



FACULTY
OF MATHEMATICS
AND PHYSICS
Charles University

Report on part of state final examination Defence of master's thesis

Academic year: 2023/2024

Student's name and surname: Bc. Vojtěch Partík
Student's ID: 51710329

Type of the study programme: Master's (post-Bachelor)
Study programme: Astronomy and Astrophysics
Study ID: 737332

Title of the thesis: Exploring Galaxy Evolution in the Virgo Cluster
Thesis department: Astronomical Institute of Charles University (101. • 32-AUUK)

Language of the thesis: English
Language of defence: English
Advisor: Rhys Taylor, Dr.
Reviewer(s): doc. Mgr. Michal Švanda, Ph.D.
Date of defence: 12.06.2024 **Venue of defence:** Praha
Attempt: regular

Course of the examination: Presentation of the diploma thesis. Neutral hydrogen in galaxies, tracing their evolution, stripping, tidal interactions. Introducing the Virgo Cluster, HI detection at 21 cm with Arecibo, complementary optical data. Describing the results - velocity distribution; color-magnitude diagram; early- and late-type galaxies with and without HI detection; stacking of spectra to detect weak signals; HI deficiency; dim and dark clouds. Evaluation of the thesis by supervisor and reviewer. Answering the question about stacking. Questions and comments from the committee members - selection of areas on the sky; ALMA proposal submitted; mass-to-light ratio diagram and the related errors of brightness and distance; comparison of the two regions and the question of relaxation; the problem of determining distance to the individual galaxies.

Result of defence:	excellent (1)	
Chair of the board:	Đurech Josef, doc. Mgr., Ph.D.
Committee members:	Vokrouhlický David, prof. RNDr., DrSc.
	Brož Miroslav, doc. Mgr., Ph.D.
	Korčáková Daniela, doc. Mgr., Ph.D.
	Šubr Ladislav, doc. RNDr., Ph.D.
	Švanda Michal, doc. Mgr., Ph.D.
	Zasche Petr, doc. RNDr., Ph.D.