

# SiW testbeam simulation

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dd4hep tools

as used for ILD/SiD simulation

easier transfer from TB → full det.

rather simple layered setup

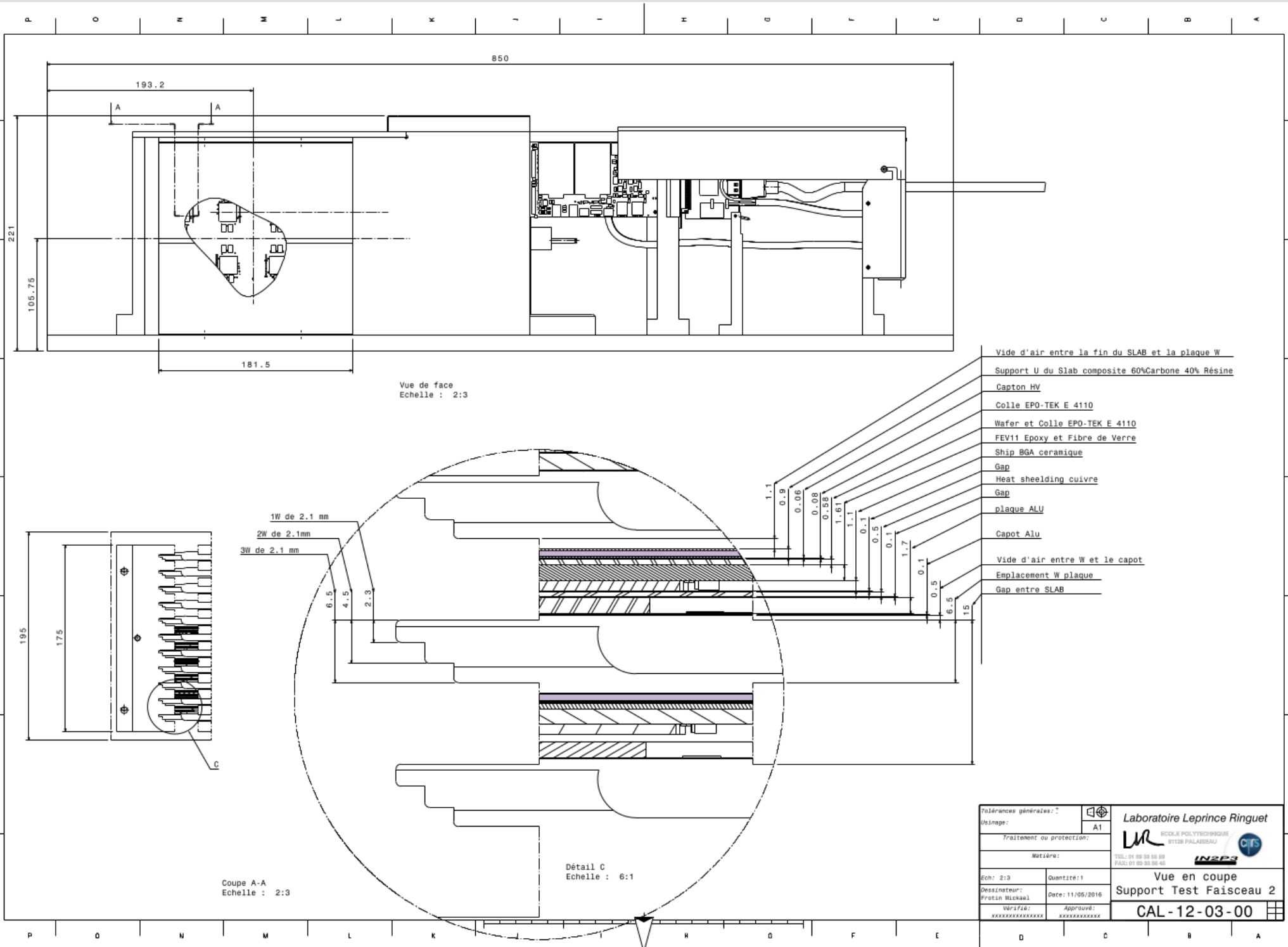
no description of:

supporting structure



individual sensors + cracks



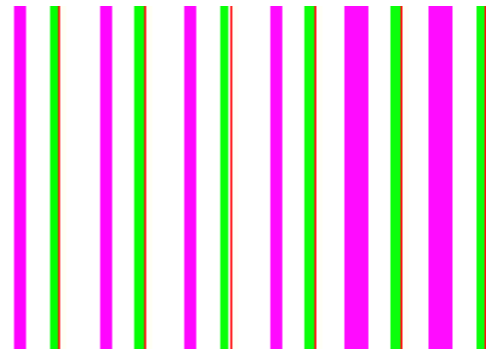
start from mechanical drawings, discussions with Jerome, Vincent, Kostia, Adrian + others



- Vide d'air entre la fin du SLAB et la plaque W
- Support U du Slab composite 60%Carbone 40% Résine
- Capton HV
- Colle EPO-TEK E 4110
- Wafer et Colle EPO-TEK E 4110
- FEV11 Epoxy et Fibre de Verre
- Ship BGA ceramique
- Gap
- Heat sheelding cuivre
- Gap
- plaque ALU
- Capot Alu
- Vide d'air entre W et le capot
- Emplacement W plaque
- Gap entre SLAB

Tolérances générales: ?		Laboratoire Leprince Ringuet	
Usage: A1		 <small>ECOLE POLYTECHNIQUE</small> <small>91128 PALAISEAU</small> <small>INZEP</small>	
Traitement ou protection:		<small>Tel: 01 69 39 39 39</small> <small>Fax: 01 69 39 39 40</small>	
Matière:			
Ech: 2:3	Quantité: 1	Vue en coupe	
Dessinateur: Protin Mickael	Date: 11/06/2016	Support Test Faisceau 2	
Vérifié: xxxxxxxxxxxxxx	Approuvé: xxxxxxxxxxxxxx	CAL-12-03-00	

Conf 1: || 1 || 2 || 3 || 4 ||| 5 ||| 6



||||| 7



Conf 2: ||| 1 || 2 || 3 ||| 4 ||| 5 |||| 6



||||| 7



Beam →

tungsten  
PCB  
silicon

Conf 3: |||| 1 || 2 ||| 3 ||| 4 |||| 5 |||| 6



||||| 7



longitudinally to scale

code available in the CALICE svn at:

[https://svnsrv.desy.de/viewvc/calice/calice\\_dd\\_testbeams/2017\\_SiECAL\\_DESY/](https://svnsrv.desy.de/viewvc/calice/calice_dd_testbeams/2017_SiECAL_DESY/)

README

instructions

extra\_materials.xml

define extra materials

ECAL\_commondefs.xml

define layers' thicknesses (si, pcb, ...), cell sizes, etc

ECAL\_commondisp.xml

colors for geometry display

write\_geom\_desc.py

script to write detector geometry  
for different layer configurations

ECAL\_CONF1.xml

produced by write\_geom\_desc.py

ECAL\_CONF2.xml

ECAL\_CONF3.xml

runmany.sh

produce simulated events in above geometries

makeplots.py

make some simple plots from these events (pylcio)

try it,

let me know if there are problems