

KIC 009642561

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})
009642561-01	OBS	No	339.927480	298.221273	415.4	3.288	7.8	7.7	1.45	5636	3.32	2.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009642561-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—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.

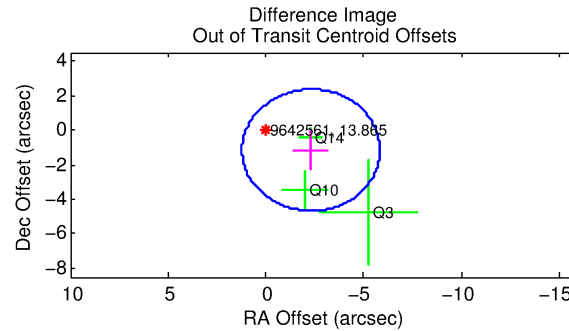
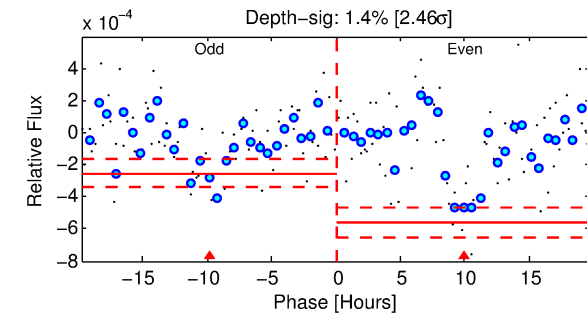
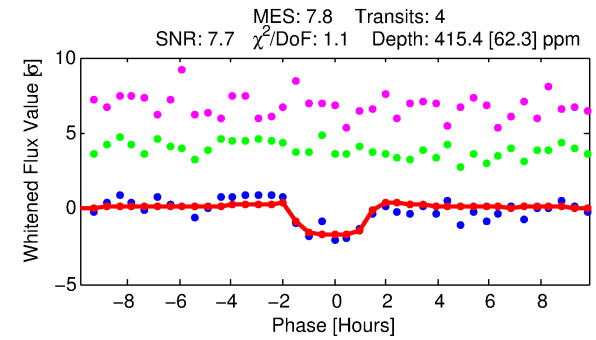
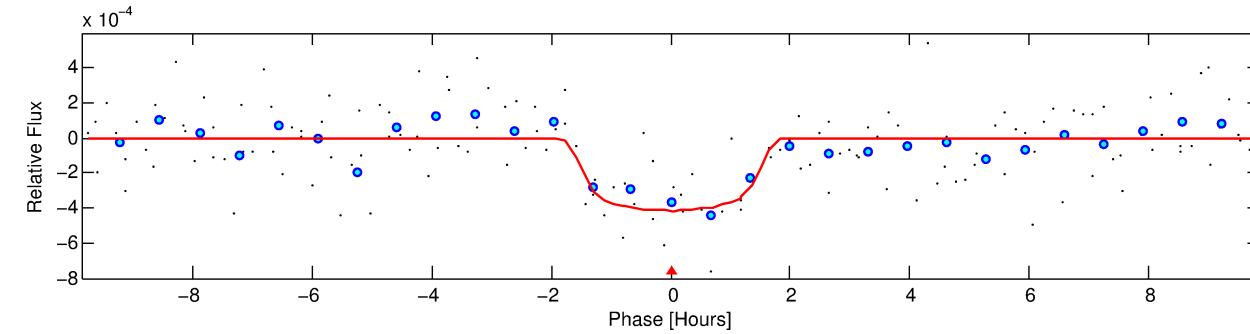
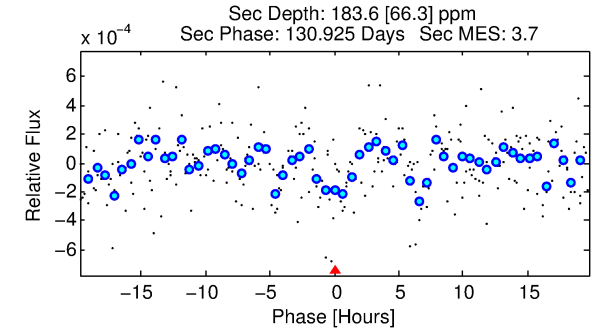
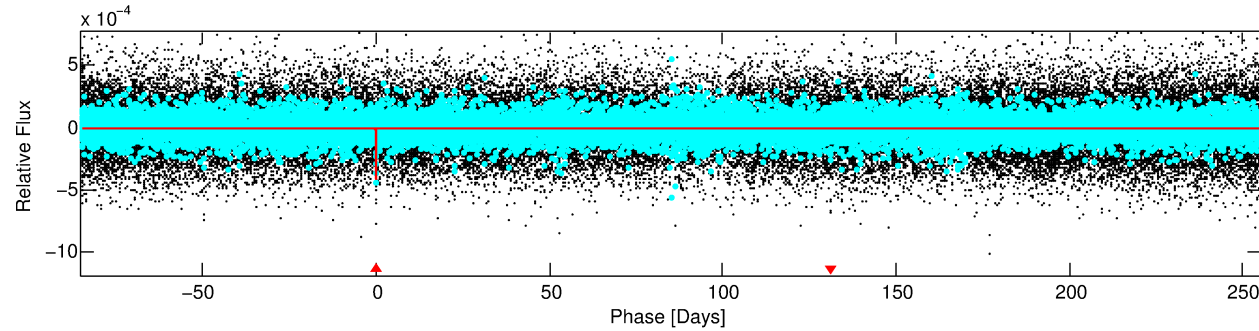
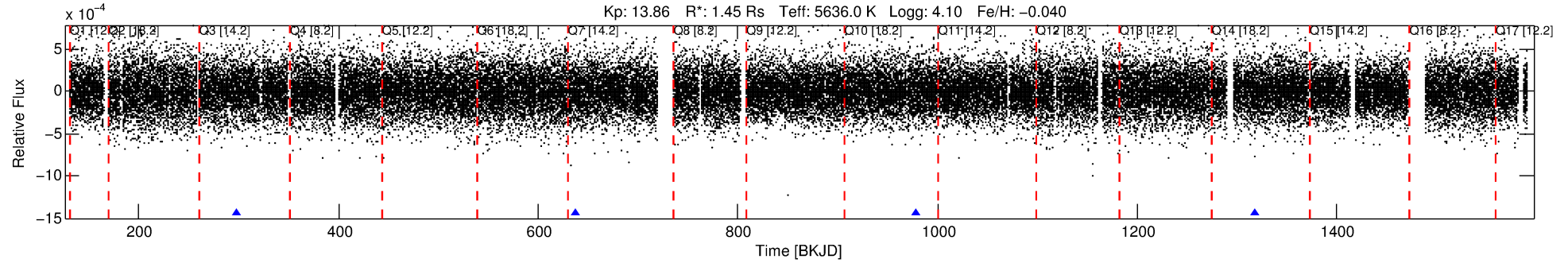
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009642561-01

No Significant Match Found

DV One-Page Summary

KIC: 9642561 Candidate: 1 of 1 Period: 339.927 d



DV Fit Results:

Period = 339.92748 [0.00510] d
Epoch = 298.2213 [0.0100] BKJD
Rp/R* = 0.0211 [0.0202]
a/R* = 472.49 [1979.97]
b = 0.83 [1.63]
Seff = 2.15 [1.31]
Teq = 309 [47] K
Rp = 3.32 [3.37] Re
a = 0.9373 [0.3352] AU
Ag = 8028.93 [16363.02] [0.49σ]
Teffp = 4518 [2203] K [1.91σ]

