

# DESY, Location Zeuthen.

DESY in Brandenburg



Christian Stegmann

4. September 2012

# That's us – Zeuthen in numbers

## Budget 2011 in Mio. Euro

### Institutionell funds

Personel	Consumables	Investments
9,9	3,7	4,1

### Third party funds

Personel	Consumables	Investements
0,6	0,2	0,2

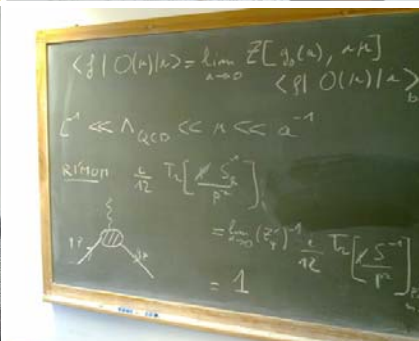
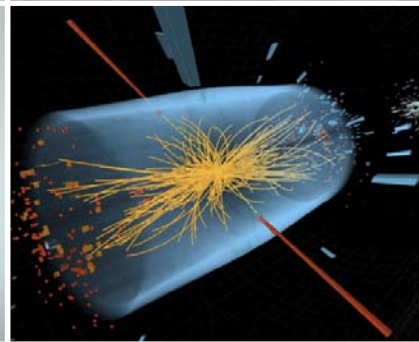
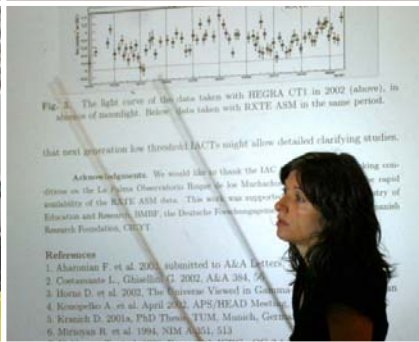
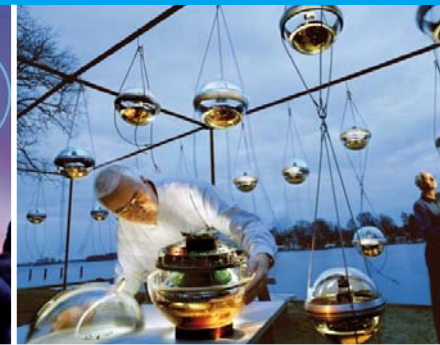
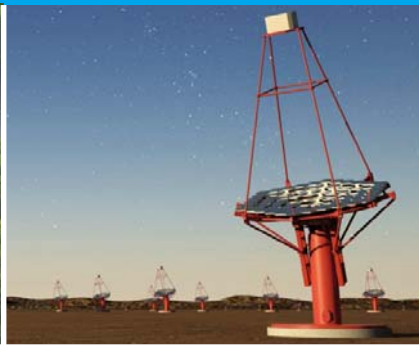
## Personel 2011

FTE	200
Heads	237
Apprentencies	20
Foreign researchers	48



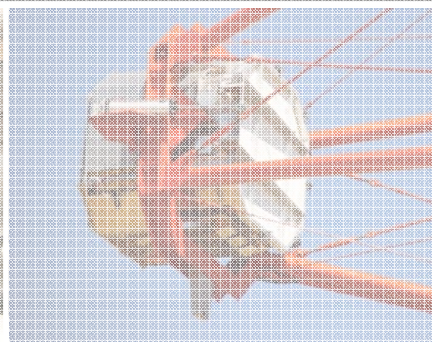
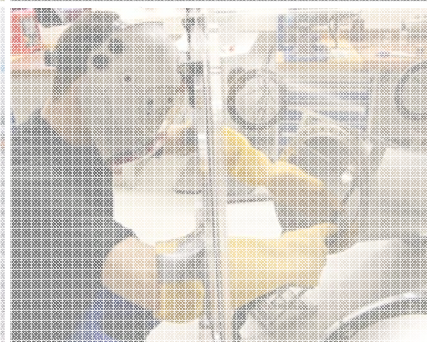
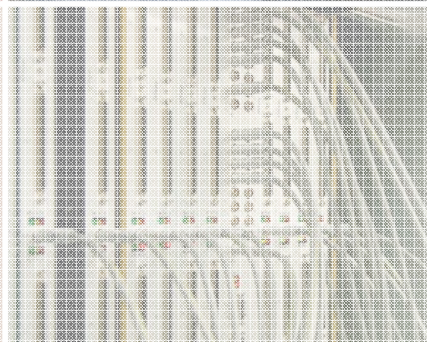
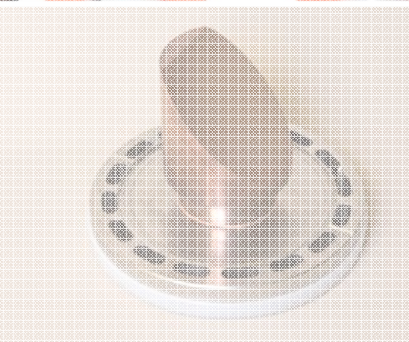
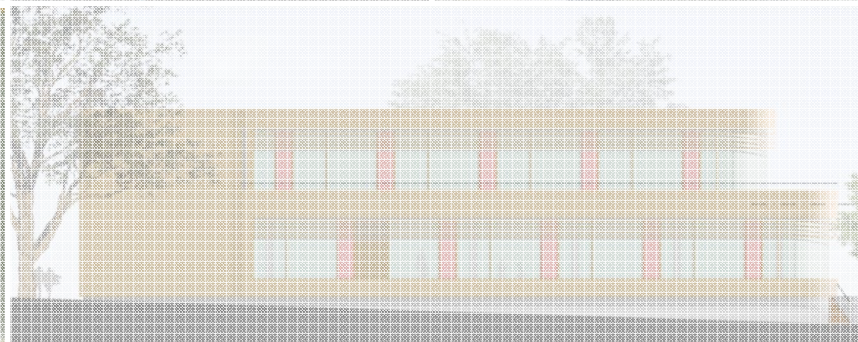
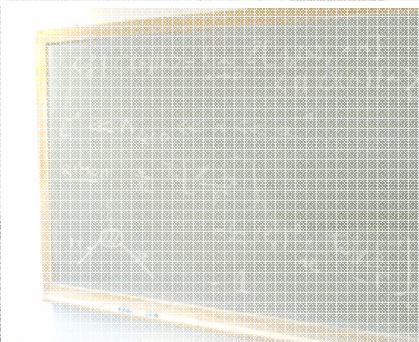
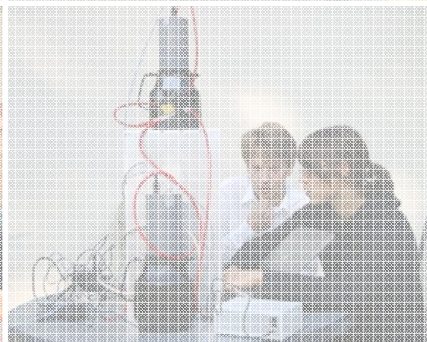
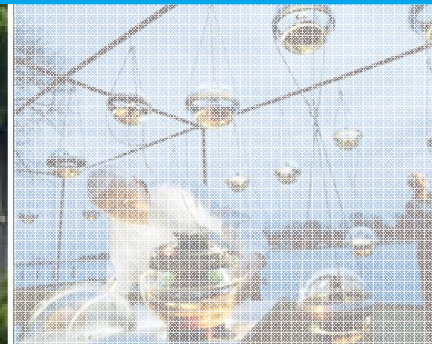


# That's us – People, History and Projects





# DESY, Location Zeuthen





# Our Way to a Modern Institute





# Today



# Our Infrastructure

## > Mechanics and Construction

- Konstruktion 5 engineers, 1 technician, 2 designer
- Workshop 1 head, 6 mechanics
- Apprenticeship 1 instructor, 9 apprentices

