

KIC 006309206

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})
006309206-01	OBS	No	555.487614	197.726009	284.3	15.454	8.6	7.8	1.51	5620	2.74	1.32

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006309206-01	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.

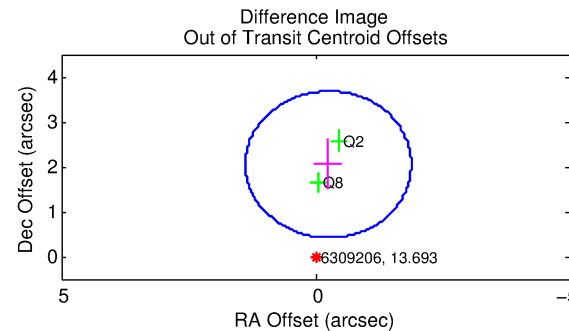
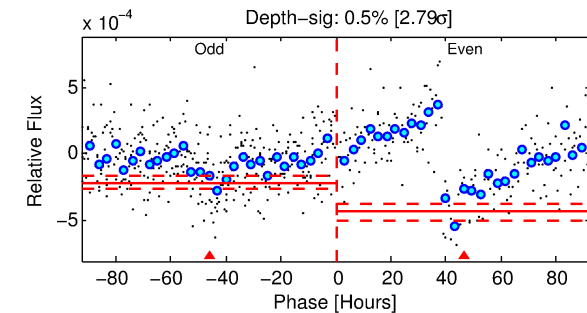
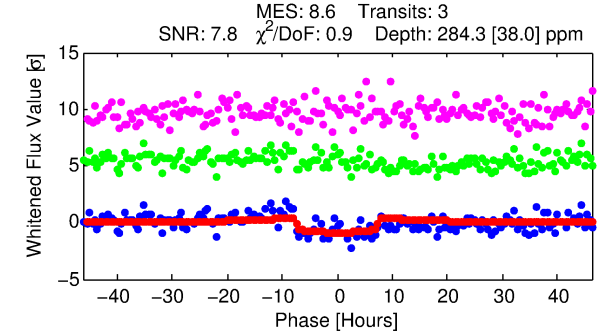
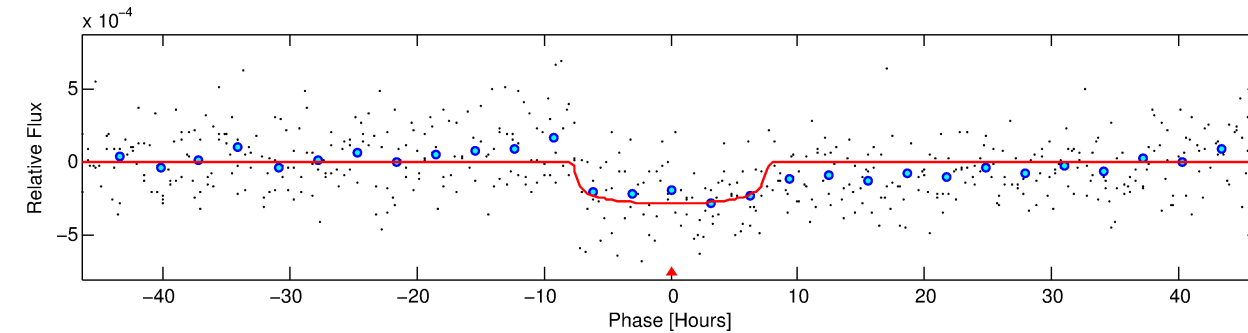
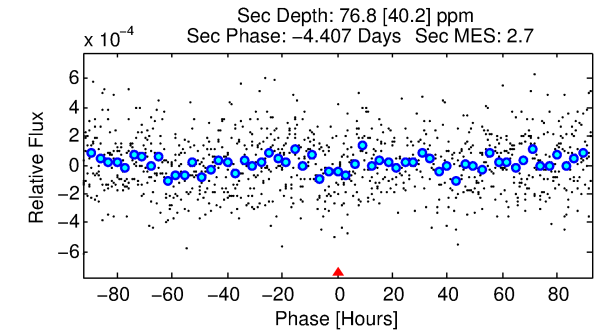
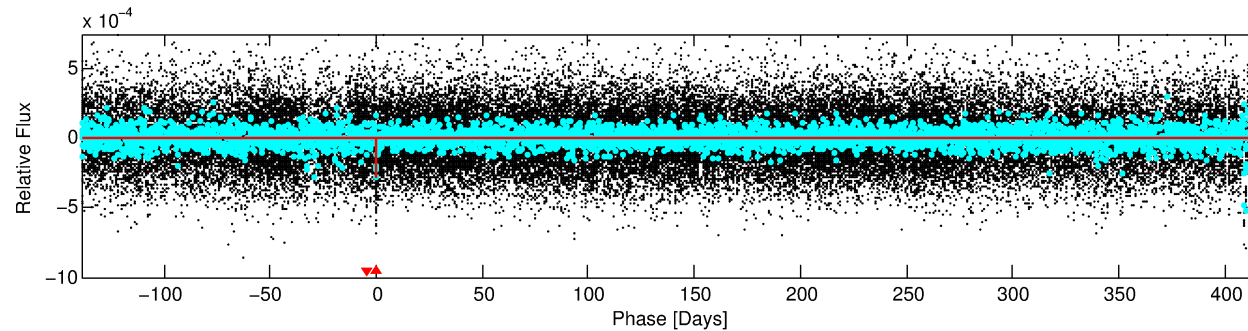
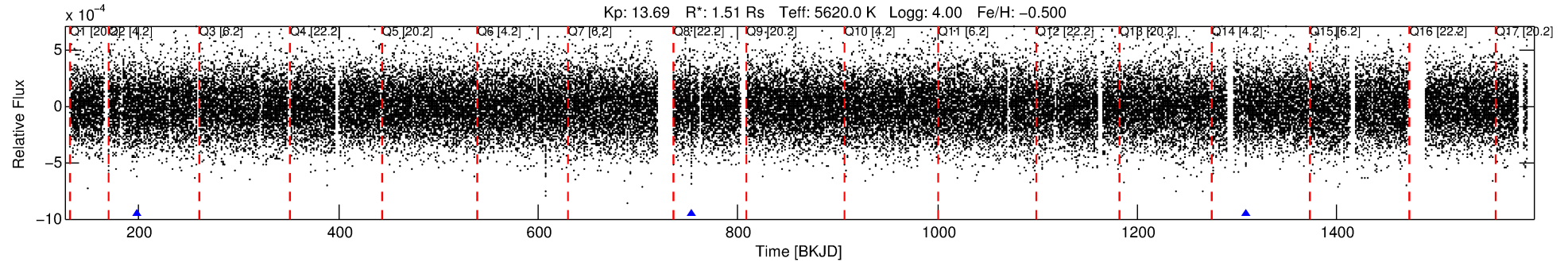
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006309206-01

No Significant Match Found

DV One-Page Summary

KIC: 6309206 Candidate: 1 of 1 Period: 555.488 d



DV Fit Results:

Period = 555.48761 [0.01546] d
Epoch = 197.7260 [0.0209] BKJD
Rp/R* = 0.0166 [0.0059]
a/R* = 195.91 [313.79]
b = 0.72 [1.06]
Seff = 1.32 [1.24]
Teq = 274 [64] K
Rp = 2.74 [1.67] Re
a = 1.2390 [0.6759] AU
Ag = 8670.20 [11135.78] [0.78σ]
Teffp = 4081 [911] K [4.17σ]

