

KIC 006370558

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})
006370558-01	OBS	No	60.316850	183.443437	141.6	41.749	20.3	24.5	1.98	6526	3.10	53.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006370558-01	OBS	FP	0.00	1	0	0	0	LPP_DV

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

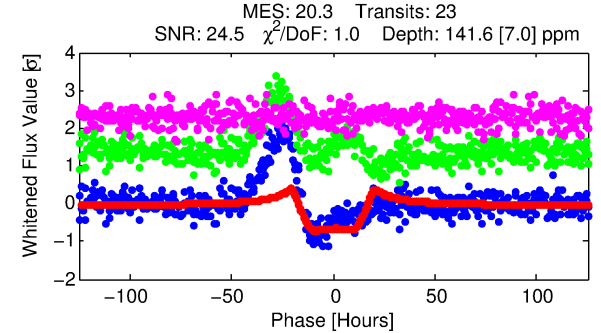
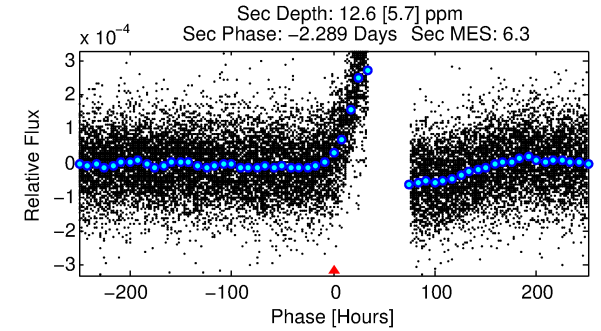
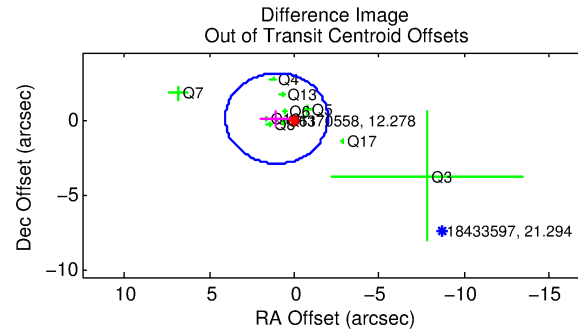
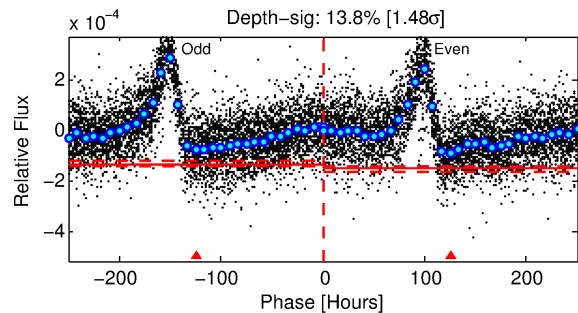
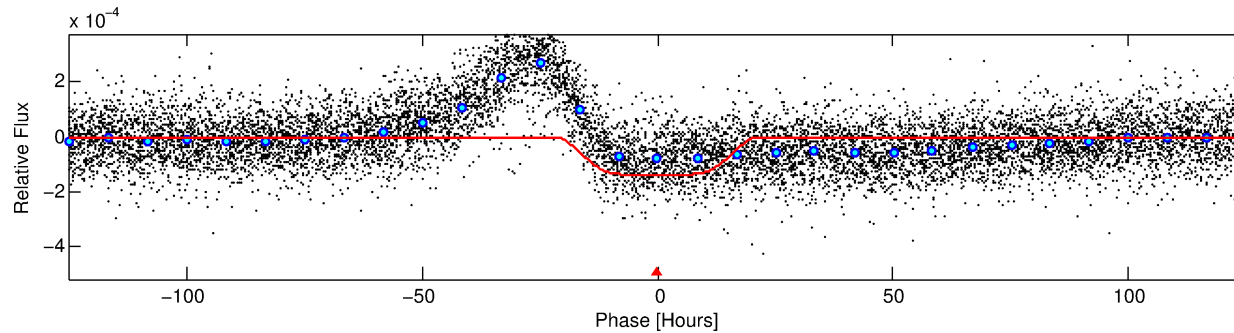
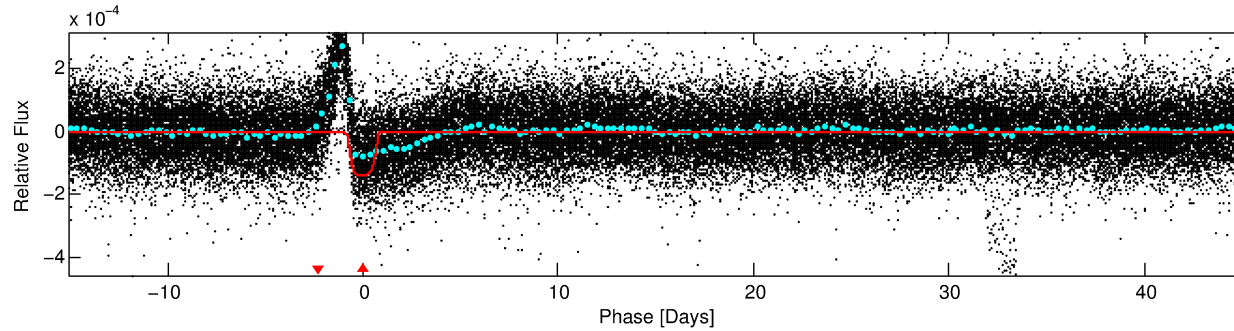
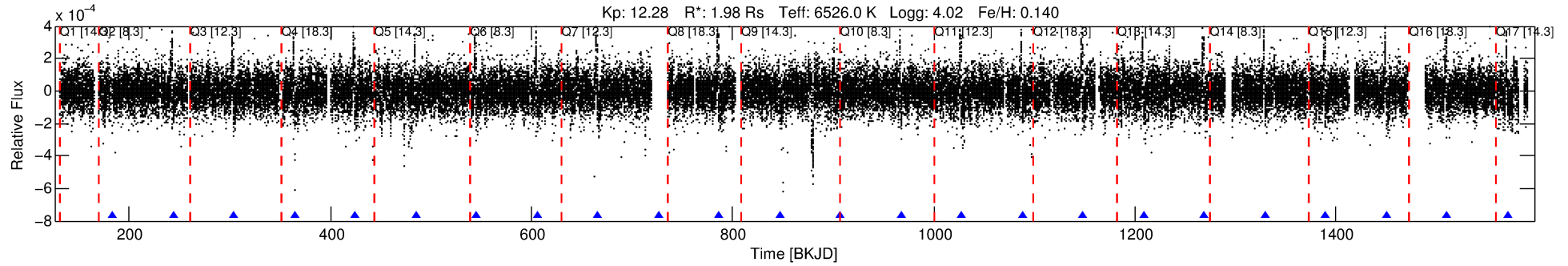
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006370558-01

No Significant Match Found

DV One-Page Summary

KIC: 6370558 Candidate: 1 of 1 Period: 60.317 d



DV Fit Results:

Period = 60.31685 [0.00197] d
Epoch = 183.4434 [0.0273] BKJD
Rp/R* = 0.0144 [0.0004]
a/R* = 3.15 [0.16]
b = 0.98 [0.00]
Seff = 53.90 [25.99]
Teq = 691 [83] K
Rp = 3.10 [0.99] Re
a = 0.3433 [0.1004] AU
Ag = 85.15 [55.03] [1.53 σ]
Teffp = 3245 [391] K [6.38 σ]

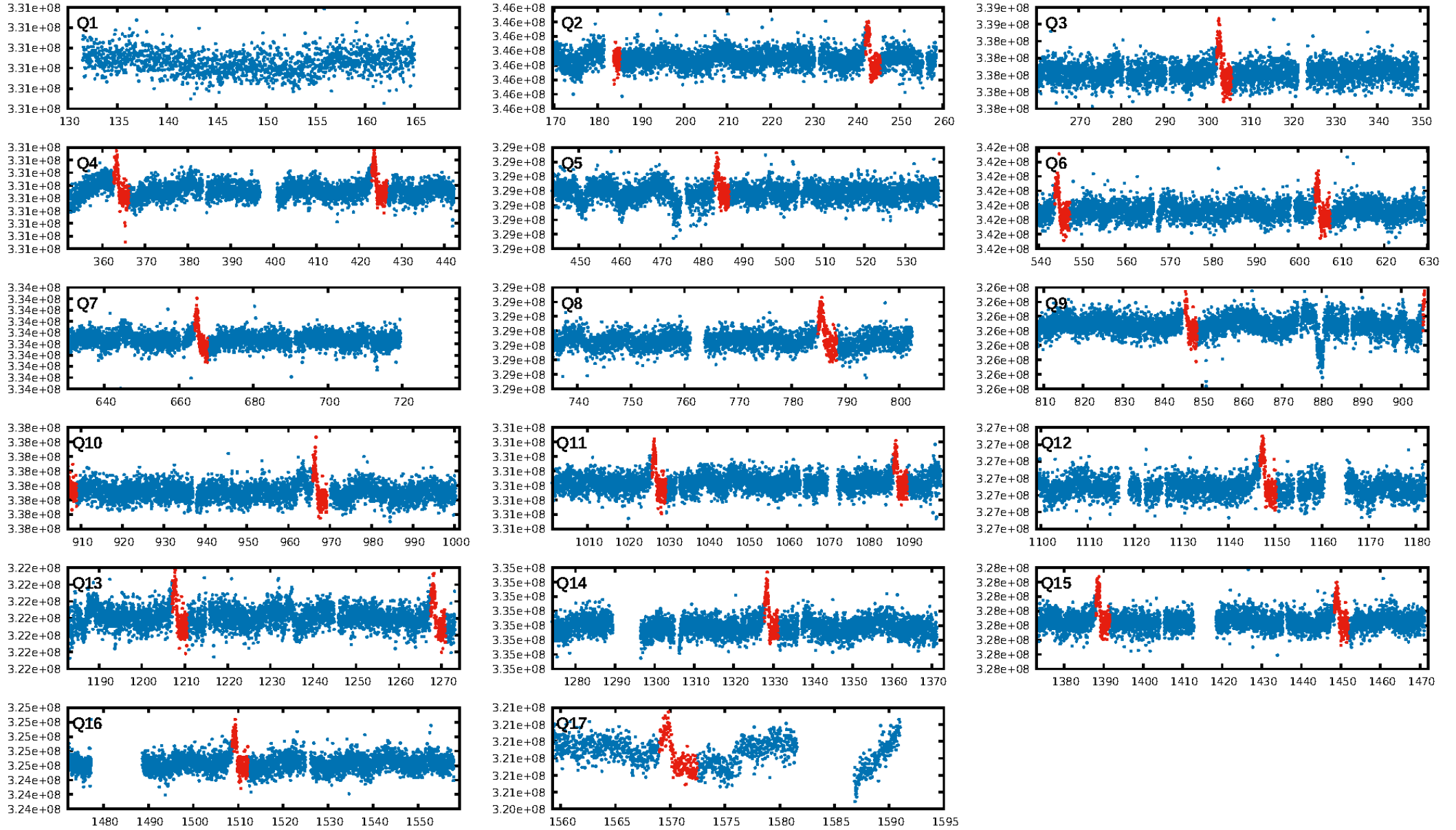
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.64e-81
RollingBand-fgt: 1.00 [22/22]
GhostDiagnostic-chr: 3.446
Centroid-sig: 99.2%
Centroid-so: 0.127 arcsec [0.47 σ]
OotOffset-rm: 1.046 arcsec [1.04 σ]
KicOffset-rm: 1.120 arcsec [0.83 σ]
OotOffset-st: 1/3/3/3 [10]
KicOffset-st: 1/3/3/3 [10]
DiffImageQuality-fgm: 0.70 [7/10]
DiffImageOverlap-fno: 1.00 [11/11]

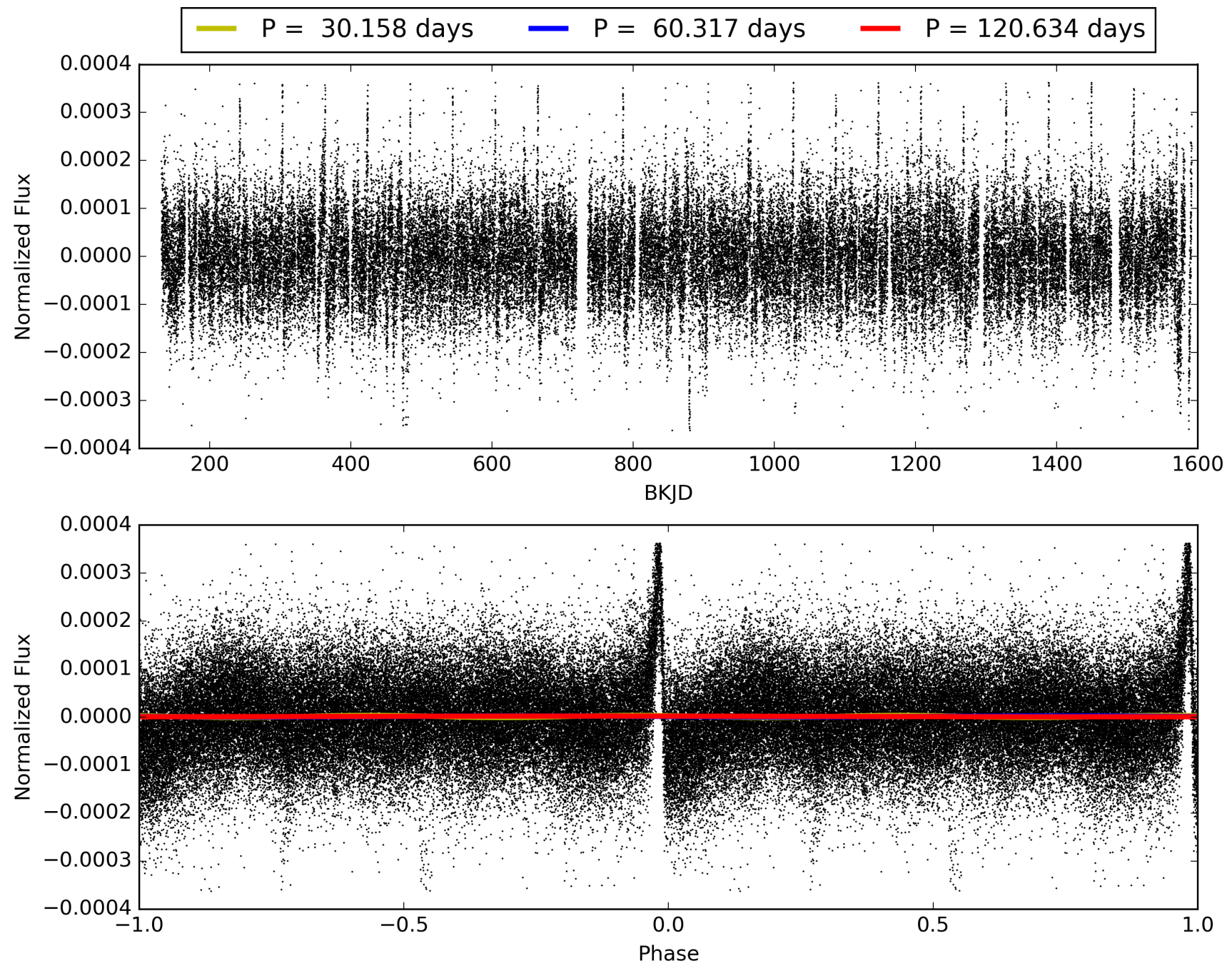
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:19:02 Z

