

KIC 003734660

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})
003734660-01	OBS	No	19.939748	150.359596	213.2	39.278	23.6	31.6	1.67	6191	4.81	213.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003734660-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

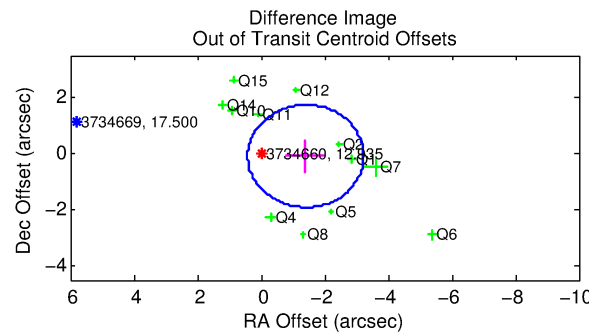
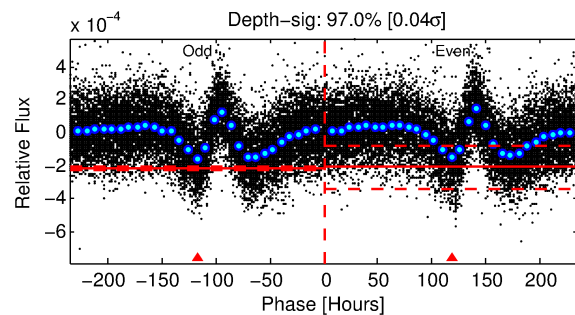
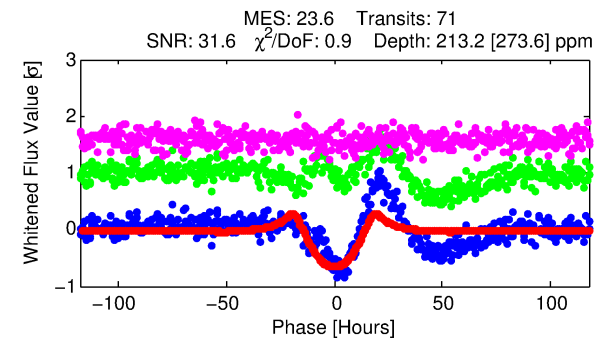
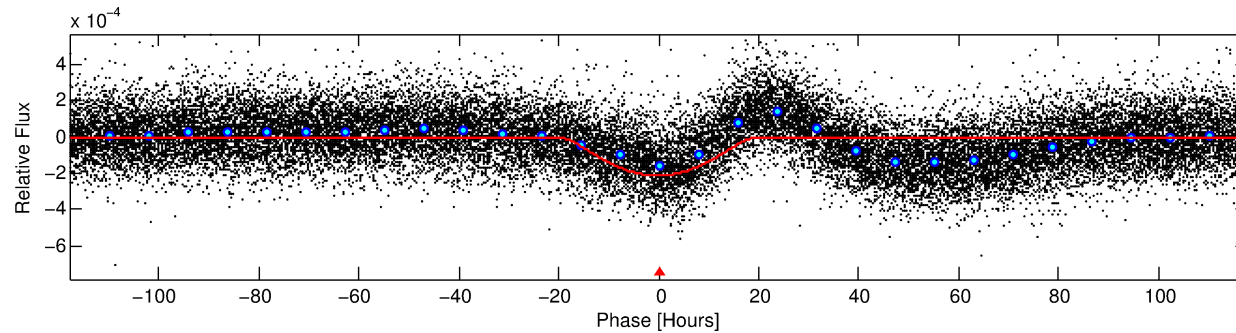
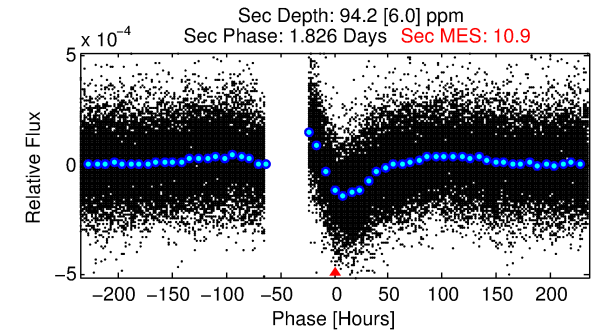
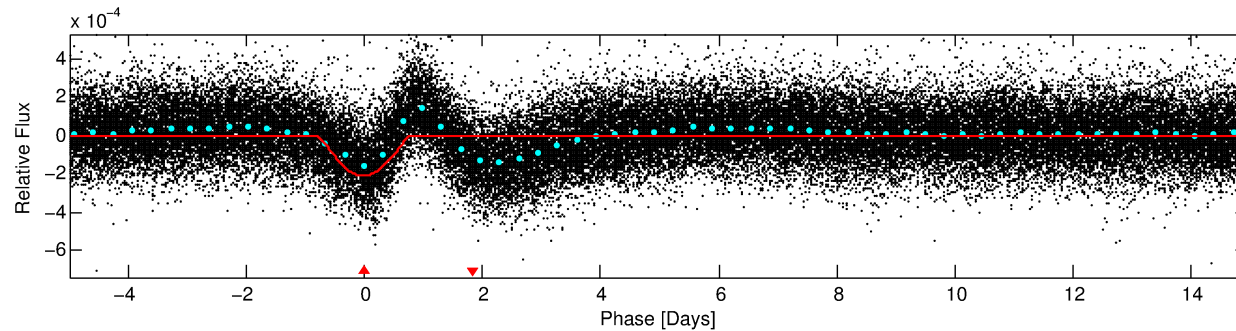
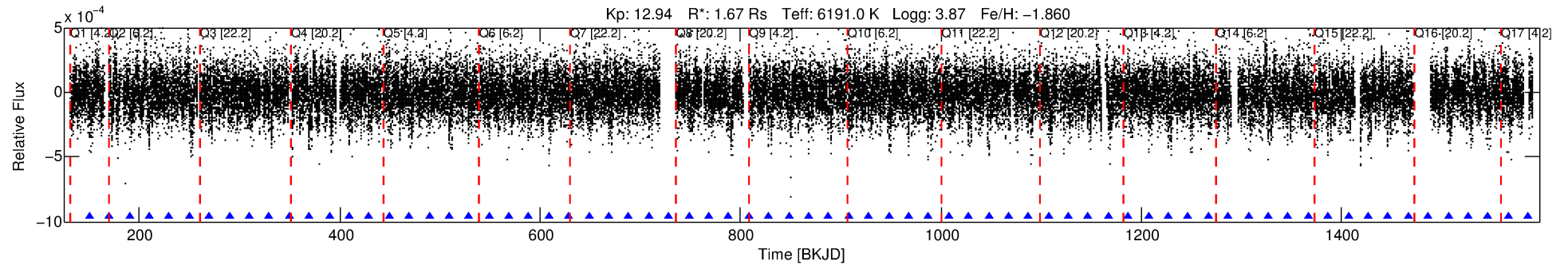
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003734660-01

No Significant Match Found

DV One-Page Summary

KIC: 3734660 Candidate: 1 of 1 Period: 19.940 d



DV Fit Results:

Period = 19.93975 [0.00051] d
Epoch = 150.3596 [0.0205] BKJD
Rp/R* = 0.0264 [0.0132]
a/R* = 1.35 [0.07]
b = 1.00 [0.00]
Seff = 213.21 [133.56]
Teq = 974 [153] K
Rp = 4.81 [2.99] Re
a = 0.1315 [0.0488] AU
Ag = 38.67 [45.48] [0.83σ]
Teffp = 3757 [954] K [2.88σ]

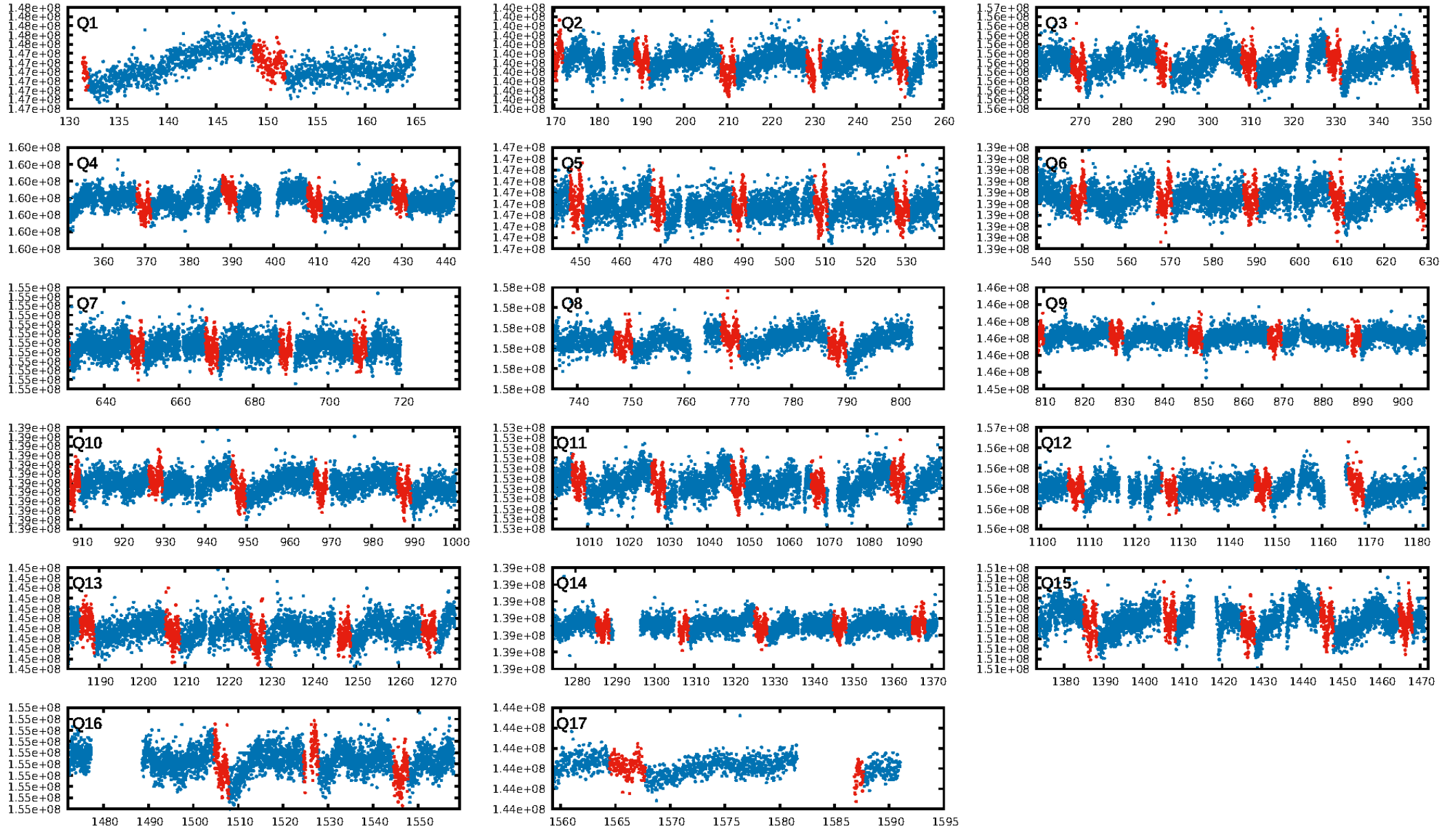
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 36.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.95e-124
RollingBand-fgt: 1.00 [68/68]
GhostDiagnostic-chr: -1197
Centroid-sig: 0.3%
Centroid-so: 0.685 arcsec [2.18σ]
OotOffset-rm: 1.407 arcsec [2.31σ]
KicOffset-rm: 1.497 arcsec [2.55σ]
OotOffset-st: 4/3/3/2 [12]
KicOffset-st: 4/3/3/2 [12]
DiffImageQuality-fgm: 0.67 [8/12]
DiffImageOverlap-fno: 1.00 [15/15]

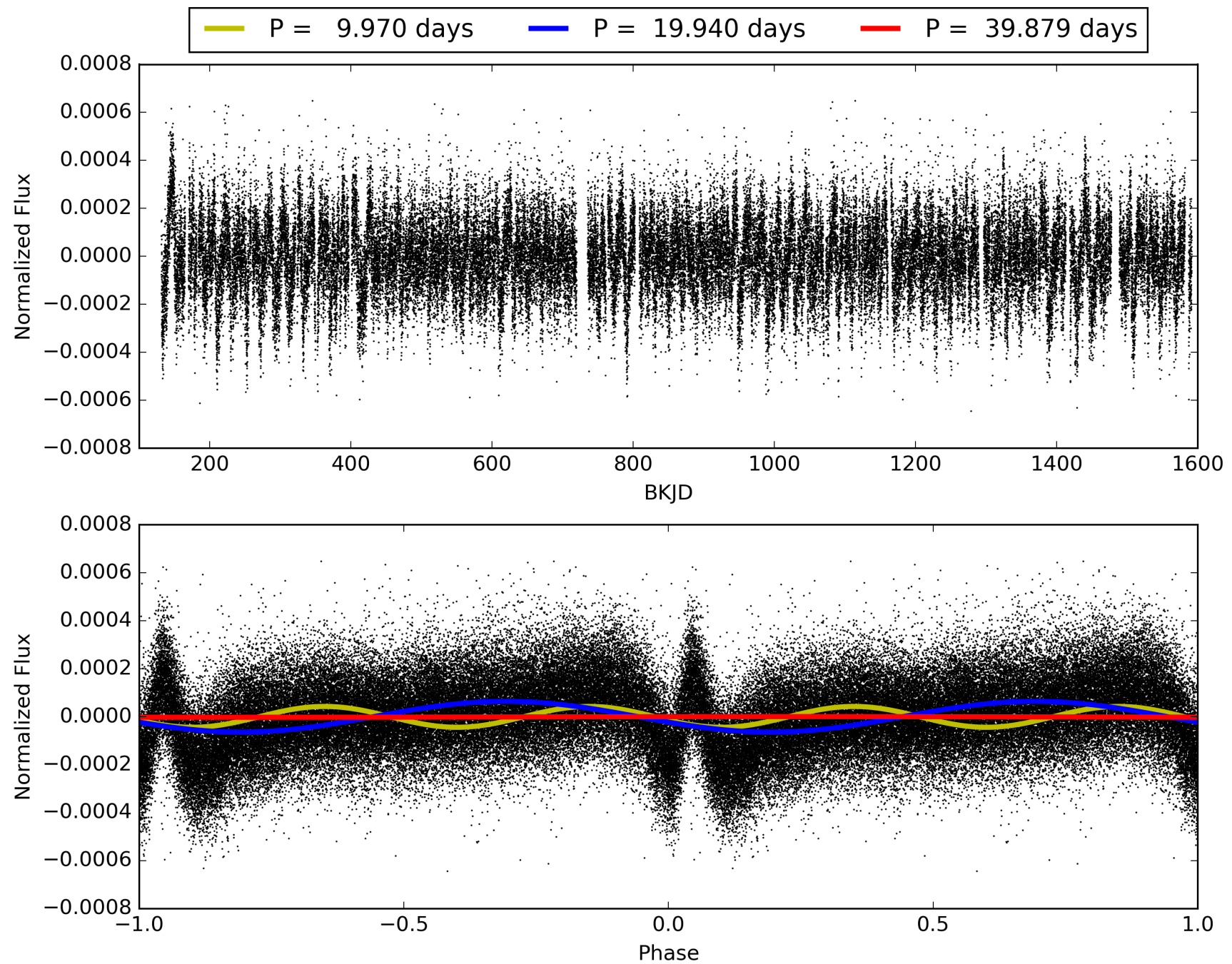
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 18:51:35 Z

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

TCE 003734660-01, PDC Light Curves

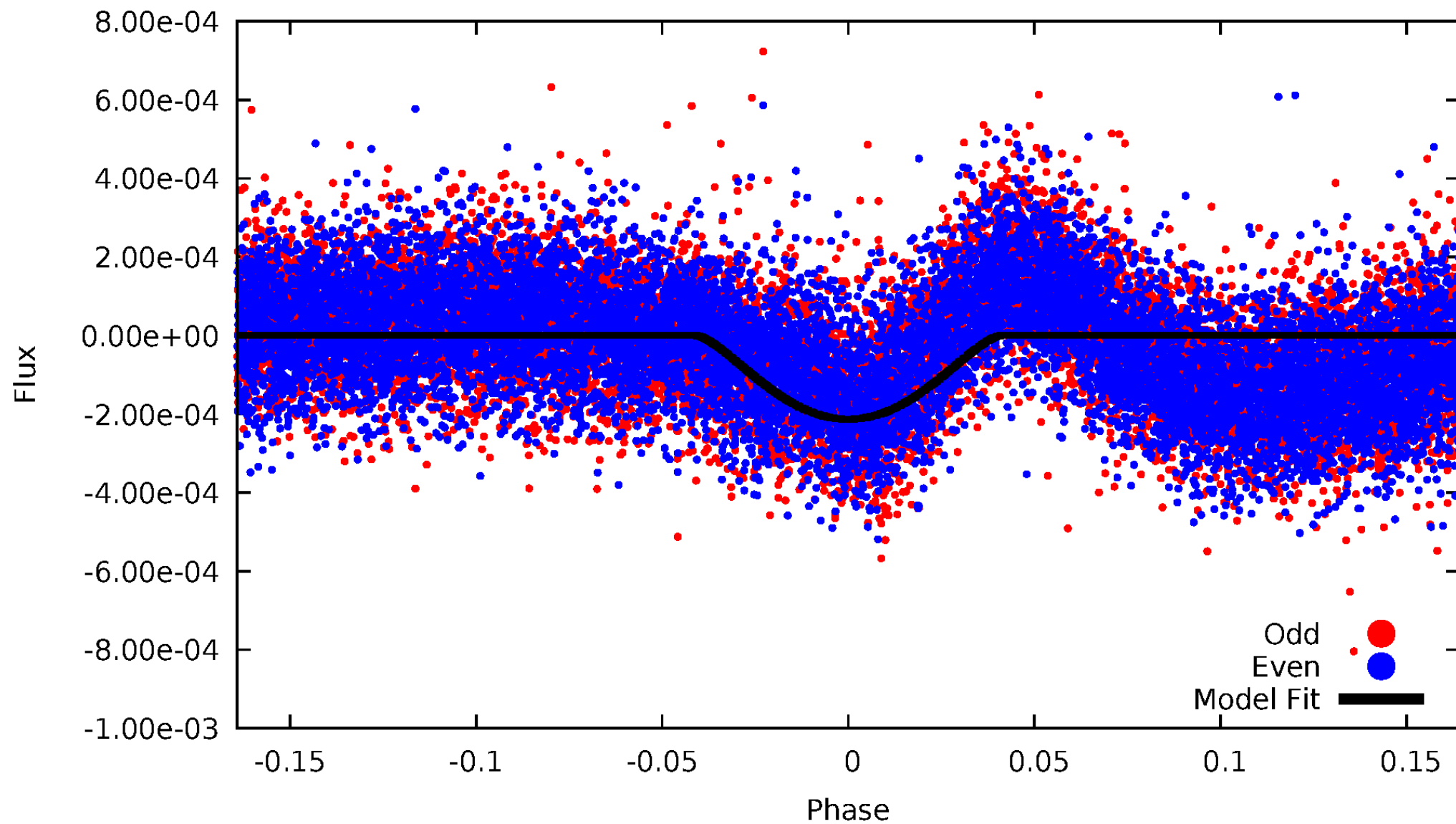


TCE 003734660-01



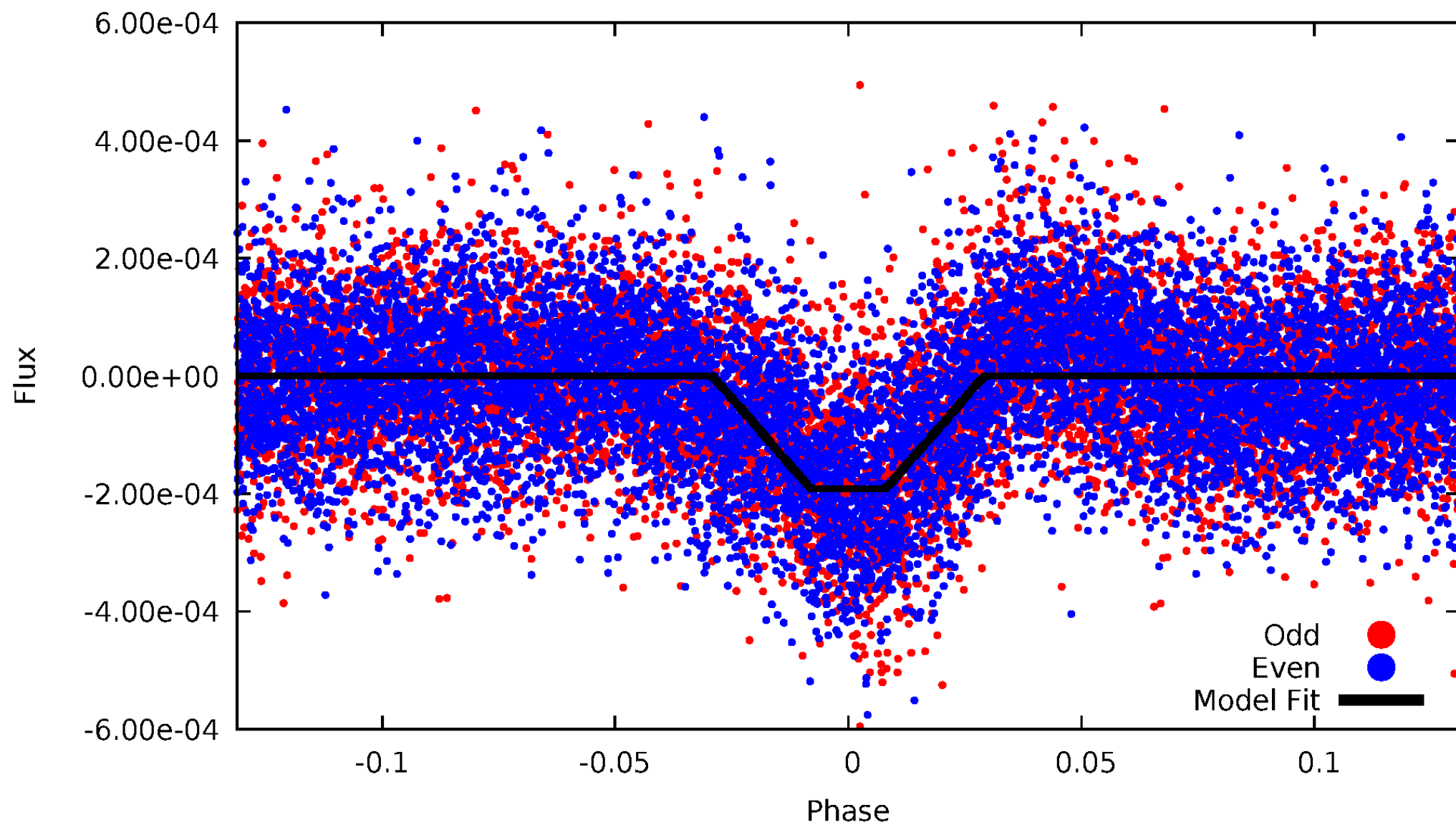
DV Odd/Even

TCE 003734660-01



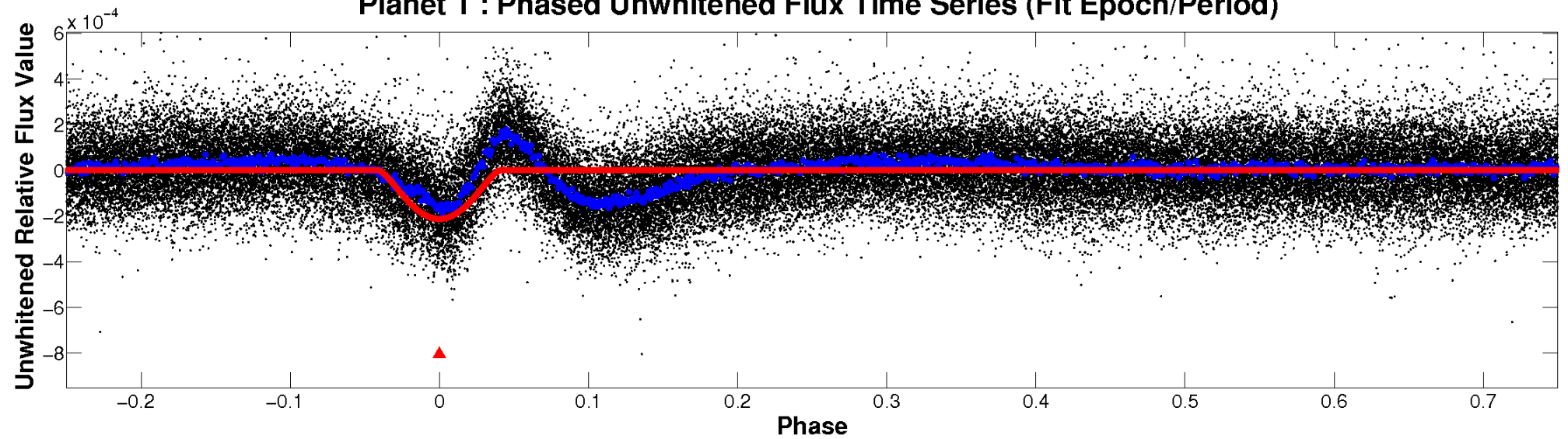
ALT Odd/Even

TCE 003734660-01

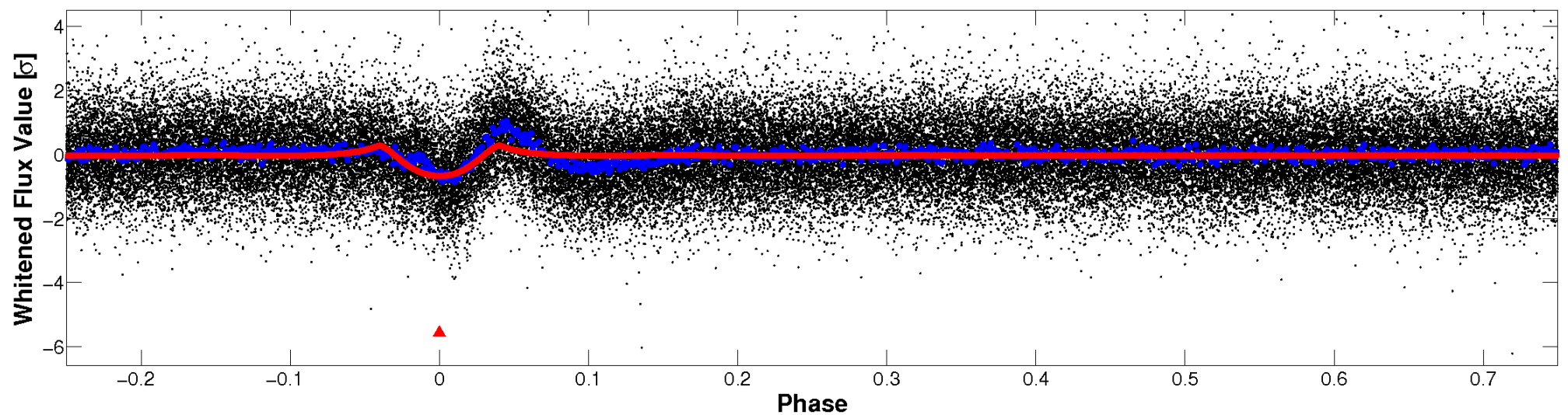


Non-Whitened Vs. Whitened Light Curve

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

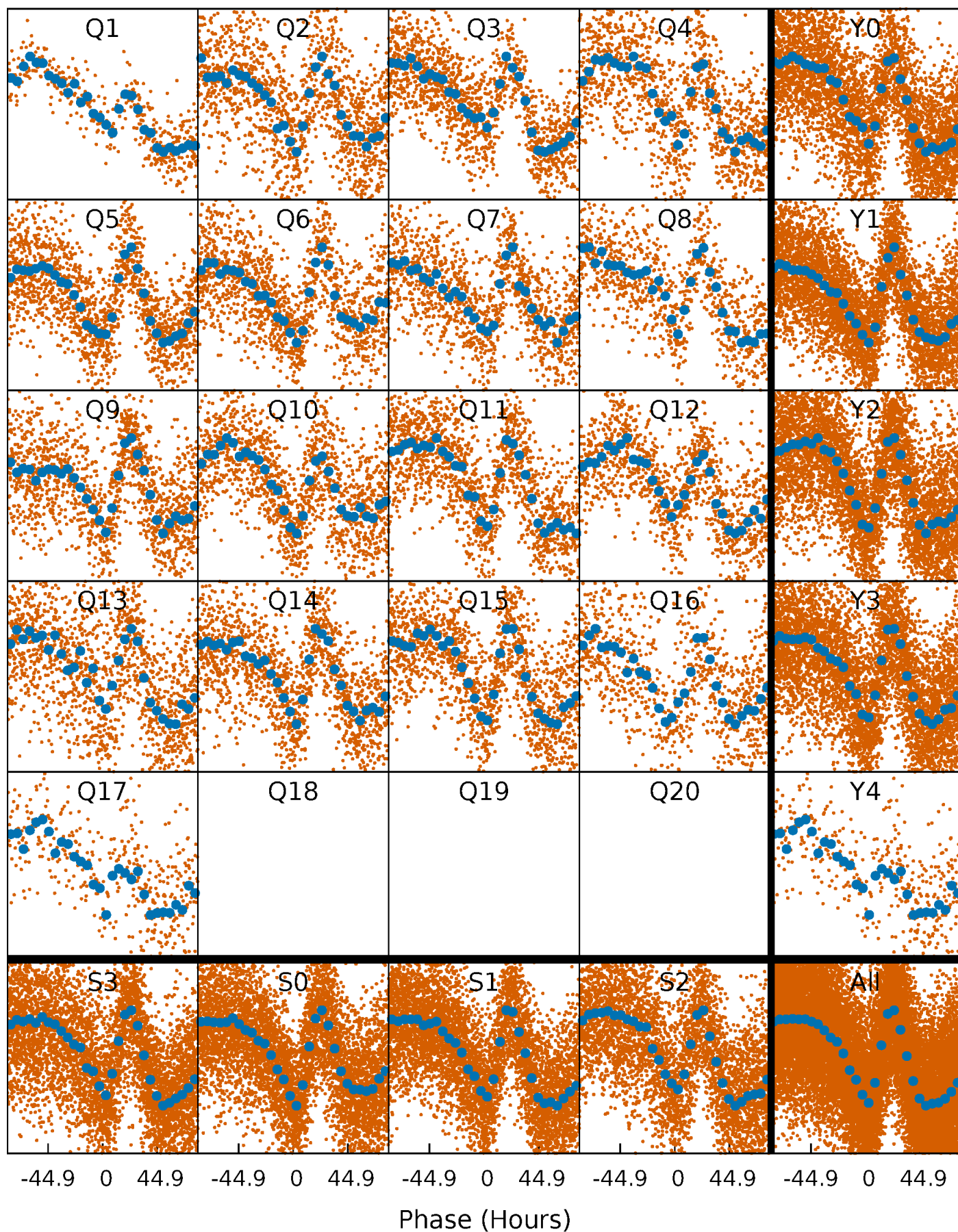


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



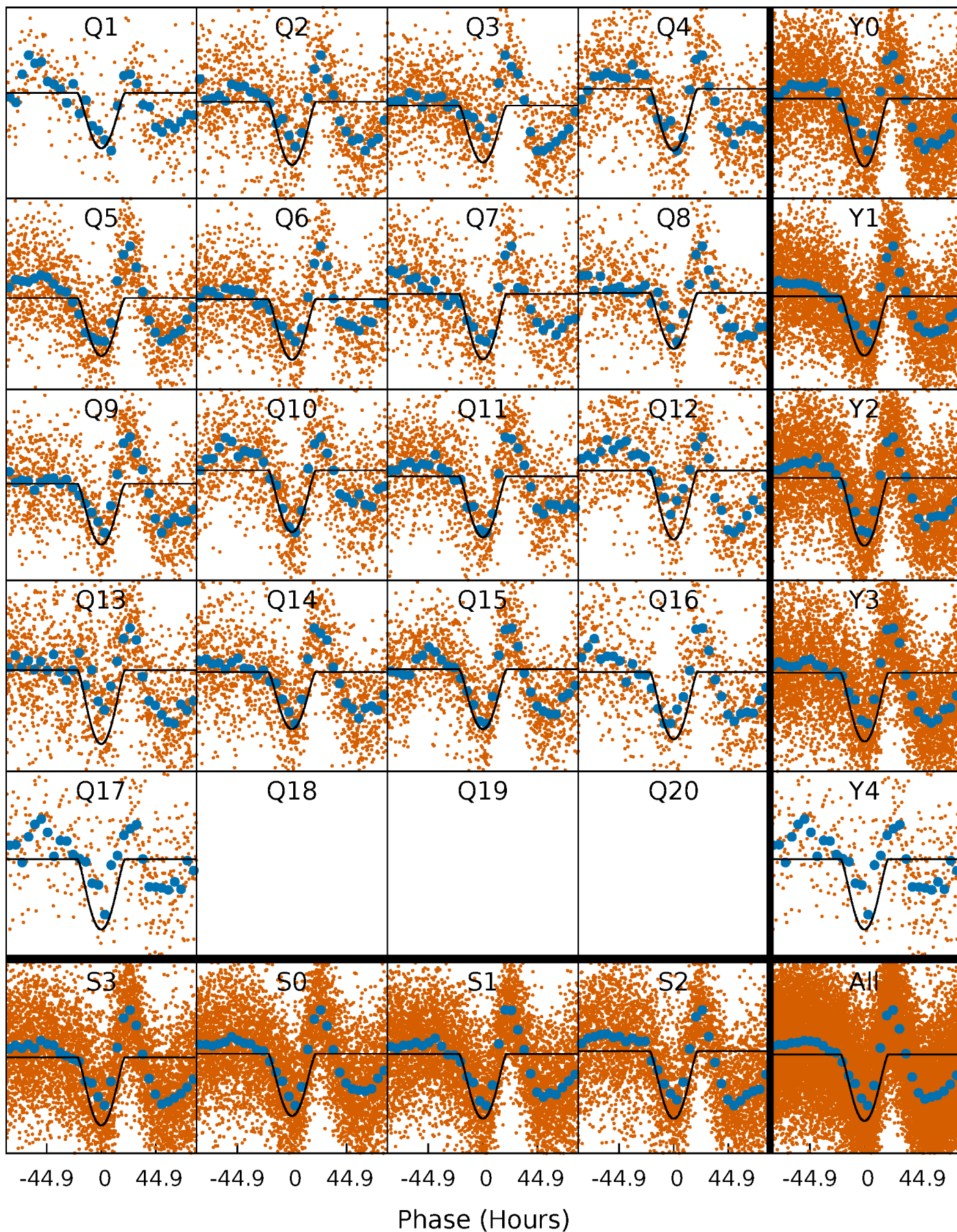
PDC Quarter-Phased Transit Curves

TCE 003734660-01 P= 19.939748 Days $T_0=150.359596$ (BKJD)



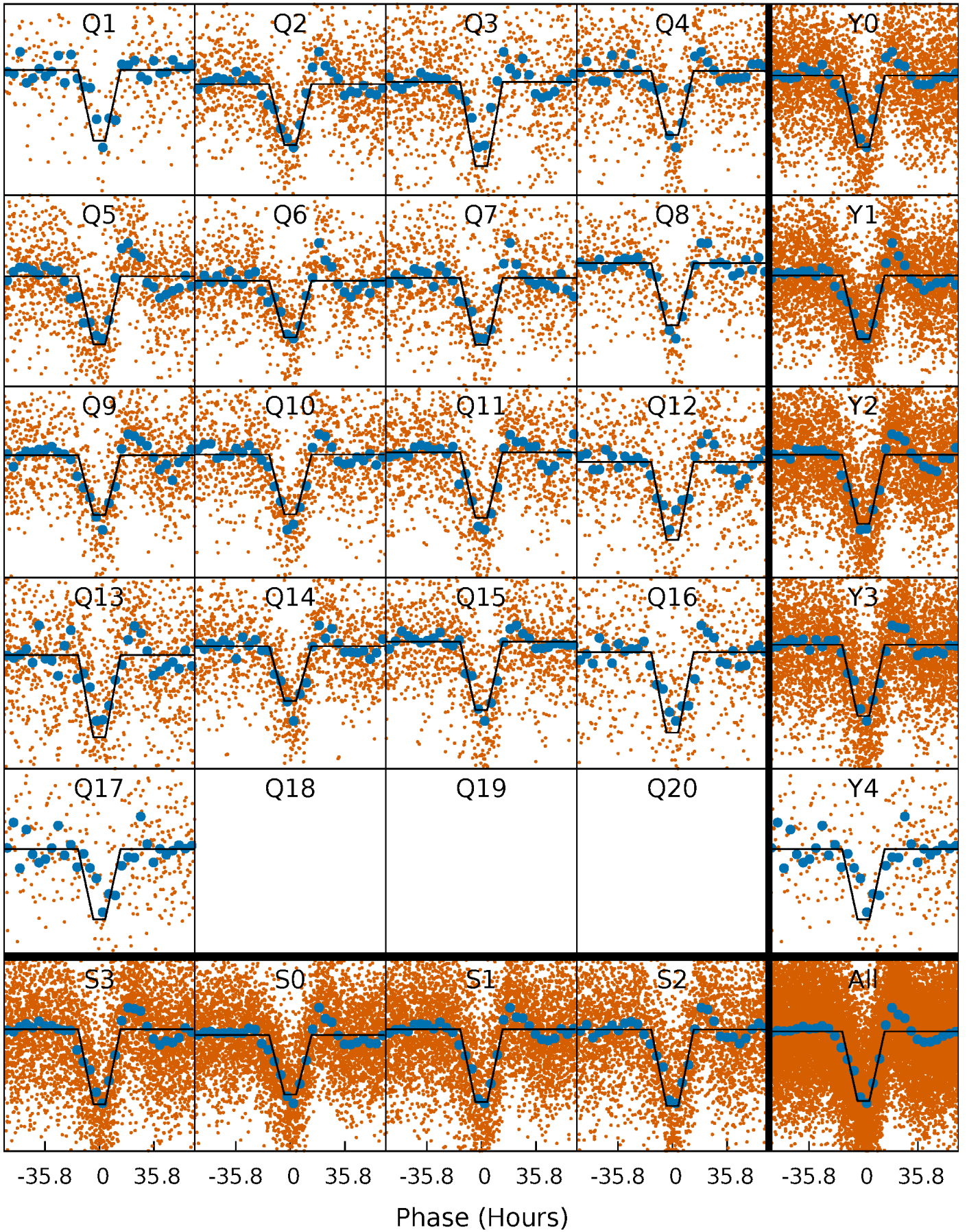
DV Quarter-Phased Transit Curves

TCE 003734660-01 P= 19.939748 Days $T_0=150.359596$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

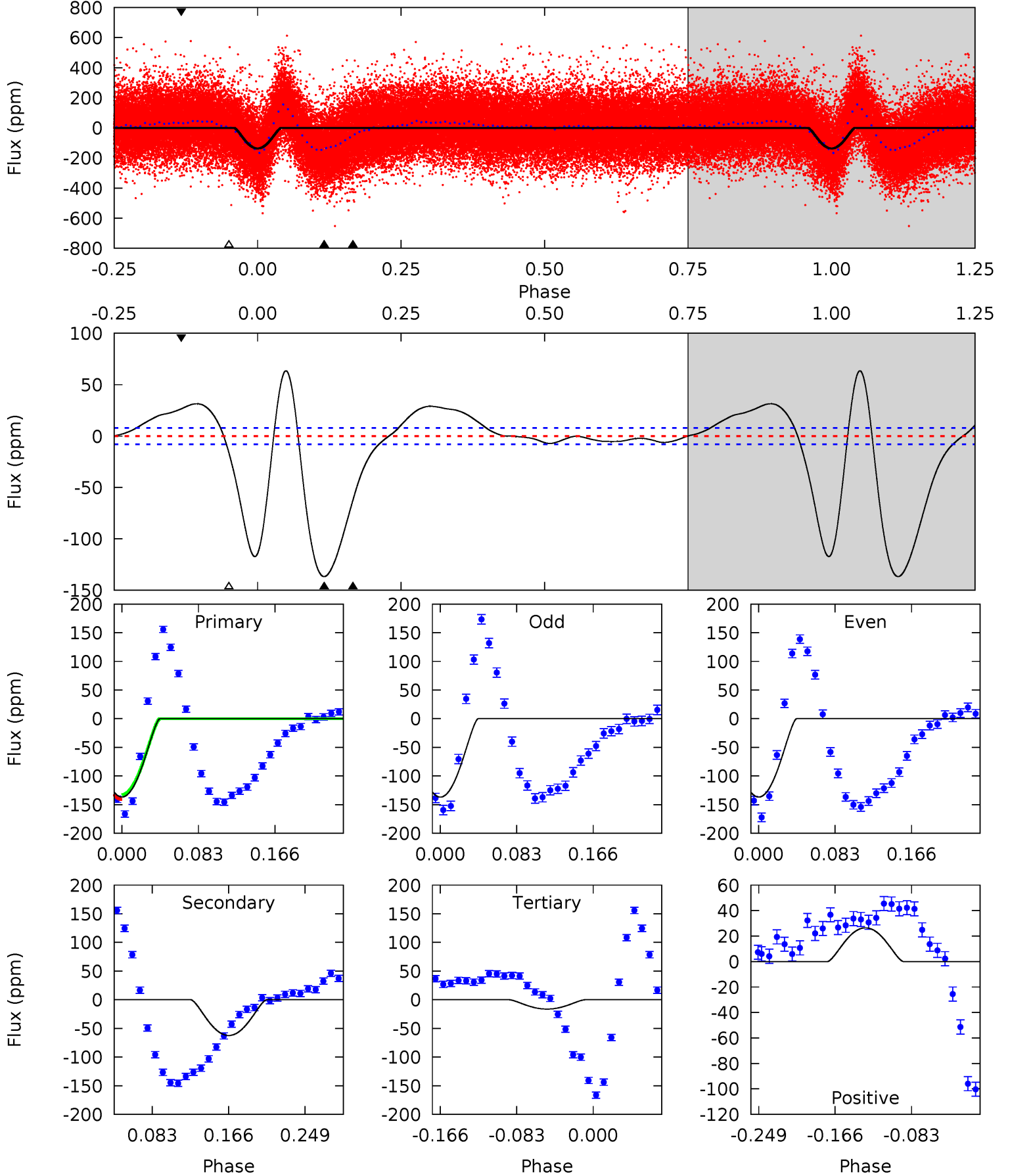
TCE 003734660-01 P= 19.937201 Days $T_0=150.544440$ (BKJD)



DV Model-Shift Uniqueness Test

003734660-01, P = 19.939748 Days, E = 130.419848 Days

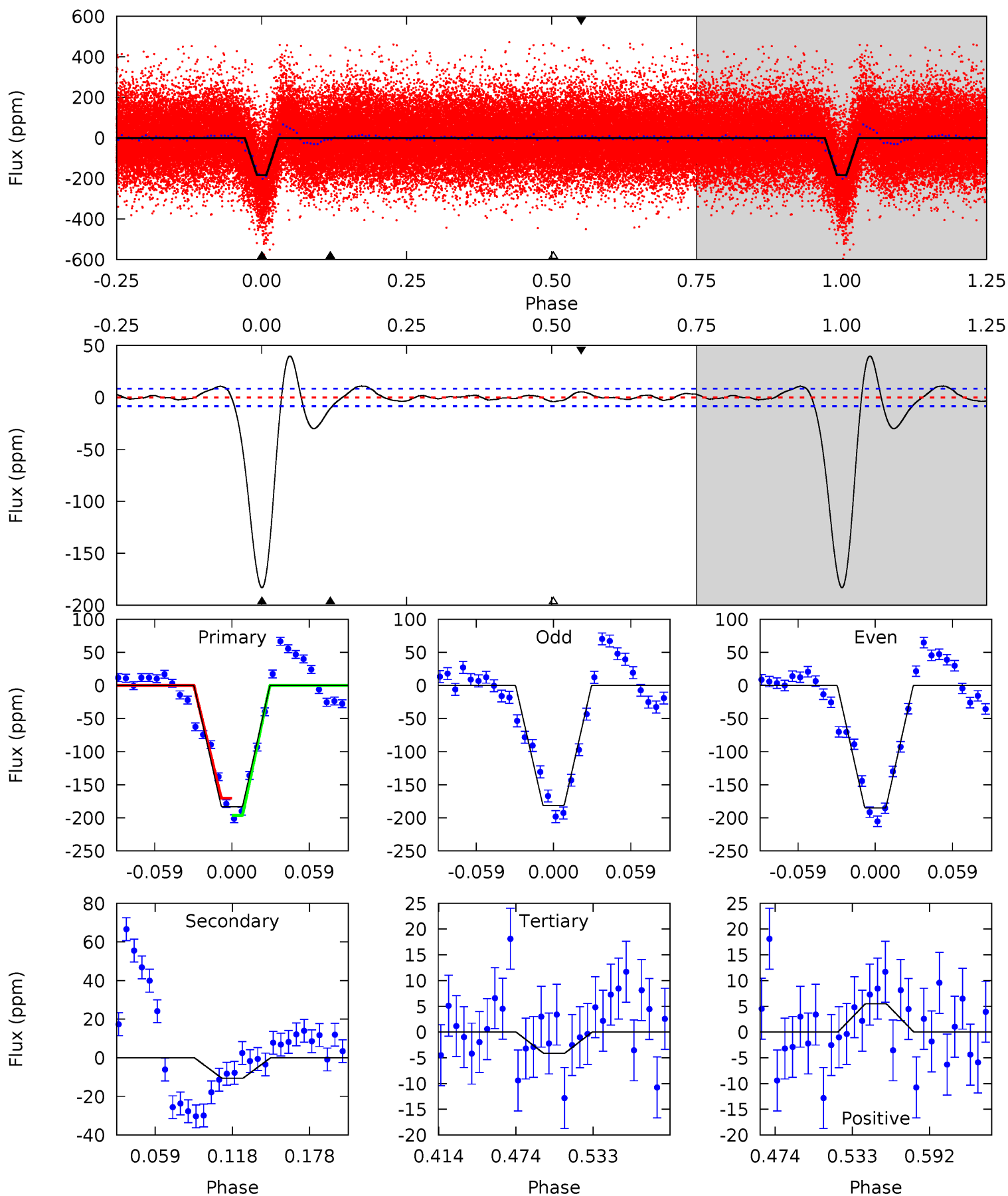
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
79.1	36.1	9.41	15.3	4.60	1.73	17.0	69.7	63.8	26.7	20.8	0.04	0.93	0.32	2.42



Alt Model-Shift Uniqueness Test

003734660-01, $P = 19.937201$ Days, $E = 130.607239$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
100.9	5.82	2.27	3.02	4.67	1.89	1.66	98.6	97.9	3.55	2.80	0.95	1.00	0.18	7.20



Stellar Parameters For KIC 003734660

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6191^{+223}_{-149}	$3.873^{+0.364}_{-0.156}$	$-1.860^{+0.400}_{-0.050}$	$1.674^{+0.408}_{-0.612}$	$0.762^{+0.074}_{-0.026}$	$0.229^{+0.640}_{-0.101}$
	+4%/-2%	+9%/-4%	+22%/-3%	+24%/-37%	+10%/-3%	+280%/-44%
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 003734660-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-62 ± 2	$4.40^{+2.77}_{-2.20}$	1354^{+102}_{-132}	3826^{+1099}_{-509}	31^{+90}_{-19}
Alt.	-11 ± 2	$2.80^{+2.26}_{-1.70}$	1354^{+97}_{-137}	3338^{+1248}_{-556}	13^{+69}_{-9}

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 $A_{obs} \gg 1.0$

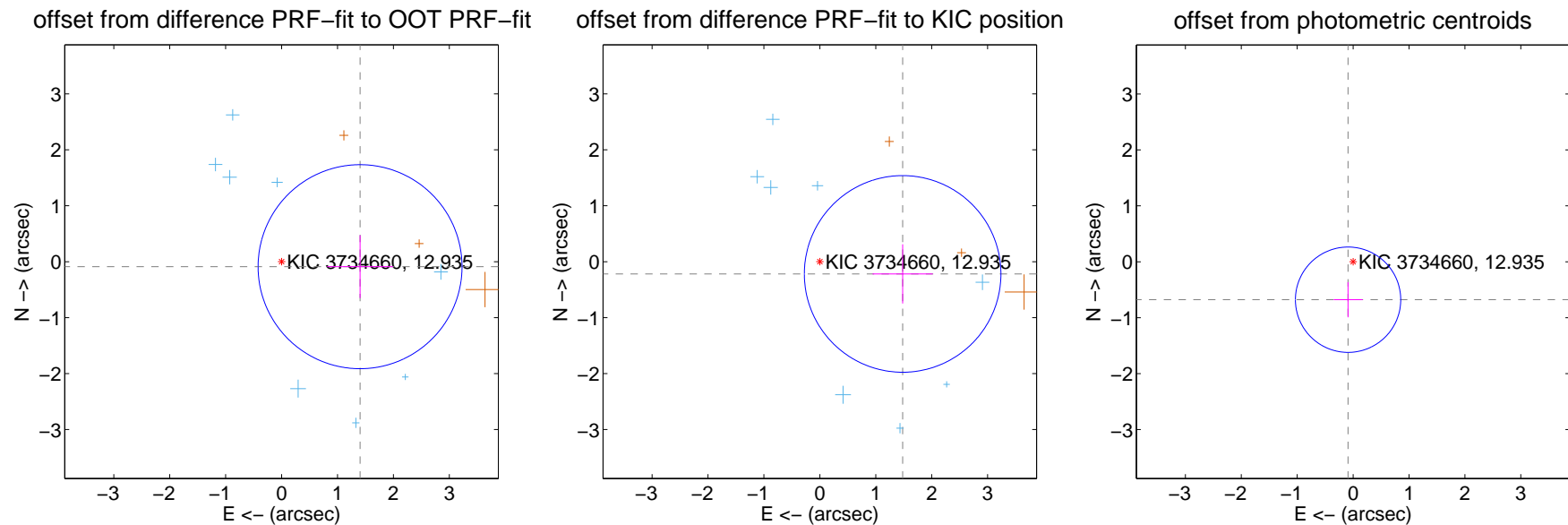
DV Centroid Data

Supplemental centroid analysis for 003734660-01. Kepler magnitude: 12.94. Transit SNR 31.61

There are 8 quarters with good PRF difference image offsets

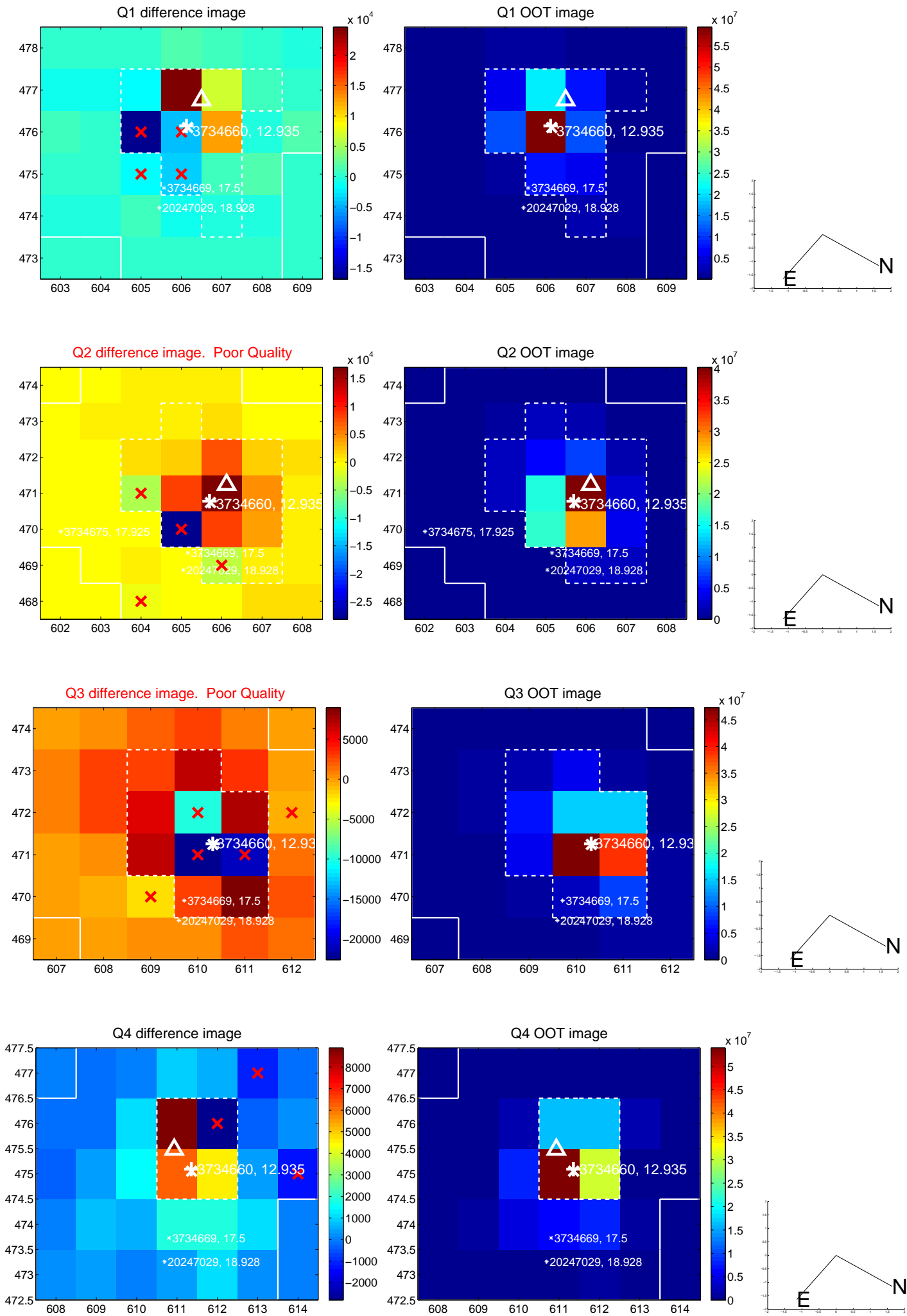
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.407 ± 0.608	2.31	-1.404 ± 0.590	-0.089 ± 0.562
PRF-fit source offset from KIC position	1.497 ± 0.586	2.55	-1.481 ± 0.539	-0.219 ± 0.529
photometric centroid source offset	0.68 ± 0.31	2.18	0.09 ± 0.26	-0.68 ± 0.31

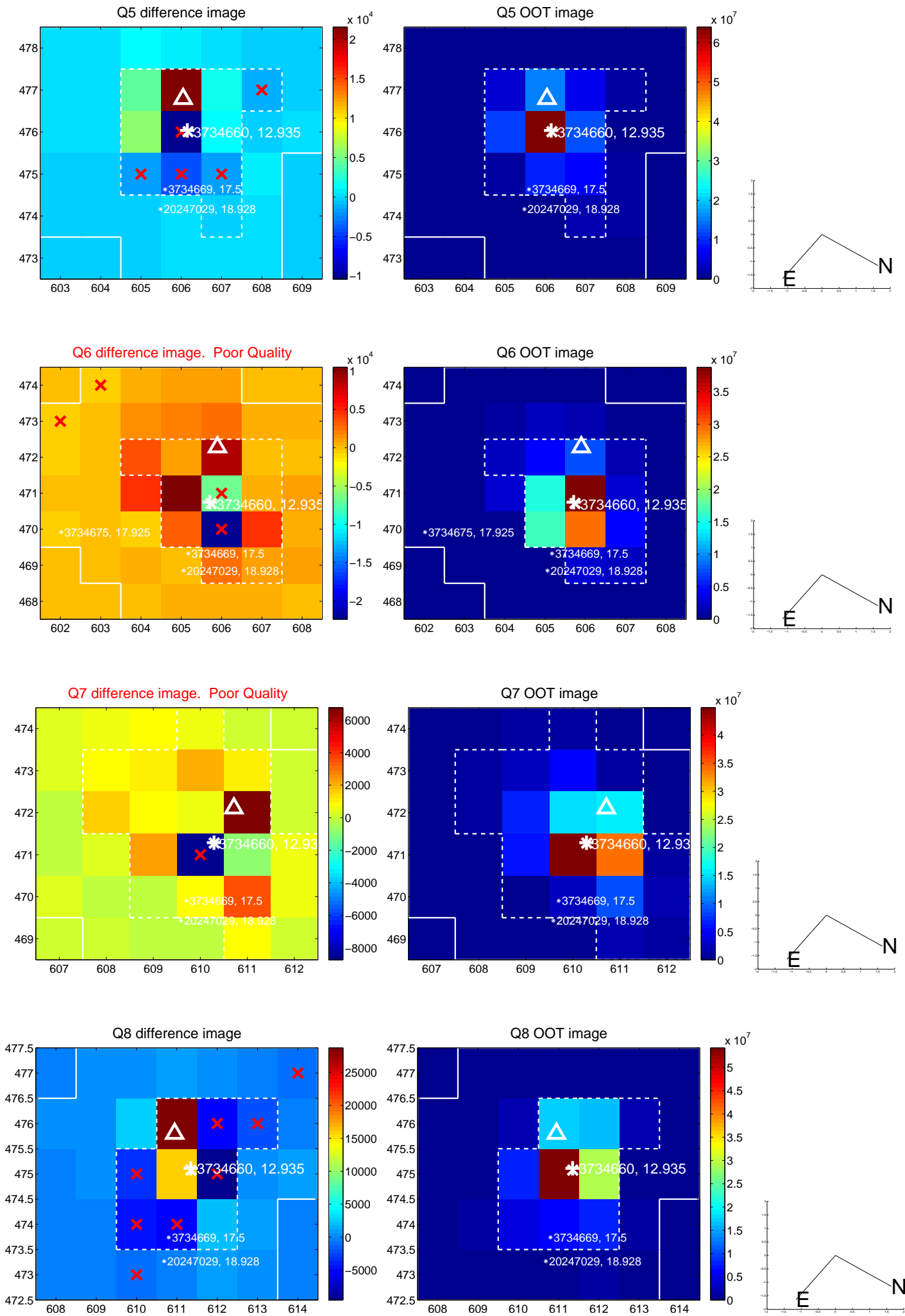


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

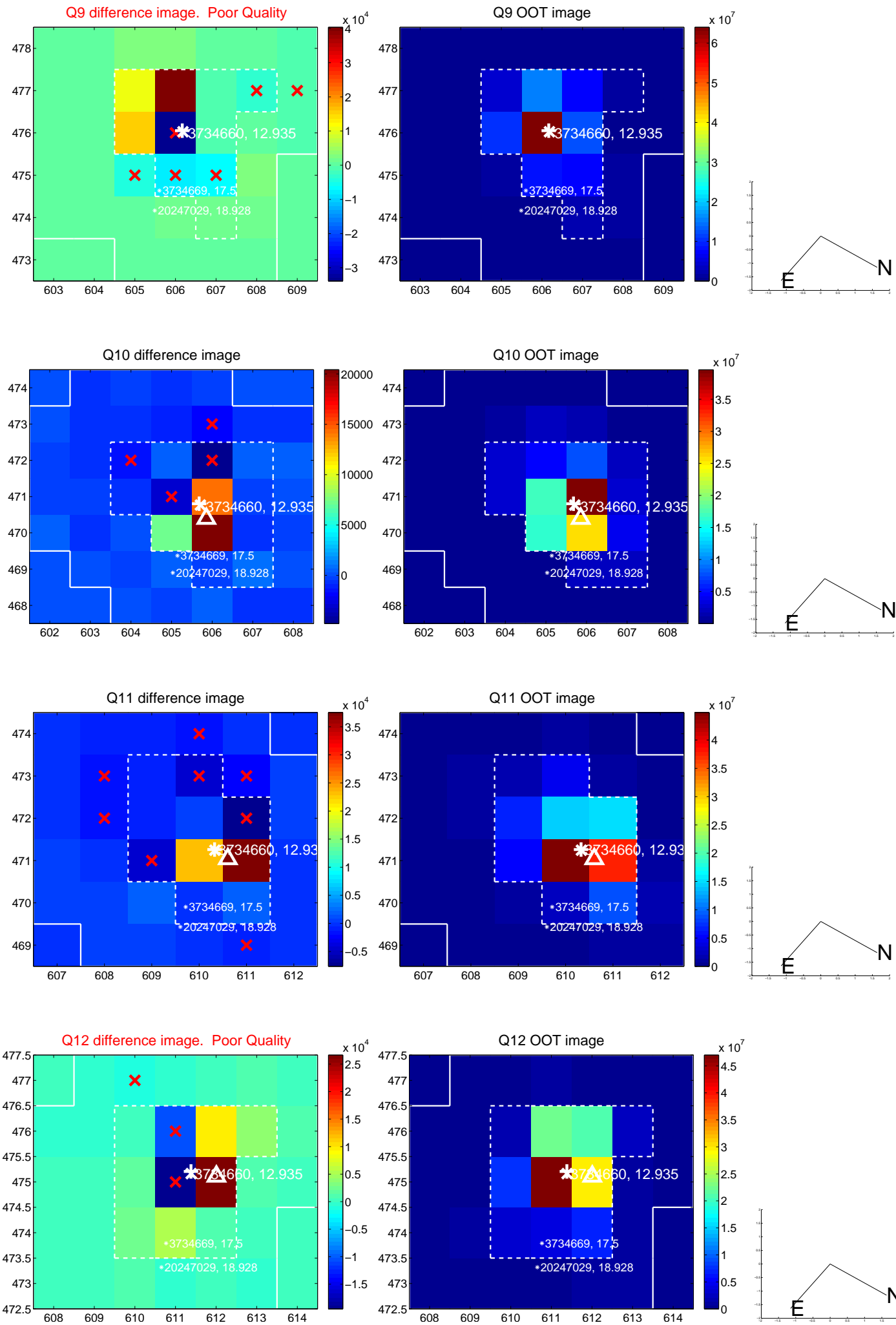
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

