

KIC 005899544

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})
005899544-01	OBS	1034.01	1.739403	132.251126	2265.0	1.981	188.9	84.5	0.74	5415	4.30	611.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005899544-01	OBS	FP	0.00	0	0	1	0	CENT_KIC_POS—HALO_GHOST

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.

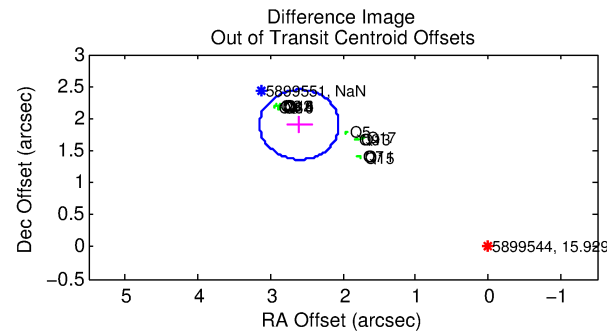
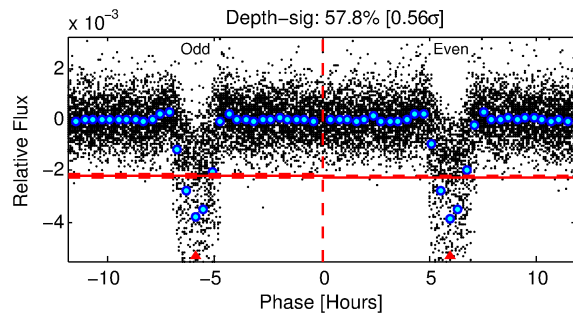
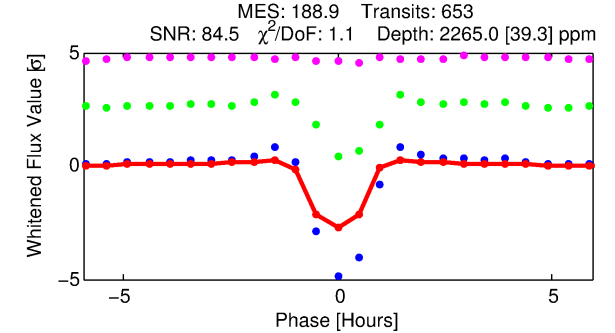
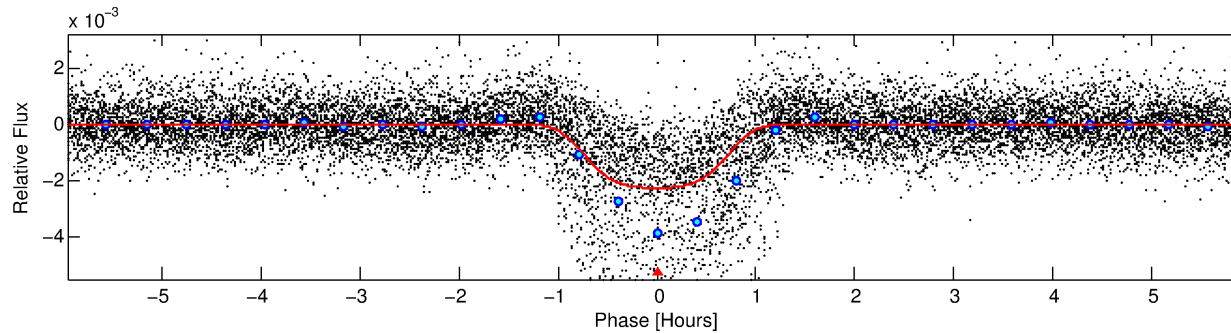
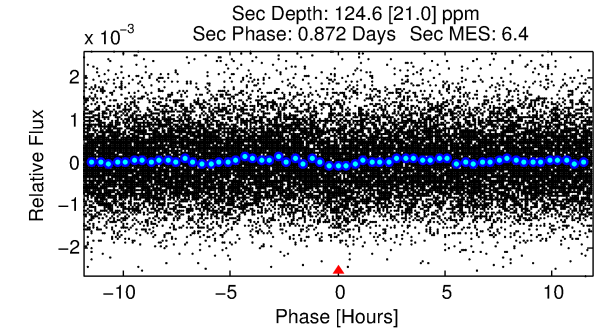
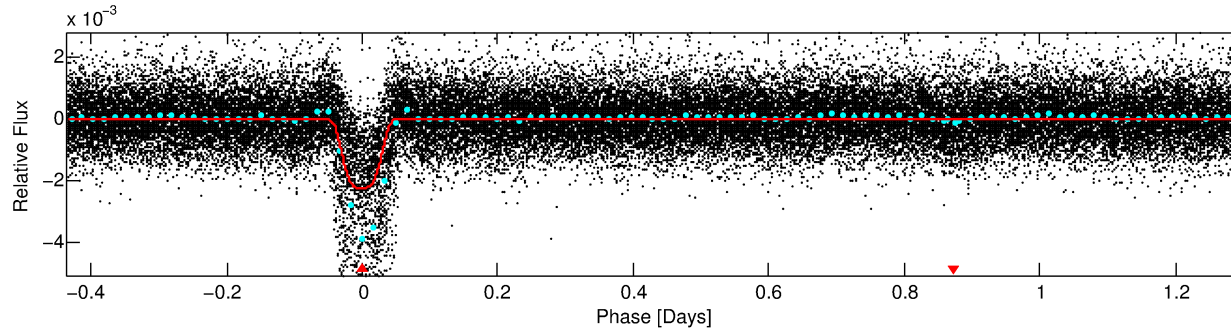
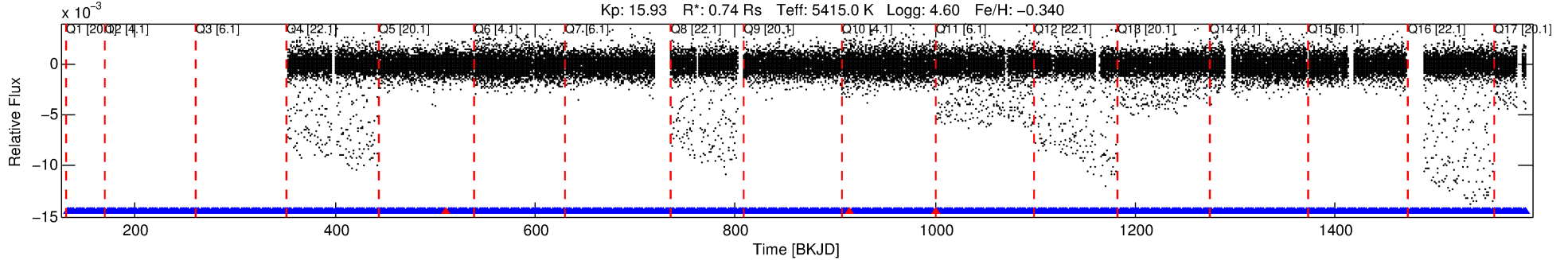
Ephemeris Match Information For 005899544-01

No Significant Match Found

DV One-Page Summary

KIC: 5899544 Candidate: 1 of 1 Period: 1.739 d
KOI: K01034.01 Corr: 0.897

Kp: 15.93 R*: 0.74 Rs Teff: 5415.0 K Logg: 4.60 Fe/H: -0.340



DV Fit Results:

Period = 1.73940 [0.00000] d
Epoch = 132.2511 [0.0003] BKJD
Rp/R* = 0.0531 [0.0011]
a/R* = 3.67 [0.22]
b = 0.91 [0.01]
Seff = 611.44 [160.60]
Teq = 1268 [83] K
Rp = 4.30 [0.83] Re
a = 0.0263 [0.0041] AU
Ag = 2.57 [0.71] [2.22σ]
Teffp = 2482 [143] K [7.34σ]

