Manuscript instructions

June 17, 2019.

No matter how experienced an ADASS author you are, you should at least read this introduction and the checklist that follows it. Requirements have changed in recent years, particularly in the way references have to be handled. We are now asking authors to include author index entries in their papers, and this document describes how to do this. We have also added the ASCL index, and include a Makefile to make it really clear what we need to have submitted.

Introduction

If you give any type talk, present a poster, organize a demo booth, or organise a BoF, at ADASS you are expected to submit a paper for the proceedings.[1] The Proceedings are published by the Astronomical Society of the Pacific (ASP) as part of their conference series. The ASP has a house style for these Proceedings and this imposes a number of constraints on the way papers are written and formatted.

*You **must** submit your paper in LaTeX with references using BibTeX, and must follow the proper ASP style files.* For ADASS XXIX, the main LaTeX style file is asp2014.sty and the BibTeX bibliographic style file is asp2014.bst. On the ADASS site there is a .tar file[2] that contains these .sty files and a template LaTeX file that can be used as the basis for your paper. It also provides a copy of the ASP's document called 'Instructions for Authors and Editors', the first part of which provides detailed directions for authors. The LOC usually distributes updates on their own website more frequently, so please check those before you take the often somewhat outdated adass.org website.

You should read these ASP-provided directions, but should note that they are now some years old, and that requirements for new volumes have changed slightly. In particular, all papers must now provide a .bib file with details of their references in BibTeX format. Papers must no longer use \bibitem LaTeX directives. You may have used \bibitem references for ADASS papers in the past, but these are no longer acceptable. (The template LaTeX file included in the ADASS-supplied .tar file is a modified version of the standard ASP file, which – amongst other things – has had the old \bibitem examples removed. Please use this file rather than any older copies you might have.)

The following check list is intended to serve as a basic summary of what is required. Even if you are an experienced author of ADASS papers, please do read

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[1]   Invited speakers and financial aid recipients are required to submit a paper. Everyone else is strongly encouraged to do so.
[2]   http://www.adass.org/instructions/ADASS2019.tar

through it, because some things have changed over time. And in any case experience shows that even the most experienced and careful authors can get some of these things wrong. The ADASS editors for this conference will check your paper, and may be able to correct minor problems, but will ask you to modify it if necessary. Editing and checking papers can be a very time-consuming process, but it goes much, much faster if authors follow the guidelines!

Each item in the checklist ends with a reference to one of the following sections, which covers the point in more detail. For even more detail, see part one of the ASP's 'Instructions for Authors and Editors' document.

Check list

- Papers should be submitted as compressed tar archives named <paper_id>_<version>.tar.gz. For example: O4-3_v1.tar.gz for the first version submitted, O4-3_v2.tar.gz for the second, etc. (See File names and Paper IDs, p7.). This archive should NOT contain any sub-directories. Filenames in the archive should NOT contain version tags.

- References must all use BibTeX entries in a .bib file. No use of \bibitem! (Even though some older ASP templates have them.) (See References, p5.)

- All references must be cited in the text, usually using \citet or \citep. Do not use \cite. (See References, p5.)

- No LaTeX warnings. Particularly, no overfull hboxes or unresolved references. (See LaTeX warnings and errors, p10.)

- No use of \usepackage except for \usepackage{asp2014}. (See LaTeX packages and commands, p14.)

- No use of \renewcommand or \renewenvironment. (See LaTeX packages and commands, p14.)

- Arguments to \citep etc., should use ADS type references where possible, fall back on <author><year> or something suitably unique if not. (See References, p5.)

- References in the text are all generated automatically (using \citep etc), not put in explicitly as ordinary text that just looks like a generated reference. (See References, p5.)

- Definitely no LaTeX errors. (See LaTeX warnings and errors, p10.)

- Paper is the right length. References don't spill over into one more page. (See Length of Paper, p13.)

- Paper has an abstract. (See Length of Paper, p13.)

- References are to things that actually exist and can be expected to continue to exist. Not papers "in preparation" or URLs for blog items. (See References, p5.)

- Graphics files have to be .eps encapsulated Postscript format. Yes they do! Sorry, but they do. (See Figures – format, p10.)

- Name all the files properly - figures are <paper>_f<n>.eps, eg O1-3_f1.eps. Paper names use dashes not periods, O1-3.tex not O1.3.tex. Posters now use the same naming convention as oral papers, e.g. P3-21. All files should be in the same directory – don't use a separate sub-directory for graphics files. (See File names and Paper IDs, p7.)

- Figure captions should make sense if the figure is printed in monochrome - because it will be! (See Figures – content, p9.)

- Figures are legible at the size ADASS Proceedings volumes are printed, which is quite small. (See Figures – content., p9)

- Avoid ending lines with '\\' – this leads to underfull \hbox warnings. (See LaTeX warnings and errors, p10.)

- Copyright forms signed and filled out - don't use electronic signatures. (See Miscellany, p17.)

- Author lists follow the correct format: comma separated, with an 'and' for the final author. (See Authors and Affiliations, p11.)

