INTERNSHIP OFFER
DE-2026-2079-2

Karlsruhe, Germany, Germany

ON-SITE

INTERNSHIP HOST

Name of Company
Karlsruhe Institute of Technology Karlsruhe School of Elementary and Astoparticle Physics (KSETA)

Website
www.kseta.kit.edu

Address of Company
Karlsruhe
Germany

Number of Employees
9000

Business or Product
Higher Education and Research

STUDENT REQUIRED

General Discipline
Physics and Physical Sciences

Field of Study
Astrophysics;Experimental Physics/ Applied Physics

Completed Years of Study
3

Language Required
English Excellent (C1, C2)

Required Qualifications and Skills
Teamwork | Scientific Computing | Programming | Physics | Creativity
Experience with programming.

Student Status Requirements
Required during the whole period of internship

Other Requirements/Information
Bachelor degree in physics; enrolment in Master's studies.

INTERNSHIP OFFER

8 - 12 weeks

Latest Possible Start Date
01-Jun-2026

Within Months
May-2026 - Aug-2026

Company Closed WIthin
-

992 EUR per Month

Deductions Expected
variable

Payment Method
Bank Transfer

500 EUR per Month

Arranged by
Trainee

Estimated Cost of Living including Lodging
992 EUR / Month

Working Environment: Research and development

Working Hours / Week: 40.0

The IceCube Observatory and Cosmic Rays

IceCube is a neutrino observatory located at the South Pole. It is primarily used for the detection of astronomical neutrinos of very high energies, but can also measure extensive air-showers generated by high-energy cosmic rays. The main part of IceCube are sensors in the deep ice where tracks of Cherenkov light of charged particles are reconstructed. These are interacting neutrinos which passed the Earth shielding and also high-energy secondaries of cosmic-ray air showers from above. An additional surface instrumentation allows for the measurement of the secondary particles produced in the air-shower. At KIT we are focussing on reconstruction and analysing the air-showers in order understand spectrum and composition of the high-energy cosmic rays.
The student will be involved in the reconstruction and analyses of the muon component of air-showers at IceCube for cosmic-ray studies. Simulations of events detected by IceCube and its surface instrumentation will be used for these studies. Basic programming skills in python are required. As a whole, the student will be provided with the opportunity to learn about the highest energy particles produced by our Milky Way.Observing the high-energy Cosmic Rays with IceCube Surface Detectors

ADDITIONAL INFORMATION

see additional documents

Deadline for Nomination - 25-Jan-2026

Date - 12-Jan-2026

On Behalf of Receiving Country - IAESTE Germany

Karlsruhe Institute of Technology

2026 - Internship Proposal
Institute for Astroparticle Physics (IAP)

The IceCube Observatory and Cosmic Rays

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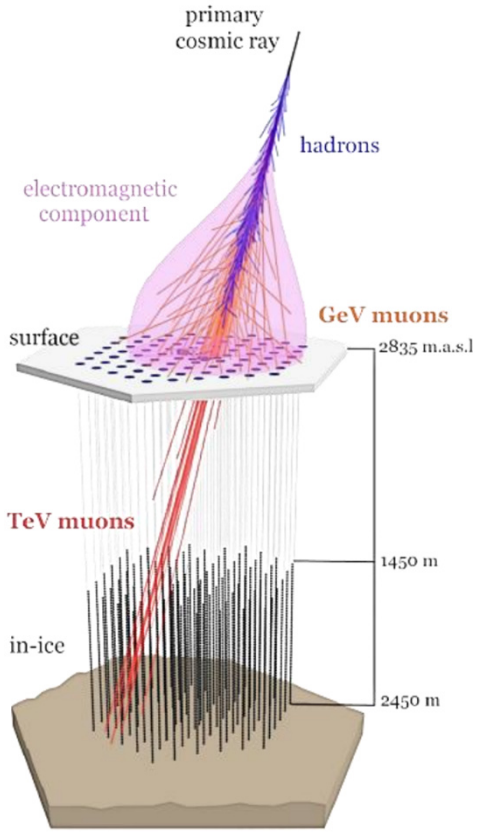

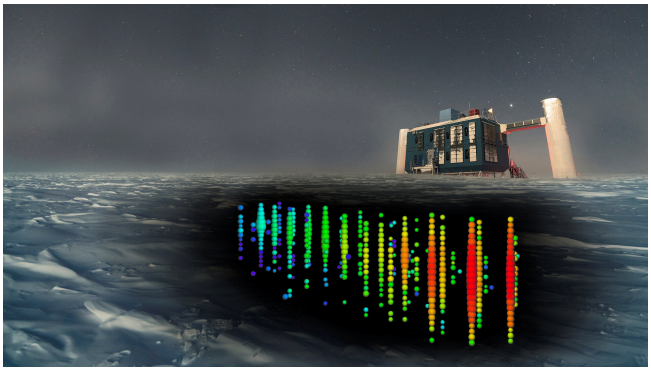

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Contact:
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IceCube Neutrino Observatory

Web:
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www.icecube.wisc.edu