

KIC 008742139

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})
008742139-01	OBS	No	370.031366	231.936596	1978.5	21.349	7.8	10.3	0.65	4909	5.71	0.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008742139-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

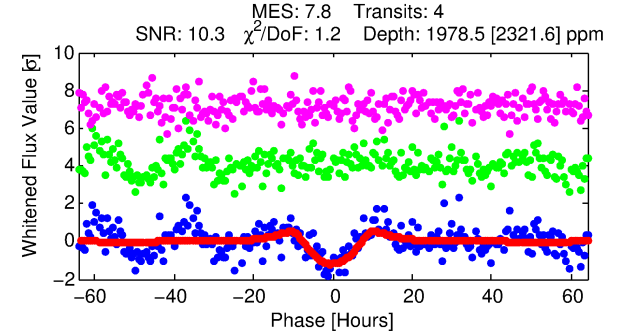
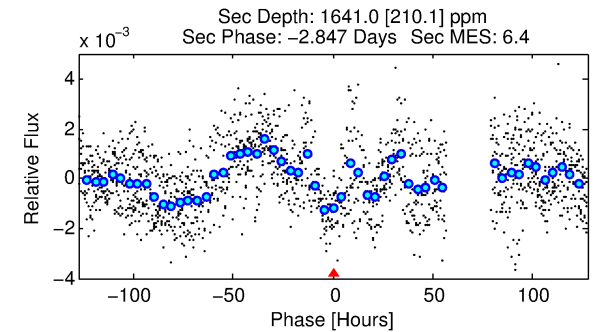
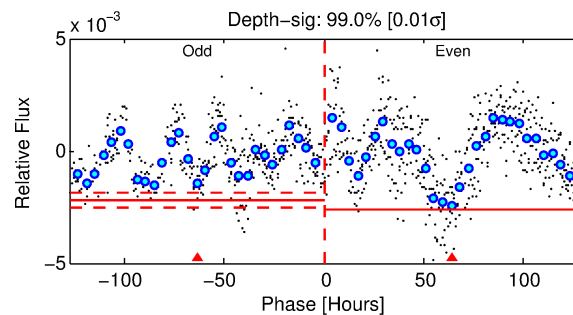
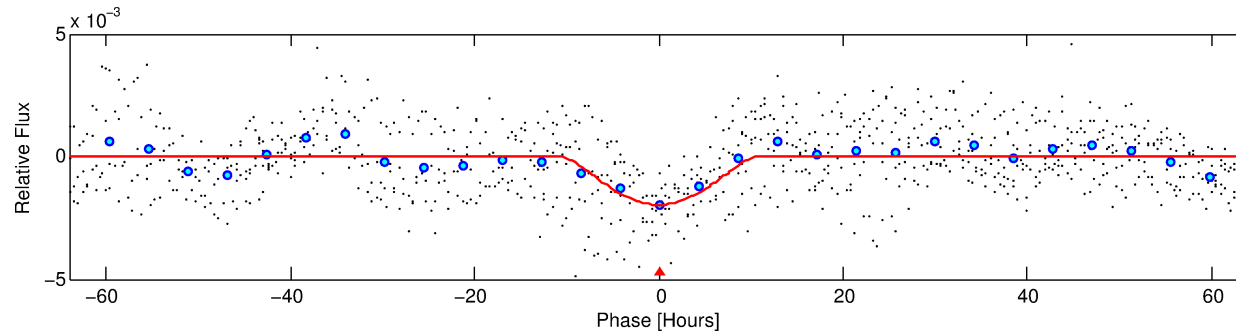
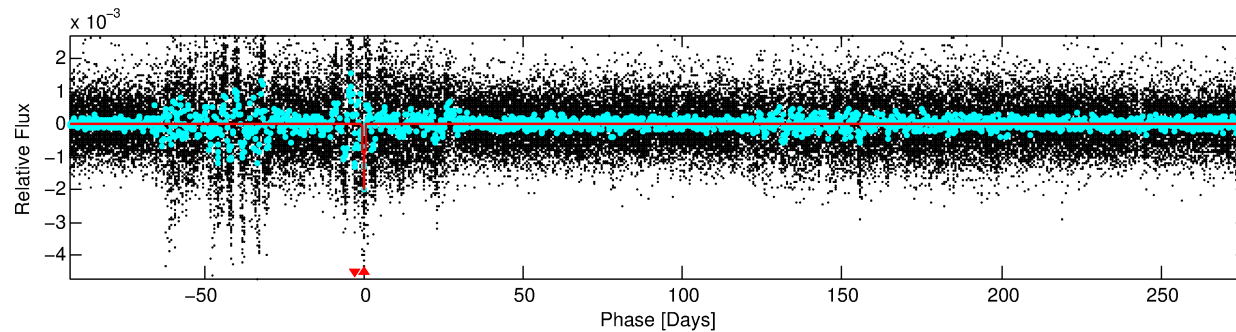
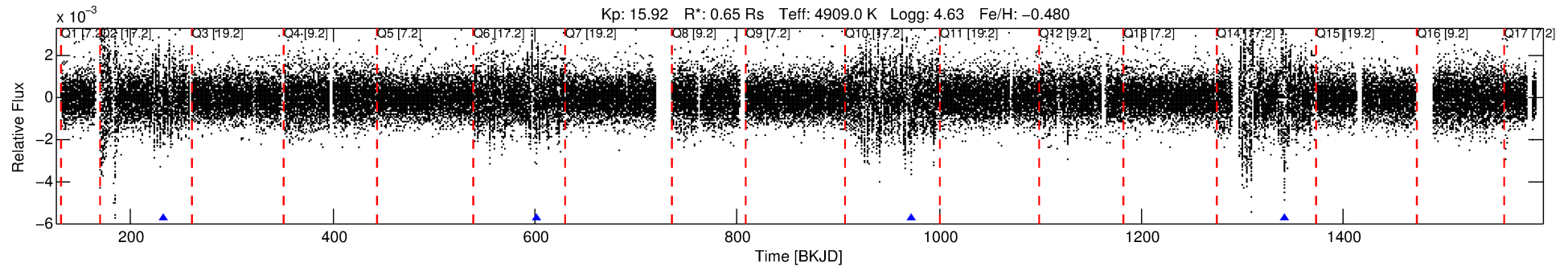
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008742139-01

No Significant Match Found

DV One-Page Summary

KIC: 8742139 Candidate: 1 of 1 Period: 370.031 d



DV Fit Results:

Period = 370.03137 [0.01775] d
Epoch = 231.9366 [0.0309] BKJD
Rp/R* = 0.0804 [0.2212]
a/R* = 54.18 [30.89]
b = 1.00 [0.37]
Seff = 0.28 [0.04]
Teq = 186 [7] K
Rp = 5.71 [15.72] Re
a = 0.8815 [0.0653] AU
Ag = 21485.28 [118186.21] [0.18 σ]
Teffp = 3484 [4791] K [0.69 σ]

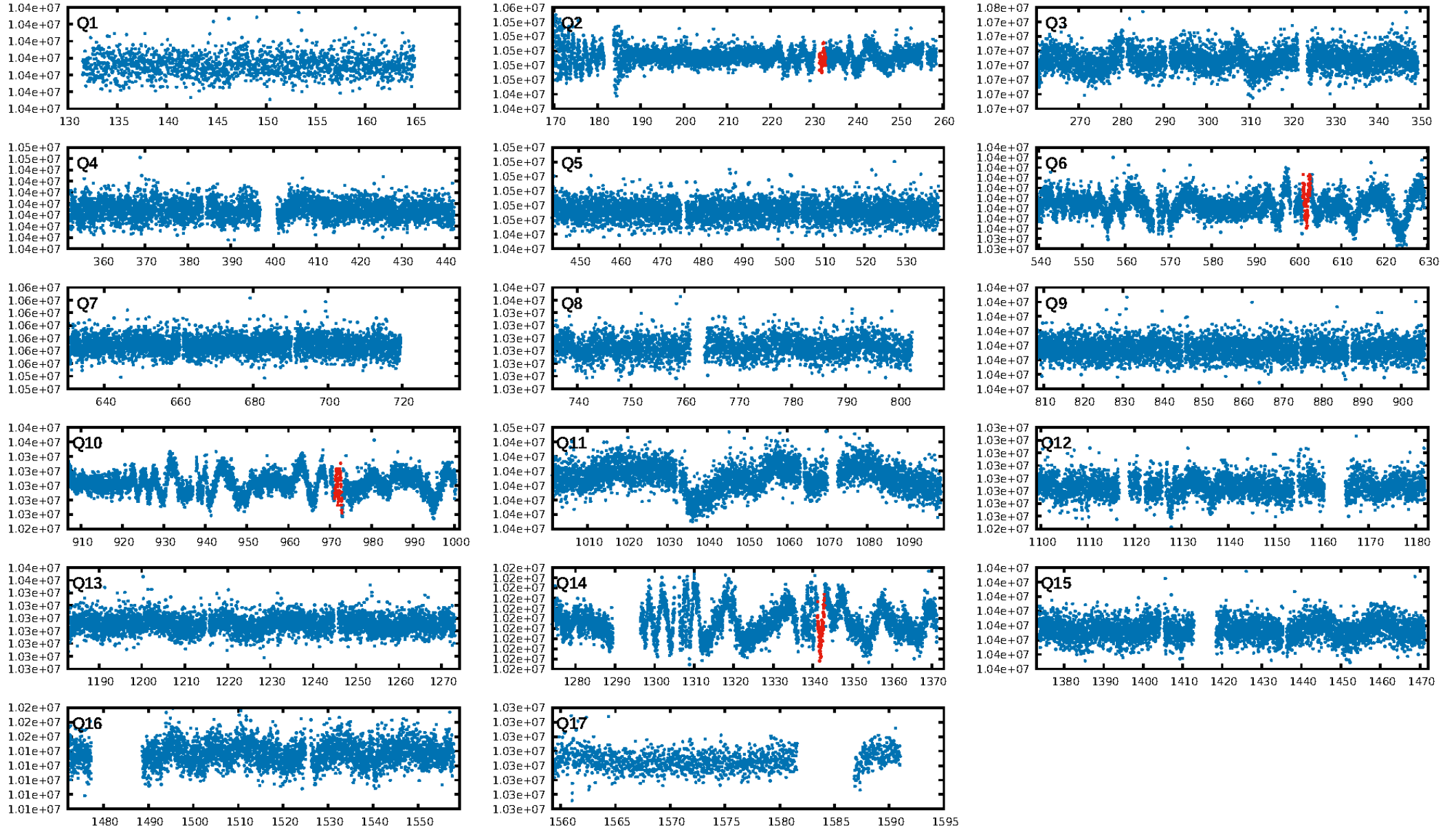
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.8%
ModelChiSquareGof-sig: 98.8%
Bootstrap-pfa: 7.25e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -2.692
Centroid-sig: 0.0%
Centroid-so: 11.221 arcsec [3.99 σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

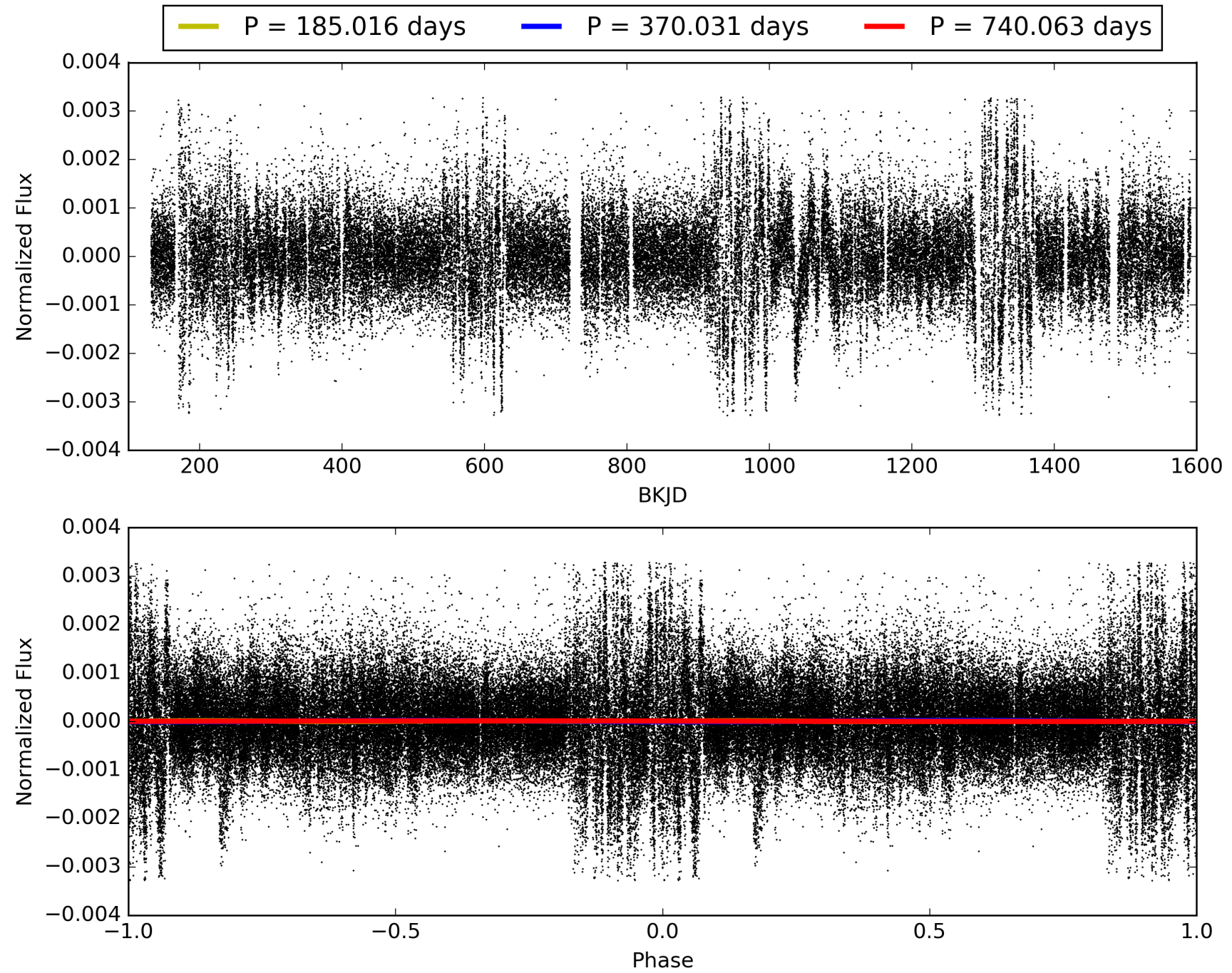
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:01:21 Z

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

TCE 008742139-01, PDC Light Curves

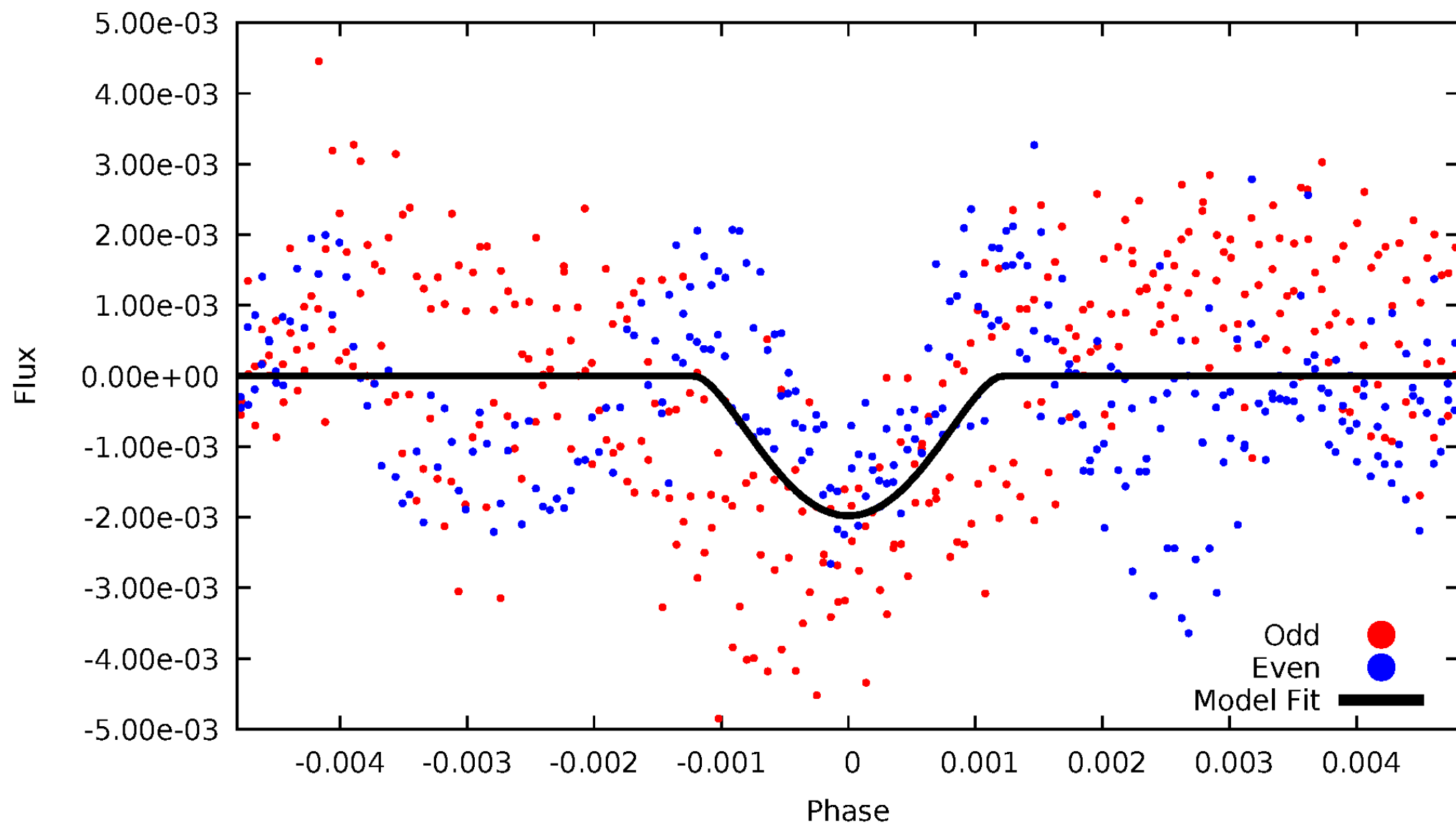


TCE 008742139-01



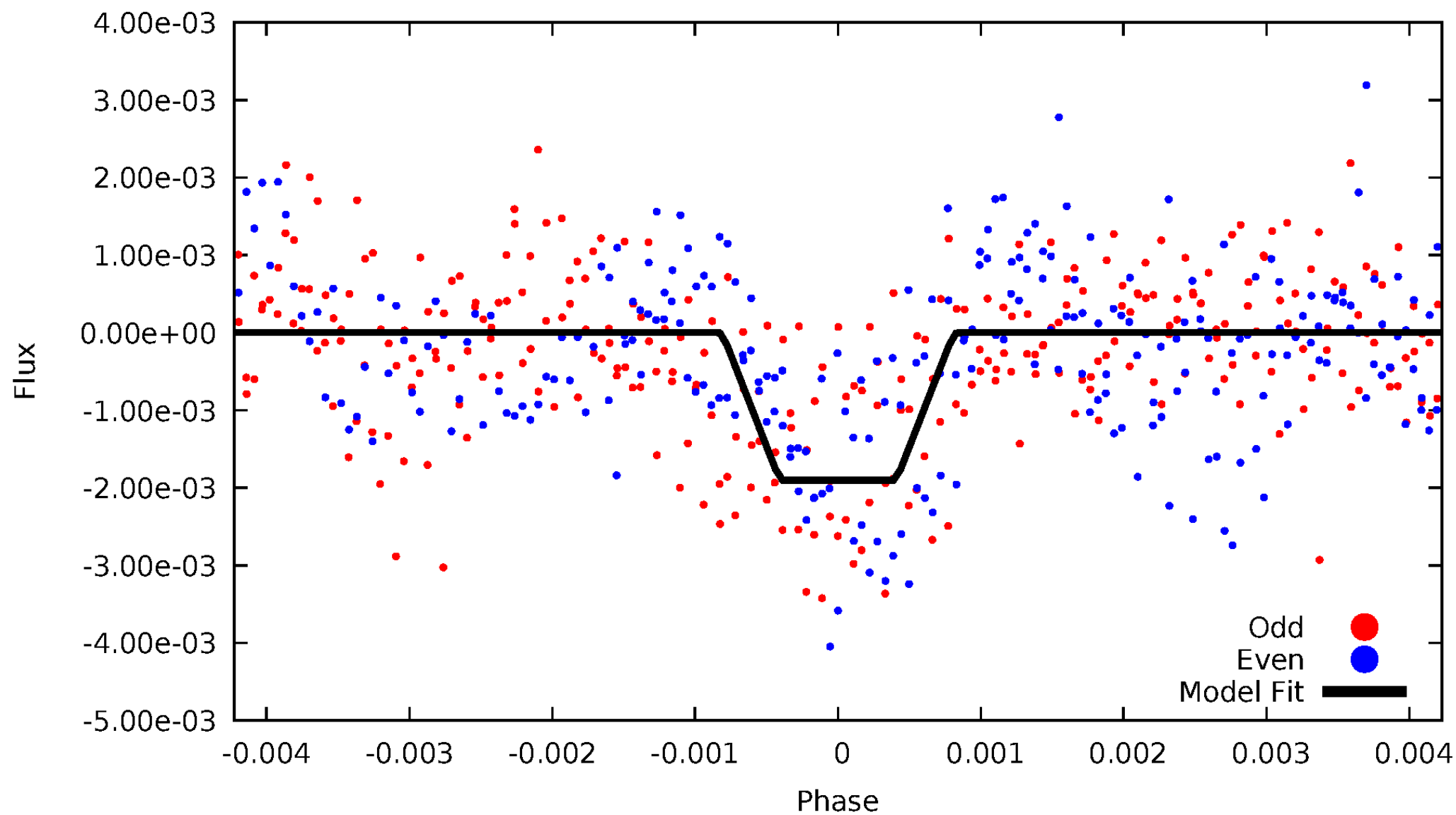
DV Odd/Even

TCE 008742139-01

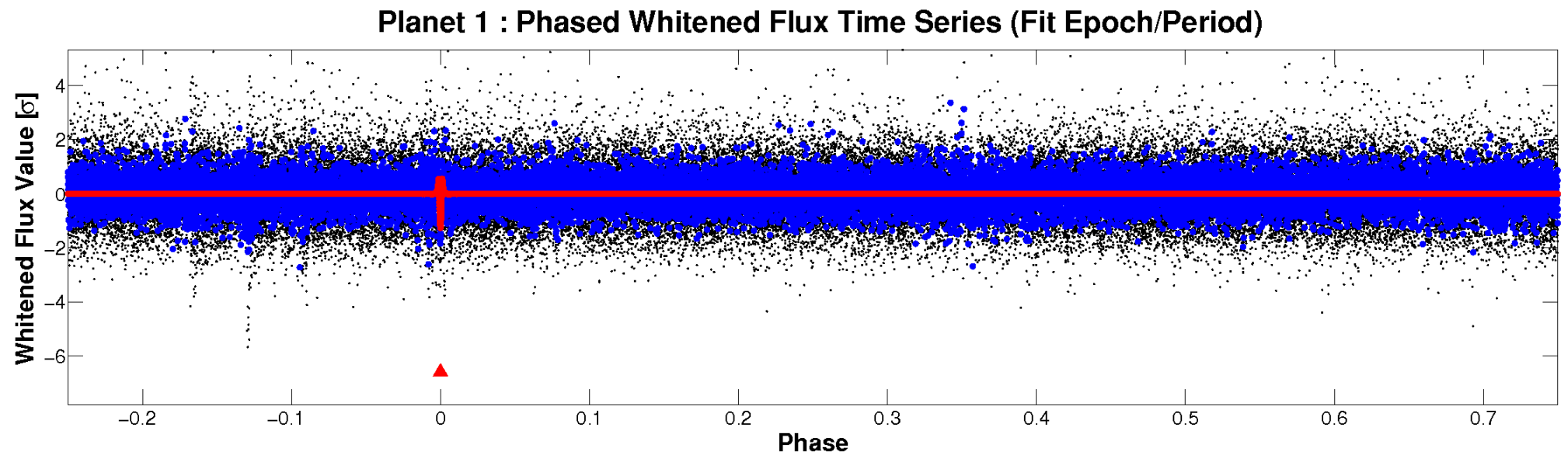
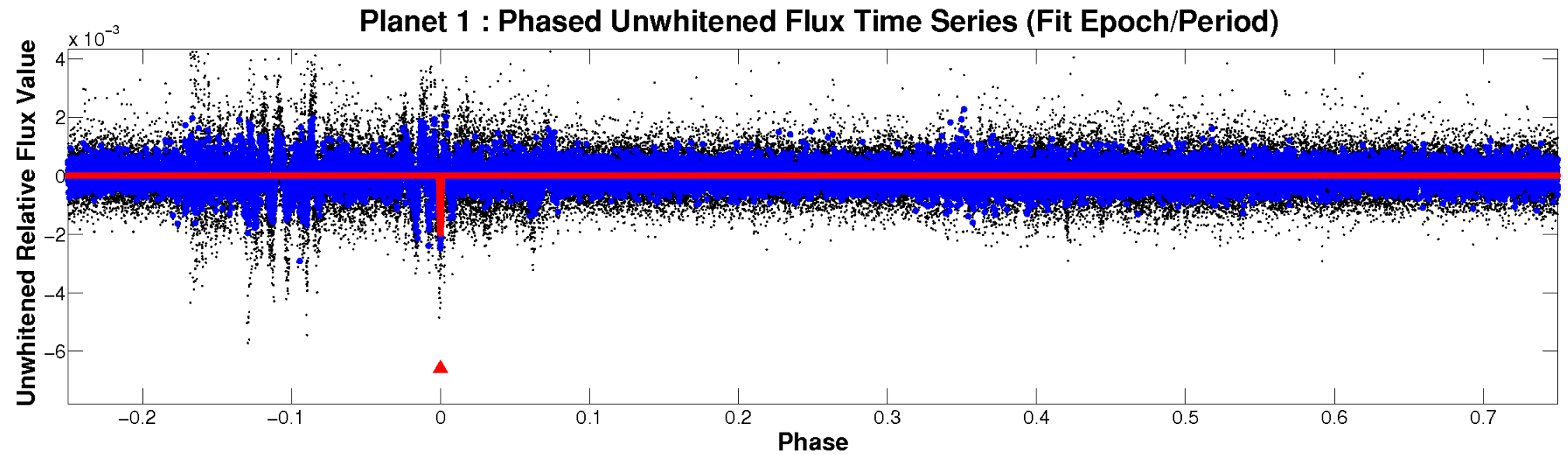


ALT Odd/Even

TCE 008742139-01

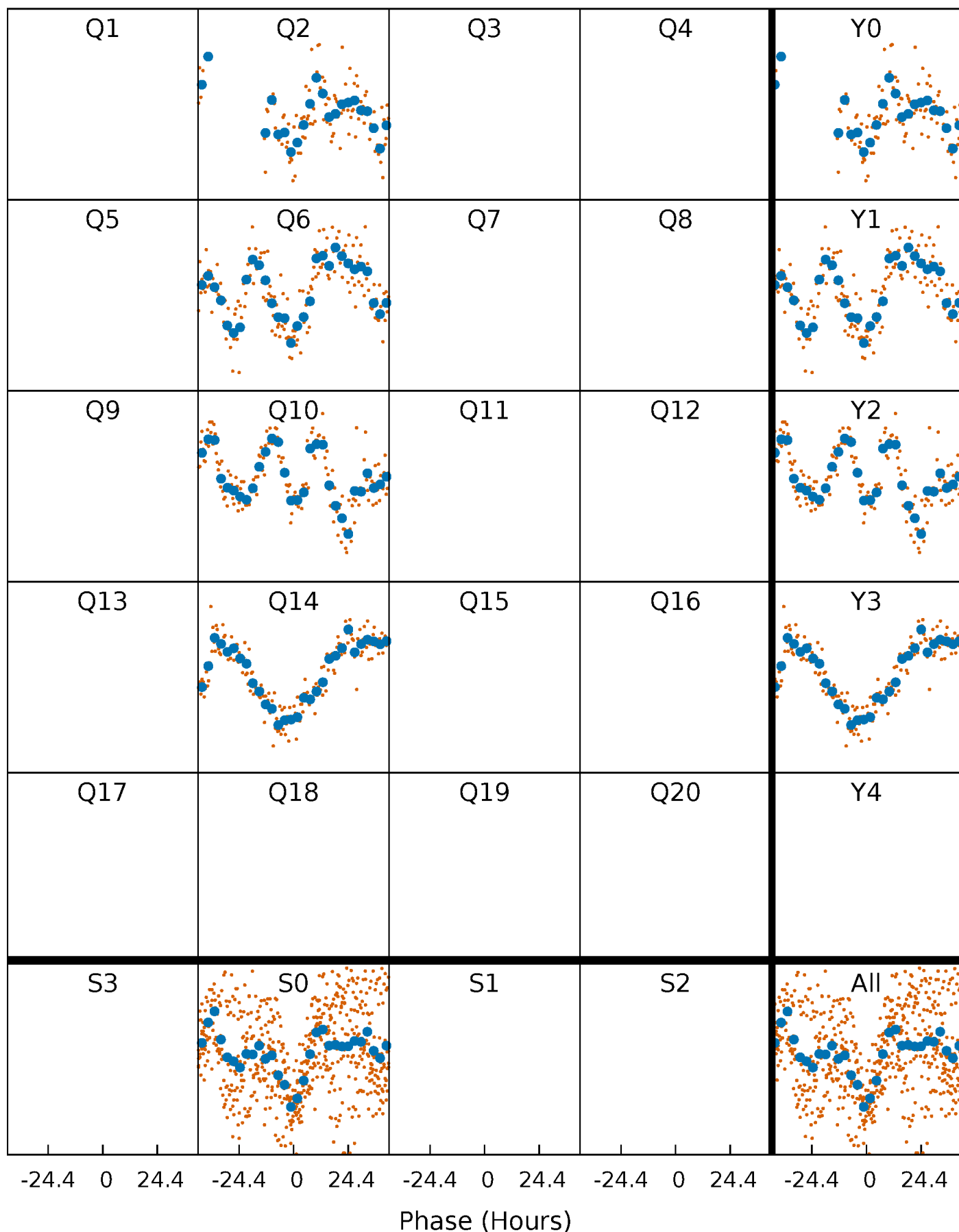


Non-Whitened Vs. Whitened Light Curve



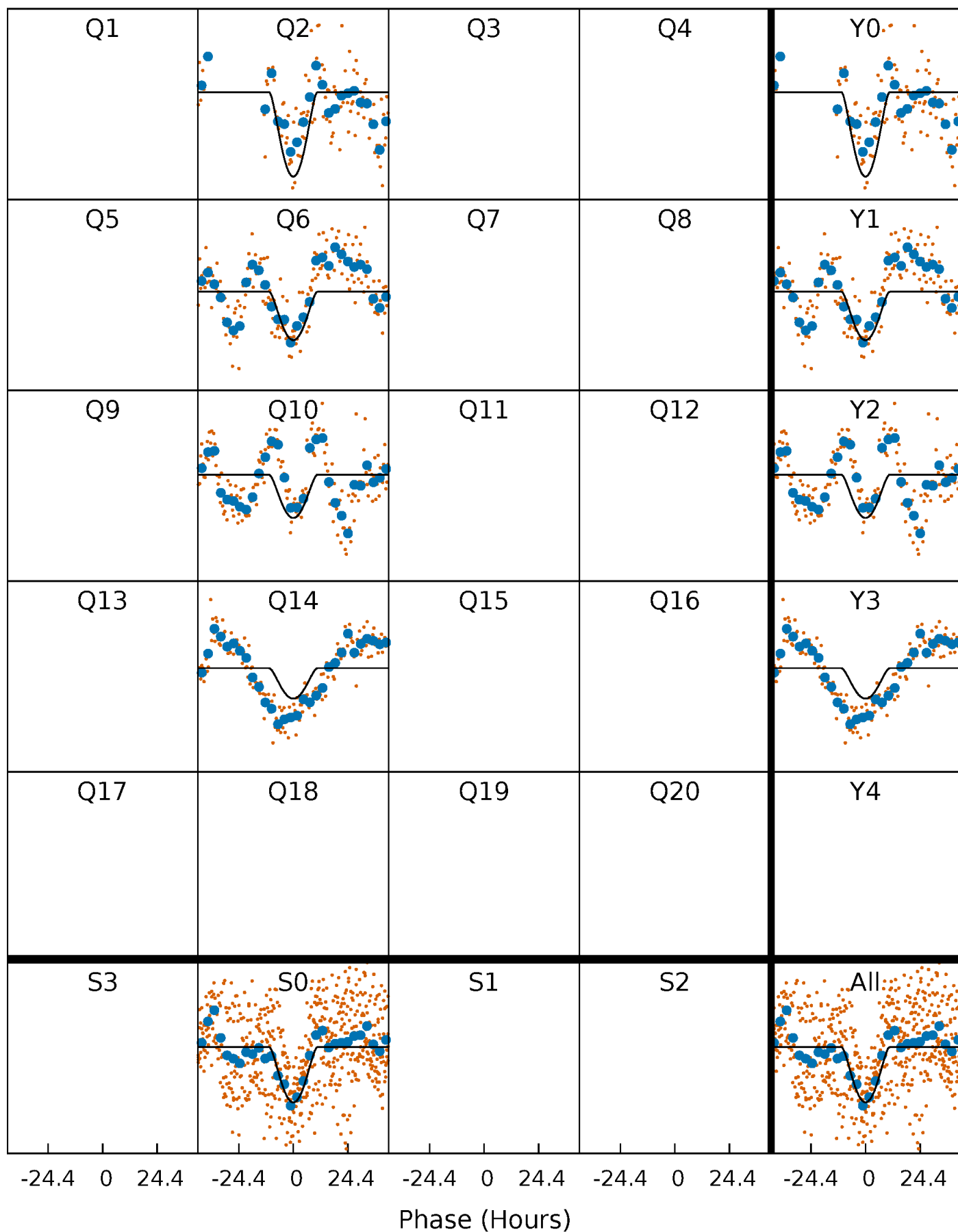
PDC Quarter-Phased Transit Curves

TCE 008742139-01 P=370.031366 Days $T_0=231.936596$ (BKJD)



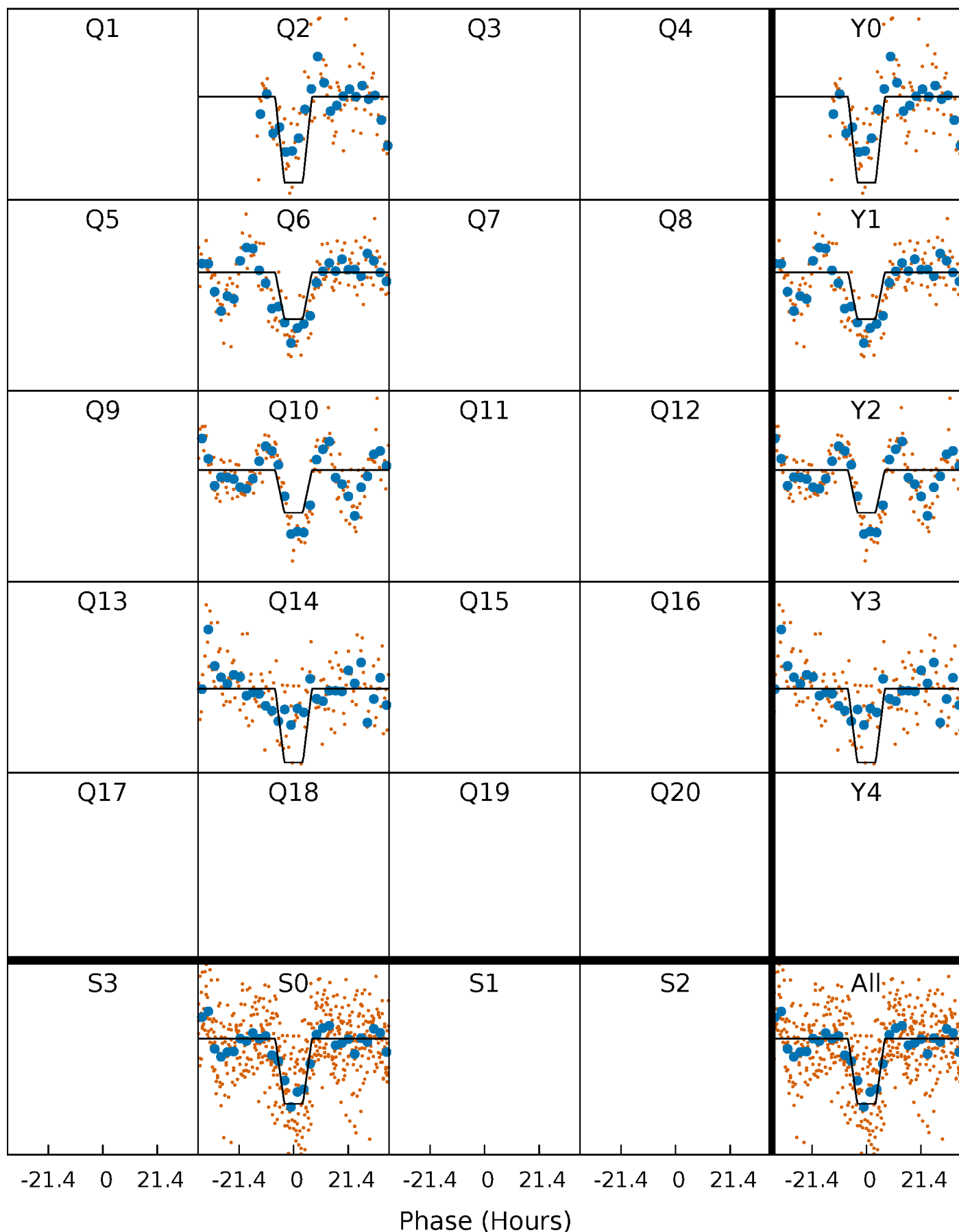
DV Quarter-Phased Transit Curves

TCE 008742139-01 P=370.031366 Days $T_0=231.936596$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

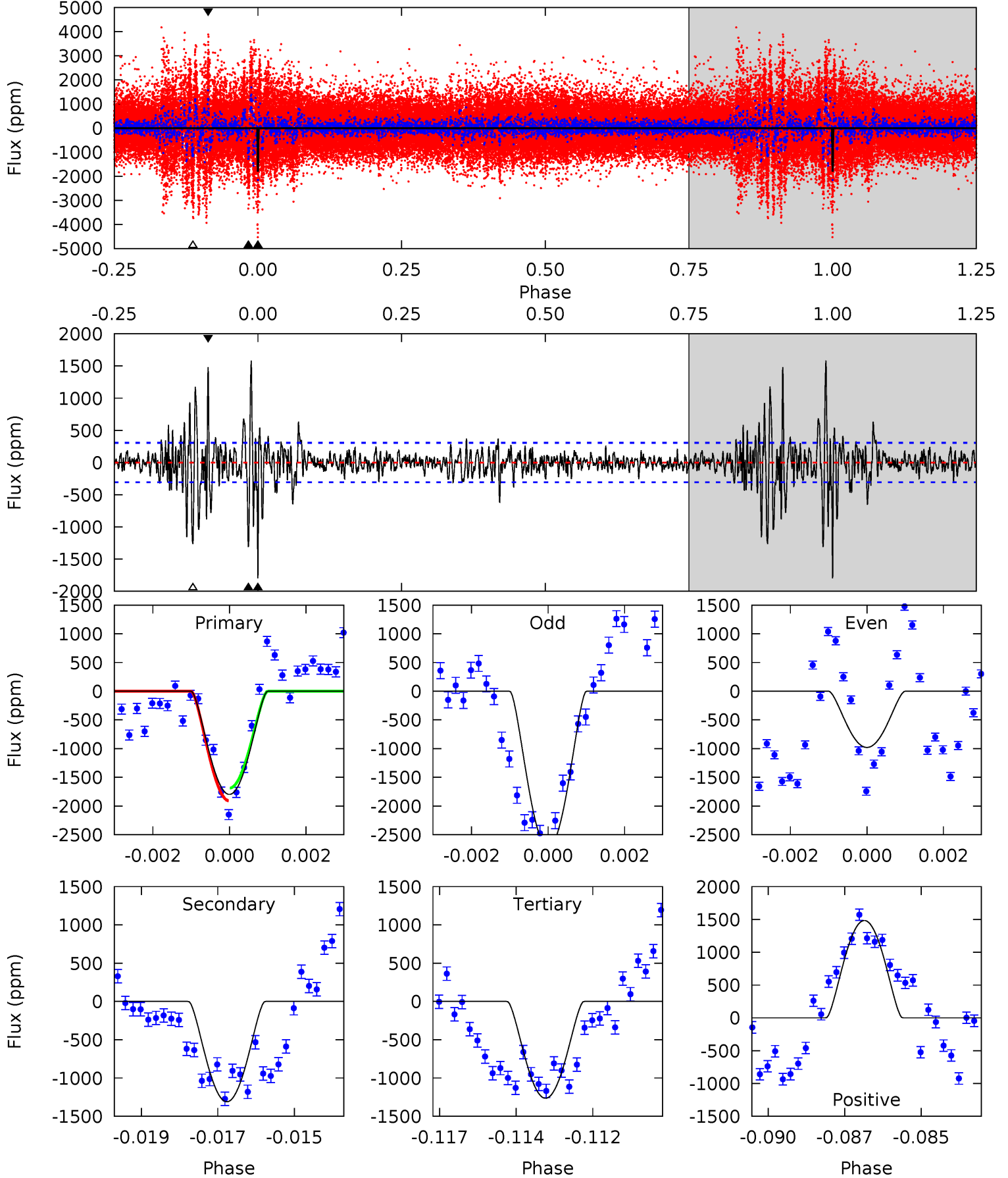
TCE 008742139-01 P=369.990471 Days $T_0=231.987338$ (BKJD)



DV Model-Shift Uniqueness Test

008742139-01, P = 370.031366 Days, E = 231.936596 Days

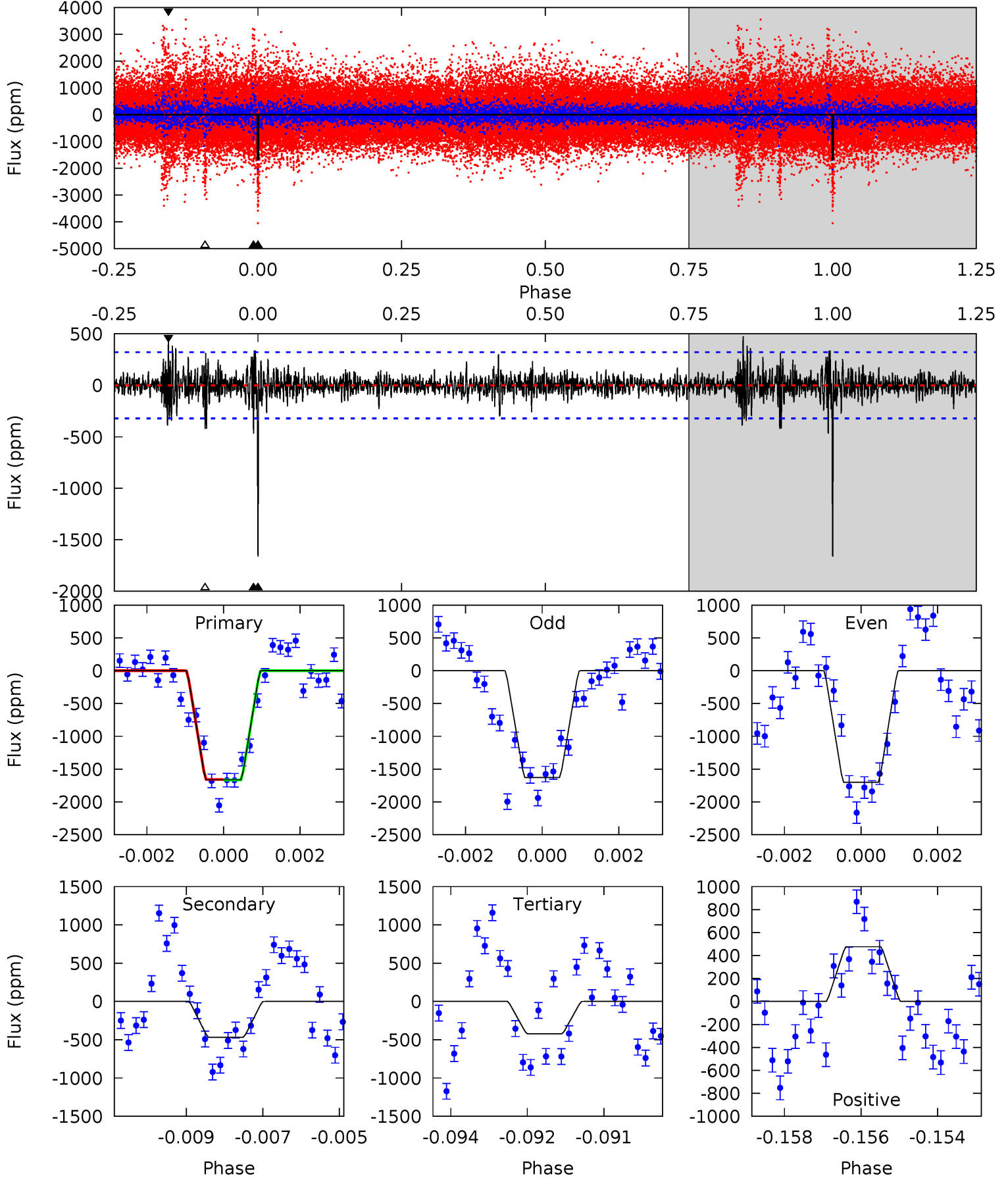
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.9	22.6	21.8	25.5	5.29	3.03	3.93	9.18	5.41	0.79	-2.98	15.1	1.29	0.47	1.90



Alt Model-Shift Uniqueness Test

008742139-01, P = 369.990471 Days, E = 231.987338 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.6	7.77	7.01	7.92	5.35	3.14	1.29	20.6	19.7	0.76	-0.16	0.60	0.97	0.22	0.08



Stellar Parameters For KIC 008742139

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4909^{+145}_{-145}	$4.635^{+0.045}_{-0.045}$	$-0.480^{+0.300}_{-0.300}$	$0.651^{+0.064}_{-0.052}$	$0.666^{+0.072}_{-0.048}$	$3.408^{+0.694}_{-0.629}$
	+3%/-3%	+1%/-1%	+62%/-62%	+10%/-8%	+11%/-7%	+20%/-18%
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 008742139-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1310 ± 58	$12.88^{+12.63}_{-8.43}$	260^{+9}_{-9}	2875^{+1137}_{-464}	3478^{+24715}_{-2609}
Alt.	-467 ± 60	$11.86^{+12.37}_{-8.27}$	260^{+9}_{-9}	2566^{+1025}_{-390}	1430^{+13559}_{-1075}

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 $A_{obs} \gg 1.0$

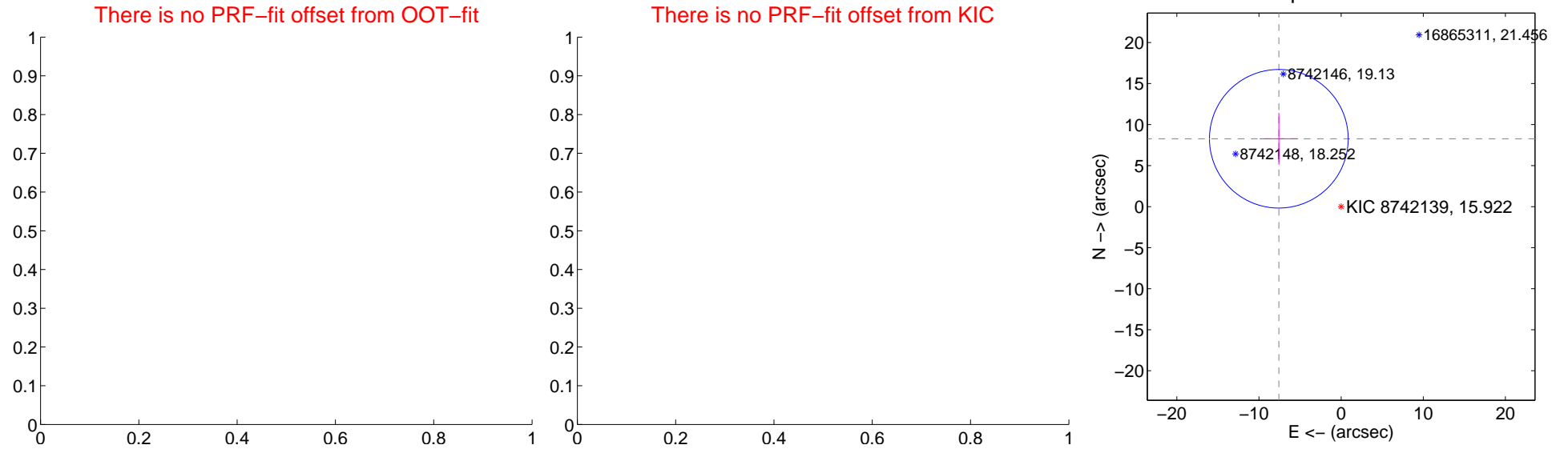
DV Centroid Data

Supplemental centroid analysis for 008742139-01. Kepler magnitude: 15.92. Transit SNR 10.29

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	11.22 ± 2.81	3.99	7.58 ± 2.34	8.27 ± 3.16

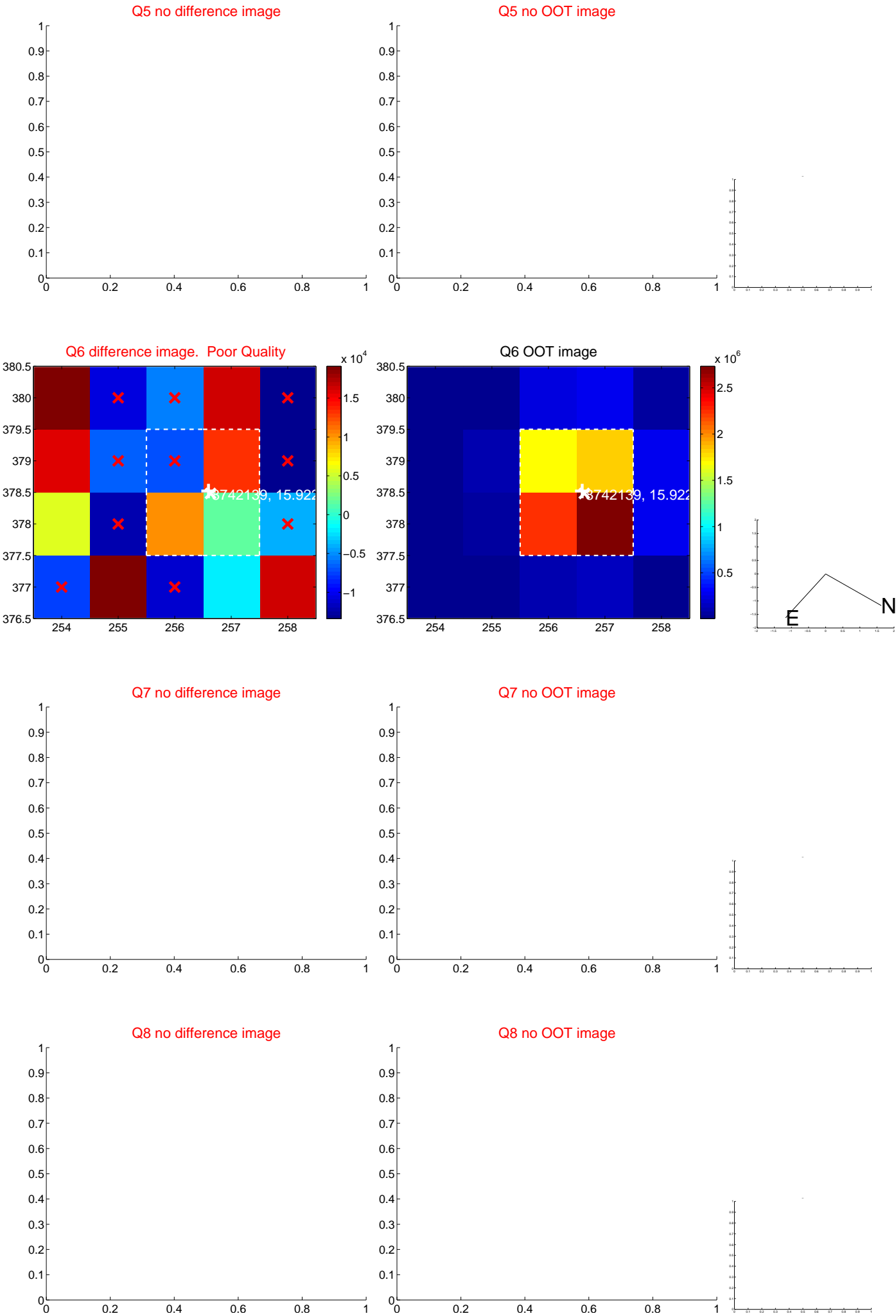


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



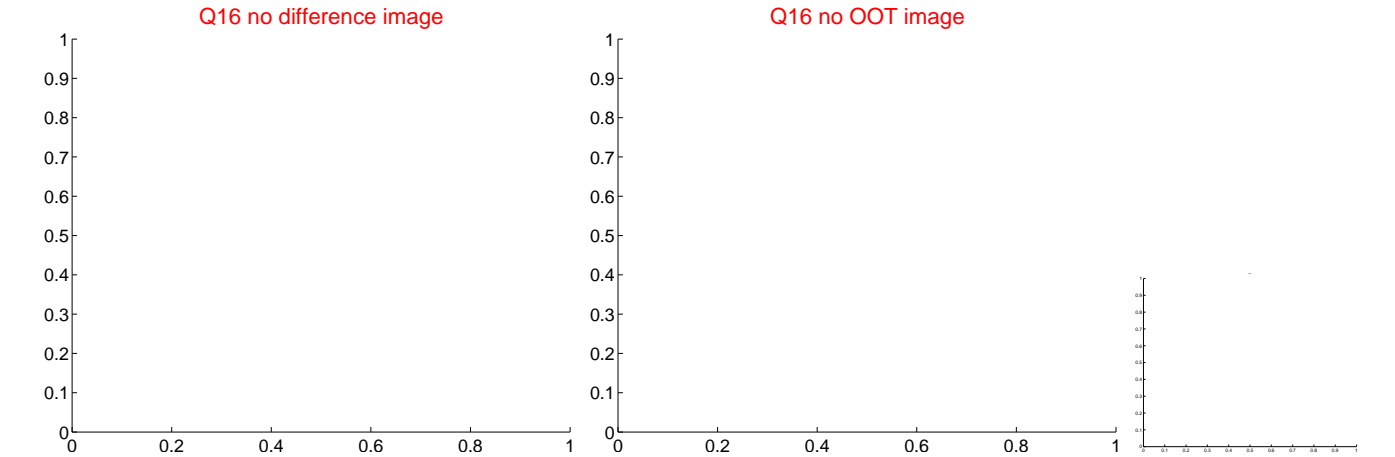
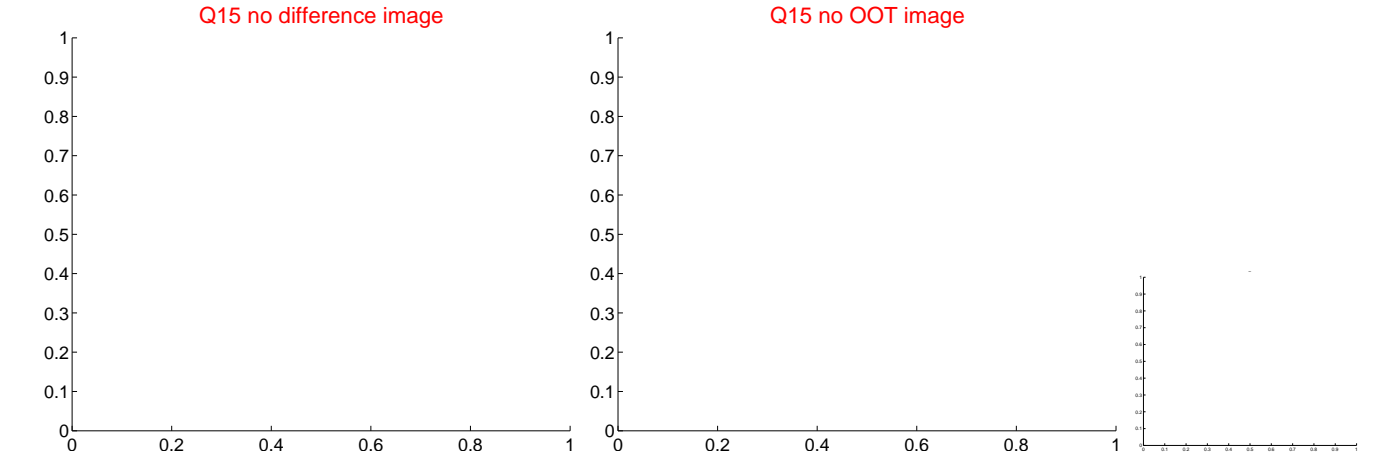
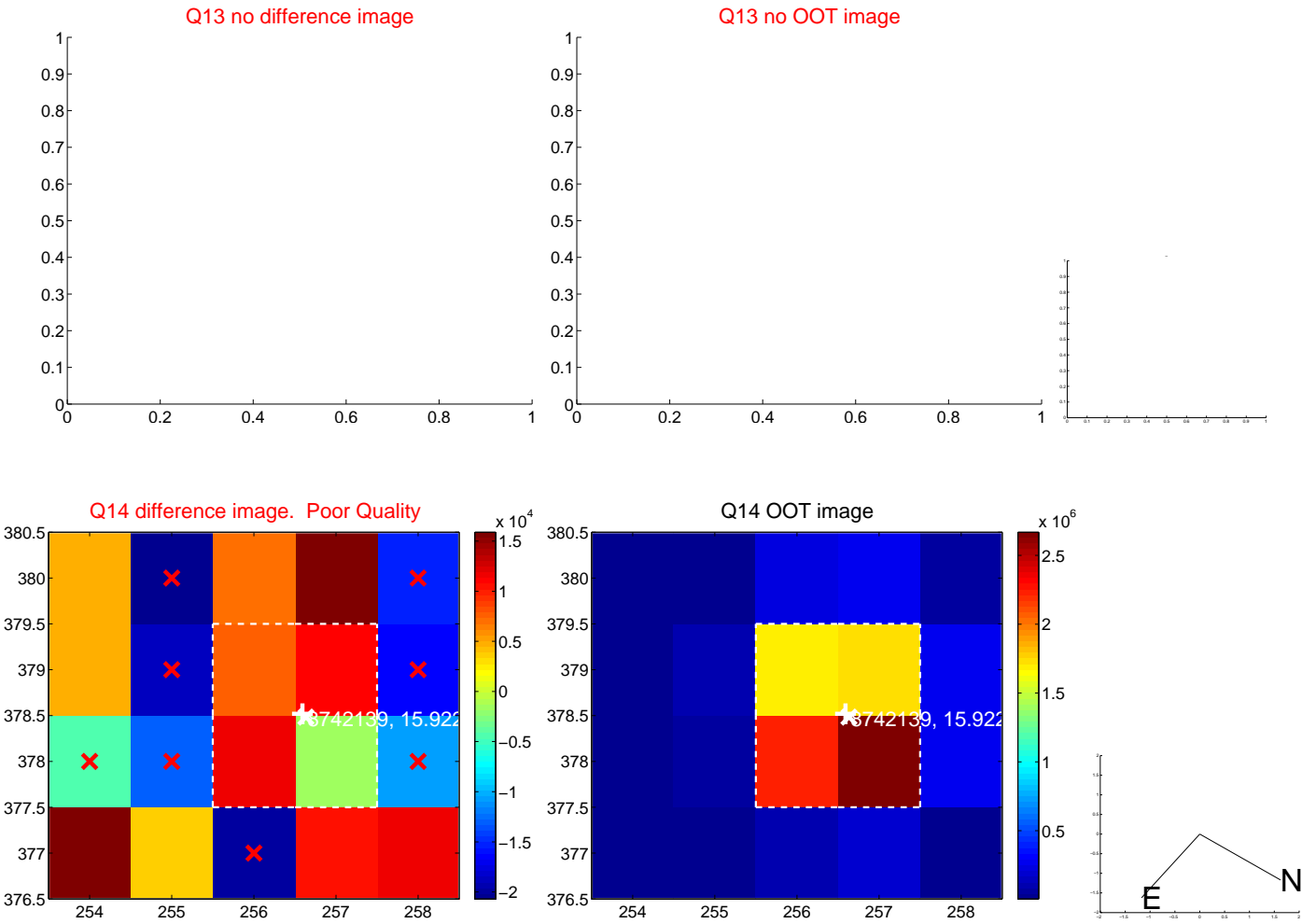
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



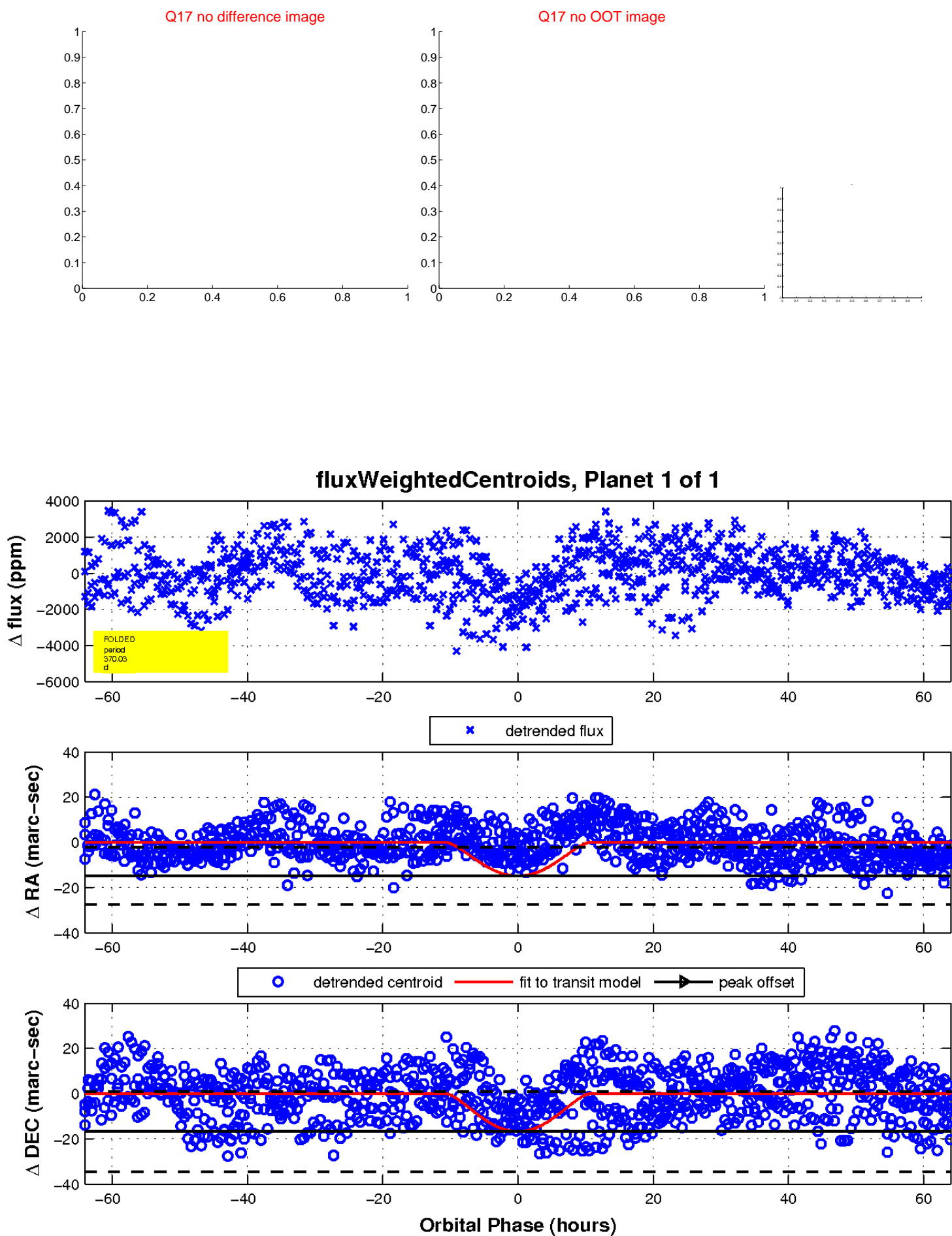
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: 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

