

Astropy project: 2020 Group Achievement Award (A)

The Astropy project is a unique collaboration that has developed comprehensive, freely-available and open-source software library packages for astronomy research using the high-level Python programming language. Those packages are now used in many places around the world including major observatories, the James Webb Space Telescope, LIGO and SALT.

A committee of four (Tom Aldcroft, Thomas Robitaille, Kelle Cruz and Erik Tollerud) coordinated the mostly unfunded development of over 200,000 lines of high-quality program code by a team of nearly 250 individual developers; the committee is the public face of Astropy and they ensure consensus amongst the developers and compliance with community standards.

The Astropy Project has provided hundreds of junior scientists with experience in professional-standard software development practices including use of version control, unit testing, code review and issue tracking procedures. This is a vital skillset for modern researchers that is often missing from formal university education in physics or astronomy. In addition, the Astropy project and community leads have dedicated resources to producing documentation and tutorials for novice programmers.

The Astropy project has produced a comprehensive Python package of astronomy tools, which has rapidly become a standard research toolkit, as illustrated by the high number of citations to the journal papers and adoption into major science calibration pipelines.

For these reasons the Astropy Project Team are awarded the 2020 RAS Group Achievement Award for Astronomy.

Short citation

The Astropy Project Team have developed the comprehensive, high-quality, freely-available and open-source Astropy software library packages for astronomy research using the high-level Python programming language. Those packages are now used in many places around the world including major observatories, the James Webb Space Telescope, LIGO and SALT.

Through their hard work and attention to detail, the team members have produced not only an exceedingly valuable research toolkit but have fostered professional software development skills in the astronomical community.

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