DESY Summer Student Program 2009

Welcome Session

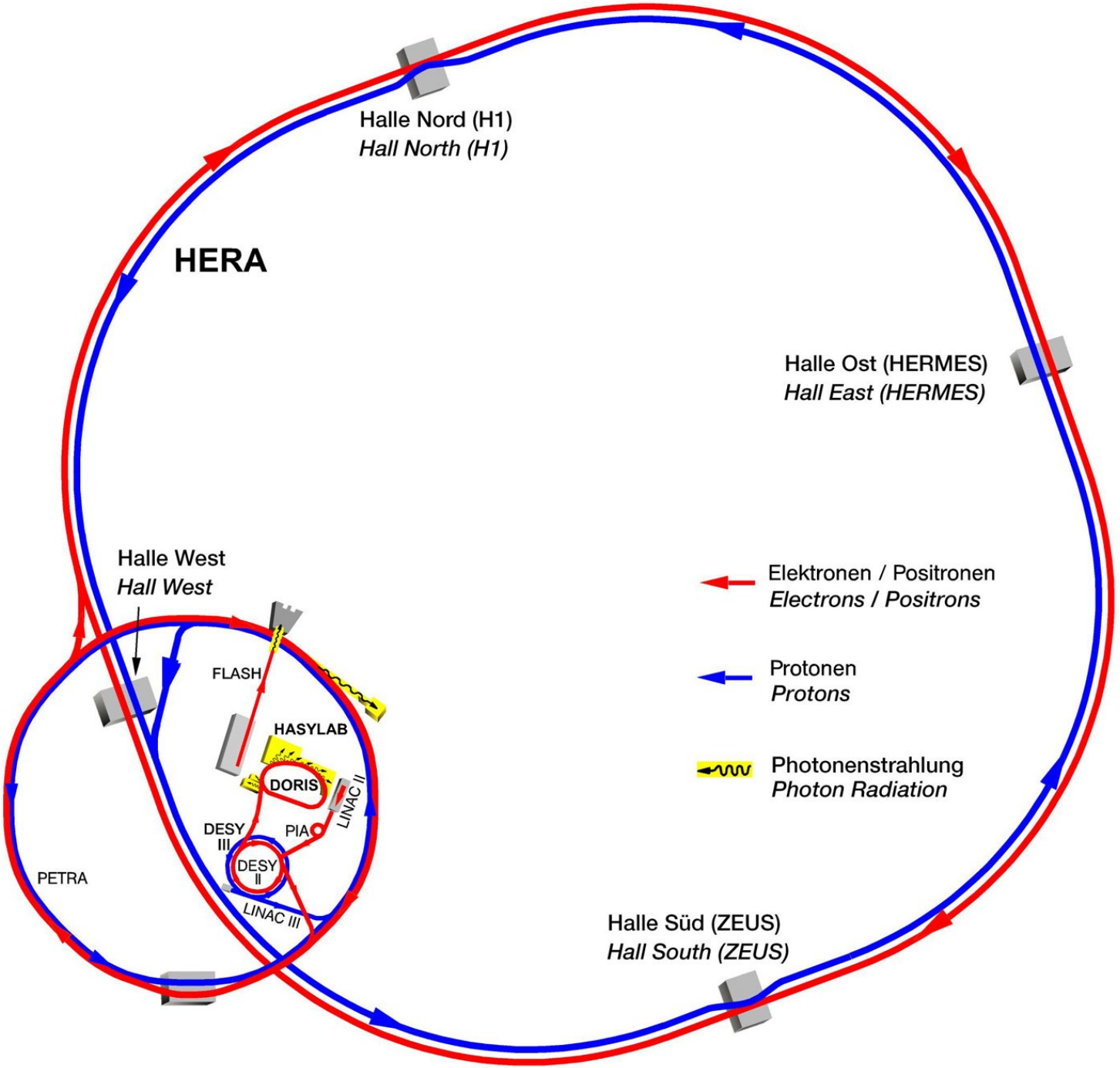
Joachim Meyer DESY – FH1

The 92 Summer students come from

- Armenia, Australia, Austria, Belgium, China, Estonia, Germany, Georgia,
- Greece, Ireland, India, Israel, Italy, Mexico, Netherlands, Poland
- Romania, Russia, Slovakia, Spain, Thailand,
- Ucraine, UK, USA