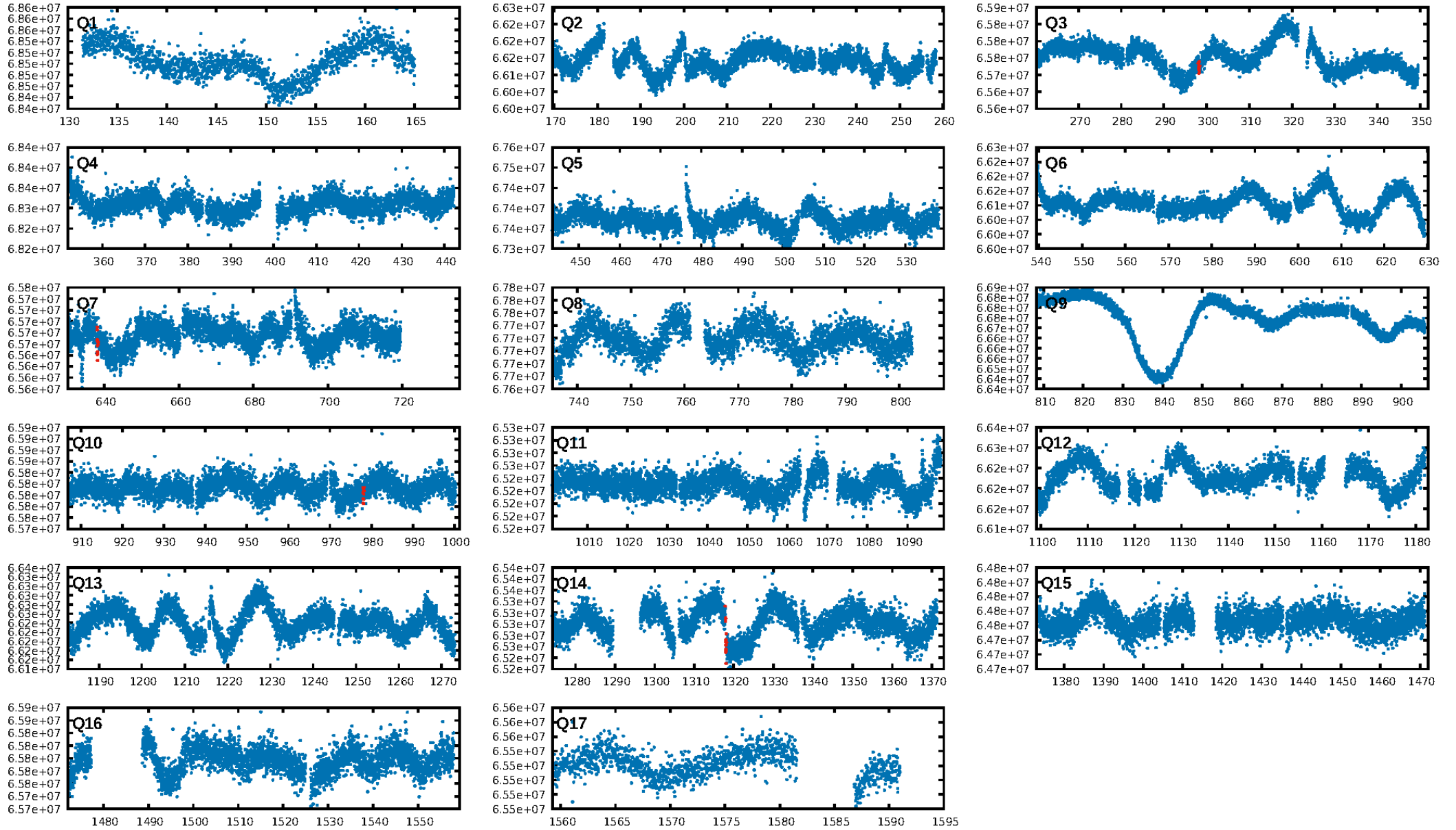
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 8.2%
ModelChiSquareGof-sig: 96.7%
Bootstrap-pfa: 9.81e-14
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 3.99
Centroid-sig: 69.1%
Centroid-so: 0.831 arcsec [0.56σ]
OotOffset-rm: 2.576 arcsec [2.20σ]
KicOffset-rm: 2.818 arcsec [2.90σ]
OotOffset-st: 2/1/0/0 [3]
KicOffset-st: 2/1/0/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [4/4]

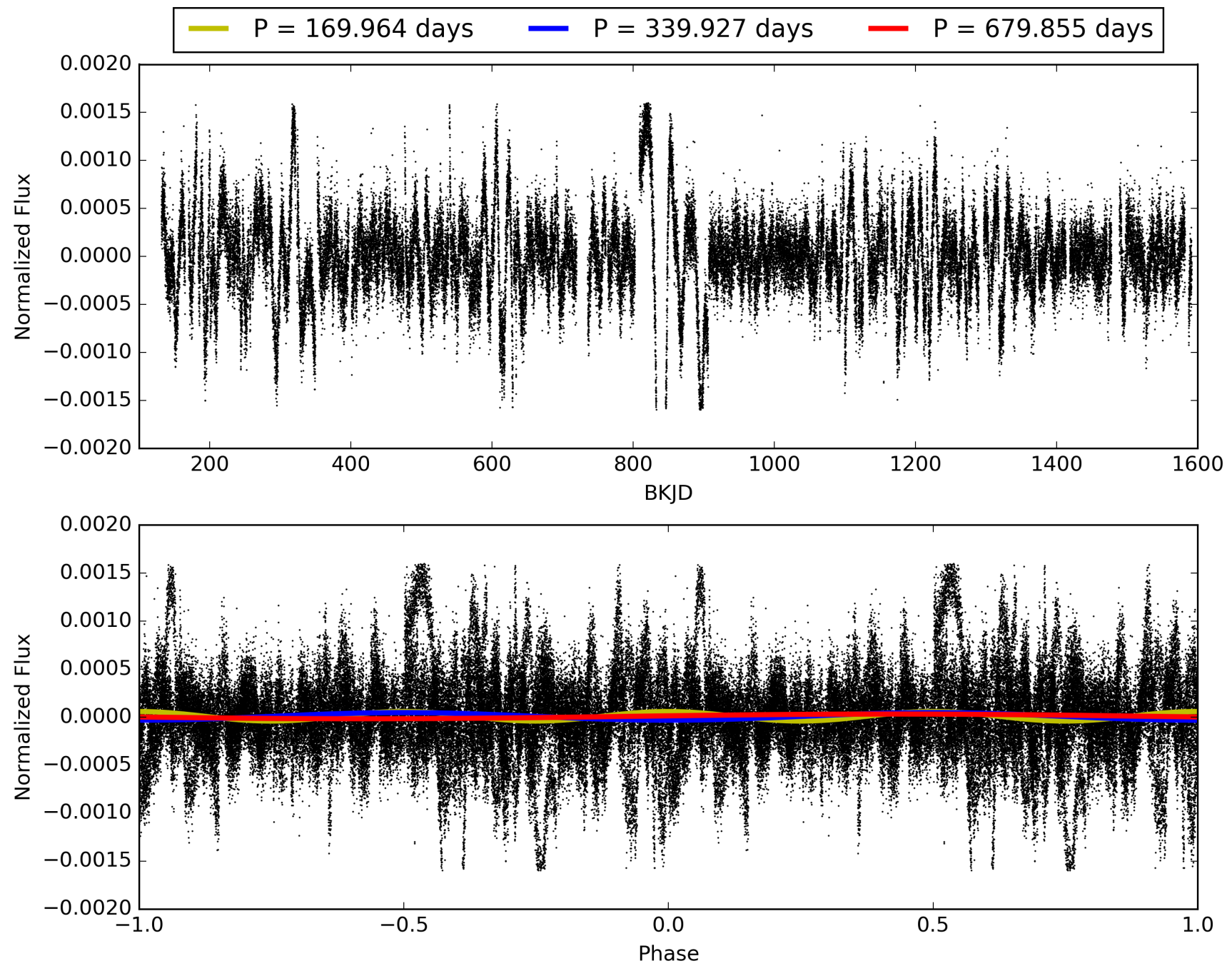
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:54:38 Z

