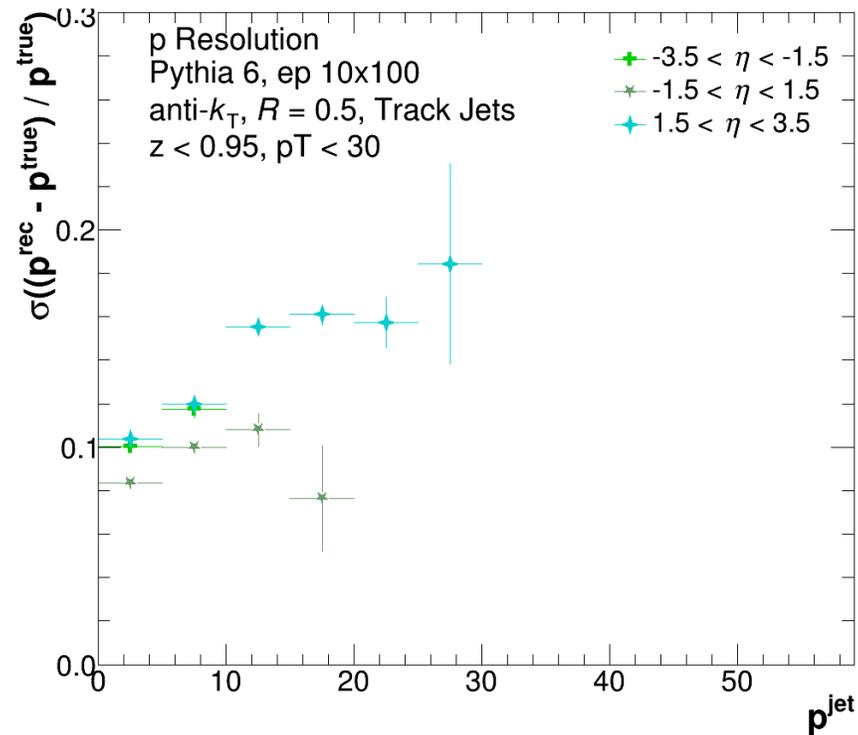


Jet Studies

Tristan Protzman, Lehigh University

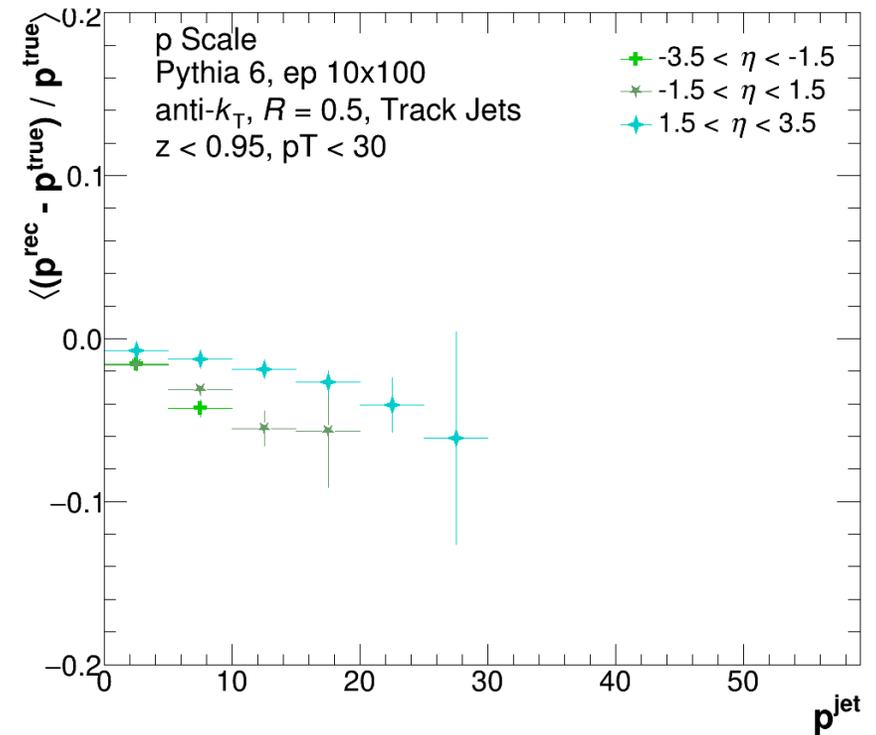
June Production

- SIDIS ep 10x100 data
 - prop.2/c131177/SIDIS/pythia6/ep-10x100
- Scale and resolution both seem good
 - Nothing to prevent physics goals



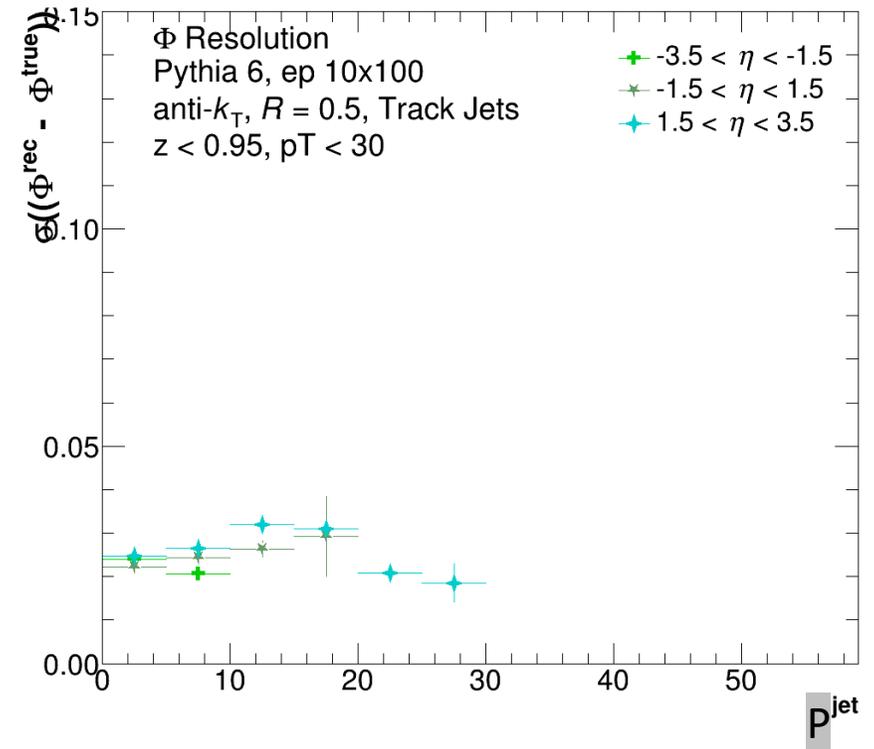
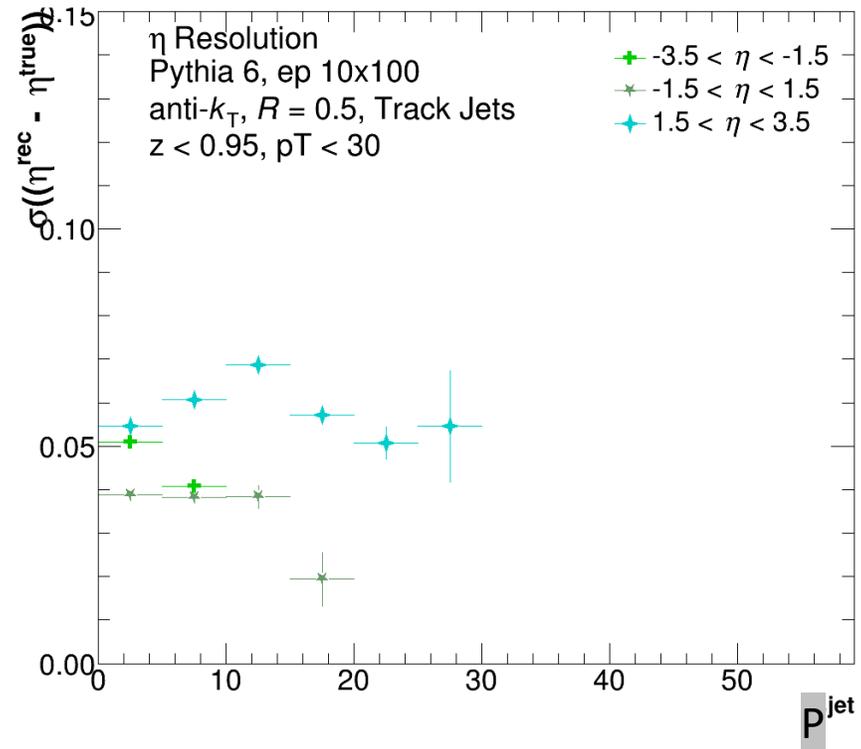
Cuts

- $p_T < 30$
- $Z < 0.95$
- $> R$ from detector boundaries
 - Need to get in touch with tracking group to find latest values



June Production

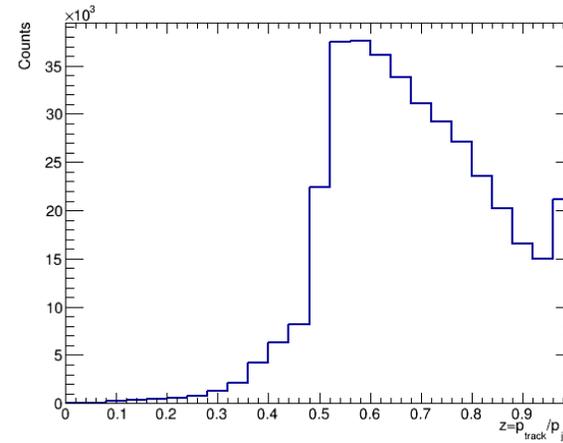
- Our resolution in eta and phi also look good



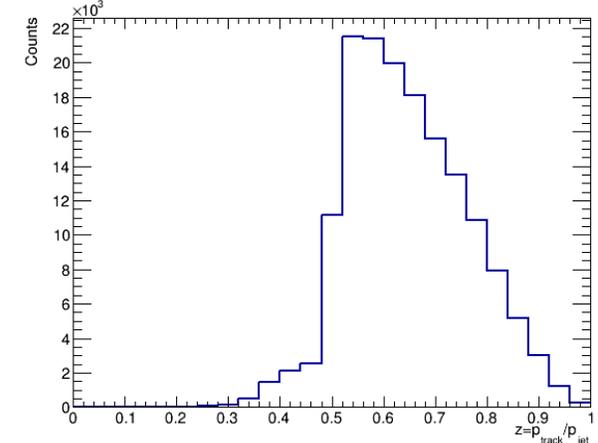
Jet Z Cut

- Only matching jets with a Z less than 0.95 helps considerably
 - $Z = p_{\text{track}} / p_{\text{jet}}$
 - Eliminates jets composed primarily of a single constituent
- Truth and reconstructed jets have significantly different spectra
 - Far more high z jets in truth set
 - Not sure what to make of that yet

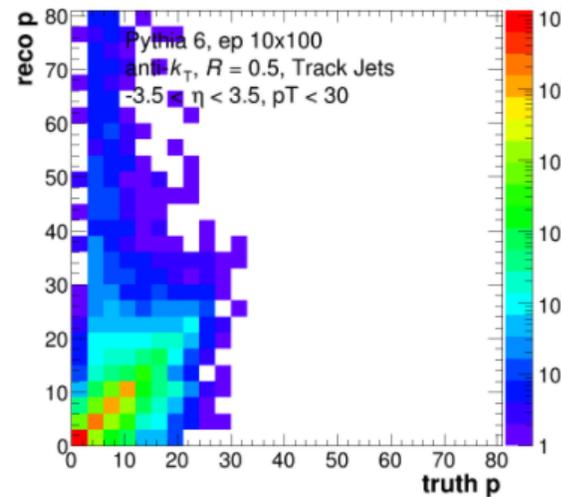
Truth Z Distribution



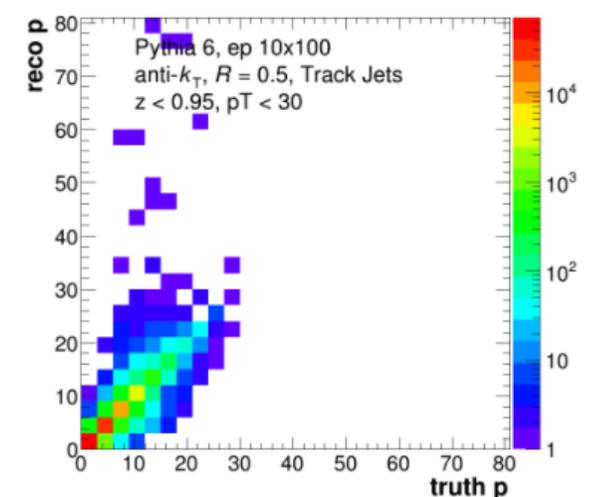
Reconstructed Z Distribution



No Z Cut

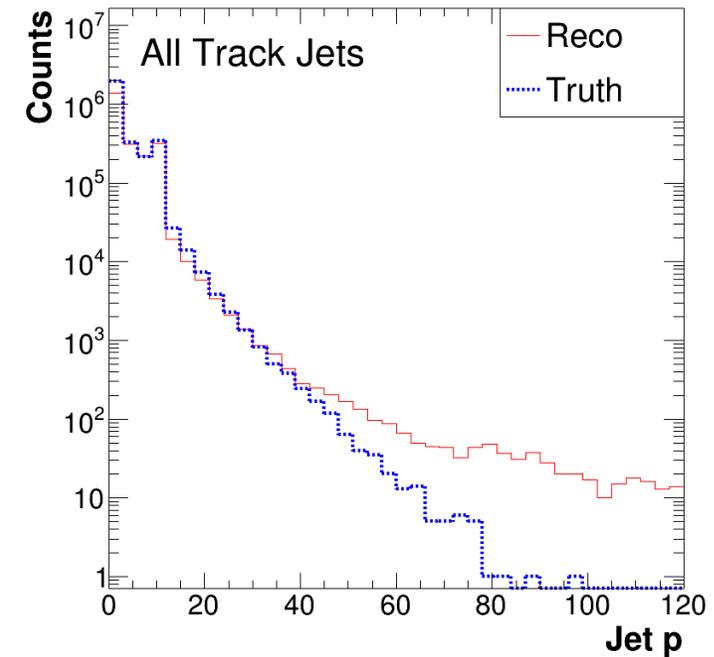
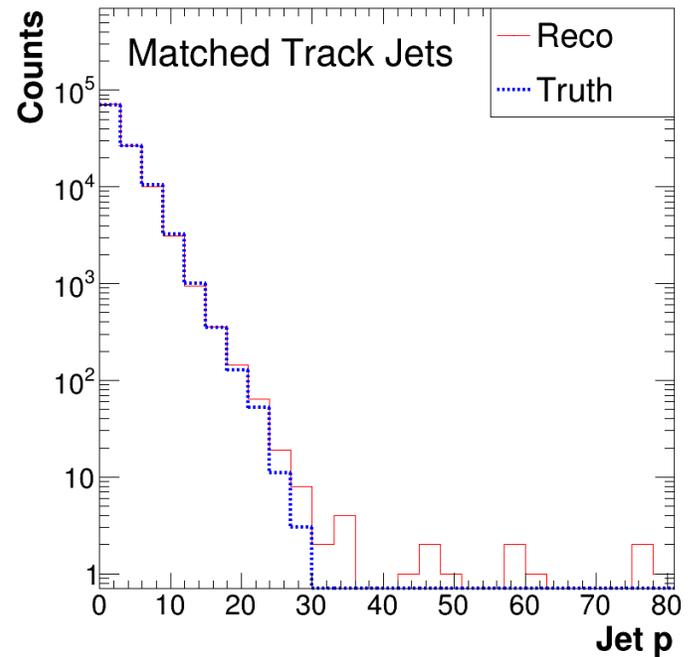
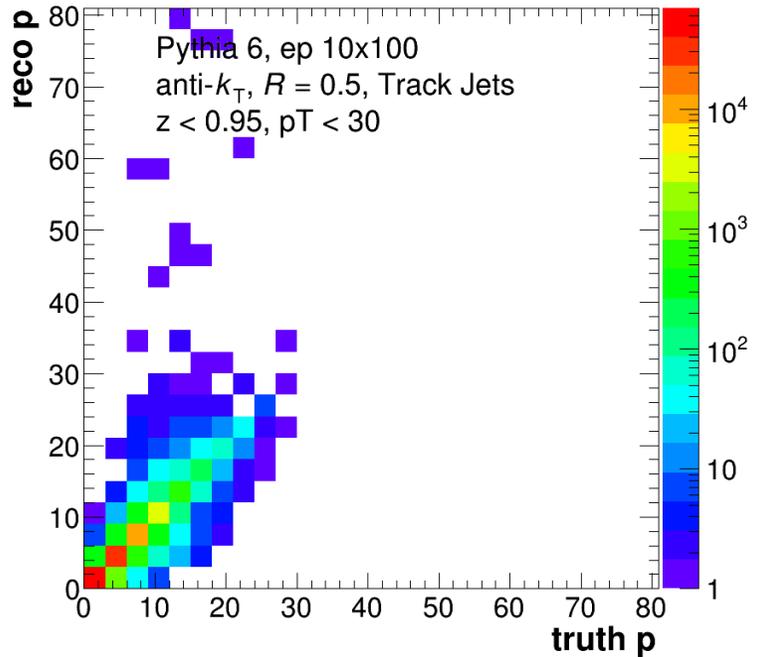


Z < 0.95



Backup

Tracked Jet Spectra



- Most of these high momentum reconstructed jets fall in $3 < \text{eta} < 3.5$
- These are excluded from matching as they are within R of the detector edge

