

KIC 005596504

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})
005596504-01	OBS	No	447.165967	154.613477	180.9	4.279	7.1	6.9	2.58	6194	3.95	5.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005596504-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—ALL_TRANS_CHASES—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.

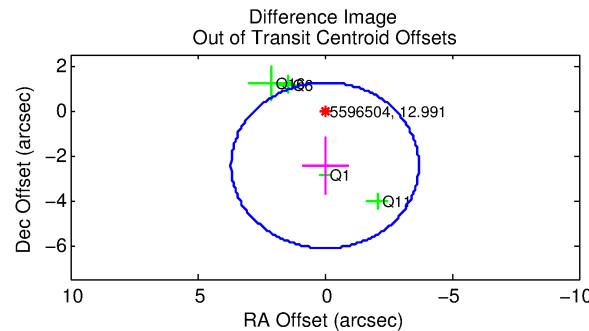
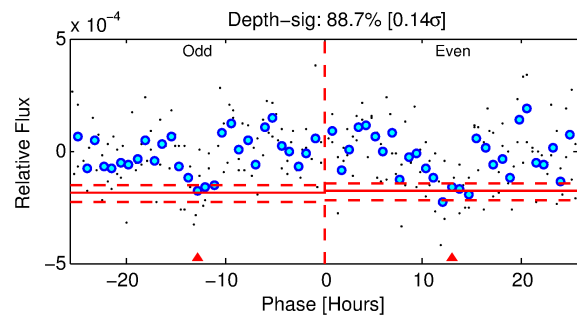
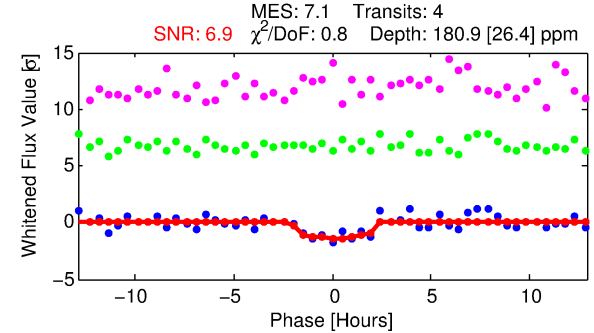
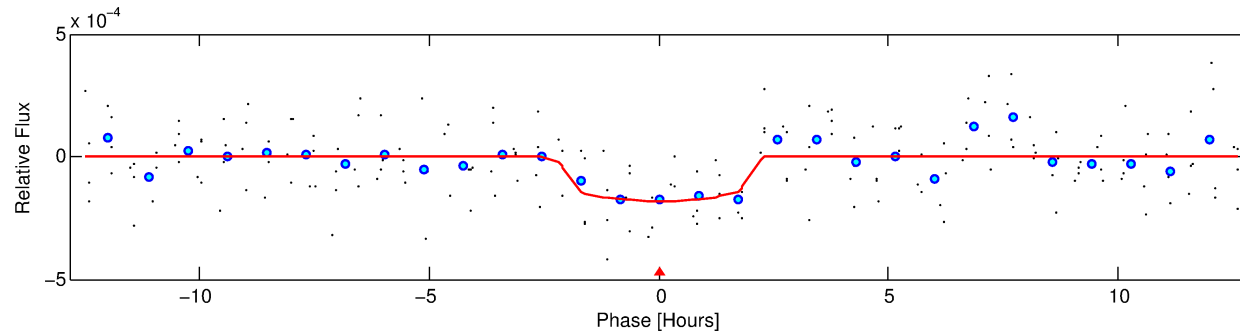
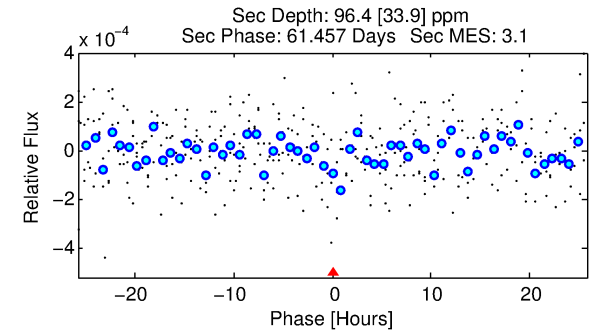
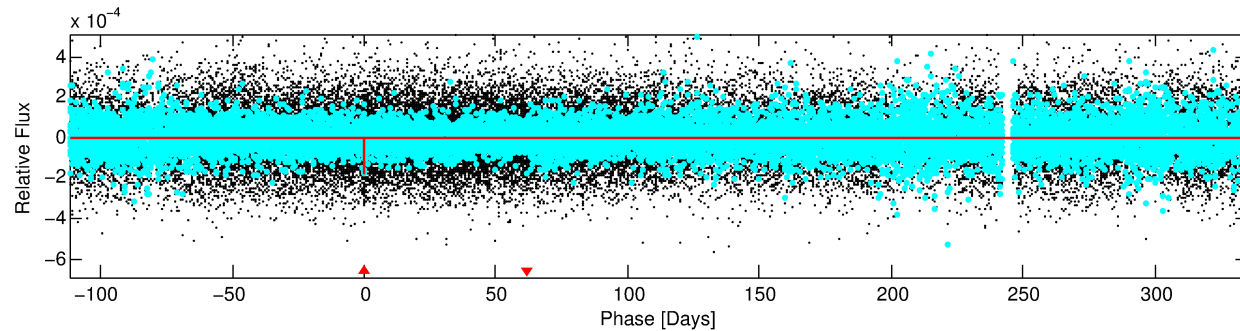
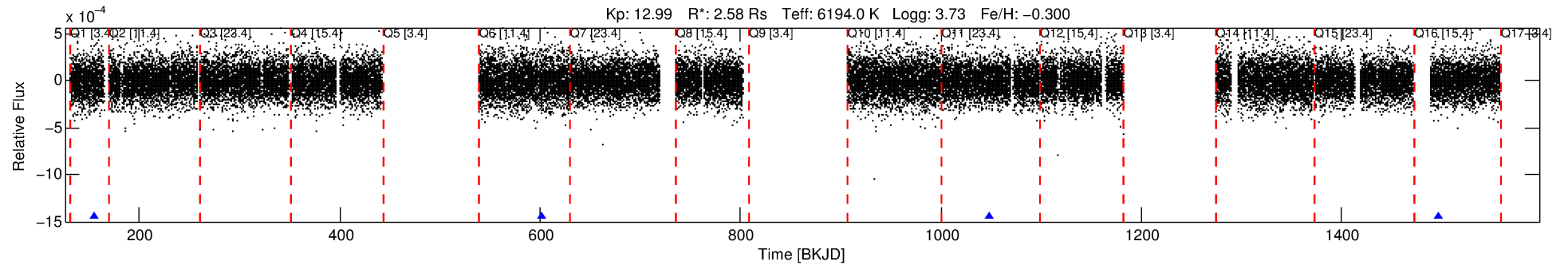
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005596504-01

No Significant Match Found

DV One-Page Summary

KIC: 5596504 Candidate: 1 of 1 Period: 447.166 d



DV Fit Results:

Period = 447.16597 [0.00725] d
Epoch = 154.6135 [0.0149] BKJD
Rp/R* = 0.0140 [0.0097]
a/R* = 433.22 [1616.32]
b = 0.86 [1.17]
Seff = 5.59 [3.21]
Teq = 392 [56] K
Rp = 3.95 [3.13] Re
a = 1.2540 [0.4492] AU
Ag = 5343.19 [8222.36] [0.65σ]
Teffp = 5183 [1861] K [2.57σ]

