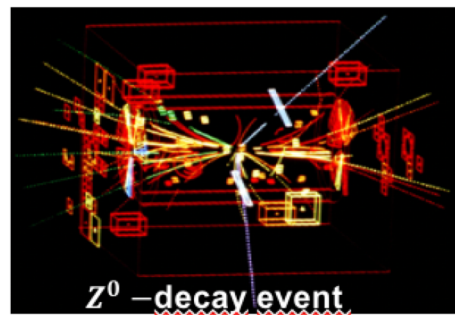
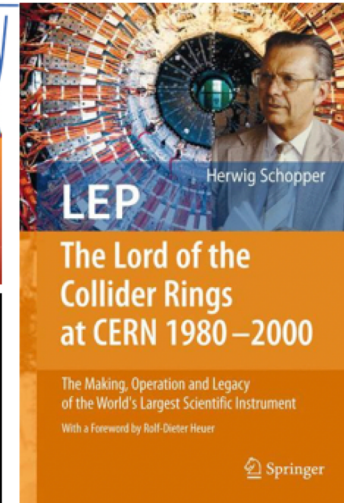
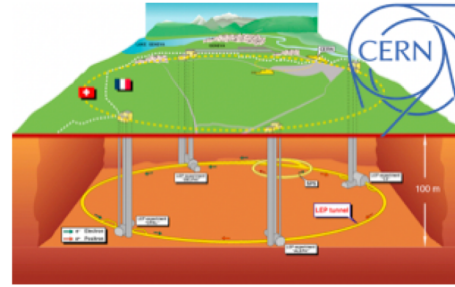
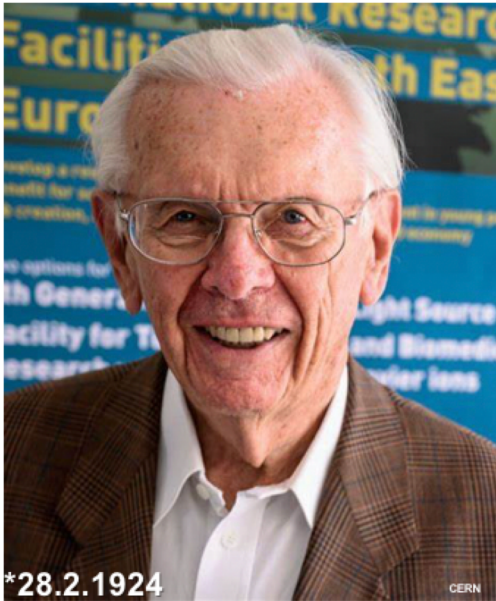


Ehrendoktorwürde (Dr. rer. nat. h.c.) of the KIT department of physics awarded to Prof. Dr. Herwig Franz Schopper – Symposium on March 6, 2024

DPG– spring meeting – Fachverband Teilchenphysik 2024, Karlsruhe



1968: with Profs. Mößbauer & Becker



25.1.83: press conference: $W^\pm Z^0$

2017: Science for Peace

Foundation of Modern Physics in Karlsruhe

Three new Chairs filled in 1960:

Werner Buckel: Solid State Physics

Gerhard Höhler: Theoretical Nuclear and Particle Physics

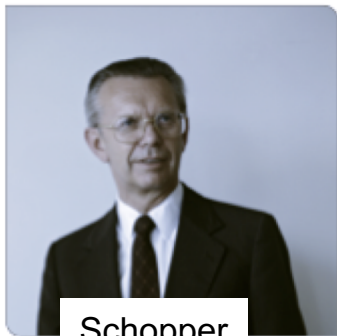
Herwig Schopper: Experimental Nuclear and Particle Physics;

→ Director of two Institutes for Experimental Nuclear Physics (IEKP):
One at KFK, one at TH Karlsruhe

Condition by Herwig Schopper to accept position:
„Formal Separation of both IEKP should be invisible in Scientific research“ – first idea of unification



Buckel



Schopper



Höhler

First tasks at **University** in 1960 ff

1. **New Buildings** were desperately needed:
new Highrise, lecture halls
2. A **new and modern curriculum** had to be agreed upon and lectures organised (balance between nuclear-particle physics and condensed matter physics)



Hochhaus
ready 1967

First tasks at Nuclear Research Center KFK

get a building, preliminary at Erwin Becker's institute

Design and construction of ,double' IEKP

How it started



Soon we could move in!