- The first author of the paper must be the person who presented the paper at the conference. (See Authors and Affiliations, p11.)

- No repetition of affiliations - list each organisation once, with multiple e-mail addresses if you really must. (See Authors and Affiliations, p11.)

- Running heads should fit in the same horizontal space as the text does, not pushing the page numbers over to the right. (See LaTeX warnings and errors, p10.)

- Run through a spelling checker. (I know that can be tricky with LaTeX.) (See Content and Typesetting, p15.)

- Proofread, or have the text proofread, to check for proper English usage. In particular, note that "allows to" is not conventional English, and English uses articles ('a','an','the') in places where other languages, particularly Eastern European languages, don't have them. (See Content and Typesetting, p15.)

- It will help the editors if you add subject, author and ASCL index entries to your .tex file. (See Authors and Affiliations, p11 and Appendix: The Index.py and ascl.py script, p19.)

References

Unless your paper has no references at all, it needs a .bib file. An example file is included in the .tar file available from ADASS.[3]

Most of the entries in the example file come from the ADS abstract service.[4] If you can find the paper you want to reference on ADS, you can click on the "Bibtex entry for this abstract" link that ADS provides following the abstract. Copy and paste this into your .bib file. If you cannot find the reference on ADS, you will probably need to create the entry yourself. A useful guide to BibTeX entries can be found in the OpenOffice pages.[5] If absolutely nothing else fits, fall back on an @misc entry.

The point of including references is so that readers can actually locate the reference in question. Remember this when considering references to papers "in press" or "in preparation". ASP frowns on such references to things that don't actually exist yet, because they're going to be hard for readers to find. Try to avoid these. If you really must use them, try to include enough detail for a future reader to locate the paper when it does appear.

Papers in arXiv that have not yet been published can be referenced. Indeed, ADS will generate BibTeX refences for such papers. This fictional example shows the main fields:

```
@ARTICLE{20yyarXivnnnn.mmmmm,
  author =        {{Author}, A.~N. and others},
  title =         "{A really important paper}",
  journal =       {ArXiv e-prints},
  archivePrefix ="arXiv",
  eprint =        {arXiv:nnnn.mmmmm},
  year =          20yy,
}
```

In general, most things on the Web are transient, and should not be included as formal references. The preferred way to reference a URL is to supply the URL as a footnote. If it doesn't clutter up the text, it might be included as part of the main text, usually in parentheses. If you are struggling to fit in your 4 pages, note that footnotes take up more space than in-text references. If you use a URL, embed it in \url{}, e.g. use \url{http://cxc.cfa.harvard.edu/} rather than {\tt http://cxc.cfa.harvard.edu/}.

You will find that references generated by BibTeX from ADS-generated entries can be very verbose, and eat into your allotted number of pages. You can reduce this fairly easily. ADS generates the full author list, but the ADASS convention is that papers with 8 or more authors should be abbreviated to just "A. N. Author et al.", for which the BibTeX entry should be "{Author}, A.~N. and others". Note that this applies to lists of editors as well, although having more than eight

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[3]   http://www.adass.org/instructions/ADASS2019.tar
[4]   http://adsabs.harvard.edu/abstract_service.html
[5]   http://www.openoffice.org/bibliographic/bibtex-defs.html

editors is unusual. Also, ADS makes ADASS references particularly verbose, calling the series "Astronomical Society of the Pacific Conference Series" which you can replace with "ASP Conf. Ser.", and the ADASS book titles "Astronomical Data Analysis Software and Systems XXI" etc., which you can replace with "ADASS XXI".

The editing process for the ADASS proceedings involves combining all the individual .bib files into one master .bib file for the whole volume. For this to work properly, the names used to cite references should be as standard as possible. Please do not use "ref1", "ref2", etc. – if everyone does that it will be chaotic. The standard ADS reference names, 2015MNRAS.454.1012A, 2015arXiv151100011O, etc. are cumbersome, but are a standard. If you have to make up your own, a convention like <author><year> is reasonable.

References to the current ADASS volume should be based on the following template:

```
@inproceedings{<paper_id>_adassxxix,
      author     = "<authors>",
      booktitle     = "ADASS XXIX",
      year     = 2020,
      editor     = "TBD",
      volume     = "TBD",
      series     = "ASP Conf. Ser.",
      pages     = "TBD",
      publisher     = "ASP",
      address     ="San Francisco",
}
```

(This is for ADASS XXIX in Groningen, The Netherlands, 2019. For later meetings change the roman numerals – in both places – and the year. Note that the proceedings will be published the year after the conference.) The ADASS editors will fill in the various TBDs as part of the process of completing the volume. For the <paper_id> element, please use the oral, poster etc. ID (e.g., O2-1, P2-17, etc.) given in the programme. The <authors> element should list the authors of the paper being referenced.

It is never correct to list more than one author followed by et al. You should never have an entry like author = {{Author}, A.~N. and {Coauthor}, B.~M. and others} in the BibTeX file.

The .bib file you supply should only include references actually cited in the .tex file. Please don't send your master .bib file with every reference you've ever used. This complicates things for the editors.

