

KIC 010092506

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})
010092506-01	OBS	No	31.039792	137.379765	554.1	74.457	14.9	35.3	2.46	6915	9.94	232.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010092506-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

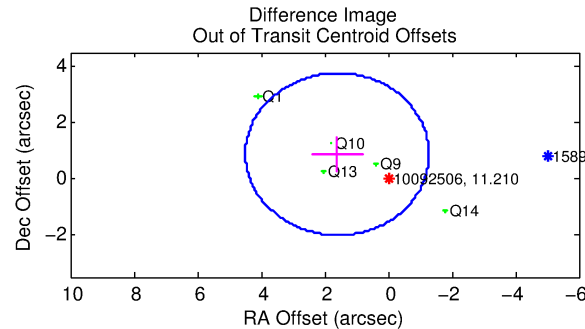
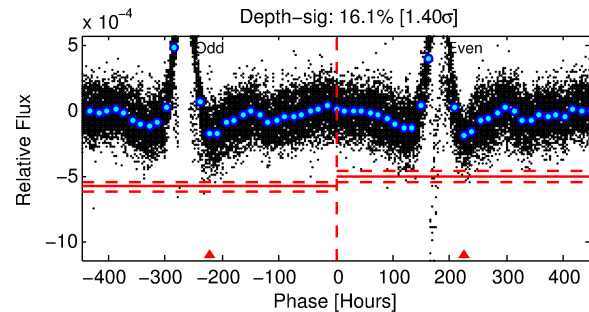
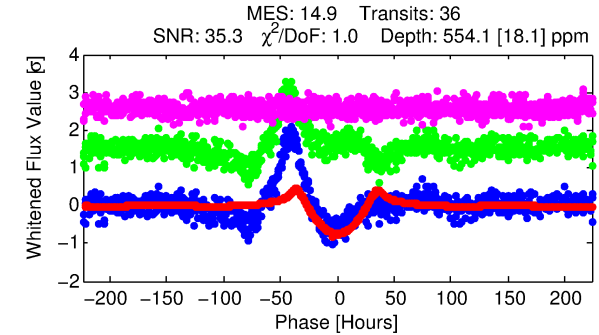
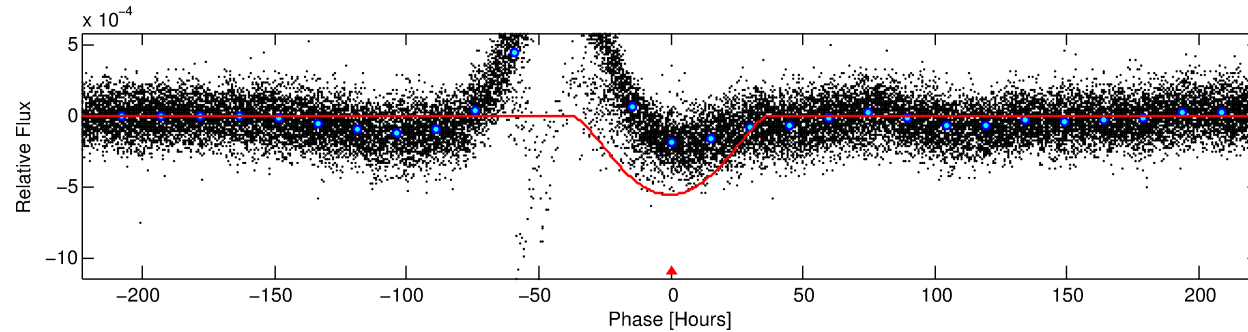
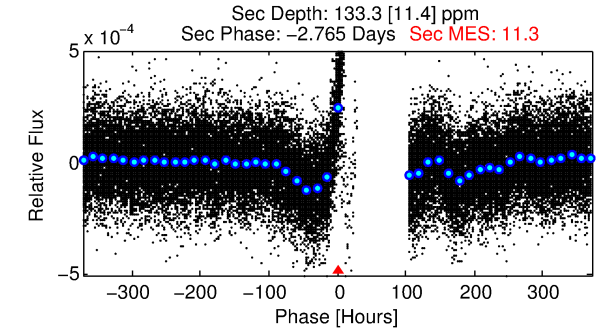
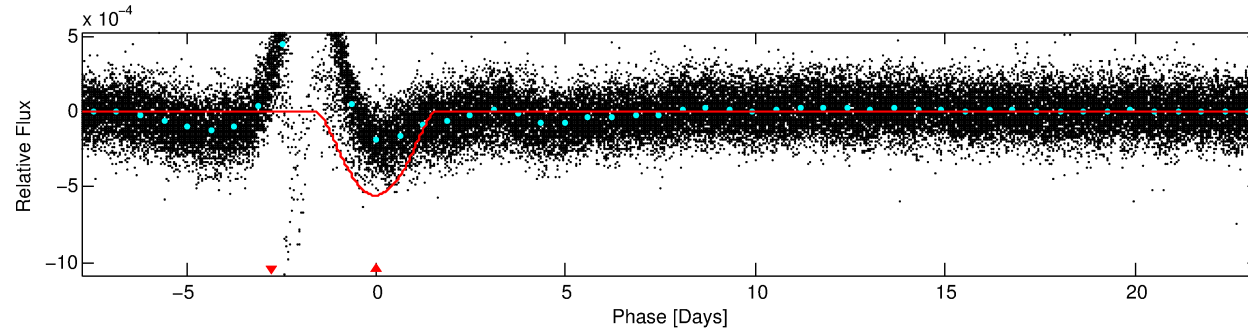
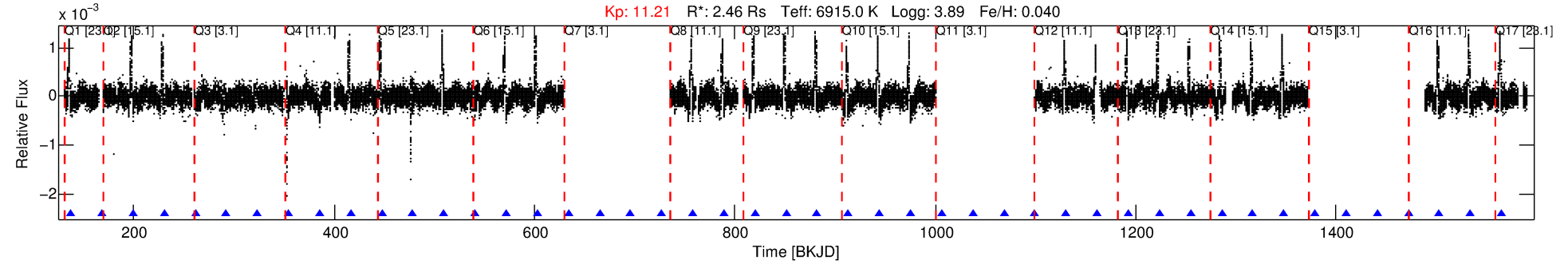
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010092506-01

No Significant Match Found

DV One-Page Summary

KIC: 10092506 Candidate: 1 of 1 Period: 31.040 d



DV Fit Results:

Period = 31.03979 [0.00120] d
Epoch = 137.3798 [0.0308] BKJD
Rp/R* = 0.0371 [0.0097]
a/R* = 1.38 [0.04]
b = 0.99 [0.02]
Seff = 232.38 [83.34]
Teq = 996 [89] K
Rp = 9.94 [3.67] Re
a = 0.2305 [0.0537] AU
Ag = 39.46 [25.18] [1.53σ]
Teffp = 3858 [513] K [5.50σ]

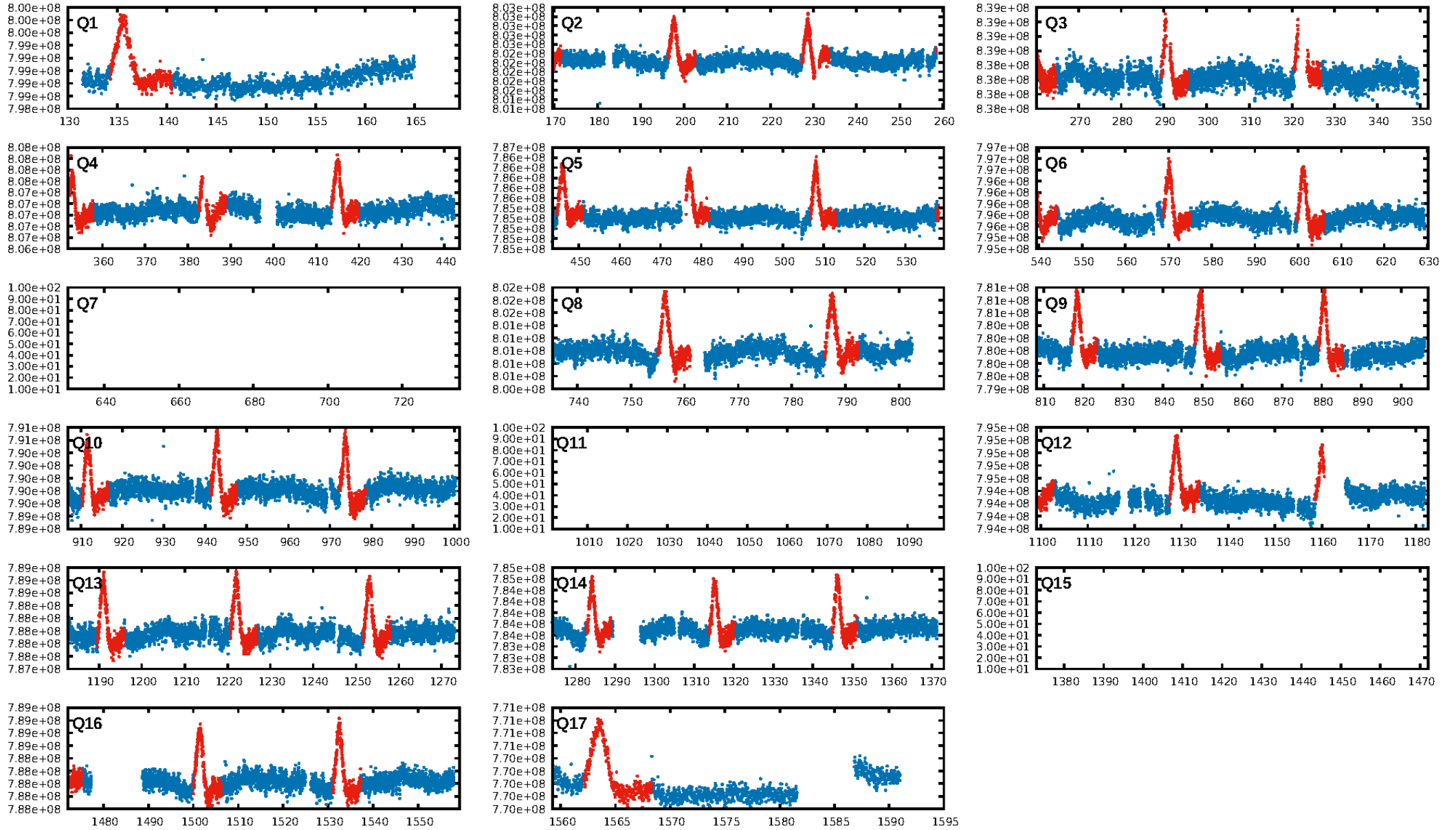
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.08e-47
RollingBand-fgt: 1.00 [34/34]
GhostDiagnostic-chr: 4.775
Centroid-sig: 1.8%
Centroid-so: 0.037 arcsec [0.57σ]
OotOffset-rm: 1.825 arcsec [1.90σ]
OotOffset-st: 2/0/0/3 [5]
KicOffset-rm: 1.792 arcsec [1.34σ]
KicOffset-st: 2/0/0/3 [5]
DiffImageQuality-fgm: 0.80 [4/5]
DiffImageOverlap-fno: 1.00 [7/7]

