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Introduction

One of the main purposes of the LHCHWG is to provide the experimental collaborations with information in various forms (reference cross sections, benchmarks, recommendations, codes,...). An expression of interest on a specific piece of information may come from experiment or theory (e.g., analysis contact persons, group conveners, or physics coordinators). Such requests should be communicated to the conveners of the working groups WG1-WG4 (collectively referred to as "WGs" in the following). Here we illustrate the guidelines that should be followed to insure a correct and efficient work and communication.

General Principles

- Information on the activities of the LHCHWG should be fully public, open and accessible by anyone, at any time.
- Vertical and horizontal information flow in the LHCHWG should be always guaranteed.
- Calls for action or help should be made in a transparent way, accessible also from outside the LHCHWG.
- Official LHCHWG deliverables are always subject to approval procedures before being publicly available (for details, see below).
- Personal and group focused initiatives as well as external collaborations with other groups should be supported. They should be open to anyone and announced in the mailing list of the WG.

Workflow

Here we outline a "normal" workflow in the LHCHWG. It is understood that in case of doubt, the WG conveners should consult the Steering Committee.

1). Submission of requests to the WGs

The conveners of the WGs promote and organize the activities in their groups. In addition, they are the contacts for requests from any internal or external source (e.g., ATLAS/CMS analysis contact persons, group conveners, physics coordinators or other groups like FCC, HL-LHC, or theorists). If the request is considered relevant by the conveners of the appropriate WG, they will define its scope and goals within the WG. If the request is deemed relevant but not-yet-feasible, the WG conveners propose it as an addition to an official LHCHWG wish-list, possibly with a priority grading. Such proposals are communicated to the SC and approved in coordination with the other WG conveners.

2). Publication of the activity and call to the LHCHWG

The WG conveners publish the approved activities (and/or the corresponding call-for-action) on their respective twiki page, with a description of the work to be done, the expected type of deliverables, and the approximated schedule (including a deadline for committing to contribute) and take corresponding actions to gather all the needed expertise from the community. People willing to contribute express their interest to the WG conveners. Depending on the exact request, deliverables are also identified (e.g., tables of numbers to be published on the twiki codes to be made public, lists of available results/codes, documents to appear on the arXiv², etc.).

3). Work is performed

The WG conveners organise the work and collect the results and deliverables. Intermediate status reports can be given upon request from the SC and/or appear on the Twiki of the corresponding WG. Open discussions/meetings are regularly scheduled and announced via the LHCHWG mailing list.

4). Approval of the results

Once results and/or information corresponding to the request is available, the WG conveners inform the SC (typically in the regular SC-WG convener meetings) who either approve it directly or start an approval procedure, the details of which will depend on the actual deliverable. For example, in the case of a document to appear on the arXiv² in the name of the LHCHWG (as a whole or by a WG or by smaller groups), a WG-wide (yet light) review procedure will take place.

5). Publication of the results: see detailed discussion on the LHCHWG Library page.

Announcement of new developments in the TH/MC/Tools*

"The announcement of new developments in the TH/MC/Tools can be posted on the dedicated Wiki page if the authors consider it relevant for the all LHCHWG groups. The MCnet contact person supervises the corresponding Wiki page and its maintenance. The submission of the news through LHCHWG e-mail lists should be avoided.

Exchange of non-sensitive experimental information between experiment and theory

For the LHCHWG it is important that Monte Carlo (MC) information, even after detector simulation and with simple kinematic selections applied, may be exchanged between experiment and theory. This information must be non-controversial within the experiments and not compromise their independence. After feedback from the experiments we have defined the following rules in this respect:

- 1). Every figure or numerical information that is planned to be used or shown in a public document, during a workshop, or a working group meeting requires sign-off by the corresponding collaboration. This also applies if only generator information and no detector simulation were used, as long as the MC is used within (and with the corresponding setup of) the collaboration.
- 2). For written documents, like e.g. notes on arxiv, the collaboration will have to prepare a short document to be circulated among all collaborators for comments and make this document public as well, to provide an official statement by the experiment. Usually such documents include the figures in question, captions that explain what is shown, and potentially some more text to give more specific information, e.g. how exactly a plot has been created. These documents can usually be published on a track of a few weeks. There can be cases though where more discussion within the collaborations may be required.
- 3). There can be a light approval for distributions/information only based on MC and meant to be shown on slides in meetings only. This consists of a sign-off by the Higgs conveners and physics coordination (PC) of the experiments. Depending on the content, the experiments may require an internal approval procedure as described in (2) for notice within the whole collaboration, for three days before approval.
- 4). The light approval ideally should be requested 1-2 weeks before the plots are meant to be shown in public, to give the experiments time to react.
- 5). Private discussions between a limited number of experimentalists and theorists, who would like to exchange material prior to such an approval, e.g. in preparation of a meeting, are allowed. If you plan such a private discussion, people should bring up the case with the corresponding experimental contact of the WG, so that the boundary conditions can be defined. These conditions include e.g.:
 - Exchange only of generator information (potentially including detector simulation);
 - Application of simple and well physics-motivated kinematic and/or topological selections;
 - Information exchange for a confined and well defined purpose and finite time span.

It should be understood that such exchanges are meant to be private and in the small circle of people involved in the specific purpose. The experimental contact of the WG should always be kept in the loop for such exchanges. Once the studies conclude and will be presented in public rules (1)-(4) apply. Two hypothetical examples are below.

Example-1:

As follow up of ATLAS or CMS showing a p_T distribution with some modeling problems in a meeting, theory colleagues ask for a MC generator level rapidity plot with the same selection, or for the same plot, but after applying some more restrictive generator selection or after changing some generator settings. This type of information can and should be exchanged. After solving the issue, new material illustrating the solution should be approved following rules (1)-(4).

Example-2:

For the discussion of an identified MC issue with experimental material that falls under (1)-(4) in some future meeting, the plots showing the issue can be exchanged with a few colleagues (e.g. generator authors) to ensure that the right type of information is presented in order to ensure an effective discussion.

In case of remaining questions please contact the SC directly for further advice.

-- KatharineLeney - 2023-06-02

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