

KIC 003956238

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})
003956238-01	OBS	No	0.971680	131.954108	9.8	1.837	7.9	3.8	3.47	6569	1.27	38762.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003956238-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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

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

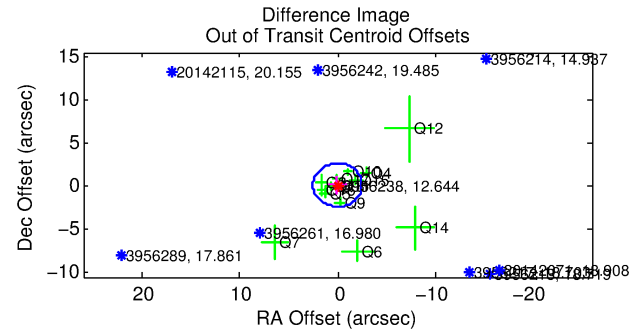
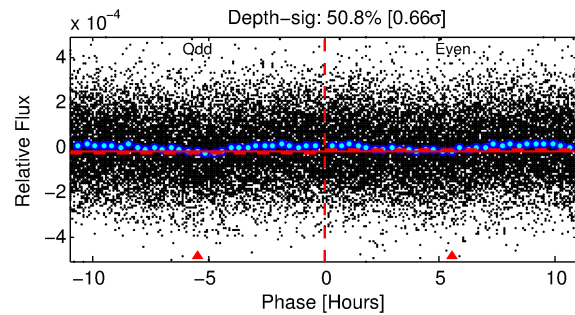
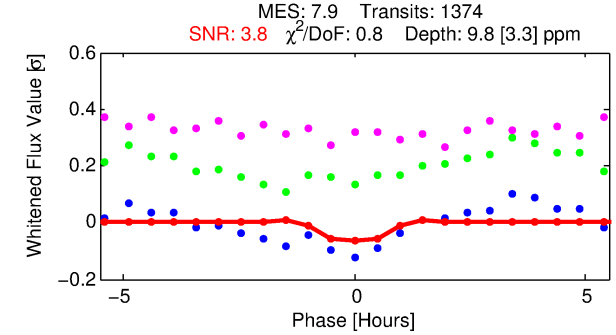
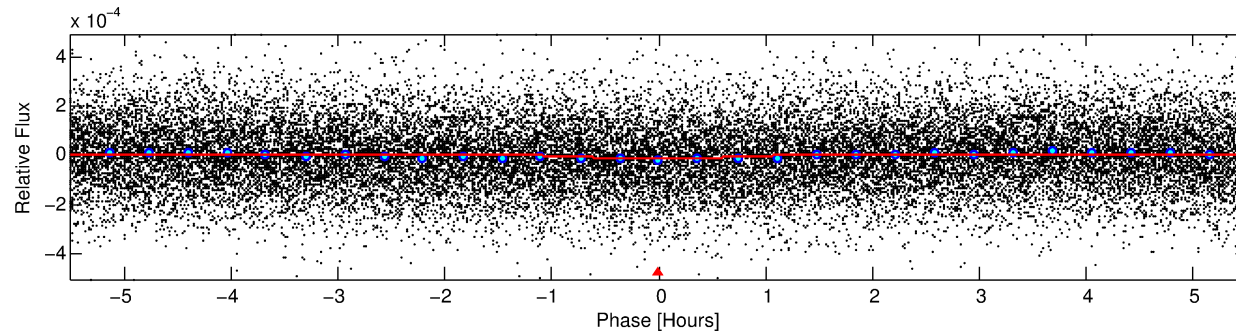
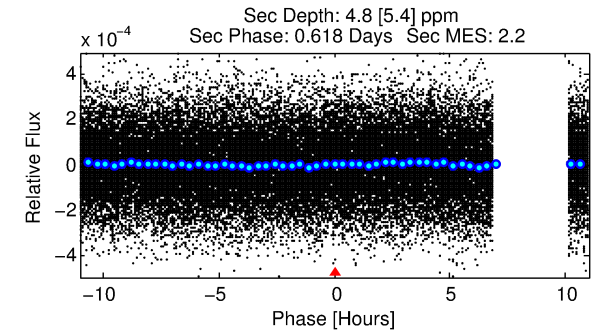
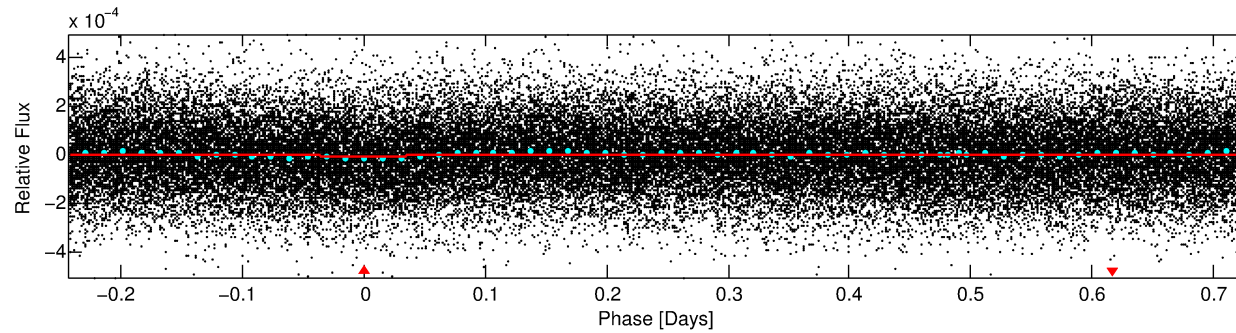
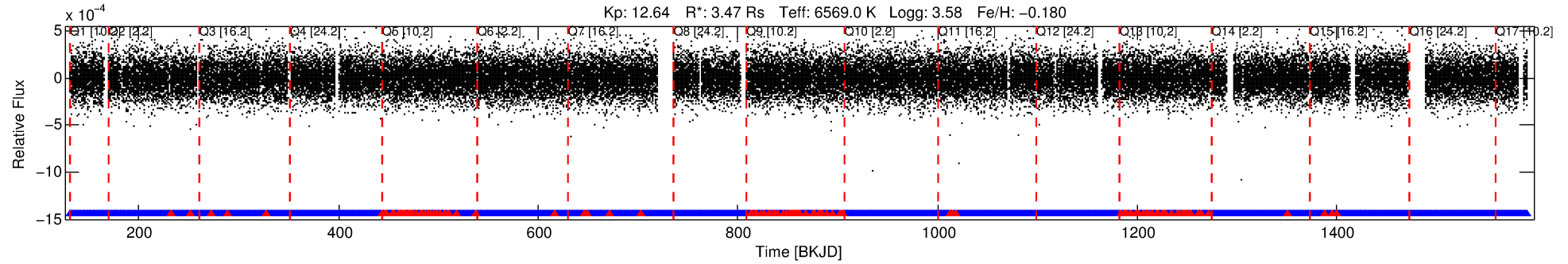
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003956238-01

No Significant Match Found

DV One-Page Summary

KIC: 3956238 Candidate: 1 of 1 Period: 0.972 d



DV Fit Results:

Period = 0.97168 [0.00003] d
Epoch = 131.9541 [0.0062] BKJD
Rp/R* = 0.0034 [0.0012]
a/R* = 2.02 [2.89]
b = 0.90 [0.41]
Seff = 38762.63 [23216.65]
Teq = 3578 [536] K
Rp = 1.27 [0.68] Re
a = 0.0228 [0.0085] AU
Ag = 0.85 [1.24] [-0.12σ]
Teffp = 5307 [1782] K [0.93σ]

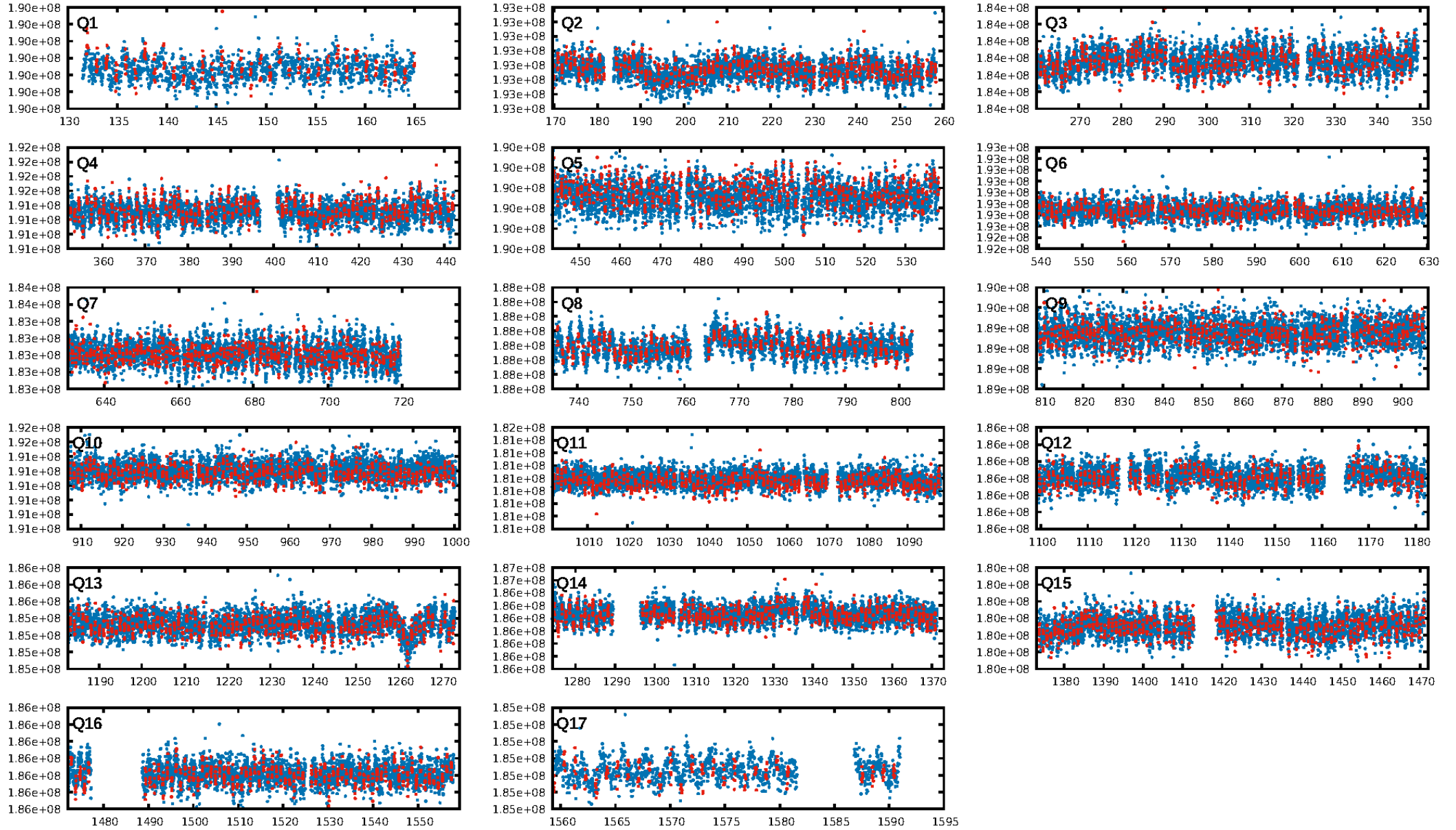
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.93e-14
RollingBand-fgt: 0.91 [1190/1312]
GhostDiagnostic-chr: -16.39
Centroid-sig: 0.1%
Centroid-so: 5.673 arcsec [2.26σ]
OotOffset-rm: 0.146 arcsec [0.17σ]
KicOffset-rm: 0.151 arcsec [0.20σ]
OotOffset-st: 3/4/3/4 [14]
KicOffset-st: 3/4/3/4 [14]
DiffImageQuality-fgm: 0.43 [6/14]
DiffImageOverlap-fno: 1.00 [17/17]

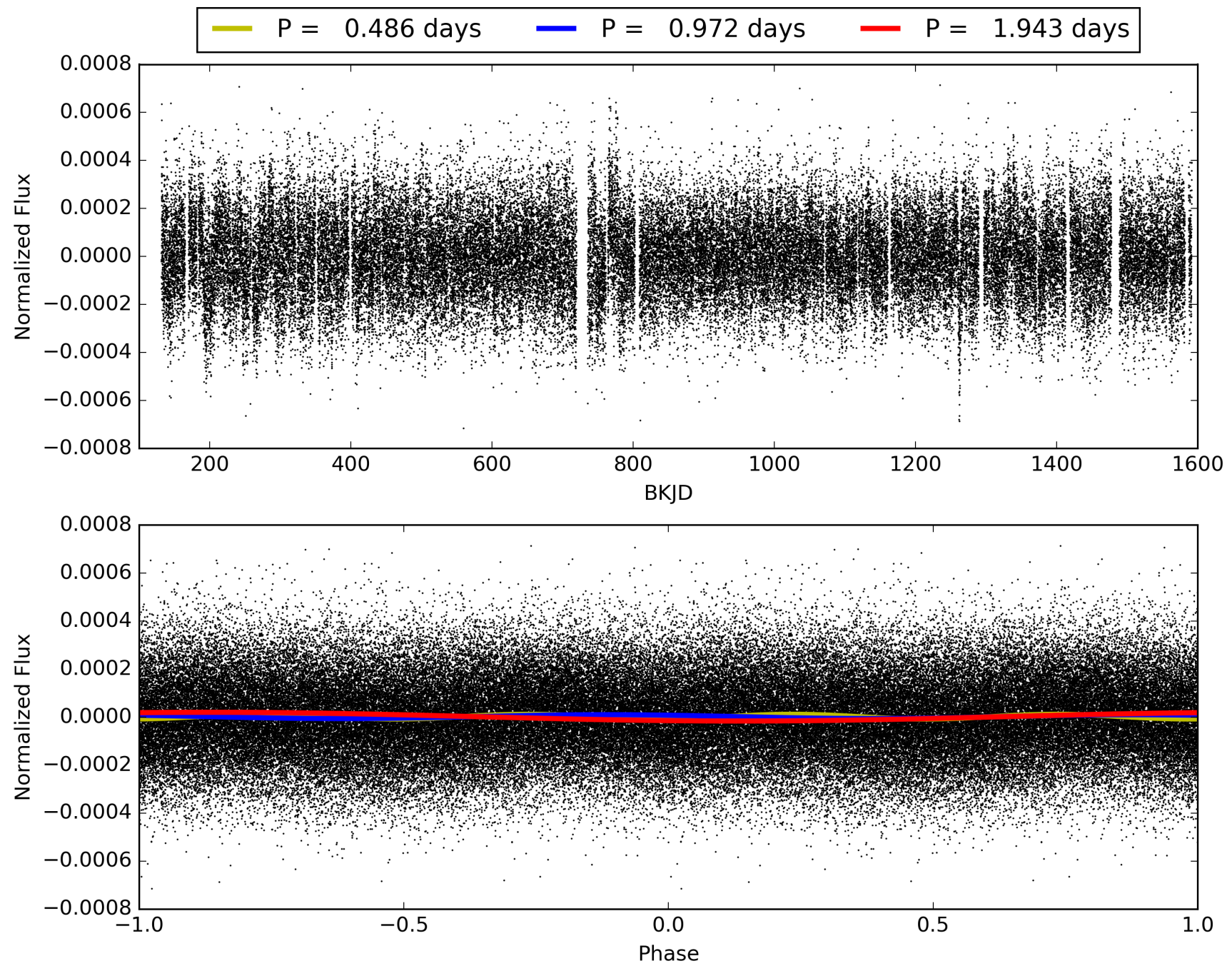
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:43:53 Z

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

TCE 003956238-01, PDC Light Curves

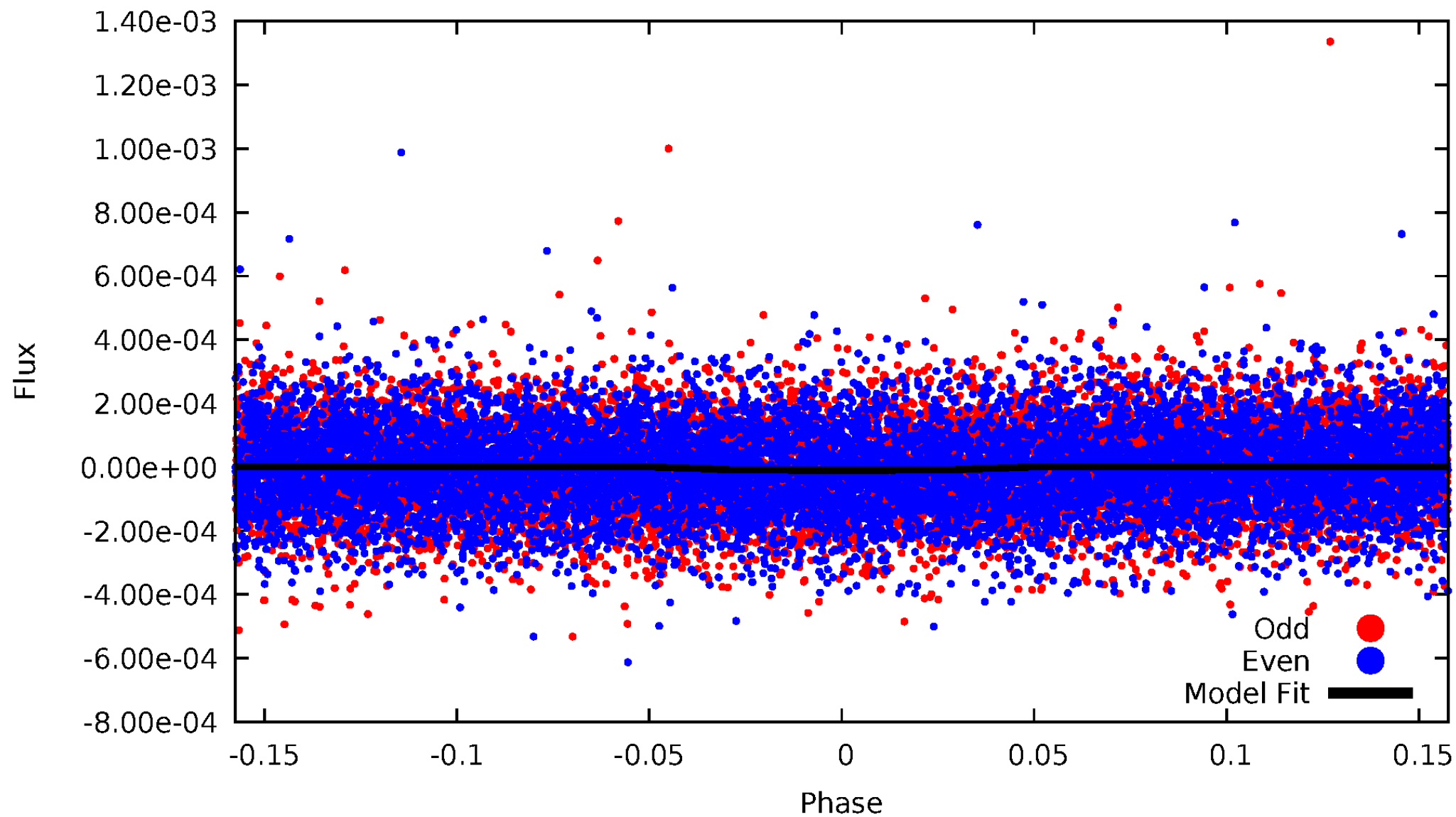


TCE 003956238-01



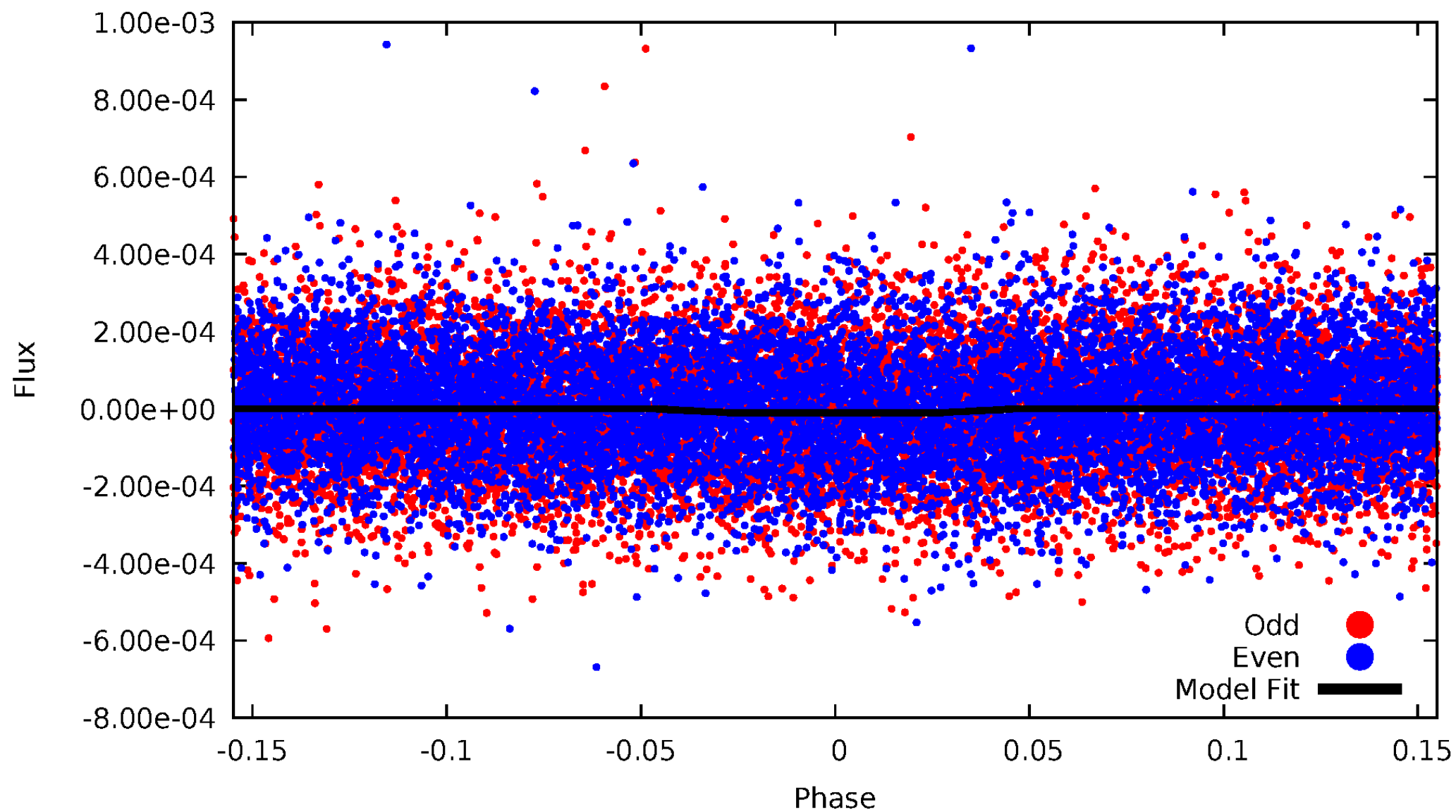
DV Odd/Even

TCE 003956238-01



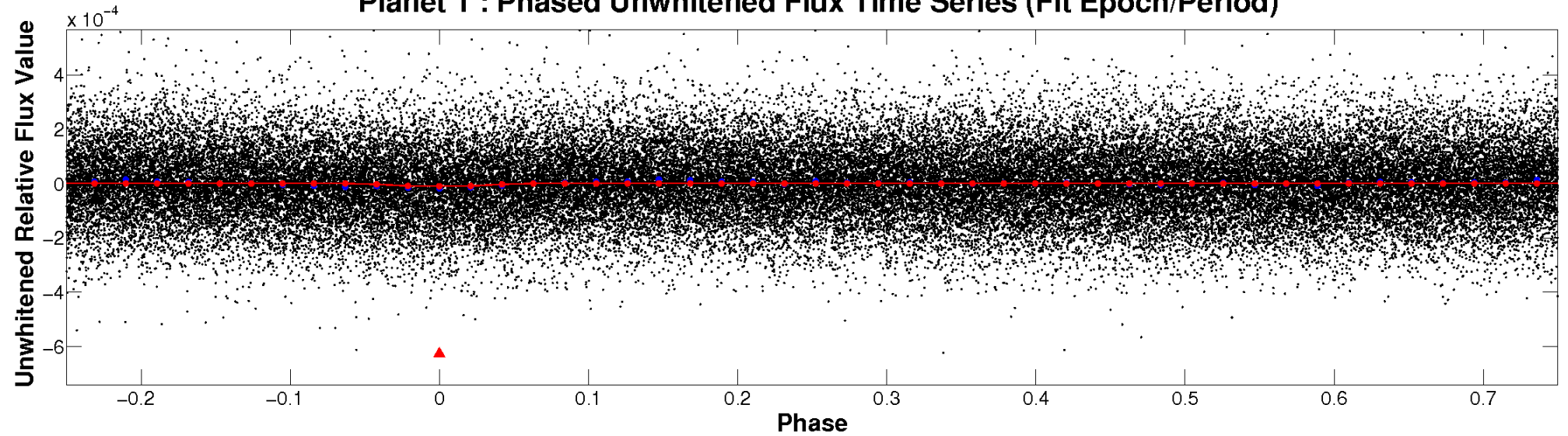
ALT Odd/Even

TCE 003956238-01

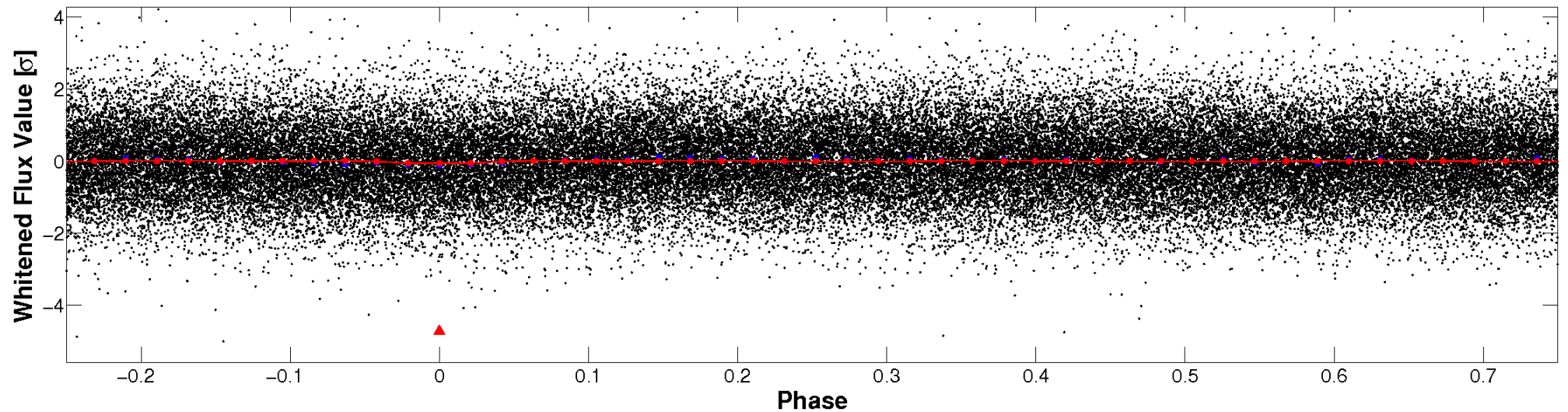


Non-Whitened Vs. Whitened Light Curve

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

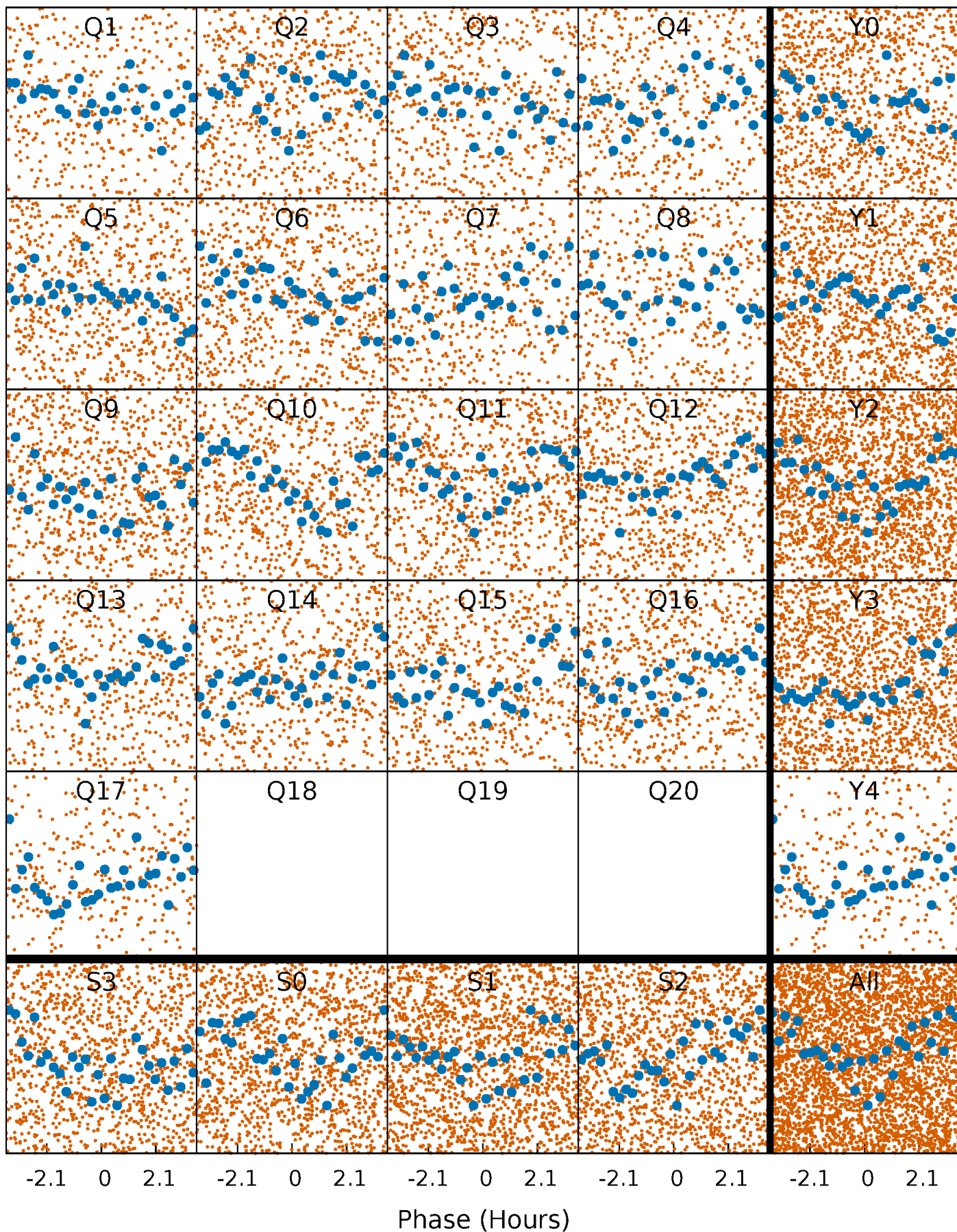


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



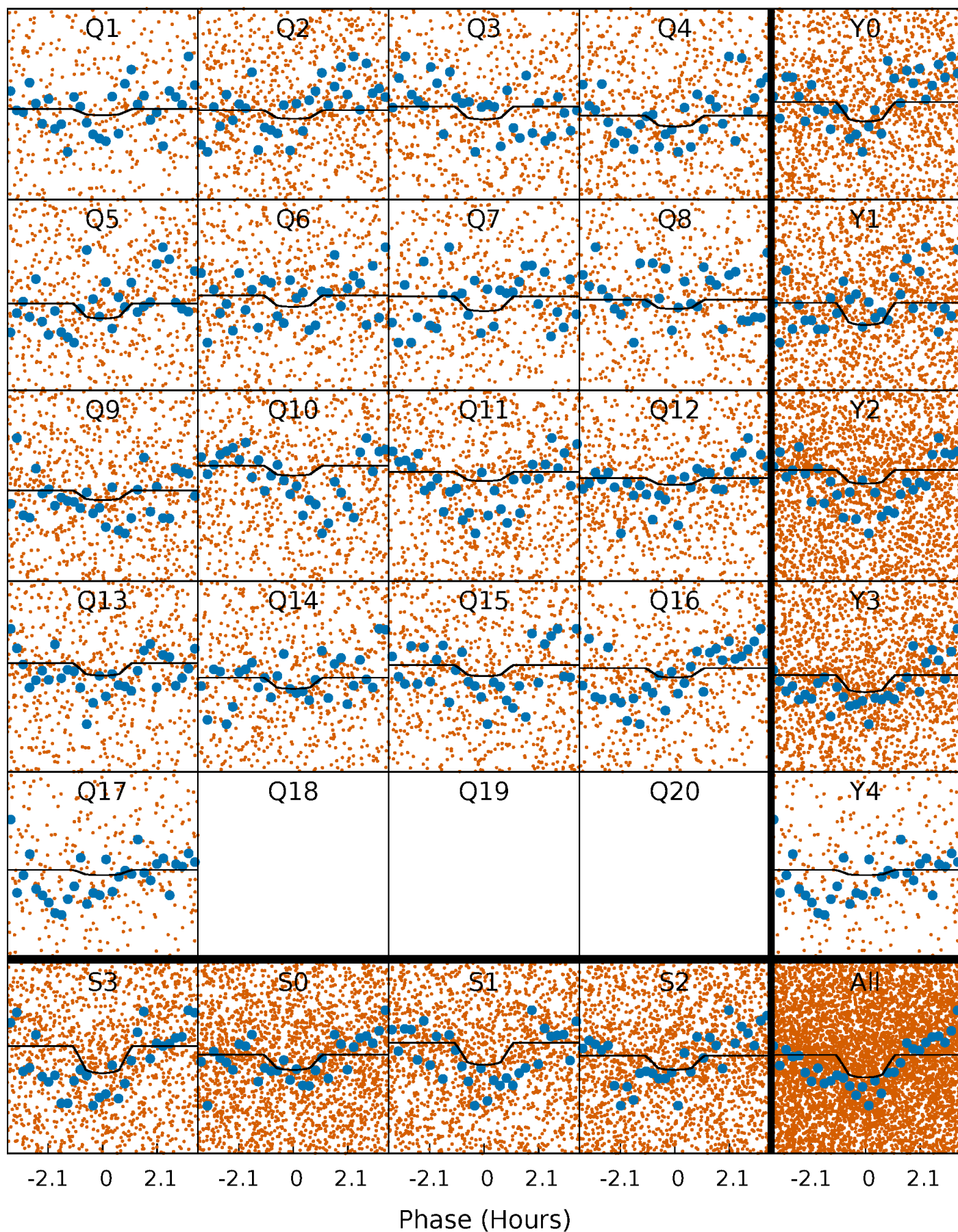
PDC Quarter-Phased Transit Curves

TCE 003956238-01 P= 0.971680 Days $T_0=131.954108$ (BKJD)



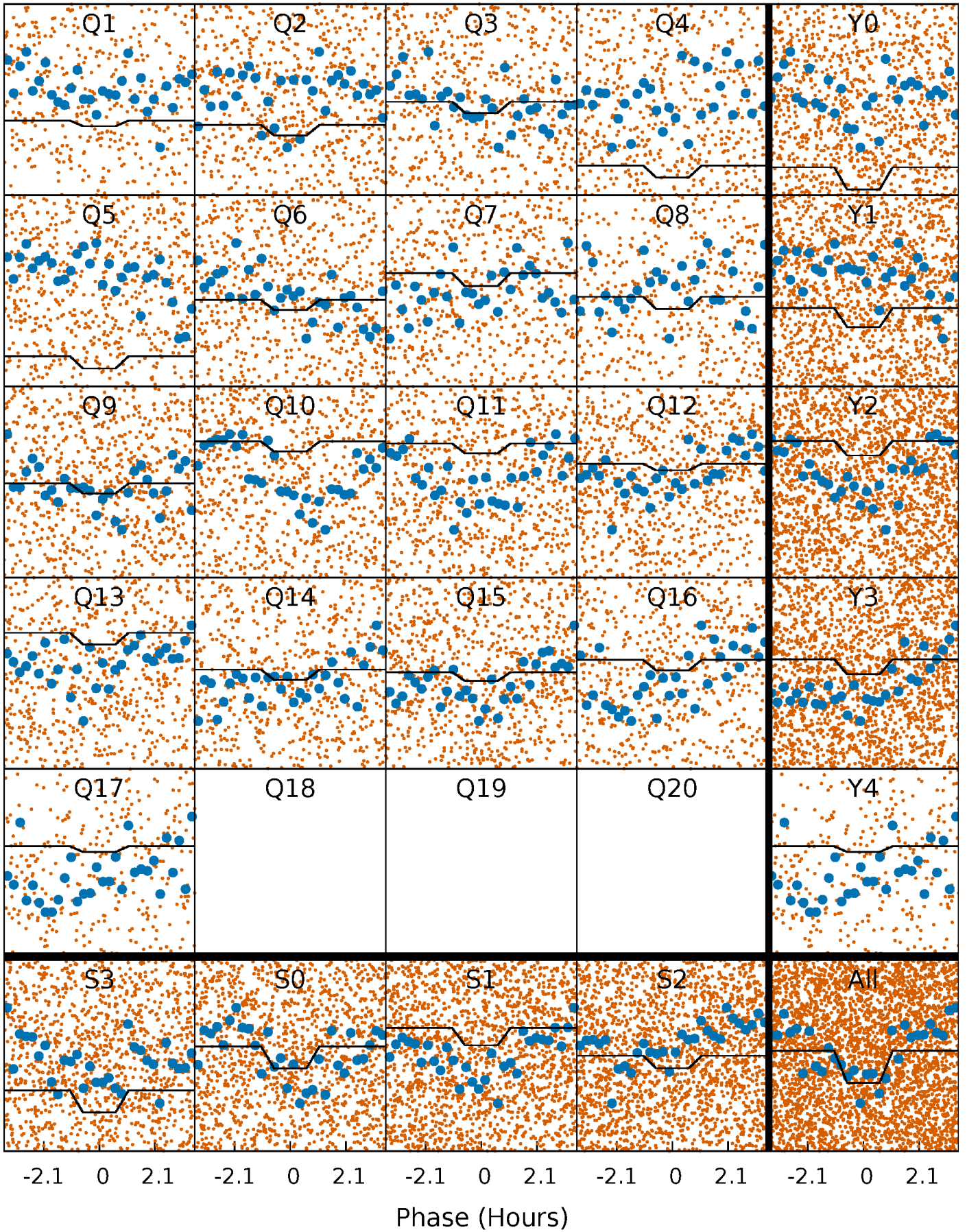
DV Quarter-Phased Transit Curves

TCE 003956238-01 P= 0.971680 Days $T_0=131.954108$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

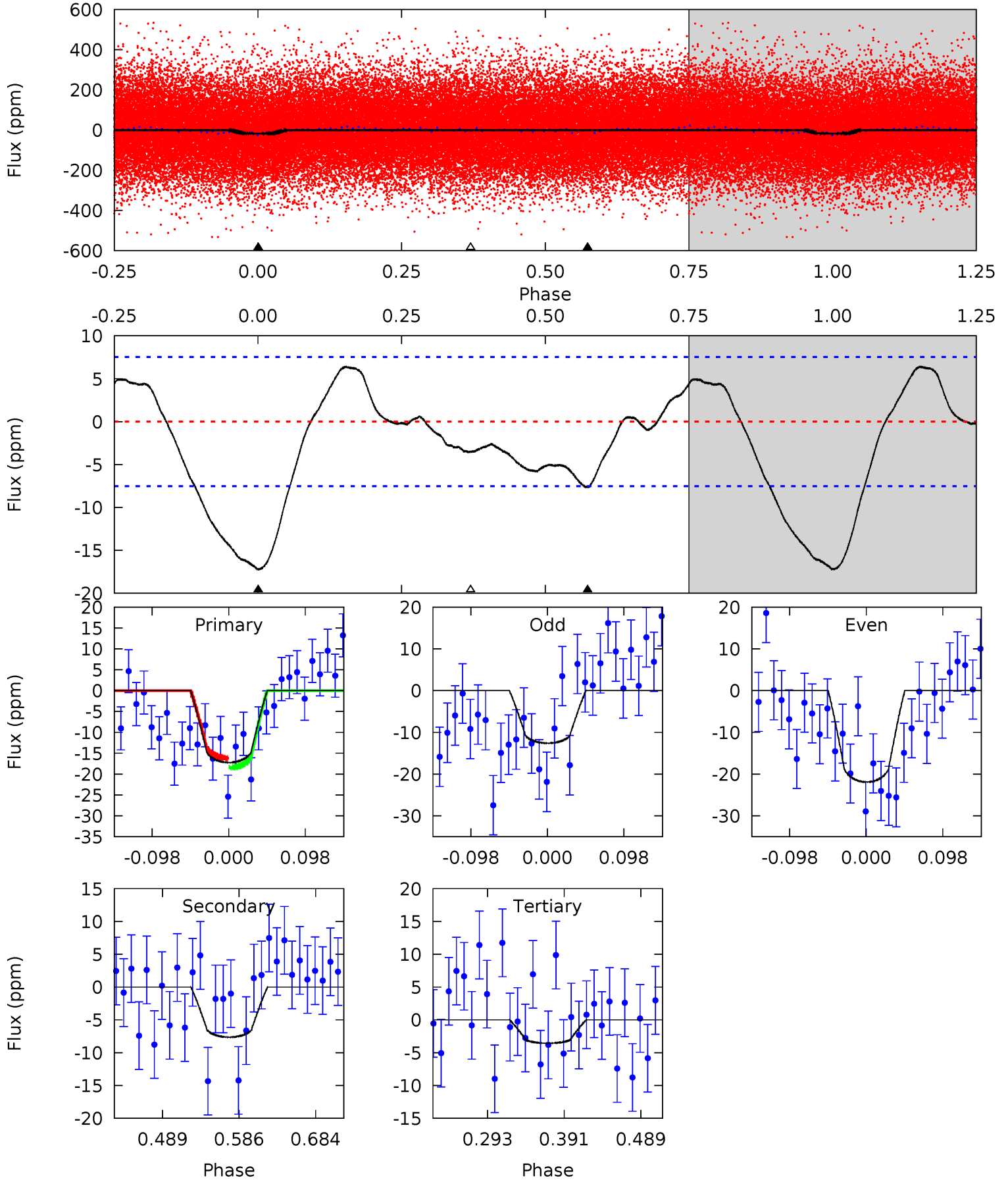
TCE 003956238-01 P= 0.971686 Days $T_0=131.954334$ (BKJD)



DV Model-Shift Uniqueness Test

003956238-01, P = 0.971680 Days, E = 130.982428 Days

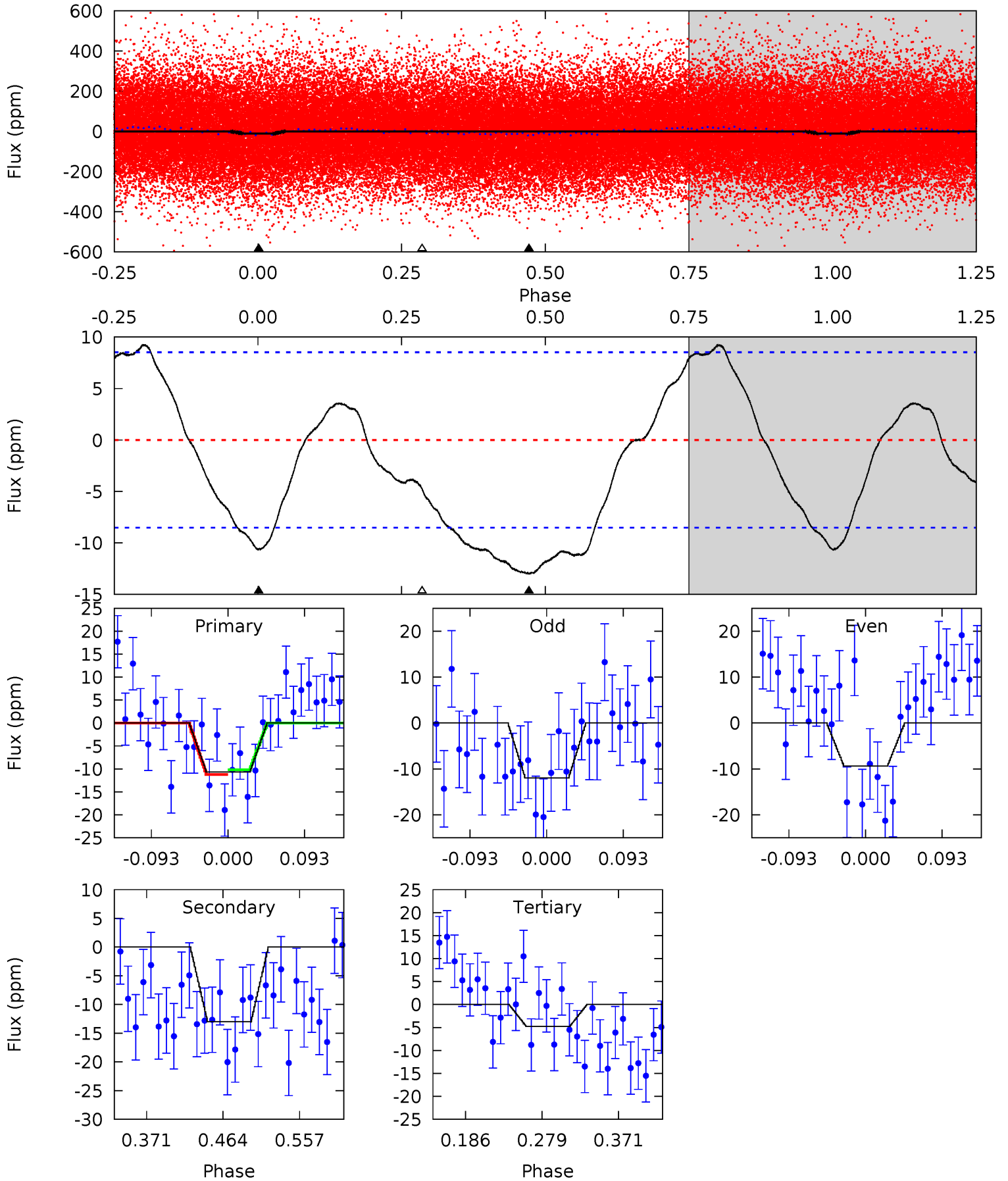
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	4.64	2.16	0	4.57	1.66	2.24	8.31	10.5	2.48	4.64	2.83	0.98	0.27	0.70



Alt Model-Shift Uniqueness Test

003956238-01, P = 0.971686 Days, E = 130.982648 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.74	6.99	2.57	0	4.58	1.68	3.05	3.17	5.74	4.42	6.99	0.68	0.69	0.42	0.28



Stellar Parameters For KIC 003956238

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6569^{+177}_{-177}	$3.579^{+0.344}_{-0.086}$	$-0.180^{+0.300}_{-0.250}$	$3.470^{+0.340}_{-1.360}$	$1.664^{+0.208}_{-0.357}$	$0.056^{+0.144}_{-0.012}$
	+3%/-3%	+10%/-2%	+167%/-139%	+10%/-39%	+12%/-21%	+256%/-21%
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 003956238-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-8 ± 2	$1.19^{+0.49}_{-0.47}$	4928^{+261}_{-448}	5596^{+1785}_{-1017}	$1.529^{+2.669}_{-0.805}$
Alt.	-13 ± 2	$1.14^{+0.50}_{-0.45}$	4909^{+273}_{-429}	6733^{+2411}_{-1194}	$2.856^{+4.822}_{-1.503}$

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 $A_{obs} \gg 1.0$

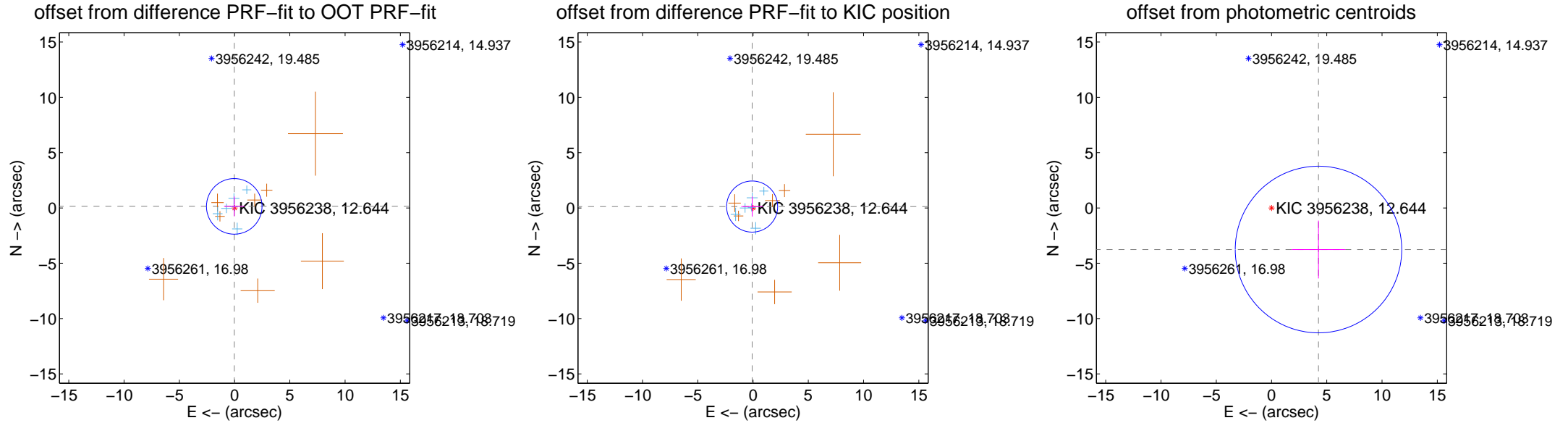
DV Centroid Data

Supplemental centroid analysis for 003956238-01. Kepler magnitude: 12.64. Transit SNR 3.79

There are 6 quarters with good PRF difference image offsets

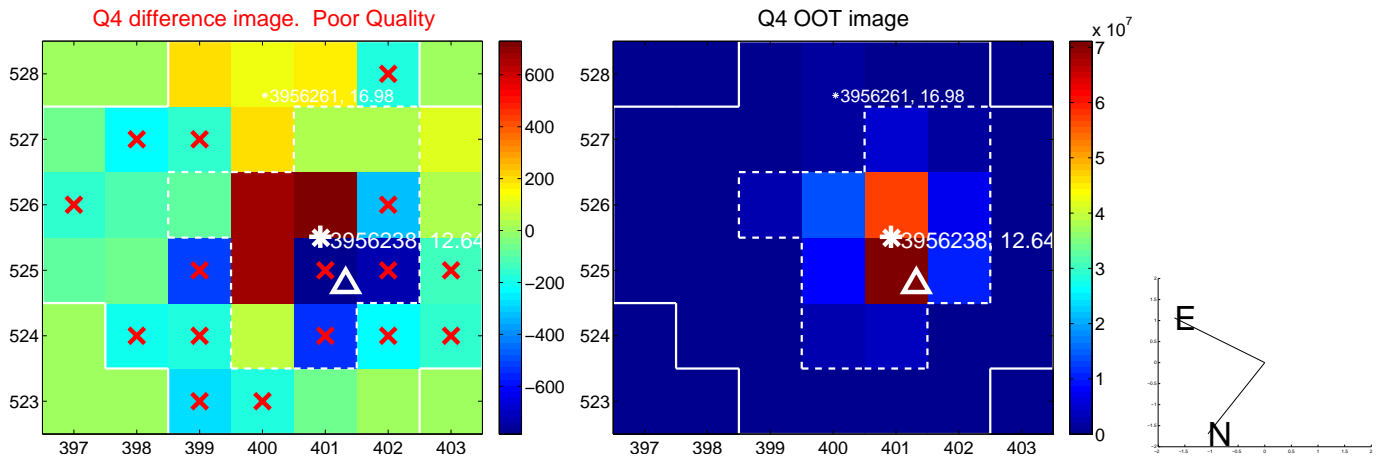
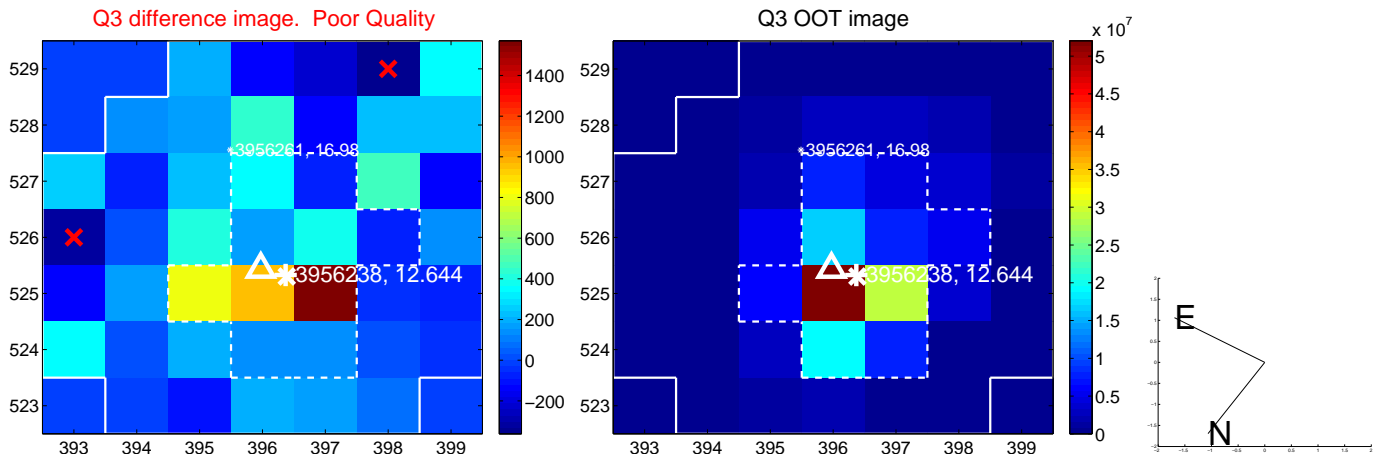
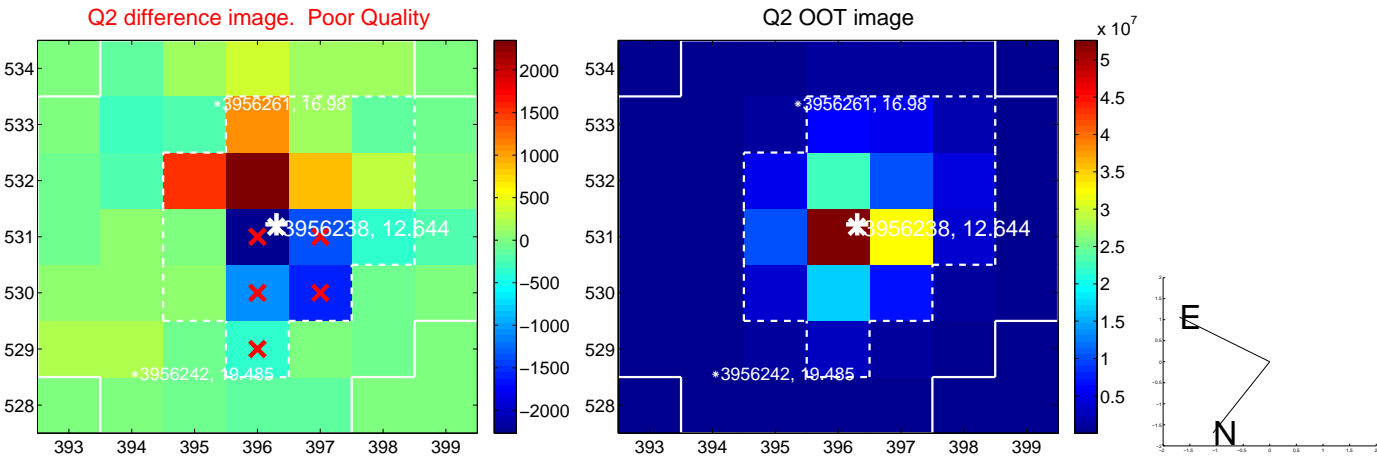
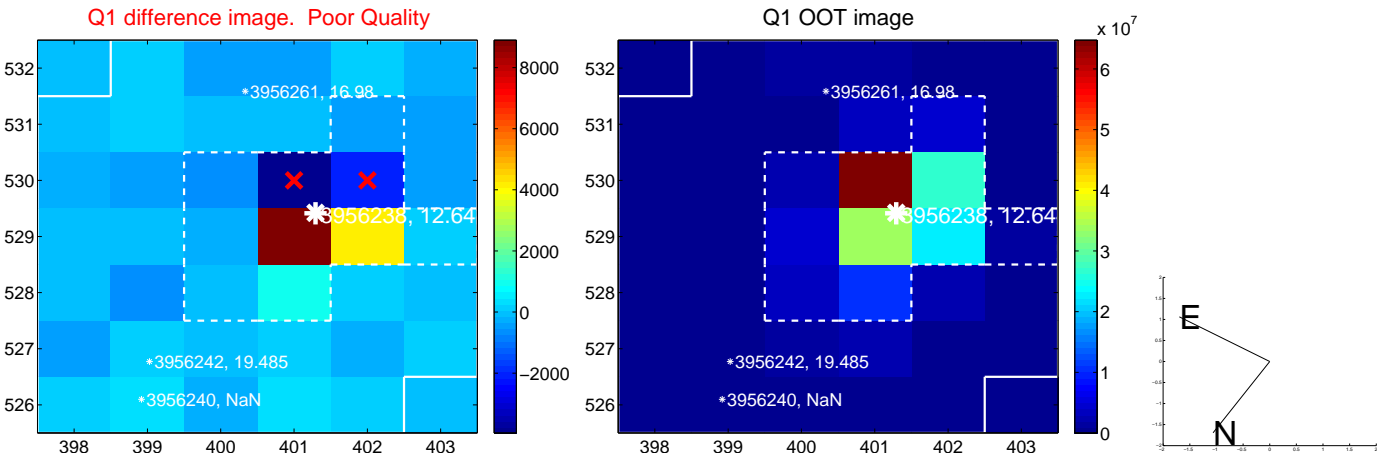
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.146 ± 0.838	0.17	0.030 ± 0.922	0.143 ± 0.896
PRF-fit source offset from KIC position	0.151 ± 0.770	0.20	0.082 ± 0.981	0.126 ± 0.907
photometric centroid source offset	5.67 ± 2.51	2.26	-4.25 ± 2.43	-3.76 ± 2.61

