

# TPOL digitisation module

- Reminder: TPOL data format, analysis, GEANT based simulation
- The new TPOL digitisation module

# TPOL data format and analysis

- TPOL raw data: histograms, stored in custom format
- Histograms binning and format: hardware-oriented (ADC counts)
- Special runs with silicon detector: ntuples → tuning, calibration
- TPOL polarisation analysis: based on histogram data alone
- Need full simulation of all details (background, digitisation, timing information) to understand the data

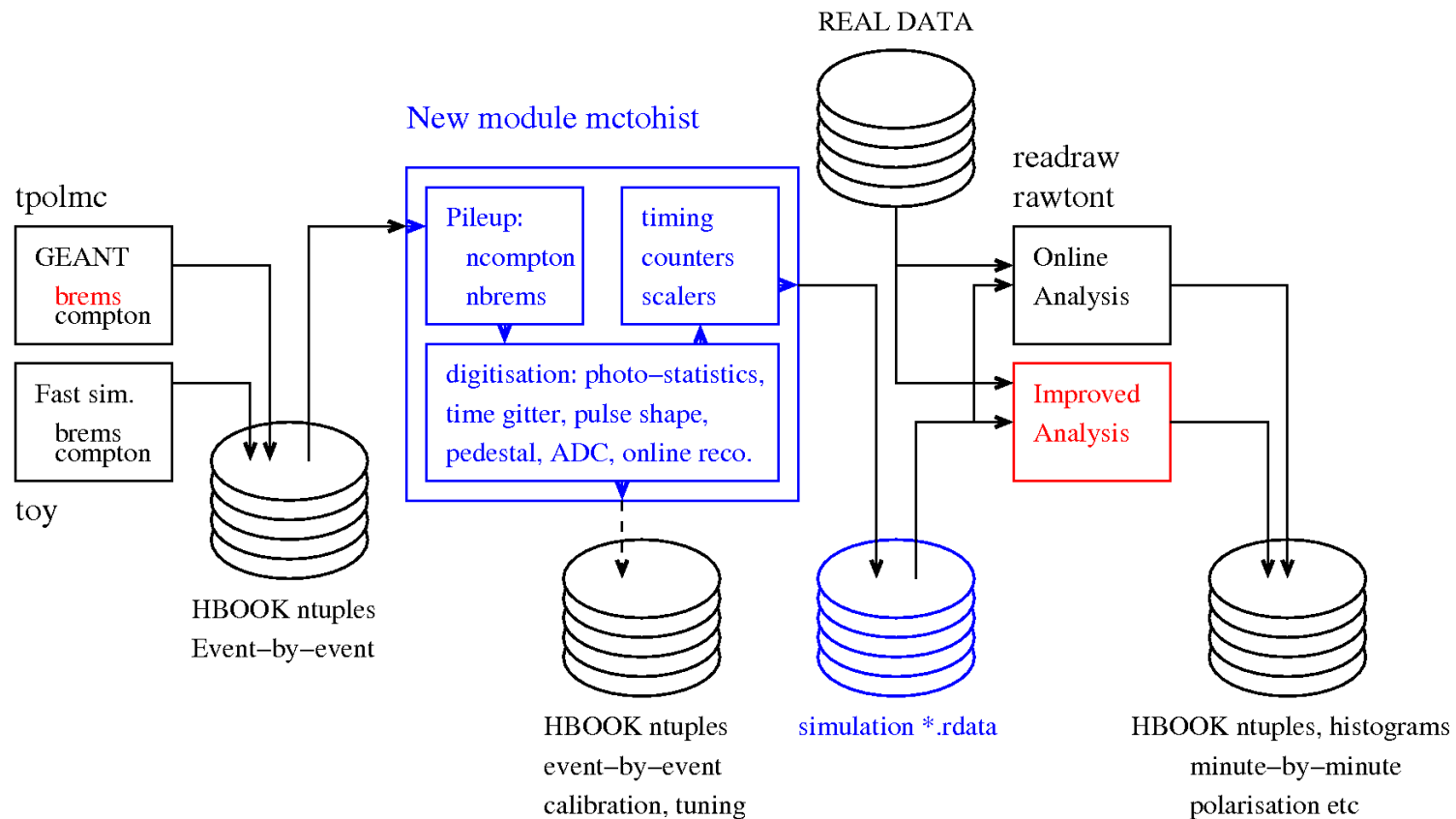
# TPOL GEANT-based simulation

- GEANT based simulation of Compton events
- Detailed work on beamline  
→ big success
- Produces ntuples with Compton events
- Digitisation module not worked out in great detail
- Bremsstrahlung and timing information not (yet) simulated
- Interface to TPOL raw (histogram) data format not existing

# TPOL digitisation module

- Promised since long
- Now: first version of [mctohist](#) ready
- Input: ntuples with Compton and Bremsstrahlung events, passed through GEANT+light-collection simulation
- Output:
  - Raw data histograms plus timing information and essential slow-control parameters
  - Optional Ntuple with digitisation output event-by-event
  - Looks very much like real data

# TPOI digitisation module inside



- Completes analysis chain for MC
- Still missing: **brems** generator in GEANT