

15th Patras Workshop on Axions, WIMPs and WISPs

3-7 June 2019

Albert-Ludwigs-University
Freiburg, Germany

Scientific Programme

- Direct and Indirect Searches for Dark Matter
- Direct and Indirect Searches for Axions & WISPs
- Searches for Hidden Sector Photons
- Astrophysical Signatures for Dark Matter
- Review of Collider Experiments
- New Developments: Theory & Experiment
- Scalar Dark Energy: Theory & Experiment

Organizing committee:

Horst Fischer (Chair, Univ. of Freiburg)
Marc Schumann (Chair, Univ. of Freiburg)
Vassilis Anastassopoulos (Univ. of Patras)
Laura Baudis (Univ. of Zurich)
Giovanni Cantatore (Univ. of Trieste)

Joerg Jaeckel (Univ. of Heidelberg)
Axel Lindner (DESY)
Andreas Ringwald (DESY)
Yannis Semertzidis (CAPP/IBS & KAIST)
Konstantin Zioutas (Co-Chair, Univ. of Patras)



Deadline for abstract submission and early registration: 30 April 2019

<http://axion-wimp2019.desy.de>

SPONSORS: CERN, DESY, IBS/CAPP, UNIVERSITY OF FREIBURG,
UNIVERSITY OF HEIDELBERG, UNIVERSITY OF PATRAS, UNIVERSITY OF ZURICH

Freiburg: some interesting facts



- 227'400 people
 - one of the „classic“ German **University** cities
 - „**green** capital of Germany“
- Freiburg is one of the **warmest German cities**
 - most tropical nights ($T > 20^{\circ}\text{C}$) in Germany
- Freiburg is the **highest German city**
 - trick: include summit of „Schauinsland“ (1282m)



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 - trick: include summit of „Schauinsland“ (1282m)
- **Freiburg Münster** (1200-1500)
 - Tower: „nicest tower on Earth“ (J. Burckardt)
116m, finished already 1330
 - among highest buildings during middle ages



Be aware of the „Bächle“...



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Welcome to the Institute of Physics



Astroparticle Physics Lab (AG Schumann)

Photo: Oliver Kern, www.okdv.de



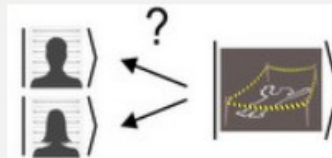
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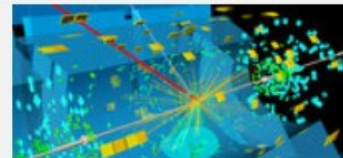
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- [Scientific Advisory
Board \(SAB\)](#)

News

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Physics Colloquium 03.06.2019, 17:15 Uhr

"Quantum Retrodiction: Is
there an Arrow of Time in

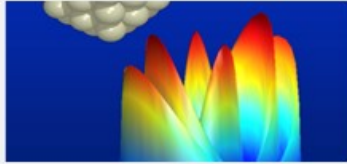


Fundamental questions in particle physics

The Research Training
Group "Mass and

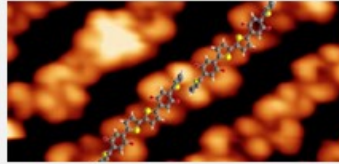
Research Groups at the Institute of Physics

Atomic, Molecular and Optical Physics



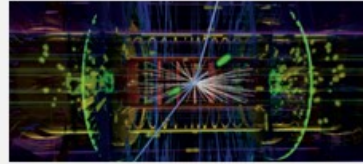
- Cluster and Synchrotron Spectroscopy [↗](#)
Prof. Dr. T. Lau
- Experimental Attosecond and Laser Physics [↗](#)
Prof. Dr. G. Sansone
- Experimental Atomic, Molecular and Optical Physics [↗](#)
Prof. Dr. T. Schätz
- Molecular and Nanophysics [↗](#)
Prof. Dr. F. Stienkemeier
- Clusterphysics [↗](#)
apl. Prof. Dr. B. v. Issendorff
- Solar Physics [↗](#)
Prof. Dr. O. von der Lühse
Prof. Dr. S. Berdyugina
- Quantum Optics and Statistics [↗](#)
Prof. Dr. A. Buchleitner
apl. Prof. Dr. H.-P. Breuer
Dr. S. Y. Buhmann (Emmy Noether Group [↗](#))
PD Dr. A. Rodriguez
PD Dr. T. Wellens

Condensed Matter and Applied Physics



- Experimental Polymer Physics [↗](#)
Prof. Dr. G. Reiter
- Nanophysics and Molecular Nanomagnets [↗](#)
Prof. Dr. O. Waldmann
- Funktional Nanosystems [↗](#)
Prof. Dr. M. Moseler
PD Dr. M. Walter
- Statistical Physics of Soft Matter and Complex Systems [↗](#)
Prof. Dr. T. Schilling
- Biomolecular Dynamics [↗](#)
Prof. Dr. G. Stock
- Theoretical Condensed Matter Physics [↗](#)
Prof. Dr. M. Thoss
- Dynamics in the Life Sciences [↗](#)
Prof. Dr. J. Timmer
apl. Prof. Dr. T. Filk
- Applied Theoretical Physics - Computational Physics [↗](#)
Prof. Dr. J. Dzubiella

