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**Modulbezeichnung:** Seminar: Particle Physics and Astrophysics (PS) **5 ECTS**  
(Seminar: Particle Physics and Astrophysics)

Modulverantwortliche/r: Uli Katz, Gisela Anton, Ulrich Heber, Manami Sasaki, Stefan Funk, Thilo Michel, Thomas Eberl, Jörn Wilms

Lehrende: Jörn Wilms, Ulrich Heber, Manami Sasaki, Stefan Funk, Uli Katz, Gisela Anton, Thilo Michel, Thomas Eberl

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Startsemester: WS 2018/2019

Dauer: 1 Semester

Turnus: unregelmäßig

Präsenzzeit: 30 Std.

Eigenstudium: 120 Std.

Sprache: Englisch

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### Lehrveranstaltungen:

Physics Seminar: Particle Physics and Astrophysics I (WS 2018/2019, Hauptseminar, 2 SWS, Anwesenheitspflicht, Gisela Anton et al.)

Physics Seminar: Particle Physics and Astrophysics II (WS 2018/2019, Hauptseminar, 2 SWS, Anwesenheitspflicht, Gisela Anton et al.)

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### Inhalt:

#### Contents:

In this seminar, topics in modern particle physics and astrophysics will be discussed. Participants will present their topic of choice in a seminar talk and have a discussion with the audience. Suitable topics will be provided by the supervisors.

See the StudON page for the list of topics and further information.

### Lernziele und Kompetenzen:

#### Learning goals and competences

Students

- comprehend an interesting physical topic in a short time frame
- identify and interpret the appropriate literature
- select and organize the relevant information for the presentation
- compose a presentation on the topic at the appropriate level for the audience
- use the appropriate presentation techniques and tools
- criticize and defend the topic in a scientific discussion

### Literatur:

#### Literature

Primary literature will be provided by the supervisors of the individual topics.

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### Verwendbarkeit des Moduls / Einpassung in den Musterstudienplan:

Das Modul ist im Kontext der folgenden Studienfächer/Vertiefungsrichtungen verwendbar:

[1] **Physics (Master of Science): ab 1. Semester**

(Po-Vers. 2015s | NatFak | Physics (Master of Science) | Master's examination | Physics seminar(s))

[2] **Physics (Master of Science)**

(Po-Vers. 2018w | NatFak | Physics (Master of Science) | Master's examination | Physics seminar(s))

[3] **Physik (Bachelor of Science): ab 5. Semester**

(Po-Vers. 2007 | NatFak | Physik (Bachelor of Science) | alte Prüfungsordnungen | Bachelorprüfung | Physikalisches Seminar)

[4] **Physik (Bachelor of Science): ab 5. Semester**

(Po-Vers. 2010 | NatFak | Physik (Bachelor of Science) | Module des 3. bis 6. Fachsemesters | Physikalisches Seminar)

[5] **Physik (Bachelor of Science)**

(Po-Vers. 2018w | NatFak | Physik (Bachelor of Science) | Bachelorprüfung | Physikalisches Seminar)

[6] **Physik (Master of Science): ab 1. Semester**

(Po-Vers. 2010 | NatFak | Physik (Master of Science) | Masterprüfung | Physikalisches Seminar)

[7] **Physik mit integriertem Doktorandenkolleg (Master of Science): ab 1. Semester**

(Po-Vers. 2010 | NatFak | Elitestudiengang Physik mit integriertem Doktorandenkolleg (Master of Science) | Masterprüfung | Physikalisches Seminar)

**[8] Physik mit integriertem Doktorandenkolleg (Master of Science): ab 1. Semester**

(Po-Vers. 2015s | NatFak | Elitestudiengang Physik mit integriertem Doktorandenkolleg (Master of Science) | Masterprüfung | Physics seminar(s))

**[9] Physik mit integriertem Doktorandenkolleg (Master of Science)**

(Po-Vers. 2018w | NatFak | Elitestudiengang Physik mit integriertem Doktorandenkolleg (Master of Science) | Masterprüfung | Physics seminar(s))

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**Studien-/Prüfungsleistungen:**

Seminar: Teilchenphysik und Astrophysik (Prüfungsnummer: 756013)

(englische Bezeichnung: Seminar: Particle Physics and Astrophysics)

Prüfungsleistung, mündliche Prüfung, Dauer (in Minuten): 45

Anteil an der Berechnung der Modulnote: 100%

Erstablingung: WS 2018/2019, 1. Wdh.: keine Angabe

1. Prüfer: Gisela Anton

1. Prüfer: Stefan Funk

1. Prüfer: Ulrich Heber

1. Prüfer: Uli Katz

1. Prüfer: Thilo Michel

1. Prüfer: Manami Sasaki

1. Prüfer: Thomas Eberl

1. Prüfer: Jörn Wilms

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**Organisatorisches:**

- Preliminary meeting scheduled for Mo, 15 Oct 2018, for both seminars, first presentations expected at Mo, 29 Oct 2018.
- This course will be held in English, i.e. seminar talks are expected to be given in English, too. This also applies to the discussion during and after the presentations.
- Note that, due to the large number of participants, the seminar is split into two parts, where participation in one part is compulsory and participation in both parts is invited and encouraged.
- Further information is available on StudON where also the list of topics will be made available. Participants registering before the list of topics is available will receive a request by email to select their favourite topics once this list is visible on StudON. Registration is via StudON.

**Bemerkungen:**

May be applied to specialisation 'Astrophysics and astroparticle physics' in the physics master program starting winter term 2018/19.