



Introduction

Precision EW WG meeting

July 1, 2019

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Goals for today

- This meeting is devoted to reviewing recent progress on all fronts and prepare for the sub-group reports to the general meeting
 - Experimental aspects
 - Review the progress on combination of m_W and s_{2w} observables
 - Recent DY results from ATLAS/CMS/LHCb
 - QED/EW corrections relevant for weak mixing angle measurements
 - Review the progress since the dedicated meeting on May 7
 - <https://indico.cern.ch/event/816643/>
 - PDF benchmarking for precision DY physics
 - Review the progress since the dedicated meeting on May 28
 - <https://indico.cern.ch/event/823493/>
 - Analytic resummation benchmarking of $p_T W/Z$, and their ratio
 - Review the progress since the dedicated meeting on June 18
 - <https://indico.cern.ch/event/827617/>
- The goal of today is to further discuss/summarize the progress and to prepare the summary reports for the general meeting on 02-03/07.

Meetings this week

- LHC EW WG general meeting this week (Tuesday-Wednesday) with several contributions from our precision EW subgroup
 - <https://indico.cern.ch/event/821220/>
- Luca Rottoli will summarize the status of resummation benchmarking on Tuesday morning
- Alessandro Vicini will summarize the status of QED/EW corrections on Tuesday morning
- Bogdan Malaescu will summarize the PDF benchmarking status on Wednesday morning
- Discussion on Yellow report progress/plans on Wednesday morning
 - We wish to present this now and discuss it briefly, as a preparation for the summary on Wednesday

Publications and yellow reports

- Our workshops and meetings have as a general common goal to achieve significant progress and document it when it reaches a sufficient level of maturity
- This should happen over a finite period of time (we have been already working for 12-15 months)
- Our theory colleagues expressed the wish that any significant work achieved which would result in clear progress in the field should be published in a journal in its own right
 - QED/EW benchmarking work, PDF benchmarking, and pT W/Z analytic resummation benchmarking are areas of work where a publication in a journal could/should happen
- The publications will predate, but are not in contradiction with the Yellow report, which will summarise them and contain other topics as well

Timelines

- QED/EW benchmarking work is nearing completion
- pT W/Z benchmarking is in progress with a few groups having uploaded their inputs in the last 24 hours or so while the remaining groups promised to upload their inputs quite soon
- PDF correlation benchmarking work is taking off with some concrete toys produced for validation
- Given where we stand, we can and should realistically aim to publish in ~ the first half of 2020
- The yellow report should progress in parallel and be produced in its final version before end 2020 (cycle of ~ 3 years)
- We encourage all of you who participate in this work to think let us know whether it is ok to report our medium-term goals in this way on Wednesday, many thanks!

Next meetings

- We continue to have dedicated meetings on different benchmarking studies every 1 or 2 months
 - We plan to have another pT W/Z and PDF benchmarking meeting during the first week of August
- We plan to have our second workshop of the year sometime between 15/10 and 20/11 this year
 - The spring workshop was at Durham and as usual the second workshop will be held at CERN
 - We will send a Doodle after this week's meetings with the goal of fixing the workshop dates (~ 3 days as last year) within the next couple of weeks
- As usual, we will announce our upcoming meetings to the whole mailing list in due time