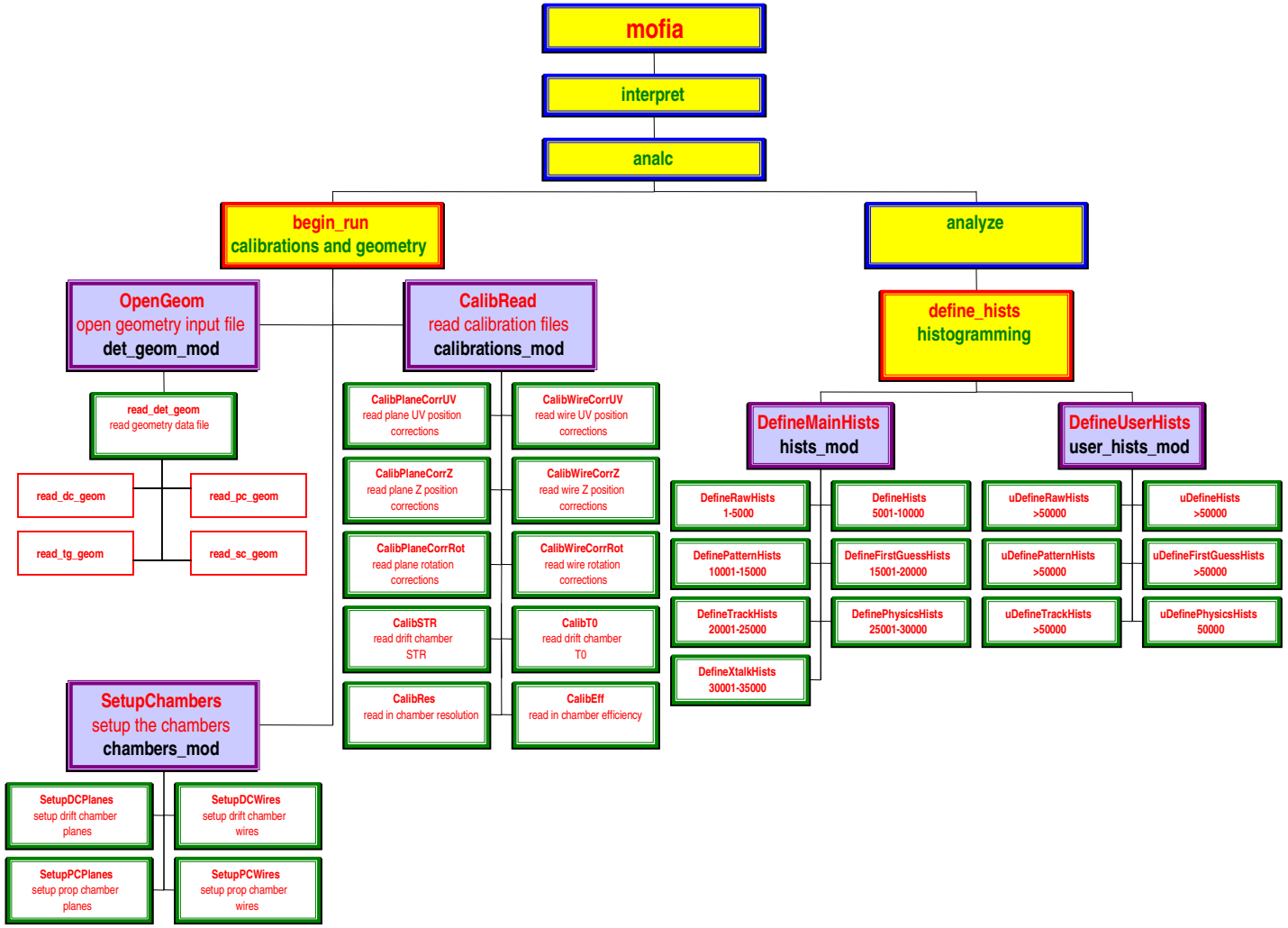
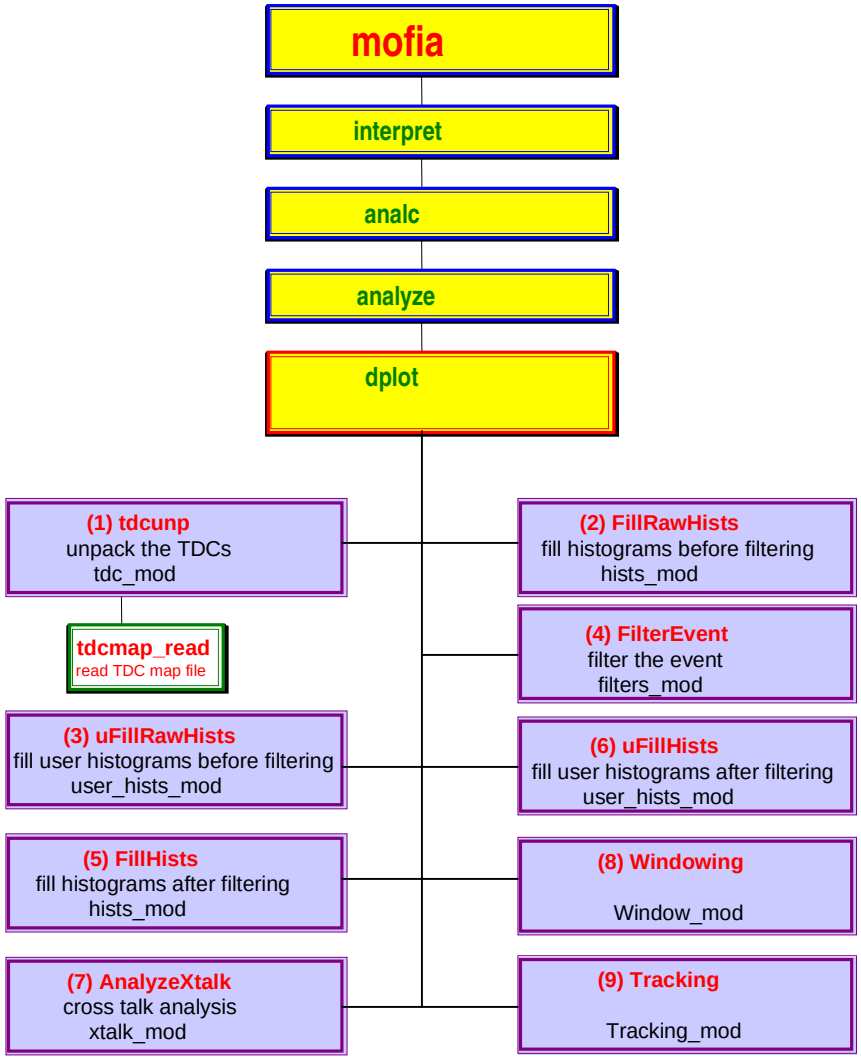
TWIST Flowcharts

MOFIA Initialization Branch



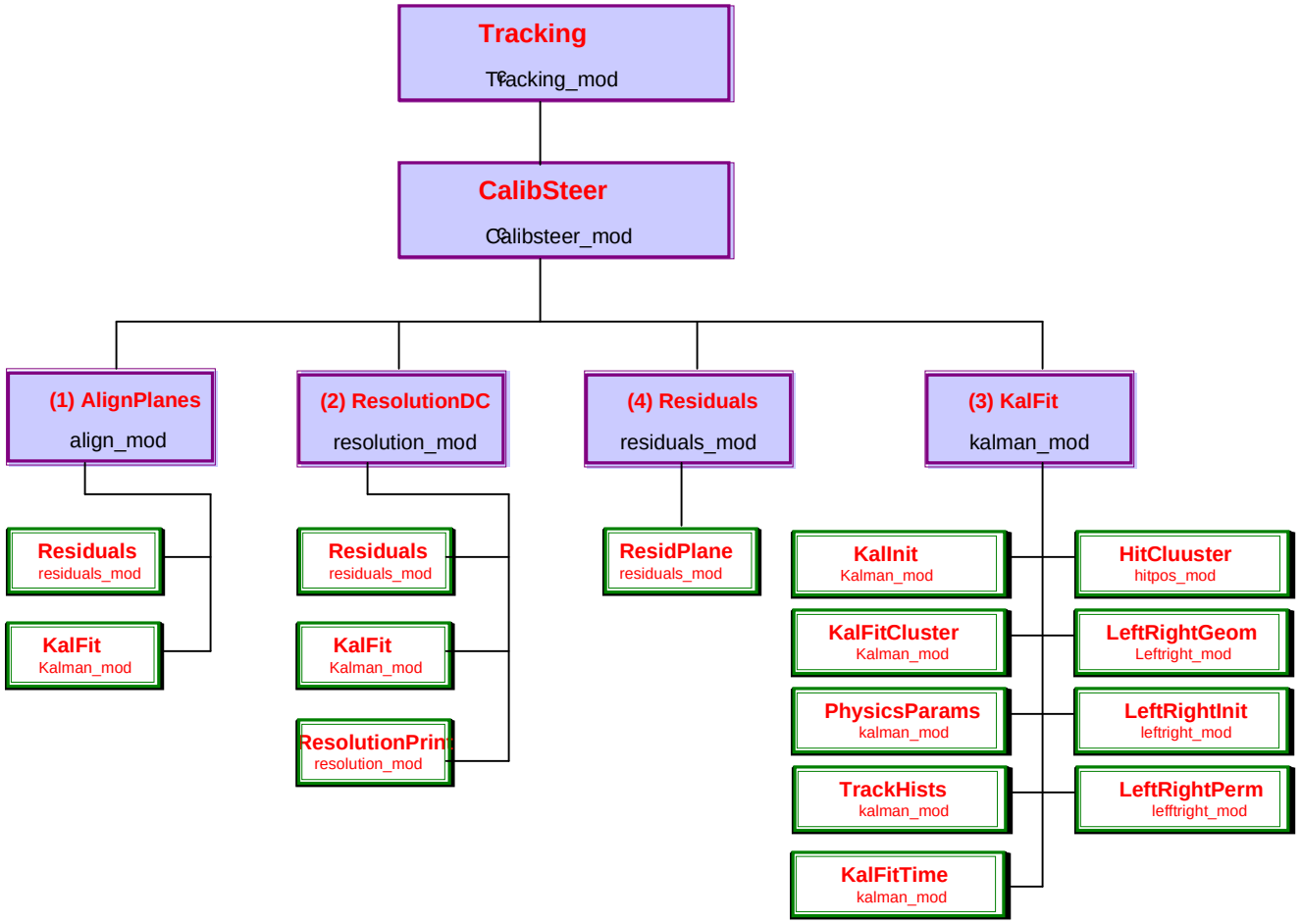
TWIST Flowcharts

MOFIA Analysis Branch



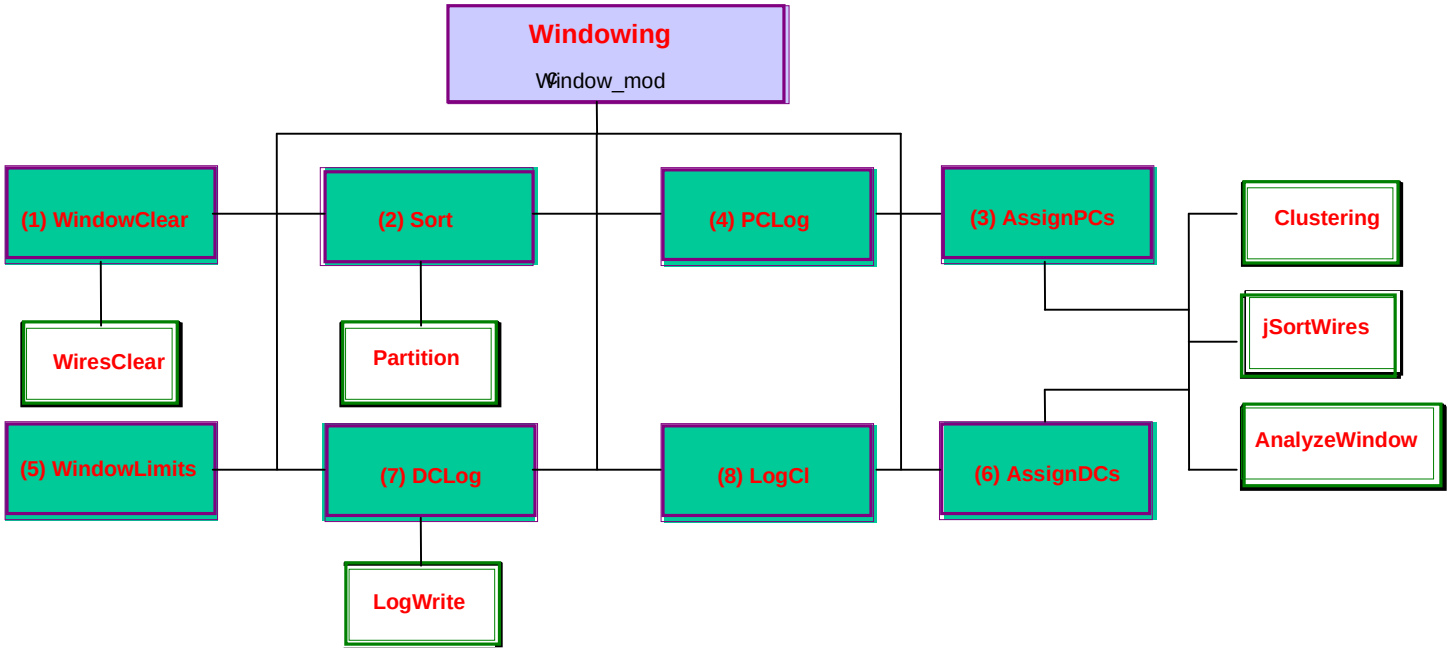
TWIST Flowcharts

Tracking Branch



TWiST Flowcharts

Windowing Branch



TWIST Code Organization

Modules List:

- tdcmap_mod
  - tdcmap_read — public
    - CDGET — public
    - RITE — public
- tdc_mod
  - tdcfill — public
  - sortwires — public
    - sortwires1 — private
  - insert_whit — public
    - insert_whit1 — private
  - tdc_init — public
  - tdc_clear — public
  - tdcprint — public
  - whitsprint — public
  - next — public
  - remove_whit — public
- Unp_mod
  - tdcunp — public
    - tdcunp_bank — private
      - * do_record — private
  - tdc_listhits — public
  - GetCamac — public
  - unpmc — public
- calibrations_mod
  - CalibRead — public
    - CalibSTR — private
    - CalibT0 — private
    - CalibRes — private

TWIST Code Organization

- chambers_mod
  - SetupChambers — public
    - SetupDCPlanes — private
    - SetupDCWires — private
    - SetupPCPlanes — private
    - SetupPCWires — private
  - PrintGeom — public
    - PrintDCPlanes — private
    - PrintDCWires — private
    - PrintPCPlanes — private
    - PrintPCWires — private
- filters_mod
  - FilterEvent — public
    - CalculateCounters — private
    - ApplyFilters — private
    - InitAll — private
- det_geom_mod
  - OpenGeom — public