Don't put 'fake' references in your actual text: "This is described by Bloggs et al. (1999)". Use "This is described by \citet{Bloggs1999}".

LaTeX supports a number of '\cite'-type commands, but most of what you need can be accommodated by \citet and \citep. You should not use the simple (and

traditional) \cite, which is an older-style of command and can cause problems. There are other '\cite'-type commands that can be used in unusual circumstances,[6] and only \cite must be avoided, but try to stick to \citet and \citep. The ASP Instructions provide a very good explanation of how to use these.

You will need to supply your .bib file, which you should call <paper_id>.bib, eg P9-99.bib, and you will need to include the line:

```
\bibliography{P9-99}
```

in your .tex file, with P9-99 replaced by your paper identifier.

Note that using BibTeX with LaTeX is something of a circular process. First you run LaTeX to pick up all the '\cite'-type references (written into the .aux file).

```
latex P9-99.tex
```

At this point, you will see LaTeX warnings about undefined citations.
Then you run BibTeX:

```
bibtex P9-99
```

And then you run LaTeX again. It always takes two runs to get all the citations resolved:

```
latex P9-99.tex
latex P9-99.tex
```


File names and paper IDs

Following a standard convention makes it easier to handle submitted files automatically. Please name all your files as follows.

All presentations have a type and a number, and an ID constructed from these. The type is abbreviated to a single letter, as follows:

Invited presentation: I
Oral presentation: O
BoF: B
Focus demo: F
Poster: P
Demo booth: D
Tutorial: T

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[6]   See http://texdoc.net/texmf-dist/doc/latex/natbib/natbib.pdf

The number for an oral presentation is formed from the session number and the number within that session, separated by a dash, e.g. "I2-1", or "O10-3". Posters follow the same convention, using a combination of the key theme number and number within that theme, e.g. "P3-21". (Note that for conferences before 2016, posters were just given a three-digit number, e.g. "P045", but that has now changed so that posters can be associated with conference themes.) All other presentations are just given a number from 1 up.

The ID for each presentation is then just the type letter followed by the number. In most of these notes this is shown as <paper_id>.

The main LaTeX file for a presentation must be <paper_id>.tex. The BibTeX file must be <paper_id>.bib and the graphics files for any figures must be <paper_id>_f<n>.eps, where <n> is the figure number, starting at 1.

For example:

Oral presentation O4.3	O4-3.tex, O4-3.bib, O4-3_f1.eps
Invited presentation I3.1	I3-1.tex, I3-1.bib, I3-1_f1.eps
BoF 2	B2.tex, B2.bib, B2_f1.eps
Focus Demo 5	F5.tex, F5.bib, F5_f1.eps
Poster P1.23	P1-23.tex, P1-23.bib, P1-23_f1.eps
Demo Booth 4	D4.tex, D4.bib, D4_f1.eps
Tutorial 2	T2.tex, T2.bib, T2_f1.eps

When you submit your paper, you should include the .tex file, the .bib file (unless your paper has no references) and any .eps files it uses. You should also include a copy of the .pdf file that was generated when you typeset the paper yourself. Please have all the files in the same directory, rather than using a subdirectory for associated files like figures.

You must submit a single archive file – preferably a .tar file, compressed to form a .tar.gz file, but .zip files are acceptable – named as follows:

<paper_id>_<version>.tar.gz

where <version> is v1 for the first version, v2 for the second, etc. For example, the first version of the O4-3 paper should be called

O4-3_v1.tar.gz

and subsequent versions should be called O4-3_v2.tat.gz, O4-3_v3.tar.gz etc. Following this convention makes it much easier for the ADASS editors to keep track of the numerous submissions. If you use .zip files, they should follow the same convention: O4-3_v1.zip etc. Note that each .tar or .zip file should contain *all* the files needed for the paper – don't expect the editors to go back into your earlier versions to find missing graphics files, for example.

Figures - content

The most important point about figures is that they're there for the reader to look at. That means they have to be clear and legible. It's important to realise that the reader may read the paper in two rather different ways: in the printed volume, and on-line. This complicates things, but ideally a figure should be clear and informative in both circumstances.

The printed book produced for all ASP Conference proceedings has quite small pages – the books are closer to A5 than to A4. Most authors will make test prints of their papers, if at all, on A4 or the roughly equivalent US quarto. Try printing your paper two pages to a sheet instead, and in black and white. Most people will be surprised at how hard it is to make out the figures, and will be thoroughly confused by captions such as "the red line shows … while the green line shows …". See if you can say what you need without mentioning colour.

If you possibly can, make your figures easy to read in the printed volume. The ASP has quite strict guidelines about this, and they review the volume when it is submitted to them for publication. However, being realistic, most people are going to view an on-line version of the paper, and that version will be in colour and can be blown up on a screen as much as needed. ADASS papers are available without restrictions such as paywalls, and the preface to the volume will describe how to access them.

