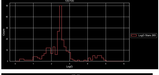
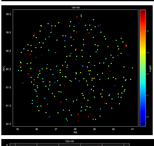
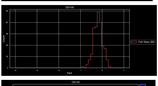
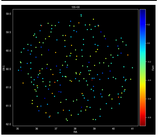
```
Python 3.7.8 (default, Jun 24 2020, 07:29:10)
[GCC 4.8.5 20150623 (Red Hat 4.8.5-44)] on linux2 Type "help", "copyright", "credits" or "license" for more information.
IPython 7.2.0 -- An enhanced Interactive Python.

In [1]: runfile('/home/josephwarkins/Apogee My Field DR 3.py', wdir='/home/josephwarkins')
/home/josephwarkins/anaconda3/bin/python
Class 0: 12
Class 1: 1
Class 2: 2182
Class 3: 5248
Class 4: 1148
Class 5: 1124
Class 6: 1148
Class 7: 1219
Class 8: 1219

Fe: 42212
Mg: 52148
Si: 52148
Ca: 52148
Ni: 42212

#11: Stars 47287

Mn: Stars 5136

Mg_m: Stars 5258
Mg_p: Stars 10406
Mg_d: Stars 10406
Mg_g: Stars 5258

SNR_m: Stars 20898
SNR_p: Stars 41348
SNR_d: Stars 41348
SNR_g: Stars 20898

Ms_m: Stars 50618
Ms_p: Stars 100148
Ms_d: Stars 100148
Ms_g: Stars 50618

Mg_m: Stars 5258
Mg_p: Stars 7929
Mg_d: Stars 7929
Mg_g: Stars 5258

Mn: Stars 5136
Mg_m: Stars 5258
Mg_p: Stars 10406
Mg_d: Stars 10406
Mg_g: Stars 5258

Fulfils: 1366

Subset of Fulfils: 256
```

```
CO-50-0
CO-50
CO-50
CO-50
```

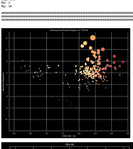


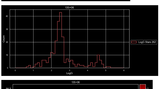


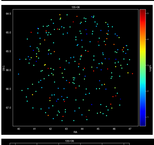


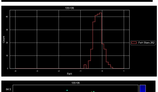


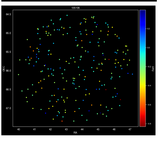
```
=================================================
=================================================

1.0:40

Programname: l'apaque'l

main_separator: 20
turbo0?: 0
subgenes: 0
red_genes: 125
red_cluster: 32
red_genes = red_clus: 111

Mx: 21
My: 21
Mzp: 0
Mzm: 20
Mxy: 20
Mz: 0
Mx: 0

=================================================
=================================================
```



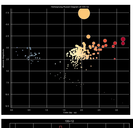


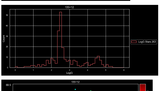


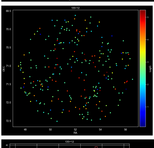


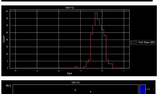


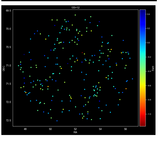
```
=================================================
=================================================

1.5:12

Programname: l'apaque'l

main_separator: 40
turbo0?: 0
subgenes: 0
red_genes: 92
red_cluster: 32
red_genes = red_clus: 132

Mx: 21
My: 21
Mzp: 0
Mzm: 20
Mxy: 20
Mz: 0
Mx: 0

=================================================
=================================================
```



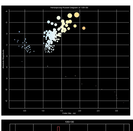


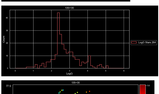


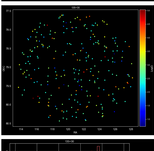


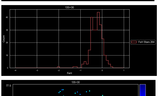


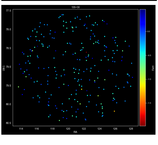
```
=================================================
=================================================

1.5:20

Programname: l'apaque'l

main_separator: 12
turbo0?: 15
subgenes: 0
red_genes: 127
red_cluster: 21
red_genes = red_clus: 106

Mx: 21
My: 21
Mzp: 0
Mzm: 23
Mxy: 0
Mz: 0

=================================================
=================================================
```



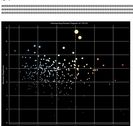


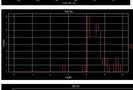


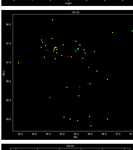


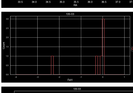


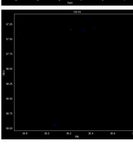
```
=================================================
=================================================

1.5:40

Programname: l'ecc'l

main_separator: 37
turbo0?: 0
subgenes: 0
red_genes: 210
red_cluster: 32
red_genes = red_clus: 210

Mx: 40
My: 40
Mzp: 0
Mzm: 0
Mxy: 0
Mz: 0

=================================================
=================================================
```



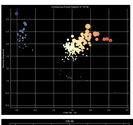


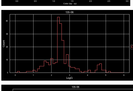


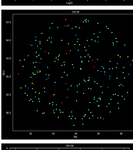


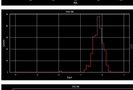


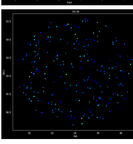
```
==========================================================
==========================================================

135:08

Programmer: ['sanger']

main_sequence: 28
subgenre: 1
subgenre: 2
subgenre: 29
read_genre: 28
read_genre: read_clump: 302

Dec: 22
Dec: 22
Dec: 22
Mag: 27
Mag: 22
Mg: 22
==========================================================
==========================================================
```



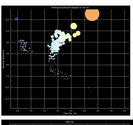


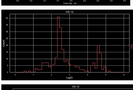


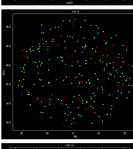


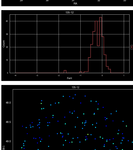


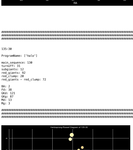
```
==========================================================
==========================================================

135:12

Programmer: ['sanger']

main_sequence: 55
subgenre: 1
subgenre: 2
read_genre: 284
read_genre: 28
read_genre: read_clump: 139

Dec: 28
Dec: 28
Dec: 22
Mag: 22
Mg: 8
==========================================================
==========================================================
```



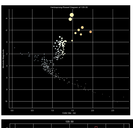


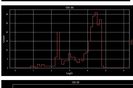


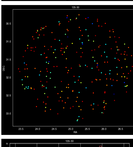


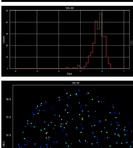


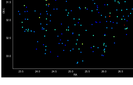
```
==========================================================
==========================================================

135:30

Programmer: ['Sally']

main_sequence: 28
subgenre: 1
subgenre: 2
read_genre: 28
read_genre: 28
read_genre: read_clump: 72

Dec: 8
Dec: 22
Mag: 22
Mg: 22
Mg: 8
==========================================================
==========================================================
```

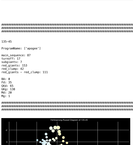




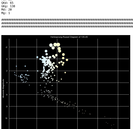


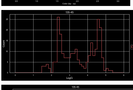


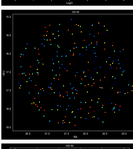


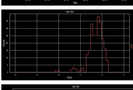


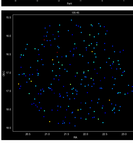
```
==========================================================
==========================================================

135:45

Programmer: ['sanger']

main_sequence: 87
subgenre: 1
subgenre: 2
read_genre: 87
read_genre: 87
read_genre: read_clump: 111

Dec: 8
Dec: 22
Mag: 28
Mag: 28
Mg: 8
==========================================================
==========================================================
```







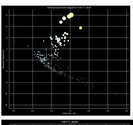


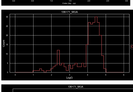


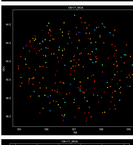
GEN/TC.MGA

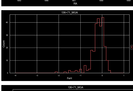
Program   : [-Energy-]

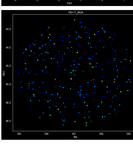
```
mem_separator: 102
hyperf: 51
subpatch: 0
num_genes: 36
num_clusters: 4
ind_genes = ind_clus: 57

Ms: 0
Ms: 1
Ms: 23
Ms: 24
Ms: 27
Ms: 31
```







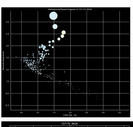


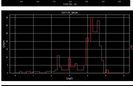


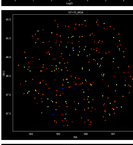
GEN/B.MGA

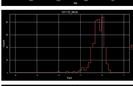
Program   : [-Energy-]

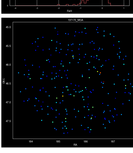
```
mem_separator: 102
hyperf: 51
subpatch: 0
num_genes: 36
num_clusters: 4
ind_genes = ind_clus: 52

Ms: 0
Ms: 1
Ms: 23
Ms: 24
Ms: 27
Ms: 31
```







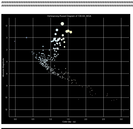


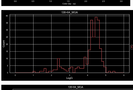


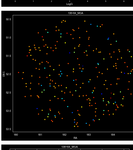
GEN/BS.MGA

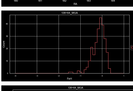
Program   : [-Energy-]

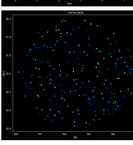
```
mem_separator: 102
hyperf: 51
subpatch: 0
num_genes: 36
num_clusters: 4
ind_genes = ind_clus: 45

Ms: 0
Ms: 1
Ms: 23
Ms: 24
Ms: 27
Ms: 31
```







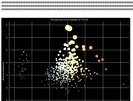


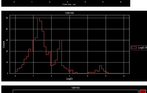


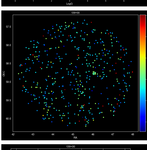
GEN/BT

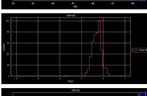
Program   : [-Entropy-]

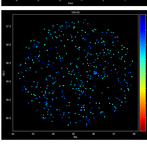
```
mem_separator: 102
hyperf: 51
subpatch: 0
num_genes: 36
num_clusters: 4
ind_genes = ind_clus: 424

Ms: 0
Ms: 1
Ms: 23
Ms: 24
Ms: 27
Ms: 31
```



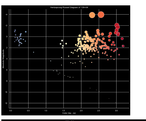


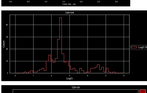


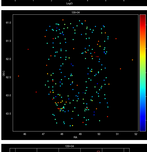


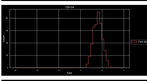


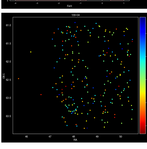
```
==========================================
==========================================

LC0.txt

Programmer: [ Jacques ]

main_sequence: 76
turnoff: 0
subgiants: 1
red_giants: 100
red_clump: 47
red_giants - red_clump: 106

Mv: 26
Mv: 0
Mv: 24
Mv: 252
Mv: 0
Mv: 0
==========================================
==========================================
```



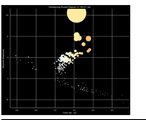


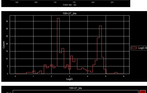


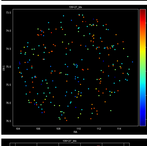


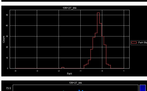


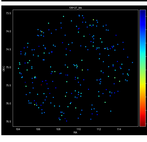
```
==========================================
==========================================

LC0v12.pro

Programmer: [ Calvin ]

main_sequence: 67
turnoff: 0
subgiants: 0
red_giants: 100
red_clump: 47
red_giants - red_clump: 119

Mv: 0
Mv: 0
Mv: 24
Mv: 0
Mv: 0
==========================================
==========================================
```



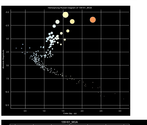


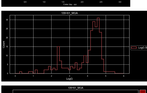


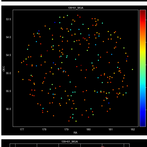


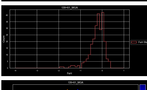


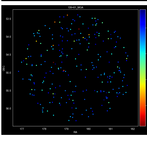
```
==========================================
==========================================

LC0v12_MLR

Programmer: [ Jacques ]

main_sequence: 127
turnoff: 0
subgiants: 0
red_giants: 100
red_clump: 35
red_giants - red_clump: 31

Mv: 0
Mv: 0
Mv: 24
Mv: 0
Mv: 0
==========================================
==========================================
```



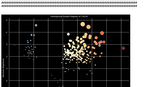


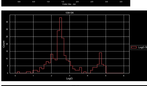


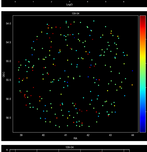


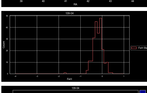


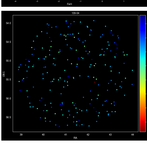
```
==========================================
==========================================

LC0.dat

Programmer: [ Jacques ]

main_sequence: 85
turnoff: 0
subgiants: 0
red_giants: 104
red_clump: 47
red_giants - red_clump: 157

Mv: 0
Mv: 0
Mv: 24
Mv: 0
Mv: 0
==========================================
==========================================
```



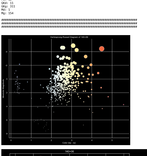


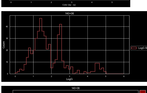


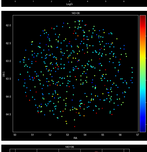


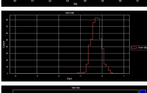


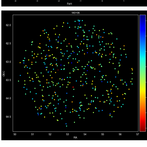
```
==========================================
==========================================

SUM=80

Programmer: I'Grim'I

mass_separator: 50
nsteps: 5
nsubsymb: 2
nsubsymb: 10
rnd_clump: 10
rnd_points: rnd_clump: 430

Dec: 20
Dec: 20
Mass: 50
Mass: 50
Mu: 1
Mu: 1
==========================================
==========================================
```



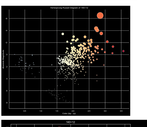


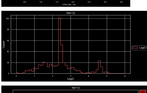


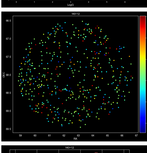


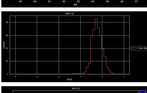


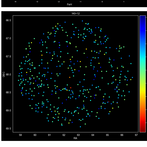
```
==========================================
==========================================

SUM=10

Programmer: I'Grim'I

mass_separator: 50
nsteps: 5
nsubsymb: 2
nsubsymb: 10
rnd_clump: 10
rnd_points: rnd_clump: 290

Dec: 20
Dec: 20
Mass: 50
Mass: 50
Mu: 1
Mu: 1
==========================================
==========================================
```



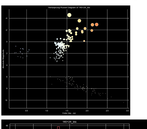


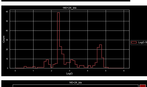


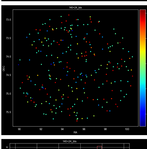


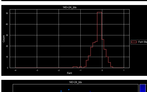


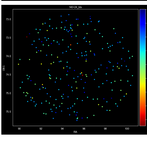
```
==========================================
==========================================

SUM=70_pts

Programmer: I'Grim'I

mass_separator: 50
nsteps: 5
nsubsymb: 2
rnd_points: 100
nsubsymb: 10
rnd_points: rnd_clump: 110

Dec: 20
Dec: 20
Mass: 50
Mass: 50
Mu: 1
Mu: 1
==========================================
==========================================
```



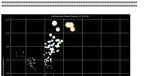


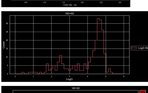


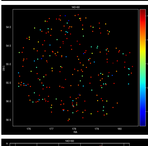


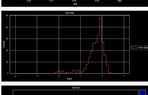


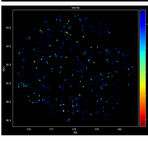
```
==========================================
==========================================

SUM=60

Programmer: I'Gnipper'I

mass_separator: 150
nsteps: 5
nsubsymb: 2
nsubsymb: 6
rnd_clump: 7
rnd_points: rnd_clump: 75

Dec: 0
Dec: 0
Mass: 75
Mass: 75
Mu: 10
Mu: 10
==========================================
==========================================
```



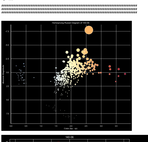


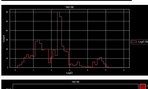


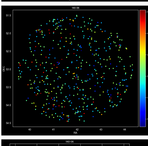


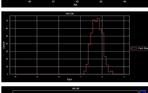


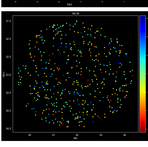
```
==================================================
==================================================

108-00

Programkamer: [ticin']

main_separator: 45
tunoff: 0
subgeometry: 0
cnd_geometry: 0
cnd_gamma: 0.25
cnd_points: - end_time: 367

Mx: 20
Nx: 0
Mz: 20
Nz: 0
Mxy: 20
Nxy: 0
==================================================
==================================================
```



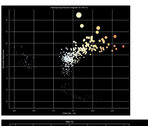


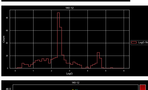


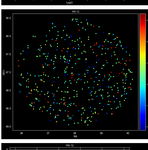


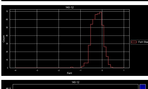


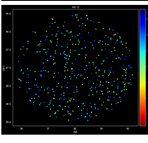
```
==================================================
==================================================

108-12

Programkamer: [ticin']

main_separator: 60
tunoff: 0
subgeometry: 0
cnd_geometry: 0.25
cnd_gamma: 0.5
cnd_points: - end_time: 200

Mx: 20
Nx: 0
Mz: 20
Nz: 0
Mxy: 20
Nxy: 0
==================================================
==================================================
```



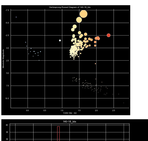


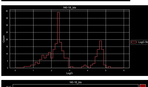


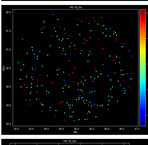


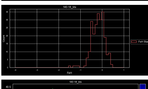


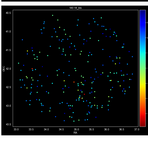
```
==================================================
==================================================

108-18_bis

Programkamer: [ticin']

main_separator: 45
tunoff: 0.04
subgeometry: 0
cnd_geometry: 0.25
cnd_gamma: 0.5
cnd_points: - end_time: 150

Mx: 20
Nx: 0
Mz: 20
Nz: 0
Mxy: 20
Nxy: 0
==================================================
==================================================
```



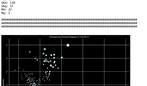


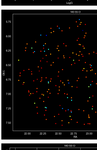


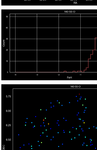


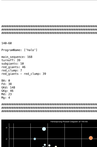


```
==================================================
==================================================

108-18-0

Programkamer: [ticin'ticin'ticin']

main_separator: 100
tunoff: 0.04
subgeometry: 0
cnd_geometry: 0.5
cnd_gamma: 0.5
cnd_points: - end_time: 43

Mx: 20
Nx: 0
Mz: 120
Nz: 0
Mxy: 20
Nxy: 0
==================================================
==================================================
```







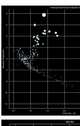


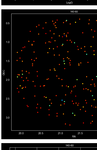
SOB:GW

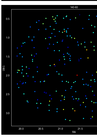
Programmer: ['Kelly']

main_sequence: SOB
subgenre: G
sub_genre: GW
sub_genre: A
real_class: A real_class: D4

Mv: G
Vis: D4
Mag: GW
Mag: G
Mg: A







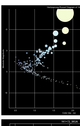
SOLCS_MLA

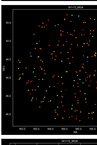
Programmer: ['George']

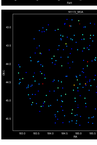
main_sequence: SOC
subgenre: L
subgenre: M
sub_genre: A
real_class: A

real_class: D4

Mv: G
Vis: D4
Mag: G3
Mag: G
Mg: A





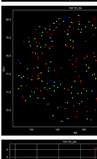


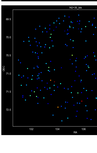
SOLCS_Pro

Programmer: ['Calvin']

main_sequence: SOB
subgenre: K
subgenre: M
sub_genre: CFB
sub_genre: A
real_class: A real_class: D4T

Mv: G
Vis: D4
Mag: G4
Mag: G
Mg: F



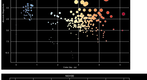


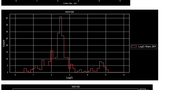
SOCWR

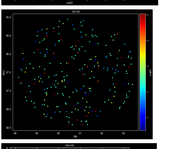
Programmer: ['Apoorv']

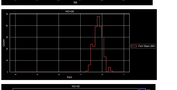
main_sequence: SO
subgenre: C
subgenre: I
sub_genre: CFB
sub_genre: A
real_class: A real_class: D3V

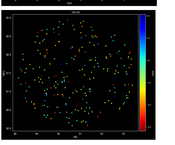
Mv: SO
Vis: C
Mag: B
Mag: A3
Mg: G5



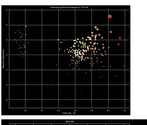


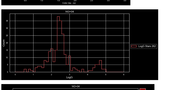


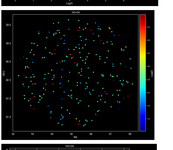


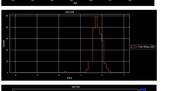


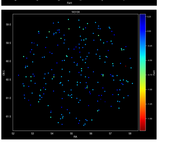
```
================================================================
SCC40
Programmer: Jasper I
================================================================
main_separator: 20
hotspot: 1
hotspot_cut: 1
sub_separator: 10
row_gamma: 10
row_gamma = row_clump: 170
Dim: 2
Dim: 2
Dim: 21
Dim: 21
Dim: 21
Dim: 21
================================================================
```



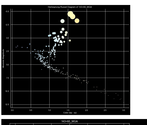


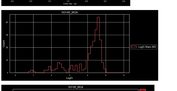


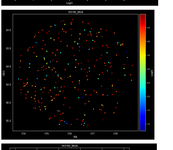


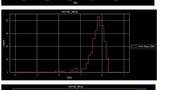


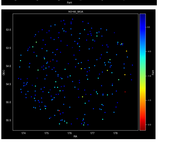
```
================================================================
SCC40_MLN
Programmer: Jasper I
main_separator: 150
hotspot: 1
hotspot_cut: 1
sub_separator: 10
row_gamma: 10
row_gamma = row_clump: 50
Dim: 2
Dim: 2
Dim: 21
Dim: 21
Dim: 21
Dim: 21
================================================================
```



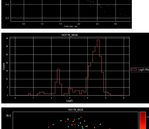


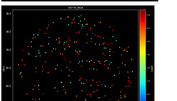


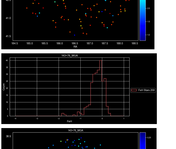


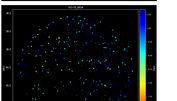


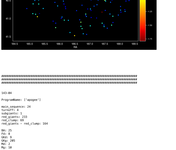
```
================================================================
SCC15_MLN
Programmer: Jasper I
main_separator: 150
hotspot: 1
hotspot_cut: 1
sub_separator: 10
row_gamma: 10
row_gamma = row_clump: 50
Dim: 2
Dim: 2
Dim: 21
Dim: 21
Dim: 21
Dim: 21
================================================================
```



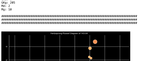


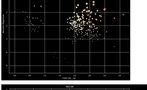


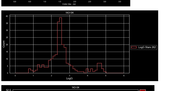


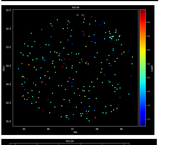


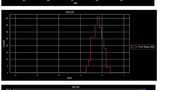
```
================================================================
SCC40
Programmer: Jasper I
main_separator: 20
hotspot: 1
hotspot_cut: 1
sub_separator: 10
row_gamma: 10
row_gamma = row_clump: 500
Dim: 2
Dim: 2
Dim: 21
Dim: 21
Dim: 21
Dim: 21
================================================================
```

