Subject: Data levels in R3Broot - suggestion
Posted by Ralf Plag on Wed, 20 Jan 2016 12:07:48 GMT
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To avoid further chaos we need to define some common data levels.

In land02 we have:

RAW-level: mapped data (e.g. plane, bar, pm), no calibration applied
TCAL-level: time-slope and energy-offset applied
SYNC-level: fully calibrated: time-sync and energy-slope applied as well
DHIT-level: Physical quantities in the detector internal coordinate system
HIT-level: Physical quantities in cm, ns, MeV

In ucesb we have:
UNPACK: module, channel
RAW: mapped, as above

Unfortunately, in R3BRoot, RAW-level corresponds to the ucesb UNPACK-level.

I'd like to suggest three base levels which every detector should use. Additional levels can be added if needed.

MAPPED-level: mapped data (e.g. plane, bar, pm), no calibration applied
CAL-level: Fully calibrated
HIT-level: Physical quantities in cm, ns, MeV

Note:
UNPACK level is not needed in R3BRoot since this is provided by ucesb in stand-alone mode.
Since the term "RAW-level" is ambiguous, I suggest not to use it at all. MAPPED is nicely descriptive and intuitive, so we better use that and it should always refer to the detector channel (e.g. bar, pm) and not to the electronics channel (module, channel).
Existing data structures called "RAW" (mostly holding UNPACK-data) should be deleted (or if needed for some strange reason renamed into UNPACK).

Cheers,
Ralf