GFF2APLOT

USER'S MANUAL

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1   Command-line Options Description

-h , **--help**
Shows command-line help.

--version
Shows current program version and exits.

-v , **--verbose**
By default, warnings and errors are sent to standard error. This option switches on process reporting messages to appear on standard error too.

-V <logs_filename> , **--logs-filename** <logs_filename>
If is possible to open '<logs_filename>' then such file will contain all the messages and warnings produced by the program even though they were disabled from standard error with '**quiet**' option.

-q , **--quiet**
This option disables any message or warning from standard error. It does not disable error report because such errors are pointing a problem which can make **GFF2APLOT** produce unexpected results. Solve the cause of such problems before continuing to run the program in a silent mode.

-P <format_name,page_width,page_height> , **--page-bbox** <format_name,page_width,page_height>
page_bbox=<name,width,height>
This option allows users to define an arbitrary page format, by defining a name for such format and the width and height for that page. See '**page_bbox**' customization variable on page 3 (section 2.1) for further info on this command-line option. It overrides any '**page-size**' command-line option (and any related variable passed through custom files).

-p <format_name> , **--page-size** <format_name>   **page_size**=<format_name>
'<format_name>' is a pre-defined page format from table 2. By default is set to '**a4**'.

--margin-left <length>   **margin_left**=<length>
--margin-right <length>   **margin_right**=<length>
--margin-top <length>   **margin_top**=<length>
--margin-bottom <length>   **margin_bottom**=<length>
You can set page margin with those four variables. '<length>' can be given in points, milimeters, centimeters or inches (pt, mm, cm or in, respectively), but is set to points if no units are provided.

-B <color> , **--background-color** <color>   **background_color**=<color>
-F <color> , **--foreground-color** <color>   **foreground_color**=<color>
You can change background —say here page filling— and foreground —say here text, outlines and tickmarks— color for the page. Available colors are defined on table 1, default values are '**white**' and '**black**', for background and foreground respectively.

-T <string> , **--title** <string>   **title**=<string>
Setting the main title to '<string>' for the current figure, by default showing '**align_name**' in the form of '**sequence1_name**' x '**sequence2_name**'.

-t <string> , **--subtitle** <string>   **subtitle**=<string>
Setting '<string>' as the current figure subtitle, by default an empty string.

-X <string> , **--x-label** <string>   **x_label**=<string>
TO BE DEFINED !!!

-Y <string>, **--y-label** <string>   **y_label**=<string>
TO BE DEFINED !!!

-C <custom_filename>, **--custom-filename** <custom_filename>
Loading customization parameters from '<custom_filename>'. Now you can load several customization files by passing this option several times. The precedence is the input order in the command-line, so, for the common definitions, the last '<custom_file>' will override previous '<custom_files>' settings. If default customization file ".gff2aplotrc" does exist, it is the first customization that is loaded by the program.

2   Customization Variables Description

2.1   Layout Attributes

page_bbox = <format_name,page_width,page_height>   [*undef*]
 This variable allows users to define an arbitrary page format, by defining a name for such format and the width and height for that page. Do not include this variable in your custom files if you are using standard page sizes which can be set using '**page_size**', because '**page_bbox**' overrides any further page definition by that variable. If the variable is not set, default value forces the use of any settings given for '**page_size**'. '<format_name>' defines a name for the new page format. '<page_width>' and '<page_height>' are set to points if no unit is given, you can use points, milimeters, centimeters or inches (pt, mm, cm or in, respectively). See table 2 for a reference on already defined page sizes and their dimensions.

page_size = <format_name>   [**a4**]
Setting a standard page size, available values for '<format_name>' are listed in table 2. Page width and height values are coded for most common paper formats.

margin_left = <length>   [**1cm**]
margin_right = <length>   [**1cm**]
margin_top = <length>   [**1cm**]
margin_bottom = <length>   [**1cm**]
You can set page margin with those four variables. '<length>' can be given in points, milimeters, centimeters or inches (pt, mm, cm or in, respectively), but is set to points if no units are provided.

background_color = <color>   [**white**]
foreground_color = <color>   [**black**]
These two customization variables accept any '<color>' from those listed on table 1. Default values are '**white**' and '**black**' for '**background_color**' and '**foreground_color**' respectively. These two variables also set the aliases '**BGcolor**' and '**FGcolor**', so that you can use '**bgcolor**' and '**bg**', or '**fgcolor**' and '**fg**', to set any other color-related variable with the same colors you are defining as background/foreground colors.

title = <string>   [*undef*]
'**title**' sets the main title to '<string>' for the current figure, by default showing '**align_name**' in the form of '**sequence1_name**' x '**sequence2_name**'.

show_title = <boolean>   [**on**]
'**show_title**' switches on/off displaying the figure title. If you do not want to visualize the default title you can set this variable to '**off**', but you are not able to reuse the area of plot where title appears (set '**title_fontsize**' to '**0**' if you want to remove that area from plot).

title_font = <font>   [**helvetica-bold**]
TO BE DEFINED !!!

title_fontsize = <length>   [**24pt**]
Sets title fontsize, '<length>' can be in pt, mm, cm or in (default is points if no units are given). Setting '**title_fontsize**' to '**0**' forces **GFF2APLOT** to remove title area from plot, so no space is left for it.

subtitle = <string>   [*undef*]
'**subtitle**' sets the current figure subtitle to '<string>', by default it is defined as an empty string.

show_subtitle = <boolean>   [**on**]
'**show_subtitle**' switches on/off displaying the subtitle text. If you do not want to visualize the default subtitle you can set this variable to '**off**', as with '**show_title**' you are not able to reuse the area of plot where subtitle appears (so set '**subtitle_fontsize**' to '**0**' if you want to remove that area from plot too).

subtitle_font = <font>   [**helvetica**]
TO BE DEFINED !!!

subtitle_fontsize = <length>   [**16pt**]
Sets subtitle fontsize, '<length>' can be in pt, mm, cm or in (default is points if no units are given). Setting '**subtitle_fontsize**' to '**0**' forces GFF2APLOT to remove subtitle area from plot, so no space is left for it.

x_label = <string>   [*undef*]
TO BE DEFINED !!!

show_x_label = <boolean>   [**on**]
'**show_x_label**' switches on/off displaying the subtitle text. If you do not want to visualize the default subtitle you can set this variable to '**off**', as with '**show_title**' you are not able to reuse the area of plot where subtitle appears (so set '**subtitle_fontsize**' to '**0**' if you want to remove that area from plot too).

x_label_font = <font>   [**helvetica-bold**]
TO BE DEFINED !!!

x_label_fontsize = <length>   [**12pt**]
Sets X-label fontsize, '<length>' can be in pt, mm, cm or in (default is points if no units are given). Setting '**subtitle_fontsize**' to '**0**' forces GFF2APLOT to remove subtitle area from plot, so no space is left for it.

y_label = <string>   [*undef*]
TO BE DEFINED !!!

show_y_label = <boolean>   [**on**]
'**show_x_label**' switches on/off displaying the subtitle text. If you do not want to visualize the default subtitle you can set this variable to '**off**', as with '**show_title**' you are not able to reuse the area of plot where subtitle appears (so set '**subtitle_fontsize**' to '**0**' if you want to remove that area from plot too).

y_label_font = <font>   [**helvetica-bold**]
TO BE DEFINED !!!

y_label_fontsize = <length>   [**12pt**]
Sets Y-label fontsize, '<length>' can be in pt, mm, cm or in (default is points if no units are given). Setting '**subtitle_fontsize**' to '**0**' forces GFF2APLOT to remove subtitle area from plot, so no space is left for it.

show_percent_box_label = <boolean>   [**on**]
TO BE DEFINED !!!

percent_box_label = <string>   [*undef*]
TO BE DEFINED !!!

percent_box_label_font = <font>   [**helvetica-bold**]
TO BE DEFINED !!!

percent_box_label_fontsize = <length>   [**9pt**]
TO BE DEFINED !!!

show_percent_box_sublabel = <boolean>   [**on**]
TO BE DEFINED !!!

percent_box_sublabel = <string>   [*undef*]
TO BE DEFINED !!!

percent_box_label_font = <font>   [**helvetica-bold**]
TO BE DEFINED !!!

percent_box_label_fontsize = <length>   [**9pt**]
TO BE DEFINED !!!

show_extra_box_label = <boolean>   [**on**]
TO BE DEFINED !!!

extra_box_label = <string>   [*undef*]
TO BE DEFINED !!!

extra_box_label_font = <font>   [**helvetica-bold**]
TO BE DEFINED !!!

extra_box_label_fontsize = <length>   [**9pt**]
TO BE DEFINED !!!

show_extra_box_sublabel = <boolean>   [**on**]
TO BE DEFINED !!!

extra_box_sublabel = <string>   [*undef*]
TO BE DEFINED !!!

extra_box_sublabel_font = <font>   [**helvetica-bold**]
TO BE DEFINED !!!

extra_box_sublabel_fontsize = <length>   [**9pt**]
TO BE DEFINED !!!

2.2 GFF-Feature Attributes

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2.3 GFF-Group Attributes

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2.4 GFF-Strand Attributes

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2.5   GFF-Source Attributes

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2.6   GFF-Sequence Attributes

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A   Command-Line Options Summary for **GFF2APLOT**.

-h , **--help**	S...
--version	S...
-v , **--verbose**	V...
-V <logs_filename> , **--logs-filename** <logs_filename>	R...
-q , **--quiet**	Q...
-P <format_name,page_width,page_height> , **--page-bbox** <format_name,page_width,page_height>	D...
-p <format_name> , **--page-size** <format_name>	S...
--margin-left <length>	
--margin-right <length>	
--margin-top <length>	
--margin-bottom <length>	S...
-B <color> , **--background-color** <color>	
-F <color> , **--foreground-color** <color>	S...
-T <string> , **--title** <string>	S...
-t <string> , **--subtitle** <string>	S...
-X <string> , **--x-label** <string>	'...
-Y <string> , **--y-label** <string>	'...
-C <custom_filename> , **--custom-filename** <custom_filename>	R...

B   Customization Variables Sumary for GFF2APLOT.

PAGE LAYOUT

page_bbox = *undef*
<format_name,page_width,page_height>

Defining arbitrary page formats. Overrides any setting for '**page_size**'.

page_size = <format_name> **a4**

Sets a standard page size, available format names are listed in table 2.

margin_left = <length> **1cm**
margin_right = <length> **1cm**
margin_top = <length> **1cm**
margin_bottom = <length> **1cm**

Setting page margins (default is 1cm each).

background_color = <color> **white**
foreground_color = <color> **black**

Setting foreground color for the page. Find available colors on table 1.

ZOOM OPTIONS

LABELS

Variable	Default	Description
title = <string>	*undef*	Setting figure title to '<string>'.
show_title = <boolean>	**on**	Switching on/off title from plot.
title_font = <font>	**helvetica-bold**	Sets title font, see available fonts at **??**.
title_fontsize = <length>	**24pt**	Sets title fontsize, '<length>' can be in pt, mm, cm or in (default is points if no units are given).
subtitle = <string>	*undef*	Setting subtitle to '<string>'.
show_subtitle = <boolean>	**on**	Switching on/off subtitle from plot.
subtitle_font = <font>	**helvetica**	Sets subtitle font, see available fonts at **??**.
subtitle_fontsize = <length>	**16pt**	Sets subtitle fontsize, '<length>' can be in pt, mm, cm or in (default is points if no units are given).
x_label = <string>	*undef*	'<string>'.
show_x_label = <boolean>	**on**	Switching on/off subtitle from plot.
x_label_font = <font>	**helvetica-bold**	Sets X-label font, see available fonts at **??**.
x_label_fontsize = <length>	**12pt**	Sets X-label fontsize, '<length>' can be in pt, mm, cm or in (default is points if no units are given).
y_label = <string>	*undef*	'<string>'.
show_y_label = <boolean>	**on**	Switching on/off subtitle from plot.
y_label_font = <font>	**helvetica-bold**	Sets Y-label font, see available fonts at **??**.
y_label_fontsize = <length>	**12pt**	Sets Y-label fontsize, '<length>' can be in pt, mm, cm or in (default is points if no units are given).
show_percent_box_label = <boolean>	**on**	**TO BE DEFINED !!!**
percent_box_label = <string>	*undef*	**TO BE DEFINED !!!**
percent_box_label_font = <font>	**helvetica-bold**	Sets percent-box main label font.
percent_box_label_fontsize = <length>	**9pt**	Sets percent-box main label fontsize.
show_percent_box_sublabel = <boolean>	**on**	**TO BE DEFINED !!!**
percent_box_sublabel = <string>	*undef*	**TO BE DEFINED !!!**
percent_box_label_font = <font>	**helvetica-bold**	Sets percent-box sublabel font.
percent_box_label_fontsize = <length>	**9pt**	Sets percent-box sublabel fontsize.
show_extra_box_label = <boolean>	**on**	**TO BE DEFINED !!!**
extra_box_label = <string>	*undef*	**TO BE DEFINED !!!**
extra_box_label_font = <font>	**helvetica-bold**	Sets extra-box main label font.

TICK MARKS

APLOT LAYOUT

GENERAL DEFINITIONS

GFF-FEATURE ATTRIBUTES

GFF-GROUP ATTRIBUTES

GFF-STRAND ATTRIBUTES

GFF-SOURCE ATTRIBUTES

GFF-SEQUENCE ATTRIBUTES

C   CMYK color definition
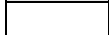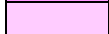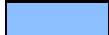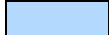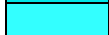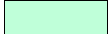
	Color	C	M	Y	K
	black	0.00	0.00	0.00	1.00
	verydarkgrey	0.00	0.00	0.00	0.80
	darkgrey	0.00	0.00	0.00	0.60
	grey	0.00	0.00	0.00	0.40
	lightgrey	0.00	0.00	0.00	0.20
	verylightgrey	0.00	0.00	0.00	0.10
	white	0.00	0.00	0.00	0.00
	verydarkmagenta	0.00	1.00	0.00	0.30
	darkmagenta	0.00	0.80	0.00	0.05
	magenta	0.00	0.60	0.00	0.00
	lightmagenta	0.00	0.40	0.00	0.00
	verylightmagenta	0.00	0.20	0.00	0.00
	verydarkviolet	0.45	0.85	0.00	0.00
	darkviolet	0.30	0.65	0.00	0.00
	violet	0.22	0.55	0.00	0.00
	lightviolet	0.15	0.40	0.00	0.00
	verylightviolet	0.10	0.20	0.00	0.00
	verydarkblue	1.00	1.00	0.00	0.20
	darkblue	0.90	0.90	0.00	0.00
	blue	0.75	0.75	0.00	0.00
	lightblue	0.50	0.50	0.00	0.00
	verylightblue	0.30	0.30	0.00	0.00
	verydarkskyblue	0.90	0.50	0.00	0.15
	darkskyblue	0.75	0.45	0.00	0.00
	skyblue	0.60	0.38	0.00	0.00
	lightskyblue	0.45	0.25	0.00	0.00
	verylightskyblue	0.30	0.15	0.00	0.00
	verydarkcyan	1.00	0.00	0.00	0.10
	darkcyan	0.80	0.00	0.00	0.00
	cyan	0.60	0.00	0.00	0.00
	lightcyan	0.40	0.00	0.00	0.00
	verylightcyan	0.20	0.00	0.00	0.00

