A BibTeX Style for Astronomical Journals

(for use with BibTeX 0.99c)

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This is a preliminary version. Please report any bugs in the style files, and errors or omissions in the documentation to one of the E-mail addresses below. This package is sent to several astronomical journals, with a request for their official approval of its use. Version 1.0 will hopefully contain a list of journals that have given their consent.

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Contents

Introduction

This document describes the BibTeX style `astron.bst`. BibTeX is a programme that makes it much easier to produce a list of references for papers that are prepared with LaTeX, and it comes with nearly every distribution of LaTeX. Consult your local TEXnician if you cannot find it on the computer(s) you use.

The `astron.bst` style is designed to produce a list of references in the author-year format that is commonly used among astronomical journals. The style file produces references in the exact format of *Astronomy and Astrophysics*, the European astronomical journal. However, the formats of the various astronomical journals (notably Monthly Notices of the Royal Astronomical Society, Astrophysics and Space Science, The Astronomical Journal, and The Astrophysical Journal) only differ in typographical details, such as punctuation and the use of italics.

In the near future we may expect astronomical journals to accept source or DVI files of papers prepared with TEX and LaTeX. It will be possible to use BibTeX and the style `astron.bst` presented here *without restrictions* with any of the LaTeX style files that may be distributed by the journals or their publishers.

For some aspects of scientific publishing with TEX and LaTeX, see appendix A

1 BibTeX

This documentation is not intended as an introduction to BibTeX, nor to LaTeX. You are assumed to be familiar with both. If you are not: LaTeX is documented in its *User's Guide and Reference Manual* by Leslie Lamport (1986). BibTeX is documented by its author: Oren Patashnik (1988). The manual comes with each distribution of BibTeX. It explains how BibTeX should be used, and how style files can be created or adapted.

BibTeX is also documented in section 4.2.3, 'Using BibTeX', and appendix B, 'The Bibliography Database', of the LaTeX *User's Guide*. If you only want to use existing bibliography styles, the information in the LaTeX *User's Guide and Reference Manual* (Lamport, 1986) is sufficient.

2 The 'astron' style files

With this package you should find the BibTeX style file `astron.bst` and the complementary LaTeX style file `astron.sty`. You should install both on the computer on which you run LaTeX and BibTeX. Preferably you should put the files in the directory where the standard and/or optional LaTeX and BibTeX style files are kept. If you are on a multi-user system and have no permission to write to these directories, ask your system manager to install them for you. If you are the only astronomer on the system, and hence the only user of the '`astron`' style, you may also put the files in your working directory.

2.1 `\cite` and `\cite*`

Citations in the author-year format usually look like: '(Author, year)'. But sometimes the name of the author is part of the running text, and you want to make a citation look like: '... Author (year)'. To allow for both forms of citations, `astron.sty` provides two commands: `\cite` and `\cite*`. The command `\cite{`*label*`}` will produce the full citation '(Author, year)', while the command `\cite*{`*label*`}` will produce the short citation '(year)'.

These commands are not standard LaTeX (LaTeX only provides the `\cite` command). They are added to the vocabulary of any LaTeX document style by including the 'astron' option in your document style call, e.g.:

```
\documentstyle[11pt,astron]{article}
```

where '`11pt`' and '`article`' represent the document styles you chose to use.

If you want to make a citation of an other format than the formats produced by `\cite` or `\cite*`, you will have to type the entire citation yourself and use the `\nocite` command. The call '`\nocite{`*label*`}`' in your document will cause LaTeX and BibTeX to include the citation indicated by *label* in the list of references, but the `\nocite` command will *not* be replaced by the *key* text.

2.2 `astron.bst` and `astron.sty`

The style file `astron.bst` causes BibTeX to produce a *document*`.bbl` file with a list of references according to the usual format:

```
\begin{thebibliography}{}
\bibitem[key]{label}bibliography entry
   ⋮
\end{thebibliography}
```

The *label* is, of course, the label which you use in the `\cite{`*label*`}` and `\cite*{`*label*`}` calls in your LaTeX document, and by which BibTeX recognizes entries in the *database*`.bib` file. The style file `astron.bst` causes BibTeX to produce *key*s with the format: `{`*Author*`}{`*year*`}`. The style file `astron.sty` causes LaTeX to replace a `\cite{`*label*`}` call by the text '(Author, year)', and a `\cite*{`*label*`}` call by the text '(year)'. Due to the definition of `\@biblabel` in `astron.sty`, the *key* is not printed in the actual list of references.

2.3 Required, optional, and ignored fields

The bibliography style '`astron`' has its own ideas about which fields in an entry are required, optional or ignored. Astronomical journals make an effort of 'economic' printing, which means that they leave everything out that is not absolutely necessary.

The classes of the fields in each entry are tabulated in appendix B. One thing I will give away here: in the 'author-year' citation system it is obvious that `author` and `year` information is required for every entry. Remember that 'required' means that BibTeX issues a warning if the field is empty, i.e., if the information is not available in your *database*`.bib` file.

3 Examples

The files `example.bib` and `example.tex` show what a bibliographic database file might look like, and demonstrate the use of the `\cite` and `\cite*` commands in various forms.

4 Abbreviations

The file `mnemonic.bib` contains a list of mnemonics which may be used in the '`journal`' fields of the entries in the bibliographic database. If you want to use the mnemonics, you should include `mnemonic.bib` into the `\bibliography` call:

`\bibliography{mnemonic,`*other bibliographic database files*`}`

If you have an entry: '`journal = aa`' (note: *without* quotes or braces around '`aa`'), then BibTeX will cause the mnemonic to be replaced by the text *Astron. Astrophys.* in the final list of references.

