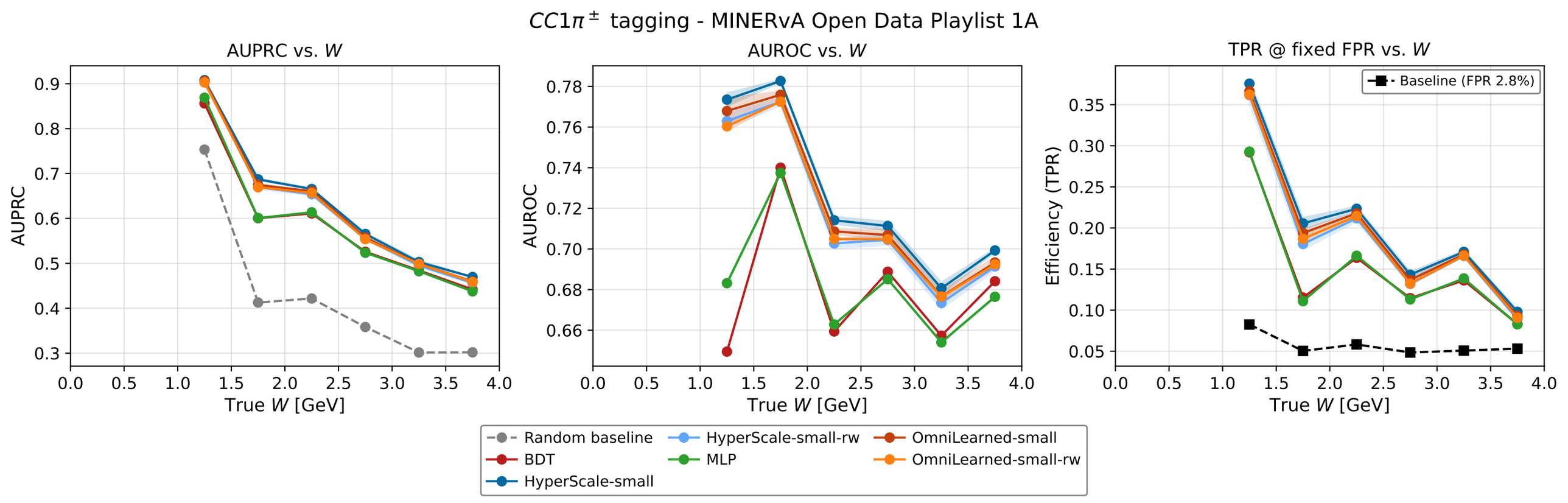
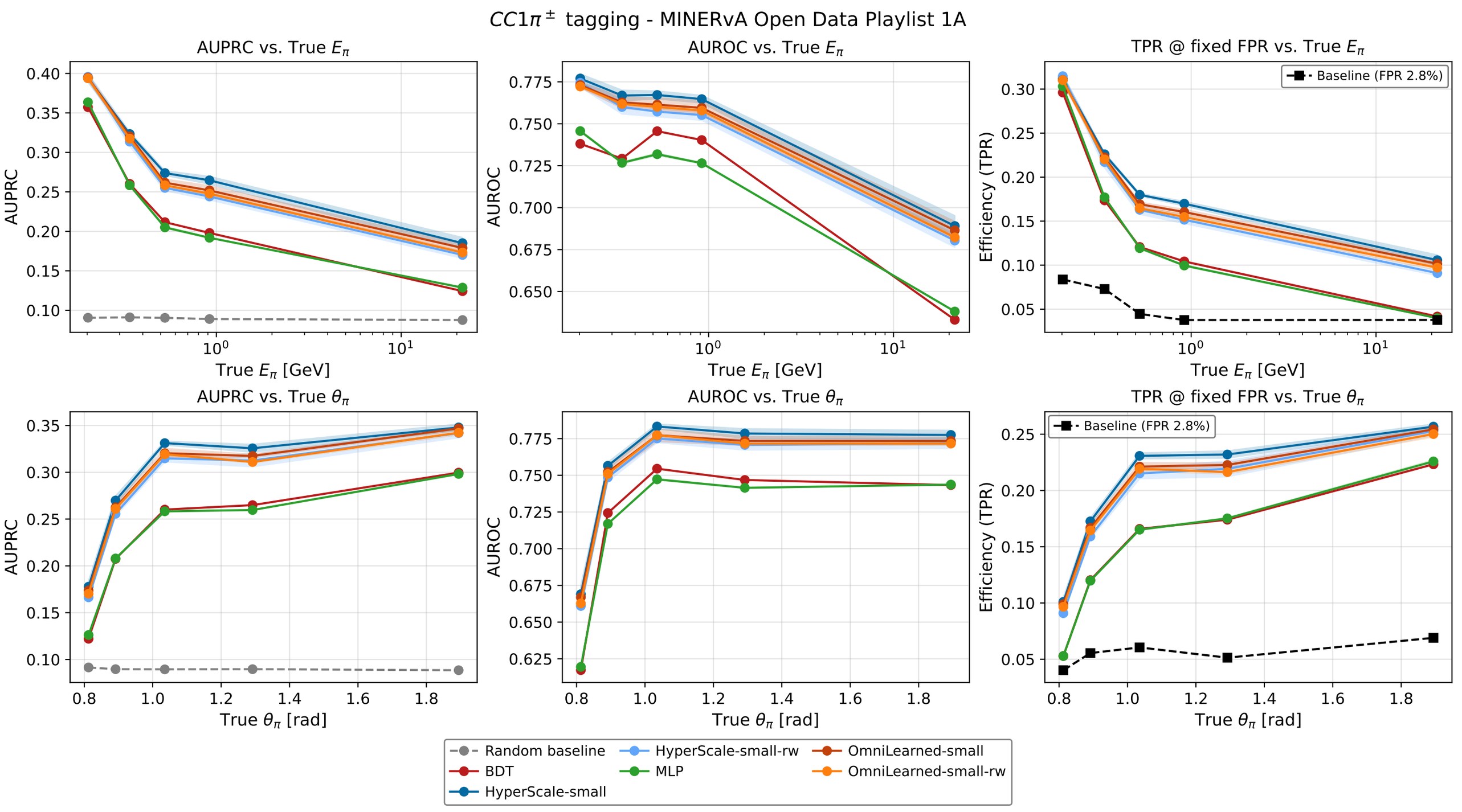
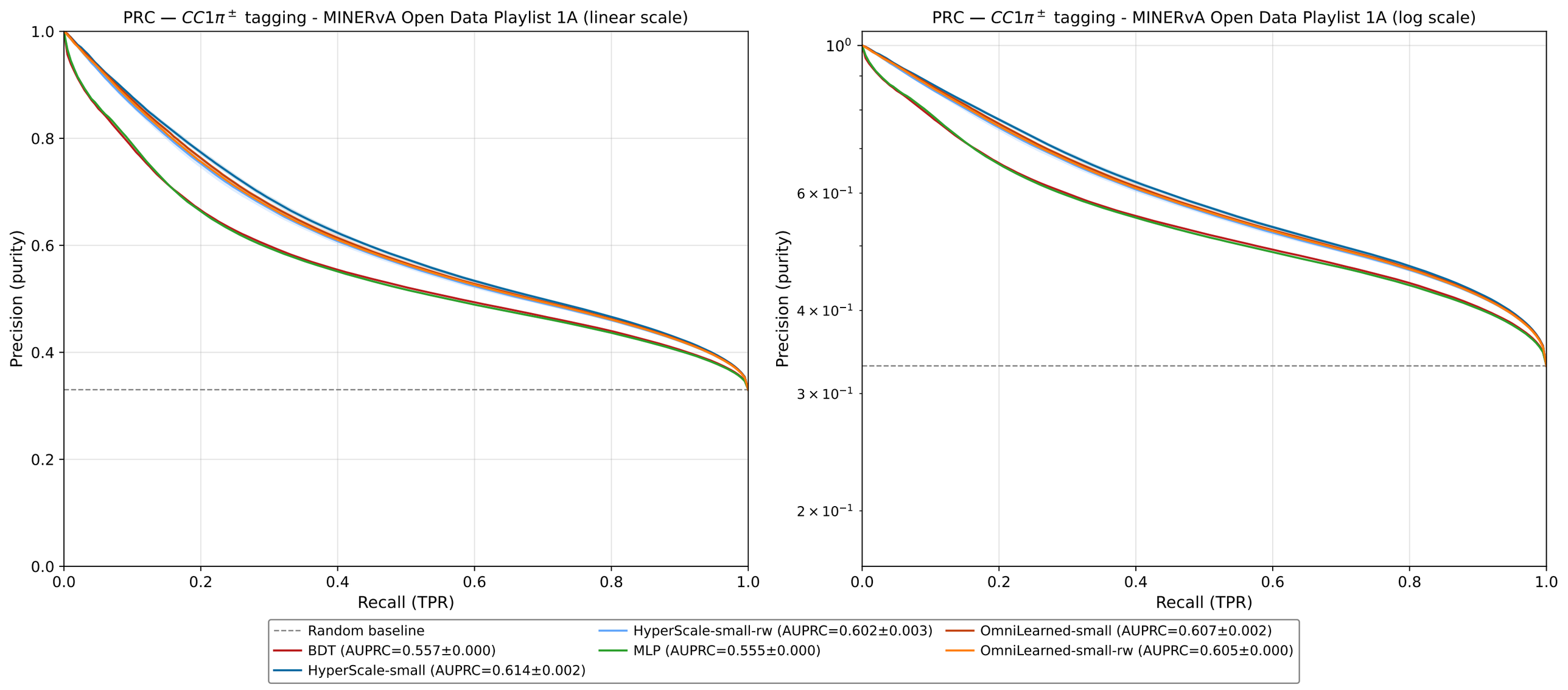
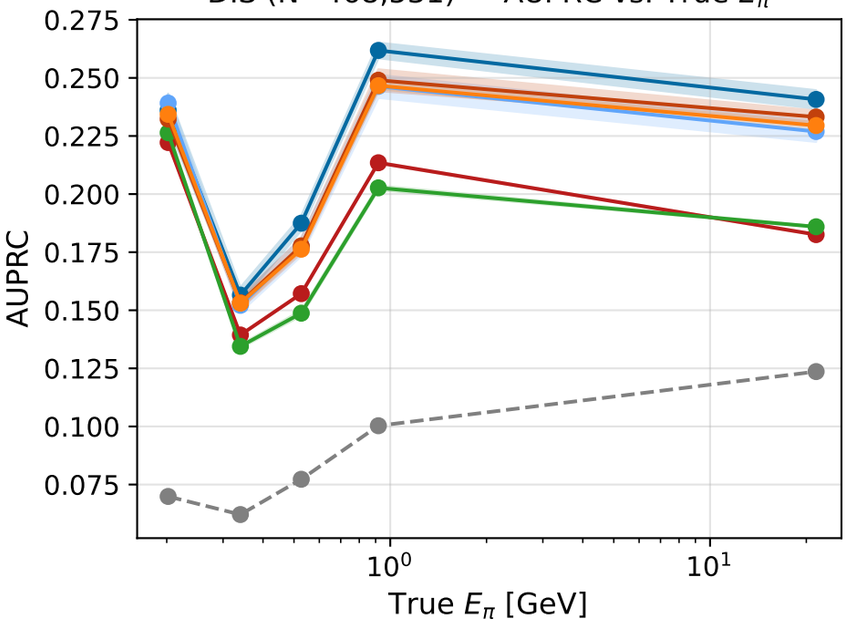

