ATLAS Policy document: Access of non-ATLAS scientists to ATLAS data and unofficial results

Version 4.0

Approved[1] by the CB on 16 October 2020
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This policy document describes two ways of collaboration of ATLAS members with non-ATLAS scientists that permit sharing ATLAS data and/or unofficial results with identified individuals outside of ATLAS.

Abstract

1. **Short-term association (STA)**. Non-ATLAS scientists benefiting from this status participate in the analysis work, potentially including access to ATLAS collision and Monte Carlo simulated data. The work typically leads to a public result in form of a paper or public note. Depending on the type and amount of work done by the non-ATLAS scientists, the contribution is acknowledged by a reference, an acknowledgement, or co-authorship. Short-term association is proposed by the Physics Coordinator and the Spokesperson, and requires endorsement by the ATLAS Executive Board.

2. **Interactions with authors of Monte Carlo generators and related tools (MCI).** In specific cases it may be needed to discuss internal plots and results using collision and/or simulated data with authors of MC generators or of related phenomenological tools. They may be involved in discussions of results not yet approved for presentation outside ATLAS but approved for this specific purpose by the Physics Coordinator. These persons do not become authors of ATLAS papers and they have no access to ATLAS data for analysis or access to ATLAS internal web pages. If they have made significant contributions, they may be acknowledged in one or more paper(s), or may become author of PUB notes. Such interactions are managed by the Physics Coordinator. No ATLAS Executive Board endorsement is required.

[1] The approval was performed by an electronic procedure completed on 21 October 2020.

Detailed description

1. Short-Term Association with ATLAS (STA)

Introduction

ATLAS members may wish to collaborate with individuals or groups that are not members of the ATLAS Collaboration on specific ATLAS-related scientific or technical topics, potentially requiring access to ATLAS collision and/or simulated data by the non-ATLAS scientist. These collaborations will typically lead to a dedicated ATLAS paper or publ-note. Examples include:

- Theorists wishing to collaborate on a dedicated physics study.
- Computer scientists wishing to collaborate on a technical study, for instance related to machine learning.
- LHC accelerator physicists collaborating to combine machine and ATLAS measurements to establish a precise estimate of beam properties.

Guidelines

Short-term associations shall normally be limited to cases where an external person or group brings specific expertise or new research ideas to ATLAS.

The decision on whether a formal short-term association should be undertaken rests with the ATLAS Executive Board, acting on a recommendation from the ATLAS Spokesperson. The Spokesperson is expected to establish that there is support for the recommendation within the ATLAS Collaboration by the following procedure:

1. A written proposal shall be prepared by the proponents explaining the expertise of the STA candidates(s), whether direct access to ATLAS data is required, and what the benefit is for the ATLAS Collaboration.
2. The proposal shall be discussed and agreed upon with the corresponding group convener, Physics Coordinator and Spokesperson.
3. If Step 2 is passed, the ATLAS Spokesperson shall circulate the proposal to the Executive Board for endorsement.
4. The Spokesperson reports newly approved short-term associations to the Collaboration Board at its next meeting.

An approved short-term association is only valid for the work described in the written proposal. Any new project involving the same person or group, or a significant amendment of the original project requires a new short-term association following the above procedure. A short-term association ends with the completion of the work.

Depending on the type and amount of work done by the non-ATLAS scientist, the contribution is acknowledged by a reference, an acknowledgement, or co-authorship of the document(s) the non-ATLAS scientist contributed to.

The Physics Coordinator regularly updates the Executive Board about the status of ongoing and recently concluded short-term associations.

2. Interactions with authors of Monte Carlo event generators and related tools (MCI)

Introduction

As part of regular ATLAS Monte Carlo (MC) production, commissioning of new event generator setups, or during a specific physics analysis, extensive comparisons of ATLAS data with the predictions of MC event generators are performed and generator parameters are tuned to data. Interactions with the authors of MC event generators or of related phenomenological tools (referred to as "MC authors" below) can be useful to speed up the process of understanding the data and the generator modeling. This may also require a prolonged collaboration between authors of a specific generator and ATLAS collaborators. In this context it can be important to discuss internal plots and results on collision and/or simulated data with MC authors. The procedure described here addresses such cases.

Guidelines

A better understanding of some processes being measured by ATLAS may benefit from early interactions (i.e. before results are published) with certain MC authors; such discussions may entail the need to show ATLAS-internal results. Physics groups can request permission from the Physics Coordinator to do so with selected MC authors; the decision to allow this special status should be made in consultation with the Physics Modeling Group (PMG). Such authorization for interactions with MC authors is granted for a period of up to two years, which may be renewed as necessary. The PMG convenors and relevant subgroup conveners should be informed regularly about the progress of the interaction.

Preliminary generator-level results produced with the ATLAS framework and/or ATLAS simulated data can be discussed confidentially with the MC authors. The plots and results discussed with the MC authors must have been endorsed by the Physics Coordinator if they contain unpublished ATLAS data, to make sure that the results are solid and stable enough, and that they are not of a sensitive nature. In such cases, the MC authors with whom discussions about internal material are undertaken are formally asked (through an e-mail from the Physics Coordinator or a delegate) to maintain confidentiality about these discussions. In no case will direct access to ATLAS data be given.

The Physics Coordinator maintains a record of ongoing MCI projects. That record is made available to the collaboration.

MC authors interacting with ATLAS may be acknowledged in the relevant paper(s) if they have made significant contributions. Exceptional authorship may be granted for PUB notes. If, along the course of the interaction, it becomes clear that exceptional authorship will be requested for a CONF note or a paper, a Short-Term Association (STA) should be requested.