DESY site in Hamburg

We are HERE now


Halle Nord (H1)
Hall North (H1)
HERA
Halle Ost (HERMES)
Hall East (HERMES)
Halle West
Hall West
FLASH
HASYLAB
DORIS
LINAC II
DESY III
PIA
DESY II
LINAC III
PETRA
Halle Süd (ZEUS)
Hall South (ZEUS)
Elektronen / Positronen
Electrons / Positrons
Protonen
Protons
Photonenstrahlung
Photon Radiation

Your Research Projects at DESY :

DESY Summer Students join groups engaged in the following activities:

Program A : Experiments with Synchrotron Radiation (only at Hamburg)

- Students join groups at HASYLAB engaged in fundamental and applied research in the fields of physics, biology, chemistry, crystallography, material science, geological science, and medicine. The work includes participation in the preparation and realization of measurements, evaluation of the measured data, and technical improvement of the instrumentation.

Program B : Research in Elementary Particle Physics, accelerators and computing:

- **Experiments in Elementary Particle Physics**
  Research is concentrated mainly on the experiments H1, HERMES and ZEUS at the electron-proton-collider HERA, the experiments ATLAS, CMS at the proton-proton-collider LHC and in preparations for experiments at a e+ e- Linear Collider. At Zeuthen research is done also in the area of Neutrino-Astrophysics. The activities can be characterized by the following categories :
  B1 Physics analysis (software-oriented)
  B2 Data processing (software-oriented)
  B3 Development of experimental equipment (hardware-oriented)

- **B4 Research on Accelerators**
  Students join groups engaged in the development of accelerators. Activities include prototype projects for a e+ e- linear collider and research in the areas of superconducting magnets and cavities.

- **B5. Theory of Elementary Particles**
  Students acquire some elementary insight into topics from the wide spectrum of research of the Theory group. Depending on previous knowledge, activities may range from further reading, with discussions of theoretical concepts and research methods, to participation in simple research projects.

- **B6. Computing**
  Research is done in the area of Computing in High Energy Physics. At Zeuthen students participate also in tests and software development for powerful parallel computers

Lectures for ALL summer students :

DESY Summer Student Program 2009 : Lectures at Hamburg

DESY Summer Student Common Lectures - Week 1 (Place : Auditorium)

Time	Mon, 20.7.2009	Tue, 21.7.2009	Wed, 22.7.2009	Thu, 23.7.2009	Fri, 24.7.2009
9:00 - 10:30		10:00 Welcome Session Registration *J. Meyer*	10:00 Introduction to DESY *H. Dosch*	Astro Particle Physics *A. Lindner*	Introduction to Accelerators *W. Decking*
11:00 - 12:30				Astro Particle Physics *A. Lindner*	Free Electron Laser *M. Dohlus*

DESY Summer Student Common Lectures - Week 2 - (Place : Auditorium)

Time	Mon, 27.7.2009	Tue, 28.7.2009	Wed, 29.7.2009	Thu, 30.7.2009	Fri, 31.7.2009
9:00 - 10:30	e+ e- Linear Collider *K. Buesser*	Superconductivity at Accelerators *P.Schmueser*	Elementary Particle Physics Research *A. Geiser*	Research with Synchrotron Radiation *J. Viefhaus*	
11:00 - 12:30	e+ e- Linear Collider *K. Buesser*	Superconductivity at Accelerators *P.Schmueser*	Research with Synchrotron Radiation *J. Viefhaus*	Elementary Particle Physics Research *A. Geiser*	

Lectures for ALL summer students :

DESY Summer Student Common Lectures - Other Weeks (Place : Auditorium)

Time	Fri, 21.8.2009	Fri, 28.8.2009
9:00 - 12:00	Life Science Applications with Synchrotron Radiation *EMBL*	Neutrino Physics *C. Hagner*

DESY Summer Student Program 2009 : Lectures at Hamburg

Lectures for Summer Students in HEP, Accelerators and Computing (Place : SEM 2, Bld 2A)

Time	Mon, 3.8.2009	Tue, 4.8.2009	Wed, 5.8.2009	Thu, 6.8.2009	Fri,7.8.2009
9:00 - 10:00	Introduction to Elementary Particle Physics *J.Meyer*	Detectors in Elementary Particle Physics *D. Pitzl*	Introduction to Elementary Particle Physics *J.Meyer*	Introduction to Elementary Particle Physics *J.Meyer*	Simulating HEP Processes *H. Jung*
10:30 - 11:30	Detectors in Elementary Particle Physics *D. Pitzl*	Introduction to Elementary Particle Physics *J. Meyer*	Detectors in Elementary Particle Physics *D. Pitzl*	Elementary Particle Physics Questions -Answers *J. Meyer*	Simulating HEP Processes *H. Jung*
11:45 - 12:30	Discussion Session *D. Pitzl*	Discussion Session *J. Meyer*	Discussion Session *D. Pitzl*	Discussion Session *J. Meyer*	Discussion Session *H. Jung*

