MESA

Modules for Experiments in Stellar Astrophysics

Latest News

- 21 Mar 2018
  » Release 10398
- 28 Jan 2018
  » New MESA SDK Version
- 13 Jan 2018
  » Summer School 2018
- 23 Oct 2017
  » Release 10108
- 23 Oct 2017
  » Instrument Paper 4
- 21 Sep 2017
  » New MESA SDK Version
- 12 Sep 2017
  » Release 10000
- 01 Sep 2017
  » Docker, Python and Web
- 14 Aug 2017
  » New mesa-users list
- 02 Aug 2017
  » New MESA SDK Version

This web documentation corresponds to the most recent MESA release (r10398). Documentation for past versions can be found here.

If you find errors or formatting issues, please email Josiah Schwab using this link.

This page documents the MESA options that are part of the pgstar namelist. It is autogenerated from the file $MESA_DIR/star/defaults/pgstar.defaults.

Boxes like

```
option_name = 'default'
```

show the default value of each option. To override the default values, add an entry to the pgstar namelist in your inlist.

Contents

general options ¶

window updates ¶

pgstar_interval ¶

update windows when `mod(model_number,pgstar_interval) == 0` note: this replaces the obsolete control `pgstar_cnt`. better performance for star with this > 1. make it as large as you can while still getting adequate plot updates. Does not alter the rate at which pgplots are saved to disk, use the `*_file_interval` options instead.

```
pgstar_interval = 3
```

pause ¶

if true, then after refresh windows, wait for user to hit RETURN

```
pause = .false.
```

pause_interval ¶

if > 0, then pause when `mod(model_number, pause_interval) = 0`.

```
pause_interval = -1
```

pgstar_sleep ¶

after refresh windows, sleep this long (in seconds; can be noninteger)

```
pgstar_sleep = 0.0
```

clear_history ¶

```
clear_history = .false.
```

white_on_black flags ¶

true means white foreground color on black background

file_white_on_black_flag ¶

win_white_on_black_flag ¶

```
file_white_on_black_flag = .true.
win_white_on_black_flag = .true.
```

file output ¶

file_device ¶

file_extension ¶

‘png’ is Portable Network Graphics format; can also use ‘pdf’

```
file_device = 'png'
file_extension = 'png'
```

file_digits ¶

number of digits for `model_number` in filenames

```
file_digits = 6
```

delta_HR_limit_for_file_output ¶

trigger file output by distance travelled on HR diagram negative means no limit HR distance since last file output = sum of dHR where per step dHR = same definition as used for timestep limits

```
dHR = sqrt((delta_HR_ds_L*dlgL)**2 + (delta_HR_ds_Teff*dlgTeff)**2)
dlgL = log10(L/L_prev)
dlgTeff = log10(Teff/Teff_prev)
```

```
delta_HR_limit_for_file_output = -1
```

```
pgstar_report_writing_files = .true.
```

for terminal output report when write plot file

title, age, and model number ¶

placement details scale is for character size disp, coord, fjust are args for PGMTXT

- DISP : the displacement of the character string from the specified edge of the viewport, measured outwards from the viewport in units of the character height. Use a negative value to write inside the viewport, a positive value to write outside.
- COORD : the location of the character string along the specified edge of the viewport, as a fraction of the length of the edge.

- FJUST : controls justification of the string parallel to the specified edge of the viewport. If FJUST = 0.0, the left-hand end of the string will be placed at COORD; if JUST = 0.5, the center of the string will be placed at COORD; if JUST = 1.0, the right-hand end of the string will be placed at at COORD.

model_number

```
pgstar_show_model_number = .true.
```

only shown for full window, not for subplots

```
pgstar_model_scale = 0.8
pgstar_model_lw = 3
pgstar_model_disp = 3.0
pgstar_model_coord = 1.01
pgstar_model_fjust = 1.0
```

age ¶

```
pgstar_show_age = .true.
```

if all of those are false, then picks units based on magnitude of age

```
pgstar_show_age_in_seconds = .false.
pgstar_show_age_in_minutes = .false.
pgstar_show_age_in_hours = .false.
pgstar_show_age_in_days = .false.
pgstar_show_age_in_years = .false.
pgstar_show_log_age_in_years = .false.
```

only shown for full window, not for subplots

```
pgstar_age_scale = 0.8
pgstar_age_lw = 3
pgstar_age_disp = 3.0
pgstar_age_coord = -0.04
pgstar_age_fjust = 0.0
```

axes line weight

```
pgstar_box_lw = 3
```

titles ¶

these apply to all plots except grids.

```
pgstar_show_title = .true.
pgstar_title_scale = 1.3
pgstar_title_lw = 3
pgstar_title_disp = 1.1
pgstar_title_coord = 0.5
pgstar_title_fjust = 0.5
```

grid titles ¶

these apply to the top of the grid, not to the subplots within the grid.

```
pgstar_grid_show_title = .true.
pgstar_grid_title_scale = 1.2
pgstar_grid_title_lw = 3
pgstar_grid_title_disp = 1.8
pgstar_grid_title_coord = 0.5
pgstar_grid_title_fjust = 0.5
```

scale for axis labels ¶

```
pgstar_xaxis_label_scale = 1.5
pgstar_left_yaxis_label_scale = 1.5
pgstar_right_yaxis_label_scale = 1.5
pgstar_xaxis_label_lw = 4
pgstar_left_yaxis_label_lw = 4
pgstar_right_yaxis_label_lw = 4
```

displacements for axis labels ¶

```
pgstar_xaxis_label_disp = 2.2
pgstar_left_yaxis_label_disp = 3.1
pgstar_right_yaxis_label_disp = 4.1
```

relative scale of axis numbers ¶

```
pgstar_num_scale = 1.2
```

line width for data ¶

```
pgstar_lw = 8
```

TRho Profile window ¶

current model in T-Rho plane

```
TRho_Profile_win_flag = .false.
```

```
TRho_Profile_win_width = 6
TRho_Profile_win_aspect_ratio = 0.75
```

```
TRho_Profile_xleft = 0.15
TRho_Profile_xright = 0.85
TRho_Profile_ybot = 0.15
TRho_Profile_ytop = 0.85
TRho_Profile_txt_scale = 1.0
TRho_Profile_title = 'TRho_Profile'
```

```
TRho_switch_to_Column_Depth = .false.
```

if true, replace logRho for xaxis by log column depth (g/cm^2)

```
TRho_switch_to_mass = .false.
```

if true, replaces logRho for xaxis by log mass coordinate M-m(k) (Msun)

```
show_TRho_Profile_legend = .false.
TRho_Profile_legend_coord = 0.05
TRho_Profile_legend_fjust = 0.0
TRho_Profile_legend_disp1 = -2.0
TRho_Profile_legend_del_disp = -1.3
```

```
show_TRho_Profile_text_info = .false.
TRho_Profile_text_info_xfac = 0.77
TRho_Profile_text_info_dxfac = 0.02
TRho_Profile_text_info_yfac = 0.6
TRho_Profile_text_info_dyfac = -0.04
```

```
show_TRho_Profile_mass_locs = .false.
show_TRho_accretion_mesh_borders = .false.
```

If true, plots the borders of the mesh and newly accreted material in the appropriate xcoord

```
show_TRho_Profile_kap_regions = .false.
show_TRho_Profile_eos_regions = .false.
show_TRho_Profile_gamma1_4_3rd = .false.
show_TRho_Profile_degeneracy_line = .true.
show_TRho_Profile_Pgas_Prad_line = .true.
show_TRho_Profile_burn_lines = .true.
```

```
show_TRho_Profile_burn_labels = .true.
show_TRho_Profile_logQ_limit = .false.
```

```
show_TRho_Profile_annotation1 = .false.
show_TRho_Profile_annotation2 = .false.
show_TRho_Profile_annotation3 = .false.
```

```
TRho_Profile_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
TRho_use_decorator = .false.
```

axis limits

```
TRho_Profile_xmin = -11.1
TRho_Profile_xmax = 10.2
TRho_Profile_ymin = 2.6
TRho_Profile_ymax = 10.2
```

file output

```
TRho_Profile_file_flag = .false.
TRho_Profile_file_dir = 'png'
TRho_Profile_file_prefix = 'trho_profile_'
TRho_Profile_file_interval = 5
TRho_Profile_file_width = -1
TRho_Profile_file_aspect_ratio = -1
```

mass location markers

```
profile_mass_point_color_index
1 = foreground color
2 = red
3 = green
4 = blue
etc. the full range is defined in Set_Colours in pgstar_support.f
profile_mass_point_symbol
code number of the symbol to be drawn:
      -1, -2  : a single dot (diameter = current
                line width).
      -3..-31 : a regular polygon with ABS(SYMBOL)
                edges (style set by current fill style).
      0..31   : standard marker symbols.
      32..127 : ASCII characters (in current font).
                e.g. to use letter F as a marker, let
```

```
                SYMBOL = ICHAR('F').
      > 127   :   a Hershey symbol number.
for info about codes, http://www.astro.caltech.edu/~tjp/pgplot/hershey
profile_mass_point_str
text to show with the marker
profile_mass_point_str_clr
color index for the string
```

set all the entries

```
profile_mass_point_q = -1
profile_mass_point_color_index = 1
profile_mass_point_symbol = -6
profile_mass_point_symbol_scale = 1.7
profile_mass_point_str = ''
profile_mass_point_str_clr = 1
profile_mass_point_str_scale = 1.0
```

set defaults

```
num_profile_mass_points = 3
```

```
profile_mass_point_q(1) = 0.5
profile_mass_point_color_index(1) = 1
profile_mass_point_symbol(1) = -6
profile_mass_point_str(1) = '  0.5 M\d\(0844)\u'
profile_mass_point_str_clr(1) = 1
```

```
profile_mass_point_q(2) = 0.95
profile_mass_point_color_index(2) = 1
profile_mass_point_symbol(2) = -6
profile_mass_point_str(2) = '  0.95 M\d\(0844)\u'
profile_mass_point_str_clr(3) = 1
```

```
profile_mass_point_q(3) = 0.999
profile_mass_point_color_index(3) = 1
profile_mass_point_symbol(3) = -6
profile_mass_point_str(3) = '  0.999 M\d\(0844)\u'
profile_mass_point_str_clr(3) = 1
```

Abundance window ¶

current model abundance profiles

```
Abundance_win_flag = .false.
```

```
Abundance_win_width = 6
Abundance_win_aspect_ratio = 0.75
```

```
Abundance_xleft = 0.15
Abundance_xright = 0.85
Abundance_ybot = 0.15
Abundance_ytop = 0.85
Abundance_txt_scale = 1.0
Abundance_title = 'Abundance'
```

```
Abundance_num_isos_to_show = -1
Abundance_which_isos_to_show(1) = 'h1'
Abundance_which_isos_to_show(2) = 'he3'
Abundance_which_isos_to_show(3) = 'he4'
Abundance_which_isos_to_show(4) = 'c12'
Abundance_which_isos_to_show(5) = 'n14'
Abundance_which_isos_to_show(6) = 'o16'
```

```
num_abundance_line_labels = 5
Abundance_line_txt_scale_factor = 0.8
```

```
Abundance_legend_max_cnt = 16
Abundance_legend_txt_scale_factor = 0.8
```

```
Abundance_xaxis_name = 'mass'
Abundance_xaxis_reversed = .false.
```

power xaxis limits – to override system default selections

```
Abundance_xmin = -101d0
Abundance_xmax = -101d0
```

abundance yaxis limits – to override system default selections

```
Abundance_log_mass_frac_min = 101
Abundance_log_mass_frac_max = 0.3
```

```
Abundance_show_photosphere_location = .false.
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Abundance_use_decorator = .false.
```

file output

```
Abundance_file_flag = .false.
Abundance_file_dir = 'png'
Abundance_file_prefix = 'abund_'
Abundance_file_interval = 5
Abundance_file_width = -1
Abundance_file_aspect_ratio = -1
```

Power window ¶

current model nuclear power profiles

```
Power_win_flag = .false.
```

```
Power_win_width = 6
Power_win_aspect_ratio = 0.75
```

```
Power_xleft = 0.15
Power_xright = 0.85
Power_ybot = 0.15
Power_ytop = 0.85
Power_txt_scale = 1.0
Power_title = 'Power'
```

```
Power_xaxis_name = 'mass'
Power_xaxis_reversed = .false.
```

```
Power_legend_max_cnt = 16
Power_legend_txt_scale_factor = 0.7
```

power xaxis limits – to override system default selections

```
Power_xmin = -101d0
Power_xmax = -101d0
```

power yaxis limits – to override system default selections

```
Power_ymin = -101d0
Power_ymax = -101d0
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Power_use_decorator = .false.
```

file output

```
Power_file_flag = .false.
Power_file_dir = 'png'
Power_file_prefix = 'power_'
Power_file_interval = 5
Power_file_width = -1
Power_file_aspect_ratio = -1
```

Mixing window ¶

current model profile of mixing diffusion coefficients

```
Mixing_win_flag = .false.
```

```
Mixing_win_width = 6
Mixing_win_aspect_ratio = 0.75
```

```
Mixing_xleft = 0.15
Mixing_xright = 0.85
Mixing_ybot = 0.15
Mixing_ytop = 0.85
Mixing_txt_scale = 1.0
Mixing_title = 'Mixing'
```

```
Mixing_legend_txt_scale_factor = 1
```

```
show_Mixing_annotation1 = .false.
show_Mixing_annotation2 = .false.
show_Mixing_annotation3 = .false.
```

```
Mixing_show_rotation_details = .true.
```

```
Mixing_xaxis_name = 'mass'
Mixing_xaxis_reversed = .false.
```

```
Mixing_xmin = -101d0
Mixing_xmax = -101d0
```

```
Mixing_ymin = -101d0
Mixing_ymax = -101d0
Mixing_dymin = -101d0
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Mixing_use_decorator = .false.
```

file output

```
Mixing_file_flag = .false.
Mixing_file_dir = 'png'
Mixing_file_prefix = 'mixing_'
Mixing_file_interval = 5
Mixing_file_width = -1
Mixing_file_aspect_ratio = -1
```

Dynamo window ¶

current model dynamo info

```
Dynamo_win_flag = .false.
```

```
Dynamo_win_width = 6
Dynamo_win_aspect_ratio = 0.75
```

```
Dynamo_xleft = 0.15
Dynamo_xright = 0.85
Dynamo_ybot = 0.15
Dynamo_ytop = 0.85
Dynamo_txt_scale = 1.0
Dynamo_title = 'Dynamo'
```

```
Dynamo_legend_txt_scale_factor = 0.7
```

```
show_Dynamo_annotation1 = .false.
show_Dynamo_annotation2 = .false.
```

```
show_Dynamo_annotation3 = .false.
```

```
Dynamo_xaxis_name = 'mass'
Dynamo_xmin = -101d0
Dynamo_xmax = -101d0
Dynamo_xaxis_reversed = .false.
```

```
Dynamo_ymin_left = -101d0
Dynamo_ymax_left = -101d0
Dynamo_dymin_left = -101d0
```

```
Dynamo_ymin_right = -101d0
Dynamo_ymax_right = -101d0
Dynamo_dymin_right = -101d0
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Dynamo_use_decorator = .false.
```

file output

```
Dynamo_file_flag = .false.
Dynamo_file_dir = 'png'
Dynamo_file_prefix = 'dynamo_'
Dynamo_file_interval = 5
Dynamo_file_width = -1
Dynamo_file_aspect_ratio = -1
```

Mode Propagation window ¶

for asterseismology

```
Mode_Prop_win_flag = .false.
```

```
Mode_Prop_win_width = 6
Mode_Prop_win_aspect_ratio = 0.75
```

```
Mode_Prop_xleft = 0.15
Mode_Prop_xright = 0.85
Mode_Prop_ybot = 0.15
Mode_Prop_ytop = 0.85
```

```
Mode_Prop_txt_scale = 1.0
Mode_Prop_title = 'Mode_Prop'
```

```
Mode_Prop_nu_max_obs = -999
```

```
Mode_Prop_xaxis_name = 'mass'
Mode_Prop_xaxis_reversed = .false.
```

power xaxis limits – to override system default selections

```
Mode_Prop_xmin = -101d0
Mode_Prop_xmax = -101d0
```

power yaxis limits – to override system default selections

```
Mode_Prop_ymin = -101d0
Mode_Prop_ymax = -101d0
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Mode_Prop_use_decorator = .false.
```

file output

```
Mode_Prop_file_flag = .false.
Mode_Prop_file_dir = 'png'
Mode_Prop_file_prefix = 'mode_prop_'
Mode_Prop_file_interval = 5
Mode_Prop_file_width = -1
Mode_Prop_file_aspect_ratio = -1
```

Summary Burn window ¶

```
Summary_Burn_win_flag = .false.
```

```
Summary_Burn_win_width = 6
Summary_Burn_win_aspect_ratio = 0.75
```

```
Summary_Burn_xleft = 0.15
Summary_Burn_xright = 0.85
```

```
Summary_Burn_ybot = 0.15
Summary_Burn_ytop = 0.80
Summary_Burn_txt_scale = 1.0
Summary_Burn_title = 'Summary_Burn'
Summary_Burn_title_shift = 2.5
```

```
Summary_Burn_xaxis_name = 'mass'
Summary_Burn_xaxis_reversed = .false.
```

```
Summary_Burn_xmin = -101d0
Summary_Burn_xmax = -101d0
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Summary_Burn_use_decorator = .false.
```

file output

```
Summary_Burn_file_flag = .false.
Summary_Burn_file_dir = 'png'
Summary_Burn_file_prefix = 'Summary_Burn_'
Summary_Burn_file_interval = 5
Summary_Burn_file_width = -1
Summary_Burn_file_aspect_ratio = -1
```

Summary Profile window ¶

```
Summary_Profile_win_flag = .false.
```

```
Summary_Profile_win_width = 6
Summary_Profile_win_aspect_ratio = 0.75
```

```
Summary_Profile_xleft = 0.15
Summary_Profile_xright = 0.85
Summary_Profile_ybot = 0.15
Summary_Profile_ytop = 0.85
Summary_Profile_txt_scale = 1.0
Summary_Profile_title = 'Summary_Profile'
```

```
Summary_Profile_xaxis_name = 'mass'
Summary_Profile_xaxis_reversed = .false.
```

```
Summary_Profile_xmin = -101d0
Summary_Profile_xmax = -101d0
```

```
Summary_Profile_name(:) = ''
```

if name len=0, then skip this one

```
Summary_Profile_legend(:) = ''
Summary_Profile_scaled_value(:) = .true.
```

if true, show values scaled max to 1.0 and min to 0.0 if false, show the unmapped values (which should be in range 0.0 to 1.0) typically set .false. for mass fractions; .true. for everything else.

```
Summary_Profile_num_lines = 11
```

```
Summary_Profile_name(1) = 'x'
Summary_Profile_legend(1) = 'X'
Summary_Profile_scaled_value(1) = .false.
```

```
Summary_Profile_name(2) = 'y'
Summary_Profile_legend(2) = 'Y'
Summary_Profile_scaled_value(2) = .false.
```

```
Summary_Profile_name(3) = 'log_j_rot'
Summary_Profile_legend(3) = 'log j rel'
```

```
Summary_Profile_name(4) = 'log_omega'
Summary_Profile_legend(4) = 'log \(0650) rel'
```

```
Summary_Profile_name(5) = 'mass'
Summary_Profile_legend(5) = 'm rel'
```

```
Summary_Profile_name(6) = 'radius'
Summary_Profile_legend(6) = 'r rel'
```

```
Summary_Profile_name(7) = 'eps_nuc'
Summary_Profile_legend(7) = 'eps nuc rel'
```

```
Summary_Profile_name(8) = 'entropy'
Summary_Profile_legend(8) = 'entropy rel'
```

```
Summary_Profile_name(9) = 'opacity'
Summary_Profile_legend(9) = 'opacity rel'
```

```
Summary_Profile_name(10) = 'luminosity'
Summary_Profile_legend(10) = 'L rel'
```

```
Summary_Profile_name(11) = 'temperature'
Summary_Profile_legend(11) = 'T rel'
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Summary_Profile_use_decorator = .false.
```

file output

```
Summary_Profile_file_flag = .false.
Summary_Profile_file_dir = 'png'
Summary_Profile_file_prefix = 'Summary_Profile_'
Summary_Profile_file_interval = 5
Summary_Profile_file_width = -1
Summary_Profile_file_aspect_ratio = -1
```

Summary History window ¶

```
Summary_History_win_flag = .false.
```

```
Summary_History_win_width = 6
Summary_History_win_aspect_ratio = 0.75
```

```
Summary_History_xleft = 0.15
Summary_History_xright = 0.85
Summary_History_ybot = 0.15
Summary_History_ytop = 0.85
Summary_History_txt_scale = 1.0
Summary_History_title = 'Summary_History'
```

```
Summary_History_xmax = -1
Summary_History_xmin = -1
Summary_History_max_width = -1
```

```
Summary_History_name(:) = ''
```

if name len=0, then skip this one

```
Summary_History_legend(:) = ''
Summary_History_scaled_value(:) = .true.
```

if true, show values scaled max to 1.0 and min to 0.0 if false, show the unmapped values (which should be in range 0.0 to 1.0) typically set .false. for mass fractions; .true. for everything else.

```
Summary_History_num_lines = 7
```

```
Summary_History_name(1) = 'log_center_T'
Summary_History_legend(1) = 'log T\dc\u rel'
```

```
Summary_History_name(2) = 'log_center_Rho'
Summary_History_legend(2) = 'log Rho\dc\u rel'
```

```
Summary_History_name(3) = 'log_L'
Summary_History_legend(3) = 'log L rel'
```

```
Summary_History_name(4) = 'log_Teff'
Summary_History_legend(4) = 'log Teff rel'
```

```
Summary_History_name(5) = 'log_R'
Summary_History_legend(5) = 'log R rel'
```

```
Summary_History_name(6) = 'center_h1'
Summary_History_legend(6) = 'h1\dc\u'
Summary_History_scaled_value(6) = .false.
```

```
Summary_History_name(7) = 'center_he4'
Summary_History_legend(7) = 'he4\dc\u'
Summary_History_scaled_value(7) = .false.
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Summary_History_use_decorator = .false.
```

file output

```
Summary_History_file_flag = .false.
Summary_History_file_dir = 'png'
Summary_History_file_prefix = 'Summary_History_'
Summary_History_file_interval = 5
Summary_History_file_width = -1
Summary_History_file_aspect_ratio = -1
```

"Kippenhahn" window ¶

history of convection and more.

```
your history_columns.list needs to include
       star_mass
       mixing_regions 40    -- 40 can be changed if you wish
       burning_regions 80    -- 80 can be changed if you wish
and if you have set M_center > 0, then also include
       log_xmstar
if you want to show luminosities, include some or all of
       log_L, log_Lneu, log_LH, log_LHe
if you want to show mass boundaries, then include some or all of
       he_core_mass, c_core_mass, o_core_mass, si_core_mass, fe_core_m
```

```
Kipp_win_flag = .false.
```

```
Kipp_win_width = 7
Kipp_win_aspect_ratio = 0.75
```

```
Kipp_xleft = 0.15
Kipp_xright = 0.85
Kipp_ybot = 0.15
Kipp_ytop = 0.85
Kipp_txt_scale = 1.0
Kipp_title = 'Kipp'
```

Set xaxis

```
Kipp_step_xmin = -1
Kipp_step_xmax = -1
```

These can be combined with Kipp_{xmin,xmax} options

```
Kipp_max_width = -1
```

Negative implies show all steps. This overrides `Kipp_step_xmin`

```
Kipp_xaxis_name = 'model_number'
```

are `model_number` or `star_age`

```
Kipp_xaxis_log = .false.
Kipp_xmin = -101d0
Kipp_xmax = -101d0
Kipp_xmargin = 0.0
Kipp_xaxis_reversed = .false.
Kipp_xaxis_in_seconds = .false.
```