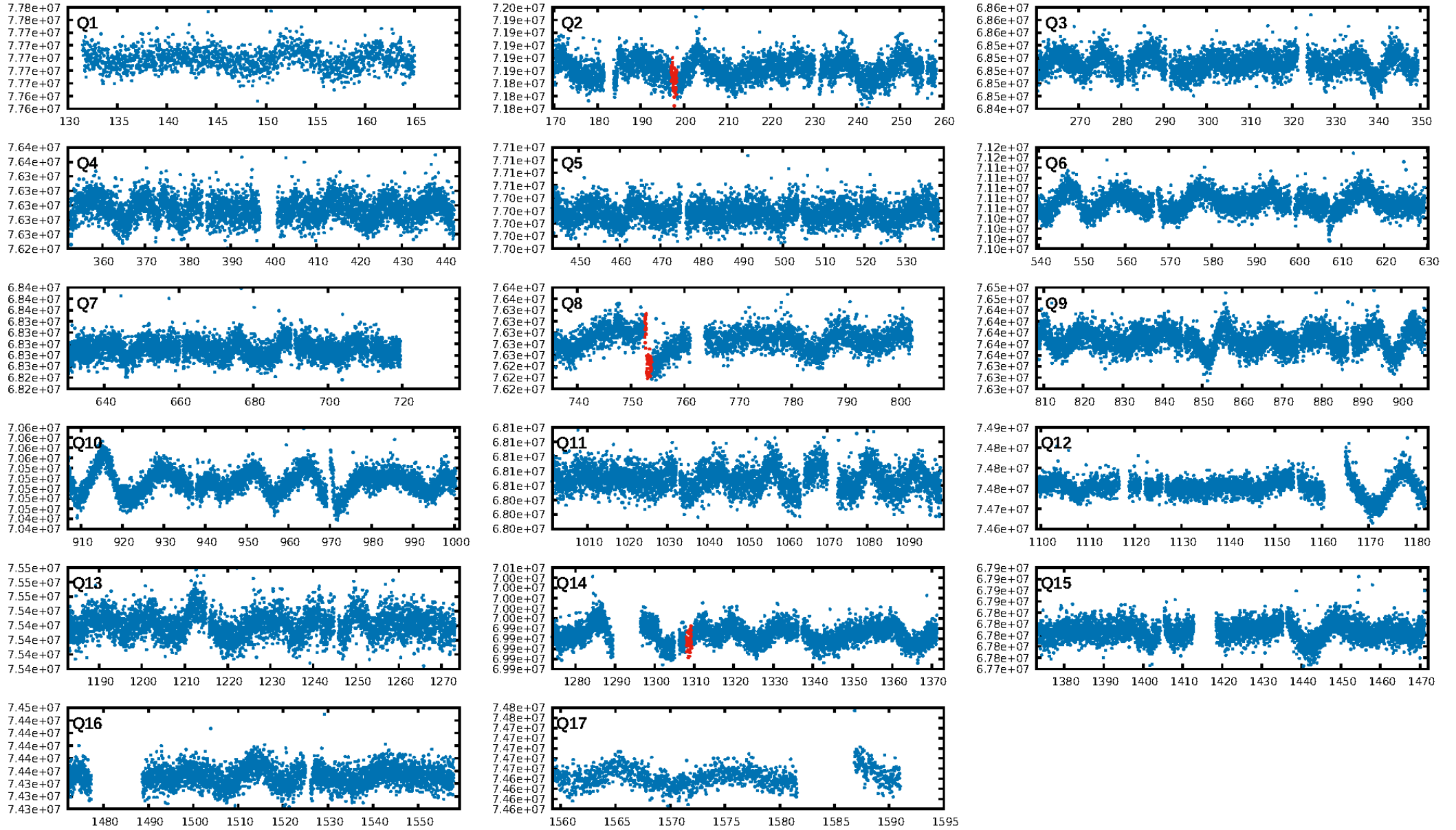
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 14.5%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 1.48e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.248
Centroid-sig: 6.2%
Centroid-so: 1.765 arcsec [1.28σ]
OotOffset-rm: 2.064 arcsec [3.80σ]
KicOffset-rm: 2.013 arcsec [3.74σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

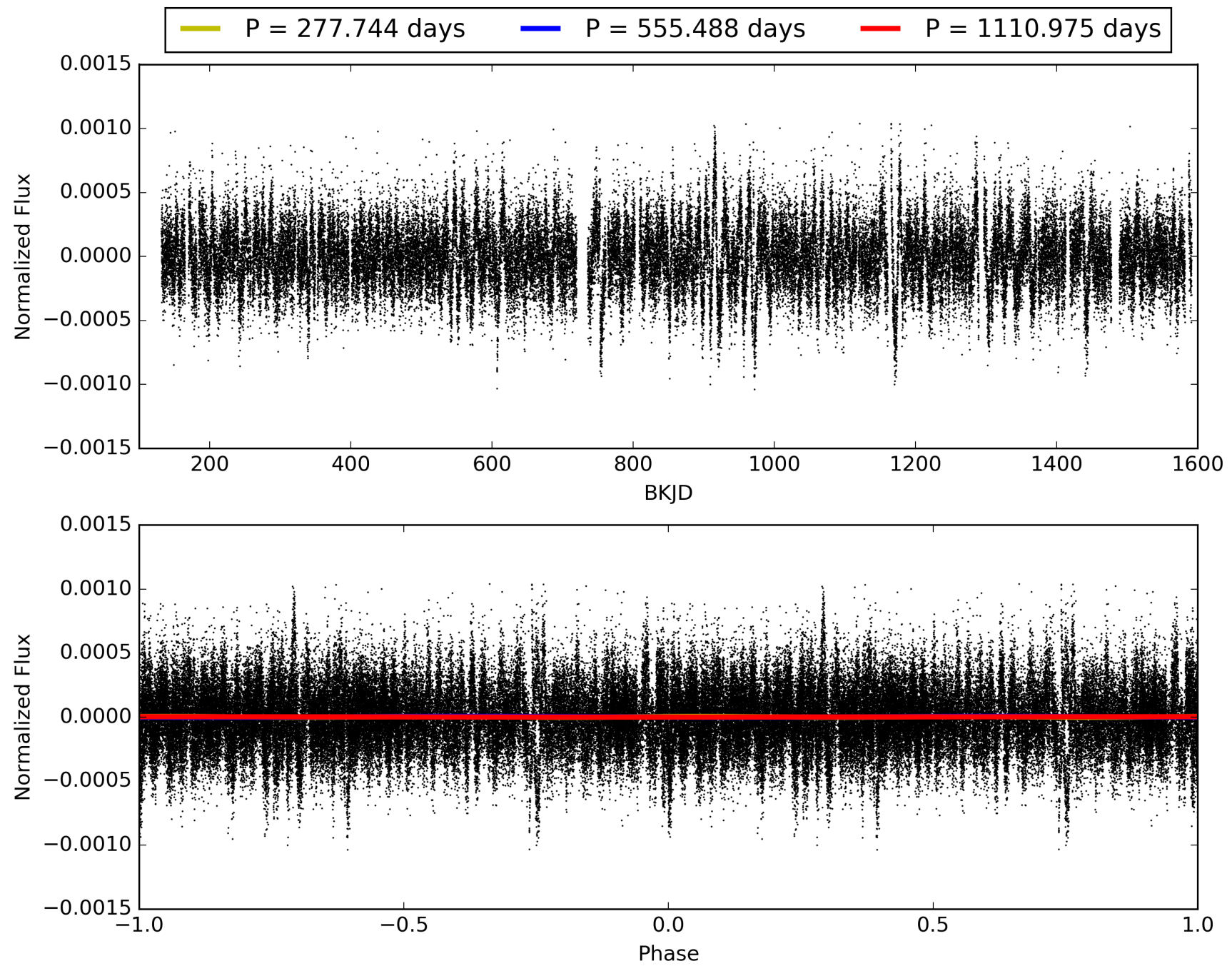
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 21:30:07 Z

