



Helmholtz Institute Jena



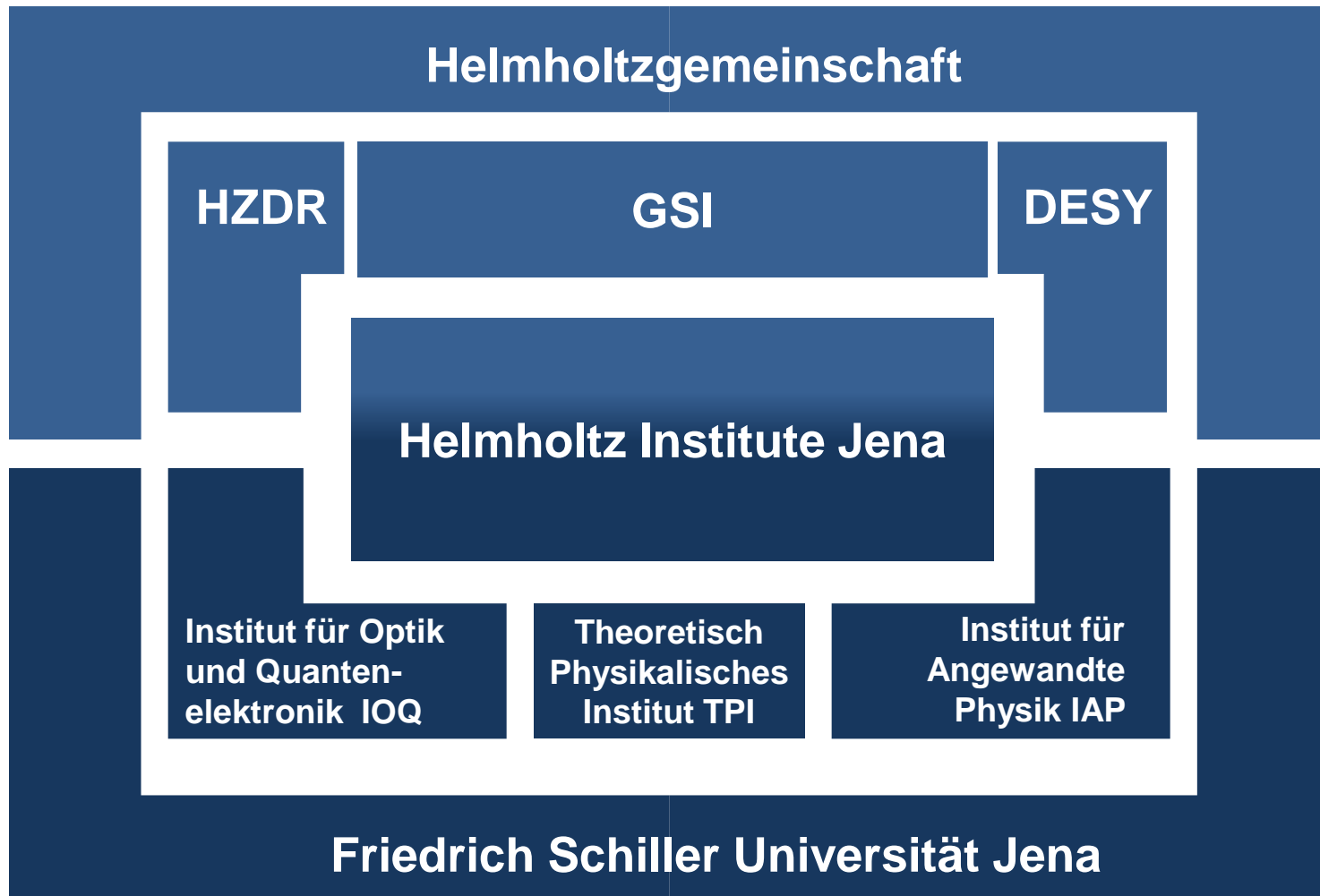
Günter Weber

HI-Jena

Karlsruhe, February 21<sup>st</sup> 2012



# Structure of the HI-Jena



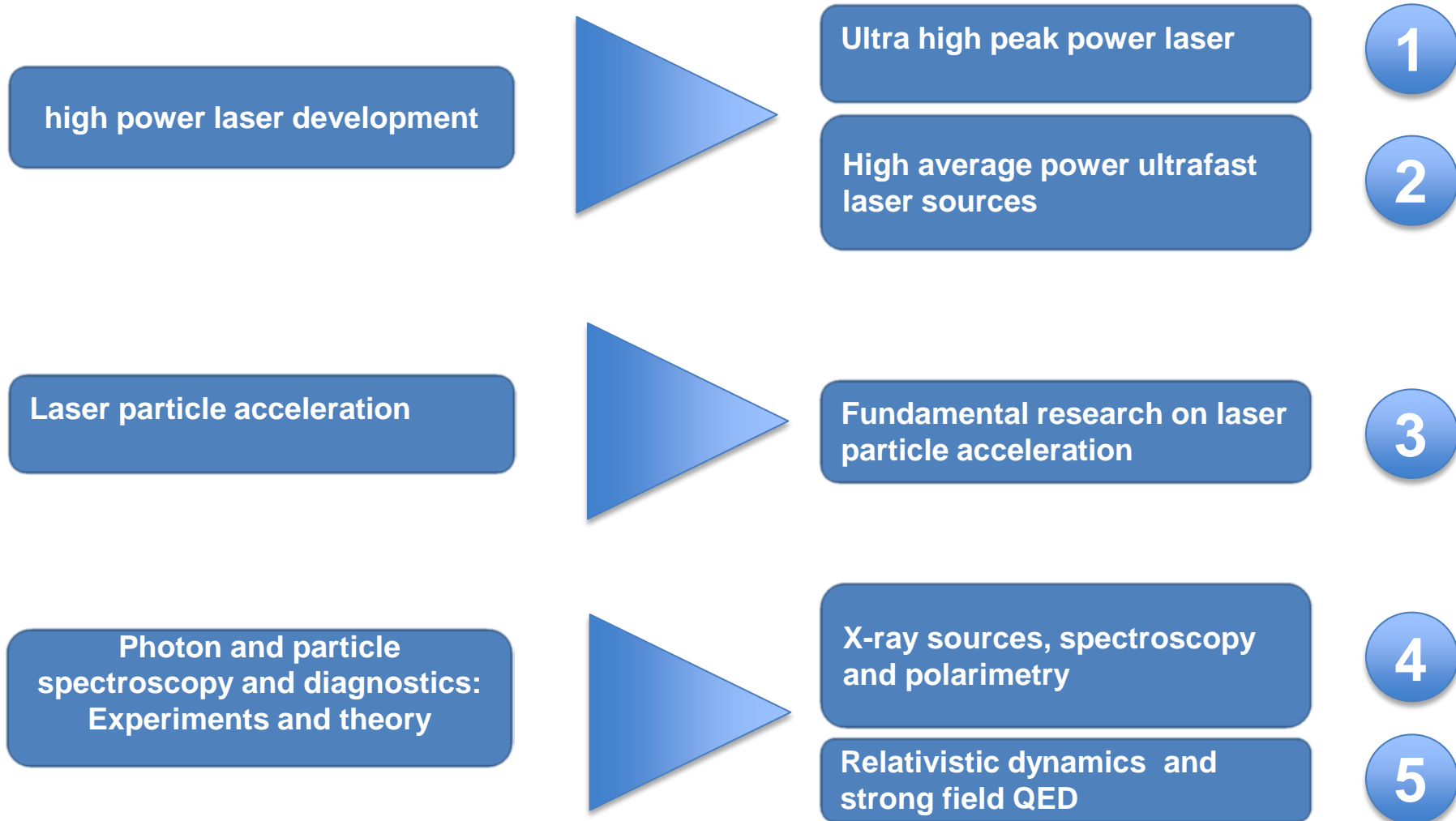
# Helmholtz Institute Jena



- Great expertise of the FSU in the fields of laser physics and photonics
- Research of FSU complementary to the research programs at GSI/FAIR und DESY/XFEL
- Successful scientific cooperation between GSI, DESY, HZDR, and FSU.
- Ideal conditions for the Helmholtz Institute at the FSU Jena founded in 2009.



# Helmholtz Institute Jena



# Research Fields of the HI-Jena

- Light sources for accelerators
- Optics (X-Ray) for FELs, synchrotrons, storage rings, and traps
- Advanced laser-based accelerator concepts
- Physics in extreme laser and particle fields
- Diagnostics and Detectors



