

DWC Processor

DWC Processor

- ▶ Add beam track information from DWC in the lcio
- ▶ Uses BIF collection : Execute after the event builder

```
<execute>  
  <processor name="EUDAQEventBuilder2016"/>  
  <processor name="myDWCProcessor"/>
```

- ▶ Also reads raw files: BIFraw, AHCALraw and DWCrout

```
<processor name="myDWCProcessor" type="DWCProcessor">  
  <parameter name="InputCollectionNameBIF" type="string"> BIFData </parameter>  
  <parameter name="OutputCollectionNameDWC" type="string"> DWData </parameter>  
  <parameter name="InputFileNameBIF" type="string"> /pnfs/desy.de/calice/tb-cern/native/cernAhcalM  
ay2018/BifRaw/Electron/n60GeV/PP/bifraw-run060520__14p05p2018__15p39p28.raw </parameter>  
  <parameter name="InputFileNameAHCAL" type="string"> /pnfs/desy.de/calice/tb-cern/native/cernAhca  
lMay2018/AhcalRaw/Electron/n60GeV/PP/ahcalRaw_Run060520__14p05p2018__15p39p28.raw </parameter>  
  <parameter name="InputFileNameDWC" type="string"> /pnfs/desy.de/calice/tb-cern/native/cernAhcalM  
ay2018/DWC/root/dwc_run_520.root </parameter>  
</processor>
```

DWC Tree Writer

```
<processor name="HcalRootTreeWriter_HCAL" type="RootTreeWriter">
  <parameter name="DwcWriteEngine_enable" type="int"> 1 </parameter>
  <parameter name="DwcWriteEngine_prefix" type="string"> dwc_ </parameter>
  <parameter name="DwcWriteEngine_InCol" type="string"> DWData </parameter>
```

- ▶ New engine “DwcWriteEngine” available for writing down the track
- ▶ nTrack: number of tracks (basically 1)
- ▶ Segment: x and y segments [mm]
- ▶ Slope: x and y slopes [mm]
 - ▶ -999 if no track reconstructed

- ▶ Track is as:
- ▶ $x = \text{slopeX} * z + \text{segmentX}$
- ▶ $y = \text{slopeY} * z + \text{segmentY}$

```
*.....*
*Br   42 :dwc_nTrack : dwc_nTrack/I                                     *
*Entries :   182302 : Total Size=   732222 bytes File Size =   11835 *
*Baskets :     27 : Basket Size=   82432 bytes Compression=  61.80 *
*.....*
*Br   43 :dwc_segmentX : dwc_segmentX[dwc_nTrack]/F                   *
*Entries :   182302 : Total Size=  1459629 bytes File Size =   875709 *
*Baskets :     54 : Basket Size=   76800 bytes Compression=   1.67 *
*.....*
*Br   44 :dwc_segmentY : dwc_segmentY[dwc_nTrack]/F                   *
*Entries :   182302 : Total Size=  1459629 bytes File Size =   875827 *
*Baskets :     54 : Basket Size=   76800 bytes Compression=   1.66 *
*.....*
*Br   45 :dwc_slopeX : dwc_slopeX[dwc_nTrack]/F                       *
*Entries :   182302 : Total Size=  1459513 bytes File Size =   879726 *
*Baskets :     54 : Basket Size=   76800 bytes Compression=   1.66 *
*.....*
*Br   46 :dwc_slopeY : dwc_slopeY[dwc_nTrack]/F                       *
*Entries :   182302 : Total Size=  1459513 bytes File Size =   873438 *
*Baskets :     54 : Basket Size=   76800 bytes Compression=   1.67 *
*.....*
```

Stash

- ▶ I have made pull requests, it will be available in stash, feature/TokyoWorkshop



optimized the code a bit

Linghui Liu - #12 - CaliceSoft/labview_converter

feature/TokyoWorkshop



Created a new engine for DWC data

Linghui Liu - #8 - CaliceSoft/RootTreeWriter

feature/TokyoWorkshop