Barrel timing counter aka. SciTil TDR Status

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TDR

	A	B	C
1	System	Submission *Expected*	M3 (Approval) *Expected*
2	Target Spectrometer EMC		08/08/2008
3	Barrel EMC		08/08/2008
4	Backward Endcap EMC		08/08/2008
5	Forward Endcap EMC		08/08/2008
6	Solenoid		05/21/2009
7	Dipole		05/21/2009
8	Micro Vertex Detector (MVD)		02/26/2013
9	Straw Tube Tracker (STT)		01/29/2013
10	Cluster Jet Target		08/28/2013
11	Muon System		09/22/2014
12	Forward Shashlyk Calorimeter	17/6/2015	*1/2016*
13	Luminosity Detector	*3/2016*	*9/2016*
14	Forward TOF	*3/2015*	*9/2016*
15	Forward Tracking	*3/2015*	*9/2016*
16	Barrel DIRC	*6/2016*	*12/2016*
17	Hypernuclear Setup	*6/2016*	*12/2016*
18	Pellet Target	*6/2016*	*12/2016*
19	Controls	*6/2016*	*12/2016*
20	Planar GEM Trackers	*9/2016*	*3/2017*
21	Barrel Time of Flight (TOF)	*9/2016*	*3/2017*
22	DAQ	*6/2017*	*12/2017*
23	Endcap Disc DIRC	*6/2017*	*12/2017*
24	Computing	*9/2017*	*3/2018*
25	Silicon Lambda Disks	tba	tba
26	Forward RICH	tba	tba
27	tba: to be announced		Status 3/11/2015
28			
29	For the items “Interaction Region”, “Supports” and “Supplies” no TDRs are planned, only specification documents.		

another 3 months to go

Contents

Preface vii

1 Executive Summary 1

2 The $\overline{\text{P}}$ANDA Experiment 3
- 2.1 The $\overline{\text{P}}$ANDA Experiment . . . 3
  - 2.1.1 The Scientific Program . . . 3
  - 2.1.2 High Energy Storage Ring . . . 3
  - 2.1.3 Targets . . . 4
  - 2.1.4 Luminosity Considerations . . . 4
- 2.2 The $\overline{\text{P}}$ANDA Detector . . . 4
  - 2.2.1 Target Spectrometer . . . 5
  - 2.2.2 Forward Spectrometer . . . 6
  - 2.2.3 The Particle Identification System 6
  - 2.2.4 Data Acquisition . . . 6
  - 2.2.5 Infrastructure . . . 6

3 Goals and Requirements 9
- 3.1 EMC preshower detection . . . 9
- 3.2 Event timing . . . 9

4 Design of the Barrel Time-of-Flight 11
- 4.1 Mechanics . . . 11
- 4.2 Scintillator . . . 11
- 4.3 Photo detector . . . 11
- 4.4 Single tile . . . 11
- 4.5 Super module . . . 11
- 4.6 Readout electronics . . . 11

5 Operation / Calibration and Monitoring 13

6 Simulation and Reconstruction 15
- 6.1 Online t0 calculation . . . 15
- 6.2 Event Sorting . . . 18
- 6.3 Pattern Matching . . . 18
- 6.4 Relative Time-of-Flight . . . 18
- 6.5 Particle Identification . . . 18
- 6.6 EMC Preshower detection and energy compensation . . . 19

7 Performance 21
- 7.1 Single tile . . . 21
  - 7.1.1 Simulation . . . 21
  - 7.1.2 Lab test . . . 23
  - 7.1.3 Beam test . . . 23
- 7.2 Super module . . . 23
  - 7.2.1 Efficiency . . . 23
- 7.3 Radiation hardness . . . 23

