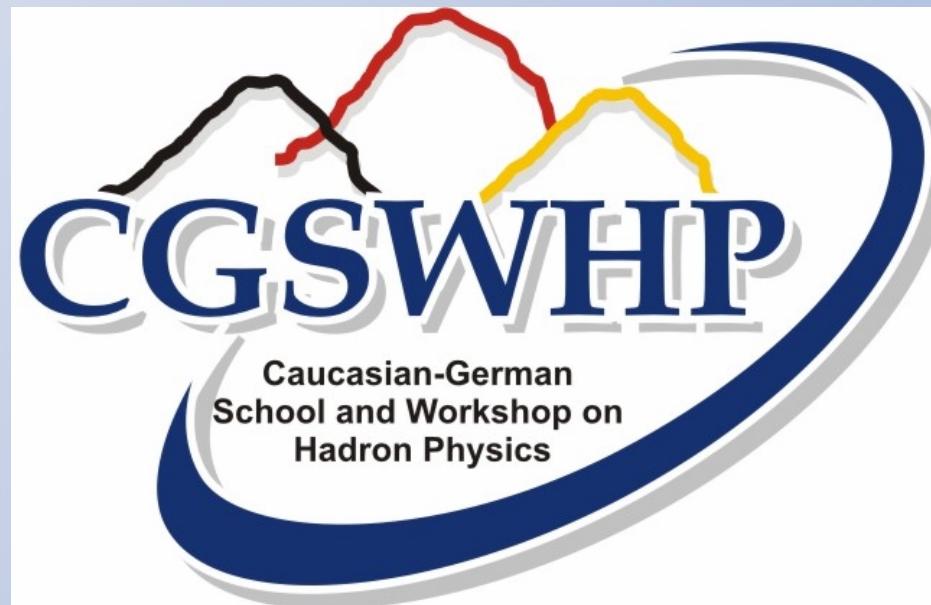
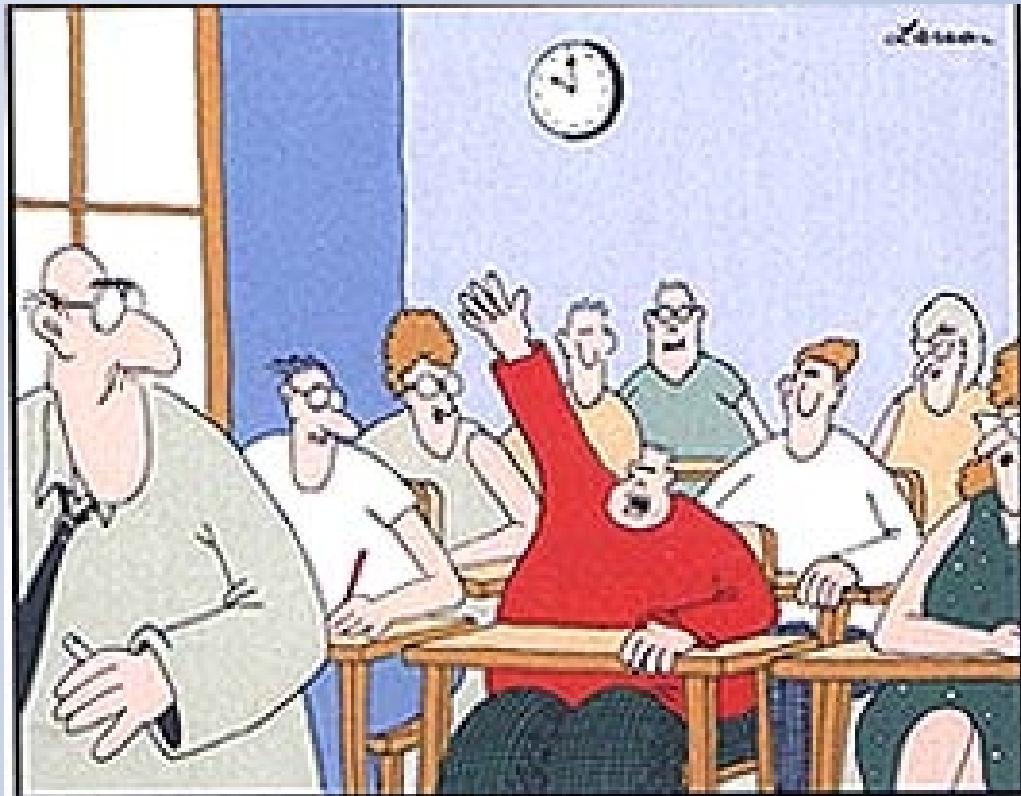


---

# Hans Ströher

## Workshop Summary





Mr. Chairman may I be excused?  
My brain is full."

