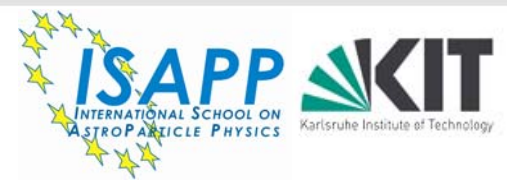




# Introduction to the Summer Institute 2009

- Introduction to the research infrastructure  
University&FZK → KIT → KCETA
- Aim and Structure of the Summer Institute
  - programme & modules
  - excursions
  - registration & technicalities
- laboratory projects & tutors

# Aim and Structure of the SI



3 weeks (20 July to 7 August)

1) get a personal insight into research projects

→ laboratory work

2) get an overview on Astroparticle Physics and research projects & technologies

→ lectures & seminars

3) get an insight into other research fields & sites

→ excursions

4) give us (and yourself) feedback

→ students presentations

→ reality check, reports

5) discover the city of Karlsruhe and its surroundings

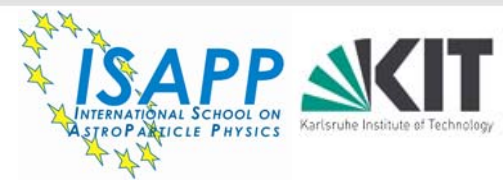
# Aim and Structure of the SI

programme week 1 (20 July to 24 July)

	Monday	Tuesday	Wednesday	Thursday	Friday
09:00 – 10:15 (FTU)		Hannestad: Introduction to modern cosmology	Drexlin: Phenomenology of neutrinos & $\nu$ masses	Kraus: Dark Matter in Cosmology and Astrophysics	Engel: The physics of Cosmic Rays
10:15 – 10:45	coffee break				
10:45 – 12:00 (FTU)		Hannestad: Introduction to modern cosmology	Drexlin: Single $\beta$ decay experiments	Eitel: DM search with cryogenic bolometers	Zeppenfeld: Particle Physics Programme at LHC
12:00 – 13:00	lunch				
13:00 – 14:30 IK seminar room	Introduction & registration	students session	students session	KATRIN excursion	bioliq excursion
14:30 – 17:30	laboratory work				

shifted to next Tuesday

# Aim and Structure of the SI



programme week 1 (20 July to 24 July)

	Monday	Tuesday	Wednesday	Thursday	Friday
09:00 – 10:15 (FTU)		laboratory work	Drexlin: Phenomenology of neutrinos & $\nu$ masses	Kraus: Dark Matter in Cosmology and Astrophysics	Engel: The physics of Cosmic Rays
10:15 – 10:45	coffee break				
10:45 – 12:00 (FTU)		laboratory work	Drexlin: Single $\beta$ decay experiments	Eitel: DM search with cryogenic bolometers	Zeppenfeld: Particle Physics Programme at LHC
12:00 – 13:00	lunch				
13:00 – 14:30 IK seminar room	Introduction & registration	students session	students session	KATRIN excursion	bioliq excursion
14:30 – 17:30	laboratory work				

# Aim and Structure of the SI

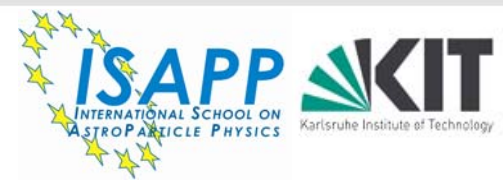
programme week 2 (27 July to 31 July)

	Monday	Tuesday	Wednesday	Thursday	Friday
09:00 – 10:15 (FTU)	Roth: Overview of the Pierre Auger Observatory	Hannestad: Introduction to modern cosmology	laboratory work	excursion	laboratory work
10:15 – 10:45	coffee break				
10:45 – 12:00 (FTU) 11:00 – 12:15 (IK seminar)	Müller: Highlights from the Experiment CMS at LHC	Hannestad: Introduction to modern cosmology	Menn: Indirect DM search: balloons, satellites, ISS	to MPIK Heidelberg	Huege: Advanced techniques for detection of UHE CR's
12:15 – 13:00	lunch				
13:00 – 14:30	ANKA excursion	research reactor excursion	laboratory work		laboratory work
14:30 – 17:30	laboratory work				

with "reality check"

joint dinner

# Aim and Structure of the SI



programme week 3 (3 August to 7 August)

