AstroJournal

User Manual

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1 Introduction

The idea behind this software utility is to generate structured documents from astronomy observation reports created as basic tables. These tables are saved in .tsv or .csv format files and imported by AstroJournal. Once imported, the program will export this information by category (reports by date, by target, by constellation) in PDF format using LaTeX.

1.1 Main Features

The following list shows the main features for the software AstroJournal:

- Support for GNU/Linux, Mac OS X, and Windows users.
- Runnable via Graphical User Interface (GUI) or command line.
- Generation of a PDF document containing all user observation reports collected by increasing target catalogue number. This is useful for comparing targets observed over time.
- Generation of a PDF document containing all user observation reports collected by decreasing date. This is useful for visualising one's observations by session.
- Generation of a PDF document containing the targets observed by constellation. This is useful for checking observed and unobserved targets by constellation.
- Generation of a txt document containing all user observation reports collected by decreasing date. This is for creating observation reports to be published in an astronomy forum (e.g. Stargazers Lounge).
- Complete lists of Messier objects and Caldwell selection of NGC targets are included at the end of the generated PDF documents.
- Although the program requires some form of structured input file, this is intentionally minimal in order to not distract the user who wants to insert his / her data rather than thinking of how to format this data. All input data is treated as a string and therefore is not parsed for controls. This leaves the freedom to the user to introduce the data content as s/he wish. For instance, although in each document header I use the Antoniadi Scale for Seeing, this can be trivially overridden with a customised one. The inserted value for the seeing is not controlled according to a specific scale.
- Possibility to edit the document header and the footer according to one's need. This must be done in LaTex for preserving the format controls in the final output file.

1.2 Requirements

To use AstroJournal you need to install:

- Java 1.7+ https://java.com/en/download/;

- TeX Live http://www.tug.org/texlive/ (GNU/Linux users only);
- MikTeX http://miktex.org/download (Windows users only);
- MacTeX https://tug.org/mactex/ (Mac OS X users only).

1.2.1 Notes:

- On GNU/Linux Debian/Ubuntu/Mint, a deb package is provided and is located in the folder *target/*.
- On Windows, users should install MikTeX and then the LaTeX packages *url* and *mptopdf* using MikTeX Manager.
- On Mac OS X, users should install MacTeX. If the command *pdflatex* is not available, I think it should be possible to create a link called *pdflatex* to the corresponding program used by MacTeX to compile LaTeX code. In addition, to run AstroJournal on a MAC OS X platform, some steps are required since Mac OS X still uses Java 1.6 while AstroJournal requires Java 1.7+:
  - Download the latest Java from https://java.com/en/download/mac_download.jsp.
  - Follow the procedure for installing the package.

  Unfortunately, Mac OS X installs this version of Java as Plugin, and this is not in the $PATH$ environment variable. To correct this, 1) open the application Terminal; 2) type *nano ~/.bash_profile*; 3) write at the beginning of the file the following instruction: *export PATH=/Library/Internet\ Plug-Ins/JavaAppletPlugin.plugin/Contents/Home/bin/:$PATH$* (there is a SPACE after *Internet*); 4) hold the button *Control* while pressing the button *x* ; 5) press the button *y* (Yes) ; Press the button *Enter* / *Return* ; 5) close Terminal. To test: start Terminal and type *java -version*. It should report a version above 1.6. As of the time this README was written, this command returned *java version "1.8.0_66"*. This procedure is required for the first time only.
  - Download AstroJournal, unzip the file, and enter the application folder.
  - Enter the folder *target*.
  - Click *astrojournal-x.x.x-jar-with-dependencies.jar*
  - Mac OS X will ask for permissions to execute the file. Answer *Yes*. This may require the user to disable special controls in Mac OS X in *System Preferences* → *Security & Privacy*. In particular at least the radio box *Mac App Store and identified developers* should be selected.
  - AstroJournal should start correctly now.

1.3 Download

The latest stable version of this software application can be downloaded here: https://github.com/pdp10/AstroJournal/zipball/master.

After downloading and uncompressing the file:

- On GNU/Linux or Mac OS X, run AstroJournal typing (or clicking): "./astrojournal.sh" .
- On Windows, click: "astrojournal.exe" .

This will start a basic graphical user interface to generate the journals.
The user manual for the software astroJournal can be downloaded:
https://github.com/pdp10/AstroJournal/blob/develop/doc/user_manual.pdf

2 Use Case

Here are some guidelines for using AstroJournal:

1. Report your observations (with the structure of my tsv or csv file) using a spreadsheet program, such as MS Excel, Libreoffice Spreadsheet, or Google Spreadsheet. Alternatively you can use a common text editor (e.g. Wordpad, GNU Emacs, Kate, etc.) as long as the fields are the same as in the samples provided in the raw_report and that each field is separated using a TAB character.
2. Export your file as tsv (if using Google Spreadsheet) or csv. In the latter case, when asked, select tab as field delimiter.
3. Put this file in the folder raw_reports.
4. In the main astrojournal folder click on the icons (or type the command) ./astrojournal.sh (GNU/Linux) or astrojournal.exe (Windows).
5. Press the button "Create Journals".

2.1 Create an observation report

As currently implemented, the format of the observation tables is specific. The titles (Date, Time, Location, Altitude, Temperature, Seeing, Transparency, Telescopes, Eyepieces, Filters, Target, Cons, Type, Power, and Notes) cannot be changed as these are used by AstroJournal to retrieve the data. All fields are separated by a tab character (TAB) explicitly shown in this example with a text when this must be included. Fields can have single or double quotes.
You can find samples of these files in the folder raw_reports, which is AstroJournal input folder.
These files can be edited with any spreadsheet (e.g. Google SpreadSheet, MS Excel, LibreOffice SpreadSheet) or a common text editor (e.g. MS Wordpad, Emacs, Kate, or GEdit).
To customise the document header and footer, please look into the folder latex_header_footer to find the LaTeX files for the header and footer. Also these

files can be edited with any common text editor.
Example of observation records contained in a file parsed by AstroJournal:

3 Preferences

AstroJournal allows users to customise a few parameters via graphical user interface (Edit → Preferences).
If you are acquainted with Latex, you can also change the generated document headers and footers by editing the files in the folder latex_header_footer.

4 Reporting Bugs

If you find a issue with AstroJournal please try the following steps:

1. Check that you are running the latest version of AstroJournal. You can see the version you are running on the main window title and you can check the AstroJournal website (http://pdp10.github.io/AstroJournal/) to see what the latest version is.

2. Report a bug using AstroJournal online bug reporting and tracking system at https://github.com/pdp10/AstroJournal/issues.

3. Additionally, a mailing list is provided: astrojournal AT googlegroups.com .

You can also suggest new functionalities you would like to see in AstroJournal by filing them as a bug with a severity of "enhancement".