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

TCE 006309206-01, PDC Light Curves

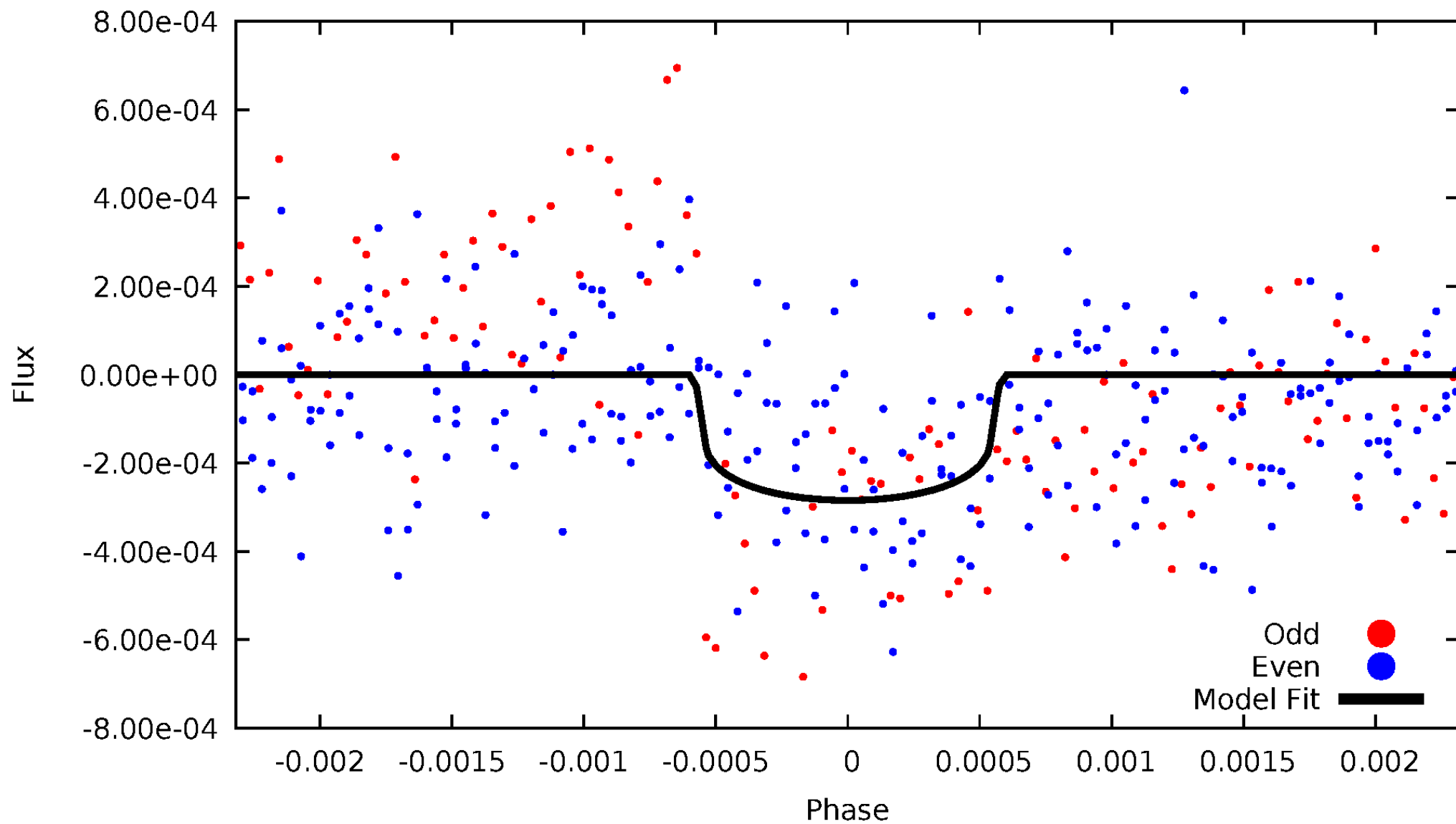


TCE 006309206-01



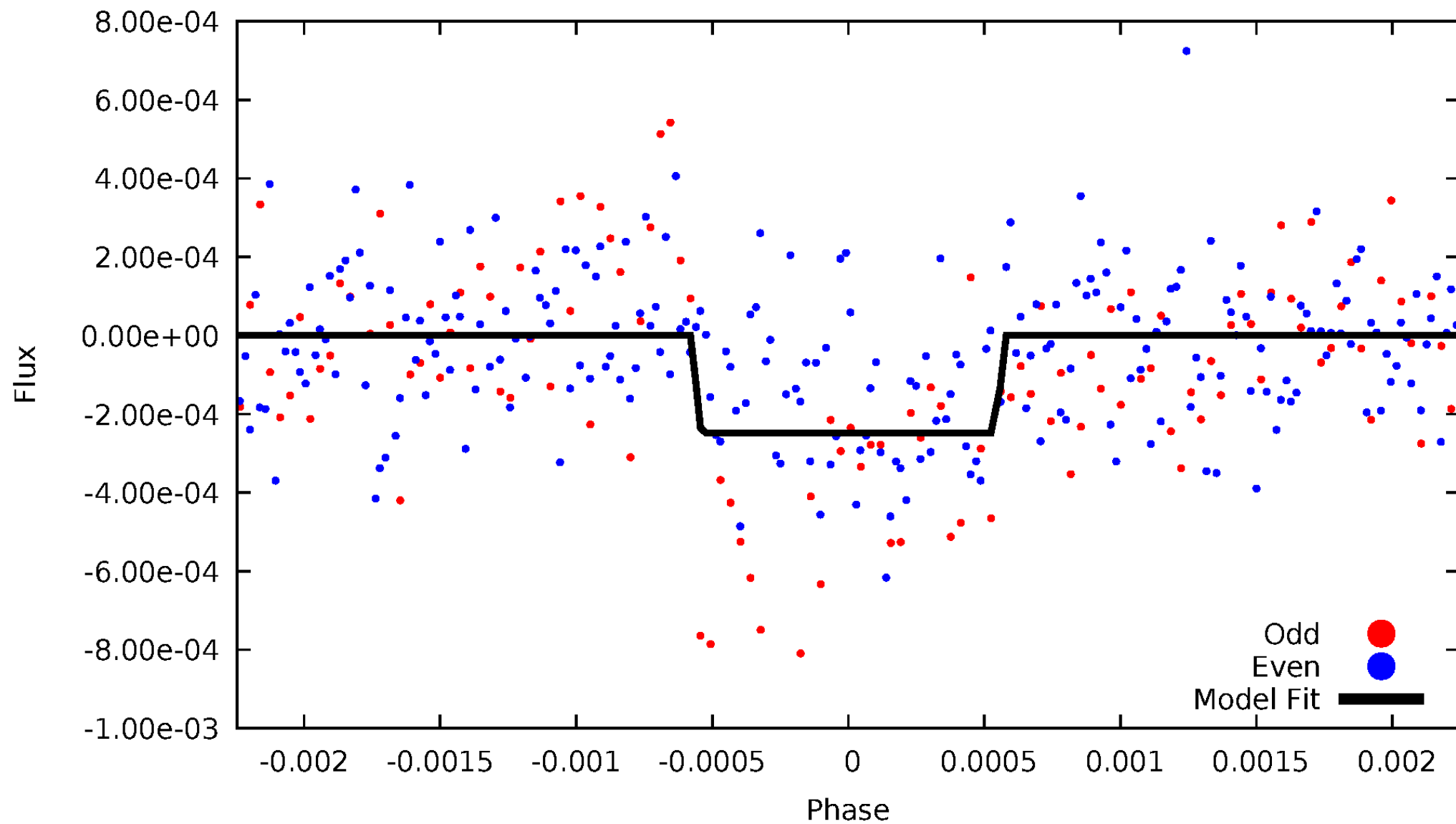
DV Odd/Even

TCE 006309206-01

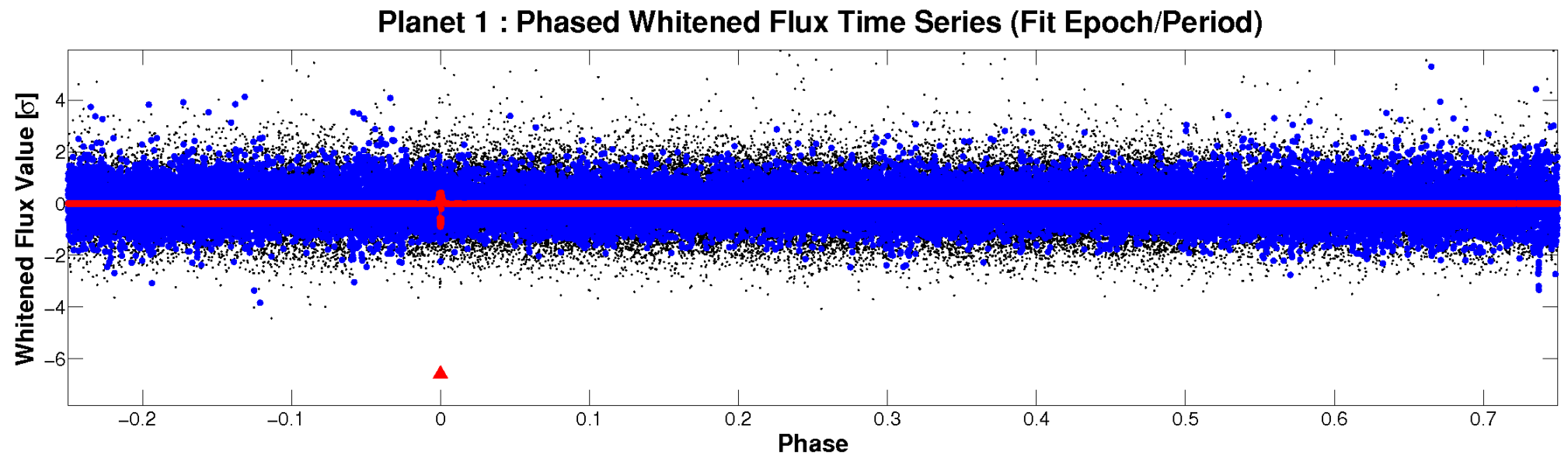
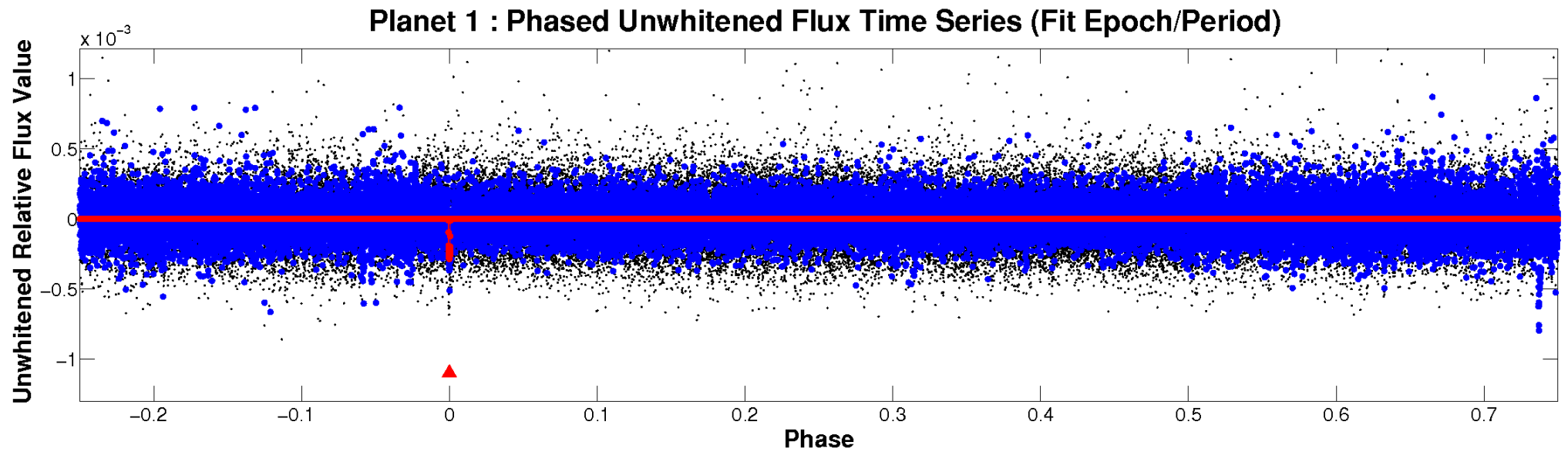


