Physicists and Astronomers

SOC: 19-2010 • Career Profile Report

■ Key Facts

$166,290	26,400	+4.0%
Median Salary	Employment	Growth Rate

■ Requirements & Salary Range

Education: Doctoral

■ Automation Risk Assessment

Low Risk - 8.0% probability of being automated in the next 10-20 years.

This job is relatively safe from automation due to its creative, social, or complex problem-solving requirements.

■■ Work-Life Balance

7.5/10 - Good work-life balance

■ Personality Fit (RIASEC)

Higher scores indicate better personality fit for this career type.

Realistic	6.2/10	**Investigative**	9.4/10
Artistic	5.6/10	**Social**	6.4/10
Enterprising	4.8/10	**Conventional**	6.4/10

■ Top Skills Required

Analytical skills, Communication skills, Critical-thinking skills, Interpersonal skills, Math skills, Problem-solving skills, Self-discipline

✓ Strengths

- High Demand
- Flexible Work
- Continuous Learning

■ Challenges

- Burnout Risk
- Rapid Technological Change

■ What They Do

Physicists and Astronomers typically perform the following tasks: • Analyze research data to determine its significance, using computers. • Present research findings at scientific conferences and in papers written for scientific journals. • Study celestial phenomena, using a variety of ground-based and space-borne telescopes and scientific instruments. • Collaborate with other astronomers to carry out research projects. • Mentor graduate students and junior colleagues. • Supervise students' research on celestial and astronomical phenomena. • Teach astronomy or astrophysics. • Develop theories based on personal observations or on observations and theories of other astronomers. • Measure radio, infrared, gamma, and x-ray emissions from extraterrestrial sources. • Develop instrumentation and software for astronomical observation and analysis. • Review scientific proposals and research papers. • Raise funds for scientific research. • Develop and modify astronomy-related programs for public presentation. • Serve on professional panels and committees. • Calculate orbits and determine sizes, shapes, brightness, and motions of different celestial bodies. • Conduct question-and-answer presentations on astronomy topics with public audiences. • Direct the operations of a planetarium.