

Annual Report

Funding Programme:	Helmholtz Young Investigators Groups
Project ID No.:	VH-NG-1204
Project Title:	Opening a New Window on Physics Beyond the Standard Model Using the Cherenkov Telescope Array
Group Leader:	Elisa Pueschel
Helmholtz Centre:	DESY (Zeuthen location)
Participating University:	University of Potsdam
Report Period (=Calendar Year):	03/2017-12/2018

1) Group Structure

Please report briefly on the structure and personnel development of your group.

Since starting the group in March I have hired two postdocs (one starting Nov 2017, the second starting May 2018) and two graduate students (one starting October 2017, the second starting Jan 2018). There is also a bachelor's project student in the group.

2) Network

Please describe how you / your research group are integrated within the Helmholtz Centre and the partner university (e.g. as member of committees).

I feel that we are well integrated into DESY as a group. The full group participates in bi-weekly group meetings for members of the VERITAS and CTA collaborations. I am a member of several committees (PhD board, local organization committee for a major conference that will be held in Berlin this summer) and have sat on a number of postdoc hiring committees. I am also a seminar organizer for the weekly astroparticle seminar.

3) Satisfaction

How satisfied are you with the general working conditions provided by the Helmholtz Centre / partner university? Is there anything that meets your criticism?

Satisfied

4) Scientific Progress / Milestones

How has your work plan progressed? Which important milestones could be achieved during the report period? Is the progress of your work in accordance with original planning or has the work plan been changed?

The work plan has not unexpectedly changed slightly as it took over half a year between starting the group and the first personnel joining. Taking that into account, the project is still on track in terms of achieving milestones. Work has begun on developing software and analysis tools for CTA, both in terms of progress on the overall software framework (ctapipe) and in reconstruction improvement (utilizing event classes) and performance studies (high night sky background performance studies).

5) Financial Plan / Time Schedule <i>Can you comply with the financial plan and time schedule or do you see a need for adjustment?</i>
<p>I will make some adjustments. Some of the money that was allocated for computing resources will not be necessary and the money can be put towards personnel instead.</p>
6) Status <i>Do you hold a joint Junior Professorship or a W2/W3 Professorship? Do you aim for such a position? What is the status of your negotiations in this respect?</i>
<p>I do not hold a professorship. I have not yet attempted to negotiate such a position.</p>
7) Teaching Activities of the Group Leader
<p>I will start teaching in the autumn of 2018 (masters level particle physics).</p>
8) Publications of the Group
<p> A luminous and isolated gamma-ray flare from the blazar B2 1215+30 Multiwavelength follow-up of a rare IceCube neutrino multiplet Gamma-ray Observations Under Bright Moonlight with VERITAS Dark Matter Constraints from a Joint Analysis of Dwarf Spheroidal Galaxy Observations with VERITAS Very-High-Energy γ-Ray Observations of the Blazar 1ES 2344+514 with VERITAS Discovery of Very-High-Energy Emission from RGB J2243+203 and Derivation of its Redshift Upper Limit Multiwavelength Observations of the Blazar BL Lacertae: A New Fast TeV Gamma-Ray Flare </p>
9) External Funding
<p>Forum Junge Wissenschaft award, 5K euro to host a conference</p>
10) Patent Applications <i>No. of pending/granted patents</i>
<p>...</p>
11) Awards received by Group Members / Professorship Appointments offered to Group

Leader
...