Detector Efficiency for LD2-

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Detector Efficiency

- Sitting: Q^2=1.60, W=3.08, SHMS LD2- Right angle(6.260 deg)
- Run list: {12022, 12026, 12027, 12028, 12029, 12030, 12032, 12034, 12035, 12037, 12038, 12039, 12040, 12041, 12042, 12043, 12044, 12045, 12046}

Detector efficiency: ε_detector =N_Did/N_should

Where:

- N_Did : Number of events passing
  Acceptance cuts + CoinTime cut + PID cuts

- N_Should: Number of events passing
  Acceptance cuts + CoinTime cut + PID cuts (except the detector under study)

PID Cuts

- HMS: H.cal > 0.7, H.cer > 1.5
- SHMS: P.cal < 0.85
- Timing: |CoinTime| < 2.0

HMS Cerenkov

Run 12034

- N_Did : Number of events passing
  Acceptance cut + CoinTime cut + HCal +Hcer

- N_Should: Number of events passing
  Acceptance cut + CoinTime cut + HCal

```
=:=:=:=:=:=:=:=:=:=:=:=:=:=
=       HMS Cerenkov      =
=:=:=:=:=:=:=:=:=:=:=:=:=:=

PLT_HMS_ALL_Elec_Cer_Did        :     357777
PLT_HMS_ALL_Elec_Cer_Should     :     374902
PLT_HMS_COIN_Elec_Cer_Did       :     22191
PLT_HMS_COIN_Elec_Cer_Should    :     22495
PLT_HMS_SING_Elec_Cer_Did       :     19015
PLT_HMS_SING_Elec_Cer_Should    :     19964

PLT_HMS_Cer_ALL_Elec_Eff        :      0.9543 +-   0.0003

PLT_HMS_Cer_COIN_Elec_Eff       :      0.9865 +-   0.0008

PLT_HMS_Cer_SING_Elec_Eff       :      0.9525 +-   0.0015
```

HMS Calorimeter

Run 12034

- N_Did : Number of events passing
  Acceptance cut + CoinTime cut + HCal +Hcer

- N_Should: Number of events passing
  Acceptance cut + CoinTime cut + HCer

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PLT_HMS_Cal_ALL_Elec_Eff        :     0.9860 +-  0.0002

PLT_HMS_Cal_COIN_Elec_Eff       :     0.9793 +-  0.0009

PLT_HMS_Cal_SING_Elec_Eff       :     0.9863 +-  0.0008
```

SHMS Calorimeter efficiency ?