

KIC 003939534

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})
003939534-01	OBS	No	358.737961	202.890643	111.5	7.964	9.4	5.4	1.59	5492	1.92	2.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003939534-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—LPP_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS—HALO_GHOST

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

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

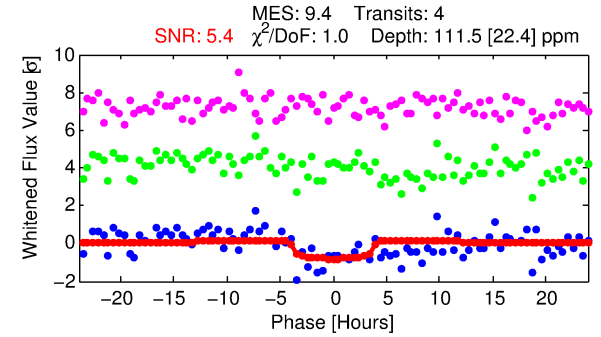
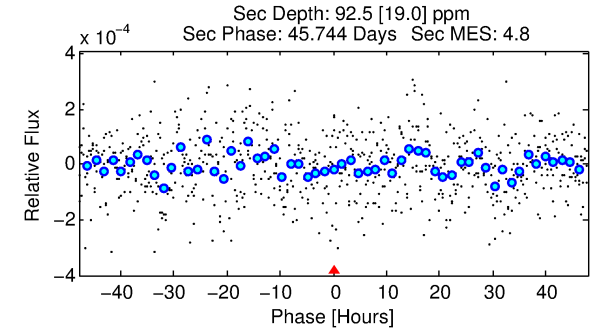
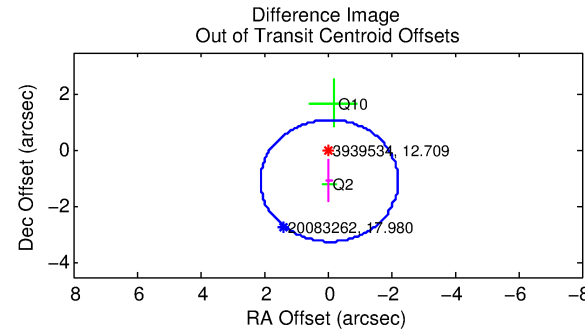
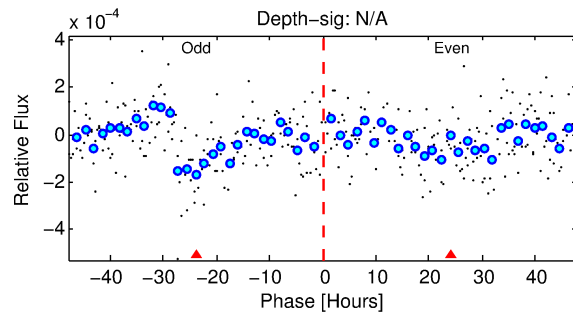
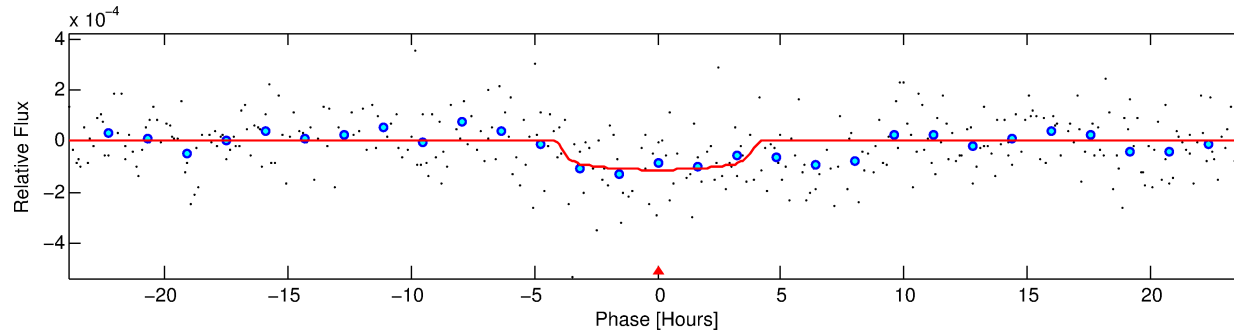
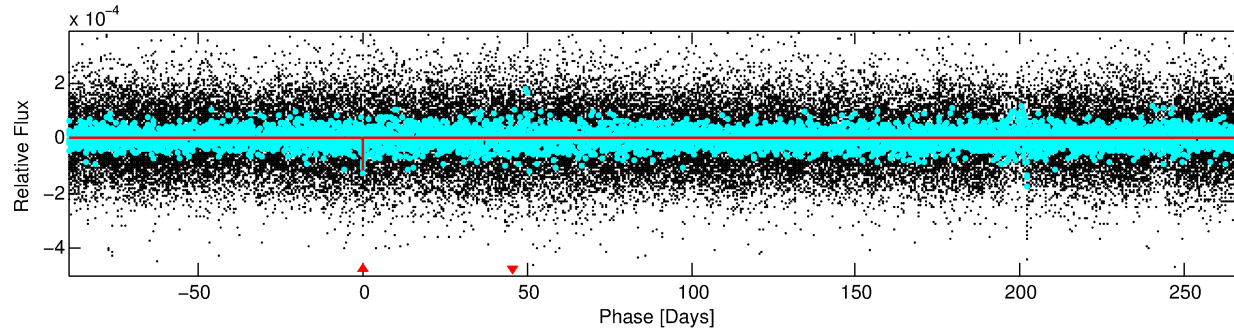
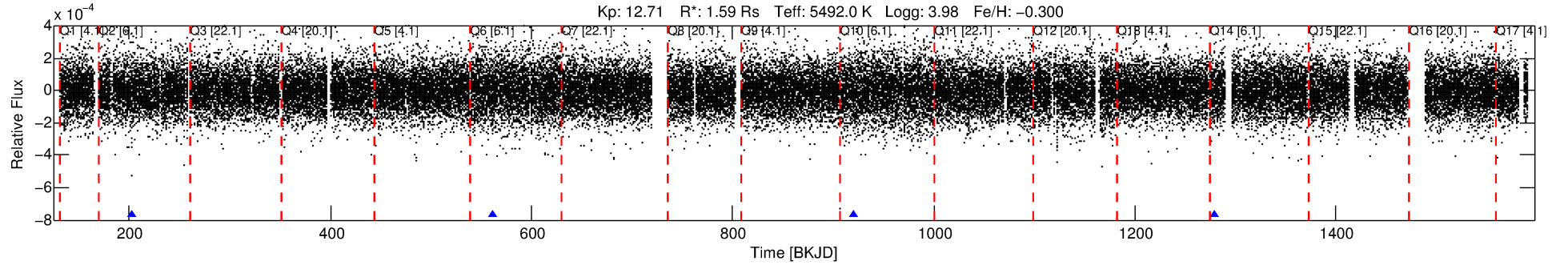
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003939534-01

No Significant Match Found

DV One-Page Summary

KIC: 3939534 Candidate: 1 of 1 Period: 358.738 d



DV Fit Results:

Period = 358.73796 [0.01161] d
Epoch = 202.8906 [0.0221] BKJD
Rp/R* = 0.0111 [0.0106]
a/R* = 188.68 [805.83]
b = 0.85 [1.43]
Seff = 2.30 [1.44]
Teq = 314 [49] K
Rp = 1.92 [1.95] Re
a = 0.9450 [0.3430] AU
Ag = 12370.33 [24905.07] [0.50σ]
Teffp = 5121 [2466] K [1.95σ]

