curriculum vitae. Candidates will be considered until the position has been filled, and the first round of interviews will take place in the beginning of September 2025. For more information, please contact Chris Broekema (broekema@astron.nl) or John Romein (romein@astron.nl).

**Reactions**
You can apply for this job by sending your letter and curriculum vitae to ASTRON through www.jobsatastron.nl. The first closing date is **the 31st of August 2025.** Candidates will be considered until the positions have been filled.