

# Referee's report on ATLAS-DESY

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## Analysis activities

### Very strong participation of the ATLAS-DESY group in many analyses

- Elin's talk gave a few highlights amongst the contributions new since the last PRC
- e.g. top x-section in lepton+jets: the analysis of the DESY group (Zeuthen) was shown to be the best, and made the ATLAS result

### Well defined strategy

- EW analyses for their potential impact on pdfs
- Other SM analyses as premises to search for new physics, e.g. :
  - multijets : moving to boosted top and ttbar resonances
  - $\tau\tau$  and  $\tau\nu$  : premise to SUSY searches with  $\tau$

Manpower situation in Zeuthen: physics analyses are driven by Ulrich Husemann (YIG) and one post-doc (Elin Bergeaas). As UH is leaving it is **very important that Zeuthen gets a new YIG asap** to keep this physics momentum.

## Upgrade activities: tracker

IBL (Inner B Layer) : schedule has become quite tight with the move of the LS1 (spring 2013 – end 2014). However does not affect directly DESY activities.

- **Test beam**: DESY provided the **infrastructure** for 2x 3-weeks of tests
  - very much appreciated
  - DESY group provides a **very strong support** to the tests (EuDet telescope, event reconstruction,.. )
- Procurement of optical fibers for data transmission.

Upgrade of the **strip tracker** : good to see that the **PETAL project is well on track** and that **manpower has been reinforced**

- **Simulation studies**: much progress since the last PRC
  - 3 post-docs + 1 PhD student
  - now very visible within Atlas ( post-doc -> convenor responsibility)
- **Operations of the current SCT** : expect to be soon very visible
  - detector expert who takes a new permanent position
  - YIG of K. Tackmann will join part time

## Upgrade activities : trigger

J. Haller left. Participation of DESY to the upgrade of the central trigger (for phase 2 i.e. 2020+) still possible only if someone (new person) pushes this effort.

## Operations of ALFA

- Installation completed and commissioning has started
- will be moved into the beam in special runs with high beta\* (already in 2011 maybe)
- once a first calibration of LUCID is done: other special runs will be needed – e.g. when LHC energy is increased
- Hence we support a sustained participation to ALFA, with the currently allocated resources:
  - 1 permanent + 1 post-doc
  - very visible within the ALFA group

## For the minutes...

We congratulate the Atlas group for their very visible contributions to physics analyses. We note that a new YIG leader is needed to maintain these efforts in Zeuthen.

We note with pleasure the increased manpower on the tracker upgrade – including those for the operations of the current SCT.

We recommend that the group maintain a manpower level that is appropriate to the size of the project, so that they play a major role in the tracker upgrade.