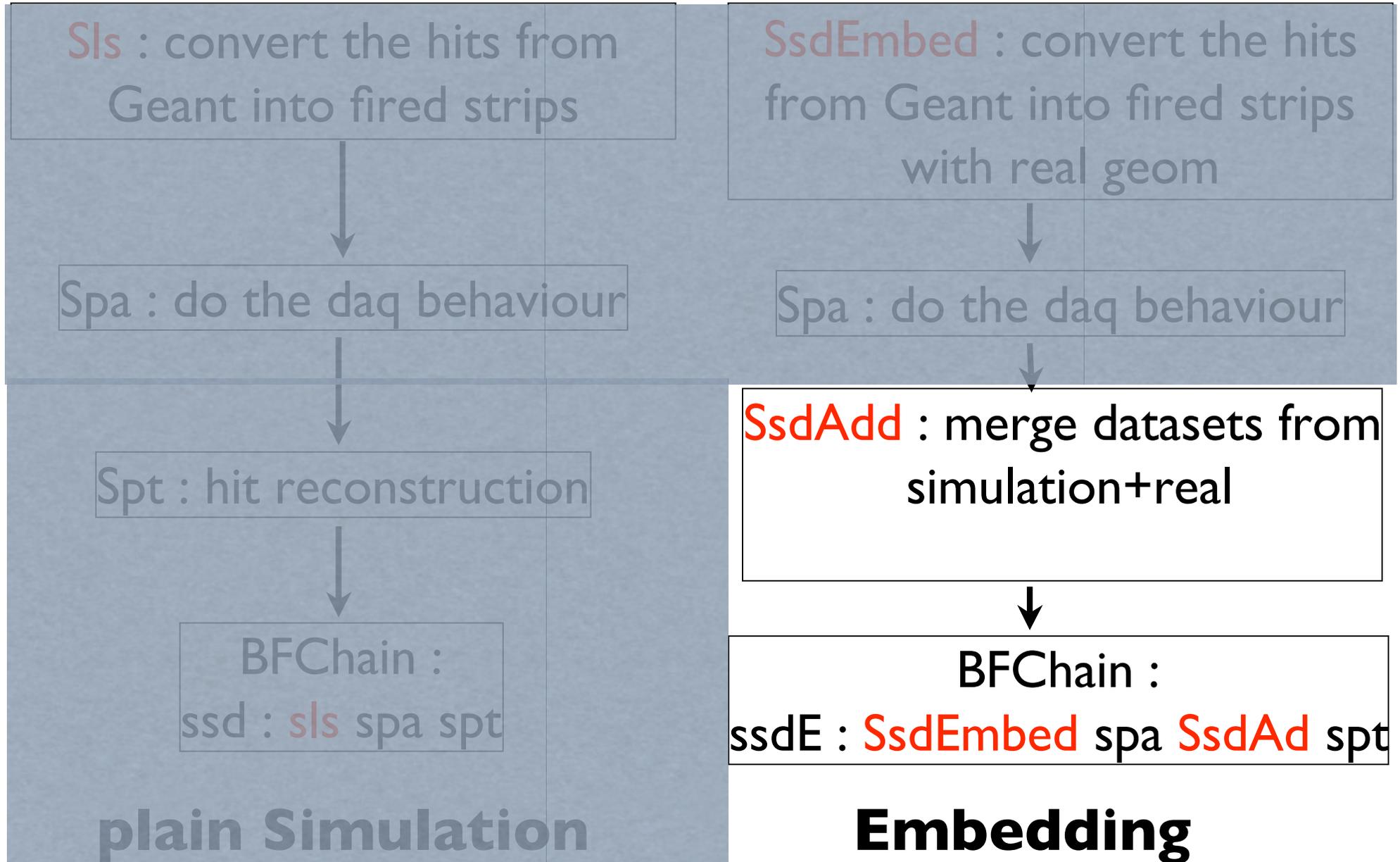


# Ssd Embedding status

## part2

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S&C 03/05

# Reco. Chain (since last meeting)



# Transmission of IdTruth



**SsdEmbed** sls\_strip table : when writing strips after GEANT hit charge sharing, get the .id\_mctrack

**Spa** spa\_strip table : when adding sls\_strip table and the table containing the pedestal&noise

**Spt** scf\_cluster table : during the cluster reco :  
scf.id\_mctrack = strip.id\_mctrack

**Spt** scm\_spt table : during the cluster matching, spt.id\_mctrack = scf.id\_mctrack

**SsdAdd** StEvent : when filling the hit collection, setIdTruth (spt.id\_mctrack)

# bfcMixer\_TpcSvtSsd.C

- if (isSsdIn) chain3Opt += " **ssdE** ";

## bfc chain

- {"**ssdEmbed**" , "", "", "", "StSsdEmbeddingMaker", "StSsdEmbeddingMaker", "... SSD AddingMaker" ,kFALSE},
- {"ssd" , "", "", "sls,spa,spt" , "", "", "SSD full chain for simulation",kFALSE},
- {"sls" , "", "", "tls,Simu,St\_tpc,St\_svt,SvtCL", "St\_sls\_Maker", "StSsdSimulationMaker", "... SSD slow simulator",kFALSE},
- {"**spa**" , "SpaStrip", "", "tls,Simu,St\_tpc,St\_svt,SvtCL,ssdUtil", "St\_spa\_Maker", "StSsdSimulationMaker", "... SSD Pedestal Annihilator",kFALSE},
- {"spt" , "", "", "St\_svt,ssdUtil", "StSsdPointMaker", "StSsdPointMaker", "... SSD Point Creator",kFALSE},
- {"**ssdAdd**" , "", "", "ssd\_daq", "StSsdAddMaker", "StSsdAddMaker", "... SSD merge maker" ,kFALSE},
- {"**ssdpre**" , "", "", "**ssdEmbed,spa**" , "", "", "SSD full chain for pre-embedding",kFALSE}
- {"**ssdE**" , "", "", "**ssdpre,ssdAdd**" , "", "", "SSD full chain for embedding",kFALSE},

# Comments

- from the .tags.root file, very few hits (=strips fired) in SSD (10 hits /evt)
- Then, it gives a large difference between strips from real data and simulation.
- After ped. subtraction, the # of strips to be embedded is very low.
- this version only add (embed) strips with the same id
- 2nd version : keep all the strips :
  - I. if  $\text{id\_strip}(\text{MC}) == \text{id\_strip}(\text{real})$  :
    - i. signal (strip) = sum
    - ii. id truth = id truth from the MC strip
- From the associationMaker, IdM(MC) and IdR(reco) of global position, momentum indexes, etc .. are shifted :
  - because I do not write all the SSD hits (after mixing the 2 geometry) but the root file containing the g2t\_ssd-hit table remains the same.

# To do

- Finish the merging of datasets (include IdTruth info)
- converge with bfcMixer macro
- study the effect of adding an additionnal signal
- influence of noise of the strips : pedestal file from real data or perfect SSD ?
- Tuned the simu to match the real data : to be done
- web doc :
  - [http://www.star.bnl.gov/public/ssd/STAR\\_informatique/Embedding.html](http://www.star.bnl.gov/public/ssd/STAR_informatique/Embedding.html)