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Press Release

Dr. Tobias Nebel receives Otto Hahn Medal of the Max Planck Society



Dr. Tobias Nebel, a young research scientist at the Max Planck Institute of Quantum Optics in Garching (near Munich), has been awarded the Otto Hahn Medal 2010. Since 1978 the Max Planck Society annually honours with this award up to 40 young scientists for their excellent research. It is supposed to encourage highly talented people to pursue a professional career at universities and institutes in the field of fundamental research. Dr. Nebel receives this award “for the first measurement of the Lamb shift in muonic hydrogen and the resulting redefinition of the radius of the proton”.

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Tobias Nebel, born in 1976, studied physics at the University of Augsburg, at the University of British Columbia Vancouver (Canada) and at the Ludwig-Maximilians-Universität München, where he received his doctoral degree at the chair of Professor Theodor W. Hänsch in 2010. His thesis on the subject *The Lamb Shift in Muonic Hydrogen* was carried out at the Max Planck Institute of Quantum Optics in the Laser Spectroscopy Division and finished with “summa cum laude”.

The measurements on the muonic hydrogen atoms took place in collaboration with several research institutes at the Paul Scherrer Institute in Villigen, Switzerland. In these exotic atoms the outer electron is replaced by the 200times heavier muon, which gets much closer to the nucleus and literally “feels” its extension. The spectroscopic determination of the Lamb shift of the energy levels in muonic hydrogen in 2010 yielded a value for the proton radius which was significantly smaller than deduced from previous measurements – a fact that still puzzles the scientific community.

Tobias Nebel has already received the “Government of Canada Award” for Graduate Studies in Canada. Dr. Nebel will be presented with the Otto Hahn Medal on the occasion of the main assembly of the Max Planck Society in Berlin on June 8, 2011. *Olivia Meyer-Streng*

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