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Nuclear Astrophysics Masterclasses - Fingerprints of the Stars

Wednesday 18 September 2024 12:40 (15 minutes)

Masterclasses are one-day outreach events for high school students, introducing them to topics of current research. Within the framework of the EU project ChETEC-INFRA, Masterclasses on Nuclear Astrophysics have been developed. This interdisciplinary field of science provides a new didactic perspective on nuclear and astrophysical processes by addressing the link between these two subjects. The Nuclear Astrophysics Masterclasses pick up this didactic potential. They include the spectroscopic analysis of metal poor stars with WebSME. Furthermore, the processes behind the formation of the first chemical elements are reconstructed with the help of various gamification elements as well as hands-on activities. Emphasis is placed on current research topics in nuclear astrophysics, in particular the primordial lithium problem. The talk will present the teaching materials, the didactic concept, the experiences made so far in the implementation as well as possibilities of utilizing the Masterclasses for PhD outreach training.

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