



mnassa

## Style guide & instructions to authors

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## General notes

The Monthly Notes of the Astronomical Society of Southern Africa (MNASSA) is the official journal of the Astronomical Society of Southern Africa (ASSA) and publishes material of interest to professional and amateur astronomers. MNASSA is indexed in A&A Abstracts and therefore the articles at any level should be of a high standard.

Contributions to MNASSA can be divided into the following:

- *reader's letters*;
- *ASSA news* (Society-related material; news from Council; activities of members, etc.);
- *news notes* (local and international news of interest to astronomers);
- *research papers* (original research papers on all branches of astronomy and astrophysics; papers are sent to referees before publication);
- *general contributions* (typically longer and more detailed than news notes, these contributions are less formal than research papers; these include historical articles, biographies, obituaries, travel accounts, observing reports, instrumentation development papers and progress reports on ongoing research);
- *reviews* (currently only book reviews are published, but during 2003 this will include web sites and software); and
- the *observer's page* (accounts of the activities of the various observing sections within the Society).

There are no page charges, but it is important for papers to be concise.

The ASSA holds the copyright of all the papers it publishes, but, with the author's agreement, will usually freely grant permission for reproduction for non-commercial purposes.

## The publication process

### Submission of manuscripts

Papers may be submitted in hard copy or electronic form. Electronic submission is strongly preferred.

#### Hard copy submission

Articles should be submitted to:

The Editor: MNASSA  
c/o SAAO  
PO Box 9  
Observatory  
7935  
South Africa

The submission should be in computer-printed or typewritten form, in a standard font in which roman and italic characters can be distinguished. Hard copy figures should accompany the manuscript. Manuscripts and artwork are not returned after submission unless special arrangements have been agreed upon.

## **Electronic submission**

Electronic submission is preferred in PDF (recommended) or PostScript format. Most other formats can also be accepted (e.g. TeX, LaTeX, Microsoft Word). To limit file sizes, artwork embedded in the document should be low-resolution, with high-resolution versions made available separately.

Articles should be e-mailed to the Editor at:

auke@telkomsa.net (preferred) or  
mnassa@sao.ac.za

## **The refereeing process**

All submitted manuscripts are reviewed initially by a MNASSA editor. Manuscripts with insufficient priority for publication are rejected promptly.

Research papers are sent to appropriate referees for peer review. Authors may be requested to undertake revision of their paper before it is accepted for publication.

Rejected manuscripts will not be returned to authors unless specifically requested. Print copies of original illustrations, photographs and slides will be returned.

## **The publication process after a paper has been accepted**

When a contribution has been accepted for publication, it is copy-edited for grammar, spelling, journal style, etc.

The paper is then typeset from the supplied electronic files and returned to the author for approval. These proofs are e-mailed in PDF format to the first author, and contain queries regarding ambiguities, unclear sections of text, missing information, etc.

Note that although the paper will be typeset using the author's source files as a starting point, the paper will have been converted to the typesetter's own system (Adobe PageMaker 6.5 for the PC). Therefore, proofs should be read carefully, particularly equations and other numerical matter. It is the responsibility of each author to check their proofs, reply to any queries, and notify the editor of any typographical errors. When updating the reference list, please be careful to update textual citations as well.

## **Offprints**

Authors will be provided with an electronic offprint on publication of their paper. Such offprints are e-mailed to the author who originally submitted the manuscript, unless otherwise arranged.

In addition, authors may choose to receive three printed copies of that number of MNASSA in which their article appears. These copies will be sent by surface mail to the first author.

# Preparing a manuscript

Papers are typeset, as far as possible, directly from the author’s submission. Authors are therefore requested to follow MNASSA’s style conventions, as set out below:

## Title

Clearly indicate the title of the paper (using capital letters only where they would occur in a normal sentence), and the names and full postal addresses of each author, along with the address for correspondence if that is different.

## Abstract

Authors should provide an abstract, normally of not more than 200 words.

## Sections

The paper should be divided into sections and, if necessary, subsections. Optionally, sections may be numbered 1, 2, 2.1, 2.1.1 etc. Appendices should be labelled A, B, etc. Section headings should contain capital letters only where they would occur in a normal sentence.