	Monday	Tuesday	Wednesday	Thursday	Friday
09:00 – 10:45	laboratory work				reports II
10:45 – 11:00	coffee break				
11:00 – 12:15 (IK seminar)	Heiss: Grid computing	Hartmann: Silicon detector technology	Wolf: Vacuum technology	Kreps: Neural networks in data analysis	discussion & resumé end of SI
12:15 – 13:00	lunch				
13:00 – 17:30	laboratory work			reports from laboratory projects	

# Aim and Structure of the SI

excursions

on FZK campus: → **attendance lists to be filled**  
(always leaving from IK bldg. 401 main entrance at 13:00)

Thurs 23 July: KATRIN

Fri 24 July: bioliq

Mon 27 July: ANKA

Tues 28 July: research reactor

Participation list for the visit to Max-Planck-Institute  
for Nuclear Physics in Heidelberg  
date, time and location: July 30 at 09:00 p.m., meeting point at KIT-shuttle bus stop / FZK

no.	NAME	institution
1		
2		
3		
4		
5		
6		
7		

Thursday 30 July: excursion to MPIK Heidelberg

09:00 departure from FZK south gate (KIT shuttle stop)

10:00 – 14:00 MPIK Heidelberg

→ **attendance list to be filled by tomorrow morning!!**

~14:30 - ??? free time at Heidelberg (on personal basis)

# Aim and Structure of the SI

registration & technicalities

- visitor badges for FZK campus
- lunch vouchers for FZK cantina
- receipt of fees
- certification of participation (at the end 😊)



M.-C.  
Kauffmann



R. Engel



A. Haungs



K. Eitel

T. Thümmeler

K. Schlösser

problems? let us help you!  
contact Marie-Christine Kauffmann (Tel. 3546)  
or me (Tel. 3701) or your tutors!

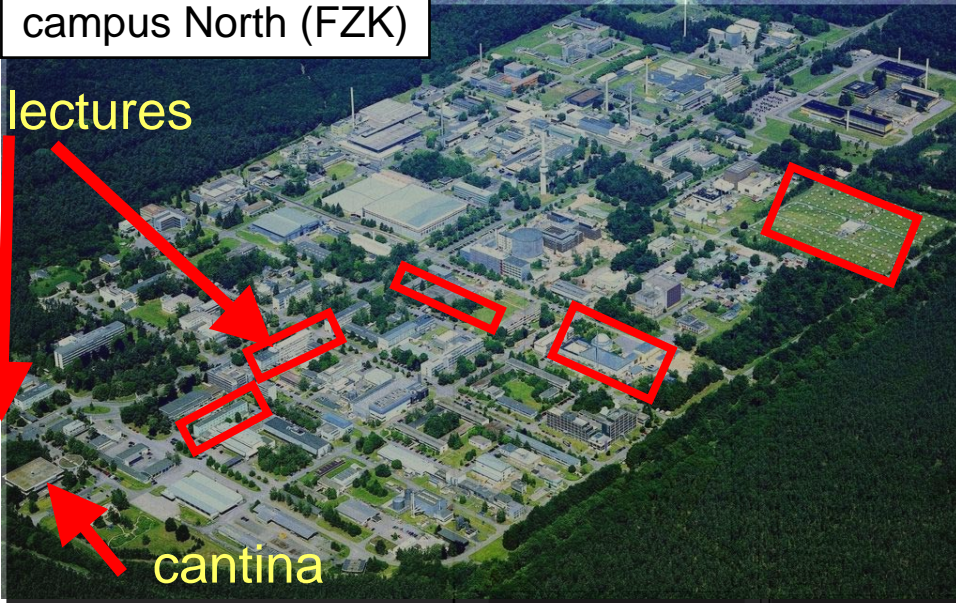


# Karlsruhe Institute of Technology

campus North (FZK)

lectures

cantina



campus South (Univ.)