Requires `Kipp_xaxis_name='star_age'`

```
Kipp_xaxis_in_Myr = .false.
```

Requires `Kipp_xaxis_name='star_age'`

```
Kipp_xaxis_time_from_present = .false.
```

plots `star_age-max(star_age)` Requires `Kipp_xaxis_name='star_age'`

bounds for mass yaxis

```
Kipp_mass_max = -1
Kipp_mass_min = -1
Kipp_mass_margin = 0.01
```

bounds for luminosity yaxis

```
Kipp_lgL_max = -101d0
Kipp_lgL_min = -101d0
Kipp_lgL_margin = 0.1
```

```
Kipp_show_mixing = .true.
```

this uses the `mixing_regions` specified in your `history_columns.list`

```
Kipp_show_burn = .true.
```

this uses the `burning_regions` specified in your `history_columns.list`

```
Kipp_show_luminosities = .false.
```

to use this option, include the following in your `history_columns.list` `log_L`, `log_Lneu`, `log_LH`, `log_LHe`

```
Kipp_show_mass_boundaries = .true.
```

to use this option, include the following in your `history_columns.list` `he_core_mass`, `c_core_mass`, `o_core_mass`, `si_core_mass`, `fe_core_mass`

```
Kipp_mix_line_weight = 10
Kipp_mix_interval = 4
```

show mixing for steps with `mod(model_number, Kipp_mix_interval) = 0`.

```
Kipp_burn_line_weight = 14
```

```
Kipp_burn_type_cutoff = 0d0
```

show burn lines only for abs(log(eps)) > Kipp_burn_type_cutoff

```
Kipp_luminosities_line_weight = 8
Kipp_masses_line_weight = 8
```

```
show_Kipp_annotation1 = .false.
show_Kipp_annotation2 = .false.
show_Kipp_annotation3 = .false.
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Kipp_use_decorator = .false.
```

file output

```
Kipp_file_flag = .false.
Kipp_file_dir = 'png'
Kipp_file_prefix = 'conv_'
Kipp_file_interval = 5
Kipp_file_width = -1
Kipp_file_aspect_ratio = -1
```

"rti" window ¶

history of Rayleigh Taylor instabilities.

```
your history_columns.list needs to include
       star_mass
       rti_regions 40    -- 40 can be changed if you wish
and if you have set M_center > 0, then also include
       log_xmstar
```

```
rti_win_flag = .false.
```

```
rti_win_width = 7
rti_win_aspect_ratio = 0.75
```

```
rti_xleft = 0.15
rti_xright = 0.85
rti_ybot = 0.15
rti_ytop = 0.85
rti_txt_scale = 1.0
rti_title = 'Rayleigh Taylor Instability'
```

Set xaxis

```
rti_step_xmin = -1
rti_step_xmax = -1
```

These can be combined with `rti_{xmin,xmax}` options

```
rti_max_width = -1
```

Negative implies show all steps. This overrides `rti_step_xmin`

```
rti_xaxis_name = 'model_number'
```

are `model_number` or `star_age`

```
rti_xaxis_log = .false.
rti_xmin = -101d0
rti_xmax = -101d0
rti_xmargin = 0.0
rti_xaxis_reversed = .false.
rti_xaxis_in_seconds = .false.
```

Requires `rti_xaxis_name='star_age'`

```
rti_xaxis_in_Myr = .false.
```

Requires `rti_xaxis_name='star_age'`

```
rti_xaxis_time_from_present = .false.
```

plots `star_age-max(star_age)` Requires `rti_xaxis_name='star_age'`

bounds for mass yaxis

```
rti_mass_max = -1
rti_mass_min = -1
rti_mass_margin = 0.01
```

```
rti_line_weight = 10
rti_interval = 4
```

show rti for steps with `mod(model_number, rti_interval) = 0.`

```
show_rti_annotation1 = .false.
show_rti_annotation2 = .false.
show_rti_annotation3 = .false.
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
rti_use_decorator = .false.
```

file output

```
rti_file_flag = .false.
rti_file_dir = 'png'
rti_file_prefix = 'rti_'
```

```
rti_file_interval = 5
rti_file_width = -1
rti_file_aspect_ratio = -1
```

TRho window ¶

history of central temperature vs. density

```
TRho_win_flag = .false.
```

```
TRho_win_width = 6
TRho_win_aspect_ratio = 0.75
```

```
TRho_xleft = 0.15
TRho_xright = 0.85
TRho_ybot = 0.15
TRho_ytop = 0.85
TRho_txt_scale = 1.0
TRho_title = 'TRho'
```

axis limits – to override system default selections

```
TRho_logT_min = -101d0
TRho_logT_max = -101d0
TRho_logRho_min = -101d0
TRho_logRho_max = -101d0
```

```
TRho_logT_margin = 0.1
TRho_logRho_margin = 0.1
TRho_logRho_dlogRho_min = -1
TRho_logT_dlogT_min = -1
```

```
TRho_step_min = -1
TRho_step_max = 999999
```

```
show_TRho_degeneracy_line = .true.
```

```
show_TRho_annotation1 = .false.
show_TRho_annotation2 = .false.
show_TRho_annotation3 = .false.
```

```
TRho_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
TRho_use_decorator = .false.
```

file output

```
TRho_file_flag = .false.
TRho_file_dir = 'png'
TRho_file_prefix = 'trho_'
TRho_file_interval = 5
TRho_file_width = -1
TRho_file_aspect_ratio = -1
```

HR window ¶

history of `lg_L` vs. `lg_Teff`

```
HR_win_flag = .false.
```

```
HR_win_width = 6
HR_win_aspect_ratio = 0.75
```

```
HR_xleft = 0.15
HR_xright = 0.85
HR_ybot = 0.15
HR_ytop = 0.85
HR_txt_scale = 1.0
HR_title = 'HR'
```

axis limits – to override system default selections

```
HR_logT_min = -101d0
HR_logT_max = -101d0
HR_logL_min = -101d0
HR_logL_max = -101d0
```

```
HR_logL_margin = 0.1
HR_logT_margin = 0.1
HR_dlogT_min = -1
HR_dlogL_min = -1
```

```
HR_step_min = -1
HR_step_max = 999999
```

```
show_HR_classical_instability_strip = .false.
show_HR_Mira_instability_region = .false.
```

```
show_HR_target_box = .false.
HR_target_n_sigma = -3
HR_target_logL = 0
HR_target_logL_sigma = 0
HR_target_logT = 0
HR_target_logT_sigma = 0
```

```
show_HR_annotation1 = .false.
show_HR_annotation2 = .false.
show_HR_annotation3 = .false.
```

```
HR_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
HR_use_decorator = .false.
```

file output

```
HR_file_flag = .false.
HR_file_dir = 'png'
HR_file_prefix = 'hr_'
HR_file_interval = 5
HR_file_width = -1
HR_file_aspect_ratio = -1
```

logL_Teff window ¶

history of logL vs. Teff

```
logL_Teff_win_flag = .false.
```

```
logL_Teff_win_width = 6
logL_Teff_win_aspect_ratio = 0.75
```

```
logL_Teff_xleft = 0.15
logL_Teff_xright = 0.85
logL_Teff_ybot = 0.15
logL_Teff_ytop = 0.85
logL_Teff_txt_scale = 1.0
logL_Teff_title = 'logL_Teff'
```

```
show_logL_Teff_target_box = .false.
logL_Teff_target_n_sigma = -3
logL_Teff_target_logL = 4.00d0
logL_Teff_target_logL_sigma = 0.06d0
logL_Teff_target_Teff = 6095d0
logL_Teff_target_Teff_sigma = 65
```

axis limits – to override system default selections

```
logL_Teff_logL_min = -101d0
logL_Teff_logL_max = -101d0
logL_Teff_Teff_min = -101d0
logL_Teff_Teff_max = -101d0
```

```
logL_Teff_Teff_margin = 0.1
logL_Teff_logL_margin = 0.1
logL_Teff_dTeff_min = -1
logL_Teff_dlogL_min = -1
```

```
logL_Teff_step_min = -1
logL_Teff_step_max = 999999
```

```
show_logL_Teff_annotation1 = .false.
show_logL_Teff_annotation2 = .false.
show_logL_Teff_annotation3 = .false.
```

```
logL_Teff_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
logL_Teff_use_decorator = .false.
```

file output

```
logL_Teff_file_flag = .false.
logL_Teff_file_dir = 'png'
logL_Teff_file_prefix = 'logL_Teff_'
logL_Teff_file_interval = 5
logL_Teff_file_width = -1
logL_Teff_file_aspect_ratio = -1
```

logL_R window ¶

history of logL vs. R

```
logL_R_win_flag = .false.
```

```
logL_R_win_width = 6
logL_R_win_aspect_ratio = 0.75
```

```
logL_R_xleft = 0.15
logL_R_xright = 0.85
logL_R_ybot = 0.15
logL_R_ytop = 0.85
logL_R_txt_scale = 1.0
logL_R_title = 'logL_R'
```

```
show_logL_photosphere_r = .false.
```

```
show_logL_R_target_box = .false.
logL_R_target_n_sigma = -3
logL_R_target_logL = 4.00d0
logL_R_target_logL_sigma = 0.06d0
logL_R_target_R = 6095d0
logL_R_target_R_sigma = 65
```

axis limits – to override system default selections

```
logL_R_logL_min = -101d0
logL_R_logL_max = -101d0
logL_R_R_min = -101d0
logL_R_R_max = -101d0
```

```
logL_R_R_margin = 0.1
logL_R_logL_margin = 0.1
logL_R_dR_min = -1
logL_R_dlogL_min = -1
```

```
logL_R_step_min = -1
logL_R_step_max = 999999
```

```
show_logL_R_annotation1 = .false.
show_logL_R_annotation2 = .false.
show_logL_R_annotation3 = .false.
```

```
logL_R_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
logL_R_use_decorator = .false.
```

file output

```
logL_R_file_flag = .false.
logL_R_file_dir = 'png'
logL_R_file_prefix = 'logL_R_'
logL_R_file_interval = 5
logL_R_file_width = -1
logL_R_file_aspect_ratio = -1
```

logL_v window ¶

history of logL vs. v surface or photosphere

```
logL_v_win_flag = .false.
```

```
logL_v_win_width = 6
logL_v_win_aspect_ratio = 0.75
```

```
logL_v_xleft = 0.15
logL_v_xright = 0.85
logL_v_ybot = 0.15
logL_v_ytop = 0.85
logL_v_txt_scale = 1.0
logL_v_title = 'logL_v'
```

```
show_logL_photosphere_v = .false.
```

```
show_logL_v_target_box = .false.
logL_v_target_n_sigma = -3
logL_v_target_logL = 4.00d0
logL_v_target_logL_sigma = 0.06d0
logL_v_target_v = 6095d0
logL_v_target_v_sigma = 65
```

axis limits – to override system default selections

```
logL_v_logL_min = -101d0
logL_v_logL_max = -101d0
logL_v_v_min = -101d0
logL_v_v_max = -101d0
```

```
logL_v_v_margin = 0.1
logL_v_logL_margin = 0.1
logL_v_dv_min = -1
logL_v_dlogL_min = -1
```

```
logL_v_step_min = -1
logL_v_step_max = 999999
```

```
show_logL_v_annotation1 = .false.
show_logL_v_annotation2 = .false.
show_logL_v_annotation3 = .false.
```

```
logL_v_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
logl_v_use_decorator = .false.
```

file output

```
logL_v_file_flag = .false.
logL_v_file_dir = 'png'
logL_v_file_prefix = 'logL_v_'
logL_v_file_interval = 5
logL_v_file_width = -1
logL_v_file_aspect_ratio = -1
```

L_Teff window ¶

history of L vs. Teff

```
L_Teff_win_flag = .false.
```

```
L_Teff_win_width = 6
L_Teff_win_aspect_ratio = 0.75
```

```
L_Teff_xleft = 0.15
L_Teff_xright = 0.85
L_Teff_ybot = 0.15
L_Teff_ytop = 0.85
L_Teff_txt_scale = 1.0
L_Teff_title = 'L_Teff'
```

```
show_L_Teff_target_box = .false.
L_Teff_target_n_sigma = -3
L_Teff_target_L = 4.00d0
L_Teff_target_L_sigma = 0.06d0
L_Teff_target_Teff = 6095d0
L_Teff_target_Teff_sigma = 65
```

axis limits – to override system default selections

```
L_Teff_L_min = -101d0
L_Teff_L_max = -101d0
L_Teff_Teff_min = -101d0
L_Teff_Teff_max = -101d0
```

```
L_Teff_Teff_margin = 0.1
L_Teff_L_margin = 0.1
L_Teff_dTeff_min = -1
L_Teff_dL_min = -1
```

```
L_Teff_step_min = -1
L_Teff_step_max = 999999
```

```
show_L_Teff_annotation1 = .false.
show_L_Teff_annotation2 = .false.
show_L_Teff_annotation3 = .false.
```

```
L_Teff_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
L_Teff_use_decorator = .false.
```

file output

```
L_Teff_file_flag = .false.
L_Teff_file_dir = 'png'
L_Teff_file_prefix = 'L_Teff_'
L_Teff_file_interval = 5
L_Teff_file_width = -1
L_Teff_file_aspect_ratio = -1
```

L_v window ¶

history of L vs. surface velocity

```
L_v_win_flag = .false.
```

```
L_v_win_width = 6
L_v_win_aspect_ratio = 0.75
```

```
L_v_xleft = 0.15
L_v_xright = 0.85
L_v_ybot = 0.15
L_v_ytop = 0.85
L_v_txt_scale = 1.0
L_v_title = 'L_v'
```

```
show_L_v_target_box = .false.
L_v_target_n_sigma = -3
L_v_target_L = 4.00d0
L_v_target_L_sigma = 0.06d0
L_v_target_v = 6095d0
L_v_target_v_sigma = 65
```

axis limits – to override system default selections

```
L_v_L_min = -101d0
L_v_L_max = -101d0
L_v_v_min = -101d0
L_v_v_max = -101d0
```

```
L_v_v_margin = 0.1
L_v_L_margin = 0.1
L_v_dv_min = -1
L_v_dL_min = -1
```

```
L_v_step_min = -1
L_v_step_max = 999999
```

```
show_L_v_annotation1 = .false.
show_L_v_annotation2 = .false.
show_L_v_annotation3 = .false.
```

```
L_v_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
L_v_use_decorator = .false.
```

file output

```
L_v_file_flag = .false.
L_v_file_dir = 'png'
L_v_file_prefix = 'L_v_'
L_v_file_interval = 5
L_v_file_width = -1
L_v_file_aspect_ratio = -1
```

L_R window ¶

history of L vs. R

```
L_R_win_flag = .false.
```

```
L_R_win_width = 6
L_R_win_aspect_ratio = 0.75
```

```
L_R_xleft = 0.15
L_R_xright = 0.85
L_R_ybot = 0.15
L_R_ytop = 0.85
L_R_txt_scale = 1.0
L_R_title = 'L_R'
```

```
show_L_R_target_box = .false.
L_R_target_n_sigma = -3
L_R_target_L = 4.00d0
L_R_target_L_sigma = 0.06d0
L_R_target_R = 6095d0
L_R_target_R_sigma = 65
```

axis limits – to oRerride system default selections

```
L_R_L_min = -101d0
L_R_L_max = -101d0
L_R_R_min = -101d0
L_R_R_max = -101d0
```

```
L_R_R_margin = 0.1
L_R_L_margin = 0.1
L_R_dR_min = -1
L_R_dL_min = -1
```

```
L_R_step_min = -1
L_R_step_max = 999999
```

```
show_L_R_annotation1 = .false.
show_L_R_annotation2 = .false.
show_L_R_annotation3 = .false.
```

```
L_R_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
L_R_use_decorator = .false.
```

file output

```
L_R_file_flag = .false.
L_R_file_dir = 'png'
L_R_file_prefix = 'L_R_'
L_R_file_interval = 5
L_R_file_width = -1
L_R_file_aspect_ratio = -1
```

R_Teff window ¶

history of R vs. Teff

```
R_Teff_win_flag = .false.
```

```
R_Teff_win_width = 6
R_Teff_win_aspect_ratio = 0.75
```

```
R_Teff_xleft = 0.15
R_Teff_xright = 0.85
R_Teff_ybot = 0.15
R_Teff_ytop = 0.85
R_Teff_txt_scale = 1.0
R_Teff_title = 'R_Teff'
```

```
show_R_Teff_target_box = .false.
R_Teff_target_n_sigma = -3
R_Teff_target_R = 4.00d0
R_Teff_target_R_sigma = 0.06d0
R_Teff_target_Teff = 6095d0
R_Teff_target_Teff_sigma = 65
```

axis limits – to override system default selections

```
R_Teff_R_min = -101d0
R_Teff_R_max = -101d0
R_Teff_Teff_min = -101d0
R_Teff_Teff_max = -101d0
```

```
R_Teff_Teff_margin = 0.1
R_Teff_R_margin = 0.1
R_Teff_dTeff_min = -1
R_Teff_dR_min = -1
```

```
R_Teff_step_min = -1
R_Teff_step_max = 999999
```

```
show_R_Teff_annotation1 = .false.
show_R_Teff_annotation2 = .false.
show_R_Teff_annotation3 = .false.
```

```
R_Teff_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
R_Teff_use_decorator = .false.
```

file output

```
R_Teff_file_flag = .false.
R_Teff_file_dir = 'png'
R_Teff_file_prefix = 'R_Teff_'
R_Teff_file_interval = 5
R_Teff_file_width = -1
R_Teff_file_aspect_ratio = -1
```

R_L window ¶

history of R vs. L

```
R_L_win_flag = .false.
```

```
R_L_win_width = 6
R_L_win_aspect_ratio = 0.75
```

```
R_L_xleft = 0.15
R_L_xright = 0.85
R_L_ybot = 0.15
R_L_ytop = 0.85
R_L_txt_scale = 1.0
R_L_title = 'R_L'
```

```
show_R_L_target_box = .false.
R_L_target_n_sigma = -3
R_L_target_R = 4.00d0
R_L_target_R_sigma = 0.06d0
R_L_target_L = 6095d0
R_L_target_L_sigma = 65
```

axis limits – to override system default selections

```
R_L_R_min = -101d0
R_L_R_max = -101d0
```

```
R_L_L_min = -101d0
R_L_L_max = -101d0
```

```
R_L_L_margin = 0.1
R_L_R_margin = 0.1
R_L_dL_min = -1
R_L_dR_min = -1
```

```
R_L_step_min = -1
R_L_step_max = 999999
```

```
show_R_L_annotation1 = .false.
show_R_L_annotation2 = .false.
show_R_L_annotation3 = .false.
```

```
R_L_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
R_L_use_decorator = .false.
```

file output

```
R_L_file_flag = .false.
R_L_file_dir = 'png'
R_L_file_prefix = 'R_L_'
R_L_file_interval = 5
R_L_file_width = -1
R_L_file_aspect_ratio = -1
```

logg_Teff window ¶

history of logg vs. Teff

```
logg_Teff_win_flag = .false.
```

```
logg_Teff_win_width = 6
logg_Teff_win_aspect_ratio = 0.75
```

```
logg_Teff_xleft = 0.15
logg_Teff_xright = 0.85
logg_Teff_ybot = 0.15
logg_Teff_ytop = 0.85
logg_Teff_txt_scale = 1.0
logg_Teff_title = 'logg_Teff'
```

```
show_logg_Teff_target_box = .false.
logg_Teff_target_n_sigma = -3
logg_Teff_target_logg = 4.00d0
logg_Teff_target_logg_sigma = 0.06d0
logg_Teff_target_Teff = 6095d0
logg_Teff_target_Teff_sigma = 65
```

axis limits – to override system default selections

```
logg_Teff_logg_min = -101d0
logg_Teff_logg_max = -101d0
logg_Teff_Teff_min = -101d0
logg_Teff_Teff_max = -101d0
```

```
logg_Teff_Teff_margin = 0.1
logg_Teff_logg_margin = 0.1
logg_Teff_dTeff_min = -1
logg_Teff_dlogg_min = -1
```

```
logg_Teff_step_min = -1
logg_Teff_step_max = 999999
```

```
show_logg_Teff_annotation1 = .false.
show_logg_Teff_annotation2 = .false.
show_logg_Teff_annotation3 = .false.
```

```
logg_Teff_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
logg_Teff_use_decorator = .false.
```

file output

```
logg_Teff_file_flag = .false.
logg_Teff_file_dir = 'png'
logg_Teff_file_prefix = 'logg_Teff_'
logg_Teff_file_interval = 5
logg_Teff_file_width = -1
logg_Teff_file_aspect_ratio = -1
```

logg_logT window ¶

history of logg vs. log Teff

```
logg_logT_win_flag = .false.
```

```
logg_logT_win_width = 6
logg_logT_win_aspect_ratio = 0.75
```

```
logg_logT_xleft = 0.15
logg_logT_xright = 0.85
logg_logT_ybot = 0.15
logg_logT_ytop = 0.85
logg_logT_txt_scale = 1.0
logg_logT_title = 'logg_logT'
```

```
show_logg_logT_target_box = .false.
logg_logT_target_n_sigma = -3
logg_logT_target_logg = 4.00d0
logg_logT_target_logg_sigma = 0.06d0
logg_logT_target_logT = 3.785d0
logg_logT_target_logT_sigma = 0.00461d0
```

axis limits – to override system default selections

```
logg_logT_logg_min = -101d0
logg_logT_logg_max = -101d0
logg_logT_logT_min = -101d0
logg_logT_logT_max = -101d0
```

```
logg_logT_logg_margin = 0.1
logg_logT_logT_margin = 0.1
logg_logT_dlogT_min = -1
logg_logT_dlogg_min = -1
```

```
logg_logT_step_min = -1
logg_logT_step_max = 999999
```

```
show_logg_logT_annotation1 = .false.
show_logg_logT_annotation2 = .false.
show_logg_logT_annotation3 = .false.
```

```
logg_logT_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
logg_logT_use_decorator = .false.
```

file output

```
logg_logT_file_flag = .false.
logg_logT_file_dir = 'png'
logg_logT_file_prefix = 'logg_logT_'
logg_logT_file_interval = 5
logg_logT_file_width = -1
logg_logT_file_aspect_ratio = -1
```

dPg_dnu window ¶

`delta_Pg` vs. `delta_nu` (for asteroseismology)

```
dPg_dnu_win_flag = .false.
```

```
dPg_dnu_win_width = 6
dPg_dnu_win_aspect_ratio = 0.75
```

```
dPg_dnu_xleft = 0.15
dPg_dnu_xright = 0.85
dPg_dnu_ybot = 0.15
dPg_dnu_ytop = 0.85
dPg_dnu_txt_scale = 1.0
dPg_dnu_title = 'dPg_dnu'
```

axis limits – to override system default selections

```
dPg_dnu_delta_nu_min = -101d0
dPg_dnu_delta_nu_max = -101d0
dPg_dnu_delta_Pg_min = -101d0
dPg_dnu_delta_Pg_max = -101d0
```

```
dPg_dnu_delta_nu_margin = 0.1
dPg_dnu_delta_Pg_margin = 0.1
dPg_dnu_d_delta_nu_min = -1
dPg_dnu_d_delta_Pg_min = -1
```

```
dPg_dnu_step_min = -1
dPg_dnu_step_max = 999999
```

```
show_dPg_dnu_annotation1 = .false.
show_dPg_dnu_annotation2 = .false.
show_dPg_dnu_annotation3 = .false.
```

```
dPg_dnu_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
dPg_dnu_use_decorator = .false.
```

file output

```
dPg_dnu_file_flag = .false.
dPg_dnu_file_dir = 'png'
dPg_dnu_file_prefix = 'dPg_dnu_'
dPg_dnu_file_interval = 5
dPg_dnu_file_width = -1
dPg_dnu_file_aspect_ratio = -1
```

Network window ¶

Shows N vs Z for isotopes in current net

```
Network_win_flag = .false.
```

```
Network_win_width = 6
Network_win_aspect_ratio = 0.75
```

```
Network_xleft = 0.15
Network_xright = 0.85
Network_ybot = 0.15
```

```
Network_ytop = 0.85
Network_txt_scale = 1.0
Network_title = 'Network'
```

axis limits – to override system default selections

```
Network_nmin = -101d0
Network_nmax = -101d0
Network_zmin = -101d0
Network_zmax = -101d0
```

Show mass fraction as a coloured square

```
Network_show_mass_fraction = .true.
```

Limits on mass fractions to show

```
Network_log_mass_frac_min = -5.0d0
Network_log_mass_frac_max = 0.0d0
```

Label Y axis with element name

```
Network_show_element_names = .true.
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Network_use_decorator = .false.
```

Add colorbar

```
Network_show_colorbar = .true.
```

file output

```
Network_file_flag = .false.
Network_file_dir = 'png'
Network_file_prefix = 'Network_'
Network_file_interval = 5
Network_file_width = -1
Network_file_aspect_ratio = -1
```

Production window ¶

Plots the abundance for each stable isotope divided by the initial stable composition

```
Production_win_flag = .false.
```

```
Production_win_width = 6
Production_win_aspect_ratio = 0.75
```

```
Production_xleft = 0.15
Production_xright = 0.85
Production_ybot = 0.15
Production_ytop = 0.85
Production_txt_scale = 1.0
Production_title = 'Production'
```

axis limits – to override system default selections

```
Production_amin = -101d0
Production_amax = -101d0
Production_ymin = -101d0
Production_ymax = -101d0
```

Mass range of star to show

```
Production_min_mass = -101d0
Production_max_mass = -101d0
```

Min log mass fraction an isotope must have to be shown

```
Production_min_mass_frac = -5.0d0
```

Add labels with element names

```
Production_show_element_names = .true.
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Production_use_decorator = .false.
```

file output

```
Production_file_flag = .false.
Production_file_dir = 'png'
```

```
Production_file_prefix = 'Production_'
Production_file_interval = 5
Production_file_width = -1
Production_file_aspect_ratio = -1
```

Profile Panels ¶

for tracking shocks

```
Profile_Panels_show_Mach_1_location = .false.
Profile_Panels_show_photosphere_location = .false.
Profile_Panels_xwidth_left_of_shock = -1
Profile_Panels_xwidth_right_of_shock = -1
Profile_Panels_xwidth_left_div_shock_value = -1
Profile_Panels_xwidth_right_div_shock_value = -1
```

these apply to all Profile Panels plots don't use if value is <= 0 else put location of shock at center of xaxis, and set xmin and xmax so that (xmax - xmin)/center_value = this.

Profile_Panels1 ¶

```
Profile_Panels1_win_flag = .false.
```

```
Profile_Panels1_win_width = 6
Profile_Panels1_win_aspect_ratio = 0.75
```

```
Profile_Panels1_xleft = 0.15
Profile_Panels1_xright = 0.85
Profile_Panels1_ybot = 0.15
Profile_Panels1_ytop = 0.85
Profile_Panels1_txt_scale = 1.0
Profile_Panels1_title = 'Profile Panels1'
```

```
Profile_Panels1_xaxis_name = 'mass'
Profile_Panels1_xaxis_reversed = .false.
Profile_Panels1_xmin = -101d0
Profile_Panels1_xmax = -101d0
Profile_Panels1_xmargin = 0d0
Profile_Panels1_show_mix_regions_on_xaxis = .false.
```

```
Profile_Panels1_yaxis_name(:) = ''
Profile_Panels1_yaxis_reversed(:) = .false.
Profile_Panels1_yaxis_log(:) = .false.
Profile_Panels1_ymin(:) = -101d0
Profile_Panels1_ymax(:) = -101d0
Profile_Panels1_ycenter(:) = -101d0
```

```
Profile_Panels1_ymargin(:) = 0.1
Profile_Panels1_dymin(:) = -1
```

```
Profile_Panels1_other_yaxis_name(:) = ''
Profile_Panels1_other_yaxis_reversed(:) = .false.
Profile_Panels1_other_yaxis_log(:) = .false.
Profile_Panels1_other_ymin(:) = -101d0
Profile_Panels1_other_ymax(:) = -101d0
Profile_Panels1_other_ycenter(:) = -101d0
Profile_Panels1_other_ymargin(:) = 0.1
Profile_Panels1_other_dymin(:) = -1
```

```
Profile_Panels1_show_grid = .false.
```

setup default plot

```
Profile_Panels1_num_panels = 2
Profile_Panels1_yaxis_name(1) = 'logT'
Profile_Panels1_other_yaxis_name(1) = 'entropy'
Profile_Panels1_yaxis_name(2) = 'logRho'
Profile_Panels1_other_yaxis_name(2) = 'logP'
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Profile_Panels1_use_decorator = .false.
```

file output

```
Profile_Panels1_file_flag = .false.
Profile_Panels1_file_dir = 'png'
Profile_Panels1_file_prefix = 'profile_panels1_'
Profile_Panels1_file_interval = 5
Profile_Panels1_file_width = -1
Profile_Panels1_file_aspect_ratio = -1
```

Profile_Panels2 ¶

```
Profile_Panels2_win_flag = .false.
```

```
Profile_Panels2_win_width = 6
Profile_Panels2_win_aspect_ratio = 0.75
```

```
Profile_Panels2_xleft = 0.15
Profile_Panels2_xright = 0.85
Profile_Panels2_ybot = 0.15
Profile_Panels2_ytop = 0.85
Profile_Panels2_txt_scale = 1.0
Profile_Panels2_title = 'Profile Panels2'
```

```
Profile_Panels2_xaxis_name = ''
Profile_Panels2_xaxis_reversed = .false.
Profile_Panels2_xmin = -101d0
Profile_Panels2_xmax = -101d0
Profile_Panels2_xmargin = 0d0
Profile_Panels2_show_mix_regions_on_xaxis = .false.
```

```
Profile_Panels2_num_panels = 0
```

```
Profile_Panels2_yaxis_name(:) = ''
Profile_Panels2_yaxis_reversed(:) = .false.
Profile_Panels2_yaxis_log(:) = .false.
Profile_Panels2_ymin(:) = -101d0
Profile_Panels2_ymax(:) = -101d0
Profile_Panels2_ycenter(:) = -101d0
Profile_Panels2_ymargin(:) = 0.1
Profile_Panels2_dymin(:) = -1
```

```
Profile_Panels2_other_yaxis_name(:) = ''
Profile_Panels2_other_yaxis_reversed(:) = .false.
Profile_Panels2_other_yaxis_log(:) = .false.
Profile_Panels2_other_ymin(:) = -101d0
Profile_Panels2_other_ymax(:) = -101d0
Profile_Panels2_other_ycenter(:) = -101d0
Profile_Panels2_other_ymargin(:) = 0.1
Profile_Panels2_other_dymin(:) = -1
```

```
Profile_Panels2_show_grid = .false.
```

setup default plot

```
Profile_Panels2_win_aspect_ratio = 1.25
Profile_Panels2_txt_scale = 0.9
Profile_Panels2_ybot = 0.1
Profile_Panels2_ytop = 0.9
Profile_Panels2_title = 'Abundance-Power'
```

```
Profile_Panels2_xaxis_name = 'logP'
Profile_Panels2_xaxis_reversed = .true.
```

```
Profile_Panels2_num_panels = 2
Profile_Panels2_yaxis_name(1) = 'Abundance'
Profile_Panels2_yaxis_name(2) = 'Power'
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Profile_Panels2_use_decorator = .false.
```

file output

```
Profile_Panels2_file_flag = .false.
Profile_Panels2_file_dir = 'png'
Profile_Panels2_file_prefix = 'profile_Panels2_'
Profile_Panels2_file_interval = 5
Profile_Panels2_file_width = -1
Profile_Panels2_file_aspect_ratio = -1
```

Profile_Panels3 ¶

```
Profile_Panels3_win_flag = .false.
```

```
Profile_Panels3_win_width = 6
Profile_Panels3_win_aspect_ratio = 0.75
```

```
Profile_Panels3_xleft = 0.15
Profile_Panels3_xright = 0.85
Profile_Panels3_ybot = 0.15
Profile_Panels3_ytop = 0.85
Profile_Panels3_txt_scale = 1.0
Profile_Panels3_title = 'Profile Panels3'
```

```
Profile_Panels3_xaxis_name = ''
Profile_Panels3_xaxis_reversed = .false.
Profile_Panels3_xmin = -101d0
Profile_Panels3_xmax = -101d0
Profile_Panels3_xmargin = 0d0
Profile_Panels3_show_mix_regions_on_xaxis = .false.
```

```
Profile_Panels3_num_panels = 0
```

```
Profile_Panels3_yaxis_name(:) = ''
Profile_Panels3_yaxis_reversed(:) = .false.
Profile_Panels3_yaxis_log(:) = .false.
Profile_Panels3_ymin(:) = -101d0
Profile_Panels3_ymax(:) = -101d0
Profile_Panels3_ycenter(:) = -101d0
Profile_Panels3_ymargin(:) = 0.1
Profile_Panels3_dymin(:) = -1
```

```
Profile_Panels3_other_yaxis_name(:) = ''
Profile_Panels3_other_yaxis_reversed(:) = .false.
Profile_Panels3_other_yaxis_log(:) = .false.
Profile_Panels3_other_ymin(:) = -101d0
Profile_Panels3_other_ymax(:) = -101d0
Profile_Panels3_other_ycenter(:) = -101d0
Profile_Panels3_other_ymargin(:) = 0.1
Profile_Panels3_other_dymin(:) = -1
```

```
Profile_Panels3_show_grid = .false.
```

setup default plot

```
Profile_Panels3_win_aspect_ratio = 1.25
Profile_Panels3_txt_scale = 0.9
Profile_Panels3_ybot = 0.1
Profile_Panels3_ytop = 0.9
Profile_Panels3_title = 'Abundance-Power-Mixing'
```

```
Profile_Panels3_xaxis_name = 'logP'
Profile_Panels3_xaxis_reversed = .true.
```

```
Profile_Panels3_num_panels = 3
Profile_Panels3_yaxis_name(1) = 'Abundance'
Profile_Panels3_yaxis_name(2) = 'Power'
Profile_Panels3_yaxis_name(3) = 'Mixing'
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Profile_Panels3_use_decorator = .false.
```

file output

```
Profile_Panels3_file_flag = .false.
Profile_Panels3_file_dir = 'png'
Profile_Panels3_file_prefix = 'profile_Panels3_'
Profile_Panels3_file_interval = 5
Profile_Panels3_file_width = -1
Profile_Panels3_file_aspect_ratio = -1
```

Profile_Panels4 ¶

```
Profile_Panels4_win_flag = .false.
```

```
Profile_Panels4_win_width = 6
Profile_Panels4_win_aspect_ratio = 0.75
```

```
Profile_Panels4_xleft = 0.15
Profile_Panels4_xright = 0.85
Profile_Panels4_ybot = 0.15
Profile_Panels4_ytop = 0.85
Profile_Panels4_txt_scale = 1.0
Profile_Panels4_title = 'Profile Panels4'
```

```
Profile_Panels4_xaxis_name = ''
Profile_Panels4_xaxis_reversed = .false.
Profile_Panels4_xmin = -101d0
Profile_Panels4_xmax = -101d0
Profile_Panels4_xmargin = 0d0
Profile_Panels4_show_mix_regions_on_xaxis = .false.
```

```
Profile_Panels4_num_panels = 0
```

```
Profile_Panels4_yaxis_name(:) = ''
Profile_Panels4_yaxis_reversed(:) = .false.
Profile_Panels4_yaxis_log(:) = .false.
Profile_Panels4_ymin(:) = -101d0
Profile_Panels4_ymax(:) = -101d0
Profile_Panels4_ycenter(:) = -101d0
Profile_Panels4_ymargin(:) = 0.1
Profile_Panels4_dymin(:) = -1
```

```
Profile_Panels4_other_yaxis_name(:) = ''
Profile_Panels4_other_yaxis_reversed(:) = .false.
Profile_Panels4_other_yaxis_log(:) = .false.
Profile_Panels4_other_ymin(:) = -101d0
Profile_Panels4_other_ymax(:) = -101d0
Profile_Panels4_other_ycenter(:) = -101d0
```

```
Profile_Panels4_other_ymargin(:) = 0.1
Profile_Panels4_other_dymin(:) = -1
```

```
Profile_Panels4_show_grid = .false.
```

setup default plot

```
Profile_Panels4_win_aspect_ratio = 1.25
Profile_Panels4_txt_scale = 0.9
Profile_Panels4_ybot = 0.1
Profile_Panels4_ytop = 0.9
Profile_Panels4_title = 'Abundance-Power-Mixing-Dynamo'
```

```
Profile_Panels4_xaxis_name = 'logP'
Profile_Panels4_xaxis_reversed = .true.
```

```
Profile_Panels4_num_panels = 4
Profile_Panels4_yaxis_name(1) = 'Abundance'
Profile_Panels4_yaxis_name(2) = 'Power'
Profile_Panels4_yaxis_name(3) = 'Mixing'
Profile_Panels4_yaxis_name(4) = 'Dynamo'
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Profile_Panels4_use_decorator = .false.
```

file output

```
Profile_Panels4_file_flag = .false.
Profile_Panels4_file_dir = 'png'
Profile_Panels4_file_prefix = 'profile_Panels4_'
Profile_Panels4_file_interval = 5
Profile_Panels4_file_width = -1
Profile_Panels4_file_aspect_ratio = -1
```

Profile_Panels5 ¶

```
Profile_Panels5_win_flag = .false.
```

```
Profile_Panels5_win_width = 5
Profile_Panels5_win_aspect_ratio = 0.75
```

```
Profile_Panels5_xleft = 0.15
Profile_Panels5_xright = 0.85
Profile_Panels5_ybot = 0.15
Profile_Panels5_ytop = 0.85
Profile_Panels5_txt_scale = 1.0
Profile_Panels5_title = 'Profile Panels5'
```

```
Profile_Panels5_xaxis_name = ''
Profile_Panels5_xaxis_reversed = .false.
Profile_Panels5_xmin = -101d0
Profile_Panels5_xmax = -101d0
Profile_Panels5_xmargin = 0d0
Profile_Panels5_show_mix_regions_on_xaxis = .false.
```

```
Profile_Panels5_num_panels = 0
```

```
Profile_Panels5_yaxis_name(:) = ''
Profile_Panels5_yaxis_reversed(:) = .false.
Profile_Panels5_yaxis_log(:) = .false.
Profile_Panels5_ymin(:) = -101d0
Profile_Panels5_ymax(:) = -101d0
Profile_Panels5_ycenter(:) = -101d0
Profile_Panels5_ymargin(:) = 0.1
Profile_Panels5_dymin(:) = -1
```

```
Profile_Panels5_other_yaxis_name(:) = ''
Profile_Panels5_other_yaxis_reversed(:) = .false.
Profile_Panels5_other_yaxis_log(:) = .false.
Profile_Panels5_other_ymin(:) = -101d0
Profile_Panels5_other_ymax(:) = -101d0
Profile_Panels5_other_ycenter(:) = -101d0
Profile_Panels5_other_ymargin(:) = 0.1
Profile_Panels5_other_dymin(:) = -1
```

```
Profile_Panels5_show_grid = .false.
```

setup default plot

```
Profile_Panels5_win_aspect_ratio = 1.25
Profile_Panels5_txt_scale = 0.9
Profile_Panels5_ybot = 0.1
Profile_Panels5_ytop = 0.9
Profile_Panels5_title = 'Summary Profile-Mode Prop-Mixing'
```

```
Profile_Panels5_xaxis_name = 'logP'
Profile_Panels5_xaxis_reversed = .true.
```

```
Profile_Panels5_num_panels = 3
Profile_Panels5_yaxis_name(1) = 'Summary_Profile'
Profile_Panels5_yaxis_name(2) = 'Mode_Prop'
Profile_Panels5_yaxis_name(3) = 'Mixing'
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Profile_Panels5_use_decorator = .false.
```

file output

```
Profile_Panels5_file_flag = .false.
Profile_Panels5_file_dir = 'png'
Profile_Panels5_file_prefix = 'profile_Panels5_'
Profile_Panels5_file_interval = 5
Profile_Panels5_file_width = -1
Profile_Panels5_file_aspect_ratio = -1
```

Profile_Panels6 ¶

```
Profile_Panels6_win_flag = .false.
```

```
Profile_Panels6_win_width = 6
Profile_Panels6_win_aspect_ratio = 0.75
```

```
Profile_Panels6_xleft = 0.15
Profile_Panels6_xright = 0.85
Profile_Panels6_ybot = 0.15
Profile_Panels6_ytop = 0.85
Profile_Panels6_txt_scale = 1.0
Profile_Panels6_title = 'Profile Panels6'
```

```
Profile_Panels6_xaxis_name = ''
Profile_Panels6_xaxis_reversed = .false.
Profile_Panels6_xmin = -101d0
Profile_Panels6_xmax = -101d0
Profile_Panels6_xmargin = 0d0
Profile_Panels6_show_mix_regions_on_xaxis = .false.
```

```
Profile_Panels6_num_panels = 0
```

```
Profile_Panels6_yaxis_name(:) = ''
Profile_Panels6_yaxis_reversed(:) = .false.
Profile_Panels6_yaxis_log(:) = .false.
Profile_Panels6_ymin(:) = -101d0
Profile_Panels6_ymax(:) = -101d0
Profile_Panels6_ycenter(:) = -101d0
Profile_Panels6_ymargin(:) = 0.1
Profile_Panels6_dymin(:) = -1
```

```
Profile_Panels6_other_yaxis_name(:) = ''
Profile_Panels6_other_yaxis_reversed(:) = .false.
Profile_Panels6_other_yaxis_log(:) = .false.
Profile_Panels6_other_ymin(:) = -101d0
Profile_Panels6_other_ymax(:) = -101d0
Profile_Panels6_other_ycenter(:) = -101d0
Profile_Panels6_other_ymargin(:) = 0.1
Profile_Panels6_other_dymin(:) = -1
```

```
Profile_Panels6_show_grid = .false.
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Profile_Panels6_use_decorator = .false.
```

file output

```
Profile_Panels6_file_flag = .false.
Profile_Panels6_file_dir = 'png'
Profile_Panels6_file_prefix = 'profile_Panels6_'
Profile_Panels6_file_interval = 5
Profile_Panels6_file_width = -1
Profile_Panels6_file_aspect_ratio = -1
```

Profile_Panels7 ¶

```
Profile_Panels7_win_flag = .false.
```

```
Profile_Panels7_win_width = 6
Profile_Panels7_win_aspect_ratio = 0.75
```

```
Profile_Panels7_xleft = 0.15
Profile_Panels7_xright = 0.85
Profile_Panels7_ybot = 0.15
Profile_Panels7_ytop = 0.85
```

```
Profile_Panels7_txt_scale = 1.0
Profile_Panels7_title = 'Profile Panels4'
```

```
Profile_Panels7_xaxis_name = ''
Profile_Panels7_xaxis_reversed = .false.
Profile_Panels7_xmin = -101d0
Profile_Panels7_xmax = -101d0
Profile_Panels7_xmargin = 0d0
Profile_Panels7_show_mix_regions_on_xaxis = .false.
```

```
Profile_Panels7_num_panels = 0
```

```
Profile_Panels7_yaxis_name(:) = ''
Profile_Panels7_yaxis_reversed(:) = .false.
Profile_Panels7_yaxis_log(:) = .false.
Profile_Panels7_ymin(:) = -101d0
Profile_Panels7_ymax(:) = -101d0
Profile_Panels7_ycenter(:) = -101d0
Profile_Panels7_ymargin(:) = 0.1
Profile_Panels7_dymin(:) = -1
```

```
Profile_Panels7_other_yaxis_name(:) = ''
Profile_Panels7_other_yaxis_reversed(:) = .false.
Profile_Panels7_other_yaxis_log(:) = .false.
Profile_Panels7_other_ymin(:) = -101d0
Profile_Panels7_other_ymax(:) = -101d0
Profile_Panels7_other_ycenter(:) = -101d0
Profile_Panels7_other_ymargin(:) = 0.1
Profile_Panels7_other_dymin(:) = -1
```

```
Profile_Panels7_show_grid = .false.
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Profile_Panels7_use_decorator = .false.
```

file output

```
Profile_Panels7_file_flag = .false.
Profile_Panels7_file_dir = 'png'
Profile_Panels7_file_prefix = 'profile_Panels7_'
Profile_Panels7_file_interval = 5
Profile_Panels7_file_width = -1
Profile_Panels7_file_aspect_ratio = -1
```

Profile_Panels8 ¶

```
Profile_Panels8_win_flag = .false.
```

```
Profile_Panels8_win_width = 6
Profile_Panels8_win_aspect_ratio = 0.75
```

```
Profile_Panels8_xleft = 0.15
Profile_Panels8_xright = 0.85
Profile_Panels8_ybot = 0.15
Profile_Panels8_ytop = 0.85
Profile_Panels8_txt_scale = 1.0
Profile_Panels8_title = 'Profile Panels8'
```

```
Profile_Panels8_xaxis_name = ''
Profile_Panels8_xaxis_reversed = .false.
Profile_Panels8_xmin = -101d0
Profile_Panels8_xmax = -101d0
Profile_Panels8_xmargin = 0d0
Profile_Panels8_show_mix_regions_on_xaxis = .false.
```

```
Profile_Panels8_num_panels = 0
```

```
Profile_Panels8_yaxis_name(:) = ''
Profile_Panels8_yaxis_reversed(:) = .false.
Profile_Panels8_yaxis_log(:) = .false.
Profile_Panels8_ymin(:) = -101d0
Profile_Panels8_ymax(:) = -101d0
Profile_Panels8_ycenter(:) = -101d0
Profile_Panels8_ymargin(:) = 0.1
Profile_Panels8_dymin(:) = -1
```

```
Profile_Panels8_other_yaxis_name(:) = ''
Profile_Panels8_other_yaxis_reversed(:) = .false.
Profile_Panels8_other_yaxis_log(:) = .false.
Profile_Panels8_other_ymin(:) = -101d0
Profile_Panels8_other_ymax(:) = -101d0
Profile_Panels8_other_ycenter(:) = -101d0
Profile_Panels8_other_ymargin(:) = 0.1
Profile_Panels8_other_dymin(:) = -1
```

```
Profile_Panels8_show_grid = .false.
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Profile_Panels8_use_decorator = .false.
```

file output

```
Profile_Panels8_file_flag = .false.
Profile_Panels8_file_dir = 'png'
Profile_Panels8_file_prefix = 'profile_Panels8_'
Profile_Panels8_file_interval = 5
Profile_Panels8_file_width = -1
Profile_Panels8_file_aspect_ratio = -1
```

Profile_Panels9 ¶

```
Profile_Panels9_win_flag = .false.
```

```
Profile_Panels9_win_width = 6
Profile_Panels9_win_aspect_ratio = 0.75
```

```
Profile_Panels9_xleft = 0.15
Profile_Panels9_xright = 0.85
Profile_Panels9_ybot = 0.15
Profile_Panels9_ytop = 0.85
Profile_Panels9_txt_scale = 1.0
Profile_Panels9_title = 'Profile Panels9'
```

```
Profile_Panels9_xaxis_name = ''
Profile_Panels9_xaxis_reversed = .false.
Profile_Panels9_xmin = -101d0
Profile_Panels9_xmax = -101d0
Profile_Panels9_xmargin = 0d0
Profile_Panels9_show_mix_regions_on_xaxis = .false.
```

```
Profile_Panels9_num_panels = 0
```

```
Profile_Panels9_yaxis_name(:) = ''
Profile_Panels9_yaxis_reversed(:) = .false.
Profile_Panels9_yaxis_log(:) = .false.
Profile_Panels9_ymin(:) = -101d0
Profile_Panels9_ymax(:) = -101d0
Profile_Panels9_ycenter(:) = -101d0
Profile_Panels9_ymargin(:) = 0.1
Profile_Panels9_dymin(:) = -1
```

```
Profile_Panels9_other_yaxis_name(:) = ''
Profile_Panels9_other_yaxis_reversed(:) = .false.
Profile_Panels9_other_yaxis_log(:) = .false.
Profile_Panels9_other_ymin(:) = -101d0
Profile_Panels9_other_ymax(:) = -101d0
Profile_Panels9_other_ycenter(:) = -101d0
Profile_Panels9_other_ymargin(:) = 0.1
Profile_Panels9_other_dymin(:) = -1
```

```
Profile_Panels9_show_grid = .false.
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Profile_Panels9_use_decorator = .false.
```

file output

```
Profile_Panels9_file_flag = .false.
Profile_Panels9_file_dir = 'png'
Profile_Panels9_file_prefix = 'profile_Panels9_'
Profile_Panels9_file_interval = 5
Profile_Panels9_file_width = -1
Profile_Panels9_file_aspect_ratio = -1
```

History Tracks ¶

History_Track1 ¶

```
History_Track1_win_flag = .false.
History_Track1_win_width = 6
History_Track1_win_aspect_ratio = 0.75
```

```
History_Track1_xleft = 0.15
History_Track1_xright = 0.85
History_Track1_ybot = 0.15
History_Track1_ytop = 0.85
History_Track1_txt_scale = 1.0
History_Track1_title = 'History_Track1'
```

set default

```
History_Track1_xname = 'log_center_T'
History_Track1_yname = 'log_L'
History_Track1_xaxis_label = 'log T\dcenter'
History_Track1_yaxis_label = 'log L/L\d\(2281)'
History_Track1_reverse_xaxis = .true.
History_Track1_reverse_yaxis = .false.
History_Track1_log_xaxis = .false.
History_Track1_log_yaxis = .false.
```

```
History_Track1_xmin = -101d0
History_Track1_xmax = -101d0
History_Track1_ymin = -101d0
History_Track1_ymax = -101d0
```

```
History_Track1_xmargin = 0.1
History_Track1_ymargin = 0.1
History_Track1_dxmin = -1
History_Track1_dymin = -1
```

```
History_Track1_step_min = -1
History_Track1_step_max = 999999
```

```
show_History_Track1_target_box = .false.
History_Track1_n_sigma = -3
History_Track1_xtarget = 0
History_Track1_xsigma = 0
History_Track1_ytarget = 0
History_Track1_ysigma = 0
```

```
show_History_Track1_annotation1 = .false.
show_History_Track1_annotation2 = .false.
show_History_Track1_annotation3 = .false.
```

```
History_Track1_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
History_Track1_use_decorator = .false.
```

file output

```
History_Track1_file_flag = .false.
History_Track1_file_dir = 'png'
History_Track1_file_prefix = 'track1_'
History_Track1_file_interval = 5
History_Track1_file_width = -1
History_Track1_file_aspect_ratio = -1
```

History_Track2 ¶

```
History_Track2_win_flag = .false.
History_Track2_win_width = 6
History_Track2_win_aspect_ratio = 0.75
```

```
History_Track2_xleft = 0.15
History_Track2_xright = 0.85
History_Track2_ybot = 0.15
History_Track2_ytop = 0.85
History_Track2_txt_scale = 1.0
History_Track2_title = 'History_Track2'
```

```
History_Track2_xname = ''
History_Track2_yname = ''
History_Track2_xaxis_label = ''
History_Track2_yaxis_label = ''
History_Track2_reverse_xaxis = .false.
History_Track2_reverse_yaxis = .false.
History_Track2_log_xaxis = .false.
History_Track2_log_yaxis = .false.
```

```
History_Track2_xmin = -101d0
History_Track2_xmax = -101d0
History_Track2_ymin = -101d0
History_Track2_ymax = -101d0
```

```
History_Track2_xmargin = 0.1
History_Track2_ymargin = 0.1
History_Track2_dxmin = -1
History_Track2_dymin = -1
```

```
History_Track2_step_min = -1
History_Track2_step_max = 999999
```

```
show_History_Track2_target_box = .false.
History_Track2_n_sigma = -3
History_Track2_xtarget = 0
```

```
History_Track2_xsigma = 0
History_Track2_ytarget = 0
History_Track2_ysigma = 0
```

```
show_History_Track2_annotation1 = .false.
show_History_Track2_annotation2 = .false.
show_History_Track2_annotation3 = .false.
```

```
History_Track2_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
History_Track2_use_decorator = .false.
```

file output

```
History_Track2_file_flag = .false.
History_Track2_file_dir = 'png'
History_Track2_file_prefix = 'track2_'
History_Track2_file_interval = 5
History_Track2_file_width = -1
History_Track2_file_aspect_ratio = -1
```

History_Track3 ¶

```
History_Track3_win_flag = .false.
History_Track3_win_width = 6
History_Track3_win_aspect_ratio = 0.75
```

```
History_Track3_xleft = 0.15
History_Track3_xright = 0.85
History_Track3_ybot = 0.15
History_Track3_ytop = 0.85
History_Track3_txt_scale = 1.0
History_Track3_title = 'History_Track3'
```

```
History_Track3_xname = ''
History_Track3_yname = ''
History_Track3_xaxis_label = ''
History_Track3_yaxis_label = ''
History_Track3_reverse_xaxis = .false.
History_Track3_reverse_yaxis = .false.
History_Track3_log_xaxis = .false.
History_Track3_log_yaxis = .false.
```

```
History_Track3_xmin = -101d0
History_Track3_xmax = -101d0
History_Track3_ymin = -101d0
History_Track3_ymax = -101d0
```

```
History_Track3_xmargin = 0.1
History_Track3_ymargin = 0.1
History_Track3_dxmin = -1
History_Track3_dymin = -1
```

```
History_Track3_step_min = -1
History_Track3_step_max = 999999
```

```
show_History_Track3_target_box = .false.
History_Track3_n_sigma = -3
History_Track3_xtarget = 0
History_Track3_xsigma = 0
History_Track3_ytarget = 0
History_Track3_ysigma = 0
```

```
show_History_Track3_annotation1 = .false.
show_History_Track3_annotation2 = .false.
show_History_Track3_annotation3 = .false.
```

```
History_Track3_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
History_Track3_use_decorator = .false.
```

file output

```
History_Track3_file_flag = .false.
History_Track3_file_dir = 'png'
History_Track3_file_prefix = 'track3_'
History_Track3_file_interval = 5
History_Track3_file_width = -1
History_Track3_file_aspect_ratio = -1
```

History_Track4 ¶

```
History_Track4_win_flag = .false.
History_Track4_win_width = 6
History_Track4_win_aspect_ratio = 0.75
```

```
History_Track4_xleft = 0.15
History_Track4_xright = 0.85
History_Track4_ybot = 0.15
History_Track4_ytop = 0.85
History_Track4_txt_scale = 1.0
History_Track4_title = 'History_Track4'
```

```
History_Track4_xname = ''
History_Track4_yname = ''
History_Track4_xaxis_label = ''
History_Track4_yaxis_label = ''
History_Track4_reverse_xaxis = .false.
History_Track4_reverse_yaxis = .false.
History_Track4_log_xaxis = .false.
History_Track4_log_yaxis = .false.
```

```
History_Track4_xmin = -101d0
History_Track4_xmax = -101d0
History_Track4_ymin = -101d0
History_Track4_ymax = -101d0
```

```
History_Track4_xmargin = 0.1
History_Track4_ymargin = 0.1
History_Track4_dxmin = -1
History_Track4_dymin = -1
```

```
History_Track4_step_min = -1
History_Track4_step_max = 999999
```

```
show_History_Track4_target_box = .false.
History_Track4_n_sigma = -3
History_Track4_xtarget = 0
History_Track4_xsigma = 0
History_Track4_ytarget = 0
History_Track4_ysigma = 0
```

```
show_History_Track4_annotation1 = .false.
show_History_Track4_annotation2 = .false.
show_History_Track4_annotation3 = .false.
```

```
History_Track4_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
History_Track4_use_decorator = .false.
```

file output

```
History_Track4_file_flag = .false.
History_Track4_file_dir = 'png'
History_Track4_file_prefix = 'track4_'
History_Track4_file_interval = 5
History_Track4_file_width = -1
History_Track4_file_aspect_ratio = -1
```

History_Track5 ¶

```
History_Track5_win_flag = .false.
History_Track5_win_width = 6
History_Track5_win_aspect_ratio = 0.75
```

```
History_Track5_xleft = 0.15
History_Track5_xright = 0.85
History_Track5_ybot = 0.15
History_Track5_ytop = 0.85
History_Track5_txt_scale = 1.0
History_Track5_title = 'History_Track5'
```

```
History_Track5_xname = ''
History_Track5_yname = ''
History_Track5_xaxis_label = ''
History_Track5_yaxis_label = ''
History_Track5_reverse_xaxis = .false.
History_Track5_reverse_yaxis = .false.
History_Track5_log_xaxis = .false.
History_Track5_log_yaxis = .false.
```

```
History_Track5_xmin = -101d0
History_Track5_xmax = -101d0
History_Track5_ymin = -101d0
History_Track5_ymax = -101d0
```

```
History_Track5_xmargin = 0.1
History_Track5_ymargin = 0.1
```

```
History_Track5_dxmin = -1
History_Track5_dymin = -1
```

```
History_Track5_step_min = -1
History_Track5_step_max = 999999
```

```
show_History_Track5_target_box = .false.
History_Track5_n_sigma = -3
History_Track5_xtarget = 0
History_Track5_xsigma = 0
History_Track5_ytarget = 0
History_Track5_ysigma = 0
```

```
show_History_Track5_annotation1 = .false.
show_History_Track5_annotation2 = .false.
show_History_Track5_annotation3 = .false.
```

```
History_Track5_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
History_Track5_use_decorator = .false.
```

file output

```
History_Track5_file_flag = .false.
History_Track5_file_dir = 'png'
History_Track5_file_prefix = 'track5_'
History_Track5_file_interval = 5
History_Track5_file_width = -1
History_Track5_file_aspect_ratio = -1
```

History_Track6 ¶

```
History_Track6_win_flag = .false.
History_Track6_win_width = 6
History_Track6_win_aspect_ratio = 0.75
```

```
History_Track6_xleft = 0.15
History_Track6_xright = 0.85
History_Track6_ybot = 0.15
History_Track6_ytop = 0.85
```

```
History_Track6_txt_scale = 1.0
History_Track6_title = 'History_Track6'
```

```
History_Track6_xname = ''
History_Track6_yname = ''
History_Track6_xaxis_label = ''
History_Track6_yaxis_label = ''
History_Track6_reverse_xaxis = .false.
History_Track6_reverse_yaxis = .false.
History_Track6_log_xaxis = .false.
History_Track6_log_yaxis = .false.
```

```
History_Track6_xmin = -101d0
History_Track6_xmax = -101d0
History_Track6_ymin = -101d0
History_Track6_ymax = -101d0
```

```
History_Track6_xmargin = 0.1
History_Track6_ymargin = 0.1
History_Track6_dxmin = -1
History_Track6_dymin = -1
```

```
History_Track6_step_min = -1
History_Track6_step_max = 999999
```

```
show_History_Track6_target_box = .false.
History_Track6_n_sigma = -3
History_Track6_xtarget = 0
History_Track6_xsigma = 0
History_Track6_ytarget = 0
History_Track6_ysigma = 0
```

```
show_History_Track6_annotation1 = .false.
show_History_Track6_annotation2 = .false.
show_History_Track6_annotation3 = .false.
```

```
History_Track6_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
History_Track6_use_decorator = .false.
```

file output

```
History_Track6_file_flag = .false.
History_Track6_file_dir = 'png'
History_Track6_file_prefix = 'track6_'
History_Track6_file_interval = 5
History_Track6_file_width = -1
History_Track6_file_aspect_ratio = -1
```

History_Track7 ¶

```
History_Track7_win_flag = .false.
History_Track7_win_width = 6
History_Track7_win_aspect_ratio = 0.75
```

```
History_Track7_xleft = 0.15
History_Track7_xright = 0.85
History_Track7_ybot = 0.15
History_Track7_ytop = 0.85
History_Track7_txt_scale = 1.0
History_Track7_title = 'History_Track7'
```

```
History_Track7_xname = ''
History_Track7_yname = ''
History_Track7_xaxis_label = ''
History_Track7_yaxis_label = ''
History_Track7_reverse_xaxis = .false.
History_Track7_reverse_yaxis = .false.
History_Track7_log_xaxis = .false.
History_Track7_log_yaxis = .false.
```

```
History_Track7_xmin = -101d0
History_Track7_xmax = -101d0
History_Track7_ymin = -101d0
History_Track7_ymax = -101d0
```

```
History_Track7_xmargin = 0.1
History_Track7_ymargin = 0.1
History_Track7_dxmin = -1
History_Track7_dymin = -1
```

```
History_Track7_step_min = -1
History_Track7_step_max = 999999
```

```
show_History_Track7_target_box = .false.
History_Track7_n_sigma = -3
History_Track7_xtarget = 0
History_Track7_xsigma = 0
History_Track7_ytarget = 0
History_Track7_ysigma = 0
```

```
show_History_Track7_annotation1 = .false.
show_History_Track7_annotation2 = .false.
show_History_Track7_annotation3 = .false.
```

```
History_Track7_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
History_Track7_use_decorator = .false.
```

file output

```
History_Track7_file_flag = .false.
History_Track7_file_dir = 'png'
History_Track7_file_prefix = 'track7_'
History_Track7_file_interval = 5
History_Track7_file_width = -1
History_Track7_file_aspect_ratio = -1
```

History_Track8 ¶

```
History_Track8_win_flag = .false.
History_Track8_win_width = 6
History_Track8_win_aspect_ratio = 0.75
```

```
History_Track8_xleft = 0.15
History_Track8_xright = 0.85
History_Track8_ybot = 0.15
History_Track8_ytop = 0.85
History_Track8_txt_scale = 1.0
History_Track8_title = 'History_Track8'
```

```
History_Track8_xname = ''
History_Track8_yname = ''
History_Track8_xaxis_label = ''
History_Track8_yaxis_label = ''
History_Track8_reverse_xaxis = .false.
```

```
History_Track8_reverse_yaxis = .false.
History_Track8_log_xaxis = .false.
History_Track8_log_yaxis = .false.
```

```
History_Track8_xmin = -101d0
History_Track8_xmax = -101d0
History_Track8_ymin = -101d0
History_Track8_ymax = -101d0
```

```
History_Track8_xmargin = 0.1
History_Track8_ymargin = 0.1
History_Track8_dxmin = -1
History_Track8_dymin = -1
```

```
History_Track8_step_min = -1
History_Track8_step_max = 999999
```

```
show_History_Track8_target_box = .false.
History_Track8_n_sigma = -3
History_Track8_xtarget = 0
History_Track8_xsigma = 0
History_Track8_ytarget = 0
History_Track8_ysigma = 0
```

```
show_History_Track8_annotation1 = .false.
show_History_Track8_annotation2 = .false.
show_History_Track8_annotation3 = .false.
```

```
History_Track8_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
History_Track8_use_decorator = .false.
```

file output

```
History_Track8_file_flag = .false.
History_Track8_file_dir = 'png'
History_Track8_file_prefix = 'track8_'
History_Track8_file_interval = 5
History_Track8_file_width = -1
History_Track8_file_aspect_ratio = -1
```

History_Track9 ¶

```
History_Track9_win_flag = .false.
History_Track9_win_width = 6
History_Track9_win_aspect_ratio = 0.75
```

```
History_Track9_xleft = 0.15
History_Track9_xright = 0.85
History_Track9_ybot = 0.15
History_Track9_ytop = 0.85
History_Track9_txt_scale = 1.0
History_Track9_title = 'History_Track9'
```

```
History_Track9_xname = ''
History_Track9_yname = ''
History_Track9_xaxis_label = ''
History_Track9_yaxis_label = ''
History_Track9_reverse_xaxis = .false.
History_Track9_reverse_yaxis = .false.
History_Track9_log_xaxis = .false.
History_Track9_log_yaxis = .false.
```

```
History_Track9_xmin = -101d0
History_Track9_xmax = -101d0
History_Track9_ymin = -101d0
History_Track9_ymax = -101d0
```

```
History_Track9_xmargin = 0.1
History_Track9_ymargin = 0.1
History_Track9_dxmin = -1
History_Track9_dymin = -1
```

```
History_Track9_step_min = -1
History_Track9_step_max = 999999
```

```
show_History_Track9_target_box = .false.
History_Track9_n_sigma = -3
History_Track9_xtarget = 0
History_Track9_xsigma = 0
History_Track9_ytarget = 0
History_Track9_ysigma = 0
```

```
show_History_Track9_annotation1 = .false.
show_History_Track9_annotation2 = .false.
show_History_Track9_annotation3 = .false.
```

```
History_Track9_fname = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
History_Track9_use_decorator = .false.
```

file output

```
History_Track9_file_flag = .false.
History_Track9_file_dir = 'png'
History_Track9_file_prefix = 'track9_'
History_Track9_file_interval = 5
History_Track9_file_width = -1
History_Track9_file_aspect_ratio = -1
```

History Panels ¶

History_Panels1 ¶

```
History_Panels1_win_flag = .false.
```

```
History_Panels1_win_width = 6
History_Panels1_win_aspect_ratio = 0.75
```

```
History_Panels1_xleft = 0.15
History_Panels1_xright = 0.85
History_Panels1_ybot = 0.15
History_Panels1_ytop = 0.85
History_Panels1_txt_scale = 1.0
History_Panels1_title = 'History_Panels1'
```

```
History_Panels1_xaxis_name = 'model_number'
History_Panels1_xmin = -101d0
History_Panels1_xmax = -101d0
History_Panels1_max_width = 100
History_Panels1_dxmin = -1
History_Panels1_xaxis_reversed = .false.
History_Panels1_xaxis_log = .false.
```

```
History_Panels1_yaxis_name(:) = ''
History_Panels1_yaxis_reversed(:) = .false.
```

```
History_Panels1_yaxis_log(:) = .false.
History_Panels1_ymin(:) = -101d0
History_Panels1_ymax(:) = -101d0
History_Panels1_ymargin(:) = 0.1
History_Panels1_dymin(:) = -1
```

```
History_Panels1_other_yaxis_name(:) = ''
History_Panels1_other_yaxis_reversed(:) = .false.
History_Panels1_other_yaxis_log(:) = .false.
History_Panels1_other_ymin(:) = -101d0
History_Panels1_other_ymax(:) = -101d0
History_Panels1_other_ymargin(:) = 0.1
History_Panels1_other_dymin(:) = -1
```

```
History_Panels1_points_name(:) = ''
```

setup default

```
History_Panels1_num_panels = 3
```

```
History_Panels1_yaxis_name(1) = 'log_center_T'
History_Panels1_yaxis_reversed(1) = .false.
History_Panels1_ymin(1) = -101d0
History_Panels1_ymax(1) = -101d0
History_Panels1_dymin(1) = -1
```

```
History_Panels1_other_yaxis_name(1) = 'log_center_Rho'
History_Panels1_other_yaxis_reversed(1) = .false.
History_Panels1_other_ymin(1) = -101d0
History_Panels1_other_ymax(1) = -101d0
History_Panels1_other_dymin(1) = -1
```

```
History_Panels1_yaxis_name(2) = 'log_L'
History_Panels1_yaxis_reversed(2) = .false.
History_Panels1_ymin(2) = -101d0
History_Panels1_ymax(2) = -101d0
History_Panels1_dymin(2) = -1
```

```
History_Panels1_other_yaxis_name(2) = 'log_Teff'
History_Panels1_other_yaxis_reversed(2) = .false.
History_Panels1_other_ymin(2) = -101d0
History_Panels1_other_ymax(2) = -101d0
History_Panels1_other_dymin(2) = -1
```

```
History_Panels1_yaxis_name(3) = 'star_mass'
History_Panels1_yaxis_reversed(3) = .false.
History_Panels1_ymin(3) = -101d0
History_Panels1_ymax(3) = -101d0
History_Panels1_dymin(3) = -1
```

```
History_Panels1_other_yaxis_name(3) = 'log_abs_mdot'
History_Panels1_other_yaxis_reversed(3) = .false.
History_Panels1_other_ymin(3) = -101d0
History_Panels1_other_ymax(3) = -101d0
History_Panels1_other_dymin(3) = -1
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
History_Panels1_use_decorator = .false.
```

file output

```
History_Panels1_file_flag = .false.
History_Panels1_file_dir = 'png'
History_Panels1_file_prefix = 'History_Panels1_'
History_Panels1_file_interval = 5
History_Panels1_file_width = -1
History_Panels1_file_aspect_ratio = -1
```

History_Panels2 ¶

```
History_Panels2_win_flag = .false.
```

```
History_Panels2_win_width = 6
History_Panels2_win_aspect_ratio = 0.75
```

```
History_Panels2_xleft = 0.15
History_Panels2_xright = 0.85
History_Panels2_ybot = 0.15
History_Panels2_ytop = 0.85
History_Panels2_txt_scale = 1.0
History_Panels2_title = 'History_Panels2'
```

```
History_Panels2_xaxis_name = 'model_number'
History_Panels2_xmin = -101d0
History_Panels2_xmax = -101d0
History_Panels2_max_width = 100
History_Panels2_dxmin = -1
```

```
History_Panels2_xaxis_reversed = .false.
History_Panels2_xaxis_log = .false.
```

```
History_Panels2_num_panels = 0
```

```
History_Panels2_yaxis_name(:) = ''
History_Panels2_yaxis_reversed(:) = .false.
History_Panels2_yaxis_log(:) = .false.
History_Panels2_ymin(:) = -101d0
History_Panels2_ymax(:) = -101d0
History_Panels2_ymargin(:) = 0.1
History_Panels2_dymin(:) = -1
```

```
History_Panels2_other_yaxis_name(:) = ''
History_Panels2_other_yaxis_reversed(:) = .false.
History_Panels2_other_yaxis_log(:) = .false.
History_Panels2_other_ymin(:) = -101d0
History_Panels2_other_ymax(:) = -101d0
History_Panels2_other_ymargin(:) = 0.1
History_Panels2_other_dymin(:) = -1
```

```
History_Panels2_points_name(:) = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
History_Panels2_use_decorator = .false.
```

file output

```
History_Panels2_file_flag = .false.
History_Panels2_file_dir = 'png'
History_Panels2_file_prefix = 'History_Panels2_'
History_Panels2_file_interval = 5
History_Panels2_file_width = -1
History_Panels2_file_aspect_ratio = -1
```

