

KIC 009760386

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})
009760386-01	OBS	No	256.543839	347.036705	160.9	17.806	9.3	6.3	1.02	6274	1.52	2.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009760386-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—CENT_FEW_DIFFS

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

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

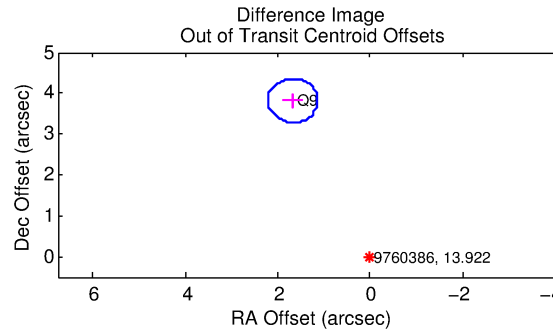
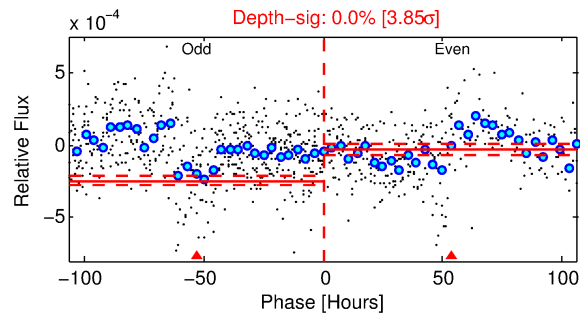
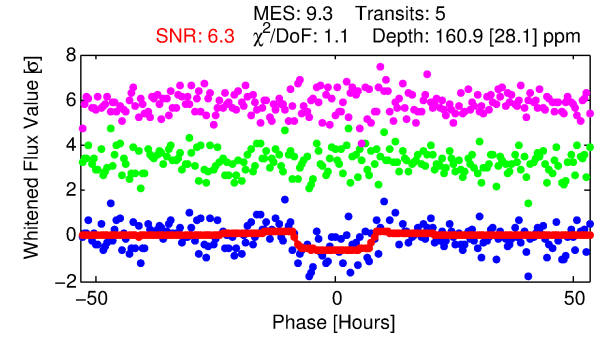
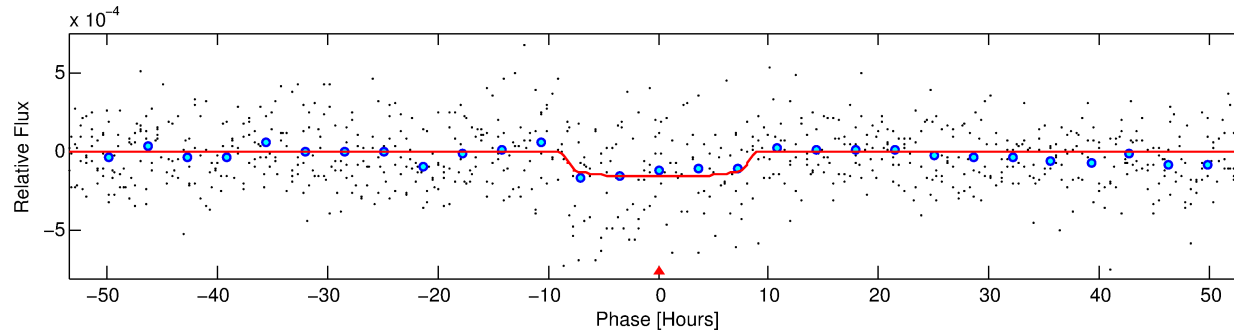
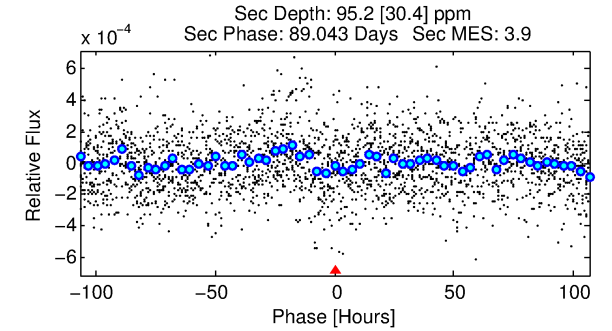
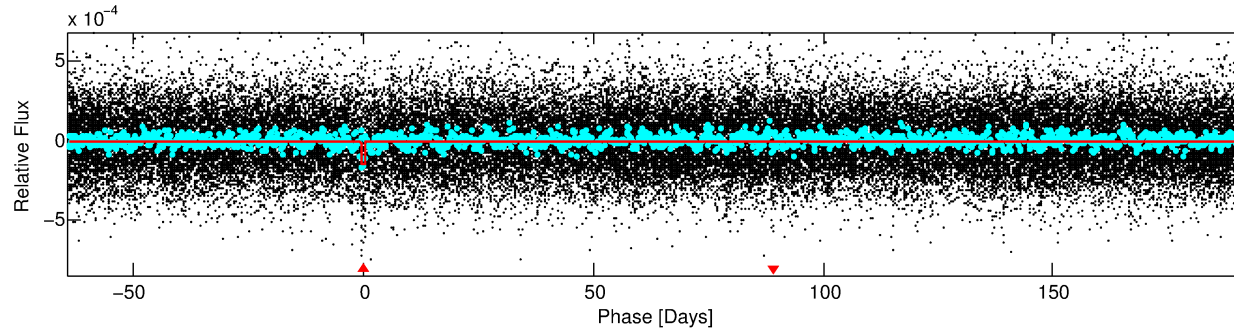
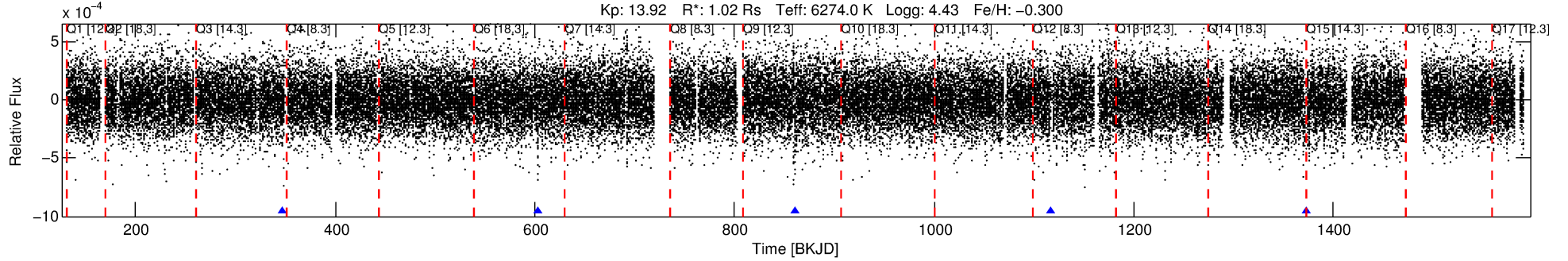
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009760386-01

No Significant Match Found

DV One-Page Summary

KIC: 9760386 Candidate: 1 of 1 Period: 256.544 d



DV Fit Results:

Period = 256.54384 [0.01393] d
Epoch = 347.0367 [0.0294] BKJD
Rp/R* = 0.0137 [0.0025]
a/R* = 50.31 [42.06]
b = 0.90 [0.17]
Seff = 2.30 [0.94]
Teq = 314 [32] K
Rp = 1.52 [0.57] Re
a = 0.7945 [0.2157] AU
Ag = 14233.38 [8816.76] [1.61σ]
Teffp = 5301 [662] K [7.53σ]

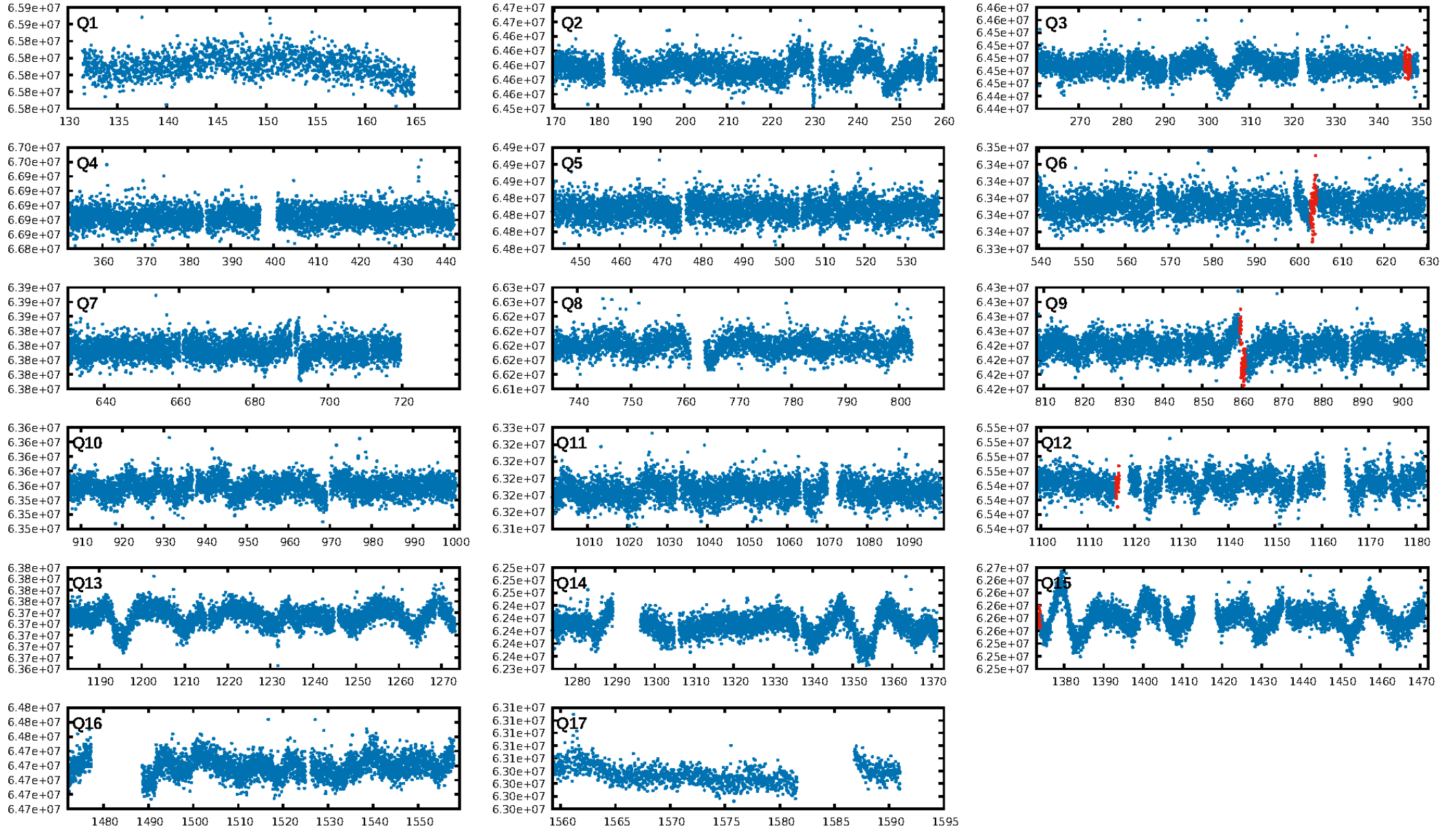
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 7.89e-19
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.44
Centroid-sig: 8.5%
Centroid-so: 2.182 arcsec [1.47σ]
OotOffset-rm: 4.170 arcsec [23.27σ]
KicOffset-rm: 4.341 arcsec [24.13σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

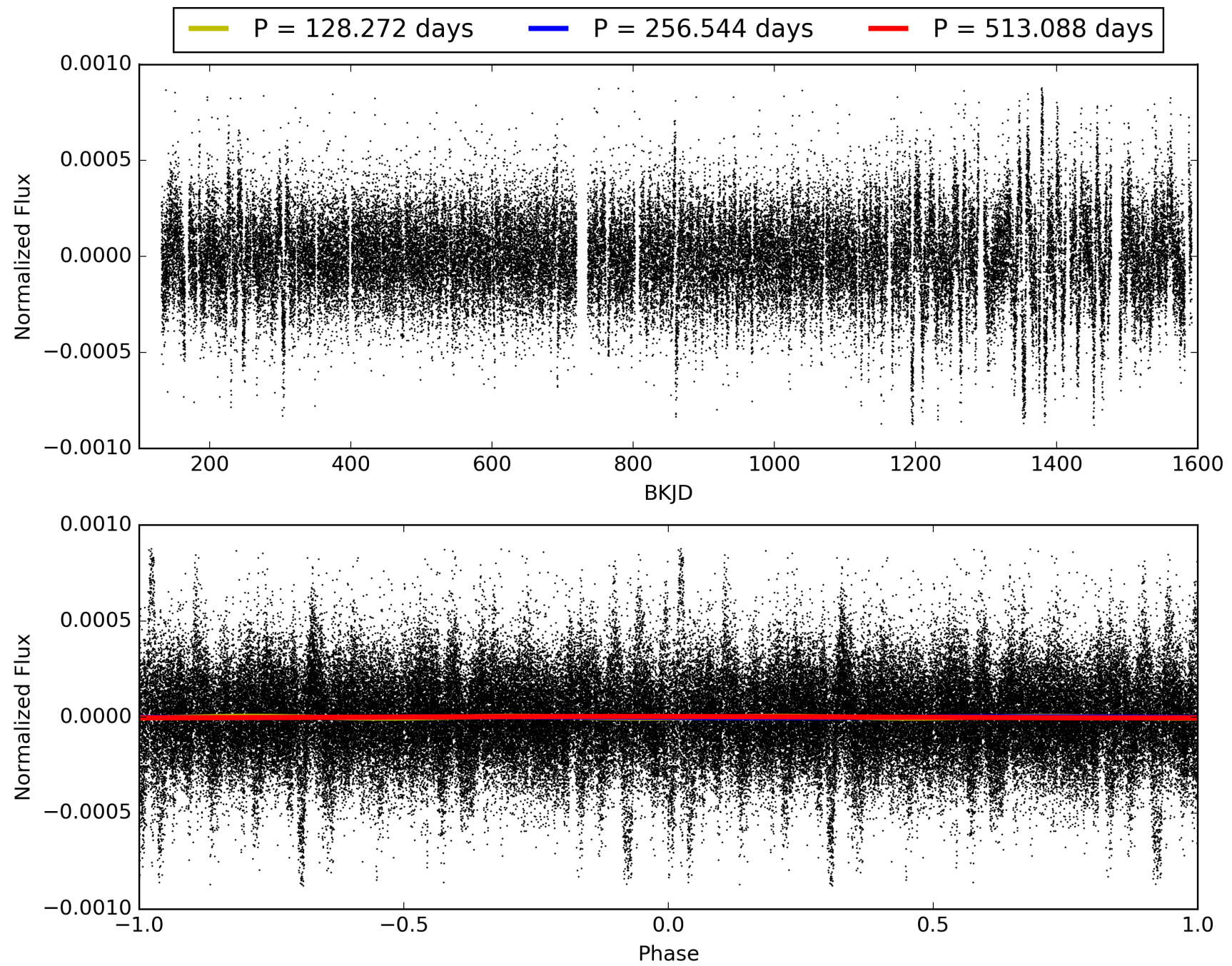
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:27:51 Z

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

TCE 009760386-01, PDC Light Curves

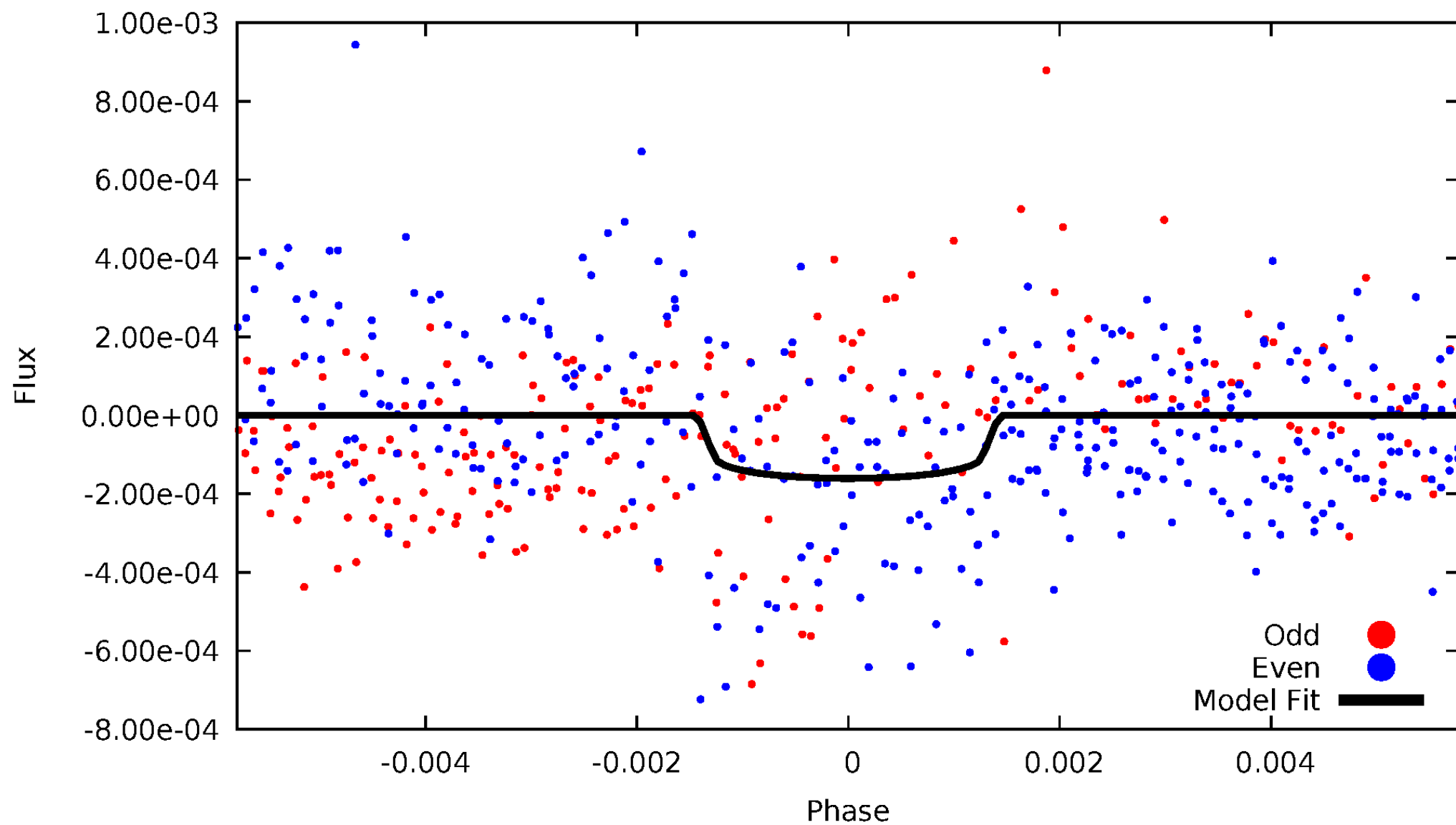


TCE 009760386-01



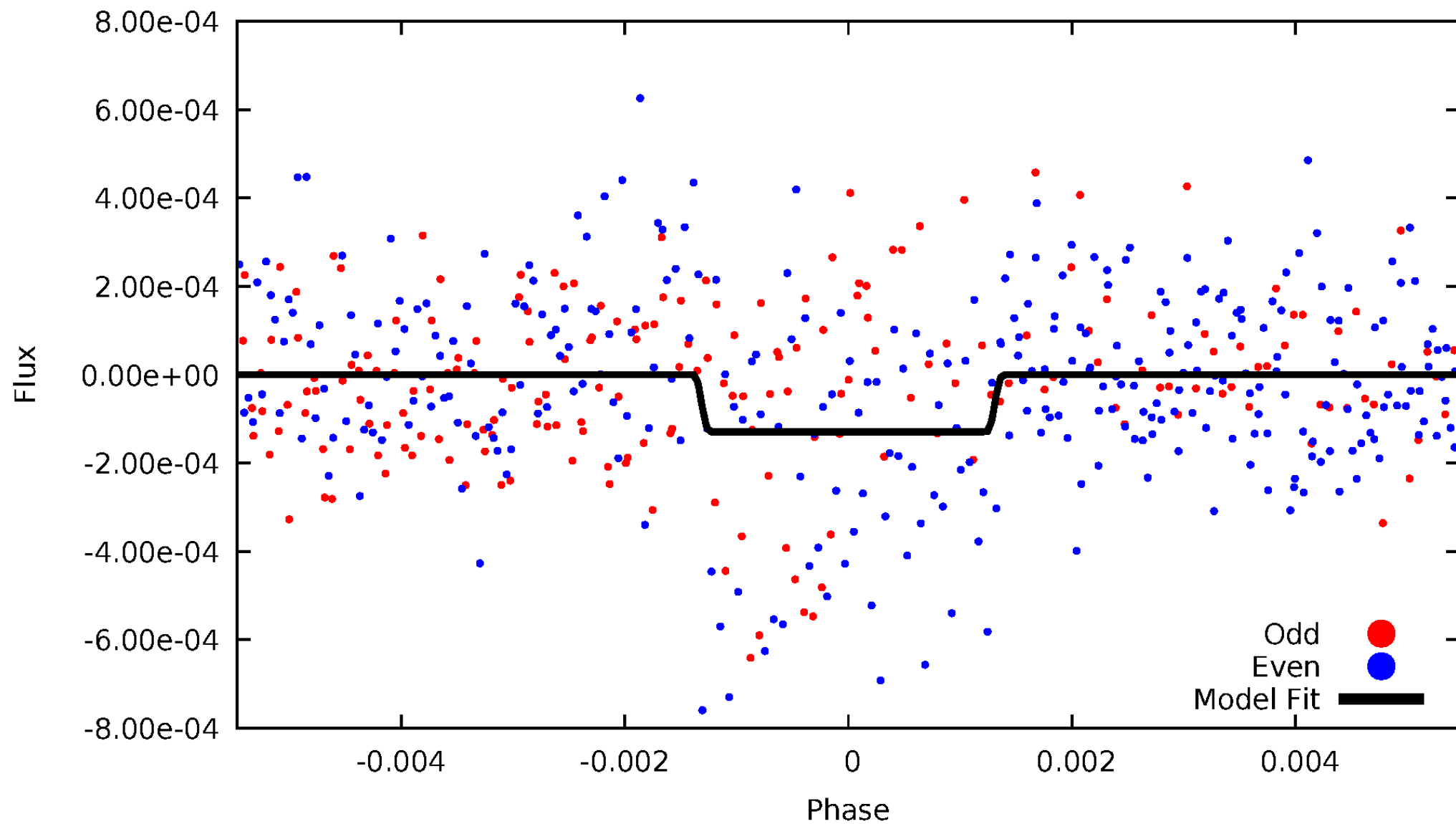
DV Odd/Even

TCE 009760386-01

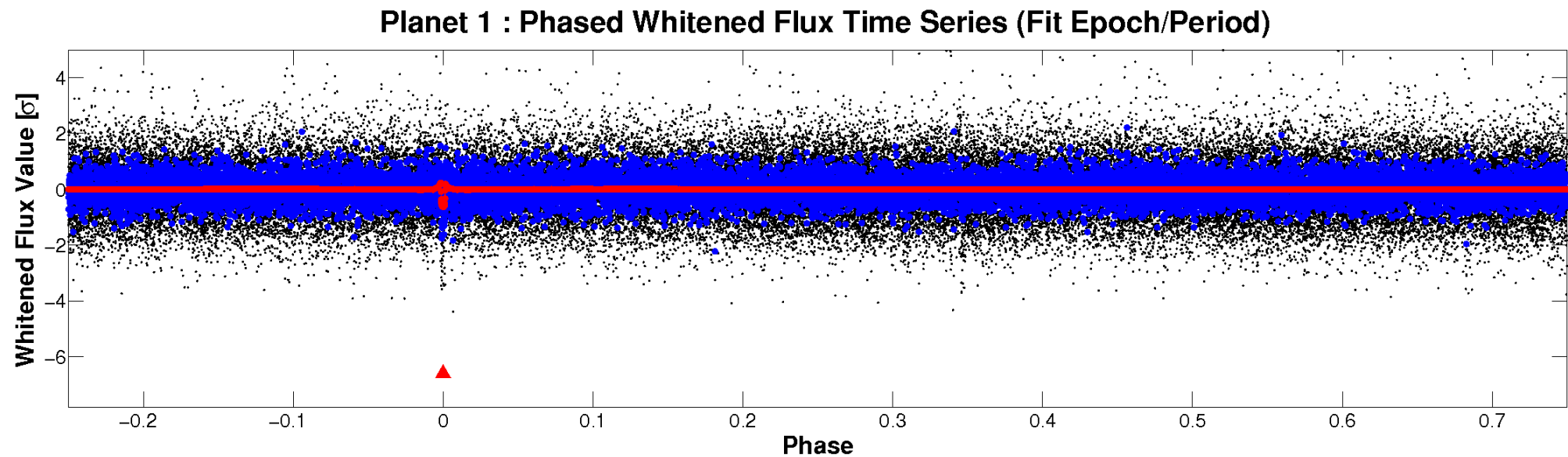
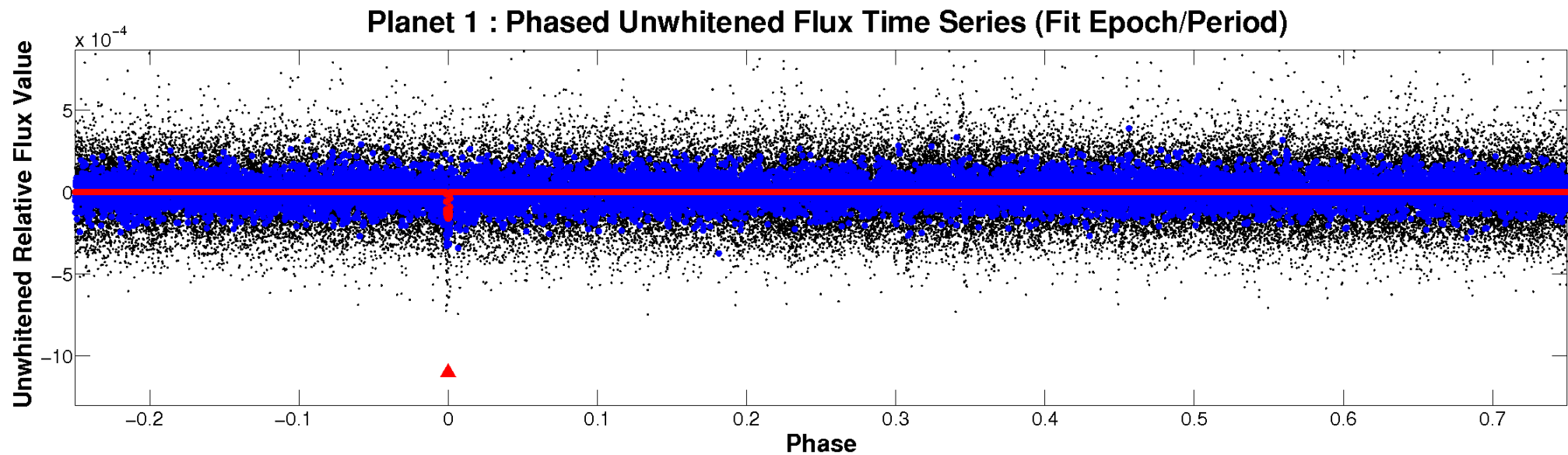


ALT Odd/Even

TCE 009760386-01



Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 009760386-01 P=256.543839 Days $T_0=347.036705$ (BKJD)



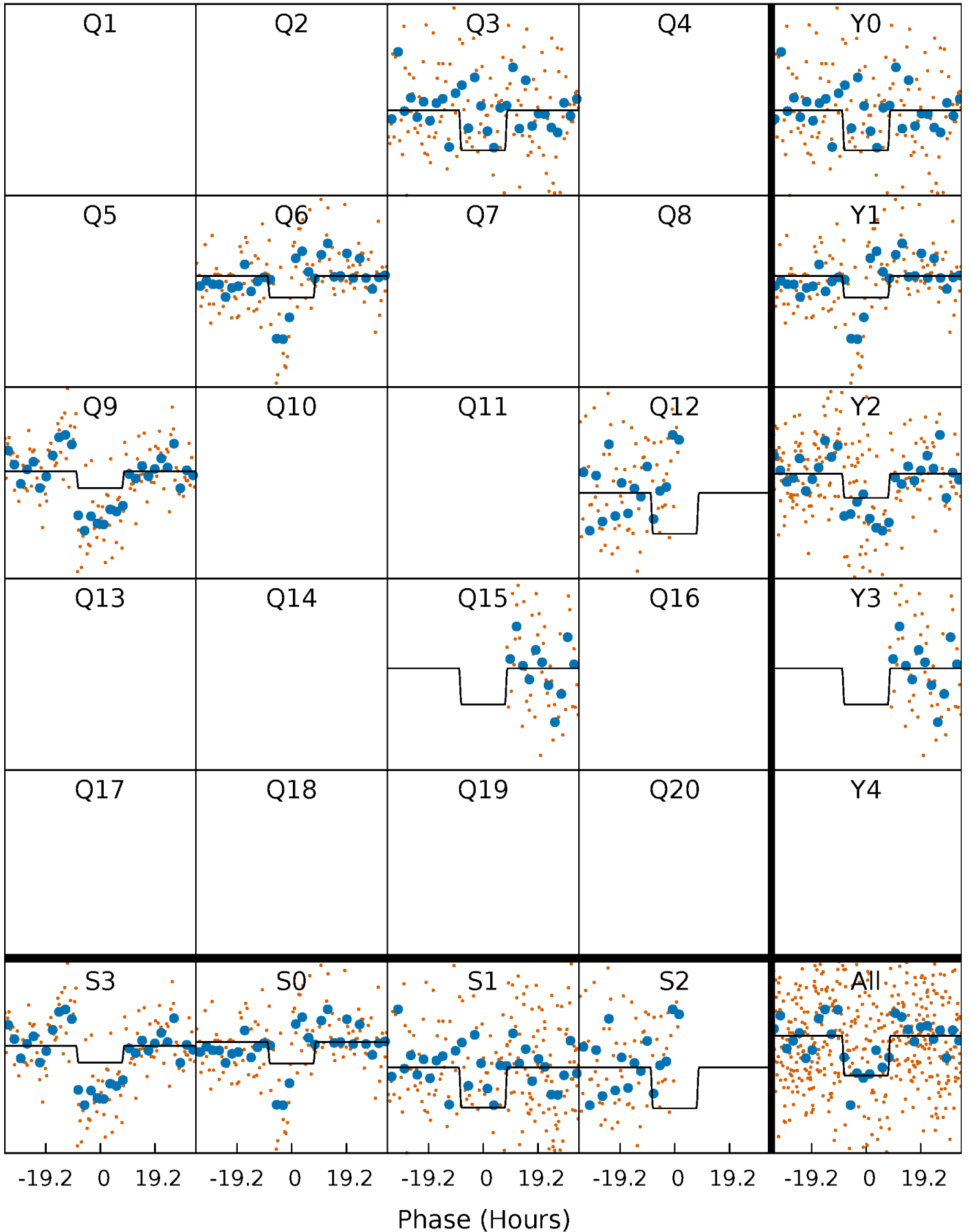
DV Quarter-Phased Transit Curves

TCE 009760386-01 P=256.543839 Days $T_0=347.036705$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

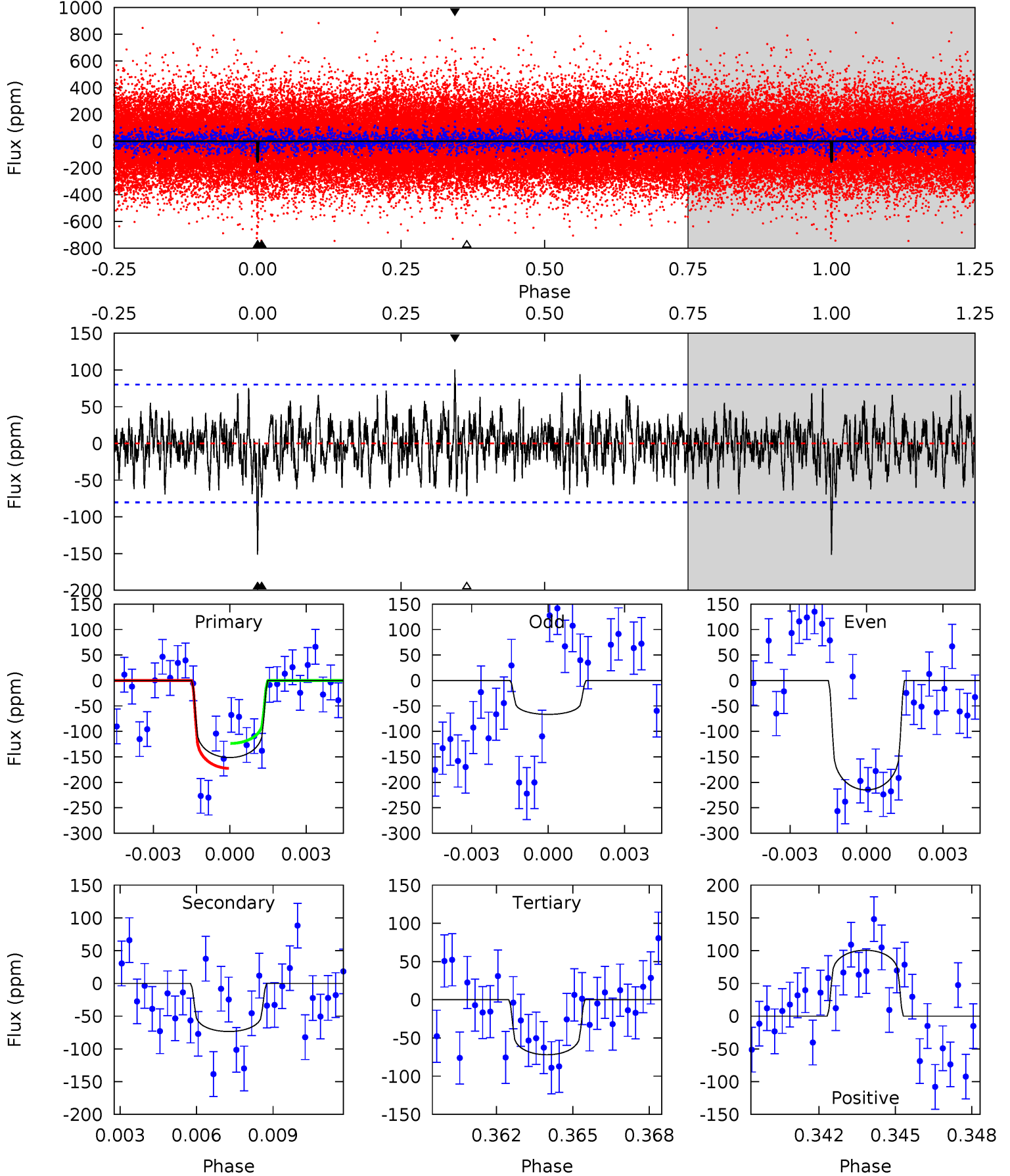
TCE 009760386-01 P=256.529723 Days $T_0=347.040627$ (BKJD)



DV Model-Shift Uniqueness Test

009760386-01, P = 256.543839 Days, E = 90.492866 Days

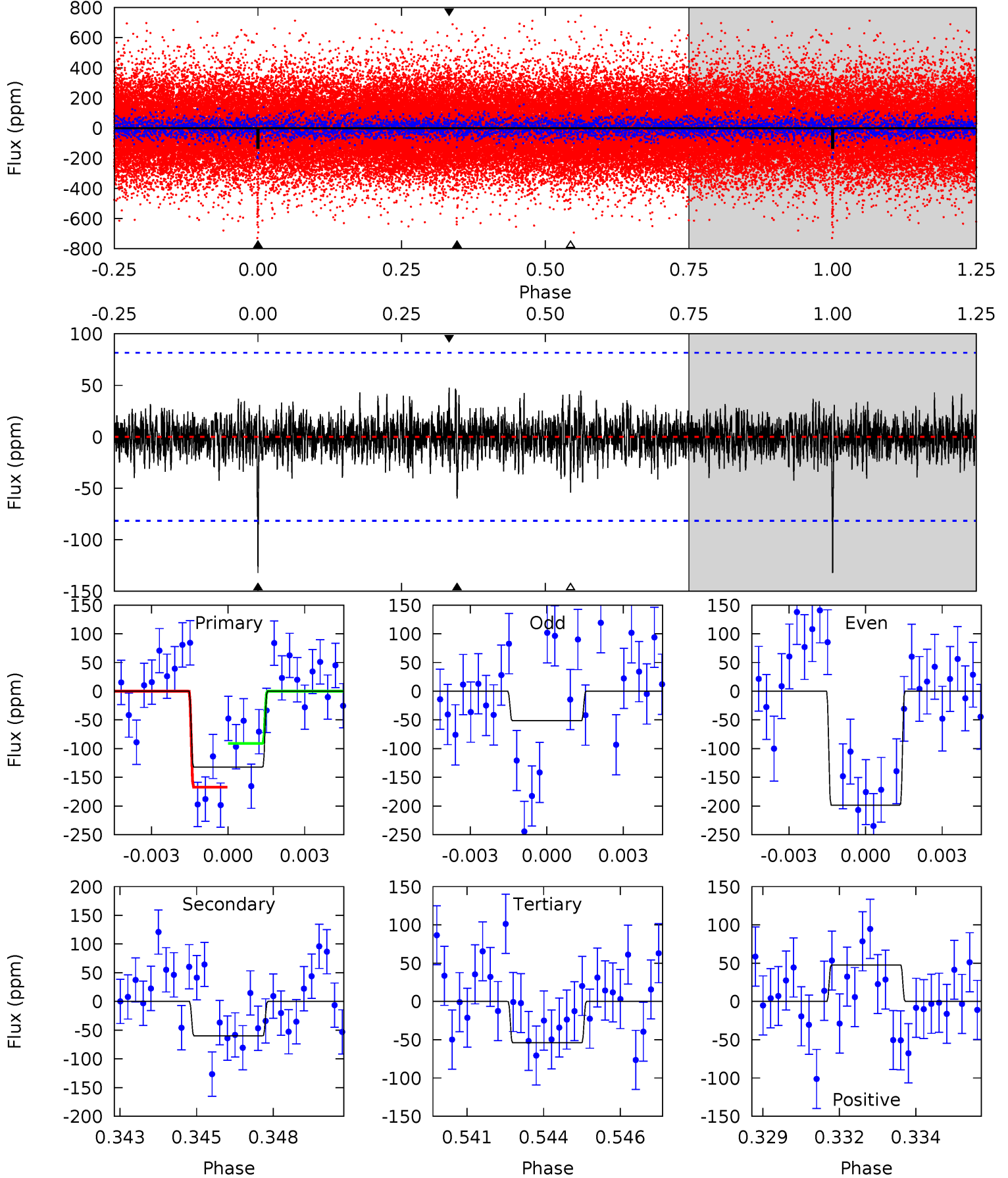
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.92	4.82	4.71	6.59	5.26	2.97	1.64	5.20	3.32	0.10	-1.78	4.78	1.56	0.40	1.60



Alt Model-Shift Uniqueness Test

009760386-01, P = 256.529723 Days, E = 90.510904 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.54	3.86	3.49	3.09	5.27	3.00	0.82	5.05	5.46	0.37	0.77	4.72	1.82	0.27	2.46



Stellar Parameters For KIC 009760386

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6274^{+169}_{-206}	$4.426^{+0.070}_{-0.210}$	$-0.300^{+0.250}_{-0.300}$	$1.022^{+0.335}_{-0.112}$	$1.013^{+0.160}_{-0.120}$	$1.335^{+0.494}_{-0.733}$
	+3%/-3%	+2%/-5%	+83%/-100%	+33%/-11%	+16%/-12%	+37%/-55%
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 009760386-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-73 ± 15	$1.56^{+0.39}_{-0.31}$	445^{+35}_{-23}	5040^{+528}_{-396}	10065^{+6178}_{-3727}
Alt.	-60 ± 15	$1.28^{+0.35}_{-0.29}$	445^{+33}_{-23}	5240^{+748}_{-562}	12084^{+8997}_{-5174}

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

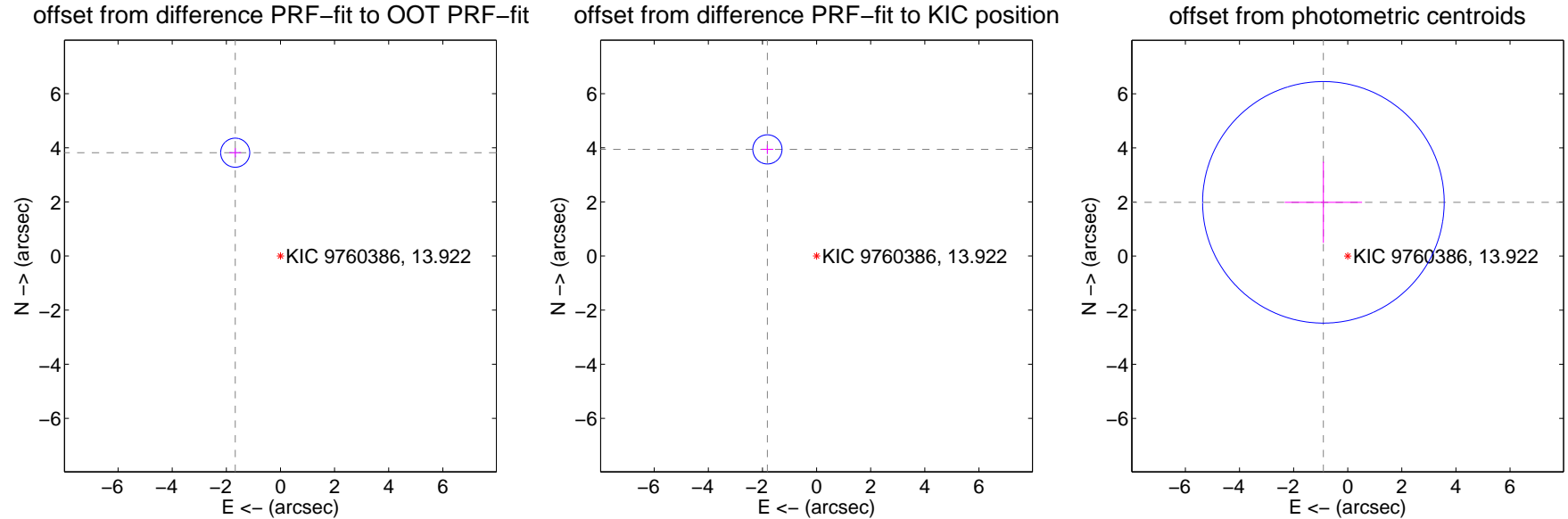
DV Centroid Data

Supplemental centroid analysis for 009760386-01. Kepler magnitude: 13.92. Transit SNR 6.32

There are 1 quarters with good PRF difference image offsets

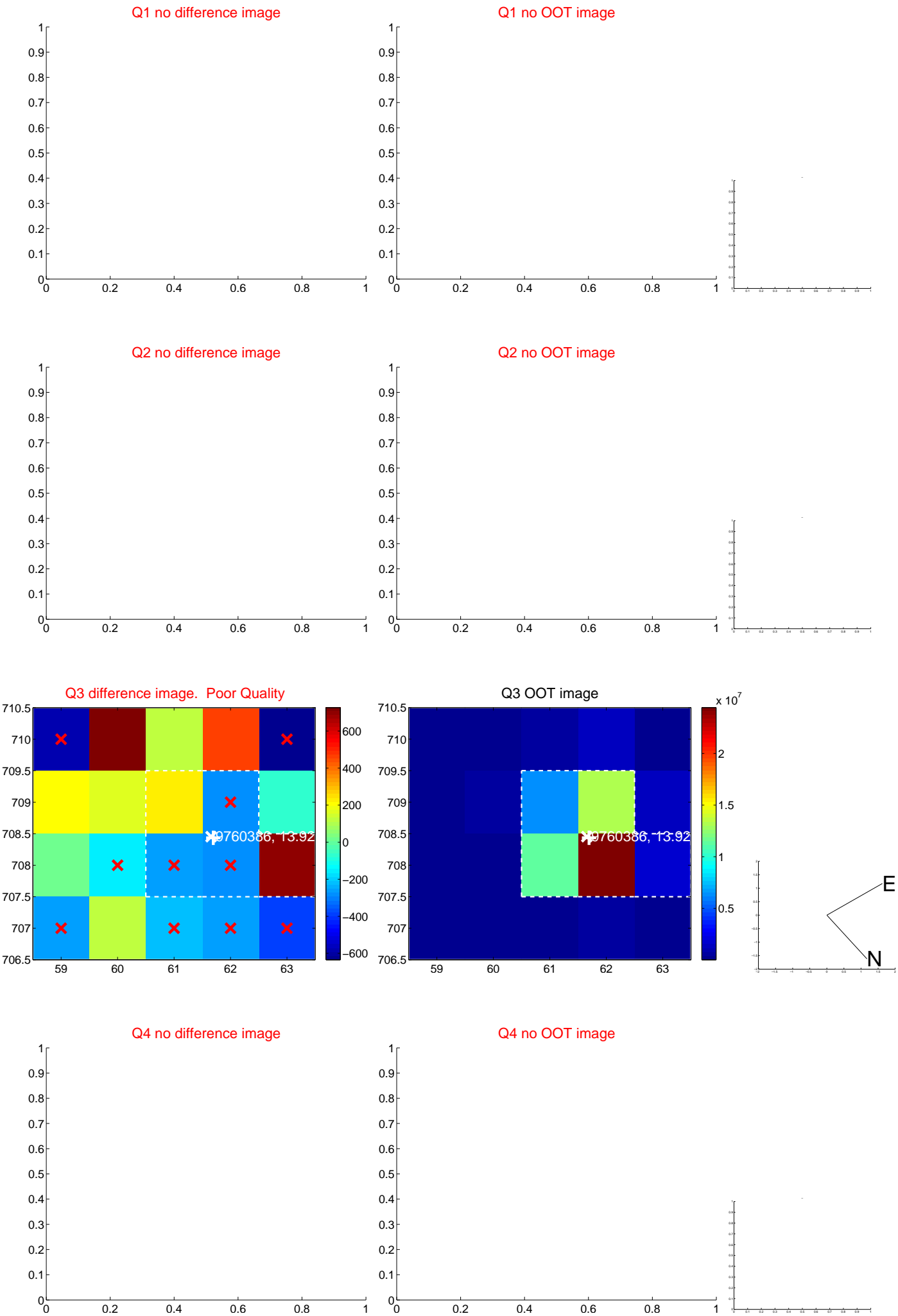
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.170 ± 0.179	23.27	1.672 ± 0.216	3.819 ± 0.171
PRF-fit source offset from KIC position	4.341 ± 0.180	24.13	1.817 ± 0.216	3.942 ± 0.171
photometric centroid source offset	2.18 ± 1.49	1.47	0.90 ± 1.43	1.99 ± 1.50

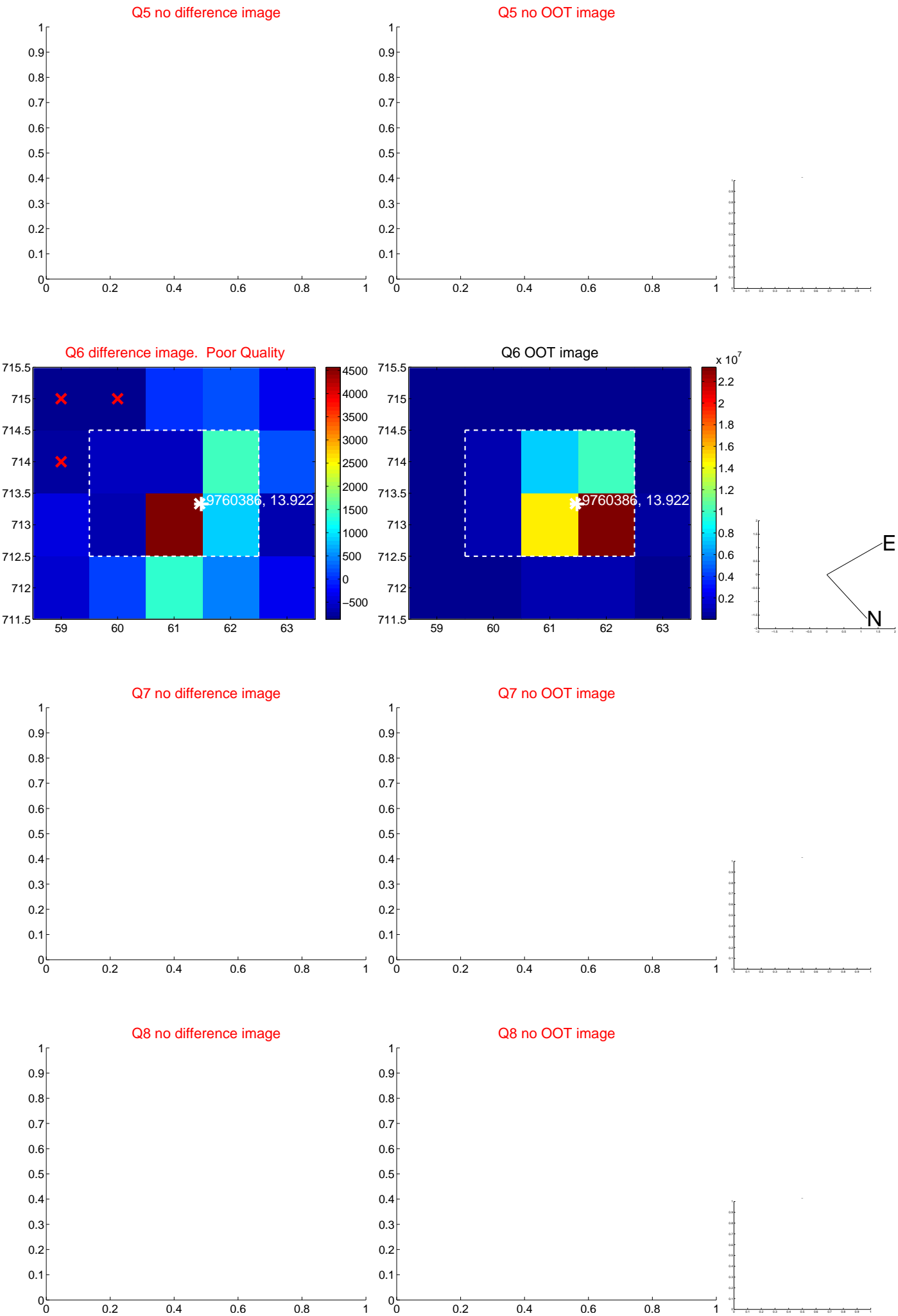


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

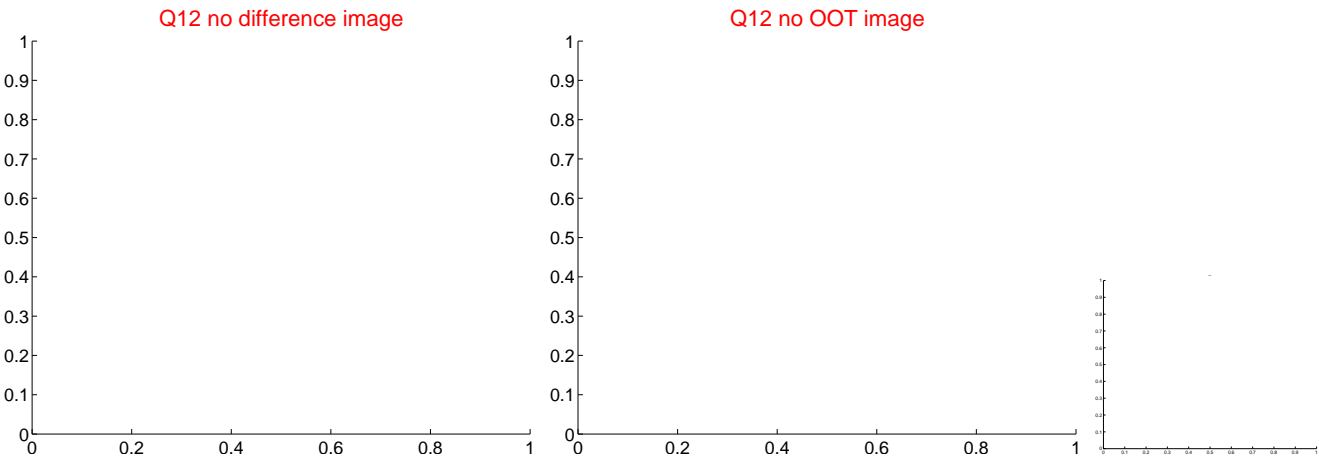
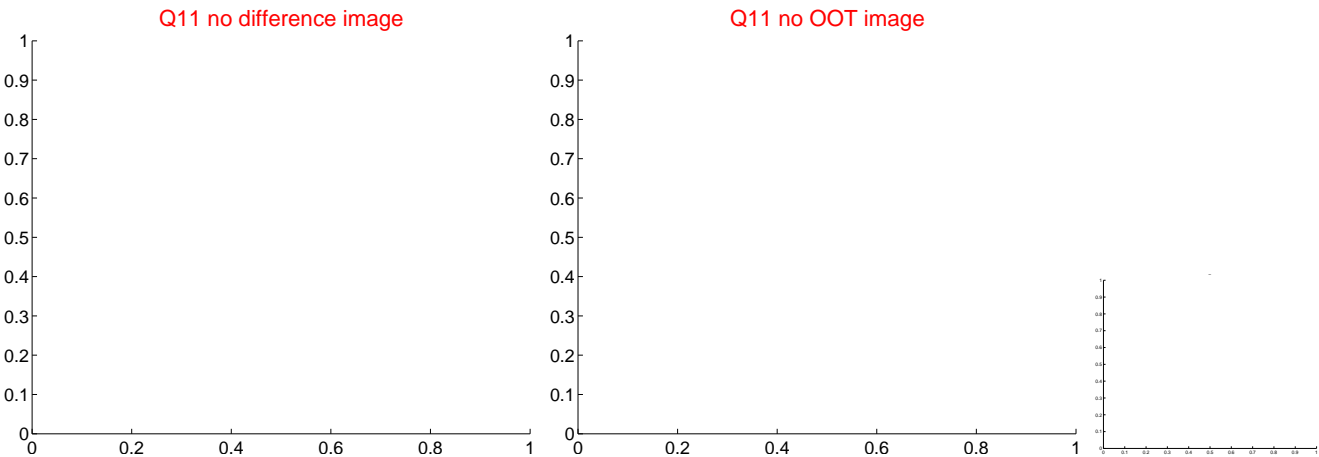
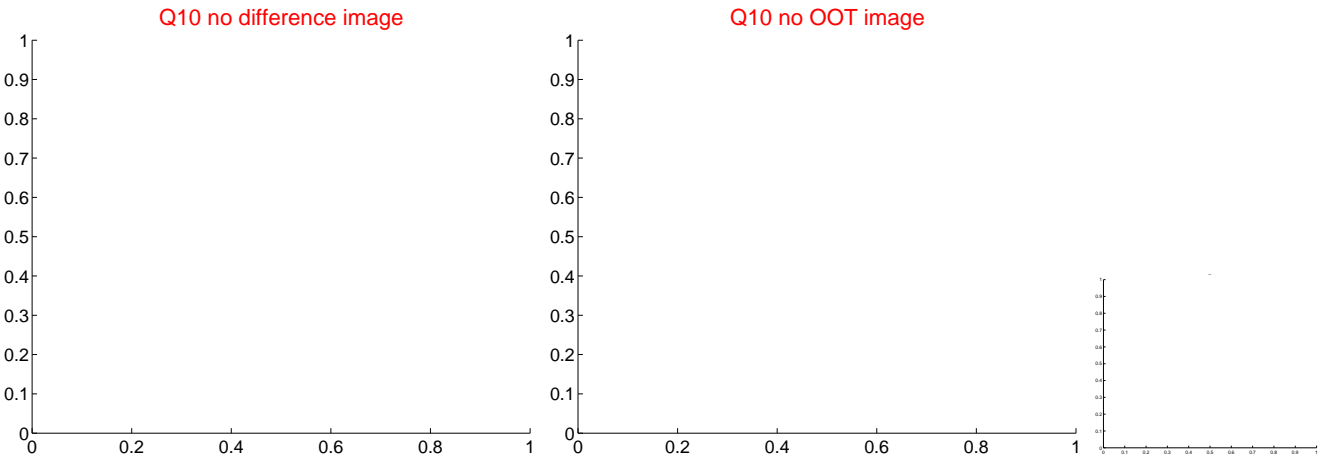
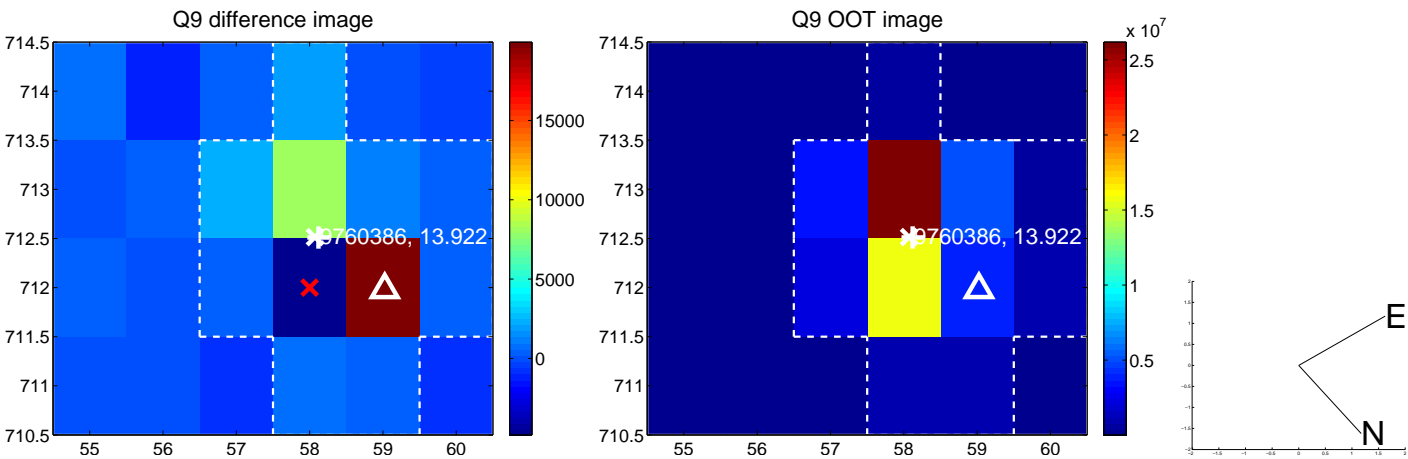
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



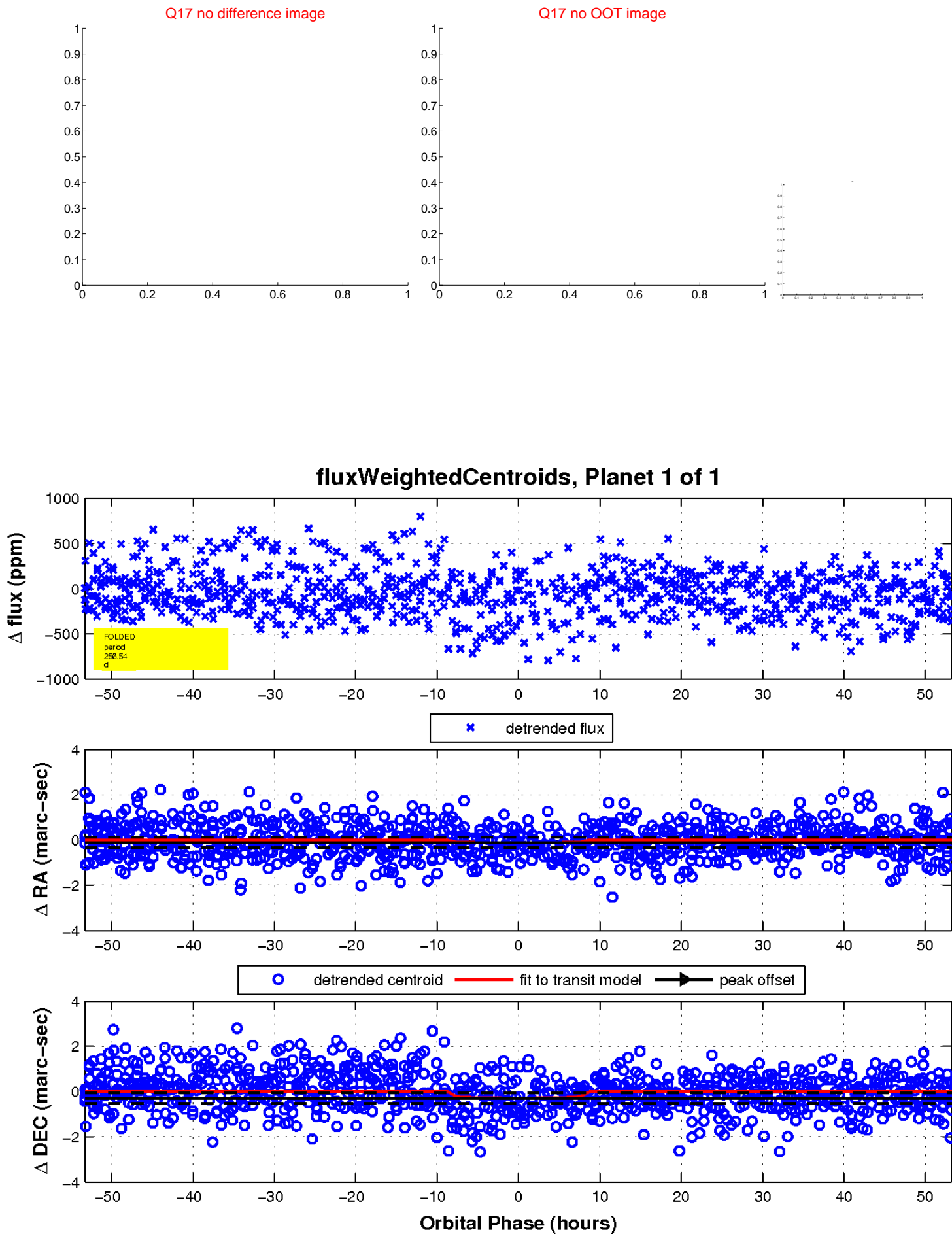
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \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.



UKIRT Image

Declination

