

KIC 007038460

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})
007038460-01	OBS	No	407.192453	409.971279	905.0	6.378	7.8	7.8	0.99	5726	3.00	0.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007038460-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

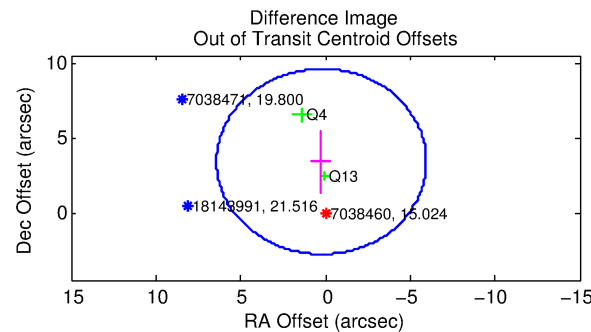
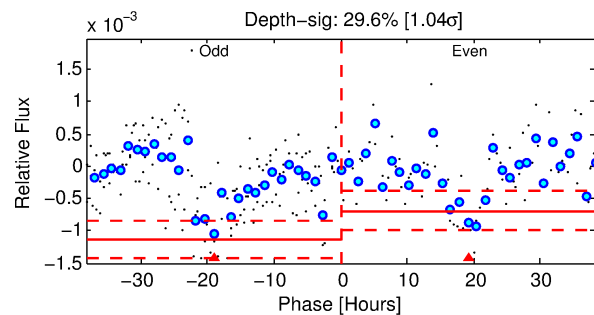
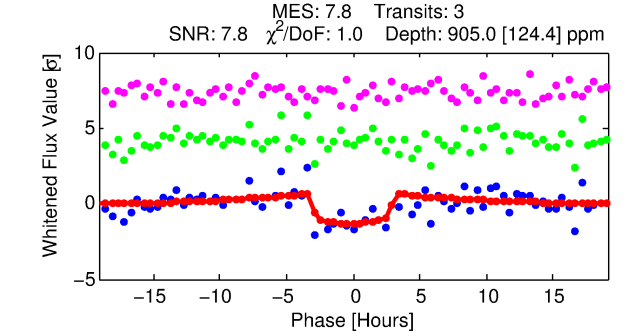
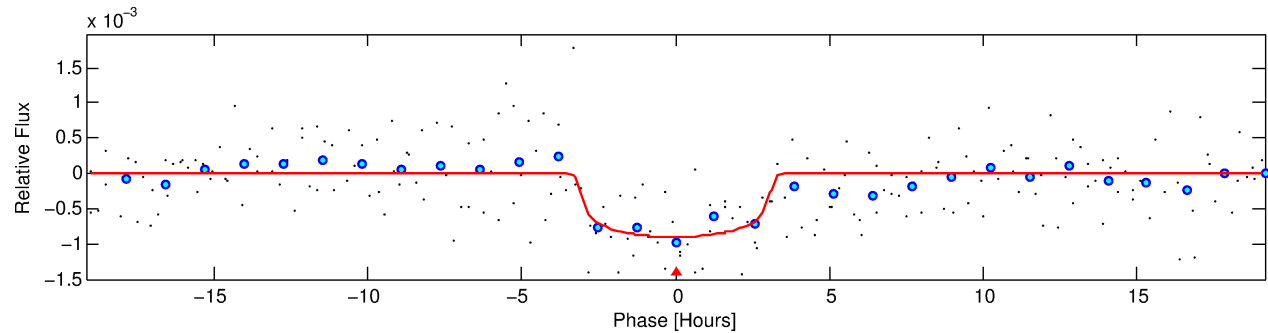
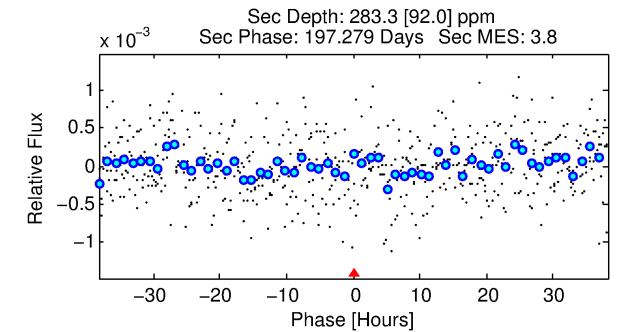
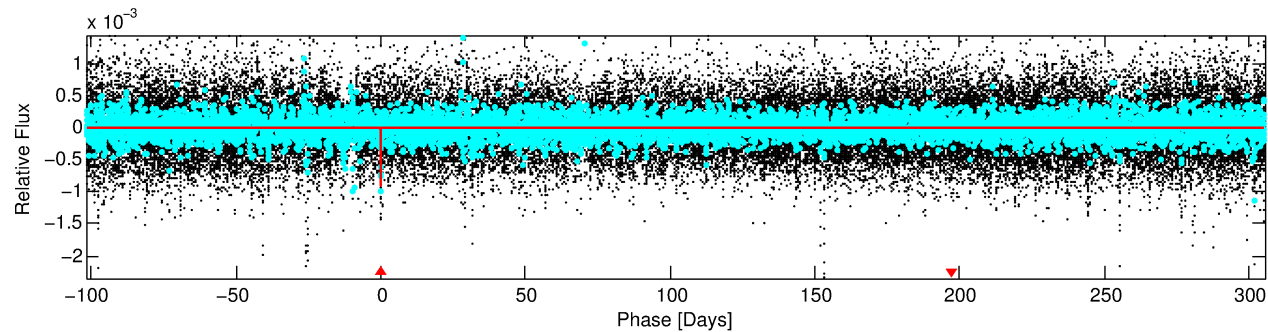
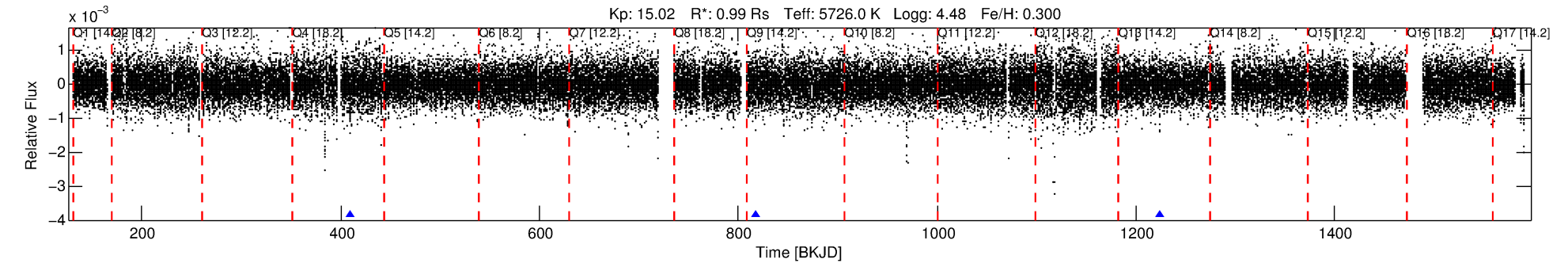
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007038460-01

No Significant Match Found

DV One-Page Summary

KIC: 7038460 Candidate: 1 of 1 Period: 407.192 d



DV Fit Results:

Period = 407.19245 [0.00781] d
Epoch = 409.9713 [0.0121] BKJD
Rp/R* = 0.0277 [0.0317]
a/R* = 459.06 [2128.66]
b = 0.41 [9.42]
Seff = 0.78 [0.31]
Teff = 240 [24] K
Rp = 3.00 [3.54] Re
a = 1.1006 [0.2803] AU
Ag = 20970.36 [49063.01] [0.43 σ]
Teffp = 4460 [2579] K [1.64 σ]