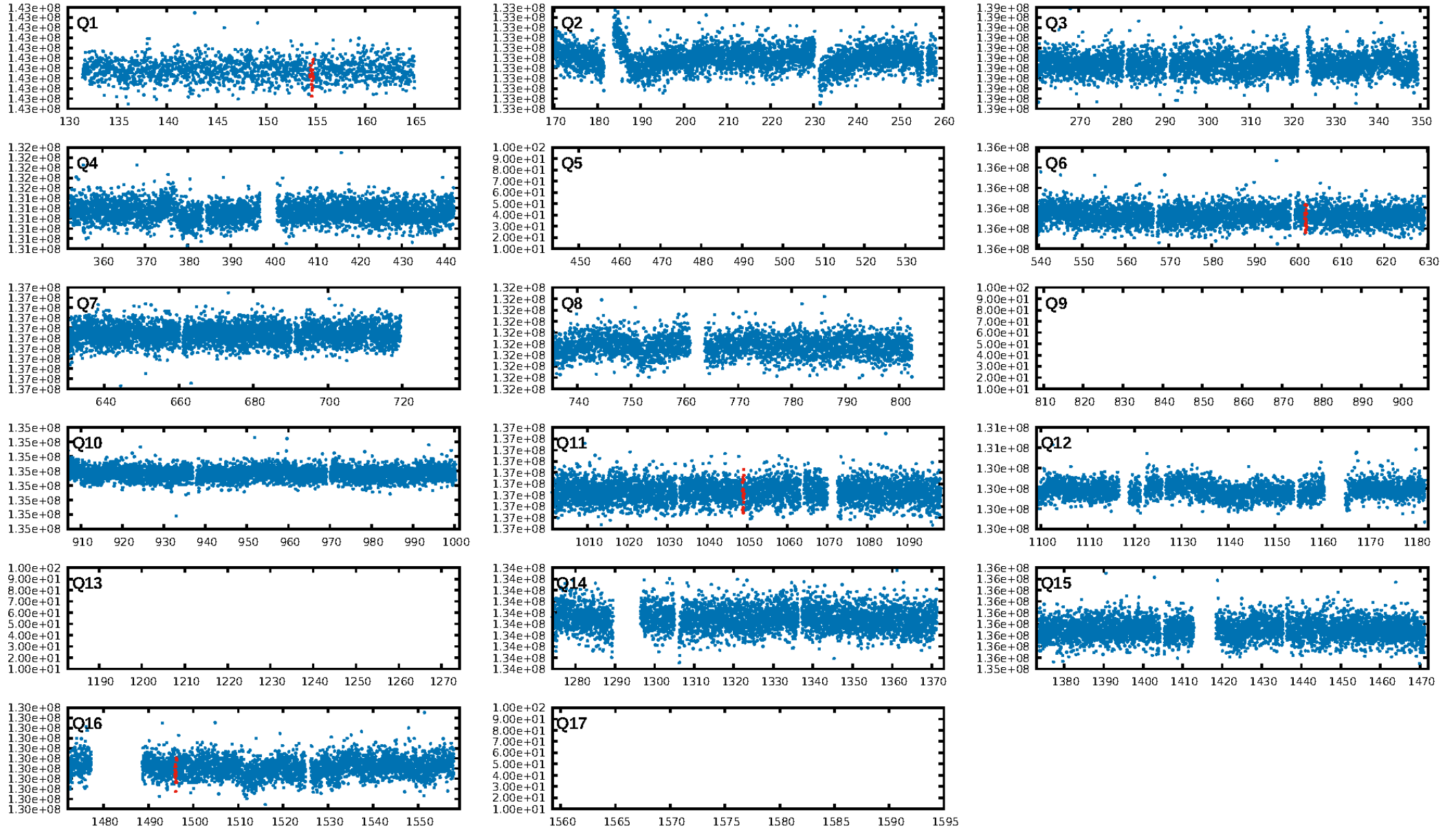
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 92.4%
ModelChiSquareGof-sig: 99.4%
Bootstrap-pfa: 7.28e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.481
Centroid-sig: 26.2%
Centroid-so: 2.251 arcsec [1.06σ]
OotOffset-rm: 2.443 arcsec [1.99σ]
KicOffset-rm: 2.600 arcsec [2.16σ]
OotOffset-st: 1/1/1/1 [4]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [4/4]

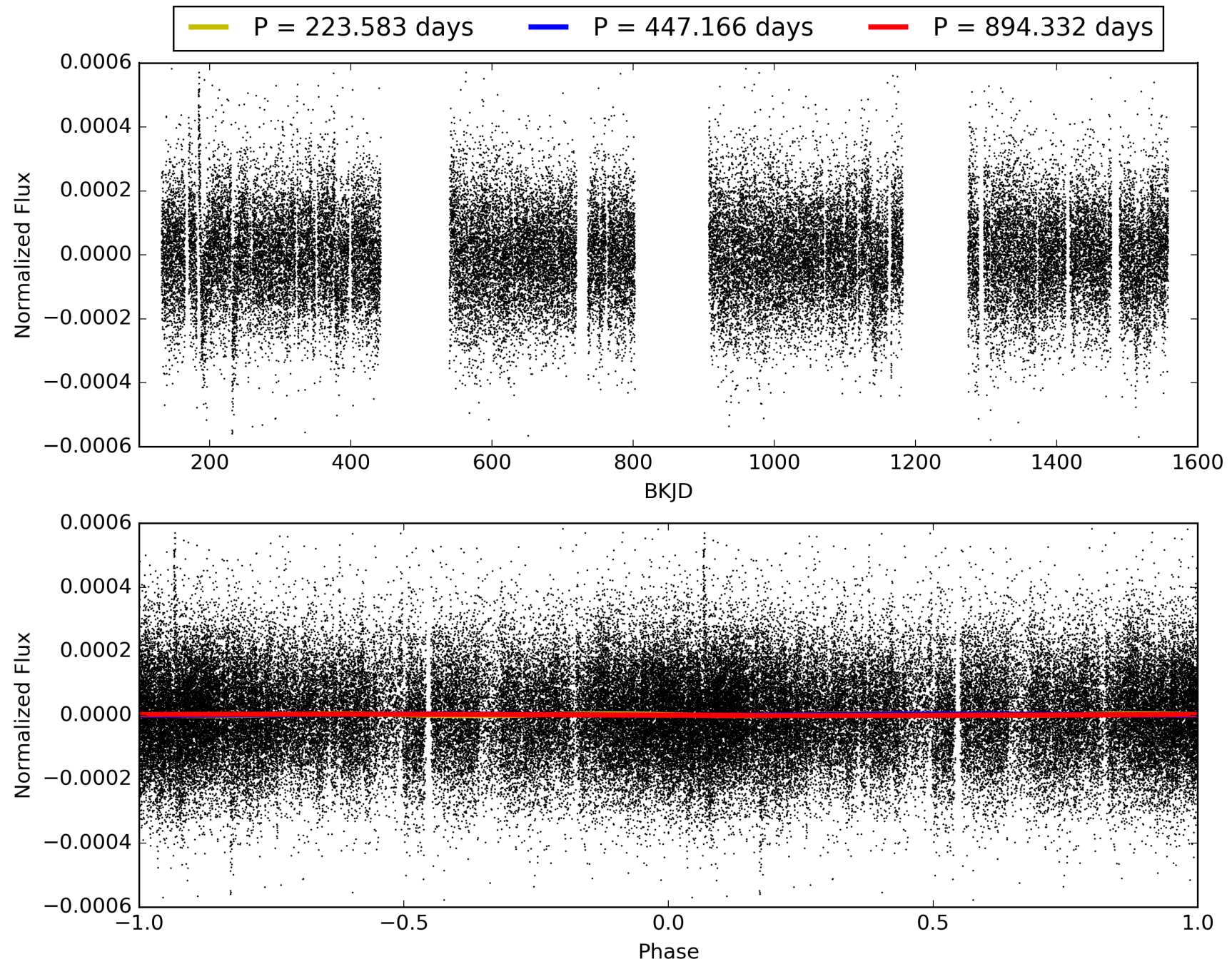
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:40:41 Z

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

TCE 005596504-01, PDC Light Curves

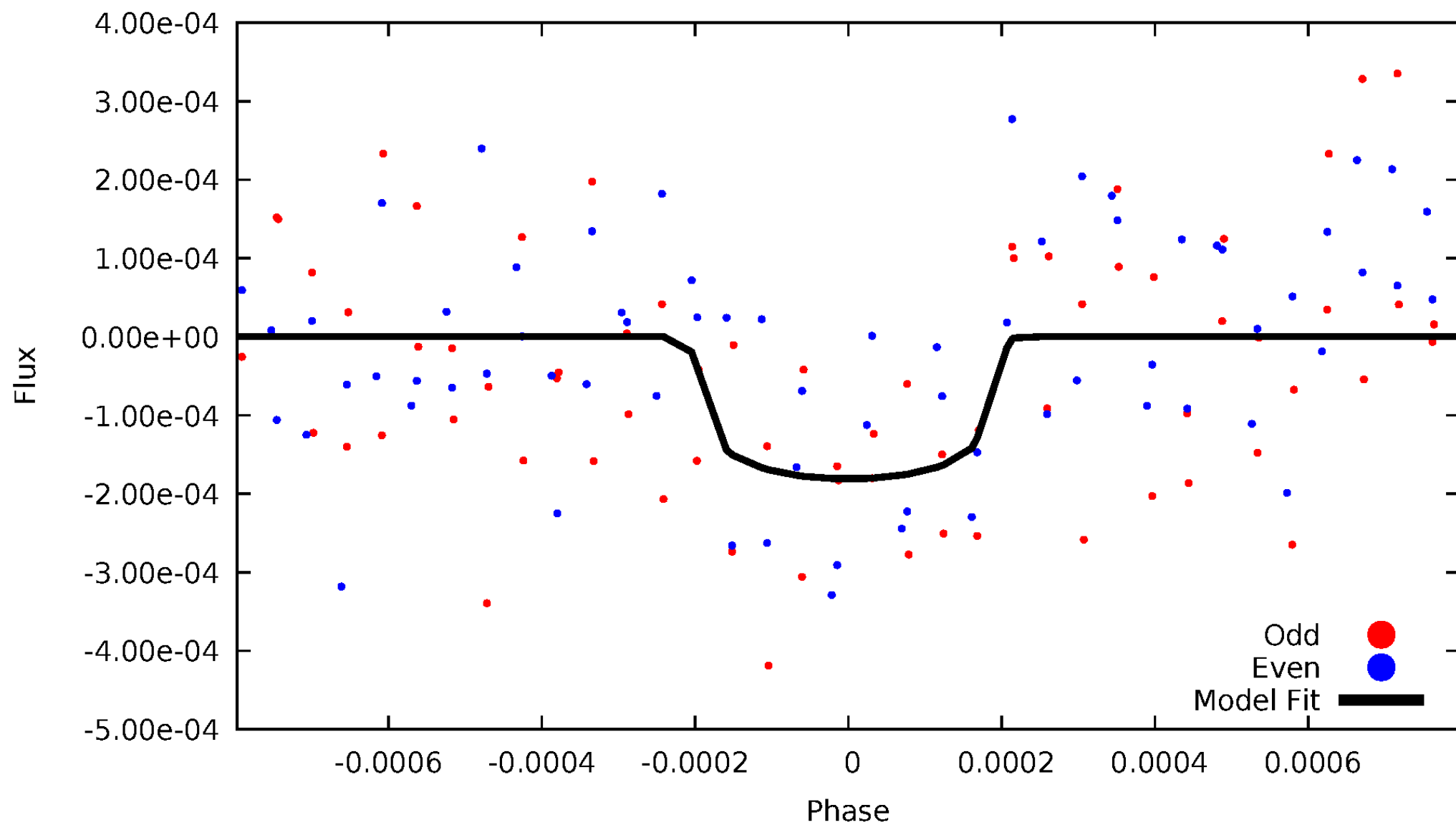


TCE 005596504-01



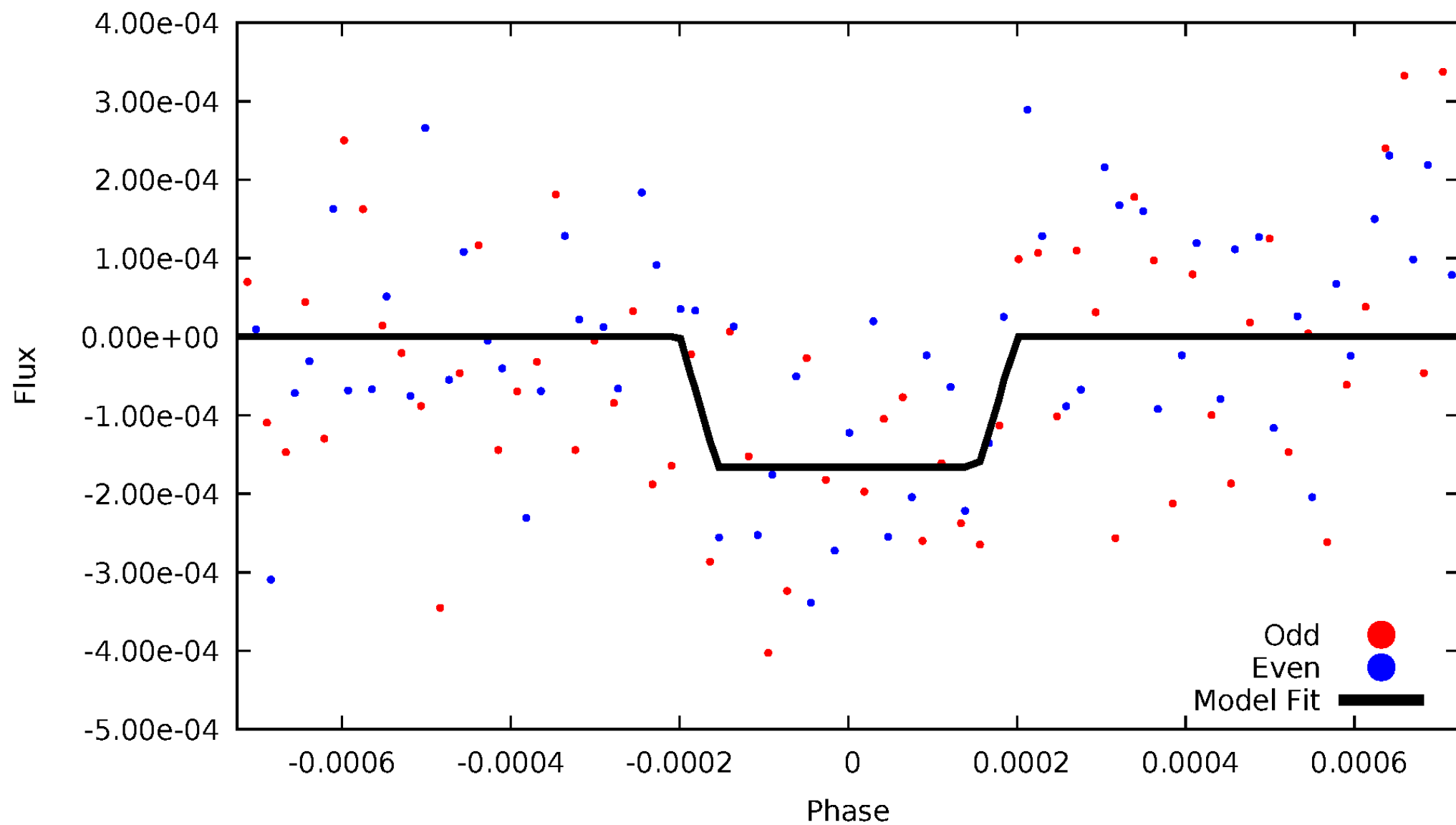
DV Odd/Even

TCE 005596504-01



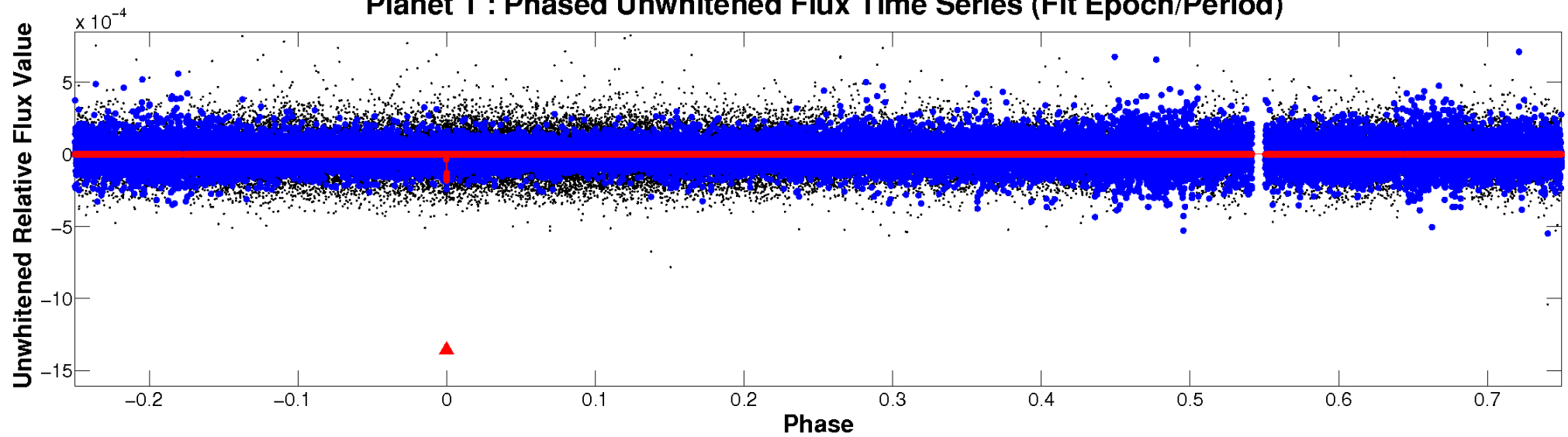
ALT Odd/Even

TCE 005596504-01

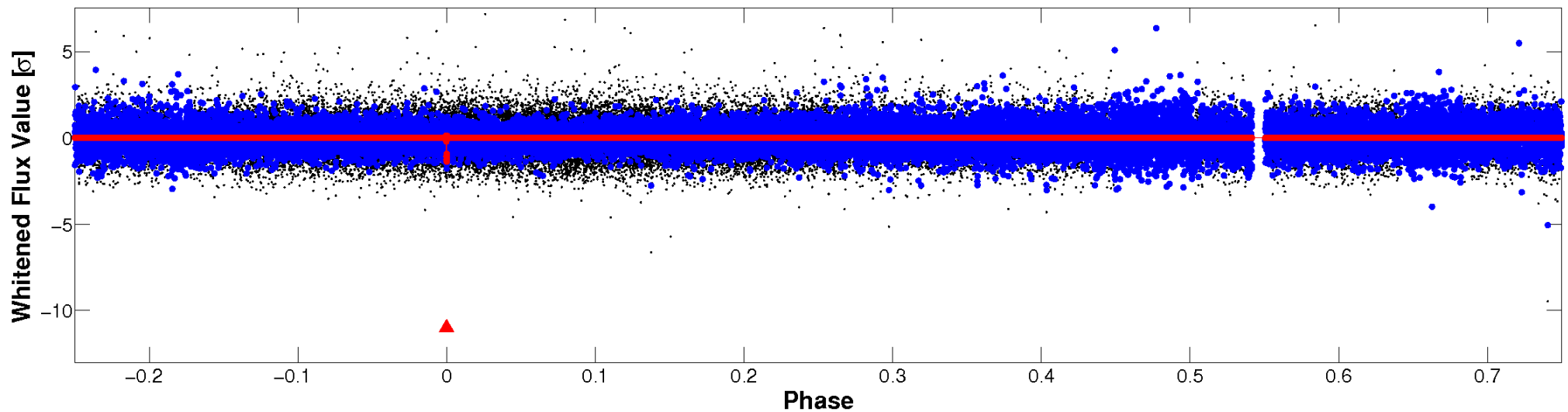


Non-Whitened Vs. Whitened Light Curve

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

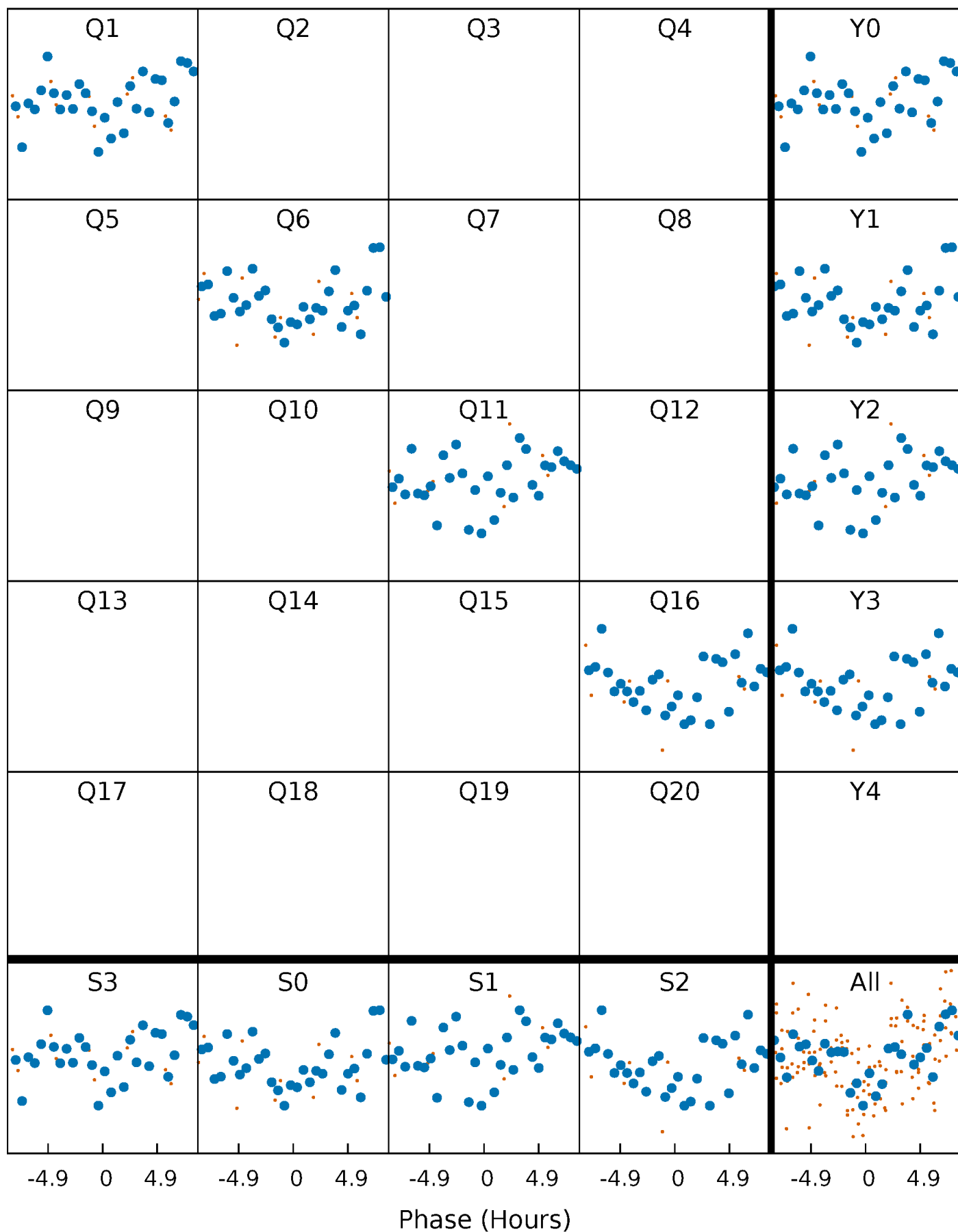


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



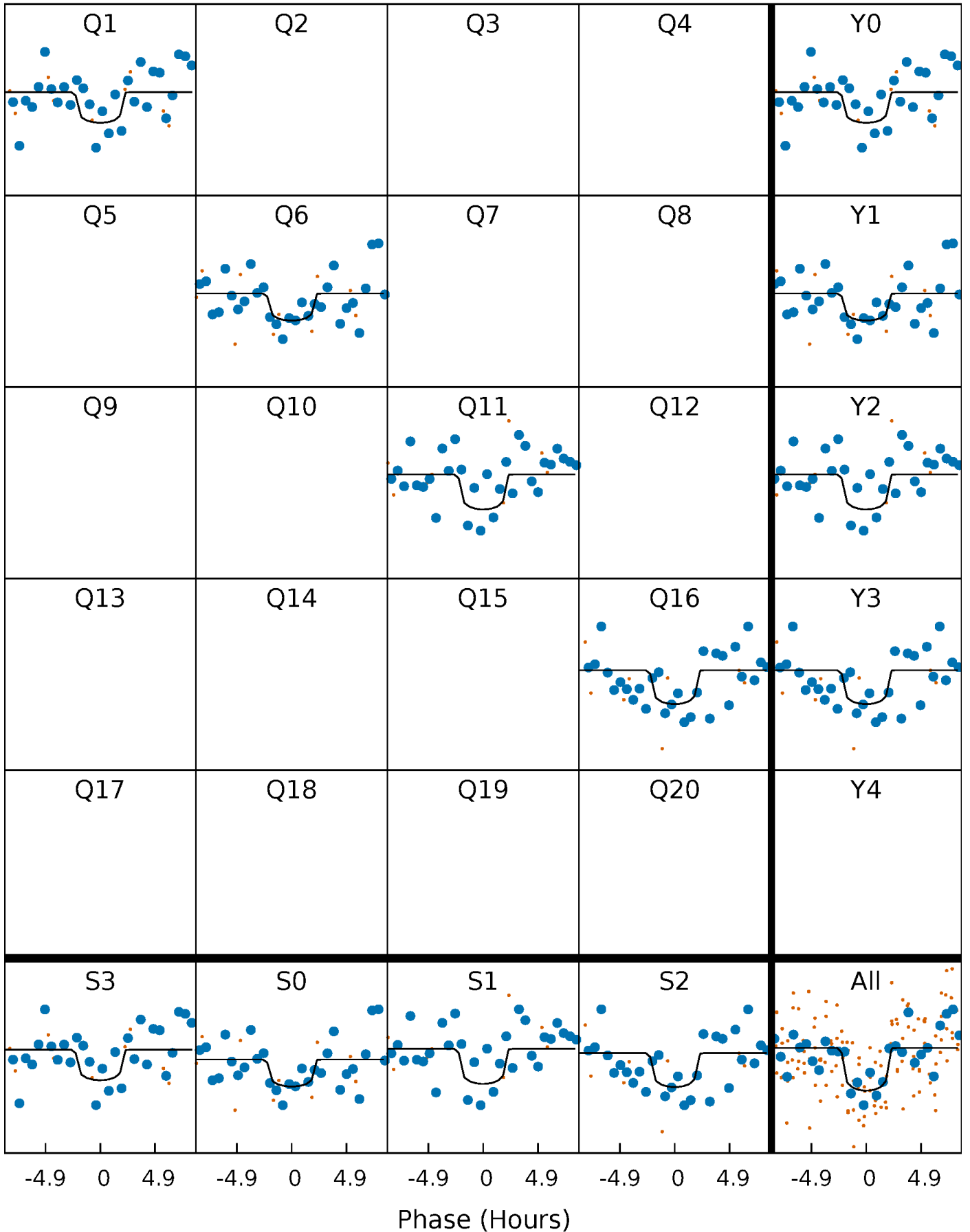
PDC Quarter-Phased Transit Curves

TCE 005596504-01 P=447.165967 Days $T_0=154.613477$ (BKJD)



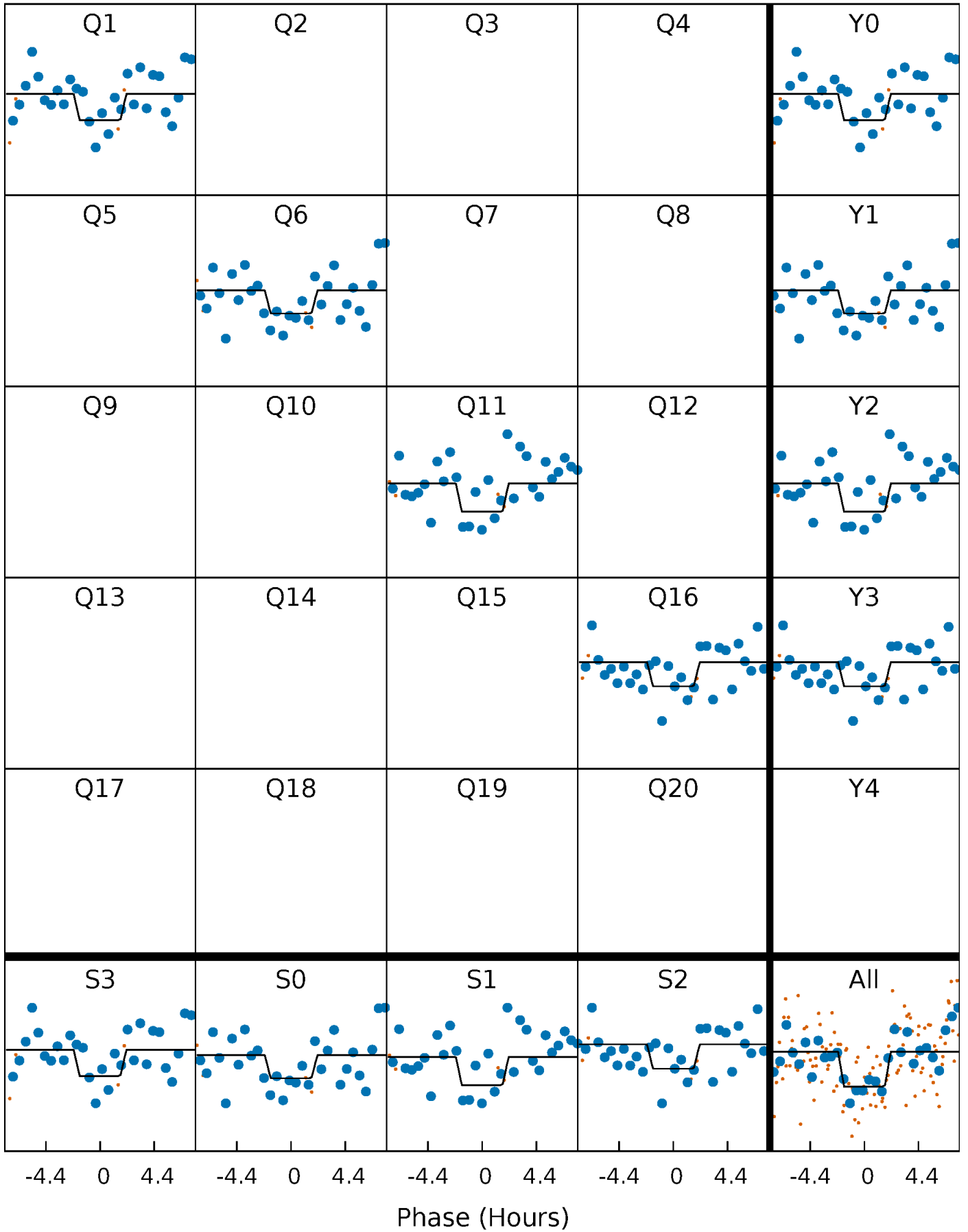
DV Quarter-Phased Transit Curves

TCE 005596504-01 P=447.165967 Days $T_0=154.613477$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

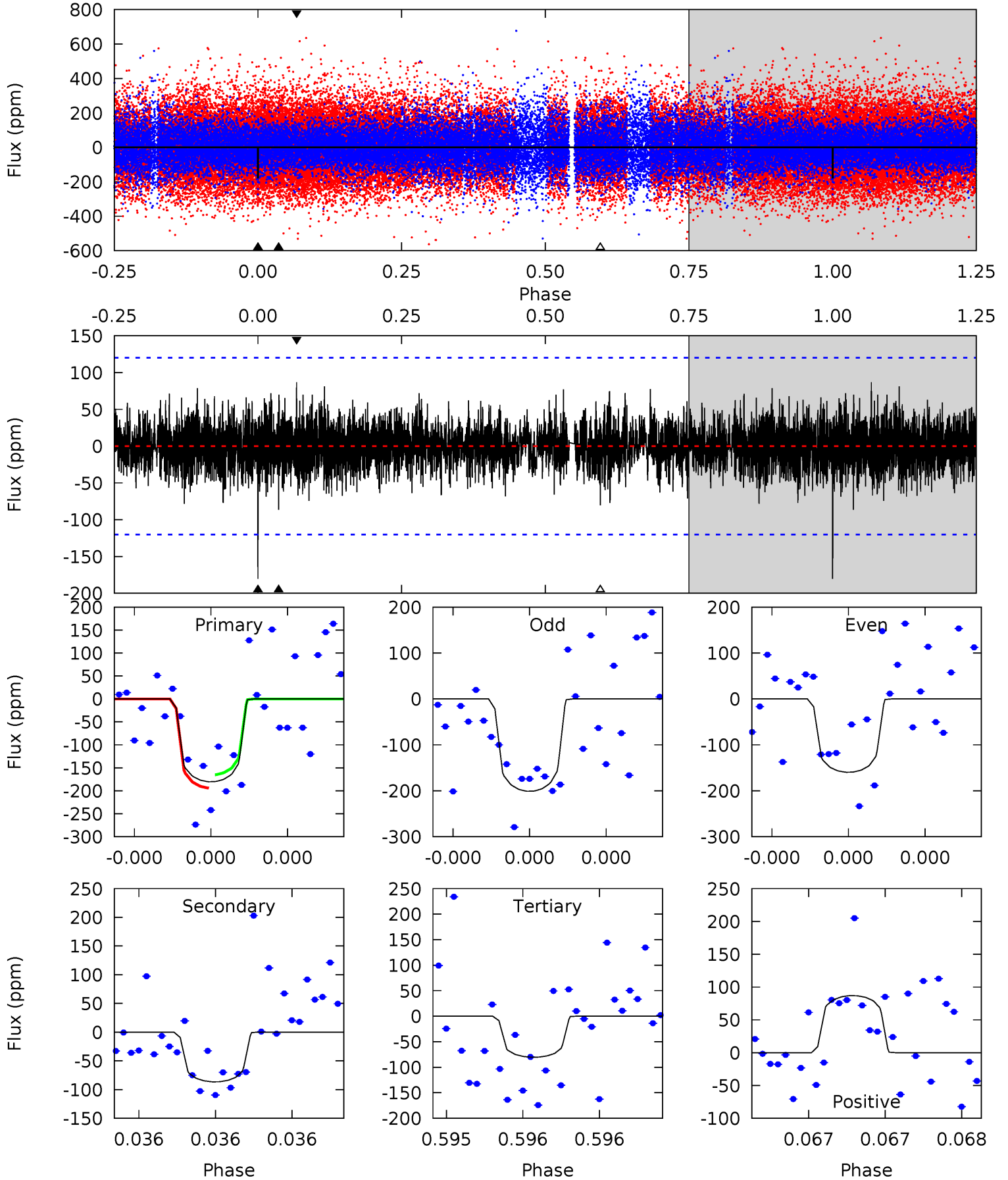
TCE 005596504-01 P=447.161216 Days $T_0=154.623640$ (BKJD)



DV Model-Shift Uniqueness Test

005596504-01, P = 447.165967 Days, E = 154.613477 Days

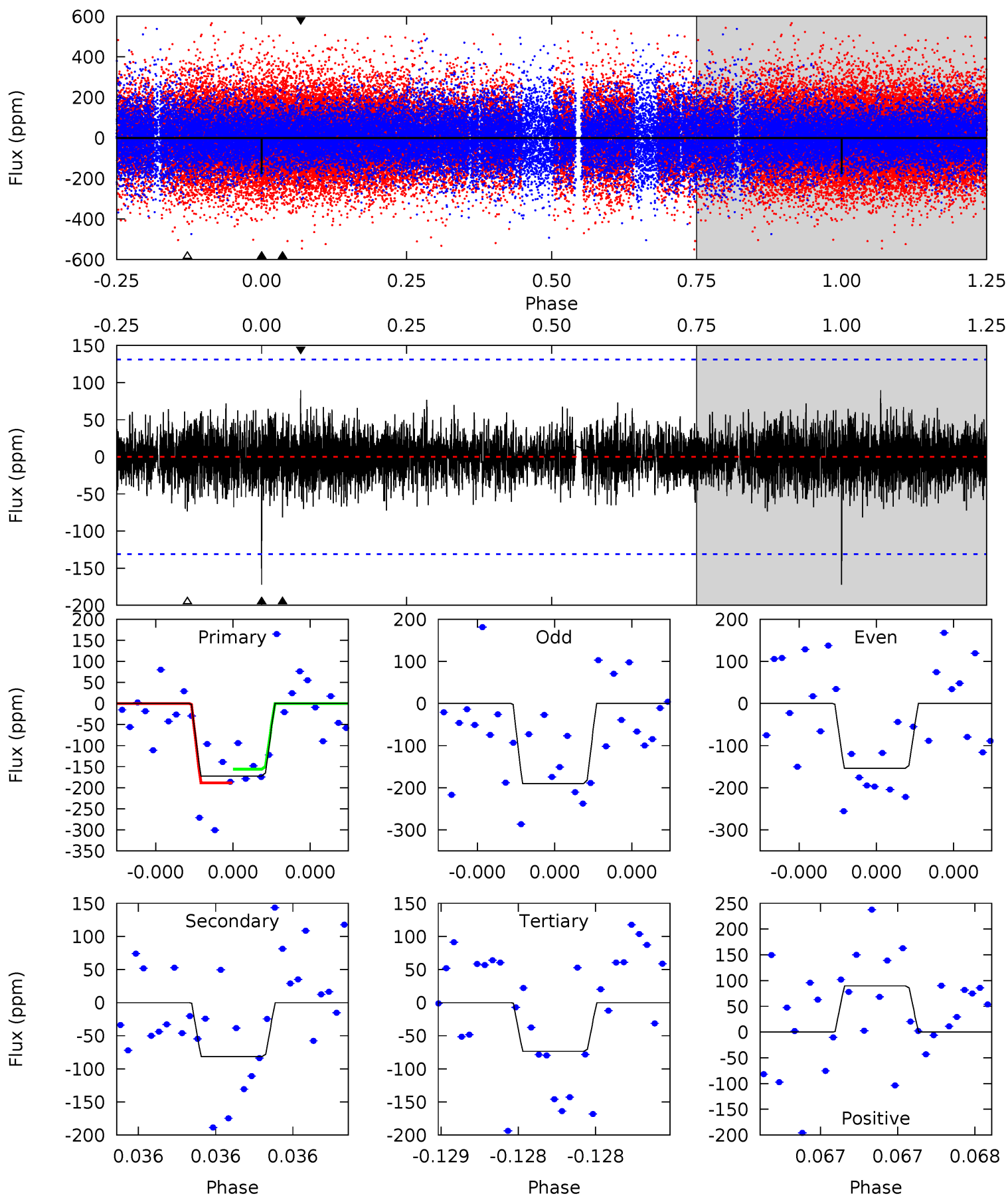
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.39	4.02	3.73	4.04	5.59	3.51	1.07	4.65	4.35	0.29	-0.02	0.96	0.97	0.33	0.67



