Contribution ID: **161** Type: **Oral presentation**

# Unbiased helicity-dependent parton distributions with polarized collider data

*Tuesday, 29 April 2014 15:00 (30 minutes)*

We present an unbiased global determination of spin-dependent parton distribution functions and their uncertainties using the NNPDF methodology: NNPDFpol1.1. As compared to
our previous determination, NNPDFpol1.0, longitudinally polarized deep-inelastic scattering data are now supplemented with the most recent polarized hadron collider data for inclusive jet and W boson production from STAR and PHENIX experiments at RHIC.
Polarized W production data provide a handle on the polarized quark-antiquark separation,
while inclusive jet production data allow us to substantially improve our determination of the medium- and large-x polarized gluon. We study the phenomenological implications of the NNPDFpol1.1 set, in particular concerning the nucleon spin content.

**Primary author:** NOCERA, Emanuele Roberto (Università degli Studi di Milano & INFN Milano,Italy)

**Presenter:** NOCERA, Emanuele Roberto (Università degli Studi di Milano & INFN Milano,Italy)

**Session Classification:** WG6: Spin Physics

**Track Classification:** WG6: Spin Physics