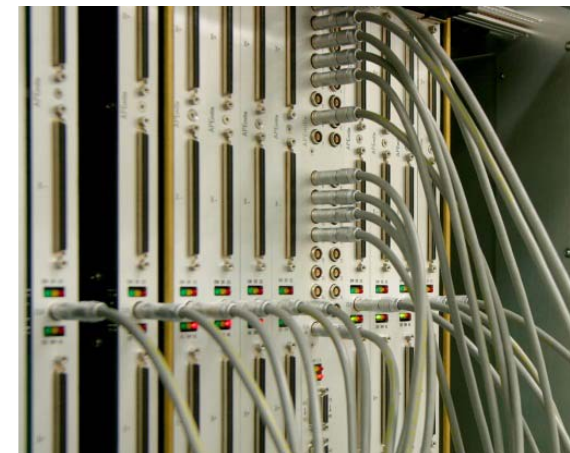
## > Electronics

- Development 13 engineers
- Workshop 1 engineer, 1 technician, 5 skilled worker
- Apprenticeship 1 instructor, 8 apprentices

## > Computing centre

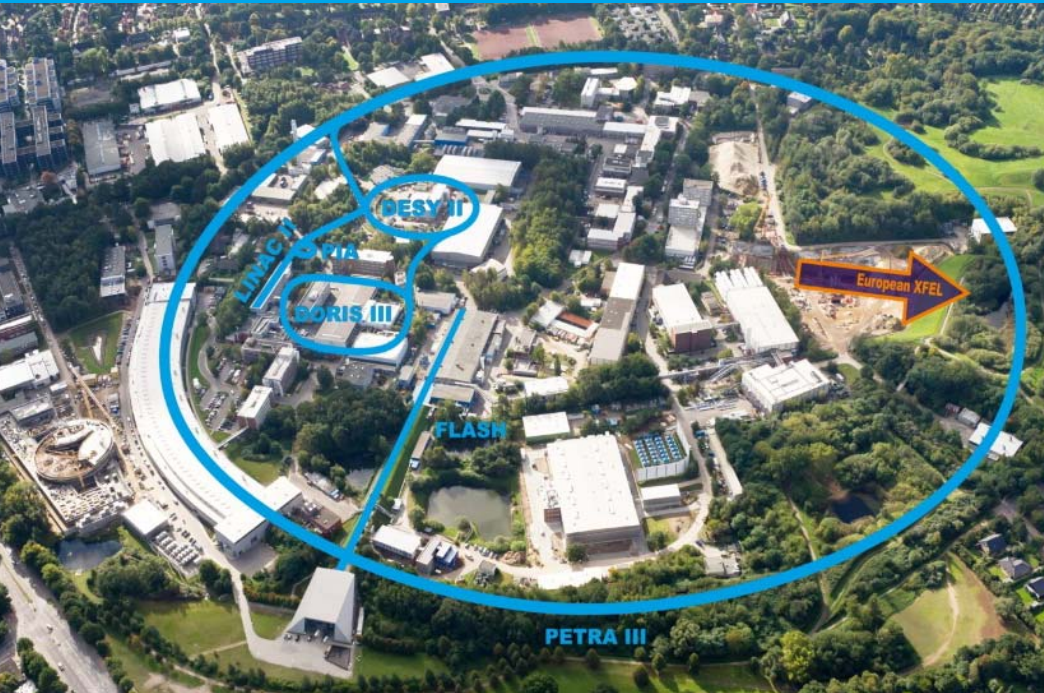
- Grid-, TIER-, High-Performance-Computing, Service
- Resources: 3500 CPU Cores,, 2PB disk space,  
Tape library extendable > 4PB, external network connection 10Gbps

