

REFeree STATEMENT

on the competition for the academic position of “Associate Professor” at the Faculty of Physics of Sofia University "St. Kliment Ohridski” in the professional field 4.1 Physical Sciences (General Theory of Relativity and Relativistic Astrophysics), published in the Bulgarian State Gazette, issue no. 67 of July 28, 2020

with single candidate Dr. Galin Nikolaev Gylchev, Assistant Professor at the Department of Theoretical Physics, Faculty of Physics of Sofia University,

prepared by Prof. Ludmil Kirilov Hadjiivanov (INRNE - BAS)

As the only documents presented for the competition are those submitted by Assistant Professor Dr. Galin Gylchev, the facts subject to verification and thus, determining the decision are reduced to whether his candidacy satisfies all current requirements for the academic position of “Associate Professor. In addition to the so-called minimal national criteria listed in the latest version of the Law for development of the academic staff in the Republic of Bulgaria and the Regulations for its implementation, the requirements added in this case are those defined in the Regulations for the conditions for acquiring scientific degrees and holding academic positions at Sofia University "St. Kliment Ohridski” and also those to the candidates for academic positions in the Faculty of Physics of Sofia University in the professional field 4.1. Physical sciences.

The candidate, Assistant Professor Dr. Galin Gylchev has presented all the necessary (auto)biographical documents, diplomas and certificates for his scientific and pedagogical activities. We will compare in what follows the information contained in them with the requirements for holding the academic position of "Associate Professor" at the Faculty of Physics of Sofia University according to the rules listed above.

(a) availability of a doctoral degree

A copy is presented of the diploma no. 34485 from August 16, 2010 of Galin Nikolaev Gylchev for acquiring the educational and scientific degree "Doctor" in the scientific specialty 01.03.01 Theoretical and Mathematical Physics based on a defended dissertation entitled "Gravitational Lenses", issued by the Scientific Commission 06 of the Higher Attestation Commission, Record no. 11 of June 15, 2010.

(b) teaching experience

• *required documented teaching experience, equivalent to at least 2 years of full-time employment at Sofia University according to Art. 105. (1) of PURPNSZADSU*

Attached is a Reference for the educational employment of Assistant Professor Galin Nikolaev Gylchev, issued by the Department of Educational Activities of Sofia University on September 04, 2020, documenting total classroom employment for five consecutive academic years (from 2015/2016 to 2019/2020) of 3822.5 hours with an annual standard for classroom employment of 270 hours and, accordingly, a requirement for a total of 540 hours.

The teaching experience of Assistant Professor Galin Gylchev includes lectures (in 5 different disciplines), seminars and practical classes, including lectures in English and courses in Theoretical Astrophysics and Introduction to the physics of black holes, which are directly related to the scientific field relevant for the competition.

• *required scientific guidance of at least one successfully defended graduate and/or consulting of a successfully defended doctoral student*

Attached is an official note signed by the Dean of the Faculty of Physics, certifying that Assistant Professor Galin Nikolaev Gylchev has been the scientific supervisor of the thesis "Gravitational aberration of galactic clusters" presented by Veselina Kalinova in the framework of the Master's program Astronomy and Astrophysics, defended on July 22, 2010 (Record no. 106 of the same date).

(c) research experience

- *required at least 7 publications from group I (Q1 or Q2)*

Attached is a list of 10 (11) publications from this group, published in Phys. Rev. Lett. - 1, Phys. Rev. D - 6, Eur. Phys. J. C - 2 (+ 1 accepted for publication after the submission of the competition documents) and Annals of Physics – 1, respectively. Of these, 4 (5) have been published in the last 3 years, with a requirement of at least 1.

- *the candidate is required to have a significant contribution in at least 4 of these articles*

The candidate is in first place in the list of co-authors of 6 (7) of these. Attached is a certificate from Prof. Stoycho Yazadjiev, certifying the significant contribution of Assistant Professor Dr. Galin Gylchev in these publications, as well as in others in which he is the corresponding author.

- *at least 50 independent citations required in refereed publications (Web of Science or Scopus, without auto-citations, including those by co-authors of the publication)*

Attached is a list of 337 citations, indicating several "golden" articles, with 28, 30, 45, 65, 64 and 70 citations, respectively (meanwhile the INSPIRE HEP platform already shows 347 citations).

In 2017, the monograph of Galin Gylchev and Stoycho Yazadjiev "Gravitational Lenses" (340 p.) was printed in 300 copies in the Publishing House of Sofia University.

The attached Information list indicating the fulfillment of the minimum national requirements for the scientific field 4.1 Physical sciences provided by Dr. Galin Gylchev contains the following values for the corresponding indicators – from group B - 175 points, from group Γ - 235 and from group Δ - 140 points, well above the minimum requirements of 100, 200 and 100 points, respectively.

- *required h-index at least 5 (without auto-citations)*

According to INSPIRE HEP, the actual h-index of Assistant Professor Dr. Galin Gylchev is 7.

- *The requirement for leadership and/or participation in international and/or national projects is also met: Dr. Galin Gylchev has acted as coordinator of a research project and of a project for a scientific forum funded by the research program of Sofia University "St. Kliment Ohridski", and has participated as a member of the research team in 10 other projects.*

He has international experience in scientific cooperation including a short-term scientific visit to the group of Theoretical Astrophysics at the University of Tübingen, Germany.

Official certificates are attached, according to which Dr. Galin Gylchev has been working at Sofia University for 12 years, initially as Teaching Assistant (2008-2011) and then, as Assistant Professor (2011-2019) in the Department of Physics, Biophysics and Radiology of the Medical Faculty, and from November 1, 2019 – as Assistant Professor in the Department of Theoretical Physics at the Faculty of Physics. During all this time the main scientific activity of Dr. Galin Gylchev has been related to the study of the effects of gravitational lenses created by compact objects (black holes, bare singularities, space-time tunnels), an area at the front line of modern physics.

The fact that Dr. Galin Gylchev is a member of such an active and internationally recognized team as the research group of Prof. Stoycho Yazadjiev and the already significant teaching experience gained by him guarantee that he would be a promising member of the senior staff of the Department of Theoretical Physics.

Therefore, I strongly suggest that the respected members of this jury, as well as the members of the Faculty Council of the Faculty of Physics of Sofia University "St. Kliment Ohridski" **vote for awarding the academic position of "Associate Professor" to Assistant Professor Dr. Galin Nikolaev Gylchev.**

November 19, 2020
Sofia

Signature:

Prof. Ludmil Hadjiivanov, DSc