

## LHCb related paper classes not under Editorial Board Responsibility

There are several classes of papers connected to LHCb that are not managed by the Editorial Board. This document aims to clarify the rules for the review of these documents, the author list for these documents, whether they obtain LHCb and CERN-EP report numbers. It is neither possible nor desirable to be prescriptive, this document can only aim to serve as guidelines, with the spokesperson adjudicating where it is unclear which rules should apply.

The LHCb paper classes include:

**Open Data Papers:** Papers which analyse LHCb open data. The rules are given in the policy document “**CERN Open Data Policy for LHC Experiments: Implementation Plan November 2020**”

Available at <https://indico.cern.ch/event/976845/>

Review: Not reviewed by the collaboration

Authors: Not signed by LHCb authors, unless not physics related and specifically approved by the CB.

LHCb note numbers: No LHCb note number

EP approval: Not required, no CERN-EP number

**Conference Proceedings:** These follow the rules described here

[https://lhcb.web.cern.ch/lhcb\\_page/collaboration/organization/editorial\\_board/conference\\_proceedings.html](https://lhcb.web.cern.ch/lhcb_page/collaboration/organization/editorial_board/conference_proceedings.html)

linked on the SB web page.

LHCb note numbers: LHCb-CONF number

Authors: No authorlist.

EP approval: Not required, no CERN-EP number.

**Theoretical/Phenomenology Papers or Physics Review Papers:** These are physics papers that do not rely on the analysis of LHCb data or simulation. They typically suggest new theoretical approaches or analysis techniques relevant to LHCb or review the state of a research field where LHCb is contributing.

Review: Papers that include projections for LHCb performance or sensitivity, should be sent to the Physics coordinator and Editorial Board chair for comments prior to being posted on the arXiv or submitted to the journal. This rule is reproduced from ‘LHCb Publication Procedure’ available on the EB web site.

Authors: Signed by individual LHCb members, and/or others, independently of LHCb collaboration.

LHCb note numbers: No LHCb note number.

EP approval: Not required, no CERN-EP number.

**R&D Papers – no LHCb resources:** These are papers proposing or testing detector technology or software algorithms that may have relevance to LHCb and are signed by LHCb members.

Papers that do not rely on the analysis of LHCb centrally taken data or simulation, software or technical infrastructure are published purely at the discretion of the authors. Papers that make a statement that a technology will be used in LHCb, should be sent to the relevant project leader(s), spokesperson and Technical Coordinator for comments prior to being posted on the arXiv or submitted to the journal.

Authors: Signed by individual LHCb members, and/or others, independently of LHCb collaboration.

LHCb note numbers: No LHCb note number.

EP approval: Not required, no CERN-EP number.

**R&D Papers – LHCb resources:** These are papers proposing or testing detector technology or software algorithms that will, or may, have relevance to LHCb and utilise LHCb centrally taken data or simulation, software or significant amounts of technical infrastructure.

Review: The paper should be reviewed inside the relevant project. The spokesperson should be informed by the project leader that this light review process is being followed. The project leader should steer the review, or appoint someone to do so. In the case that the paper cuts across several projects, the Operations Coordinator or Technical Coordinator may take this role.

If the paper is considered by the project leader of sufficient importance that a DP number should be assigned, the review procedure of LHCb Detector Description or Detector Performance Papers (below) should be followed.

Authors: To be determined by the project leader appropriately to the scope of the paper, it may be the full members of the project or a smaller number of authors. Non-LHCb members may also be authors. The wider group of people in LHCb working in the area of the paper, or who provided substantive resources (simulation, data-taking or infrastructure) on which it relies, should be consulted by the project leader when considering the author list.

Submitted to a journal by the project leader, or a lead author appointed by the project leader.

LHCb note numbers: No LHCb note number, unless the LHCb-DP review process below is followed.

EP approval: optional, CERN-EP number optional.

**LHCb Detector Description or Detector Performance Paper:** These are papers describing a sub-detector or software project (or substantial components thereof) or its performance. These may well be intended to be a reference in LHCb publications.

