KIC 008145958

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	$R_\star$ ($R_\odot$)	$T_\star$ (K)	R_p ($R_\oplus$)	S_p ($S_\oplus$)
008145958-01	OBS	6978.01	3.075460	134.482867	45.8	1.262	7.7	8.4	1.24	5763	0.95	881.10

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008145958-01	OBS	PC	0.98	0	0	0	0	NO_COMMENT

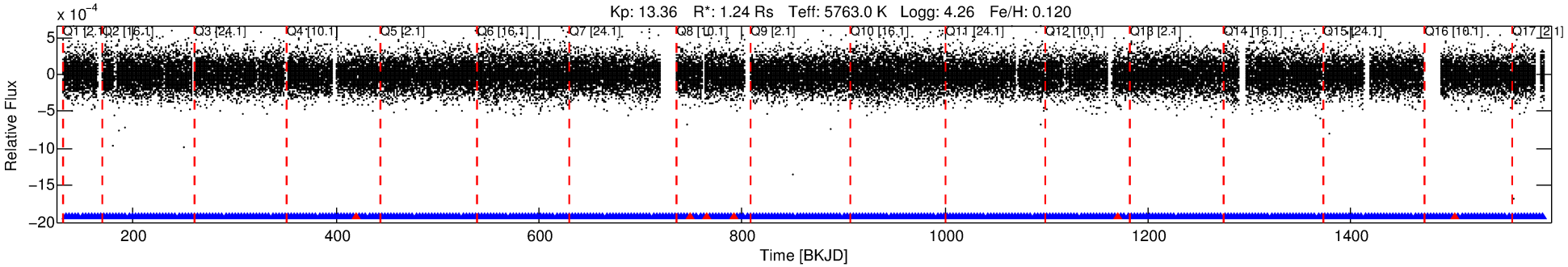
Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.
See `http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col` for comment definitions.

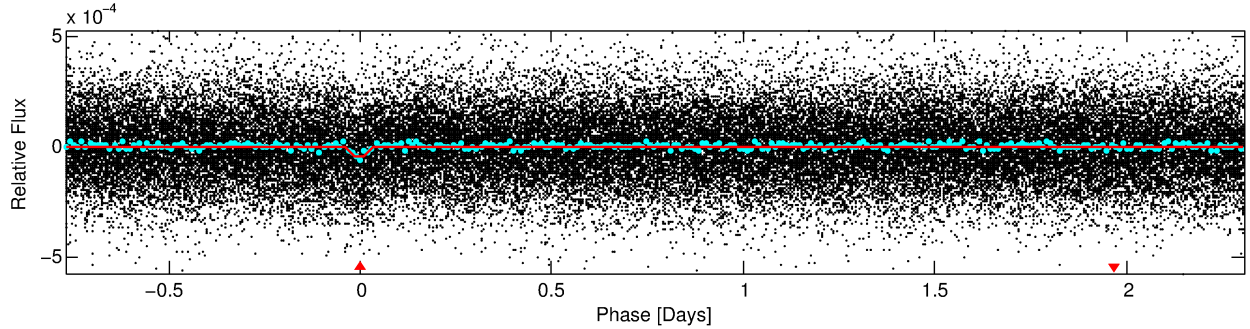
Ephemeris Match Information For 008145958-01

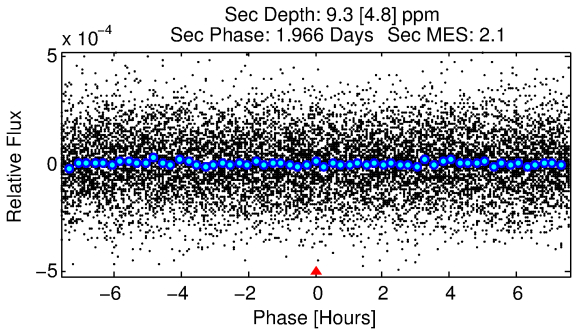
No Significant Match Found

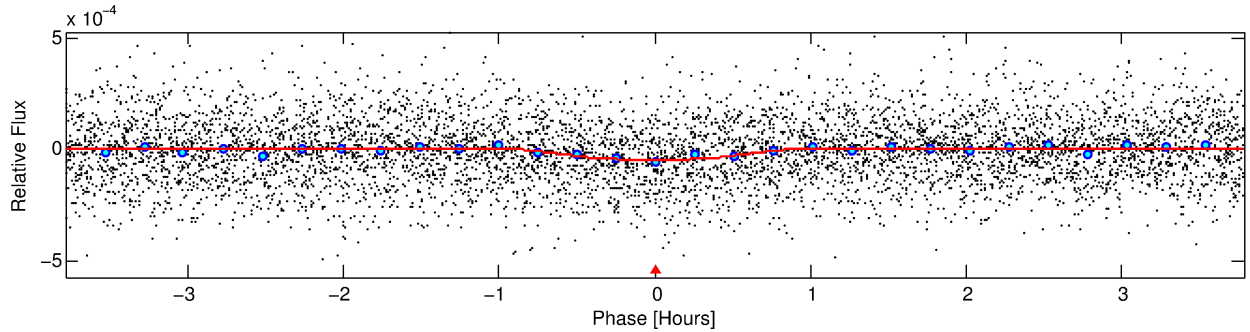
DV One-Page Summary

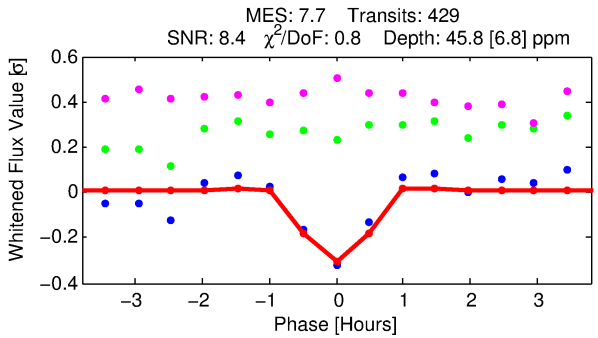
KIC: 8145958 Candidate: 1 of 1 Period: 3.075 d
KOI: K06978.01 Corr: 0.860

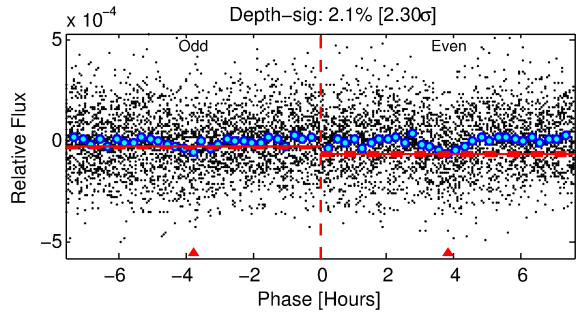


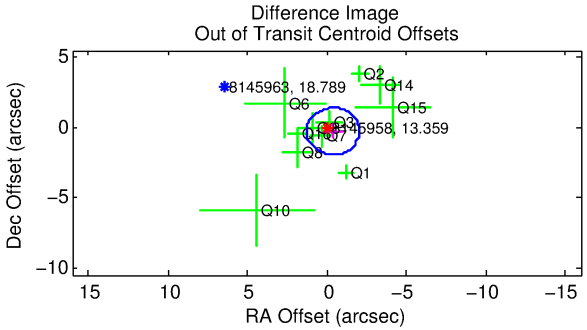












DV Fit Results:

Period = 3.07546 [0.00002] d
Epoch = 134.4829 [0.0029] BKJD
Rp/R* = 0.0070 [0.0028]
a/R* = 11.01 [19.17]
b = 0.82 [0.73]

Seff = 881.10 [220.52]
Teq = 1389 [87] K
Rp = 0.95 [0.40] Re
a = 0.0416 [0.0064] AU

Ag = 9.84 [9.60] [0.92σ]
Teffp = 3805 [900] K [2.67σ]

DV Diagnostic Results:

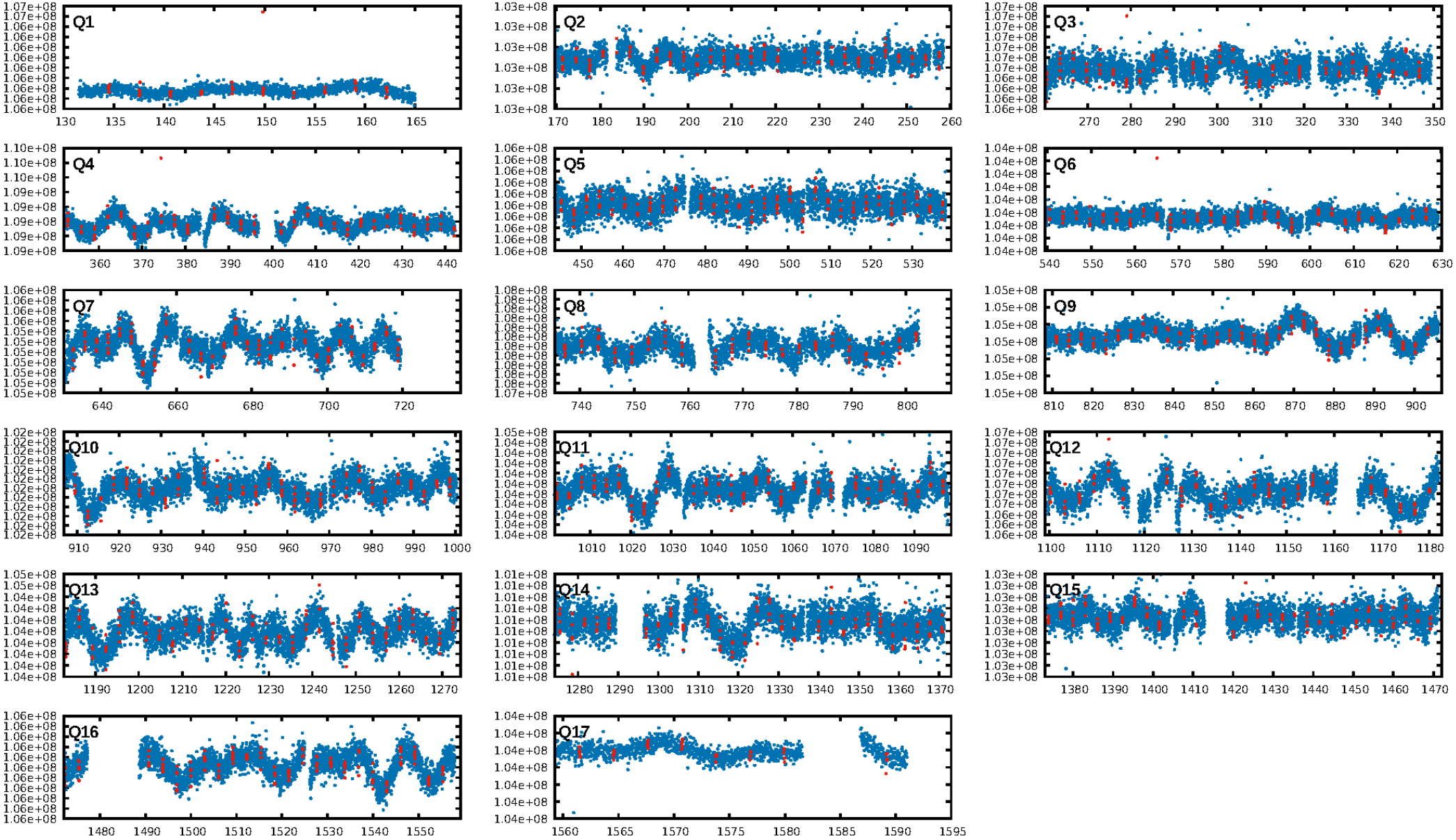
ShortPeriod−sig: N/A
LongPeriod−sig: N/A
ModelChiSquare2−sig: N/A
ModelChiSquareGof−sig: N/A
Bootstrap−pfa: 3.66e−14
RollingBand−fgt: 0.99 [405/411]
GhostDiagnostic−chr: 21.7

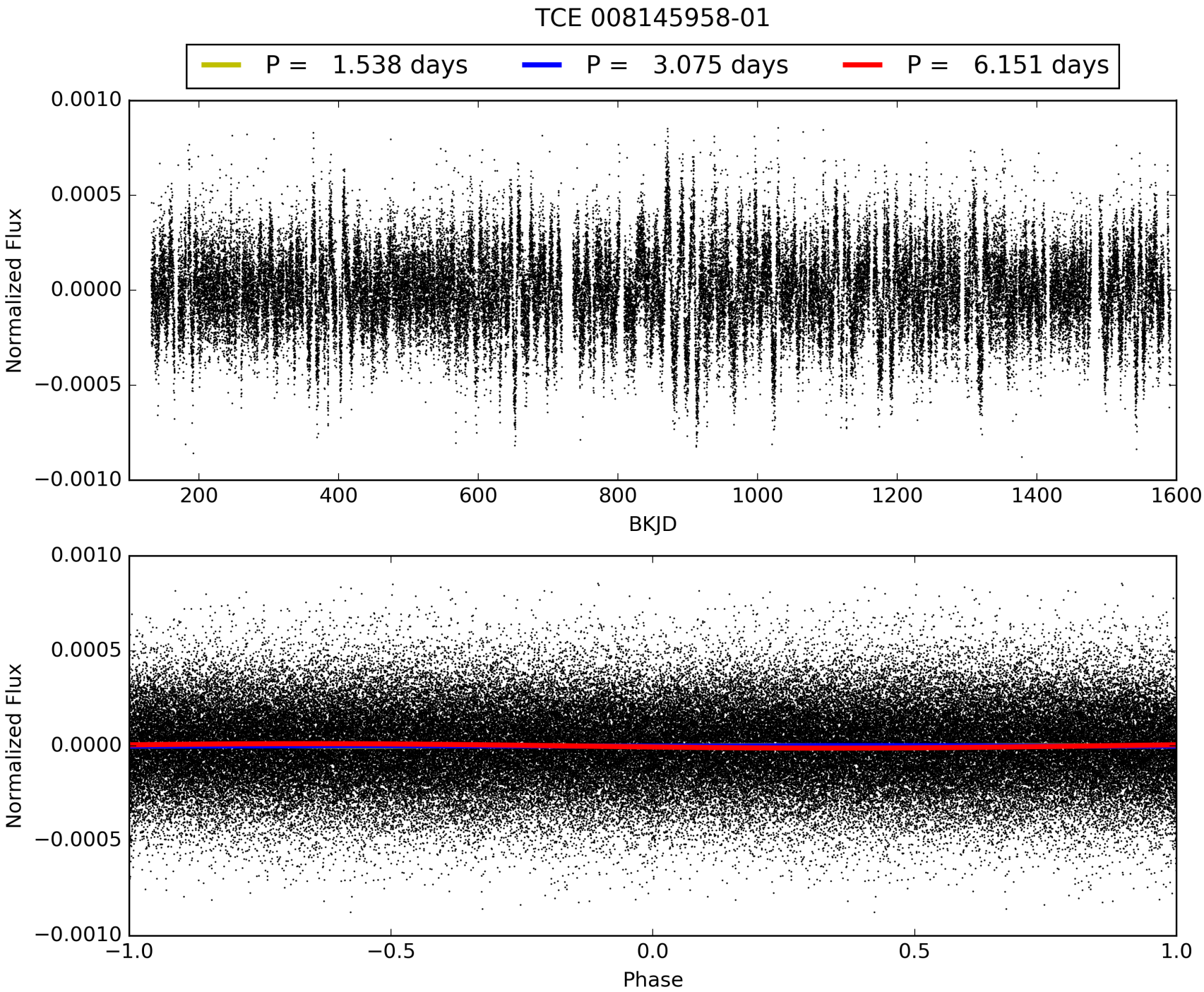
Centroid−sig: 0.5%
Centroid−so: 2.781 arcsec [1.83σ]
OotOffset−rm: 0.471 arcsec [0.85σ]
KicOffset−rm: 0.534 arcsec [0.92σ]
OotOffset−st: 4/3/2/2 [11]
KicOffset−st: 4/3/2/2 [11]
DiffImageQuality−fgm: 0.27 [3/11]
DiffImageOverlap−fno: 0.00 [17/17]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01−Feb−2016 01:28:45 Z

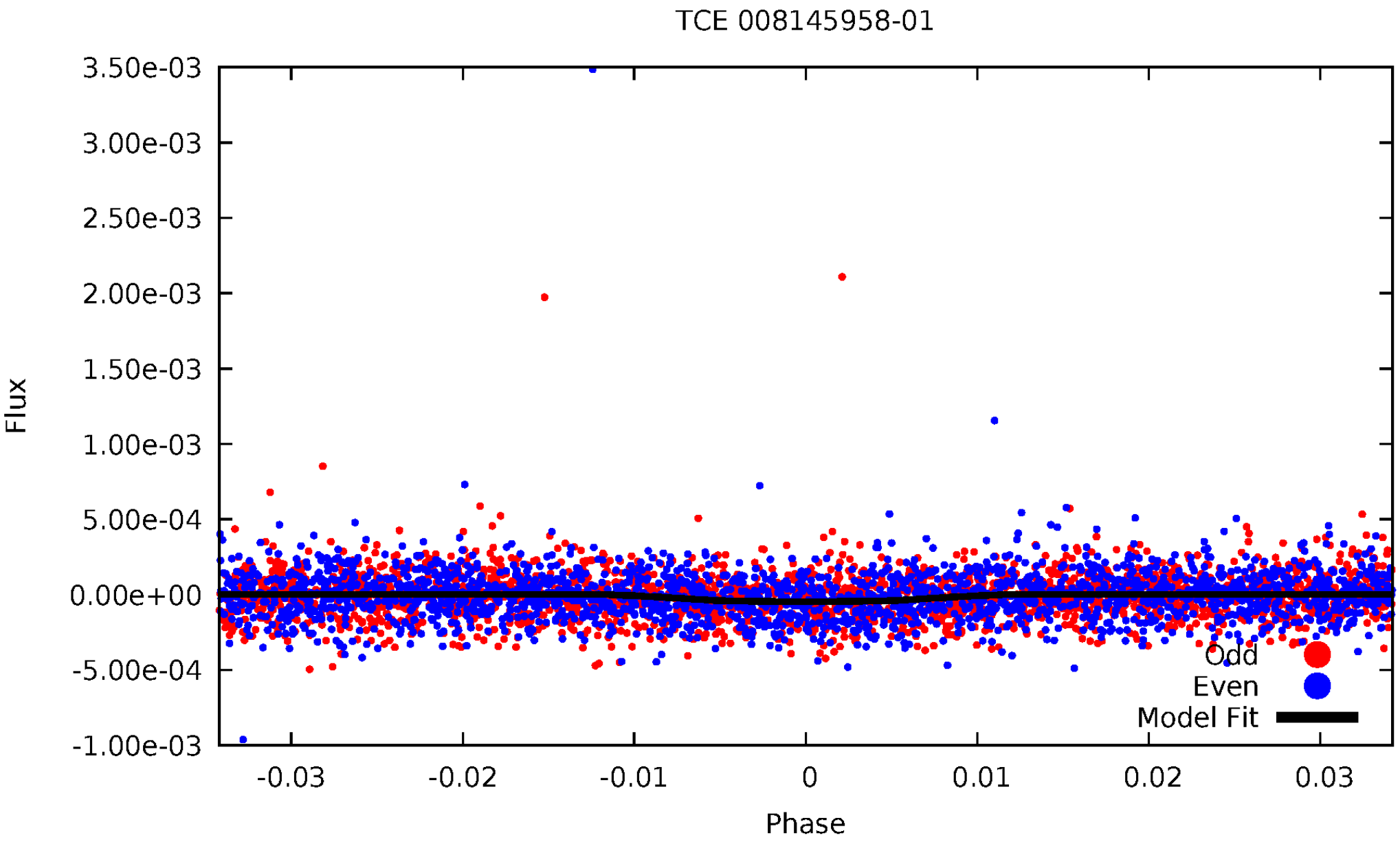
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008145958-01, PDC Light Curves




TCE 008145958-01
P = 1.538 days
P = 3.075 days
P = 6.151 days
Normalized Flux
0.0010
0.0005
0.0000
−0.0005
−0.0010
200
400
600
800
1000
1200
1400
1600
BKJD
Normalized Flux
0.0010
0.0005
0.0000
−0.0005
−0.0010
−1.0
−0.5
0.0
0.5
1.0
Phase

DV Odd/Even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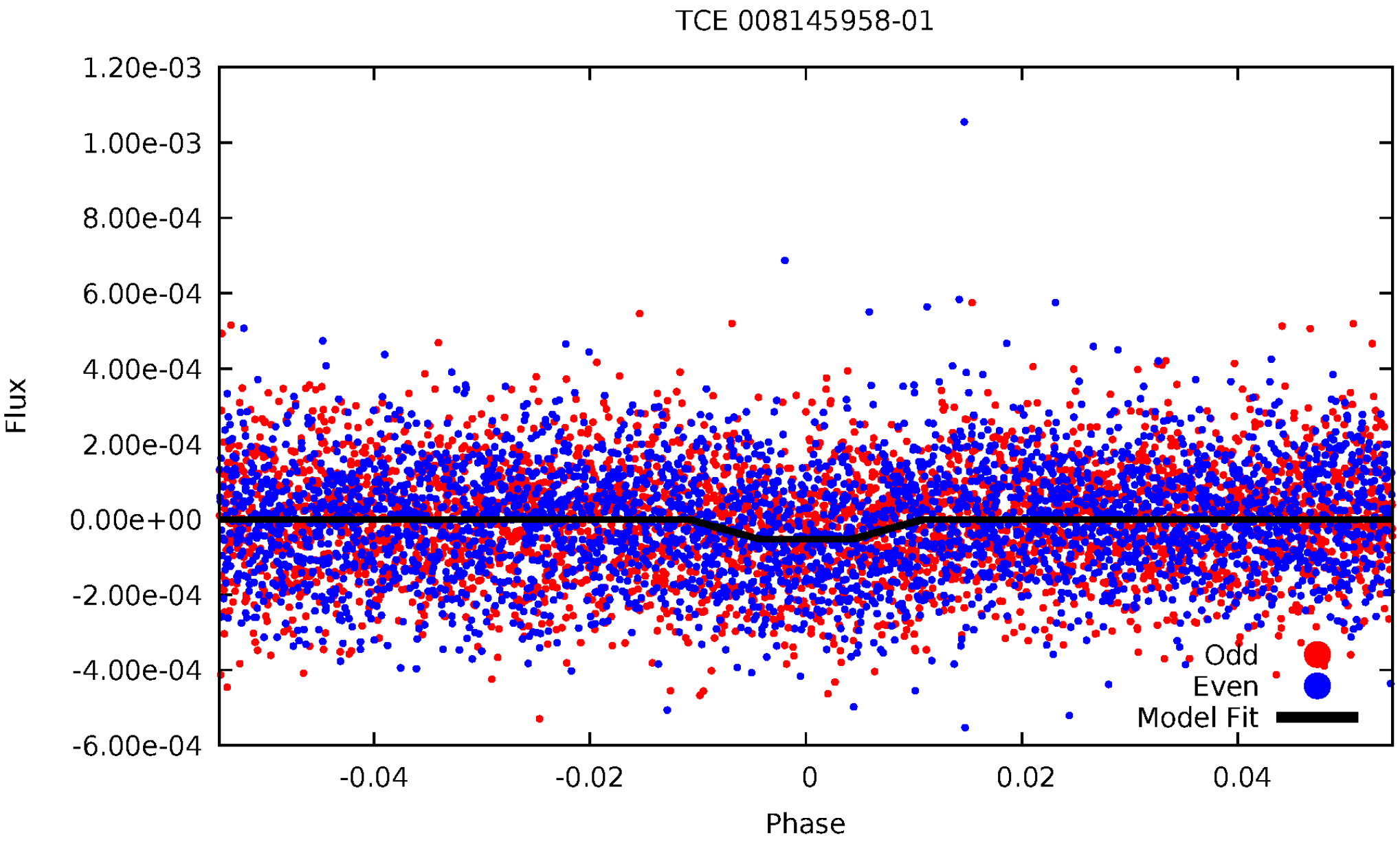
3.50e-03
3.00e-03
2.50e-03
2.00e-03
1.50e-03
1.00e-03
5.00e-04
0.00e+00
-5.00e-04
-1.00e-03
Flux
-0.03
-0.02
-0.01
0
0.01
0.02
0.03
Phase
Odd
Even
Model Fit

ALT Odd/Even


TCE 008145958-01
1.20e-03
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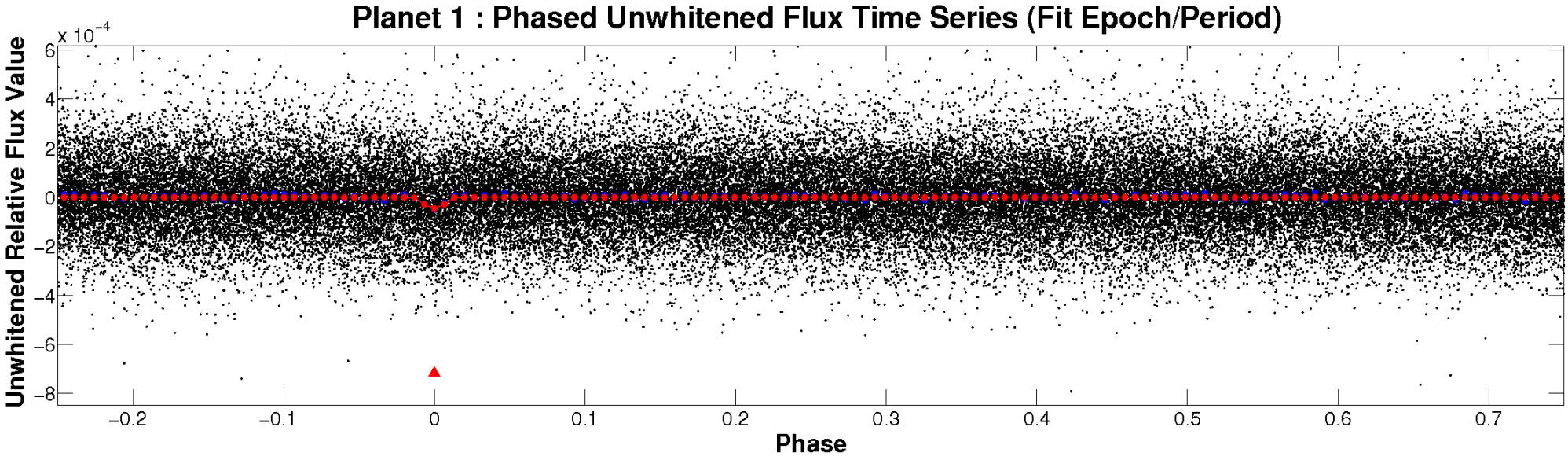
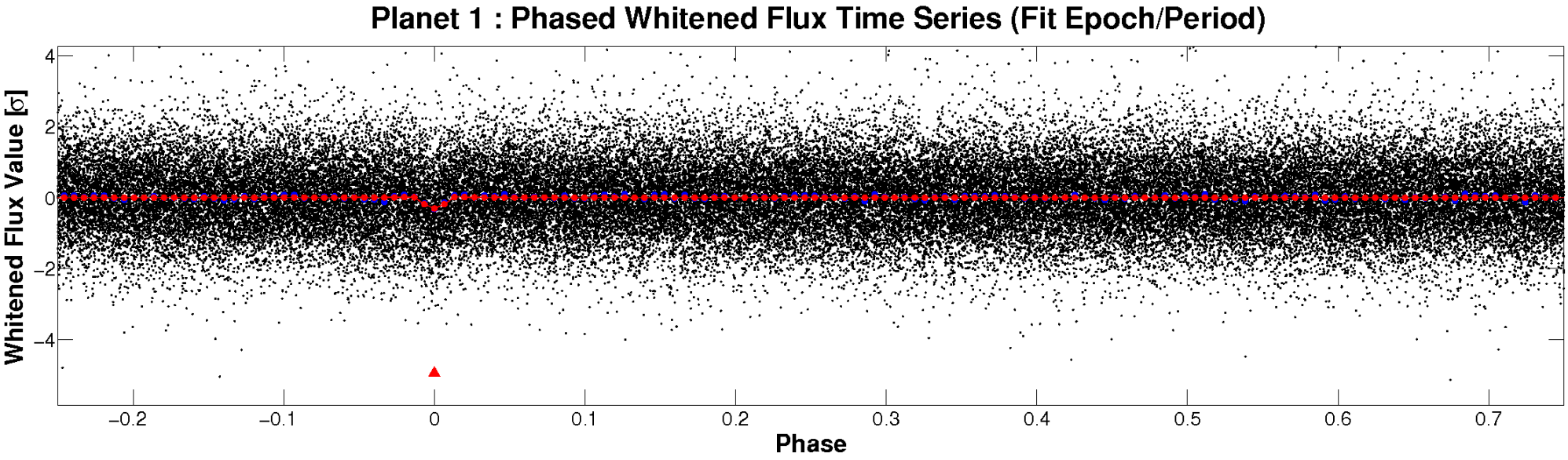
8.00e-04
6.00e-04
4.00e-04
2.00e-04
0.00e+00
-2.00e-04
-4.00e-04
-6.00e-04
Flux
-0.04
-0.02
0
0.02
0.04
Phase
Odd
Even
Model Fit

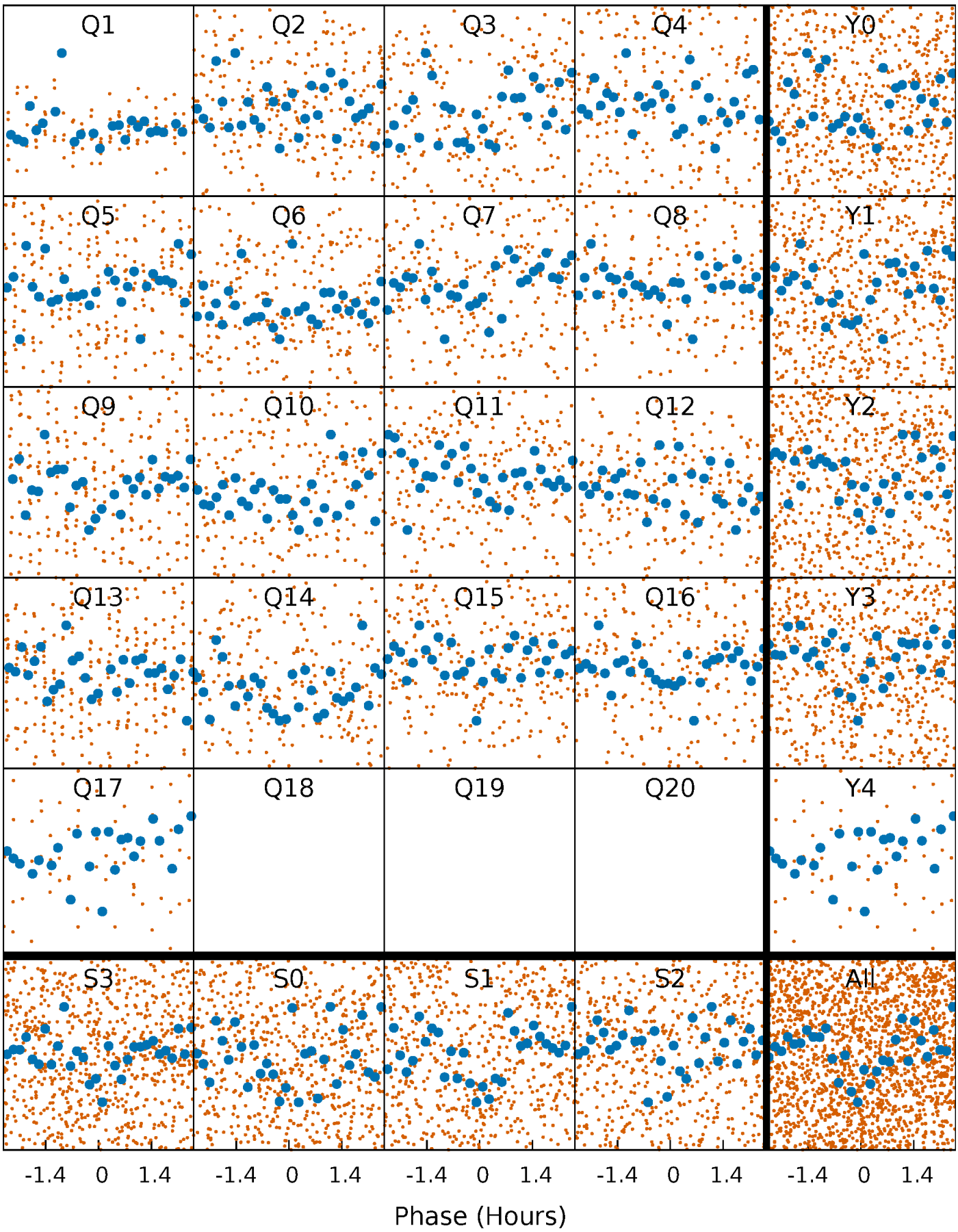
Non-Whitened Vs. Whitened Light Curve





PDC Quarter-Phased Transit Curves

TCE 008145958-01 P= 3.075460 Days T_0=134.482867 (BKJD)



DV Quarter-Phased Transit Curves

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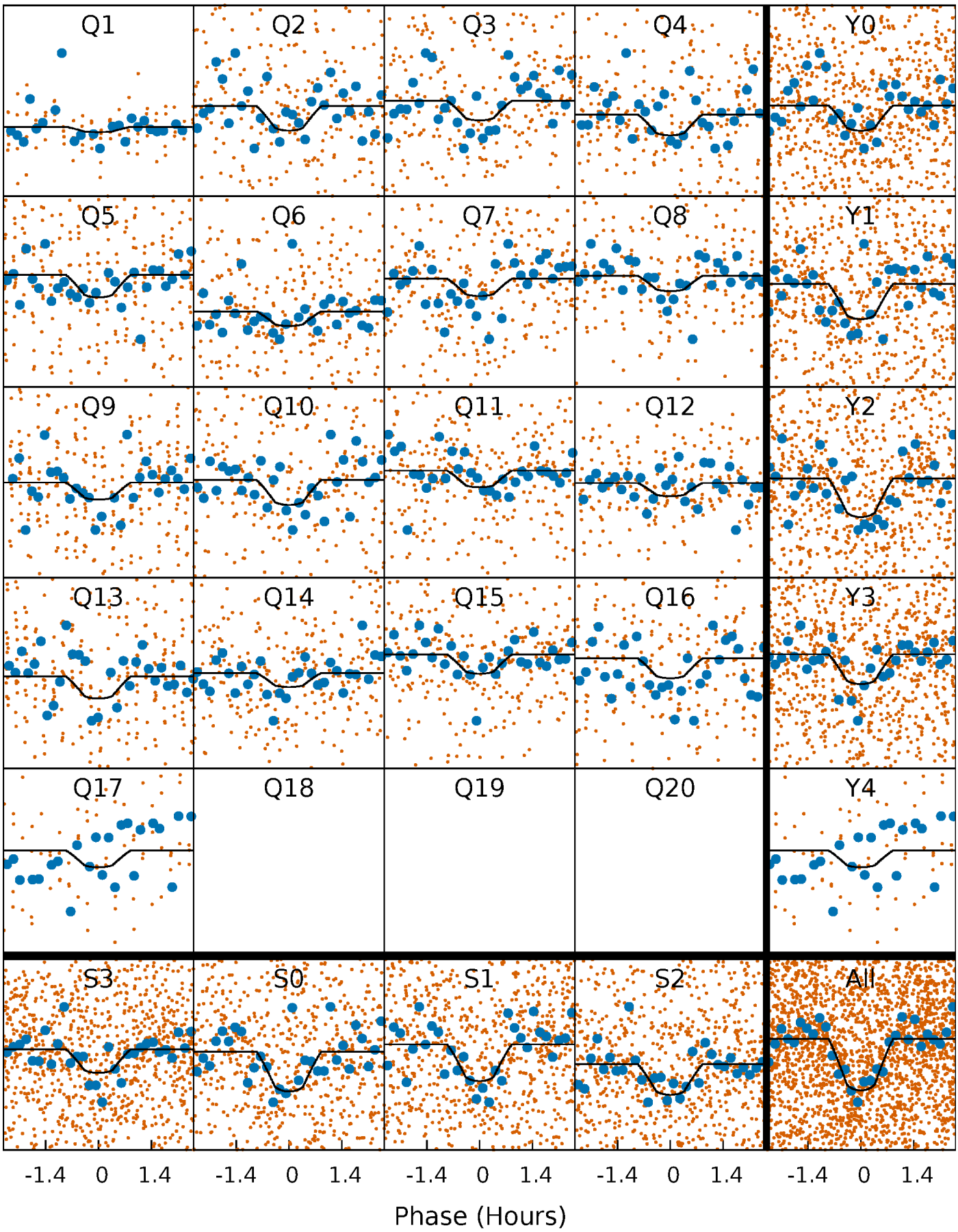
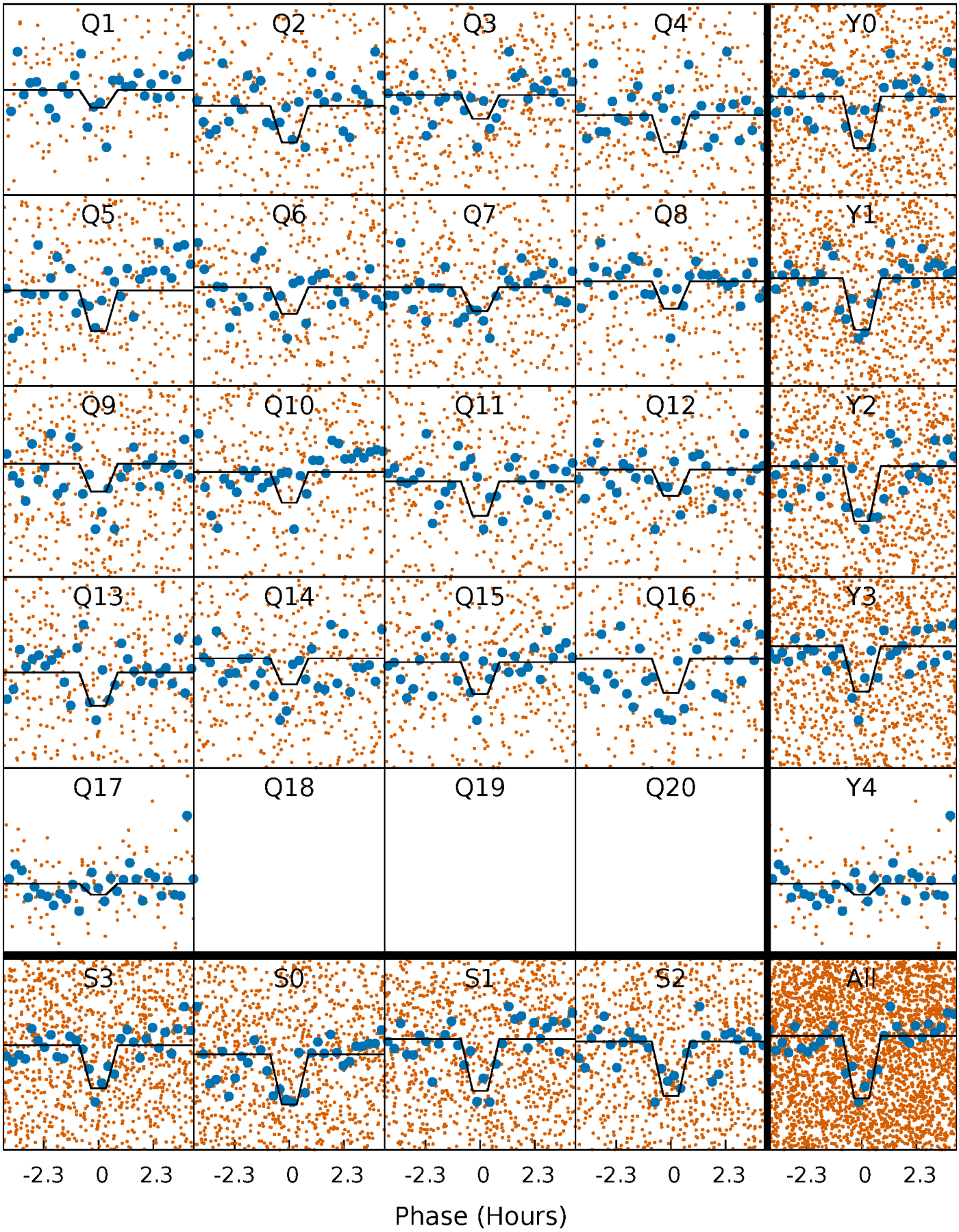


Alt. Detrend Quarter-Phased Transit Curves

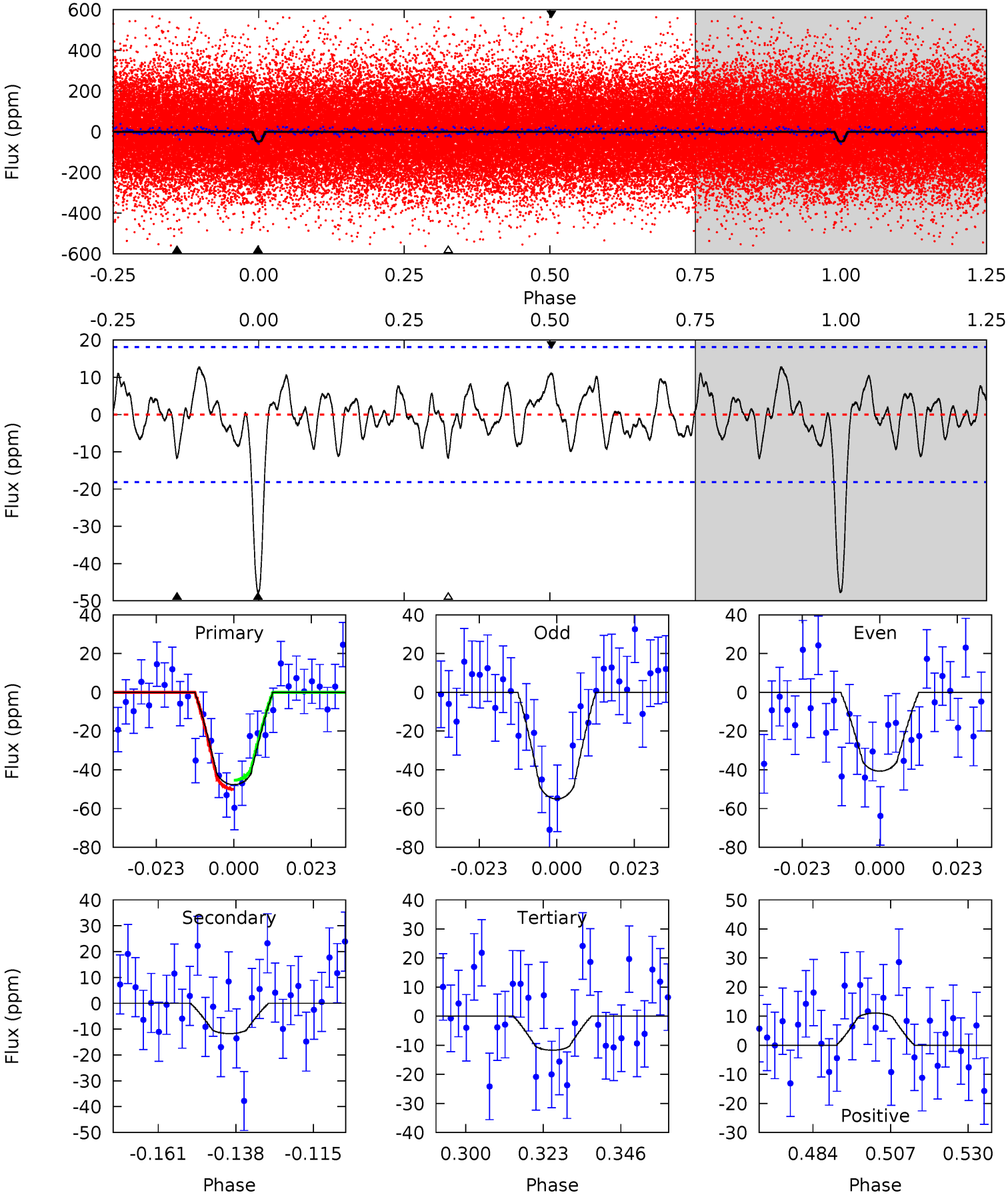
TCE 008145958-01 P= 3.075502 Days T_0=134.469630 (BKJD)



DV Model-Shift Uniqueness Test

008145958-01, P = 3.075460 Days, E = 131.407407 Days

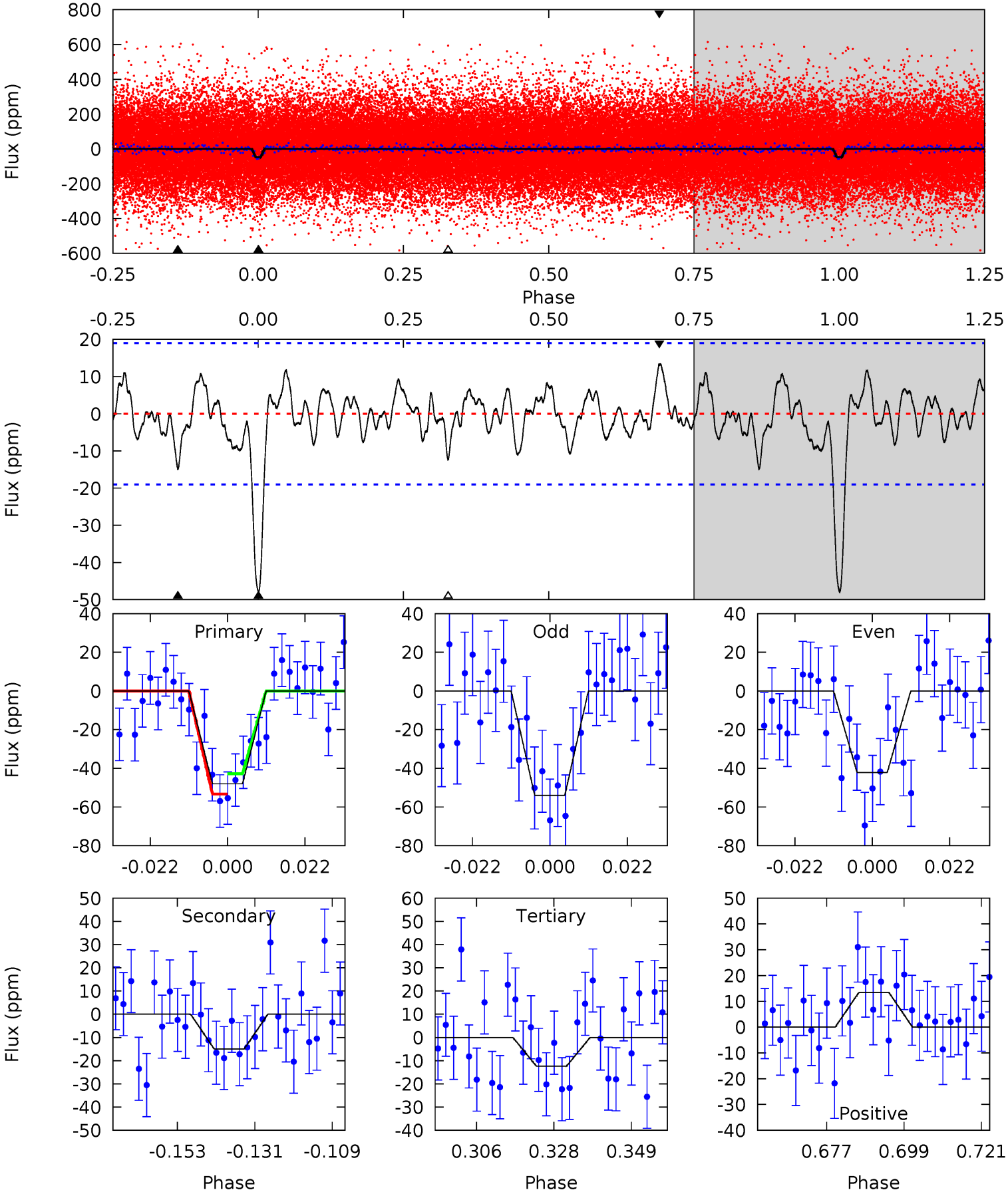
Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	3.15	3.14	2.97	4.86	2.27	1.37	9.65	9.81	0.01	0.17	1.93	0.87	0.21	0.63



Alt Model-Shift Uniqueness Test

008145958-01, P = 3.075502 Days, E = 131.394128 Days

Pri	Sec	Ter	Pos	FA_1	FA_2	F_{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	3.83	3.17	3.44	4.87	2.29	1.27	9.13	8.86	0.66	0.39	1.51	0.97	0.22	1.35



Stellar Parameters For KIC 008145958

	$T_{\rm eff}(K)$	$\log(g)$	[Fe/H]	R ($R_\odot$)	$M(M_\odot)$	$p_\star$ (g·cm^{-3})
	5763^{+78}_{-78}	$4.256^{+0.143}_{-0.117}$	$0.120^{+0.150}_{-0.150}$	$1.242^{+0.200}_{-0.200}$	$1.014^{+0.081}_{-0.065}$	$0.745^{+0.502}_{-0.232}$
	+1%/-1%	+3%/-3%	+125%/-125%	+16%/-16%	+8%/-6%	+67%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008145958-01 / KOI 6978.01

Detrend	Depth (ppm)	R_p ($R_\oplus$)	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-12±4	$0.93^{+0.38}_{-0.37}$	1942^{+93}_{-98}	4266^{+919}_{-575}	13^{+21}_{-7}
Alt.	-15±4	$0.97^{+0.40}_{-0.37}$	1938^{+89}_{-83}	4371^{+994}_{-521}	15^{+24}_{-8}

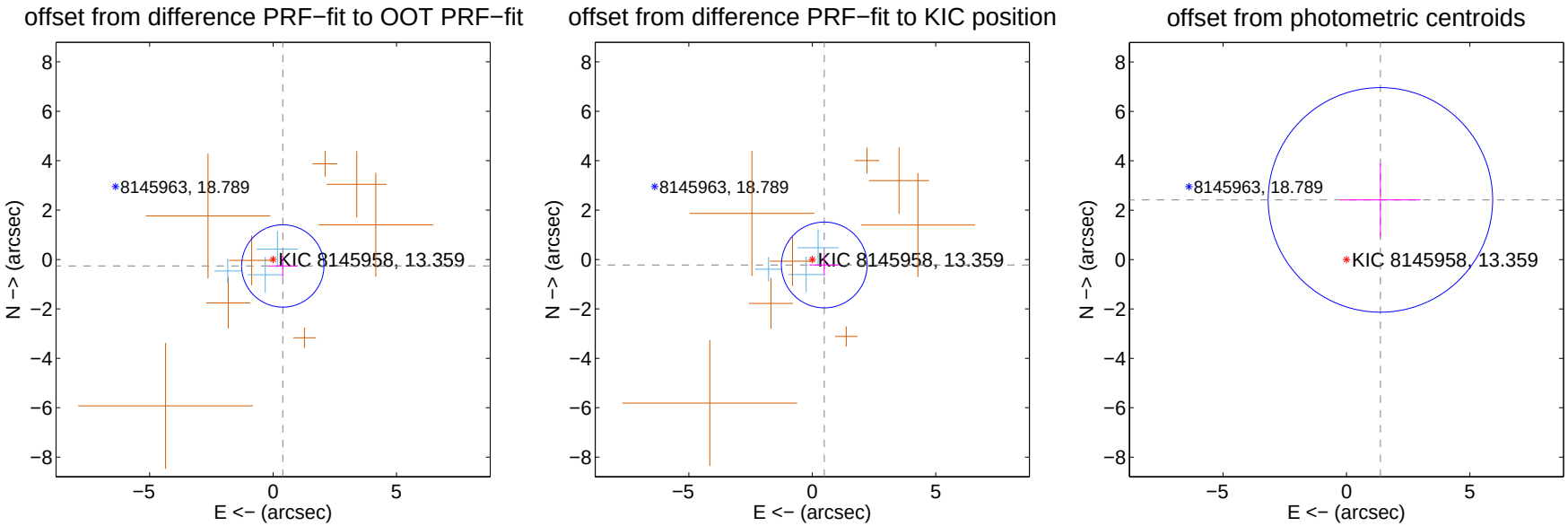
T_{max} = Theoretical Maximum Planetary Temperature
T_{obs} = Observed Planetary Temperature (Assuming A=0.3)
A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

DV Centroid Data

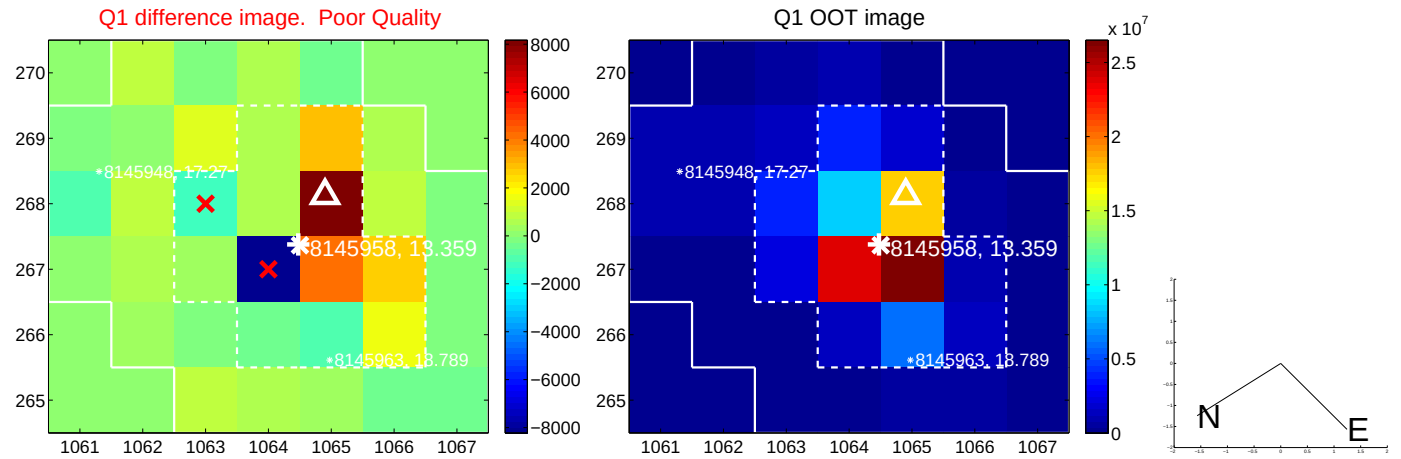
Supplemental centroid analysis for 008145958-01. Kepler magnitude: 13.36. Transit SNR 8.42
There are 3 quarters with good PRF difference image offsets
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

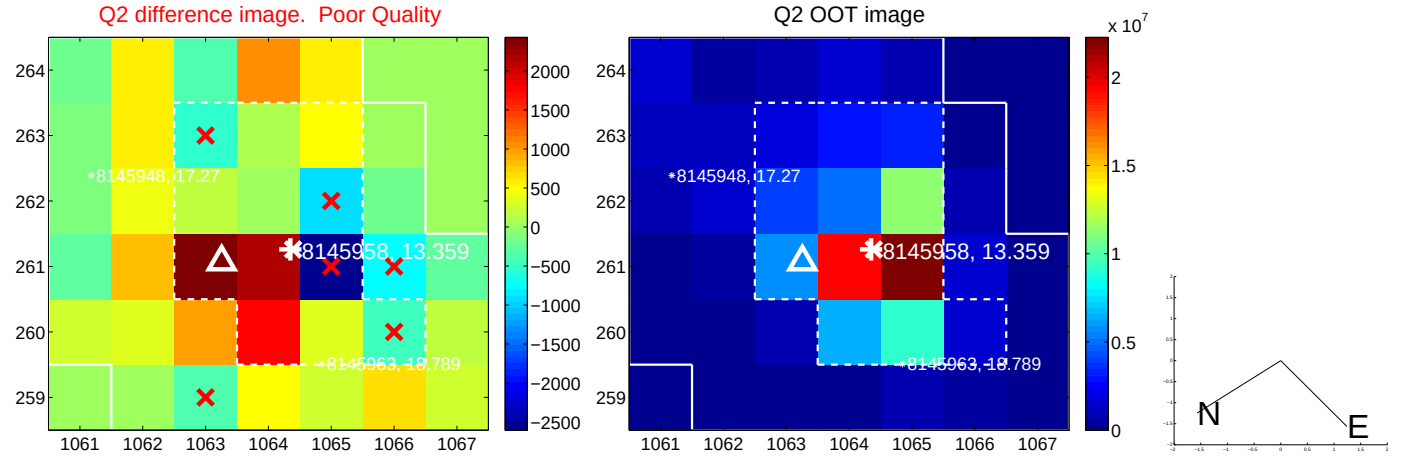
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.471 ± 0.556	0.85	-0.392 ± 0.603	-0.262 ± 0.430
PRF-fit source offset from KIC position	0.534 ± 0.579	0.92	-0.486 ± 0.605	-0.222 ± 0.435
photometric centroid source offset	2.78 ± 1.52	1.83	-1.38 ± 1.62	2.42 ± 1.48

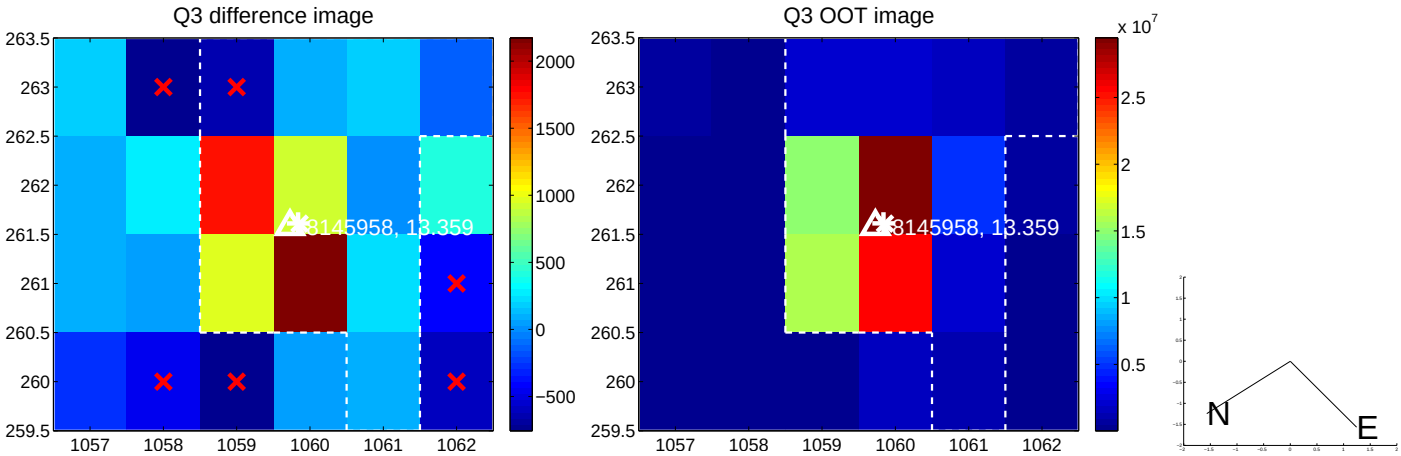


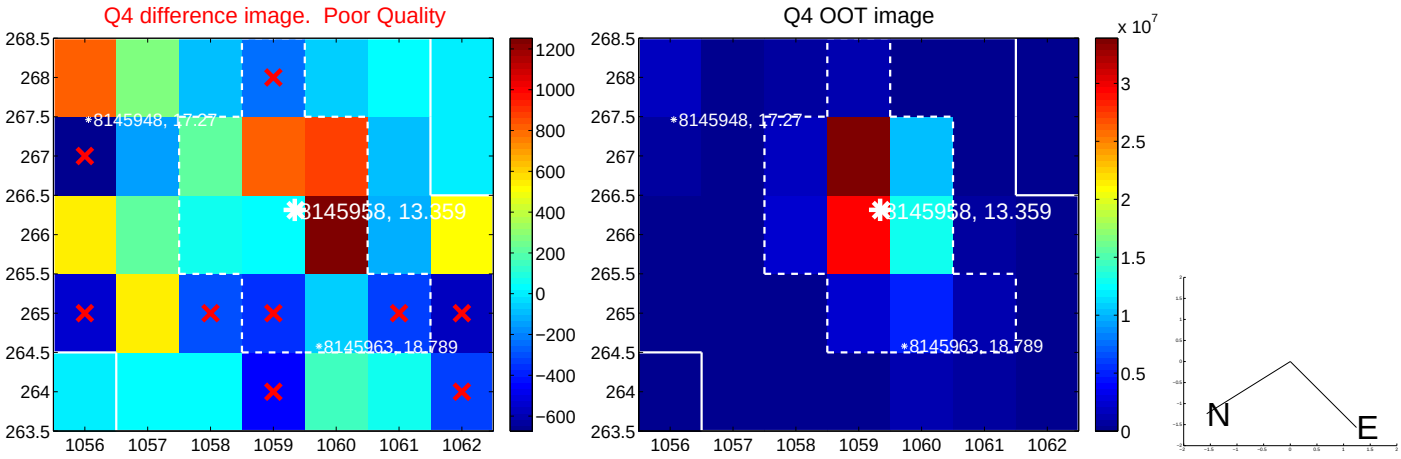
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one-σ uncertainty. Blue circle: three-σ. Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs $> 15,000,000$ are from the UKIRT catalog.

white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

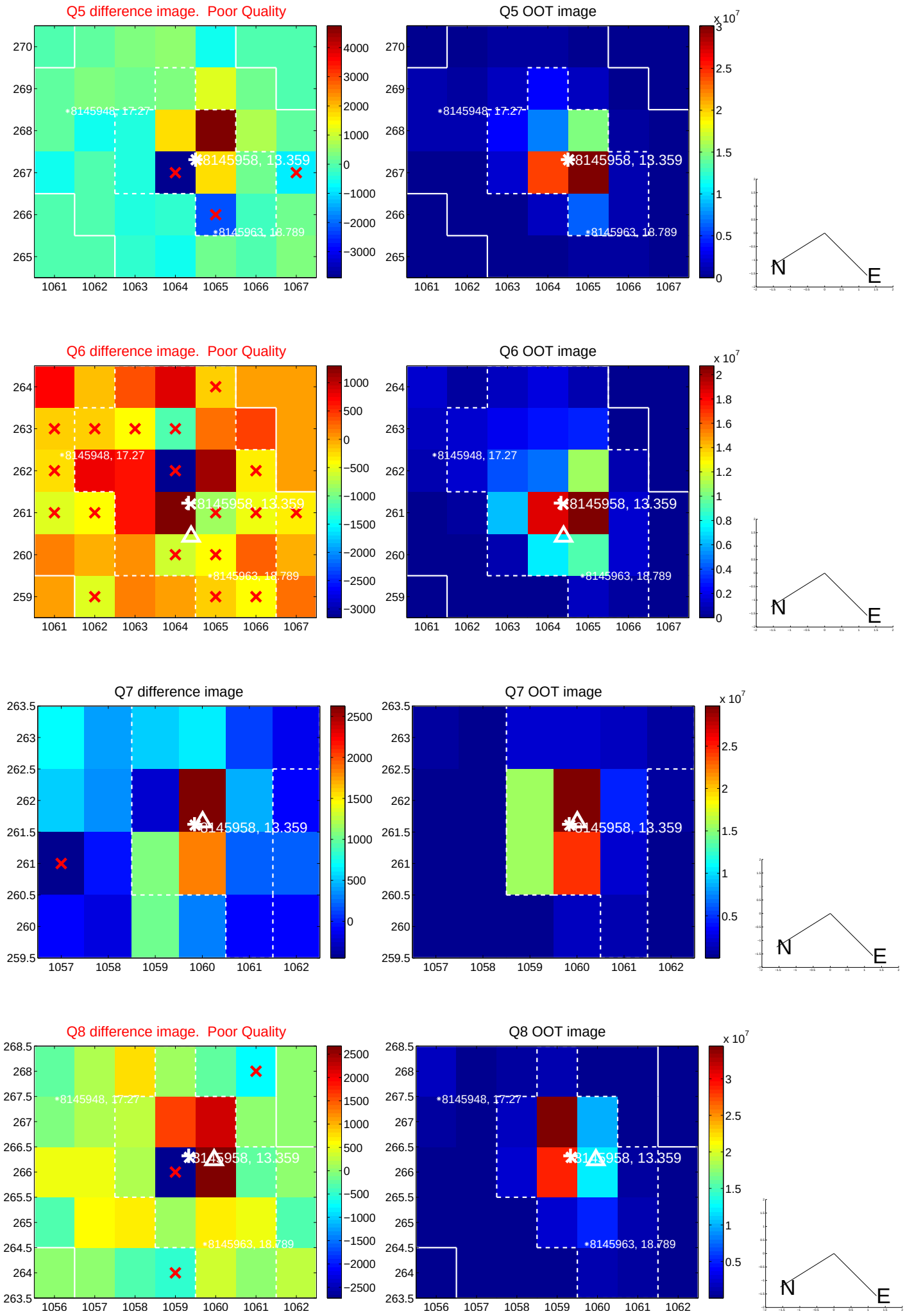




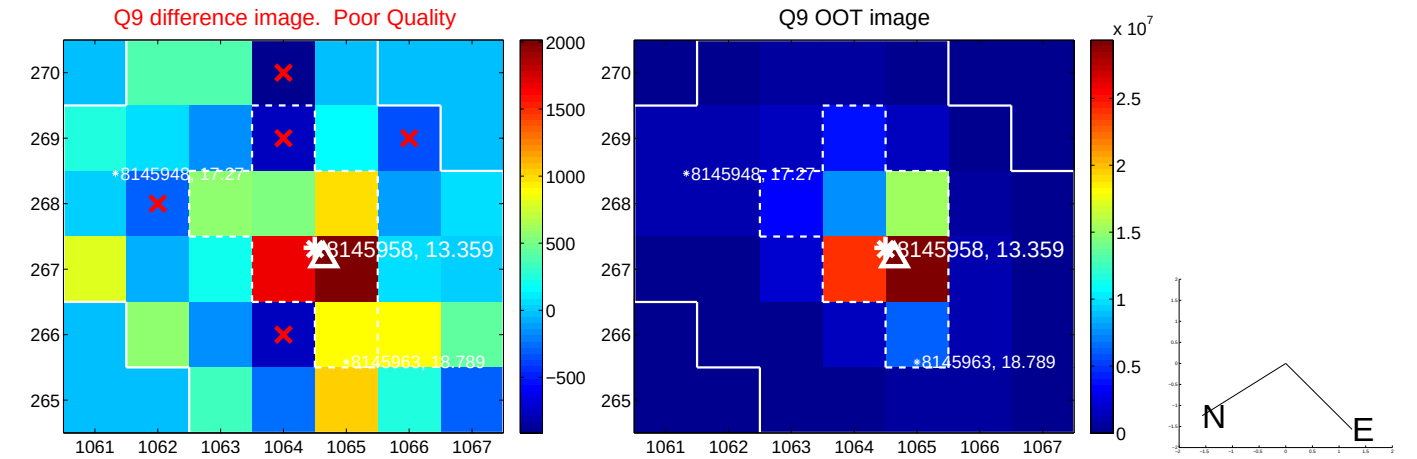


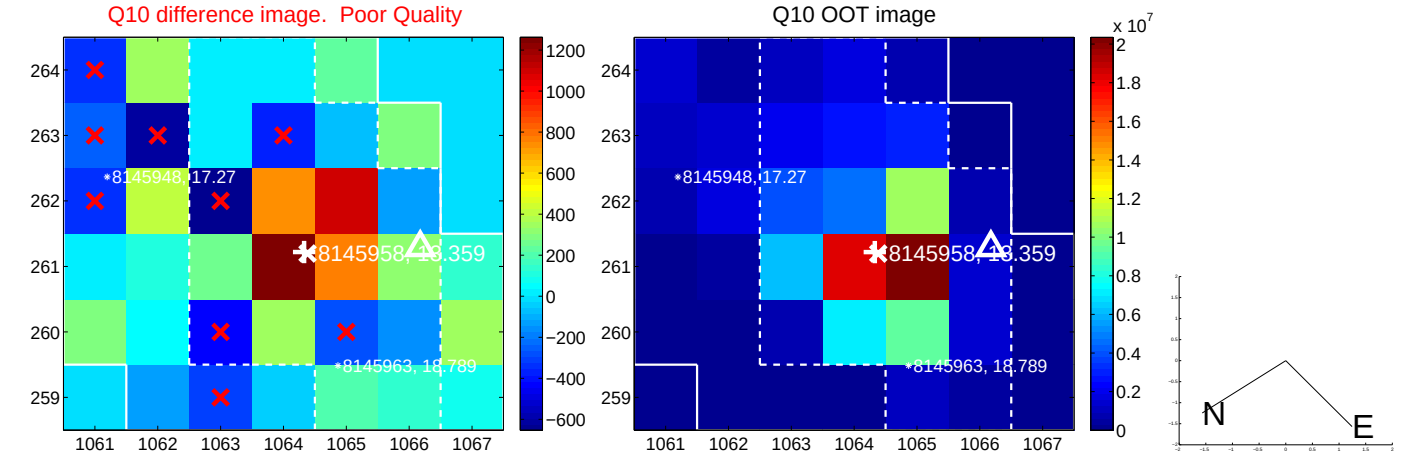


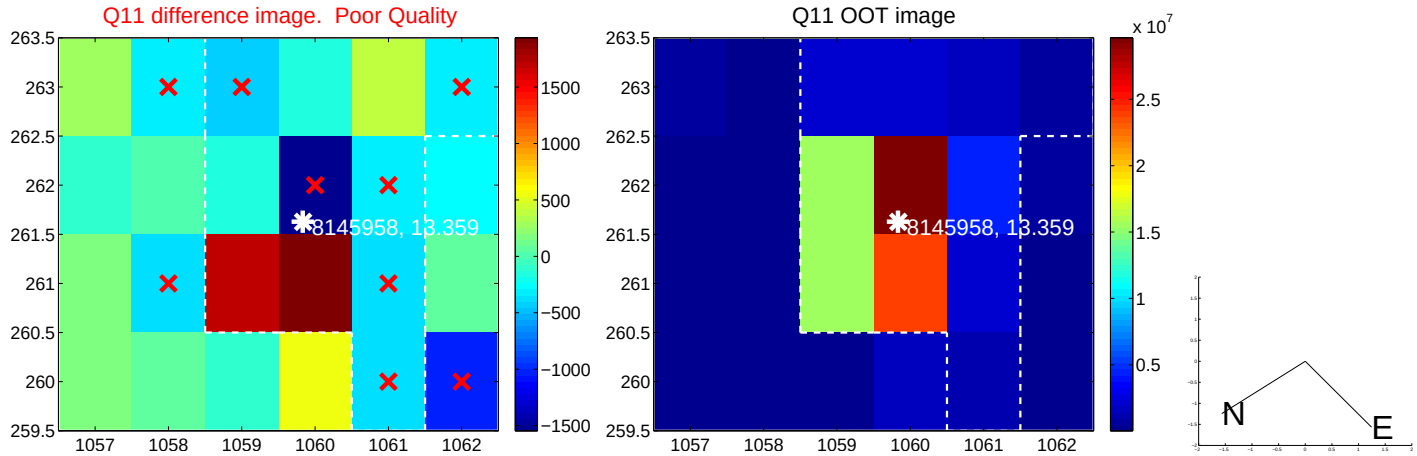
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

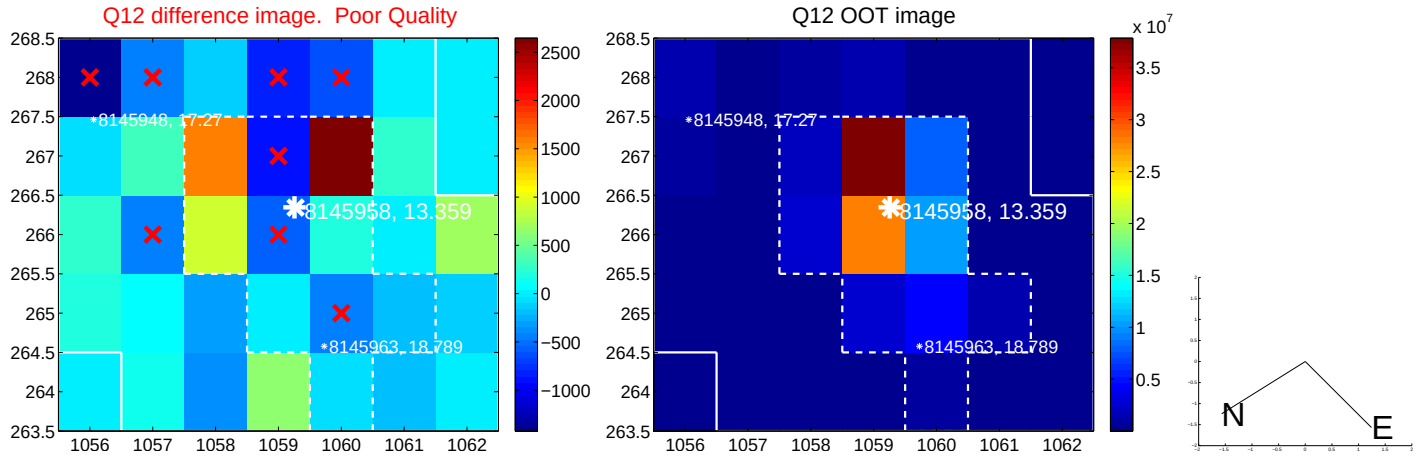


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

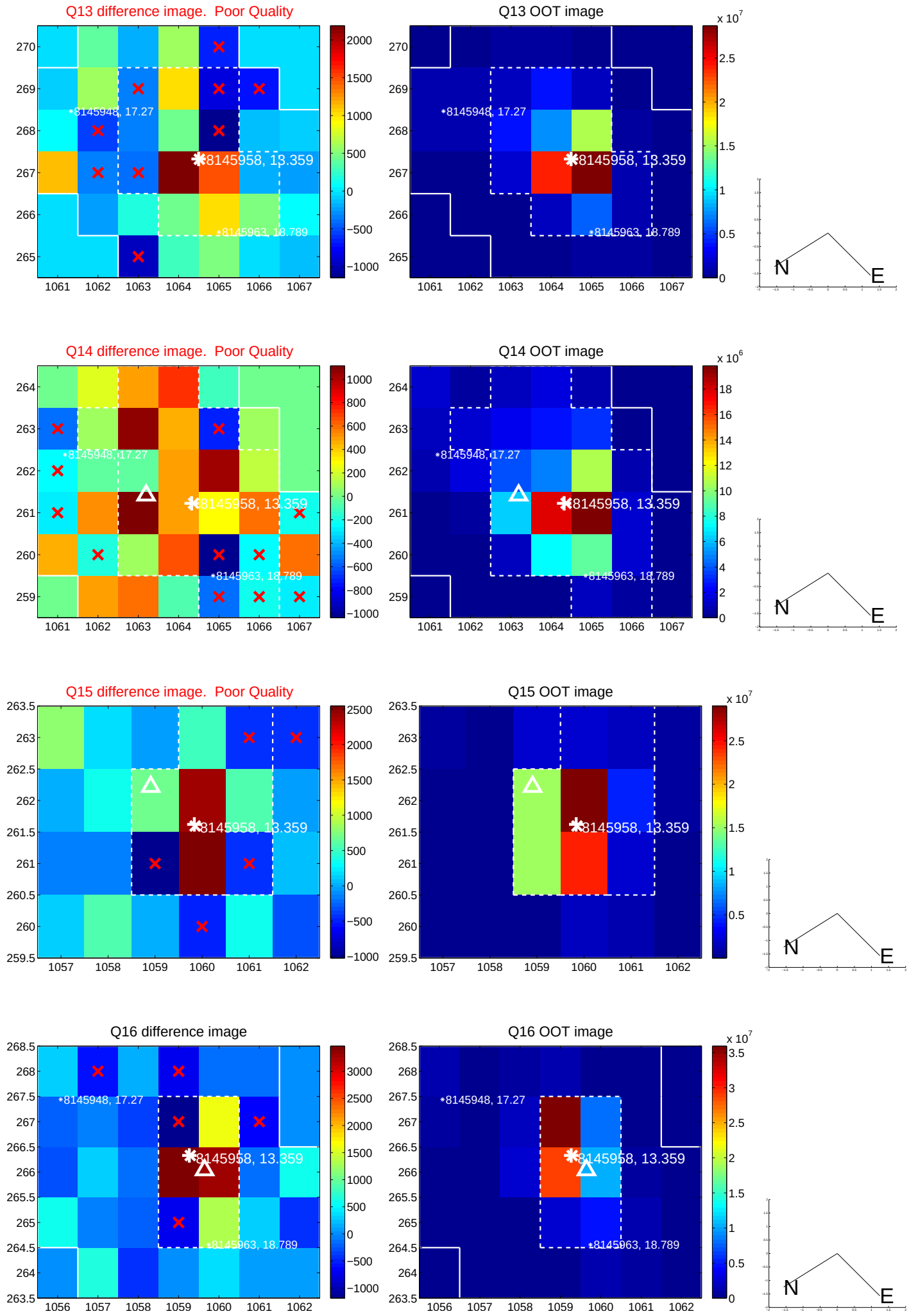




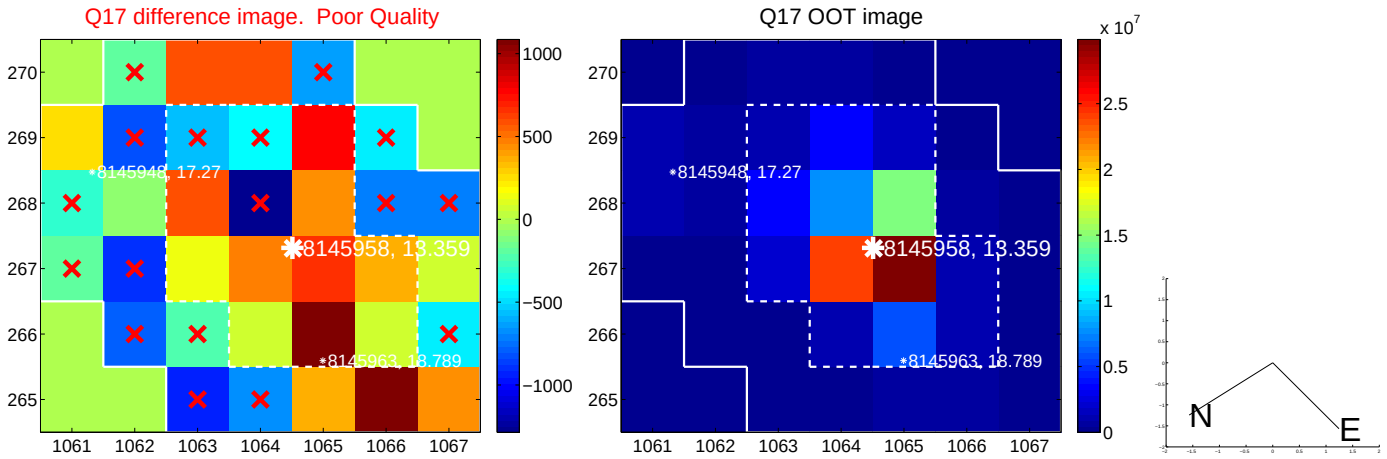


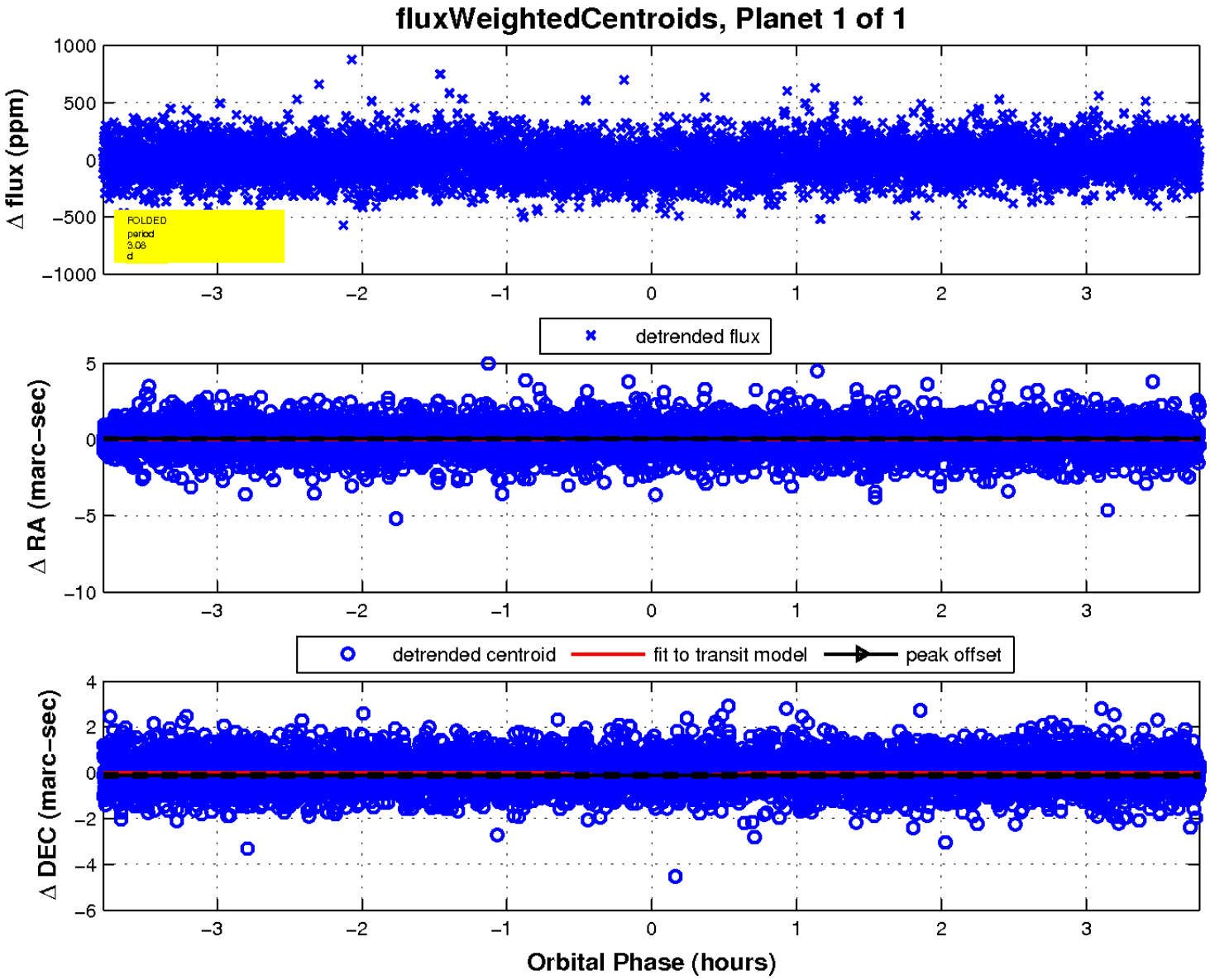
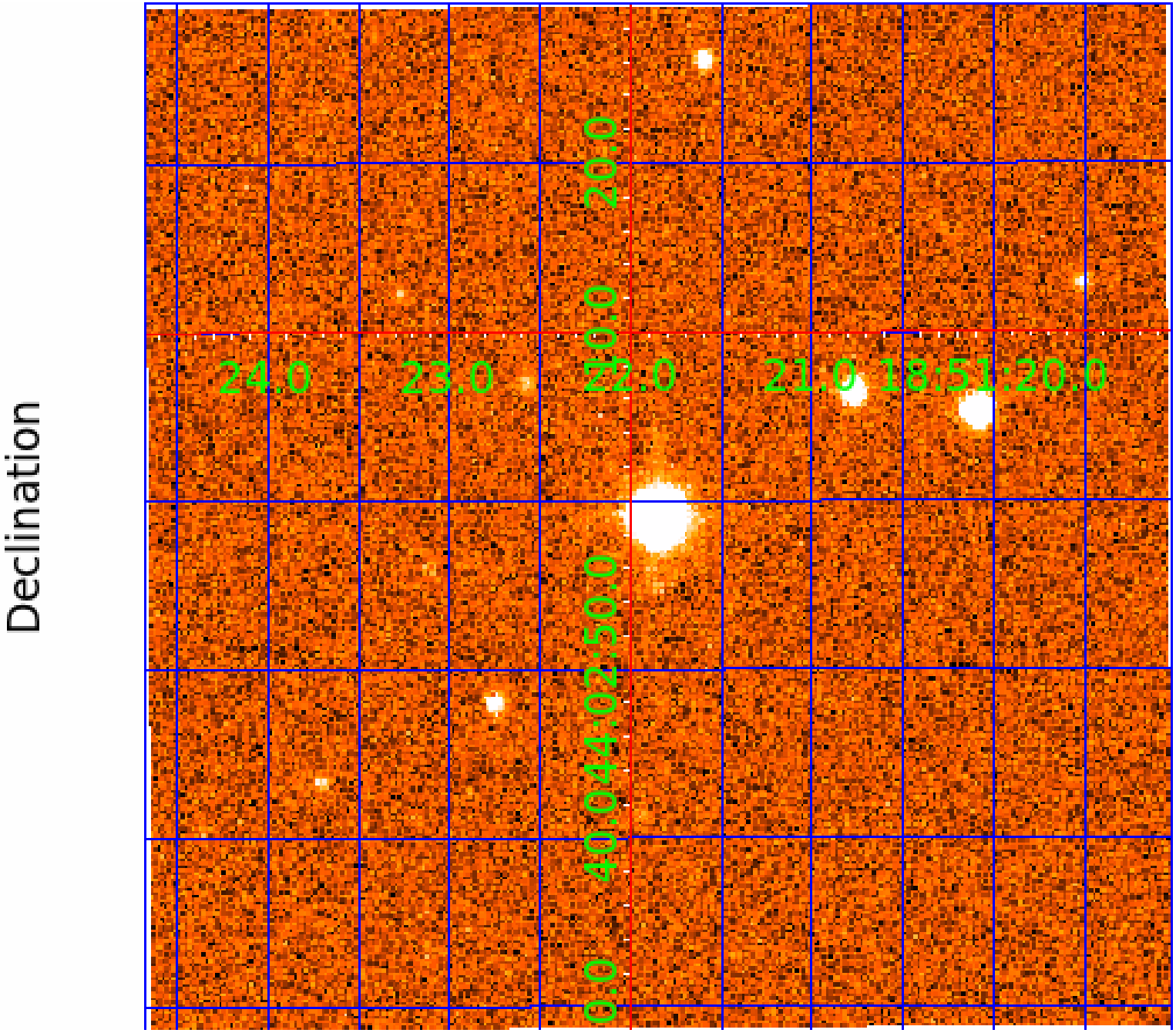


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.





UKIRT Image