

**Updated Report 2005/2006 on
Activities Chairman SAD/YALINA Steering Committee**

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Activities of SAD/YALINA Steering Committee

- The SAD/YALINA SC was established at our last CEG meeting, to support **integral ADS and Transmutation related ISTC projects**
- Five SC Meetings were organized (**electronic and paper copies of all minutes are available at this CEG meeting**):
 - SY-SCM 1, JINR Dubna, July 13, 2004
 - SY-SCM 2, JIPNR Minsk, January 24-25, 2005
 - SY-SCM 3, JINR Dubna, June 27-28, 2005
 - SY-SCM 4, JINR Dubna, September 15-16, 2005
 - SY-SCM 5, JIPNR Minsk, December 5-6, 2005
- **No formal SC Meetings in 2006**, but a lot of communication

Highlights SY-SCM 1 Dubna, July 13, 2005

- **Proposed Charter for SAD/YALINA Steering Committee was accepted**
- **Status and progress of main projects SAD and YALINA were presented and discussed in detail**
- **Foreign collaborators stressed assessment of “Dynamics Experiments” in SAD**
- **SC recommended creation of SAD brochure and short leaflet**
- **Synergies/collaborations with other ISTC projects for creation of SAD were discussed: ISTC Project #1372, SAD startup support by (new ISTC experiment?) at BFS/Obninsk**
- **Role of high energy neutrons in SAD was stressed**
- **Main issues of the meeting were time schedules and reliable cost estimates**
- **Action plan was agreed for following areas: SAD design, radiation shielding and general issues**

Highlights SY-SCM 2 JIPNR Minsk, Jan. 24-25, 2005

- **New funding perspectives for SAD in EC FP6 IP EUROTRANS in connection with withdrawal of TRADE contribution**
- **First detailed cost and time schedule estimates for SAD; 432 Mroubles (≈ 12 MEuro), reachable ambitious goal to have first physics experiments in SAD in 2008**
- **Presentation of YALINA booster experiments with mixed neutron spectra**
- **Discussion of power increase options in SAD**
- **Proposal for target irradiation benchmark based on SAD preparation experiments**

Highlights SY-SCM 3 JINR Dubna, June 27-28, 2005

- Dubna Director Designate A. Sissakian underlined the important role of SADS in the JINR Dubna roadmap.
- Funding problems for SAD were recognized; cost optimization by “ISTC channeling” was proposed: 6 MEuro realistic?
- Discussion of consequences of PHASOTRON fire in April 2005
- Proposal for funding scheme “one third each”: JINR Dubna, ISTC, IP EUROTRANS
- Round table discussion with Management of JINR Dubna and ISTC Executive Director N. Jousten => **SAD realization is an ambitious project, realizable without recognizable technical killing issues, but with challenges for the funding**
- YALINA is well integrated in international projects (DOE, EC IP EUROTRANS). Next experiments series will be done with “booster” mixed spectrum configuration

Highlights SY-SCM 4 JINR Dubna, September 15-16, 2005

- **Main objective: clarification of funding modalities in framework of “one third each” scheme.**
 - **IP EUROTRANS has made commitments for this solution.**
 - **Corresponding ISTC support channels are in discussion with good perspectives.**
 - **Formal commitments of JINR Dubna are required to enable progress with EUROTRANS cooperation.**
- **YALINA is proceeding as scheduled. Creation of International Science Laboratory (ISL) with YALINA is discussed and recommended.**
- **PHASOTRON could be visited after April fire**
- **Statement of JINR on scientific working program of SAD with IP EUROTRANS Domain 2 ECATS was signed by four key representatives of JINR**

Highlights SY-SCM 5 JPINR Minsk, Dec. 5-6, 2005

- **The SY-SCM5 was held in conjunction with IAEA RCM for CRP on ADS Benchmarks**
- **IP EUROTRANS DM2 ECATS was presented by designated coordinator G. Granget**
- **With support of SY-SC members the SAD project was approved by the Program Advisory Committee (PAC) of JINR Dubna. However, additional external funding support is recommended.**
- **Technical progress of SAD is on schedule.**
- **Organizational aspects for formal prolongation of ISTC projects SAD and YALINA**
- **Letters of recommendation for SAD and YALINA were prepared by collaborators**
- **Draft proposal for creation of International Center of Excellence for Transmutation (ICE-TR) in Minsk was prepared.**

Highlights SAD/YALINA related activities in 2006 (I)

In 2006 there were **no Steering Committee Meetings**, mainly because availability of key members of the SC could not be solved. However, the SAD/YALINA Steering Committee was **significantly contributing with key persons** to the following relevant meetings (list probably not complete):

- Both projects SAD and YALINA were strongly supported at ISTC CEG ADS and Transmutation Meeting Brussels, Jan. 30-31, 2006.
- Detailed presentation of both projects at IP EUROTRANS Extraordinary Scientific Consultancy Committee (SCC) Meeting Karlsruhe, Feb. 2-3, 2006
- Participation to JINR-AFK-ISTC-EUROTRANS Meeting Moscow, May 23-24, 2006. The proposed **SA-SCM 6 could not be realized** in connection with this meeting. In principle **considerable support by Russian commercial company** is under serious consideration.

Highlights SAD/YALINA related activities in 2006 (II)

- Presentation at IP EUROTRANS DM2 ECATS Meeting, Brussels, June 12-13, 2006. At this meeting **inclusion of ISTC #2267 SAD** in IP EUROTRANS DM2 ECATS **was challenged**. Finally, due to high cost estimates for SAD realization, not matching funding model under consideration, **SAD was excluded** from ECATS in favor of newly proposed experiment in VENUS facility at SCK-CEN (GUINEVERE).
- Various phone calls and e-mail exchanges were performed, related to SAD and YALINA. Some of the topics:
 - **Long term realization of SAD**. New option to replace existing PHASOTRON accelerator in SAD concept? New modern dedicated proton accelerator on convenient place at JINR Dubna could reduce current SAD sub-critical system design costs and ensure traditional proton therapy competences of JINR at reasonable total cost level (≈ 20 M€?).
 - **Bureaucratic organizational problems** with continuation of YALINA (proposal for creation of International Science Laboratory, International Center of Competence for Transmutation (ISL / ICE-TR))