## > Administration, library, support, technical infrastructure, ...





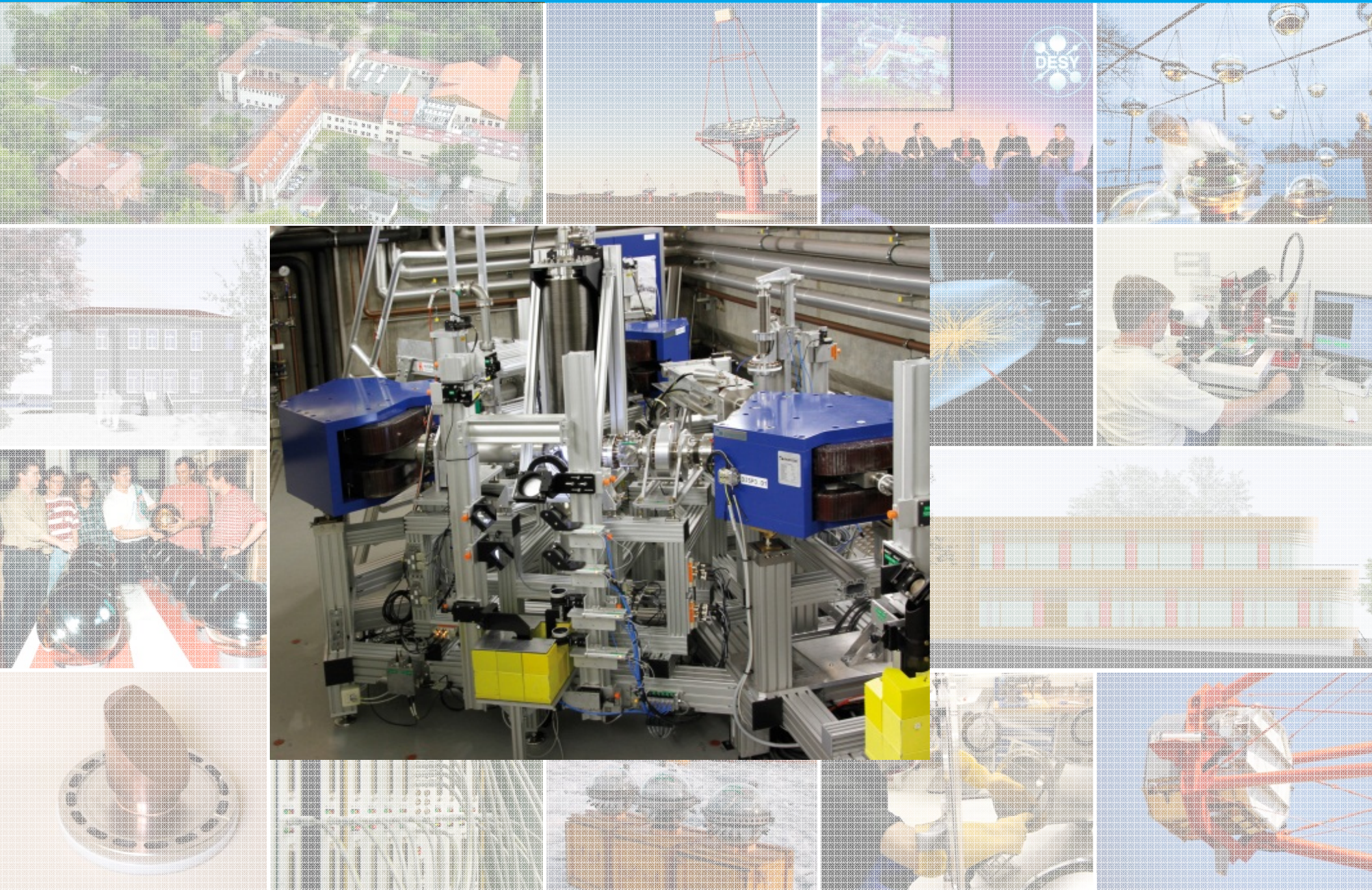
# An integral part of DESY



- > Accelerator science
- > Particle physics
- > Astroparticle physics



# Accelerator development





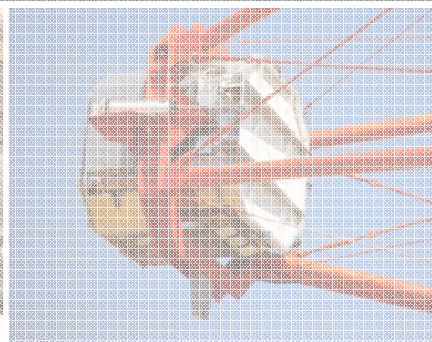
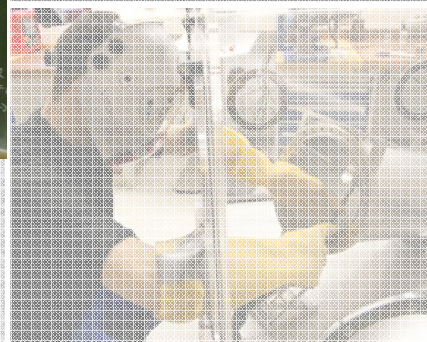
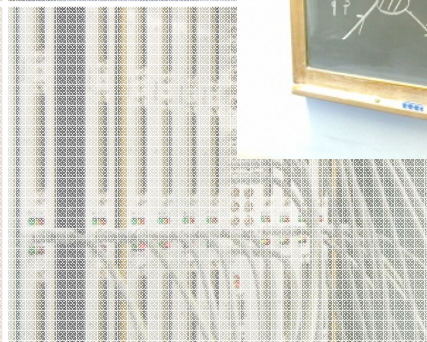
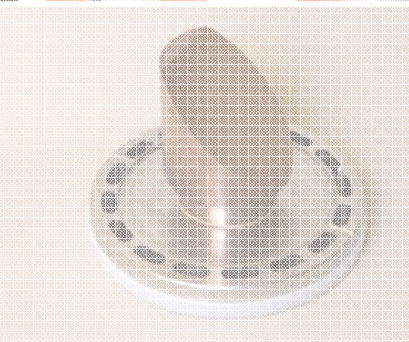
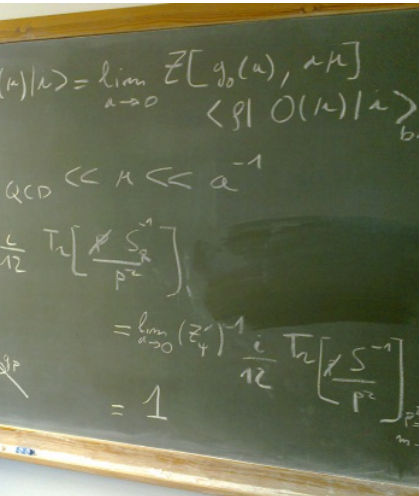
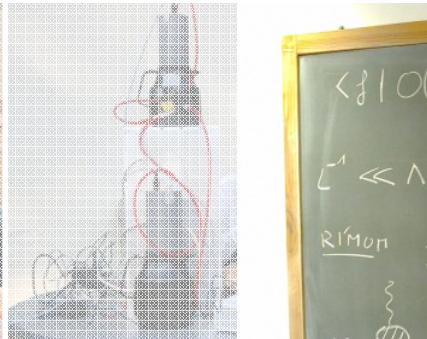
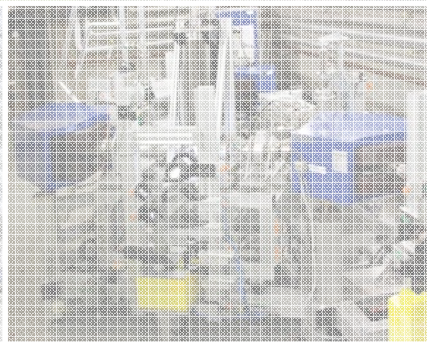
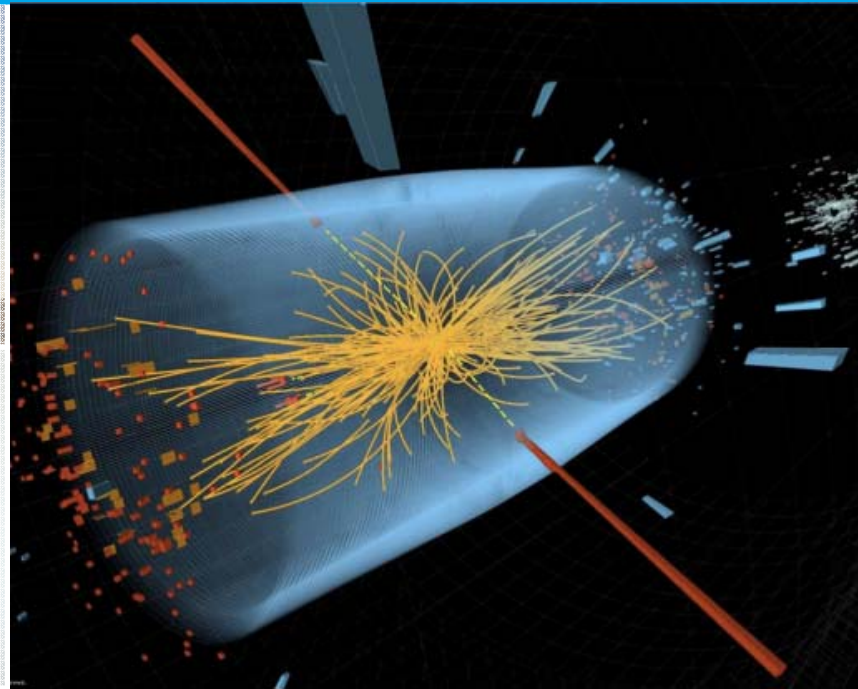
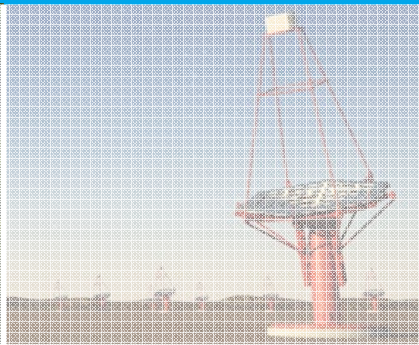
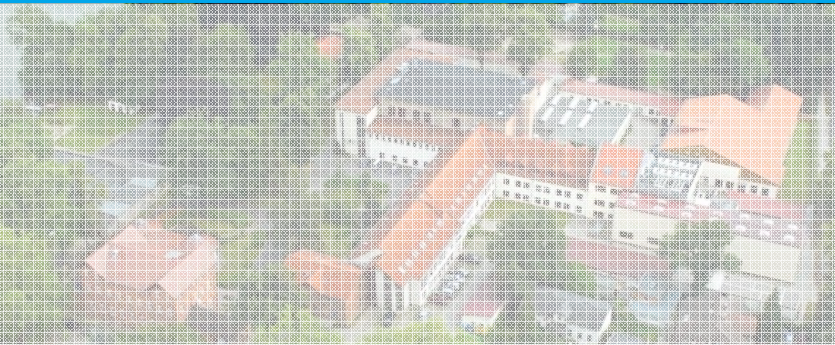
# PITZ – „Photoinjektor Teststand in Zeuthen“



- > Development and optimization of high-frequency photo-injectors for free-electron lasers
- > Test of subsystems
  - Photo cathodes
  - Laser systems
  - Components for beam diagnostics

