nmmn Documentation

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Contents

Tools for astronomy, data analysis, time series, numerical simulations and more! These are modules I wrote which I find useful – for whatever reason – in my research.

List of submodules available:

- *astro*: astronomy
- *dsp*: signal processing
- *lsd*: misc. operations on arrays, lists, dictionaries and sets
- *stats*: statistical methods
- *plots*: custom plots
- *fermi*: Fermi LAT analysis methods
- *bayes*: Bayesian tools for dealing with posterior distributions
- *grmhd*: tools for dealing with GRMHD numerical simulations
- *sed*: tools for dealing with spectral energy distributions (SEDs)

Code available on Github.

CHAPTER 1

Usage

Example 1: Remove all *nan* and *inf* (∞) elements from a numpy array.

```
>>> import nmmn.lsd, numpy
>>> x=numpy.array([1,2,numpy.nan,numpy.inf])
>>> xok=nmmn.lsd.delweird(x)
```

Example 2: Reads SED generated by grmonty.

```
>>> import nmmn.sed
>>> s=nmmn.sed.SED()
>>> s.grmonty('grmonty.spec')
>>> plot(s.lognu, s.ll)
```

Now it is easy to compute the bolometric luminosity: *s.bol()*.

CHAPTER 2

Contents

2.1 nmmn package

2.1.1 Submodules

2.1.2 nmmn.astro module

2.1.3 nmmn.bayes module

2.1.4 nmmn.dsp module

2.1.5 nmmn.fermi module

2.1.6 nmmn.grmhd module

2.1.7 nmmn.lsd module

2.1.8 nmmn.misc module

2.1.9 nmmn.plots module

2.1.10 nmmn.sed module

2.1.11 nmmn.stats module

2.1.12 Module contents

CHAPTER 3

Todo

- [ ] need more examples

CHAPTER 4

Indices and tables

- genindex
- modindex
- search