

CHAMPP CENTER IN HAMBURG FOR ASTRO-, MATHEMATICAL AND PARTICLE PHYSICS

LECTURE COURSE IN THE QUANTUM UNIVERSE RESEARCH SCHOOL

Summer Term 2022

Experiments on Physics beyond the Standard Model

C. Schwanenberger, K. Peters

Course Description:

This lecture will provide an introduction of experimental aspects on physics beyond the Standard Model. The following topics will be covered:

- The shortcomings of the Standard Model
- Supersymmetry
- Grand Unified Theories
- Compositeness
- CP violation
- Exotic neutrinos
- Dark matter
- Axions
- Future colliders

Prerequisites:

Knowledge on particle physics on the level of a bachelor degree in physics is recommended, but not absolutely necessary.

| Date and Place: | Tue 11:00 – 12:30, SemRm 4064, Bahrenfeld Fri 10:15– 11:00, SemRm 1076, Bahrenfeld |
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| Problem Classes: | Fri 11:00– 11:45, SemRm 1076, Bahrenfeld |
| Starting on: | 5 April, 2022 |