

KIC 008560280

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})
008560280-01	OBS	7896.01	85.339857	215.549475	710.8	10.402	15.7	15.9	4.70	4850	19.91	71.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008560280-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH

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.

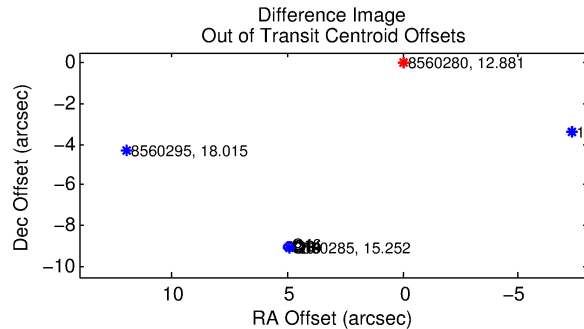
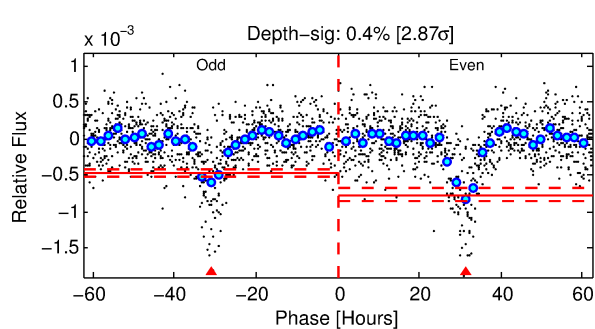
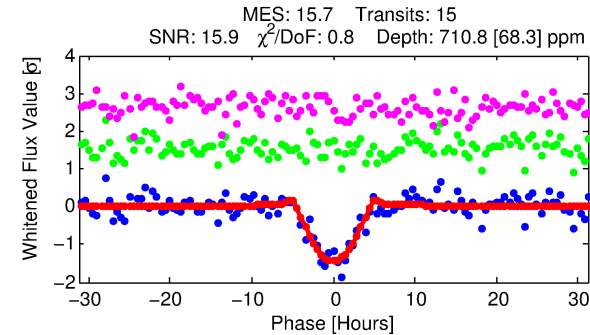
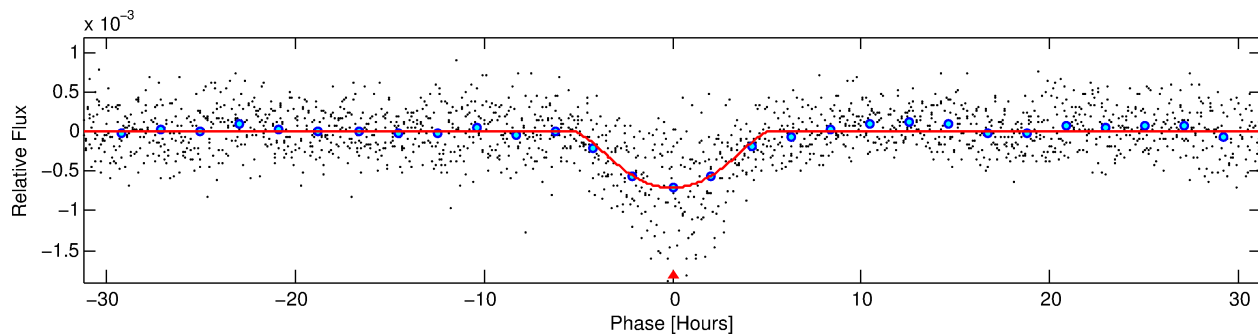
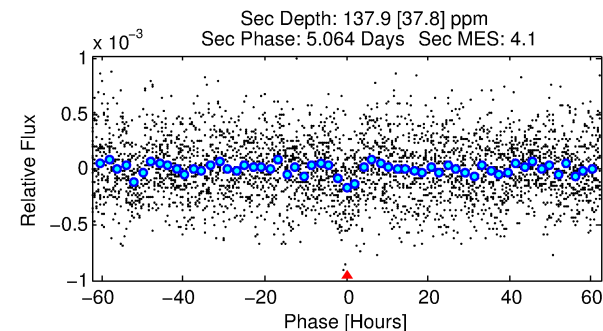
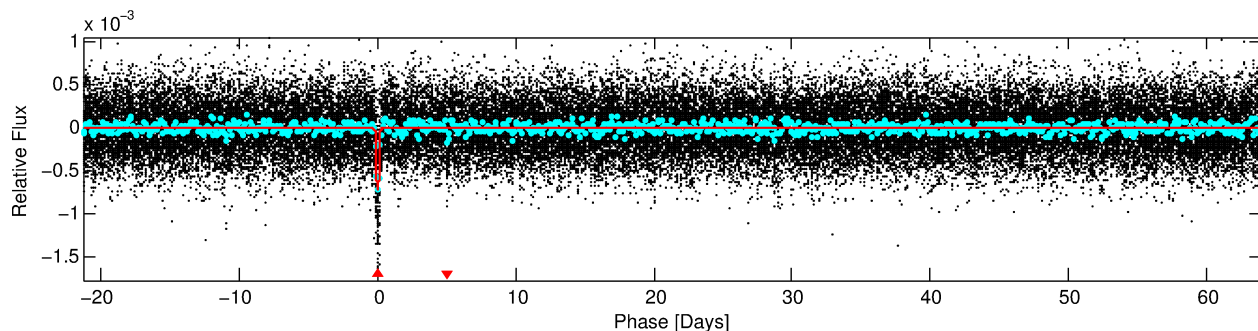
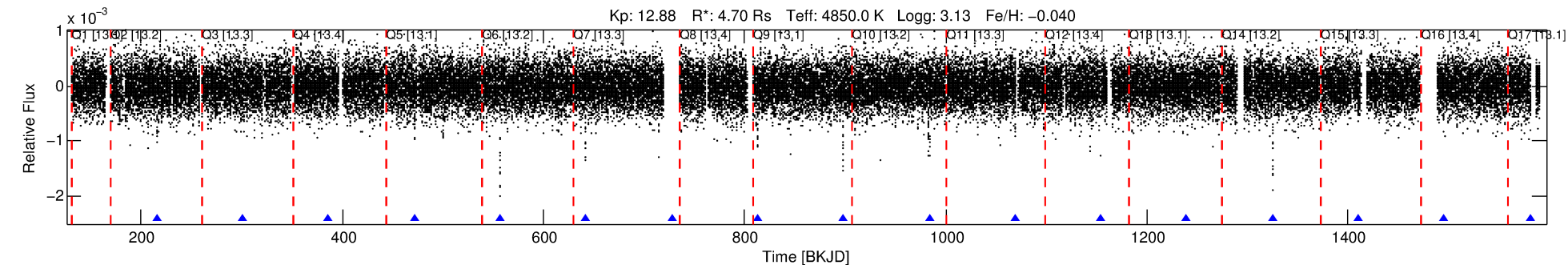
Ephemeris Match Information For 008560280-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008560280-01	8560280	1249.01	8560285	1:1	10.3	0	3	15.25	12.88	77.77	Direct-PRF	0	0.21	0.26

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 8560280 Candidate: 1 of 1 Period: 85.340 d



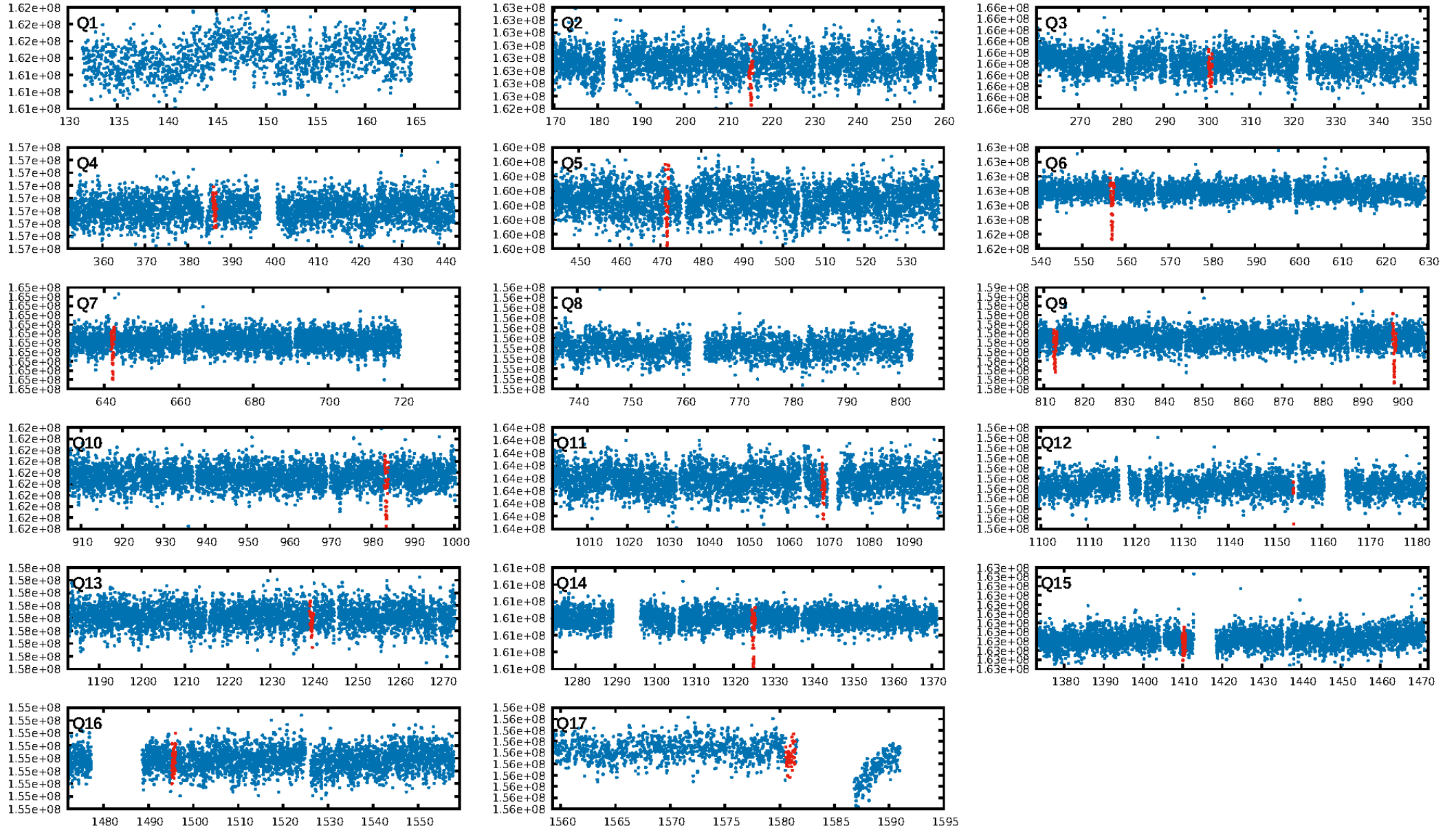
DV Fit Results:

