

KIC 002556650

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})
002556650-01	OBS	2156.01	2.852353	132.044660	1348.2	0.774	23.9	34.1	0.43	3731	1.73	35.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002556650-01	OBS	PC	1.00	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.

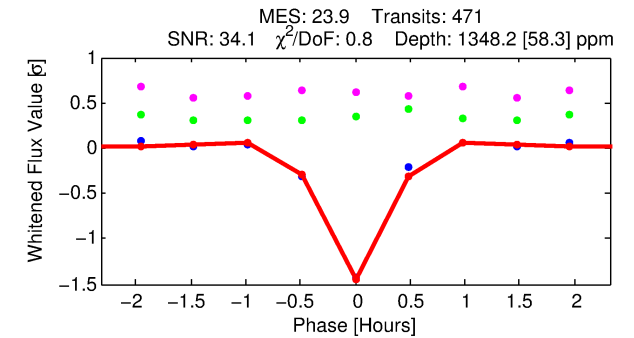
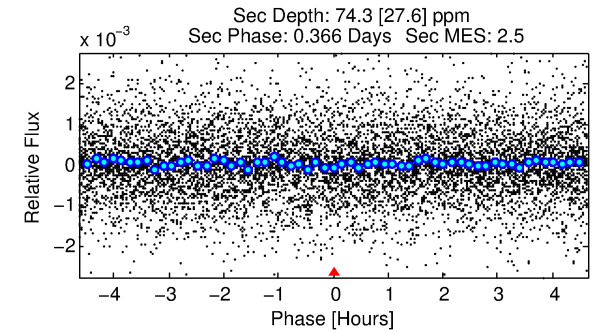
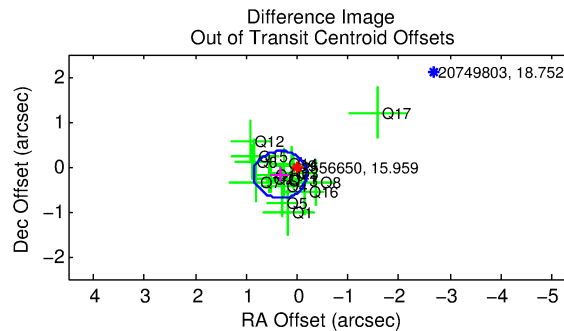
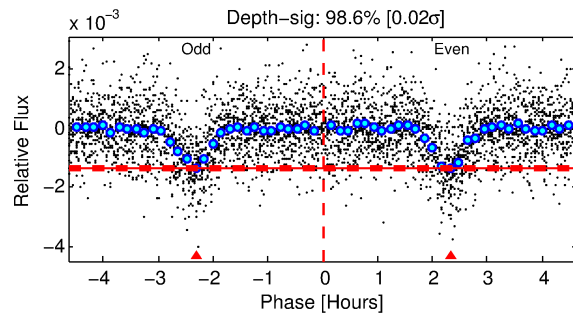
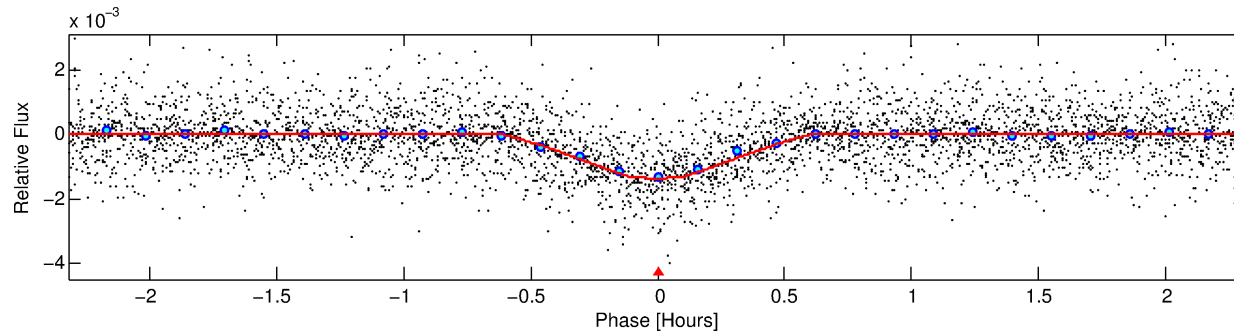
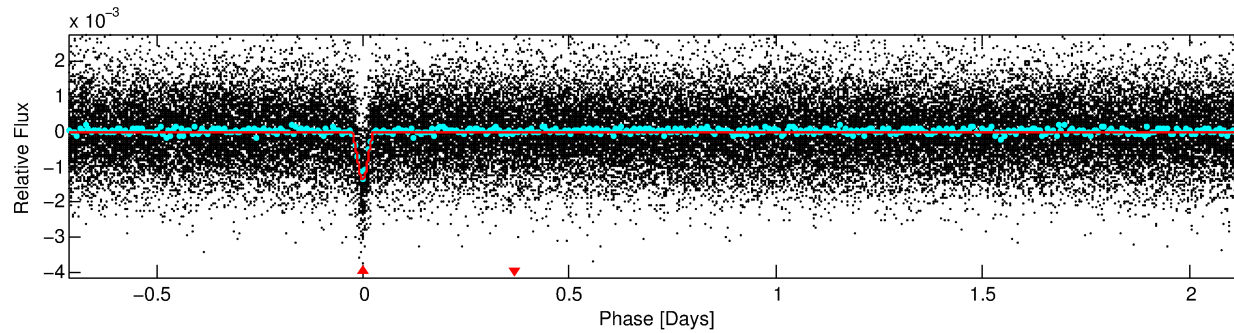
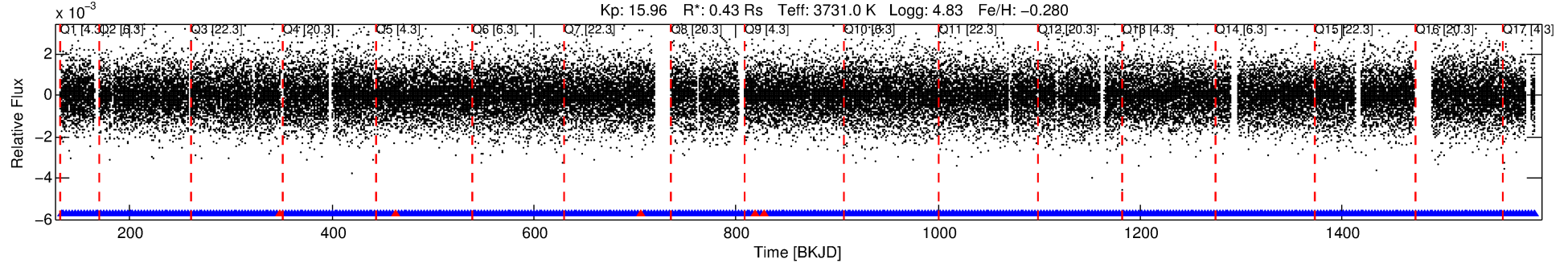
Ephemeris Match Information For 002556650-01

No Significant Match Found

DV One-Page Summary

KIC: 2556650 Candidate: 1 of 1 Period: 2.852 d
KOI: K02156.01 Corr: 0.948

Kp: 15.96 R*: 0.43 Rs Teff: 3731.0 K Logg: 4.83 Fe/H: -0.280



DV Fit Results:

Period = 2.85235 [0.00000] d
Epoch = 132.0447 [0.0004] BKJD
Rp/R* = 0.0365 [0.0065]
a/R* = 21.46 [18.68]
b = 0.70 [0.63]
Seff = 35.12 [5.10]
Teq = 621 [23] K
Rp = 1.73 [0.37] Re
a = 0.0304 [0.0028] AU
Ag = 12.70 [6.72] [1.74σ]
Teffp = 1812 [237] K [5.00σ]

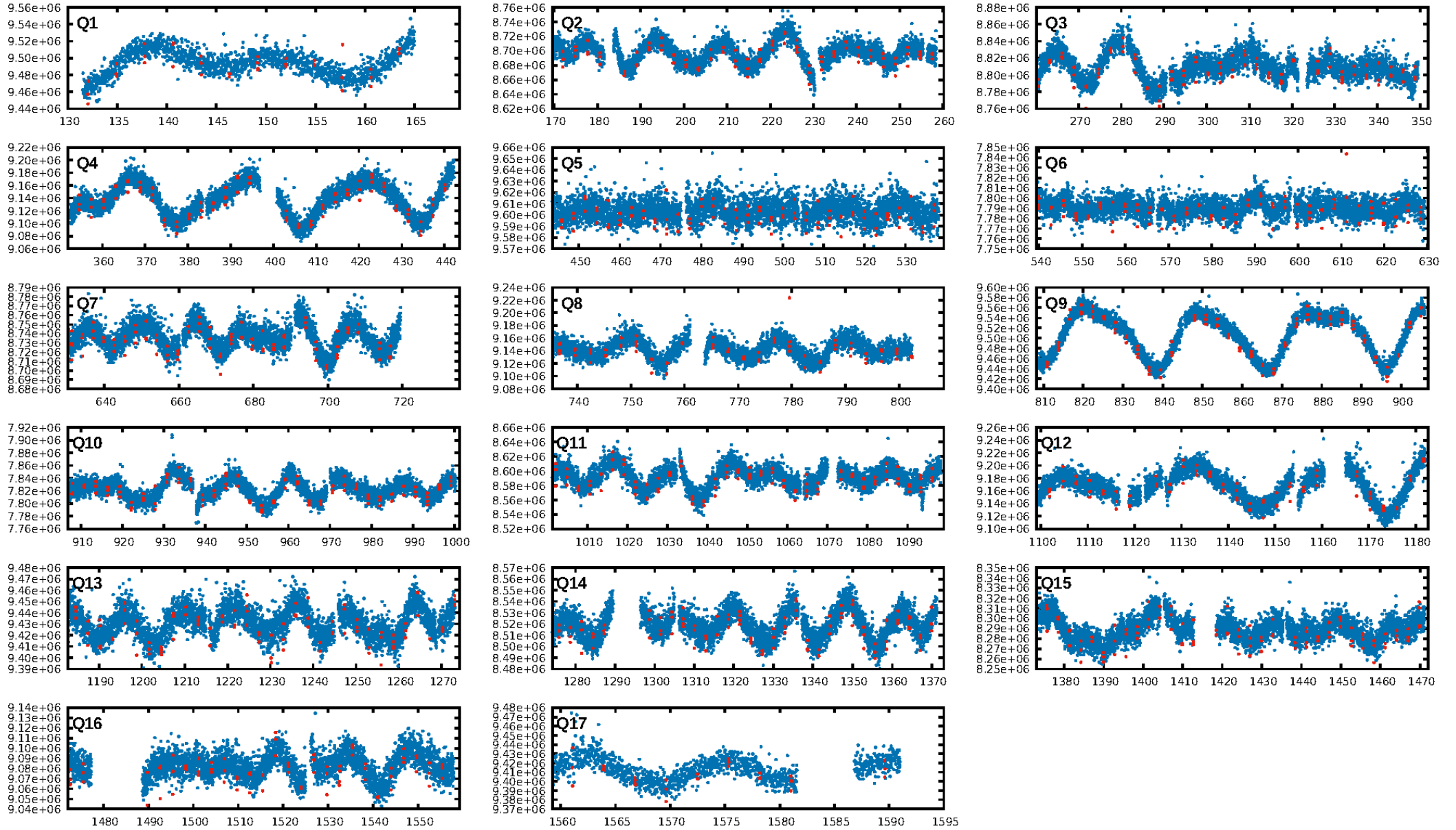
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.60e-120
RollingBand-fgt: 0.99 [445/450]
GhostDiagnostic-chr: 2.206
Centroid-sig: 9.4%
Centroid-so: 1.125 arcsec [2.76σ]
OotOffset-rm: 0.378 arcsec [2.17σ]
KicOffset-rm: 0.130 arcsec [0.76σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

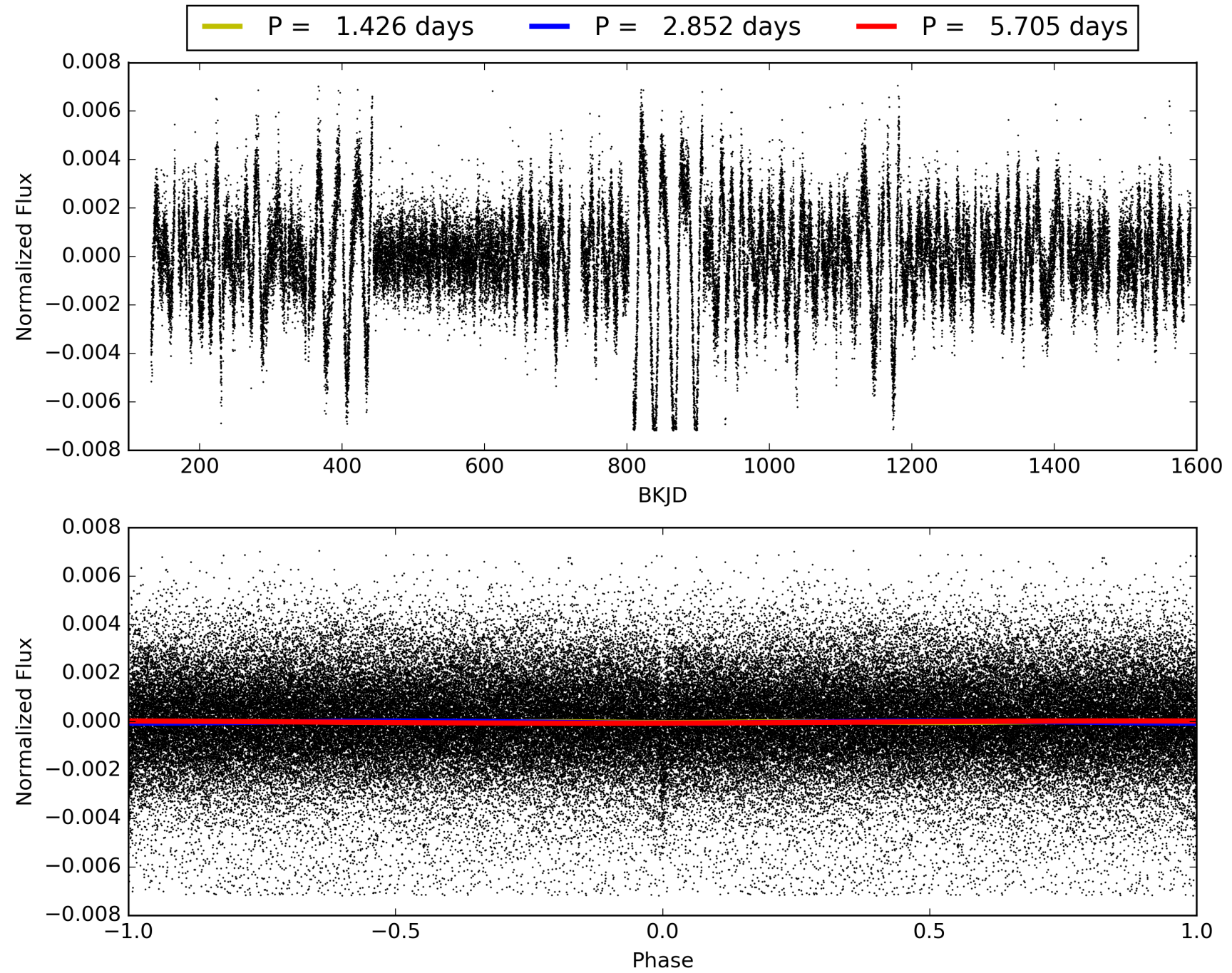
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:20:18 Z

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

TCE 002556650-01, PDC Light Curves

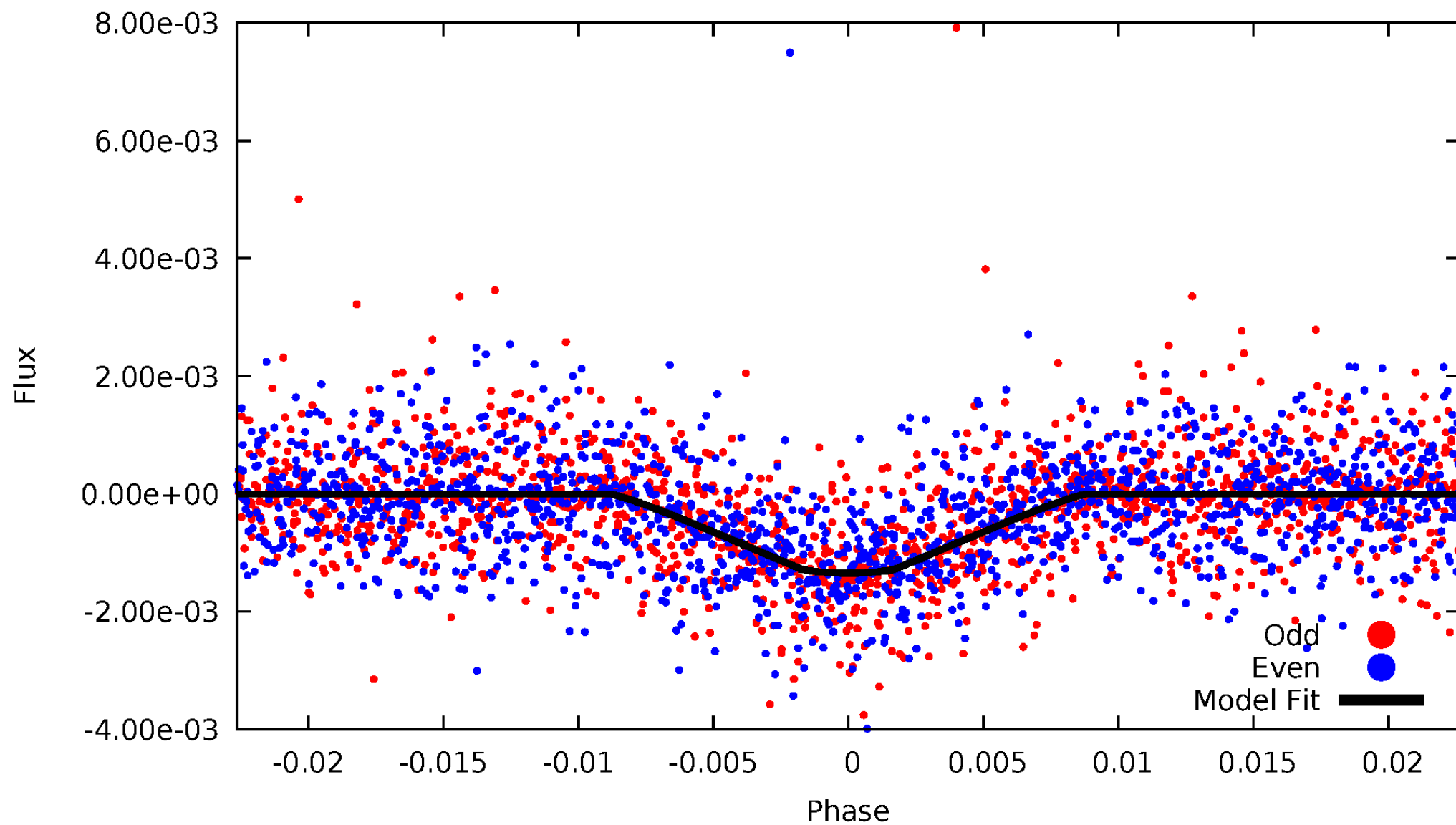


TCE 002556650-01



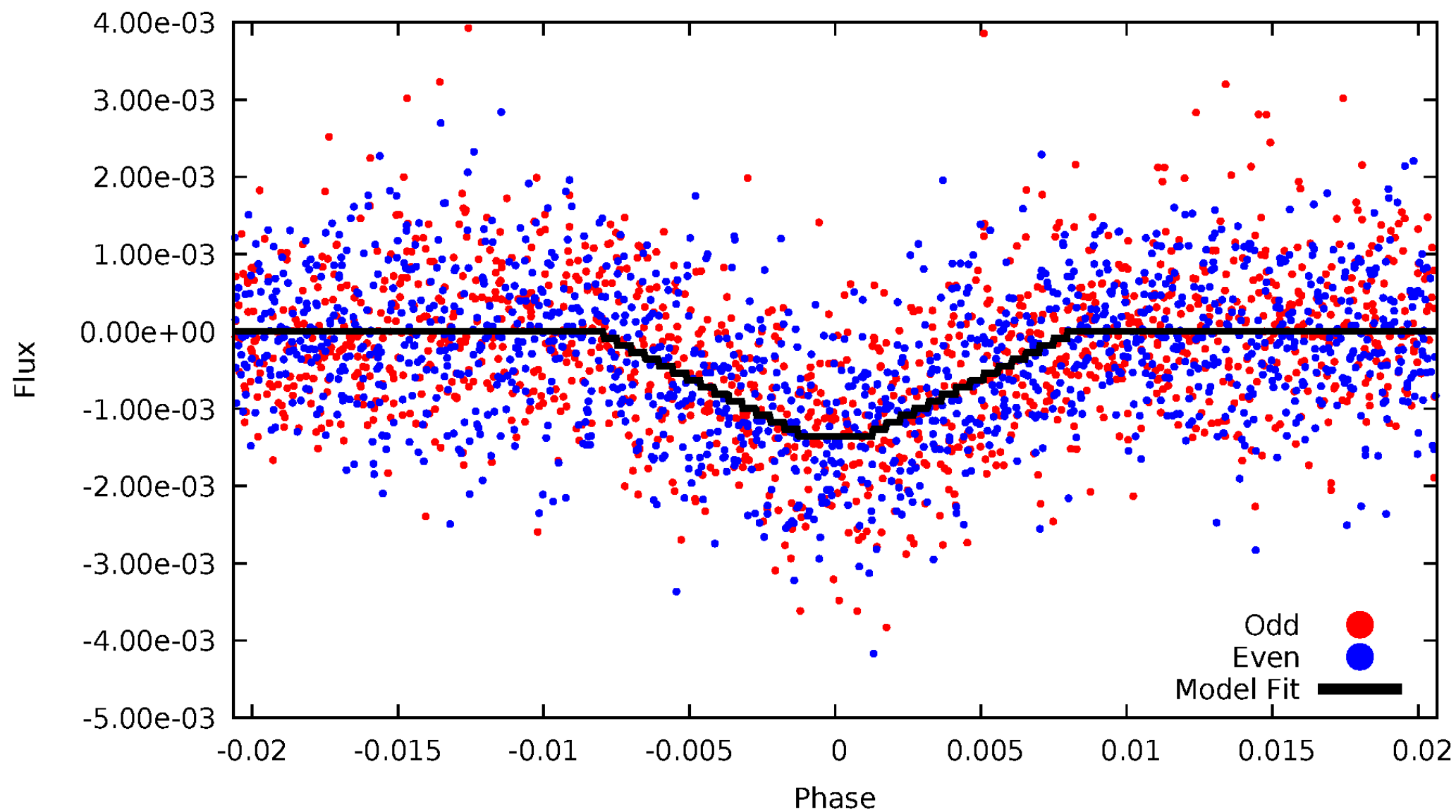
DV Odd/Even

TCE 002556650-01



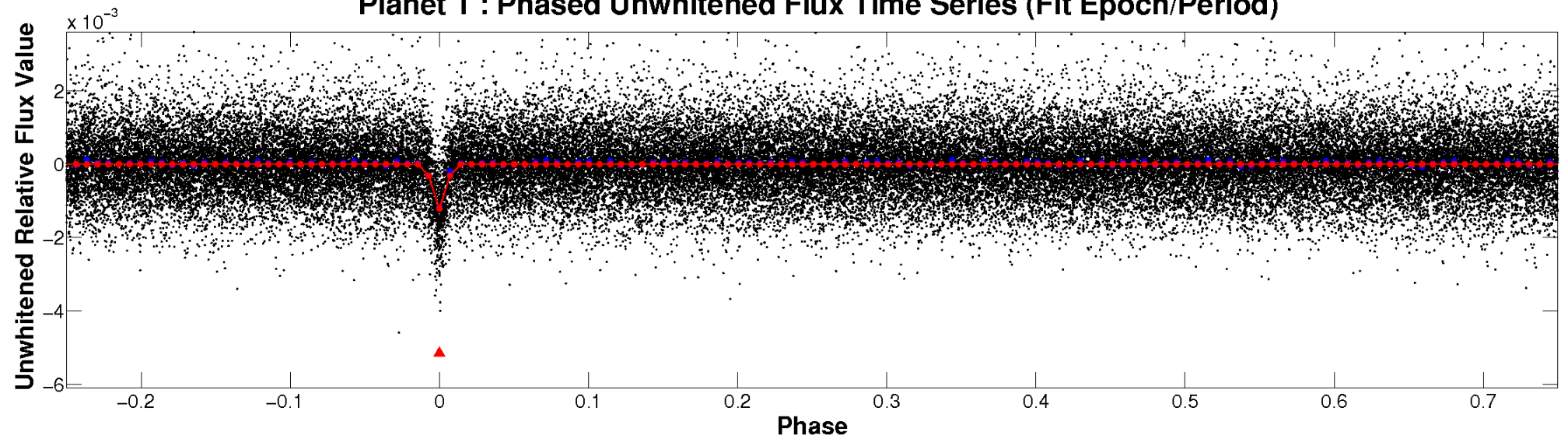
ALT Odd/Even

TCE 002556650-01

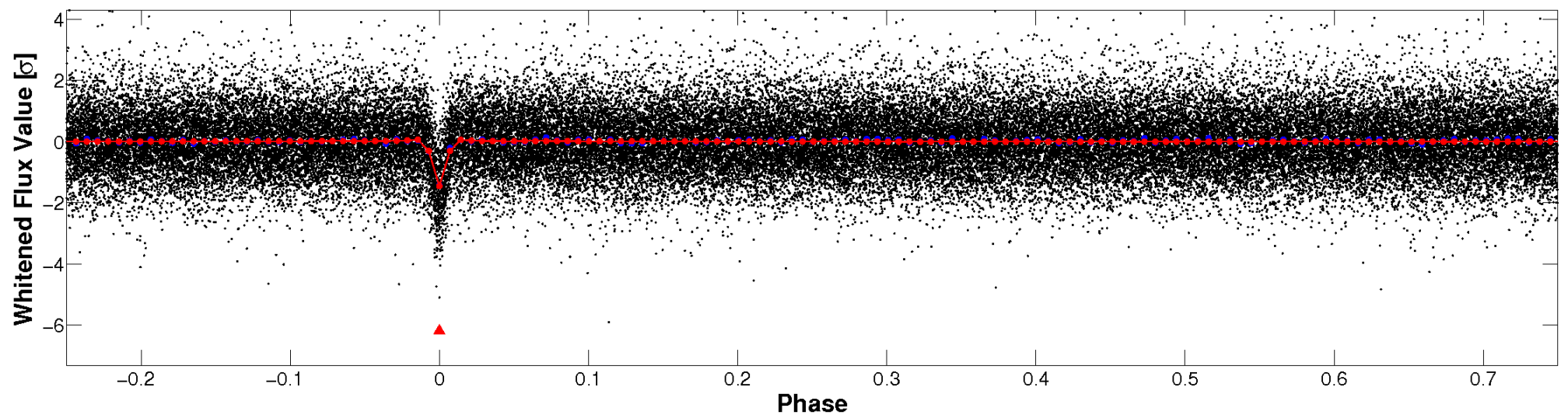


Non-Whitened Vs. Whitened Light Curve

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

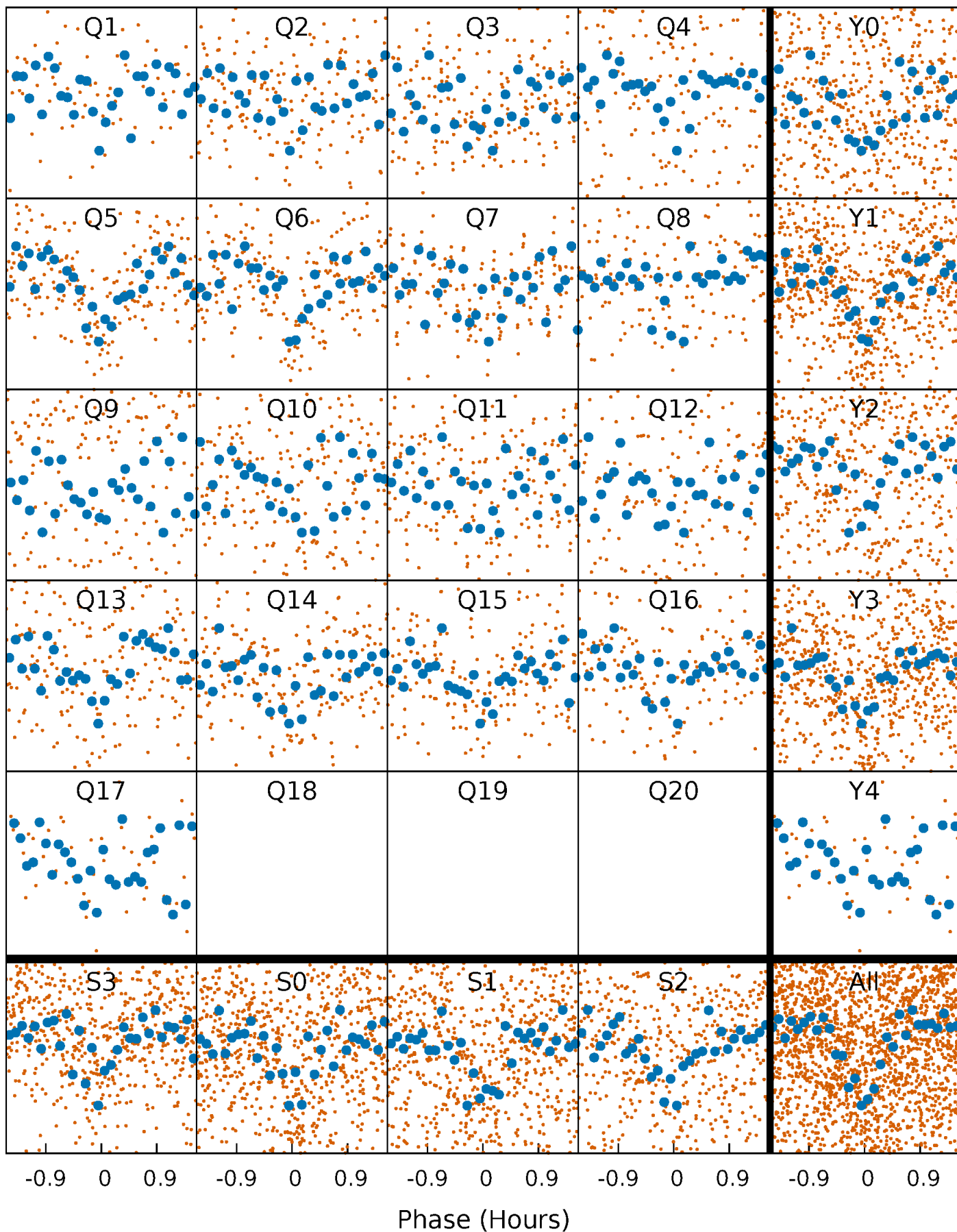


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



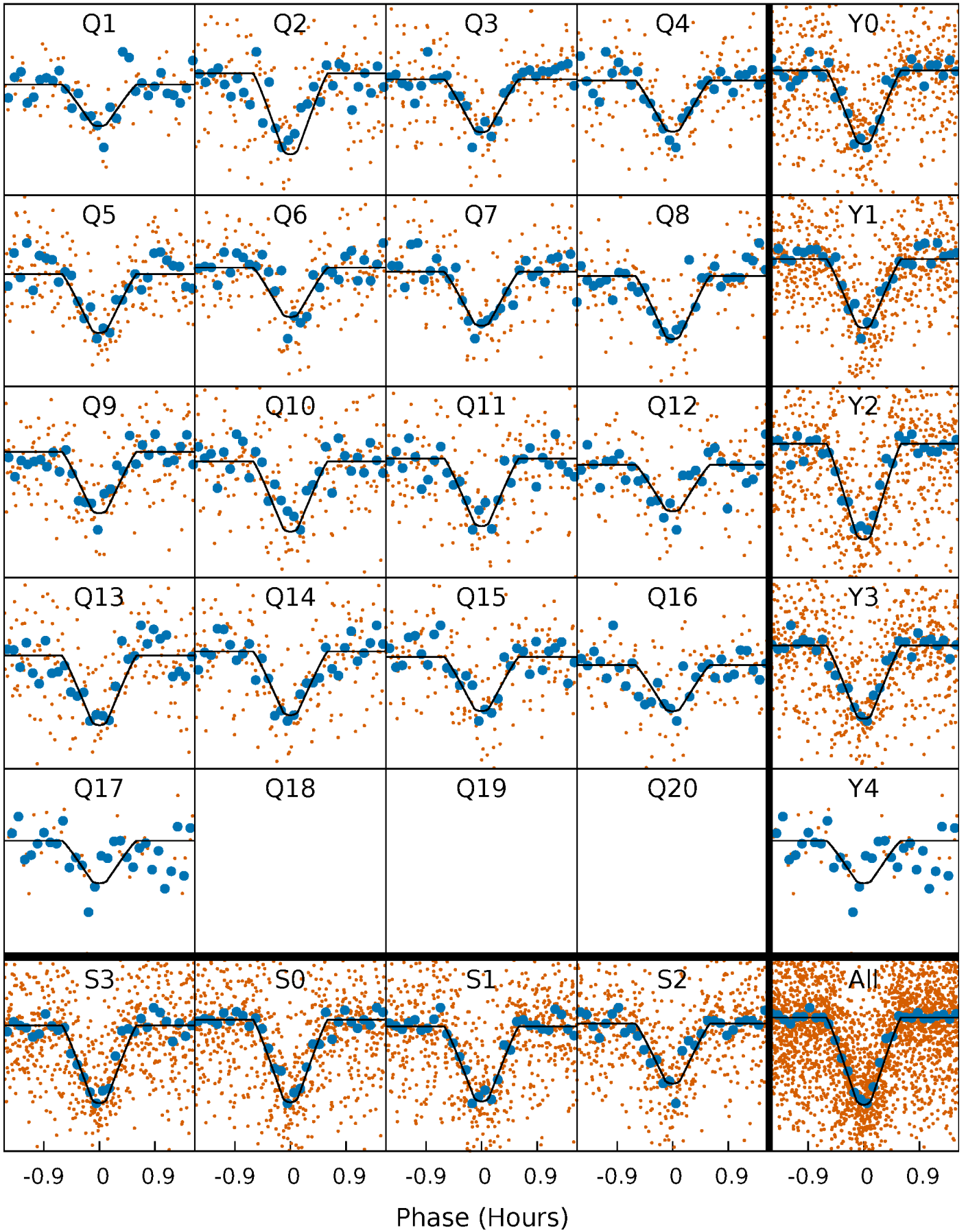
PDC Quarter-Phased Transit Curves

TCE 002556650-01 P= 2.852353 Days $T_0=132.044660$ (BKJD)



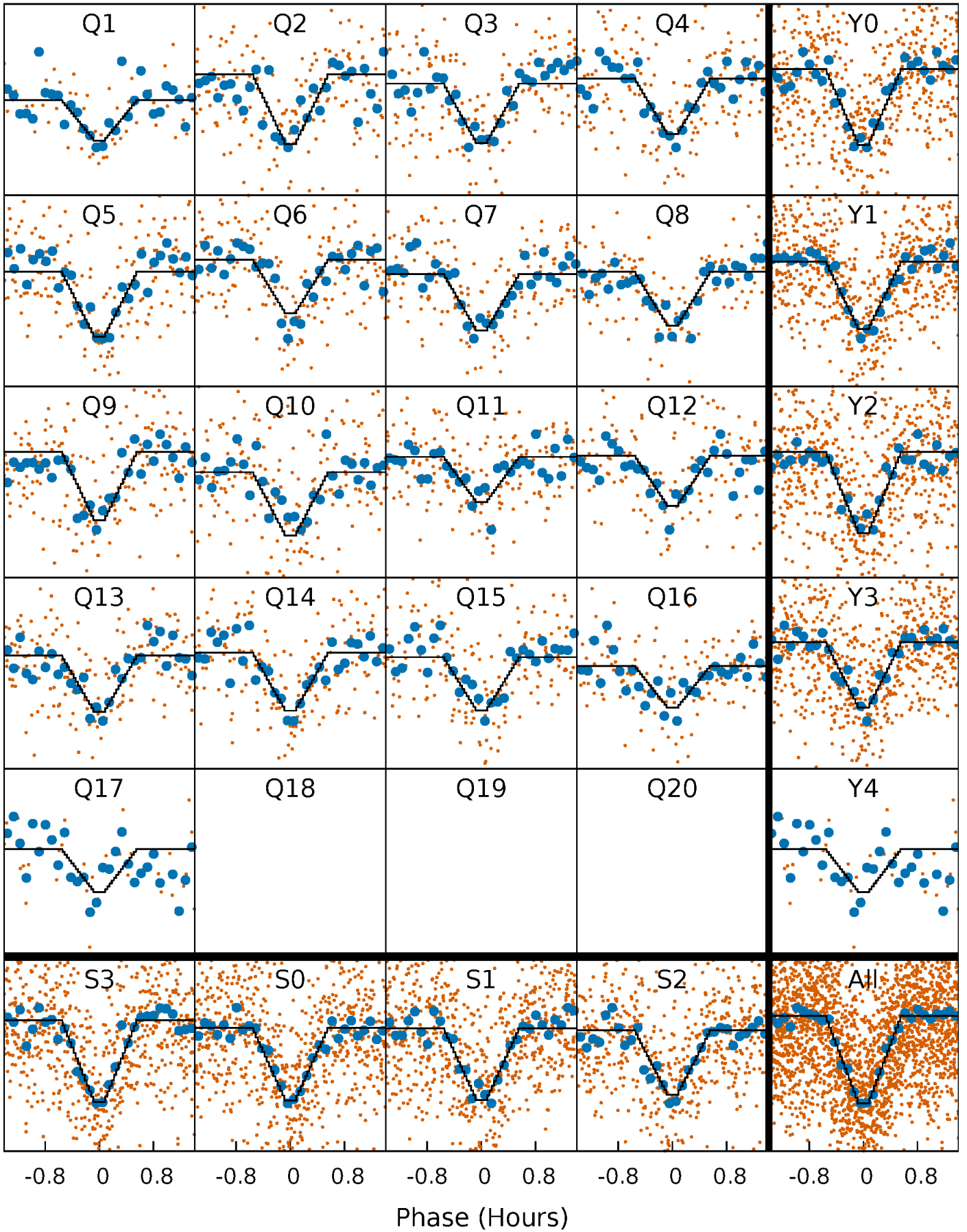
DV Quarter-Phased Transit Curves

TCE 002556650-01 P= 2.852353 Days $T_0=132.044660$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

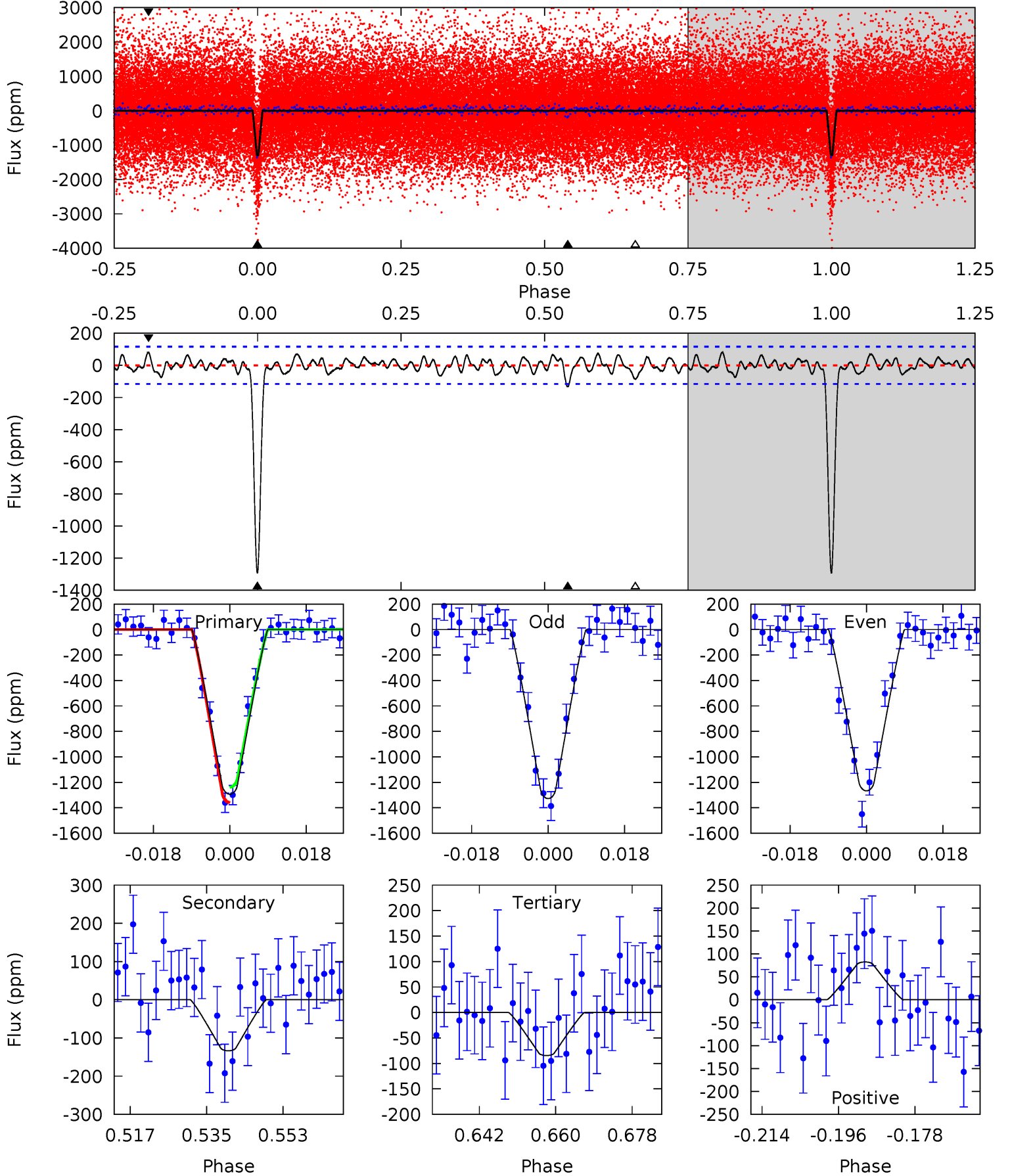
TCE 002556650-01 P= 2.852348 Days $T_0=132.044616$ (BKJD)



DV Model-Shift Uniqueness Test

002556650-01, P = 2.852353 Days, E = 129.192307 Days

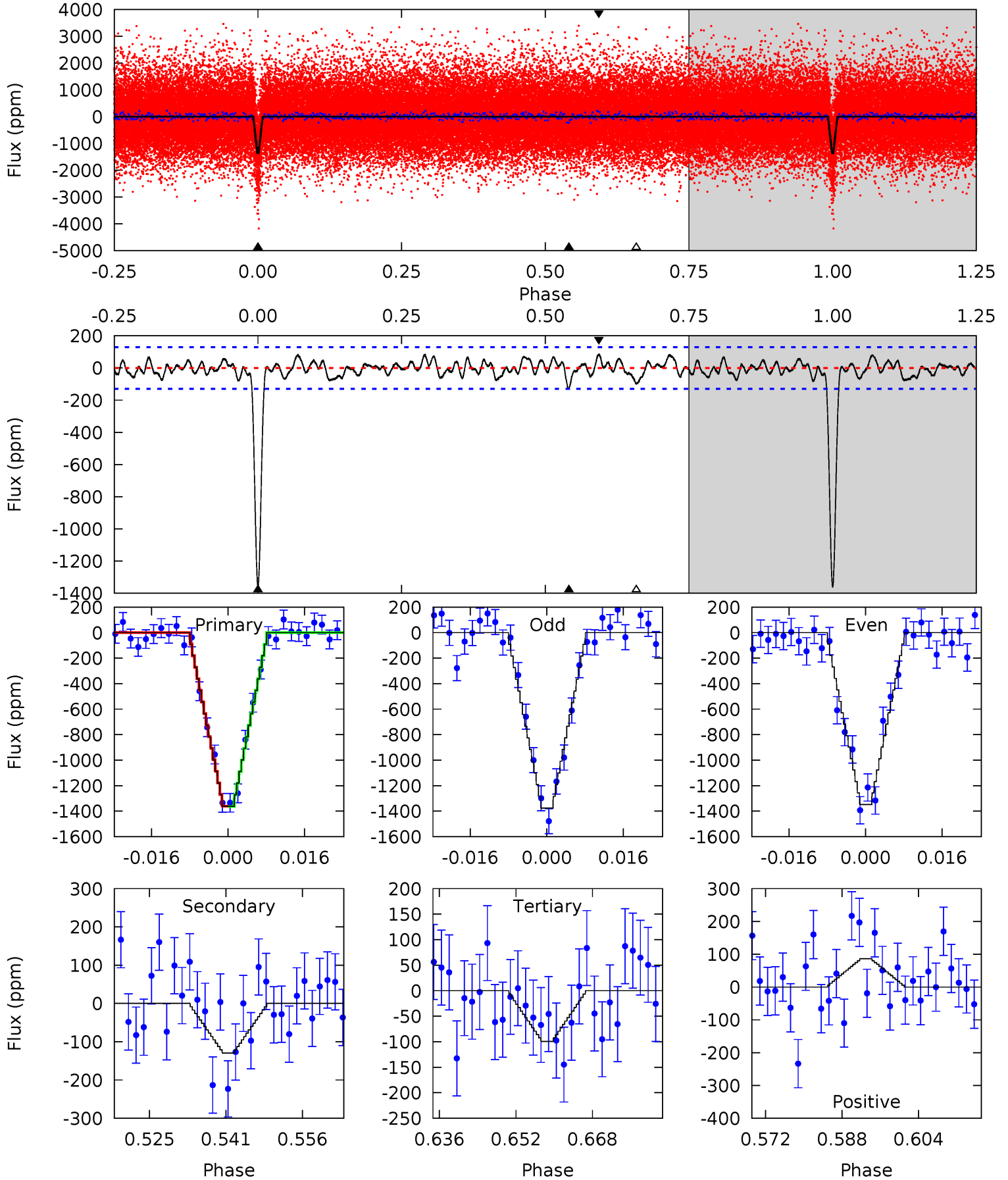
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
54.7	5.65	3.57	3.49	4.91	2.37	1.36	51.1	51.2	2.07	2.16	1.28	0.93	0.06	2.56



Alt Model-Shift Uniqueness Test

002556650-01, P = 2.852348 Days, E = 129.192268 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.8	4.94	3.78	3.28	4.94	2.41	1.39	48.0	48.5	1.16	1.66	0.54	0.98	0.06	0.05



Stellar Parameters For KIC 002556650

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3731^{+74}_{-81}	$4.830^{+0.055}_{-0.055}$	$-0.280^{+0.150}_{-0.150}$	$0.433^{+0.047}_{-0.052}$	$0.463^{+0.041}_{-0.055}$	$8.030^{+2.419}_{-1.553}$
	+2%/-2%	+1%/-1%	+54%/-54%	+11%/-12%	+9%/-12%	+30%/-19%
Source	SPE70	SPE60	SPE70	DSEP		

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

Secondary Eclipse Parameters for KIC 002556650-01 / KOI 2156.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-134 ± 24	$1.71^{+0.36}_{-0.33}$	869^{+26}_{-26}	2667^{+162}_{-138}	23^{+13}_{-8}
Alt.	-130 ± 26	$1.74^{+0.33}_{-0.32}$	868^{+28}_{-26}	2647^{+153}_{-140}	22^{+12}_{-7}

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 $A_{obs} \gg 1.0$

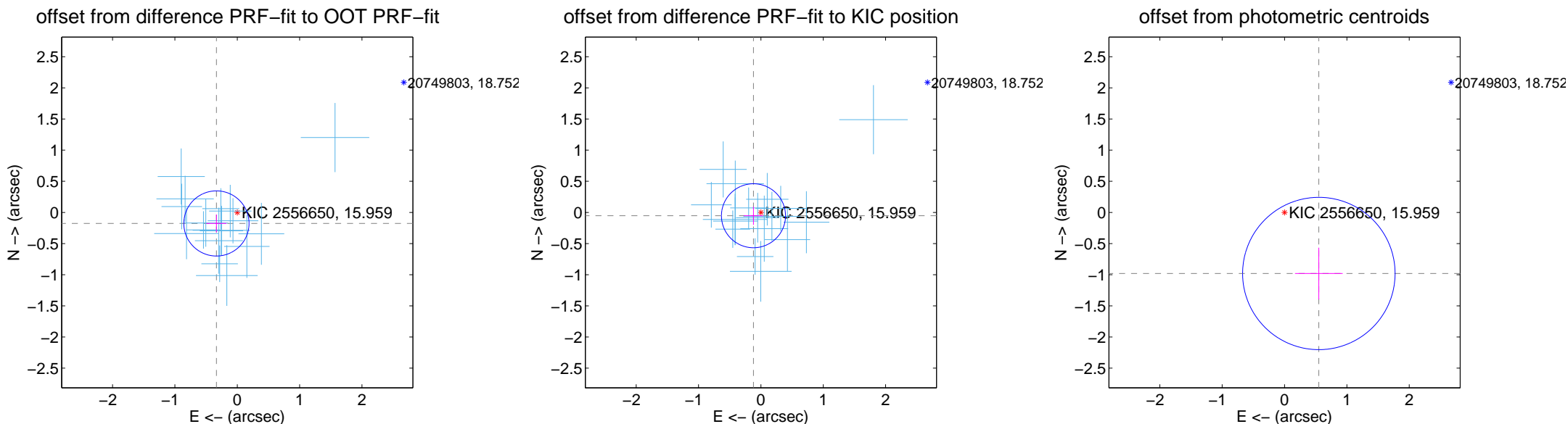
DV Centroid Data

Supplemental centroid analysis for 002556650-01. Kepler magnitude: 15.96. Transit SNR 34.08

There are 17 quarters with good PRF difference image offsets

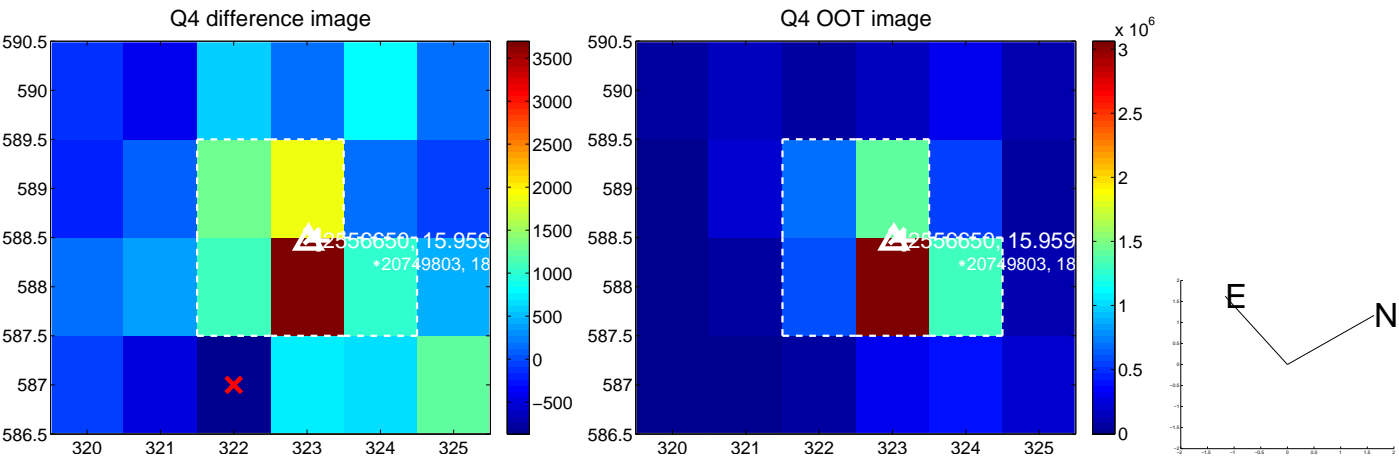
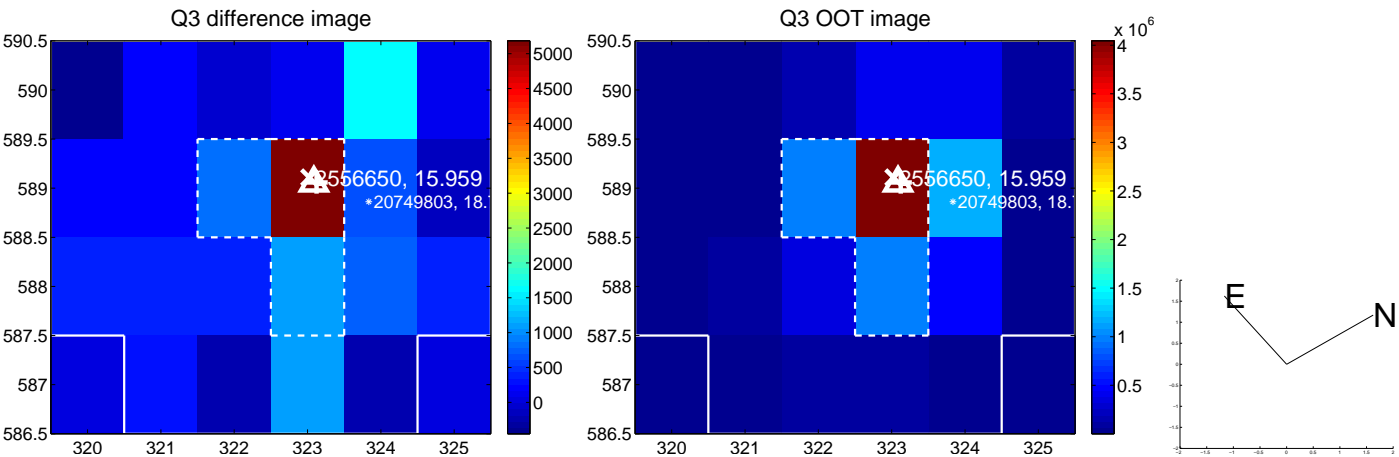
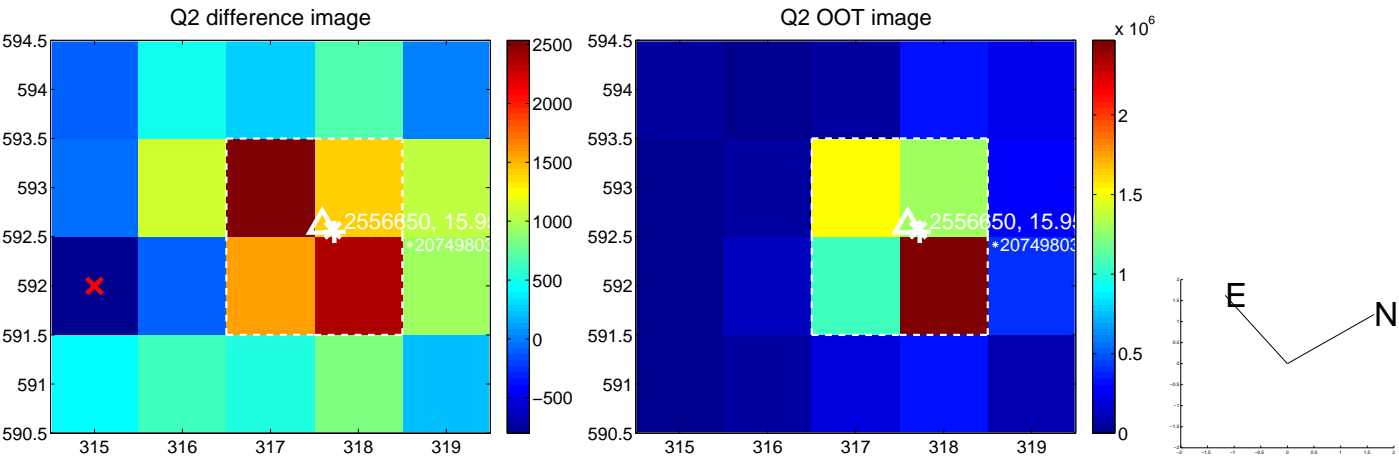
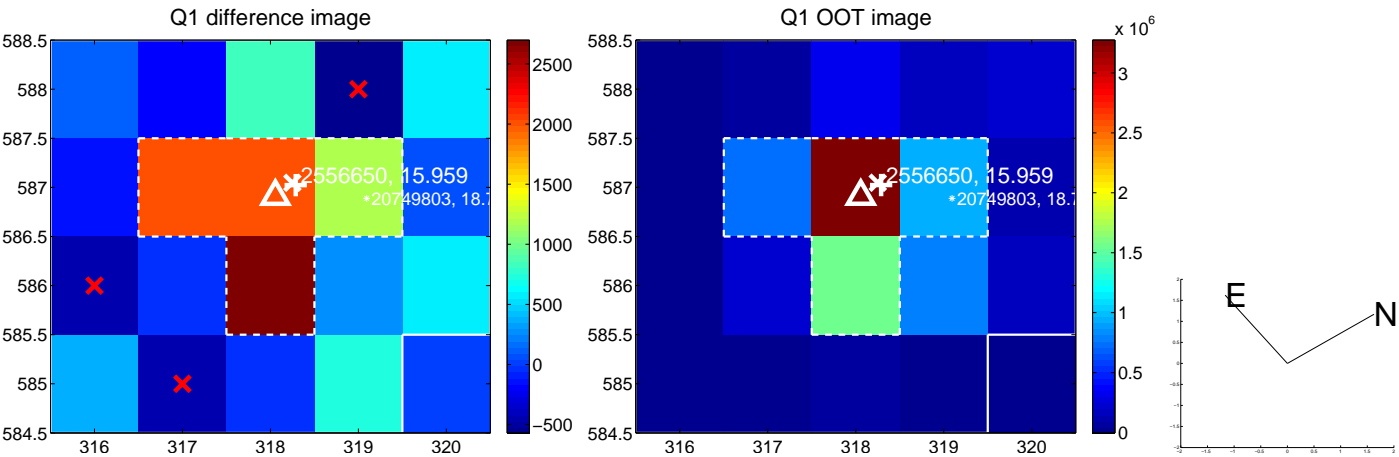
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.378 ± 0.174	2.17	0.334 ± 0.162	-0.177 ± 0.143
PRF-fit source offset from KIC position	0.130 ± 0.171	0.76	0.119 ± 0.155	-0.053 ± 0.147
photometric centroid source offset	1.12 ± 0.41	2.76	-0.55 ± 0.38	-0.98 ± 0.42

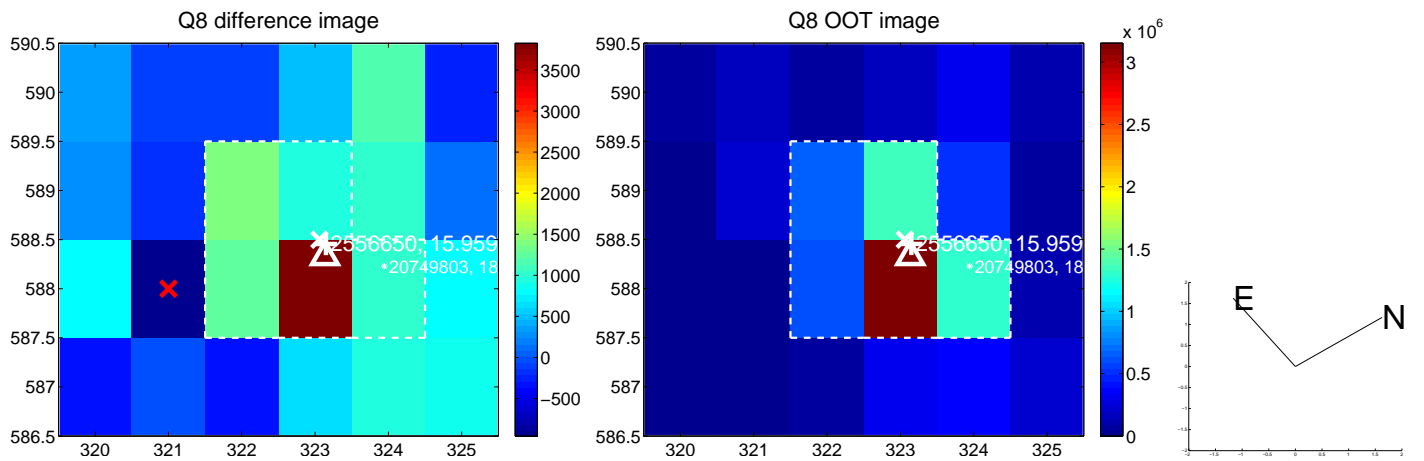
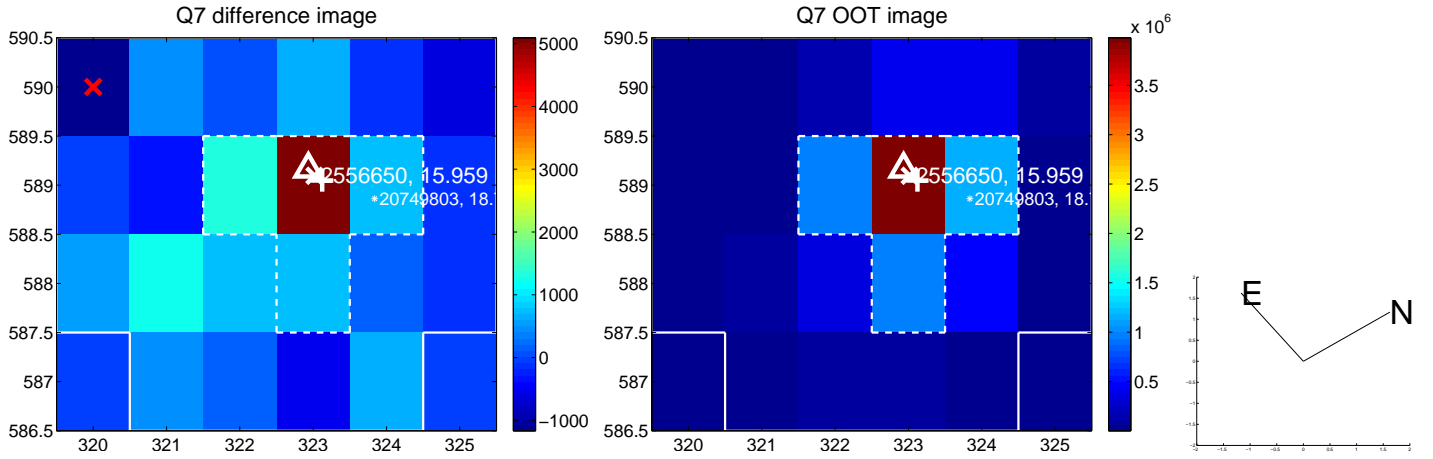
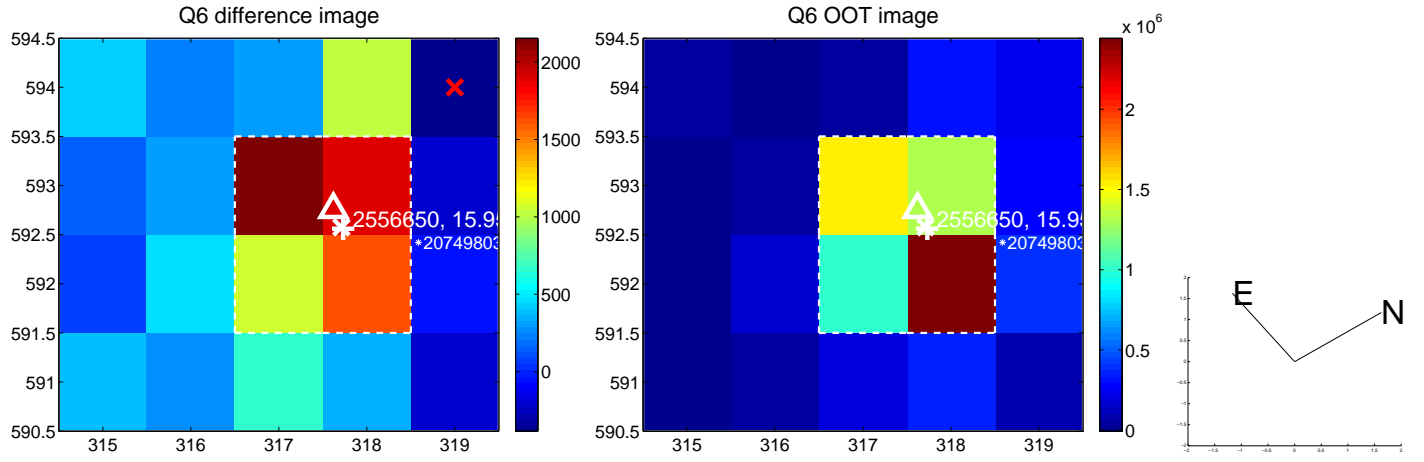
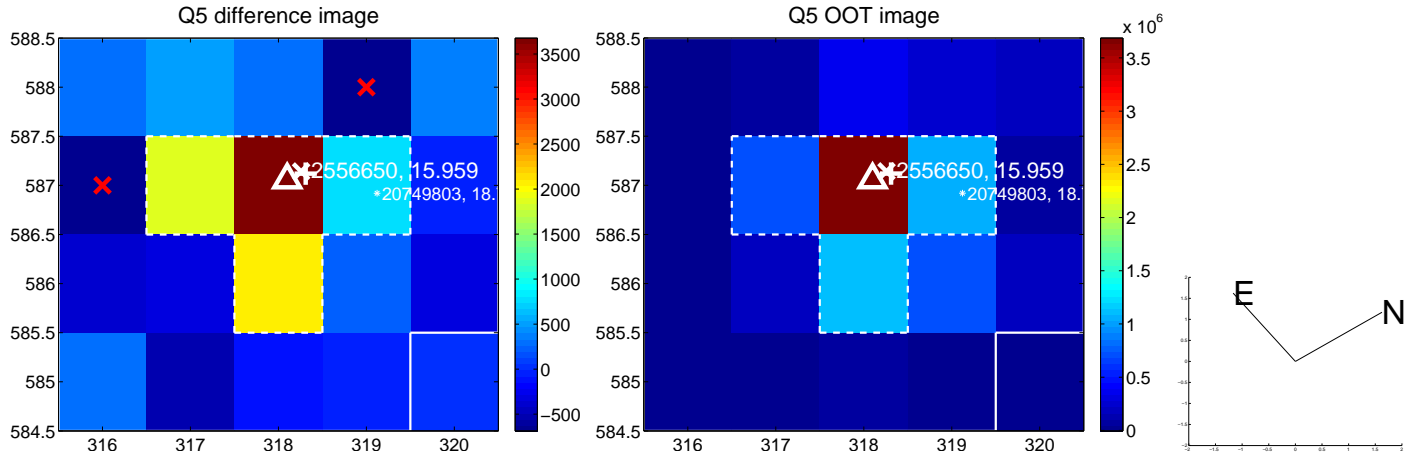


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

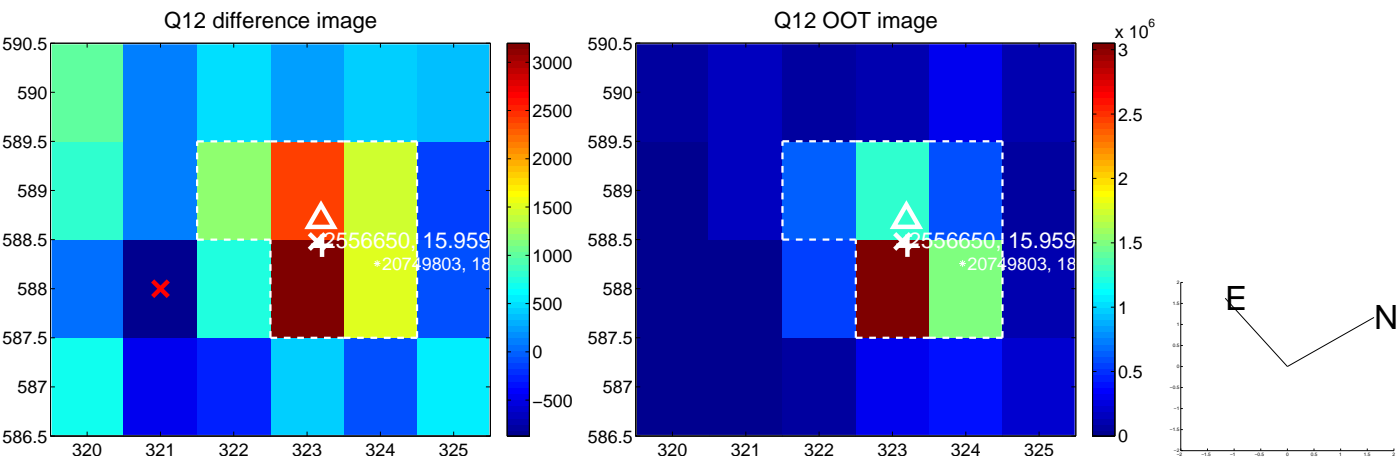
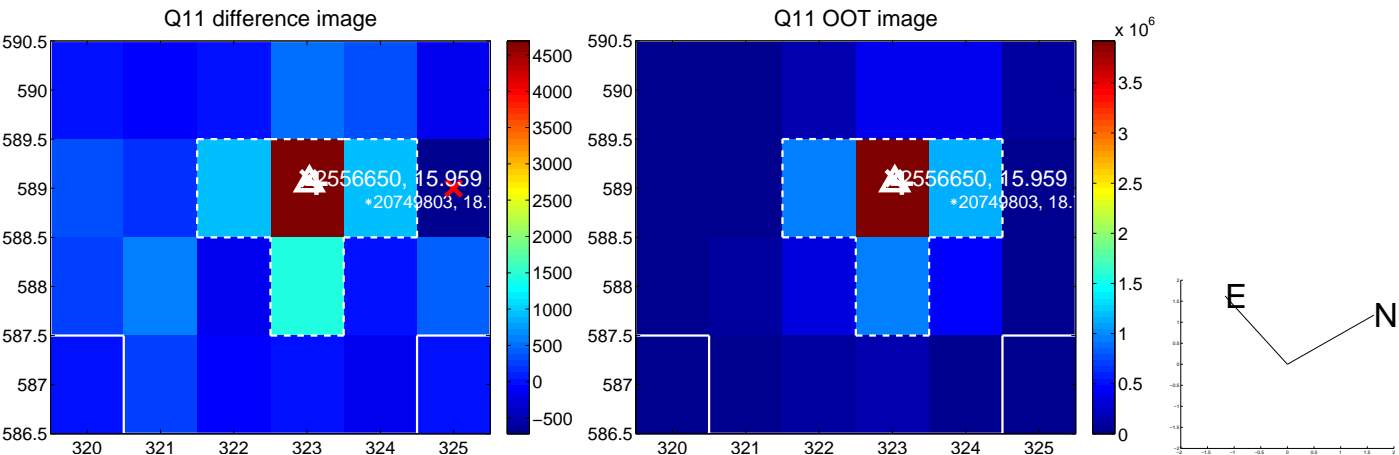
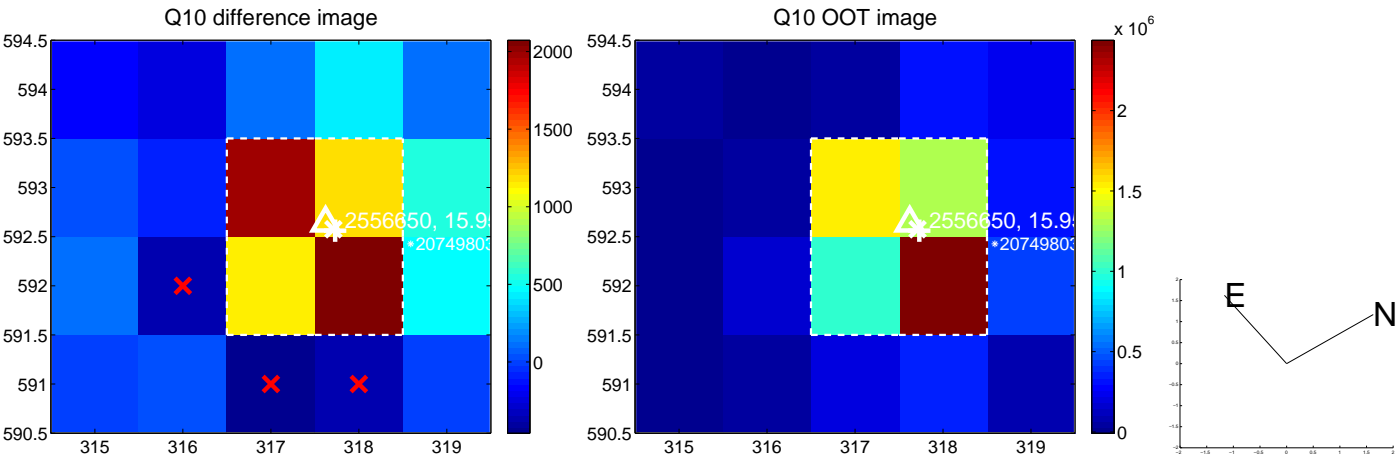
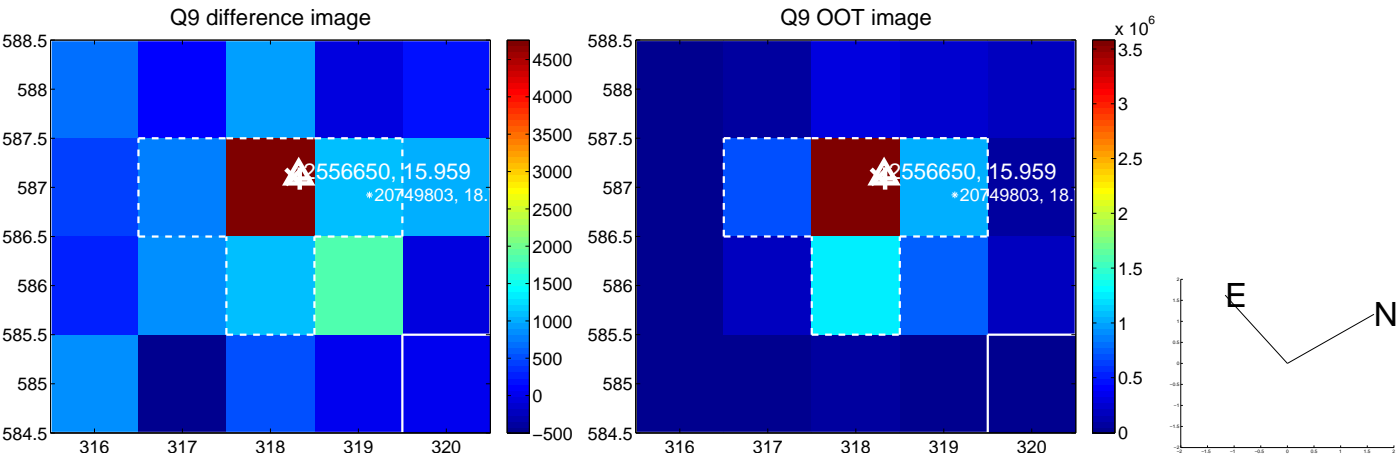
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



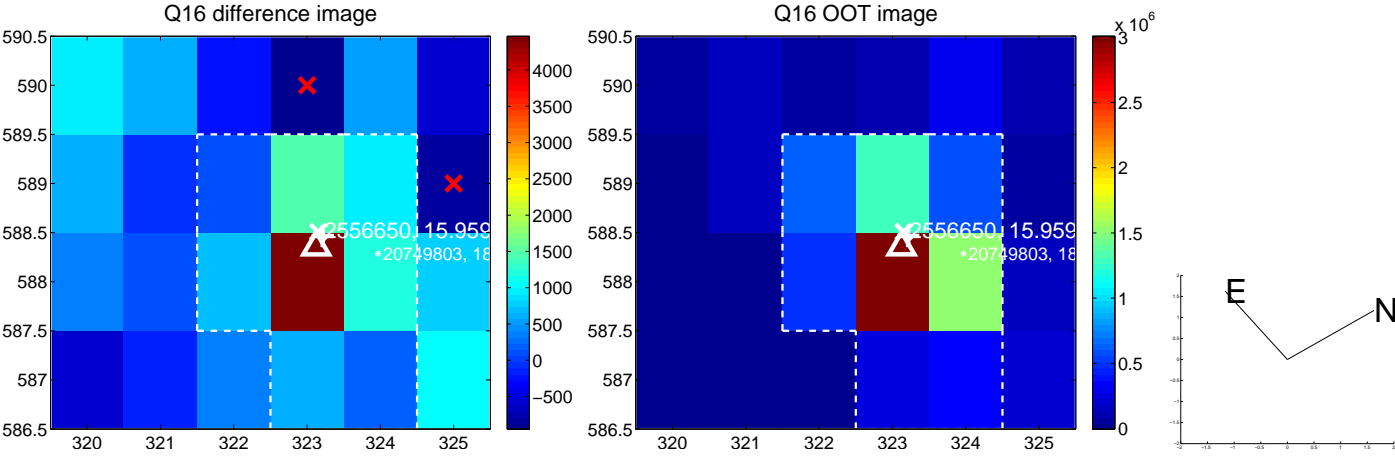
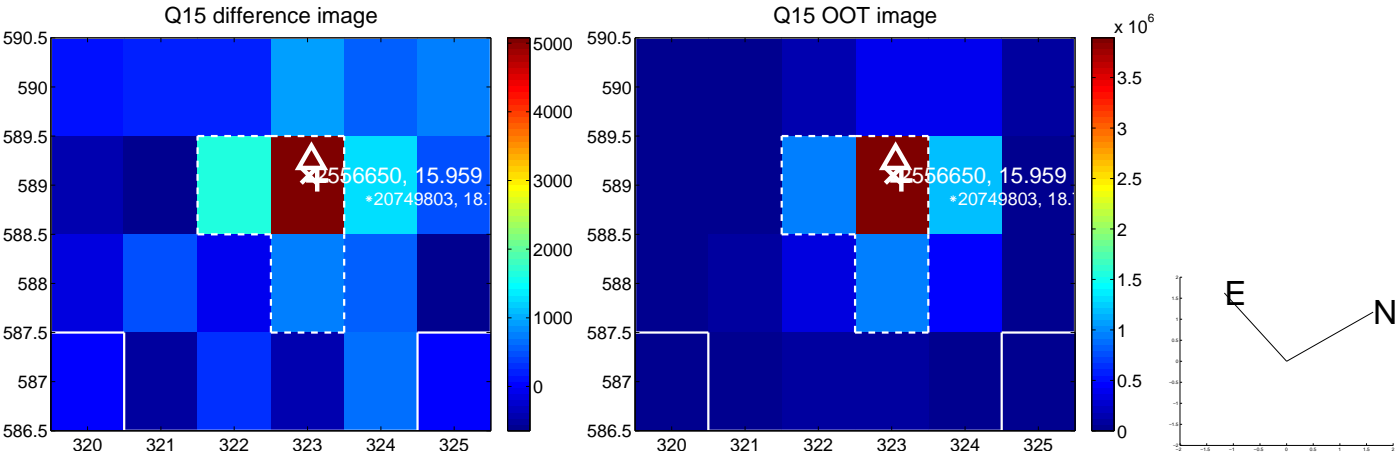
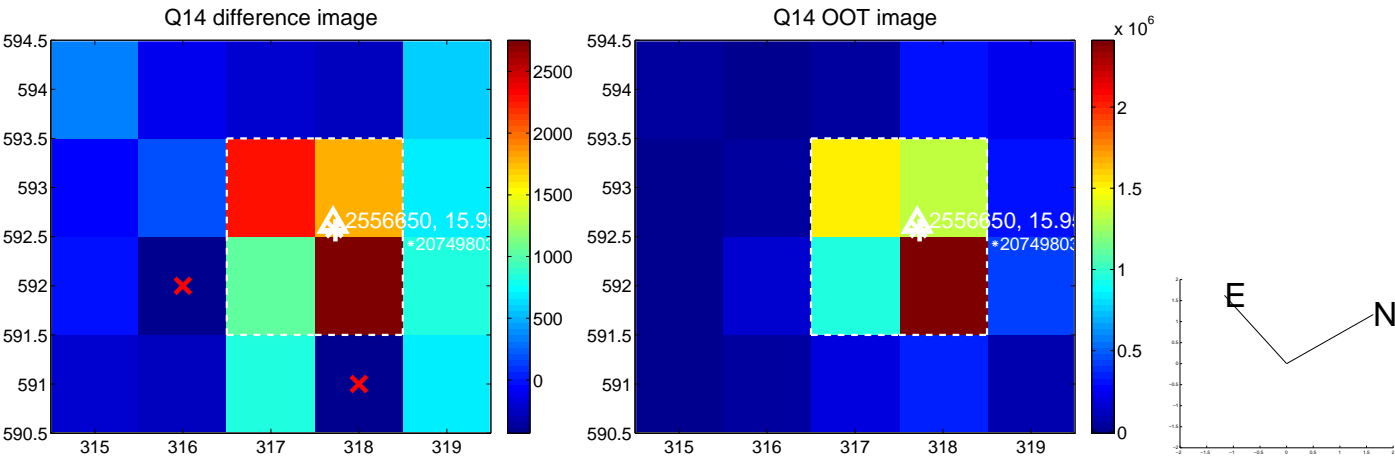
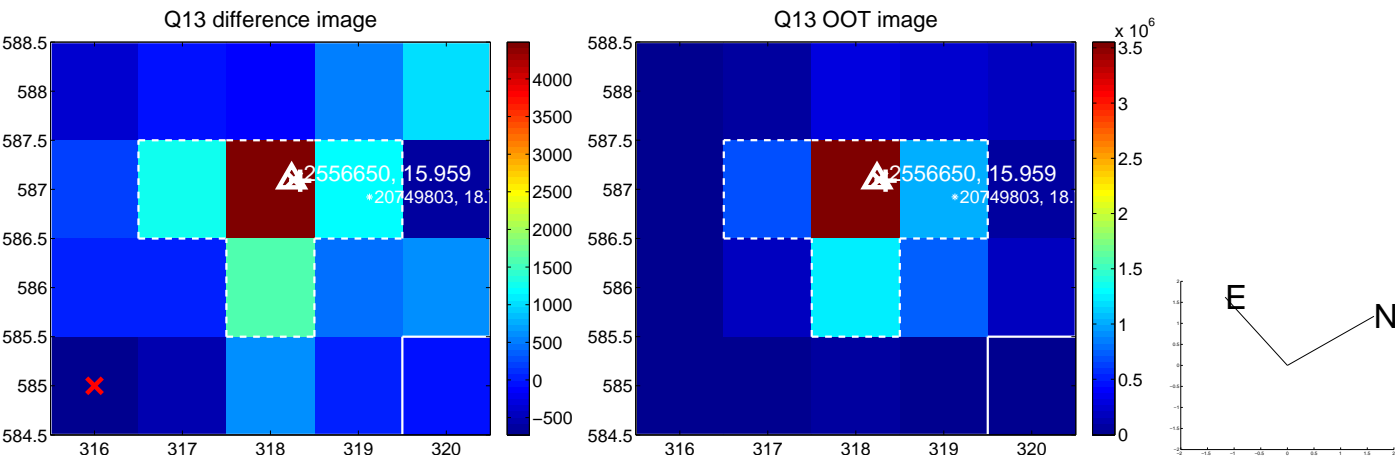
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



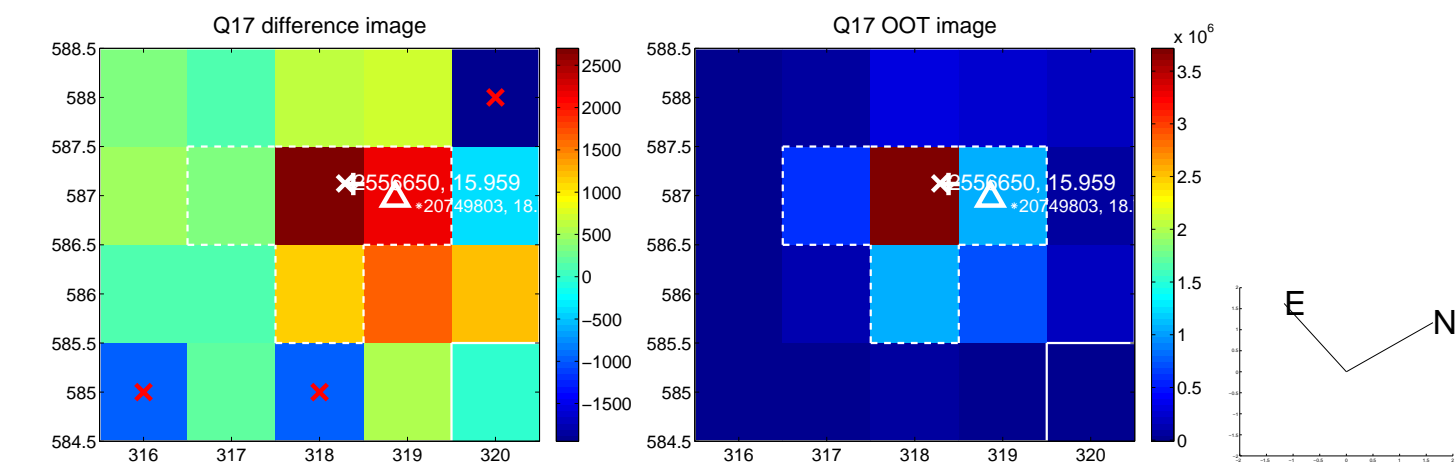
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



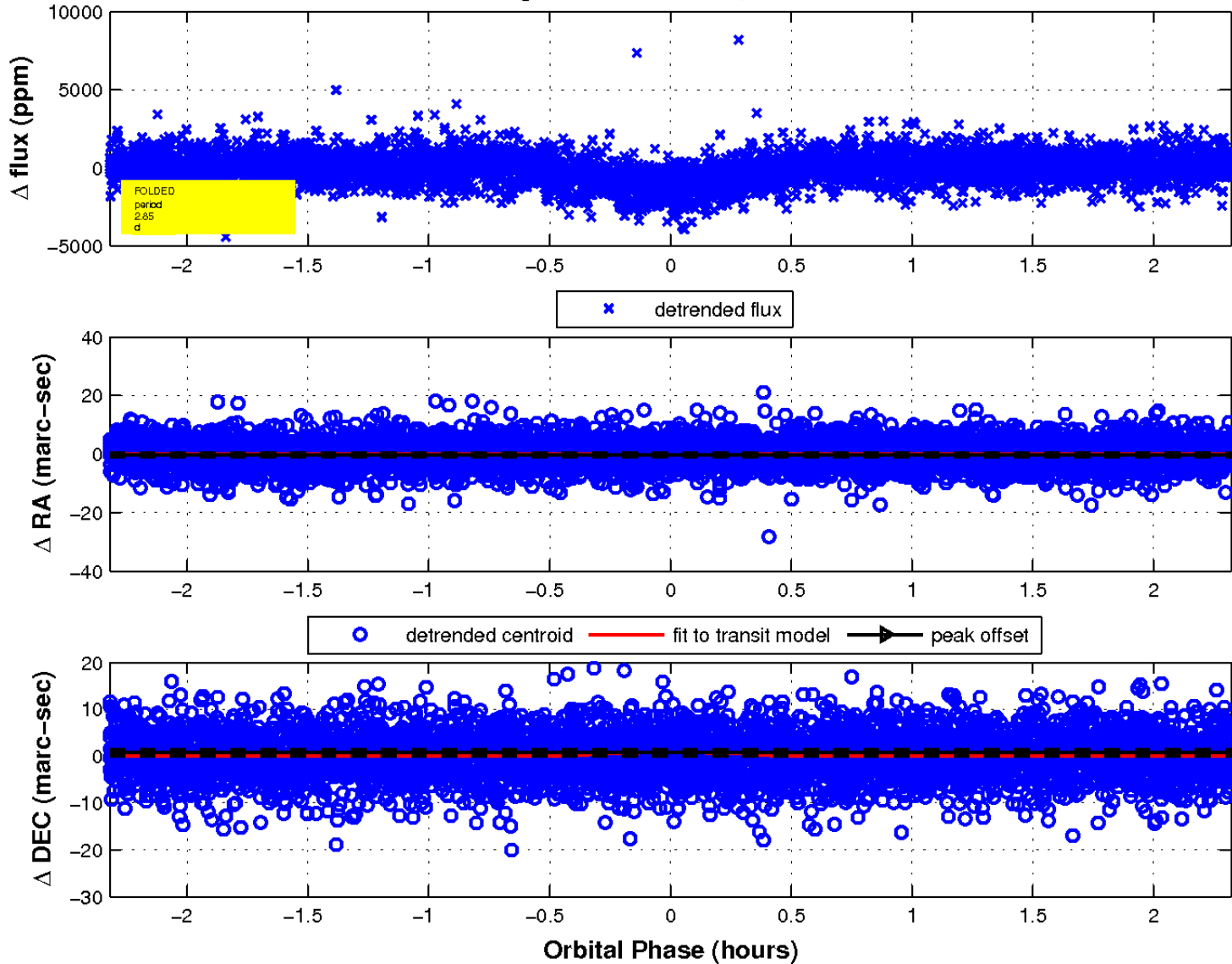
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

