SIDIS measurements at COMPASS

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on behalf of the COMPASS Collaboration

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Common Muon and Proton Apparatus for Structure and Spectroscopy

fixed target experiment on the M2 beam line at CERN SPS
a facility, built by the COMPASS Collaboration, in the years 1997-2001

initially approved for 5 years of data taking,
the experiment took data from 2002 to 2022

and the spectrometer is still there,
being used by the AMBER Collaboration
the COMPASS spectrometer

designed to
- use high energy muon and hadron beams, and different targets
- have large angular acceptance, as flat as possible
- cover a broad kinematical range

two stages spectrometer
Large Angle Spectrometer (SM1), Small Angle Spectrometer (SM2)
  equipped with
Very Small, Small, Large Area trackers
  RICH, muon detectors, calorimeters,
  trigger hodoscopes

apart from 2005,
several upgrades
to fulfill the requirements of
the different measurements
15 years of data taking
dedicated to spectroscopy and nucleon structure

ΔG, SIDIS
160 GeV/c polarized μ⁺ beam
L and T polarized d (⁶LiD) target
2002-2004
L polarized d (⁶LiD) target
2006

Hadron Spectroscopy and Primakof
hadron beams, LH and nuclear targets
2008, 2009
2012 (**)
→ Philipp Haas

SIDIS
L and T polarized p (NH₃) target
2007
2010 (*), 2011 (*)

Drell-Yan
190 GeV/c π⁻ beam
T polarized p (NH₃) target
2015, 2018 (**)
→ Malgorzata R. Niemiec

SIDIS
T polarized d (⁶LiD) target
2022 (*)

DVCS / SIDIS
160 GeV/c polarized μ± beams
LH target
(2012), 2016, 2017 (**)
→ Karolina Lavickova

(*) Addenda to the COMPASS Proposal
(**) COMPASS II Proposal