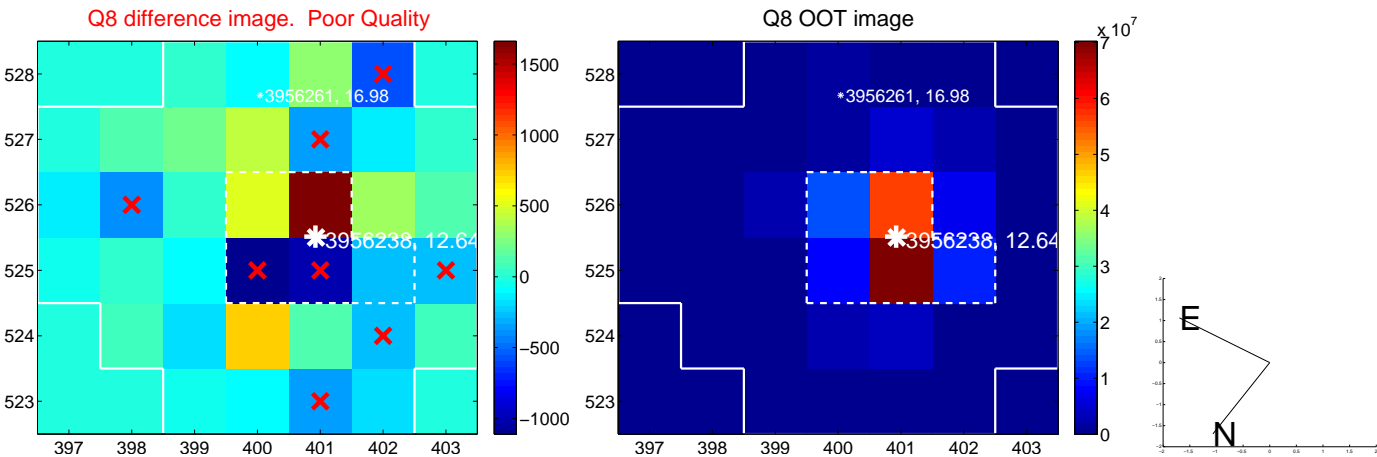
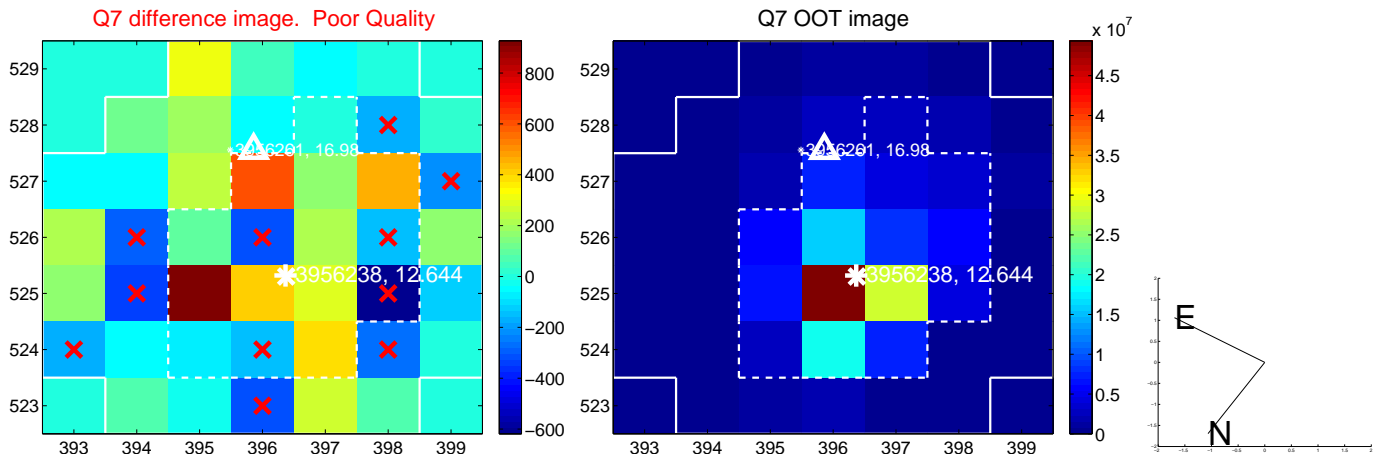
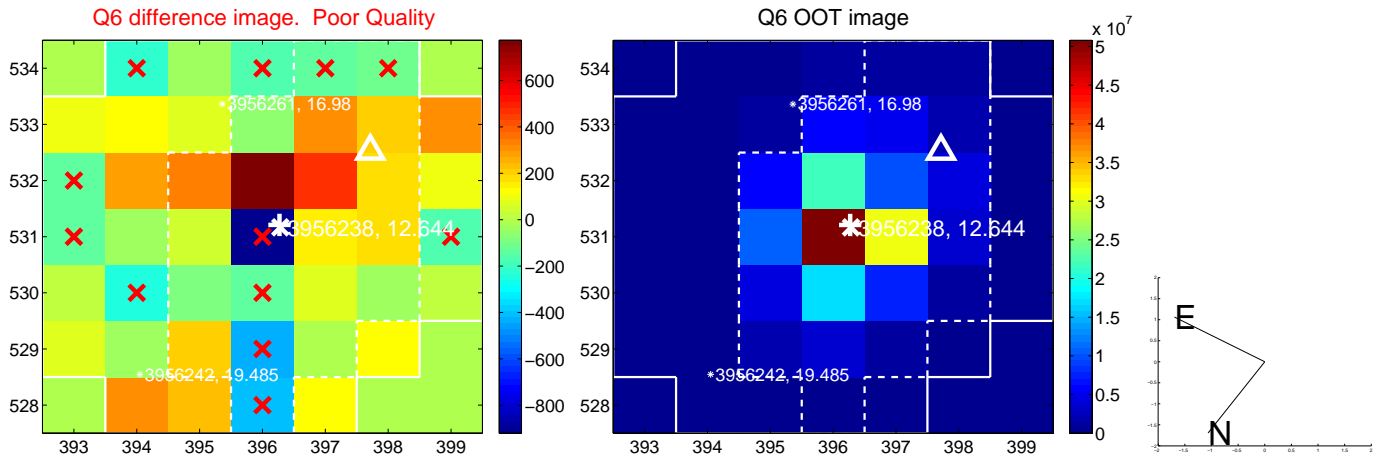
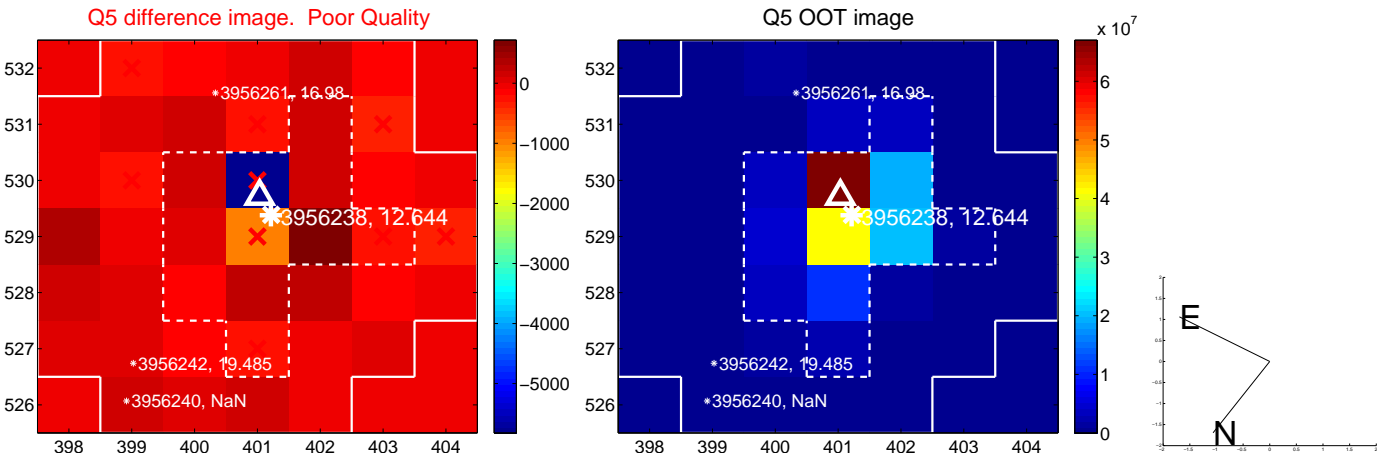


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

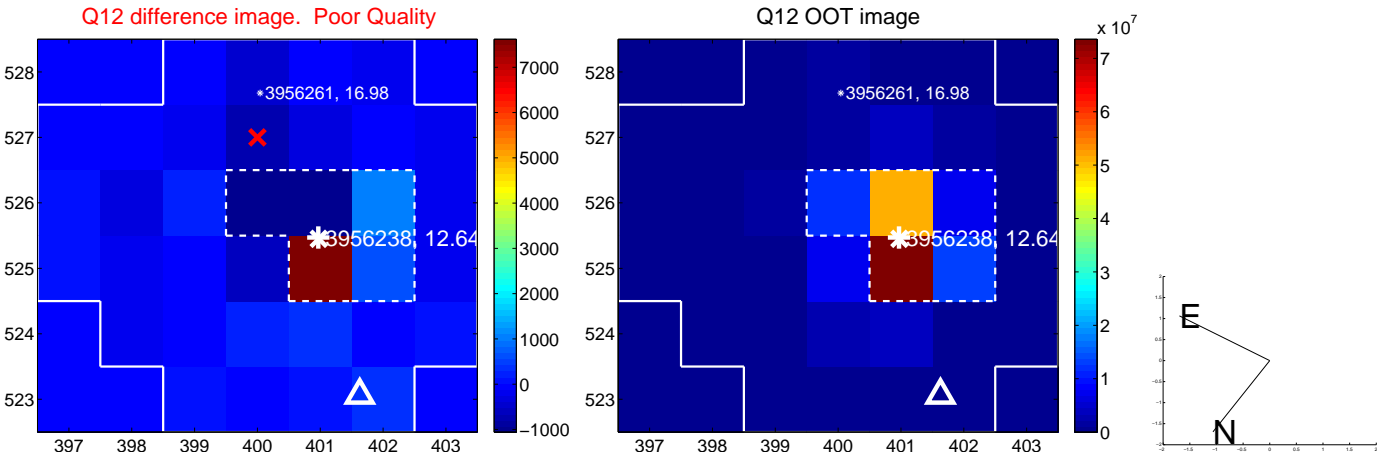
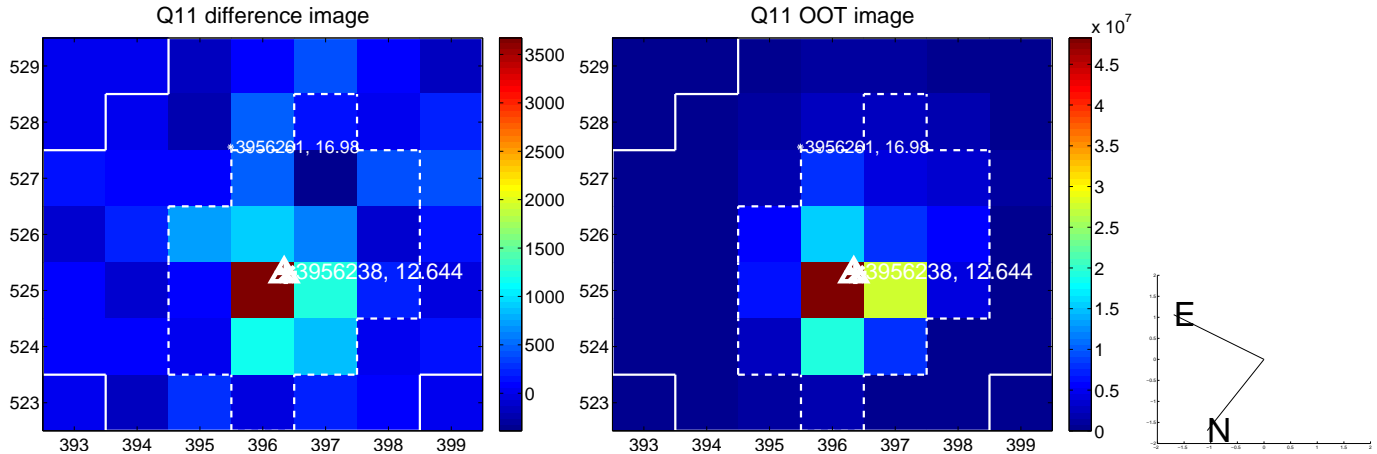
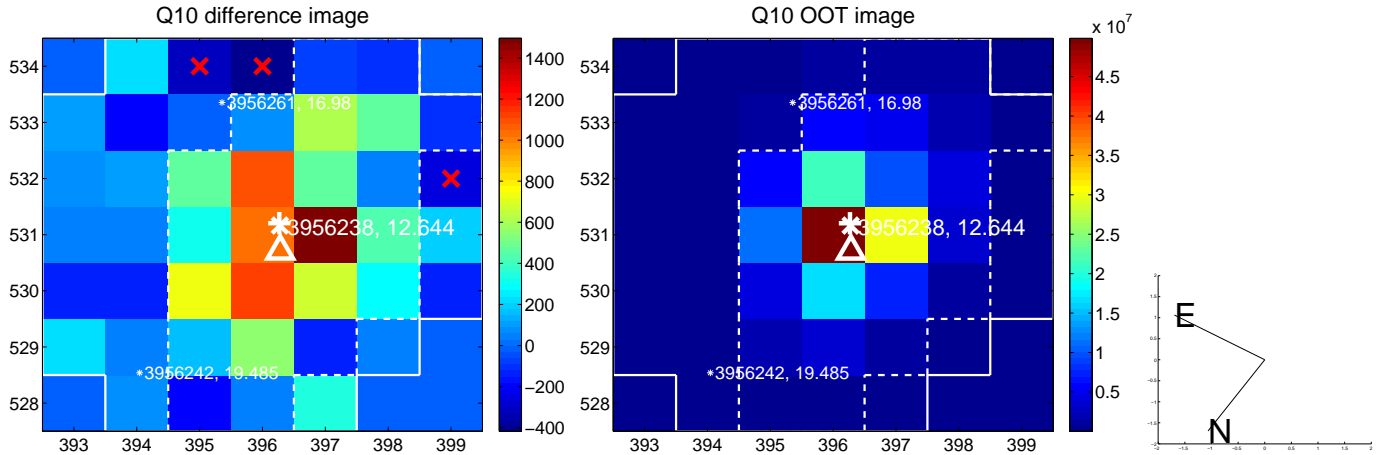
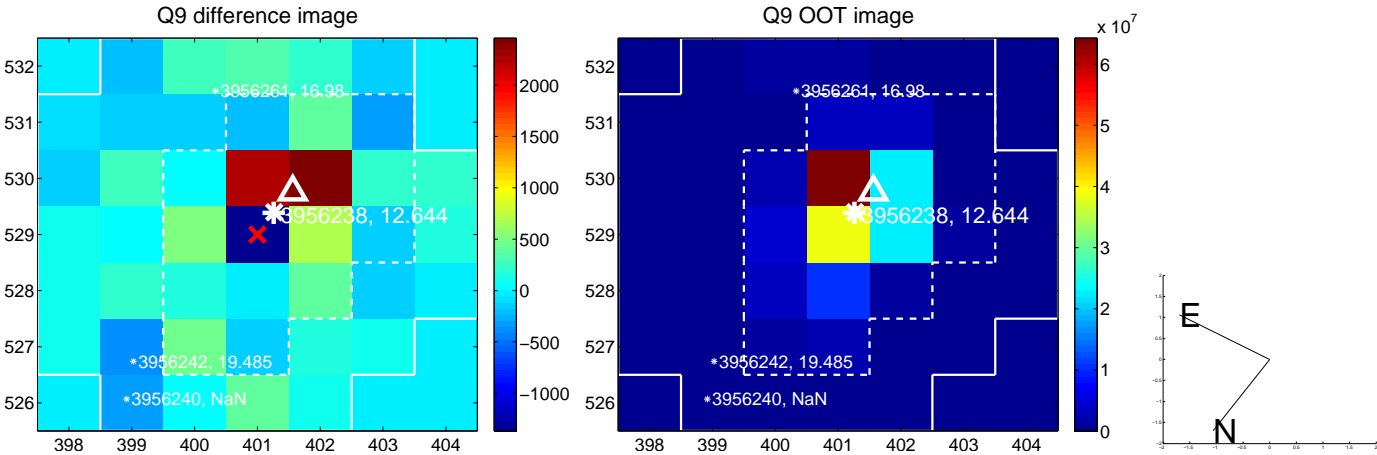
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



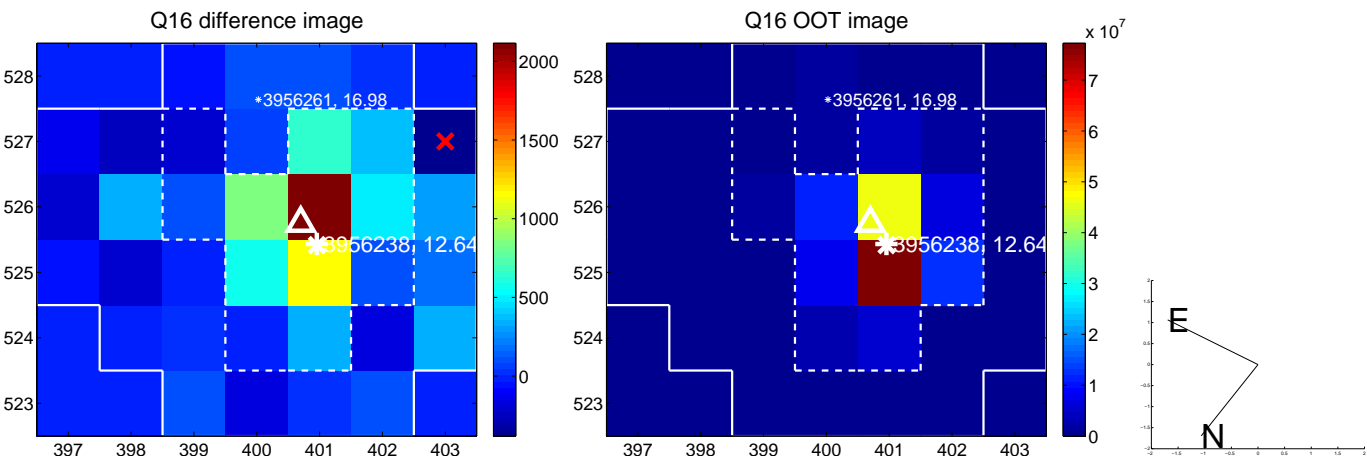
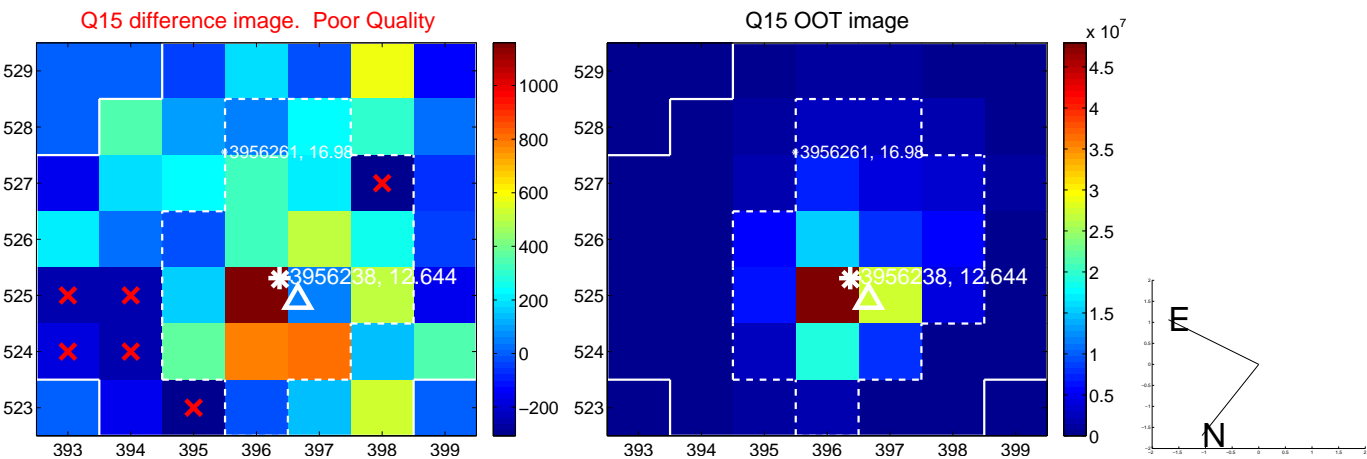
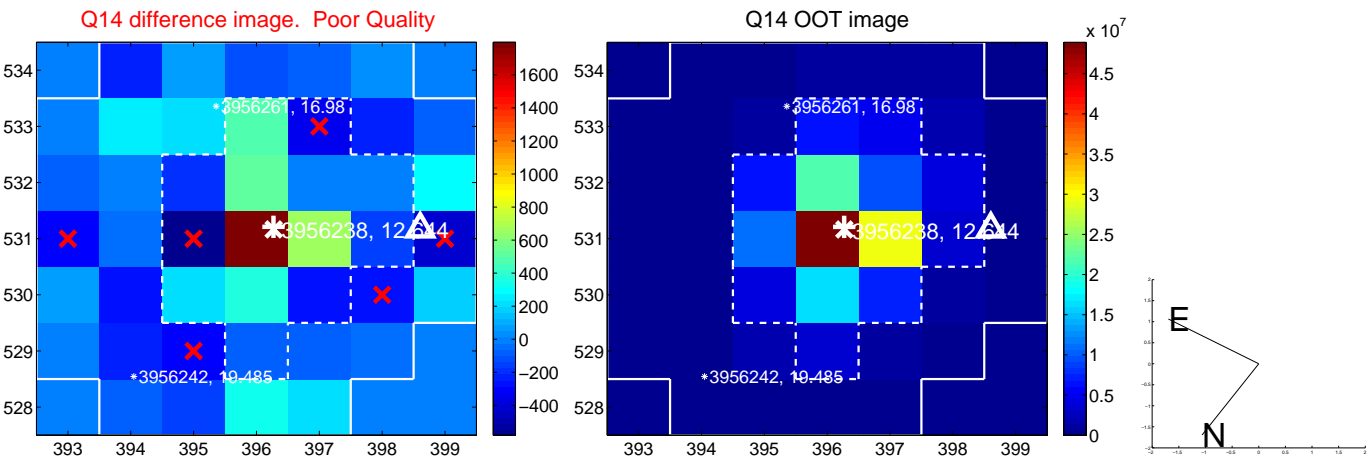
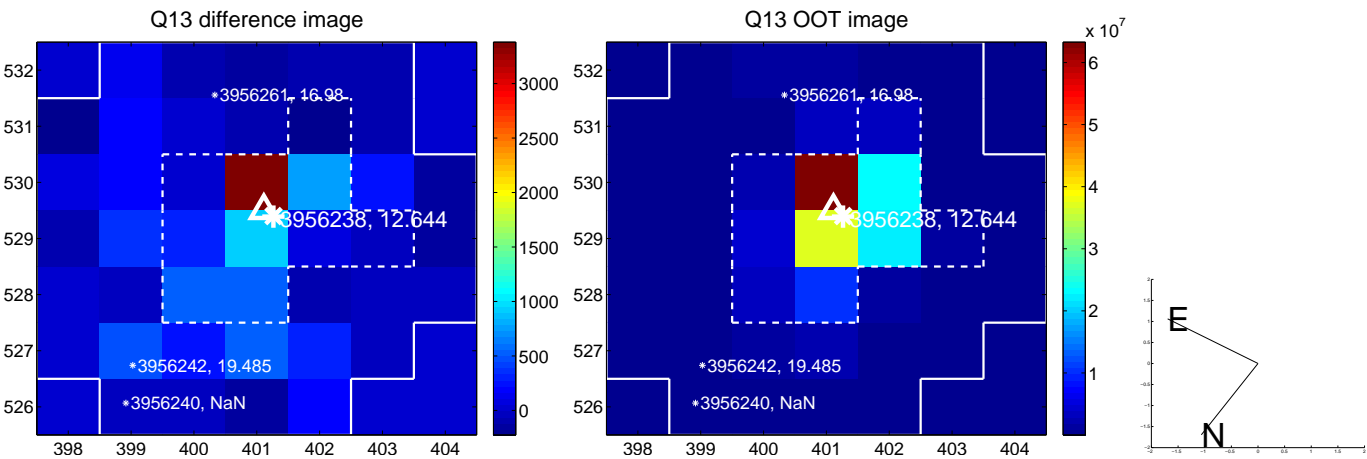
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



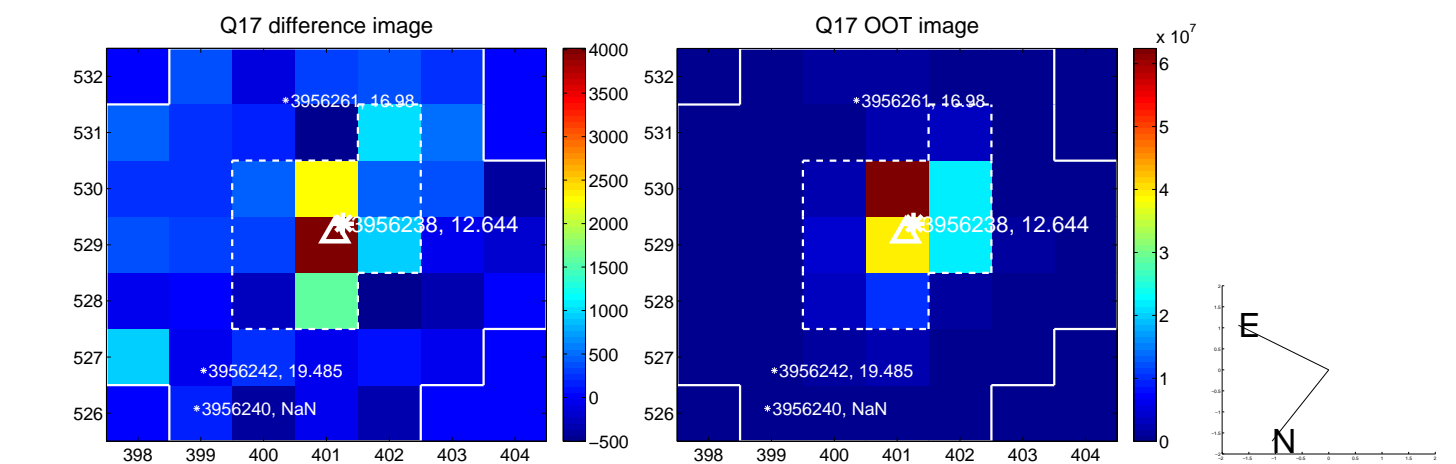
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



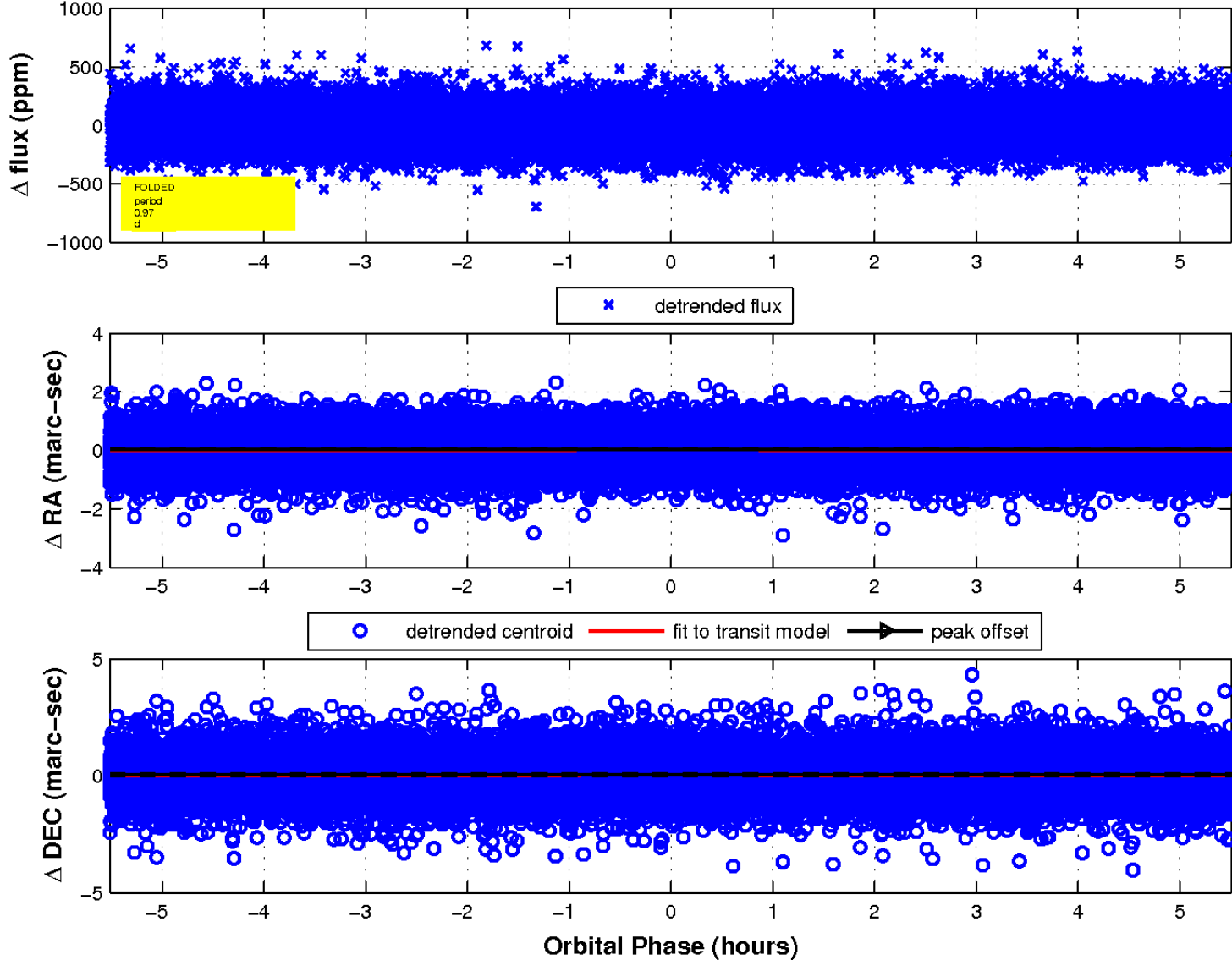
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

