

NCC

Plans

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Tasks

- CDR
- Simulation
- Prototype
- NCC – real thing
- money
- collaborators
- Prototype and real thing
 - Sensors
 - Electronics
 - Preamp design
 - preamp board
 - ADC and readout

Cast of characters

- Moscow State U –
 - Merkin – Silicon sensors
 - Voronin – analog readout (with MEPHI / Trieste etc)
- INFN, Trieste- Vachii – PreAmp (?)
- JINR – Dubna – Malakov (director), Anotoly Litvinenko , Sergei Bazylev
 - Veksler and Baldin Laboratory of High Energies. *Director: [A.I. Malakhov](#)*
 - Mechanical Design (A.Litvinenko)
 - Integration
 - Construction of prototype?
 - Digital readout electronics (S.Bazylev)
- Moscow Engineering and Physics Institute (**MEPhI**)
 - E.Atkin – analog readout (with MSU / Trieste etc)
- Prague
 - M.Finger, Charles University –physics
 - V.Vrba, Physics Institute - π^0/γ identifier
- University of New Mexico
 - Doug Fields, Jan Rak – π^0/γ identifier
- Saclay-Clairmont – Testla Preamp(?)
- D0 (FNAL) – Hybrid (SVX-4) burn in stand
- Riken – Atsushi
- UCR –RKS, Vassili
- BNL – Edward
- Colorado?
- Ill – Matthias

New Names (for RKS)

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- Sergei BAZYLEV,
Vjacheslav SLEPNEV,
Veksler and Baldin
Laboratory of High Energies,
Joint Institute for Nuclear
Research
- Edward Atkin,
MEPhI

Possible Europeans

■ INFN Trieste

- COMPASS, Franco Bradamante(to BNL? Boss), Fulvio Tessarotto Silvia Dalla Torre, Anna Martin; Andrea Vacchi(Boss)

■ INFN Frascati

- HERMES, Enzo de Sanctis, Pasquale Di Nezza(Boss) , Nicola Bianchi, Delia Hasch

■ INFN Ferrara

- HERMES, Paola Dalpiaz

■ Prague group

- Charles University, ?,?
 - Miraslov Finger
 - Vrba

■ DESY-Zeuthen

- HERMES, Wolf-Dieter Nowak(to bnl), Ekle Aschenhauer

■ Warzaw

- Jan Nassalski, Ewa Rondio, Barbara Badelek, Krzuysztof Kurek, Andrzej Sandacz

■ Max-Planck

- Alan Caldwell (phone meeting?)

■ British QCD community

Prototype

- Detector – 2 sensors wide
 - JINR
 - mechanical design and construction + tungsten(?) + assembly
 - MSU
 - Sensors
 - Readout boards, cables
 - Bonding and testing
 - UCR/BNL
 - Digital readout, test beam DAQ
 - Trieste
 - PreAmps – CR1-P4 (A.Vacchi is asked to help to populate the prototype)
- Analog readout boards available (MSU)
 - Need some components purchased through BNL
- Sensors ordered (MSU)
- Digital readout - commercial components
- DAQ – PC
- Date – End 2005
- test at Dubna test beam
- π^0/γ – prototype
 - Physics Institute in Prague(?)
 - Sensors could come from Trieste (from old experiment)
 - Readout can be the same as for pad layers but this idea was not discussed seriously yet

Real Thing - calorimeter

- Sensors, cables – MSU, production in Russia
- Preamps – still multiple options, in all cases production is likely through Europractice
- Mechanical Design & construction – Dubna
 - Also may be able to provide integration engineer for central region (Support from BNL?)
 - Mechanical assembly at Dubna
 - Tungsten – purchased in Russia (paid by Riken?)
- Analog readout design & construction – MSU/MEPhI, testing in Russia
- Digital readout design & construction – Dubna/Nevis (US components, the rest is mirki)
- Trigger – Iowa State

PS: g/p0 identifier is yet to follow

Real thing- Preamp

- Pre-Amp – Needs 2 year (several possibilities)
 - need factor of 1000 dynamic range [16 bit dynamic range, with 12 bit accuracy – several schemes being tried – Solin]
 - Trieste – as a commercial development of a modified CR3A
 - change 4 to 16 channels
 - change base to base shaping to 3-500 ns
 - dynamic range is probably OK
 - Saclay/Clermont (Testla pream?)
 - Dubna
 - Note: All will go via same broker in Europe
 - Needs funding for production

Real thing – cables, preamp board

- Dubna??

Real thing- cables – Readout board/ADC

- Find Commercial ADC
- Chi
- Dubna Electronics engineers

Real thing -LVL-1 and triggering

Real thing-Online Software

Simulations – Physics case

- RKS in charge for now
 - Vassily
 - Astrid
 - Colorado?
 - need to recruit more folks (Europe, Japan, Korea,

Schedule

- Big meeting in March at BNL
 - review plans
 - go over CDR
- CDR due in May

CDR

- Due in May
- Many of these assignments will change as folks join
- Parts and tentative assignments
 - Intro -rks
 - Physics case – rks+Ed K.
 - simulations (vassily, astrid, Jamie,
- Detector overview and design– Edward
 - Sensors – Merkin+Edward
 - Construction – Edward
 - Electronics – Edward-Chi
 - Preamp/ and preamp boards
 - readout – chi?
 - cabling-?
- Software and Calibration issues- Vassily?
- Cost and schedule – RKS
- Collaboration Issues - RKS

Funding sources

- UCR (90K) Solin, MSU prototyping
- Riken (200K)
- Prague (?) for development of gamma/ π^0
- Dubna (50K) for prototype detector construction
- Riken - Tungsten