Particles, Fields and Cosmos



- Experimental Particle Physics [↗](#)
Prof. Dr. B. Heinemann
- Experimental Particle Physics [↗](#)
Prof. Dr. G. Herten
apl. Prof. Dr. U. Landgraf
- Experimental Particle Physics [↗](#)
Prof. Dr. K. Jakobs
Dr. C. Weiser (Interim Professor)
Hon.-Prof. Dr. P. Jenni
- Experimental Particle Physics [↗](#)
Prof. Dr. M. Schumacher
- Experimental Astroparticle Physics [↗](#)
Prof. Dr. M. Schumann
apl. Prof. Dr. H. Fischer
- Theory of Particle Physics and Quantum Field Theory [↗](#)
Prof. Dr. S. Dittmaier
- Quantum Fields and Particle Phenomenology [↗](#)
Prof. Dr. H. Ita
visiting Prof. Dr. F. Febres Cordero
- Elementary Particle Phenomenology [↗](#)
Prof. Dr. J. J. van der Bij



23 research groups
theory and experiment

~600 students
~125 PhD students
~65 PostDocs

Members of external Institutes

Kiepenheuer Institute, KIS

- Solar Physics (KIS) [↗](#)
Prof. Dr. O. von der Lühse
Prof. Dr. S. Berdyugina
apl. Prof. Dr. M. Roth
apl. Prof. Dr. W. Schmidt

University of Freiburg

- Medical Physics (University Hospital) [↗](#)
Prof. Dr. M. Bock*
Prof. Dr. J. Hennig*
- Bio and Nanophotonics (Faculty of Engineering) [↗](#)
Prof. Dr. A. Rohrbach*
- Computational Neuroscience (Faculty of Biology) [↗](#)
Prof. Dr. S. Rotter*

Fraunhofer Institutes

- Applied Solid State Physics (Fraunhofer IAF) [↗](#)
apl. Prof. Dr. J. Wagner
- Theoretical Materials Physics (Fraunhofer IWM) [↗](#)
apl. Prof. Dr. C. Elsässer
Prof. Dr. M. Moseler
- Spectroscopy of Optical Materials (Fraunhofer IPM) [↗](#)
PD Dr. F. Kühnemann
- Solar Energy Systems (Fraunhofer ISE) [↗](#)
N.N.

Axions and WIMPs in Freiburg



Agenda

98 contributions! >130 participants.

	Monday		Tuesday		Wednesday		Thursday		Friday
9:30			9:00		9:00		9:00		9:00
10:50	Coffee		10:35	Coffee	10:35	Coffee	10:35	Coffee	10:35
11:20			11:05		11:05		11:05		11:05
13:00	Lunch		13:05	Lunch	13:05	Lunch	13:05	Lunch	13:10
14:30			14:15	Short Talks	14:00	Excursion	14:30		14:30
16:00	Coffee		16:00	Posters + Coffee		Excursion	16:10	Coffee	16:00
16:30						Excursion	16:40		16:30
			17:10			Excursion	17:15		17:15
18:30	End		18:30	End		Excursion	18:40	End	18:30
	18:45 Reception				19:30	Excursion	19:30	Dinner	

**TODAY:
Welcome Reception**



**Öffentlicher
Abendvortrag: Die
Verborgene Seite des
Universums - auf der
Suche nach Dunkler
Materie**

Die Professorin Laura Baudis (Universität Zürich) spricht in diesem öffentlichen Abendvortrag am 04. Juni, 19:30 im HS 2004/KG II über die Suche nach "Dunkler Materie" und berichtet von aktuellen und künftigen Bemühungen diese in Experimenten nachzuweisen.

**Wednesday:
Afternoon Excursion**

**Thursday:
Conference Dinner**

MO 03.06.

sonnig
und windig




28° / 17°
gefühl 30° / 17°


80 %


0,9 l/m²

 SO
7 km/h
Böen 50 km/h



 05:32 Uhr

 21:21 Uhr

 Freuen Sie sich auf bis zu 9 Sonnenstunden

 Neumond ?

Morgens


sonnig



27° / 17°


10 %


0 l/m²

 SO
6 km/h

Mittags

leichter Regen-
schauer
und windig



28° / 23°


80 %


0,9 l/m²

 SW
11 km/h
Böen 50 km/h

Abends

bedeckt



23° / 19°


15 %


0 l/m²

 SO
3 km/h

Nachts

wolkig



19° / 16°


20 %


0 l/m²

 SO
5 km/h

DI 04.06.

sonnig



30° / 15°
gefühl 32° / 15°


10 %


0 l/m²

 SO
5 km/h



MI 05.06.

sonnig
und windig



29° / 17°
gefühl 31° / 18°


85 %


2,9 l/m²

 NW
6 km/h
Böen 60 km/h



DO 06.06.

bedeckt



15° / 14°
gefühl 18° / 13°


90 %


2,0 l/m²

 SW
9 km/h



FR 07.06.

sonnig



25° / 15°
gefühl 27° / 16°


25 %


0 l/m²

 NW
4 km/h



Conference Office

- Justin Baier
- Daniel Baur
- Julia Dierle
- Patrick Meinhardt

Conference Desk staffed during every coffee break, at every morning and just before the start of the afternoon.

- Horst Fischer
- Marc Schumann

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WELCOME

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