ALT Odd/Even

TCE 006309206-01

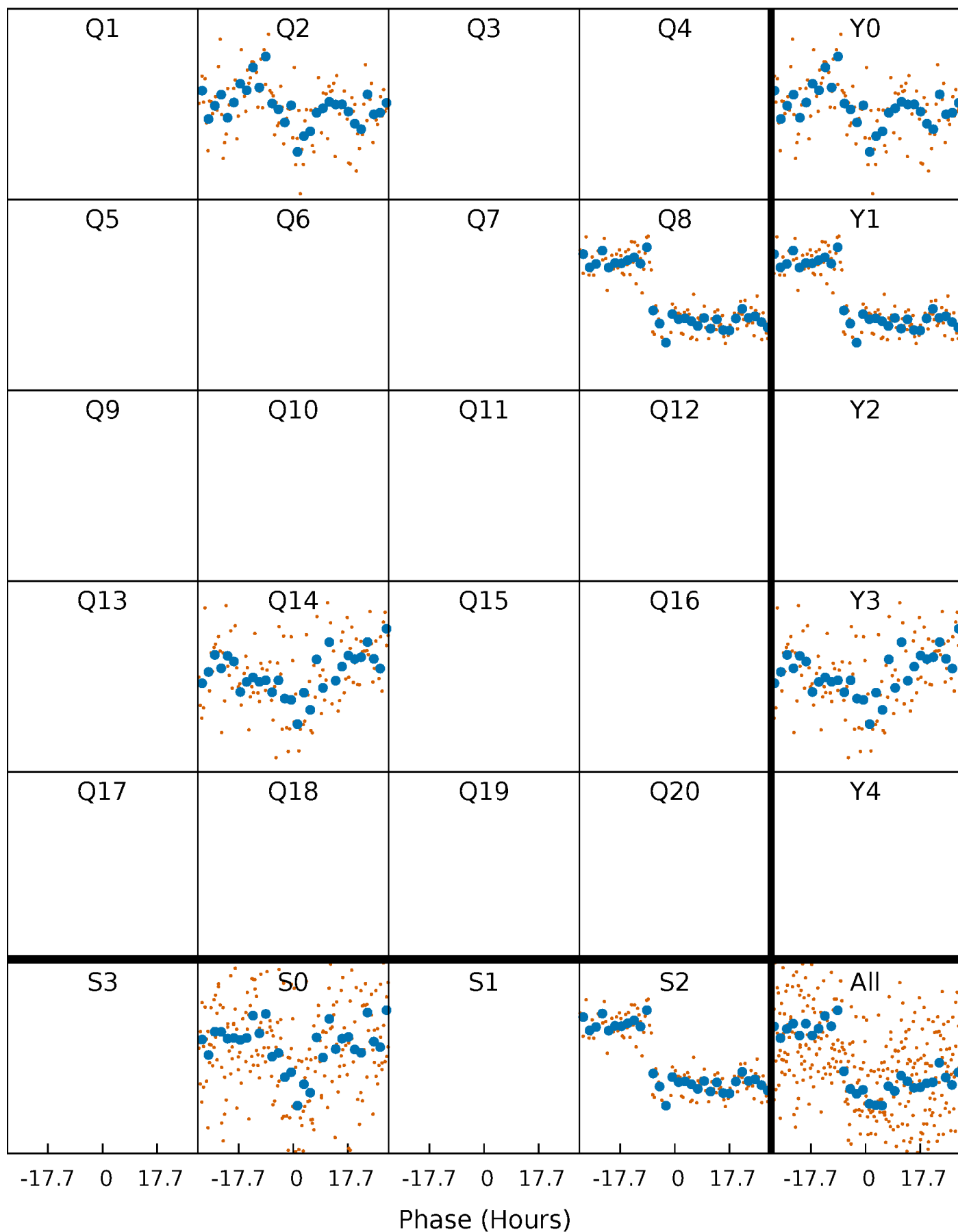


Non-Whitened Vs. Whitened Light Curve



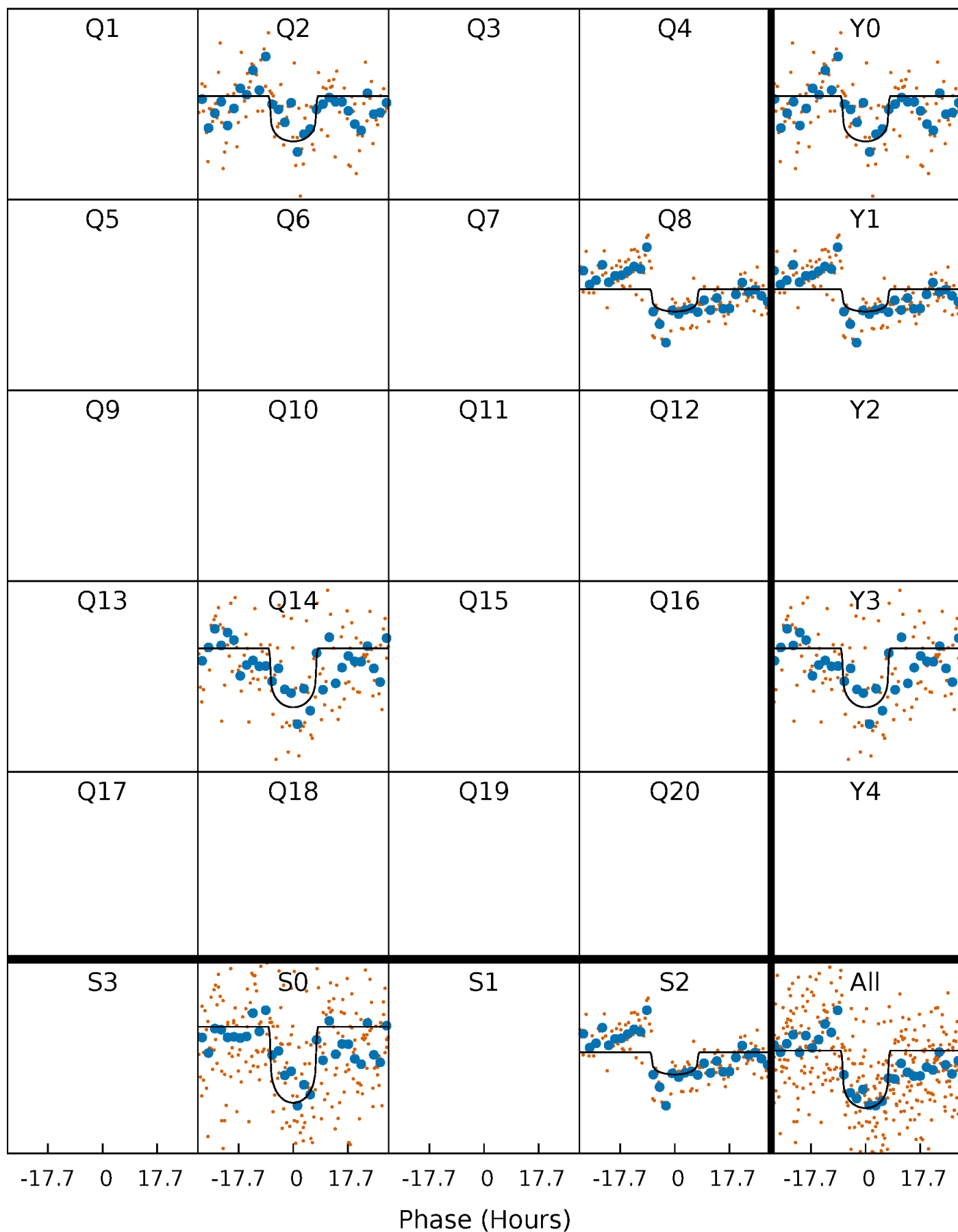
PDC Quarter-Phased Transit Curves

TCE 006309206-01 P=555.487614 Days $T_0=197.726009$ (BKJD)



