DANIEL MAZIN

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My main interests are devoted to the very high energy (VHE, E > 50 GeV) astroparticle physics with Imaging Atmospheric Cherenkov Telescopes (IACTs). In particular, I am interested in VHE gamma-ray emission mechanisms from distant AGNs and cosmological implications of observations of AGNs at these energies.

SCIENTIFIC CAREER:

Since 06/2012	Otto Hahn group leader at MPI for physics, Munich
06/2010 – 06/2012	Otto Hahn postdoctoral researcher at IFAE, Barcelona
06/2008 – 06/2010	Marie Curie fellow at IFAE, Barcelona
02/2007 – 05/2008	Postdoctoral researcher at IFAE, Barcelona

WORK EXPERIENCE:

Since 06/2012

Researcher at the Max Planck Institute for physics Munich, Otto Hahn group leader. The Otto Hahn group is a young investigator group created by the Max Planck society. The research focus of the group is extragalactic background light and cosmology using high and very high energy gamma-ray data from Fermi-LAT and Imaging Air Cherenkov Telescopes (IACTs). The focus is on advanced analysis techniques and combining the available data in joint likelihood fit. The group has also a strong hardware focus on advanced photodetectors such as SiPMs to be used in IACTs such as CTA with the intermediate goal to construct SiPM prototype clusters for the MAGIC telescopes. The group currently consists of me (group leader) and a PhD student under my supervision (started in August 2012) and works in strong cooperation with the MAGIC/CTA group of Prof. Teshima.

02/2007 – 06/2012

Researcher in the MAGIC/CTA group at IFAE, Barcelona. The group is currently the strongest in MAGIC and the largest in CTA/Spain. My duties included supervision of master and PhD students, AGN and EBL studies for MAGIC and CTA, planning of MAGIC observations, interpretation and publication of data, coordination of IFAE hardware activities related to MAGIC, responsibility for slow control of the MAGIC trigger and readout system, coordination of the MAGIC upgrade as well as outreach activities.

11/2003 – 01/2007

PhD thesis in the MAGIC/CTA group at MPI for physics, Munich. I mainly worked on data analysis, interpretation and publication of the results. I was the Principal Investigator of the MAGIC discovery of three distant AGNs. I also worked on the alternative analysis method, called model analysis. Further, I deepened my studies on indirect constraints of the extragalactic background light

using VHE data of distant blazars and proposed a statistically solid method to measure distances of AGNs with unknown redshifts

04/2002 - 09/2007	Diploma student at HEGRA/HESS group of Prof. Dr. G. Heinzelmann at Hamburg University. I was involved in the data interpretation of the HEGRA telescopes. I also developed a computer code to calculate the gamma-gamma attenuation of VHE gamma-rays from distant sources by interaction with low energy photons of the extragalactic background light.

ACADEMIC AWARDS:

07/2013	IUPAP Young Researcher Award 2013 for the work on gamma-ray blazars and extragalactic background light with MAGIC. The IUPAP Young Scientist Awards have been established in 2006 by International Union of Pure and Applied Physics (IUPAP) for recognition of research by young scientists with a maximum of 8 years research experience following a PhD. The Award, consisting of a certificate, a medal and a cheque for 1000,- Euro was given to me at the 33rd ICRC at Rio de Janeiro, Brazil, in July 2013.
06/2012	MAGIC Senior Prize 2012. The yearly prize is given to a senior member of the MAGIC collaboration to acknowledge her/his contribution to student supervision, whereas the students elect the winner.
02/2009	Awarded by the Max Planck Society to lead an Otto Hahn group. The award consists of foreign phase of 2 years as a post-doc researcher and then 3 years at a Max Planck Institute of my choice as a W2 junior professor.
10/2008	Otto-Hahn Medal of the Max Planck Society 2008
01/2008	Marie Curie Intra European Fellowship for 2 years

PROFESSIONAL ACTIVITIES:

Since 04/2013	Convener of the AGN group of the MAGIC collaboration. In a team of currently 3 people, the AGN conveners take care of the scientific progress of the extragalactic physics working group (largest group within MAGIC), organize scientific conferences and meetings, prepare and support preparation of observation proposals, supervise data analysis and interpretation of the results as well as publication of the results in peer-reviewed journals.
12/2009 - 11/2013	Member of the MAGIC Time Allocation Committee
Since 10/2009	MAGIC upgrade manager. As such I am responsible for the coordination, installation and commissioning of a new MAGIC-I telescope camera and a new trigger and readout system for the MAGIC telescopes. The position makes me a member of the Executive Board, the highest executive committee in MAGIC, and a member of the MAGIC Collaboration Board.
Since 07/2009	Member of the Technical Board of MAGIC
Since 09/2008	Member of the Speakers' Bureau of the MAGIC collaboration (09/2008 – 10/2009 the Chair of the Bureau)

Since 01/2008	Work on the CTA design studies focusing on the science case. I am convener of the Extragalactic Background Light and Cosmology working group within CTA. I am the author of the analysis package used by the Physics Working Group to simulate CTA response using performance files produced by the Monte-Carlo Working Group.
Since 01/2008	Responsible for slow control of the trigger and readout system of the MAGIC telescopes.
Since 2006	Coordination of efforts for joint observations between the three big collaborations H.E.S.S., MAGIC and VERITAS.
Since 2005	Principal Investigator of many successful MAGIC observations of extragalactic sources with focus on distant blazars. Also Principal Investigator on Crab variability studies and MAGIC performance studies.

TEACHING EXPERIENCE:

09/2010 - 05/2012	Lectures on the extragalactic background light and cosmology for a master program at the Universitat Autònoma de Barcelona.
11/2011	Teacher/Organizer of a special CTA workshop devoted to simulating energy spectra and spatial morphologies of astrophysical sources and CTA response, Tokyo, Japan
01/2011	Teacher on spectral unfolding of the data at the second stereo MAGIC analysis workshop, Zeuthen, Germany
03/2010	Teacher on spectral unfolding of the data at the first MAGIC analysis workshop, Dortmund, Germany
02/2008	Teacher on EBL physics and spectral unfolding of the data at MAGIC software school, Benasque, Spain

SUPERVISION OF STUDENTS:

Since 08/2012	Supervision of a PhD thesis at the Max Planck Institute for physics, Munich, Ms. Priyadarshini Bangale. Expected completion date is mid 2015.
09/2009 – 01/2013	Supervision of a PhD thesis in the IFAE group, Dr. Gianluca Giavitto. The thesis received the highest mark and will be proposed for an European prize for excellence.
02/2007 – 06/2009	Co-supervision of a PhD thesis of Dr. Manel Errando. The thesis has received the highest mark and was awarded to be the “best thesis in the physics department” in 2009.

KEY SKILLS AND COMPETENCES:

- Expert on non-thermal physics at very high energies with focus on extragalactic gamma ray sources, in particular Active Galactic Nuclei
- Expert knowledge on diffuse extragalactic background light and cosmology studies using very high energy gamma ray data from distant sources
- Expert knowledge of Imaging Atmospheric Cherenkov Telescopes, their construction, commissioning, operation and maintenance
- Expert in data analysis, advanced analysis techniques and Monte-Carlo – data validation.
- High experience in project leadership and large project coordination
- Excellent interpersonal skills, very experienced in team-work and student supervision

- Sportive, tennis player, many awards as young player, run at Berlin Marathon in 2000
- Fluent in written and spoken English, German, and Russian, good knowledge of Spanish

EDUCATION:

12/2007	PhD in physics at the TU, Munich. Grade: summa cum laude
06/2003	Diploma in physics at U Hamburg. Grade: very good (1.0)

PERSONAL:

Birth date	30 March 1976
Birth place	St-Petersburg, Russia

25 September 2013