



ATLAS Note

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Guide to references and BibTeX in ATLAS documents

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This document discusses how to use BibTeX for the bibliography of your ATLAS paper. It covers what to pay attention to when creating references and how to get round common problems. Standard .bib bibliography files are provided which contain all ATLAS and CMS journal publications as well as ATLAS CONF and PUB notes.

Use of both biblatex and the more traditional BibTeX for formatting the references is covered. A biblatex style file and 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.

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1 Introduction

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 or other big collaboration should include the first author, whereas, if the paper is by smaller collaborations 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.

It is strongly recommended to use BibTeX for the references. Although it often appears harder to use at the beginning, it means that the number of typos should be reduced significantly and the format of the references will be correct, without you having to worry about formatting it. In addition the order of the references is automatically correct. Files which contain ATLAS and CMS journal publications as well as ATLAS CONF and PUB notes in BibTeX format are provided — see Section 2.1.

A new implementation of BibTeX is provided by the biblatex [1] package. All ATLAS documents use this package now by default. 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. 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.

The nomenclature is rather confusing as the package biblatex can use either biber or bibtex as a backend to process your .bib files. There are 3 possible cases that will be considered here:

1. biblatex + biber;

2. `biblatex + bibtex`;
3. Traditional `BibTeX` with `bibtex`;

N: 04-00-00 1. is the default for ATLAS. You can change to the `bibtex` backend (alternative 2.) by passing the option `backend=bibtex` to `atlaspackage`. However, see Section 2.4 for some of the drawbacks of the `bibtex` backend. While the use of traditional `BibTeX` (alternative 3.) is deprecated, the templates indicate via commented out commands how to use it. Information on how to use traditional `BibTeX` is in Appendix A. If you use the `biber` backend, 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.

The typical compilation cycle when using `biblatex` with the `biber` backend looks like the following:

```
pdflatex mydocument
biber mydocument
pdflatex mydocument
pdflatex mydocument
```

If you use `biblatex` with the backend `bibtex` rather than `biber`, or the traditional version of `BibTeX`, replace the command `biber` with `bibtex`. The recommended alternative to explicit commands is `latexmk -pdf mydocument`. `latexmk` is a Perl script that looks at your document and runs the appropriate commands as often as they are needed.

`biber` and `bibtex` create a file with the extension `.bbl`, which contains the actual references used, and (pdf)`LaTeX` then takes care to include them in your document. Note that only after the third run of `pdfLaTeX` will all references be correct. Unless you change a reference you do not have to do the `biber/bibtex` step again. The style of the references is governed by the `biblatex` options that you use or the `BibTeX` style file (which has the extension `bst`).

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 Bibliography databases

One or more files with the extension `.bib` should contain all the references. The files may also contain references that you do not use, so they act like a library of references. See Section 2.1 for details on files which contain ATLAS and CMS journal publications as well as ATLAS CONF and PUB notes.

You should check that you base your `.bib` file on the examples provided, as they have the references in the style recommended for ATLAS publications. This will definitely save time in the reviewing process!

Using `biblatex`, you should include commands like:

```
\addbibresource{bib/ATLAS.bib}
\addbibresource{bib/CMS.bib}
\addbibresource{atlas_biblatex.bib}
```

in the preamble of your document.

If you use `atlaspackage`, then `biblatex` is used with the `biber` backend by default. Turn off the use with the option `biblatex=false`.

If you want to use the `bibtex` backend, include `atlaspackage` with the option `backend=bibtex` and use the command `bibtex` instead of `biber` to process the `.bib` files. Note that `biber` returns an error if it encounters an empty `.bib` file.

2.1 Databases with ATLAS and CMS references

Four database files with all ATLAS and CMS journal references as well as ATLAS CONF and PUB notes are provided:

ATLAS.bib the citation key is the ATLAS reference code, e.g. `HIGG-2012-27`;

CMS.bib the citation key is the CMS reference code, e.g. `CMS-HIG-12-036`;

ConfNotes.bib the citation key is the CONF note number, e.g. `ATLAS-CONF-2014-063`;

PubNotes.bib the citation key is the PUB note number, e.g. `ATL-PHYS-PUB-2014-021`.

These are available in the directory `bib` of `atlaslatex`. The files are updated once per month and all entries have been checked for correct formatting. These files are included whenever a new version of `atlaslatex` is released. They are also available directly from the PubCom TWiki [2]. You are strongly encouraged to use these files and not try to maintain your own copies of such publications.

Two additional files are provided:

ATLAS-useful.bib useful references often used in papers;

ATLAS-SUSY.bib references that are commonly used in SUSY papers.

These are provided ‘as is’ and do not undergo the same level of checking as the other four files.

N: 01-07-02 ATLAS journal publications, CONF and PUB notes as well as CMS publications are available.

Corrections to all files are very welcome.

2.2 References from Inspire

A common way to find a reference is using Inspire [3]. 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."`.

4. Remove the journal letter from the volume and include it in the journal, e.g. "`\EPJC`", "`\PRD`" or "`Phys.~Lett.~B`".

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 the `author` or `collaboration` fields, you can of course simply delete them! Do not comment the lines out, as comment lines are not recognised inside `BibTeX` entries.

2.3 Entry types to use

Sometimes it is not clear what entry type to use. Here are a few guidelines. Note that some of the entry types that `biblatex` has are not part of `BibTeX`. The capitalisation of the entry types is irrelevant.

@Article This is easy — use it for articles published in journals, e.g. [4].

@Book Just as easy — use it for books, e.g. [5].

@Proceedings, @Inproceedings The name says it all. Use `@Inproceedings` for a paper in the proceedings and `@Proceedings` for the whole volume.

@Collection Use it for things such as the ATLAS Technical Design Report [6] where the names that you find are the editors. Use `@Incollection` for a single article in a collection. If you use traditional `BibTeX`, you have to use `@Booklet` as in Ref. [7].

@Report Use it for conference and internal notes. This is probably also the best type to use for preprints if you use `biblatex`. You can also use `@Booklet` or `@Online` instead.

@Online Use it for things that are only available online, e.g. [8]. If you use traditional `BibTeX` you have to use `@Misc` instead.

@Thesis The name says it all. `@Phdthesis` and `@Masterthesis` also exist. If you are using `biblatex` you can and should specify the thesis type, e.g. `type = {PhD}`, see for example a PhD thesis [9].

`biblatex` also knows about multivolume proceedings etc. See the manual for more details.

2.4 Errata

N: 04-00-00 Errata for ATLAS publications are included. `biblatex` offers a nice mechanism for this using the related field. For example, Ref [10] has an Erratum. This is achieved using the following:

```

@Article{EXOT-2013-13,
  author      = "{ATLAS Collaboration}",
  title       = "{Search for new phenomena in final states ...}",
  journal     = "Eur. Phys. J. C",
  volume      = "75",
  year        = "2015",
  pages       = "299",
  doi         = "10.1140/epjc/s10052-015-3517-3",
  reportNumber = "CERN-PH-EP-2014-299",
  eprint      = "1502.01518",
  archivePrefix = "arXiv",
  primaryClass = "hep-ex",
  related     = "EXOT-2013-13-err",
  relatedstring = "Erratum:",
}

@Article{EXOT-2013-13-err,
  author      = "{ATLAS Collaboration}",
  journal     = "Eur. Phys. J. C",
  volume      = "75",
  year        = "2015",
  pages       = "408",
  doi         = "10.1140/epjc/s10052-015-3639-7",
  reportNumber = "CERN-PH-EP-2014-299",
}

```

This mechanism is used in `ATLAS.bib` and may be extended to `CMS.bib` once I have a list of the CMS Errata.

The mechanism only works if the `biber` backend is used. Using the standard files with the `bibtex` backend and/or traditional `BIBTEX` does not cause errors when compiling. However, the Errata are simply ignored. Instead, you also should use the files `ATLAS-errata.bib` etc. (with the appropriate key, e.g. `EXOT-2013-13-witherratum` [1]). An example entry looks like:

```

@Article{EXOT-2013-13-witherratum,
  author      = "{ATLAS Collaboration}",
  title       = "{Search for new phenomena in final states ...}",
  journal     = "Eur. Phys. J. C",
  volume      = "75",
  year        = "2015",
  pages       = "299",
  doi         = "10.1140/epjc/s10052-015-3517-3",
  reportNumber = "CERN-PH-EP-2014-299",
  eprint      = "1502.01518",
  archivePrefix = "arXiv",
  primaryClass = "hep-ex",
  addendum    = "Erratum:
  \href{http://dx.doi.org/10.1140/epjc/s10052-015-3639-7}{Eur. Phys. J. C
  \textbf{75} (2015) 408}",
}