The list in appendix D contains the same journals and periodicals as section 001 'Periodicals' in *Astronomy and Astrophysics Abstracts*, Vol. 49A (Burkhardt et al., 1990). The abbreviations follow the recommendations of the "International List of Periodical Title Word Abbreviations", so you are strongly encouraged to use them.

If you want to cite periodicals which are not in `mnemonic.bib`, or if you think you will never use 90% of the mnemonics in the supplied file, you could create your own mnemonics file, and copy from `mnemonic.bib` the abbreviations which you do use.

5 Maintaining the database

To setup and maintain bibliographic databases for BibTeX, this package contains a file `template.bib`, which contains templates of the entries with their required and optional fields (according to `astron.bst`). If you want to add an entry to a database, you can copy the relevant template from `template.bib` into your database file, and then complete the entry with the relevant information.

I have used this method to maintain the databases for quite some time, and I find that it saves me from a lot of arduous typing, and many typing errors.

6 Credits

The BibTeX and LaTeX '`astron`' styles are adaptations of the '`apalike`' styles developed by Oren Patashnik and Suzan King. The `\cite` and `\cite*` trickery is adapted from '`named.bst`' by Peter F. Patel-Schneider.

References

Burkhardt, G., Esser, U., Hefele, H., Heinrich, I., Hoffmann, W., Krahn, D., Matas, V. R., Schmadel, L. D., Wielen, R., and Zech, G. (eds.): 1990, *Astronomy and Astrophysics Abstracts*, Vol. 49A, Springer-Verlag, Heidelberg

Daniel, H.-U., Berger, J., and Savaray, D.: 1989, *Messenger* **56**, 67

Lamport, L.: 1986, *LaTeX, A Document Preparation System*, Addison-Wesley, Reading, Massachusetts

Patashnik, O.: 1988, *BibTeXing*, Supplied with BibTeX distributions

A Aspects of publishing with TEX and LaTeX

New developments, such as TEX and LaTeX, are about to radically change the conventional ways of scientific publishing. Experiments with the acceptance of papers prepared with TEX or LaTeX are already going on (Daniel et al., 1989).

The principle is simple and appealing. Authors prepare their papers with TEX or LaTeX, and send their manuscripts to the publishers on floppy disk or via electronic mail. A publisher runs TEX or LaTeX on the manuscript, and produces a (high quality) printable copy of the paper. The costly and time consuming steps of typesetting and proofreading would then be eliminated.

But before everything will run smoothly, some aspects of scientific publishing with TEX and LaTeX will have to be considered, and some problems need to be addressed.

A.1 Generalized Mark-up

Although papers in the various scientific journals exhibit a great variety in typographical appearance, a common underlying structure can be recognized. The papers can be characterized by: a heading (with the title of the paper, and the author's names and affiliations); an abstract or summary; sections; tables; figures; equations; a list of references; and sometimes appendices. The typographical form of a paper is intended to support this structure. The typography is, in fact, derived from the structure, as becomes evident from the typographical instructions that are scribbled on to the oldfashioned typewriter written manuscripts by a desk editor.

A desk editor recognizes the structural elements of a paper from the typography of the typewriter written manuscript. The author has *implicitly* structured his manuscript by applying some rudimentary typography. The structure of a manuscript can be formalized, by asking the author to *explicitly* state what comes next, e.g. like this:

```
title:       Gnats and Gnus again
author:      A.N. Author
affiliation: The Gnats and Gnus Institute,
             Somewhere Lane 15, Downtown, Inthecountry.
abstract:
 Some people get fed up with examples that are about Gnats and Gnus.
 This paper brings about new information, which shows that Gnats and
 Gnus are a species with such unexpected virtues, that the reader will
 never be agonized again, but, to the contrary, cannot wait to learn
 more about them.
introduction:
```

⋮

A desk editor could again scribble his remarks in this manuscript, to indicate to a typesetter what typographical form is required for each of the structural elements. The 'scribbeling' of the desk editor is, by the way, called 'mark-up'. An other desk editor, of a different journal, could also scribble in *his* remarks, which would make sure that the typesetter applies the typographical rules of this other journal.

So we have not only *formalized* the mark-up of the paper, we have also made it independent of the typographical form. Mark-up which is independent of the typographical form is said to be *generalized* mark-up.

The idea of modern (scientific) publishing is that the author supplies a manuscript, which is marked-up employing a 'Generalized Mark-up Language'[1].

This manuscript can be processed by *any* publisher into the typographical format of a particular publication. The advantages of the concept are obvious: 1. the author does not have to bother with typographical matters, and 2. the publisher is completely in control of the appearance of a publication, just as he always has been.

A.2 TEX

So how do TEX and LaTeX fit into this concept? Let us first look at TEX, and then at LaTeX.

TEX is a computerized typesetting system, geared towards the typesetting of manuscripts which contain a lot of mathematics. Like the traditional typesetting systems, TEX requires information from the user about *where* and *how* things are to be put on paper. TEX provides many basic commands, but these commands are hardly ever used directly. The commands are grouped in *macros*, which perform (typographically) logical functions. Macros are grouped into *macro packages*. TEX comes with a standard macro package '`plain.tex`', and it is this macro package that is used by most authors who say they use TEX.

However, this 'plain' macro package still requires information from the user about where and how things are to be put on paper. And it is here that a problem arises. Because if 'plain' TEX were to be used for scientific publishing, it would mean that authors have to concern themselves with the layout and the typographical details of the journal(s) they are publishing in. Although publishers would not dare to doubt the scientific capabilities of authors, they have serious concerns about their qualities as typographers. And with good reason, as years of experience with 'camera ready' manuscripts have shown.