1. Electron – Nucleon Scattering at DESY, Hamburg

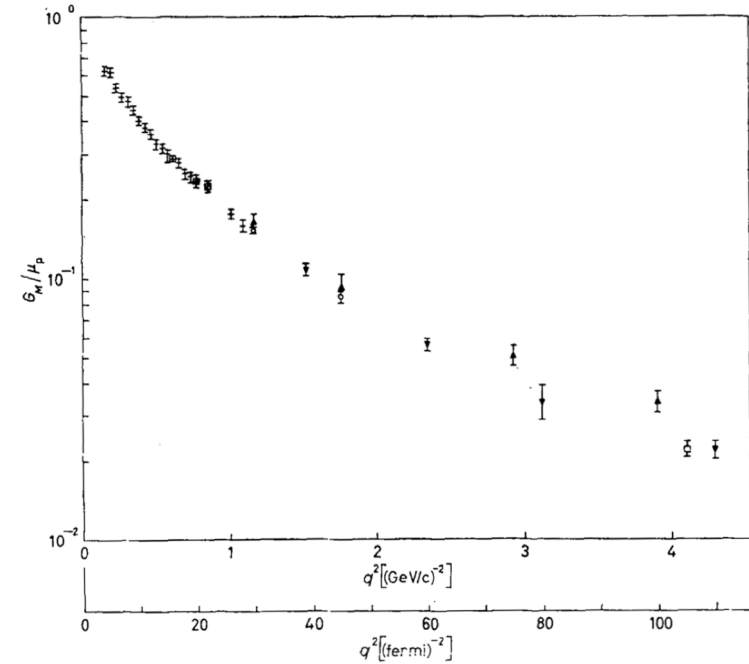
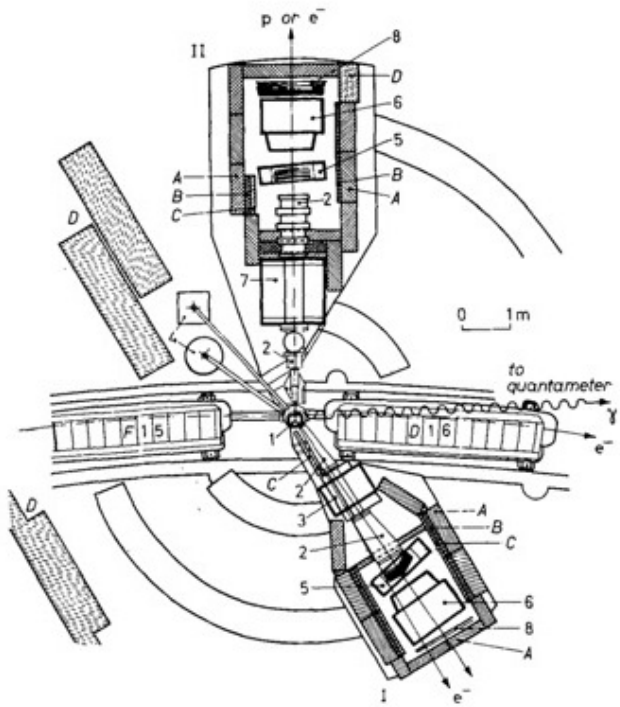


Fig. 13. – The magnetic form factor G_M/μ_p . + JANSSENS *et al.* (6); ▲ CHEN *et al.* (5); ▼ this work; ◻ combined data, see Table V; ◊ combined data, see (14).

Electromagnetic Formfactors to higher q -values
Finer details of Nucleon Structure

2. Neutron –Scattering at CERN and at Serpuchov, USSR

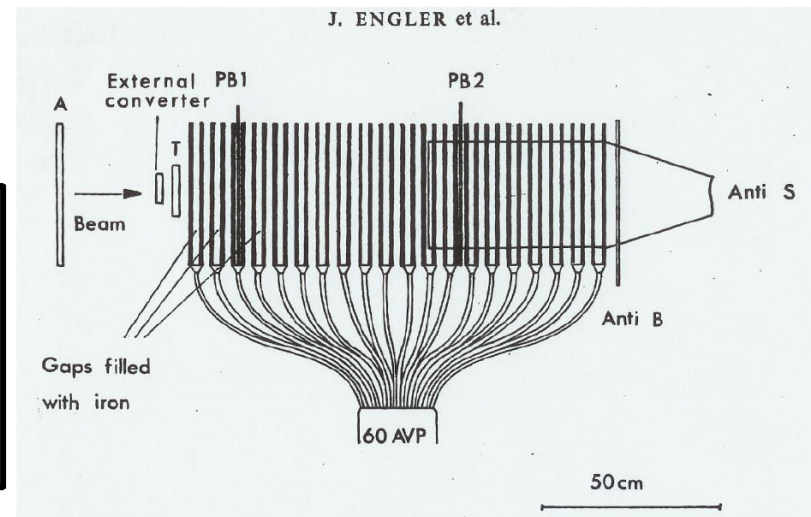
Invention of Hadron-Calorimeter 1967

Sampling Total Absorption Counter

name „STAC“ not popular

J.Engler, K.Runge, H.Müller et al

**Smiled at by all experts:
not competitive with magnetic
spectrometer,
now in every collider experiment**



H.Schopper, 50. Jahrestag für Kern-und Teilchenphysik at KIT

3. Accelerators and detectors:

-First European studies of Supraconducting RF Cavities

first application for particle separators at CERN and Serpuchov
knowhow to CERN (LEP) and many accelerators

-Proton SC Linac Prototyp at IEKP (2 cooling plants at 3⁰ K)

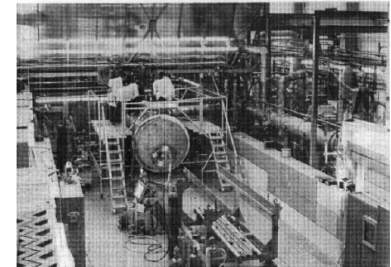
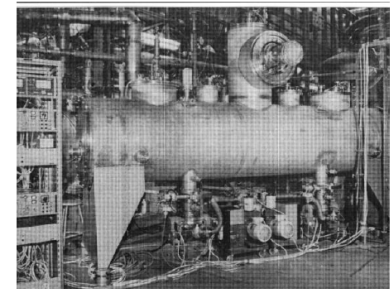
first cryogenic at FZK

Supraconducting Magnets

W.Heinz, J.Halbritter (origine of ITP)

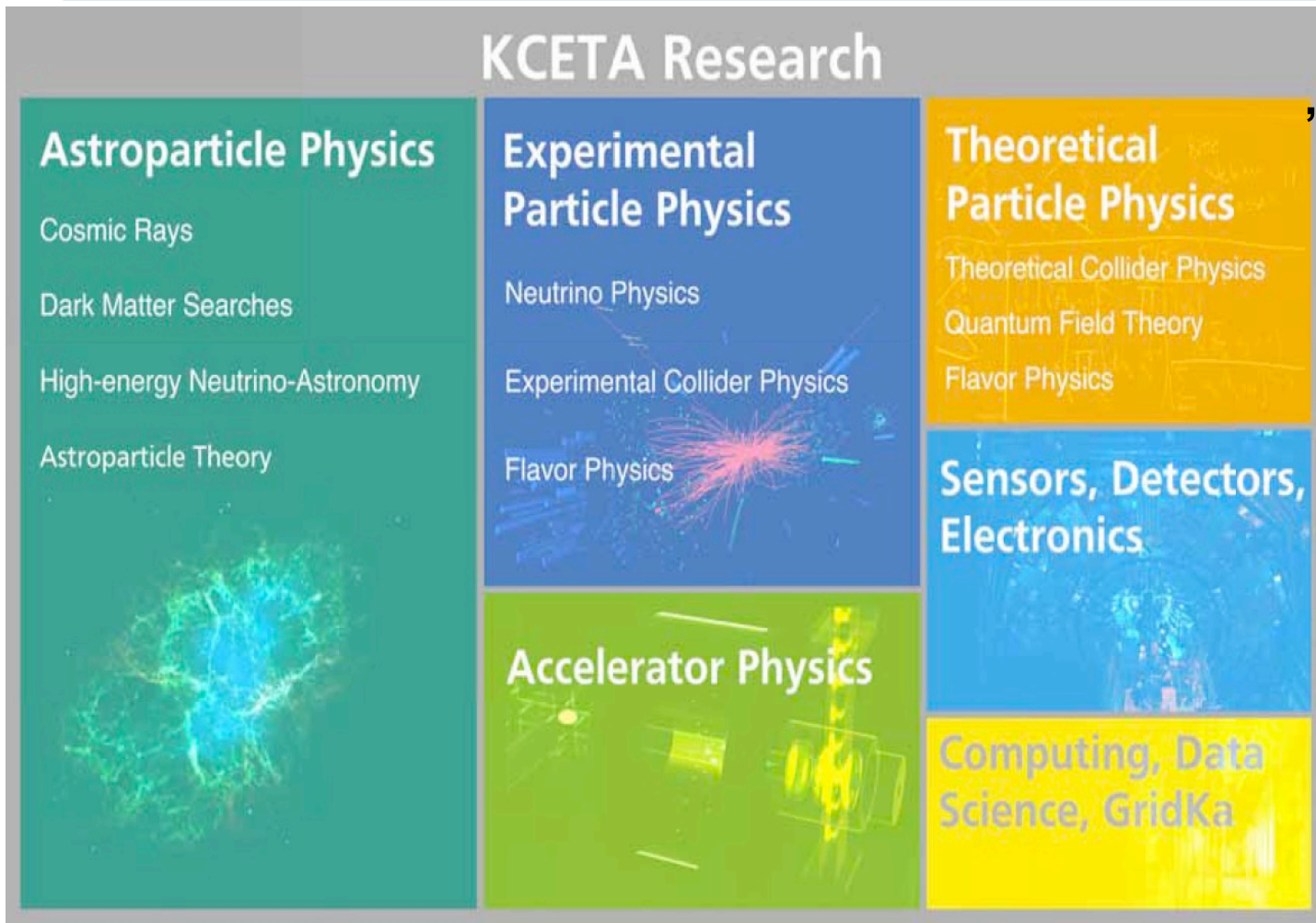
Use of computers (in particle physics experiments)

