ASTR:1070 Project Template

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Abstract

Briefly summarize what you did. A good resource for learning more about LaTeX can be found by clicking this link. Google is also helpful, e.g. "how to italicize in latex". (Optional)

1 Introduction

Give a background description of your object.

Describe what you will be doing in the following sections, e.g., in §2 ...

Here's an example of quoting and citing: "I always thought something was fundamentally wrong with the universe" [Adams, 1995]. Here's another way to cite, Eggen et al. [1962] and Stockbridge [2019].

For more information on how to cite things, see this natbib page.

Your references should be stored in the references.bib file.

2 Data Product

Describe the image observations (when, where, what filters, exposure times, etc). You can find this information in the FITS header in Maxim DL (ctrl-f). You could include some of this information in a table as in Table 1:

Quantity	Value
Filter	R
Exposure	60 s

Table 1: Here is my table caption

Describe how you produced your data product (e.g. image)...

If you want to use bullet points or numbering lists, try the following:

- Here is an item
- Here is another item

1. Here is the first item
2. Here is the second item

You can point your reader to your figure: see Figure 1.

Figure 1: The Universe. Adjust the width value to change the size of the image.

3 Analysis

This is an example of how to typeset an equation

$$x = \frac{a}{b} \tag{1}$$

and here is how to reference equation (1). It is optional to add a label to an equation.

This is an example of how to align an equation over multiple lines. The * prevents an equation number from being shown

$$\begin{aligned} x &= \frac{a}{b} \\ &= \frac{2\,\mathrm{km}}{5\,\mathrm{s}} \end{aligned}$$

One can also enlarge the parenthesis

$$\begin{aligned} m &= m_0 - 5\log_{100}(\frac{f}{f_0}) \\ &= m_0 - 5\log_{100}\left(\frac{f}{f_0}\right) \end{aligned}$$

Here's a way to insert math into a sentence $y = m \cdot x + b$ and another way of inserting an expression:

$$\theta_{\mathrm{rad}} = 100\,\mathrm{px}\left(\frac{0.75''}{1\,\mathrm{px}}\right)\left(\frac{1\,\mathrm{rad}}{206265''}\right) \approx 3.6 \times 10^{-4}\,\mathrm{rad}$$

For more information on mathematical typesetting, click on this link.

4 Conclusion

Summarize your results (optional).

References

D. Adams. *The Hitchhiker's Guide to the Galaxy*. San Val, 1995. ISBN 9781417642595. URL http://books.google.com/books?id=W-xMPgAACAAJ.

O. J. Eggen, D. Lynden-Bell, and A. R. Sandage. Evidence from the motions of old stars that the Galaxy collapsed. ApJ, 136:748, Nov 1962. doi: 10.1086/147433.

Z. Stockbridge. Citizen science with the transit of mercury, Oct 2019. URL https://www.skyandtelescope.com/astronomy-news/citizen-tom-mercury-transit/. Accessed: 2019-10-27.