## Tables

Tables should be numbered in order of their citation in the text. Each table should be provided with a caption, preferably no longer than 10 to 15 words, positioned above the table. Explanatory comments, if necessary, are placed immediately below the table.

Sample table layout

**Table 2.** Reduced observations of 2002 Leonids

<b>Date</b> <small>(a)</small>	<b>Watch times</b> <small>(b)</small>	<b>T<sub>eff</sub></b> <small>(c)</small>	<b>F</b> <small>(d)</small>	<b>Alt</b> <small>(e)</small>	<b>LM</b> <small>(f)</small>	<b>Leonids</b>	<b>ZHR</b> <small>(g)</small>
16	00:48 – 02:00	1.2	1.00	19.1	5.4	2	16
17	00:45 – 02:10	1.4	1.00	19.8	5.6	3	16
17	01:12 – 02:20	1.1	1.00	30.9	5.1	4	31
18	00:44 – 02:10	1.4	1.00	21.5	5.2	3	23
18	00:45 – 02:05	1.3	1.00	28.2	5.0	3	24

(a) 2002 November; (b) time in UT; (c) effective observing time in hours; (d) correction factor for cloud cover during the watch; (e) mean altitude of the radiant in degrees; (f) naked eye limiting magnitude; (g) computed zenithal hourly rate.

## Figures

Figures (line art & images) should be supplied electronically wherever possible.

Figures should be numbered in order of their citation in the text. Each figure should be provided with a caption positioned immediately below it.

It is the responsibility of the author to obtain the appropriate copyright permission for any figures taken from another's work.

Where a figure has several parts, labels '(a)', '(b)' etc. should be added as appropriate. Graphs containing quantitative information should have borders on all sides and fiducial marks on every border.

## Line art

Authors are asked to bear in mind, when preparing their diagrams, the likely reduction that will be needed when the figure is placed in the journal page. It is important to ensure that the line thickness used will withstand a possibly significant reduction in size. This applies to all aspects of the figure, but dotted and dot-dashed lines can cause particular problems.

Axis labelling, lettering and any plotting symbols should be sized appropriately for the figure and its likely final size.

## Images

Grey-scale images can be tricky to reproduce well, owing to the slight but unavoidable loss of contrast that occurs during the printing process. Steps that authors can take to remedy this problem include: avoiding very fine (< 20 per cent) or very solid (> 80 per cent) tints, increasing the contrast between shades as much as possible, and using fewer different levels of grey.

## Electronic formats

Most graphics formats are acceptable (e.g. JPG, TIFF, GIF). Please make sure that the files have sufficient resolution: 300 dpi for grey-scale figures (e.g. photographs), and 800 dpi for line art, at final size.

Graphic files should be named to indicate clearly to which illustration they belong.

## Mathematics

Equations should be punctuated as part of the sentence. Displayed equations are ranged left (i.e. no indent). The usual numbering convention for equations [i.e. (1), (2), (3)... or (2.1), (2.2), (2.3)...] should be followed. Equations in appendices should be numbered (A1), (A2), (B1), etc.

Scalar variables are *italic*; vectors are ***bold italic*** (no arrows); matrices are **bold Univers** font (like bold sans serif); dot products are denoted by a bold centred dot, cross-products by a bold multiplication sign.

Differential complex *i*, exponential *e*, sin, cos, tan, log, etc., are roman.

Sub/superscripts that are physical variables are italic, while those that are just labels are roman (e.g.  $C_r$ , but  $T_{\text{eff}}$ ).

## Units

Units should be in roman and separated from the number by a space – e.g. 200 km.

The units of time are ms, s, min, h, d, yr.

The units of length/distance are Å, nm, µm, mm, cm, m, km, au, light-year, pc. Use superscript –1, not solidus /, for units: e.g. km s<sup>-1</sup> not km/s. The unit of arcseconds is arcsec when used to denote angular size or separation (e.g. ‘beamsize 12 arcsec’, ‘30 arcsec west of the star’); use " for coordinates (e.g. Dec –30° 29' 23").

Avoid repeating units unnecessarily (e.g. ‘1.3 and 2.6 mm’ rather than ‘1.3 mm and 2.6 mm’).

The unit of magnitudes is mag, not superscript m.

Percentages should be written ‘per cent’, not %.

Use the degree symbol ° except to denote e.g. areas, where deg<sup>2</sup> may be more appropriate (e.g. ‘a survey area of 3 deg<sup>2</sup>’).

Solar masses and solar luminosities should be roman.

Use only standard SI units and those additional units that are recognized for use in astronomy.

## Punctuation

When deciding where to add commas, it may be helpful to read through the sentence and note where the natural ‘pauses’ occur.

## Spelling

Please use British spelling – e.g. centre not center, labelled not labeled.

The following style regarding -ise/yse and -ize spellings is followed:

-ise/yse: devise, surprise, comprise, revise, exercise, analyse.

-ize: recognize, criticize, minimize, emphasize, organize, parametrize.

Miscellaneous journal spellings: acknowledgments, artefact, best-fitting (not best-fit), disc (except computer disk), haloes (not halos), hotspot, none the less, non-linear, on to, time-scale.

‘Sun’, ‘Earth’ and ‘Moon’ are capitalized, but ‘solar’ and ‘lunar’ are not.

‘none’ is a singular word (‘none of the stars is a white dwarf’); ‘data’ is a plural word (‘these data show...’).

## Hyphens, N-rules

Hyphens (‘-’) are used for compound adjectives (e.g. low-density gas, least-squares fit, two-component model). This also applies to simple units (e.g. 1.5-m telescope, 284.5-nm line), but not to complex units or ranges, which could become cumbersome (e.g. 15 km s<sup>-1</sup> feature, 100–200 μm observations). Some words (e.g. timescale) are always hyphenated as part of journal style (see above).

N-rules (‘-’) are used as parentheses (e.g. ‘the results – assuming no temperature gradient – are indicative of ...’), to denote a range (e.g. 1.6–2.2 μm), to denote the joining of two words (e.g. Herbig–Haro object), and also as a negative (minus) sign.

## Miscellaneous

e.g., i.e., cf., etc., are roman.

Single quotes ‘ ’ not double quotes “ ”.

Letters denoting wavebands (e.g. *UBV*) are set italic. Colour excess is set as e.g. *E(B–V)*.

Letters denoting orbital states are set roman.

Ionized species should be denoted by small capitals, preceded by a thin space – e.g. Hei.

Balmer lines are set as e.g. Hα (no subscript).

Computer software (e.g. *DAPHOT*) should be in small capitals.

Satellite names should be in italic (e.g. *Ginga*, *IRAS*).

The correct bracket order is {[()]}.

Acronyms and abbreviations should be spelt out at the first occurrence, unless they are very well known.

Dates should be written as e.g. ‘1998 April 14’

Figures and tables should be referred to as e.g. ‘Fig. 1’ and ‘Table 1’, unless they are from another paper, in which case ‘fig. 1’ and ‘table 1’ should be used.

Authors should check that any stellar names derived from constellations are written in the correct genitive form: e.g. V386 Sagittarii or V386 Sgr, not V386 Sagittarius.

## References

Authors should check carefully that all references in the text appear in the reference list, and vice versa; also that the dates and spelling of names are consistent between the text and the reference list. It is the responsibility of authors to ensure the accuracy of their references.

### In the text

When citing references in the text, tables or figure captions:

- for one author, use the style '(Brown 1999)' or e.g. '...the observations of Brown (1999)...', depending on the context;
- for two authors, use an ampersand: 'Brown & Jones (1991)';
- for three authors, give all three names at first mention, e.g. '(Brown, Jones & Smith 1994)', but 'et al.' (in roman) thereafter, e.g. '(Brown et al. 1994)';
- for more than three authors, use 'et al.';
- for several papers by the same author(s), use the style '(Brown 1992, 1995)' or 'Smith et al. (2000a,b) show that...';
- when several papers are listed in brackets, they should be ordered by date and separated by semi-colons, e.g. '(Smith et al. 1990; Brown et al. 1995)'.

### In the reference list

Use no bold or italic, and no commas after author surnames. Use an ampersand between the final two author names. List all authors if eight or fewer, otherwise 'et al.'. Enclose the year of publication in parentheses. It is recommended that the title of the paper is also added. Use a period to terminate each reference.

Dutra C. M. & Bica E. (2002) A catalogue of dust clouds in the Galaxy. *Astron. Astrophys.*, 383, 631–635.

Gingerich O. (1988) Shapley's Impact. In: Grindlay J.E. & Davis Philip A.G. (eds) *The Harlow-Shapley Symposium on Globular Cluster Systems in Galaxies*, *Astron. Soc. Pac.*, San Francisco, 23–33.

Berry R. & Burnell J. (2000) *The Handbook of Astronomical Image Processing*. Willmann-Bell Inc, Richmond, Virginia.

Krisciunas K. (2001) A Brief History of Astronomical Brightness Determination Methods at Optical Wavelengths. preprint (astro-ph/0106313)

de la Fuente Marcos R. (1998) Searching for open cluster remnants. *Astron. Astrophys. Letters*, in press.

Williams B.G. (1992) PhD thesis, Univ. Edinburgh.

Prefixes such as 'de' or 'van' should be considered as part of the family name for alphabetical arrangement, and 'Mc' should be read as 'Mac'. If there are several references with the same first author, arrange in the following order: first single-author papers (by date); then two-author papers (alphabetically by co-author, then by date); then multi-author papers (by date).

Private communications or papers in preparation should be listed as such in the text, but omitted from the reference list, e.g. 'Smith (in preparation) shows that...'

### Citations of electronic material

URLs and e-mail addresses may be placed in [ ] to improve readability.

Break a URL that goes to another line after a slash or before a period. Do not insert a hyphen at the break.

*Online periodical:*

Author A. A., Author B. B. & Author C. C. (Year)  
Title of article. Title of Periodical, xx, xxxxxx.  
Retrieved month day, year, from [source].

*Online document:*

Author A. A. (Year) Title of work.  
Retrieved month day, year, from [source].

*Article in an Internet-only journal*

Fredrickson B. L. (2000 March 7) CPC2: The Second Cape Photographic Catalogue. I - History, observations and plate measurements. *Online Instrumentation*, 3, Article 0001a. Retrieved 2002 November 20 from [<http://journals.asa.org/instrument/volume3/pre0030001a.html>].

*Article in an Internet-only newsletter*

Glueckauf R. L., Whitton J., Baxter J., Kain J., Vogelgesang S., Hudson M., et al. (1998 July). A catalogue of nebulae and clusters of stars in the southern hemisphere. *SouthSky News*, 2(3). Retrieved from [<http://www.southsky.net/subscribe/newsletr4a.html>].

Use the complete publication date given on the article. Note that there are no page numbers. In an Internet periodical, volume and issue numbers often are not relevant. If they are not used, the name of the periodical is all that can be provided in the reference.

*Stand-alone document, no author identified, no date*

ASP's 8th WWW user survey. (n.d.) Retrieved 2001 August 8 from <http://www.asp.edu/usersurveys/survey1997-10/>

If the author of a document is not identified, begin the reference with the title of the document.

# Keywords

List of keywords as used by the *Monthly Notices of the Royal Astronomical Society*, *Astronomy and Astrophysics*, and *The Astrophysical Journal*.

## General

editorials, notices  
errata, addenda  
extraterrestrial intelligence  
history and philosophy of astronomy  
miscellaneous  
obituaries, biographies

## Physical data and processes

acceleration of particles  
accretion, accretion discs  
astrobiology  
astrochemistry  
atomic data  
atomic processes  
black hole physics  
conduction  
convection  
dense matter  
diffusion  
elementary particles  
equation of state  
gravitation  
gravitational lensing  
gravitational waves  
hydrodynamics  
instabilities  
line: formation  
line: identification  
line: profiles  
magnetic fields  
(*magnetohydrodynamics*) MHD  
masers  
molecular data  
molecular processes  
neutrinos  
nuclear reactions, nucleosynthesis, abundances  
plasmas  
polarization  
radiation mechanisms: general  
radiation mechanisms: non-thermal  
radiation mechanisms: thermal  
radiative transfer  
relativity  
scattering  
shock waves  
stellar dynamics  
turbulence  
waves