But, because TEX actually is a computer programme, there are great powers hidden inside. By building on the 'plain' macros, or by developing completely new ones, the concept of macros can be carried further, until a package is achieved which, to the user, looks like a 'Generalized Mark-up Language'.

A.3 LaTeX as a Generalized Mark-up Language

A TEX macro package with the properties of a Generalized Mark-up Language has already been developed. It is called LaTeX. With LaTeX the author uses 'generalized mark-up' commands such as '`\title`', '`\begin{abstract}`', '`\section`', '`\appendix`', which bear no relation to a particular typographical format at all. The typographical format of the final printed copy of a LaTeX manuscript is determined by so-called 'style files'. LaTeX comes with four standard style files, which allow the user to produce typographically sound articles (papers), books, reports, and letters. But these style files may be replaced by others, to produce an entirely different typographical format of a document from the *same* mark-up commands. Thus, if a publisher accepts the source text of a LaTeX manuscript, he can convert it into printed output with almost any desired typographical format, *without* changing the original text.

[1] In fact, there is at present an international effort being made of the development of what is called the 'Standard Generalized Mark-up Language' (SGML). SGML will be / is an ISO standard. SGML will be mainly used by publishers and by organisations to maintain large databases.

As an author you do not have to worry that you will yet again have to learn something new: suppliers of word-processors will incorporate SGML in their products, so you will produce SGML manuscripts without knowing it.

A.4 TEX, and the 'typewriter syndrome'

If you are an editor or a publisher, you will have met authors who say that they much prefer TEX over LaTeX. They try to convince you that they can do much more with it than can be done with LaTeX. What they mean is, that they have more direct control of what the *printed output* looks like, and hence, over the typography of their product. We should realize that authors who say they use TEX, in fact use the 'plain' macro package. Some 90% of these authors use 'plain' TEX as a sophisticated typewriter. For instance, when they start a new section, they tell TEX to leave some white space between the preceding text and the new section heading, switch to a different font, type the heading, leave some white space again, switch back to the font for the running text, and continue to type the next paragraph.

This is all fine when an author types a manuscript for his own purposes, or one that will be typeset again by a professional typesetter. Of course, a publisher could provide a set of instructions which tell the author how everything should be formatted, just like the instructions that are provided for 'camera ready' papers. But publishers know how well authors keep to these instructions, and many authors have nightmares about camera ready manuscripts, which cost them blood, sweat, tears, and far too much time to prepare.

Furthermore, TEX is not intended to be used in this way. When 'plain' TEX is used as a typewriter, not even 5% of its potential capabilities are challenged. The design of TEX allows it to be adapted to the structural and typographical demands of the publications of many, different branches of science, by means of the 'macro' concept. For very specialized branches, special macro packages can be developed (and are developed, such as the $\mathcal{AMS}$TEX package of the American Mathematical Society). Other branches, like astronomy, could do with a 'general purpose' package, such as LaTeX.

Authors will have to adapt to the concept of Generalized Mark-up, and be cured from the 'typewriter syndrome'. Only through generalized mark-up, the principle of directly publishing the manuscript provided by the author will work. And the benefits will be great: it allows the author to fully concentrate on the writing of the manuscript, without worries about the layout; it leaves the publisher in full control of the typographical appearance of his publications; and the time between submission and publication can be reduced considerably.

A.5 Consultation and education

Like with every beautiful concept, there are some practical hazards and problems involved in scientific publishing with TEX and LaTeX. The mark-up commands provided by LaTeX do not cover every peculiarity you may have in scientific papers, and not all commands are strictly 'generalized', i.e., some do have a direct typographical effect[2]. And then authors should use the proper commands for their mark-up, which they have to select from an overwhelming number of available commands.

Publishers can provide special or optional style files, which add new mark-up commands to the LaTeX vocabulary. But this has to be done very cautiously, because every new command means a deviation from standard LaTeX, and requires extra attention from the authors. New commands should not be added without proper consultation of the community of authors that has to use a particular macro package.

Authors will have to be educated about the proper mark-up of their papers. Experience at Springer-Verlag (Heidelberg) and Kluwer Academic Publishers (Dordrecht), with TEX and LaTeX manuscripts provided by authors, has shown that the much greater possibilities of these systems in comparison to the old typewriter, are only to often used in the wrong

[2]This is not a problem peculiar to LaTeX, it is a problem that designers of generalized mark-up languages are struggling with in general.

way. This means that TEX and LaTeX manuscripts need so much polishing and brushing up, that the effort involved equals or sometimes surpasses that of having the manuscript typeset in the traditional way.

What authors have to learn about the mark-up of their papers, are rules that generally apply to the proper typesetting of mathematical texts. These rules are not dependent of a particular journal (although, of course, some branches of science may have their peculiarities, but these are then again common for the branch). Rules of proper typesetting are mentioned at many places in the *TeXbook* and in the *LaTeX User's Guide and Reference Manual*. But the learning of TEX and LaTeX is at present still a matter of teaching it yourself, and many authors seem to miss the good advice that is given.

A.6 Concluding remarks

The use of TEX and LaTeX for scientific publishing will only succeed if we adapt to the concept of 'generalized mark-up'. Only in that way an author can fully concentrate on the writing of his manuscript, and leave the typographical intricacies to the publisher. Much has yet to be learned by everyone involved: authors, editors, and publishers. We can learn from each other: publishers can learn from authors what is wrong about their macro packages; authors can learn from publishers which rules of proper typesetting they violate.

