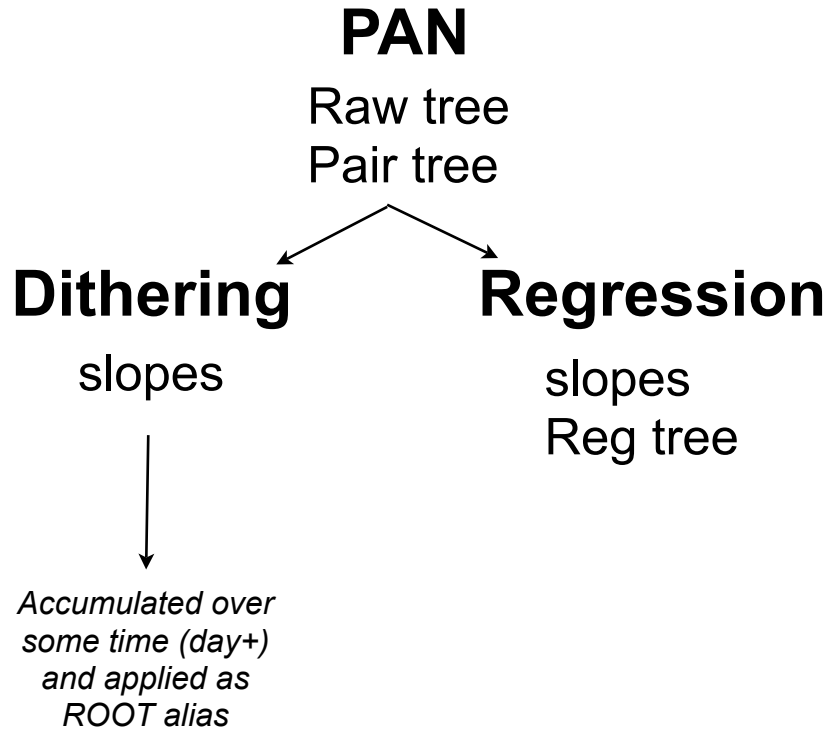
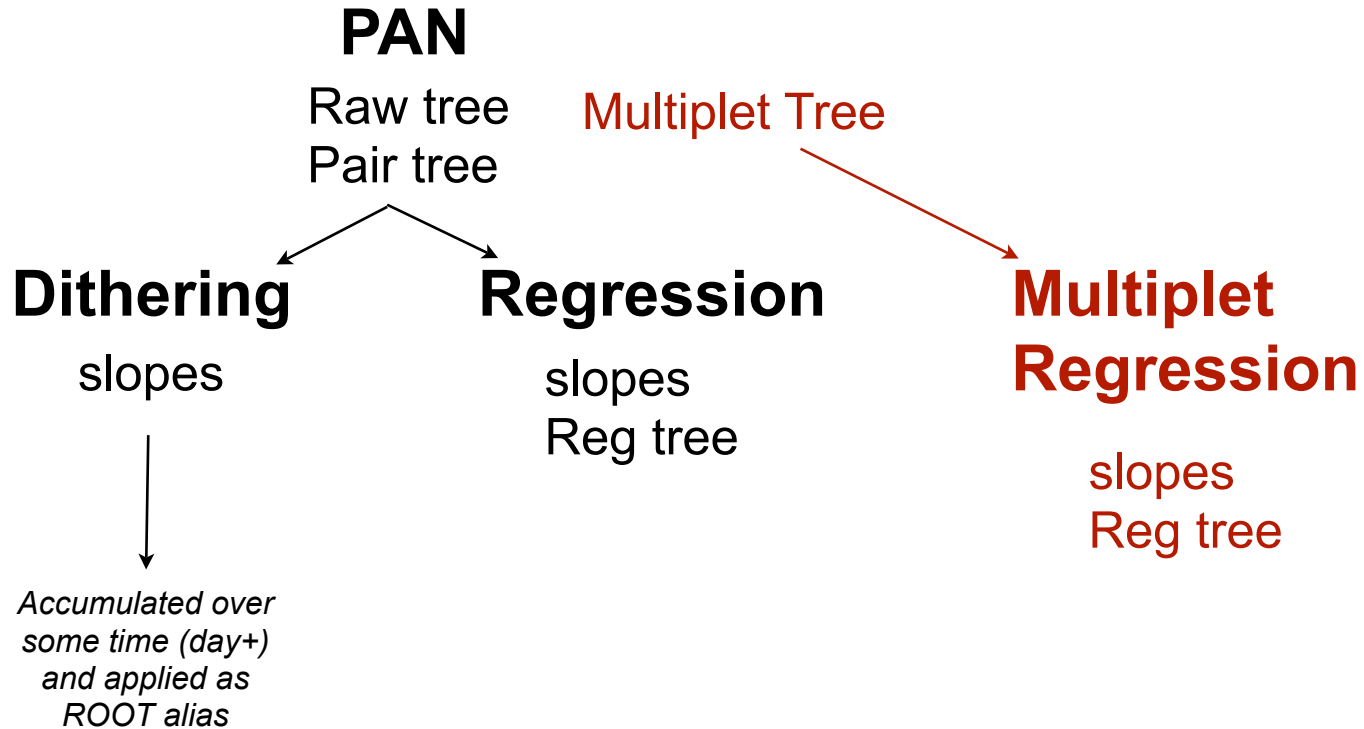


Analysis software

Parity ANalysis code



Parity ANalysis code



On-line Analysis Chain

Prompt: *shift workers, after every run, use automated scripts to run prompt analysis, then check specific plots to verify data quality*

PAN + POSTPAN

Raw, Pair, Reg trees

Dither/Reg slopes

WAC: Weekly Analysis Coordinator

- re-runs failed/skipped prompt analyses
- keeps global run list up-to-date
- Dither slope averages
- Daily summaries
 - Pair summary Tree
 - summary text output
- Slug summaries
 - Pair summary tree
 - Run summary tree
 - summary text output

WAC : rotating position as overseer of prompt and on-line analysis.

SLUG : data from one IHWP state, about 4-12 hours in H-II

tools for creating text and ROOT summaries are complex (Bryan) or kludgy (Kent)

DAQ / Slow Control Software

AutoDB - create .db from EPICS reads, DAQ parameters, and defaults in files

Online PAN

- feedback
 - Periodic EPICS read/writes through feedback scripts
- On-line monitor
 - PANGUIN

BMW - controls beam modulation (on VME CPU)

- update for new system, or at least revival of old system
- requires EPICS interface, old software is incompatible

GreenMonster- slow controls of DAQ parameters, manages BMW, plus data input (SCANDATA)

Runbird- TCL/TK GUI script for real-time monitoring of feedback analysis and source parameters

Well documented by B.Moffit (see H-II webpage)

Modifications to Analysis Software

Fast flip (more data) 240 Hz = 8 times more data

Presently, PAN analyzes at ~150Hz (I think...10 min for 1 Hr?)

File size is large (~50M/hr)

Analysis time may be limited by I/O. Improved data filtering may be required

- separate “calibration” analysis, or separate “calibration” files with peds, raw data, etc, with friendable-trees?
 - This will speed aggregate analyses as well as clearly separate disposable files

Profiling computation time may be necessary to find slow points

Feedback analysis must be real time and not-prescaled! (is et efficiency 100% at high rates?)

Multiplet Analysis

New multiplet analysis will require new multiplet tree

Tasks

DAQ / Slow controls

Prompt analysis

Feedback scripts

WAC / multirun tools

POSTPAN Dithering Analysis update

PAN Multiplet Analysis

PAN speedup/reduced data flow