$CC1\pi^{\pm}$ tagging - MINERvA Open Data Playlist 1A
AUPRC vs. W
AUPRC
True W [GeV]
AUROC vs. W
AUROC
True W [GeV]
TPR @ fixed FPR vs. W
Efficiency (TPR)
Baseline (FPR 2.8%)
True W [GeV]
Random baseline
BDT
HyperScale-small
HyperScale-small-rw
MLP
OmniLearned-small
OmniLearned-small-rw


$CC1\pi^{\pm}$ tagging - MINERvA Open Data Playlist 1A
AUPRC vs. True E_π
AUROC vs. True E_π
TPR @ fixed FPR vs. True E_π
Baseline (FPR 2.8%)
AUPRC
AUROC
Efficiency (TPR)
True E_π [GeV]
AUPRC vs. True θ_π
AUROC vs. True θ_π
TPR @ fixed FPR vs. True θ_π
True θ_π [rad]
Random baseline
BDT
HyperScale-small
HyperScale-small-rw
MLP
OmniLearned-small
OmniLearned-small-rw

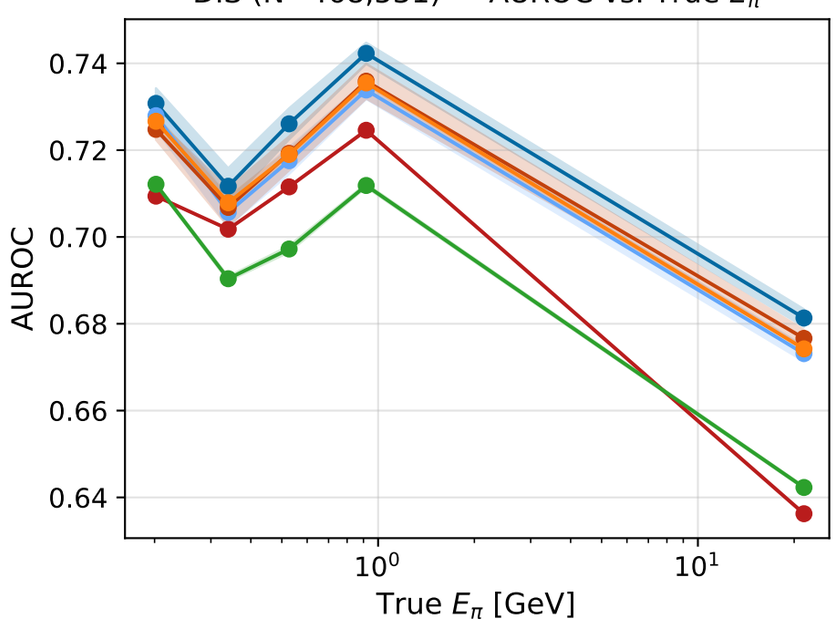

PRC — $CC1\pi^{\pm}$ tagging - MINERvA Open Data Playlist 1A (linear scale)
PRC — $CC1\pi^{\pm}$ tagging - MINERvA Open Data Playlist 1A (log scale)
Precision (purity)
Recall (TPR)
1.0
0.8
0.6
0.4
0.2
0.0
0.0
0.2
0.4
0.6
0.8
1.0
10^{0}
6×10^{-1}
4×10^{-1}
3×10^{-1}
2×10^{-1}
Random baseline
BDT (AUPRC=0.557±0.000)
HyperScale-small (AUPRC=0.614±0.002)
HyperScale-small-rw (AUPRC=0.602±0.003)
MLP (AUPRC=0.555±0.000)
OmniLearned-small (AUPRC=0.607±0.002)
OmniLearned-small-rw (AUPRC=0.605±0.000)

$CC1\pi^{\pm}$ tagging - MINERvA Open Data Playlist 1A – by interaction type

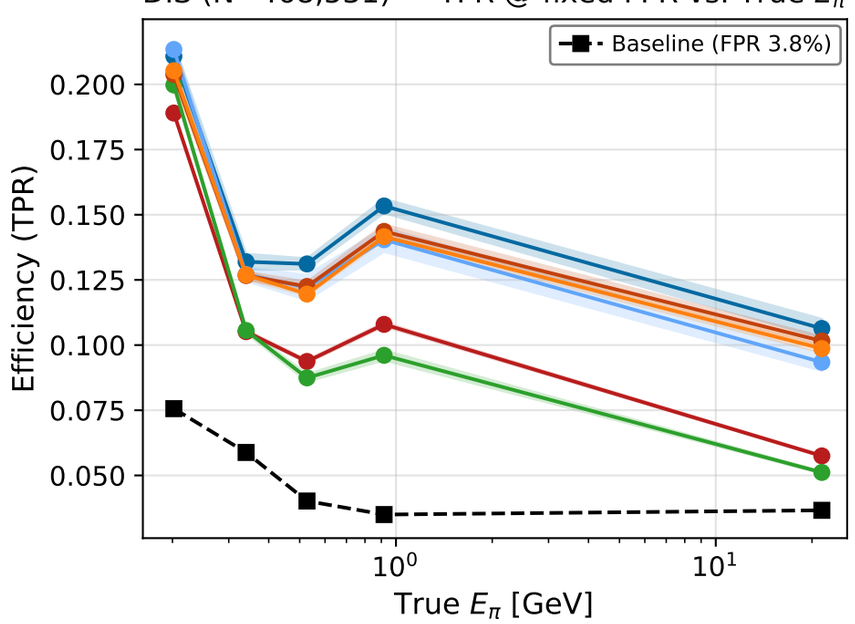
DIS (N=468,531) — AUPRC vs. True E_π



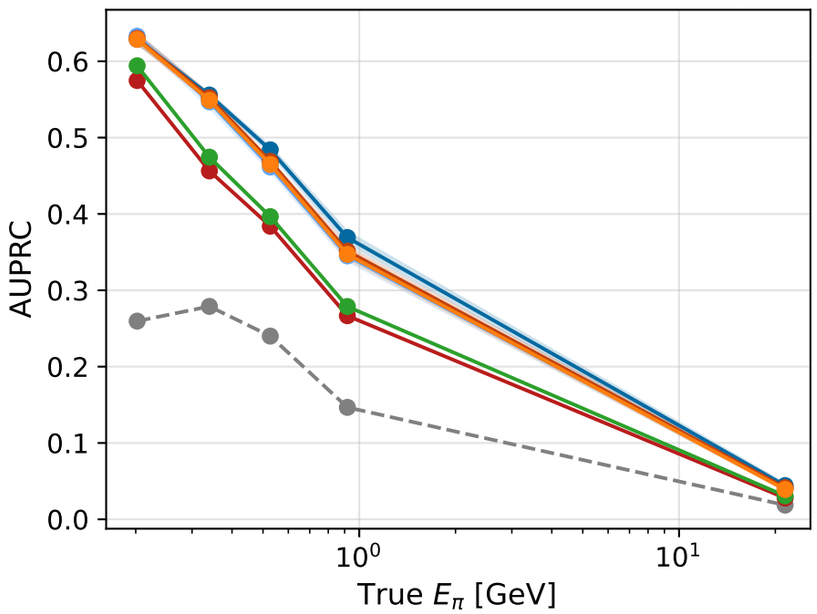
DIS (N=468,531) — AUROC vs. True E_π



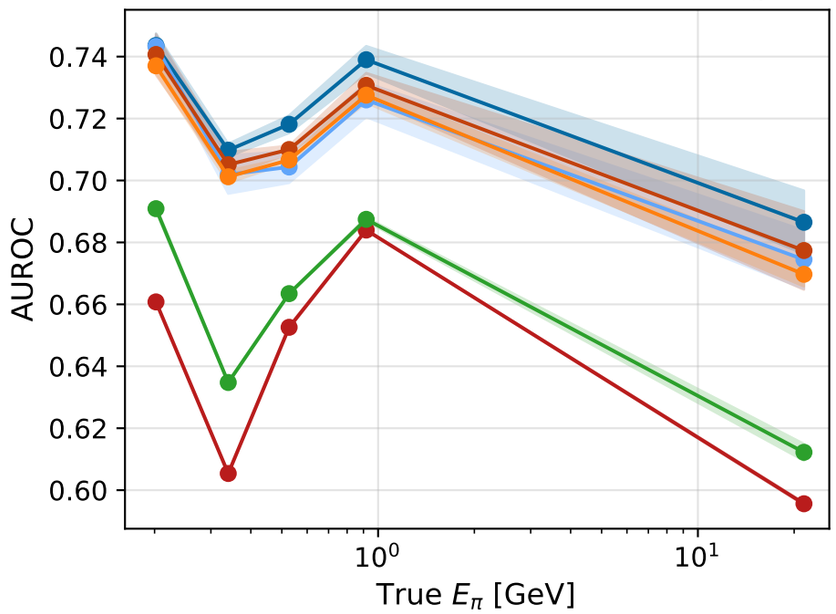
DIS (N=468,531) — TPR @ fixed FPR vs. True E_π



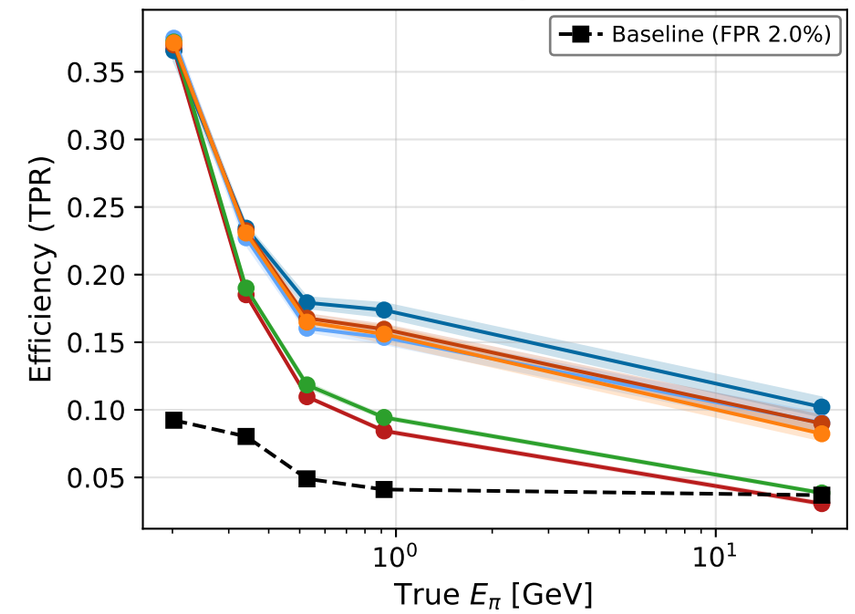
RES (N=162,809) — AUPRC vs. True E_π



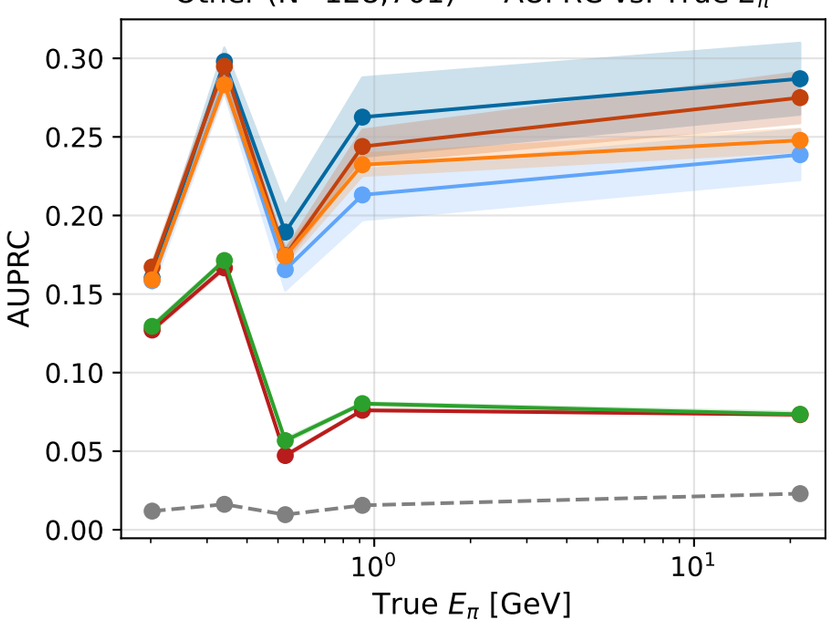
RES (N=162,809) — AUROC vs. True E_π



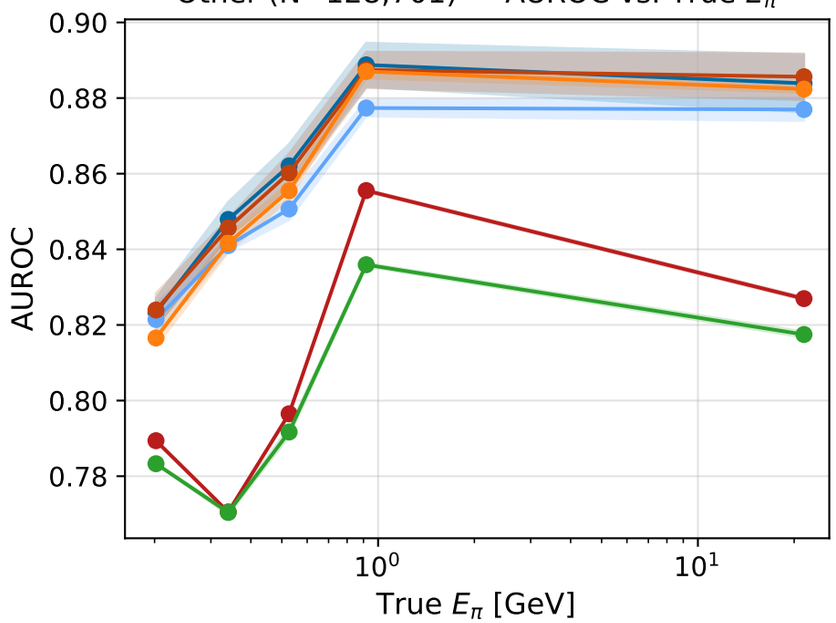
RES (N=162,809) — TPR @ fixed FPR vs. True E_π