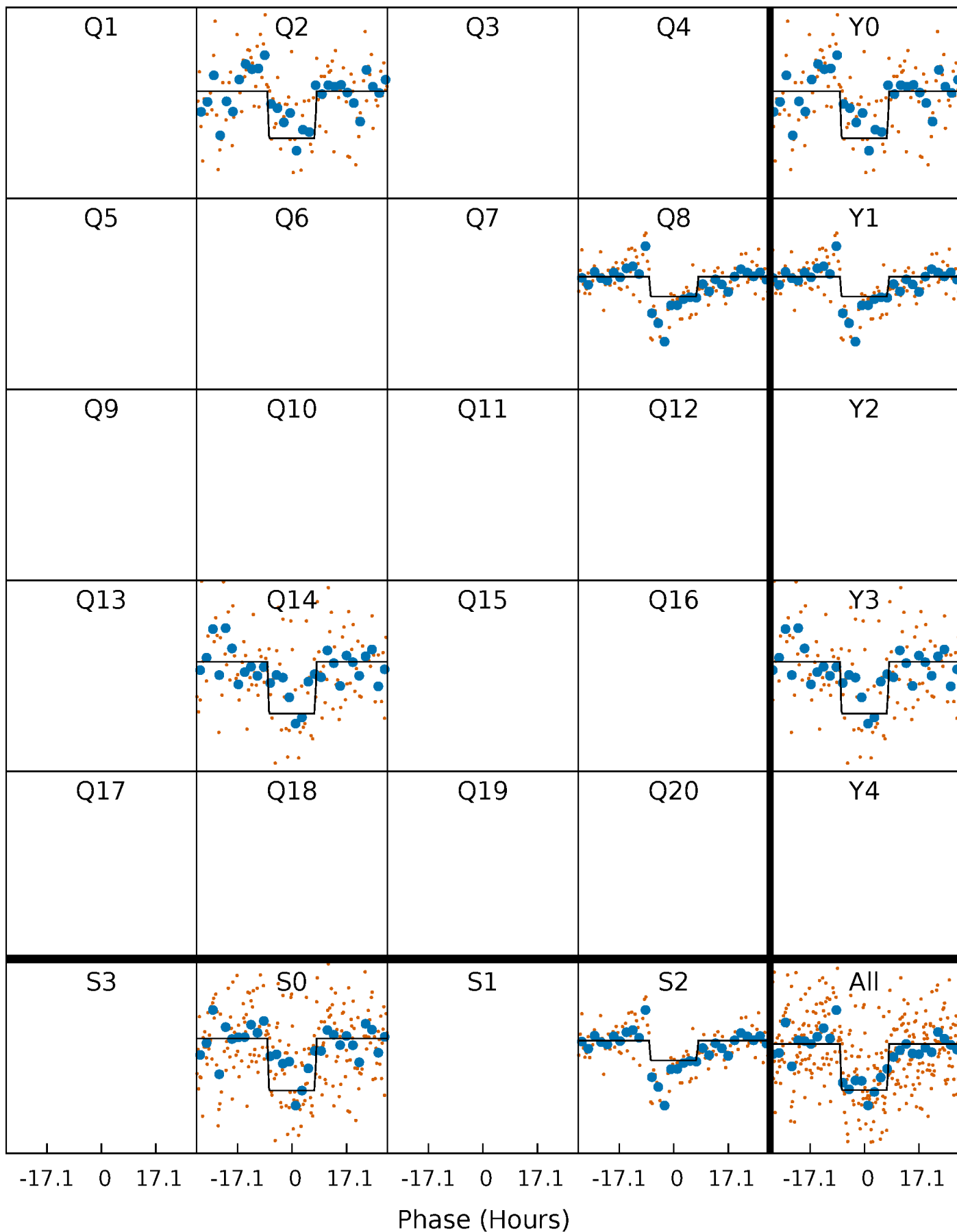
DV Quarter-Phased Transit Curves

TCE 006309206-01 P=555.487614 Days $T_0=197.726009$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

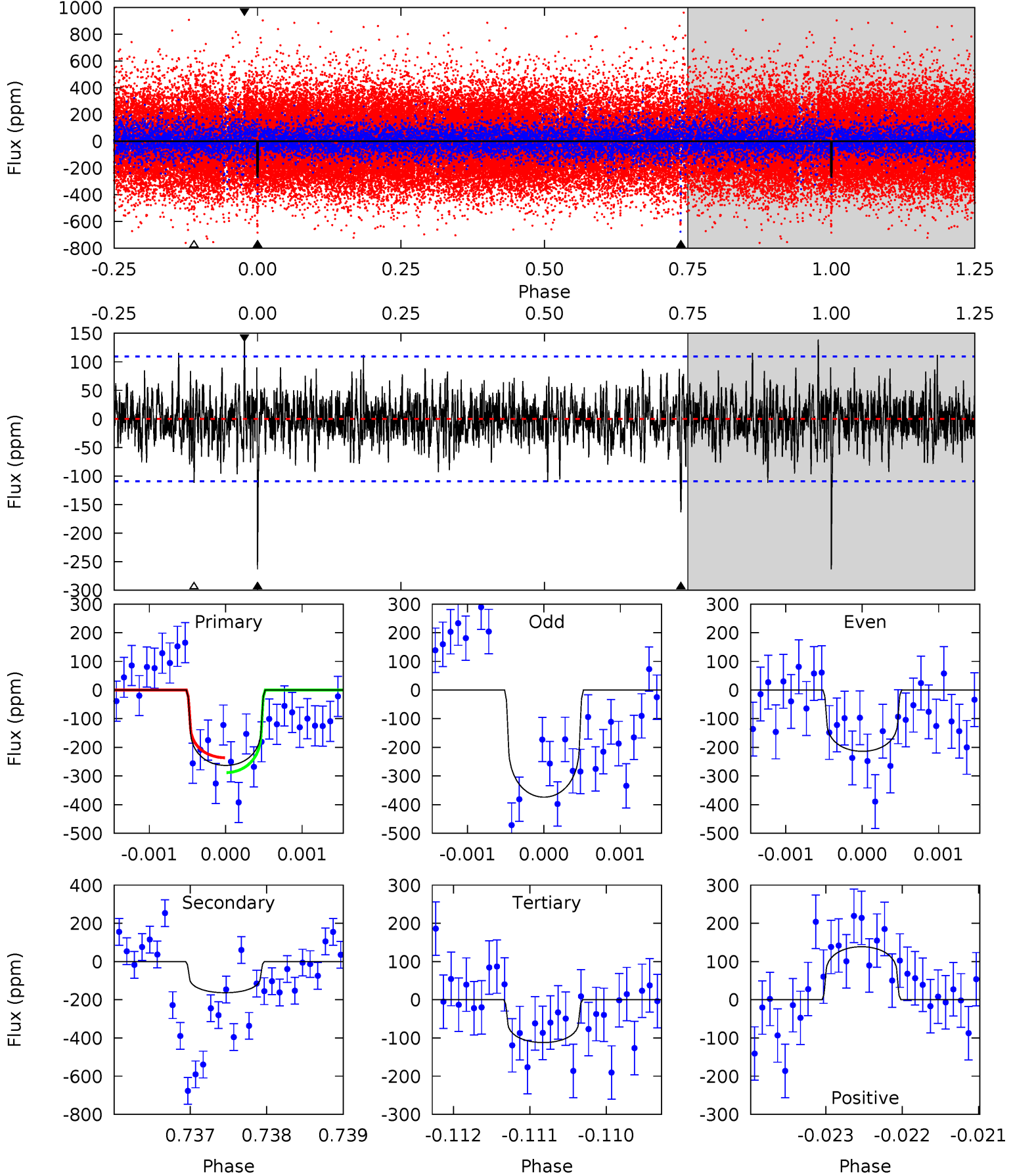
TCE 006309206-01 P=555.472706 Days $T_0=197.744340$ (BKJD)



