Goodman Focus Documentation

Release 0.2.0

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GOODMAN FOCUS FINDER

Finds the best focus for one or more focus sequences.

1.1 How to Install

This tool requires python `3.6` at least to work. It will not install with `3.5`.

We recommend using astroconda since it is easier.

1.1.1 Using PYPI

Create a virtual environment using `conda` and specify python version `3.6`.

```
conda create -n goodman_focus python=3.6
```

Install using `pip`

```
pip install goodman-focus
```

1.1.2 Using github

Clone the latest version using:

```
git clone https://github.com/soar-telescope/goodman_focus.git
```

Move into the new directory

```
cd goodman_focus
```

Create a virtual environment using the `environment.yml` file and activate it.

```
conda env create python=3.6 -f environment.yml

conda activate goodman_focus
```

Install using `pip`

```
pip install .
```

1.2 How to use it

1.2.1 From terminal

There is an automatic script that will obtain focus from a folder containing a focus sequence.

If you have `fits` files you can simply run.

```
goodman-focus
```

It will run with the following defaults:

```
--data-path: (Current Working Directory)
--file-pattern: *fits
--obstype: FOCUS
--features-model: gaussian
--debug: (not activated)
```

To get some help and a full list of options use:

```
goodman-focus -h
```

1.2.2 In other code

After installing using pip you can also import the class and instatiate it providing a list of arguments and values.

```python
from goodman_focus.goodman_focus import GoodmanFocus
```

If no argument is provided it will run with the default values.

The list of arguments can be defined as follow:

```python
arguments = ['--data-path', '/provide/some/path',
             '--file-pattern', '*.fits',
             '--obstype', 'FOCUS',
             '--features-model', 'gaussian',
             '--debug']
```

`--features-model` is the function/model to fit to each detected line. `gaussian` will use a `Gaussian1D` which provide more consistent results. and `moffat` will use a `Moffat1D` model which fits the profile better but is harder to control and results are less consistent than when using a gaussian.

FOUND A PROBLEM?

Please Open an Issue on GitHub.

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