## Astronomical instrumentation, methods and techniques

atmospheric effects  
balloons  
instrumentation: adaptive optics  
instrumentation: detectors  
instrumentation: high angular resolution  
instrumentation: interferometers  
instrumentation: miscellaneous  
instrumentation: photometers  
instrumentation: polarimeters  
instrumentation: spectrographs  
light pollution  
methods: analytical  
methods: data analysis  
methods: laboratory  
methods: miscellaneous  
methods: N-body simulations  
methods: numerical  
methods: observational  
methods: statistical  
site testing  
space vehicles: instruments  
techniques: high angular resolution  
techniques: image processing  
techniques: interferometric  
techniques: miscellaneous  
techniques: photometric  
techniques: polarimetric  
techniques: radar astronomy  
techniques: radial velocities  
techniques: spectroscopic  
telescopes

## Astronomical data bases

astronomical data bases: miscellaneous  
atlases  
catalogues  
surveys

## Astrometry and celestial mechanics

astrometry  
celestial mechanics  
eclipses  
ephemerides  
occultations  
reference systems  
time

## The Sun

Sun: abundances  
Sun: activity  
Sun: atmosphere  
Sun: atmospheric motions  
Sun: chromosphere  
Sun: corona  
Sun: coronal mass ejections (*CMEs*)  
Sun: evolution  
Sun: faculae, plages  
Sun: Filaments  
Sun: flares  
Sun: fundamental parameters  
Sun: general  
Sun: granulation  
Sun: helioseismology  
Sun: infrared  
Sun: interior  
Sun: magnetic fields  
Sun: oscillations  
Sun: particle emission  
Sun: photosphere  
Sun: prominences  
Sun: radio radiation  
Sun: rotation  
(*Sun:*) solar–terrestrial relations  
(*Sun:*) solar wind  
(*Sun:*) sunspots  
Sun: transition region  
Sun: UV radiation  
Sun: X-rays, gamma-rays

## Solar system

comets: general  
**comets: individual:...**  
Earth  
interplanetary medium  
Kuiper Belt  
meteors, meteoroids  
minor planets, asteroids  
Moon  
Oort Cloud  
planets: rings  
planets and satellites: formation  
planets and satellites: general  
**planets and satellites: individual:...**  
Solar system: formation  
Solar system: general

## Stars

stars: abundances  
stars: activity  
stars: AGB and post-AGB  
stars: atmospheres  
(*stars:*) binaries (including multiple): close  
(*stars:*) binaries: eclipsing  
(*stars:*) binaries: general  
(*stars:*) binaries: spectroscopic  
(*stars:*) binaries: symbiotic  
(*stars:*) binaries: visual  
(*stars:*) blue stragglers  
stars: carbon

stars: chemically peculiar  
stars: chromospheres  
(*stars:*) circumstellar matter  
stars: coronae  
stars: distances  
stars: dwarf novae  
stars: early-type  
stars: emission-line, Be  
stars: evolution  
stars: flare  
stars: formation  
stars: fundamental parameters (*classification, colours, luminosities, masses, radii, temperatures, etc.*)  
stars: general  
(*stars:*) Hertzsprung–Russell (HR) diagram  
stars: horizontal branch  
stars: imaging  
**stars: individual:...**  
stars: interiors  
stars: kinematics  
stars: late-type  
stars: low-mass, brown dwarfs  
stars: luminosity function, mass function  
stars: magnetic fields  
stars: mass-loss  
stars: neutron  
(*stars:*) novae, cataclysmic variables  
stars: oscillations (including pulsations)  
(*stars:*) planetary systems  
(*stars:*) planetary systems: formation  
(*stars:*) planetary systems: protoplanetary discs  
stars: Population II  
stars: pre-main-sequence  
(*stars:*) pulsars: general  
**(stars:) pulsars: individual:...**  
stars: rotation  
stars: spots  
stars: statistics  
(*stars:*) subdwarfs  
(*stars:*) supergiants  
(*stars:*) supernovae: general  
(*stars:*) **supernovae: individual:...**  
(*stars:*) Cepheids  
(*stars:*)  $\delta$  Scuti  
stars: variables: other  
(*stars:*) white dwarfs  
stars: winds, outflows  
stars: Wolf+Rayet

