

KIC 010225800

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})
010225800-01	OBS	0729.01	1.423794	132.655118	1247.9	1.449	58.5	70.0	1.02	5962	4.30	1794.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010225800-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_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 010225800-01

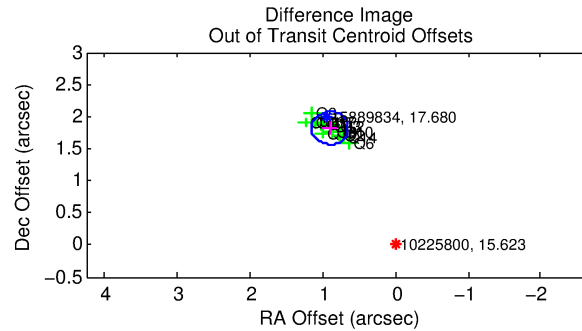
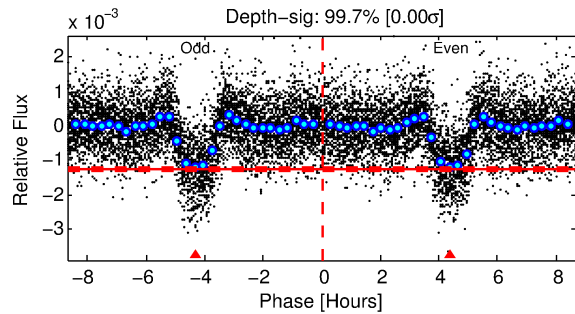
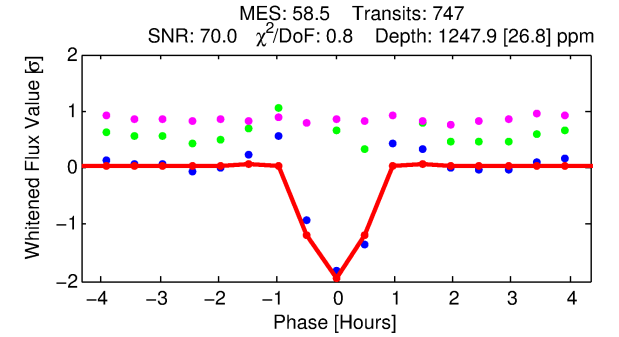
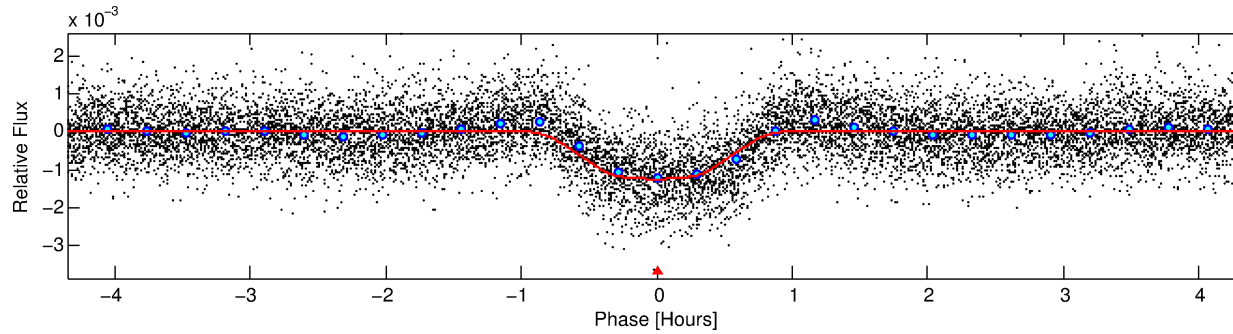
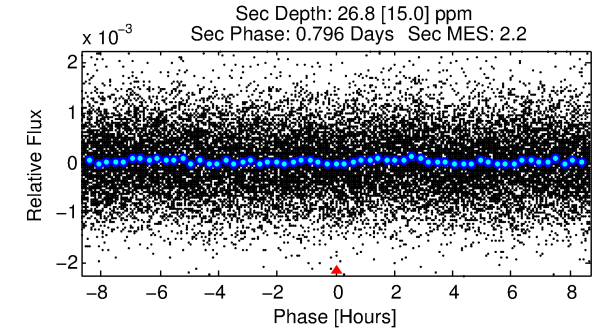
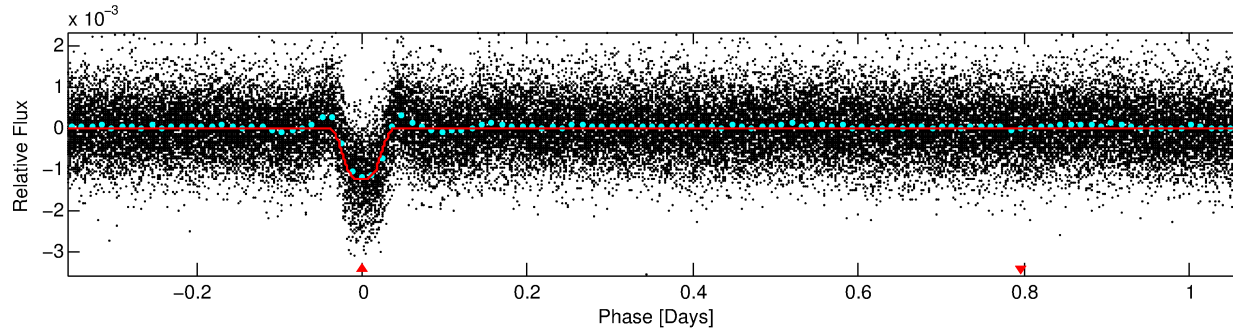
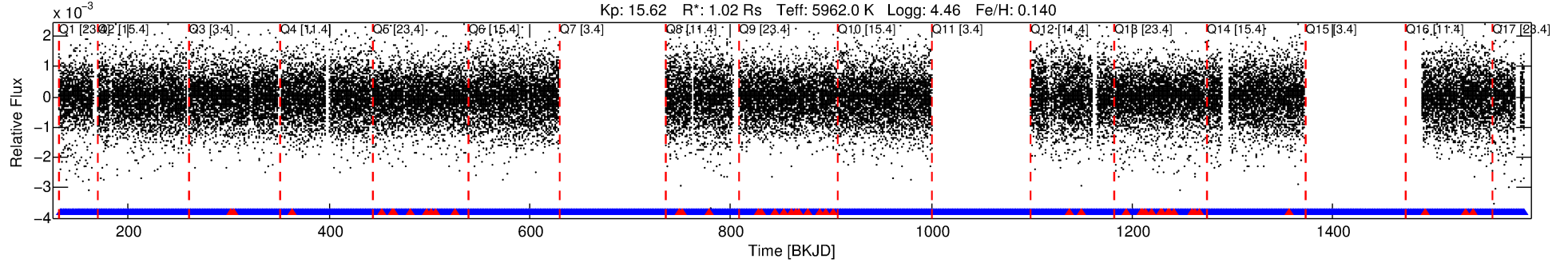
No Significant Match Found

DV One-Page Summary

KIC: 10225800 Candidate: 1 of 1 Period: 1.424 d

KOI: K00729.01 Corr: 0.947

Kp: 15.62 R*: 1.02 Rs Teff: 5962.0 K Logg: 4.46 Fe/H: 0.140



DV Fit Results:

Period = 1.42379 [0.00000] d
Epoch = 132.6551 [0.0003] BKJD
Rp/R* = 0.0386 [0.0019]
a/R* = 4.00 [0.82]
b = 0.90 [0.05]
Seff = 1794.66 [698.32]
Teq = 1660 [161] K
Rp = 4.30 [1.22] Re
a = 0.0256 [0.0062] AU
Ag = 0.52 [0.35] [-1.36σ]
Teff = 2181 [320] K [1.45σ]

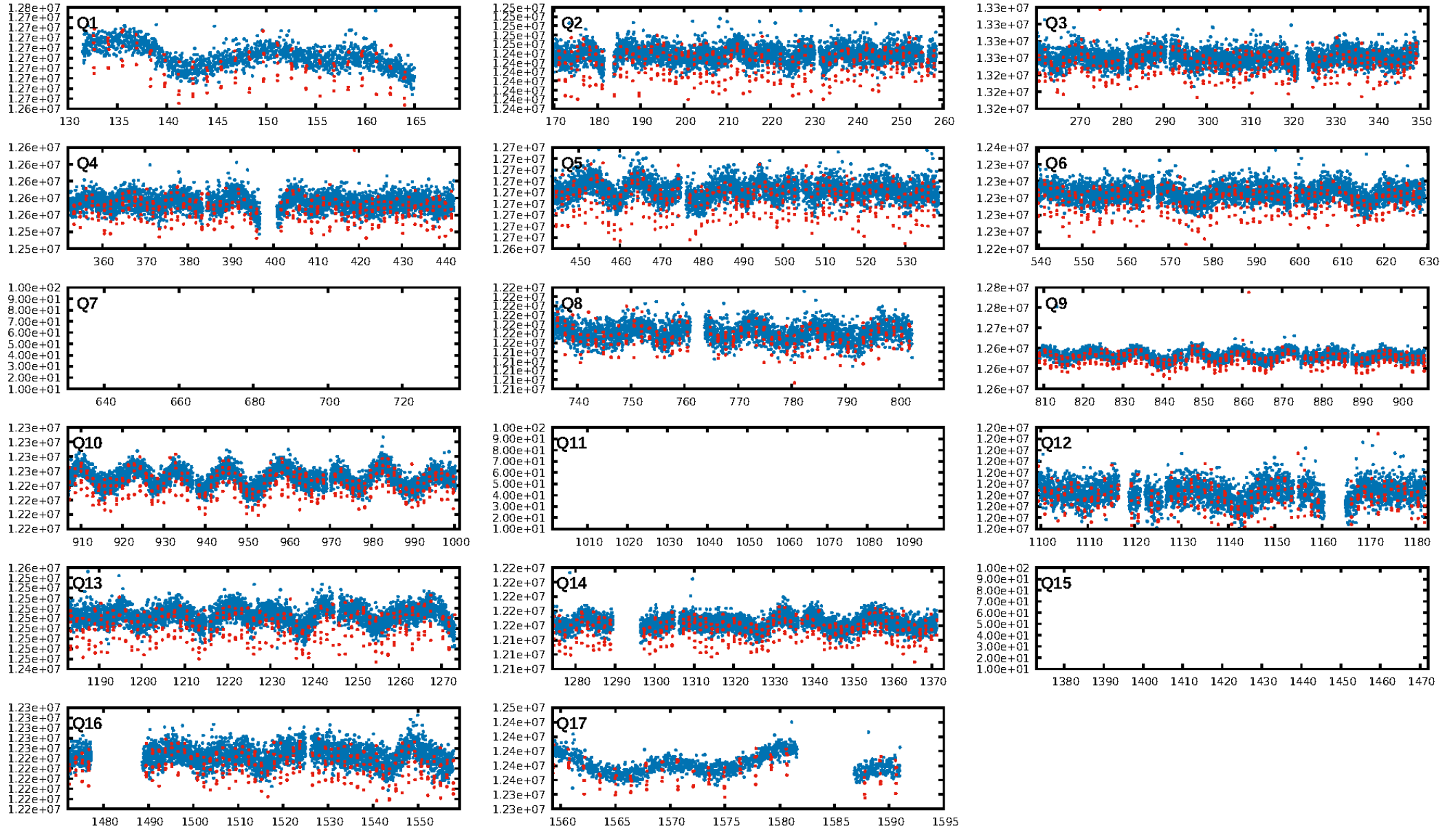
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGo-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.94 [661/705]
GhostDiagnostic-chr: 1.643
Centroid-sig: 0.0%
Centroid-so: 3.452 arcsec [15.71σ]
OotOffset-rm: 2.031 arcsec [24.02σ]
KicOffset-rm: 2.213 arcsec [28.97σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