---

## Overview:

Lectures

Overview talks

Current COSY experiments + theory

New proposals + theory

Technical issues, facilities

High energy

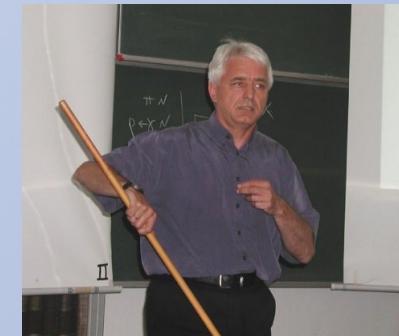
Hans Ströher, Tbilisi (Georgia), Aug./Sept. 2004

Forschungszentrum Jülich  
in der Helmholtz-Gemeinschaft



Science policy:

H. Ströher: Hadron physics in Europe



Evening lecture:

A. Katcharava: Jülich and its Research Center

Hadron physics:

F. Rathmann: Polarization experiments in storage rings

E. Steffens: Polarized beams



N. Nikolaev: Spin physics in QCD

H. Seyfarth: Spin effects in H- and D-recombination

High energy physics:

R. Shanidze: Astroparticle physics with hadrons and leptons

A. Liparteliani: Rare beauty as windows onto extra dimensions

---

## Overview:

Lectures

Overview talks

Current COSY experiments + theory

New proposals + theory

Technical issues, facilities

High energy

Hans Ströher, Tbilisi (Georgia), Aug./Sept. 2004

Forschungszentrum Jülich  
in der Helmholtz-Gemeinschaft



Hadron physics – overview talks:

D. Gotta: Hadronic atoms

R. Machleidt: Nucleon-Nucleon interaction

C. Wilkin: Meson production

P. Thörngren: Spin dependence in pd reactions



---

## Overview:

Lectures

Overview talks

Current COSY experiments + theory

New proposals + theory

Technical issues, facilities

High energy

Hans Ströher, Tbilisi (Georgia), Aug./Sept. 2004

Forschungszentrum Jülich  
in der Helmholtz-Gemeinschaft



## Hadron physics - experiment:

V. Kleber: Light scalar meson production at COSY



I. Keshelashvili:  $\phi$ -meson production in pp interactions



Y. Maeda:  $\phi$ -meson production in pn interactions

I. Zychor: Evidence for a new  $Y^*$  hyperon in pp

W. Eyrich: Search for the pentaquark q+ state

Y. Valdau:  $K^+$  production in pn interactions



A. Katcharava: Polarized charge exchange reaction

V. Glagolev: The charge exchange reaction studies

S. Yaschenko: The deuteron breakup reaction

Hadron physics – experiment (cont.):

G. Macharashvili: The deuteron breakup reaction

V. Hejny:  $\eta$  production in dd interactions

M. Nekipelov: Experiments on in-medium K<sup>+</sup>-meson



Hadron physics – theory:

V. Baru: Flattè-parametrization of s-wave resonances

A. Gasparian: Hyperon-nucleon interaction and strangeness

Y. Uzikov: Parity determination of the pentaquark

C. Wilkin: Polarized charge exchange reaction

N. Nikolaev: Double spin asymmetry (transversity)



---

## Overview:

Lectures

Overview talks

Current COSY experiments + theory

New proposals + theory

Technical issues, facilities

High energy

Hans Ströher, Tbilisi (Georgia), Aug./Sept. 2004

Forschungszentrum Jülich  
in der Helmholtz-Gemeinschaft



## Hadron physics – proposals and plans for new experiments:

R. Schleichert: Double polarization pn experiments

T. Mersmann: Investigation of the  $^3\text{He}\eta$  -system

M. Hartmann: Plans for  $\text{K}^-$  -production in pA reactions at ANKE

M. Wolke: WASA at CELSIUS and  $\eta'$  decays with WASA at COSY

M. Büscher: Key experiments for WASA at COSY



---

## Overview:

Lectures

Overview talks

Current COSY experiments + theory

New proposals + theory

Technical issues, facilities

High energy

Hans Ströher, Tbilisi (Georgia), Aug./Sept. 2004

Forschungszentrum Jülich  
in der Helmholtz-Gemeinschaft



Hadron physics – technical issues:

B. Lorentz: Polarized beams at COSY

D. Chiladze: Deuteron polarimetry at ANKE

R. Engels: Polarized internal target at ANKE

K. Grigoriev: Cell tests for ANKE

R. Tölle: HESR-project in FAIR at GSI

P. Lenisa: Polarized antiproton experiments (PAX)

D. Grzonka: FLAIR at FAIR



R. Shanidze: A TANDEM regional center for Caucasus

---

## Overview:

Lectures

Overview talks

Current COSY experiments + theory

New proposals + theory

Technical issues, facilities

High energy

Hans Ströher, Tbilisi (Georgia), Aug./Sept. 2004

Forschungszentrum Jülich  
in der Helmholtz-Gemeinschaft



High energy physics – Current experiments:

M. Tabidze: BEC from the DELPHI data

A. Garishvili: R-parity violating scalar top decays

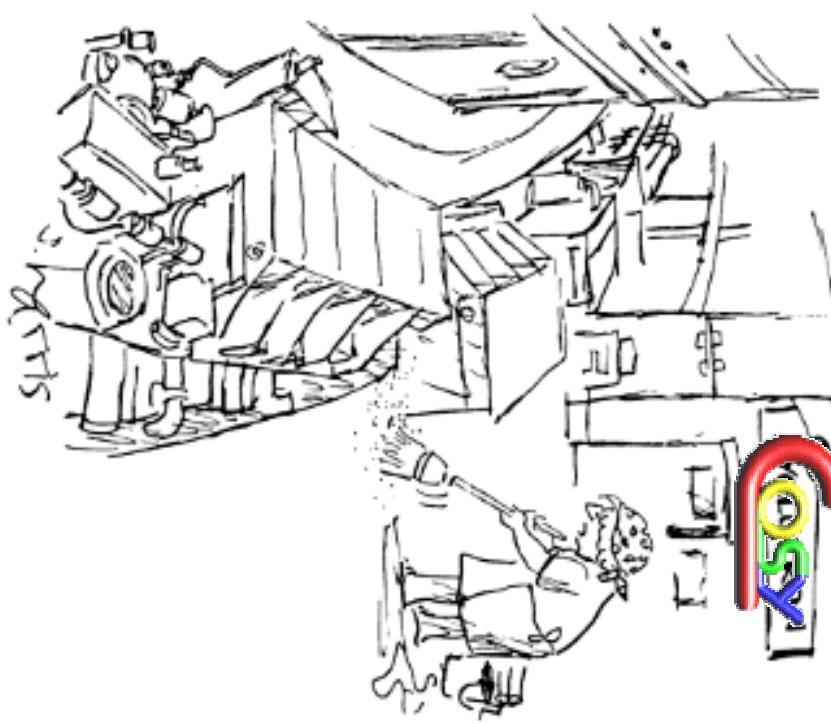
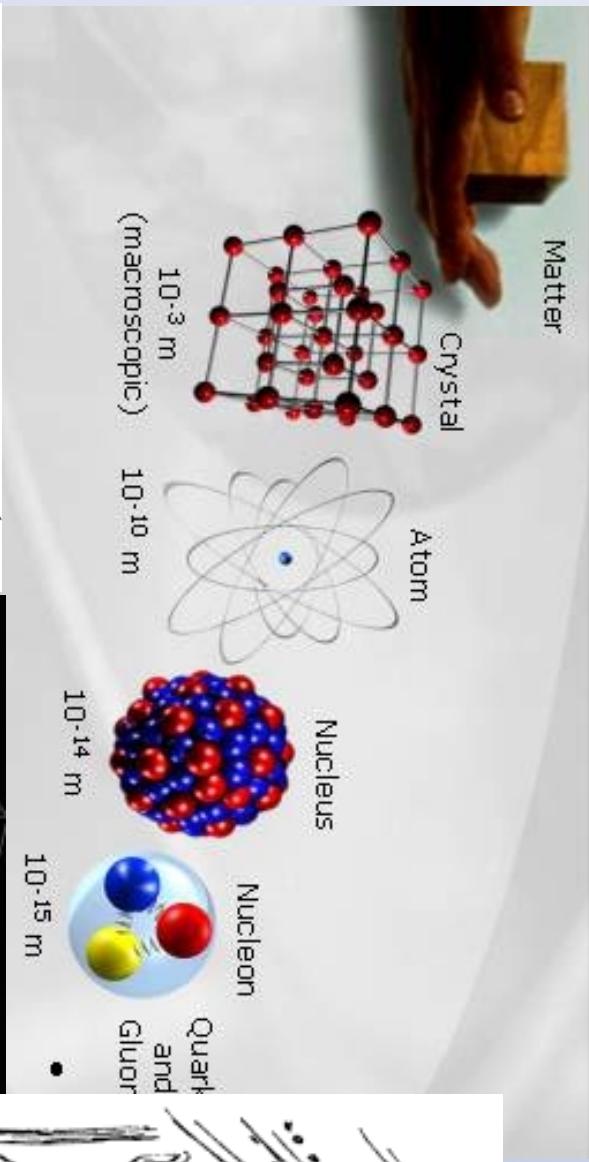
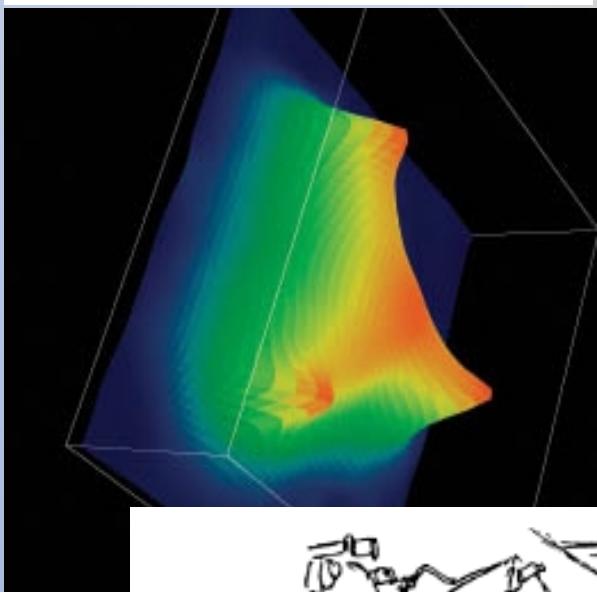
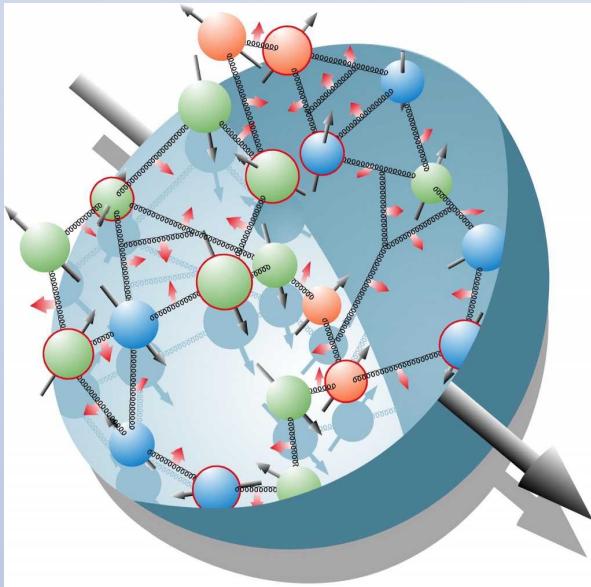
High energy physics – Ideas for searches at LHC (ATLAS)

