

# **Evidence of Strong Proton Shape Fluctuations from Incoherent Diffraction,**

Heikki Mäntysaari and Björn Schenke,

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1. How is coherent vs incoherent diffraction determined experimentally? (**Nadia**)
2. What is a pomeron? Can the vector meson produced in this process only be a  $J/\psi$ ? (**Gula**)
3. Is there a minimum  $|t|$  for incoherent diffraction? Why? (**Shiv**)
4. What is meant by “collective phenomena” (see page 1) and how does it relate to the shape of the proton? What are Glasma and Color Glass Condensate, how were they discovered (were they?), and how do they differ from Quark Gluon Plasma. What is the IP-Glasma model used for related to the QGP? (**Rekam**)
5. What is the Constituent Quark Model? Why would the gluon density of a proton change at different times? How is the gluon density related to the gluon structure function? (**Andrea**)
6. How does regular DIS probe the proton structure? How do parton evolution models help it to probe the gluon structure? (**Kristyn**)
7. What is Gluon Saturation and how does it relate to the Color Glass Condensate model and other parton evolution models. What are other parton evolution models (or approximation regimes)? List some and explain one other besides the ones we discussed. (**Matt**)
8. How will an EIC contribute to this picture—for regular DIS and for Diffractive DIS? What will it add to the HERA data? (**Doug**)
9. Can we have one equation for both coherent and incoherent cross sections (see equations 3 & 4)? If yes, what would it be? If not, why? (**Sudhanva**)