

KIC 002717158

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})
002717158-01	OBS	3459.01	13.222646	144.292276	255.0	4.412	11.2	12.1	0.86	5931	1.72	71.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002717158-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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 002717158-01

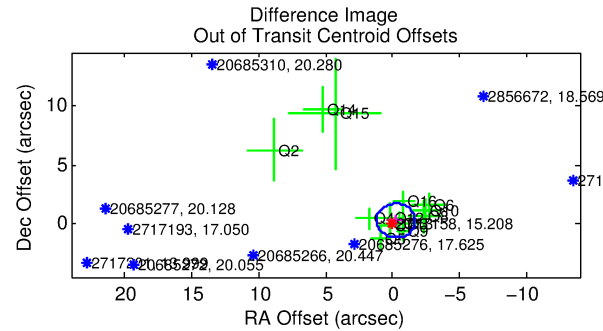
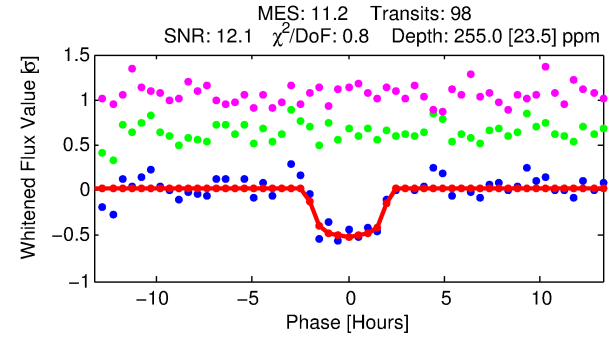
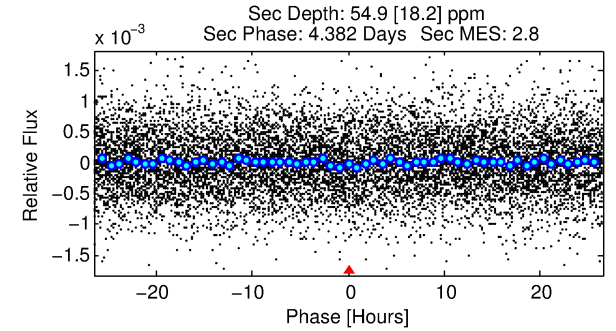
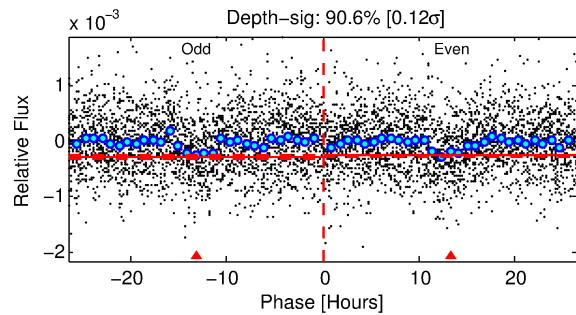
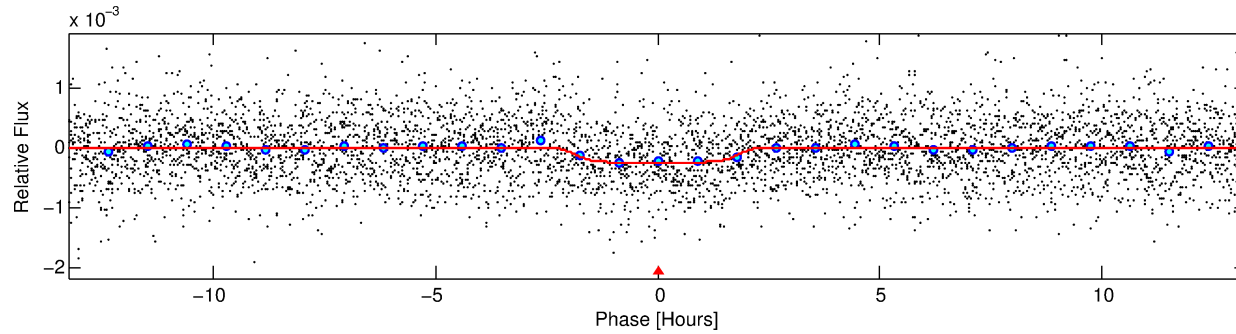
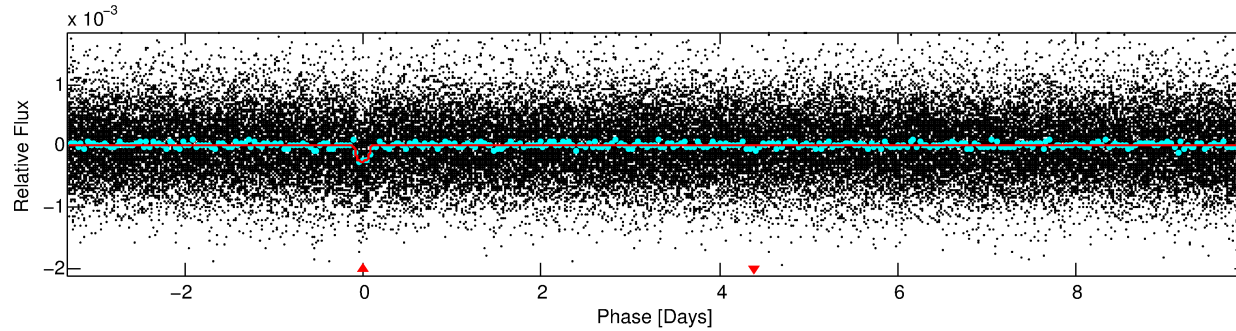
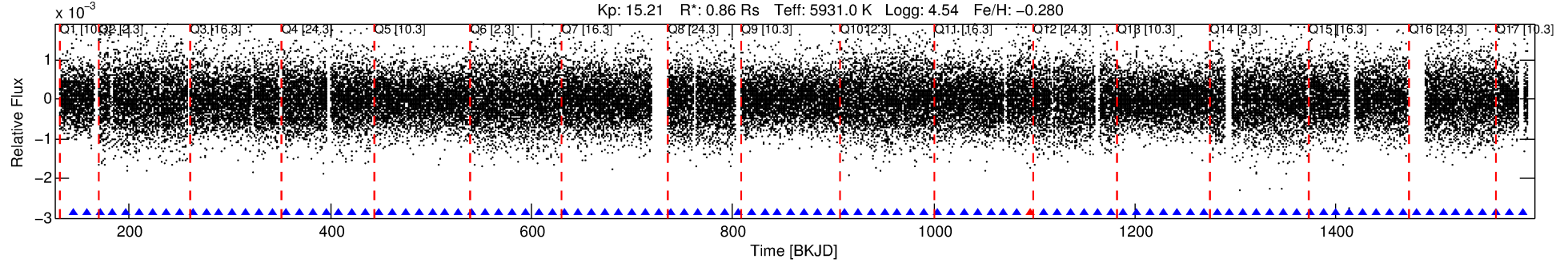
No Significant Match Found

DV One-Page Summary

KIC: 2717158 Candidate: 1 of 1 Period: 13.223 d

KOI: K03459.01 Corr: 0.919

Kp: 15.21 R*: 0.86 Rs Teff: 5931.0 K Logg: 4.54 Fe/H: -0.280



DV Fit Results:

Period = 13.22265 [0.00014] d
Epoch = 144.2923 [0.0082] BKJD
Rp/R* = 0.0183 [0.0021]
a/R* = 8.55 [4.42]
b = 0.95 [0.06]
Seff = 71.17 [25.53]
Teq = 741 [66] K
Rp = 1.72 [0.50] Re
a = 0.1077 [0.0247] AU
Ag = 117.93 [62.10] [1.88σ]
Teffp = 3774 [397] K [7.53σ]

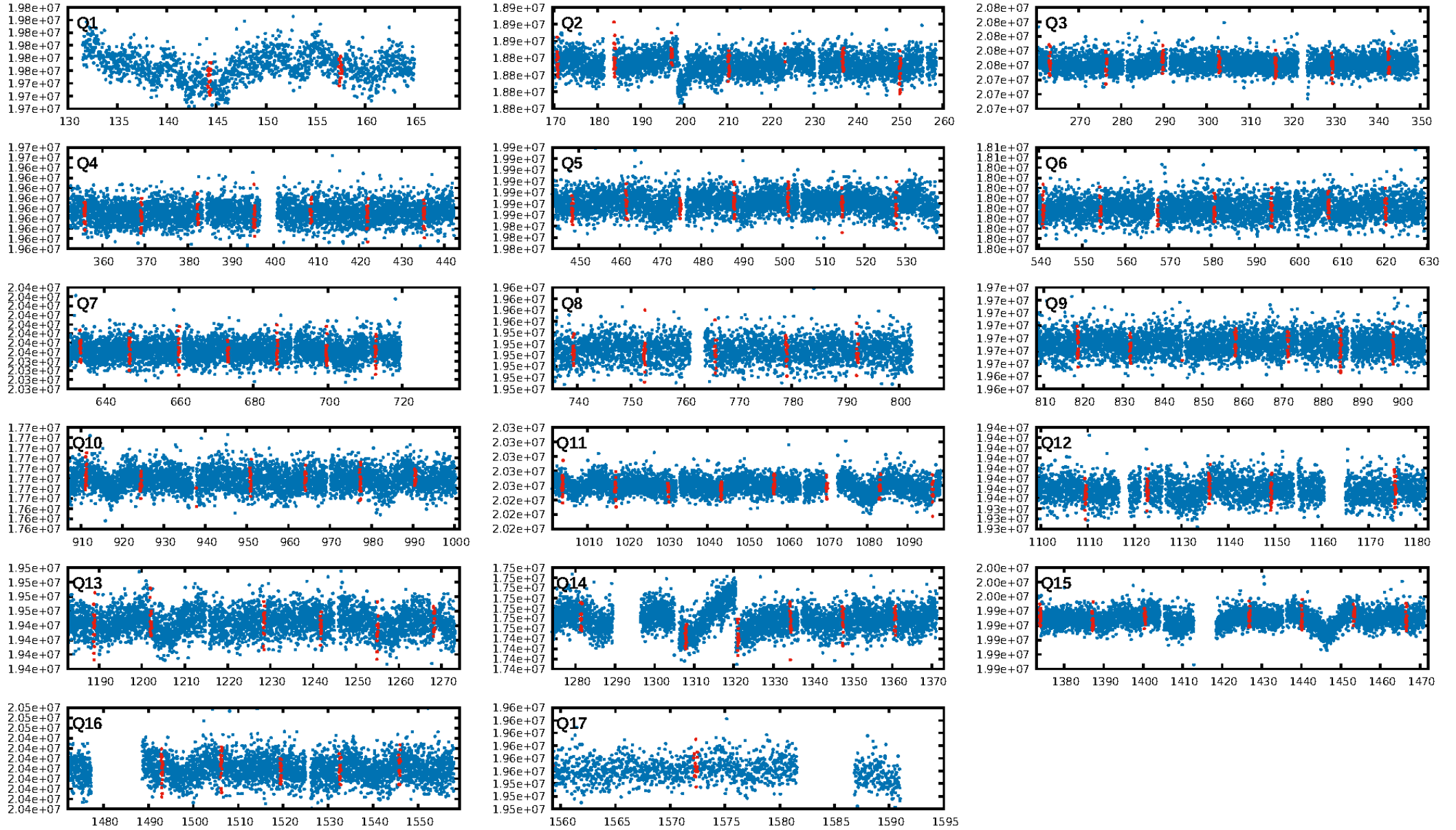
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 96.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.97e-29
RollingBand-fgt: 0.99 [94/95]
GhostDiagnostic-chr: 2.658
Centroid-sig: 2.0%
Centroid-so: 2.184 arcsec [1.93σ]
OotOffset-rm: 0.371 arcsec [0.77σ]
KicOffset-rm: 0.102 arcsec [0.14σ]
OotOffset-st: 4/3/4/3 [14]
KicOffset-st: 4/3/4/3 [14]
DiffImageQuality-fgm: 0.29 [4/14]
DiffImageOverlap-fno: 1.00 [17/17]

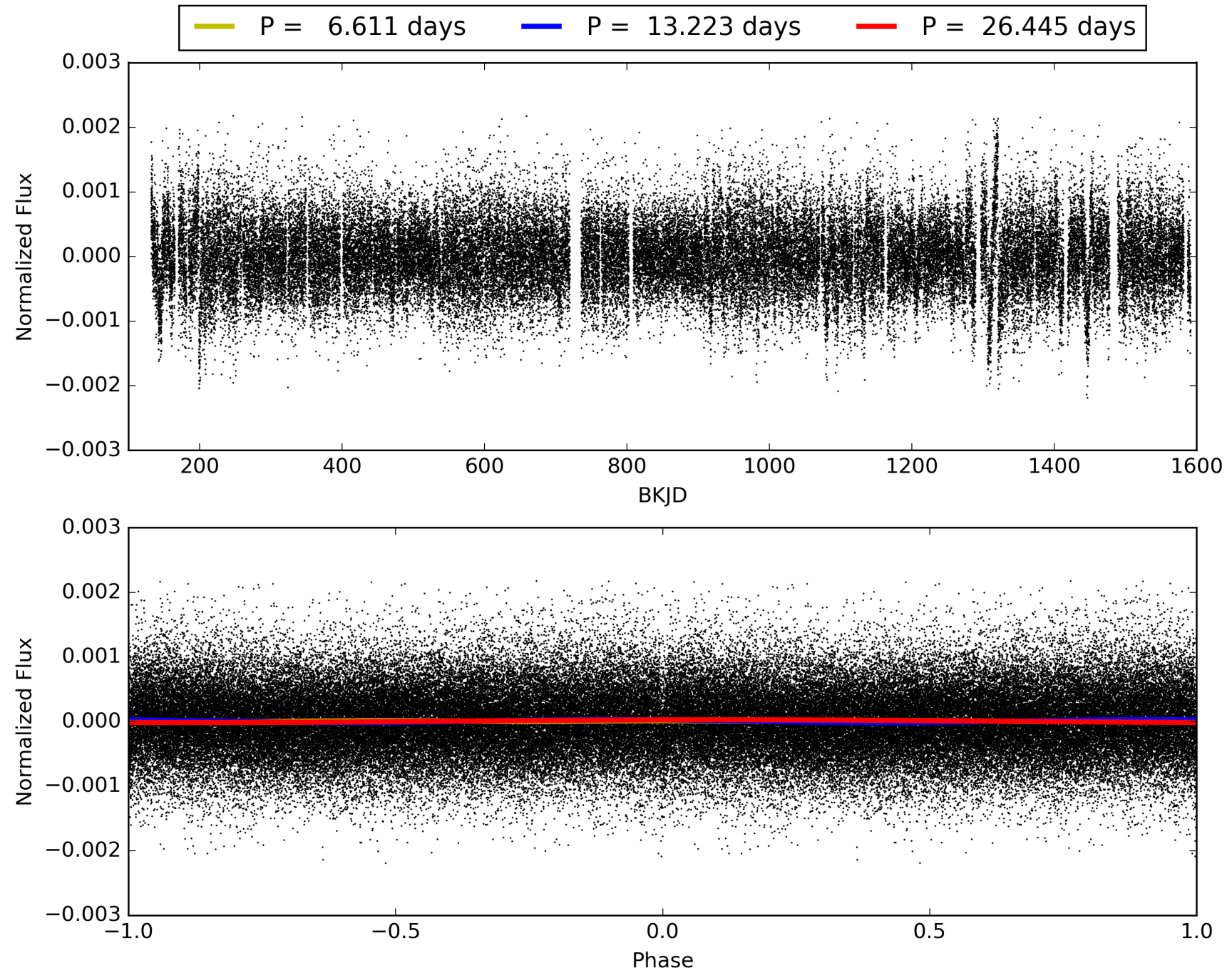
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:39:00 Z

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

TCE 002717158-01, PDC Light Curves

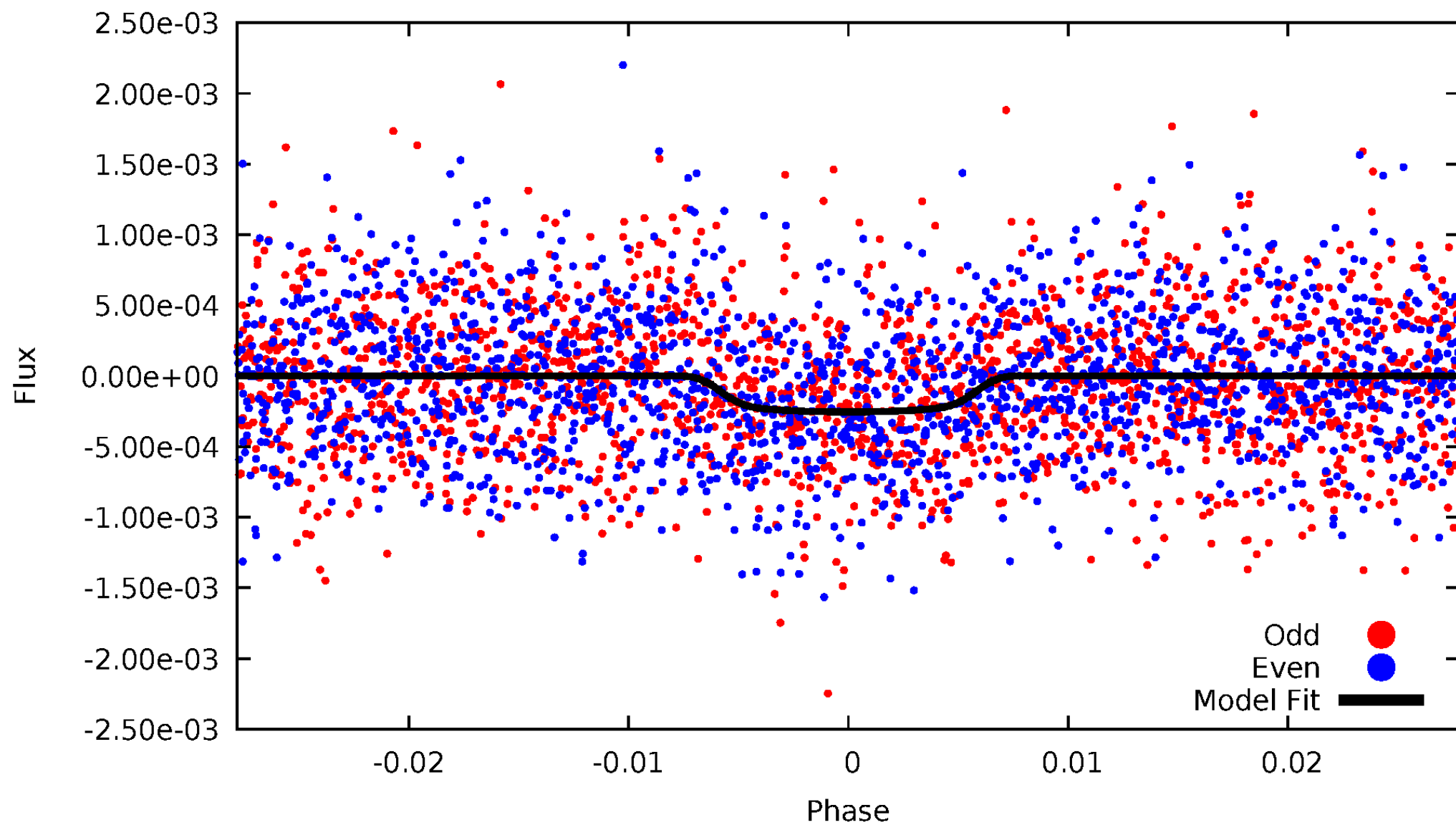


TCE 002717158-01



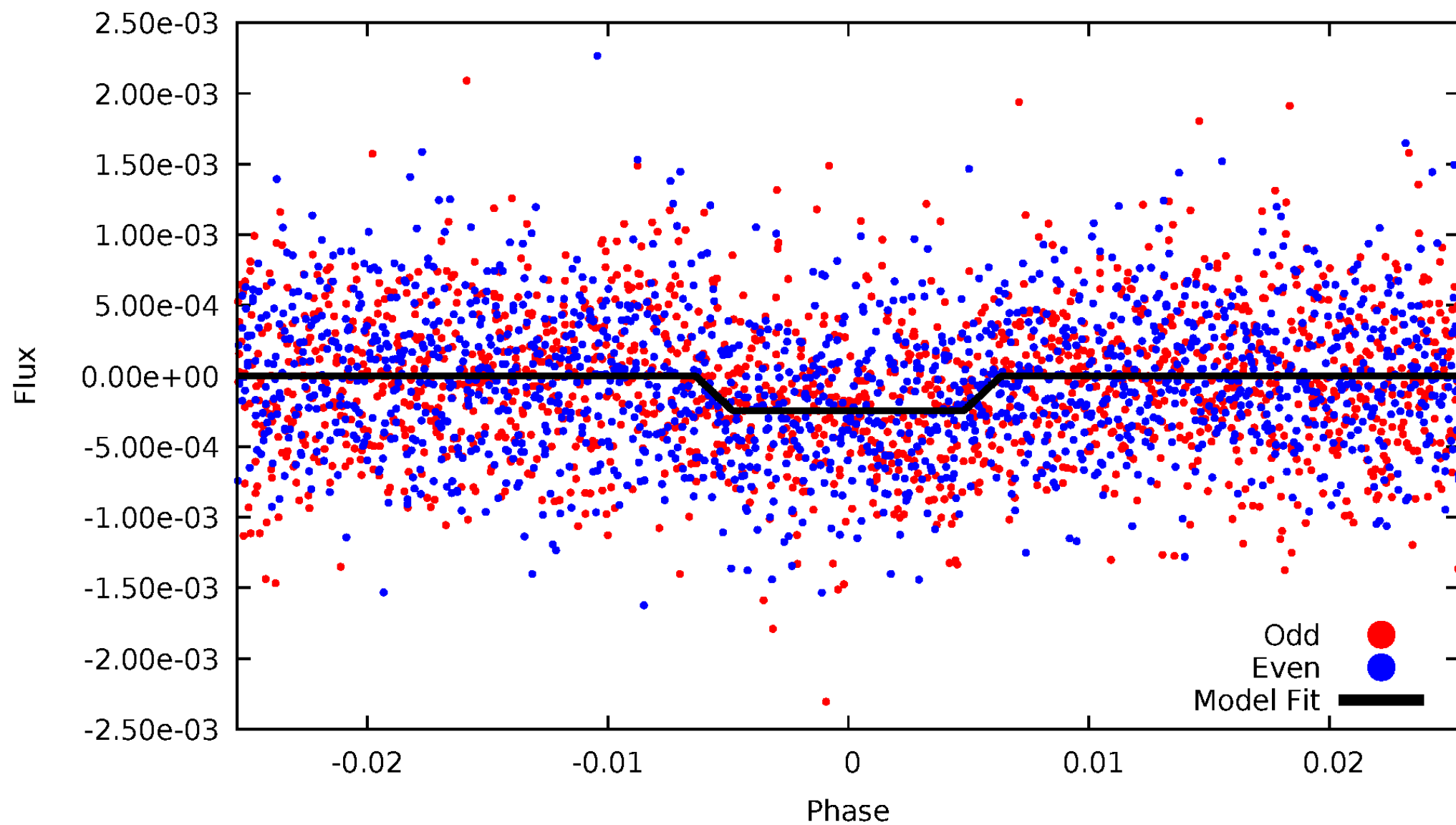
DV Odd/Even

TCE 002717158-01

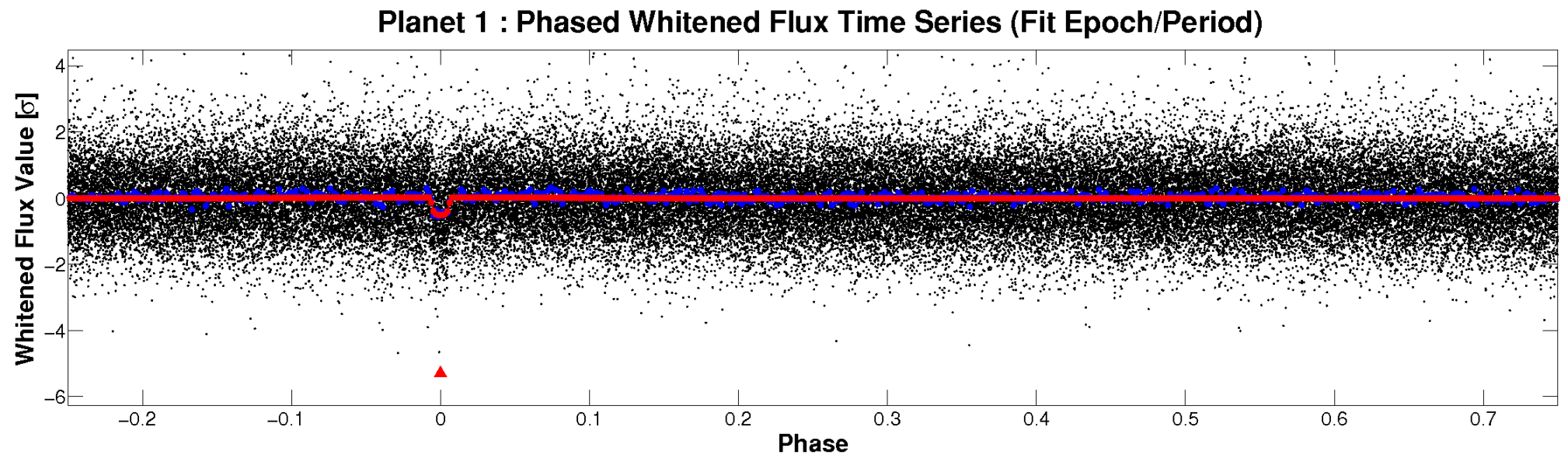
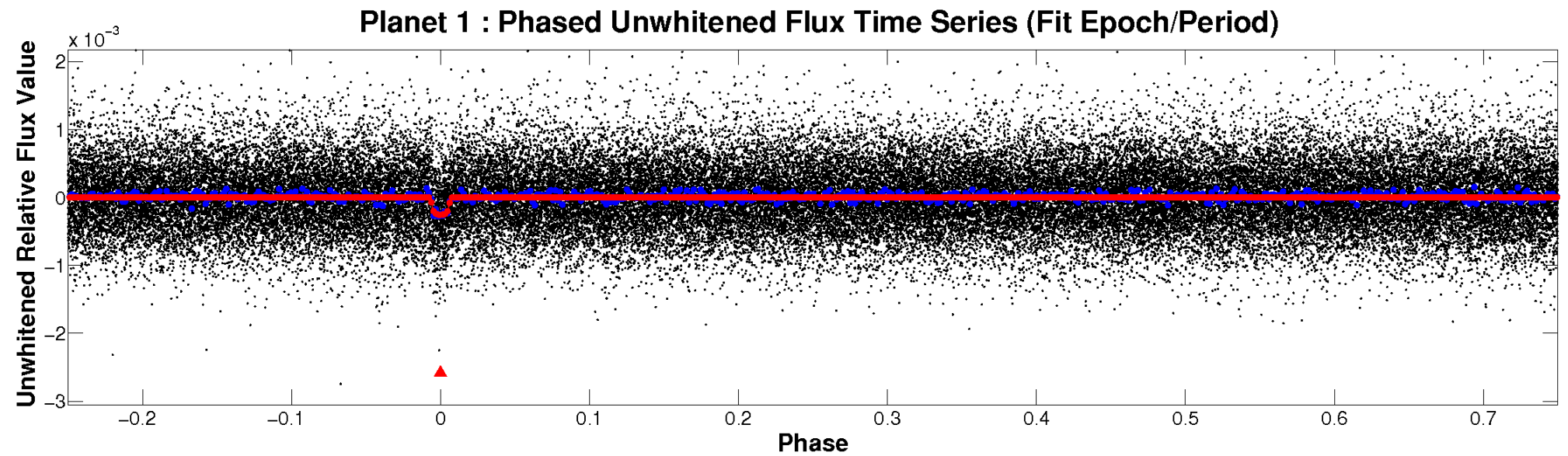


ALT Odd/Even

TCE 002717158-01

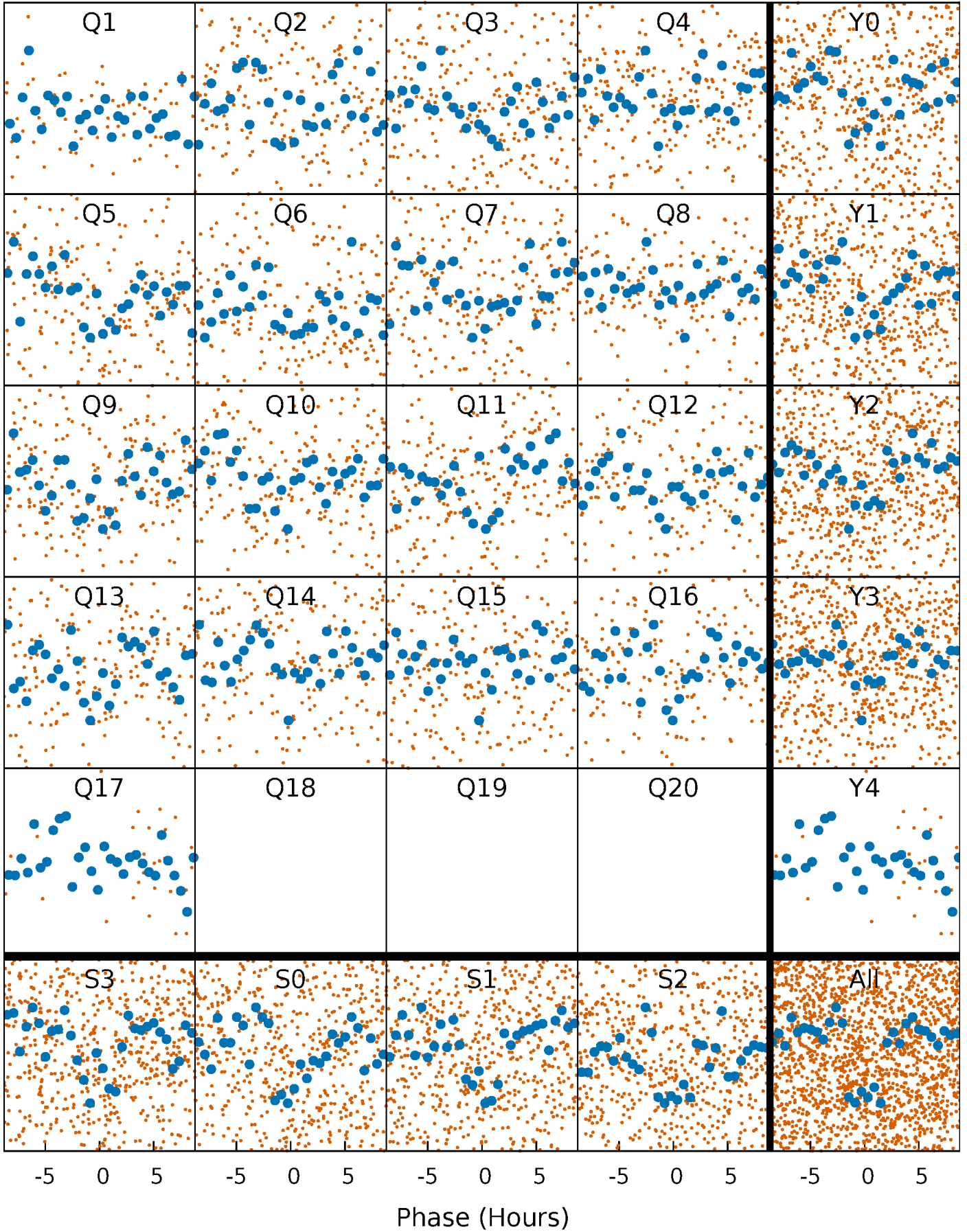


Non-Whitened Vs. Whitened Light Curve



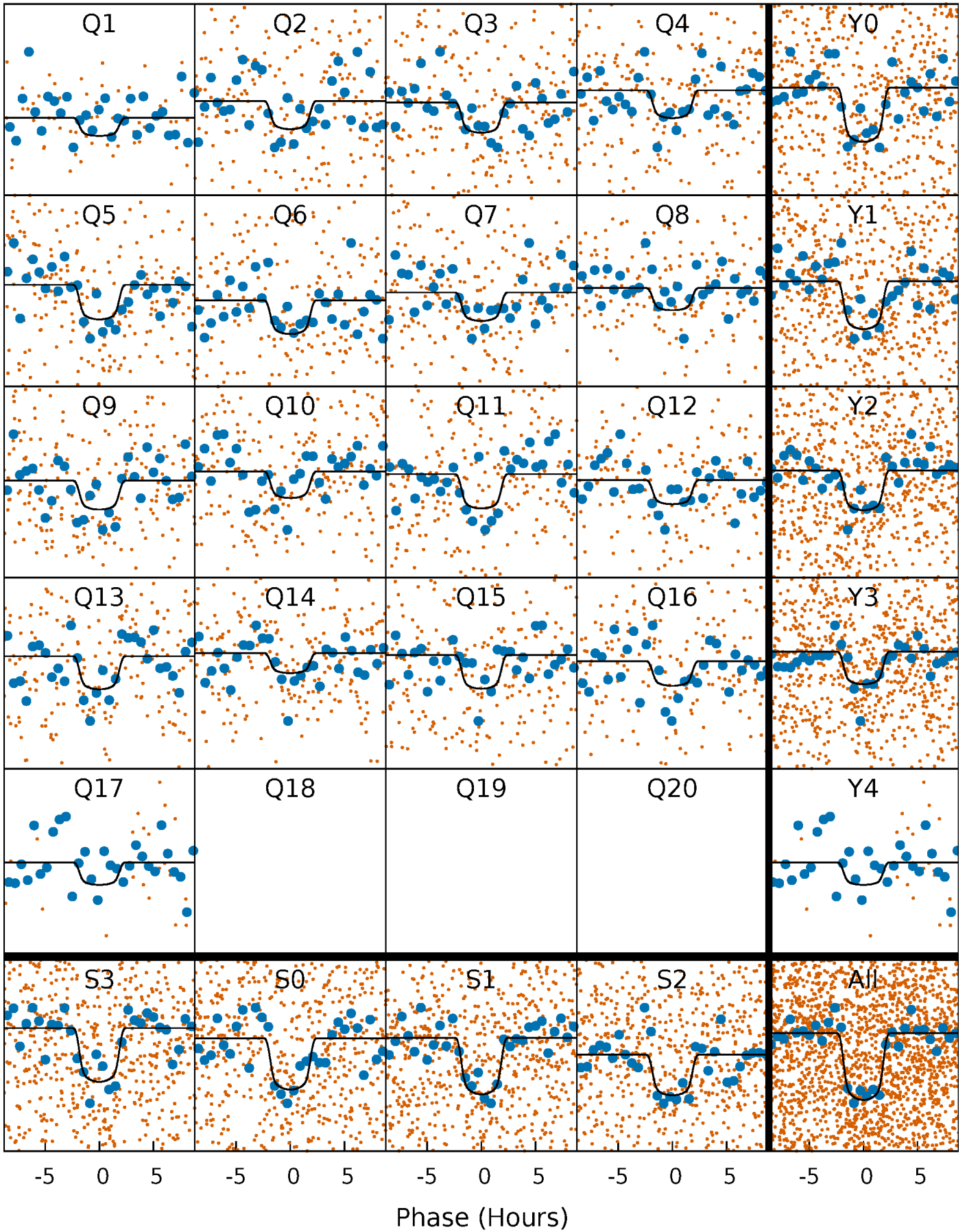
PDC Quarter-Phased Transit Curves

TCE 002717158-01 P= 13.222646 Days $T_0=144.292276$ (BKJD)



