Welcome to REF 2016 - Antwerpen

History and goals of the REF workshop series

- 23-24 June 2014 Antwerp (Belgium)
- 8-11 December 2014 in Antwerp (Belgium)
- 1-3 June 2015 Amsterdam(The Netherlands)
- 2-5 November 2015 DESY Hamburg (Germany)

- Goal:
  - organize a discussion between the experts
    - the investigation of the nucleon structure based on the Transverse-Momentum Dependent factorization framework (TMD)
    - dealing with the unintegrated Parton Distribution Functions (uPDF) in the small-XB regime.
  - develop common language for mutual understanding
  - promote joint research programs
  - unify treatments of some of the crucial problems in the theory of strong interaction.

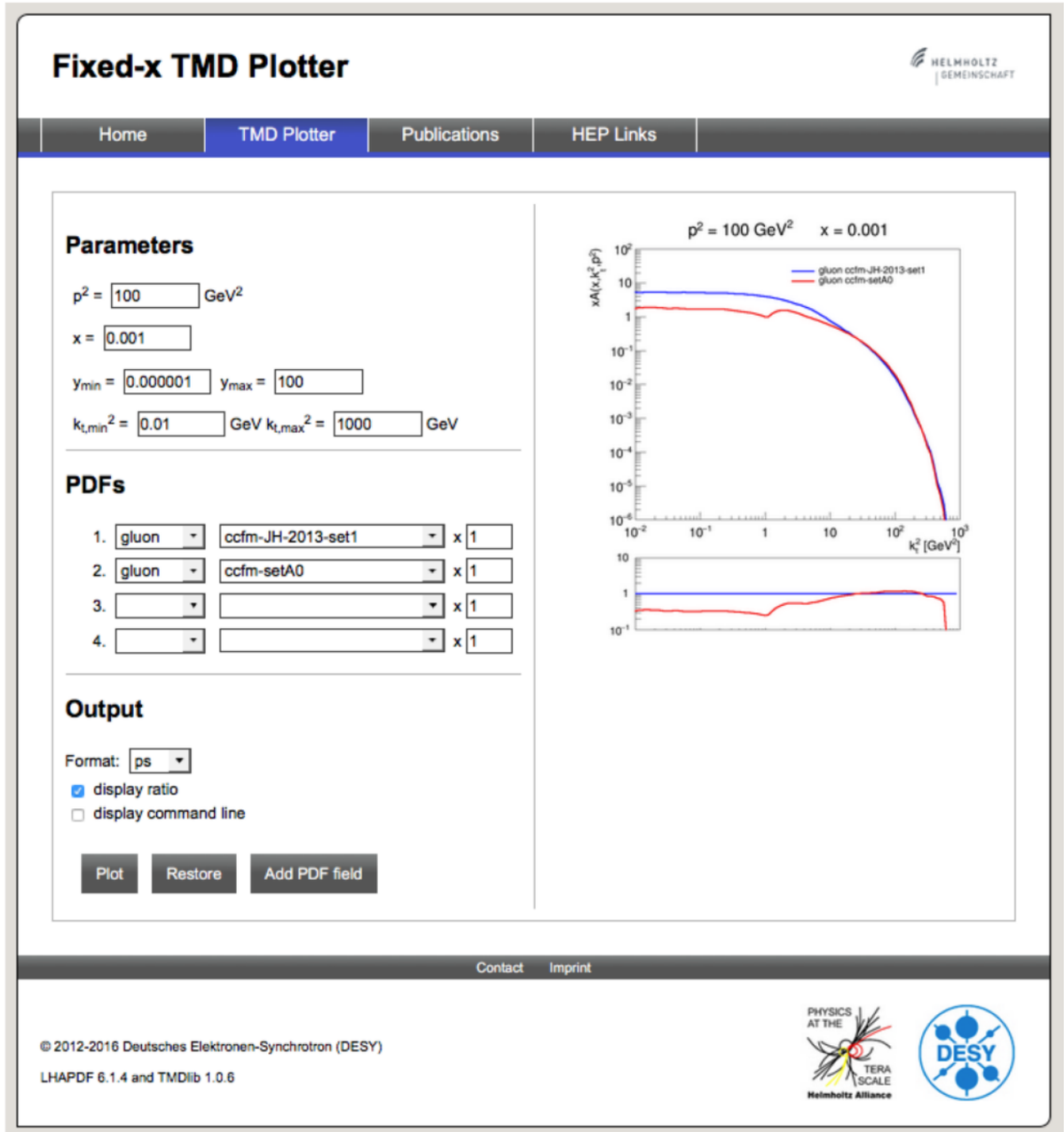
What has happened - TMDlib and TMDplotter

- TMDlib proposed in 2014 as part of REF workshop and further developed
- combine and collect different ansaetze and approaches:

  http://tmd.hepforge.org/ and
  http://tmdplotter.desy.de

➔ TMDlib: a library of parametrization of different TMDs and uPDFs (similar to LHApdf)

