

# Astronomer

**Aliases:** Astrophysicist

**Industry/Sector(s):** Education, Training and Research

## JOB DESCRIPTION <sup>1</sup>

The tasks an Astronomer is expected to perform include:

- Studying sizes, shapes, position, masses, movement and other characteristics of heavenly bodies such as Moon, planets and stars
- Interpreting solar and stellar prominences and other celestial phenomena
- Observing celestial bodies with telescopes fitted with complex devices such as spectroscopes, photometers, bolometers and other photography and radiation-recording instruments
- Recording observations
- Computing position and orbits of stars, planets, comets and asteroids
- Taking photographs of Sun in calcium and hydrogen lights to locate Sun spots and eruption
- Interpreting data regarding size, composition, position, temperature, etc. of planet and other heavenly bodies at given times for use by air and sea navigators
- Publishing results of observations and solar prominences, dark marking and other phenomena
- Sending periodical messages to research centres regarding solar and geomagnetic observations, behaviour and other phenomena of Sun and Moon
- Undertaking research in special fields

## WORK ENVIRONMENT <sup>1, 2</sup>

- It is not a desk job
- Need not handle a team
- Local travelling is a part of this job role
- Part-time work and contractual jobs may be available
- Work from home option is not available

### Working hours

- Organizations usually work for 5/6 days a week and 8/9 hours everyday. This may vary from organization to organization
- Shift system may be available
- Overtime may be required

### Is the job suitable for a candidate with special needs?

*This may vary from organization to organization*

## EDUCATIONAL QUALIFICATIONS AND TRAINING <sup>3</sup>

Preferably, Master's in astronomy/physics

## KEY COMPETENCIES <sup>1</sup>

- Ability to solve complex problems, conduct research and accurately analyse data
- Knowledge of specific science-related software programmes
- Proficient in maths and science
- Skilled in observing celestial bodies with telescopes
- Skilled in using photography devices such as spectroscopes, photometers and bolometers
- Knowledge of characteristics of different celestial bodies
- Ability to observe and make new discoveries

## DESIRABLE COMPETENCIES <sup>1</sup>

- Good communication skills
- Hardworking

## AVAILABLE SKILL TRAINING AND LEARNING INSTITUTES

Universities offering astronomy and physics across India

## AVAILABLE SKILL TRAINING SCHEMES/SCHOLARSHIPS

For scholarship and schemes, use further links like:

- <https://scholarships.gov.in/>

## SAMPLE OF TRAINING AND LEARNING COURSES

[http://www.iiap.res.in/course\\_syllabus.html](http://www.iiap.res.in/course_syllabus.html)

## CAREER PROGRESSION PATH <sup>4</sup>

Head of Department



**Astronomer** → Teacher



Junior Researcher

*The progression is indicative*

## EXPECTED EARNINGS <sup>3</sup>

•For new entrants - Rs 50,000 to Rs 51,000 per month

*These figures are indicative and subject to change*

## REQUIRED WORK EXPERIENCE <sup>3</sup>

Some organizations hire new entrants too

## PROBABLE EMPLOYERS <sup>3</sup>

Public and private research and observation centres

## KEYWORDS

- Astronomer
- Astrophysicist

## OCCUPATIONAL CODES AND STANDARDS

Standard	Code	Description
NCO 2015	2111.0900	Astronomer
ISCO 2008	2111	Physicists and Astronomers
NIC 2008	72100	Research and experimental development on natural sciences and engineering
QP Reference	Not available	Not available
NSQF	Not available	Not available

## REFERENCES

1	<a href="http://dget.nic.in/upload/uploadfiles/files/publication/Des-Div-2.pdf">http://dget.nic.in/upload/uploadfiles/files/publication/Des-Div-2.pdf</a>
2	<a href="http://www.ccdisabilities.nic.in/page.php?s=reg&amp;t=def&amp;p=list_jobsNew">http://www.ccdisabilities.nic.in/page.php?s=reg&amp;t=def&amp;p=list_jobsNew</a>
3	<a href="https://targetstudy.com/professions/astronomer.html">https://targetstudy.com/professions/astronomer.html</a>
4	<a href="http://dget.nic.in/upload/uploadfiles/files/publication/Des-Div-2.pdf">http://dget.nic.in/upload/uploadfiles/files/publication/Des-Div-2.pdf</a>