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

TCE 006370558-01, PDC Light Curves

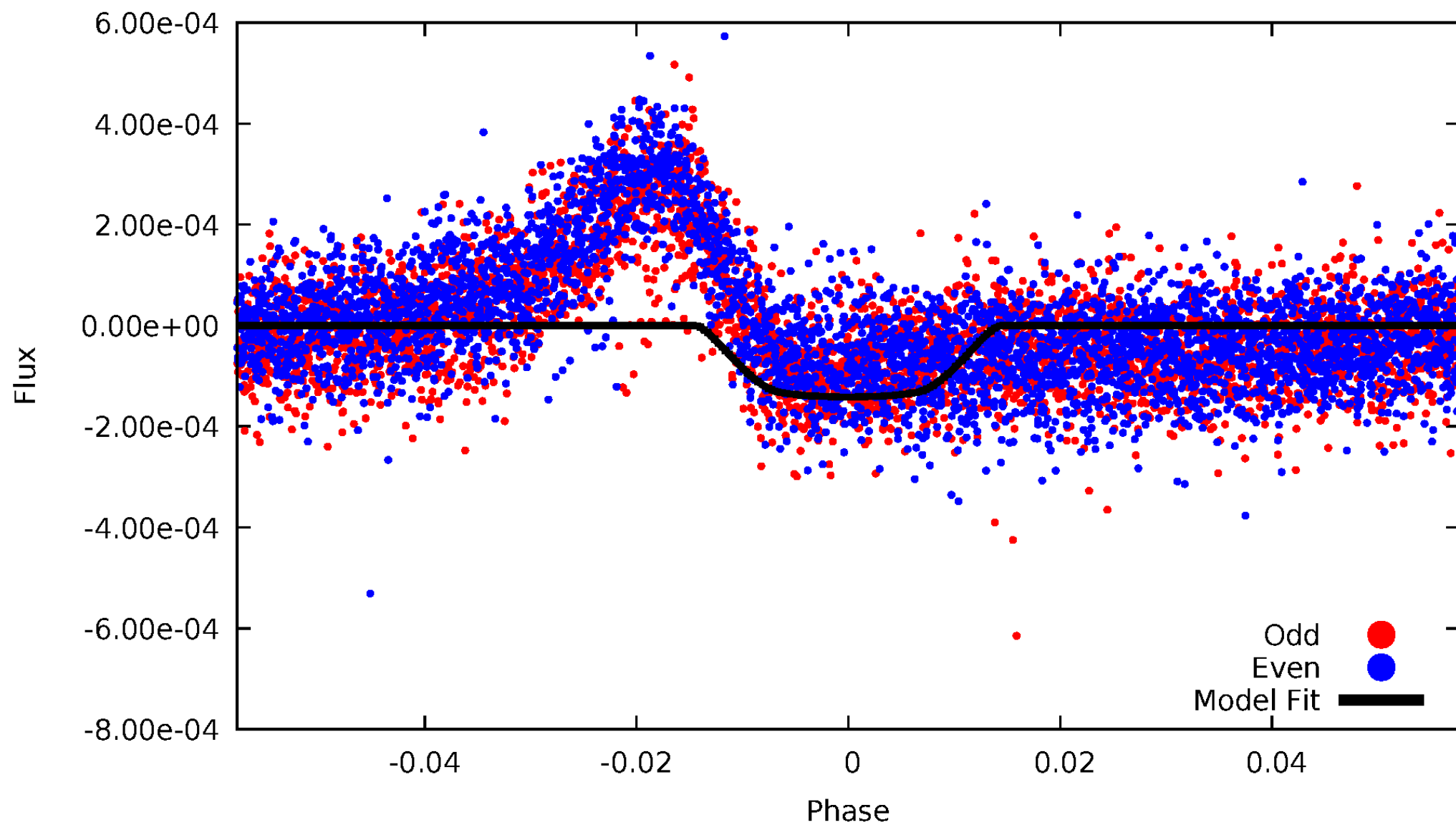


TCE 006370558-01



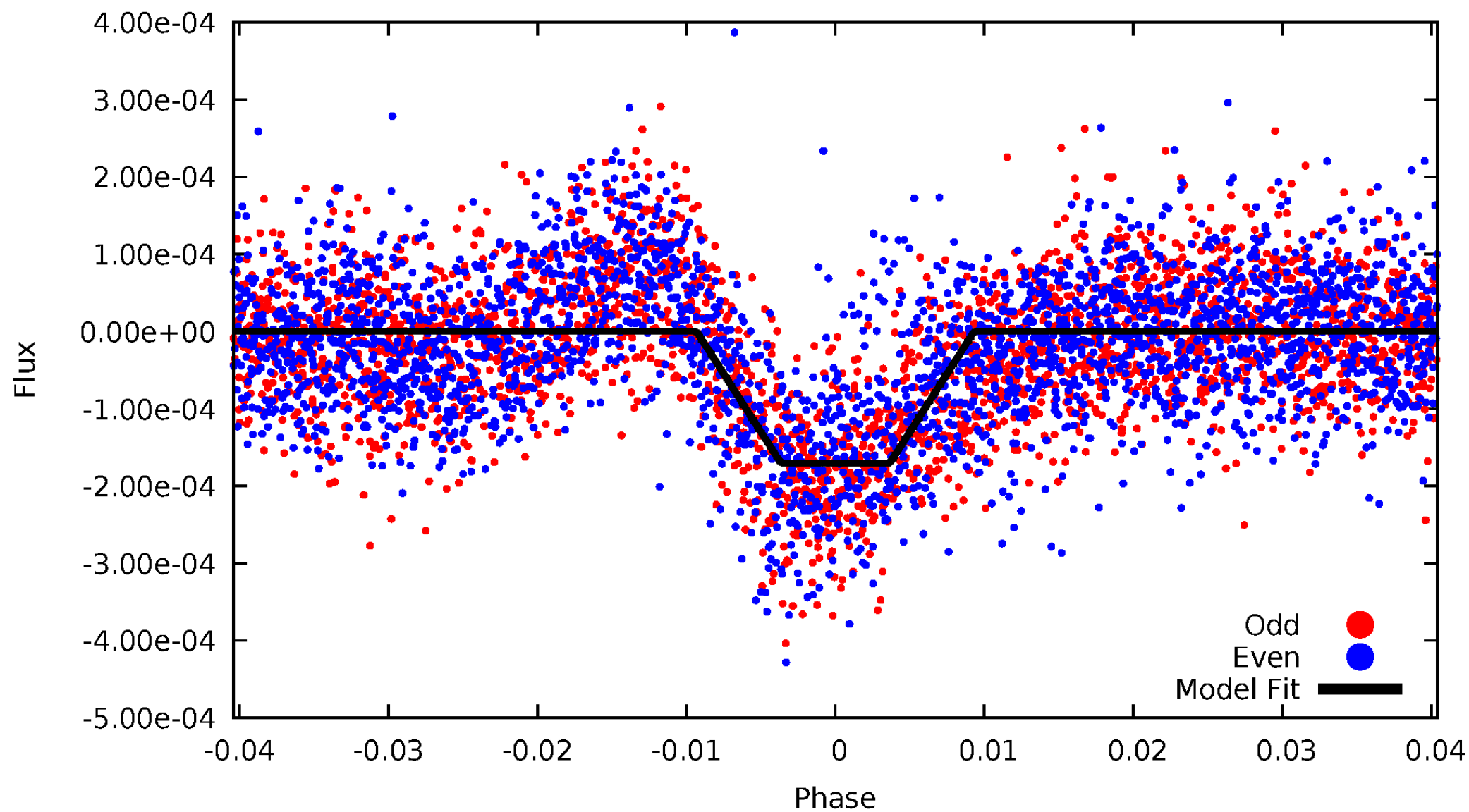
DV Odd/Even

TCE 006370558-01

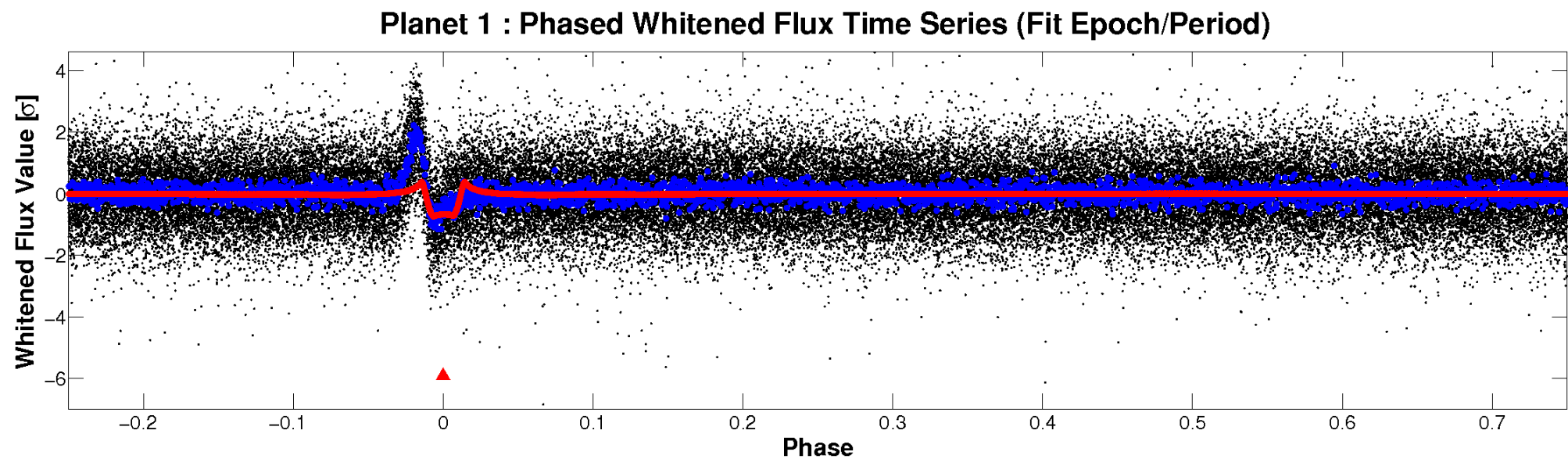
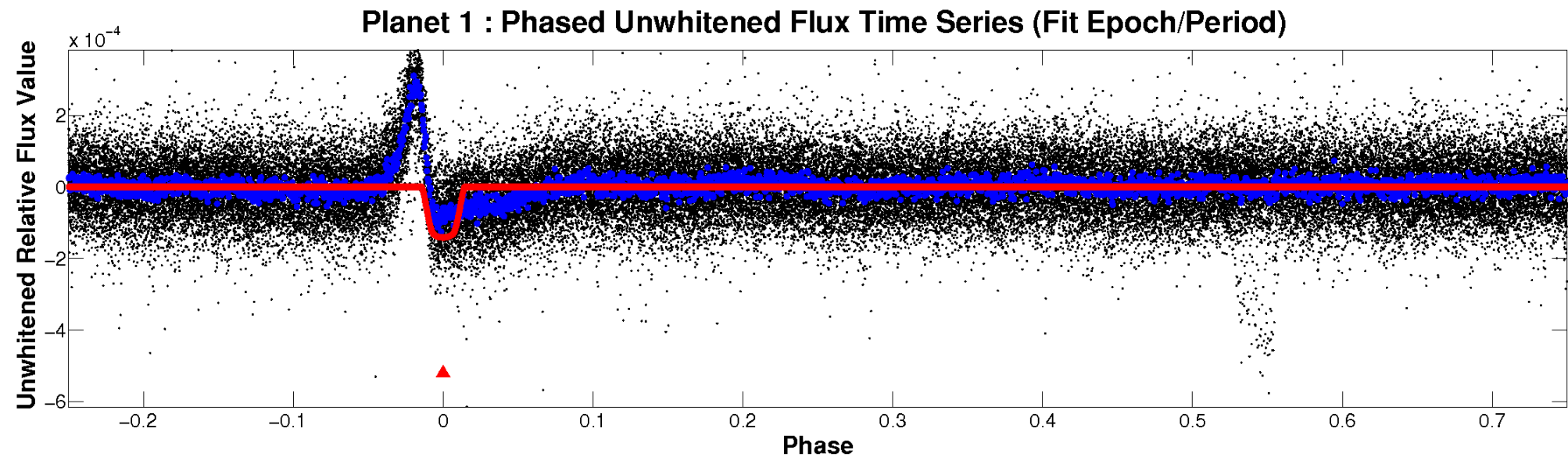


ALT Odd/Even

TCE 006370558-01

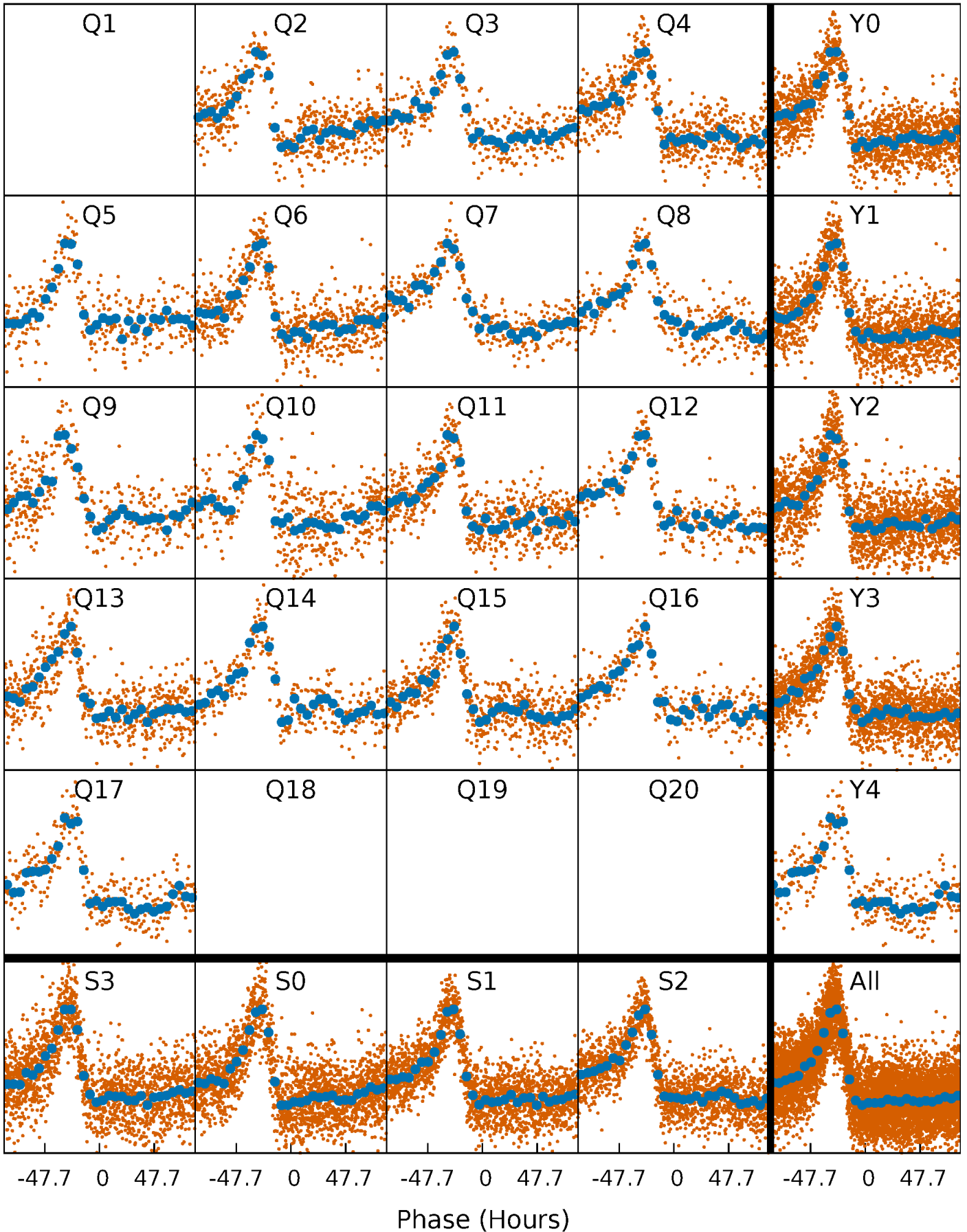


Non-Whitened Vs. Whitened Light Curve



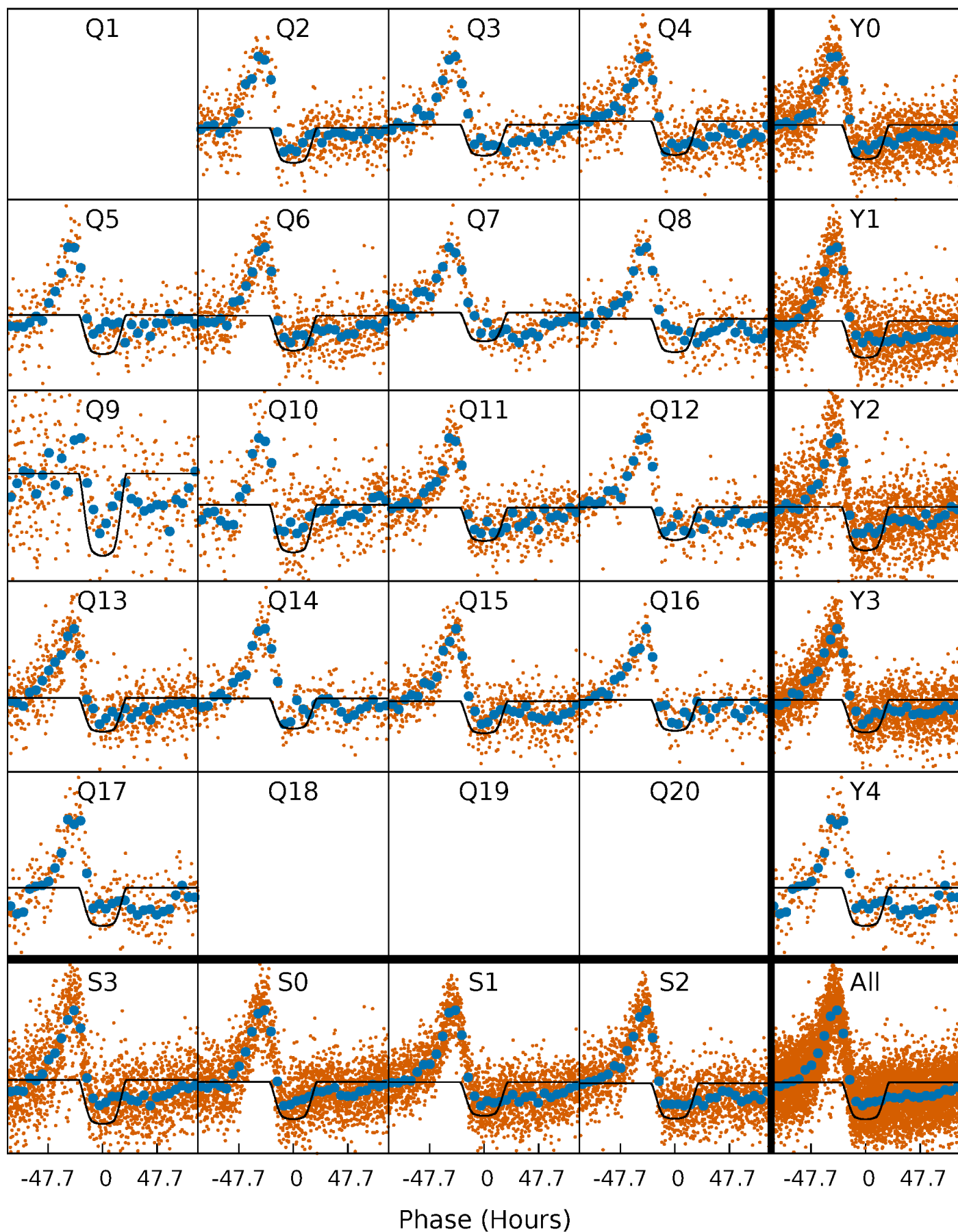
PDC Quarter-Phased Transit Curves

TCE 006370558-01 P= 60.316850 Days $T_0=183.443437$ (BKJD)



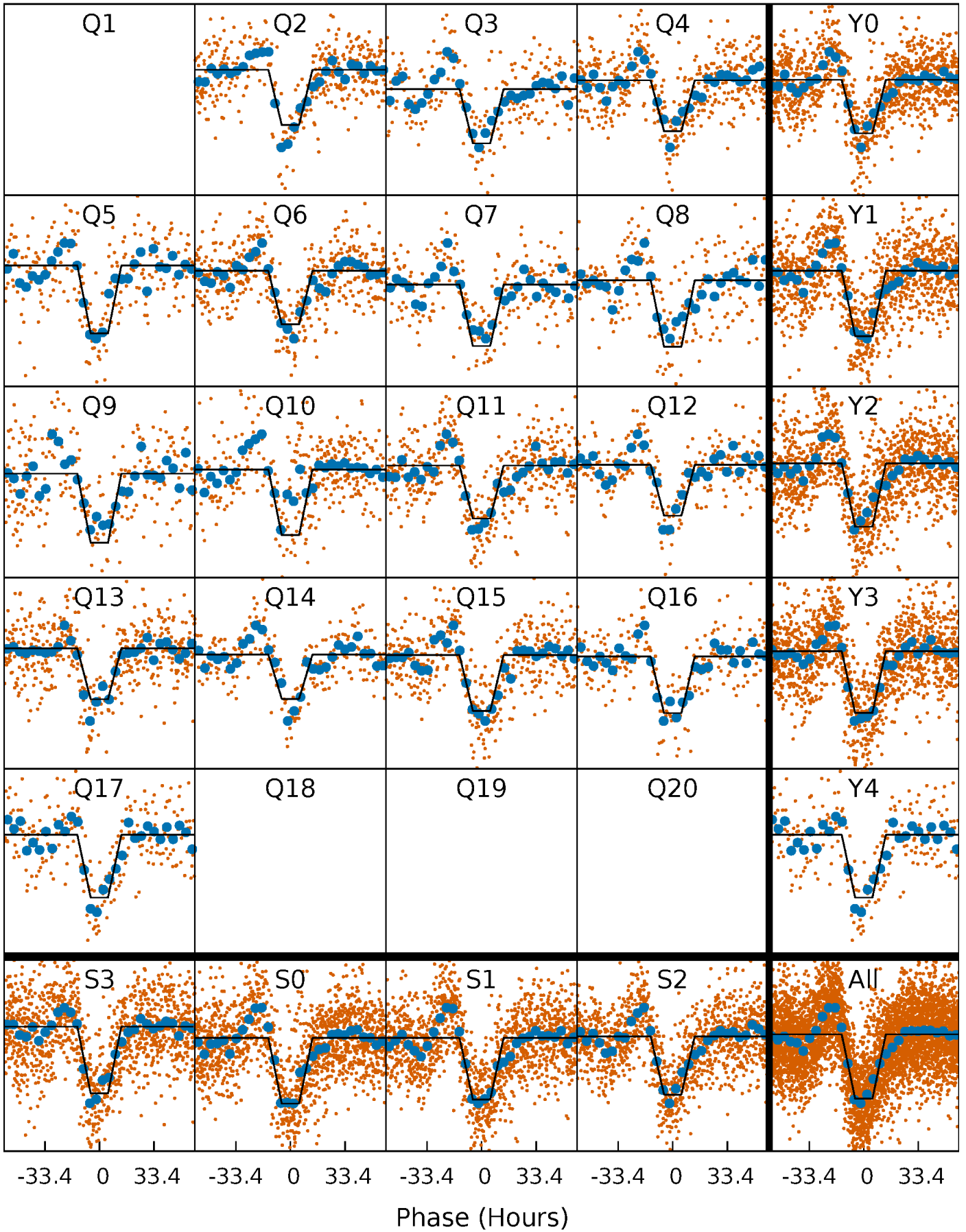
DV Quarter-Phased Transit Curves

TCE 006370558-01 P= 60.316850 Days $T_0=183.443437$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

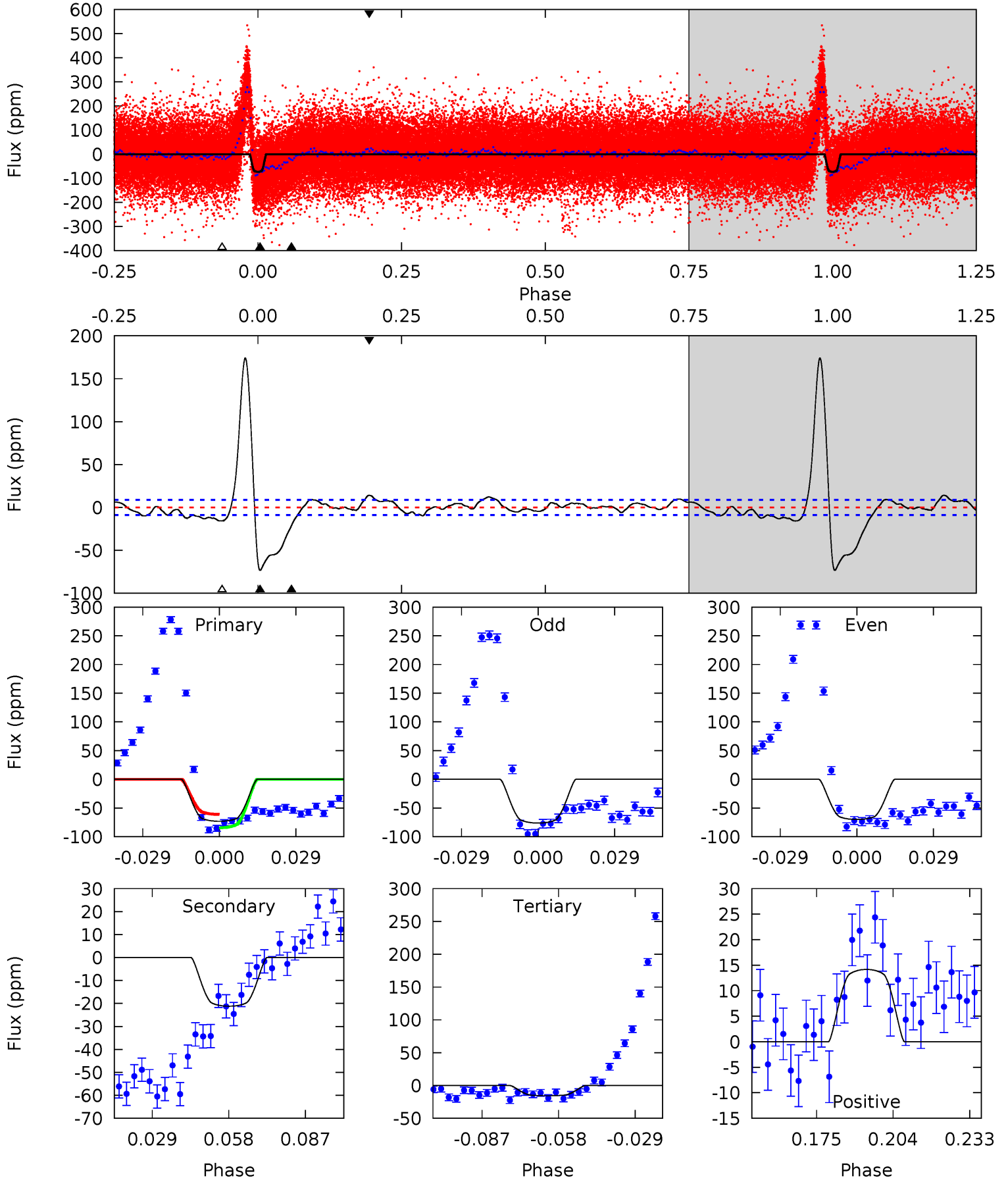
TCE 006370558-01 P= 60.317863 Days $T_0=183.141512$ (BKJD)



DV Model-Shift Uniqueness Test

006370558-01, P = 60.316850 Days, E = 123.126587 Days

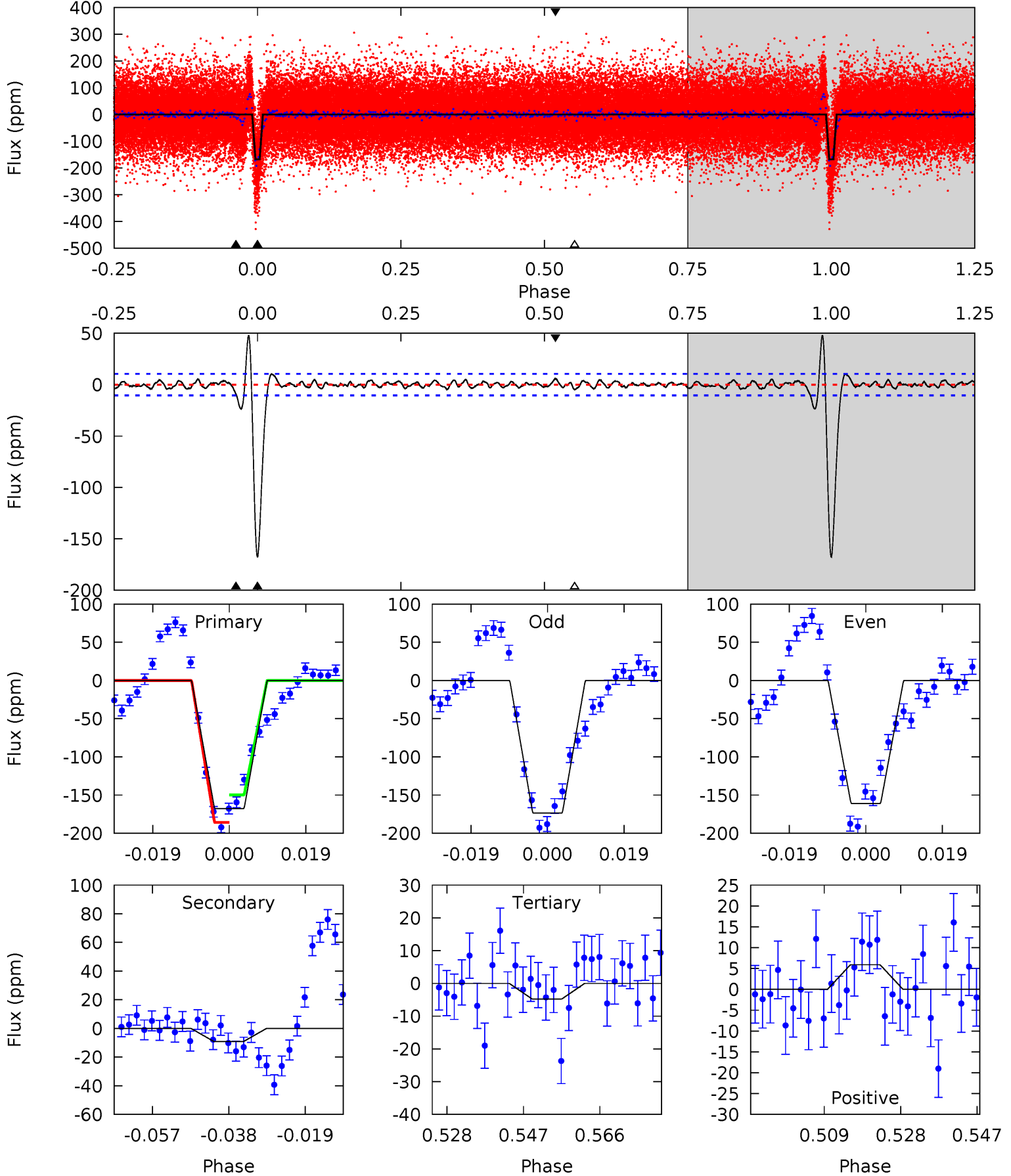
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.8	11.5	8.48	7.69	4.82	2.18	7.73	31.3	32.1	3.04	3.83	1.68	0.93	0.70	6.35



Alt Model-Shift Uniqueness Test

006370558-01, P = 60.317863 Days, E = 122.823649 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
78.4	4.28	2.23	2.76	4.90	2.35	1.12	76.2	75.6	2.05	1.52	2.94	0.95	0.22	8.42



Stellar Parameters For KIC 006370558

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6526^{+182}_{-251}	$4.017^{+0.264}_{-0.176}$	$0.140^{+0.250}_{-0.300}$	$1.977^{+0.626}_{-0.626}$	$1.481^{+0.207}_{-0.284}$	$0.270^{+0.449}_{-0.128}$
	+3%/-4%	+7%/-4%	+179%/-214%	+32%/-32%	+14%/-19%	+166%/-47%
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 006370558-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-21 ± 2	$3.01^{+0.54}_{-0.48}$	949^{+79}_{-82}	3991^{+117}_{-120}	149^{+60}_{-38}
Alt.	-9 ± 2	$2.79^{+0.48}_{-0.50}$	958^{+84}_{-90}	3580^{+152}_{-182}	76^{+38}_{-25}

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

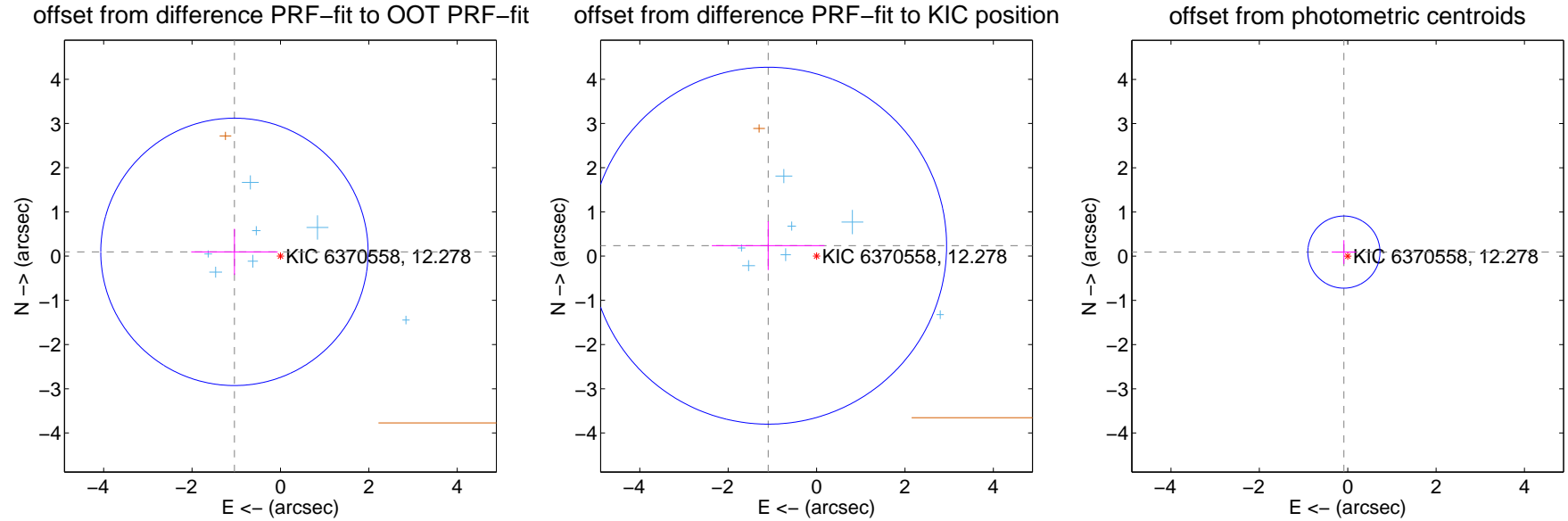
DV Centroid Data

Supplemental centroid analysis for 006370558-01. Kepler magnitude: 12.28. Transit SNR 24.50