History_Panels3 ¶

```
History_Panels3_win_flag = .false.
```

```
History_Panels3_win_width = 6
History_Panels3_win_aspect_ratio = 0.75
```

```
History_Panels3_xleft = 0.15
History_Panels3_xright = 0.85
History_Panels3_ybot = 0.15
History_Panels3_ytop = 0.85
History_Panels3_txt_scale = 1.0
History_Panels3_title = 'History_Panels3'
```

```
History_Panels3_xaxis_name = 'model_number'
History_Panels3_xmin = -101d0
History_Panels3_xmax = -101d0
History_Panels3_max_width = 100
History_Panels3_dxmin = -1
History_Panels3_xaxis_reversed = .false.
History_Panels3_xaxis_log = .false.
```

```
History_Panels3_num_panels = 0
```

```
History_Panels3_yaxis_name(:) = ''
History_Panels3_yaxis_reversed(:) = .false.
History_Panels3_yaxis_log(:) = .false.
History_Panels3_ymin(:) = -101d0
History_Panels3_ymax(:) = -101d0
History_Panels3_ymargin(:) = 0.1
History_Panels3_dymin(:) = -1
```

```
History_Panels3_other_yaxis_name(:) = ''
History_Panels3_other_yaxis_reversed(:) = .false.
History_Panels3_other_yaxis_log(:) = .false.
History_Panels3_other_ymin(:) = -101d0
History_Panels3_other_ymax(:) = -101d0
History_Panels3_other_ymargin(:) = 0.1
History_Panels3_other_dymin(:) = -1
```

```
History_Panels3_points_name(:) = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
History_Panels3_use_decorator = .false.
```

file output

```
History_Panels3_file_flag = .false.
History_Panels3_file_dir = 'png'
History_Panels3_file_prefix = 'History_Panels3_'
```

```
History_Panels3_file_interval = 5
History_Panels3_file_width = -1
History_Panels3_file_aspect_ratio = -1
```

History_Panels4 ¶

```
History_Panels4_win_flag = .false.
```

```
History_Panels4_win_width = 6
History_Panels4_win_aspect_ratio = 0.75
```

```
History_Panels4_xleft = 0.15
History_Panels4_xright = 0.85
History_Panels4_ybot = 0.15
History_Panels4_ytop = 0.85
History_Panels4_txt_scale = 1.0
History_Panels4_title = 'History_Panels4'
```

```
History_Panels4_xaxis_name = 'model_number'
History_Panels4_xmin = -101d0
History_Panels4_xmax = -101d0
History_Panels4_max_width = 100
History_Panels4_dxmin = -1
History_Panels4_xaxis_reversed = .false.
History_Panels4_xaxis_log = .false.
```

```
History_Panels4_num_panels = 0
```

```
History_Panels4_yaxis_name(:) = ''
History_Panels4_yaxis_reversed(:) = .false.
History_Panels4_yaxis_log(:) = .false.
History_Panels4_ymin(:) = -101d0
History_Panels4_ymax(:) = -101d0
History_Panels4_ymargin(:) = 0.1
History_Panels4_dymin(:) = -1
```

```
History_Panels4_other_yaxis_name(:) = ''
History_Panels4_other_yaxis_reversed(:) = .false.
History_Panels4_other_yaxis_log(:) = .false.
History_Panels4_other_ymin(:) = -101d0
History_Panels4_other_ymax(:) = -101d0
History_Panels4_other_ymargin(:) = 0.1
History_Panels4_other_dymin(:) = -1
```

```
History_Panels4_points_name(:) = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
History_Panels4_use_decorator = .false.
```

file output

```
History_Panels4_file_flag = .false.
History_Panels4_file_dir = 'png'
History_Panels4_file_prefix = 'History_Panels4_'
History_Panels4_file_interval = 5
History_Panels4_file_width = -1
History_Panels4_file_aspect_ratio = -1
```

History_Panels5 ¶

```
History_Panels5_win_flag = .false.
```

```
History_Panels5_win_width = 6
History_Panels5_win_aspect_ratio = 0.75
```

```
History_Panels5_xleft = 0.15
History_Panels5_xright = 0.85
History_Panels5_ybot = 0.15
History_Panels5_ytop = 0.85
History_Panels5_txt_scale = 1.0
History_Panels5_title = 'History_Panels5'
```

```
History_Panels5_xaxis_name = 'model_number'
History_Panels5_xmin = -101d0
History_Panels5_xmax = -101d0
History_Panels5_max_width = 100
History_Panels5_dxmin = -1
History_Panels5_xaxis_reversed = .false.
History_Panels5_xaxis_log = .false.
```

```
History_Panels5_num_panels = 0
```

```
History_Panels5_yaxis_name(1) = 'num_zones'
History_Panels5_yaxis_reversed(1) = .false.
History_Panels5_ymin(1) = -101d0
```

```
History_Panels5_ymax(1) = -101d0
History_Panels5_dymin(1) = -1
```

```
History_Panels5_yaxis_name(:) = ''
History_Panels5_yaxis_reversed(:) = .false.
History_Panels5_yaxis_log(:) = .false.
History_Panels5_ymin(:) = -101d0
History_Panels5_ymax(:) = -101d0
History_Panels5_ymargin(:) = 0.1
History_Panels5_dymin(:) = -1
```

```
History_Panels5_other_yaxis_name(:) = ''
History_Panels5_other_yaxis_reversed(:) = .false.
History_Panels6_other_yaxis_log(:) = .false.
History_Panels5_other_ymin(:) = -101d0
History_Panels5_other_ymax(:) = -101d0
History_Panels5_other_ymargin(:) = 0.1
History_Panels5_other_dymin(:) = -1
```

```
History_Panels5_points_name(:) = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
History_Panels5_use_decorator = .false.
```

file output

```
History_Panels5_file_flag = .false.
History_Panels5_file_dir = 'png'
History_Panels5_file_prefix = 'History_Panels5_'
History_Panels5_file_interval = 5
History_Panels5_file_width = -1
History_Panels5_file_aspect_ratio = -1
```

History_Panels6

```
History_Panels6_win_flag = .false.
```

```
History_Panels6_win_width = 6
History_Panels6_win_aspect_ratio = 0.75
```

```
History_Panels6_xleft = 0.15
History_Panels6_xright = 0.85
```

```
History_Panels6_ybot = 0.15
History_Panels6_ytop = 0.85
History_Panels6_txt_scale = 1.0
History_Panels6_title = 'History_Panels6'
```

```
History_Panels6_xaxis_name = 'model_number'
History_Panels6_xmin = -101d0
History_Panels6_xmax = -101d0
History_Panels6_max_width = 100
History_Panels6_dxmin = -1
History_Panels6_xaxis_reversed = .false.
History_Panels6_xaxis_log = .false.
```

```
History_Panels6_num_panels = 0
```

```
History_Panels6_yaxis_name(:) = ''
History_Panels6_yaxis_reversed(:) = .false.
History_Panels6_yaxis_log(:) = .false.
History_Panels6_ymin(:) = -101d0
History_Panels6_ymax(:) = -101d0
History_Panels6_ymargin(:) = 0.1
History_Panels6_dymin(:) = -1
```

```
History_Panels6_other_yaxis_name(:) = ''
History_Panels6_other_yaxis_reversed(:) = .false.
History_Panels6_other_yaxis_log(:) = .false.
History_Panels6_other_ymin(:) = -101d0
History_Panels6_other_ymax(:) = -101d0
History_Panels6_other_ymargin(:) = 0.1
History_Panels6_other_dymin(:) = -1
```

```
History_Panels6_points_name(:) = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
History_Panels6_use_decorator = .false.
```

file output

```
History_Panels6_file_flag = .false.
History_Panels6_file_dir = 'png'
History_Panels6_file_prefix = 'History_Panels6_'
History_Panels6_file_interval = 5
History_Panels6_file_width = -1
History_Panels6_file_aspect_ratio = -1
```

History_Panels7 ¶

```
History_Panels7_win_flag = .false.
```

```
History_Panels7_win_width = 6
History_Panels7_win_aspect_ratio = 0.75
```

```
History_Panels7_xleft = 0.15
History_Panels7_xright = 0.85
History_Panels7_ybot = 0.15
History_Panels7_ytop = 0.85
History_Panels7_txt_scale = 1.0
History_Panels7_title = 'History_Panels7'
```

```
History_Panels7_xaxis_name = 'model_number'
History_Panels7_xmin = -101d0
History_Panels7_xmax = -101d0
History_Panels7_max_width = 100
History_Panels7_dxmin = -1
History_Panels7_xaxis_reversed = .false.
History_Panels7_xaxis_log = .false.
```

```
History_Panels7_num_panels = 0
```

```
History_Panels7_yaxis_name(:) = ''
History_Panels7_yaxis_reversed(:) = .false.
History_Panels7_yaxis_log(:) = .false.
History_Panels7_ymin(:) = -101d0
History_Panels7_ymax(:) = -101d0
History_Panels7_ymargin(:) = 0.1
History_Panels7_dymin(:) = -1
```

```
History_Panels7_other_yaxis_name(:) = ''
History_Panels7_other_yaxis_reversed(:) = .false.
History_Panels7_other_yaxis_log(:) = .false.
History_Panels7_other_ymin(:) = -101d0
History_Panels7_other_ymax(:) = -101d0
History_Panels7_other_ymargin(:) = 0.1
History_Panels7_other_dymin(:) = -1
```

```
History_Panels7_points_name(:) = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
History_Panels7_use_decorator = .false.
```

file output

```
History_Panels7_file_flag = .false.
History_Panels7_file_dir = 'png'
History_Panels7_file_prefix = 'History_Panels7_'
History_Panels7_file_interval = 5
History_Panels7_file_width = -1
History_Panels7_file_aspect_ratio = -1
```

History_Panels8 ¶

```
History_Panels8_win_flag = .false.
```

```
History_Panels8_win_width = 6
History_Panels8_win_aspect_ratio = 0.75
```

```
History_Panels8_xleft = 0.15
History_Panels8_xright = 0.85
History_Panels8_ybot = 0.15
History_Panels8_ytop = 0.85
History_Panels8_txt_scale = 1.0
History_Panels8_title = 'History_Panels8'
```

```
History_Panels8_xaxis_name = 'model_number'
History_Panels8_xmin = -101d0
History_Panels8_xmax = -101d0
History_Panels8_max_width = 100
History_Panels8_dxmin = -1
History_Panels8_xaxis_reversed = .false.
History_Panels8_xaxis_log = .false.
```

```
History_Panels8_num_panels = 0
```

```
History_Panels8_yaxis_name(:) = ''
History_Panels8_yaxis_reversed(:) = .false.
History_Panels8_yaxis_log(:) = .false.
History_Panels8_ymin(:) = -101d0
History_Panels8_ymax(:) = -101d0
History_Panels8_ymargin(:) = 0.1
History_Panels8_dymin(:) = -1
```

```
History_Panels8_other_yaxis_name(:) = ''
History_Panels8_other_yaxis_reversed(:) = .false.
History_Panels8_other_yaxis_log(:) = .false.
History_Panels8_other_ymin(:) = -101d0
History_Panels8_other_ymax(:) = -101d0
History_Panels8_other_ymargin(:) = 0.1
History_Panels8_other_dymin(:) = -1
```

```
History_Panels8_points_name(:) = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
History_Panels8_use_decorator = .false.
```

file output

```
History_Panels8_file_flag = .false.
History_Panels8_file_dir = 'png'
History_Panels8_file_prefix = 'History_Panels8_'
History_Panels8_file_interval = 5
History_Panels8_file_width = -1
History_Panels8_file_aspect_ratio = -1
```

History_Panels9 ¶

```
History_Panels9_win_flag = .false.
```

```
History_Panels9_win_width = 6
History_Panels9_win_aspect_ratio = 0.75
```

```
History_Panels9_xleft = 0.15
History_Panels9_xright = 0.85
History_Panels9_ybot = 0.15
History_Panels9_ytop = 0.85
History_Panels9_txt_scale = 1.0
History_Panels9_title = 'History_Panels9'
```

```
History_Panels9_xaxis_name = 'model_number'
History_Panels9_xmin = -101d0
History_Panels9_xmax = -101d0
History_Panels9_max_width = 100
History_Panels9_dxmin = -1
```

```
History_Panels9_xaxis_reversed = .false.
History_Panels9_xaxis_log = .false.
```

```
History_Panels9_num_panels = 0
```

```
History_Panels9_yaxis_name(1) = 'num_zones'
History_Panels9_yaxis_reversed(1) = .false.
History_Panels9_ymin(1) = -101d0
History_Panels9_ymax(1) = -101d0
History_Panels9_dymin(1) = -1
```

```
History_Panels9_yaxis_name(:) = ''
History_Panels9_yaxis_reversed(:) = .false.
History_Panels9_yaxis_log(:) = .false.
History_Panels9_ymin(:) = -101d0
History_Panels9_ymax(:) = -101d0
History_Panels9_ymargin(:) = 0.1
History_Panels9_dymin(:) = -1
```

```
History_Panels9_other_yaxis_name(:) = ''
History_Panels9_other_yaxis_reversed(:) = .false.
History_Panels9_other_yaxis_log(:) = .false.
History_Panels9_other_ymin(:) = -101d0
History_Panels9_other_ymax(:) = -101d0
History_Panels9_other_ymargin(:) = 0.1
History_Panels9_other_dymin(:) = -1
```

```
History_Panels9_points_name(:) = ''
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
History_Panels9_use_decorator = .false.
```

file output

```
History_Panels9_file_flag = .false.
History_Panels9_file_dir = 'png'
History_Panels9_file_prefix = 'History_Panels9_'
History_Panels9_file_interval = 5
History_Panels9_file_width = -1
History_Panels9_file_aspect_ratio = -1
```

History_Panel_points_error_bars ¶

History_Panel_points_interval ¶

History_Panel_points_marker ¶

History_Panel_points_ci ¶

History_Panel_points_lw ¶

History_Panel_points_ch ¶

```
History_Panel_points_error_bars = .true.
History_Panel_points_interval = 1
History_Panel_points_marker = 5
History_Panel_points_ci = 1
History_Panel_points_lw = 1
History_Panel_points_ch = 1.0
```

Color Magnitude Panels ¶

Plots either color-color, color-magnitude, magnitude-color or magnitude-magnitude

Color_magnitude1 ¶

```
Color_magnitude1_win_flag = .false.
```

```
Color_magnitude1_win_width = 6
Color_magnitude1_win_aspect_ratio = 0.75
```

```
Color_magnitude1_xleft = 0.15
Color_magnitude1_xright = 0.85
Color_magnitude1_ybot = 0.15
Color_magnitude1_ytop = 0.85
Color_magnitude1_txt_scale = 1.0
Color_magnitude1_title = 'Color_magnitude1'
```

Plots xaxis1-xaxis2 leave xaxis2 blank if you only want to plot xaxis1.

```
Color_magnitude1_xaxis1_name = ''
Color_magnitude1_xaxis2_name = ''
Color_magnitude1_xmin = -101d0
Color_magnitude1_xmax = -101d0
Color_magnitude1_max_width = 100
Color_magnitude1_dxmin = -1
Color_magnitude1_xaxis_reversed = .false.
Color_magnitude1_xaxis_log = .false.
```

Plots yaxis1-yaxis2 leave yaxis2 blank if you only want to plot yaxis1.

```
Color_magnitude1_yaxis1_name(:) = ''
Color_magnitude1_yaxis2_name(:) = ''
Color_magnitude1_yaxis_reversed(:) = .false.
Color_magnitude1_yaxis_log(:) = .false.
Color_magnitude1_ymin(:) = -101d0
Color_magnitude1_ymax(:) = -101d0
Color_magnitude1_ymargin(:) = 0.1
Color_magnitude1_dymin(:) = -1
```

Plots `other_yaxis1-other_yaxis2` leave `other_yaxis2` blank if you only want to plot `other_yaxis1`.

```
Color_magnitude1_other_yaxis1_name(:) = ''
Color_magnitude1_other_yaxis2_name(:) = ''
Color_magnitude1_other_yaxis_reversed(:) = .false.
Color_magnitude1_other_yaxis_log(:) = .false.
Color_magnitude1_other_ymin(:) = -101d0
Color_magnitude1_other_ymax(:) = -101d0
Color_magnitude1_other_ymargin(:) = 0.1
Color_magnitude1_other_dymin(:) = -1
```

setup default

```
Color_magnitude1_num_panels = 0
```

Plots xaxis1-xaxis2 leave xaxis2 blank if you only want to plot xaxis1.

```
Color_magnitude1_xaxis1_name = ''
Color_magnitude1_xaxis2_name = ''
Color_magnitude1_xmin = -101d0
Color_magnitude1_xmax = -101d0
Color_magnitude1_max_width = 100
Color_magnitude1_dxmin = -1
Color_magnitude1_xaxis_reversed = .false.
Color_magnitude1_xaxis_log = .false.
```

Plots yaxis1-yaxis2 leave yaxis2 blank if you only want to plot yaxis1.

```
Color_magnitude1_yaxis1_name(:) = ''
Color_magnitude1_yaxis2_name(:) = ''
Color_magnitude1_yaxis_reversed(:) = .false.
Color_magnitude1_yaxis_log(:) = .false.
Color_magnitude1_ymin(:) = -101d0
Color_magnitude1_ymax(:) = -101d0
Color_magnitude1_ymargin(:) = 0.1
Color_magnitude1_dymin(:) = -1
```

Plots `other_yaxis1-other_yaxis2` leave `other_yaxis2` blank if you only want to plot `other_yaxis1`.

```
Color_magnitude1_other_yaxis1_name(:) = ''
Color_magnitude1_other_yaxis2_name(:) = ''
Color_magnitude1_other_yaxis_reversed(:) = .false.
Color_magnitude1_other_yaxis_log(:) = .false.
Color_magnitude1_other_ymin(:) = -101d0
Color_magnitude1_other_ymax(:) = -101d0
Color_magnitude1_other_ymargin(:) = 0.1
Color_magnitude1_other_dymin(:) = -1
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Color_magnitude1_use_decorator = .false.
```

file output

```
Color_magnitude1_file_flag = .false.
Color_magnitude1_file_dir = 'png'
Color_magnitude1_file_prefix = 'Color_magnitude1_'
Color_magnitude1_file_interval = 5
Color_magnitude1_file_width = -1
Color_magnitude1_file_aspect_ratio = -1
```

Color_magnitude2 ¶

```
Color_magnitude2_win_flag = .false.
```

```
Color_magnitude2_win_width = 6
Color_magnitude2_win_aspect_ratio = 0.75
```

```
Color_magnitude2_xleft = 0.15
Color_magnitude2_xright = 0.85
Color_magnitude2_ybot = 0.15
Color_magnitude2_ytop = 0.85
Color_magnitude2_txt_scale = 1.0
Color_magnitude2_title = 'Color_magnitude2'
```

Plots xaxis1-xaxis2 leave xaxis2 blank if you only want to plot xaxis1.

```
Color_magnitude2_xaxis1_name = ''
Color_magnitude2_xaxis2_name = ''
Color_magnitude2_xmin = -101d0
Color_magnitude2_xmax = -101d0
```

```
Color_magnitude2_max_width = 100
Color_magnitude2_dxmin = -1
Color_magnitude2_xaxis_reversed = .false.
Color_magnitude2_xaxis_log = .false.
```

Plots yaxis1-yaxis2 leave yaxis2 blank if you only want to plot yaxis1.

```
Color_magnitude2_yaxis1_name(:) = ''
Color_magnitude2_yaxis2_name(:) = ''
Color_magnitude2_yaxis_reversed(:) = .false.
Color_magnitude2_yaxis_log(:) = .false.
Color_magnitude2_ymin(:) = -101d0
Color_magnitude2_ymax(:) = -101d0
Color_magnitude2_ymargin(:) = 0.1
Color_magnitude2_dymin(:) = -1
```

Plots `other_yaxis1-other_yaxis2` leave `other_yaxis2` blank if you only want to plot `other_yaxis1`.

```
Color_magnitude2_other_yaxis1_name(:) = ''
Color_magnitude2_other_yaxis2_name(:) = ''
Color_magnitude2_other_yaxis_reversed(:) = .false.
Color_magnitude2_other_yaxis_log(:) = .false.
Color_magnitude2_other_ymin(:) = -101d0
Color_magnitude2_other_ymax(:) = -101d0
Color_magnitude2_other_ymargin(:) = 0.1
Color_magnitude2_other_dymin(:) = -1
```

setup default

```
Color_magnitude2_num_panels = 0
```

Plots xaxis1-xaxis2 leave xaxis2 blank if you only want to plot xaxis1.

```
Color_magnitude2_xaxis1_name = ''
Color_magnitude2_xaxis2_name = ''
Color_magnitude2_xmin = -101d0
Color_magnitude2_xmax = -101d0
Color_magnitude2_max_width = 100
Color_magnitude2_dxmin = -1
Color_magnitude2_xaxis_reversed = .false.
Color_magnitude2_xaxis_log = .false.
```

Plots yaxis1-yaxis2 leave yaxis2 blank if you only want to plot yaxis1.

```
Color_magnitude2_yaxis1_name(:) = ''
Color_magnitude2_yaxis2_name(:) = ''
Color_magnitude2_yaxis_reversed(:) = .false.
Color_magnitude2_yaxis_log(:) = .false.
```

```
Color_magnitude2_ymin(:) = -101d0
Color_magnitude2_ymax(:) = -101d0
Color_magnitude2_ymargin(:) = 0.1
Color_magnitude2_dymin(:) = -1
```

Plots `other_yaxis1-other_yaxis2` leave `other_yaxis2` blank if you only want to plot `other_yaxis1`.

```
Color_magnitude2_other_yaxis1_name(:) = ''
Color_magnitude2_other_yaxis2_name(:) = ''
Color_magnitude2_other_yaxis_reversed(:) = .false.
Color_magnitude2_other_yaxis_log(:) = .false.
Color_magnitude2_other_ymin(:) = -101d0
Color_magnitude2_other_ymax(:) = -101d0
Color_magnitude2_other_ymargin(:) = 0.1
Color_magnitude2_other_dymin(:) = -1
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Color_magnitude2_use_decorator = .false.
```

file output

```
Color_magnitude2_file_flag = .false.
Color_magnitude2_file_dir = 'png'
Color_magnitude2_file_prefix = 'Color_magnitude2_'
Color_magnitude2_file_interval = 5
Color_magnitude2_file_width = -1
Color_magnitude2_file_aspect_ratio = -1
```

Color_magnitude3 ¶

```
Color_magnitude3_win_flag = .false.
```

```
Color_magnitude3_win_width = 6
Color_magnitude3_win_aspect_ratio = 0.75
```

```
Color_magnitude3_xleft = 0.15
Color_magnitude3_xright = 0.85
Color_magnitude3_ybot = 0.15
Color_magnitude3_ytop = 0.85
Color_magnitude3_txt_scale = 1.0
Color_magnitude3_title = 'Color_magnitude3'
```

Plots xaxis1-xaxis2 leave xaxis2 blank if you only want to plot xaxis1.

```
Color_magnitude3_xaxis1_name = ''
Color_magnitude3_xaxis2_name = ''
Color_magnitude3_xmin = -101d0
Color_magnitude3_xmax = -101d0
Color_magnitude3_max_width = 100
Color_magnitude3_dxmin = -1
Color_magnitude3_xaxis_reversed = .false.
Color_magnitude3_xaxis_log = .false.
```

Plots yaxis1-yaxis2 leave yaxis2 blank if you only want to plot yaxis1.

```
Color_magnitude3_yaxis1_name(:) = ''
Color_magnitude3_yaxis2_name(:) = ''
Color_magnitude3_yaxis_reversed(:) = .false.
Color_magnitude3_yaxis_log(:) = .false.
Color_magnitude3_ymin(:) = -101d0
Color_magnitude3_ymax(:) = -101d0
Color_magnitude3_ymargin(:) = 0.1
Color_magnitude3_dymin(:) = -1
```

