

KIC 011622600

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})
011622600-01	OBS	1876.01	82.534269	209.125644	1892.2	4.994	38.0	39.0	0.58	4316	2.66	1.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011622600-01	OBS	PC	0.85	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 011622600-01

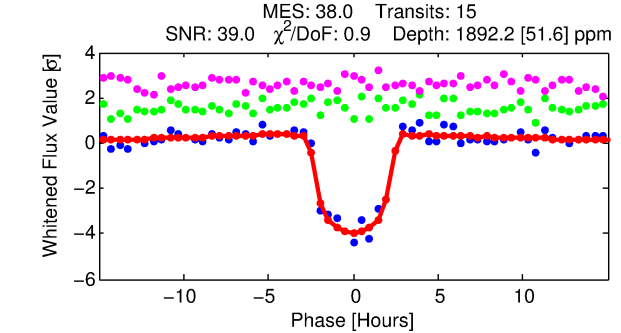
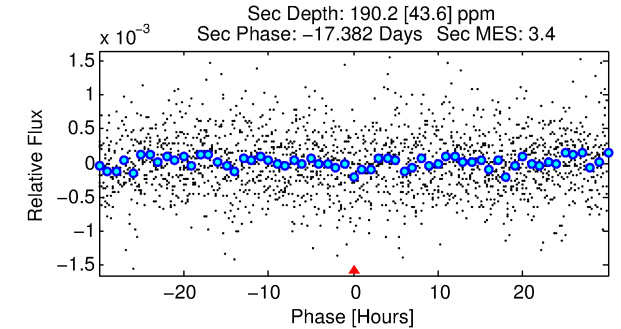
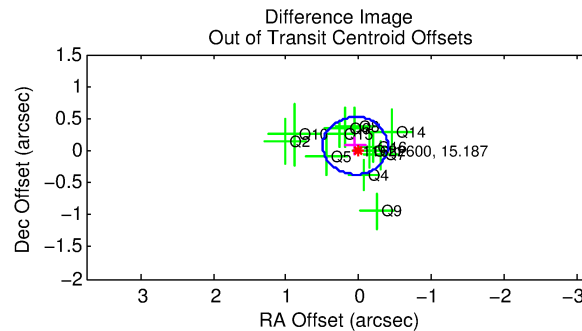
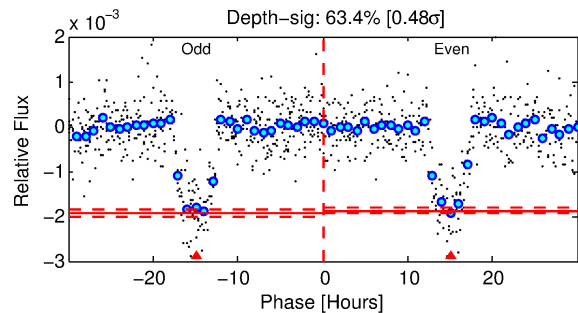
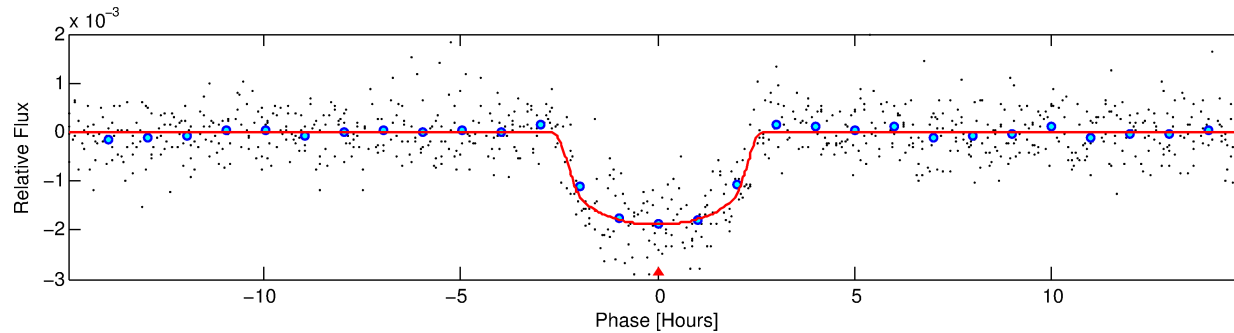
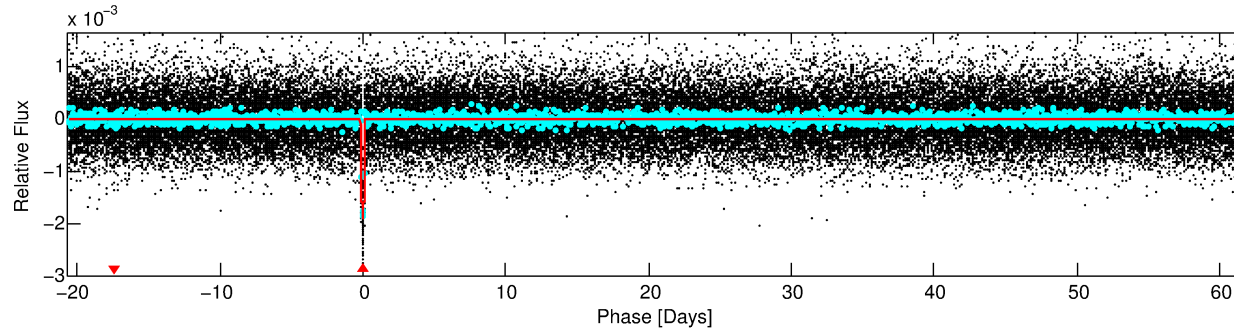
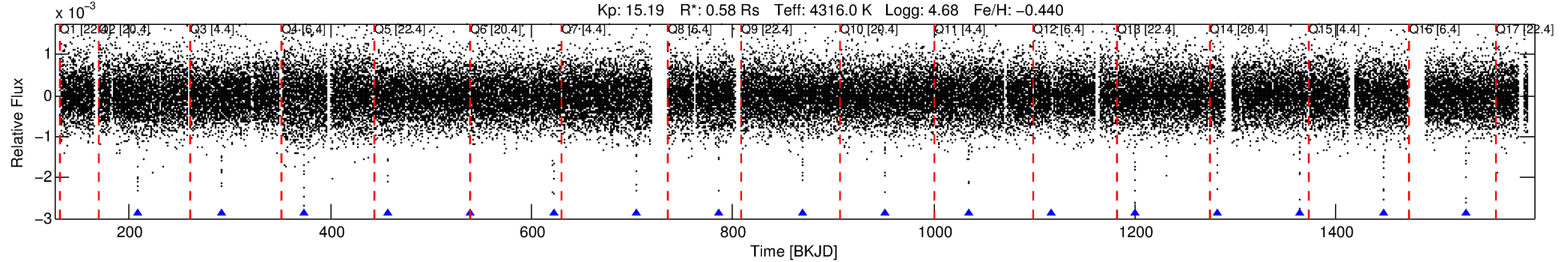
No Significant Match Found

DV One-Page Summary

KIC: 11622600 Candidate: 1 of 1 Period: 82.534 d

KOI: K01876.01 Corr: 0.984

Kp: 15.19 R*: 0.58 Rs Teff: 4316.0 K Logg: 4.68 Fe/H: -0.440



DV Fit Results:

Period = 82.53427 [0.00028] d
Epoch = 209.1256 [0.0027] BKJD
Rp/R* = 0.0421 [0.0080]
a/R* = 101.18 [67.92]
b = 0.67 [0.57]
Seff = 1.09 [0.10]
Teq = 260 [6] K
Rp = 2.66 [0.52] Re
a = 0.3103 [0.0123] AU
Ag = 1421.45 [636.46] [2.23σ]
Teffp = 2471 [279] K [7.92σ]

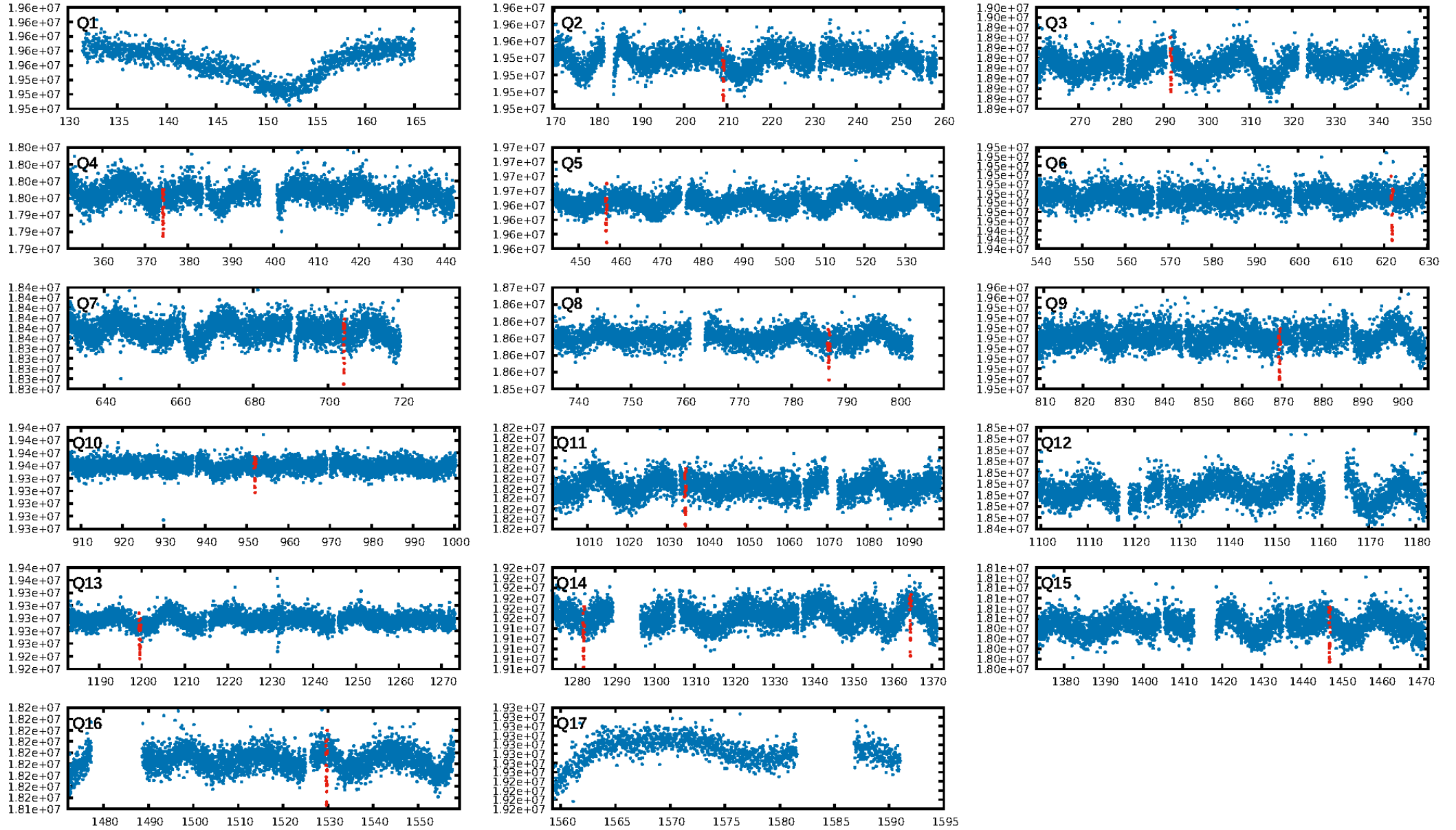
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 86.7%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: 2.49e-306
RollingBand-fgt: 1.00 [15/15]
GhostDiagnostic-chr: 3.798
Centroid-sig: 44.1%
Centroid-so: 0.239 arcsec [0.71σ]
OotOffset-rm: 0.089 arcsec [0.60σ]
KicOffset-rm: 0.113 arcsec [0.64σ]
OotOffset-st: 4/3/3/2 [12]
KicOffset-st: 4/3/3/2 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 1.00 [12/12]

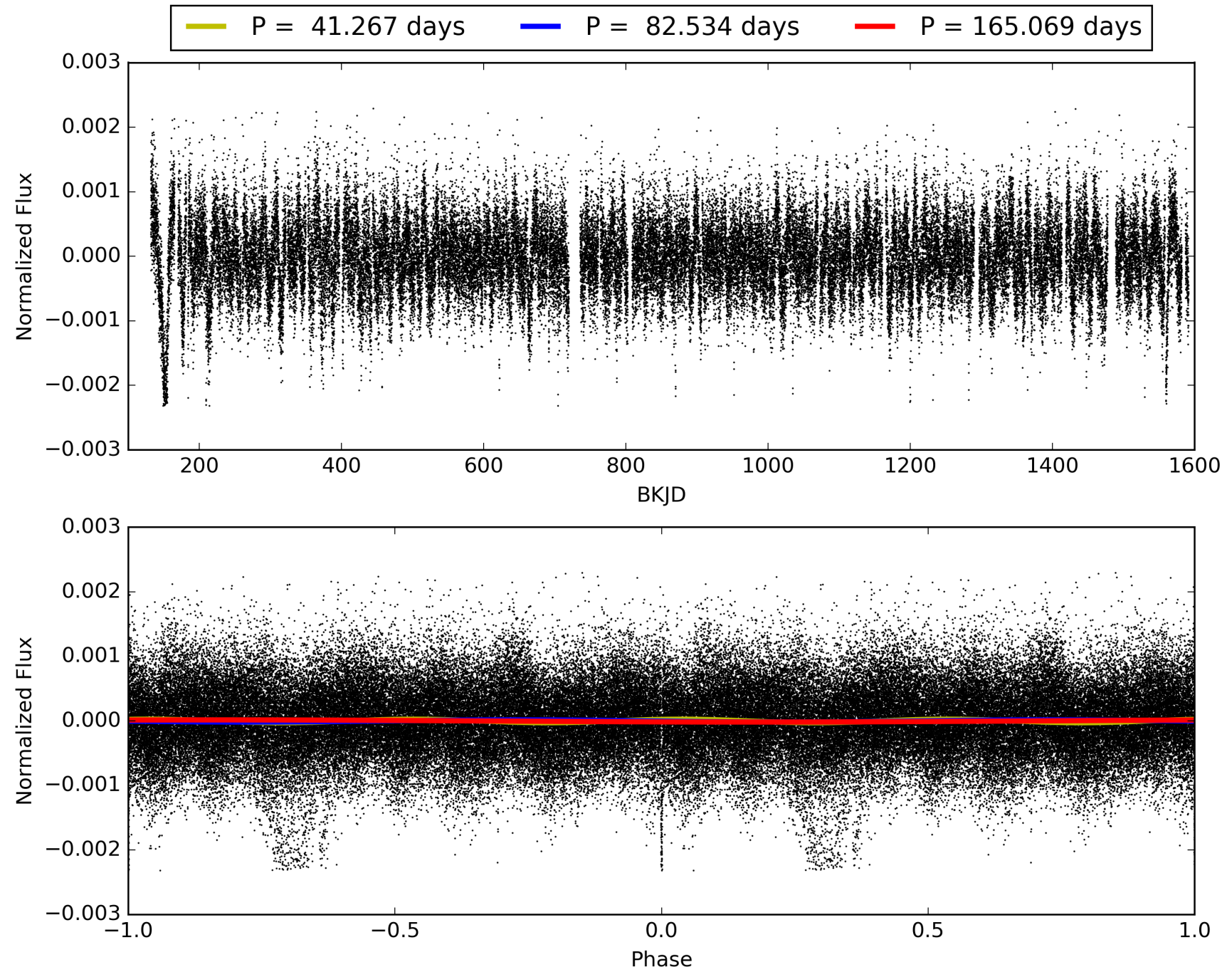
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:48:42 Z

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

TCE 011622600-01, PDC Light Curves

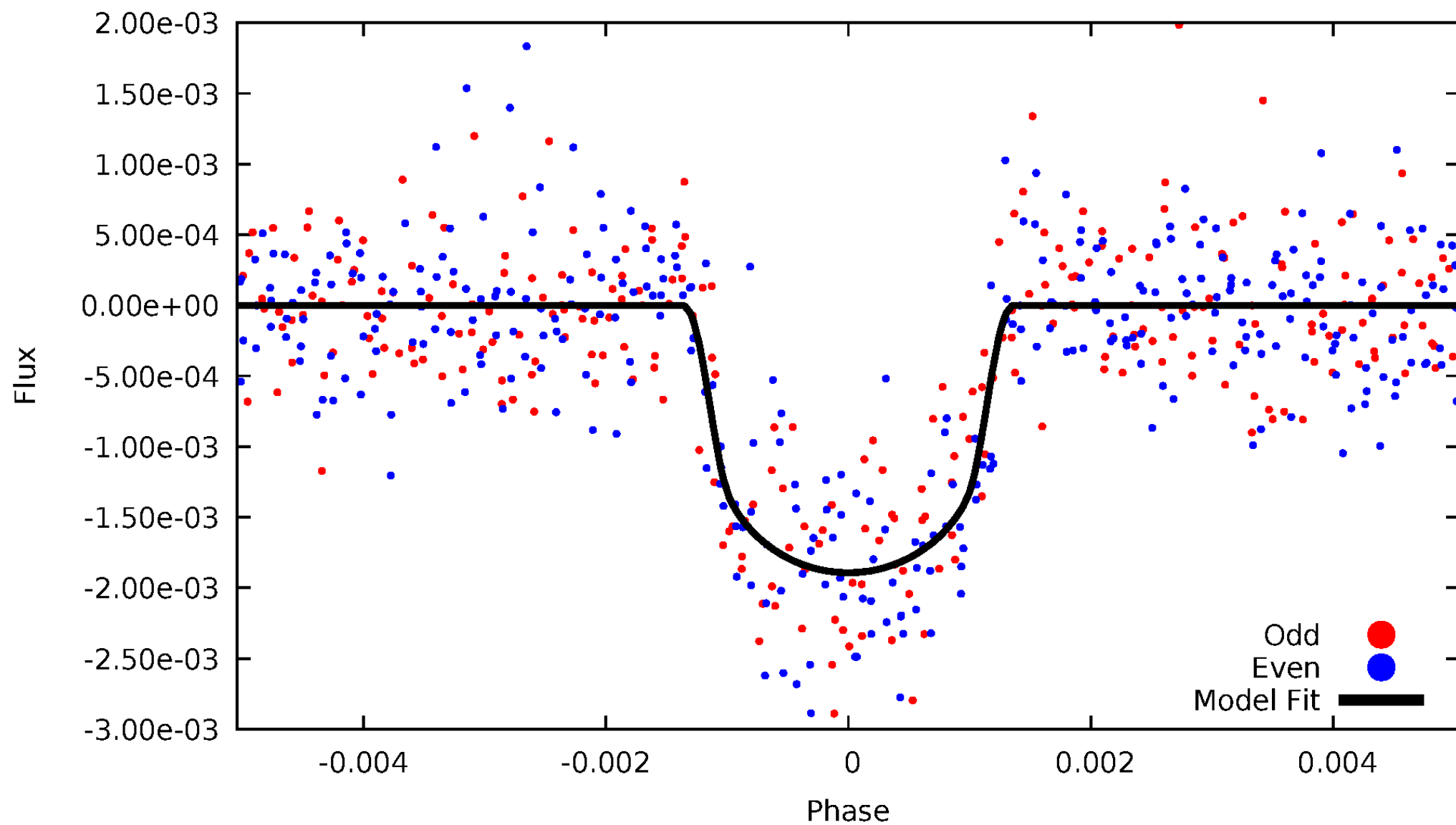


TCE 011622600-01



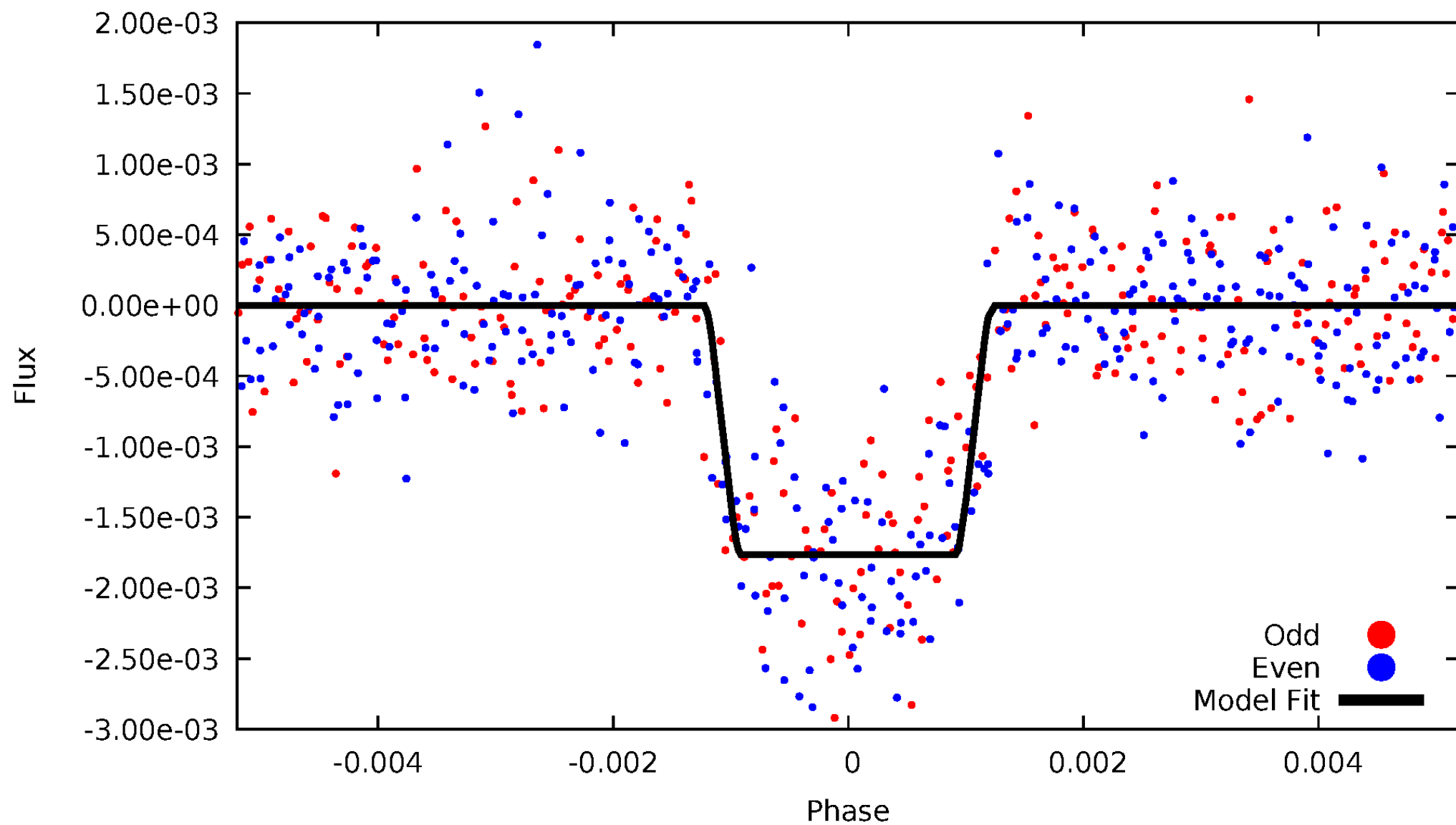
DV Odd/Even

TCE 011622600-01



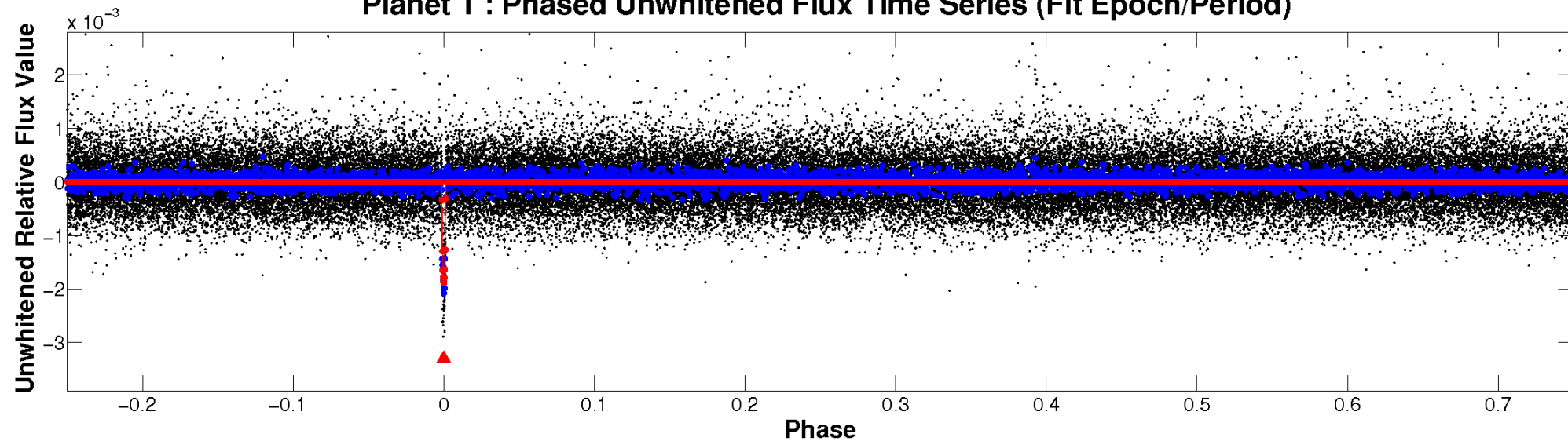
ALT Odd/Even

TCE 011622600-01

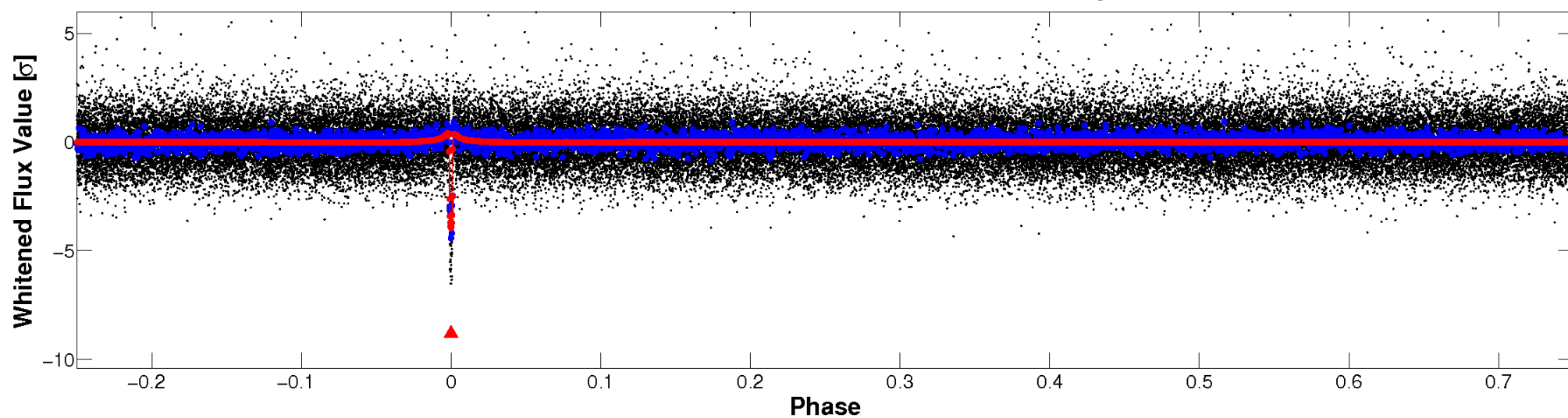


Non-Whitened Vs. Whitened Light Curve

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

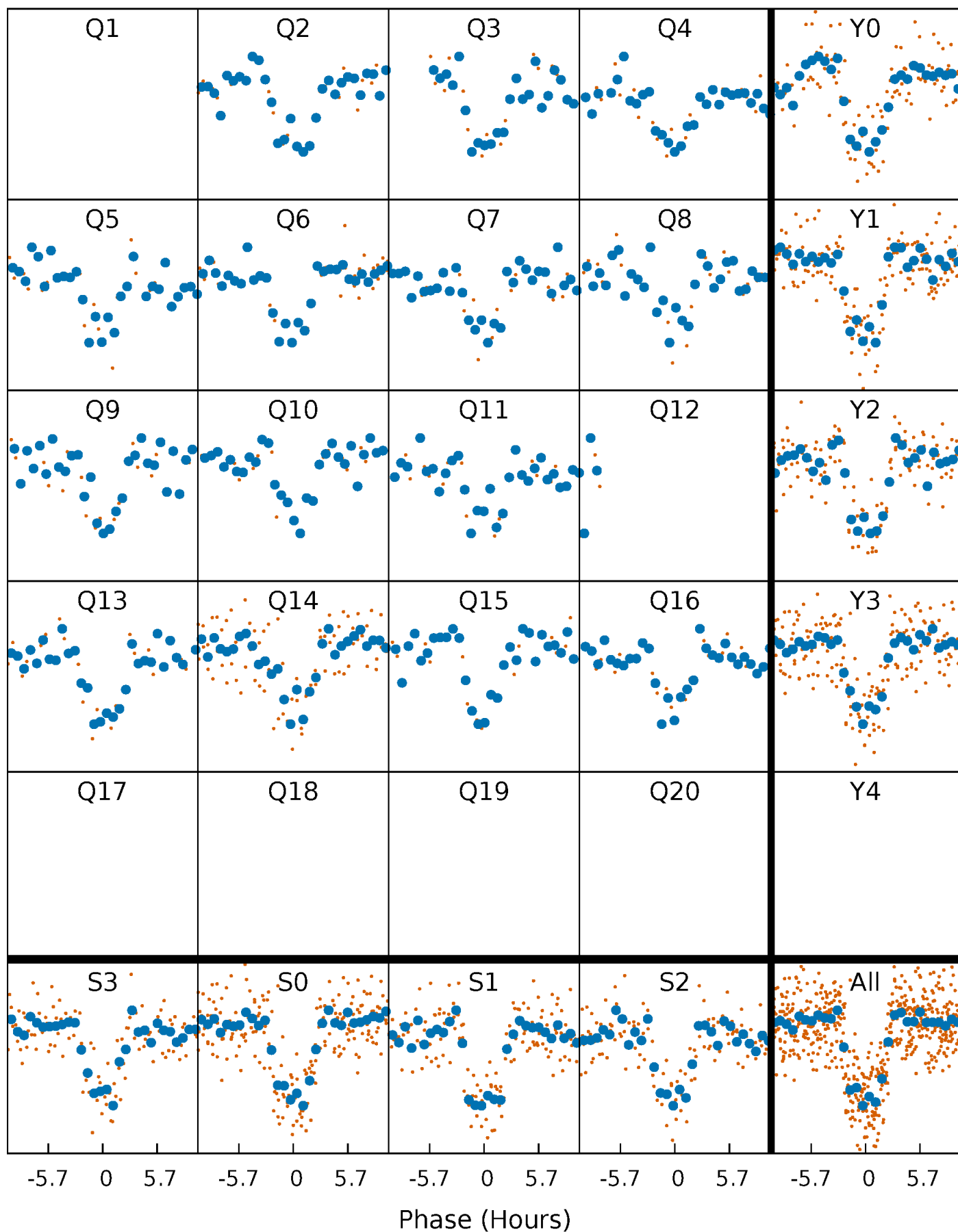


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



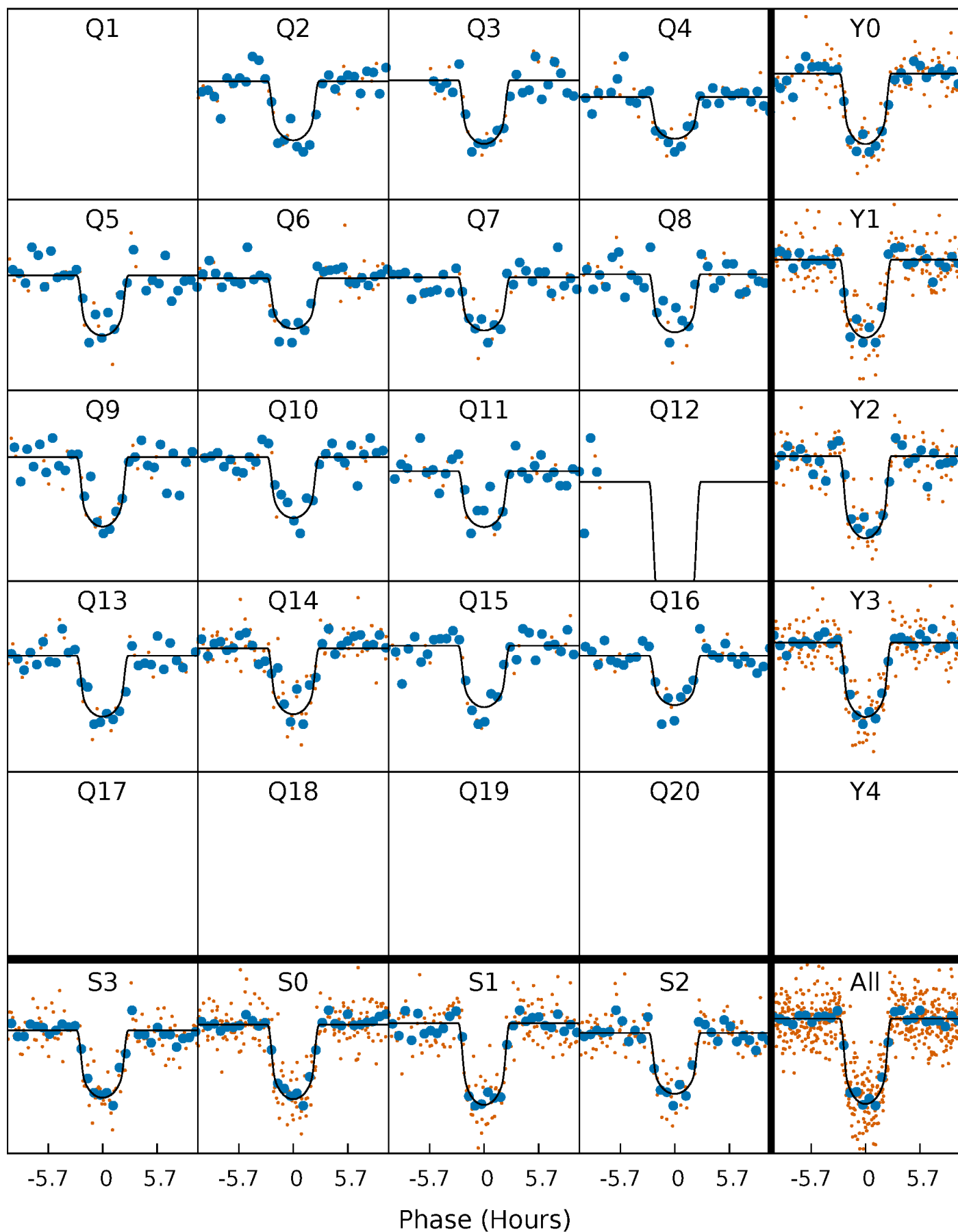
PDC Quarter-Phased Transit Curves

TCE 011622600-01 P= 82.534269 Days $T_0=209.125644$ (BKJD)



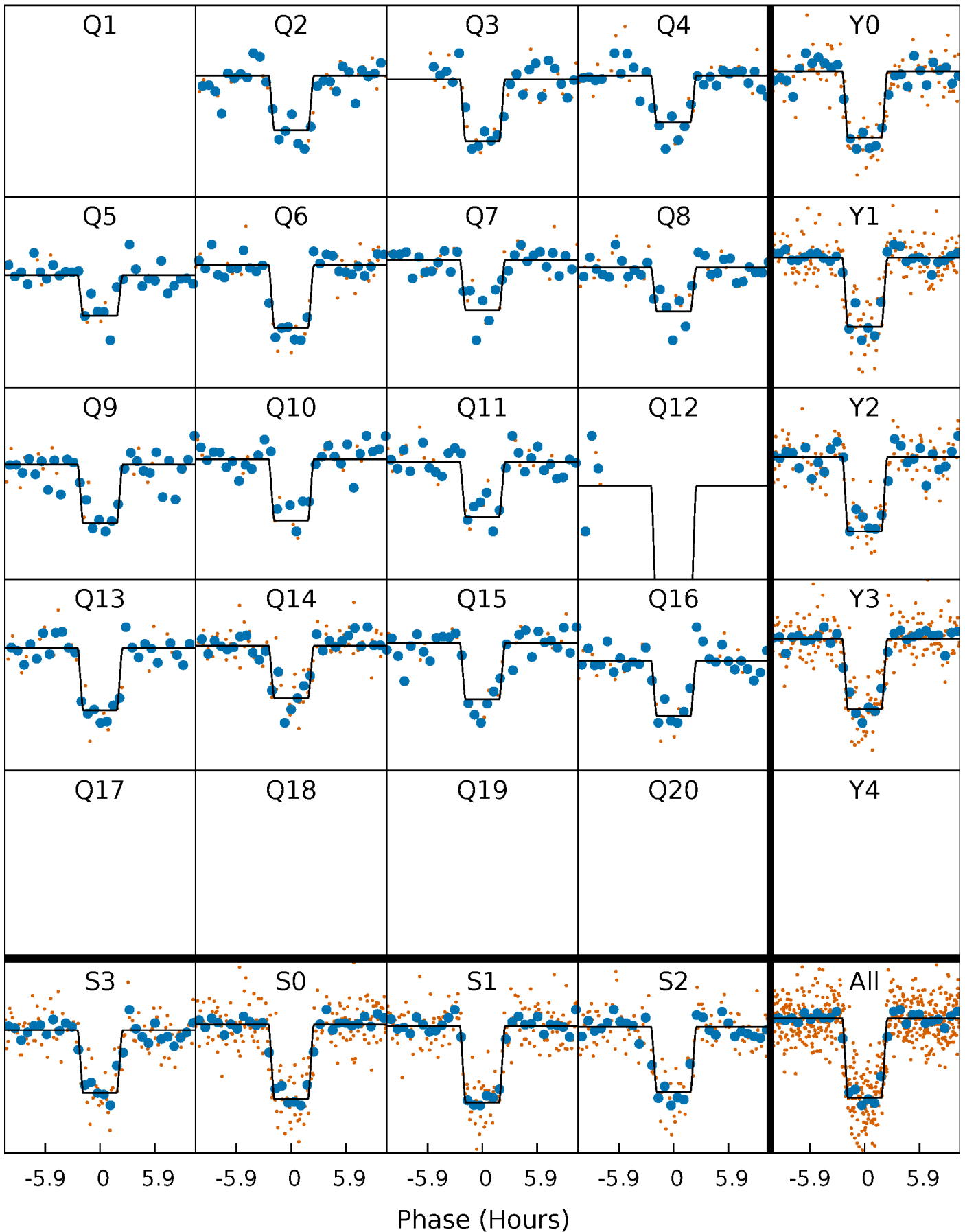
DV Quarter-Phased Transit Curves

TCE 011622600-01 P= 82.534269 Days $T_0=209.125644$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

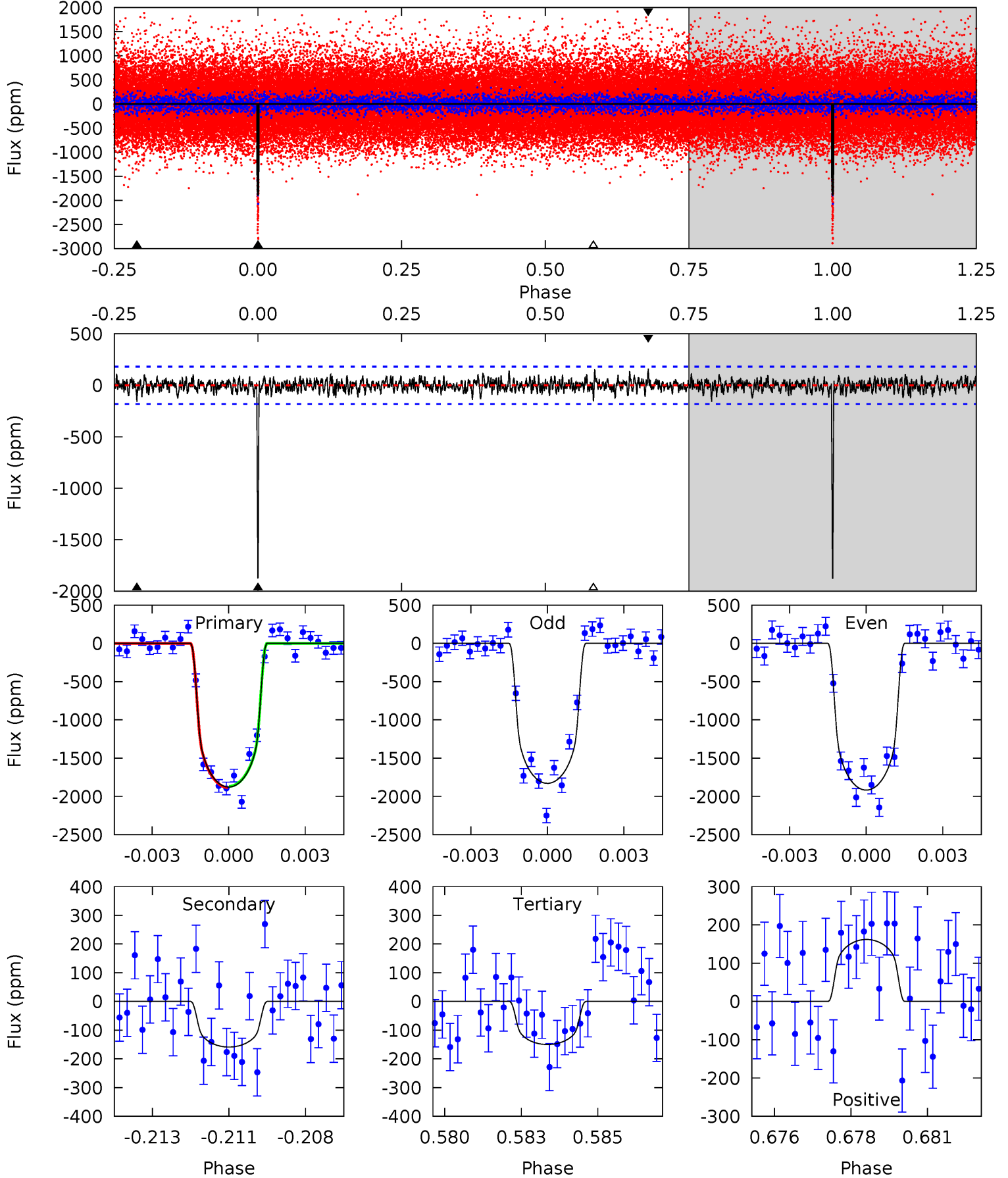
TCE 011622600-01 P= 82.534434 Days $T_0=209.124511$ (BKJD)



DV Model-Shift Uniqueness Test

011622600-01, $P = 82.534269$ Days, $E = 126.591375$ Days

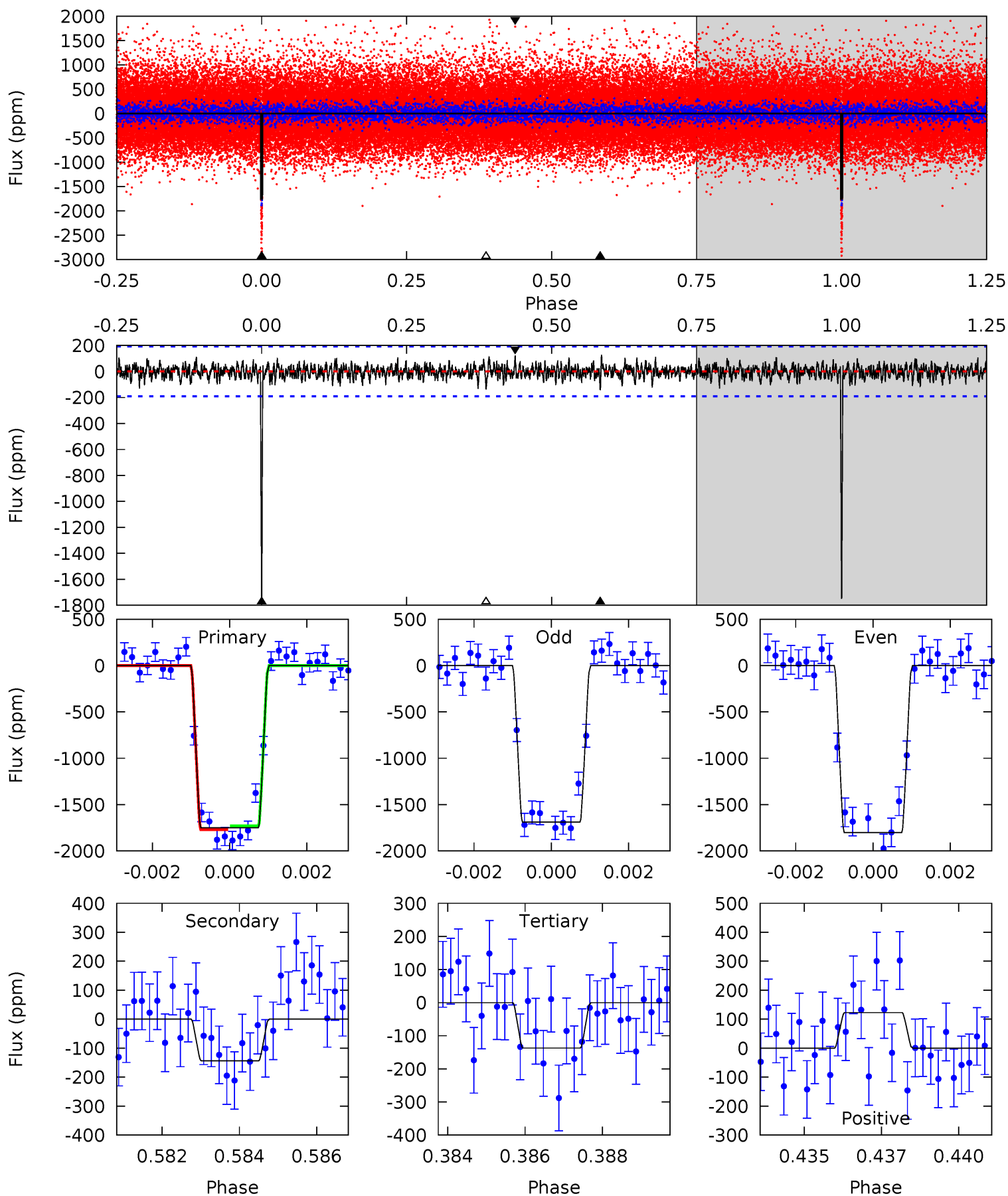
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
54.6	4.62	4.36	4.71	5.27	3.00	1.25	50.2	49.9	0.25	-0.09	1.28	0.99	0.08	0.23



Alt Model-Shift Uniqueness Test

011622600-01, $P = 82.534434$ Days, $E = 126.590077$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.3	3.97	3.79	3.39	5.29	3.03	1.05	44.5	44.9	0.18	0.58	1.54	1.03	0.07	0.58



Stellar Parameters For KIC 011622600

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4316^{+86}_{-86}	$4.678^{+0.028}_{-0.023}$	$-0.440^{+0.150}_{-0.150}$	$0.580^{+0.026}_{-0.029}$	$0.584^{+0.031}_{-0.027}$	$4.221^{+0.463}_{-0.377}$
	+2%/-2%	+1%/-0%	+34%/-34%	+4%/-5%	+5%/-5%	+11%/-9%
Source	SPE60	SPE60	SPE60	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011622600-01 / KOI 1876.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-159 ± 34	$2.66^{+0.55}_{-0.48}$	363^{+8}_{-8}	2923^{+205}_{-178}	1172^{+692}_{-435}
Alt.	-144 ± 36	$2.66^{+0.46}_{-0.50}$	363^{+8}_{-8}	2895^{+183}_{-183}	1087^{+596}_{-399}

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

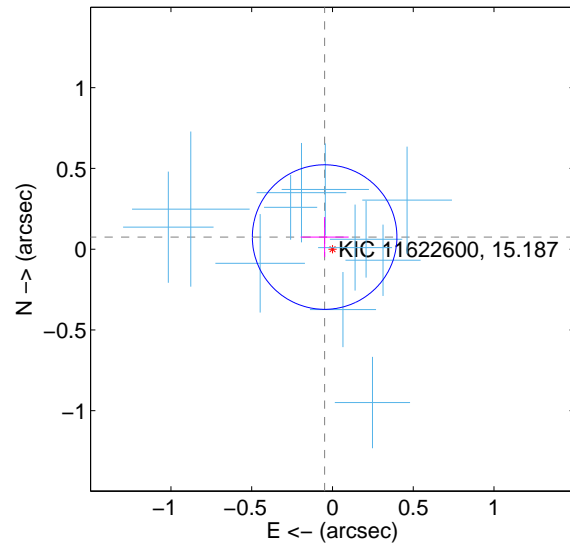
Supplemental centroid analysis for 011622600-01. Kepler magnitude: 15.19. Transit SNR 38.99

There are 12 quarters with good PRF difference image offsets

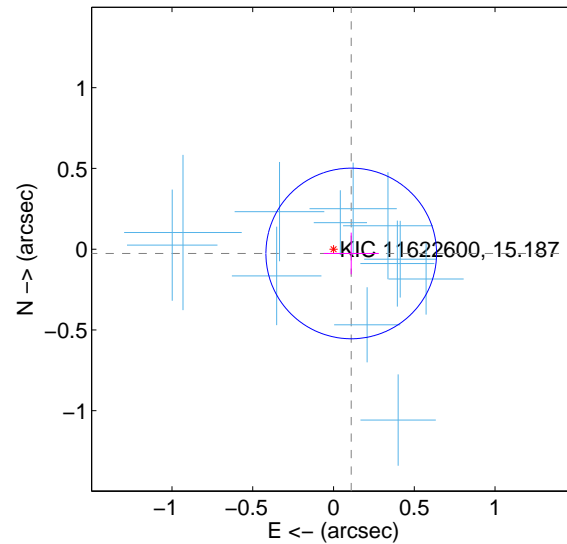
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.089 ± 0.149	0.60	0.048 ± 0.149	0.075 ± 0.124
PRF-fit source offset from KIC position	0.113 ± 0.176	0.64	-0.110 ± 0.171	-0.027 ± 0.129
photometric centroid source offset	0.24 ± 0.34	0.71	-0.15 ± 0.33	0.18 ± 0.34

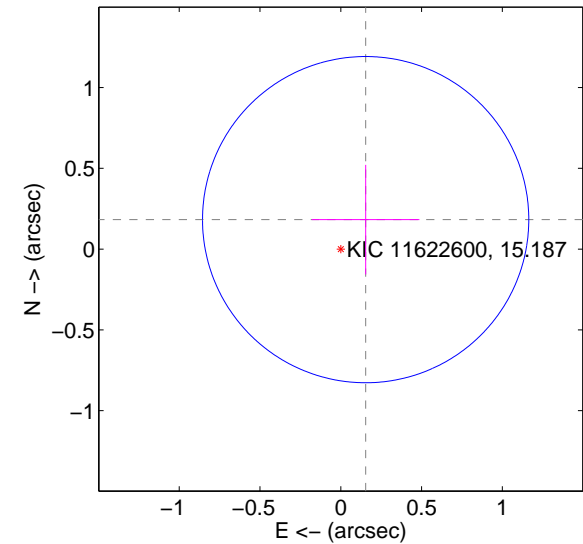
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



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.

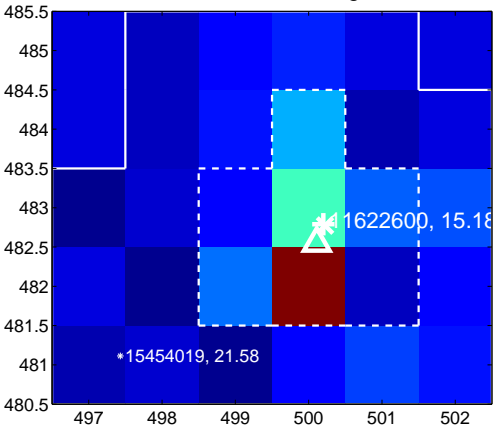
Q1 no difference image



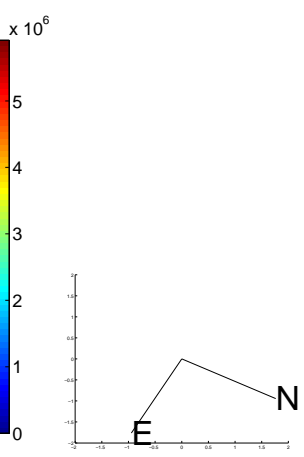
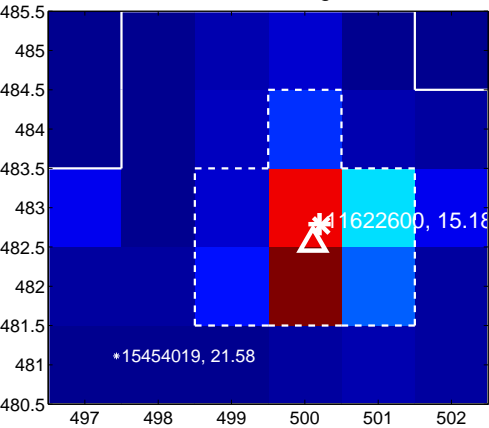
Q1 no OOT image



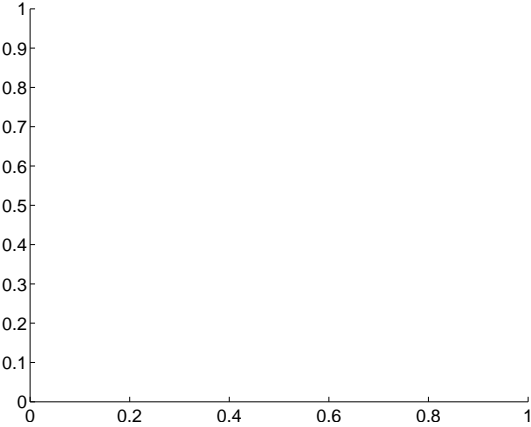
Q2 difference image



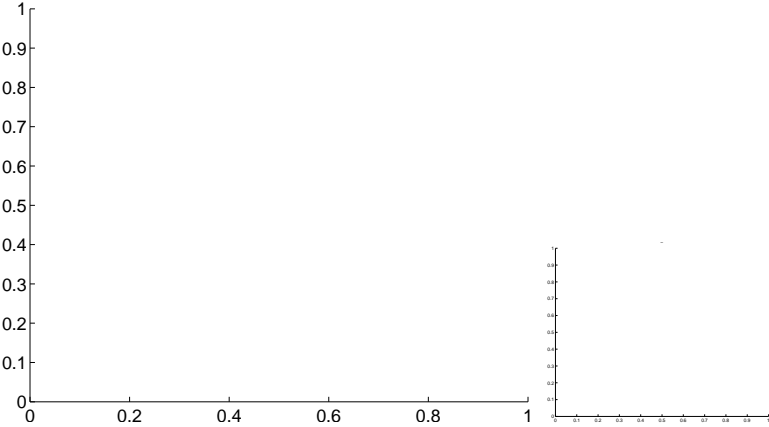
Q2 OOT image



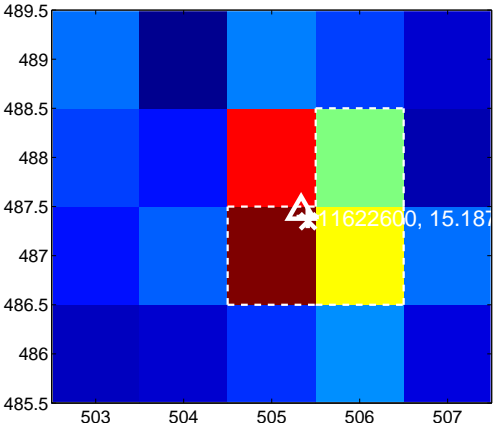
Q3 no difference image



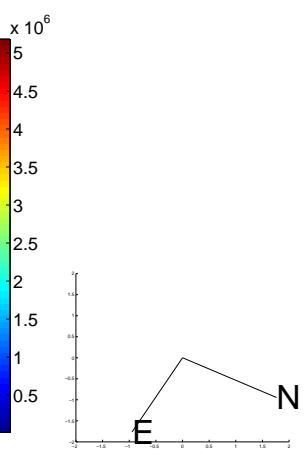
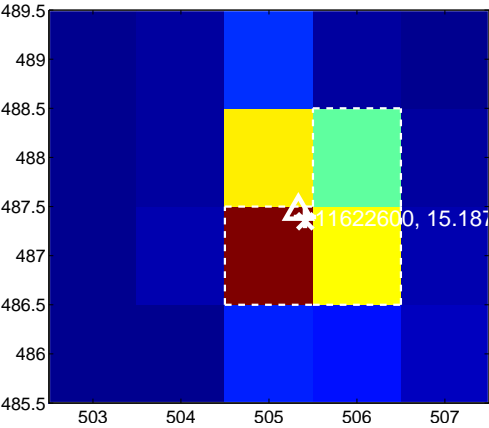
Q3 no OOT image



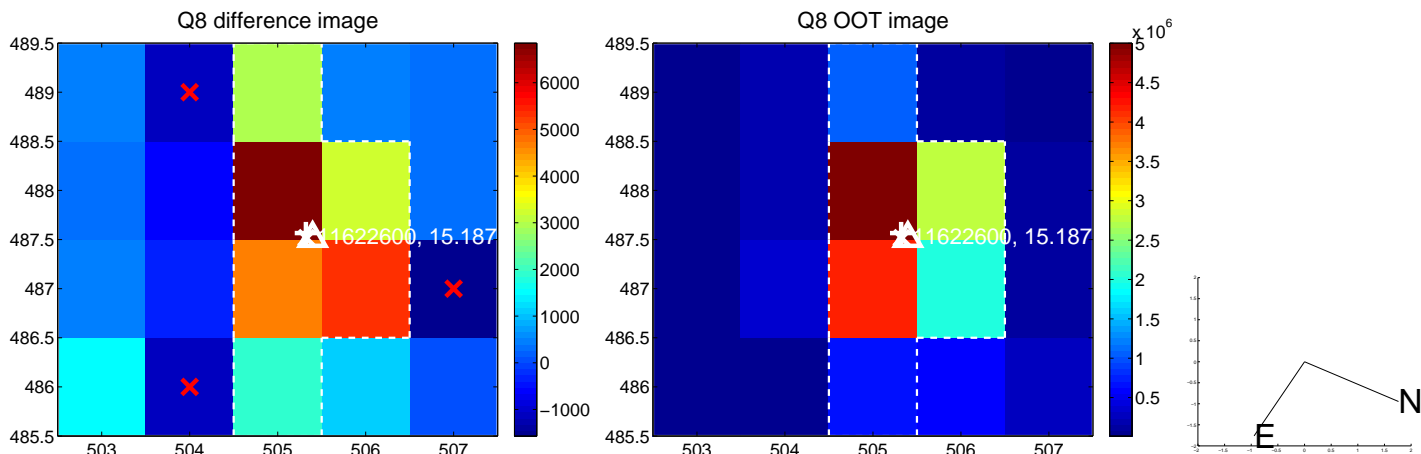
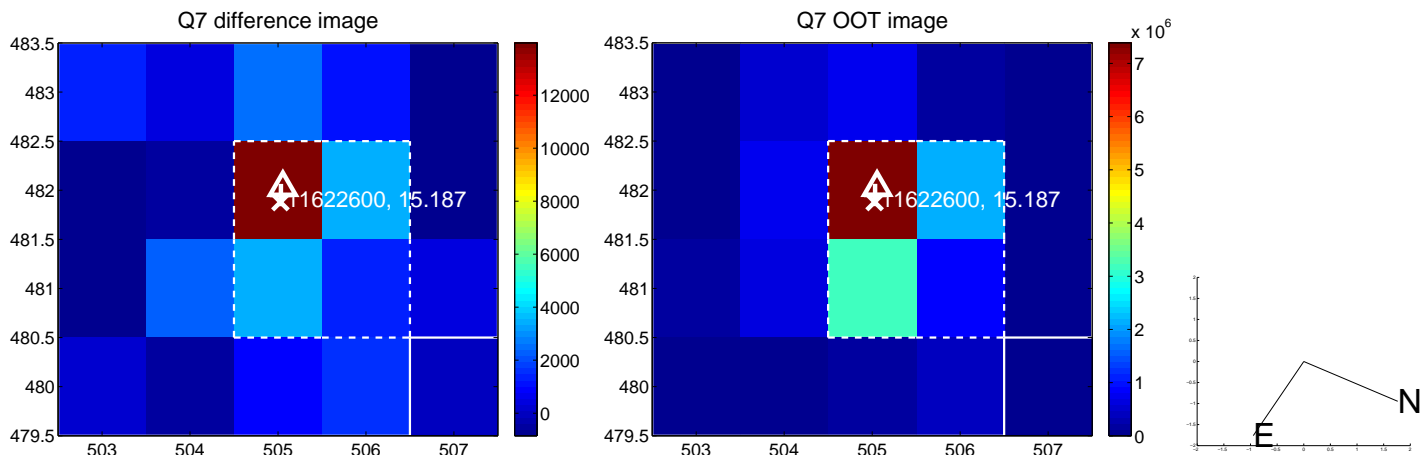
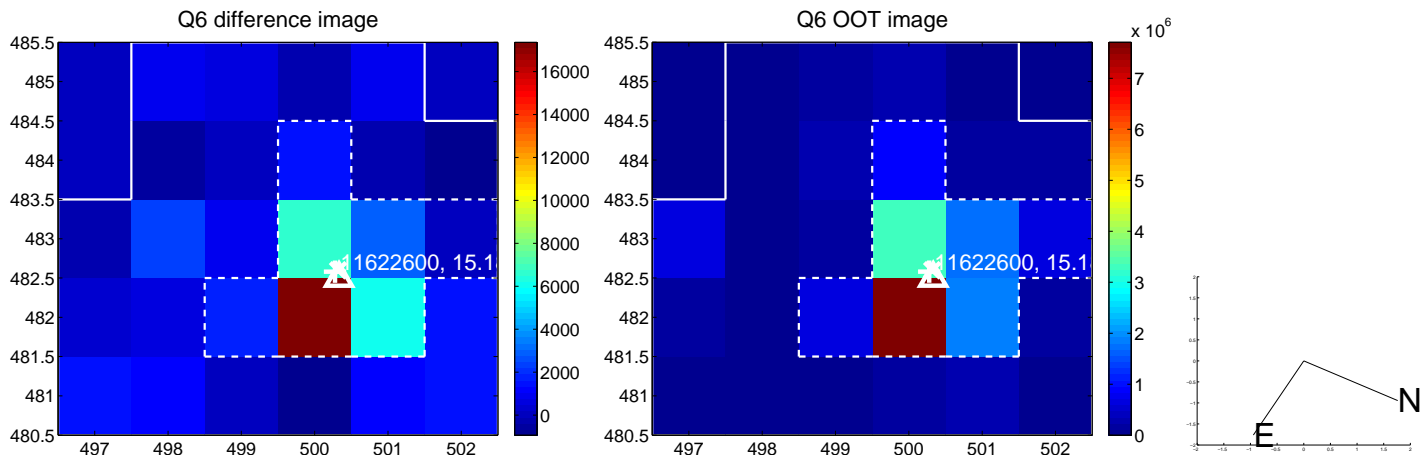
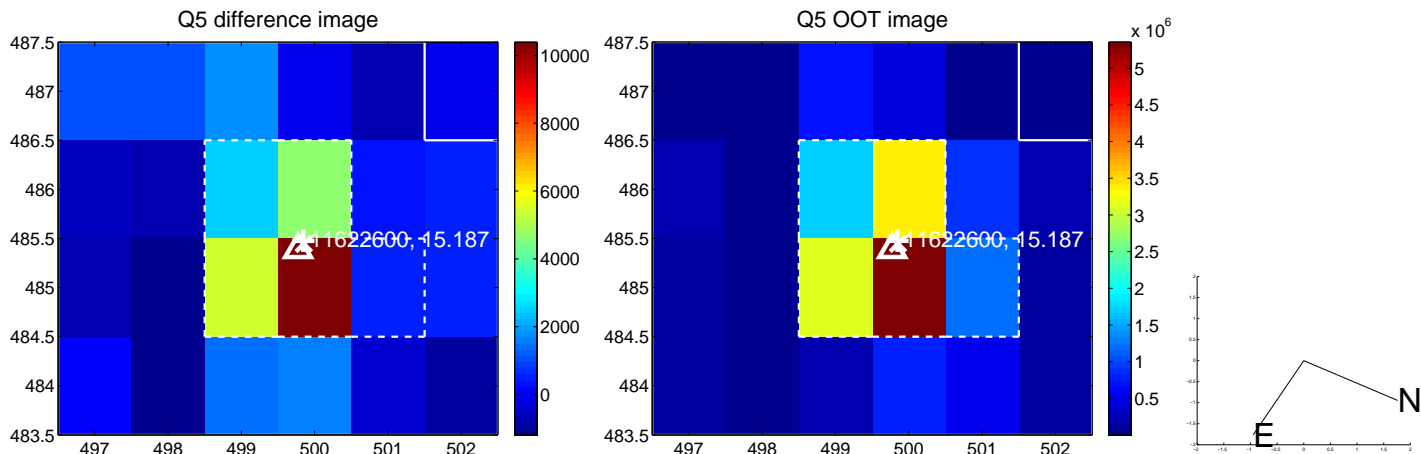
Q4 difference image



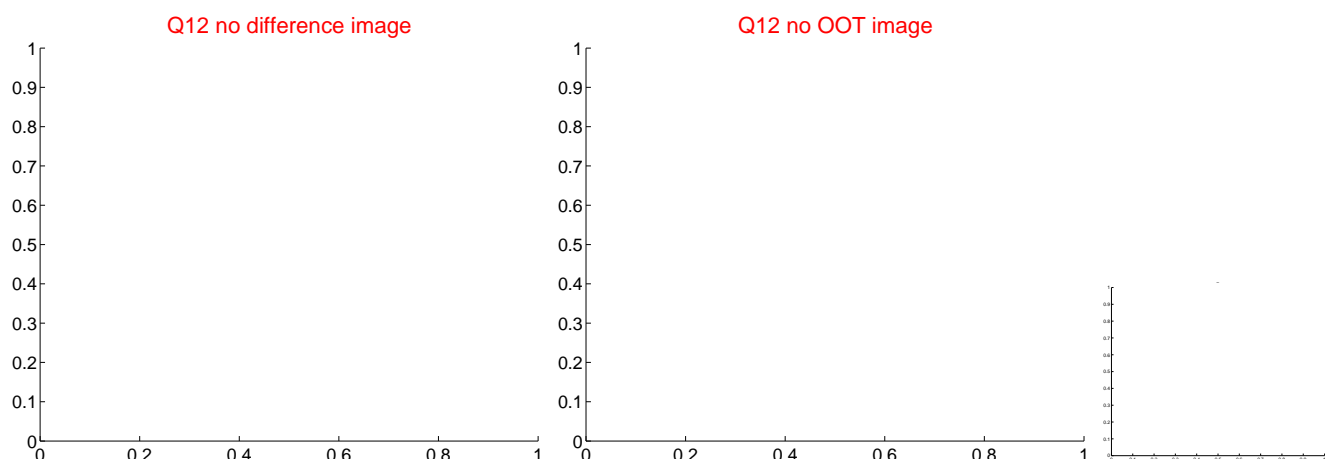
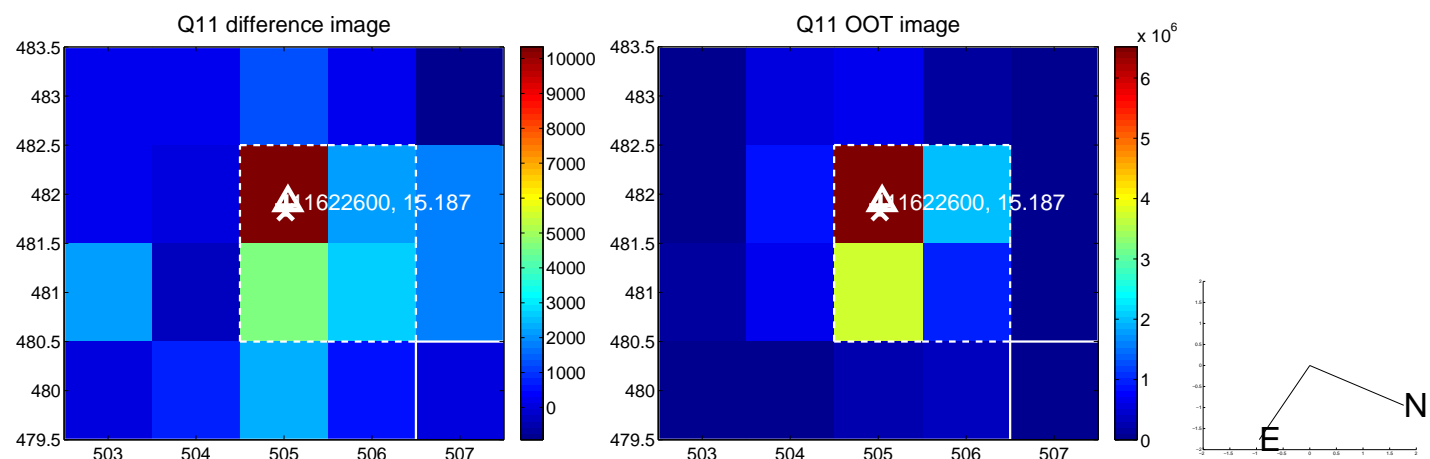
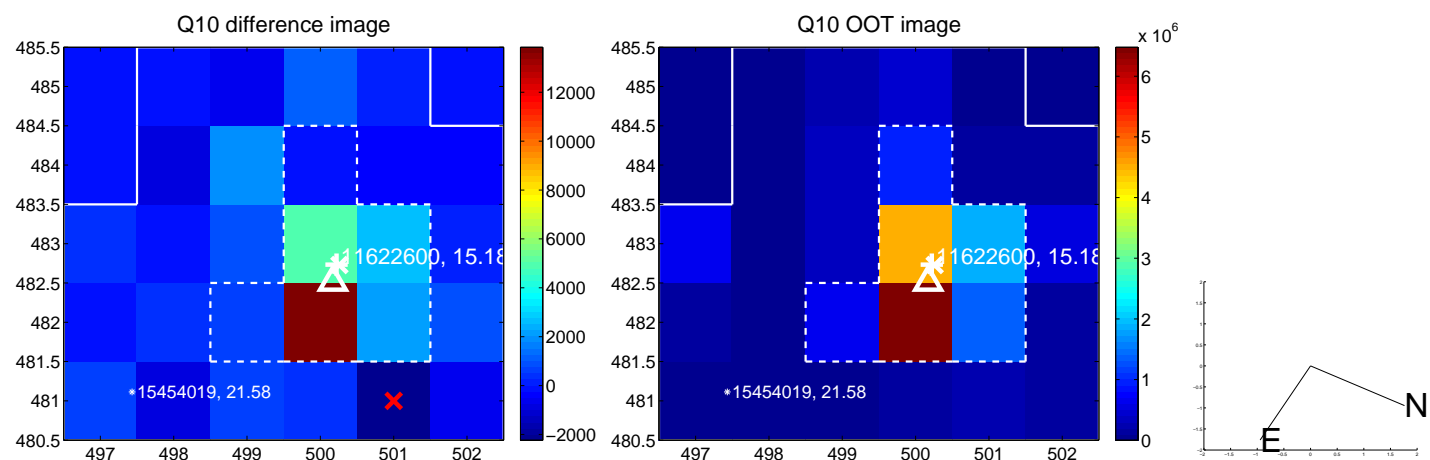
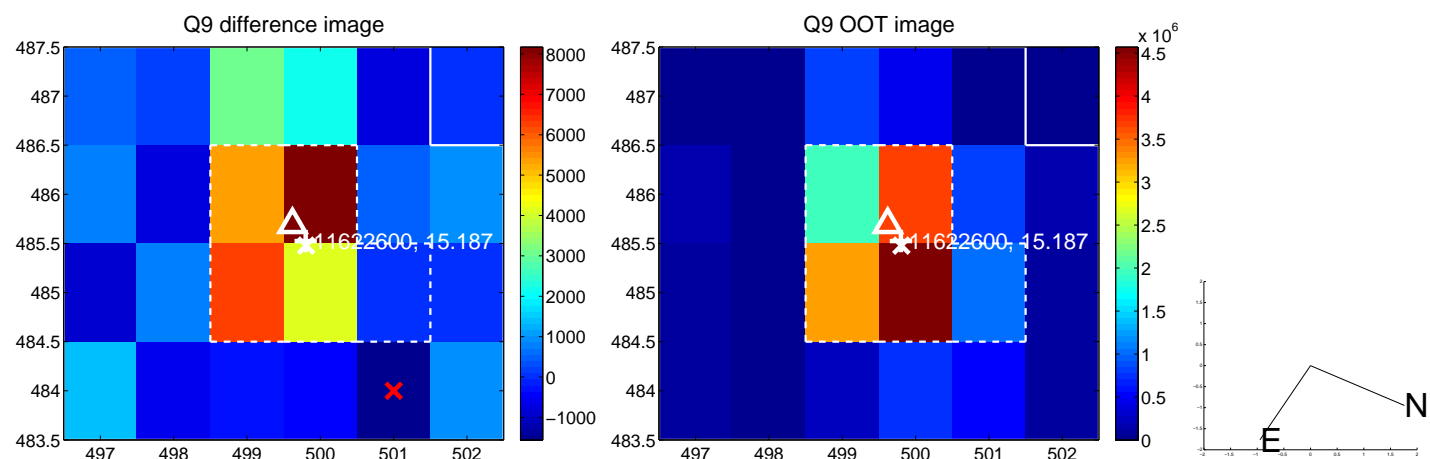
Q4 OOT image



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

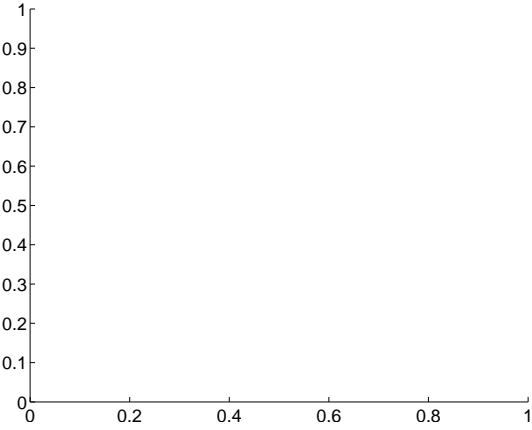


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

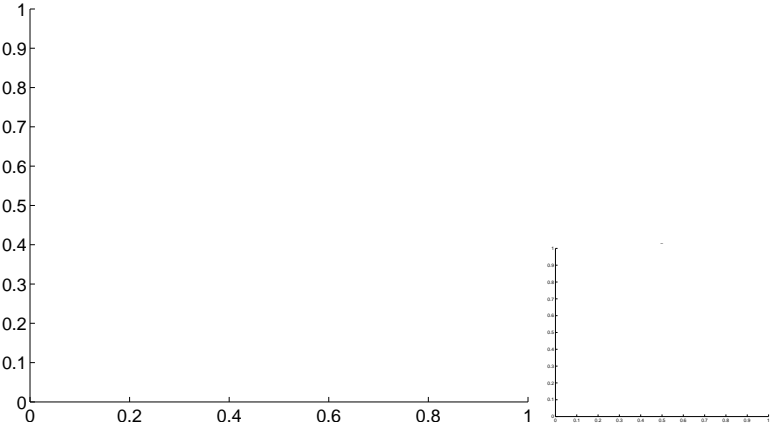


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

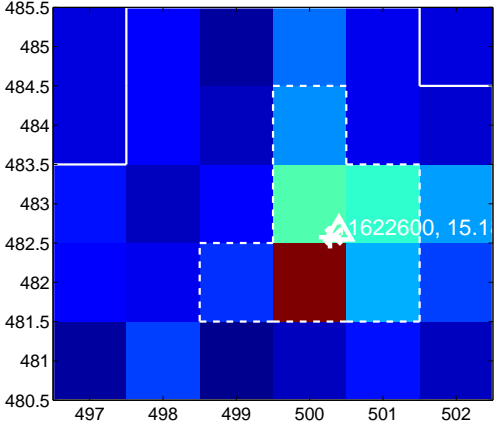
Q13 no difference image



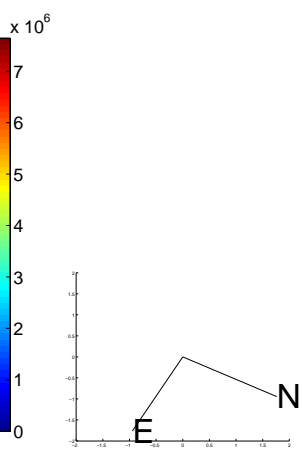
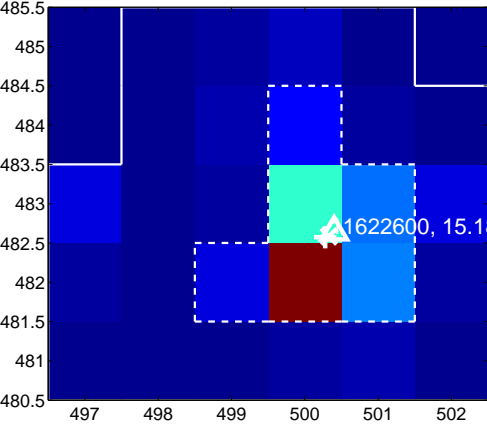
Q13 no OOT image



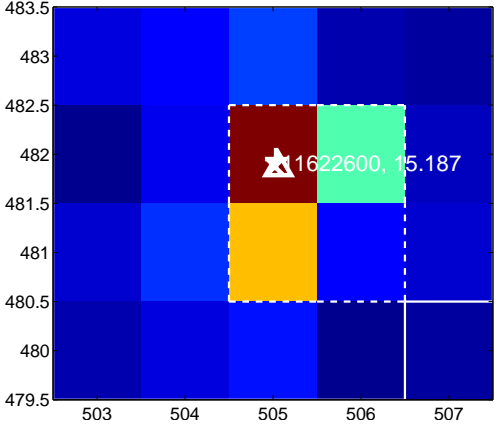
Q14 difference image



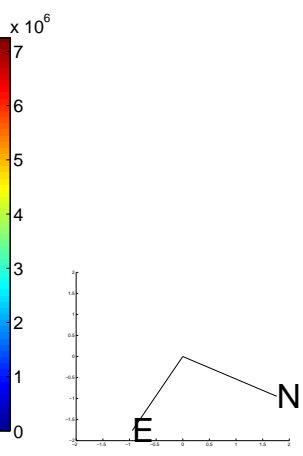
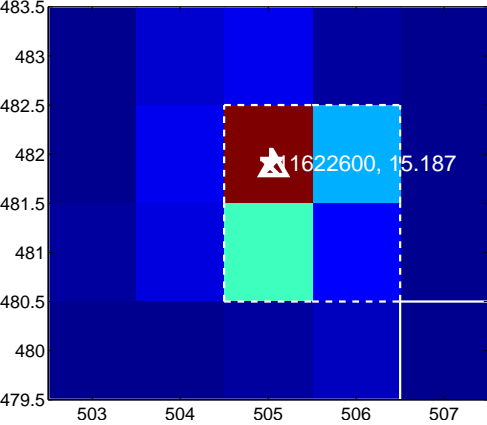
Q14 OOT image



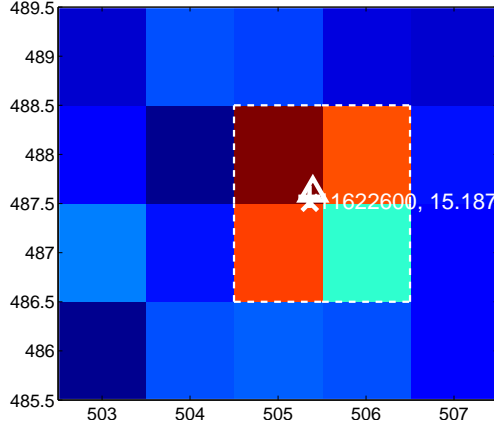
Q15 difference image



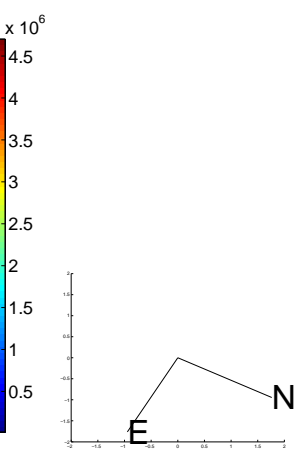
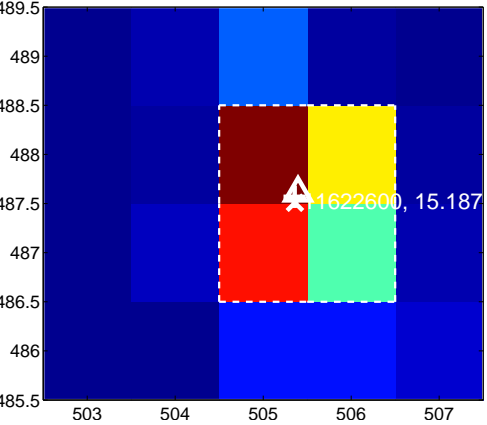
Q15 OOT image



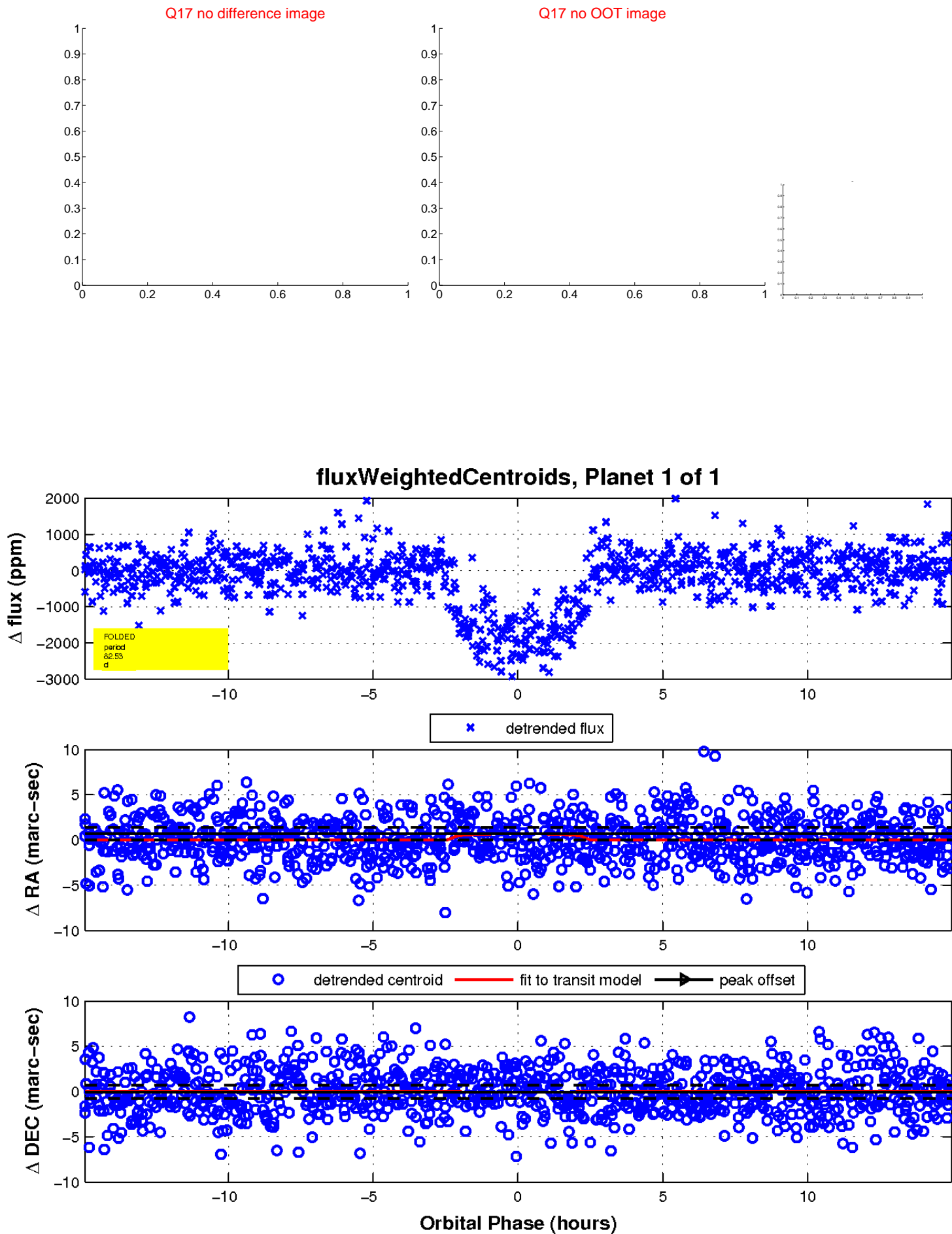
Q16 difference image



Q16 OOT image



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



UKIRT Image

Declination