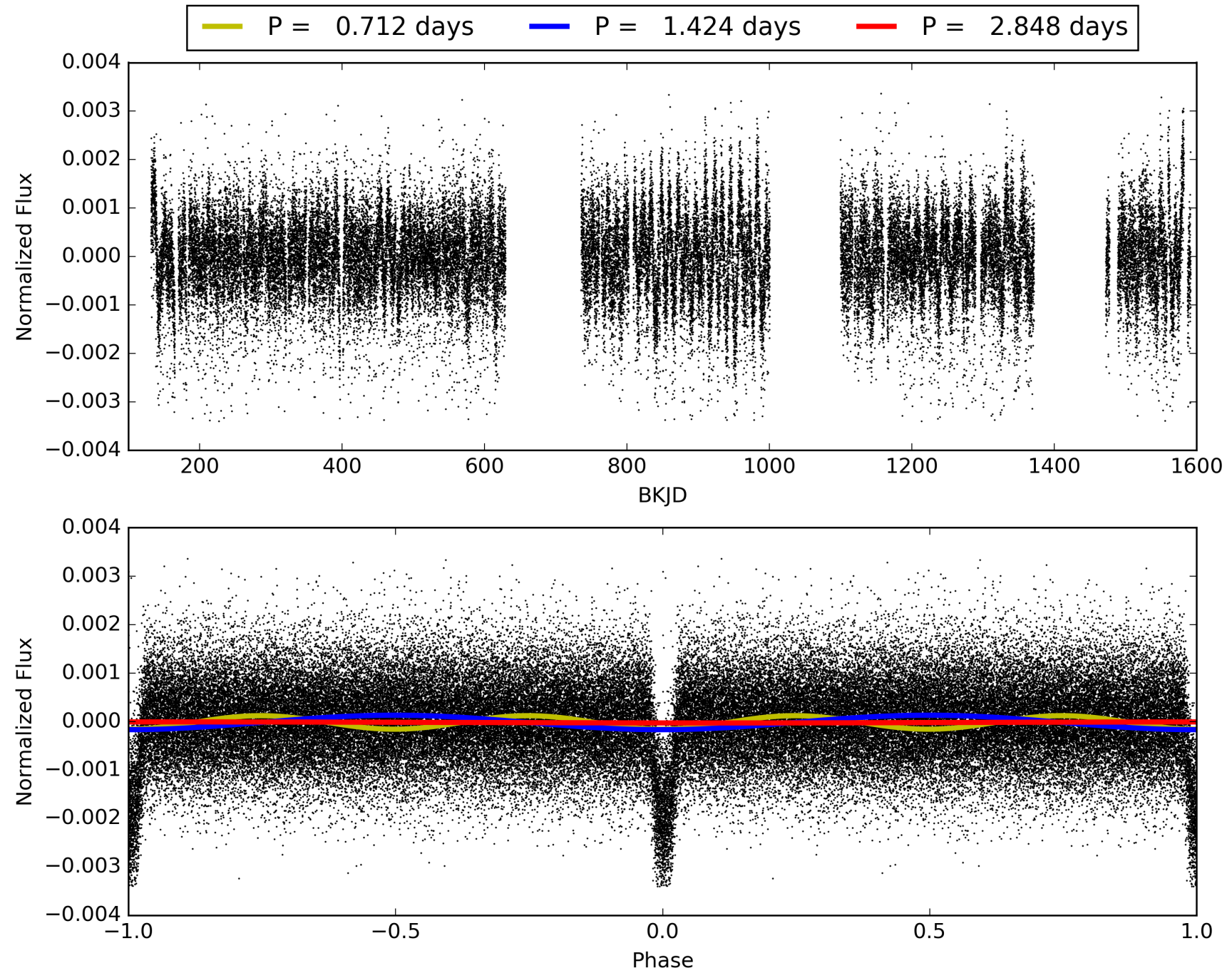
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:43:41 Z

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

TCE 010225800-01, PDC Light Curves

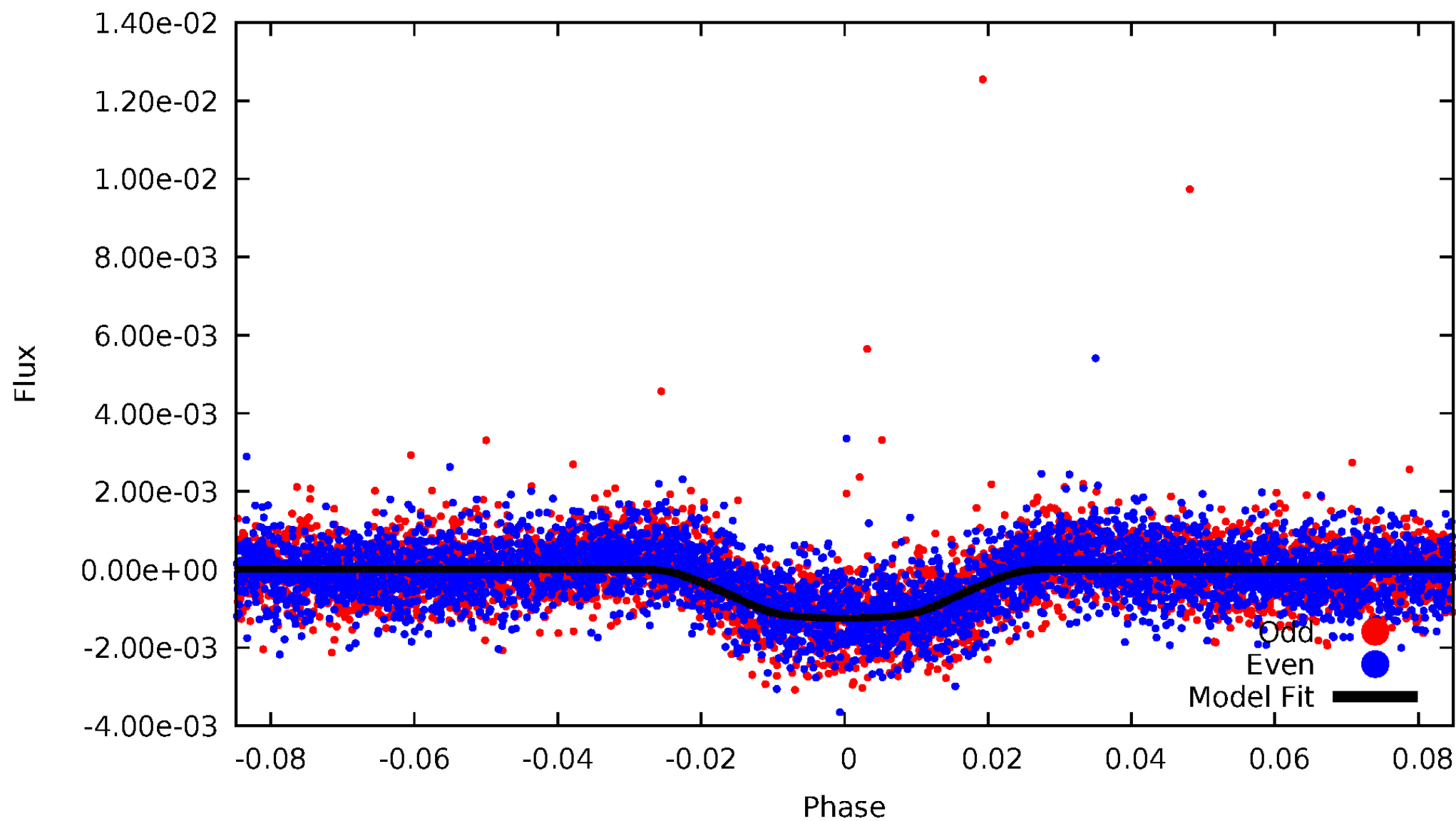


TCE 010225800-01



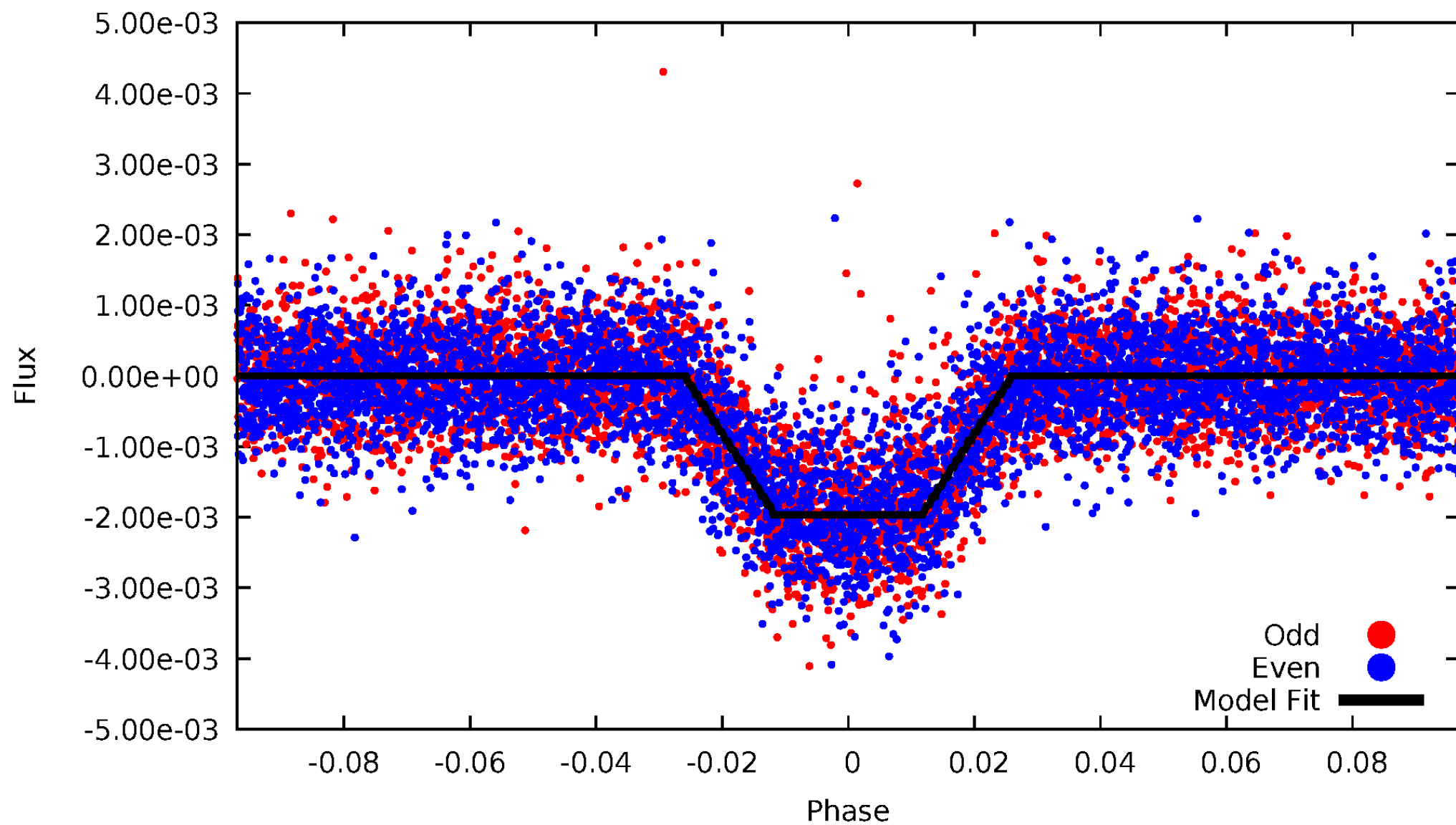
DV Odd/Even

TCE 010225800-01



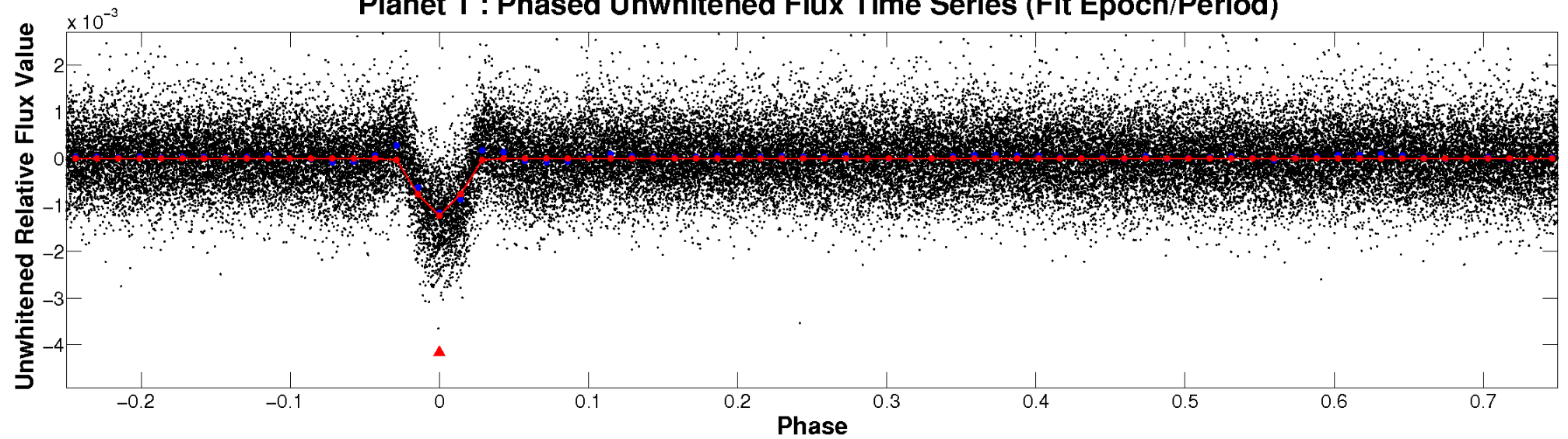
ALT Odd/Even

TCE 010225800-01

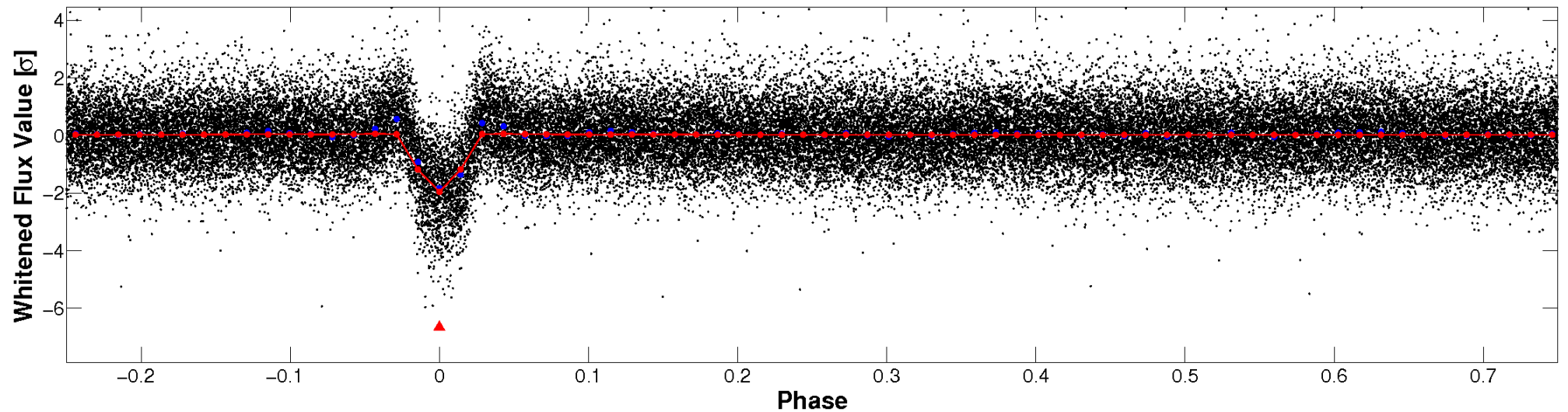


Non-Whitened Vs. Whitened Light Curve

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

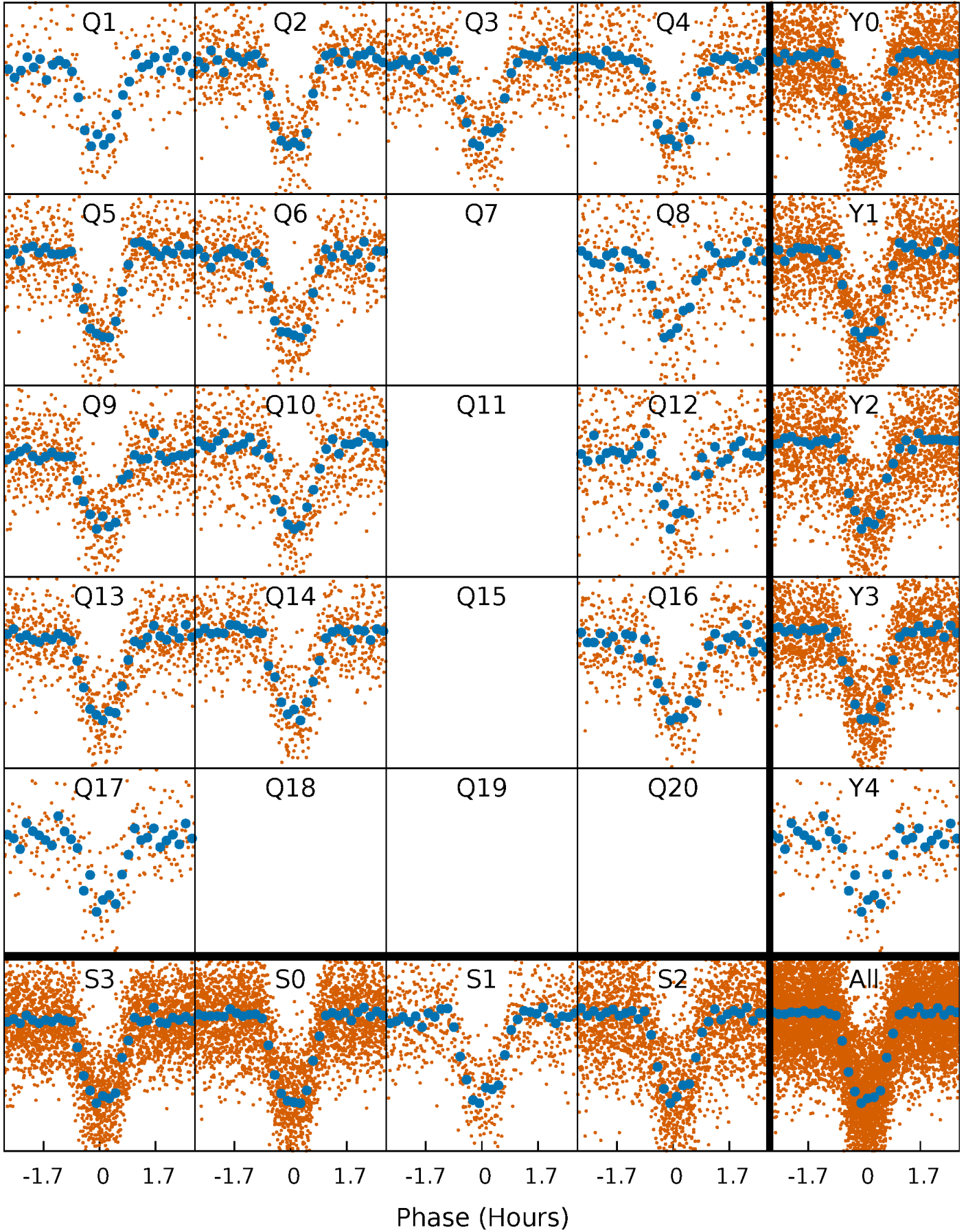


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



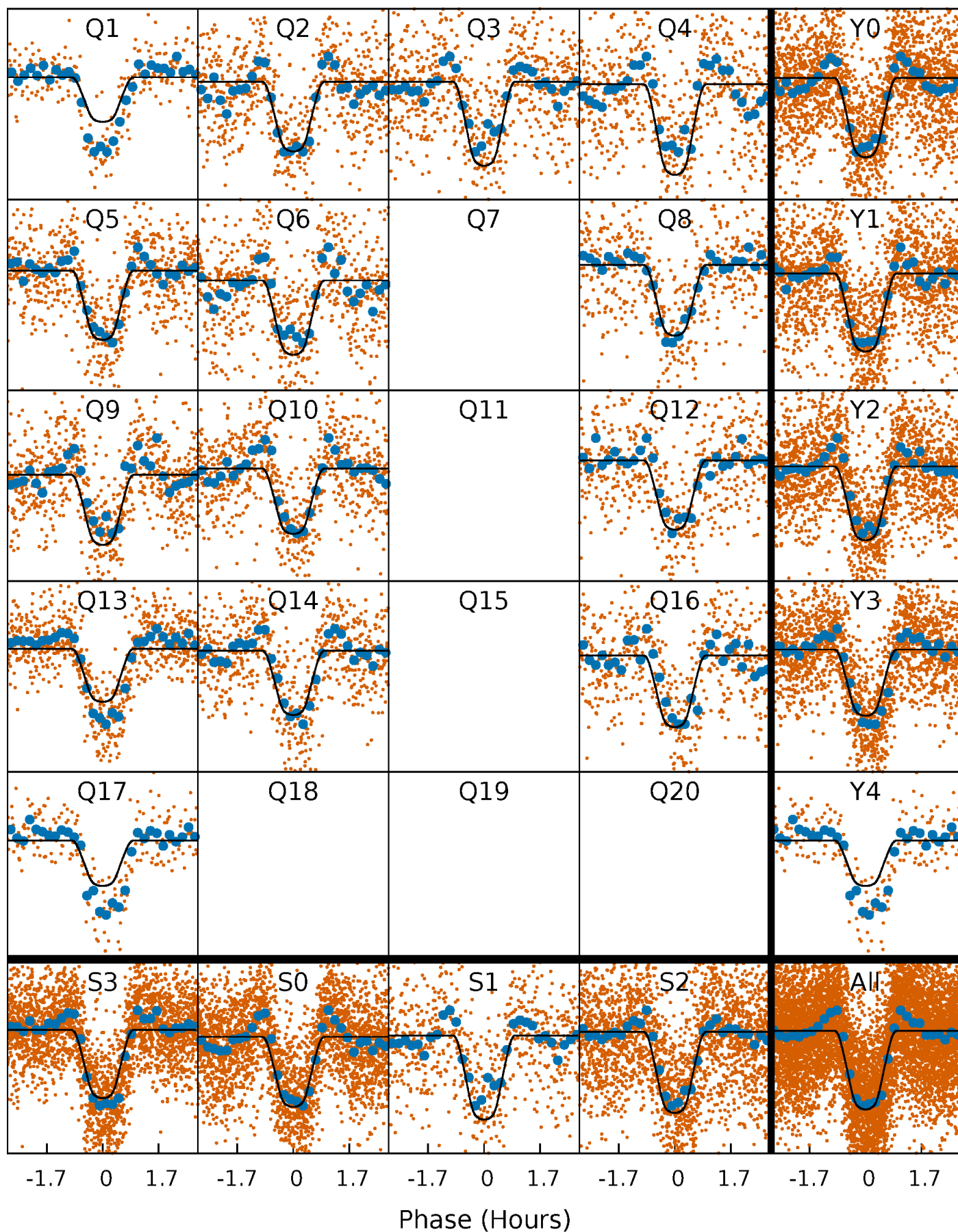
PDC Quarter-Phased Transit Curves

TCE 010225800-01 P= 1.423794 Days $T_0=132.655117$ (BKJD)



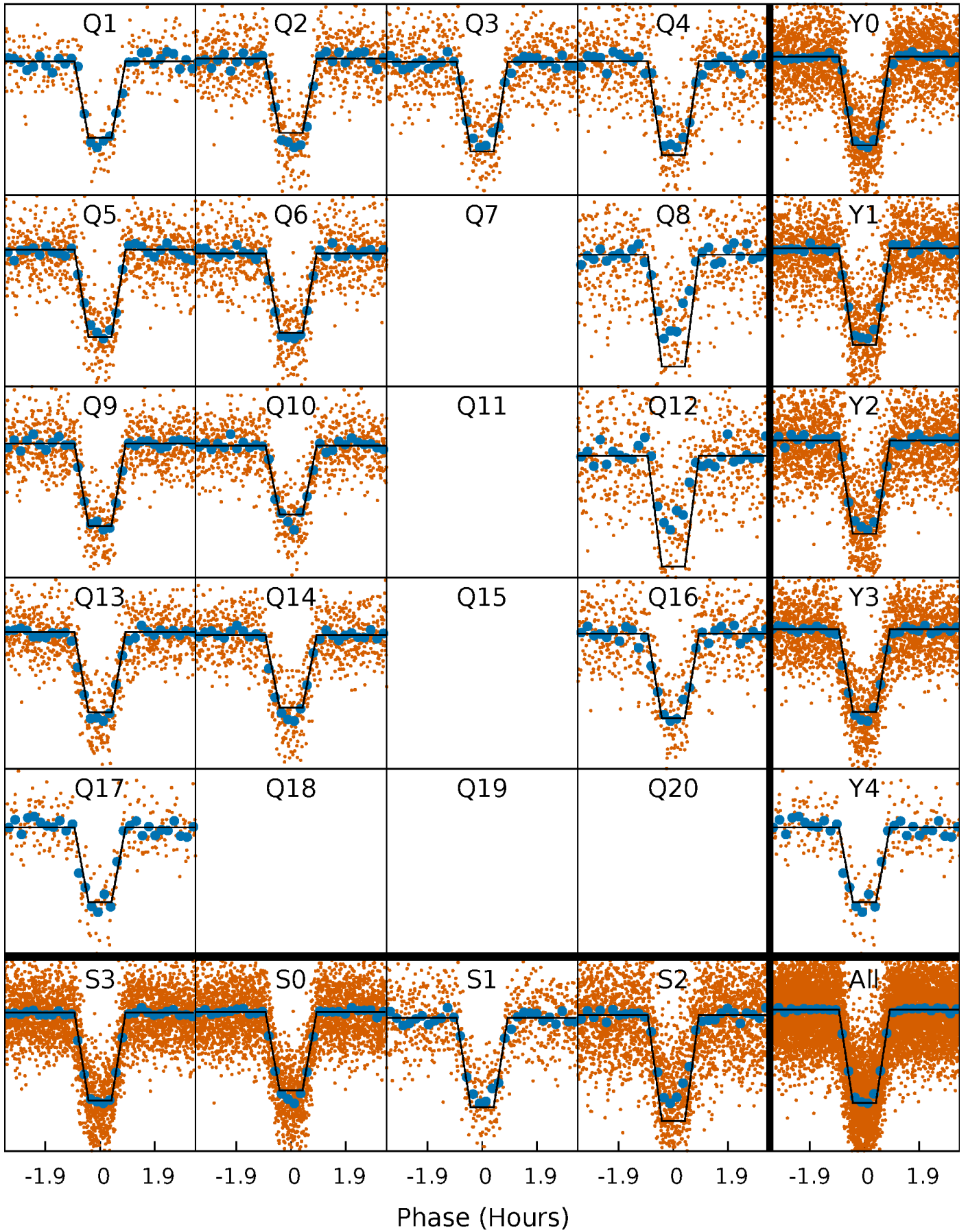
DV Quarter-Phased Transit Curves

TCE 010225800-01 P= 1.423794 Days $T_0=132.655117$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

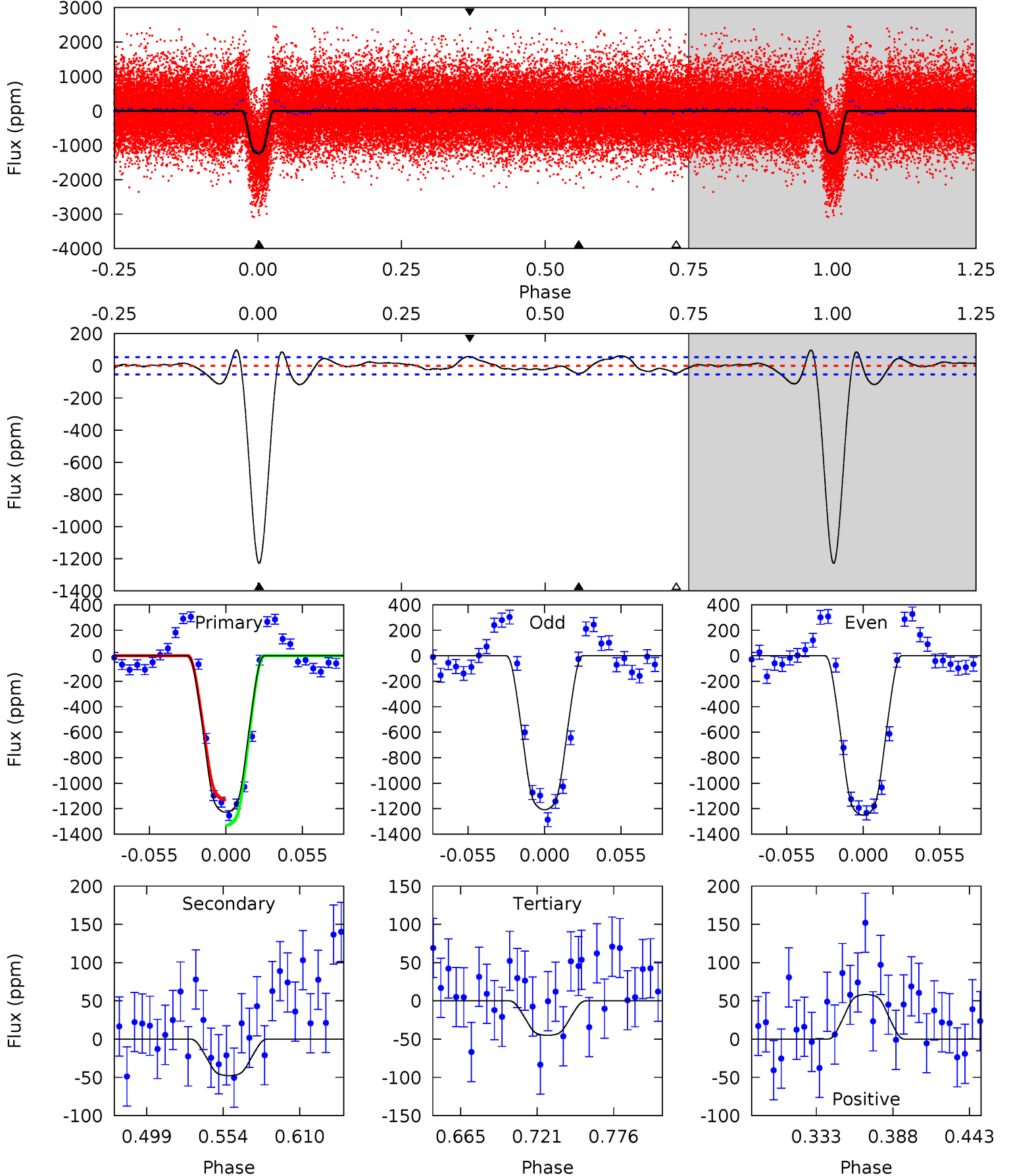
TCE 010225800-01 P= 1.423803 Days $T_0=132.653671$ (BKJD)



DV Model-Shift Uniqueness Test

010225800-01, P = 1.423794 Days, E = 131.231323 Days

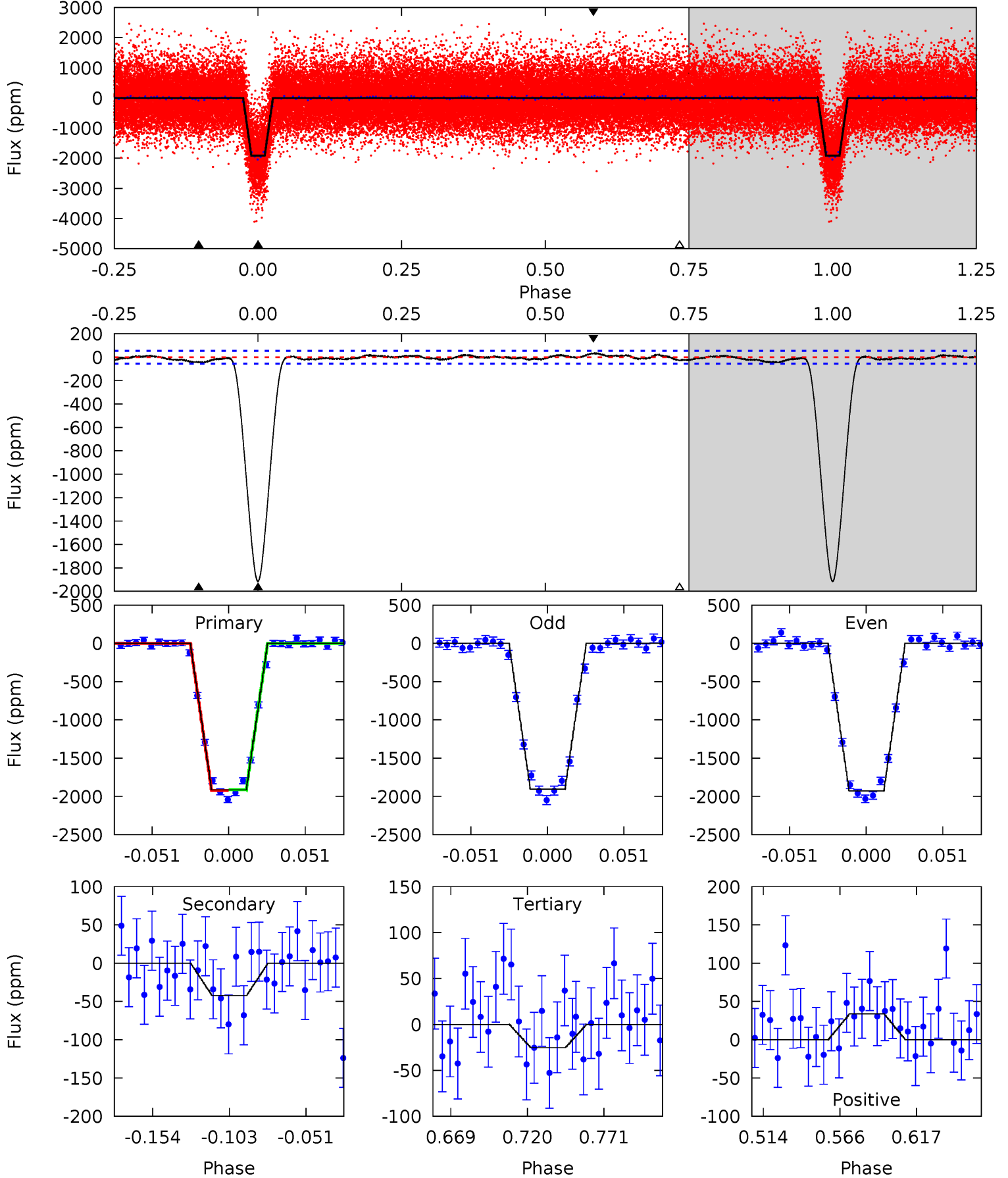
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
108.0	4.19	3.96	5.12	4.69	1.92	3.19	104.0	102.9	0.23	-0.93	1.88	1.00	0.07	8.80



Alt Model-Shift Uniqueness Test

010225800-01, P = 1.423803 Days, E = 131.229868 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
162.6	3.59	2.14	2.86	4.70	1.95	1.06	160.5	159.8	1.44	0.73	0.99	0.99	0.02	0.44



Stellar Parameters For KIC 010225800

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5962^{+162}_{-223}	$4.464^{+0.050}_{-0.200}$	$0.140^{+0.200}_{-0.300}$	$1.019^{+0.285}_{-0.122}$	$1.102^{+0.122}_{-0.150}$	$1.466^{+0.383}_{-0.730}$
	+3%/-4%	+1%/-4%	+143%/-214%	+28%/-12%	+11%/-14%	+26%/-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 010225800-01 / KOI 0729.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-48 ± 11	$4.47^{+0.73}_{-0.43}$	2376^{+162}_{-134}	2914^{+173}_{-220}	$0.804^{+0.292}_{-0.240}$
Alt.	-42 ± 12	$5.09^{+0.81}_{-0.45}$	2362^{+169}_{-110}	2651^{+216}_{-309}	$0.551^{+0.216}_{-0.175}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

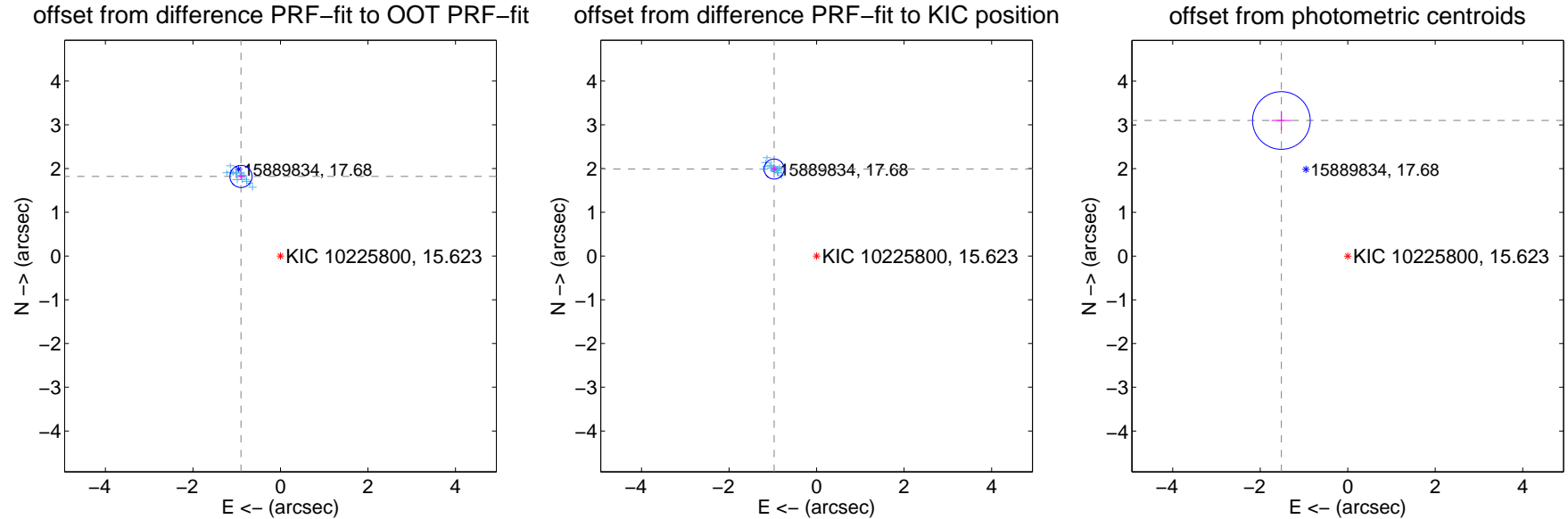
DV Centroid Data

Supplemental centroid analysis for 010225800-01. Kepler magnitude: 15.62. Transit SNR 70.04