Plots `other_yaxis1-other_yaxis2` leave `other_yaxis2` blank if you only want to plot `other_yaxis1`.

```
Color_magnitude3_other_yaxis1_name(:) = ''
Color_magnitude3_other_yaxis2_name(:) = ''
Color_magnitude3_other_yaxis_reversed(:) = .false.
Color_magnitude3_other_yaxis_log(:) = .false.
Color_magnitude3_other_ymin(:) = -101d0
Color_magnitude3_other_ymax(:) = -101d0
Color_magnitude3_other_ymargin(:) = 0.1
Color_magnitude3_other_dymin(:) = -1
```

setup default

```
Color_magnitude3_num_panels = 0
```

Plots xaxis1-xaxis2 leave xaxis2 blank if you only want to plot xaxis1.

```
Color_magnitude3_xaxis1_name = ''
Color_magnitude3_xaxis2_name = ''
Color_magnitude3_xmin = -101d0
Color_magnitude3_xmax = -101d0
Color_magnitude3_max_width = 100
Color_magnitude3_dxmin = -1
Color_magnitude3_xaxis_reversed = .false.
Color_magnitude3_xaxis_log = .false.
```

Plots yaxis1-yaxis2 leave yaxis2 blank if you only want to plot yaxis1.

```
Color_magnitude3_yaxis1_name(:) = ''
Color_magnitude3_yaxis2_name(:) = ''
Color_magnitude3_yaxis_reversed(:) = .false.
Color_magnitude3_yaxis_log(:) = .false.
Color_magnitude3_ymin(:) = -101d0
Color_magnitude3_ymax(:) = -101d0
Color_magnitude3_ymargin(:) = 0.1
Color_magnitude3_dymin(:) = -1
```

Plots `other_yaxis1-other_yaxis2` leave `other_yaxis2` blank if you only want to plot `other_yaxis1`.

```
Color_magnitude3_other_yaxis1_name(:) = ''
Color_magnitude3_other_yaxis2_name(:) = ''
Color_magnitude3_other_yaxis_reversed(:) = .false.
Color_magnitude3_other_yaxis_log(:) = .false.
Color_magnitude3_other_ymin(:) = -101d0
Color_magnitude3_other_ymax(:) = -101d0
Color_magnitude3_other_ymargin(:) = 0.1
Color_magnitude3_other_dymin(:) = -1
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Color_magnitude3_use_decorator = .false.
```

file output

```
Color_magnitude3_file_flag = .false.
Color_magnitude3_file_dir = 'png'
Color_magnitude3_file_prefix = 'Color_magnitude3_'
Color_magnitude3_file_interval = 5
Color_magnitude3_file_width = -1
Color_magnitude3_file_aspect_ratio = -1
```

Color_magnitude4 ¶

```
Color_magnitude4_win_flag = .false.
```

```
Color_magnitude4_win_width = 6
Color_magnitude4_win_aspect_ratio = 0.75
```

```
Color_magnitude4_xleft = 0.15
Color_magnitude4_xright = 0.85
Color_magnitude4_ybot = 0.15
Color_magnitude4_ytop = 0.85
```

```
Color_magnitude4_txt_scale = 1.0
Color_magnitude4_title = 'Color_magnitude4'
```

Plots xaxis1-xaxis2 leave xaxis2 blank if you only want to plot xaxis1.

```
Color_magnitude4_xaxis1_name = ''
Color_magnitude4_xaxis2_name = ''
Color_magnitude4_xmin = -101d0
Color_magnitude4_xmax = -101d0
Color_magnitude4_max_width = 100
Color_magnitude4_dxmin = -1
Color_magnitude4_xaxis_reversed = .false.
Color_magnitude4_xaxis_log = .false.
```

Plots yaxis1-yaxis2 leave yaxis2 blank if you only want to plot yaxis1.

```
Color_magnitude4_yaxis1_name(:) = ''
Color_magnitude4_yaxis2_name(:) = ''
Color_magnitude4_yaxis_reversed(:) = .false.
Color_magnitude4_yaxis_log(:) = .false.
Color_magnitude4_ymin(:) = -101d0
Color_magnitude4_ymax(:) = -101d0
Color_magnitude4_ymargin(:) = 0.1
Color_magnitude4_dymin(:) = -1
```

Plots `other_yaxis1-other_yaxis2` leave `other_yaxis2` blank if you only want to plot `other_yaxis1`.

```
Color_magnitude4_other_yaxis1_name(:) = ''
Color_magnitude4_other_yaxis2_name(:) = ''
Color_magnitude4_other_yaxis_reversed(:) = .false.
Color_magnitude4_other_yaxis_log(:) = .false.
Color_magnitude4_other_ymin(:) = -101d0
Color_magnitude4_other_ymax(:) = -101d0
Color_magnitude4_other_ymargin(:) = 0.1
Color_magnitude4_other_dymin(:) = -1
```

setup default

```
Color_magnitude4_num_panels = 0
```

Plots xaxis1-xaxis2 leave xaxis2 blank if you only want to plot xaxis1.

```
Color_magnitude4_xaxis1_name = ''
Color_magnitude4_xaxis2_name = ''
Color_magnitude4_xmin = -101d0
Color_magnitude4_xmax = -101d0
Color_magnitude4_max_width = 100
Color_magnitude4_dxmin = -1
```

```
Color_magnitude4_xaxis_reversed = .false.
Color_magnitude4_xaxis_log = .false.
```

Plots yaxis1-yaxis2 leave yaxis2 blank if you only want to plot yaxis1.

```
Color_magnitude4_yaxis1_name(:) = ''
Color_magnitude4_yaxis2_name(:) = ''
Color_magnitude4_yaxis_reversed(:) = .false.
Color_magnitude4_yaxis_log(:) = .false.
Color_magnitude4_ymin(:) = -101d0
Color_magnitude4_ymax(:) = -101d0
Color_magnitude4_ymargin(:) = 0.1
Color_magnitude4_dymin(:) = -1
```

Plots `other_yaxis1-other_yaxis2` leave `other_yaxis2` blank if you only want to plot `other_yaxis1`.

```
Color_magnitude4_other_yaxis1_name(:) = ''
Color_magnitude4_other_yaxis2_name(:) = ''
Color_magnitude4_other_yaxis_reversed(:) = .false.
Color_magnitude4_other_yaxis_log(:) = .false.
Color_magnitude4_other_ymin(:) = -101d0
Color_magnitude4_other_ymax(:) = -101d0
Color_magnitude4_other_ymargin(:) = 0.1
Color_magnitude4_other_dymin(:) = -1
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Color_magnitude4_use_decorator = .false.
```

file output

```
Color_magnitude4_file_flag = .false.
Color_magnitude4_file_dir = 'png'
Color_magnitude4_file_prefix = 'Color_magnitude4_'
Color_magnitude4_file_interval = 5
Color_magnitude4_file_width = -1
Color_magnitude4_file_aspect_ratio = -1
```

Color_magnitude5 ¶

```
Color_magnitude5_win_flag = .false.
```

```
Color_magnitude5_win_width = 6
Color_magnitude5_win_aspect_ratio = 0.75
```

```
Color_magnitude5_xleft = 0.15
Color_magnitude5_xright = 0.85
Color_magnitude5_ybot = 0.15
Color_magnitude5_ytop = 0.85
Color_magnitude5_txt_scale = 1.0
Color_magnitude5_title = 'Color_magnitude5'
```

Plots xaxis1-xaxis2 leave xaxis2 blank if you only want to plot xaxis1.

```
Color_magnitude5_xaxis1_name = ''
Color_magnitude5_xaxis2_name = ''
Color_magnitude5_xmin = -101d0
Color_magnitude5_xmax = -101d0
Color_magnitude5_max_width = 100
Color_magnitude5_dxmin = -1
Color_magnitude5_xaxis_reversed = .false.
Color_magnitude5_xaxis_log = .false.
```

Plots yaxis1-yaxis2 leave yaxis2 blank if you only want to plot yaxis1.

```
Color_magnitude5_yaxis1_name(:) = ''
Color_magnitude5_yaxis2_name(:) = ''
Color_magnitude5_yaxis_reversed(:) = .false.
Color_magnitude5_yaxis_log(:) = .false.
Color_magnitude5_ymin(:) = -101d0
Color_magnitude5_ymax(:) = -101d0
Color_magnitude5_ymargin(:) = 0.1
Color_magnitude5_dymin(:) = -1
```

Plots `other_yaxis1-other_yaxis2` leave `other_yaxis2` blank if you only want to plot `other_yaxis1`.

```
Color_magnitude5_other_yaxis1_name(:) = ''
Color_magnitude5_other_yaxis2_name(:) = ''
Color_magnitude5_other_yaxis_reversed(:) = .false.
Color_magnitude5_other_yaxis_log(:) = .false.
Color_magnitude5_other_ymin(:) = -101d0
Color_magnitude5_other_ymax(:) = -101d0
Color_magnitude5_other_ymargin(:) = 0.1
Color_magnitude5_other_dymin(:) = -1
```

setup default

```
Color_magnitude5_num_panels = 0
```

Plots xaxis1-xaxis2 leave xaxis2 blank if you only want to plot xaxis1.

```
Color_magnitude5_xaxis1_name = ''
Color_magnitude5_xaxis2_name = ''
Color_magnitude5_xmin = -101d0
Color_magnitude5_xmax = -101d0
Color_magnitude5_max_width = 100
Color_magnitude5_dxmin = -1
Color_magnitude5_xaxis_reversed = .false.
Color_magnitude5_xaxis_log = .false.
```

Plots yaxis1-yaxis2 leave yaxis2 blank if you only want to plot yaxis1.

```
Color_magnitude5_yaxis1_name(:) = ''
Color_magnitude5_yaxis2_name(:) = ''
Color_magnitude5_yaxis_reversed(:) = .false.
Color_magnitude5_yaxis_log(:) = .false.
Color_magnitude5_ymin(:) = -101d0
Color_magnitude5_ymax(:) = -101d0
Color_magnitude5_ymargin(:) = 0.1
Color_magnitude5_dymin(:) = -1
```

Plots `other_yaxis1-other_yaxis2` leave `other_yaxis2` blank if you only want to plot `other_yaxis1`.

```
Color_magnitude5_other_yaxis1_name(:) = ''
Color_magnitude5_other_yaxis2_name(:) = ''
Color_magnitude5_other_yaxis_reversed(:) = .false.
Color_magnitude5_other_yaxis_log(:) = .false.
Color_magnitude5_other_ymin(:) = -101d0
Color_magnitude5_other_ymax(:) = -101d0
Color_magnitude5_other_ymargin(:) = 0.1
Color_magnitude5_other_dymin(:) = -1
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Color_magnitude5_use_decorator = .false.
```

file output

```
Color_magnitude5_file_flag = .false.
Color_magnitude5_file_dir = 'png'
Color_magnitude5_file_prefix = 'Color_magnitude5_'
Color_magnitude5_file_interval = 5
Color_magnitude5_file_width = -1
Color_magnitude5_file_aspect_ratio = -1
```

Color_magnitude6 ¶

```
Color_magnitude6_win_flag = .false.
```

```
Color_magnitude6_win_width = 6
Color_magnitude6_win_aspect_ratio = 0.75
```

```
Color_magnitude6_xleft = 0.15
Color_magnitude6_xright = 0.85
Color_magnitude6_ybot = 0.15
Color_magnitude6_ytop = 0.85
Color_magnitude6_txt_scale = 1.0
Color_magnitude6_title = 'Color_magnitude6'
```

Plots xaxis1-xaxis2 leave xaxis2 blank if you only want to plot xaxis1.

```
Color_magnitude6_xaxis1_name = ''
Color_magnitude6_xaxis2_name = ''
Color_magnitude6_xmin = -101d0
Color_magnitude6_xmax = -101d0
Color_magnitude6_max_width = 100
Color_magnitude6_dxmin = -1
Color_magnitude6_xaxis_reversed = .false.
Color_magnitude6_xaxis_log = .false.
```

Plots yaxis1-yaxis2 leave yaxis2 blank if you only want to plot yaxis1.

```
Color_magnitude6_yaxis1_name(:) = ''
Color_magnitude6_yaxis2_name(:) = ''
Color_magnitude6_yaxis_reversed(:) = .false.
Color_magnitude6_yaxis_log(:) = .false.
Color_magnitude6_ymin(:) = -101d0
Color_magnitude6_ymax(:) = -101d0
Color_magnitude6_ymargin(:) = 0.1
Color_magnitude6_dymin(:) = -1
```

Plots `other_yaxis1-other_yaxis2` leave `other_yaxis2` blank if you only want to plot `other_yaxis1`.

```
Color_magnitude6_other_yaxis1_name(:) = ''
Color_magnitude6_other_yaxis2_name(:) = ''
Color_magnitude6_other_yaxis_reversed(:) = .false.
Color_magnitude6_other_yaxis_log(:) = .false.
Color_magnitude6_other_ymin(:) = -101d0
Color_magnitude6_other_ymax(:) = -101d0
Color_magnitude6_other_ymargin(:) = 0.1
Color_magnitude6_other_dymin(:) = -1
```

setup default

```
Color_magnitude6_num_panels = 0
```

Plots xaxis1-xaxis2 leave xaxis2 blank if you only want to plot xaxis1.

```
Color_magnitude6_xaxis1_name = ''
Color_magnitude6_xaxis2_name = ''
Color_magnitude6_xmin = -101d0
Color_magnitude6_xmax = -101d0
Color_magnitude6_max_width = 100
Color_magnitude6_dxmin = -1
Color_magnitude6_xaxis_reversed = .false.
Color_magnitude6_xaxis_log = .false.
```

Plots yaxis1-yaxis2 leave yaxis2 blank if you only want to plot yaxis1.

```
Color_magnitude6_yaxis1_name(:) = ''
Color_magnitude6_yaxis2_name(:) = ''
Color_magnitude6_yaxis_reversed(:) = .false.
Color_magnitude6_yaxis_log(:) = .false.
Color_magnitude6_ymin(:) = -101d0
Color_magnitude6_ymax(:) = -101d0
Color_magnitude6_ymargin(:) = 0.1
Color_magnitude6_dymin(:) = -1
```

Plots `other_yaxis1-other_yaxis2` leave `other_yaxis2` blank if you only want to plot `other_yaxis1`.

```
Color_magnitude6_other_yaxis1_name(:) = ''
Color_magnitude6_other_yaxis2_name(:) = ''
Color_magnitude6_other_yaxis_reversed(:) = .false.
Color_magnitude6_other_yaxis_log(:) = .false.
Color_magnitude6_other_ymin(:) = -101d0
Color_magnitude6_other_ymax(:) = -101d0
Color_magnitude6_other_ymargin(:) = 0.1
Color_magnitude6_other_dymin(:) = -1
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Color_magnitude6_use_decorator = .false.
```

file output

```
Color_magnitude6_file_flag = .false.
Color_magnitude6_file_dir = 'png'
Color_magnitude6_file_prefix = 'Color_magnitude6_'
Color_magnitude6_file_interval = 5
```

```
Color_magnitude6_file_width = -1
Color_magnitude6_file_aspect_ratio = -1
```

Color_magnitude7 ¶

```
Color_magnitude7_win_flag = .false.
```

```
Color_magnitude7_win_width = 6
Color_magnitude7_win_aspect_ratio = 0.75
```

```
Color_magnitude7_xleft = 0.15
Color_magnitude7_xright = 0.85
Color_magnitude7_ybot = 0.15
Color_magnitude7_ytop = 0.85
Color_magnitude7_txt_scale = 1.0
Color_magnitude7_title = 'Color_magnitude7'
```

Plots xaxis1-xaxis2 leave xaxis2 blank if you only want to plot xaxis1.

```
Color_magnitude7_xaxis1_name = ''
Color_magnitude7_xaxis2_name = ''
Color_magnitude7_xmin = -101d0
Color_magnitude7_xmax = -101d0
Color_magnitude7_max_width = 100
Color_magnitude7_dxmin = -1
Color_magnitude7_xaxis_reversed = .false.
Color_magnitude7_xaxis_log = .false.
```

Plots yaxis1-yaxis2 leave yaxis2 blank if you only want to plot yaxis1.

```
Color_magnitude7_yaxis1_name(:) = ''
Color_magnitude7_yaxis2_name(:) = ''
Color_magnitude7_yaxis_reversed(:) = .false.
Color_magnitude7_yaxis_log(:) = .false.
Color_magnitude7_ymin(:) = -101d0
Color_magnitude7_ymax(:) = -101d0
Color_magnitude7_ymargin(:) = 0.1
Color_magnitude7_dymin(:) = -1
```

Plots `other_yaxis1-other_yaxis2` leave `other_yaxis2` blank if you only want to plot `other_yaxis1`.

```
Color_magnitude7_other_yaxis1_name(:) = ''
Color_magnitude7_other_yaxis2_name(:) = ''
Color_magnitude7_other_yaxis_reversed(:) = .false.
Color_magnitude7_other_yaxis_log(:) = .false.
Color_magnitude7_other_ymin(:) = -101d0
```

```
Color_magnitude7_other_ymax(:) = -101d0
Color_magnitude7_other_ymargin(:) = 0.1
Color_magnitude7_other_dymin(:) = -1
```

setup default

```
Color_magnitude7_num_panels = 0
```

Plots xaxis1-xaxis2 leave xaxis2 blank if you only want to plot xaxis1.

```
Color_magnitude7_xaxis1_name = ''
Color_magnitude7_xaxis2_name = ''
Color_magnitude7_xmin = -101d0
Color_magnitude7_xmax = -101d0
Color_magnitude7_max_width = 100
Color_magnitude7_dxmin = -1
Color_magnitude7_xaxis_reversed = .false.
Color_magnitude7_xaxis_log = .false.
```

Plots yaxis1-yaxis2 leave yaxis2 blank if you only want to plot yaxis1.

```
Color_magnitude7_yaxis1_name(:) = ''
Color_magnitude7_yaxis2_name(:) = ''
Color_magnitude7_yaxis_reversed(:) = .false.
Color_magnitude7_yaxis_log(:) = .false.
Color_magnitude7_ymin(:) = -101d0
Color_magnitude7_ymax(:) = -101d0
Color_magnitude7_ymargin(:) = 0.1
Color_magnitude7_dymin(:) = -1
```

Plots `other_yaxis1-other_yaxis2` leave `other_yaxis2` blank if you only want to plot `other_yaxis1`.

```
Color_magnitude7_other_yaxis1_name(:) = ''
Color_magnitude7_other_yaxis2_name(:) = ''
Color_magnitude7_other_yaxis_reversed(:) = .false.
Color_magnitude7_other_yaxis_log(:) = .false.
Color_magnitude7_other_ymin(:) = -101d0
Color_magnitude7_other_ymax(:) = -101d0
Color_magnitude7_other_ymargin(:) = 0.1
Color_magnitude7_other_dymin(:) = -1
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Color_magnitude7_use_decorator = .false.
```

file output

```
Color_magnitude7_file_flag = .false.
Color_magnitude7_file_dir = 'png'
Color_magnitude7_file_prefix = 'Color_magnitude7_'
Color_magnitude7_file_interval = 5
Color_magnitude7_file_width = -1
Color_magnitude7_file_aspect_ratio = -1
```

Color_magnitude8 ¶

```
Color_magnitude8_win_flag = .false.
```

```
Color_magnitude8_win_width = 6
Color_magnitude8_win_aspect_ratio = 0.75
```

```
Color_magnitude8_xleft = 0.15
Color_magnitude8_xright = 0.85
Color_magnitude8_ybot = 0.15
Color_magnitude8_ytop = 0.85
Color_magnitude8_txt_scale = 1.0
Color_magnitude8_title = 'Color_magnitude8'
```

Plots xaxis1-xaxis2 leave xaxis2 blank if you only want to plot xaxis1.

```
Color_magnitude8_xaxis1_name = ''
Color_magnitude8_xaxis2_name = ''
Color_magnitude8_xmin = -101d0
Color_magnitude8_xmax = -101d0
Color_magnitude8_max_width = 100
Color_magnitude8_dxmin = -1
Color_magnitude8_xaxis_reversed = .false.
Color_magnitude8_xaxis_log = .false.
```

Plots yaxis1-yaxis2 leave yaxis2 blank if you only want to plot yaxis1.

```
Color_magnitude8_yaxis1_name(:) = ''
Color_magnitude8_yaxis2_name(:) = ''
Color_magnitude8_yaxis_reversed(:) = .false.
Color_magnitude8_yaxis_log(:) = .false.
Color_magnitude8_ymin(:) = -101d0
Color_magnitude8_ymax(:) = -101d0
Color_magnitude8_ymargin(:) = 0.1
Color_magnitude8_dymin(:) = -1
```

Plots `other_yaxis1-other_yaxis2` leave `other_yaxis2` blank if you only want to plot `other_yaxis1`.

```
Color_magnitude8_other_yaxis1_name(:) = ''
Color_magnitude8_other_yaxis2_name(:) = ''
Color_magnitude8_other_yaxis_reversed(:) = .false.
Color_magnitude8_other_yaxis_log(:) = .false.
Color_magnitude8_other_ymin(:) = -101d0
Color_magnitude8_other_ymax(:) = -101d0
Color_magnitude8_other_ymargin(:) = 0.1
Color_magnitude8_other_dymin(:) = -1
```

setup default

```
Color_magnitude8_num_panels = 0
```

Plots xaxis1-xaxis2 leave xaxis2 blank if you only want to plot xaxis1.

```
Color_magnitude8_xaxis1_name = ''
Color_magnitude8_xaxis2_name = ''
Color_magnitude8_xmin = -101d0
Color_magnitude8_xmax = -101d0
Color_magnitude8_max_width = 100
Color_magnitude8_dxmin = -1
Color_magnitude8_xaxis_reversed = .false.
Color_magnitude8_xaxis_log = .false.
```

Plots yaxis1-yaxis2 leave yaxis2 blank if you only want to plot yaxis1.

```
Color_magnitude8_yaxis1_name(:) = ''
Color_magnitude8_yaxis2_name(:) = ''
Color_magnitude8_yaxis_reversed(:) = .false.
Color_magnitude8_yaxis_log(:) = .false.
Color_magnitude8_ymin(:) = -101d0
Color_magnitude8_ymax(:) = -101d0
Color_magnitude8_ymargin(:) = 0.1
Color_magnitude8_dymin(:) = -1
```

Plots `other_yaxis1-other_yaxis2` leave `other_yaxis2` blank if you only want to plot `other_yaxis1`.

```
Color_magnitude8_other_yaxis1_name(:) = ''
Color_magnitude8_other_yaxis2_name(:) = ''
Color_magnitude8_other_yaxis_reversed(:) = .false.
Color_magnitude8_other_yaxis_log(:) = .false.
Color_magnitude8_other_ymin(:) = -101d0
Color_magnitude8_other_ymax(:) = -101d0
Color_magnitude8_other_ymargin(:) = 0.1
Color_magnitude8_other_dymin(:) = -1
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Color_magnitude8_use_decorator = .false.
```

file output

```
Color_magnitude8_file_flag = .false.
Color_magnitude8_file_dir = 'png'
Color_magnitude8_file_prefix = 'Color_magnitude8_'
Color_magnitude8_file_interval = 5
Color_magnitude8_file_width = -1
Color_magnitude8_file_aspect_ratio = -1
```

Color_magnitude9 ¶

```
Color_magnitude9_win_flag = .false.
```

```
Color_magnitude9_win_width = 6
Color_magnitude9_win_aspect_ratio = 0.75
```

```
Color_magnitude9_xleft = 0.15
Color_magnitude9_xright = 0.85
Color_magnitude9_ybot = 0.15
Color_magnitude9_ytop = 0.85
Color_magnitude9_txt_scale = 1.0
Color_magnitude9_title = 'Color_magnitude9'
```

Plots xaxis1-xaxis2 leave xaxis2 blank if you only want to plot xaxis1.

```
Color_magnitude9_xaxis1_name = ''
Color_magnitude9_xaxis2_name = ''
Color_magnitude9_xmin = -101d0
Color_magnitude9_xmax = -101d0
Color_magnitude9_max_width = 100
Color_magnitude9_dxmin = -1
Color_magnitude9_xaxis_reversed = .false.
Color_magnitude9_xaxis_log = .false.
```