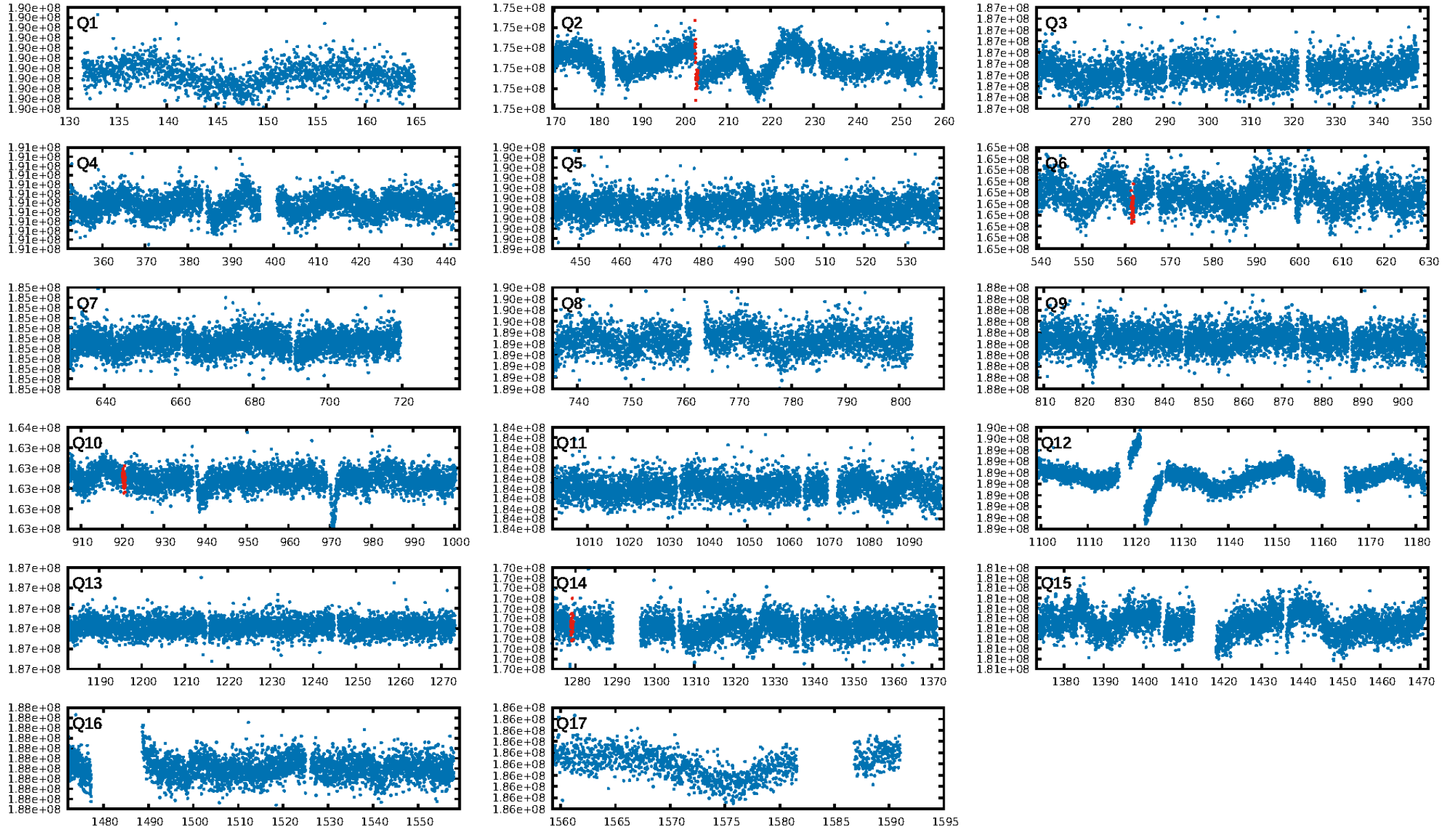
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 97.4%
Bootstrap-pfa: 9.16e-11
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.04611
Centroid-sig: 13.9%
Centroid-so: 2.315 arcsec [1.10σ]
OotOffset-rm: 1.076 arcsec [1.49σ]
KicOffset-rm: 1.285 arcsec [1.64σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

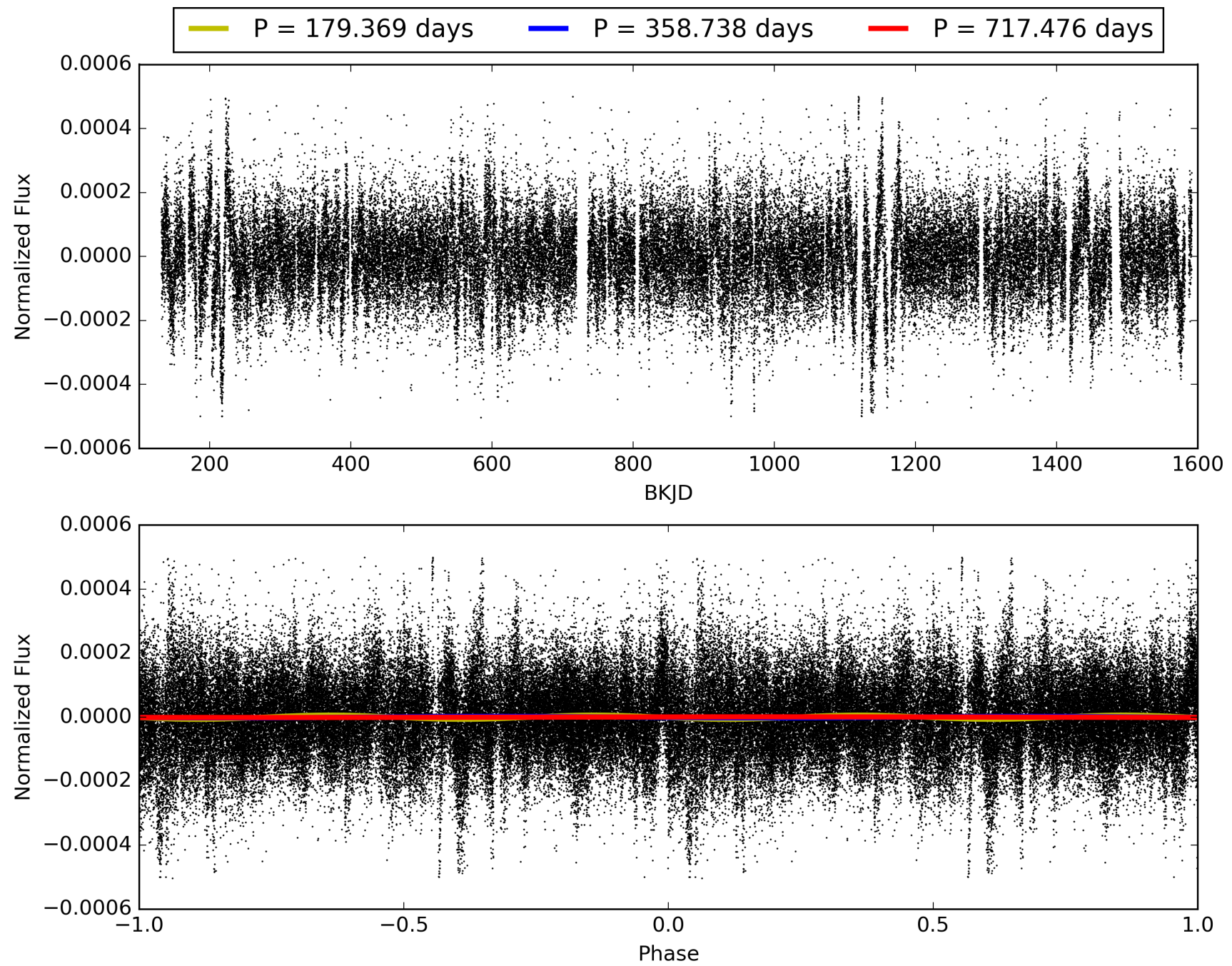
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:39:27 Z