Review: These follow the rules 'Rules for the preparation of Detector Performance Papers' available from the EB web page. In brief, a review is performed inside the relevant projects and by members of the TB, with sign-off by the Spokesperson. For software project related papers, or those not directly related to one project, it may be more appropriate for the Operations Coordinator to steer the process, at the discretion of the Spokesperson. Where TB members are not best suited any two other senior knowledgeable members of the collaboration may be appointed by the Operations Coordinator.

If the paper is more minor in scope then the lighter procedure described above of 'R&D papers-LHCb resources', potentially with a restricted author list, may be followed at the discretion of the Spokesperson. In this case the paper does not receive an LHCb-DP number. If the scope of the paper is the full LHCb detector then the full collaboration sign the paper and the review procedure follows that of CONF notes

[https://lhcb.web.cern.ch/lhcb\\_page/collaboration/organization/editorial\\_board/lhcbpubconf.pdf](https://lhcb.web.cern.ch/lhcb_page/collaboration/organization/editorial_board/lhcbpubconf.pdf)

Authors: Signed by members of the project(s) with an author list determined by the project leader(s). Submitted to the journal by the Project Leader or a lead author appointed by the Technical Coordinator or Operations Coordinator.

LHCb note numbers: Obtains an LHCb-DP number (DP, detector paper, but also applicable to software) and is linked on the LHCb web page

[https://lhcbproject.web.cern.ch/lhcbproject/Publications/LHCbProjectPublic/Summary\\_DP.html](https://lhcbproject.web.cern.ch/lhcbproject/Publications/LHCbProjectPublic/Summary_DP.html)

EP approval: encouraged, CERN-EP number encouraged.

**LHCb Physics Related Performance Papers:** These are papers describing an analysis of LHCb data or simulation that provide the measurement of quantities of relevance to LHCb physics. An example would be the determination of efficiencies that will be used in physics publications.

Review: For papers with the full collaboration author list the review procedure follows that of CONF notes

[https://lhcb.web.cern.ch/lhcb\\_page/collaboration/organization/editorial\\_board/lhcbpubconf.pdf](https://lhcb.web.cern.ch/lhcb_page/collaboration/organization/editorial_board/lhcbpubconf.pdf)

For a limited author list, the Physics Analysis or Physics Performance WG conveners organize the review, and approve the document. The final approval for submission of the document is given by the Physics Coordinator or Operations Coordinator.

Authors: For papers that are expected to be cited by a number of LHCb physics publications the full collaboration is expected to be authors. For more focussed papers of relevance only to a single, or small number, of physics papers a limited author list may be appropriate at the discretion of the Physics Coordinator or Operations Coordinator.

LHCb note numbers: Obtains an LHCb-DP number (DP, detector paper, but also applicable to software) and is linked on the LHCb web page

[https://lhcbproject.web.cern.ch/lhcbproject/Publications/LHCbProjectPublic/Summary\\_DP.html](https://lhcbproject.web.cern.ch/lhcbproject/Publications/LHCbProjectPublic/Summary_DP.html)

EP approval: encouraged, CERN-EP number encouraged.

**LHC Working Group Publications:** These are joint publications among two or more LHC experiments (<https://lpsc.web.cern.ch/lhc-working-groups>). The following guidelines have been devised in collaboration with the other LHC experiments.

(1) Documents producing new measurements or data combinations should be signed by the full collaborations unless the collaboration decides that the topic is of limited interest and prefers not to submit it to a journal.

Reinterpretations of published data are subject to the publication guidelines in place for the individual members of the LHC Collaborations and are in any case allowed when the collaborations decide not to submit dedicated experimental papers on the topic.

2) Documents reporting studies that are only using simulation without experimental data, and/or with usage of data being limited to comparisons of existing published results with theory predictions (that would not fall under the first case), can be signed by a limited number of authors. The publication committees of the related experiments have to be

informed. When experiment internal tools (e.g. MC samples or software) or information are used, the collaboration should first approve the results and release a public note with the relevant plots which can be eventually added, properly referenced, in the limited authorship paper.

For limited-authorship papers, the responsibility of defining the authorship of any given document is with the LHC WG conveners.