L. Chigovani: Top quark rare decays via FCNC at LHC

V. Kartelishvili: Gluino-gluino bound states

Other:

T. Nadareishvili: Additional solutions



"Particles, particles, particles."

## Bottomline

- First Caucasian-German School and Workshop on Hadron Physics
  - First big physics meeting in Georgia since independence
  - Scientific sucess
  - Regular basis (~ 2 yrs)
  - LANL-Archive; CD-ROM (need talks by 9/04)
- Increase interest and, as a consequence, cooperation and involvement of:
  - Faculty (HEPI)
  - Students and Post-Doc's
    - in current and new facilities (and the phycis!) in Europe

## Thanks

- **Support:**

- Tbilisi State University (Rector: Academician Roin Metreveli and Prorector: Prof. Anzor Khelashvili)
- Academician Albert Tavkhelidze
- Georgian Ministry of Foreign Affairs (Consulate Berlin)
- German Embassy (Mirko Schilbach)
- HEPI (Prof. M. Nioradze) (Academician Nodar Amaglobeli)
- UNESCO Regional Bureau (Prof. Merab Eliashvili)
- Sponsor KAZBEGI
- Research Center Jülich (FZJ)

- **Speakers (and accompanying persons):**

- Talks, contributions, ..., mood

- **Organizers:**

- Nelly Magalashvili (women's programme)

Dr. Andro Katcharava  
(incl. family, friends, and colleagues)

**“didi madloba”**



"Quarks. Neutrinos. Mesons. All those damn particles  
you can't see.



"Quarks. Neutrinos. Mesons. All those damn particles  
you can't see. That's what drove me to drink.  
But now I can see them!"

Well then:  
Let's give it  
(another) try !!!!

---

# The End