Period = 85.33986 [0.00134] d
Epoch = 215.5495 [0.0127] BKJD
Rp/R* = 0.0389 [0.0185]
a/R* = 21.60 [4.14]
b = 0.98 [0.04]
Seff = 71.47 [7.37]
Teq = 741 [19] K
Rp = 19.91 [9.74] Re
a = 0.3911 [0.0311] AU
Ag = 29.26 [29.08] [0.97 σ]
Teff = 2666 [661] K [2.91 σ]

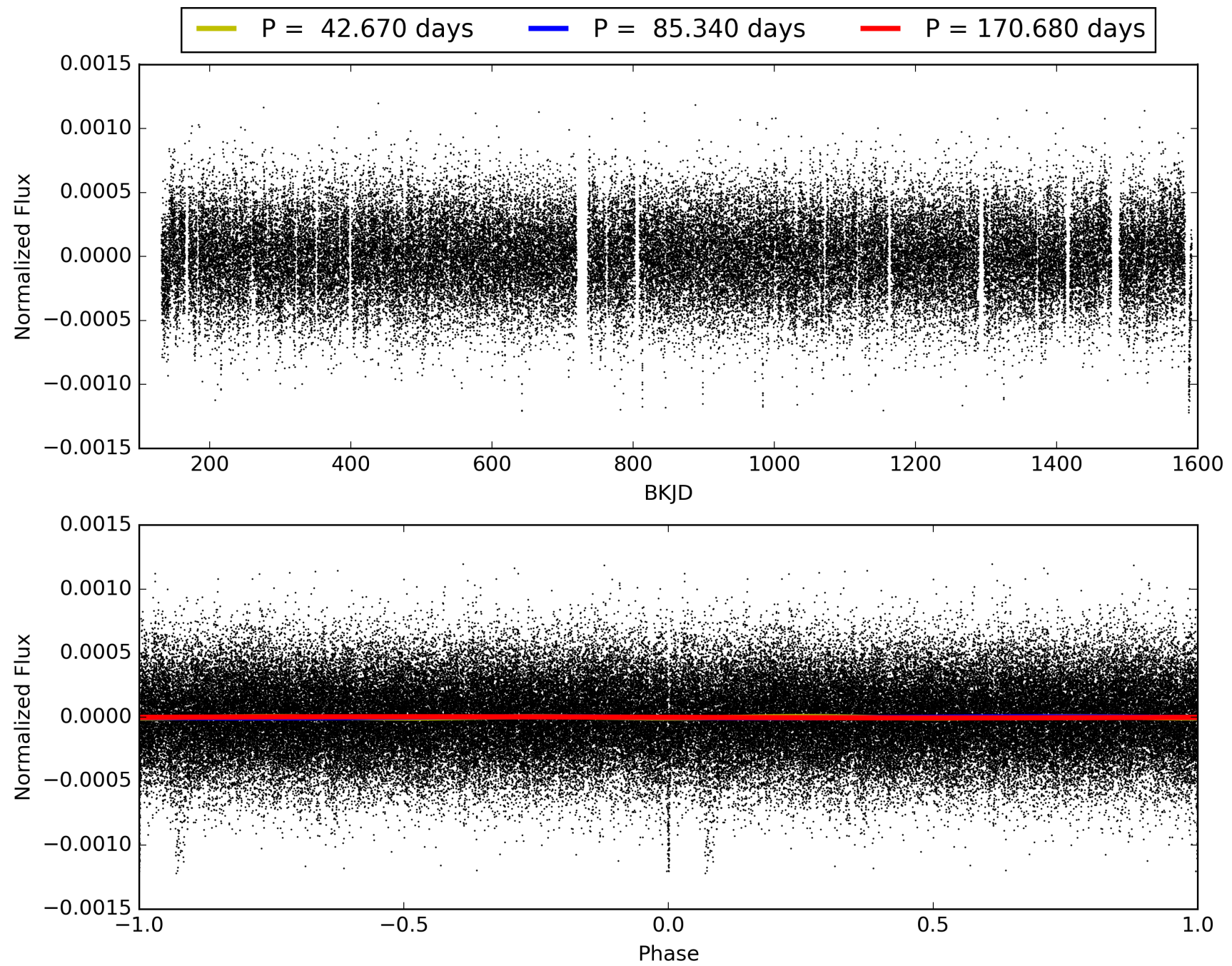
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.03e-49
RollingBand-fgt: 1.00 [14/14]
GhostDiagnostic-chr: -0.1556
Centroid-sig: 0.0%
Centroid-so: 31.963 arcsec [153.43 σ]
OotOffset-rm: 10.270 arcsec [141.13 σ]
KicOffset-rm: 10.231 arcsec [140.78 σ]
OotOffset-st: 4/0/2/0 [6]
KicOffset-st: 4/0/2/0 [6]
DiffImageQuality-fgm: 1.00 [6/6]
DiffImageOverlap-fno: 1.00 [12/12]

TCE 008560280-01, PDC Light Curves

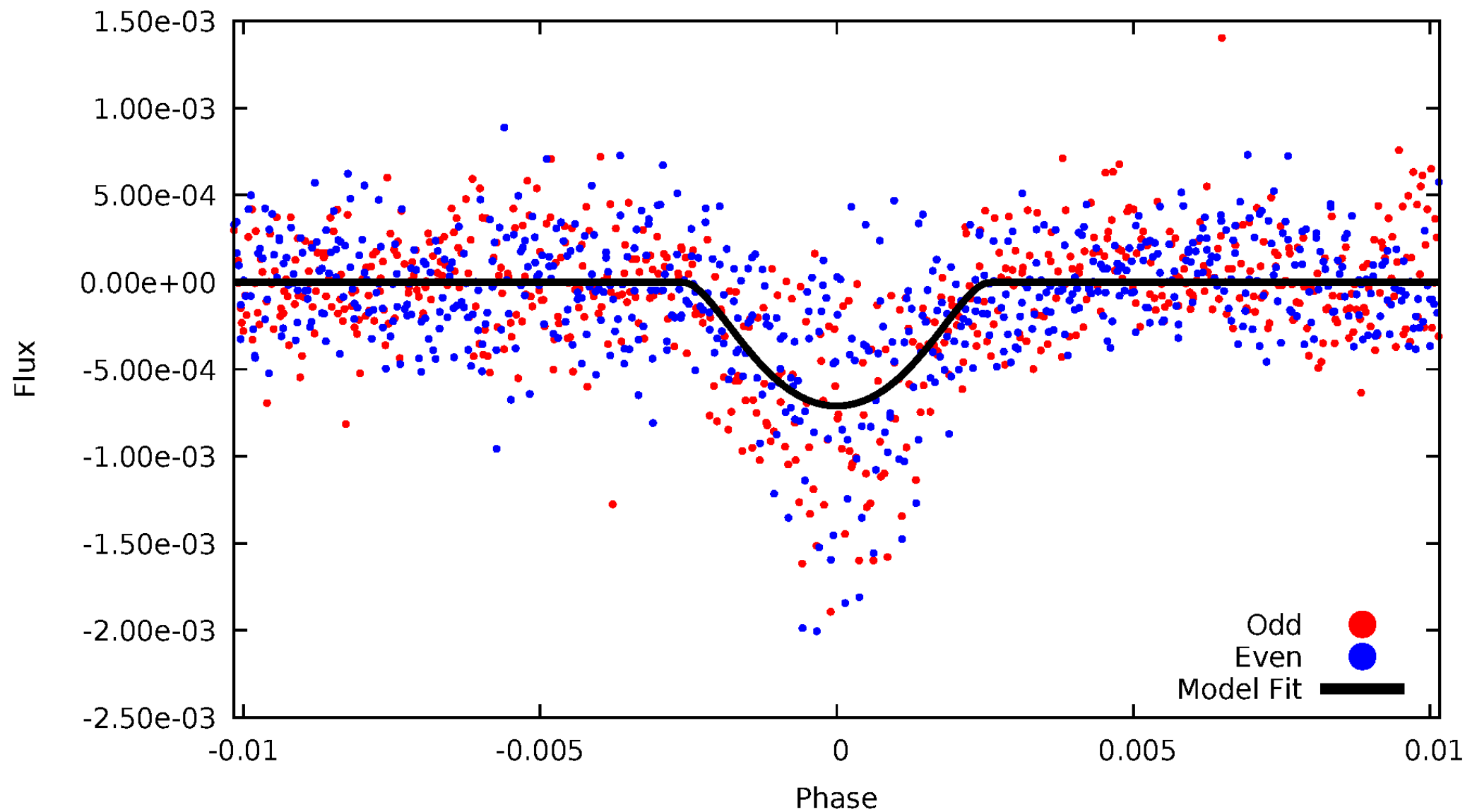


TCE 008560280-01



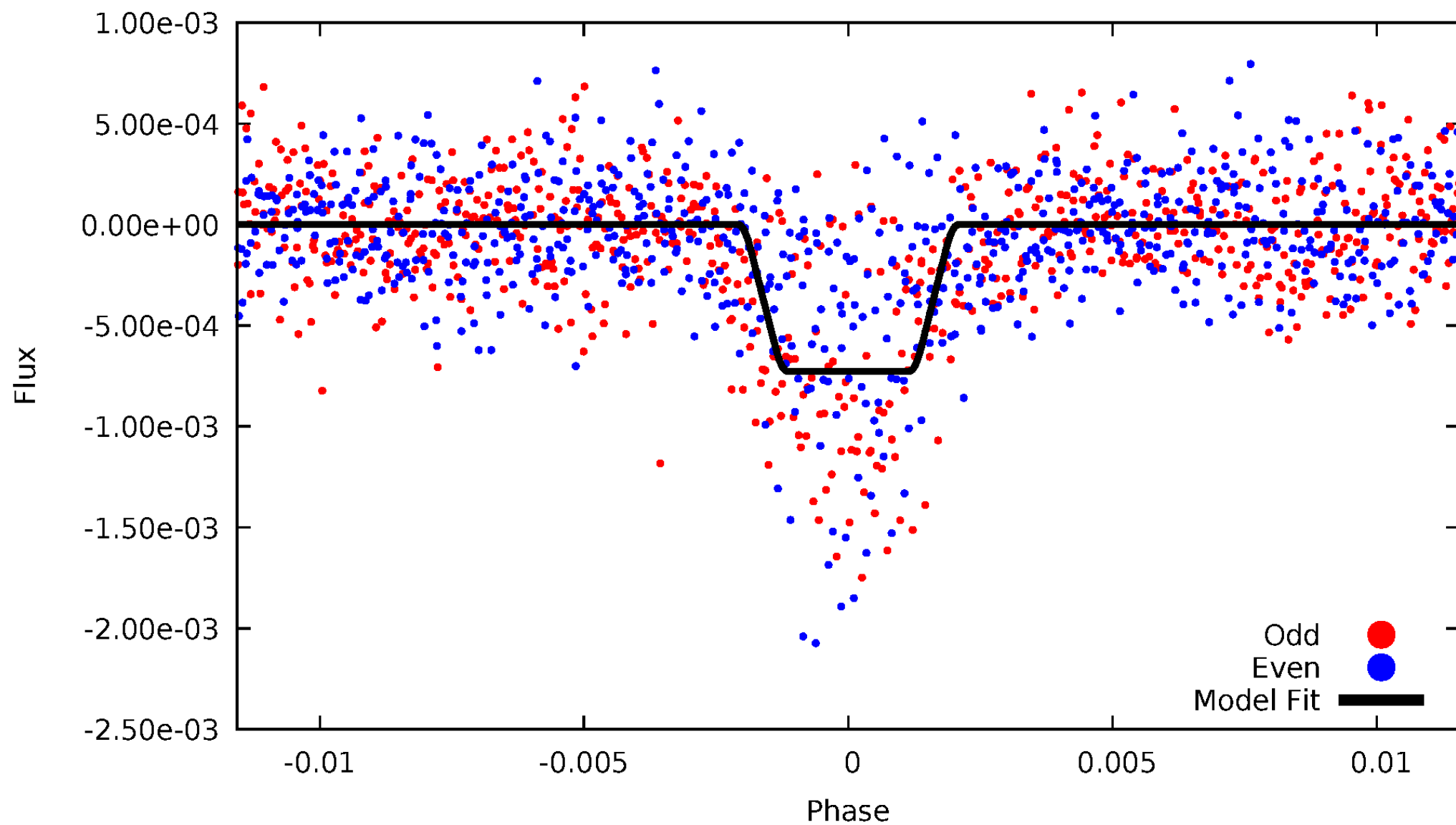
DV Odd/Even

TCE 008560280-01

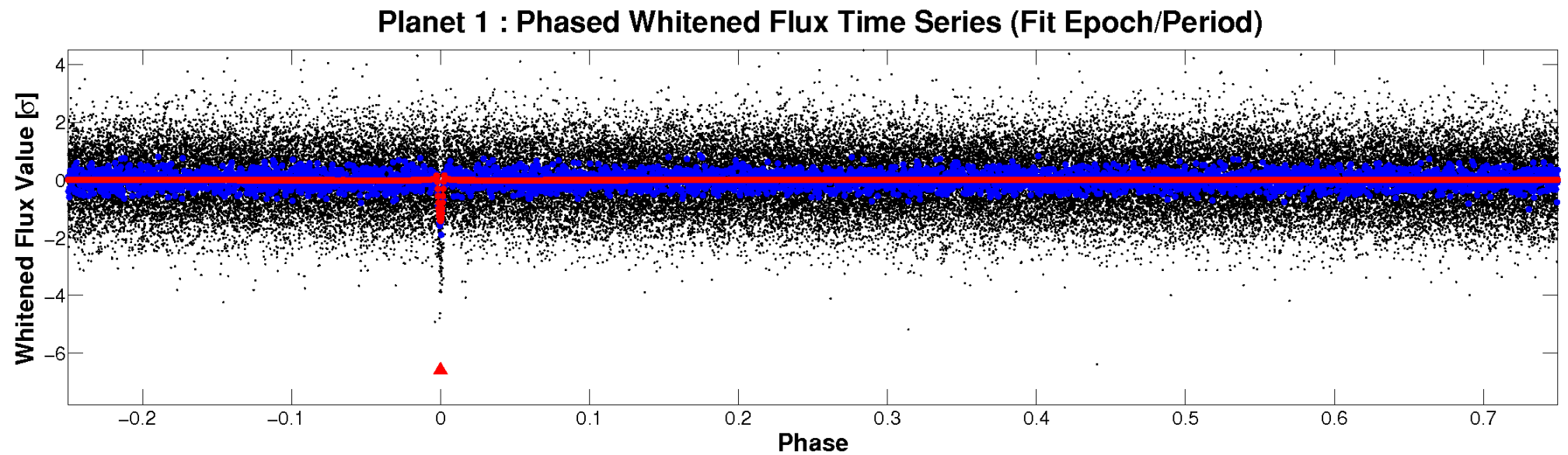
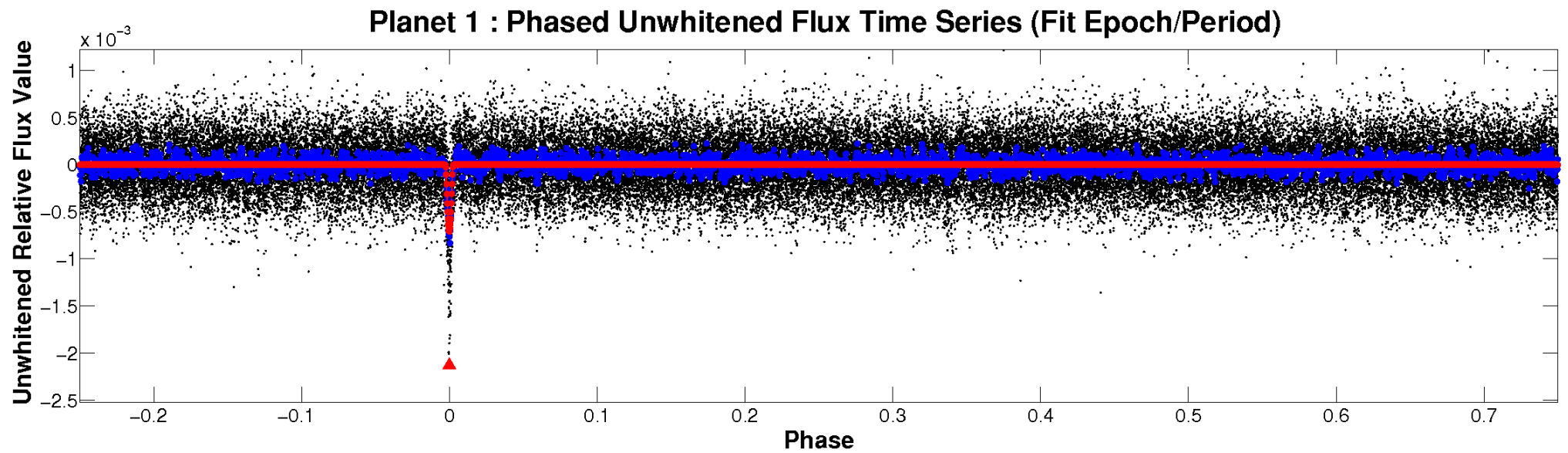


ALT Odd/Even

TCE 008560280-01

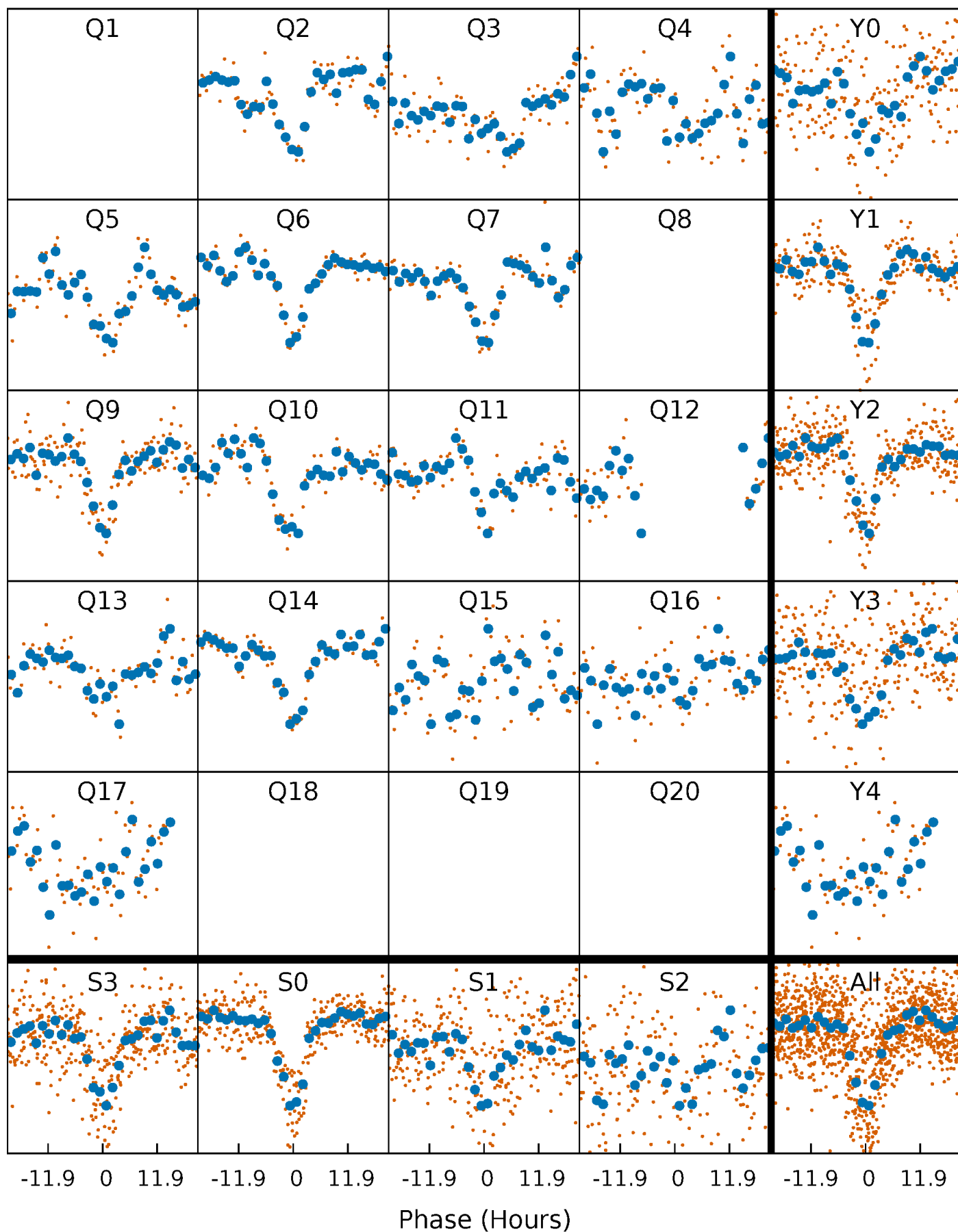


Non-Whitened Vs. Whitened Light Curve



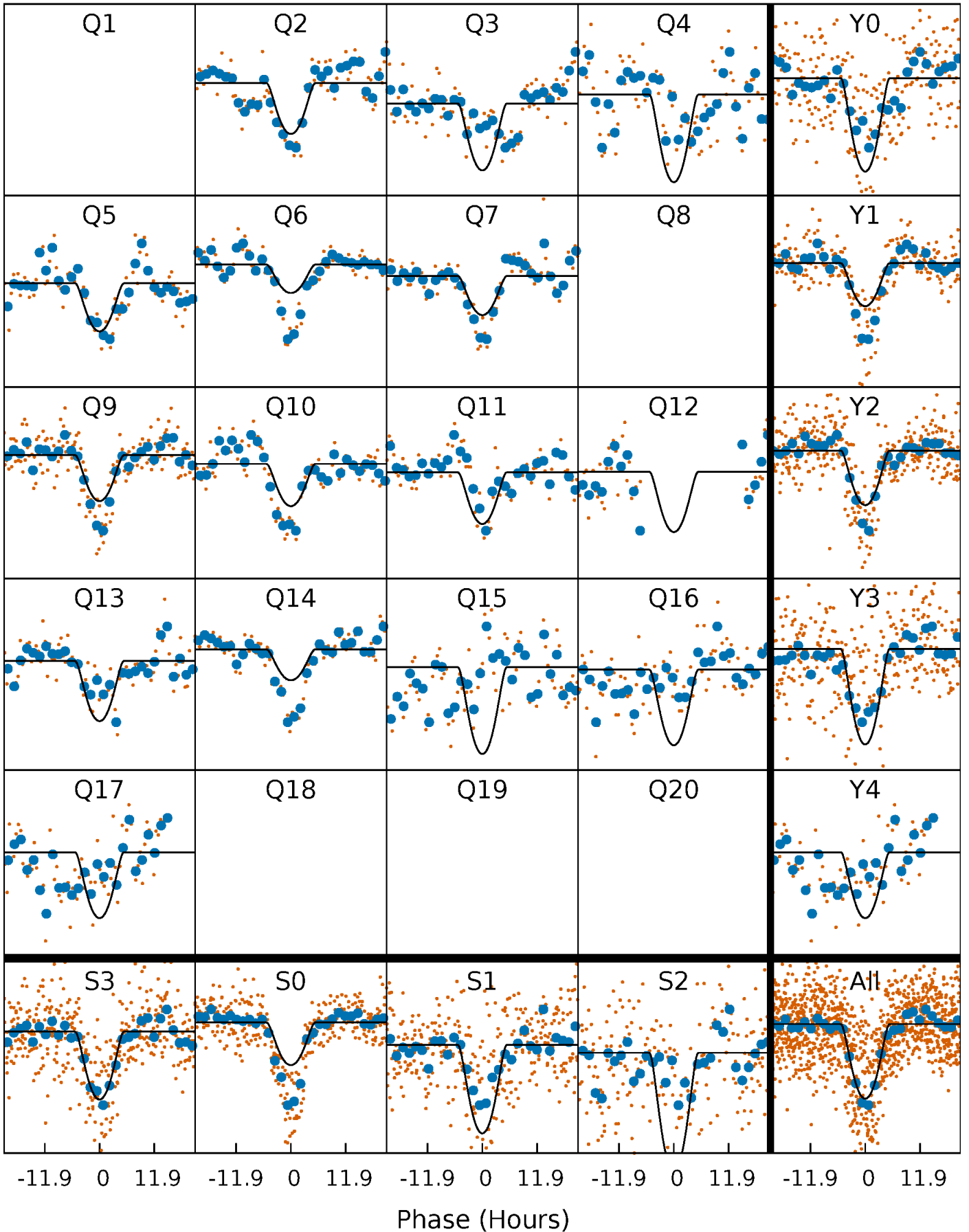
PDC Quarter-Phased Transit Curves

TCE 008560280-01 P= 85.339857 Days $T_0=215.549475$ (BKJD)



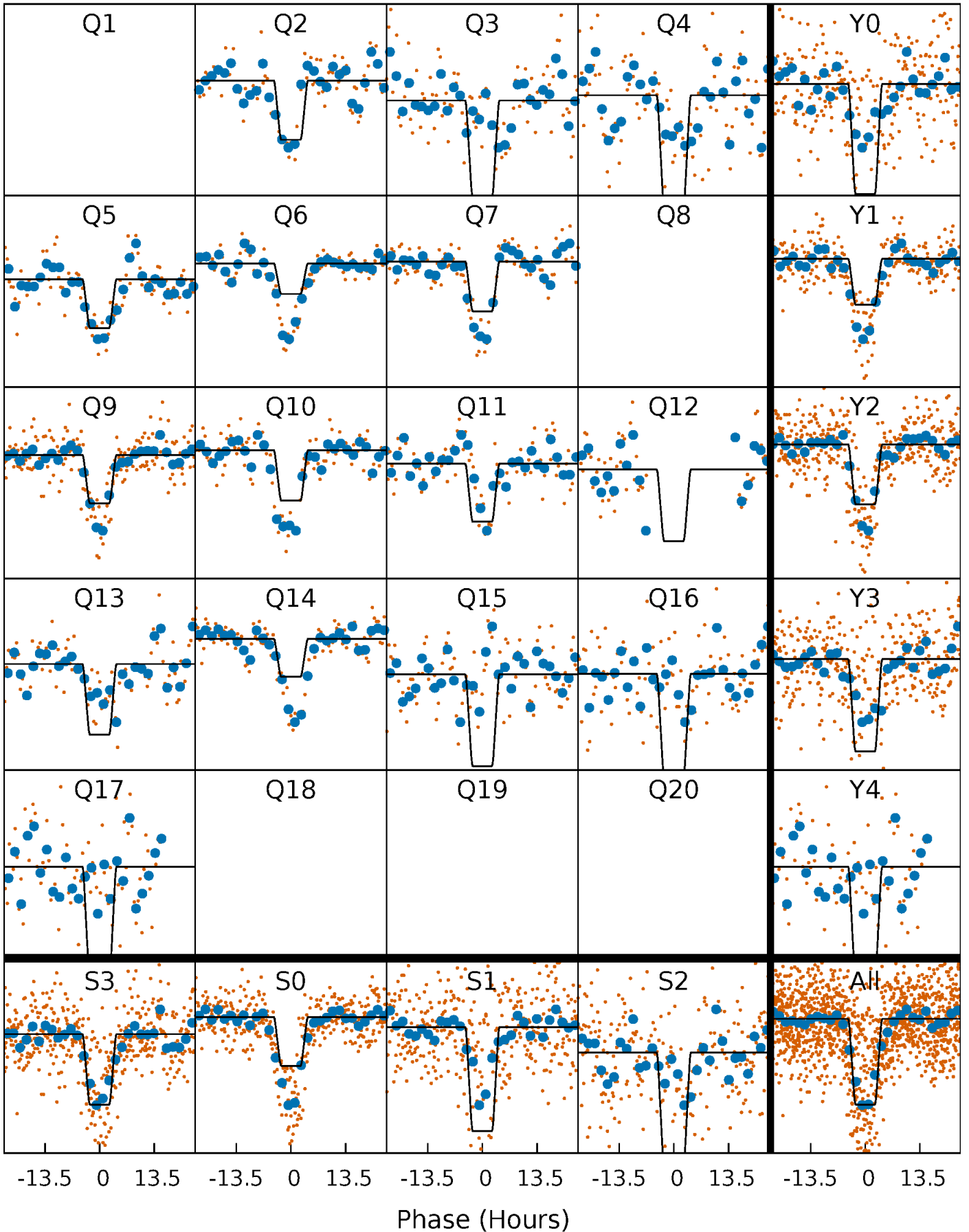
DV Quarter-Phased Transit Curves

TCE 008560280-01 P= 85.339857 Days $T_0=215.549475$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

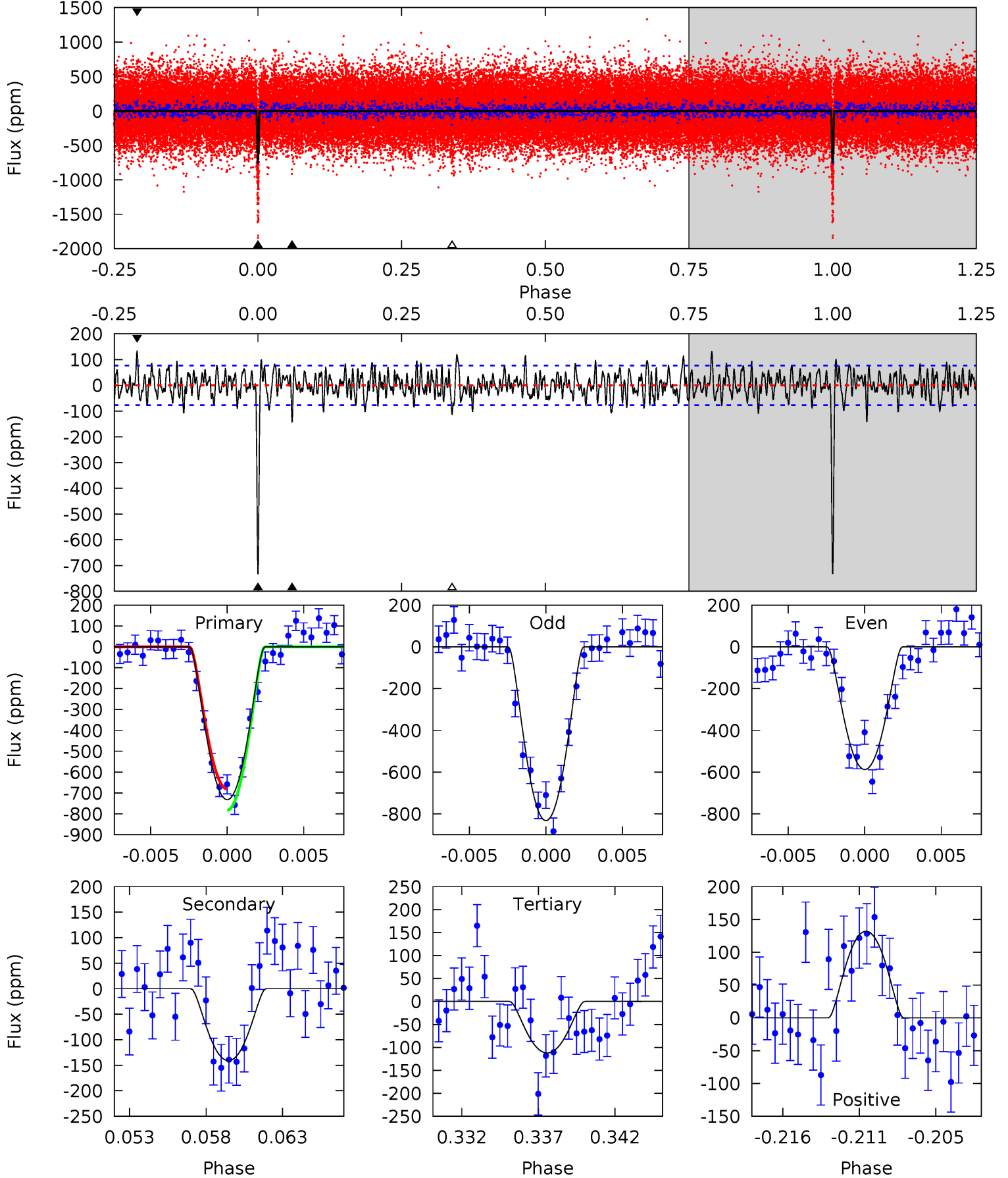
TCE 008560280-01 P= 85.333790 Days $T_0=215.597543$ (BKJD)



DV Model-Shift Uniqueness Test

008560280-01, P = 85.339857 Days, E = 130.209618 Days

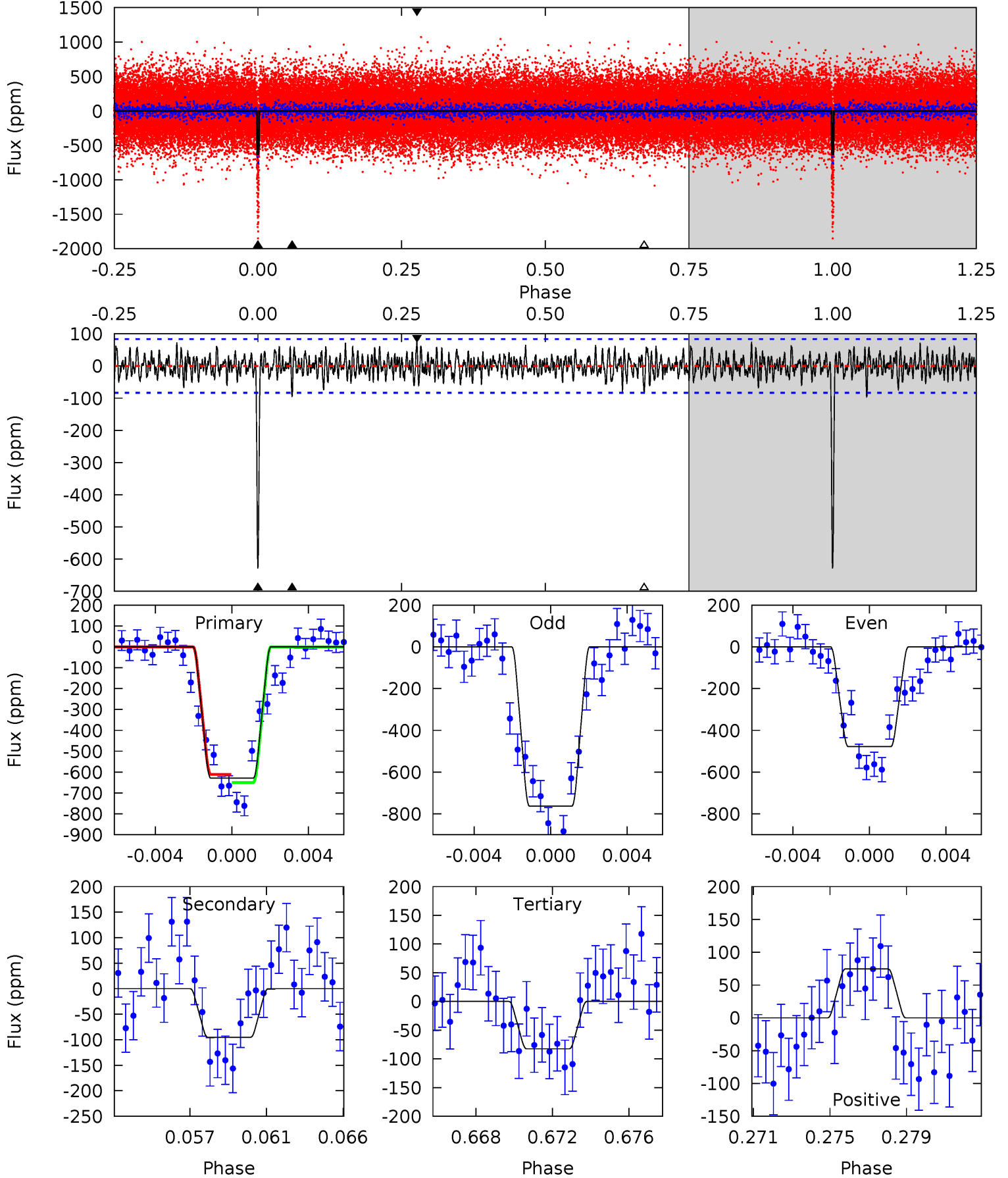
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.1	9.44	7.52	8.84	5.15	2.79	2.67	41.6	40.3	1.92	0.60	8.17	0.99	0.15	3.39



Alt Model-Shift Uniqueness Test

008560280-01, P = 85.333790 Days, E = 130.263753 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.1	5.93	5.13	4.64	5.19	2.87	1.57	34.0	34.5	0.80	1.29	8.80	1.03	0.11	1.21



Stellar Parameters For KIC 008560280

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4850^{+63}_{-58}	$3.134^{+0.030}_{-0.030}$	$-0.040^{+0.150}_{-0.100}$	$4.696^{+0.537}_{-0.331}$	$1.095^{+0.257}_{-0.139}$	$0.015^{+0.002}_{-0.002}$
	+1%/-1%	+1%/-1%	+375%/-250%	+11%/-7%	+23%/-13%	+12%/-14%
Source	SPE74	AST9	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 008560280-01 / KOI 7896.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-141 ± 15	$20.43^{+9.80}_{-9.11}$	1037^{+20}_{-20}	3200^{+640}_{-351}	29^{+64}_{-16}
Alt.	-95 ± 16	$14.78^{+9.41}_{-8.33}$	1036^{+21}_{-21}	3292^{+1153}_{-442}	36^{+179}_{-22}

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 $A_{obs} \gg 1.0$

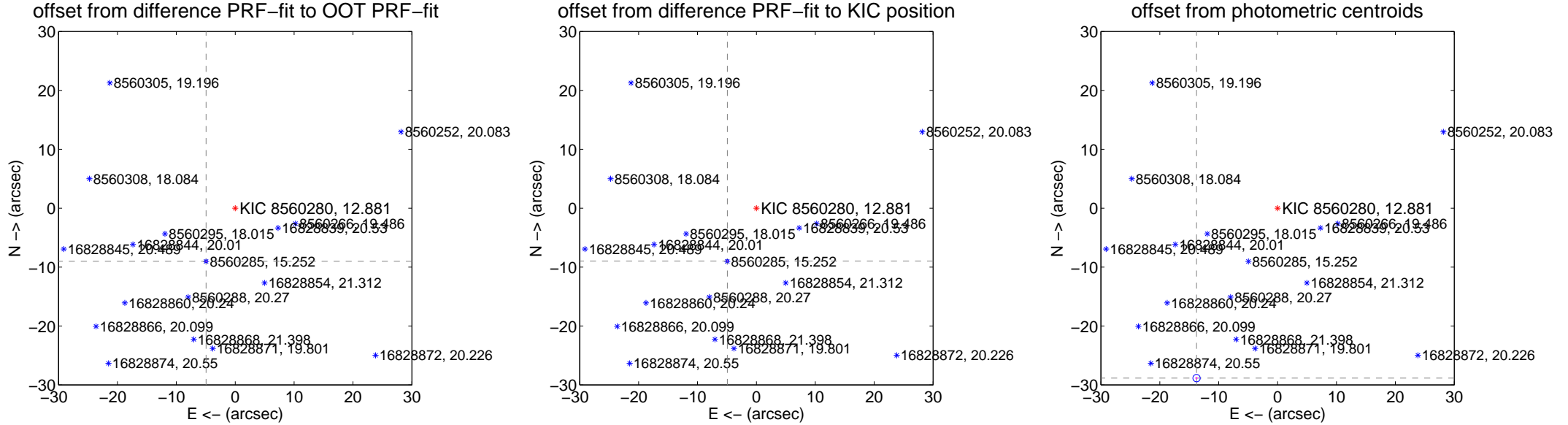
DV Centroid Data

Supplemental centroid analysis for 008560280-01. Kepler magnitude: 12.88. Transit SNR 15.88

There are 6 quarters with good PRF difference image offsets

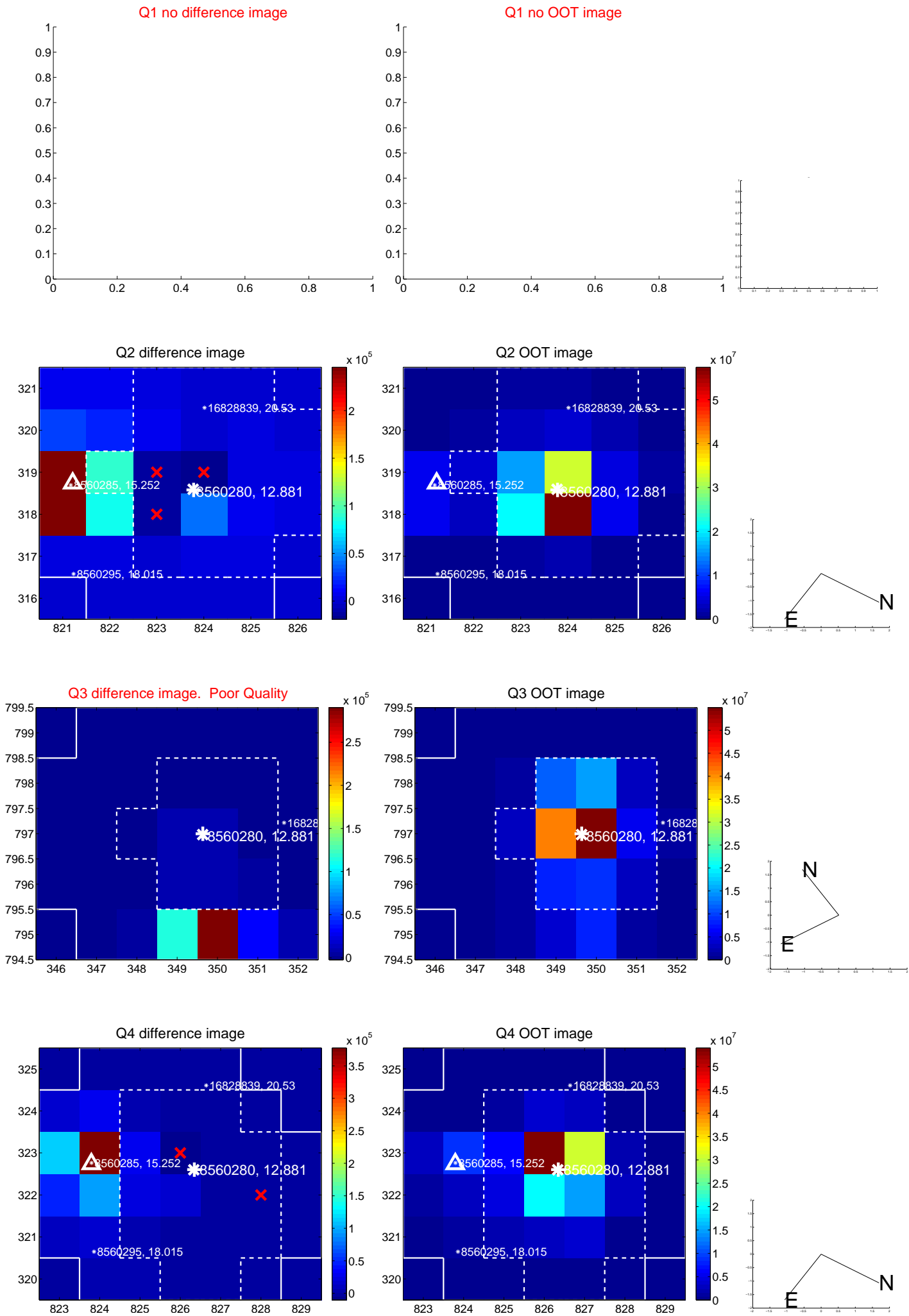
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	10.270 \pm 0.073	141.13	4.943 \pm 0.067	-9.002 \pm 0.074
PRF-fit source offset from KIC position	10.231 \pm 0.073	140.78	4.937 \pm 0.067	-8.960 \pm 0.074
photometric centroid source offset	31.96 \pm 0.21	153.43	13.76 \pm 0.20	-28.85 \pm 0.21

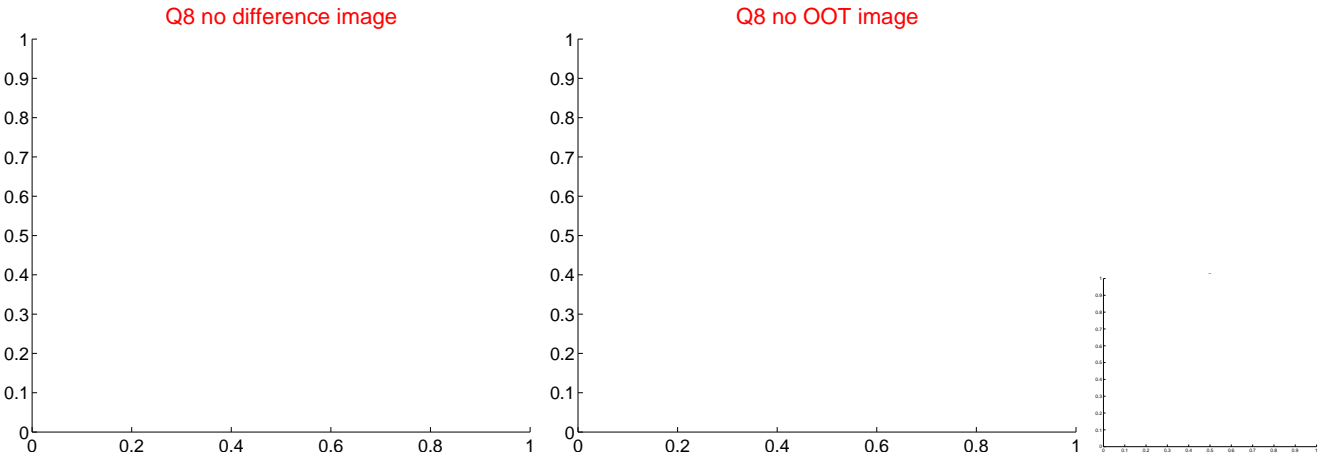
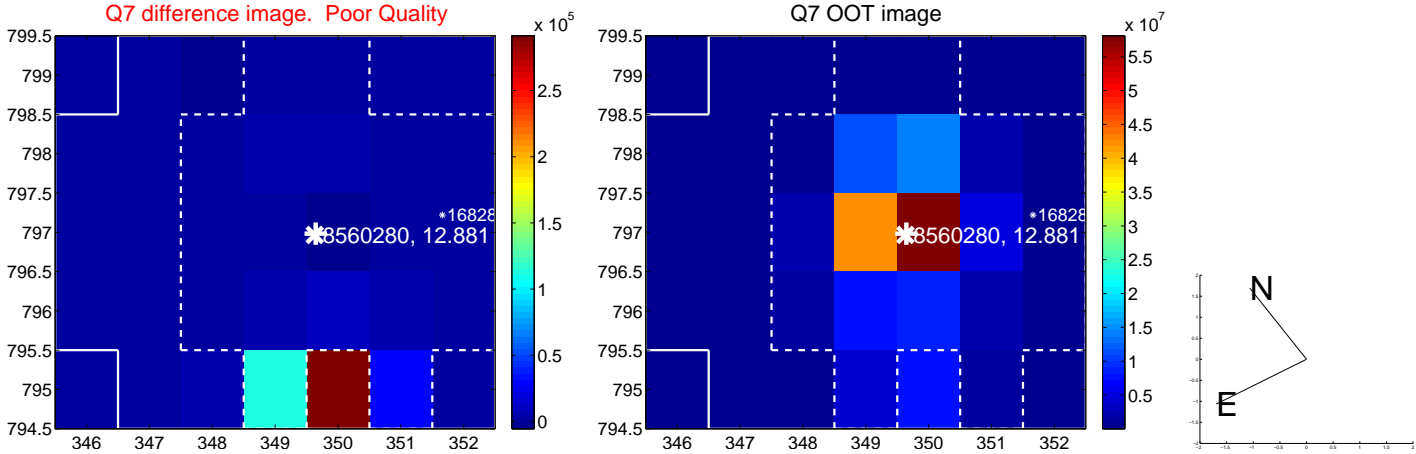
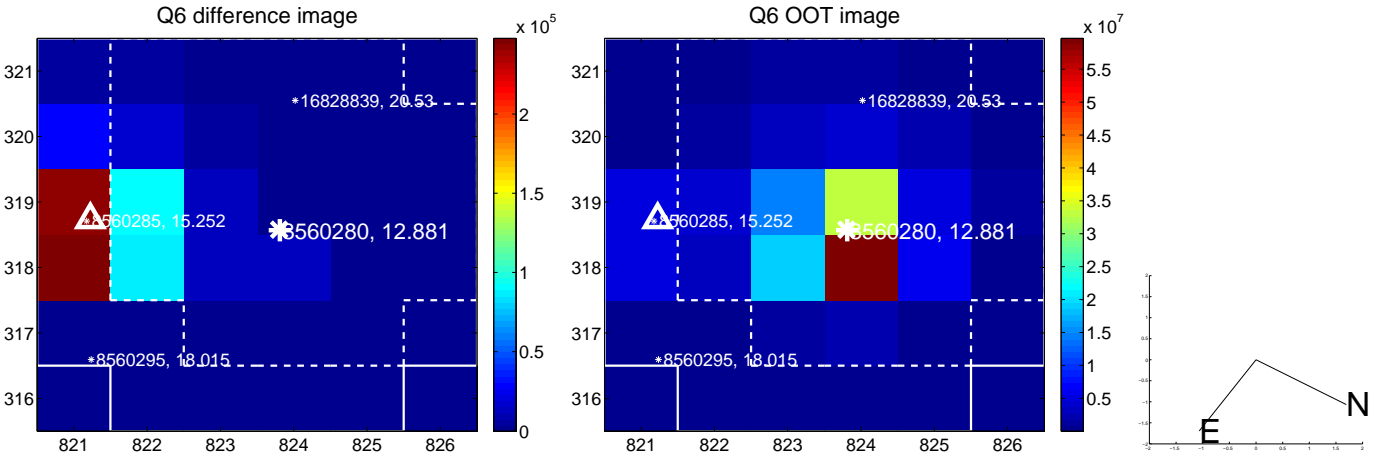
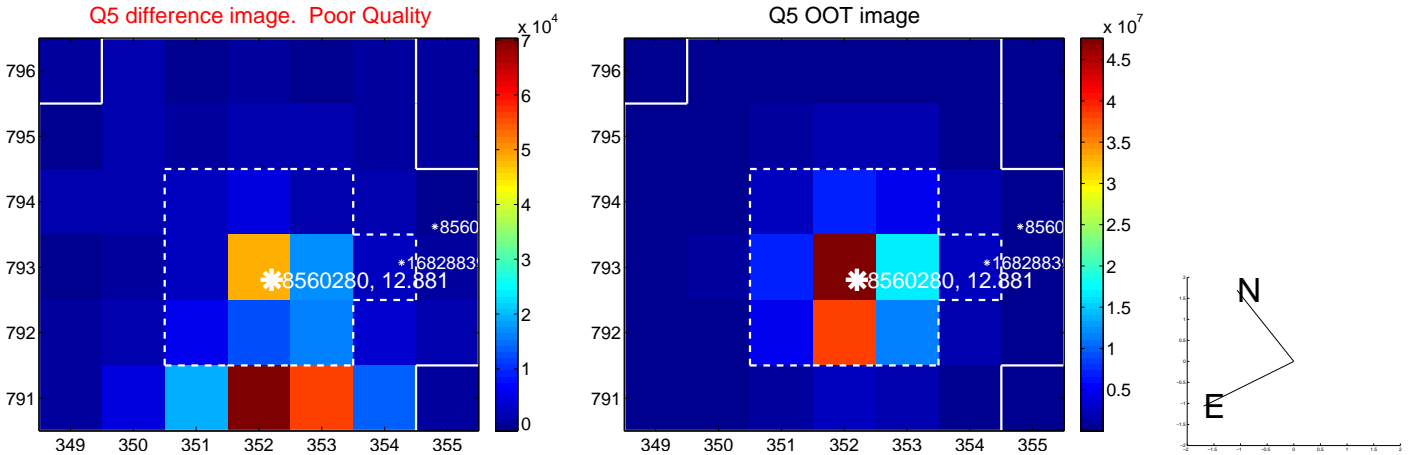


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

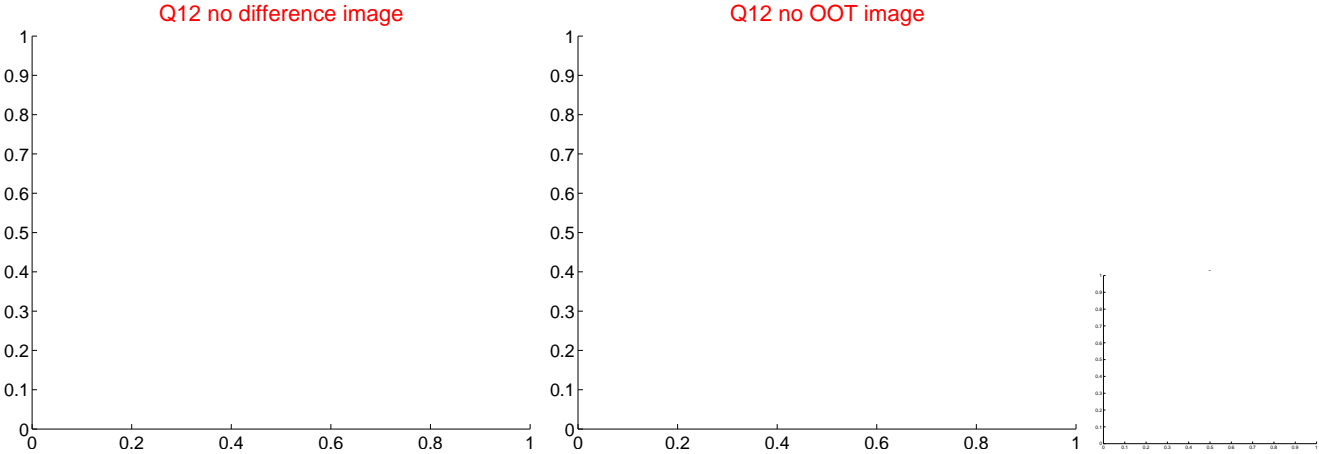
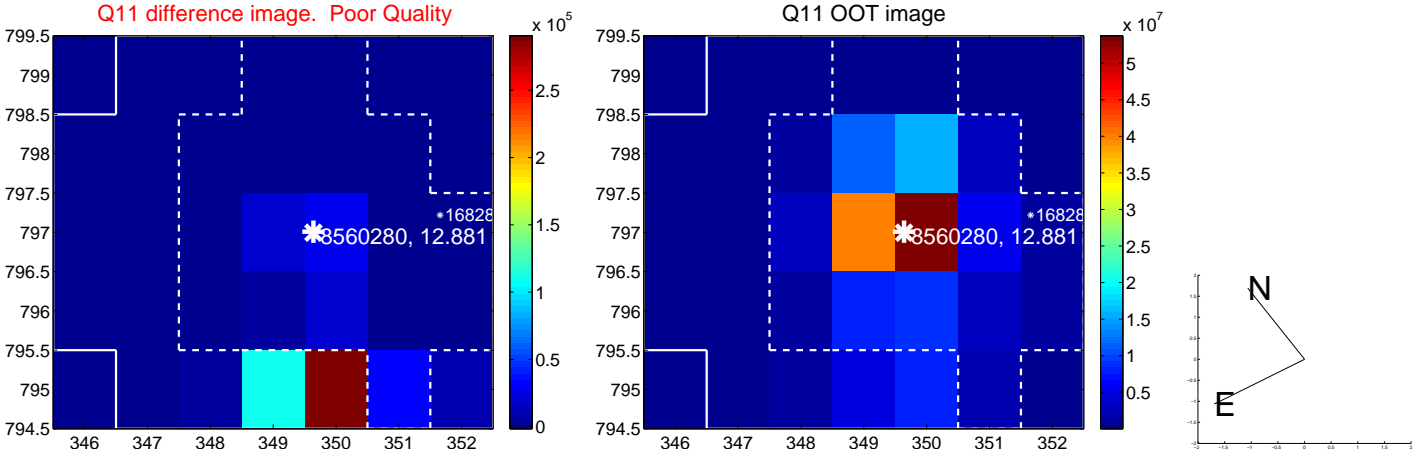
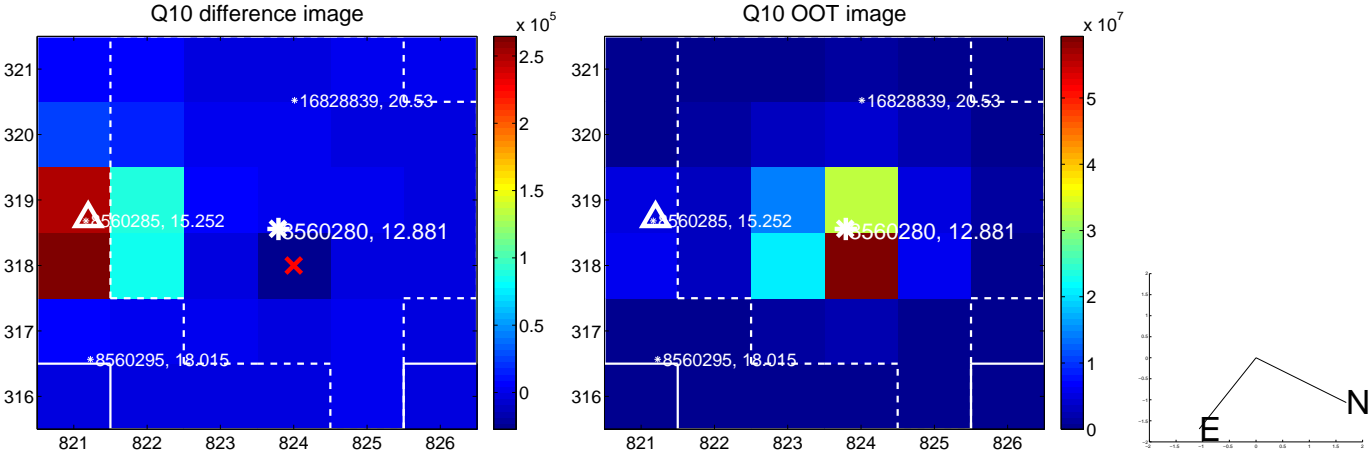
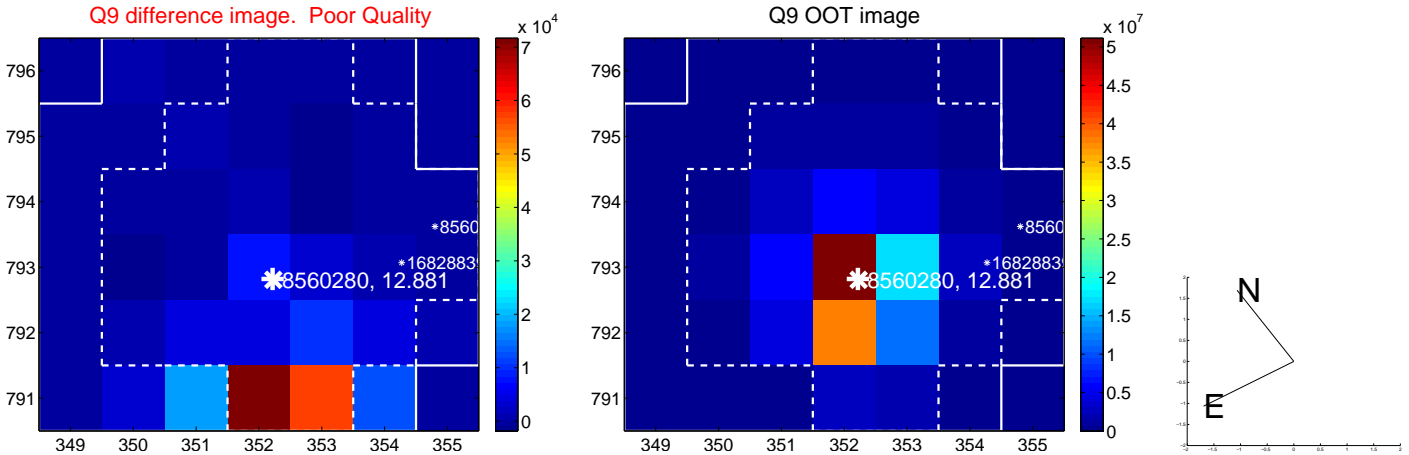
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



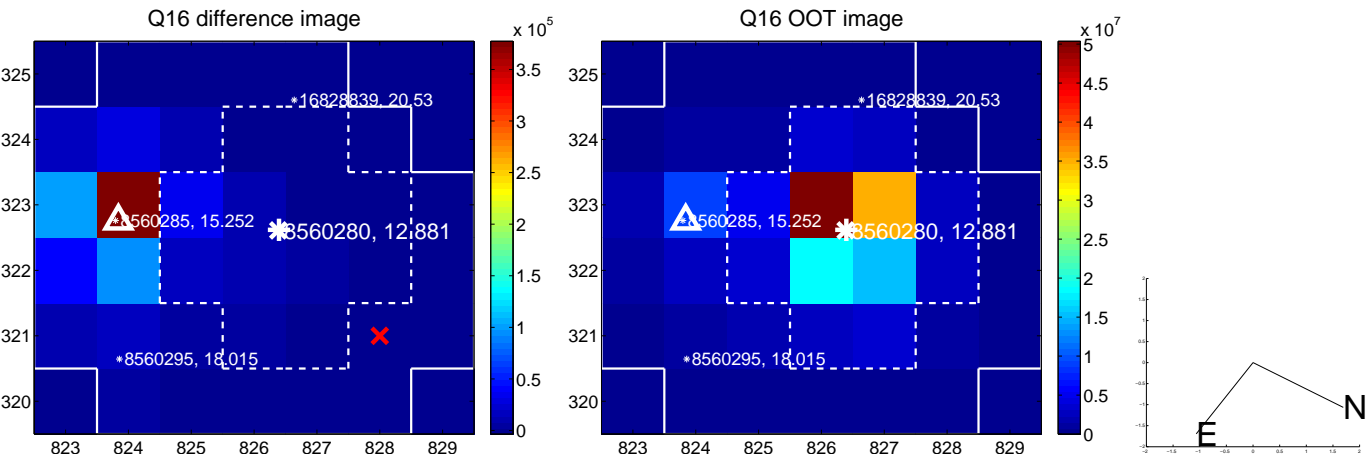
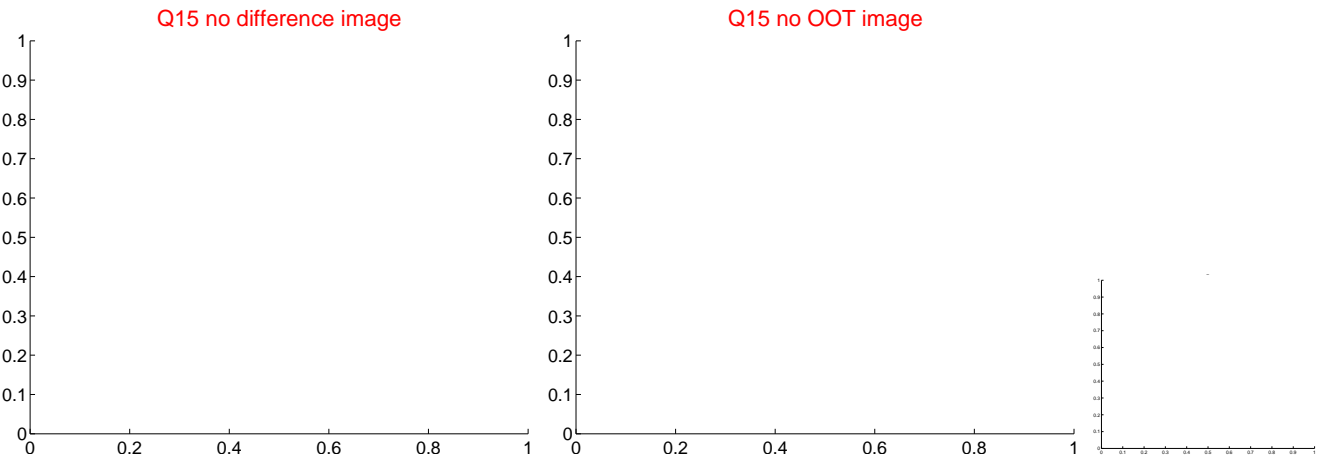
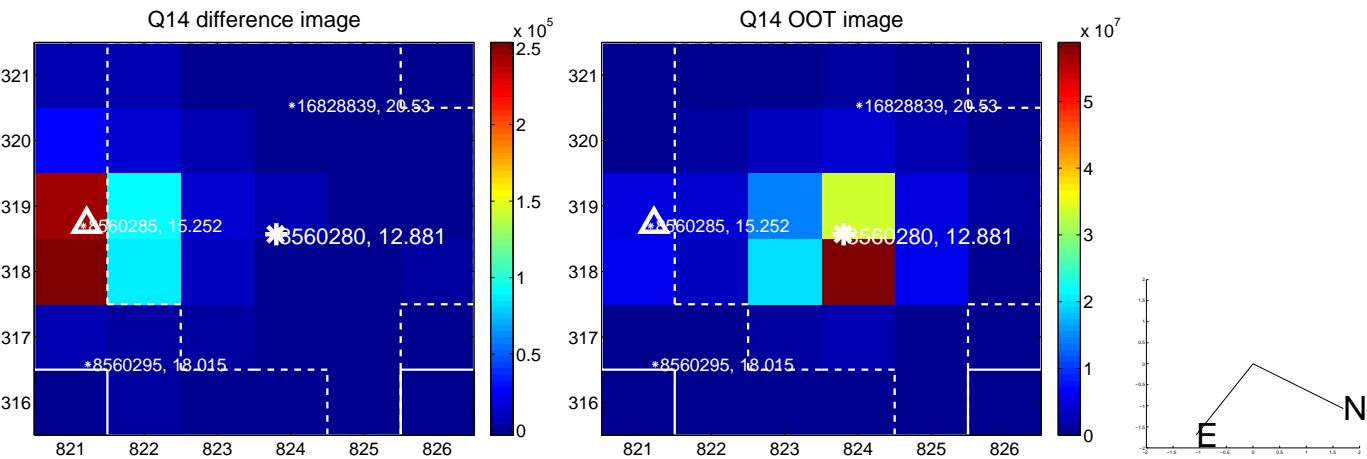
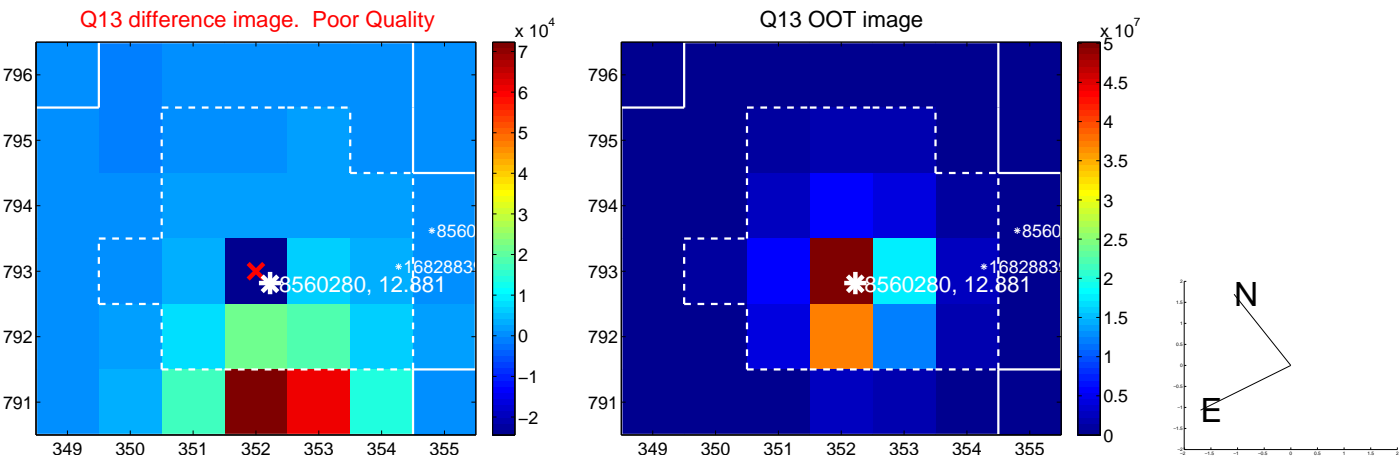
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



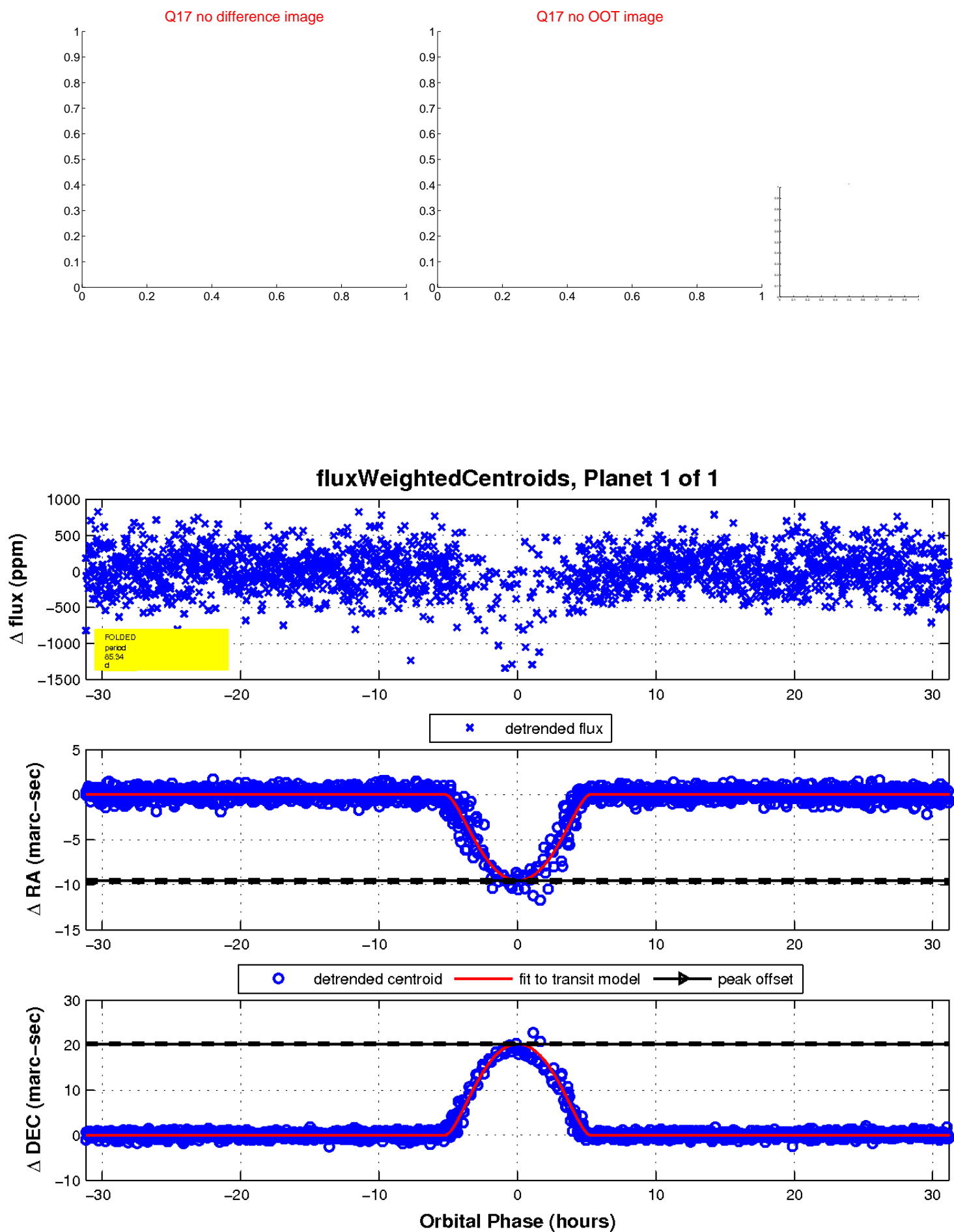
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



UKIRT Image

Declination

