Electron LH variables

(ttbar sample)

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Data sample

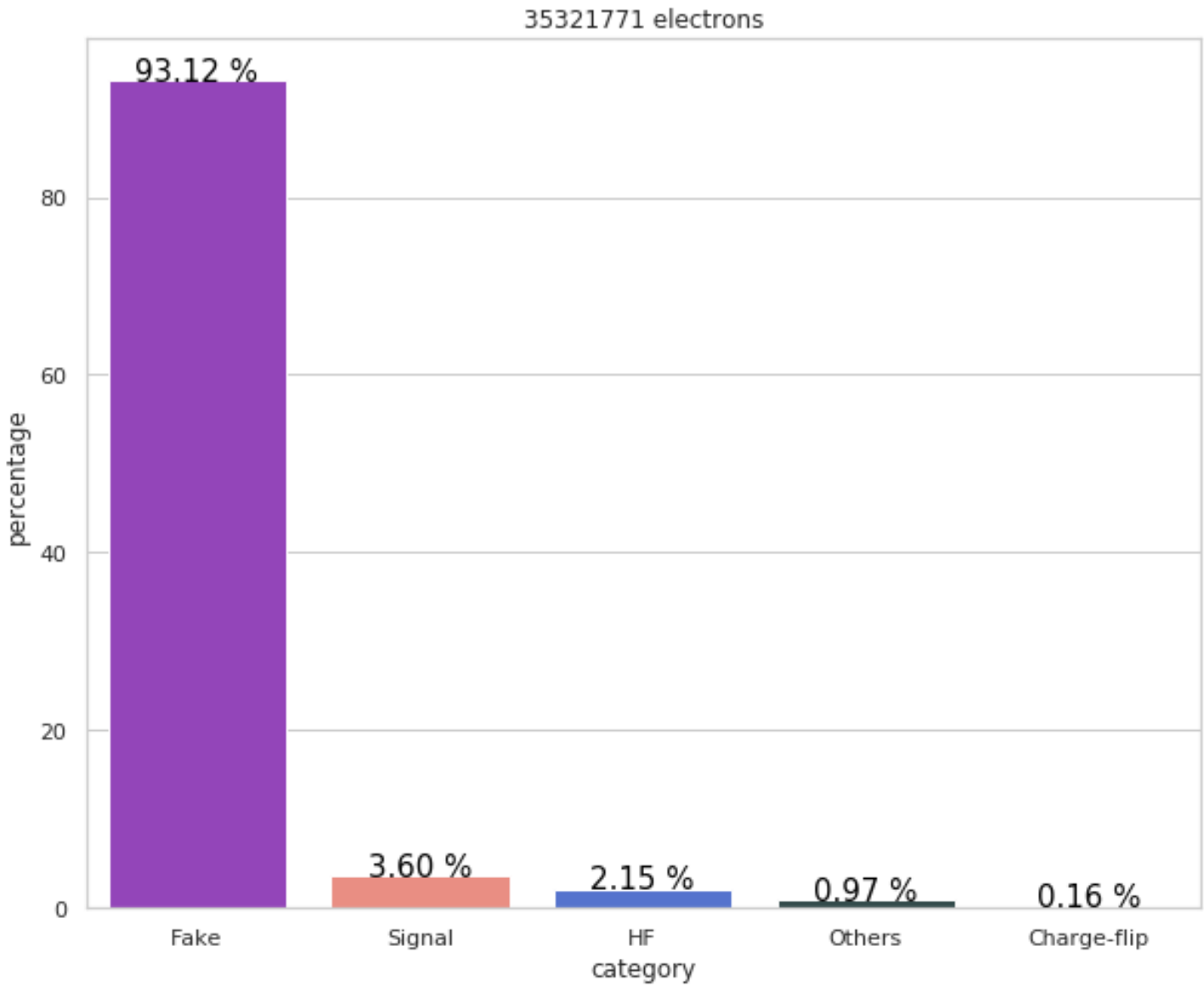
$t\bar{t}$ sample (150/4727 files)

`mc16_13TeV.410470.PhPy8EG_A14_ttbar_hdamp258p75_nonallhad.deriv.DAOD_EGAM7.e6337_e5984_s3126_r10724_r10726_p3613`

Selection criteria

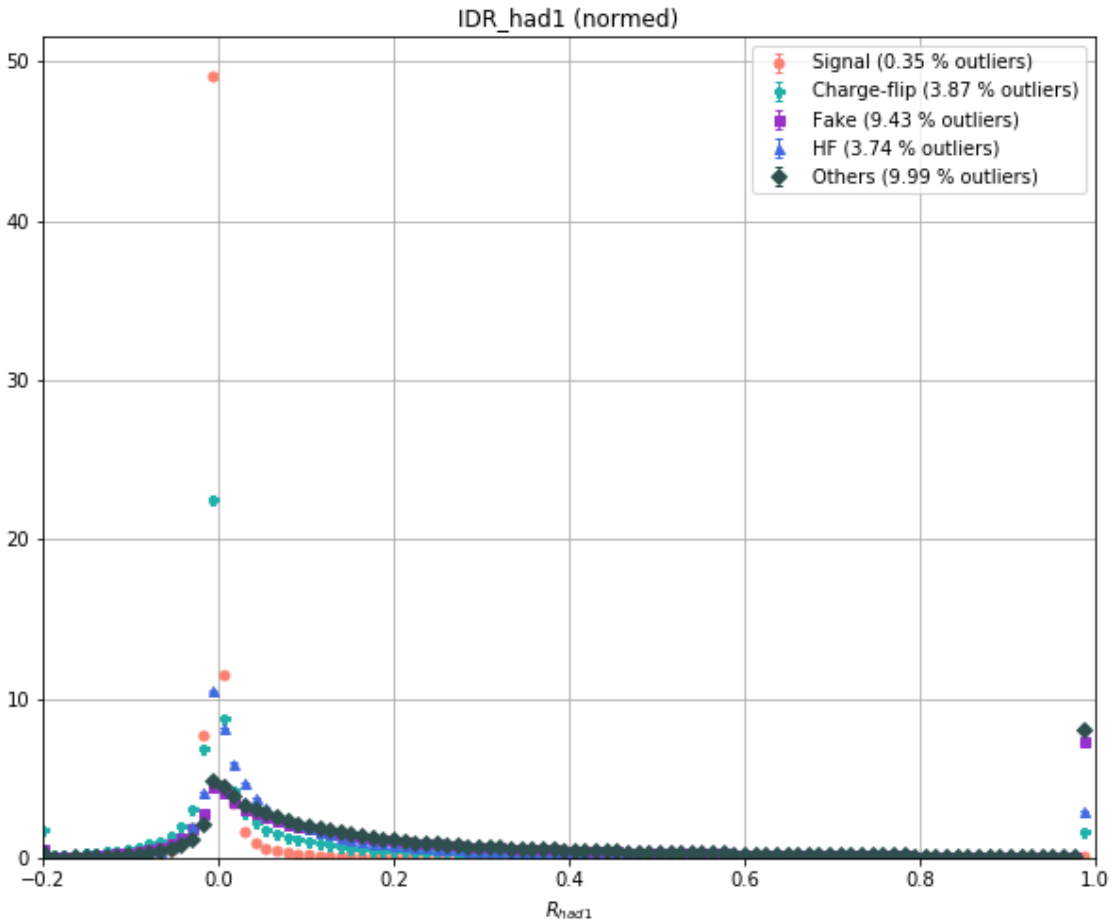
All container electrons, no cuts

Category Distribution



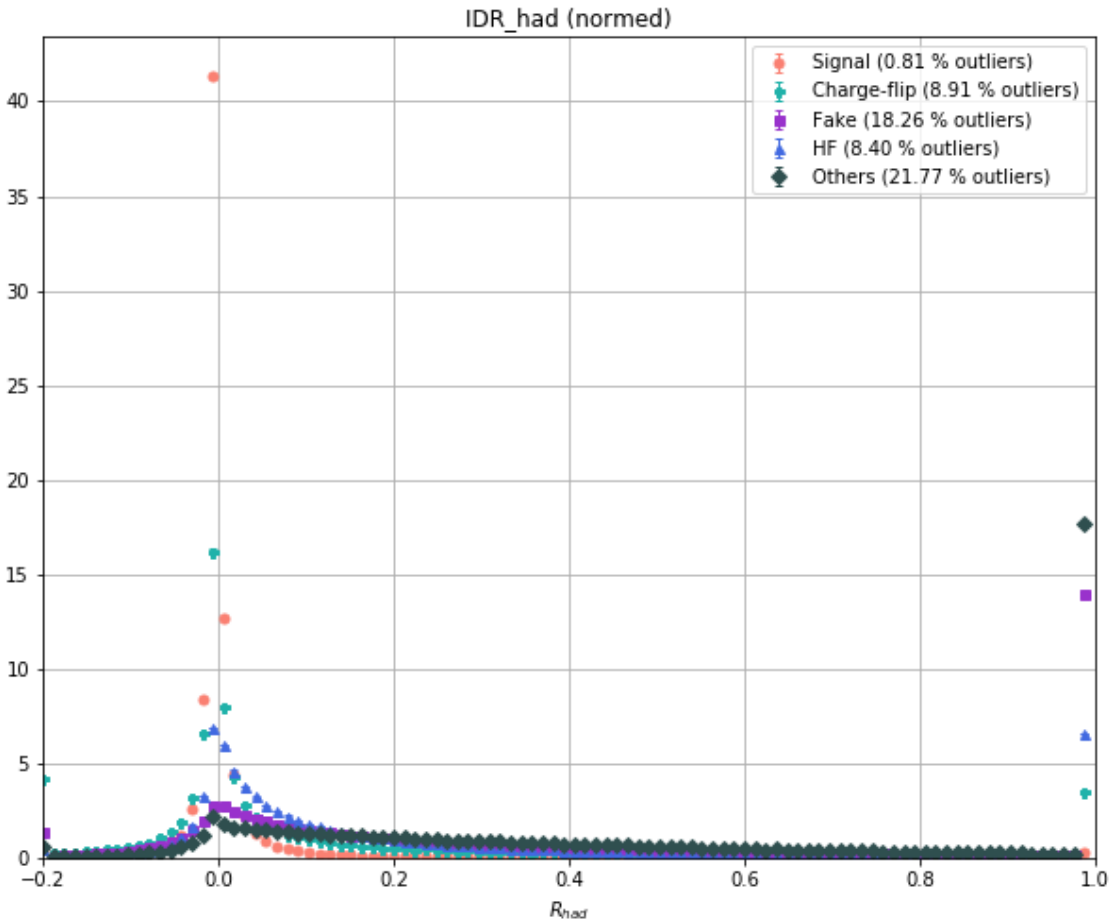
Hadronic Leakage

R_{had1} – E_T in 1st layer of hadronic calo / E_T in EM cluster



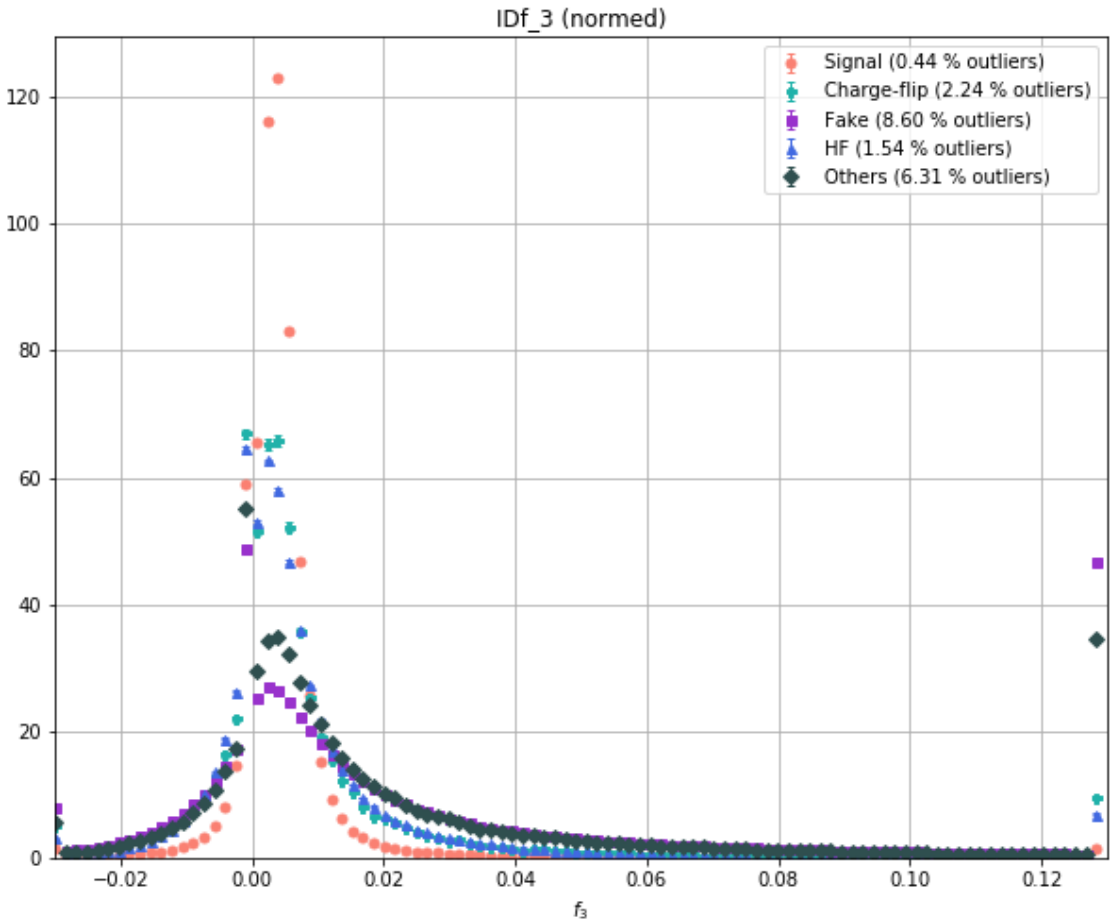
Hadronic Leakage

R_{had} – E_T in the hadronic calo / E_T in EM cluster



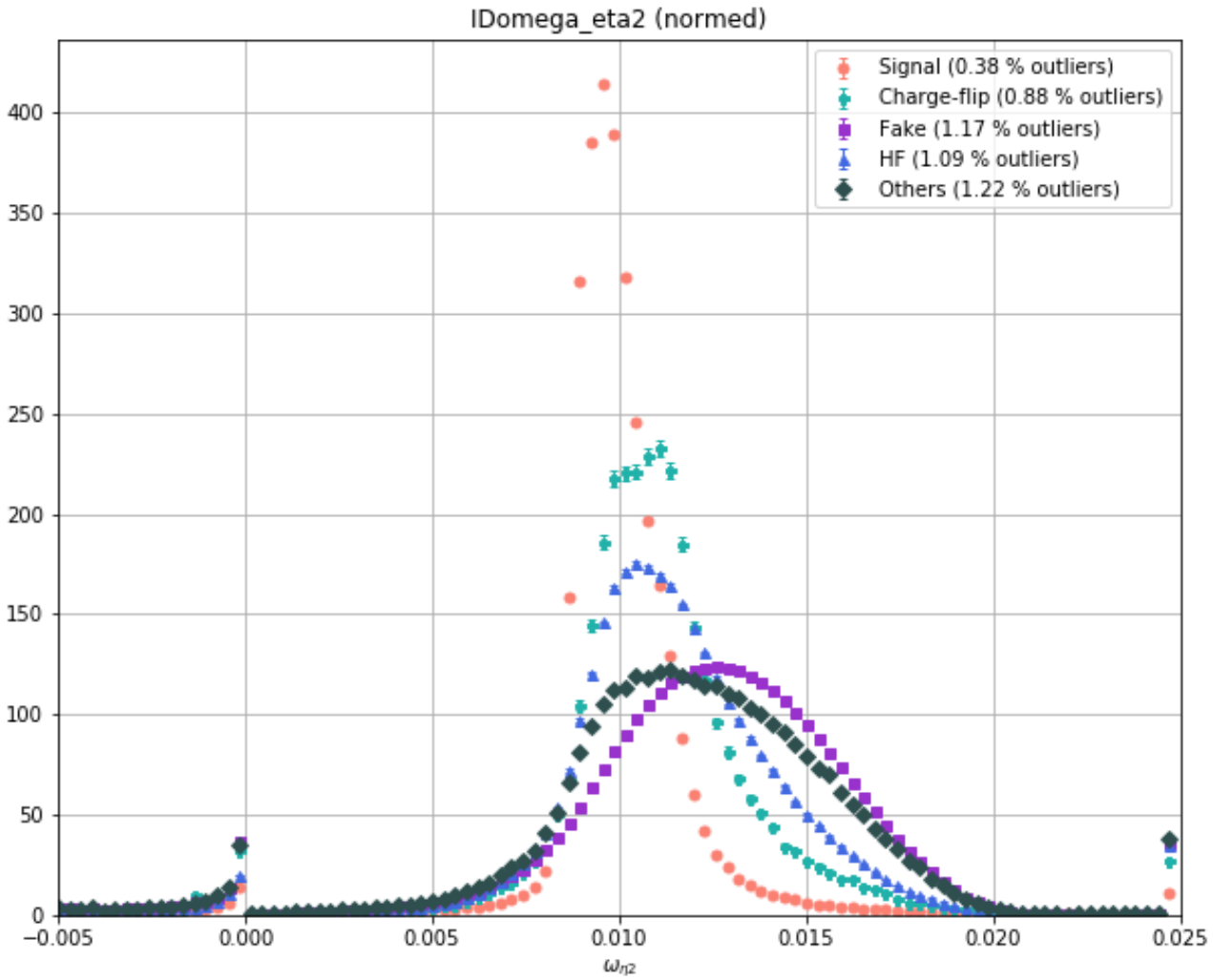
3rd EM calo layer

f_3– Energy in 3rd layer / total energy in EM calo



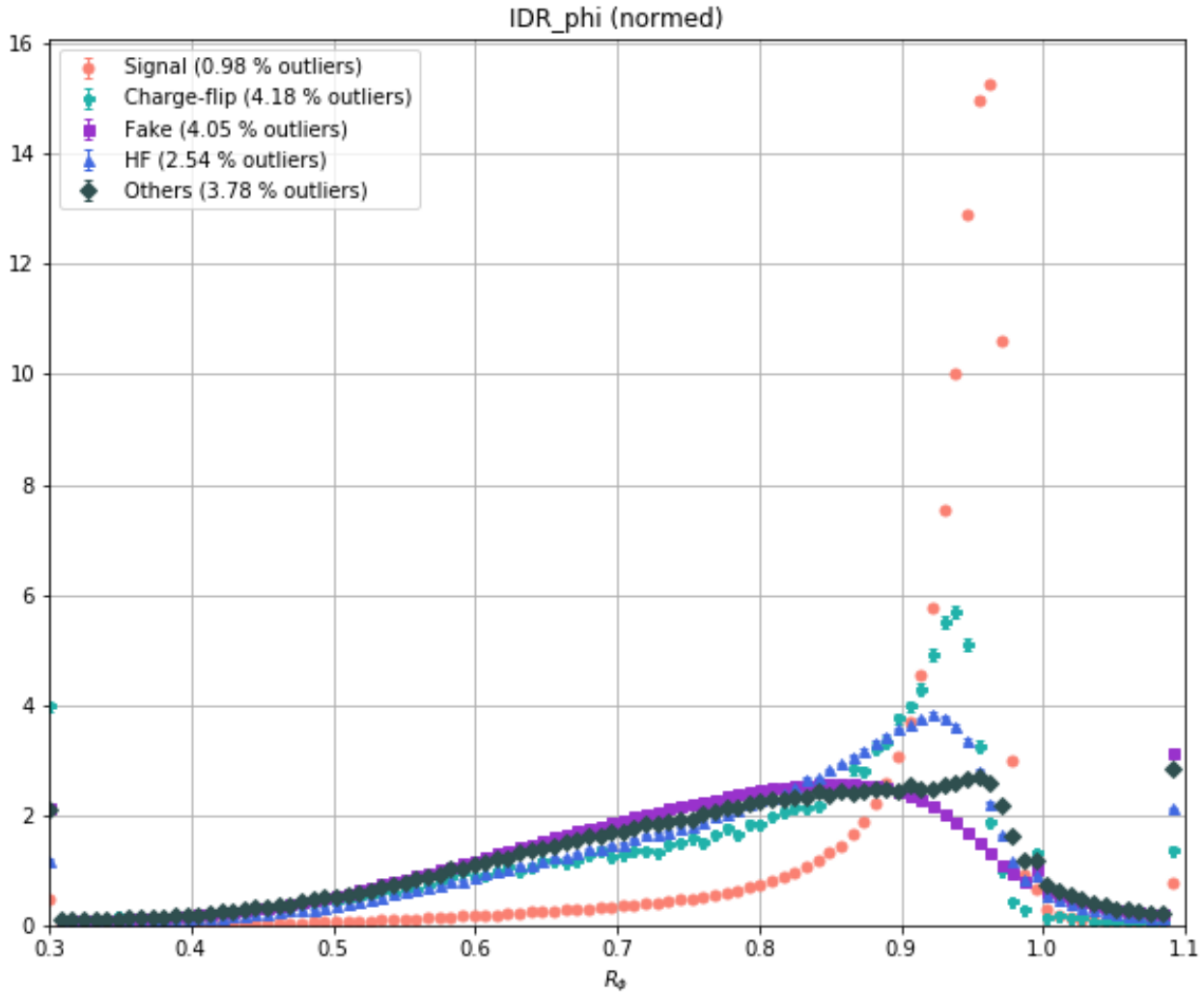
2nd EM calo layer

$w_{\eta 2}$ – Lateral shower width



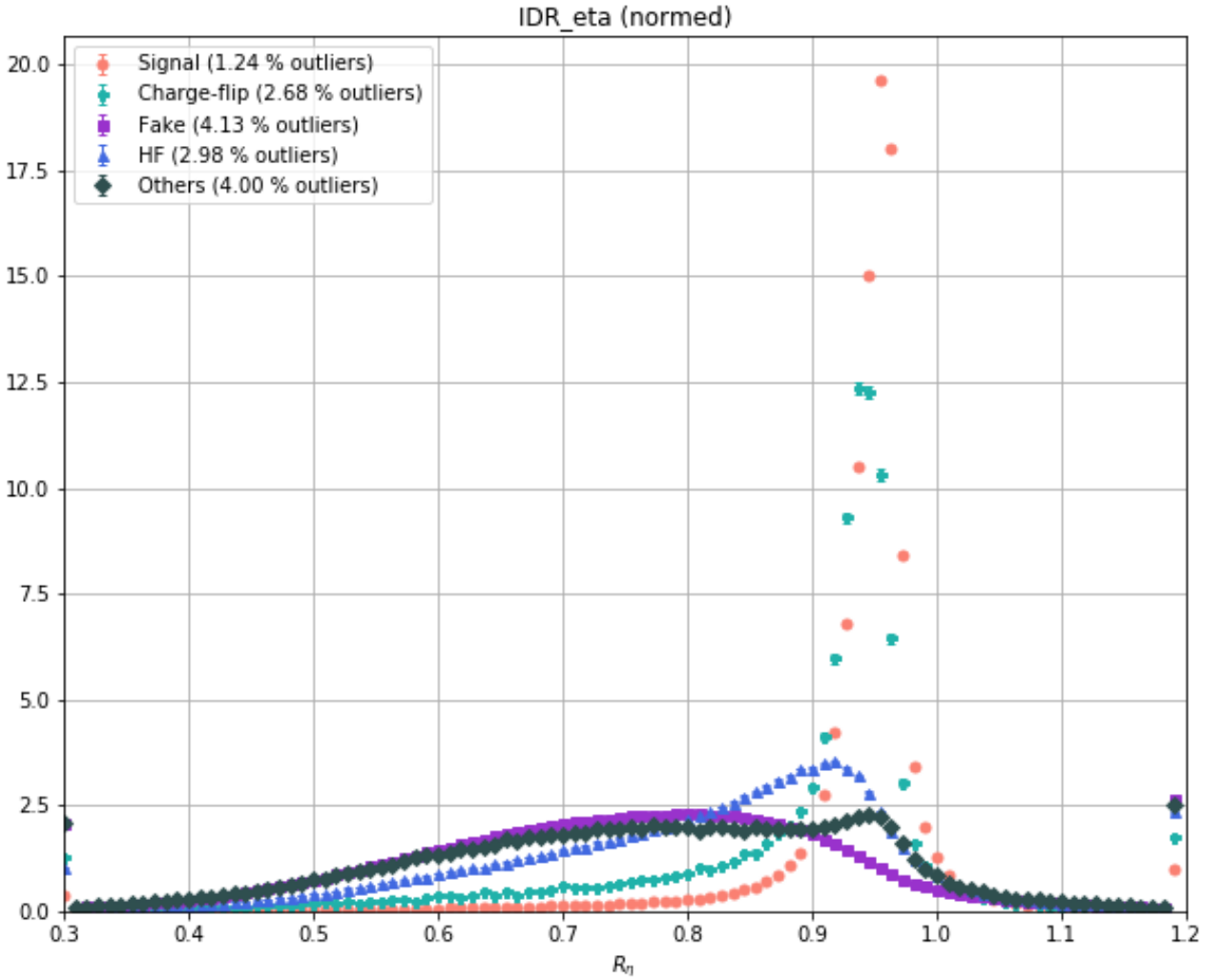
2nd EM calo layer

R_ϕ – Ratio of the energy in 3×3 cells over the energy in 3×7 cells centred at the electron cluster position



