

# Underlying event and Minimum Bias (WG1)

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(Last year: 8 talks)

## PLAN:

### - Theorists confirmed (4 talks):

Andre' Giannini (asking for support) - particle multiplicities with kT factorization

Thomas Trainor (Soft and hard models for UE in Pythia8)

Boris Blok (minijets in pA)

Mark Strikman + Maxim Azarkhin (multiplicity correlation studies)

### - Theorists/Phenomenologists contacted but no reply:

Yannis Makris (<https://arxiv.org/abs/1803.04413>)

Matthew Dolan (<https://arxiv.org/abs/1609.00607>)

Robert Vertesi (<https://arxiv.org/abs/1809.10102>)

Antonio Ortiz (<https://arxiv.org/abs/1809.01744>)

James Monk (<https://arxiv.org/abs/1807.03685>)

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## - Collaborations confirmed:

### ATLAS

1. Softdrop+jet shapes
2. Fragmentation studies ( $g \rightarrow bb$  and fragmentation using charged particles)
3. Z UE at 13 TeV + 4 lepton DPI

### CMS

1. Recent results on Minimum Bias and Underlying Event by CMS
2. Small system physics from CMS: energy and multiplicity dependence of identified particle production
3. Small system physics from CMS: energy and multiplicity dependence of particle correlations

## - Collaborations contacted but no submission yet:

- ALICE
- LHCb
- STAR
- PHENIX

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Activity of contacting theorists/collaborations not started yet but first round of mails to be sent before August's holidays

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## PLAN:

- Focus on Underlying Event measurements and jet substructure observables
  - Particle multiplicities, event shapes in different final states
  - Phenomenology studies about tagging boosted objects from substructure
  - Total and inelastic cross section measurements
- contact LHC collaborations (based on last year – ALICE, CMS, ATLAS, LHCb)
- contact RHIC collaborations (STAR, PHENIX?)