



## OPINION

on

a competition for obtaining

the academic rank of **PROFESSOR** in the area **4. Natural Sciences, Mathematics and Informatics, professional field 4.4. Earth Sciences, scientific specialty "Remote sensing of the earth and the planets (Studies of the processes in the middle and high atmosphere of the Earth)"** for the needs of the section **"Atmospheric optical investigations"**, **Stara Zagora Department**, according to an announcement in **State Gazette No. 98 of December 13, 2019 (pp.117-118, №1253)**

with the candidate: **Veneta Hristova Guineva, PhD, Assoc. Prof. at SRTI-BAS**

Prepared by: **Prof. Dr. Boian Borissov Kirov**

In 1980 Veneta Guineva graduated from the Faculty of Physics at Sofia University, Engineering Physics, in the specialty of "Radiophysics and Electronics", specialization "Plasma Physics", Thesis: "Self-response in the propagation of surface waves in gas-discharge plasma." In 1980 she started working at the United factories for storage devices, Stara Zagora, and in 1983 - as a physicist at the Central Laboratory for Space Research (CLSR) - BAS, where she worked successively as a physicist to associate professor, as she is now. In 2000 she successfully defended her thesis on "CO+ in the Halley comet spectrum by data from the three-channel spectrometer on board VEGA-2". For the purposes of the thesis the CO+ glow intensity distribution in Halley comet tail by data from TCS on board Vega-2. A detailed synthetic spectrum of CO+ has been created for cometary studies, by means of which to separate this ion glow from the registered spectra. The research of the thesis has been carried out for about 10 years in the Central Solar-Terrestrial Influences Laboratory -BAS, Stara Zagora. Part of the work was performed during the implementation of a contract and NSF (№NI F-233 "Emissions of the Halley Comet in the visible region - processing and analysis of the data obtained by the interplanetary station Vega-2", 1992/95) led by V. Guineva.

In 2008 she habilitated and took the position of a senior research associate II degree. The main scientific interests and scientific contributions of V. Guineva are focused on the following main areas: modeling of emission and absorption processes, processing of measurement data, development of devices for laboratory and ground measurements, satellite and rocket experiments, investigation of the glow in the coma and tail of Halley comet and studying the processes in the high and middle atmosphere of the Earth.

After the adoption of the Act on development of the academic staff in Republic of Bulgaria (2010) and according to its requirements, she was re-appointed to the position of associate professor, which she still holds today.

The complete list of the candidate's publications in issues that are referenced and indexed in world-famous databases of scientific information is 47. Publications in journals with impact factor (IF) and/or impact rank (SJR) are 33. The number of observed citations is 75.

Author's works submitted for review in the professor competition are 76, classified as follows:

**1. Scientific publications in issues that are referenced and indexed in world-famous databases of scientific information (22).**

From them:

**Publications in journals with impact factor (IF) and/or impact rank (SJR): (13)**

**Publications in refereed and/or indexed journals without impact factor: (9).**

**2. Scientific publications in non-peer-reviewed journals with scientific review or in edited collective volumes (54).**

1. According to Decree No. 122 of June 29, 2018 amending the Regulations for the Application of the Act on development for the Academic Staff in Republic of Bulgaria, the applicant must submit a monograph or at least 10 publications meeting the above criteria, such as the number of the points calculated according to the criterion and established in the Decree must be at least 100 - indicator B. In the specific case they are **147.75**.

2. The proposed scientific publications in issues that are referenced and indexed in world-famous databases with scientific information are 3 (indicator Г.7). In my opinion, the cited works under No. 1 and 2 can be included in the scientific contributions of the candidate, but they do not meet the requirements of criteria Г.7. However, they meet the requirements of the criteria under Г.8. Therefore, when calculating the number of points under criteria Г.7, one piece of work must be taken into account and the total number of points under Г 7 is 20.

3. The proposed scientific publications in non-peer-reviewed journals with scientific review or in edited collective volumes (indicator Г.8) are 63 in number, to which must be added the two publications dropped from the Г 7. Thus, the points in the Г 8 amount to 371.1

**The total number of points on indicator Г amounts to 391.1 while the points, required by the Decree, amount to 200 , and according to the requirements of BAS - 220.**

**The number of points that the candidate scores related to citations of her papers significantly exceeds the required 120 points.**

The scientometric indicators of the candidate fully meet the requirements of the Regulations for the Application of the Act on development of the academic staff in Republic of Bulgaria as well as the additional requirements of BAS.

The scientific activity of the applicant fully corresponds to the topic of the competition. The review of her scientific publications and especially those, in which she has a major contribution, show that Dr. Guineva has a significant contribution to **the study of the influence of solar activity and fluxes in the solar wind on the magnetosphere, auroras and magnetic disturbances.**

Assoc. Prof. Guineva participates in 15 international agreements/contracts, leading 7 of them.

In conclusion, I highly appreciate the achieved scientific results and the acquired research experience by Assoc. Prof. Dr. Veneta Guineva. She has the necessary scientific achievements and qualification for the rank of Professor and fully meets the requirements of The Act on development of the academic staff in Republic of Bulgaria in the in higher education area 4. Natural sciences, mathematics and informatics, professional field 4.4. Earth sciences. Therefore, I suggest to the Jury to propose to the esteemed Scientific Council of SRTI-BAS to vote Assoc. Prof. Dr. Veneta Guineva to obtain the academic position of Professor in the professional field 4.4. Earth sciences, scientific specialty "Remote sensing of the earth and the planets (Studies of the processes in the middle and high atmosphere of the earth)".

April 23, 2020

Sofia



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Prepared the opinion: \_\_\_\_\_

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/prof. B.Kirov/