Forward Physics at the LHC, physics questions

1) 'New physics'

Understanding the underlying event (forward detector)

Central exclusive production (Higss) (proton tagging; high lumi)

Electroweak vector scattering (gamma gamma --> WW, anomalous coupling) (forward detector, high lumi)

2) Understanding the Standard model (QCD):

Totem: total cross section, elastic scattering, soft diffraction (low lumi)

BFKL (jet-gap-jet= hard color singlet exchange; Mueller-Navelet jets)

(forward detector; medium lumi)

Single hard diffraction (low lumi)

Monte Carlo in forward direction, including rapidity gaps

Double Pomeron with hard scale (inclusive, Pomeron structure function)

Gamma-Pomeron, with and without hard scale (low and medium lumi)

Drell-Yan in the forward direction (small-x, saturation)

pA: saturation ...