```
Python 3.7.8 (default, Jun 28 2020, 07:20:05)
[GCC 4.2.1 Compatible Apple LLVM 9.0.0 (clang-900.0.39.2)] on darwin
Type "help", "copyright", "credits" or "license" for more information.
IPython 7.18.0 -- An enhanced Interactive Python.

In [1]: run/Users/jonathanpolonsky/Keppler-Mq Target Program-MR.py', wdir='/Users/jonathanpolonsky/
/Users/jonathanpolonsky/Lab/venv/bin/bin/python

Index: APOGEE_TARGET1 to APOGEE_TARGET2

* APOGEE_DEAD_DENSE APOGEE_TARGET1 bit 0 , 'APOGEE_TARGET1', 1)
* APOGEE_SEYFERT APOGEE_TARGET1 bit 1 , 'APOGEE_TARGET1', 2)
* APOGEE_WTD_DENSE APOGEE_TARGET1 bit 2 , 'APOGEE_TARGET1', 3)
* APOGEE_WTD_SPARSE APOGEE_TARGET1 bit 3 , 'APOGEE_TARGET1', 4)
* APOGEE_WARM_CLUMP APOGEE_TARGET1 bit 4 , 'APOGEE_TARGET1', 5)
* APOGEE_WARM_DISK APOGEE_TARGET1 bit 5 , 'APOGEE_TARGET1', 6)
* APOGEE_BIC_CLUSTER APOGEE_TARGET1 bit 6 , 'APOGEE_TARGET1', 7)
* APOGEE_BIC APOGEE_TARGET1 bit 7 , 'APOGEE_TARGET1', 8)
* APOGEE_DRIVEN_SPIRAL APOGEE_TARGET1 bit 8 , 'APOGEE_TARGET1', 9)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 9 , 'APOGEE_TARGET1', 10)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 10 , 'APOGEE_TARGET1', 11)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 11 , 'APOGEE_TARGET1', 12)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 12 , 'APOGEE_TARGET1', 13)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 13 , 'APOGEE_TARGET1', 14)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 14 , 'APOGEE_TARGET1', 15)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 15 , 'APOGEE_TARGET1', 16)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 16 , 'APOGEE_TARGET1', 17)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 17 , 'APOGEE_TARGET1', 18)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 18 , 'APOGEE_TARGET1', 19)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 19 , 'APOGEE_TARGET1', 20)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 20 , 'APOGEE_TARGET1', 21)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 21 , 'APOGEE_TARGET1', 22)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 22 , 'APOGEE_TARGET1', 23)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 23 , 'APOGEE_TARGET1', 24)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 24 , 'APOGEE_TARGET1', 25)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 25 , 'APOGEE_TARGET1', 26)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 26 , 'APOGEE_TARGET1', 27)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 27 , 'APOGEE_TARGET1', 28)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 28 , 'APOGEE_TARGET1', 29)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 29 , 'APOGEE_TARGET1', 30)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 30 , 'APOGEE_TARGET1', 31)
* APOGEE_Galactic Center APOGEE_TARGET1 bit 31 , 'APOGEE_TARGET1', 32)
* APOGEE_BULGE_GIANT APOGEE_TARGET2 bit 0 , 'APOGEE_TARGET2', 33)
* APOGEE_BULGE_SUPER_GIANT APOGEE_TARGET2 bit 1 , 'APOGEE_TARGET2', 34)
* APOGEE_COMMISSIONING APOGEE_TARGET2 bit 2 , 'APOGEE_TARGET2', 35)
* APOGEE_COMMISSIONING APOGEE_TARGET2 bit 3 , 'APOGEE_TARGET2', 36)
* APOGEE_DEVICE2M_FOR_DRAGO APOGEE_TARGET2 bit 4 , 'APOGEE_TARGET2', 37)
* APOGEE_DEVICE2M_FOR_DRAGO APOGEE_TARGET2 bit 5 , 'APOGEE_TARGET2', 38)
* APOGEE_FIX_ALSTATION_FOR APOGEE_TARGET2 bit 6 , 'APOGEE_TARGET2', 39)
* APOGEE_FIX_ALSTATION_FOR APOGEE_TARGET2 bit 7 , 'APOGEE_TARGET2', 40)
* APOGEE_MC_MONITOR_APOGEE APOGEE_TARGET2 bit 8 , 'APOGEE_TARGET2', 41)
* APOGEE_MC_MONITOR_APOGEE APOGEE_TARGET2 bit 9 , 'APOGEE_TARGET2', 42)
* APOGEE_BULGE_SA APOGEE_TARGET2 bit 10 , 'APOGEE_TARGET2', 43)
* APOGEE_BULGE_SA APOGEE_TARGET2 bit 11 , 'APOGEE_TARGET2', 44)
```

==========

```
Apogee Target Bit Number Distribution Histogram
```

* APOGEE_DEAD_DENSE APOGEE_TARGET1 bit 0 , 'APOGEE_TARGET1', 1)

```
Field, ['RAD:dec' 'RAD:ra' 'DEG:dec' 'DEG:ra' 'HMS:dec' 'HMS:ra' 'DEG:dec'
'DEG:ra' 'MFLAG' 'MRADIUS' 'DEG:dec' 'DEG:ra' 'DEGREE' 'DEG:dec' 'DMS:dec'
'DEG:ra' 'DEG:dec' 'DEG:ra' 'DEG:dec' 'DEG:ra' 'DEG:dec' 'DEG:ra' 'DEG
```

Status: 12853

mask_sequence: 0157
subsystem: 01
subsystem: 00
mode: 00
mode: 00
mode

['APOGEE_DWARF APOGEE_TARGET1 bit 11', 'APOGEE_TARGET1', 21]

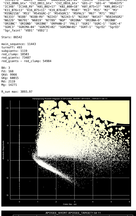
Fields: ['RA', 'DEC', 'RV', 'RV_ERR', 'RV_NVISIT', 'RV_CHI2', 'RV_SNR', 'RV_VRAD', 'RV_VERR', 'RV_VSHIFT', 'RV_VSHIFT_ERR', 'RV_VSHIFT_NVISIT', 'RV_VSHIFT_CHI2', 'RV_VSHIFT_SNR', 'RV_VRAD_ERR', 'RV_VRAD_NVISIT', 'RV_VRAD_CHI2', 'RV_VRAD_SNR', 'RV_TEFF', 'RV_TEFF_ERR', 'RV_LOGG', 'RV_LOGG_ERR', 'RV_FEH', 'RV_FEH_ERR', 'RV_ALPHAFE', 'RV_ALPHAFE_ERR', 'RV_CARBON', 'RV_CARBON_ERR', 'RV_NITROGEN', 'RV_NITROGEN_ERR', 'RV_MAGFIELD', 'RV_MAGFIELD_ERR', 'RV_FLAG', 'RV_FLAG_ERR', 'RV_FLAG_NVISIT', 'RV_FLAG_CHI2', 'RV_FLAG_SNR', 'RV_FLAG_VRAD', 'RV_FLAG_VERR', 'RV_FLAG_VSHIFT', 'RV_FLAG_VSHIFT_ERR', 'RV_FLAG_VRAD_ERR', 'RV_FLAG_TEFF', 'RV_FLAG_TEFF_ERR', 'RV_FLAG_LOGG', 'RV_FLAG_LOGG_ERR', 'RV_FLAG_FEH', 'RV_FLAG_FEH_ERR', 'RV_FLAG_ALPHAFE', 'RV_FLAG_ALPHAFE_ERR', 'RV_FLAG_CARBON', 'RV_FLAG_CARBON_ERR', 'RV_FLAG_NITROGEN', 'RV_FLAG_NITROGEN_ERR', 'RV_FLAG_MAGFIELD', 'RV_FLAG_MAGFIELD_ERR', 'RV_COMMENTS', 'RV_FEH_MDF', 'RV_FEH_MDF_ERR', 'RV_FEH_MDF_NVISIT', 'RV_FEH_MDF_CHI2', 'RV_FEH_MDF_SNR', 'RV_FEH_MDF_FLAG', 'RV_FEH_MDF_FLAG_ERR', 'RV_FEH_MDF_FLAG_NVISIT', 'RV_FEH_MDF_FLAG_CHI2', 'RV_FEH_MDF_FLAG_SNR', 'RV_FEH_MDF_FLAG_FEH', 'RV_FEH_MDF_FLAG_FEH_ERR', 'RV_FEH_MDF_FLAG_LOGG', 'RV_FEH_MDF_FLAG_LOGG_ERR', 'RV_FEH_MDF_FLAG_MAGFIELD', 'RV_FEH_MDF_FLAG_MAGFIELD_ERR', 'RV_FEH_MDF_FLAG_COMMENTS', 'RV_LOGG_MDF', 'RV_LOGG_MDF_ERR', 'RV_LOGG_MDF_NVISIT', 'RV_LOGG_MDF_CHI2', 'RV_LOGG_MDF_SNR', 'RV_LOGG_MDF_FLAG', 'RV_LOGG_MDF_FLAG_ERR', 'RV_LOGG_MDF_FLAG_NVISIT', 'RV_LOGG_MDF_FLAG_CHI2', 'RV_LOGG_MDF_FLAG_SNR', 'RV_LOGG_MDF_FLAG_FEH', 'RV_LOGG_MDF_FLAG_FEH_ERR', 'RV_LOGG_MDF_FLAG_LOGG', 'RV_LOGG_MDF_FLAG_LOGG_ERR', 'RV_LOGG_MDF_FLAG_MAGFIELD', 'RV_LOGG_MDF_FLAG_MAGFIELD_ERR', 'RV_LOGG_MDF_FLAG_COMMENTS', 'RV_ALPHAFE_MDF', 'RV_ALPHAFE_MDF_ERR', 'RV_ALPHAFE_MDF_NVISIT', 'RV_ALPHAFE_MDF_CHI2', 'RV_ALPHAFE_MDF_SNR', 'RV_ALPHAFE_MDF_FLAG', 'RV_ALPHAFE_MDF_FLAG_ERR', 'RV_ALPHAFE_MDF_FLAG_NVISIT', 'RV_ALPHAFE_MDF_FLAG_CHI2', 'RV_ALPHAFE_MDF_FLAG_SNR', 'RV_ALPHAFE_MDF_FLAG_FEH', 'RV_ALPHAFE_MDF_FLAG_FEH_ERR', 'RV_ALPHAFE_MDF_FLAG_LOGG', 'RV_ALPHAFE_MDF_FLAG_LOGG_ERR', 'RV_ALPHAFE_MDF_FLAG_MAGFIELD', 'RV_ALPHAFE_MDF_FLAG_MAGFIELD_ERR', 'RV_ALPHAFE_MDF_FLAG_COMMENTS', 'RV_CARBON_MDF', 'RV_CARBON_MDF_ERR', 'RV_CARBON_MDF_NVISIT', 'RV_CARBON_MDF_CHI2', 'RV_CARBON_MDF_SNR', 'RV_CARBON_MDF_FLAG', 'RV_CARBON_MDF_FLAG_ERR', 'RV_CARBON_MDF_FLAG_NVISIT', 'RV_CARBON_MDF_FLAG_CHI2', 'RV_CARBON_MDF_FLAG_SNR', 'RV_CARBON_MDF_FLAG_FEH', 'RV_CARBON_MDF_FLAG_FEH_ERR', 'RV_CARBON_MDF_FLAG_LOGG', 'RV_CARBON_MDF_FLAG_LOGG_ERR', 'RV_CARBON_MDF_FLAG_MAGFIELD', 'RV_CARBON_MDF_FLAG_MAGFIELD_ERR', 'RV_CARBON_MDF_FLAG_COMMENTS', 'RV_NITROGEN_MDF', 'RV_NITROGEN_MDF_ERR', 'RV_NITROGEN_MDF_NVISIT', 'RV_NITROGEN_MDF_CHI2', 'RV_NITROGEN_MDF_SNR', 'RV_NITROGEN_MDF_FLAG', 'RV_NITROGEN_MDF_FLAG_ERR', 'RV_NITROGEN_MDF_FLAG_NVISIT', 'RV_NITROGEN_MDF_FLAG_CHI2', 'RV_NITROGEN_MDF_FLAG_SNR', 'RV_NITROGEN_MDF_FLAG_FEH', 'RV_NITROGEN_MDF_FLAG_FEH_ERR', 'RV_NITROGEN_MDF_FLAG_LOGG', 'RV_NITROGEN_MDF_FLAG_LOGG_ERR', 'RV_NITROGEN_MDF_FLAG_MAGFIELD', 'RV_NITROGEN_MDF_FLAG_MAGFIELD_ERR', 'RV_NITROGEN_MDF_FLAG_COMMENTS', 'RV_MAGFIELD_MDF', 'RV_MAGFIELD_MDF_ERR', 'RV_MAGFIELD_MDF_NVISIT', 'RV_MAGFIELD_MDF_CHI2', 'RV_MAGFIELD_MDF_SNR', 'RV_MAGFIELD_MDF_FLAG', 'RV_MAGFIELD_MDF_FLAG_ERR', 'RV_MAGFIELD_MDF_FLAG_NVISIT', 'RV_MAGFIELD_MDF_FLAG_CHI2', 'RV_MAGFIELD_MDF_FLAG_SNR', 'RV_MAGFIELD_MDF_FLAG_FEH', 'RV_MAGFIELD_MDF_FLAG_FEH_ERR', 'RV_MAGFIELD_MDF_FLAG_LOGG', 'RV_MAGFIELD_MDF_FLAG_LOGG_ERR', 'RV_MAGFIELD_MDF_FLAG_MAGFIELD', 'RV_MAGFIELD_MDF_FLAG_MAGFIELD_ERR', 'RV_MAGFIELD_MDF_FLAG_COMMENTS', 'RV_COMMENTS', 'RV_COMMENTS_ERR', 'RV_COMMENTS_NVISIT', 'RV_COMMENTS_CHI2', 'RV_COMMENTS_SNR', 'RV_COMMENTS_FLAG', 'RV_COMMENTS_FLAG_ERR', 'RV_COMMENTS_FLAG_NVISIT', 'RV_COMMENTS_FLAG_CHI2', 'RV_COMMENTS_FLAG_SNR', 'RV_COMMENTS_FLAG_FEH', 'RV_COMMENTS_FLAG_FEH_ERR', 'RV_COMMENTS_FLAG_LOGG', 'RV_COMMENTS_FLAG_LOGG_ERR', 'RV_COMMENTS_FLAG_MAGFIELD', 'RV_COMMENTS_FLAG_MAGFIELD_ERR', 'RV_COMMENTS_FLAG_COMMENTS']

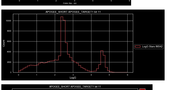
Stars: 4453

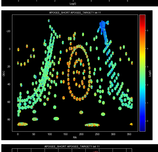
main_sequence: 11443
giants: 1010
subgiants: 2192
red_clump: 3040
rv_binary: 0
red_giants: red_clump: 5050

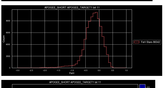
RV: 0
Fe: 0
Mg: 0
Mg_NMFS
Mg_NMFS
Mg: 10171

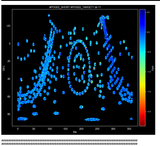
N_sat max: 3855.87











['APOGEE_INTERMEDIATE APOGEE_TARGET1 bit 11', 'APOGEE_TARGET1', 11]

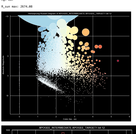
Fields: ['RA', 'DEC', 'RV', 'RV_ERR', 'RV_NVISIT', 'RV_CHI2', 'RV_SNR', 'RV_VRAD', 'RV_VERR', 'RV_VSHIFT', 'RV_VSHIFT_ERR', 'RV_VSHIFT_NVISIT', 'RV_VSHIFT_CHI2', 'RV_VSHIFT_SNR', 'RV_VRAD_ERR', 'RV_VRAD_NVISIT', 'RV_VRAD_CHI2', 'RV_VRAD_SNR', 'RV_TEFF', 'RV_TEFF_ERR', 'RV_LOGG', 'RV_LOGG_ERR', 'RV_FEH', 'RV_FEH_ERR', 'RV_ALPHAFE', 'RV_ALPHAFE_ERR', 'RV_CARBON', 'RV_CARBON_ERR', 'RV_NITROGEN', 'RV_NITROGEN_ERR', 'RV_MAGFIELD', 'RV_MAGFIELD_ERR', 'RV_FLAG', 'RV_FLAG_ERR', 'RV_FLAG_NVISIT', 'RV_FLAG_CHI2', 'RV_FLAG_SNR', 'RV_FLAG_VRAD', 'RV_FLAG_VERR', 'RV_FLAG_VSHIFT', 'RV_FLAG_VSHIFT_ERR', 'RV_FLAG_VRAD_ERR', 'RV_FLAG_TEFF', 'RV_FLAG_TEFF_ERR', 'RV_FLAG_LOGG', 'RV_FLAG_LOGG_ERR', 'RV_FLAG_FEH', 'RV_FLAG_FEH_ERR', 'RV_FLAG_ALPHAFE', 'RV_FLAG_ALPHAFE_ERR', 'RV_FLAG_CARBON', 'RV_FLAG_CARBON_ERR', 'RV_FLAG_NITROGEN', 'RV_FLAG_NITROGEN_ERR', 'RV_FLAG_MAGFIELD', 'RV_FLAG_MAGFIELD_ERR', 'RV_COMMENTS', 'RV_FEH_MDF', 'RV_FEH_MDF_ERR', 'RV_FEH_MDF_NVISIT', 'RV_FEH_MDF_CHI2', 'RV_FEH_MDF_SNR', 'RV_FEH_MDF_FLAG', 'RV_FEH_MDF_FLAG_ERR', 'RV_FEH_MDF_FLAG_NVISIT', 'RV_FEH_MDF_FLAG_CHI2', 'RV_FEH_MDF_FLAG_SNR', 'RV_FEH_MDF_FLAG_FEH', 'RV_FEH_MDF_FLAG_FEH_ERR', 'RV_FEH_MDF_FLAG_LOGG', 'RV_FEH_MDF_FLAG_LOGG_ERR', 'RV_FEH_MDF_FLAG_MAGFIELD', 'RV_FEH_MDF_FLAG_MAGFIELD_ERR', 'RV_FEH_MDF_FLAG_COMMENTS', 'RV_LOGG_MDF', 'RV_LOGG_MDF_ERR', 'RV_LOGG_MDF_NVISIT', 'RV_LOGG_MDF_CHI2', 'RV_LOGG_MDF_SNR', 'RV_LOGG_MDF_FLAG', 'RV_LOGG_MDF_FLAG_ERR', 'RV_LOGG_MDF_FLAG_NVISIT', 'RV_LOGG_MDF_FLAG_CHI2', 'RV_LOGG_MDF_FLAG_SNR', 'RV_LOGG_MDF_FLAG_FEH', 'RV_LOGG_MDF_FLAG_FEH_ERR', 'RV_LOGG_MDF_FLAG_LOGG', 'RV_LOGG_MDF_FLAG_LOGG_ERR', 'RV_LOGG_MDF_FLAG_MAGFIELD', 'RV_LOGG_MDF_FLAG_MAGFIELD_ERR', 'RV_LOGG_MDF_FLAG_COMMENTS', 'RV_ALPHAFE_MDF', 'RV_ALPHAFE_MDF_ERR', 'RV_ALPHAFE_MDF_NVISIT', 'RV_ALPHAFE_MDF_CHI2', 'RV_ALPHAFE_MDF_SNR', 'RV_ALPHAFE_MDF_FLAG', 'RV_ALPHAFE_MDF_FLAG_ERR', 'RV_ALPHAFE_MDF_FLAG_NVISIT', 'RV_ALPHAFE_MDF_FLAG_CHI2', 'RV_ALPHAFE_MDF_FLAG_SNR', 'RV_ALPHAFE_MDF_FLAG_FEH', 'RV_ALPHAFE_MDF_FLAG_FEH_ERR', 'RV_ALPHAFE_MDF_FLAG_LOGG', 'RV_ALPHAFE_MDF_FLAG_LOGG_ERR', 'RV_ALPHAFE_MDF_FLAG_MAGFIELD', 'RV_ALPHAFE_MDF_FLAG_MAGFIELD_ERR', 'RV_ALPHAFE_MDF_FLAG_COMMENTS', 'RV_CARBON_MDF', 'RV_CARBON_MDF_ERR', 'RV_CARBON_MDF_NVISIT', 'RV_CARBON_MDF_CHI2', 'RV_CARBON_MDF_SNR', 'RV_CARBON_MDF_FLAG', 'RV_CARBON_MDF_FLAG_ERR', 'RV_CARBON_MDF_FLAG_NVISIT', 'RV_CARBON_MDF_FLAG_CHI2', 'RV_CARBON_MDF_FLAG_SNR', 'RV_CARBON_MDF_FLAG_FEH', 'RV_CARBON_MDF_FLAG_FEH_ERR', 'RV_CARBON_MDF_FLAG_LOGG', 'RV_CARBON_MDF_FLAG_LOGG_ERR', 'RV_CARBON_MDF_FLAG_MAGFIELD', 'RV_CARBON_MDF_FLAG_MAGFIELD_ERR', 'RV_CARBON_MDF_FLAG_COMMENTS', 'RV_NITROGEN_MDF', 'RV_NITROGEN_MDF_ERR', 'RV_NITROGEN_MDF_NVISIT', 'RV_NITROGEN_MDF_CHI2', 'RV_NITROGEN_MDF_SNR', 'RV_NITROGEN_MDF_FLAG', 'RV_NITROGEN_MDF_FLAG_ERR', 'RV_NITROGEN_MDF_FLAG_NVISIT', 'RV_NITROGEN_MDF_FLAG_CHI2', 'RV_NITROGEN_MDF_FLAG_SNR', 'RV_NITROGEN_MDF_FLAG_FEH', 'RV_NITROGEN_MDF_FLAG_FEH_ERR', 'RV_NITROGEN_MDF_FLAG_LOGG', 'RV_NITROGEN_MDF_FLAG_LOGG_ERR', 'RV_NITROGEN_MDF_FLAG_MAGFIELD', 'RV_NITROGEN_MDF_FLAG_MAGFIELD_ERR', 'RV_NITROGEN_MDF_FLAG_COMMENTS', 'RV_MAGFIELD_MDF', 'RV_MAGFIELD_MDF_ERR', 'RV_MAGFIELD_MDF_NVISIT', 'RV_MAGFIELD_MDF_CHI2', 'RV_MAGFIELD_MDF_SNR', 'RV_MAGFIELD_MDF_FLAG', 'RV_MAGFIELD_MDF_FLAG_ERR', 'RV_MAGFIELD_MDF_FLAG_NVISIT', 'RV_MAGFIELD_MDF_FLAG_CHI2', 'RV_MAGFIELD_MDF_FLAG_SNR', 'RV_MAGFIELD_MDF_FLAG_FEH', 'RV_MAGFIELD_MDF_FLAG_FEH_ERR', 'RV_MAGFIELD_MDF_FLAG_LOGG', 'RV_MAGFIELD_MDF_FLAG_LOGG_ERR', 'RV_MAGFIELD_MDF_FLAG_MAGFIELD', 'RV_MAGFIELD_MDF_FLAG_MAGFIELD_ERR', 'RV_MAGFIELD_MDF_FLAG_COMMENTS', 'RV_COMMENTS', 'RV_COMMENTS_ERR', 'RV_COMMENTS_NVISIT', 'RV_COMMENTS_CHI2', 'RV_COMMENTS_SNR', 'RV_COMMENTS_FLAG', 'RV_COMMENTS_FLAG_ERR', 'RV_COMMENTS_FLAG_NVISIT', 'RV_COMMENTS_FLAG_CHI2', 'RV_COMMENTS_FLAG_SNR', 'RV_COMMENTS_FLAG_FEH', 'RV_COMMENTS_FLAG_FEH_ERR', 'RV_COMMENTS_FLAG_LOGG', 'RV_COMMENTS_FLAG_LOGG_ERR', 'RV_COMMENTS_FLAG_MAGFIELD', 'RV_COMMENTS_FLAG_MAGFIELD_ERR', 'RV_COMMENTS_FLAG_COMMENTS']

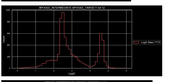
Stars: 5175

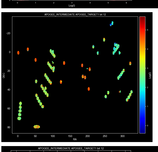
main_sequence: 1
giants: 1
subgiants: 35
red_clump: 1
red_giants: 5040
rv_binary: 3047

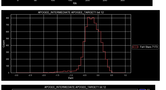
RV: 0
Fe: 0
Mg: 0
Mg_NMFS
Mg_NMFS
Mg: 207

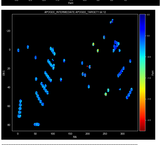
N_sat max: 2474.88











['Extended Young Stellar Clusters APOGEE_TARGET1 bit 12', 'APOGEE_TARGET1', 12]

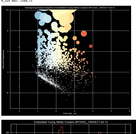
Fields: ['RA', 'DEC', 'RV', 'RV_ERR', 'RV_NVISIT', 'RV_CHI2', 'RV_SNR', 'RV_VRAD', 'RV_VERR', 'RV_VSHIFT', 'RV_VSHIFT_ERR', 'RV_VSHIFT_NVISIT', 'RV_VSHIFT_CHI2', 'RV_VSHIFT_SNR', 'RV_VRAD_ERR', 'RV_VRAD_NVISIT', 'RV_VRAD_CHI2', 'RV_VRAD_SNR', 'RV_TEFF', 'RV_TEFF_ERR', 'RV_LOGG', 'RV_LOGG_ERR', 'RV_FEH', 'RV_FEH_ERR', 'RV_ALPHAFE', 'RV_ALPHAFE_ERR', 'RV_CARBON', 'RV_CARBON_ERR', 'RV_NITROGEN', 'RV_NITROGEN_ERR', 'RV_MAGFIELD', 'RV_MAGFIELD_ERR', 'RV_FLAG', 'RV_FLAG_ERR', 'RV_FLAG_NVISIT', 'RV_FLAG_CHI2', 'RV_FLAG_SNR', 'RV_FLAG_VRAD', 'RV_FLAG_VERR', 'RV_FLAG_VSHIFT', 'RV_FLAG_VSHIFT_ERR', 'RV_FLAG_VRAD_ERR', 'RV_FLAG_TEFF', 'RV_FLAG_TEFF_ERR', 'RV_FLAG_LOGG', 'RV_FLAG_LOGG_ERR', 'RV_FLAG_FEH', 'RV_FLAG_FEH_ERR', 'RV_FLAG_ALPHAFE', 'RV_FLAG_ALPHAFE_ERR', 'RV_FLAG_CARBON', 'RV_FLAG_CARBON_ERR', 'RV_FLAG_NITROGEN', 'RV_FLAG_NITROGEN_ERR', 'RV_FLAG_MAGFIELD', 'RV_FLAG_MAGFIELD_ERR', 'RV_COMMENTS', 'RV_FEH_MDF', 'RV_FEH_MDF_ERR', 'RV_FEH_MDF_NVISIT', 'RV_FEH_MDF_CHI2', 'RV_FEH_MDF_SNR', 'RV_FEH_MDF_FLAG', 'RV_FEH_MDF_FLAG_ERR', 'RV_FEH_MDF_FLAG_NVISIT', 'RV_FEH_MDF_FLAG_CHI2', 'RV_FEH_MDF_FLAG_SNR', 'RV_FEH_MDF_FLAG_FEH', 'RV_FEH_MDF_FLAG_FEH_ERR', 'RV_FEH_MDF_FLAG_LOGG', 'RV_FEH_MDF_FLAG_LOGG_ERR', 'RV_FEH_MDF_FLAG_MAGFIELD', 'RV_FEH_MDF_FLAG_MAGFIELD_ERR', 'RV_FEH_MDF_FLAG_COMMENTS', 'RV_LOGG_MDF', 'RV_LOGG_MDF_ERR', 'RV_LOGG_MDF_NVISIT', 'RV_LOGG_MDF_CHI2', 'RV_LOGG_MDF_SNR', 'RV_LOGG_MDF_FLAG', 'RV_LOGG_MDF_FLAG_ERR', 'RV_LOGG_MDF_FLAG_NVISIT', 'RV_LOGG_MDF_FLAG_CHI2', 'RV_LOGG_MDF_FLAG_SNR', 'RV_LOGG_MDF_FLAG_FEH', 'RV_LOGG_MDF_FLAG_FEH_ERR', 'RV_LOGG_MDF_FLAG_LOGG', 'RV_LOGG_MDF_FLAG_LOGG_ERR', 'RV_LOGG_MDF_FLAG_MAGFIELD', 'RV_LOGG_MDF_FLAG_MAGFIELD_ERR', 'RV_LOGG_MDF_FLAG_COMMENTS', 'RV_ALPHAFE_MDF', 'RV_ALPHAFE_MDF_ERR', 'RV_ALPHAFE_MDF_NVISIT', 'RV_ALPHAFE_MDF_CHI2', 'RV_ALPHAFE_MDF_SNR', 'RV_ALPHAFE_MDF_FLAG', 'RV_ALPHAFE_MDF_FLAG_ERR', 'RV_ALPHAFE_MDF_FLAG_NVISIT', 'RV_ALPHAFE_MDF_FLAG_CHI2', 'RV_ALPHAFE_MDF_FLAG_SNR', 'RV_ALPHAFE_MDF_FLAG_FEH', 'RV_ALPHAFE_MDF_FLAG_FEH_ERR', 'RV_ALPHAFE_MDF_FLAG_LOGG', 'RV_ALPHAFE_MDF_FLAG_LOGG_ERR', 'RV_ALPHAFE_MDF_FLAG_MAGFIELD', 'RV_ALPHAFE_MDF_FLAG_MAGFIELD_ERR', 'RV_ALPHAFE_MDF_FLAG_COMMENTS', 'RV_CARBON_MDF', 'RV_CARBON_MDF_ERR', 'RV_CARBON_MDF_NVISIT', 'RV_CARBON_MDF_CHI2', 'RV_CARBON_MDF_SNR', 'RV_CARBON_MDF_FLAG', 'RV_CARBON_MDF_FLAG_ERR', 'RV_CARBON_MDF_FLAG_NVISIT', 'RV_CARBON_MDF_FLAG_CHI2', 'RV_CARBON_MDF_FLAG_SNR', 'RV_CARBON_MDF_FLAG_FEH', 'RV_CARBON_MDF_FLAG_FEH_ERR', 'RV_CARBON_MDF_FLAG_LOGG', 'RV_CARBON_MDF_FLAG_LOGG_ERR', 'RV_CARBON_MDF_FLAG_MAGFIELD', 'RV_CARBON_MDF_FLAG_MAGFIELD_ERR', 'RV_CARBON_MDF_FLAG_COMMENTS', 'RV_NITROGEN_MDF', 'RV_NITROGEN_MDF_ERR', 'RV_NITROGEN_MDF_NVISIT', 'RV_NITROGEN_MDF_CHI2', 'RV_NITROGEN_MDF_SNR', 'RV_NITROGEN_MDF_FLAG', 'RV_NITROGEN_MDF_FLAG_ERR', 'RV_NITROGEN_MDF_FLAG_NVISIT', 'RV_NITROGEN_MDF_FLAG_CHI2', 'RV_NITROGEN_MDF_FLAG_SNR', 'RV_NITROGEN_MDF_FLAG_FEH', 'RV_NITROGEN_MDF_FLAG_FEH_ERR', 'RV_NITROGEN_MDF_FLAG_LOGG', 'RV_NITROGEN_MDF_FLAG_LOGG_ERR', 'RV_NITROGEN_MDF_FLAG_MAGFIELD', 'RV_NITROGEN_MDF_FLAG_MAGFIELD_ERR', 'RV_NITROGEN_MDF_FLAG_COMMENTS', 'RV_MAGFIELD_MDF', 'RV_MAGFIELD_MDF_ERR', 'RV_MAGFIELD_MDF_NVISIT', 'RV_MAGFIELD_MDF_CHI2', 'RV_MAGFIELD_MDF_SNR', 'RV_MAGFIELD_MDF_FLAG', 'RV_MAGFIELD_MDF_FLAG_ERR', 'RV_MAGFIELD_MDF_FLAG_NVISIT', 'RV_MAGFIELD_MDF_FLAG_CHI2', 'RV_MAGFIELD_MDF_FLAG_SNR', 'RV_MAGFIELD_MDF_FLAG_FEH', 'RV_MAGFIELD_MDF_FLAG_FEH_ERR', 'RV_MAGFIELD_MDF_FLAG_LOGG', 'RV_MAGFIELD_MDF_FLAG_LOGG_ERR', 'RV_MAGFIELD_MDF_FLAG_MAGFIELD', 'RV_MAGFIELD_MDF_FLAG_MAGFIELD_ERR', 'RV_MAGFIELD_MDF_FLAG_COMMENTS', 'RV_COMMENTS', 'RV_COMMENTS_ERR', 'RV_COMMENTS_NVISIT', 'RV_COMMENTS_CHI2', 'RV_COMMENTS_SNR', 'RV_COMMENTS_FLAG', 'RV_COMMENTS_FLAG_ERR', 'RV_COMMENTS_FLAG_NVISIT', 'RV_COMMENTS_FLAG_CHI2', 'RV_COMMENTS_FLAG_SNR', 'RV_COMMENTS_FLAG_FEH', 'RV_COMMENTS_FLAG_FEH_ERR', 'RV_COMMENTS_FLAG_LOGG', 'RV_COMMENTS_FLAG_LOGG_ERR', 'RV_COMMENTS_FLAG_MAGFIELD', 'RV_COMMENTS_FLAG_MAGFIELD_ERR', 'RV_COMMENTS_FLAG_COMMENTS']

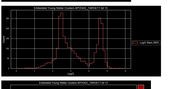
Stars: 2840

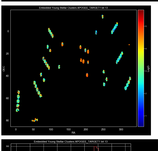
main_sequence: 825
giants: 1
subgiants: 31
red_clump: 1
red_giants: 1993
rv_binary: 1170

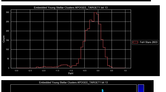
RV: 0
Fe: 0
Mg: 0
Mg_NMFS
Mg_NMFS
Mg: 20

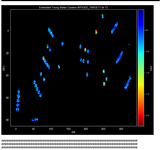
N_sat max: 2368.71











['Massive Low Stars APOGEE_TARGET1 bit 12', 'APOGEE_TARGET1', 12]

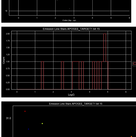
Fields: ['TARG']

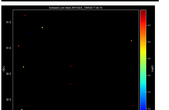
Stars: 12

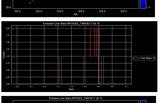
main_sequence: 5
giants: 1
subgiants: 6
red_clump: 0
red_giants: 0
rv_binary: 0
red_giants: red_clump: 0

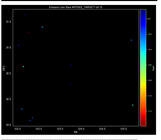
RV: 0
Fe: 0
Mg: 0
Mg_NMFS
Mg_NMFS
Mg: 0

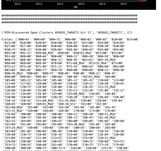
N_sat max: 36.54

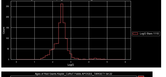


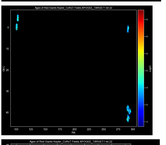


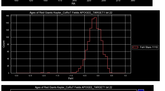


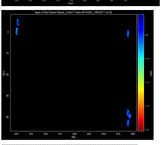


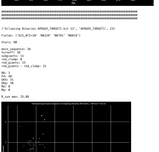




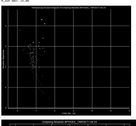


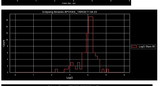


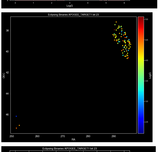


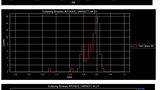


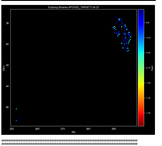
```
##############################################################################
##############################################################################

[ 'Eclipsing Binaries APOGEE_TARGET3 bit 19', 'APOGEE_TARGET1', 20]

Fields: ['KIC_ID','ra','dec' 'NALEDV' 'METRIC' 'MASSFIT']

Stars: 98

main_sequence: 35
subgiants: 1
redgiants: 1
redgiants: 0
red_clump: 0
red_giants: red_clump: 15

RV: 0
Vsin: 0
Vmac: 0
Mass: 0
Mg: 0

m_ext max: 25.00
```



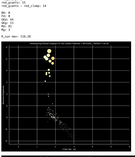


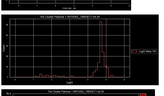


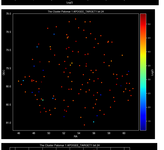


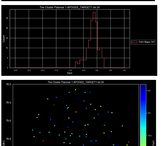


```
##############################################################################
##############################################################################

[ The Cluster Malanan 1 APOGEE_TARGET3 bit 24', 'APOGEE_TARGET1', 24]

Fields: ['MAJ1']

Stars: 241

main_sequence: 125
subgiants: 1
redgiants: 1
redgiants: 0
red_clump: 0
red_giants: red_clump: 14

RV: 0
Vsin: 0
Vmac: 0
Mass: 0
Mg: 0

m_ext max: 116.20
```

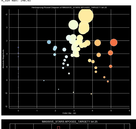


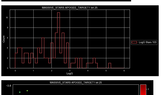


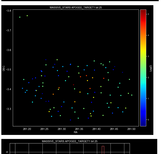


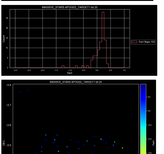


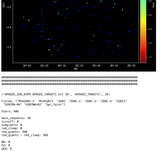
```
##############################################################################
##############################################################################

[ MASSIVE_EVOLVED APOGEE_TARGET3 bit 25', 'APOGEE_TARGET1', 25]

Fields: ['ID']

Stars: 485

main_sequence: 5
subgiants: 1
redgiants: 1
redgiants: 0
red_clump: 0
red_giants: red_clump: 81

RV: 0
Vsin: 0
Vmac: 0
Mass: 0
Mg: 0

m_ext max: 148.95
```



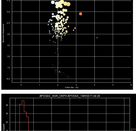


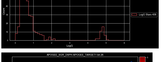


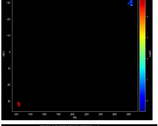


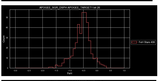


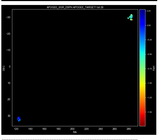
```
##############################################################################
##############################################################################

[ SUPERGIANT_SUN_DUPP APOGEE_TARGET3 bit 26', 'APOGEE_TARGET1', 26]

Fields: ['PRIMARY' 'MASSFIT' 'SUN1' 'SUN2.1' 'SUN2.2' 'SUN2.4' 'SUN3'
 'SUN3Sim.RV' 'SUN3Sim.Mg' 'Dp/sun1']

Stars: 486

main_sequence: 35
subgiants: 1
redgiants: 1
redgiants: 0
red_clump: 0
red_giants: red_clump: 300

RV: 0
Vsin: 0
Vmac: 0
Mass: 0
Mg: 0

m_ext max: 1000.23
```

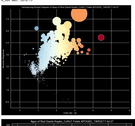
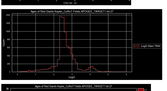
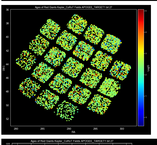
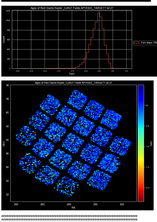


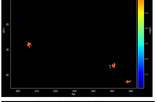


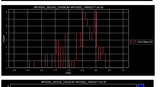


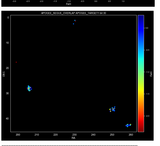




```
==========================================================================
==========================================================================

Frequency of Red Giants/Weather,CoRoT Fields OPHIUCH_TARGETS Sct 27', 'OPHIUCH_TARGETS', 27)
Fields: ['OPHIUCH']
{'mag_lo':10.0,'mag_hi':13.0,'dmag':0.5,'ldr':0.0,'ldb':0.0,'lmin':0.0,
 'b1':0.0,'b2':0.0,'b3':0.0,'b4':0.0,'b5':0.0,'b6':0.0,'b7':0.0,'b8':0.0,
 'b9':0.0,'b10':0.0,'b11':0.0,'b12':0.0,'b13':0.0,'b14':0.0,'b15':0.0,'b16':0.0,
 'b17':0.0,'b18':0.0,'b19':0.0,'b20':0.0,'b21':0.0,'b22':0.0,'b23':0.0,
 'b24':0.0,'b25':0.0,'b26':0.0,'b27':0.0,'b28':0.0,'b29':0.0,'b30':0.0,
 'b31':0.0,'b32':0.0,'b33':0.0,'b34':0.0,'b35':0.0,'b36':0.0,'b37':0.0,
 'b38':0.0,'b39':0.0,'b40':0.0,'b41':0.0,'b42':0.0,'b43':0.0,'b44':0.0,
 'b45':0.0,'b46':0.0,'b47':0.0,'b48':0.0,'b49':0.0,'b50':0.0,'b51':0.0,
 'b52':0.0,'b53':0.0,'b54':0.0,'b55':0.0,'b56':0.0,'b57':0.0,'b58':0.0,
 'b59':0.0,'b60':0.0,'b61':0.0,'b62':0.0,'b63':0.0,'b64':0.0,'b65':0.0,
 'b66':0.0,'b67':0.0,'b68':0.0,'b69':0.0,'b70':0.0,'b71':0.0,'b72':0.0,
 'b73':0.0,'b74':0.0,'b75':0.0,'b76':0.0,'b77':0.0,'b78':0.0,'b79':0.0,
 'b80':0.0,'b81':0.0,'b82':0.0,'b83':0.0,'b84':0.0,'b85':0.0,'b86':0.0,
 'b87':0.0,'b88':0.0,'b89':0.0,'b90':0.0,'b91':0.0,'b92':0.0,'b93':0.0,
 'b94':0.0,'b95':0.0,'b96':0.0,'b97':0.0,'b98':0.0,'b99':0.0,'b100':0.0,
 'b101':0.0,'b102':0.0,'b103':0.0,'b104':0.0,'b105':0.0,'b106':0.0,'b107':0.0,
 'b108':0.0,'b109':0.0,'b110':0.0,'b111':0.0,'b112':0.0,'b113':0.0,'b114':0.0,
 'b115':0.0,'b116':0.0,'b117':0.0,'b118':0.0,'b119':0.0,'b120':0.0,'b121':0.0,
 'b122':0.0,'b123':0.0,'b124':0.0,'b125':0.0,'b126':0.0,'b127':0.0,'b128':0.0,
 'b129':0.0,'b130':0.0,'b131':0.0,'b132':0.0,'b133':0.0,'b134':0.0,'b135':0.0,
 'b136':0.0,'b137':0.0,'b138':0.0,'b139':0.0,'b140':0.0,'b141':0.0,'b142':0.0,
 'b143':0.0,'b144':0.0,'b145':0.0,'b146':0.0,'b147':0.0,'b148':0.0,'b149':0.0,
 'b150':0.0,'b151':0.0,'b152':0.0,'b153':0.0,'b154':0.0,'b155':0.0,'b156':0.0,
 'b157':0.0,'b158':0.0,'b159':0.0,'b160':0.0,'b161':0.0,'b162':0.0,'b163':0.0,
 'b164':0.0,'b165':0.0,'b166':0.0,'b167':0.0,'b168':0.0,'b169':0.0,'b170':0.0,
 'b171':0.0,'b172':0.0,'b173':0.0,'b174':0.0,'b175':0.0,'b176':0.0,'b177':0.0,
 'b178':0.0,'b179':0.0,'b180':0.0,'b181':0.0,'b182':0.0,'b183':0.0,'b184':0.0,
 'b185':0.0,'b186':0.0,'b187':0.0,'b188':0.0,'b189':0.0,'b190':0.0,'b191':0.0,
 'b192':0.0,'b193':0.0,'b194':0.0,'b195':0.0,'b196':0.0,'b197':0.0,'b198':0.0,
 'b199':0.0,'b200':0.0,'b201':0.0,'b202':0.0,'b203':0.0,'b204':0.0,'b205':0.0,
 'b206':0.0,'b207':0.0,'b208':0.0,'b209':0.0,'b210':0.0,'b211':0.0,'b212':0.0,
 'b213':0.0,'b214':0.0,'b215':0.0,'b216':0.0,'b217':0.0,'b218':0.0,'b219':0.0,
 'b220':0.0,'b221':0.0,'b222':0.0,'b223':0.0,'b224':0.0,'b225':0.0,'b226':0.0,
 'b227':0.0,'b228':0.0,'b229':0.0,'b230':0.0,'b231':0.0,'b232':0.0,'b233':0.0,
 'b234':0.0,'b235':0.0,'b236':0.0,'b237':0.0,'b238':0.0,'b239':0.0,'b240':0.0,
 'b241':0.0,'b242':0.0,'b243':0.0,'b244':0.0,'b245':0.0,'b246':0.0,'b247':0.0,
 'b248':0.0,'b249':0.0,'b250':0.0,'b251':0.0,'b252':0.0,'b253':0.0,'b254':0.0,
 'b255':0.0,'b256':0.0,'b257':0.0,'b258':0.0,'b259':0.0,'b260':0.0,'b261':0.0,
 'b262':0.0,'b263':0.0,'b264':0.0,'b265':0.0,'b266':0.0,'b267':0.0,'b268':0.0,
 'b269':0.0,'b270':0.0,'b271':0.0,'b272':0.0,'b273':0.0,'b274':0.0,'b275':0.0,
 'b276':0.0,'b277':0.0,'b278':0.0,'b279':0.0,'b280':0.0,'b281':0.0,'b282':0.0,
 'b283':0.0,'b284':0.0,'b285':0.0,'b286':0.0,'b287':0.0,'b288':0.0,'b289':0.0,
 'b290':0.0,'b291':0.0,'b292':0.0,'b293':0.0,'b294':0.0,'b295':0.0,'b296':0.0,
 'b297':0.0,'b298':0.0,'b299':0.0,'b300':0.0,'b301':0.0,'b302':0.0,'b303':0.0,
 'b304':0.0,'b305':0.0,'b306':0.0,'b307':0.0,'b308':0.0,'b309':0.0,'b310':0.0,
 'b311':0.0,'b312':0.0,'b313':0.0,'b314':0.0,'b315':0.0,'b316':0.0,'b317':0.0,
 'b318':0.0,'b319':0.0,'b320':0.0,'b321':0.0,'b322':0.0,'b323':0.0,'b324':0.0,
 'b325':0.0,'b326':0.0,'b327':0.0,'b328':0.0,'b329':0.0,'b330':0.0,'b331':0.0,
 'b332':0.0,'b333':0.0,'b334':0.0,'b335':0.0,'b336':0.0,'b337':0.0,'b338':0.0,
 'b339':0.0,'b340':0.0,'b341':0.0,'b342':0.0,'b343':0.0,'b344':0.0,'b345':0.0,
 'b346':0.0,'b347':0.0,'b348':0.0,'b349':0.0,'b350':0.0,'b351':0.0,'b352':0.0,
 'b353':0.0,'b354':0.0,'b355':0.0,'b356':0.0,'b357':0.0,'b358':0.0,'b359':0.0,
 'b360':0.0,'b361':0.0,'b362':0.0,'b363':0.0,'b364':0.0,'b365':0.0,'b366':0.0,
 'b367':0.0,'b368':0.0,'b369':0.0,'b370':0.0,'b371':0.0,'b372':0.0,'b373':0.0,
 'b374':0.0,'b375':0.0,'b376':0.0,'b377':0.0,'b378':0.0,'b379':0.0,'b380':0.0,
 'b381':0.0,'b382':0.0,'b383':0.0,'b384':0.0,'b385':0.0,'b386':0.0,'b387':0.0,
 'b388':0.0,'b389':0.0,'b390':0.0,'b391':0.0,'b392':0.0,'b393':0.0,'b394':0.0,
 'b395':0.0,'b396':0.0,'b397':0.0,'b398':0.0,'b399':0.0,'b400':0.0,'b401':0.0,
 'b402':0.0,'b403':0.0,'b404':0.0,'b405':0.0,'b406':0.0,'b407':0.0,'b408':0.0,
 'b409':0.0,'b410':0.0,'b411':0.0,'b412':0.0,'b413':0.0,'b414':0.0,'b415':0.0,
 'b416':0.0,'b417':0.0,'b418':0.0,'b419':0.0,'b420':0.0,'b421':0.0,'b422':0.0,
 'b423':0.0,'b424':0.0,'b425':0.0,'b426':0.0,'b427':0.0,'b428':0.0,'b429':0.0,
 'b430':0.0,'b431':0.0,'b432':0.0,'b433':0.0,'b434':0.0,'b435':0.0,'b436':0.0,
 'b437':0.0,'b438':0.0,'b439':0.0,'b440':0.0,'b441':0.0,'b442':0.0,'b443':0.0,
 'b444':0.0,'b445':0.0,'b446':0.0,'b447':0.0,'b448':0.0,'b449':0.0,'b450':0.0,
 'b451':0.0,'b452':0.0,'b453':0.0,'b454':0.0,'b455':0.0,'b456':0.0,'b457':0.0,
 'b458':0.0,'b459':0.0,'b460':0.0,'b461':0.0,'b462':0.0,'b463':0.0,'b464':0.0,
 'b465':0.0,'b466':0.0,'b467':0.0,'b468':0.0,'b469':0.0,'b470':0.0,'b471':0.0,
 'b472':0.0,'b473':0.0,'b474':0.0,'b475':0.0,'b476':0.0,'b477':0.0,'b478':0.0,
 'b479':0.0,'b480':0.0,'b481':0.0,'b482':0.0,'b483':0.0,'b484':0.0,'b485':0.0,
 'b486':0.0,'b487':0.0,'b488':0.0,'b489':0.0,'b490':0.0,'b491':0.0,'b492':0.0,
 'b493':0.0,'b494':0.0,'b495':0.0,'b496':0.0,'b497':0.0,'b498':0.0,'b499':0.0,
 'b500':0.0,'b501':0.0,'b502':0.0,'b503':0.0,'b504':0.0,'b505':0.0,'b506':0.0,
 'b507':0.0,'b508':0.0,'b509':0.0,'b510':0.0,'b511':0.0,'b512':0.0,'b513':0.0,
 'b514':0.0,'b515':0.0,'b516':0.0,'b517':0.0,'b518':0.0,'b519':0.0,'b520':0.0,
 'b521':0.0,'b522':0.0,'b523':0.0,'b524':0.0,'b525':0.0,'b526':0.0,'b527':0.0,
 'b528':0.0,'b529':0.0,'b530':0.0,'b531':0.0,'b532':0.0,'b533':0.0,'b534':0.0,
 'b535':0.0,'b536':0.0,'b537':0.0,'b538':0.0,'b539':0.0,'b540':0.0,'b541':0.0,
 'b542':0.0,'b543':0.0,'b544':0.0,'b545':0.0,'b546':0.0,'b547':0.0,'b548':0.0,
 'b549':0.0,'b550':0.0,'b551':0.0,'b552':0.0,'b553':0.0,'b554':0.0,'b555':0.0,
 'b556':0.0,'b557':0.0,'b558':0.0,'b559':0.0,'b560':0.0,'b561':0.0,'b562':0.0,
 'b563':0.0,'b564':0.0,'b565':0.0,'b566':0.0,'b567':0.0,'b568':0.0,'b569':0.0,
 'b570':0.0,'b571':0.0,'b572':0.0,'b573':0.0,'b574':0.0,'b575':0.0,'b576':0.0,
 'b577':0.0,'b578':0.0,'b579':0.0,'b580':0.0,'b581':0.0,'b582':0.0,'b583':0.0,
 'b584':0.0,'b585':0.0,'b586':0.0,'b587':0.0,'b588':0.0,'b589':0.0,'b590':0.0,
 'b591':0.0,'b592':0.0,'b593':0.0,'b594':0.0,'b595':0.0,'b596':0.0,'b597':0.0,
 'b598':0.0,'b599':0.0,'b600':0.0,'b601':0.0,'b602':0.0,'b603':0.0,'b604':0.0,
 'b605':0.0,'b606':0.0,'b607':0.0,'b608':0.0,'b609':0.0,'b610':0.0,'b611':0.0,
 'b612':0.0,'b613':0.0,'b614':0.0,'b615':0.0,'b616':0.0,'b617':0.0,'b618':0.0,
 'b619':0.0,'b620':0.0,'b621':0.0,'b622':0.0,'b623':0.0,'b624':0.0,'b625':0.0,
 'b626':0.0,'b627':0.0,'b628':0.0,'b629':0.0,'b630':0.0,'b631':0.0,'b632':0.0,
 'b633':0.0,'b634':0.0,'b635':0.0,'b636':0.0,'b637':0.0,'b638':0.0,'b639':0.0,
 'b640':0.0,'b641':0.0,'b642':0.0,'b643':0.0,'b644':0.0,'b645':0.0,'b646':0.0,
 'b647':0.0,'b648':0.0,'b649':0.0,'b650':0.0,'b651':0.0,'b652':0.0,'b653':0.0,
 'b654':0.0,'b655':0.0,'b656':0.0,'b657':0.0,'b658':0.0,'b659':0.0,'b660':0.0,
 'b661':0.0,'b662':0.0,'b663':0.0,'b664':0.0,'b665':0.0,'b666':0.0,'b667':0.0,
 'b668':0.0,'b669':0.0,'b670':0.0,'b671':0.0,'b672':0.0,'b673':0.0,'b674':0.0,
 'b675':0.0,'b676':0.0,'b677':0.0,'b678':0.0,'b679':0.0,'b680':0.0,'b681':0.0,
 'b682':0.0,'b683':0.0,'b684':0.0,'b685':0.0,'b686':0.0,'b687':0.0,'b688':0.0,
 'b689':0.0,'b690':0.0,'b691':0.0,'b692':0.0,'b693':0.0,'b694':0.0,'b695':0.0,
 'b696':0.0,'b697':0.0,'b698':0.0,'b699':0.0,'b700':0.0,'b701':0.0,'b702':0.0,
 'b703':0.0,'b704':0.0,'b705':0.0,'b706':0.0,'b707':0.0,'b708':0.0,'b709':0.0,
 'b710':0.0,'b711':0.0,'b712':0.0,'b713':0.0,'b714':0.0,'b715':0.0,'b716':0.0,
 'b717':0.0,'b718':0.0,'b719':0.0,'b720':0.0,'b721':0.0,'b722':0.0,'b723':0.0,
 'b724':0.0,'b725':0.0,'b726':0.0,'b727':0.0,'b728':0.0,'b729':0.0,'b730':0.0,
 'b731':0.0,'b732':0.0,'b733':0.0,'b734':0.0,'b735':0.0,'b736':0.0,'b737':0.0,
 'b738':0.0,'b739':0.0,'b740':0.0,'b741':0.0,'b742':0.0,'b743':0.0,'b744':0.0,
 'b745':0.0,'b746':0.0,'b747':0.0,'b748':0.0,'b749':0.0,'b750':0.0,'b751':0.0,
 'b752':0.0,'b753':0.0,'b754':0.0,'b755':0.0,'b756':0.0,'b757':0.0,'b758':0.0,
 'b759':0.0,'b760':0.0,'b761':0.0,'b762':0.0,'b763':0.0,'b764':0.0,'b765':0.0,
 'b766':0.0,'b767':0.0,'b768':0.0,'b769':0.0,'b770':0.0,'b771':0.0,'b772':0.0,
 'b773':0.0,'b774':0.0,'b775':0.0,'b776':0.0,'b777':0.0,'b778':0.0,'b779':0.0,
 'b780':0.0,'b781':0.0,'b782':0.0,'b783':0.0,'b784':0.0,'b785':0.0,'b786':0.0,
 'b787':0.0,'b788':0.0,'b789':0.0,'b790':0.0,'b791':0.0,'b792':0.0,'b793':0.0,
 'b794':0.0,'b795':0.0,'b796':0.0,'b797':0.0,'b798':0.0,'b799':0.0,'b800':0.0,
 'b801':0.0,'b802':0.0,'b803':0.0,'b804':0.0,'b805':0.0,'b806':0.0,'b807':0.0,
 'b808':0.0,'b809':0.0,'b810':0.0,'b811':0.0,'b812':0.0,'b813':0.0,'b814':0.0,
 'b815':0.0,'b816':0.0,'b817':0.0,'b818':0.0,'b819':0.0,'b820':0.0,'b821':0.0,
 'b822':0.0,'b823':0.0,'b824':0.0,'b825':0.0,'b826':0.0,'b827':0.0,'b828':0.0,
 'b829':0.0,'b830':0.0,'b831':0.0,'b832':0.0,'b833':0.0,'b834':0.0,'b835':0.0,
 'b836':0.0,'b837':0.0,'b838':0.0,'b839':0.0,'b840':0.0,'b841':0.0,'b842':0.0,
 'b843':0.0,'b844':0.0,'b845':0.0,'b846':0.0,'b847':0.0,'b848':0.0,'b849':0.0,
 'b850':0.0,'b851':0.0,'b852':0.0,'b853':0.0,'b854':0.0,'b855':0.0,'b856':0.0,
 'b857':0.0,'b858':0.0,'b859':0.0,'b860':0.0,'b861':0.0,'b862':0.0,'b863':0.0,
 'b864':0.0,'b865':0.0,'b866':0.0,'b867':0.0,'b868':0.0,'b869':0.0,'b870':0.0,
 'b871':0.0,'b872':0.0,'b873':0.0,'b874':0.0,'b875':0.0,'b876':0.0,'b877':0.0,
 'b878':0.0,'b879':0.0,'b880':0.0,'b881':0.0,'b882':0.0,'b883':0.0,'b884':0.0,
 'b885':0.0,'b886':0.0,'b887':0.0,'b888':0.0,'b889':0.0,'b890':0.0,'b891':0.0,
 'b892':0.0,'b893':0.0,'b894':0.0,'b895':0.0,'b896':0.0,'b897':0.0,'b898':0.0,
 'b899':0.0,'b900':0.0,'b901':0.0,'b902':0.0,'b903':0.0,'b904':0.0,'b905':0.0,
 'b906':0.0,'b907':0.0,'b908':0.0,'b909':0.0,'b910':0.0,'b911':0.0,'b912':0.0,
 'b913':0.0,'b914':0.0,'b915':0.0,'b916':0.0,'b917':0.0,'b918':0.0,'b919':0.0,
 'b920':0.0,'b921':0.0,'b922':0.0,'b923':0.0,'b924':0.0,'b925':0.0,'b926':0.0,
 'b927':0.0,'b928':0.0,'b929':0.0,'b930':0.0,'b931':0.0,'b932':0.0,'b933':0.0,
 'b934':0.0,'b935':0.0,'b936':0.0,'b937':0.0,'b938':0.0,'b939':0.0,'b940':0.0,
 'b941':0.0,'b942':0.0,'b943':0.0,'b944':0.0,'b945':0.0,'b946':0.0,'b947':0.0,
 'b948':0.0,'b949':0.0,'b950':0.0,'b951':0.0,'b952':0.0,'b953':0.0,'b954':0.0,
 'b955':0.0,'b956':0.0,'b957':0.0,'b958':0.0,'b959':0.0,'b960':0.0,'b961':0.0,
 'b962':0.0,'b963':0.0,'b964':0.0,'b965':0.0,'b966':0.0,'b967':0.0,'b968':0.0,
 'b969':0.0,'b970':0.0,'b971':0.0,'b972':0.0,'b973':0.0,'b974':0.0,'b975':0.0,
 'b976':0.0,'b977':0.0,'b978':0.0,'b979':0.0,'b980':0.0,'b981':0.0,'b982':0.0,
 'b983':0.0,'b984':0.0,'b985':0.0,'b986':0.0,'b987':0.0,'b988':0.0,'b989':0.0,
 'b990':0.0,'b991':0.0,'b992':0.0,'b993':0.0,'b994':0.0,'b995':0.0,'b996':0.0,
 'b997':0.0,'b998':0.0,'b999':0.0,'b1000':0.0}
Stars: 7844

main_sequence:1236
subgiants: 0
red_giants: 0
red_giants - red_clump: 4000

Mv: 0
Mb: 0.5
dmag: 0.5
Mag: 10.5
Mc: 0
Mr: 0
N_sim_max: 2878.75













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

('OPHIUCH_RUN20_MEDIT OPHIUCH_TARGETS Sct 20', 'OPHIUCH_TARGETS', 20)
Fields: ['1:50:-0000:00', '1:50:-0:0:00', '1:50:-0:0:0:', '1:50:-0:0:0:', '1:50:-0:0:0:']
{'mag_lo':10.0,'mag_hi':13.0,'dmag':0.5,'ldr':0.0,'ldb':0.0,'lmin':0.0,
 'b1':0.0,'b2':0.0,'b3':0.0,'b4':0.0,'b5':0.0,'b6':0.0,'b7':0.0,'b8':0.0,
 'b9':0.0,'b10':0.0,'b11':0.0,'b12':0.0,'b13':0.0,'b14':0.0,'b15':0.0,'b16':0.0,
 'b17':0.0,'b18':0.0,'b19':0.0,'b20':0.0,'b21':0.0,'b22':0.0,'b23':0.0,
 'b24':0.0,'b25':0.0,'b26':0.0,'b27':0.0,'b28':0.0,'b29':0.0,'b30':0.0,
 'b31':0.0,'b32':0.0,'b33':0.0,'b34':0.0,'b35':0.0,'b36':0.0,'b37':0.0,
 'b38':0.0,'b39':0.0,'b40':0.0,'b41':0.0,'b42':0.0,'b43':0.0,'b44':0.0,
 'b45':0.0,'b46':0.0,'b47':0.0,'b48':0.0,'b49':0.0,'b50':0.0,'b51':0.0,
 'b52':0.0,'b53':0.0,'b54':0.0,'b55':0.0,'b56':0.0,'b57':0.0,'b58':0.0,
 'b59':0.0,'b60':0.0,'b61':0.0,'b62':0.0,'b63':0.0,'b64':0.0,'b65':0.0,
 'b66':0.0,'b67':0.0,'b68':0.0,'b69':0.0,'b70':0.0,'b71':0.0,'b72':0.0,
 'b73':0.0,'b74':0.0,'b75':0.0,'b76':0.0,'b77':0.0,'b78':0.0,'b79':0.0,
 'b80':0.0,'b81':0.0,'b82':0.0,'b83':0.0,'b84':0.0,'b85':0.0,'b86':0.0,
 'b87':0.0,'b88':0.0,'b89':0.0,'b90':0.0,'b91':0.0,'b92':0.0,'b93':0.0,
 'b94':0.0,'b95':0.0,'b96':0.0,'b97':0.0,'b98':0.0,'b99':0.0,'b100':0.0,
 'b101':0.0,'b102':0.0,'b103':0.0,'b104':0.0,'b105':0.0,'b106':0.0,'b107':0.0,
 'b108':0.0,'b109':0.0,'b110':0.0,'b111':0.0,'b112':0.0,'b113':0.0,'b114':0.0,
 'b115':0.0,'b116':0.0,'b117':0.0,'b118':0.0,'b119':0.0,'b120':0.0,'b121':0.0,
 'b122':0.0,'b123':0.0,'b124':0.0,'b125':0.0,'b126':0.0,'b127':0.0,'b128':0.0,
 'b129':0.0,'b130':0.0,'b131':0.0,'b132':0.0,'b133':0.0,'b134':0.0,'b135':0.0,
 'b136':0.0,'b137':0.0,'b138':0.0,'b139':0.0,'b140':0.0,'b141':0.0,'b142':0.0,
 'b143':0.0,'b144':0.0,'b145':0.0,'b146':0.0,'b147':0.0,'b148':0.0,'b149':0.0,
 'b150':0.0,'b151':0.0,'b152':0.0,'b153':0.0,'b154':0.0,'b155':0.0,'b156':0.0,
 'b157':0.0,'b158':0.0,'b159':0.0,'b160':0.0,'b161':0.0,'b162':0.0,'b163':0.0,
 'b164':0.0,'b165':0.0,'b166':0.0,'b167':0.0,'b168':0.0,'b169':0.0,'b170':0.0,
 'b171':0.0,'b172':0.0,'b173':0.0,'b174':0.0,'b175':0.0,'b176':0.0,'b177':0.0,
 'b178':0.0,'b179':0.0,'b180':0.0,'b181':0.0,'b182':0.0,'b183':0.0,'b184':0.0,
 'b185':0.0,'b186':0.0,'b187':0.0,'b188':0.0,'b189':0.0,'b190':0.0,'b191':0.0,
 'b192':0.0,'b193':0.0,'b194':0.0,'b195':0.0,'b196':0.0,'b197':0.0,'b198':0.0,
 'b199':0.0,'b200':0.0,'b201':0.0,'b202':0.0,'b203':0.0,'b204':0.0,'b205':0.0,
 'b206':0.0,'b207':0.0,'b208':0.0,'b209':0.0,'b210':0.0,'b211':0.0,'b212':0.0,
 'b213':0.0,'b214':0.0,'b215':0.0,'b216':0.0,'b217':0.0,'b218':0.0,'b219':0.0,
 'b220':0.0,'b221':0.0,'b222':0.0,'b223':0.0,'b224':0.0,'b225':0.0,'b226':0.0,
 'b227':0.0,'b228':0.0,'b229':0.0,'b230':0.0,'b231':0.0,'b232':0.0,'b233':0.0,
 'b234':0.0,'b235':0.0,'b236':0.0,'b237':0.0,'b238':0.0,'b239':0.0,'b240':0.0,
 'b241':0.0,'b242':0.0,'b243':0.0,'b244':0.0,'b245':0.0,'b246':0.0,'b247':0.0,
 'b248':0.0,'b249':0.0,'b250':0.0,'b251':0.0,'b252':0.0,'b253':0.0,'b254':0.0,
 'b255':0.0,'b256':0.0,'b257':0.0,'b258':0.0,'b259':0.0,'b260':0.0,'b261':0.0,
 'b262':0.0,'b263':0.0,'b264':0.0,'b265':0.0,'b266':0.0,'b267':0.0,'b268':0.0,
 'b269':0.0,'b270':0.0,'b271':0.0,'b272':0.0,'b273':0.0,'b274':0.0,'b275':0.0,
 'b276':0.0,'b277':0.0,'b278':0.0,'b279':0.0,'b280':0.0,'b281':0.0,'b282':0.0,
 'b283':0.0,'b284':0.0,'b285':0.0,'b286':0.0,'b287':0.0,'b288':0.0,'b289':0.0,
 'b290':0.0,'b291':0.0,'b292':0.0,'b293':0.0,'b294':0.0,'b295':0.0,'b296':0.0,
 'b297':0.0,'b298':0.0,'b299':0.0,'b300':0.0,'b301':0.0,'b302':0.0,'b303':0.0,
 'b304':0.0,'b305':0.0,'b306':0.0,'b307':0.0,'b308':0.0,'b309':0.0,'b310':0.0,
 'b311':0.0,'b312':0.0,'b313':0.0,'b314':0.0,'b315':0.0,'b316':0.0,'b317':0.0,
 'b318':0.0,'b319':0.0,'b320':0.0,'b321':0.0,'b322':0.0,'b323':0.0,'b324':0.0,
 'b325':0.0,'b326':0.0,'b327':0.0,'b328':0.0,'b329':0.0,'b330':0.0,'b331':0.0,
 'b332':0.0,'b333':0.0,'b334':0.0,'b335':0.0,'b336':0.0,'b337':0.0,'b338':0.0,
 'b339':0.0,'b340':0.0,'b341':0.0,'b342':0.0,'b343':0.0,'b344':0.0,'b345':0.0,
 'b346':0.0,'b347':0.0,'b348':0.0,'b349':0.0,'b350':0.0,'b351':0.0,'b352':0.0,
 'b353':0.0,'b354':0.0,'b355':0.0,'b356':0.0,'b357':0.0,'b358':0.0,'b359':0.0,
 'b360':0.0,'b361':0.0,'b362':0.0,'b363':0.0,'b364':0.0,'b365':0.0,'b366':0.0,
 'b367':0.0,'b368':0.0,'b369':0.0,'b370':0.0,'b371':0.0,'b372':0.0,'b373':0.0,
 'b374':0.0,'b375':0.0,'b376':0.0,'b377':0.0,'b378':0.0,'b379':0.0,'b380':0.0,
 'b381':0.0,'b382':0.0,'b383':0.0,'b384':0.0,'b385':0.0,'b386':0.0,'b387':0.0,
 'b388':0.0,'b389':0.0,'b390':0.0,'b391':0.0,'b392':0.0,'b393':0.0,'b394':0.0,
 'b395':0.0,'b396':0.0,'b397':0.0,'b398':0.0,'b399':0.0,'b400':0.0,'b401':0.0,
 'b402':0.0,'b403':0.0,'b404':0.0,'b405':0.0,'b406':0.0,'b407':0.0,'b408':0.0,
 'b409':0.0,'b410':0.0,'b411':0.0,'b412':0.0,'b413':0.0,'b414':0.0,'b415':0.0,
 'b416':0.0,'b417':0.0,'b418':0.0,'b419':0.0,'b420':0.0,'b421':0.0,'b422':0.0,
 'b423':0.0,'b424':0.0,'b425':0.0,'b426':0.0,'b427':0.0,'b428':0.0,'b429':0.0,
 'b430':0.0,'b431':0.0,'b432':0.0,'b433':0.0,'b434':0.0,'b435':0.0,'b436':0.0,
 'b437':0.0,'b438':0.0,'b439':0.0,'b440':0.0,'b441':0.0,'b442':0.0,'b443':0.0,
 'b444':0.0,'b445':0.0,'b446':0.0,'b447':0.0,'b448':0.0,'b449':0.0,'b450':0.0,
 'b451':0.0,'b452':0.0,'b453':0.0,'b454':0.0,'b455':0.0,'b456':0.0,'b457':0.0,
 'b458':0.0,'b459':0.0,'b460':0.0,'b461':0.0,'b462':0.0,'b463':0.0,'b464':0.0,
 'b465':0.0,'b466':0.0,'b467':0.0,'b468':0.0,'b469':0.0,'b470':0.0,'b471':0.0,
 'b472':0.0,'b473':0.0,'b474':0.0,'b475':0.0,'b476':0.0,'b477':0.0,'b478':0.0,
 'b479':0.0,'b480':0.0,'b481':0.0,'b482':0.0,'b483':0.0,'b484':0.0,'b485':0.0,
 'b486':0.0,'b487':0.0,'b488':0.0,'b489':0.0,'b490':0.0,'b491':0.0,'b492':0.0,
 'b493':0.0,'b494':0.0,'b495':0.0,'b496':0.0,'b497':0.0,'b498':0.0,'b499':0.0,
 'b500':0.0,'b501':0.0,'b502':0.0,'b503':0.0,'b504':0.0,'b505':0.0,'b506':0.0,
 'b507':0.0,'b508':0.0,'b509':0.0,'b510':0.0,'b511':0.0,'b512':0.0,'b513':0.0,
 'b514':0.0,'b515':0.0,'b516':0.0,'b517':0.0,'b518':0.0,'b519':0.0,'b520':0.0,
 'b521':0.0,'b522':0.0,'b523':0.0,'b524':0.0,'b525':0.0,'b526':0.0,'b527':0.0,
 'b528':0.0,'b529':0.0,'b530':0.0,'b531':0.0,'b532':0.0,'b533':0.0,'b534':0.0,
 'b535':0.0,'b536':0.0,'b537':0.0,'b538':0.0,'b539':0.0,'b540':0.0,'b541':0.0,
 'b542':0.0,'b543':0.0,'b544':0.0,'b545':0.0,'b546':0.0,'b547':0.0,'b548':0.0,
 'b549':0.0,'b550':0.0,'b551':0.0,'b552':0.0,'b553':0.0,'b554':0.0,'b555':0.0,
 'b556':0.0,'b557':0.0,'b558':0.0,'b559':0.0,'b560':0.0,'b561':0.0,'b562':0.0,
 'b563':0.0,'b564':0.0,'b565':0.0,'b566':0.0,'b567':0.0,'b568':0.0,'b569':0.0,
 'b570':0.0,'b571':0.0,'b572':0.0,'b573':0.0,'b574':0.0,'b575':0.0,'b576':0.0,
 'b577':0.0,'b578':0.0,'b579':0.0,'b580':0.0,'b581':0.0,'b582':0.0,'b583':0.0,
 'b584':0.0,'b585':0.0,'b586':0.0,'b587':0.0,'b588':0.0,'b589':0.0,'b590':0.0,
 'b591':0.0,'b592':0.0,'b593':0.0,'b594':0.0,'b595':0.0,'b596':0.0,'b597':0.0,
 'b598':0.0,'b599':0.0,'b600':0.0,'b601':0.0,'b602':0.0,'b603':0.0,'b604':0.0,
 'b605':0.0,'b606':0.0,'b607':0.0,'b608':0.0,'b609':0.0,'b610':0.0,'b611':0.0,
 'b612':0.0,'b613':0.0,'b614':0.0,'b615':0.0,'b616':0.0,'b617':0.0,'b618':0.0,
 'b619':0.0,'b620':0.0,'b621':0.0,'b622':0.0,'b623':0.0,'b624':0.0,'b625':0.0,
 'b626':0.0,'b627':0.0,'b628':0.0,'b629':0.0,'b630':0.0,'b631':0.0,'b632':0.0,
 'b633':0.0,'b634':0.0,'b635':0.0,'b636':0.0,'b637':0.0,'b638':0.0,'b639':0.0,
 'b640':0.0,'b641':0.0,'b642':0.0,'b643':0.0,'b644':0.0,'b645':0.0,'b646':0.0,
 'b647':0.0,'b648':0.0,'b649':0.0,'b650':0.0,'b651':0.0,'b652':0.0,'b653':0.0,
 'b654':0.0,'b655':0.0,'b656':0.0,'b657':0.0,'b658':0.0,'b659':0.0,'b660':0.0,
 'b661':0.0,'b662':0.0,'b663':0.0,'b664':0.0,'b665':0.0,'b666':0.0,'b667':0.0,
 'b668':0.0,'b669':0.0,'b670':0.0,'b671':0.0,'b672':0.0,'b673':0.0,'b674':0.0,
 'b675':0.0,'b676':0.0,'b677':0.0,'b678':0.0,'b679':0.0,'b680':0.0,'b681':0.0,
 'b682':0.0,'b683':0.0,'b684':0.0,'b685':0.0,'b686':0.0,'b687':0.0,'b688':0.0,
 'b689':0.0,'b690':0.0,'b691':0.0,'b692':0.0,'b693':0.0,'b694':0.0,'b695':0.0,
 'b696':0.0,'b697':0.0,'b698':0.0,'b699':0.0,'b700':0.0,'b701':0.0,'b702':0.0,
 'b703':0.0,'b704':0.0,'b705':0.0,'b706':0.0,'b707':0.0,'b708':0.0,'b709':0.0,
 'b710':0.0,'b711':0.0,'b712':0.0,'b713':0.0,'b714':0.0,'b715':0.0,'b716':0.0,
 'b717':0.0,'b718':0.0,'b719':0.0,'b720':0.0,'b721':0.0,'b722':0.0,'b723':0.0,
 'b724':0.0,'b725':0.0,'b726':0.0,'b727':0.0,'b728':0.0,'b729':0.0,'b730':0.0,
 'b731':0.0,'b732':0.0,'b733':0.0,'b734':0.0,'b735':0.0,'b736':0.0,'b737':0.0,
 'b738':0.0,'b739':0.0,'b740':0.0,'b741':0.0,'b742':0.0,'b743':0.0,'b744':0.0,
 'b745':0.0,'b746':0.0,'b747':0.0,'b748':0.0,'b749':0.0,'b750':0.0,'b751':0.0,
 'b752':0.0,'b753':0.0,'b754':0.0,'b755':0.0,'b756':0.0,'b757':0.0,'b758':0.0,
 'b759':0.0,'b760':0.0,'b761':0.0,'b762':0.0,'b763':0.0,'b764':0.0,'b765':0.0,
 'b766':0.0,'b767':0.0,'b768':0.0,'b769':0.0,'b770':0.0,'b771':0.0,'b772':0.0,
 'b773':0.0,'b774':0.0,'b775':0.0,'b776':0.0,'b777':0.0,'b778':0.0,'b779':0.0,
 'b780':0.0,'b781':0.0,'b782':0.0,'b783':0.0,'b784':0.0,'b785':0.0,'b786':0.0,
 'b787':0.0,'b788':0.0,'b789':0.0,'b790':0.0,'b791':0.0,'b792':0.0,'b793':0.0,
 'b794':0.0,'b795':0.0,'b796':0.0,'b797':0.0,'b798':0.0,'b799':0.0,'b800':0.0,
 'b801':0.0,'b802':0.0,'b803':0.0,'b804':0.0,'b805':0.0,'b806':0.0,'b807':0.0,
 'b808':0.0,'b809':0.0,'b810':0.0,'b811':0.0,'b812':0.0,'b813':0.0,'b814':0.0,
 'b815':0.0,'b816':0.0,'b817':0.0,'b818':0.0,'b819':0.0,'b820':0.0,'b821':0.0,
 'b822':0.0,'b823':0.0,'b824':0.0,'b825':0.0,'b826':0.0,'b827':0.0,'b828':0.0,
 '
```