There are 14 quarters with good PRF difference image offsets

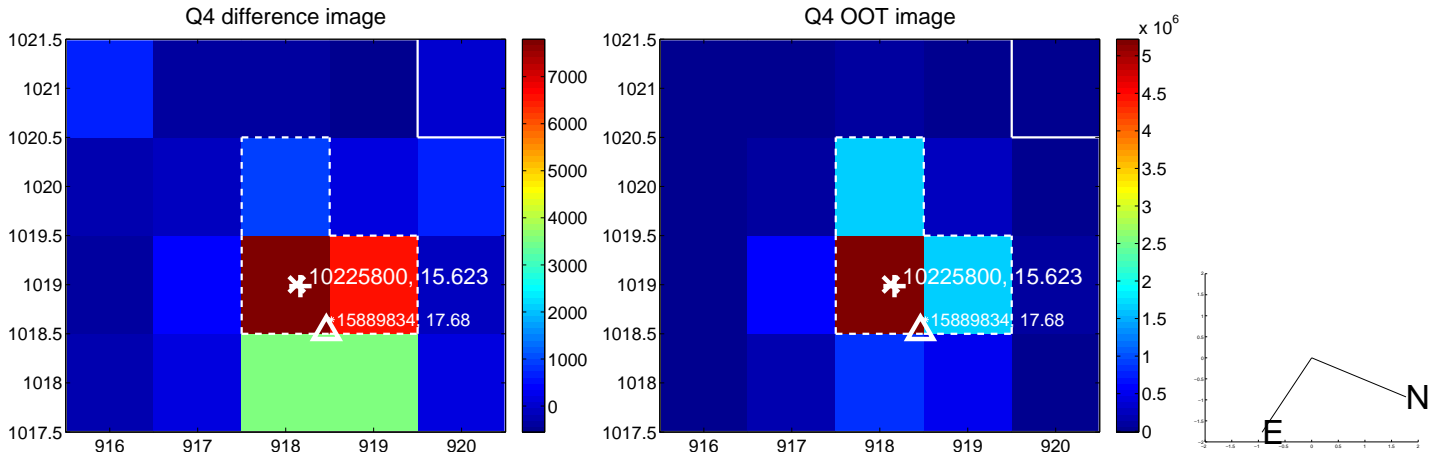
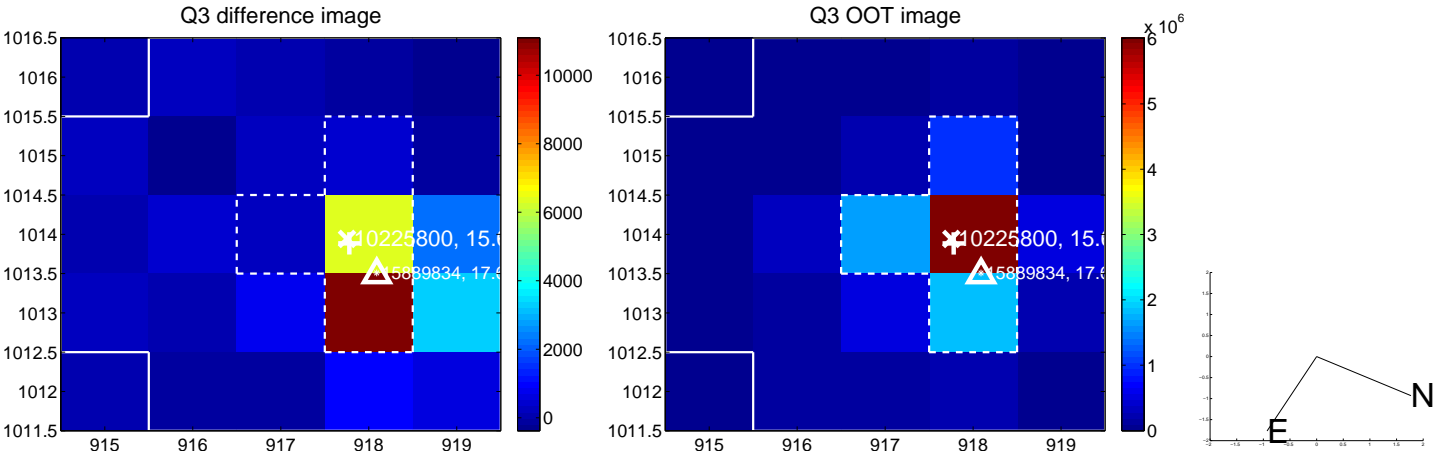
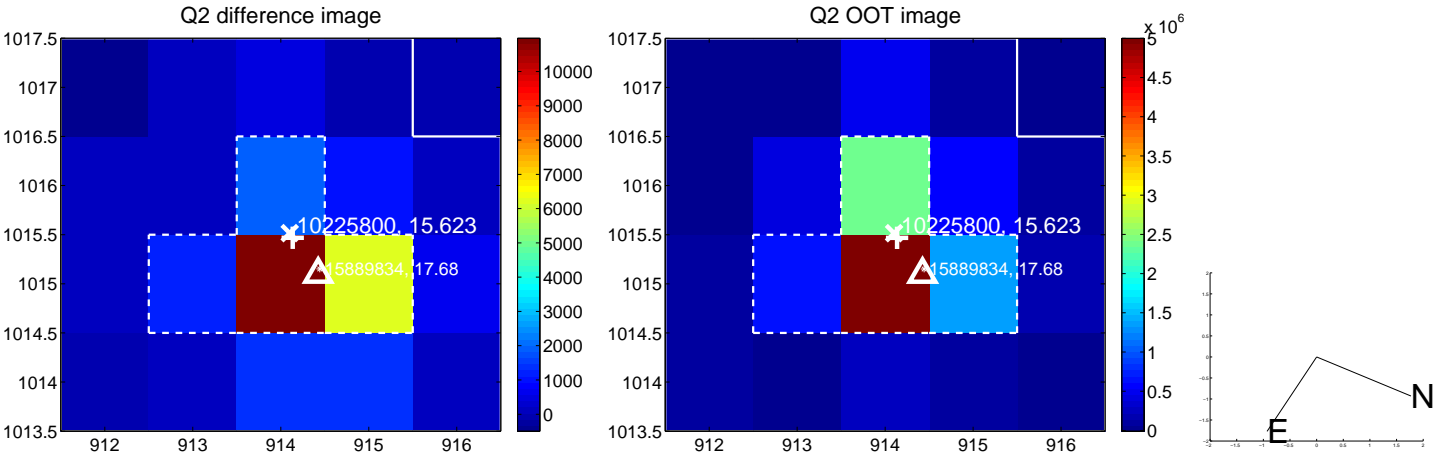
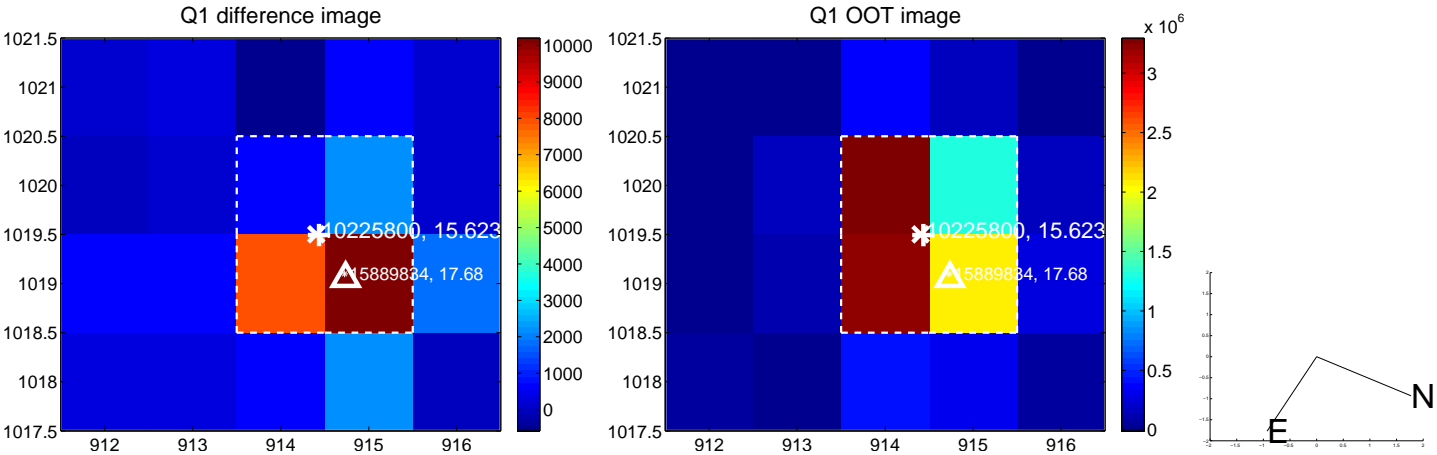
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.031 ± 0.085	24.02	0.901 ± 0.084	1.820 ± 0.075
PRF-fit source offset from KIC position	2.213 ± 0.076	28.97	0.970 ± 0.075	1.989 ± 0.073
photometric centroid source offset	3.45 ± 0.22	15.71	1.52 ± 0.22	3.10 ± 0.22

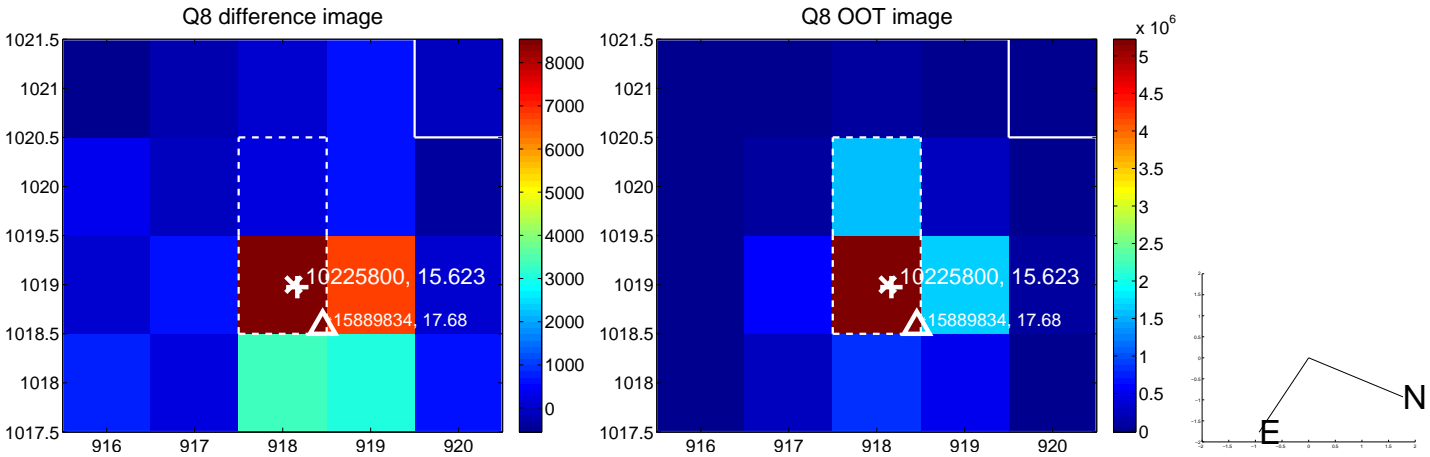
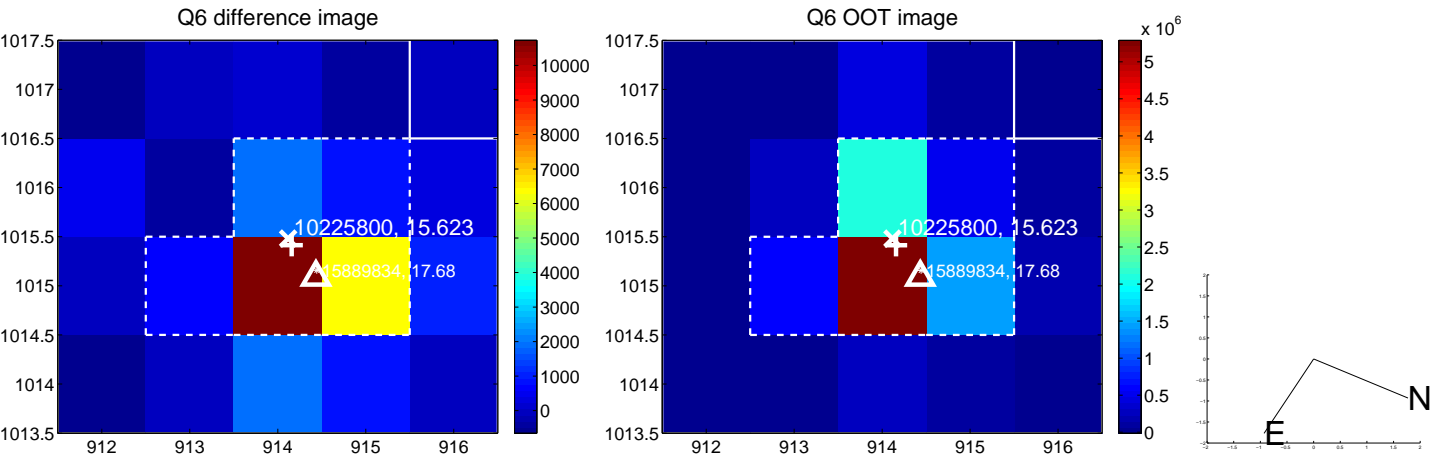
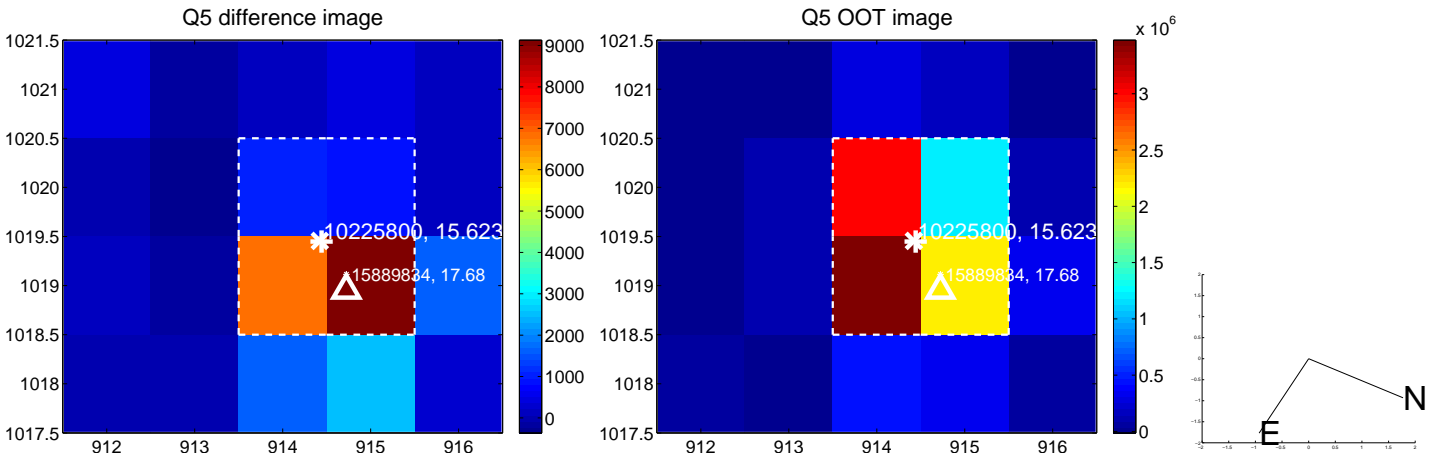


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

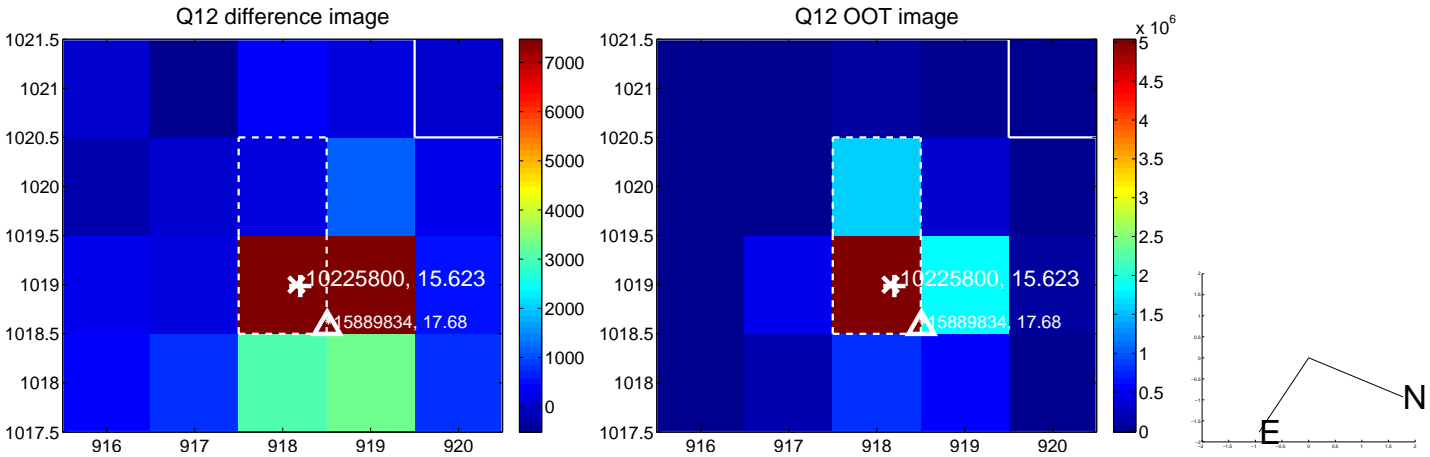
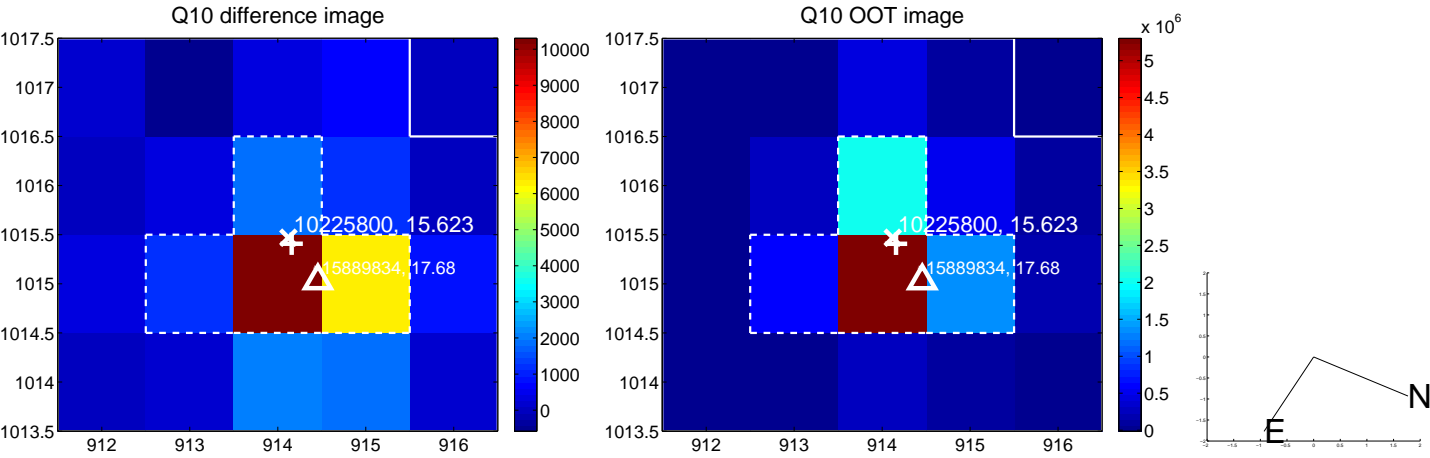
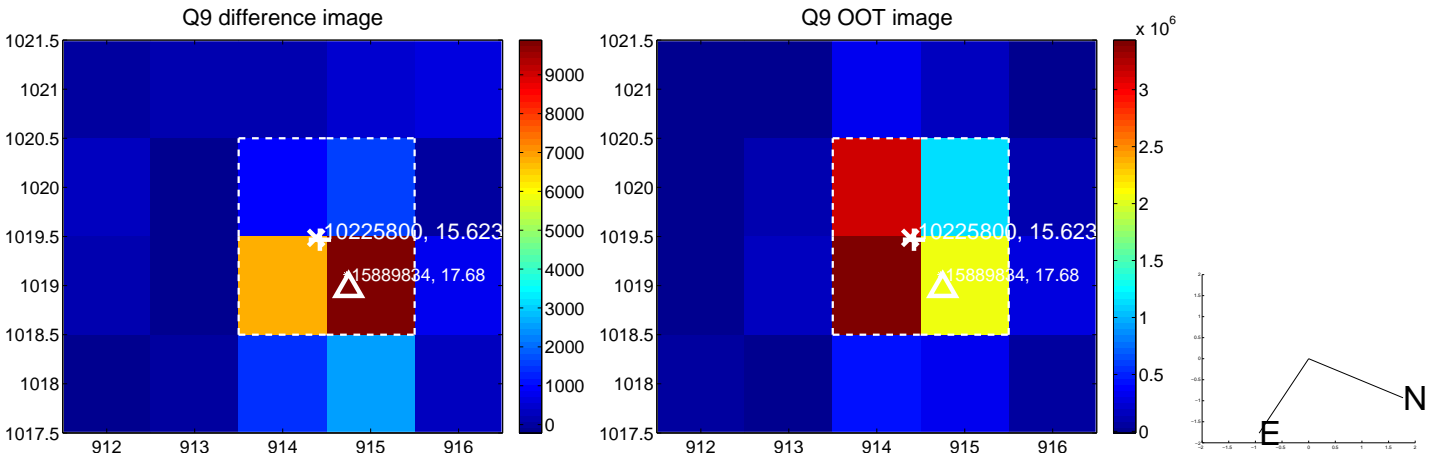
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