The ASP 'Instructions for Authors and Editors' document devotes quite a lot of space to the question of figures, and you should read what it has to say. (Summary: \articlefigure and \articlefiguretwo, or \plotone and \plottwo will do most of what you need, and if you need more you can use \includegraphics.) Do crop any unnecessary white space from around your figure, because that is wasted space on the page. Ideally, ensure that any included line art or text (such as annotations) is legible when the figure is shrunk to 90% of the intended print size. Lines should not be defined as hairline width; the recommended minimum line width at the intended print size is 0.25pt.

Figures need to have a *minimum* resolution of 240 pixels per inch (95 pix/cm) to reproduce satisfactorily. Authors should print out their figures at actual size and evaluate the readability of any embedded text. If the embedded text appears smaller than about 8 pt, then it is not going to be readable in the final printed figure. Text also needs to appear in a contrasting colour to be easily legible.

Equally, for the benefit of those reading on-line, make sure that your figure has enough resolution to be magnified to show the required detail without becoming pixelated.

Figures – format

Figures must be submitted as .eps (encapsulated postscript files). Unfortunately, this is an ASP requirement. We realise the originals for most figures will not be in this format, and you will have to convert them. Sorry.

There are some very capable graphic conversion programs that can convert almost anything into a .eps file. One example for MacOS is GraphicConverter.[7] There are a number of Web-based converters of varying quality available. We have seen some rather strange .eps files submitted with ADASS papers in the past. It also seems that some versions of LaTeX handle strange .eps files better than others do, so the ADASS editors may not always get the same results as you do from some of the stranger files – bounding box problems in particular can make a figure look a different size on different machines.

If you have problems with conversion to .eps, contact the ADASS editors. If you think your .eps files may give problems, it can help to submit the original files as well (but don't expect the editors to fix all your conversion problems for you!). This is a case where submitting your version of the final .pdf file can help – the editors can at least see what you expect the figures to look like.

LaTeX warnings and errors

Your paper should run through LaTeX without any errors. Obviously!

It should also run through LaTeX without any warnings. Most warnings should be treated as errors.

ADASS papers often generate warnings about an overfull \hbox. These need to be fixed, as otherwise the text can run off the printed page in the final volume. Some overflow errors will be annoyingly small, but they still need to be fixed.

A common cause of an overfull \hbox is an included figure that's been forced to too large a scale. Another is verbatim text where the lines are too long. LaTeX will not attempt to hyphenate verbatim text, and all it can do is let it overflow the page. Yet another, especially given the variety of terminology and the use of URLs etc. in ADASS papers, is the simple case where LaTeX would like to hyphenate a word, but doesn't know how to, and ends up leaving it poking into the right margin.

Figure scales can be reduced until the figure fits properly. You may then have to see how legible it is, of course. Verbatim text is something you will have to

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[7]   https://www.lemkesoft.de/en/products/graphicconverter/

reformat yourself – if it is program text, you may need to split the lines up. You can change the text size of verbatim text, perhaps with \small, and this may help. You can use the \- directive to show LaTeX where a word can be hyphen\-ated, if you have a word it doesn't know, but in some cases you may have to modify the sentence to fix the problem; a very small change, like changing "such as" to "like" or vice-versa, may be enough.

If you want to combine two separate images into a single figure, the usual way is to use \minipage. But this has a subtle way of generating an overfull hbox:

```
\begin{minipage}{0.3\textwidth}
\includegraphics{P999_f1.eps}
\end{minipage}
\begin{minipage}{0.7\textwidth}
\includegraphics{P999_f2a.eps}
\end{minipage}
```

Here, the two minipages together take up exactly 1.0 of the textwidth (0.7 + 0.3). However, you get an overfull hbox. The problem is that each minipage is treated as a word by LaTeX, and it inserts an interword space between them. The (unintuitive) fix is to put a single '%' after the first \end{minipage}, so it becomes:

```
\end{minipage}%
```

The opposite warning, an under full \hbox, can be tolerated in some cases. You need to look carefully at the result to see how it looks. If a line has been spaced out by a ridiculous amount, some rewording may be needed. In general, you should avoid ending a line with '\\' – this is a common cause of under full \hboxes. The ASP convention is that there is not normally a blank line between paragraphs; you can use '\\' to get this effect, and may feel it looks better, but it should be avoided.

One genuine problem that, strangely, doesn't always generate a warning is when the running heads (specified using \markboth at the start of the .tex file) overflow the space allowed. Usually the problem is the string used for the paper title; if this is too long it will push the page number on the right hand page over past the page margin. Oddly, LaTeX just lets this happen. If you have a long paper title, check that this isn't happening.

Authors and affiliations

The ASP 'Instructions for Authors and Editors' goes into great detail about the format of the list of authors and their affiliations that make up the arguments of the \author LaTeX command. It may seem quite petty at times, but it helps give the complete volume a coherent feel, and it also means that things like an author index can be added semi-automatically by parsing the \author command, if necessary.

Read the ASP instructions for the details. A few points are worth emphasising:

If all authors are from the same institution, there is no need to give them superscript numbers, and no need to number the single affiliation.

Generally, only the main author's e-mail address needs to be given. If you really want to publicise every author's address, don't do so by giving multiple versions of the same affiliation with the same institute but different e-mail addresses. Provide just one \affil entry for each institute, but supply multiple e-mail addresses at the end, separated by commas.

The presenting author must be the first author of the paper. (It is a requirement of the ADASS conferences that a paper must be presented by its first author.) In the case of an invited talk, the first author must be the person who was invited.

Some authors seem to prefer to spell out forenames; others prefer to just use initials. Either is acceptable, but be consistent. Put the surname last for each author, separate the authors with commas, and if there are more than two authors the last author's name should be preceded by 'and'.

If there are multiple affiliations, the ASP convention is that the commas separating the authors should go after each author's name and before the corresponding affiliation number, as in "Ralph Alpher,[1] Hans Bethe,[2] and George Gamow[3]". Note that this "superscripts follow punctuation" rule is the same as that used for footnotes.

If your name is Mario Vargas Llosa, or any name where someone from a different culture (or, more the point, an automatic parser) might be confused as to whether you are Vargas Llosa, M. or Llosa, M. V., it would help to note this in a comment somewhere, or you may end up misrepresented in the author index.

Because of problems such as this with automatic parsing of the author list, we are now asking authors to add their own author index entries. The \author command still needs to be formatted correctly, as described above, but we have realised it is much easier for authors – who, after all, know their own names! – to add the required entries.

There needs to be a separate author index entry for each author, each on a separate line. These \aindex commands should come just before the abstract. The \aindex command has a very simple format, with Surname followed by a comma, followed by initials, for example:

```
%\aindex{Smith,~J.}
%\aindex{Vargas Llosa,~M.}
%\aindex{Kennedy,~J.~F.}
```

Note that these entries need to be commented out, as they will only be recognised when the final volume is constructed – at which point they will automatically be uncommented. Each initial must have a period after it, and a ~ before it to get the spacing correct.

Here are a few more examples, showing some of the less usual cases, such as hyphenated surnames and first names, and juniors and seniors:

```
%\aindex{Picard,~J.-L.}
%\aindex{Downey,~R.~J.,~Jr.}
%\aindex{Fairbanks,~D.,~Sr.}
%\aindex{Lloyd-Webber,~A.}
%\aindex(Van der Waals,~J.~D.)
```

Please try to make sure that you and your co-authors are named consistently in the author index. If you drop your middle initial in one paper and include it in another, you will generate two author index entries. The same will happen if you sometimes hyphenate a double-barrelled surname and sometimes don't.[8] The editors will try to spot these cases, but it's much easier if they don't have to.

Length of Paper

Except in very exceptional circumstances (an extra page awarded to the winner of the best poster competition, for example), page limits are as follows:

Invited Oral:	10 pages
Contributed Oral:	4 pages
Poster:	4 pages
Demo:	4 pages
Focus Demo:	4 pages
BoF:	4 pages
Tutorial:	4 pages

Editors will enforce these very strictly. Four pages are not very many, and it can take some effort to keep a paper to that limit. There are some things that can help. And there are some things that might help, but are not allowed.

- Abstracts. You must have an abstract. But it does not have to be exactly the same as the one submitted with your original proposal. Many people tend to submit quite long abstracts with their initial proposal, using the abstract to argue for having the paper accepted, or to be given as a talk. Such abstracts may even include most of the content of the paper. The abstract needed for the published paper, however, is simply a brief summary of the contents of the paper.

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[8]   The British are often inconsistent here. You see both David Lloyd-George and David Lloyd George. Sacha Baron Cohen does not use the hyphen, but his brother, Simon Baron-Cohen does.

- Footnotes. Although particularly appropriate for things like URLs, these use up a lot of vertical space. You could always consider putting the text in-line.

- References. Note what is said in the section on References about the verbose nature of some ADS-generated BibTeX entries. You can save some space, as described in that section, by trimming these down. However, remember that all references will be combined into a master .bib file, which will be edited for duplicates, and as a result the final versions may change slightly in format. If you trim your references too enthusiastically, they may grow again in the final editing, so don't rely too much on that.

- Excessive \section and \subsection commands can constrain where page breaks can occur, and can use up space.

- Don't try to gain extra space by using packages that modify the normal spacing of the ASP layout. Such things exist, but they will interfere with the construction of the overall volume, and would in any case make your paper look different to all the others. The editors will remove such packages and return the paper to you.

- Don't try to save space by making figures so small they are unreadable.

In the end, if you find yourself hitting the page limit, you probably need to get rid of some text.

LaTeX packages and commands

The whole set of ADASS papers is processed as one big LaTeX job to produce the final Proceedings volume. This means that your paper has to play nicely with all the other papers, and in general this means sticking as far as possible to standard constructions and not getting too clever with LaTeX. In particular, it means not using non-standard packages, and not modifying the way commands work.

Your paper needs to have \usepackage{asp2014} at the start of the .tex file, but that should be the only \usepackage command in the file.

Authors should not use \usepackage except in the most exceptional circumstances. Many packages will interfere with the construction of the volume (in particular, the subfig package performs global redefinitions of some key formatting quantities and must not be used). The asp2014 package itself includes all the packages that are usually needed. There is a list of these packages in the ASP 'Instructions for Authors and Editors' (appendix E). If you believe you really do need to make use of a specific additional LaTeX package, contact the ADASS editors.