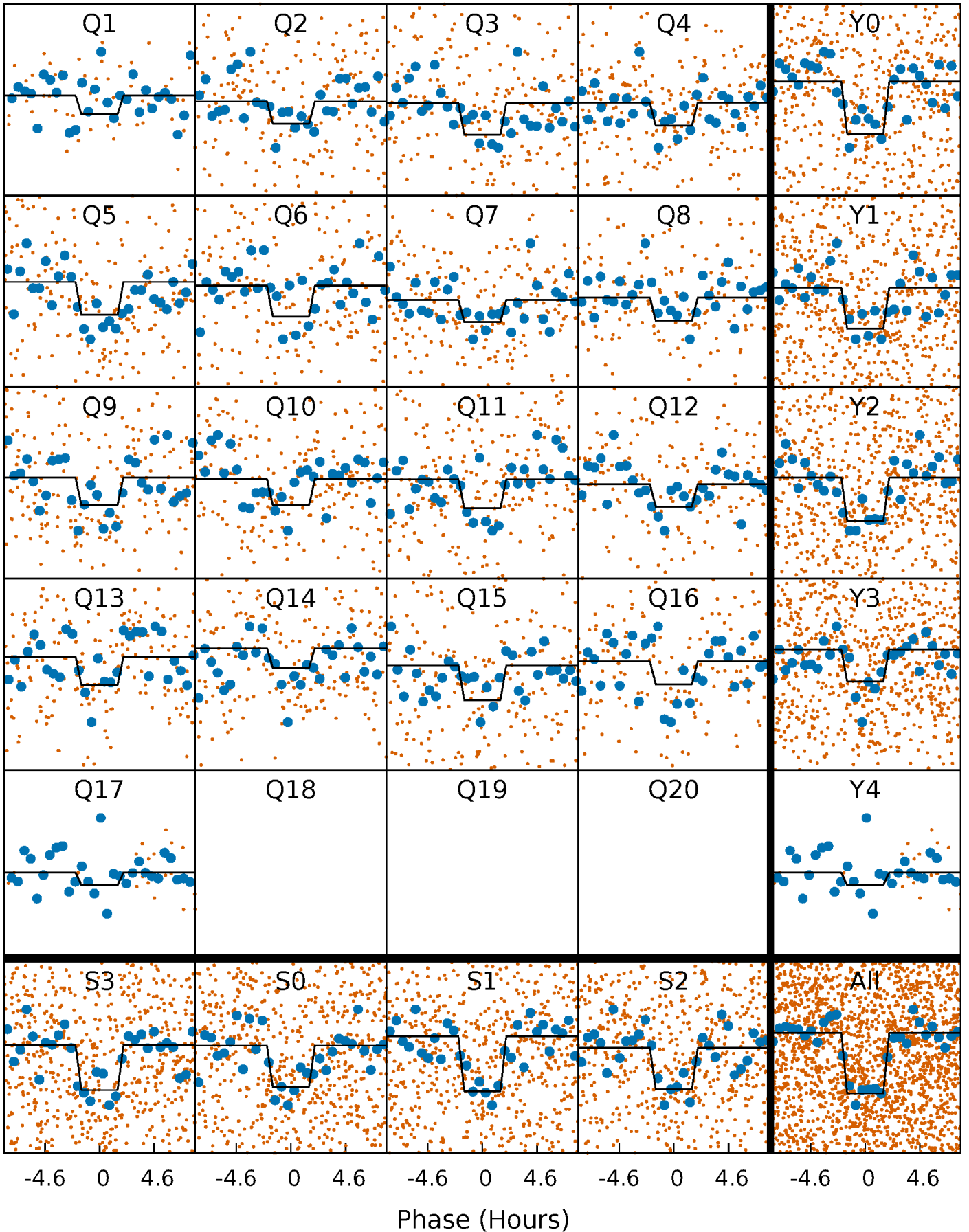
DV Quarter-Phased Transit Curves

TCE 002717158-01 P= 13.222646 Days $T_0=144.292276$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

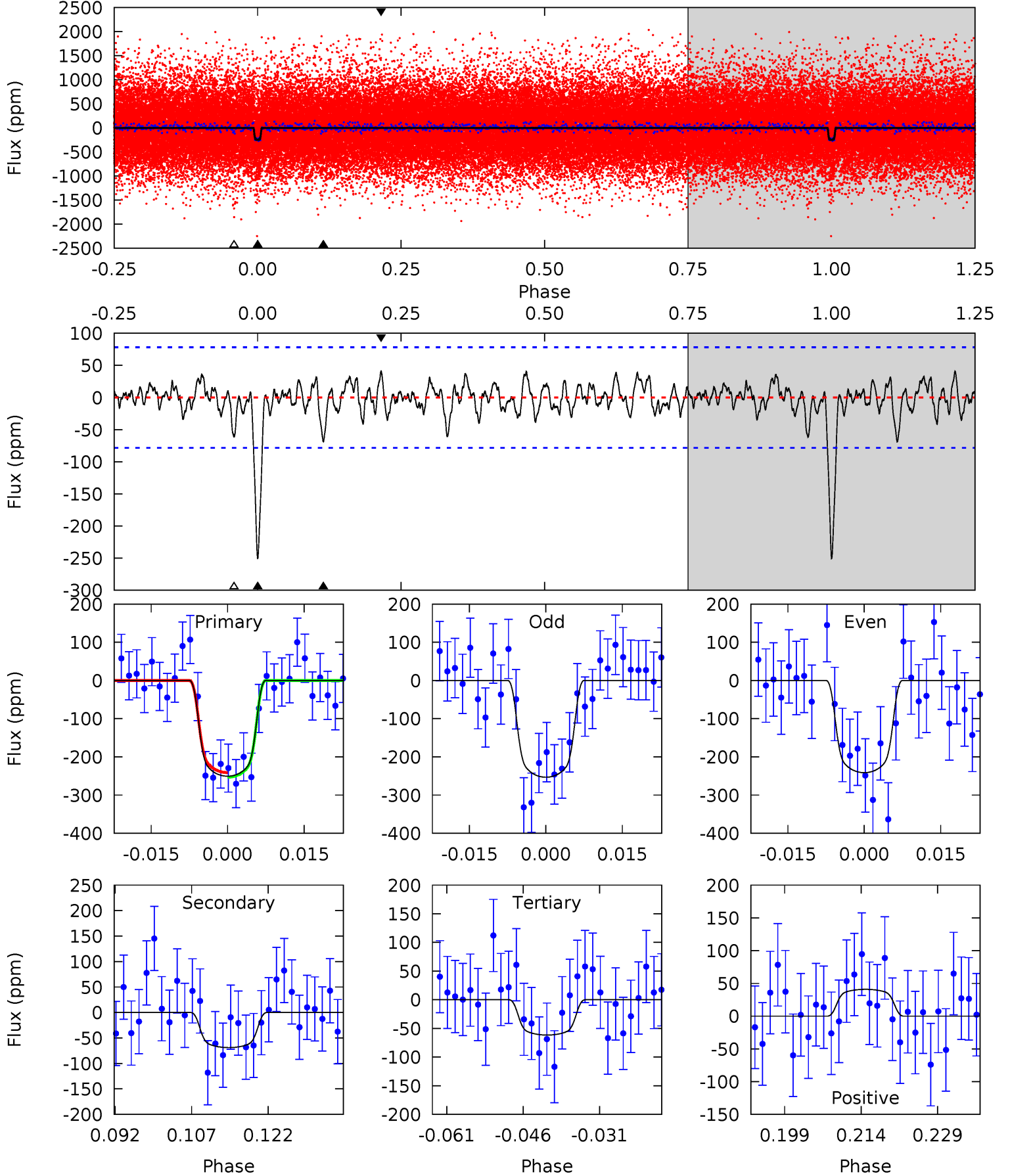
TCE 002717158-01 P= 13.222620 Days $T_0=144.294710$ (BKJD)



DV Model-Shift Uniqueness Test

002717158-01, $P = 13.222646$ Days, $E = 131.069630$ Days

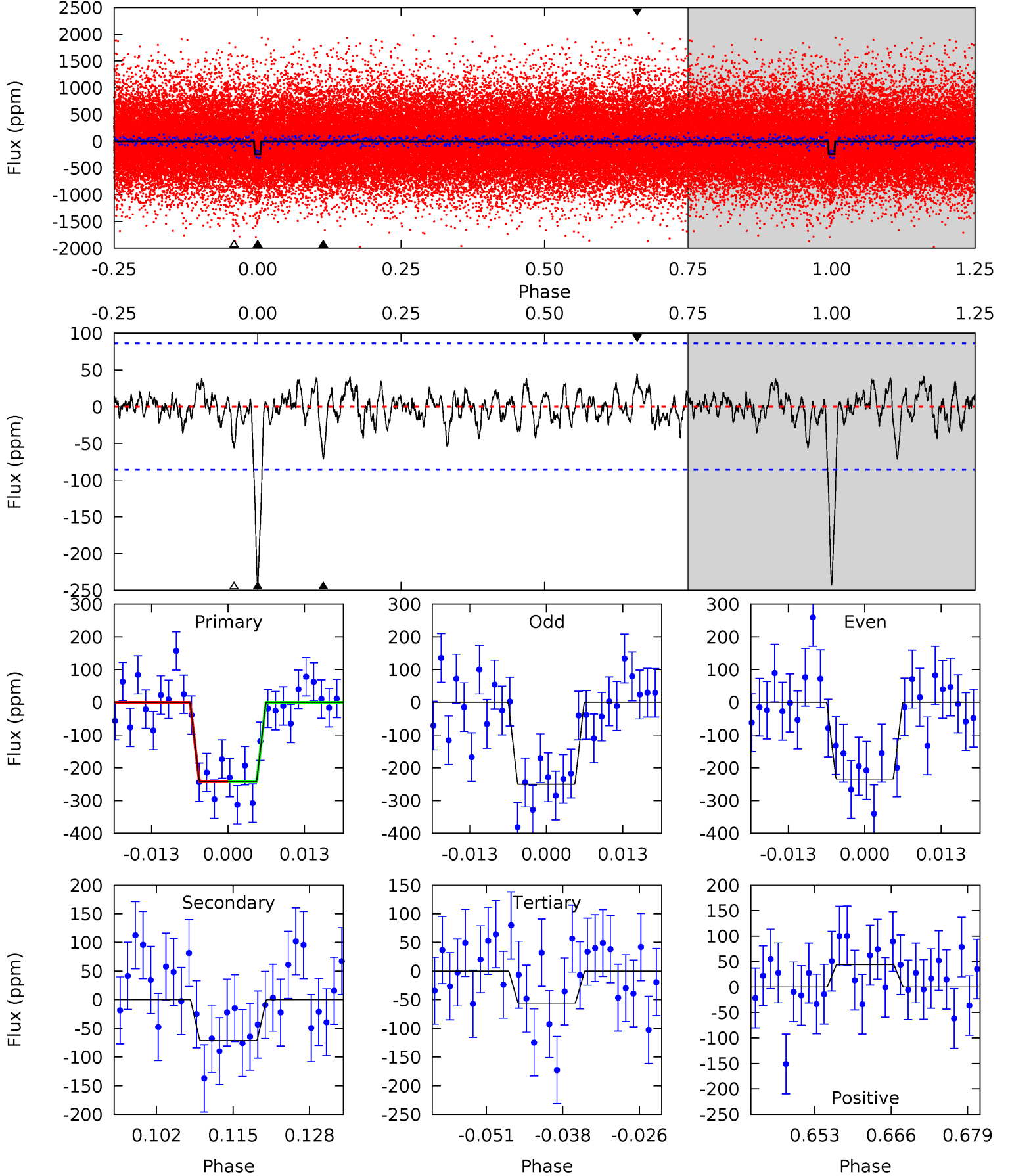
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	4.35	3.89	2.58	4.94	2.43	1.10	11.9	13.2	0.46	1.77	0.38	1.07	0.14	0.38



Alt Model-Shift Uniqueness Test

002717158-01, $P = 13.222620$ Days, $E = 131.072090$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	4.12	3.23	2.55	4.98	2.49	0.97	10.8	11.5	0.89	1.56	0.47	1.24	0.15	0.02



Stellar Parameters For KIC 002717158

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5931^{+161}_{-178}	$4.545^{+0.044}_{-0.187}$	$-0.280^{+0.300}_{-0.300}$	$0.863^{+0.231}_{-0.077}$	$0.953^{+0.109}_{-0.119}$	$2.087^{+0.472}_{-0.949}$
	+3%/-3%	+1%/-4%	+107%/-107%	+27%/-9%	+11%/-12%	+23%/-45%
Source	PHO1	KIC0	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 002717158-01 / KOI 3459.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-69 ± 16	$1.80^{+0.31}_{-0.26}$	1060^{+74}_{-51}	4249^{+253}_{-281}	132^{+54}_{-44}
Alt.	-71 ± 17	$1.55^{+0.29}_{-0.25}$	1054^{+71}_{-47}	4489^{+355}_{-327}	180^{+90}_{-63}

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 $A_{obs} \gg 1.0$

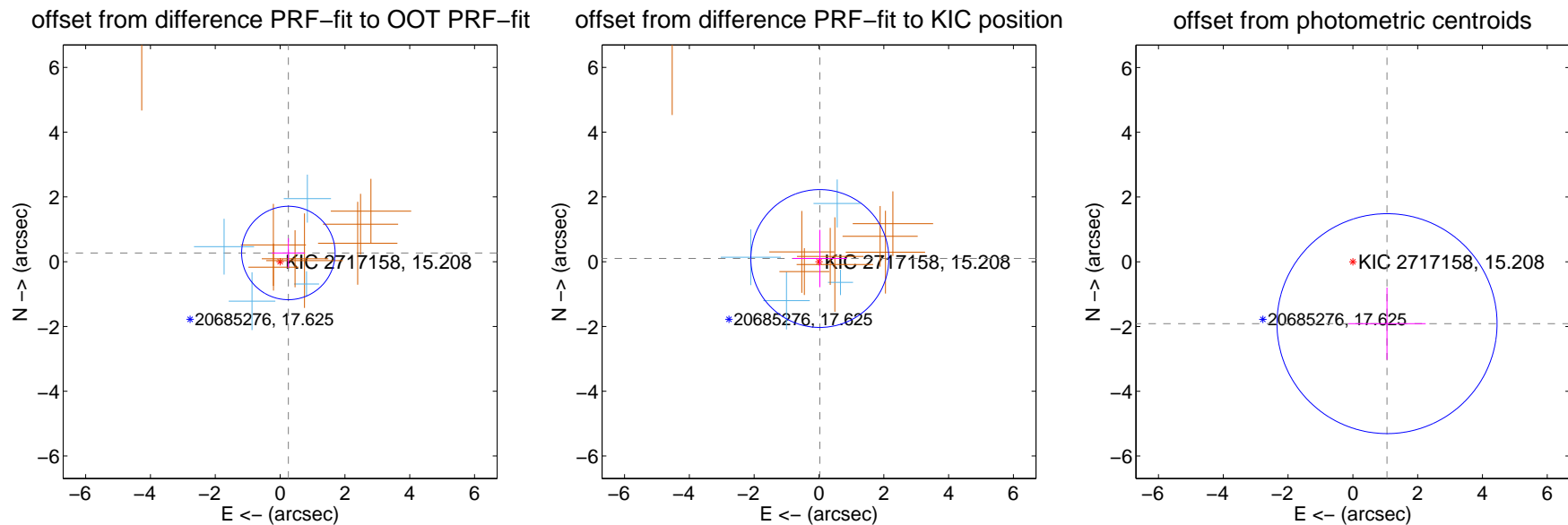
DV Centroid Data

Supplemental centroid analysis for 002717158-01. Kepler magnitude: 15.21. Transit SNR 12.06

There are 4 quarters with good PRF difference image offsets

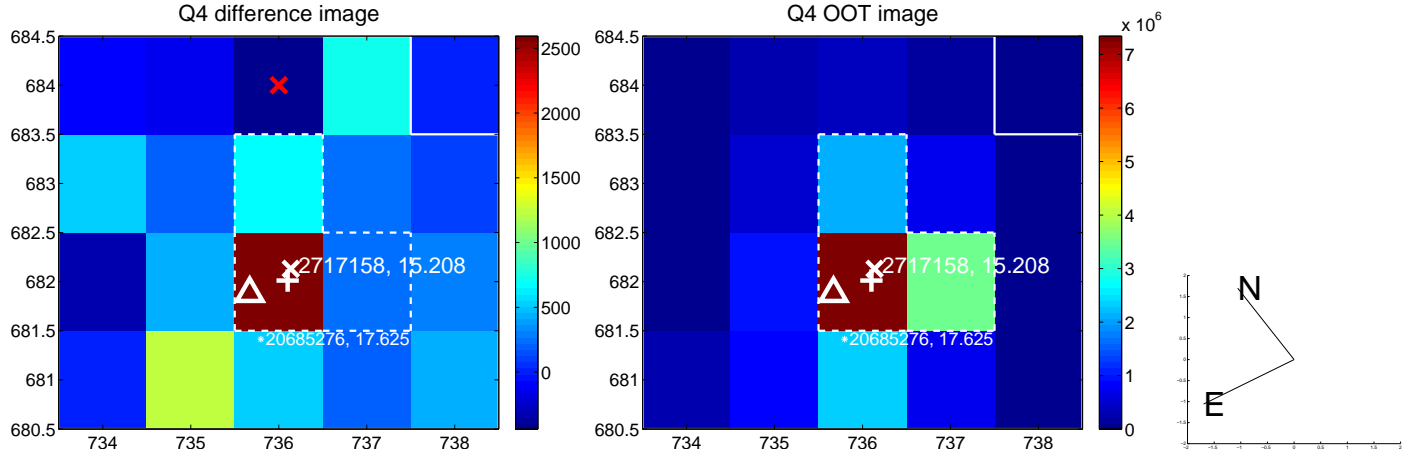
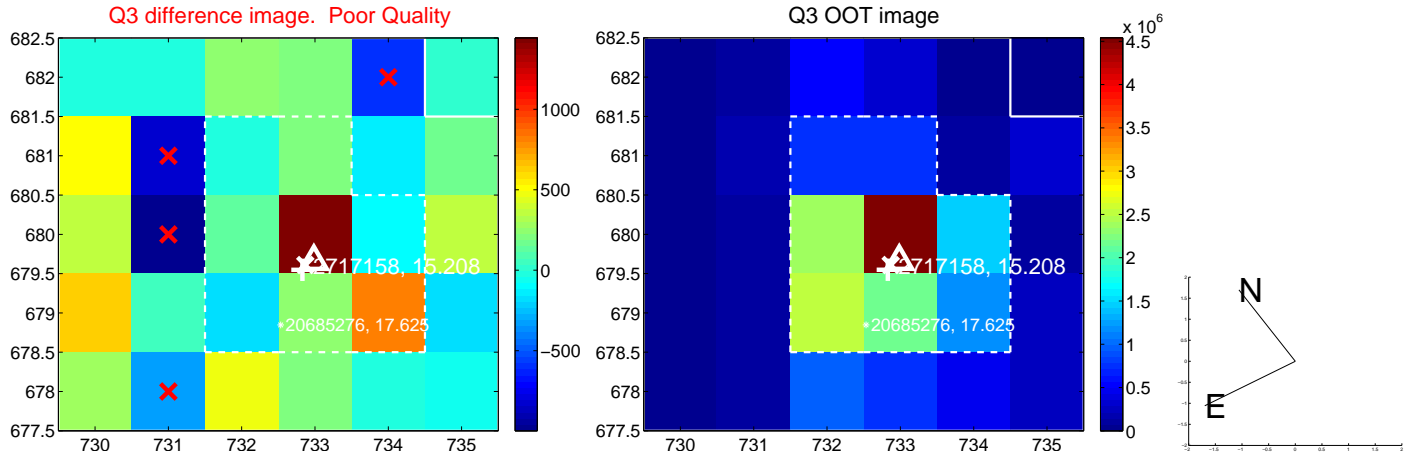
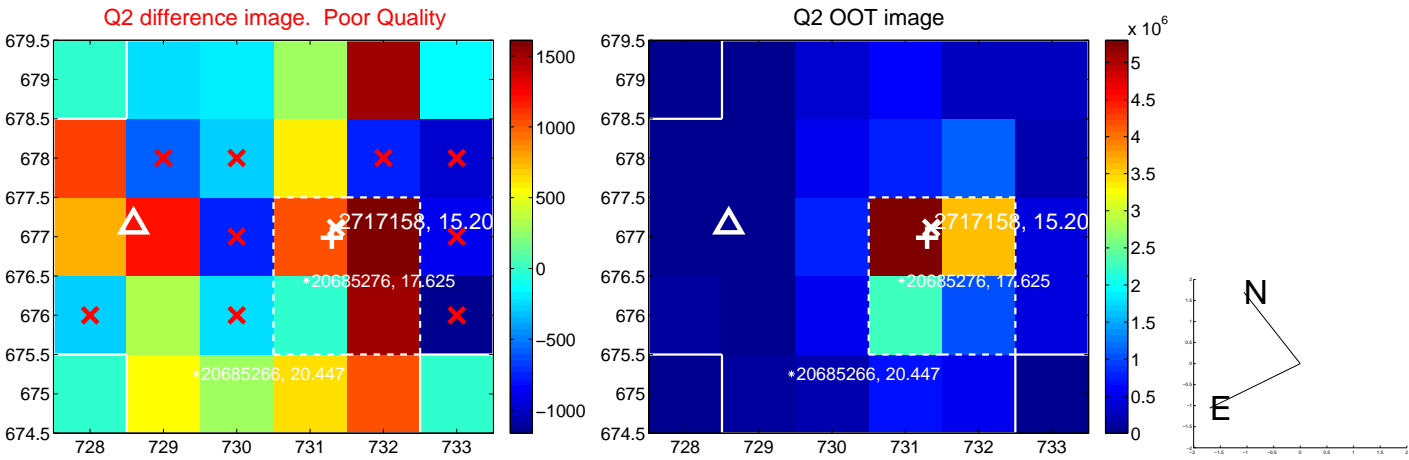
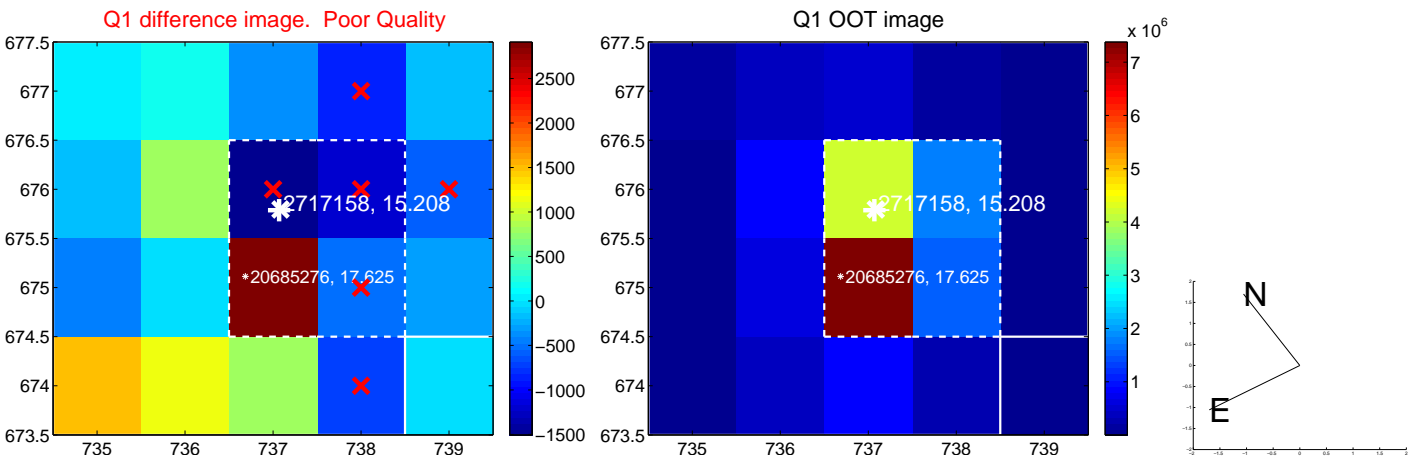
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.371 ± 0.481	0.77	-0.255 ± 0.510	0.269 ± 0.454
PRF-fit source offset from KIC position	0.102 ± 0.710	0.14	-0.026 ± 0.836	0.098 ± 0.885
photometric centroid source offset	2.18 ± 1.13	1.93	-1.05 ± 1.19	-1.91 ± 1.11

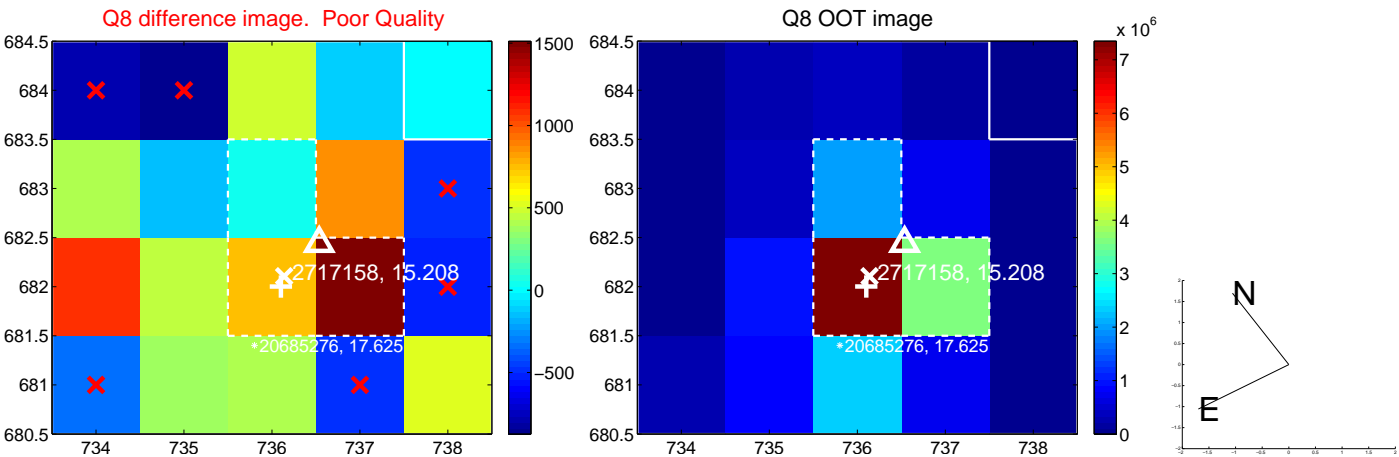
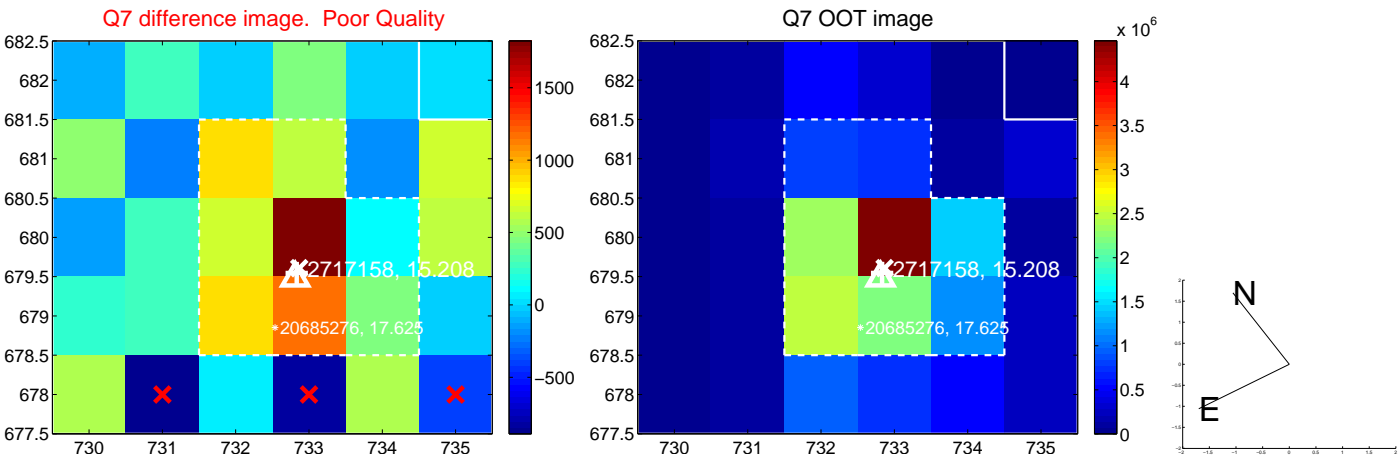
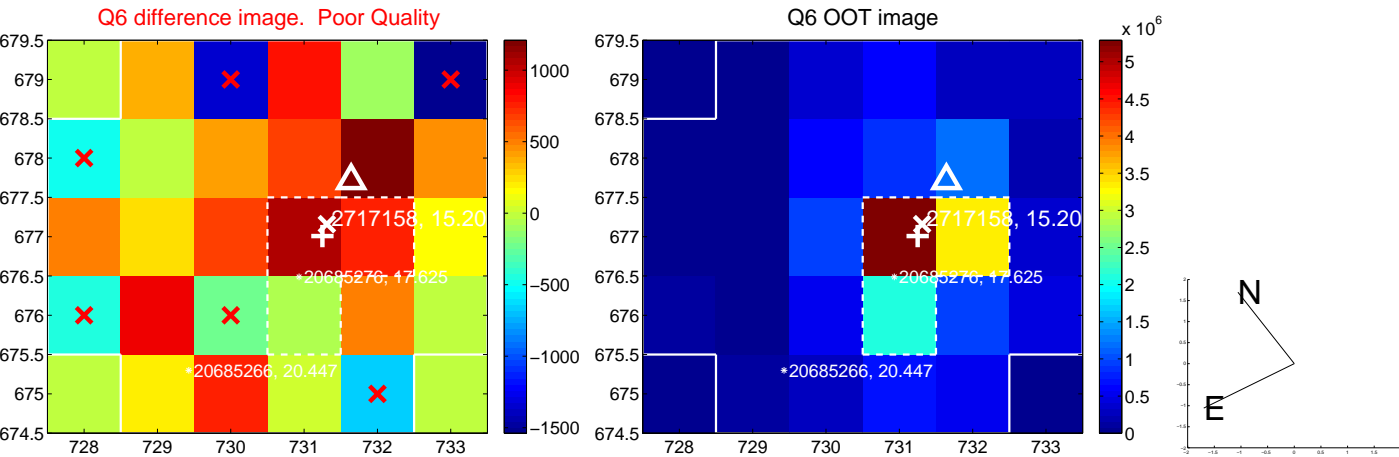
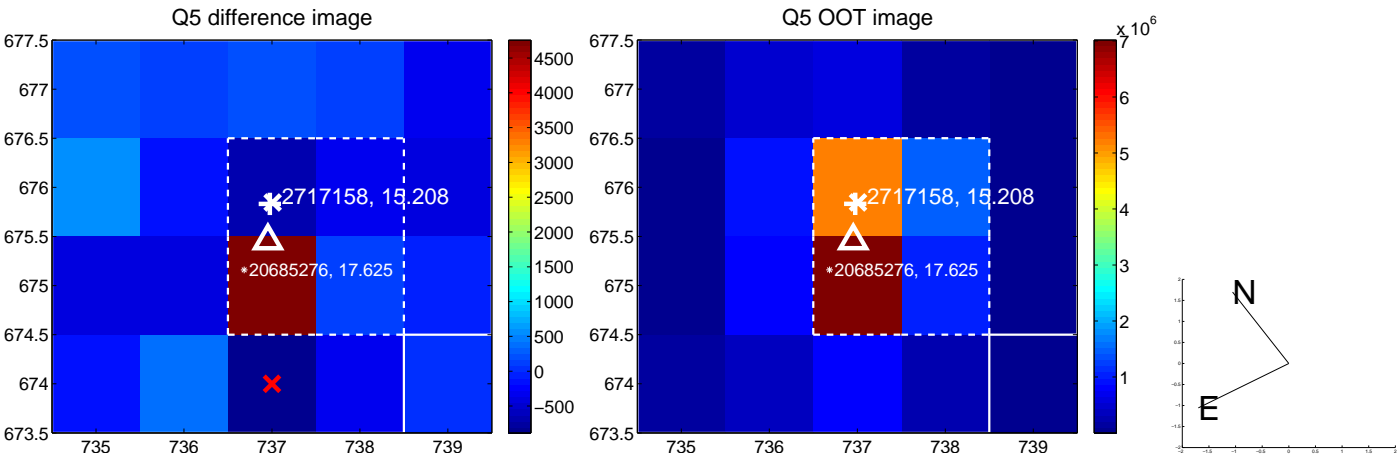


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

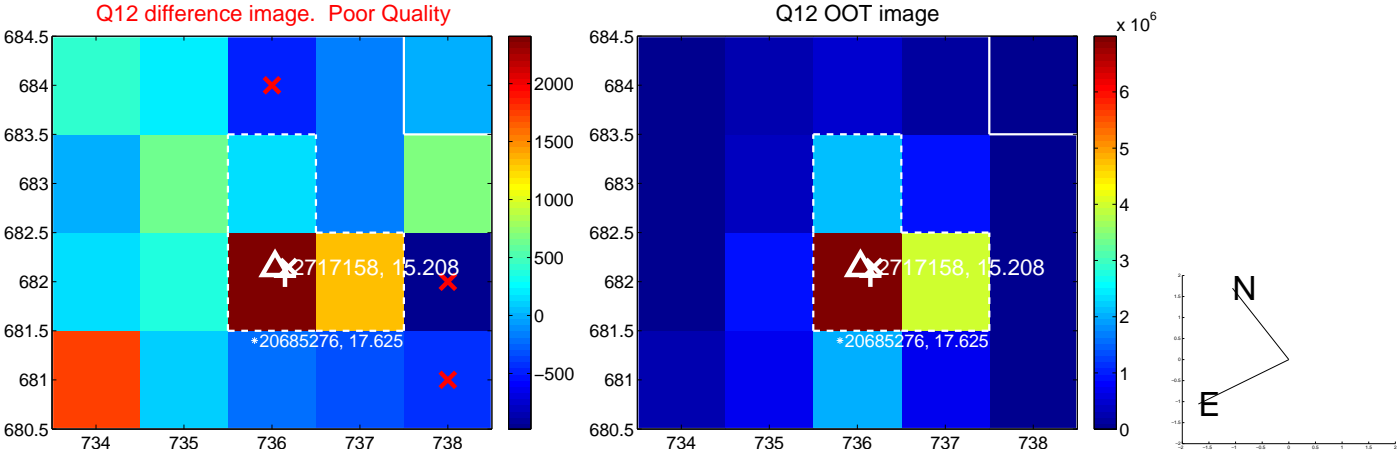
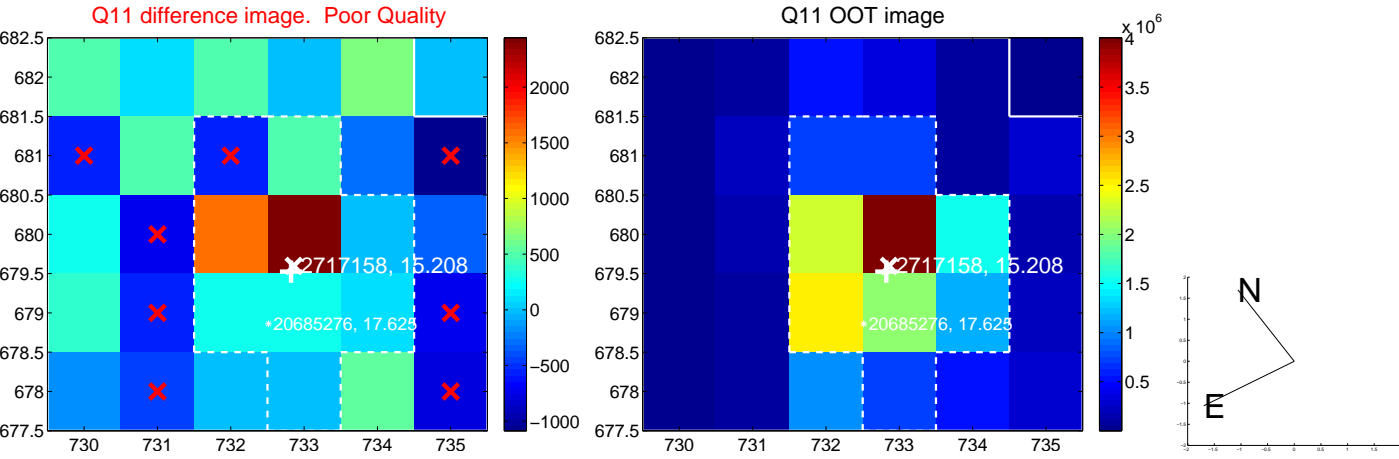
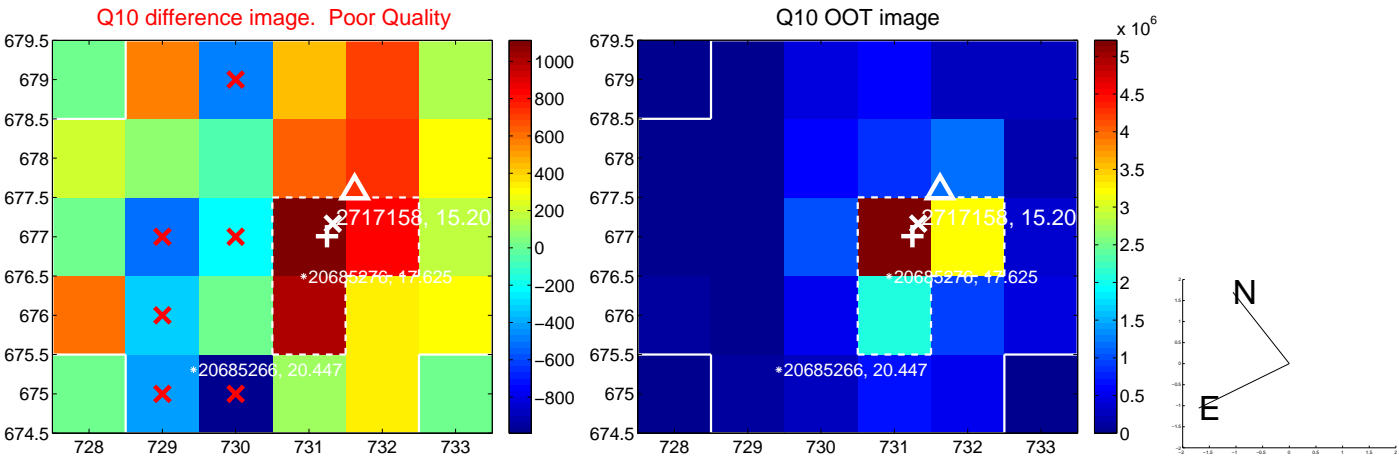
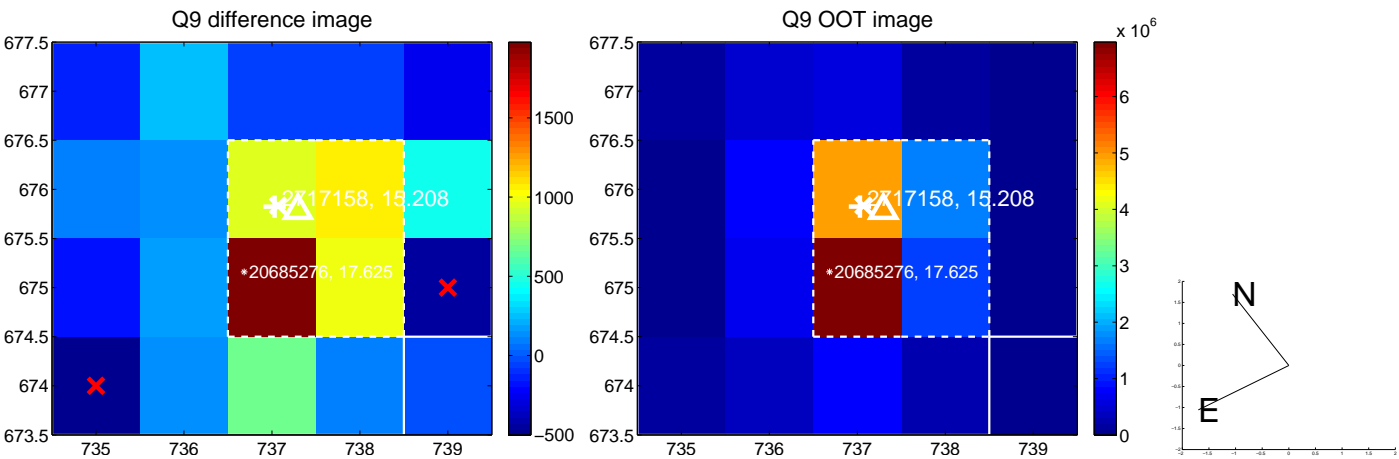
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



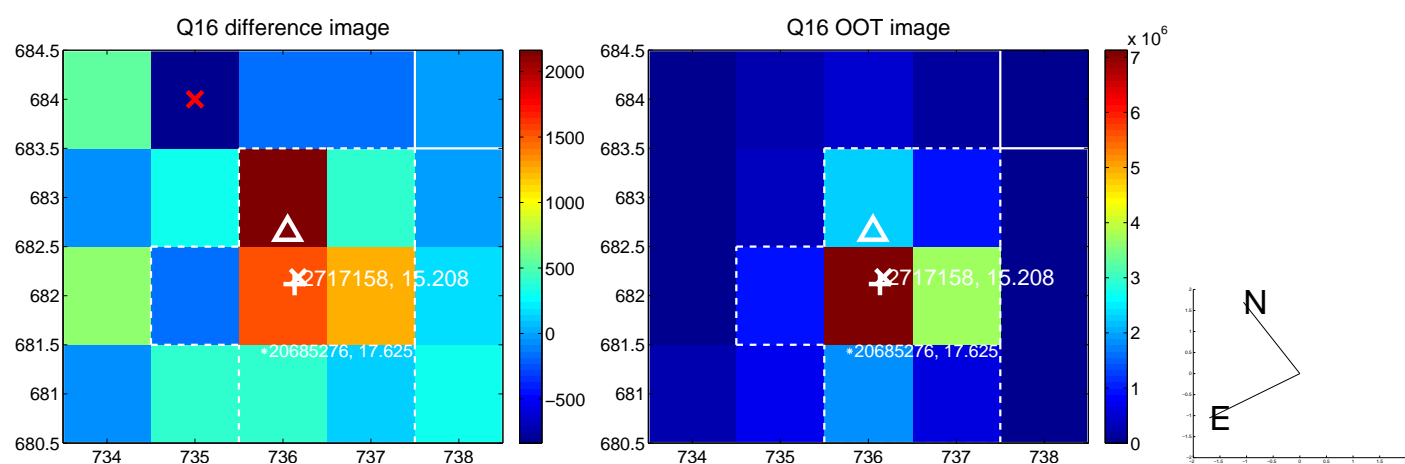
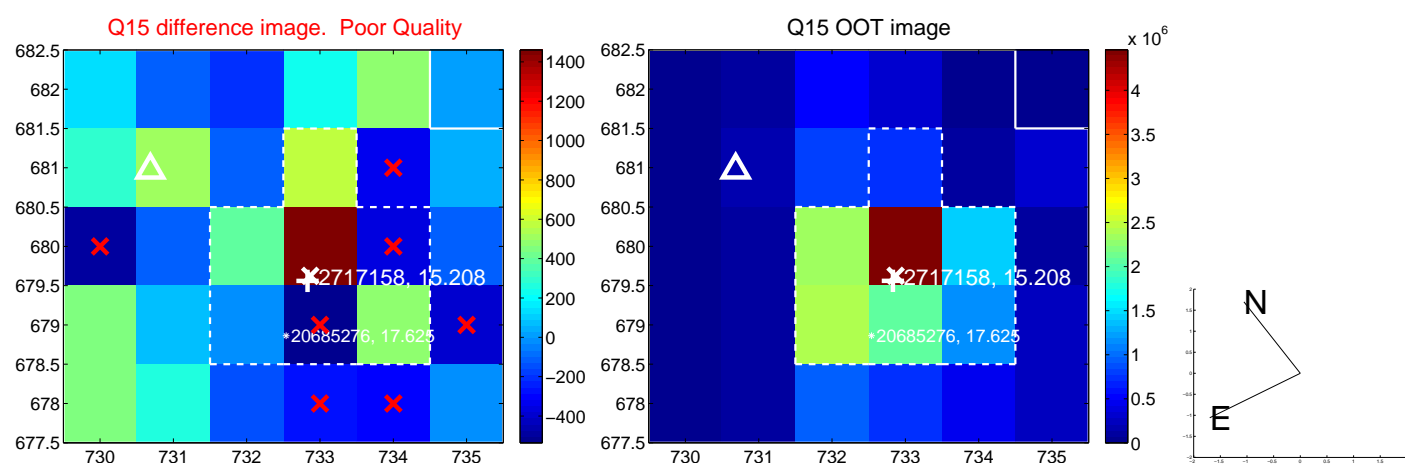
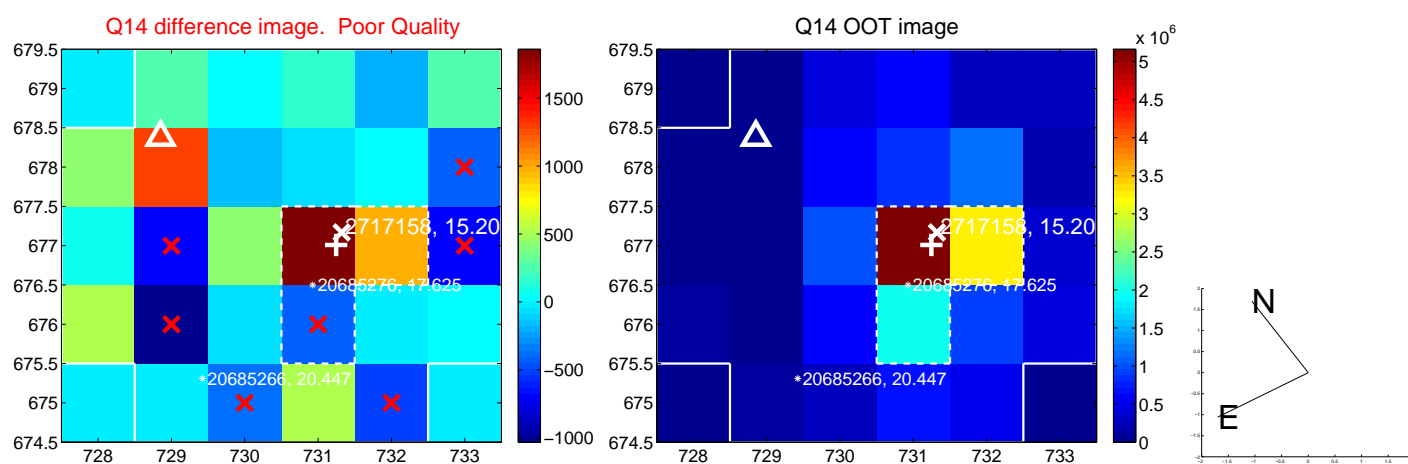
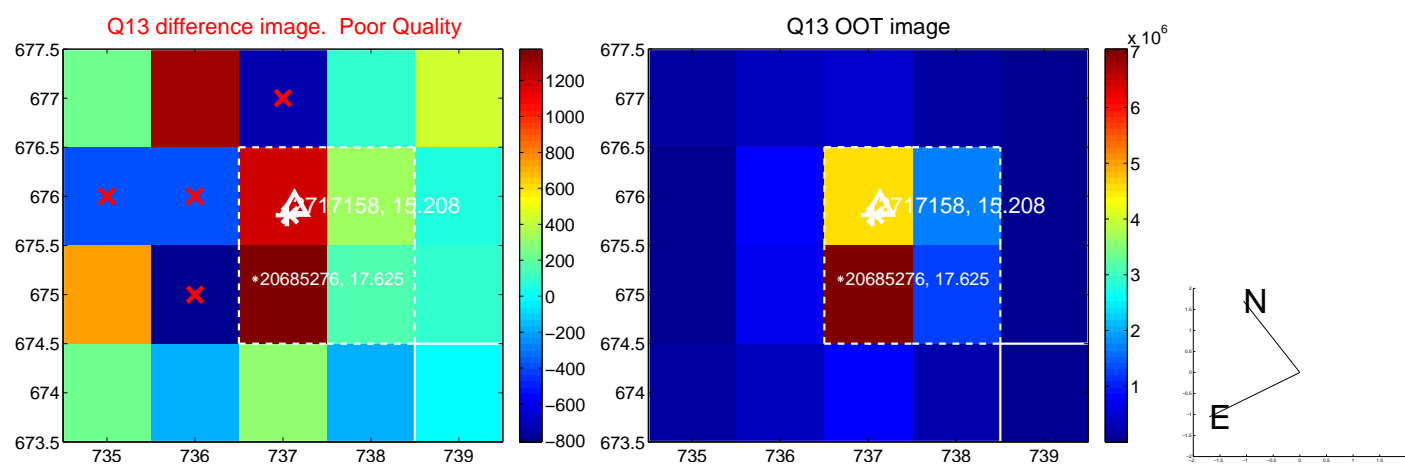
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



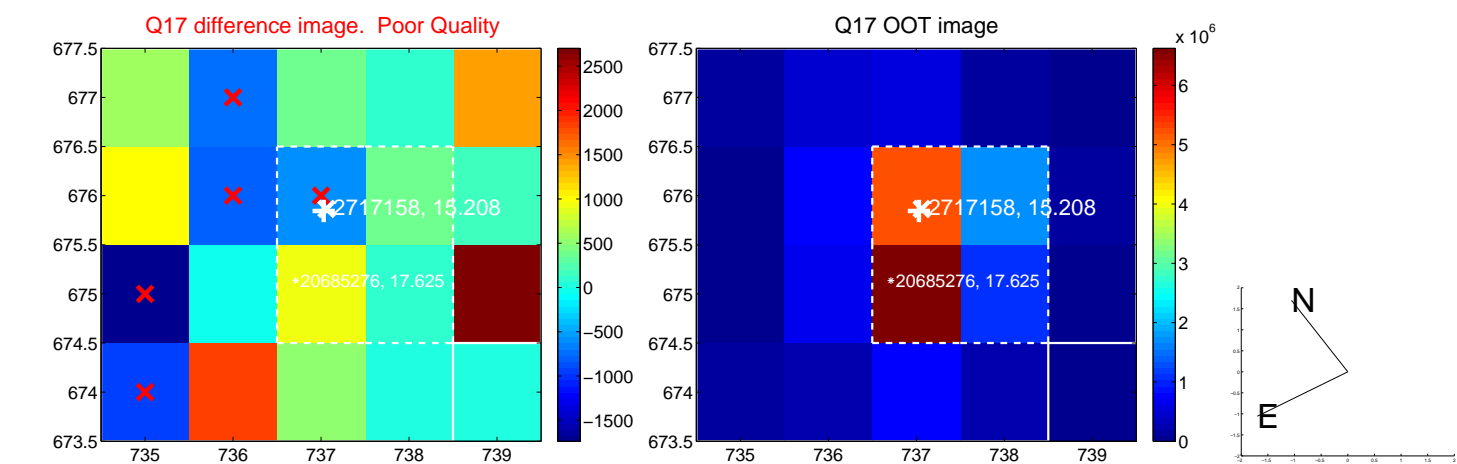
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



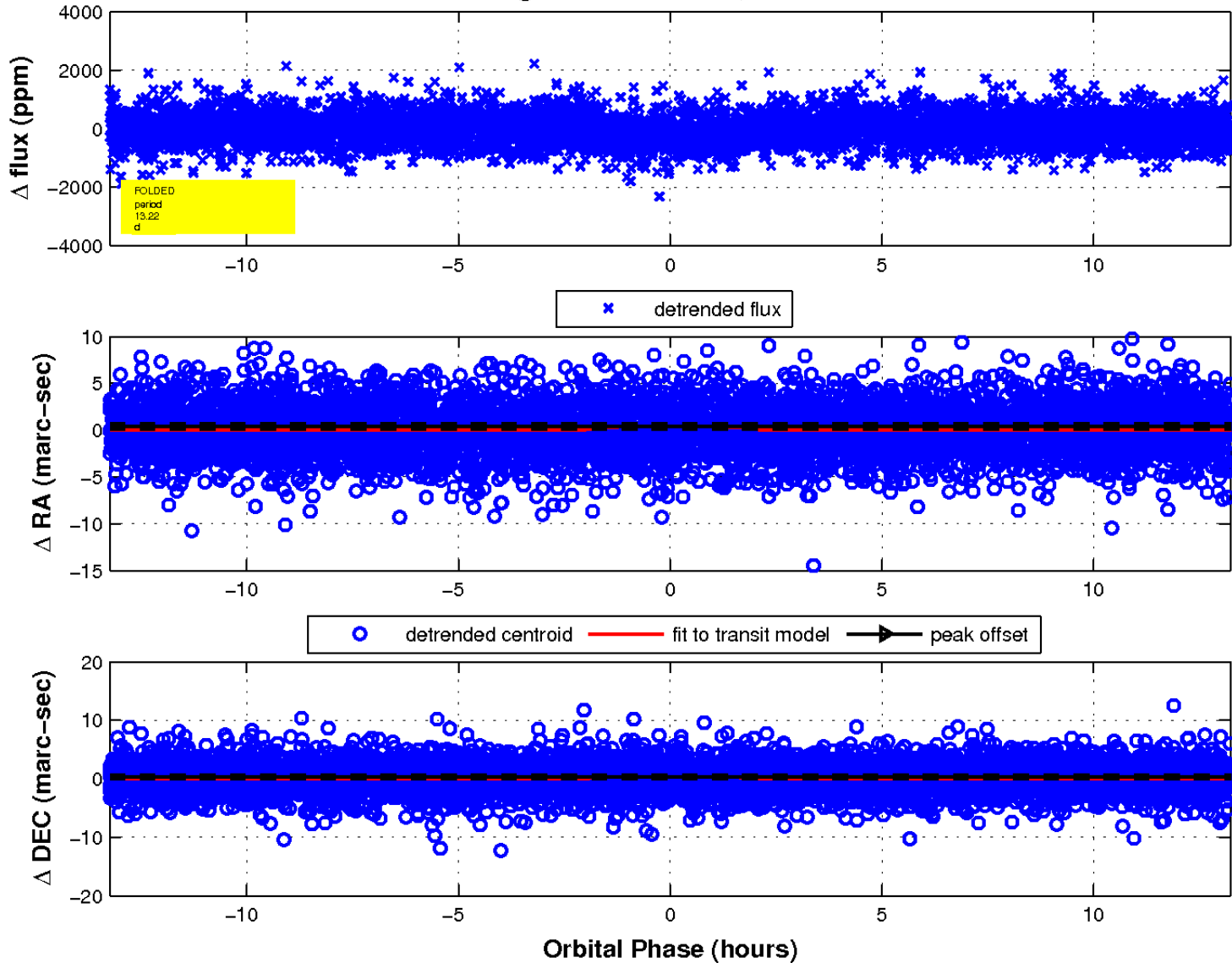
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