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

TCE 003939534-01, PDC Light Curves

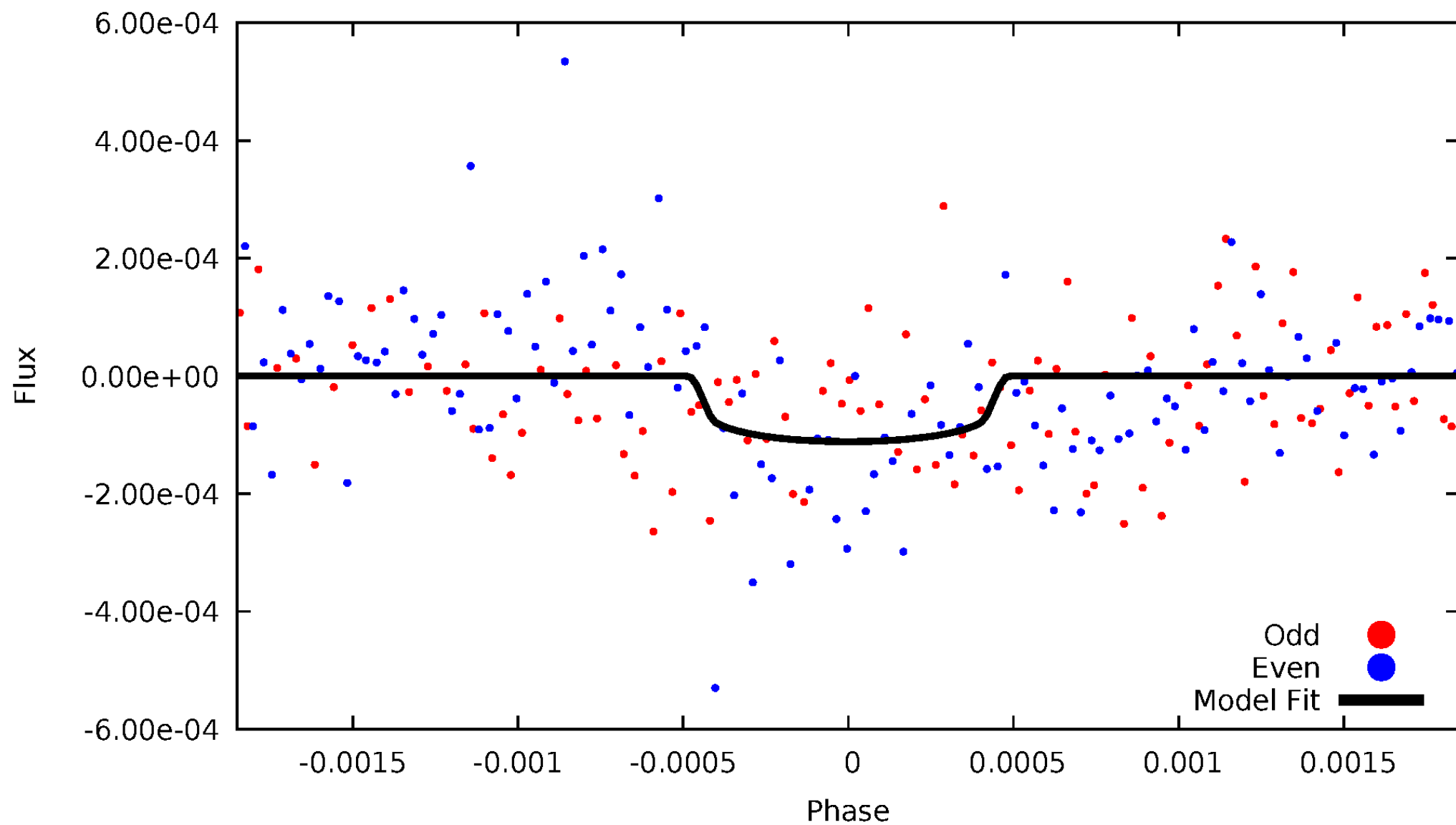


TCE 003939534-01



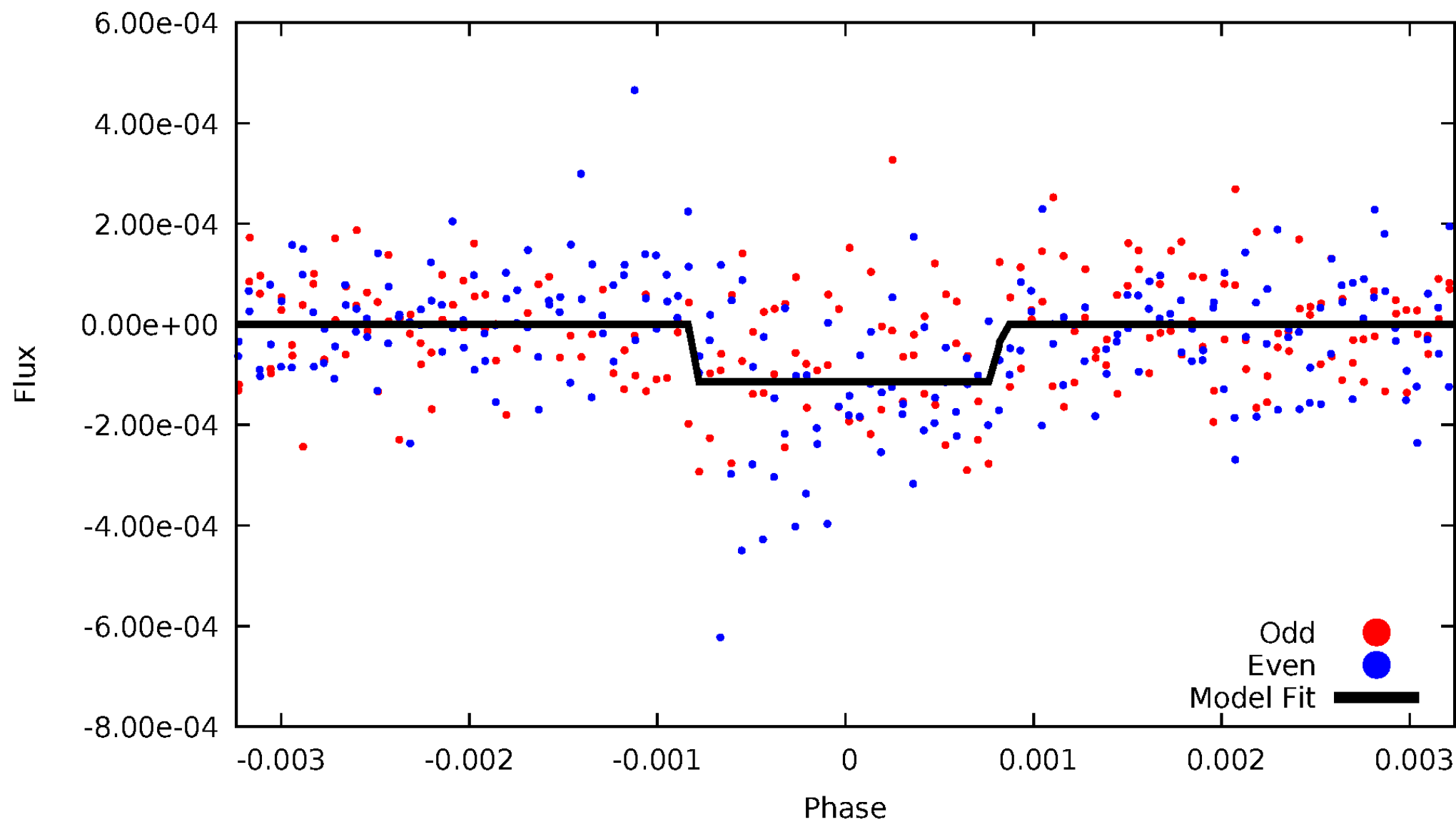
DV Odd/Even

TCE 003939534-01



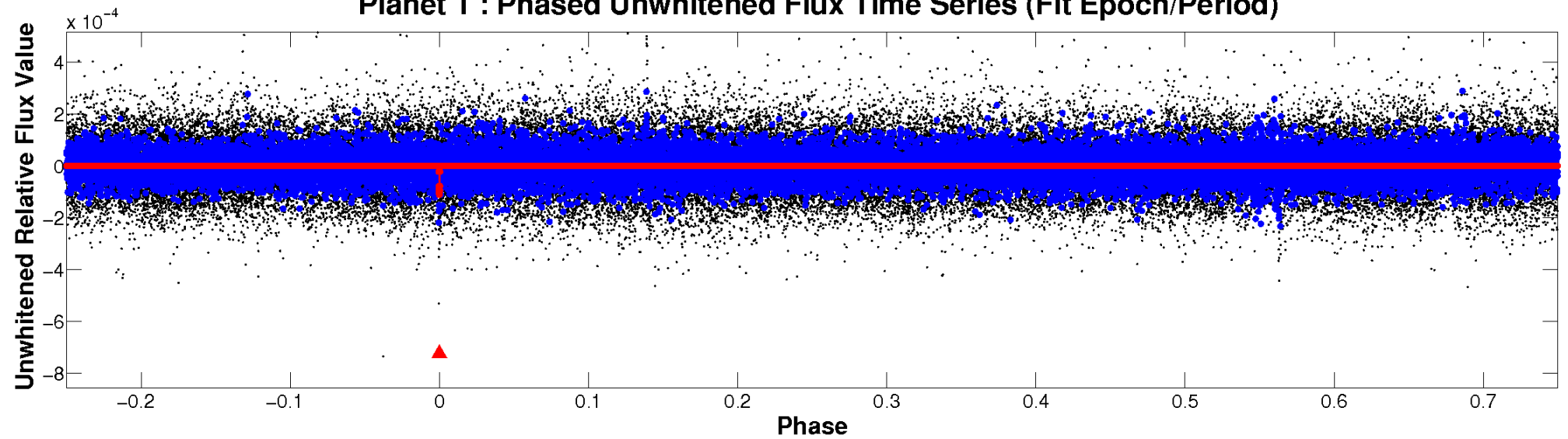
ALT Odd/Even

TCE 003939534-01

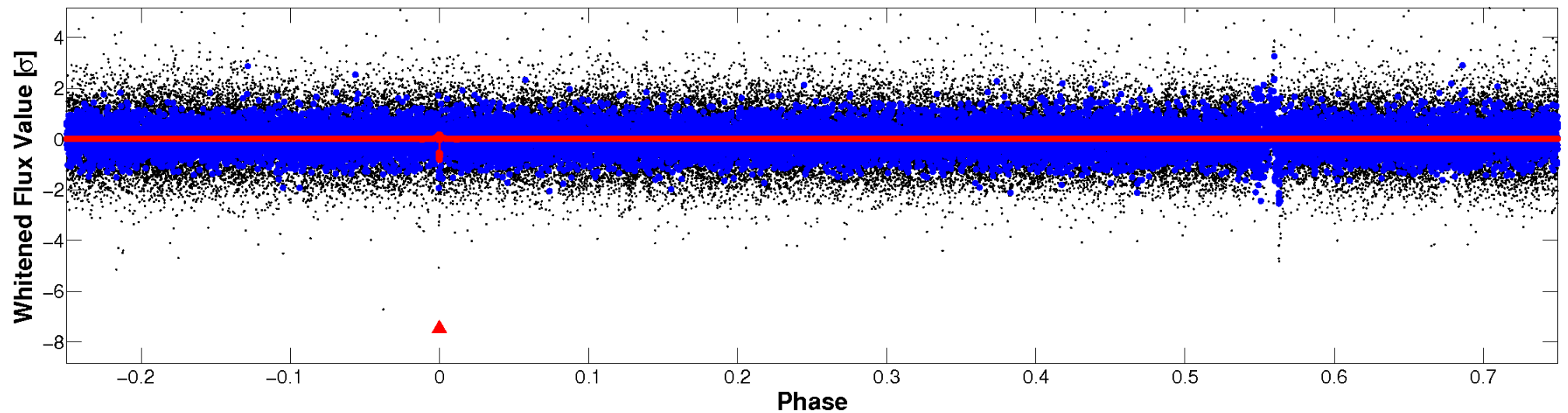


Non-Whitened Vs. Whitened Light Curve

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

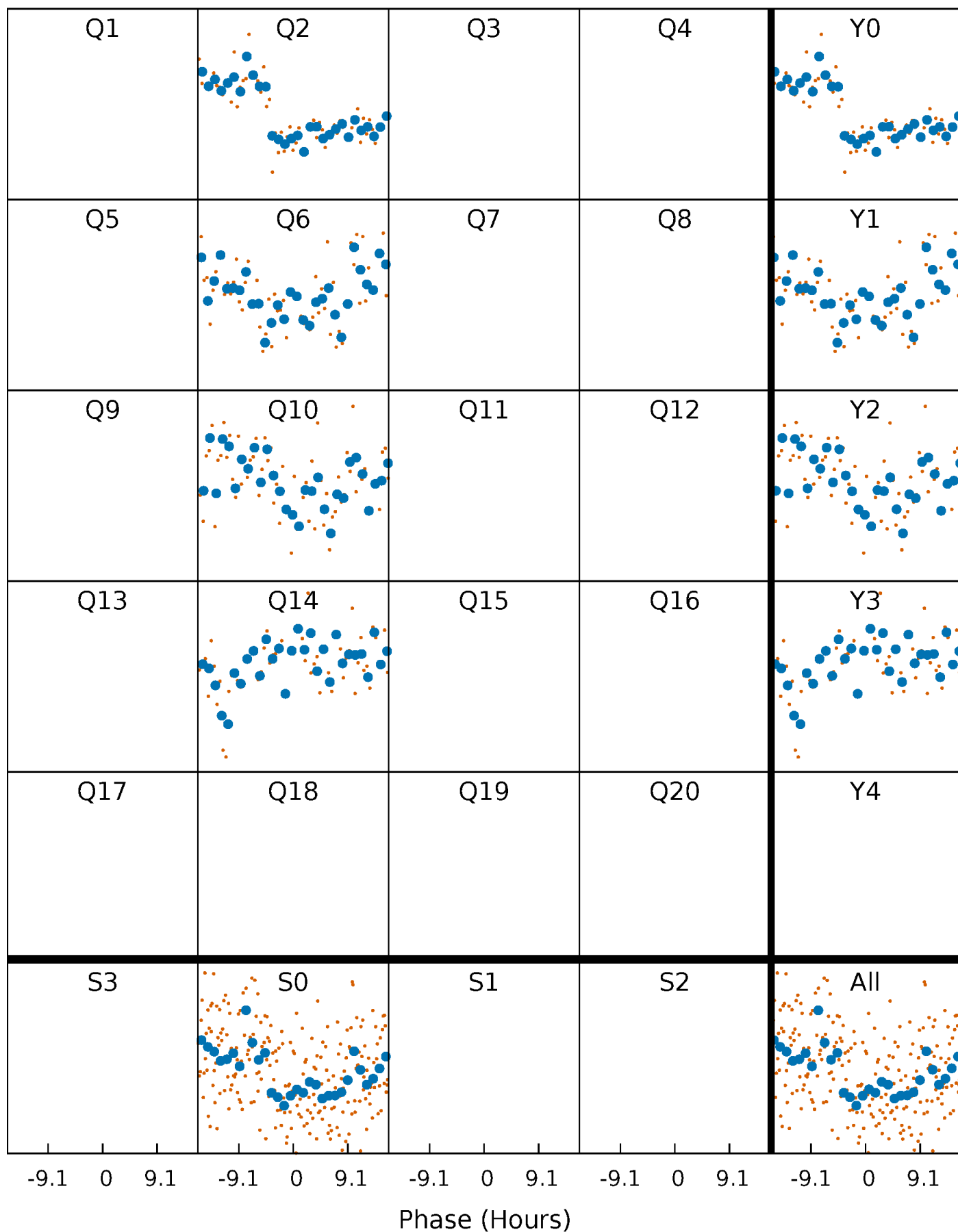


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



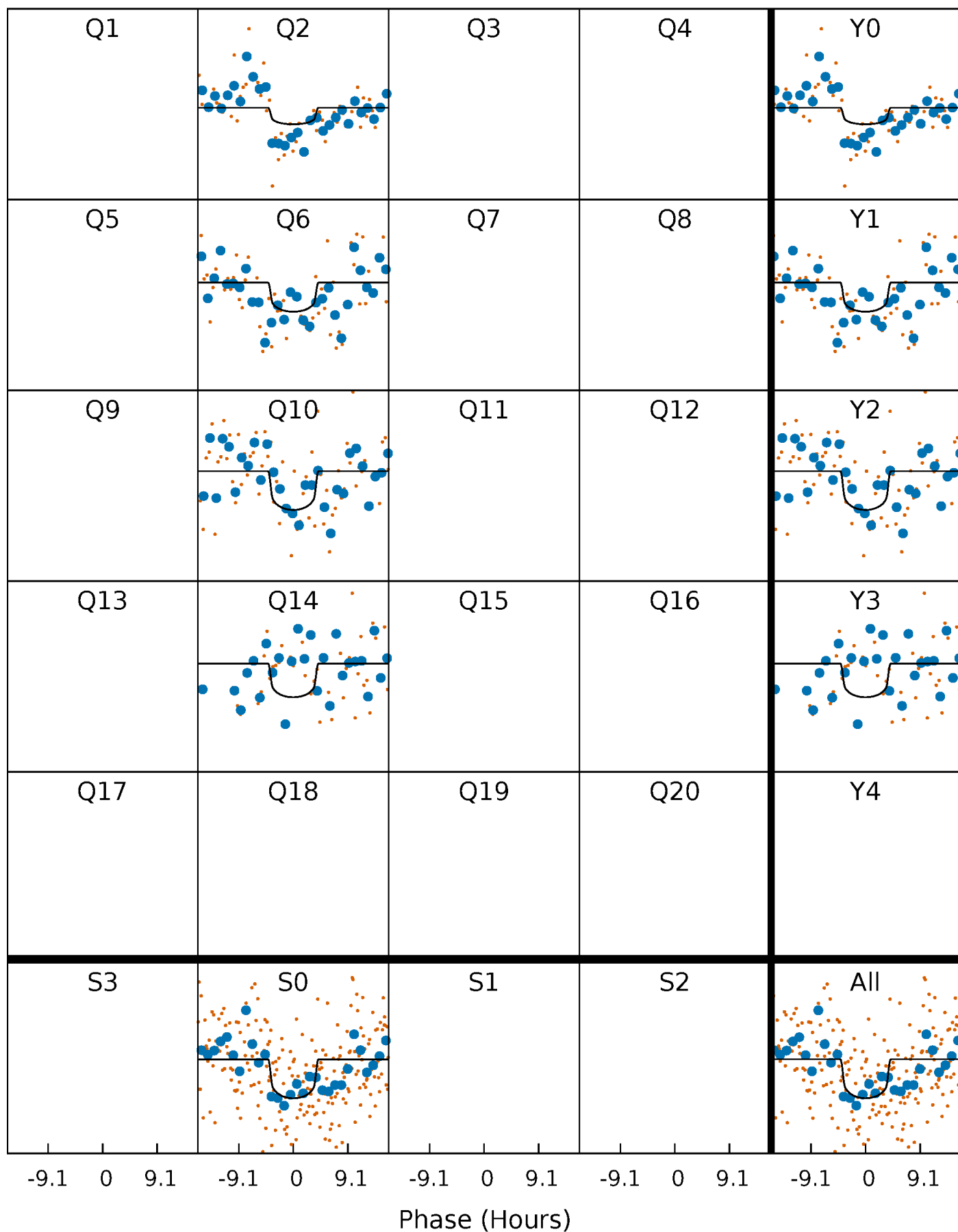
PDC Quarter-Phased Transit Curves

TCE 003939534-01 P=358.737961 Days $T_0=202.890643$ (BKJD)



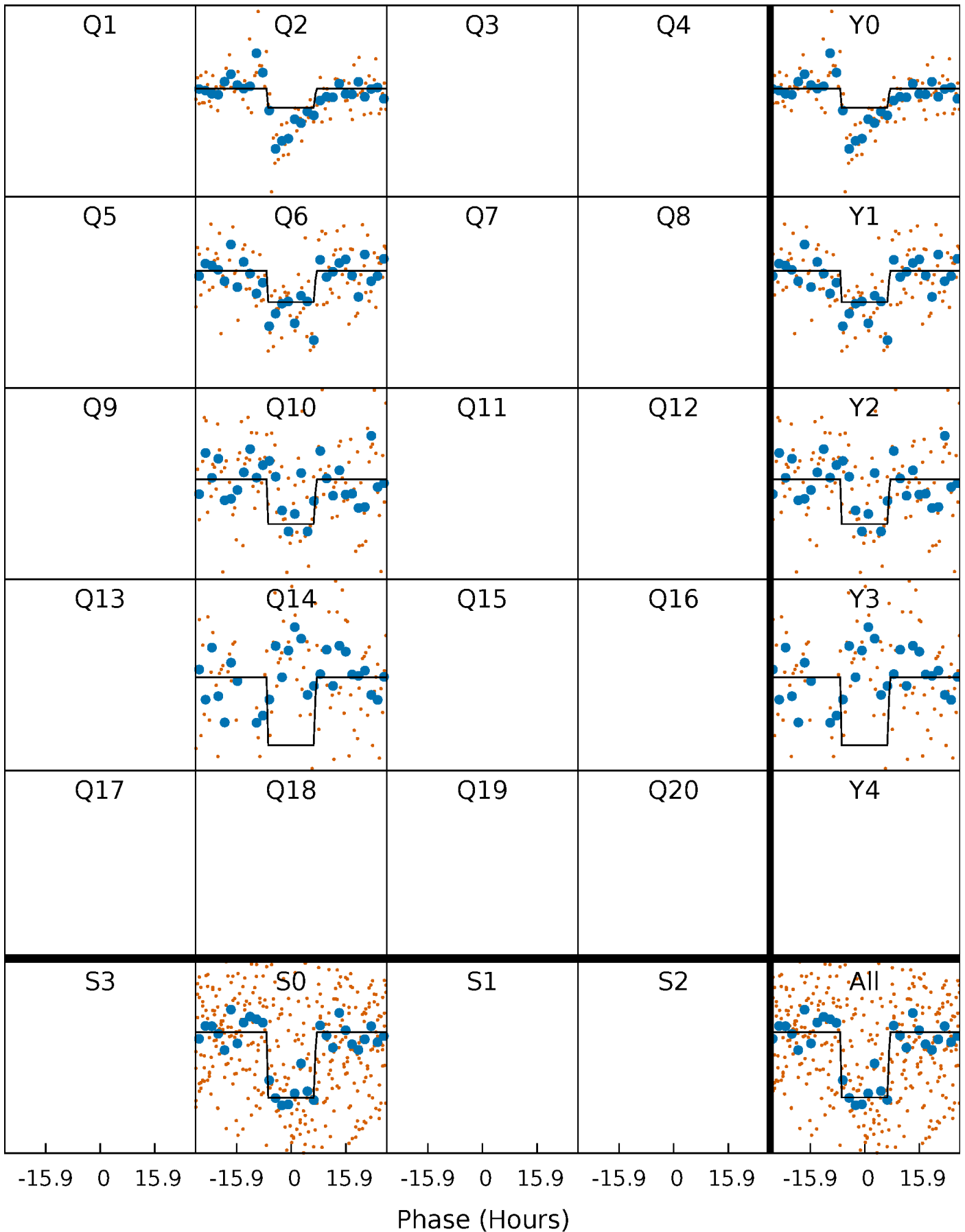
DV Quarter-Phased Transit Curves

TCE 003939534-01 P=358.737961 Days $T_0=202.890643$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

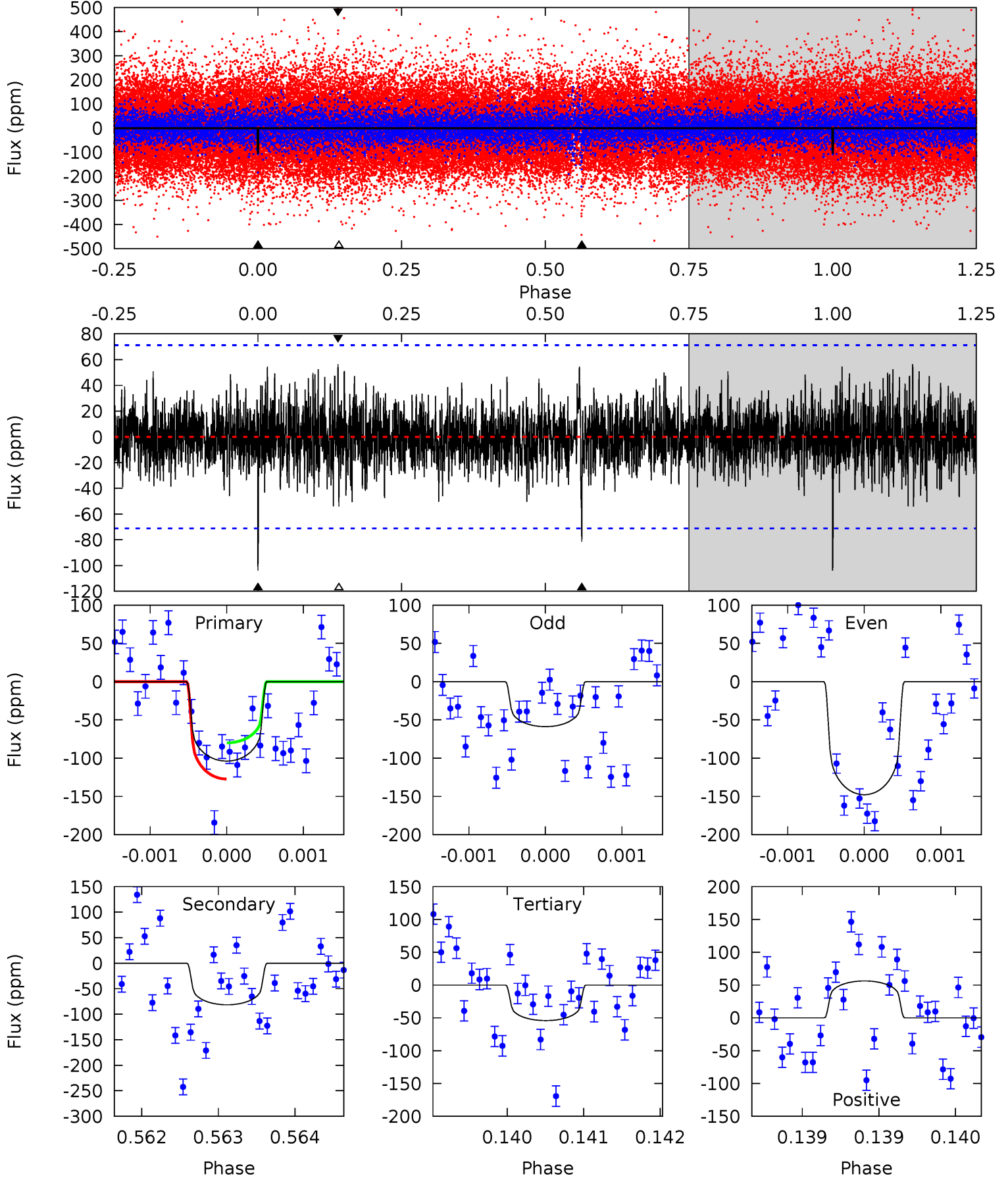
TCE 003939534-01 P=358.711146 Days $T_0=202.984817$ (BKJD)



DV Model-Shift Uniqueness Test

003939534-01, P = 358.737961 Days, E = 202.890643 Days

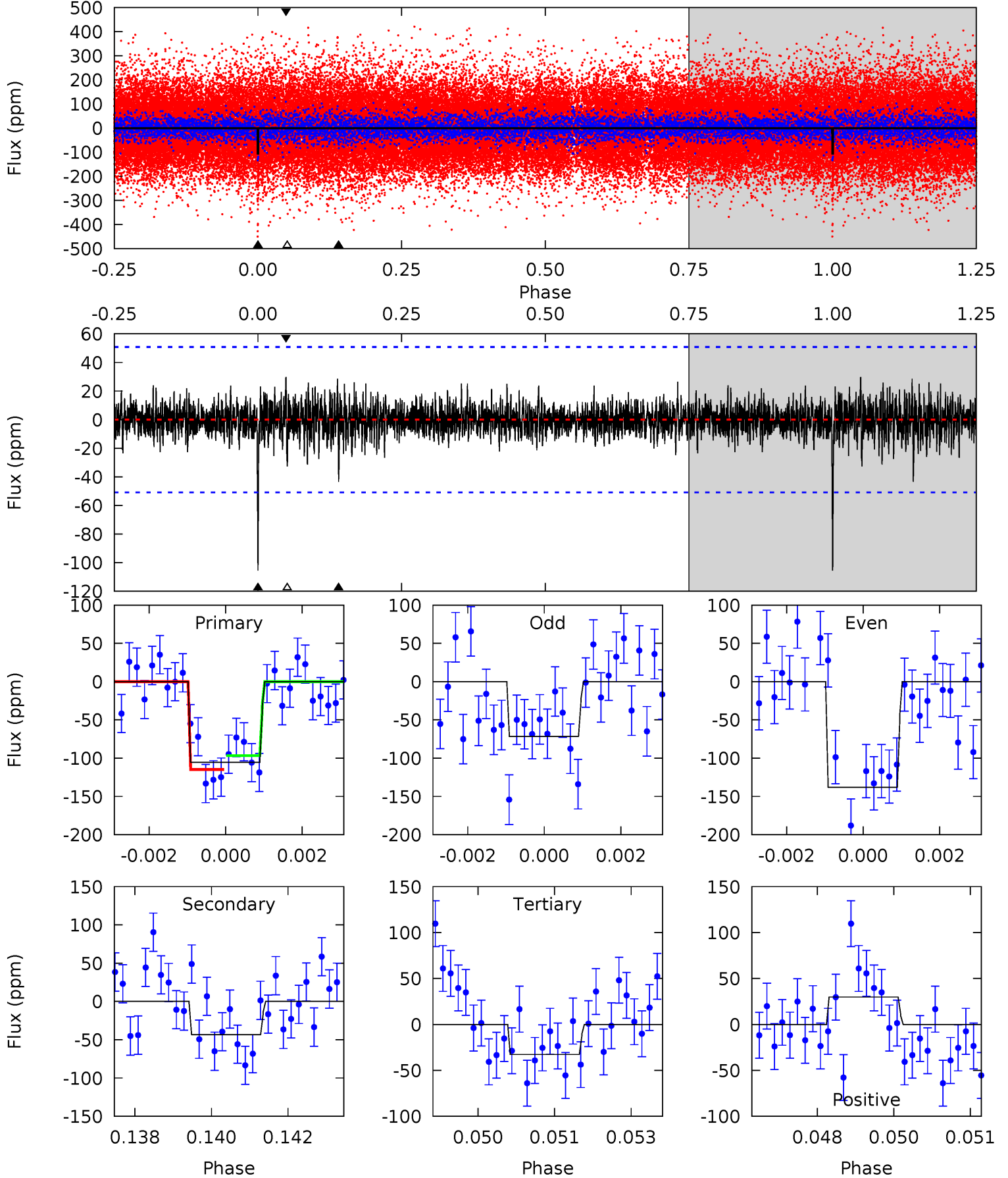
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.98	6.27	4.16	4.32	5.46	3.31	1.22	3.81	3.65	2.10	1.94	3.44	1.02	0.35	1.82



Alt Model-Shift Uniqueness Test

003939534-01, $P = 358.711146$ Days, $E = 202.984817$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	4.58	3.45	3.14	5.36	3.14	0.82	7.67	7.98	1.13	1.44	3.52	1.05	0.22	0.96



Stellar Parameters For KIC 003939534

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5492^{+208}_{-125}	$3.978^{+0.364}_{-0.156}$	$-0.300^{+0.400}_{-0.200}$	$1.588^{+0.452}_{-0.552}$	$0.875^{+0.145}_{-0.058}$	$0.307^{+0.756}_{-0.151}$
	+4%/-2%	+9%/-4%	+133%/-67%	+28%/-35%	+17%/-7%	+246%/-49%
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 003939534-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-82 ± 13	$2.26^{+1.65}_{-1.50}$	436^{+34}_{-43}	4623^{+3034}_{-807}	8241^{+56634}_{-5566}
Alt.	-43 ± 9	$2.11^{+1.61}_{-1.34}$	432^{+37}_{-44}	4166^{+2291}_{-706}	4843^{+31158}_{-3287}

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 $A_{obs} \gg 1.0$

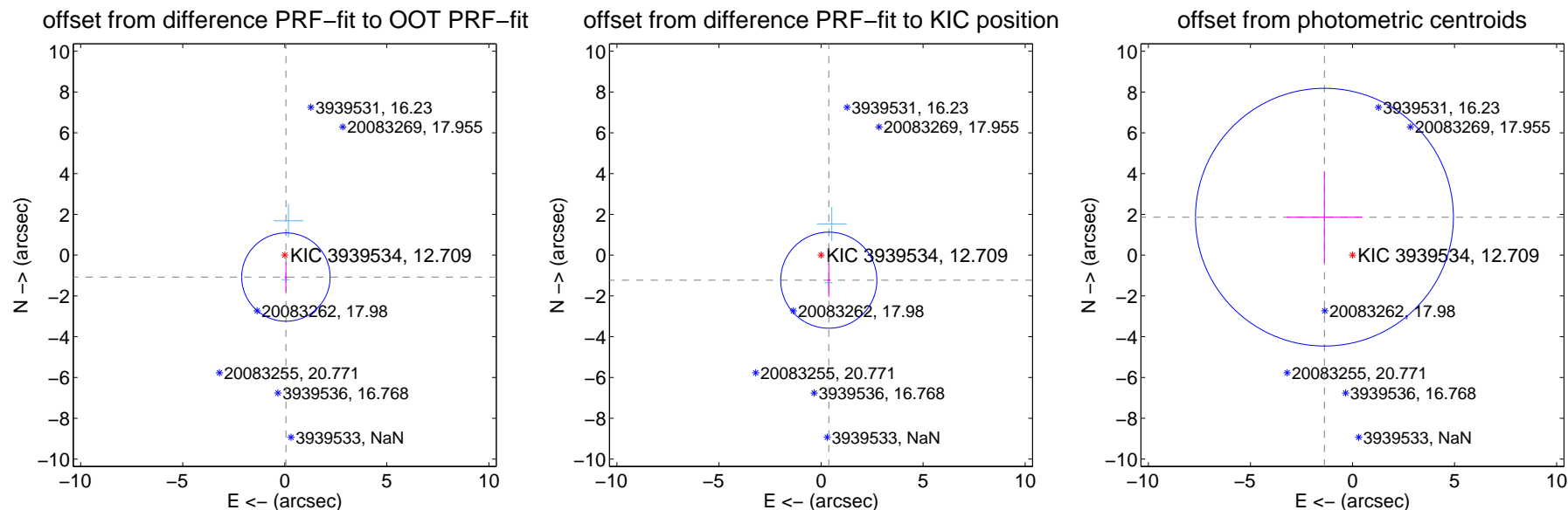
DV Centroid Data

Supplemental centroid analysis for 003939534-01. Kepler magnitude: 12.71. Transit SNR 5.38

There are 2 quarters with good PRF difference image offsets

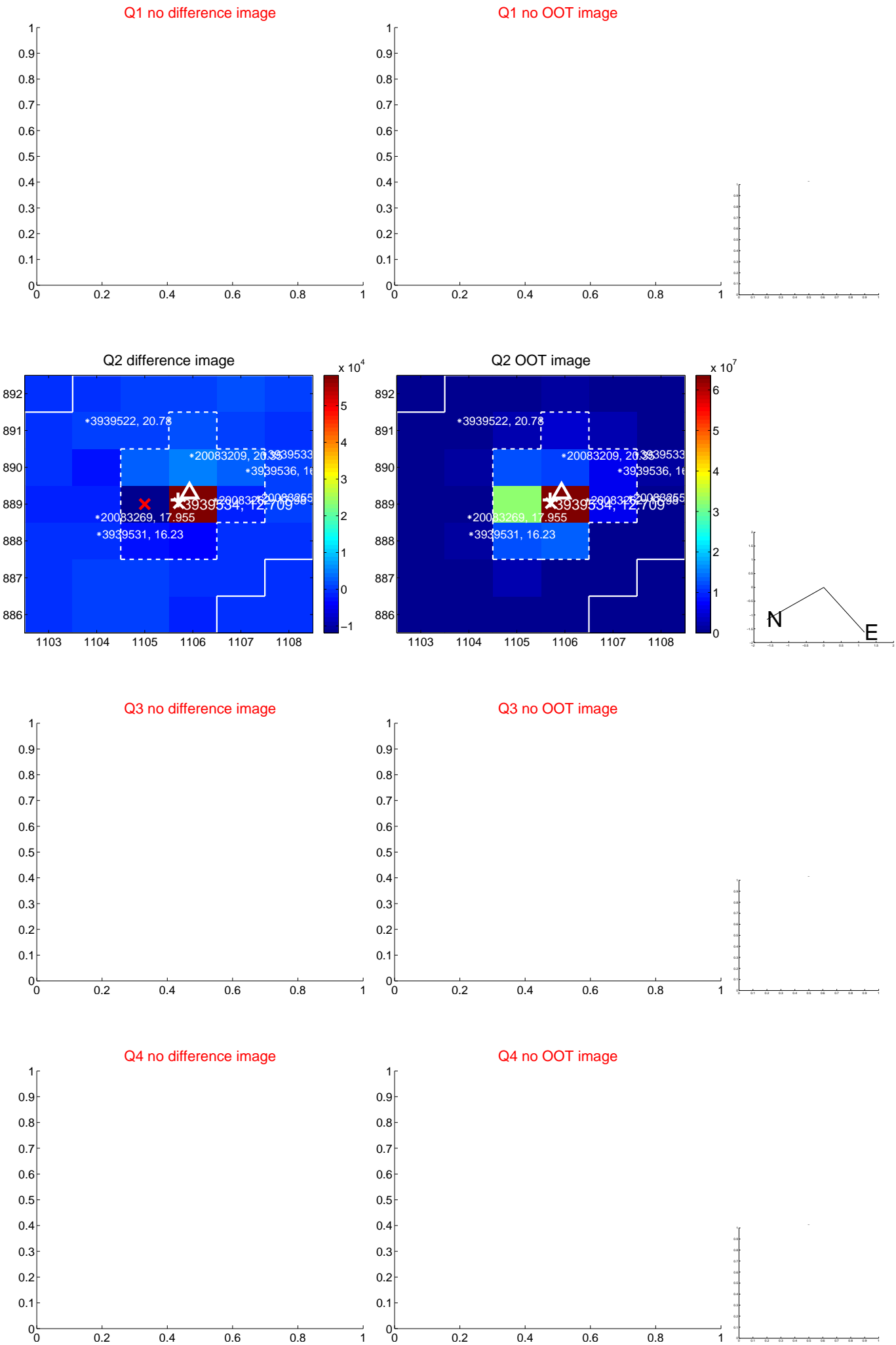
The direct PRF centroid is offset from the target star catalog position by about 0.38 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.076 ± 0.722	1.49	-0.055 ± 0.075	-1.075 ± 0.725
PRF-fit source offset from KIC position	1.285 ± 0.785	1.64	-0.380 ± 0.081	-1.228 ± 0.836
photometric centroid source offset	2.31 ± 2.11	1.10	1.37 ± 1.86	1.86 ± 2.23