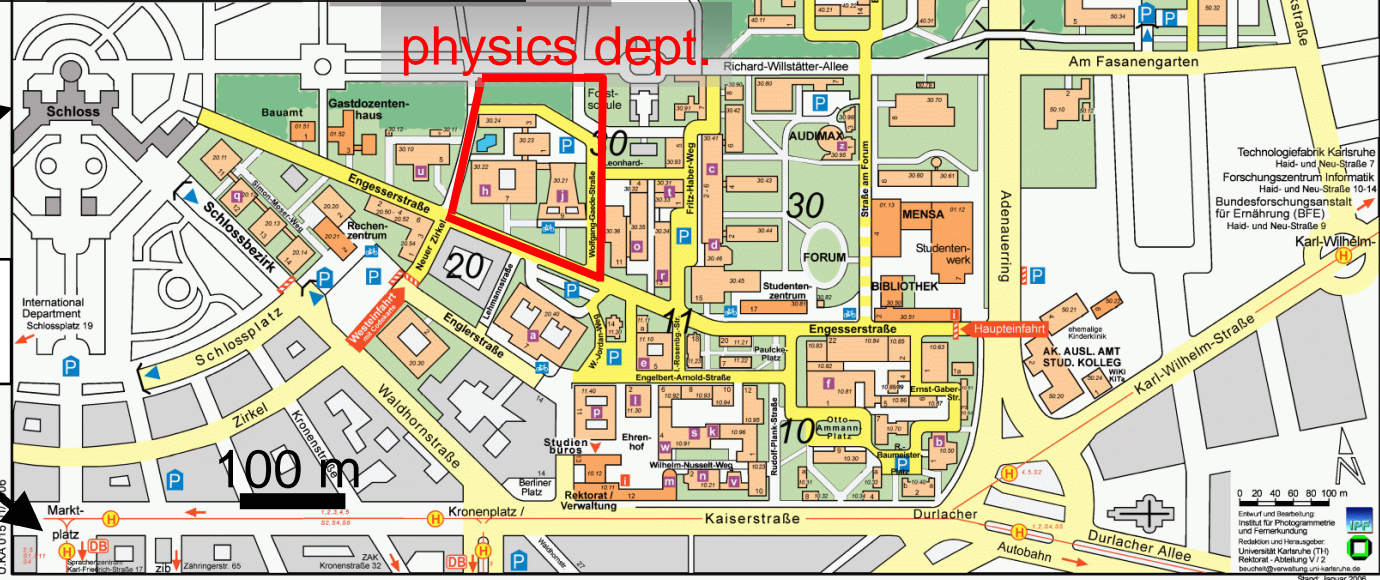


Universität Karlsruhe (TH)  
Forschungsuniversität • gegründet 1825



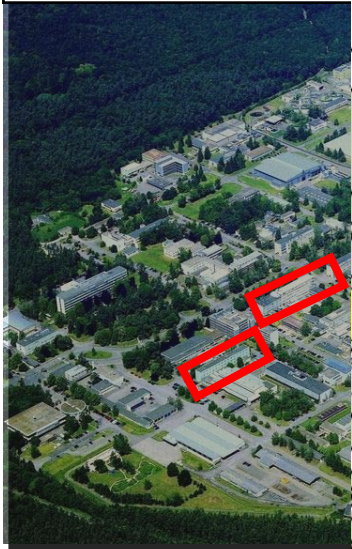
Karlsruhe Schloss (palace)

Karlsruhe Market Square (city center)



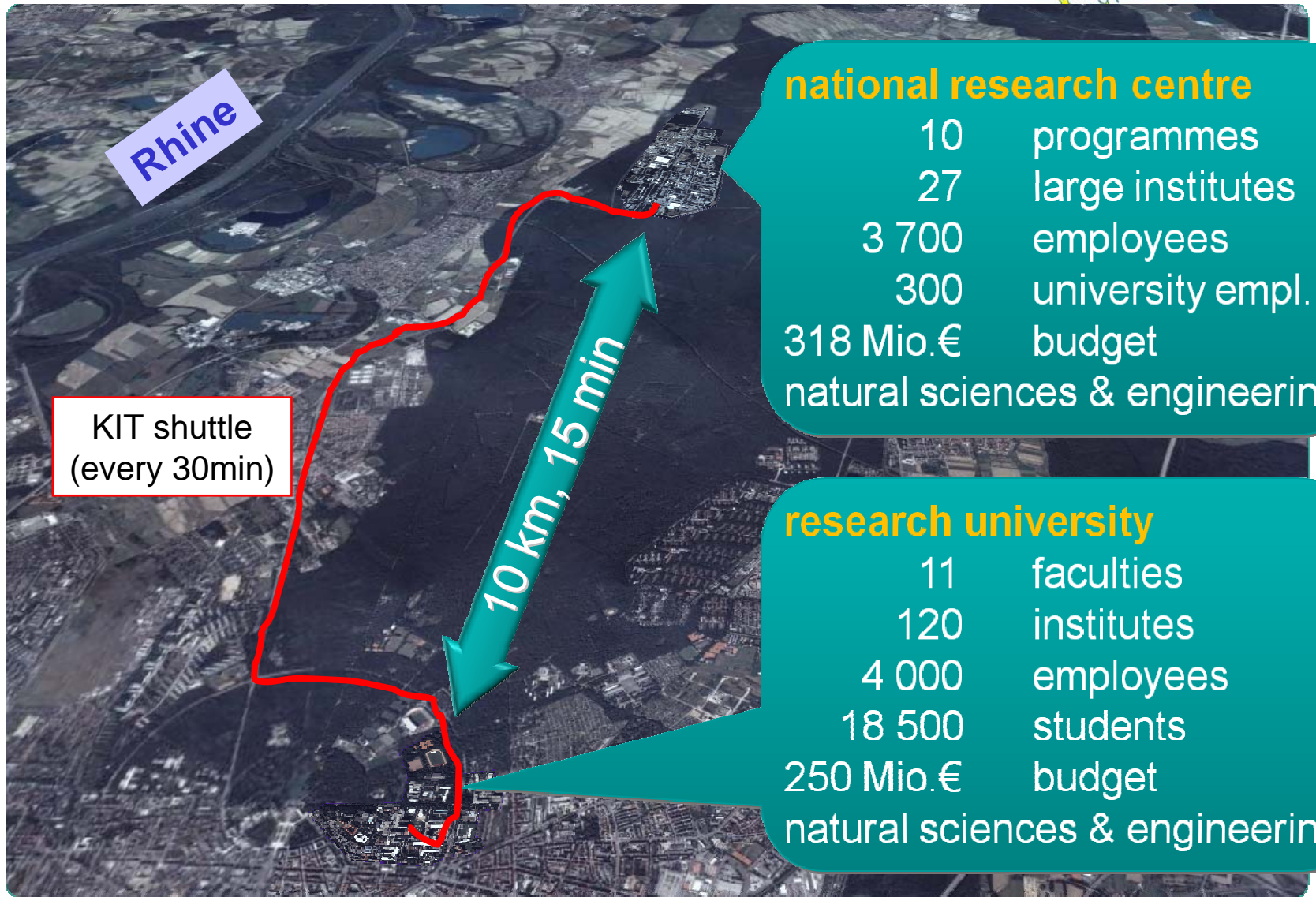
# Karlsruhe Institute of Technology

campus North (F7)



Karlsruhe Schloss  
(palace)