There are 7 quarters with good PRF difference image offsets

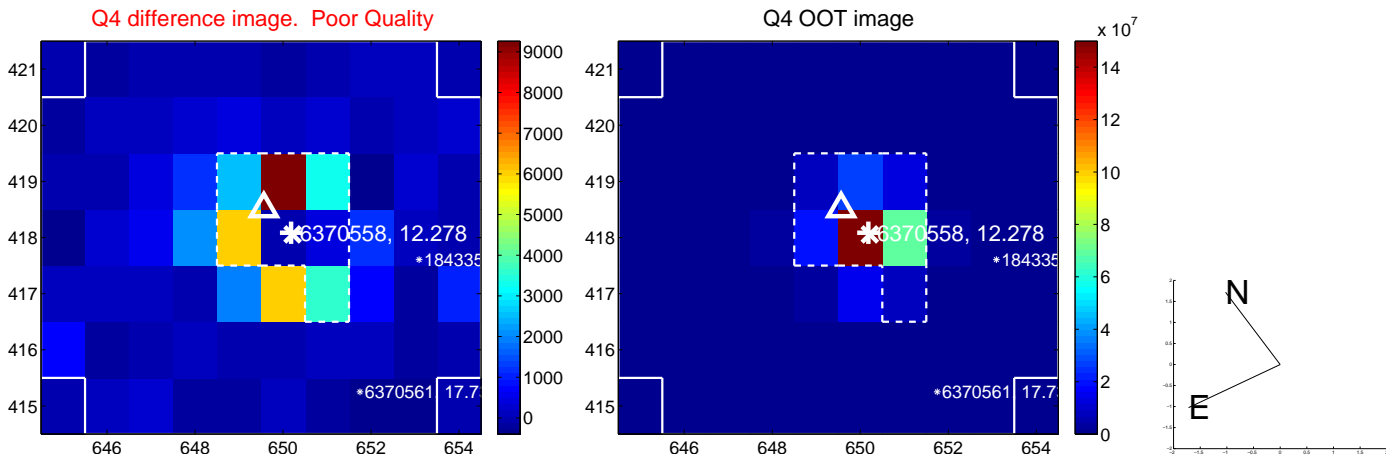
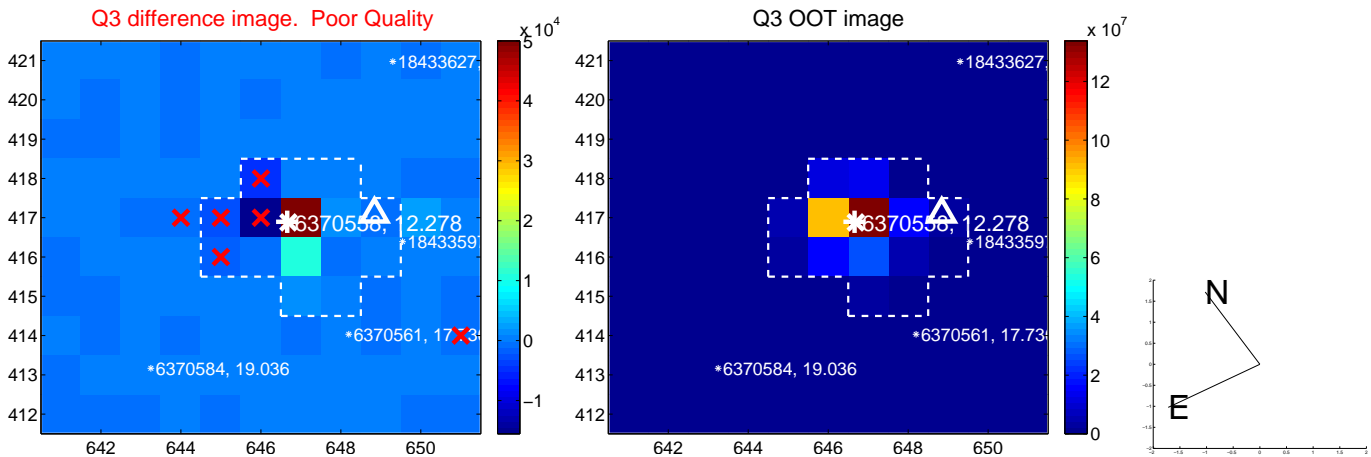
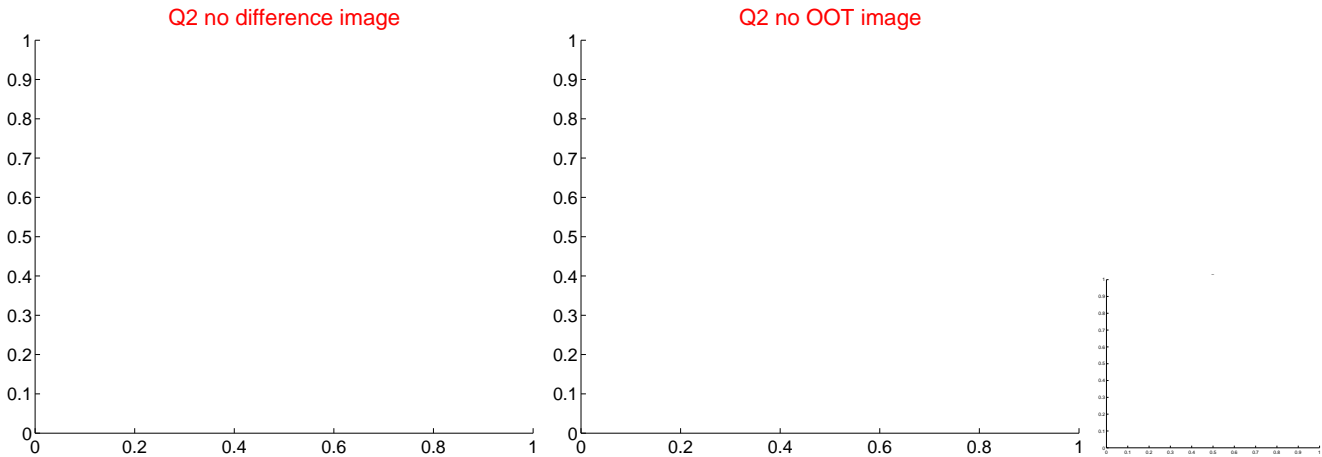
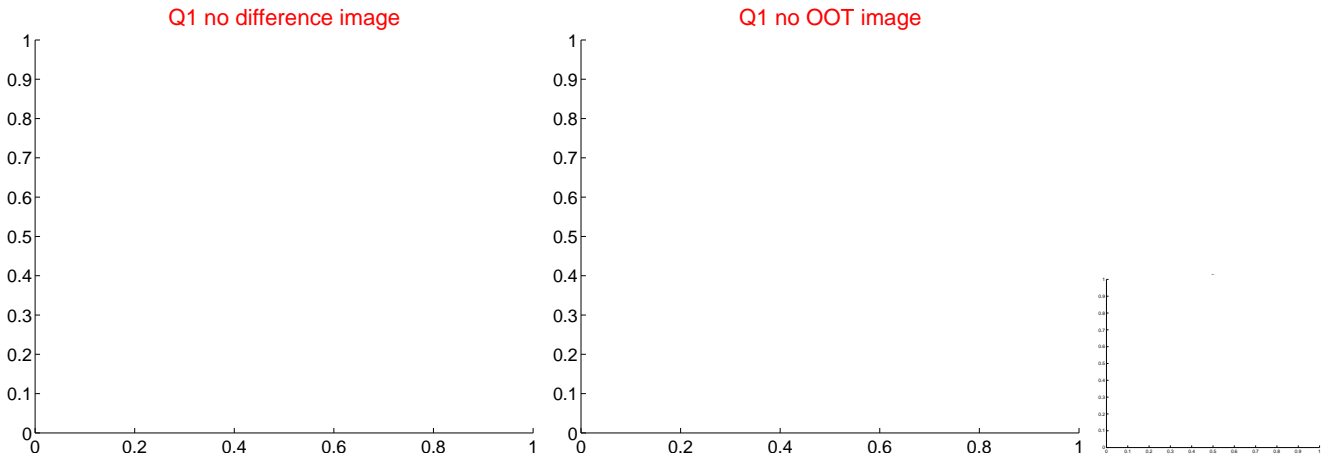
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.046 ± 1.008	1.04	1.041 ± 0.978	0.097 ± 0.521
PRF-fit source offset from KIC position	1.120 ± 1.345	0.83	1.095 ± 1.274	0.236 ± 0.553
photometric centroid source offset	0.13 ± 0.27	0.47	0.09 ± 0.28	0.09 ± 0.27

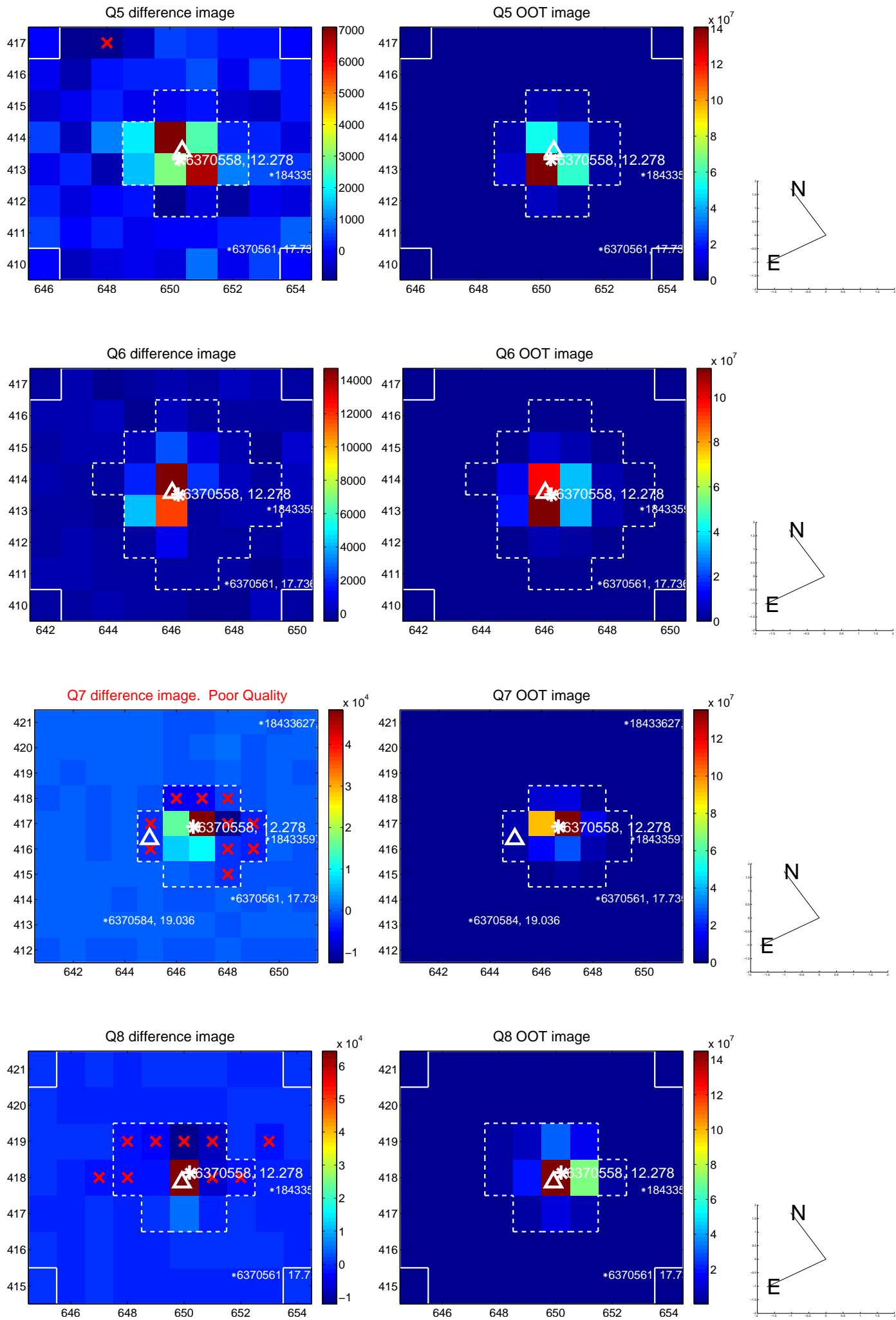


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

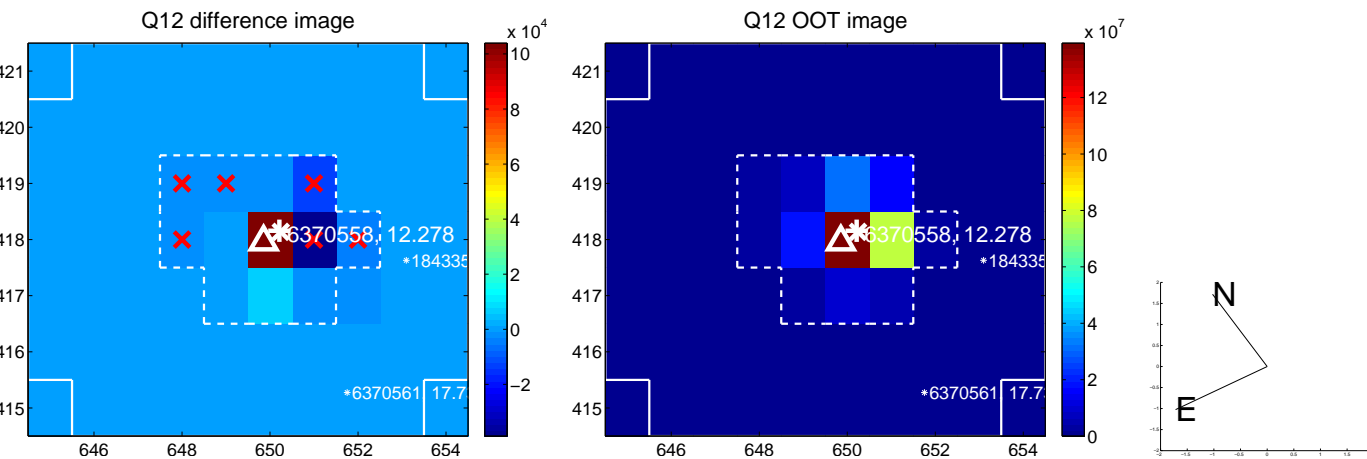
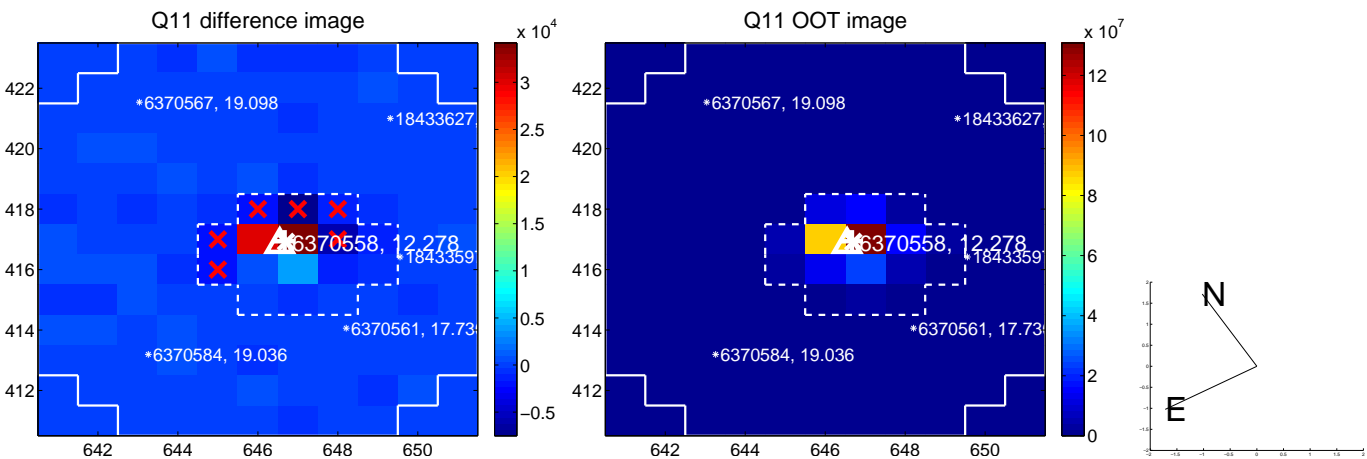
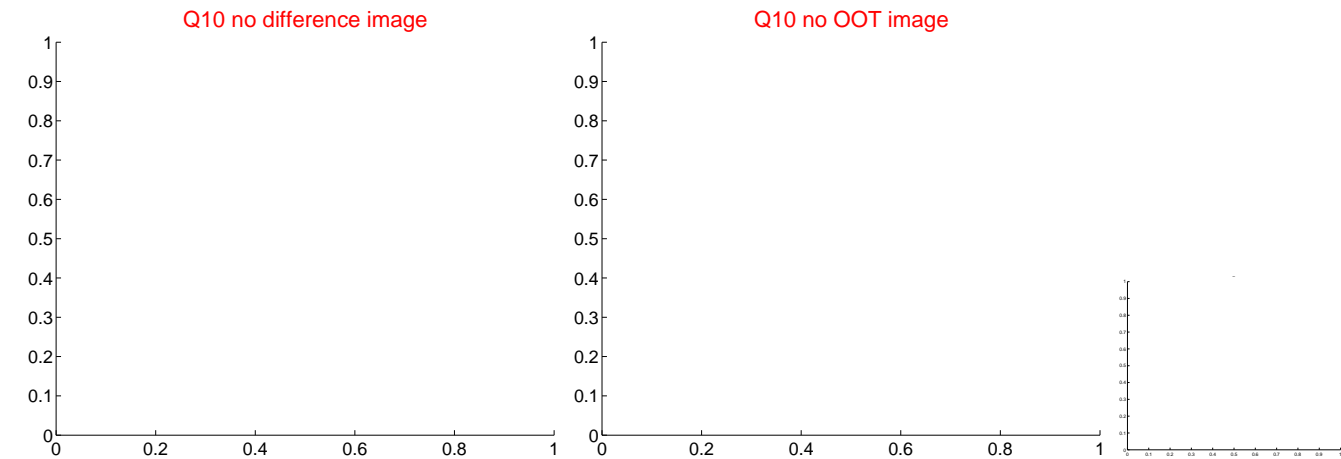
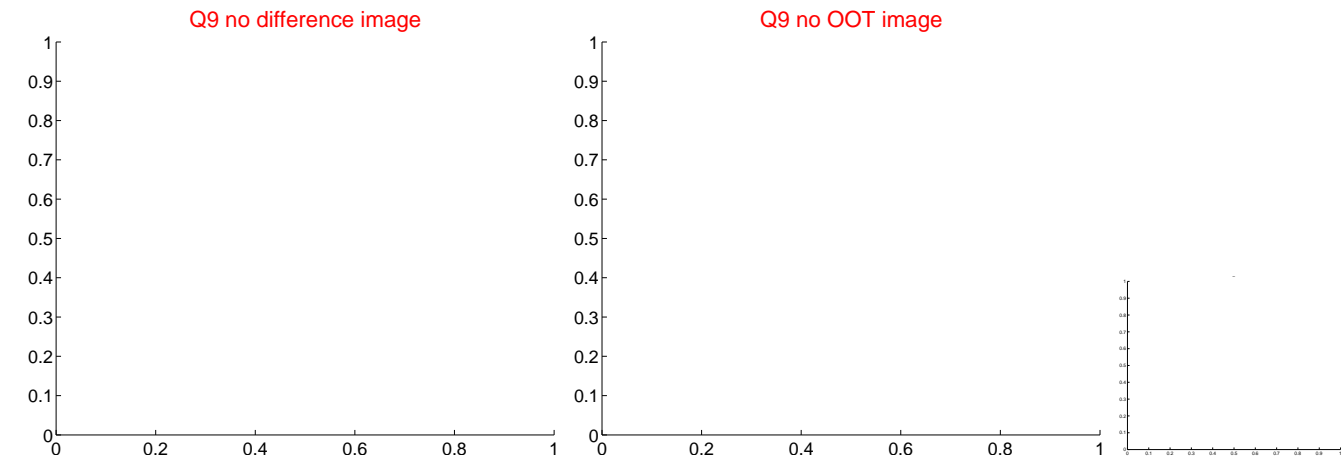
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



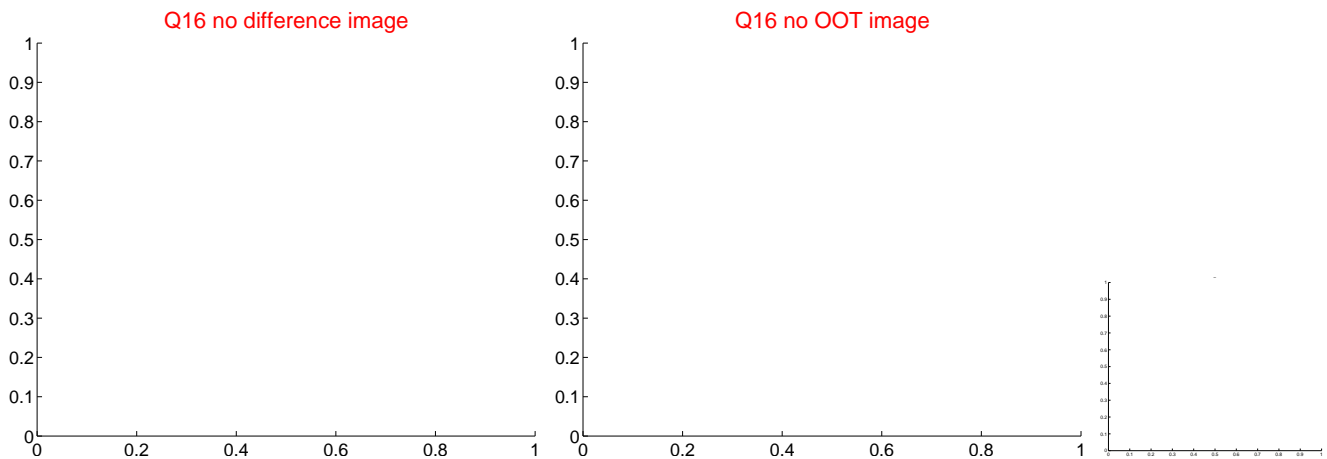
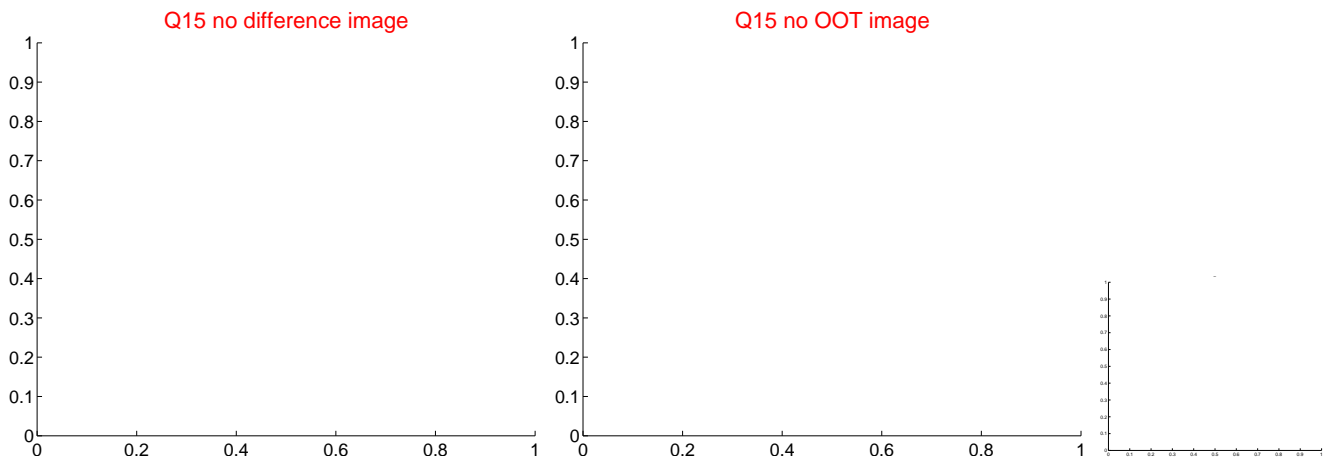
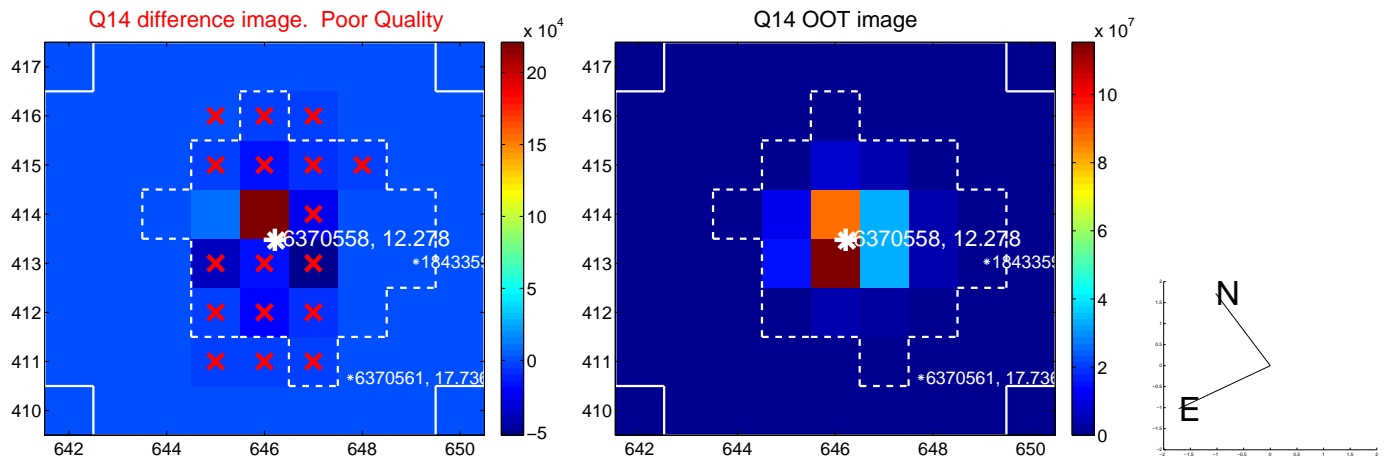
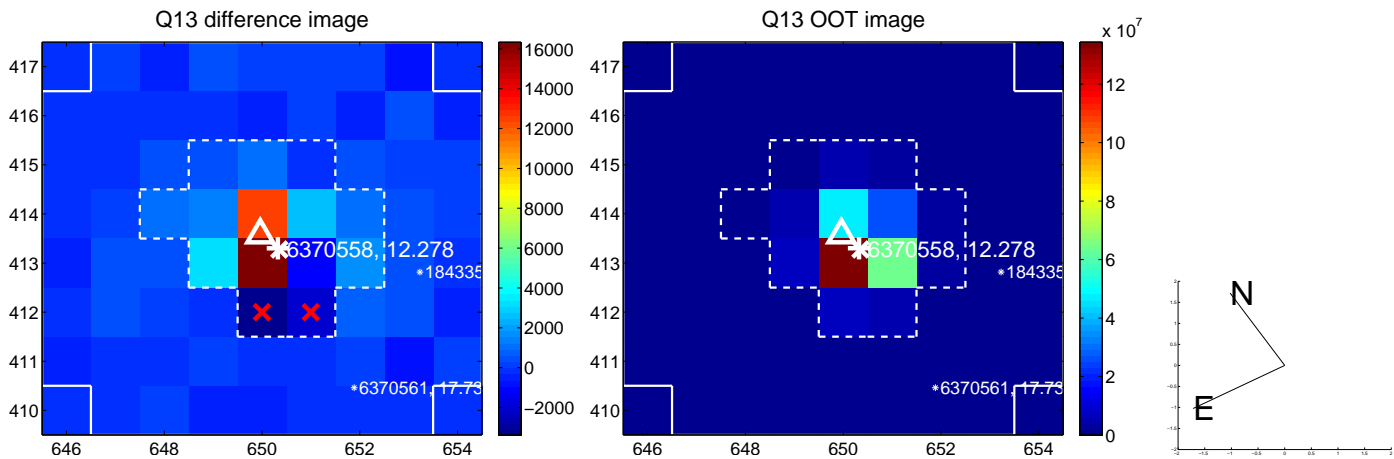
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



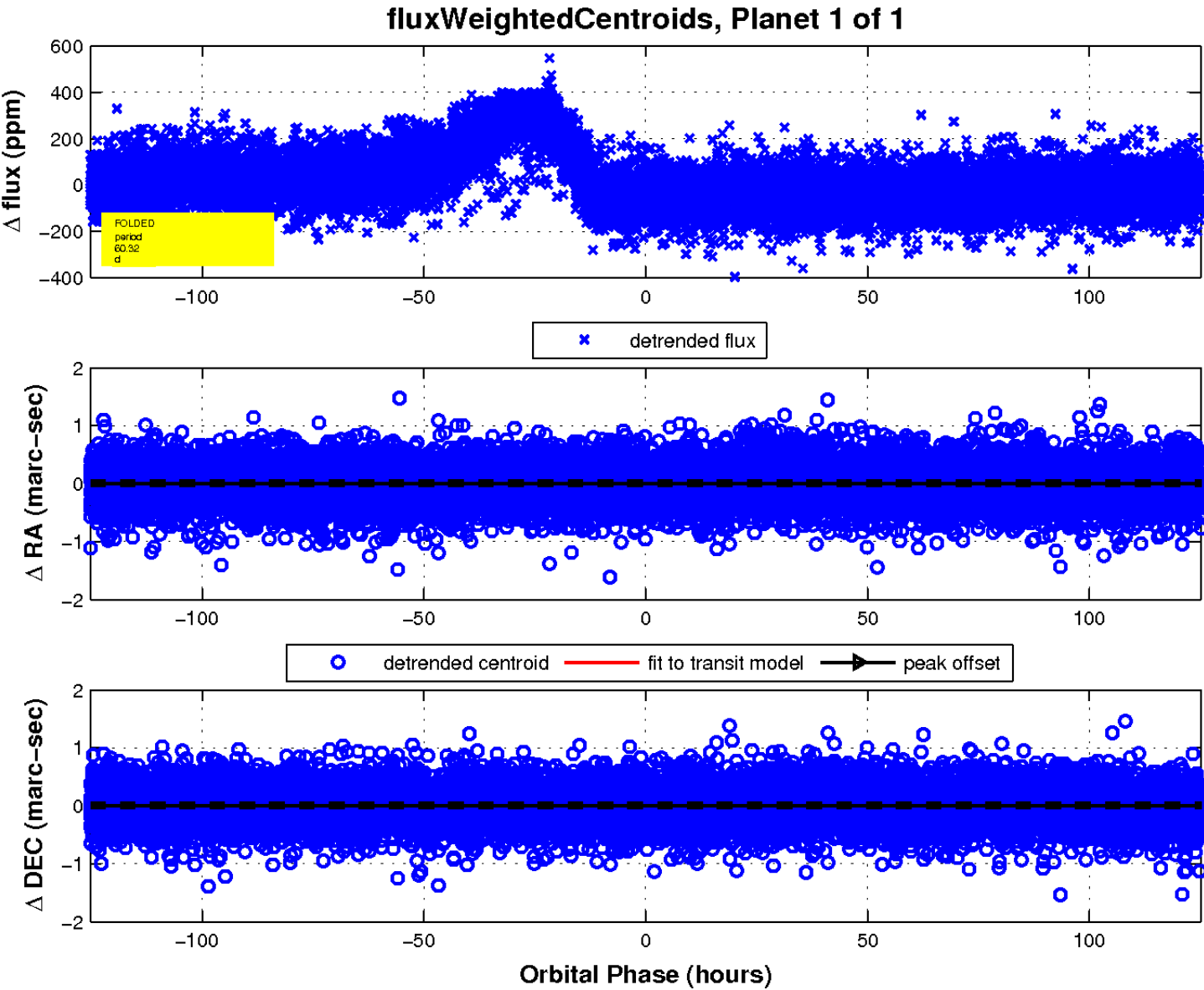
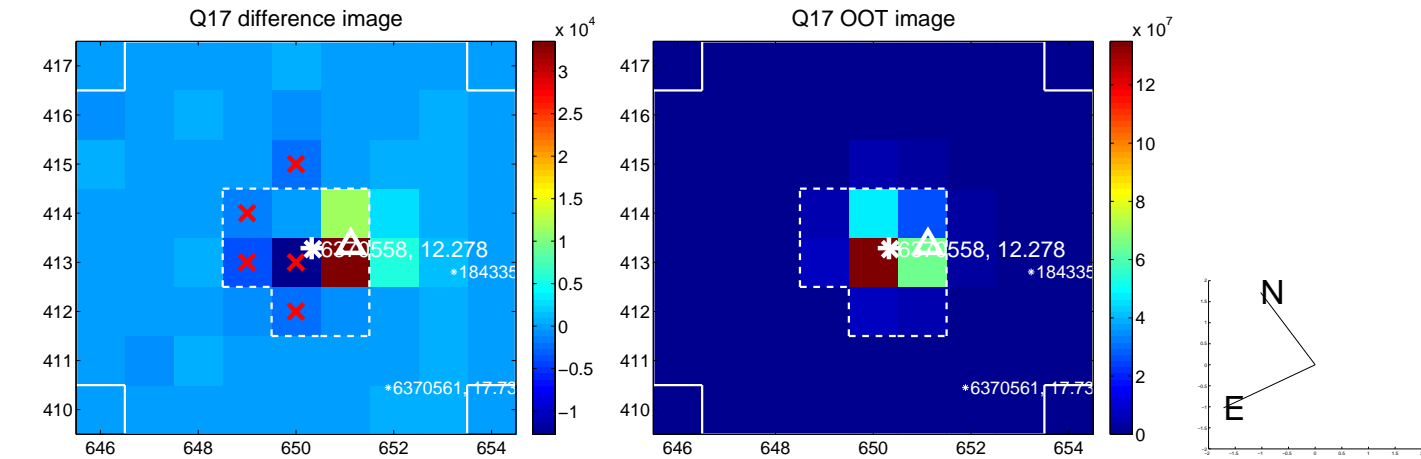
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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.



UKIRT Image

Declination

