

KIC 007749890

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})
007749890-01	OBS	No	406.811872	338.256807	227.1	9.423	10.5	6.3	1.38	6007	2.42	1.92

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007749890-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—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.

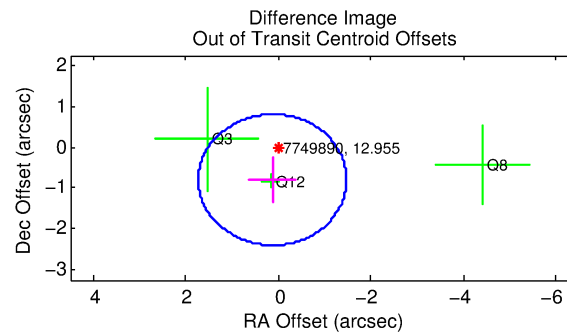
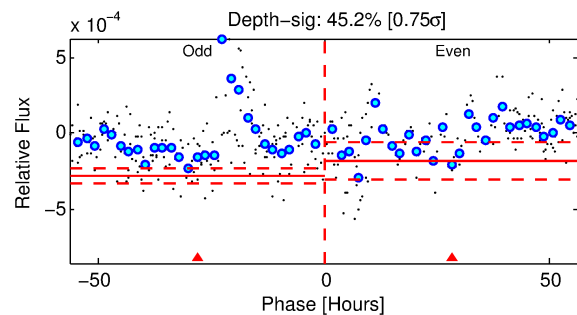
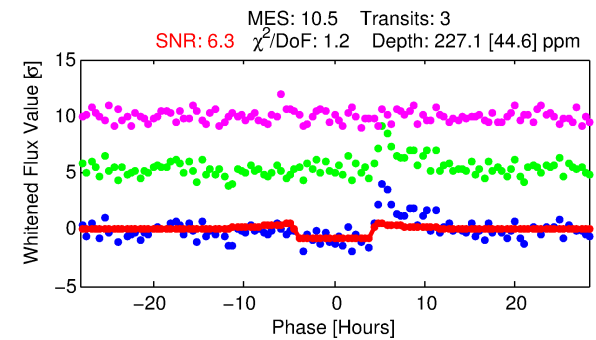
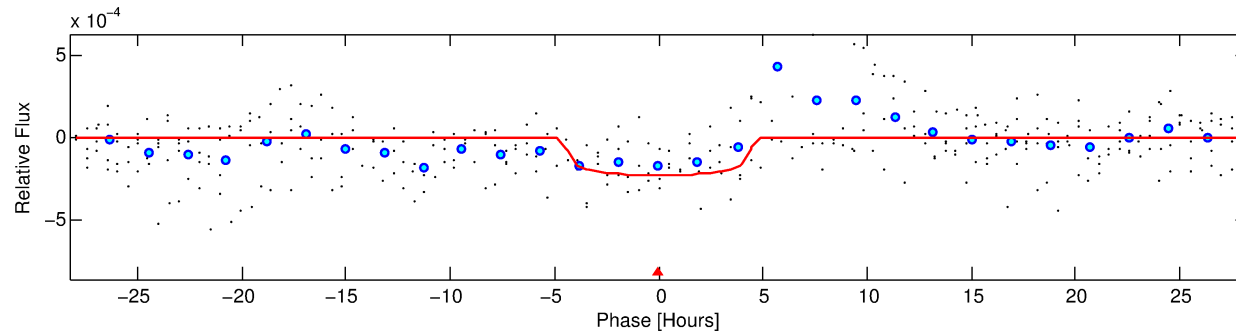
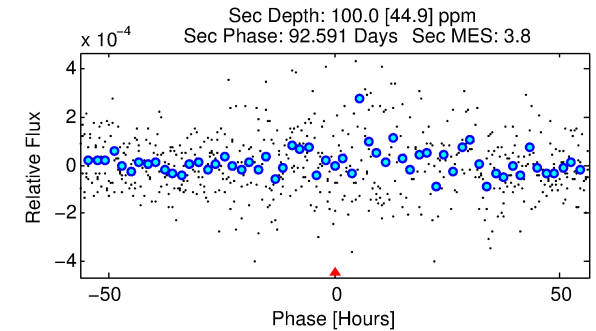
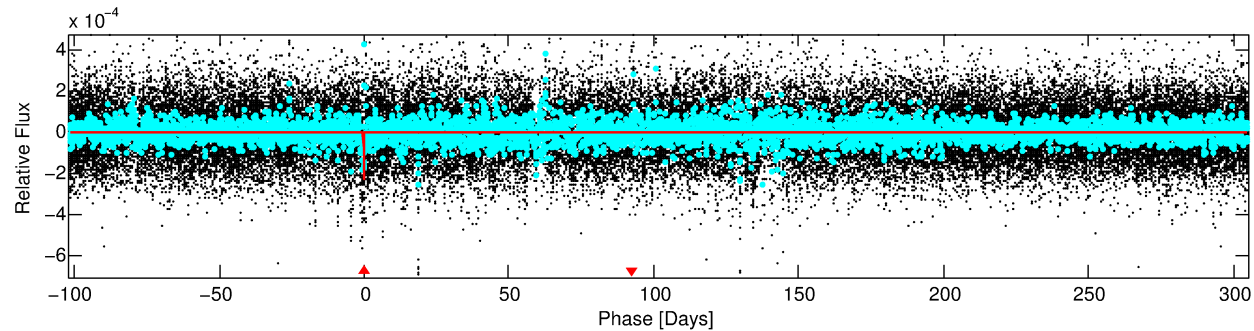
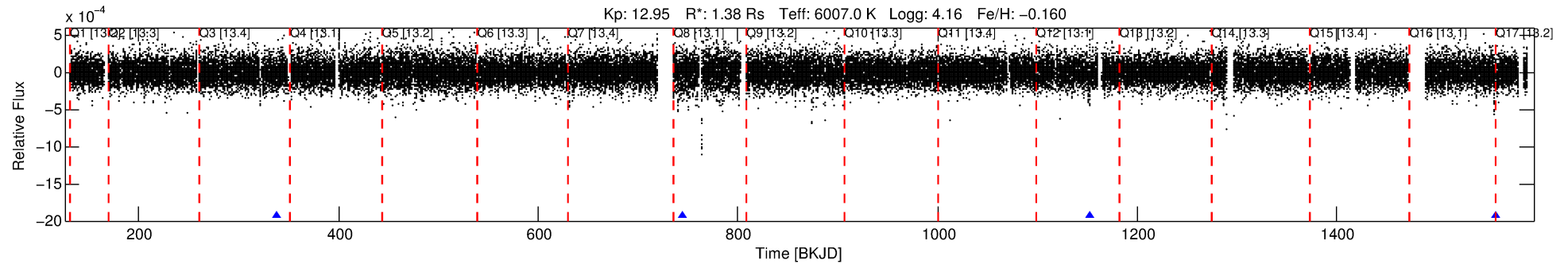
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007749890-01

No Significant Match Found

DV One-Page Summary

KIC: 7749890 Candidate: 1 of 1 Period: 406.812 d



DV Fit Results:

Period = 406.81187 [0.01121] d
Epoch = 338.2568 [0.0145] BKJD
Rp/R* = 0.0160 [0.0065]
a/R* = 166.88 [320.50]
b = 0.88 [0.50]
Seff = 1.92 [0.72]
Teq = 300 [28] K
Rp = 2.42 [1.14] Re
a = 1.0772 [0.2455] AU
Ag = 10937.43 [10910.07] [1.00σ]
Teffp = 4746 [1111] K [4.00σ]