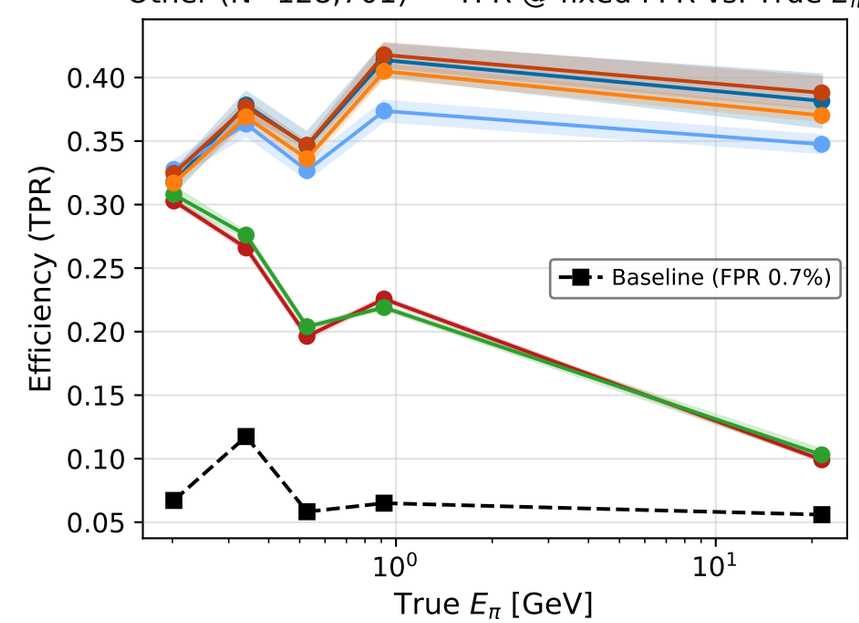
Other (N=128,701) — AUPRC vs. True E_π

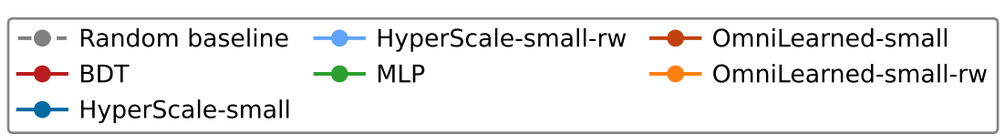


Other (N=128,701) — AUROC vs. True E_π



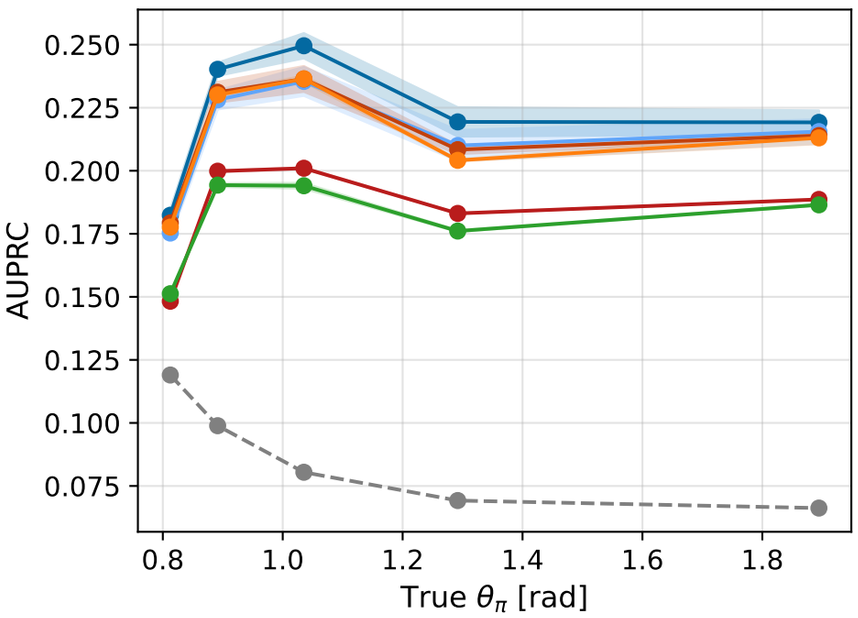
Other (N=128,701) — TPR @ fixed FPR vs. True E_π



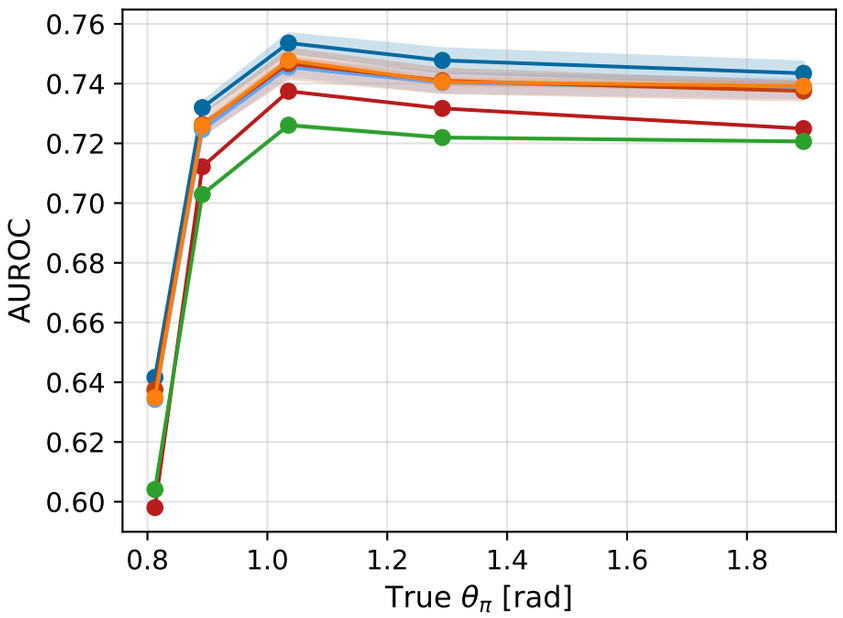


$CC1\pi^{\pm}$ tagging - MINERvA Open Data Playlist 1A - by interaction type

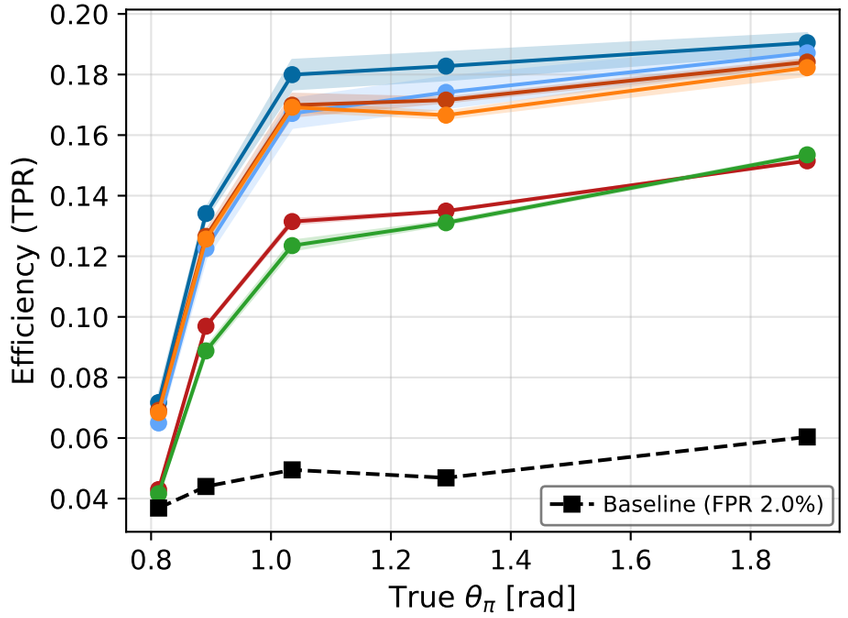
DIS (N=187,775) — AUPRC vs. True θ_π



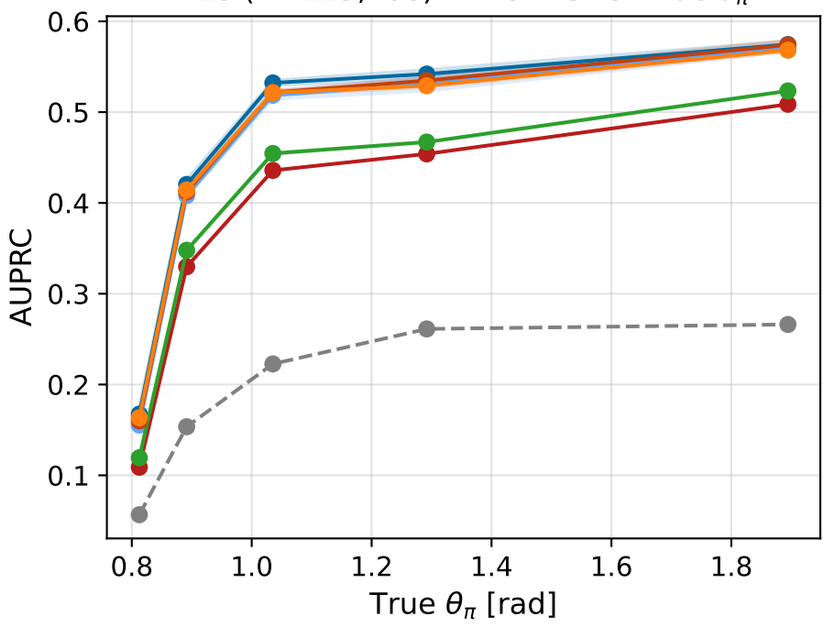
DIS (N=187,775) — AUROC vs. True θ_π



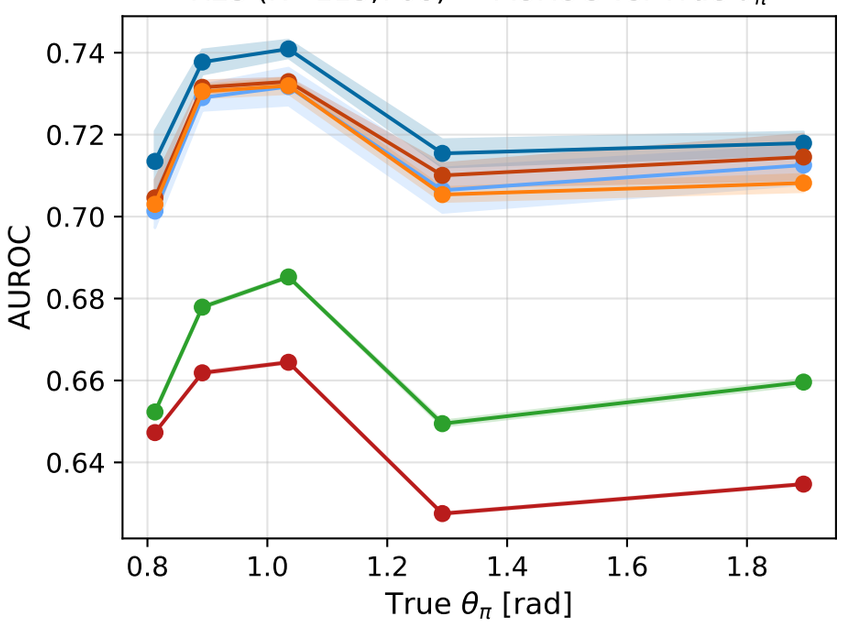
DIS (N=187,775) — TPR @ fixed FPR vs. True θ_π



