

PUBLIC LECTURE EVALUATION

Masaryk University

Faculty	Faculty of Science
Procedure field	Theoretical physics and astrophysics
Applicant	Ernst Paunzen, Dr.rer.nat
Lecture date	23.4.2021
Lecture topic	Star clusters in the Gaia era
Persons present (number)	74
Designated evaluators (board members)	prof. Rikard von Unge, Ph.D. (online) prof. Mgr. Tomáš Tyc, Ph.D. (online) doc. Mgr. Miroslav Brož, Ph.D. (online) doc. RNDr. Jiří Kubát, CSc. (online) prof. RNDr. David Vokrouhlický, DrSc. (online)

The public lecture “Star clusters in the Gaia era” was realized online and was attended by the whole habilitation committee:

prof. Rikard von Unge, Ph.D. (předseda), Přírodovědecká fakulta MU
 prof. Mgr. Tomáš Tyc, Ph.D., Přírodovědecká fakulta MU
 doc. Mgr. Miroslav Brož, Ph.D., Astronomický ústav UK, Praha
 doc. RNDr. Jiří Kubát, CSc., Astronomický ústav AV ČR
 prof. RNDr. David Vokrouhlický, DrSc., Astronomický ústav UK, Praha

Furthermore, out of the three opponents prof. Francesco Leone attended.

The lecture was focused on the role of the Gaia satellite for the understanding of open and globular clusters in our Galaxy. In the beginning the speaker gave an introduction to star clusters, introduced the terminology and described their fundamental properties. The role of the proper motion of the stars in the star cluster and its importance for identifying which stars belong to the cluster was thoroughly explained and some unexpected features related to the shape of the cluster along the line of sight were mentioned. In the end, the applicant mentioned the discovery of the rotation of globular clusters and discussed the consequences of this for galactic dynamics.

The lecture showed that the applicant has a firm grasp of the topic. The lecture was appropriate for the scientific community and was much appreciated which the lively discussion in the end showed. The questions discussed were for example on the accuracy and precision of the Gaia measurements, how much of the mass of the galaxy is contained in clusters, the nature and origin of blue stragglers and how to measure their mass or if the rotation of the globular clusters is always in the same direction. The applicant answered all these questions in a satisfactory way.

Conclusion

The lecture delivered by Ernst Paunzen entitled “Star clusters in the Gaia era” and delivered as part of the habilitation appointment procedure, **demonstrated** sufficient scholarly qualifications and pedagogical capabilities expected of applicants participating in a habilitation procedure in the field of Theoretical physics and astrophysics.

The lecture took place online at 2pm on Friday April 23, 2021. The above-mentioned members of the board attended the lecture and provided its evaluation. All designated evaluators are familiar with the text of the evaluation and agree with it.

Date: 23.4.2021

Rikard von Unge
signature

[name and surname]
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[name and surname]
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