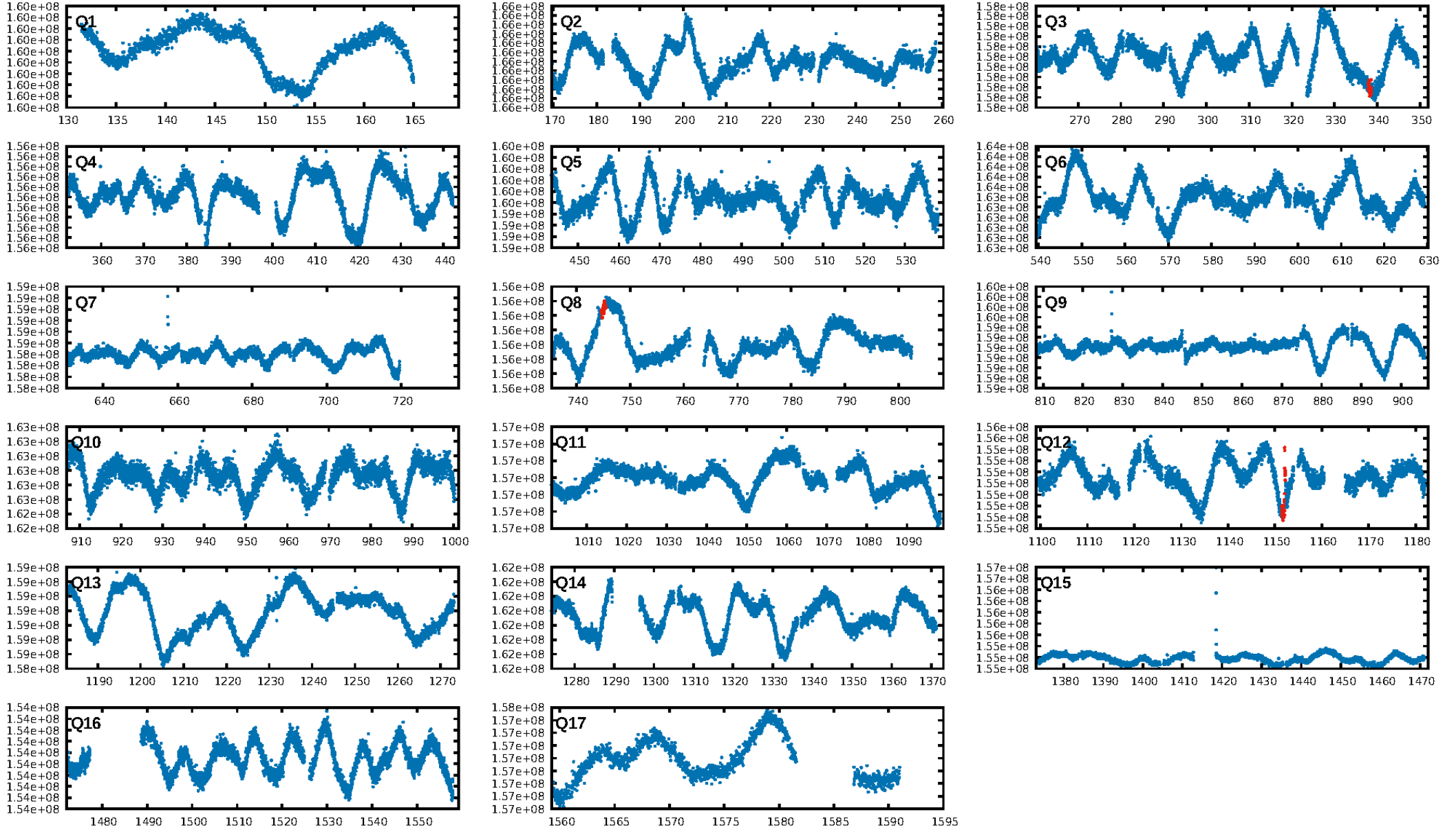
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.9%
ModelChiSquareGof-sig: 85.4%
Bootstrap-pfa: 1.13e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -3.211
Centroid-sig: 19.8%
Centroid-so: 1.427 arcsec [1.02σ]
OotOffset-rm: 0.809 arcsec [1.52σ]
OotOffset-st: 0/1/2/0 [3]
KicOffset-rm: 0.703 arcsec [1.32σ]
KicOffset-st: 0/1/2/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

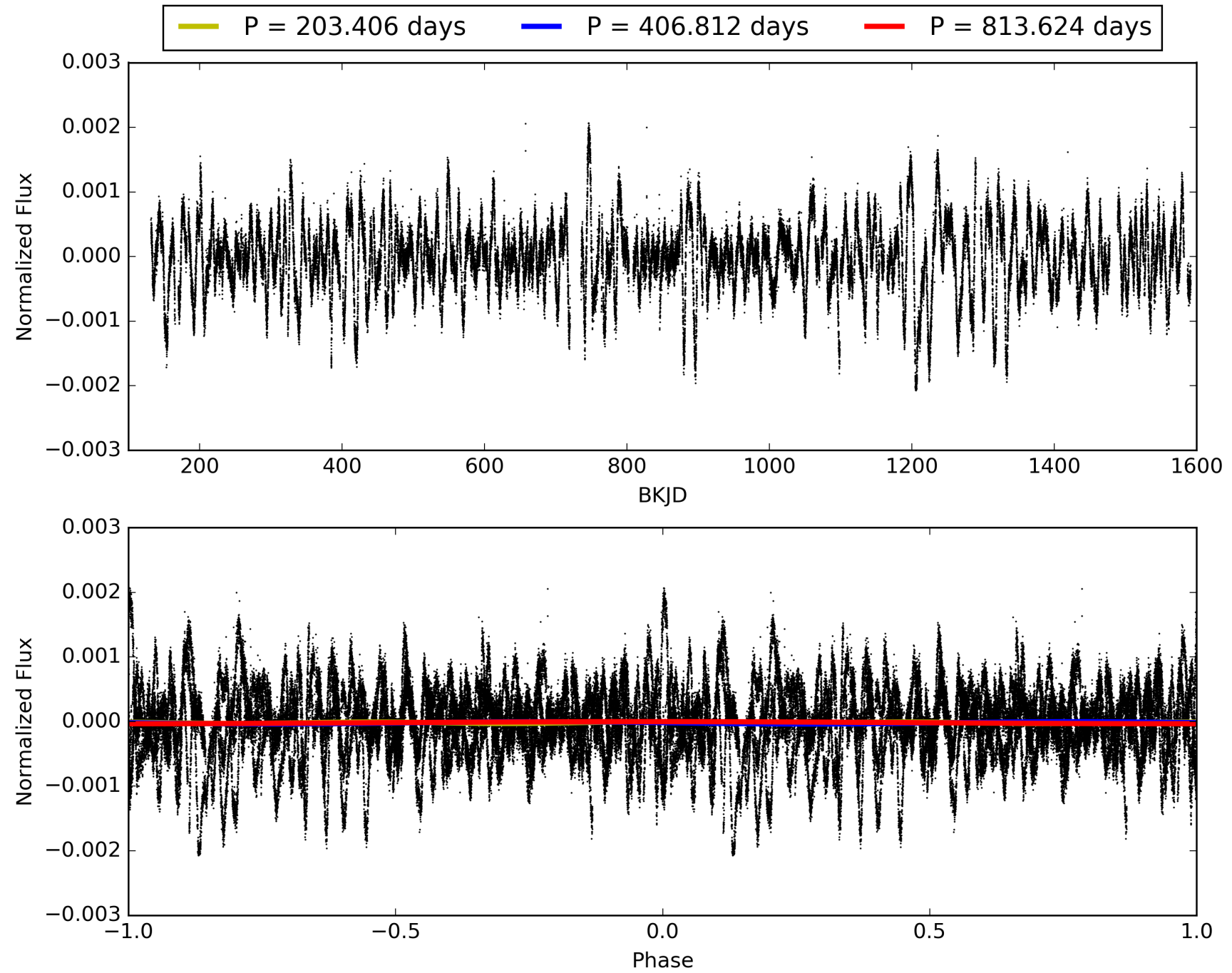
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:24:44 Z