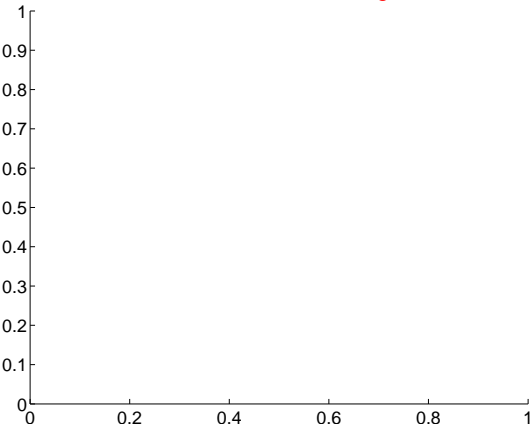


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

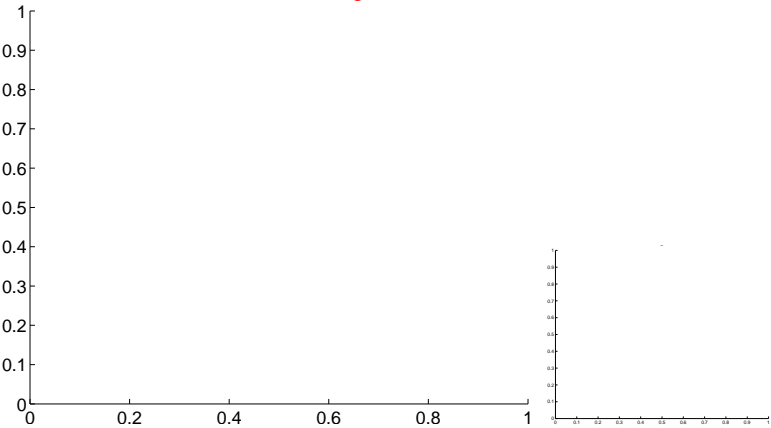


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

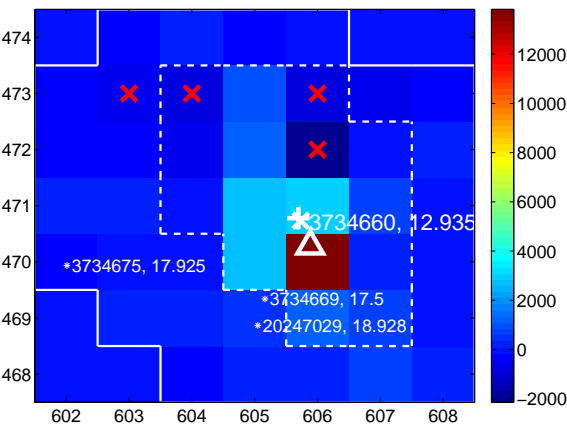
Q13 no difference image



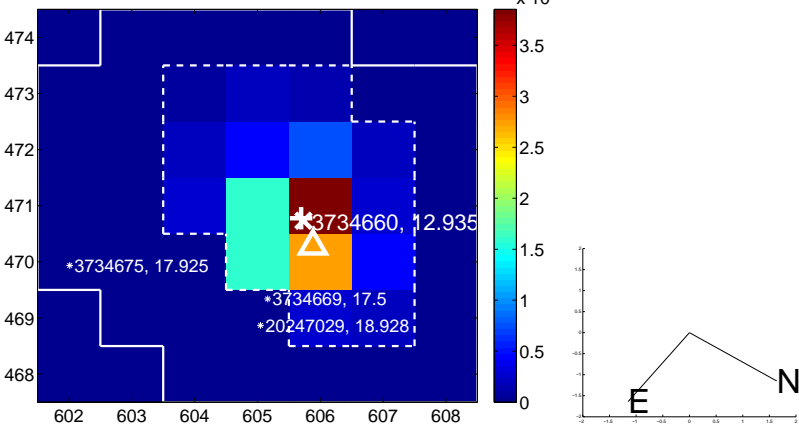
Q13 no OOT image



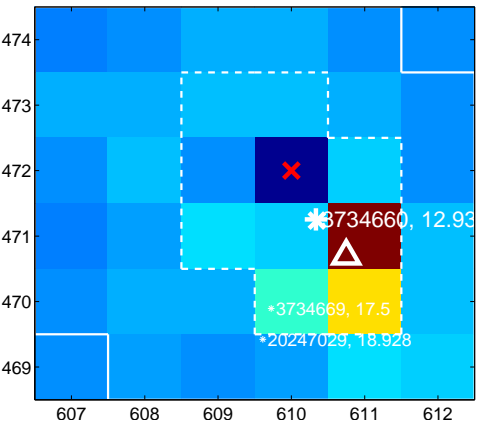
Q14 difference image



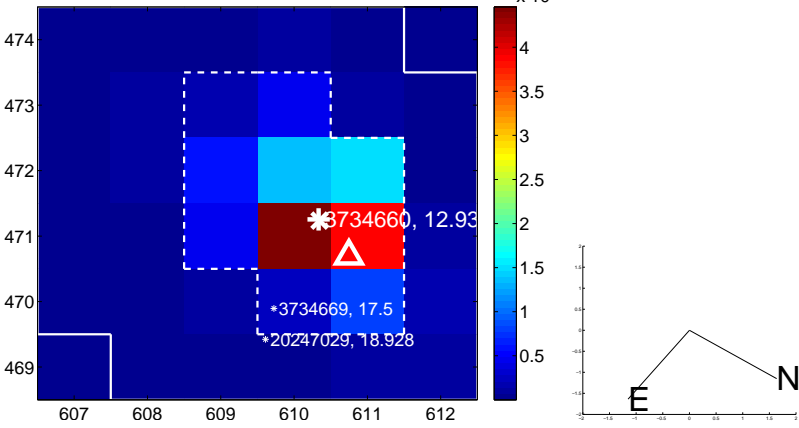
Q14 OOT image



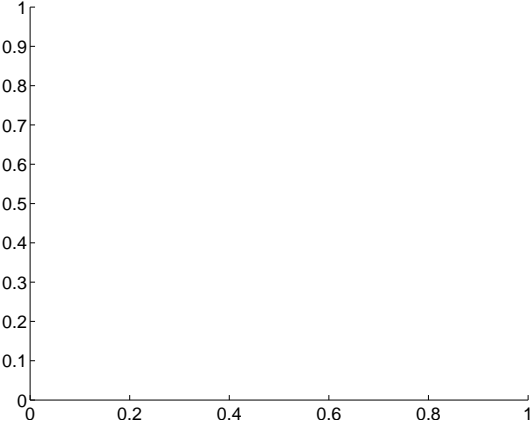
Q15 difference image



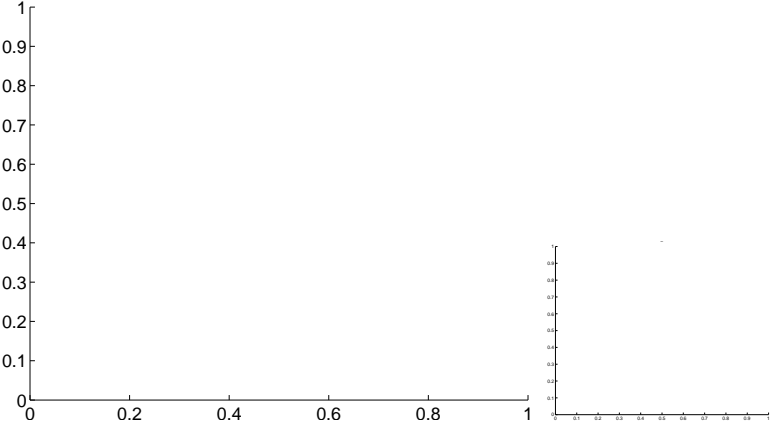
Q15 OOT image



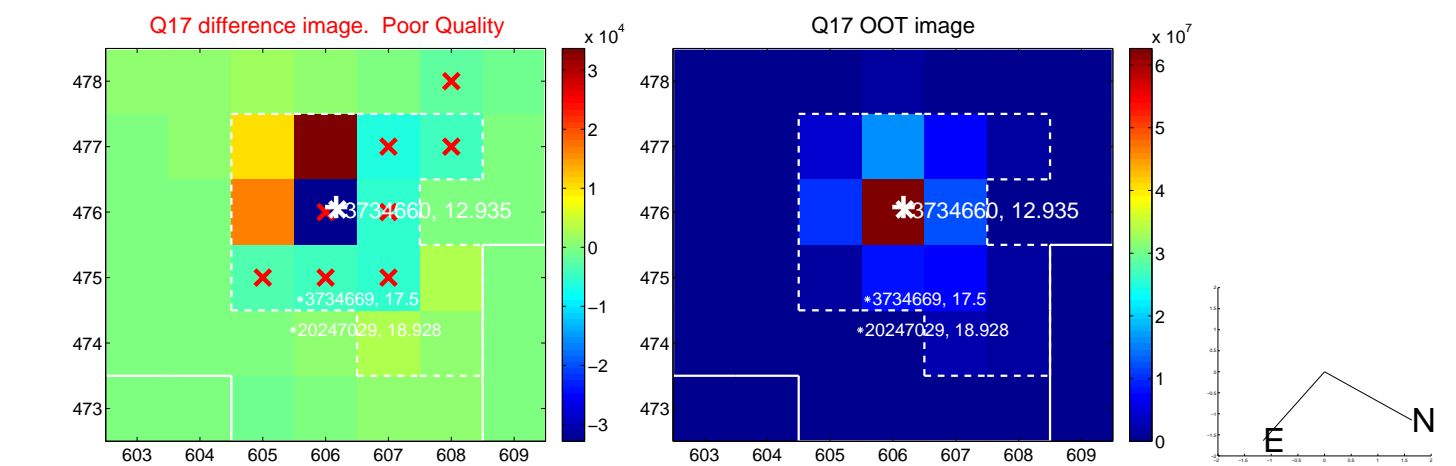
Q16 no difference image



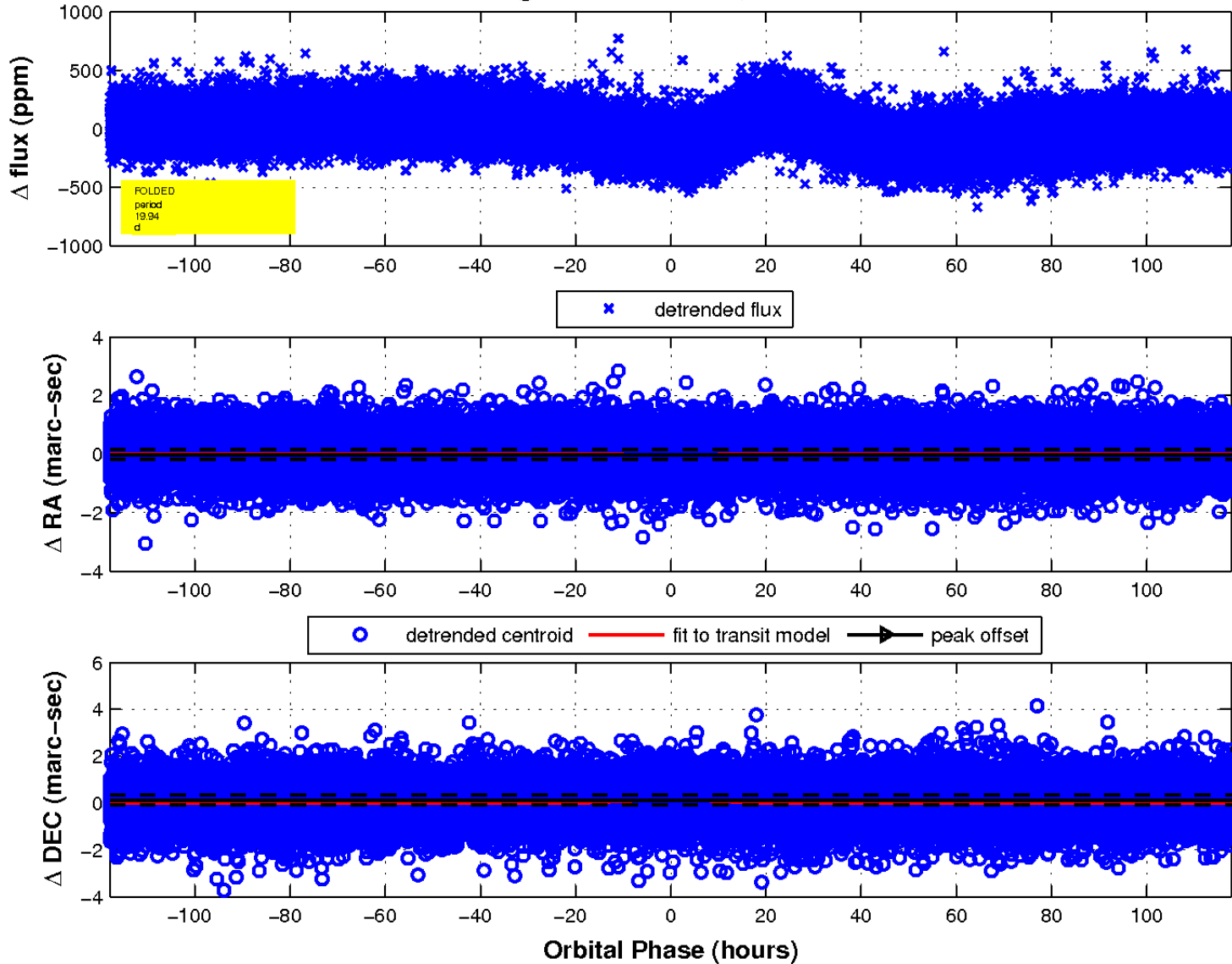
Q16 no OOT image



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