Plots yaxis1-yaxis2 leave yaxis2 blank if you only want to plot yaxis1.

```
Color_magnitude9_yaxis1_name(:) = ''
Color_magnitude9_yaxis2_name(:) = ''
Color_magnitude9_yaxis_reversed(:) = .false.
Color_magnitude9_yaxis_log(:) = .false.
Color_magnitude9_ymin(:) = -101d0
Color_magnitude9_ymax(:) = -101d0
Color_magnitude9_ymargin(:) = 0.1
Color_magnitude9_dymin(:) = -1
```

Plots `other_yaxis1-other_yaxis2` leave `other_yaxis2` blank if you only want to plot `other_yaxis1`.

```
Color_magnitude9_other_yaxis1_name(:) = ''
Color_magnitude9_other_yaxis2_name(:) = ''
Color_magnitude9_other_yaxis_reversed(:) = .false.
Color_magnitude9_other_yaxis_log(:) = .false.
Color_magnitude9_other_ymin(:) = -101d0
Color_magnitude9_other_ymax(:) = -101d0
Color_magnitude9_other_ymargin(:) = 0.1
Color_magnitude9_other_dymin(:) = -1
```

setup default

```
Color_magnitude9_num_panels = 0
```

Plots xaxis1-xaxis2 leave xaxis2 blank if you only want to plot xaxis1.

```
Color_magnitude9_xaxis1_name = ''
Color_magnitude9_xaxis2_name = ''
Color_magnitude9_xmin = -101d0
Color_magnitude9_xmax = -101d0
Color_magnitude9_max_width = 100
Color_magnitude9_dxmin = -1
Color_magnitude9_xaxis_reversed = .false.
Color_magnitude9_xaxis_log = .false.
```

Plots yaxis1-yaxis2 leave yaxis2 blank if you only want to plot yaxis1.

```
Color_magnitude9_yaxis1_name(:) = ''
Color_magnitude9_yaxis2_name(:) = ''
Color_magnitude9_yaxis_reversed(:) = .false.
Color_magnitude9_yaxis_log(:) = .false.
Color_magnitude9_ymin(:) = -101d0
Color_magnitude9_ymax(:) = -101d0
Color_magnitude9_ymargin(:) = 0.1
Color_magnitude9_dymin(:) = -1
```

Plots `other_yaxis1-other_yaxis2` leave `other_yaxis2` blank if you only want to plot `other_yaxis1`.

```
Color_magnitude9_other_yaxis1_name(:) = ''
Color_magnitude9_other_yaxis2_name(:) = ''
Color_magnitude9_other_yaxis_reversed(:) = .false.
Color_magnitude9_other_yaxis_log(:) = .false.
Color_magnitude9_other_ymin(:) = -101d0
Color_magnitude9_other_ymax(:) = -101d0
```

```
Color_magnitude9_other_ymargin(:) = 0.1
Color_magnitude9_other_dymin(:) = -1
```

Enables calling a subroutine to add extra information to a plot see `$MESA_DIR/star/other/pgstar_decorator.f90`

```
Color_magnitude9_use_decorator = .false.
```

file output

```
Color_magnitude9_file_flag = .false.
Color_magnitude9_file_dir = 'png'
Color_magnitude9_file_prefix = 'Color_magnitude9_'
Color_magnitude9_file_interval = 5
Color_magnitude9_file_width = -1
Color_magnitude9_file_aspect_ratio = -1
```

Text Summary ¶

Text_Summary 1 ¶

```
Text_Summary1_win_flag = .false.
Text_Summary1_win_width = 10
Text_Summary1_win_aspect_ratio = 0.15
```

```
Text_Summary1_xleft = 0.02
Text_Summary1_xright = 0.98
Text_Summary1_ybot = 0.08
Text_Summary1_ytop = 0.98
Text_Summary1_txt_scale = 4.5
Text_Summary1_title = ''
```

setup default

```
Text_Summary1_num_rows = 8
Text_Summary1_num_cols = 4
Text_Summary1_name(:,:) = ''
```

```
Text_Summary1_name(1,1) = 'model_number'
Text_Summary1_name(2,1) = 'log_star_age'
Text_Summary1_name(3,1) = 'log_dt'
Text_Summary1_name(4,1) = 'log_L'
Text_Summary1_name(5,1) = 'log_Teff'
Text_Summary1_name(6,1) = 'log_R'
Text_Summary1_name(7,1) = 'log_g'
Text_Summary1_name(8,1) = 'log_surf_cell_P'
```

```
Text_Summary1_name(1,2) = 'star_mass'
Text_Summary1_name(2,2) = 'log_abs_mdot'
Text_Summary1_name(3,2) = 'he_core_mass'
Text_Summary1_name(4,2) = 'c_core_mass'
Text_Summary1_name(5,2) = 'cz_bot_mass'
Text_Summary1_name(6,2) = 'cz_top_mass'
Text_Summary1_name(7,2) = 'cz_bot_radius'
Text_Summary1_name(8,2) = 'cz_top_radius'
```

```
Text_Summary1_name(1,3) = 'log_cntr_T'
Text_Summary1_name(2,3) = 'log_cntr_Rho'
Text_Summary1_name(3,3) = 'log_center_P'
Text_Summary1_name(4,3) = 'center h1'
Text_Summary1_name(5,3) = 'center he4'
Text_Summary1_name(6,3) = 'center c12'
Text_Summary1_name(7,3) = 'center n14'
Text_Summary1_name(8,3) = 'center o16'
```

```
Text_Summary1_name(1,4) = 'log_Lnuc'
Text_Summary1_name(2,4) = 'log_Lneu'
Text_Summary1_name(3,4) = 'log_LH'
Text_Summary1_name(4,4) = 'log_LHe'
Text_Summary1_name(5,4) = 'log_LZ'
Text_Summary1_name(6,4) = 'num_zones'
Text_Summary1_name(7,4) = 'num_retries'
Text_Summary1_name(8,4) = 'num_backups'
```

file output

```
Text_Summary1_file_flag = .false.
Text_Summary1_file_dir = 'png'
Text_Summary1_file_prefix = 'Text_Summary1_'
Text_Summary1_file_interval = 5
Text_Summary1_file_width = -1
Text_Summary1_file_aspect_ratio = -1
```

Text_Summary2 ¶

```
Text_Summary2_win_flag = .false.
Text_Summary2_win_width = 6
Text_Summary2_win_aspect_ratio = 1.5
```

```
Text_Summary2_xleft = 0.02
Text_Summary2_xright = 0.98
Text_Summary2_ybot = 0.08
Text_Summary2_ytop = 0.98
```

```
Text_Summary2_txt_scale = 4.5
Text_Summary2_title = ''
```

```
Text_Summary2_num_rows = 0
Text_Summary2_num_cols = 0
Text_Summary2_name(:,:) = ''
```

file output

```
Text_Summary2_file_flag = .false.
Text_Summary2_file_dir = 'png'
Text_Summary2_file_prefix = 'Text_Summary2_'
Text_Summary2_file_interval = 5
Text_Summary2_file_width = -1
Text_Summary2_file_aspect_ratio = -1
```

Text_Summary3 ¶

```
Text_Summary3_win_flag = .false.
Text_Summary3_win_width = 6
Text_Summary3_win_aspect_ratio = 1.5
```

```
Text_Summary3_xleft = 0.02
Text_Summary3_xright = 0.98
Text_Summary3_ybot = 0.08
Text_Summary3_ytop = 0.98
Text_Summary3_txt_scale = 4.5
Text_Summary3_title = ''
```

```
Text_Summary3_num_rows = 0
Text_Summary3_num_cols = 0
Text_Summary3_name(:,:) = ''
```

file output

```
Text_Summary3_file_flag = .false.
Text_Summary3_file_dir = 'png'
Text_Summary3_file_prefix = 'Text_Summary3_'
Text_Summary3_file_interval = 5
Text_Summary3_file_width = -1
Text_Summary3_file_aspect_ratio = -1
```

Text_Summary4 ¶

```
Text_Summary4_win_flag = .false.
Text_Summary4_win_width = 6
Text_Summary4_win_aspect_ratio = 1.5
```

```
Text_Summary4_xleft = 0.02
Text_Summary4_xright = 0.98
Text_Summary4_ybot = 0.08
Text_Summary4_ytop = 0.98
Text_Summary4_txt_scale = 4.5
Text_Summary4_title = ''
```

```
Text_Summary4_num_rows = 0
Text_Summary4_num_cols = 0
Text_Summary4_name(:,:) = ''
```

file output

```
Text_Summary4_file_flag = .false.
Text_Summary4_file_dir = 'png'
Text_Summary4_file_prefix = 'Text_Summary4_'
Text_Summary4_file_interval = 5
Text_Summary4_file_width = -1
Text_Summary4_file_aspect_ratio = -1
```

Text_Summary5 ¶

```
Text_Summary5_win_flag = .false.
Text_Summary5_win_width = 6
Text_Summary5_win_aspect_ratio = 1.5
```

```
Text_Summary5_xleft = 0.02
Text_Summary5_xright = 0.98
Text_Summary5_ybot = 0.08
Text_Summary5_ytop = 0.98
Text_Summary5_txt_scale = 4.5
Text_Summary5_title = ''
```

```
Text_Summary5_num_rows = 0
Text_Summary5_num_cols = 0
Text_Summary5_name(:,:) = ''
```

file output

```
Text_Summary5_file_flag = .false.
Text_Summary5_file_dir = 'png'
```

```
Text_Summary5_file_prefix = 'Text_Summary5_'
Text_Summary5_file_interval = 5
Text_Summary5_file_width = -1
Text_Summary5_file_aspect_ratio = -1
```

Text_Summary6 ¶

```
Text_Summary6_win_flag = .false.
Text_Summary6_win_width = 6
Text_Summary6_win_aspect_ratio = 1.5
```

```
Text_Summary6_xleft = 0.02
Text_Summary6_xright = 0.98
Text_Summary6_ybot = 0.08
Text_Summary6_ytop = 0.98
Text_Summary6_txt_scale = 4.5
Text_Summary6_title = ''
```

```
Text_Summary6_num_rows = 0
Text_Summary6_num_cols = 0
Text_Summary6_name(:,:) = ''
```

file output

```
Text_Summary6_file_flag = .false.
Text_Summary6_file_dir = 'png'
Text_Summary6_file_prefix = 'Text_Summary6_'
Text_Summary6_file_interval = 5
Text_Summary6_file_width = -1
Text_Summary6_file_aspect_ratio = -1
```

Text_Summary7 ¶

```
Text_Summary7_win_flag = .false.
Text_Summary7_win_width = 6
Text_Summary7_win_aspect_ratio = 1.5
```

```
Text_Summary7_xleft = 0.02
Text_Summary7_xright = 0.98
Text_Summary7_ybot = 0.08
Text_Summary7_ytop = 0.98
Text_Summary7_txt_scale = 4.5
Text_Summary7_title = ''
```

```
Text_Summary7_num_rows = 0
Text_Summary7_num_cols = 0
Text_Summary7_name(:,:) = ''
```

file output

```
Text_Summary7_file_flag = .false.
Text_Summary7_file_dir = 'png'
Text_Summary7_file_prefix = 'Text_Summary7_'
Text_Summary7_file_interval = 5
Text_Summary7_file_width = -1
Text_Summary7_file_aspect_ratio = -1
```

Text_Summary8 ¶

```
Text_Summary8_win_flag = .false.
Text_Summary8_win_width = 6
Text_Summary8_win_aspect_ratio = 1.5
```

```
Text_Summary8_xleft = 0.02
Text_Summary8_xright = 0.98
Text_Summary8_ybot = 0.08
Text_Summary8_ytop = 0.98
Text_Summary8_txt_scale = 4.5
Text_Summary8_title = ''
```

```
Text_Summary8_num_rows = 0
Text_Summary8_num_cols = 0
Text_Summary8_name(:,:) = ''
```

file output

```
Text_Summary8_file_flag = .false.
Text_Summary8_file_dir = 'png'
Text_Summary8_file_prefix = 'Text_Summary8_'
Text_Summary8_file_interval = 5
Text_Summary8_file_width = -1
Text_Summary8_file_aspect_ratio = -1
```

Text_Summary9 ¶

```
Text_Summary9_win_flag = .false.
Text_Summary9_win_width = 6
Text_Summary9_win_aspect_ratio = 1.5
```

```
Text_Summary9_xleft = 0.02
Text_Summary9_xright = 0.98
Text_Summary9_ybot = 0.08
Text_Summary9_ytop = 0.98
Text_Summary9_txt_scale = 4.5
Text_Summary9_title = ''
```

```
Text_Summary9_num_rows = 0
Text_Summary9_num_cols = 0
Text_Summary9_name(:,:) = ''
```

file output

```
Text_Summary9_file_flag = .false.
Text_Summary9_file_dir = 'png'
Text_Summary9_file_prefix = 'Text_Summary9_'
Text_Summary9_file_interval = 5
Text_Summary9_file_width = -1
Text_Summary9_file_aspect_ratio = -1
```

Grid ¶

Grid1 ¶

```
Grid1_win_flag = .false.
```

```
Grid1_win_width = 6
Grid1_win_aspect_ratio = 1
```

```
Grid1_xleft = 0.12
Grid1_xright = 0.95
Grid1_ybot = 0.08
Grid1_ytop = 0.92
Grid1_title = ''
```

```
Grid1_plot_name(:) = ''
Grid1_plot_row(:) = 1
Grid1_plot_rowspan(:) = 1
Grid1_plot_col(:) = 1
Grid1_plot_colspan(:) = 1
Grid1_plot_pad_left(:) = 0.0
Grid1_plot_pad_right(:) = 0.0
Grid1_plot_pad_top(:) = 0.0
Grid1_plot_pad_bot(:) = 0.0
Grid1_txt_scale_factor(:) = 0.7
```

set default

```
Grid1_num_cols = 2
Grid1_num_rows = 8
Grid1_num_plots = 4
```

```
Grid1_plot_name(1) = 'TRho_Profile'
Grid1_plot_row(1) = 1
Grid1_plot_rowspan(1) = 4
Grid1_plot_col(1) = 1
Grid1_plot_colspan(1) = 2
Grid1_plot_pad_left(1) = 0.0
Grid1_plot_pad_right(1) = 0.0
Grid1_plot_pad_top(1) = 0.0
Grid1_plot_pad_bot(1) = 0.1
Grid1_txt_scale_factor(1) = 0.7
```

```
Grid1_plot_name(2) = 'HR'
Grid1_plot_row(2) = 5
Grid1_plot_rowspan(2) = 2
Grid1_plot_col(2) = 1
Grid1_plot_colspan(2) = 1
Grid1_plot_pad_left(2) = 0.03
Grid1_plot_pad_right(2) = 0.07
Grid1_plot_pad_top(2) = 0.03
Grid1_plot_pad_bot(2) = 0.0
Grid1_txt_scale_factor(2) = 0.65
```

```
Grid1_plot_name(3) = 'TRho'
Grid1_plot_row(3) = 5
Grid1_plot_rowspan(3) = 2
Grid1_plot_col(3) = 2
Grid1_plot_colspan(3) = 1
Grid1_plot_pad_left(3) = 0.07
Grid1_plot_pad_right(3) = 0.03
Grid1_plot_pad_top(3) = 0.03
Grid1_plot_pad_bot(3) = 0.0
Grid1_txt_scale_factor(3) = 0.65
```

```
Grid1_plot_name(4) = 'Text_Summary1'
Grid1_plot_row(4) = 7
Grid1_plot_rowspan(4) = 2
Grid1_plot_col(4) = 1
Grid1_plot_colspan(4) = 2
Grid1_plot_pad_left(4) = -0.08
Grid1_plot_pad_right(4) = 0.0
Grid1_plot_pad_top(4) = 0.08
Grid1_plot_pad_bot(4) = -0.05
Grid1_txt_scale_factor(4) = 0.2
```

file output

```
Grid1_file_flag = .false.
Grid1_file_dir = 'png'
Grid1_file_prefix = 'grid1'
Grid1_file_interval = 5
Grid1_file_width = 9
Grid1_file_aspect_ratio = -1
```

Grid2 ¶

```
Grid2_win_flag = .false.
```

```
Grid2_win_width = 6
Grid2_win_aspect_ratio = 1
```

```
Grid2_xleft = 0.12
Grid2_xright = 0.95
Grid2_ybot = 0.08
Grid2_ytop = 0.92
Grid2_title = ''
```

```
Grid2_plot_name(:) = ''
Grid2_plot_row(:) = 1
Grid2_plot_rowspan(:) = 1
Grid2_plot_col(:) = 1
Grid2_plot_colspan(:) = 1
Grid2_plot_pad_left(:) = 0.0
Grid2_plot_pad_right(:) = 0.0
Grid2_plot_pad_top(:) = 0.0
Grid2_plot_pad_bot(:) = 0.0
Grid2_txt_scale_factor(:) = 0.7
```

set default

```
Grid2_win_width = 9
Grid2_win_aspect_ratio = 0.6
```

```
Grid2_num_cols = 4
Grid2_num_rows = 8
Grid2_num_plots = 5
```

```
Grid2_plot_name(1) = 'TRho_Profile'
Grid2_plot_row(1) = 1
Grid2_plot_rowspan(1) = 4
```

```
Grid2_plot_col(1) = 1
Grid2_plot_colspan(1) = 2
Grid2_plot_pad_left(1) = 0.0
Grid2_plot_pad_right(1) = 0.0
Grid2_plot_pad_top(1) = 0.0
Grid2_plot_pad_bot(1) = 0.1
Grid2_txt_scale_factor(1) = 0.7
```

```
Grid2_plot_name(2) = 'HR'
Grid2_plot_row(2) = 5
Grid2_plot_rowspan(2) = 2
Grid2_plot_col(2) = 1
Grid2_plot_colspan(2) = 1
Grid2_plot_pad_left(2) = 0.00
Grid2_plot_pad_right(2) = 0.04
Grid2_plot_pad_top(2) = 0.03
Grid2_plot_pad_bot(2) = 0.0
Grid2_txt_scale_factor(2) = 0.65
```

```
Grid2_plot_name(3) = 'TRho'
Grid2_plot_row(3) = 5
Grid2_plot_rowspan(3) = 2
Grid2_plot_col(3) = 2
Grid2_plot_colspan(3) = 1
Grid2_plot_pad_left(3) = 0.04
Grid2_plot_pad_right(3) = 0.00
Grid2_plot_pad_top(3) = 0.03
Grid2_plot_pad_bot(3) = 0.0
Grid2_txt_scale_factor(3) = 0.65
```

```
Grid2_plot_name(4) = 'Text_Summary1'
Grid2_plot_row(4) = 7
Grid2_plot_rowspan(4) = 2
Grid2_plot_col(4) = 1
Grid2_plot_colspan(4) = 4
Grid2_plot_pad_left(4) = -0.08
Grid2_plot_pad_right(4) = 0.0
Grid2_plot_pad_top(4) = 0.08
Grid2_plot_pad_bot(4) = -0.04
Grid2_txt_scale_factor(4) = 0.19
```

```
Grid2_plot_name(5) = 'Abundance'
Grid2_plot_row(5) = 1
Grid2_plot_rowspan(5) = 6
Grid2_plot_col(5) = 3
Grid2_plot_colspan(5) = 2
Grid2_plot_pad_left(5) = 0.07
Grid2_plot_pad_right(5) = 0.03
Grid2_plot_pad_top(5) = 0.0
Grid2_plot_pad_bot(5) = 0.0
Grid2_txt_scale_factor(5) = 0.65
```

file output

```
Grid2_file_flag = .false.
Grid2_file_dir = 'png'
Grid2_file_prefix = 'Grid2'
Grid2_file_interval = 5
Grid2_file_width = 9
Grid2_file_aspect_ratio = -1
```

Grid3 ¶

```
Grid3_win_flag = .false.
```

```
Grid3_win_width = 6
Grid3_win_aspect_ratio = 1.2
```

```
Grid3_xleft = 0.10
Grid3_xright = 0.89
Grid3_ybot = 0.08
Grid3_ytop = 0.92
Grid3_title = ''
```

```
Grid3_num_cols = 1
Grid3_num_rows = 1
Grid3_num_plots = 1
```

```
Grid3_plot_name(:) = ''
Grid3_plot_row(:) = 1
Grid3_plot_rowspan(:) = 1
Grid3_plot_col(:) = 1
Grid3_plot_colspan(:) = 1
Grid3_plot_pad_left(:) = 0.0
Grid3_plot_pad_right(:) = 0.0
Grid3_plot_pad_top(:) = 0.0
Grid3_plot_pad_bot(:) = 0.0
Grid3_txt_scale_factor(:) = 0.7
```

set default

```
Grid3_num_cols = 1
Grid3_num_rows = 7
Grid3_num_plots = 3
```

```
Grid3_plot_name(1) = 'TRho_Profile'
Grid3_plot_row(1) = 1
Grid3_plot_rowspan(1) = 3
Grid3_plot_col(1) = 1
Grid3_plot_colspan(1) = 1
Grid3_plot_pad_left(1) = 0.03
Grid3_plot_pad_right(1) = 0.03
Grid3_plot_pad_top(1) = 0.04
Grid3_plot_pad_bot(1) = 0.07
Grid3_txt_scale_factor(1) = 0.7
```

```
Grid3_plot_name(2) = 'Summary_Profile'
Grid3_plot_row(2) = 4
Grid3_plot_rowspan(2) = 2
Grid3_plot_col(2) = 1
Grid3_plot_colspan(2) = 1
Grid3_plot_pad_left(2) = 0.03
Grid3_plot_pad_right(2) = 0.03
Grid3_plot_pad_top(2) = 0.04
Grid3_plot_pad_bot(2) = 0.07
Grid3_txt_scale_factor(2) = 0.7
```

```
Grid3_plot_name(3) = 'Kipp'
Grid3_plot_row(3) = 6
Grid3_plot_rowspan(3) = 2
Grid3_plot_col(3) = 1
Grid3_plot_colspan(3) = 1
Grid3_plot_pad_left(3) = 0.03
Grid3_plot_pad_right(3) = 0.03
Grid3_plot_pad_top(3) = 0.04
Grid3_plot_pad_bot(3) = 0.07
Grid3_txt_scale_factor(3) = 0.7
```

file output

```
Grid3_file_flag = .false.
Grid3_file_dir = 'png'
Grid3_file_prefix = 'grid3_'
Grid3_file_interval = 5
Grid3_file_width = -1
Grid3_file_aspect_ratio = -1
```

