

LEVEL OF INTEREST AND ENGAGEMENT IN ASTROPHYSICS AMONG UNDERGRADUATE STUDENTS IN SRI LANKA

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Astrophysics is the branch of astronomy which uses physics and mathematics to study and understand how the objects in the Universe form, behave and evolve. In Sri Lanka, astrophysics remains in its early stages but is progressing steadily. However, due to limited facilities and resources, the interest and knowledge about astrophysics are questionable among the student community. This study investigated the interest and exposure to astrophysics among undergraduate students across Sri Lanka. A nationwide survey was gathered using structured questionnaires, and responses were collected from 309 undergraduate students, selected from 28 universities with a margin of error of $\pm 5.5\%$ at the 95% confidence level. According to the study, 12% respondents had studied an astrophysics-related course. The other 88% had no formal exposure. Nevertheless, participants expressed moderate to high attitude towards studying the subject, with an average interest level of 3.37 ± 0.12 on a 5-point Likert scale. However, their knowledge level is significantly low in advanced topics compared to basic topics. This study also investigated the possibility for offering a certificate course for undergraduate students. About 52% students indicated that they would enroll if a course was offered free-of-charge, while 40% said they might consider enrolling even with payment. Only 8% expressed no interest. In terms of preferred delivery modes, the majority favored online learning, with 158 responses, followed by hybrid formats, and fully on-site programmes. These findings show strong latent interest in astrophysics among Sri Lankan undergraduates, with limited formal engagement. It highlights the need for improved academic and outreach programmes to support students' growing curiosity about astrophysics. Focused curricular expansions, and adaptive, flexible and informal learning platforms preeminently online and short-term certificate courses can unlock the interest and enable the growth of space-science education in the country.

Keywords: Astronomy outreach in Sri Lanka, Astrophysics education, Cosmology, Informal science education, Undergraduate interest