Antideuteron Workshop 2017 CANCELED, moved to spring 2018

Wednesday, September 20, 2017 - Friday, September 22, 2017

Scientific Program

CANCELED

Unfortunately, we have to inform you that we have to cancel this year's Antideuteron workshop. Although we were able to compile an interesting list of speakers, it is, due to a number of conflicts, not as complete as we anticipated. We will soon start the planning to hold the workshop in the May/June 2018 time frame. For instance, the new antideuteron experiment GAPS is currently in an interesting design and preparatory phase before actual construction will begin. For next year's workshop, a much more detailed overview of GAPS will be possible. We deeply apologize to everybody who already committed to joining the workshop this year and potentially already initialized travel arrangements. We hope that it is not causing too much inconvenience. Rene and I decided to cancel for the sole reason to organize a more complete and effective workshop for next year.

Best regards,

Philip von Doetinchem

Rene Ong

Program

The precise measurement of cosmic-ray antiparticles serves as important means for identifying the nature of dark matter. Recent years showed that identifying the nature of dark matter with cosmic-ray positrons and higher energy antiprotons is challenging, and has lead to a significantly increased interest in cosmic-ray antideuteron searches. Antideuterons may also be generated in dark matter annihilations or decays, offering a potential breakthrough in unexplored phase space for dark matter. The workshop aims at bringing together theorists and experimentalists in the field to discuss the current status and perspectives, including potential primary sources of antideuterons, uncertainties of antideuteron production and propagation in our Galaxy, and experimental cosmic-ray antideuteron search updates.

Tentative program:

Sources of primary cosmic ray antimatter:

- antideuterons from dark matter

- antiprotons from dark matter

- antiprotons and antideuterons from primordial black holes, gravitino

- prospects for the detection of antihelium

Antiproton and antideuteron propagation

- heliospheric effects

- geomagnetic effects

- atmospheric effects

Cosmic-ray experiments:

- status from BESS

- status from AMS

- status from GAPS

Production and interaction:

- antideuteron production modeling

- simulation of antideuteron interactions

- status from ALICE

- status from NA61/SHINE

Path into the future:

- how to reduce background uncertainties

- interplay of direct, indirect, and collider experiments with antimatter input