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

TCE 007749890-01, PDC Light Curves

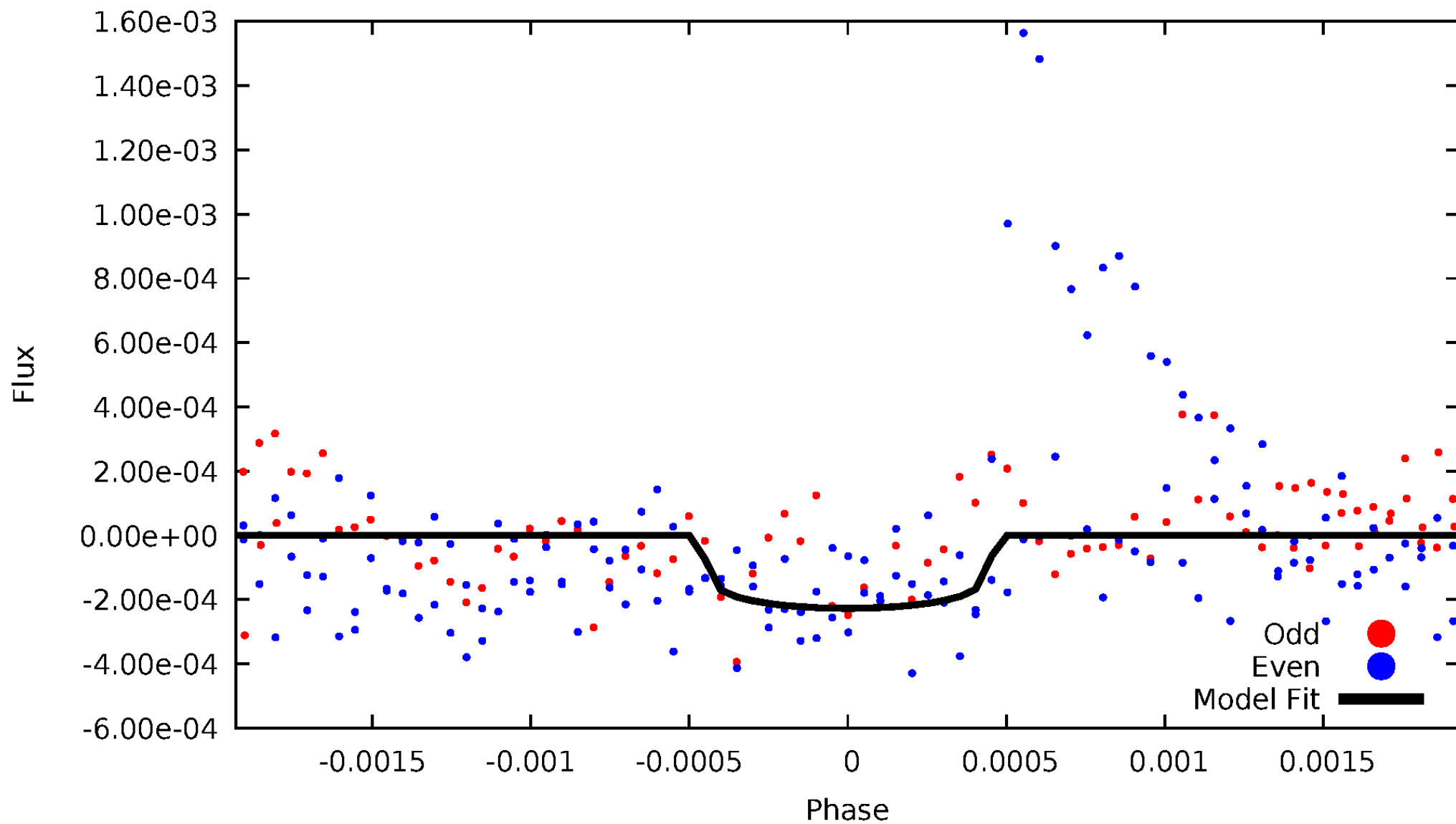


TCE 007749890-01



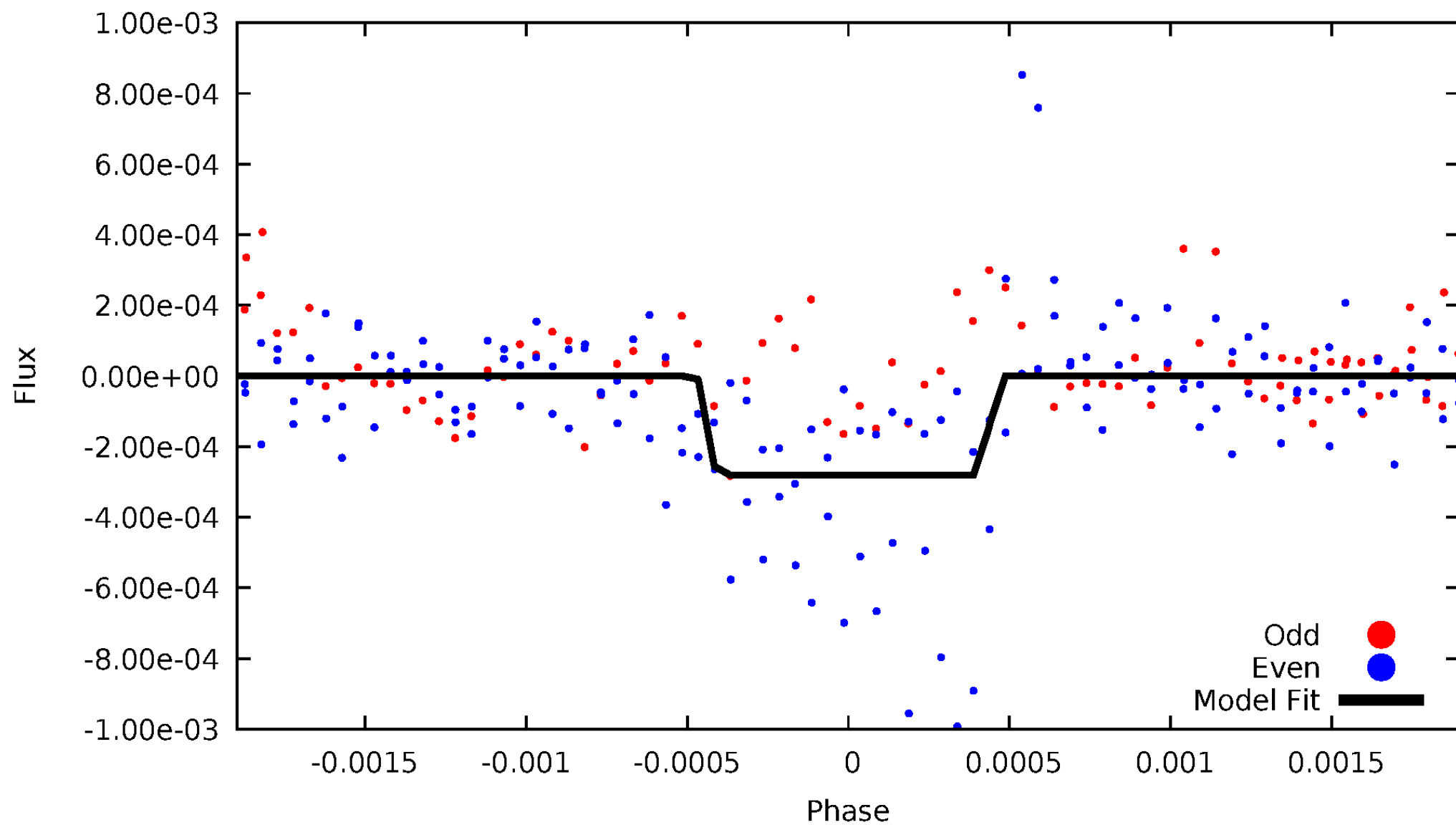
DV Odd/Even

TCE 007749890-01

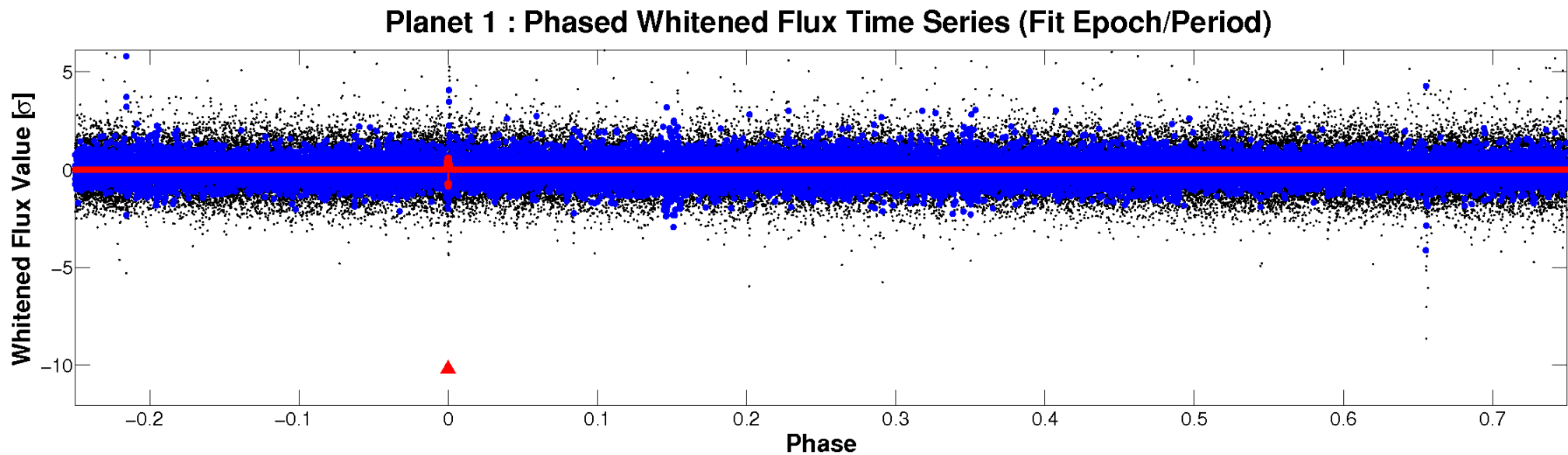
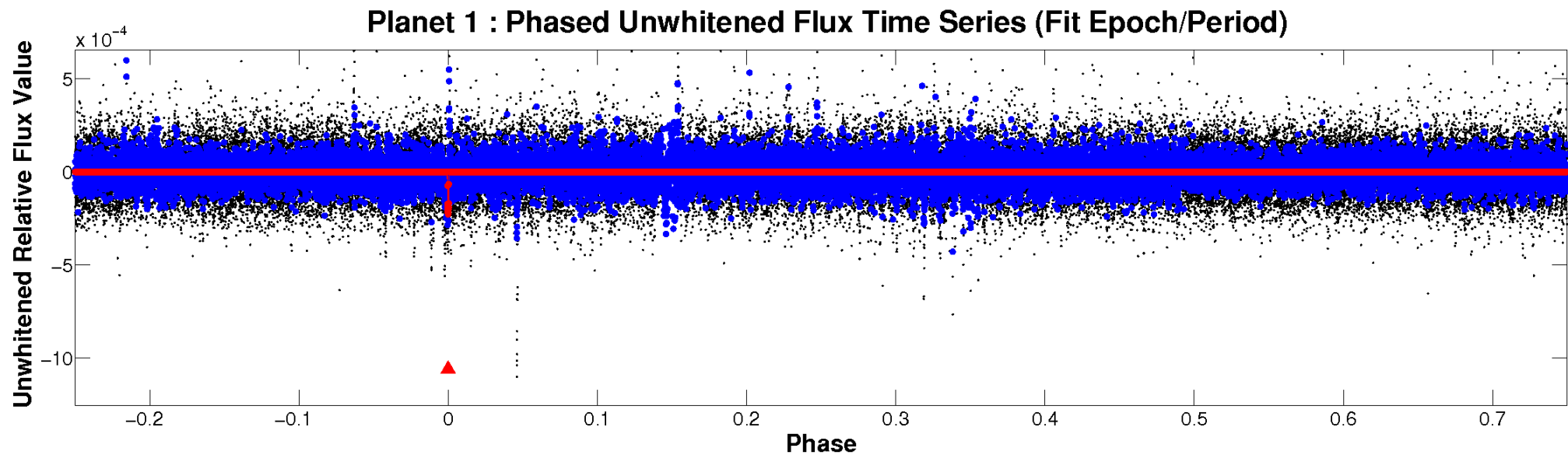


ALT Odd/Even

TCE 007749890-01

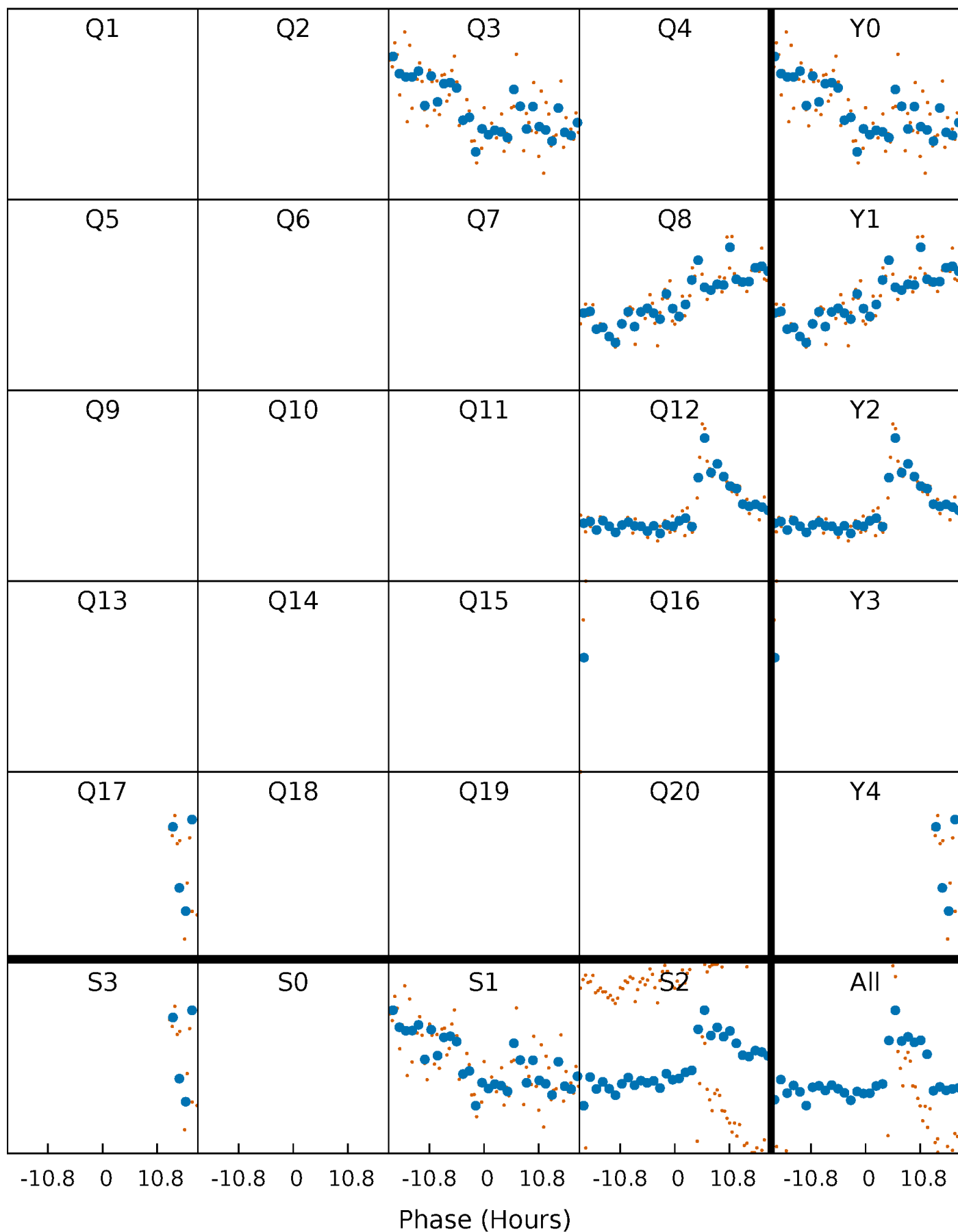


Non-Whitened Vs. Whitened Light Curve



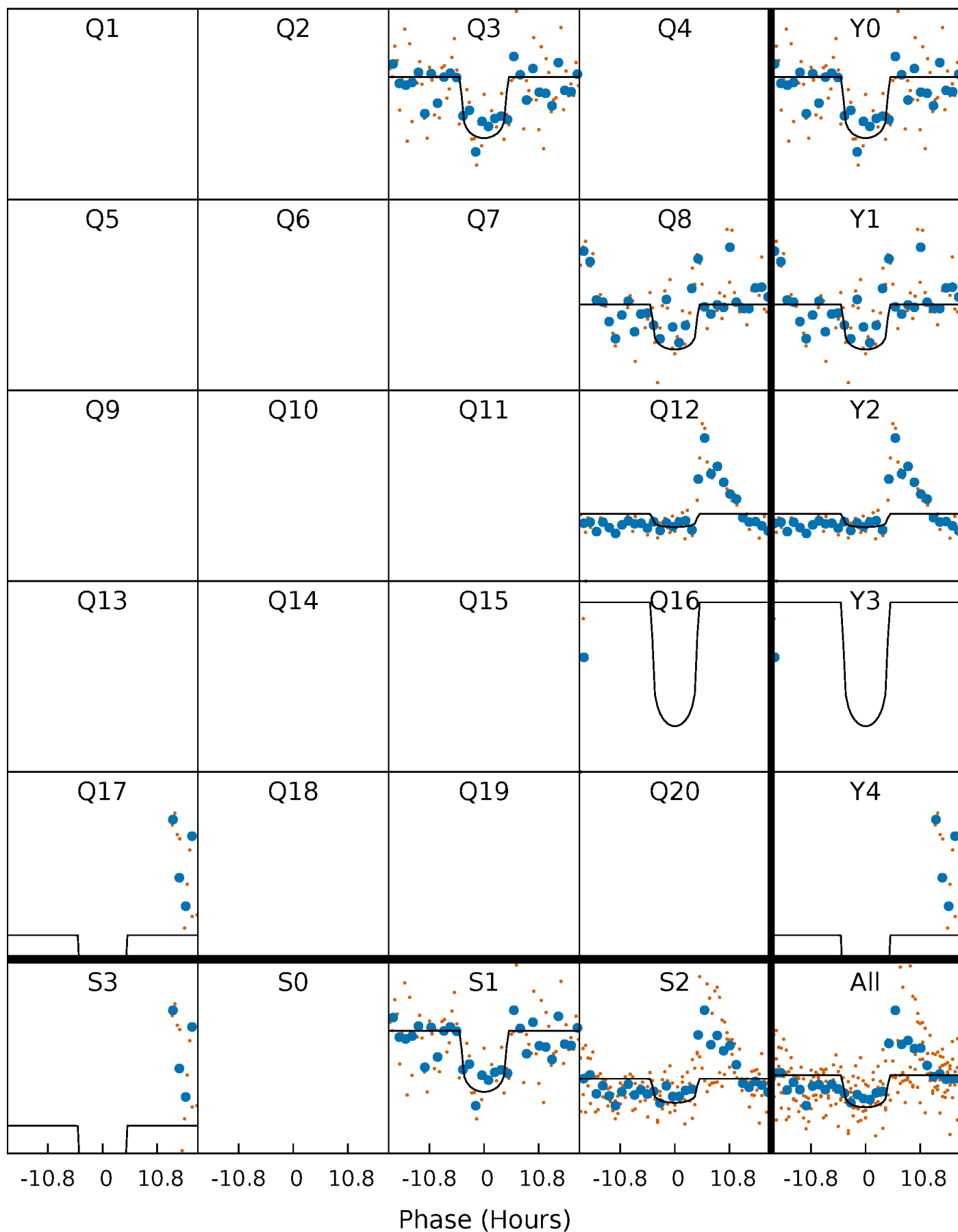
PDC Quarter-Phased Transit Curves

TCE 007749890-01 P=406.811872 Days $T_0=338.256807$ (BKJD)



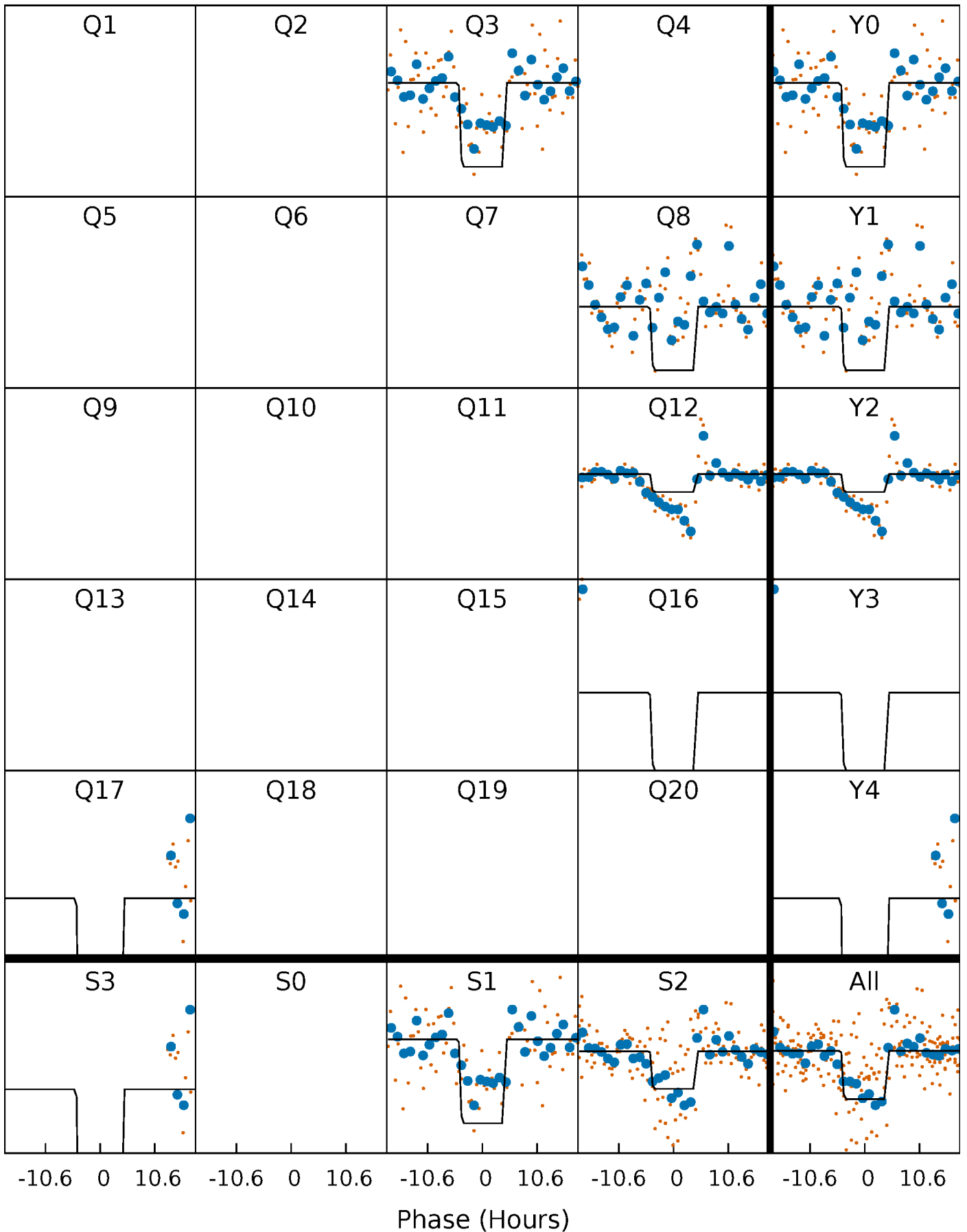
DV Quarter-Phased Transit Curves

TCE 007749890-01 P=406.811872 Days $T_0=338.256807$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

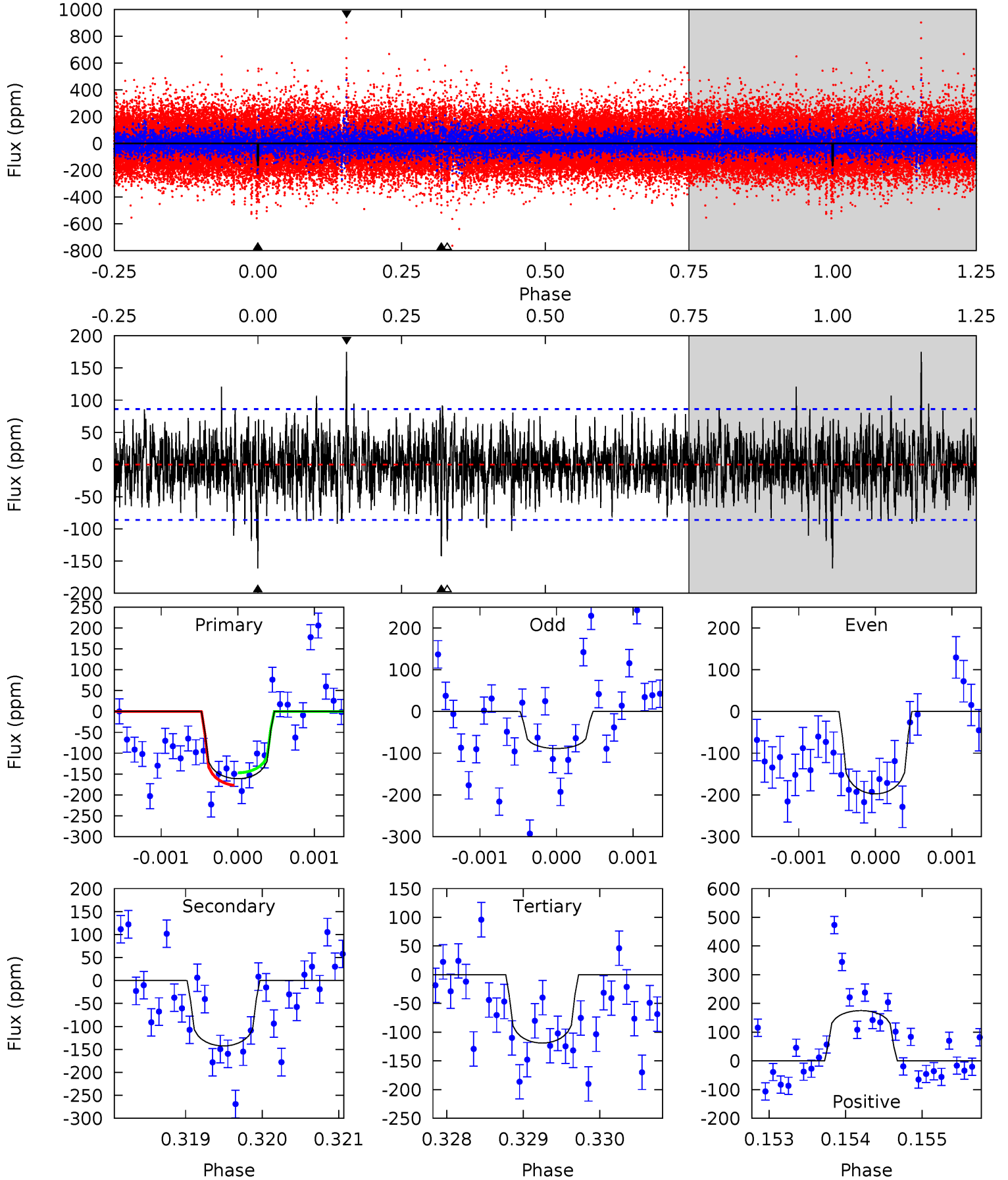
TCE 007749890-01 P=406.811746 Days $T_0=338.263395$ (BKJD)



DV Model-Shift Uniqueness Test

007749890-01, P = 406.811872 Days, E = 338.256807 Days

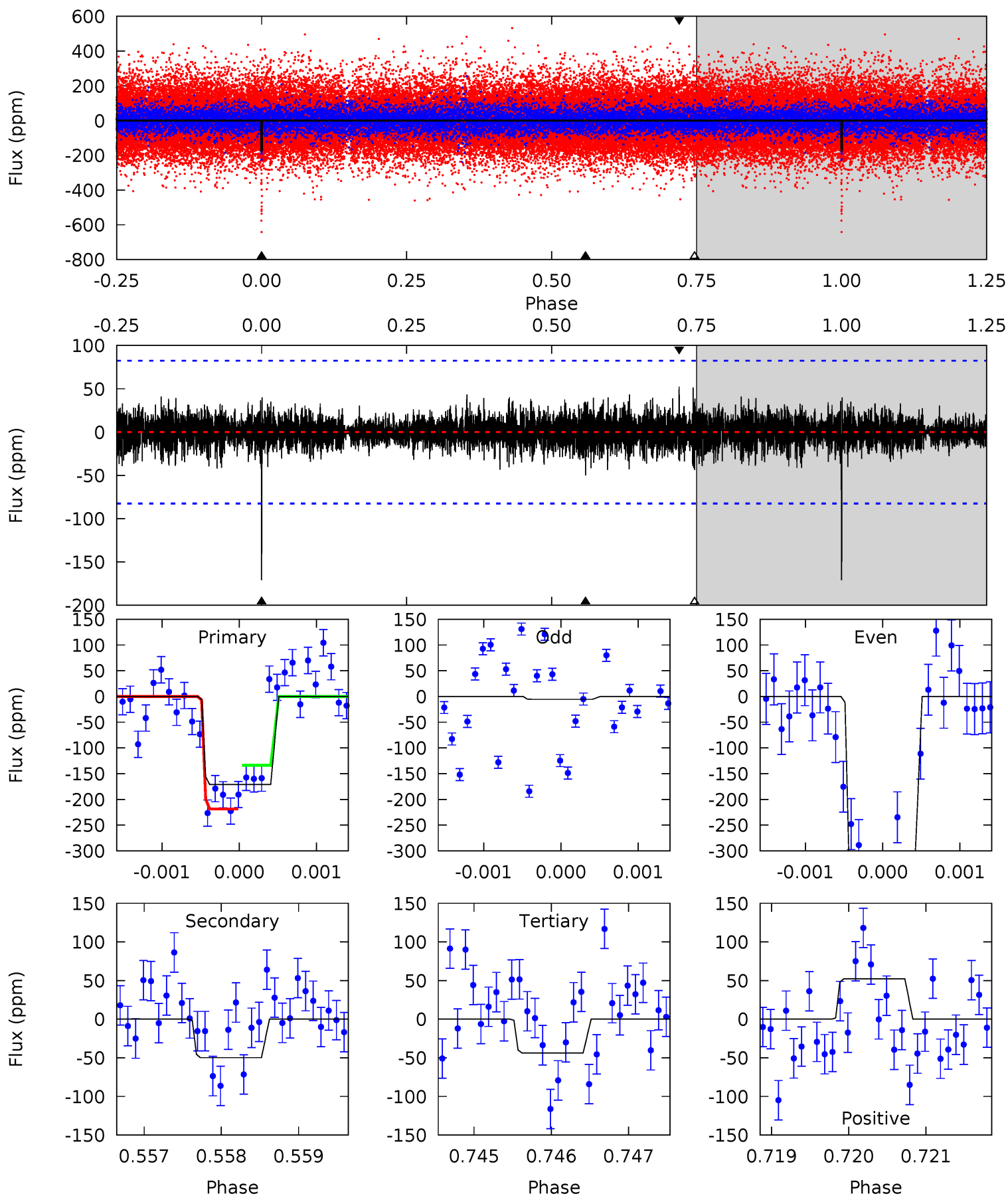
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	9.01	7.53	11.1	5.44	3.28	1.93	2.67	-0.88	1.49	-2.07	3.15	0.87	0.52	0.95



Alt Model-Shift Uniqueness Test

007749890-01, P = 406.811746 Days, E = 338.263395 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	3.30	2.90	3.46	5.46	3.30	0.81	8.43	7.86	0.40	-0.16	11.3	1.69	0.23	2.81



Stellar Parameters For KIC 007749890

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6007^{+164}_{-164}	$4.160^{+0.210}_{-0.123}$	$-0.160^{+0.300}_{-0.300}$	$1.382^{+0.300}_{-0.334}$	$1.009^{+0.160}_{-0.116}$	$0.538^{+0.607}_{-0.212}$
	+3%/-3%	+5%/-3%	+188%/-188%	+22%/-24%	+16%/-11%	+113%/-39%
Source	PHO1	FLK73	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 007749890-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-142 ± 16	$2.41^{+1.04}_{-1.04}$	418^{+26}_{-26}	5253^{+1489}_{-724}	16087^{+32621}_{-8412}
Alt.	-50 ± 15	$2.46^{+1.15}_{-1.01}$	416^{+25}_{-26}	4133^{+952}_{-498}	5117^{+10005}_{-2815}

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

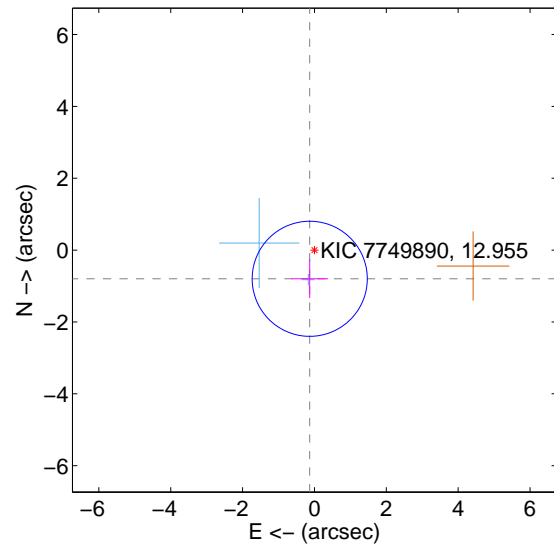
Supplemental centroid analysis for 007749890-01. Kepler magnitude: 12.96. Transit SNR 6.26

There are 2 quarters with good PRF difference image offsets

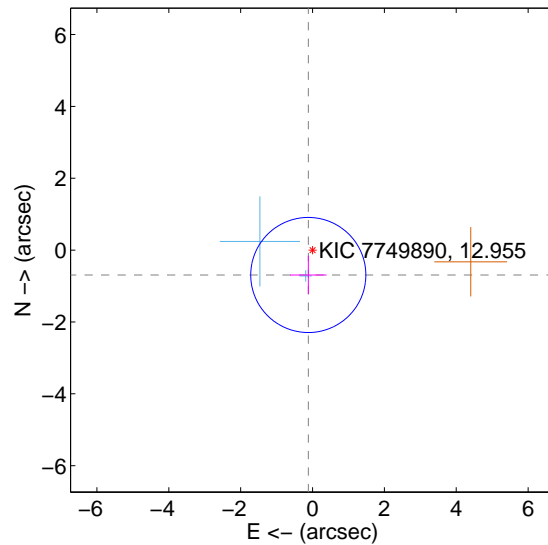
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.809 ± 0.534	1.52	0.131 ± 0.510	-0.799 ± 0.535
PRF-fit source offset from KIC position	0.703 ± 0.534	1.32	0.118 ± 0.510	-0.693 ± 0.535
photometric centroid source offset	1.43 ± 1.40	1.02	-0.34 ± 1.39	-1.39 ± 1.40

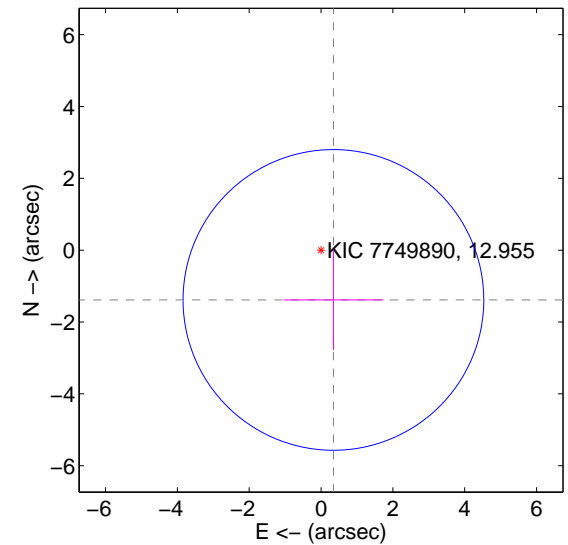
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