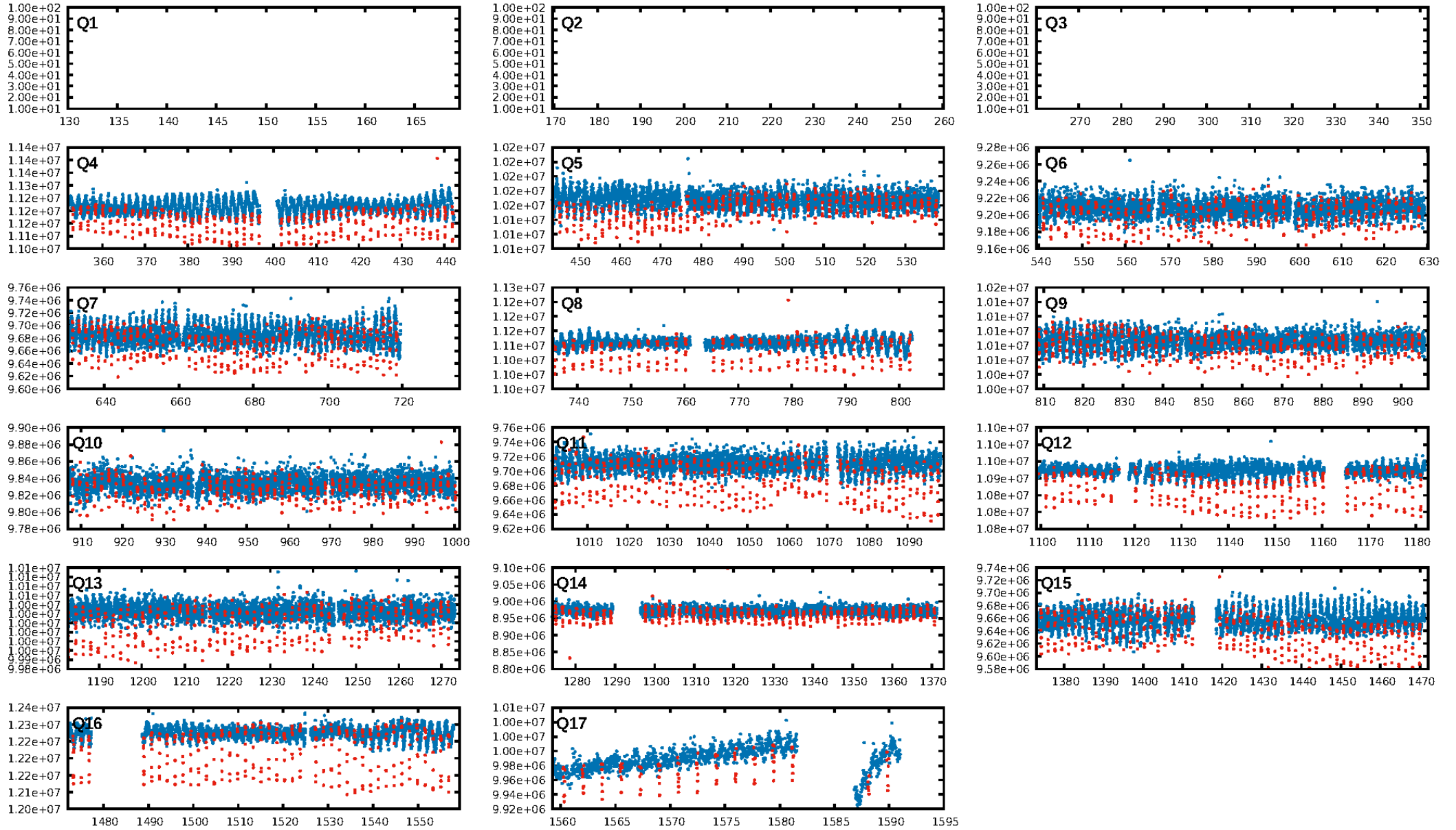
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [635/638]
GhostDiagnostic-chr: -0.1042
Centroid-sig: 0.0%
Centroid-so: 11.143 arcsec [108.66σ]
OotOffset-rm: 3.223 arcsec [17.76σ]
KicOffset-rm: 3.994 arcsec [49.60σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

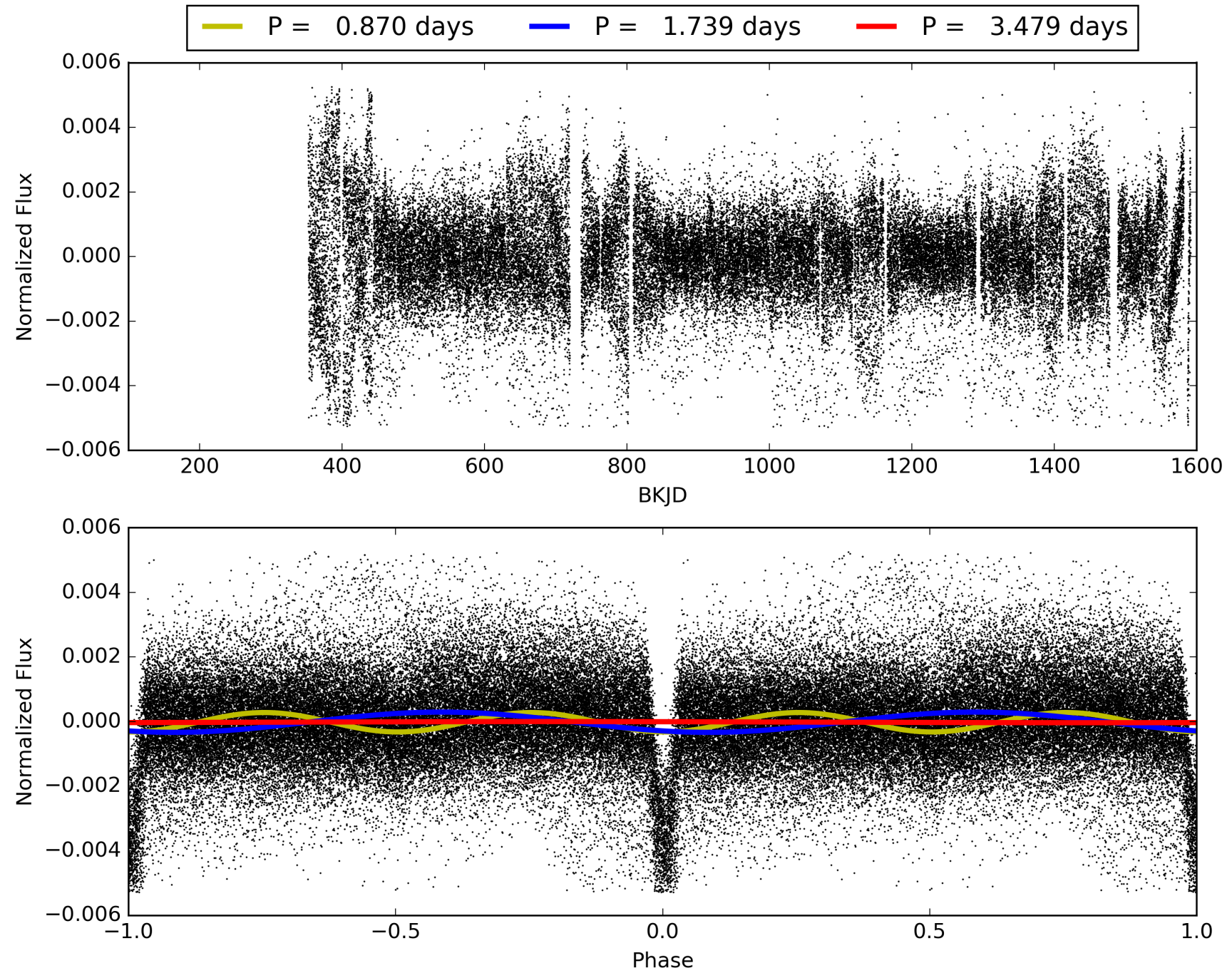
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 13:01:02 Z

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

TCE 005899544-01, PDC Light Curves

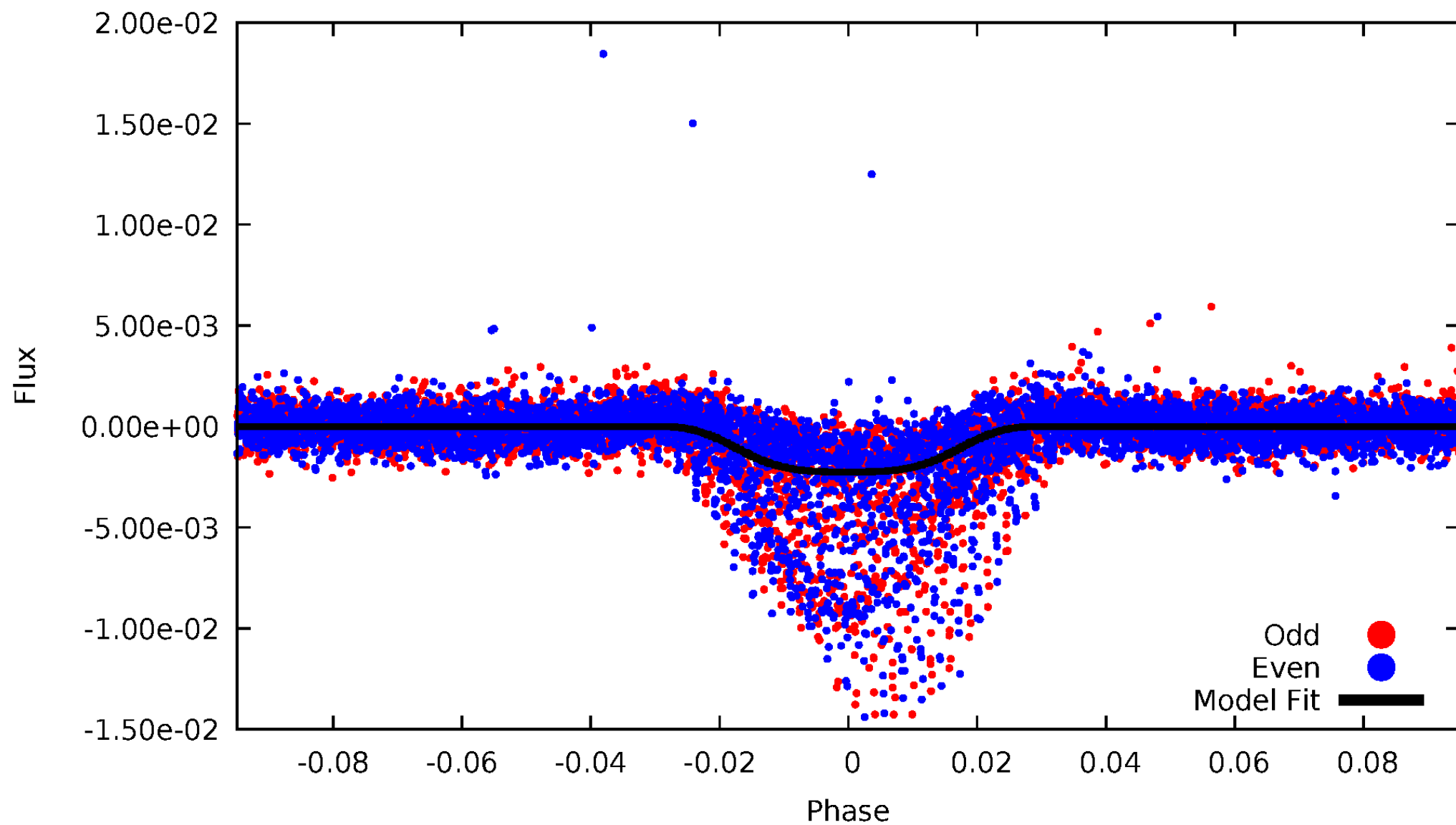


TCE 005899544-01



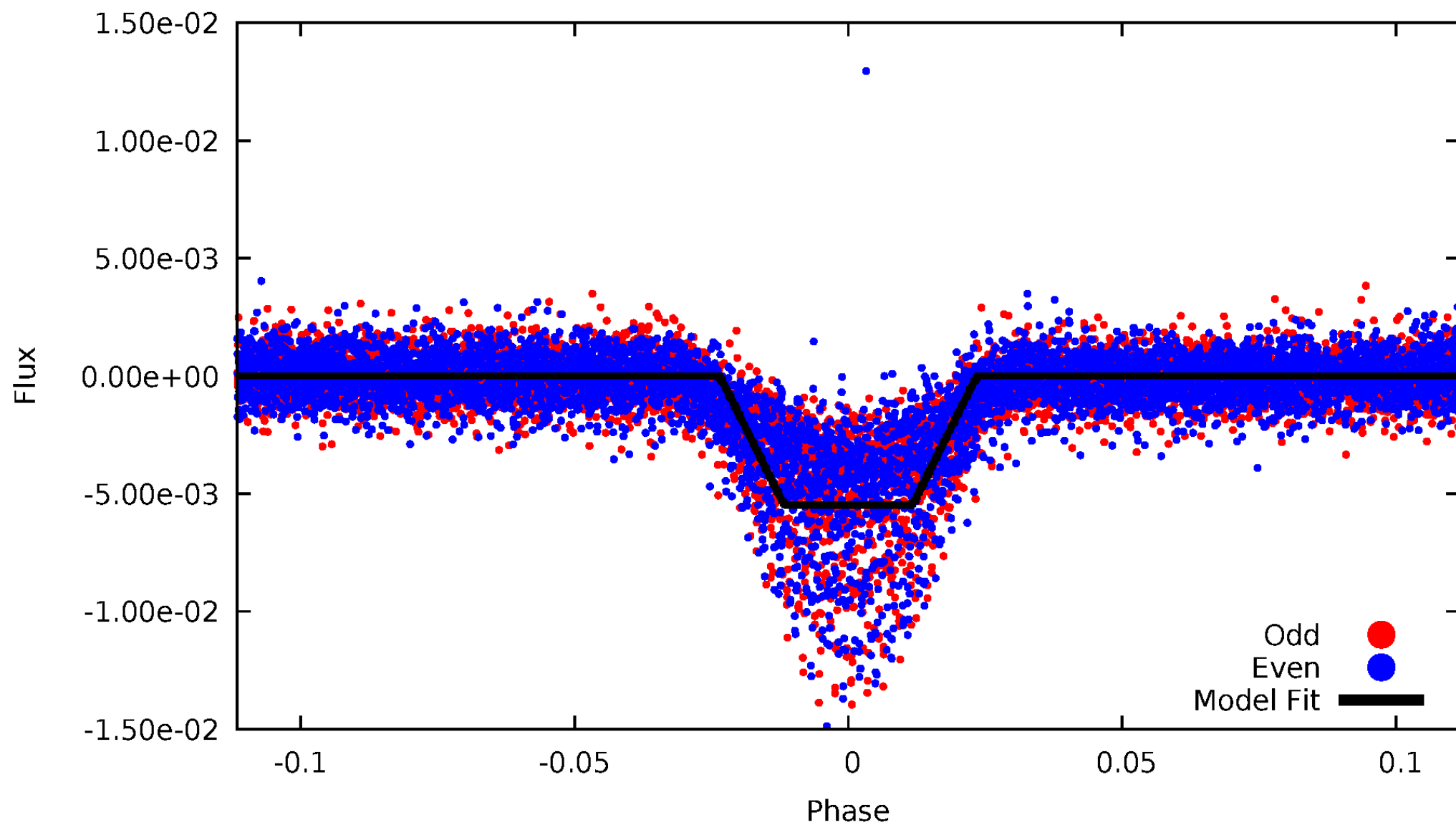
DV Odd/Even

TCE 005899544-01

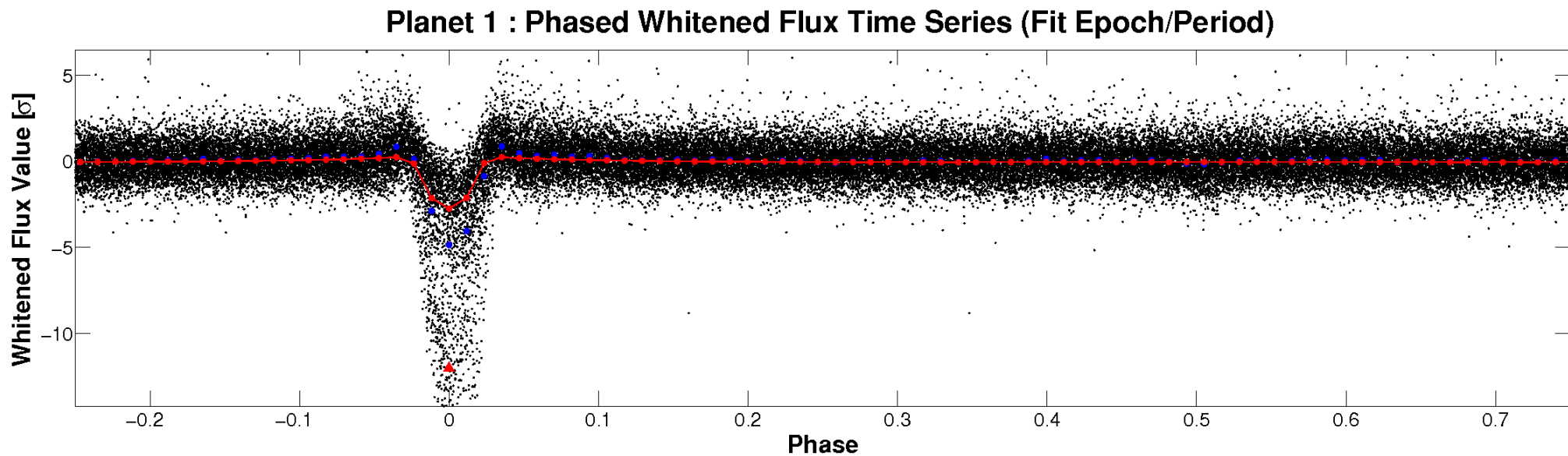
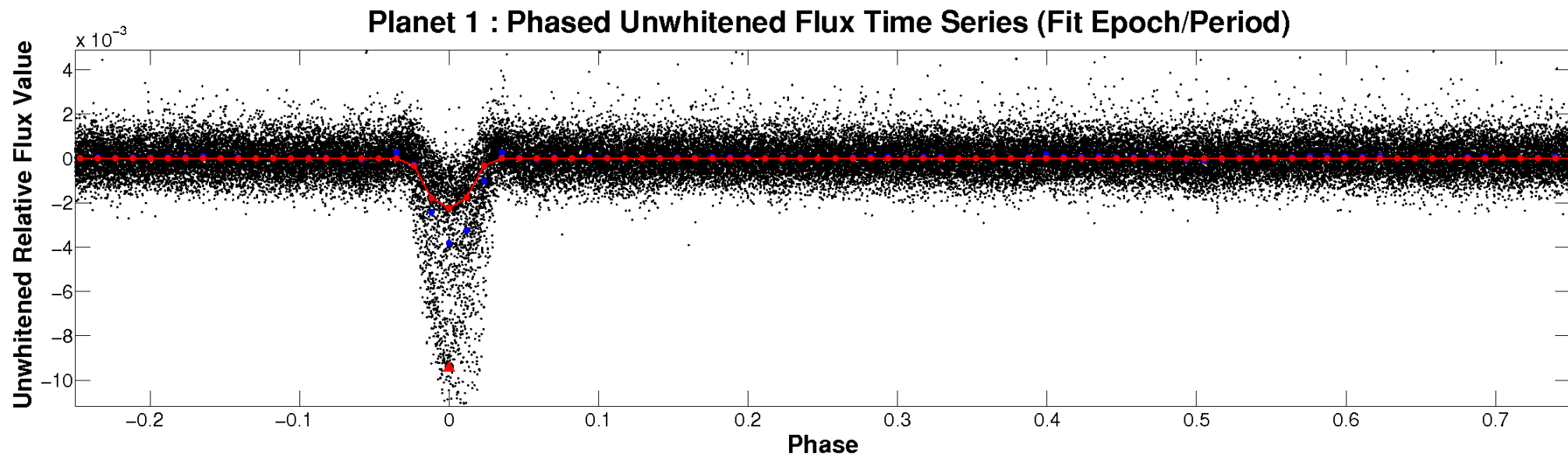


ALT Odd/Even

TCE 005899544-01

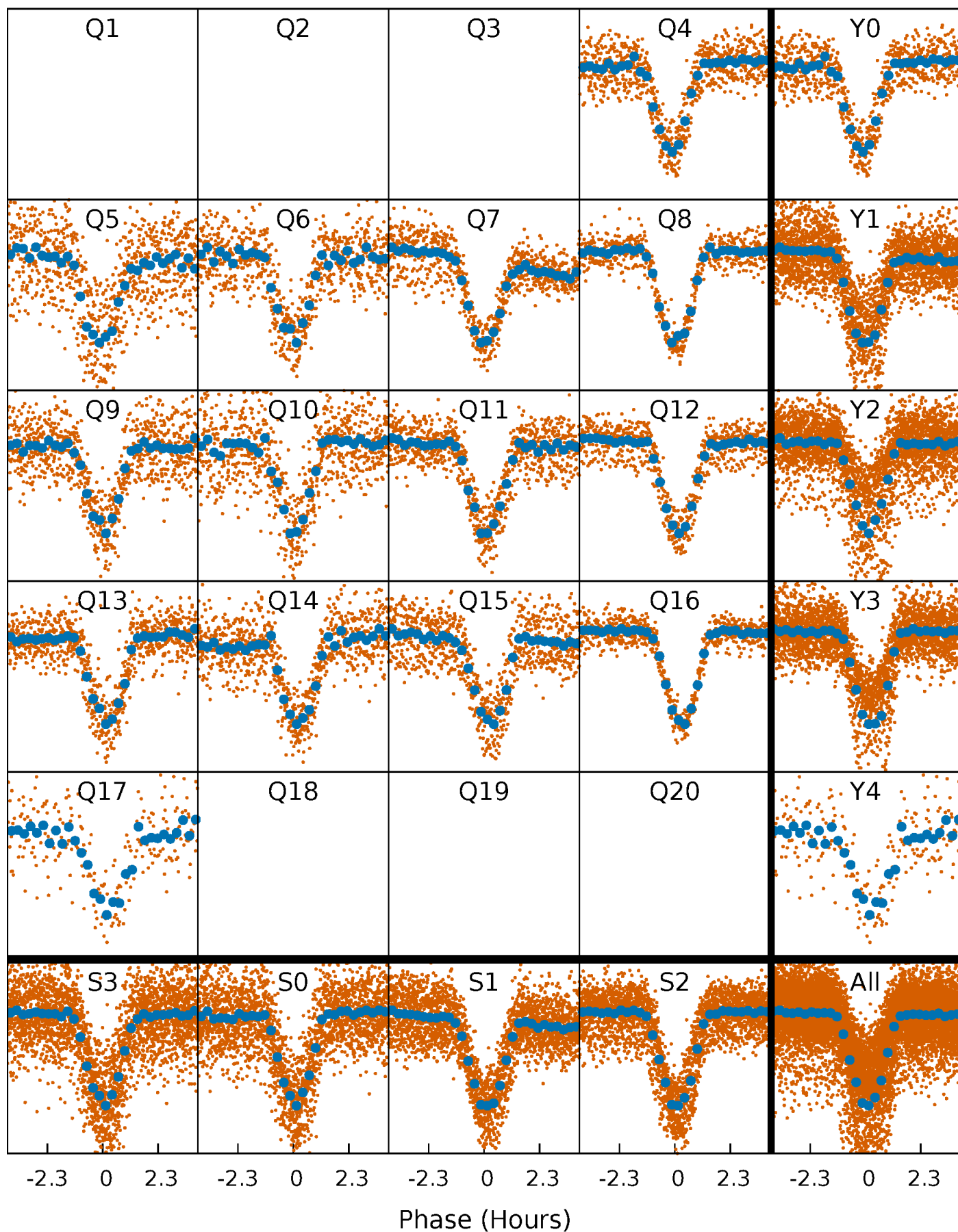


Non-Whitened Vs. Whitened Light Curve



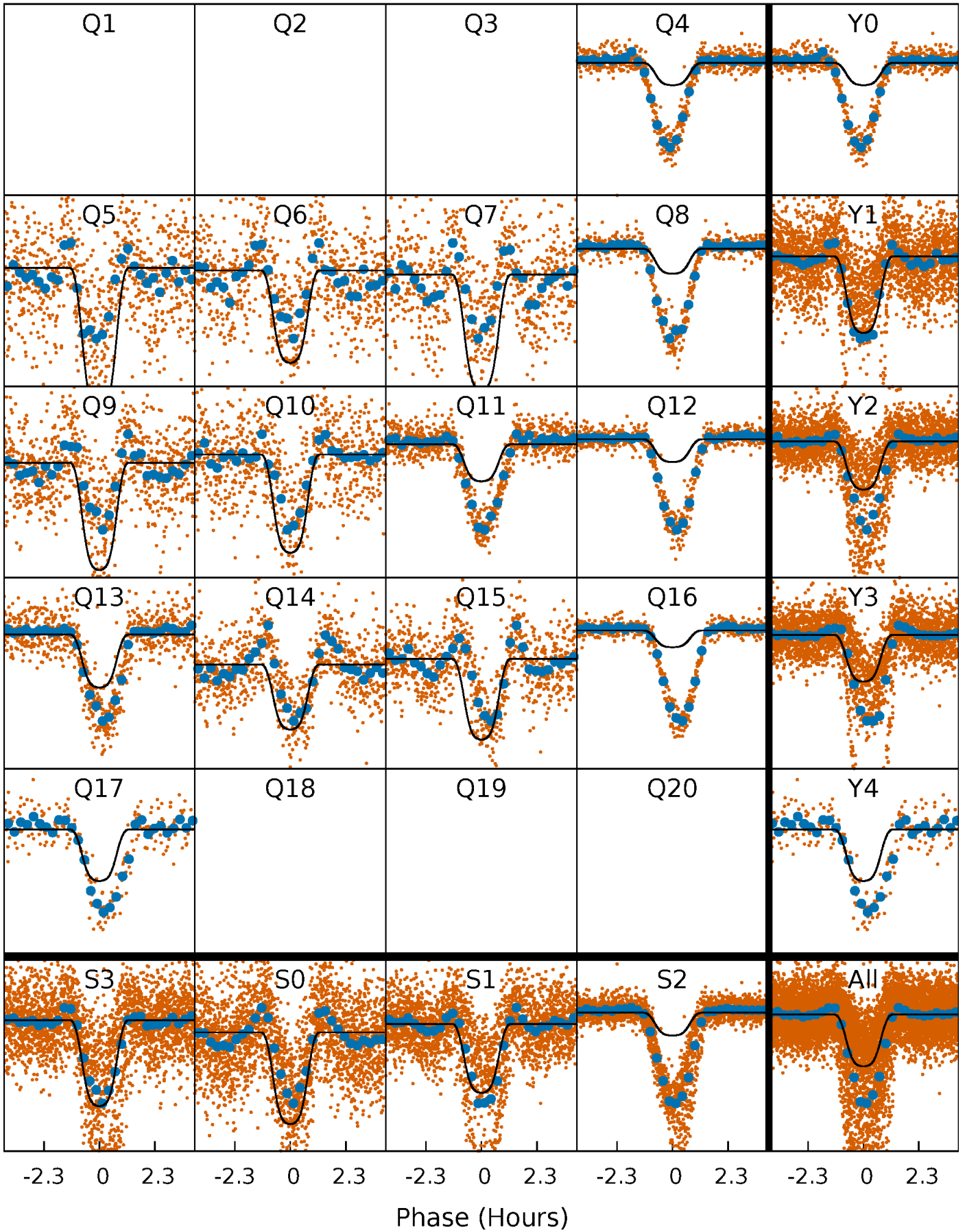
PDC Quarter-Phased Transit Curves

TCE 005899544-01 P= 1.739403 Days $T_0=132.251126$ (BKJD)



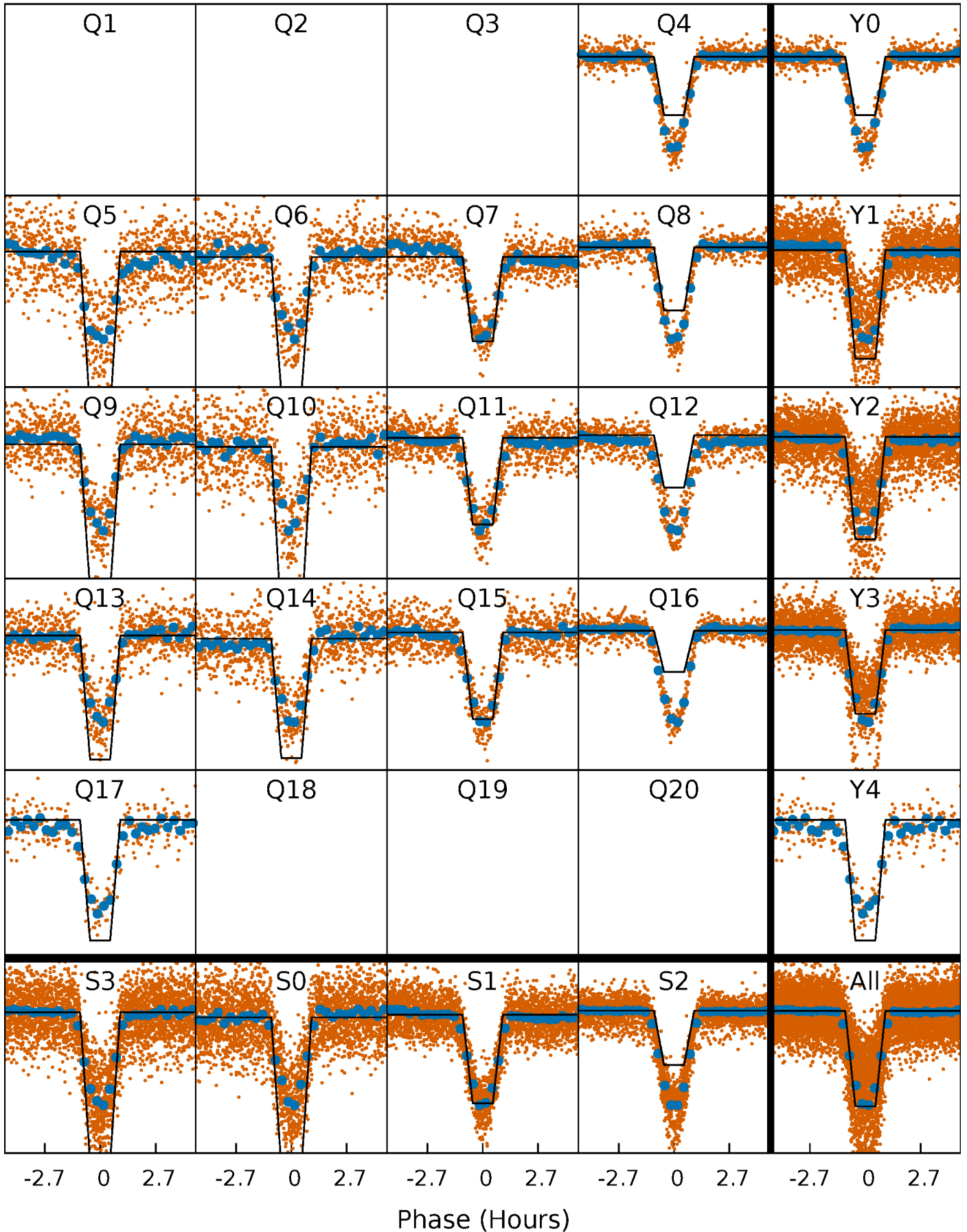
DV Quarter-Phased Transit Curves

TCE 005899544-01 P= 1.739403 Days $T_0=132.251126$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

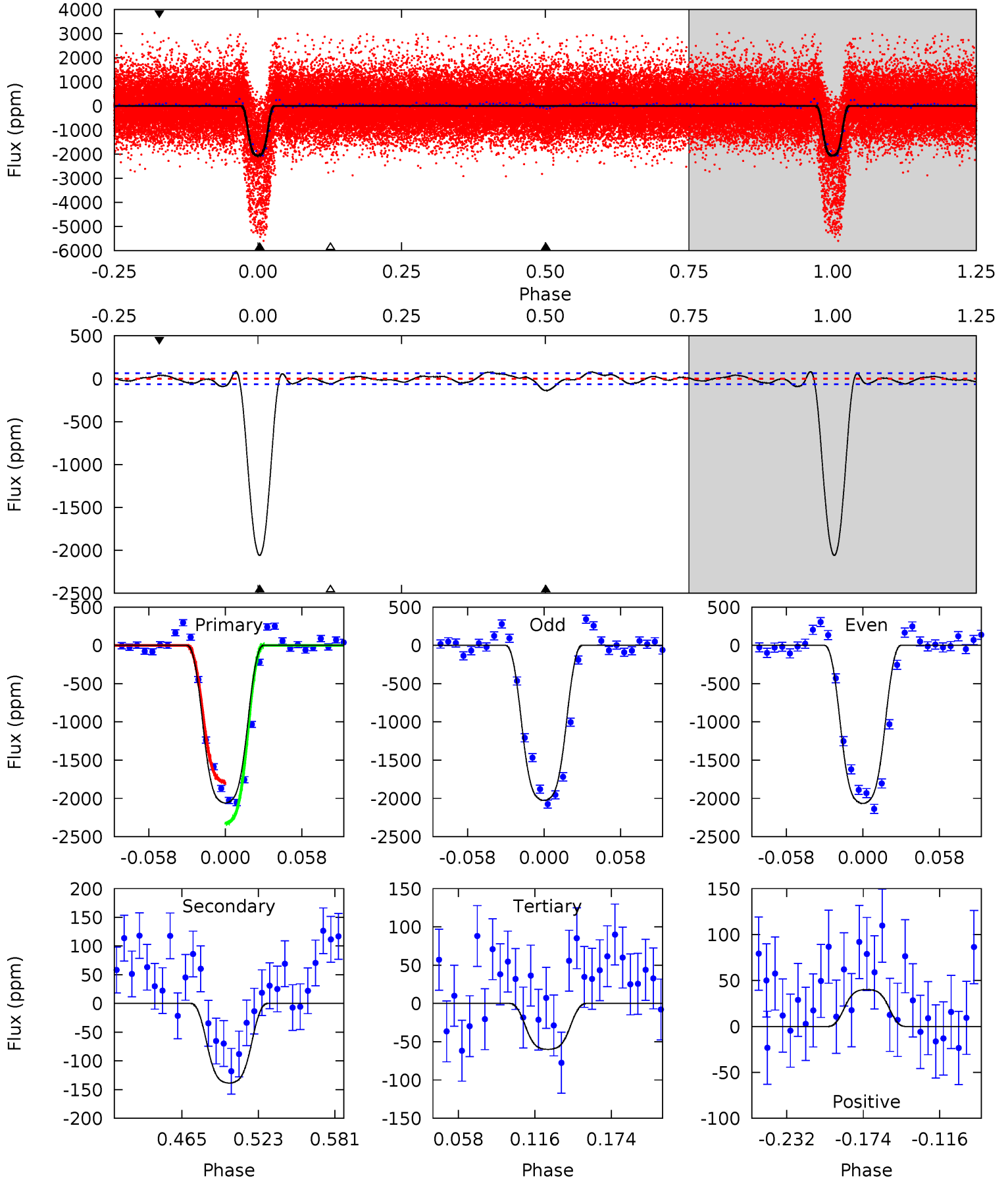
TCE 005899544-01 P= 1.739427 Days $T_0=132.242795$ (BKJD)



DV Model-Shift Uniqueness Test

005899544-01, P = 1.739403 Days, E = 132.251126 Days

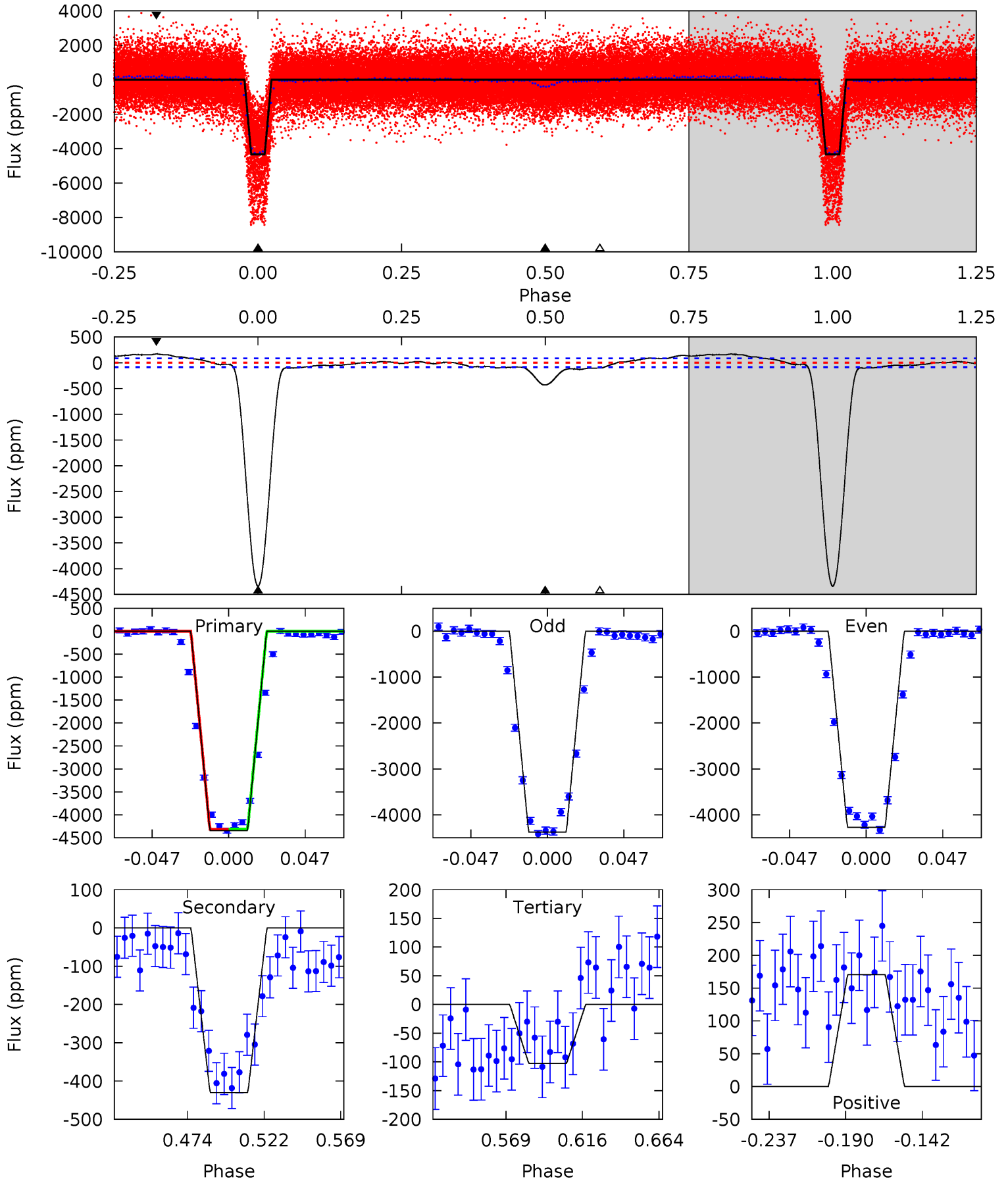
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
148.4	9.99	4.32	2.89	4.68	1.89	2.53	144.1	145.5	5.66	7.10	1.39	1.91	0.04	19.4



Alt Model-Shift Uniqueness Test

005899544-01, P = 1.739427 Days, E = 132.242795 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
238.2	23.6	5.64	9.36	4.72	1.98	4.60	232.6	228.9	18.0	14.3	2.78	1.17	0.04	0.23



Stellar Parameters For KIC 005899544

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5415^{+206}_{-187}	$4.603^{+0.037}_{-0.112}$	$-0.340^{+0.300}_{-0.300}$	$0.742^{+0.142}_{-0.065}$	$0.806^{+0.092}_{-0.083}$	$2.779^{+0.569}_{-0.979}$
	+4%/-3%	+1%/-2%	+88%/-88%	+19%/-9%	+11%/-10%	+20%/-35%
Source	KIC0	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 005899544-01 / KOI 1034.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-139 ± 14	$4.37^{+0.43}_{-0.27}$	1792^{+99}_{-73}	3092^{+82}_{-89}	$2.700^{+0.445}_{-0.440}$
Alt.	-430 ± 18	$6.07^{+0.64}_{-0.36}$	1798^{+90}_{-82}	3342^{+99}_{-95}	$4.377^{+0.469}_{-0.636}$

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 $A_{\text{obs}} \gg 1.0$

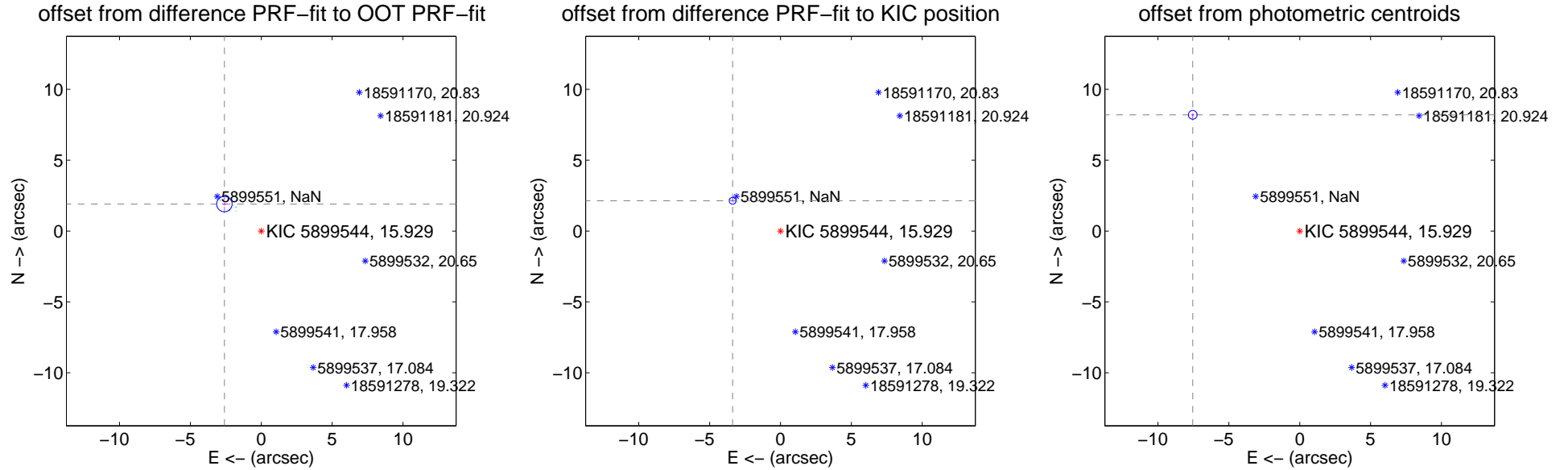
DV Centroid Data

Supplemental centroid analysis for 005899544-01. Kepler magnitude: 15.93. Transit SNR 84.52

There are 14 quarters with good PRF difference image offsets

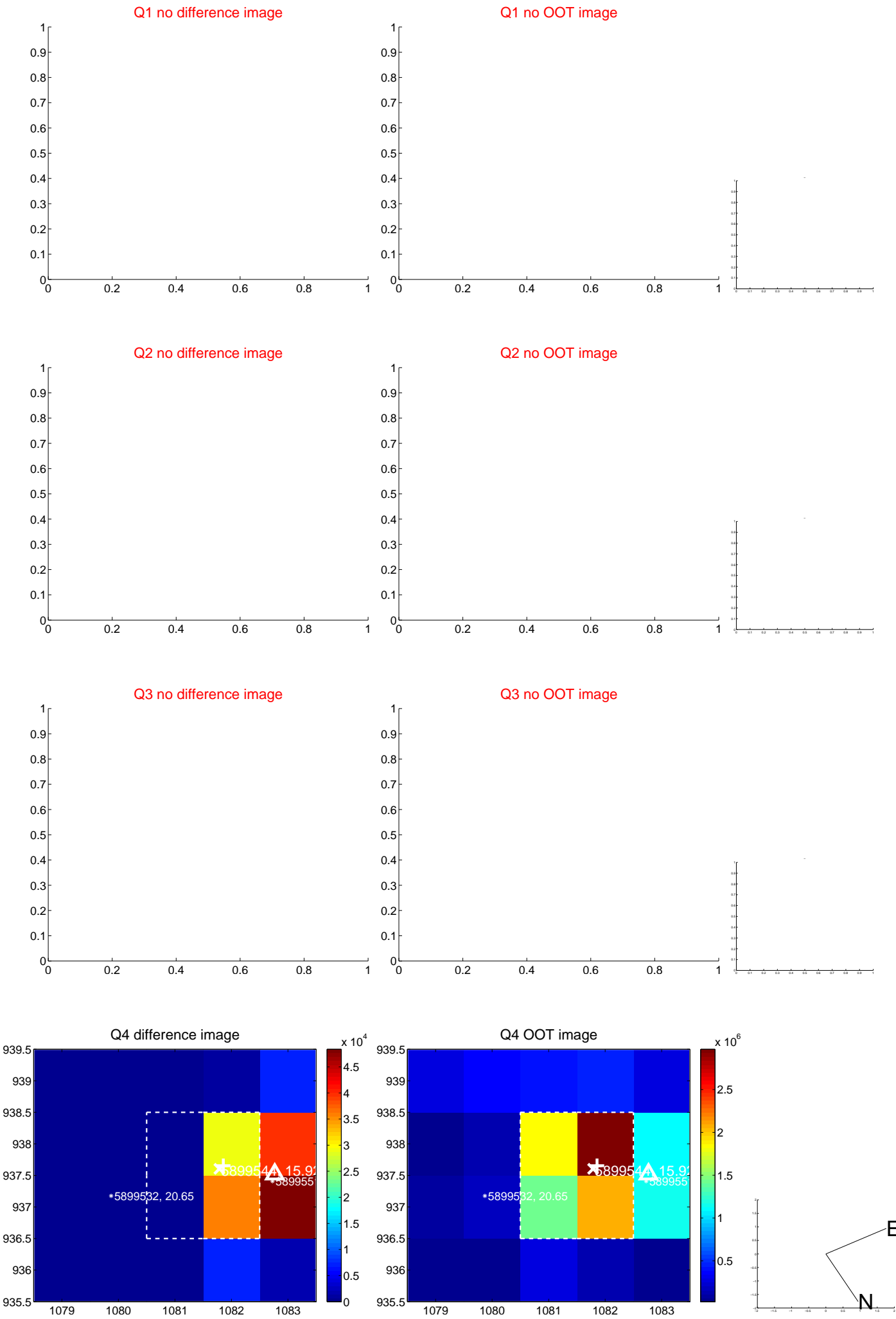
The direct PRF centroid is offset from the target star catalog position by about 1.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.223 ± 0.181	17.76	2.599 ± 0.163	1.905 ± 0.109
PRF-fit source offset from KIC position	3.994 ± 0.081	49.60	3.375 ± 0.079	2.136 ± 0.071
photometric centroid source offset	11.14 ± 0.10	108.66	7.55 ± 0.10	8.20 ± 0.10

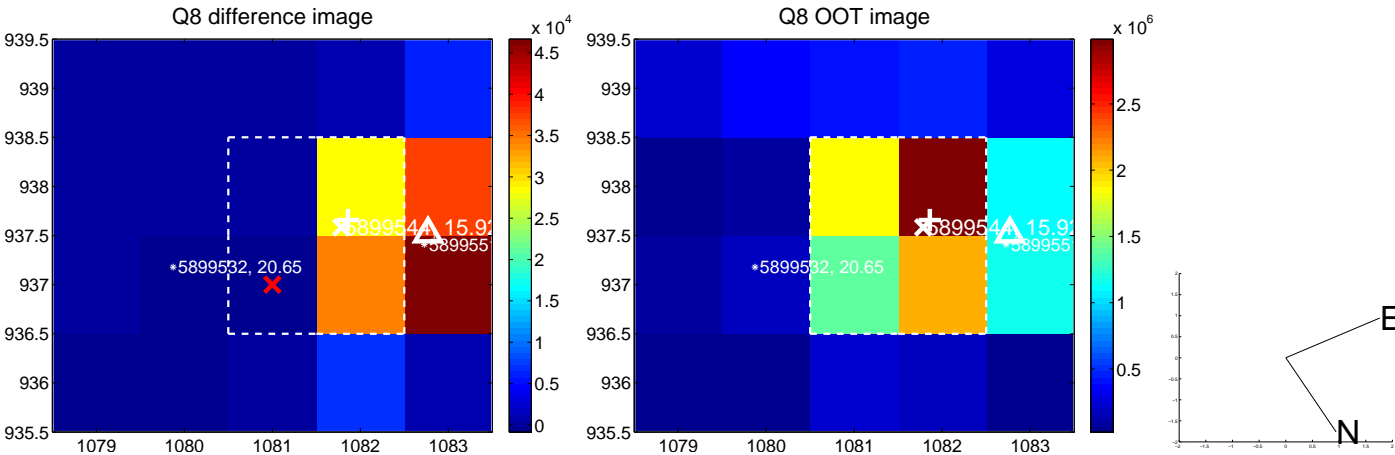
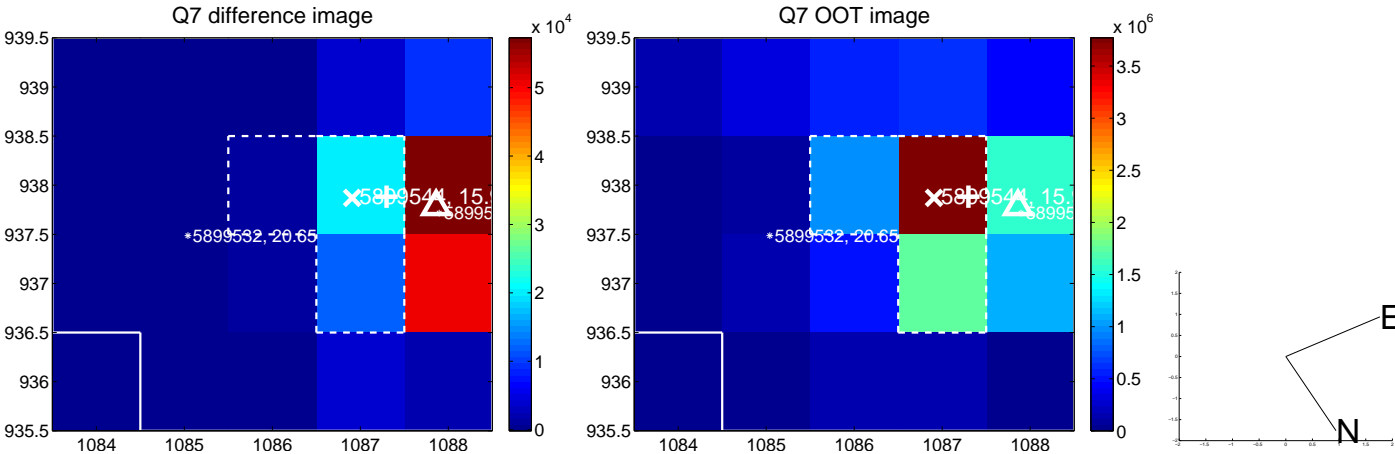
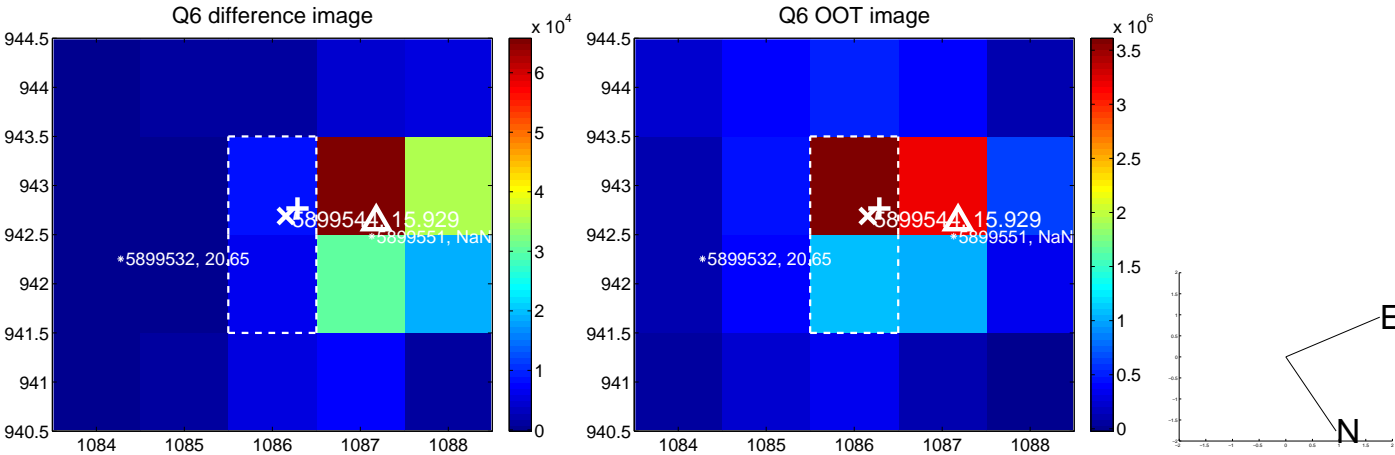
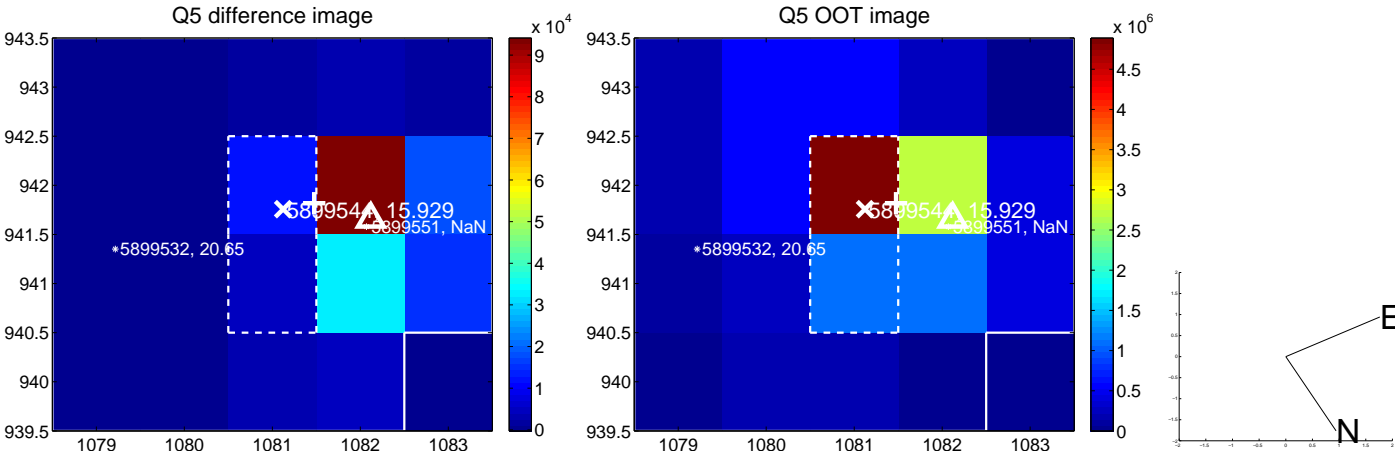


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000 are from the UKIRT catalog.

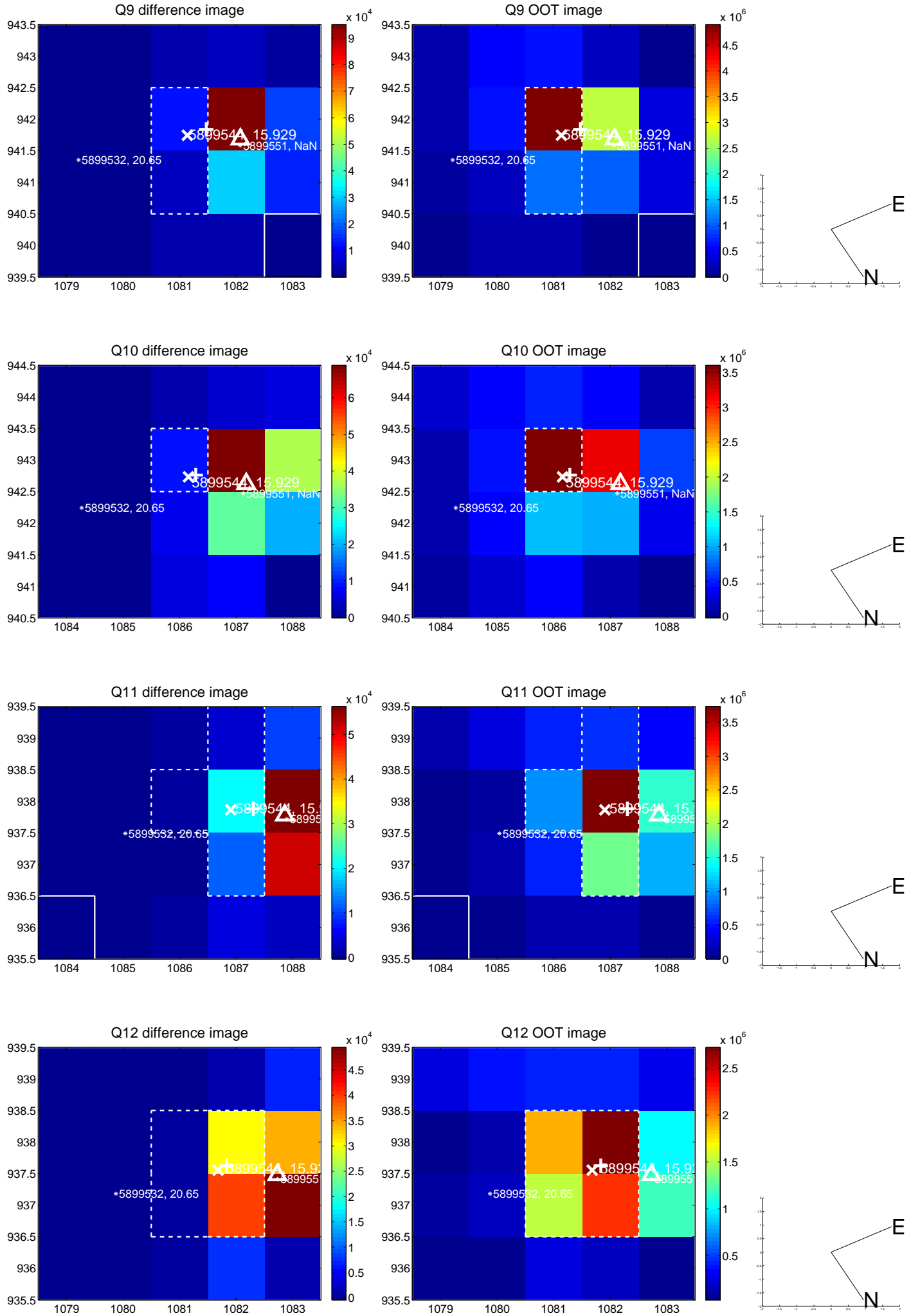
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



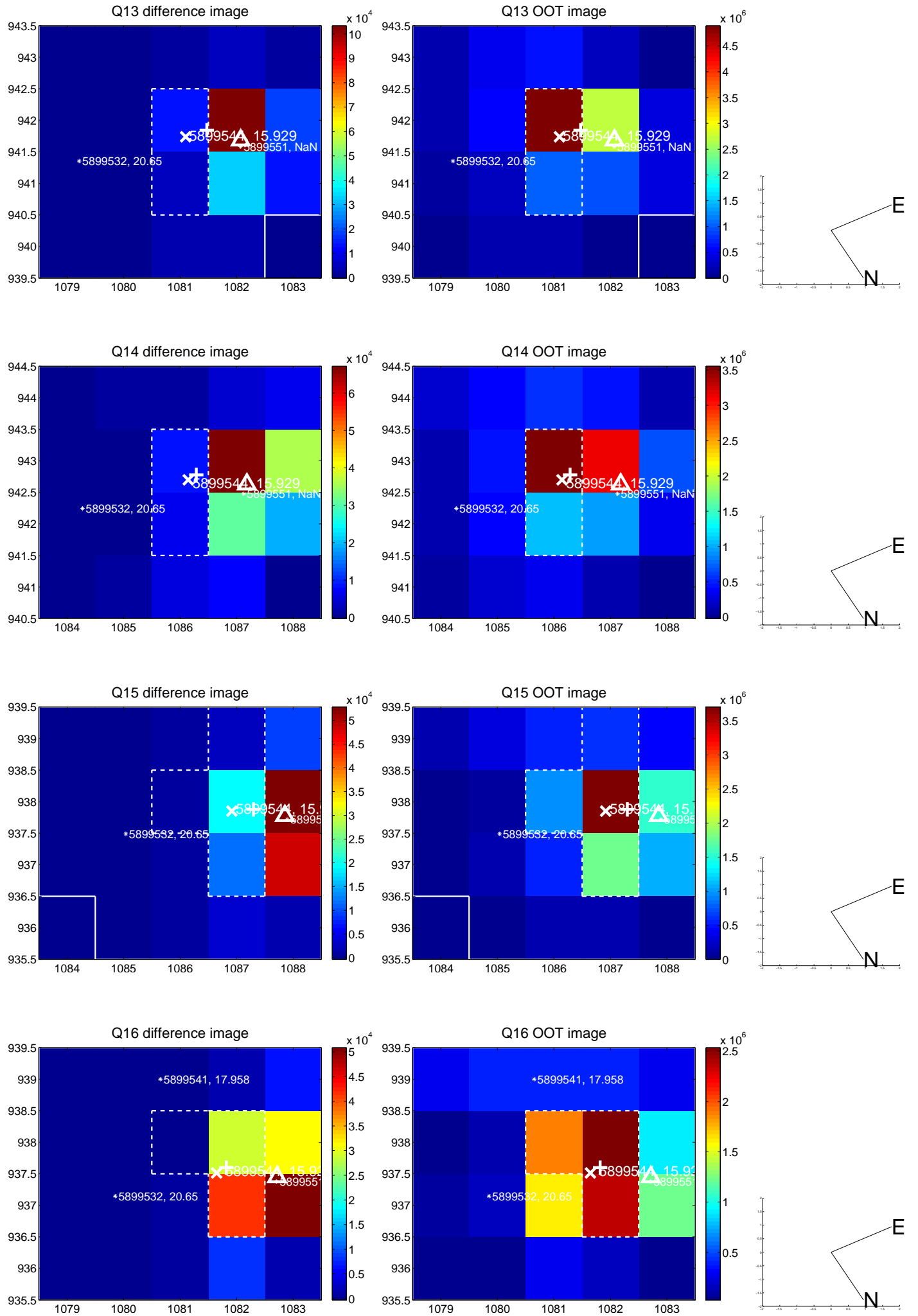
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



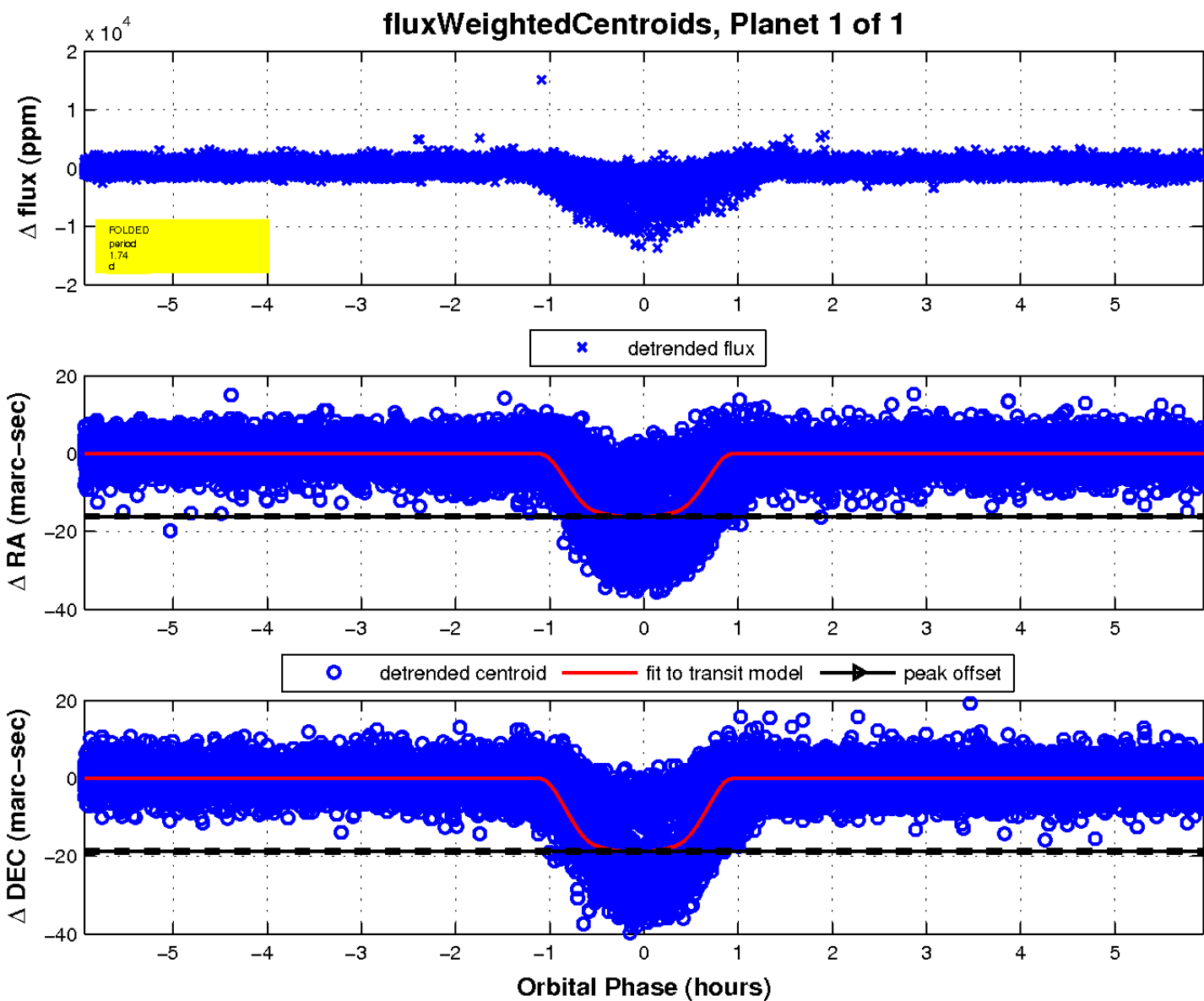
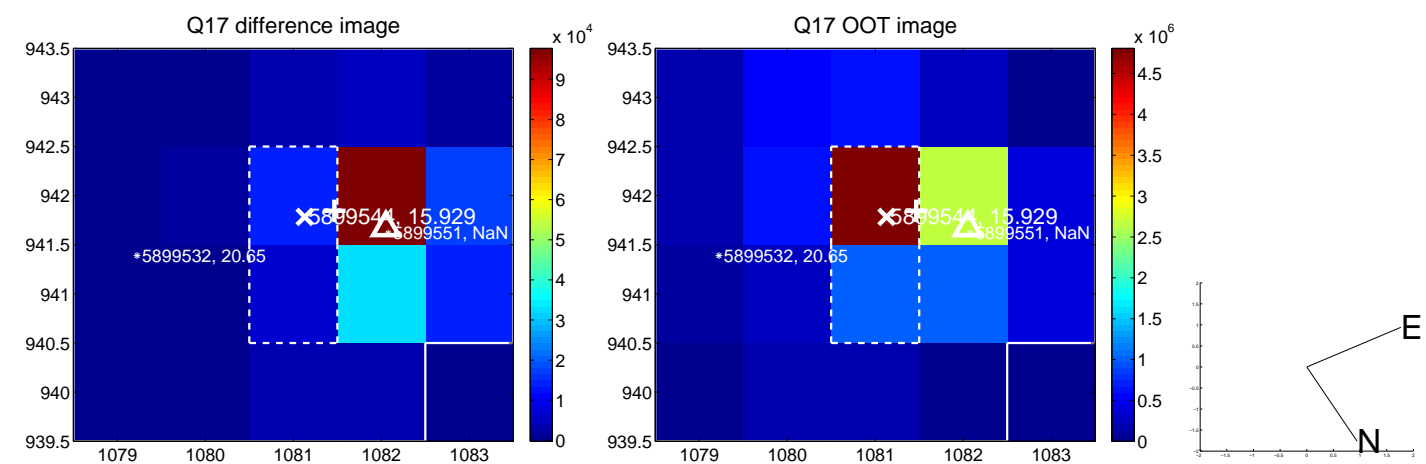
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