Grid4 ¶

```
Grid4_win_flag = .false.
```

```
Grid4_win_width = 7
Grid4_win_aspect_ratio = 1
```

```
Grid4_xleft = 0.12
Grid4_xright = 0.95
Grid4_ybot = 0.08
Grid4_ytop = 0.92
Grid4_title = ''
```

```
Grid4_plot_name(:) = ''
Grid4_plot_row(:) = 1
Grid4_plot_rowspan(:) = 1
Grid4_plot_col(:) = 1
Grid4_plot_colspan(:) = 1
Grid4_plot_pad_left(:) = 0.0
Grid4_plot_pad_right(:) = 0.0
Grid4_plot_pad_top(:) = 0.0
Grid4_plot_pad_bot(:) = 0.0
Grid4_txt_scale_factor(:) = 0.7
```

set default

```
Grid4_num_cols = 10
Grid4_num_rows = 9
Grid4_num_plots = 6
```

```
Grid4_plot_name(1) = 'TRho_Profile'
Grid4_plot_row(1) = 1
Grid4_plot_rowspan(1) = 3
Grid4_plot_col(1) = 1
Grid4_plot_colspan(1) = 5
Grid4_plot_pad_left(1) = 0.0
Grid4_plot_pad_right(1) = 0.09
Grid4_plot_pad_top(1) = 0.0
Grid4_plot_pad_bot(1) = 0.1
Grid4_txt_scale_factor(1) = 0.7
```

```
Grid4_plot_name(2) = 'Summary_Profile'
Grid4_plot_row(2) = 1
Grid4_plot_rowspan(2) = 3
Grid4_plot_col(2) = 6
Grid4_plot_colspan(2) = 5
Grid4_plot_pad_left(2) = 0.00
Grid4_plot_pad_right(2) = 0.09
Grid4_plot_pad_top(2) = 0.0
Grid4_plot_pad_bot(2) = 0.1
Grid4_txt_scale_factor(2) = 0.7
```

```
Grid4_plot_name(3) = 'HR'
Grid4_plot_row(3) = 4
```

```
Grid4_plot_rowspan(3) = 2
Grid4_plot_col(3) = 1
Grid4_plot_colspan(3) = 2
Grid4_plot_pad_left(3) = 0.0
Grid4_plot_pad_right(3) = 0.01
Grid4_plot_pad_top(3) = 0.03
Grid4_plot_pad_bot(3) = 0.07
Grid4_txt_scale_factor(3) = 0.65
```

```
Grid4_plot_name(4) = 'TRho'
Grid4_plot_row(4) = 6
Grid4_plot_rowspan(4) = 2
Grid4_plot_col(4) = 1
Grid4_plot_colspan(4) = 2
Grid4_plot_pad_left(4) = 0.0
Grid4_plot_pad_right(4) = 0.01
Grid4_plot_pad_top(4) = 0.04
Grid4_plot_pad_bot(4) = 0.06
Grid4_txt_scale_factor(4) = 0.65
```

```
Grid4_plot_name(5) = 'Kipp'
Grid4_plot_row(5) = 4
Grid4_plot_rowspan(5) = 4
Grid4_plot_col(5) = 3
Grid4_plot_colspan(5) = 7
Grid4_plot_pad_left(5) = 0.09
Grid4_plot_pad_right(5) = 0.0
Grid4_plot_pad_top(5) = 0.03
Grid4_plot_pad_bot(5) = 0.06
Grid4_txt_scale_factor(5) = 0.7
```

```
Grid4_plot_name(6) = 'Text_Summary1'
Grid4_plot_row(6) = 8
Grid4_plot_rowspan(6) = 2
Grid4_plot_col(6) = 1
Grid4_plot_colspan(6) = 10
Grid4_plot_pad_left(6) = -0.08
Grid4_plot_pad_right(6) = 0.0
Grid4_plot_pad_top(6) = 0.03
Grid4_plot_pad_bot(6) = 0.0
Grid4_txt_scale_factor(6) = 0.17
```

file output

```
Grid4_file_flag = .false.
Grid4_file_dir = 'png'
Grid4_file_prefix = 'grid4_'
Grid4_file_interval = 5
Grid4_file_width = -1
Grid4_file_aspect_ratio = -1
```

Grid5 ¶

```
Grid5_win_flag = .false.
```

```
Grid5_win_width = 7
Grid5_win_aspect_ratio = 1
```

```
Grid5_xleft = 0.12
Grid5_xright = 0.95
Grid5_ybot = 0.08
Grid5_ytop = 0.92
Grid5_title = ''
```

```
Grid5_plot_name(:) = ''
Grid5_plot_row(:) = 1
Grid5_plot_rowspan(:) = 1
Grid5_plot_col(:) = 1
Grid5_plot_colspan(:) = 1
Grid5_plot_pad_left(:) = 0.0
Grid5_plot_pad_right(:) = 0.0
Grid5_plot_pad_top(:) = 0.0
Grid5_plot_pad_bot(:) = 0.0
Grid5_txt_scale_factor(:) = 0.7
```

set default

```
Grid5_num_cols = 10
Grid5_num_rows = 7
Grid5_num_plots = 5
```

```
Grid5_plot_name(1) = 'TRho_Profile'
Grid5_plot_row(1) = 1
Grid5_plot_rowspan(1) = 3
Grid5_plot_col(1) = 1
Grid5_plot_colspan(1) = 5
Grid5_plot_pad_left(1) = 0.0
Grid5_plot_pad_right(1) = 0.09
Grid5_plot_pad_top(1) = 0.0
Grid5_plot_pad_bot(1) = 0.1
Grid5_txt_scale_factor(1) = 0.7
```

```
Grid5_plot_name(2) = 'Summary_Profile'
Grid5_plot_row(2) = 1
Grid5_plot_rowspan(2) = 3
Grid5_plot_col(2) = 6
Grid5_plot_colspan(2) = 5
```

```
Grid5_plot_pad_left(2) = 0.00
Grid5_plot_pad_right(2) = 0.09
Grid5_plot_pad_top(2) = 0.0
Grid5_plot_pad_bot(2) = 0.1
Grid5_txt_scale_factor(2) = 0.7
```

```
Grid5_plot_name(3) = 'HR'
Grid5_plot_row(3) = 4
Grid5_plot_rowspan(3) = 2
Grid5_plot_col(3) = 1
Grid5_plot_colspan(3) = 2
Grid5_plot_pad_left(3) = 0.0
Grid5_plot_pad_right(3) = 0.01
Grid5_plot_pad_top(3) = 0.03
Grid5_plot_pad_bot(3) = 0.07
Grid5_txt_scale_factor(3) = 0.65
```

```
Grid5_plot_name(4) = 'TRho'
Grid5_plot_row(4) = 6
Grid5_plot_rowspan(4) = 2
Grid5_plot_col(4) = 1
Grid5_plot_colspan(4) = 2
Grid5_plot_pad_left(4) = 0.0
Grid5_plot_pad_right(4) = 0.01
Grid5_plot_pad_top(4) = 0.04
Grid5_plot_pad_bot(4) = 0.06
Grid5_txt_scale_factor(4) = 0.65
```

```
Grid5_plot_name(5) = 'Kipp'
Grid5_plot_row(5) = 4
Grid5_plot_rowspan(5) = 4
Grid5_plot_col(5) = 3
Grid5_plot_colspan(5) = 7
Grid5_plot_pad_left(5) = 0.09
Grid5_plot_pad_right(5) = 0.0
Grid5_plot_pad_top(5) = 0.03
Grid5_plot_pad_bot(5) = 0.06
Grid5_txt_scale_factor(5) = 0.7
```

file output

```
Grid5_file_flag = .false.
Grid5_file_dir = 'png'
Grid5_file_prefix = 'grid5_'
Grid5_file_interval = 5
Grid5_file_width = -1
Grid5_file_aspect_ratio = -1
```

Grid6 ¶

```
Grid6_win_flag = .false.
```

```
Grid6_win_width = 9
Grid6_win_aspect_ratio = 0.7
```

```
Grid6_xleft = 0.12
Grid6_xright = 0.95
Grid6_ybot = 0.08
Grid6_ytop = 0.89
Grid6_title = ''
```

```
Grid6_num_cols = 1
Grid6_num_rows = 1
Grid6_num_plots = 1
```

```
Grid6_plot_name(:) = ''
Grid6_plot_row(:) = 1
Grid6_plot_rowspan(:) = 1
Grid6_plot_col(:) = 1
Grid6_plot_colspan(:) = 1
Grid6_plot_pad_left(:) = 0.0
Grid6_plot_pad_right(:) = 0.03
Grid6_plot_pad_top(:) = 0.0
Grid6_plot_pad_bot(:) = 0.09
Grid6_txt_scale_factor(:) = 0.7
```

set default

```
Grid6_num_cols = 3
Grid6_num_rows = 3
Grid6_num_plots = 5
```

```
Grid6_plot_name(1) = 'Summary_Burn'
Grid6_plot_row(1) = 1
Grid6_plot_rowspan(1) = 1
Grid6_plot_col(1) = 2
Grid6_plot_colspan(1) = 2
Grid6_plot_pad_left(1) = 0.03
Grid6_plot_pad_right(1) = 0.06
Grid6_plot_pad_top(1) = 0.0
Grid6_plot_pad_bot(1) = 0.06
Grid6_txt_scale_factor(1) = 0.7
```

```
Grid6_plot_name(2) = 'Abundance'
Grid6_plot_row(2) = 2
Grid6_plot_rowspan(2) = 1
```

```
Grid6_plot_col(2) = 2
Grid6_plot_colspan(2) = 2
Grid6_plot_pad_left(2) = 0.03
Grid6_plot_pad_right(2) = 0.06
Grid6_plot_pad_top(2) = 0.06
Grid6_plot_pad_bot(2) = 0.00
Grid6_txt_scale_factor(2) = 0.7
```

```
Grid6_plot_name(3) = 'HR'
Grid6_plot_row(3) = 1
Grid6_plot_rowspan(3) = 1
Grid6_plot_col(3) = 1
Grid6_plot_colspan(3) = 1
Grid6_plot_pad_left(3) = 0.00
Grid6_plot_pad_right(3) = 0.09
Grid6_plot_pad_top(3) = 0.00
Grid6_plot_pad_bot(3) = 0.06
Grid6_txt_scale_factor(3) = 0.65
```

```
Grid6_plot_name(4) = 'TRho'
Grid6_plot_row(4) = 2
Grid6_plot_rowspan(4) = 1
Grid6_plot_col(4) = 1
Grid6_plot_colspan(4) = 1
Grid6_plot_pad_left(4) = 0.00
Grid6_plot_pad_right(4) = 0.09
Grid6_plot_pad_top(4) = 0.06
Grid6_plot_pad_bot(4) = 0.00
Grid6_txt_scale_factor(4) = 0.65
```

```
Grid6_plot_name(5) = 'Text_Summary1'
Grid6_plot_row(5) = 3
Grid6_plot_rowspan(5) = 1
Grid6_plot_col(5) = 1
Grid6_plot_colspan(5) = 3
Grid6_plot_pad_left(5) = -0.07
Grid6_plot_pad_right(5) = -0.02
Grid6_plot_pad_top(5) = 0.1
Grid6_plot_pad_bot(5) = 0.00
Grid6_txt_scale_factor(5) = 0.21
```

file output

```
Grid6_file_flag = .false.
Grid6_file_dir = 'png'
Grid6_file_prefix = 'grid6_'
Grid6_file_interval = 5
Grid6_file_width = -1
Grid6_file_aspect_ratio = -1
```

Grid7 ¶

```
Grid7_win_flag = .false.
```

```
Grid7_win_width = 6
Grid7_win_aspect_ratio = 1.5
```

```
Grid7_xleft = 0.12
Grid7_xright = 0.95
Grid7_ybot = 0.08
Grid7_ytop = 0.91
Grid7_title = ''
```

```
Grid7_num_cols = 1
Grid7_num_rows = 1
Grid7_num_plots = 1
```

```
Grid7_plot_name(:) = ''
Grid7_plot_row(:) = 1
Grid7_plot_rowspan(:) = 1
Grid7_plot_col(:) = 1
Grid7_plot_colspan(:) = 1
Grid7_plot_pad_left(:) = 0.0
Grid7_plot_pad_right(:) = 0.0
Grid7_plot_pad_top(:) = 0.0
Grid7_plot_pad_bot(:) = 0.0
Grid7_txt_scale_factor(:) = 0.9
```

set default

```
Grid7_num_cols = 1
Grid7_num_rows = 3
Grid7_num_plots = 3
```

```
Grid7_plot_name(1) = 'Abundance'
Grid7_plot_row(1) = 1
Grid7_plot_rowspan(1) = 1
Grid7_plot_col(1) = 1
Grid7_plot_colspan(1) = 1
Grid7_plot_pad_left(1) = 0.03
Grid7_plot_pad_right(1) = 0.08
Grid7_plot_pad_top(1) = 0.00
Grid7_plot_pad_bot(1) = 0.06
Grid7_txt_scale_factor(1) = 0.9
```

```
Grid7_plot_name(2) = 'TRho'
Grid7_plot_row(2) = 2
Grid7_plot_rowspan(2) = 1
Grid7_plot_col(2) = 1
Grid7_plot_colspan(2) = 1
Grid7_plot_pad_left(2) = 0.03
Grid7_plot_pad_right(2) = 0.08
Grid7_plot_pad_top(2) = 0.06
Grid7_plot_pad_bot(2) = 0.00
Grid7_txt_scale_factor(2) = 0.9
```

```
Grid7_plot_name(3) = 'Text_Summary1'
Grid7_plot_row(3) = 3
Grid7_plot_rowspan(3) = 1
Grid7_plot_col(3) = 1
Grid7_plot_colspan(3) = 1
Grid7_plot_pad_left(3) = -0.08
Grid7_plot_pad_right(3) = 0.0
Grid7_plot_pad_top(3) = 0.1
Grid7_plot_pad_bot(3) = 0.0
Grid7_txt_scale_factor(3) = 0.16
```

file output

```
Grid7_file_flag = .false.
Grid7_file_dir = 'png'
Grid7_file_prefix = 'grid7_'
Grid7_file_interval = 5
Grid7_file_width = -1
Grid7_file_aspect_ratio = -1
```

Grid8 ¶

```
Grid8_win_flag = .false.
```

```
Grid8_win_width = 7
Grid8_win_aspect_ratio = 1.2
```

```
Grid8_xleft = 0.12
Grid8_xright = 0.95
Grid8_ybot = 0.08
Grid8_ytop = 0.91
Grid8_title = ''
```

```
Grid8_num_cols = 1
Grid8_num_rows = 1
```

```
Grid8_num_plots = 1
```

```
Grid8_plot_name(:) = ''
Grid8_plot_row(:) = 1
Grid8_plot_rowspan(:) = 1
Grid8_plot_col(:) = 1
Grid8_plot_colspan(:) = 1
Grid8_plot_pad_left(:) = 0.0
Grid8_plot_pad_right(:) = 0.03
Grid8_plot_pad_top(:) = 0.0
Grid8_plot_pad_bot(:) = 0.09
Grid8_txt_scale_factor(:) = 0.7
```

set default

```
Grid8_num_cols = 3
Grid8_num_rows = 14
Grid8_num_plots = 6
```

```
Grid8_plot_name(1) = 'Summary_Burn'
Grid8_plot_row(1) = 1
Grid8_plot_rowspan(1) = 4
Grid8_plot_col(1) = 1
Grid8_plot_colspan(1) = 3
Grid8_plot_pad_left(1) = 0.0
Grid8_plot_pad_right(1) = 0.06
Grid8_plot_pad_top(1) = 0.0
Grid8_plot_pad_bot(1) = 0.09
Grid8_txt_scale_factor(1) = 0.7
```

```
Grid8_plot_name(2) = 'Abundance'
Grid8_plot_row(2) = 5
Grid8_plot_rowspan(2) = 4
Grid8_plot_col(2) = 1
Grid8_plot_colspan(2) = 3
Grid8_plot_pad_left(2) = 0.0
Grid8_plot_pad_right(2) = 0.06
Grid8_plot_pad_top(2) = 0.0
Grid8_plot_pad_bot(2) = 0.05
Grid8_txt_scale_factor(2) = 0.7
```

```
Grid8_plot_name(3) = 'HR'
Grid8_plot_row(3) = 9
Grid8_plot_rowspan(3) = 3
Grid8_plot_col(3) = 1
Grid8_plot_colspan(3) = 1
Grid8_plot_pad_left(3) = 0.00
Grid8_plot_pad_right(3) = 0.1133
Grid8_plot_pad_top(3) = 0.05
```

```
Grid8_plot_pad_bot(3) = 0.0
Grid8_txt_scale_factor(3) = 0.65
```

```
Grid8_plot_name(4) = 'TRho'
Grid8_plot_row(4) = 9
Grid8_plot_rowspan(4) = 3
Grid8_plot_col(4) = 2
Grid8_plot_colspan(4) = 1
Grid8_plot_pad_left(4) = 0.0267
Grid8_plot_pad_right(4) = 0.0867
Grid8_plot_pad_top(4) = 0.05
Grid8_plot_pad_bot(4) = 0.0
Grid8_txt_scale_factor(4) = 0.65
```

```
Grid8_plot_name(5) = 'TRho_Profile'
Grid8_plot_row(5) = 9
Grid8_plot_rowspan(5) = 3
Grid8_plot_col(5) = 3
Grid8_plot_colspan(5) = 1
Grid8_plot_pad_left(5) = 0.0533
Grid8_plot_pad_right(5) = 0.06
Grid8_plot_pad_top(5) = 0.05
Grid8_plot_pad_bot(5) = 0.0
Grid8_txt_scale_factor(5) = 0.7
```

```
Grid8_plot_name(6) = 'Text_Summary1'
Grid8_plot_row(6) = 12
Grid8_plot_rowspan(6) = 3
Grid8_plot_col(6) = 1
Grid8_plot_colspan(6) = 3
Grid8_plot_pad_left(6) = -0.08
Grid8_plot_pad_right(6) = 0.0
Grid8_plot_pad_top(6) = 0.06
Grid8_plot_pad_bot(6) = 0.0
Grid8_txt_scale_factor(6) = 0.16
```

file output

```
Grid8_file_flag = .false.
Grid8_file_dir = 'png'
Grid8_file_prefix = 'grid8_'
Grid8_file_interval = 5
Grid8_file_width = -1
Grid8_file_aspect_ratio = -1
```

Grid9 ¶

```
Grid9_win_flag = .false.
```

```
Grid9_win_width = 7
Grid9_win_aspect_ratio = 0.8
```

```
Grid9_xleft = 0.15
Grid9_xright = 0.85
Grid9_ybot = 0.12
Grid9_ytop = 0.91
Grid9_title = ''
```

```
Grid9_num_cols = 1
Grid9_num_rows = 1
Grid9_num_plots = 1
```

```
Grid9_plot_name(:) = ''
Grid9_plot_row(:) = 1
Grid9_plot_rowspan(:) = 1
Grid9_plot_col(:) = 1
Grid9_plot_colspan(:) = 1
Grid9_plot_pad_left(:) = 0.0
Grid9_plot_pad_right(:) = 0.0
Grid9_plot_pad_top(:) = 0.0
Grid9_plot_pad_bot(:) = 0.0
Grid9_txt_scale_factor(:) = 0.7
```

set default

```
Grid9_num_cols = 3
Grid9_num_rows = 11
Grid9_num_plots = 5
```

```
Grid9_plot_name(1) = 'Abundance'
Grid9_plot_row(1) = 1
Grid9_plot_rowspan(1) = 5
Grid9_plot_col(1) = 1
Grid9_plot_colspan(1) = 3
Grid9_plot_pad_left(1) = 0.0
Grid9_plot_pad_right(1) = 0.06
Grid9_plot_pad_top(1) = 0.0
Grid9_plot_pad_bot(1) = 0.09
Grid9_txt_scale_factor(1) = 0.7
```

```
Grid9_plot_name(2) = 'HR'
Grid9_plot_row(2) = 6
Grid9_plot_rowspan(2) = 3
Grid9_plot_col(2) = 1
Grid9_plot_colspan(2) = 1
Grid9_plot_pad_left(2) = 0.00
```

```
Grid9_plot_pad_right(2) = 0.1133
Grid9_plot_pad_top(2) = 0.05
Grid9_plot_pad_bot(2) = 0.01
Grid9_txt_scale_factor(2) = 0.65
```

```
Grid9_plot_name(3) = 'TRho'
Grid9_plot_row(3) = 6
Grid9_plot_rowspan(3) = 3
Grid9_plot_col(3) = 2
Grid9_plot_colspan(3) = 1
Grid9_plot_pad_left(3) = 0.0267
Grid9_plot_pad_right(3) = 0.0867
Grid9_plot_pad_top(3) = 0.05
Grid9_plot_pad_bot(3) = 0.01
Grid9_txt_scale_factor(3) = 0.65
```

```
Grid9_plot_name(4) = 'TRho_Profile'
Grid9_plot_row(4) = 6
Grid9_plot_rowspan(4) = 3
Grid9_plot_col(4) = 3
Grid9_plot_colspan(4) = 1
Grid9_plot_pad_left(4) = 0.0533
Grid9_plot_pad_right(4) = 0.06
Grid9_plot_pad_top(4) = 0.05
Grid9_plot_pad_bot(4) = 0.01
Grid9_txt_scale_factor(4) = 0.7
```

```
Grid9_plot_name(5) = 'Text_Summary1'
Grid9_plot_row(5) = 9
Grid9_plot_rowspan(5) = 3
Grid9_plot_col(5) = 1
Grid9_plot_colspan(5) = 3
Grid9_plot_pad_left(5) = -0.08
Grid9_plot_pad_right(5) = 0.0
Grid9_plot_pad_top(5) = 0.08
Grid9_plot_pad_bot(5) = 0.0
Grid9_txt_scale_factor(5) = 0.14
```

file output

```
Grid9_file_flag = .false.
Grid9_file_dir = 'png'
Grid9_file_prefix = 'grid9_'
Grid9_file_interval = 5
Grid9_file_width = -1
Grid9_file_aspect_ratio = -1
```

“annotation” strings – provide args for PGMTXT

```
      Write text at a position specified relative to the viewport (outs
      or inside).  The text is written using the current values of
      attributes color-index, line-width, character-height, and
      character-font.

       SIDE            : must include one of the characters 'B', 'L', '
                         or 'R' signifying the Bottom, Left, Top, or Ri
                         margin of the viewport. If it includes 'LV' or
                         'RV', the string is written perpendicular to t
                         frame rather than parallel to it.
       DISP            : the displacement of the character string from
                         specified edge of the viewport, measured outwa
                         from the viewport in units of the character
                         height. Use a negative value to write inside t
                         viewport, a positive value to write outside.
       COORD           : the location of the character string along the
                         specified edge of the viewport, as a fraction
                         the length of the edge.
       FJUST           : controls justification of the string parallel
                         the specified edge of the viewport. If
                         FJUST = 0.0, the left-hand end of the string w
                         be placed at COORD; if JUST = 0.5, the center
                         the string will be placed at COORD; if JUST =
                         the right-hand end of the string will be place
                         at COORD. Other values between 0 and 1 give in
                         mediate placing, but they are not very useful.
       TEXT          :   the text string to be plotted. Trailing spaces
                         ignored when justifying the string, but leadin
                         spaces are significant.
```

```
annotation1_ci = 1
annotation1_ch = 1
annotation1_lw = 1
annotation1_cf = 1
annotation1_side = 'T'
annotation1_disp = 0
annotation1_coord = 0
annotation1_fjust = 0.0
annotation1_text = ''
```

```
annotation2_ci = 1
annotation2_ch = 1
annotation2_lw = 1
annotation2_cf = 1
annotation2_side = 'T'
annotation2_disp = 0
annotation2_coord = 0
annotation2_fjust = 0.0
annotation2_text = ''
```

```
annotation3_ci = 1
annotation3_ch = 1
annotation3_lw = 1
annotation3_cf = 1
annotation3_side = 'T'
annotation3_disp = 0
annotation3_coord = 0
annotation3_fjust = 0.0
annotation3_text = ''
```

pgstar_extras ¶

the PGSTAR extra's work the same as for the star controls

```
read_extra_pgstar_inlist1 = .false.
extra_pgstar_inlist1_name = 'undefined'
```

if `read_extra_pgstar_inlist1` is true, then read &pgstar from this namelist file

```
read_extra_pgstar_inlist2 = .false.
extra_pgstar_inlist2_name = 'undefined'
```

if `read_extra_pgstar_inlist2` is true, then read &pgstar from this namelist file

```
read_extra_pgstar_inlist3 = .false.
extra_pgstar_inlist3_name = 'undefined'
```

if `read_extra_pgstar_inlist3` is true, then read &pgstar from this namelist file

```
read_extra_pgstar_inlist4 = .false.
extra_pgstar_inlist4_name = 'undefined'
```

if `read_extra_pgstar_inlist4` is true, then read &pgstar from this namelist file

```
read_extra_pgstar_inlist5 = .false.
extra_pgstar_inlist5_name = 'undefined'
```

if `read_extra_pgstar_inlist5` is true, then read &pgstar from this namelist file