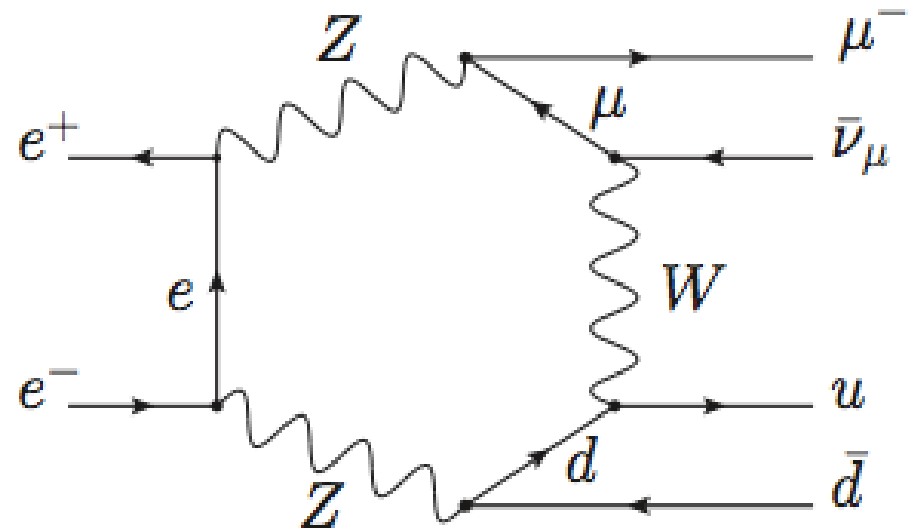
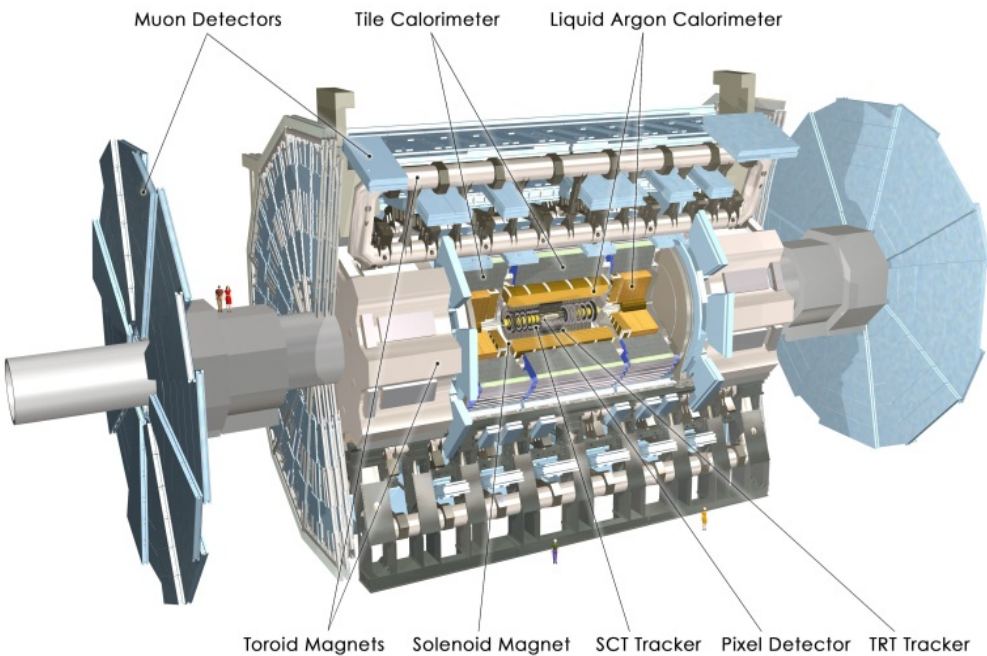


# Particle physics





# Particle physics in Zeuthen



## > Experimental particle physics

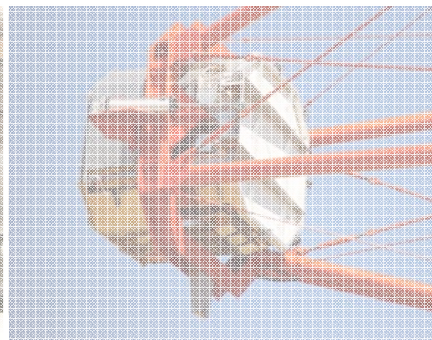
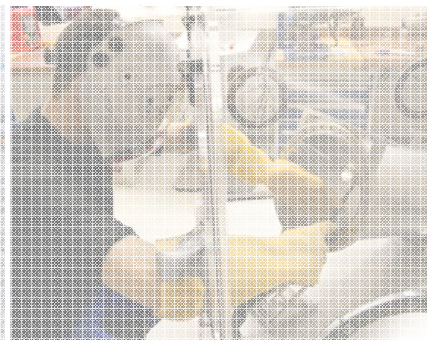
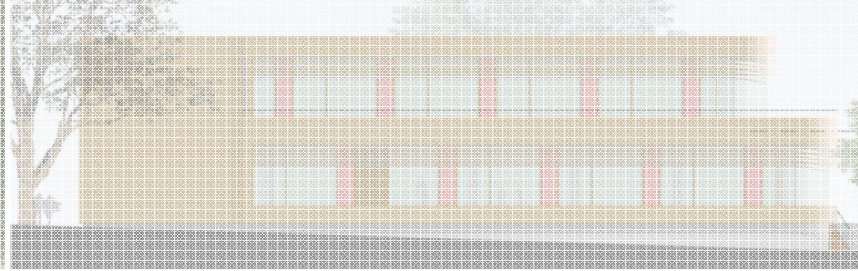
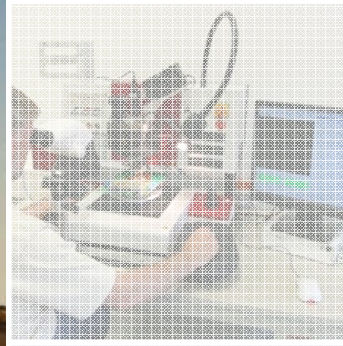
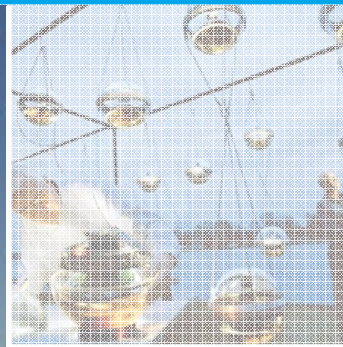
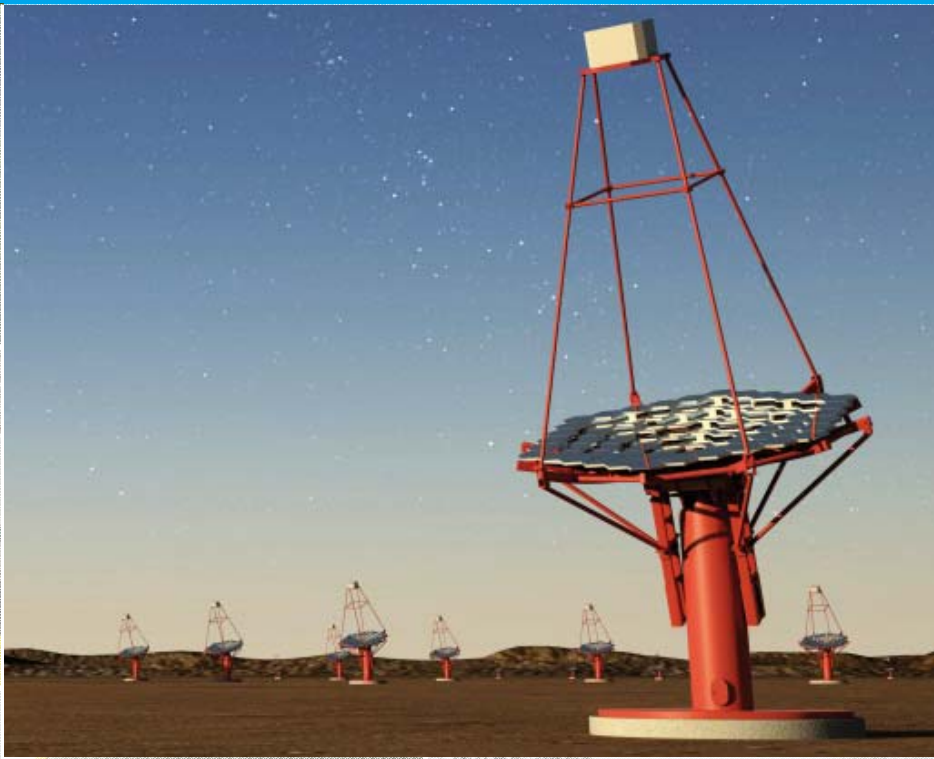
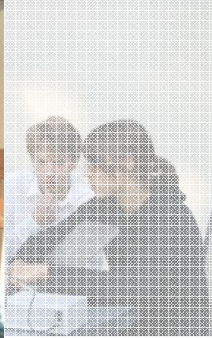
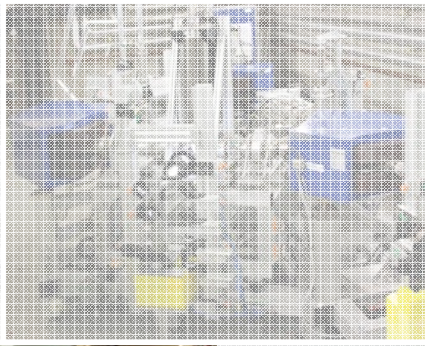
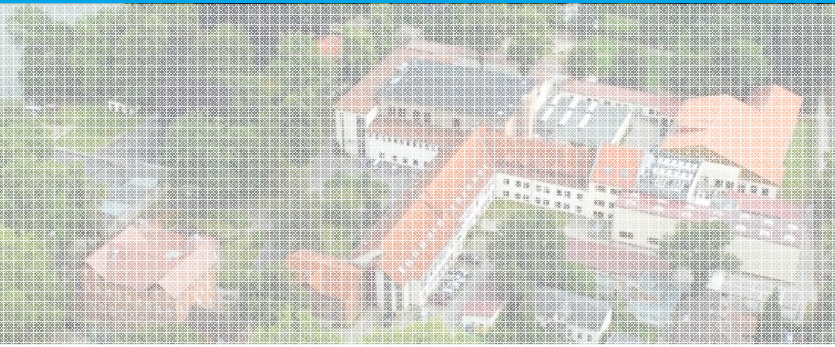
- ATLAS
- CMS
- Linear Collider

