# PHOTOPRODUCTION ($Q^2 \approx 0$)

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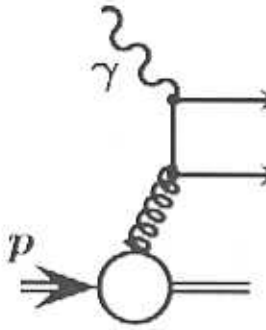
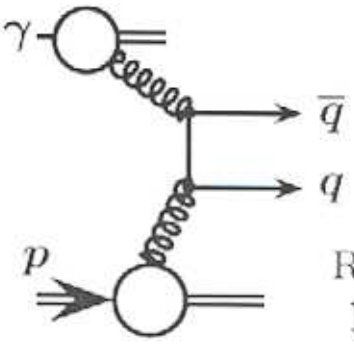
## HIGH-$p_T$ JET/HADRON PRODUCTION:



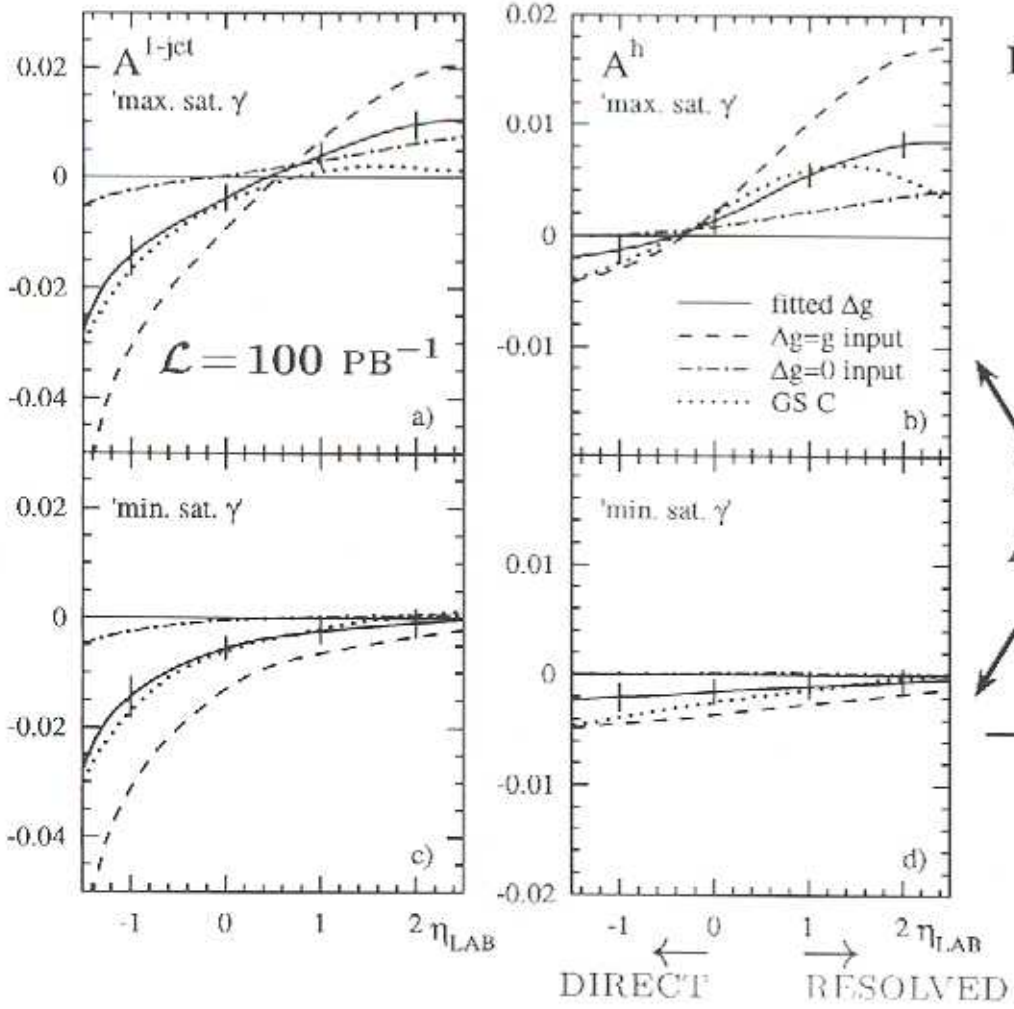

DIRECT PHOTON




RESOLVED PHOTON ($\vec{\gamma}\vec{p}$)