DV Model-Shift Uniqueness Test

006309206-01, P = 555.487614 Days, E = 197.726009 Days

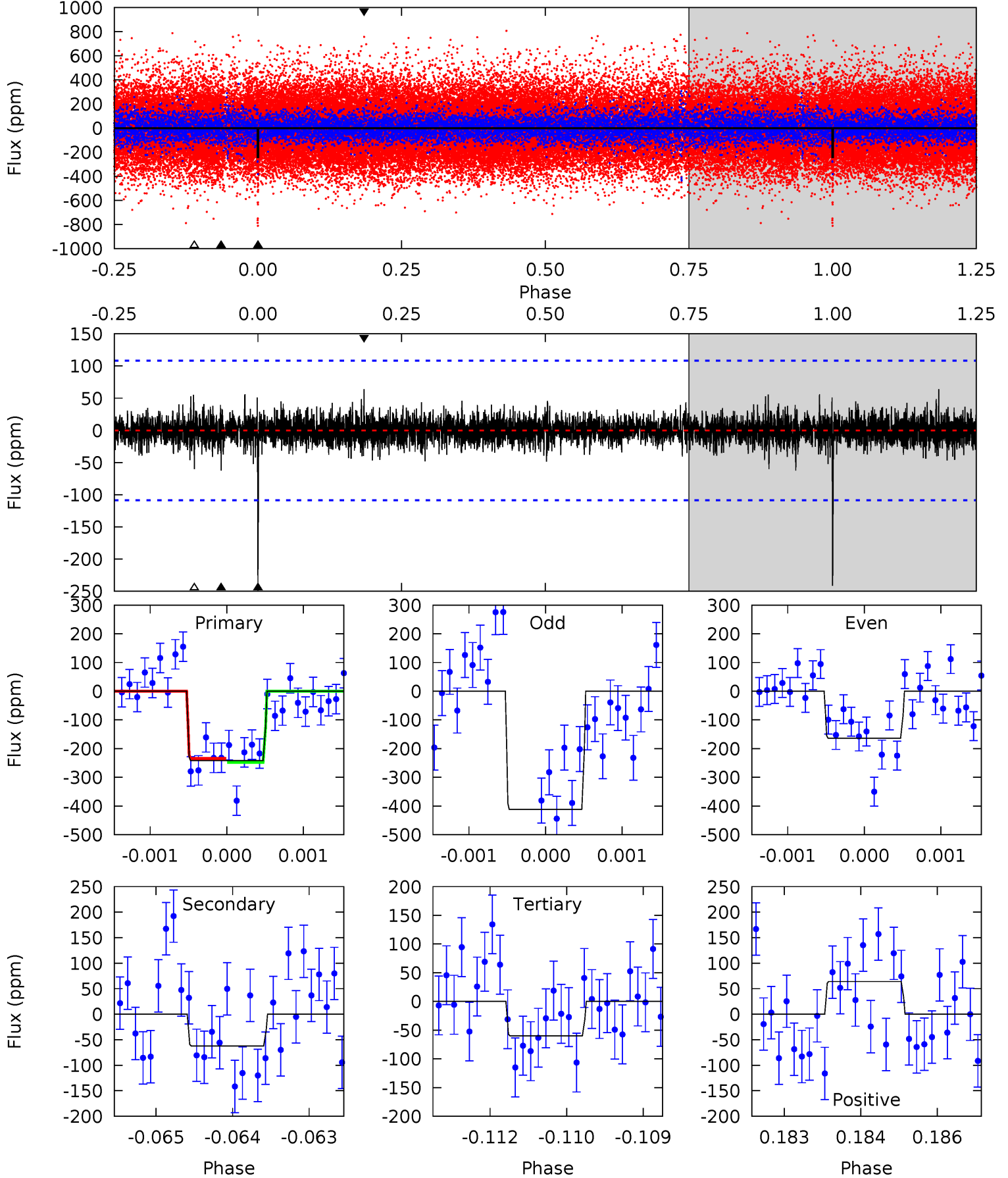
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	8.10	5.56	6.89	5.42	3.25	1.52	7.51	6.18	2.54	1.21	3.68	1.11	0.35	1.28



Alt Model-Shift Uniqueness Test

006309206-01, P = 555.472706 Days, E = 197.744340 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	3.13	3.00	3.21	5.43	3.26	0.68	9.10	8.89	0.12	-0.08	5.80	1.48	0.21	0.34



Stellar Parameters For KIC 006309206

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5620^{+168}_{-168}	$3.996^{+0.567}_{-0.243}$	$-0.500^{+0.300}_{-0.300}$	$1.508^{+0.609}_{-0.744}$	$0.822^{+0.096}_{-0.088}$	$0.338^{+2.220}_{-0.198}$
	+3%/-3%	+14%/-6%	+60%/-60%	+40%/-49%	+12%/-11%	+657%/-59%
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 006309206-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-163 ± 20	$2.44^{+1.39}_{-0.99}$	378^{+40}_{-58}	4999^{+1228}_{-585}	23133^{+41165}_{-13859}
Alt.	-62 ± 20	$2.41^{+1.29}_{-1.06}$	376^{+45}_{-55}	4214^{+854}_{-540}	9050^{+19362}_{-5565}

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

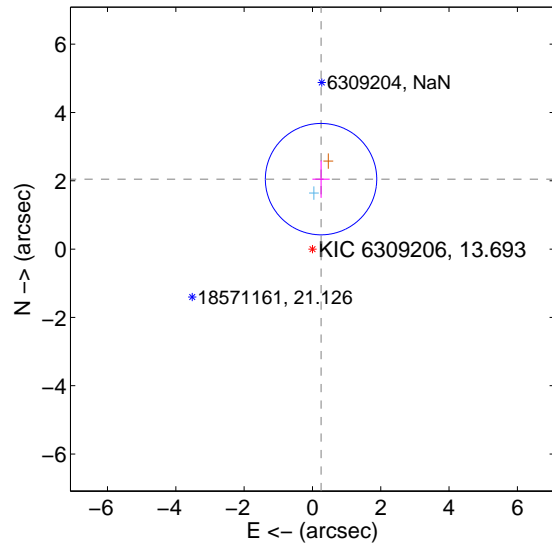
Supplemental centroid analysis for 006309206-01. Kepler magnitude: 13.69. Transit SNR 7.79

There are 1 quarters with good PRF difference image offsets

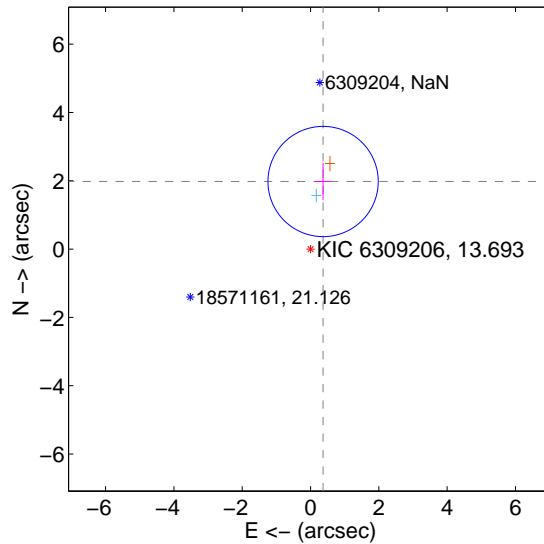
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.064 ± 0.544	3.80	-0.252 ± 0.254	2.049 ± 0.547
PRF-fit source offset from KIC position	2.013 ± 0.538	3.74	-0.368 ± 0.242	1.979 ± 0.545
photometric centroid source offset	1.77 ± 1.38	1.28	-0.17 ± 1.31	1.76 ± 1.38

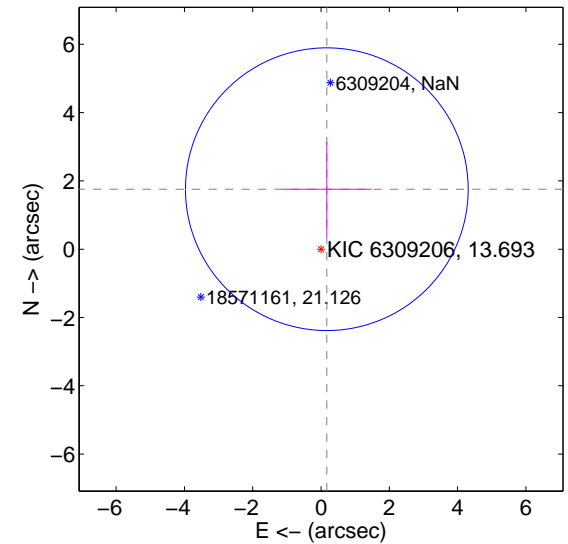
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

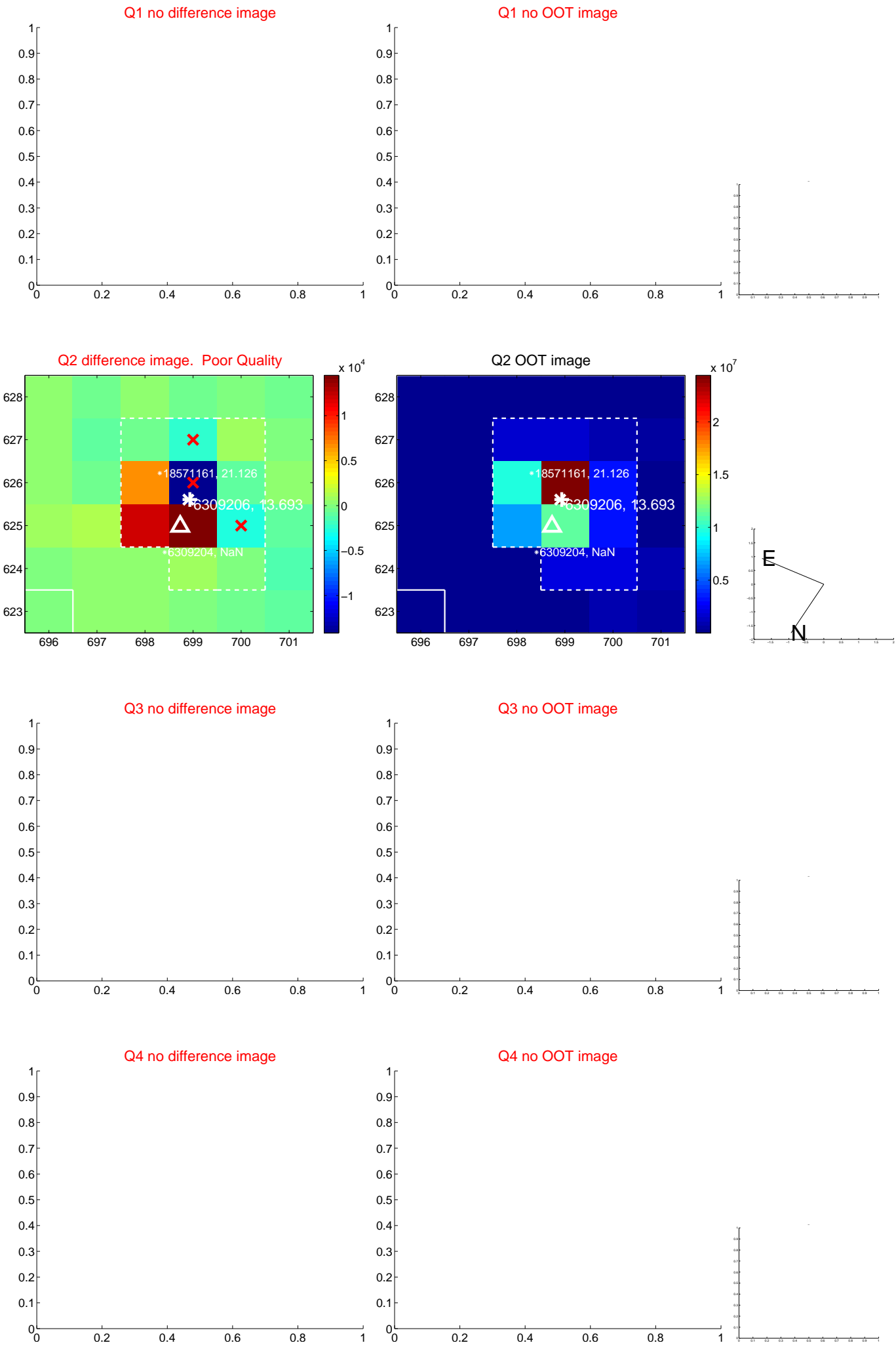


offset from photometric centroids

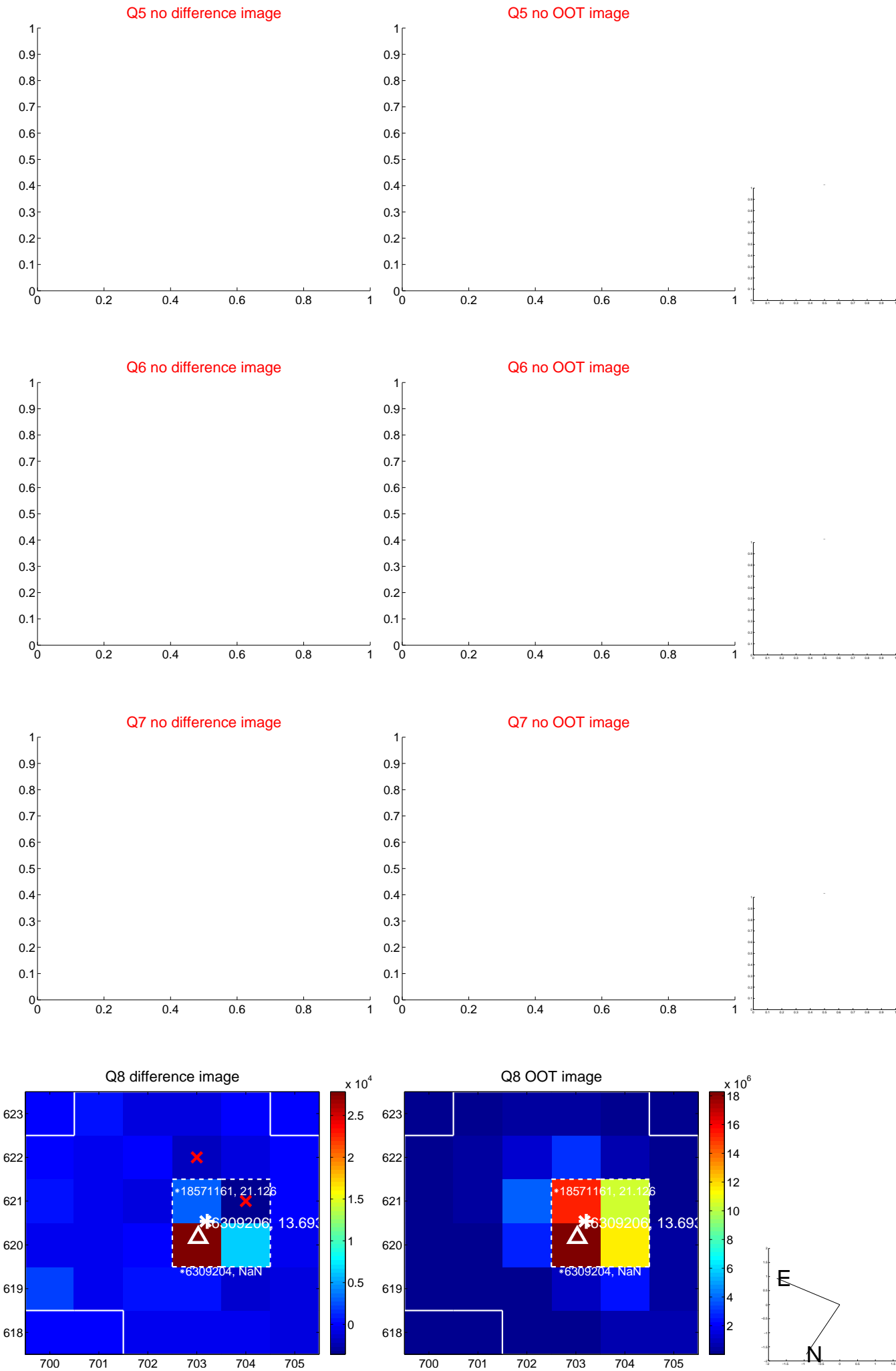


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



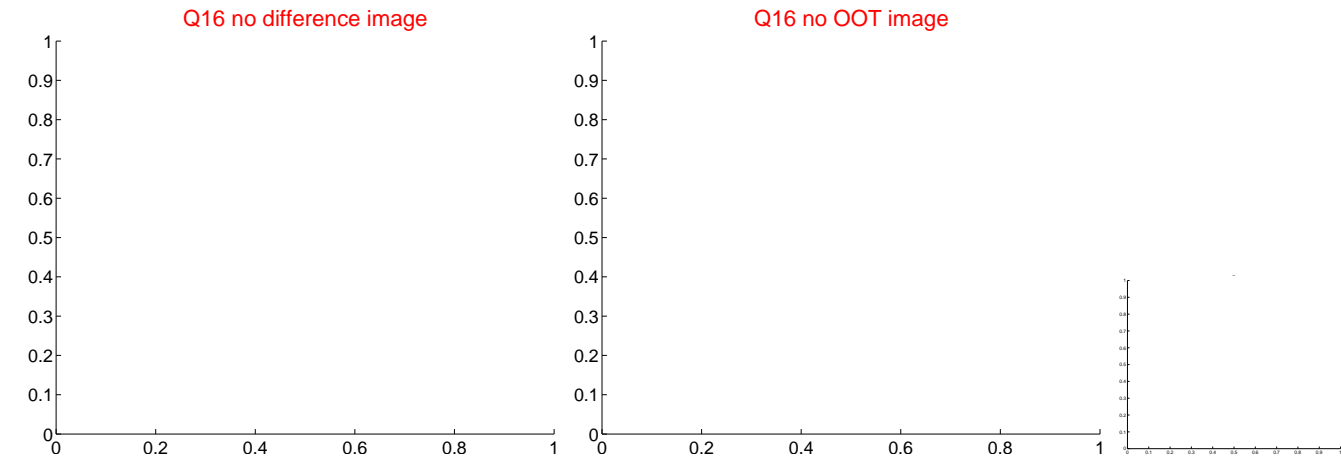
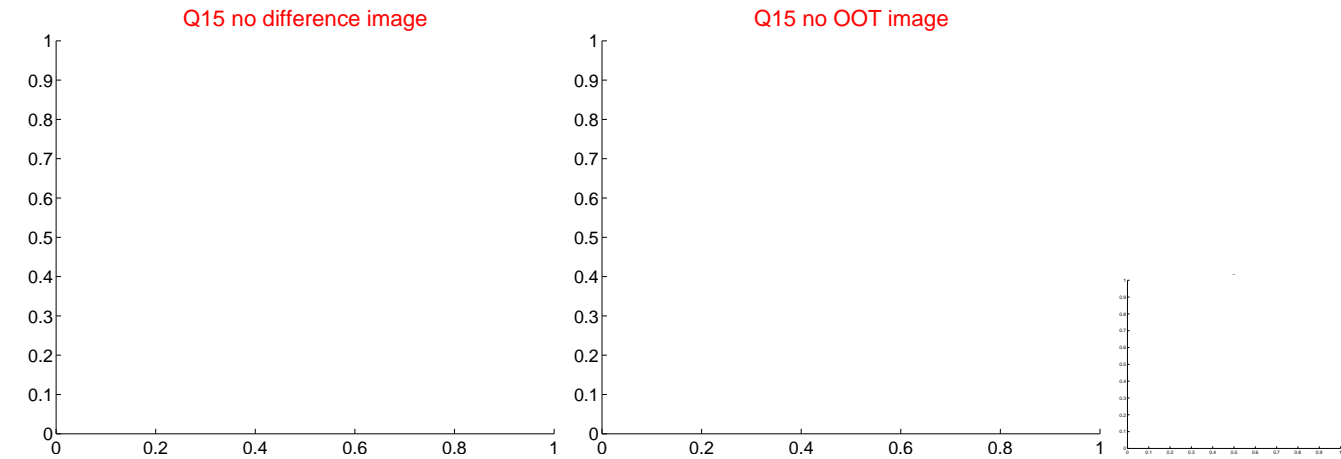
