

<b>Module title</b>		<b>Abbreviation</b>
FOKUS Research Module High Energy Astrophysics with Mini Research Project		11-FM-HAS-MF-111-mo1
<b>Module coordinator</b>		<b>Module offered by</b>
chairperson of examination committee		Faculty of Physics and Astronomy
<b>ECTS</b>	<b>Method of grading</b>	<b>Only after succ. compl. of module(s)</b>
16	numerical grade	--
<b>Duration</b>	<b>Module level</b>	<b>Other prerequisites</b>
1 semester	graduate	11-A4, 11-KET
<b>Contents</b>		
Specific and advanced knowledge for independent scientific work in the research area of High-Energy Astrophysics.		
<b>Intended learning outcomes</b>		
The students have special and advanced knowledge of independent scientific work in the field of High-Energy Astrophysics. They are able to reproduce and summarise the acquired knowledge in an oral presentation. They are able to apply the acquired methods, to conduct and evaluate astrophysical experiments and to present the obtained results.		
<b>Courses</b> (type, number of weekly contact hours, language – if other than German)		
Plasma-Astrophysik (Plasma-Astrophysics): V (3 weekly contact hours) + Ü/P (1 weekly contact hour), German or English, once a year (summer semester) Kosmologie (Cosmology): V (3 weekly contact hours) + Ü/P (1 weekly contact hour), German or English Kompaktseminar Hochenergie-Astrophysik (Block Taught Seminar High Energy Astrophysics): S (2 weekly contact hours), German or English, details on availability to be announced (block taught seminar (3 days), usually held during semester break) Astrophysikalisches Praktikum (Practical Course Astrophysics): P (4 weekly contact hours)		
<b>Method of assessment</b> (type, scope, language – if other than German, examination offered – if not every semester, information on whether module is creditable for bonus)		
<p>This module has the following assessment components</p> <ol style="list-style-type: none"> <li>1. Topics covered in lectures and exercises: written examination (approx. 90 minutes) or talk (approx. 30 minutes) or oral examination of one candidate each or oral examination in groups (approx. 30 minutes) or project report (approx. 8 pages)</li> <li>2. Seminar: talk (approx. 30 to 45 minutes)</li> <li>3. Lab course (research project): a) Preparing, performing and evaluating the experiments will be considered successfully completed if a Testat (exam) is passed. Students will be given one opportunity to repeat experiments they did not pass. Or b) discussion to test the students' understanding of the physics-related contents and results of the experiment (approx. 20 minutes).</li> </ol> <p>Assessment components 1 and 2 will be offered in German or English. Students must register for assessment components 1 through 3 online (details to be announced). Details on when assessment component 2 will be offered to be announced. Lectures and exercises will cover either plasma-astrophysics or cosmology (as announced by or agreed upon with the lecturer). To pass this module, students must pass both assessment component 1 and assessment component 2.</p>		
<b>Allocation of places</b>		
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<b>Additional information</b>		
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<b>Referred to in LPO I</b> (examination regulations for teaching-degree programmes)		
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**Module appears in**

Master's degree (1 major) FOKUS Physics (2010)

Master's degree (1 major) FOKUS Physics (2011)

Master's degree (1 major) FOKUS Physics (2006)