## > Theoretical particle physics

- Phenomenology
- Lattice QCD



# Astroparticle Physics





# Astroparticle Physics at DESY



## > Neutrino astronomy

- Pioneers in der neutrino astronomy
- Leading participation in IceCube

## > Theory

- Dark Matter, indirect detection
- Global modelling of high-energy particles
- Particle acceleration

## > Gamma-ray astronomy

- Participation in all operating Cherenkov-experiments
- Preparation of CTA

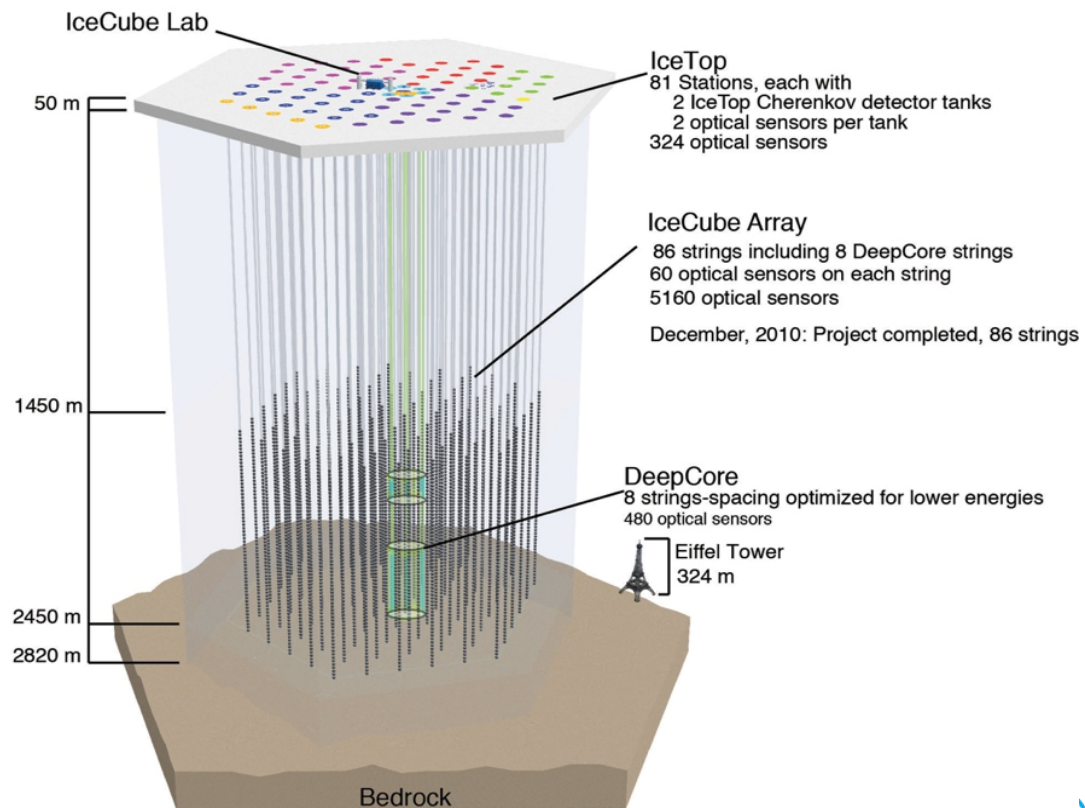


## Neutrino astronomy: From lake Baikal ...





# ... to the South Pole



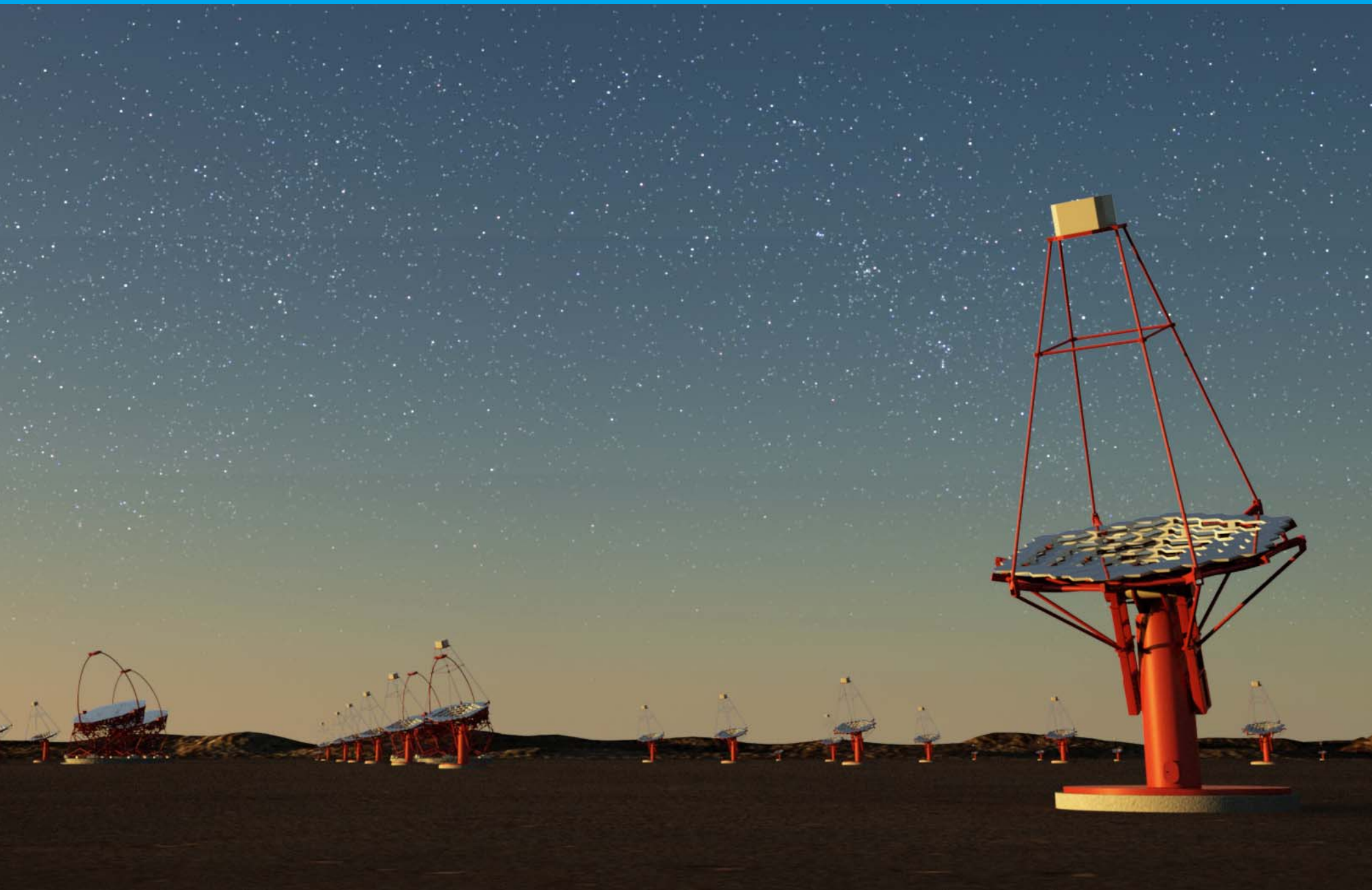


# Gamma-ray astronomy





CTA





