Constraining Properties of Dark Matter particles Using Astrophysical Data

Iakubovskyi, D.

List of Publications

Constraints on decaying dark matter from XMM-Newton observations of M31
A. Boyarsky, D. Iakubovskyi, O. Ruchayskiy and V. Savchenko
Monthly Notices of the Royal Astronomical Society **387** 1361-1373 (2008).

A lower bound on the mass of dark matter particles
A. Boyarsky, O. Ruchayskiy and D. Iakubovskyi
Journal of Cosmology and Astro-Particle Physics **03** 005 (2009).

New evidence for dark matter
A. Boyarsky, O. Ruchayskiy, D. Iakubovskyi, A. V. Macciò and D. Malyshev
arXiv:0911.1774, **to appear**.

Searching for dark matter in X-rays: how to check the dark matter origin of a spectral feature
A. Boyarsky, O. Ruchayskiy, D. Iakubovskyi, M. G. Walker, S. Riemer-Sørensen and S. H. Hansen
Monthly Notices of the Royal Astronomical Society **407** 1188-1202 (2010) — arXiv:1001.0644.

Next decade of sterile neutrino studies
A. Boyarsky, D. Iakubovskyi, O. Ruchayskiy
Physics of the Dark Universe, **1** 136-154 (2012).

Searching for decaying dark matter in stacked spectra of nearby galaxies observed with XMM-Newton
A. Boyarsky, D. Iakubovskyi, O. Ruchayskiy, **to appear**.

Curriculum vitae

Name: Dmytro Iakubovskyi

Date of birth: April 04, 1983

Place of birth: Krivoy Rog, Ukraine

EDUCATION

Jun. 2004: M.Sc. in Physics at Taras Shevchenko National University of Kyiv
Cosmological solutions in theories with one brane
Supervisor: Dr. Yuri Shtanov.

Jun. 2003: B.Sc. in Physics at Taras Shevchenko National University of Kyiv
Solutions of 5D models with branes
Supervisor: Dr. Yuri Shtanov.

Jun. 1999: High School Diploma at Ukrainian Lyceum of Physics and Mathematics (Kiev, Ukraine).

Acknowledgments

I wish to thank Jeroen Franse, Ganna Ivaschchenko, Artem Ivashko, Denis Malyshev, Maria Medvedyeva, Oleg Ruchayskiy, Vladimir Savchenko, Yuri Shtanov, Jeroen Sprangers and Ievgen Vovk for useful discussions. I would like extend special thanks to my past and present roommates in the Instituut-Lorentz voor theoretische natuurkunde – Ted van der Aalst, Aron Beekman and Emilio Cobanero.

Realization of this long-term project is hardly possible without the highest-quality scientific supervision from Alexey Boyarsky and thesis promotion from Ana Achúcarro. I would also like to thank all colleagues who read the thesis and give their comments.

The enormously stimulating work environment in the Instituut-Lorentz has been created by many people, including its past and present members. The visible part of the iceberg is maintained by Marianne, Fran and Trudy, whom I want to thank for their professionalism and kindness.

Finally, I would like to thank my family for being there.