



Publication Committee: Status Report

September 1st , 2016

Andro Kacharava
8th JEDI collaboration meeting
1 Sep 2016, Tbilisi

Status: General info (reminder)

Publication Committee (jedi-pubcom)

- E-mail address: jedi-pubcom@fz-juelich.de
link from: collaborations.fz-juelich.de/ikp/jedi/...
- Members: M. Bai, A. Kacharava, V. Hejny, A. Lehrach, J. Pretz, F. Rathmann, and H. Stroehler

Pubcom Dutes:

- Follow publication rules accepted by the JEDI collaboration (March 2014);
- Inform collaboration with appropriate meetings/workshops/conferences;
- Consider suggestions from the collaboration in participation of topical events;
- Set-up Editorial Committee (EC) for preparing the collaboration publications.

Status: Contributions

Since March 2016 (7-th Collaboration Mtg.):

- **~15 Talks at international Conferences/Workshops/Colloquiums:**
 - ✓ **DPG'16** (March 14-18, Darmstadt): MB, FH, AS, NH, AS, PM
 - ✓ **CAPP'16** (April 21-22, Daejon, Korea): Frank Rathmann
 - ✓ **IPAC'16** (May, 8-13, Busan, Korea): E. Valetov, Yu. Senichev
 - ✓ **CALOR'16** (May 15-20, Daegu, Korea): I. Keshelashvili, F. Mueller
 - ✓ **MESON'16** (June 2-7, Krakow): Paolo Lenisa
 - ✓ **CBAC mtg.** (June 27/28, Juelich): J. Pretz, A. Nass, I. Keshelashvili
 - ✓ **ECT'16** (July 25 -29, Trento): A. Wirzba
- **Proceedings: CALOR'16** (... in progress)

Status: Coming events (2016)

- **Physics Beyond Colliders** (September 6-7, CERN)
 - F. Rathmann:** "Search for EDM's using storage rings"

- **IBIC'16** (September 11-15, Barcelona, Spain)
 - F. Trinkel:** "Development of a Rogowski coil as a horizontal and vertical BPM's"

- **SPIN'16** (September 25-30, Illinois Uni, USA)
 - J. Pretz:** "EDM measurements at storage rings"
 - N. Hempelmann:** "Stabilization of the deuteron spin tune in a SR using feedback"
 - J. Slim:** "An RF Wien Filter for a first EDM-measurements at COSY/Juelich"
 - E. Valetov:** "Spin dynamics investigation of QF spin lattice for EDM searches."

Status: Publications

Recent paper (Theory):

- **Phys. Rev. Lett. 115, 062001 (2015)** (*„Electric Dipole Moment of the Neutron from 2+1 Flavor Lattice QCD“*)
 - authors: F.-K. Guo, R. Horsley, Ulf-G. Meisner, Y. Nakamura,

Status: Publications

Recent papers (Experiment):

- ✓ **Phys. Rev. Lett. 117, 054801 (2016):** „How to reach a thousand-second in-plane polarization lifetime with 0.97-GeV/c deuterons in a storage ring“
 - authors: G. Guidoboni et. al., **(JEDI collaboration)**

- ✓ **NIM A 828, 116 (2016):** „*Electromagnetic simulation and design of a novel waveguide RF Wien filter for EDM searches of protons and deuterons*“
 - authors: **J. Slim**, D. Heberling, R. Gebel, A. Lehrach, H. Soltner, F. Rathmann, ...

Status: Publications

Considered papers (being in preparation):

- **PR ST-AB:** „*Spin tune mapping for EDM searches*“
 - Editorial committee: **A. Saleev**, N. Nikolaev, F. Rathmann, D. Eversmann, B. Lorentz, S. Chekmenov, ;
 - timeline for submission will be discussed today (16:00)
 - will follow **PhD** thesis
- **PR ST-AB:** „*Spin tune paper – longer version ...*“
 - Editorial committee: **D. Eversmann**, J. Pretz, F. Rathmann, V. Hejny, M. Rosenthal, F. Hinder;
 - in progress, after **PhD** thesis is finalized
- **PR ST-AB:** „*Investigation of beam & spin dynamics for EDM measurements ...*“
 - Editorial committee: **M. Rosenthal**, M. Bai, A. Lehrach, V. Hejny, J. Pretz, F. Rathmann;
 - in progress, after **PhD** thesis is finalized

Status: Publications

Related technical papers (being considered):

- **NIM A:** „ *A novel RF E x B spin manipulator at COSY ...* “
 - Editorial committee: **S. Mey**, R. Gebel, A. Lehrach, J. Pretz, F. Rathmann
 - in progress, after **PhD** thesis is finalized

- **PR ST-AB:** „ *Estimation of systematic errors for deuteron EDM searches at COSY ...* “
 - Editorial committee: **S. Chekmenev**, Yu. Senichev, A. Lehrach, J. Pretz, ...
 - to be discussed ! (will follow **PhD** thesis)

Status: Publications

List of papers (in pipeline/in queue):

- **PR ST-AB:** „*A long lifetime paper*“
→ see presentation by Ed Stephenson: „More projects“
- **Under new analysis (PR ST-AB):** „*How a spin-echo process maintains rf-solenoid-induced spin resonance oscillations of the vertical polarization*“
→ Ed Stephenson et al.,
- **PR ST-AB:** „*Lattice investigation for deuteron EDM ring ...*“
→ Yu. Senichev et al., (based on 3 PhD thesis material ...)