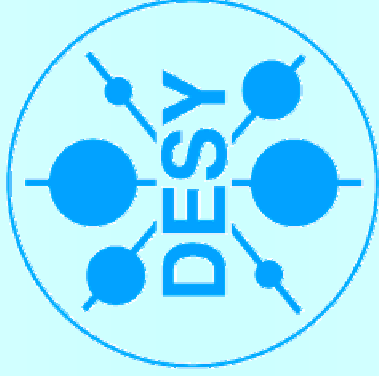


Report from the BDIR Sessions

Karsten Büßer



ECFA Workshop
Montpellier
November 16th, 2003

Two Messages from BDIR

TESLA

- Urgent tasks to be done before LCWS'04
- Recruitment

BDIR Agenda



Thursday, November 13th, 15:15-16:45

- Peter Wienemann Simulation of the machine background in the TESLA TPC with GEANT4
- Wolfgang Lohmann Extracting beam parameters from LCAL energy distributions
- Wolfgang Lohmann Simulations with realistic beams
- Karsten Büßer Mask design update
- Hitoshi Yamamoto Beam profile monitor

Thursday, November 13th, 17:10 - 19:00

- David Miller Report from satellite meeting on beam instrumentation
- Eric Torrence Report from the US beam instrumentation efforts
- H.-Jürgen Schreiber Beam energy spectrometer
- Grahame Blair Laser wire studies

Friday, November 14th, 08:30-10:15

Discussion about the plans of the BDIR working group for the next two years

Friday, November 14th, 14:00 - 15:45

- Stewart Boogert Luminosity spectrum measurements
- Freddy Poirier Luminosity spectrum measurements
- Joint Session Polarisation/BDIR:
 - Gudi Moortgat-Pick Requirements on polarisation (informal talk)
 - Peter Schueler Status of polarisation measurement
 - Roman Poeschl Report on E166

Most Urgent Task

- Are there topics which could influence the technology decision ?
- One obvious question: The crossing angle problem
 - Are there real show-stoppers for the x-angle?
 - If **yes**: Warm machines will have a hard time
 - If **no**: Do we still want to stick with the head-on scheme and invest a MAJOR effort in tackling the extraction line problems?
- The crossing angle question has to be answered before LCWS'04 to have an influence on the technology decision.
- The wise persons will probably ask us.
We should have a good answer by then !

Questions to be answered



Outcome of Friday morning discussion:

The answers to just two questions can really save the head-on collisions scheme.

- Is there a good physics case ?
- Will the different masking scheme and backgrounds be a problem ?

Other technical challenges to the x-angle:

- SC mini quads
- crab-crossing

have still to be shown solvable, but experts are optimistic.

Consequences

- X-angle masking is much more complicated
 - Backgrounds have to be checked for the TESLA case
 - Are there major problems for, e.g. the VTX?
 - There will be a larger acceptance hole in the forward detectors.
- Background question will be tackled by BDIR group.
- Low angle acceptance problem must be answered by the physics (e.g. SUSY) groups:
 - Redo their favourite well motivated analysis with an acceptance cut in the forward region which will be provided by the BDIR group.
 - Quantify the losses before LCWS'04.

Announcements

- X-angle meeting with emphasize on physics case:
- January, 19, 2004 in Zeuthen: video/phoneconference
- BDS optics review meeting:
- January, 20, 2004 in Zeuthen (TESLA meeting week)
- Inter-regional BDIR/MDI pre-meeting to the LCWS'04 in Paris.

Recruitment

TESLA

- The extremely complex questions on the BDIR matrix need the input from all persons here in the room:
- The methods and tools of HEP people are supplementing the machine guys' approaches in a con-genial way.
- The machine groups are sub-critical and need badly our help.
- Machine related projects broaden the horizons of the typical HEP analysis/detector person and are a very valuable asset for the cv.
- If we (HEP people) want to have influence on the things the machine guys impose on our detector (and physics capabilities) we have to be part of the game.

Open Positions on the Horizon



- UK PPARC bid was successful
 - Money (positions+hardware) will be available middle of next year
- 15 M€ bid to EU FP6 will (hopefully) result in funding end of 2004.
 - European collaboration to form the prototype of the:
- European Linear Collider Design Team
- All this will be just-in-time for the wise persons panel decision about the technology !

Accept the Challenge

TESLA

It is in our hands to develop the most complex machine ever built on the world:

„The experiment starts at the gun.“