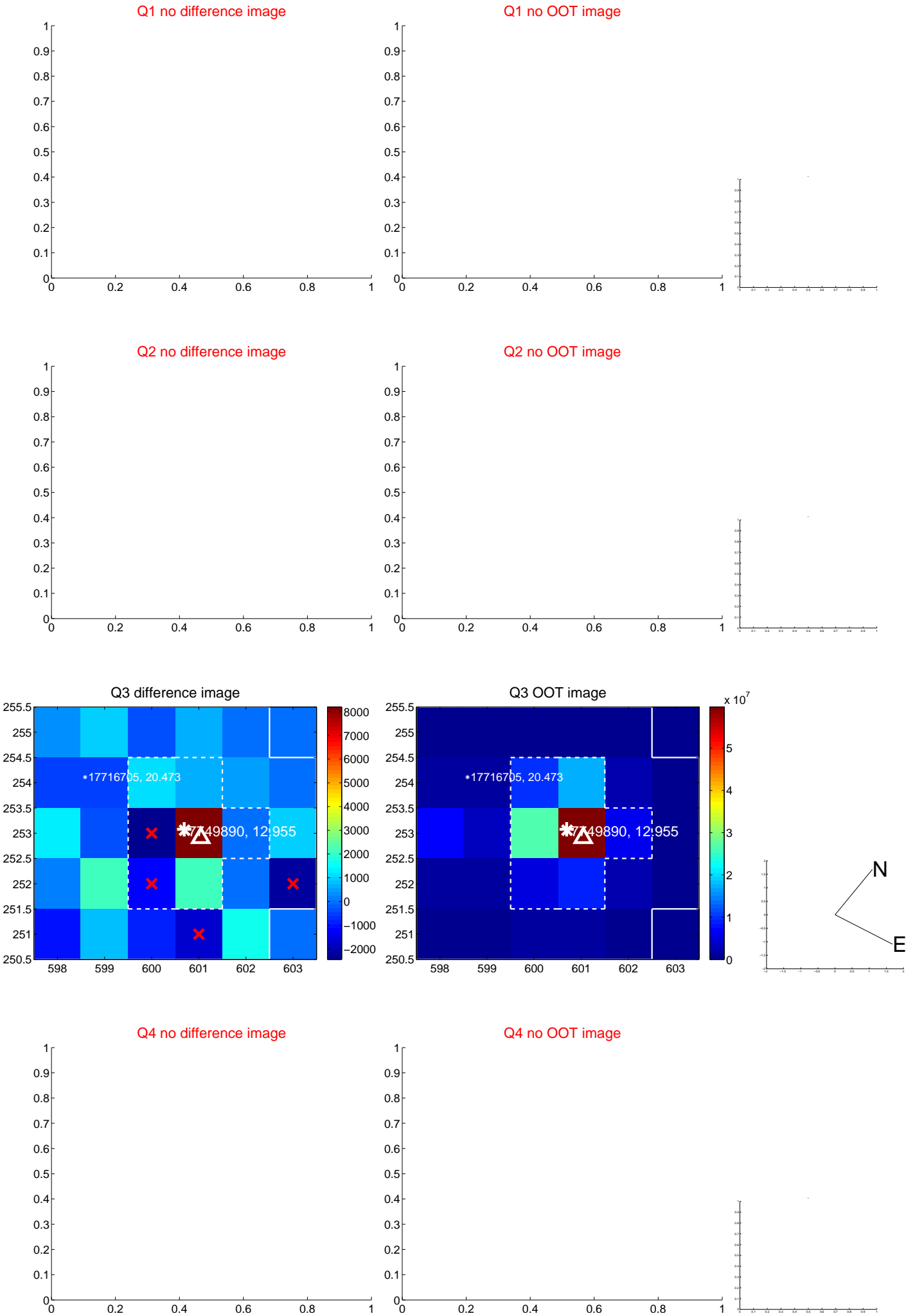


offset from photometric centroids

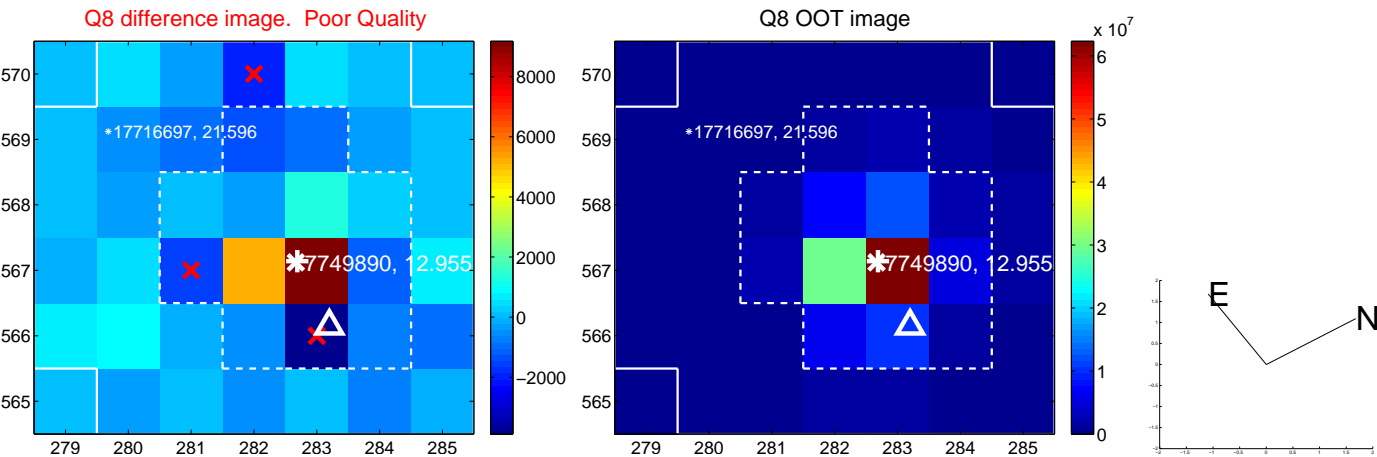
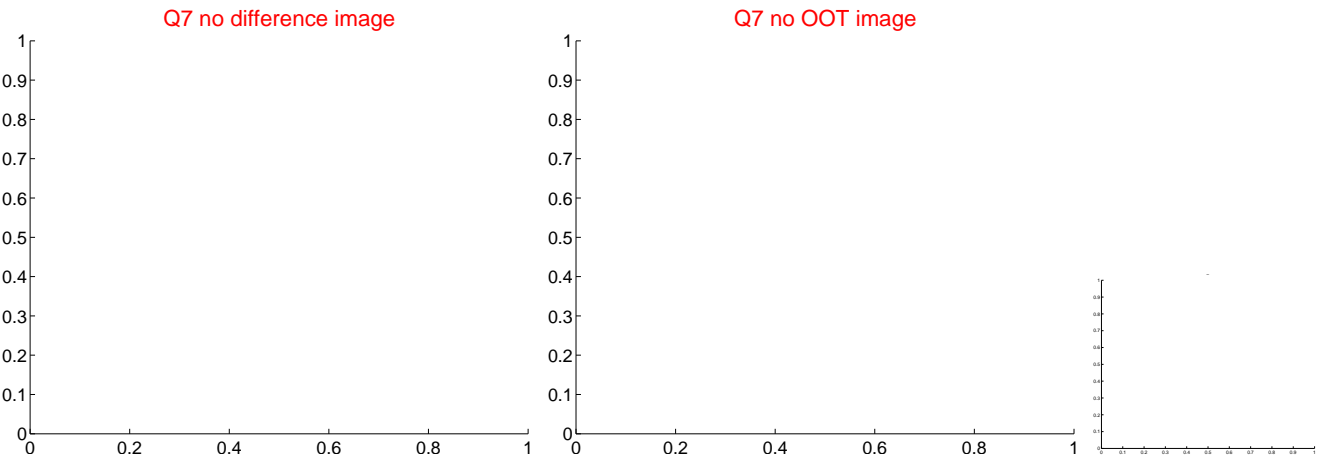
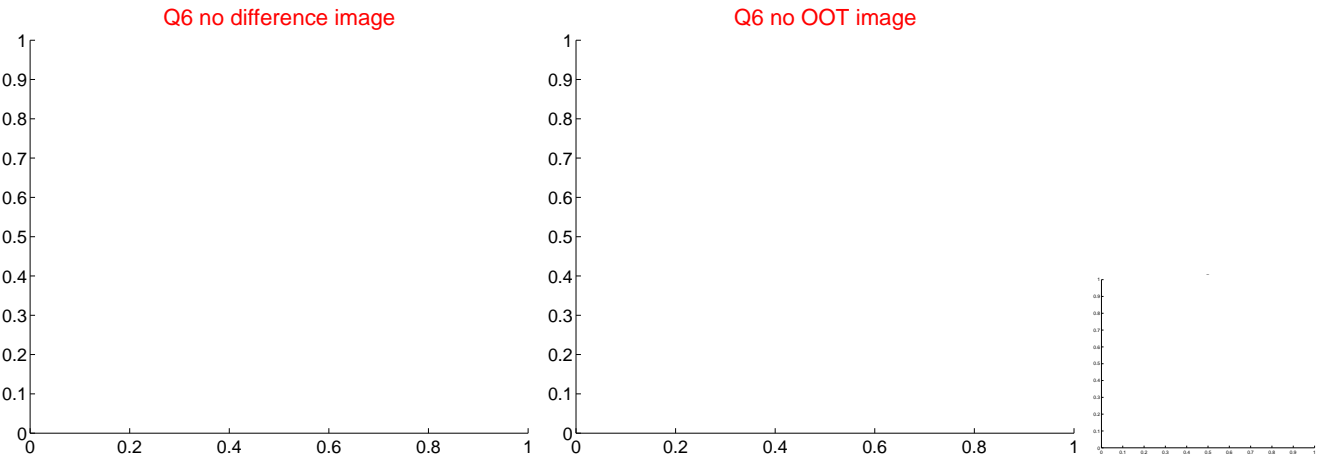
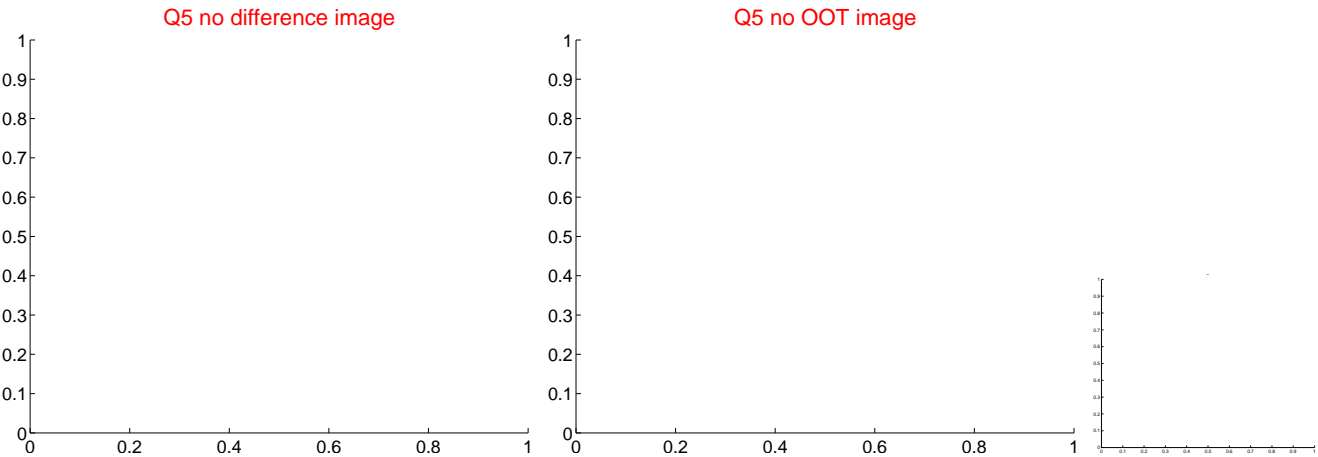