==========

V WFM20_FLRANGER_STAR WFM20_TWO3TS kin 2', 'WFM20_TWO3TS', 2)

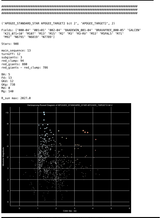
Fields: ['DEC_W1' 'DEC_W2' 'DEC_W3' 'DEC20_W1' 'DEC20_W2' 'DEC20_W3' 'ERR_W1' 'ERR_W2' 'ERR_W3' 'ERR20_W1' 'ERR20_W2' 'ERR20_W3' 'FLAG' 'HEL' 'HEL1' 'HEL2' 'HEL3' 'MJD' 'MJD1' 'MJD2' 'MJD3' 'PLATE' 'RA' 'RA1' 'RA2' 'RA3' 'SCIENCE']

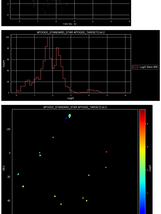
Stars: 9

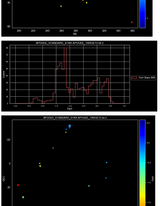
main_sequence: 53
subgiants: 0
turboFOX: 0
red_clump: 0
rejected: 0
red_giants: red_flag: 700

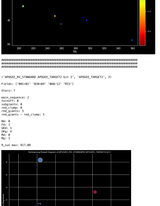
DR: 5
Mag: 19
Bin: 0.5
Dist: 10
Mag_Cut: 20
Mag_Lim: 0
Mag_Bin: 0.5

N_star_box: 2657.0









==========

V WFM20_PA_FLRANGER WFM20_TWO3TS kin 2', 'WFM20_TWO3TS', 3)

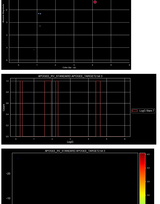
Fields: ['DEC_W1' 'DEC_W2' 'DEC_W3' 'PA1' 'PA2']

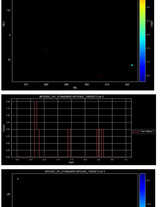
Stars: 1

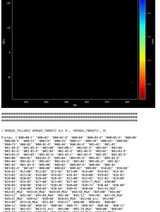
main_sequence: 0
subgiants: 0
turboFOX: 0
red_clump: 0
rejected: 0
red_giants: red_flag: 1

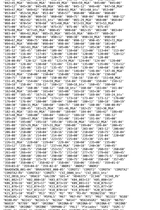
DR: 5
Mag: 0
Bin: 0
Dist: 0
Mag_Cut: 0
Mag_Lim: 0
Mag_Bin: 0

N_star_box: 151.00





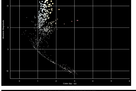


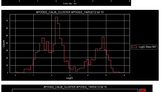


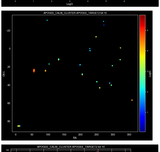
==========

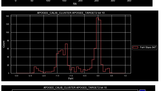
V WFM20_FOLLOWED WFM20_TWO3TS kin 0', 'WFM20_TWO3TS', 0)

