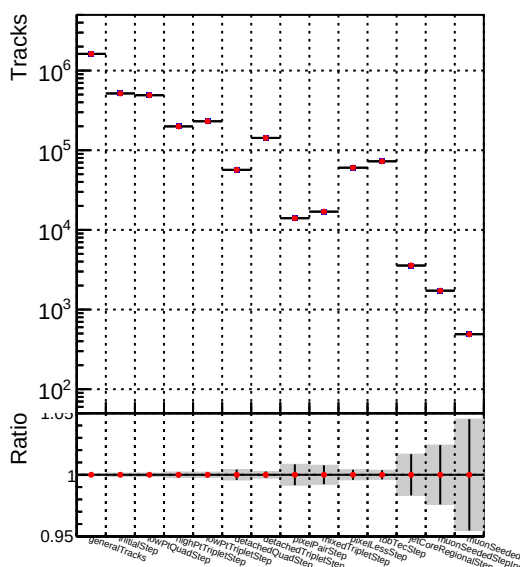
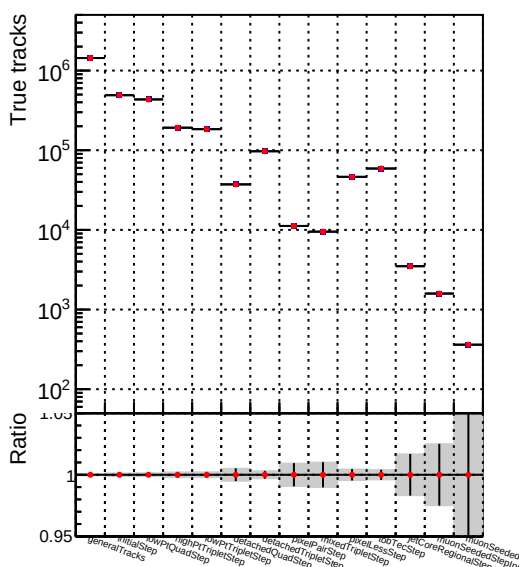


### Number of tracks vs collection



### Number of true tracks vs collection



|        |   |                                             |
|--------|---|---------------------------------------------|
| Number | 0 | DQM_V0001_R0000000001_Global_mkrFit_batch10 |
|--------|---|---------------------------------------------|

Number —●— DOM V0001 R0000000001 Global mkFit batch16

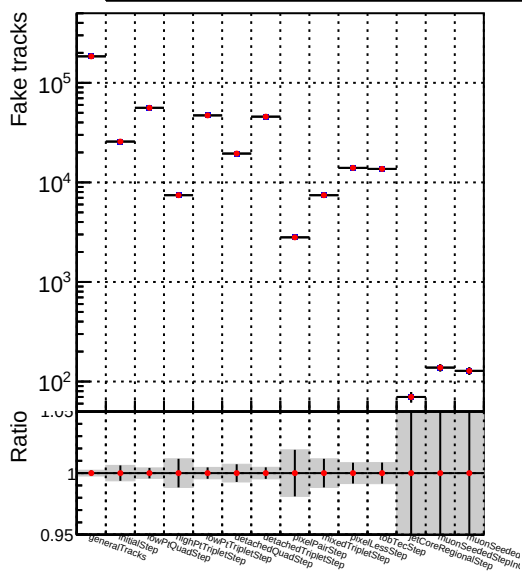


Figure 1 is a log-linear plot showing the ratio of duplicate tracks for various steps in the analysis pipeline. The y-axis is labeled 'Ratio' and ranges from 0.95 to  $10^5$  on a logarithmic scale. The x-axis lists 18 steps: generalTracks, initialStep, initPairStep, initTripletStep, initQuadStep, highPTTripletStep, detachedTripletStep, detachedQuadStep, initPairStep, initTripletStep, initQuadStep, highPTTripletStep, detachedTripletStep, detachedQuadStep, initPairStep, initTripletStep, initQuadStep, highPTTripletStep, detachedTripletStep, detachedQuadStep. Red dots with error bars represent the ratio for each step. A horizontal line at Ratio = 1.0 indicates the baseline. Steps with ratios significantly above 1.0 are highlighted with grey vertical bars.

| Step                | Ratio (approx.) | Highlighted |
|---------------------|-----------------|-------------|
| generalTracks       | ~40,000         | Yes         |
| initialStep         | ~1.0            | No          |
| initPairStep        | ~40             | Yes         |
| initTripletStep     | ~40             | Yes         |
| initQuadStep        | ~7              | Yes         |
| highPTTripletStep   | ~450            | Yes         |
| detachedTripletStep | ~1,000          | Yes         |
| detachedQuadStep    | ~2.5            | Yes         |
| initPairStep        | ~1.0            | No          |
| initTripletStep     | ~1.0            | No          |
| initQuadStep        | ~1.0            | No          |
| highPTTripletStep   | ~100            | Yes         |
| detachedTripletStep | ~100            | Yes         |
| detachedQuadStep    | ~1.0            | No          |
| initPairStep        | ~1.0            | No          |
| initTripletStep     | ~1.0            | No          |
| initQuadStep        | ~1.0            | No          |
| highPTTripletStep   | ~1.0            | No          |
| detachedTripletStep | ~1.0            | No          |
| detachedQuadStep    | ~1.0            | No          |

### Number of pileup tracks vs collection