↳ $\Delta q^\gamma$

INCLUSIVE ASYMMETRIES FOR SINGLE JETS: $p_T > 8$ GeV HADRONS: $p_T > 2$ GeV



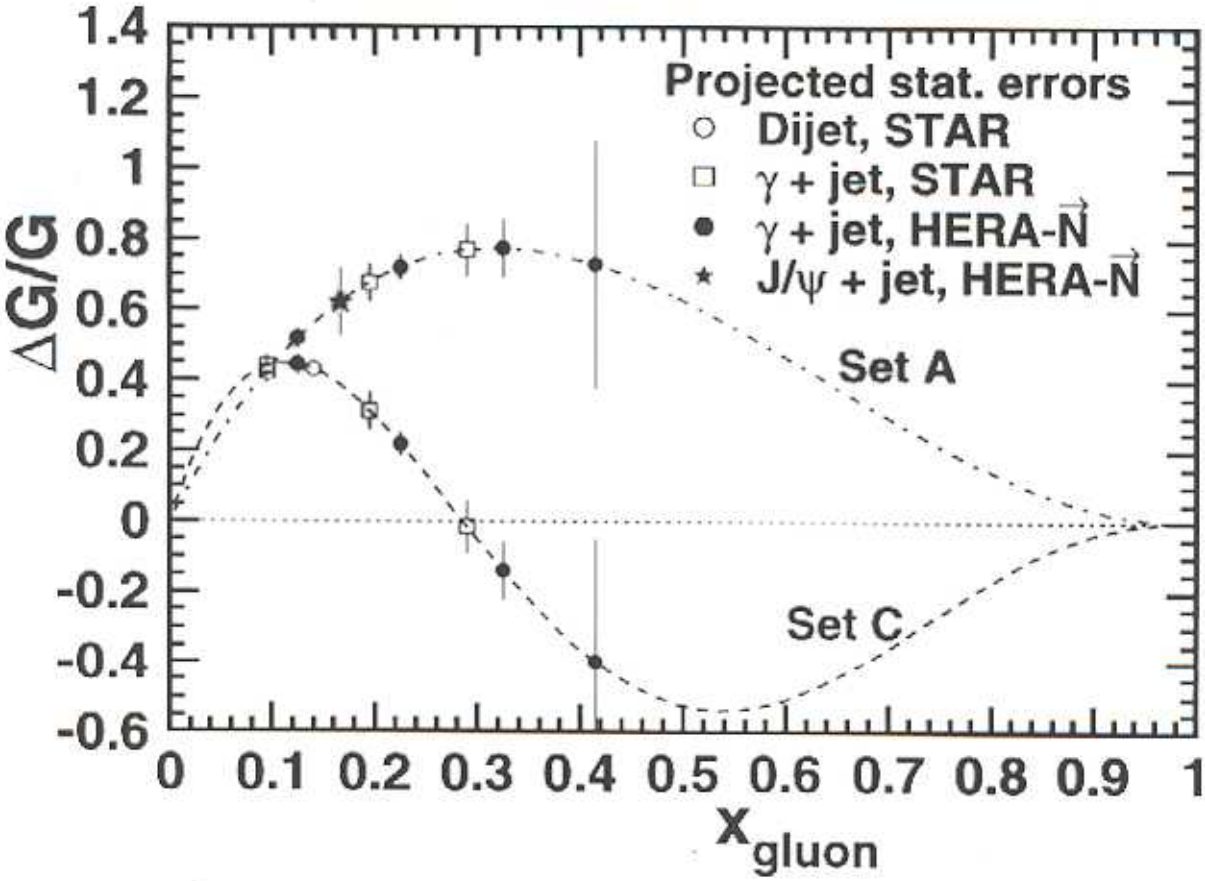

INFORMATION ON $\Delta q^\gamma$ UNIQUE TO HERA

2 DIFFERENT ASSUMPTIONS FOR $\Delta q^\gamma$

→ SENSITIVITY TO $\Delta q^\gamma$ AND $\Delta G$

# $\Delta G/G$ AT HERA-$\vec{N}$

$$\vec{p}\vec{p} \to \gamma + \text{JET} + X, \quad \vec{p}\vec{p} \to J/\Psi + \text{JET} + X$$




| | | | | |
|---|---|---|---|---|
| HERA-$\vec{N}$ | 2 | 4 | 6 | 8 |
| RHIC | 10 | 20 | 30 | |

$\longrightarrow p_T$

STUDY $\Delta G/G$ IN

$p$QCD ONSET REGION

DEEP PERTURB. REGION

COMPLEMENTARY EXPERIMENTS!

(V. KOROTKOV)