	Color	C	M	Y	K
	verydarkseagreen	0.75	0.00	0.45	0.00
	darkseagreen	0.62	0.00	0.38	0.00
	seagreen	0.50	0.00	0.30	0.00
	lightseagreen	0.38	0.00	0.22	0.00
	verylightseagreen	0.25	0.00	0.15	0.00
	verydarkgreen	1.00	0.00	1.00	0.25
	darkgreen	0.80	0.00	0.80	0.00
	green	0.60	0.00	0.60	0.00
	lightgreen	0.40	0.00	0.40	0.00
	verylightgreen	0.20	0.00	0.20	0.00
	verydarklimegreen	0.50	0.00	1.00	0.10
	darklimegreen	0.40	0.00	0.95	0.00
	limegreen	0.30	0.00	0.80	0.00
	lightlimegreen	0.20	0.00	0.65	0.00
	verylightlimegreen	0.10	0.00	0.50	0.00
	verydarkyellow	0.00	0.00	1.00	0.25
	darkyellow	0.00	0.00	1.00	0.10
	yellow	0.00	0.00	1.00	0.00
	lightyellow	0.00	0.00	0.50	0.00
	verylightyellow	0.00	0.00	0.25	0.00
	verydarkorange	0.00	0.50	0.80	0.10
	darkorange	0.00	0.40	0.80	0.00
	orange	0.00	0.30	0.80	0.00
	lightorange	0.00	0.20	0.75	0.00
	verylightorange	0.00	0.15	0.70	0.00
	verydarkred	0.00	1.00	1.00	0.15
	darkred	0.00	0.80	0.80	0.00
	red	0.00	0.60	0.60	0.00
	lightred	0.00	0.40	0.40	0.00
	verylightred	0.00	0.20	0.20	0.00
	verydarkbrown	0.35	0.85	1.00	0.40
	darkbrown	0.30	0.70	1.00	0.35
	brown	0.25	0.75	1.00	0.25
	lightbrown	0.20	0.60	0.70	0.15
	verylightbrown	0.15	0.45	0.55	0.00

Table 1: GFF2APLOT CMYK color definition table and Color Names.

D   Page format definition

PAGE FORMAT	PAGE SIZE					
	(in points)		(in cms)		(in inches)	
a0	2384	3370	84.1	118.9	33.1	46.8
a1	1684	2384	59.4	84.1	23.4	33.1
a2	1190	1684	42.0	59.4	16.5	23.4
a3	842	1190	29.7	42.0	11.7	16.5
a4	595	842	21.0	29.7	8.3	11.7
a5	420	595	14.8	21.0	5.8	8.3
a6	297	420	10.5	14.8	4.1	5.8
a7	210	297	7.4	10.5	2.9	4.1
a8	148	210	5.2	7.4	2.1	2.9
a9	105	148	3.7	5.2	1.5	2.1
a10	73	105	2.6	3.7	1.0	1.5
b0	2920	4127	103.0	145.6	40.6	57.3
b1	2064	2920	72.8	103.0	28.7	40.6
b2	1460	2064	51.5	72.8	20.3	28.7
b3	1032	1460	36.4	51.5	14.3	20.3
b4	729	1032	25.7	36.4	10.1	14.3
b5	516	729	18.2	25.7	7.2	10.1
b6	363	516	12.8	18.2	5.0	7.2
b7	258	363	9.1	12.8	3.6	5.0
b8	181	258	6.4	9.1	2.5	3.6
b9	127	181	4.5	6.4	1.8	2.5
b10	91	127	3.2	4.5	1.3	1.8
executive	540	720	19.0	25.4	7.5	10.0
folio	612	936	21.6	33.0	8.5	13.0
legal	612	1008	21.6	35.6	8.5	14.0
letter	612	792	21.6	27.9	8.5	11.0
quarto	610	780	21.5	27.5	8.5	10.8
statement	396	612	14.0	21.6	5.5	8.5
10x14	720	1008	25.4	35.6	10.0	14.0
ledger	1224	792	43.2	27.9	17.0	11.0
tabloid	792	1224	27.9	43.2	11.0	17.0

Table 2: Page Sizes defined in **GFF2APLOT**.