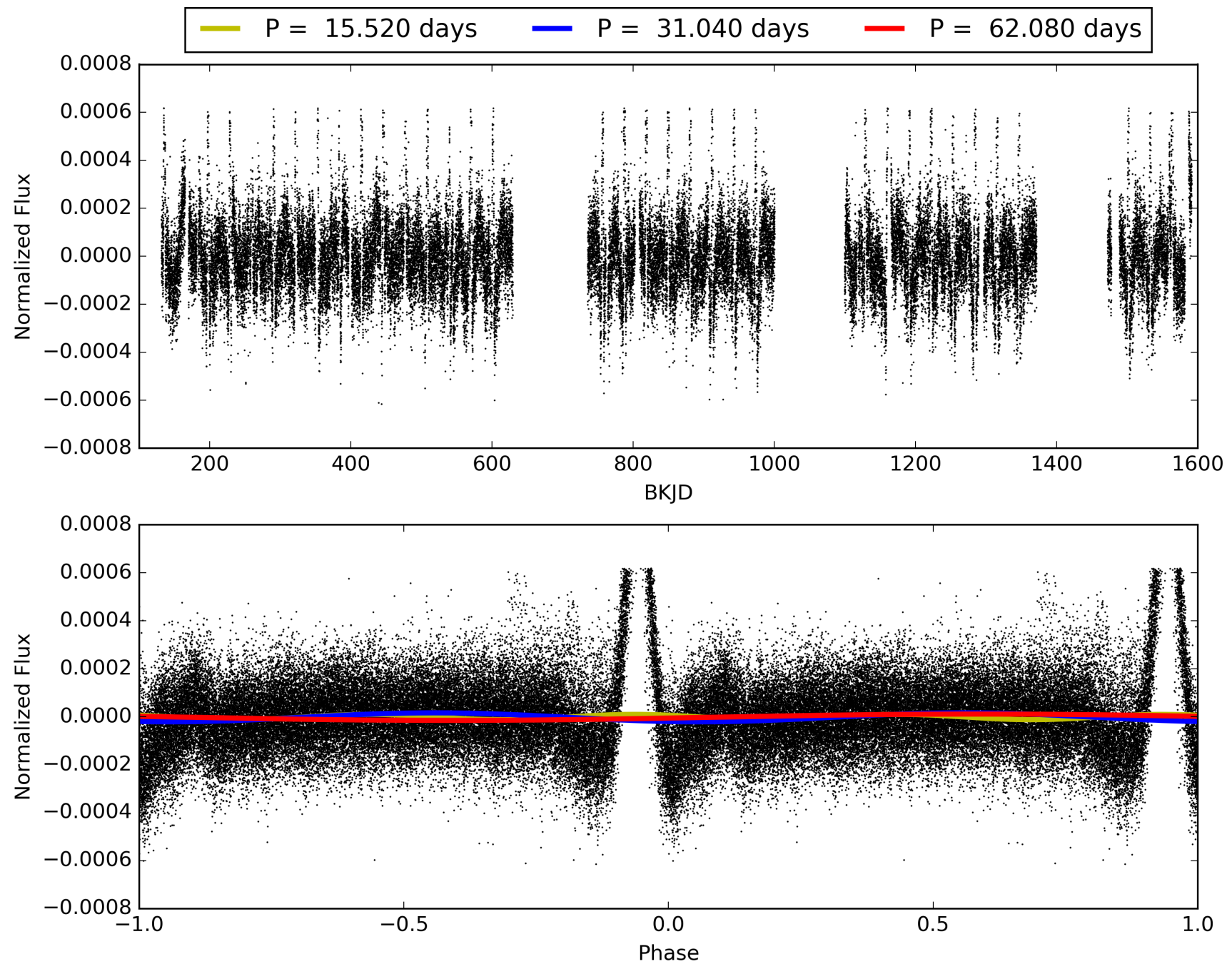
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:04:49 Z

