

KIC 008636539

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})
008636539-01	OBS	2656.01	6.773703	138.072873	144.1	4.737	13.6	13.9	1.07	6392	1.72	325.44

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008636539-01	OBS	PC	0.99	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.

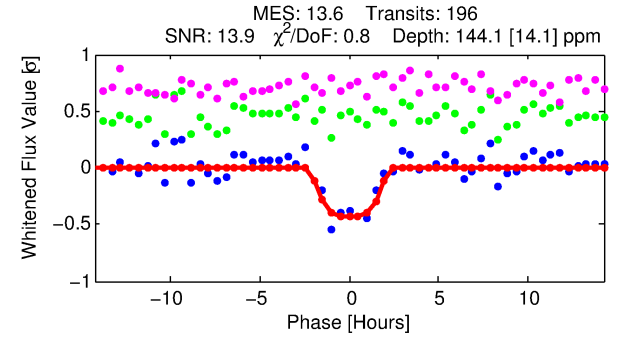
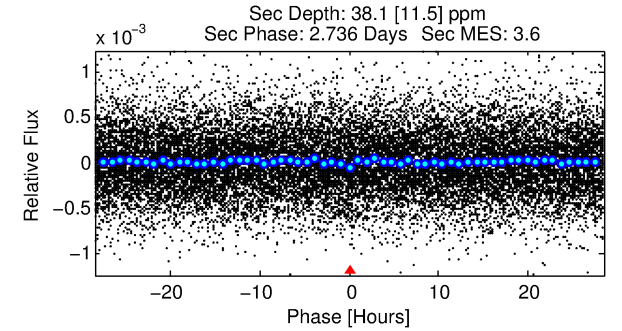
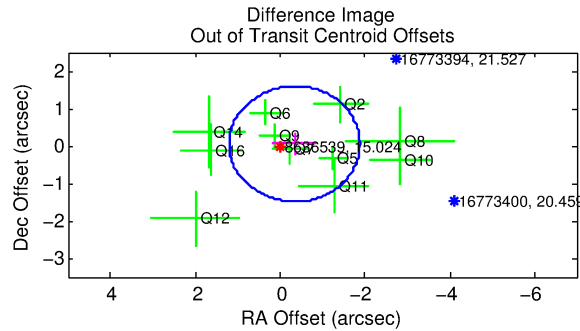
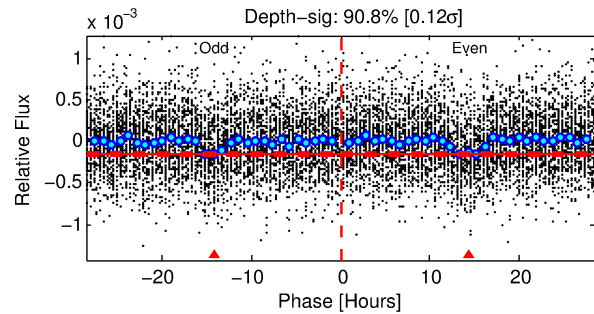
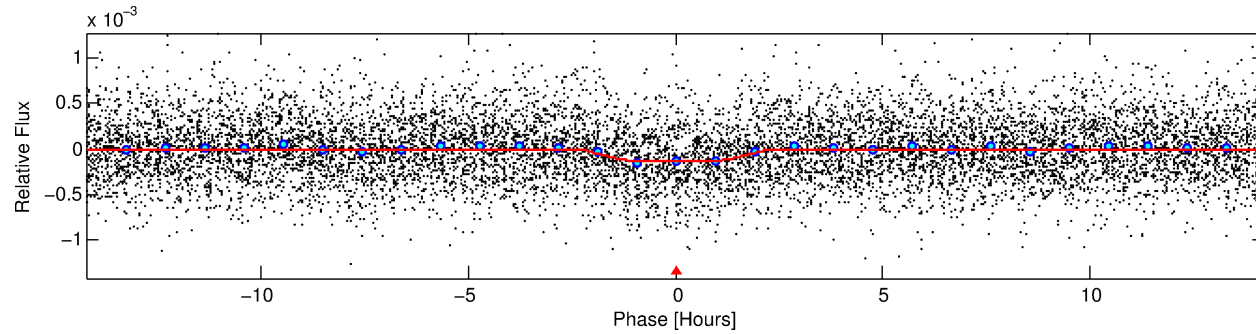
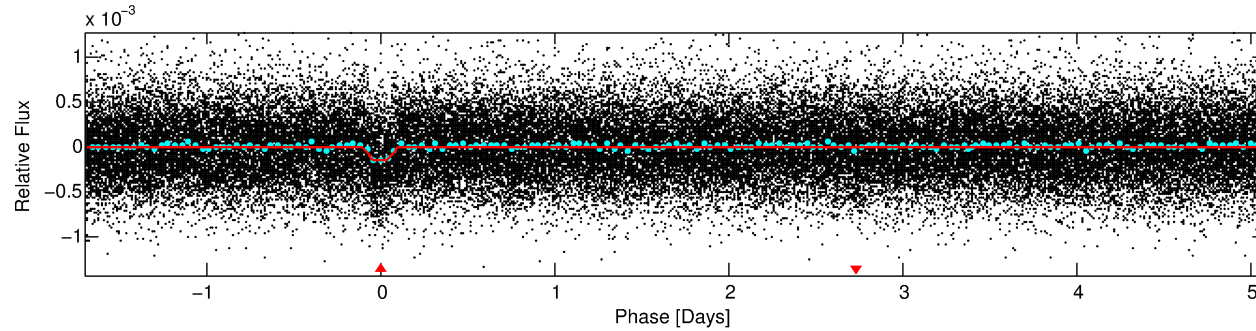
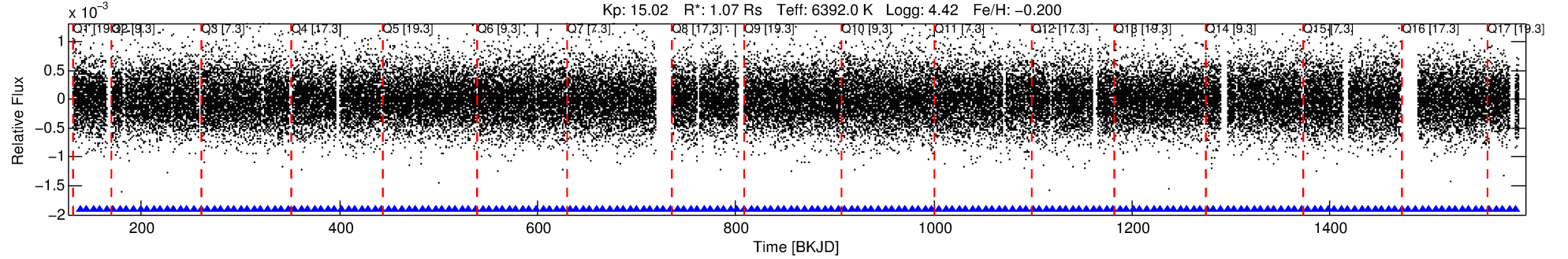
Ephemeris Match Information For 008636539-01

No Significant Match Found

DV One-Page Summary

KIC: 8636539 Candidate: 1 of 1 Period: 6.774 d

KOI: K02656.01 Corr: 0.872



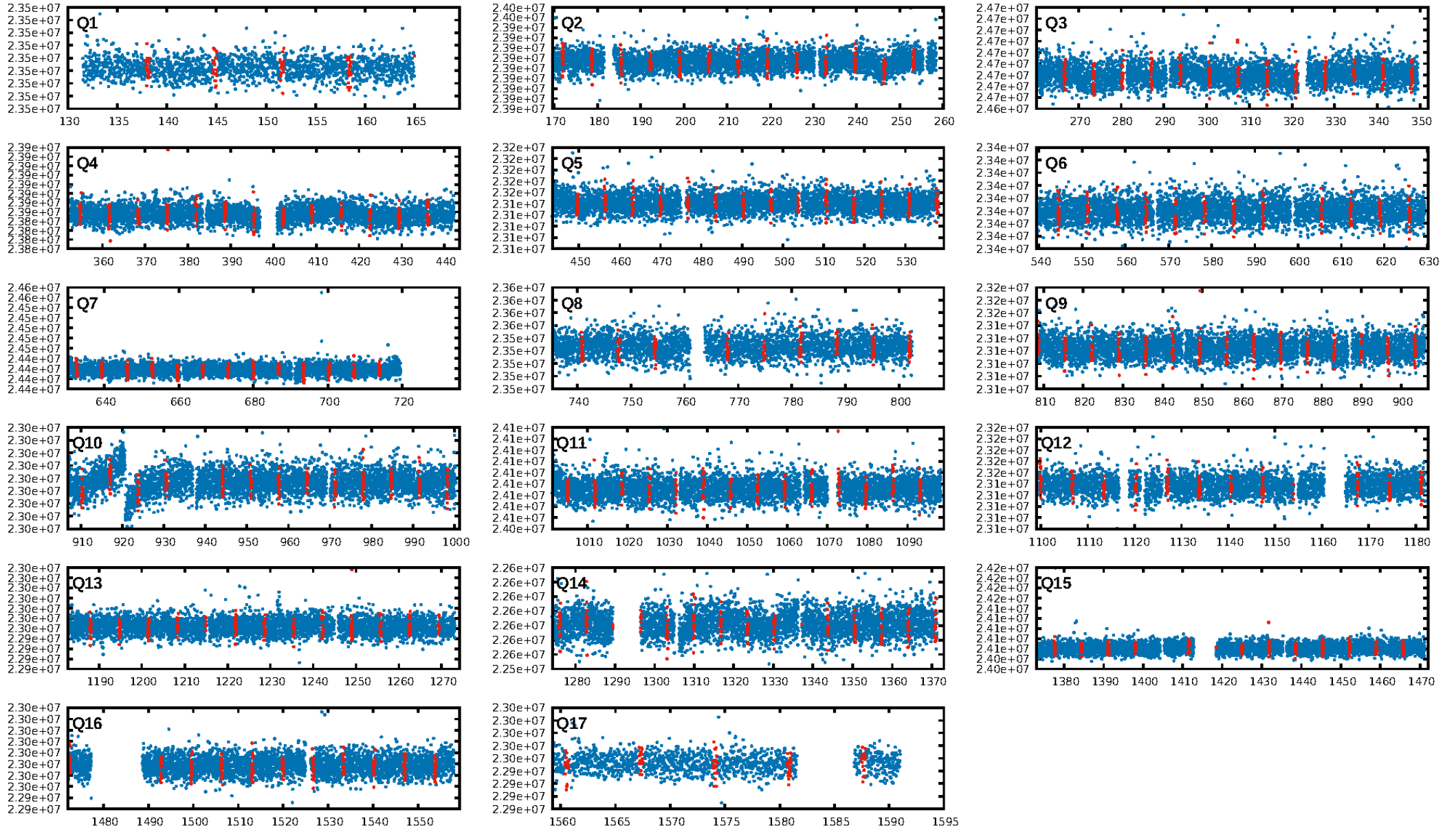
DV Fit Results:

Period = 6.77370 [0.00007] d
Epoch = 138.0729 [0.0080] BKJD
Rp/R* = 0.0147 [0.0010]
a/R* = 3.01 [0.54]
b = 0.98 [0.01]
Seff = 325.44 [126.75]
Teff = 1083 [105] K
Rp = 1.72 [0.55] Re
a = 0.0727 [0.0186] AU
Ag = 37.51 [18.52] [1.97 σ]
Teffp = 4144 [373] K [7.89 σ]

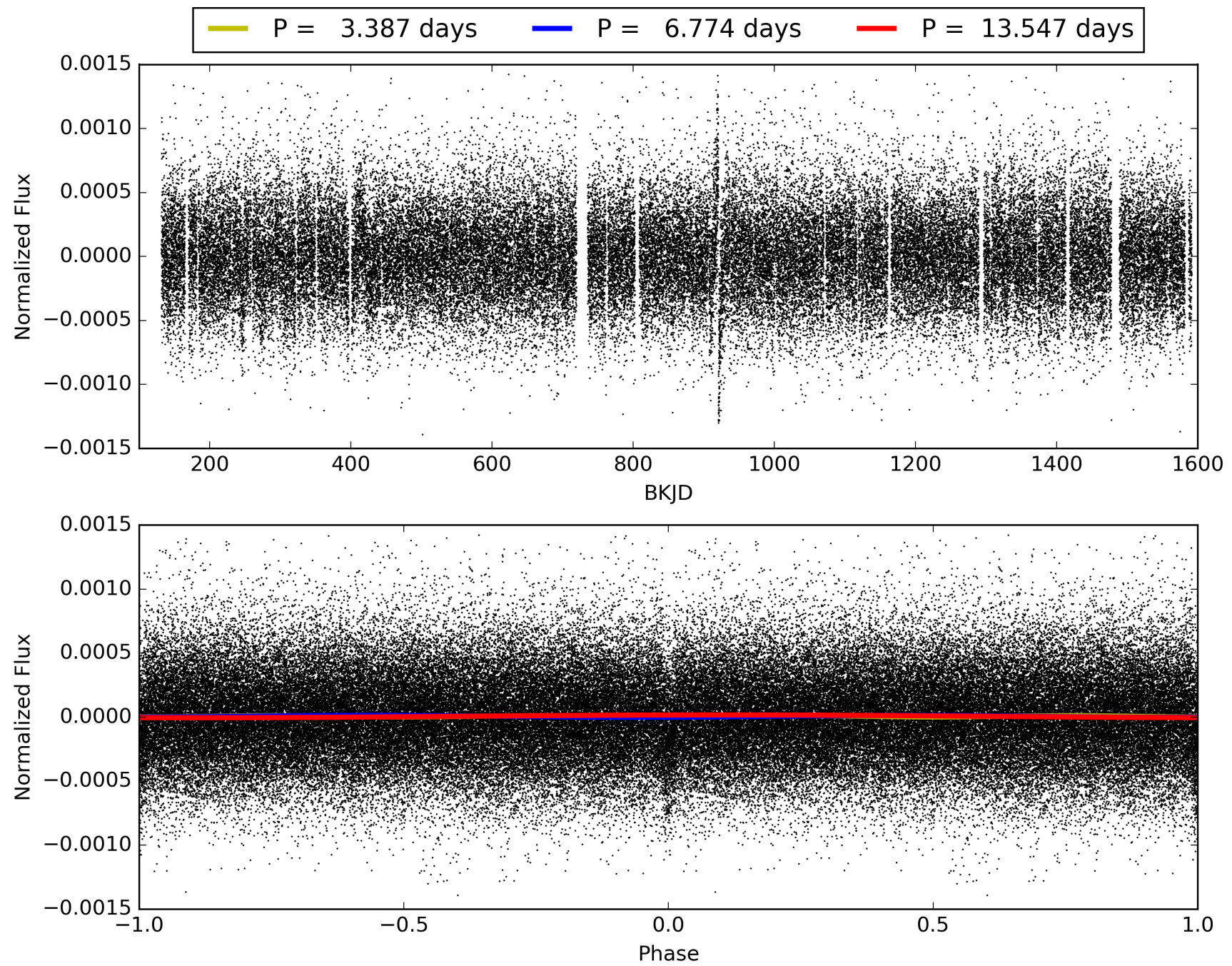
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.15e-41
RollingBand-fgt: 1.00 [187/187]
GhostDiagnostic-chr: 2.207
Centroid-sig: 23.6%
Centroid-so: 0.932 arcsec [0.99 σ]
OotOffset-rm: 0.346 arcsec [0.67 σ]
KicOffset-rm: 0.438 arcsec [0.87 σ]
OotOffset-st: 4/2/3/2 [11]
KicOffset-st: 4/2/3/2 [11]
DiffImageQuality-fgm: 0.73 [8/11]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008636539-01, PDC Light Curves

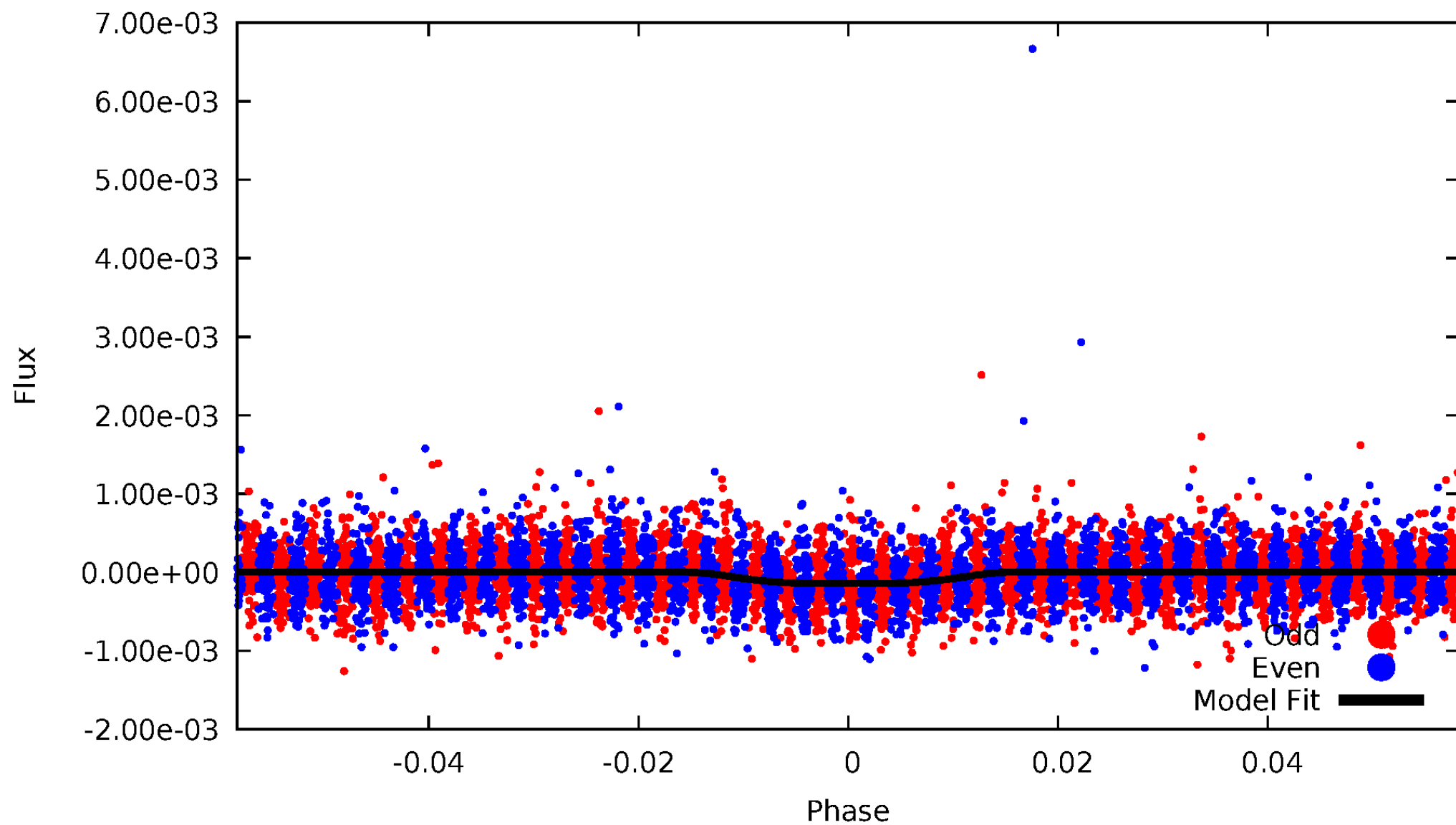


TCE 008636539-01



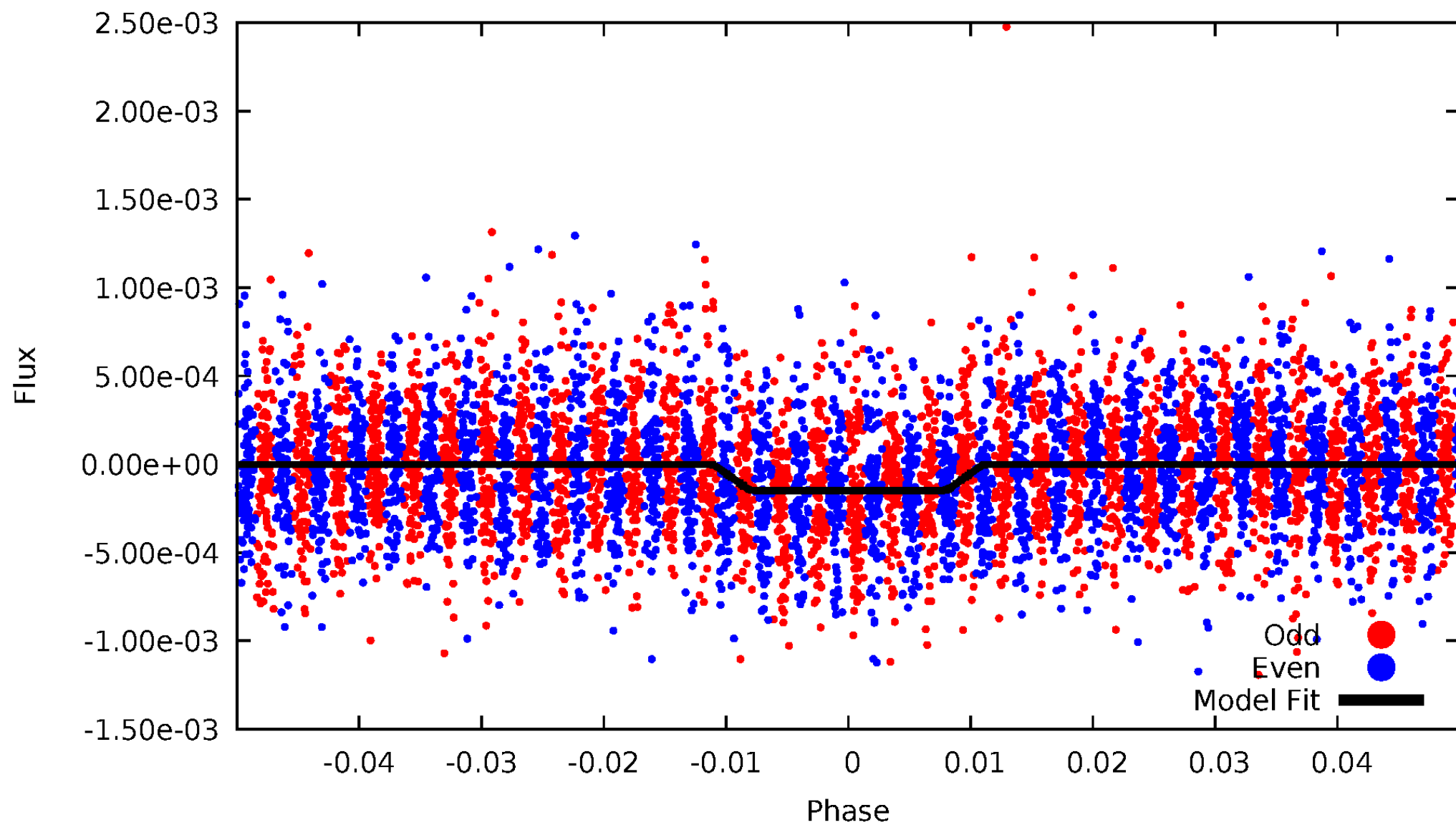
DV Odd/Even

TCE 008636539-01

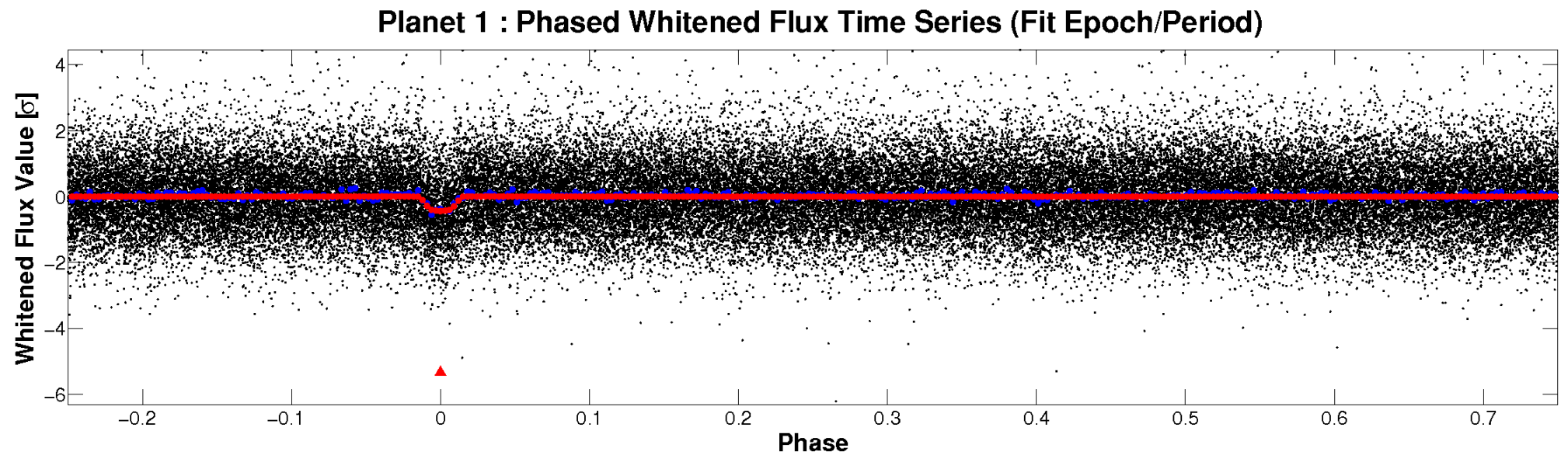
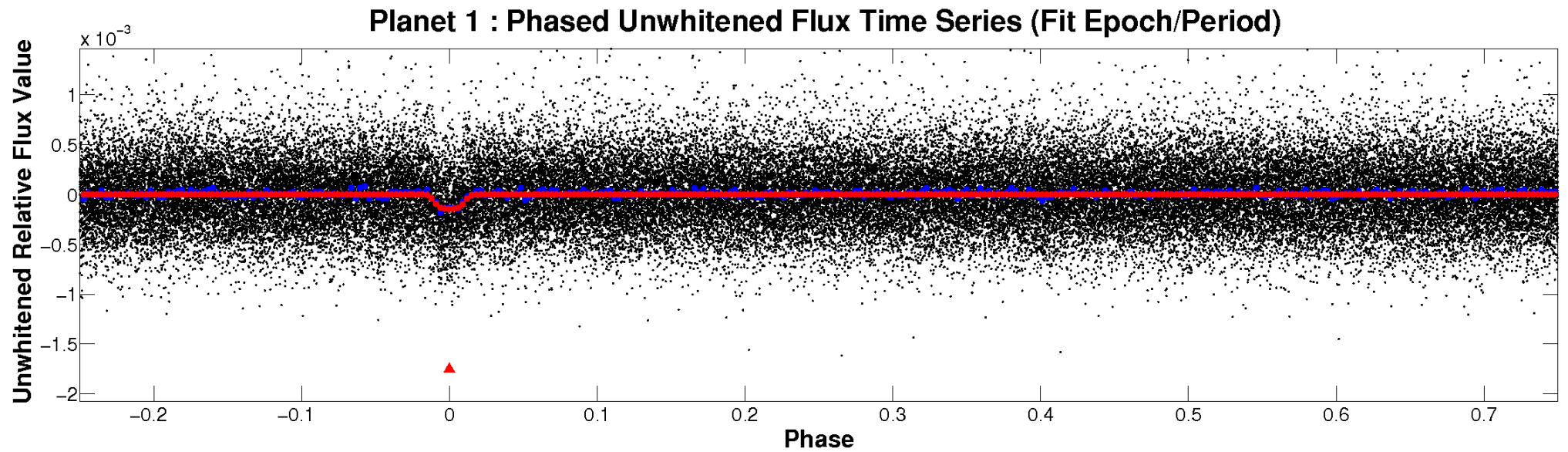


ALT Odd/Even

TCE 008636539-01

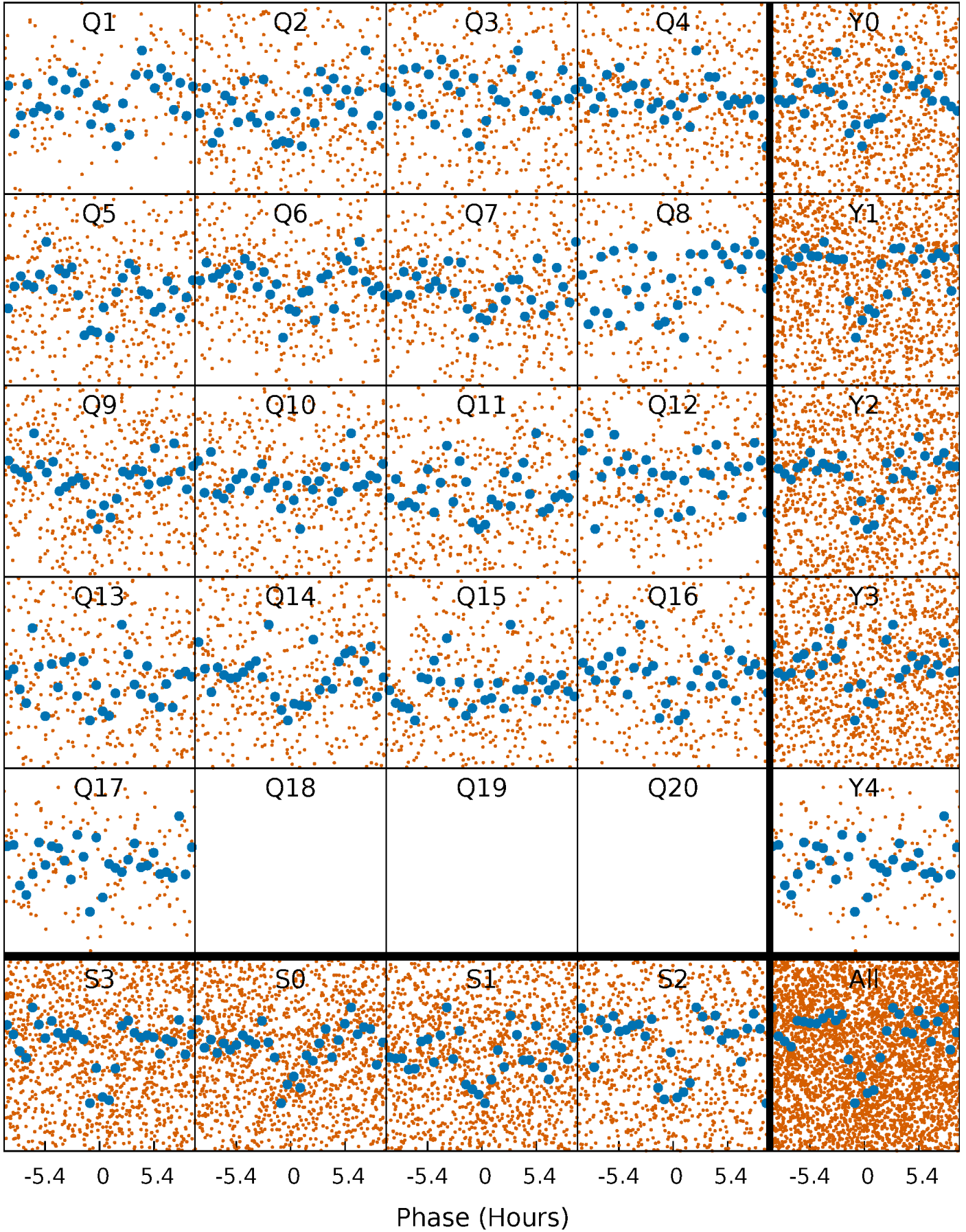


Non-Whitened Vs. Whitened Light Curve



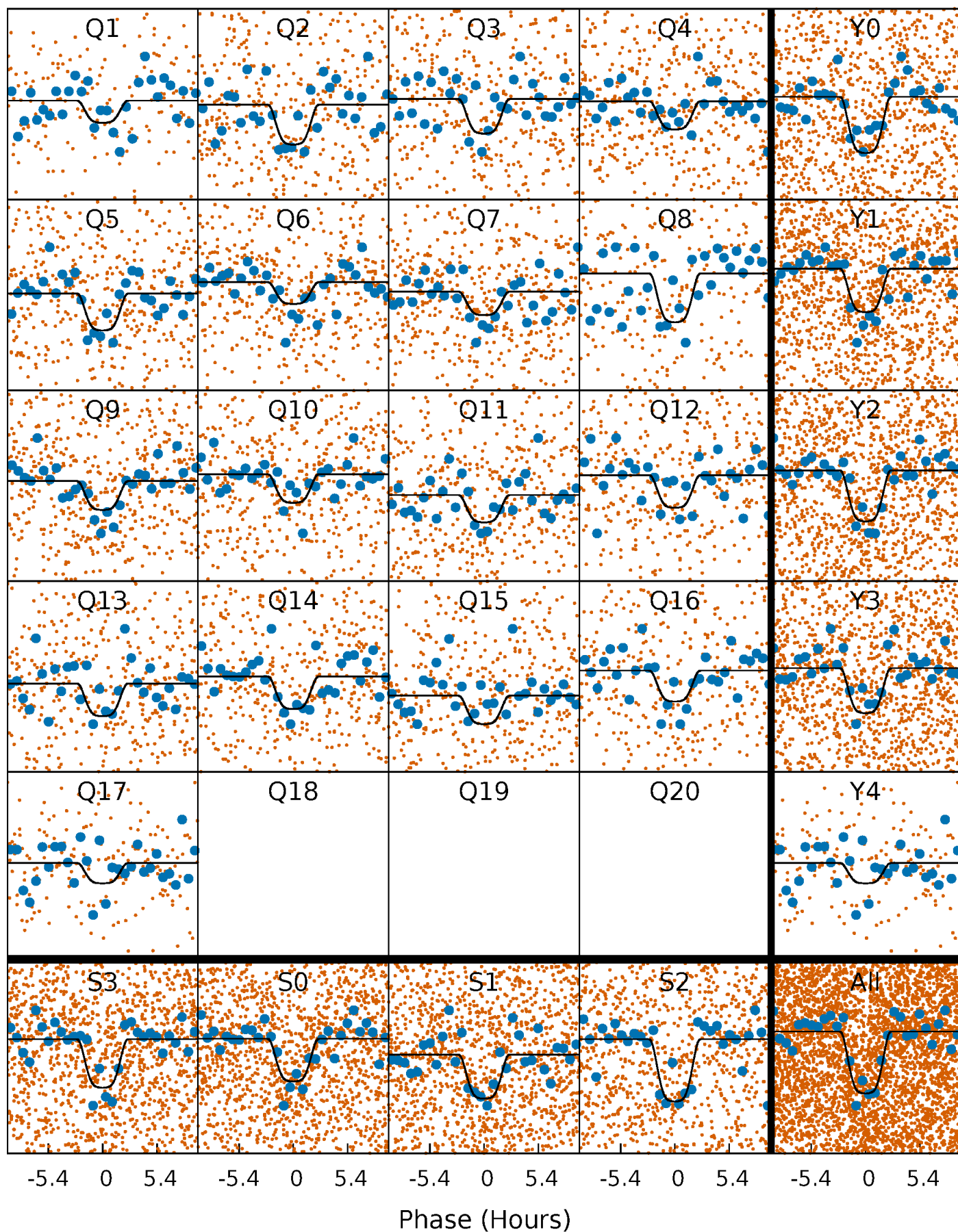
PDC Quarter-Phased Transit Curves

TCE 008636539-01 P= 6.773703 Days $T_0=138.072873$ (BKJD)



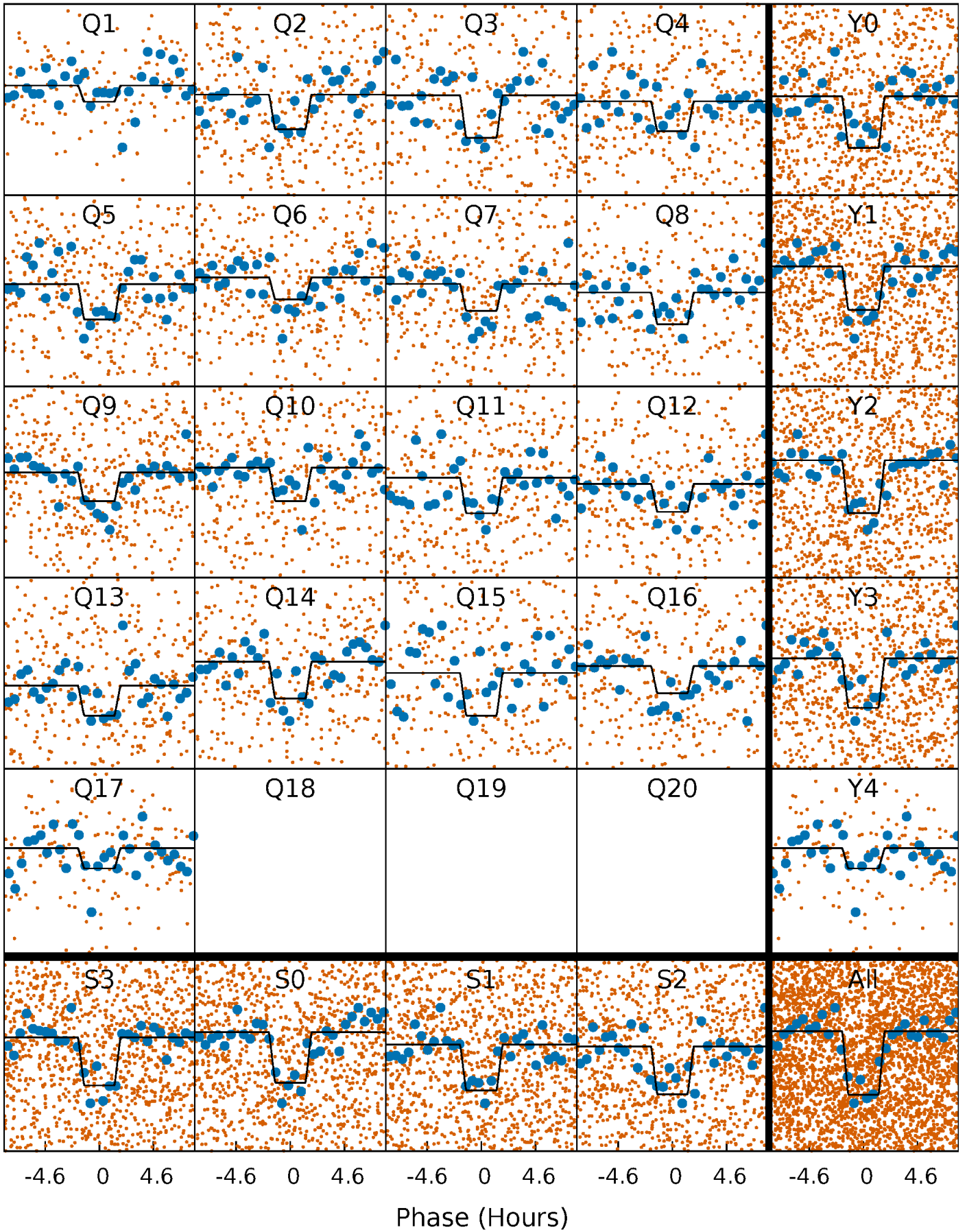
DV Quarter-Phased Transit Curves

TCE 008636539-01 P= 6.773703 Days $T_0=138.072873$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

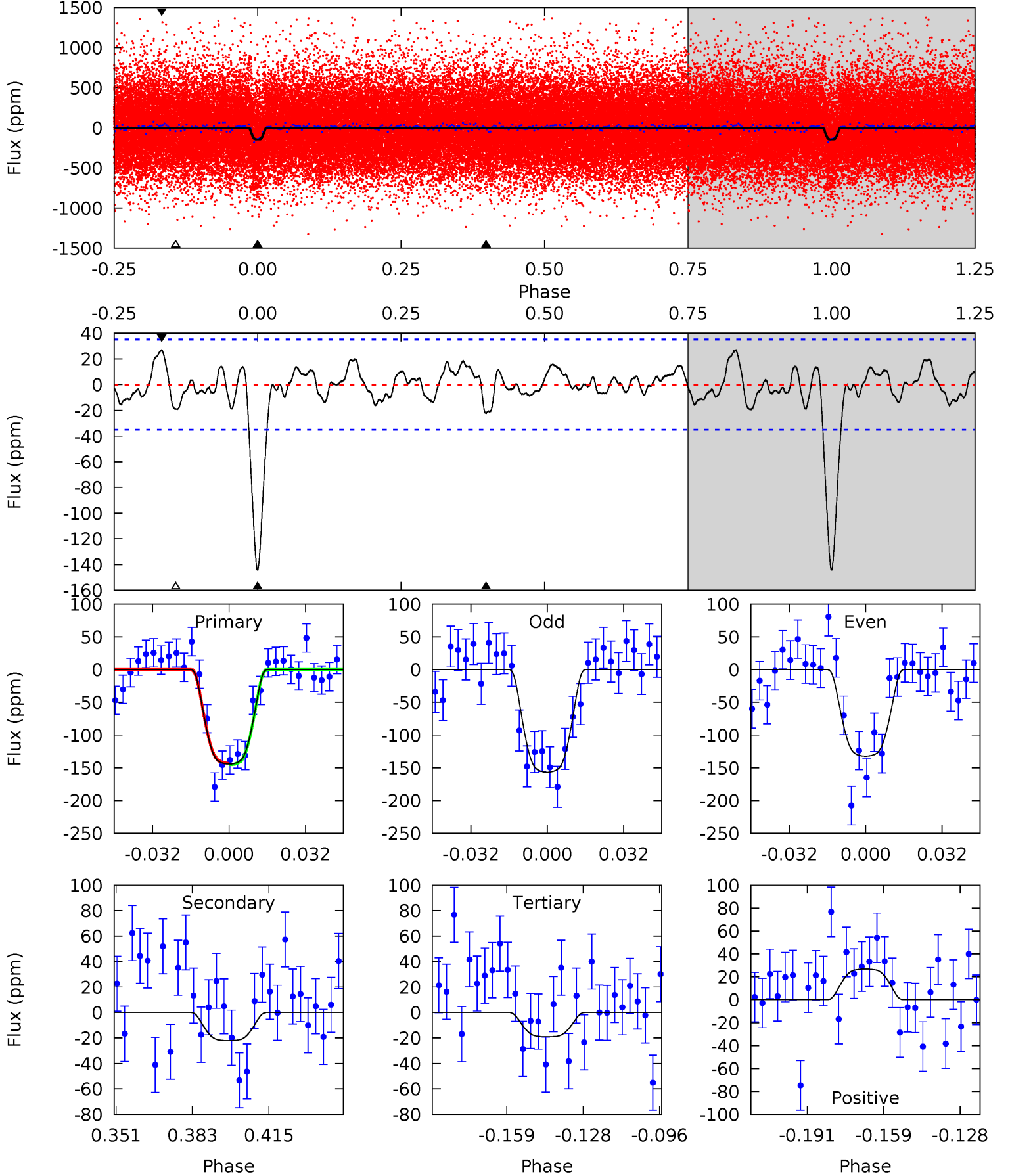
TCE 008636539-01 P= 6.773709 Days $T_0=138.070222$ (BKJD)



DV Model-Shift Uniqueness Test

008636539-01, P = 6.773703 Days, E = 131.299170 Days

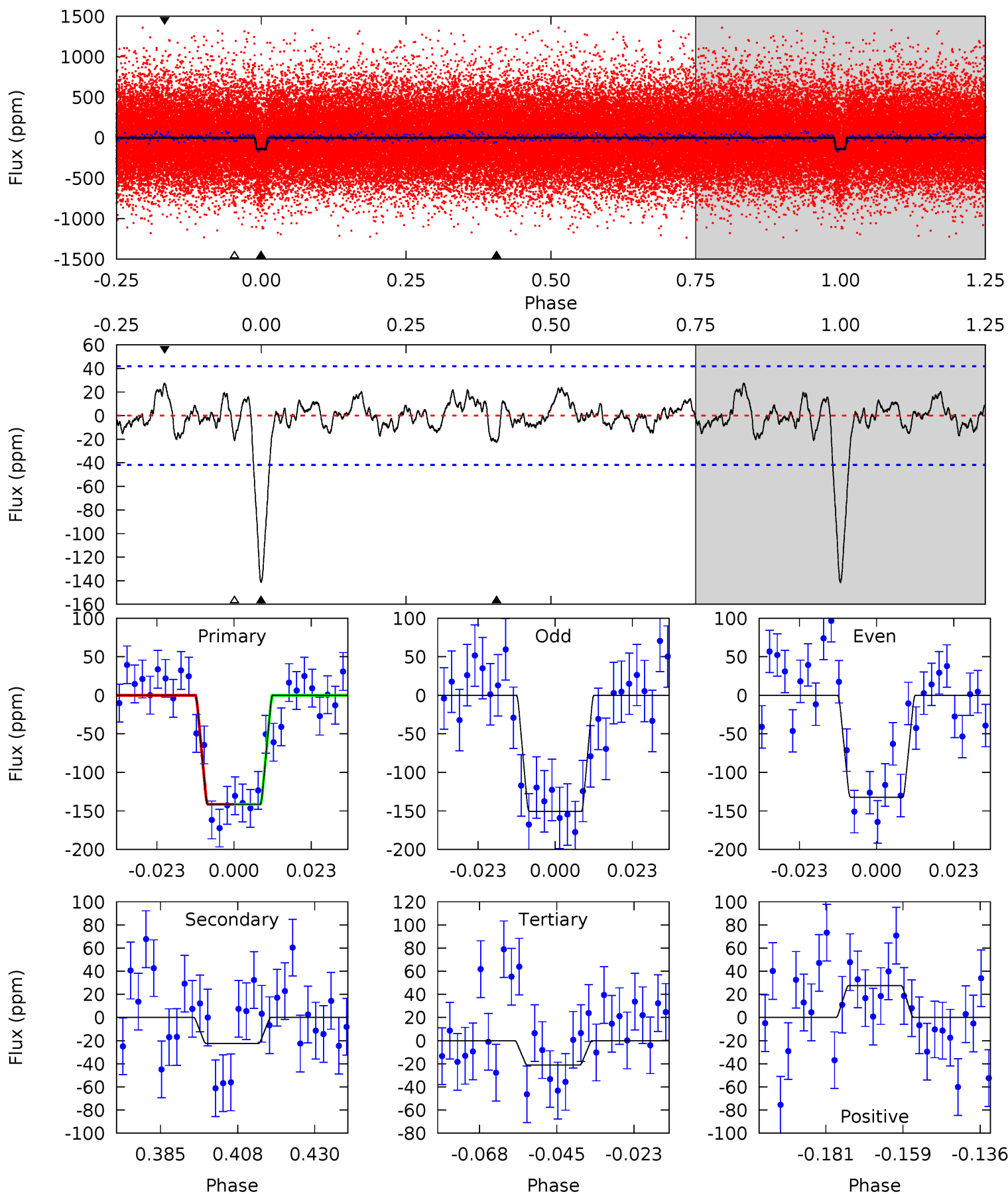
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.7	3.03	2.62	3.66	4.80	2.15	1.27	17.1	16.1	0.41	-0.64	1.68	0.98	0.16	0.16



Alt Model-Shift Uniqueness Test

008636539-01, P = 6.773709 Days, E = 131.296513 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	2.61	2.47	3.21	4.87	2.28	1.07	14.0	13.2	0.15	-0.60	1.07	0.99	0.16	0.01



Stellar Parameters For KIC 008636539

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6392^{+154}_{-220}	$4.425^{+0.065}_{-0.195}$	$-0.200^{+0.250}_{-0.300}$	$1.072^{+0.334}_{-0.134}$	$1.116^{+0.154}_{-0.154}$	$1.274^{+0.352}_{-0.657}$
	+2%/-3%	+1%/-4%	+125%/-150%	+31%/-12%	+14%/-14%	+28%/-52%
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 008636539-01 / KOI 2656.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-22 ± 7	$1.77^{+0.27}_{-0.20}$	1541^{+104}_{-77}	3914^{+258}_{-278}	19^{+9}_{-8}
Alt.	-22 ± 9	$1.48^{+0.26}_{-0.19}$	1536^{+103}_{-80}	4209^{+329}_{-352}	29^{+15}_{-12}

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 $A_{obs} \gg 1.0$

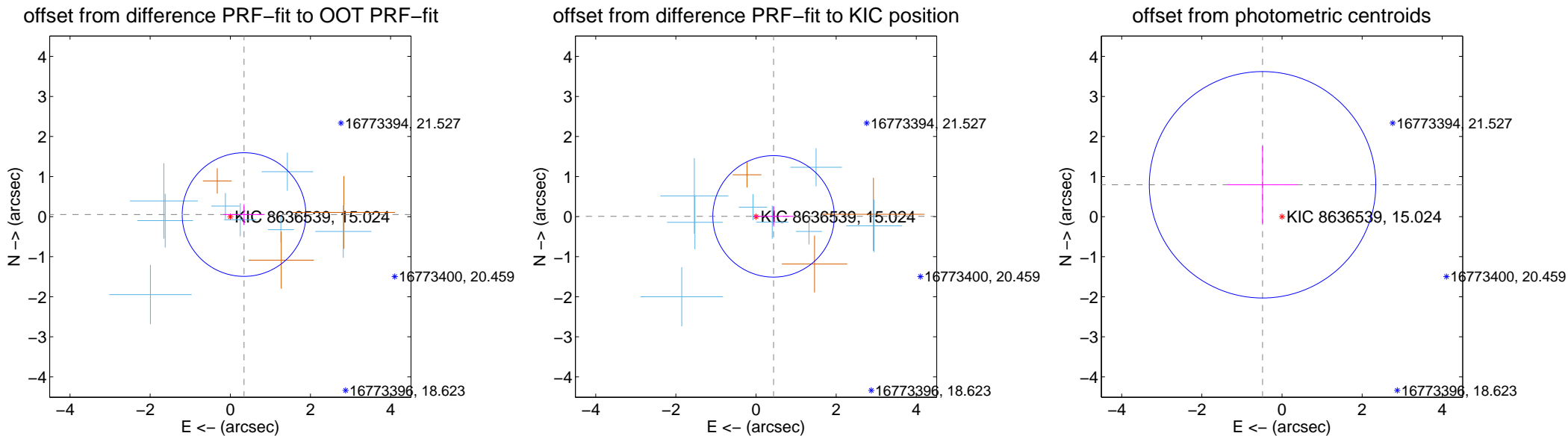
DV Centroid Data

Supplemental centroid analysis for 008636539-01. Kepler magnitude: 15.02. Transit SNR 13.92

There are 8 quarters with good PRF difference image offsets

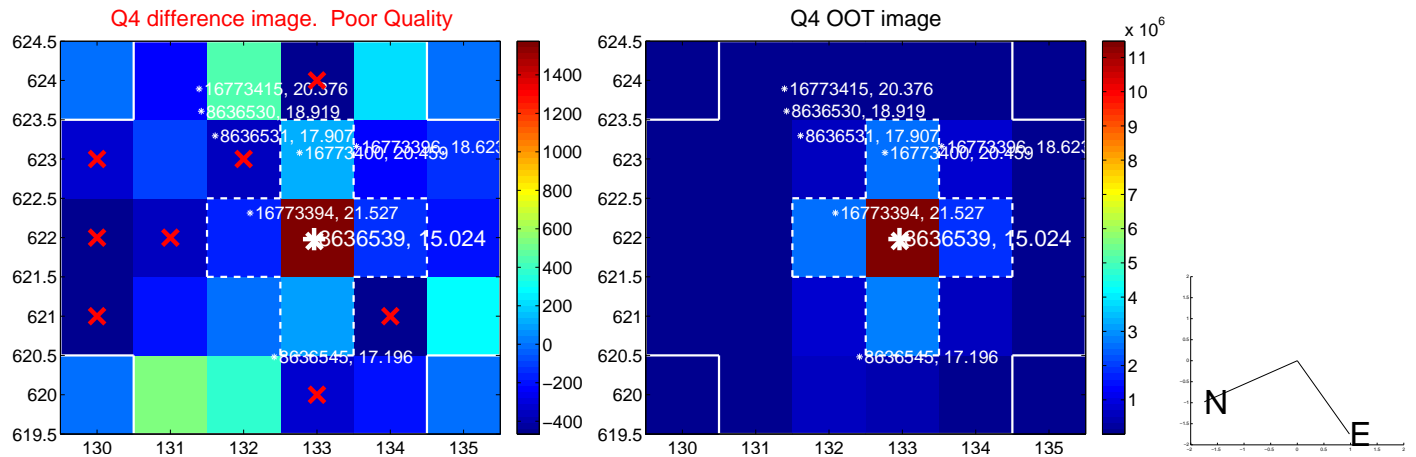
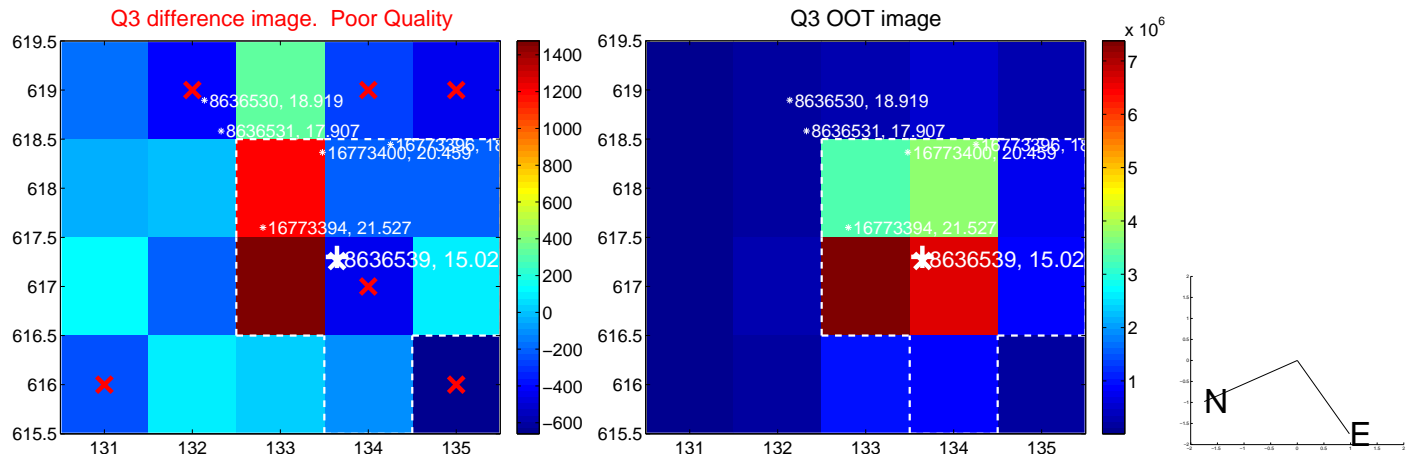
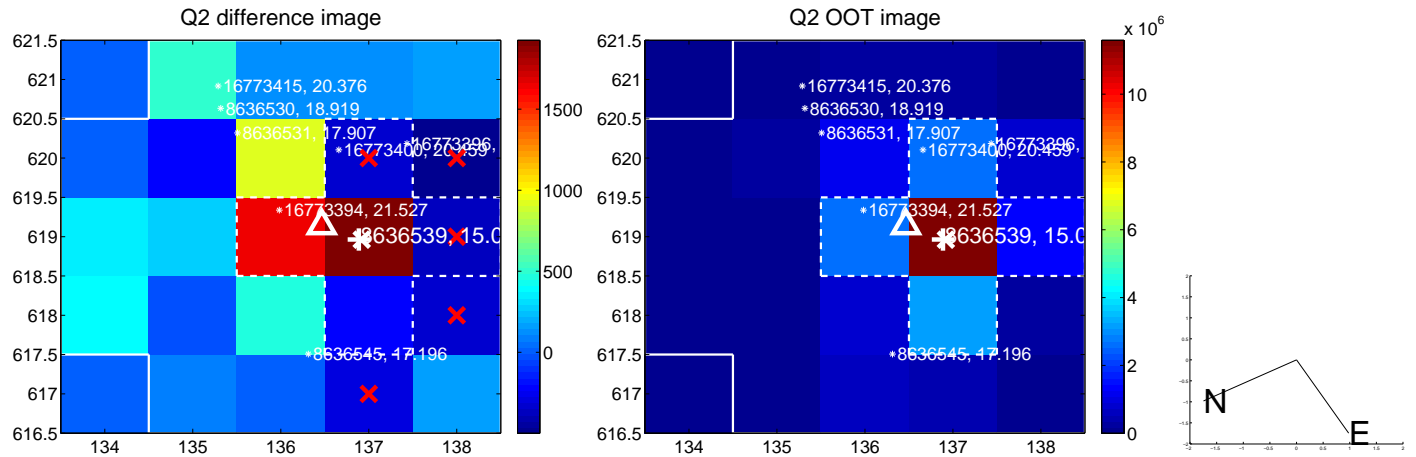
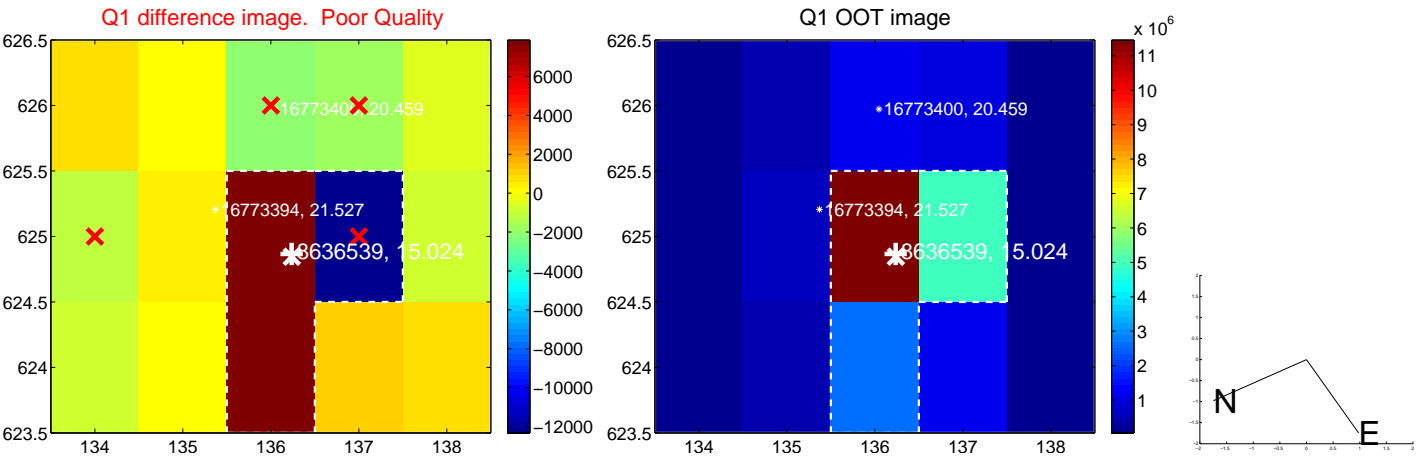
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.346 ± 0.514	0.67	-0.342 ± 0.514	0.052 ± 0.259
PRF-fit source offset from KIC position	0.438 ± 0.505	0.87	-0.438 ± 0.505	0.006 ± 0.254
photometric centroid source offset	0.93 ± 0.94	0.99	0.49 ± 0.88	0.80 ± 0.96

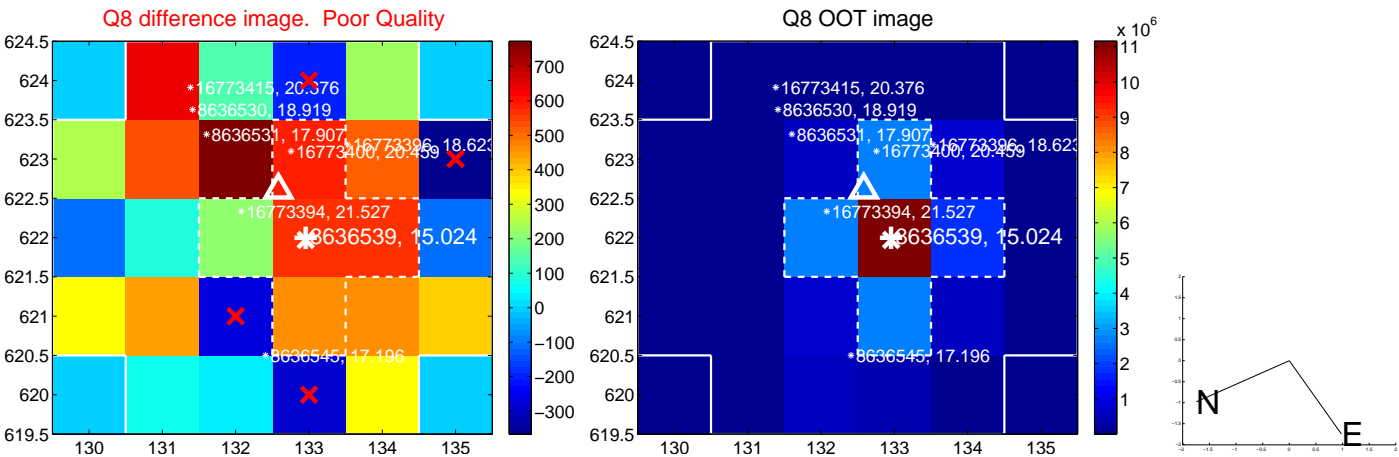
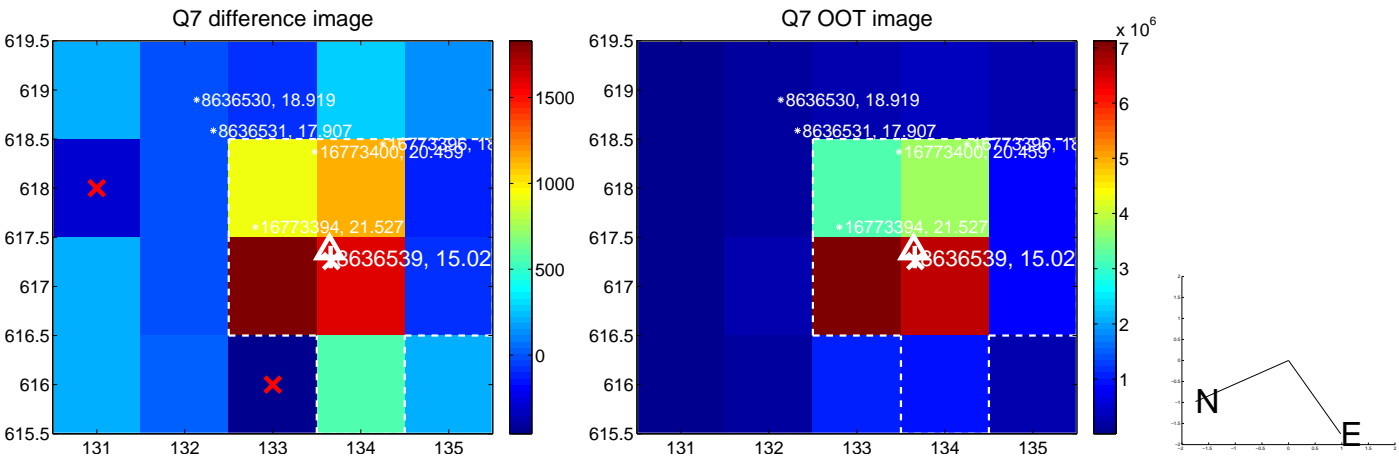
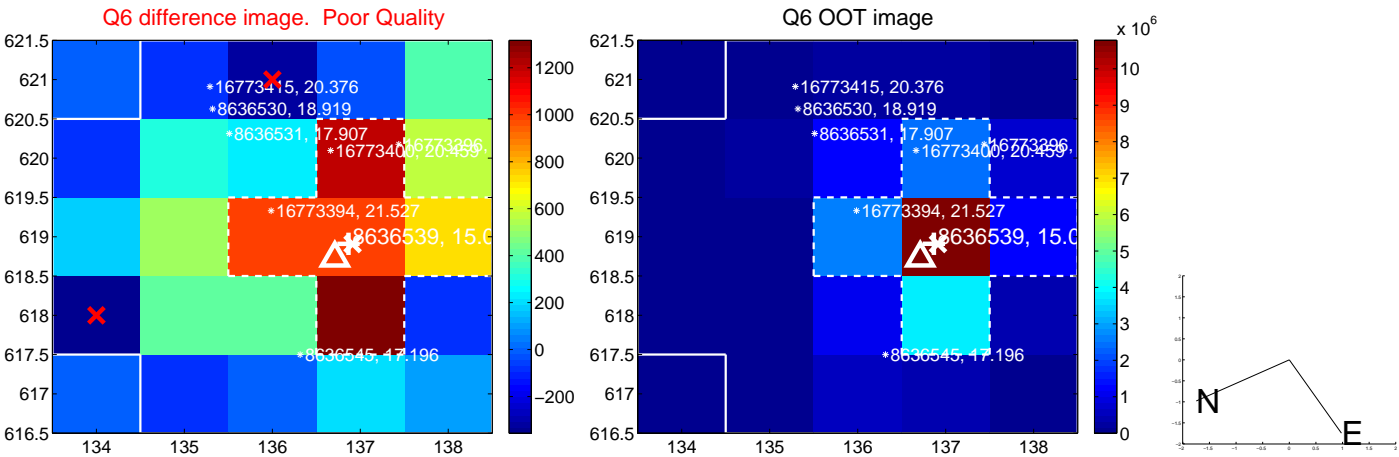
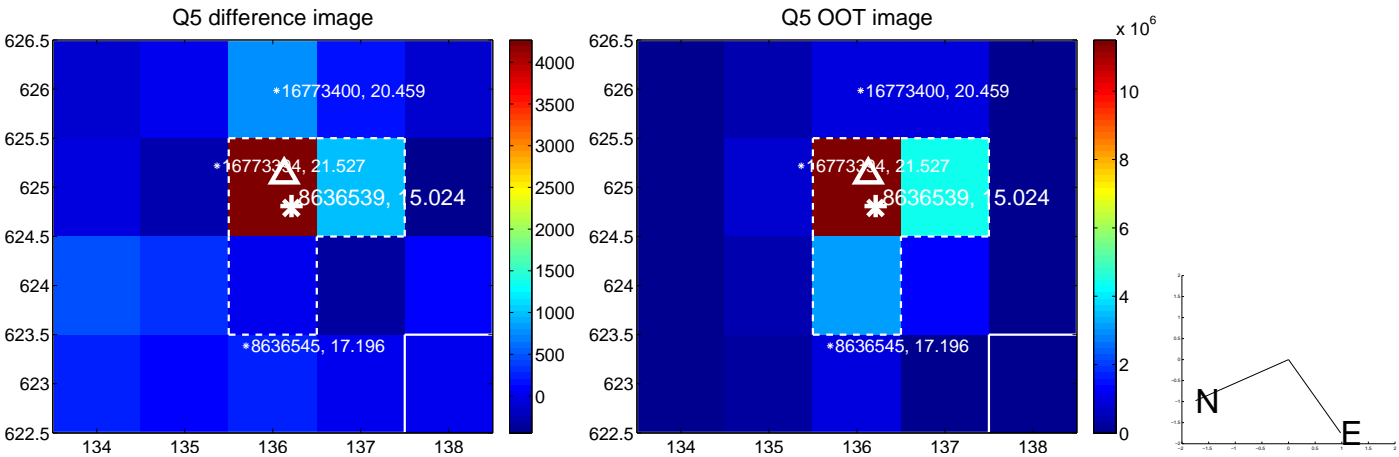


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

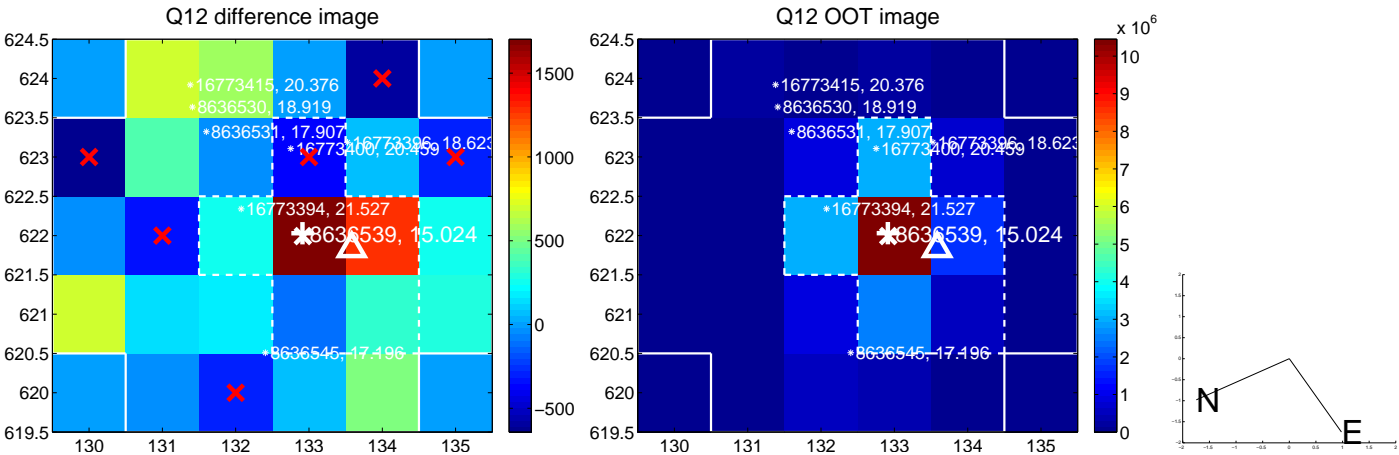
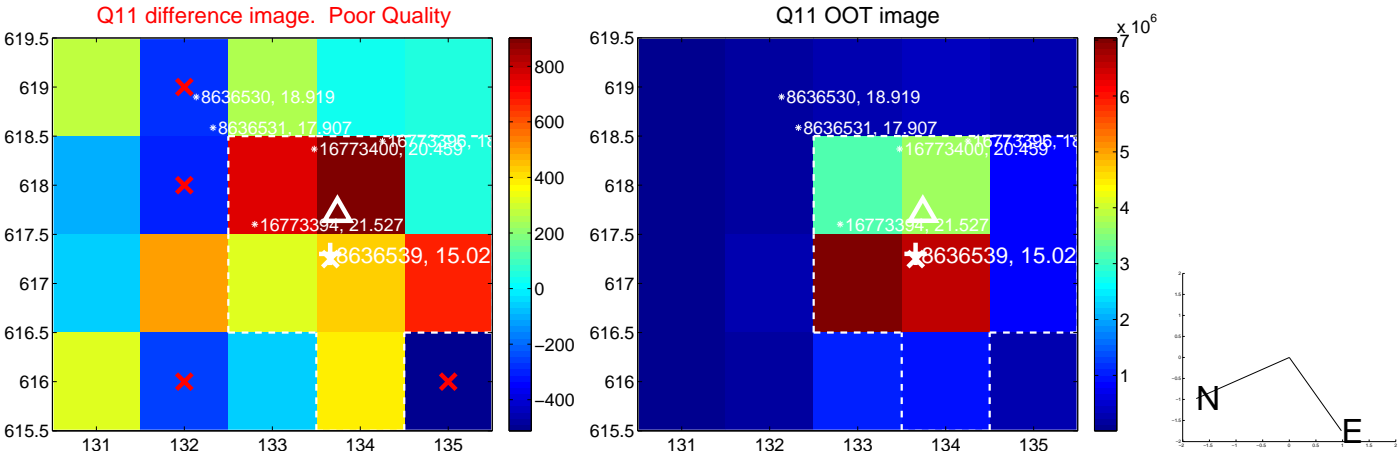
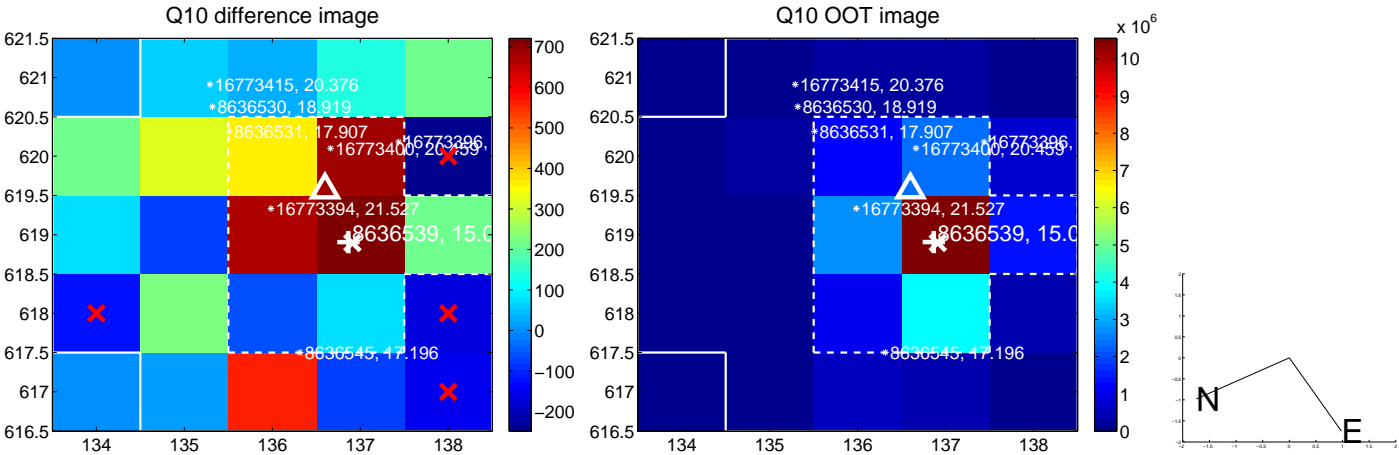
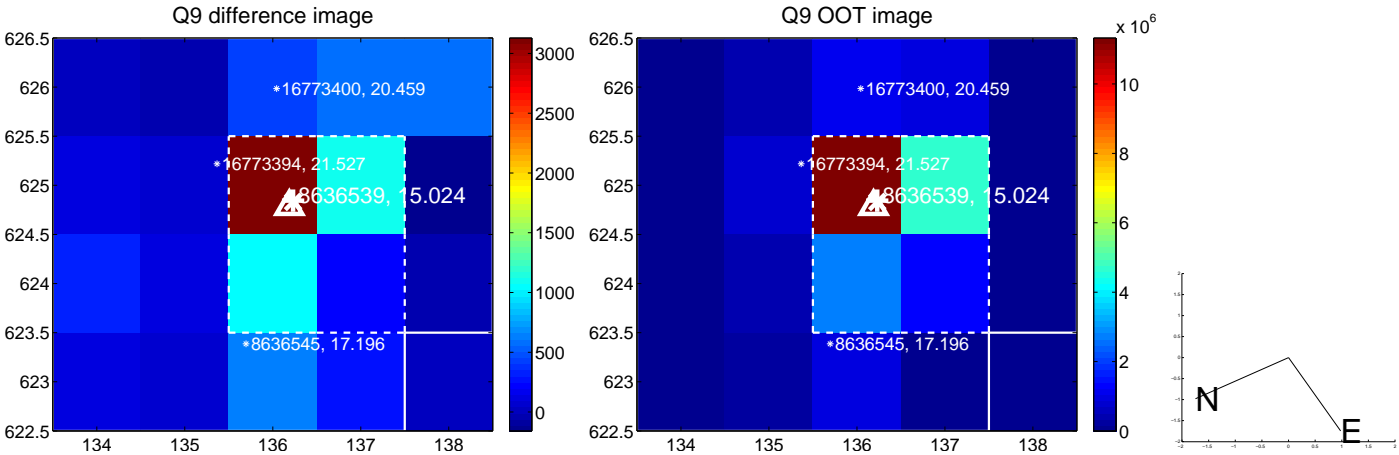
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



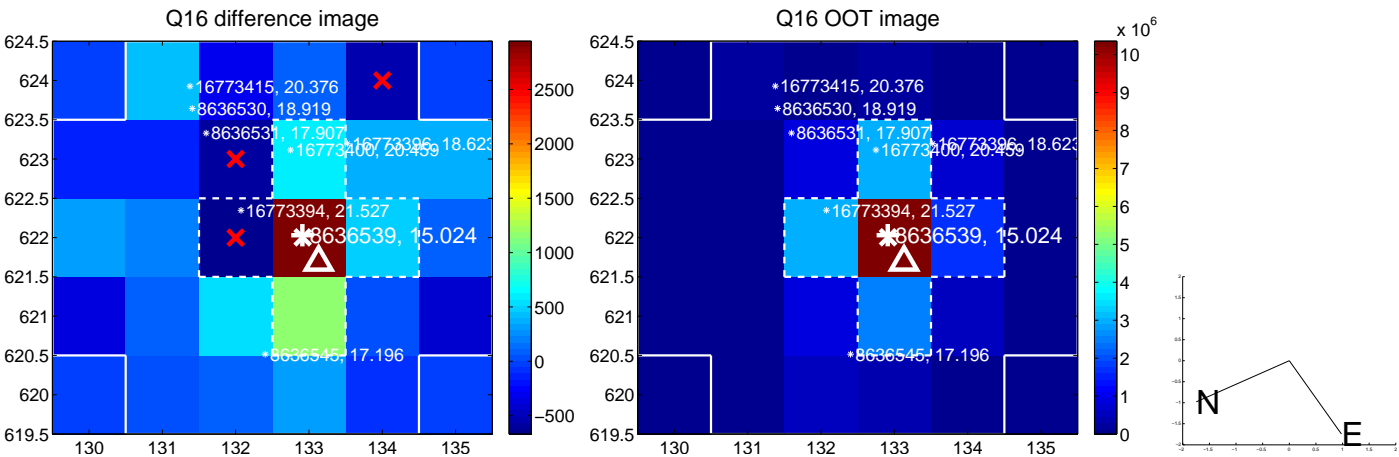
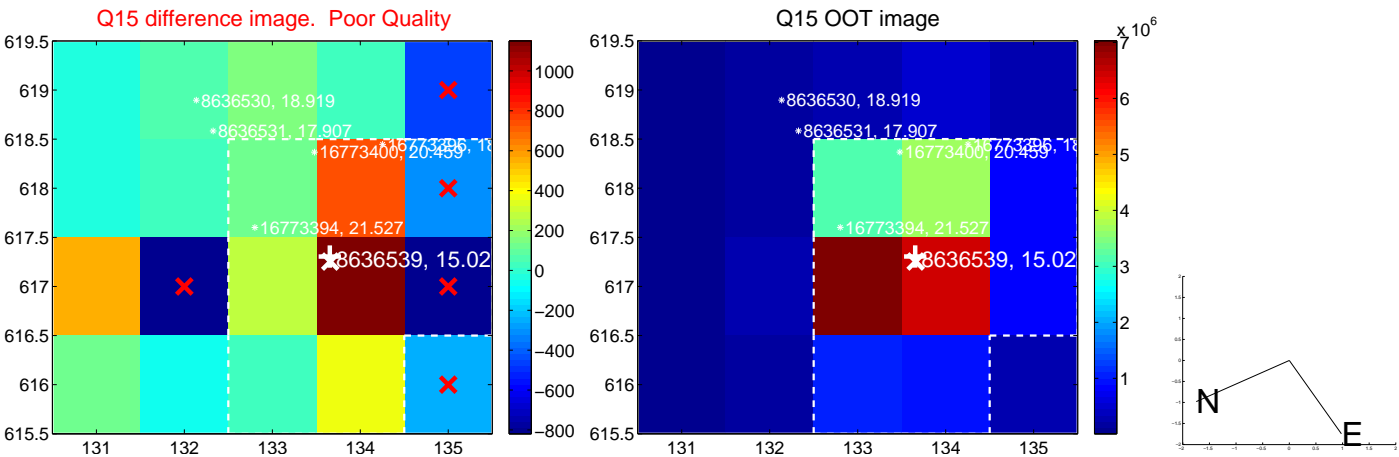
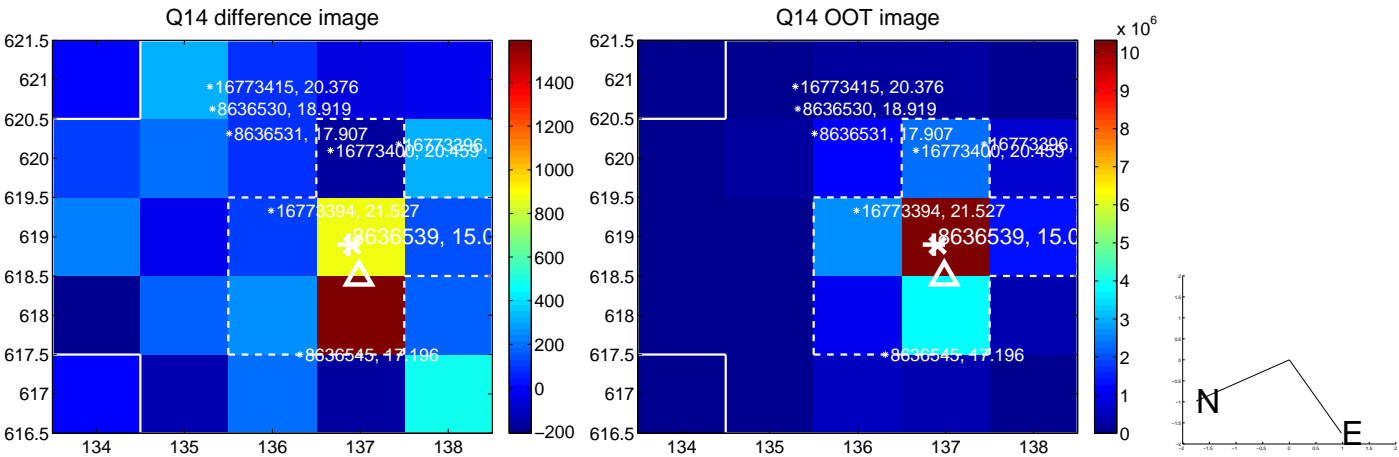
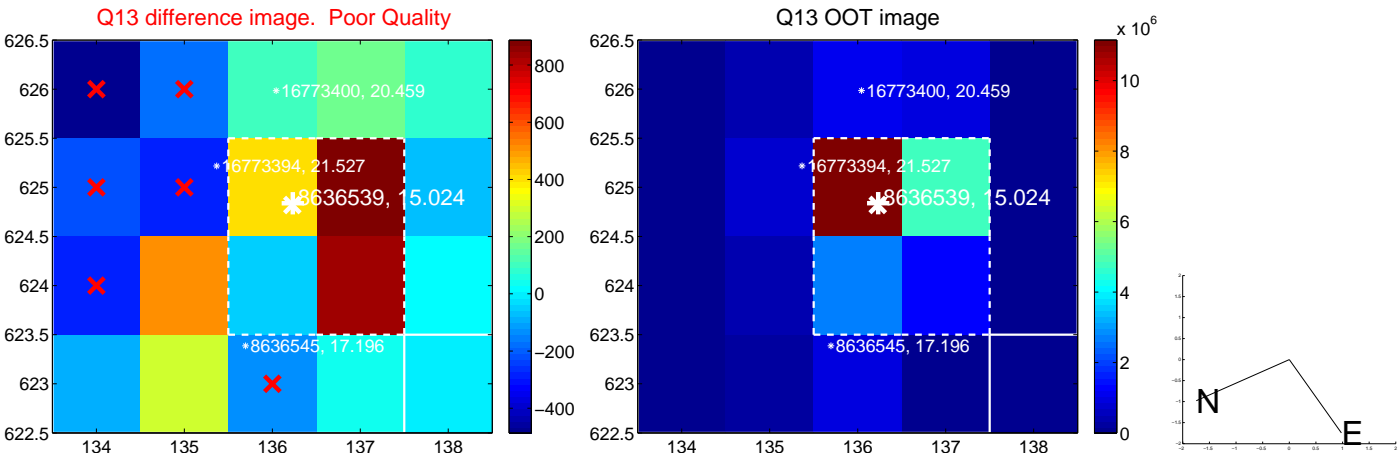
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



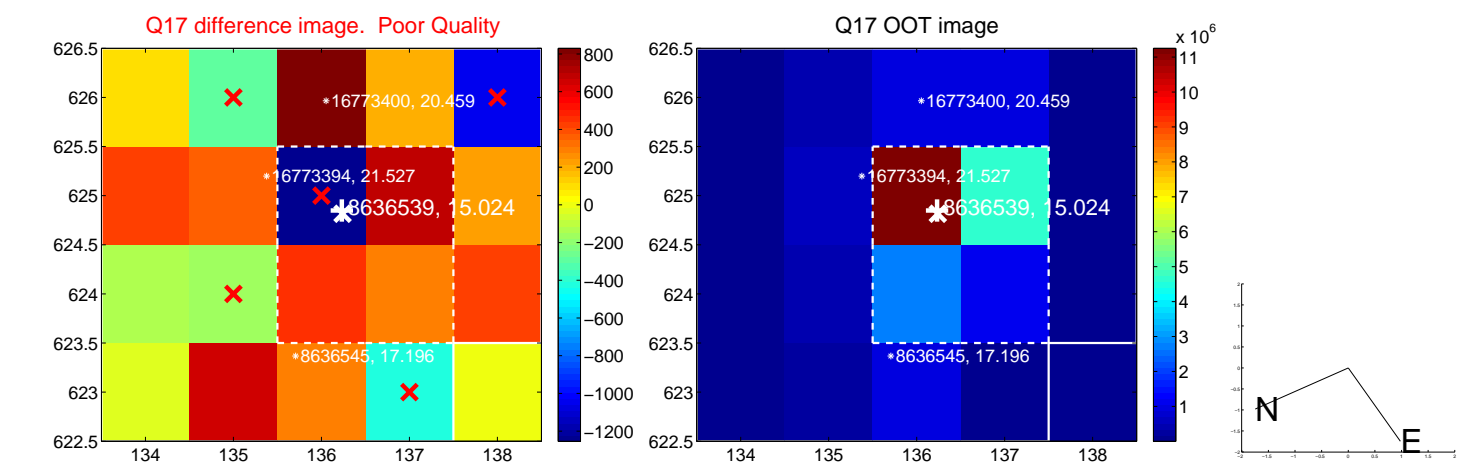
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



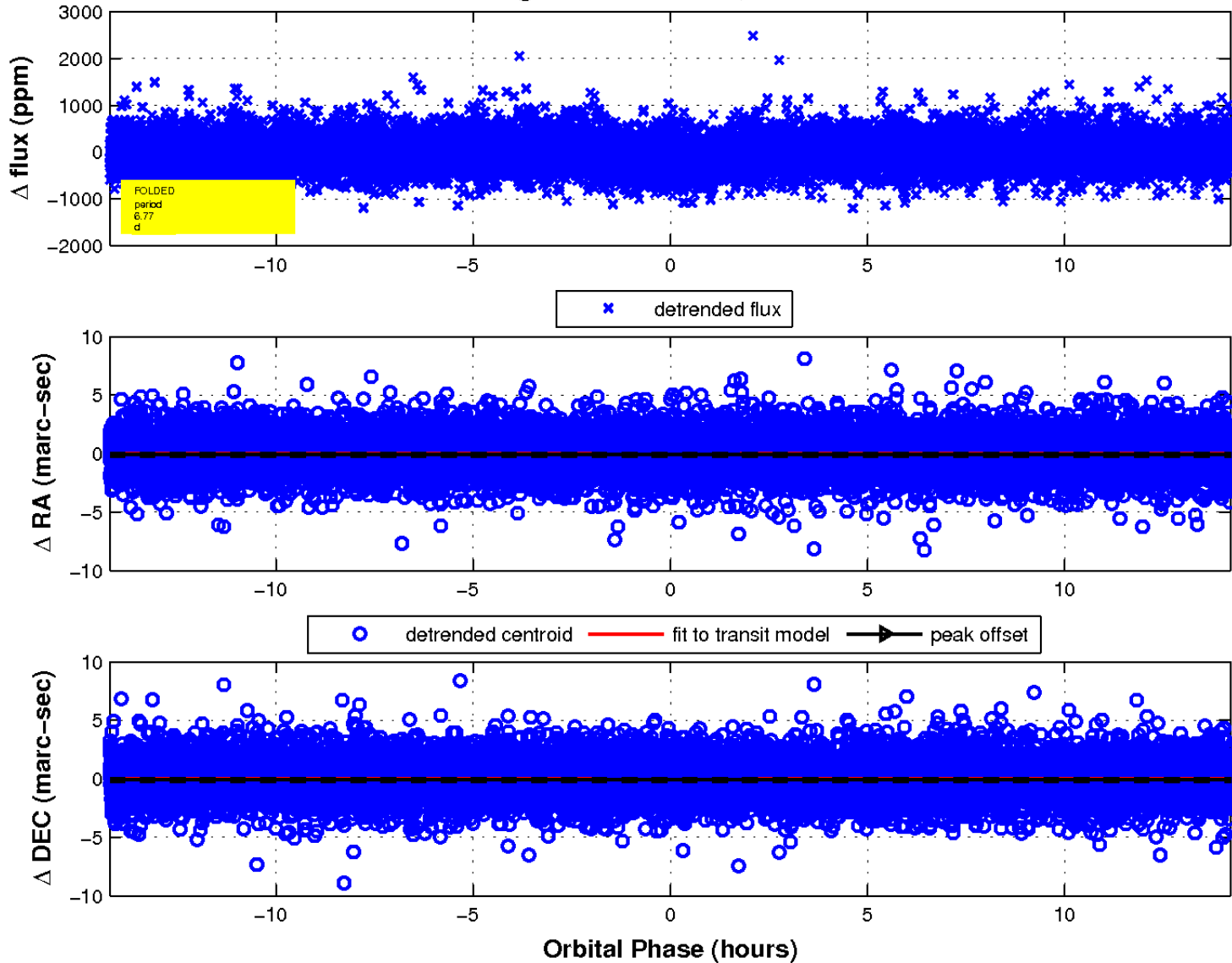
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