    - read_det_geom — private
      - read_dc_geom — private
      - read_pc_geom — private
      - read_tg_geom — private
      - read_sc_geom — private
- NameList_mod
  - namelist_c — public
  - show_namelist — public
    - list_namelists — public
- residuals_mod
  - ResidInit — public
  - Residuals — public
    - ResidPlane — private

TWIST Code Organization

- hists_mod
  - DefineMainHists public
    - DefineRawHists private
    - DefineHists private
    - DefinePatternHists private
    - DefineFirstGuessHists private
    - DefineTrackHists private
    - DefinePhysicsHists private
    - DefineXtalkHists private
  - FillRawHists public
  - FillHists public
  - FillPatternHists public
  - FillFirstGuessHists public
  - FillTrackHists public
  - FillPhysicsHists public
  - FillXtalkHists public
  - TestGeomHists public
  - ResetHists public
  - WriteHists public
- user_hists_mod
  - DefineUserHists public
    - uDefineRawHists private
    - uDefineHists private
    - uDefinePatternHists private
    - uDefineFirstGuessHists private
    - uDefineTrackHists private
    - uDefinePhysicsHists private
  - uFillRawHists public
  - uFillHists public
  - uFillPatternHists public
  - uFillFirstGuessHists public
  - uFillTrackHists public
  - uFillPhysicsHists public
- xtalk_mod
  - InitXtalkCounters public
  - AnalyzeXtalk public
  - PrintXtalkCounters public

TWIST Code Organization

- kalman_mod
  - KalFit public
    - KalInit private
    - KalFitCluster private
      - KalFilter private
        - » KalTrackModel private
      - KalSmooth private
    - KalFitTime private
      - KalFilter private
        - » KalTrackModel private
      - KalSmooth private
      - PhysicsParams private
    - TrackHists private
- PRECISION_MOD
- align_mod
  - AlignPlanes public
  - PrintResid public
- calibsteer_mod
  - CalibSteer public
- hitpos_mod
  - HitCluster public
  - HitTime public
    - HitSegment private
    - HitPosition private
  - HitDriftBin public
- leftright_mod
  - LeftRightGeom public
  - LeftRightInit public
  - LeftRightPerm public
- **efficiency_mod**
  - InitEfficiency public
  - CalcEfficiency public
    - Uvpos private
    - CellNumber private
    - intersect private
  - PrintEfficiency public

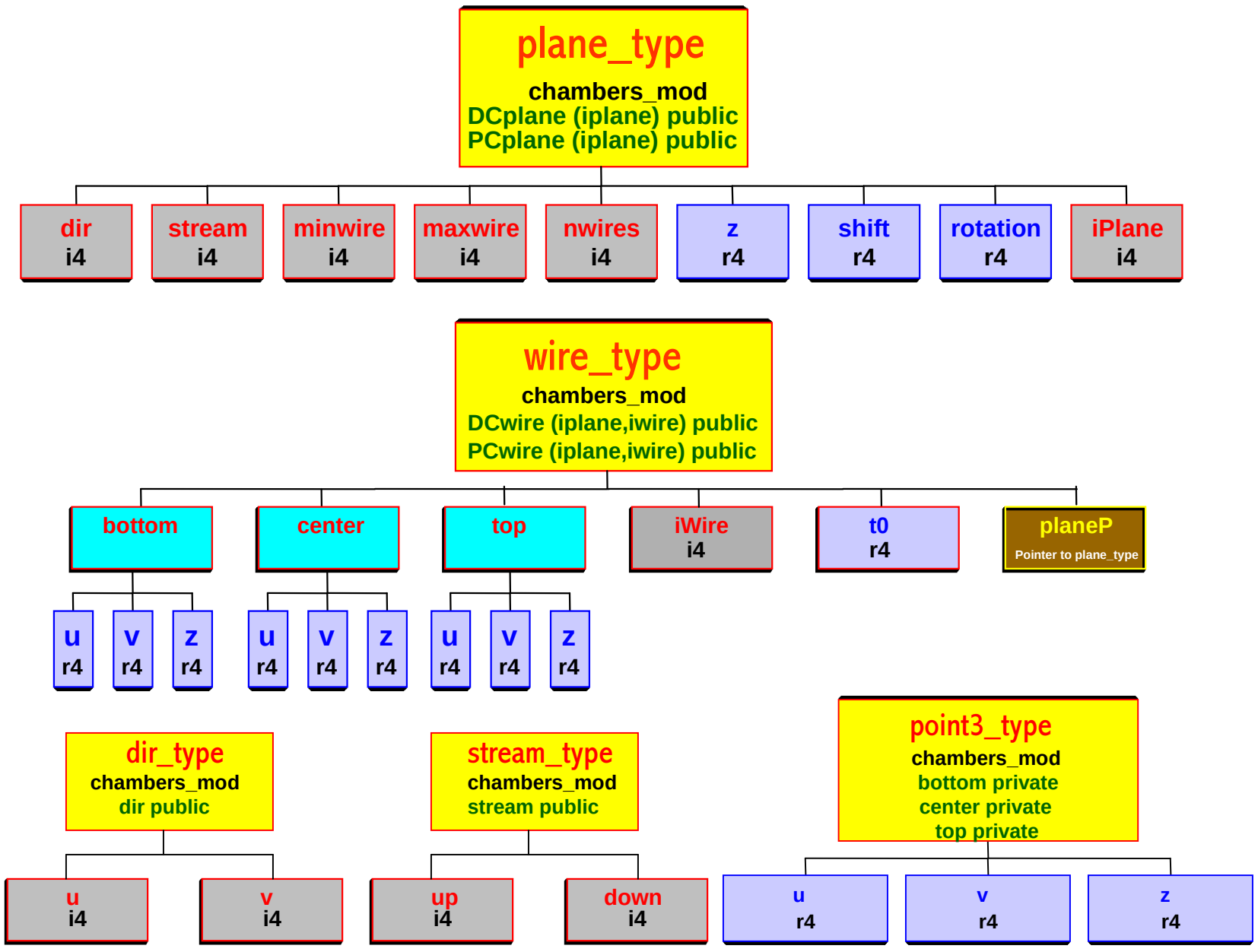
TWIST Code Organization

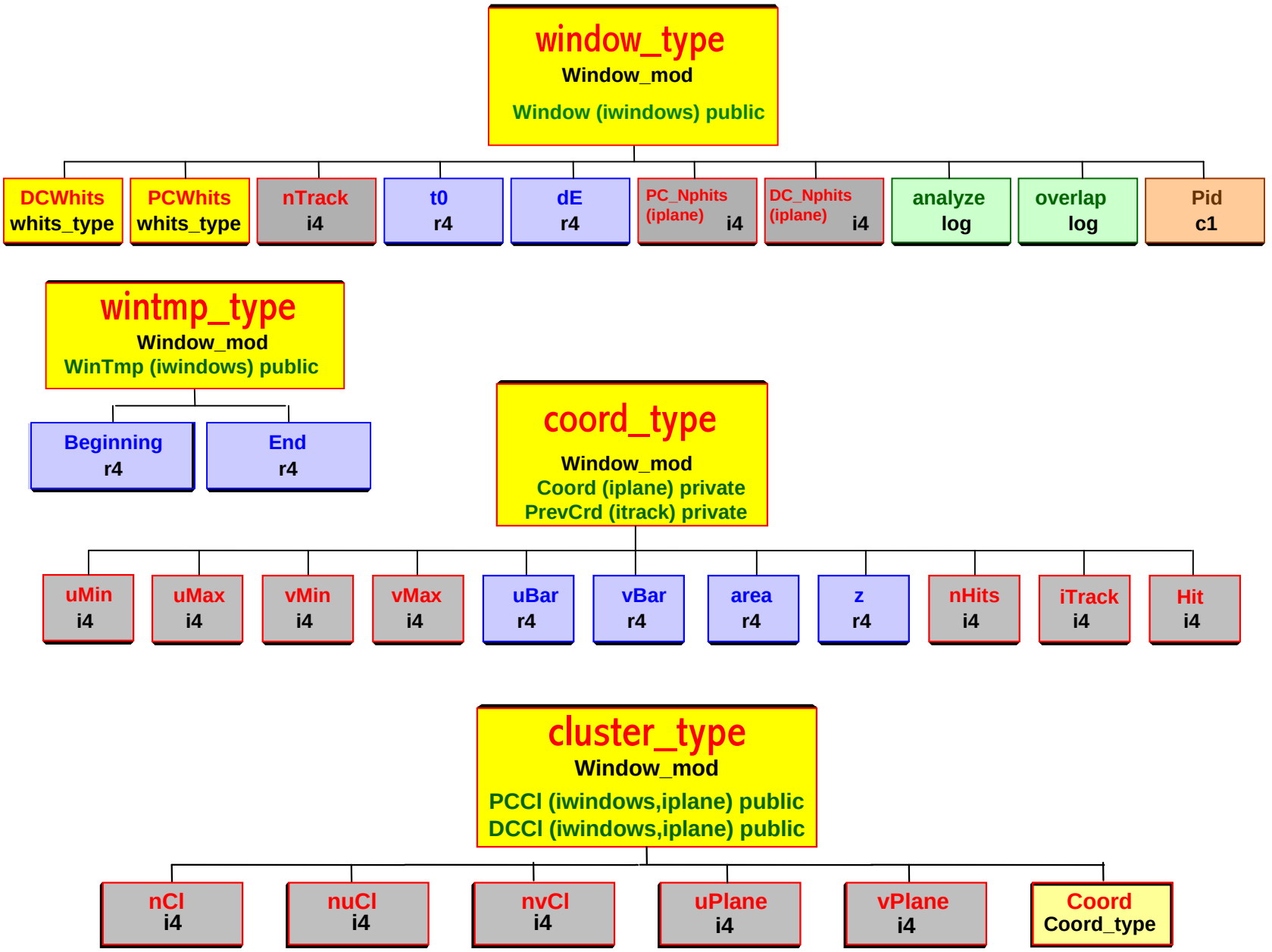
- Firstguess_mod
  - Particle public
    - Initialize private
    - Muon private
      - NewTrack private
        - » AddClHits private
        - » AddHits private
        - » jSortWires public
      - AddClk private
      - AddClkTmp private
    - eDense private
      - AddClk private
      - AddClkTmp private
    - eSparse private
      - NewTrack private
      - AddClk private
      - AddClkTmp private
  - StartParameters public
  - RemoveHits public
  - CirFit private
  - Cont private
  - FirstGuessArt public
    - PariSearch private
    - printWorkingTrackInfo private
    - ZeroTrackCounters public
  - addcluster public
    - unwind private
    - unwind4 private
    - addsums private
    - remsums private
  - insert_fgtrack public
    - addtrack private
  - PrintWork public
  - fit_circle private
  - find_slope private

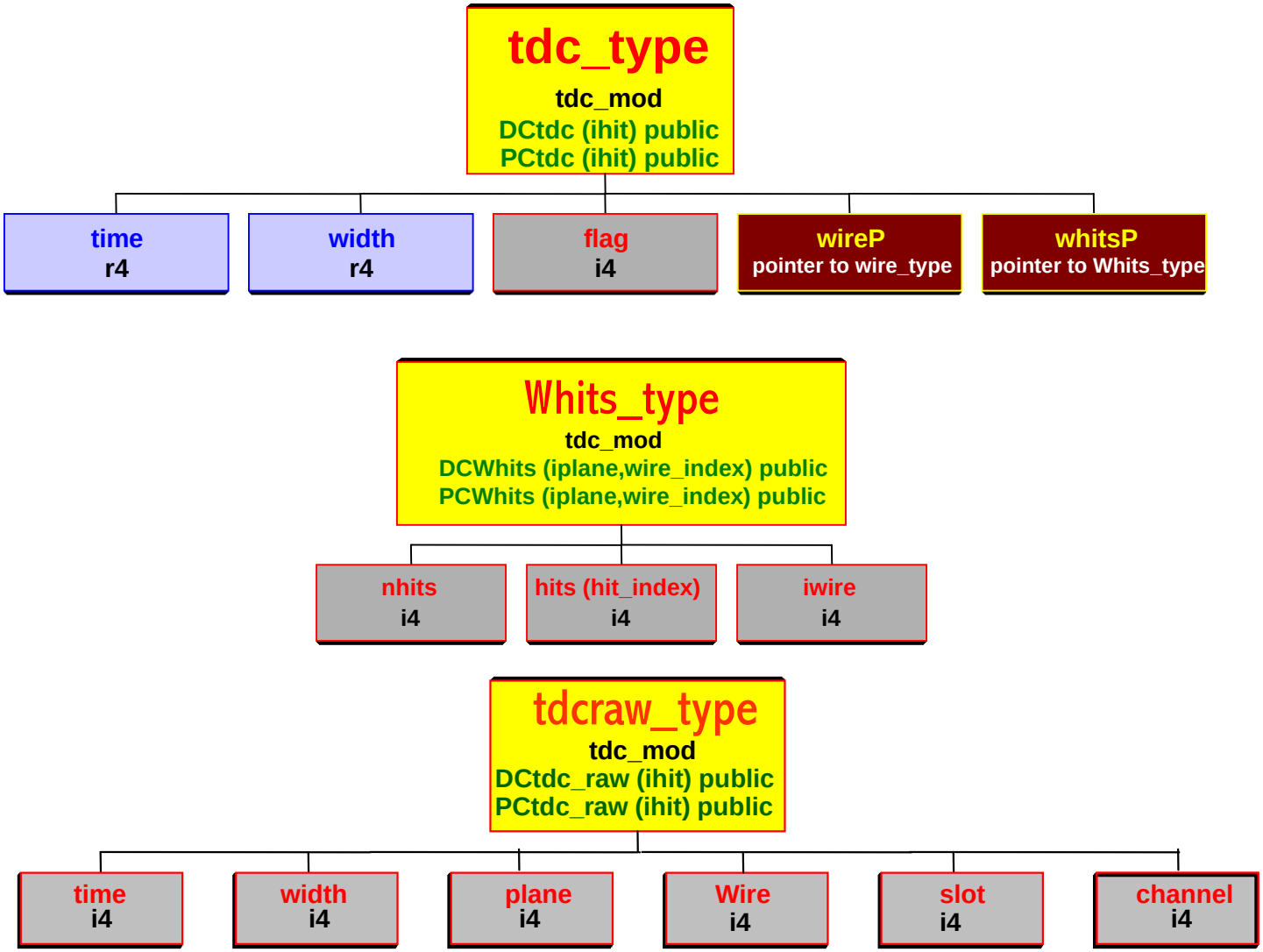
TWIST Code Organization

- Window_mod
  - Windowing public
    - WindowClear private
      - WiresClear private
    - Sort private
      - Partition private
        - » InterchangeSort
    - AssignPCs private
      - Clustering private
      - AnalyzeWindow private
      - jSortWires public
    - AssignDCs private
      - Clustering private
    - WindowLimits private
    - DCLog private
      - LogWrite private
    - LogCl private
    - PCLog private
    - PCWLog private
    - WinLog private
    - DinSertLog private
    - LogWinHits private
    - WireLog private
    - WinTmpLog private
- Track_mod
  - TrackLog public
  - insertmctrack public
  - listmctracks public
  - difMCFGtracks public
    - diftracks private
- matrix_mod
  - MatrixMultiply public
  - MatrixTranspose public
  - MatrixInvert public
  - test_matrix public
- resolution_mod
  - ResolutionDC public
  - ResolutionPrint public
  - ResolutionInit public
- Tracking_mod
  - Tracking public