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

TCE 010092506-01, PDC Light Curves

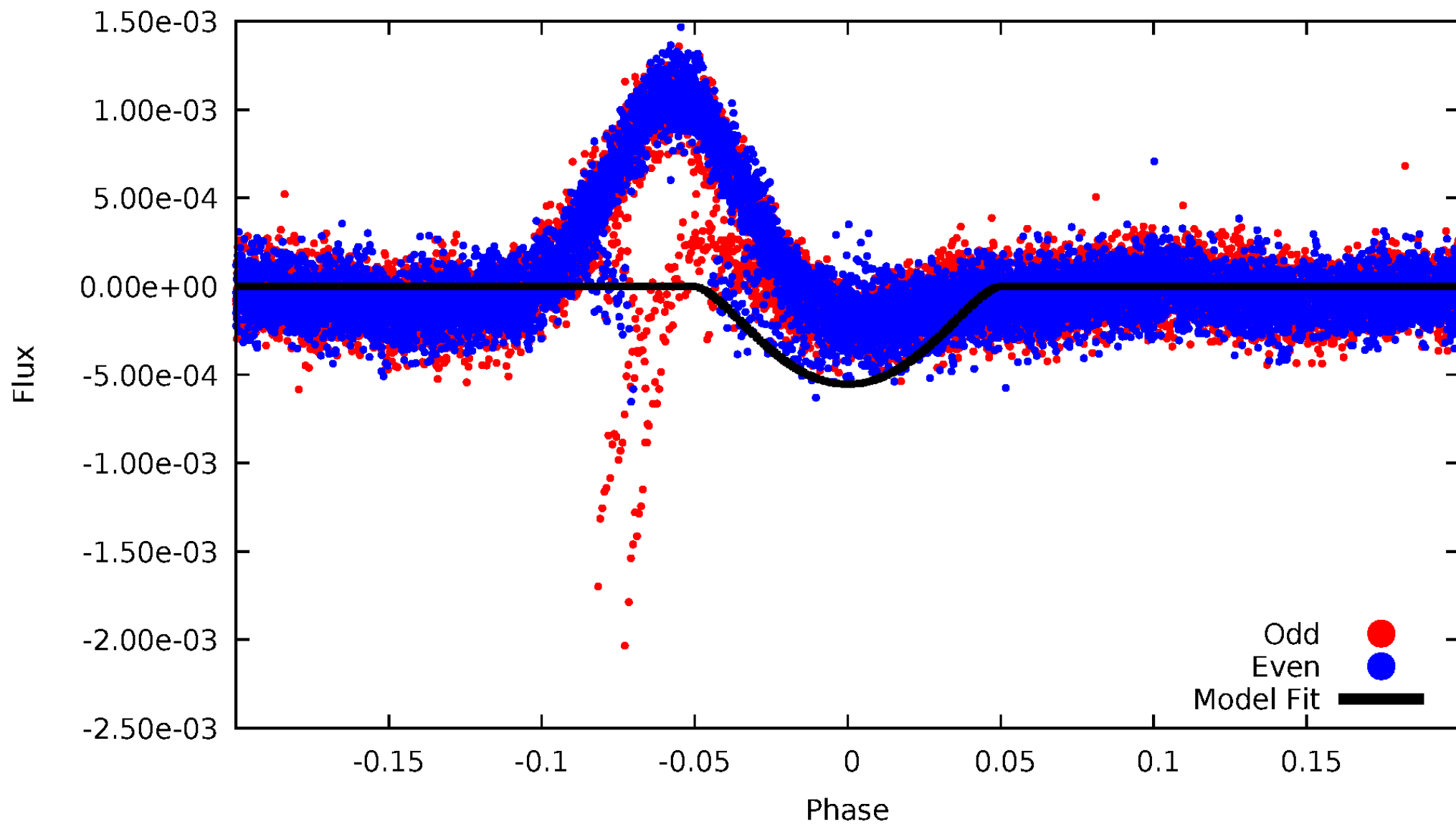


TCE 010092506-01



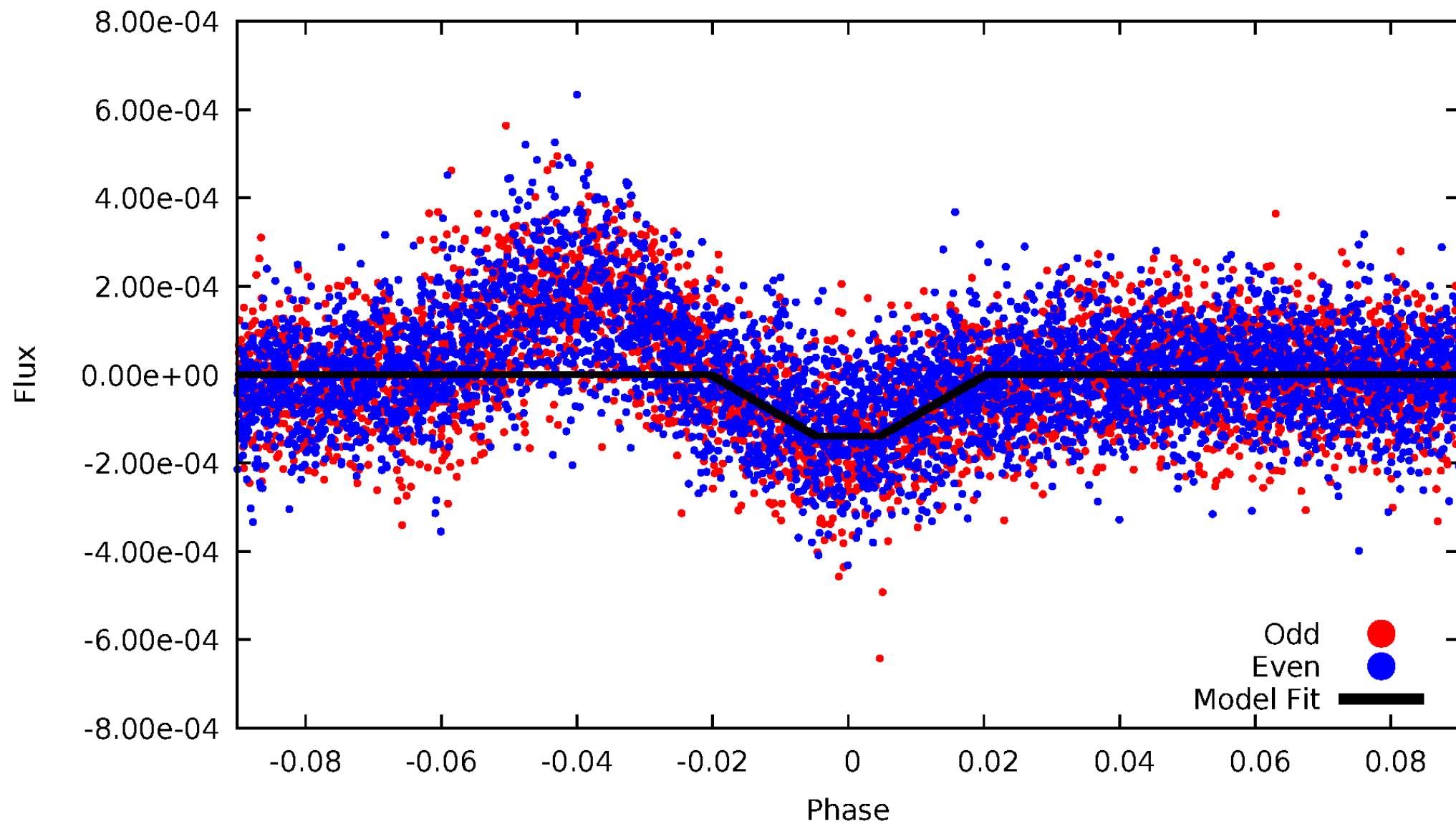
DV Odd/Even

TCE 010092506-01

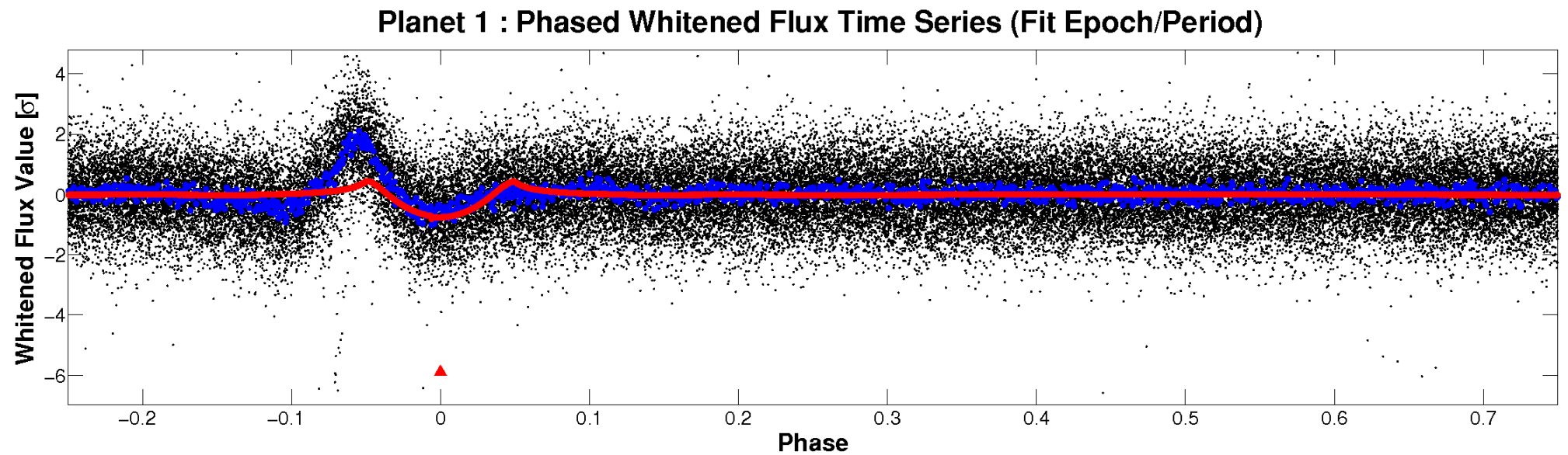
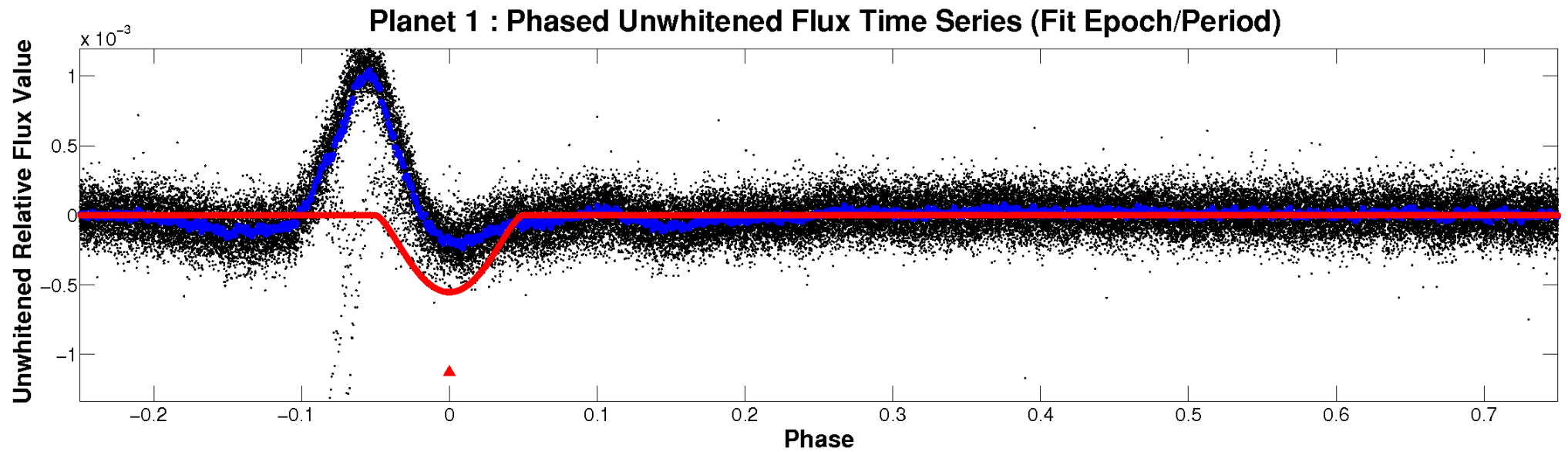


ALT Odd/Even

TCE 010092506-01

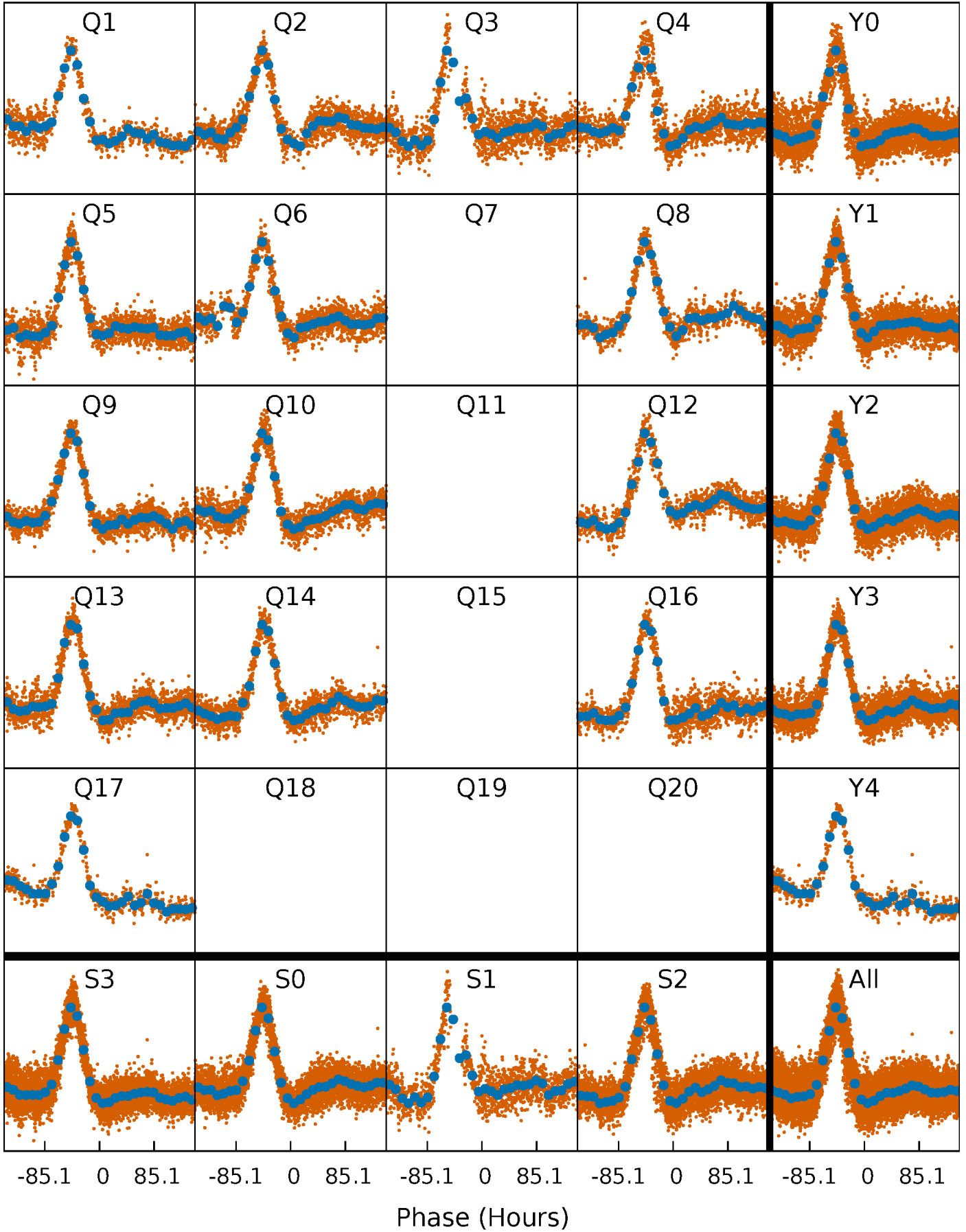


Non-Whitened Vs. Whitened Light Curve



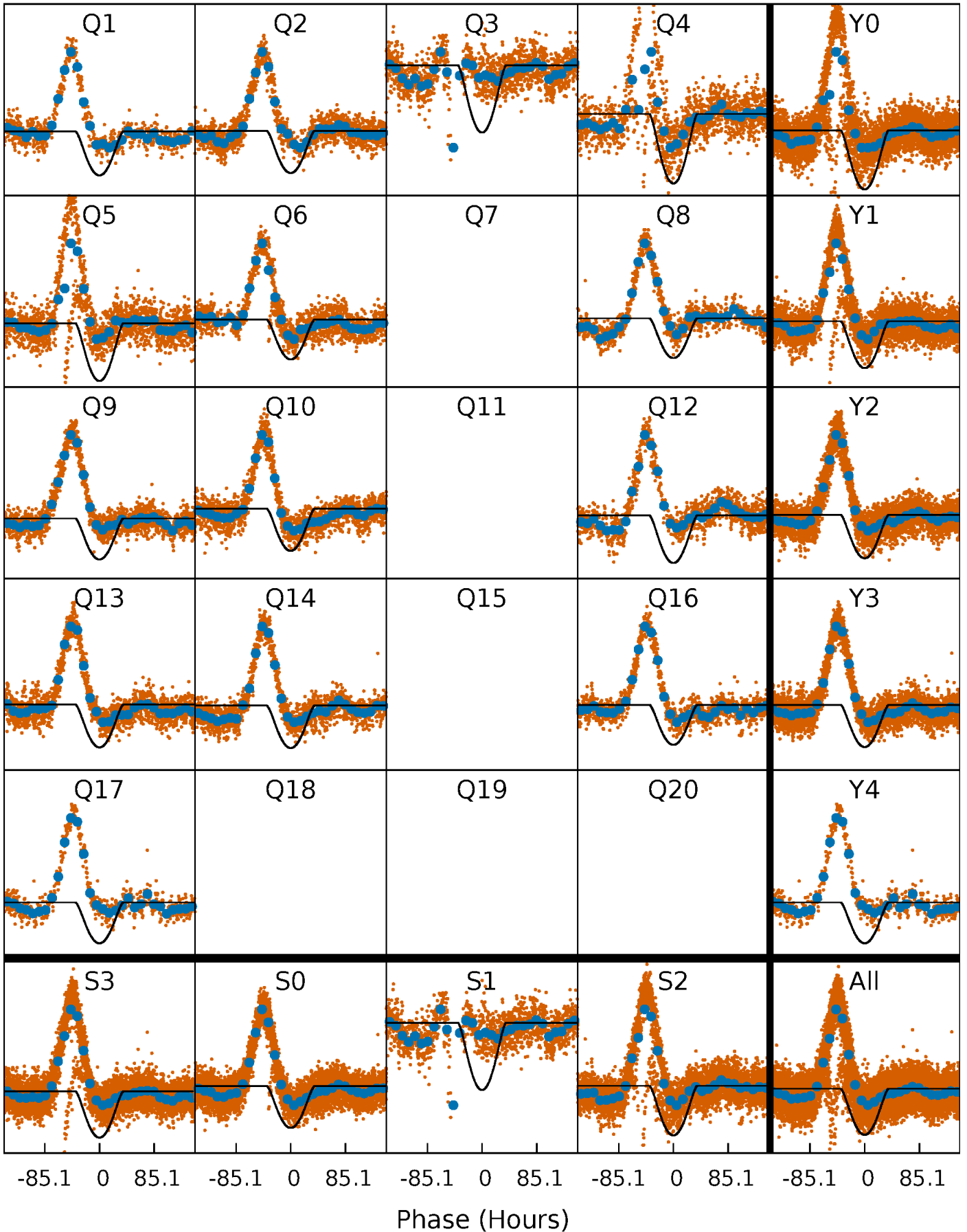
PDC Quarter-Phased Transit Curves

TCE 010092506-01 P= 31.039792 Days $T_0=137.379765$ (BKJD)



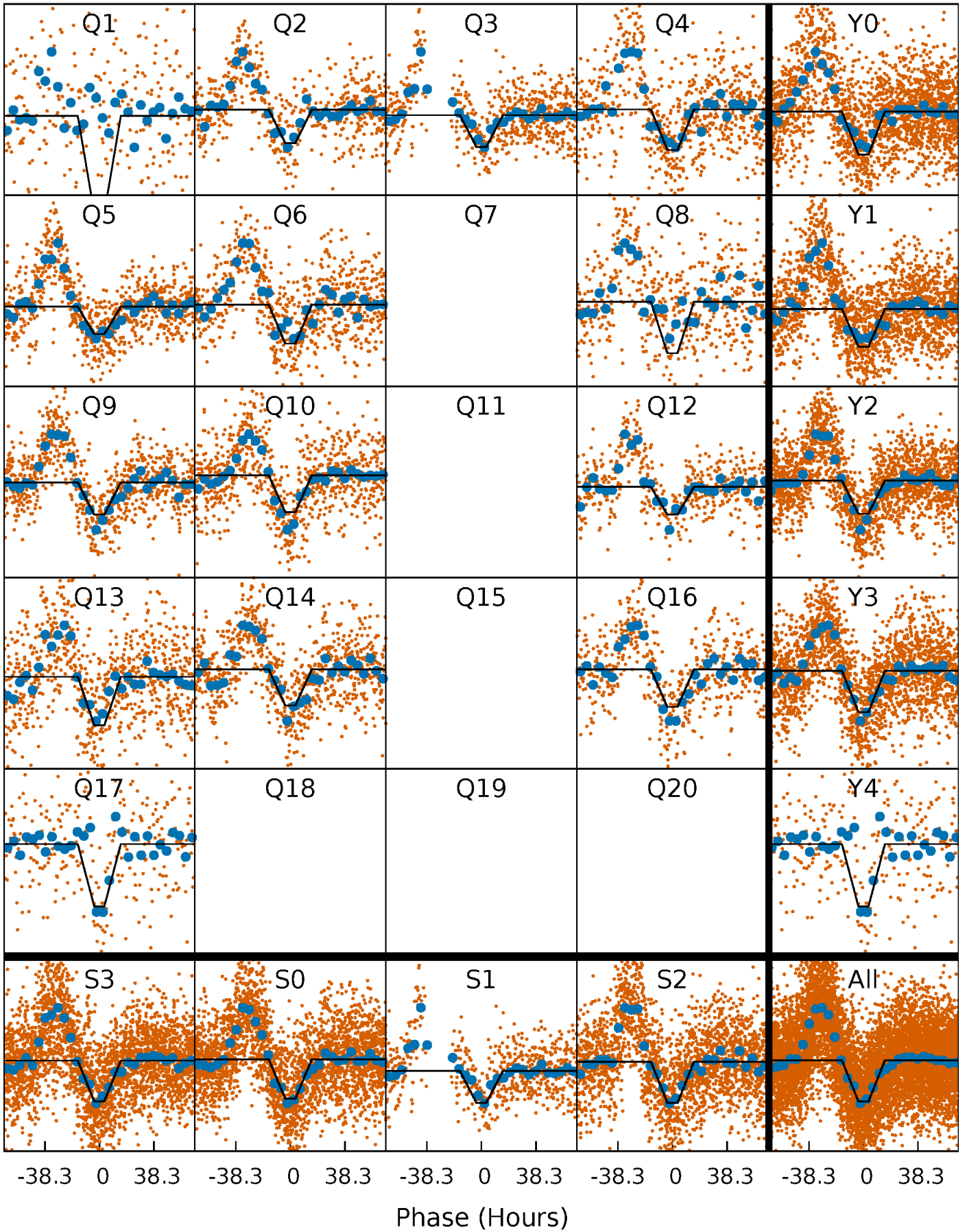
DV Quarter-Phased Transit Curves

TCE 010092506-01 P= 31.039792 Days $T_0=137.379765$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

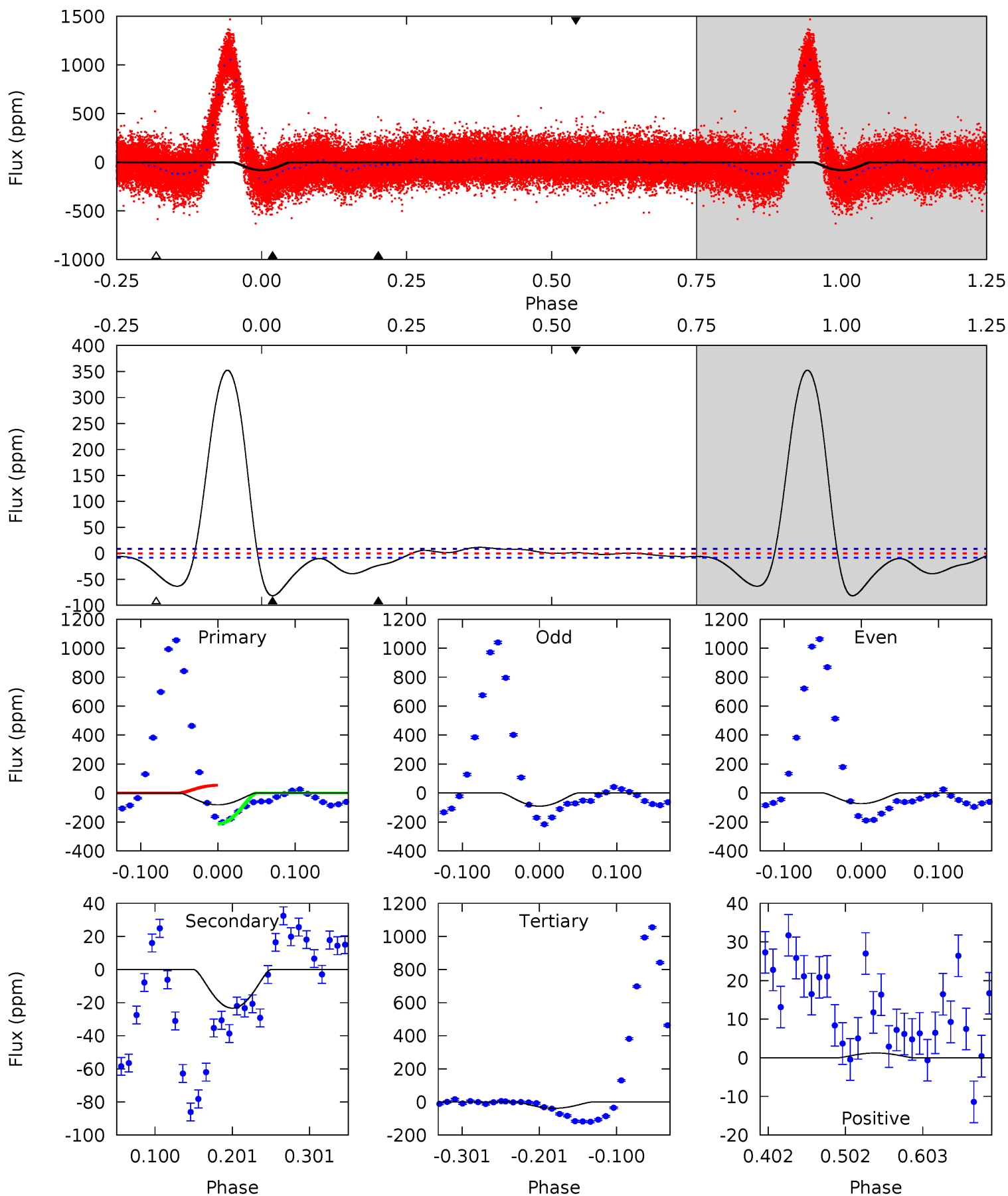
TCE 010092506-01 P= 31.035199 Days $T_0=136.982813$ (BKJD)



DV Model-Shift Uniqueness Test

010092506-01, P = 31.039792 Days, E = 106.339973 Days

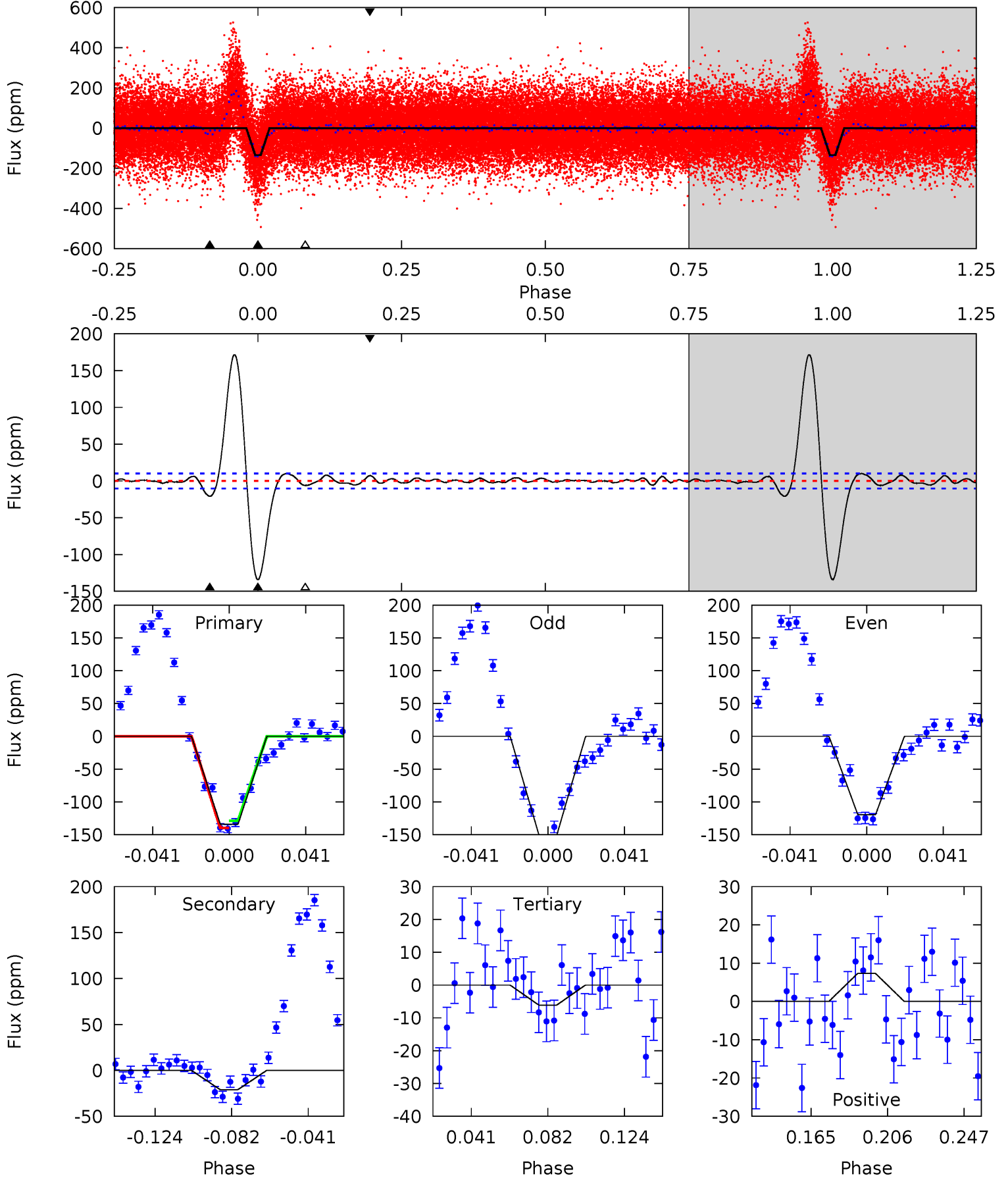
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
44.0	12.6	20.6	0.67	4.56	1.64	20.8	23.4	43.3	-8.04	11.9	4.75	0.83	0.81	45.7



Alt Model-Shift Uniqueness Test

010092506-01, P = 31.035199 Days, E = 105.947614 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
61.7	9.66	2.81	3.37	4.75	2.04	3.13	58.8	58.3	6.85	6.29	7.19	0.93	0.56	2.44



Stellar Parameters For KIC 010092506

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6915^{+72}_{-82}	$3.887^{+0.202}_{-0.109}$	$0.040^{+0.150}_{-0.150}$	$2.455^{+0.427}_{-0.640}$	$1.693^{+0.151}_{-0.218}$	$0.161^{+0.185}_{-0.054}$
	+1%/-1%	+5%/-3%	+375%/-375%	+17%/-26%	+9%/-13%	+115%/-34%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010092506-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-23 ± 2	$9.44^{+2.96}_{-2.35}$	1381^{+64}_{-88}	3107^{+296}_{-223}	$7.606^{+5.964}_{-3.136}$
Alt.	-21 ± 2	$3.46^{+2.36}_{-2.16}$	1394^{+61}_{-82}	4267^{+2144}_{-649}	50^{+303}_{-33}

