

Mandate of the TOPLHCWG

Rev.8 Nov 2nd, 2012

The purpose of the TOPLHCWG is to define guidelines for the combination of results on top physics measurements from ATLAS and CMS. In particular, to specify what measurements are to be combined, identify the systematic uncertainties that can be considered as correlated among experiments, and agree on formats to be provided for the combinations.

Agree on the methods to be used for the combinations in consultation with the ATLAS-CMS Statistics Group, and prepare in time all software infrastructure needed to fulfill these goals. Individuals for running each combination will be identified.

Agree on the way combined results are presented (values with and without correction for acceptances, differential unfolded distributions, likelihoods) and the theory predictions -including theory errors- they should be compared to.

Prepare all relevant documentation. This includes notes and publications explaining the combination procedures and the results. This effort will happen in synchronization with the major HEP conferences. This documentation, as well as a more detailed presentation of the inputs by the Collaborations, the procedures chosen for the combinations and the results will also be made public via web pages that will be kept up to date.

Maintain a close connection to the equivalent group performing the combination at the Tevatron. The two groups will have to identify persons responsible for performing the world combination of relevant quantities in correspondence of any major update.

Membership of the group

The permanent members of the group will be composed of one representative from each of the involved experiments, ATLAS and CMS. The ATLAS top WG conveners and the CMS top PAG conveners are ex-officio members. For each planned combination the group will nominate, with the endorsement of the respective top working group conveners, one contact person per experiment for this specific measurement. This person will then be a temporary member of the group for the necessary period. Participation to the group activity should come also from the theory community. It is suggested to involve key theorists in the field of top physics, in consultation with the LPCC, to provide feedback and guidance on phenomenological issues in the combinations.

Organization and meetings

The group will have a public mailing list for announcements of open meetings, and an internal mailing list for the coordination of any internal activity. Initiative for meetings and the coordination of the work will be primarily responsibility of the permanent group members. Where needed, the work will be subsequently organized in smaller subgroups performing the individual combinations. While the meetings will generally be closed, non group members may be invited for discussing specific topics. Open meetings will also be organized for discussions on combination techniques and results.

Approval procedure

For each new combination an internal document will be produced describing the agreed upon combination method and its result. It will become a public document following the usual procedures of the experiments.

Treatment of confidential information

For the preparation of combination results, experiments may on occasion agree to share details of analysis results that are still in the approval process of the experiment. If such information is provided to the combination group, all members of the combination group will keep this information confidential and not disclose or discuss these confidential results with anyone, except other active members of the combination group.