# Prototype in Berlin-Adlershof

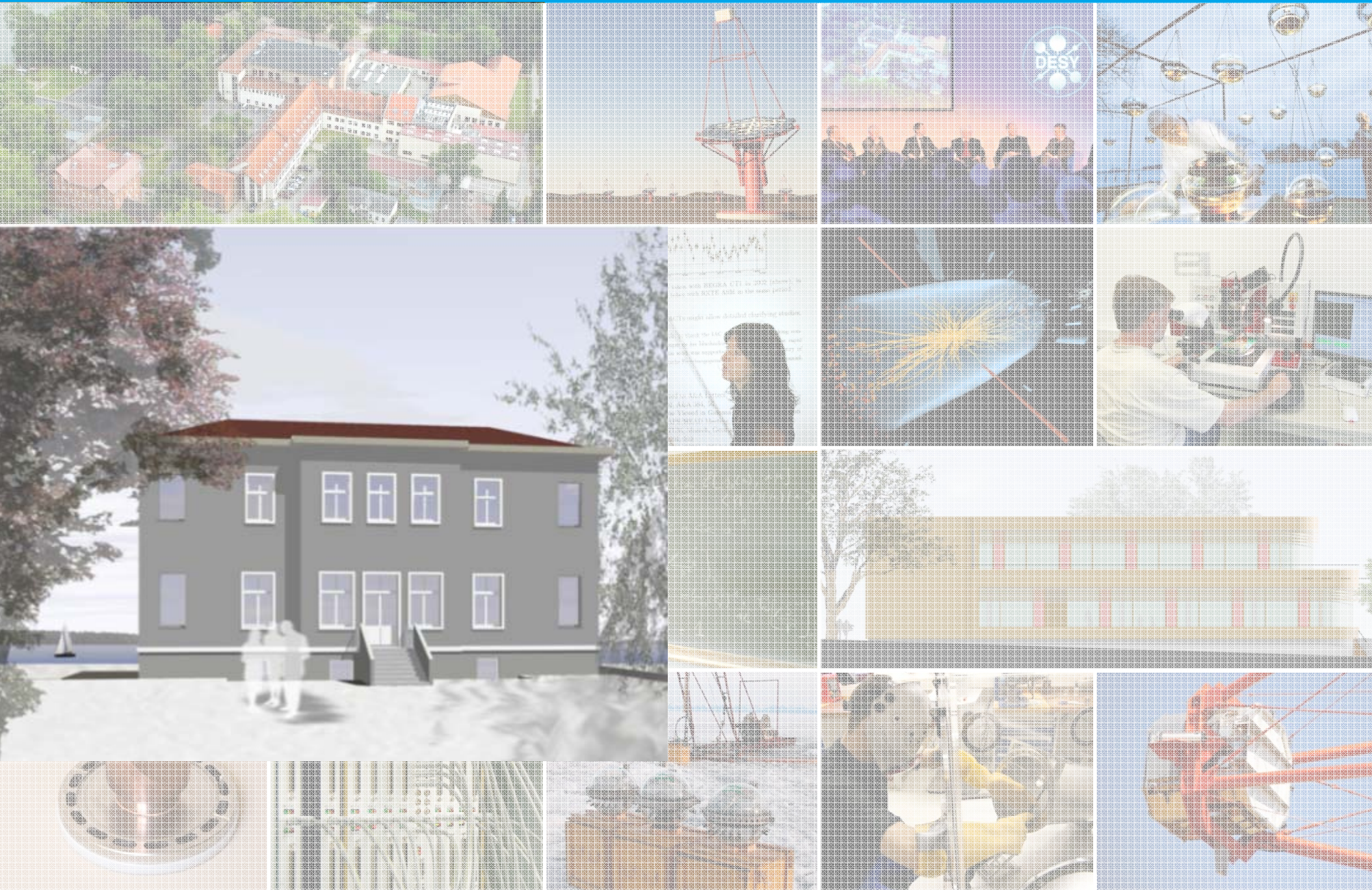




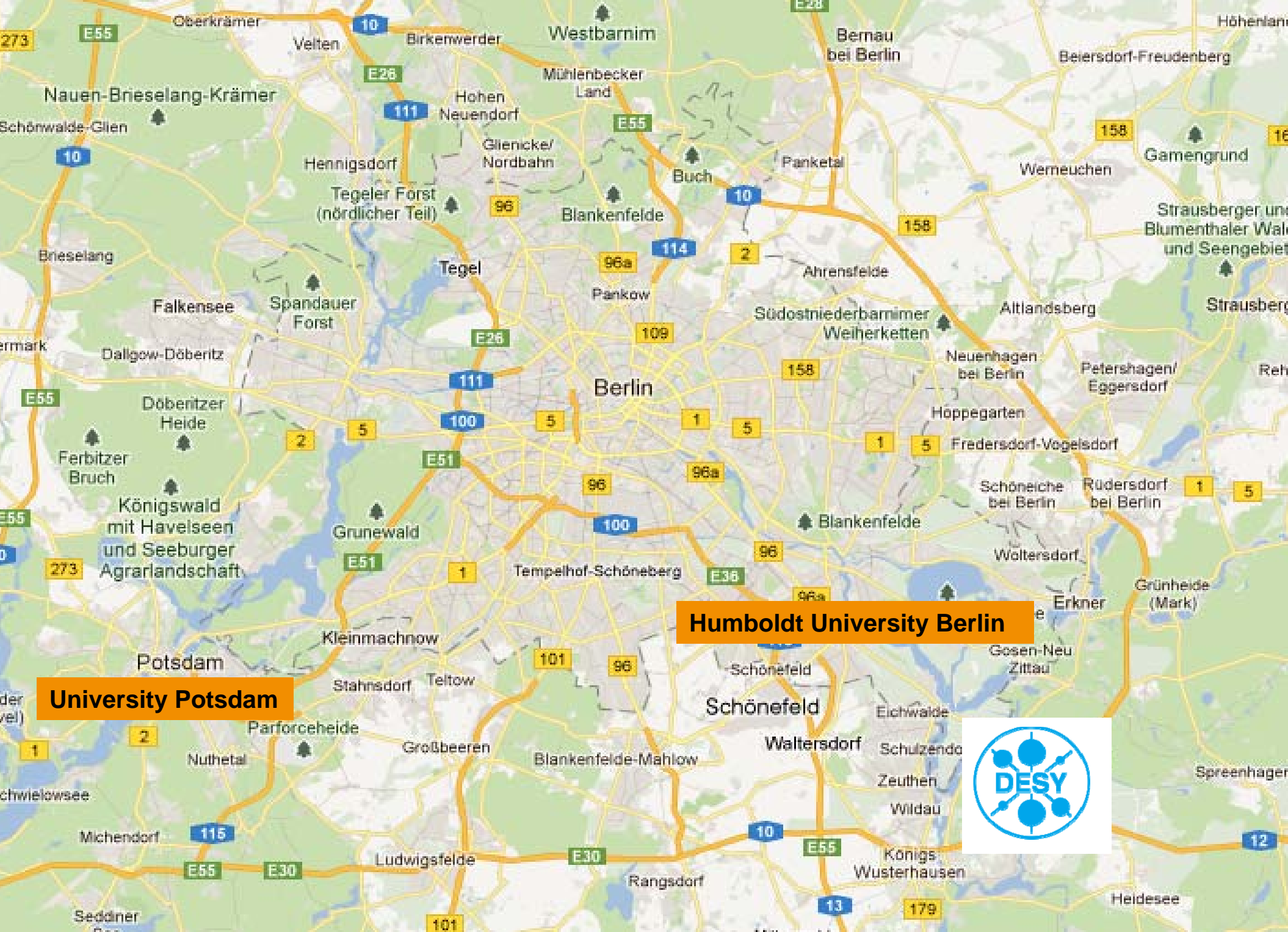




# We in the local region and far beyond







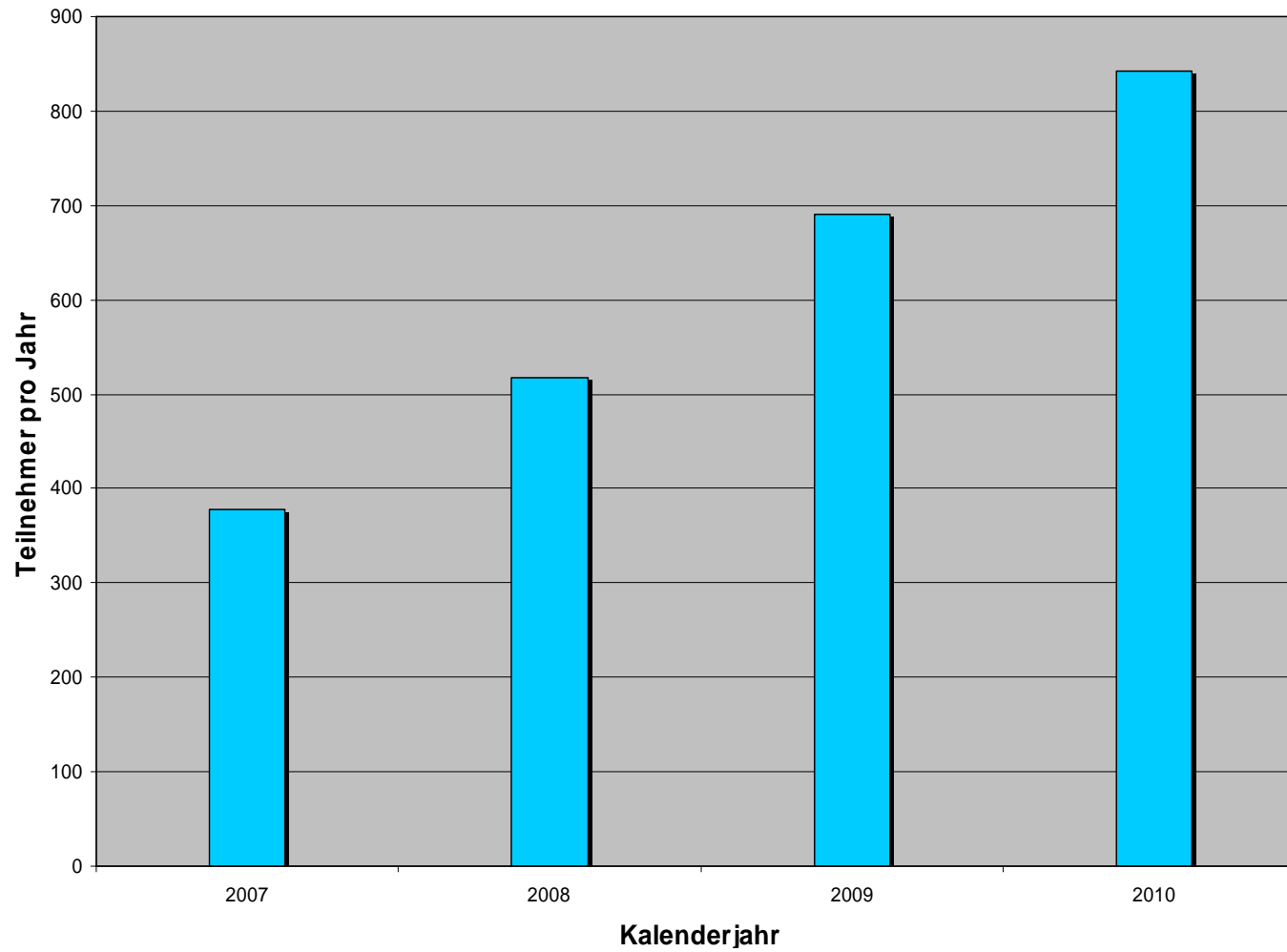
**University Potsdam**

**Humboldt University Berlin**





# Conferences at Zeuthen





# Our Villa – a place to meet









# Our gate to the world– once the airport gets ready...





# DESY, Location Zeuthen



We wish you a successful workshop and a good time at DESY in Zeuthen

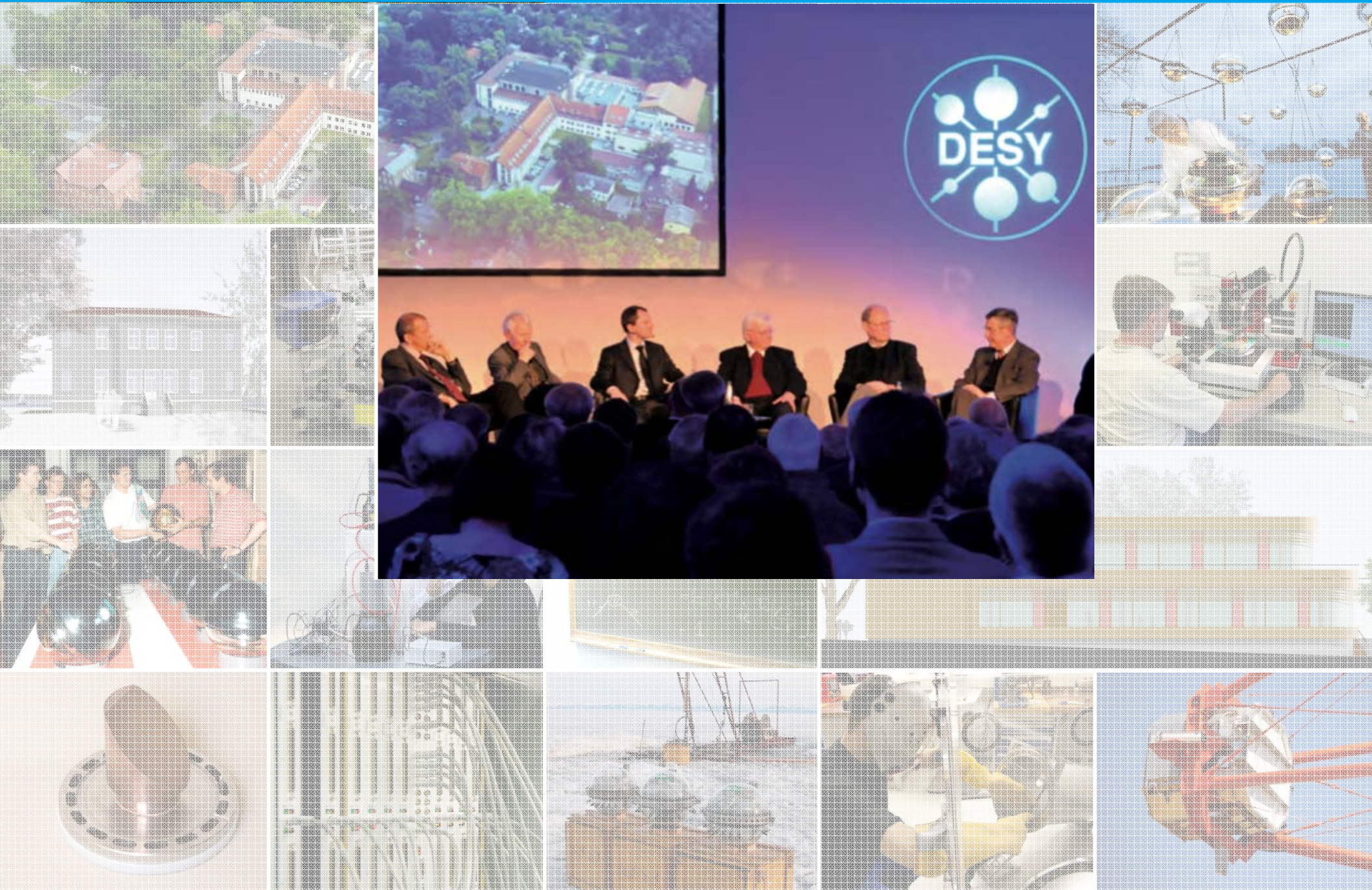








# Ein Institut mit Geschichte





# 20 Jahre Staatsvertrag



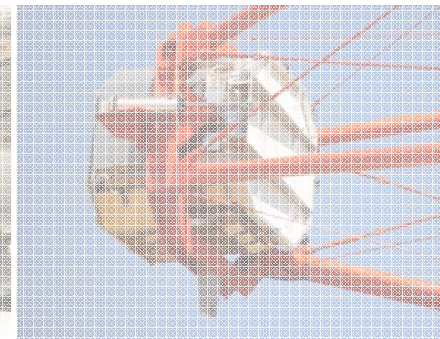