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 $A_{obs} \gg 1.0$

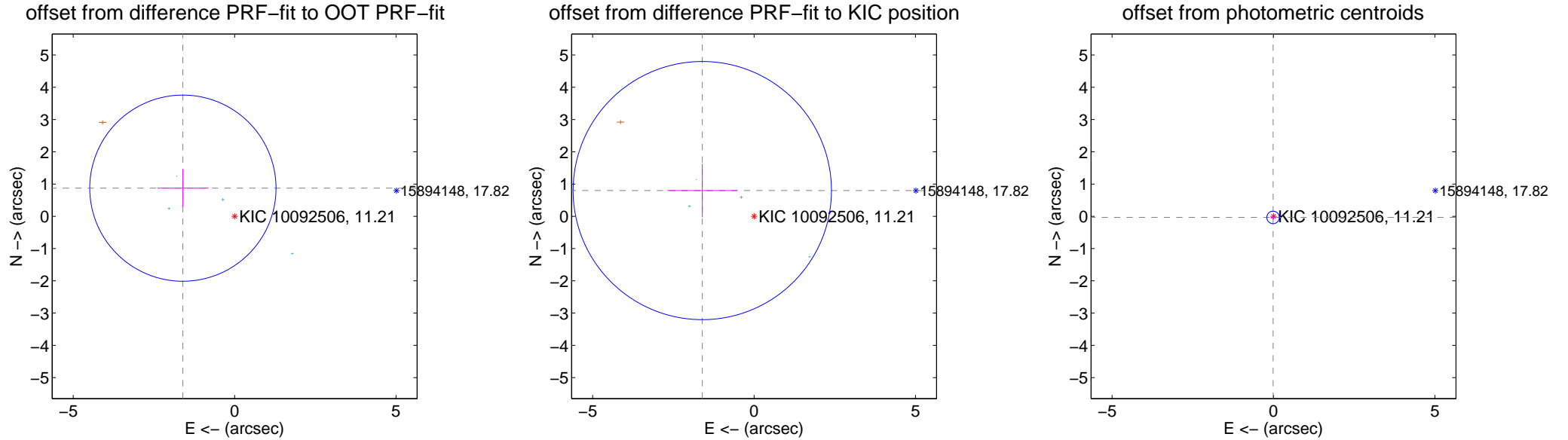
DV Centroid Data

Supplemental centroid analysis for 010092506-01. **Kepler magnitude: 11.21.** Transit SNR 35.25

There are 4 quarters with good PRF difference image offsets

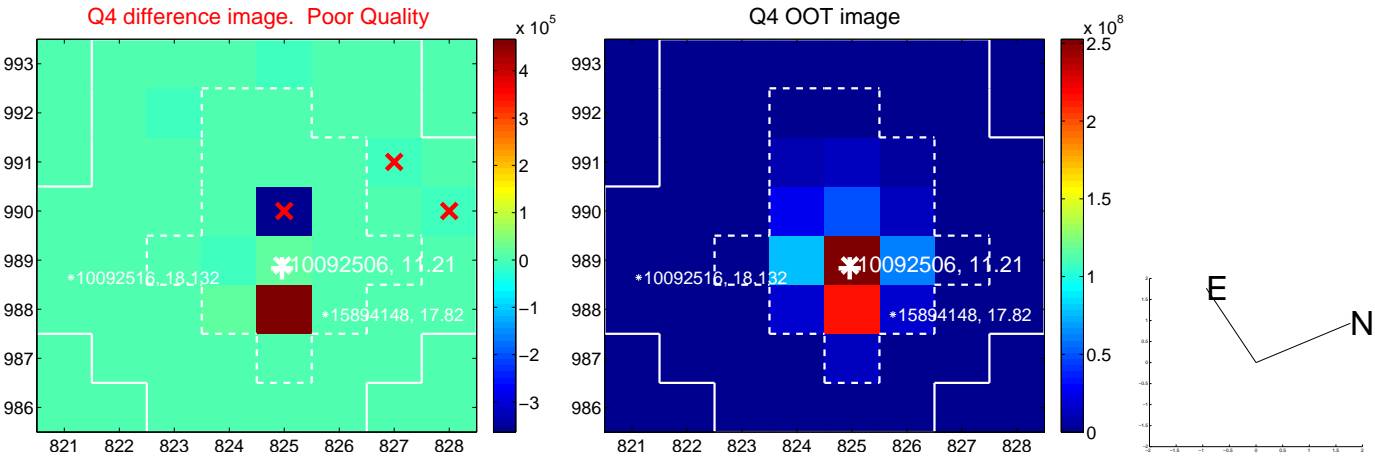
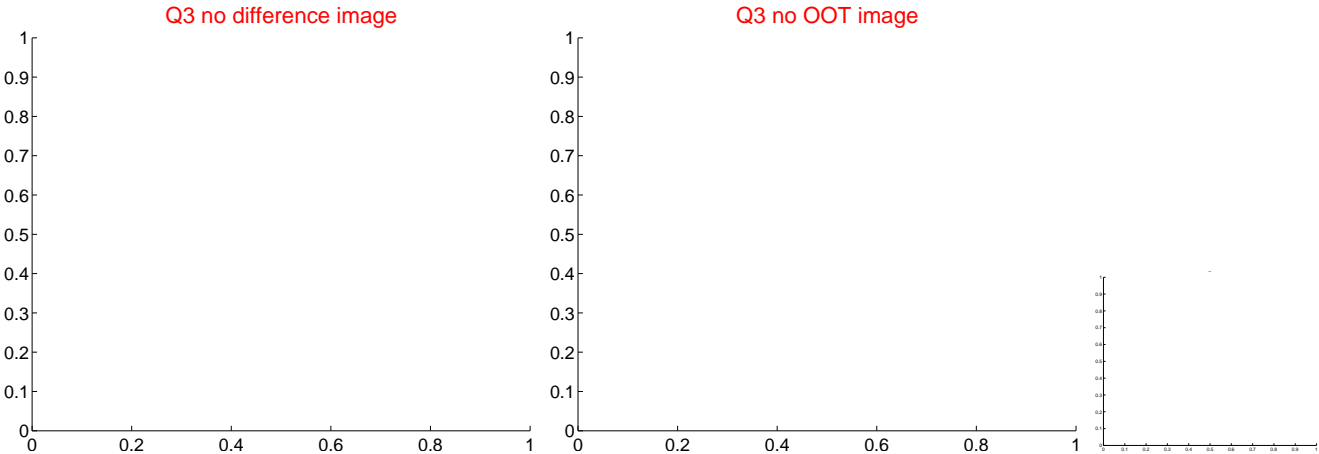
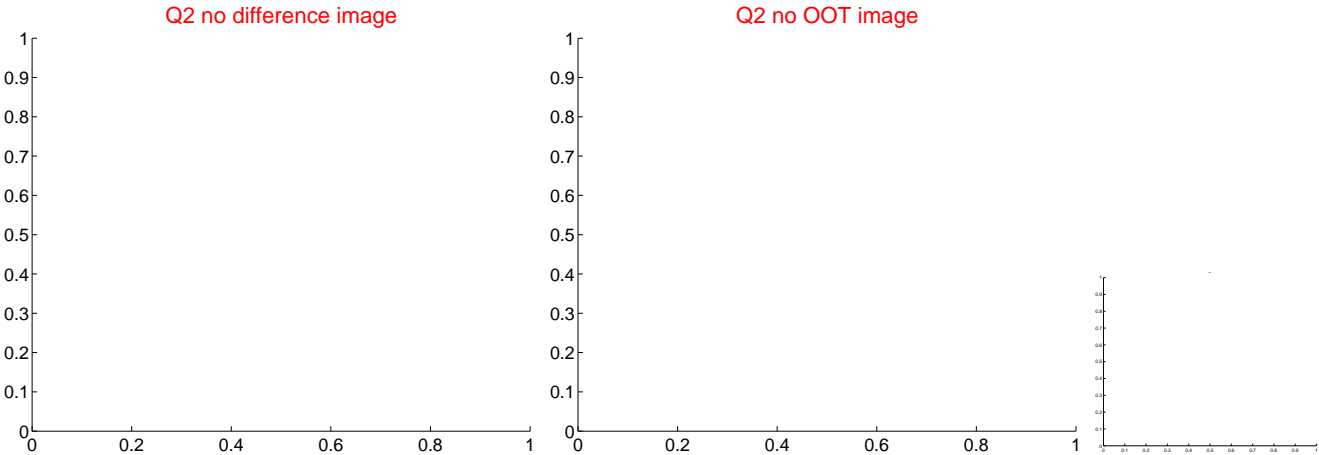
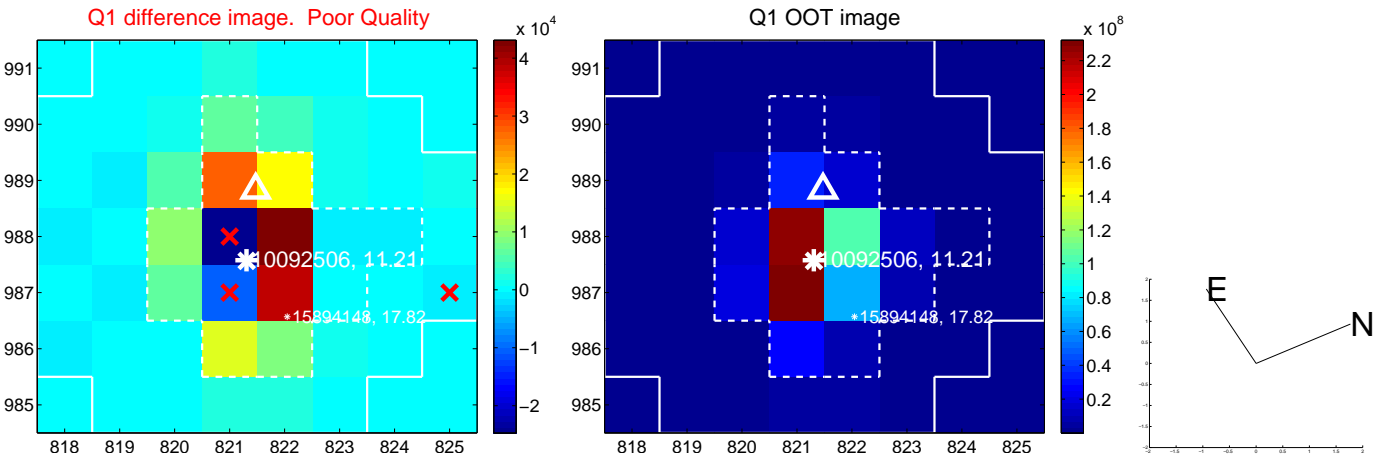
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.825 ± 0.962	1.90	1.603 ± 0.790	0.872 ± 0.587
PRF-fit source offset from KIC position	1.792 ± 1.334	1.34	1.604 ± 1.086	0.798 ± 0.829
photometric centroid source offset	0.04 ± 0.06	0.57	0.01 ± 0.08	-0.03 ± 0.06

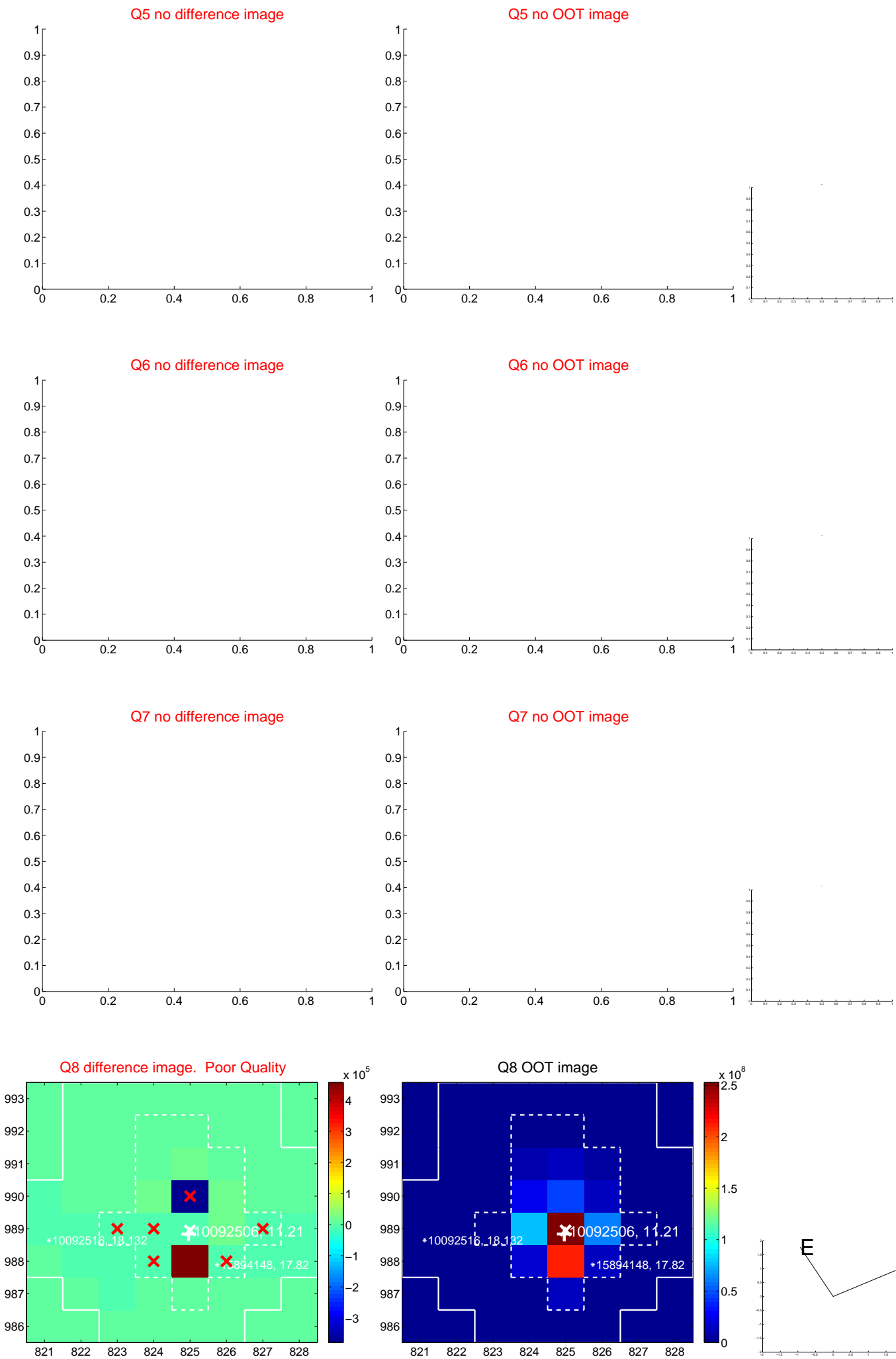


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

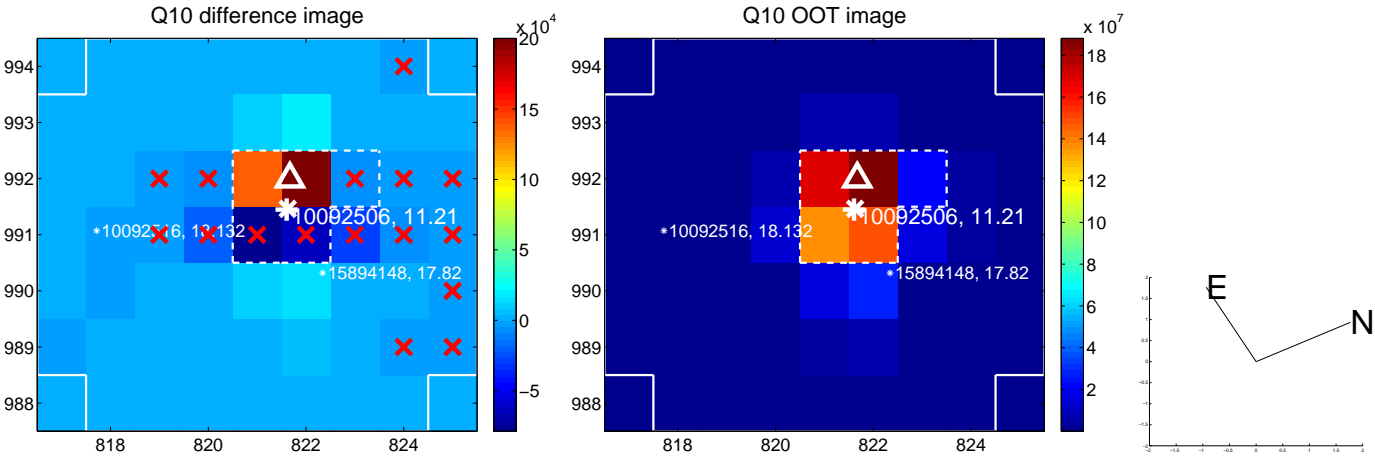
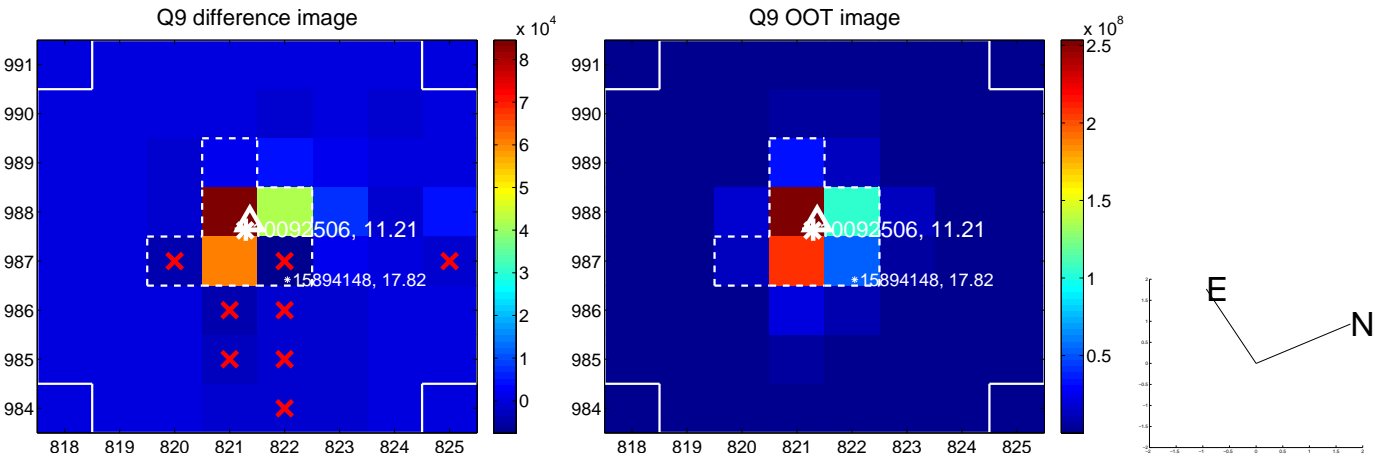
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



