

URL: <a href="http://cxc.harvard.edu/ciao3.4/errs.html">http://cxc.harvard.edu/ciao3.4/errs.html</a>
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AHELP for CIAO 3.4 Context: chips

Jump to: Description Examples Bugs See Also

# **Synopsis**

Specifies the appearance of errorbars.

# **Syntax**

```
chips> [D #] [C #] ERRS [<coor>] <color>
chips> [D #] [C #] ERRS [<coor>] <errorstyle>
chips> [D #] [C #] ERRS [<coor>] <errortype>
chips> [D #] [C #] ERRS [<coor>] chips> [D #] [C #] ERRS [<coor>] chips> [D #] [C #] ERRS [<coor>] {ABSOLUTE | RELATIVE}
chips> [D #] [C #] ERRS [<coor>] SIZE <errortick_size_value>
```

### **Description**

```
Argument: {ABSOLUTE | ABS}

Description: errors are not relative to the data value; instead they are plotted as absolute values

Default: RELATIVE

Argument: C #

Description: curve number designation
Options: integer numbers
Default: current curve
```

See the C command for more information about this argument.

```
Argument: <color>
Description: axes color
Options: BLACK, BLUE, CYAN, DEFAULT, GREEN, MAGENTA, RED, WHITE,
YELLOW
Default: DEFAULT (appears in ChIPS window as white; prints as black)

Argument: <coor>
Description: axis coordinates
Options: X, Y
Default: both X and Y

Argument: D #
Description: drawing area number designation
Options: integer numbers
```

errs 1

```
Default: current drawing area
```

See the D command for more information about this argument.

```
Argument: <errorstyle>
Description: sytle for errorbars
Options: STANDARD - errorbar with top and bottom ticks
         BAR - errorbar only, no ticks on top or bottom
Default: STANDARD
Argument: <errortype>
Description: type of errorbars
Options: BOTH - both positive and negative errorbars
         NONE - no error bars
         UP - positive errorbar only
         {DOWN | DN} - negative errorbar only
Default: BOTH
Argument: <errortick_size_value>
Description: size of top and bottom errorbar ticks
Options: real numbers
Default: 3.0
Argument: <linestyle>
Description: style for lines
Options: SOLID, DOT, DASH, LONGDASH, DOTDASH, DOTLONGDASH,
         DASHLONGDASH
Default: SOLID
Argument: {RELATIVE | REL}
Description: errors are relative to the data value
Default: RELATIVE
```

The command:

```
chips> [D #] [C #] ERRS [<coor>] {ABSOLUTE | RELATIVE}
```

affects all subsequent plots, not just the existing plot.

CIAO allows some plot attributes to be changed using the ChIPS state object and resource file. See "ahelp chips" for further details.

### **Example 1**

```
chips> SPLIT 2
chips> D 1 CURVE data/exampleA.dat YUP 5 YDOWN 6
chips> D 1 CURVE data/exampleB.dat YUP 7 YDOWN 8
chips> D 2 CURVE data/exampleA.dat XUP 3 XDOWN 3
chips> D 2 CURVE data/exampleB.dat XUP 4 XDOWN 5
chips> D 2 C 1 ERRS X UP
chips> D 2 C 1 ERRS BAR
```

Two curves with Y error bars are plotted in drawing area number 1, and two curves are plotted in drawing area number 2 with X error bars. The error bars for curve 1 of drawing area 2 are then changed to be positive error bars only, having no tick marks on the tops or bottoms of the bars.

### Example 2

```
chips> D 1 C 1 ERRS Y UP
```

2 Example 1

chips> D 1 C 1 ERRS BAR

Building on the previous example, the Y error bars plotted in drawing area 1 for curve 1 are modified.

# **Example 3**

```
chips> ERRS ABS
chips> D 1 CURVE data/exampleA.dat YUP 5 YDOWN 6
chips> ERRS REL
chips> D 1 CURVE data/exampleAa.dat YUP 5 YDOWN 6
```

The first CURVE command is preceded by the ERRS ABS command, which will set all errors to be plotted as absolute (instead of relative) to the data points. The second CURVE command is preceded by the ERRS REL command, which will set all errors to plotted as relative to the data.

### **Bugs**

See the <u>bugs page for ChIPS</u> on the CIAO website for an up-to-date listing of known bugs.

#### See Also

chips

<u>axes, drawarea, font, grids, label, levels, limits, line, linear, location, log, relativesize, split, symbol, ticks, tickvals, title, xlabel, ylabel, zlabel</u>

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Example 3 3

4 Example 3