Basic research has introduced new technologies at FZK which became basis for new applications



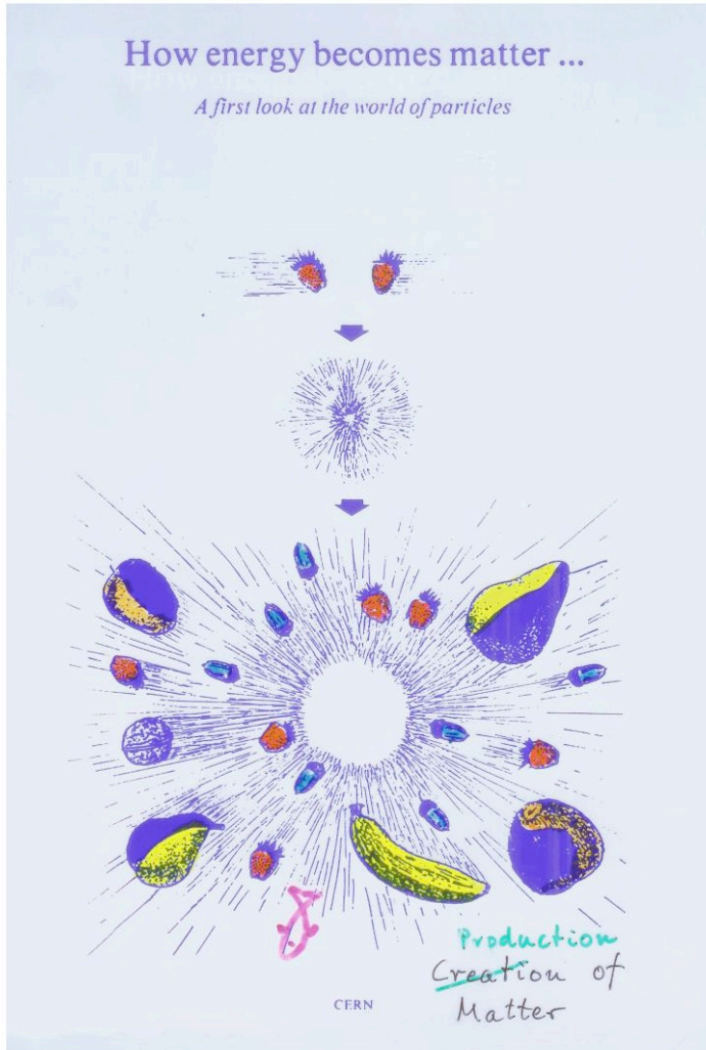
SC proton linac

Center for Elementary and Astro Particle Physics KCETA



”One of the largest concentrations for this domain of physics in the world has been created **Competitive on worldwide scale**” (HS)

Schopper, Colliders and the Pope



Visit of Pope John Paul II at CERN 1982

Original graph shown to Pope

Honors (selection)

- 1957 Physics Prize of the Academy of Science Göttingen
- 1958 Carus Medal of the German Academy Leopoldina
- 1967 Membership of the Academy of Science Leopoldina
- 1985 Gold Medal of the Weizman Institute, Israel
- 1985 Golden Plate Award der American Academy of Achievement, USA
- 1989 Großes Bundesverdienstkreuz
- 1991 Wilhelm Exner Medal, Austria
- 1994 Medal of Friendship, Russian Federation
- 2003 Tate Medal of the American Institute of Physics
- 2003 Grand Cordon of the Order of Independence, Jordan
- 2004 UNESCO Albert Einstein Medal
- 2024 Heisenberg Medal

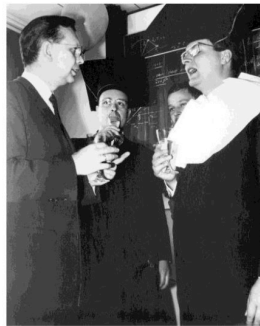


Honory Memberships in the EPS, DPG, SPG

Honory Doctorates of the Universities of Erlangen, Moskow, Geneva,
London, JINR Dubna, IHEP Protvino, Cyprus Institute,...

Schopper's Doctors in Karlsruhe in the 60-s

New Doctors are produced and celebrated



H.Schopper, 50. Jahrestag für Kern-und Teilchenphysik at KIT

**60 years later:
now it is your turn, Herr Schopper !**