Alt Model-Shift Uniqueness Test

005596504-01, P = 447.161216 Days, E = 154.623640 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.39	3.49	3.16	3.84	5.63	3.56	0.95	4.23	3.54	0.34	-0.35	0.78	1.05	0.34	0.69



Stellar Parameters For KIC 005596504

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6194^{+170}_{-170}	$3.733^{+0.328}_{-0.103}$	$-0.300^{+0.350}_{-0.300}$	$2.582^{+0.423}_{-0.987}$	$1.317^{+0.224}_{-0.274}$	$0.108^{+0.260}_{-0.034}$
	+3%/-3%	+9%/-3%	+117%/-100%	+16%/-38%	+17%/-21%	+242%/-32%
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 005596504-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-86 ± 22	$3.70^{+2.82}_{-1.98}$	535^{+36}_{-47}	5033^{+2423}_{-948}	5441^{+20053}_{-3760}
Alt.	-81 ± 23	$3.78^{+2.74}_{-2.28}$	541^{+30}_{-51}	5047^{+2830}_{-987}	5142^{+26692}_{-3571}

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

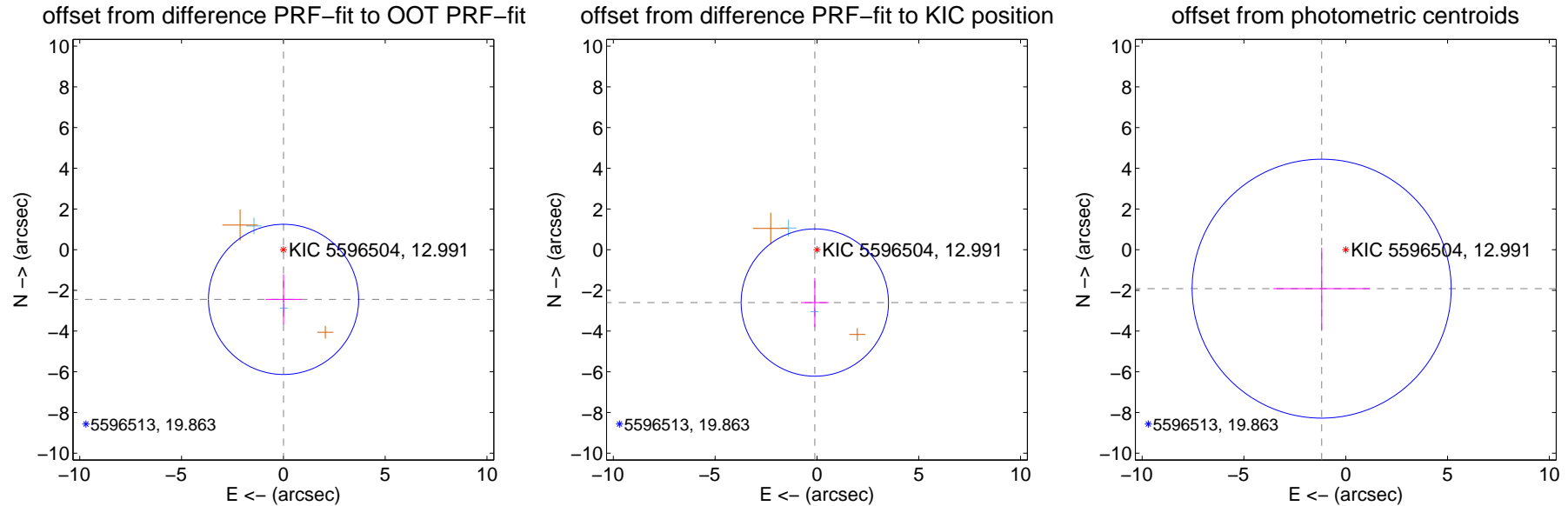
DV Centroid Data

Supplemental centroid analysis for 005596504-01. Kepler magnitude: 12.99. Transit SNR 6.91

There are 2 quarters with good PRF difference image offsets

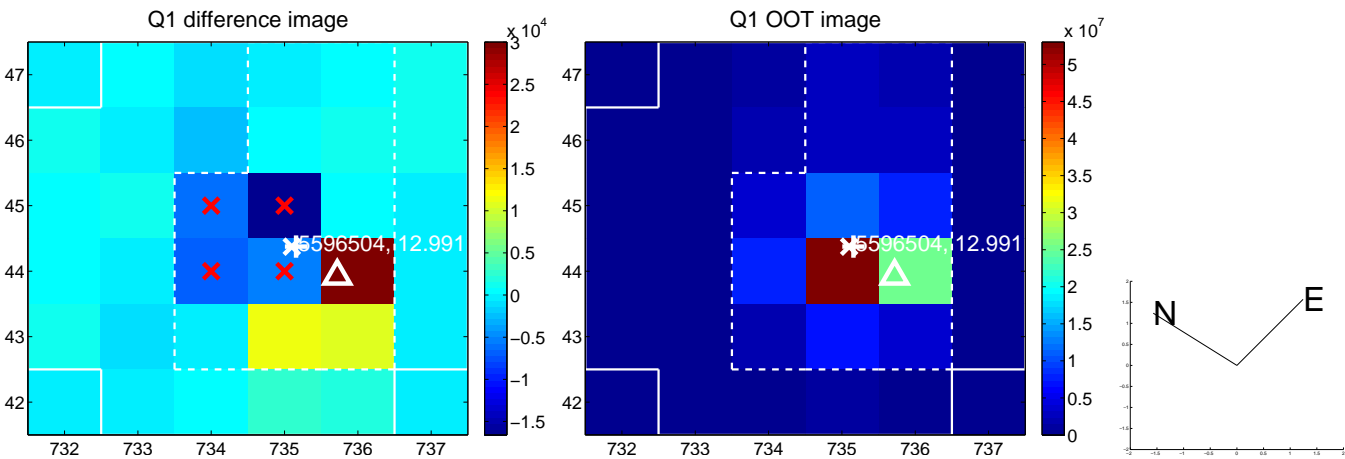
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.443 ± 1.230	1.99	-0.009 ± 0.887	-2.443 ± 1.227
PRF-fit source offset from KIC position	2.600 ± 1.206	2.16	0.105 ± 0.680	-2.598 ± 1.207
photometric centroid source offset	2.25 ± 2.12	1.06	1.18 ± 2.37	-1.92 ± 2.02

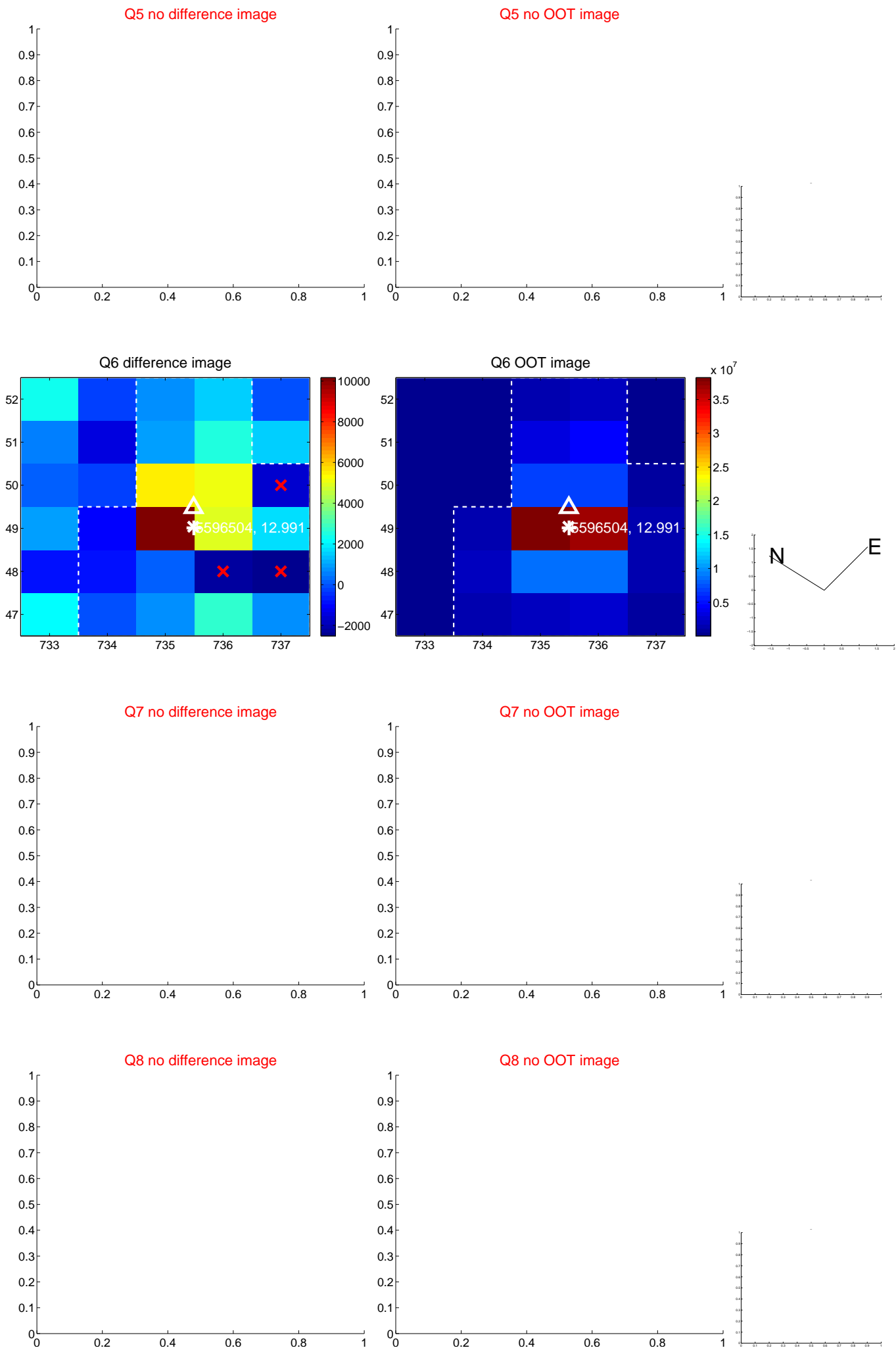


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

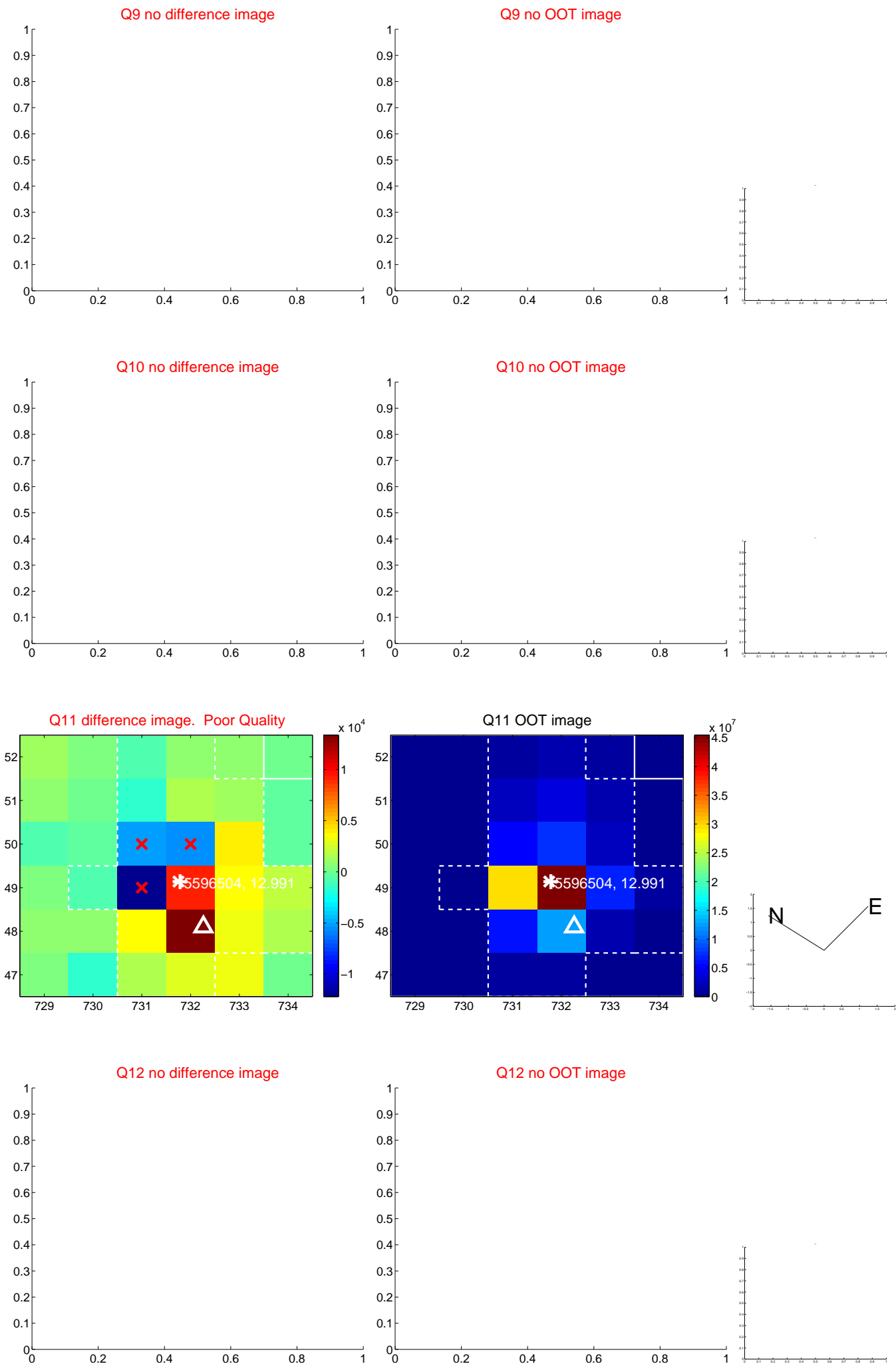
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