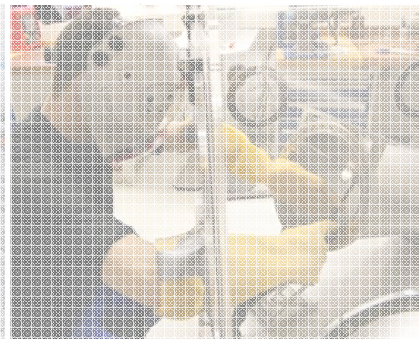
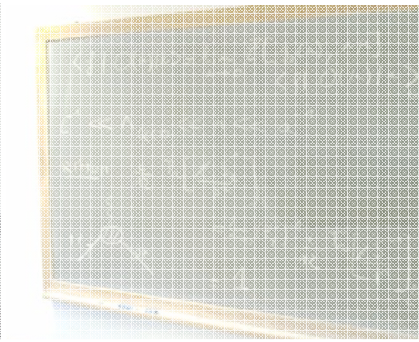
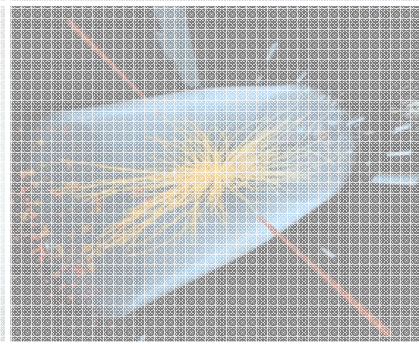
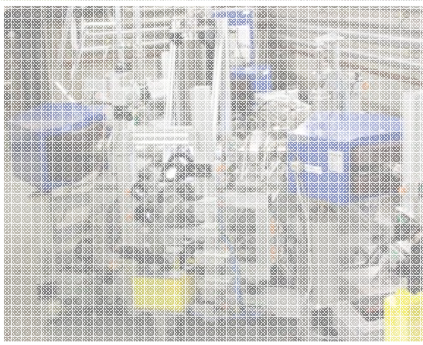
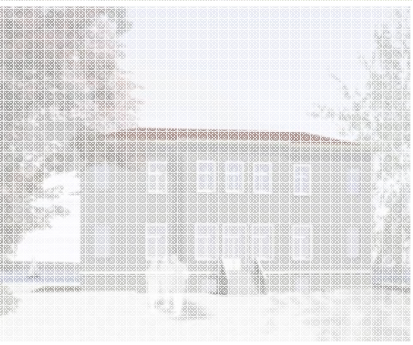
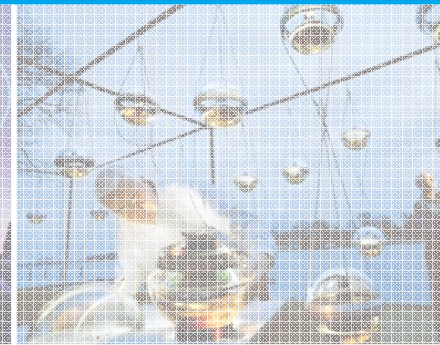
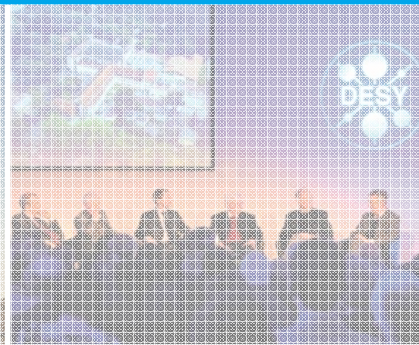
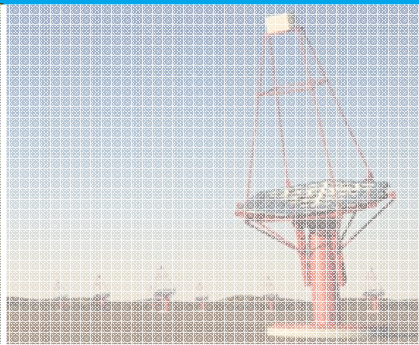
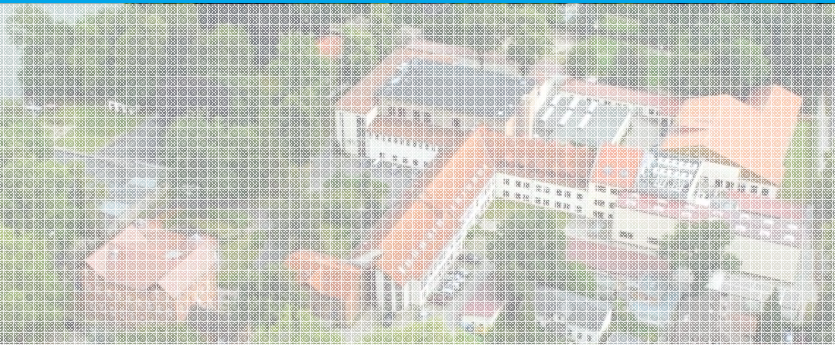


# Die Vorbereitungen laufen





# Education





# From ABC to high school



## > Schülerlabor

- eintägige Praktika für Schulklassen der Stufen 5–10, zweitägige Lehrerfortbildungen für Grundschullehrkräfte, Seminare für Lehramtstudenten der Uni Potsdam und FU Berlin
- **am 16. Mai 2012 kam der 20 000sten Schüler**

## > Cosmic Lab

- Vermittlung von Astroteilchenphysik durch eigene Messungen für kleine Gruppen interessierter Jugendlicher und Lehrkräfte
- Praktika bei DESY, Projektarbeiten in der Schule (mehrere Wochen bis zu ein Schuljahr), 5. Prüfungskomponente zum Abitur, Lehrerfortbildungen



# Unsere Kantine und Cafeteria



*„Das Direktorium hat den Vorschlag von Herrn Stegmann begrüßt, da sich so die Gelegenheit bietet, in Zeuthen ein für den Standort, aber auch DESY und die Helmholtz Gemeinschaft einmalig attraktives Gebäude zu errichten“*

Kasten Wurr, Hauptabteilungsleiter DESY



# Die zukünftige Struktur

