

Event Request for LV1 Trigger Study in VRDC

- **Goals of Trigger Study in VRDC**
 - trigger parameters for RICH
 - input for new RICH LV1 board design
 - EMCal / RICH lookup scheme
 - trigger tile sizes
 - overlapping lookup
 - input for RICH LV1 board design
 - input for post-Ersatz board design
 - re-evaluation of trigger performance
 - *cf.* my study in MDC-J-2
 - efficiency for “signals”
 - rejection against “background”
- **Conditions**
 - only CO₂ as RICH radiator gas
 - analysis starts from PRDF

- Efficiency for Di-Electron

- single J/Ψ events (no PYTHIA)

- p_t (J/Ψ) 8~10 bins 0~8 GeV/c
 - z (vertex) 3 bins 0~20 cm
 - no azimuthal cut at vertex
 - minimum 5K each > 120~150K events

- single ϕ events (no PYTHIA)

- p_t (ϕ) 8~10 bins 0~4 GeV/c
 - z (vertex) 3 bins 0~20 cm
 - no azimuthal cut at vertex
 - minimum 5K each > 120~150K events

- Efficiency for Single Electron

- charm events (PYTHIA)

- 20K events w/ p_t (e) cut requested by MGP

- Rejection / Trigger Rate

- minimum bias p+p events

- 250K events in MDC-J-2
 - PRDF in same format as MDC-2
 - MDC-2 PRDF claimed to be still readable