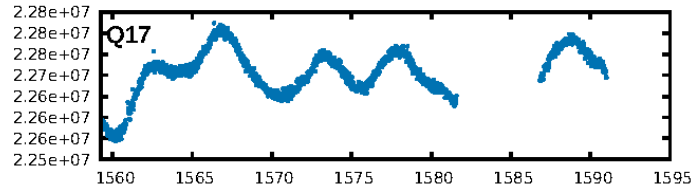
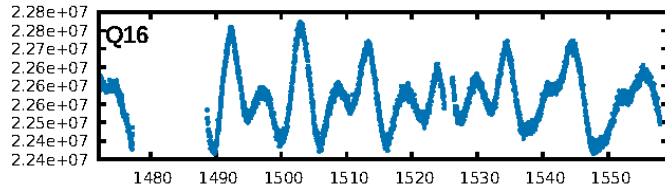
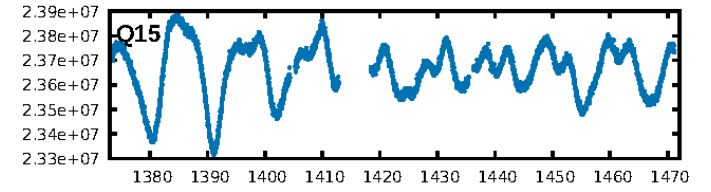
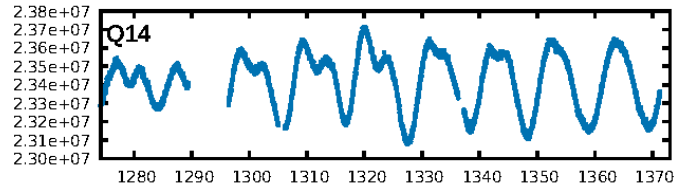
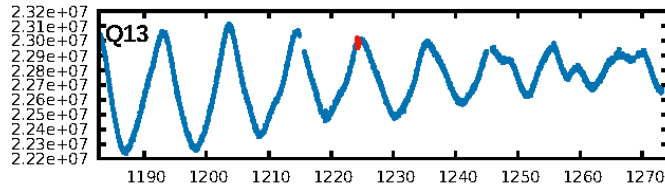
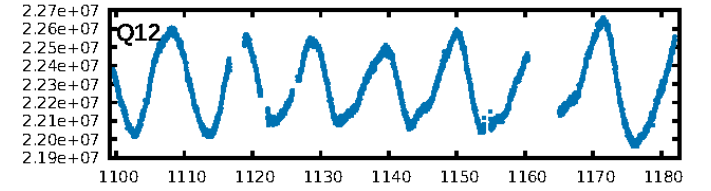
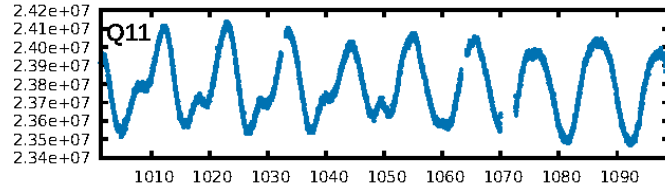
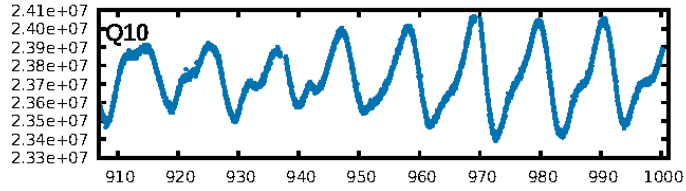
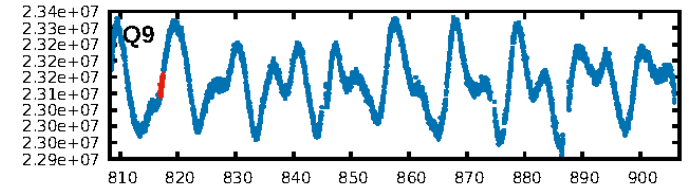
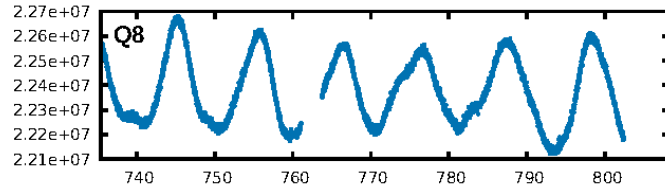
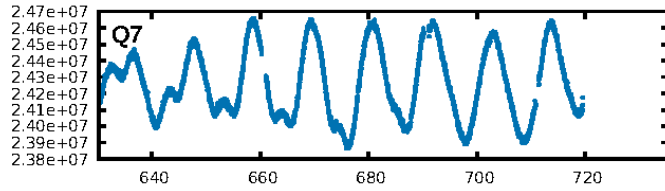
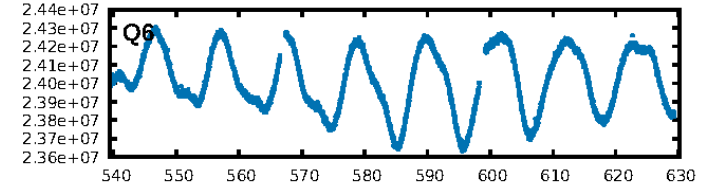
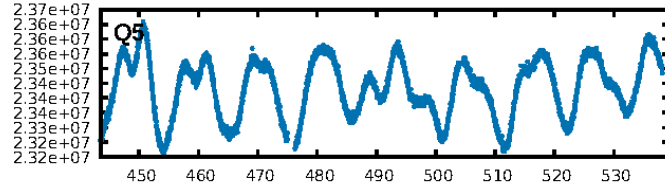
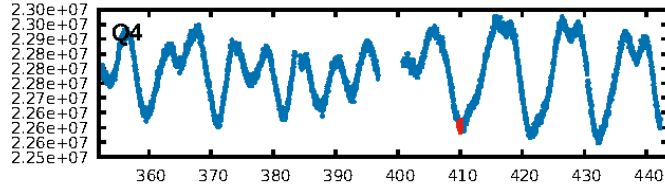
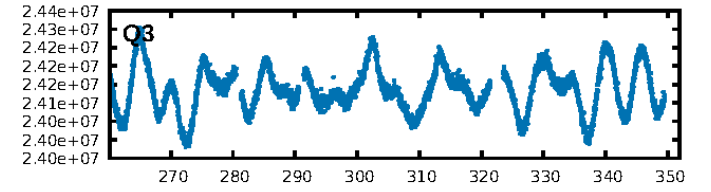
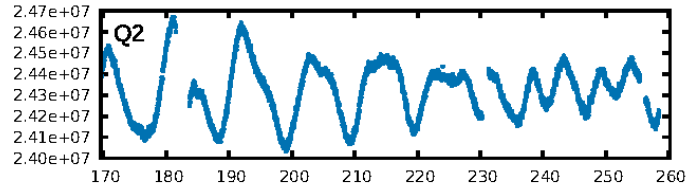
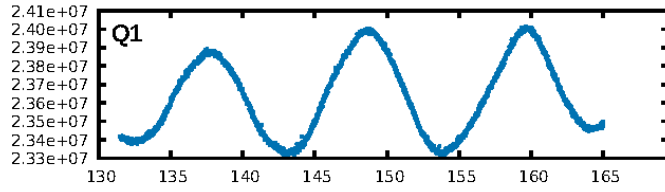
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 18.0%
ModelChiSquareGof-sig: 97.0%
Bootstrap-pfa: 5.35e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.04883
Centroid-sig: 49.6%
Centroid-so: 0.814 arcsec [0.76 σ]
OotOffset-rm: 3.409 arcsec [1.65 σ]
KicOffset-rm: 3.433 arcsec [1.65 σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

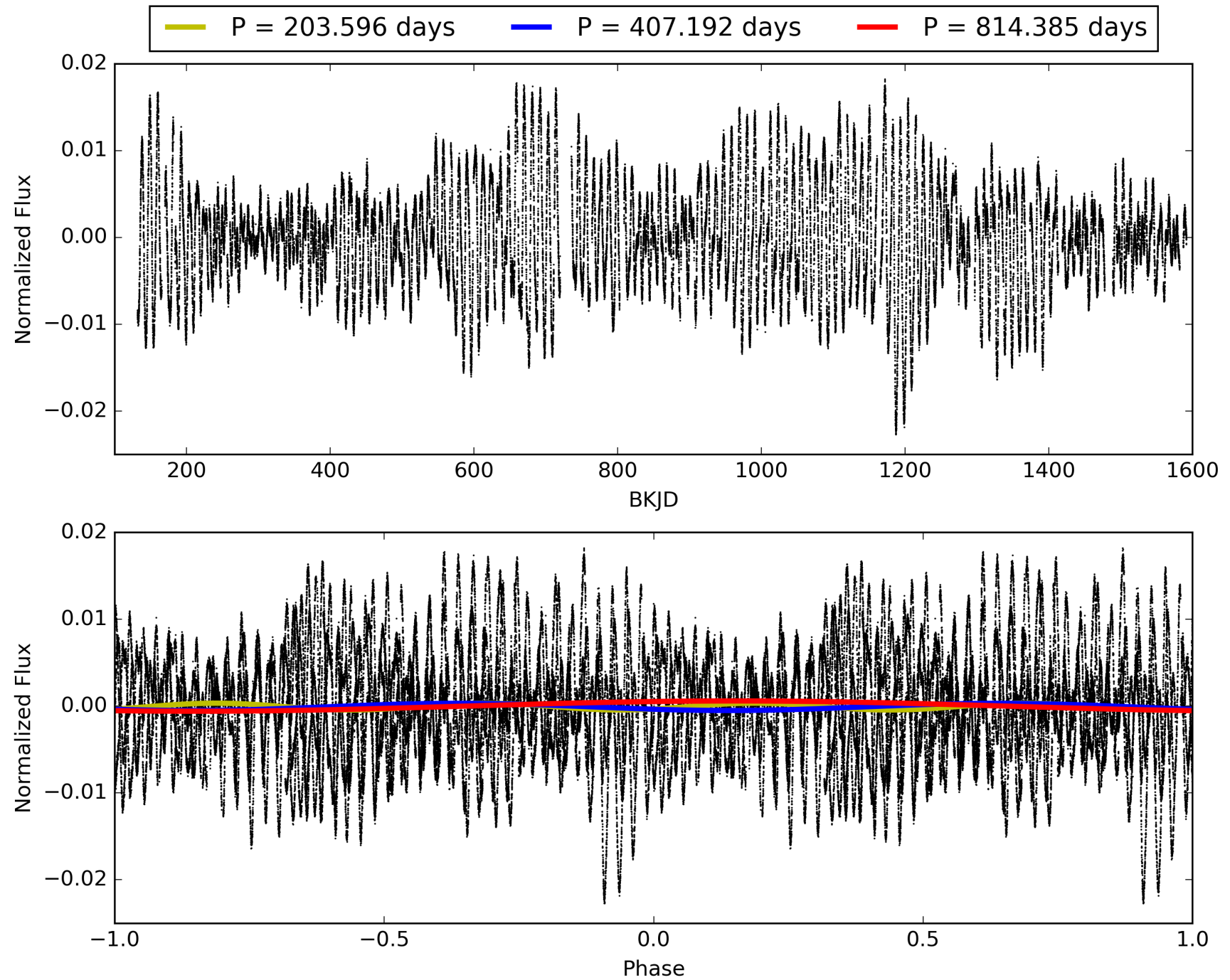
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 04:40:57 Z

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

TCE 007038460-01, PDC Light Curves

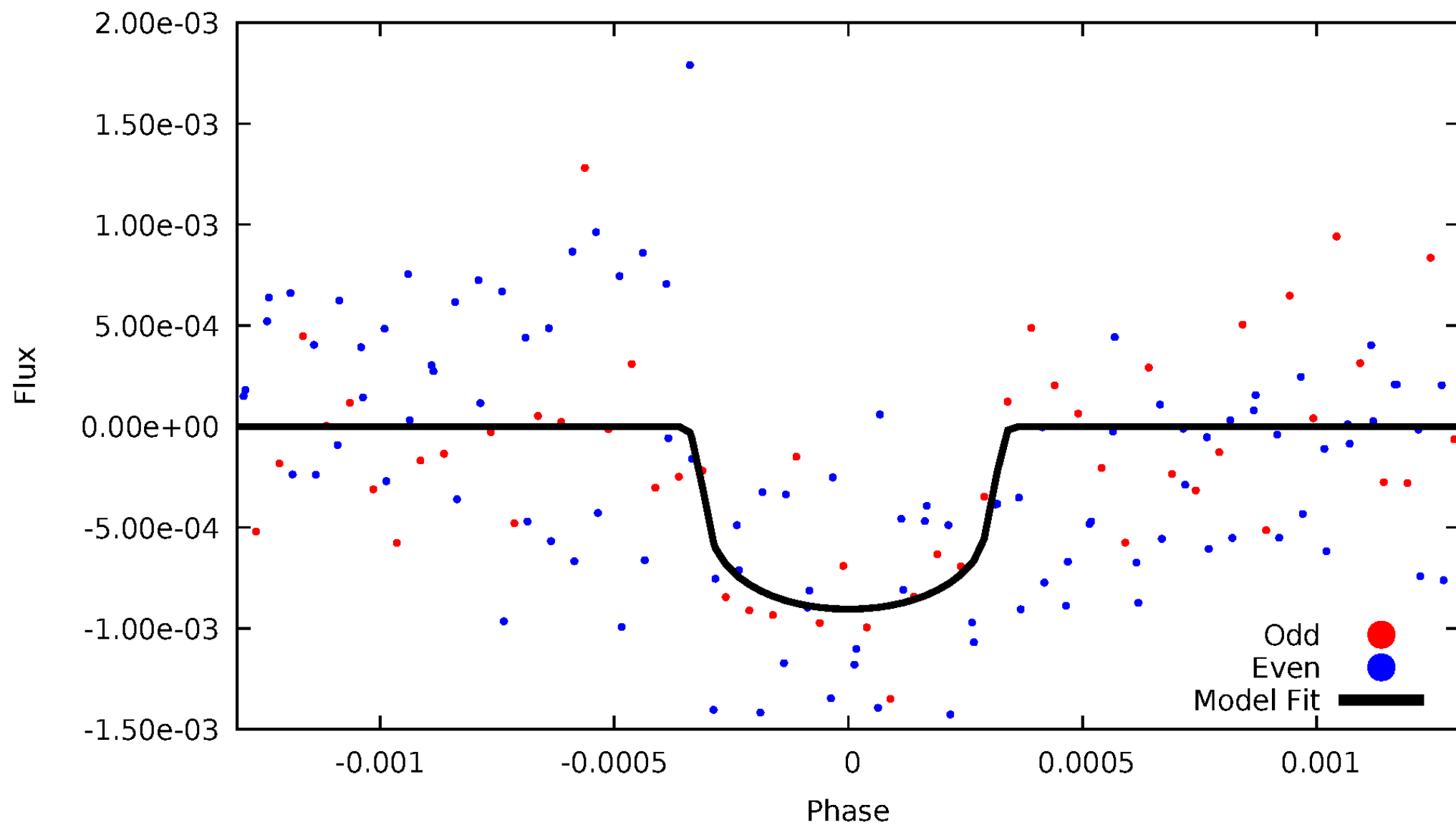


TCE 007038460-01



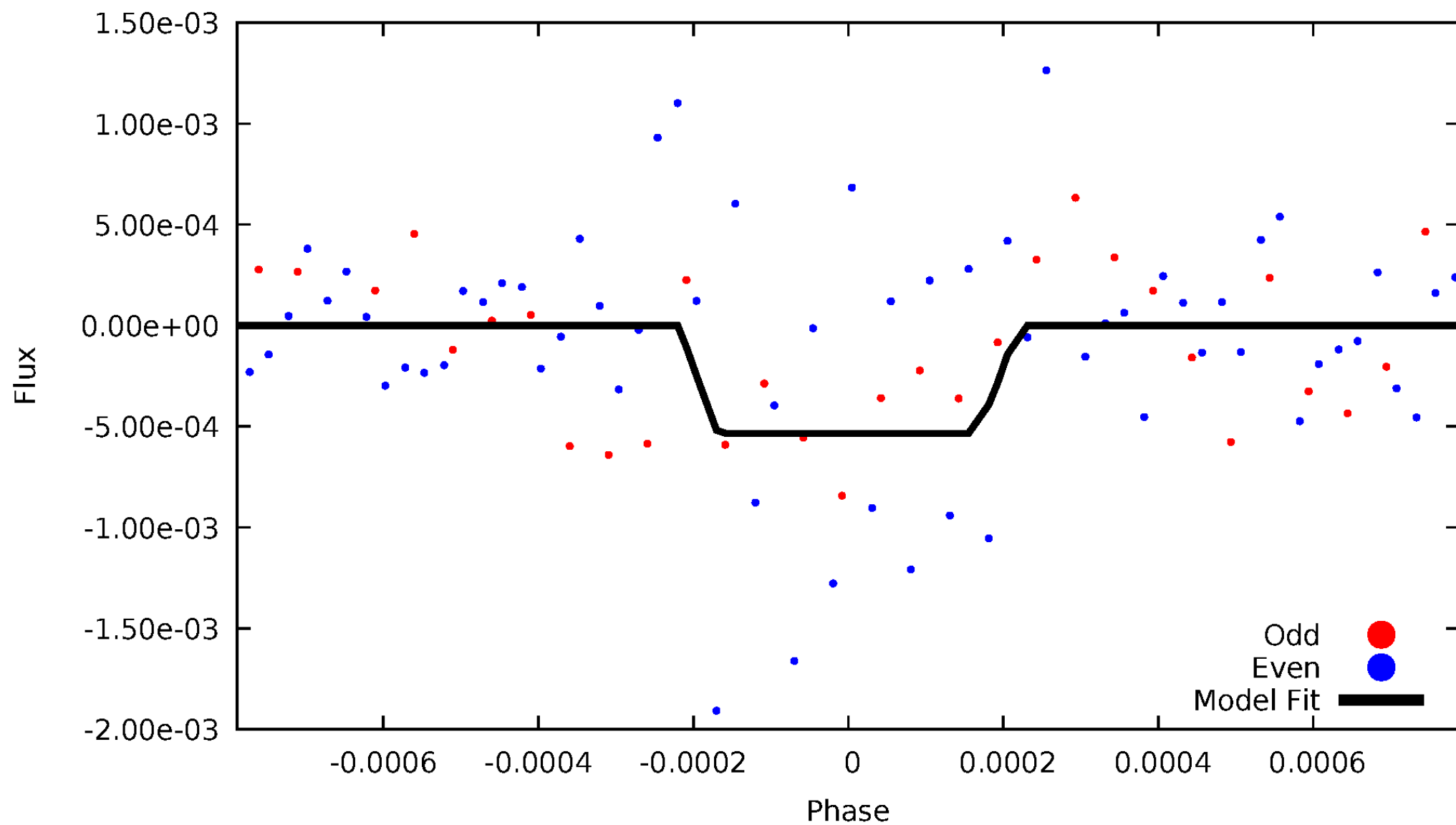
DV Odd/Even

TCE 007038460-01



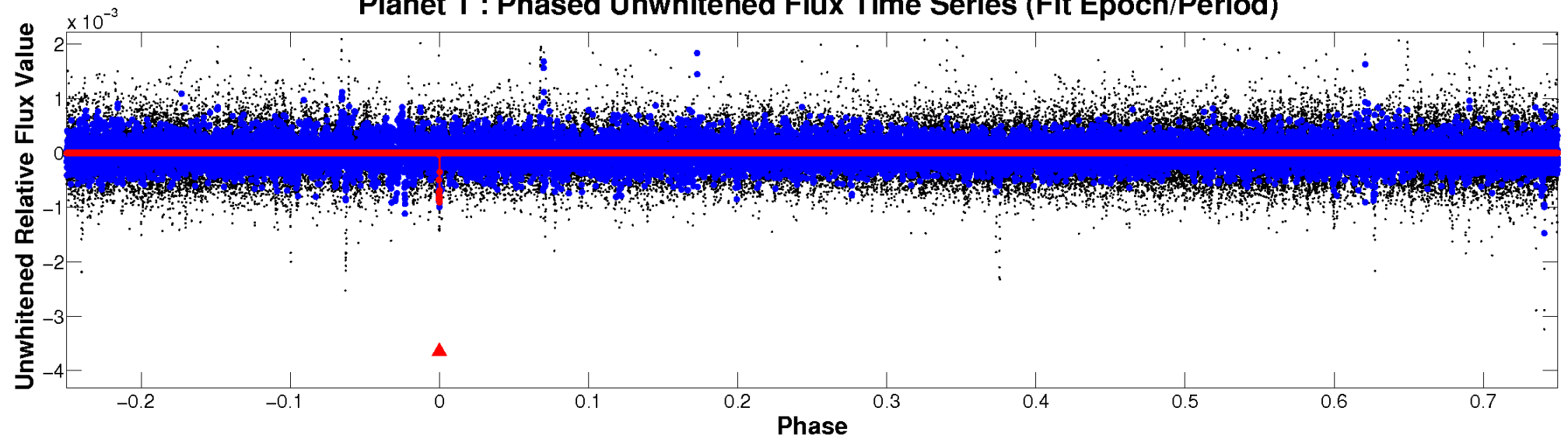
ALT Odd/Even

TCE 007038460-01

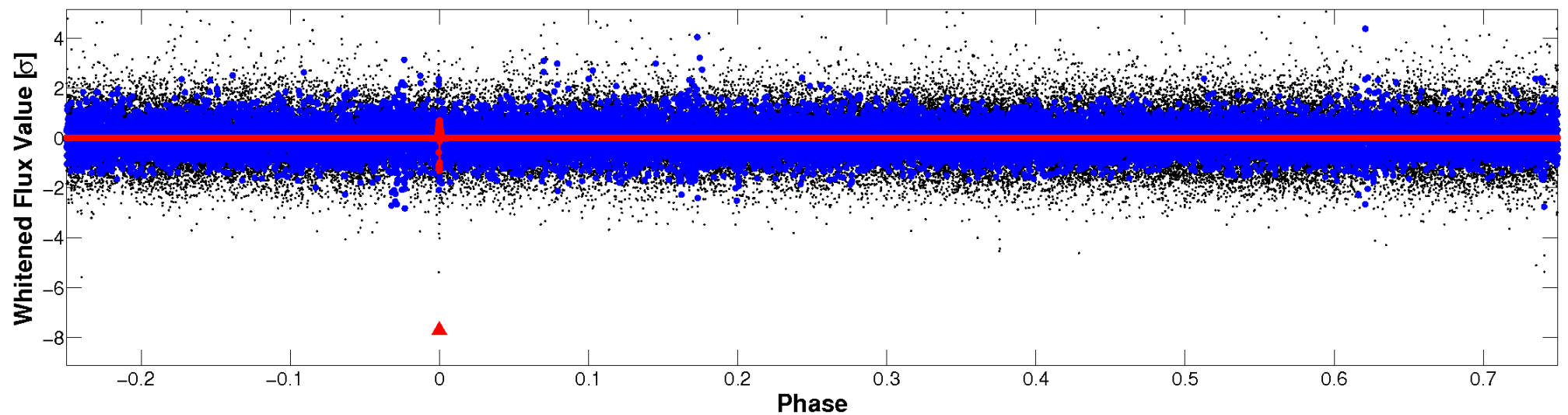


Non-Whitened Vs. Whitened Light Curve

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

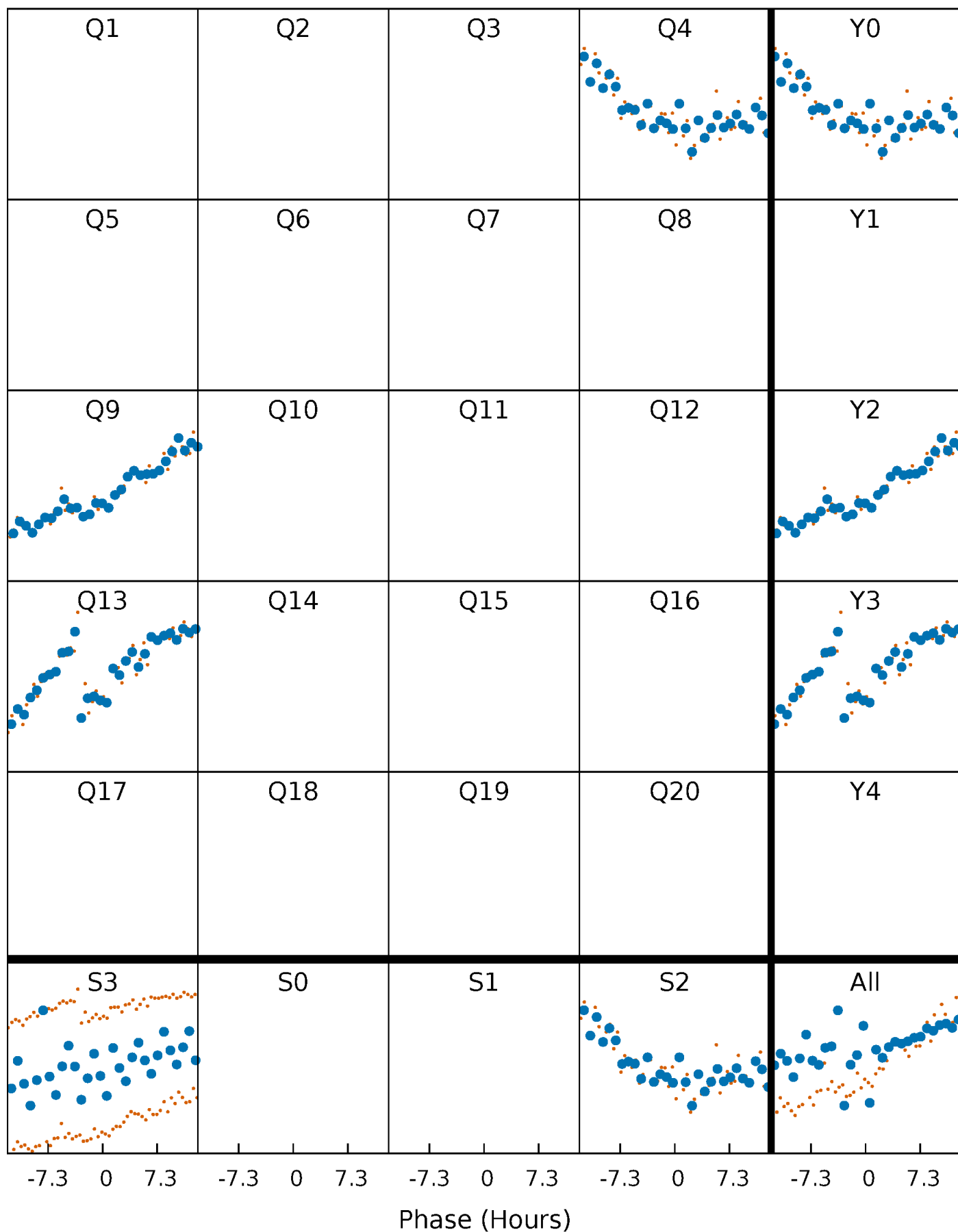


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



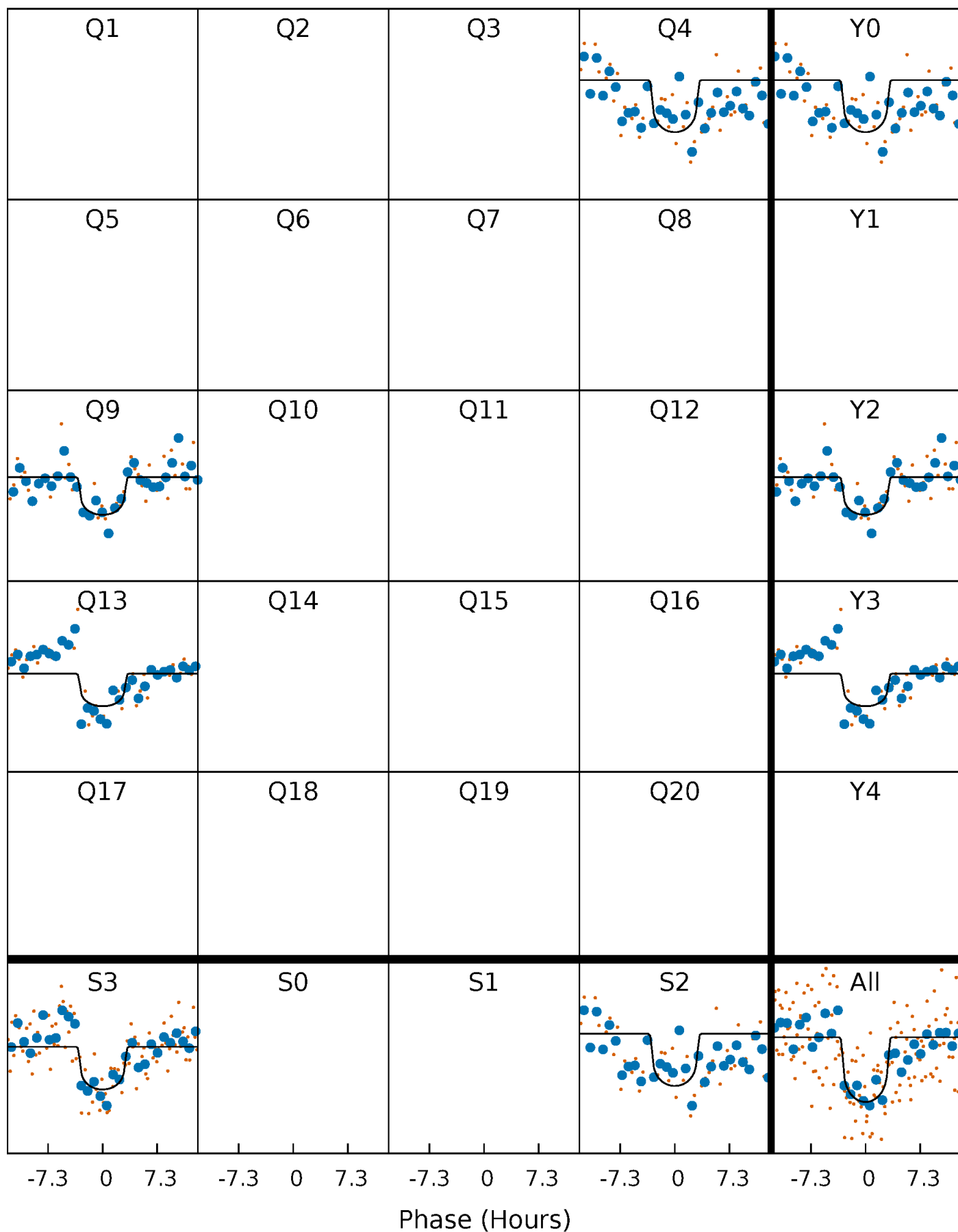
PDC Quarter-Phased Transit Curves

TCE 007038460-01 P=407.192453 Days $T_0=409.971279$ (BKJD)



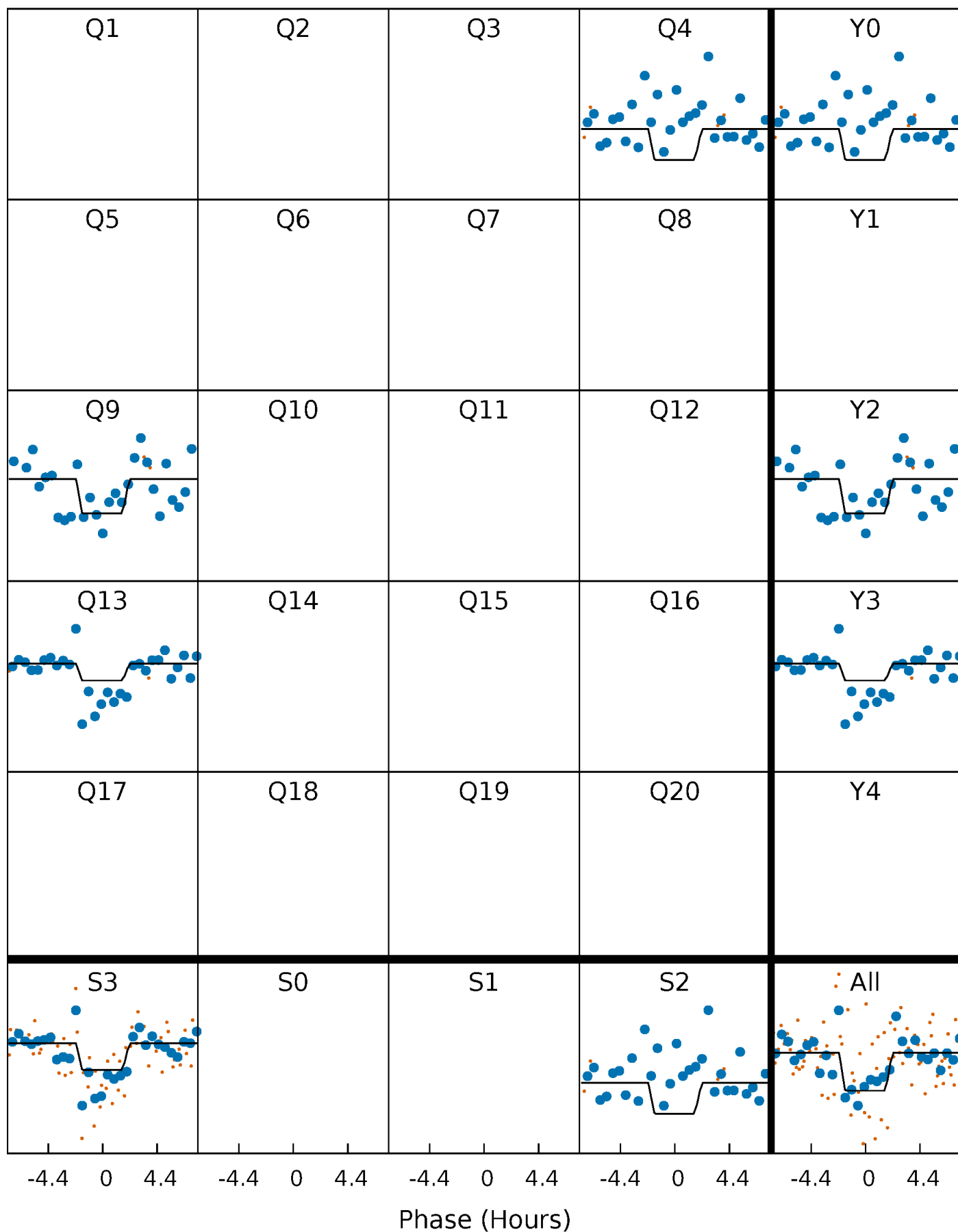
DV Quarter-Phased Transit Curves

TCE 007038460-01 P=407.192453 Days $T_0=409.971279$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

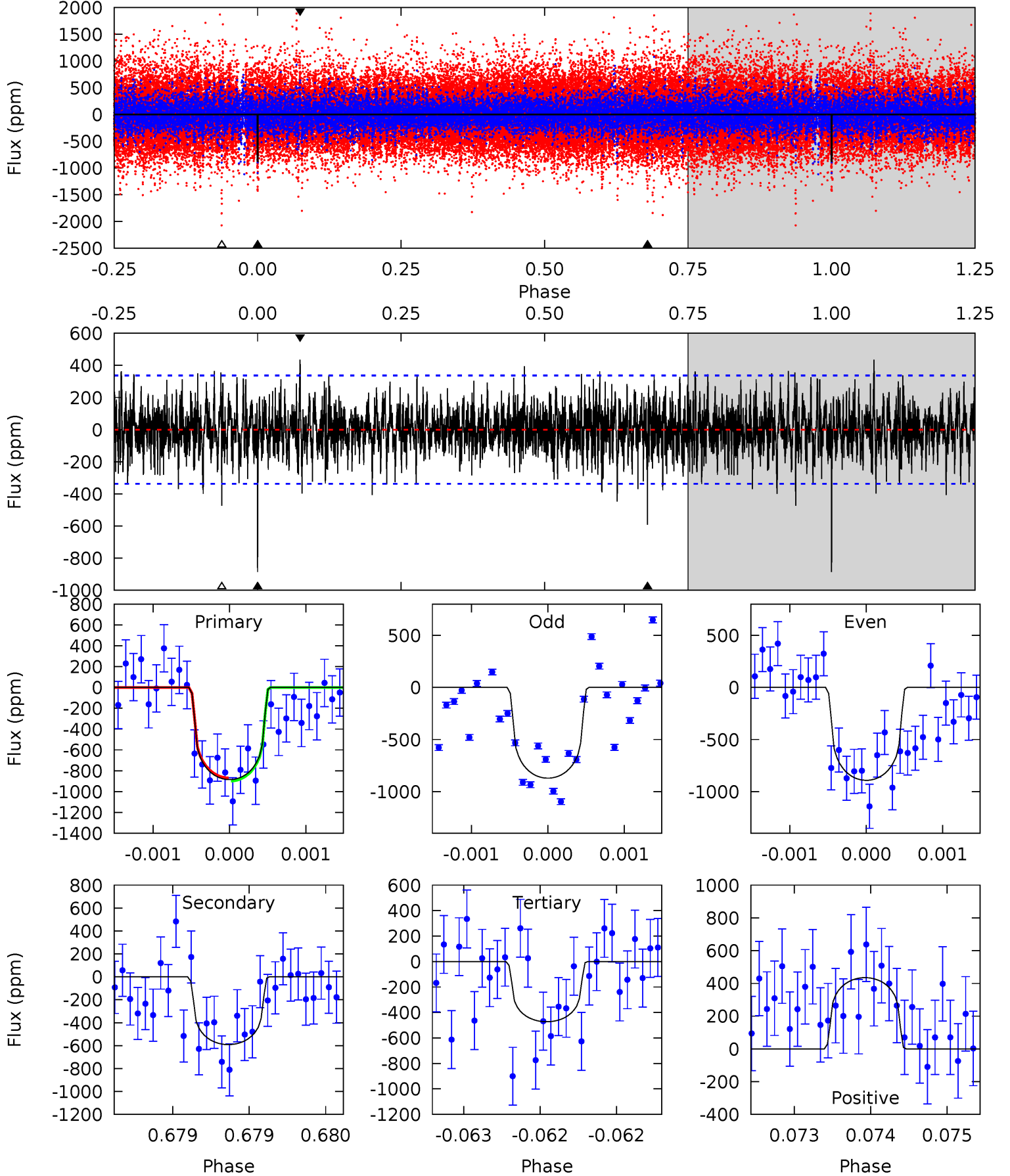
TCE 007038460-01 P=407.104627 Days $T_0=410.098917$ (BKJD)



DV Model-Shift Uniqueness Test

007038460-01, P = 407.192453 Days, E = 2.778826 Days

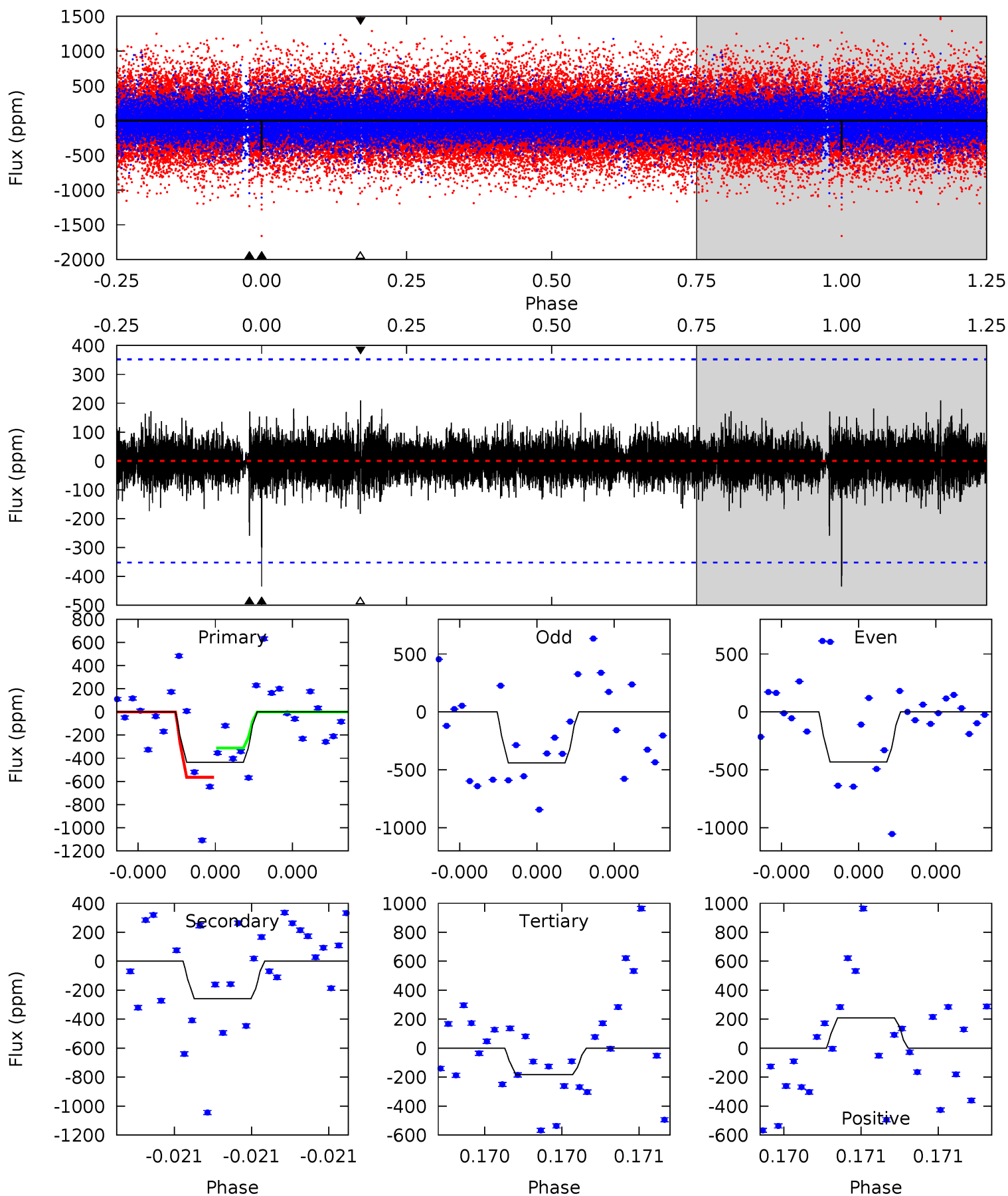
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	9.67	7.74	7.12	5.52	3.40	1.83	6.75	7.36	1.94	2.56	0.16	1.01	0.33	0.24



Alt Model-Shift Uniqueness Test

007038460-01, P = 407.104627 Days, E = 2.994290 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.92	4.12	2.92	3.34	5.60	3.52	0.67	4.00	3.58	1.20	0.78	0.06	1.12	0.33	2.01



Stellar Parameters For KIC 007038460

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5726^{+154}_{-188}	$4.476^{+0.052}_{-0.208}$	$0.300^{+0.150}_{-0.300}$	$0.991^{+0.295}_{-0.098}$	$1.072^{+0.097}_{-0.122}$	$1.553^{+0.406}_{-0.774}$
	+3%/-3%	+1%/-5%	+50%/-100%	+30%/-10%	+9%/-11%	+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 007038460-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-591 ± 61	$4.11^{+3.42}_{-2.70}$	343^{+25}_{-18}	4791^{+3290}_{-933}	$22891^{+167805}_{-15961}$
Alt.	-259 ± 63	$3.69^{+3.41}_{-2.53}$	341^{+26}_{-16}	4244^{+2800}_{-839}	$12078^{+107983}_{-8969}$

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

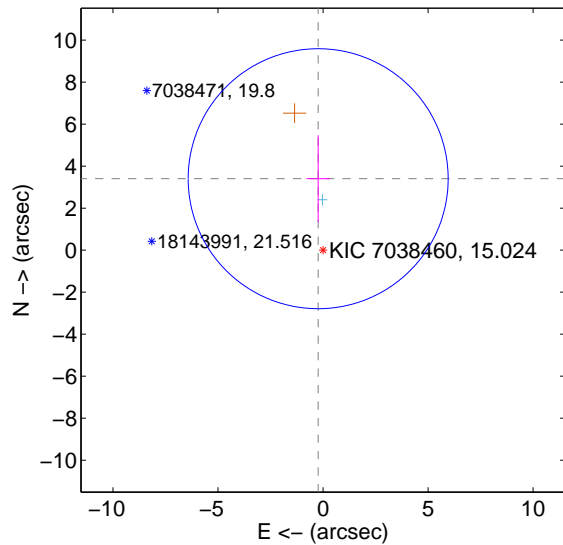
Supplemental centroid analysis for 007038460-01. Kepler magnitude: 15.02. Transit SNR 7.83

There are 1 quarters with good PRF difference image offsets

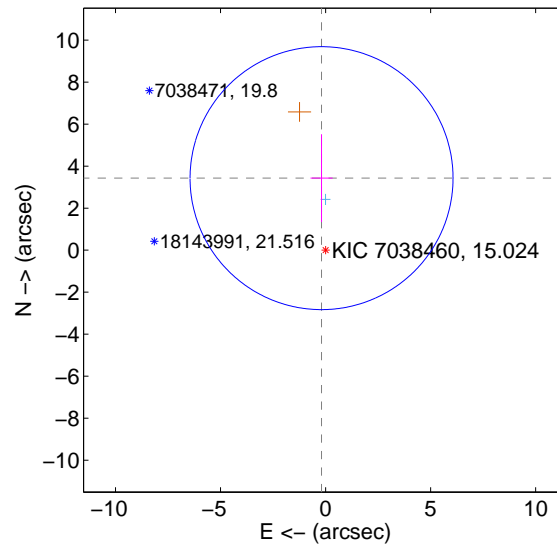
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.409 ± 2.062	1.65	0.232 ± 0.562	3.401 ± 2.067
PRF-fit source offset from KIC position	3.433 ± 2.086	1.65	0.192 ± 0.526	3.428 ± 2.089
photometric centroid source offset	0.81 ± 1.08	0.76	0.74 ± 1.06	0.34 ± 1.15

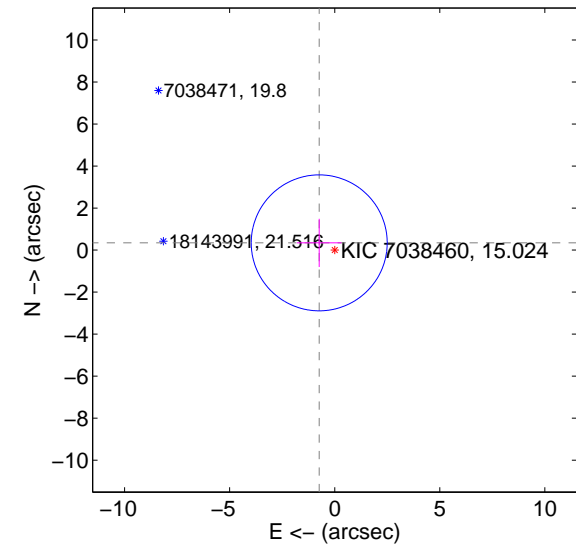
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

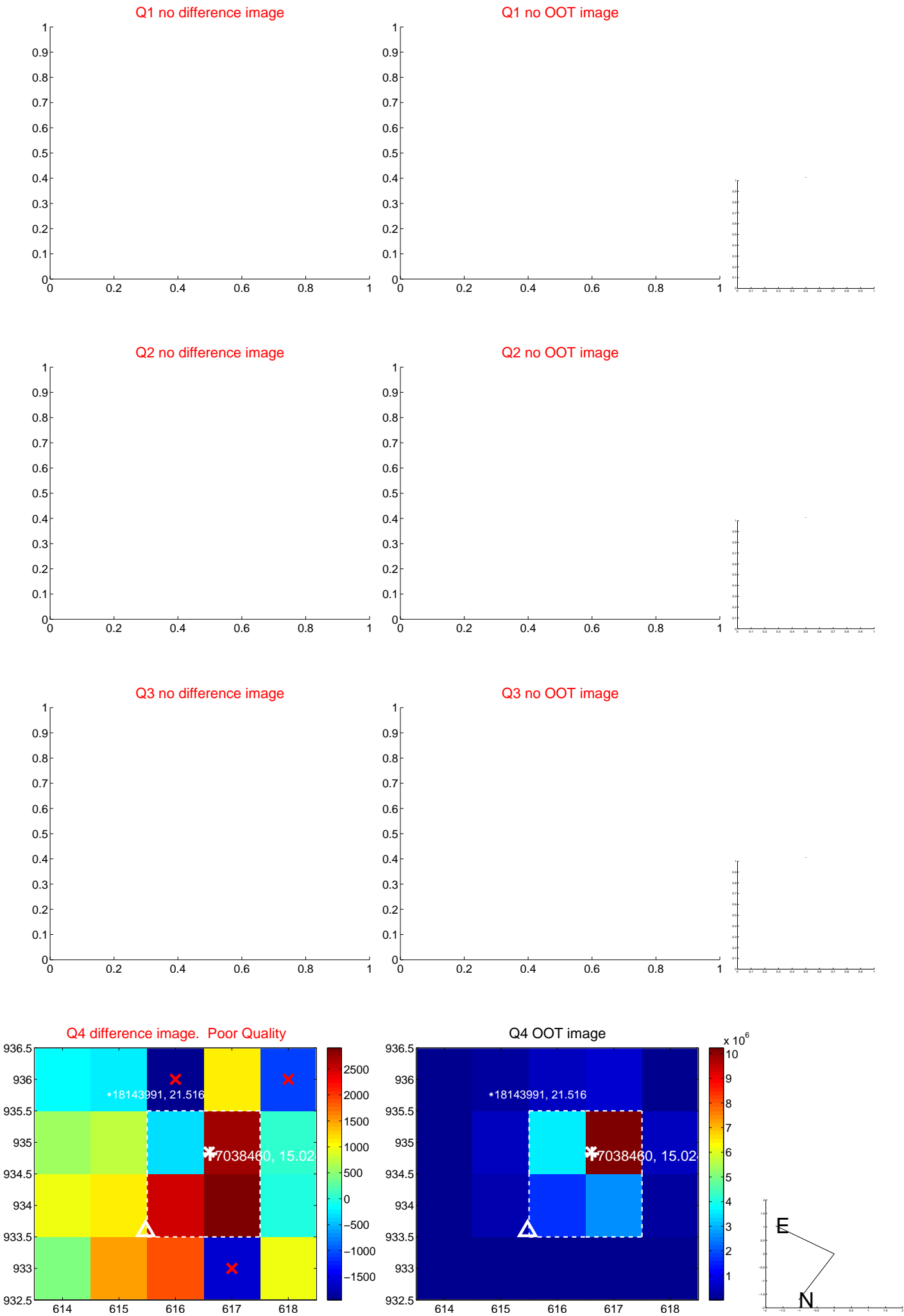


offset from photometric centroids



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.

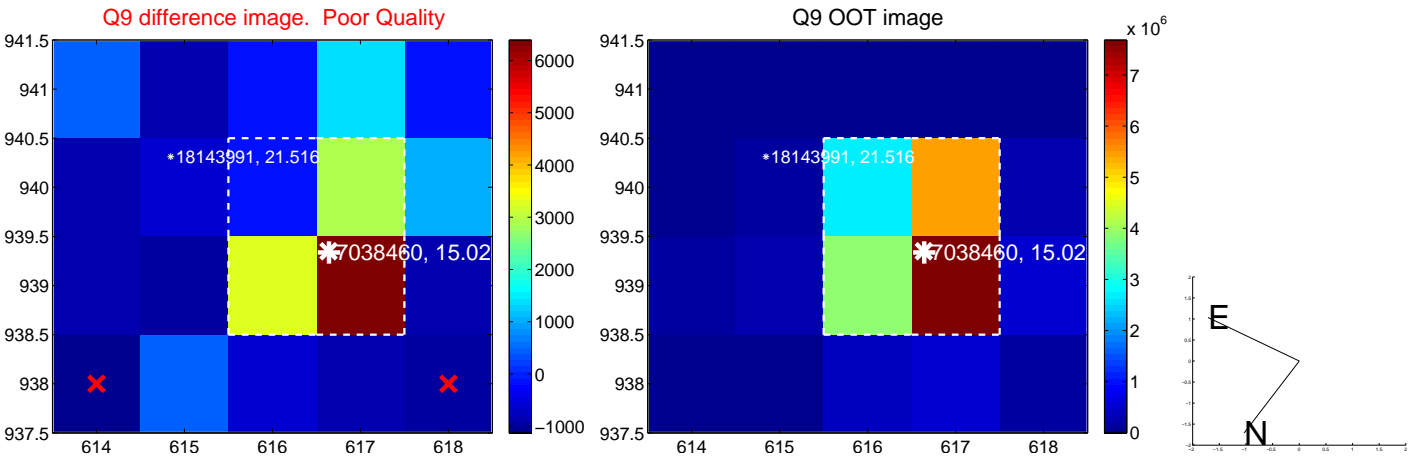
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