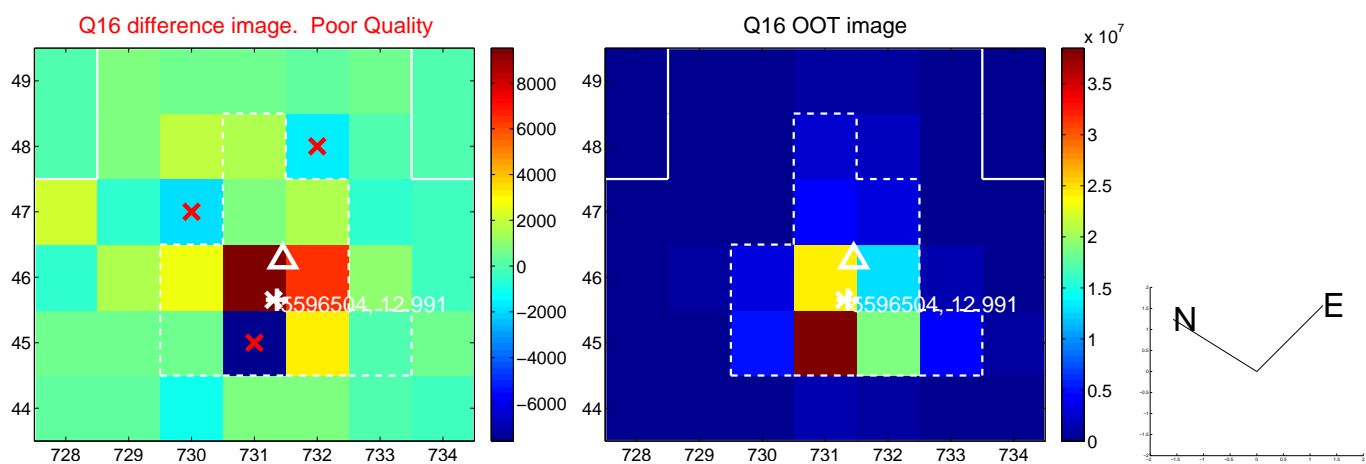
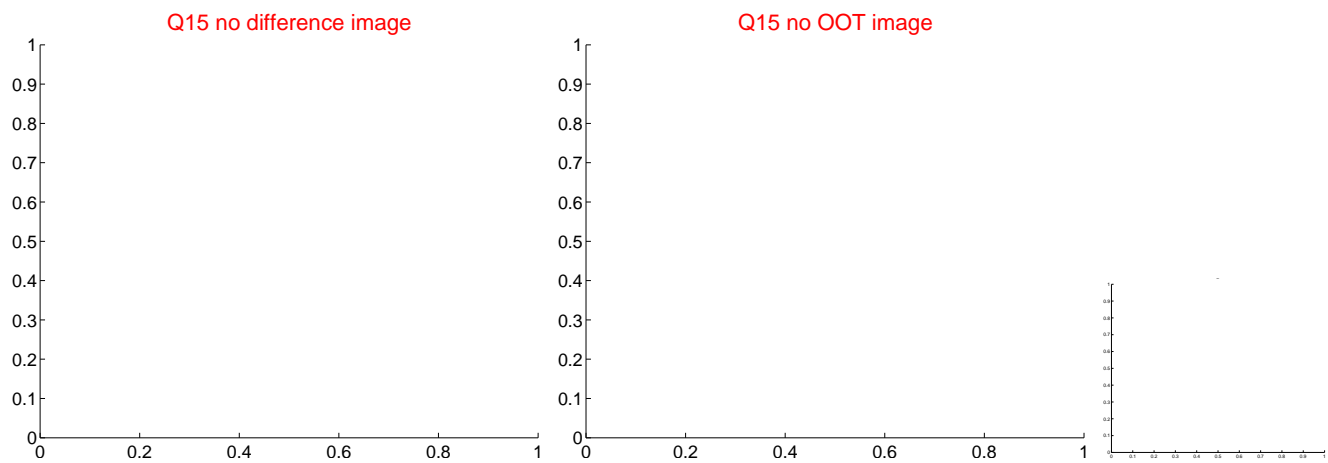
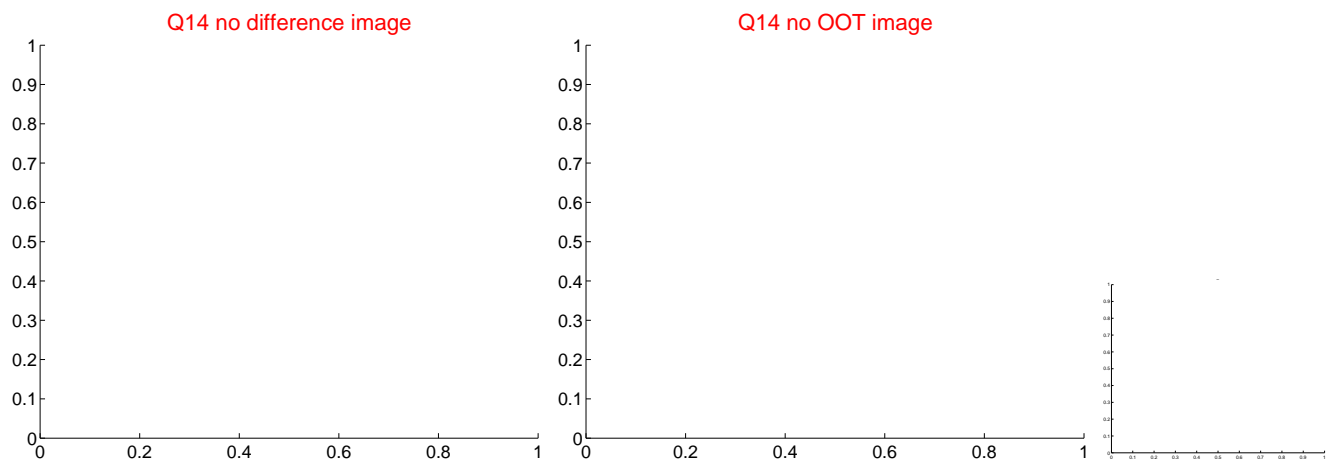
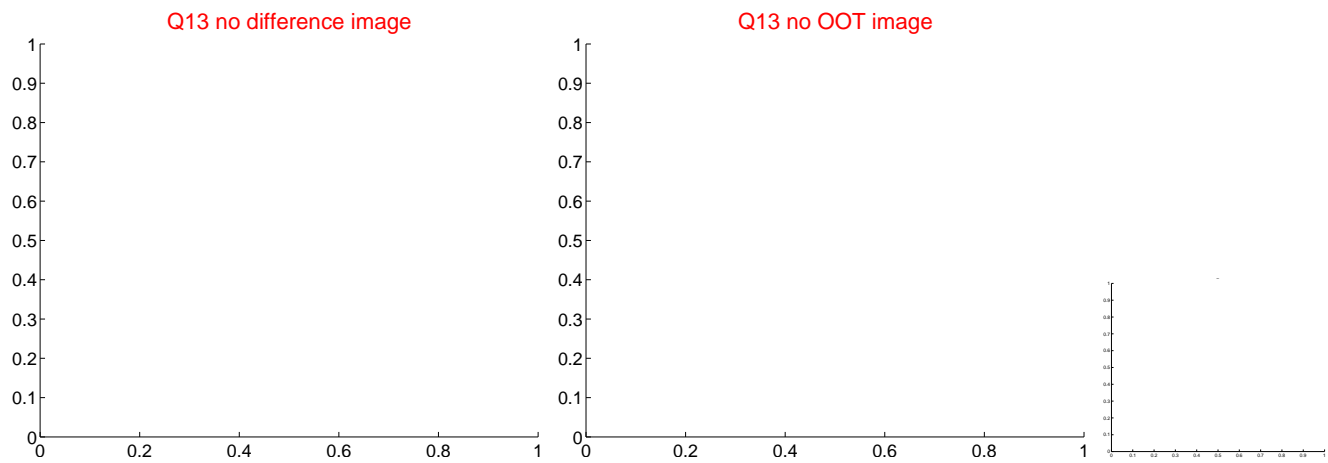
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



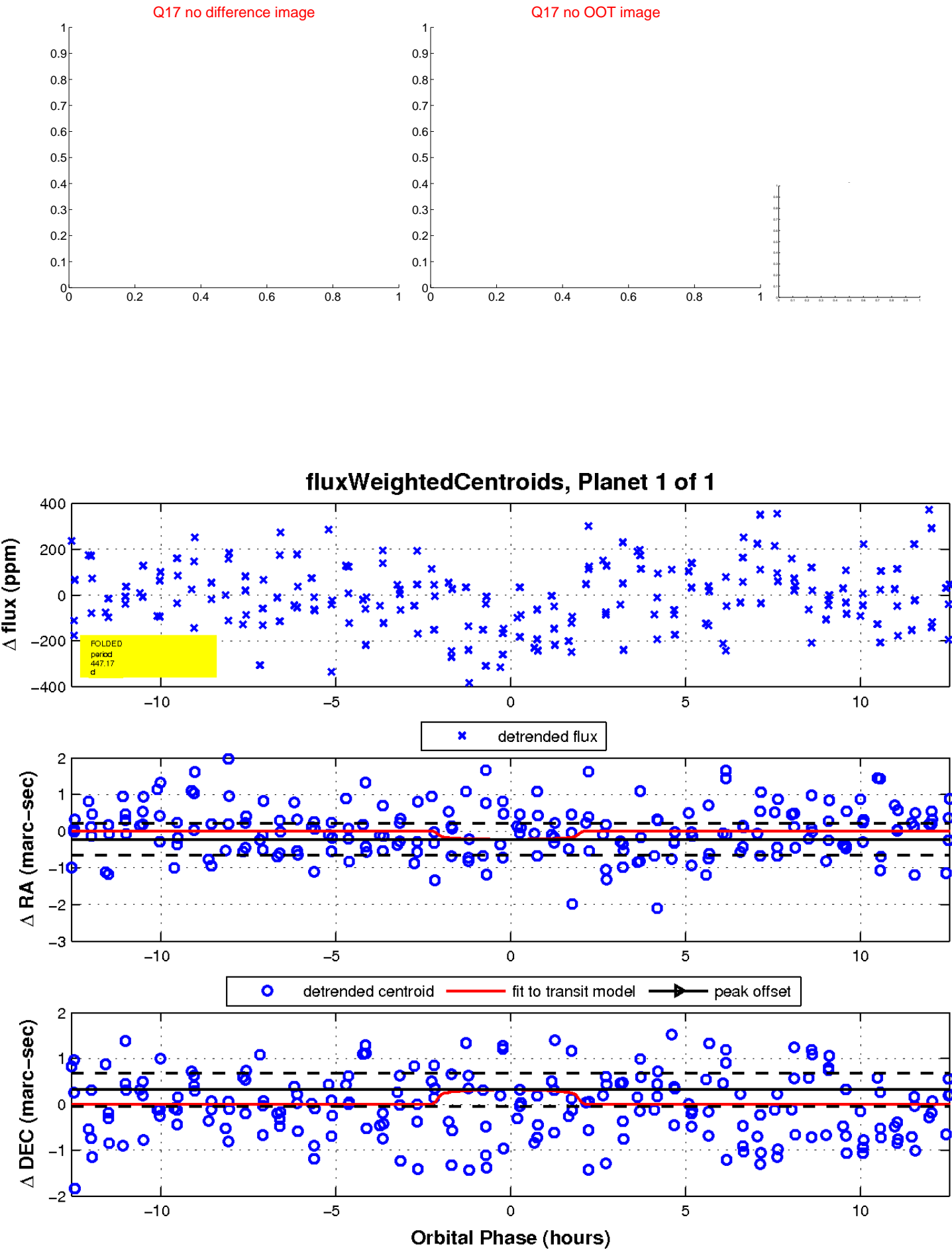
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UKIRT Image

Declination

