```
Python 3.7.8 (default, Jun 24 2020, 07:20:10)
[GCC 4.2.1 Compatible Apple LLVM 9.1.0 (clang-902.0.39.2)] on darwin.
Type "help", "copyright", "credits" or "license" for more information.
IPython 7.2.0 -- An enhanced Interactive Python.

In [1]: runfile('/Users/josephkarpinski/Desktop By Programme 3.py', wdir='/Users/josephkarpinski')
/Users/josephkarpinski/anaconda3/bin/python
Reading data from file

Class 1: 12
Class 2: 1
Class 3: 2140
Class 4: 5248
Class 5: 1248
Class 6: 2148
Class 7: 1248
Class 8: 1248
Class 9: 1248
Class 10: 1248

Fit KS22
Mag: 12148
Mag: 12148
Mag: 12148
Mag: 12148

Kfit Stars 47287

Mk: Stars 5730

Mg_g: Stars 5230
Mg_r: Stars 5230
Mg_i: Stars 5230
Mg_z: Stars 5230

GMAG: Stars 20894
RMAG: Stars 20894
IMAG: Stars 20894
ZMAG: Stars 12953

Mag_g: Stars 5860
Mag_r: Stars 5860
Mag_i: Stars 5860
Mag_z: Stars 5860

Mg_g: Stars 5230
Mg_r: Stars 7905
Mg_i: Stars 7905
Mg_z: Stars 7905

Mg_g: Stars 12268
Mg_r: Stars 12268
Mg_i: Stars 12268
Mg_z: Stars 12268

Fields: ['2MASS-ID' 'GMAG-KS' 'GMAG-KS-2' ... 'mecha_groups' 'ra:ra' 'ra:1']

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mecha: 12
rel_genre: 1080

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subgenre: 841
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rel_genre: 5129

mecha: 14614
mech_sequence: 4876
turnoff: 2092
subgenre: 1
rel_genre: 5230

mecha_dec: 2661
mech_sequence: 1062
turnoff: 30
subgenre: 1
rel_genre: 1280

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mech_sequence: 1
turnoff: 30
subgenre: 1
rel_genre: 1411

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mech_sequence: 3095
turnoff: 1248
subgenre: 1
rel_genre: 2453

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turnoff: 1248
subgenre: 1
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turnoff: 1248
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rel_genre: 4011

mecha: 10211
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turnoff: 1248
subgenre: 227
rel_genre: 10146

series: 10878
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turnoff: 1248
subgenre: 1
rel_genre: 1248

mpr: 1211
mech_sequence: 53
turnoff: 1
subgenre: 1
rel_genre: 1214

mar_cluster: 263
mech_sequence: 75
turnoff: 1
subgenre: 1
rel_genre: 1211

cluster_gc: 5470
mech_sequence: 4248
turnoff: 1248
subgenre: 1
rel_genre: 6278

cluster_gc: 3145
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rel_genre: 1248

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rel_genre: 1248

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rel_genre: 1248

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turnoff: 1248
subgenre: 1
rel_genre: 8262

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rel_genre: 1248

mr_dec: 204
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turnoff: 1
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mag_apparent: 14512
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turnoff: 1303
subgenre: 1
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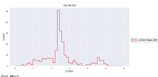
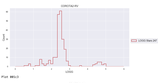


Plot 8BL0

Plot 8BL0

Plot 8BL0



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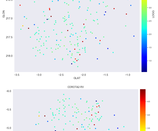

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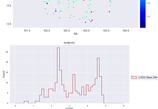
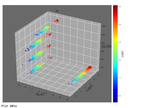
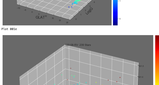


Plot 8BL4



Plot 8BC

Plot 8BM



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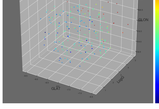