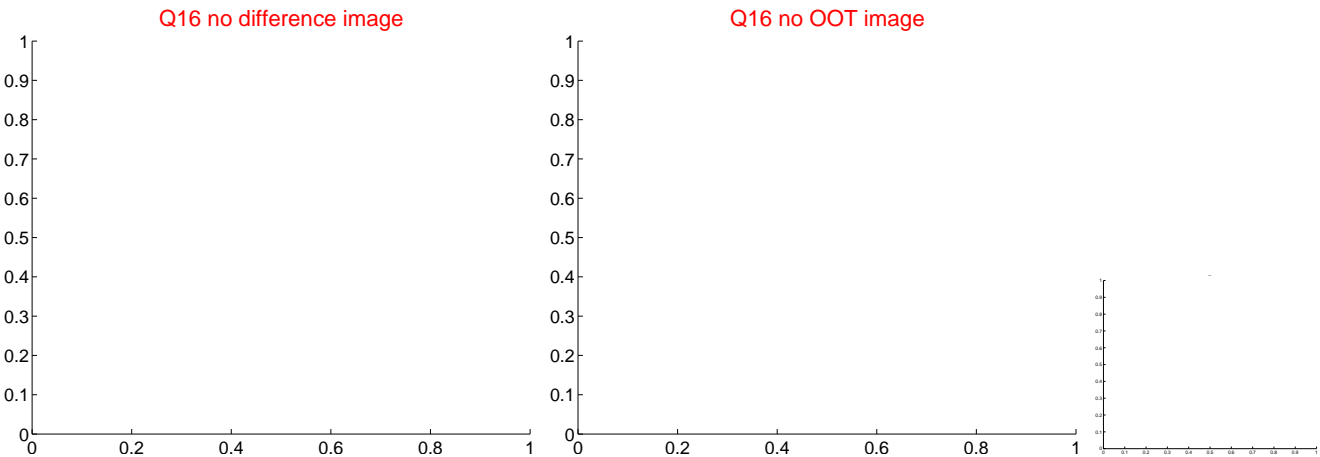
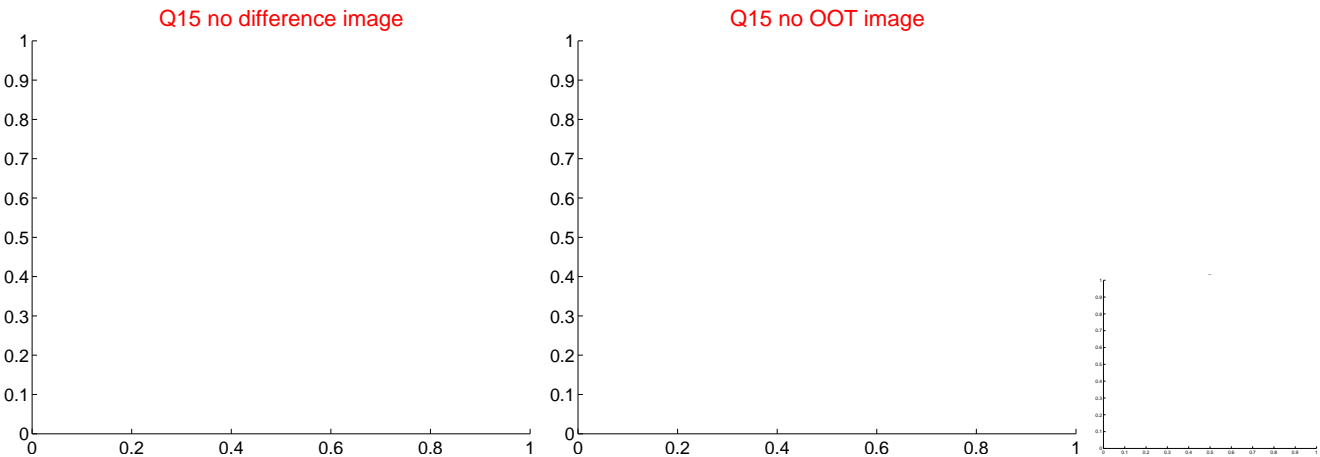
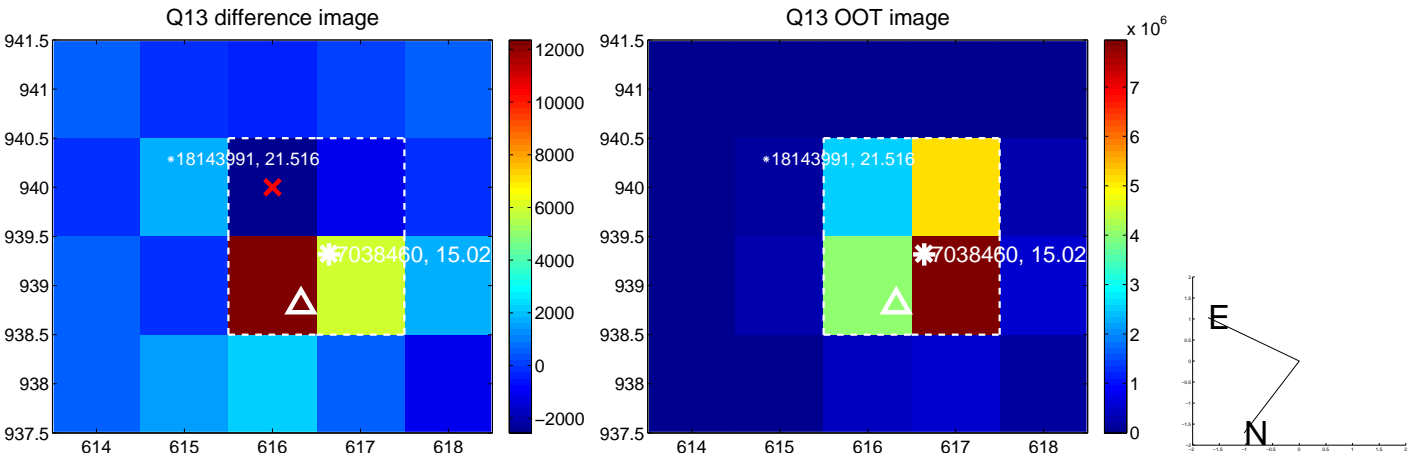
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



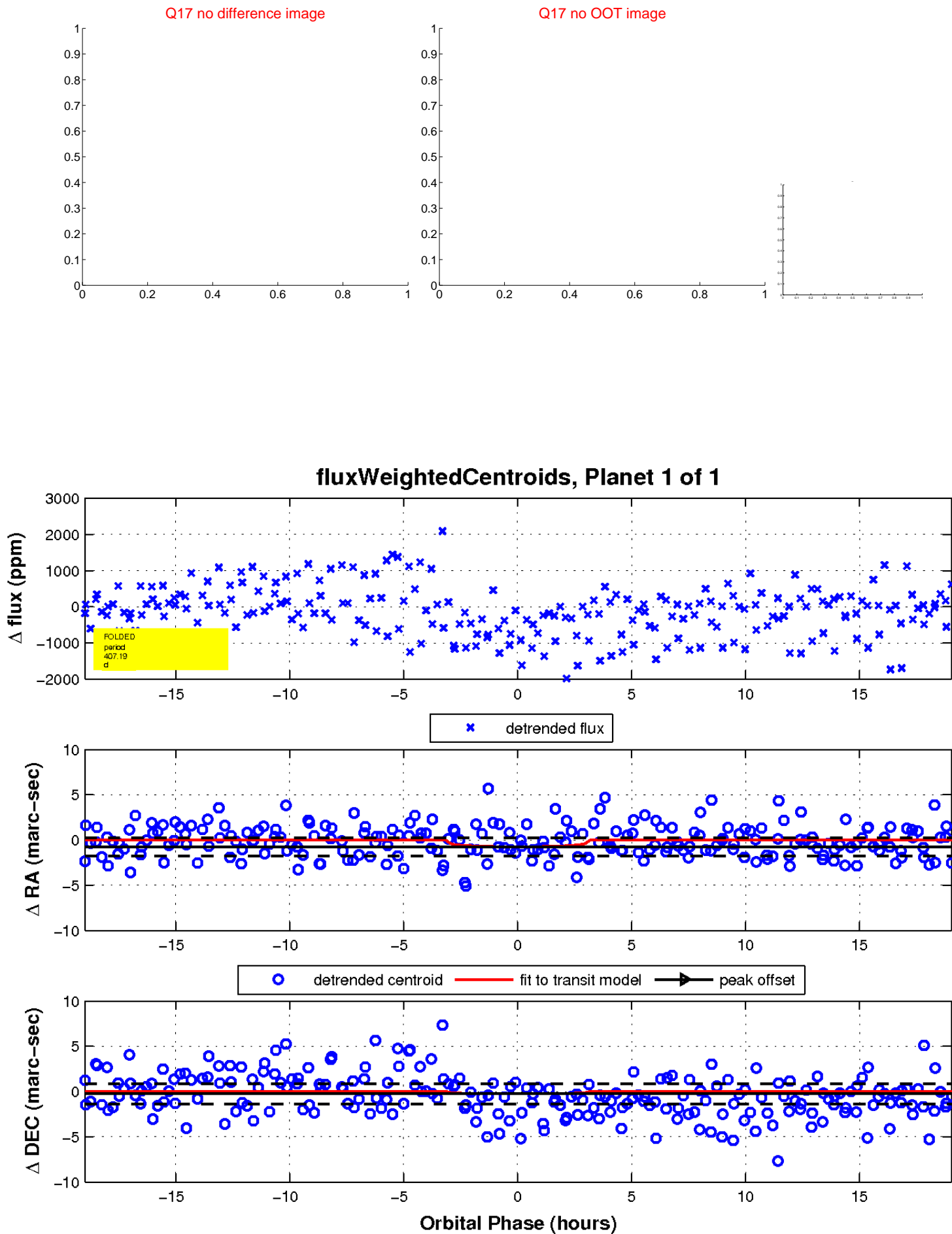
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