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

TCE 009642561-01, PDC Light Curves

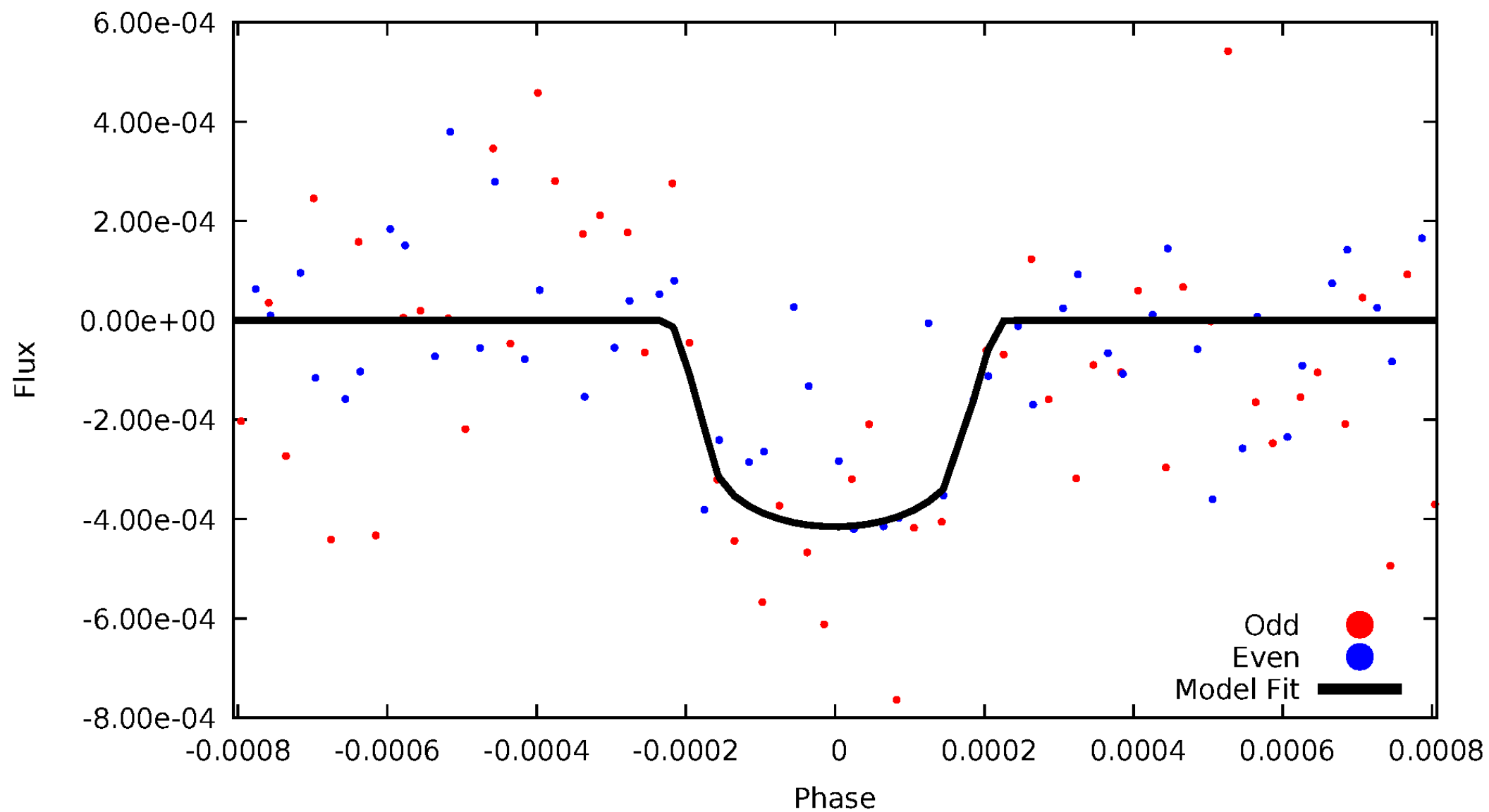


TCE 009642561-01



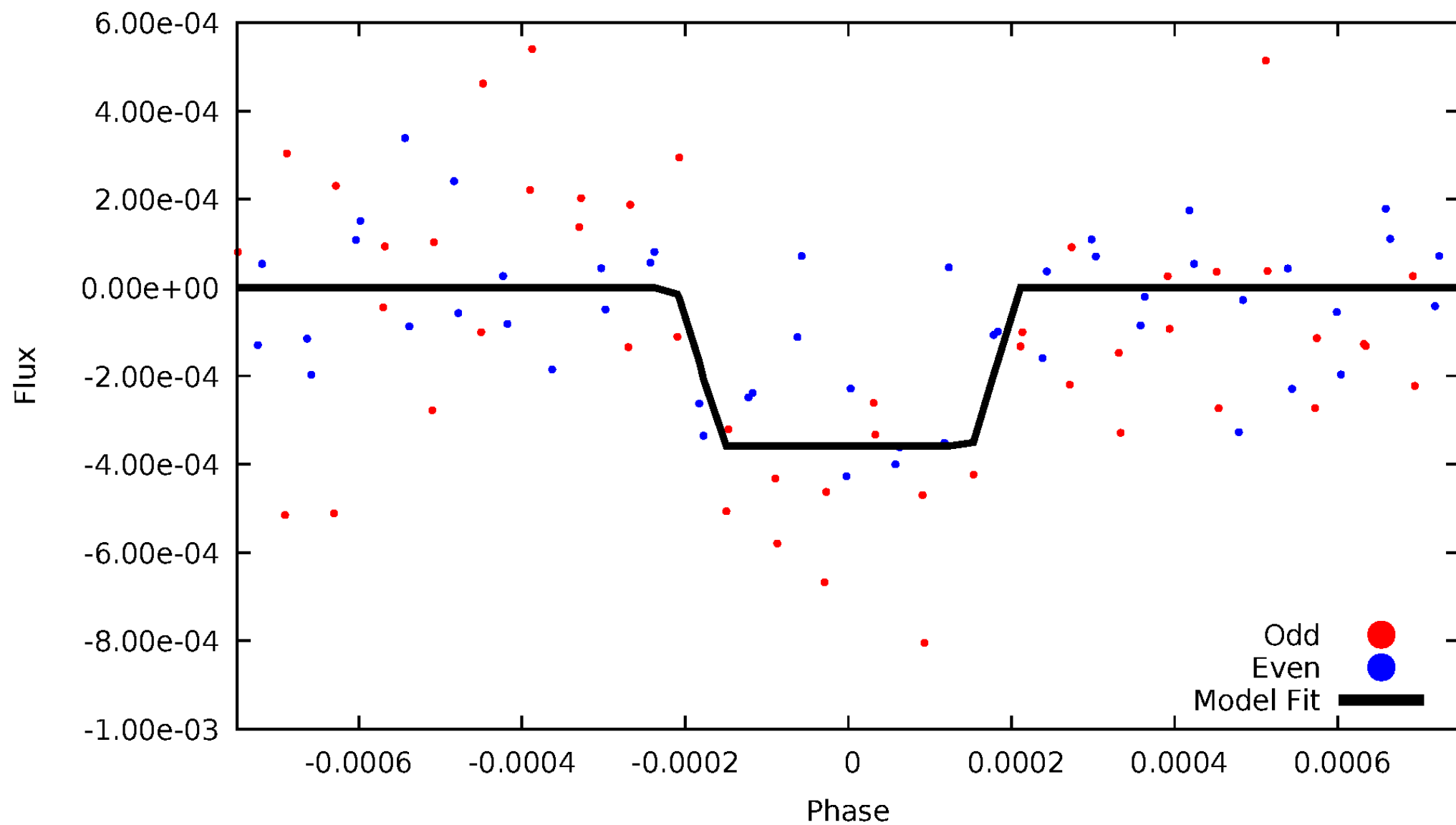
DV Odd/Even

TCE 009642561-01



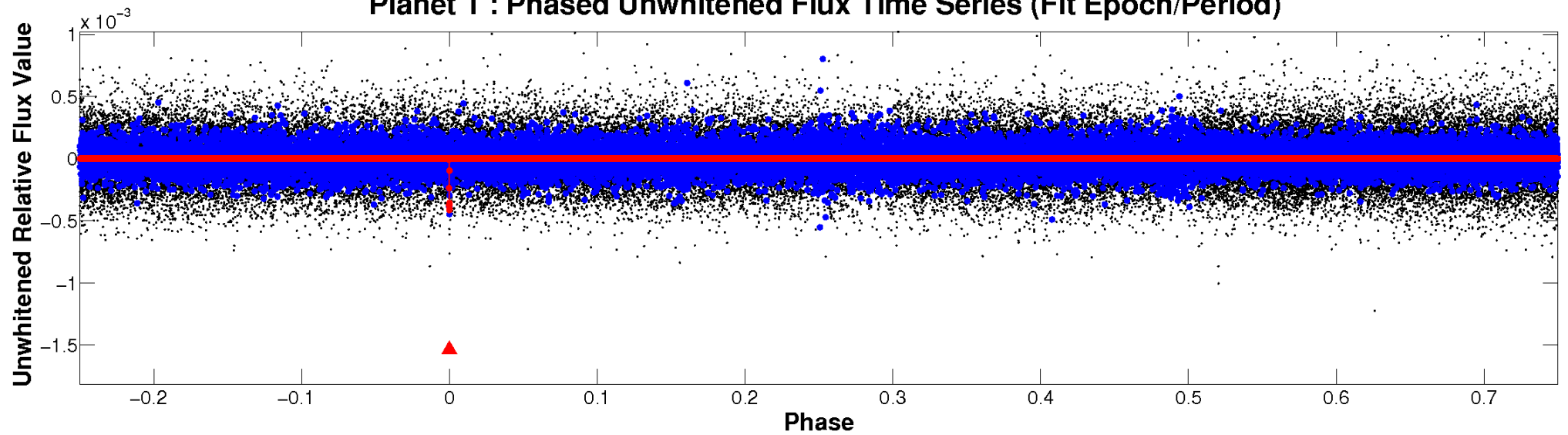
ALT Odd/Even

TCE 009642561-01

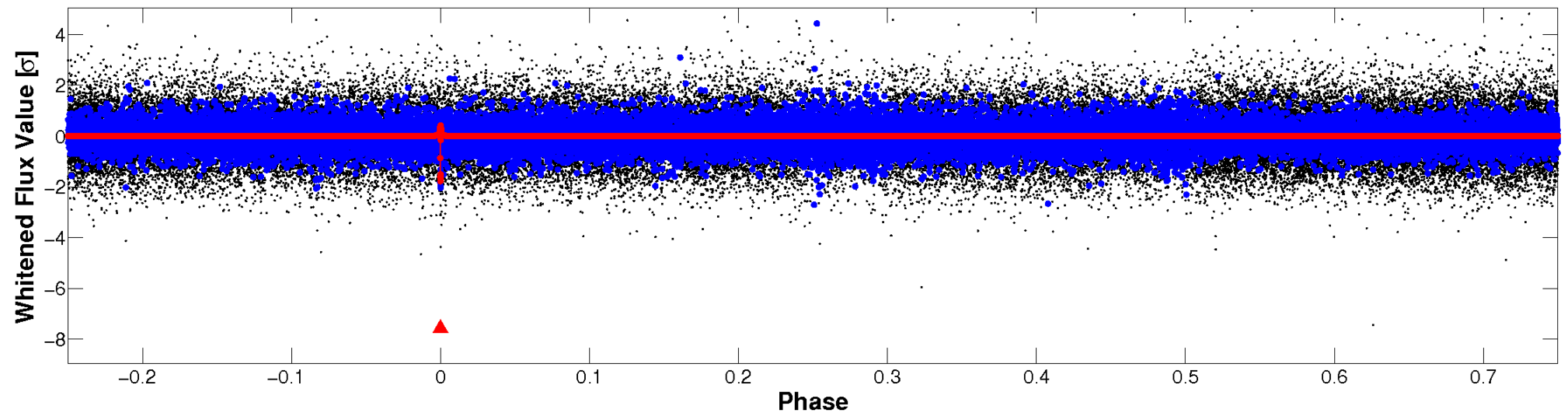


Non-Whitened Vs. Whitened Light Curve

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

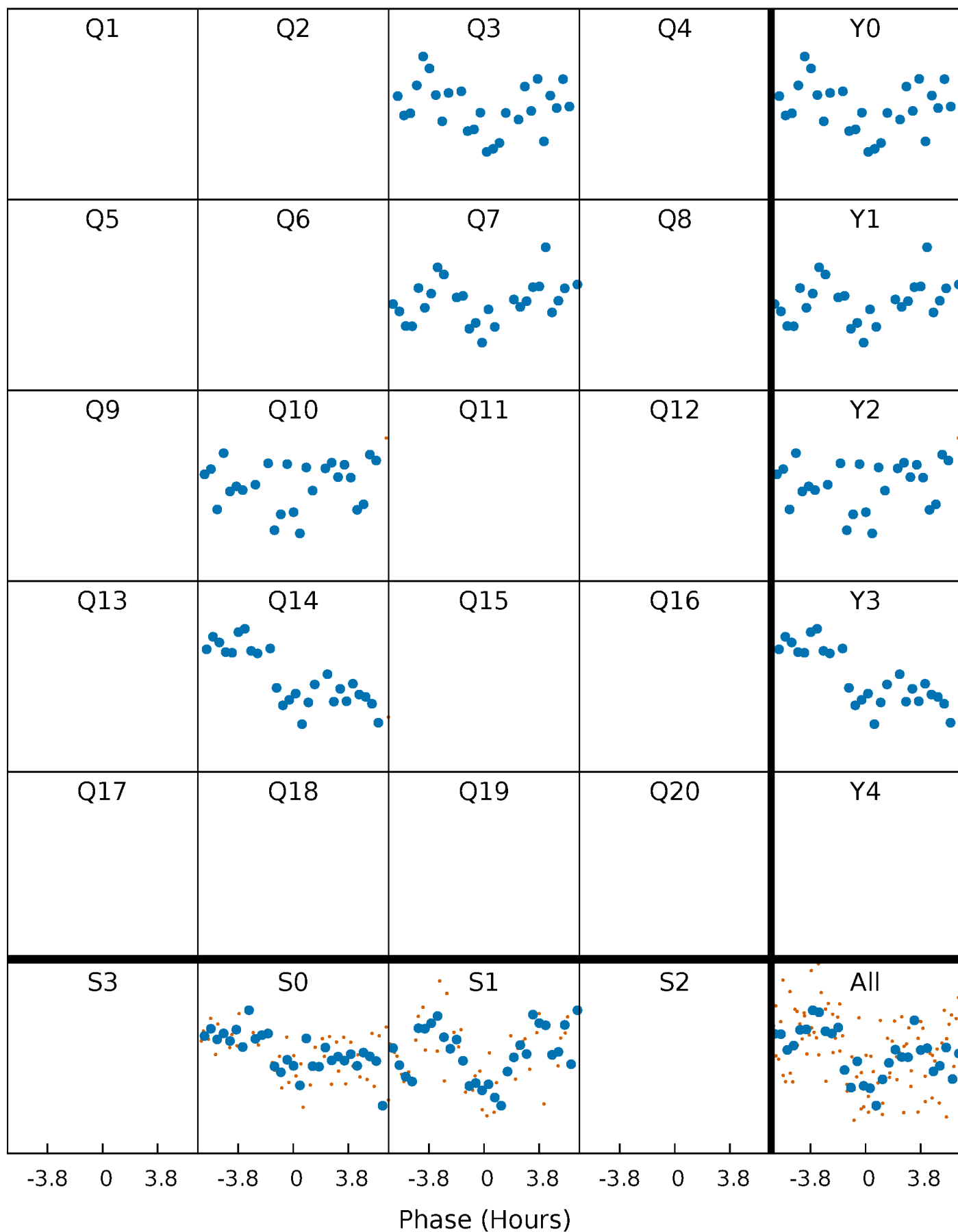


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



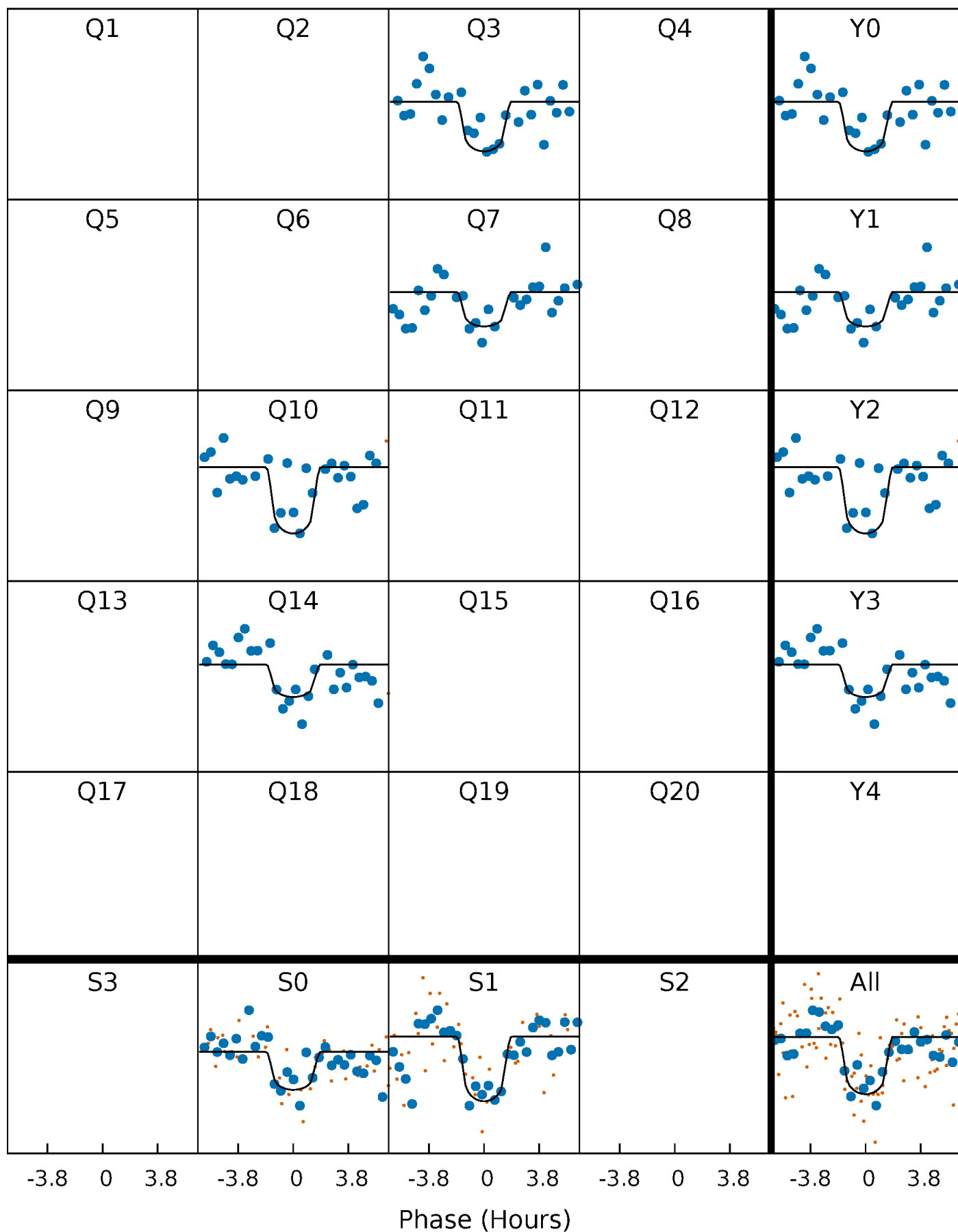
PDC Quarter-Phased Transit Curves

TCE 009642561-01 P=339.927480 Days $T_0=298.221273$ (BKJD)



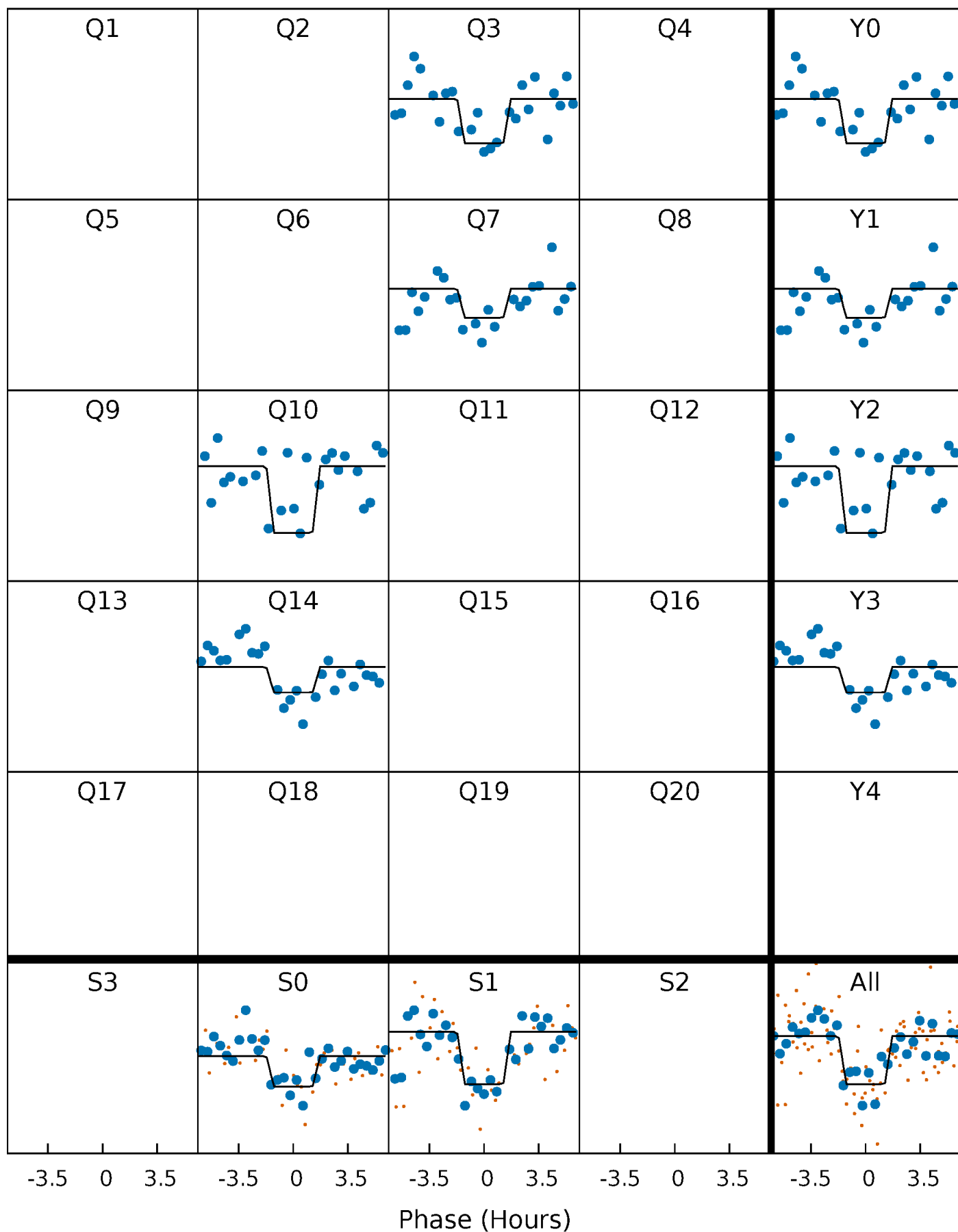
DV Quarter-Phased Transit Curves

TCE 009642561-01 P=339.927480 Days $T_0=298.221273$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

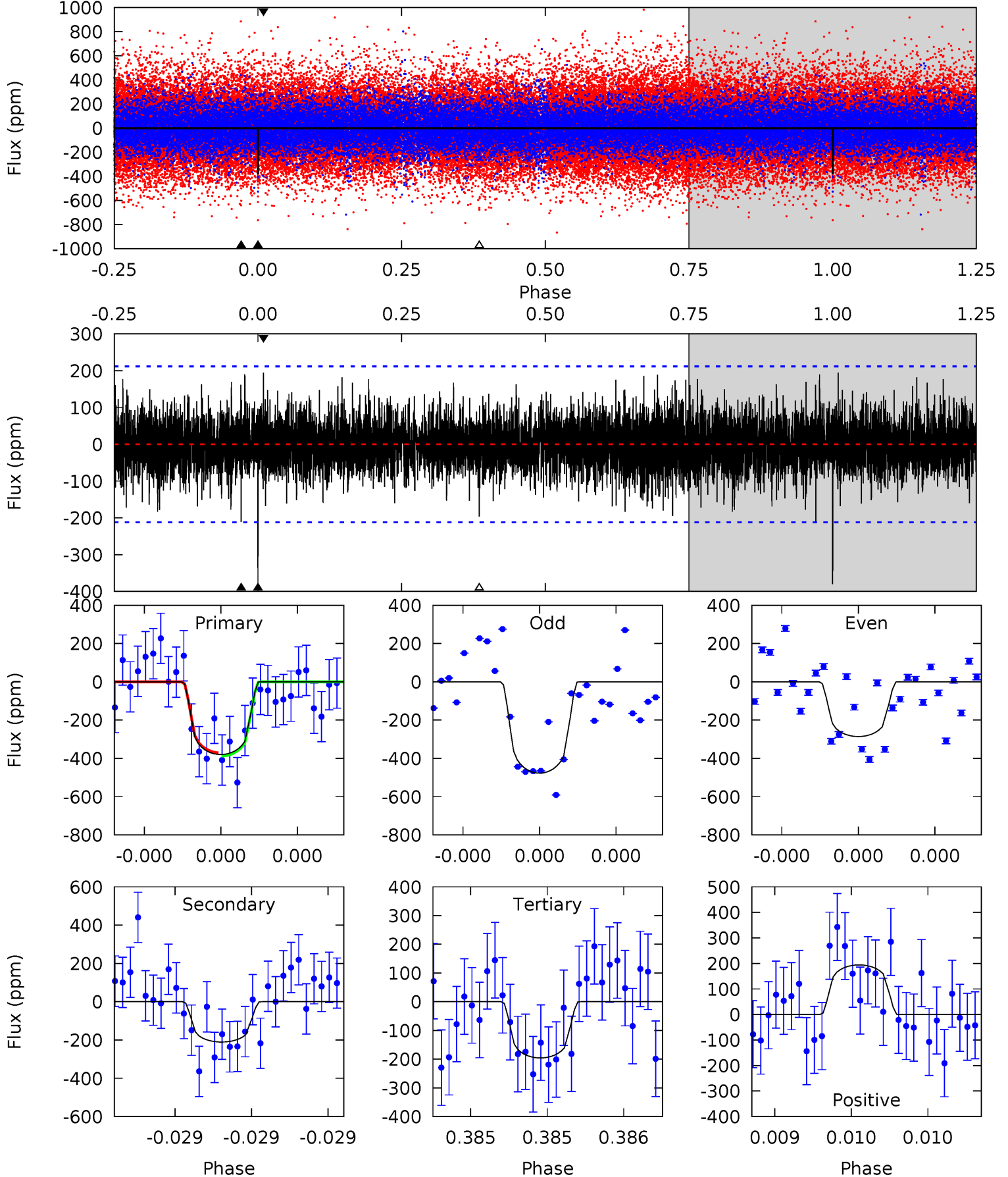
TCE 009642561-01 P=339.923181 Days $T_0=298.230556$ (BKJD)



DV Model-Shift Uniqueness Test

009642561-01, P = 339.927480 Days, E = 298.221273 Days

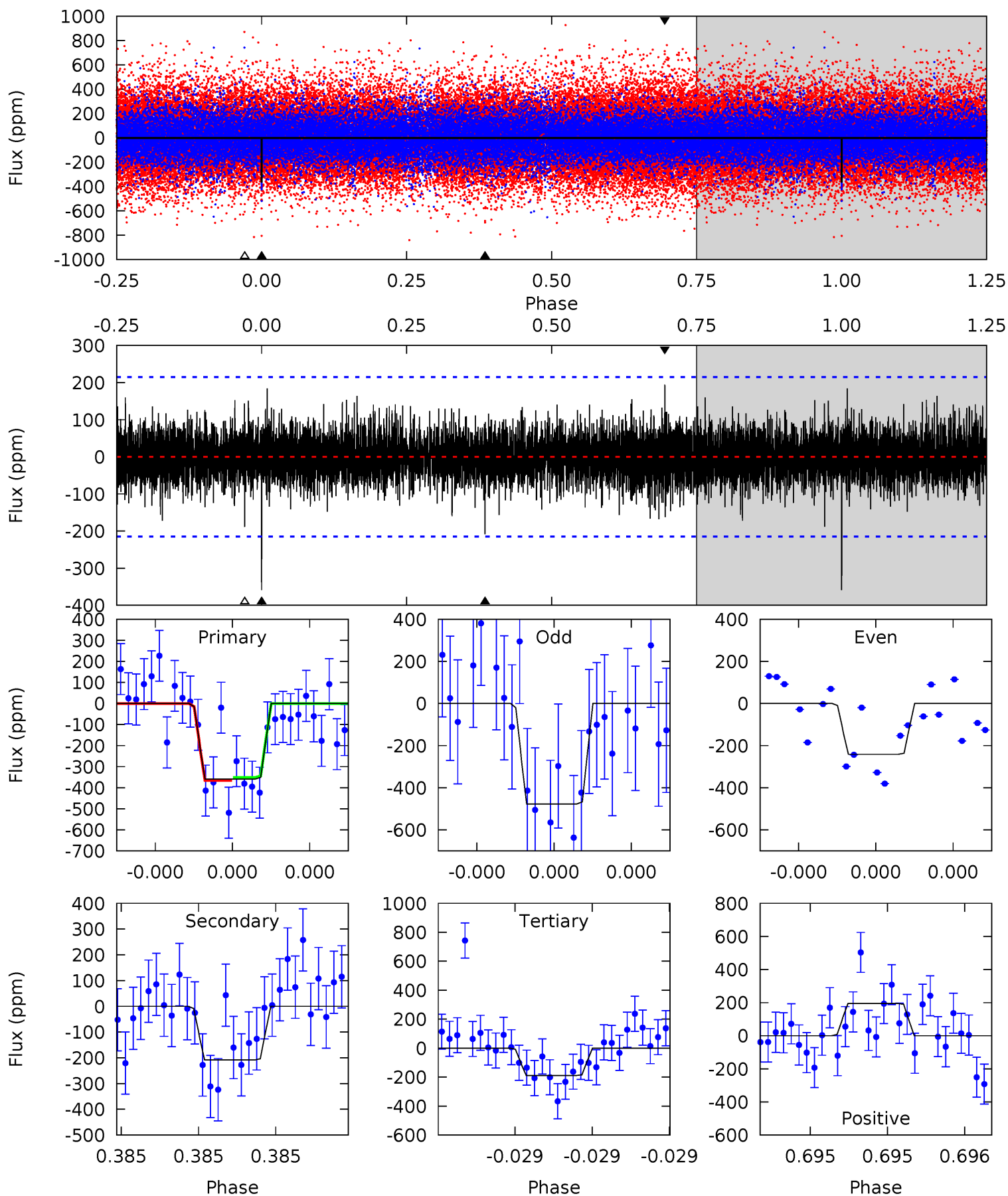
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.0	5.55	5.16	5.12	5.59	3.50	1.38	4.86	4.90	0.39	0.43	2.57	1.00	0.34	0.22



Alt Model-Shift Uniqueness Test

009642561-01, P = 339.923181 Days, E = 298.230556 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.37	5.44	4.92	5.08	5.60	3.53	1.19	4.44	4.29	0.52	0.36	3.07	0.92	0.35	0.18



Stellar Parameters For KIC 009642561

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5636^{+152}_{-152}	$4.096^{+0.364}_{-0.156}$	$-0.040^{+0.300}_{-0.250}$	$1.445^{+0.352}_{-0.484}$	$0.949^{+0.115}_{-0.094}$	$0.443^{+1.192}_{-0.188}$
	+3%/-3%	+9%/-4%	+750%/-625%	+24%/-33%	+12%/-10%	+269%/-42%
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 009642561-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-210 ± 38	$3.63^{+3.33}_{-2.31}$	426^{+32}_{-44}	4470^{+2429}_{-838}	7652^{+49427}_{-5550}
Alt.	-208 ± 38	$3.37^{+3.21}_{-2.09}$	424^{+35}_{-43}	4610^{+2741}_{-925}	9117^{+54544}_{-6819}

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 $A_{obs} \gg 1.0$

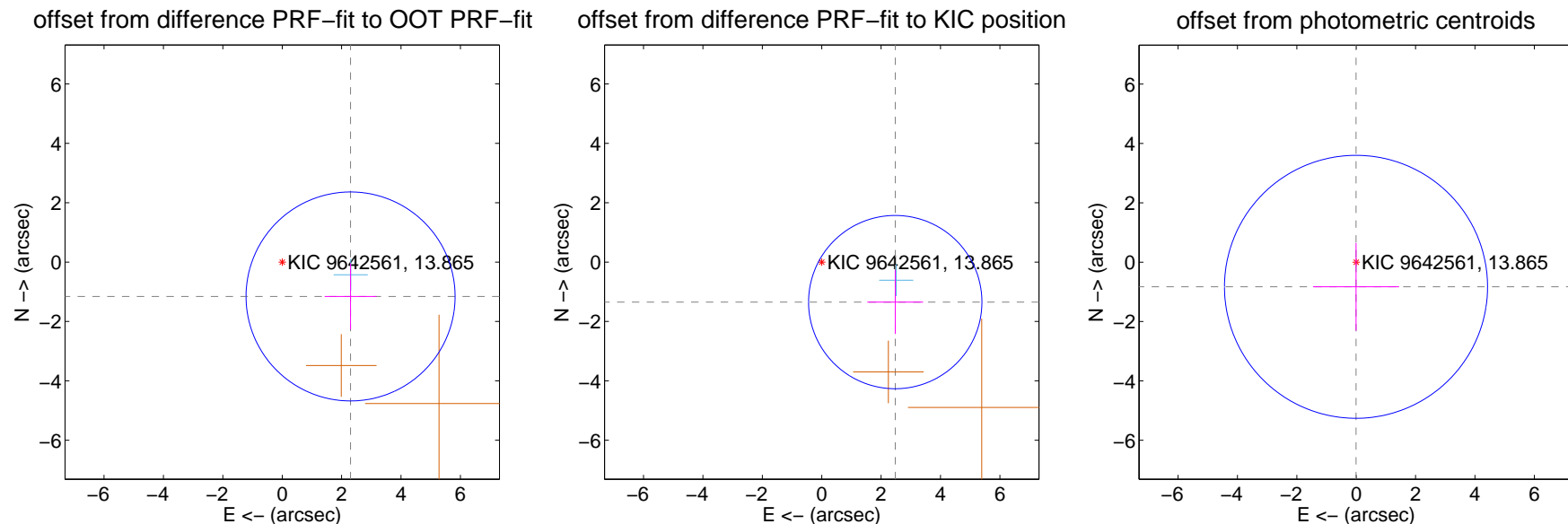
DV Centroid Data

Supplemental centroid analysis for 009642561-01. Kepler magnitude: 13.87. Transit SNR 7.67

There are 1 quarters with good PRF difference image offsets

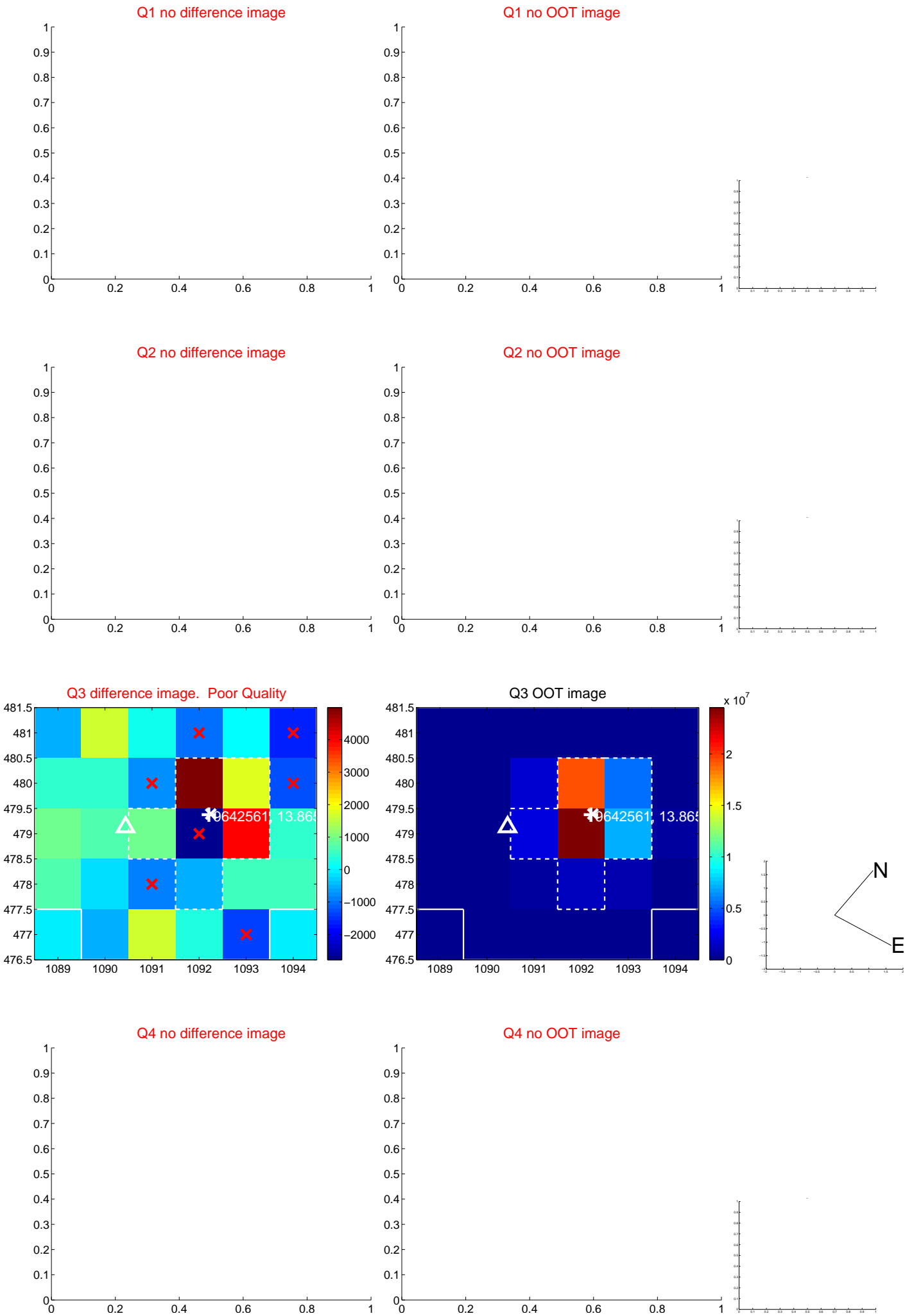
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.576 ± 1.173	2.20	-2.301 ± 0.873	-1.157 ± 1.112
PRF-fit source offset from KIC position	2.818 ± 0.973	2.90	-2.475 ± 0.941	-1.347 ± 1.074
photometric centroid source offset	0.83 ± 1.48	0.56	0.01 ± 1.45	-0.83 ± 1.48

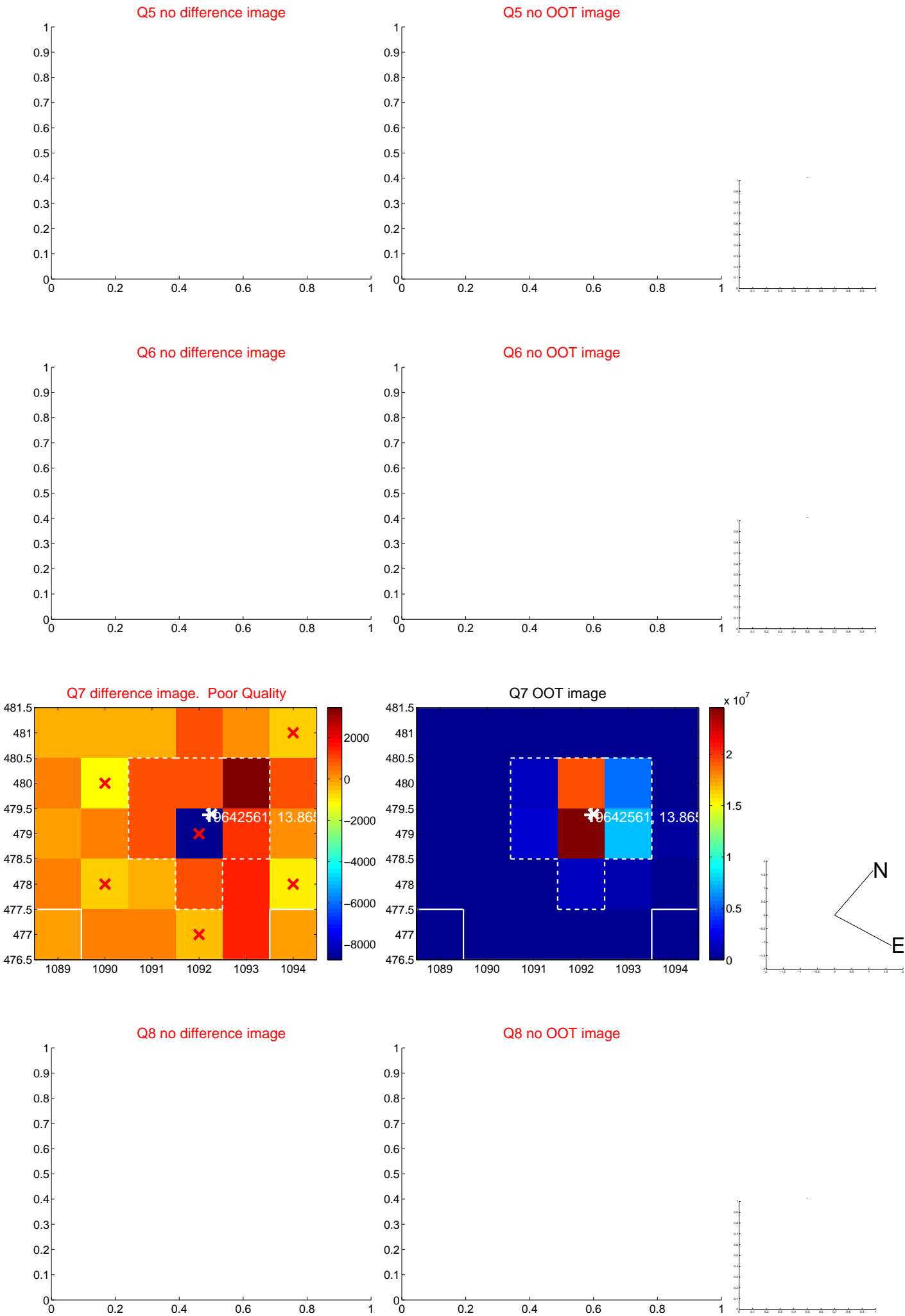


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

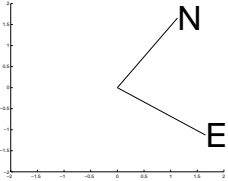
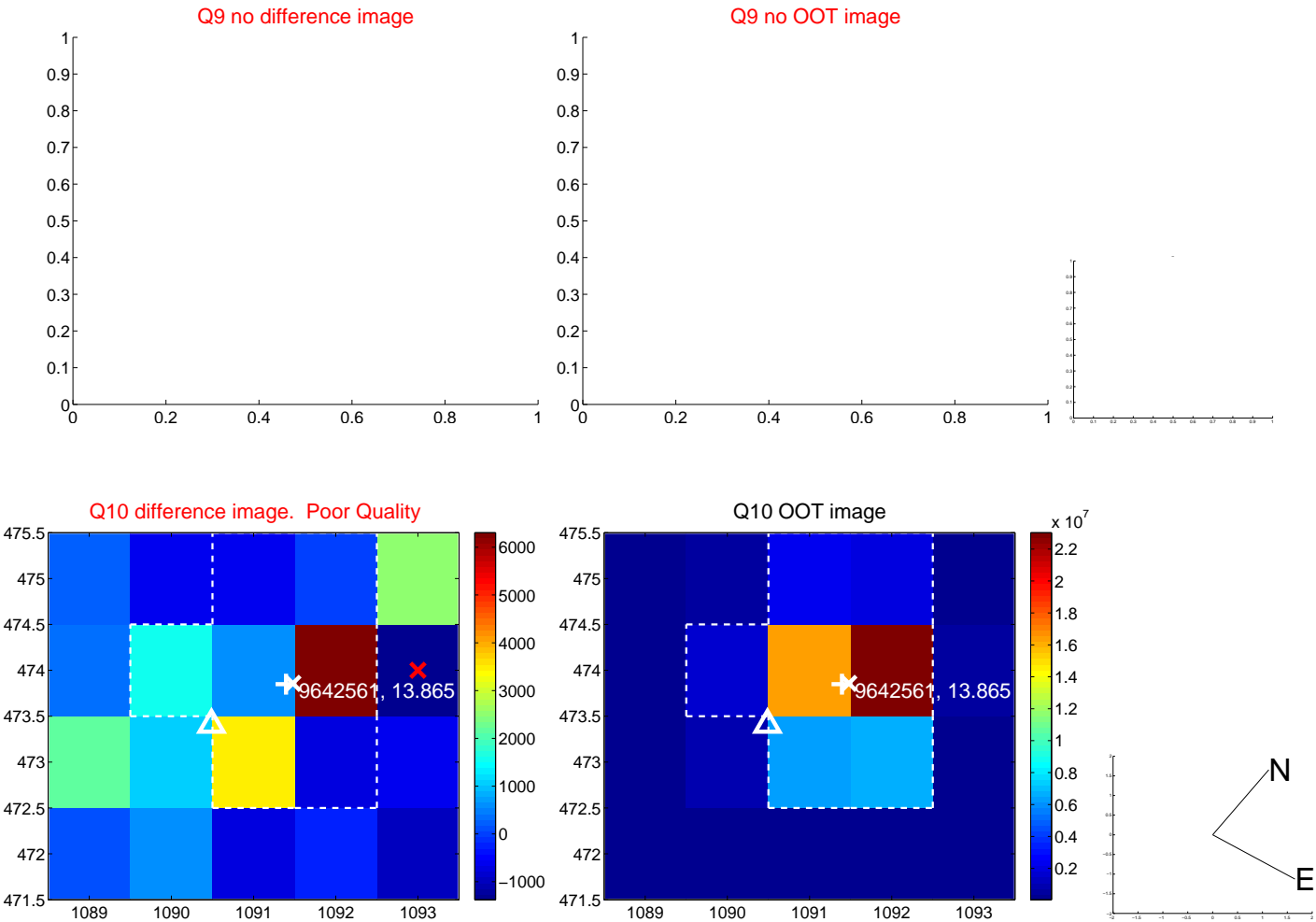
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



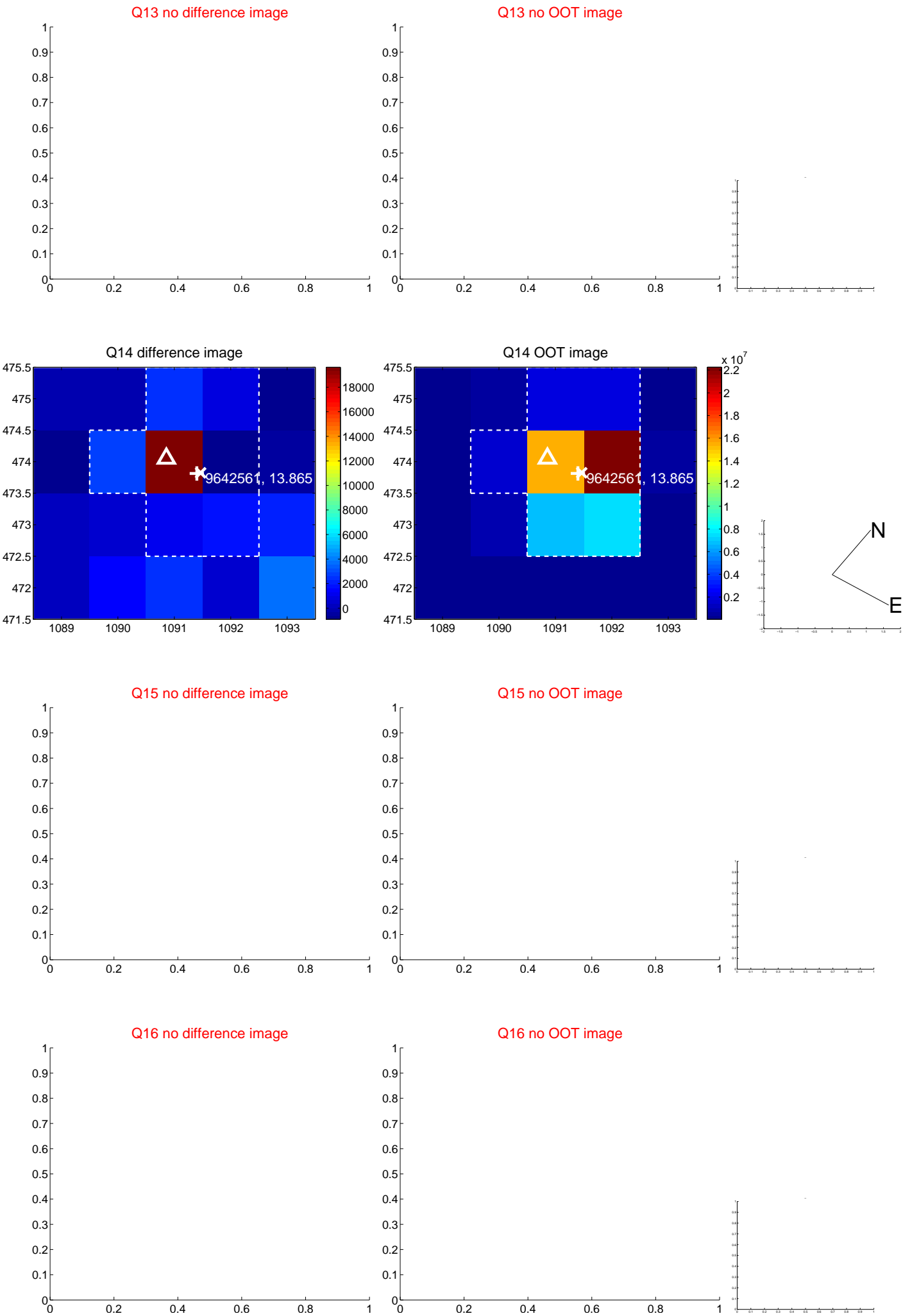
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



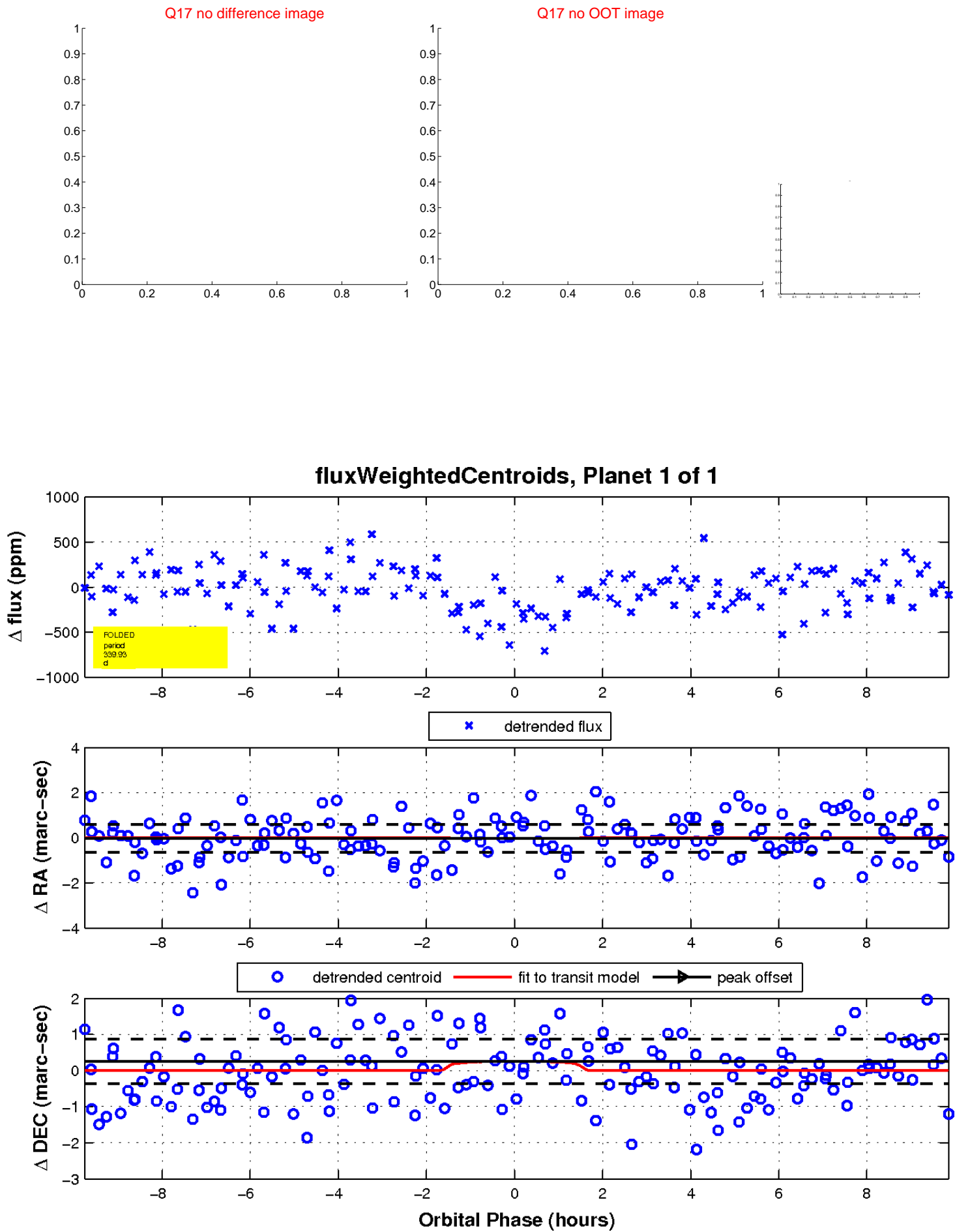
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