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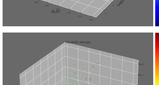
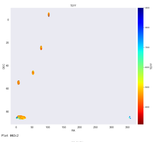
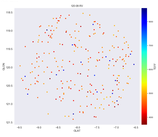
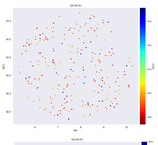
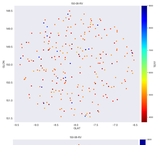


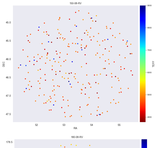


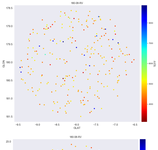
Plot 0012

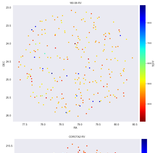


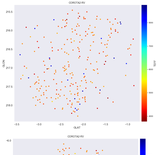


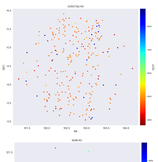


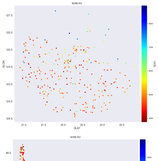


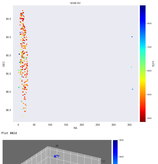




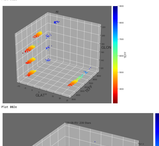








Plot 0014



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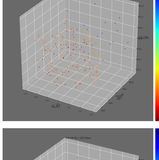

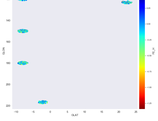

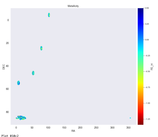

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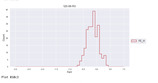

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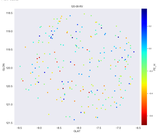

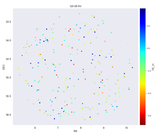

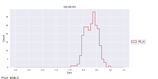

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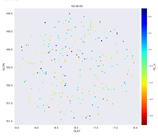

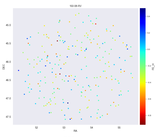

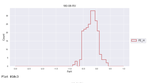

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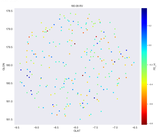

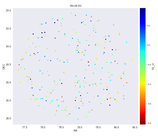

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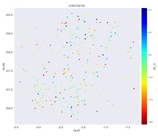

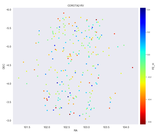

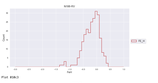

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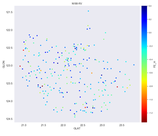

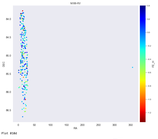

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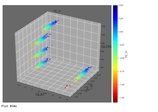

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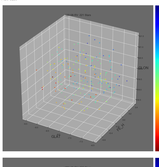

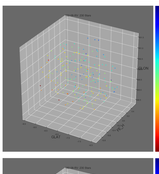

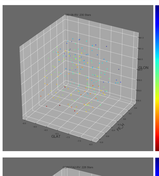

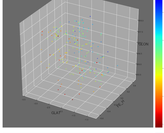
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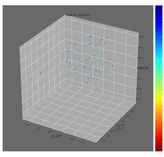
Program Assembly Chemical Abundance
Count
Bin
AL_FE_Base_SSC
AL_FE_Base_SSC


Fast Cards
Program Assembly Chemical Abundance
Count
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AL_FE_Base_SSC
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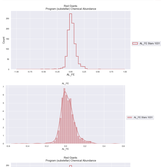
Fast Cards
Program Assembly Chemical Abundance
Count
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AL_FE_Base_SSC
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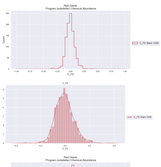
Fast Cards
Program Assembly Chemical Abundance
Count
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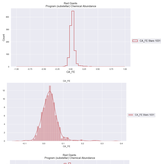
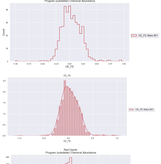
AL_FE_Base_SSC
AL_FE_Base_SSC


Fast Cards
Program Assembly Chemical Abundance
Count
Bin
CA_FE_Base_SSC
CA_FE_Base_SSC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Program Assembly Chemical Abundance
Count
Bin
CA_FE_Base_SSC
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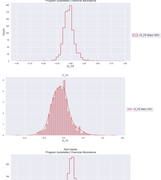
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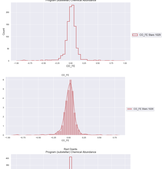
Program Assembly Chemical Abundance
Count
Bin
CE_FE_Base_BKC
CE_FE_Base_BKC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Program Assembly Chemical Abundance
Count
Bin
CE_FE_Base_SSC
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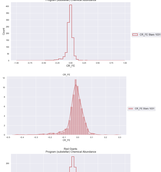