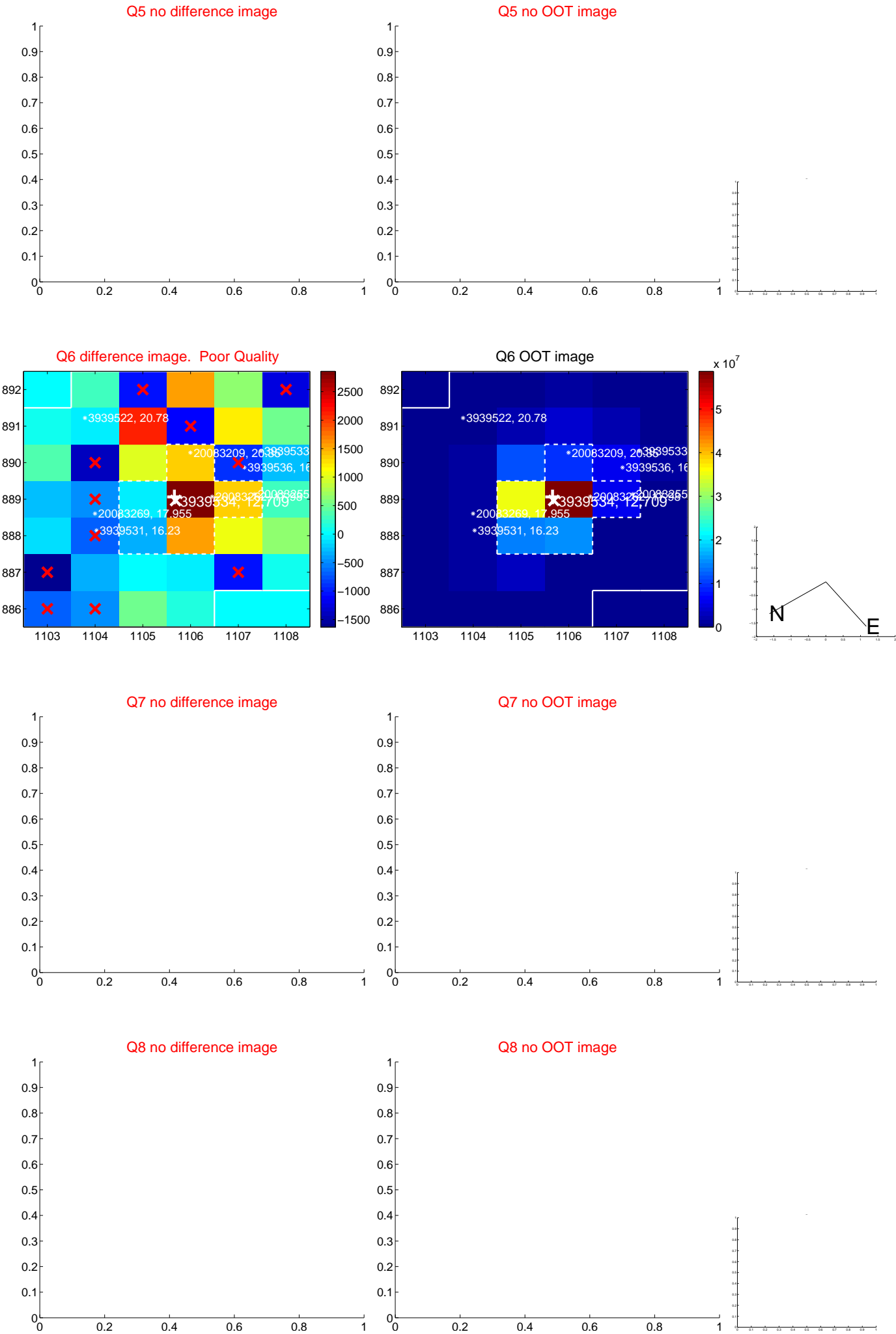


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

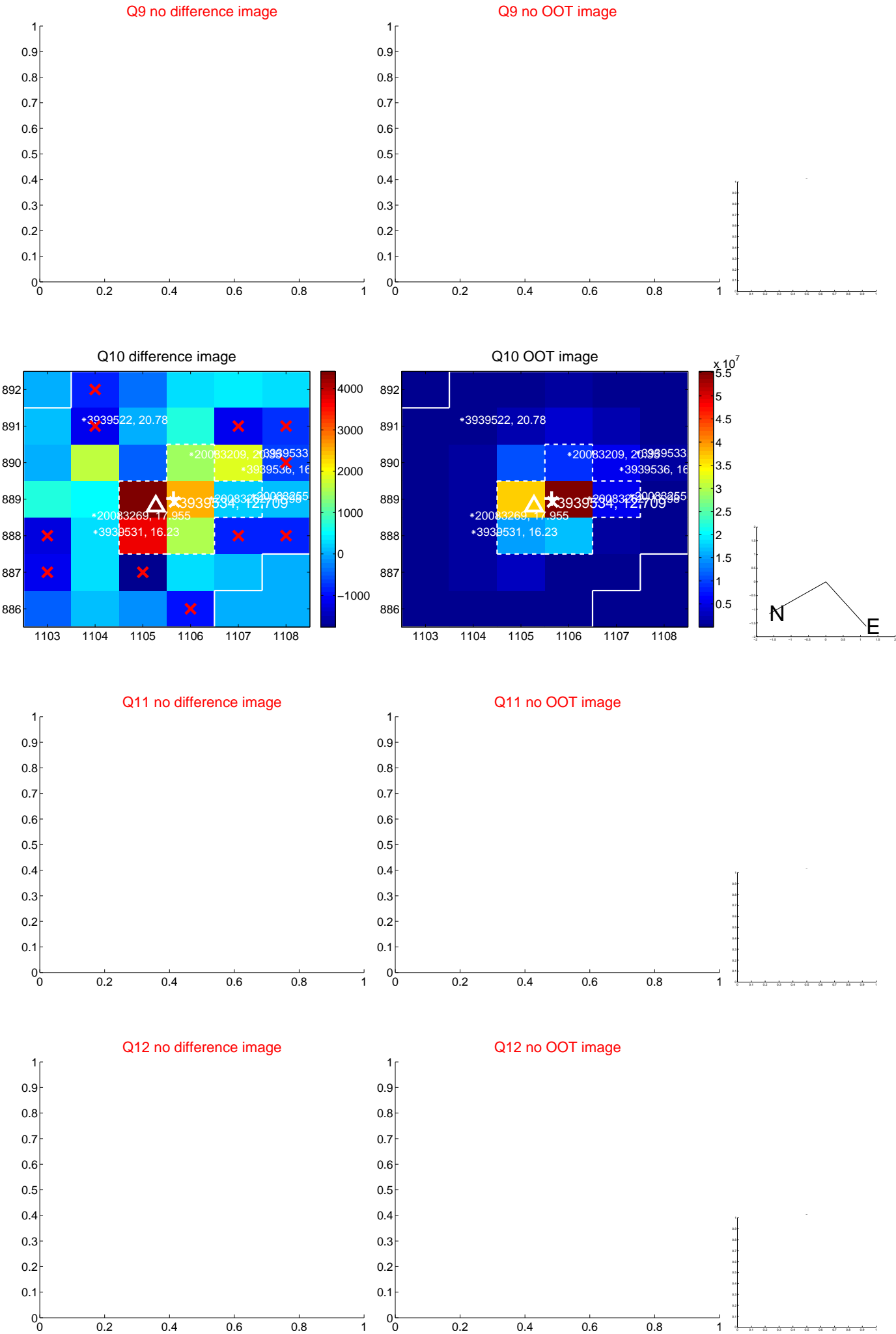
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



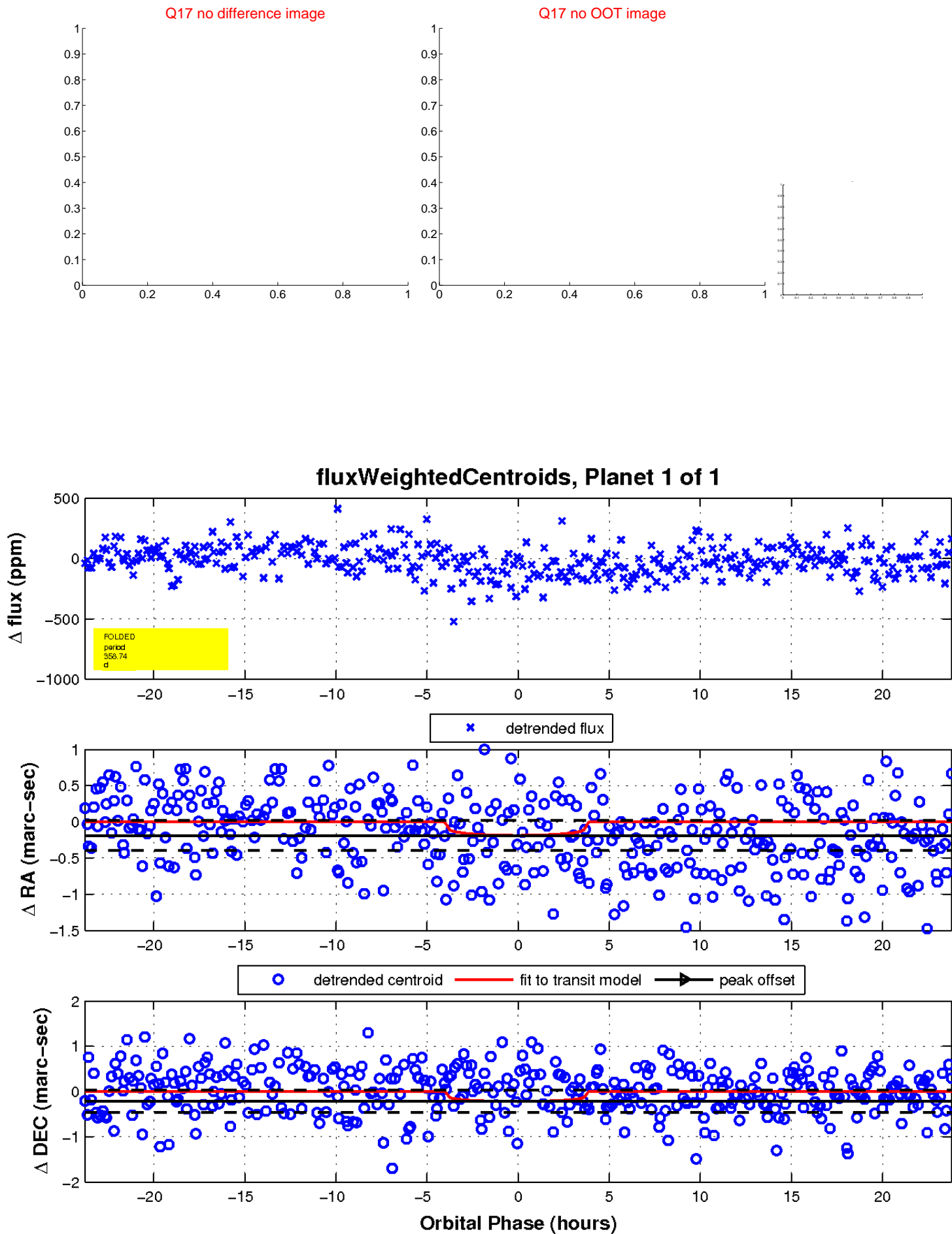
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

