

武汉物数所理论交叉学术交流系列报告

(第一七〇期)

Determination of the proton radius and proton radius puzzle

Prof. Savely G. Karshenboim
Committee on Data for Science and Technology,
Max Planck Institute of Quantum Optics,
2017年6月14日(周三) 上午10:00-11:00
磁共振楼10楼1016-17报告厅

About the speaker:

2014 (till 31.10.16) scientist (E15) at Max-Planck-Institut für Quantenoptik, Garching
2011-2014 scientist at Max-Planck-Institut Für Quantenoptik, Garching (a freelancer with honorarium agreement from Feb., 2011)
2015 (till Oct. 2016) Pulkovo observatory: Lead scientist (part time)
2011-2015 Pulkovo observatory: Lead scientist
1983-2011: D.I. Mendeleev Institute: various positions such as engineer, researcher, senior researcher, lead scientist (1999-2002) and head of laboratory (2002-2011)



Abstract:

I will discuss the determination of the proton charge radius by different means including spectroscopy of hydrogen and deuterium, spectroscopy of muonic hydrogen and elastic electron-proton scattering. The most accurate result is from the measurement of the Lamb shift in muonic hydrogen and it is in contradiction with the results from ordinary hydrogen and scattering. I will review the situation and discuss the accuracy and reliability of the involved theory and experiment.

主办单位:武汉物数所理论与交叉研究部