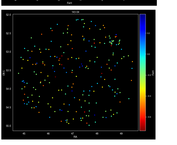




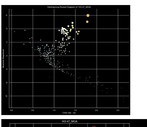


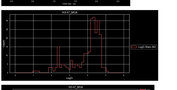


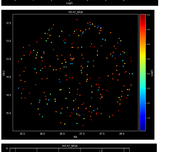


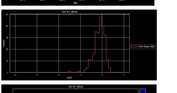


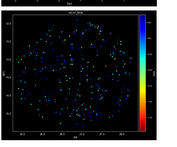
```
==================================================
==================================================

SO1-07_MLR

Programmes: ['merge']

mask_separator: 10
kernel: 3
subpixels: 3
min_pixels: 10
rms_clamp: 40
rms_points = rms_clamp: 41

Nx: 6
Ny: 6
Nkx: 12
Nky: 12
Nf: 2
Nc: 2
==================================================
==================================================
```



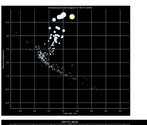


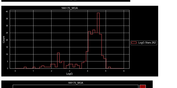


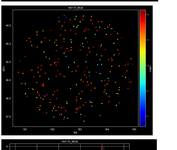


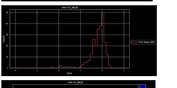


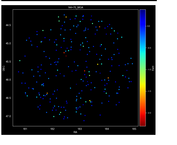
```
==================================================
==================================================

SO1-09_MLR

Programmes: ['merge']

mask_separator: 10
kernel: 3
subpixels: 3
min_pixels: 10
rms_clamp: 40
rms_points = rms_clamp: 41

Nx: 6
Ny: 6
Nkx: 12
Nky: 12
Nf: 2
Nc: 2
==================================================
==================================================
```



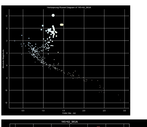


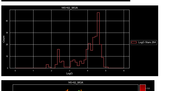


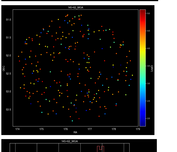


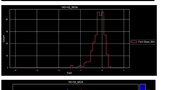


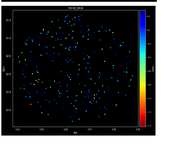
```
==================================================
==================================================

SO1-02_MLR

Programmes: ['merge']

mask_separator: 100
kernel: 84
subpixels: 3
min_pixels: 67
rms_clamp: 40
rms_points = rms_clamp: 40

Nx: 6
Ny: 6
Nkx: 12
Nky: 12
Nf: 2
Nc: 2
==================================================
==================================================
```



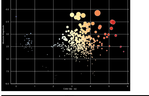


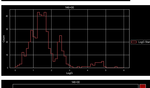


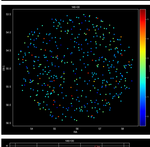


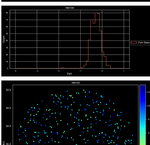


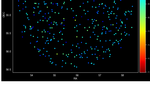
```
==================================================
==================================================

SO-00

Programmes: ['stare']

mask_separator: 25
kernel: 3
subpixels: 3
min_pixels: 10
rms_clamp: 40
rms_points = rms_clamp: 427

Nx: 12
Ny: 12
Nkx: 24
Nky: 24
Nf: 2
Nc: 2
==================================================
==================================================
```









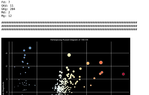


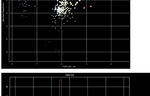
100-000

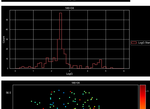
Programmes: ['sampo']

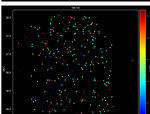
main_sequence: 20
turnoff: 5
subgiants: 5
red_giants: 20
red_clump: 50
red_giants - red_clump: 150

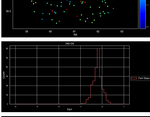
Mv: 20
Mr: 20
Mmr: 20
Mmr: 20
Mu: 20









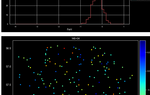


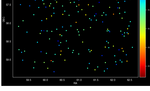
100-100

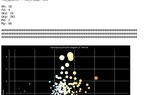
Programmes: ['alice']

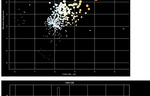
main_sequence: 20
turnoff: 5
subgiants: 5
red_giants: 20
red_clump: 50
red_giants - red_clump: 143

Mv: 20
Mr: 20
Mmr: 20
Mmr: 20
Mu: 20







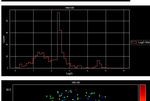


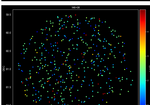
100-101

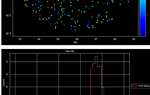
Programmes: ['alice']

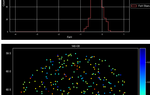
main_sequence: 20
turnoff: 5
subgiants: 5
red_giants: 20
red_clump: 50
red_giants - red_clump: 300

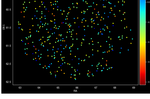
Mv: 20
Mr: 20
Mmr: 20
Mmr: 20
Mu: 20









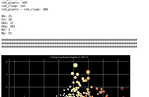


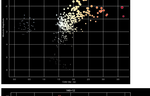
100-10.pos

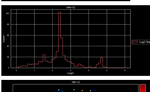
Programmes: ['alice']

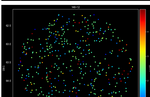
main_sequence: 20
turnoff: 5
subgiants: 5
red_giants: 20
red_clump: 50
red_giants - red_clump: 144

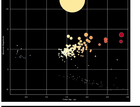
Mv: 20
Mr: 20
Mmr: 20
Mmr: 20
Mu: 20

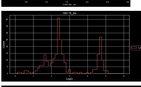


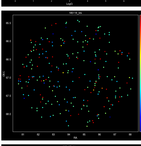


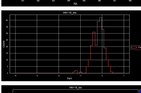


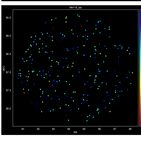




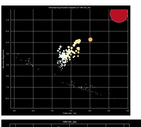


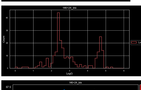


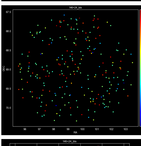


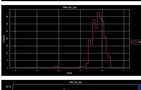


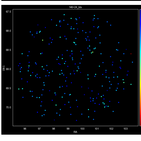
```
DIR=DR_Jet/

Prog=mdbench [-ratio=]

mem_requested= 50
nproc= 1
nsdim=3 ; 4
nsdim_fast= 3
rad_frac= 0.5
rad_grain= 0.01
rad_frac_fast= 0.01
rad_grain= 0.01
rad_flux= 130

Mx: 5
My: 25
Mz: 25
Mrr: 23
Mpr: 8
Mp: 8
```



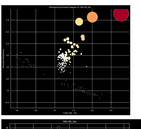


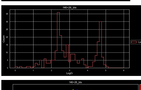


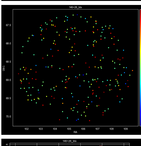


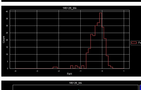


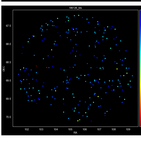
```
DIR=DR_Jet/

Prog=mdbench [-ratio=]

mem_requested= 70
nproc= 1
nsdim=3 ; 4
rad_grain= 0.01
rad_flux= 130

Mx: 5
My: 25
Mz: 25
Mrr: 23
Mpr: 8
Mp: 8
```



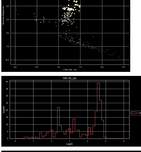


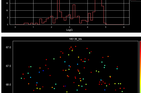


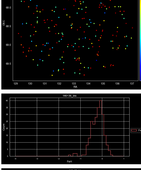


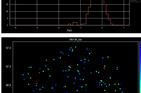


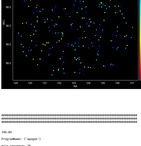
```
DIR=DR_Jet/

Prog=mdbench [-ratio=]

mem_requested= 150
nproc= 1
nsdim=3 ; 4
rad_grain= 0.01
rad_flux= 133

Mx: 5
My: 25
Mz: 25
Mrr: 23
Mpr: 8
Mp: 8
```



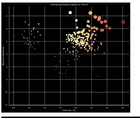


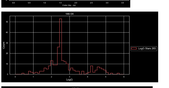


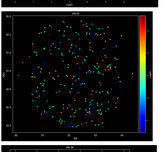


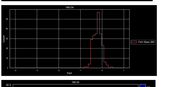


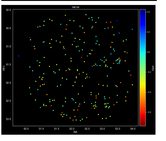
```
DR-M0

Prog=mdbench [-gauge=]

mem_requested= 30
nproc= 1
nsdim=3 ; 3
rad_grain= 0.01
rad_flux= 132

Mx: 10
My: 10
Mz: 10
Mrr: 23
Mpr: 8
Mp: 8
```



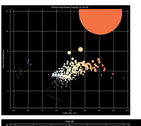


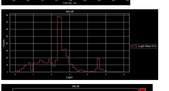


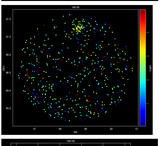


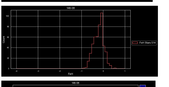


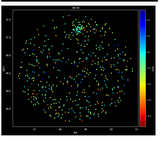

```
==========================================================
==========================================================

[08:00

Programmer: [Victor]

main_separator: 10
height: 8
radius: 5
num_points: 200
num_rays: 1
real_points = num_rays: 344

Nx: 5
Ny: 5
Wdx: 20
Wdy: 20
Nz: 6

==========================================================
==========================================================
```



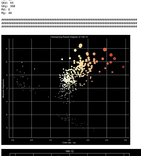


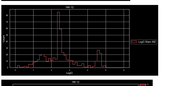


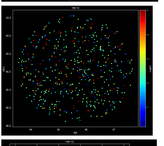


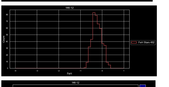


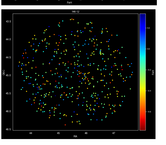

```
==========================================================
==========================================================

[08:12

Programmer: [Victor]

main_separator: 50
height: 8
radius: 5
num_points: 4
num_rays: 1
real_points = num_rays: 207

Nx: 15
Ny: 15
Wdx: 20
Wdy: 20
Nz: 6

==========================================================
==========================================================
```



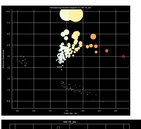


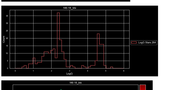


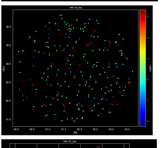


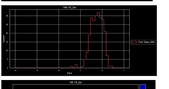


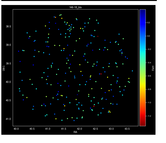

```
==========================================================
==========================================================

[08:18,PM]

Programmer: [Victor]

main_separator: 57
height: 8
radius: 5
num_points: 4
num_rays: 1
real_points = num_rays: 152

Nx: 20
Ny: 20
Wdx: 20
Wdy: 20
Nz: 20

==========================================================
==========================================================
```



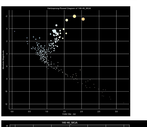


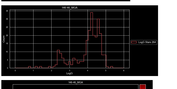


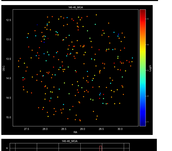


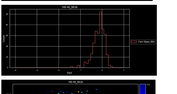


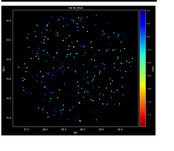

```
==========================================================
==========================================================

[08:48,PM]

Programmer: [Jeremy]

main_separator: 122
height: 8
radius: 5
num_points: 50
num_rays: 1
real_points = num_rays: 58

Nx: 1
Ny: 1
Wdx: 20
Wdy: 20
Nz: 6

==========================================================
==========================================================
```



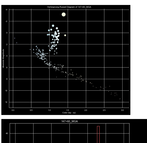


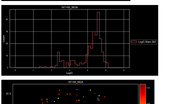


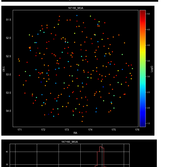


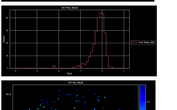


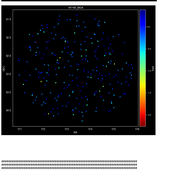

```
Left_MAP_Mass

Programmer: ['George']

main_separator: 145
total_stars: 8
subgiants: 0
red giants: 0
red_clump: 35
red_giants + red_clump: 44

Mon 0
Tue 0
Wed 0
Thur 0
Fri 17
Sat 17
Sun 0
```



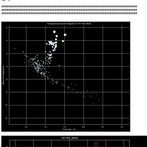


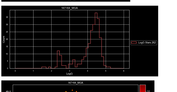


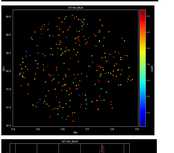


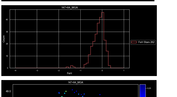


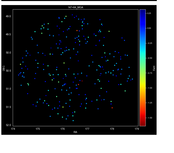

```
Left_MAP_Mass

Programmer: ['George']

main_separator: 148
total_stars: 8
subgiants: 0
red giants: 0
red_clump: 33
red_giants + red_clump: 37

Mon 0
Tue 0
Wed 0
Thur 0
Fri 17
Sat 17
Sun 0
```



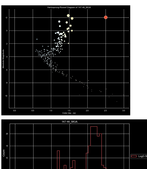


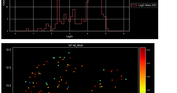


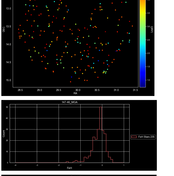


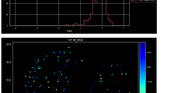


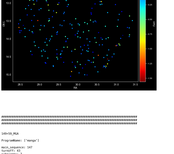

```
Left_MAP_Mass

Programmer: ['George']

main_separator: 128
total_stars: 8
subgiants: 0
red giants: 0
red_clump: 50
red_giants + red_clump: 50

Mon 0
Tue 0
Wed 0
Thur 0
Fri 17
Sat 17
Sun 0
```





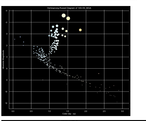


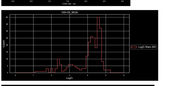


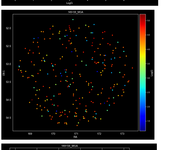


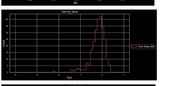

```
Left_MAP_Mass

Programmer: ['George']

main_separator: 147
total_stars: 8
subgiants: 0
red giants: 0
red_clump: 55
red_giants + red_clump: 55

Mon 0
Tue 0
Wed 0
Thur 0
Fri 17
Sat 17
Sun 0
```

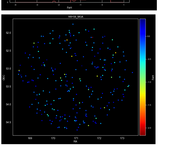
```
##################################################
##################################################
```



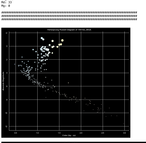


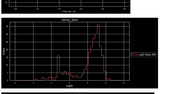


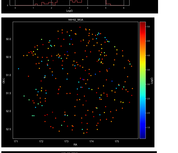


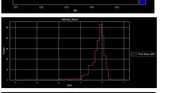


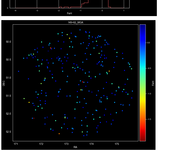

```
##################################################
##################################################

100ki2_MLA

Programmer: ['George']

main_sequence: 117
turnoff: 0
subgiants: 0
red_giants: 42
rejects: 0
red_giants - rej_clump: 42

Min: 0
Max: 10
Mean: 2.9
Sdev: 1.7
Med: 2
Mad: 1
Min: 0
Max: 10

##################################################
##################################################
```



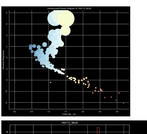


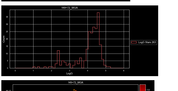


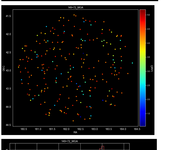


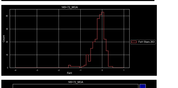


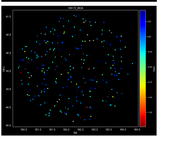

```
##################################################
##################################################

100ki3_MLA

Programmer: ['George']

main_sequence: 117
turnoff: 0
subgiants: 0
red_giants: 42
rejects: 0
red_giants - rej_clump: 42

Min: 0
Max: 10
Mean: 2.9
Sdev: 1.7
Med: 2
Mad: 1
Min: 0
Max: 10

##################################################
##################################################
```



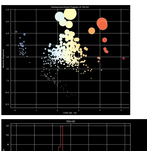


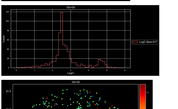


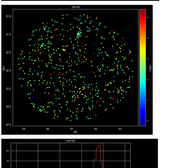


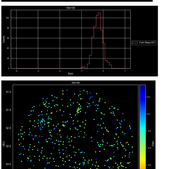



```
##################################################
##################################################

100ki80

Programmer: ['sanjana' 'sanjana-marvin']

main_sequence: 90
turnoff: 0
subgiants: 0
red_giants: 10
rejects: 10
red_giants - rej_clump: 268

Min: 0
Max: 10
Mean: 2.8
Sdev: 1.8
Med: 2
Mad: 1
Min: 0
Max: 10

##################################################
##################################################
```



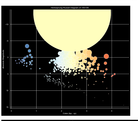


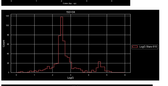


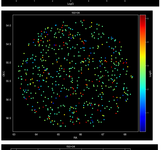


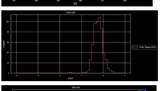

```
##################################################
##################################################

100ki80

Programmer: ['sanjana' 'sanjana-marvin']

main_sequence: 90
turnoff: 0
subgiants: 0
red_giants: 10
rejects: 10
red_giants - rej_clump: 268

Min: 0
Max: 10
Mean: 2.8
Sdev: 1.8
Med: 2
Mad: 1
Min: 0
Max: 10

##################################################
##################################################
```

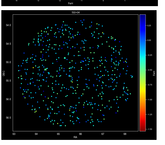
DEV: 30
SEED: 1234
Mn: 10
Mx: 30









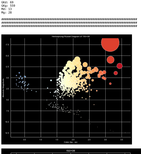


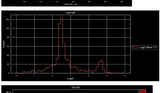
CSV:30

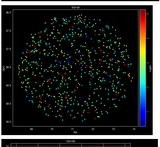
Programmer: ['sanyam', 'sanyam-marwin']

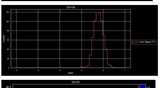
max_separator: 60
seed: 1234
subgroup: 12
subgroup_id: 0
red_pixels: 230
red_pixels - red_flag: 305

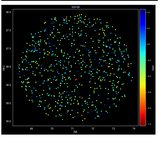
Mn: 10
Mx: 30
DEV: 30
Max: 29
Min: 10
Mg: 20









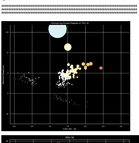


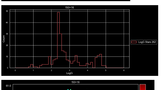
CSV:30

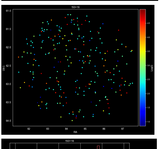
Programmer: ['sanyam']

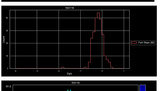
max_separator: 35
seed: 1234
subgroup: 1
subgroup_id: 0
red_pixels: 260
red_pixels - red_flag: 139

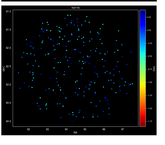
Mn: 10
Mx: 30
DEV: 30
Max: 28
Min: 8
Mg: 18









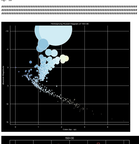


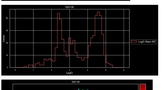
CSV:30

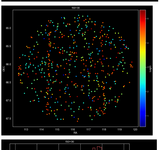
Programmer: ['sanyam', 'kara']

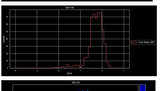
max_separator: 110
seed: 1234
subgroup: 0
subgroup_id: 0
red_pixels: 84
red_pixels - red_flag: 247

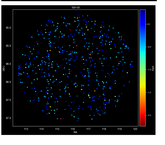
Mn: 5
Mx: 30
DEV: 30
Max: 29
Min: 5
Mg: 17









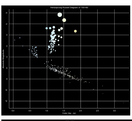


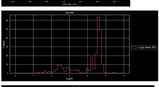
CSV:30

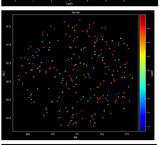
Programmer: ['sanyam']

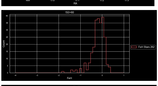
max_separator: 60
seed: 1234
subgroup: 2
subgroup_id: 0
red_pixels: 87
red_pixels - red_flag: 29

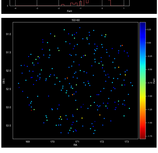
```
Dec: 0
Ra: 18
Dec: 27
Ra: 17
Dec: 27
Ra: 0
```





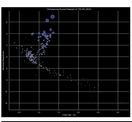


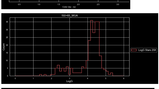


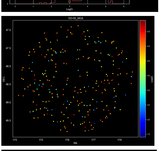


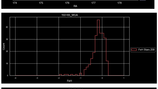
2243-01.txt

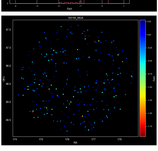
```
Programmers: ['George']

main_separation: 153
turnoff: 20
cluster_size: 0
red_points: 51
blue_points: 0
red_clump = red_clump: 43

Ra: 6
Dec: 0
Ra: 237
Dec: 27
Ra: 0
Dec: 0
```





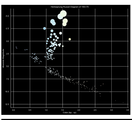


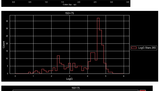


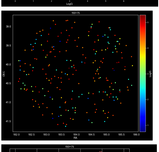


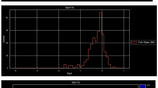
2243-75

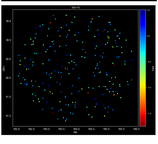
```
Programmers: ['George']

main_separation: 152
turnoff: 20
cluster_size: 0
red_points: 0
blue_points: 0
red_clump = red_clump: 84

Ra: 0
Dec: 0
Ra: 27
Dec: 27
Ra: 0
Dec: 0
```





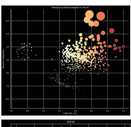


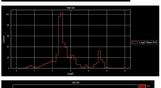


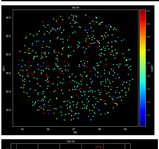


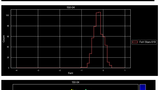
2240-80

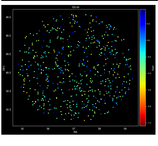
```
Programmers: ['George']

main_separation: 76
turnoff: 0
cluster_size: 0
red_points: 525
blue_points: 0
red_points = red_clump: 353

Ra: 12
Dec: 27
Ra: 12
Dec: 27
Ra: 180
Dec: 0
```









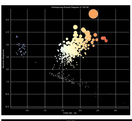


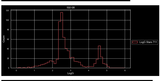
2240-00

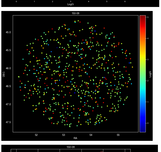
```
Programmers: ['George' 'George-non-varia']

main_separation: 157
turnoff: 0
```

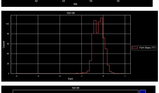
max_separation: 1423
nsigma: 0.5
nsig_points: 387

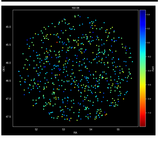
Mon: 06
Day: 11
Hour: 00
Min: 00
Sec: 00
Mon: 06







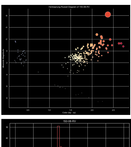


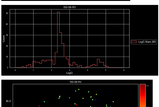


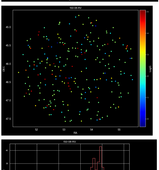
2240-08-09

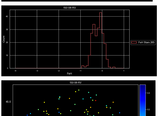
Programmer: ['sabrina']'

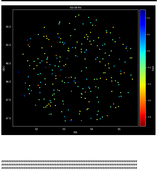
max_separation: 38
nsigma: 0.5
nsig_points: 8
Mon: 06
Day: 11
Hour: 00
Min: 00
Sec: 00
Mon: 06







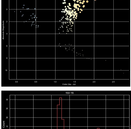


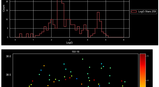


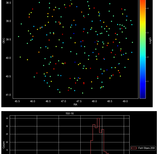
2240-10

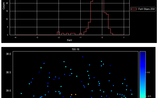
Programmer: ['sunspot']

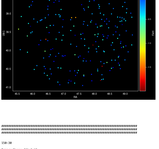
max_separation: 38
nsigma: 0.5
nsig_points: 386
Mon: 06
Day: 11
Hour: 00
Min: 00
Sec: 00
Mon: 06







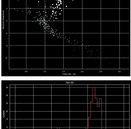


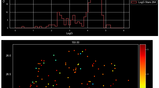


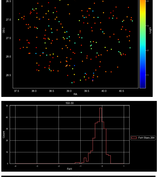
2240-10

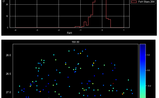
Programmer: ['victor']

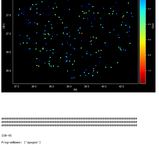
max_separation: 142
nsigma: 0.5
nsig_points: 8
Mon: 06
Day: 11
Hour: 00
Min: 00
Sec: 00
Mon: 06





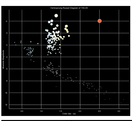


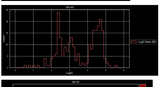


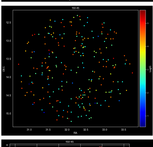


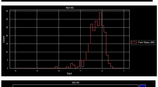
Programmer: ['sunspot']

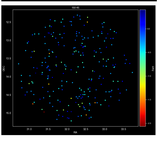
```
main_separator: NO
type:STAR: 40
subgroup: 4
CMD_points: 38
mag:mag: 7
red_clump: red_clump: 114
Dec: 0
Ra: 0
dec: 0
ra: 0
Mag: 19
Mag: 19
Mg: 0
```





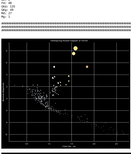


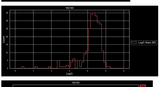


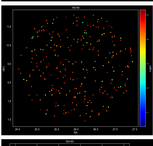


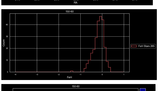
```
CD-60
```

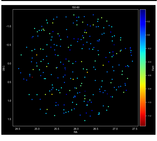
```
Programmes: ['Hertz']

main_separator: 167
type:STAR: 46
subgroup: 46
CMD_points: 36
mag:mag: 7
red_clump: red_clump: 34

Dec: 0
Ra: 0
dec: 0
ra: 0
Mag: 17
Mag: 17
Mg: 0
```





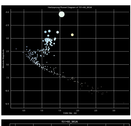


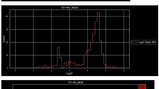


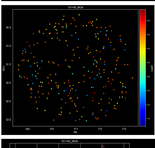


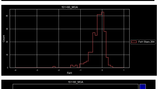
```
CD-60_MLA
```

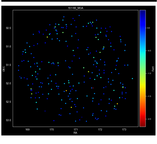
```
Programmes: ['Hertz']

main_separator: 159
type:STAR: 32
subgroup: 32
CMD_points: 30
mag:mag: 30
red_clump: red_clump: 41

Dec: 0
Ra: 0
dec: 0
ra: 0
Mag: 20
Mag: 20
Mg: 0
```





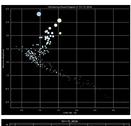


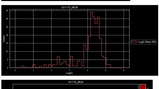


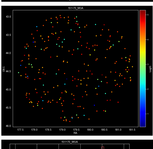


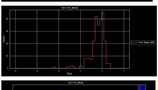
```
CD-70_MLA
```

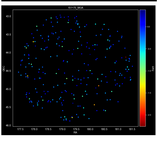
```
Programmes: ['Hertz']

main_separator: 140
type:STAR: 92
subgroup: 92
CMD_points: 91
mag:mag: 91
red_clump: red_clump: 58

Dec: 0
Ra: 0
dec: 0
ra: 0
Mag: 19
Mag: 19
Mg: 0
```







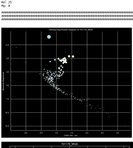


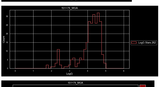


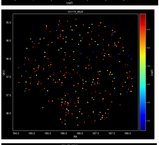
ID3/RL_MLA

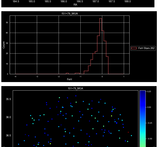
Drop-subbands: ['energy']

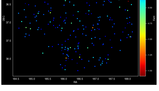
```
main_separator: 128
bandwidth: 4
subbands: 8
red_points: 32
red_clumps: 16
red_points - red_clumps: 16

Mn: 0
Mx: 15
Mdn: 7.50
Mxn: 15
Mn: 0
Mx: 0
```







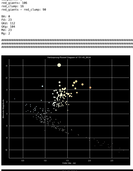


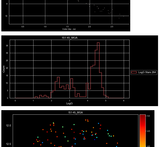


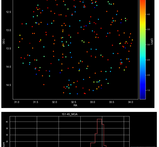
ID1/RL_MLA

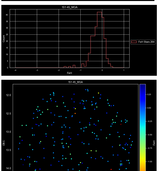
Drop-subbands: ['energy']

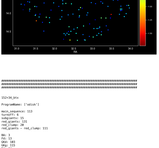
```
main_separator: 128
bandwidth: 4
subbands: 8
red_points: 32
red_clumps: 16
red_points - red_clumps: 48

Mn: 0
Mx: 15
Mdn: 7.50
Mxn: 15
Mn: 0
Mx: 0
```







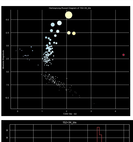


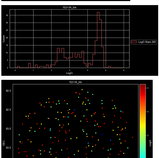


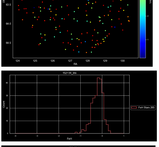
ID2/RL.pkv

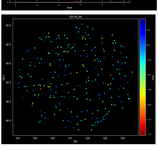
Drop-subbands: ['energy']

```
main_separator: 112
bandwidth: 4
subbands: 8
red_points: 32
red_clumps: 16
red_points - red_clumps: 111

Mn: 0
Mx: 15
Mdn: 7.50
Mxn: 15
Mn: 0
Mx: 0
```





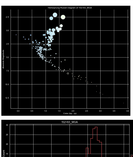


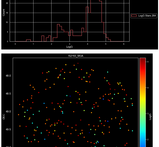


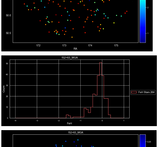
ID3/RL_MLA

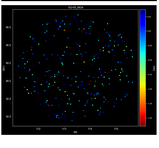
Drop-subbands: ['energy']

```
main_separator: 112
bandwidth: 4
subbands: 8
red_points: 32
red_clumps: 16
red_points - red_clumps: 48

Mn: 0
Mx: 15
Mdn: 7.50
Mxn: 15
Mn: 0
Mx: 0
```

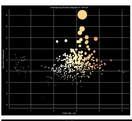


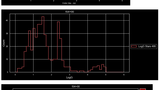


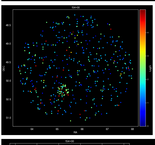


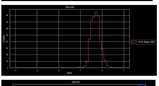


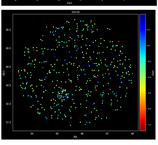
```
**********
CAL48B

Programmer: ['Alice']

main_separator: 20
header: 2
footer: 2
num_cluster: 107
num_points: 1000
tot_points = num_clus: 488

Nx: 0
Ny: 0
Mx: 23
My: 23
Nz: 0
Mz: 48
**********
```



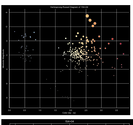


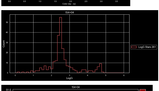


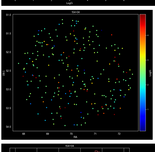


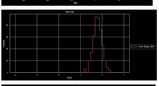


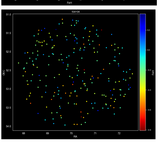

```
**********
CAL48C

Programmer: ['Jacques']

main_separator: 22
header: 2
footer: 2
num_cluster: 147
num_points: 1000
tot_points = num_clus: 147

Nx: 0
Ny: 0
Mx: 24
My: 24
Nz: 0
Mz: 0
**********
```



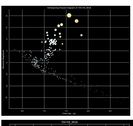


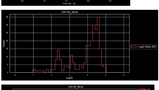


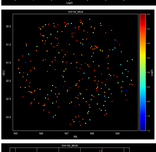


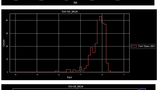


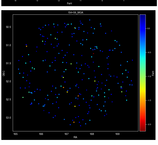

```
**********
CAL48D_MLA

Programmer: ['Jacques']

main_separator: 139
header: 2
footer: 2
num_cluster: 42
num_points: 1000
tot_points = num_clus: 42

Nx: 0
Ny: 0
Mx: 23
My: 23
Nz: 0
Mz: 0
**********
```



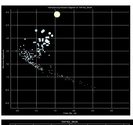


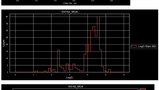


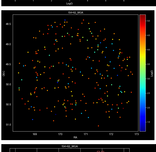


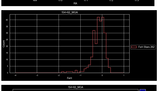


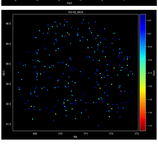

```
**********
CAL48D_MLB

Programmer: ['Jacques']

main_separator: 139
header: 2
footer: 2
num_cluster: 42
num_points: 1000
tot_points = num_clus: 42

Nx: 0
Ny: 0
Mx: 23
My: 23
Nz: 0
Mz: 0
**********
```











****

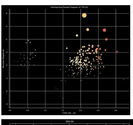
IW-BM

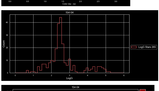
Programmer: ['Jasper']

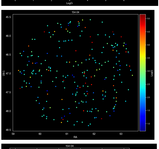
main_separator: 35
turnoff: 0
subgenre: 0
rot_speed: 0
rot_gamma: 0
rot_frame: -- rot_flame: 333

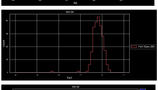
Ms: 24
Mdm: 0
Mdm: 0
Mdm: 0
Mg: 0
Mg: 0

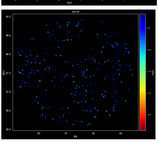
****











****

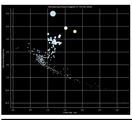
IW-HD_MGA

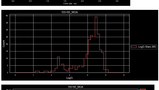
Programmer: ['George']

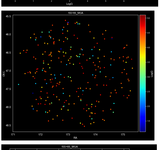
main_separator: 108
turnoff: 0
subgenre: 0
rot_speed: 0
rot_gamma: 0
rot_frame: -- rot_flame: 44

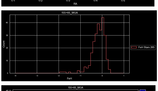
Ms: 0
Mdm: 0
Mdm: 0
Mdm: 0
Mg: 0
Mg: 0

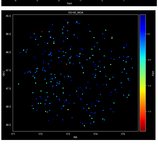
****











****

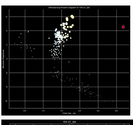
SDG_II.pkl

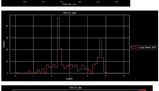
Programmer: ['Victor']

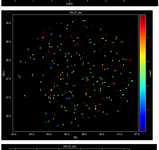
main_separator: 72
turnoff: 0
subgenre: 0
rot_speed: 0
rot_gamma: 0
rot_frame: -- rot_flame: 338

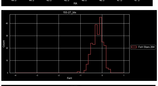
Ms: 0
Mdm: 0
Mdm: 0
Mdm: 0
Mg: 0
Mg: 0

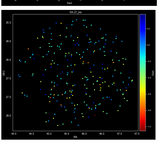
****











****

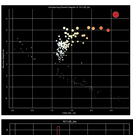
SDG_III.pkl

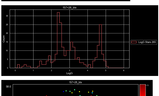
Programmer: ['Victor']

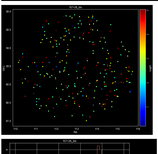
main_separator: 61
turnoff: 0
subgenre: 0
rot_speed: 0
rot_gamma: 0
rot_frame: -- rot_flame: 142

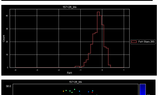
Ms: 0
Mdm: 0
Mdm: 0
Mdm: 0
Mg: 0
Mg: 0

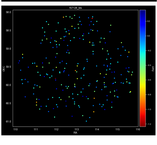
****











##

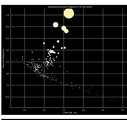
CD140_M16

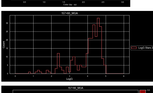
Programmer: I'anque'l

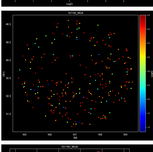
main_sequence: 141
turnoff: 5
subgiants: 0
red_giants: 70
red_clump: 40
red_giants - red_clump: 30

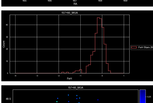
Mv: 8
Mv: 9
Mv: 10.5
Mv: 11
Mv: 12
Mv: 13

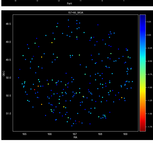
##











##

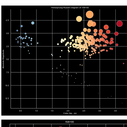
CD140

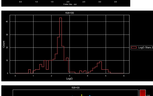
Programmer: I'anque'l

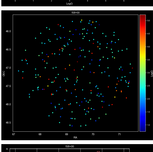
main_sequence: 98
turnoff: 5
subgiants: 0
red_giants: 93
red_clump: 43
red_giants - red_clump: 50

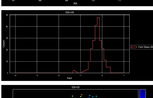
Mv: 10
Mv: 11
Mv: 12
Mv: 13
Mv: 14
Mv: 15

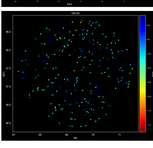
##











##

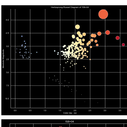
CD140

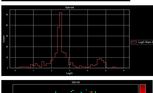
Programmer: I'anque'l

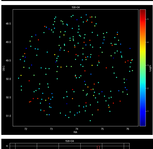
main_sequence: 37
turnoff: 1
subgiants: 1
red_giants: 81
red_clump: 40
red_giants - red_clump: 130

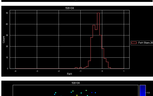
Mv: 20
Mv: 21
Mv: 22
Mv: 23
Mv: 24
Mv: 25

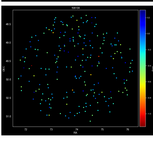
##











##

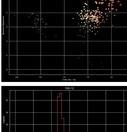
CD140

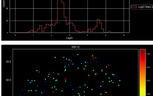
Programmer: I'anque'l

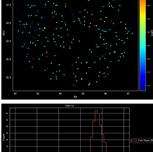
main_sequence: 32
turnoff: 5
subgiants: 1
red_giants: 105
red_clump: 40
red_giants - red_clump: 145

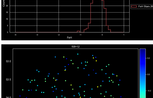
Mv: 26
Mv: 27
Mv: 28
Mv: 29
Mv: 30
Mv: 31

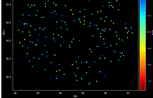
##











==========

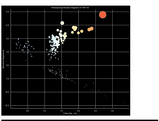
CD-30

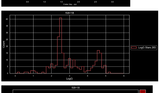
Programmer: [Spaspe]

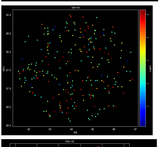
main_separator: 55
mag_limit: 9
subpixels: 8
mag_scale: 2.5
red_limit: 30
red_points: [50,1,100: 133]

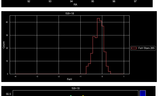
Dec: 22
Ra: 20
Year: 2000
Mag: 9.5
Mu: 0

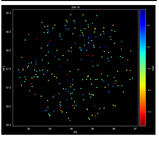
==========











==========

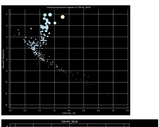
CD-01,PLA

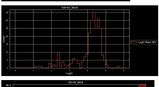
Programmer: [Sempr]

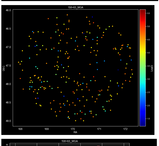
main_separator: 158
mag_limit: 9
subpixels: 8
mag_scale: 2.5
red_points: [50,1,100: 48]

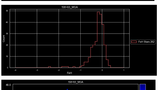
Dec: 11
Ra: 21
Year: 2019
Mag: 9.5
Mu: 0

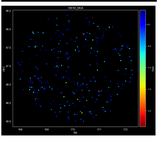
==========











==========

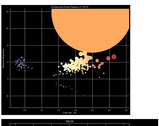
CD-00

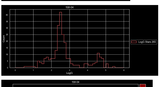
Programmer: [Spaspe]

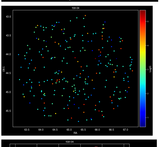
main_separator: 38
mag_limit: 9
subpixels: 8
mag_scale: 2.5
red_points: [50,1,100: 154]

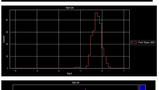
Dec: 16
Ra: 20
Year: 2000
Mag: 9.5
Mu: 0

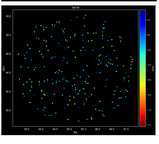
==========











==========

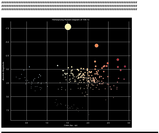
CD-02

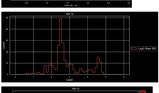
Programmer: [Spaspe]

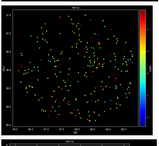
main_separator: 48
mag_limit: 9
subpixels: 8
mag_scale: 2.5
red_points: [50,1,100: 141]

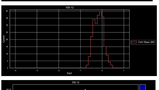
Dec: 26
Ra: 20
Year: 2000
Mag: 9.5
Mu: 0

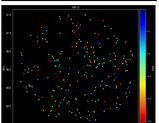
==========









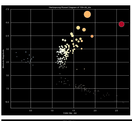


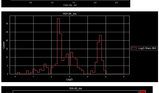
CDH-DL_pos

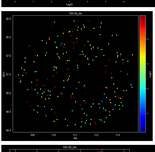
Programmer: [Valor]

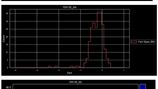
main_separator: 42
hungarian: 1
hungarian_n: 4
red_points: 288
red_clumps: 18
red_points - red_clumps: 252

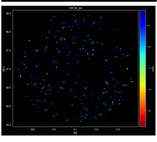
Mx: 2
Mn: 0
Sdx: 35
Sdn: 29
Rx: 7
Rn: 0









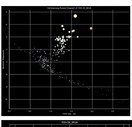


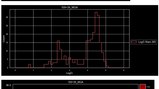
CDH-DL_MxN

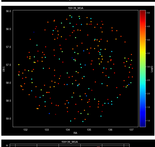
Programmer: [Energy]

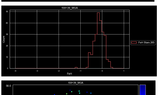
main_separator: 127
hungarian: 1
hungarian_n: 4
red_points: 88
red_clumps: 10
red_points - red_clumps: 78

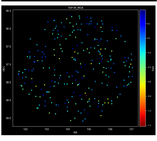
Mx: 2
Mn: 0
Sdx: 33
Sdn: 29
Rx: 7
Rn: 0









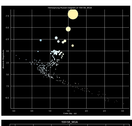


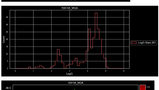
CDH-DL_MxN

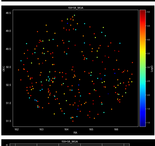
Programmer: [Energy]

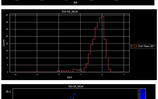
main_separator: 125
hungarian: 1
hungarian_n: 4
red_points: 88
red_clumps: 36
red_points - red_clumps: 52

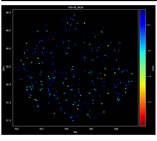
Mx: 2
Mn: 0
Sdx: 33
Sdn: 27
Rx: 7
Rn: 0









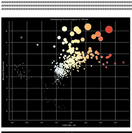


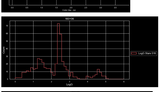
CDH-DR

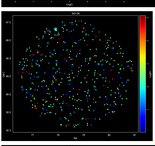
Programmer: [Color]

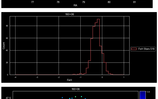
main_separator: 42
hungarian: 1
hungarian_n: 4
red_points: 288
red_clumps: 36
red_points - red_clumps: 252

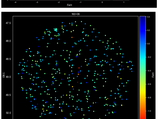
Mx: 35
Mn: 29
Sdx: 35
Sdn: 29
Rx: 7
Rn: 0



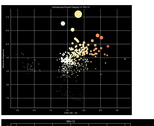


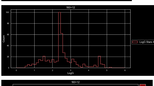


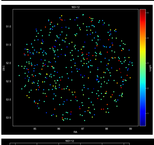


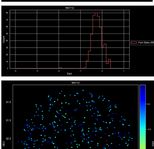


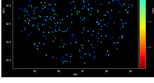
```
SDSS-II
Programmer: I'Lint'
main_separator: 96
turbo?: 1
subparts: 30
max_points: 300
red_points: 100
red_clump: 137
Mx: 0
My: 0
Mz: 0
Vx: 0
Vy: 0
Vz: 0
```



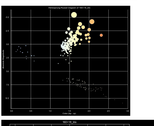


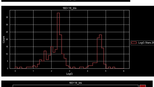


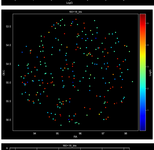


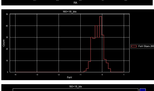


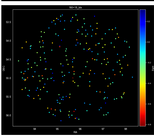

```
SDSS-II_pro
Programmer: I'Lint'
main_separator: 75
turbo?: 1
subparts: 30
red_points: 100
red_clump: 137
red_points + red_clump: 137
Mx: 0
My: 0
Mz: 0
Vx: 0
Vy: 0
Vz: 0
```



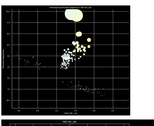


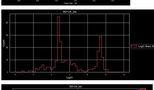


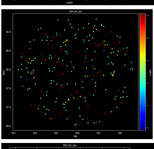


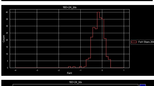


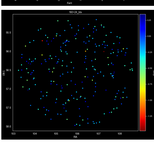

```
SDSS-II_pro
Programmer: I'Lint'
main_separator: 75
turbo?: 1
subparts: 30
red_points: 100
red_clump: 137
red_points + red_clump: 238
Mx: 0
My: 0
Mz: 0
Vx: 0
Vy: 0
Vz: 0
```



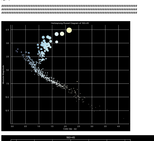


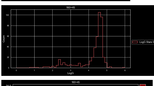


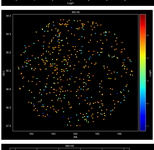


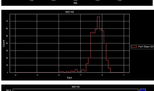


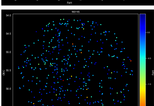

```
SDSS
Programmer: I'apogee' 'Tata'I
main_separator: 100
turbo?: 1
subparts: 30
red_points: 75
red_clump: 137
red_points + red_clump: 137
Mx: 0
My: 0
Mz: 0
Vx: 0
Vy: 0
Vz: 0
```











==========

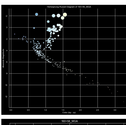
SDR-DG_MGA

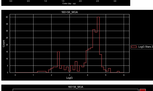
Programmer: ['Wenge']

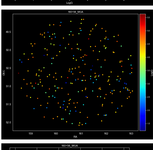
main_sequence: 127
turnoff: 48
subgiants: 30
red_giants: 70
red_clump: 30
red_giants - red_clump: 55

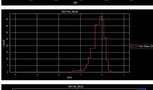
Dec: 0
Ra: 0
Age: 12
Dist: 10
Mag: 20
Mass: 1

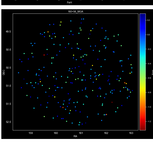
==========











==========

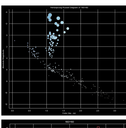
SDR-DG

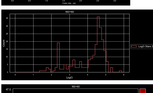
Programmer: ['Wenge']

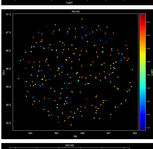
main_sequence: 127
turnoff: 48
subgiants: 30
red_giants: 70
red_clump: 30
red_giants - red_clump: 73

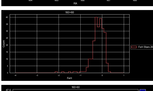
Dec: 0
Ra: 0
Age: 12
Dist: 10
Mag: 20
Mass: 1

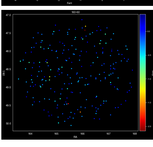
==========











==========

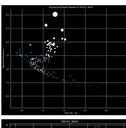
SDR-DG_MGA

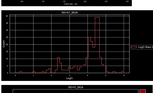
Programmer: ['Wenge']

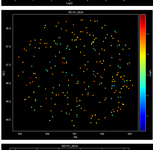
main_sequence: 130
turnoff: 50
subgiants: 30
red_giants: 70
red_clump: 30
red_giants - red_clump: 40

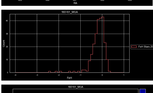
Dec: 0
Ra: 0
Age: 12
Dist: 10
Mag: 20
Mass: 1

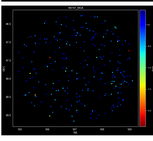
==========











==========

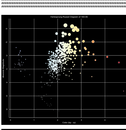
SDR-DG

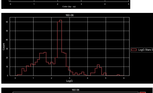
Programmer: ['Victor']

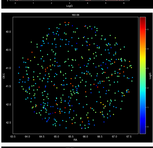
main_sequence: 90
turnoff: 0
subgiants: 0
red_giants: 400
red_clump: 400
red_giants - red_clump: 350

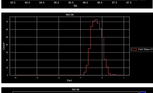
Dec: 0
Ra: 0
Age: 12
Dist: 10
Mag: 20
Mass: 1

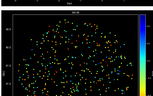
==========

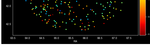




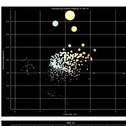


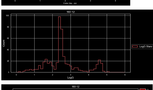


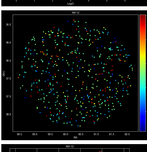


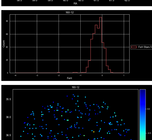


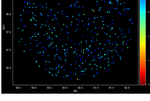
```
SDM-12
Programmes: ['Alice']

main_separator: 65
sub_separator: 0
subgroots: 2
subgroots: 0
red_clumps: 150
red_giants: 1548_flyleaf: 204

Bin: 20
Dec: 0
Mag: 12
Mag: 20
Mag: 12
Mag: 17
```



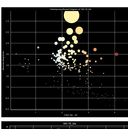


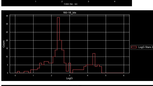


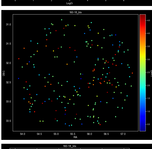


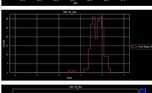


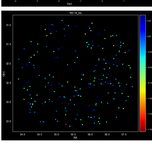

```
SDM-13_bis
Programmes: ['Alice']

main_separator: 25
sub_separator: 0
subgroots: 2
red_giants: 217
subgroots: 0
red_giants: 1548_flyleaf: 500

Bin: 0
Dec: 0
Mag: 12
Mag: 12
Mag: 18
Mag: 12
```



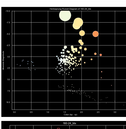


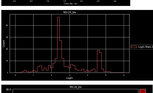


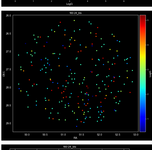


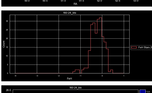


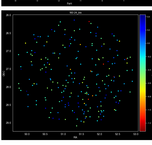

```
SDM-14_bis
Programmes: ['Alice']

main_separator: 0
sub_separator: 0
subgroots: 0
red_giants: 0
subgroots: 0
red_giants: 1548_flyleaf: 147

Bin: 0
Dec: 0
Mag: 18
Mag: 18
Mag: 18
Mag: 18
```



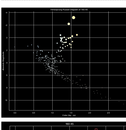


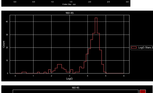


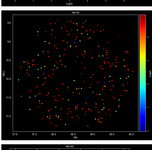


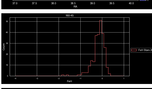


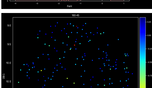

```
SDM-45
Programmes: ['Halo']

main_separator: 153
sub_separator: 0
subgroots: 31
subgroots: 0
red_giants: 0
red_giants: 1548_flyleaf: 43

Bin: 0
Dec: 0
Mag: 12
Mag: 12
Mag: 17
Mag: 12
```

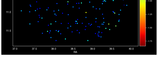












==========
==========

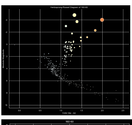
SD-50

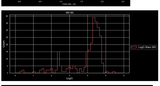
Programmer: ['Sally']

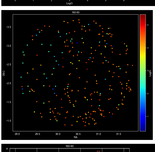
main_separator: 155
height: 20
width: 20
num_galaxies: 40
num_clusters: 4
ref_galaxy = num_clump: 48

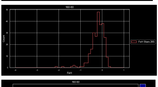
Nx: 0
Ny: 0
Qbar: 100
Mx: 0
My: 0
Mz: 0

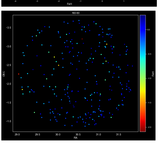
==========
==========











==========
==========

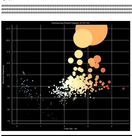
SD-60

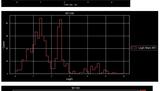
Programmer: ['Alice']

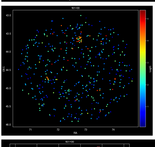
main_separator: 20
height: 0
width: 0
num_galaxies: 0
num_clusters: 0
ref_galaxy = num_clump: 384

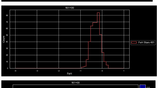
Nx: 20
Ny: 20
Qbar: 0
Mx: 87
My: 87
Mz: 100

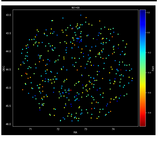
==========
==========











==========
==========

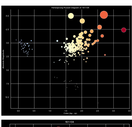
SD-80

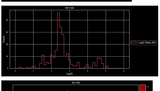
Programmer: ['Vampir']

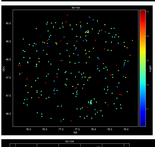
main_separator: 35
height: 0
width: 0
num_galaxies: 87
num_clusters: 0
ref_galaxy = num_clump: 152

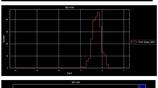
Nx: 20
Ny: 20
Qbar: 0
Mx: 100
My: 100
Mz: 0

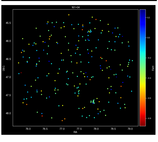
==========
==========











==========
==========

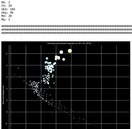
SD50_MAX

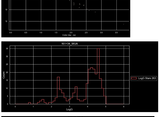
Programmer: ['Vampir']

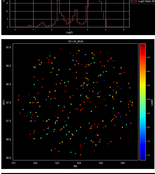
main_separator: 155
height: 0
width: 0
num_galaxies: 95
num_clusters: 0
ref_galaxy = num_clump: 67

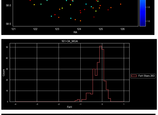
Nx: 0
Ny: 0
Qbar: 100
Mx: 20
My: 20
Mz: 0

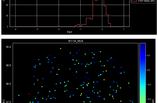
==========
==========

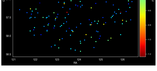




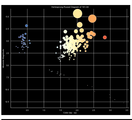


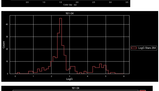


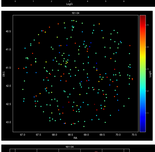


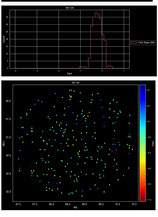


```
SIC-MM
Programmer: [spaque]

main_separator: 40
hurmpf: 0 0
subpoints: 1
rot_period: 24
rot_points: 1
rot_points - rot_time: 140

Mo: 26
Dy: 4
Hr: 19
Mn: 34
Sc: 0
Ms: 0
```

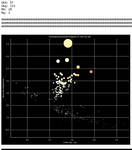


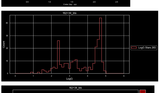


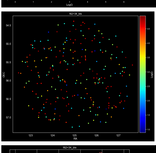


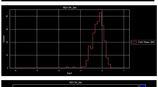


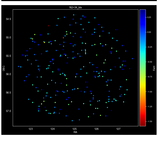

```
SEC-TR-pro
Programmer: [valcor]

main_separator: 113
hurmpf: 0 0
subpoints: 1
rot_period: 24
rot_points: 1
rot_points - rot_time: 147

Mo: 8
Dy: 4
Hr: 23
Mn: 43
Sc: 0
Ms: 0
```



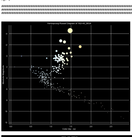


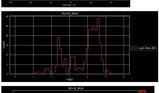


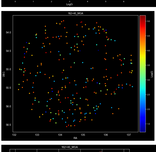


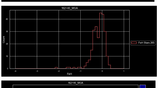


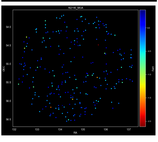
```
SEC-MM_MLA
Programmer: [energy]

main_separator: 121
hurmpf: 0 0
subpoints: 1
rot_period: 24
rot_points: 1
rot_points - rot_time: 86

Mo: 1
Dy: 4
Hr: 19
Mn: 34
Sc: 0
Ms: 0
```



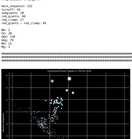


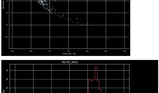


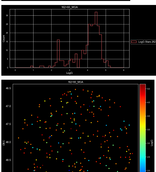


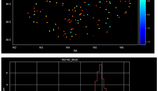


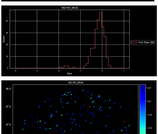
```
SEC-MM_MLA
Programmer: [energy]

main_separator: 172
hurmpf: 0 0
subpoints: 1
rot_period: 24
rot_points: 1
rot_points - rot_time: 49

Mo: 2
Dy: 4
Hr: 19
Mn: 34
Sc: 0
Ms: 0
```

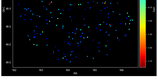




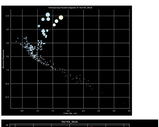


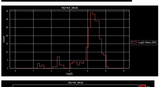


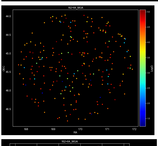


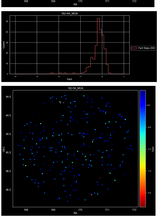


```
SOCAL_MLM

Programmer: ['George']

main_separator: 1210
hyrad(%): 40
subgrain: 35
rad_gamma: 30
rad_alpha: 20
rad_alpha - rad_clump: 43

Ni: 0
Mn: 0
Mn: 0.02
Mg: 0.5
Si: 0
Si: 0
```

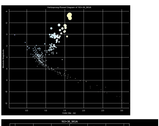


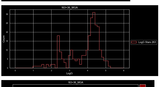


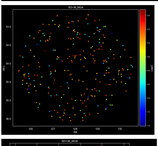


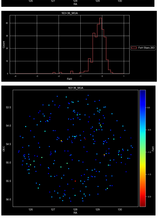



```
SOCAL_MLM

Programmer: ['George']

main_separator: 1210
hyrad(%): 40
subgrain: 35
rad_gamma: 30
rad_alpha: 20
rad_alpha - rad_clump: 43

Ni: 0
Mn: 0
Mn: 0.02
Mg: 0.5
Si: 0
Si: 0
```

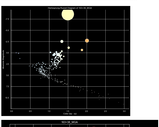


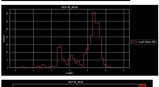


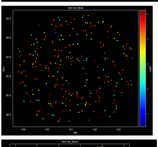


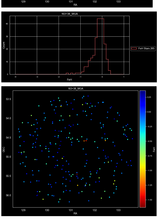



```
SOCAL_MLM

Programmer: ['George']

main_separator: 120
hyrad(%): 30
subgrain: 35
rad_gamma: 30
rad_alpha: 20
rad_alpha - rad_clump: 43

Ni: 0
Mn: 0
Mn: 0.02
Mg: 0.5
Si: 0
Si: 0
```

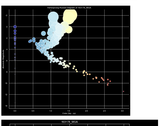


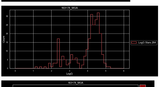


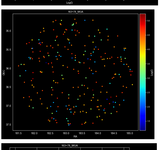


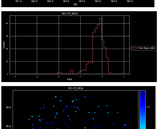


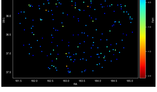

```
SOCAL_MLM

Programmer: ['George']

main_separator: 120
hyrad(%): 30
subgrain: 35
rad_gamma: 30
rad_alpha: 20
rad_alpha - rad_clump: 54

Ni: 0
Mn: 0
Mn: 0.04
Mg: 0.5
Si: 0
Si: 0
```











==========

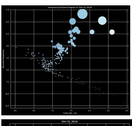
SDSS_M14

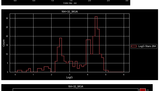
Programmer: ['Kenjar']

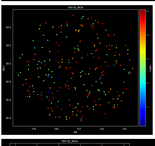
main_sequence: [82]
turnoff: [9]
subgiants: [1]
redgiants: [5]
red_clump: [4]
red_points = red_flag: [6]

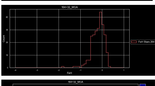
Nr: [1]
Ch: [1]
Ch2: [1]
Mag: [9]
Mag: [7]
Mg: [1]

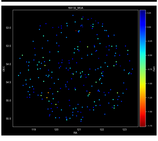
==========











==========

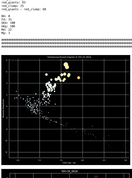
SDSS_M14

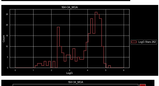
Programmer: ['Kenjar']

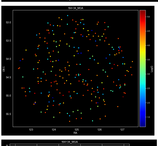
main_sequence: [1]
turnoff: [9]
subgiants: [1]
redgiants: [5]
red_clump: [4]
red_points = red_flag: [0]

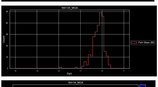
Nr: [1]
Ch: [1]
Ch2: [10]
Mag: [9]
Mag: [7]
Mg: [1]

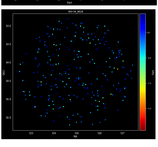
==========











==========

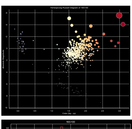
SDSS-M9

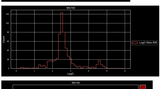
Programmer: ['apogee']

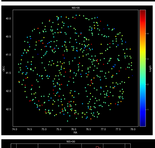
main_sequence: [8]
turnoff: [1]
subgiants: [1]
redgiants: [5]
red_clump: [3]
red_points = red_flag: [7]

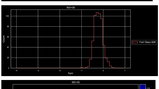
Nr: [1]
Ch: [1]
Ch2: [8]
Mag: [13]
Mag: [7]
Mg: [1]

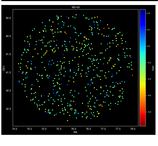
==========











==========

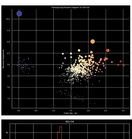
SDSS-M9

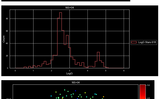
Programmer: ['apogee']

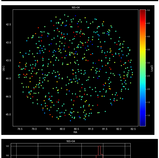
main_sequence: [8]
turnoff: [1]
subgiants: [1]
redgiants: [5]
red_clump: [3]
red_points = red_flag: [0]

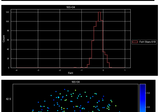
Nr: [1]
Ch: [1]
Ch2: [8]
Mag: [13]
Mag: [7]
Mg: [1]

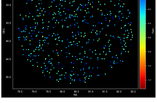
==========



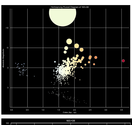


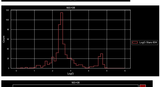


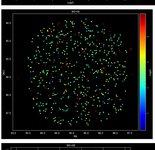


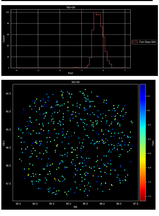


```
SDSS-DR
Programmer: Tianqian Li
main_separator: 70
header: 0
subheader: 0
num_points: 517
num_clusters: 1
num_points - num_clusters: 516
Mx: 0
My: 0
Sdx: 20
Sdy: 20
Mz: 0
Mr: 0
```

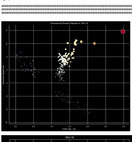


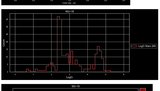


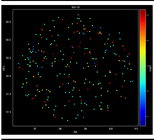


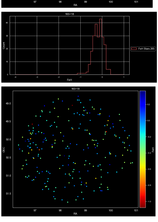


```
SDSS-DR
Programmer: Tianqian Li
main_separator: 65
header: 0
subheader: 0
num_points: 517
num_clusters: 66
num_points - num_clusters: 132
Mx: 0
My: 0
Sdx: 20
Sdy: 20
Mz: 0
Mr: 0
```

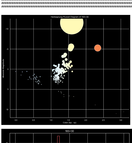


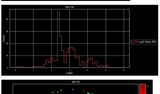


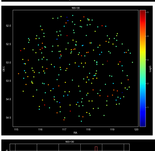


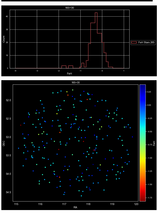


```
SDSS-DR
Programmer: Tianqian Li
main_separator: 25
header: 0
subheader: 0
num_points: 517
num_clusters: 294
Mx: 0
My: 0
Sdx: 20
Sdy: 20
Mz: 0
Mr: 0
```

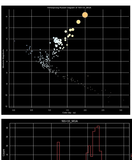


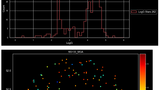


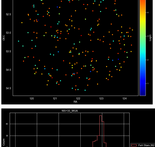


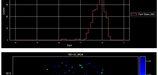


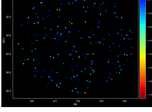
```
SDSS_PLAN
Programmer: Tianqian Li
main_separator: 125
header: 0
subheader: 0
num_points: 517
num_clusters: 50
Mx: 0
My: 0
Sdx: 20
Sdy: 20
Mz: 0
Mr: 0
```



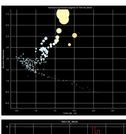


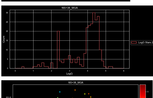


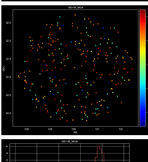


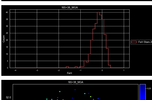


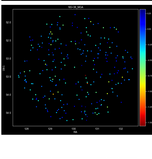
```
SDSS_M_MAA
Programmes: ['manga']

main_separation: 150
nsample: 20
subsample: 0
nsel_points: 10
real_points: 10
real_points + real_clump: 41

Dec: 0
Ra: 180
Dec_MAP: 0
Ra_MAP: 180
Dec: 0
Ra: 0
```



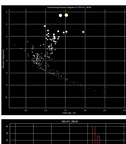


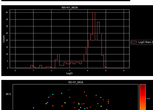


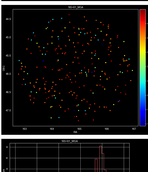


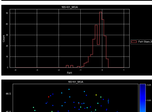


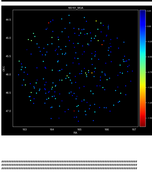

```
SDSS_M_MAA
Programmes: ['manga']

main_separation: 140
nsample: 20
subsample: 0
nsel_points: 12
real_points: 12
real_points + real_clump: 51

Dec: 0
Ra: 0
Dec: 138
Ra: 0
Dec: 0
Ra: 0
```



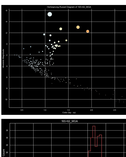


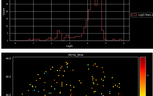


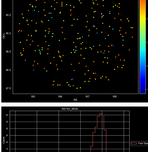


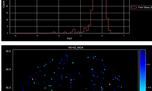


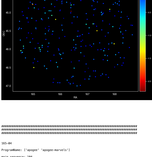

```
SDSS_M_MAA
Programmes: ['manga']

main_separation: 150
nsample: 20
subsample: 0
nsel_points: 10
real_points: 10
real_points + real_clump: 38

Dec: 0
Ra: 0
Dec: 12
Ra: 12
Dec: 0
Ra: 0
```



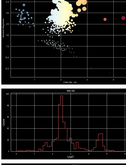


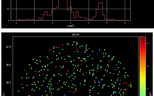


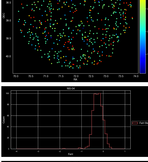


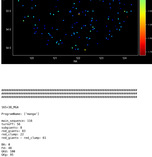


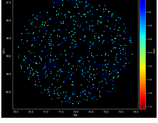

```
SDSS-MAA
Programmes: ['manga' 'apogee-marvels']

main_separation: 180
nsample: 20
subsample: 0
nsel_points: 11
real_points: 11
real_points + real_clump: 101

Dec: 30
Ra: 0
Dec: 30
Ra: 180
Dec: 0
Ra: 0
```









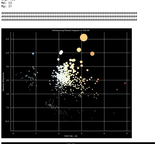


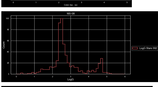
SDS-NM

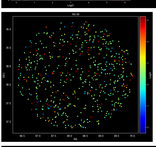
Programmer: ['ranger']

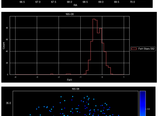
main_separator: 10
halfoff: 14
subgenre: 30
red_points: 180
Mar: 0
red_points + red_flame: 323

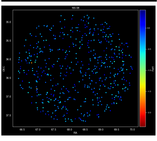
Dec: 22
Jan: 17
Apr: 18
May: 20
Mar: 12
Mar: 0









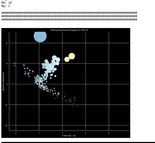


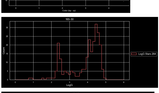
SDS-SB

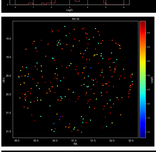
Programmer: ['Harry']

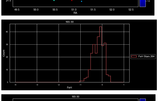
main_separator: 22
halfoff: 14
subgenre: 32
red_points: 180
red_points + red_flame: 58

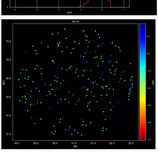
Dec: 0
Jan: 17
Apr: 22
May: 20
Mar: 12
Mar: 0









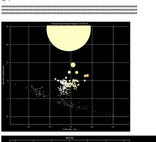


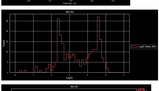
SDS-HS

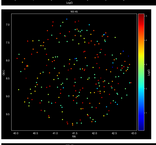
Programmer: ['ranger']

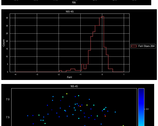
main_separator: 30
halfoff: 14
subgenre: 30
red_points: 180
red_points + red_flame: 186

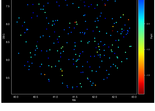
Dec: 0
Jan: 0
Apr: 19
May: 19
Mar: 12
Mar: 0









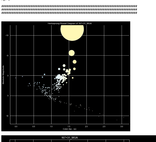


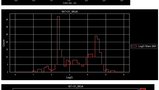
SDS5_MUH

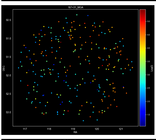
Programmer: ['ranger']

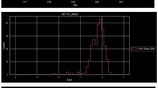
main_separator: 30
halfoff: 14
subgenre: 30
red_points: 180
red_points + red_flame: 89

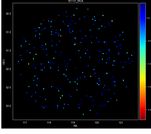
Dec: 0
Jan: 0
Apr: 19
May: 19
Mar: 12
Mar: 0



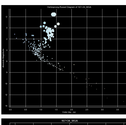


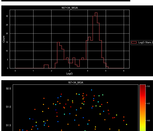


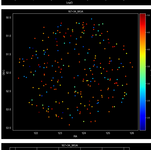


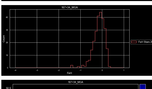


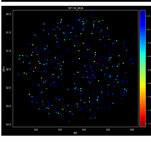
```
**********************************************************
**********************************************************

SDSS_MGA

Programmer: ['George']

main_separator: 127
subgalaxy: 0
subgalaxy: 12
subgalaxy: 24
real_index: 24
real_parts: - real_flag: 42

Dec: 0
Ra: 0
Dec: 0.5
Ra: 0.5
Dec: 1
Ra: 1
**********************************************************
**********************************************************
```



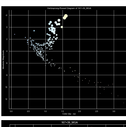


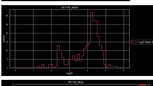


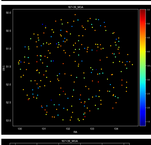


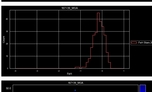


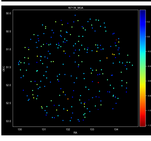
```
**********************************************************
**********************************************************

SDSS_MGA

Programmer: ['George']

main_separator: 127
subgalaxy: 0
subgalaxy: 12
subgalaxy: 24
real_index: 24
real_parts: - real_flag: 42

Dec: 0
Ra: 0
Dec: 0.5
Ra: 0.5
Dec: 1
Ra: 1
**********************************************************
**********************************************************
```



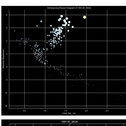


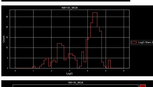


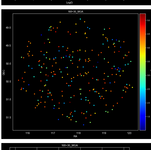


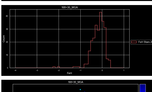


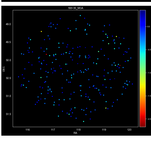
```
**********************************************************
**********************************************************

SDSS_MGA

Programmer: ['George']

main_separator: 127
subgalaxy: 0
subgalaxy: 12
subgalaxy: 24
real_index: 24
real_parts: - real_flag: 84

Dec: 0
Ra: 0
Dec: 0.5
Ra: 0.5
Dec: 1
Ra: 1
**********************************************************
**********************************************************
```



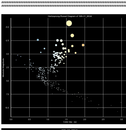


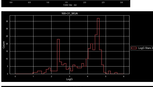


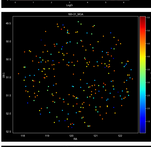


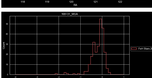


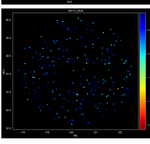
```
**********************************************************
**********************************************************

SDSS_MGA

Programmer: ['George']

main_separator: 127
subgalaxy: 0
subgalaxy: 12
subgalaxy: 24
real_index: 24
real_parts: - real_flag: 78

Dec: 0
Ra: 0
Dec: 0.5
Ra: 0.5
Dec: 1
Ra: 1
**********************************************************
**********************************************************
```



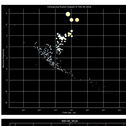


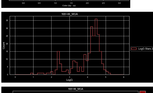


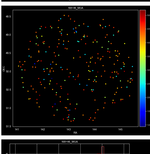


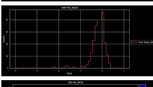


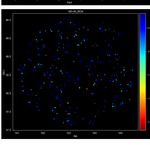

```
==============================================================
==============================================================

SUBHALMAN

Propertiesmass: ['energy']

main_separation: 100
halo#(F): 30
halo#(S): 0
sub_separation: 50
sub#(F): 30
sub#(S): 0
cut_points = sub_clump: 57

Bin: 0
Bin: 1
Bin: 2
Bin: 3
Bin: 4
Bin: 5
==============================================================
==============================================================
```



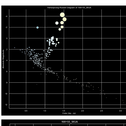


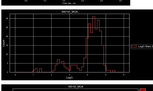


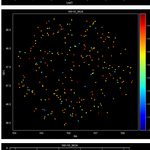


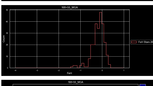


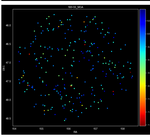

```
==============================================================
==============================================================

SUBHALMAN

Propertiesmass: ['energy']

main_separation: 100
halo#(F): 30
halo#(S): 0
sub_separation: 50
sub#(F): 30
sub#(S): 0
cut_points = sub_clump: 46

Bin: 0
Bin: 1
Bin: 2
Bin: 3
Bin: 4
Bin: 5
==============================================================
==============================================================
```



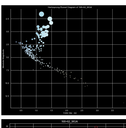


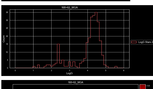


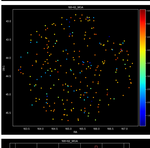


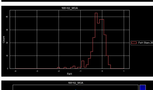


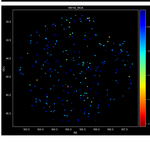

```
==============================================================
==============================================================

SUBHALMAN

Propertiesmass: ['energy']

main_separation: 100
halo#(F): 30
halo#(S): 0
sub_separation: 50
sub#(F): 30
sub#(S): 0
cut_points = sub_clump: 47

Bin: 0
Bin: 1
Bin: 2
Bin: 3
Bin: 4
Bin: 5
==============================================================
==============================================================
```



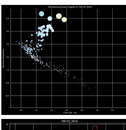


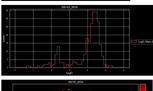


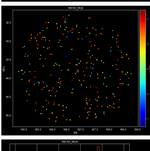


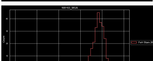


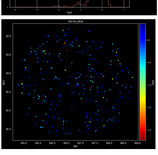

```
==============================================================
==============================================================

SUBHALMAN

Propertiesmass: ['energy']

main_separation: 100
halo#(F): 30
halo#(S): 0
sub_separation: 50
sub#(F): 30
sub#(S): 0
cut_points = sub_clump: 55

Bin: 0
Bin: 1
Bin: 2
Bin: 3
Bin: 4
Bin: 5
==============================================================
==============================================================
```

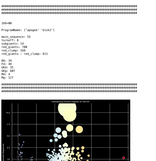










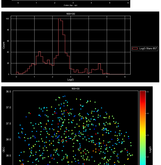


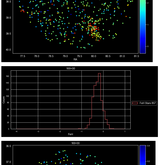
2020-08

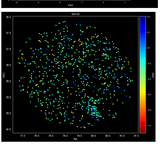
Programmer: ['spaspr' 'dvid']

```
main_separator: 0
hotspot: 0
subspots: 20
spot_radius: 10
red_cutoff: 200
red_points = red_cluster: 611
```

```
Dx: 24
Dy: 0
dxy: 0
dxy: 167
Mx: 0
My: 12
```



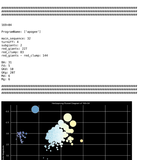


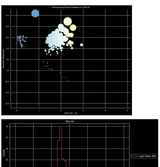
2020-08

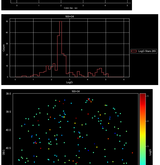
Programmer: ['spaspr']

```
main_separator: 12
hotspot: 0
subspots: 20
spot_radius: 12
red_cutoff: 200
red_points = red_cluster: 144
```

```
Dx: 0
Dy: 0
dxy: 0
dxy: 167
Mx: 0
My: 0
```





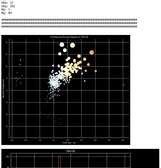


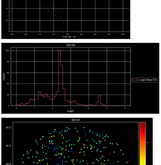
2020-08

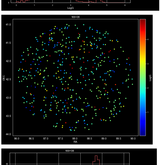
Programmer: ['dvid']

```
main_separator: 20
hotspot: 0
subspots: 20
spot_radius: 8.0
red_cutoff: 200
red_points = red_cluster: 325
```

```
Dx: 12
Dy: 0
dxy: 0
dxy: 167
Mx: 0
My: 0
```





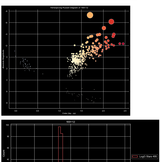


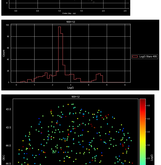
2020-07

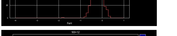
Programmer: ['dvid']

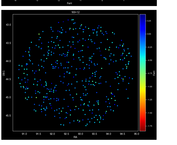
```
main_separator: 97
hotspot: 0
subspots: 0
spot_radius: 8
red_cutoff: 200
red_points = red_cluster: 270
```

```
Dx: 12
Dy: 12
dxy: 0
dxy: 167
Mx: 0
My: 0
```

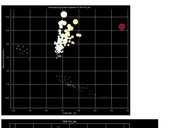


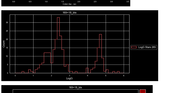


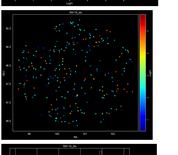


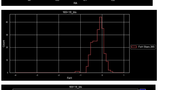


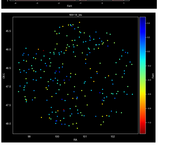
```
SDSS_DR_proc

Programmes: ['calib']

main_separator: 62
halo0?: 0
subparts: 5
red_points: 298
Mag: 19
red_points - red_clump: 148

Dec: 0
Ra: 0
dec: 0
Mag: 19
Mu: 0
Mu: 0
```



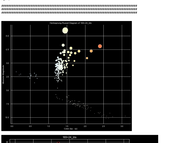


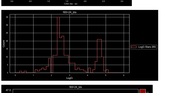


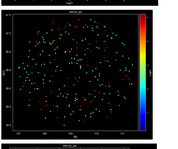


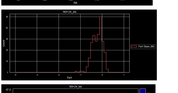


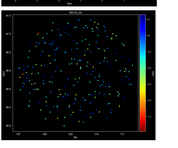

```
SDSS_DR_proc

Programmes: ['calib']

main_separator: 94
halo0?: 0
subparts: 5
red_points: 57
red_clump: 19
red_points - red_clump: 141

Dec: 0
Ra: 0
dec: 0
Mag: 179
Mu: 0
Mu: 0
```



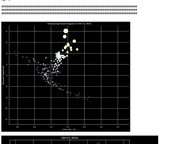


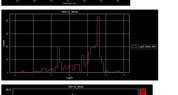


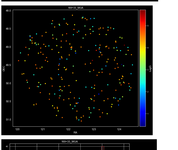


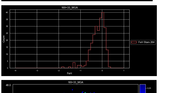


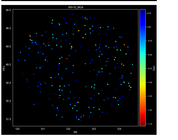
```
SDSS_DR_MUA

Programmes: ['merge']

main_separator: 115
halo0?: 20
subparts: 20
red_points: 30
Mag: 19
red_points - red_clump: 71

Dec: 0
Ra: 0
dec: 0
Mag: 19
Mu: 0
Mu: 0
```



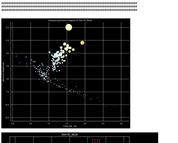


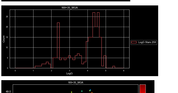


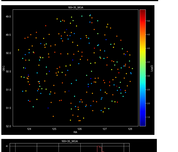


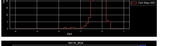


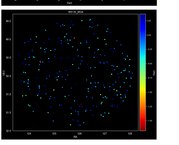
```
SDSS_DR_MUA

Programmes: ['merge']

main_separator: 118
halo0?: 0
subparts: 10
red_points: 149
Mag: 179
red_points - red_clump: 80

Dec: 0
Ra: 0
dec: 179
Mag: 179
Mu: 0
Mu: 0
```



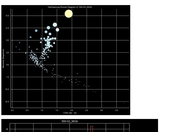


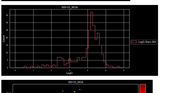


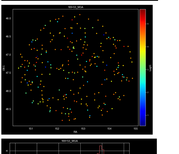


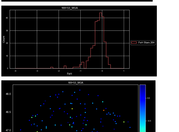


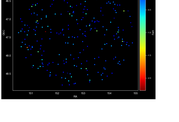

```
SDSS_MLA

Programmer: [*merge*]

main_sequence: 100
halo: 0
subhalo: 0
sub_sub: 0
num_clumps: 56
num_points = tot_clump: 57

Mx: 0
My: 0
Mz: 0
Mvx: 0
Mvy: 0
Mvz: 0
Mp: 0
```



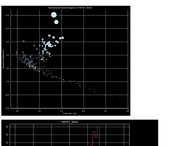


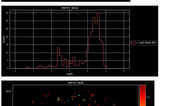


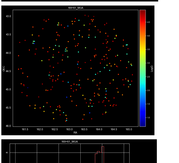


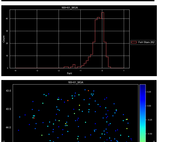


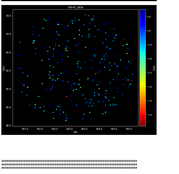
```
SDSS_MLA

Programmer: [*merge*]

main_sequence: 100
halo: 0
subhalo: 0
sub_sub: 0
num_clumps: 48
num_points = tot_clump: 48

Mx: 0
My: 0
Mz: 0
Mvx: 0
Mvy: 0
Mvz: 0
Mp: 0
```

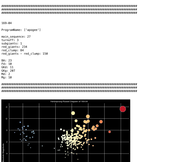




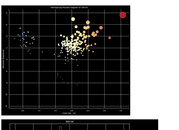


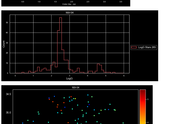


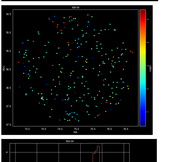


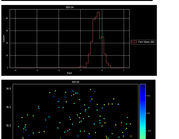


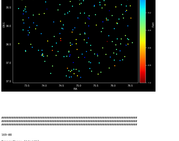

```
SDSS-MB

Programmer: [*apogee*]

main_sequence: 27
halo: 0
subhalo: 1
sub_sub: 0
num_clumps: 28
num_points = tot_clump: 258

Mx: 0
My: 0
Mz: 0
Mvx: 0
Mvy: 0
Mvz: 0
Mp: 0
```



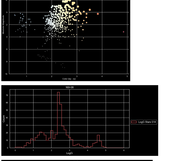


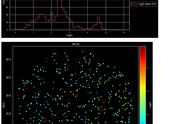


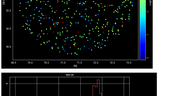


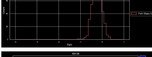


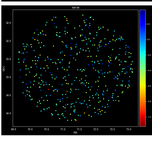

```
SDSS-MB

Programmer: [*dinit*]

main_sequence: 99
halo: 0
subhalo: 1
sub_sub: 0
num_clumps: 60
num_points = tot_clump: 545

Mx: 0
My: 0
Mz: 0
Mvx: 0
Mvy: 0
Mvz: 0
Mp: 0
```



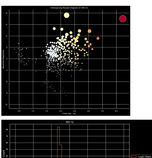


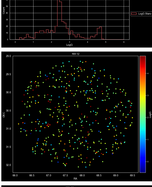




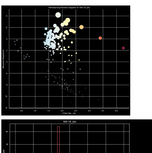


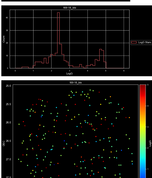

```
**********************************************************
**********************************************************

DUV-02

Programmer: [ Victor ]

main_separator: 10
hyperbol: 1
subgeometr: 0
red_points: 400
cut_points: 0
red_points + cut_cluster: 385

Nx: 0
Ny: 0
Nz: 0
Max: 29
Min: 0
Mp: 0
**********************************************************
**********************************************************
```

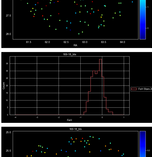




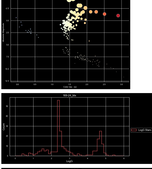

```
**********************************************************
**********************************************************

DUV-03_Pro

Programmer: [ victor ]

main_separator: 51
hyperbol: 1
subgeometr: 1
red_points: 50
red_points + cut_cluster: 113

Nx: 0
Ny: 0
Nz: 0
Max: 29
Min: 0
Mp: 0
**********************************************************
**********************************************************
```

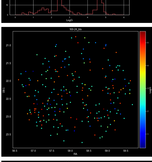


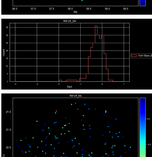




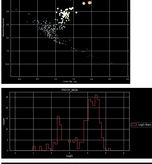

```
**********************************************************
**********************************************************

DUV-04_Pro

Programmer: [ victor ]

main_separator: 55
hyperbol: 1
subgeometr: 0
red_points: 363
cut_points: 0
red_points + cut_cluster: 122

Nx: 0
Ny: 0
Nz: 0
Max: 29
Min: 0
Mp: 0
**********************************************************
**********************************************************
```

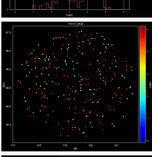


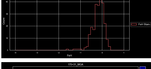


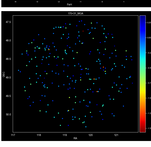



```
**********************************************************
**********************************************************

UV-01_MLA

Programmer: [ Sergey ]

main_separator: 196
hyperbol: 0
subgeometr: 0
red_points: 0
cut_points: 0
red_points + cut_cluster: 85

Nx: 0
Ny: 0
Nz: 0
Max: 29
Min: 0
Mp: 0
**********************************************************
**********************************************************
```

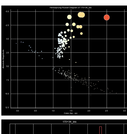


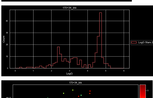


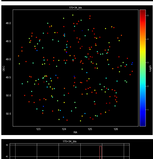


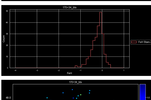


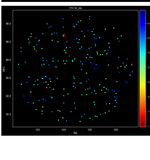
```
##########################################################
##########################################################

170:10_pro

Programmer: ['ulrich']

main_separator: 112
turnoff: 25
subgiants: 38
red_giants: 87
red_clump: 27
red_giants - red_clump: 112

Mu: 0
Sig: 0.1
Age: 10
Dmu: 0.24
Dsig: 0
Mu: 0
##########################################################
##########################################################
```



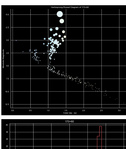


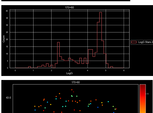


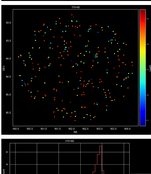


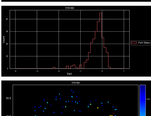


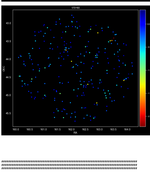
```
##########################################################
##########################################################

170:50

Programmer: ['spinner']

main_separator: 103
turnoff: 21
subgiants: 34
red_giants: 87
red_clump: 13
red_giants - red_clump: 74

Mu: 0
Sig: 0.1
Age: 10
Dmu: 0.24
Dsig: 0
Mu: 0
##########################################################
##########################################################
```



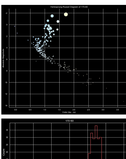


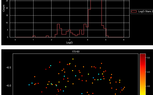


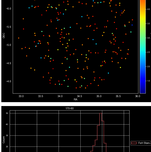


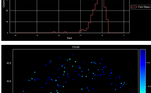


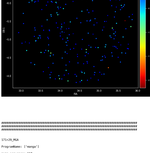
```
##########################################################
##########################################################

170:90

Programmer: ['helv']

main_separator: 106
turnoff: 22
subgiants: 41
red_giants: 87
red_clump: 15
red_giants - red_clump: 36

Mu: 0
Sig: 0.1
Age: 10
Dmu: 0.24
Dsig: 0
Mu: 0
##########################################################
##########################################################
```



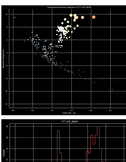


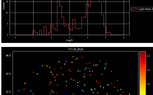


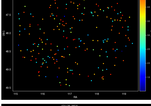


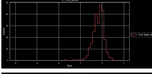


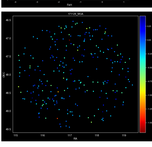
```
##########################################################
##########################################################

171:15_MLA

Programmer: ['energy']

main_separator: 118
turnoff: 25
subgiants: 31
red_giants: 94
red_clump: 20
red_giants - red_clump: 74

Mu: 0
Sig: 0.1
Age: 10
Dmu: 0.24
Dsig: 0
Mu: 0
##########################################################
##########################################################
```



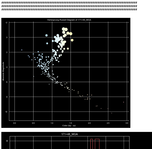


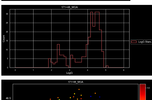


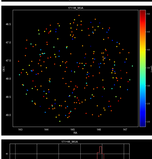


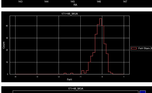


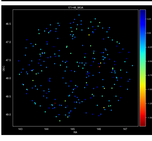

```
==========================================
STC=0_MUA

Prog=gadget [ "merge" ]

main_sequence= 142
halo=0.00
subparts= 70
red_parts= 70
red_clump= 70 red_clump= 57

Box: 0
Ver: 0
Snap: 57
Mass: 0
Mag: 0
Mu: 0
==========================================
```



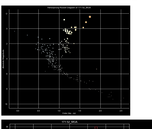


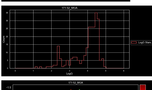


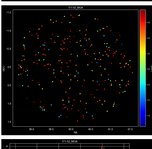


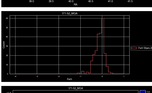


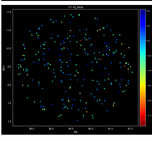

```
==========================================
STC=10_MUA

Prog=gadget [ "merge" ]

main_sequence= 115
halo=0.00
subparts= 70
red_parts= 70
red_clump= 70 red_clump= 58

Box: 0
Ver: 0
Snap: 58
Mass: 0
Mag: 0
Mu: 0
==========================================
```



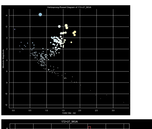


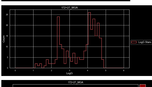


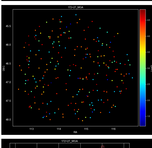


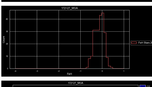


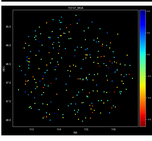

```
==========================================
STC=20_MUA

Prog=gadget [ "merge" ]

main_sequence= 90
halo=0.00
subparts= 70
red_parts= 70
red_clump= 70 red_clump= 60

Box: 0
Ver: 0
Snap: 60
Mass: 0
Mag: 0
Mu: 0
==========================================
```



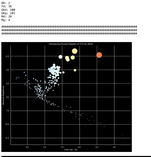


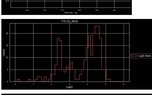


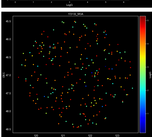


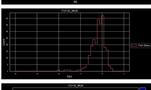


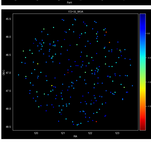

```
==========================================
STC=30_MUA

Prog=gadget [ "merge" ]

main_sequence= 182
halo=0.00
subparts= 70
red_parts= 70
red_clump= 70 red_clump= 76

Box: 0
Ver: 0
Snap: 76
Mass: 0
Mag: 0
Mu: 0
==========================================
```



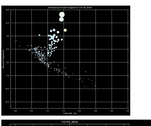


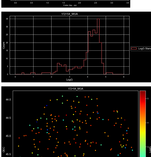


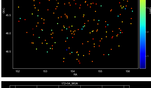


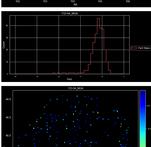



```
STOCK_MLA

Programmer: [ George ]

main_separator: 126
hydro(T): 46
subgrav(T): 32
cut_gravity: 50
cut_gravity: 50
cut_gravity = cut_time: 51

Mx: 0
Vx: 0
dMx: 0.2
dMy: 0
Mz: 0
Vz: 0
```

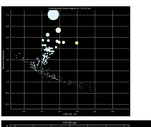


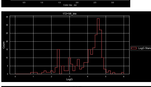


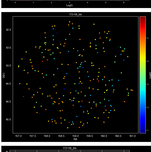


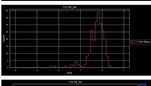


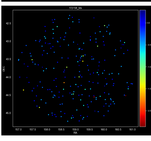
```
STOCK_pro

Programmer: [ Yaoliu_Jin ]

main_separator: 127
hydro(T): 46
subgrav(T): 32
cut_gravity: 50
cut_gravity: 50
cut_gravity = cut_time: 49

Mx: 0
Vx: 0
dMx: 0.2
dMy: 0
Mz: 0
Vz: 0
```



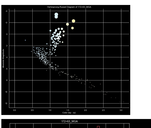


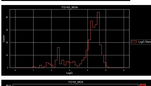


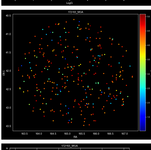


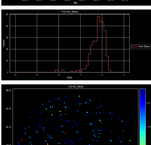


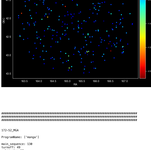
```
STOCK_MLA

Programmer: [ George ]

main_separator: 175
hydro(T): 46
subgrav(T): 32
cut_gravity: 50
cut_gravity: 50
cut_gravity = cut_time: 59

Mx: 0
Vx: 0
dMx: 0.2
dMy: 0
Mz: 0
Vz: 0
```



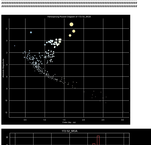


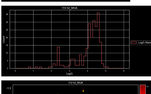


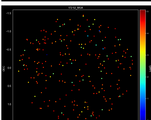


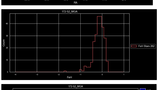


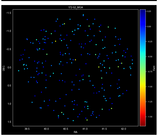
```
STOCK_MLA

Programmer: [ George ]

main_separator: 130
hydro(T): 46
subgrav(T): 32
cut_gravity: 50
cut_gravity: 50
cut_gravity = cut_time: 50

Mx: 0
Vx: 0
dMx: 0.2
dMy: 0
Mz: 0
Vz: 0
```







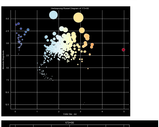


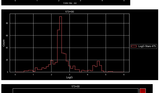


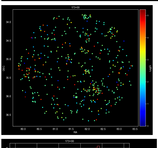
```
STOP
```

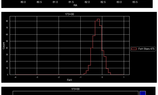
```
Programmer: I'spaper I
```

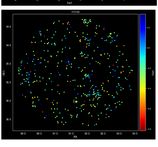
```
main_sequence: 32
turnoff: 0
subgiants: 0
red_giants: 418
red_clump: 0
red_giants + red_clump: 272

Mv: 20
Vmi: 0
Mvr: 89
Mvr: 0
Mg: 32
```





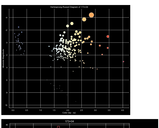


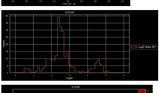


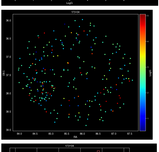


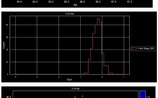
```
STOP
```

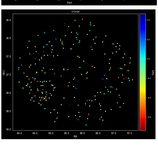
```
Programmer: I'spaper I

main_sequence: 33
turnoff: 0
subgiants: 0
red_giants: 0
red_clump: 92
red_giants + red_clump: 355

Mv: 20
Vmi: 0
Mvr: 89
Mvr: 0
Mg: 32
```





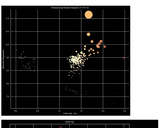


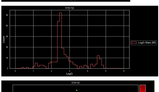


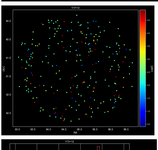


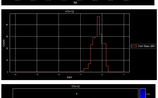
```
STOP
```

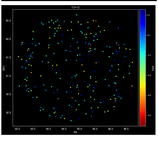
```
Programmer: I'spaper I

main_sequence: 33
turnoff: 0
subgiants: 0
red_giants: 215
red_clump: 0
red_giants + red_clump: 181

Mv: 20
Vmi: 0
Mvr: 89
Mvr: 0
Mg: 0
```





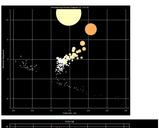


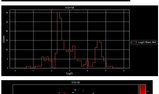


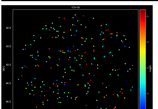


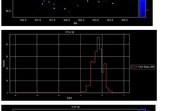
```
STOP
```

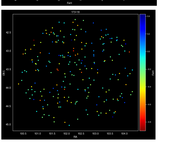
```
Programmer: I'spaper I

main_sequence: 37
turnoff: 0
subgiants: 0
red_giants: 0
red_clump: 92
red_giants + red_clump: 147

Mv: 20
Vmi: 0
Mvr: 89
Mvr: 0
Mg: 0
```



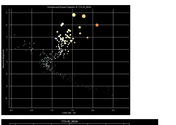


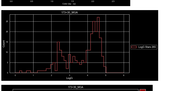


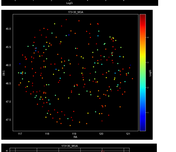


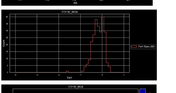


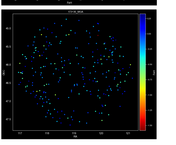
```
STG.MC.MGA
Programmer: ['mengw']

main_separator: [0]
sample: [0]
hydrosim: [0]
cut_mass: [3]
red_shift: [0]
red_points = red_clump: [0]

Ms: [0]
Vs: [0]
Mhy: [0]
Mgy: [0]
Mg: [0]
```



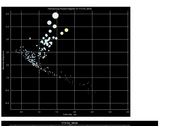


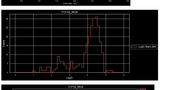


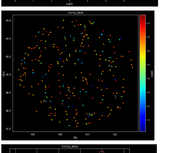


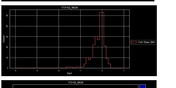


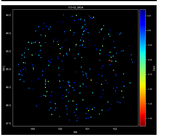
```
STG.MC.MGA
Programmer: ['mengw']

main_separator: [0]
sample: [0]
hydrosim: [0]
cut_mass: [3]
red_shift: [0]
red_points = red_clump: [54]

Ms: [0]
Vs: [0]
Mhy: [12]
Mgy: [0]
Mg: [0]
```



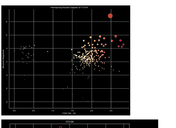


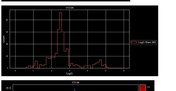


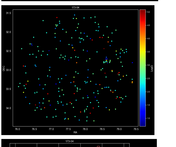


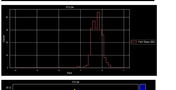


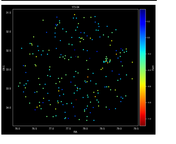
```
STG.MC

Programmer: ['mengw']

main_separator: [0]
sample: [0]
hydrosim: [0]
cut_mass: [3]
red_shift: [0]
red_points = red_clump: [32]

Ms: [0]
Vs: [0]
Mhy: [0]
Mgy: [0]
Mg: [0]
```



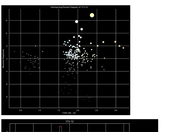


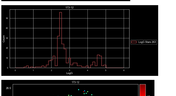


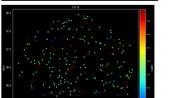


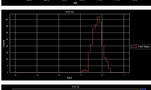


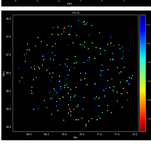
```
STG.12

Programmer: ['mengw']

main_separator: [0]
sample: [0]
hydrosim: [0]
cut_mass: [3]
red_shift: [0]
red_points = red_clump: [45]

Ms: [0]
Vs: [0]
Mhy: [0]
Mgy: [0]
Mg: [0]
```



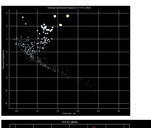


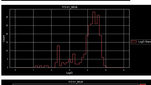


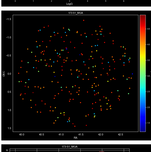


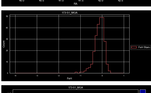


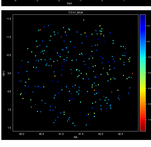
```
##########################################
##########################################

17/11_01_01

Programmes: ['Vampir']

main_sequence: 110
turnoff: 98
subgiants: 85
giants: 72
red_giants: red_clump: 52

Dec: 0
Ra: 0
date: 0.0
Mag: 10
Mv: 12
Mi: 0

##########################################
##########################################
```



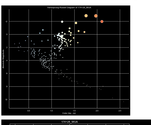


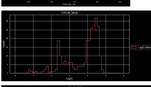


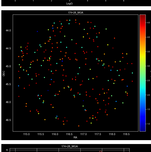


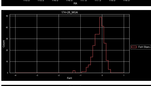


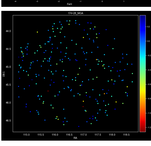
```
##########################################
##########################################

17/11_01_02

Programmes: ['Vampir']

main_sequence: 115
turnoff: 98
subgiants: 72
giants: 72
red_giants: red_clump: 42

Dec: 0
Ra: 0
date: 0.0
Mag: 10
Mv: 12
Mi: 0

##########################################
##########################################
```



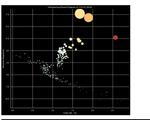


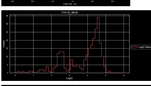


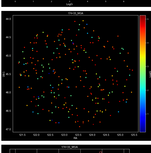


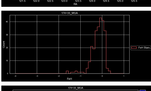


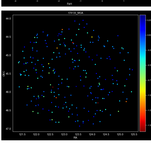
```
##########################################
##########################################

17/11_01_03

Programmes: ['Vampir']

main_sequence: 123
turnoff: 98
subgiants: 85
giants: 72
red_giants: red_clump: 72

Dec: 0
Ra: 0
date: 0.0
Mag: 10
Mv: 12
Mi: 0

##########################################
##########################################
```



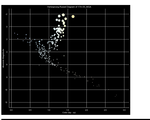


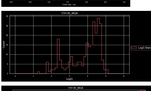


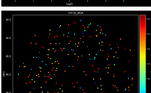


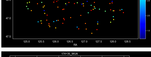
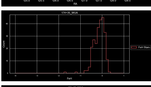
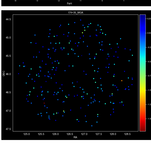


```
##########################################
##########################################

17/11_01_04

Programmes: ['Vampir']

main_sequence: 123
turnoff: 98
subgiants: 72
giants: 72
red_giants: red_clump: 60

Dec: 0
Ra: 0
date: 0.0
Mag: 10
Mv: 12
Mi: 0

##########################################
##########################################
```

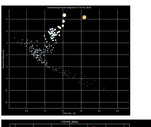
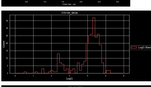
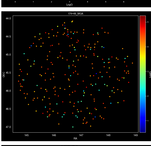
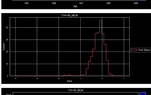
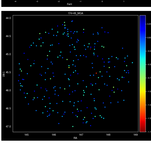




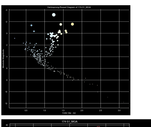
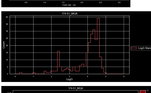
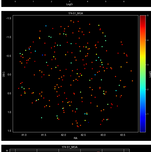
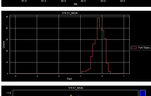
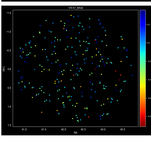


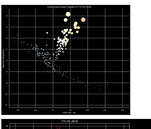
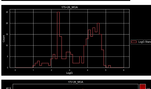
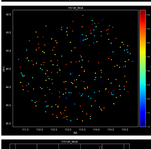
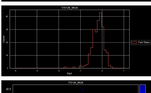
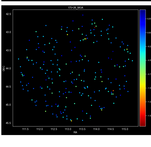
```
##################################################
##################################################

17h40_MGA

Programname: I'mergo'I

main_sequence: 125
turnoff: 19
subgiants: 72
red_giants: 18
red_clump: 7
red_giants - red_clump: 41

Dec: 0
Ra: 0
date: 0
date: 0
Mag: 0
Mu: 0

##################################################
##################################################
```

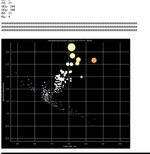
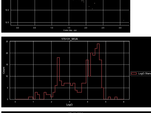
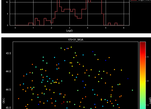
```
##################################################
##################################################

17h15_MGA

Programname: I'mergo'I

main_sequence: 128
turnoff: 19
subgiants: 75
red_giants: 19
red_clump: 54
red_giants - red_clump: -34

Dec: 0
Ra: 0
date: 0
date: 0
Mag: 0
Mu: 0

##################################################
##################################################
```

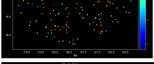






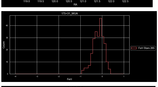
```
##################################################
##################################################

17h20_MGA

Programname: I'mergo'I

main_sequence: 88
turnoff: 20
subgiants: 30
red_giants: 20
red_clump: 17
red_giants - red_clump: 84

Dec: 0
Ra: 0
date: 0
date: 0
Mag: 0
Mu: 0

##################################################
##################################################
```

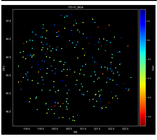






```
##################################################
##################################################

17h15_MGA

Programname: I'mergo'I

main_sequence: 98
turnoff: 19
subgiants: 52
red_giants: 17
red_clump: 51
red_giants - red_clump: 91

Dec: 0
Ra: 0
date: 0
date: 0
Mag: 0
Mu: 0

##################################################
##################################################
```

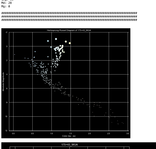




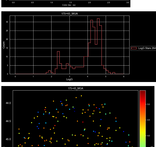


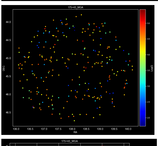


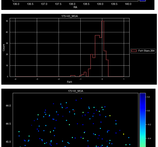


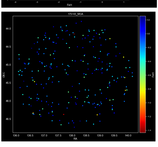
```
##################################################

17Cu31_MA4

Program&Name: I Energy I

main_separator: 1230
header: 0 0
subparts: 31
cut_points: 38
cut_points: 38
cut_points: 7 cut_flag: 54

Nx: 1
Ny: 1
xmin: 0.0
xmax: 0.0
Nx: 10
Ny: 10
##################################################
```



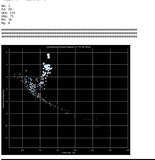


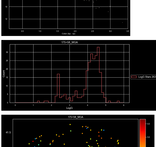


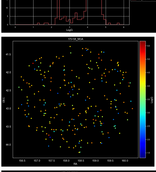


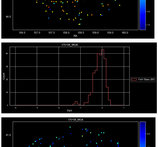


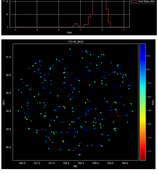
```
##################################################

17Cu31_MA5

Program&Name: I Energy I

main_separator: 1234
header: 0 0
subparts: 32
cut_points: 38
cut_points: 38
cut_points: 7 cut_flag: 42

Nx: 1
Ny: 1
xmin: 0.0
xmax: 0.0
Nx: 10
Ny: 10
##################################################
```



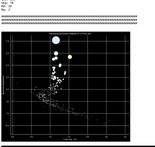


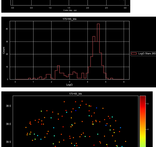


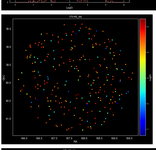


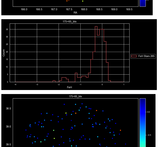


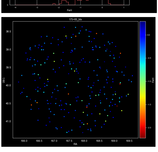
```
##################################################

17Cu31_pbx

Program&Name: I Yield_Pb I

main_separator: 1000
header: 0 0
subparts: 31
cut_points: 76
cut_points: 76
cut_points: 7 cut_flag: 68

Nx: 1
Ny: 1
xmin: 0.0
xmax: 0.0
Nx: 10
Ny: 10
##################################################
```



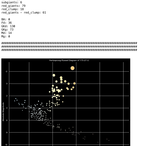


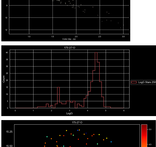


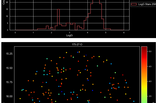


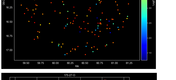


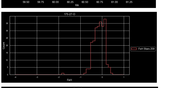
```
##################################################

17Cl-31-0

Program&Name: I Total&Total&Mass_Cl17 I

main_separator: 1000
header: 0 0
subparts: 0
cut_points: 0
cut_points: 0
cut_points: 7 cut_flag: 61

Nx: 1
Ny: 1
xmin: 0.0
xmax: 0.0
Nx: 10
Ny: 10
##################################################
```

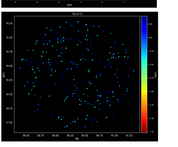




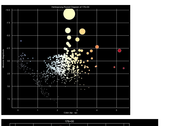


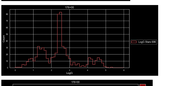


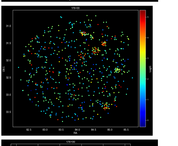


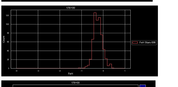


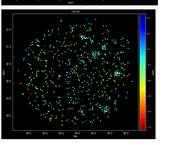
```
LTB/MB
Programmers: ['apogee', 'diaz']

main_separator: 62
hungoff: 25
sdmin: 0.01
red_gamma: 200
red_power: 1.5
red_gamma = red_fixed: 456

Nc: 25
Ns: 25
Nfrb: 20
Nfrs: 20
Nu: 0
Nq: 0
```



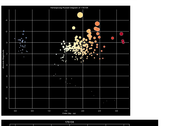


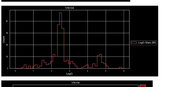


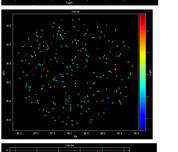


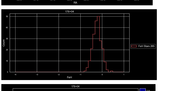


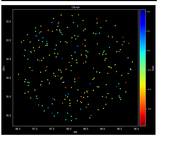
```
LTB/MB
Programmers: ['apogee']

main_separator: 62
hungoff: 25
sdmin: 0.01
red_gamma: 200
red_power: 1.5
red_gamma = red_fixed: 141

Nc: 25
Ns: 25
Nfrb: 20
Nfrs: 20
Nu: 0
Nq: 0
```



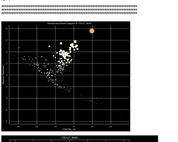


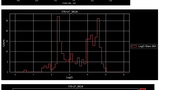


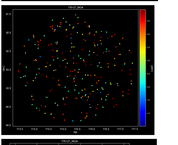


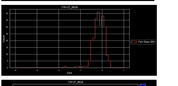


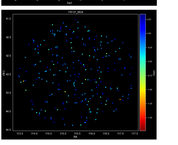
```
LTB/CC_MGA
Programmers: ['mengo']

main_separator: 95
hungoff: 25
sdmin: 0.01
red_gamma: 200
red_power: 1.5
red_gamma = red_fixed: 62

Nc: 25
Ns: 25
Nfrb: 20
Nfrs: 20
Nu: 0
Nq: 0
```



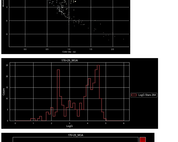


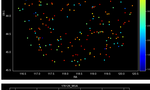
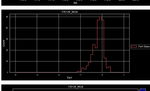
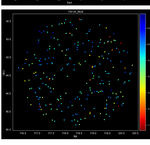




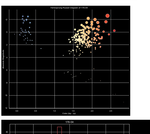
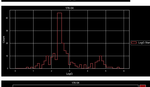
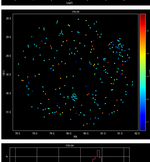
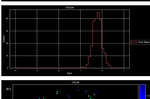
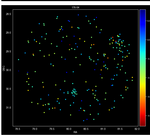


```
LTB/CC_MGA
Programmers: ['mengo']

main_separator: 90
hungoff: 25
sdmin: 0.01
red_gamma: 121
red_power: 1.5
red_gamma = red_fixed: 83

Nc: 25
Ns: 25
Nfrb: 20
Nfrs: 20
Nu: 0
Nq: 0
```

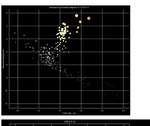
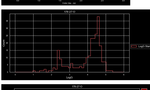
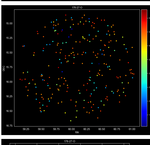
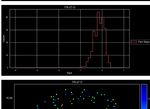
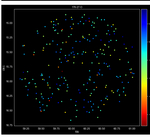


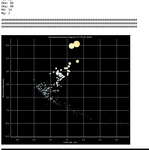
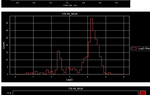
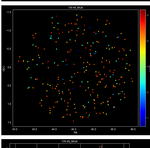
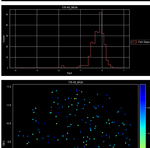
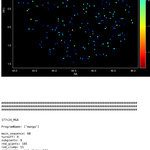
```
LTN-40
Programmer: [ Lapaque ]
main_separator: 37
hurdle: 0.01
subgoals: 1
max_depth: 21
red_cutoff: 0
red_points = red_clump: 144
Dir: 21
Dim: 21
Obs: 21
Mag: 450
Ng: 10
Nu: 0
```

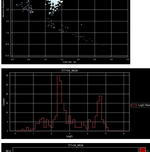
```
LTN-37-H
Programmer: [ Christoforidaris_LTN ]
main_separator: 101
hurdle: 0.01
subgoals: 1
max_depth: 30
red_cutoff: 0
red_points = red_clump: 42
Dir: 30
Dim: 30
Obs: 30
Mag: 150
Ng: 10
Nu: 0
```

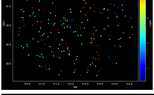
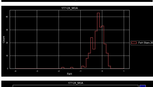
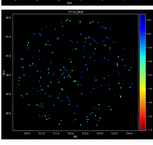






```
LTN-40_MAX
Programmer: [ George ]
main_separator: 113
hurdle: 0.01
subgoals: 1
max_depth: 30
red_cutoff: 0
red_points = red_clump: 50
Dir: 0
Dim: 30
Obs: 30
Mag: 30
Ng: 10
```

```
LTN-35_MAX
Programmer: [ George ]
main_separator: 50
hurdle: 0.01
subgoals: 1
max_depth: 23
red_cutoff: 0
red_points = red_clump: 134
Dir: 0
Dim: 30
Obs: 30
Mag: 23
Ng: 10
```



==========

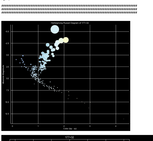
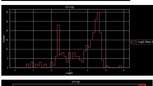
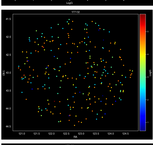
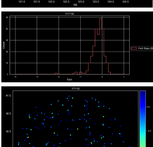
STV0

Programmes: ['merge']

mass_separator: 113
kappa: 0.5
kappa0: 0.5
ref_points: 512
sub_points: 8
ref_clump: ref_clump: 42

Dir: 0
Mass: 0
Mass: 10M
Mass: 20
Mass: 30
Mass: 40

==========

==========

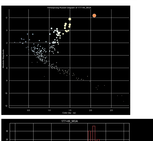
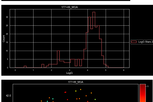
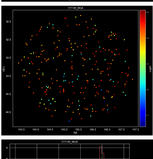
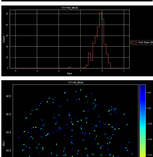
STV0_MUA

Programmes: ['merge']

mass_separator: 126
kappa: 0.5
kappa0: 0.5
ref_points: 512
sub_points: 8
ref_clump: ref_clump: 52

Dir: 0
Mass: 0
Mass: 10M
Mass: 20
Mass: 30
Mass: 40

==========

==========

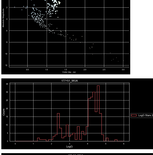
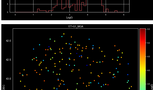
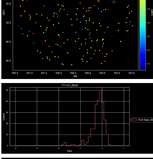
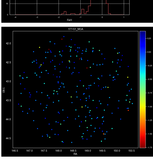
STV0_MUA

Programmes: ['merge']

mass_separator: 127
kappa: 0.5
kappa0: 0.5
ref_points: 512
sub_points: 8
ref_clump: ref_clump: 41

Dir: 0
Mass: 0
Mass: 10M
Mass: 20
Mass: 30
Mass: 40

==========

==========

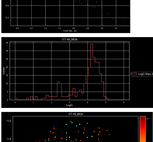
STV0_MUA

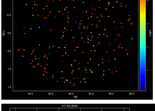
Programmes: ['merge']

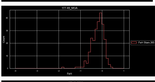
mass_separator: 128
kappa: 0.5
kappa0: 0.5
ref_points: 512
sub_points: 8
ref_clump: ref_clump: 57

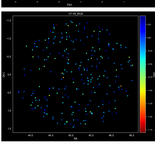
Dir: 0
Mass: 0
Mass: 10M
Mass: 20
Mass: 30
Mass: 40

==========

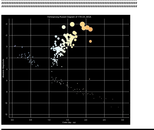


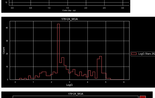


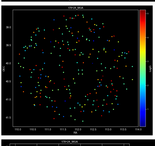


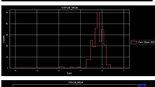


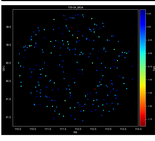
```
LTB30_M50
Programmer: ['Jenny']

main_separator: 55
halo_id: 0
subhalo_id: 0
vel_quantc: 410
vel_clump: 90
vel_quantc - vel_clump: 140

Nx: 5
Ny: 5
Nz: 25
Mvir: 29
Mc: 30
Mp: 1
```



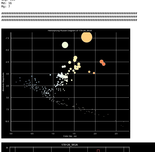


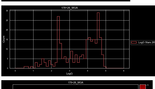


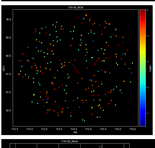


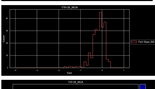


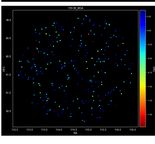
```
LTB30_M50
Programmer: ['Jenny']

main_separator: 55
halo_id: 0
subhalo_id: 0
vel_quantc: 410
vel_clump: 90
vel_quantc - vel_clump: 80

Nx: 5
Ny: 5
Nz: 25
Mvir: 29
Mc: 30
Mp: 1
```



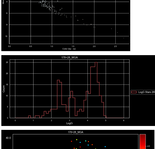


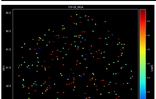


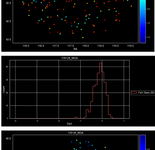


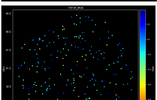


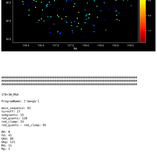
```
LTB30_M50
Programmer: ['Jenny']

main_separator: 60
halo_id: 0
subhalo_id: 0
vel_quantc: 410
vel_clump: 90
vel_quantc - vel_clump: 85

Nx: 5
Ny: 5
Nz: 25
Mvir: 29
Mc: 30
Mp: 1
```



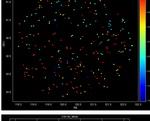


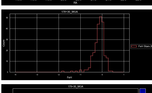


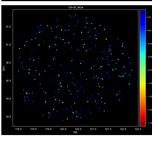




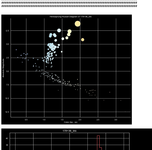
```
LTB30_M50
Programmer: ['Jenny']

main_separator: 65
halo_id: 0
subhalo_id: 0
vel_quantc: 410
vel_clump: 90
vel_quantc - vel_clump: 95

Nx: 5
Ny: 5
Nz: 25
Mvir: 29
Mc: 30
Mp: 1
```

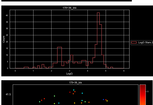


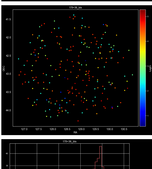


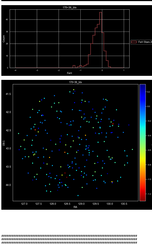


```
LTN_MS_PCA
Programfamm: ['value']
main_separator: 120
textsize: 5
textsep: 0.01
sub_separator: 40
red_clumps: 17
red_points = red_clump: 98
Nr: 0
Nr: 18
Nr: 19
Nr: 20
Nr: 5
```

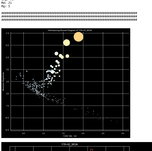


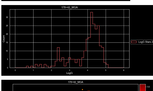


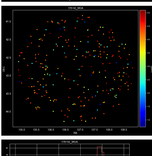


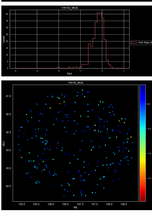



```
LTN_MS_PCA
Programfamm: ['energy']
main_separator: 125
textsize: 5
textsep: 0.01
sub_separator: 40
red_clumps: 16
red_points = red_clump: 59
Nr: 0
Nr: 18
Nr: 19
Nr: 20
Nr: 5
```

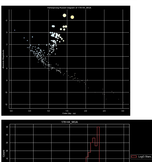


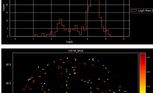


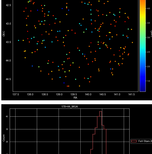


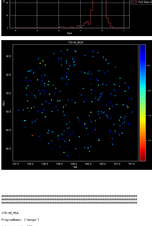



```
LTN_MS_PCA
Programfamm: ['energy']
main_separator: 120
textsize: 5
textsep: 0.01
sub_separator: 40
red_clumps: 18
red_points = red_clump: 64
Nr: 0
Nr: 18
Nr: 19
Nr: 20
Nr: 5
```

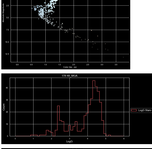


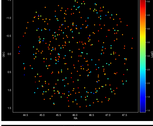


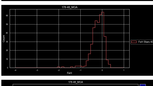


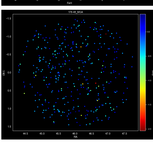



```
LTN_MS_PCA
Programfamm: ['energy']
main_separator: 130
textsize: 5
textsep: 0.01
sub_separator: 35
red_clumps: 16
red_points = red_clump: 98
Nr: 0
Nr: 18
Nr: 19
Nr: 20
Nr: 5
```

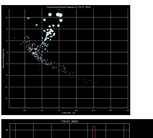


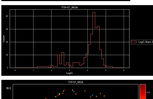


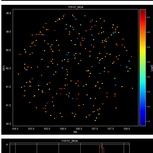


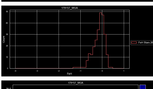


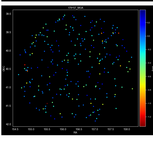

```
==========================================
==========================================

LT-R_MAP

Programmer: I.Yanger I

main_separator: 150
nx=pixel: 0
subpixel: 10
nx=pixel: 0
ref_pixel: 0
ref_pixels = ref_clump: 50

Dx: 1
Dy: 1
Dz: 0.5
Dmin: 0.5
Dmax: 2
Mx: 2
My: 2
Mz: 2
==========================================
==========================================
```



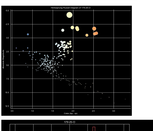


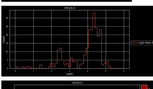


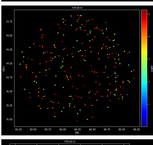


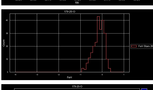


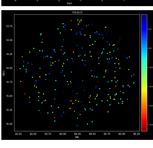

```
==========================================
==========================================

LT-R-10

Programmer: I.Yanger I

main_separator: 150
nx=pixel: 0
subpixel: 10
nx=pixel: 0
ref_pixel: 0
ref_pixels = ref_clump: 64

Dx: 1
Dy: 1
Dz: 0.5
Dmin: 0.5
Dmax: 2
Mx: 2
My: 2
Mz: 2
==========================================
==========================================
```



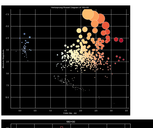


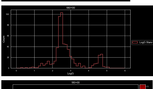


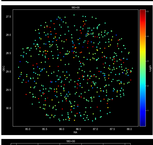


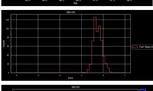


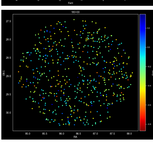

```
==========================================
==========================================

100-00

Programmer: I.Yanger I

main_separator: 70
nx=pixel: 0
subpixel: 10
ref_pixel: 0
ref_pixels = ref_clump: 357

Dx: 1
Dy: 1
Dz: 0.5
Dmin: 0.5
Dmax: 2
Mx: 2
My: 2
Mz: 2
==========================================
==========================================
```



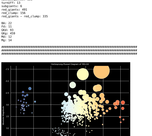


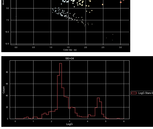


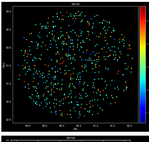


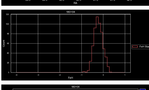


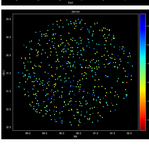

```
==========================================
==========================================

100-00

Programmer: I.Yanger I

main_separator: 100
nx=pixel: 0
subpixel: 0
nx=pixel: 0
ref_pixel: 100
ref_pixels = ref_clump: 335

Dx: 1
Dy: 1
Dz: 0.5
Dmin: 0.5
Dmax: 2
Mx: 2
My: 2
==========================================
==========================================
```











==========

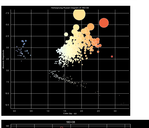
SDR-08

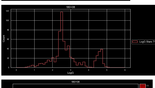
Programmer: ['sanger']

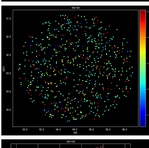
mem_sequence: 123
nsteps: 5
nsubpoints: 36
ncd_points: 571
nsd_points: 0
ncd_points - nsd_flag: 480

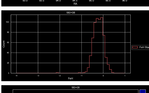
Mo: 22
Da: 28
Hr: 18
Min: 48
Sec: 28

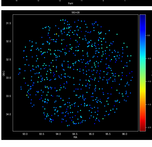
==========











==========

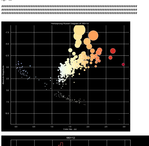
SDR-12

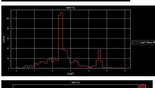
Programmer: ['sanger' 'kirk']

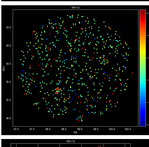
mem_sequence: 0
nsteps: 5
nsubpoints: 24
ncd_points: 571
nsd_points: 0
ncd_points - nsd_flag: 577

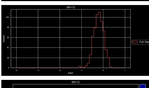
Mo: 22
Da: 28
Hr: 18
Min: 53
Sec: 8

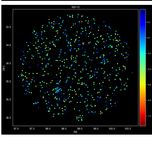
==========











==========

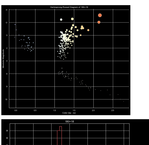
SDR-16

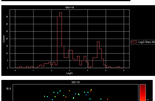
Programmer: ['sanger']

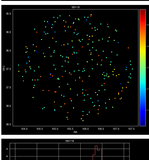
mem_sequence: 78
nsteps: 5
nsubpoints: 12
ncd_points: 571
nsd_points: 0
ncd_points - nsd_flag: 528

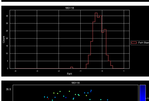
Mo: 22
Da: 28
Hr: 18
Min: 23
Sec: 28

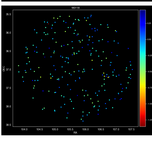
==========











==========

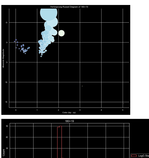
SDR-20

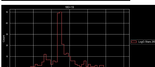
Programmer: ['sanger']

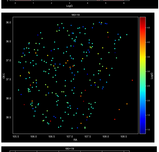
mem_sequence: 0
nsteps: 5
nsubpoints: 12
ncd_points: 571
nsd_points: 0
ncd_points - nsd_flag: 554

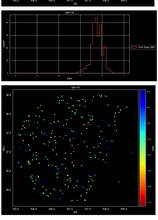
Mo: 22
Da: 28
Hr: 18
Min: 38
Sec: 8

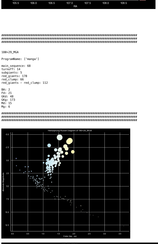
==========



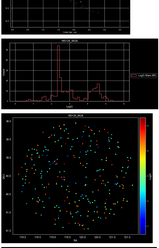


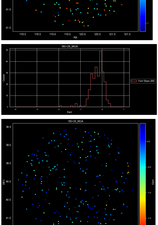


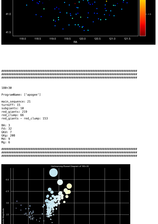


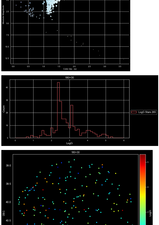


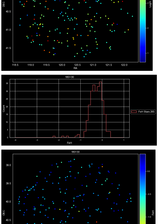
```
DBH-DS_MLM

Prog-subdomain: I-Sample I

main_parameters: 50
subparts: 10
subsubparts: 5
total_parts: 50
total_clumps: 112

Dir: 2
Step: 20
Step: 20
Max: 20
Max: 0
Min: 0
```



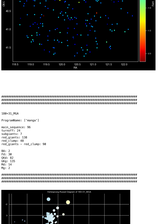


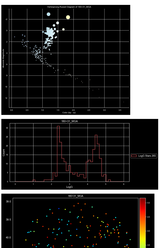


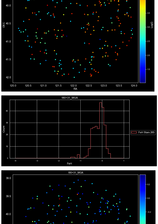


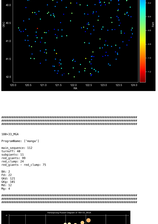


```
DBH-DS

Prog-subdomain: I-Sample II

main_parameters: 25
subparts: 10
subsubparts: 10
total_parts: 250
total_clumps: 333

Dir: 2
Step: 20
Step: 20
Max: 100
Max: 0
Min: 0
```

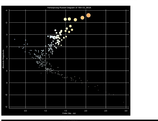




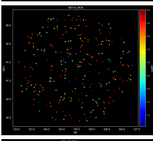


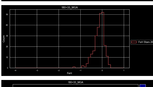


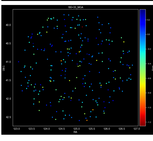
```
DBH-DS_MLM

Prog-subdomain: I-Sample I

main_parameters: 50
subparts: 10
subsubparts: 5
total_parts: 250
total_clumps: 98

Dir: 2
Step: 20
Step: 20
Max: 20
Max: 0
Min: 0
```



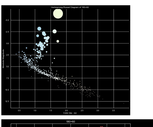

```
DBH-DS_MLM

Prog-subdomain: I-Sample I

main_parameters: 50
subparts: 10
subsubparts: 5
total_parts: 250
total_clumps: 75

Dir: 2
Step: 20
Step: 20
Max: 20
Max: 0
Min: 0
```

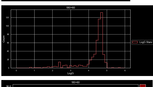


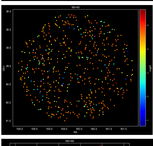


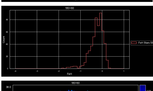


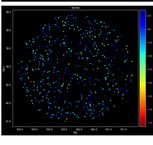

```
==========================================
==========================================

100:00

Programmer: ['sayan', 'Tarit']

main_separator: 0.4
turnoff: 35
sep_angle: 30
rad_galaxy: 150
rad_halo: 300
rad_gravity = rad_clump: 130

Mc: 0
Mh: 0
Mdg: 100
Mdh: 100
Mg: 0
Mg: 0
==========================================
==========================================
```



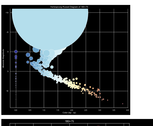


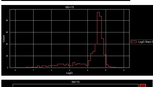


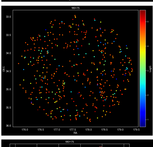


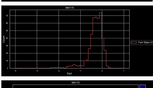


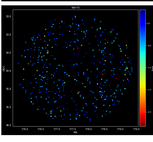
```
==========================================
==========================================

150:75

Programmer: ['sayan', 'Tarit']

main_separator: 104
turnoff: 35
sep_angle: 30
rad_galaxy: 150
rad_halo: 300
rad_gravity = rad_clump: 130

Mc: 0
Mh: 0
Mdg: 100
Mdh: 100
Mg: 100
Mg: 0
==========================================
==========================================
```



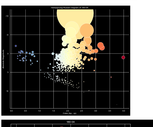


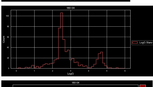


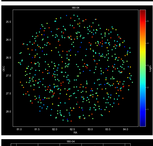


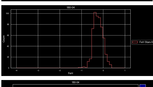


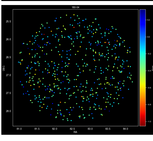
```
==========================================
==========================================

150:00

Programmer: ['sayan']

main_separator: 180
turnoff: 35
sep_angle: 30
rad_galaxy: 150
rad_halo: 300
rad_gravity = rad_clump: 155

Mc: 0
Mh: 0
Mdg: 100
Mdh: 100
Mg: 0
Mg: 0
==========================================
==========================================
```



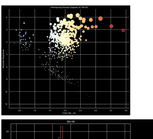


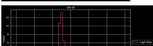


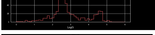


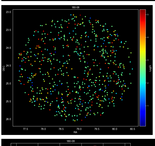


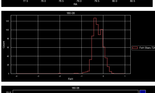
```
==========================================
==========================================

150:00

Programmer: ['sayan', 'sayan-narula']

main_separator: 185
turnoff: 35
sep_angle: 30
rad_galaxy: 150
rad_halo: 300
rad_gravity = rad_clump: 175

Mc: 0
Mh: 0
Mdg: 100
Mdh: 100
Mg: 0
Mg: 0
==========================================
==========================================
```

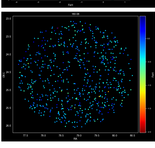


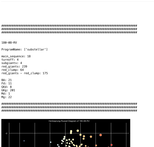




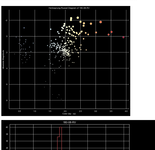


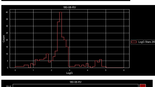


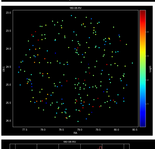


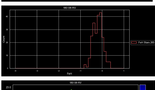


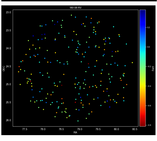
```
****************************************
2200-08-09

Programmer: ['Gabriel Cao']

main_separator: 30
totalPTS: 1
subgroups: 4
total_groups: 10
total_clumps: 10
TOT_points = total_clumps: 175

Mo: 21
Ma: 21
Ahu: 8
Mag: 20
Ma: 20
Mu: 10
****************************************
```



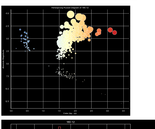


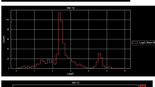


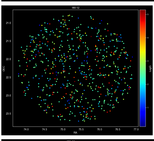


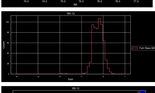


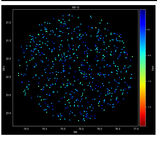
```
****************************************
2200-10

Programmer: ['Lanqian' 'Erin']

main_separator: 30
totalPTS: 1
subgroups: 4
total_groups: 10
total_clumps: 10
TOT_points = total_clumps: 177

Mo: 22
Ma: 22
Ahu: 8
Mag: 20
Ma: 20
Mu: 10
****************************************
```



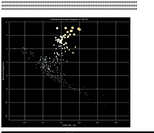


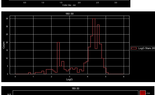


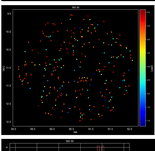


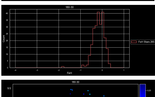


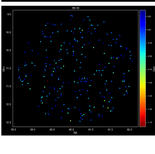
```
****************************************
2200-30

Programmer: ['Yelin']

main_separator: 130
totalPTS: 1
subgroups: 4
total_groups: 10
total_clumps: 10
TOT_points = total_clumps: 67

Mo: 5
Ma: 5
Ahu: 113
Mag: 5
Ma: 5
Mu: 5
****************************************
```



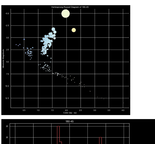


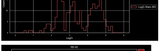


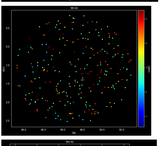


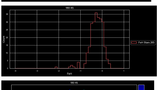


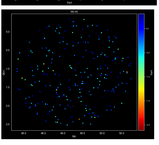
```
****************************************
2200-40

Programmer: ['Lanqian']

main_separator: 65
totalPTS: 1
subgroups: 4
total_groups: 10
total_clumps: 10
TOT_points = total_clumps: 115

Mo: 2
Ma: 2
Ahu: 57
Mag: 2
Ma: 2
Mu: 2
****************************************
```



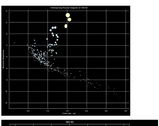


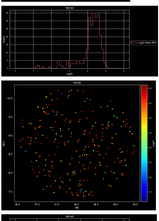


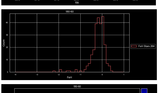


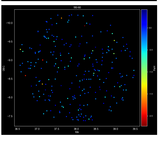



```
==================================================
==================================================

100-60

Programmer: ['Valir']

move_sequence: 60
turnoff: 0
subgoals: 0
max_points: 50
real_points: 0 real_time: 33

Dir: 1
Dim: 20
Obs: 127
Act: 18
Max: 50
Min: 0
==================================================
```

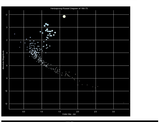


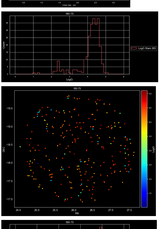


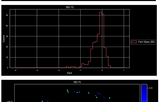


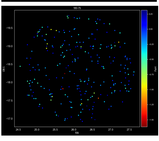



```
==================================================
==================================================

100-75

Programmer: ['Valir']

move_sequence: 45
turnoff: 0
subgoals: 0
max_points: 50
real_points: 0 real_time: 33

Dir: 1
Dim: 20
Obs: 127
Act: 18
Max: 50
Min: 0
==================================================
```

