

KIC 011513441

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})
011513441-01	OBS	5908.01	85.569664	188.057702	574.5	5.104	19.1	19.4	1.95	5361	7.56	19.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011513441-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET—HALO_GHOST

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 011513441-01

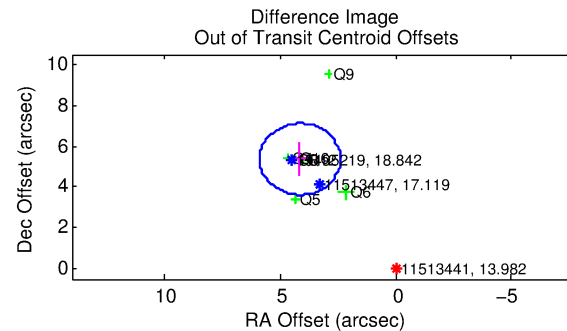
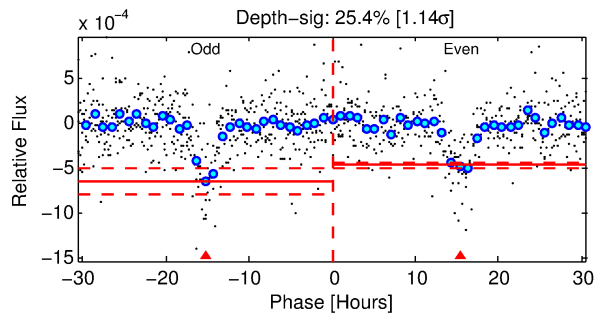
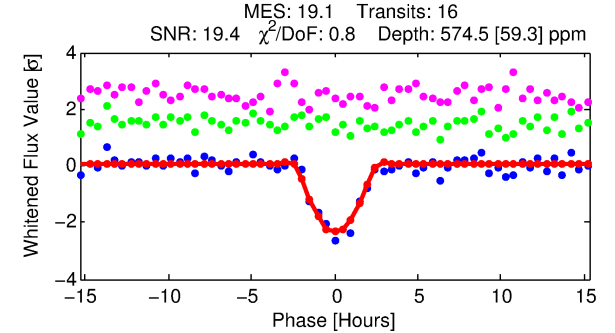
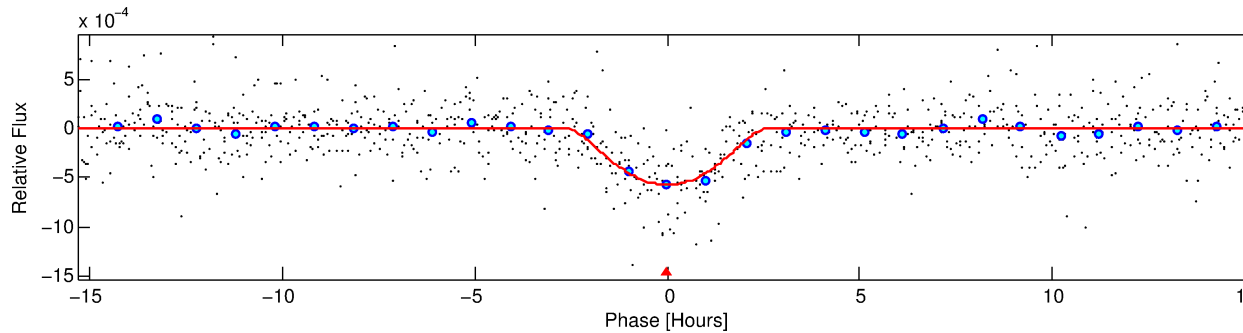
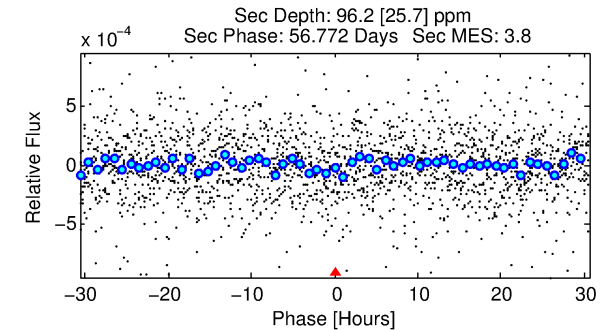
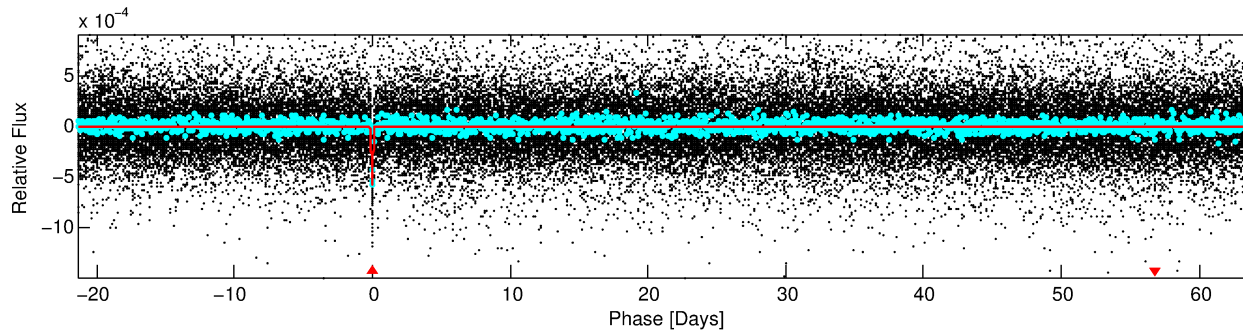
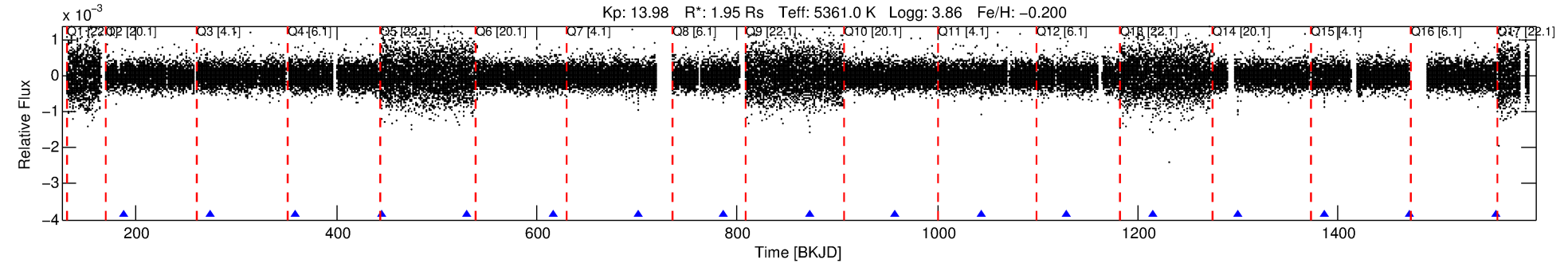
No Significant Match Found

DV One-Page Summary

KIC: 11513441 Candidate: 1 of 1 Period: 85.570 d

KOI: K05908 Corr: No Ephemeris Match

Kp: 13.98 R*: 1.95 Rs Teff: 5361.0 K Logg: 3.86 Fe/H: -0.200



DV Fit Results:

Period = 85.56966 [0.00062] d
Epoch = 188.0577 [0.0059] BKJD
Rp/R* = 0.0355 [0.0273]
a/R* = 40.86 [11.95]
b = 0.99 [0.05]
Seff = 19.54 [21.27]
Teq = 536 [146] K
Rp = 7.56 [7.24] Re
a = 0.3797 [0.2401] AU
Ag = 133.43 [253.27] [0.52σ]
Teffp = 2817 [1104] K [2.05σ]

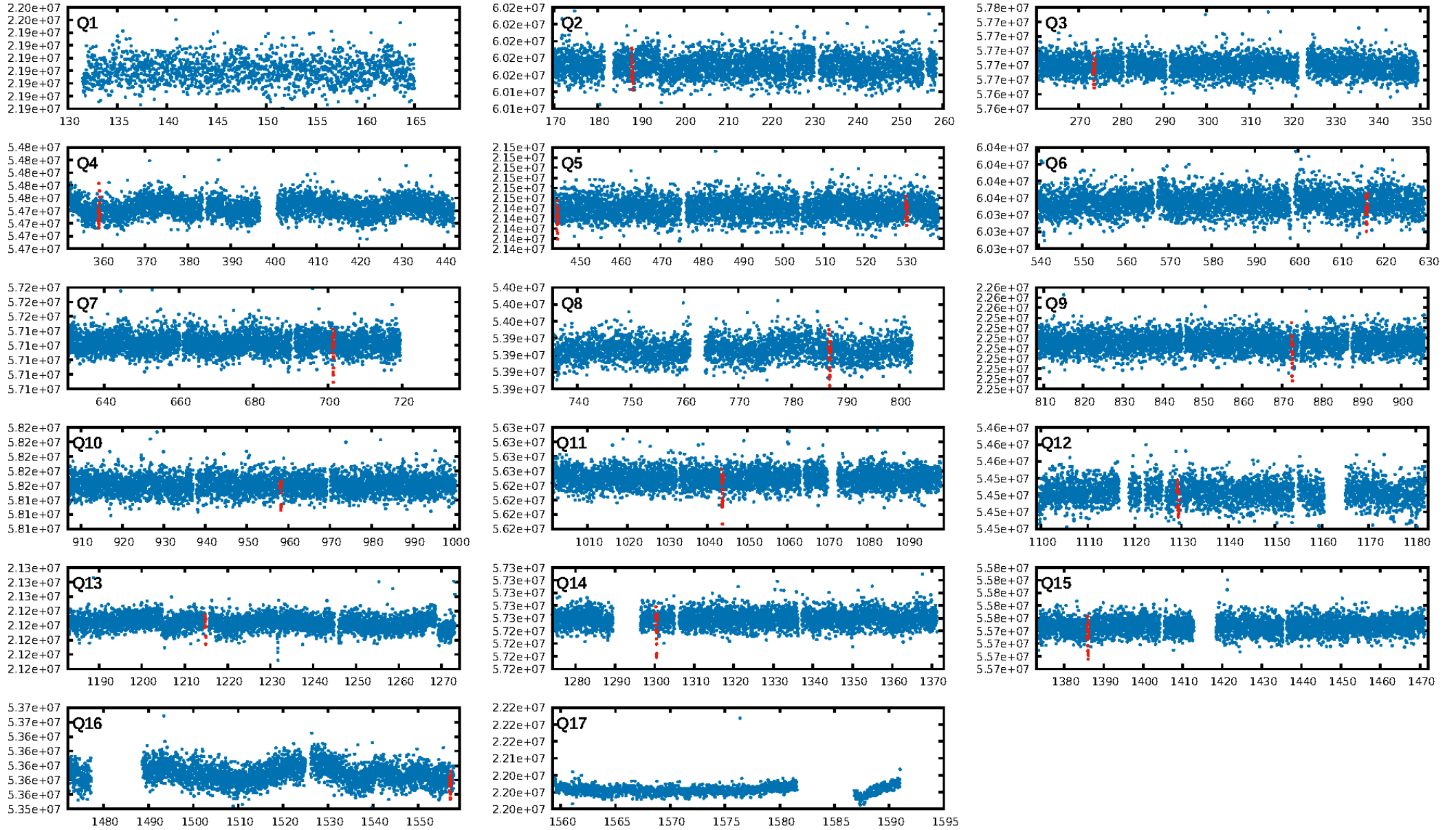
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.33e-83
RollingBand-fgt: 1.00 [16/16]
GhostDiagnostic-chr: 0.1193
Centroid-sig: 0.0%
Centroid-so: 11.791 arcsec [19.73σ]
OotOffset-rm: 6.780 arcsec [11.62σ]
KicOffset-rm: 7.028 arcsec [15.53σ]
OotOffset-st: 1/0/4/2 [7]
KicOffset-st: 1/0/4/2 [7]
DiffImageQuality-fgm: 1.00 [7/7]
DiffImageOverlap-fno: 1.00 [14/14]

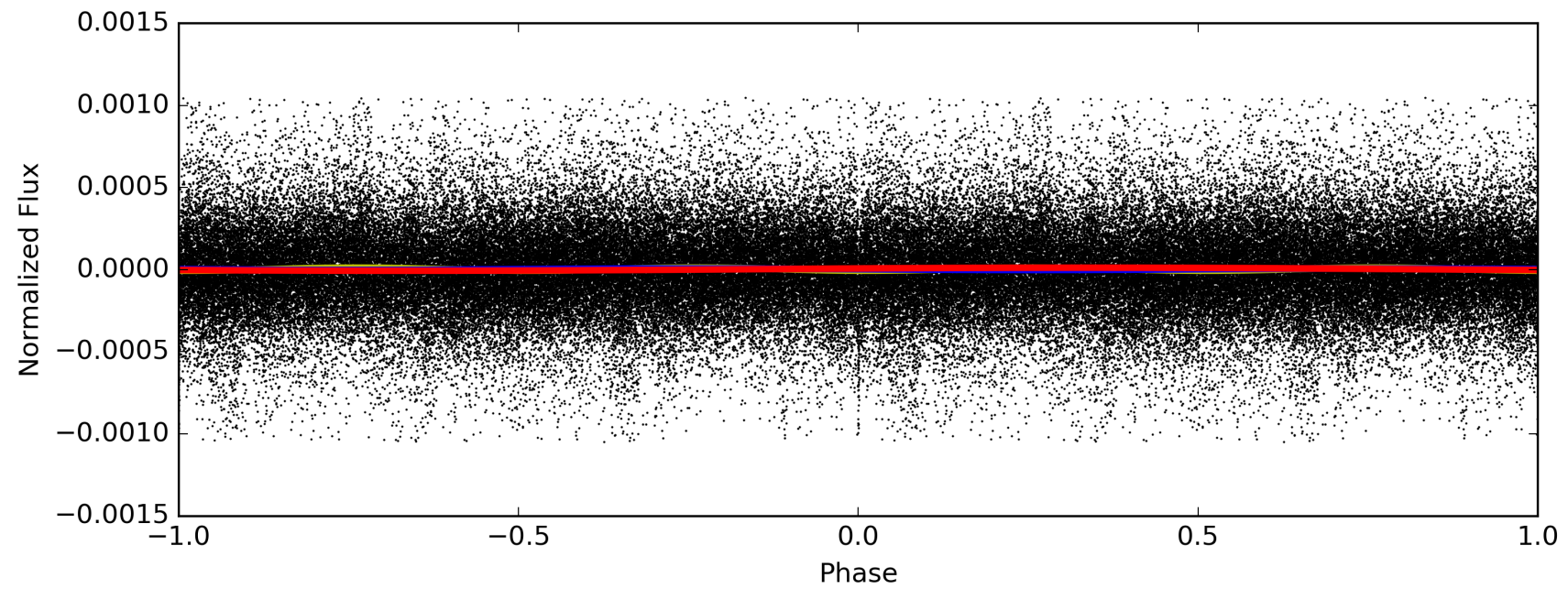
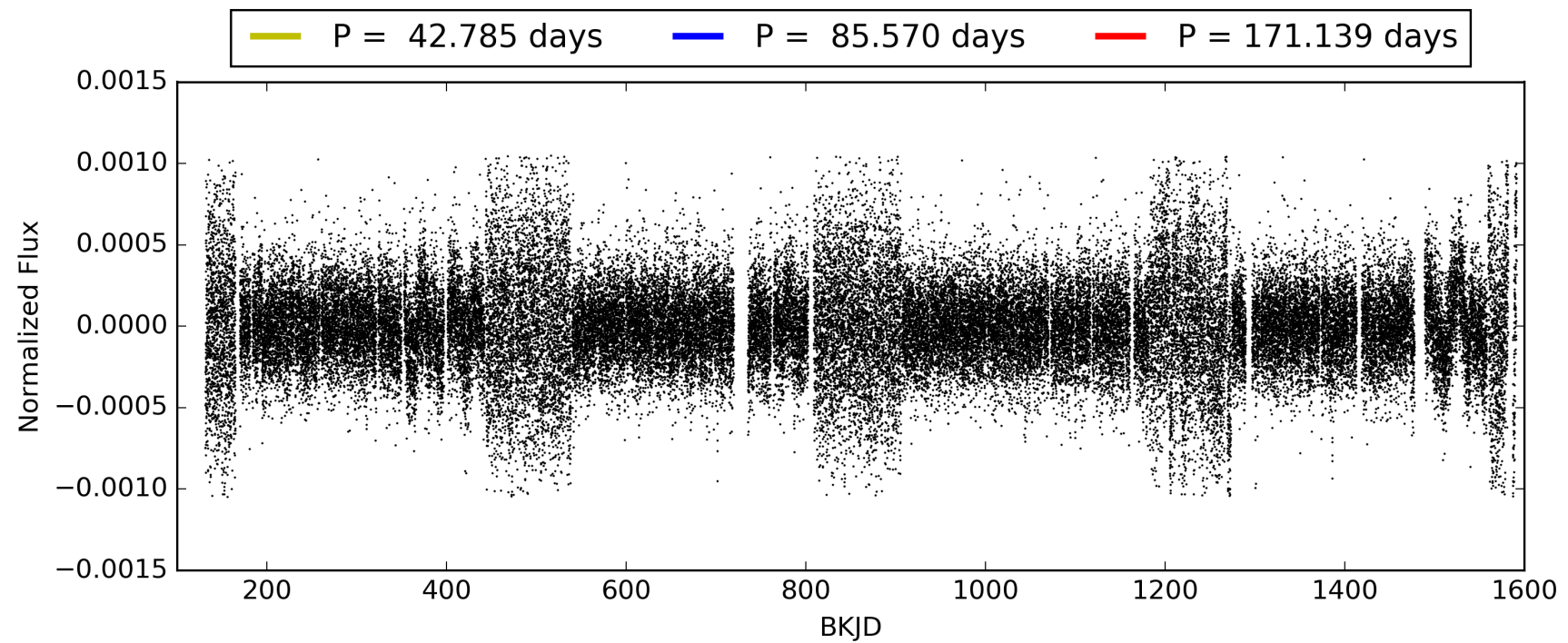
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:33:50 Z

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

TCE 011513441-01, PDC Light Curves

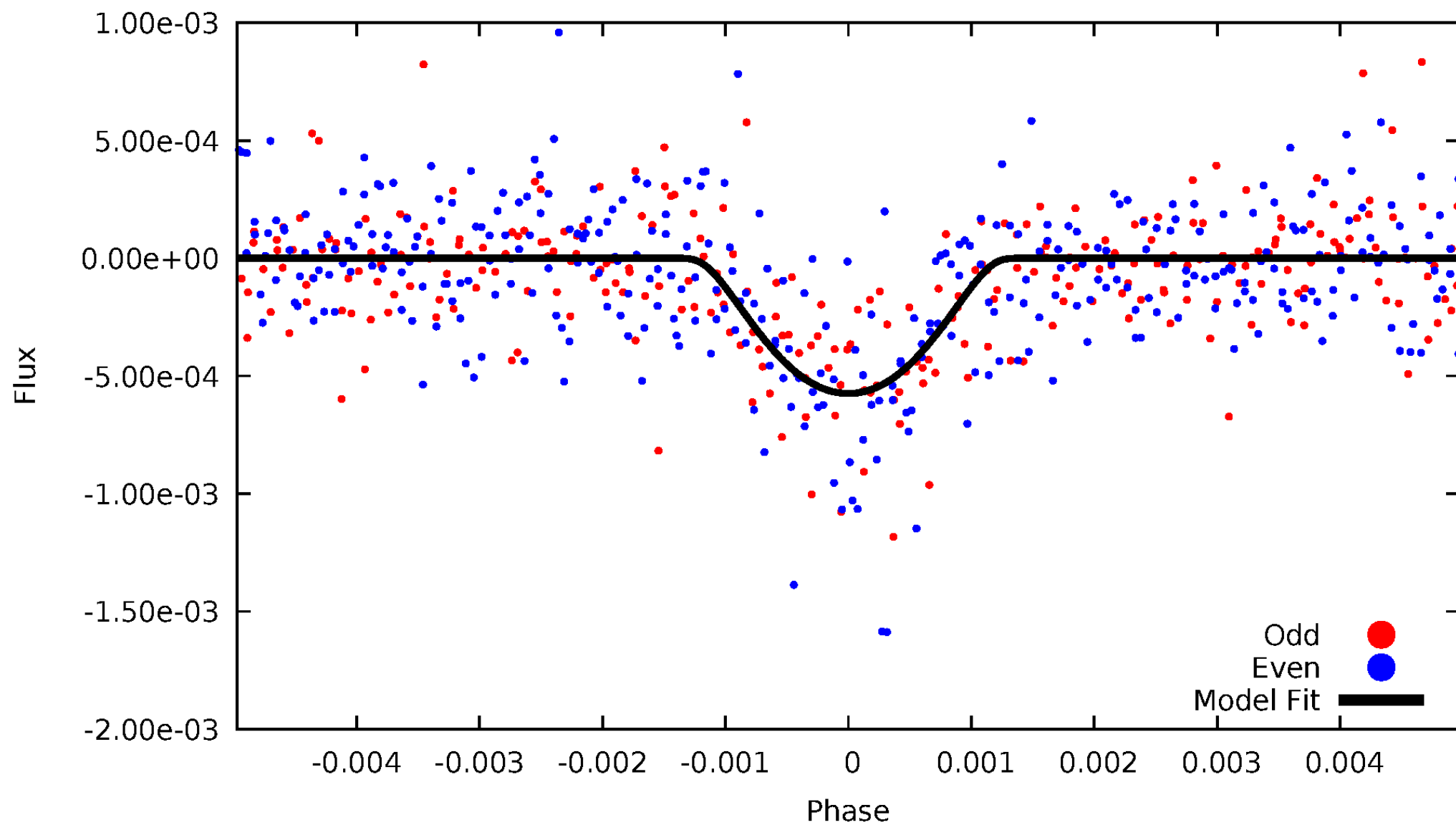


TCE 011513441-01



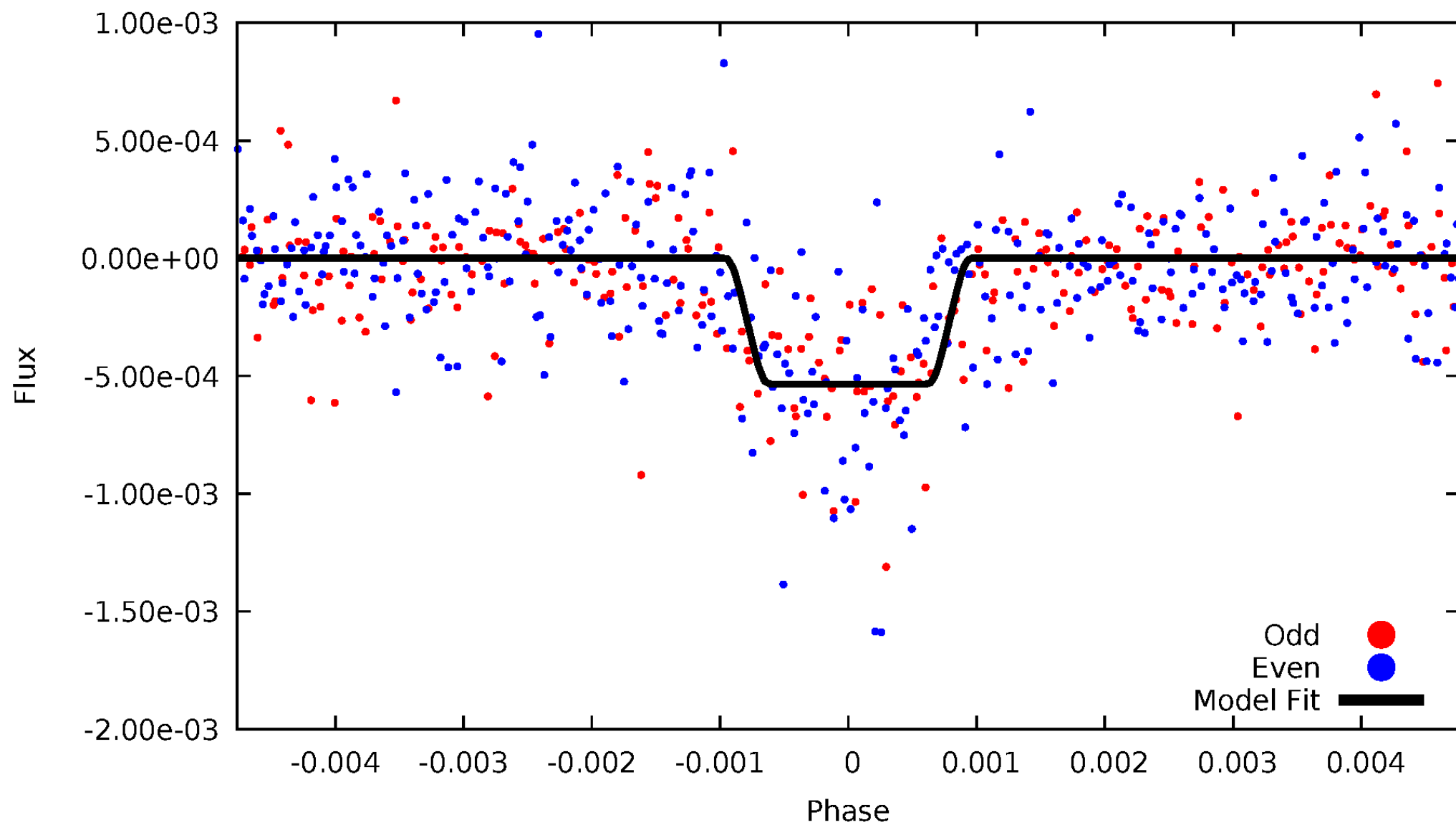
DV Odd/Even

TCE 011513441-01

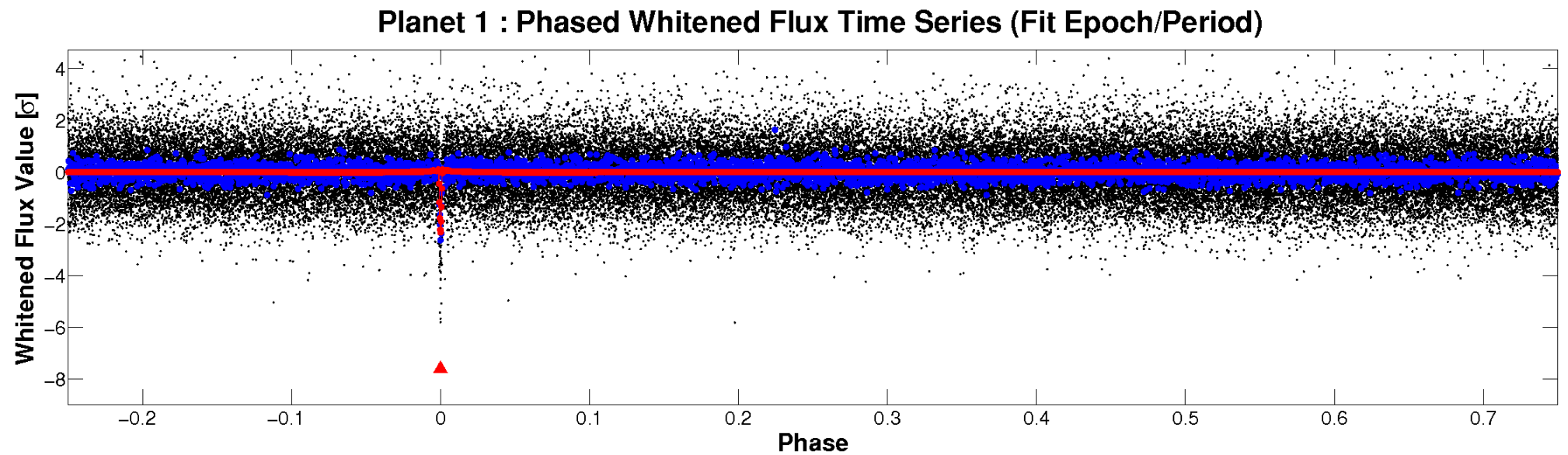
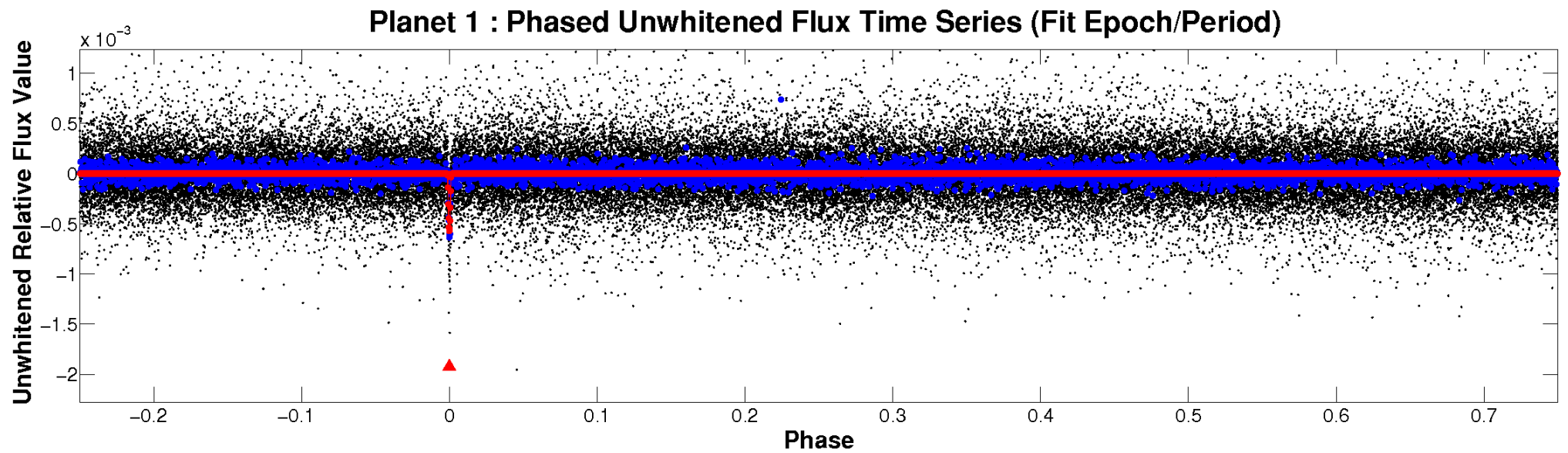


ALT Odd/Even

TCE 011513441-01

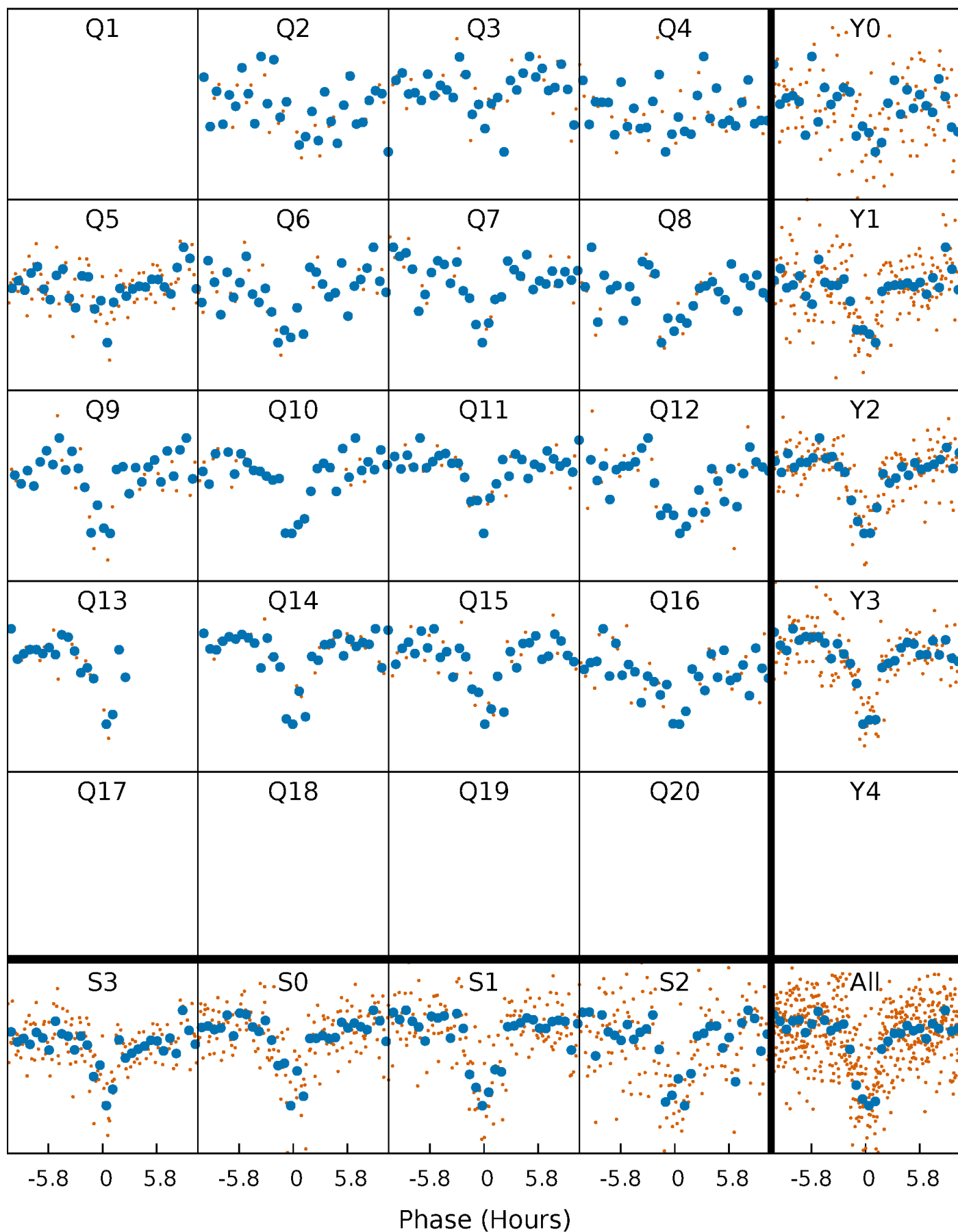


Non-Whitened Vs. Whitened Light Curve



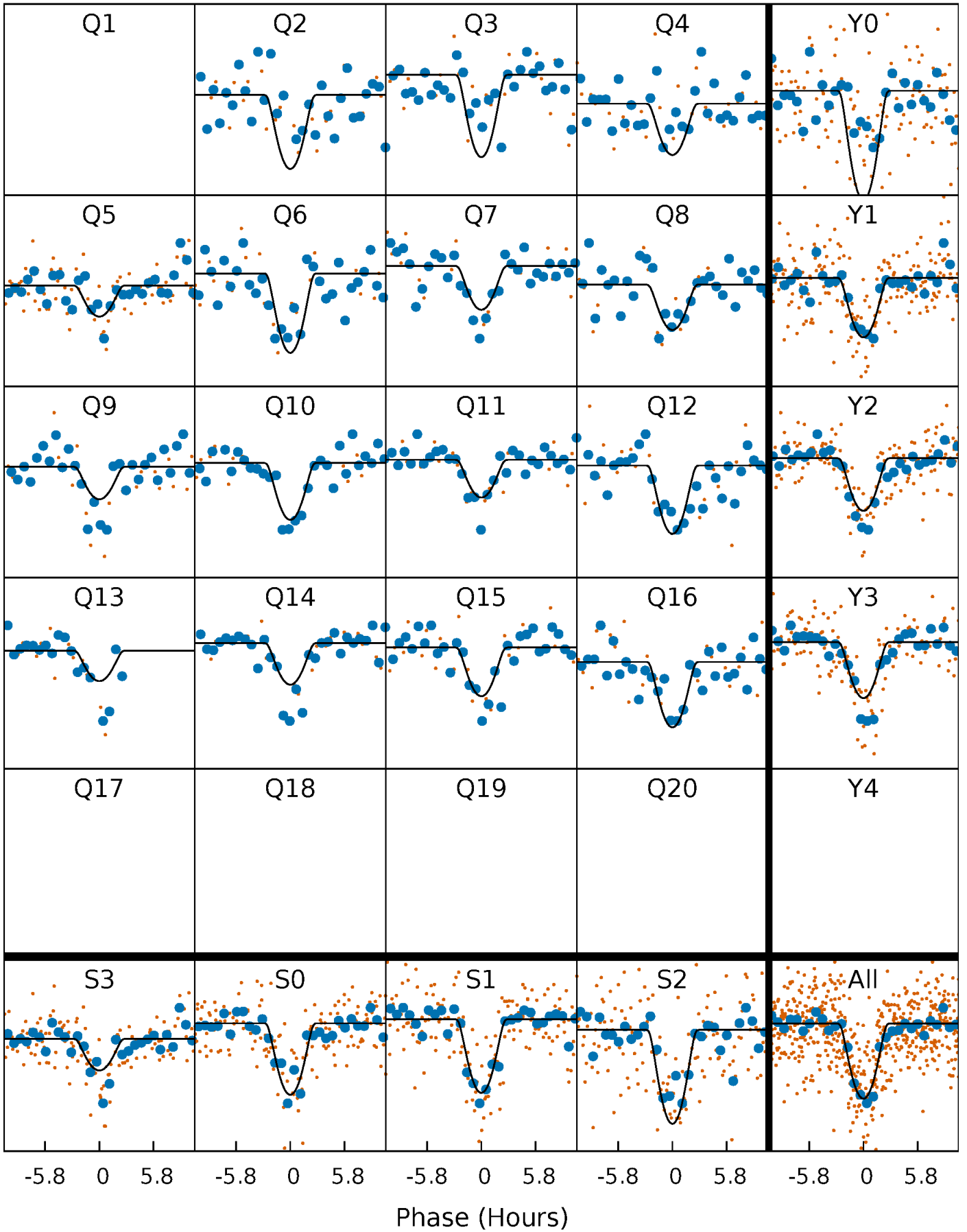
PDC Quarter-Phased Transit Curves

TCE 011513441-01 P= 85.569664 Days $T_0=188.057702$ (BKJD)



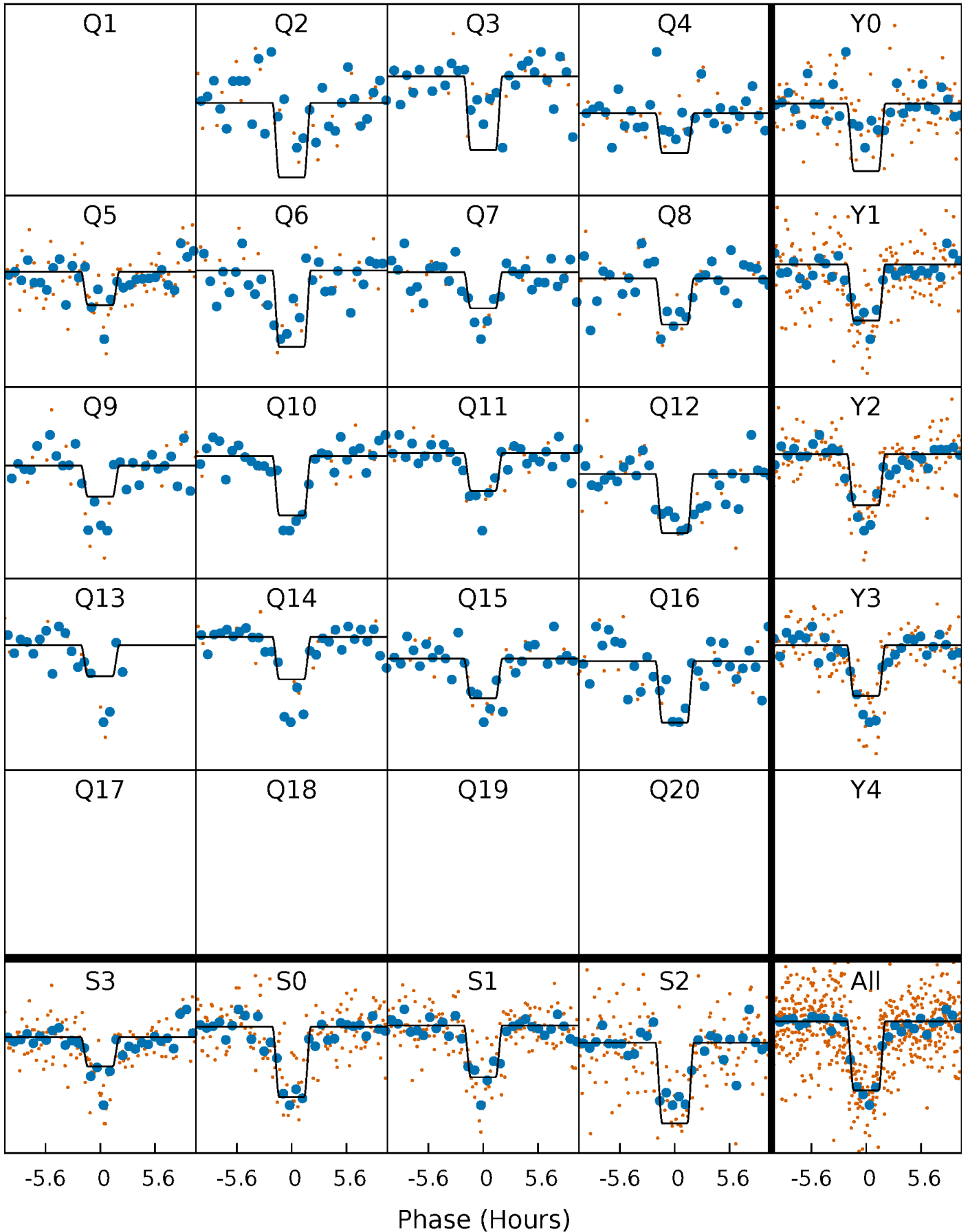
DV Quarter-Phased Transit Curves

TCE 011513441-01 P= 85.569664 Days $T_0=188.057702$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

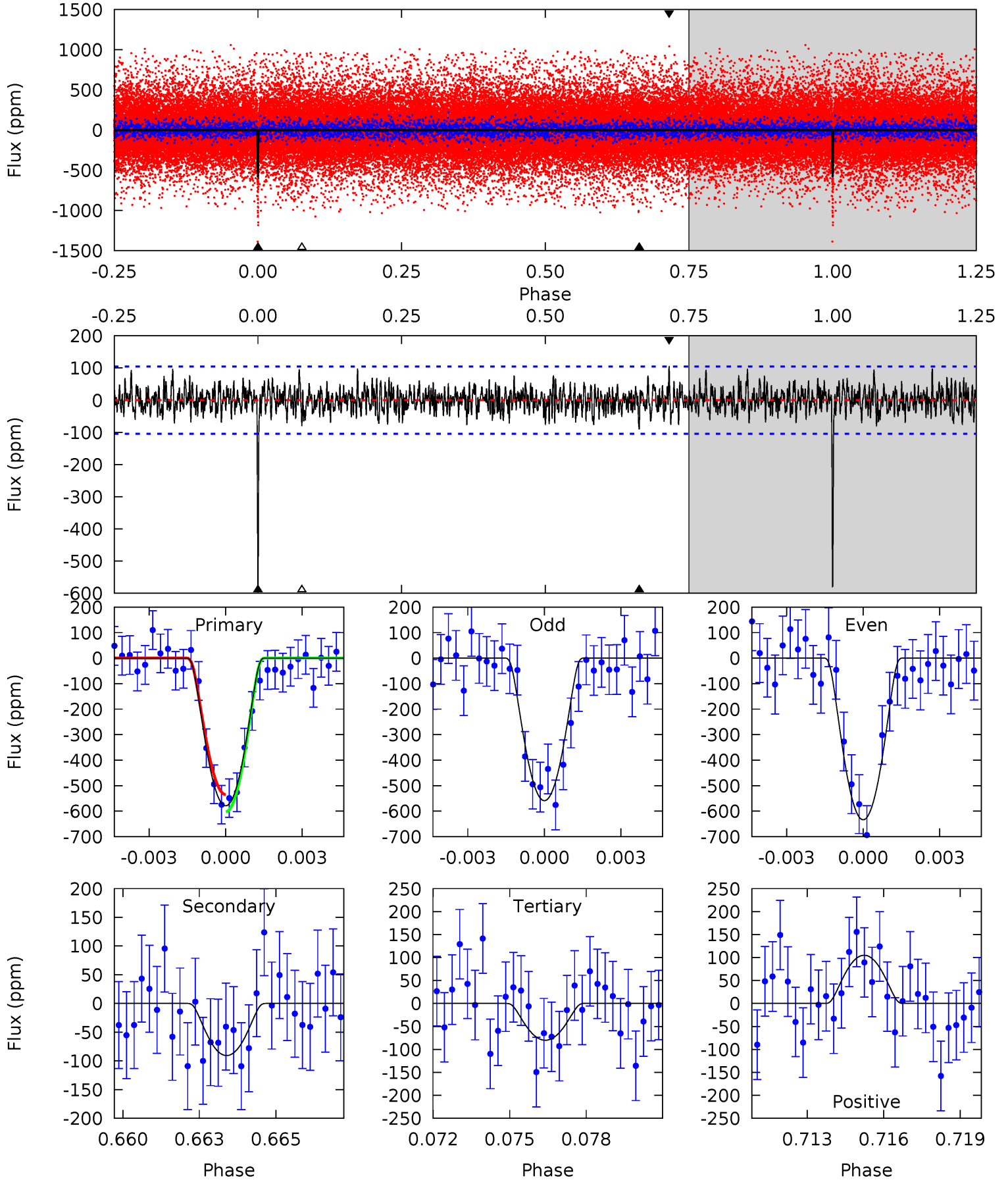
TCE 011513441-01 P= 85.569544 Days $T_0=188.064138$ (BKJD)



DV Model-Shift Uniqueness Test

011513441-01, P = 85.569664 Days, E = 102.488038 Days

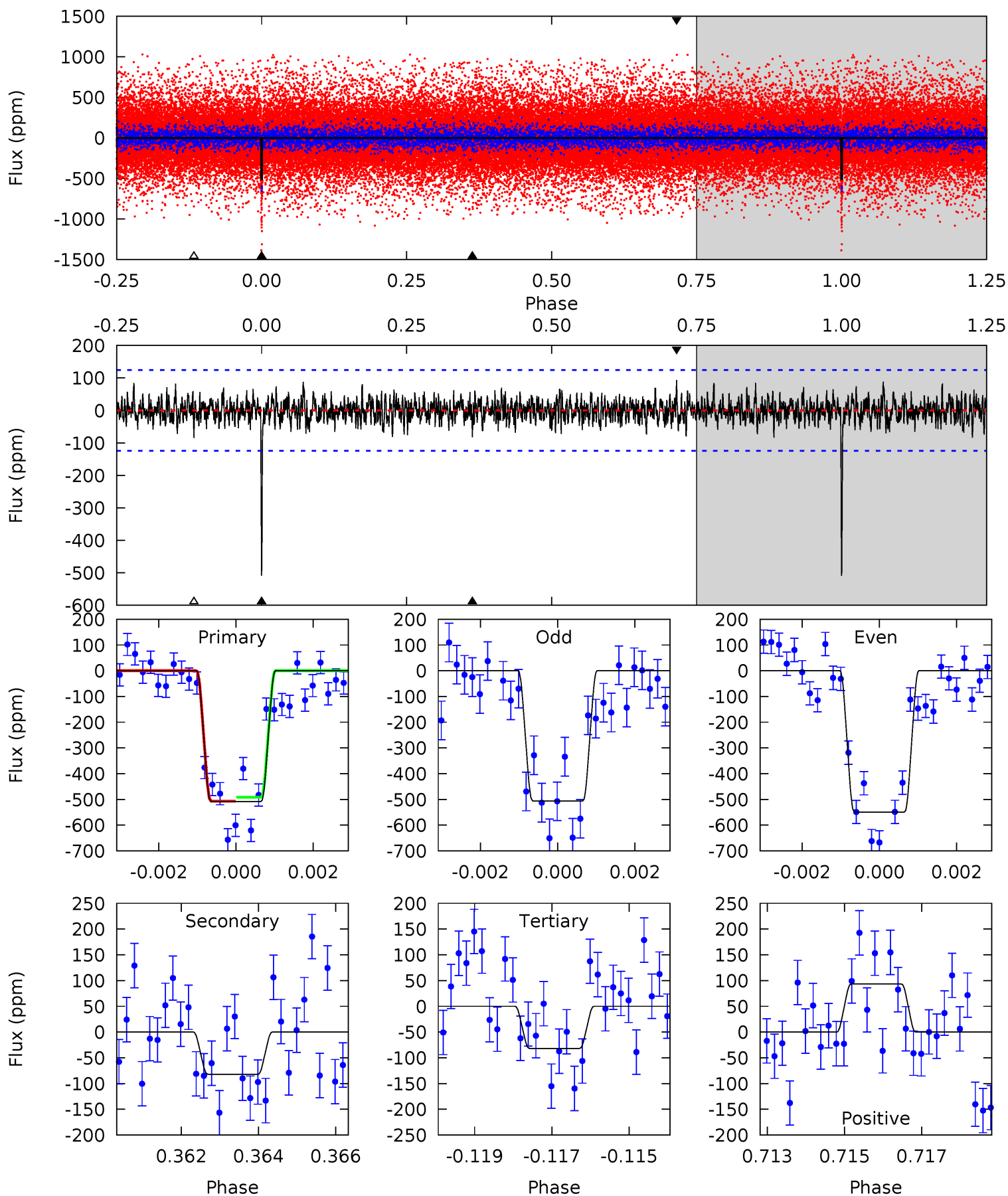
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.2	4.58	4.04	5.30	5.27	3.00	1.49	25.2	23.9	0.54	-0.72	1.93	1.03	0.15	1.71



Alt Model-Shift Uniqueness Test

011513441-01, $P = 85.569544$ Days, $E = 102.494594$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.8	3.52	3.51	4.00	5.34	3.11	1.11	18.3	17.8	0.01	-0.48	0.94	1.02	0.16	0.33



Stellar Parameters For KIC 011513441

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5361^{+185}_{-167}	$3.856^{+0.658}_{-0.282}$	$-0.200^{+0.350}_{-0.250}$	$1.951^{+0.912}_{-1.114}$	$0.997^{+0.192}_{-0.192}$	$0.189^{+2.169}_{-0.117}$
	+3%/-3%	+17%/-7%	+175%/-125%	+47%/-57%	+19%/-19%	+1147%/-62%
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 011513441-01 / KOI 5908.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-91 ± 20	$7.47^{+6.22}_{-4.54}$	740^{+97}_{-122}	3224^{+1033}_{-424}	124^{+644}_{-86}
Alt.	-82 ± 23	$5.77^{+5.45}_{-3.88}$	735^{+99}_{-125}	3446^{+1587}_{-558}	197^{+1598}_{-146}

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

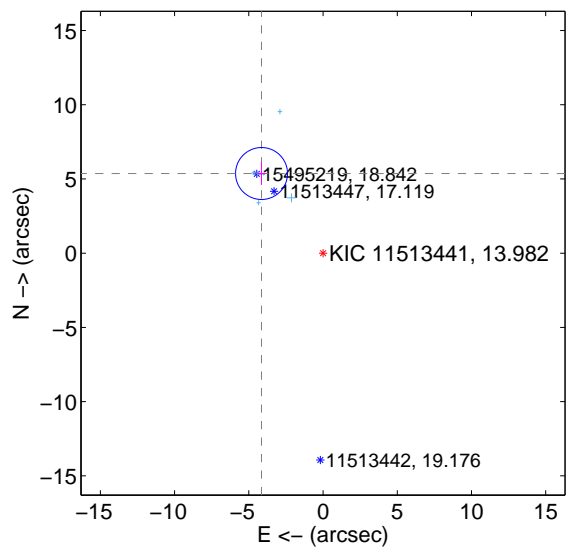
Supplemental centroid analysis for 011513441-01. Kepler magnitude: 13.98. Transit SNR 19.40

There are 7 quarters with good PRF difference image offsets

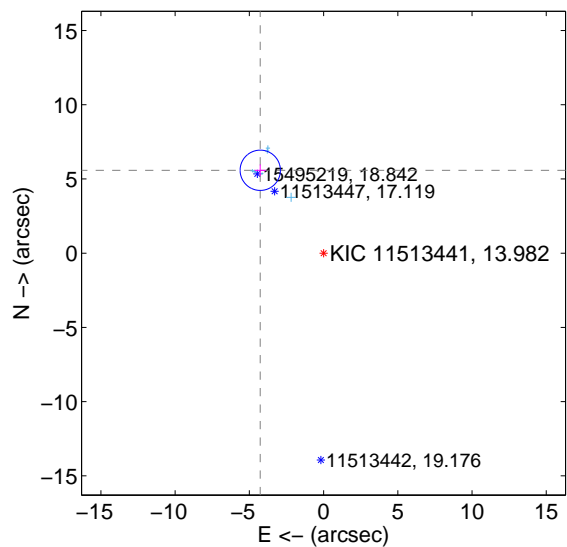
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.780 ± 0.583	11.62	4.143 ± 0.314	5.367 ± 0.762
PRF-fit source offset from KIC position	7.028 ± 0.452	15.53	4.266 ± 0.374	5.585 ± 0.393
photometric centroid source offset	11.79 ± 0.60	19.73	6.23 ± 0.55	10.01 ± 0.61

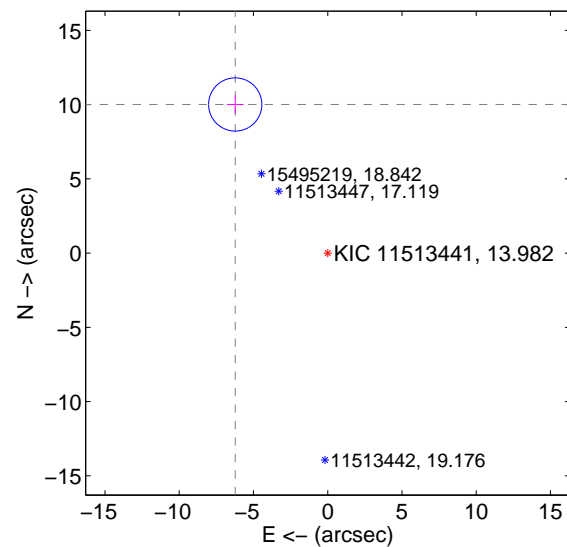
offset from difference PRF-fit to OOT PRF-fit



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 $> 15,000$ are from the UKIRT catalog.

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

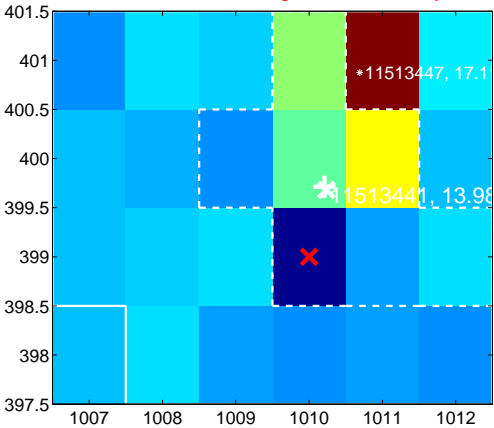
Q1 no difference image



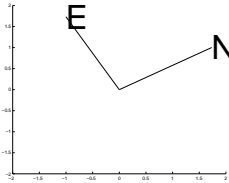
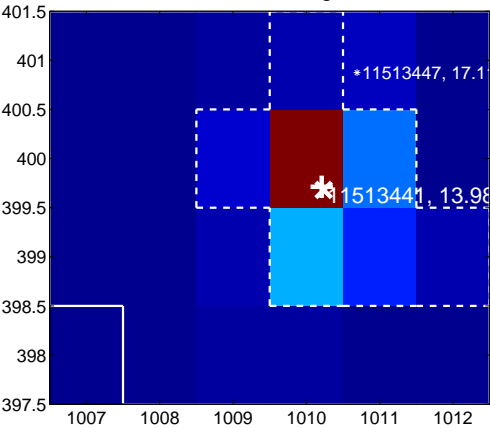
Q1 no OOT image



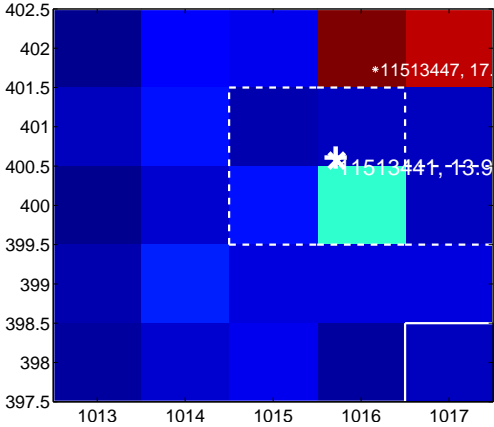
Q2 difference image. Poor Quality



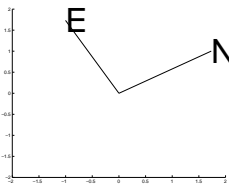
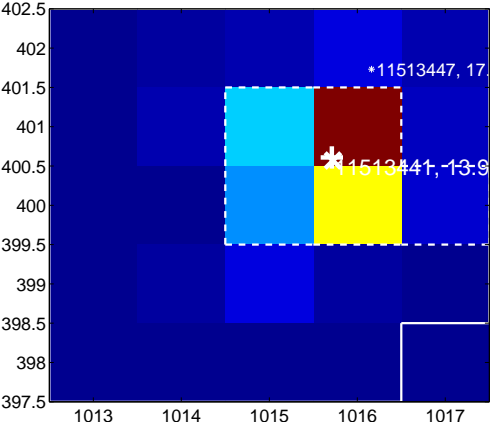
Q2 OOT image



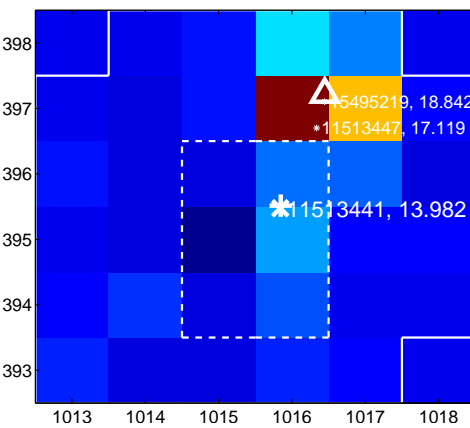
Q3 difference image. Poor Quality



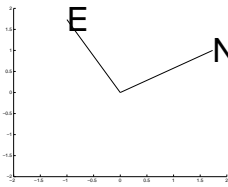
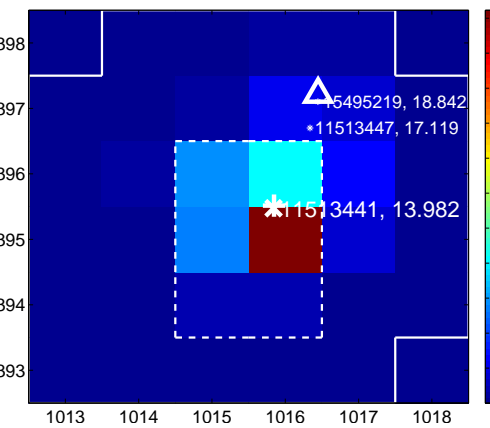
Q3 OOT image



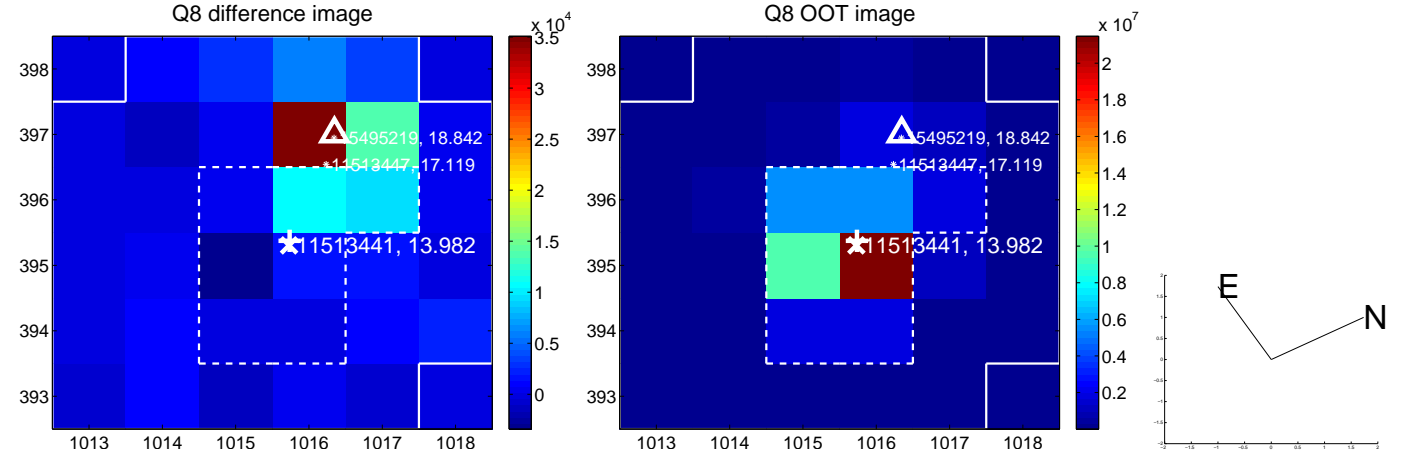
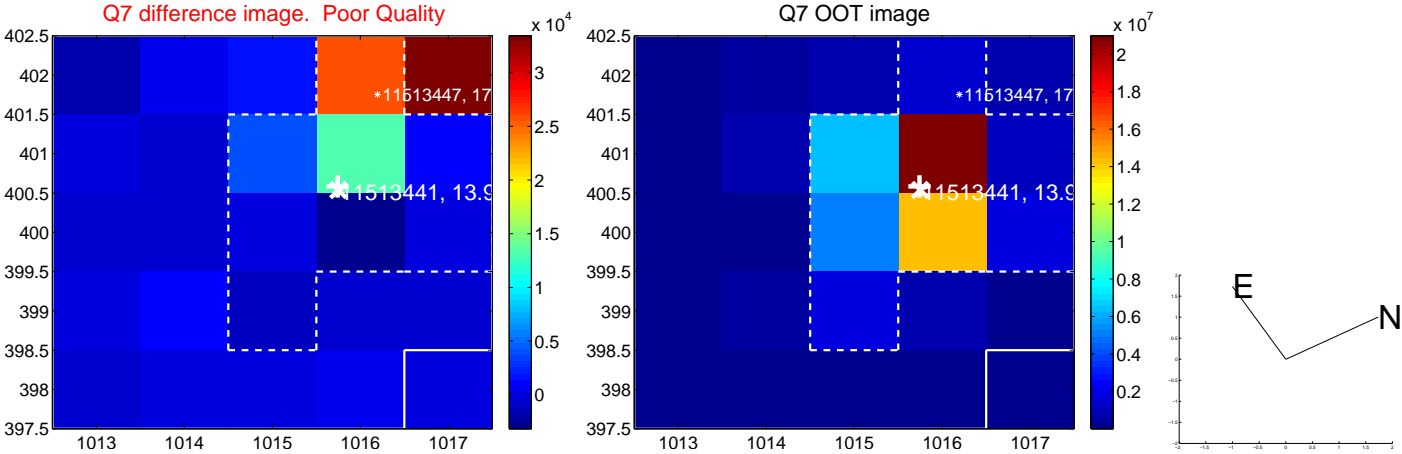
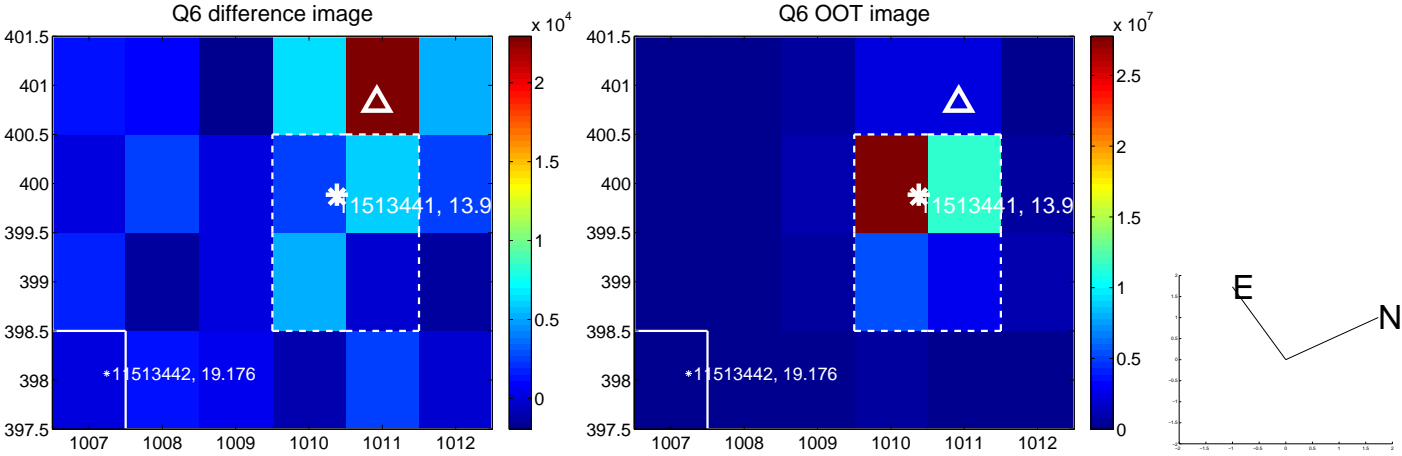
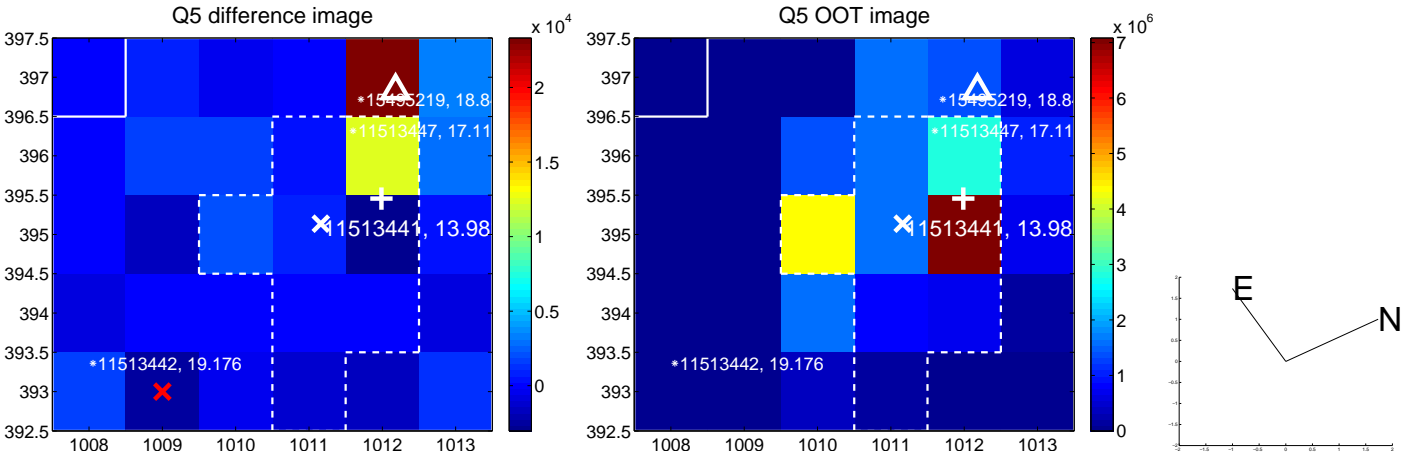
Q4 difference image



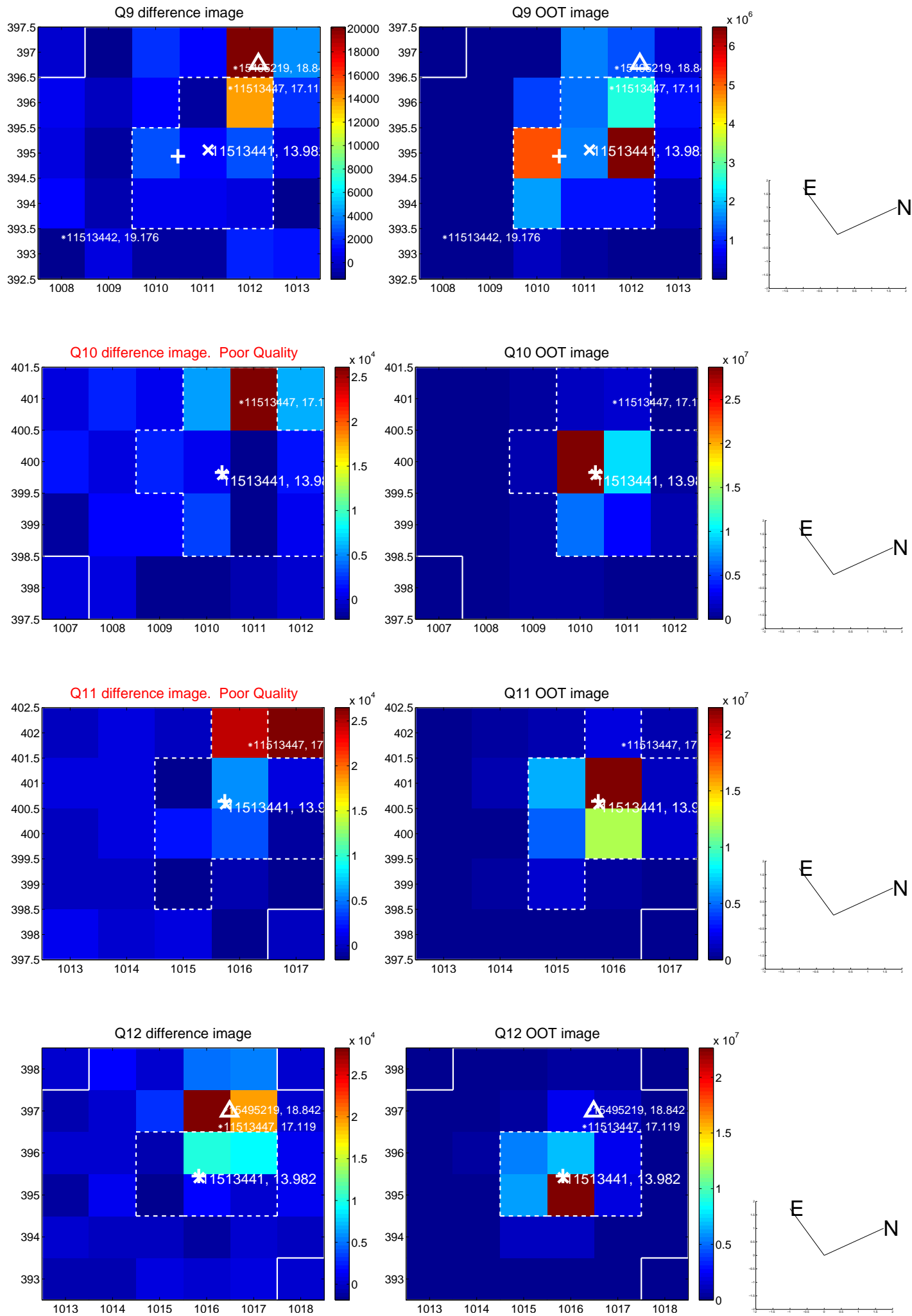
Q4 OOT image



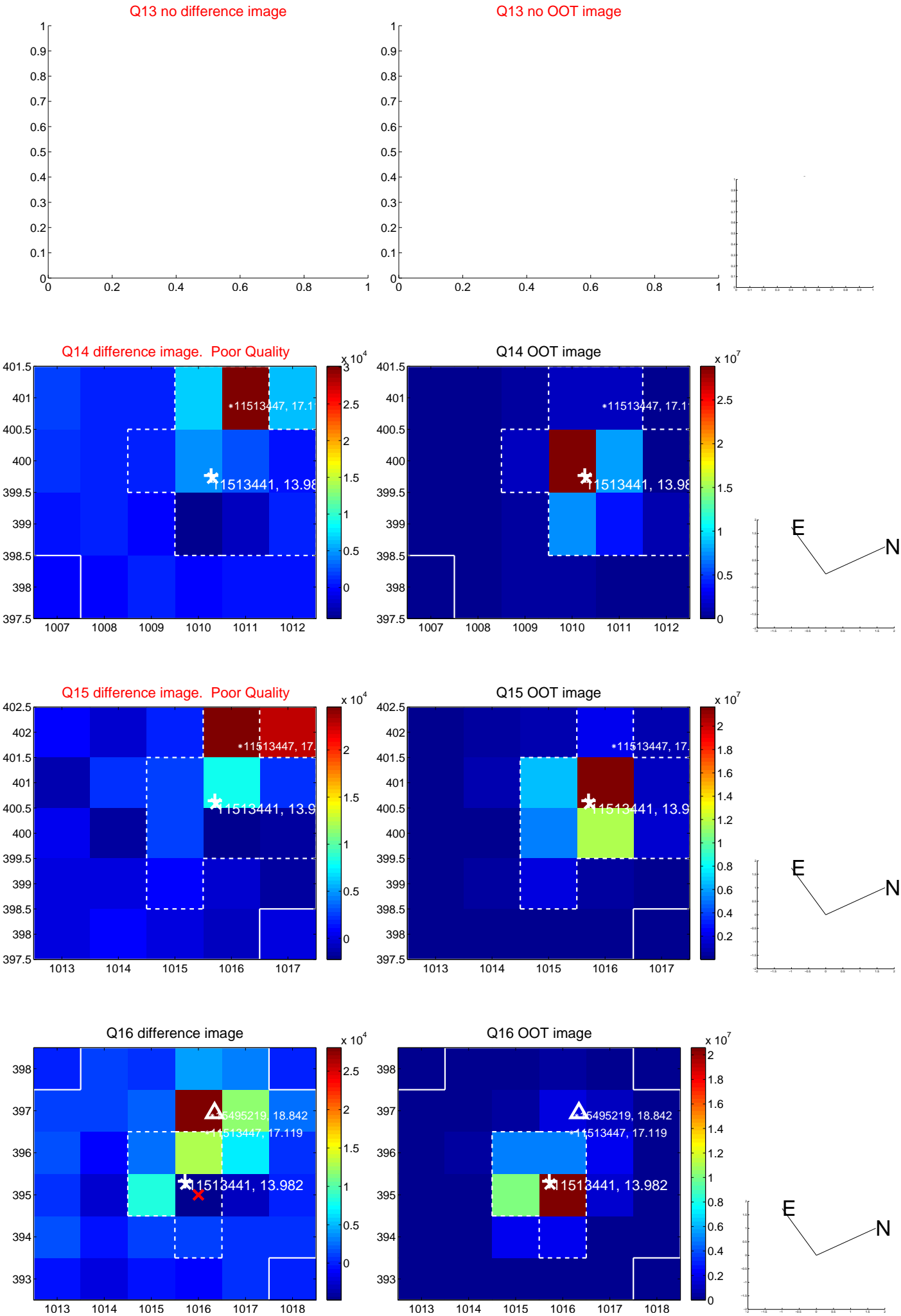
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



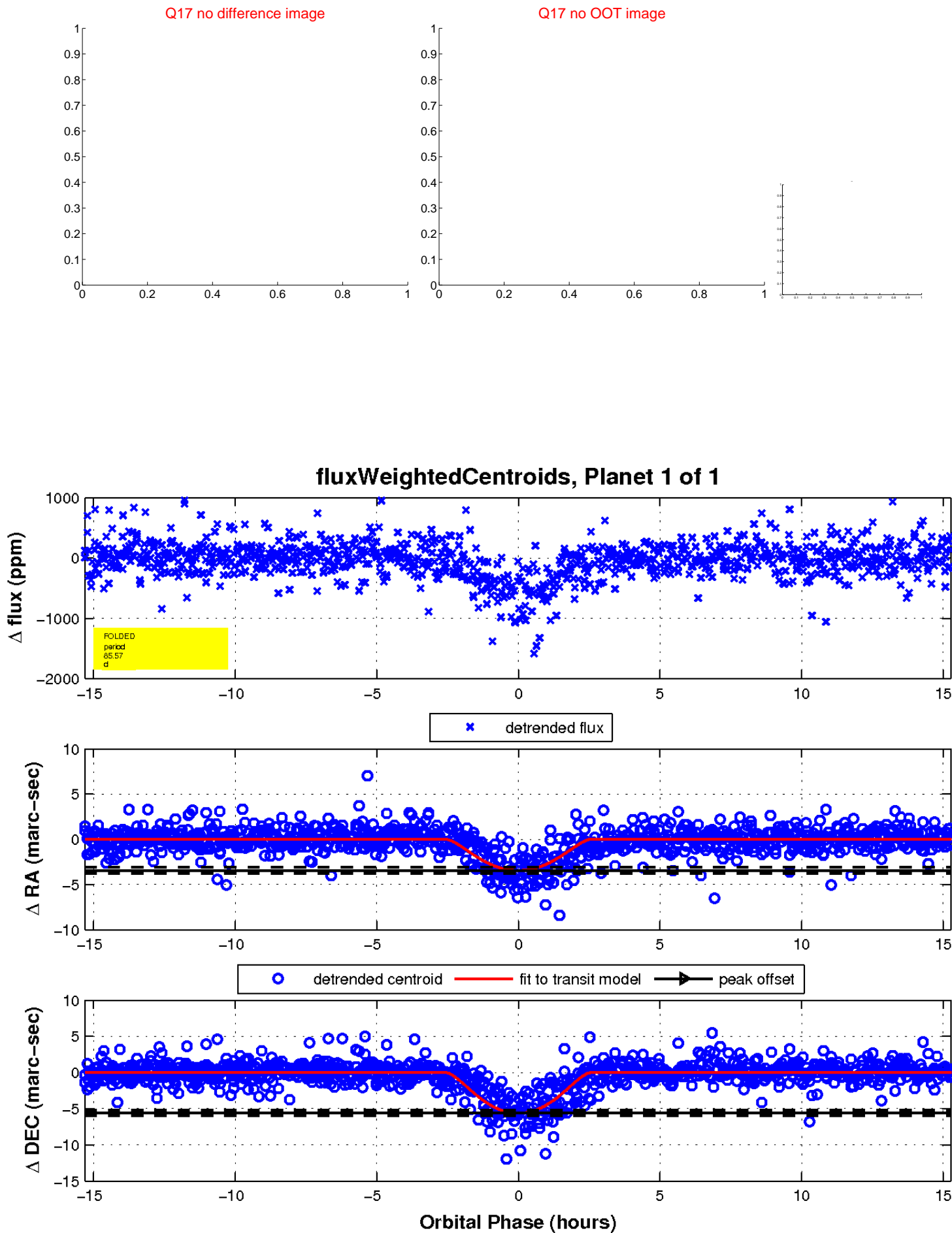
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

