

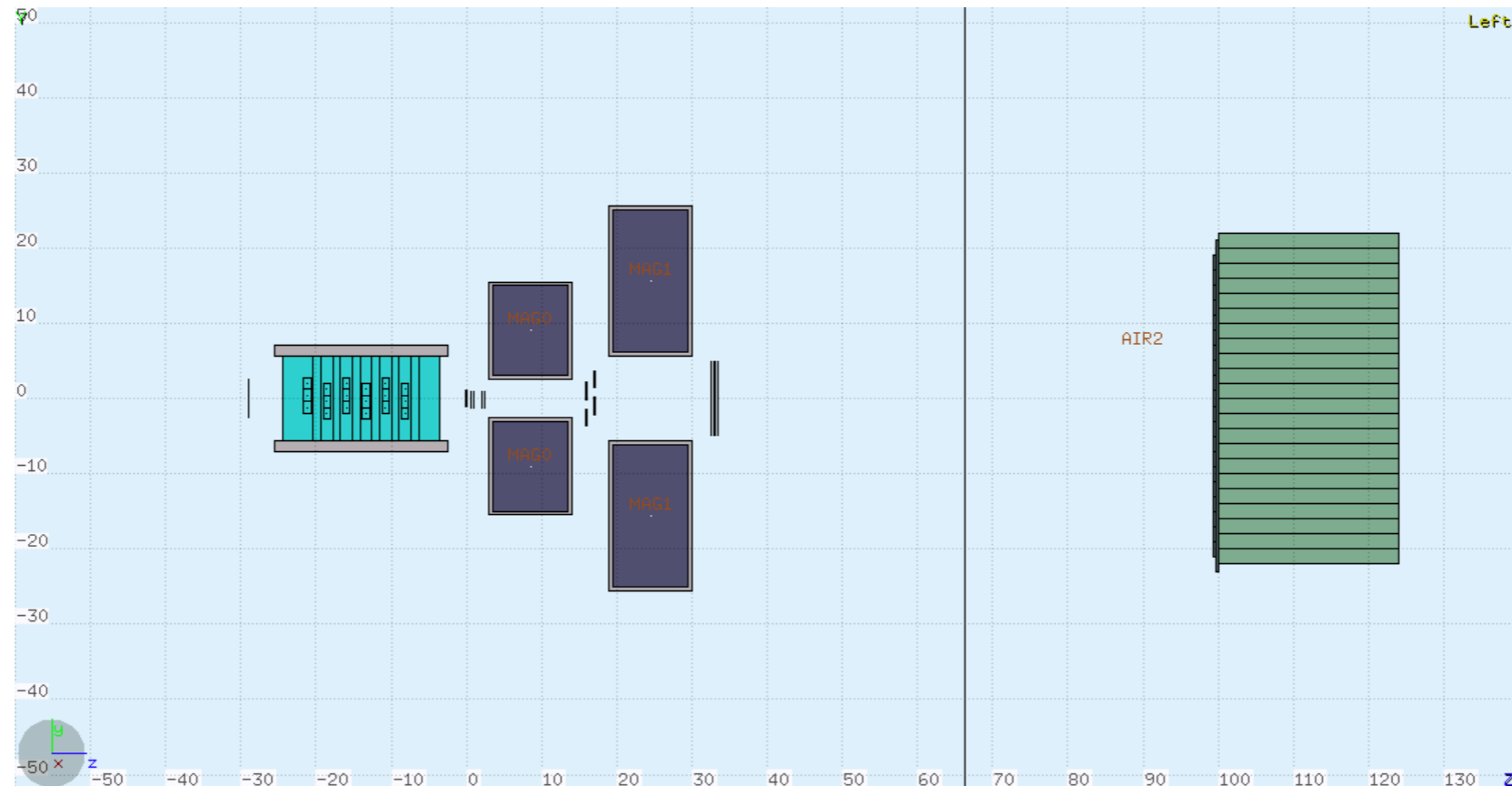
# ***FLUKA simulations*** ***in SHOE***

Milano Group  
Software meeting 12/09/2019



# July status

- All the detectors, the target and the magnets are available in FLUKA simulations (MSD thanks to Riccardo)
- Detectors can be switched on and off in the FootGlobal.par config file
- Including the magnets in FootGlobal.par config file, also the magnetic field is activated: tests ongoing
- Energy deposits in the M28 recorded only in the 14um thick epitaxial layers
- Passive layers in the IT still missing. Final layout still to be defined
- IT ntuple: got rid of imimo, iplume, ilay. Now we only have isens

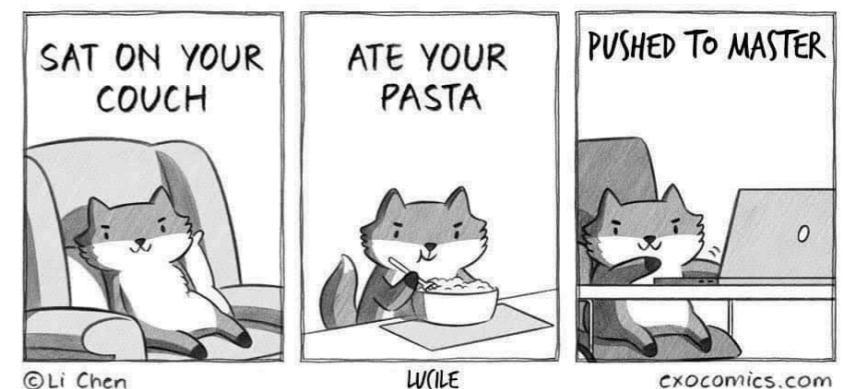


# Present status

- Rotations implementation completed (and pushed)

Detector	Whole detector			Single Sensor		
	X	Y	Z	X	Y	Z
ST	✓	✓	✓			
BM	✓	✓	✓			
TG	✓	✓	✓			
VT	✓	✓	✓	✓	✓	✓
IT	✓	✓	✓	✓	✓	✓
MSD	✓	✓	✓	✓	✓	✓
DI	✓	✓	✓	✓	✓	✓
TW	✓	✓	✓	✓	✓	✓
CA	✓	✓	✓	✓	✓	✓

- Magnetic field integration in FLUKA sim seems to work (and pushed). New simulated tuples to be tested with reco are needed and will be produced
- Introduction of passive layers of IT ladders is ongoing (available next week)
- Real calo geo is ongoing: Torino people is taking care of that (thanks!)
- Still some work to be done with FLUKA materials (next week)
- Delta rays study in progress



# Future

- Details refinements will be implemented (es. Scintillator wrapping)
- By the end of next week I'll release a presentation documenting the HowTo for FLUKA simulations in SHOE, so that anybody can put his/her hand on it
- Should I also update the Twiki page?
- In the next months Giuseppe will be the contact person for FLUKA simulations



23 Sept - end of Feb