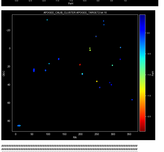
Fields: ['ERR-W1' 'ERR-W2' 'ERR-W3' 'ERR20-W1' 'ERR20-W2' 'ERR20-W3' 'DEC-W1' 'DEC-W2' 'DEC-W3' 'DEC20-W1' 'DEC20-W2' 'DEC20-W3' 'FLAG' 'HEL' 'HEL1' 'HEL2' 'HEL3' 'MJD' 'MJD1' 'MJD2' 'MJD3' 'PLATE' 'RA' 'RA1' 'RA2' 'RA3' 'SCIENCE' 'SN-W1' 'SN-W2' 'SN-W3' 'SN20-W1' 'SN20-W2' 'SN20-W3' 'VRAD-W1' 'VRAD-W2' 'VRAD-W3' 'VRAD20-W1' 'VRAD20-W2' 'VRAD20-W3' 'VRAD-ERR-W1' 'VRAD-ERR-W2' 'VRAD-ERR-W3' 'VRAD20-ERR-W1' 'VRAD20-ERR-W2' 'VRAD20-ERR-W3' 'VRAD-W-MEAN' 'VRAD20-W-MEAN' 'VRAD-ERR-W-MEAN' 'VRAD20-ERR-W-MEAN' 'VRAD-W-MEAN-CORR' 'VRAD20-W-MEAN-CORR' 'VRAD-ERR-W-MEAN-CORR' 'VRAD20-ERR-W-MEAN-CORR' 'VRAD-W-MEAN-CORR-ERR' 'VRAD20-W-MEAN-CORR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD20-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR' 'VRAD-W-MEAN-CORR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ERR-ER



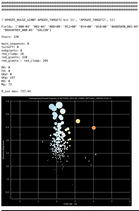


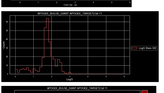


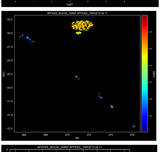


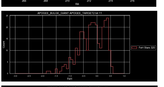


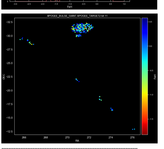

```
================================================================================

[ 'AFXXXX_BLUE_CLUSTER' AFXXXX_TARGETS 0x0 (2)', 'AFXXXX_TARGETS', (1)
Filter: ('EBM-NA-BR', 'BR1-NA', 'BWB-NA0', 'B12-NA0', 'B13-NA0', 'B23-NA0', 'BA0AFXXX_BR1-NA'
'B12-NA1', 'B13-NA1', 'B23-NA1')

Stars: 156

main_separator: 0
sep_index: 0
subgroups: 0
sub_index: 0
real_points: 156
real_points - real_clump: 156

Max: 0
Min: 0
Avg: 0
Med: 0.07
Sum: 0
Mp: 156

m_cut_max: 737.40
```



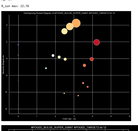


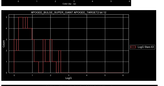


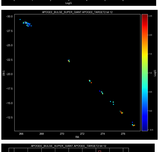


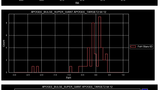


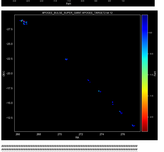

```
================================================================================

[ 'AFXXXX_BLUE_SUPER_SUPER_AFXXXX_TARGETS 0x0 (1)', 'AFXXXX_TARGETS', (1)
Filter: ('BR0-NA0', 'B12-NA0', 'B13-NA0', 'B23-NA0', 'B1B-NA0', 'B2B-NA0', 'CA0-CB0')

Stars: 63

main_separator: 0
sep_index: 0
subgroups: 0
sub_index: 0
real_points: 63
real_points - real_clump: 63

Max: 0
Min: 0
Avg: 0
Med: 0
Sum: 0
Mp: 63

m_cut_max: 25.56
```



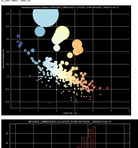


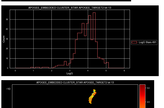


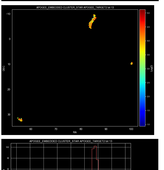


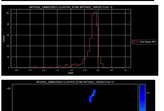


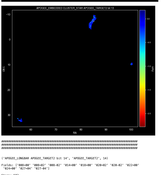

```
================================================================================

[ 'AFXXXX_EMBEDDED_CLUSTER_FINR' AFXXXX_TARGETS 0x0 (2)', 'AFXXXX_TARGETS', (1)
Filter: ('I-NA-GE_R1A', 'I2-NA_R1A', 'B1/BA0', 'BR1/BA0', 'BR1BA0_B', 'BR1BA0-C', 'BR1BA0-D'
'BR1BA0', 'BR1BA0', 'BR1BA0', 'BR1BA0', 'BR1BA0')

Stars: 125

main_separator: 125
sep_index: 125
subgroups: 0
sub_index: 0
real_points: 125
real_points - real_clump: 125

Max: 22
Min: 0
Avg: 1.6
Med: 0.04
Sum: 200
Mp: 125

m_cut_max: 200.25
```



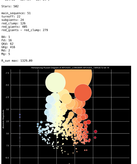









```
================================================================================

[ 'AFXXXX_EMBEDDED' AFXXXX_TARGETS 0x0 (4)', 'AFXXXX_TARGETS', (4)
Filter: ('BR0-NA0', 'BR1-NA', 'BR2-NA', 'B12-NA0', 'B13-NA0', 'B23-NA0', 'B1B-NA0', 'B2B-NA0'
'B12-NA1', 'B13-NA1', 'B23-NA1')

Stars: 380

main_separator: 55
sep_index: 55
subgroups: 20
sub_index: 20
real_points: 380
real_points - real_clump: 279

Max: 31
Min: 0
Avg: 1.3
Med: 0.03
Sum: 493
Mp: 5

m_cut_max: 1229.80
```



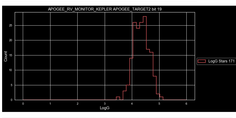
```
==================================================================
==================================================================

[ APOGEE_EPICSLOCK_STAR APOGEE_TARGET2 bit 15 , APOGEE_TARGET2', 22]

Plates: ['8000-00' '2D-dwarf']

Stars: 2

mask_sequence: 2
nsteps: 4
subsymbol: 0
rot_period: 0
rot_period: 0
rot_period_err: - rot_flag: 0

Dec: 2
Jdate: 0
Jdate: 0
Mag: 0
Mag: 0
Mag: 0

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

[ APOGEE_ASPCAP_COG_DWARF APOGEE_TARGET2 bit 10 , APOGEE_TARGET2', 10]

Plates: ['5001_APO-1' '5002_APO-1' '5003_APO-1' '5004_APO-1' '5005_APO-1'
 '5006_APO-1' '5007_APO-1' '5008_APO-1' '5112_APO-1' '5113_APO-1'
 '5114_APO-1' '5115_APO-1' '5116_APO-1' '5117_APO-1' '5118_APO-1'
 '5119_APO-1' '5120_APO-1' '5121_APO-1']

Stars: 1

mask_sequence: 1440
nsteps: 16
subsymbol: 0
rot_period: 0
rot_period: 0
rot_period_err: - rot_flag: 146

Dec: 0
Jdate: 0
Jdate: 0.0
Mag: 0.0
Mag: 0.0
Mag: 0.0

N_star_max: 200.45
```

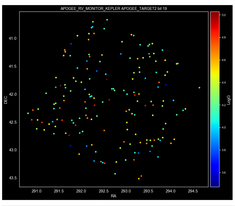
```
==================================================================
==================================================================

[ APOGEE_RCB_CLUSTER_STAR APOGEE_TARGET2 bit 17\, APOGEE_TARGET2', 17]

Plates: ['5114-00' '5114-01' '5114-00' '5114-00']

Stars: 12

mask_sequence: 10
nsteps: 4
subsymbol: 0
rot_period: 0
rot_period: 0
rot_period_err: - rot_flag: 76

Dec: 0
Jdate: 0
Jdate: 0.0
Mag: 0
Mag: 0

N_star_max: 82.00
```

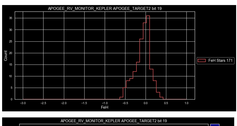
```
==================================================================
==================================================================

[ APOGEE_RV_MONITOR_STAR APOGEE_TARGET2 bit 18\, APOGEE_TARGET2', 18]

Plates: ['2100' '2100_RV']

Stars: 1

mask_sequence: 56
nsteps: 16
subsymbol: 0
rot_period: 0
rot_period: 0
rot_period_err: - rot_flag: 2

Dec: 0
Jdate: 0
Jdate: 0
Mag: 0
Mag: 0
Mag: 0

N_star_max: 5.00
```

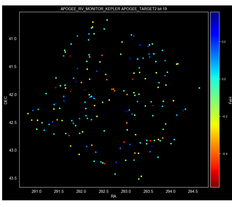


```
==================================================================
==================================================================

[ APOGEE_RV_MONITOR_ASPCAP_MASTER_TARGETS bit 19\, APOGEE_TARGET2', 19]

Plates: ['2100_ASPCAP']

Stars: 1

mask_sequence: 110
nsteps: 16
subsymbol: 0
rot_period: 0
rot_period: 0
rot_period_err: - rot_flag: 1

Dec: 0
Jdate: 0
Jdate: 0
Mag: 0
Mag: 0
Mag: 0

N_star_max: 6.13
```

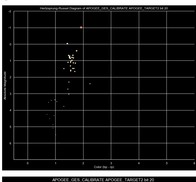


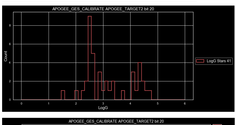


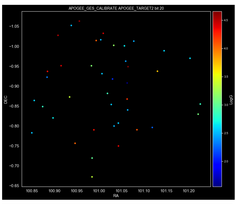


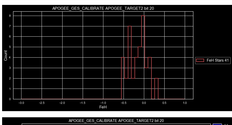


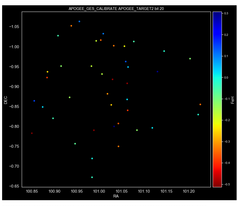

```
##########################################################################
##########################################################################
##########################################################################

('APOGEE_GES_CALIBRATE APOGEE_TARGET2 bit 20', 'APOGEE_TARGET2', 20)

Fields: ['CDMDTA3']

Stars: 41

main_sequence: 9
turnoff: 3
subgiants: 1
red_clump: 7
red_giants: 20
red_giants - red_clump: 21

BA: 0
FA: 5
GKd: 8
GKg: 20
MS: 9
MG: 0

m_sun max: 47.26
```



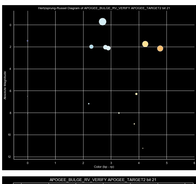


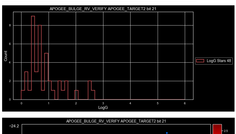


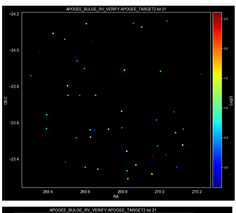


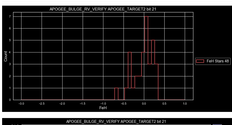


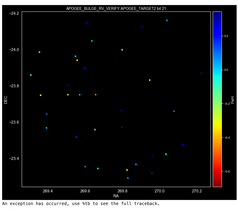

```
##########################################################################
##########################################################################
##########################################################################

('APOGEE_BULGE_RV_VERIFY APOGEE_TARGET2 bit 21', 'APOGEE_TARGET2', 21)

Fields: ['006+00']

Stars: 48

main_sequence: 0
turnoff: 0
subgiants: 0
red_clump: 1
red_giants: 48
red_giants - red_clump: 47

BA: 0
FA: 0
GKd: 0
GKg: 6
MS: 0
MG: 42

m_sun max: 49.64
```












```
An exception has occurred, use %tb to see the full traceback.

SystemExit

In [2]:

In [2]:
```