It would be a good thing if the processes of consultation and education were formalized in working groups, or something similar. I know there are publishers who are reluctant about formalized consultation, because they are afraid it slows down their efforts to get going with TEX and LaTeX. However, it is my opinion that they can only benefit from participating in some form of formalized consultation. The introduction of TEX and LaTeX will take time anyway, and by listening to the authors, publishers may be prevented from releasing macro packages which are not accepted by the authors.

Authors could in such negotiations stress that they will only opt for some form of generalized mark-up, because working truly camera ready would take too much of their time. An inventory could be made of what authors have to learn about the proper mark-up of mathematical texts, and courses could be set up to educate the new generation of authors. I think that some time from now universities will provide introductory courses in LaTeX, just as they are now providing introductory courses in computer programming.

In the mean time, LaTeX users can enjoy this BibTeX style, which extends the concept of generalized mark-up to such a horrifying thing as the compilation of a list of references.

B Classes of the fields

Fields in the entries of the bibliographic database are attributed one of three classes: required, optional, or ignored. The table in this appendix lists the class of each field in each entry. See also Sect. 2.3.

Table B.1: Classes of the fields.
(*R*= Required, *O*= Optional, –= Ignored)

	Entry						
Field	article	book	booklet	conference[a]	inbook	incoll.[b]	inproc.[c]
address	–	*O*	*O*	*O*	*O*	*O*	*O*
annote	–	–	–	–	–	–	–
author	*R*	*R*	*R*	*R*	*R*	*R*	*R*
booktitle	–	–	–	*R*	–	*R*	*R*
chapter	–	–	–	–	*R*	*O*	–
crossref	*O*	*O*	–	*O*	*O*	*O*	*O*
edition	–	*O*	–	–	*O*	*O*	–
editor	–	*O*	–	*O*	*O*	*O*	*O*
howpublished	–	–	*O*	–	–	–	–
institution	–	–	–	–	–	–	–
journal	*R*	–	–	–	–	–	–
key	*O*	*O*	*O*	*O*	*O*	*O*	*O*
month	–	–	–	–	–	–	–
note	*O*	*O*	*O*	*O*	*O*	*O*	*O*
number	–	*O*	–	*O*	*O*	*O*	*O*
organisation	–	–	–	*O*	–	–	*O*
pages	*O*	–	–	*O*	*O*	*O*	*O*
publisher	–	*R*	–	*O*	*R*	*R*	*O*
school	–	–	–	–	–	–	–
series	–	*O*	–	*O*	*O*	*O*	*O*
title	–	*R*	*R*	–	*R*	–	–
type	–	–	–	–	–	–	–
volume	*O*	*O*	–	*O*	*O*	*O*	*O*
year	*R*	*R*	*R*	*R*	*R*	*R*	*R*

[a] 'conference' is the same as 'inproceedings'
[b] incoll. = incollection
[c] inproc. = inproceedings

Table B.1: Classes of the fields (*continued*).
(*R*= Required, *O*= Optional, –= Ignored)

	Entry						
Field	manual	masters.[d]	misc	phd.[e]	proc.[f]	tech.[g]	unpubl.[h]
address	*O*	*O*	–	*O*	*O*	*O*	–
annote	–	–	–	–	–	–	–
author	*R*	*R*	*R*	*R*	*R*	*R*	*R*
booktitle	–	–	–	–	–	–	–
chapter	–	–	–	–	–	–	–
crossref	–	–	–	–	–	–	–
edition	*O*	–	–	–	–	–	–
editor	–	–	–	–	*O*	–	–
howpublished	–	–	*O*	–	–	–	–
institution	–	–	–	–	–	*O*	–
journal	–	–	–	–	–	–	–
key	*O*	*O*	*O*	*O*	*O*	*O*	*O*
month	–	–	–	–	–	–	–
note	*O*	*O*	*O*	*O*	*O*	*O*	*R*
number	–	–	–	–	*O*	–	–
organisation	*O*	–	–	–	*O*	–	–
pages	–	–	–	–	–	–	–
publisher	–	–	–	–	*O*	–	–
school	–	*R*	–	*R*	–	–	–
series	–	–	–	–	*O*	–	–
title	*R*	–	*O*	–	*R*	*R*	*R*
type	*O*	*O*	*O*	*O*	*O*	*O*	*O*
volume	–	–	–	–	*O*	–	–
year	*R*	*R*	*R*	*R*	*R*	*R*	*R*

[d] masters. = mastersthesis
[e] phd. = phdthesis
[f] proc. = proceedings
[g] tech. = techreport
[h] unpubl. = unpublished

C Changing the style files yourself

The '`astron`' bibliography style has been designed to meet the requirements of astronomical journals. Maybe you are working on documents which could do with about the same documentstyle, but not quite. Then you may want to modify the '`astron`' styles to your needs. To help you on your way, here is a summary of what happens in each style file.

You do remember to name modified style files anything other than `astron.bst` or `astron.sty`, don't you?

C.1 `astron.bst`

The style `astron.bst` causes BibTeX to create a bibliography file which looks like:

```
\begin{thebibliography}{}
\bibitem[key]{label}bibliography entry
   ⋮
\end{thebibliography}
```

The *key* is formatted from the `author` and `year` entries in the bibliographic database. It looks like: `{`*Author*`}{`*year*`}`.

The *bibliography entry* is formatted from the required and optional information in the fields of an entry, like `author`, `year`, `title`, `volume`, `pages`, et cetera. According to the definitions in `astron.bst`, BibTeX takes care of the typographical intricacies of the *bibliography entry*, such as punctuation, italics for journal names and booktitles, boldface for journal volumes, etc.

As an example, here is what `astron.bst` made BibTeX make of `\cite{lamport}` in this document:

```
\bibitem[\protect\astroncite{Lamport}{1986}]{lamport}
Lamport, L.: 1986,
\newblock {\em LaTeX, A Document Preparation System},
\newblock Addison-Wesley, Reading, Massachusetts
```

C.2 `astron.sty`

The style file `astron.sty` is a LaTeX style file. It defines the `\cite` and `\cite*` commands such that `\cite{`*label*`}` is replaced by '(Author, year)' in the running text, and `\cite*{`*label*`}` by '(year)'.

It also defines the `thebibliography` environment. It causes the text '**References**' to be produced as the heading of the list of references in '`article`s', and '**Bibliography**' as the heading in '`report`s' and '`book`s'

The `thebibliography` environment is defined in terms of the LaTeX '`list`' environment, in which the items are preceded by '`\bibitem`'. All parameters related to the '`list`' environment, such as '`itemsep`', '`leftmargin`', etc., are set at the `\begin{thebibliography}` call.

To summarize in brief: the BibTeX style `astron.bst` takes care of the typographical details of each item in the bibliography; the LaTeX style `astron.sty` takes care of the global typographical appearance of the bibliography.

D Mnemonics

This appendix lists the mnemonics by which the abbreviations of journal names may be called in the `journal` fields of the entries in the bibliographic database. See also Sect. 4.

AAO Newsl. ..... `aao`
AAVSO Newsl. ..... `aavso`
Acta Astron. ..... `acta`
Acta Astron. Geophys. Univ. Comenianae .. `aaguv`
Acta Astron. Sin. ..... `actastsin`
Acta Astrophys. Sin. ..... `actapsin`
Acta Geod. Geophys. ..... `agg`
Acta Geophys. Sin. ..... `ags`
Acta Phys. Pol., Ser. B ..... `appsb`
Acta Tech. Acad. Sci. Hung. ..... `atash`
Adv. Phys. ..... `advp`
Adv. Space Res. ..... `advsr`
AIP Conf. Proc. ..... `aip`
Am. Assoc. Variable Star Obs. Bull. ..... `aavsob`
Am. Assoc. Variable Star Obs. Circ. ..... `aavsoc`
Am. J. Phys. ..... `amjp`
Anglo–Aust. Telesc., Annu. Rep. ..... `aatar`
Ann. Geophys. ..... `ag`
Ann. Phys. (Leipzig) ..... `apl`
Ann. Phys. (N.Y.) ..... `apny`
Ann. Phys. (Paris) ..... `app`
Appl. Opt. ..... `ao`
Appl. Phys. Lett. ..... `appl`
Appl. Phys., B ..... `apb`
Appl. Spectrosc. ..... `as`
Arch. Hist. Exact Sci. ..... `ahes`
Archeoastronomy (U.K.) ..... `archuk`
Archenhold–Sternw. Berlin–Treptow, Sonderdr. ... `asbts`
Archenhold–Sternw. Berlin–Treptow, Vortr. Schr. . `asbtvs`
Arecibo Obs./NAIC, Newsl. ..... `aonaicnl`
Artif. Satell. ..... `artsat`
Astrofiz. Issled. Izv. Spets. Astrofiz. Obs. .. `aiisao`
Astrofizika ..... `af`
Astron. Astrophys. ..... `aa`
Astron. Astrophys. Rev. ..... `aar`
Astron. Astrophys. Suppl. Ser. ..... `aas`
Astron. Bull. (Carter Obs.) ..... `abco`
Astron. Ges., Abstr. Ser. ..... `agas`
Astron. Her. ..... `asther`
Astron. Inst. Univ. Brno, Contrib. ..... `aiubc`
Astron. J. ..... `astj`
Astron. Nachr. ..... `an`
Astron. Now ..... `astnow`
Astron. Raumfahrt ..... `astraum`
Astron. Rechen-Inst.Heidelb., Mitt., Ser. A `astriha`
Astron. Rechen-Inst.Heidelb., Mitt., Ser. B `astrihb`
Astron. Sch. ..... `astschu`
Astron. Tidsskr. ..... `asttid`
Astron. Tsirk. ..... `asttsir`
Astron. Vestn. ..... `astvest`
Astron. Zh. ..... `astzh`
Astronomia UAI ..... `astuai`
Astronomie ..... `astie`
Astronomy ..... `asty`
Astrophys. J. ..... `apj`
Astrophys. J., Lett. ..... `apjl`
Astrophys. J., Suppl. Ser. ..... `apjss`
Astrophys. Lett. Commmun. ..... `aplc`
Astrophys. Space. Sci. ..... `apss`
Astrophysics ..... `ap`
Atti Accad. Naz. Lincei, Ser. Ottava, Rend. ..... `aanlsor`
Aust. J. Astron. ..... `ajast`
Aust. J. Phys. ..... `ajp`
BAV Mitt. ..... `bavm`
BAV Rundbrief ..... `bavr`
BBSAG Bull. ..... `bbsag`
Be Star Newsl. ..... `bestarnl`
Bild Wiss. ..... `bildw`
BIPM Circ. T ..... `bipm`
Biul. Obs. Astron. Uniw. M. Kopernika Toruniu ... `boaumkt`
Bol. Obs. Ebro ..... `boe`
Bol. ROA ..... `broa`
Boundary-Layer Meteorol. ..... `blm`
Boyden Obs., Occas. Publ. ..... `boop`
Br. Astron. Assoc. Circ. ..... `bastac`
Bulg. J. Phys. ..... `bjp`
Bull. Am. Astron. Soc. ..... `baas`
Bull. Am. Phys. Soc. ..... `baps`
Bull. Assoc. Fr. Obs. Etoiles Variables ..... `bafoev`
Bull. Astron. Inst. Czech. ..... `bastic`
Bull. Astron. Soc. India ..... `basi`
Bull. Crimean Astrophys. Obs. ..... `bcao`
Bull. Geogr. Surv. Inst. ..... `bgsi`
Bull. Inf. Cent. Données Stellaires ..... `bicds`
Bull. Obs. Astron. Belgr. ..... `boab`
C. R. Acad. Sci., Sér. Gén., Vie Sci. ..... `crassgvs`
C. R. Acad. Sci., II ..... `crassii`
Can. J. Phys. ..... `cjp`
Celest. Mech. ..... `cm`
Cent. Astron. Sci. Spat., Obs. Sol. ..... `cassos`
Centaurus ..... `cent`
Chem. Phys. Lett. ..... `cpl`
Chin. Astron. Astrophys. ..... `chinaa`
Chin. Phys. ..... `chinp`
Chin. Phys. Lett. ..... `chinpl`
Ciel ..... `ciel`
Ciel Terre ..... `cielt`
Circ. Czech. Obs. Time Lattiude ..... `ccotl`
Circ. Inf. ..... `cinf`
Circ. Time Latitude Serv. ..... `ctls`
Classical Quantum Gravity ..... `cqg`
Comments Astrophys. ..... `cast`
Comments Nucl. Part. Phys. ..... `cnpp`
Comments Plasma Phys. Controlled Fusion . `cppcf`
Commun. Fac. Sci. Univ. Ankara, Ser. A2, A3 ..... `cfsua`
Commun. Konkoly Obs. ..... `cko`
Commun. Math. Phys. ..... `cmp`
Commun. Univ. Lond. Obs. ..... `culo`
Comput. Phys. ..... `comp`
Comput. Phys. Commun. ..... `compcom`
Contemp. Phys. ..... `cp`
Contrib. Astron. Obs. Skalnaté Pleso ..... `caosp`
Contrib. Atmos. Phys. ..... `cap`
Contrib. Dep. Astron., Univ. Tokyo ..... `cdaut`

Contrib. Lick Obs. ..... clo
Contrib. Nicholas Copernicus Obs. Planetarium Brno ..... cncopb
Contrib. Nizamiah Japal-Rangapur Obs. ..... cnjro
Contrib. Plasma Phys. ..... cpp
Contrib. Van Vleck Obs. ..... cvvo
Cosmic Res. ..... cr
Cryogenics ..... cryo
Czech. J. Phys., Sect. B ..... czjp
Data Rep. Hydrogr. Obs., Ser. Astron. Geod. drho
Dtsch. Geod. Komm. Bayer. Akad. Wiss., Reihe B dgkbawb
Dtsch. Geod. Komm. Bayer. Akad. Wiss., Reihe C dgkbawc
Dtsch. Geod. Komm. Bayer. Akad. Wiss., Reihe E dgkbawe
Earth Planet. Sci. Lett. ..... epsl
Earth Rotation Bull. ..... erb
Earth, Moon, Planets ..... emp
Earth–Sci. Rev. ..... esrev
ESA Bull. ..... esab
ESA IUE Newsl. ..... esaiuenl
ESA J. ..... esaj
ESO Ann. Rep. ..... esoar
Eur. J. Phys. ..... ejp
Europhys. Lett. ..... epl
Europhys. News ..... epn
Exp. Astron. ..... expast
Fizika ..... fiz
Fortschr. Phys. ..... fortp
Found. Phys. ..... fp
Fundam. Cosmic Phys. ..... funcp
G. A.A.B. ..... gaab
G. Astron. ..... gast
Gemini ..... gem
Gen. Relativ. Gravitation ..... grg
Geochim. Cosmochim. Acta ..... gca
Geomagn. Aehron. ..... ga
Geophys. Astrophys. Fluid Dyn. ..... gafd
Geophys. J. ..... gj
Geophys. Res. Lett. ..... grl
Geophysics ..... geo
GEOS Circ. ..... geos
Gerlands Beitr. Geophys. ..... gbg
Heavens ..... heav
Helv. Phys. Acta ..... hpa
High Energ. Phys. Nucl. Phys. ..... hepnp
Hvar Obs. Bull. ..... hob
Hyperfine Interact. ..... hi
I.A.P.P.P. Commun. ..... iappp
IAU Circ. ..... iauc
IAU Inf. Bull. ..... iauib
Icarus ..... icarus
IEEE Trans. Magn. i3etm
IEEE Trans. Nucl. Sci. i3etns
IEEE Trans. Plasma Sci. i3etps
IERS Bull. B ..... iersbb
IERS Bull.–A ..... iersba
Indian J. Pure Appl. Phys. ..... ijpap
Indian J. Radio Space Phys. ..... ijrsp
Inf. Bull. Variable Stars ..... ibvs
Inst. Astron. Astrophys. Tech. Univ. Berlin, Mitt. . iaatub
Inst. Astron. Geod., Univ. Madr., Publ. ..... iag
Inst. Astron., Univ. Camb., Annu. Rep. ..... ia
Int. Comet Q. ..... icq
Int. J. Infrared Millimeter Waves ..... ijimw
Int. J. Mod. Phys. A ..... ijmp
Int. J. Theor. Phys. ..... ijtp
Inverse Probl. ..... ip
Ir. Astron. J. ..... iastj
IRIS Bull. A ..... iris
Issled. Solntsa Krasnykh Zvezd ..... iskz
Itogi Nauki Tekh., Ser. Astron. ..... intsa
Itogi NAuki Tekh., Ser. Plazmennye Protsessy Kosmose ..... intsppk
Izv. Astron. Obs. Ehngel'gardt. ..... iaoe
Izv. Krym. Astrofiz. Obs. ..... ikao
Izv. Vyssch. Uchebn. Zaved., Radiofiz. ..... ivuzr
J. Acoust. Soc. Am. ..... jasa
J. Am. Assoc. Variable Star Obs. ..... jaavso
J. Appl. Meteorol. ..... jam
J. Appl. Phys. ..... jap
J. Astron. Fr. ..... jastf
J. Astrophys. Astron. ..... japast
J. Atmos. Sci. ..... jas
J. Atmos. Terr. Phys. ..... jatp
J. Br. Astron. Assoc. ..... jbasta
J. Br. Interplanet. Soc. ..... jbis
J. Chem. Phys. ..... jcp
J. Comp. Phys. ..... jcomp
J. Electrostat. ..... jel
J. Fac Sci., Ege Univ., Ser. A ..... jfseu
J. Fluid Mech. ..... jfm
J. Geophys. Res. ..... jgr
J. Hist. Astron. ..... jhast
J. Mater. Sci. ..... jms
J. Math. Phys. ..... jmp
J. Mod. Opt. ..... jmo
J. Opt. (Paris) ..... jop
J. Opt. Soc. Am. A ..... josaa
J. Opt. Soc. Am. B ..... josab
J. Phys. ..... jp
J. Phys. A ..... jpa
J. Phys. B ..... jpb
J. Phys. D ..... jpd
J. Phys. E ..... jpe
J. Phys. G ..... jpg
J. Phys. Soc. Jpn. ..... jpsj
J. Plasma Phys. ..... jpp
J. Quant. Spectrosc. Radiat. Transfer ..... jqsrt
J. R. Astron. Soc. Can. ..... jrasc
J. Stat. Phys. ..... jsp
J. Vac. Sci. Technol., A ..... jvst
JETP Lett. ..... jetpl
Johns Hopkins APL Tech. Dig. ..... jhatd
Jpn. J. Appl. Phys., Part 1 ..... jjap1
Jpn. J. Appl. Phys., Part 2 ..... jjap2
Kapteyn Astron. Inst., Annu. Rep. ..... kai
Kexue Tongbao ..... kexto
Kinematika Fiz. Nebesn. Tel ..... kfnt
Kodaikanal Obs. Bull. ..... kob
Komet. Tsirk. ..... kt
Kosm. Issled. ..... ki
Kozmos ..... koz
KPM ..... kpm
Laser Optoelektron. ..... lo