You should avoid changing the font size used for normal text in your paper. However, it is OK to save space by setting verbatim text, or tables, in a smaller font using \small or even \footnotesize. However, if you do this, make sure your paper does not end with a small font still enabled. If it does, this will affect the layout of subsequent papers in the final volume and you will not be popular with the editors. Use braces, or \begin and \end, to restrict the range affected by changes to font size.

Authors should never use \renewcommand or \renewenvironment in their submissions! If it is absolutely necessary to redefine a command, authors should create their own version that embeds a label that is unique to their article (e.g., \<author>_itemize and NOT \myitemize).

Content and typesetting

There are some conventions in typesetting that should be followed by all authors, so that the volume has a uniform appearance.

Footnotes are added in general after the corresponding punctuation "... like this, \footnote{see here} ..." rather than "... like this\footnote{see here}, ...". The difference is that the comma should go before the footnote, rather than after. Different languages seem to have different conventions, but this is what the Chicago Manual of Style recommends.[9]

"Interesting astronomical objects (AGNs, ...)" where the ellipsis ("...") indicates that AGNs are only the start of a list of possible objects, is not standard English usage. You can use "(e.g. AGNs)" or "(AGNs, etc.)". The ellipsis is very rarely used in formal written English.

Does English put a space in front of a question mark or an exclamation mark? No it doesn't! That space is the convention in other languages, like French, but it looks odd in English, doesn't it ? (As I typed that last sentence, my grammar checker complained about the space, so that proves it.)

The ASP guidelines suggest that a volume should be consistent throughout in its use of either British or American spelling. Given the range of ADASS authors, this seems difficult to enforce. However, you should be consistent within your own paper, and not say "color" on one line and "colour" on the next. Given how many ADASS papers are about visualization, and how things are organized, it's worth pointing out that most verbs that the British now spell with "...ise" were originally spelled with "...ize" even in Britain, so there isn't much point in being pedantic about that particular spelling difference.

Papers ought to be run through a spelling checker (set to your choice of British or US English). This can be tricky with LaTeX text, where there are so many

---

[9] It's easy to get wrong; the original 2016 version of this document managed to have two footnotes that didn't follow this rule.

"words" like "\usepackage" that most spelling checkers will complain about. However, there are LaTeX-aware checkers available – Emacs has one, for example. Failing that, just read your .tex file into a standard word processor like Textedit on the Mac, try to ignore the extraneous warnings, and concentrate on the actual spelling errors.

Regrettably, there don't seem to be any good LaTeX-aware grammar checkers.

Do proofread your paper for correct use of English. If necessary, get someone else to do this for you. The standard of English in most ADASS papers by non-native speakers is usually very good, but occasionally there are problems that make it hard to understand the meaning of a piece of text, or that make it awkward to read. Some that seem to crop up quite often are:

- "Allows to do something" doesn't work in English, although it does in other languages. You have to "allow *someone* to do something". You can use "allows one to…" but that sounds excessively formal; "allows the user to…" or even "allows us to…" usually sounds OK.

- "Proposer" in French very rarely translates to "propose" in English – it's a 'false friend', a word that sounds the same but has a subtly different meaning. "Offer", "suggest", "recommend" are usually what is really meant.

- English uses articles ('a','an','the') in places where other languages, particularly Eastern European languages, don't have them. Remember not to miss them out.

- People seem prone to write long sentences, with lots of clauses in commas, with the subject so far from the verb that they lose track of whether that subject was singular or plural. Make sure your subjects and their verbs agree.

- Apostrophes often cause problems. The possessive for "it" is "its" without an apostrophe. (Remember that "his" and "hers" don't have one either.) "It's" is short for "it is". Otherwise, singular possessives use apostrophe-s: "the car's route", "the bus's route"; plurals just use an apostrophe: "the buses' routes".

- "A software" isn't English usage. We don't talk about "softwares" and you can't count them or have just one of them. Usually you have to say "a program", or possibly "a piece of software" or "a library" or "an application", or something similar.

Most ADASS editors are not going to be pedantic about English usage, but they will want the papers to be clear and easy to read; what matters is the work being described, after all.

Miscellany

A common problem with \markboth is forgetting to change the values from the defaults supplied by the template. Another, strangely, is using the author's name for both the author and the title fields.

The copyright forms are important. ASP will not publish your paper without a completed copyright form, either an actual signed form or a scan in PDF format of such a form.

Please do fill in the copyright form! We see a surprising number where the top of the form has been filled in, but the form has not been signed and dated. And on occasion we see one that has been signed, but nothing else has been filled in.

And, although it may seem old-fashioned, signing forms electronically – for example using Acrobat to insert an electronic signature – is not acceptable. If the form doesn't look as if a human has signed it, it won't do. Sorry about that. Such forms will be sent back to the authors.

Appendix: The PaperCheck.py script

The ADASS2019.tar file containing the template .tex file, style files, and these instructions, also contains a Python script (PaperCheck.py) that can be used to check your paper for a number of possible problems. It is recommended that you run it before submitting your paper, and try to fix any problems that it may find.

