PAT2 – PostDST Analysis Tool

upgraded to work with hydra2

INTERMEDIATE STEP OF ANALYSIS BRINGING FROM LARGE DST FILES TO MUCH SMALLER FILES WITH NTUPLES OF GIVEN HYPOTHESIS ("LAPTOP SIZE")

DOES THE COMBINATION OF **K** PARTICLES OUT OF **N** PARTICLES
K – CONFIGURABLE IN MAKEFILE (compilation time)
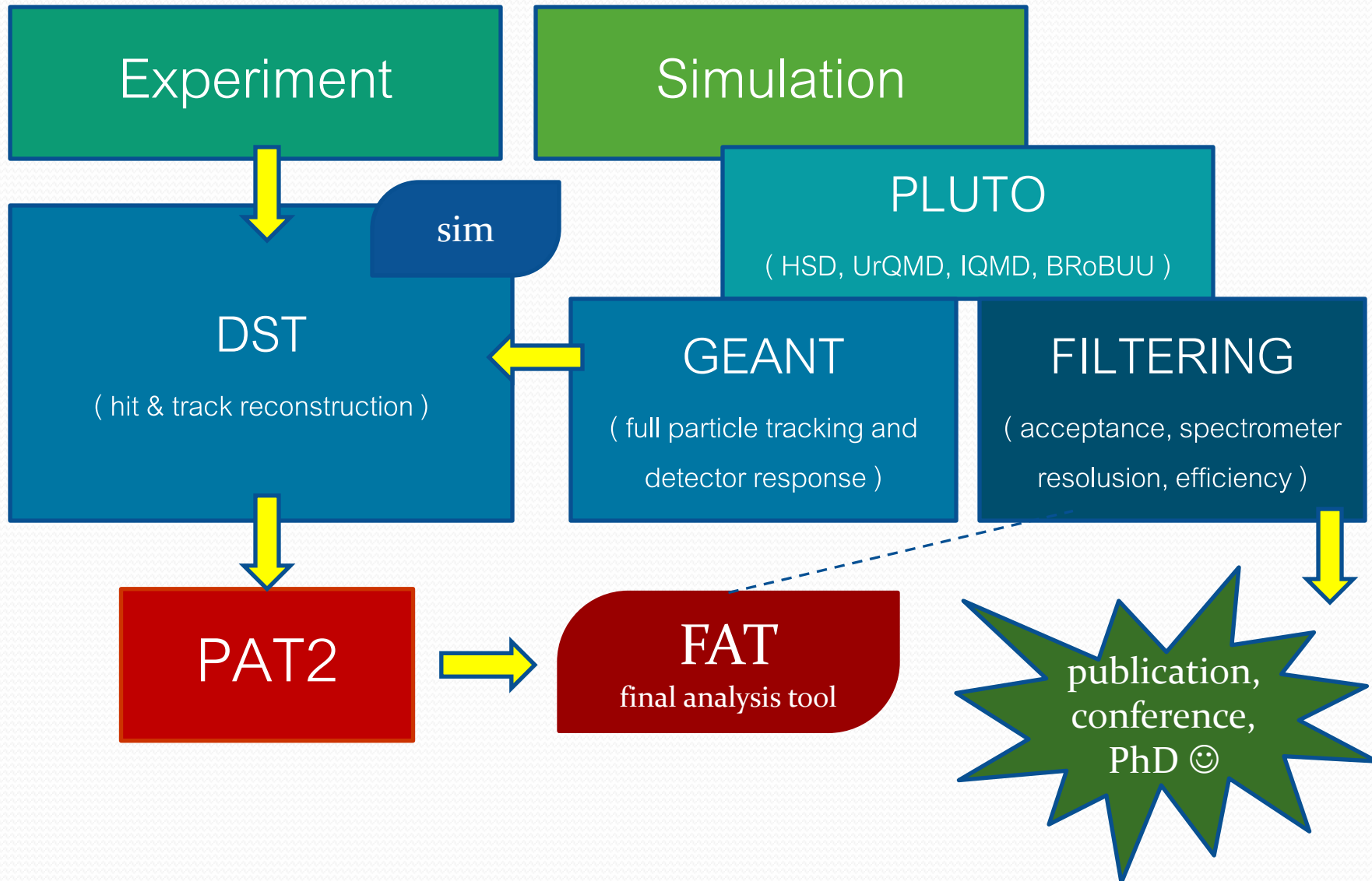**N** – THE UPPER LIMIT OF A GIVEN PARTICLE SPECIES (I.E. POSITIVE HADRON)

HEVY ION:
K = 1 or 2 out of N < 100 (one can increase)

PION BEAM:
K = 1, 2, 3, or 4 out of N < 50 (this is far too much of what we need)

Data circulation in HADES

Experiment

Simulation

sim

PLUTO

(HSD, UrQMD, IQMD, BRoBUU)

DST

(hit & track reconstruction)

GEANT

(full particle tracking and detector response)

FILTERING

(acceptance, spectrometer resolusion, efficiency)

PAT2

FAT
final analysis tool

publication, conference, PhD ☺

PAT - input

- HParticleCand (HParticleCandSim) - all
- HWallHit (HWallHitSim) – up to 3 hit clusters
- HEventHeader
- optionally: I can add any data category for investigation

PAT - cuts

- each level / each combiantion – user defined
  - RICH-MDCseg correlation window
  - graph cuts on any variables from data cat. as above

PAT - output

- **ntuple** – the flat structure – you can easily correlate
- **all variables** added at any data analysis level streamed fully **automatically** to the output nutple (no bothering with booking etc)

FAT – event-by-event ntuple read

- really final analysis (histograms, ntuples)
- FAT2 – will be automatized in terms of automatic booking / storage of histograms and easy reading on any ntuple without prior i.e. MakeClass() generation