SEDmc

Star Summary Report

TIC159304532

11/03/2024

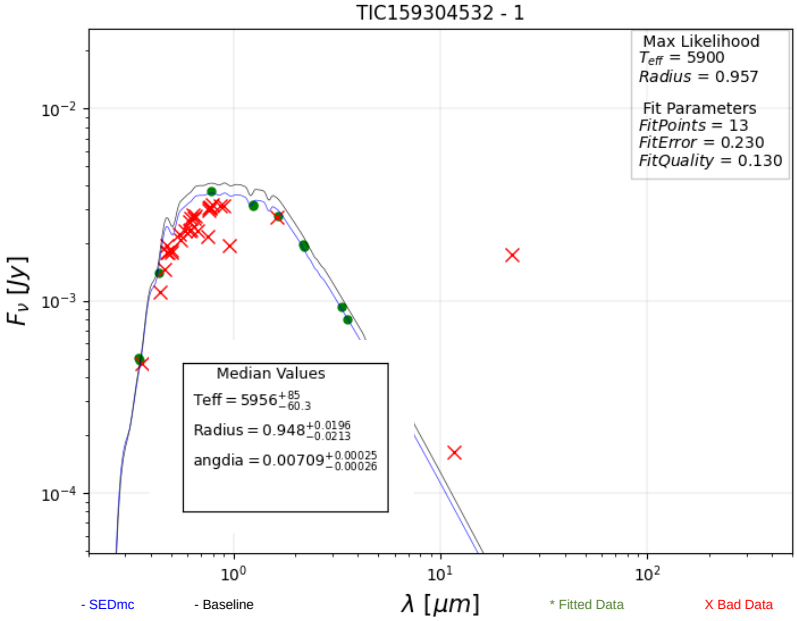
Astrometry Data: ID = TIC159304532; RA,DEC = (290.2632874, 44.5564051); Best Parallax (Simbad) = 0.8039 (+/-0.0235)

Stellar Parameters: Baseline Data Source = NASA

Data Type	Teff [K]	Rstar [Rsun]	Angular Diameter [arcsec]
Baseline Values {SEDmc residuals}	5863 (+/-103.52) {1.6%}	1.05 (+/-0.28) {-9.7%}	0.0076 (+/-0.002) {-6.7%}
SEDmc Results {fractional error}	5956 (+84, -60) {1.4%}	0.948 (+0.0196, -0.0213) {2.1%}	0.00709 (+0.00025, -0.00026) {3.5%}

Sampling Parameters: Observed Data = New; Model = nextgen; # of Walkers = 50; # of Iterations = 5000; Burn In = 1000
Min Wavelength = 0.35; Max Wavelength = 4.6; # of Fit Points = 13; # of Bad Points = 31; Fit Error = 0.23

SEDmc Observed Data & Best Fit Curve



Observed Data

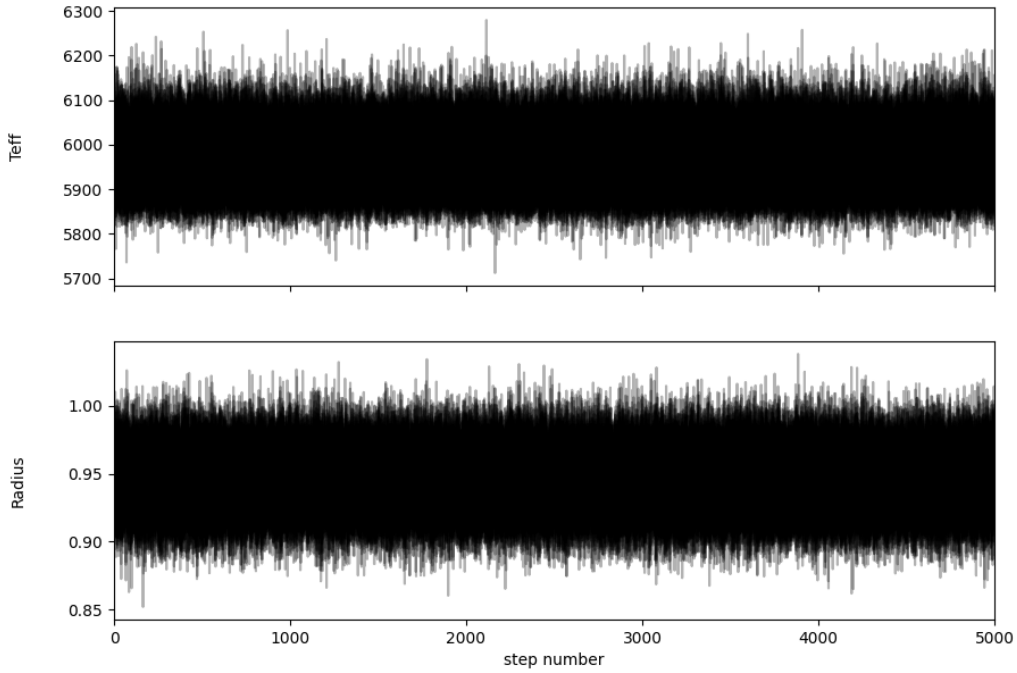
Good Data Points (Used in Sampler)

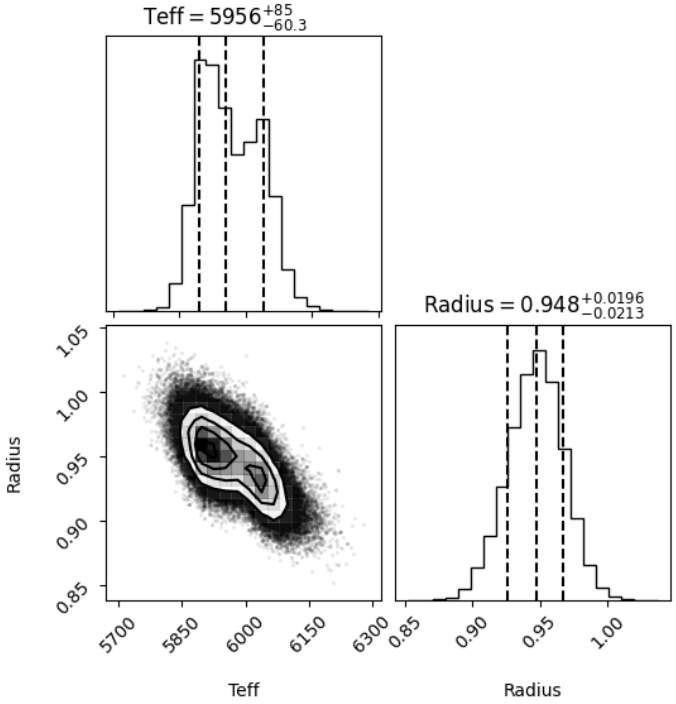
	wl	fl	efl	src	band
0	0.35	0.00	0.00	I/360/syntphot	Cousins:U
1	0.35	0.00	0.00	I/360/syntphot	SDSS:u
2	0.44	0.00	0.00	I/360/syntphot	Cousins:B
3	0.78	0.00	0.00	I/305/out	POSS-II:i
4	1.24	0.00	0.00	I/343/gps1	2MASS:J
5	1.25	0.00	0.00	II/246/out	Johnson:J
6	1.65	0.00	0.00	I/317/sample	2MASS:H
7	2.17	0.00	0.00	I/322A/out	2MASS:Ks
8	2.19	0.00	0.00	II/246/out	Johnson:K
9	3.35	0.00	0.00	II/363/unwise	WISE:W1
10	3.55	0.00	0.00	J/ApJS/254/11/spikes	Spitzer/IRAC:3.6
11	4.50	0.00	0.00	J/ApJS/254/11/spikes	Spitzer/IRAC:4.5
12	4.60	0.00	0.00	II/363/unwise	WISE:W2

Bad Data Points (All not shown)

	wl	fl	efl	src	band
0	0.36	0.00	0.00	J/AJ/144/24/kisdr2	INT/WFC:U
1	0.44	0.00	0.00	II/336/apass9	Johnson:B
2	0.47	0.00	0.00	I/305/out	POSS-II:J
3	0.48	0.00	0.00	I/343/gps1	PAN-STARRS/PS1:g
4	0.48	0.00	0.00	J/AJ/144/24/kisdr2	INT/WFC:g
5	0.48	0.00	0.00	I/353/gsc242	SDSS:g
6	0.50	0.00	0.00	I/350/gaiaedr3	GAIA/GAIA3:Gbpg
7	0.50	0.00	0.00	I/345/gaia2	GAIA/GAIA2:Gbp
8	0.55	0.00	nan	I/360/syntphot	Cousins:V
9	0.55	0.00	0.00	II/336/apass9	Johnson:V
10	0.58	0.00	0.00	I/350/gaiaedr3	GAIA/GAIA3:G
11	0.61	0.00	0.00	I/343/gps1	PAN-STARRS/PS1:
12	0.62	0.00	0.00	J/AJ/144/24/kisdr2	INT/WFC:r
13	0.62	0.00	0.00	I/345/gaia2	GAIA/GAIA2:G
14	0.63	0.00	0.00	I/353/gsc242	SDSS:r
15	0.64	0.00	0.00	I/305/out	POSS-II:F
16	0.65	0.00	nan	I/360/syntphot	Cousins:R
17	0.66	0.00	0.00	J/AJ/144/24/kisdr2	INT/WFC:Ha
18	0.67	0.00	0.00	I/339/hsoy	Gaia:G
19	0.75	0.00	0.00	I/343/gps1	PAN-STARRS/PS1:
20	0.76	0.00	0.00	I/350/gaiaedr3	GAIA/GAIA3:Grp
21	0.76	0.00	0.00	I/353/gsc242	SDSS:i
22	0.77	0.00	0.00	J/AJ/144/24/kisdr2	INT/WFC:i
23	0.77	0.00	0.00	I/345/gaia2	GAIA/GAIA2:Grp
24	0.79	0.00	nan	I/360/syntphot	Cousins:I
25	0.87	0.00	0.00	II/349/ps1	PAN-STARRS/PS1:z
26	0.90	0.00	0.00	I/353/gsc242	SDSS:z
27	0.96	0.00	0.00	I/343/gps1	PAN-STARRS/PS1:y
28	1.63	0.00	0.00	II/246/out	Johnson:H
29	11.57	0.00	nan	I/353/gsc242	WISE:W3

SEDmc Sampler Behavior - Markov Chain Plot



Auto-correlation Time: Teff = 2.414; Radius = 2.207

SEDmc Posterior Spread - Corner Plot