

Medium Lumi WG

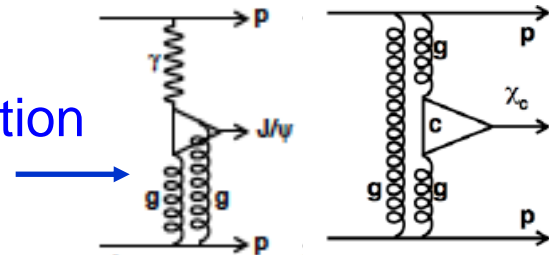
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Medium Lumi Processes

■ Central Exclusive Production

□ photoproduction, DPE, exclusive meson production

- low pt systems, benefit from FSC, proton tagging, low lumi
- high mass (electroweak, new physics)
- -> high lumi WG



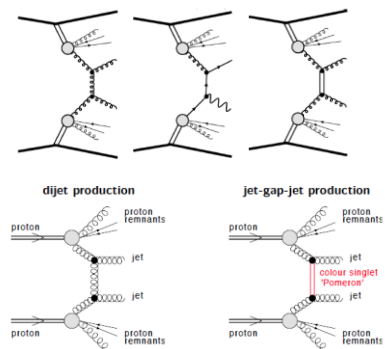
■ Diffraction

□ DPE di-jet, γ jet, jet-gap-jet

- probe quark and gluon diffractive densities
- benefit from proton tagging; backgrounds dependent on $\mu\nu$

□ Jet-gap-jet, jet veto

- no tagging, but ratios of cross sections to tagged processes



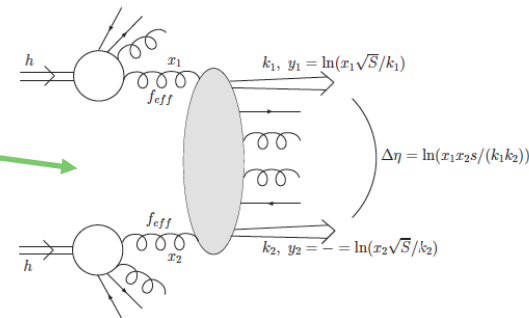
■ Mueller Navelet jets

■ Forward Drell Jan

■ Forward Jets

■ Cosmic Air Showers

■ pA



Steps for October meeting I

- Split topics by experiment, as conditions vary greatly
 - For each topic: which steps needed to answer common questions?
 - Quantitative benefit of proton tagging + timing option
 - Benefit of FSCs (past, present, future)
 - (general) can we come up with more optimal filling schemes, opportunities for low lumi running
 - Purity as a function of μ : establish best/worst case running scenarios
 - Which MC generators are needed and timescale
 - FPMC (forward physics MC), implementation of all diffractive/photon induced processes + interface to ATLAS
 - CMS generator study: (Pythia, Herwig, Powheg, Cascade, HEJ, Sherpa, BFKL NLL, NLOJET)
 - mcplots.cern.ch resource
 - Superchic++, updated MNRT, in general, attacking (or measuring!) proton disassociation backgrounds
 - Arelevant values for survival prpbabilities
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Steps for October meeting II

- Establish full list of topics/contributors
 - with input from this workshop series ++
 - looking out for overlap with other WG sections
 - Invite further speakers e.g. cosmic air, Pierre Auger
 - Writing assignments, deadline January meeting ?
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