Dubna group participation in BESIII

- Short overview of Joint Institute for Nuclear Research
- Our group – experience and resources
- Dubna group interests in BES III physics
- Current activities in BESIII

Joint Institute for Nuclear Research

Location: Dubna (120 km from Moscow)

Member states :

Republic of Armenia
Republic of Azerbaijan
Republic of Belarus
Republic of Bulgaria
Republic of Cuba
Czech Republic
Georgia
Republic of Kazakhstan
Democratic People's
Republic of Korea
Republic of Moldova
Mongolia
Republic of Poland
Romania
Russian Federation
Slovak Republic
Ukraine
Republic of Uzbekistan
Socialist Republic of Vietnam

Joint Institute for Nuclear Research

Main fields of activity:

- Theoretical physics
- Elementary particle physics
- Heavy ion physics (new elements discovery etc)
- Physics with neutron beam
- Radiation and radiobiological research

Joint Institute for Nuclear Research

Dzhelepov Laboratory of Nuclear Problems

Department of Colliding Beam Physics

Main activities:

- **DELPHI** (is almost finished now)
- **ATLAS**:
  - Muon chamber production, comissioning, installation
  - Software development and physics study
- **HARP**, **COMPASS** , **ILC**

:) We worked a lot for Dubna C-tau factory project some time ago

More details at http://dcbp.jinr.ru/

- Dubna group has accumulated significant experience in e^+e^- physics during the DELPHI experiment at LEP
- We have large practice with modern software (Gaudi/Athena, Geant4, ROOT etc) similar to that to be used by BESIII.
- We have a number of PhD students, for which to work on LEP is too late and LHC is too far
- Up to 10 physicists potentially may be involved in BESIII activity. Most of them have been participated in running experiment already.

Dubna group interests in BESIII physics

- τ-lepton physics, particularly measurments of weak dipole moments
- Scan of low energies with a radiative return method
  - resolve the Babar-DM2 discrepancy
  - barion-antibarion production study

For details look presentation of Igor Boiko at BESIII workshop in june 2005

Workplan of our group in BESIII

- **New generator implementation into BESII software**
  - EvtGen - done
  - BHLUMI - done
  - Any more ?
- **Participation in development of physics analysis tools**
- **Physics performance study for topics of our interest**
- **Other tasks ?**

We are ready to help with any other urgent software issues, if needed

Thank you!