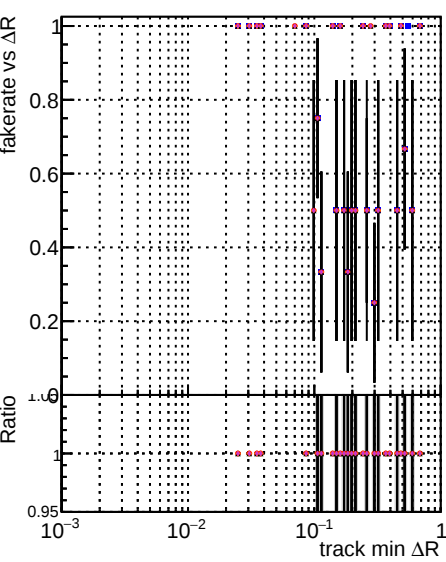


Fake rate vs dr



Duplicates Rate vs dr



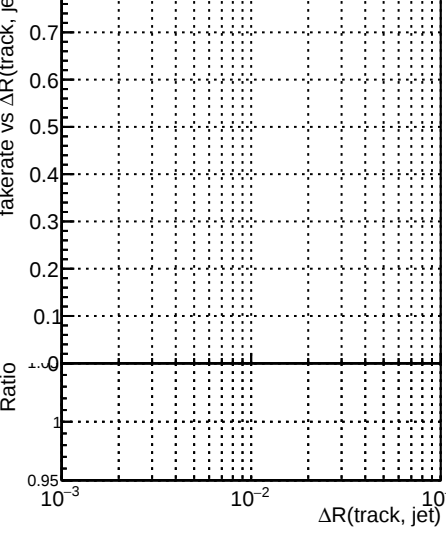
Pileup rate vs dr



Legend for Fake rate vs ΔR , Duplicates Rate vs ΔR , and Pileup rate vs ΔR :

Model	Symbol
DOM	Black circle
mkFit	Blue circle
XiMinusPU	Red circle
retrain2_lowpt	Green circle
QCD	Black circle
WZ	Black circle
tt	Black circle
tt+X	Black circle
tt+X+Y	Black circle
tt+X+Y+Z	Black circle
tt+X+Y+Z+W	Black circle
tt+X+Y+Z+W+V	Black circle
tt+X+Y+Z+W+V+U	Black circle
tt+X+Y+Z+W+V+U+T	Black circle
tt+X+Y+Z+W+V+U+T+S	Black circle
tt+X+Y+Z+W+V+U+T+S+R	Black circle
tt+X+Y+Z+W+V+U+T+S+R+Q	Black circle
tt+X+Y+Z+W+V+U+T+S+R+Q+P	Black circle
tt+X+Y+Z+W+V+U+T+S+R+Q+P+O	Black circle
tt+X+Y+Z+W+V+U+T+S+R+Q+P+O+N	Black circle
tt+X+Y+Z+W+V+U+T+S+R+Q+P+O+N+M	Black circle
tt+X+Y+Z+W+V+U+T+S+R+Q+P+O+N+M+L	Black circle
tt+X+Y+Z+W+V+U+T+S+R+Q+P+O+N+M+L+K	Black circle
tt+X+Y+Z+W+V+U+T+S+R+Q+P+O+N+M+L+K+J	Black circle
tt+X+Y+Z+W+V+U+T+S+R+Q+P+O+N+M+L+K+J+I	Black circle
tt+X+Y+Z+W+V+U+T+S+R+Q+P+O+N+M+L+K+J+I+H	Black circle
tt+X+Y+Z+W+V+U+T+S+R+Q+P+O+N+M+L+K+J+I+H+G	Black circle
tt+X+Y+Z+W+V+U+T+S+R+Q+P+O+N+M+L+K+J+I+H+G+F	Black circle
tt+X+Y+Z+W+V+U+T+S+R+Q+P+O+N+M+L+K+J+I+H+G+F+E	Black circle
tt+X+Y+Z+W+V+U+T+S+R+Q+P+O+N+M+L+K+J+I+H+G+F+E+D	Black circle
tt+X+Y+Z+W+V+U+T+S+R+Q+P+O+N+M+L+K+J+I+H+G+F+E+D+C	Black circle
tt+X+Y+Z+W+V+U+T+S+R+Q+P+O+N+M+L+K+J+I+H+G+F+E+D+C+B	Black circle
tt+X+Y+Z+W+V+U+T+S+R+Q+P+O+N+M+L+K+J+I+H+G+F+E+D+C+B+A	Black circle

Fake rate vs



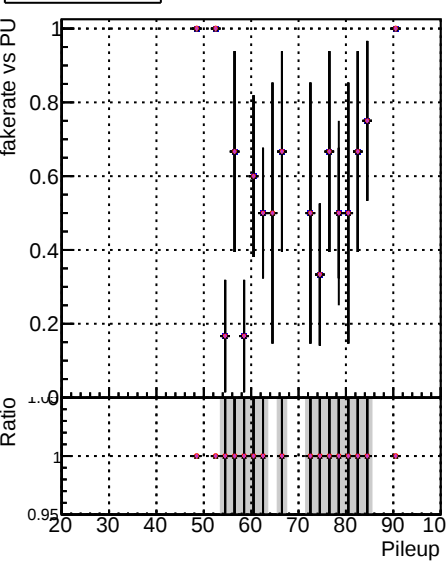
Duplicates Rate vs



Pileup rate vs



Fake rate vs pu



Duplicates Rate vs pu



Pileup rate vs pu

