# Kepler Center for Astro and Particle Physics

Annual Workshop of the Kepler-Kolleg: Particles, Fields and Messengers of the Universe (September 24 – 26, 2018, Kloster Obermarchtal)

#### **WORKSHOP PROGRAM**

(OT)= Overview and Introductory talks, (ST) Short contributions; 45 min and 25 min (including 5 min discussion)

### Monday, September 24th

|                      | Arrival   |                             |  |  |
|----------------------|---|-----------------------------|--|--|
| 12:30 – 13:30        | Lunch / Coffee/Room Check in  |                             |  |  |
| 13:30 – 13:45        | Josef Jochum  | Welcome – Rules of the game |  |  |
| Chair: Barbara Jäger |   |                             |  |  |
| 13:45 – 14:30        | Particle physics at the LHC: How to connect with dark matter                                      | OT, Julien Baglio           |  |  |
| 14:30 – 14:55        | Dark matter pair-production in the MSSM and simplified models at the LHC                          | ST, Gabriele Coniglio       |  |  |
| 14:55 – 15:20        | Epsilon Eridani and lota Horologi: two examples of X Ray activity cycle in young solar-like stars | ST, Martina Coffaro         |  |  |
| 15:20 – 15:45        | Prototype data analysis for FlashCam, a fully digital camera for CTA                              | ST, Manfredi Scalici        |  |  |
| 15:45 – 15:55        | questions, discussions – students only  |                             |  |  |
| 15:55 – 16:35        | Coffee Break  |                             |  |  |
| Chair: Rudi Schmidt  |   |                             |  |  |
| 16:35 – 17:00        | Simulation Studies of a Breast PET/MR<br>Insert for a Clinical PET/MR Scanner                     | ST, Christian Pommranz      |  |  |
| 17:00 – 17:45        | ALICE Physics Overview  | OT, Martin Völkl            |  |  |
| 17:45 – 18:10        | Track Based Alignment   | ST, Susovan Das             |  |  |
|                      |   |                             |  |  |
| 18:10 – 18:20        | questions, discussions – students only  |                             |  |  |
| 18:30                | Dinner  |                             |  |  |

kein Abendprogramm – freier Abend

## Tuesday, September 25th

| 7:30 – 8:30               | Breakfast  |  |  |  |
|---------------------------|--|--|--|--|
| Chair: Klaus Werner       |  |  |  |  |
| 8:30 – 8:55               | Testing 20'000 PMTs for JUNO   | ST, Alexander Tietzsch   |  |  |
| 8:55 – 9:20               | Cosmogenic Background Discrimination for the JUNO Experiment                       | ST, Axel Müller  |  |  |
| 9:20 - 9:45               | Indirect Dark Matter Search with the JUNO experiment                               | ST, David Blum   |  |  |
| 9:45 – 10:10              | Cavity enhanced attenuation measurement of liquid scintillators                    | ST, Tobias Heinz   |  |  |
| 10:10 – 10:20             | questions, discussions – students only   |  |  |  |
| 10:20 – 11:00             | Coffee Break   |  |  |  |
| Chair: Beate Stelzer      |  |  |  |  |
| 11:00 – 11:25             | Building a UV-MCP-Detector for use on a stratospheric ballon mission (ESBO-DS)     | ST, Lars Hanke   |  |  |
| 11:25 – 11:50             | Stellar Laboratories: High-precision Atomic<br>Physics with Hubble Space Telescope | ST, Alexander Landstorfer  |  |  |
| 11:50 – 12:15             | Analysis of SiECA Data from EUSO-SPB<br>Flight                                     | ST, Tobias Jammer  |  |  |
| 12:15 – 12:25             | questions, discussions – students only   |  |  |  |
| 12:30 –                   | Lunch / Coffee   |  |  |  |
| 13:30 – 16:30             | free time (discussion, hiking, visiting brewery)                                   | 14:30 – 16:00 Brewery Tour Braueri Berg<br>Ehingen (~ 14km drive => need cars) |  |  |
| 16:30 – 17:00             | Coffee   |  |  |  |
| Chair: Tobias Lachenmaier |  |  |  |  |
| 17:00 – 17:45             | Numerical Simulations of Gerneral<br>Relativistic Neutron Stars                    | OT, Christian Krüger   |  |  |
| 17:45 – 18:10             | The Gravitational Higgs Mechanism  | ST, Andrew Coates  |  |  |
| 18:10 – 18:20             | questions, discussions – students only   |  |  |  |
| 18:30                     | Dinner   |  |  |  |
| 19:30 – 20:30             | Physics and Music  | David Wharam   |  |  |

## Wednesday, September 26th

| 7:30 - 8:30               | Breakfast   |                         |  |  |
|---------------------------|---|-------------------------|--|--|
| Chair: Josef Jochum       |   |                         |  |  |
| 8:30 – 9:15               | The Sound of Relativistic Objects - a<br>Cosmic Orchestra   | OT, Sebastian Völkel    |  |  |
| 9:15 – 10:00              | Testing Strong Gravity with X-ray<br>Reflection Spectroscopy  | OT, Sourabh Nampalliwar |  |  |
| 10:00 – 10:25             | Next-to-Leading Order QCD Corrections to<br>Inclusive Heavy-Flavor Production in<br>Polarized Deep-Inelastic Scattering | ST, Felix Hekhorn       |  |  |
| 10:25 – 10:35             | questions, discussions – students only  |                         |  |  |
| 10:35 – 11:05             | Coffee Break  |                         |  |  |
| Chair: Rudi Schmidt       |   |                         |  |  |
| 11:05 – 11:50             | CBM Physics Overview  | OT, Kshitij Agarwal     |  |  |
| 11:50 – 12:15             | STS Detector  | ST, Evgeny Lavrik       |  |  |
| 12:15 – 12:25             | questions, discussions – students only  |                         |  |  |
| 12:30 – 13:30             | Lunch   |                         |  |  |
| Chair: Tobias Lachenmaier |   |                         |  |  |
| 13:30 – 13:55             | Numerical Simulation of Dust Aggomerates  | ST, Lukas Jordan        |  |  |
| 13:55 – 14:20             | The Formation of Planetary Proto-<br>Atmospheres  | ST, Tobias Moldenhauer  |  |  |
| 14:20 - 14:30             | questions, discussions – students only  |                         |  |  |
| 14:30 – 15:30             | Discussions - Prices  |                         |  |  |

### **END**