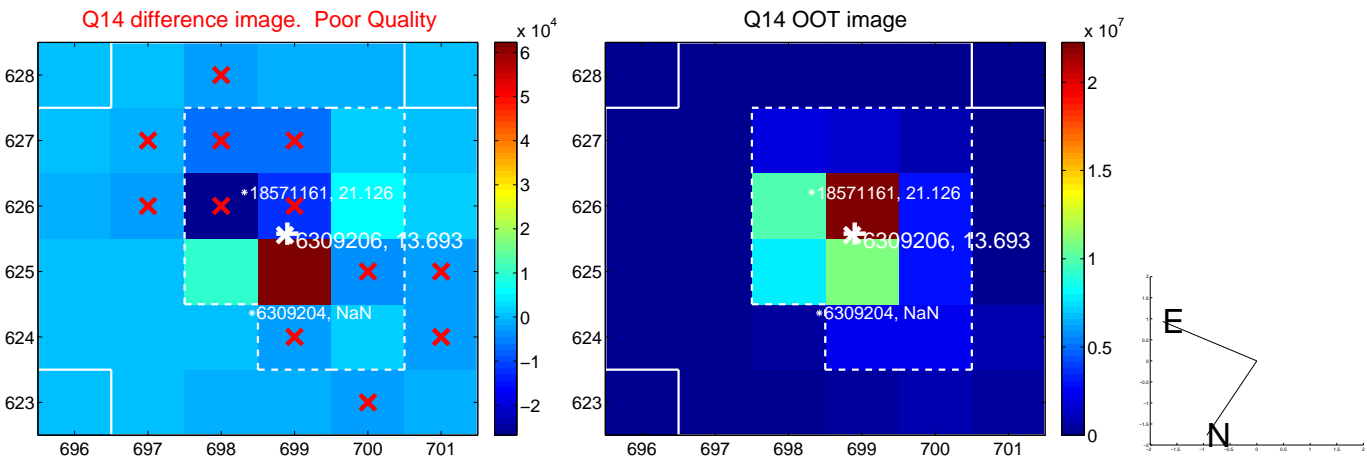
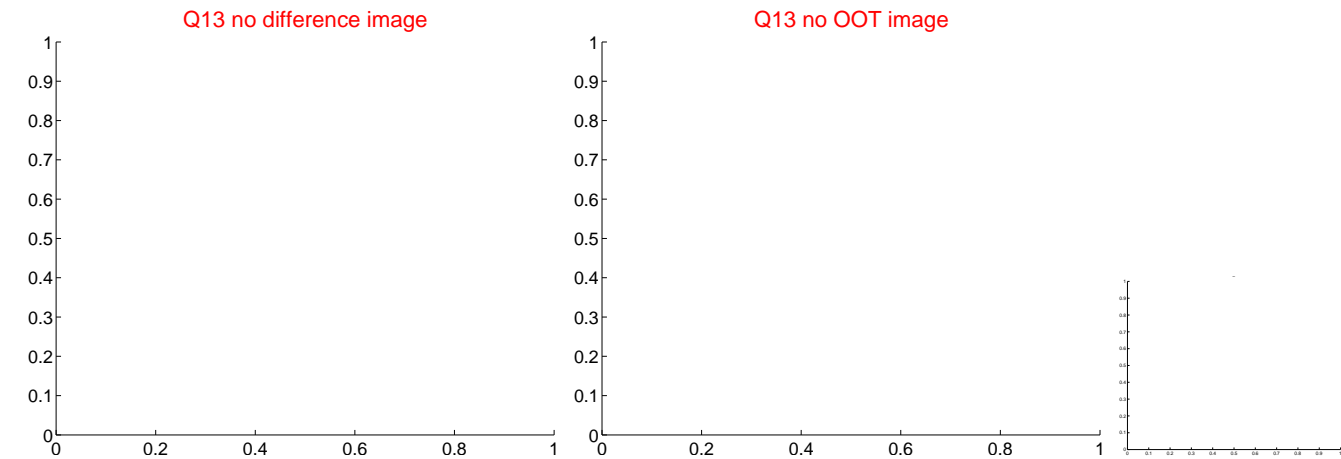
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



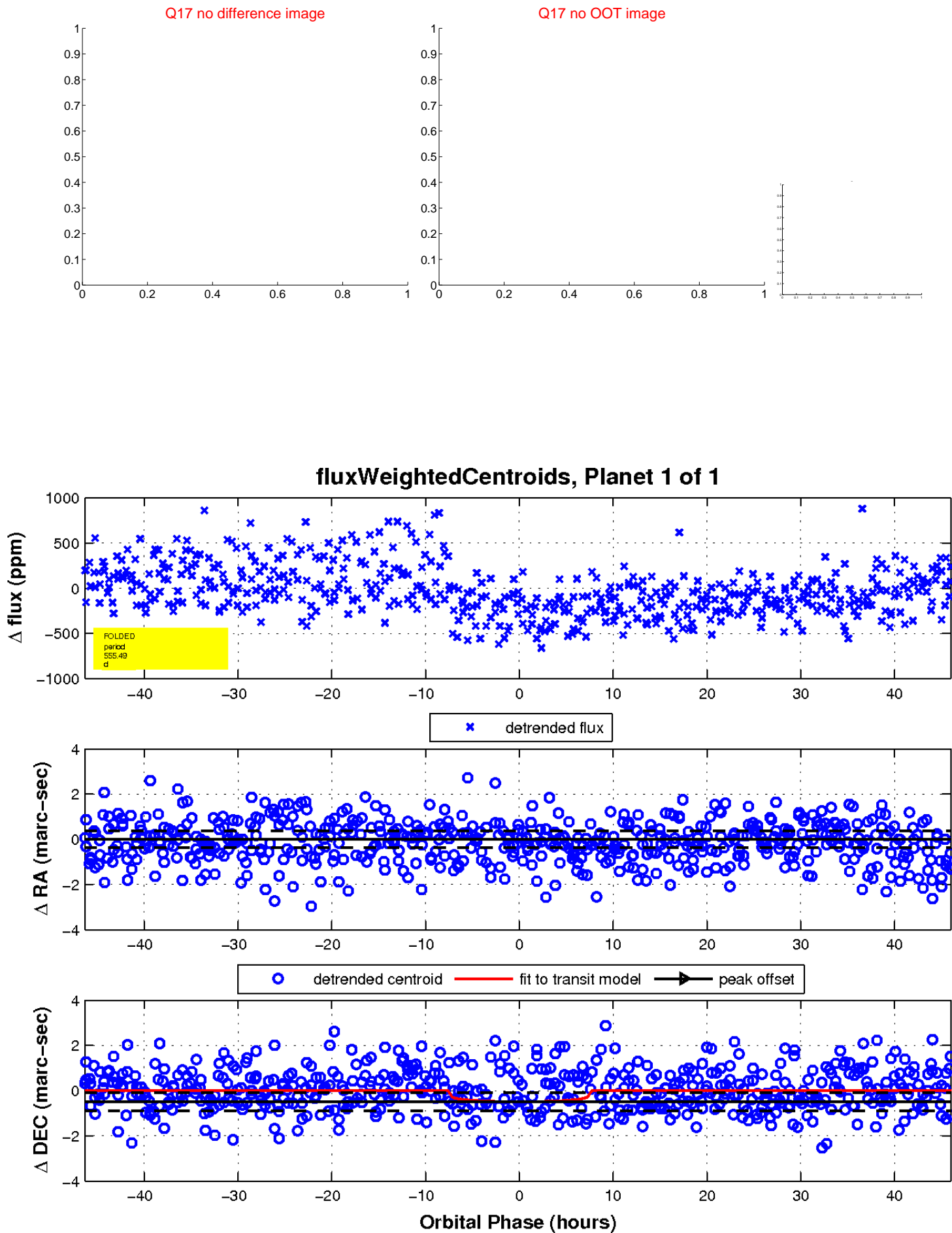
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UKIRT Image

Declination