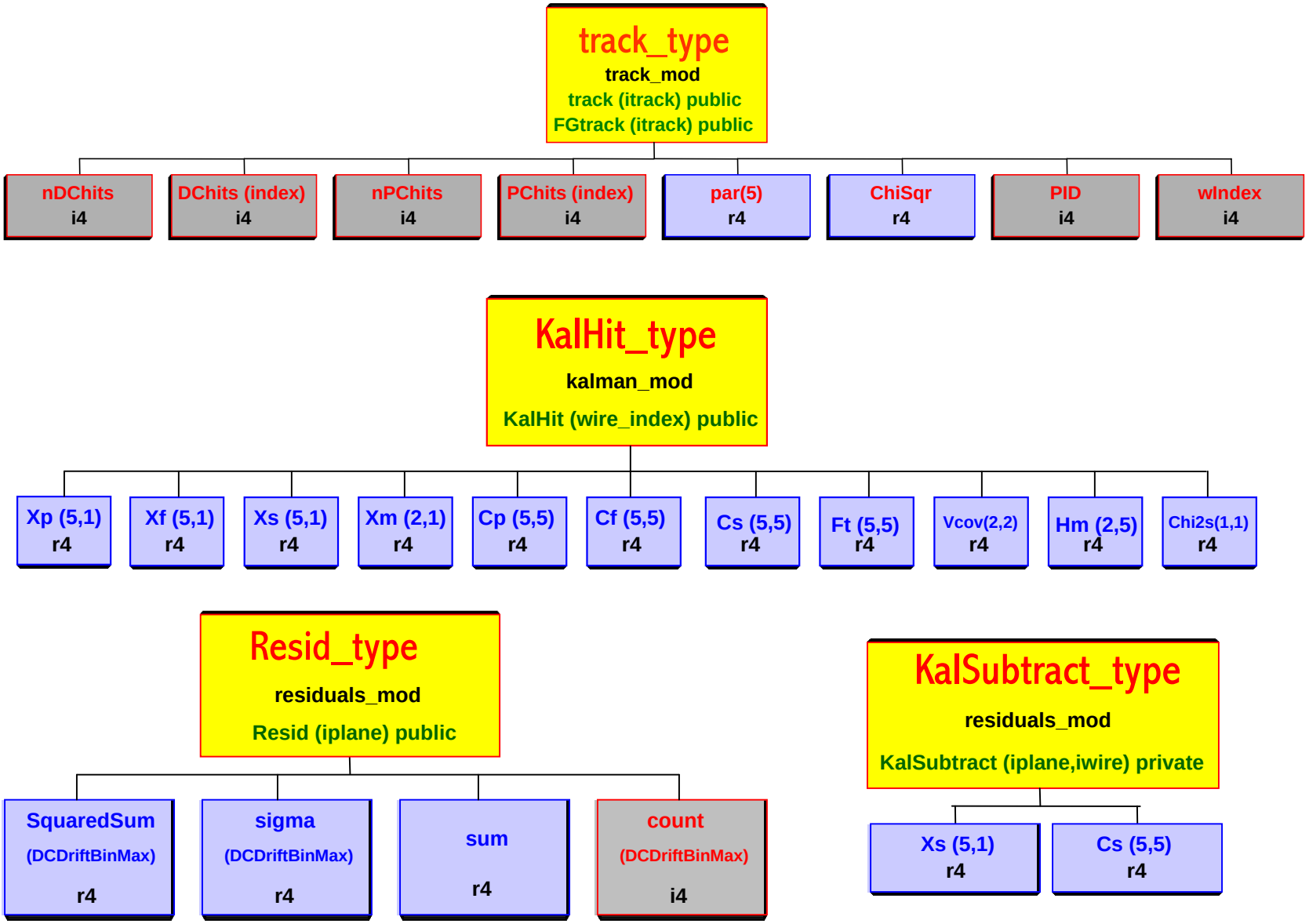
TWIST Data Structures



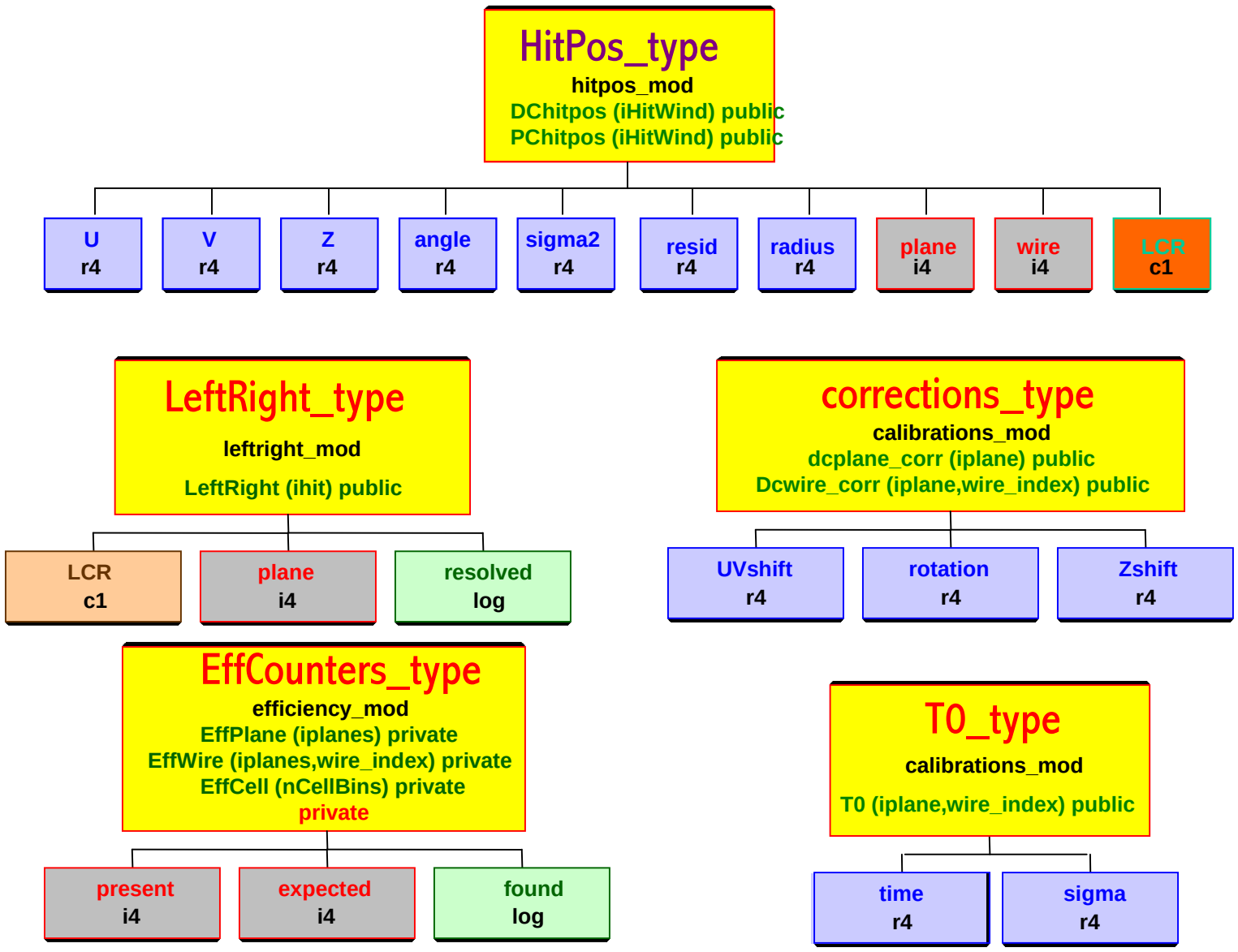
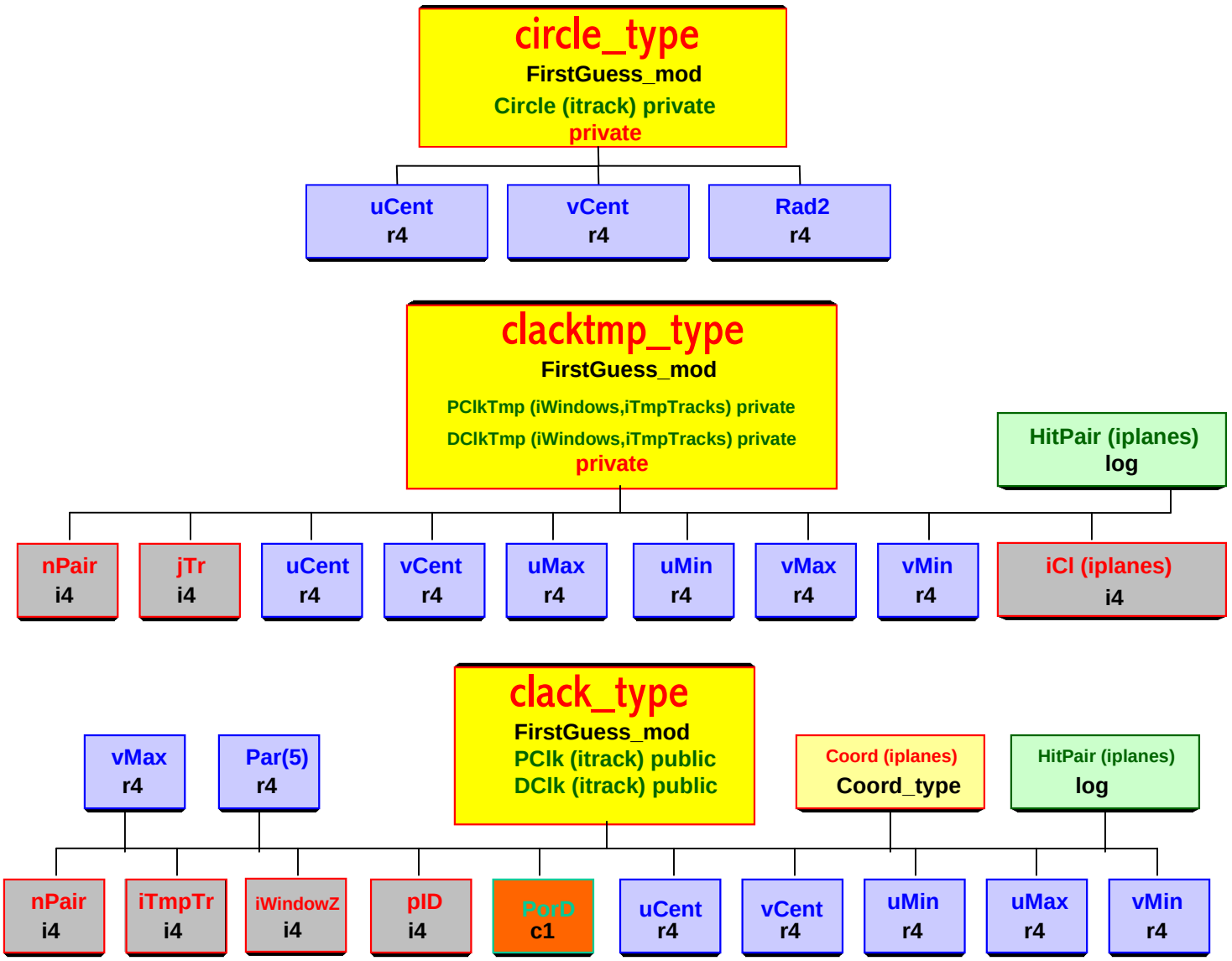

window_type
Window_mod
Window (iwindows) public
DCWhits
whits_type
PCWhits
whits_type
nTrack
i4
t0
r4
dE
r4
PC_Nphits
(iplane)
i4
DC_Nphits
(iplane)
i4
analyze
log
overlap
log
Pid
c1
wintmp_type
Window_mod
WinTmp (iwindows) public
Beginning
r4
End
r4
coord_type
Window_mod
Coord (iplane) private
PrevCrd (itrack) private
uMin
i4
uMax
i4
vMin
i4
vMax
i4
uBar
r4
vBar
r4
area
r4
z
r4
nHits
i4
iTrack
i4
Hit
i4
cluster_type
Window_mod
PCCl (iwindows,iplane) public
DCCl (iwindows,iplane) public
nCl
i4
nuCl
i4
nvCl
i4
uPlane
i4
vPlane
i4
Coord
Coord_type


tdc_type
tdc_mod
DCtdc (ihit) public
PCtdc (ihit) public
time
r4
width
r4
flag
i4
wireP
pointer to wire_type
whitsP
pointer to Whits_type
Whits_type
tdc_mod
DCWhits (iplane,wire_index) public
PCWhits (iplane,wire_index) public
nhits
i4
hits (hit_index)
i4
iwire
i4
tdcraw_type
tdc_mod
DCtdc_raw (ihit) public
PCtdc_raw (ihit) public
time
i4
width
i4
plane
i4
Wire
i4
slot
i4
channel
i4

TWIST Data Structures



TWIST Data Structures



TWIST Data Structures