```

3 Examples

The examples given above and in this section can be found in the file `doc/atlas_bibtex/atlas_bibtex.bib` of `atlaslatex`. Here are some typical reference types needed in ATLAS documents:

- LHC Collaboration [4]:

```
@Article{lhCollaboration:2012,  
  author =      "{ATLAS Collaboration}",  
  xauthor =     "Aad, G. and others",  
  title =       "{Searches for supersymmetry with the ATLAS detector using  
                final states with two leptons and missing transverse momentum  
                in  $\sqrt{s} = 7$ ,  $\sqrt{s} = 8$  TeV proton--proton collisions}",  
  journal =     "\PLB",  
  volume =     "709",  
  number =     "3",  
  pages =      "137",  
  doi =        "10.1016/j.physletb.2012.01.076",  
  year =       2012,  
  reportNumber = "CERN-PH-EP-2011-165",  
  eprint =     "1110.6189",  
  archivePrefix = "arXiv",  
  primaryClass = "hep-ex",  
}
```

- Other big collaboration [12]:

```
@Article{tevatronCollaboration:1995,  
  author =      "{CDF Collaboration}",  
  title =       "{Observation of top quark production in  $\bar{p}p$  collisions}",  
  xcollaboration = "CDF",  
  journal =     "Phys. Rev. Lett.",  
  volume =     "74",  
  year =       "1995",  
  pages =      "2626-2631",  
  doi =        "10.1103/PhysRevLett.74.2626",  
  eprint =     "hep-ex/9503002",  
  archivePrefix = "arXiv",  
  primaryClass = "hep-ex",  
  reportNumber = "FERMILAB-PUB-95-022-E, CDF-PUB-TOP-PUBLIC-3040,  
                ANL-HEP-PR-95-44",  
  SLACcitation = "%%CITATION = HEP-EX/9503002;%%",  
}
```

- Other collaboration [13]:

```
@Article{otherCollaboration:2007,
  author =      "{PHOBOS Collaboration} and Alver, B. and others",
  title =      "{Cluster properties from two-particle angular correlations
                in \(\text{pp}\) collisions at \(\sqrt{s} = 200\), \(\text{GeV}\)\) and
                \(\text{410}\), \(\text{GeV}\)\)"}",
  xcollaboration =  "PHOBOS",
  journal =      "\PRC",
  volume =      "75",
  pages =      "054913",
  doi =      "10.1103/PhysRevC.75.054913",
  year =      2007,
  archivePrefix = "arXiv",
  eprint =      "0704.0966",
  primaryClass = "hep-ex",
}
```

- Individual authors [14]:

```
@Article{authors:2008,
  author =      "Sherstnev, A. and Thorne, R. S.",
  title =      "{Parton distributions for LO generators}",
  journal =      "\EPJC",
  volume =      "55",
  pages =      "553",
  doi =      "10.1140/epjc/s10052-008-0610-x",
  year =      2008,
  archivePrefix = "arXiv",
  eprint =      "0711.2473",
  primaryClass = "hep-ph",
}
```

- arXiv only [15]:

```
@Booklet{arxivOnly:2009,
  author =      "Skands, P. Z.",
  title =      "{The Perugia tunes}",
  year =      2009,
  archivePrefix = "arXiv",
  eprint =      "0905.3418",
  primaryClass = "hep-ph",
}
```

- arXiv only submitted to a journal [16]:


```
@Article{arxivSub:2011,
  author =      "Monk, J. and Oropeza-Barrera, C.",
  title =       "{The HBOM method for unfolding detector effects}",
  journal =     "submitted to \NIM",
  year =        2011,
  archivePrefix = "arXiv",
  eprint =      "1111.4869",
  primaryClass = "hep-ex",
}
```

- ATLAS CONF Note [17]:

```
@Booklet{ATLAS-CONF-2012-058-test,
  author =      "{ATLAS Collaboration}",
  title =       "{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}",
  howpublished = "{ATLAS-CONF-2012-058}",
  url =         "http://cdsweb.cern.ch/record/1453786",
  year =        "2012",
}
```

While the `collaboration` field is a nice idea, it is not supported by many BibTeX styles. Hence in Ref. [4], `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`.

For CONF notes etc., `@Booklet` is used for the entry type. The CONF note number is included via the `howpublished` field.

For papers that have been submitted to a journal, but not yet published, use the entry type `@Article`. It is possible to specify the journal in the `journal` field in form:

`journal = "submitted to \PLB{"}` or

`journal = "accepted by \PLB{"}`. However, the ATLAS Style Guide [18] says that this should not be done for ATLAS papers.

In general, `biblatex` provides many different entry types. This is one of the reasons for the move to `biblatex` as the default for the ATLAS templates. All `atlaslatex` documentation uses `biblatex` with the backend `biber`.

N: 04-00-00 This is the default for ATLAS documents.

3.1 Bibliography database tips

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

```
@Article{lhcollaboration: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{lhcollaboration: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 use `atlasdoc` and/or `atlaspackage`.
- Depending on the style that is used, if the DOI is filled and the `hyperref` package loaded, the title of the journal can be highlighted in blue and become a hyperlink to the online paper.
- When referencing papers from journals like Phys. Rev. D, Phys. Lett. B, etc., one should not to include the ‘D’ or ‘B’ as part of the volume. Instead these belong to 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.sty`. If you want to use `biblatex` or other `bst` files, it is probably better to use the `atlasjournal` definitions.
- See the Section 2.4 on Errata for hints on how best to include Errata.
- Comments are not part of the bibliography database format. Text outside entries will be ignored. Do not try to comment out fields inside an entry! If there are fields that you do not want, you have to move them outside the entry.

If want to cite multiple references in the format [m-n], `biblatex` it can do this for you by using the option `style=numeric-comp`, which is the default in `atlaslatex`.

4 ATLAS bibliography style

The final formatting 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. ATLAS publications, in general, are submitted using the ATLAS paper style and the journal then adapts them to its conventions. The default is to include the title and the arXiv reference. All `biblatex` style settings can be found in the file `latex/atlasbiblatex.sty`.

The title can be turned off by passing option `articletitle=false` to `atlasbiblatex`. The arXiv reference can be turned off by passing the option `eprint=false` to `atlasbiblatex`.

4.1 biblatex style file

If you use `biblatex` the basic options are set in `latex/atlaspackage.sty`. A few adjustments are made in the style file `latex/atlasbiblatex.sty`, which you should include with a normal `\usepackage` command. By default, this style includes the document title. The title can be turned off by including the option `articletitle=false`. This option turns off the title for entry types `@Article`, `@Booklet` and `@Report`, as `@Booklet` should be used as the entry type for CONF and PUB notes. A summary of the options is:

block=ragged specify the option for extra spacing between blocks when making the bibliography with `biblatex`. `ragged` uses `\raggedright`, but tries not to break titles across lines; `none` and `space` print the references in block mode, while `space` includes an extra space between the author and title; The default option (`ragged`) tries to fit the title into a single line and so sometimes leads to a new line starting immediately after the author;

maxbibnames=5 specify the maximum number of author names before ‘et al.’ is used, where the value is an integer;

articletitle=true|false turn on or off including the article title in the bibliography;

titlequote=true|false enclose the title in quotes instead of emphasise;

showdoi=true|false make the journal reference a link to the DOI instead of displaying it;

eprint=true|false print the arXiv reference if available;

backref=true|false give page number of `\cite` command in bibliography;

address=true|false turn on or off the printing of the address field.

location=true|false turn on or off the printing of the location field.

texlive=YYYY set if you use an older version of T_EX Live like 2013. This option is usually set in the document class.

With `biblatex`, notes are printed after the journal reference and before the arXiv or URL. If you want the note to be printed after the arXiv or URL, use the `addendum` rather than the `note` field. The `addendum` field is ignored by traditional B_IB_TE_X. The field `address` is an alias for `location` in `biblatex`. The `month` field is ignored when using `biblatex`. If you include the month, it should be a number and not text, i.e. "11" and not "Nov", as a number is not language dependent.

The `backref` option prints the page number(s) of the corresponding `\cite` command(s) in the bibliography. It is turned on by default, as this is probably useful information when you are writing a document. For the CERN preprint version of papers it is turned off explicitly. If you want to turn off the back references for the final version of ATLAS notes, CONF notes or PUB notes, pass the option `backref=false` to `atlasbiblatex`.

To print the bibliography include the command:

```
\printbibliography
```

where it should get printed.

5 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`. If you use `biblatex` the form `journal = "\PLB"`, works without problems. 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.

6 Extracting used database entries

At some point you may want to create a bibliography database that only contains the references you are actually using in a document. You can do this using the `bibtol` program. Giving the command:

```
bibtol -x mydocument.aux -o refs.bib
```

will extract the entries that you use and in future you can use and correct `refs.bib`, which only contains the references that you actually cite.¹

For Debian/Ubuntu distributions you should be able to install `bibtol` by giving the command `(sudo) apt-get install bibtol`. For RPM-based Linux (CentOS, Scientific Linux, Fedora, ...) distributions the equivalent command is `yum install BibTool`. On a Mac, you can install it via MacPorts: `(sudo) port install BibTool`, or via Homebrew: `brew install bib-tool`.

References

- [1] *biblatex – Bibliographies in L^AT_EX using BibT_EX for sorting only*,
URL: <http://www.ctan.org/pkg/biblatex> (cit. on p. 2).
- [2] *Standard ATLAS and CMS references*,
URL: <https://twiki.cern.ch/twiki/bin/view/AtlasProtected/PubComRefs>
(cit. on p. 4).
- [3] *INSPIRE, the High Energy Physics information system*, URL: <http://inspirehep.net>
(cit. on p. 4).
- [4] 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*,
Phys. Lett. B **709** (2012) 137, arXiv: [1110.6189](https://arxiv.org/abs/1110.6189) [hep-ex] (cit. on pp. 5, 7, 9).
- [5] H. Kopka and P. W. Daly, *Guide to L^AT_EX*, 4th ed., Addison-Wesley, 2004 (cit. on p. 5).

¹ I got this tip from <http://tex.stackexchange.com/questions/417/how-to-split-all-bibtex-referenced-entries-from-a-big-bibtex-database-to-a-copy>. Do not forget to change `mydocument.tex`, or whatever your main filename is, to use `refs.bib` instead of the previous sources.

- [6] O. S. Brüning et al., eds., *LHC Design Report. 1. The LHC Main Ring*, CERN-2004-003-V-1, CERN-2004-003, 2004,
URL: <https://cdsweb.cern.ch/record/782076> (cit. on p. 5).
- [7] O. S. Brüning et al., eds., *LHC Design Report. 1. The LHC Main Ring*, CERN-2004-003-V-1, CERN-2004-003, 2004,
URL: <https://cdsweb.cern.ch/record/782076> (cit. on p. 5).
- [8] T. Oetiker et al., *A (Not So) Short Introduction to LaTeX2e*,
URL: <http://ctan.org/tex-archive/info/lshort> (cit. on p. 5).
- [9] T. Loddenkötter, ‘Implementation of a kinematic fit of single top-quark production in association with a W boson and its application in a neural-network-based analysis in ATLAS’, BONN-IR-2012-06, PhD Thesis: University of Bonn, 2012,
URL: http://hss.ulb.uni-bonn.de/diss_online (cit. on p. 5).
- [10] ATLAS Collaboration, *Search for new phenomena in final states with an energetic jet and large missing transverse momentum in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector*, *Eur. Phys. J. C* **75** (2015) 299, arXiv: [1502.01518 \[hep-ex\]](#) (cit. on p. 5),
Erratum: *Eur. Phys. J. C* **75** (2015) 408.
- [11] ATLAS Collaboration, *Search for new phenomena in final states with an energetic jet and large missing transverse momentum in pp collisions at $\sqrt{s} = 8$ TeV with the ATLAS detector*, *Eur. Phys. J. C* **75** (2015) 299, arXiv: [1502.01518 \[hep-ex\]](#),
Erratum: *Eur. Phys. J. C* **75** (2015) 408 (cit. on p. 6).
- [12] CDF Collaboration, *Observation of top quark production in $\bar{p}p$ collisions*, *Phys. Rev. Lett.* **74** (1995) 2626, arXiv: [hep-ex/9503002 \[hep-ex\]](#) (cit. on p. 7).
- [13] PHOBOS Collaboration, B. Alver et al., *Cluster properties from two-particle angular correlations in pp collisions at $\sqrt{s} = 200$ GeV and 410 GeV*, *Phys. Rev. C* **75** (2007) 054913,
arXiv: [0704.0966 \[hep-ex\]](#) (cit. on p. 7).
- [14] A. Sherstnev and R. S. Thorne, *Parton distributions for LO generators*, *Eur. Phys. J. C* **55** (2008) 553, arXiv: [0711.2473 \[hep-ph\]](#) (cit. on p. 8).
- [15] P. Z. Skands, *The Perugia tunes*, 2009, arXiv: [0905.3418 \[hep-ph\]](#) (cit. on p. 8).
- [16] J. Monk and C. Oropeza-Barrera, *The HBOM method for unfolding detector effects*, submitted to Nucl. Instrum. Meth. (2011), arXiv: [1111.4869 \[hep-ex\]](#) (cit. on p. 8).
- [17] 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*, ATLAS-CONF-2012-058, 2012, URL: <http://cdsweb.cern.ch/record/1453786> (cit. on pp. 9, 14).
- [18] E. Eisenhandler and S. Willocq, *ATLAS Style Guide*,
URL: <https://cds.cern.ch/record/1110290> (cit. on pp. 9, 15).

A Traditional BibTeX

If you use traditional BibTeX you include the source file(s) at the place where the bibliography should be printed as follows:

```
{\raggedright
  \bibliography{bib/ATLAS,%
    bib/CMS,%
    atlas_biblatex}
}
```

If you want to use the errata provided with traditional `BIBTEX`, you have to replace the field name ‘addendum’ with ‘note’, in `ATLAS-errata.bib`, as the ‘addendum’ field was introduced with `biblatex`.

Note that in Ref. [17] the entry type `@Article` used to be used and the field `journal` was abused for the conference note number. This is a result of the traditional `BIBTEX` restrictions on the entry types.

If you use traditional `BIBTEX`, you should give the journal name in the form `journal = "\PLB{ }",.`

A.1 Traditional `BIBTEX` style files

If you use traditional `BIBTEX`, you should choose between the two style files given below, depending on the journal to which they wish to submit their paper.

The traditional `BIBTEX` style files can be found in the directory `obsolete/bst` of the `atlaslatex` package.

Note that use of traditional `BIBTEX` style files is deprecated and not all options provided for `biblatex` have been ported to the `BIBTEX` style files.

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 [m-n]. If you use `biblatex` it can do this for you by using the option `style=numeric-comp`, which is the default in `atlaslatex`. If you use traditional `BIBTEX`, 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.

A.1.1 `BIBTEX` style file for journals with the title in the reference

`BIBTEX` style file: `atlasBibStyleWithTitle.bst`. Journals:

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

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

```
\bibliographystyle{bib/bst/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`.

A.1.2 BibTeX style file for journals without the title in the reference

BibTeX style file: `atlasBibStyleWoTitle.bst`. Journals:

- EPJC
- NPB
- PLB
- PRD
- PRL

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

```
\bibliographystyle{bib/bst/atlasBibStyleWoTitle}  
\bibliography{atlas-bibtex}
```

History

2013-08-13: Cristina Oropenza 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.

2014-12-03: Ian Brock Text taken from paper template and merged into this document. Document adjusted for use of `biblatex` as the default.

2015-01-30: Ian Brock Try to clarify the nomenclature and the recommended way to use BibTeX.

2015-03-20: Ian Brock Add information about standard ATLAS and CMS bibliography databases.

2016-06-14: Ian Brock Add information about address and location options.

2016-07-08: Ian Brock Add some advice on entry types to use. Reorganise a bit.

2017-02-14: Ian Brock Move options block and `maxbibnames` to `atlasbiblatex`.

2017-06-01: Ian Brock Adjust documentation to reflect change of directories for `bib` and `bst` files.

2017-07-19: Ian Brock Switch to `biber` as the default `biblatex` backend. Added documentation on how to include Errata.

2018-10-09: Ian Brock Other big collaboration references should only include the collaboration name. This follows the ‘ATLAS Style Guide’ [18].

2019-12-11: Ian Brock Included example bibliography entries directly from `bib` file using the `showexpl` package. This is based on the `listings` package. Moved almost everything on use of traditional BibTeX to an appendix.

2020-08-03: Ian Brock Use `tcolorbox` package for listings. Add use of `\ADOCnew` macro to indicate when changes have been made.