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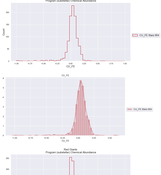
Program Assembly Chemical Abundance
Count
Bin
CL_FE_Base_SSC
CL_FE_Base_SSC


Fast Cards
Program Assembly Chemical Abundance
Count
Bin
CO_FE_Base_SSB
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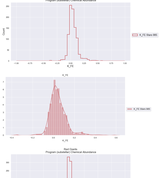
Fast Cards
Program Assembly Chemical Abundance
Count
Bin
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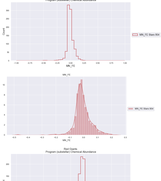
Fast Cards
Program Assembly Chemical Abundance
Count
Bin
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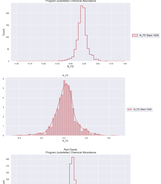
CR_FE_Base_SSC


Fast Cards
Program Assembly Chemical Abundance
Count
Bin
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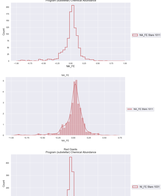
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Program Assembly Chemical Abundance
Count
Bin
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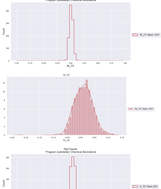
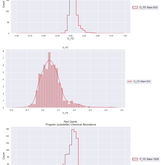

Fast Cards
Program Assembly Chemical Abundance
Count
Bin
MN_FE_Base_BKC
MN_FE_Base_BKC


Fast Cards
Program Assembly Chemical Abundance
Count
Bin
NI_FE_Base_SSB
NI_FE_Base_SSB

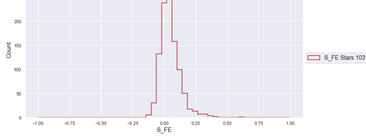
Fast Cards
Program Assembly Chemical Abundance
Count
Bin
SN_FE_Base_SSC
SN_FE_Base_SSC

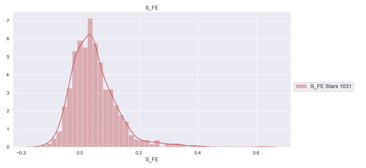
Fast Cards
Program Assembly Chemical Abundance
Count
Bin
TI_FE_Base_SSC
TI_FE_Base_SSC

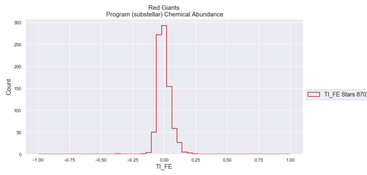
Fast Cards
Program Assembly Chemical Abundance
Count
Bin
V_FE_Base_BKC
V_FE_Base_BKC

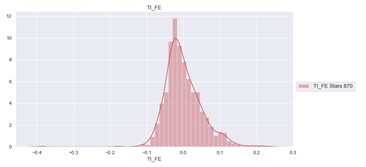
Fast Cards
Program Assembly Chemical Abundance
Count
Bin
ZN_FE_Base_SSC
ZN_FE_Base_SSC

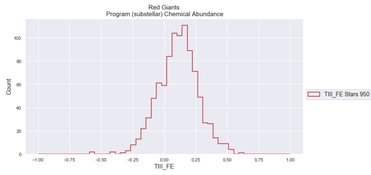
Fast Cards
Program Assembly Chemical Abundance
Count
Bin
ZR_FE_Base_SSC
ZR_FE_Base_SSC

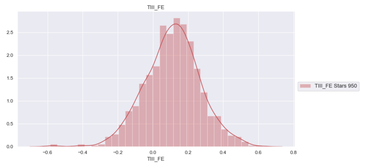


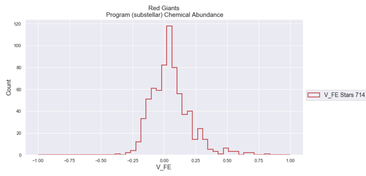


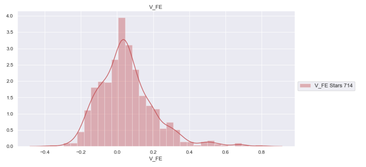


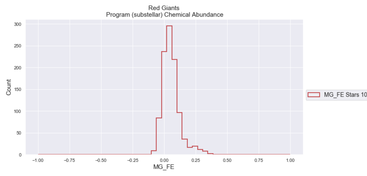


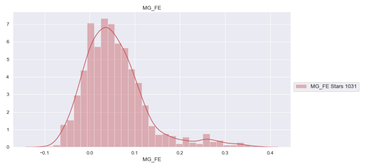


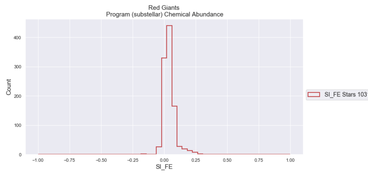


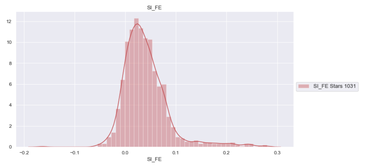










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Class O: 0
Class B: 0
Class A: 55
Class F: 40
Class G: 15
Class K: 775
Class M: 264
Class L: 0
Class T: 0

Fd: 29
GKd: 75
GKg: 975
Md: 9
Mg: 69

All: Stars 1229

BA: Stars 72

Fd_a: Stars 7
Fd_b: Stars 10
Fd_c: Stars 3
Fd_d: Stars 9

GKd_a: Stars 10
GKd_b: Stars 30
GKd_c: Stars 25
GKd_d: Stars 10

GKg_a: Stars 179
GKg_b: Stars 299
GKg_c: Stars 374
GKg_d: Stars 123

Md_a: Stars 1
Md_b: Stars 4
Md_c: Stars 3
Md_d: Stars 1

Mg_a: Stars 11
Mg_b: Stars 25
Mg_c: Stars 20
Mg_d: Stars 13

Fields: ['120-08-RV' '150-08-RV' '180-08-RV' 'COROTA2-RV' 'N188-RV']

Program: substellar


SubStellar Companions APOGEE2_TARGET3 bit 29
PI: N. Troup (Salisbury University)
This ancillary program expands upon the APOGEE Substellar Companion goal science program.
The Substellar companion program is acquiring RV observations over a long temporal baseline for field stars.
This ancillary program includes stars in a variety of star clusters, whose properties span a wide range of ages,
metallicities, and stellar densities. With this data, we hope to determine the role of the stellar environment
plays in the formation and evolution of stellar systems. Critically, this program extended the temporal
baseline for targets observed in APOGEE-1 and increased the number of RV measurements to enable robust
orbital fits.

Done!
```

In [2]: