Tracer/TileCAL

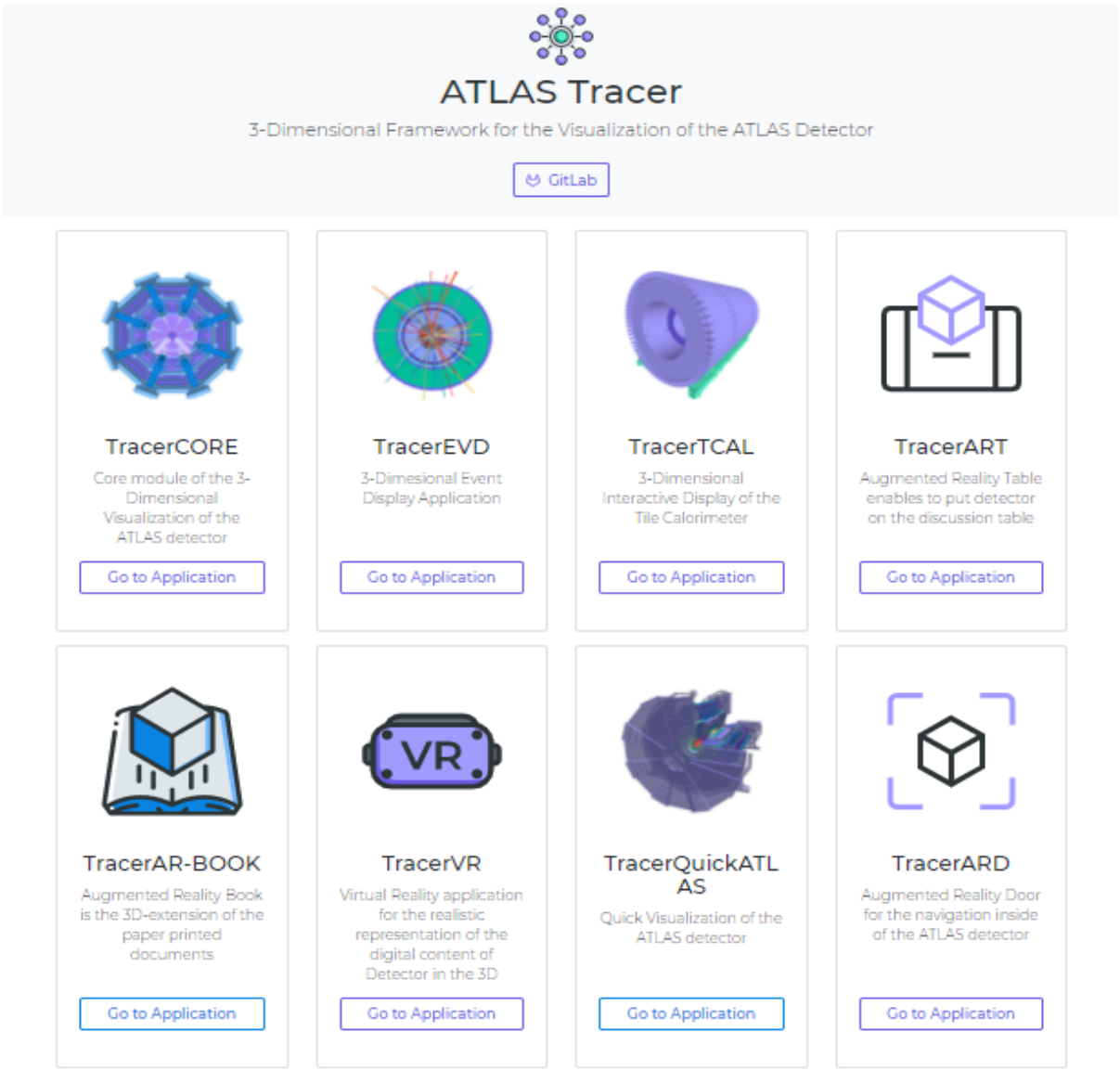
TileCal Week Computing 18 Feb 2022

ZURASHVILI NINO

Georgian Technical University

https://indico.cern.ch/event/1127849/

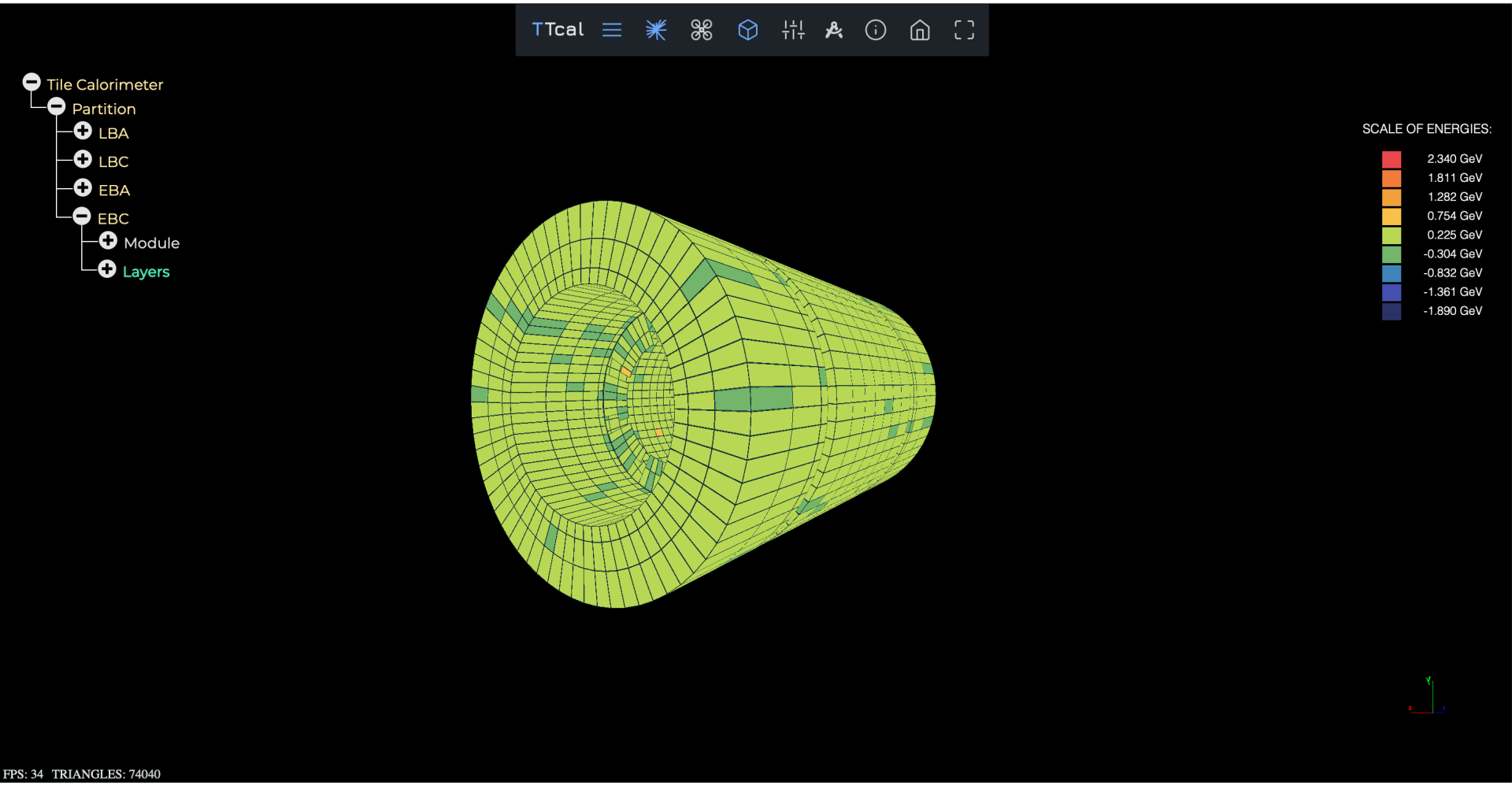
INTRODUCTION



https://tracer.web.cern.ch/tracer/

TileCal Application Status

New User Interface



https://tracer.web.cern.ch/tracer/subsystem/tcal/r3.0/index.html#

TileCal Working Plan part 1

1	Visualise Channels (PMT) ✅
2	Display Calibration Constants per Channel (1 cell = 2 Channels) ✅
3	Visualise C1, C2, C3 constants values per Channel by colour and control values by smooth transaction of colours. Then if somewhere smooth transaction is broken, it will be visible that constant value is wrong and something wrong is happening in corresponding channel ✅
4	Possibility to select constant for visualisation ✅
5	Visualise changed values of constants (or RMS) in time *In progress*
6	Visualise other conditions as well, ex.noisy per cells. *In progress*
7	Display dE/dX by cells and verify of uniformity (sameness values with other cells). If not then Calibration Constants are wrong in the cell. dE/dX values will be provided by separate file. *In progress*
8	dE/dX file will be on server with possibility to update by superUser. Also application should work on local file as well, from users PC.
9	Instead of dE/dX visualise other parameters in same way. Data will come again from separate file from server or local PC

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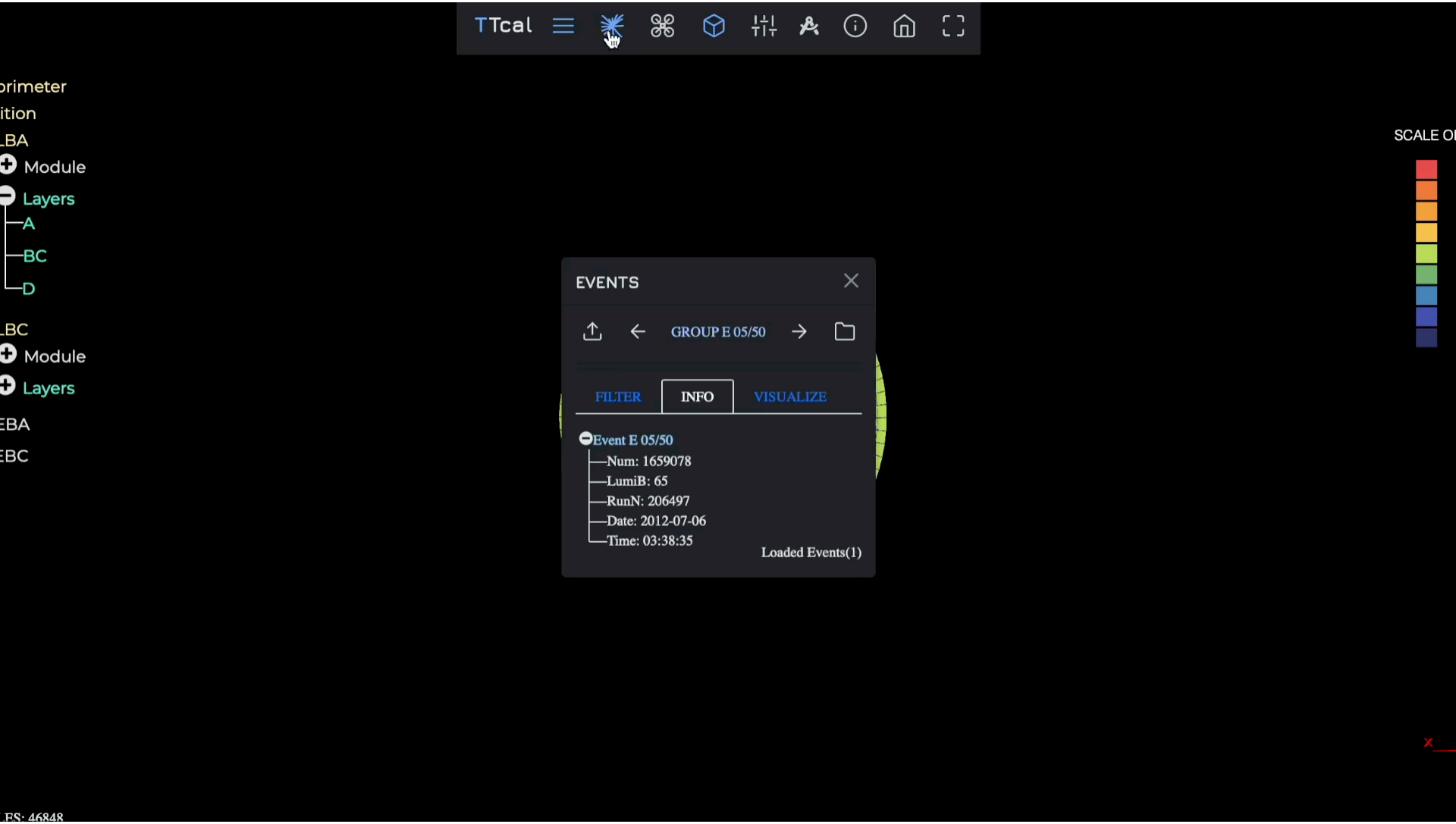
TileCal Working Plan part 1

Visualise Channels (PMT)



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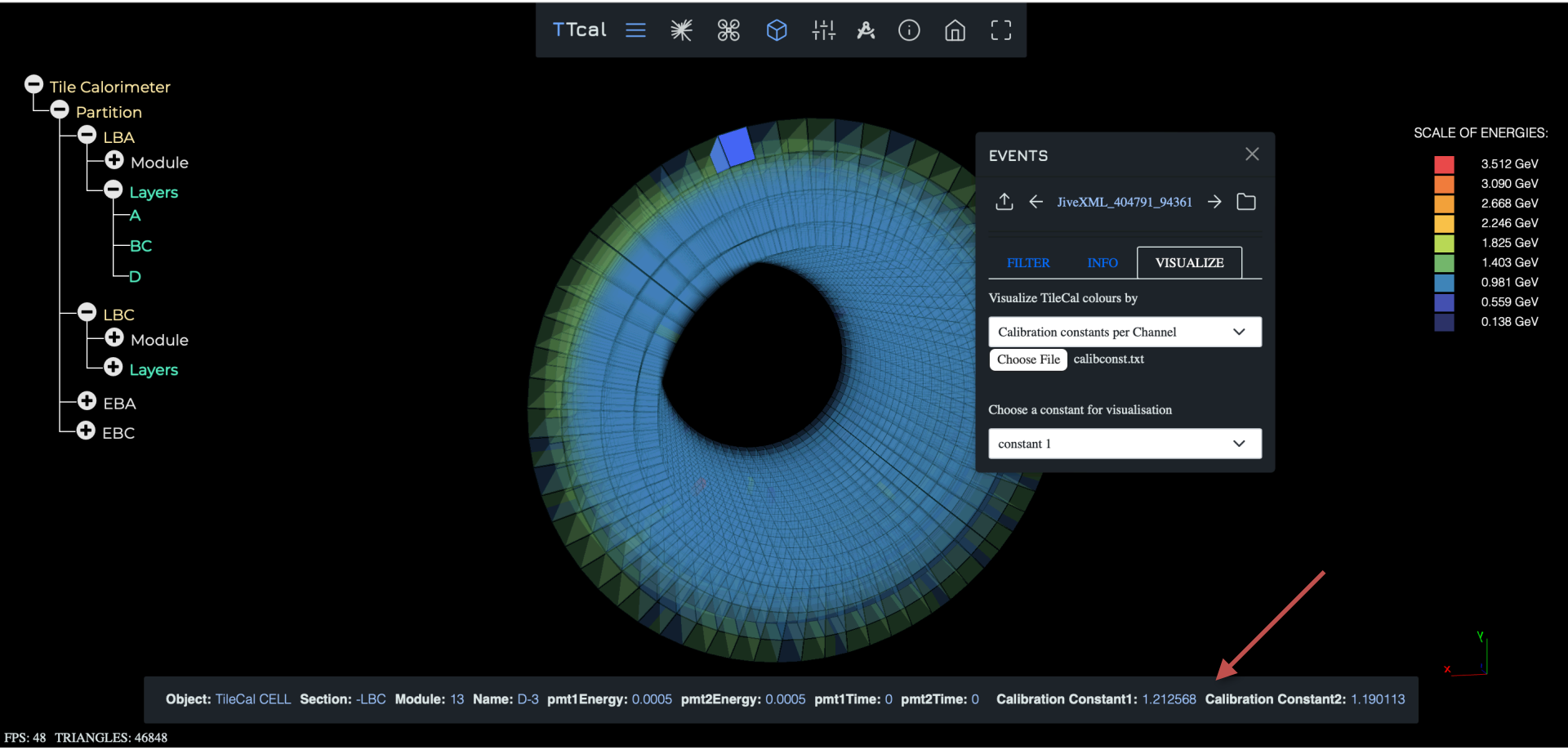
TileCal Working Plan part 1

Display Calibration Constants per Channel



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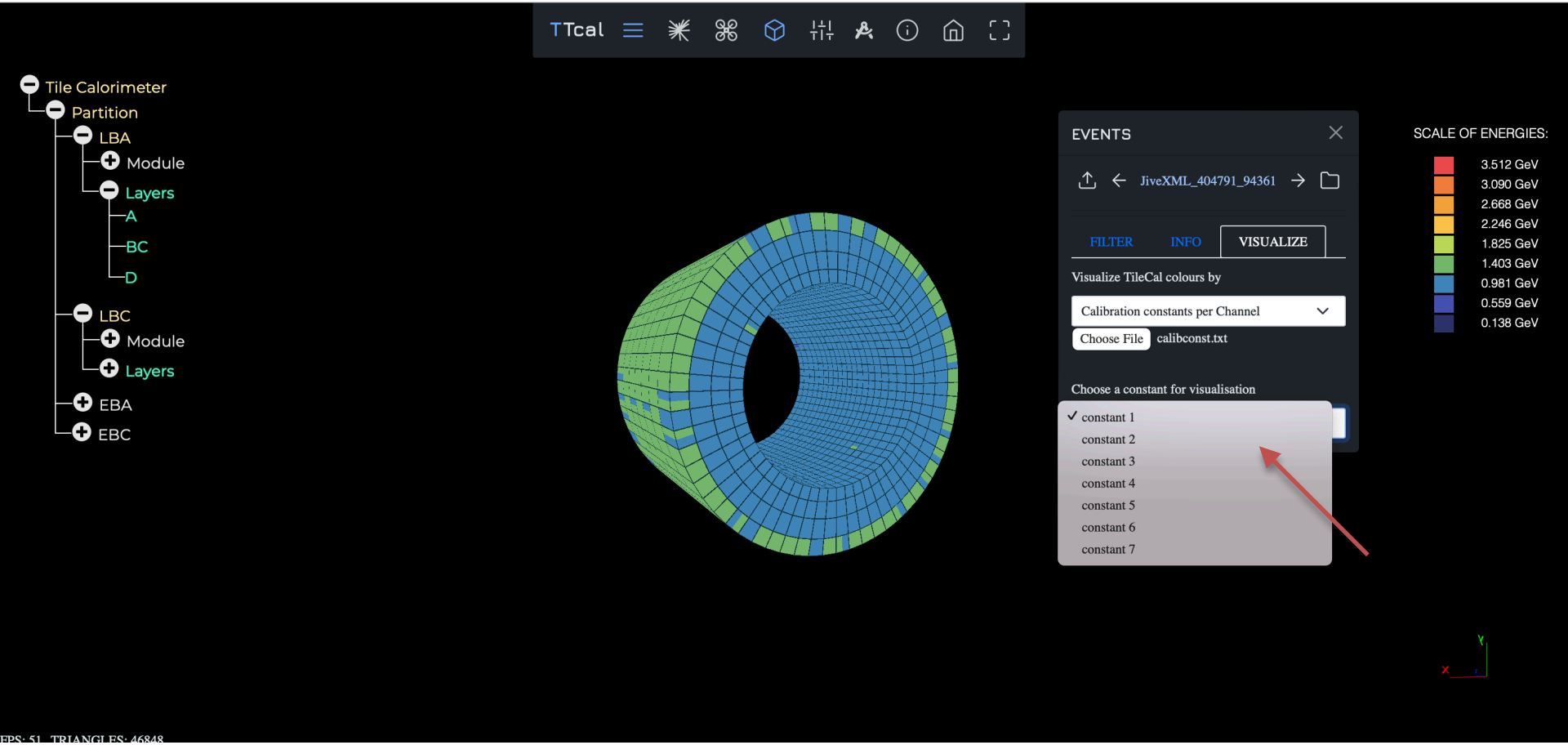
TileCal Working Plan part 1

Possibility to select constant for visualisation



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TileCal Working Plan part 2

1		Display what : Energy, Time or Energy+Time ✅
2	?	Connectivity with COOL DB for reading C1, C2, C3 constants by IOV's
3		Development Release 5 1. Display everything in 1:1 scale and also in deformed scale to make visible all detector components in full scale, (for instance, visualize muon system and Inner detector with different scales likein Atlandis)
4		Start application from pre-sets (links): with pre-defined event+geometry+camera position+zooming, etc. Similar to Atlantis *In progress*
5	?	Display energy deposit in cells by same colour but different square size insidethe cell *In progress*
6	?	Display energy deposit in cells by radiuses on plane – sum of layers(numerical values as auxiliary information)
7	?	Display energy deposit in cells alongside the eta
8		Creation of standard cuts for cells representation (1/2, ¾, etc.); make cuts bythe used controlled plane ✅
9	?	Display cells together with TileCal subsystems (sections) (example: on hover)

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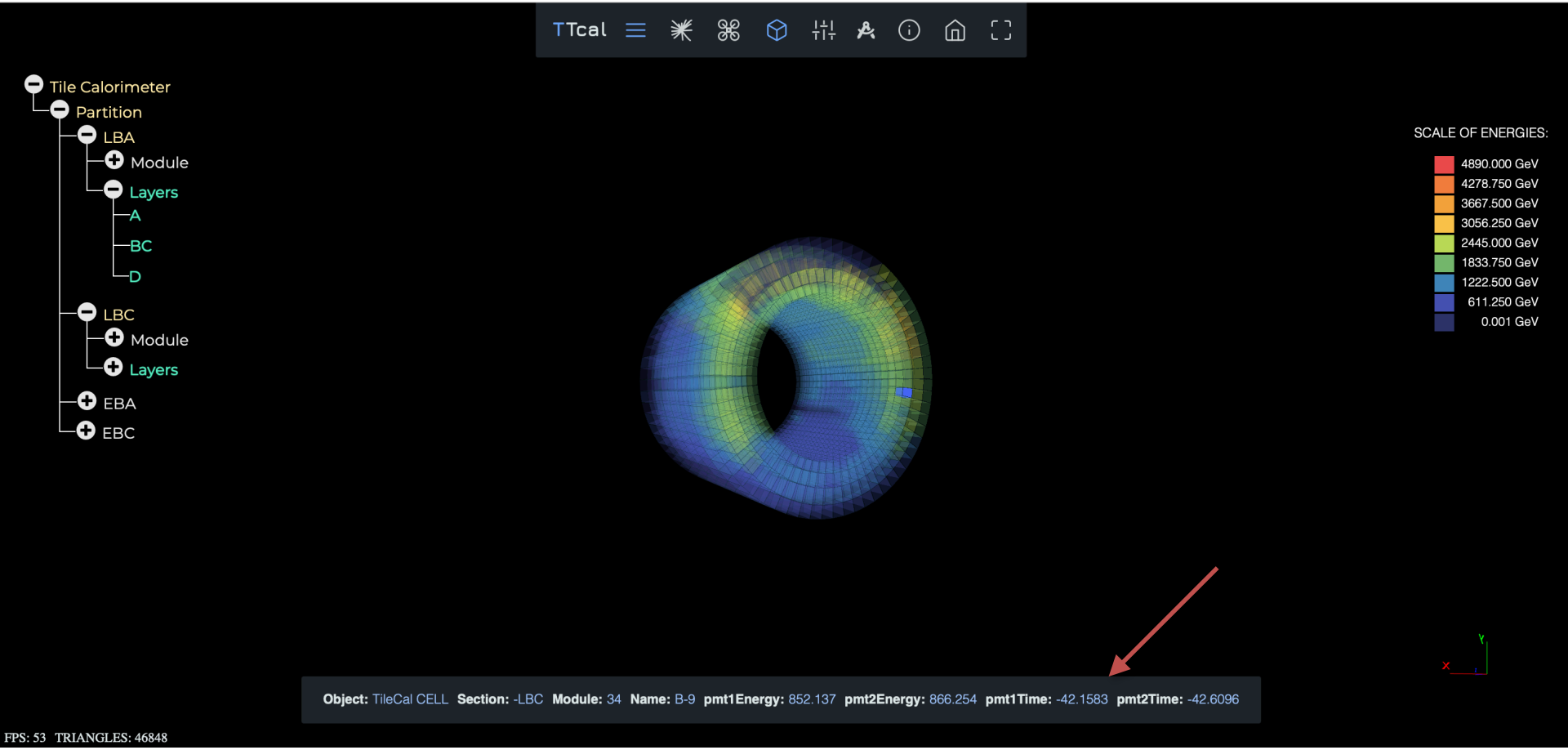
TileCal Working Plan part 2