## Interstellar medium (ISM), nebulae

ISM: abundances  
ISM: atoms  
ISM: bubbles  
ISM: clouds  
(*ISM:*) cosmic rays  
(*ISM:*) dust, extinction  
ISM: evolution  
ISM: general  
ISM: globules  
(*ISM:*) HII regions  
ISM: Herbig+Haro objects

### **ISM: individual:...**

(*except planetary nebulae*)

ISM: jets and outflows

ISM: kinematics and dynamics

ISM: lines and bands

ISM: magnetic fields

ISM: molecules

(*ISM:*) planetary nebulae: general

(*ISM:*) **planetary nebulae: individual:...**

(*ISM:*) reflection nebulae

ISM: structure

(*ISM:*) supernova remnants

### **The Galaxy**

Galaxy: abundances

Galaxy: bulge

Galaxy: centre

Galaxy: disc

Galaxy: evolution

Galaxy: formation

Galaxy: fundamental parameters

Galaxy: general

(*Galaxy:*) globular clusters: general

(*Galaxy:*) **globular clusters: individual:...**

Galaxy: halo

Galaxy: kinematics and dynamics

Galaxy: nucleus

(*Galaxy:*) open clusters and associations: general

(*Galaxy:*) **open clusters and associations: individual:...**

(*Galaxy:*) solar neighbourhood

Galaxy: stellar content

Galaxy: structure

### **Galaxies**

galaxies: abundances

galaxies: active

(*galaxies:*) BL Lacertae objects: general

(*galaxies:*) **BL Lacertae objects: individual:...**

galaxies: bulges

galaxies: clusters: general

**galaxies: clusters: individual:...**

(*galaxies:*) cooling flows

galaxies: distances and redshifts

galaxies: dwarf

galaxies: elliptical and lenticular, cD

galaxies: evolution

galaxies: formation

galaxies: fundamental parameters

(*classification, colours, luminosities, masses, radii, etc.*)

galaxies: general

galaxies: haloes

galaxies: high-redshift

**galaxies: individual:...**

galaxies: interactions

(*galaxies:*) intergalactic medium

galaxies: ISM

galaxies: irregular

galaxies: jets

galaxies: kinematics and dynamics

(*galaxies:*) Local Group

galaxies: luminosity function, mass function

(*galaxies:*) Magellanic Clouds

galaxies: magnetic fields

galaxies: nuclei

galaxies: peculiar

galaxies: photometry

(*galaxies:*) quasars: absorption lines

(*galaxies:*) quasars: emission lines

(*galaxies:*) quasars: general

(*galaxies:*) **quasars: individual:...**

galaxies: Seyfert

galaxies: spiral

galaxies: starburst

galaxies: star clusters

galaxies: statistics

galaxies: stellar content

galaxies: structure

### **Cosmology**

(*cosmology:*) cosmic microwave background

(*cosmology:*) cosmological parameters

cosmology: miscellaneous

cosmology: observations

cosmology: theory

(*cosmology:*) dark matter

(*cosmology:*) diffuse radiation

(*cosmology:*) distance scale

(*cosmology:*) early Universe

(*cosmology:*) large-scale structure of Universe

### **Sources as a function of wavelength**

gamma-rays: bursts

gamma-rays: observations

gamma-rays: theory

infrared: galaxies

infrared: general

infrared: ISM

infrared: Solar system

infrared: stars

radio continuum: galaxies

radio continuum: general

radio continuum: ISM

radio continuum: Solar system

radio continuum: stars

radio lines: galaxies

radio lines: general

radio lines: ISM

radio lines: Solar system

radio lines: stars

submillimetre

ultraviolet: galaxies

ultraviolet: general

ultraviolet: ISM

ultraviolet: Solar system

ultraviolet: stars

X-rays: binaries

X-rays: bursts

X-rays: diffuse background

X-rays: galaxies

X-rays: galaxies: clusters

X-rays: general

**X-rays: individual:...**

X-rays: ISM

X-rays: stars