



FACULTY  
OF MATHEMATICS  
AND PHYSICS  
Charles University

# Report on doctoral thesis defence jointly organized by Charles University and Université de Strasbourg

Academic year: 2023/2024

**Student's name and surname:** RNDr. Jakub Podgorný  
**Student's ID:** 59895729

**Type of the study programme:** doctoral  
**Study programme:** Theoretical Physics, Astronomy and Astrophysics  
**Study ID:** 664254

**Title of the thesis:** Polarisation properties of X-ray emission from accreting  
supermassive black holes  
**Thesis department:** Astronomical Institute of Charles University (101. • 32-AUUK)

**Language of the thesis:** English  
**Language of defence:** English  
**Supervisor:** RNDr. Michal Dovčiak, Ph.D.  
**Reviewer(s):** prof. Christine Done  
Dr. Delphine Porquet

**Date of defence:** 12.12.2023    **Venue of defence:** Praha  
**Attempt:** regular

**Course of defence:** The PhD Thesis presented by Jakub Podgorný was found by the Jury to be a complete and thorough exploration of a new and complex field. The Jury appreciated the combined presentation of theoretical research and observational analysis using the X-ray polarimetric data from the recent IXPE satellite. The presented work was evaluated as extraordinarily good given how many new results were achieved in a relatively short time, leading to an outstanding number of publications in refereed journals, six of which as first author. The student gave an excellent presentation of his results, selecting the most important for discussion and well explaining their physical background. He properly answered to questions raised by reviewers and other members of the Jury demonstrating a deep knowledge of all aspects of the Thesis work and its wider context. For all these reasons, the Jury unanimously evaluated the PhD work and its presentation as exceptional.

<b>Result of defence:</b>	pass (P)	
<b>Chair of the board:</b>	RNDr. Jiří Svoboda, Ph.D.	.....
<b>Committee members:</b>	Dr. Caroline Bot	.....
	prof. Christine Done	.....
	RNDr. Michal Dovčiak, Ph.D.	.....
	Frédéric Marin	.....
	Giorgio Matt	.....
	Dr. Delphine Porquet	.....