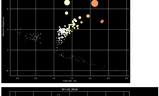


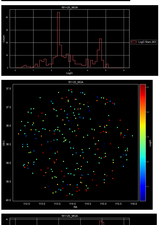


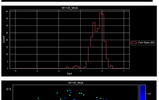


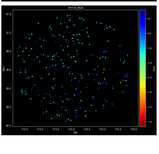



```
==================================================
==================================================

DOUBLE_MOA

Programmer: ['Vanqr']

move_sequence: 37
turnoff: 0
subgoals: 0
max_points: 50
real_points: 50 real_time: 133

Dir: 1
Dim: 20
Obs: 127
Act: 18
Max: 50
Min: 0
==================================================
```

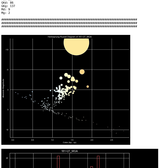


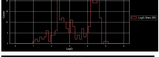


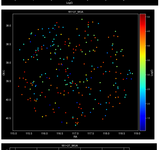


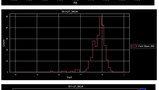


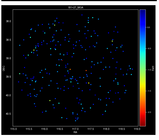

```
==================================================
==================================================

DOUBLE

Programmer: ['Vanqr']

move_sequence: 37
turnoff: 0
subgoals: 0
max_points: 50
real_points: 50 real_time: 100

Dir: 1
Dim: 20
Obs: 127
Act: 18
Max: 50
Min: 0
==================================================
```



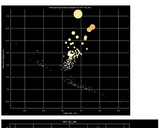


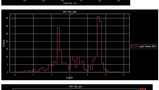


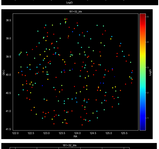


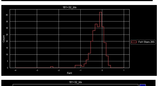


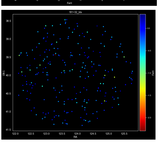
```
SD1:G2_pro

Programmer: [ salvia ]

main_sequence: 58
subgiants: 0
subgiants: 12
red_giants: 0
red_giants: 10
red_giants: [ red_clump: 112

Mv: 5
Mv: 10
Mv: 15
Mv: 20
Mv: 25
Mv: 0
```



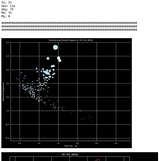


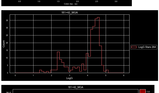


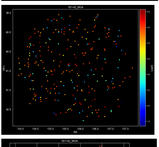


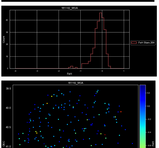


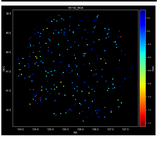
```
SD1:G2_MLA

Programmer: [ George ]

main_sequence: 158
subgiants: 0
subgiants: 0
red_giants: 0
red_giants: 0
red_giants: [ red_clump: 52

Mv: 5
Mv: 10
Mv: 15
Mv: 20
Mv: 25
Mv: 0
```



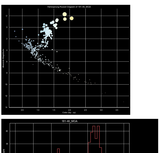


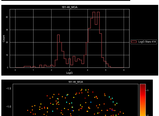


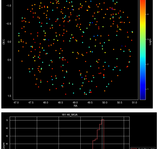


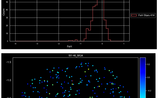


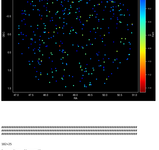
```
SD1:H2_MLA

Programmer: [ George ]

main_sequence: 95
subgiants: 0
subgiants: 0
red_giants: 0
red_giants: [ red_clump: 180

Mv: 5
Mv: 10
Mv: 15
Mv: 20
Mv: 25
Mv: 0
```



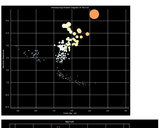


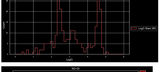


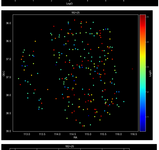


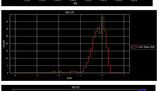


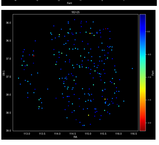
```
SD1:G5

Programmer: [ Sampler ]

main_sequence: 78
subgiants: 0
subgiants: 0
red_giants: 0
red_giants: 0
red_giants: [ red_clump: 137

Mv: 5
Mv: 10
Mv: 15
Mv: 20
Mv: 25
Mv: 0
```



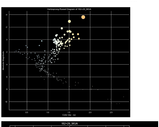


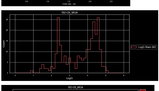


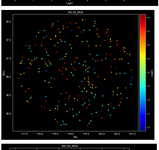


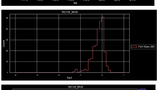


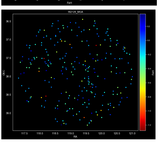

```
================================================================
================================================================

DEC-RA.MCA

Programmer: [ George ]

mca_separator: 32
nsteps: 28
nsteps_ra: 14
nsteps_dec: 14
ref_points: 38
ref_points - ref_clump: 85

Ra: 0
Dec: 0
date: 0
Min: 23
Max: 27

================================================================
================================================================
```



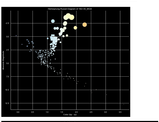


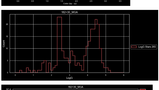


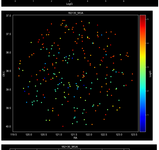


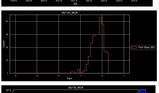


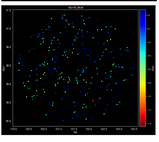

```
================================================================
================================================================

DEC-RA.MCA

Programmer: [ George ]

mca_separator: 33
nsteps: 28
nsteps_ra: 14
nsteps_dec: 14
ref_points: 38
ref_points - ref_clump: 84

Ra: 0
Dec: 0
date: 0
Min: 23
Max: 27

================================================================
================================================================
```



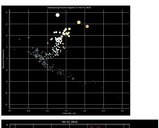


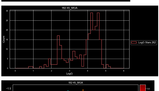


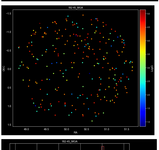


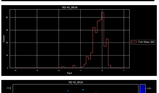


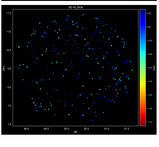

```
================================================================
================================================================

DEC-RA.MCA

Programmer: [ George ]

mca_separator: 112
nsteps: 28
nsteps_ra: 14
nsteps_dec: 14
ref_points: 38
ref_points - ref_clump: 72

Ra: 0
Dec: 0
date: 0
Min: 23
Max: 27

================================================================
================================================================
```



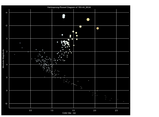


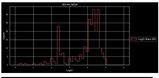


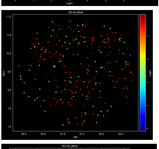


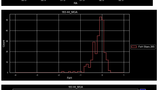


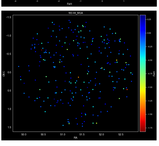

```
================================================================
================================================================

DEC-RA.MCA

Programmer: [ George ]

mca_separator: 118
nsteps: 28
nsteps_ra: 14
nsteps_dec: 14
ref_points: 38
ref_points - ref_clump: 55

Ra: 0
Dec: 0
date: 0
Min: 23
Max: 27

================================================================
================================================================
```



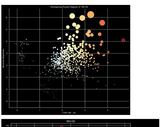


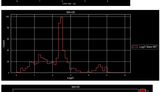


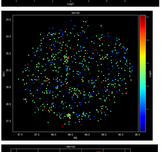


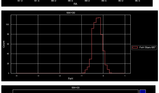


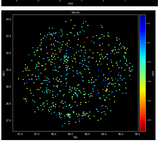

```
#################################################
#################################################

DEC-RA

Programmer: ['apogee' 'dist']

main_separator: 10
hunkpt: 2
subpixel: 0
rad_pixel: 10
rad_clump: 50
rad_pixel: = rad_clump: 400

Dec: 20
Ra: 0
Dec: 0
Ra: 360
Dec: 40
Ra: 120

#################################################
#################################################
```



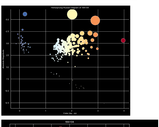


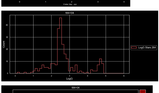


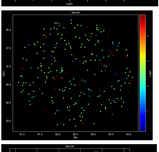


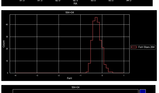


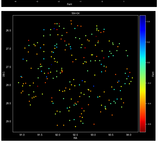

```
#################################################
#################################################

DEC-RA

Programmer: ['apogee']

main_separator: 10
hunkpt: 2
subpixel: 0
rad_pixel: 10
rad_clump: 50
rad_pixel: = rad_clump: 150

Dec: 20
Ra: 0
Dec: 0
Ra: 360
Dec: 40
Ra: 0

#################################################
#################################################
```



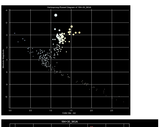


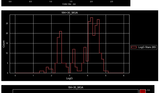


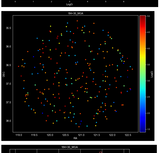


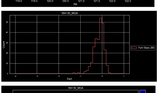


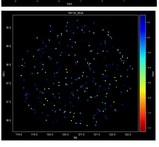

```
#################################################
#################################################

DEC-RA_MAP

Programmer: ['energy']

main_separator: 150
hunkpt: 2
subpixel: 0
rad_pixel: 10
rad_clump: 10
rad_pixel: = rad_clump: 64

Dec: 0
Ra: 0
Dec: 90
Ra: 360
Dec: 90
Ra: 0

#################################################
#################################################
```



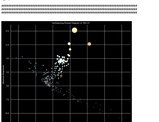




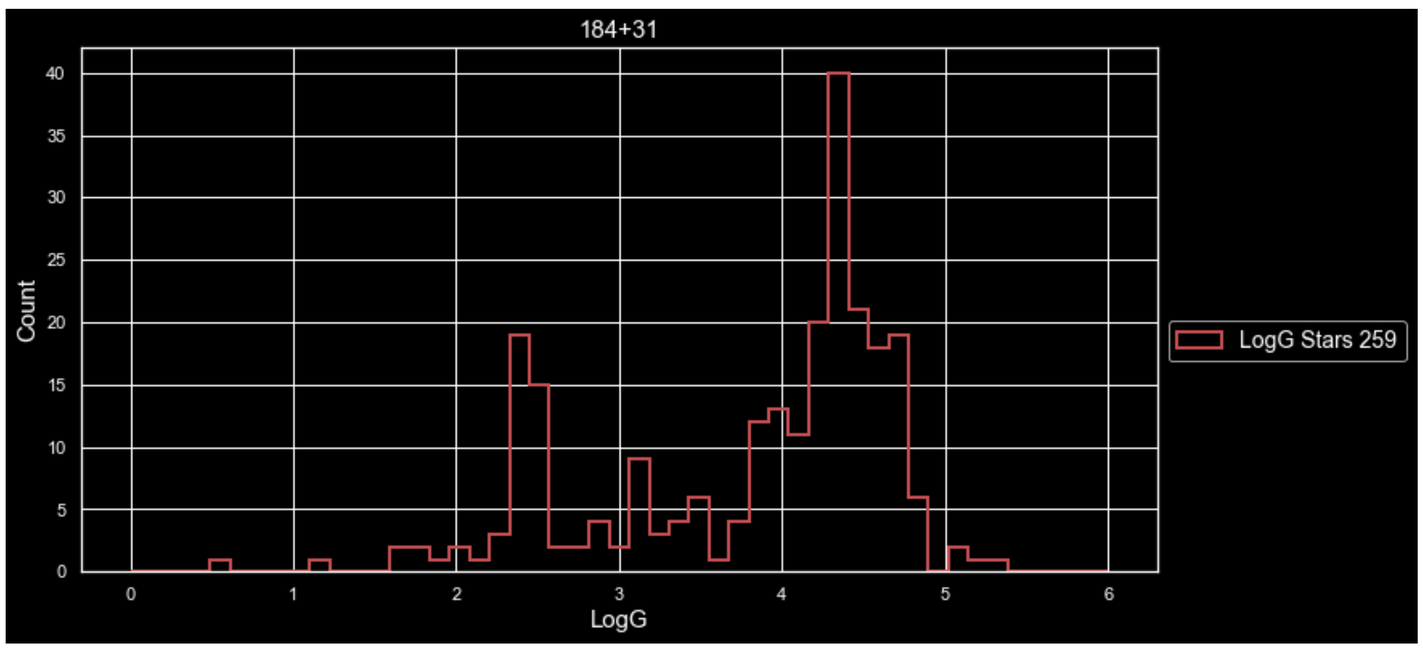


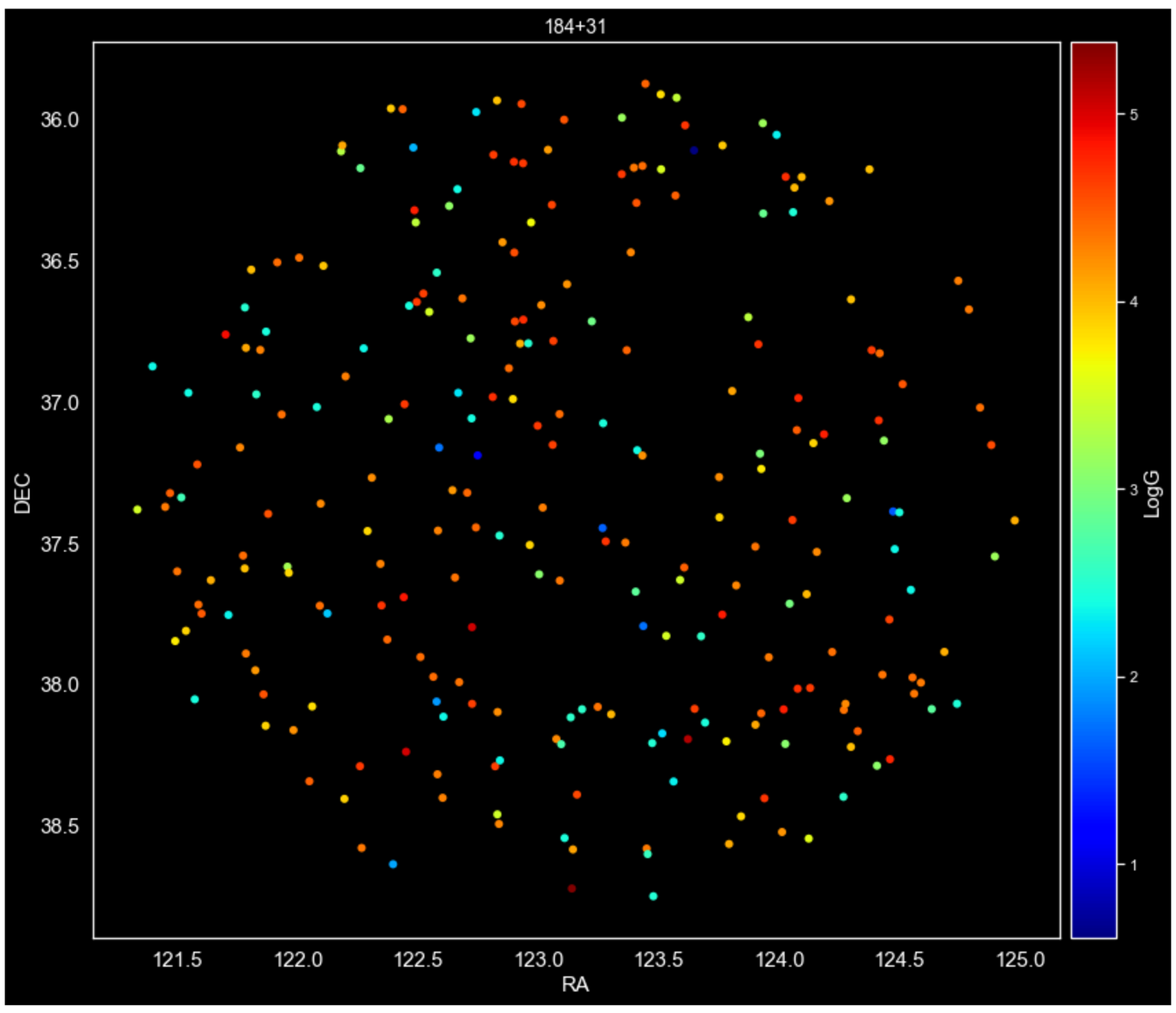


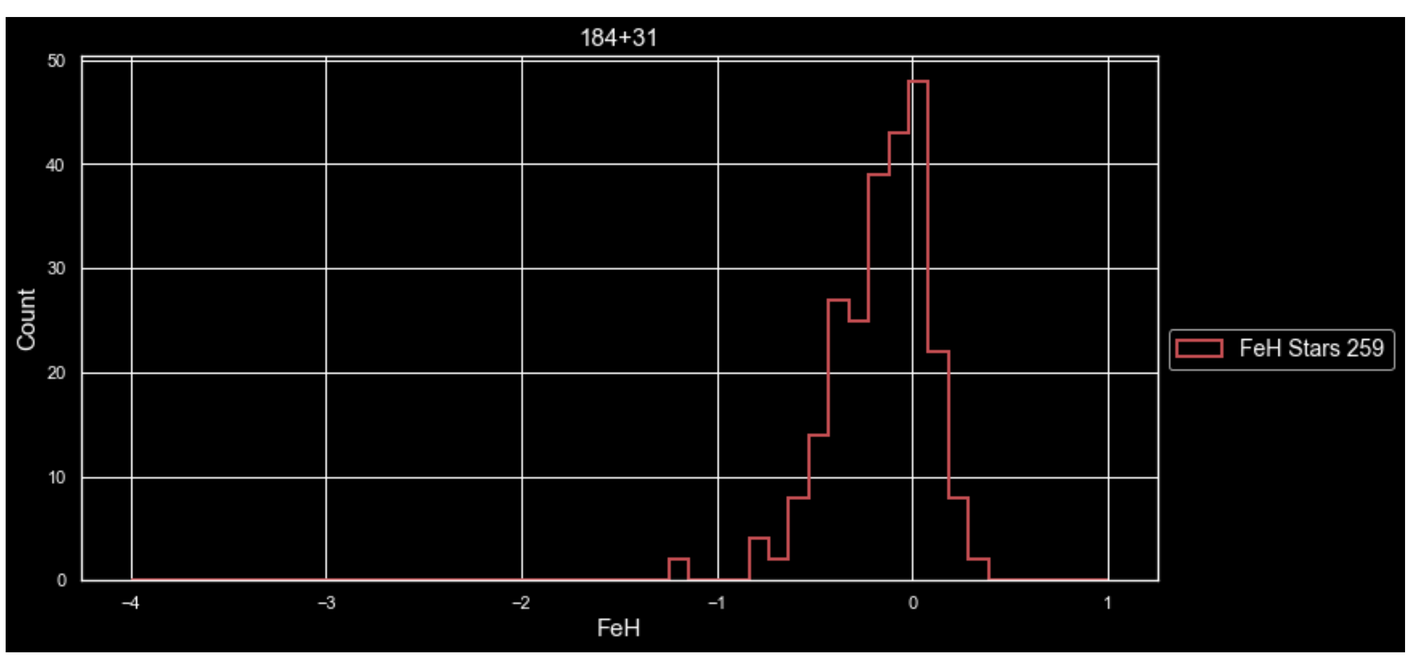

```
#################################################
#################################################

DEC-DC

Programmer: ['energy']

main_separator: 125
hunkpt: 2
subpixel: 0
rad_pixel: 10
rad_clump: 10
rad_pixel: = rad_clump: 64

Dec: 0
Ra: 0
Dec: 90
Ra: 360
Dec: 90
Ra: 0

#################################################
#################################################
```

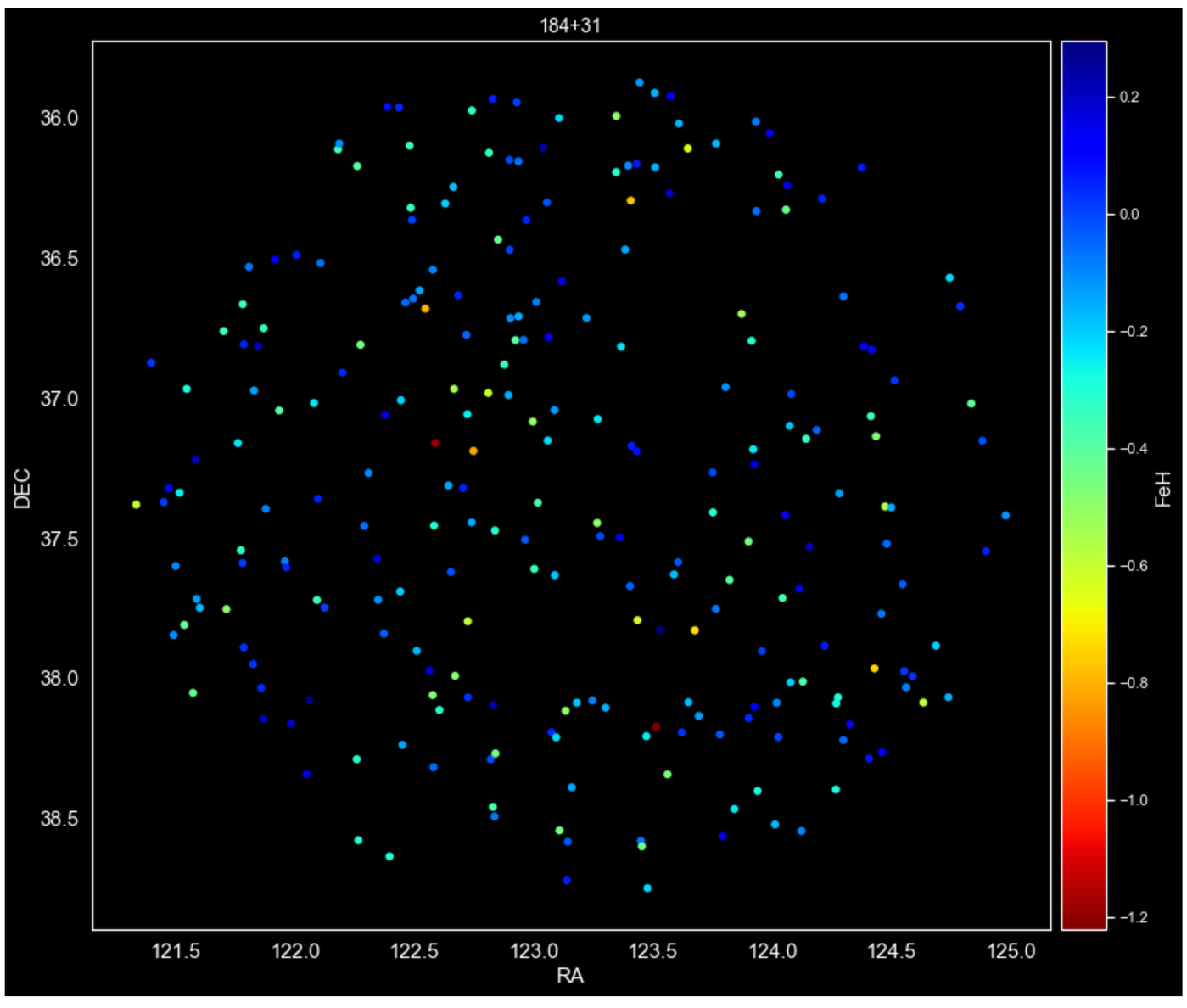


0.0
0.5
1.0
1.5
2.0
2.5
3.0
Color (bp - rp)


184+31
Count
LogG
LogG Stars 259


184+31
DEC
RA
LogG


184+31
Count
FeH
FeH Stars 259


184+31
DEC
RA
FeH

```
Done!
```

In [2]: