



FACULTY
OF MATHEMATICS
AND PHYSICS
Charles University

Report on defence of dissertation thesis

Academic year: 2023/2024

Student's name and surname: Anastasiya Yilmaz, M.Sc.
Student's ID: 26495199

Type of the study programme: doctoral
Study programme: Theoretical Physics, Astronomy and Astrophysics
Study ID: 677086

Title of the thesis: Evolution of Accreting Black Holes in X-ray Binaries
Thesis department: Astronomical Institute of Charles University (101. • 32-AUUK)

Language of the thesis: English
Language of defence: English
Supervisor: RNDr. Jiří Svoboda, Ph.D.
Reviewer(s): Fiamma Capitanio, Ph.D.
Dr. Dominic Walton

Date of defence: 26.09.2024 **Venue of defence:** Praha
Attempt: regular

Course of the examination: Chair of the committee introduced members of the committee, referees (both of them being present online) and the candidate. He stated that all formal requirements for the defense have been fulfilled. The student presented her results in about 30 minute presentation. Most of the discussion afterwards has been based on the report of one of the referees, Dr. Walton. It concerned the relation between temperature and luminosity of the accretion disc, alternate models of the accretion flow than those considered in the Thesis and the question of robustness of statement about ULX classification of the source LMC X-3. Further questions were laid by the committee members, regarding transport of angular momentum towards the central body, definition of temperature of the accretion disc and geometric and relativistic beaming. The candidate responded satisfactorily to all questions except the last one. During the private session, the committee univocally decided to award Ms. Anastasiya Yilmaz the degree PhD.

Result of defence:	pass (P)	
Chair of the board:	Šubr Ladislav, doc. RNDr., Ph.D.
Committee members:	Heinzel Petr, prof. RNDr., DrSc.
	Palouš Jan, prof. RNDr., DrSc.
	Pejcha Ondřej, doc. Mgr., Ph.D.
	Švanda Michal, doc. Mgr., Ph.D.
	Brož Miroslav, doc. Mgr., Ph.D.