

Proposal: Functionlity migration in  
coresoftware from  
simulation/g4simulation/g4jets  
to  
offline/packages/jets

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# Motivation

- Prepare for construction of jets in the analysis data stream, something like:
  - “top level DST” (data as taken)
  - -> “reconstructed event DST”
  - -> “analysis input jet DST”
- Do not want to have to load all g4simulation libraries for this construction, should be relatively light
  - e.g. `packages/jets` wouldn't have ``phg4hit`` or ``phhep`` dependencies
- Add some features to jets
  - E.g. list of track/tower/cluster id's for leading jet constituents, which can be used to pull information from other data on the node tree

# Process

- Write proposed header files:
  - `offline/packages/jets`:
    - much of code migrated directly from `g4jets`
    - some jet functionality added
  - `simulation/g4simulation/g4jets`
    - will call functionality from `offline/packages/jets` to avoid code duplication
- Get feedback from software and JS topical group
- Implement code
- Expert (Chris Pinkenburg?) update Fun4All macros for calling new library
- Iterate on feedback and functionality

# Needed now:

- Input on desired features and shape now will save time later
- Just write first draft
- Need to verify inputs; assumed same as current in `g4jets` minus specific `g4input`:
  - TowerJetInput
    - strip out FHCAL, FEMC ?
  - TowerTrackInput