TMDlib and TMDplotter: library and plotting tools for transverse-momentum-dependent parton distributions, *F. Hautmann et al.* arXiv 1408.3015, **Eur. Phys. J., C 74(12):3220, 2014.**



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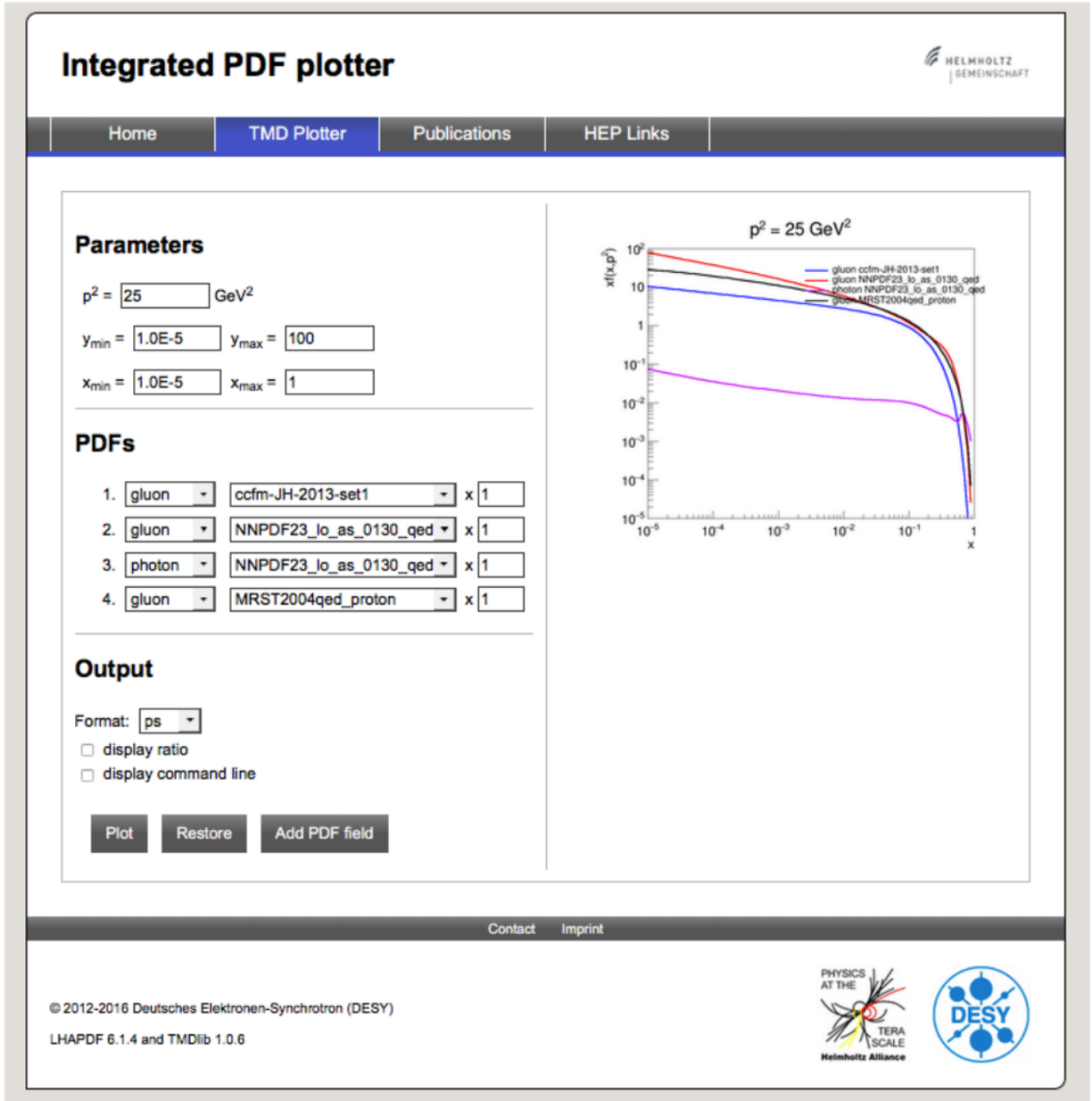
➔ Also integrated pdfs (including photon pdf are available via LHAPDF)



