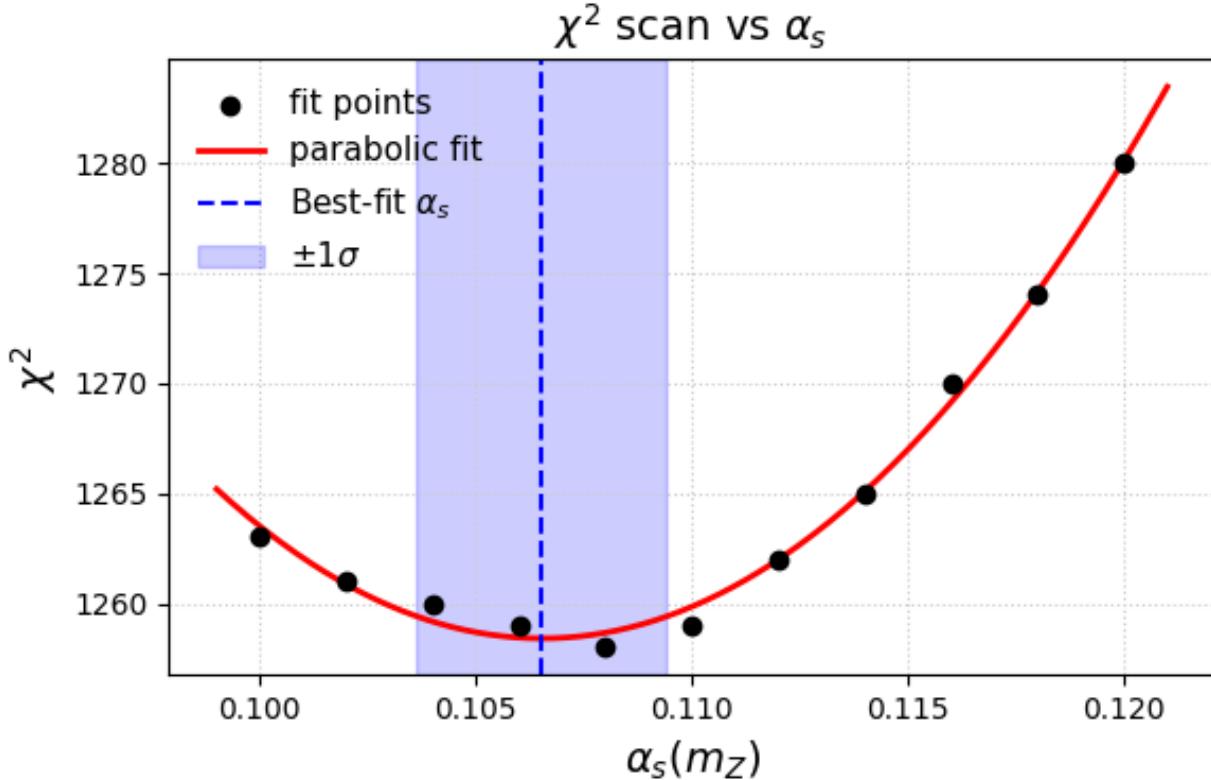
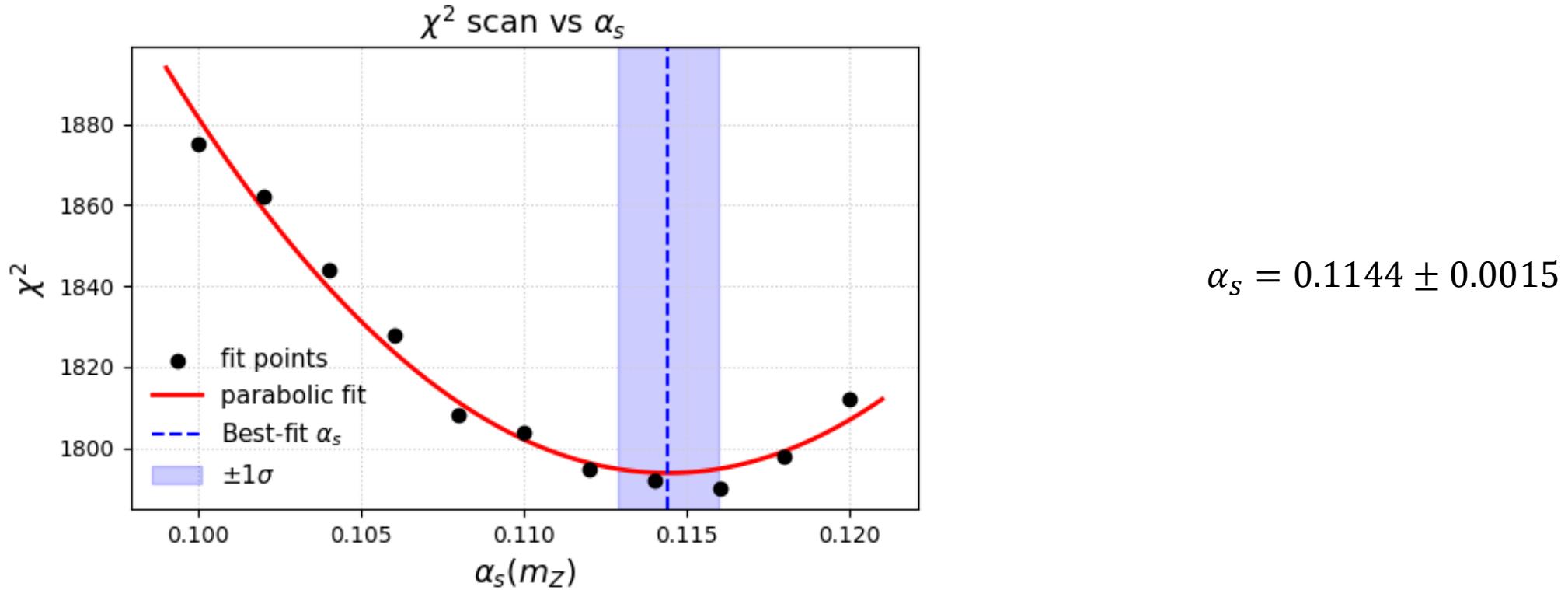


## Running Coupling Estimation using HERA data

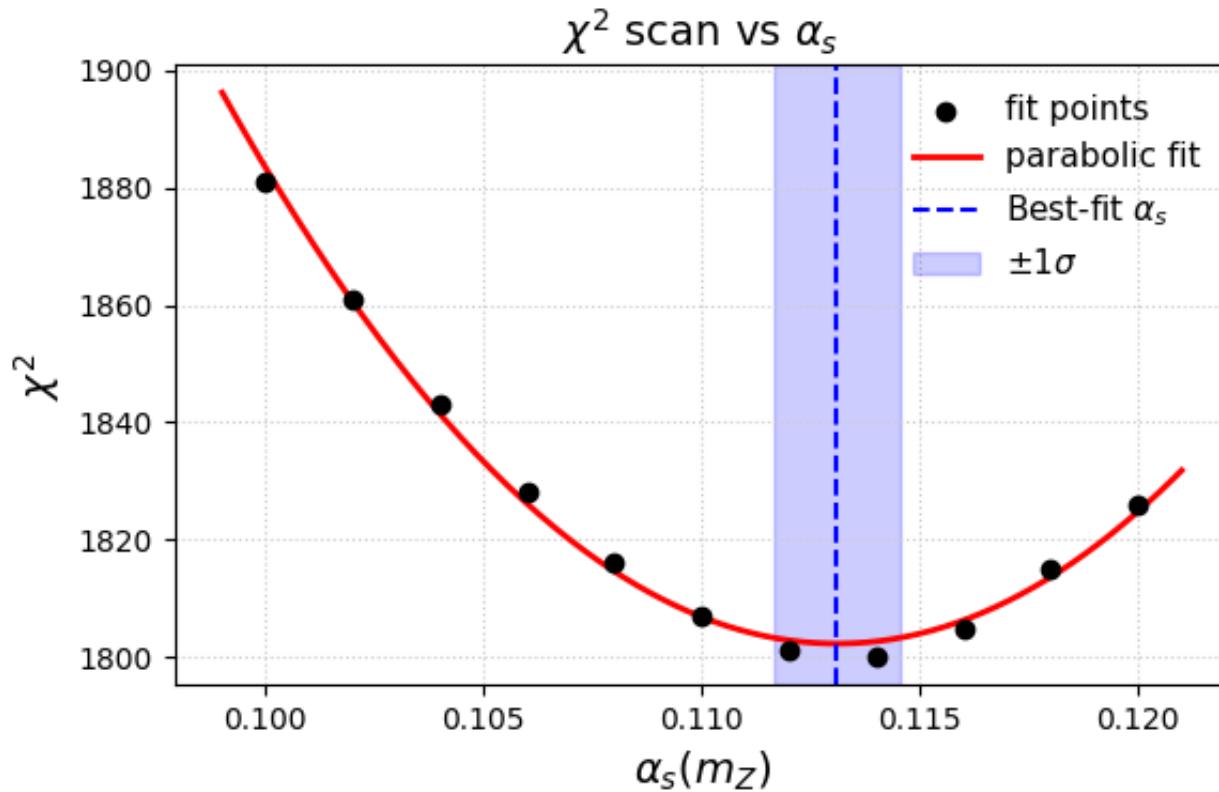


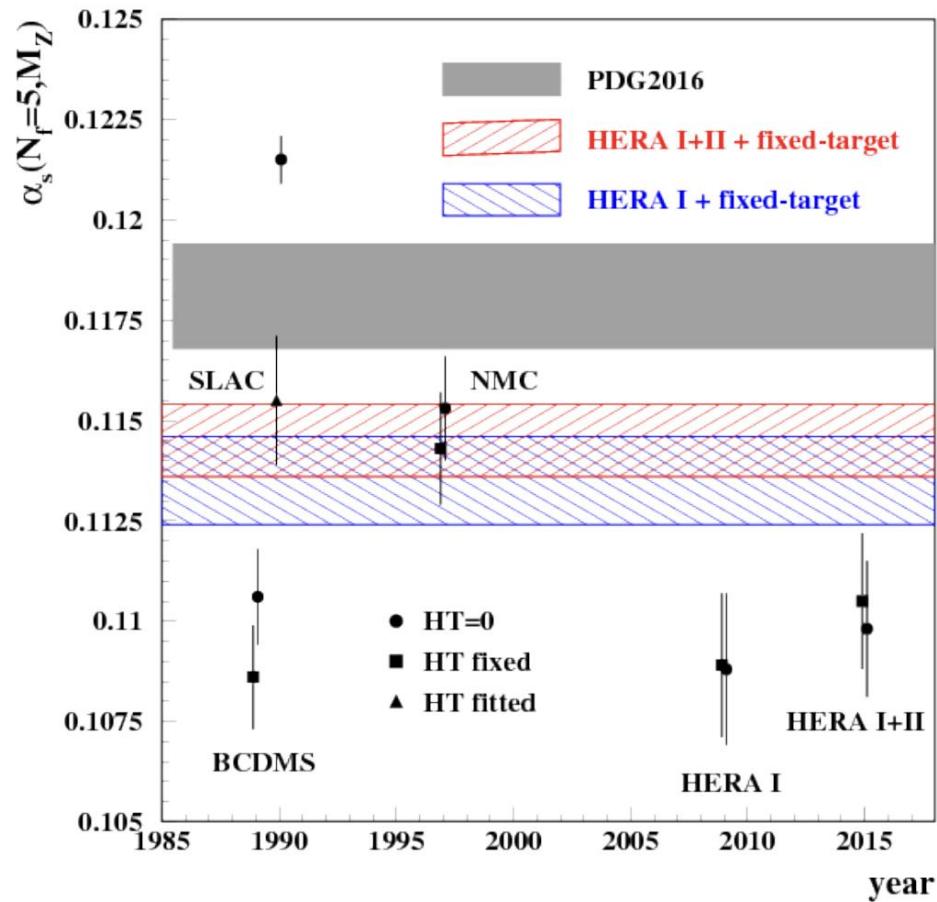
$$\alpha_s = 0.1065 \pm 0.0029$$

# Running Coupling Estimation using HERA + Fixed Target at $N^2\text{LO}$



# Running Coupling Estimation using HERA + Fixed Target at $N^3\text{LO}$





## xFitter Estimates

HERA  $0.1065 \pm 0.0029$

HERA & Fixed Target

 $N^2LO \quad 0.1144 \pm 0.0015$ 
 $N^3LO \quad 0.1131 \pm 0.0015$