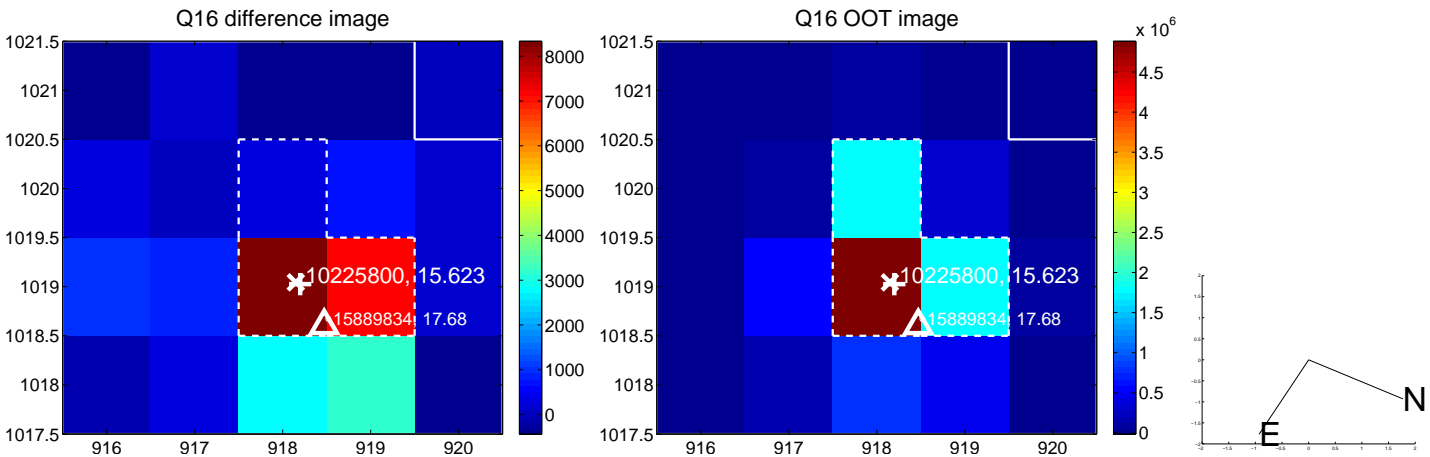
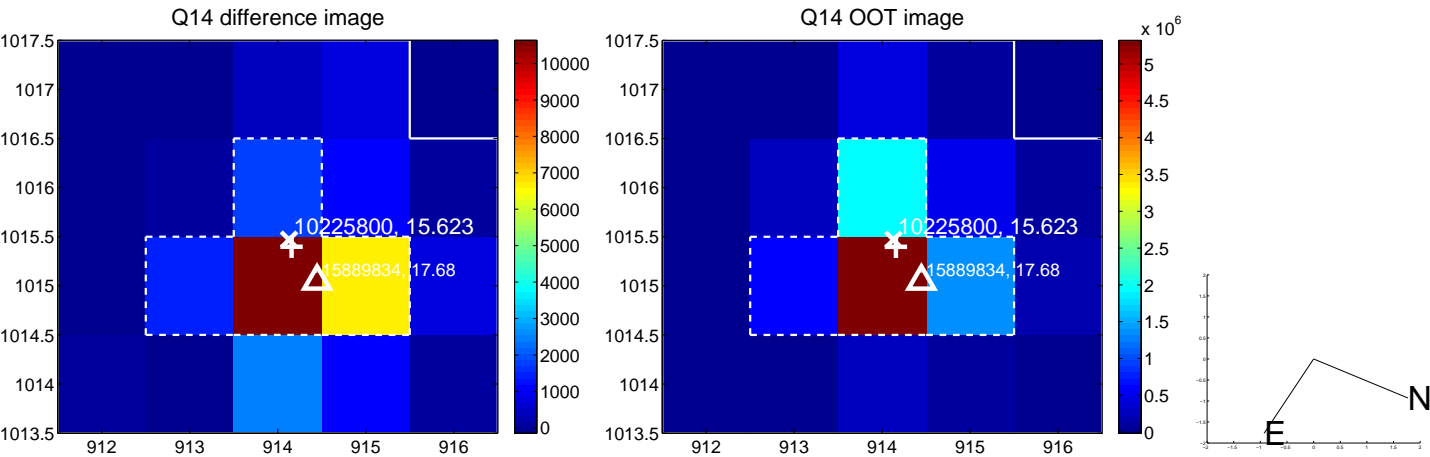
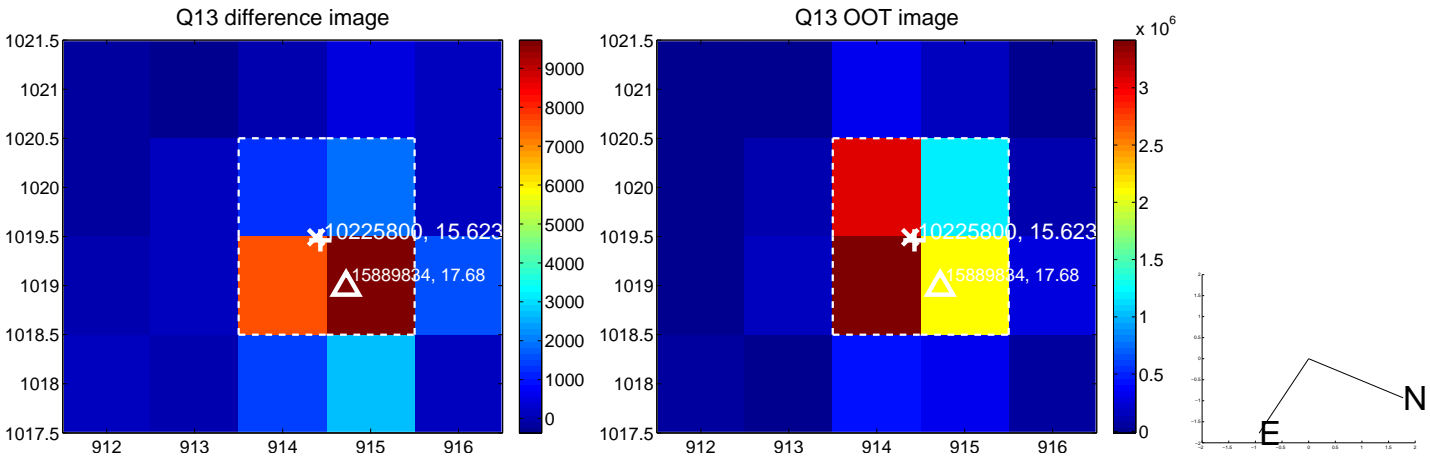
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



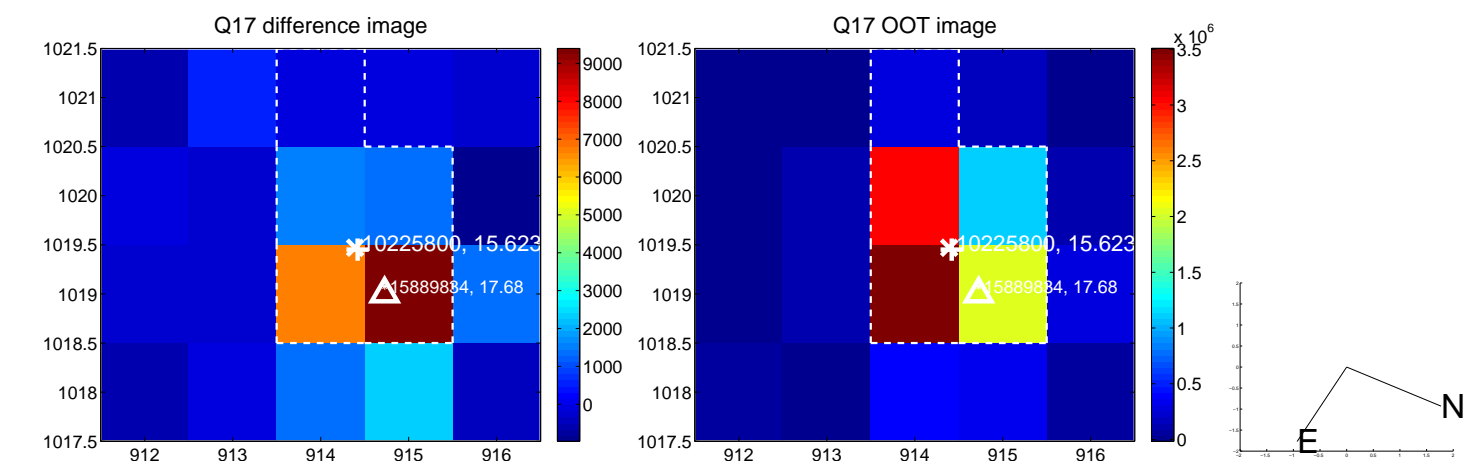
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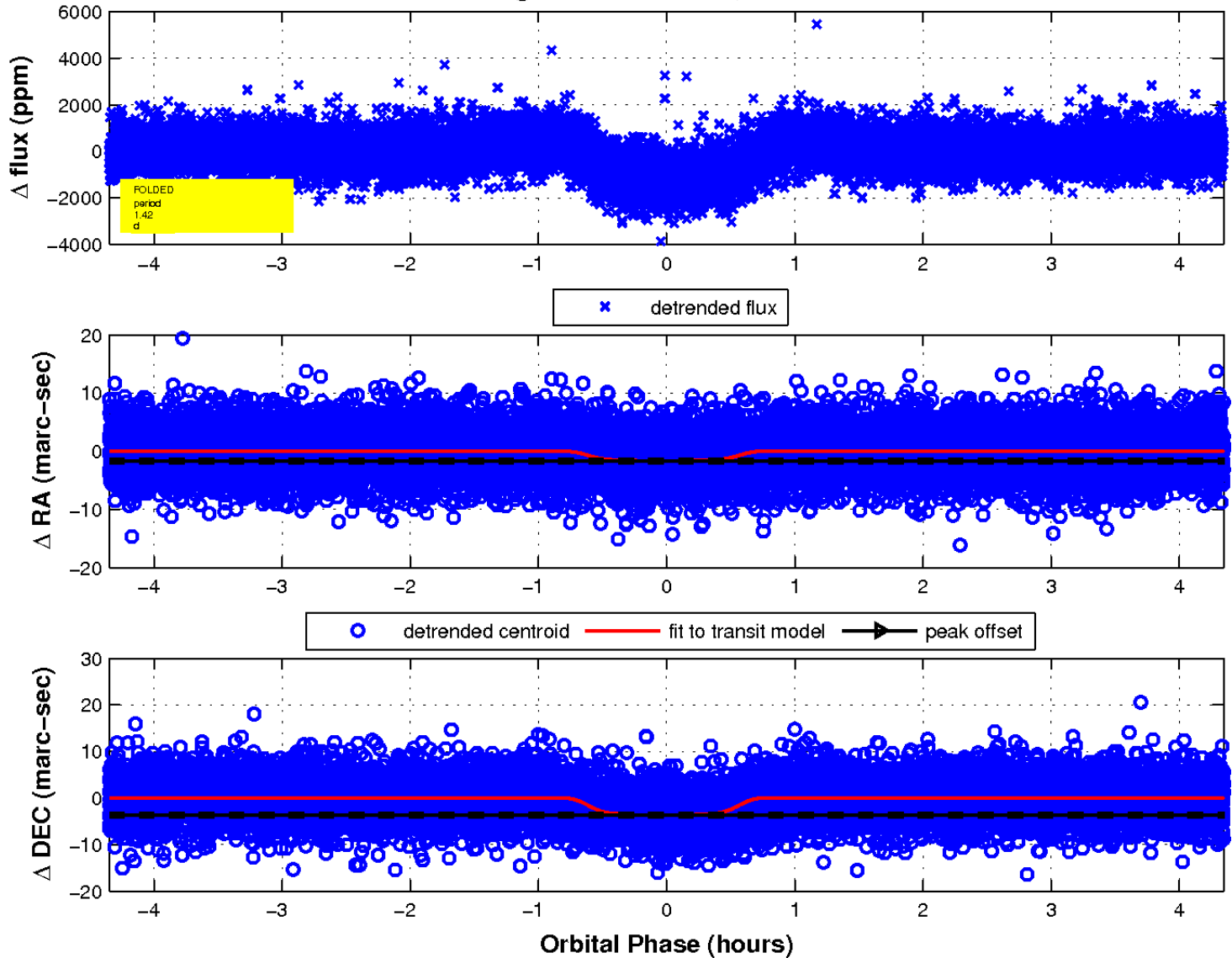
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