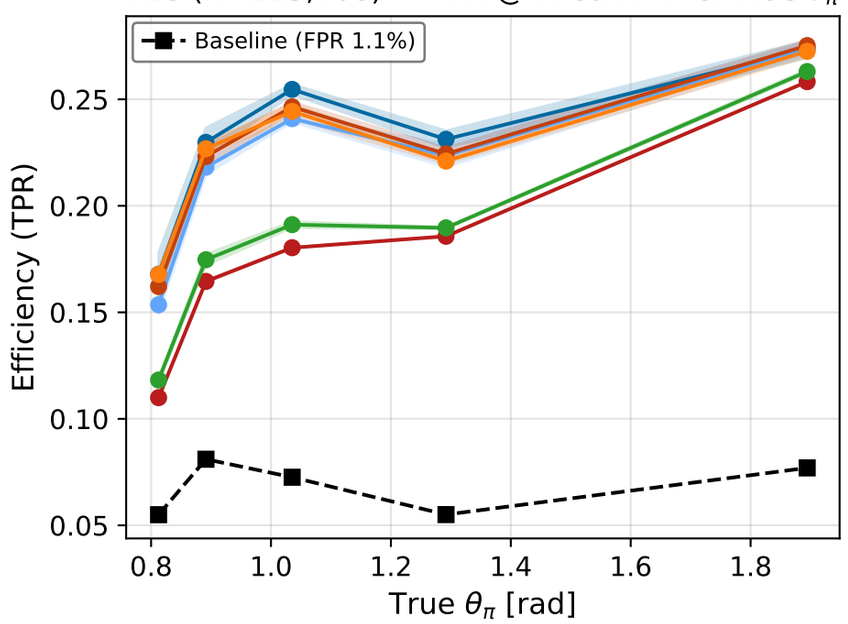
RES (N=115,708) — AUPRC vs. True θ_π



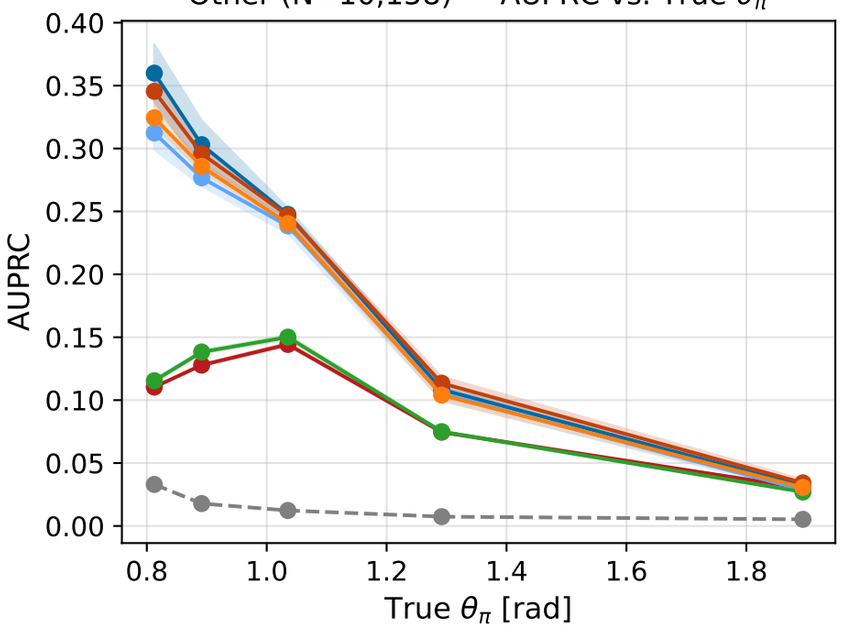
RES (N=115,708) — AUROC vs. True θ_π



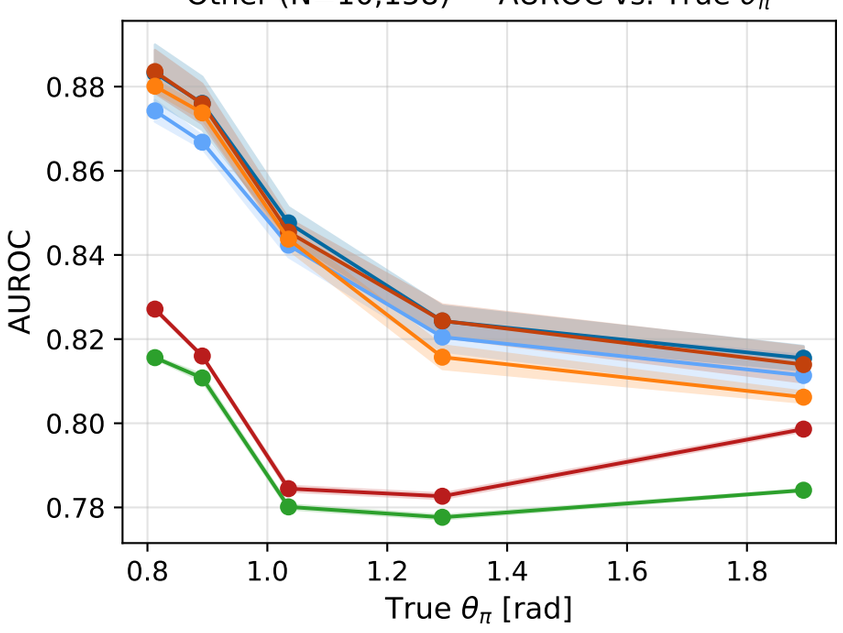
RES (N=115,708) — TPR @ fixed FPR vs. True θ_π



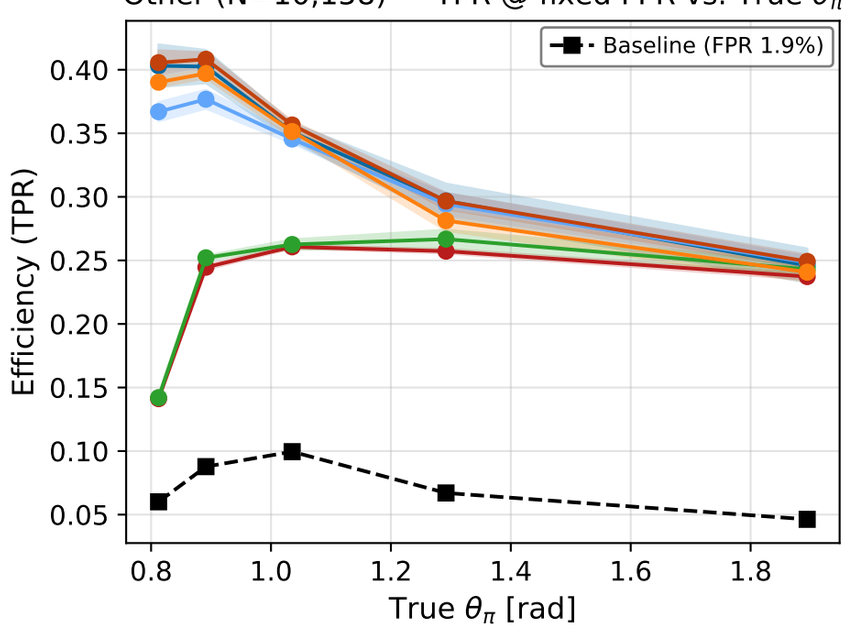
Other (N=10,158) — AUPRC vs. True θ_π



Other (N=10,158) — AUROC vs. True θ_π



Other (N=10,158) — TPR @ fixed FPR vs. True θ_π



Random baseline
BDT
HyperScale-small
HyperScale-small-rw
MLP
OmniLearned-small
OmniLearned-small-rw