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

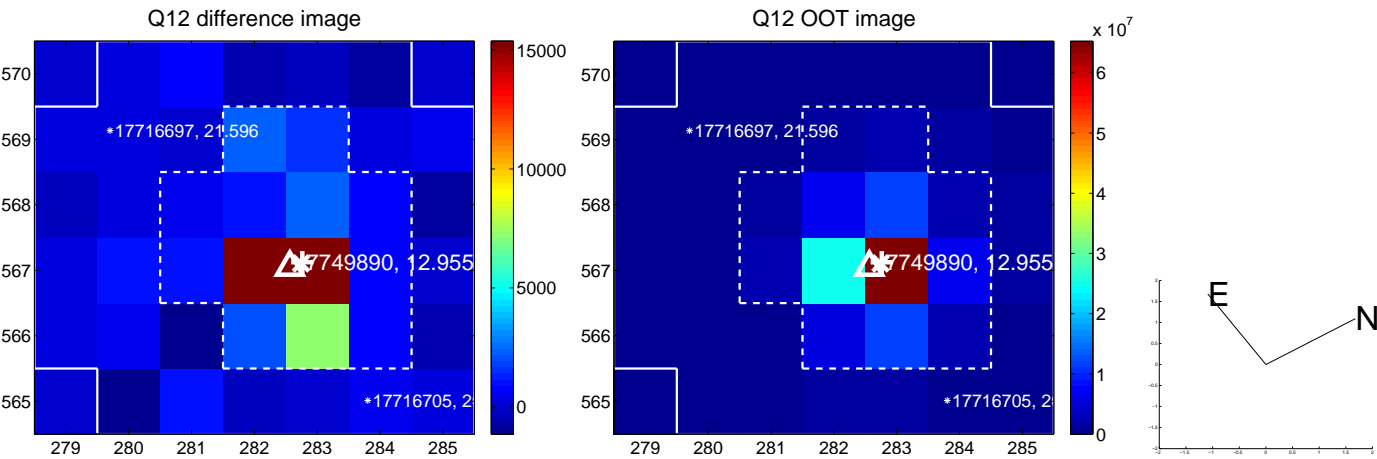
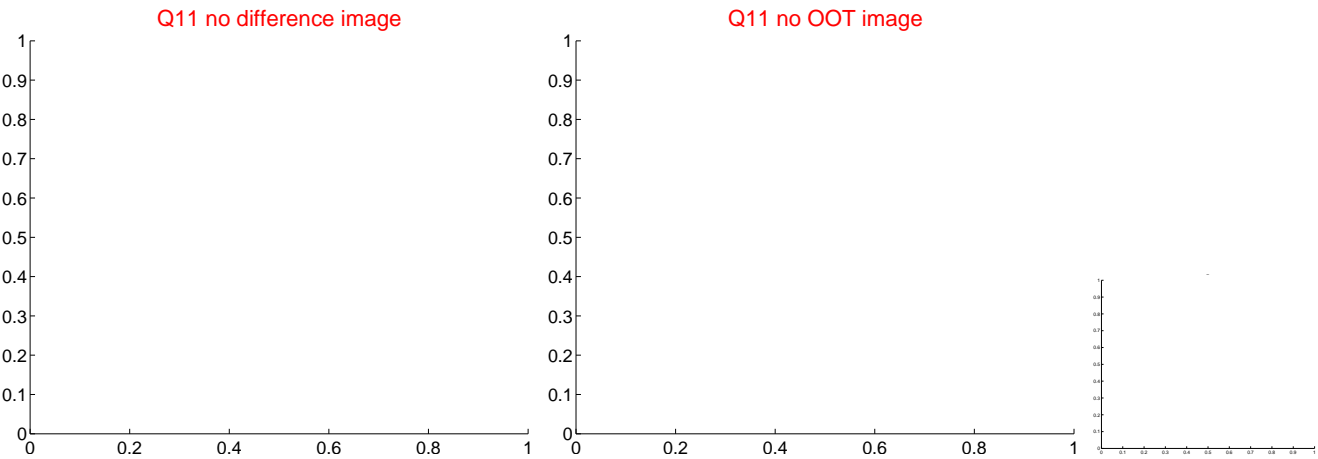
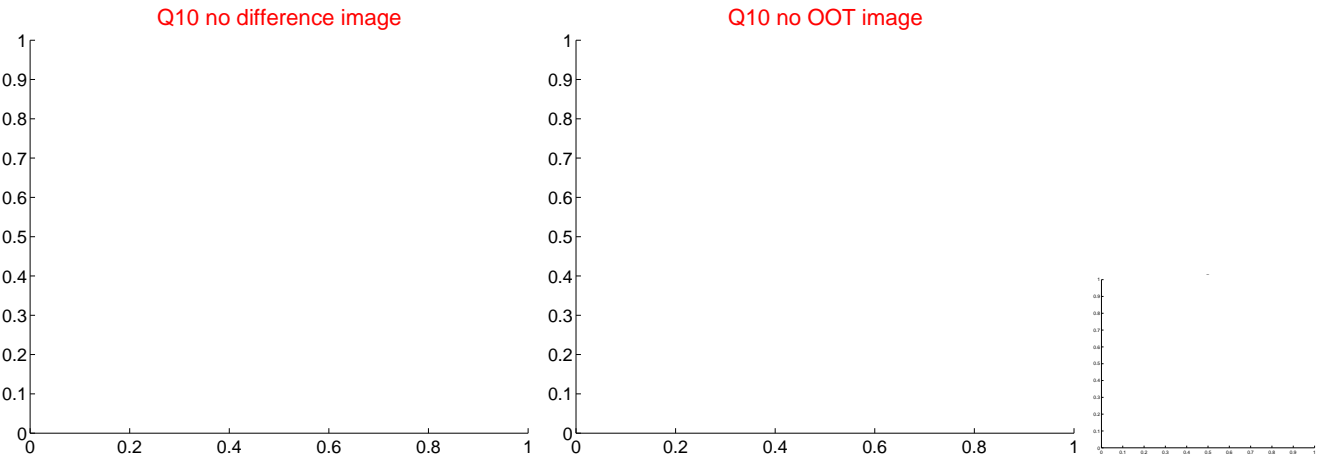
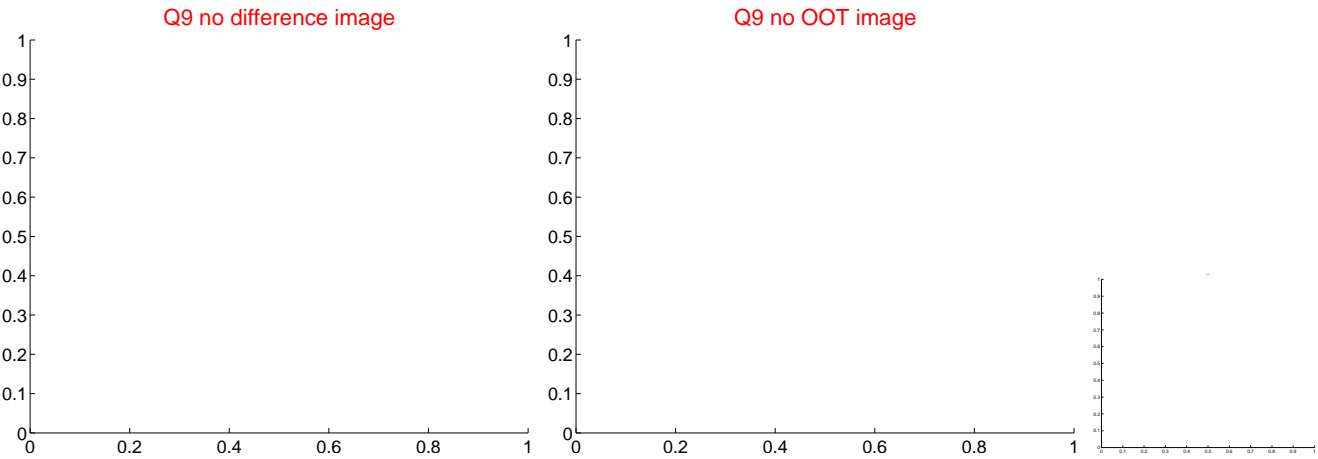
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



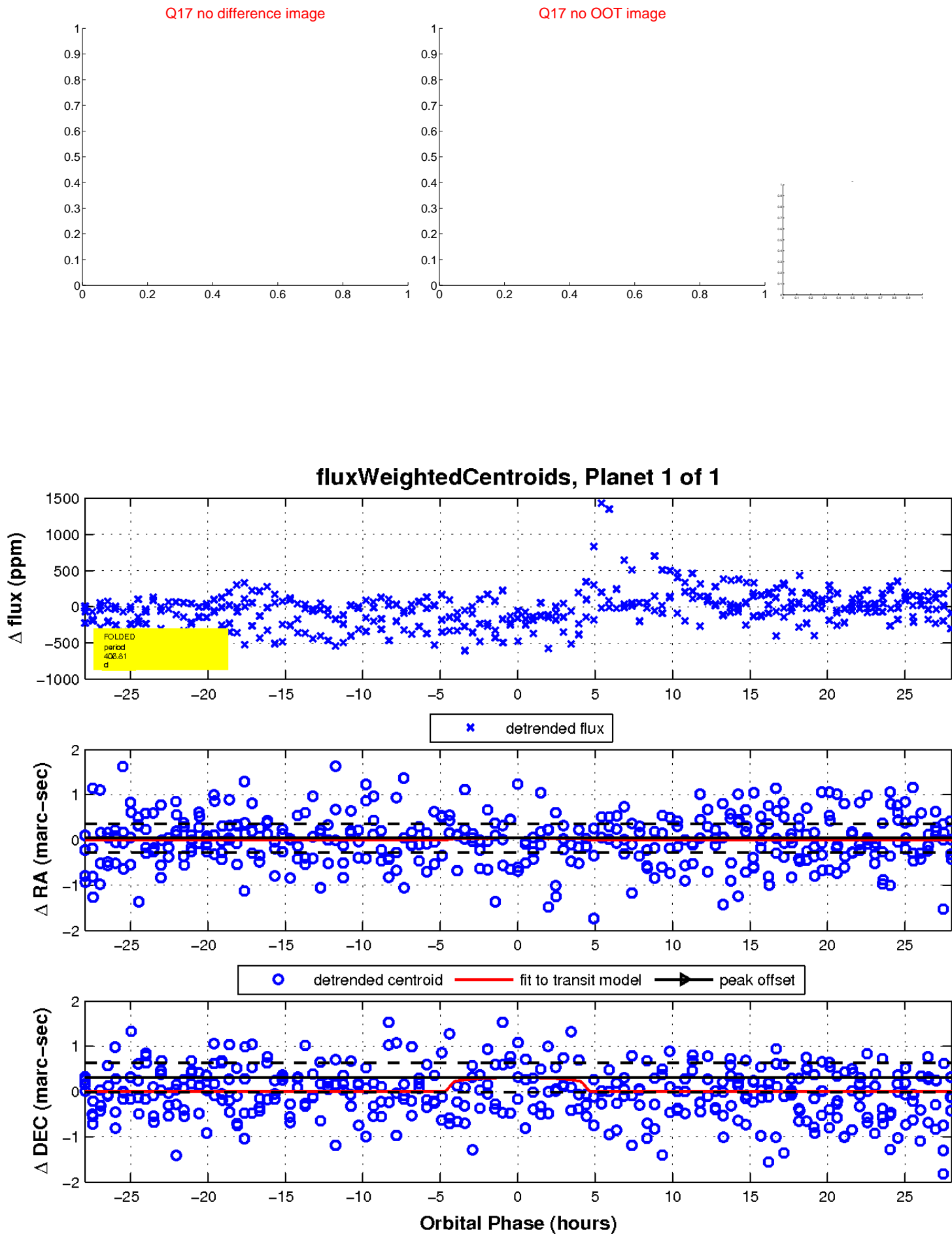
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