Display what : Energy, Time or Energy+Time



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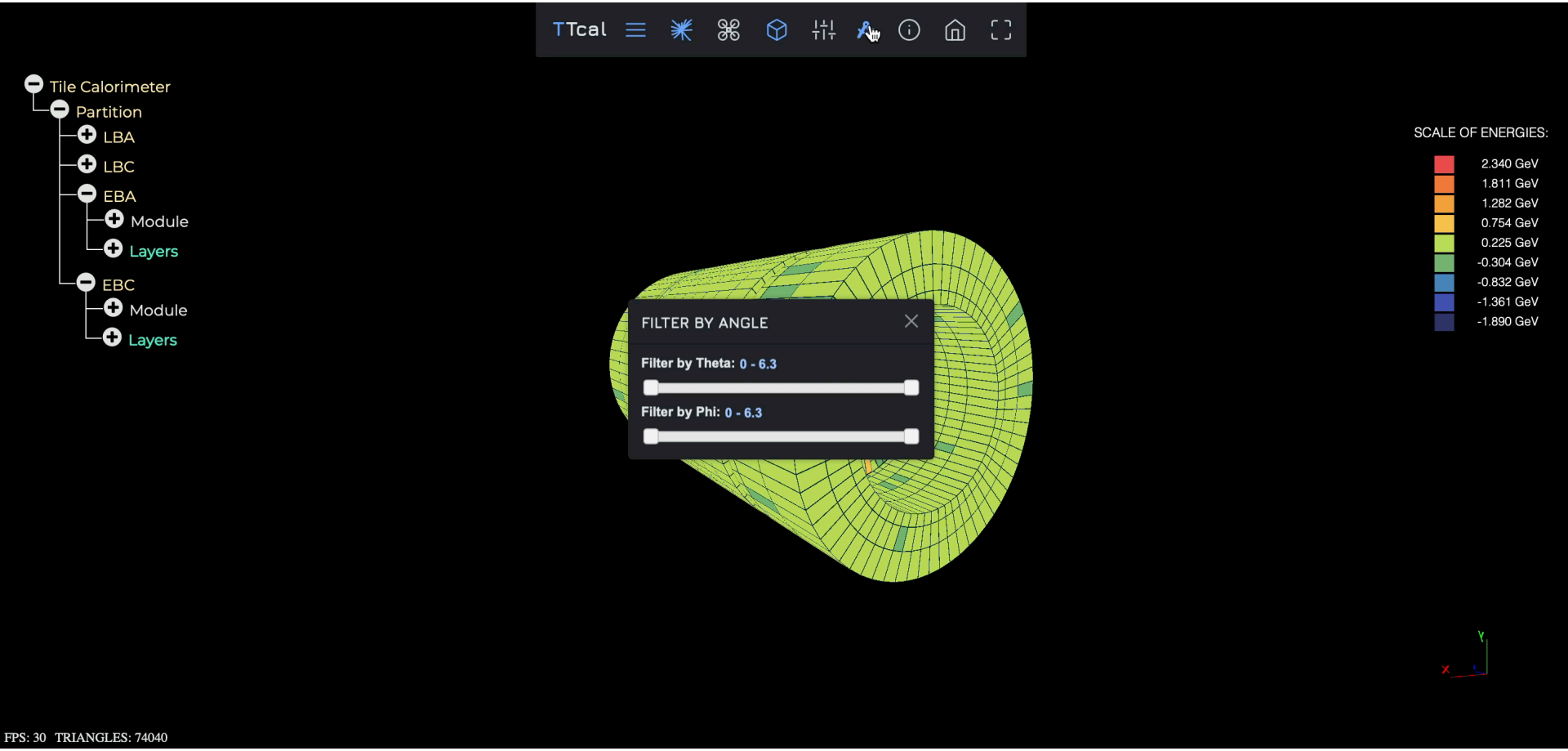
TileCal Working Plan part 2

Creation of standard cuts for cells representation



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TileCal Working Plan part 3

10		Check the visualised geometry with Tile experts
11		Energy scheme should adjust properties of cells/channels when loading new event, but during filtering with energy, energy scheme should not change. ✅
12		Add tool to change energy scheme max/min values. *In progress*
13		Change discrete energy scheme with continuous gradient scheme. (Or add switch for user to choose between types of scheme). *In progress*
14		Change info window of selected cell into two row window filled with first and second PMT property values correspondingly .
15		Add selecting gain when loading calibration constants info file.

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Thanks for your Attention!

Comments are Welcome

nino.zurashvili@cern.ch