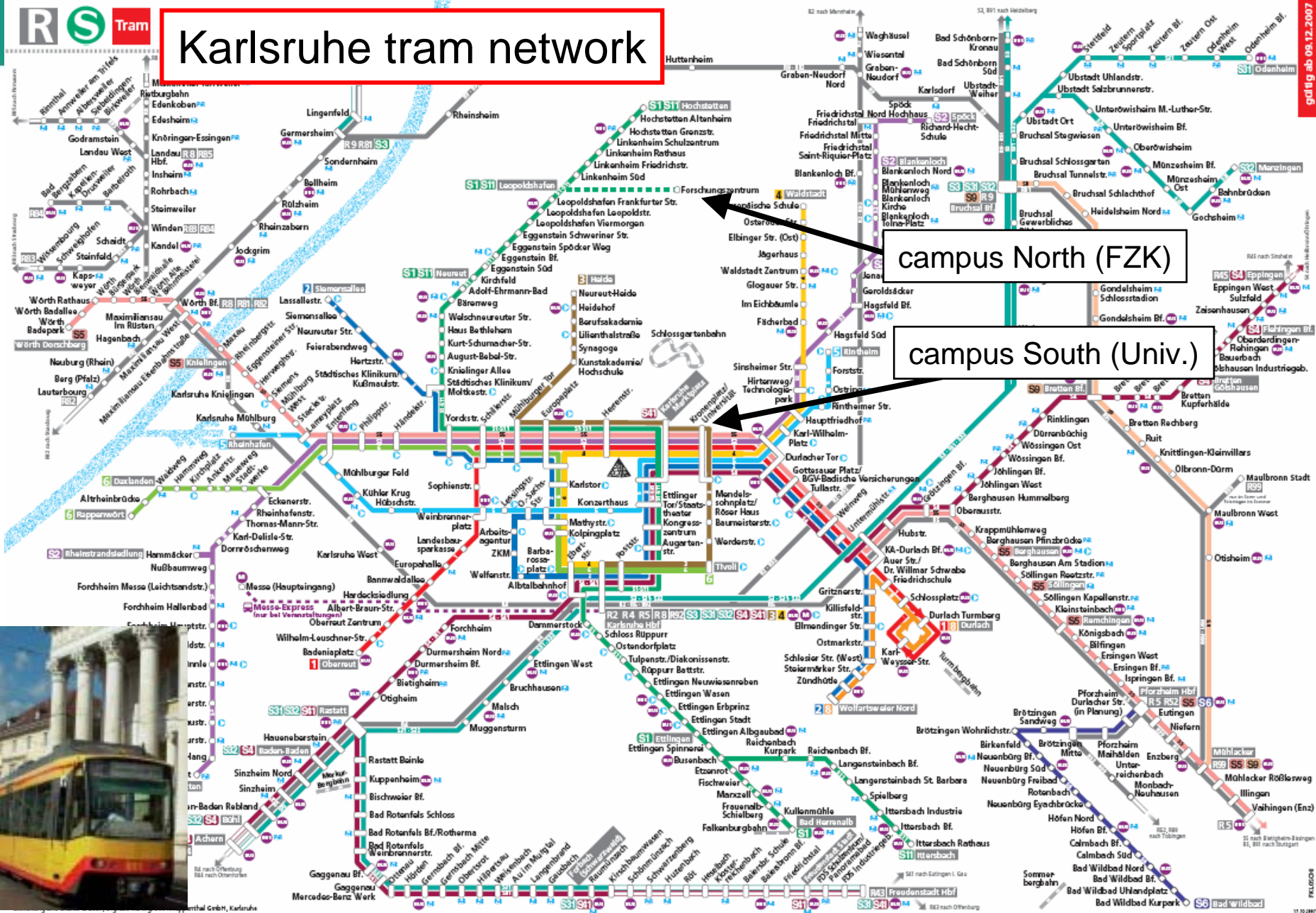
Karlsruhe Market Sq  
(city center)



# where is Karlsruhe?



# Karlsruhe tram network



campus North (FZK)

campus South (Univ.)

# Tourism in & around Karlsruhe

ZKM  
cinemas

[www.dasfest-karlsruhe.de](http://www.dasfest-karlsruhe.de)



“Zeltival”  
music festival



# Tourism in & around Karlsruhe



e.g.

- take S1/S11 to Bad Herrenalb
- take S4 to Forbach/Freudenstadt
- take DB via Offenburg to Konstanz (lake Constance)
- go to Titisee/Feldberg (1500m)
- Strassbourg (45min)
- Freiburg (1h)



9:00 Dr. Markus Roth

Overview of the Pierre Auger Observatory

10:45 Prof. Dr. Thomas Müller

Highlights from the CMS Experiment at LHC

→ room 157



ISAPP Summer Institute 2009 at the Karlsruhe Institute of Technology

