EIC Detector-1 Simulation, Production, QA - Planning

Working Group: Inclusive reactions

Contact Person: Tyler Kutz (tkutz@mit.edu)

Synopsis

Our primary goal is to use simulations to track acceptance and reconstruction resolution with evolving detector design. In addition to this, we would like to perform more sophisticated background studies including the far-backward detector

Current requests

1. 5x41 GeV ep (Q2 > 1 GeV^2):
    a. 0.5M
    b. DJANGOH
    c. Reference design of central + far-backward detectors
    d. Central tracks + central clusters + backward tracks
2. 5x41 GeV ep (Q2 > 2 GeV^2):
    a. 1M
    b. DJANGOH
    c. Reference design of central + far-backward detectors
    d. Central tracks + central clusters + backward tracks
3. 5x41 GeV ep (Q2 > 10 GeV^2):
    a. 0.5M
    b. DJANGOH
    c. Reference design of central + far-backward detectors
    d. Central tracks + central clusters + backward tracks
4. 5x41 GeV ep (Q2 > 50 GeV^2):
    a. 0.3M
    b. DJANGOH
    c. Reference design of central + far-backward detectors
    d. Central tracks + central clusters + backward tracks
5. 10x100 GeV eD (Q2 > 1 GeV^2):
    a. 0.5M
    b. DJANGOH
    c. Reference design of central + far-backward detectors
    d. Central tracks + central clusters + backward tracks
6. 10x100 GeV eD (Q2 > 2 GeV^2):
    a. 1M
    b. DJANGOH
    c. Reference design of central + far-backward detectors
    d. Central tracks + central clusters + backward tracks

7. 10x100 GeV eD (Q2 > 10 GeV^2):
    a. 1M
    b. DJANGOH
    c. Reference design of central + far-backward detectors
    d. Central tracks + central clusters + backward tracks
8. 10x100 GeV eD (Q2 > 100 GeV^2):
    a. 0.5M
    b. DJANGOH
    c. Reference design of central + far-backward detectors
    d. Central tracks + central clusters + backward tracks
9. 10x100 GeV eD (Q2 > 500 GeV^2):
    a. 0.1M
    b. DJANGOH
    c. Reference design of central + far-backward detectors
    d. Central tracks + central clusters + backward tracks
10. 18x275 GeV ep (Q2 > 1 GeV^2):
    a. 0.5M
    b. DJANGOH
    c. Reference design of central + far-backward detectors
    d. Central tracks + central clusters + backward tracks
11. 18x275 GeV ep (Q2 > 2 GeV^2):
    a. 1M
    b. DJANGOH
    c. Reference design of central + far-backward detectors
    d. Central tracks + central clusters + backward tracks
12. 18x275 GeV ep (Q2 > 10 GeV^2):
    a. 1M
    b. DJANGOH
    c. Reference design of central + far-backward detectors
    d. Central tracks + central clusters + backward tracks
13. 18x275 GeV ep (Q2 > 50 GeV^2):
    a. 1M
    b. DJANGOH
    c. Reference design of central + far-backward detectors
    d. Central tracks + central clusters + backward tracks
14. 18x275 GeV ep (Q2 > 100 GeV^2):
    a. 1M
    b. DJANGOH
    c. Reference design of central + far-backward detectors
    d. Central tracks + central clusters + backward tracks
15. 18x275 GeV ep (Q2 > 1000 GeV^2):
    a. 0.5M
    b. DJANGOH
    c. Reference design of central + far-backward detectors
    d. Central tracks + central clusters + backward tracks

16. 5x41 GeV ep charged-current (Q2 > 1 GeV^2):
    a. 1M
    b. DJANGOH
    c. Reference design of central + far-backward detectors
    d. Central tracks + central clusters + backward tracks
17. 18x275 GeV ep charged-current (Q2 > 1 GeV^2):
    a. 1M
    b. DJANGOH
    c. Reference design of central + far-backward detectors
    d. Central tracks + central clusters + backward tracks
18. 18x275 GeV ep photoproduction (Q2 < 2 GeV^2):
    a. 6M
    b. Pythia6
    c. Reference design of central + far-backward detectors
    d. Central tracks + central clusters + backward tracks

TOTAL REQUESTED EVENTS: 18.4M

Future requests

This section includes anticipated requests for the next year (which can be more vague). This should focus on larger efforts or those that are held-up by missing technical features.

1. [Request 1]:
2. [Request 2]: