

KIC 008098489

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})
008098489-01	OBS	No	279.410211	254.290075	120.5	15.879	8.0	6.4	1.15	6492	1.38	2.69

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008098489-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—MOD_NONUNIQ_ALT—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.

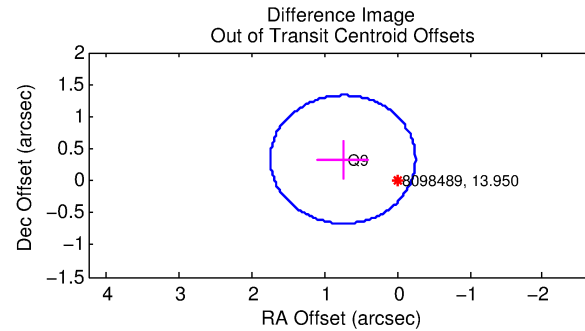
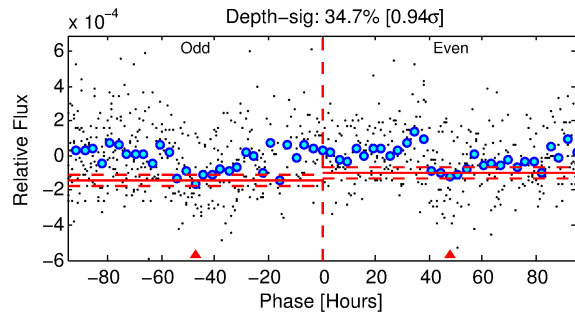
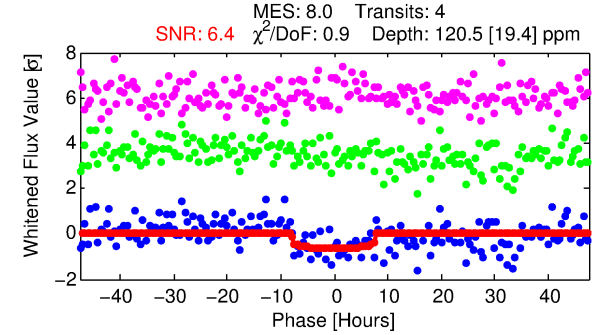
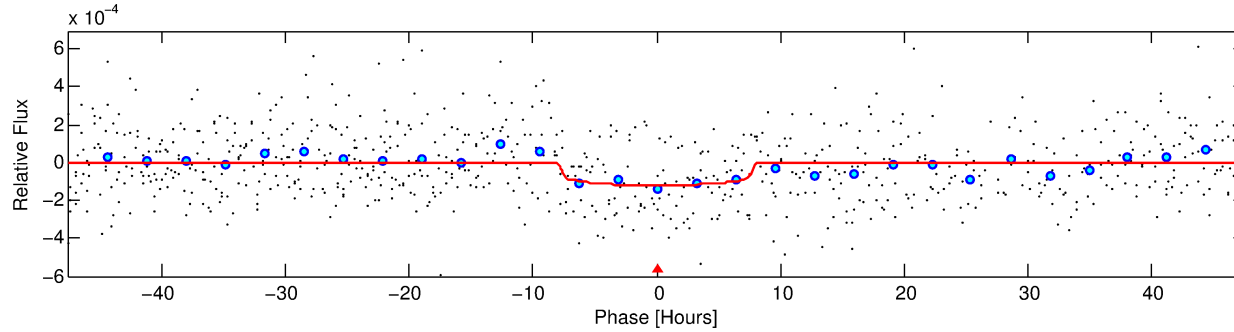
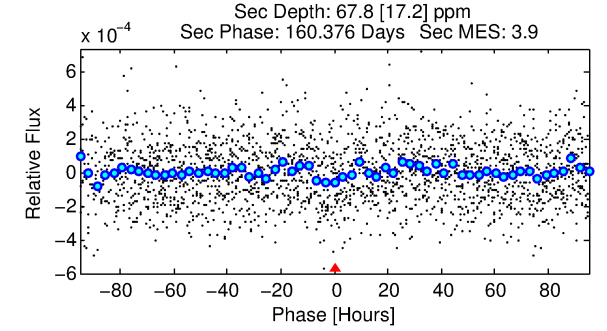
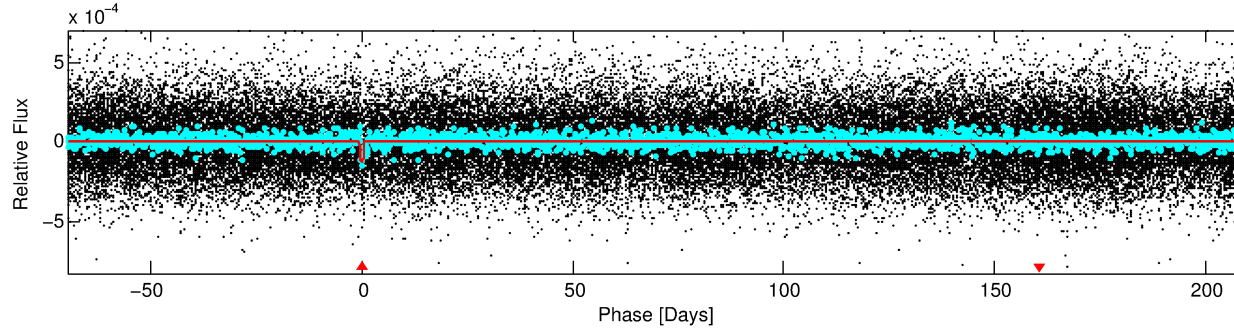
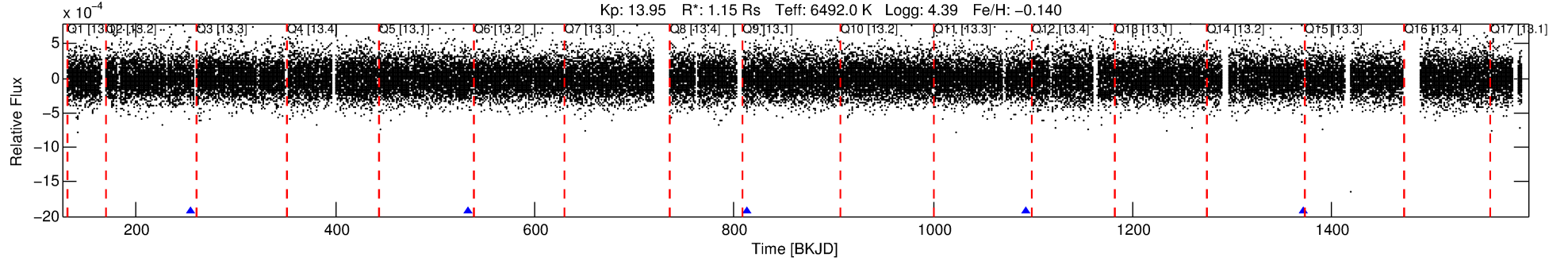
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008098489-01

No Significant Match Found

DV One-Page Summary

KIC: 8098489 Candidate: 1 of 1 Period: 279.410 d



DV Fit Results:

Period = 279.41021 [0.01674] d
Epoch = 254.2901 [0.0312] BKJD
Rp/R* = 0.0110 [0.0046]
a/R* = 85.88 [193.90]
b = 0.78 [1.12]
Seff = 2.69 [1.07]
Teq = 327 [33] K
Rp = 1.38 [0.73] Re
a = 0.8817 [0.2334] AU
Ag = 15222.93 [14459.73] [1.05σ]
Teffp = 5608 [1235] K [4.27σ]

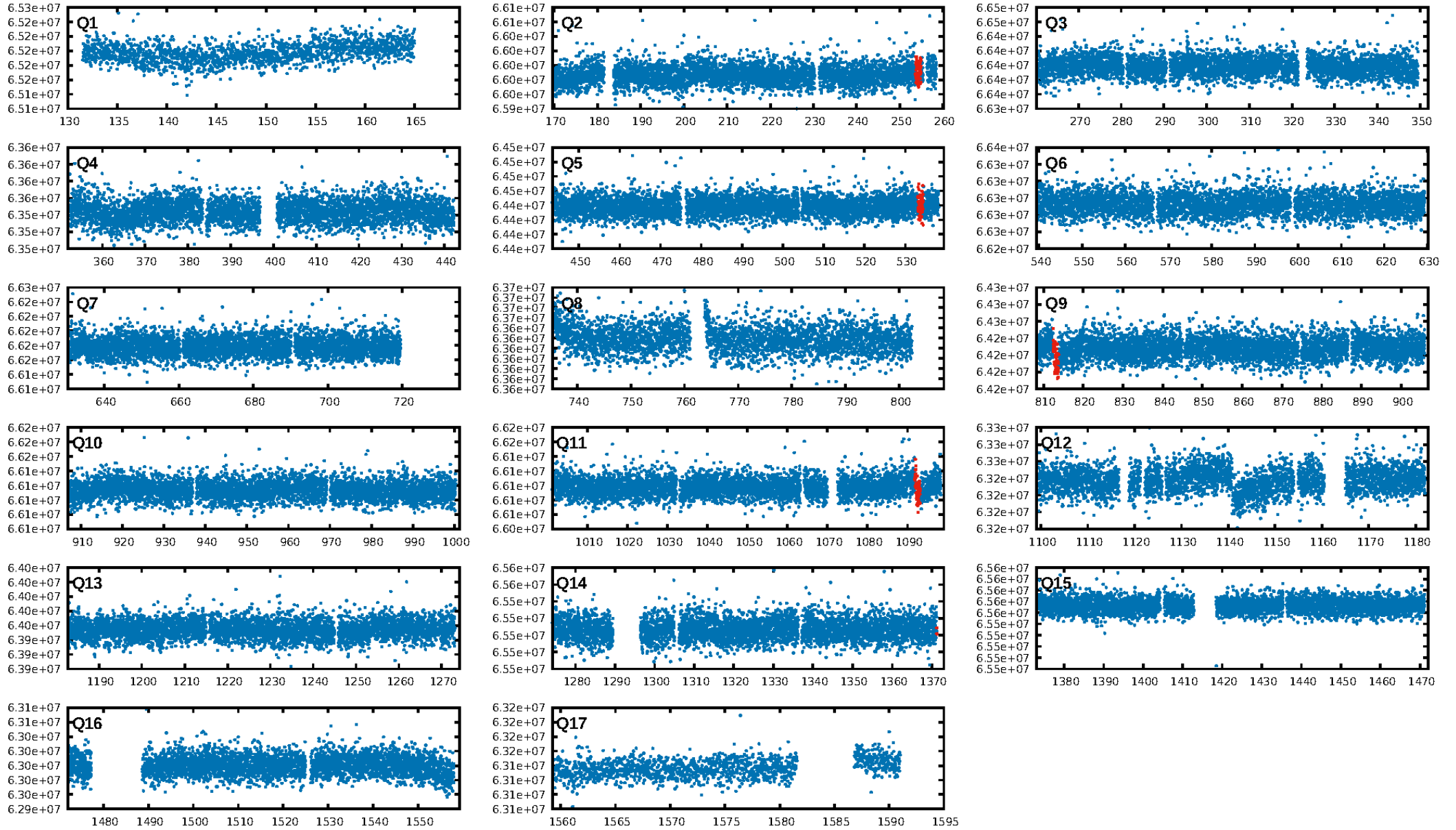
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 2.81e-16
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -6.947
Centroid-sig: 4.4%
Centroid-so: 4.425 arcsec [1.81σ]
OotOffset-rm: 0.815 arcsec [2.45σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-rm: 0.728 arcsec [2.22σ]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [3/3]

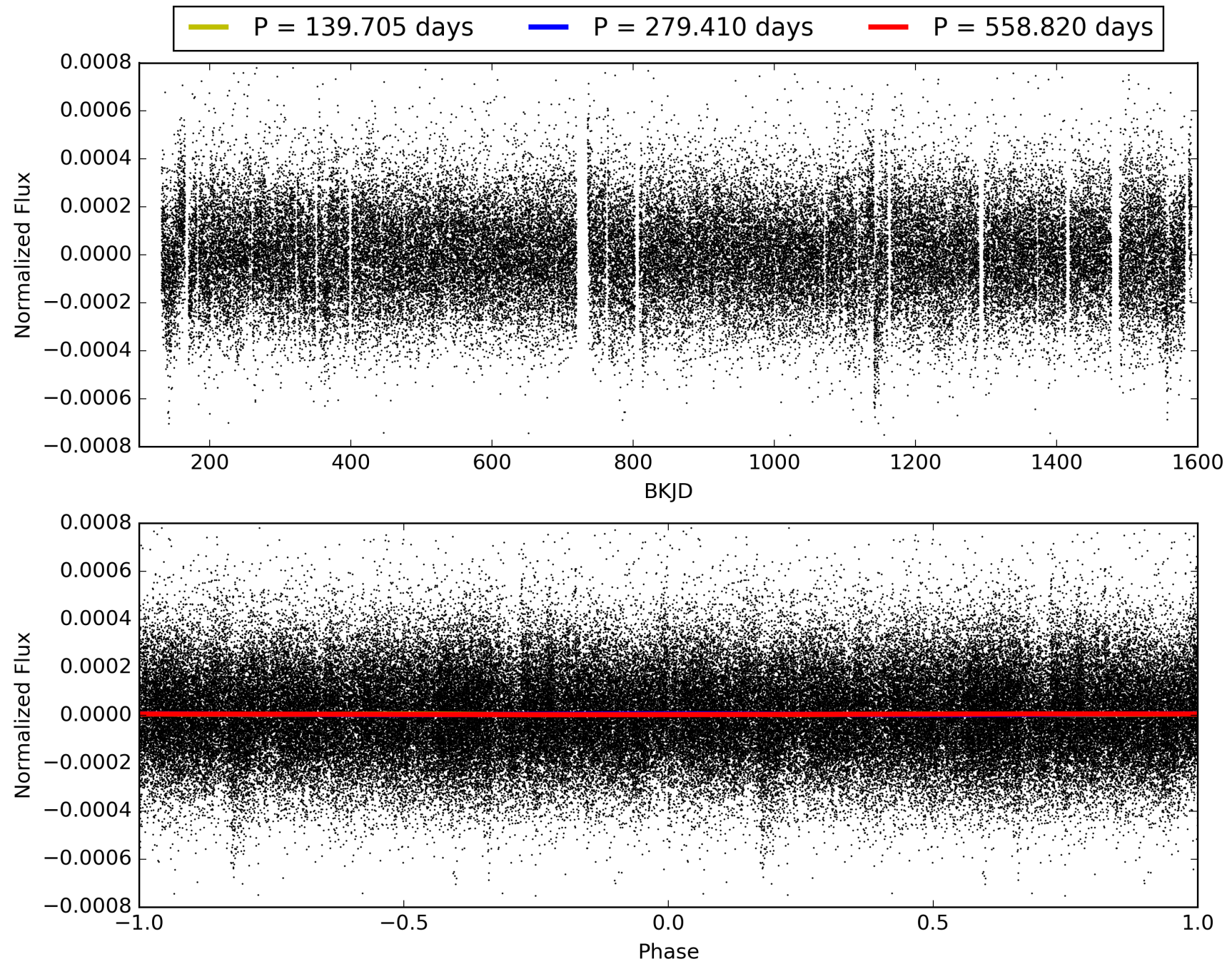
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:40:47 Z

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

TCE 008098489-01, PDC Light Curves

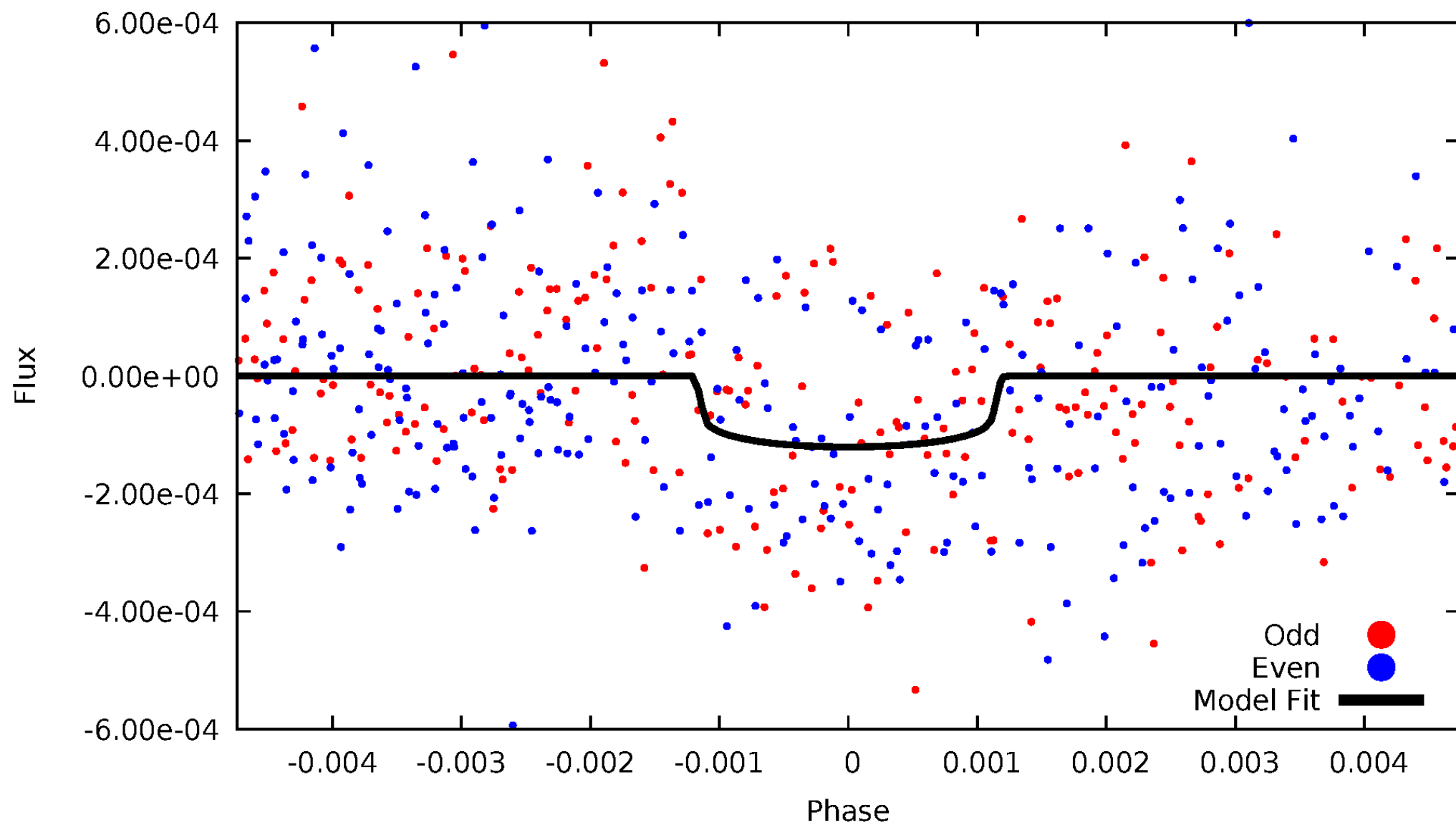


TCE 008098489-01



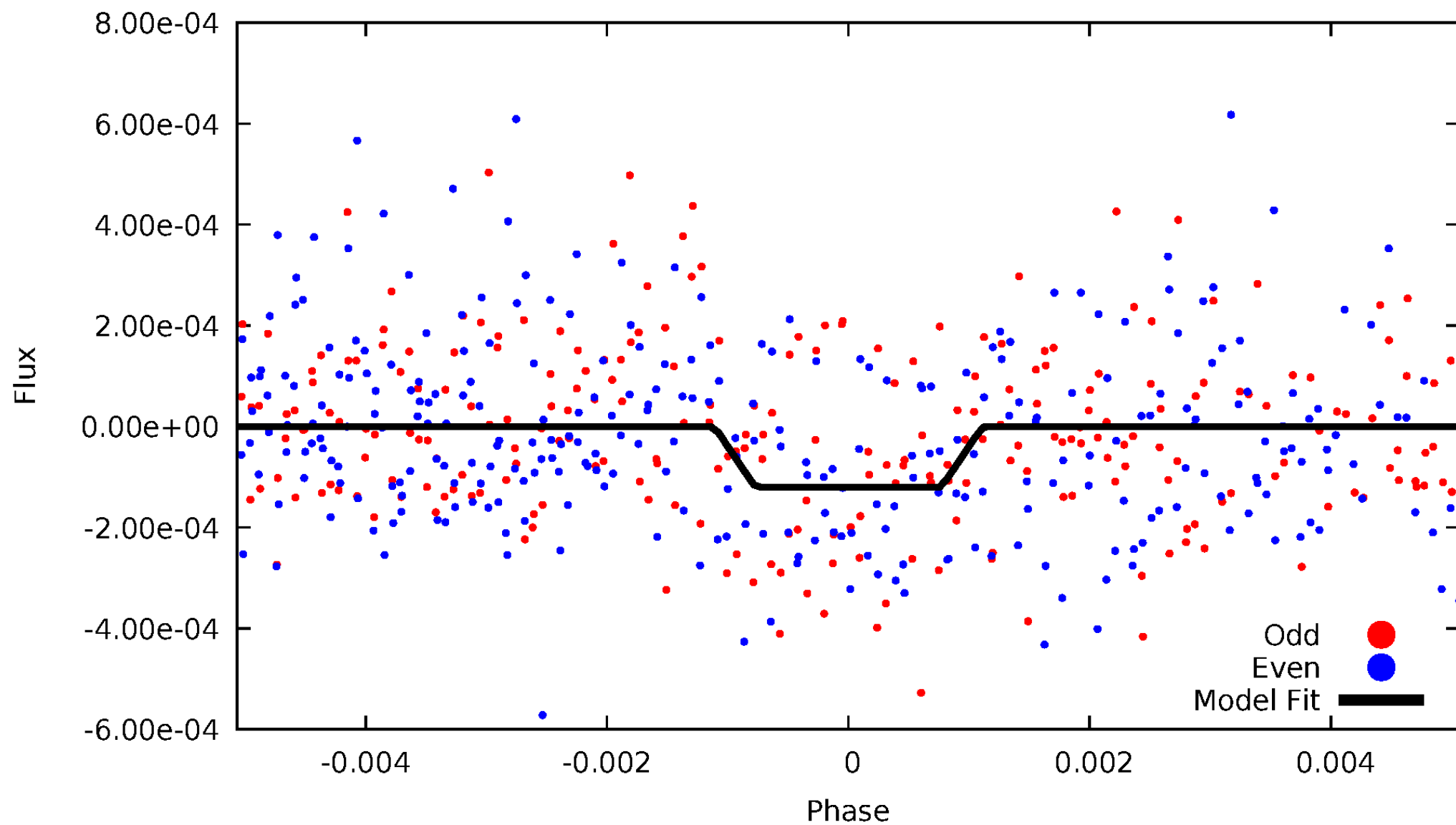
DV Odd/Even

TCE 008098489-01

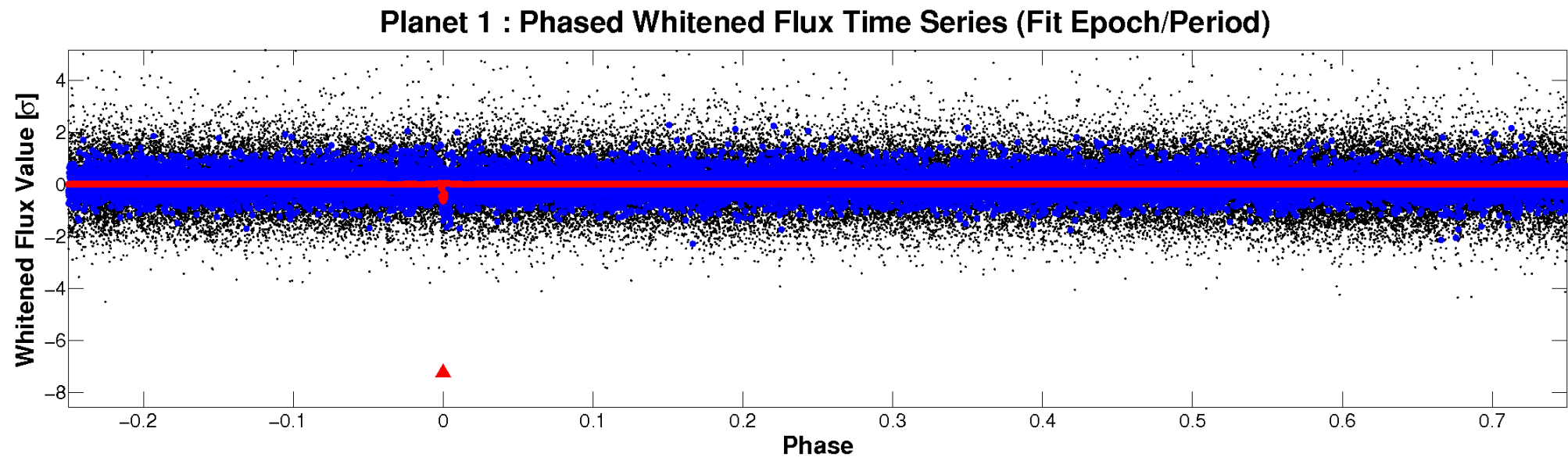
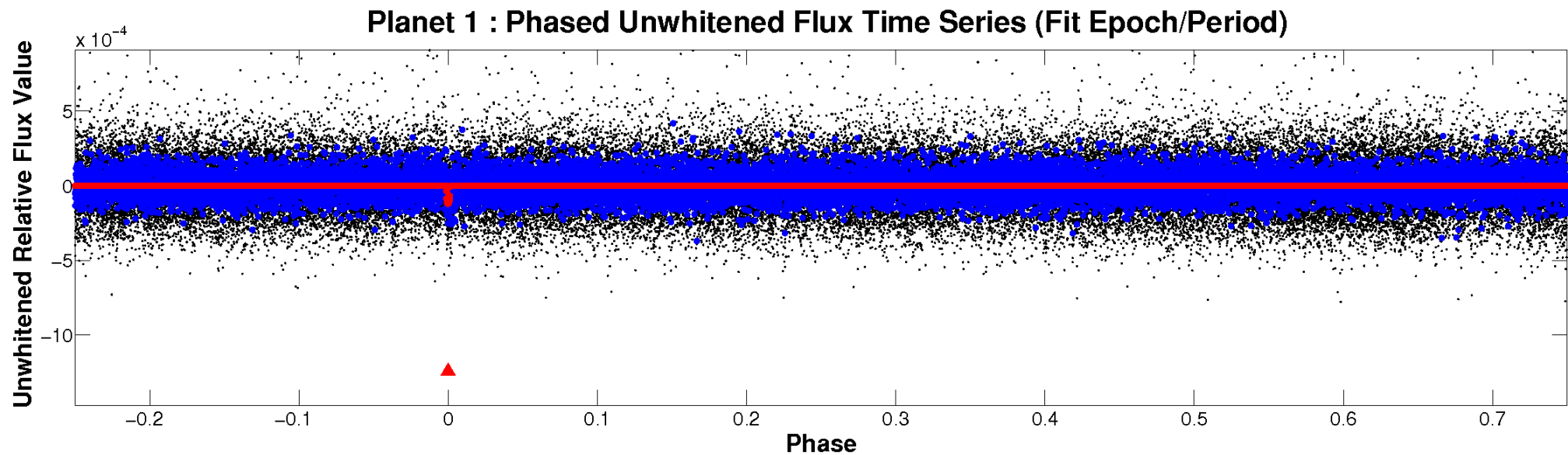


ALT Odd/Even

TCE 008098489-01

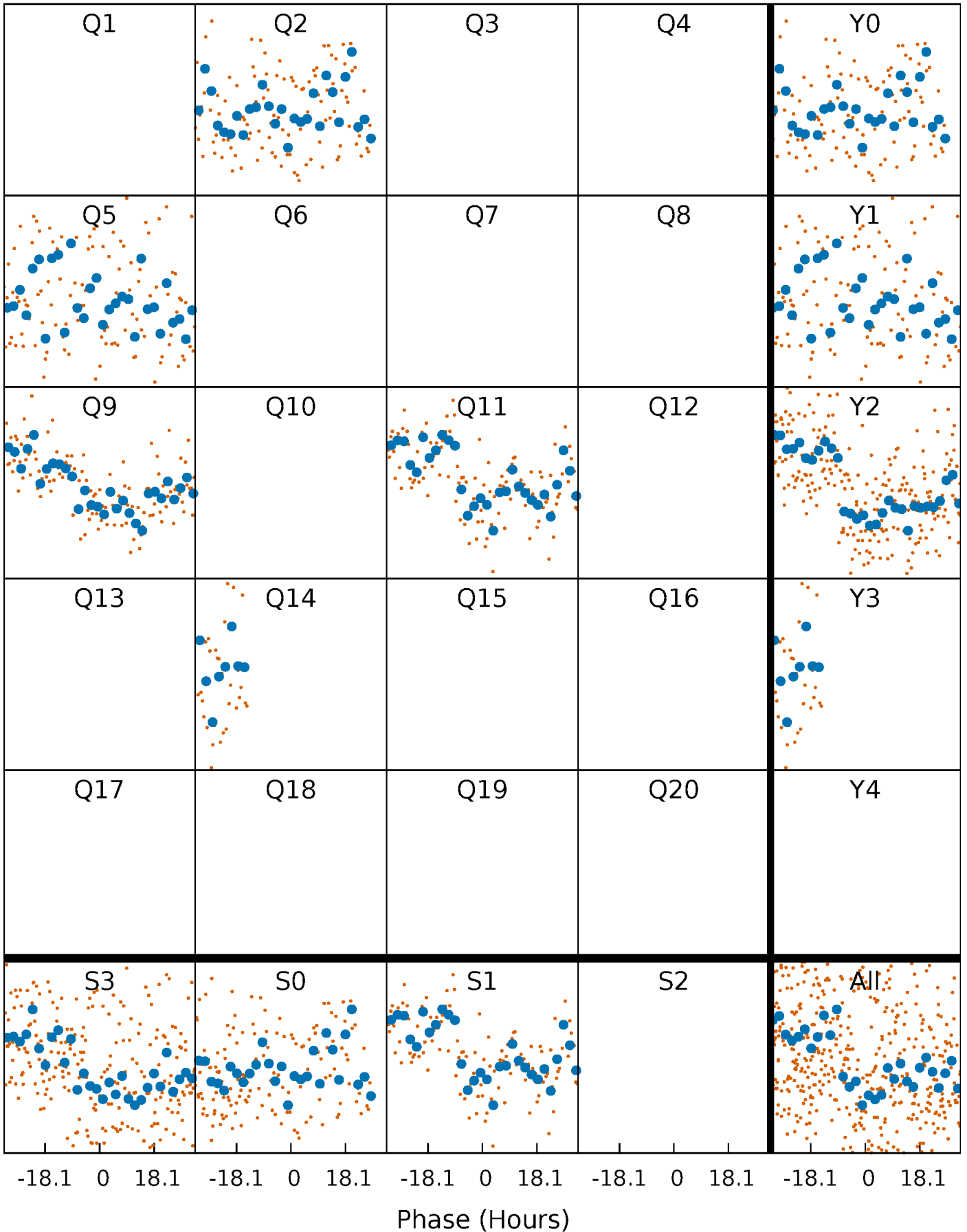


Non-Whitened Vs. Whitened Light Curve



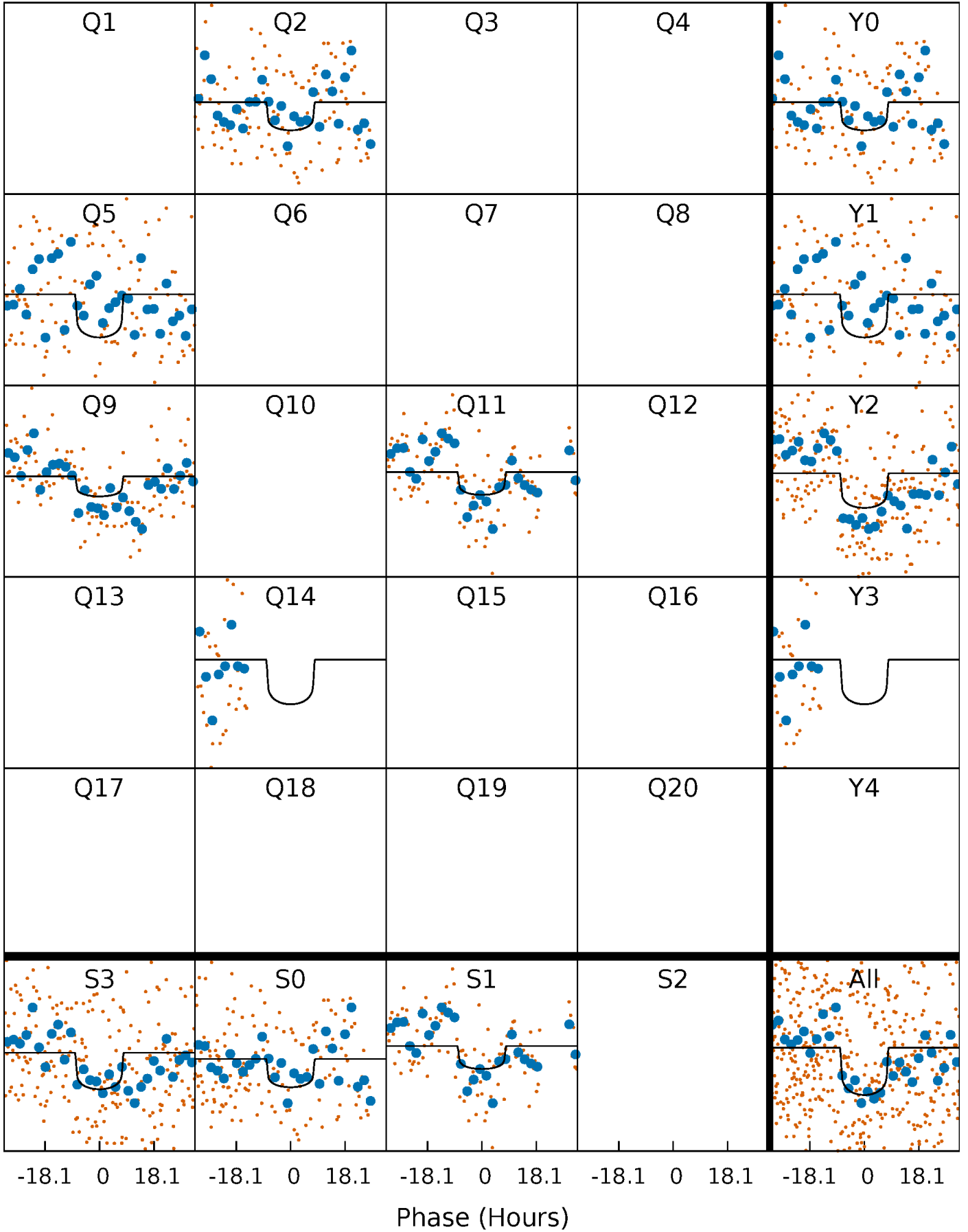
PDC Quarter-Phased Transit Curves

TCE 008098489-01 $P=279.410211$ Days $T_0=254.290075$ (BKJD)



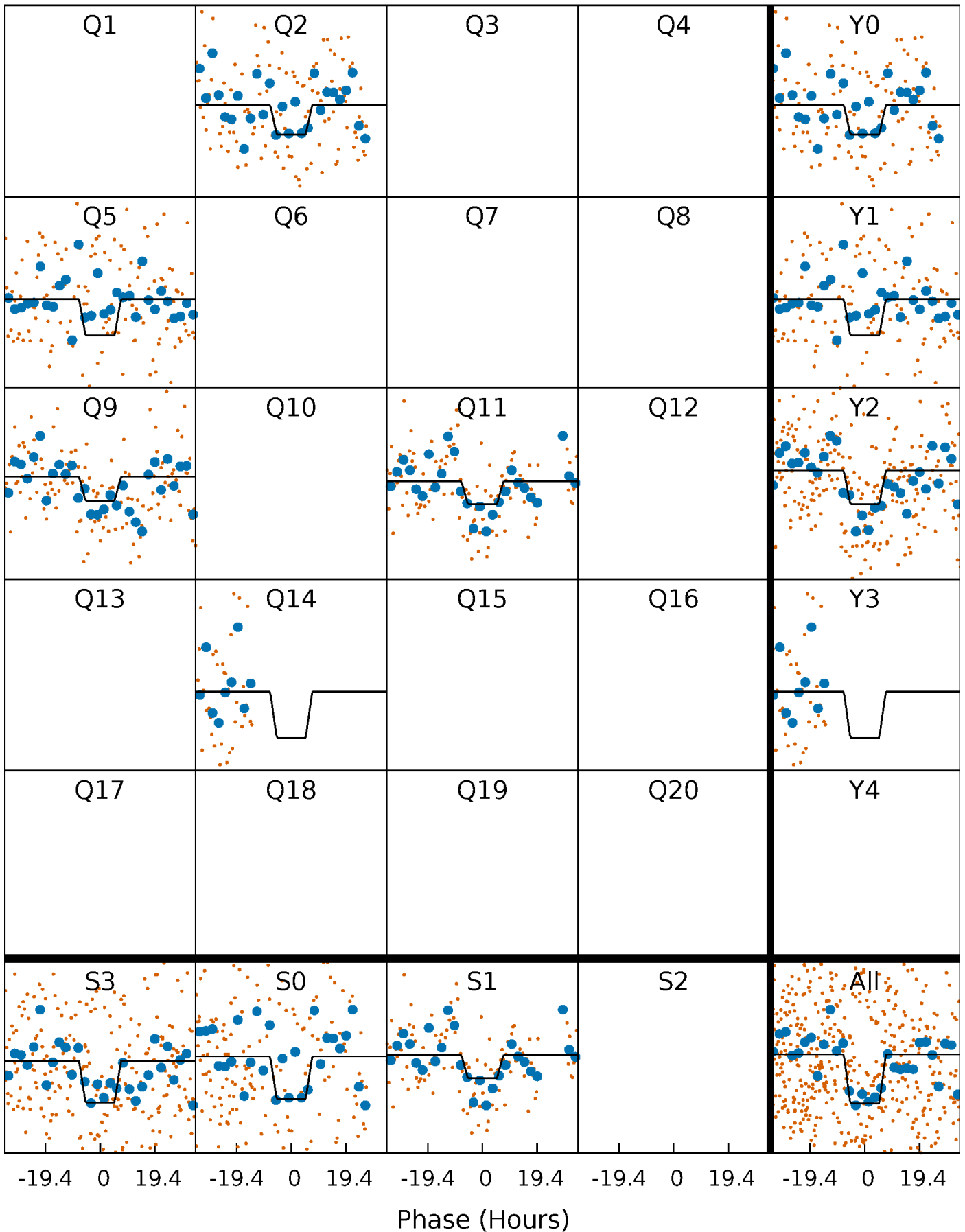
DV Quarter-Phased Transit Curves

TCE 008098489-01 P=279.410211 Days $T_0=254.290075$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

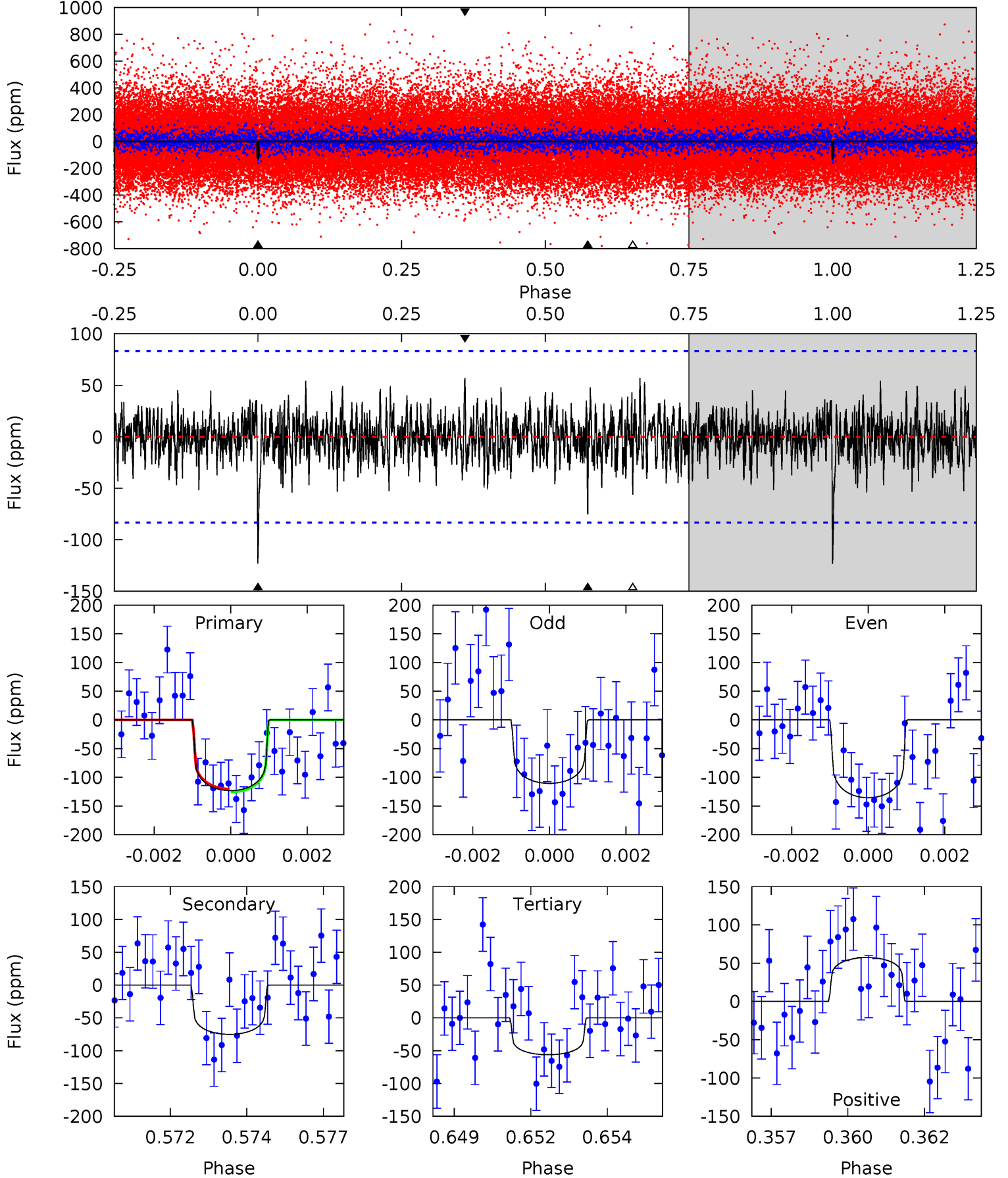
TCE 008098489-01 P=279.408499 Days $T_0=254.271606$ (BKJD)



DV Model-Shift Uniqueness Test

008098489-01, P = 279.410211 Days, E = 254.290075 Days

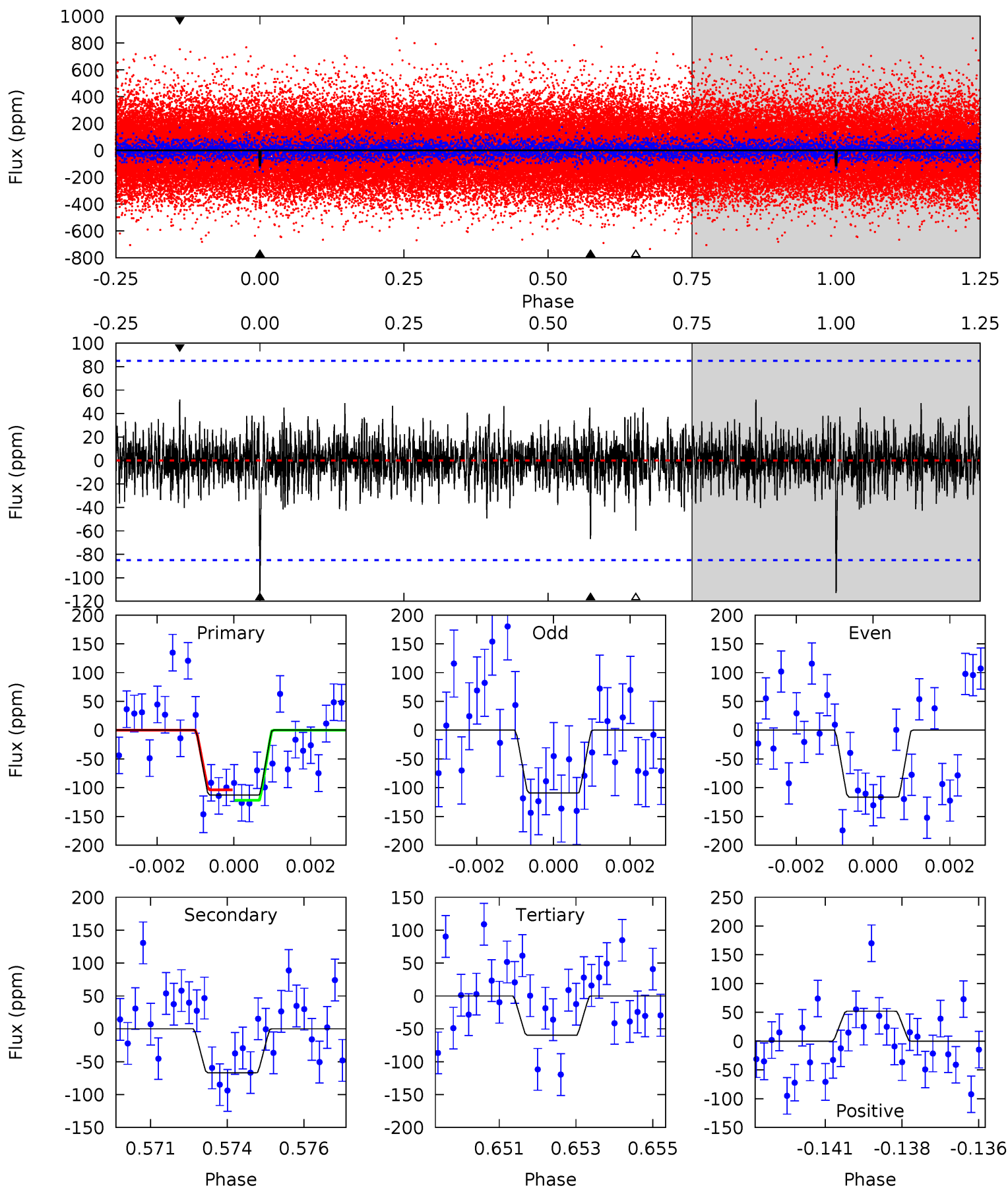
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.83	4.77	3.57	3.64	5.29	3.03	1.08	4.26	4.19	1.20	1.13	0.80	0.90	0.32	0.16



Alt Model-Shift Uniqueness Test

008098489-01, P = 279.408499 Days, E = 254.271606 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.05	4.18	3.74	3.24	5.30	3.05	0.87	3.31	3.80	0.44	0.93	0.22	0.96	0.32	0.57



Stellar Parameters For KIC 008098489

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6492^{+145}_{-210}	$4.388^{+0.068}_{-0.203}$	$-0.140^{+0.250}_{-0.300}$	$1.146^{+0.368}_{-0.123}$	$1.173^{+0.173}_{-0.156}$	$1.096^{+0.326}_{-0.596}$
	+2%/-3%	+2%/-5%	+179%/-214%	+32%/-11%	+15%/-13%	+30%/-54%
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 008098489-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-75 ± 16	$1.43^{+0.68}_{-0.60}$	463^{+35}_{-23}	5753^{+1885}_{-915}	15400^{+29739}_{-8374}
Alt.	-67 ± 16	$1.46^{+0.64}_{-0.60}$	462^{+34}_{-21}	5518^{+1761}_{-809}	12811^{+25791}_{-6697}

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

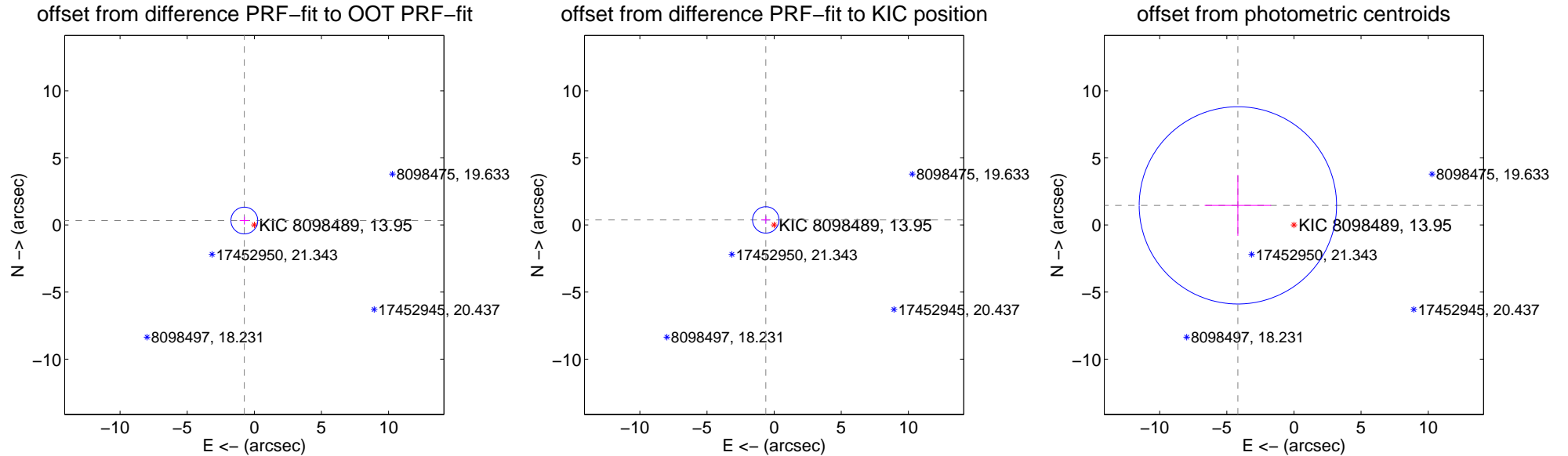
DV Centroid Data

Supplemental centroid analysis for 008098489-01. Kepler magnitude: 13.95. Transit SNR 6.37

There are 1 quarters with good PRF difference image offsets

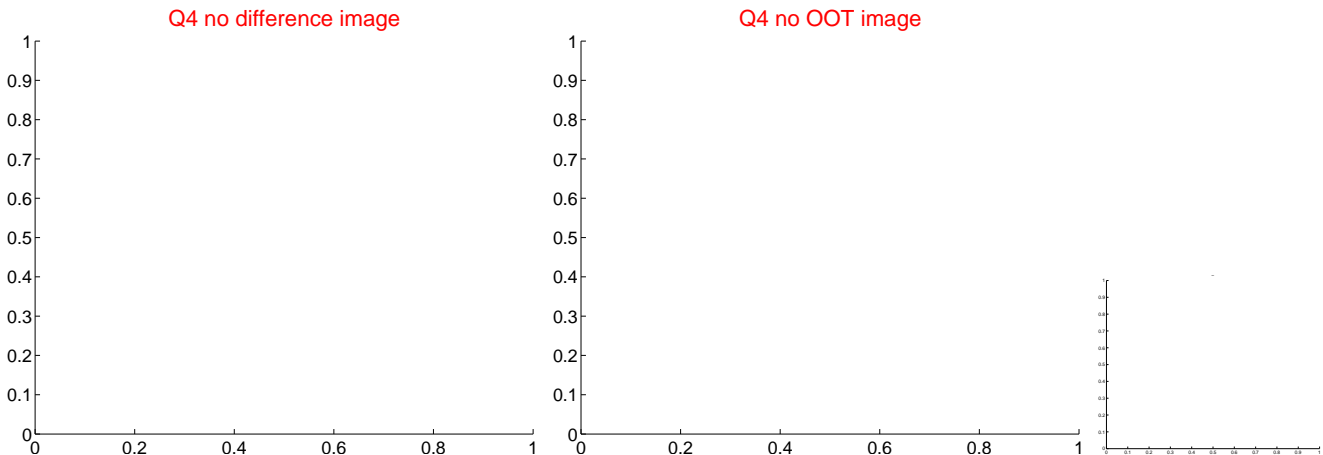
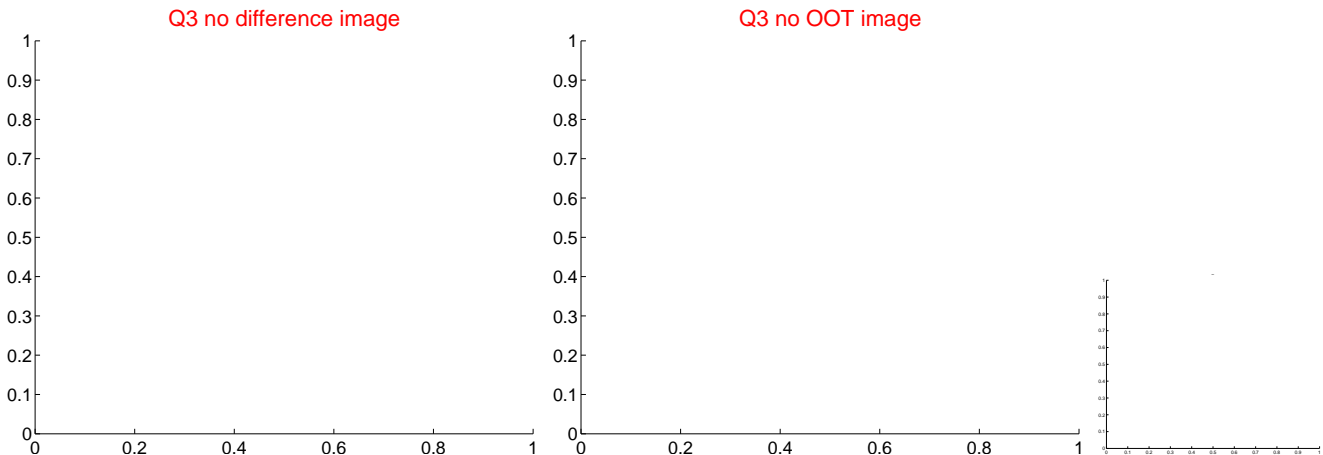
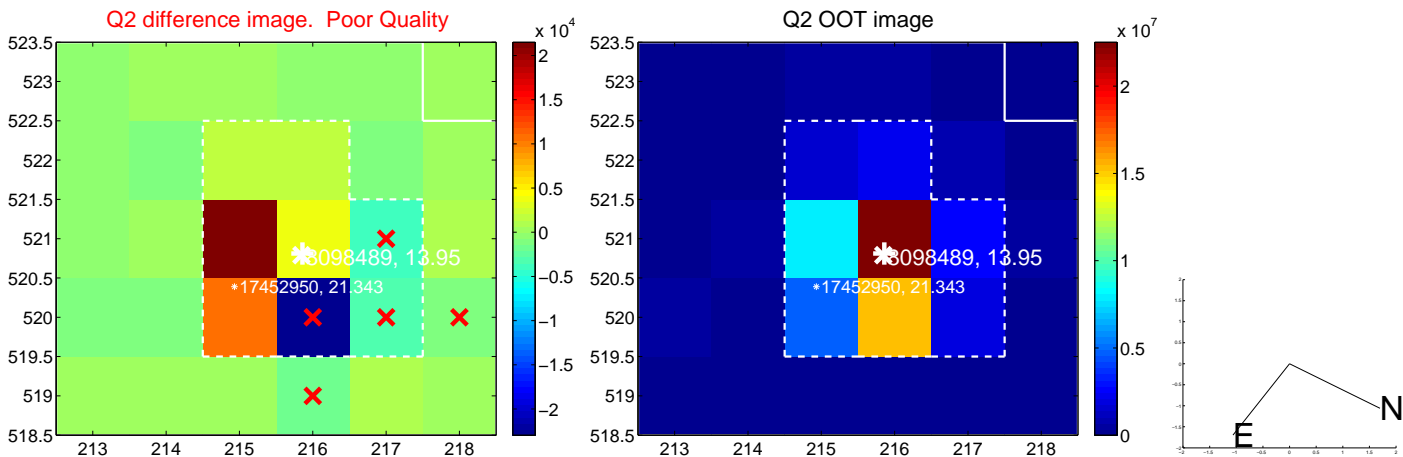
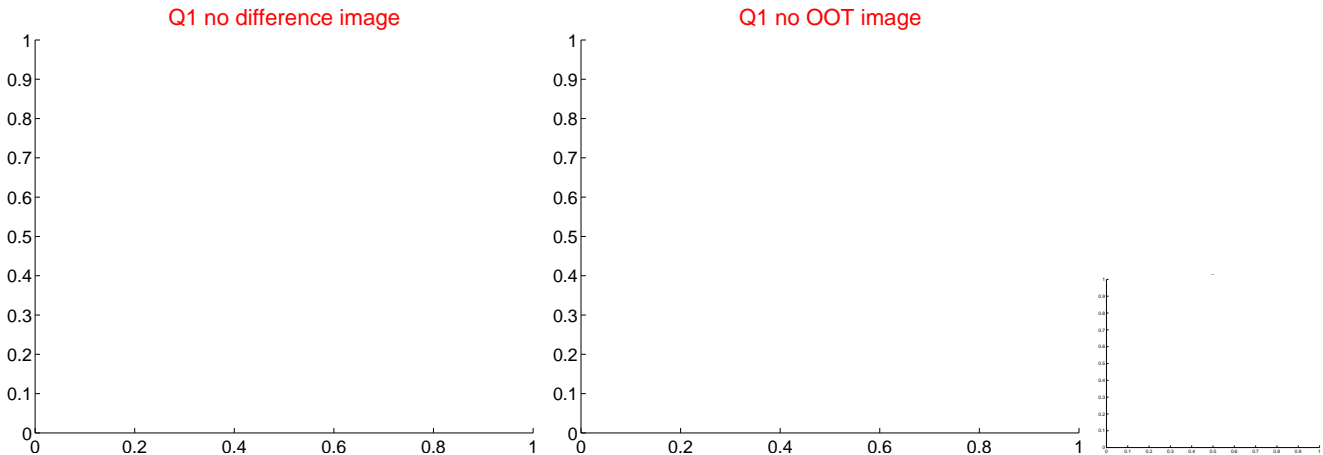
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.815 ± 0.333	2.45	0.744 ± 0.340	0.332 ± 0.293
PRF-fit source offset from KIC position	0.728 ± 0.328	2.22	0.622 ± 0.340	0.380 ± 0.293
photometric centroid source offset	4.43 ± 2.45	1.81	4.18 ± 2.47	1.46 ± 2.27

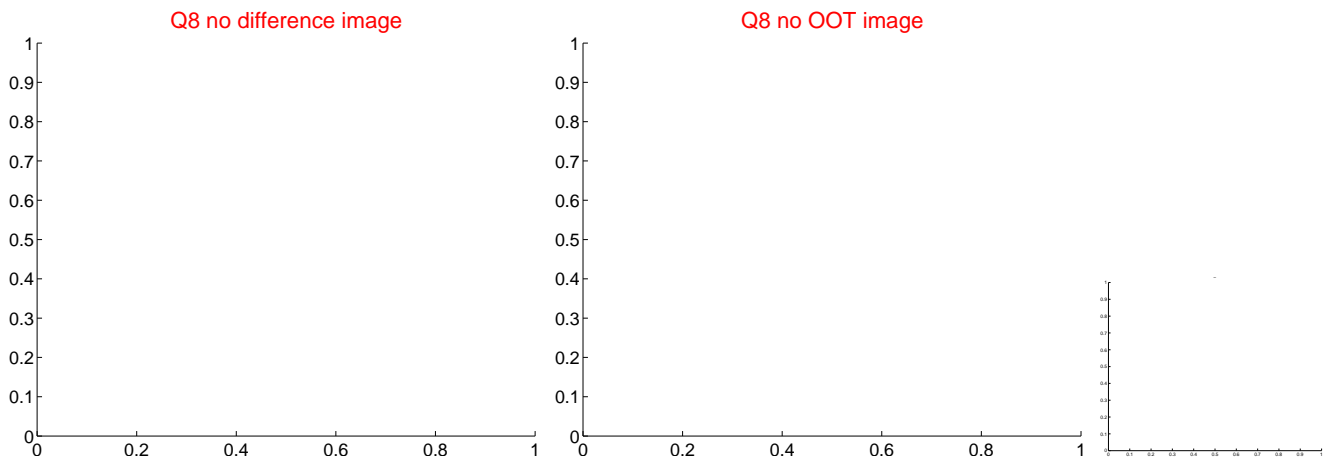
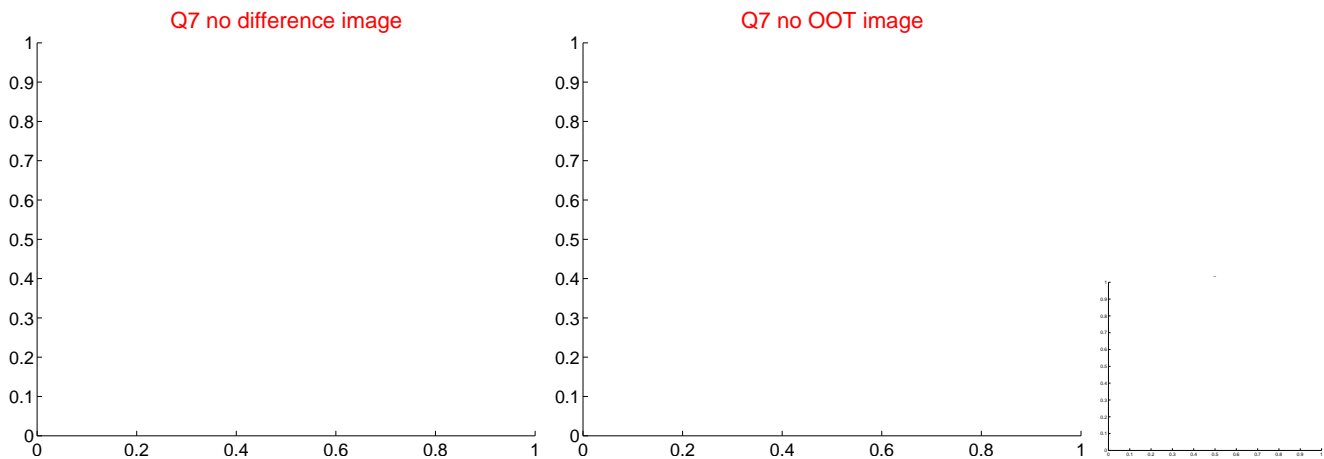
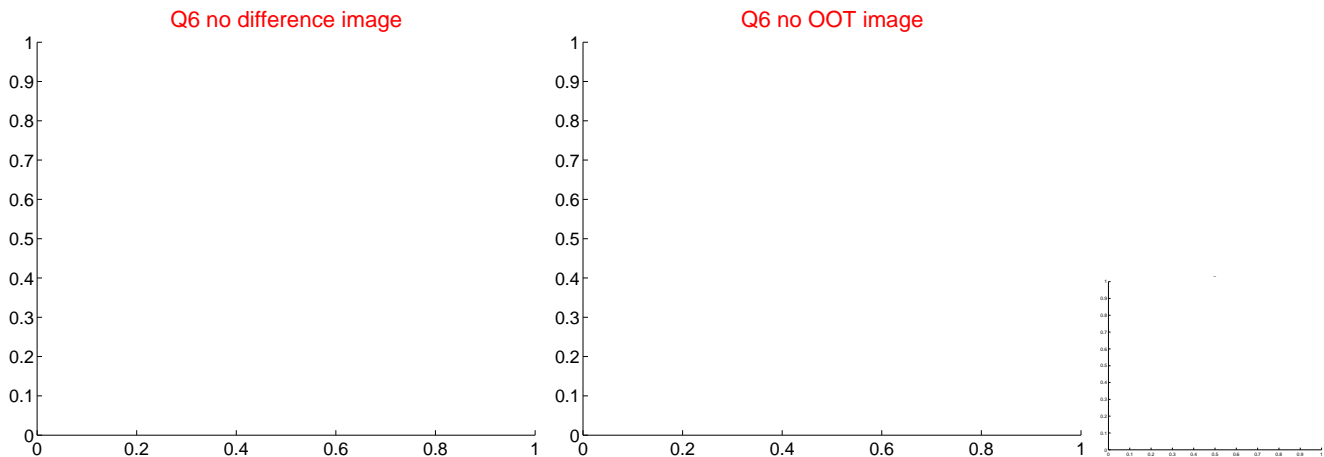
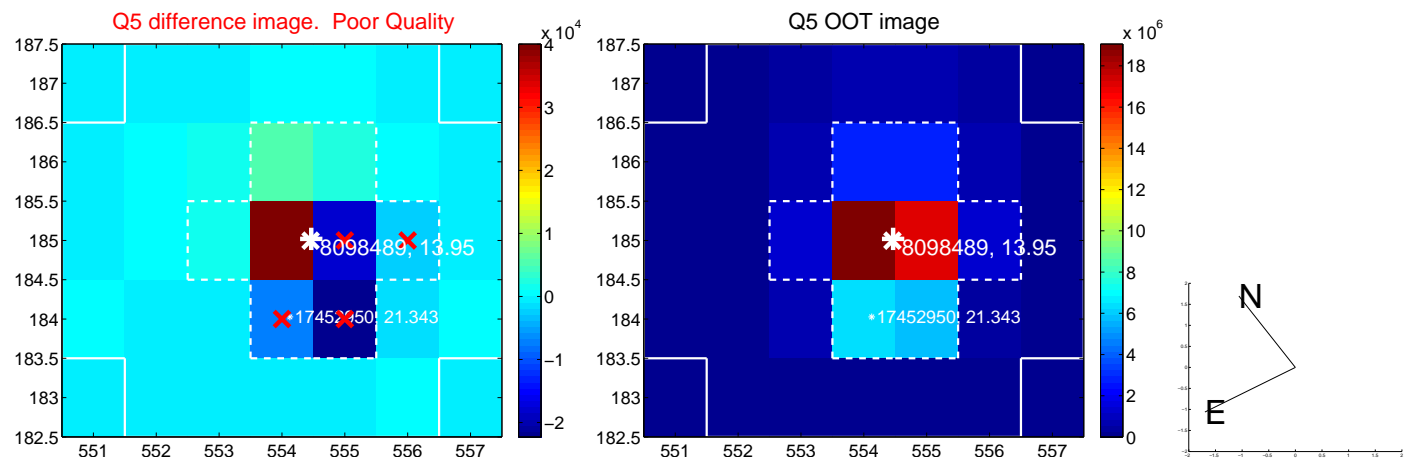


