



# Introduction to the workshop



**Aharon Levy**  
**Tel Aviv University**

# At this meeting

- **TB (10-11) paper status**
- **TB-14: 5 months (already) after.....**
- **TB-14 results for summer/autumn confs**
- **Next TB (TB-15)**
- **WGs**
- **Proceedings of Belgrade FCALWS**
- **Goals for near future**

# TB (10-11) paper status

- **First version of paper submitted on Nov 15, 2014**
- **Referee report Dec 19, 2014**

## **Report of referee 1**

**Dear Authors and Editors,**

**I would like to congratulate the authors for a proper piece of work.**

**I see no principle obstacle to not publish the article.**

**Before the article can be published it needs however a careful revision as suggested by my comments. Before I come to my comments let me briefly sketch how the paper complies with the criteria, scientific quality, originality and relevance.**

**Followed by 5 pages of general and detailed comments**

# TB (10-11) paper status

## Report of referee 2

The article presented here describes the results obtained on the tests of fully instrumented detector planes of the Forward Calorimeter of a linear collider. In this sense, this article does not provide any new developments or new ideas on detector techniques but rather a well documented and quite complete description of tests on detector prototypes. This is why I would suggest to consider this article as a Technical Report.

The amount of work done to build, prepare, run and analyse these tests are worth to be published and the results obtained will certainly become references for the future development of a linear collider detector.

Nevertheless, I consider that the article as it is now should be improved before it is accepted for publication. I will try to describe some ways for improvement in the following lines. I have to insist on the fact that I consider that the scientific content is very good and I don't think that it has to be modified in the main lines but rather add some explanations, and motivations for such or such choices.

**Followed by 5 pages of general and detailed comments**

# TB (10-11) paper status

- **Worked on the text with the help of Wolfgang, Marek Konrad and Olga and also on figures, helped by Olga, Veta, Szymon and Itamar. Answered with a 13 pages document.**
- **Second version of paper submitted on Feb 15, 2015**
- **Referee report March 10, 2015**
- **Revised version deadline: March 24, 2015 (!!!)**
- **Refree 2 – accepts the paper as is. Suggest it is published as a Technical Report**
- **Referee 1 – asks for some more changes.**

# TB (10-11) paper status

## Report of referee 2

This report concerns a second version of an article already scrutinized in December.

After careful reading, it appears that this new version is really an improvement with a more accurate and enhanced content. Some rephrasing has also been done which makes the reading more pleasant and at the level of what we expect from a journal like JINST. Almost all the remarks made about the first document have been taken into account in this revised version. So, I don't see any thing more to notify.

I thus consider that this version is trustworthy and can be considered in its present state for publication.

Concerning the classification, the article presented here describes the results obtained on the tests of fully instrumented detector planes of the Forward Calorimeter of a linear collider. In this sense, this article does not provide any new developments or new ideas on detector techniques but rather a well documented and quite complete description of tests on detector prototypes. This is why I would suggest to consider this article as a Technical Report. The results obtained and presented will certainly become references for the future development of a linear collider detector.

# TB (10-11) paper status

## Report of referee 1

Dear Authors and Editors,

I have read the second draft of the paper

”Performance of fully instrumented detector planes of the forward calorimeter of a Linear Collider Detector.”

I would like to thank the authors for having taken into account the vast majority of my comments to the first draft. I think that the paper converges.

Upon second reading I have however realised a few more issues that I would like to remark. Even if these are new I think that it is in the interest of the authors to take them into account. I apologise for not having made these comments to the first draft.

- Page 6, Fig.6: Would it be possible to (as nicely done in Fig. 5) add an axis ”Field Strength” to the top of Fig. 6? After all in the text (Page 5 bottom) the authors argue with the field strength rather than with the actual depletion voltage.

