



7th Georgian-German School and Workshop in Basic Science
GGSWBS'16



– Spin Physics, Symmetries and Applications –

Workshop Program:
August 28 – September 2, Tbilisi, Georgia

Topics:

1. Symmetries in Subatomic Physics (T- and CP- violations)
 2. Electric Dipole Moment (EDM) Searches (e.g. JEDI project)
 3. Neutrino Physics (e.g. JUNO project)
 4. Standard Model and Beyond (Theory, HEP Experiments)
 5. Engineering Sciences (Simul., Instrumentation, Electronics)
 6. Applications (e.g. Medical Imaging)
- Launching a first SMART|EDM Lab
 - Satellite JEDI collaboration meeting

Venue and general schedule of the meeting

Sun, August 28: Arrival (*early morning*); Tbilisi Tour (14⁰⁰ – 18³⁰)
Registration & Welcome Reception (19³⁰ – 22⁰⁰)
(MUZA, 'Kus Tba' road, Tbilisi)

Mon, Tue (August 29, 30): Tbilisi State University (TSU)
(Chavchavadze ave. 1, Main building)

Wed, August 31: Social program (9³⁰ – 21⁰⁰)
(Excursion: trip to Mtskheta-Mukhrani-Chardakhi)

Thu (September 1): Tbilisi State University (TSU)
(Chavchavadze ave. 1, Main building)

Fri, September 2: Departure (*after midnight*)

August 29, Monday (TSU) 10⁰⁰ – 19⁰⁰

Existing and Future Cooperation

Plenary opening session (foyer of acting hall) 10⁰⁰ – 11⁰⁰

Welcome/Opening Address:

- Darejan Tvaltvadze, Acting Rector of TSU
- Merab Eliashvili, Vice Rector of TSU
- Alexander Jejelava, Minister of Education and Science of Georgia
- Representative of German Embassy in Tbilisi
- Marine Chitashvili, Director General of SRNSF
- Sebastian M. Schmidt, FZ-Jülich Board of Directors
- Hans Ströher, Director of IKP/FZJ: *Scope of the Workshop*

Ceremony session for signatures:

- Implementation agreement between Georgia and Jülich on
- foundation of a SMART|EDM Lab at TSU; and

Plenary session 1 (acting hall) 11⁰⁰ – 13³⁰

Convener: Sebastian M. Schmidt

- Hans Ströher (FZJ) – *Precision physics (30')*
Achim Stahl (RWTH Aachen) – *Neutrino physics (JUNO proj.) (30')*

12:00 – 12:30 Coffee break (and conference photo)

- Akaki Rusetsky (Bonn) – *Challenges of the Standard Model (30')*
Paolo Lenisa (Ferrara) – *New ideas for HEP experiments (30')*

13:30 – 15:00 Lunch break

Plenary session 2 (auditorium 7) 15⁰⁰ – 19⁰⁰

Convener: Hans Ströher

- Thomas Kress (RWTH Aachen) – *LHC physics (ATLAS/CMS) (30')*
Yuri Valdau (FZJ/Bonn) – *Time Reversal Inv. at COSY (TRIC) (30')*
Stefan van Waasen (FZJ) – *Readout electronics (30')*

16:30 – 16:50 Coffee break

Topical Lectures

- Detlev Gotta (FZJ) – *From fundamental physics to applications (40')*
Erhard Steffens (Erlangen) – *Polarization as a tool (40')*
Dieter Eversheim (Bonn) – *Electronics: analog vs digital (40')*

19³⁰ – 21³⁰ Social program (Welcome dinner, „Tsiskvili“ restaurant)

August 30, Tuesday (TSU) 9⁰⁰ – 18³⁰

Existing and Future Cooperation

Plenary session 3 (auditorium 7) 9⁰⁰ – 14³⁰

Convener: Erhard Steffens

- Jon Shah (FZJ) – *Medical imaging (MR-PET technique) (30')*
Bernd Neumaier (FZJ) – *Radiotracers for PET applications (30')*
Manuel Dieterle (PSI) – *Medical application: proton therapy at PSI (30')*
Mei Bai (FZJ) – *COSY and Beyond (30')*

11:00 – 11:30 Coffee break

- Livia Ludhova (FZJ) – *Neutrino physics based on scint. detectors (30')*
Satoshi Mihara (J-PARC) – *Muon particle physics program in Japan (30')*
Ghaleb Natour (FZJ) – *Detector construction/design (examples) (30')*

13:00 – 14:30 Lunch break

Plenary session 4 (auditorium 7) 14³⁰ – 16³⁰

Convener: Mikheil Nioradze

- Archil Durglishvili (HEPI TSU) – *Geo. contributions in ATLAS exp. (30')*
Vahtang Gogohia (RMKI Budapest) – *Two faces of QCD theory (30')*
Jambul Gegelia (FZJ/TSU) – *Issues of hadronic EFT (30')*
Revaz Shandize (TSU) – *Nuclear medicine physics in Georgia (30')*

16:30 – 16:50 Coffee break

Electric Dipole Moment Searches

Plenary session 5 (auditorium 7) 16⁵⁰ – 18³⁰

Convener: Mei Bai

- Andreas Lehrach (FZJ) – *Highlights from COSY (JEDI project) (30')*
Ed Stephenson (Indiana) – *Feasibility demonstrations for EDM exp. (30')*
Yuri Senichev (FZJ) – *Option for dEDM experiment (30')*

19:00 – 20:00 Reception at TSU (snack & beverage)

20⁰⁰ – 21⁰⁰ Social program (acting hall):
Children dancing ensemble ALGETI

September 1, Thursday (TSU) 9³⁰ – 18³⁰

JEDI Collaboration Meeting

09:00	Introduction FZJ strategy process Preparations for HESR COSY injector Analytical solutions for EDM & field gradients Polarized molecules	A. Lehrach H. Ströher D. Prasuhn R. Gebel A. Magiera R. Engels
11:00 – 11:20	Coffee break	
11:20	Spin Tracking & Final Ring RF Wien-filter & BPM's (status) Database exp.: beam-time preparation Beam instrumentation (part I) Beam instrumentation (part II) Accelerator setup for EDM	A. Lehrach H. Soltner E. Stephenson F. Trinkel F. Hinder B. Lorentz
13:00 – 14:30	Lunch break	
14:30	Deflector development (Aachen) Deflector development (Juelich) Applying LOCO analysis at COSY COSY e-cooler Polarimetry development The LYSO crystal tests Readout systém Further detecor tests SiPM developments at Ferrara	K. Grigoryev J. Böker C. Weidemann S. Kamerdziev I. Keshelashvili F. Mueller D. Mchedlishvili S. Park L. Barion
16:30 – 16:50	Coffee break	
16:50	JuDit project: electronics part The d ¹² C - scattering in theory Pubcom report Precursor exp.: preparation status	D. Durini Y. Uzikov A. Kacharava A. Lehrach
Summary		H. Ströher

19³⁰– 22⁰⁰ Banquet of the workshop („Mtatscinda“ restaurant)

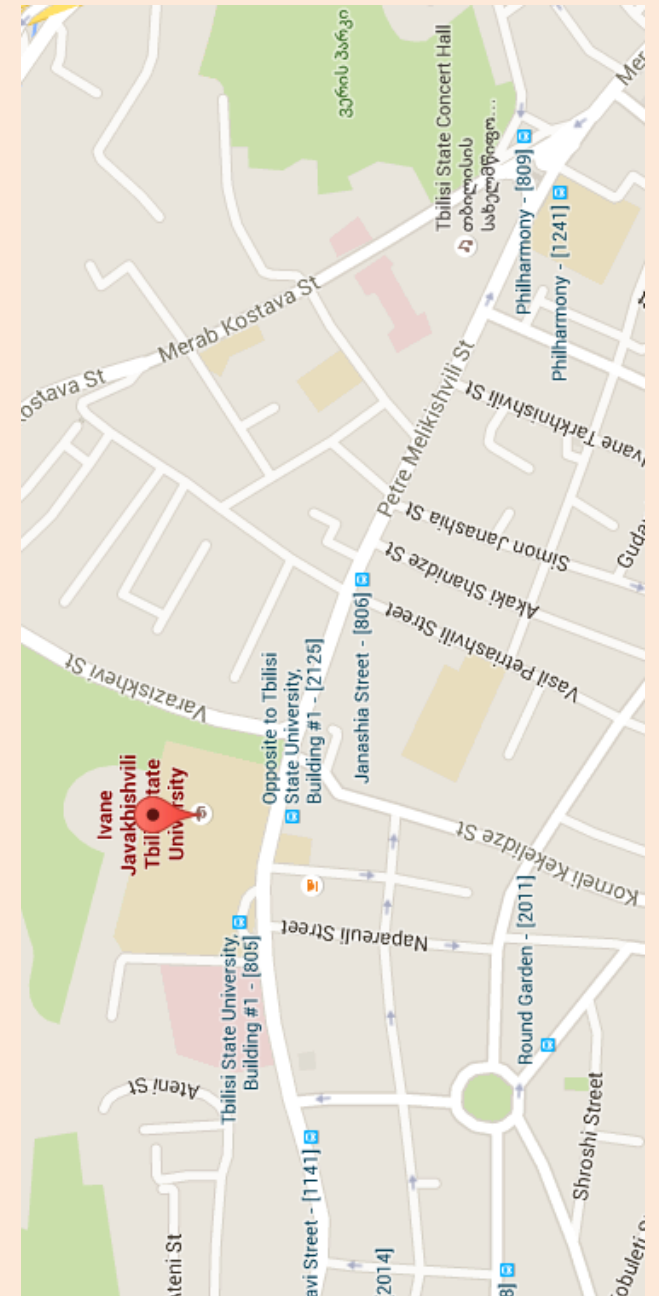
Information:

Conference web-site:
<http://collaborations.fz-juelich.de/ikp/cgswhp>

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Organizers & Sponsors:



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