CUBE

An IRAM software

Apr. 30th, 2024

Questions? Comments? Bug reports? Mail to: `gildas@iram.fr`

The GILDAS team welcomes an acknowledgment in publications
using GILDAS software to reduce and/or analyze data.
Please use the following reference in your publications:
`http://www.iram.fr/IRAMFR/GILDAS`

Documentation

In charge: J.Pety[1,2].
Active developers: S. Bardeau[1].
Main past contributors: V. de Souza[1].

Software

In charge: J.Pety[1,2].
Active developers: S. Bardeau[1].
Main past contributors: V. de Souza[1].

1. IRAM
2. Observatoire de Paris

Contents

1 In a nutshell **1**

2 Internal Helps **3**

2.1 ADM Language Internal Help . . . 3
2.1.1 Language . . . 3
2.1.2 DAG . . . 3
2.1.3 DIRECTORY . . . 3
2.1.4 FIND . . . 3
2.1.5 FREE . . . 3
2.1.6 HISTORY . . . 4
2.1.7 IMPORT . . . 4
2.1.8 LIST . . . 4
2.1.9 SNAPSHOT . . . 4
2.2 CUBE Language Internal Help . . . 4
2.2.1 Language . . . 4
2.2.2 AVERAGE . . . 4
2.2.3 BASELINE . . . 4
2.2.4 CIRCLE . . . 4
2.2.5 CONSISTENCY . . . 5
2.2.6 EXPORT . . . 5
2.2.7 EXTRACT . . . 5
2.2.8 FEATHER . . . 5
2.2.9 FFT . . . 5
2.2.10 HEADER . . . 5
2.2.11 HISTO1D . . . 5
2.2.12 LUMINOSITY . . . 5
2.2.13 MOMENTS . . . 6
2.2.14 NAN . . . 6
2.2.15 NOISE . . . 6
2.2.16 POLY2MASK . . . 6
2.2.17 REPROJECT . . . 6
2.2.18 RESAMPLE . . . 6
2.2.19 RESIDUALS . . . 6
2.2.20 ROTATE . . . 6
2.2.21 SHUFFLE . . . 7
2.2.22 SLICE . . . 7
2.2.23 SMOOTH . . . 7

2.2.24 SNR 7
2.2.25 SORT 7
2.2.26 STACK 7
2.2.27 STITCH 7
2.2.28 TEMPLATE 7
2.2.29 WINDOW 8

Chapter 1

In a nutshell

```
 1    import raw/paws
 2    list
 3    update paws-pdbi+30m-12co10-1as-cube:cube /family 12co10
 4    header 12co10:cube
 5    open edited /like 12co10:cube /init copy
 6    put /observatory +noema +30m
 7    put /source NGC5194
 8    close edited /like 12co10:edited,cube
 9    view 12co10:edited,cube
10    baseline 12co10:edited,cube /poly 1 /line -120 +120
11    view
10    noise 12co10:baselined,line,cube /range -120 120
11    bit
12    snr 12co10:baselined,line,cube 12co10:noise
13    view
14    segment 12co10:snr
14    @ show-segments
15    detect 12co10:baseline,line,cube 12co10:segments /range -120 +120
16    view 12co10:residuals
17    moments 12co10:detected
18    show /moments signal
19    show /moments noise
20    show /moments snr
21    memory
21    snapshot
22    free
23    memory
```

Chapter 2

Internal Helps

2.1 ADM Language Internal Help

2.1.1 Language

```
type ADM? for language summary
```

2.1.2 DAG

```
Type DAG ? for help
```

2.1.3 DIRECTORY

```
Type DIRECTORY ? for help
```

2.1.4 FIND

```
type FIND ? for help
```

2.1.5 FREE

```
type FREE ? for help
```

2.1.6 HISTORY

```
type HISTORY ? for help
```

2.1.7 IMPORT

```
type IMPORT ? for help
```

2.1.8 LIST

```
type LIST ? for help
```

2.1.9 SNAPSHOT

```
type SNAPSHOT ? for help
```

2.2 CUBE Language Internal Help

2.2.1 Language

```
type CUBE? for language Summary
```

2.2.2 AVERAGE

```
Type AVERAGE ?[?[?]] for help.
```

2.2.3 BASELINE

```
Type BASELINE ?[?[?]] for help.
```

2.2.4 CIRCLE

```
Type CIRCLE ?[?[?]] for help.
```

2.2.5 CONSISTENCY

```
Type CONSISTENCY ?[?[?]] for help.
```

2.2.6 EXPORT

```
Type EXPORT ?[?[?]] for help.
```

2.2.7 EXTRACT

```
Type EXTRACT ?[?[?]] for help.
```

2.2.8 FEATHER

```
Type FEATHER ?[?[?]] for help.
```

2.2.9 FFT

```
Type FFT ?[?[?]] for help.
```

2.2.10 HEADER

```
Type HEADER ?[?[?]] for help.
```

2.2.11 HISTO1D

```
Type HISTO1D ?[?[?]] for help.
```

2.2.12 LUMINOSITY

```
Type LUMINOSITY ?[?[?]] for help.
```

2.2.13 MOMENTS

Type MOMENTS ?[?[?]] for help.

2.2.14 NAN

Type NAN ?[?[?]] for help.

2.2.15 NOISE

Type NOISE ?[?[?]] for help.

\"==========

2.2.16 POLY2MASK

type POLY2MASK ?[?[?]] for help.

2.2.17 REPROJECT

type REPROJECT ?[?[?]] for help.

2.2.18 RESAMPLE

type RESAMPLE ?[?[?]] for help.

2.2.19 RESIDUALS

type RESIDUALS ?[?[?]] for help.

2.2.20 ROTATE

type ROTATE ?[?[?]] for help.

2.2.21 SHUFFLE

```
type SHUFFLE ?[?[?]] for help.
```

2.2.22 SLICE

```
type SLICE ?[?[?]] for help
```

2.2.23 SMOOTH

```
type SMOOTH ?[?[?]] for help
```

2.2.24 SNR

```
type SNR ?[?[?]] for help
```

2.2.25 SORT

```
type SORT ?[?[?]] for help
```

2.2.26 STACK

```
type STACK ?[?[?]] for help
```

2.2.27 STITCH

```
type STITCH ?[?[?] for help
```

2.2.28 TEMPLATE

```
type TEMPLATE ?[?[?] for help
```

2.2.29 WINDOW

```
type WINDOW ?[?[?] for help
```