Latitude Circ. ..... latc
LEST Found., Annu. Rep. ..... lest
Lett. Math. Phys. ..... lmp
Lick Obs. Bull. ..... lob
Manuscr. Geod. ..... mg
Mater. Lett. ..... ml
Mater. Res. Bull. ..... mrb
Mem. Fac. Sci., Kyoto Univ., Ser. Phys., Astrophys., Geophys., Chem. ..... mfs
Mem. Soc. Astron. Ital. ..... msai
Mercury ..... merc
Messenger ..... mess
Meteoritics ..... met
Meteoritika ..... metka
Metrologica ..... metro
Minor Planet Bull. ..... mpb
Minor Planet Circ. ..... mpc
Mitt. Archenold–Sternw. Berlin Treptow .... masbt
Mitt. Astron. Ges. ..... mag
Mitt. Lohrmann–Obs., Tech. Univ. Dresden mlotud
Mitt. Sternw. Sonneberg ..... mss
Mitt. Veränderliche Sterne ..... mvs
Mitt. Zentralinst. Phys. Erde ..... mzpe
Mod. Phys. Lett. A ..... mpla
Mon. Not. R. Astron. Soc. ..... mn
Mon. Notes Astron. Soc. S. Afr. ..... mnassa
Nablyud. Iskusstv. Nebesn. Tel. ..... nint
Nachr. Olbers–Ges. Bremen ..... nogb
Natl. Astron. Obs. (Jpn.), Repr. ..... naoj
Natl. Geogr. ..... ng
Natl. Radio Astron. Obs., Repr., Ser. A ..... nraoa
Natl. Radio Astron. Obs., Repr., Ser. B ..... nraob
Nature ..... nat
Naturwissenschaften ..... natwis
Nauchn. Inf. ..... ni
News Lett. Astron. Soc. N.Y. ..... nlasny
Nizamiah Rangapur Obs. Dep. Astron., Osmania Univ., Repr. ..... nrodaour
NRAO Workshop ..... nraow
Nucl. Instrum. Methods Phys. Res., Sect. A nimpra
Nucl. Instrum. Methods Phys. Res., Sect. B nimprb
Nucl. Phys. A ..... npa
Nucl. Phys. B, Part. Phys. ..... npb
Nuovo Cimento A ..... nca
Nuovo Cimento B ..... ncb
Nuovo Cimento C ..... ncc
Obs. Trav. ..... ot
Observatory ..... obs
Occultation Newsl. ..... onl
Österr. Z. Vermessungswes. Photogramm. .... ozvp
Opt. Commun. ..... oc
Opt. Eng. ..... oe
Opt. Laser Technol. ..... olt
Opt. Lett. ..... ol
Opt. News ..... on
Opt. Spectrosc. ..... os
Optik ..... optik
Origins Life Evol. Biosphere ..... ofeb
Orion ..... orion
Orione ..... orione
Oss. Astrofis. Catania, Pubbl. ..... oac
Perem. Zvezdy ..... pz
Phys. Bl. ..... pb
Phys. Chem. Miner. ..... pcm
Phys. Fluids, A ..... pfa
Phys. Fluids, B ..... pfb
Phys. Lett. A ..... pla
Phys. Lett. B ..... plb
Phys. Rep. ..... pr
Phys. Rev. A ..... pra
Phys. Rev. B ..... prb
Phys. Rev. C ..... prc
Phys. Rev. D ..... prd
Phys. Rev. Lett. ..... prl
Phys. Scr. ..... ps
Phys. Teach. ..... ptch
Phys. Today ..... ptod
Physica A ..... pha
Physica B ..... phb
Physica D ..... phd
Pis'ma Astron. Zh. ..... paz
Planet. Space Sci. ..... pss
Plasma Phys. Controlled Fusion ..... ppcf
Postepy Astron. ..... pa
Pramãna ..... pram
Priroda ..... pri
Proc. Astron. Soc. Aust. ..... pasa
Proc. IEEE pi3e
Proc. R. Soc. London, Ser. A ..... prsl
Proceedings of SPIE ..... posp
Prog. Astron. ..... past
Prog. Theor. Phys. ..... ptp
Publ. Astron. Inst. Czech. Acad. Sci. ..... paicas
Publ. Astron. Soc. Jpn. ..... pasj
Publ. Astron. Soc. Pac. ..... pasp
Publ. Beijing Astron. Obs. ..... pbao
Publ. Dep. Astron., Univ. Beogr. ..... pdaub
Publ. Dom. Astrophys. Obs. ..... pdao
Publ. Natl. Astron. Obs. Jpn. ..... pnlaoj
Publ. Purple Mt. Obs. ..... ppmo
Publ. Shaanxi Astron. Obs. ..... psao
Publ. Spéc. Cent. Données Stellaires ..... pscds
Publ. Yunnan Obs. ..... pyo
Pure Appl. Geophys. ..... pag
Q. Bull. Sol. Act. ..... qbsa
Q. J. R. Astron. Soc. ..... qjras
Radiant ..... rad
Radio Sci. ..... rsci
Recherche ..... reche
Rep. Prog. Phys. ..... rpp
Rev. Astron. ..... ra
Rev. Geophys. ..... rg
Rev. Mex. Fis. ..... rmf
Rev. Mod. Phys. ..... rmp
Rev. Roum. Phys. ..... rrp
Rev. Sci. Instrum. ..... rsi
Riv. Nuovo Cimento ..... rnc
Říše hvězd ..... rh
S. Afr. Astron. Obs., Annu. Rep. ..... saaoar
S. Afr. Astron. Obs., Circ. ..... saaoc
SAAO Newsl. ..... saaon
Sci. Am. ..... sciam
Sci. China, Ser. A ..... scch
Sci. Rep. Tôhoku Univ., Eighth Ser. ..... srtu
Science ..... sc
Sendai Astron. Rap. ..... sar
Sidereal Times ..... st
Sky Telesc. ..... sky

