

KIC 009692557

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})
009692557-01	OBS	2831.01	0.571943	131.708377	52.7	0.801	13.1	21.5	2.29	5827	1.98	28768.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009692557-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_ALT—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.

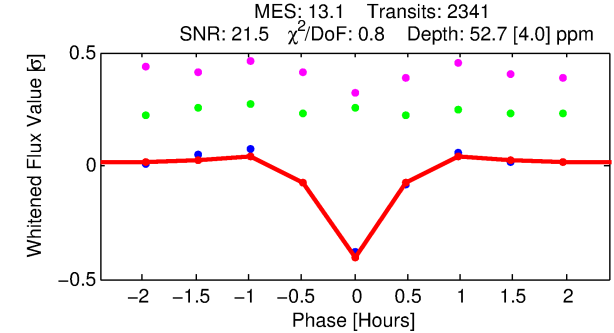
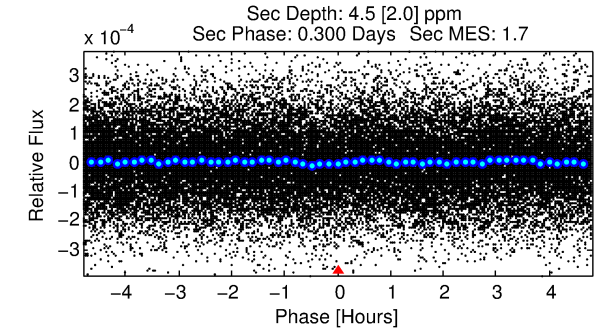
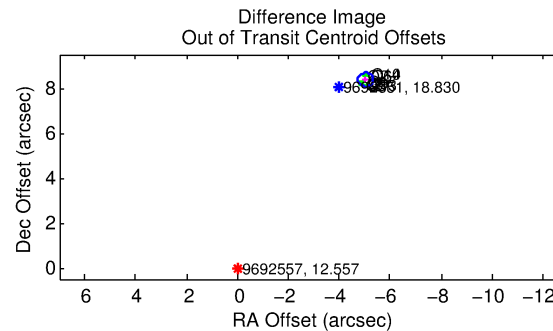
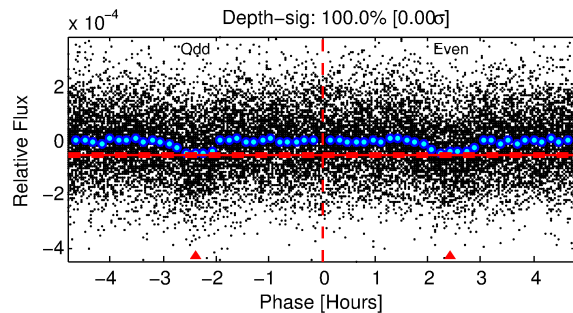
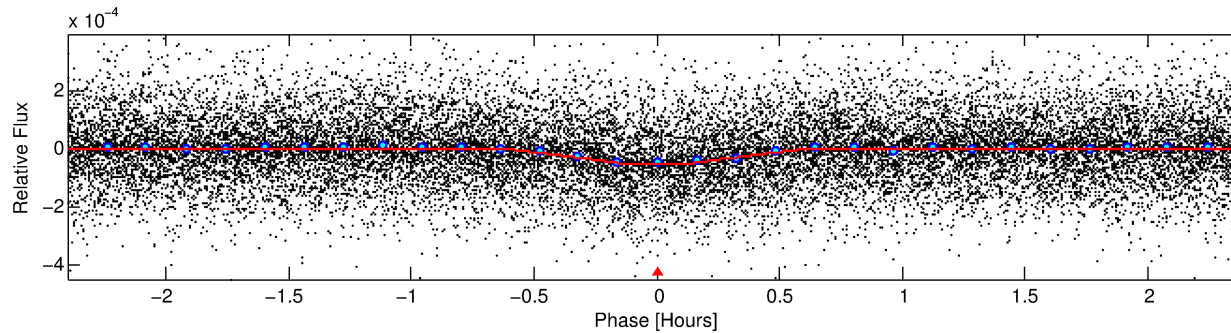
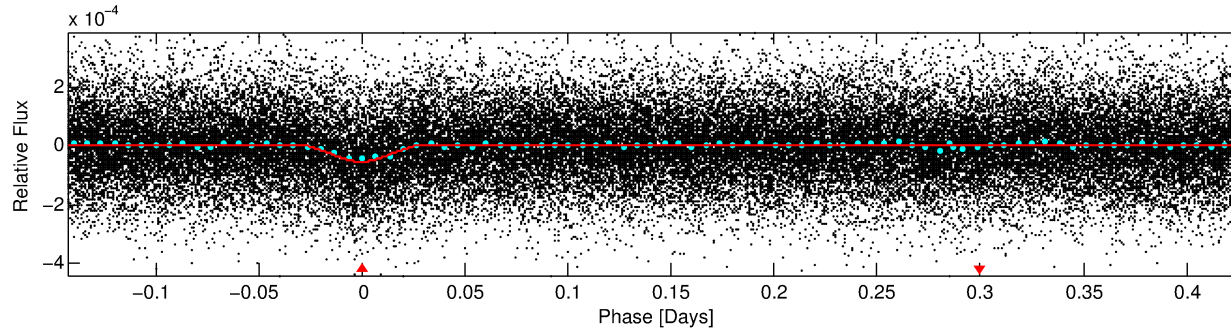
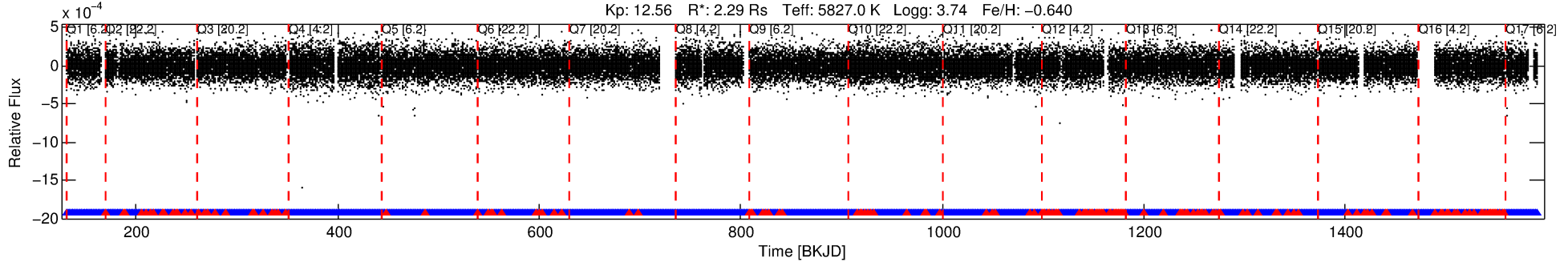
Ephemeris Match Information For 009692557-01

No Significant Match Found

DV One-Page Summary

KIC: 9692557 Candidate: 1 of 1 Period: 0.572 d
KOI: K02831.01 Corr: 0.905

Kp: 12.56 R*: 2.29 Rs Teff: 5827.0 K Logg: 3.74 Fe/H: -0.640



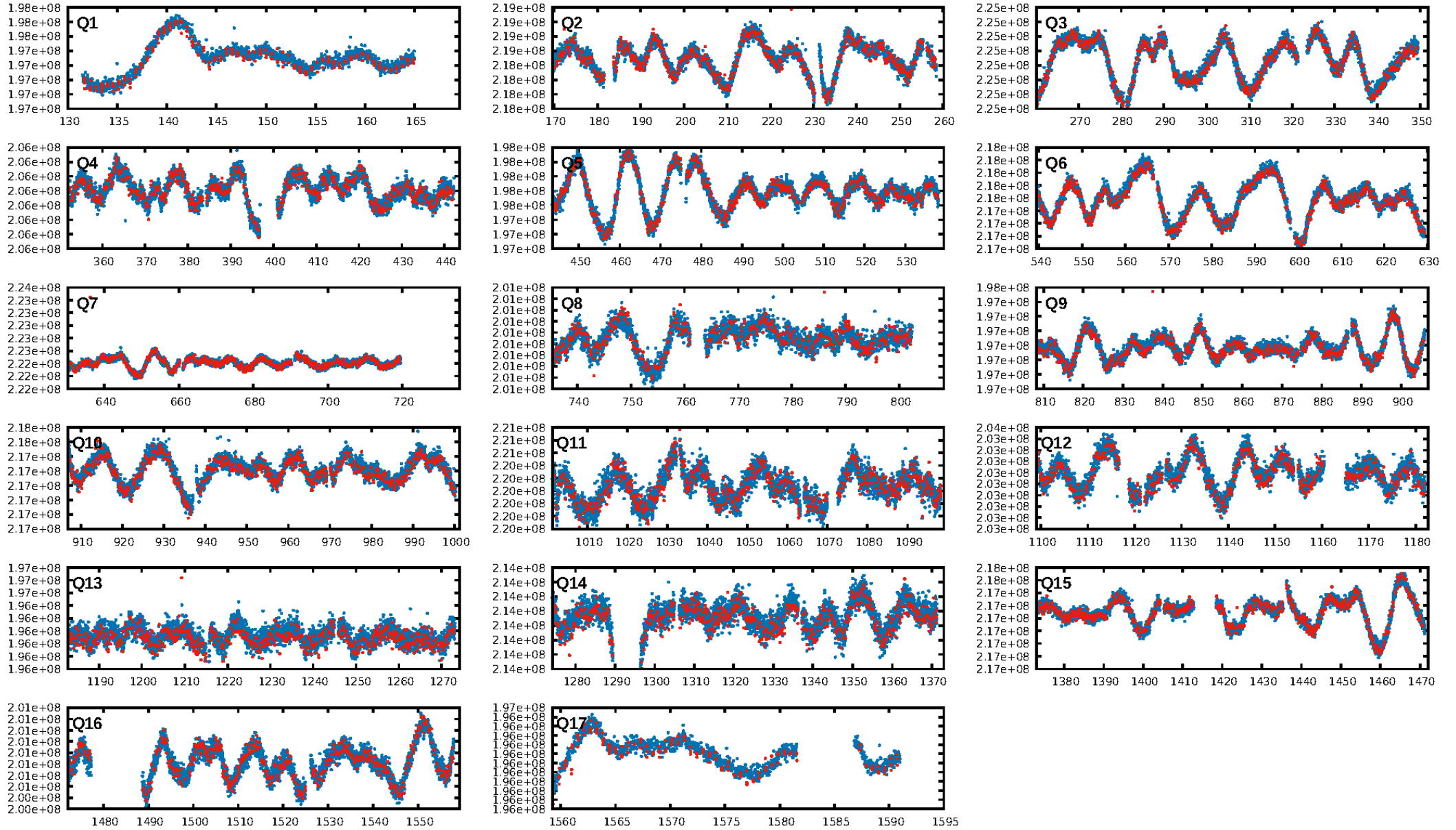
DV Fit Results:

Period = 0.57194 [0.00001] d
Epoch = 131.7084 [0.0006] BKJD
Rp/R* = 0.0079 [0.0011]
a/R* = 2.65 [1.60]
b = 0.90 [0.15]
Seff = 28768.76 [14179.51]
Teq = 3321 [409] K
Rp = 1.98 [0.70] Re
a = 0.0137 [0.0042] AU
Ag = 0.12 [0.08] [-10.49σ]
Teff = 3004 [408] K [-0.55σ]

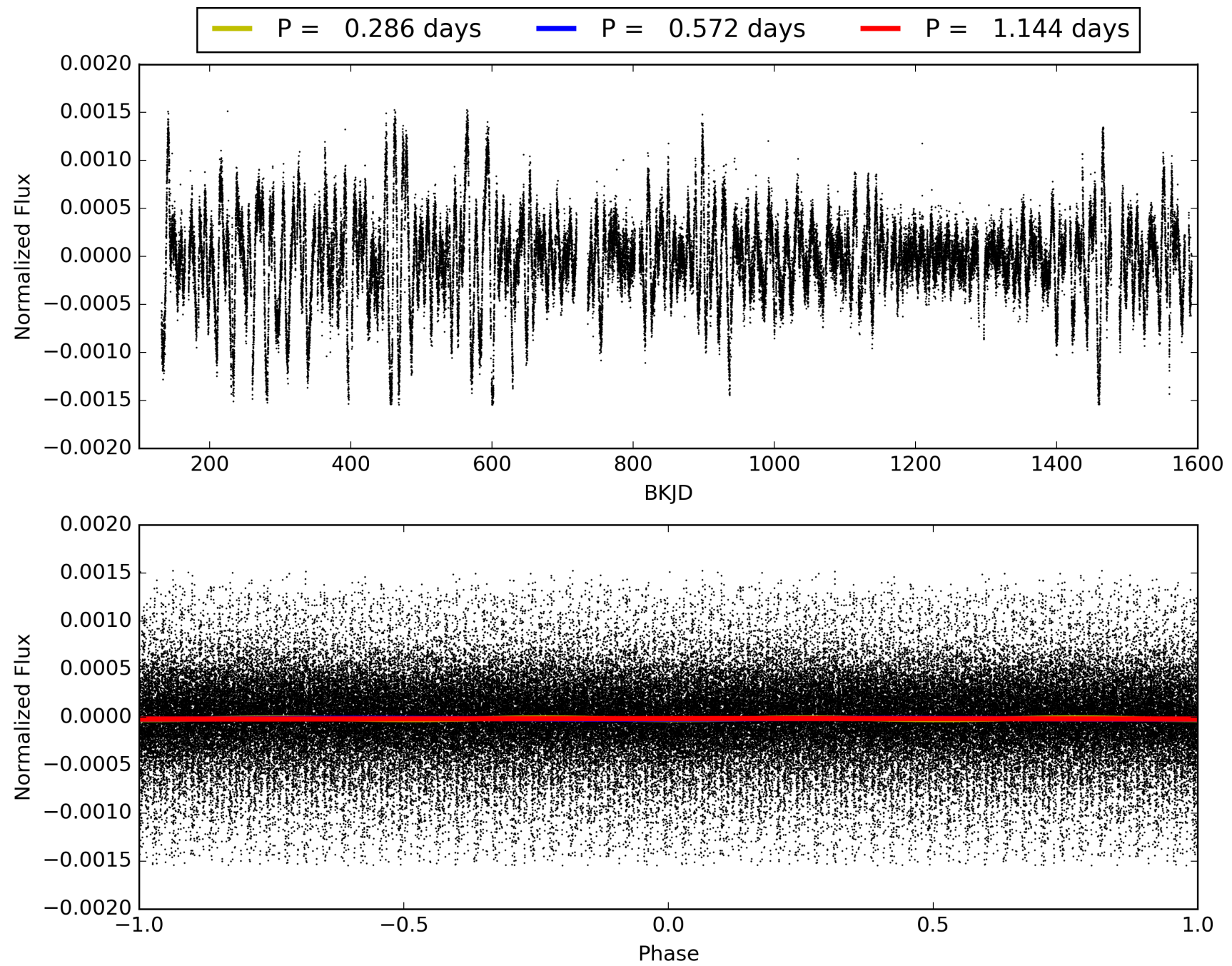
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.78e-34
RollingBand-fgt: 0.92 [2052/2235]
GhostDiagnostic-chr: -0.3542
Centroid-sig: 0.0%
Centroid-so: 8.552 arcsec [19.37σ]
OotOffset-rm: 9.771 arcsec [96.48σ]
KicOffset-rm: 9.878 arcsec [101.64σ]
OotOffset-st: 4/0/0/5 [9]
KicOffset-st: 4/0/0/5 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 009692557-01, PDC Light Curves

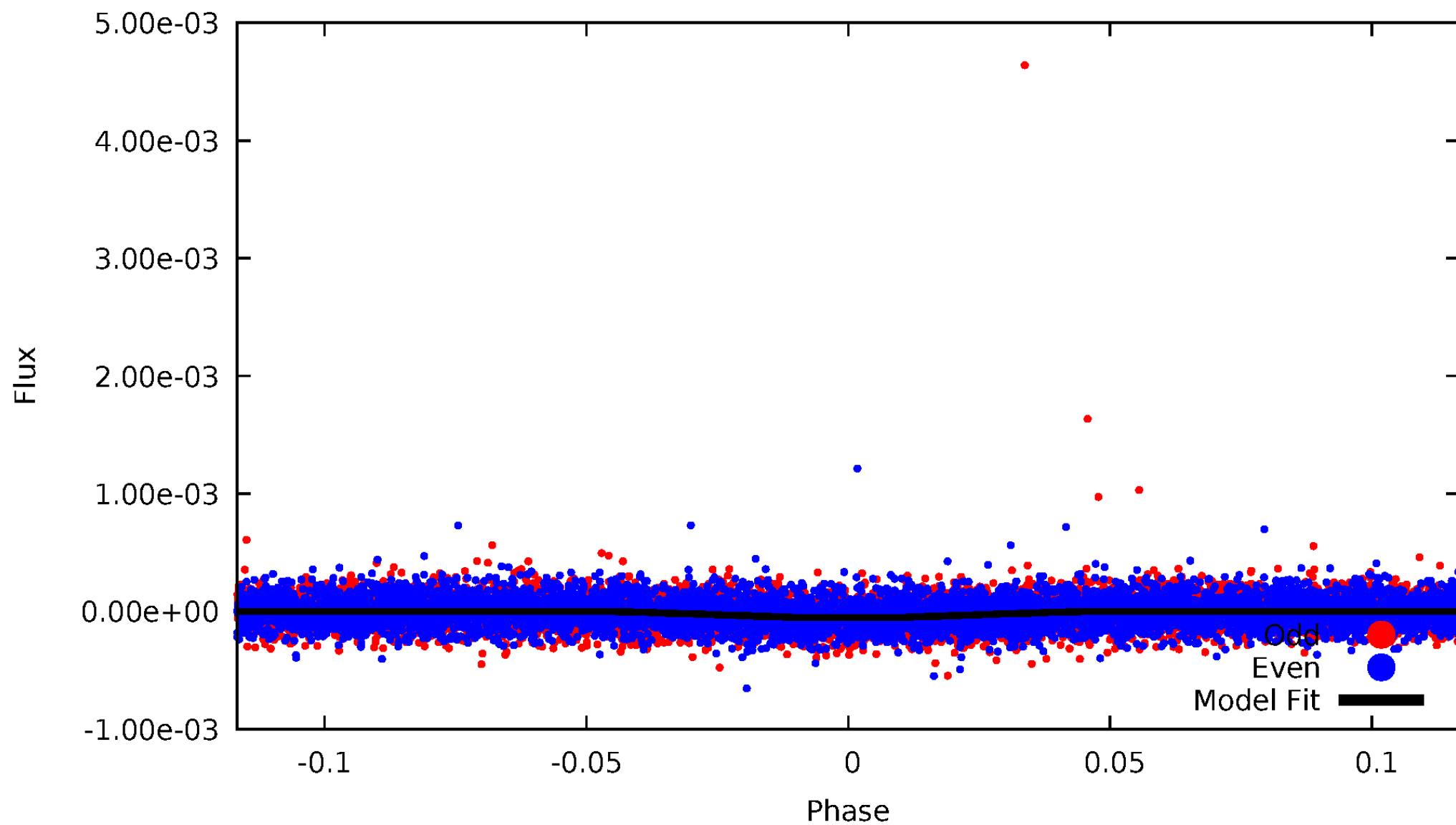


TCE 009692557-01



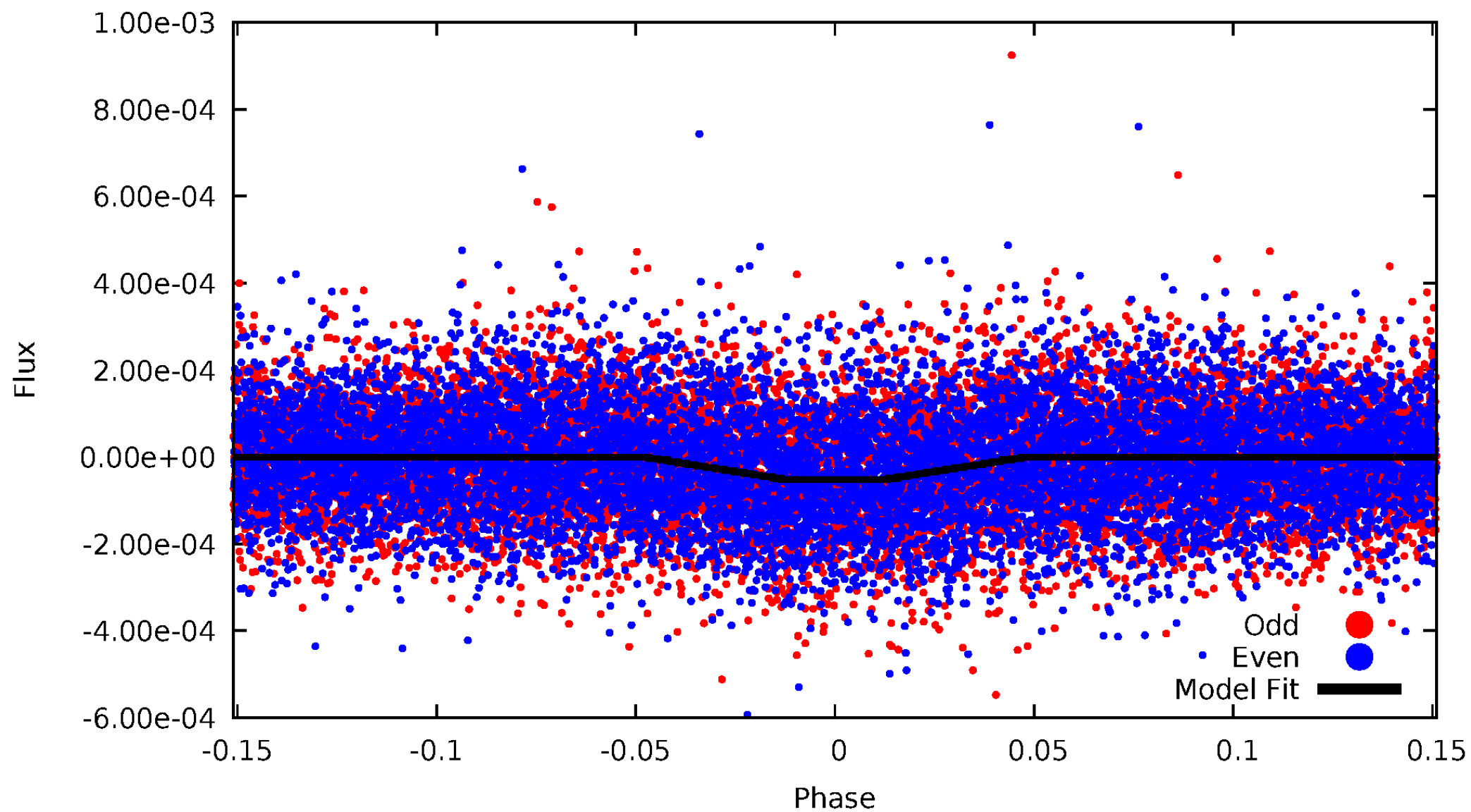
DV Odd/Even

TCE 009692557-01



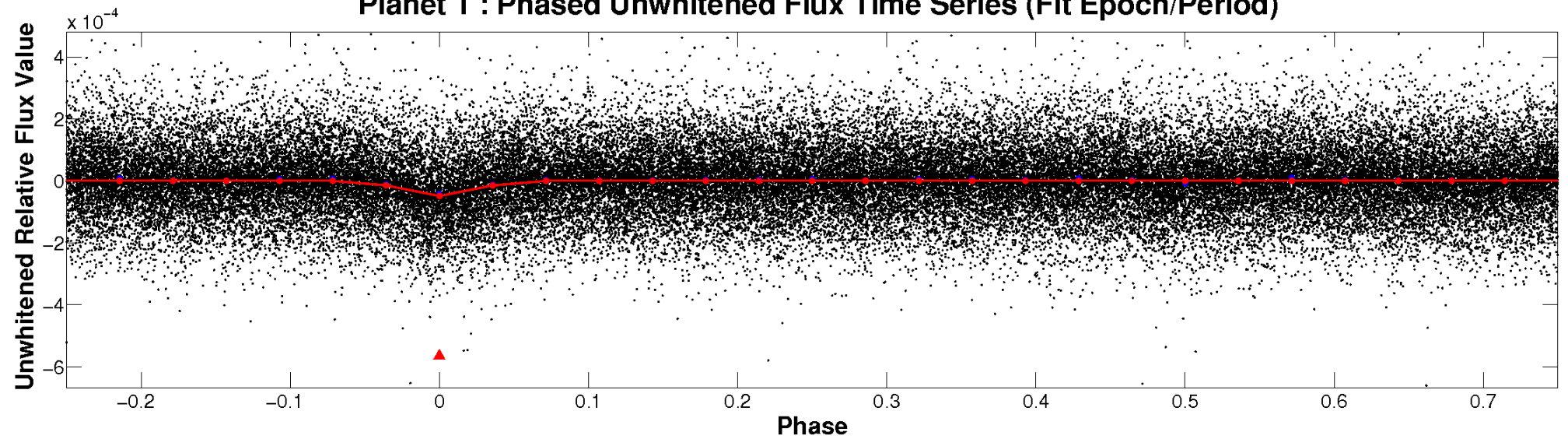
ALT Odd/Even

TCE 009692557-01

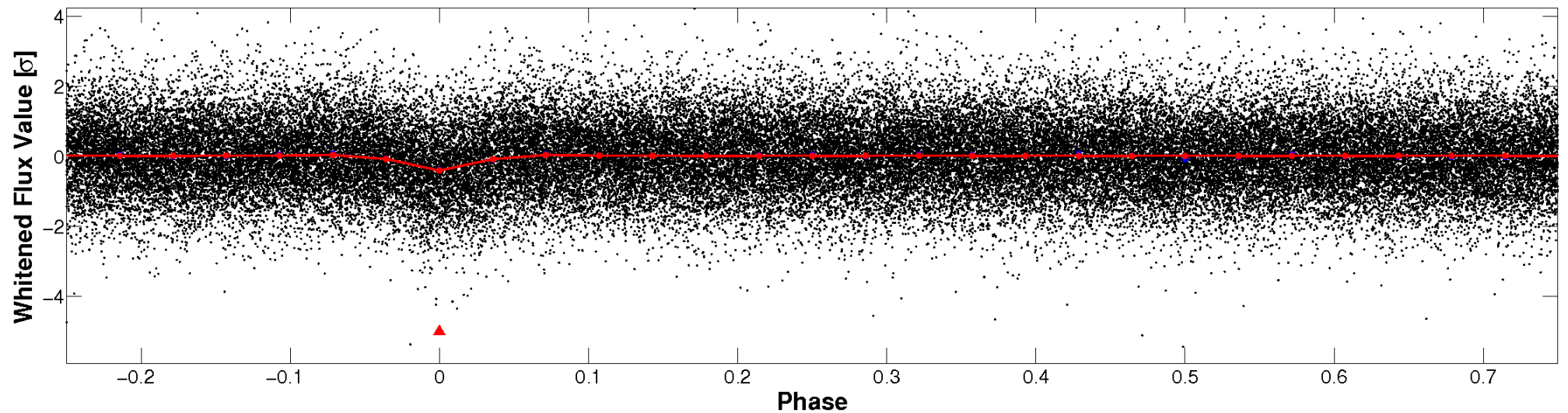


Non-Whitened Vs. Whitened Light Curve

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

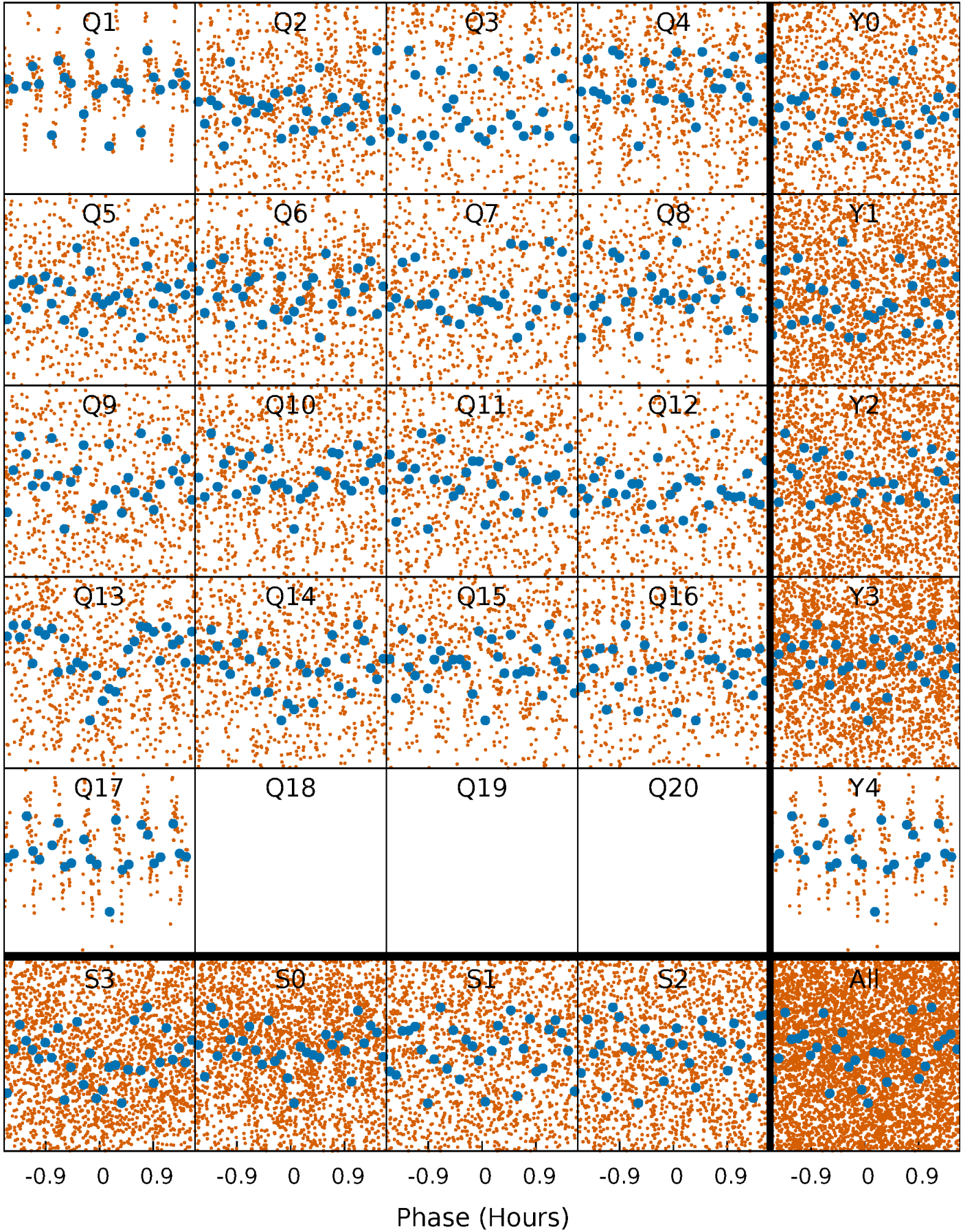


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



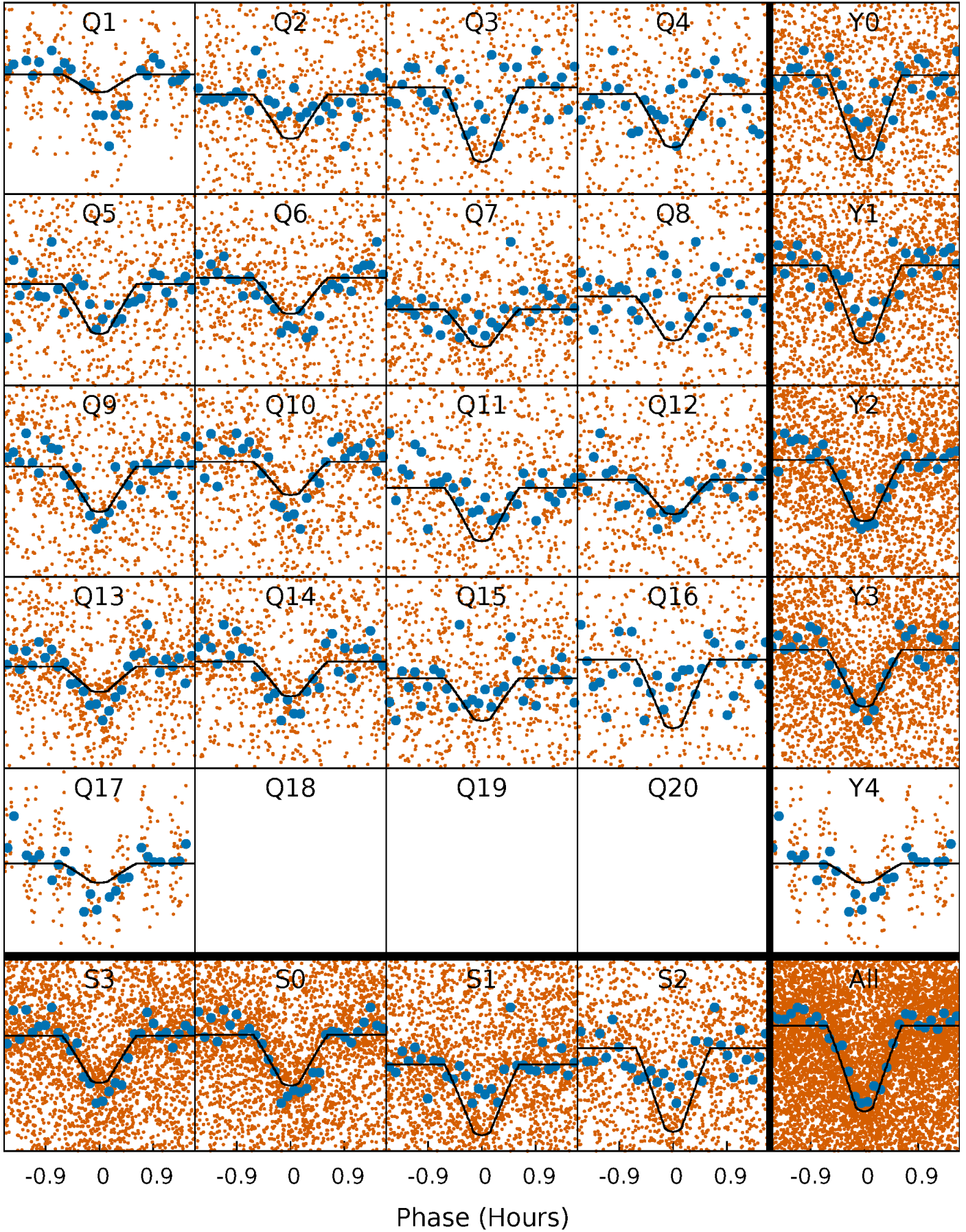
PDC Quarter-Phased Transit Curves

TCE 009692557-01 P= 0.571943 Days $T_0=131.708378$ (BKJD)



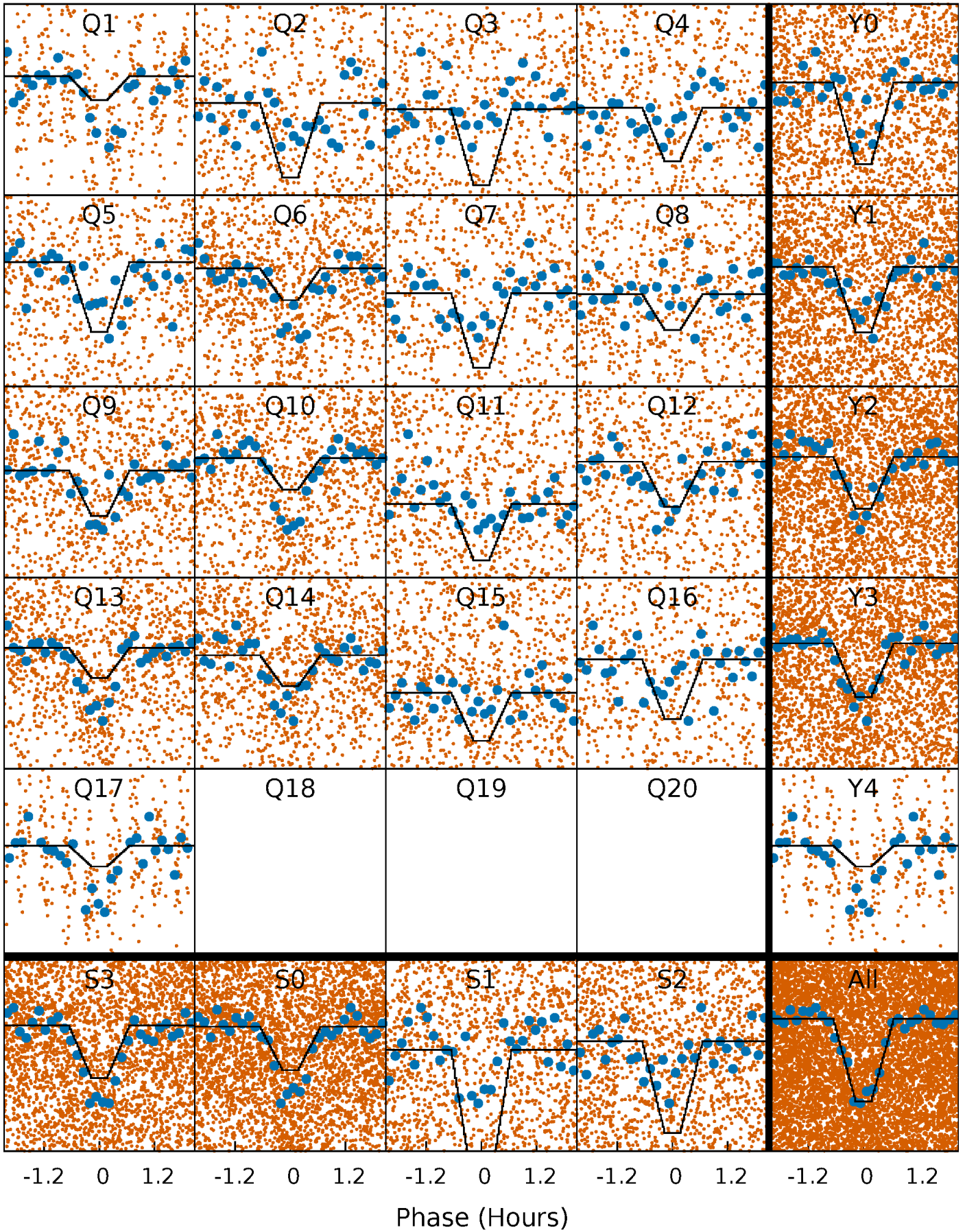
DV Quarter-Phased Transit Curves

TCE 009692557-01 P= 0.571943 Days $T_0=131.708378$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

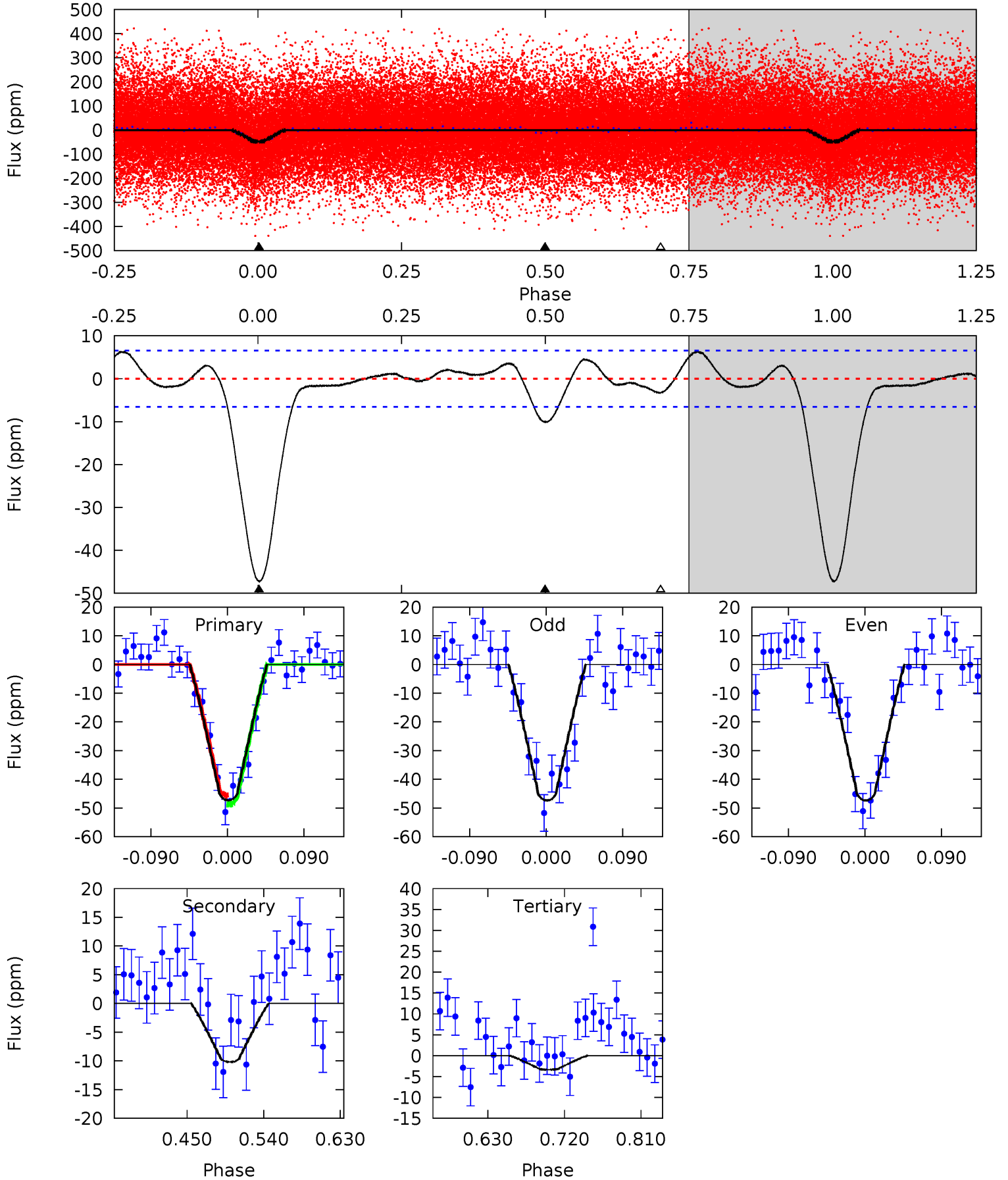
TCE 009692557-01 P= 0.571943 Days $T_0=131.710683$ (BKJD)



DV Model-Shift Uniqueness Test

009692557-01, P = 0.571943 Days, E = 131.136435 Days

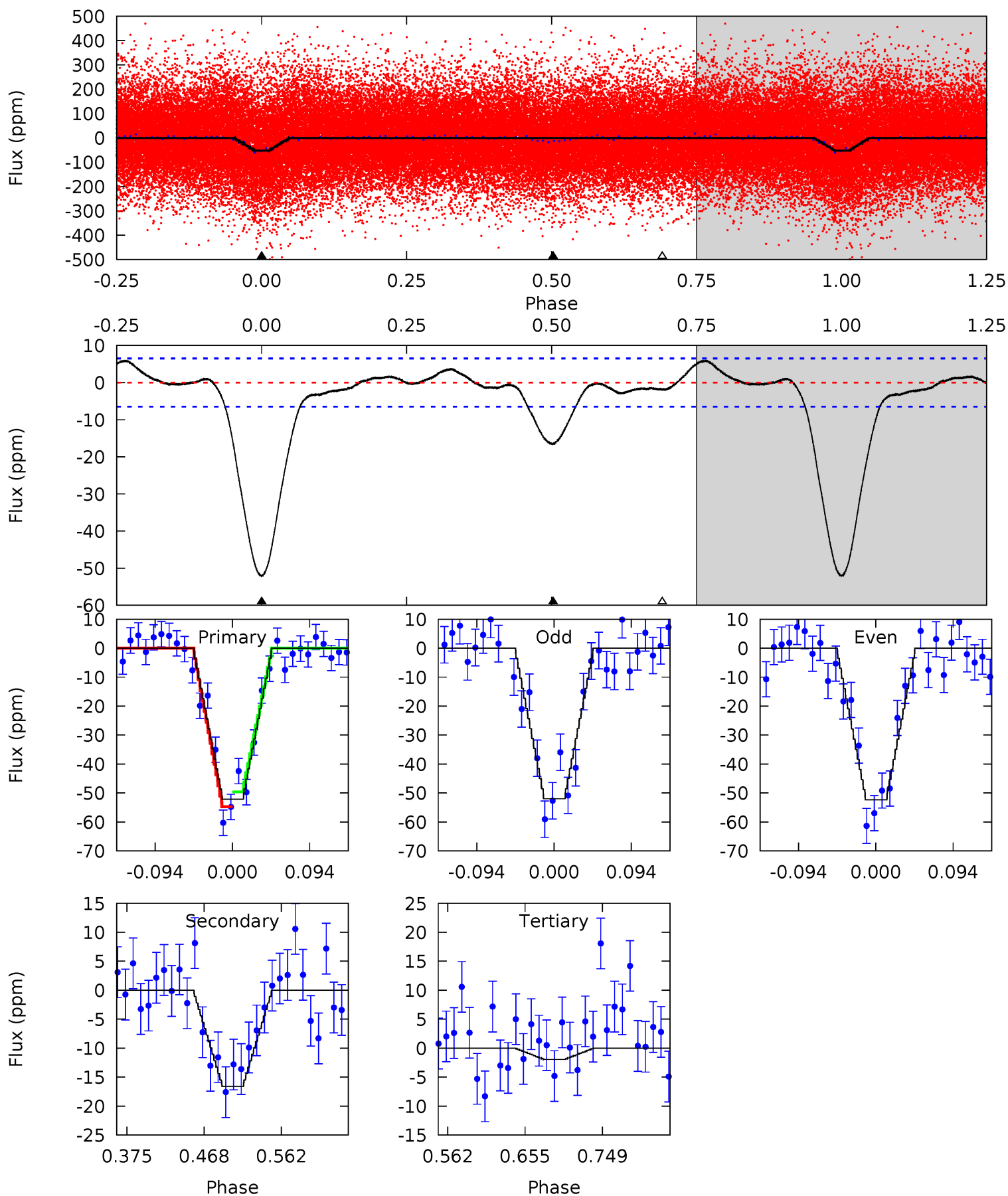
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.0	7.12	2.35	0	4.59	1.70	1.42	30.7	33.0	4.77	7.12	0.00	0.94	0.12	1.03



Alt Model-Shift Uniqueness Test

009692557-01, P = 0.571943 Days, E = 131.138740 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.8	11.7	1.38	0	4.58	1.68	1.51	35.4	36.8	10.3	11.7	0.13	0.98	0.10	1.81



Stellar Parameters For KIC 009692557

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5827^{+157}_{-157}	$3.740^{+0.280}_{-0.120}$	$-0.640^{+0.350}_{-0.250}$	$2.286^{+0.555}_{-0.740}$	$1.047^{+0.180}_{-0.180}$	$0.123^{+0.228}_{-0.050}$
	+3%/-3%	+7%/-3%	+55%/-39%	+24%/-32%	+17%/-17%	+185%/-40%
Source	PHO1	FLK73	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 009692557-01 / KOI 2831.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-10 ± 1	$1.93^{+0.40}_{-0.39}$	4576^{+296}_{-394}	-2574^{+6055}_{-939}	$0.286^{+0.165}_{-0.094}$
Alt.	-17 ± 1	$1.70^{+0.40}_{-0.36}$	4574^{+339}_{-386}	3990^{+478}_{-579}	$0.586^{+0.340}_{-0.191}$

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 $A_{obs} \gg 1.0$

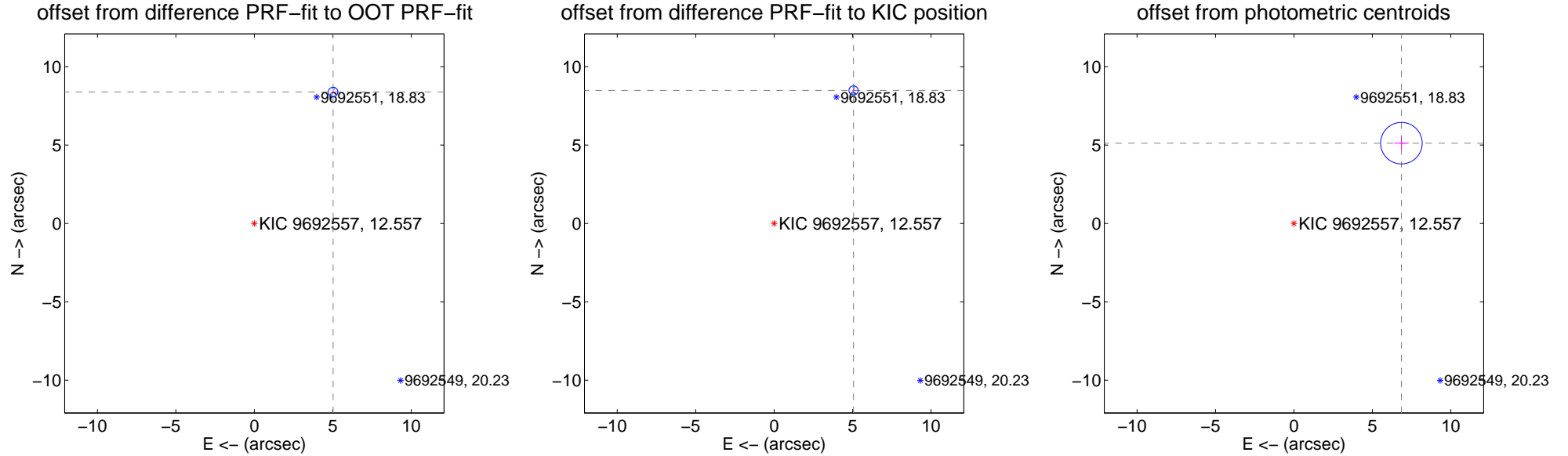
DV Centroid Data

Supplemental centroid analysis for 009692557-01. Kepler magnitude: 12.56. Transit SNR 21.45

There are 9 quarters with good PRF difference image offsets

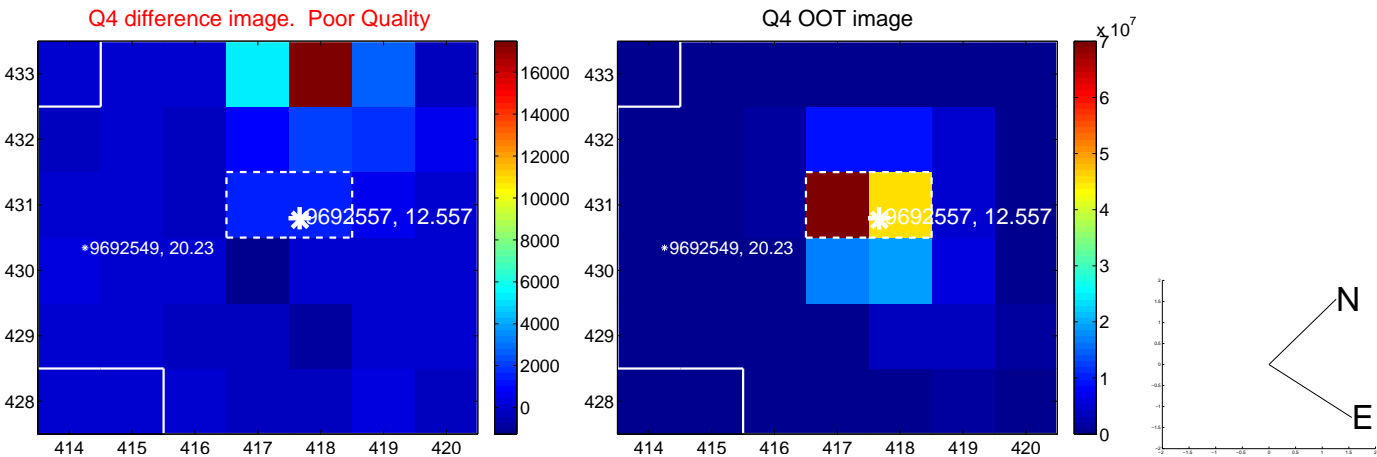
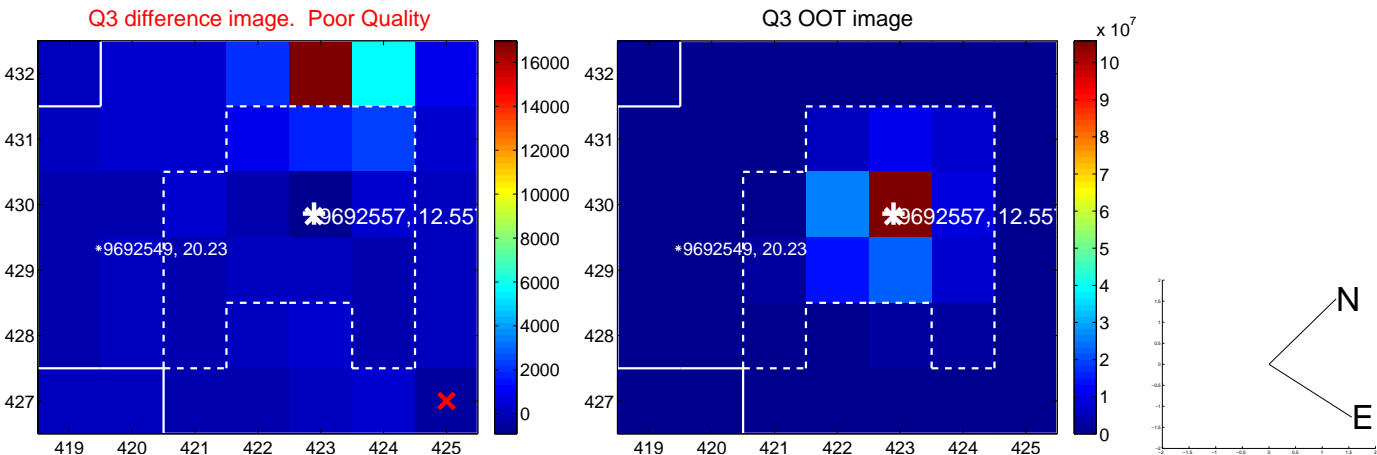
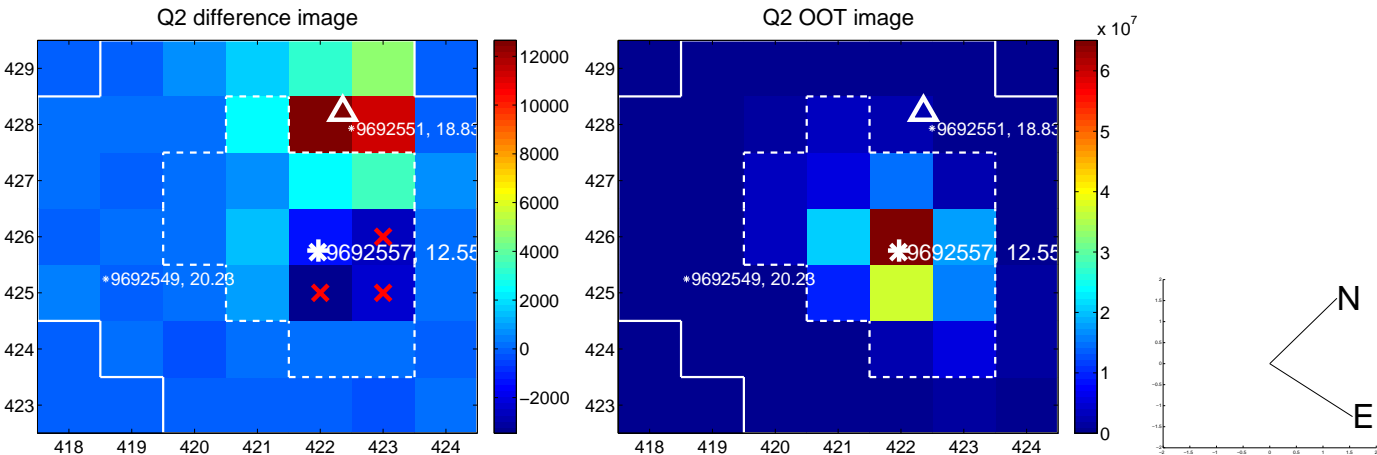
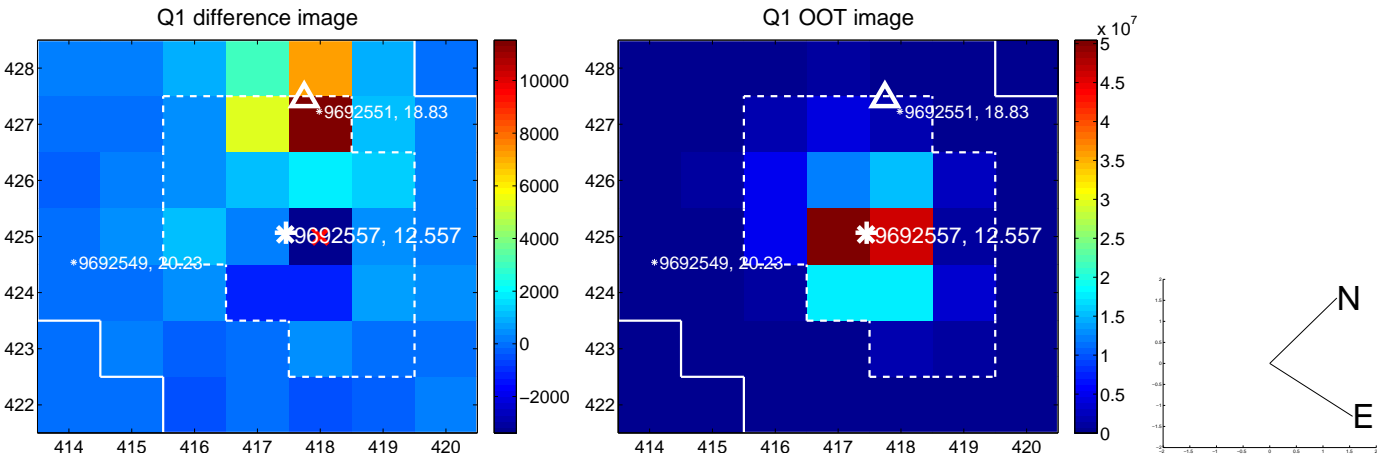
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.771 ± 0.101	96.48	-5.021 ± 0.075	8.383 ± 0.109
PRF-fit source offset from KIC position	9.878 ± 0.097	101.64	-5.061 ± 0.072	8.483 ± 0.098
photometric centroid source offset	8.55 ± 0.44	19.37	-6.85 ± 0.46	5.12 ± 0.40

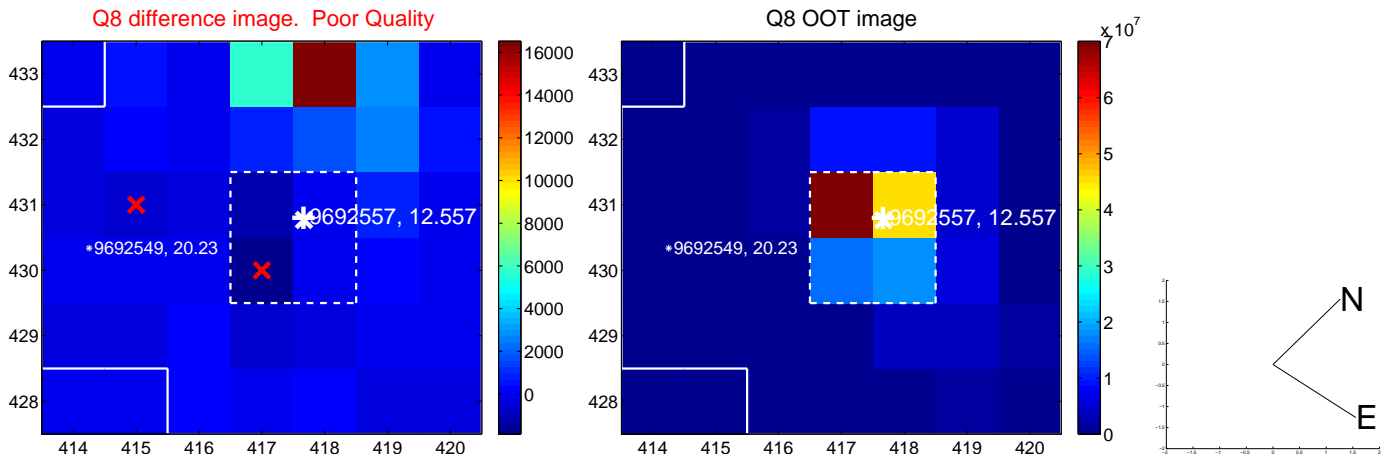
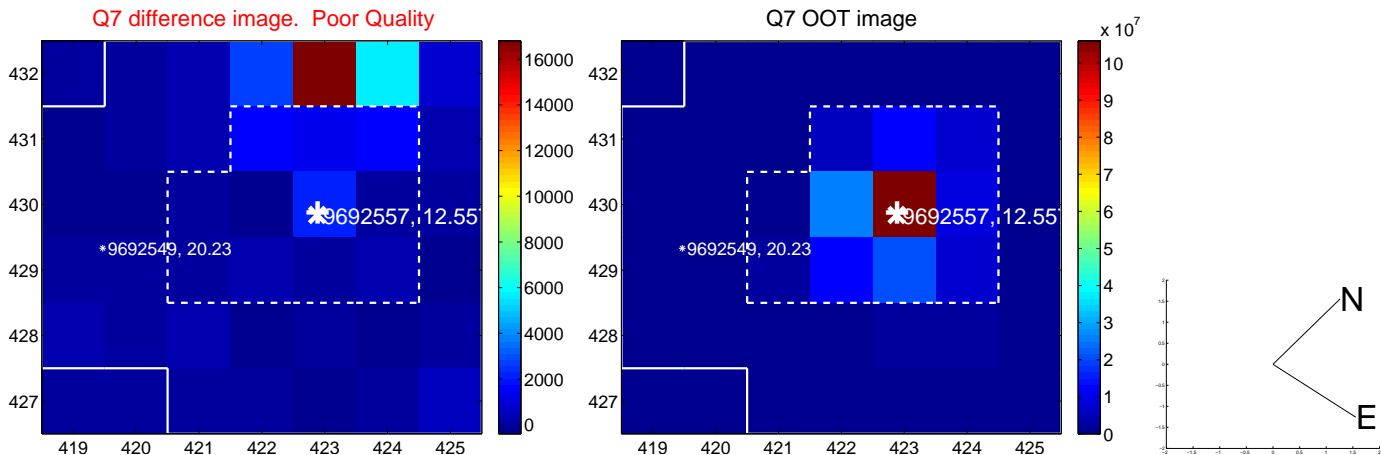
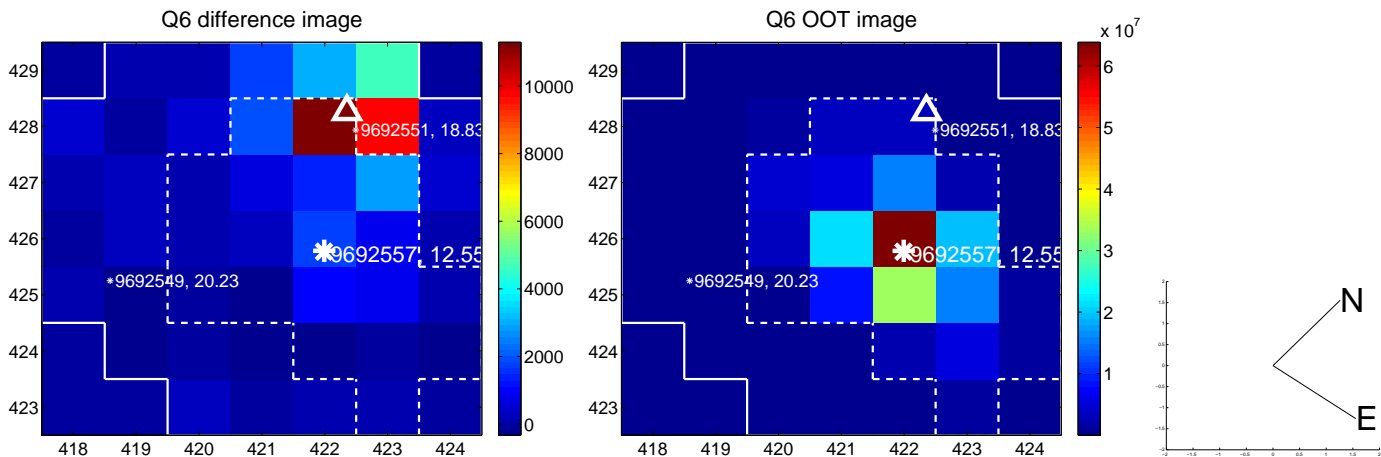
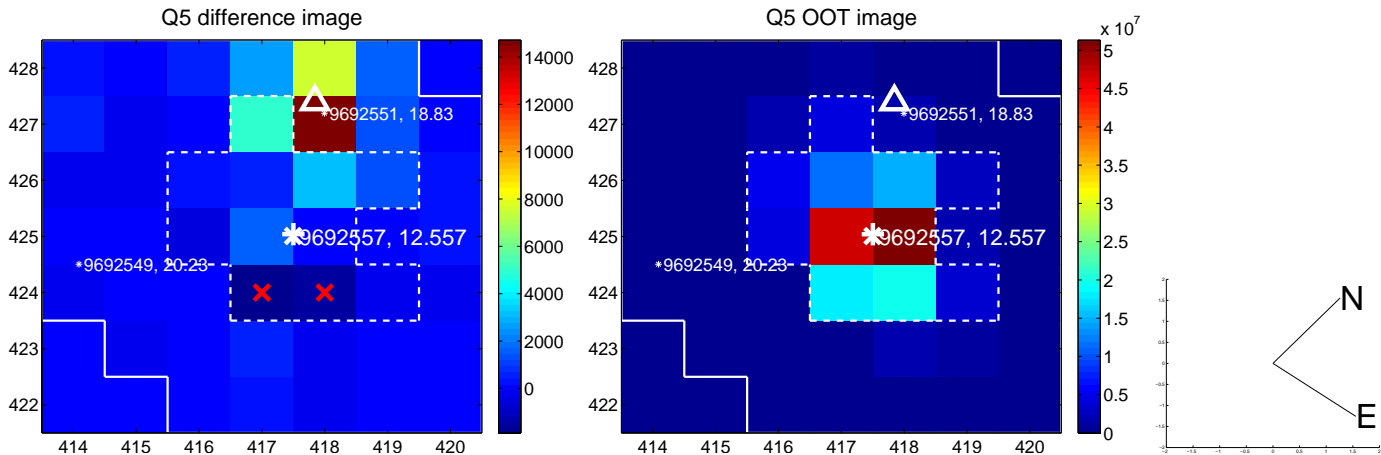


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

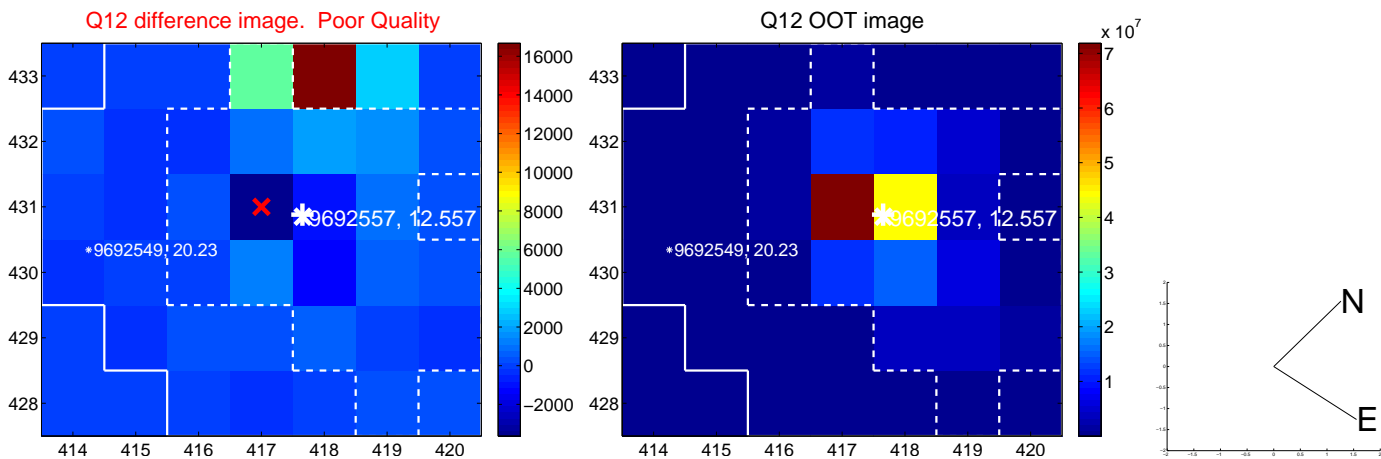
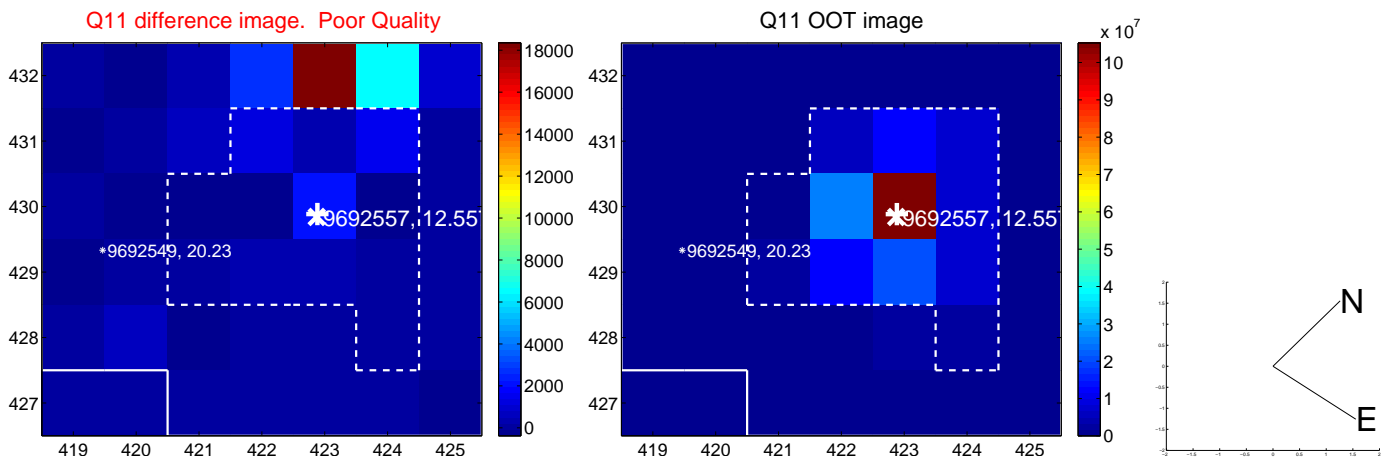
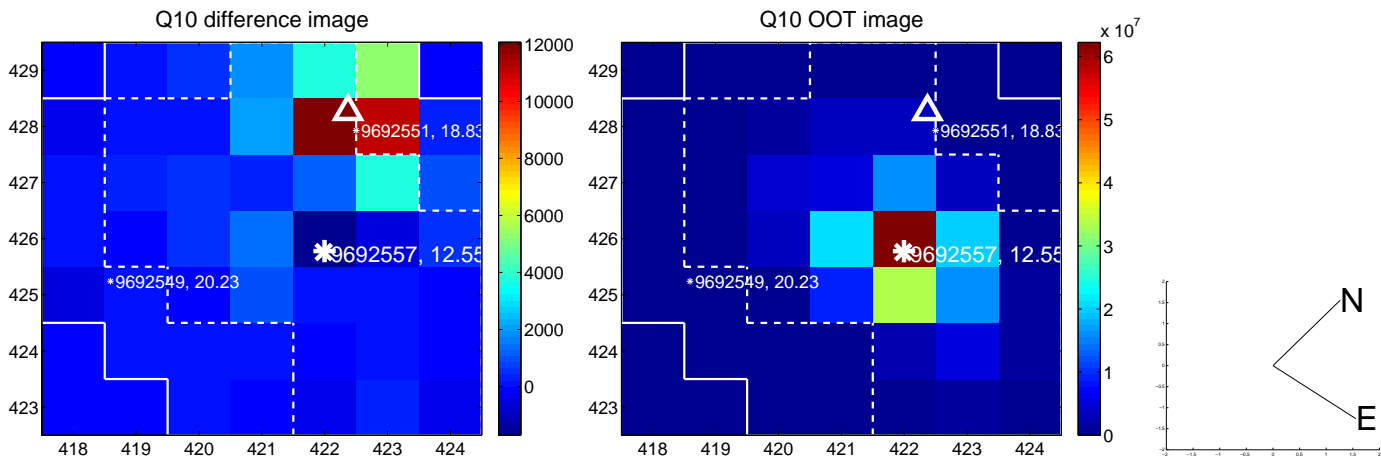
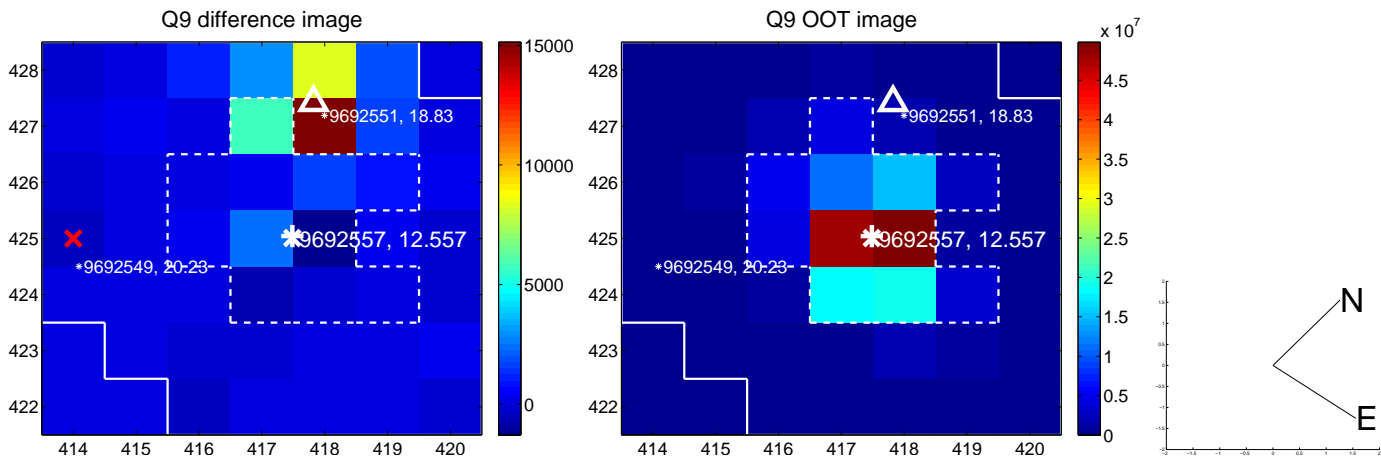
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



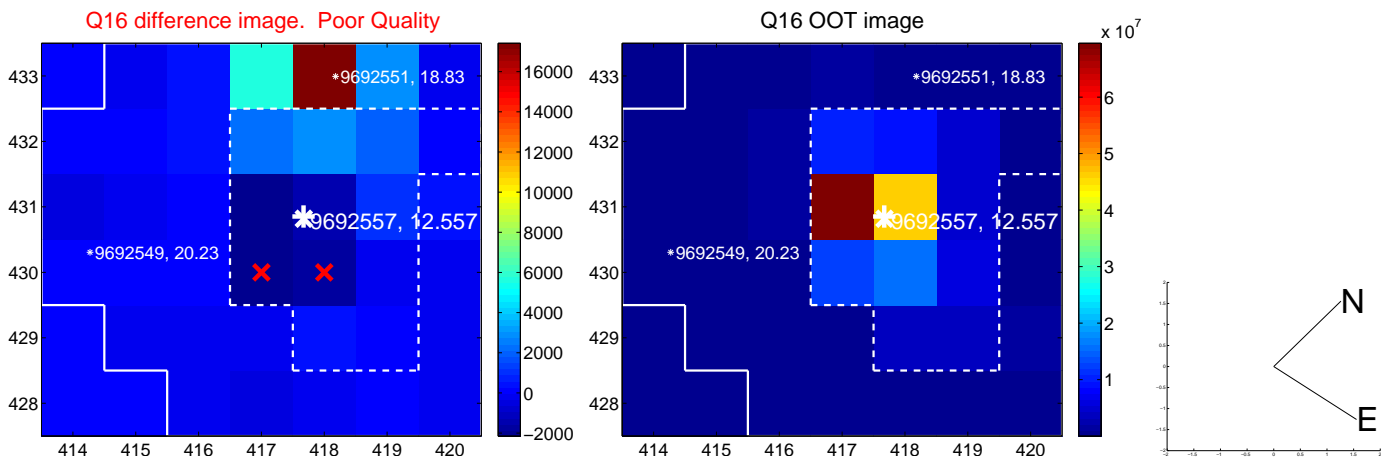
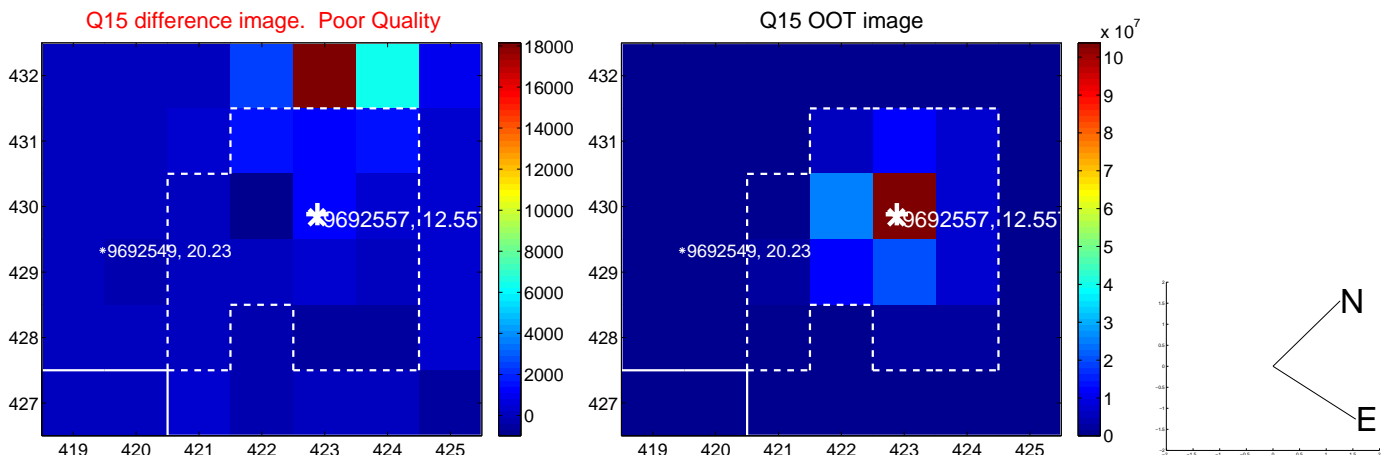
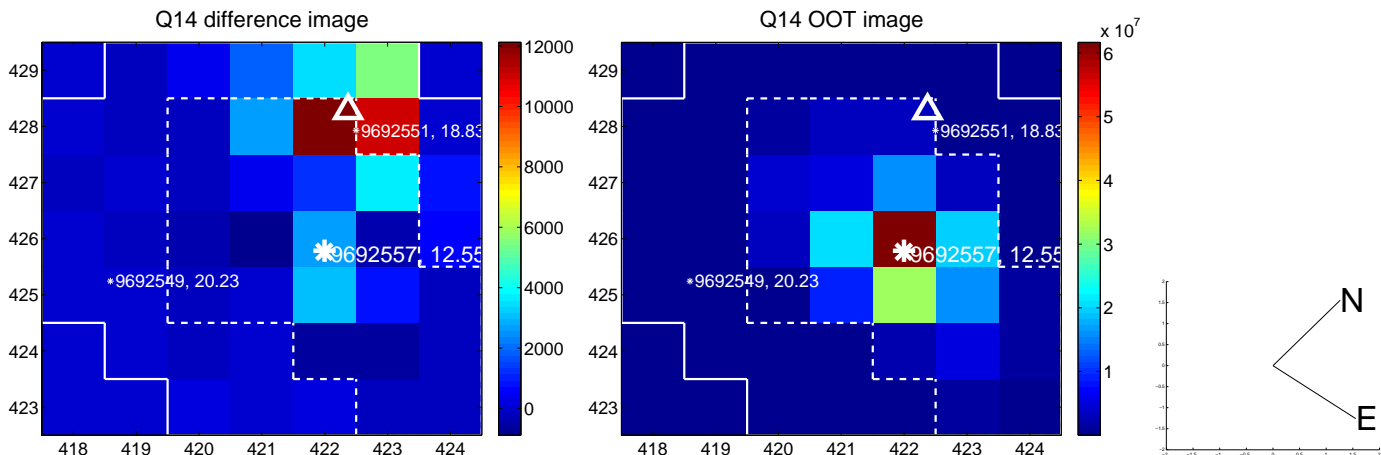
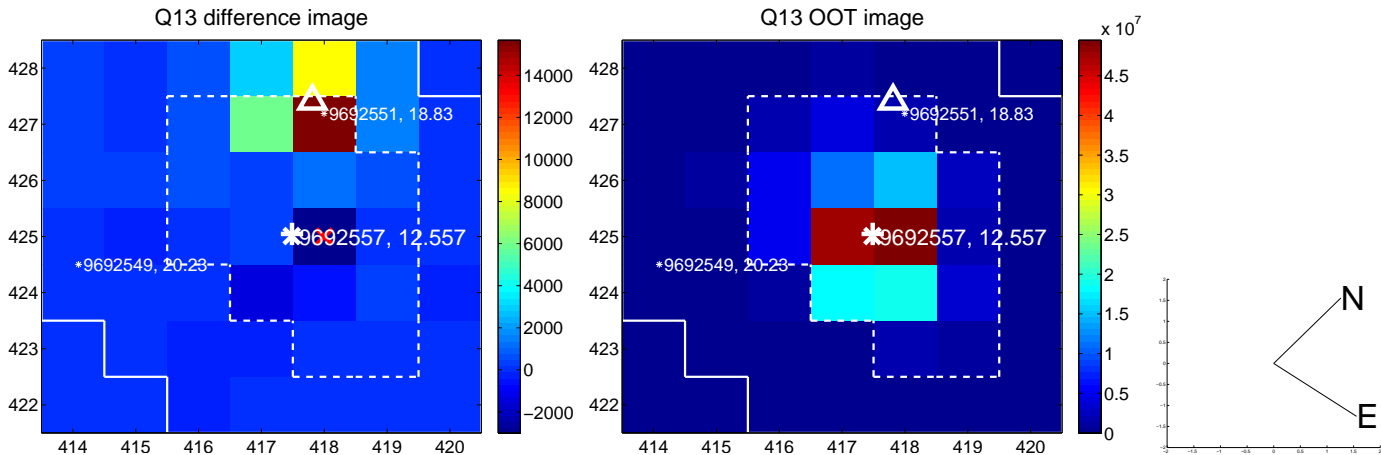
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



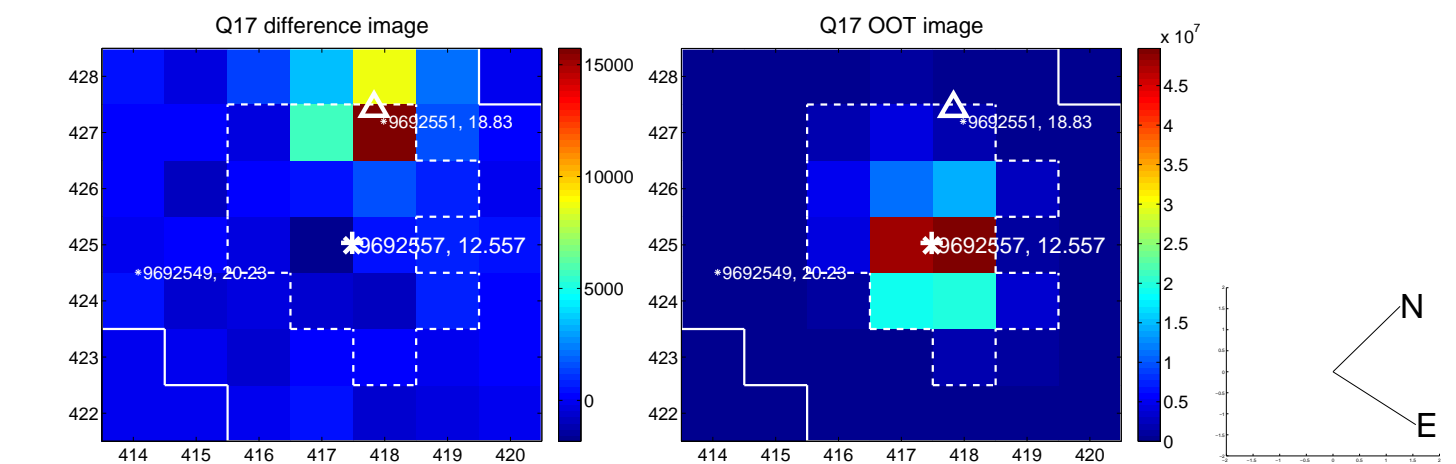
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



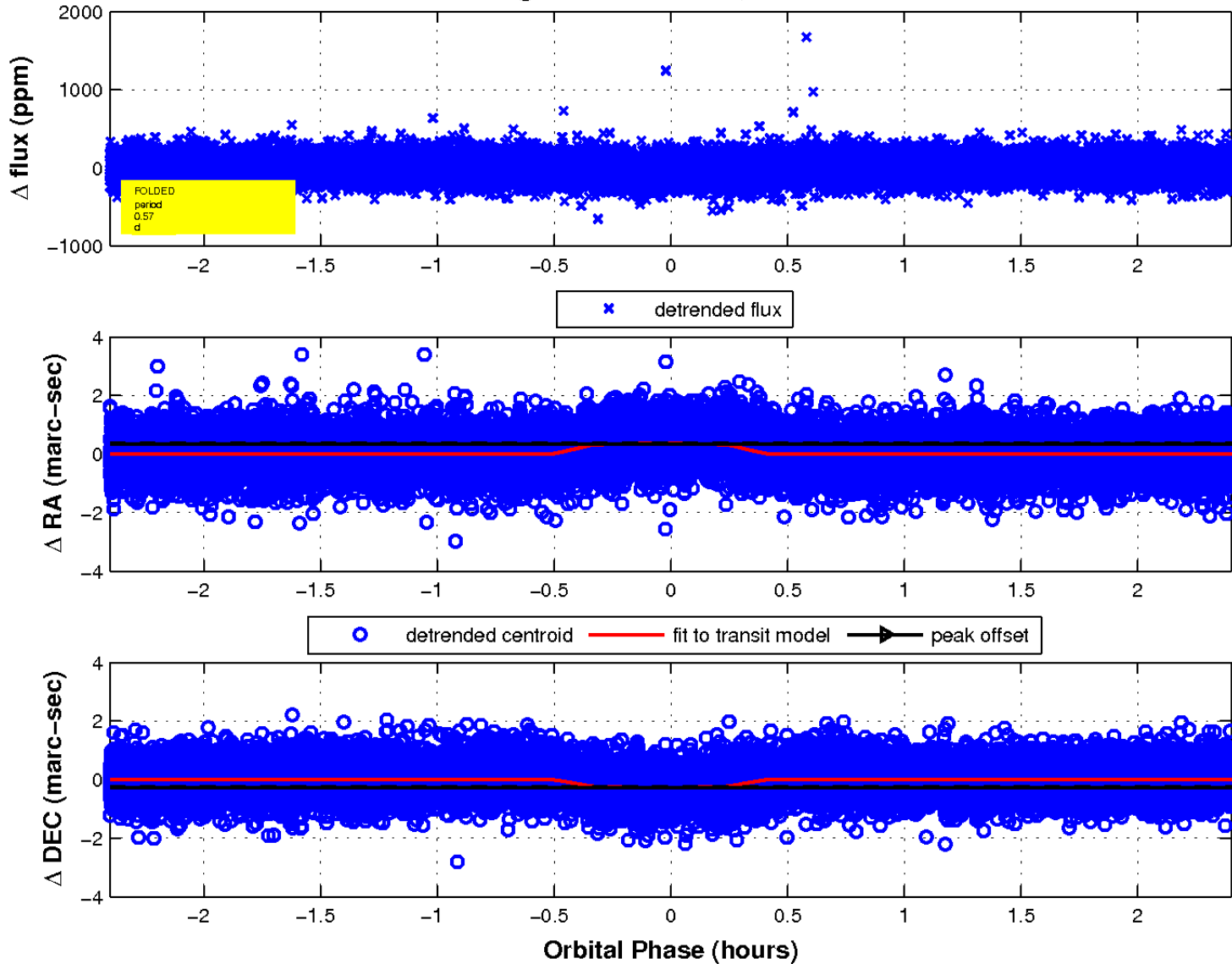
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