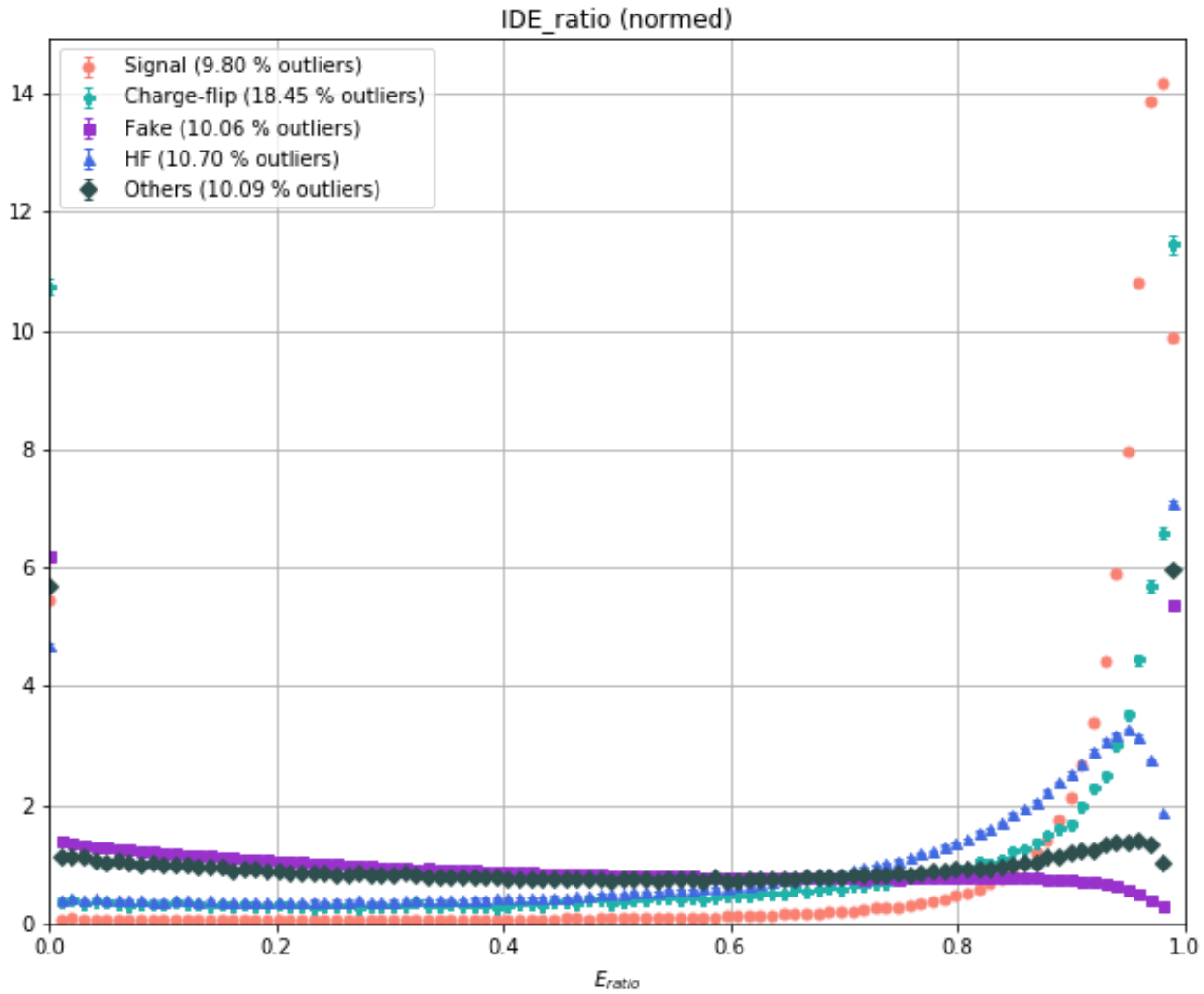
2nd EM calo layer

R_η – Ratio of the energy in 3×7 cells over the energy in 7×7 cells centred at the electron cluster position



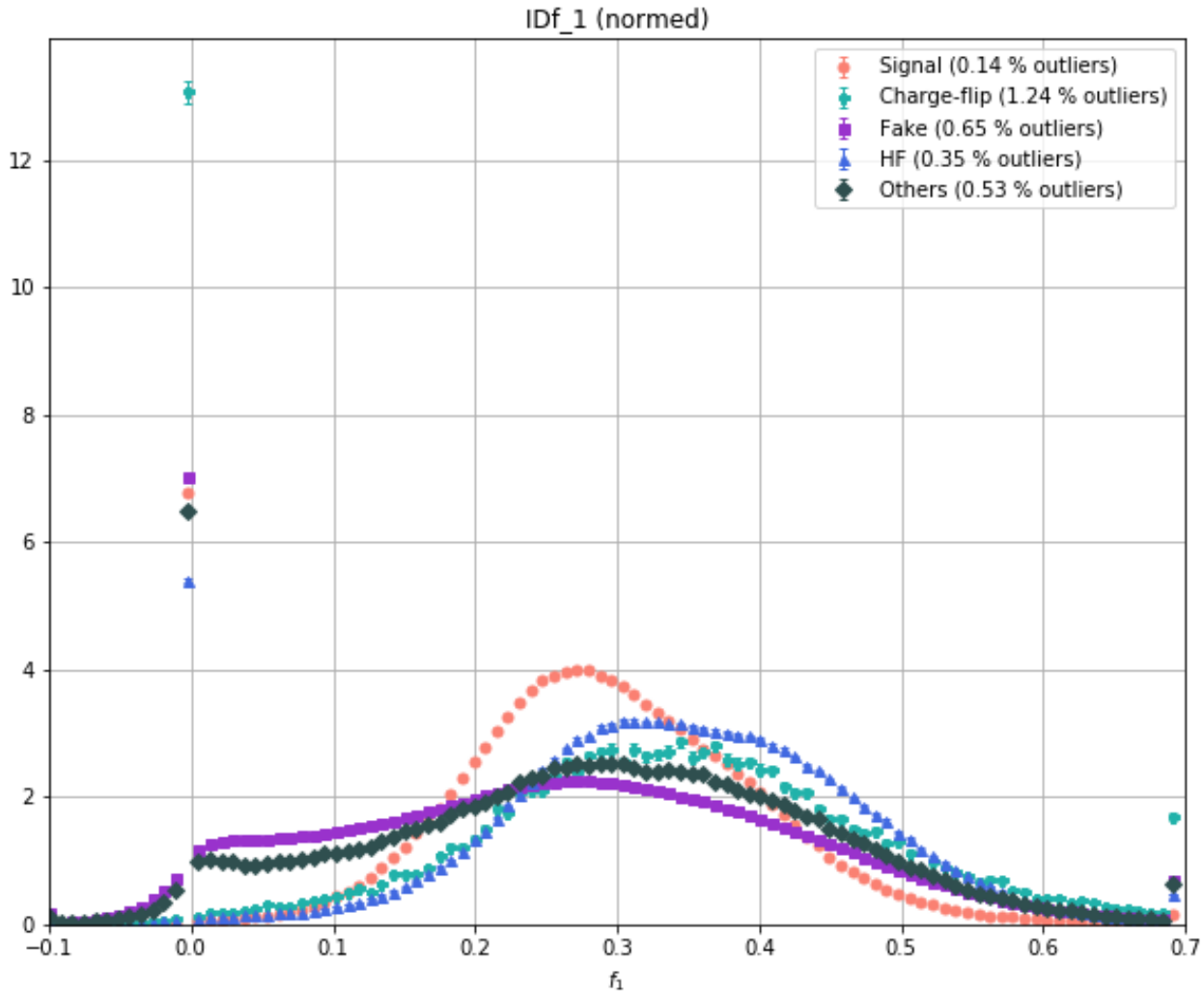
1st EM calo layer

E_{ratio} – Ratio of the energy difference between the maximum energy deposit and the secondary maximum to the sum of these energies