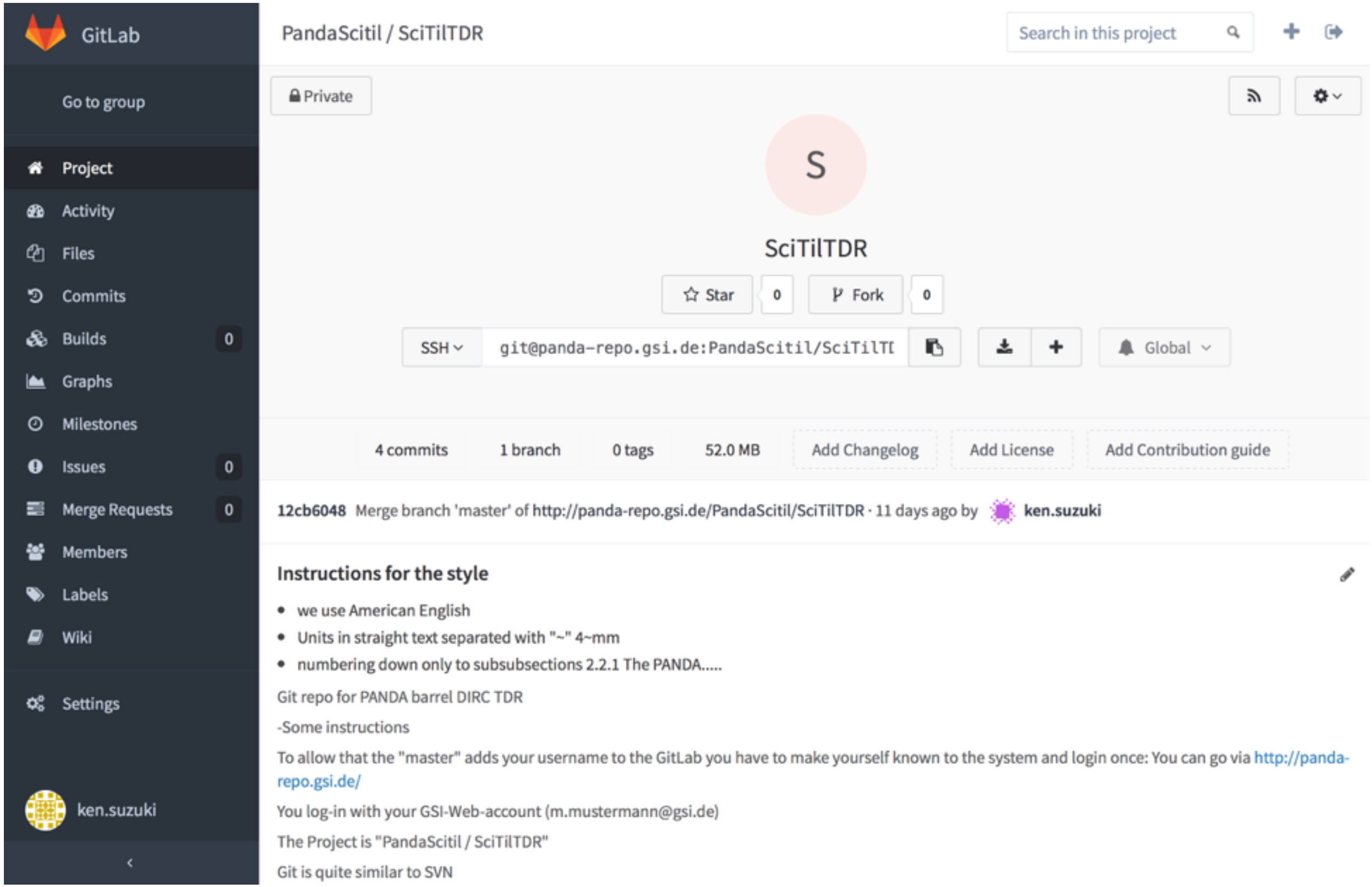
8 Mechanics and Integration 29

9 Project Management 31
- 9.1 Collaboration Structure . . . 31
- 9.2 Schedule . . . 31
- 9.3 Cost . . . 32
- 9.4 Manpower . . . 34
- 9.5 Safety . . . 34
- 9.6 Strategy for Final Design Decision . . 34

Chapter structure getting stable though we may still modify.

Repository

- It is compulsory to have a repository on a GSI server
- gitlab on panda-repo.gsi.de
  - /SciTilTDR
    - sorry, no SVN since I copied how B-DIRC did
- Dropbox
  - In Vienna locally we use more this



at the end, it should be similar to SVN, push/pull/fetch/commit/..

SciTil Group

- Erlangen
- GSI
- India (Gauhati-U. Assam, Visva Bharati-U. Bolpur, BARC Mumbai)
- Mainz
- Stefan-Meyer-Institut, Vienna

