

KIC 011360571

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})
011360571-01	OBS	2069.01	77.254715	159.324811	592.3	10.437	22.2	23.2	1.36	6564	3.79	21.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011360571-01	OBS	PC	0.94	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.

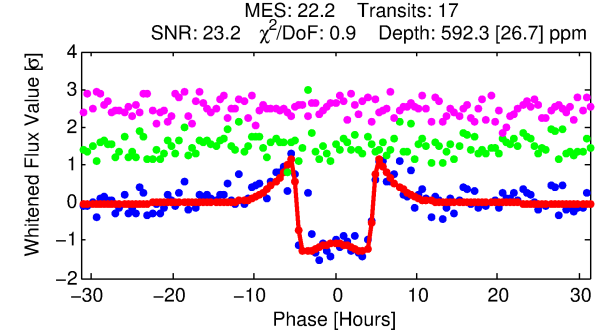
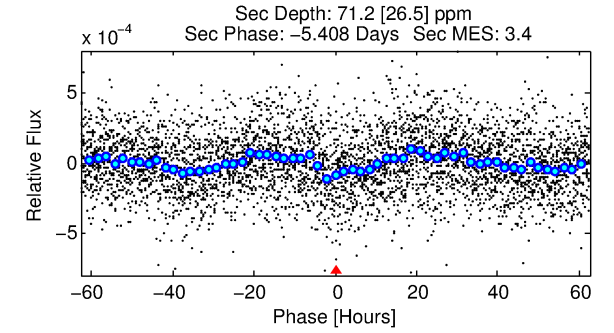
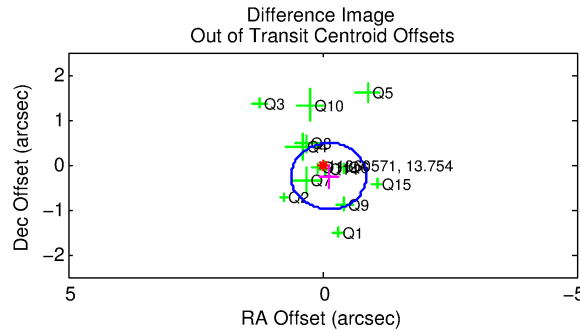
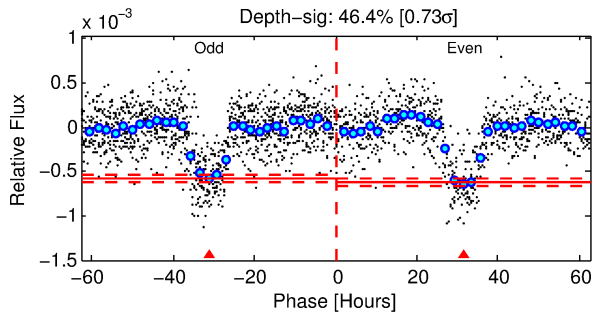
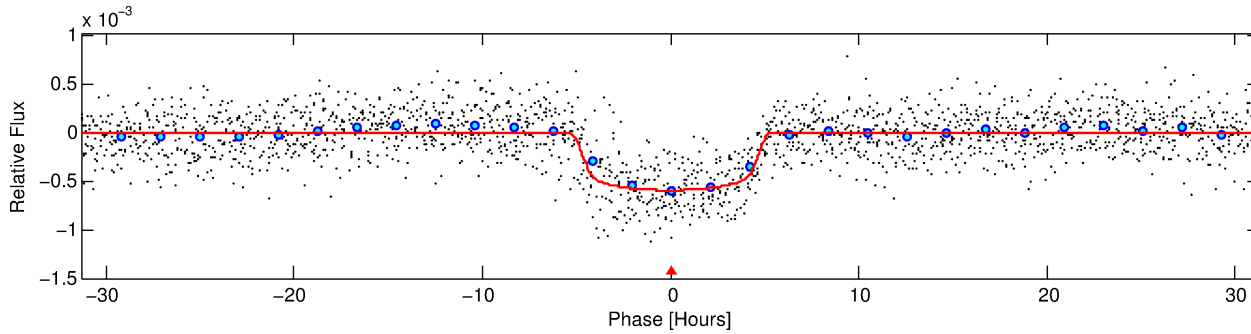
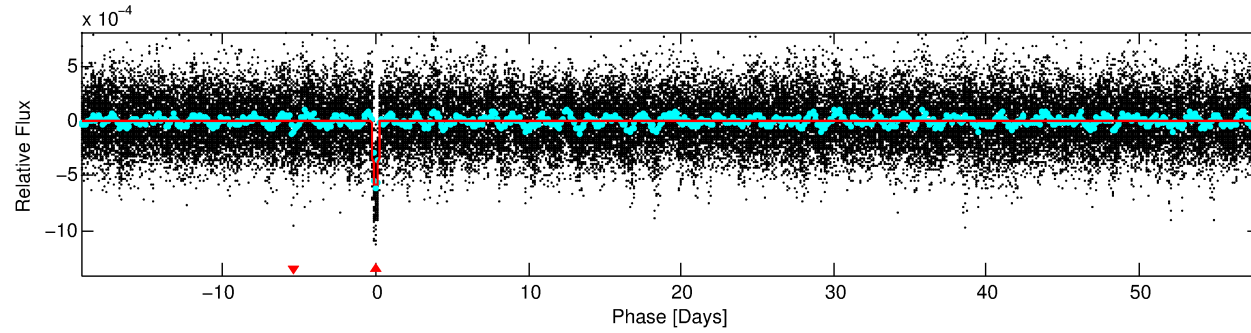
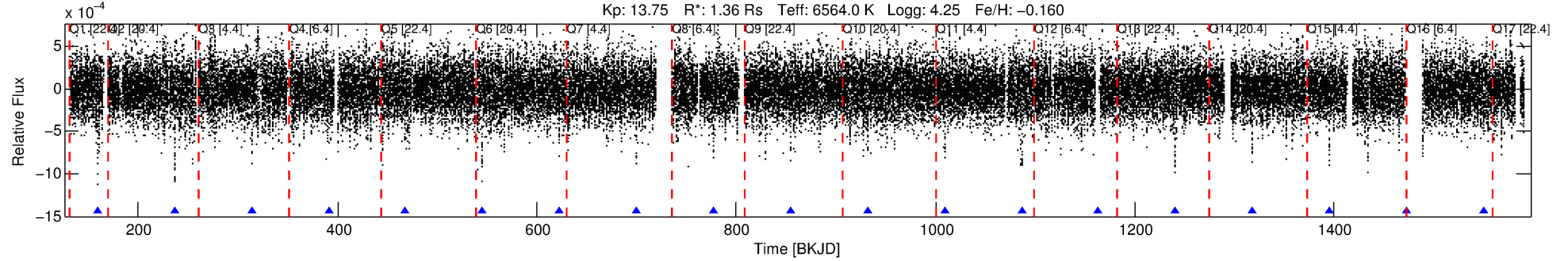
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011360571-01

No Significant Match Found

DV One-Page Summary

KIC: 11360571 Candidate: 1 of 1 Period: 77.255 d
KOI: K02069.01 Corr: 0.994



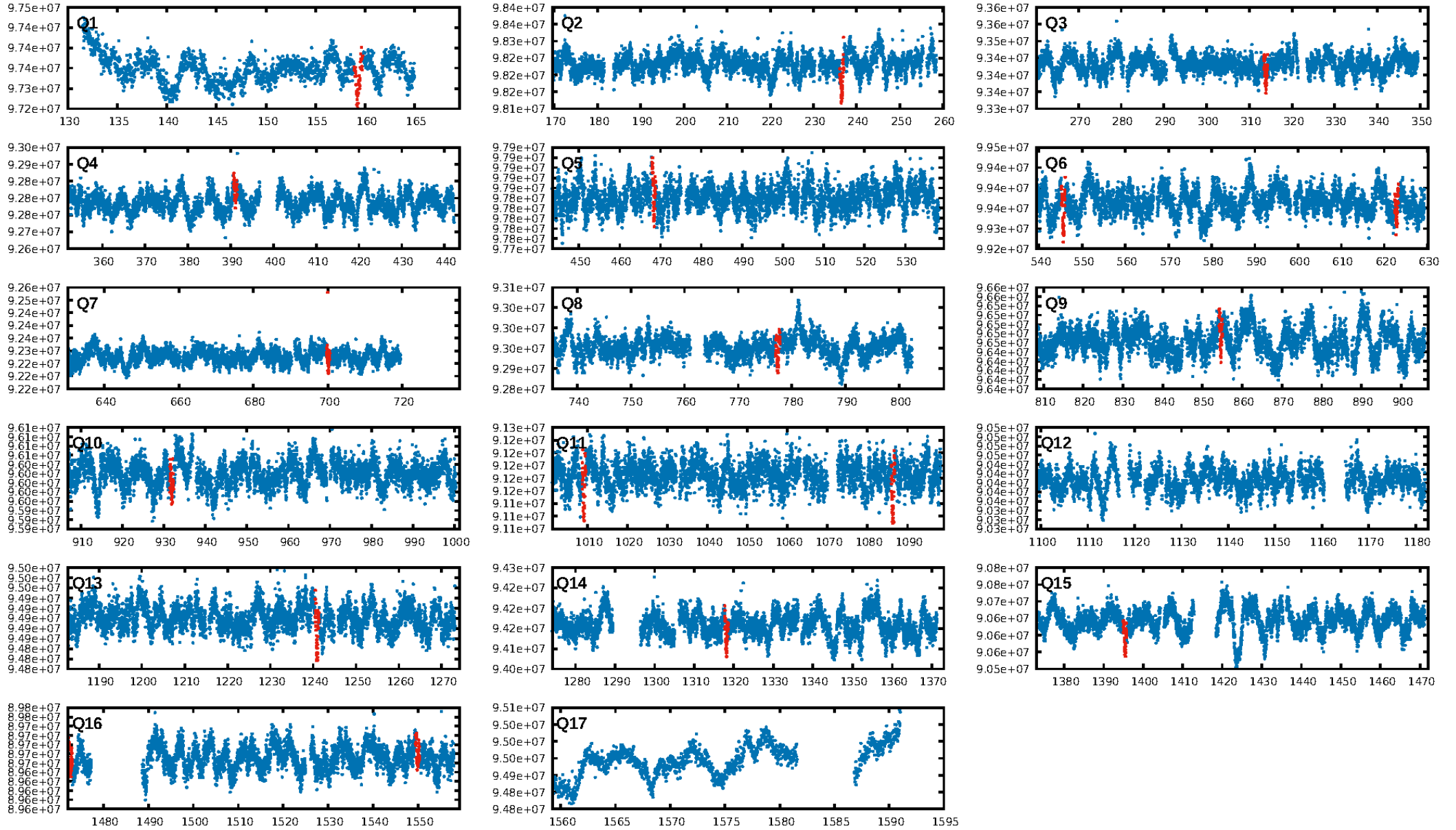
DV Fit Results:

Period = 77.25471 [0.00039] d
Epoch = 159.3248 [0.0038] BKJD
Rp/R* = 0.0256 [0.0009]
a/R* = 30.17 [3.62]
b = 0.88 [0.03]
Seff = 21.40 [8.35]
Teff = 548 [53] K
Rp = 3.79 [1.17] Re
a = 0.3780 [0.0954] AU
Ag = 390.53 [203.59] [1.91σ]
Teffp = 3770 [384] K [8.31σ]

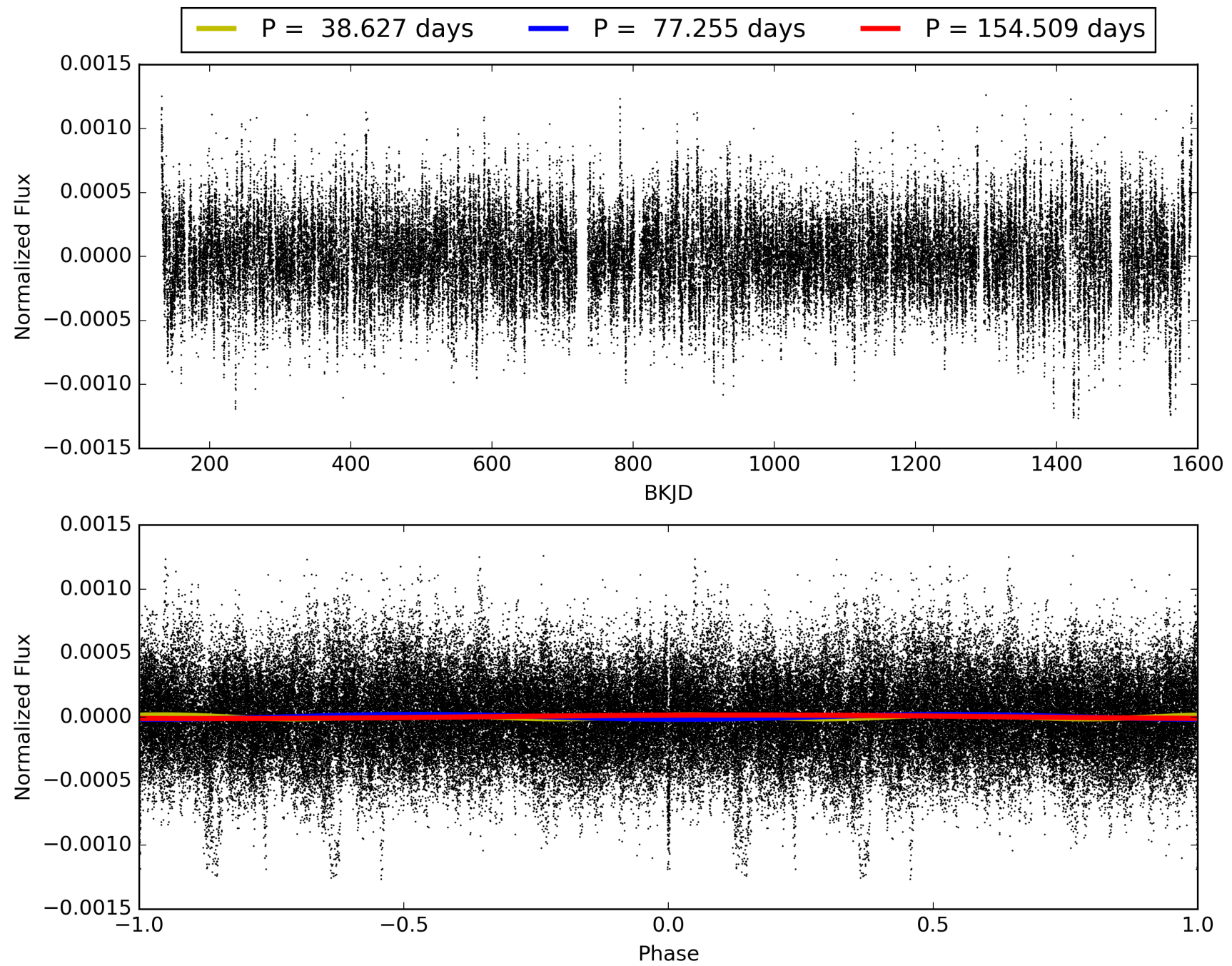
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 30.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.50e-101
RollingBand-fgt: 1.00 [16/16]
GhostDiagnostic-chr: 2.509
Centroid-sig: 86.9%
Centroid-so: 0.190 arcsec [0.92σ]
OotOffset-rm: 0.285 arcsec [1.16σ]
KicOffset-rm: 0.234 arcsec [0.91σ]
OotOffset-st: 4/4/2/3 [13]
KicOffset-st: 4/4/2/3 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 011360571-01, PDC Light Curves