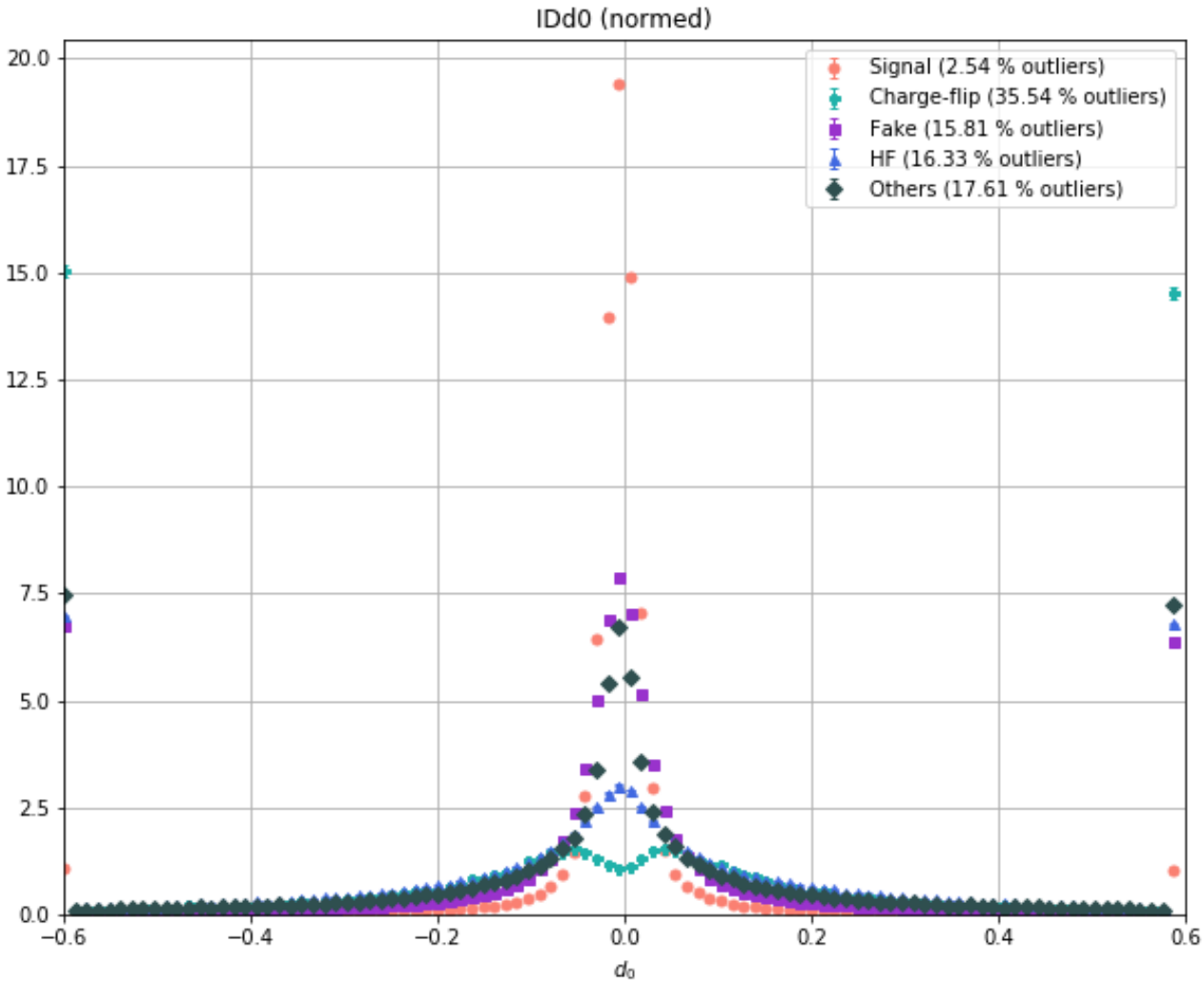
1st EM calo layer

f_1– Energy in 1st layer / total energy in EM calo



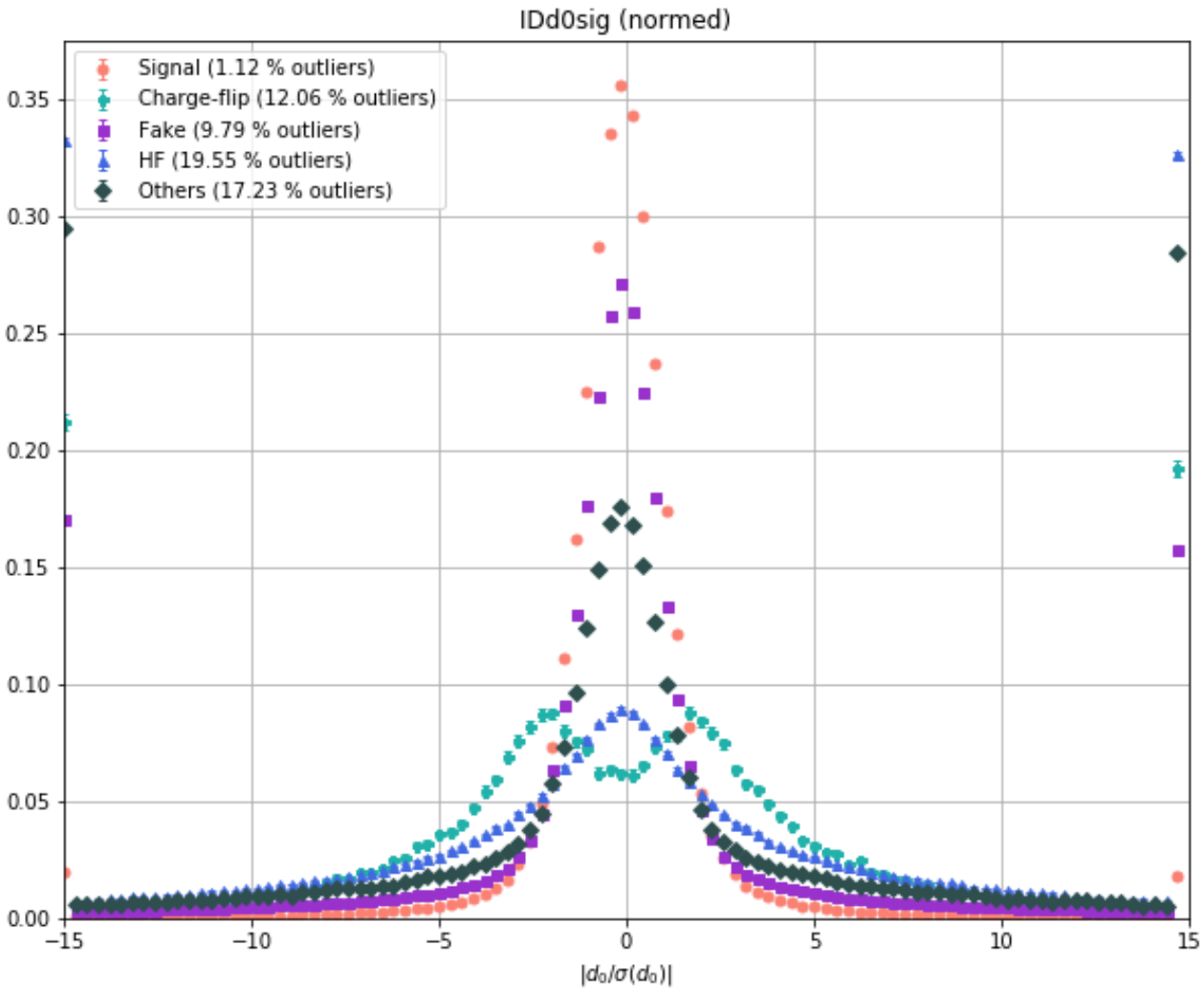
Track conditions

d_0– Transverse impact parameter relative to the beam-line



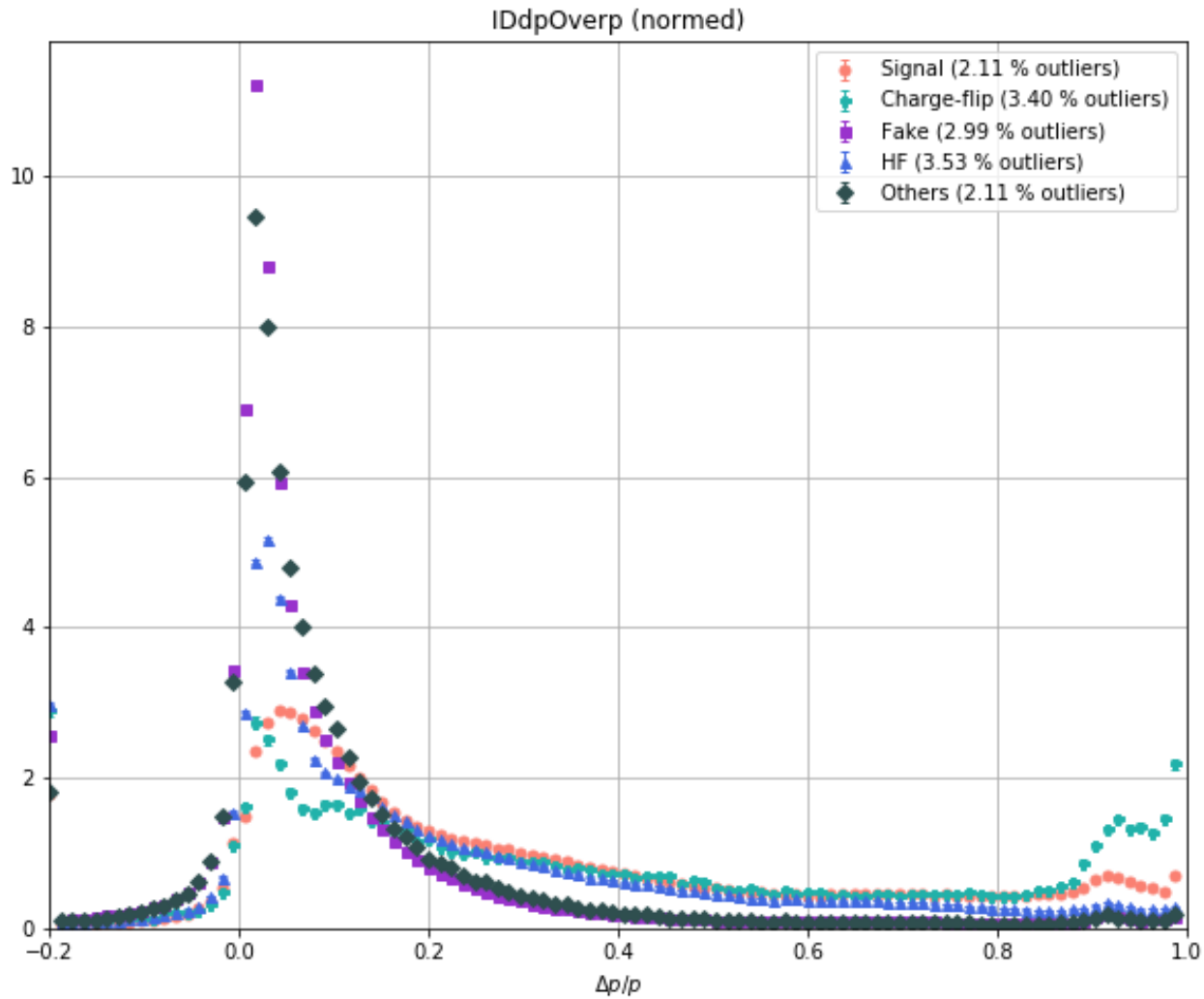
