ATLAS NOTE

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Quick guide to ATLAS BibTEX style

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Abstract

This document illustrates how to use BibTEX for the bibliography of your ATLAS paper. Two BibTEX(`.bst`) style files have been created that can be used with any of the ATLAS supported journals, depending on whether they require the title of the references to be included or not.

This document was generated using version 01-03-06 of the ATLAS LATEX package.

1 Instructions

The ATLAS Collaboration has specific guidelines as to what constitutes a good bibliographic style. For example, a reference to a paper by an LHC Collaboration must not include the first author, whereas, if the paper is by any other collaboration it should. Where available, links to the `arXiv` entries of the papers should be included. To help authors with their paper preparations, a standard ATLAS bibliographic style has been developed which incorporates all of these requirements, and, at the same time, is largely compatible with those of the journals the papers are being submitted to.

The format of the references in your ATLAS paper depends on the journal to which you are submitting, but in general we can classify the journal styles in two categories: those which require the title of the references and those which do not. To ensure the homogeneity in all ATLAS publications, BibTEXstyle files are provided for each of these categories along with an example file that illustrates how different types of bibliographic material should be referenced. Authors must choose between these two style files, depending on the journal to which they wish to submit their paper.

It is strongly advised to use these files and base your `.bib` file on the examples provided, as it has the references in the style preferred by the ATLAS Publications Committee. This will definitely save time in the reviewing process!

These style files have been successfully tested in the framework provided by each of the journals listed in the following sections and with the standard ATLAS document template.

A new implementation of BibTEX is provided by the `biblatex` [1] package. It is planned to move all ATLAS documents to the use of this package. One major advantage of the package is that it defines quite a few more entry types that are much more suitable for online documents and things like CONF and PUB notes. It is also possible to use UTF-8 encoding in the entries, which means that letters such as ä, é, ß can be included directly in the text. Adjustment of the style is also much simpler. It is possible to take a base style and then just apply changes to it rather than having to learn the details of how `bst` files are constructed. *Note that such adjustments still have to be made to the style used in the current documentation.*

You compile a document using BibTEX using the commands:

```
pdflatex + bibtex + pdflatex + pdflatex
```

For `biblatex` and `biber` use:

```
pdflatex + biber + pdflatex + pdflatex
```

You can of course use LATEX rather than PDFLATEX, but PDFLATEX is preferred, as things like clicking on cross-references and links to publications in the bibliography work much more reliably with PDFLATEX.

2 ATLAS BibTEX stlye files

Two style files adapted for ATLAS documents are included in `atlaslatex`.

2.1 Journals with the title in the reference

Journals:

- **JHEP**
- **JINST**
- **NJP**

BibTeX style file: `atlasBibStyleWithTitle.bst`
Include at the end of your `.tex` file the following lines:

```
\bibliographystyle{atlasBibStyleWithTitle}
\bibliography{atlas-bibtex}
```

You can use the BibTeX style `JHEP.bst` for papers that are supposed to be submitted to JHEP. However, note that JHEP only prints the arXiv entry etc. if the entry type is `@Article`. In the examples included in this document, the entry type `@Booklet` is used for preprints and CONF notes, as this works best with other BibTeX styles. If you are planning to submit to JHEP/JINST and use `JHEP.bst` replace all `@Booklet` entry types with `@Article`.

2.2 Journals without the title in the reference

Journals:

- **EPJC**
- **NPB**
- **PLB**
- **PRD**
- **PRL**

BibTeX style file: `atlasBibStyleWoTitle`
Include at the end of your `.tex` file the following lines:

```
\bibliographystyle{atlasBibStyleWoTitle}
\bibliography{atlas-bibtex}
```

2.3 ATLAS notes

For ATLAS Notes, the recommended style file is `atlasBibStyleWoTitle`.

3 Journal names

It is often the case that one sees several different abbreviations for journal names in one set of references. In order to try to get round this problem, macros are defined that contain the standard abbreviations. It is then also possible to modify the abbreviation if a journal uses a different convention from ours.

The abbreviations can be found in the style file `latex/atlasjournal.sty`, which is included by default if you load `atlasphysics`. This style file also defines several other abbreviations that can be adjusted to the journal style. Standard sets for different journals can be provided by an option in the future.

4 References from Inspire

A common way to find a reference is using Inspire [2]. You can select the output format as BibTeX and simply copy the result(s) to your `.bib` file. In order that the reference follows the ATLAS conventions you need to do the following, assuming that the reference is for an LHC collaboration paper:

1. Change the field name `author` to `xauthor`.

2. Change the field name `collaboration` to `author` and write the collaboration in the form `"{ATLAS Collaboration}"`. Note the use of both quotes and curly braces.

3. Either replace the journal name with the appropriate macro, e.g. "`Phys.Lett.`" with `\PLB`; or insert spaces between the parts of the name, i.e. `Phys.\ Lett.`. Note the use of `\ ` (you can also use `{}`) instead of just a space, as a regular interword space should be inserted and not an end of sentence space.

4. Remove the journal letter from the volume and include it in the journal, e.g. "Eur. Phys. J. C", "Phys. Rev. D".

If the reference is for another collaboration, rename the `collaboration` field to `xcollaboration` and insert `{NonLHC Collaboration} and` at the beginning of the `author` field.

Instead of renaming `author` or `collaboration` fields, you can of course simply delete them!

5 BibTEX tips

- A bibliographic item is created in the `.bib` file as:

```
@Article{lhcCollaboration:2012,
  author = "...",
  title  = "...",
  further bibliographic information}
}
```

  The identifier directly after the document type declaration is how one should refer to this item inside the main `.tex` file. Use a non-breaking space between the citation and the reference, i.e. `... measured previously~\cite{lhcCollaboration:2012}`.

- When referencing ATLAS CONF notes, the url to the CDS page should be included. For this to work, in the preamble of your *.tex* document add `\usepackage{hyperref}`. Note that `hyperref` is included by default if you you `atlaspackage`.

- If the DOI is filled and the `hyperref` package loaded, the title of the journal will be highlighted in blue and become a hyperlink to the online paper.

- When referencing papers from journals like PRD, PLB, etc., one has to be careful not to include the "D" or "B" as part of the volume but rather in the journal name. You can either use the macros that have been added to the `.bst` style files for these journals, or the macros defined in `atlasjournal`. If you want to use `biblatex` or other `bst` files, it is probably better to use the `atlasjournal` definitions.

In earlier versions of this document, it was recommended to include the `cite` package, if you use BibTEX and want to cite multiple references in the format [A-Z]. However, the journal style files can do this for you by using the option sort&compress option if `natbib` is used. The `revtex` style also does this for you. If you use `biblatex` use the option `style=numeric-comp`.

6 Examples

- LHC Collaboration [3]
- Other Collaboration [4]
- Individual authors [5]
- arXiv only [6]
- arXiv only submitted to a journal [7]
- ATLAS CONF Note [8]

While the `collaboration` field is a nice idea, it is not supported by many BibTEX styles. Hence in [3], `collaboration` has been renamed to `author` and the `author` field has been renamed as `xauthor`. If you use `collaboration` and omit `author` you will get a warning when you run `bibtex`.

Note that in Ref. [8] the entry type `@Article` is used and the field `journal` is abused for the conference note number. This is a result of the BibTEXrestrictions on the entry types. `biblatex` provides a lot more entry types. It is planned to move to `biblatex` or the ATLAS templates in the course of 2014.

History

2013-08-13: Cristina Oropeza Barrera First version of the document released.

2014-08-14: Ian Brock Updated the example references a bit and gave a bit more background information.

References

[1] *biblatex – Bibliographies in LaTeX using* BibTeX *for sorting only*. URL: http://www.ctan.org/pkg/biblatex.

[2] *INSPIRE, the High Energy Physics information system*. URL: http://inspirehep.net.

[3] ATLAS Collaboration. "Searches for supersymmetry with the ATLAS detector using final states with two leptons and missing transverse momentum in $\sqrt{s} = 7$ TeV proton-proton collisions". In: *Phys. Lett. B* 709 (2012), p. 137. DOI: 10.1016/j.physletb.2012.01.076. arXiv: 1110.6189 [hep-ex].

[4] PHOBOS Collaboration, B. Alver et al. "Cluster properties from two-particle angular correlations in pp collisions at $\sqrt{s} = 200$ GeV and 410 GeV". In: *Phys. Rev. C* 75 (2007), p. 054913. DOI: 10.1103/PhysRevC.75.054913. arXiv: 0704.0966 [hep-ex].

[5] A. Sherstnev and R. S. Thorne. "Parton distributions for LO generators". In: *Eur. Phys. J. C* 55 (2008), p. 553. DOI: 10.1140/epjc/s10052-008-0610-x. arXiv: 0711.2473 [hep-ph].

[6] P. Z. Skands. *The Perugia tunes*. 2009. arXiv: 0905.3418 [hep-ph].

[7] J. Monk and C. Oropeza-Barrera. *The HBOM method for unfolding detector effects*. Submitted to Nucl. Instrum. Meth. 2011. arXiv: 1111.4869 [hep-ex].

[8] ATLAS Collaboration. *Search for gluino-mediated scalar top and bottom quark production in final states with missing transverse energy and at least three b-jets with the ATLAS detector*. 2012. URL: http://cdsweb.cern.ch/record/1453786.