to be updated at the time of delivery

Radiation hardness issue

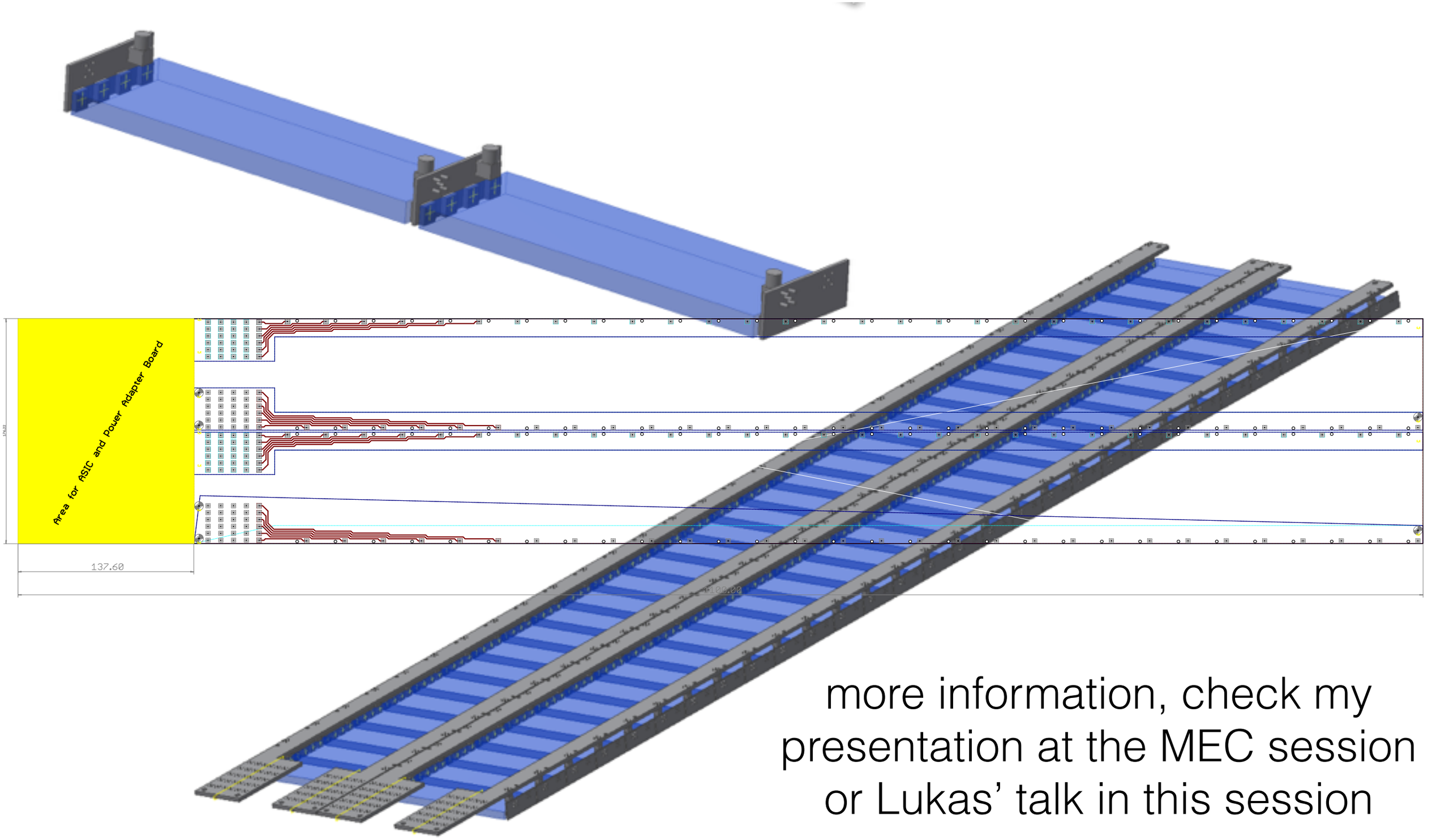
- is a risk factor, has been mentioned each time by Lars at TB session.

- irradiation test by us has been postponed due to manpower and priority because.

- from our literature study, we are rather optimistic that it's okay.

- other thing we did was to increase safety margin. Right now, σ_t(best) = 54 ps $\Leftrightarrow$ σ_t(goal) = 100 ps

First prototype



more information, check my presentation at the MEC session or Lukas' talk in this session

Readout electronics

- TOF-PET chip is in consideration
- Working with the evaluation kit
- the “railboard” to include FEE (TOF-PET chip etc.)?

Summary and Outlook

- TDR delivery in September 2016! Three months to go.
- Material should be mostly there. Current version available on a repository. (44 pages as of now)
- Work still to be done besides writing
  - radiation hardness test (August?)
  - first prototype construction

Backup

Development in Sensor

sensitive area size (0.1 mm)	pixel size (μm)	package
S13360-[13|30|60][25|50|75][CS/PE]		
S12571		