Sol. Bull. (AAVSO) ..... sbaavso
Sol. Energy ..... se
Sol. Phys. ..... sp
Sol. Radio Data ..... srd
Sol. Syst. Res. ..... ssres
Soln. Dannye, Byull. ..... sdb
Sonne ..... sonne
Soobshch. Byurak. Obs. ..... sbo
Soobshch. Spets. Astrofiz. Obs. ..... ssao
South. Stars ..... sost
Sov. Astron. ..... sa
Sov. Astron. Lett. ..... sal
Sov. J. Opt. Technol. ..... sjot
Sov. Phys. – Dokl. ..... spd
Sov. Phys. – JETP ..... spj
Sov. Phys. – Usp. ..... spu
Space ..... space
Space Sci. Rev. ..... ssr
Space Telesc. Sci. Inst., Newsl. ..... stsi
Spaceflight ..... sf
Sterne ..... sterne
Sterne Weltraum ..... sw
Sternenbote ..... sb
Strolling Astron. ..... strlast
Stud. Geophys. Geod. ..... sgg
Tartu Astrofüüs. Obs. Teated ..... taot
Tectonophysics ..... tect
Tellus, Ser. A ..... tellus
Teor. Mat. Fiz. ..... tmf
Theor. Pap. ..... tp
Time Serv. Bull. ..... tsb
Tokyo Meteor Network Rep. ..... tmnr
Tsirk. Astron. Inst. (Tashkent) ..... tai
Ukr. Fiz. Zh. ..... ufz
Universe Classroom ..... ucla
Upps. Astron. Obs., Rep. ..... uao
Urania ..... urania
U.S. Nav. Obs., Circ. ..... usnoc
U.S. Nav. Obs., Ser. 4 ..... usnos4
Usp. Fiz. Nauk ..... ufn
Variable Star Bull. ..... vsb
Vasiona ..... vasiona
Veröff. Astron. Rechen–Inst. Heidelb. ..... varih
Veröff. Zentralinst. Phys. Erde ..... vzpe
Vesmír ..... vesmir
Vestn. Akad. Nauk SSSR ..... vansssr
Vestn. Kiev. Univ., Astron. ..... vku
Vistas Astron. ..... va
WGN ..... wgn
Wiss. Z. Tech. Univ. Dresden ..... wztud
Yamamoto Circ. ..... yama
Z. Angew. Math. Phys. ..... zamp
Z. Naturforsch., A ..... zna
Z. Phys., A ..... zpa
Z. Phys., C ..... zpc
Zemlya Vselennaya ..... zv
Zenit ..... zenit
Zh. Ehksp. Teor. Fiz. ..... zetf