

KIC 008444552

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})
008444552-01	OBS	1769.01	0.589048	131.591789	60823.4	2.260	8197.1	4104.5	0.77	5592	25.73	3486.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008444552-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED

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.

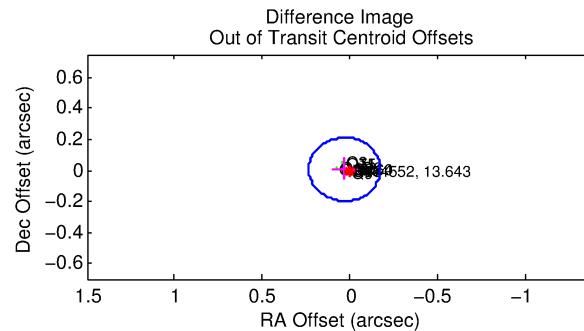
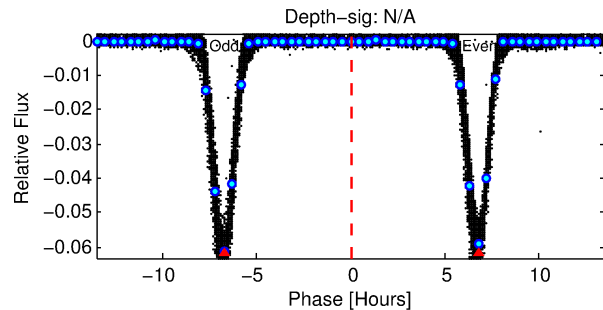
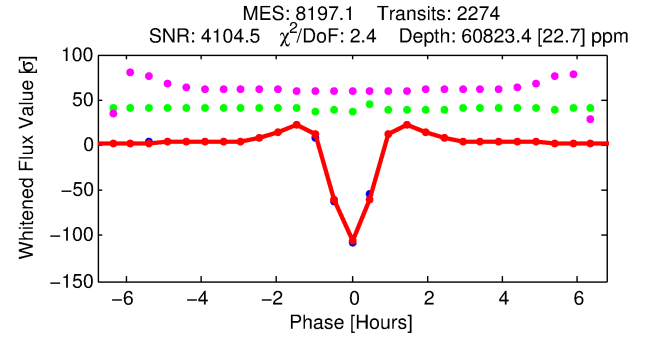
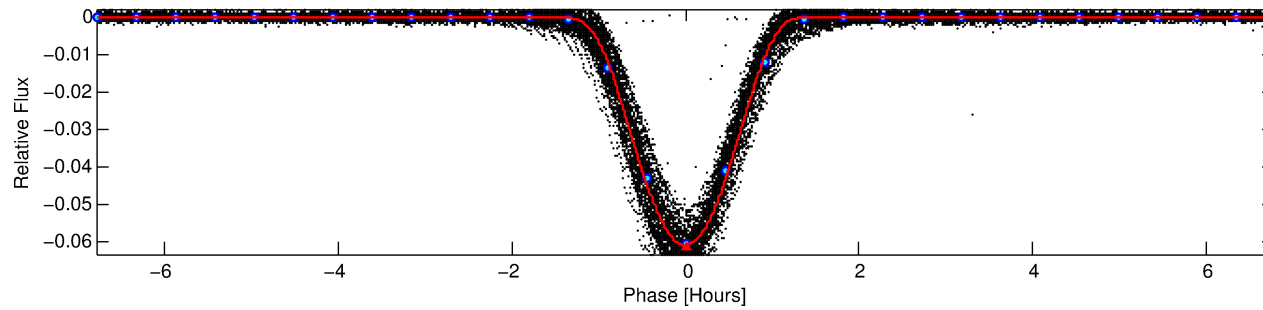
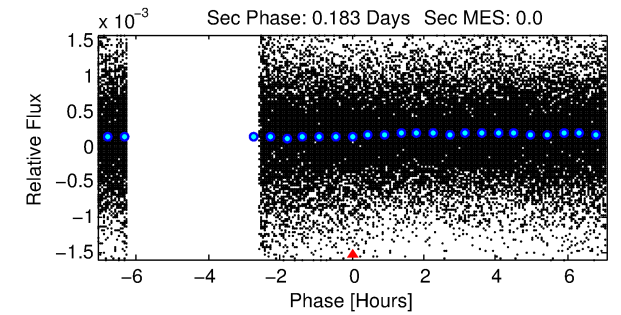
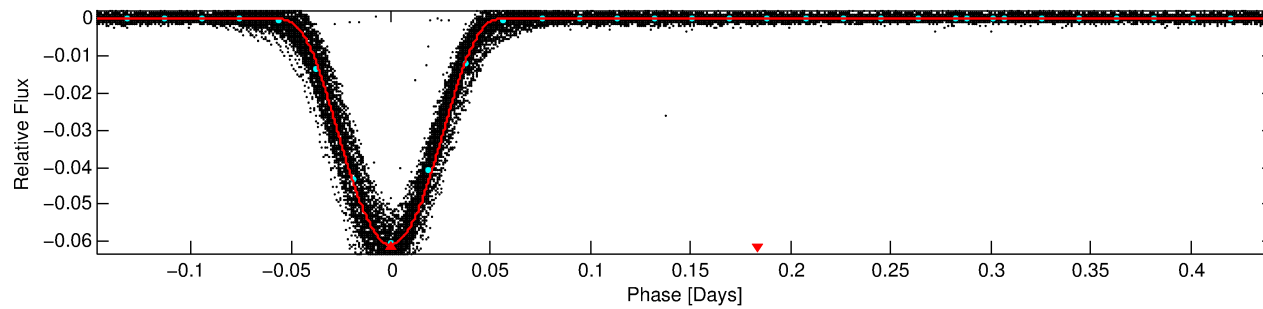
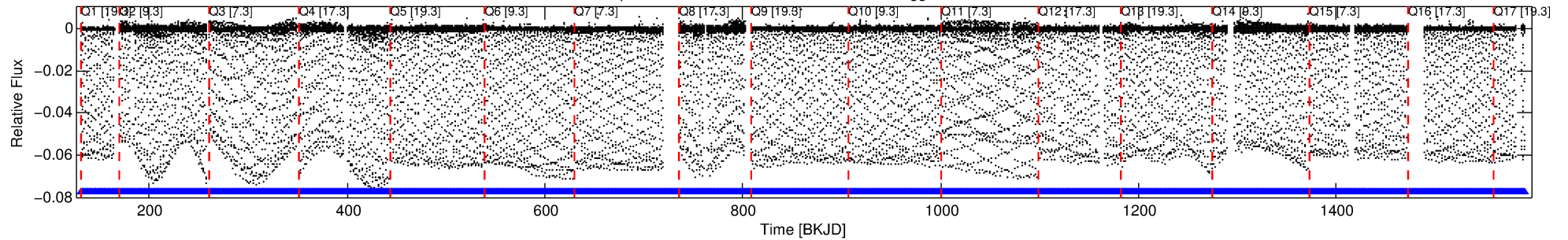
Ephemeris Match Information For 008444552-01

No Significant Match Found

DV One-Page Summary

KIC: 8444552 Candidate: 1 of 1 Period: 0.589 d
KOI: K01769.01 Corr: 0.992

Kp: 13.64 R*: 0.77 Rs Teff: 5592.0 K Logg: 4.51 Fe/H: -0.740



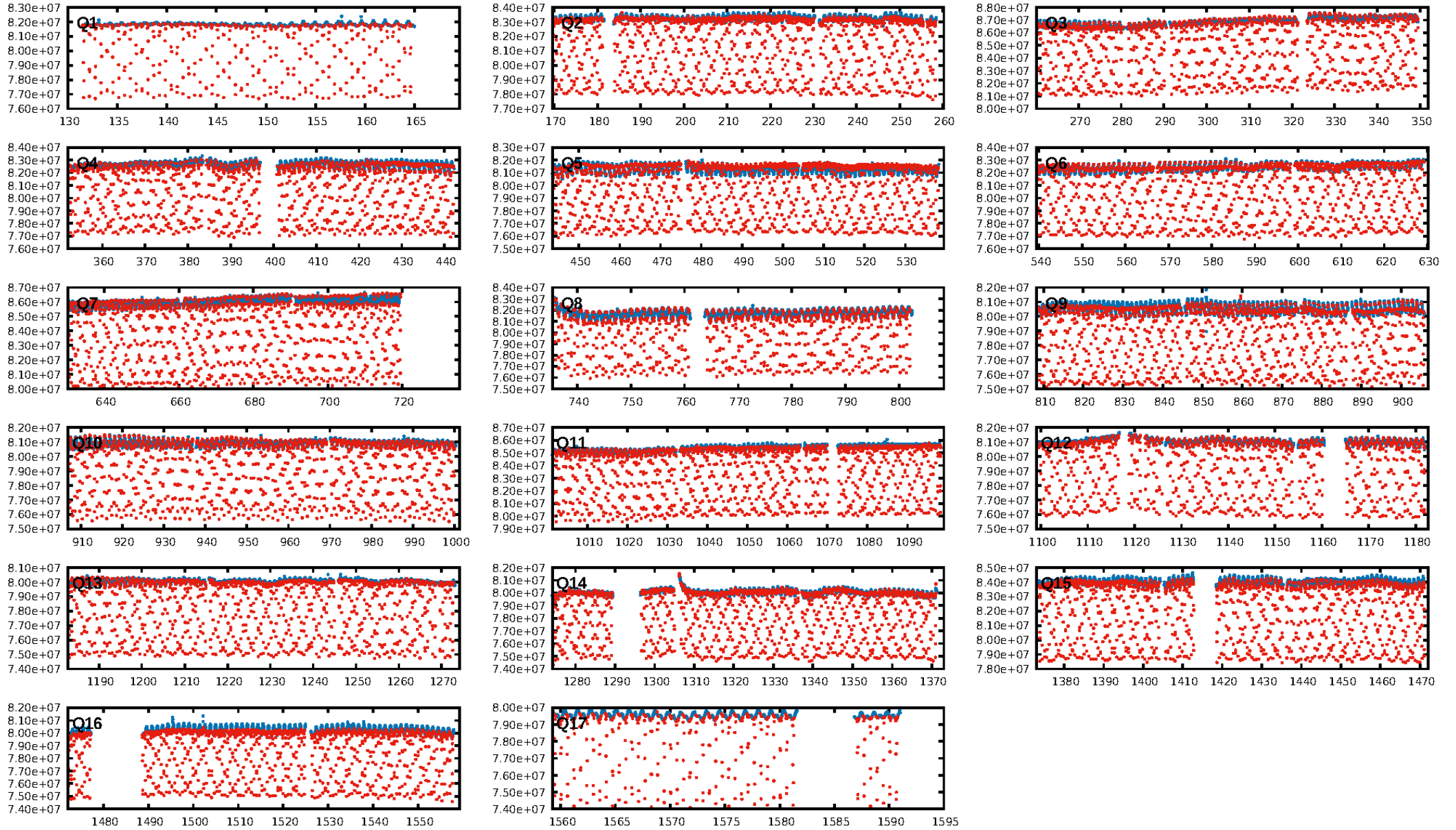
DV Fit Results:

Period = 0.58905 [0.00000] d
Epoch = 131.5918 [0.0000] BKJD
Rp/R* = 0.3058 [0.0021]
a/R* = 2.20 [0.00]
b = 0.87 [0.00]
Seff = 3486.03 [823.84]
Teq = 1959 [116] K
Rp = 25.73 [3.97] Re
a = 0.0122 [0.0017] AU
Ag = N/A
Teffp = N/A

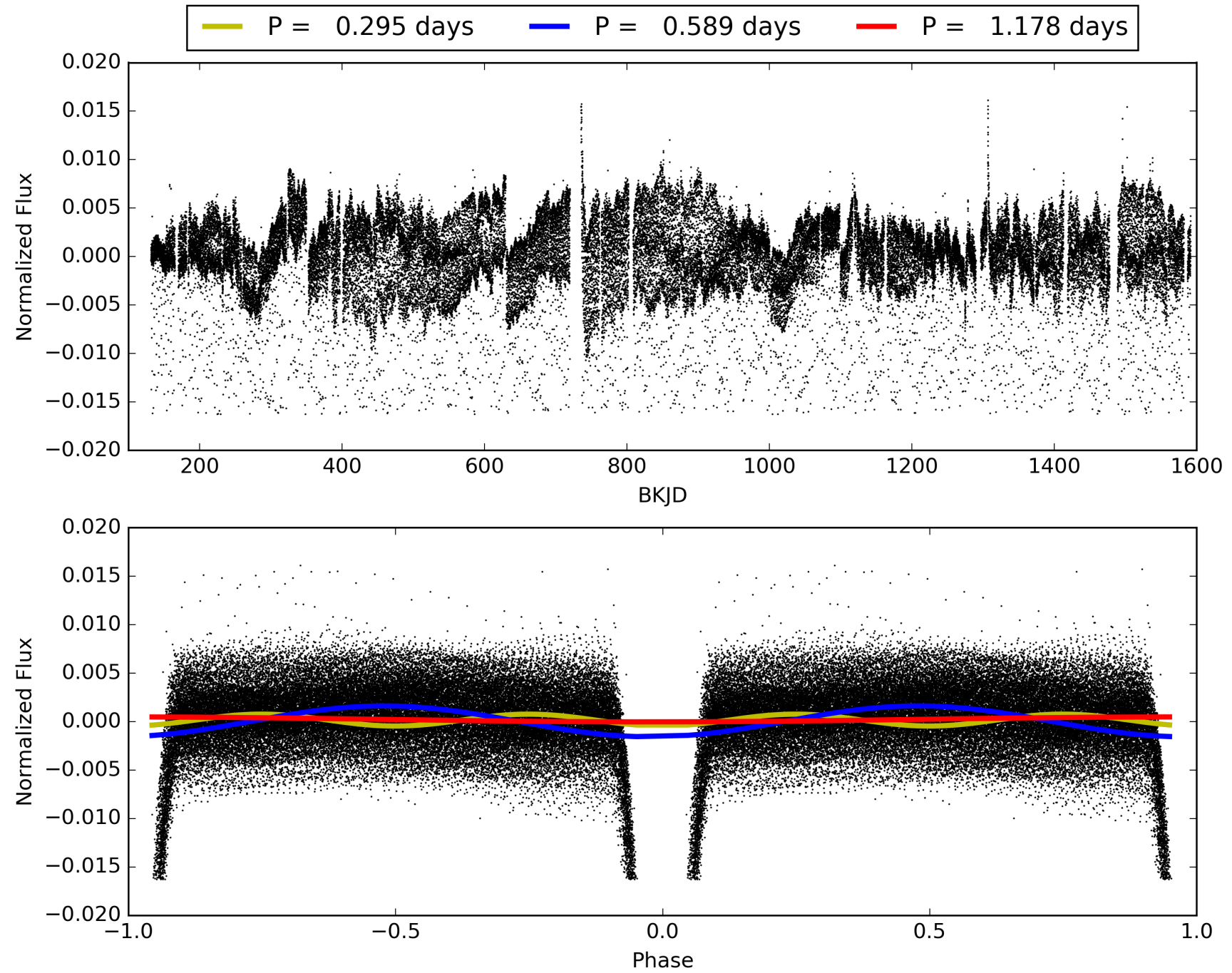
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2172/2172]
GhostDiagnostic-chr: 2.223
Centroid-sig: 0.0%
Centroid-so: 0.065 arcsec [131.26σ]
OotOffset-rm: 0.033 arcsec [0.48σ]
KicOffset-rm: 0.041 arcsec [0.60σ]
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]

TCE 008444552-01, PDC Light Curves

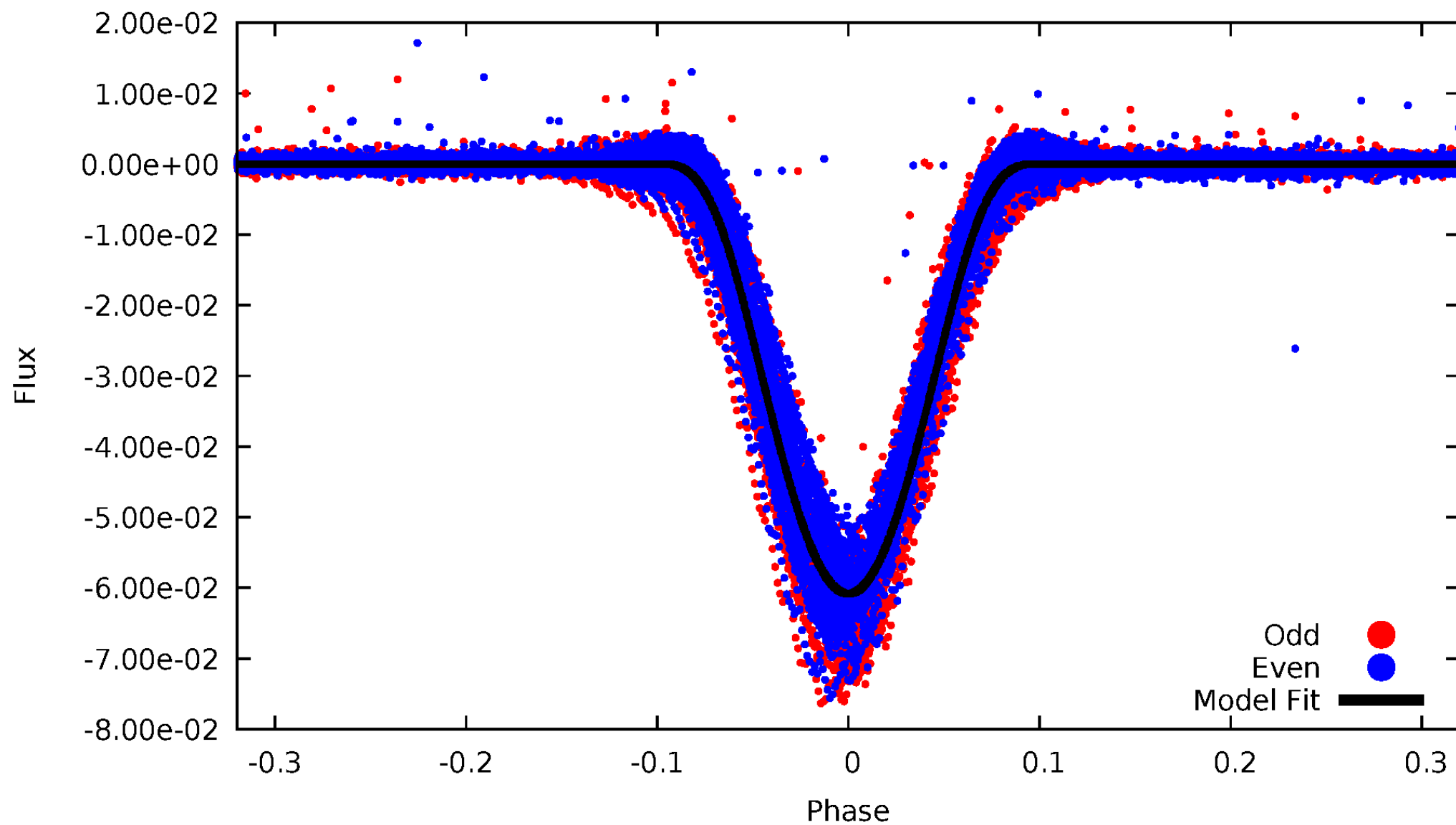


TCE 008444552-01



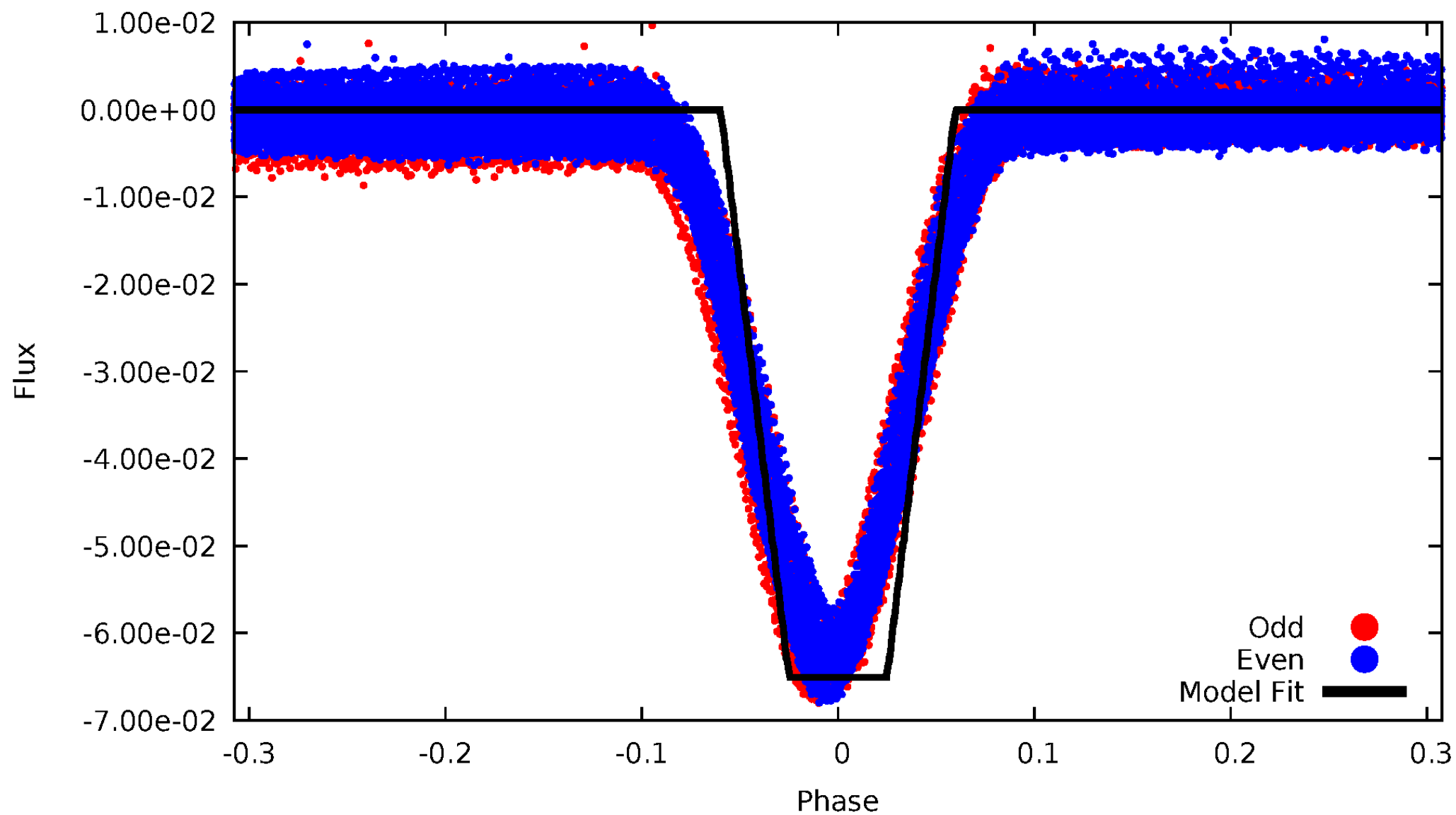
DV Odd/Even

TCE 008444552-01



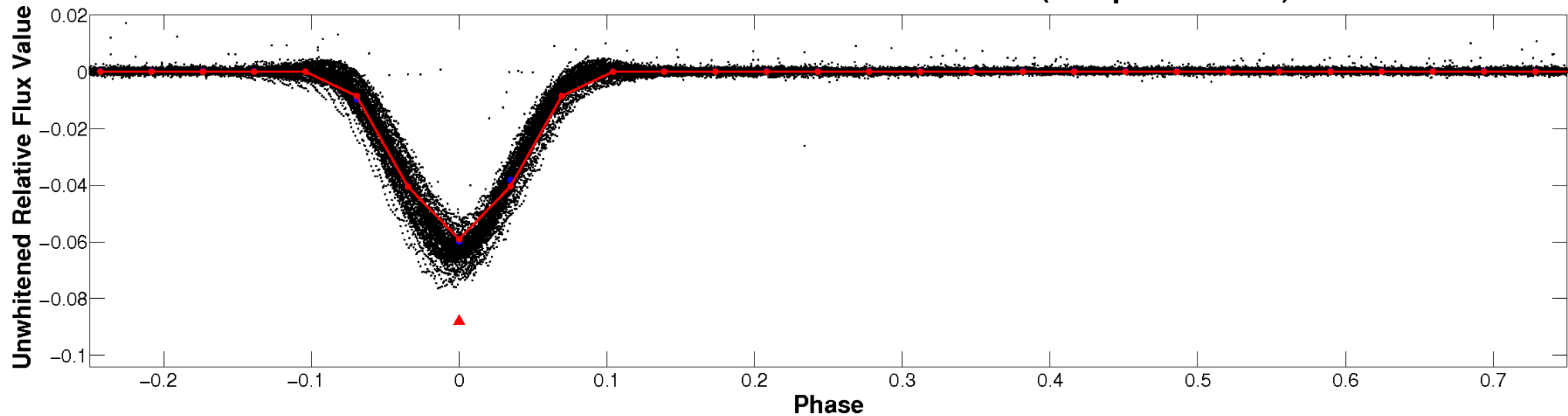
ALT Odd/Even

TCE 008444552-01

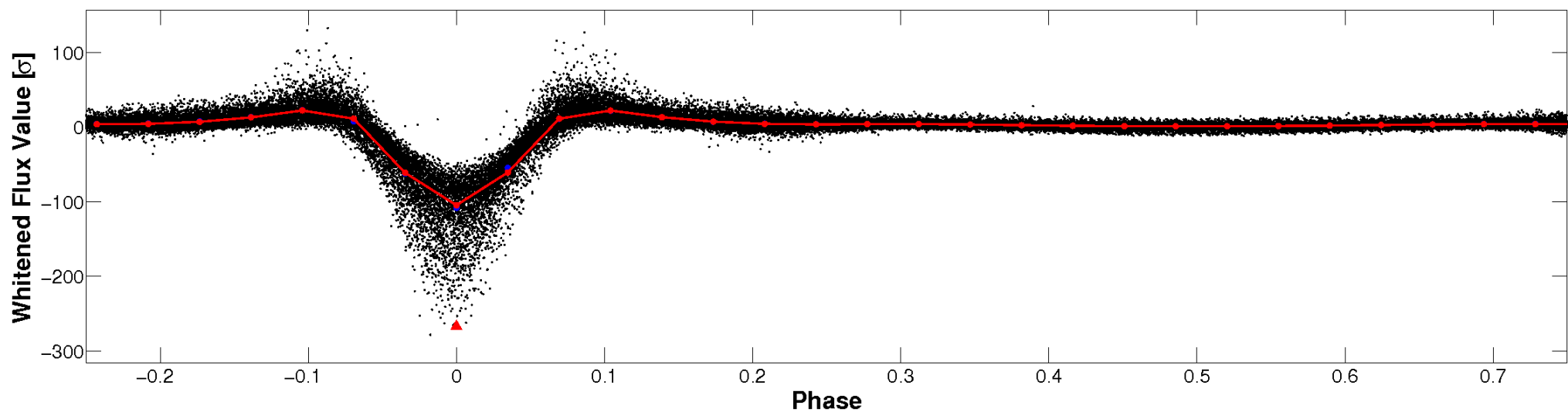


Non-Whitened Vs. Whitened Light Curve

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

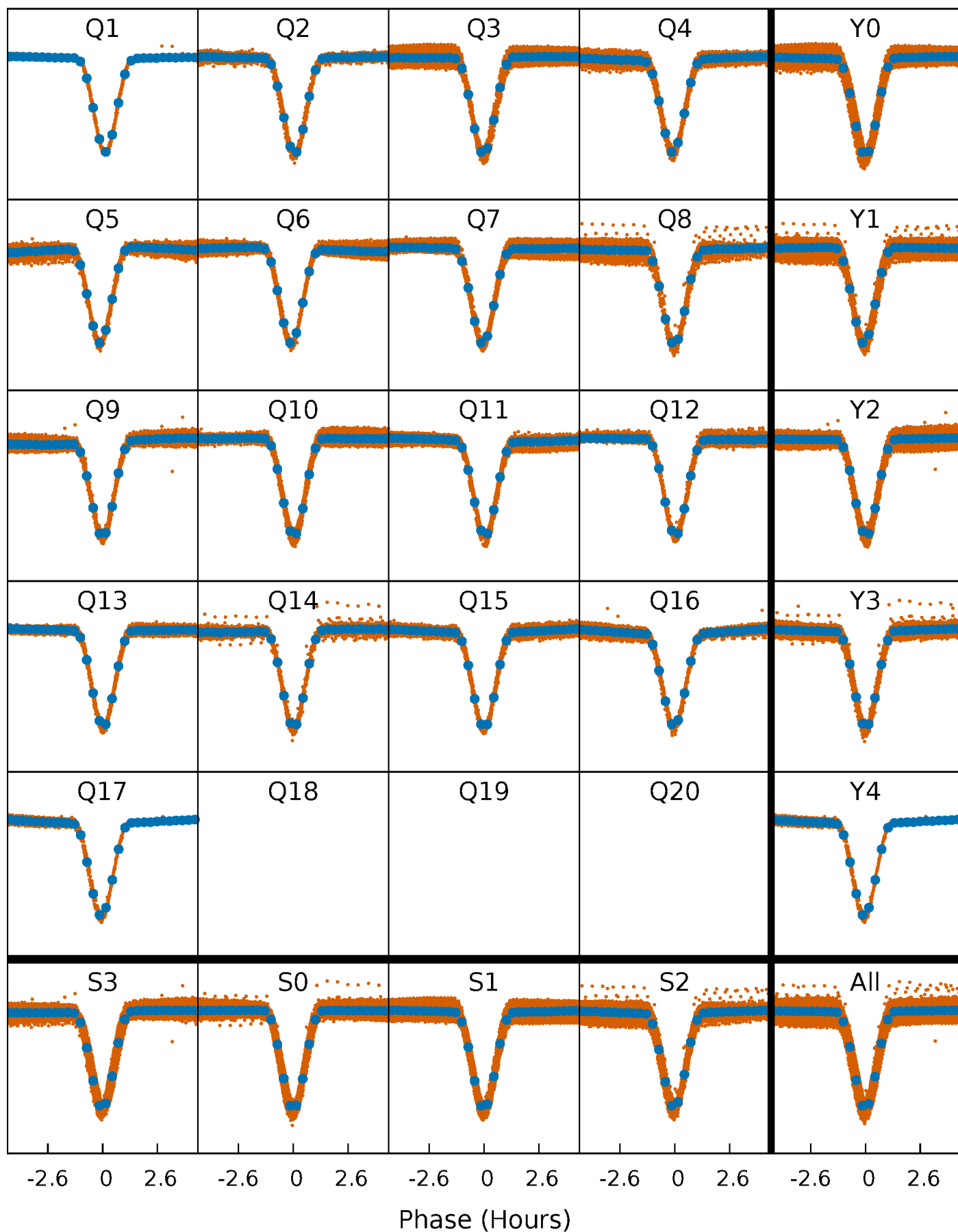


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



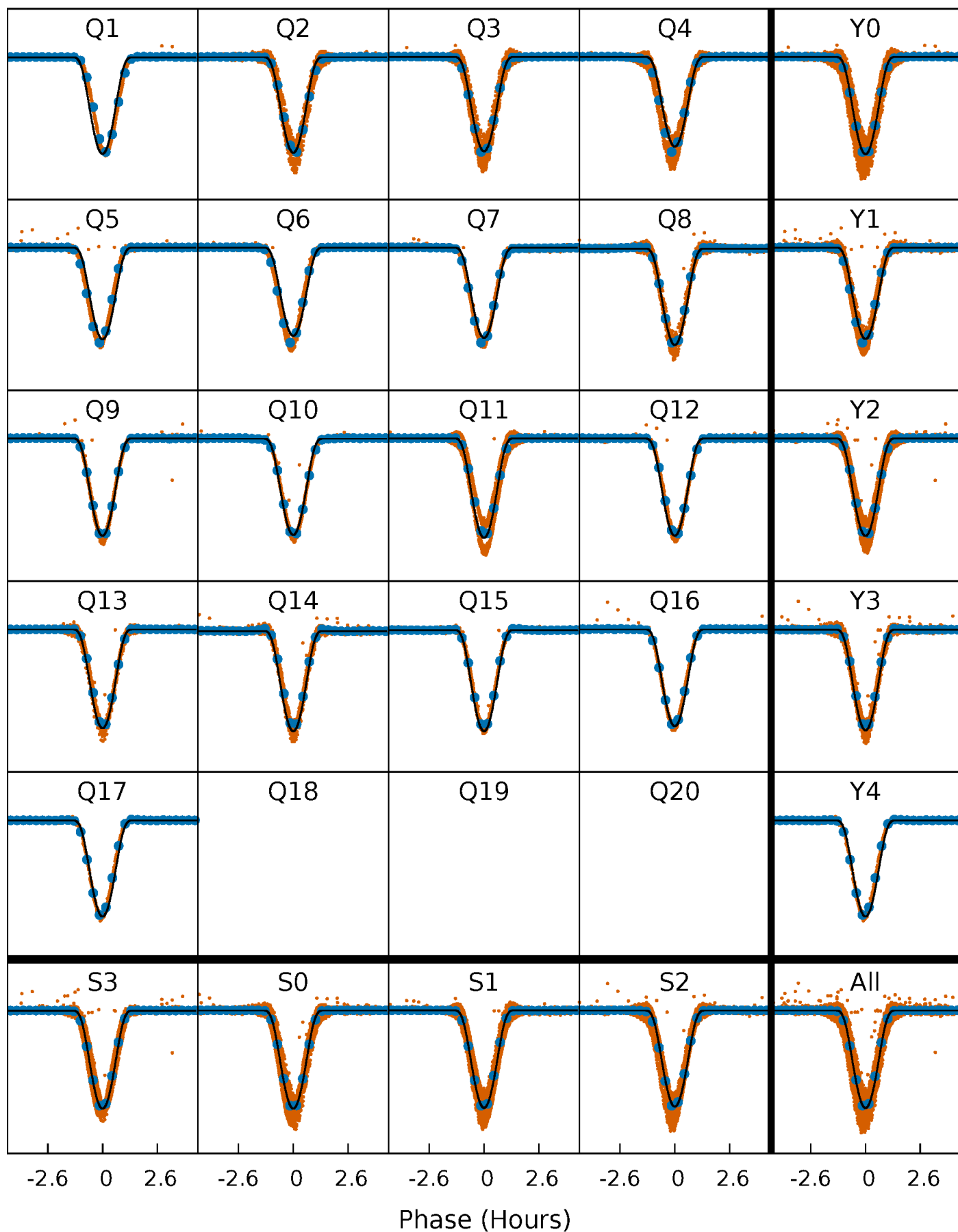
PDC Quarter-Phased Transit Curves

TCE 008444552-01 P= 0.589048 Days $T_0=131.591789$ (BKJD)



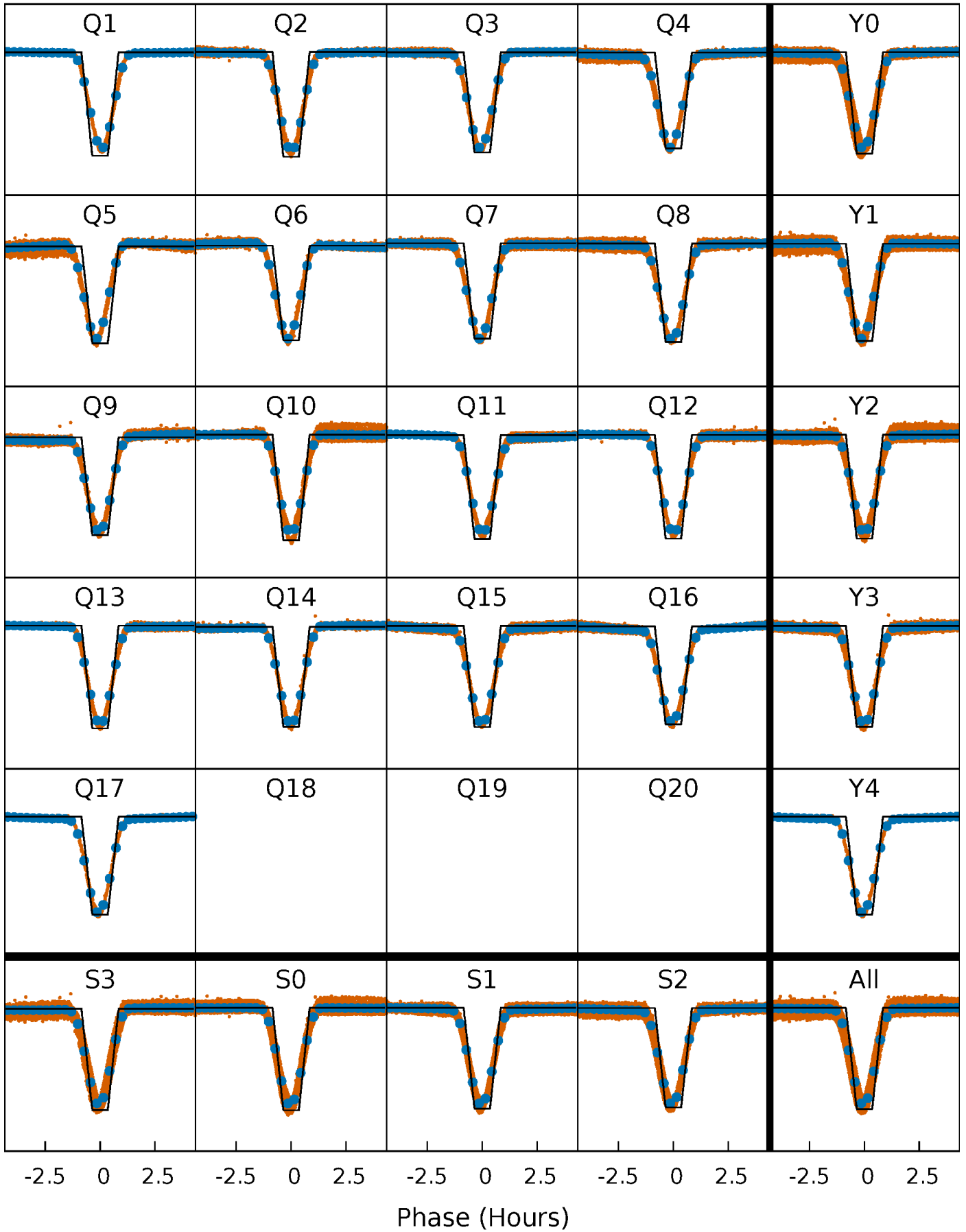
DV Quarter-Phased Transit Curves

TCE 008444552-01 P= 0.589048 Days $T_0=131.591789$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

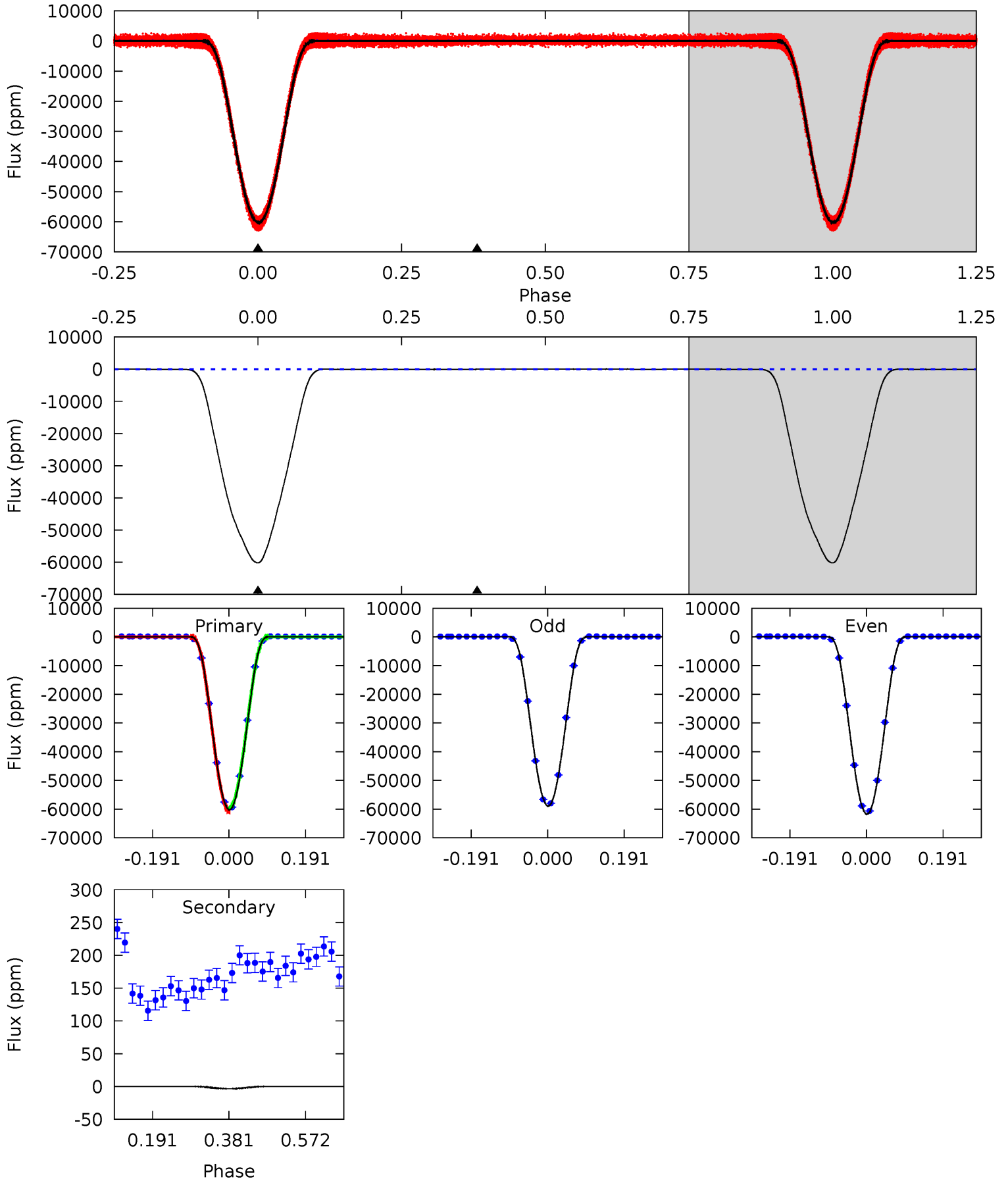
TCE 008444552-01 P= 0.589048 Days $T_0=131.594220$ (BKJD)



DV Model-Shift Uniqueness Test

008444552-01, P = 0.589048 Days, E = 131.002741 Days

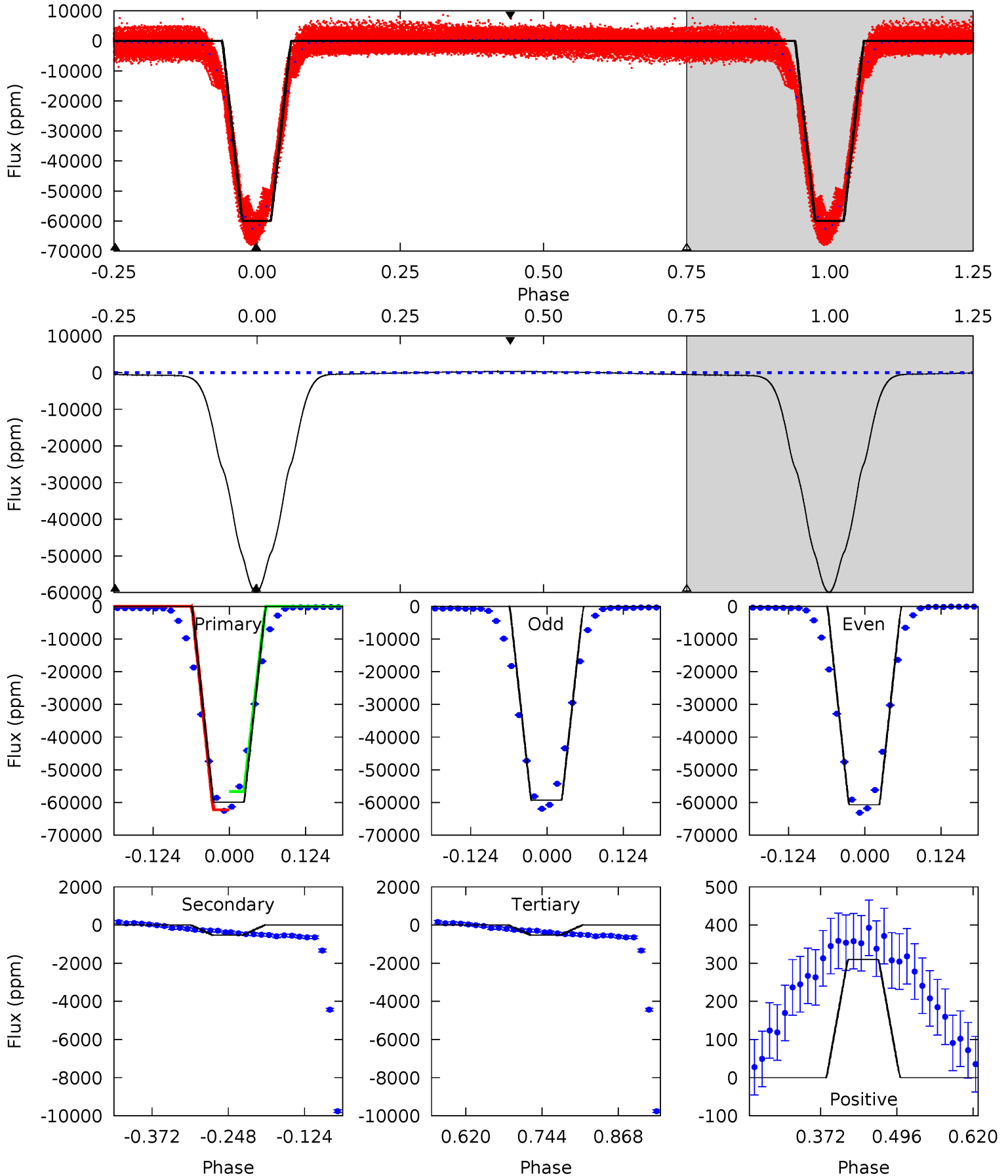
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8609	0.49	0	0	4.43	1.31	3.18	8609	8609	0.49	0.49	198.6	1.00	0.00	0



Alt Model-Shift Uniqueness Test

008444552-01, P = 0.589048 Days, E = 131.005172 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2556	22.6	22.3	13.2	4.52	1.54	11.1	2534	2543	0.31	9.40	29.2	1.00	0.01	112.6



Stellar Parameters For KIC 008444552

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5592^{+166}_{-150}	$4.510^{+0.115}_{-0.104}$	$-0.740^{+0.300}_{-0.300}$	$0.771^{+0.119}_{-0.097}$	$0.703^{+0.092}_{-0.035}$	$2.157^{+0.994}_{-0.679}$
	+3%/-3%	+3%/-2%	+41%/-41%	+15%/-13%	+13%/-5%	+46%/-32%
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 008444552-01 / KOI 1769.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3 ± 7	$25.96^{+2.14}_{-2.11}$	2743^{+131}_{-127}	-2935^{+77}_{-81}	$0.000^{+0.001}_{-0.001}$
Alt.	-530 ± 23	$21.67^{+1.88}_{-1.51}$	2735^{+138}_{-118}	-2784^{+90}_{-95}	$0.094^{+0.015}_{-0.014}$

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 $A_{obs} \gg 1.0$

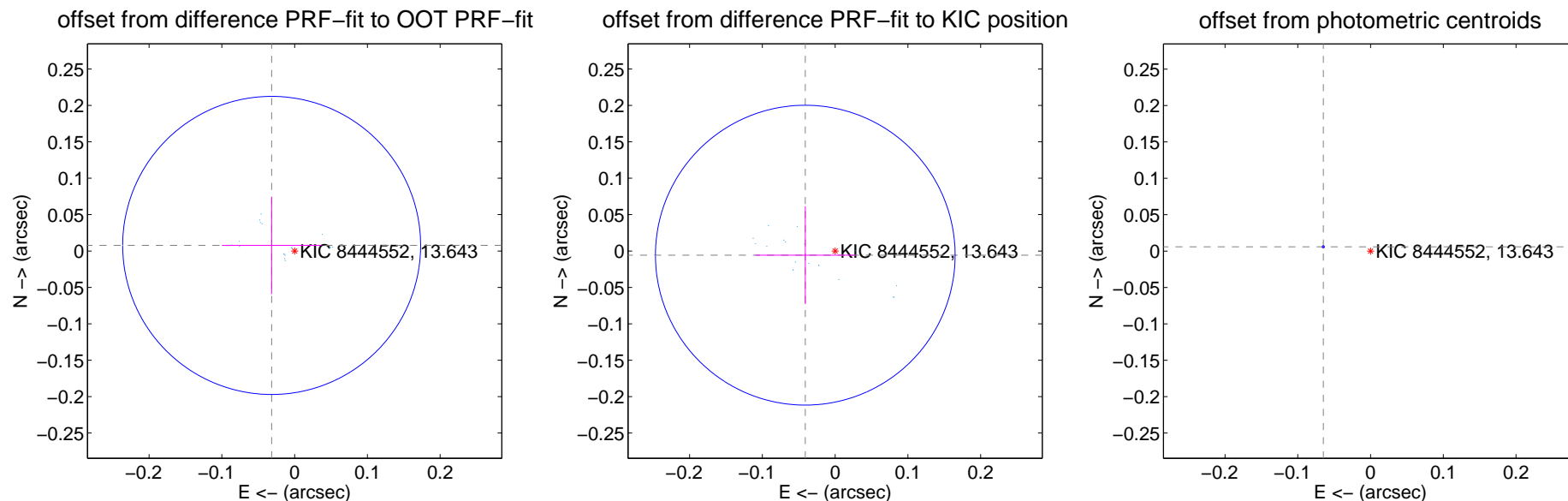
DV Centroid Data

Supplemental centroid analysis for 008444552-01. Kepler magnitude: 13.64. Transit SNR 4104.47

There are 17 quarters with good PRF difference image offsets

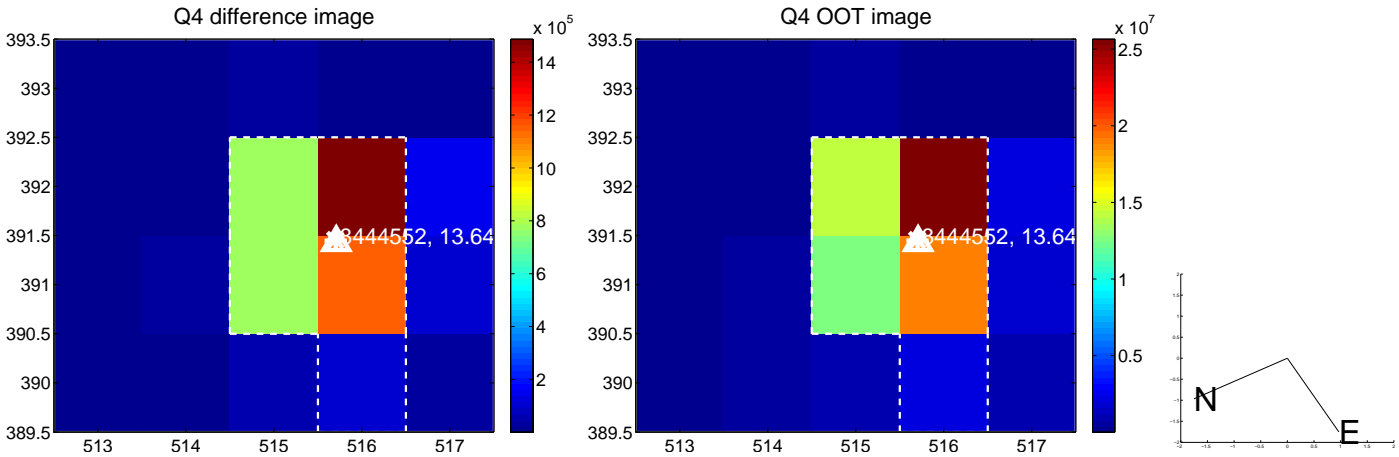
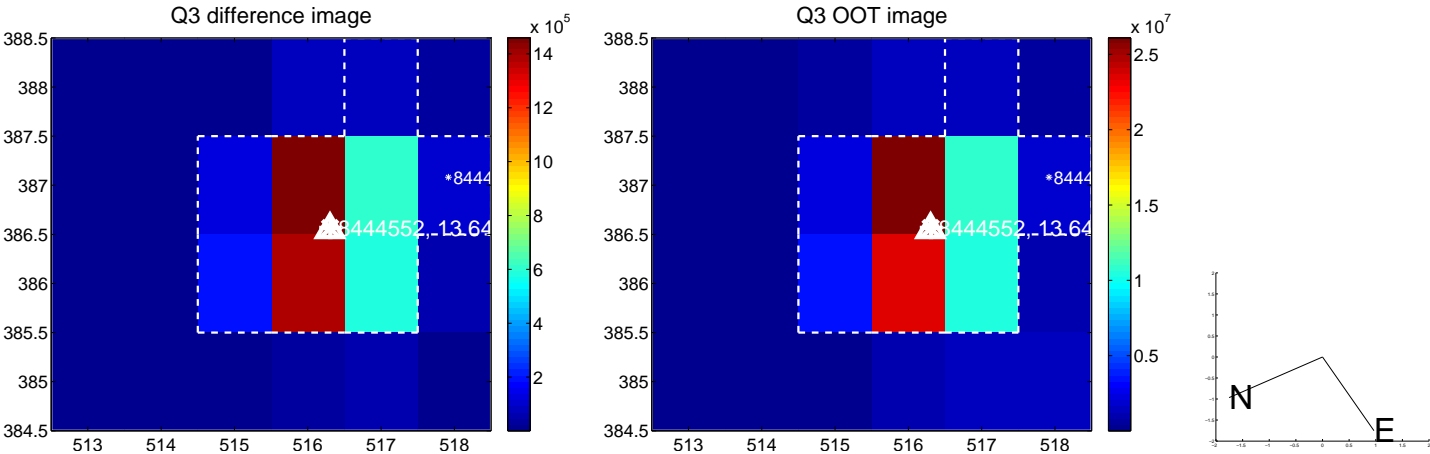
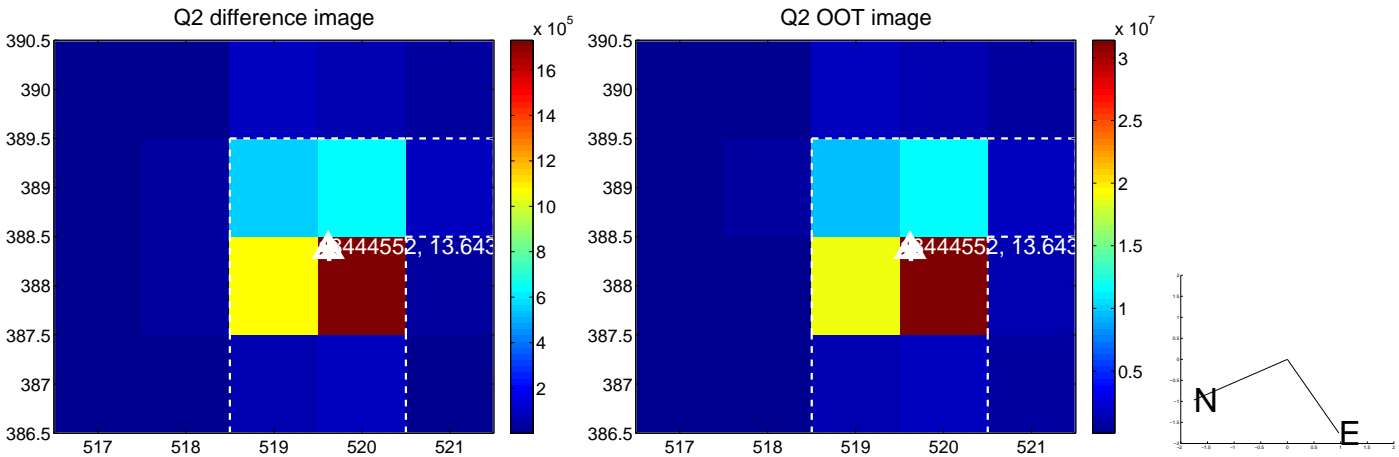
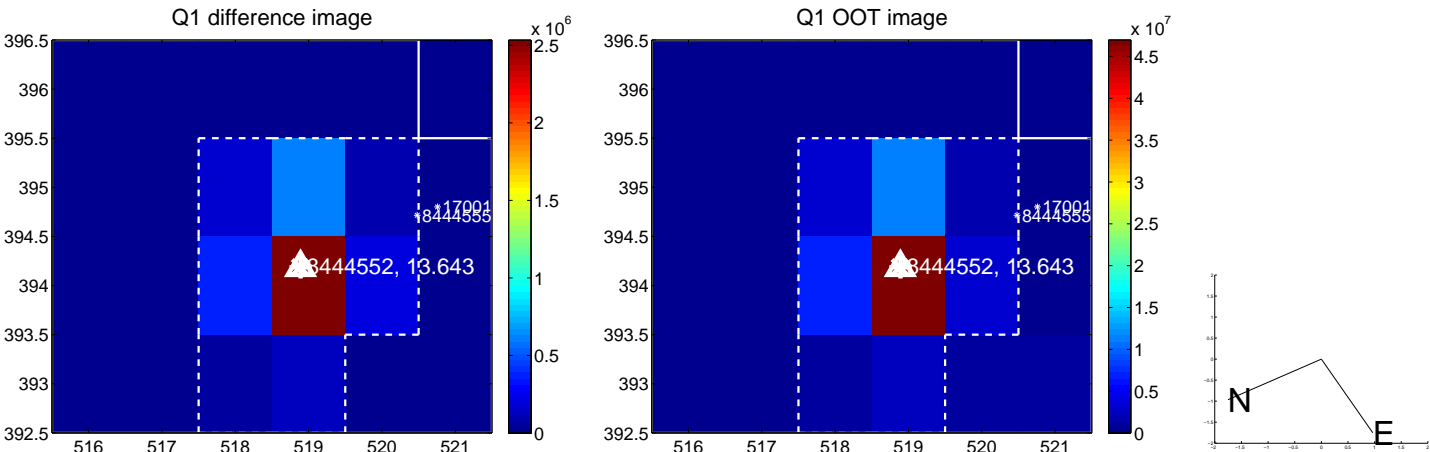
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.033 ± 0.068	0.48	0.032 ± 0.068	0.008 ± 0.067
PRF-fit source offset from KIC position	0.041 ± 0.069	0.60	0.041 ± 0.069	-0.006 ± 0.067
photometric centroid source offset	0.07 ± 0.00	131.26	0.06 ± 0.00	0.01 ± 0.00

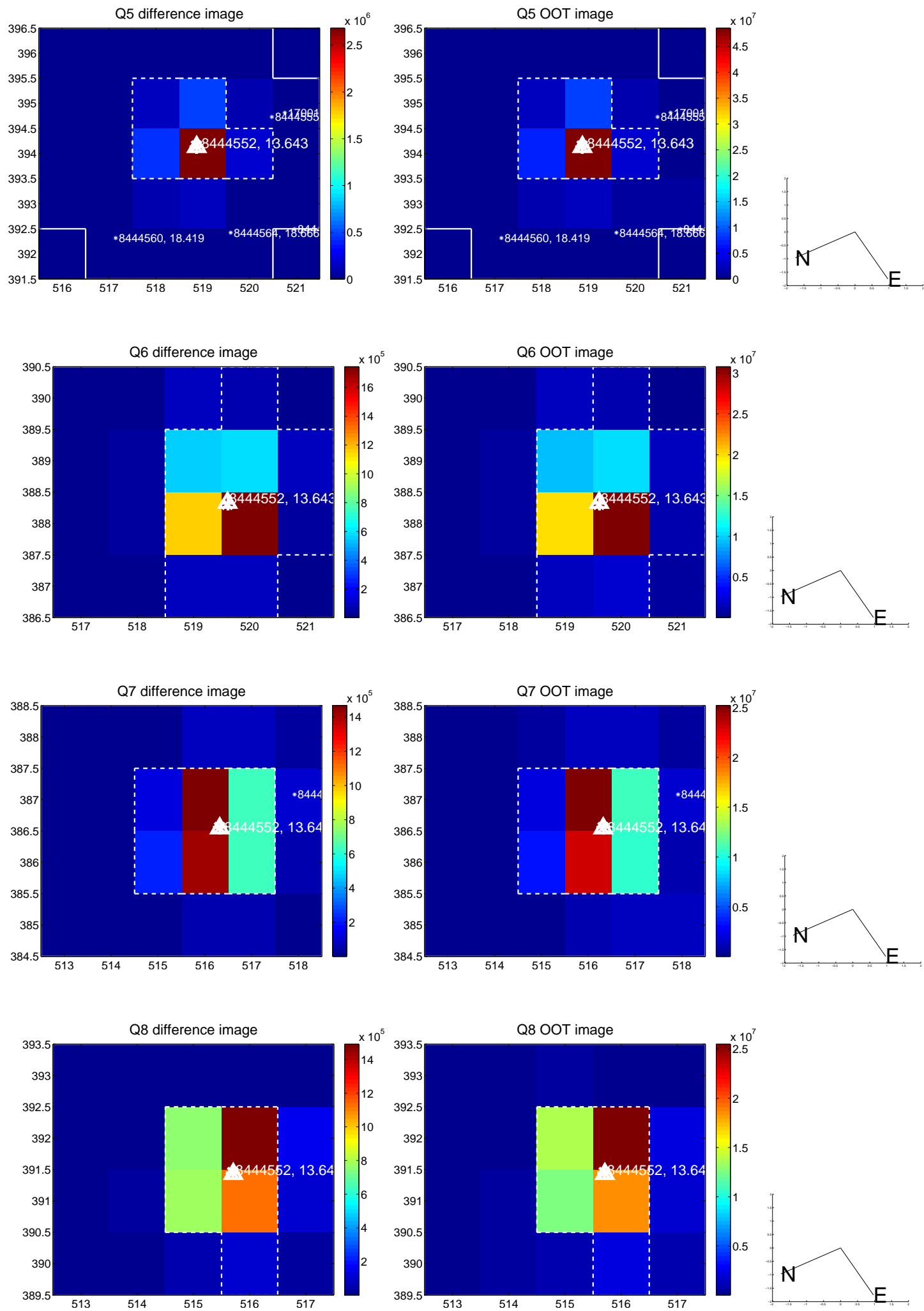


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

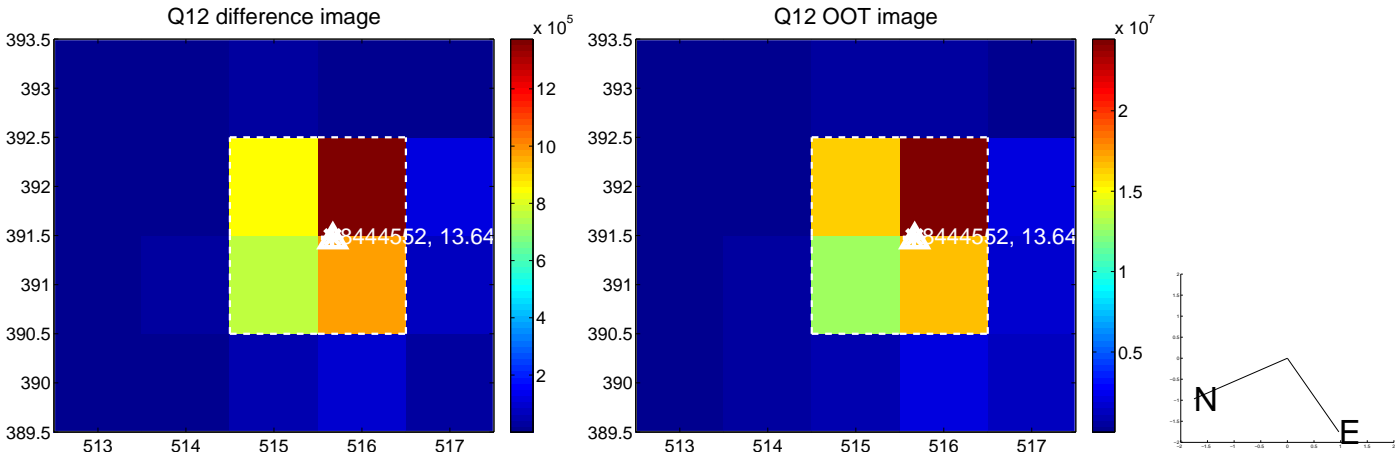
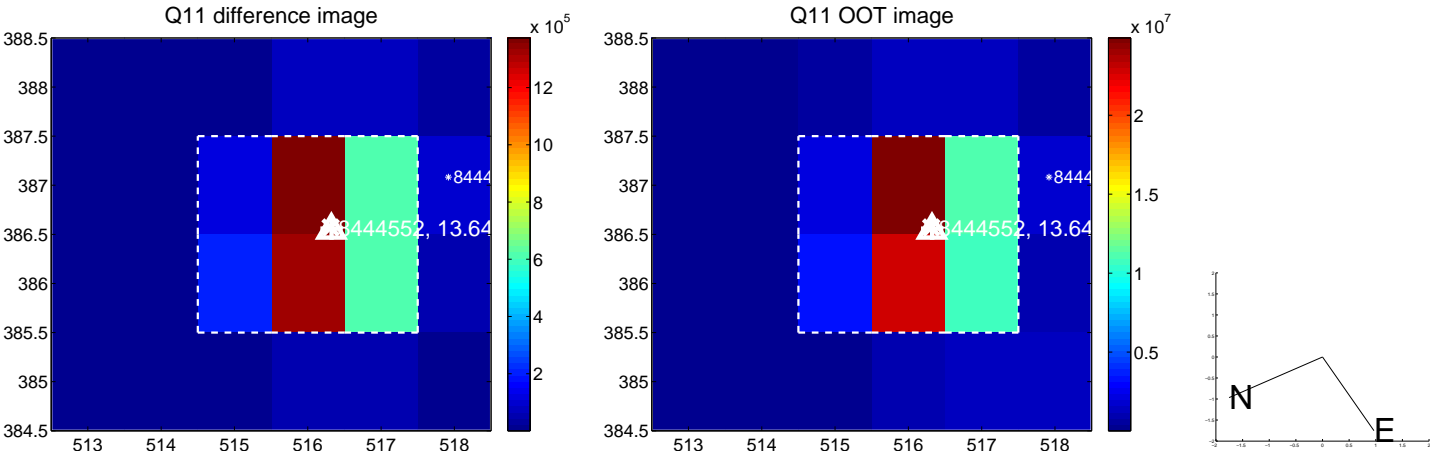
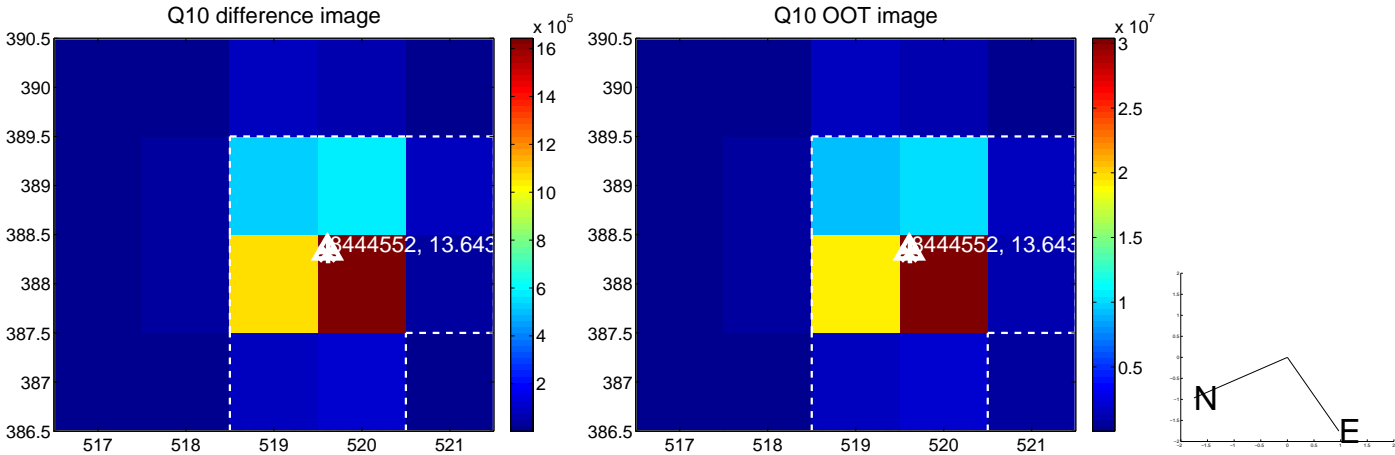
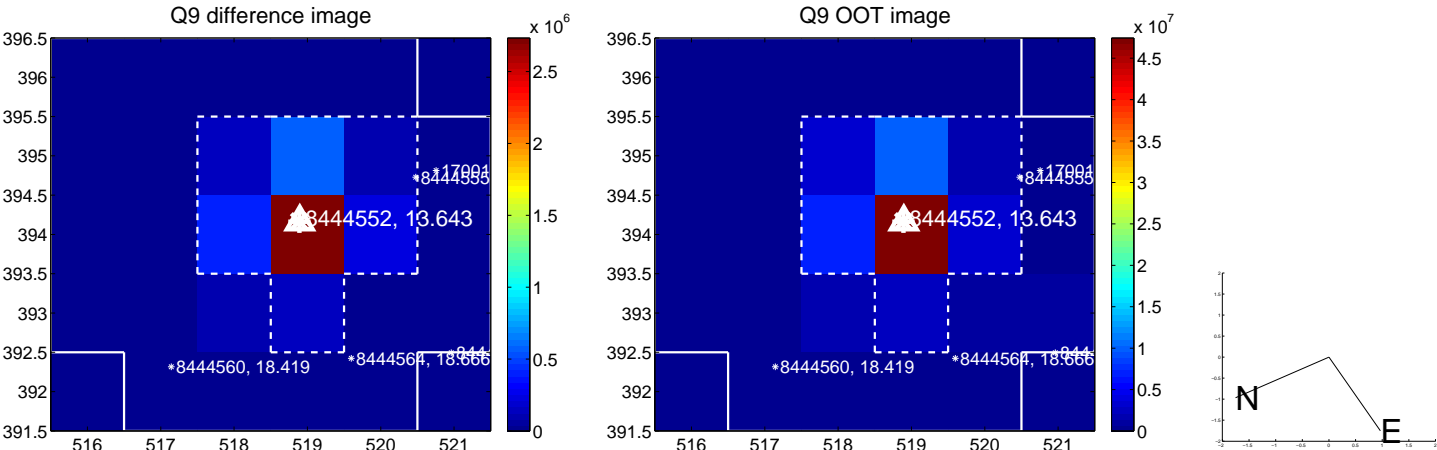
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



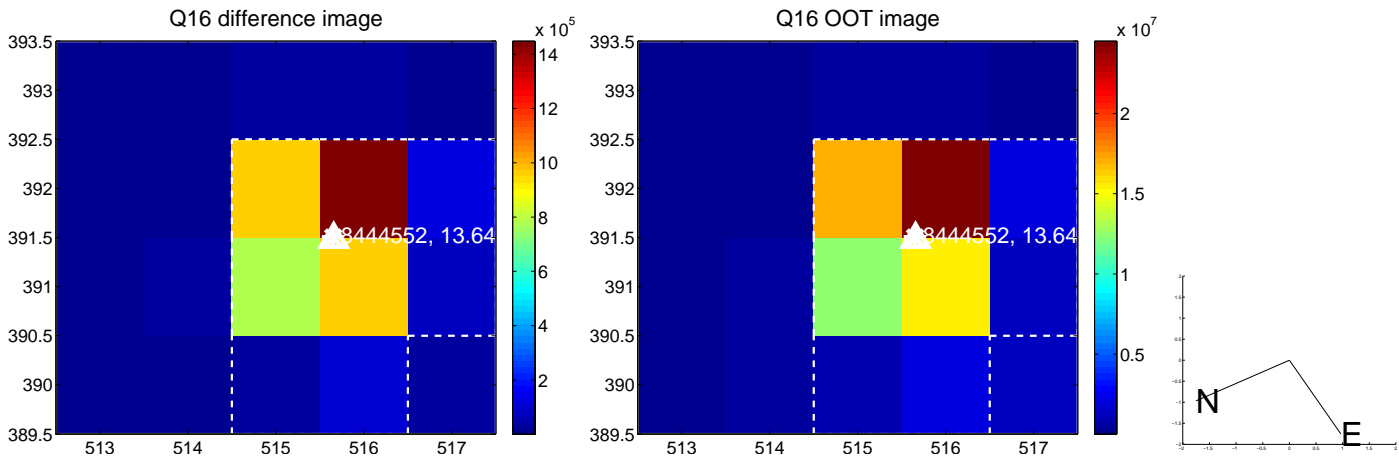
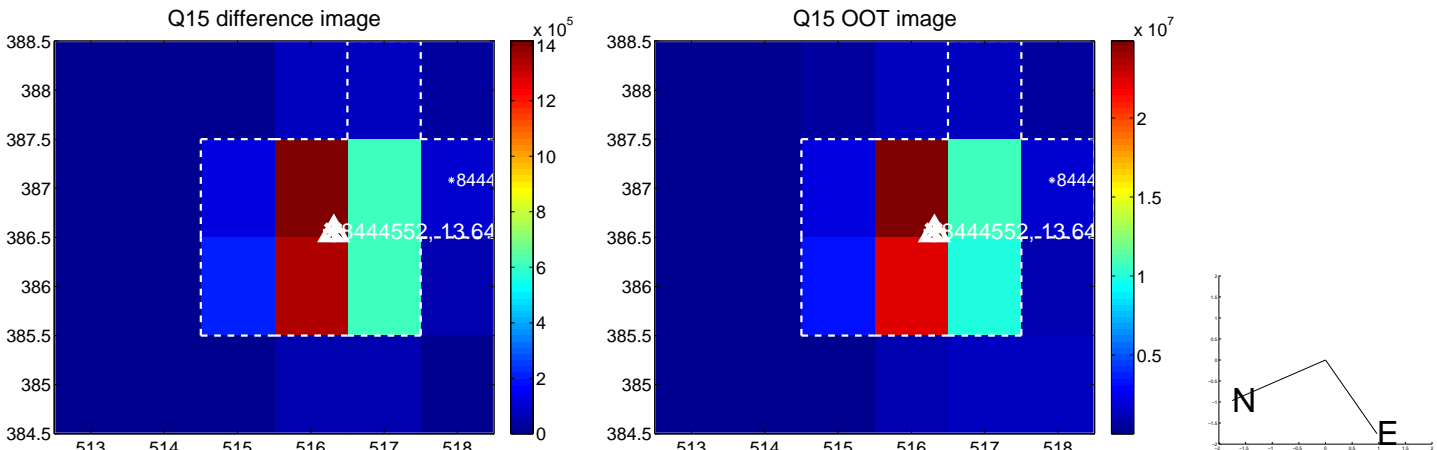
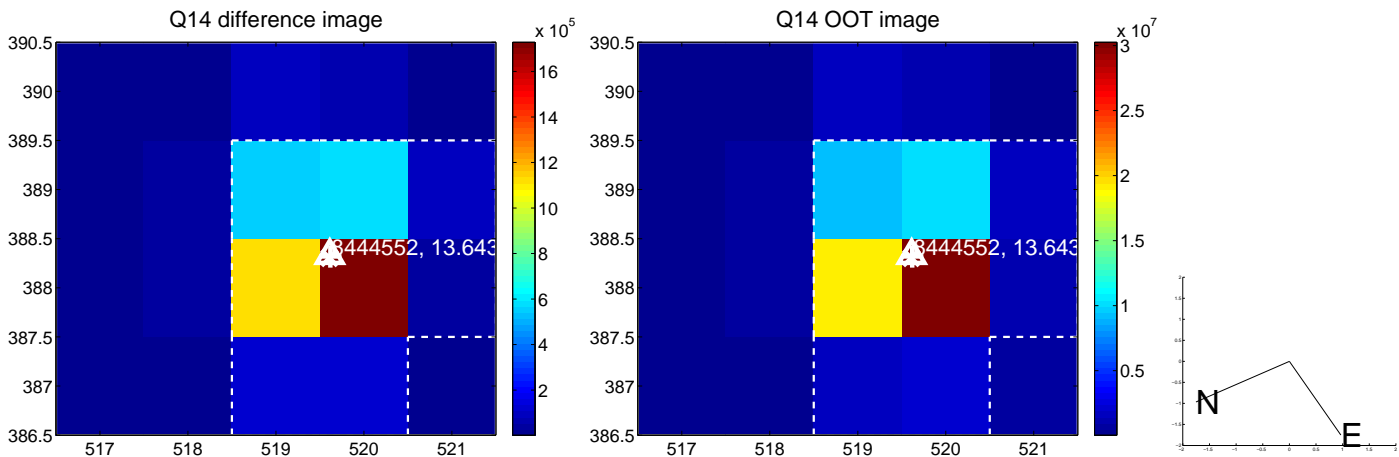
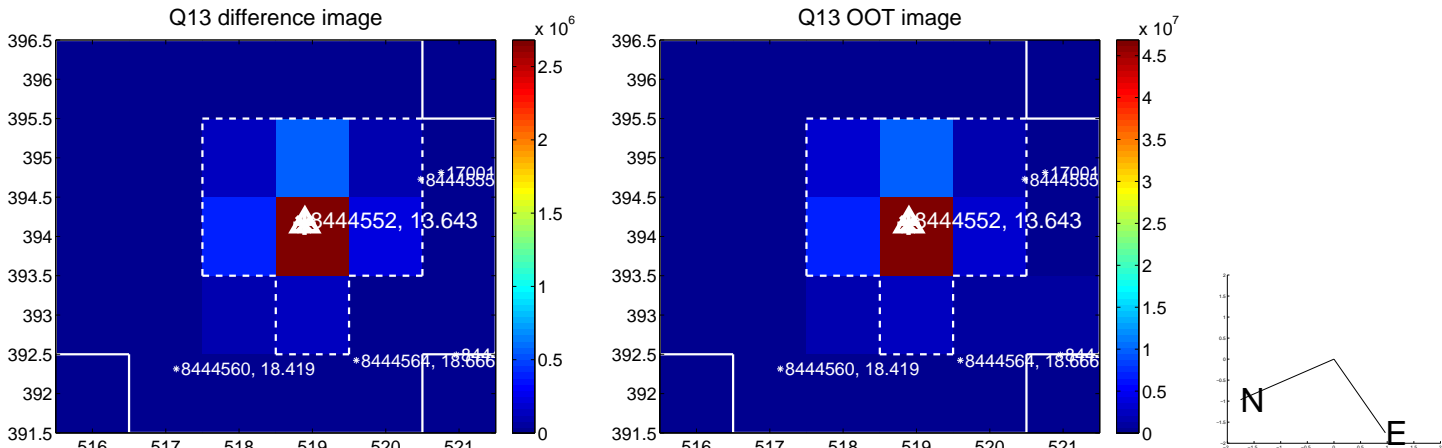
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



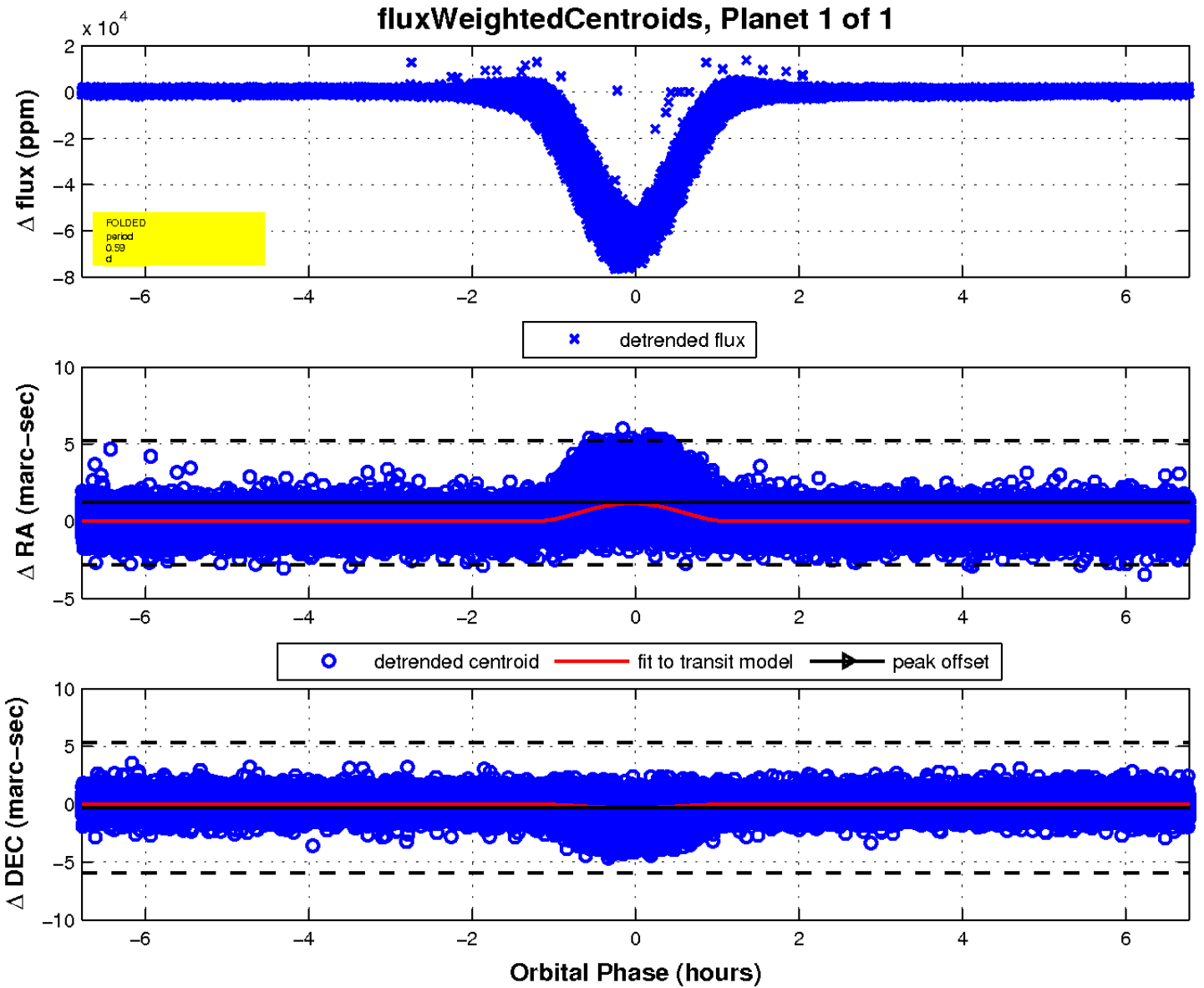
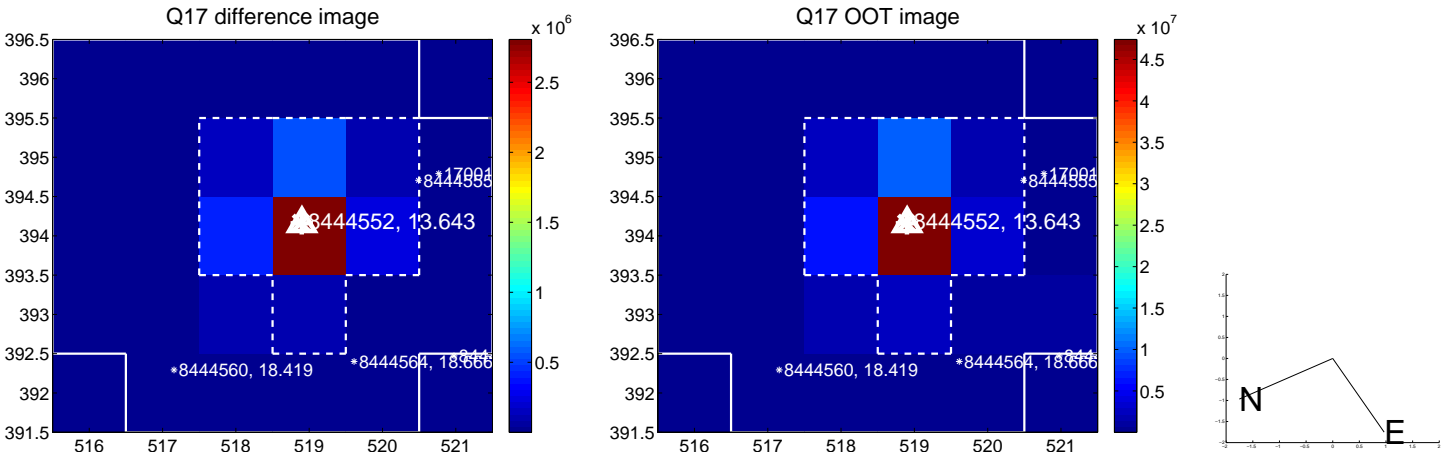
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