PaperCheck.py should run under either Python 2 or Python 3. It has been developed under OS X, but should run equally well under Linux. It has not been tested under Windows.

The simplest way to run it is to have it, together with the other Python scripts it uses (AdassChecks.py and TexScanner.py), in the same directory as the .tex file for your paper. You can then run it using:

python PaperCheck.py <PaperID> <Author>

where <PaperID> is the ID for your paper, ie O10-1 or P5-3 etc, and <Author> is the surname of the first author of the paper.

You can always set the executable flag for the script, eg "chmod +x PaperCheck.py" and run it directly, using:

./PaperCheck.py <PaperID> <Author>

The program produces relatively verbose output describing the tests it is performing, followed by a summary of what it found.

Ideally, you will see the following in the summary:

```
--------------- Summary ---------------------------------------

The paper has passed the very basic checks run by this program.

You need to make sure you have followed the ADASS manuscript
instructions, and you need to make sure that your paper
typesets without any LaTeX errors or warnings, and is within
the page limits.
```

Note that PaperCheck does not run LaTeX or BibTeX – it assumes that you have done this and fixed any errors or warnings that these generate. Nor does it check the length of the paper, or check spelling or grammar. What it does check for are a number of common problems that the ADASS editors have found in the past. For example, it checks that references use a .bib file and not \bibitem entries, that all references are supplied, and that no additional references are included in the .bib file. It checks that graphics files are .eps files, as required, and that they are in the top-level directory. It checks that all the graphics files supplied are in fact used by the .tex file. It checks that the running headers set up by the \markboth entry are not just the default values, and it checks that the author list can be parsed properly. It checks for the use of any non-standard LaTeX packages. It checks for any unprintable characters in the .tex file, and checks for the use of \cite instead of \citep or \citet.

Most papers will not pass PaperCheck the very first time. You will usually see a message like:

```
--------------- Summary ---------------------------------------
Some problems were found with this paper, as follows:
Problems were found with the use of LaTeX packages
For more details, see the earlier diagnostics from the various stages
```

In this case, you should look back at the more detailed output. In this example, the detailed output contained:

```
Step 2  - Check for use of unsupported LaTeX packages -------

** <PaperID>.tex includes the following non-standard package(s):
hyperref
this may be a problem **
```

Some of the problems spotted by PaperCheck are less important than others: a missing graphics file is clearly much more important than the presence of one that isn't used, for example.

Many papers have problems with the \author list. This is partly because the ASP rules for the format of the list of authors are very precise and it is very easy to get a comma in the wrong place or to forget that authors should be listed with the surname last (unlike the standard way of listing authors for references). Problems such as this should be fixed, but there are cases where the parser will flag a possible problem with a perfectly correct author list. For example, if an

author has a multi-word surname like "di Marco", the parser will get this right, but will ask for this to be checked. It is a good idea to check the parsing of the author list in the detailed PaperCheck output, because the same parsing is used to generate the author index for the final volume, and we really want to avoid getting authors' names wrong.

If you are using an editor that generates characters that are not in the basic standard ASCII set – for example, LATIN-1 accented characters, or UTF-8 encoded Unicode characters – PaperCheck will recommend that these be replaced by standard LaTeX sequences. Not all LaTeX installations support these extended character sets. Additionally, we have seen papers that use OS X roman characters, which overlap ambiguously with the LATIN-1 extended character set. PaperCheck will flag any such use. It's annoying to have to replace, for example, a perfectly good é with \'{e}, but this does guarantee that your paper will be typeset properly in the final volume.

Appendix: The Index.py script

The Index.py script is included in the ADASS2019.tar file, and is intended to be used to help generate entries for the subject index found at the end of the Proceedings volume. Traditionally, these entries have been inserted as part of the editing process by the ADASS editors, but it makes their job much easier if authors insert these entries themselves.

Index.py should run under either Python 2 or Python 3. It has been developed under OS X, but should run equally well under Linux. It has not been tested under Windows.

The simplest way to run it is to have it, together with the other Python scripts it uses (AdassChecks.py and AdassConfig.py), in the same directory as the .tex file for your paper. You can then run it using:

python Index.py <term>

where <term> the term that you want to generate an index entry for.

You can always set the executable flag for the script, eg "chmod +x Index.py" and run it directly, using:

./Index.py <term>

An index entry has the form:

\ssindex{topic!sub-topic!sub-sub-topic}

where the sub-topics are optional. ADASS volumes only support up to three levels in the subject index, but they do generally make a lot of use of all three levels. The VLT, for example, is indexed as:

\ssindex{observatories!ground-based!VLT}

When the \ssindex entries are added at first, they need to be commented out, as \ssindex is not defined. When the full volume of the proceedings is typeset, the entries will automatically be un-commented. So, if, for example, your abstract makes a significant mention of the VLT, you should have a line:

%\ssindex{observatories!ground-based!VLT}

Note that because this is commented out, it needs to be on a separate line, otherwise it will affect any text that follows it.