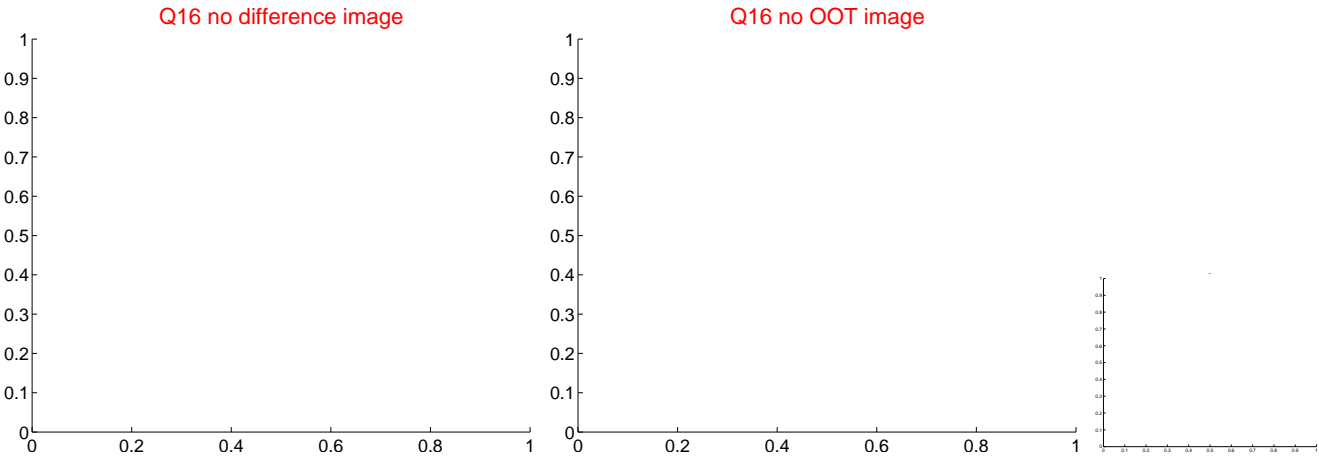
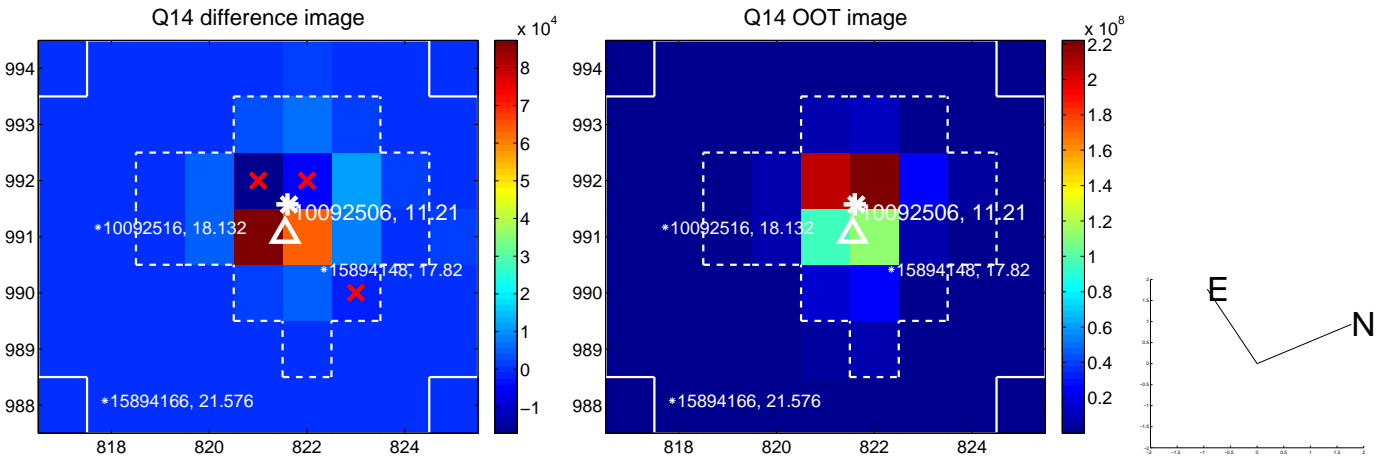
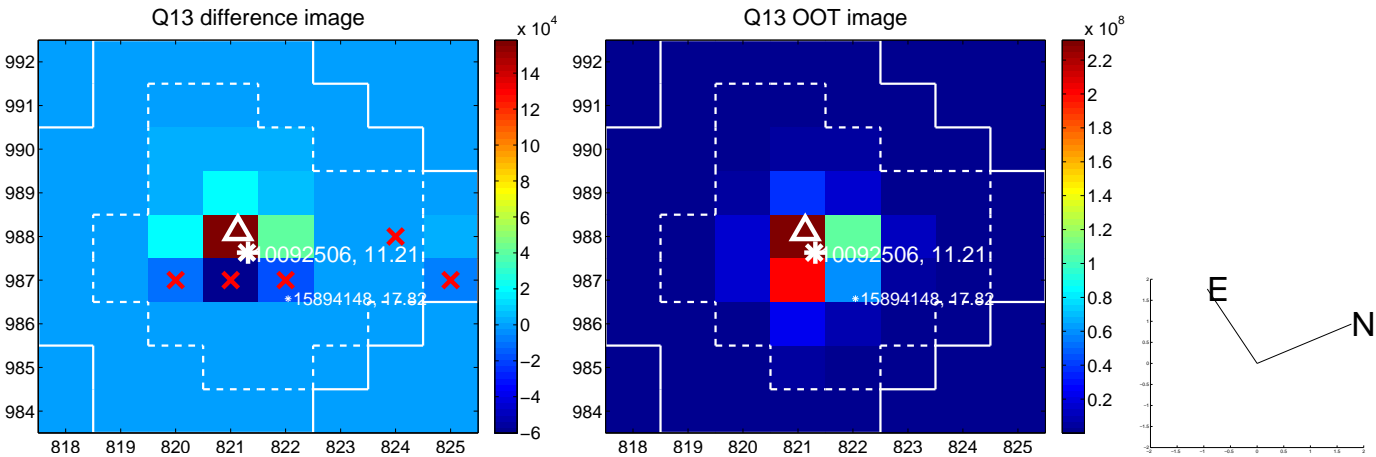
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



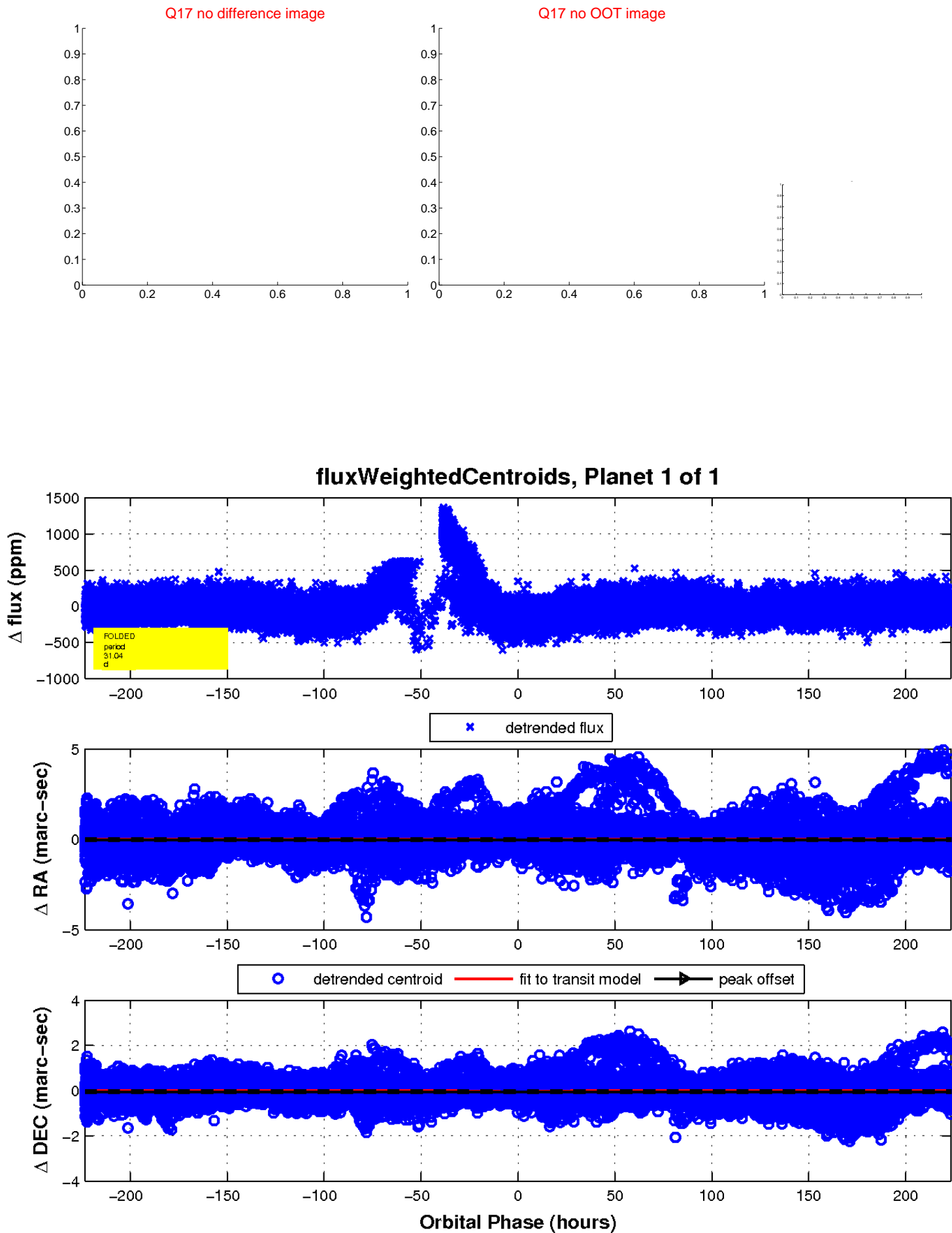
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