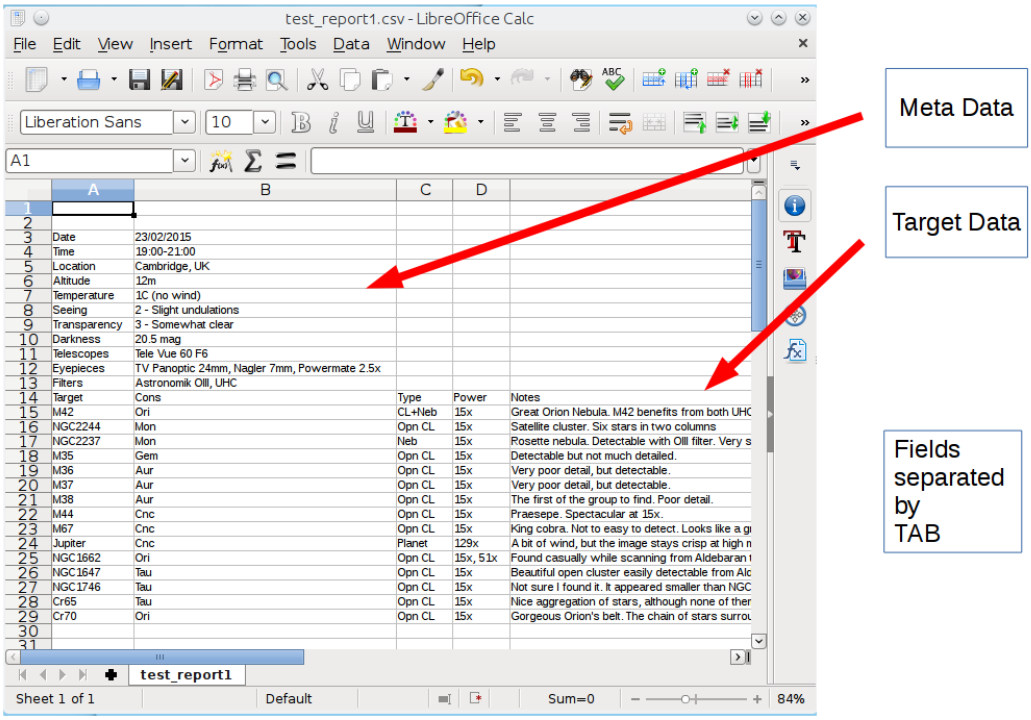

Figure 1: A report consists of two tables placed one after the other without any empty line. The first table contains the report meta data, whereas the second table lists the description for each target observed during a session. Multiple reports can be created inside the same file, but at least one empty line must be inserted between reports. When the file is exported to csv or tsv format, check that the fields are separated by a TAB delimiter.

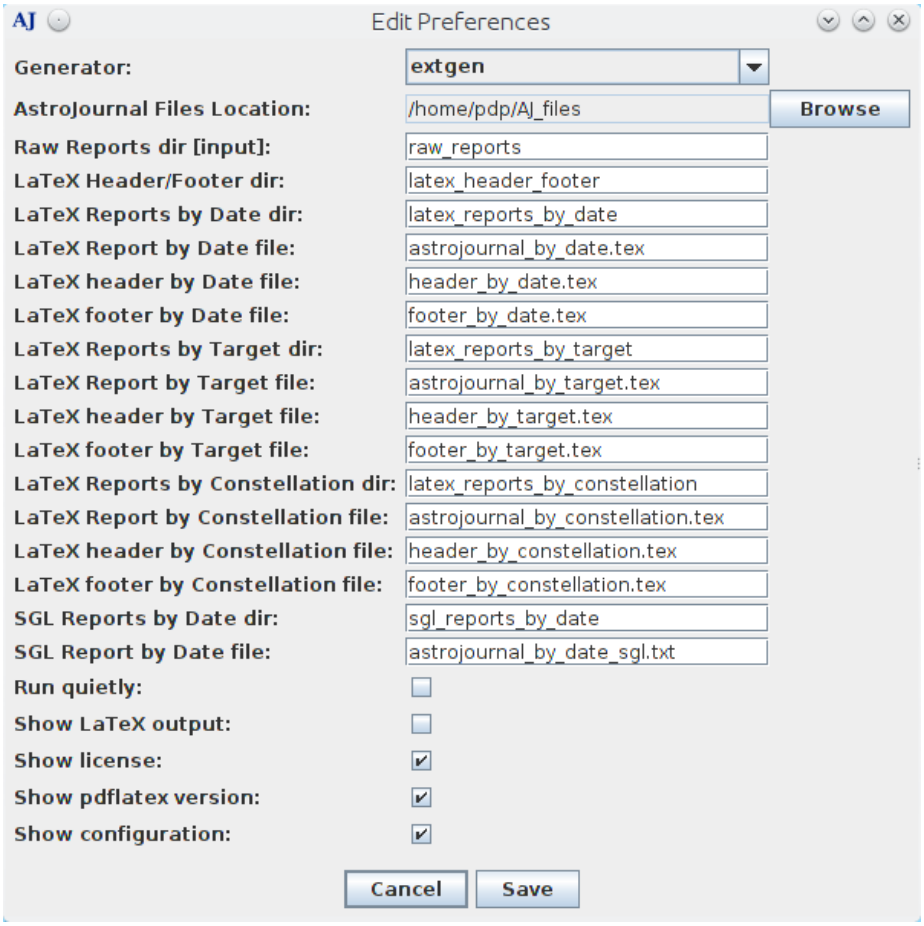

Figure 2: By default AstroJournal exports all fields provided in the csv or tsv files. However, it is also possible to export more compact reports by selecting a different generator. The "Location" field determines the folder where the raw reports (csv or tsv files) will be imported and exported. Users can also customised the name of output files and directories. If desired, the output on the main AstroJournal window can also be personalised. Two useful test features are "Show pdflatex version" and "Show LaTeX output". When enabled, the former will show the output of the command pdflatex -version. This is useful for testing the correct installation of pdflatex. The latter will show the complete output produced by pdflatex when exporting from LaTeX to PDF format.