

KIC 008233802

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})
008233802-01	OBS	3302.01	69.378430	154.197362	549.2	3.963	15.7	16.7	0.87	5806	2.25	7.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008233802-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET

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.

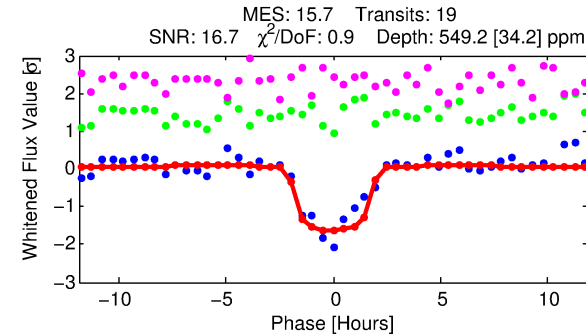
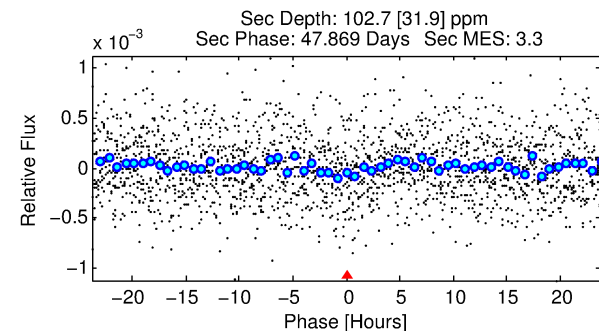
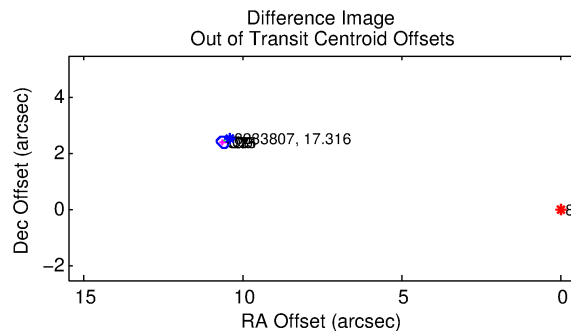
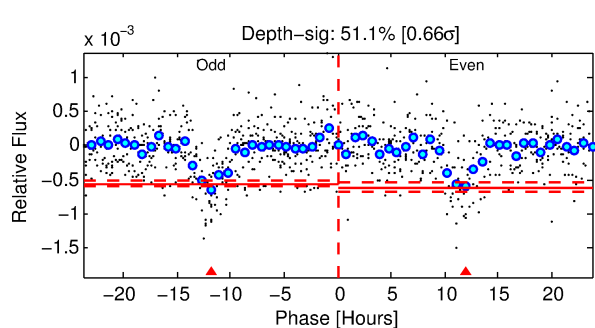
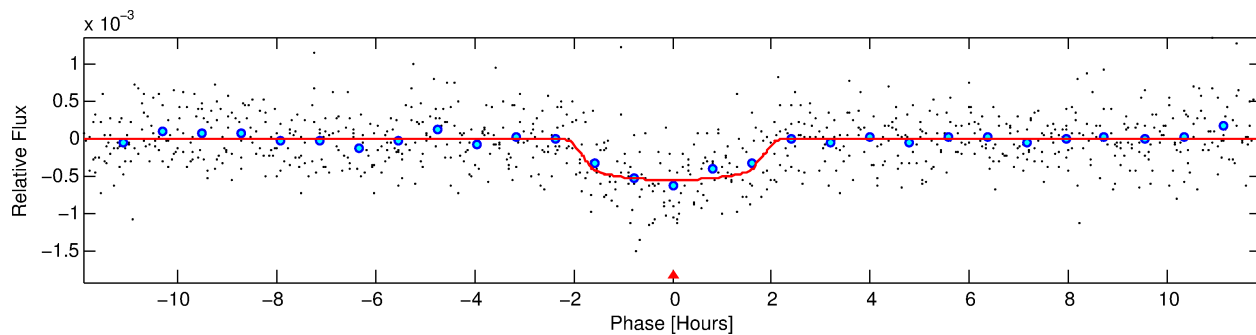
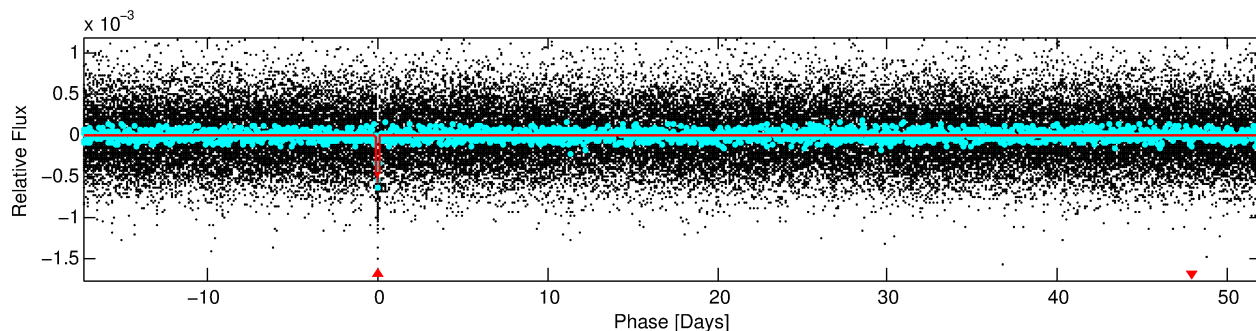
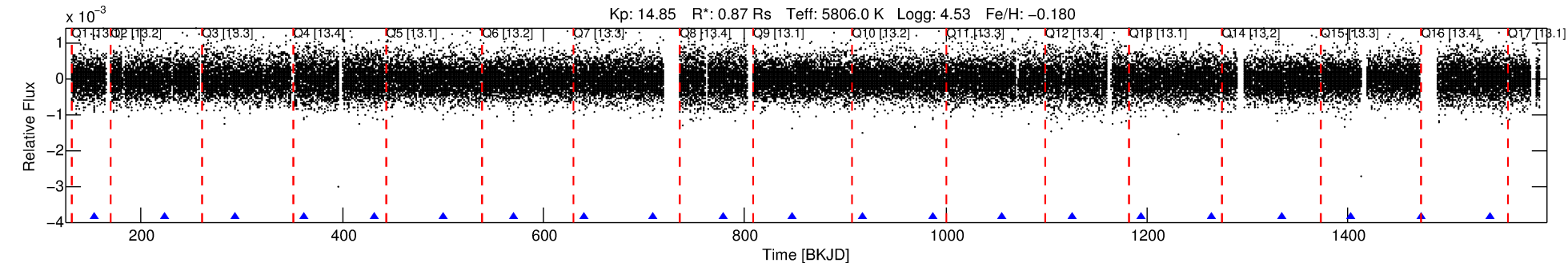
Ephemeris Match Information For 008233802-01

No Significant Match Found

DV One-Page Summary

KIC: 8233802 Candidate: 1 of 1 Period: 69.378 d
KOI: K03302.01 Corr: 0.914

Kp: 14.85 R*: 0.87 Rs Teff: 5806.0 K Logg: 4.53 Fe/H: -0.180



DV Fit Results:

Period = 69.37843 [0.00047] d
Epoch = 154.1974 [0.0055] BKJD
Rp/R* = 0.0236 [0.0105]
a/R* = 89.56 [183.06]
b = 0.77 [1.07]
Seff = 7.41 [2.83]
Teq = 421 [40] K
Rp = 2.25 [1.19] Re
a = 0.3240 [0.0797] AU
Ag = 1175.43 [1187.08] [0.99σ]
Teff = 3809 [905] K [3.74σ]

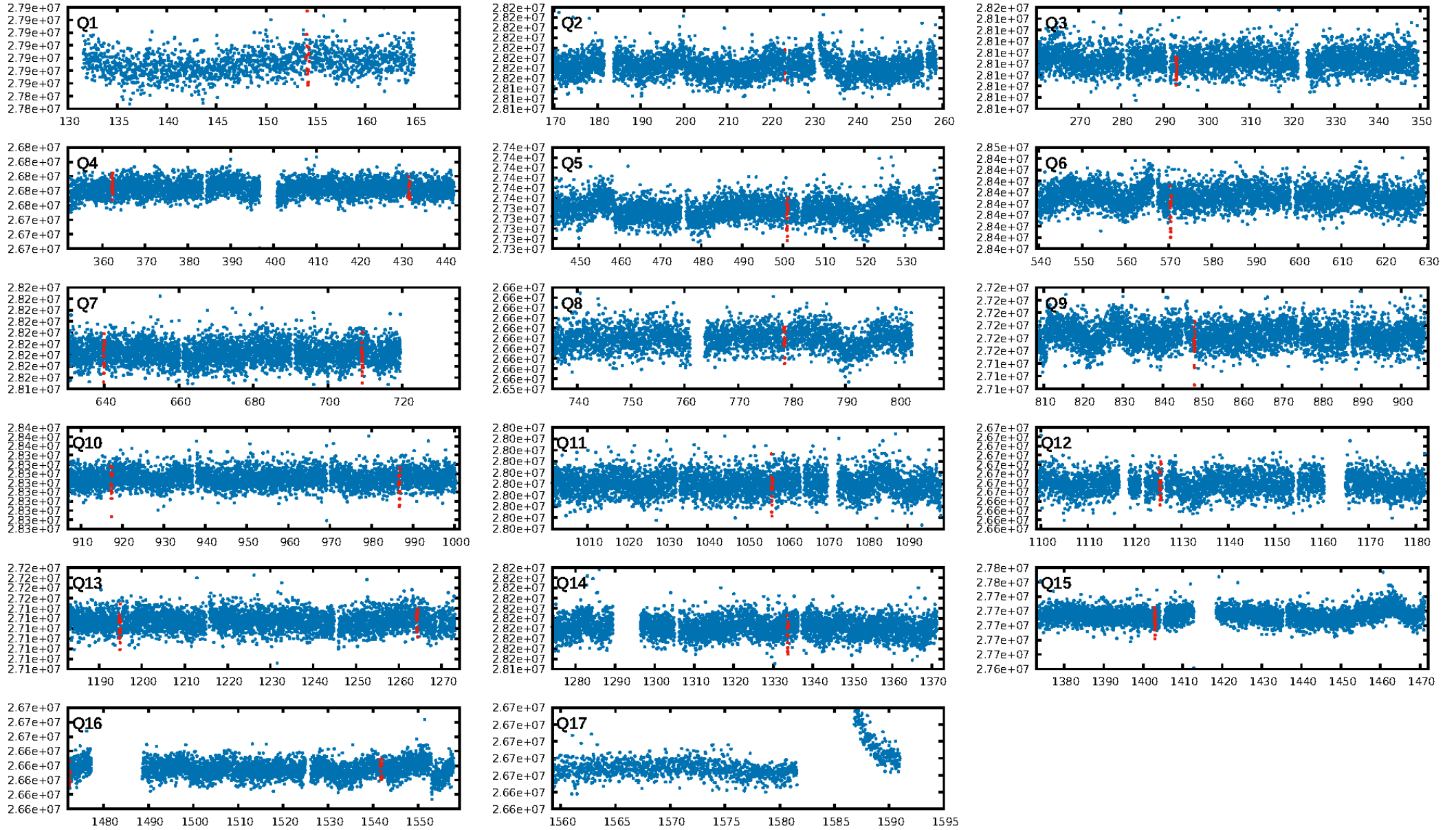
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 5.7%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 8.57e-57
RollingBand-fgt: 1.00 [18/18]
GhostDiagnostic-chr: -0.377
Centroid-sig: 0.0%
Centroid-so: 54.846 arcsec [73.55σ]
OotOffset-rm: 10.890 arcsec [155.52σ]
KicOffset-rm: 10.854 arcsec [149.63σ]
OotOffset-st: 0/4/0/1 [5]
KicOffset-st: 0/4/0/1 [5]
DiffImageQuality-fgm: 1.00 [5/5]
DiffImageOverlap-fno: 1.00 [15/15]

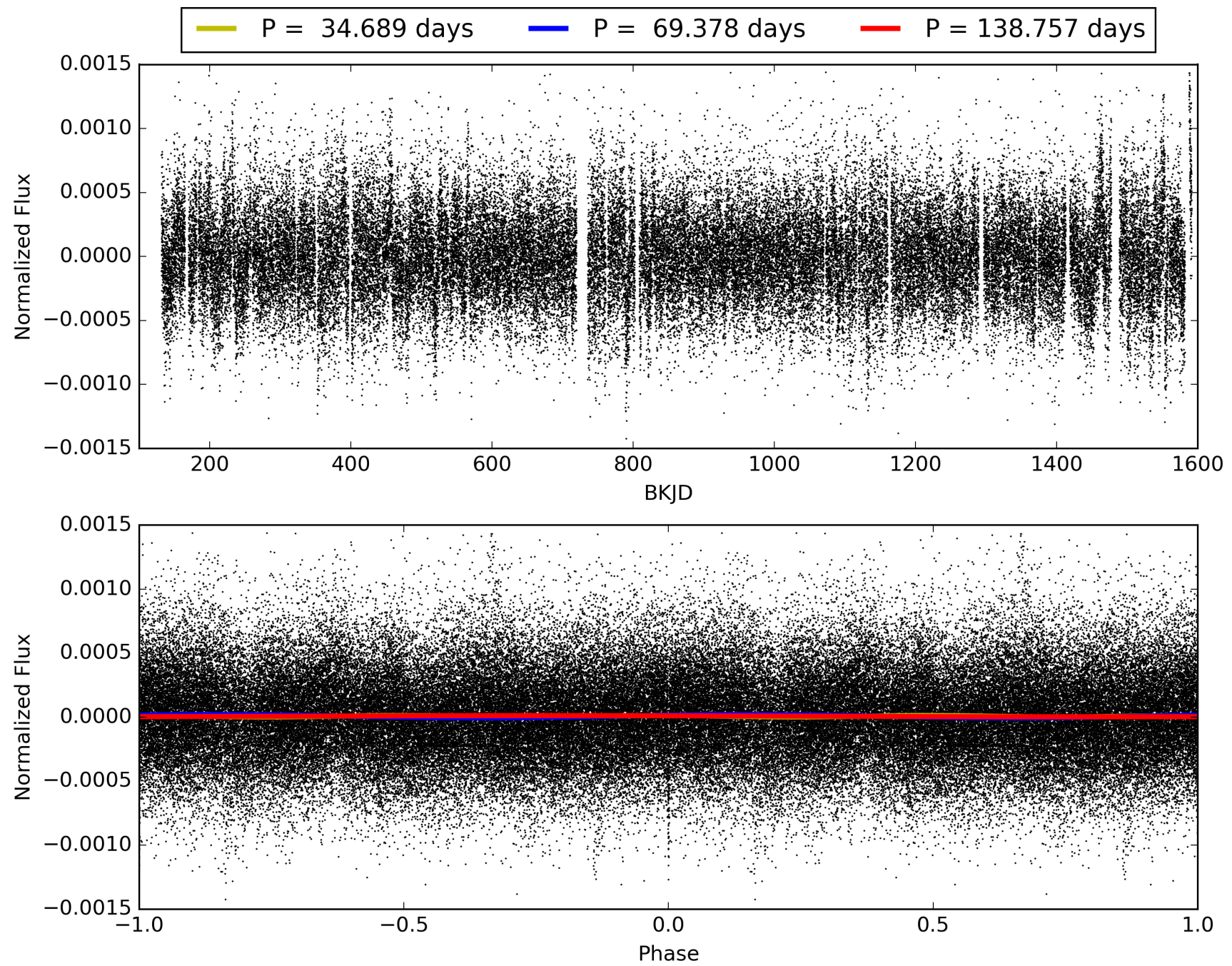
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:21:32 Z

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

TCE 008233802-01, PDC Light Curves

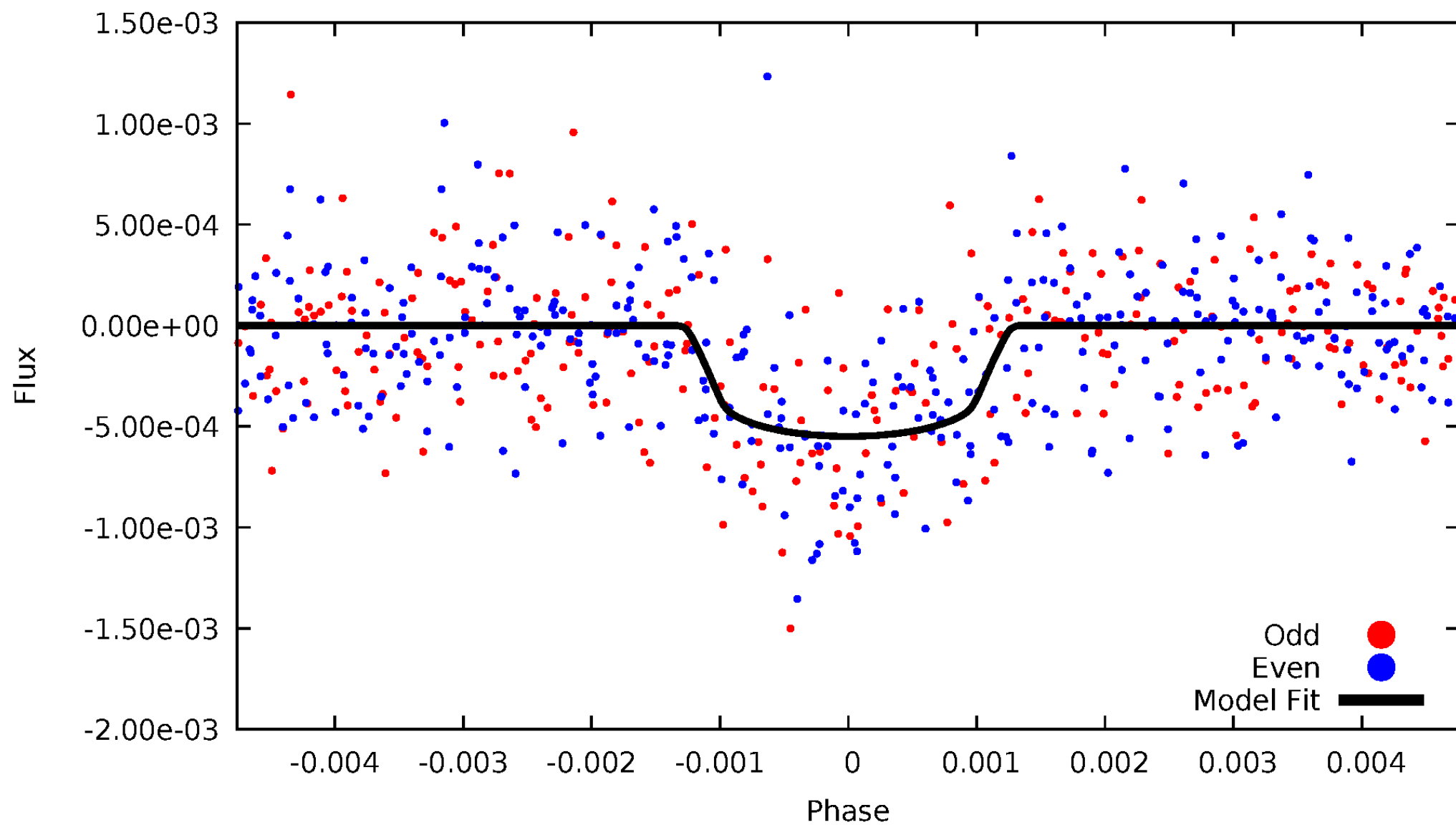


TCE 008233802-01



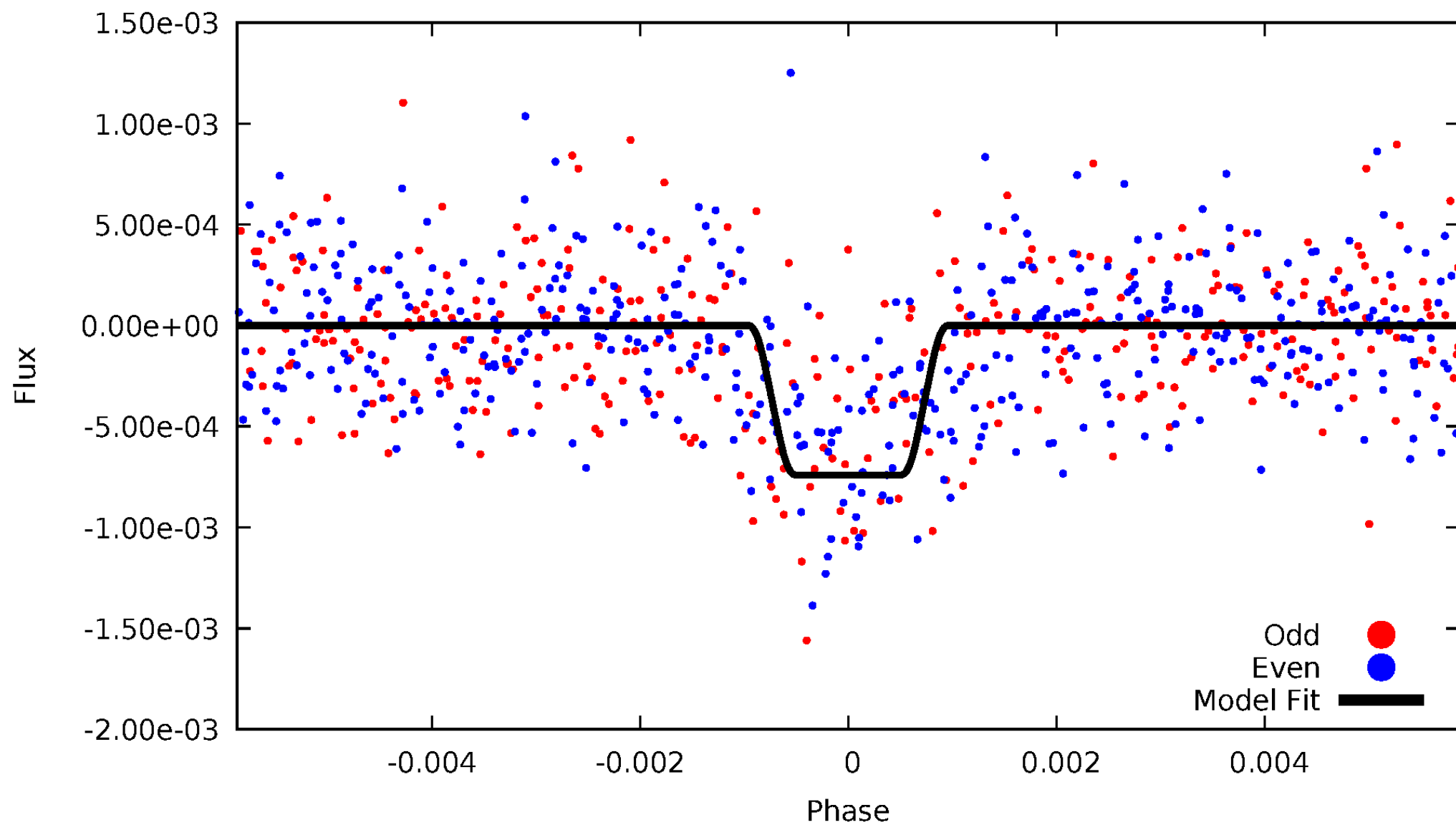
DV Odd/Even

TCE 008233802-01



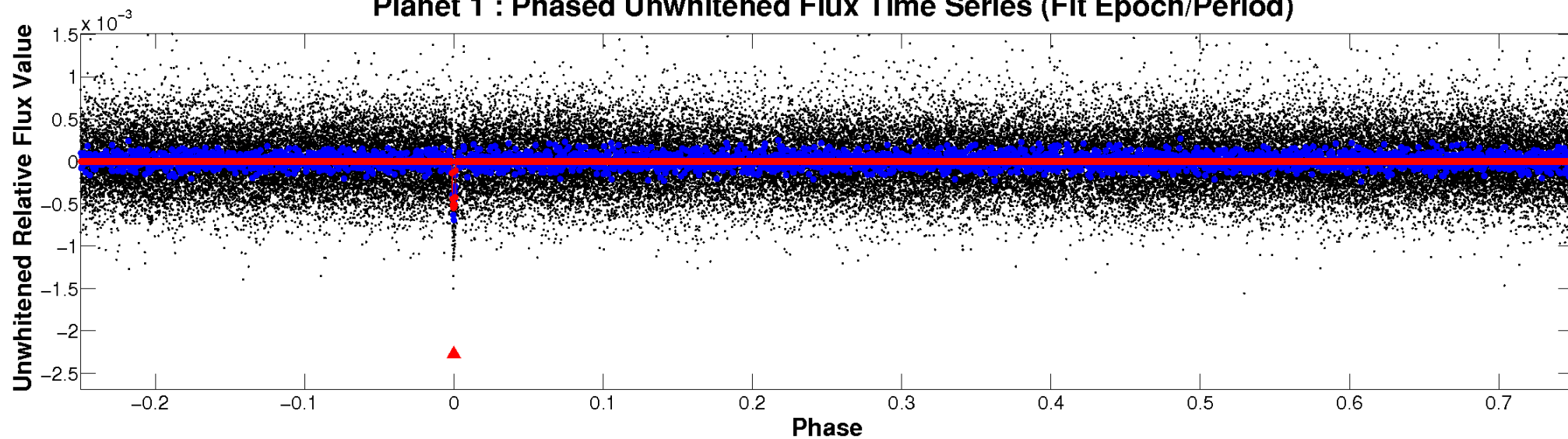
ALT Odd/Even

TCE 008233802-01

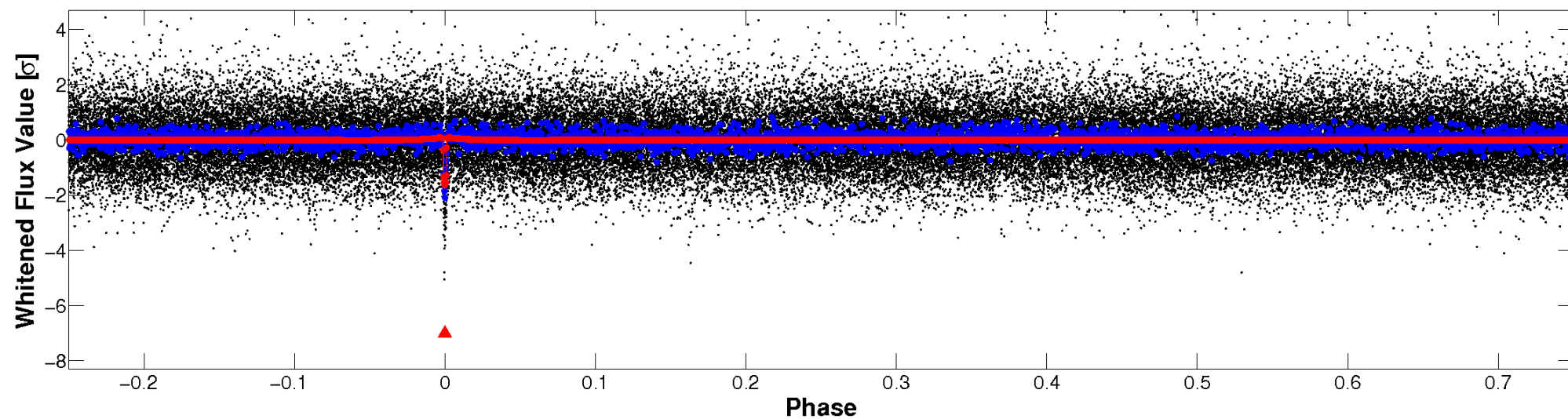


Non-Whitened Vs. Whitened Light Curve

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

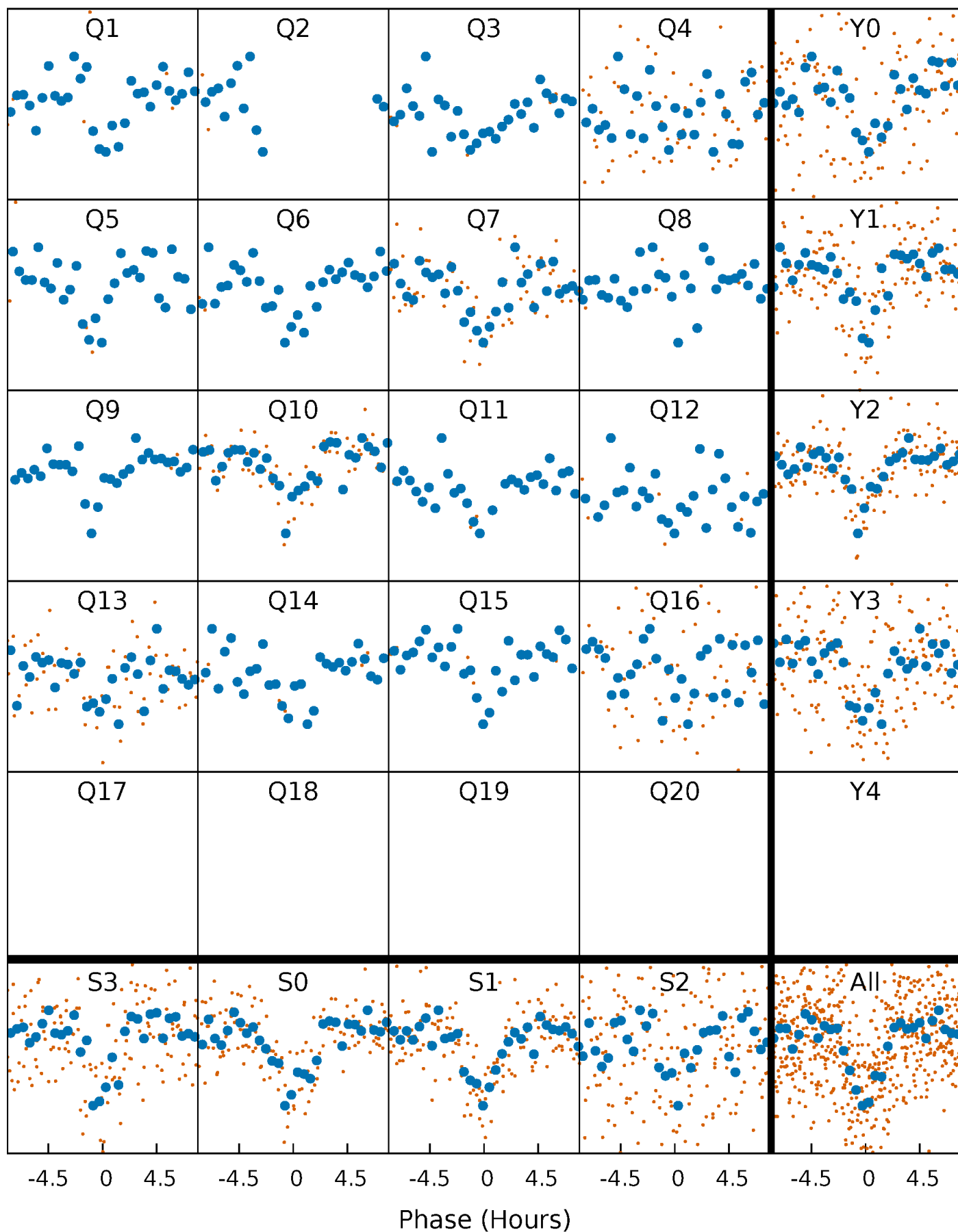


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



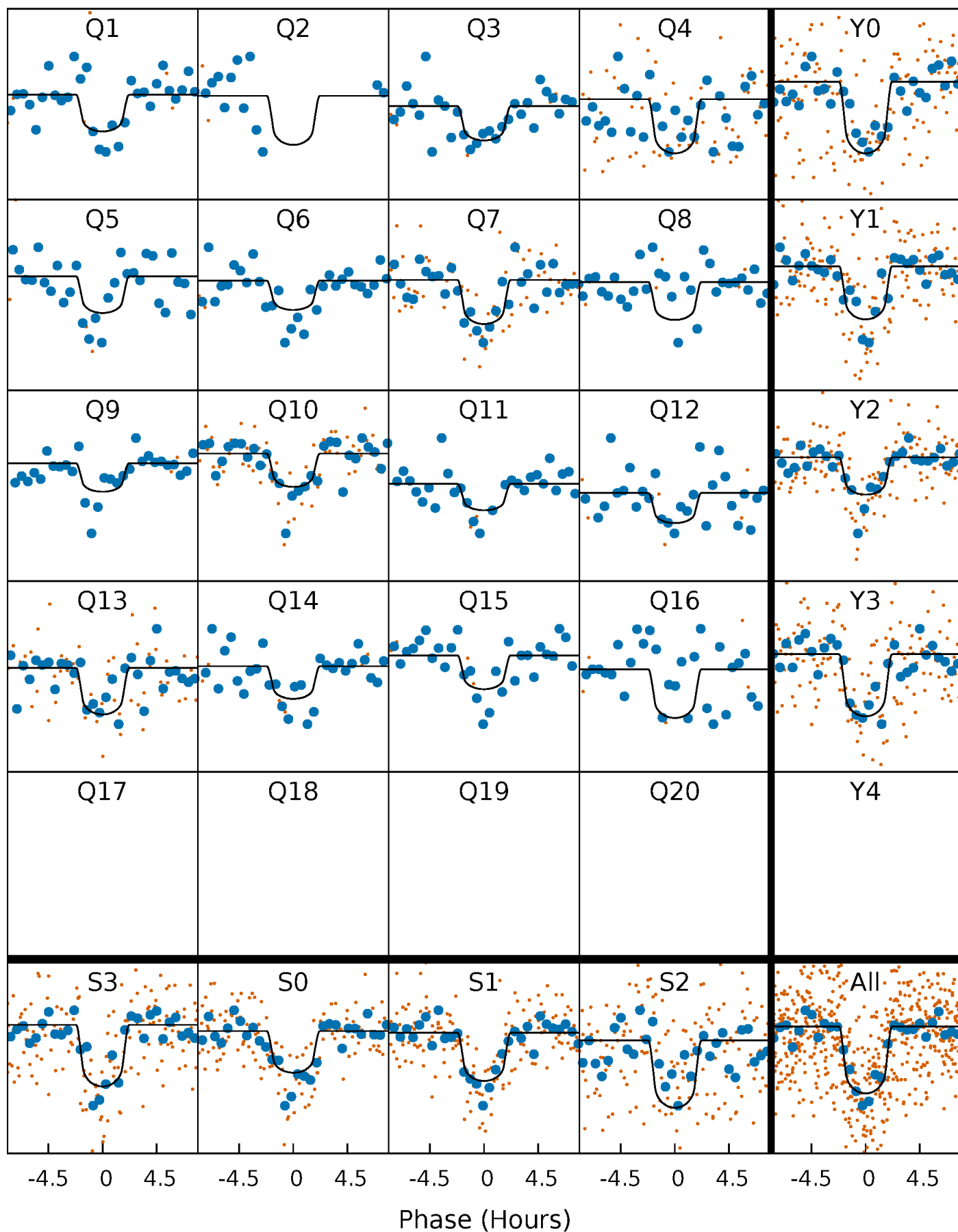
PDC Quarter-Phased Transit Curves

TCE 008233802-01 P= 69.378430 Days $T_0=154.197362$ (BKJD)



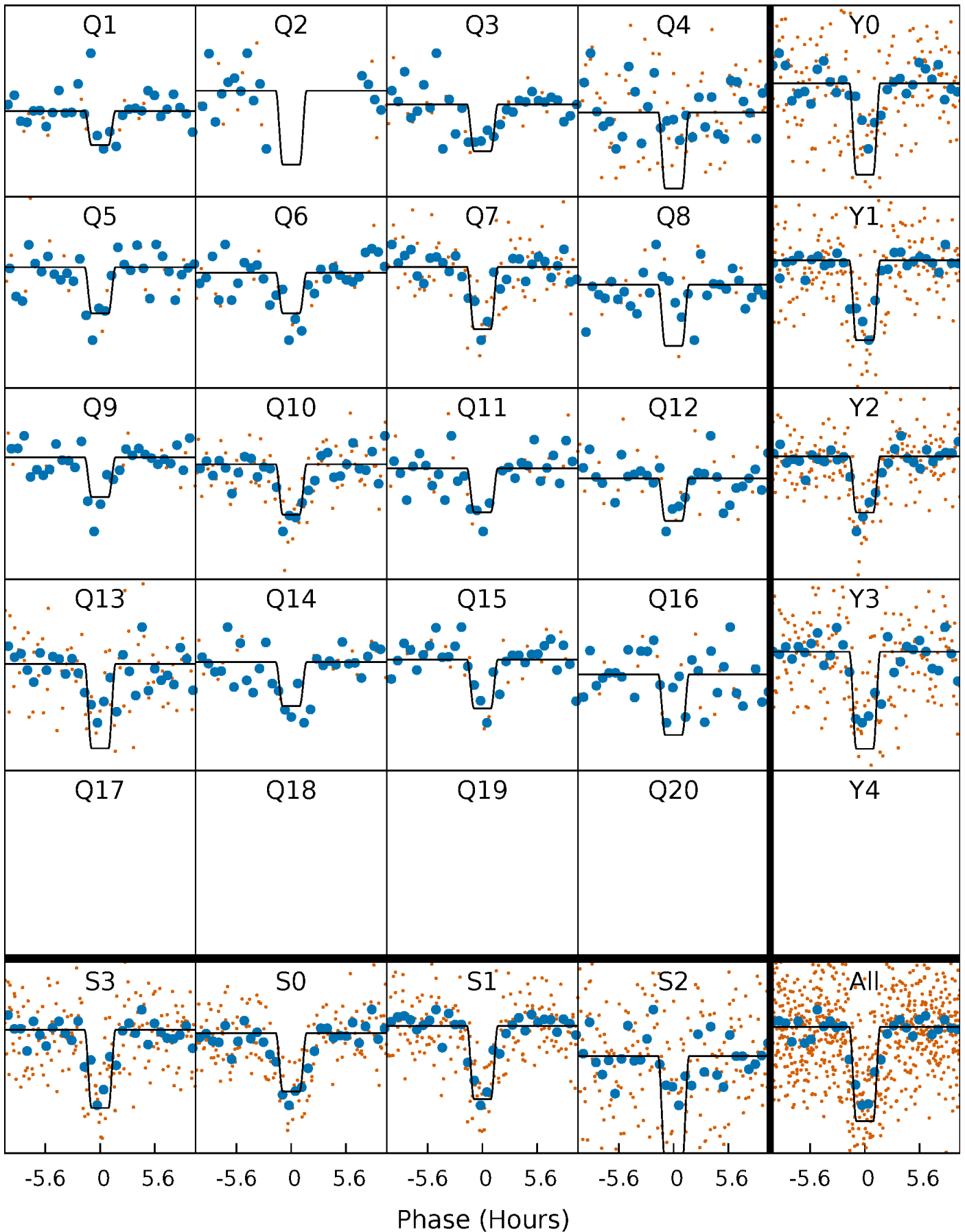
DV Quarter-Phased Transit Curves

TCE 008233802-01 P= 69.378430 Days $T_0=154.197362$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

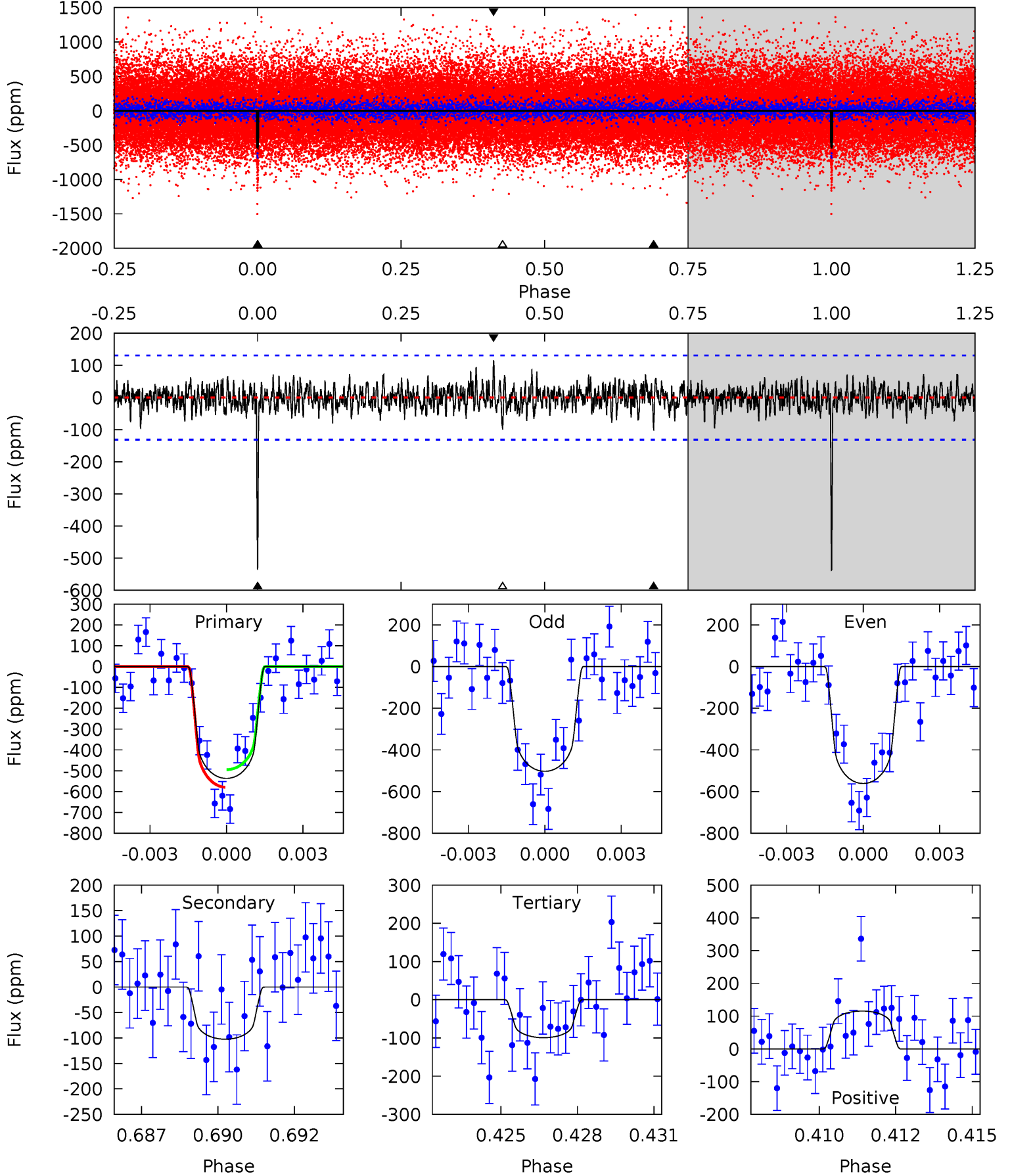
TCE 008233802-01 P= 69.378592 Days $T_0=154.191983$ (BKJD)