# TB (10-11) paper status

- **Errors and error bars: For none of the results the errors or systematic uncertainties are discussed! When error bars are present they are not commented.**
  - For example the difference of the CCE of 50% as quoted on Page 5 and 42.2% as quoted on Page 19 may be understood better if errors are discussed and given. This may also help avoiding the not very scientific judgement of a "rough agreement".
  - Error bars (or at least a comment to the errors) are missing at least for the Figs. 5, 21, 22, 27, 28, 29.
  - Error bars are present but not discussed for Figs. 18 b) and 32.

## Section 5:

- For the sake of completeness one should add a sentence that in the considered energy range the electrons act as MIP particles. Many results show the MIP spectrum and also the position scans (Figs. 21 and 32) profit from the fact that the particles pass the detector plane as MIPs.
- Since one works with single particles one has in principle to add a few sentences on how the recorded data were cleaned up, i.e. how electrons that start showering in the scintillator counters and/or in the ZEUS MVD are removed. If they haven't been removed a comment on the impact of these events would be welcome. As I should have noted this already upon first reading I would not insist on that.



# TB (10-11) paper status

Page 11: "... accuracy of about 10  $\mu\text{m}$  ..."  $\rightarrow$  "... accuracy of about 11  $\mu\text{m}$  (very picky comment, I know).

I still think that Subsection 4.4 belongs to an appendix but fine.

Page 16: The shower data were recorded at which energy?

Page 17: The last sentence of the first paragraph reads odd. Is it supposed to be "trajectories" instead of "paths" ?

Page 18, Fig. 22: If one looks closer one sees that the simulated spectrum is somewhat shifted to smaller  $X_0$  w.r.t. the measured spectrum.

This may point to the fact that the amount of absorber material is not correctly simulated. A short discussion on errors and experimental uncertainties would be welcome and is even needed.

I have spotted a few typos:

– Page 16: Section4.4  $\rightarrow$  Section 4.4

– Page 16: fof  $\rightarrow$  for

– Page 18 (Caption of Fig. 22): sensor  $\rightarrow$  sensor

Page 22: I still find the conclusions somewhat thin. At least an outlook for the next R&D steps should be given, e.g. in the present paper the power pulsing functionality of the readout electronics is mentioned but apparently this hasn't been tested in the reported measurements.

# TB (10-11) paper status

- Wolfgang, Marek, Olga, Itamar and Bogdan helped produce a doubly revised version. Andre debugged it for typos and other mistakes (affiliation) and I hope to submit the paper with answers on Wednesday (24<sup>th</sup>).

# TB-14: 5 months (already) after..

- **First results to be presented by Oron, Itamar, Jakub, Veta**
- **Need to move into higher gear for**

# TB-14 results for coming confs/WS

- **CLICdp, Kickoff AIDA-2020 (CERN, 2-5 June)**
- **EPS (Vienna, 22-29 July)**
- **Lepton-Photon (Ljubljana, 17-22 August)**
- **LCWS15 (VanCouver, 1-6 November)**
  
- **FCALWS (?,?)**

# DESY TB (TB-15)

- **We should have a discussion about the next TB at DESY.**

# Working groups

- **Following the Bucharest WS, Lucie suggested to start working groups so that we exchange information more than twice a year.**
- **In July we started a clustering working group, convened by Sasha, meeting every second Monday (5pm-CET). Details – later by Sasha.**
- **In November started second WG, a hardware working group, convened by Marek. Meetings also on Mondays 5pm-CET. Details – later by Marek.**
- **WGs turned out to be extremely useful and informative. Participation is very encouraging ( had 18 participants!)**

# Proceedings of the Belgrade WS

- **Most contributions are included in their final form.**
- **Still waiting for the revised version from Lucia.**
- **Anyone else? Final call!!**

# FCAL future topics

(From Wolfgang's presentation at the Bucharest WS)

- Finalize and submission of the paper on the test-beam results
- Preparation of the next test-beam with 4-5 sensor layers
- Continuation of the irradiation studies at SLAC
- Complete AIDA II application
- Design and realization of a “full length calorimeter”
- Design optimization
- Physics case sharpening



# Goals for near future

- **Finish analysis of TB-14**
- **Prepare material for presentation at conferences**
- **Write paper of TB-14**
- **Prepare TB-15**