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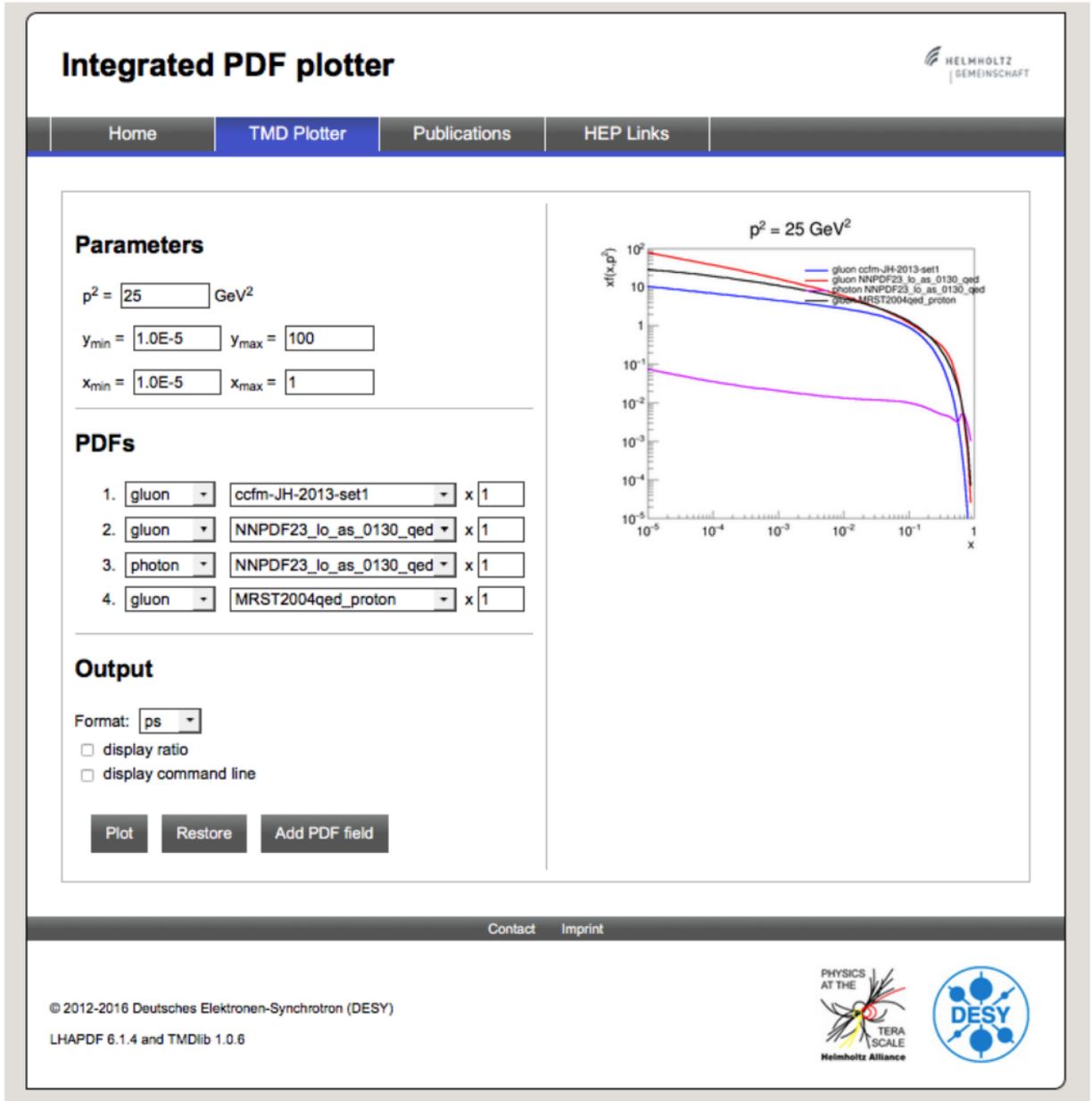

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- Feedback and comments from community is needed – just use it !

Summary and state of the art

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TRANSVERSE MOMENTUM DEPENDENT (TMD) PARTON DISTRIBUTION FUNCTIONS: STATUS AND PROSPECTS*

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- Transverse Momentum Dependent (TMD) parton distribution functions: status and prospects

  R. Angeles-Martinez (Manchester U.) et al.. Acta Phys.Polon. B46 (2015) no.12, 2501-2534, 1507.05267

  Cited by 30 records

- description of theory and tools

Program for REF 2016

- Monday:
  - Higgs/DY/QQbar production
- Tuesday:
  - TMD pdfs
- Wednesday
  - Tools, Monte Carlo generators
  - Jets, Final states
- Thursday
  - Small x

- New developments in all areas !
- Please note:
  - all talks include 5 min for discussion (i.e. 25+5 = 30)
  - longer discussion sessions at the end of the sessions !
  - Please stay within the time limits !

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Organizing committee:

- Igor Cherednikov
- Didar Dobur
- David Dudal
- Laurent Favart
- Francesco Hautmann
- Fabio Maltoni
- Pierre Van Mechelen

and behind the scene:

- Sara Van Mierlo

- and a special thank you to

  Pierre & Francesco for setting up such a nice program

Scientific committee:

- Elke Aschenauer
- Daniel Boer
- Igor Cherednikov
- Markus Diehl
- Didar Dobur
- David Dudal
- Miguel Echearría
- Laurent Favart
- Francesco Hautmann
- Hannes Jung
- Fabio Maltoni
- Piet Mulders
- Andrea Signori
- Pierre Van Mechelen

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Enjoy the workshop !