DV Model-Shift Uniqueness Test

008233802-01, P = 69.378430 Days, E = 84.818932 Days

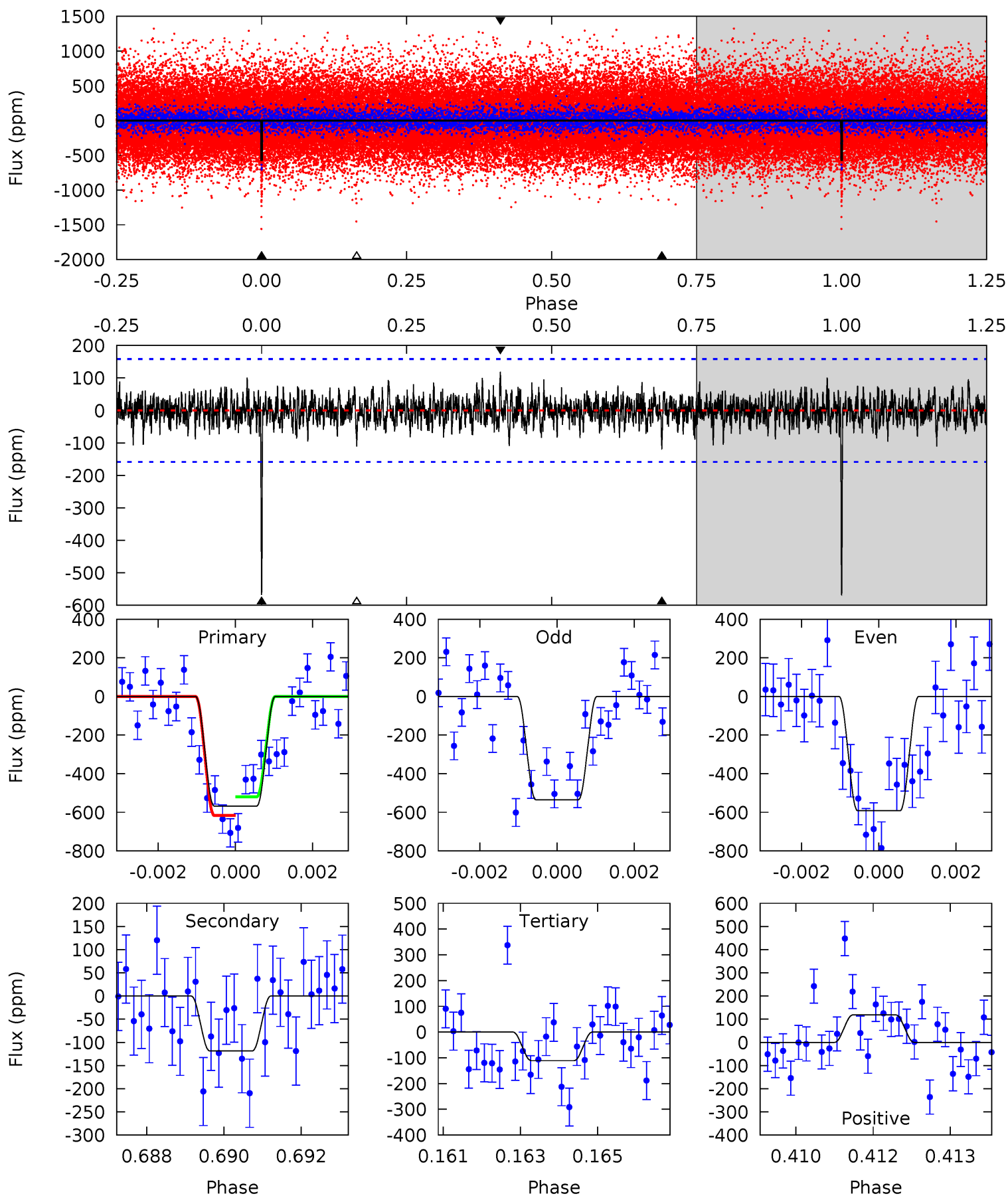
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.6	4.12	3.99	4.65	5.28	3.01	1.14	17.6	16.9	0.13	-0.53	1.16	0.90	0.18	1.70



Alt Model-Shift Uniqueness Test

008233802-01, P = 69.378592 Days, E = 84.813391 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.2	4.00	3.74	4.01	5.34	3.11	1.07	15.4	15.1	0.25	-0.01	0.94	0.96	0.17	1.62



Stellar Parameters For KIC 008233802

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5806^{+156}_{-174}	$4.529^{+0.050}_{-0.200}$	$-0.180^{+0.300}_{-0.300}$	$0.874^{+0.252}_{-0.084}$	$0.943^{+0.110}_{-0.110}$	$1.987^{+0.405}_{-0.999}$
	+3%/-3%	+1%/-4%	+167%/-167%	+29%/-10%	+12%/-12%	+20%/-50%
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 008233802-01 / KOI 3302.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-102 ± 25	$2.40^{+1.02}_{-1.01}$	599^{+38}_{-27}	4073^{+999}_{-536}	1027^{+2174}_{-565}
Alt.	-118 ± 30	$2.70^{+1.11}_{-1.02}$	600^{+41}_{-28}	4000^{+791}_{-455}	903^{+1563}_{-471}

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 $A_{obs} \gg 1.0$

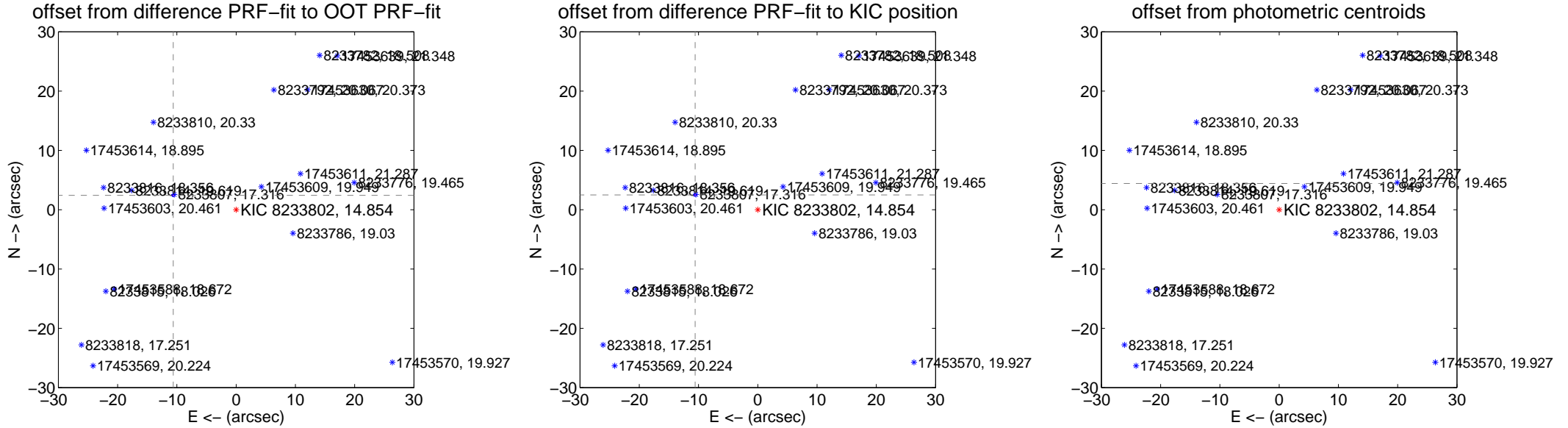
DV Centroid Data

Supplemental centroid analysis for 008233802-01. Kepler magnitude: 14.85. Transit SNR 16.69

There are 5 quarters with good PRF difference image offsets

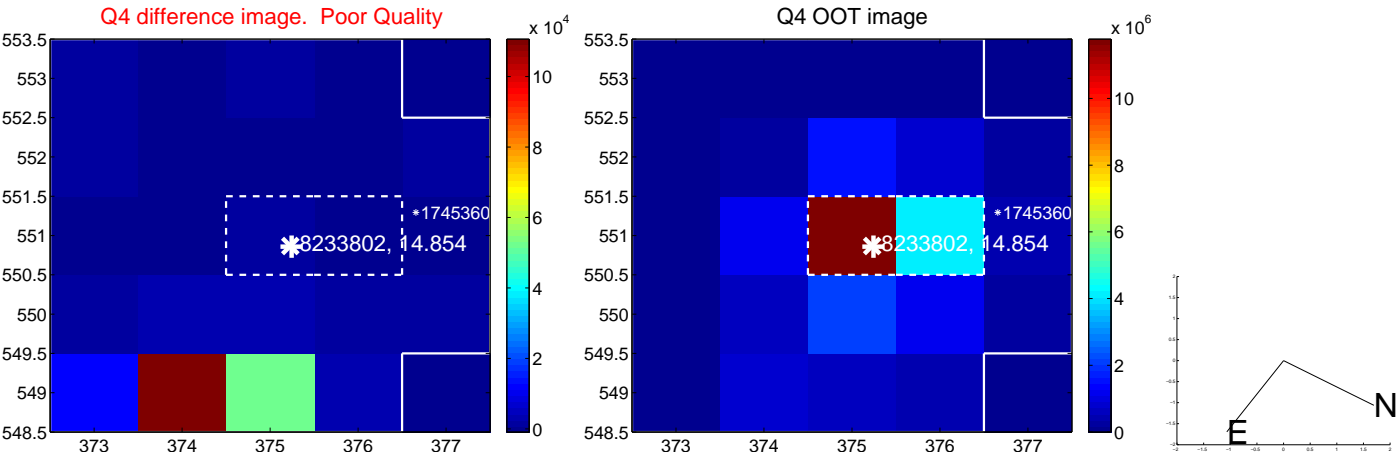
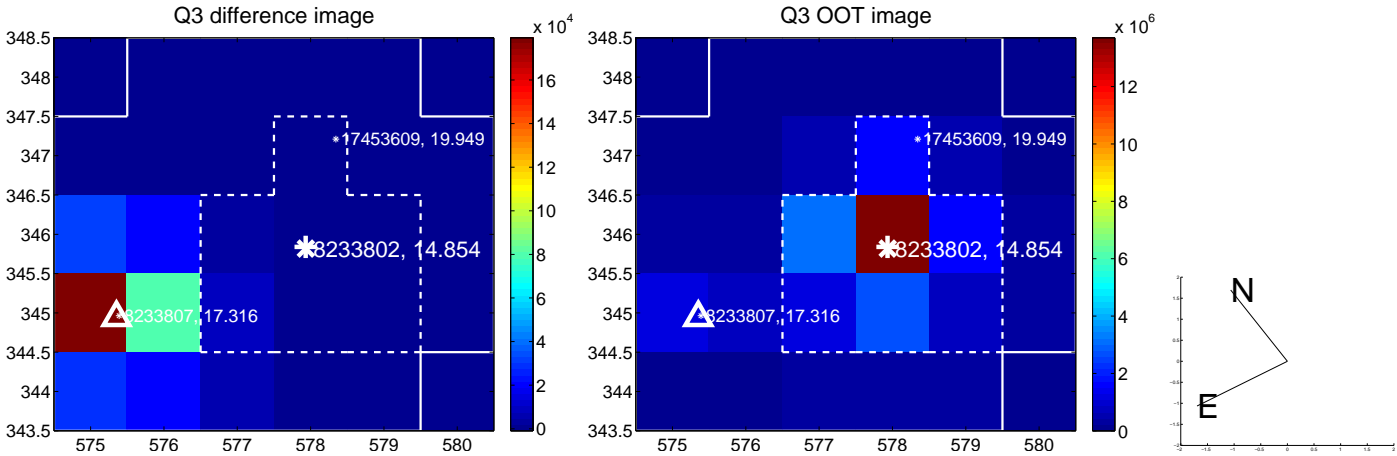
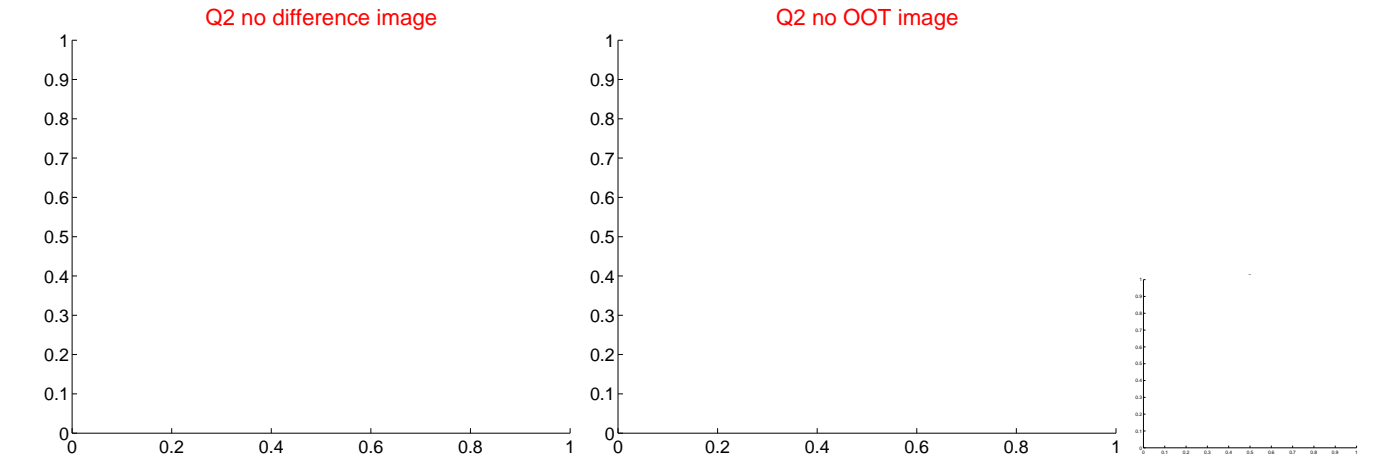
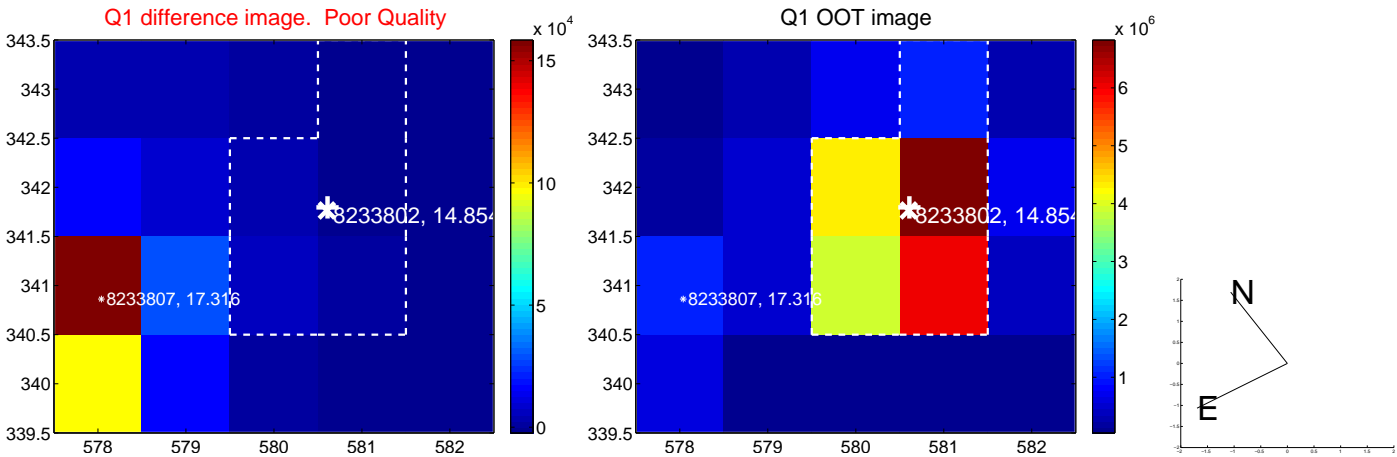
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	10.890 \pm 0.070	155.52	10.618 \pm 0.070	2.418 \pm 0.067
PRF-fit source offset from KIC position	10.854 \pm 0.073	149.63	10.565 \pm 0.072	2.488 \pm 0.068
photometric centroid source offset	54.85 \pm 0.75	73.55	54.67 \pm 0.75	4.43 \pm 0.80

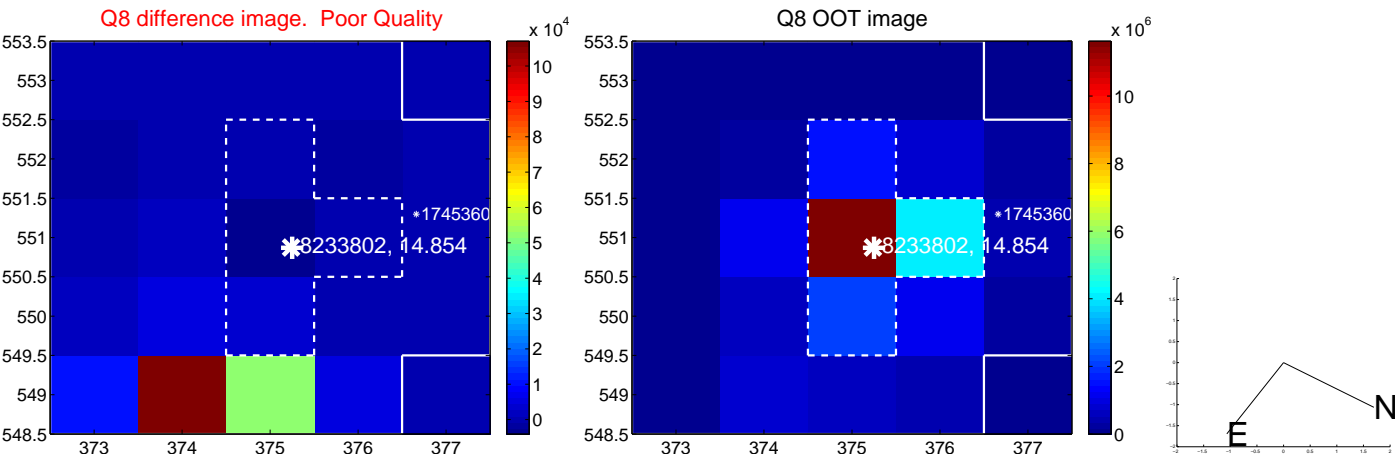
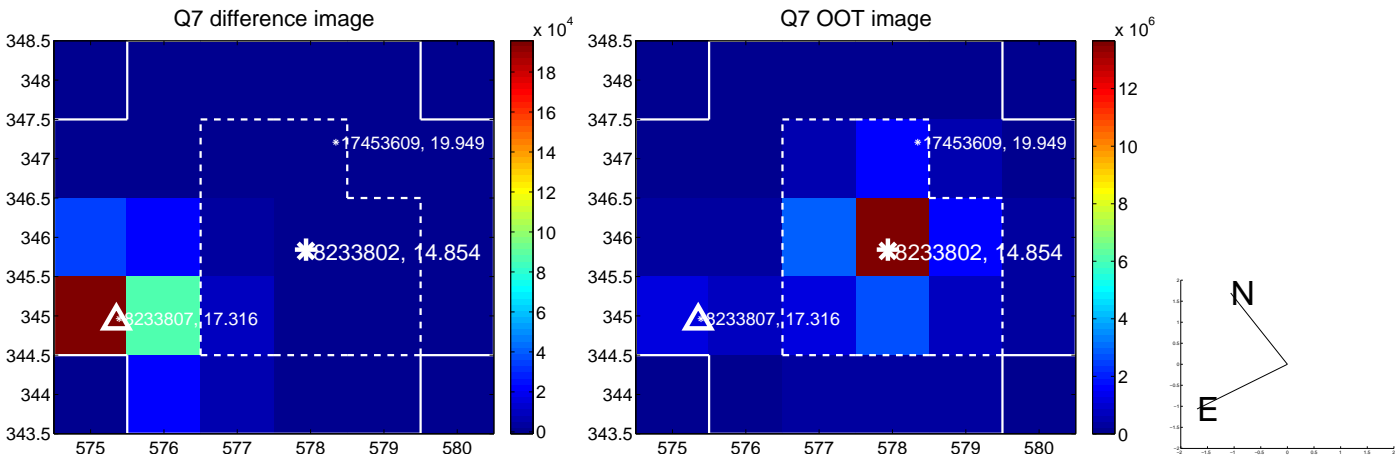
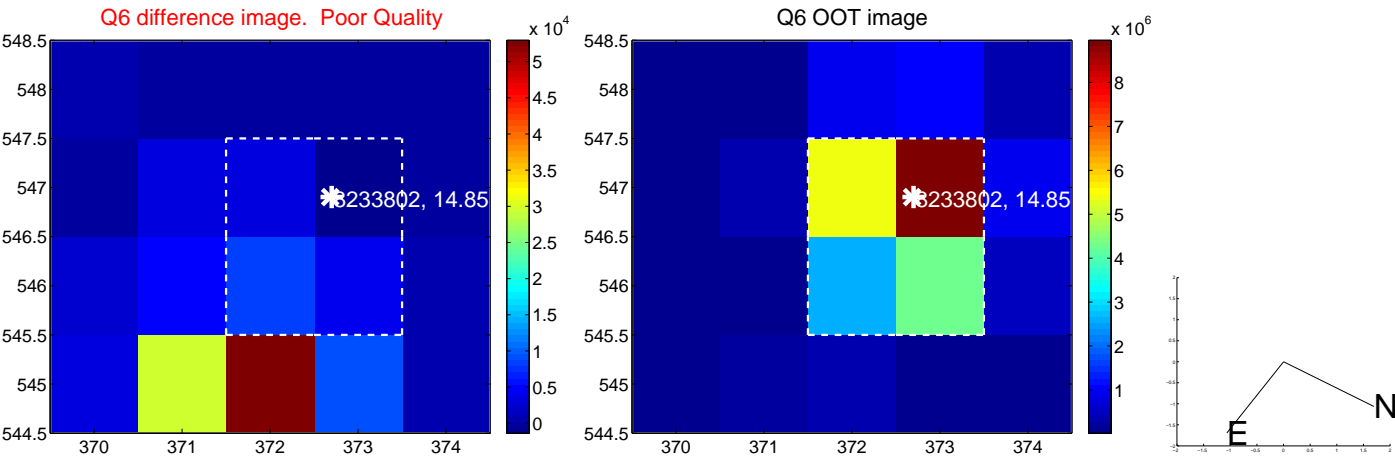
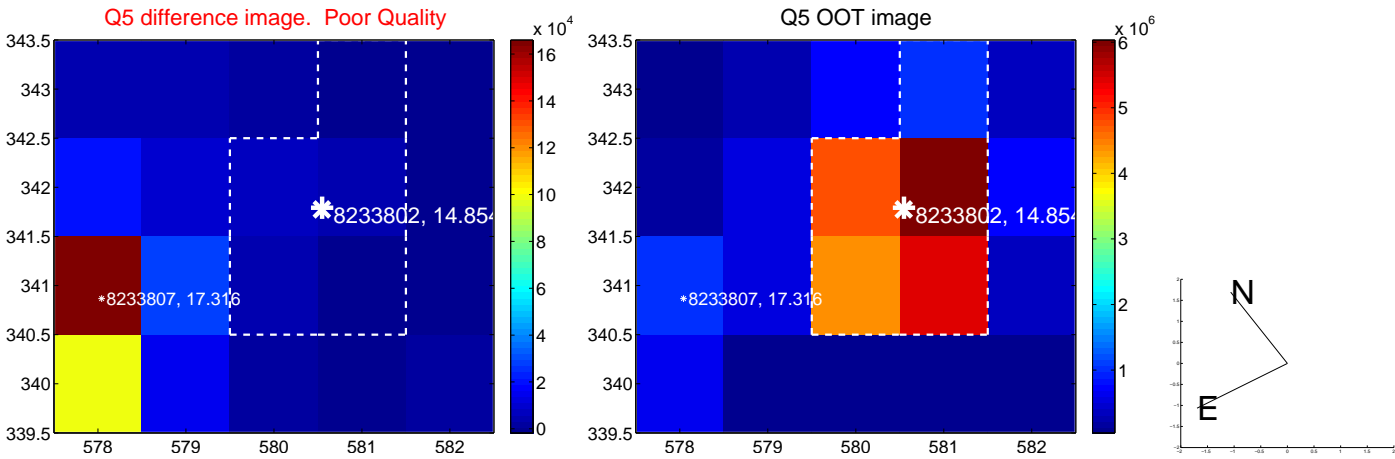


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

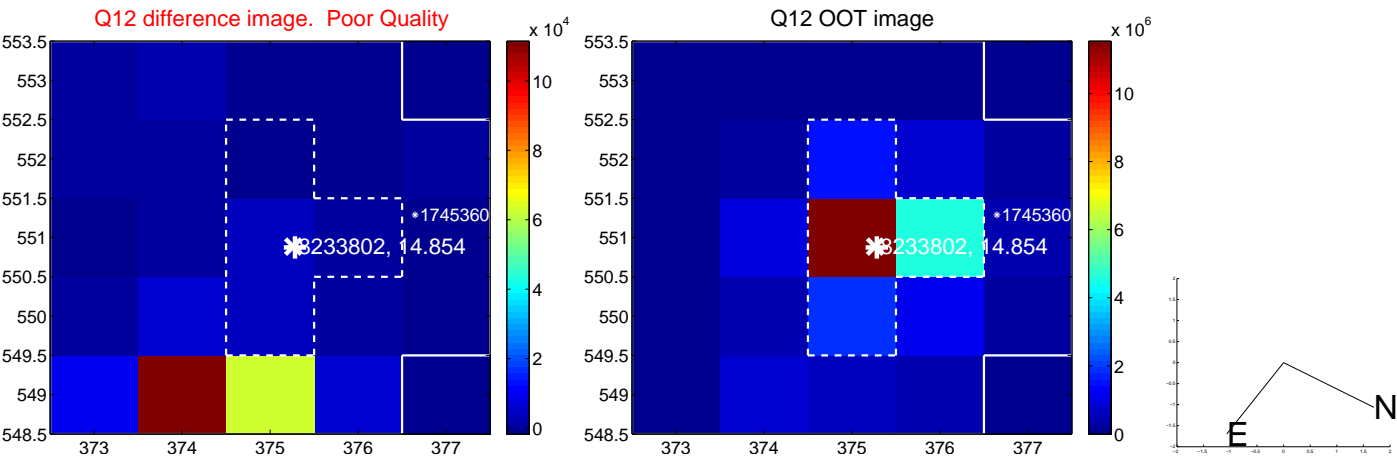
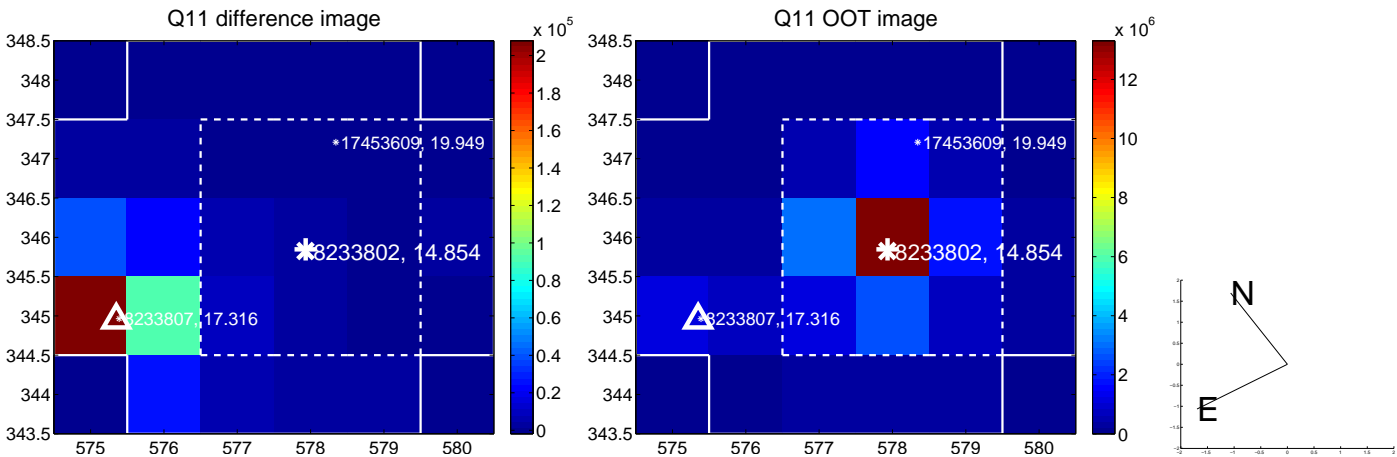
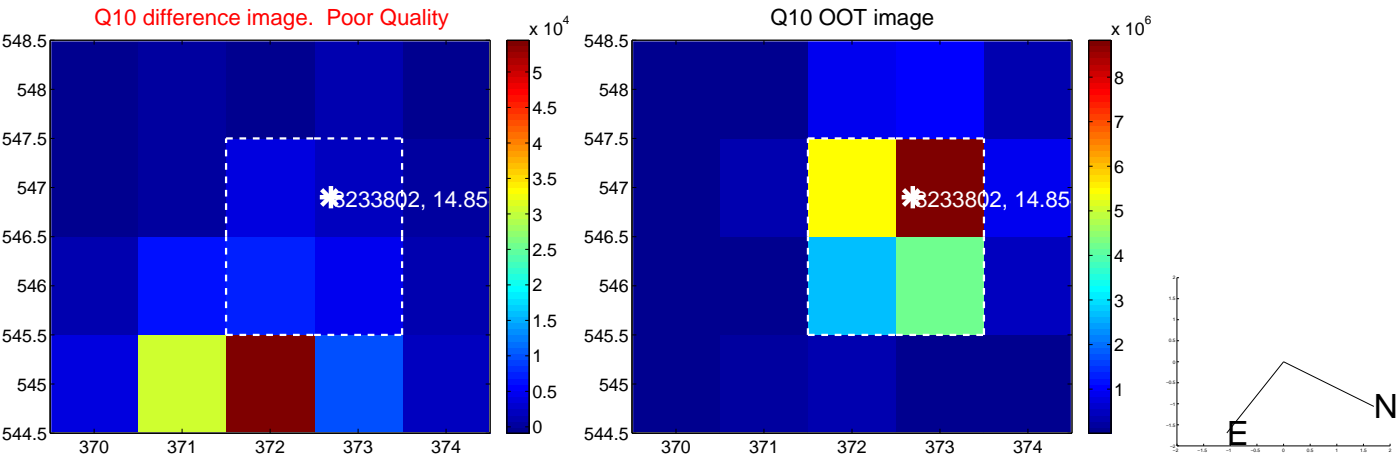
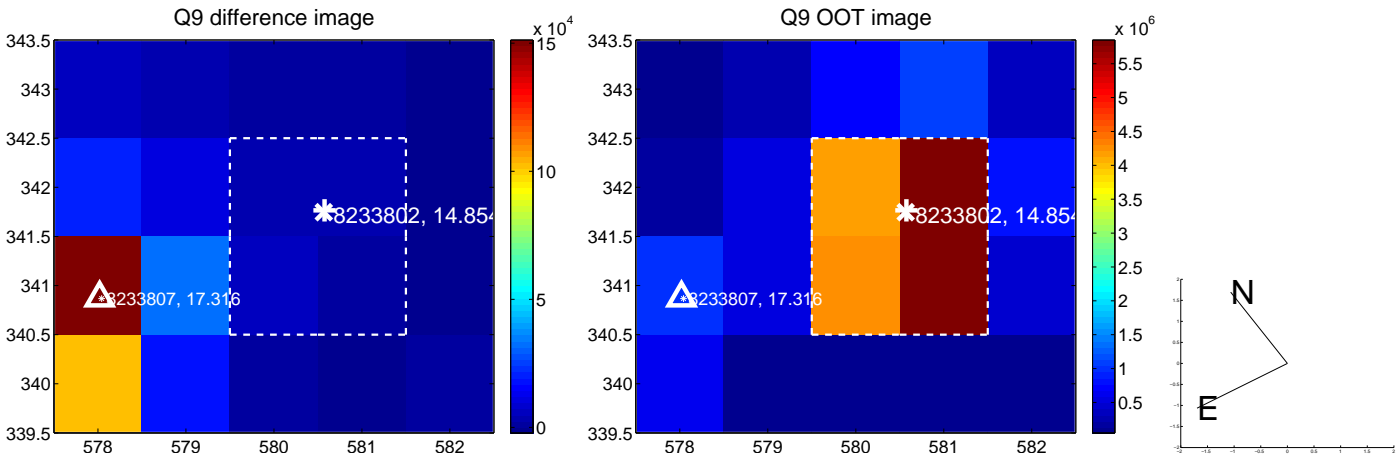
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



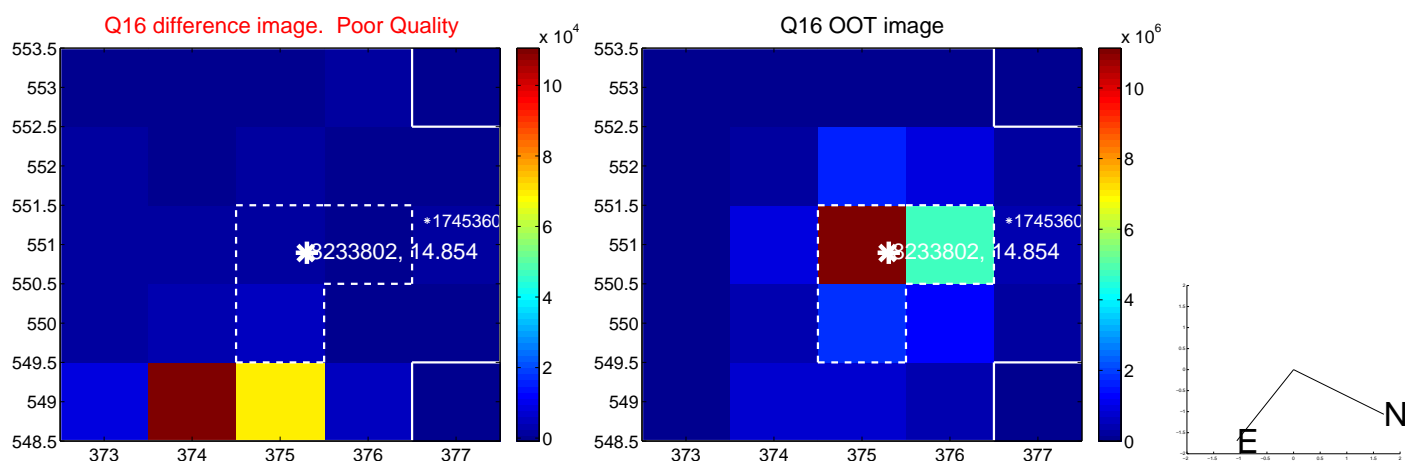
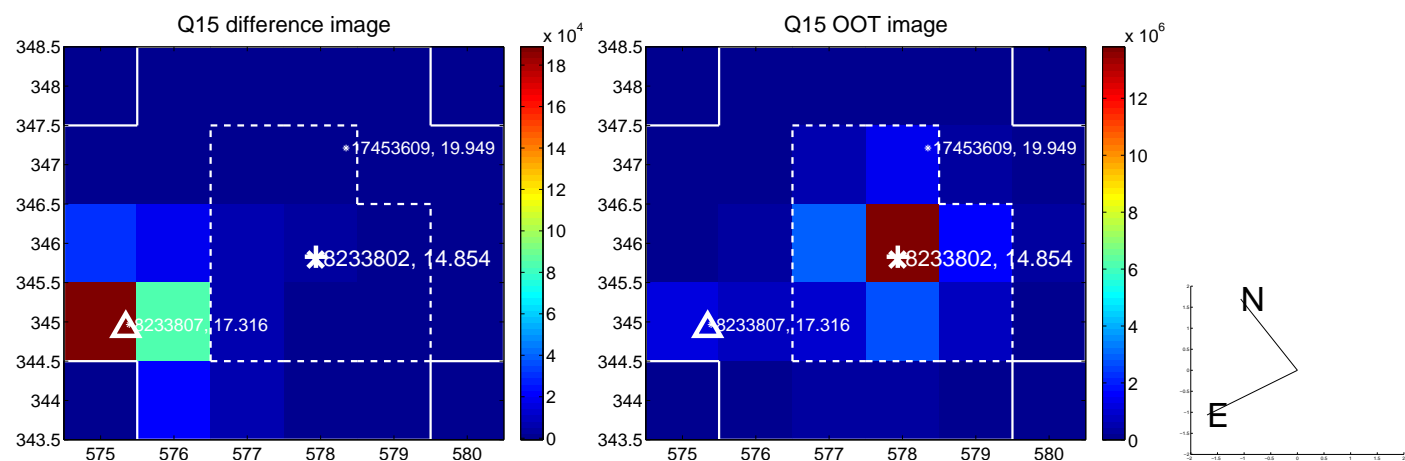
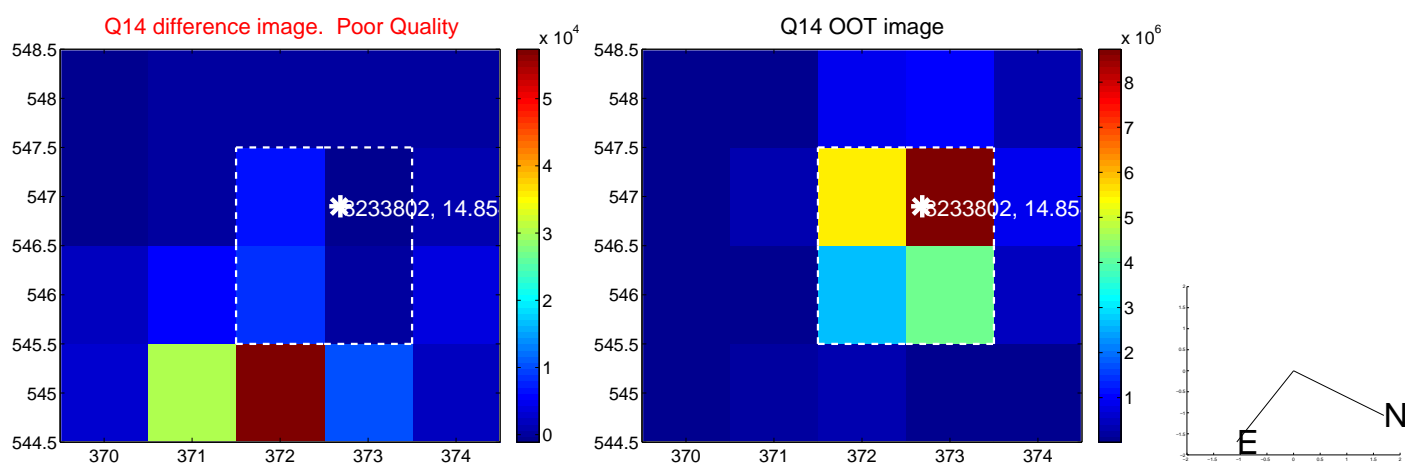
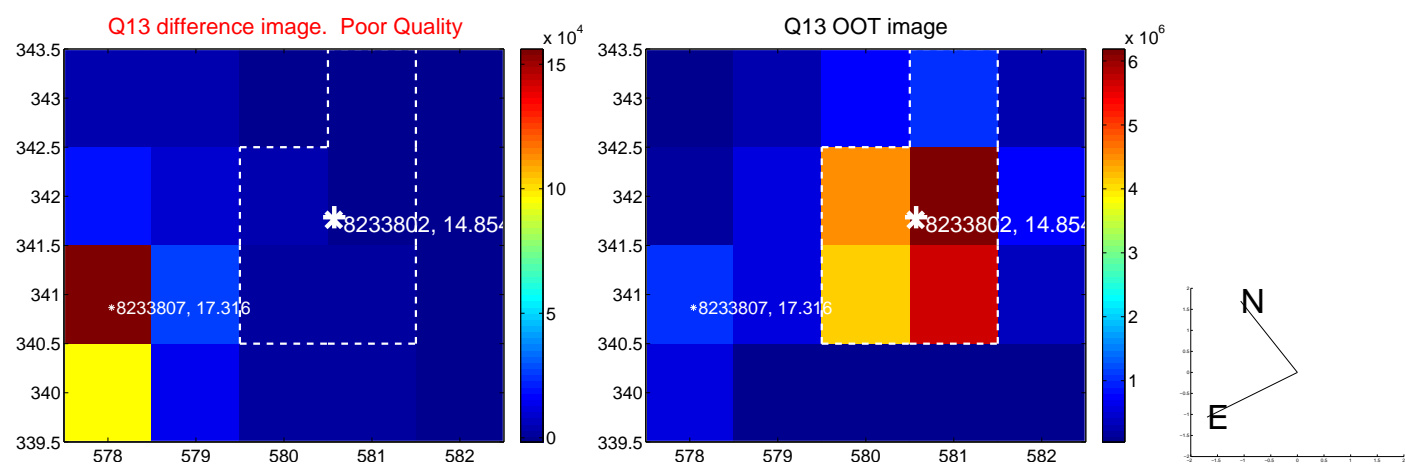
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



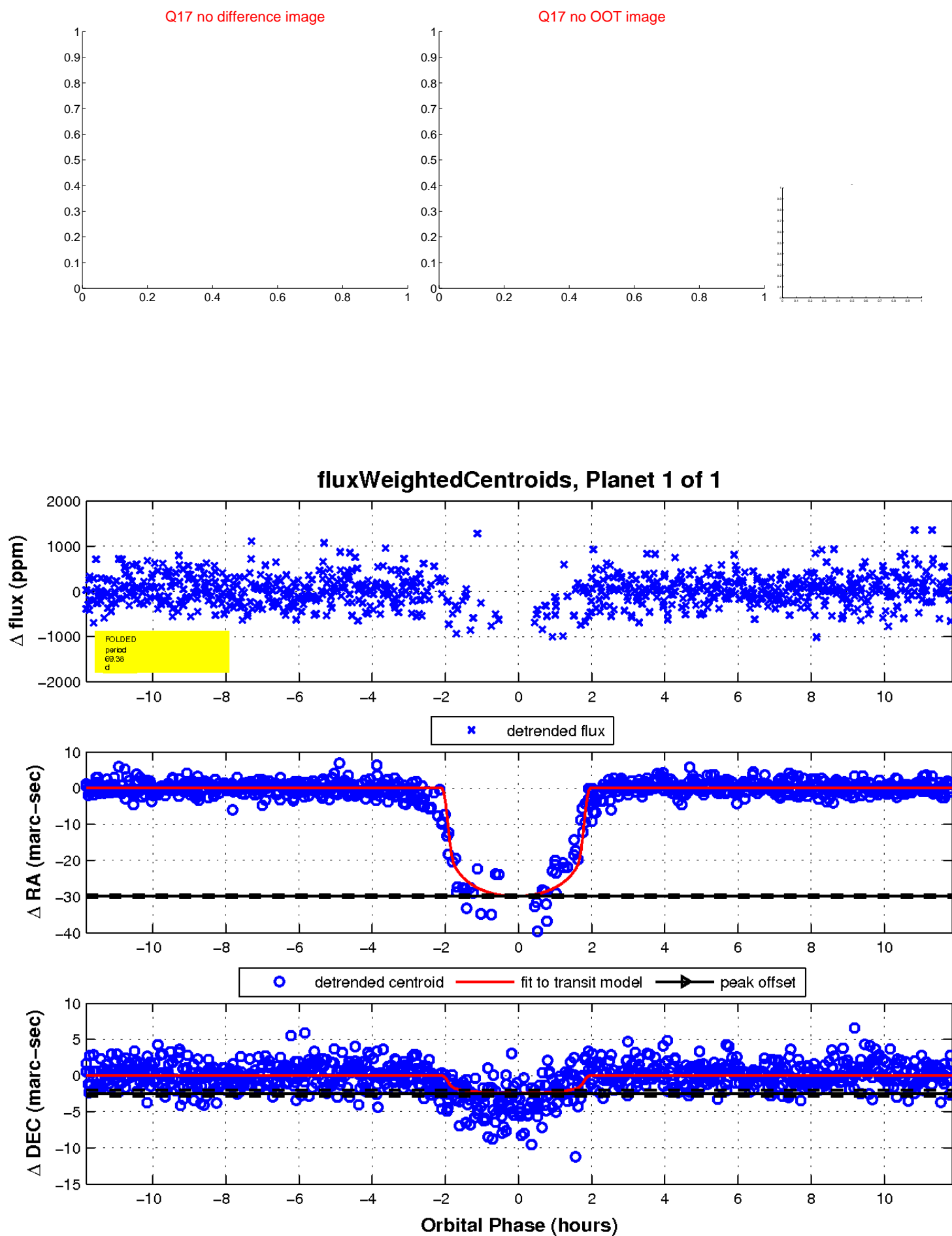
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UKIRT Image

Declination