Time	Mon, 10.8.2009	Tue, 11.8.2009	Wed, 12.8.2009	Thu, 13.8.2009	Fri, 14.8.2009
9:00 - 10:00	Theory of Elementary Particles *A.Ali*	Physics at HERA *K. Krueger*	Theory of Elementary Particles *A.Ali*	Physics at HERA *K. Krueger*	Theory of Elementary Particles *A.Ali*
10:30 - 11:30	Physics at HERA *K. Krueger*	Theory of Elementary Particles *A.Ali*	Physics at HERA *K. Krueger*	Theory of Elementary Particles *A.Ali*	Theory of Elementary Particles *A.Ali*
11:45 - 12:30	Discussion Session *K. Krueger*	Discussion Session *A.Ali*	Discussion Session *K. Krueger*	Discussion Session *A.Ali*	Discussion Session *A.Ali*

Time	Mon, 17.8.2009	Tue, 18.8.2009	Wed, 19.8.2009	Thu, 20.8.2009	Fri, 21.8.2009
9:00 - 10:00		Computing in HEP *F. Gaede*	LHC Detectors and machine *J. Haller*	Physics at pp colliders *J. Haller*	*see*
10:30 - 11:30		Computing in HEP *F. Gaede*	LHC Detectors and machine *J. Haller*	Physics at pp colliders *J. Haller*	*common*
11:45 - 12:30		Discussion Session *F. Gaede*	Discussion Session *J. Haller*	Discussion Session *J. Haller*	*lectures*

Time	Mon, 24.8.2009	Tue, 25.8.2009	Wed, 26.8.2009	Thu, 27.8.2009	Fri, 28.8.2009
9:00 - 10:00	Physics at e+ e- Colliders *G. Moortgat-Pick*	Physics at e+ e- Colliders *G. Moortgat-Pick*			*see*
10:30 - 11:30	Physics at e+ e- Colliders *G. Moortgat-Pick*	Physics at e+ e- Colliders *G. Moortgat-Pick*			*common*
11:45 - 12:30	Discussion Session *G. Moortgat-Pick*	Discussion Session *G. Moortgat-Pick*			*lectures*

Program 'Experiments with Synchrotron Radiation' 2009

Week 1 & 2

Welcome and Common Lectures for all Summer Students
Location : Auditorium

Additional Welcome Session for the HASYLAB Summerstudents on Tuesday, July 21 , time 15:00h - 16:00h, location Room 456 in building 25F

DESY Summer Student Lectures 'Exp. with SR' - Week 3

Time	Mon, Aug. 3	Tue, Aug. 4	Wed, Aug. 5	Thu, Aug. 6	Fri, Aug. 7
09:00 - 10:30		Synchrotron Radiation - Production and Properties *R. Gehrke*		Detectors for Synchrotron Radiation Experiments *H. Graafsma*	Diffraction and Scattering *A. Meents* **(continued)**
11:00 -12:30		Optics for Synchrotron Radiation Experiments *H. Schulte-Schrepping*		Diffraction and Scattering *A. Meents*	

DESY Summer Student Lectures 'Exp. with SR' - Week 4

Time	Mon, Aug. 10	Tue, Aug. 11	Wed, Aug. 12	Thu, Aug. 13	Fri, Aug. 14
09:00 - 10:30		Small Angle X-ray Scattering *U. Vainio*		X-Ray Spectroscopy *W. Drube*	
11:00 - 12:30		Small Angle X-ray Scattering **(continued)** *S. Roth*		X-Ray Fluorescence *K. Rickers*	

DESY Summer Student Lectures 'Exp. with SR' - Week 5

Time	Mon, Aug. 17	Tue, Aug. 18	Wed, Aug. 19	Thu, Aug. 20	Fri, Aug. 21
09:00 - 10:30		X-Ray Absorption Spectroscopy *E. Welter*		Diffraction Imaging *T. Wroblewski, A. Rothkirch*	Life Science Applications with Synchrotron Radiation **(plenary Lecture)** **Location: Auditorium** *N.N.*
11:00 - 12:30		Inelastic Scattering *W. Caliebe*		Characterization of Surfaces *O. Seeck*	

DESY Summer Student Lectures 'Exp. with SR' - Week 6

Time	Mon, Aug. 24	Tue, Aug. 25	Wed, Aug. 26	Thu, Aug. 27	Fri, Aug. 28
09:00 - 10:30	X-Ray Tomography *F. Beckmann*	Research with Coherent X-Rays *C. Gutt*	**Exercise Week (whole day)**		
11:00 - 12:30	Research with High Energy Photons *M.v. Zimmermann*	Spectroscopy with VUV Radiation *W. Wurth*			
15:00 - 16:00	**Preliminary discussion about the Exercise Week**				

DESY Summer Student Lectures 'Exp. with SR' - Week 7

Time	Mon, Aug. 31	Tue, Sep. 1	Wed, Sep. 2	Thu, Sep. 3	Fri, Sep. 4
09:00 -10:30	**Exercise Week (whole day)**	Experiments at FLASH *R. Treusch*	**Seminar Exercise Week**		
11:00 -12:30					

All lectures about 'Experiments with Synchrotron Radiation' and the events related to the exercise week will take place in **room 109/bldg. 25B**

INFORMATION on WEB :

http://www.desy.de/summerstudents/

DESY Summer Student Programme 2009 (21/07/09 - 10/09/09)

Summer students should visit this page regularly to get informed about the latest news.

The summer student lectures at Hamburg you find here

- There are also some 'nonofficial' special tutorials offered for HEP students on C++ and ROOT

Current Messages for **DESY - Hamburg**

Official announcements for the DESY summer students will be made here. Please read and react.

- **Tuesday 21/7 at 10:00, DESY Auditorium**
  Opening Session . Since also the registration takes place at this occasion please bring all the necessary documents with you.
- **Friday 24/7 at 18:00, DESY Canteen Extension :**
  Buffet Dinner
- **Monday 27/7 at 10:30**
  A Photo of the summer students will be taken in the lecture break on the steps in front of the auditorium
- **Friday 31/7 at 14:00, Head building Lab. 1, in front of PR :**
  Guided tour around the DESY site
- **Thursday 10/9 at 9:00 - 17:00 , Auditorium :**
  Students Session, Course Review

Where to find Help : http://www.desy.de/summerstudents

Summer Student Programme

Name	Building	Room	Phone	E-mail
Andrea Schrader	1c	378	4453	andrea.schrader@desy.de
Joachim Meyer	1a	329	2479	joachim.meyer@desy.de

Staff Department

Name	Building	Room	Phone	E-mail
Annette Pettersson	7	209	3765	annette.pettersson@desy.de
Regina Hoppman	7	204	3628	regina.hoppmann@desy.de

Travel expenses

Name	Building	Room	Phone	E-mail
Sisko-Leena Poser	6	206	4777	leena.poser@desy.de

Where to find Help : http://www.desy.de/summerstudents

Accommodation

In case you can't organize housing on your own (a list of student hostels you find here) contact the hostel (for housing on DESY site) or the housing office (for private off-site housing).
NOTE : In case you contact the hostel or housing office please state that you are a summer student!

Please note :
You are guest in the hostel.
And you are not alone there.

Hostel : Housing at DESY

Info page

Opening hours :

- Monday and Friday : 9:00 - 13:00
- Tuesday - Thursday : 9:00 - 13:00 and 14:30 - 17:00

Name	Building	Room	Phone	E-mail
Hella Hummerjohann	6	120	2740	hostel@desy.de

Housing Office : Housing off - site

Info page

Opening hours :

- Monday : 9:00 - 13:00
- Wednesday : 11:00 - 13:00
- Friday : 9:00 - 13:00

(Please be prepared to wait if you come to the office!)

Name	Building	Room	Phone	E-mail
Cathrin Schierholz	11a	28a	3487	housing@desy.de

Where to find Help : http://www.desy.de/summerstudents

Foreign guests

International Office

Info page

Name	Building	Room	Phone	E-mail
International Office	6	114	2516	international.office@desy.de

DESY info

Cashier : Building 6, first floor

Cafeteria :

Opening hours : Monday - Friday from 7:00 - 17:00

Canteen :

Opening hours : Monday - Friday from 11:00 - 14:00

Bistro :

Opening hours : Monday - Friday from 17:00 - 23:00, Saturday - Sunday from 10:00 - 17:00

Hamburg Info

Some links related to Hamburg you find below :

City Map of Hamburg
All about Hamburg
More about Hamburg (in German only)

The DESY Site :

HASYLAB R. Gehrke 25B 221
HASYLAB Lectures 25

A. Schrader 1C 378

HEP-Lectures SEM 2

Common Lectures Auditorium

J. Meyer 1A 329

Canteen

Administration 7

Gate is closed !

Guest office 6

SAFETY at DESY :

DESY Safety Information for Visitors and Contractors

1. Safety Organisation

The Industrial Safety Regulations, Accident Prevention Measures, and Health Provisions at DESY conform to the German Statutory requirements and to those of the European Community. The DESY board of directors fulfils its obligations in this respect by appointing Safety Officers within the groups who are responsible for ensuring that the safety regulations and accident prevention measures are obeyed.
Similarly, with respect to radiation safety, the groups have their own nominated Radiation Safety Officers.
Advice on questions of safety (excluding radiation safety matters) can be obtained through the safety engineers, Andreas Hoppe (ext. 3585, building 35, room 14), Stefan Schrader (ext. 2085, room 13) or Yvonne Boro (ext. 2865, room 12) -D5-.
Mrs. Boro -D5- is responsible for hazardous materials and their disposal (ext. 2865, building 35, room 14).
In addition to the group -D5- questions concerning safety in the halls may be directed to the group -MEA- where Mr. Körfer (ext. 3714, building 1d, room 11), is the contact person.

Radiation protection questions should be directed to the group -D3- in the persons of Mr. Tesch (ext. 4915 building 1c, room 278) or Mr. Leuschner (ext. 3690, building 1c, room 279).

Industrial medical advice and assistance may be obtained from Dr. Bünz (ext. 2171, building 1a, room 107).

DESY-Emergency Call: Tel. 2500

All accidents, fires, or other emergency situations should be reported via this telephone number. In the event of language difficulties the number of the telephone extension from which you are calling indicates where you are. The emergency call number alerts the DESY Technical Emergency Service which then arranges for all necessary assistance, e.g. Fire Service, Ambulance, etc. The Technical Emergency Service is available 24 hours a day, seven days a week. For more general information, and to report technical problems please use the telephone extension number 5555 or from outside DESY call ext. 8998-5555.

2. Safety Instructions

Except in the accompaniment of an experienced person, nobody is allowed to undertake any work or enter any experimental area at DESY without having first received instructions from the local Safety Officer on special dangers which might be expected, warning or alarm signals which could occur, rescue facilities which are available, and how one should react under emergency circumstances. The issue of a DACHS-access card allowing independent access to controlled areas is also conditional on a course of instructions on local safety requirements. Talk to your Safety Officer.

3. Companies and Firms

When engaging a firm or company to execute work on the DESY site the originator of the order is obliged to ensure that the local Safety Officer is informed of the work and that any employees of the company involved in the work receive adequate safety instructions.

4. Rules of the road

The general German road traffic regulations also apply on the DESY site. The maximum speed is 30 km/h (20 mph). Particular care must be taken due to the relatively large number of pedestrians on the roads. The transport of special loads over the site is also a hazard which can be regularly expected. One must drive particularly slowly in the vicinity of sharp curves, road works and building activities

5. Cranes and lifting tackle

According to German law, cranes and motorised lifting equipment may only be operated by authorised personnel. Appropriately trained and tested guests may receive limited authorisation to operate such equipment in agreement with -MEA- (ext. 3714) and the safety group -D5- (ext. 3585 / 2865).

6. Electrical equipment

Electrical equipment at DESY must conform to the VDE standards. The experimental and accelerator areas contain a wide range of electrical equipment and it is not always possible to erect an enclosure around each individual item. Such rooms are therefore declared as electrical service rooms where only authorised personnel are allowed. Before commencing work in such areas you must contact the responsible Safety Officer and ascertain what possible hazards exist.

Communication :

As soon as you have a computer connection ,
send an email to
joachim.meyer@desy.de

I need your email address for communication purposes !

You are expected to check your email daily !

In case you have already an office number and a telephone number please give these as well

German Language Course :

In case there is enough interest, a german language course is offered :

Mondays and Thursdays 17:30 for 5 weeks starting on August 3.

If you want to attend contact Andrea Schrader.

NEXT STEPS :

- Registration (NOW And HERE)
  - •International Office (Steffi Killough et al)
  - •Administration (Regina Hoppmann et al)
  - •General (Andrea Schrader)
- Afterwards : Contact your Supervisor
- Lectures start Tomorrow 10:00 HERE !

And always 9:00 on the following days !

HASYLAB Summer Students meet today
16:00, Room 456, Building 25F.