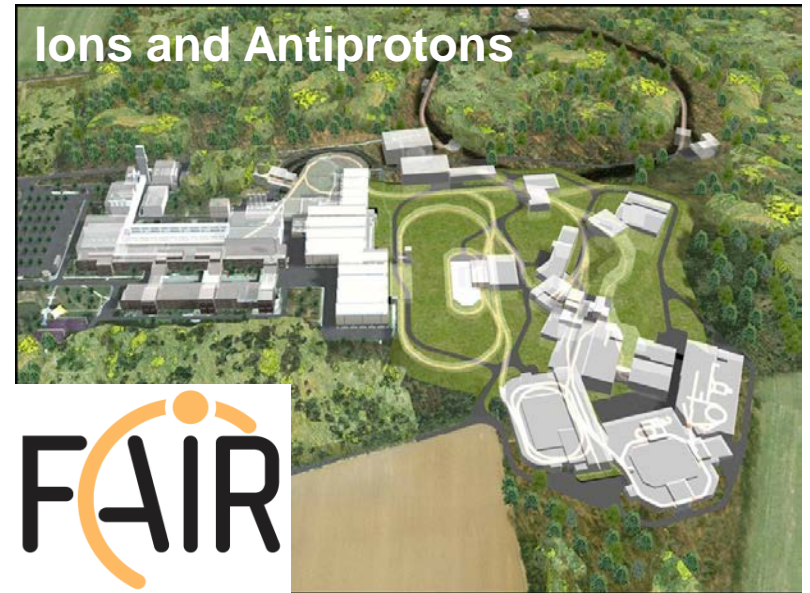


# Portfolio of Facilities

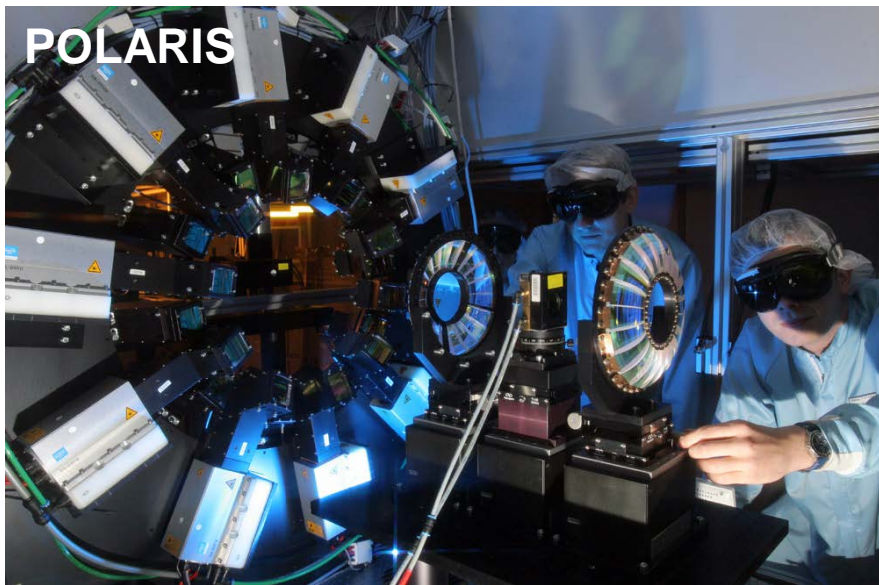
Free Electron Laser



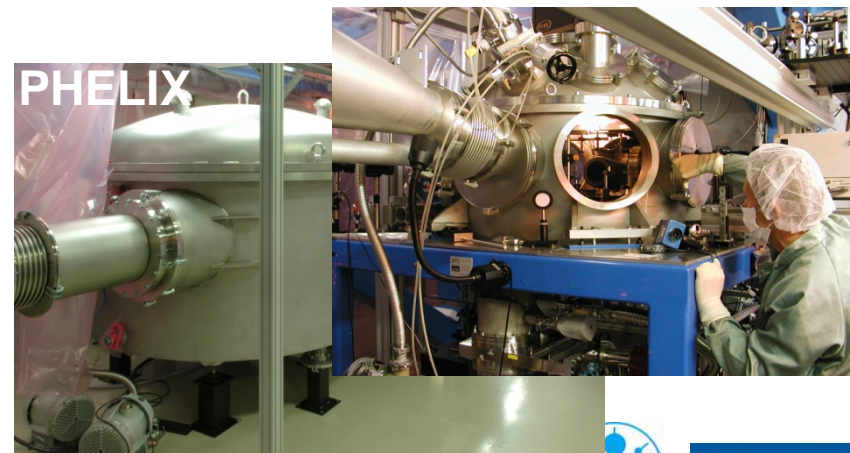
Ions and Antiprotons



POLARIS



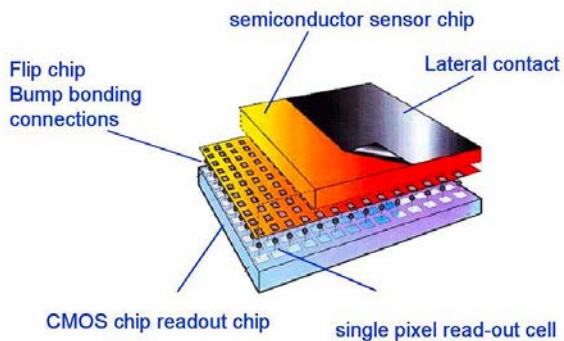
PHELIX



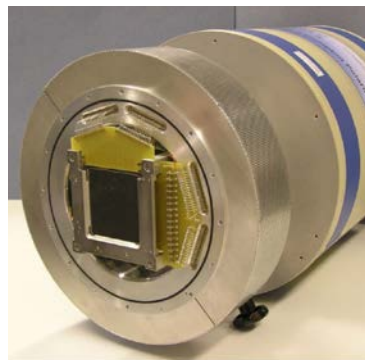
# Detectors at HI-Jena

- Various experimental environments:  
**accelerators/storage rings, x-ray beam lines, high-power laser**
- We need to detect:  
**x-rays (keV to MeV), (heavy) ions, electrons, visible photons**

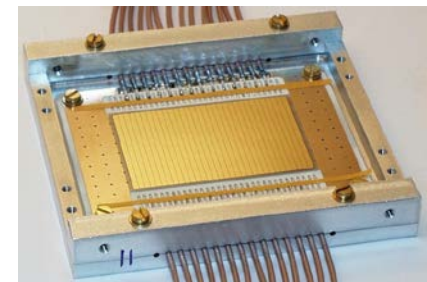
## Testing ground for different detectors and detector technologies



**Medipix/Timepix  
pixelated high-Z x-ray detectors**



**Si(Li) Hard x-ray  
Compton polarimeters**



**Diamond particle detectors**