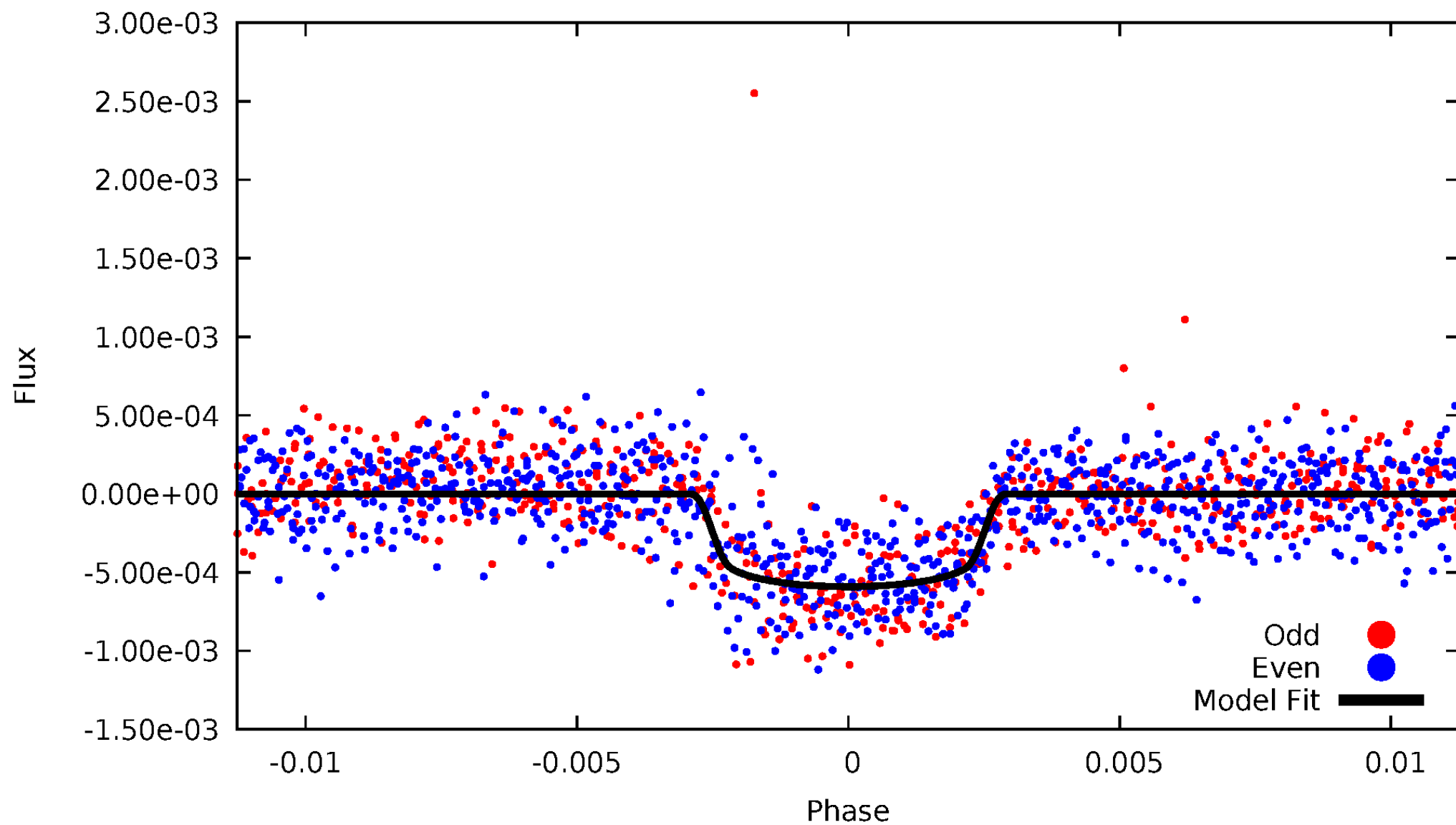


TCE 011360571-01



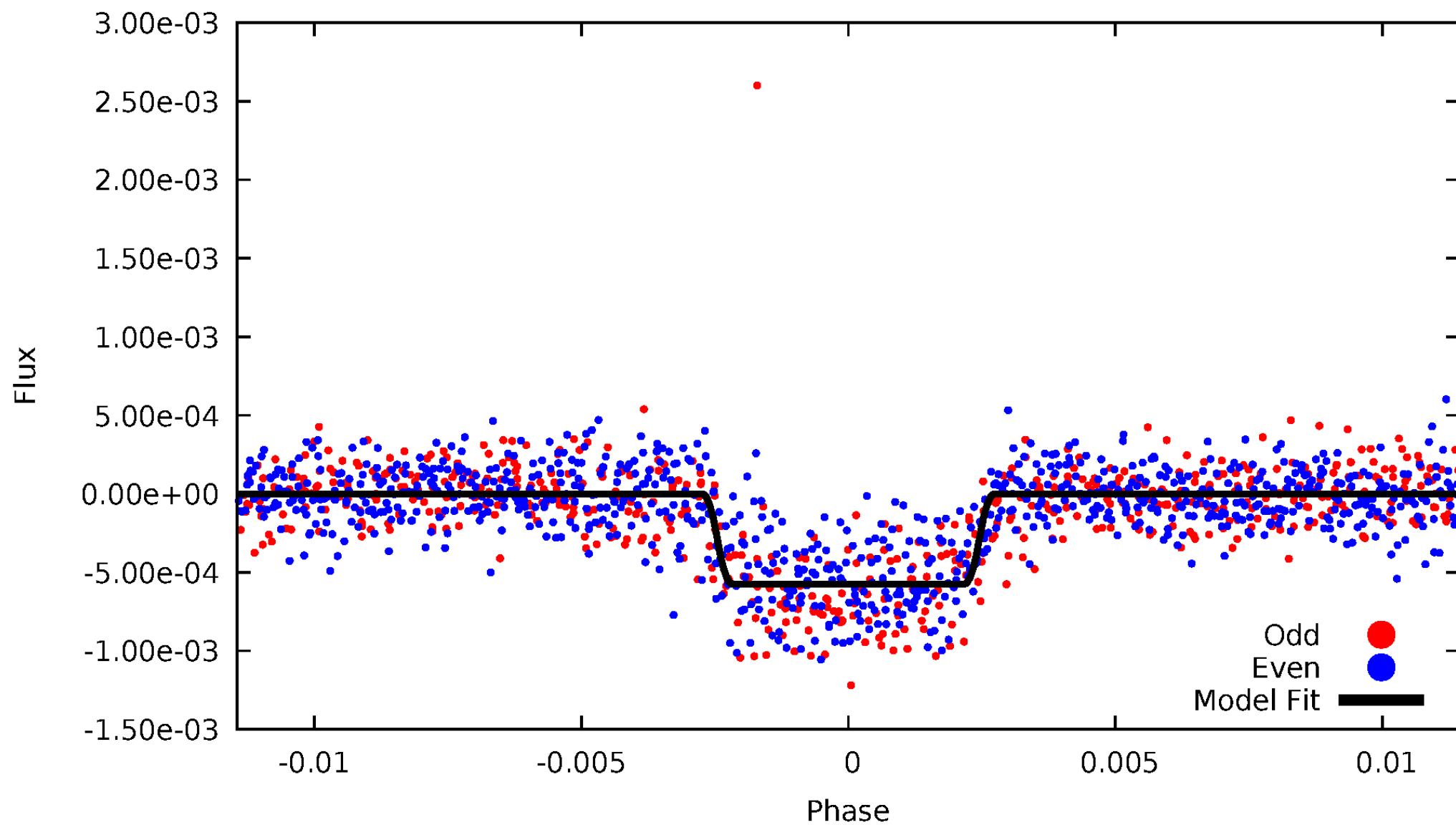
DV Odd/Even

TCE 011360571-01



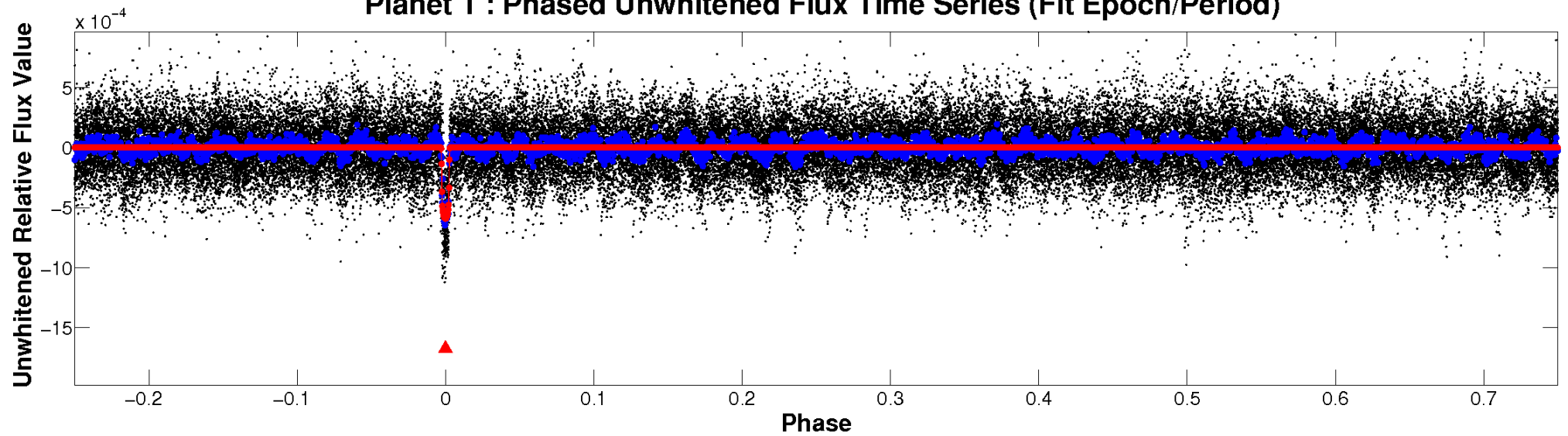
ALT Odd/Even

TCE 011360571-01

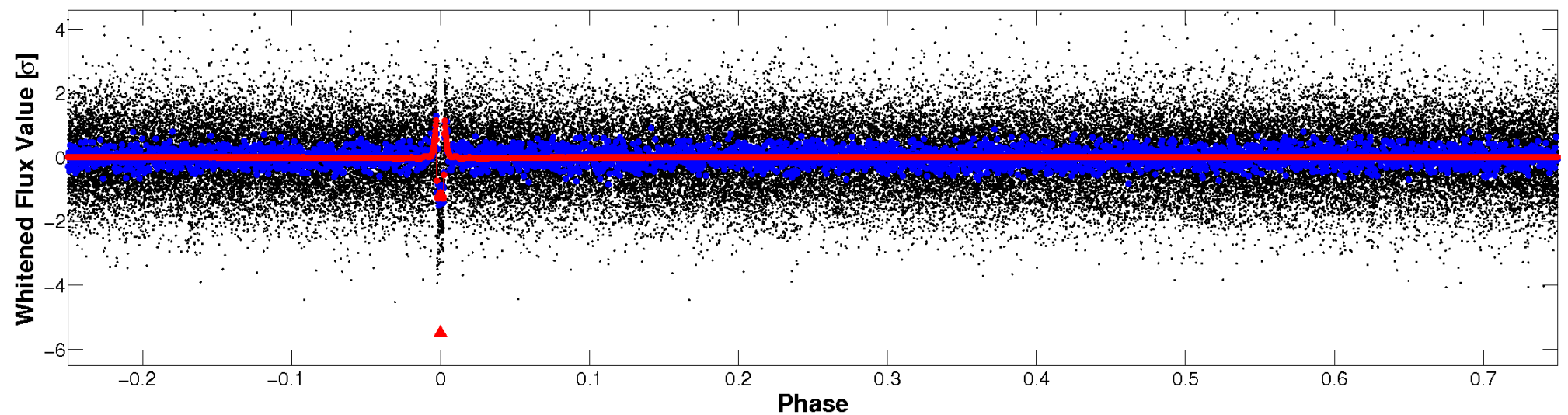


Non-Whitened Vs. Whitened Light Curve

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

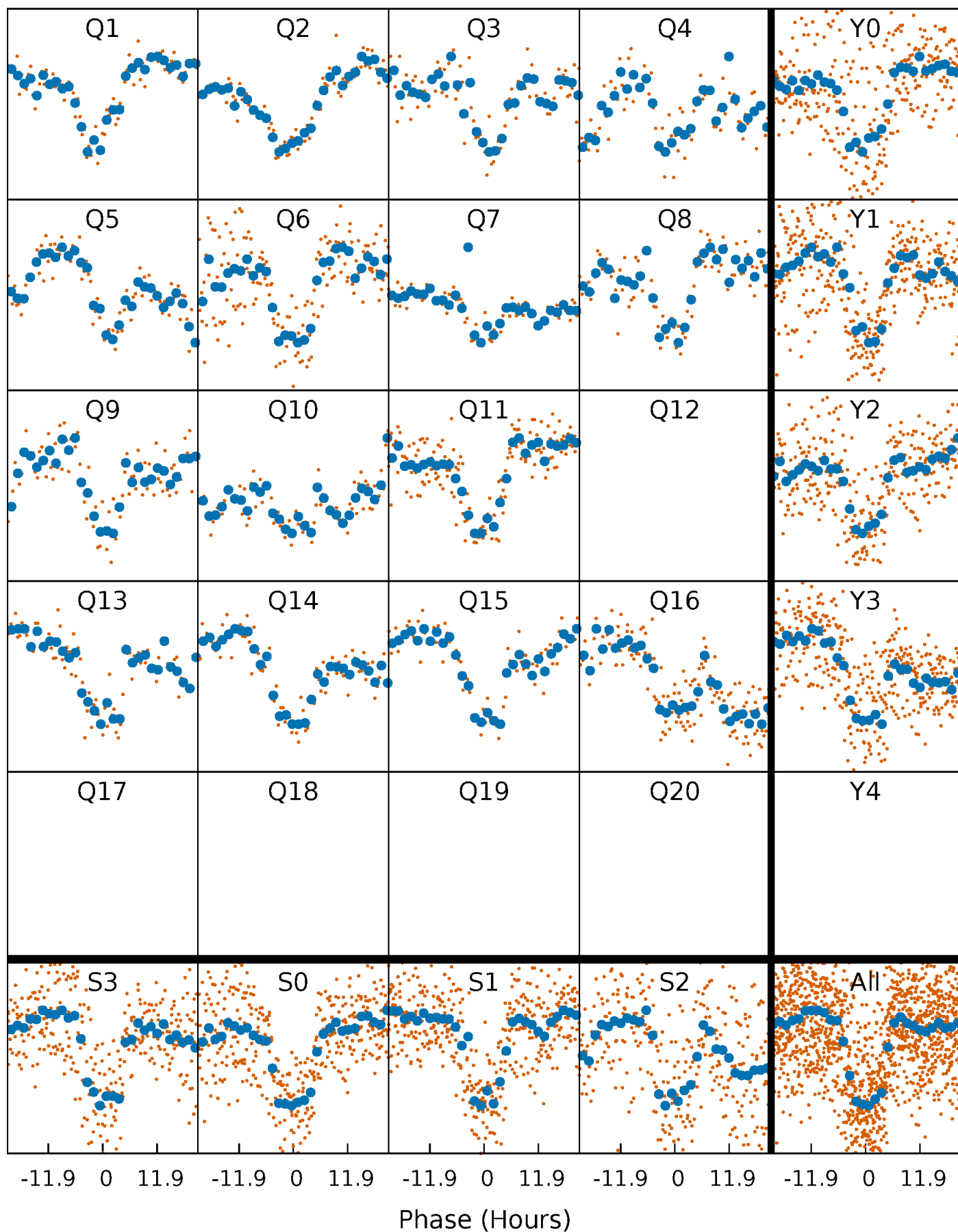


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



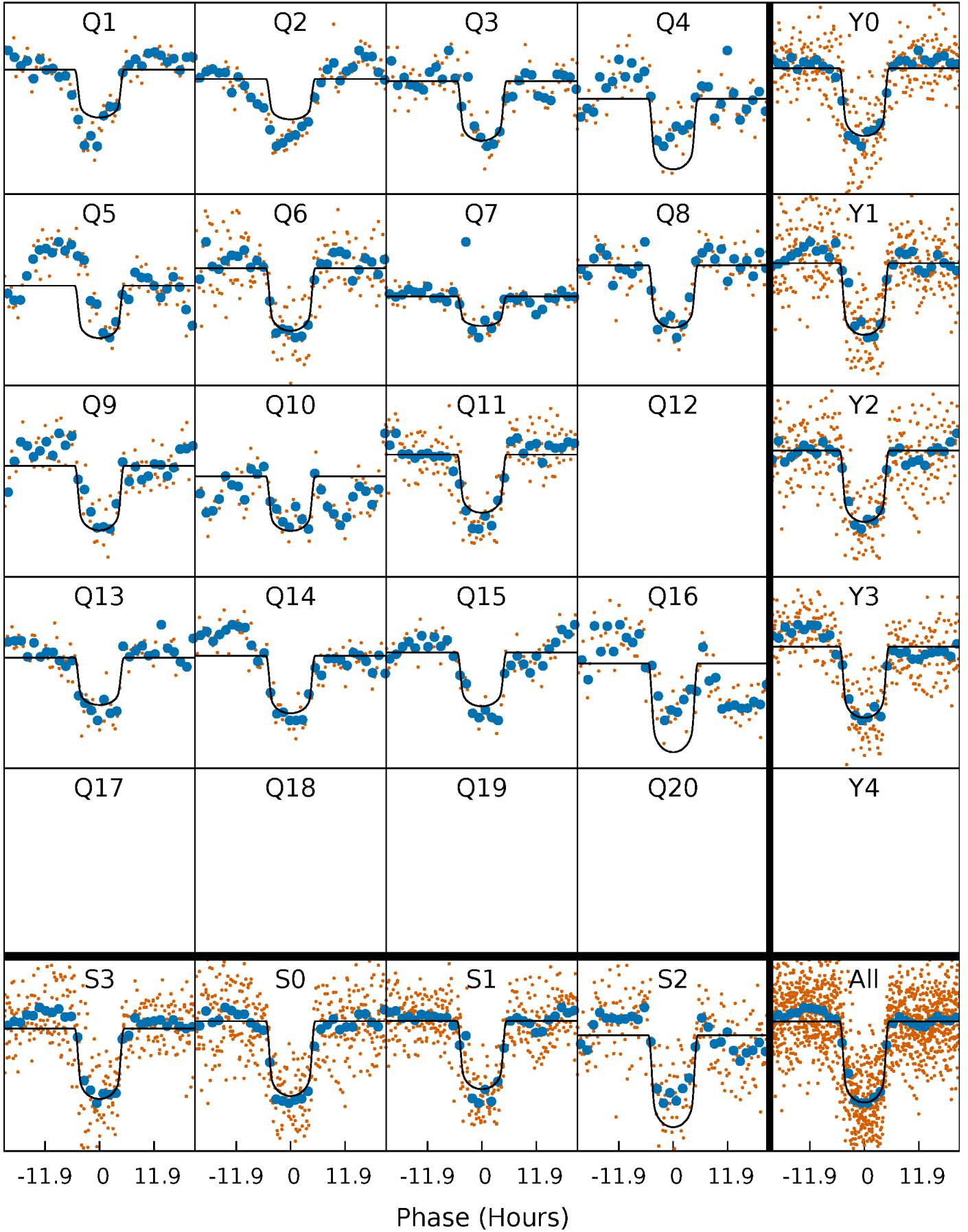
PDC Quarter-Phased Transit Curves

TCE 011360571-01 P= 77.254715 Days $T_0=159.324811$ (BKJD)



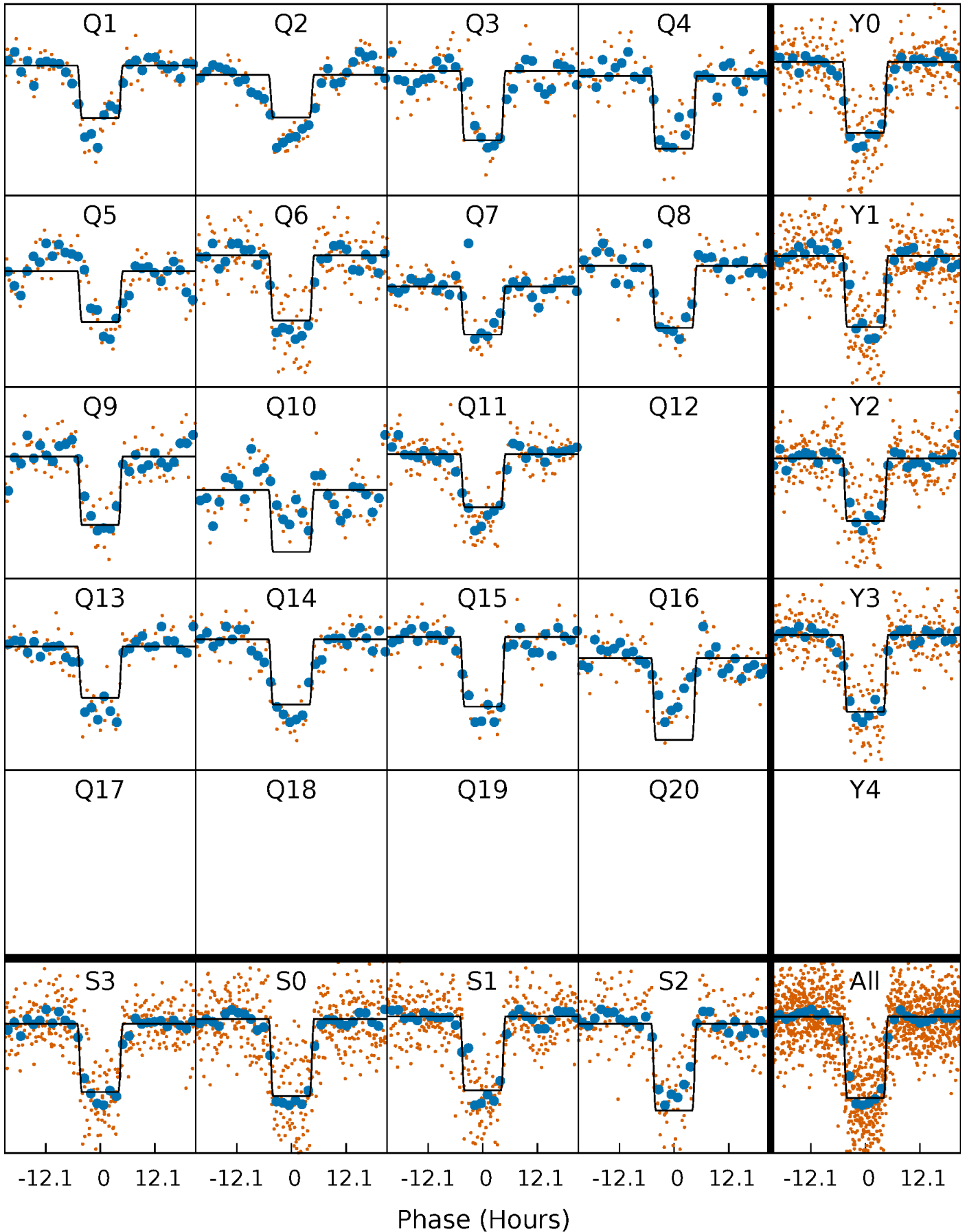
DV Quarter-Phased Transit Curves

TCE 011360571-01 P= 77.254715 Days $T_0=159.324811$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

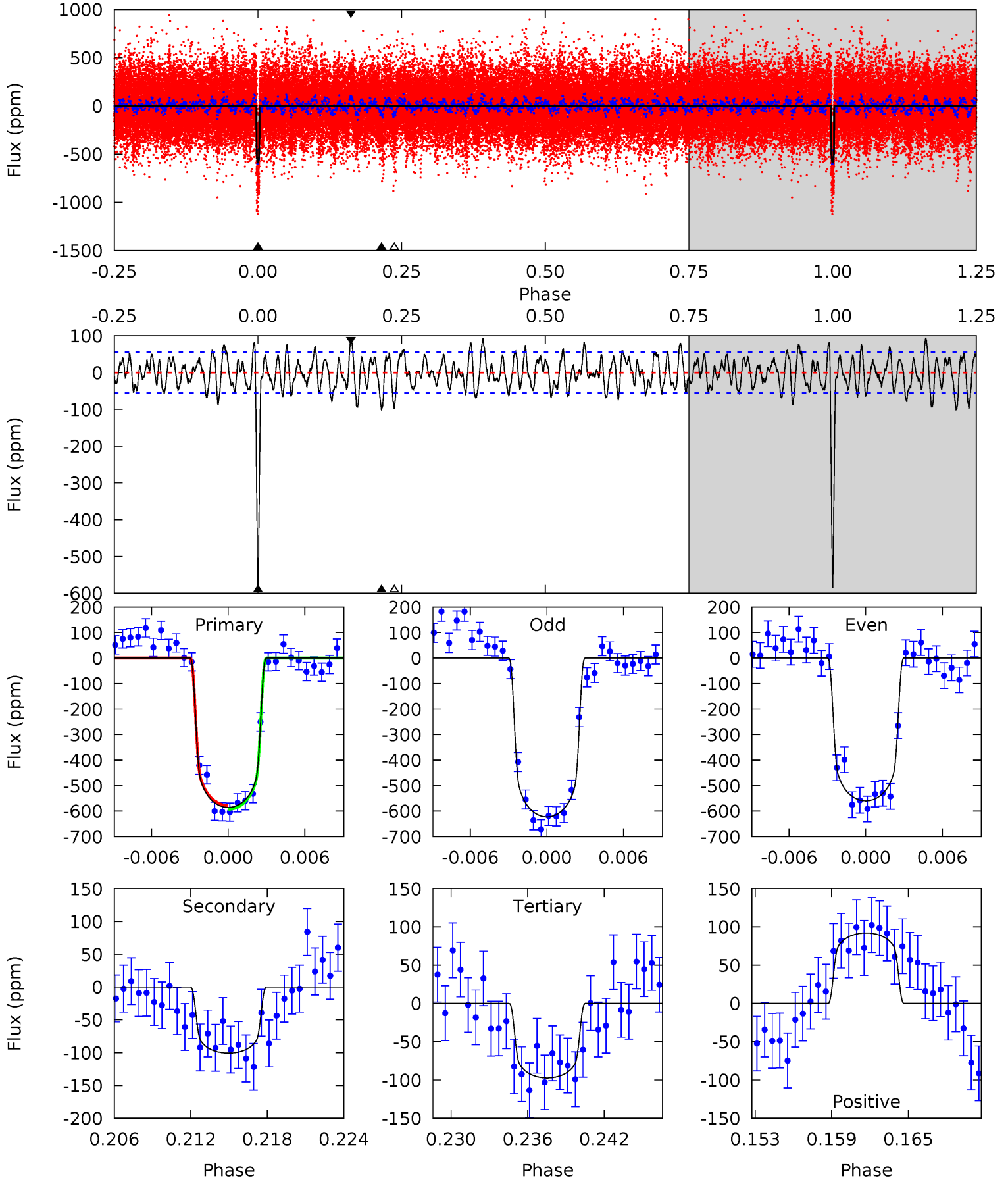
TCE 011360571-01 P= 77.254909 Days $T_0=159.321612$ (BKJD)



DV Model-Shift Uniqueness Test

011360571-01, P = 77.254715 Days, E = 82.070096 Days

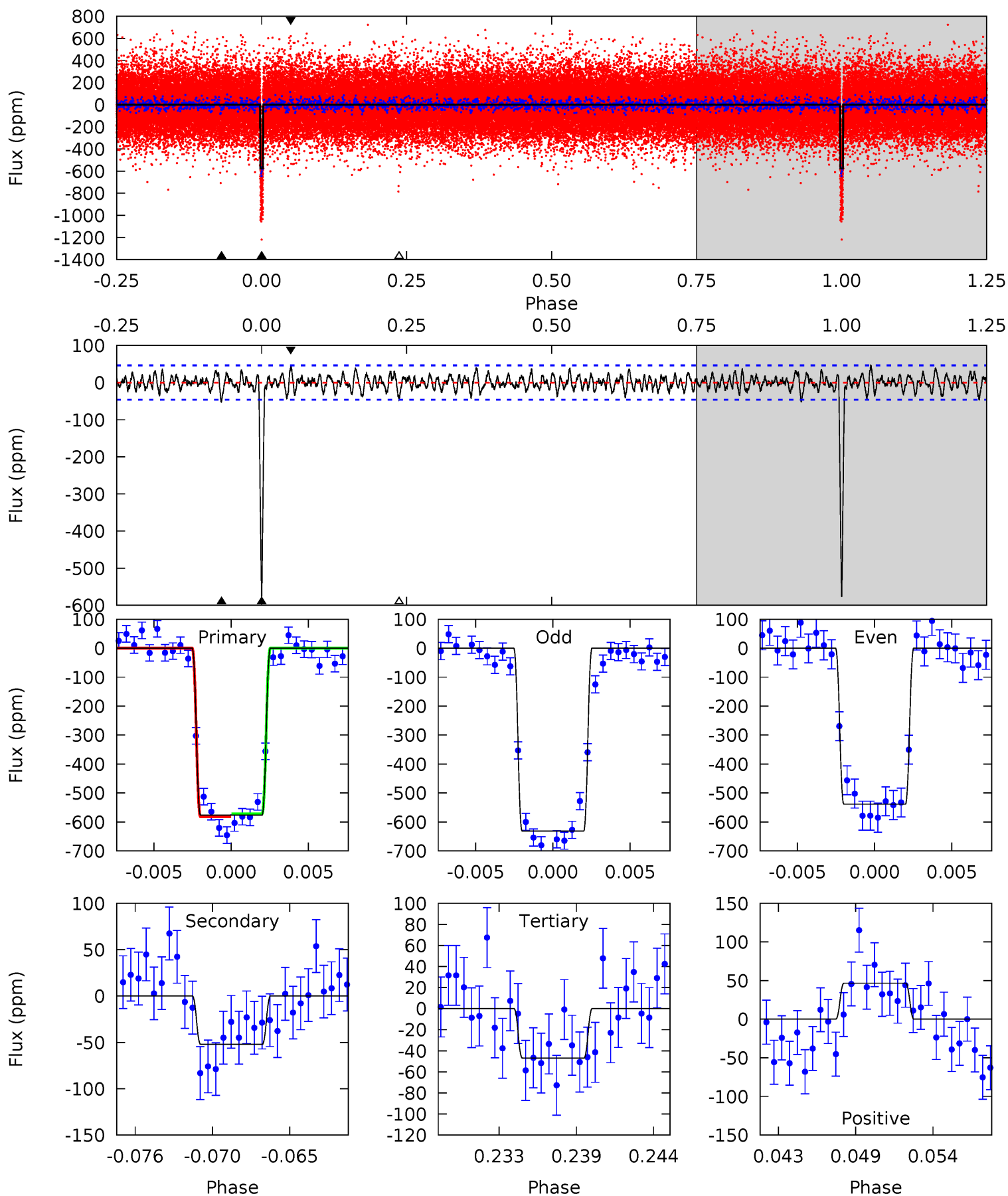
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
53.9	9.28	8.96	8.47	5.13	2.75	3.28	44.9	45.4	0.32	0.81	2.85	1.03	0.14	0.69



Alt Model-Shift Uniqueness Test

011360571-01, P = 77.254909 Days, E = 82.066703 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
64.1	5.79	5.22	5.19	5.14	2.78	1.71	58.9	58.9	0.58	0.61	5.10	1.07	0.07	0.52



Stellar Parameters For KIC 011360571

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6564^{+181}_{-250}	$4.255^{+0.128}_{-0.192}$	$-0.160^{+0.250}_{-0.300}$	$1.356^{+0.417}_{-0.243}$	$1.212^{+0.188}_{-0.188}$	$0.684^{+0.426}_{-0.352}$
	+3%/-4%	+3%/-5%	+156%/-188%	+31%/-18%	+16%/-16%	+62%/-51%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011360571-01 / KOI 2069.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-101 ± 11	$3.81^{+0.63}_{-0.43}$	765^{+60}_{-48}	4316^{+135}_{-151}	538^{+157}_{-136}
Alt.	-52 ± 9	$3.59^{+0.60}_{-0.42}$	771^{+53}_{-50}	3911^{+163}_{-161}	306^{+108}_{-82}

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 $A_{obs} \gg 1.0$

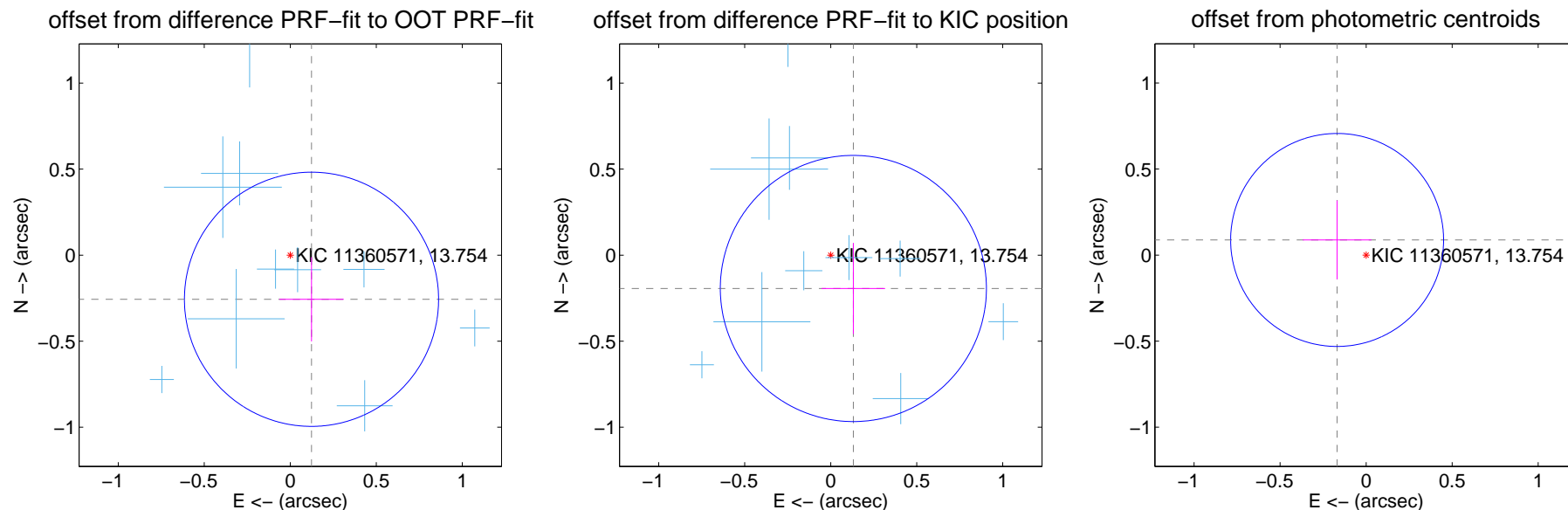
DV Centroid Data

Supplemental centroid analysis for 011360571-01. Kepler magnitude: 13.75. Transit SNR 23.15

There are 13 quarters with good PRF difference image offsets

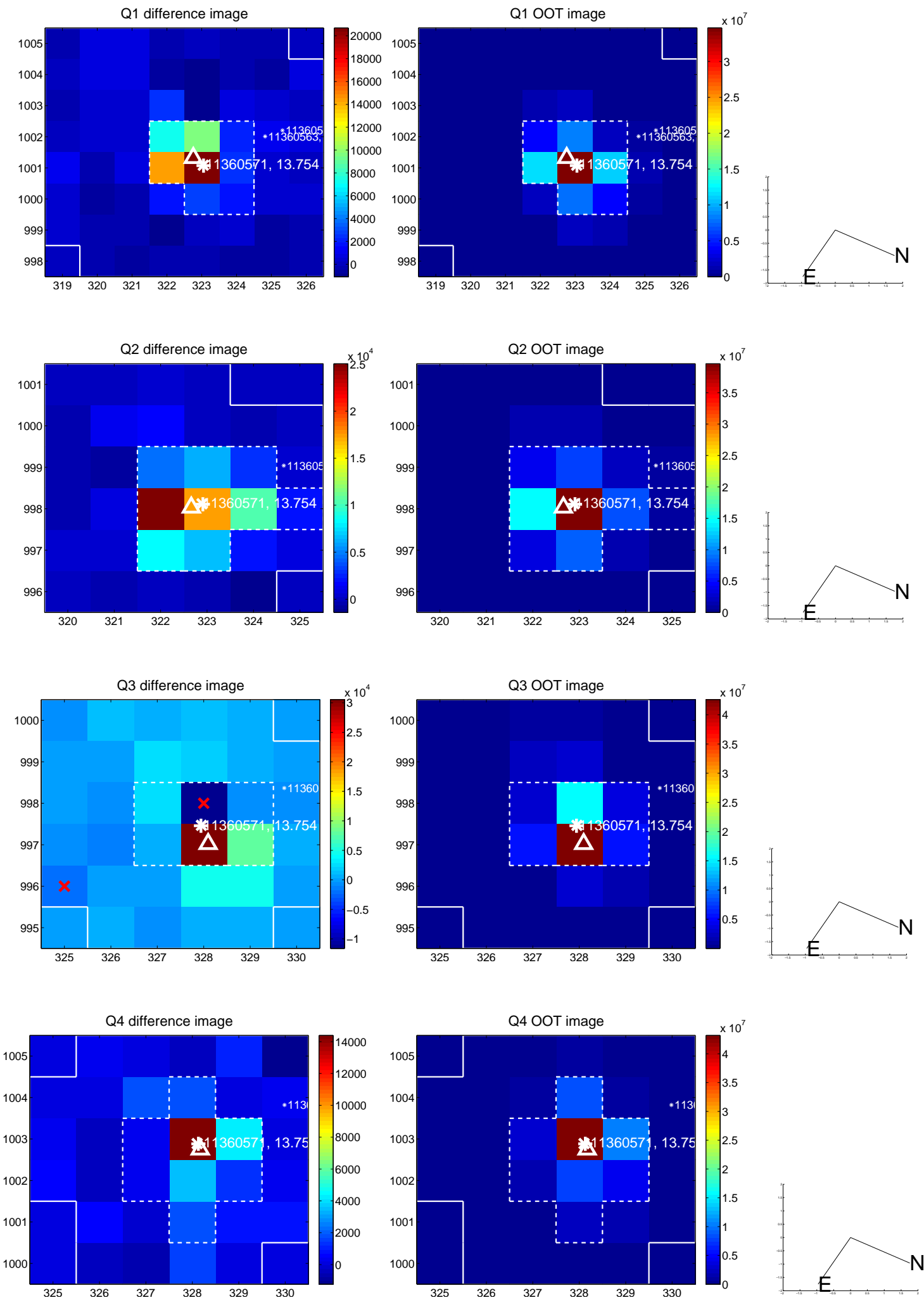
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.285 ± 0.246	1.16	-0.123 ± 0.187	-0.256 ± 0.245
PRF-fit source offset from KIC position	0.234 ± 0.258	0.91	-0.132 ± 0.185	-0.194 ± 0.264
photometric centroid source offset	0.19 ± 0.21	0.92	0.17 ± 0.20	0.09 ± 0.23

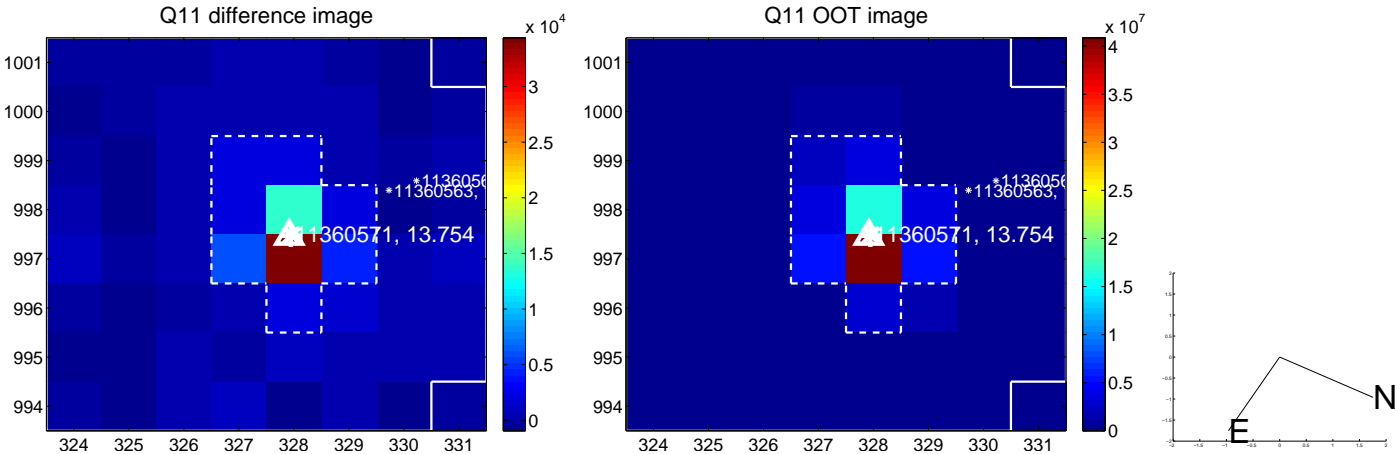
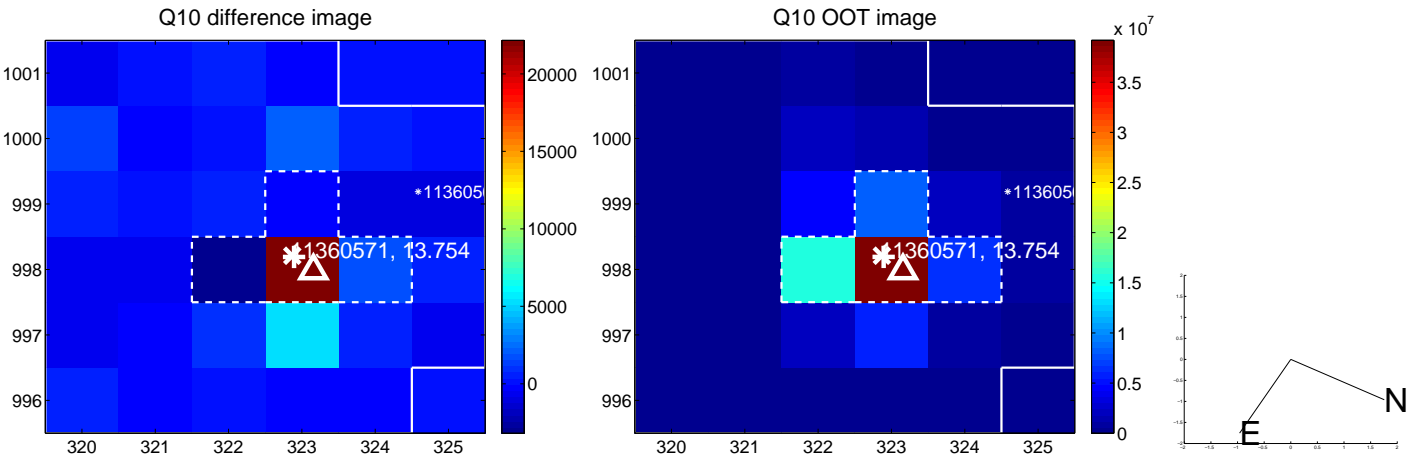
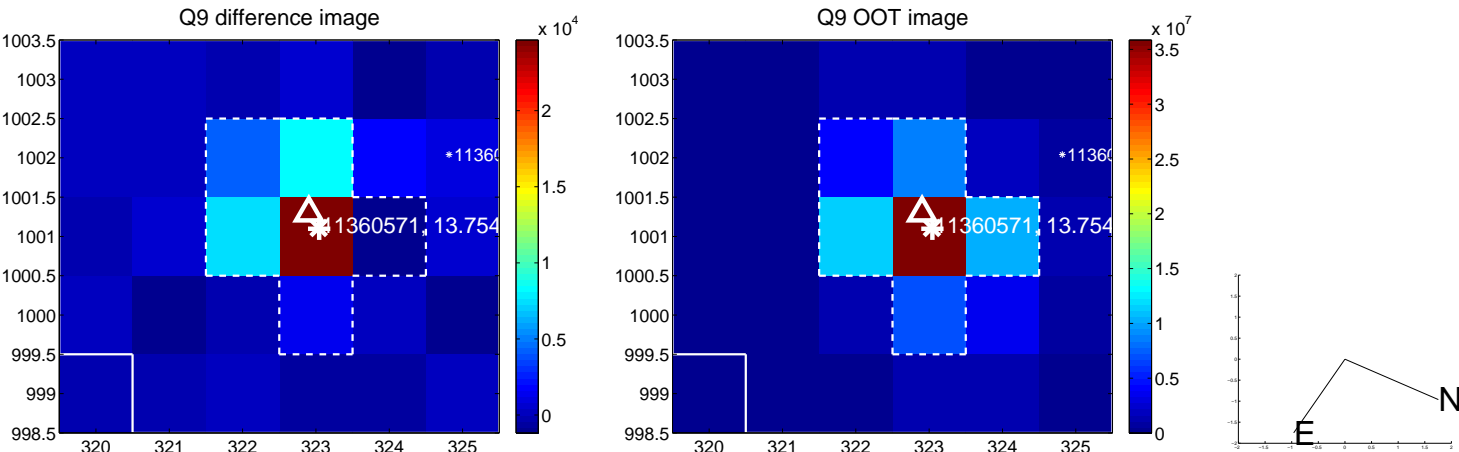


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



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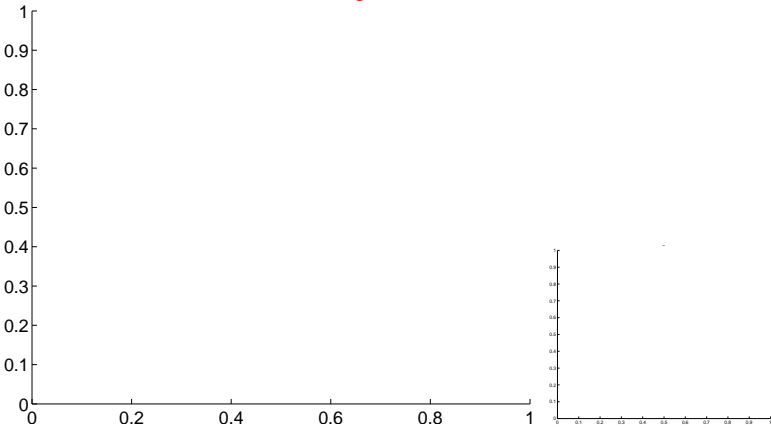


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

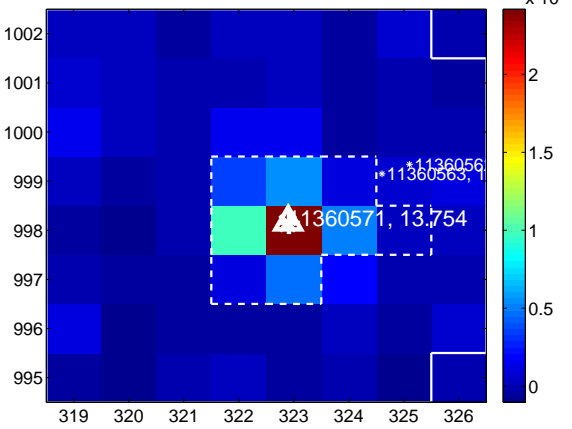
Q13 no difference image



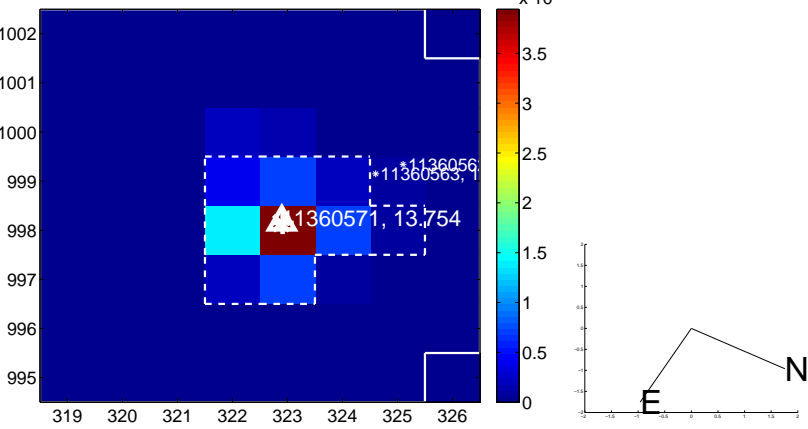
Q13 no OOT image



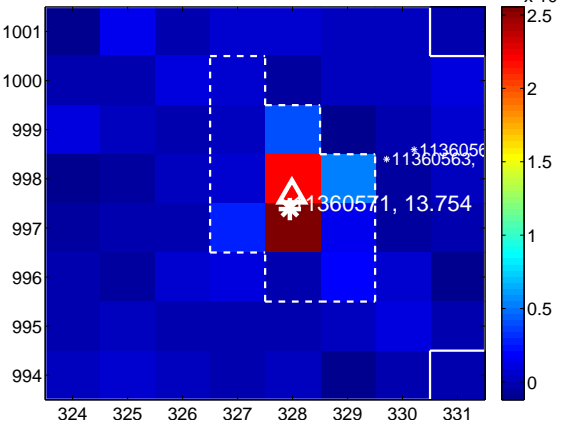
Q14 difference image



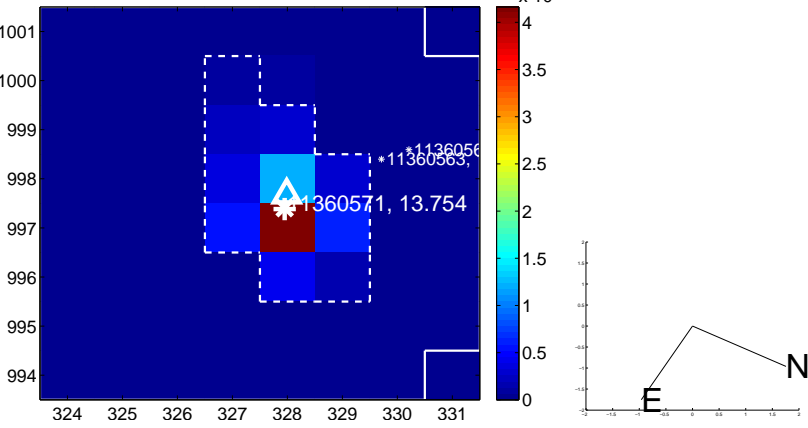
Q14 OOT image



Q15 difference image



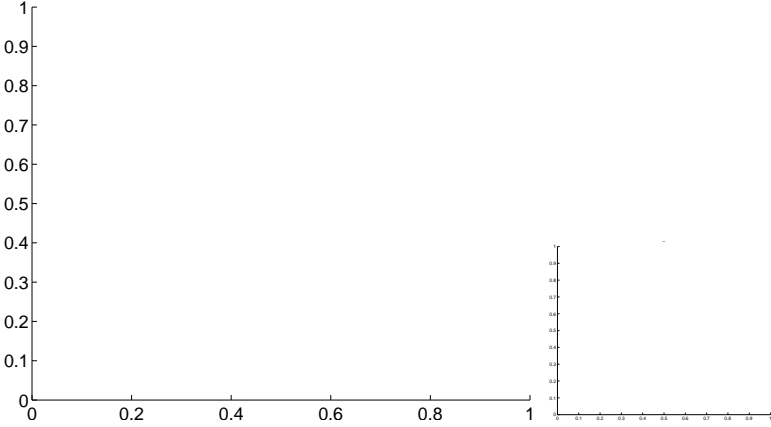
Q15 OOT image



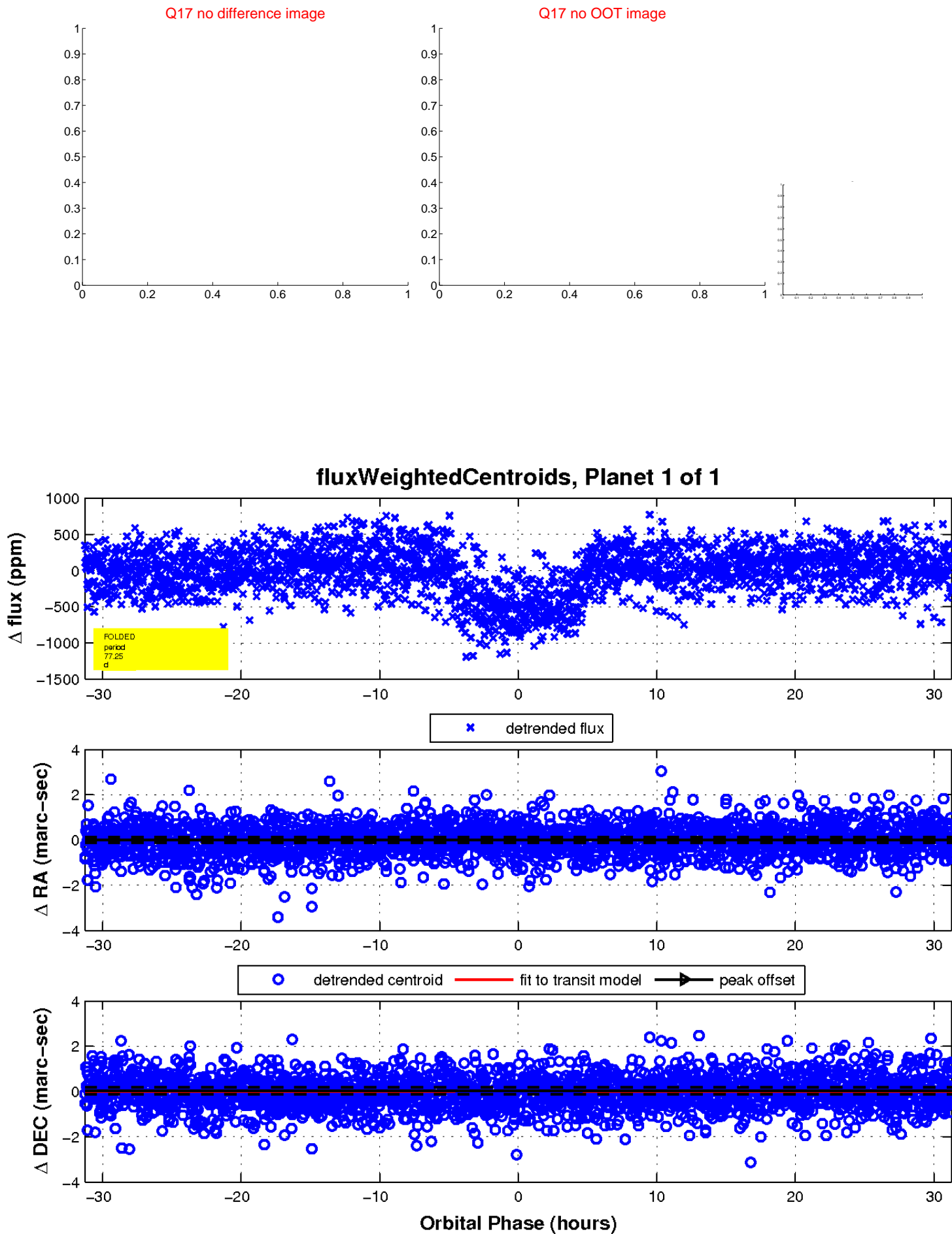
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