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

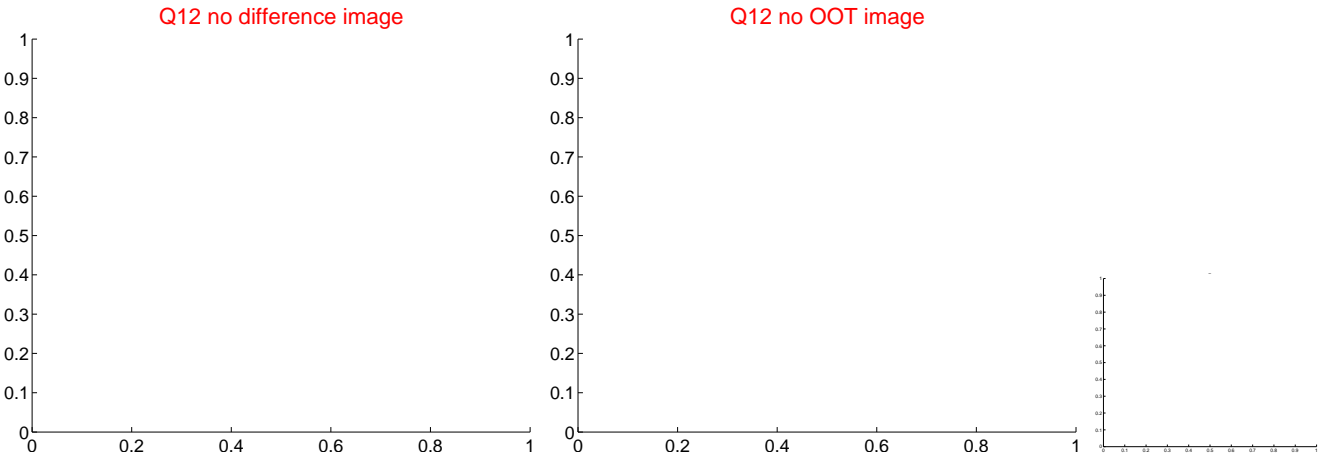
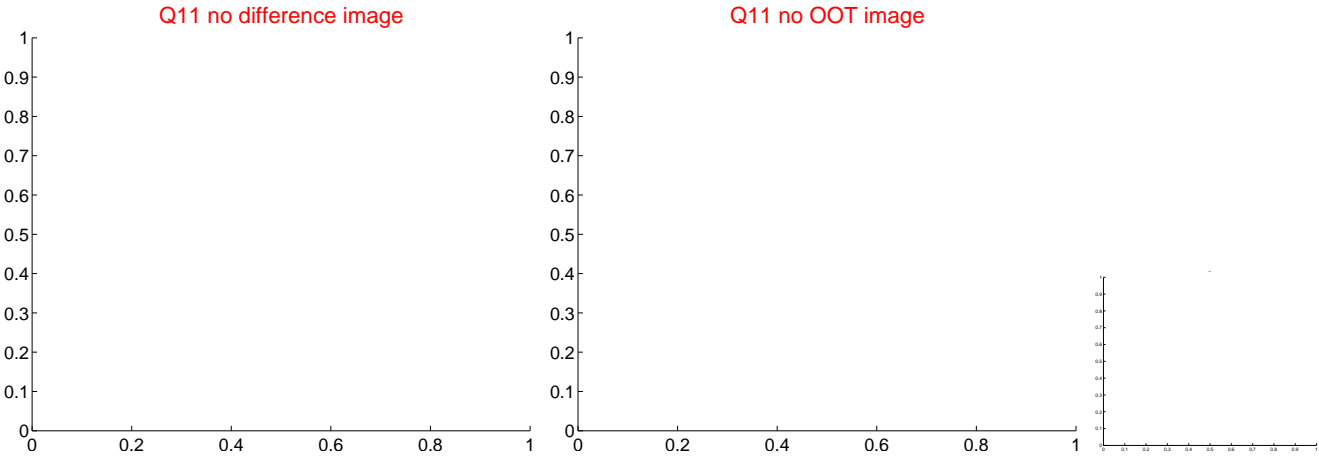
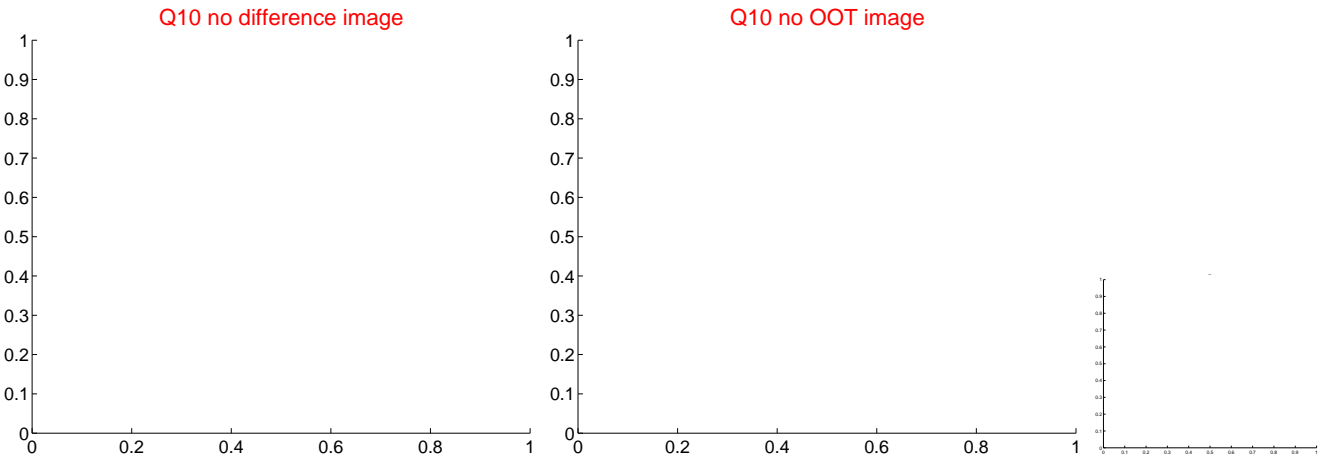
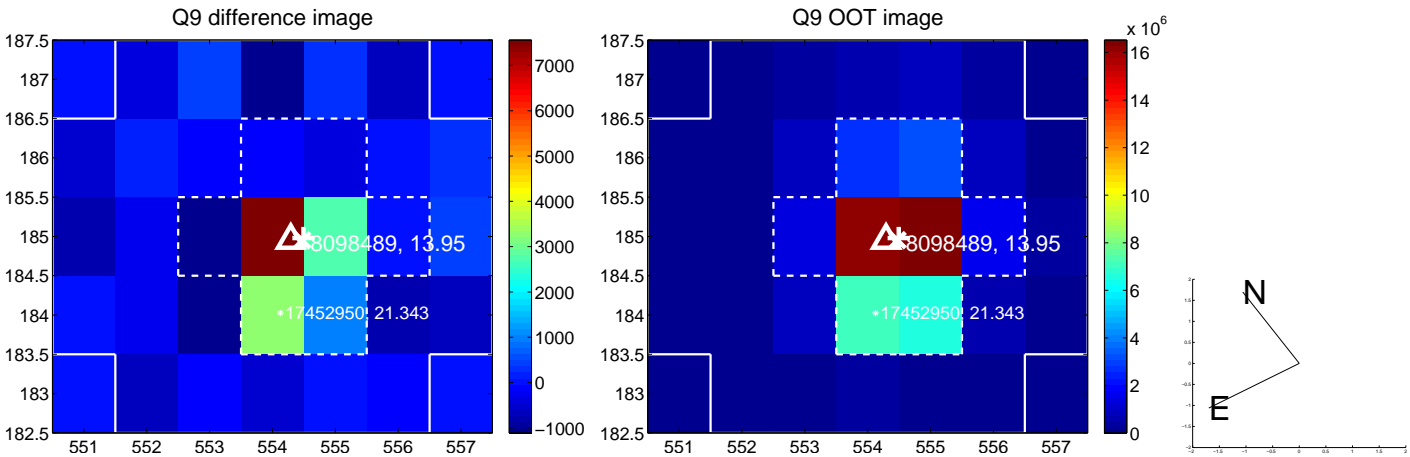
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



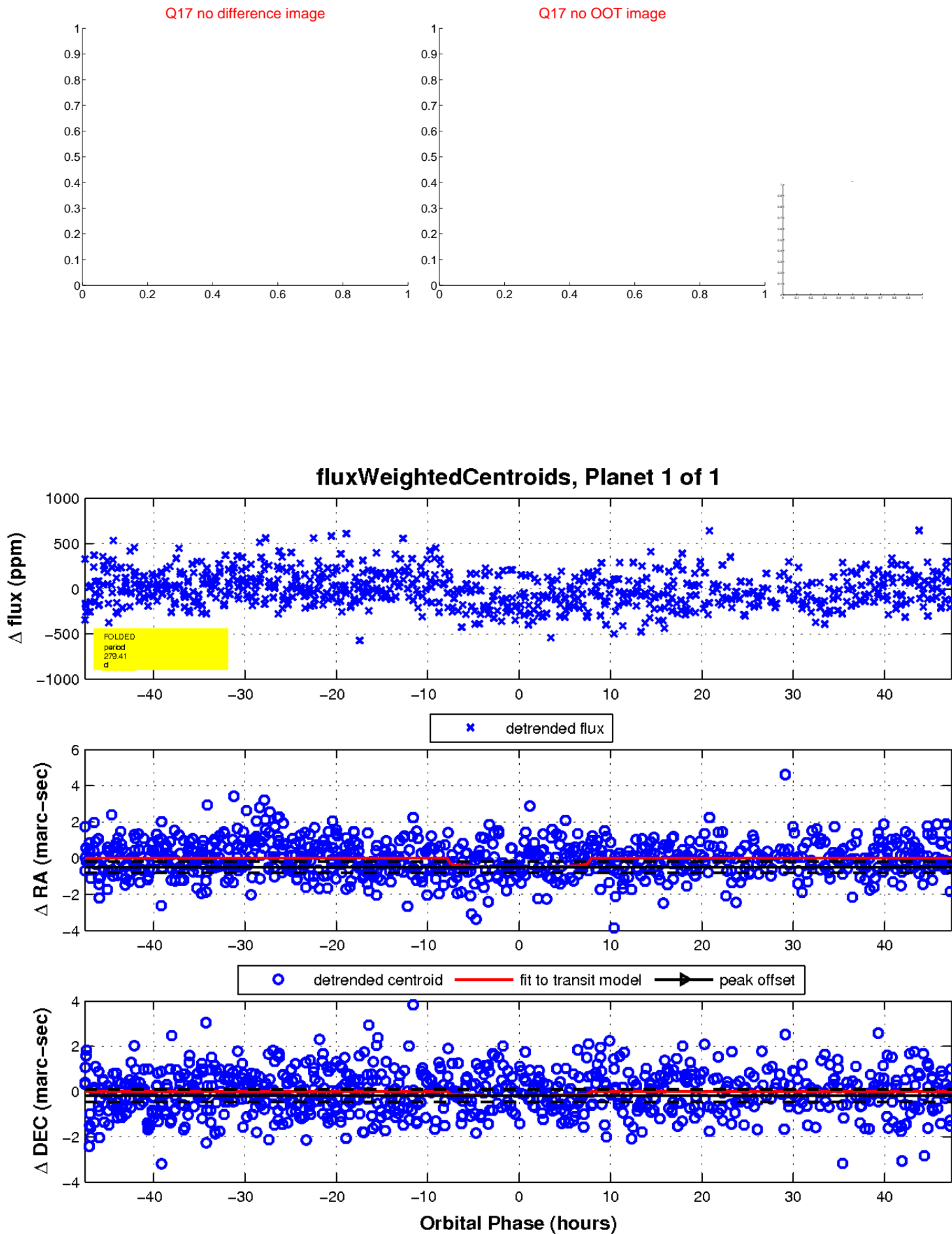
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