Ideally, of course, such an \ssindex entry should be as close as possible to the VLT reference in the text. However, in practice, it merely needs to appear on the same page. So, for example, it is common to collect all the %\ssindex lines for terms that appear in the abstract in a block just after the abstract. (If your abstract runs into the second page, you need to allow for this, but very few abstracts are that long.)

You do not need to put in a huge number of index entries. ASP guidelines suggest that three or four per page is sufficient. You do not need to index the same term more than once for any paper; someone looking for the term in question will be led to your paper, and that's what really matters.

The most important thing about index entries is to try to keep them consistent. The VLT could be indexed as shown above, but could also be indexed as \ssindex{VLT}, \ssindex{telescopes!Very Large Telescope} etc., etc. However, having all of these used, more or less randomly, would lead to a very confusing and less useful index.

The Index.py script tries to do two things:

- It makes it easy to generate the %\ssindex strings, formatted properly, that need to be inserted into the text.

- It uses the cumulative index entries for the most recent ADASS proceedings (held in the file subjectKeywords.txt) to generate consistent entries.

For example:

./Index.py VLT

will print out

```
Looking for index entries matching 'VLT'

%\ssindex{instruments!individual!VLT/UT2}
%\ssindex{instruments!individual!VLT/UT4}
%\ssindex{observatories!ground-based!VLT}
3 entries in master index
```

and of these, the entry you want is almost certainly:
%\ssindex{observatories!ground-based!VLT}
which you can easily copy and paste from the terminal into your .tex file. You
may find you don't care for the existing hierarchical entries, but please do try to
use them if possible rather than adding a new, different, entry for something that
already exists.

What if an entry doesn't already exist? For example, if your paper describes a
new, proposed, Ludicrously Large Telescope, (LLT), and you try

./Index.py LLT

you will get

```
%\ssindex{applications!Q-FULLTREE}
```

(Note that all the program is doing is a case-insignificant search on all the
existing entries.) This may include 'LLT', but it clearly isn't the entry you want, so
you have to introduce a new one. You should try to be as consistent with the
existing entries as possible, so you might think of something similar – perhaps
the VLT – and see how that would be indexed. On that basis, you should probably
modify the result you get from a search for VLT and use:

%\ssindex{observatories!ground-based!LLT}

assuming your LLT is ground-based, but that seems quite likely.

By the time the next ADASS conference comes around, your new entry will have
been extracted from the proceedings and added to the new version of the
cumulative index file, ready for someone else to use.

Appendix: The ascl.py script

The ascl.py script is included in the ADASS2019.tar file, and is intended to be
used to help generate entries for the ASCL index found at the end of the
Proceedings volume. Traditionally, these entries have been inserted as part of
the editing process by the ADASS editors, but it makes their job much easier if
authors insert these entries themselves.

The simplest way to run it is to have it, together with the other Python scripts it uses (AdassChecks.py and TexScanner.py), in the same directory as the .tex file for your paper. You can then run it using:

python ascl.py <PaperID>.tex

where <PaperID> is the ID for your paper, ie O10-1 or P5-3 etc.

You can always set the executable flag for the script, eg "chmod +x ascl.py" and run it directly, using:

./ascl.py <PaperID>.tex

The program produces relatively verbose output describing the code name matched it found, and since many code names use common names, there will be a lot of false positives. Given the line of context displayed, it should be fairly obvious for you to pick the ooindex lines you can cut and paste back into your document, e.g.

#[123] where the figure was created using TOPCAT with a setting

%\ooindex{TOPCAT, ascl:1101.010}

Appendix: The Makefile

There is now a `Makefile` included, as well as the associated `makedefs` file. If you don't know about the "make" command, this section probably makes little sense to you, especially given that previous sections should describe what is codified via the Makefile. However, if you do, this can be a time saver.

Before you use make, you should actually not edit your author settings in the `Makefile`, but do this in the `makedefs` file, viz.

```
# this is where you should define *your* macros, not in the Makefile
P = P13-20
V = 1
A = Teuben
E = teuben@gmail.com
FIGS = P13-20_f1.eps  P13-20_f2.eps
```

The following make targets could be useful for you:

make pdf
make clean
make check

```
make aindex
make tar
make zip
```

but if you are curious, you will see a few more targets that your ADASS proceedings editors will use to try and integrate your paper into the final book. The make tar/zip targets will make the correct archive, with just the files the editors need, nothing more and nothing less. This theoretically makes their ingestion a 10 second job! Pretty please.

History

This document was originally prepared for ADASS XXVI in Trieste.
Modified July 2017 for ADASS XXVII in Santiago.
Modified September 2017 to add the appendices on the PaperCheck and Index scripts, and to emphasise the importance of naming the submitted .tar or .zip archives correctly.
Modified May 2018 for ADASS XVIII in College Park. References to the Santiago conference and the conference number have been modified. A couple of minor grammatical changes were made.
Modified October2018 to add a description of how to add author index entries.
Modified December 2018 to add ASCL and Makefile/makedefs description.
Modified June 2019 for ADASS XXIX in Groningen, The Netherlands.