

KIC 009597854

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})
009597854-01	OBS	7201.01	1.287080	132.392389	82.5	1.656	9.6	8.8	0.85	5906	0.83	1675.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009597854-01	OBS	FP	0.13	0	0	1	0	CENT_RESOLVED_OFFSET

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.

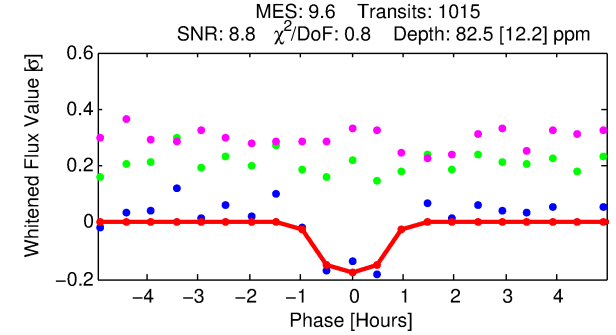
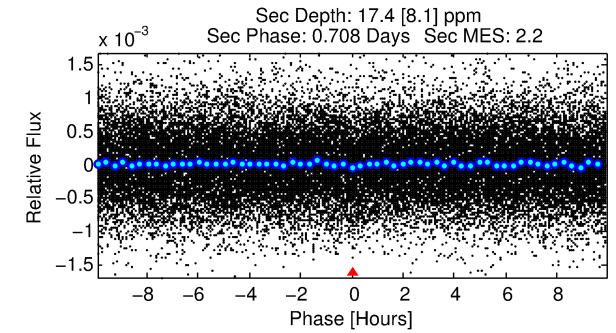
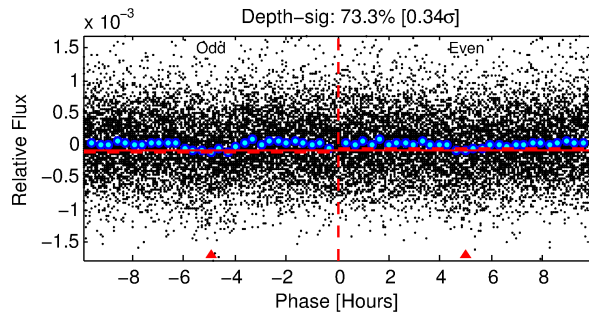
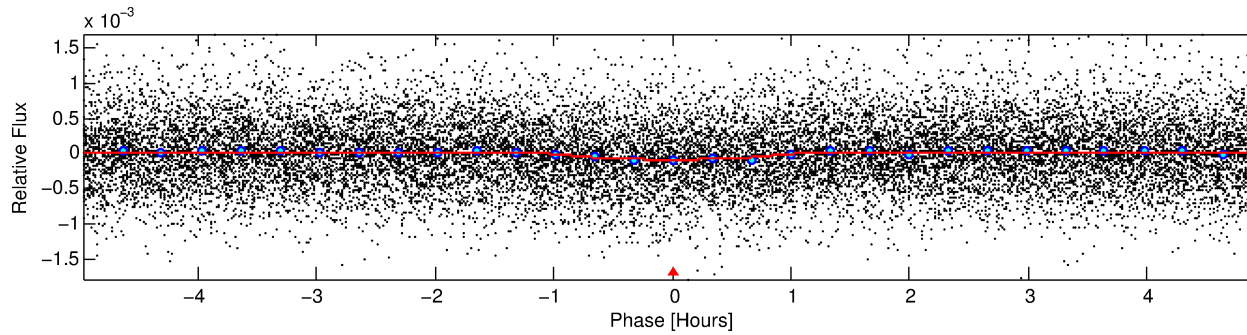
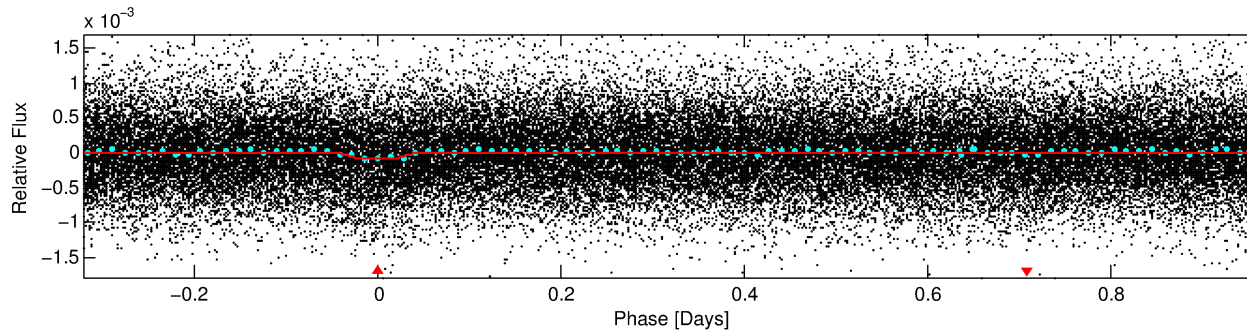
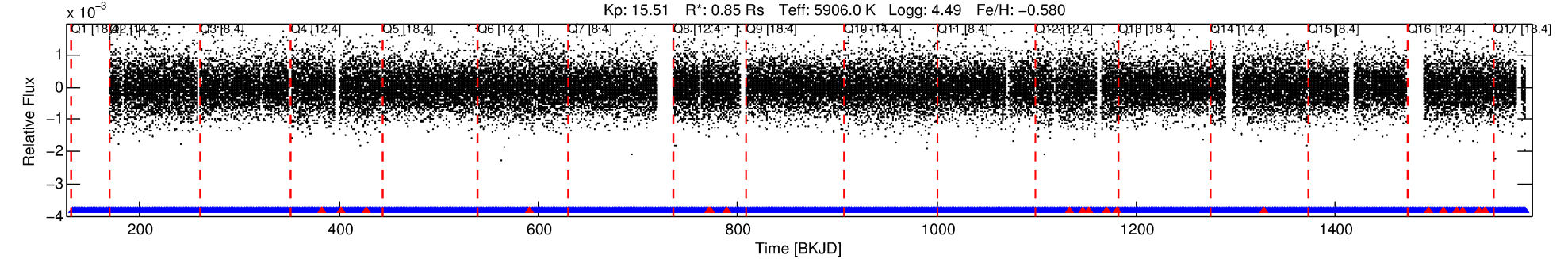
Ephemeris Match Information For 009597854-01

No Significant Match Found

DV One-Page Summary

KIC: 9597854 Candidate: 1 of 1 Period: 1.287 d
KOI: K07201.01 Corr: 0.899

Kp: 15.51 R*: 0.85 Rs Teff: 5906.0 K Logg: 4.49 Fe/H: -0.580



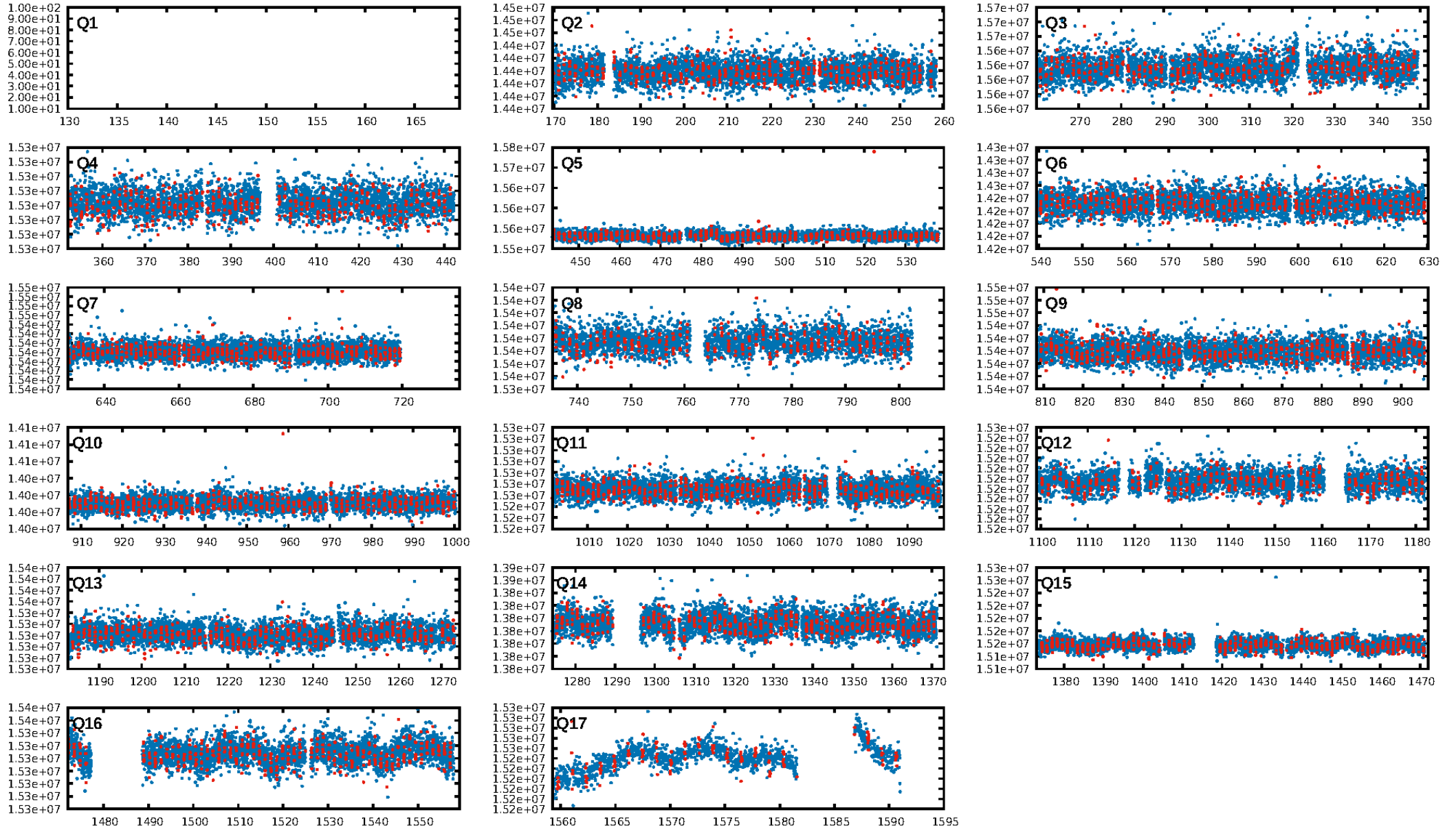
DV Fit Results:

Period = 1.28708 [0.00001] d
Epoch = 132.3924 [0.0029] BKJD
Rp/R* = 0.0089 [0.0043]
a/R* = 4.48 [10.33]
b = 0.68 [1.91]
Seff = 1675.79 [567.89]
Teff = 1631 [138] K
Rp = 0.83 [0.45] Re
a = 0.0217 [0.0047] AU
Ag = 6.63 [7.45] [0.76σ]
Teffp = 4048 [1098] K [2.18σ]

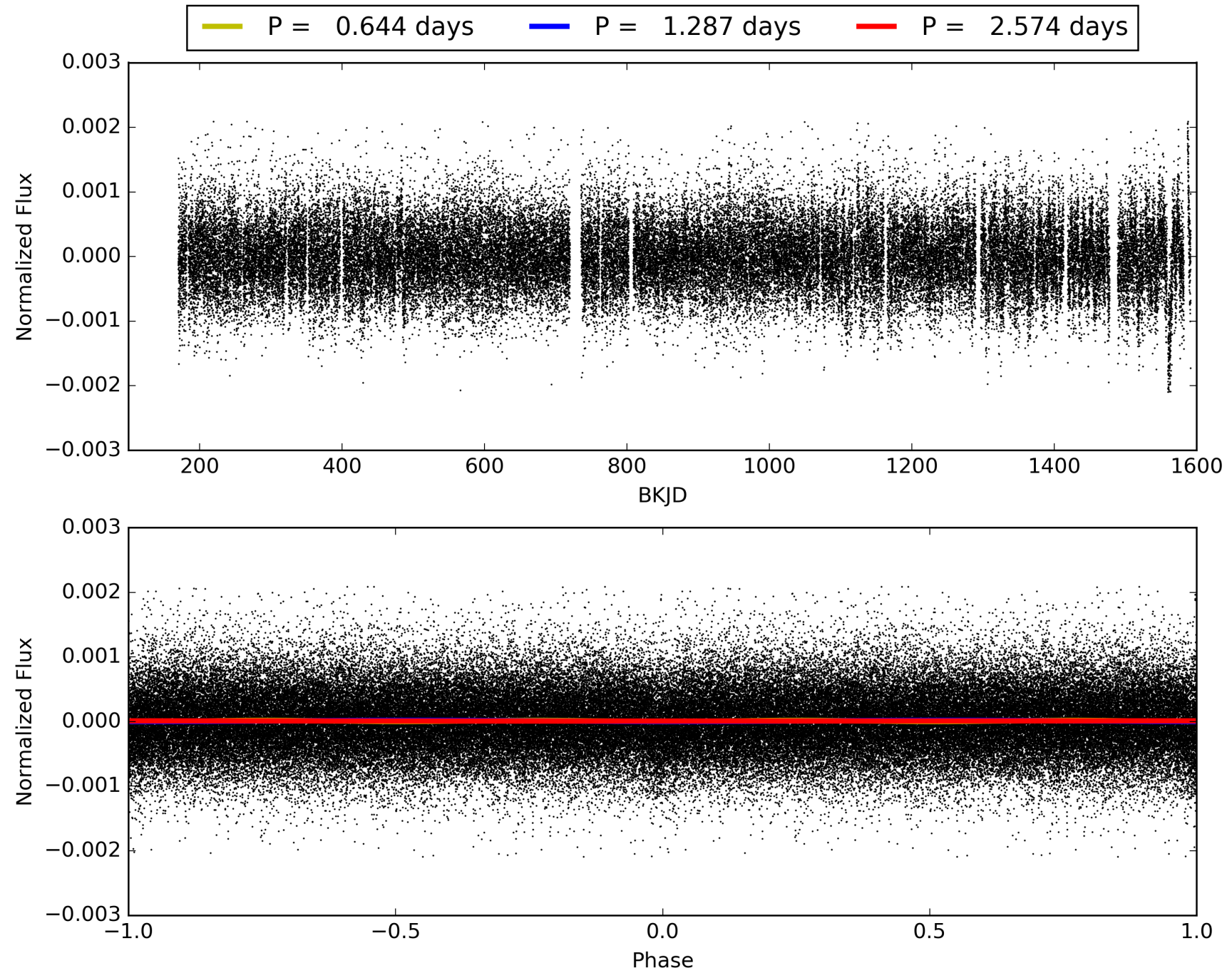
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.71e-22
RollingBand-fgt: 0.98 [974/994]
GhostDiagnostic-chr: -0.6041
Centroid-sig: 0.0%
Centroid-so: 66.093 arcsec [36.12σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [16/16]

TCE 009597854-01, PDC Light Curves

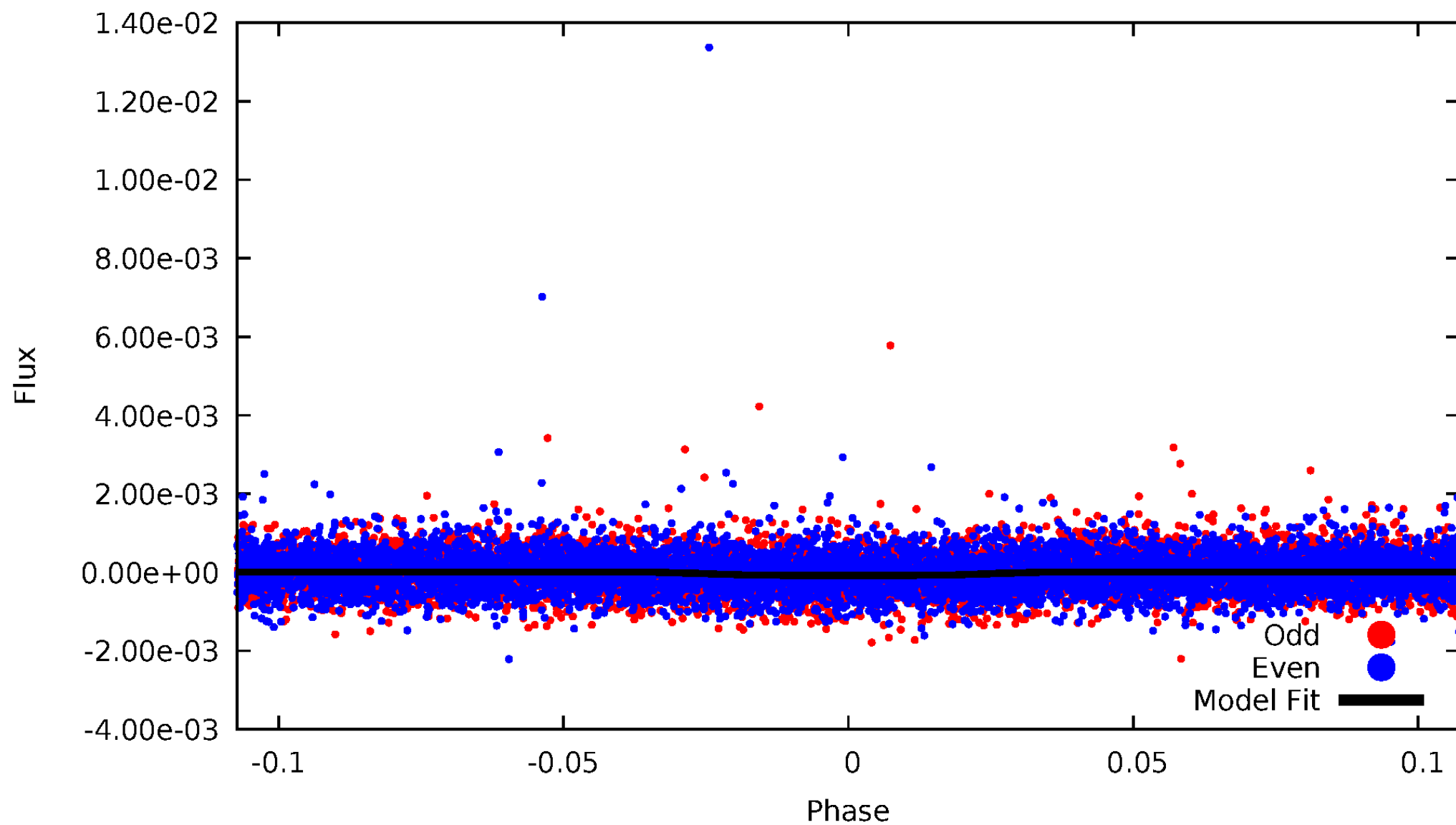


TCE 009597854-01



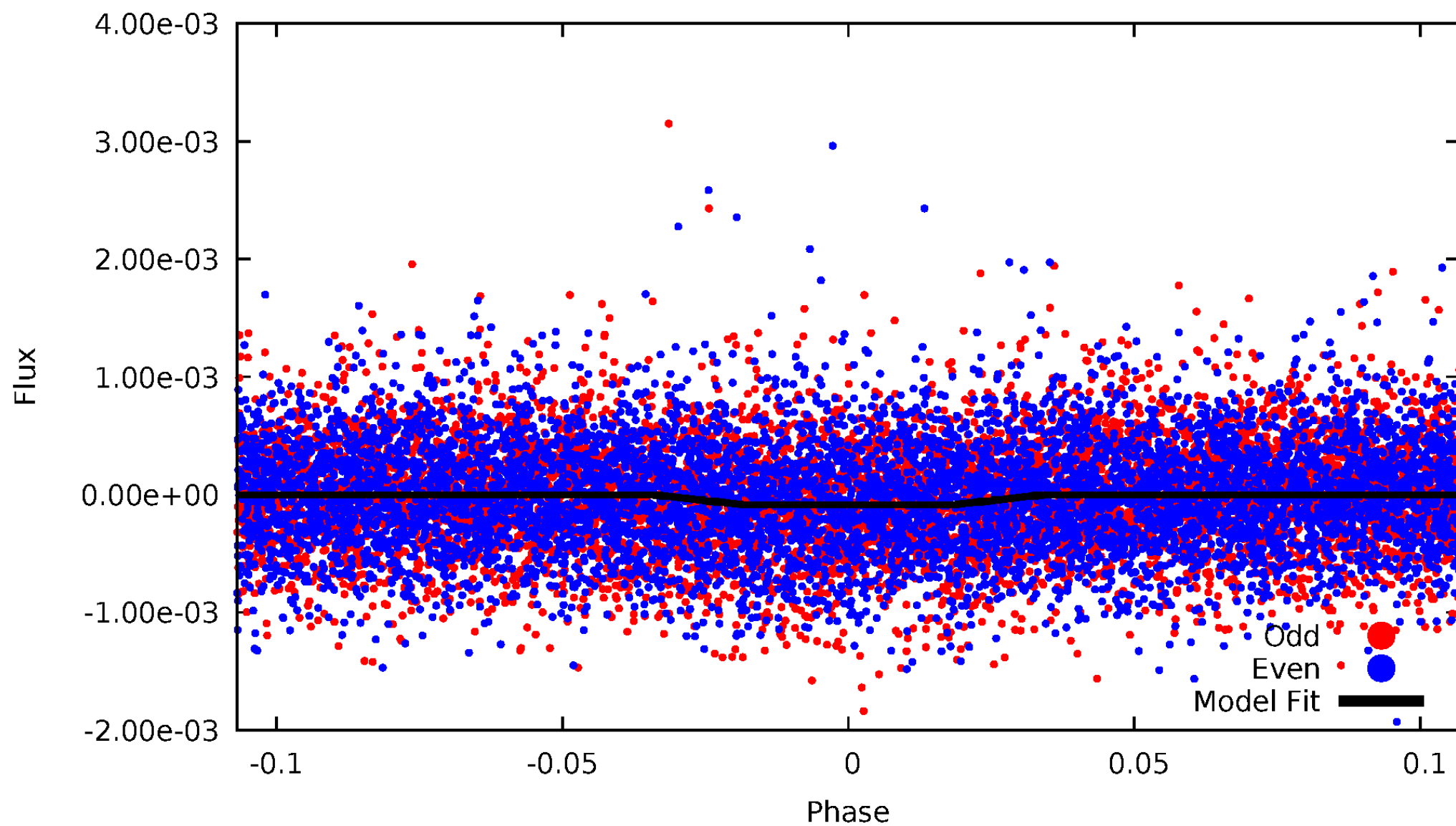
DV Odd/Even

TCE 009597854-01



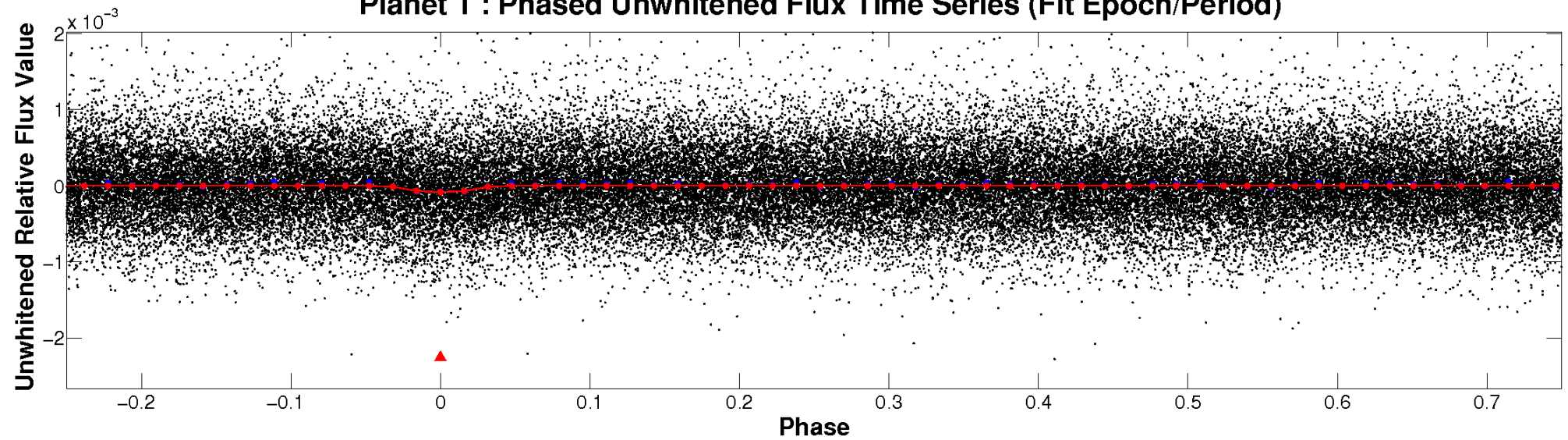
ALT Odd/Even

TCE 009597854-01

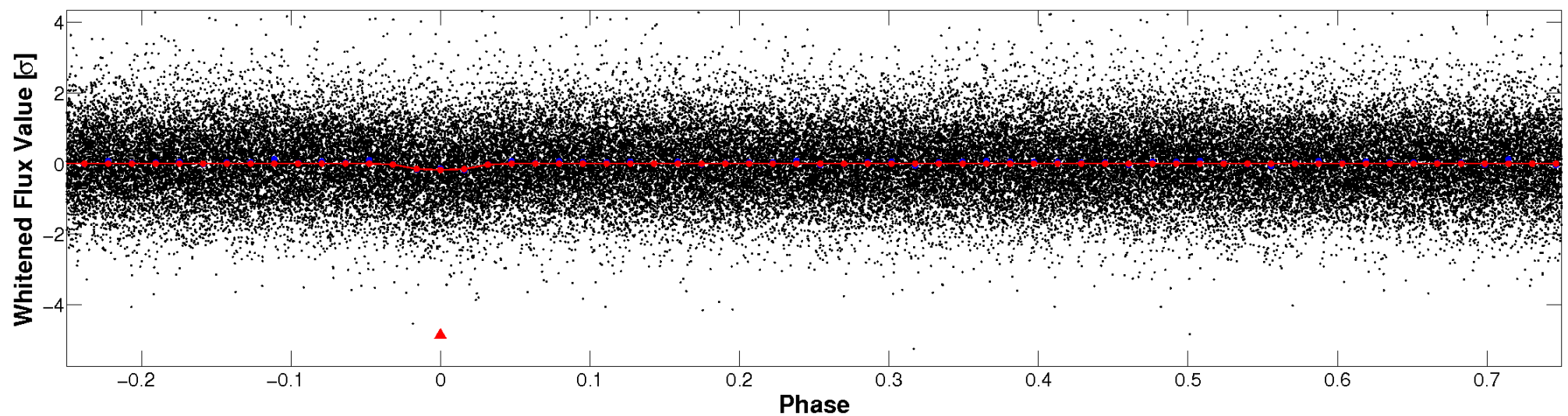


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

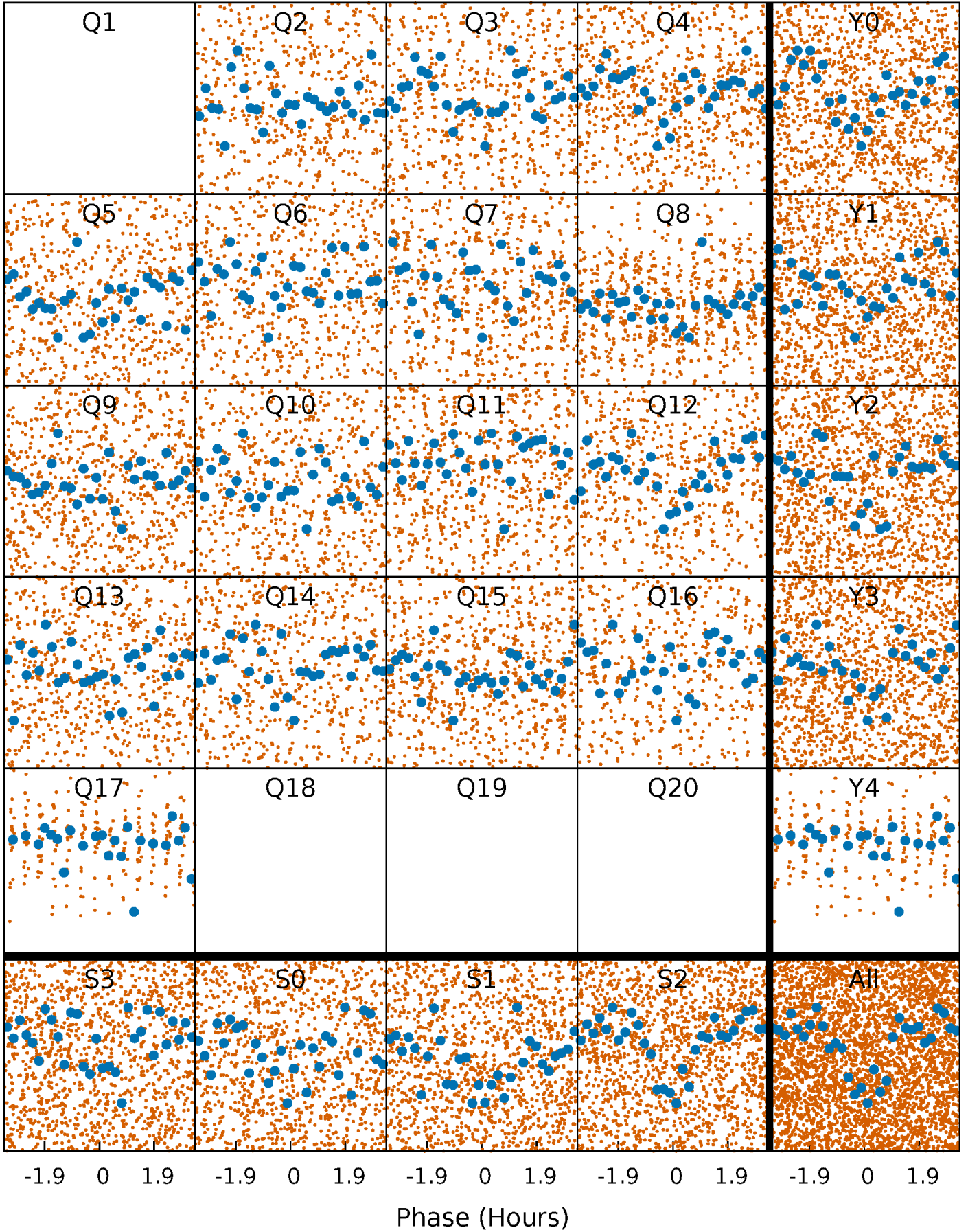


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



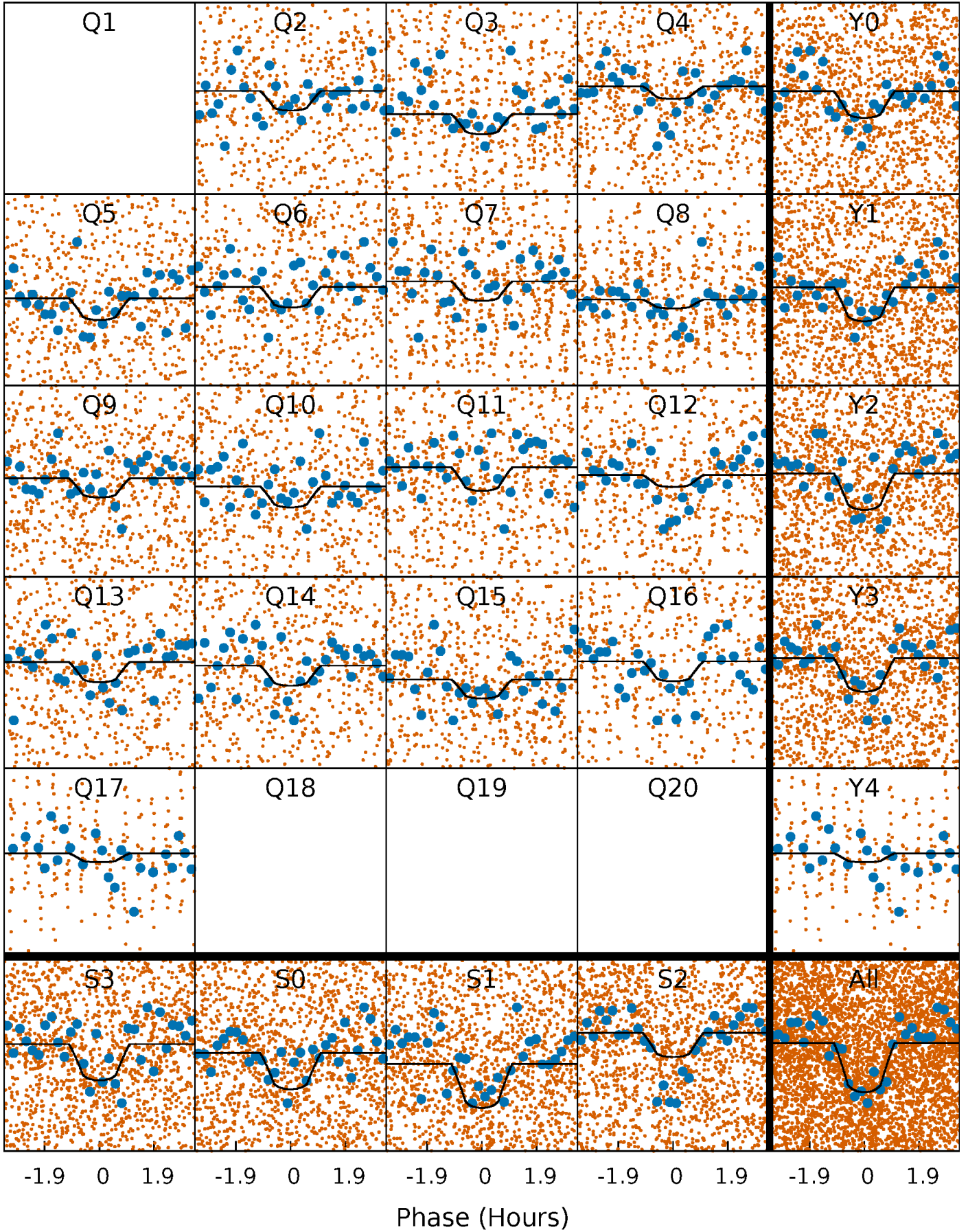
PDC Quarter-Phased Transit Curves

TCE 009597854-01 P= 1.287080 Days $T_0=132.392389$ (BKJD)



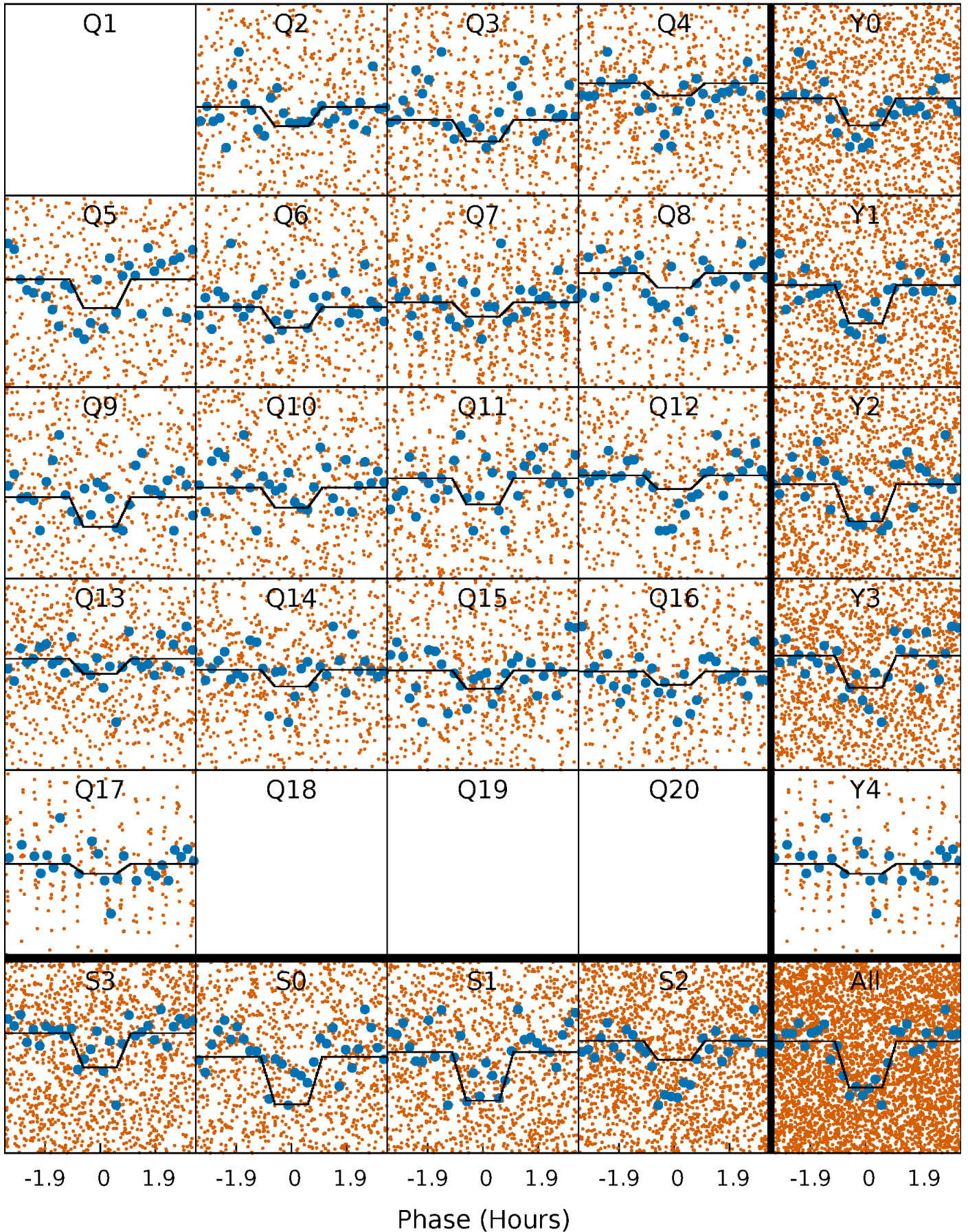
DV Quarter-Phased Transit Curves

TCE 009597854-01 P= 1.287080 Days $T_0=132.392389$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

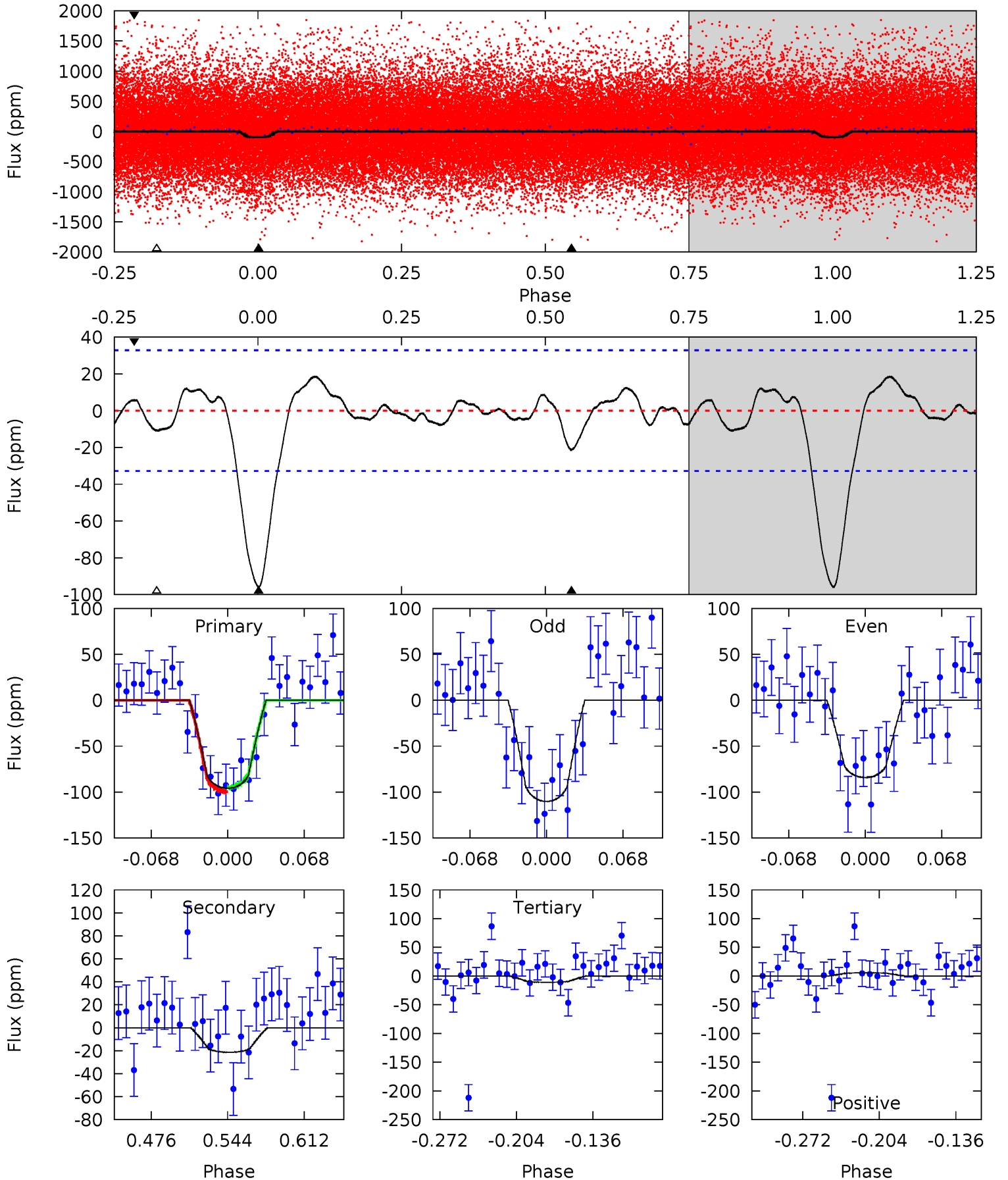
TCE 009597854-01 P= 1.287087 Days $T_0=132.391026$ (BKJD)



DV Model-Shift Uniqueness Test

009597854-01, P = 1.287080 Days, E = 132.392389 Days

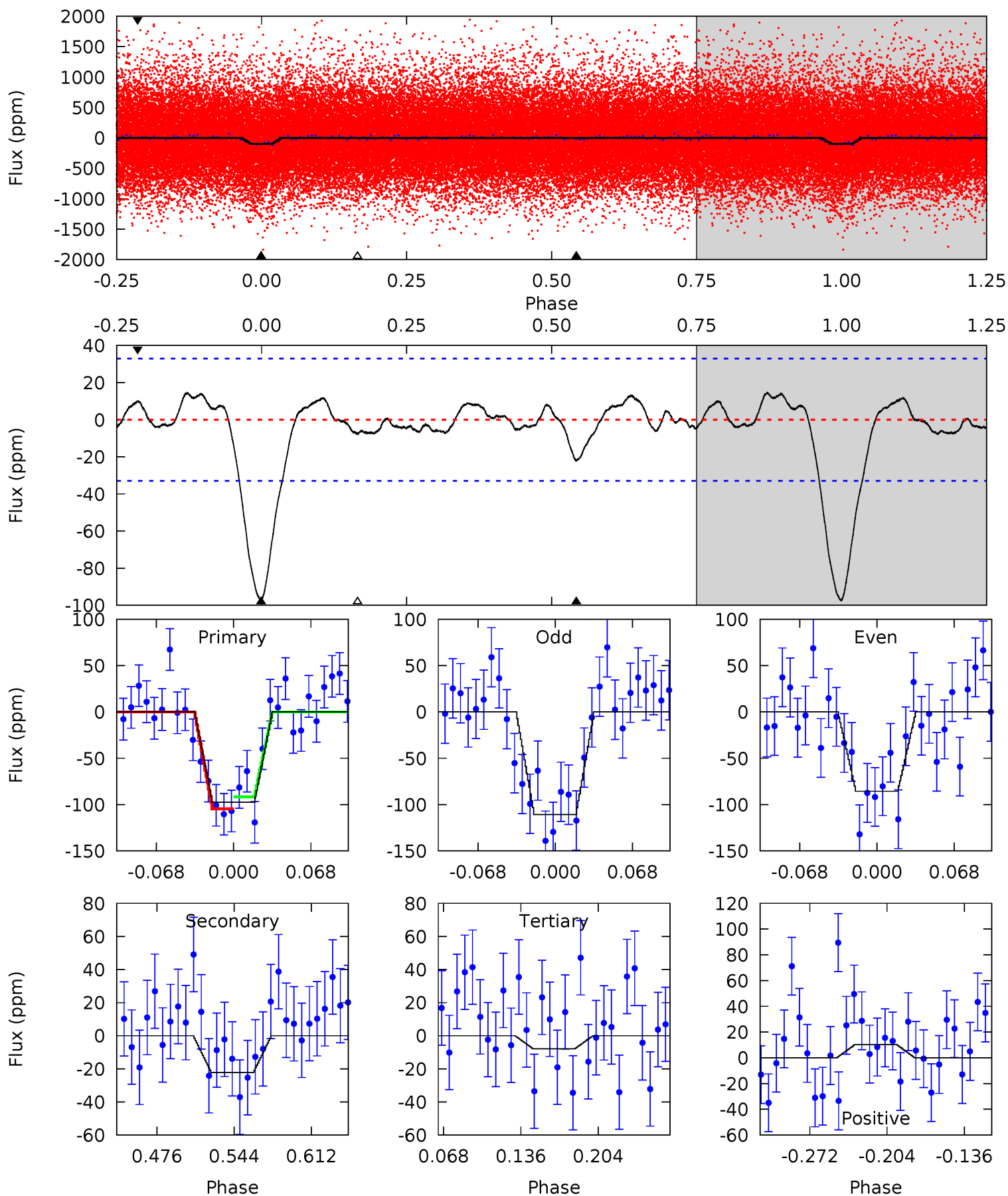
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	3.03	1.54	0.81	4.64	1.82	0.97	12.0	12.8	1.49	2.22	1.85	0.93	0.16	0.34



Alt Model-Shift Uniqueness Test

009597854-01, P = 1.287087 Days, E = 132.391026 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.8	3.14	1.10	1.44	4.65	1.83	0.87	12.7	12.3	2.04	1.70	1.77	1.07	0.13	0.92



Stellar Parameters For KIC 009597854

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5906^{+177}_{-177}	$4.494^{+0.087}_{-0.175}$	$-0.580^{+0.300}_{-0.300}$	$0.852^{+0.215}_{-0.107}$	$0.826^{+0.096}_{-0.070}$	$1.880^{+0.719}_{-0.852}$
	+3%/-3%	+2%/-4%	+52%/-52%	+25%/-13%	+12%/-8%	+38%/-45%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009597854-01 / KOI 7201.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-21 ± 7	$0.88^{+0.43}_{-0.42}$	2307^{+143}_{-110}	4354^{+1427}_{-641}	$7.107^{+19.501}_{-4.121}$
Alt.	-22 ± 7	$0.89^{+0.43}_{-0.39}$	2299^{+161}_{-109}	4379^{+1270}_{-664}	$7.454^{+16.133}_{-4.422}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

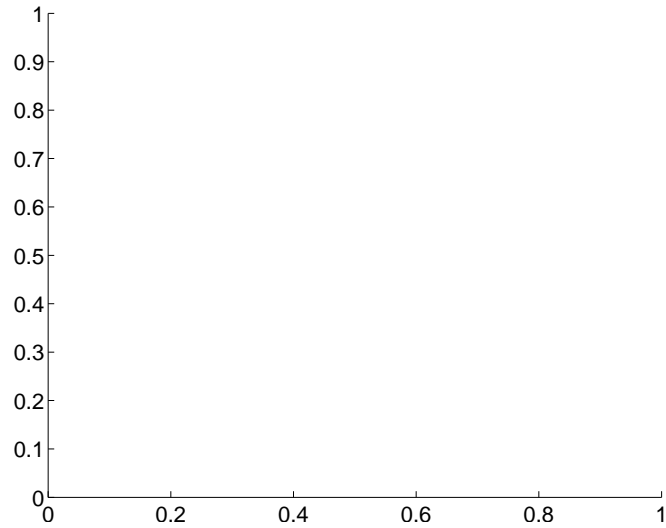
Supplemental centroid analysis for 009597854-01. Kepler magnitude: 15.51. Transit SNR 8.82

There are 0 quarters with good PRF difference image offsets

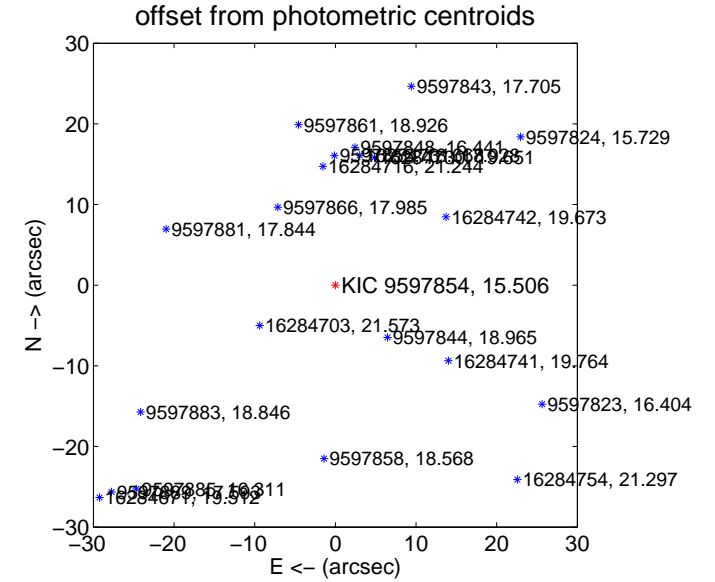
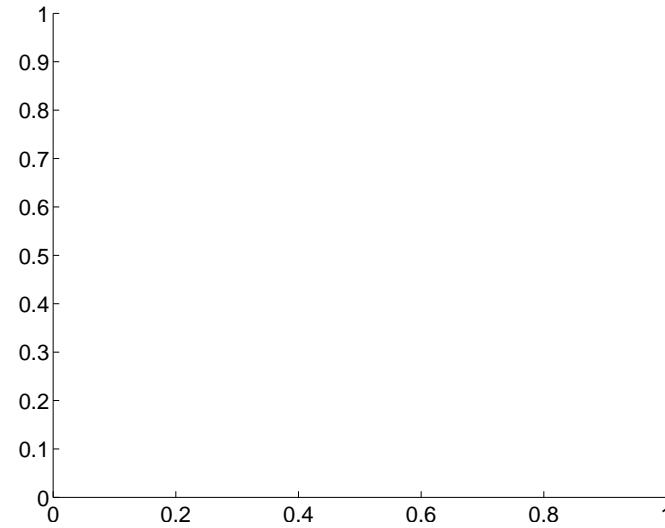
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	66.10 ± 1.83	36.12	-30.36 ± 1.62	-58.71 ± 1.88

There is no PRF-fit offset from OOT-fit

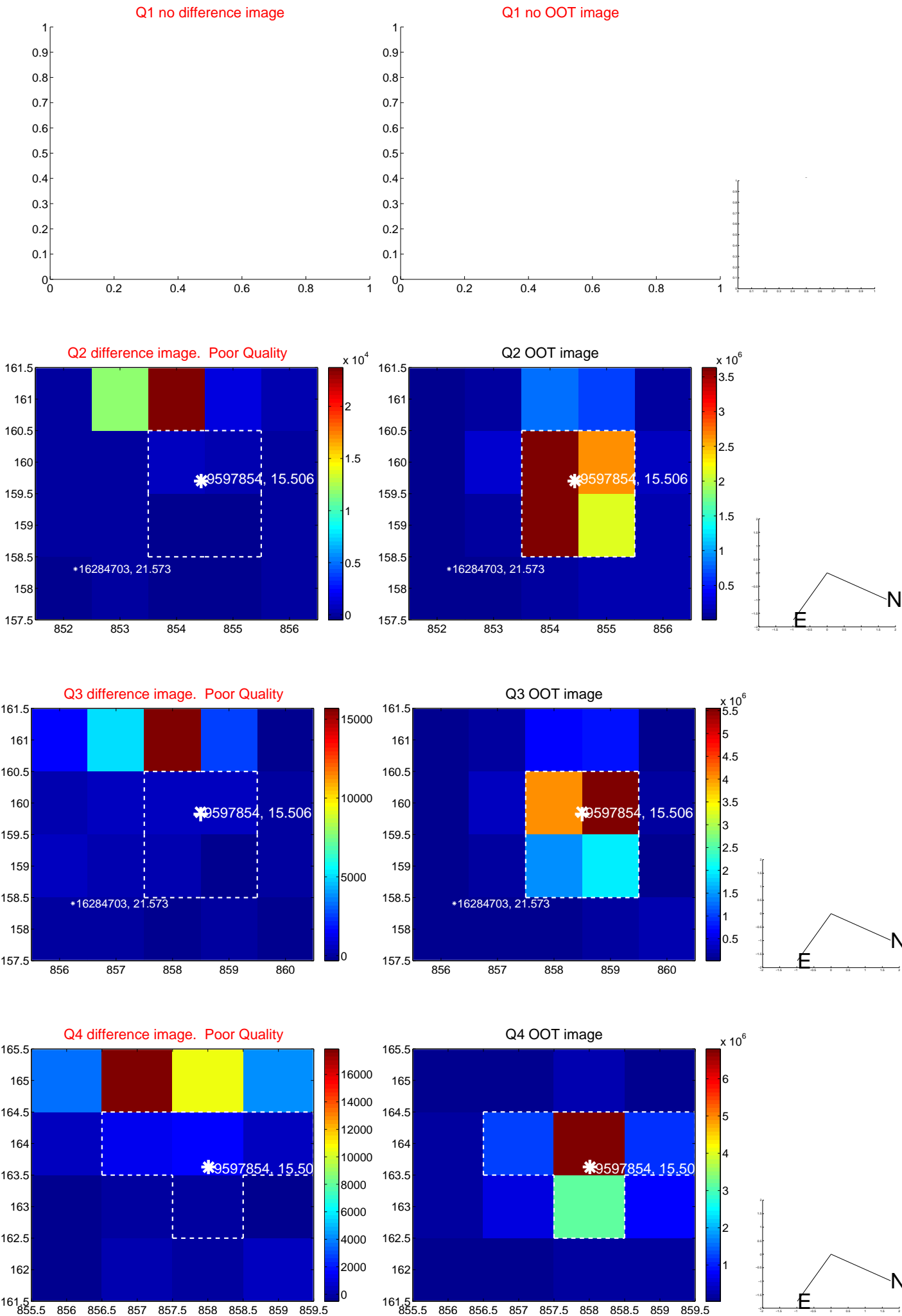


There is no PRF-fit offset from KIC

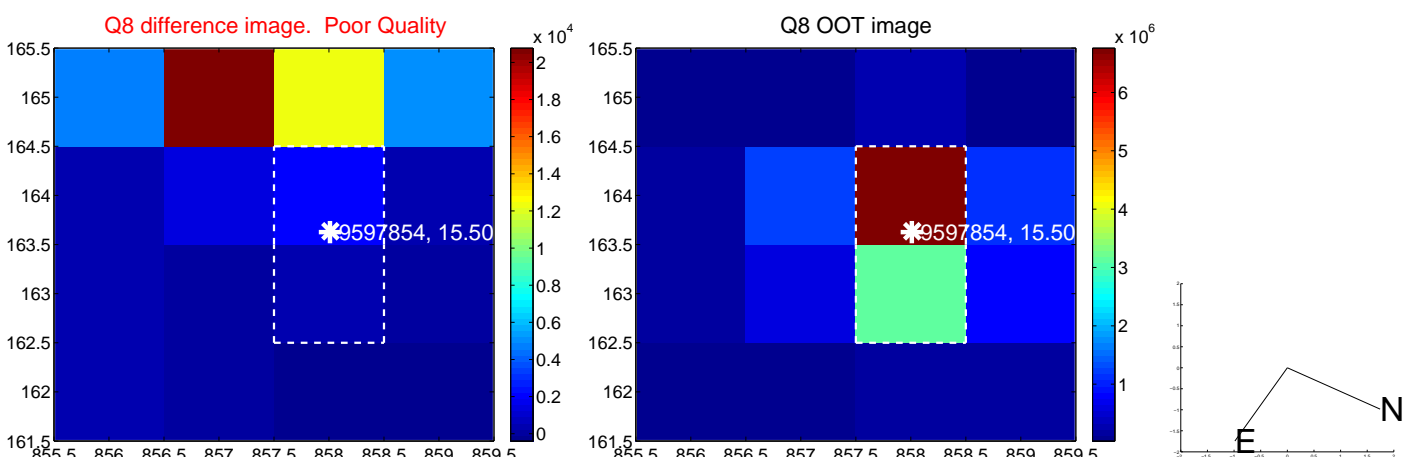
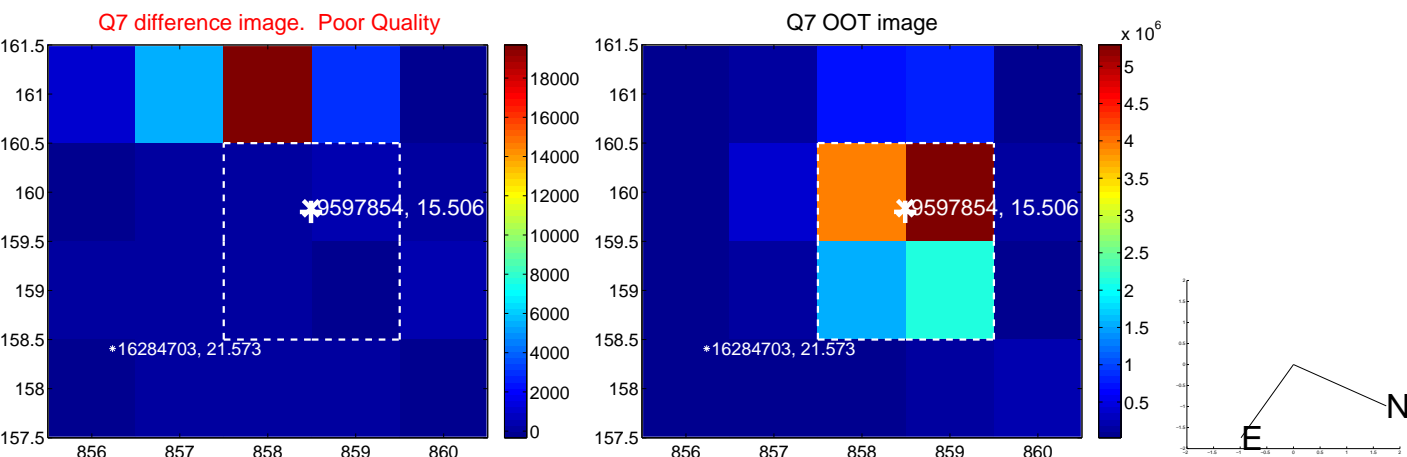
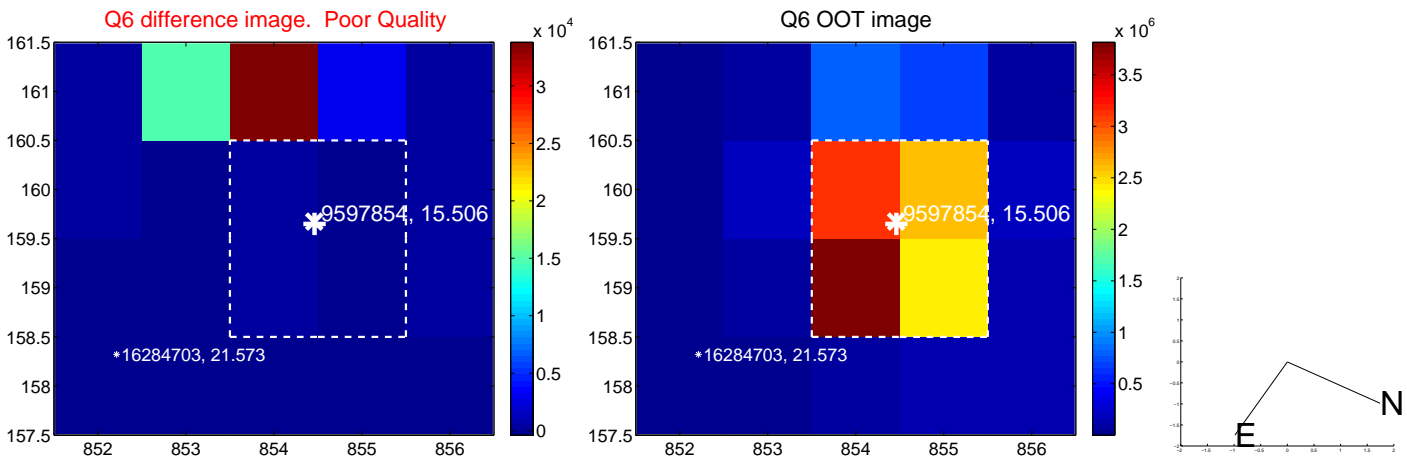
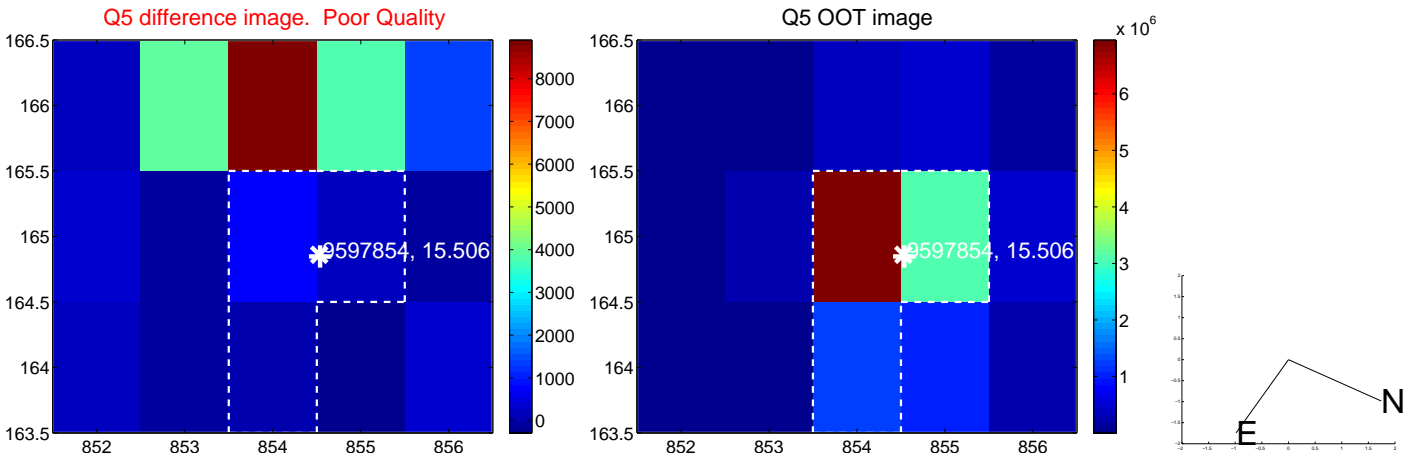


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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.

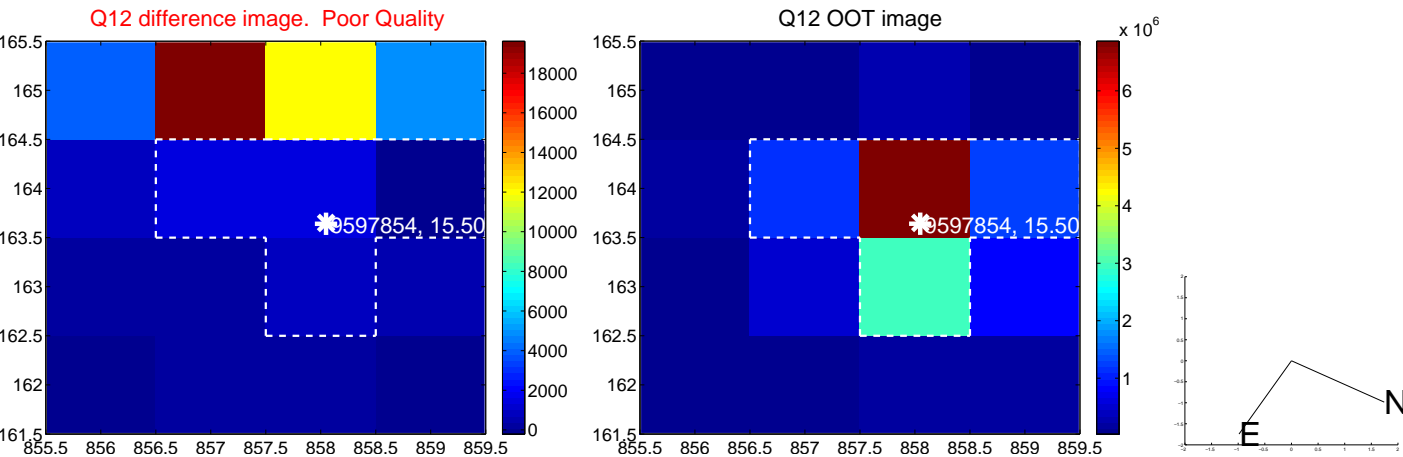
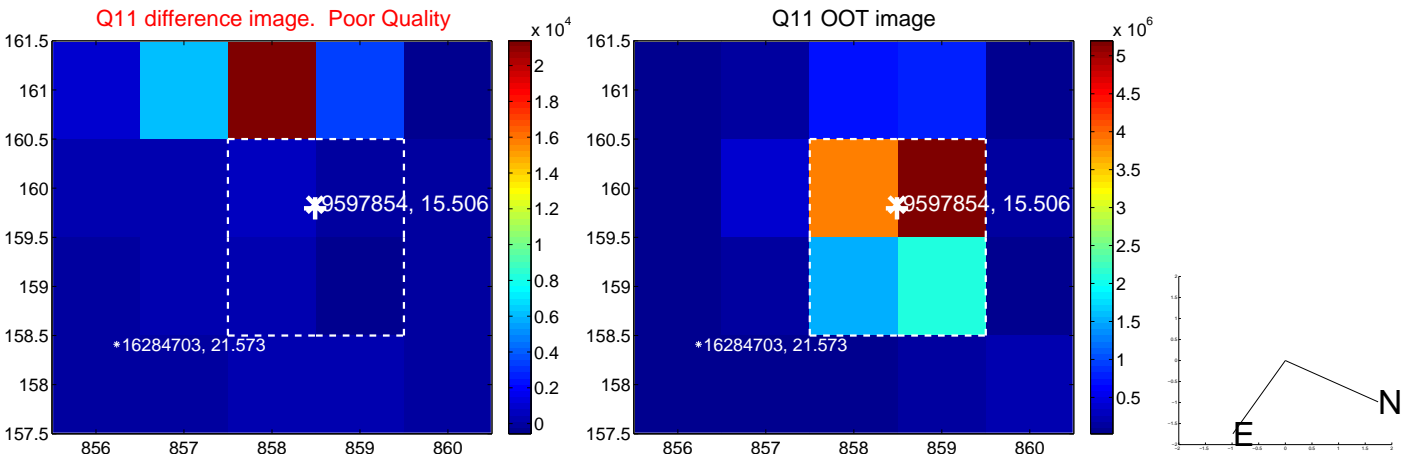
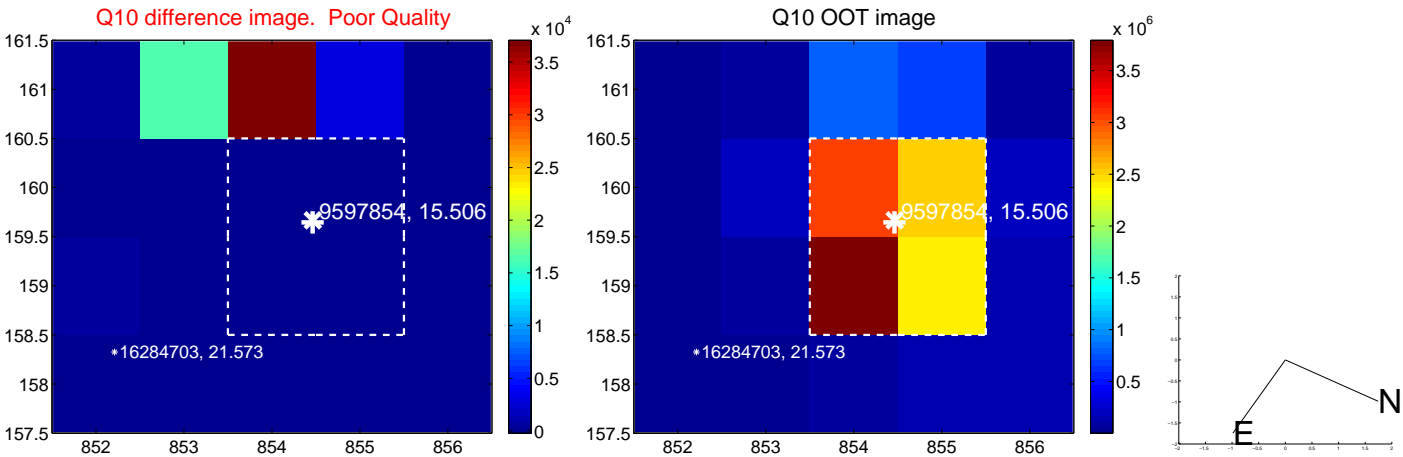
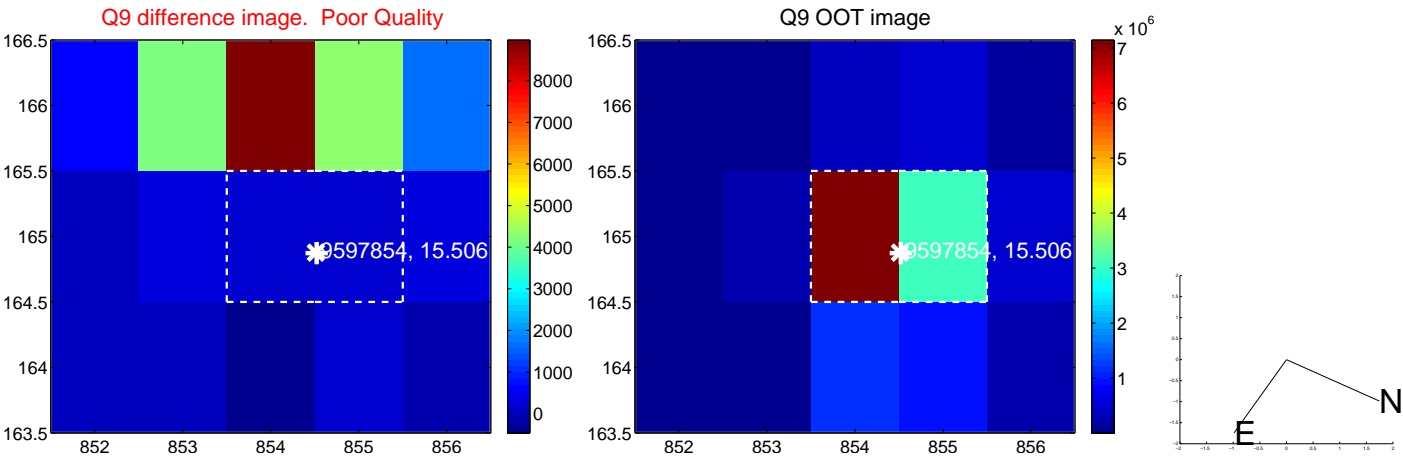
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



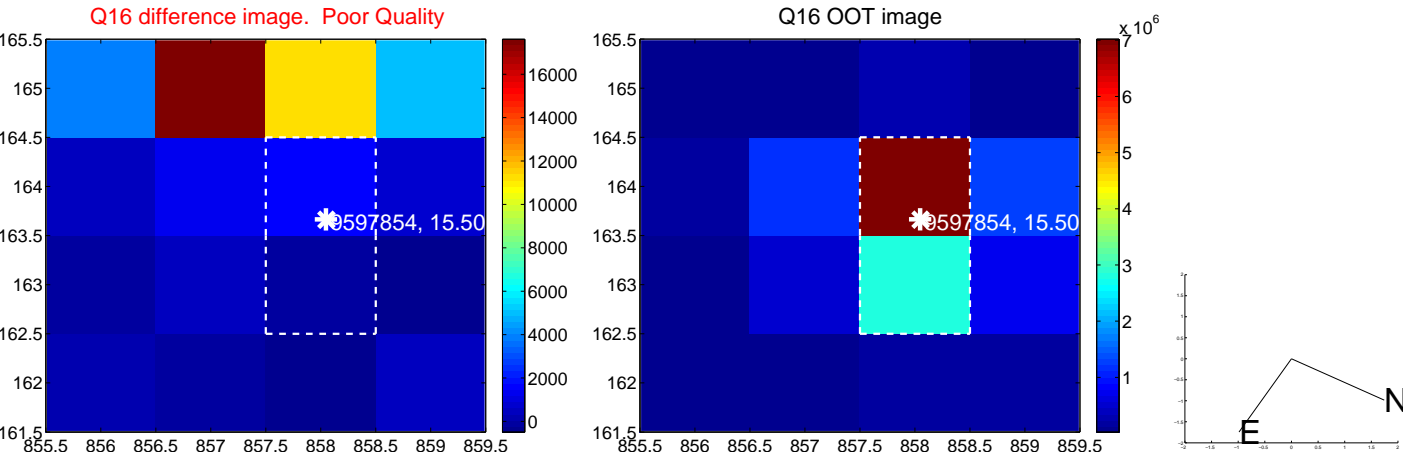
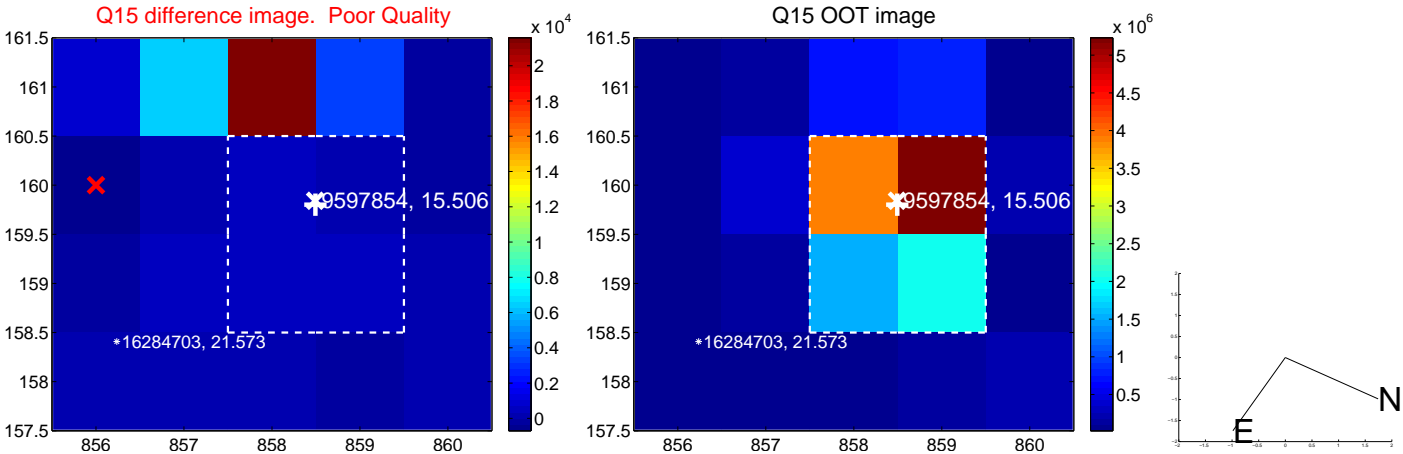
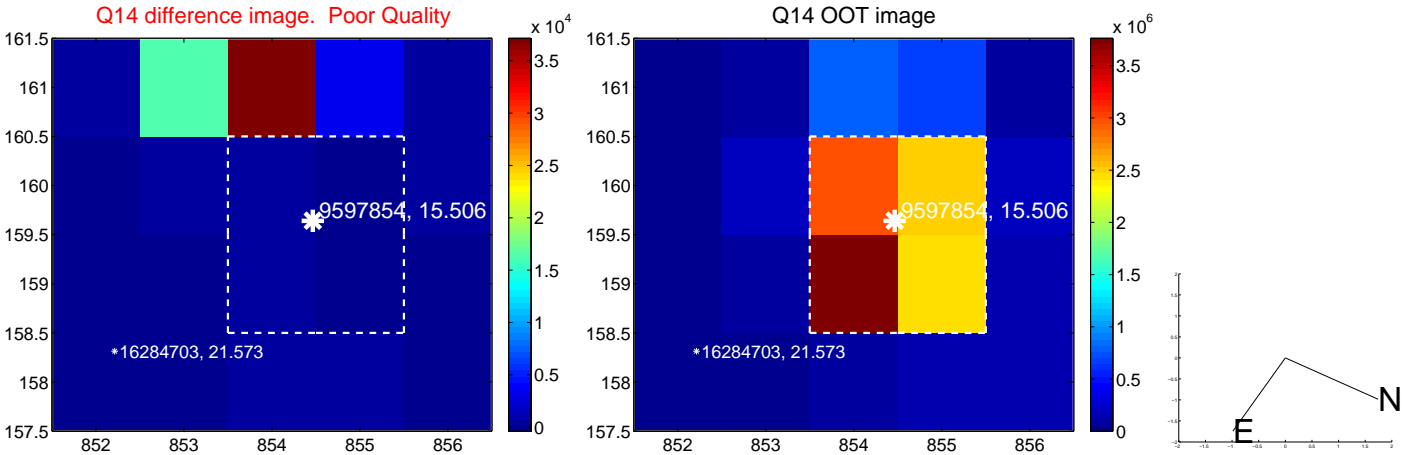
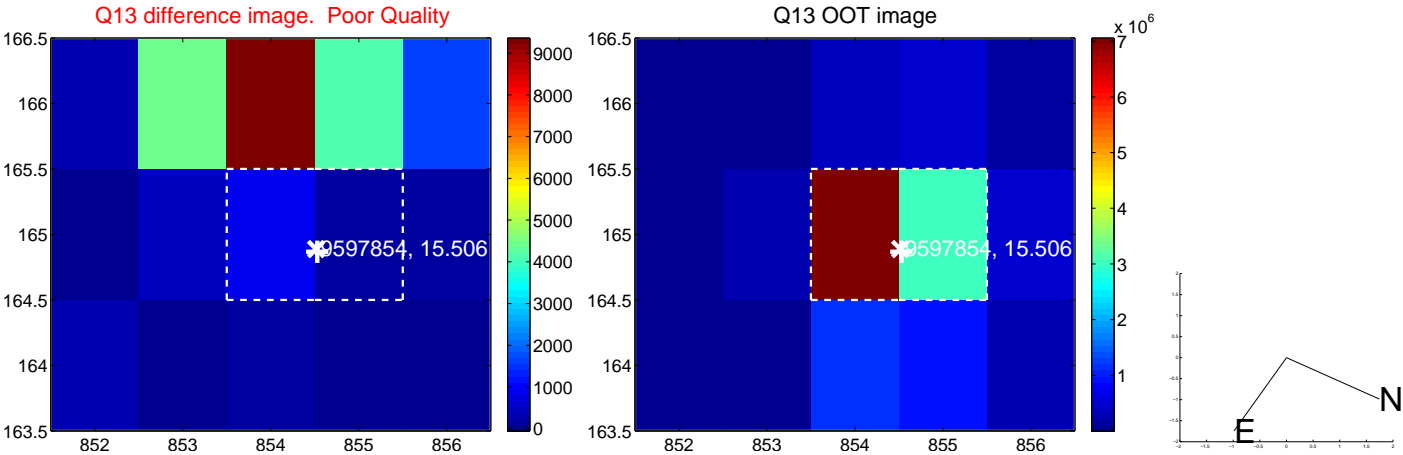
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



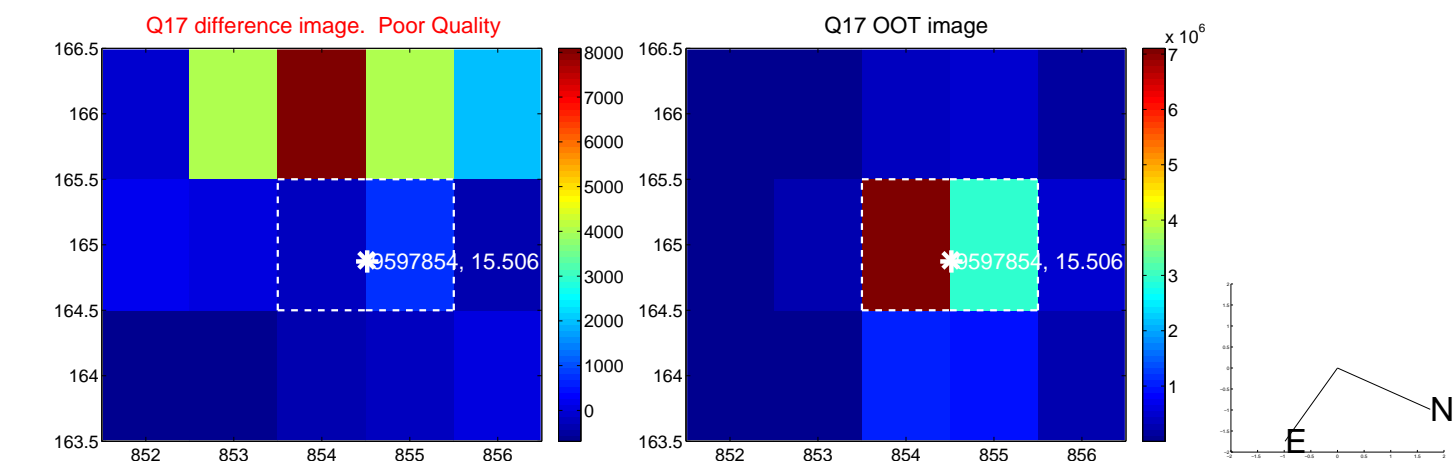
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



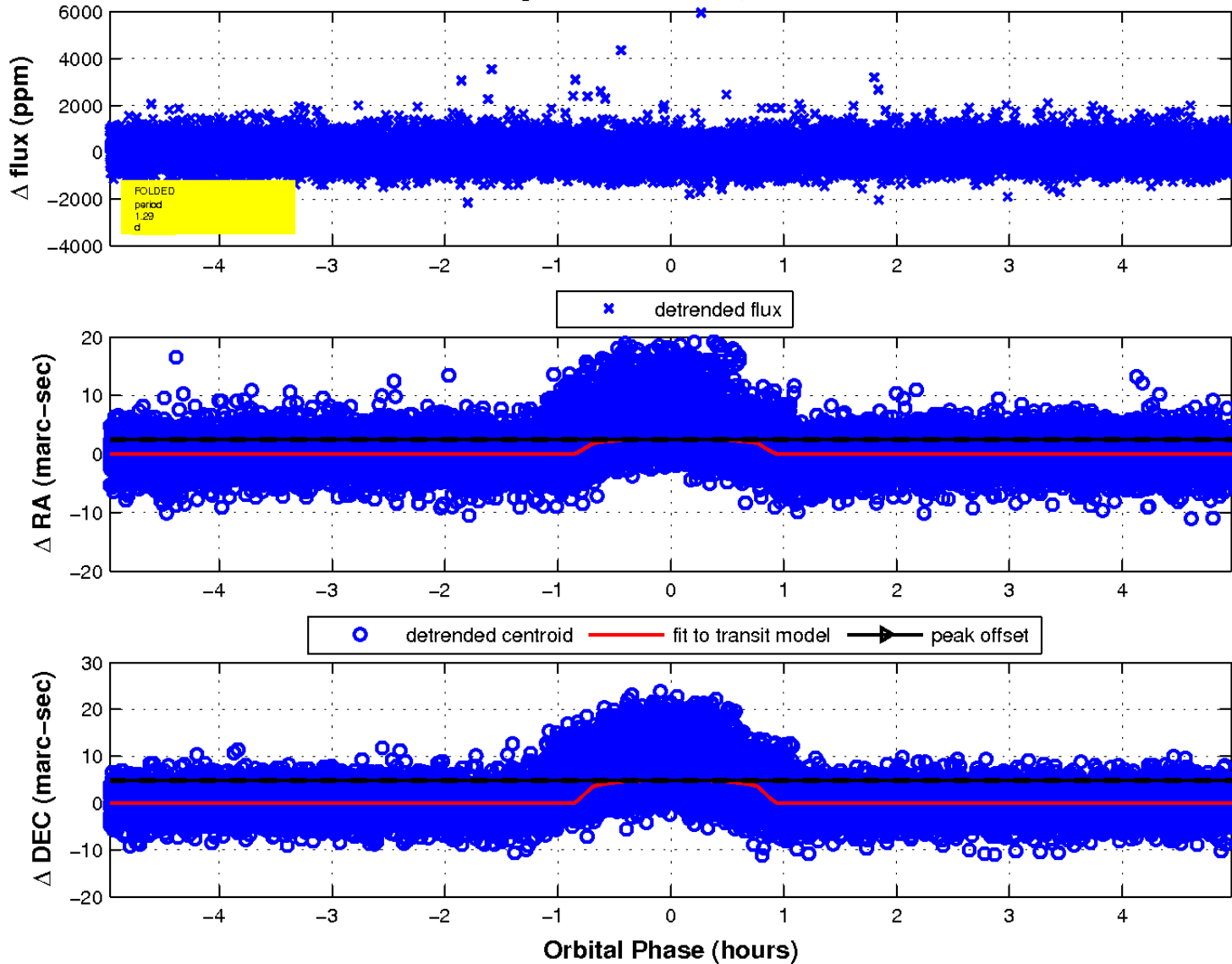
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

