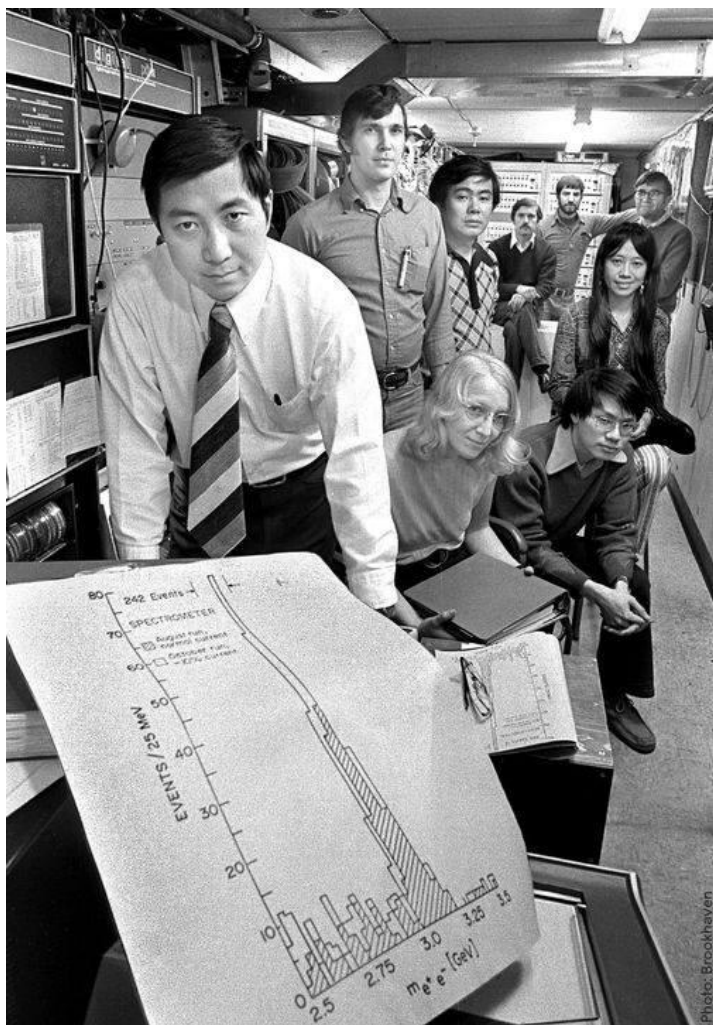


Science et Guerre Froide

AnimaScience December 2, 2025



Samuel C. C. Ting (丁肇中) - Nobel Prize 1976 with Burton Richter (SLAC)

- J/ψ discovery in 1974
- Born in Michigan in 1936
- Move to China 2 months after his birth
- Move to Taiwan in 1949 during the Chinese Civil War
- Graduated in Taipei
- Back in the US in 1956
- PhD in 1962
 - Grant from the US Atomic Energy Commission
- Start working at CERN in 1963
- DESY in 1965
- Professor at MIT since 1969

Note: Ting gave his Nobel Prize acceptance speech in Mandarin

Interview:

<https://www.youtube.com/watch?v=8NTCUZRFkA4>

Chinese Cultural Revolution : 1966 - 1976

Very strong impact on universities (Beida and Tsinghua in Beijing)

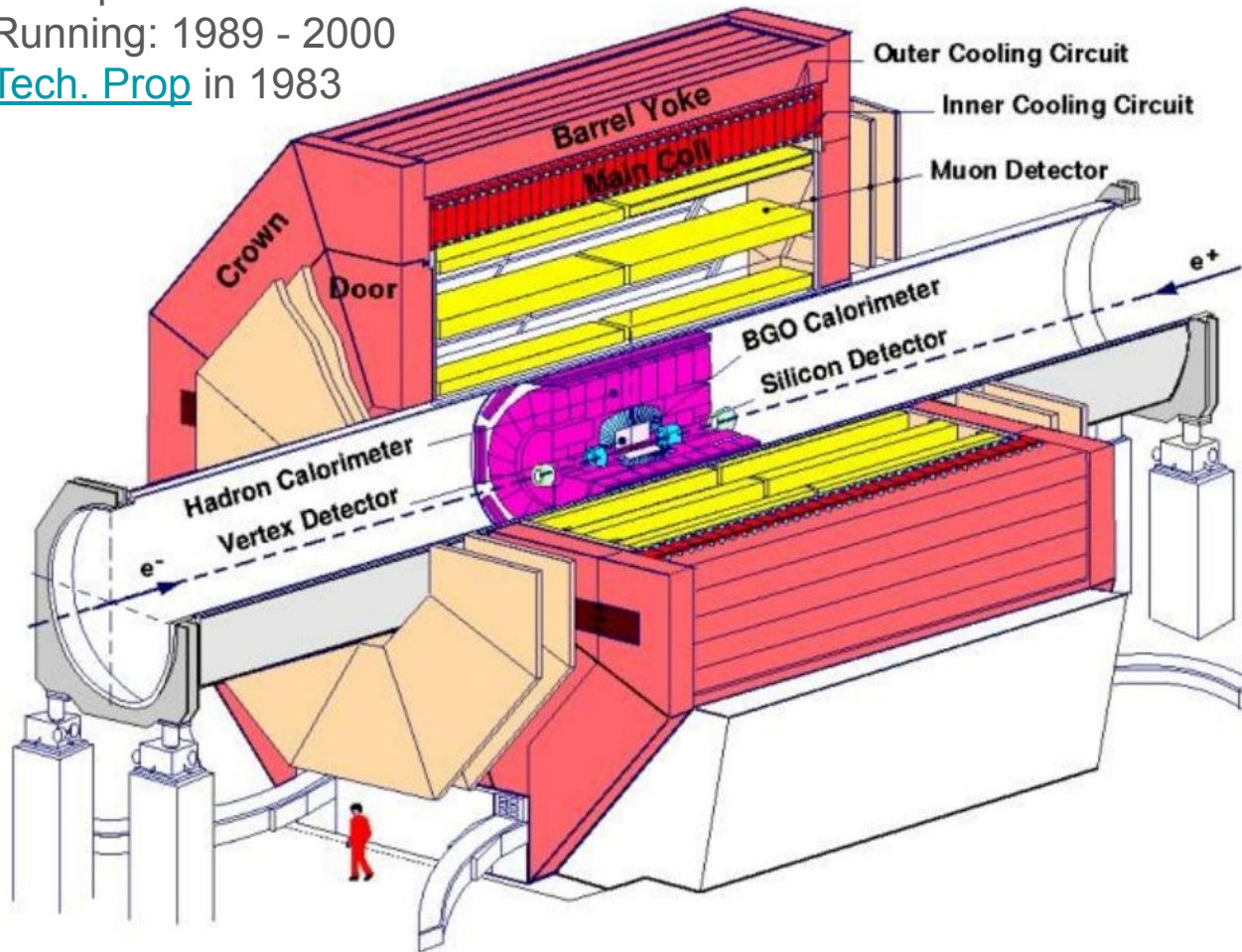
- In 1976 the academic and research system in China is destroyed !

Rebuilding after 1977

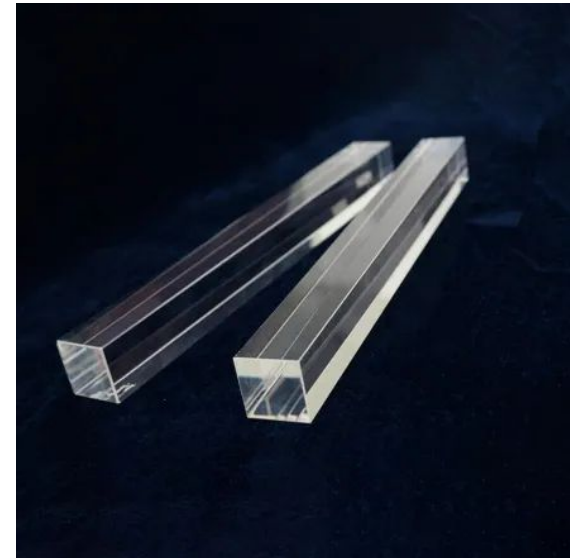
- Doctorate recreated in 1981
- reinforcement of Chinese Academy of Science
- Many student and researcher sent to US and Europe



L3 Experiment at LEP
Running: 1989 - 2000
[Tech. Prop](#) in 1983



Electromagnetic
calorimeter - 12 000
BGO crystals



- BGO crystals production done in China
- BGO polishing (and/or cutting ???) machine developed at LAPP
 - Know-how transferred in China in ~1984
- Several Chinese researchers and engineers at CERN
- Postdocs and students in Europe



Wang Yifang 王贻芳:

- Born in 1963
- PhD University of Firenze
- MIT (with Ting)
- Stanford
- IHEP Beijing
 - Director in 2011
- Chinese Academy of Science in 2015
- World Academy of Science in 2016
- Director of JUNO since 2014

Wolfgang (Pief) K. H. Panofsky (1919 - 2007)

- Born in Berlin
- PhD in CalTech in 1942
- Consultant for the Manhattan project
- First SLAC director (1961 - 1984)
- Member of the US President Science Advisory Committee (Eisenhower, Kennedy and Johnson)

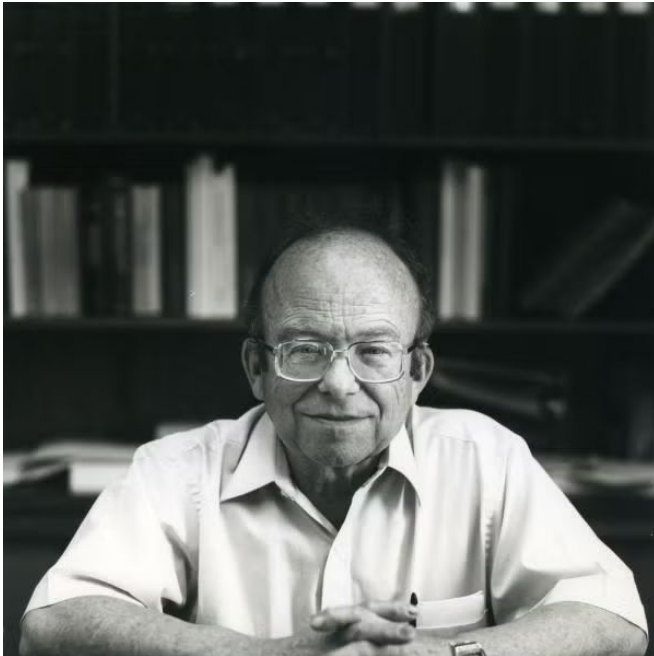
<https://www.annualreviews.org/content/journals/10.1146/annurev-nucl-102711-095043>

- 1985 - 1993 chairman of National Academy of Sciences' Committee on International Security and Arms Control
- Member of JASON
- Member of Chinese, French, Italian and Russian Academies of Science



First visit in USSR in 1957 !

- ITEP in Moscow
- JINR in Dubna





Gersh Itskovich Budker (Герш Ицкович Будкер) (1918 - 1977)

- Born in Murafa (Ukraine)
- First director of the Budker Institute of Nuclear Physics in Akademgorodok (Novossibirsk) in 1959
- Inventor of the electron cooling
- Budker Institute known for electron colliders
 - VEP-1 in 1963 (2x160 MeV)
 - up to VEPP-4M (2 - 11 GeV)

Genesis of e^+e^- colliders at SLAC, Novossibirsk and Frascati (+ Orsay)

- Many interactions between Panofsky and Budker around electron colliders developments
 - Project in 1975 for the join development of a 2x15 GeV e^+e^- storage ring at SLAC but project vetoed by authorities

Serie of conferences on instrumentation alternatively at SLAC and Novossibirsk probably in the 90's

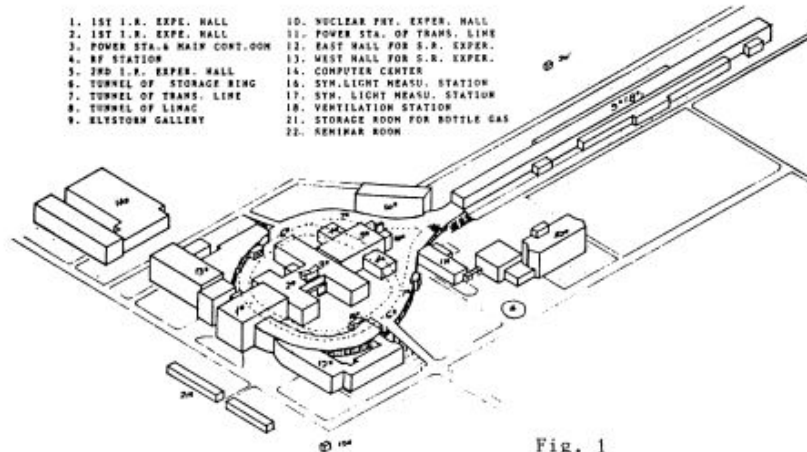


KEDR detector for VEPP-4M

- Drift chamber with pure Dimethyl-Ether !
- Liquid Krypton calorimeter
- Particle id with aerogel threshold counters

SLAC - China connections

- Contact between Panofsky and Zhang Wenyu in China started in 1973
- in 1979: Deng Xiaoping and President Jimmy Carter signed the United States - China Agreement on Cooperation in Science and Technology
 - Panofsky was present
 - Joint Committee on Cooperation in High Energy Physics
 - Construction of BEPC (up to 2×2.5 GeV) at the IHEP Beijing
 - Delegation of 30 Chinese physicists and engineers at SLAC to design BEPC



and at LAPP...

LAPP was involved in the GAMS experiment on the SPS (Jean-Pierre Peigneux)

- Strong contributions from IHEP Protvino physicist
- Wall of lead-glass calorimeter
 - GAMS-4000 mid 1980s
- Spectroscopy of neutral mesons
- A sister experiment was built in Protvino