Track conditions

$|d_0/\sigma(d_0)|$– Significance of transverse impact parameter



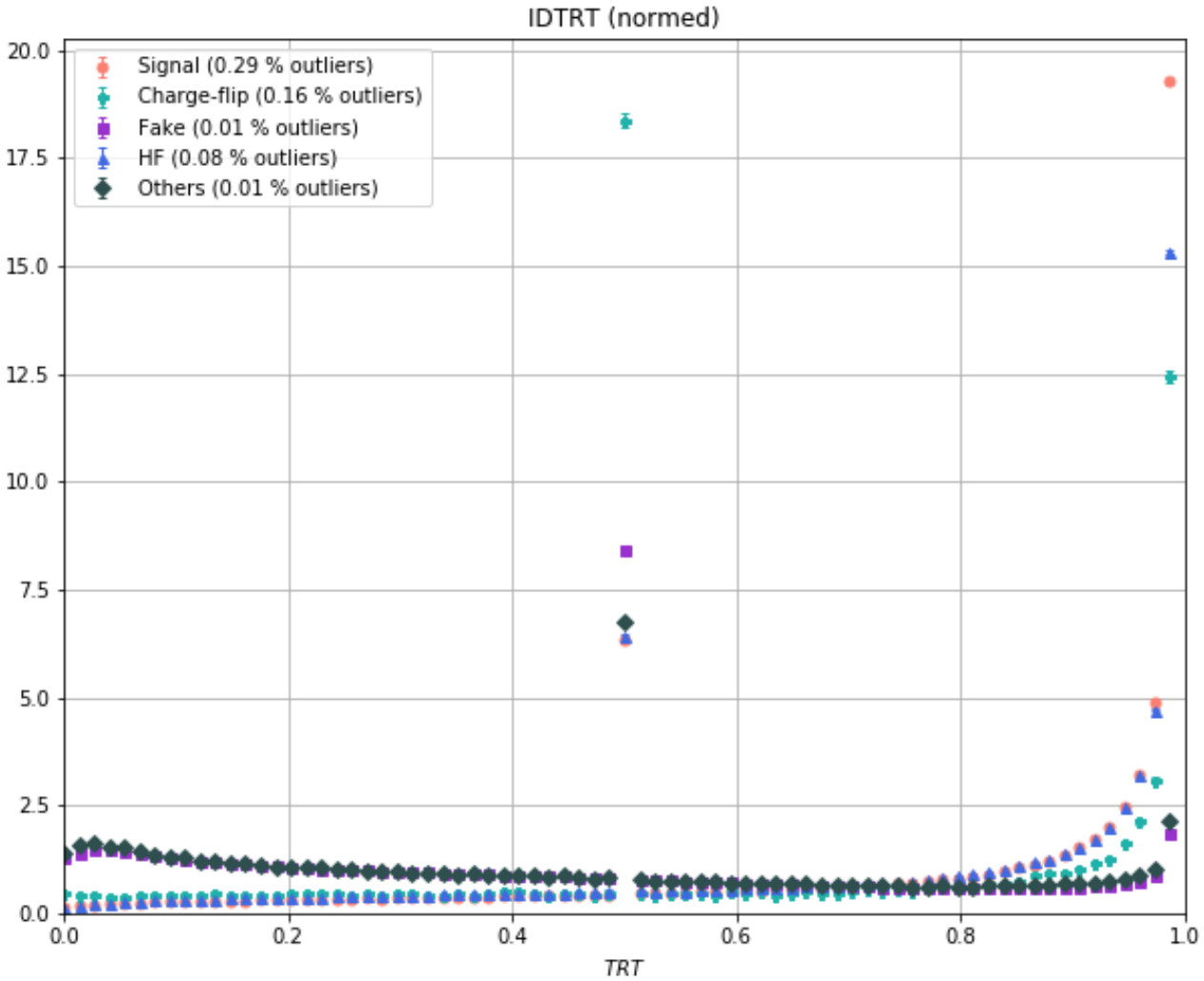
Track conditions

$\Delta p/p$– Momentum lost by the track between the perigee and the last measurement point divided by the momentum at perigee



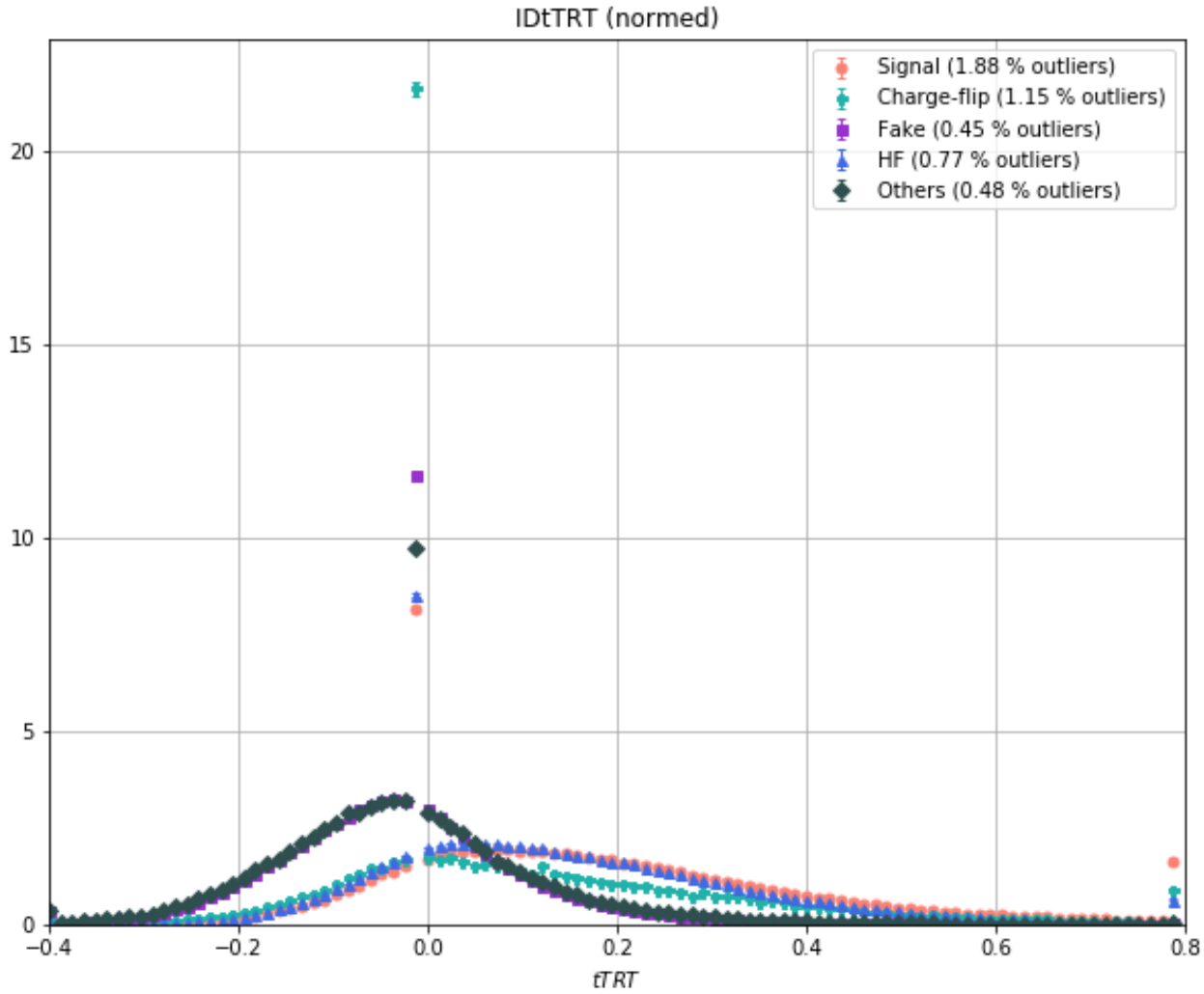
TRT

ePProbabilityHT– Likelihood probability based on transition radiation in the TRT



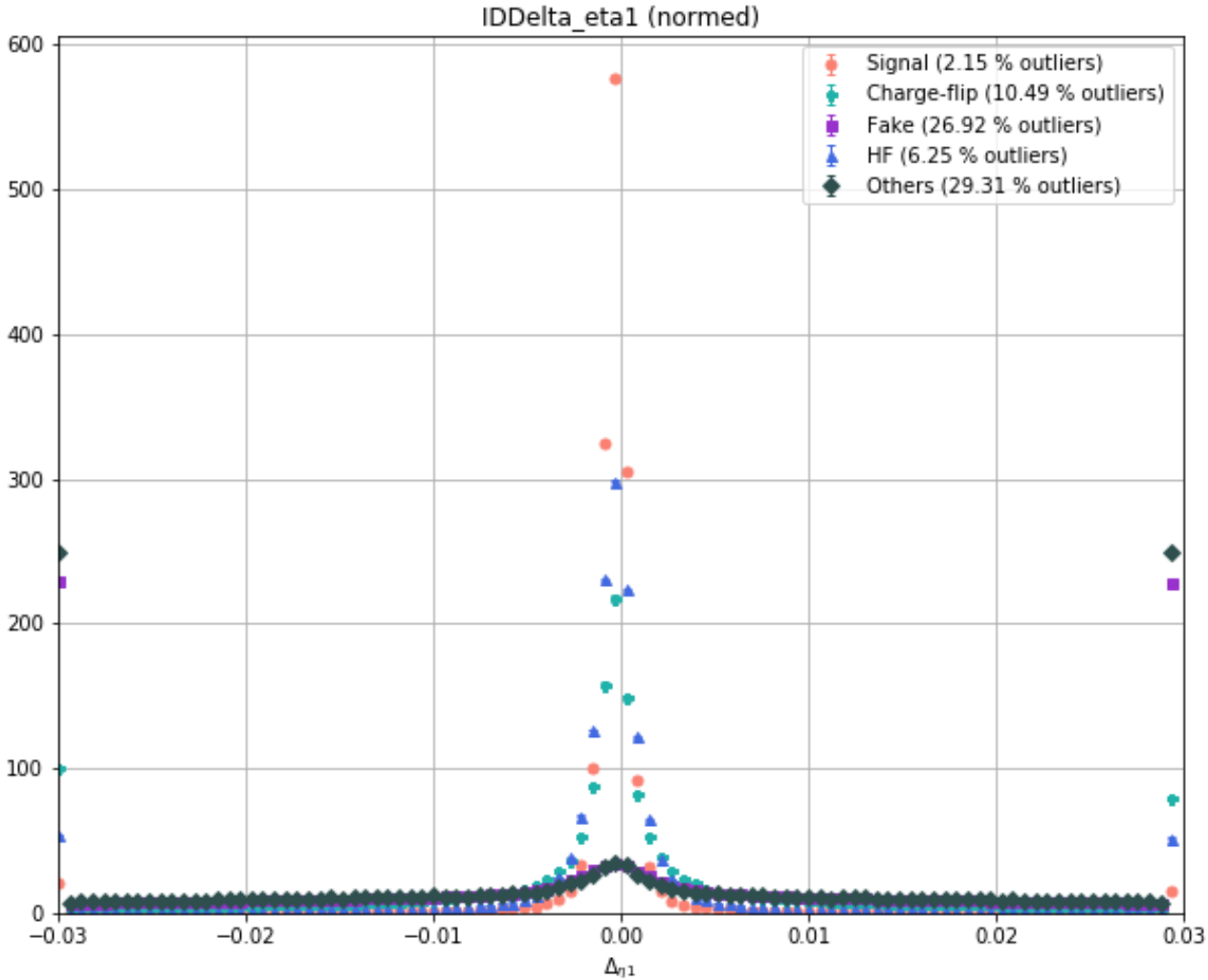
TRT

TMVA eProbabilityHT – Transform of eProbabilityHT used in TMVA



Track-cluster matching

$\Delta_{\eta 1}$– Δ_{η} between the cluster position in the first layer and the extrapolated track



Track-cluster matching

$\Delta_{\eta 1}$– Δ_{Φ} between the cluster position in the second layer and the momentum-rescaled track from the perigee, times the charge q