

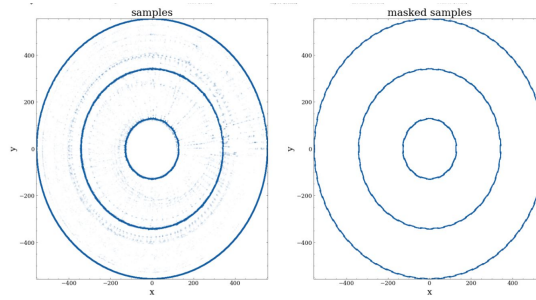
Update: GenAI for BIB Team

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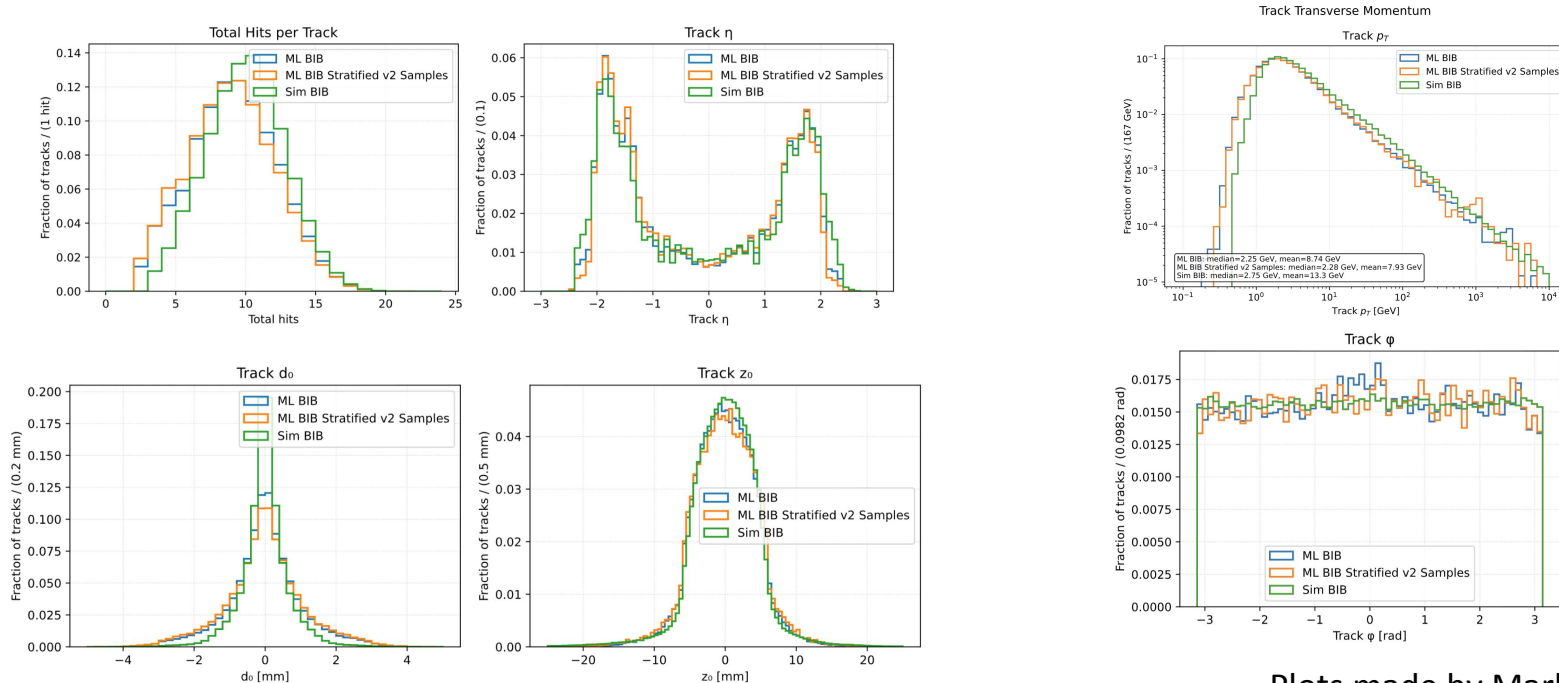
Progress so far: BIB generation

- Current pipeline:
 - Generate BIB AI samples using 1 model per detector system
 - Apply material mask to samples
 - Stratify samples such that the $p_{\text{sim}}(c) \sim p_{\text{ML}}(c)$ where c is the conditioning vector (side, layer, module, sensor)
 - Force samples to sensitive layer of module (in digitization + reconstruction)



Progress so far: digitization and reconstruction

- ML BIB tracks generally resemble Sim BIB tracks
- Stratification may not be necessary if we can get the Inner + Outer Barrel phi distributions right



Open Tasks and next steps

- More non-AUC evaluations of the BIB AI samples
- Compare time to generate BIB vs time to generate AI