

KIC 006065221

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})
006065221-01	OBS	No	543.053239	337.650821	482.3	13.734	7.2	5.8	0.73	5119	1.86	0.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006065221-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

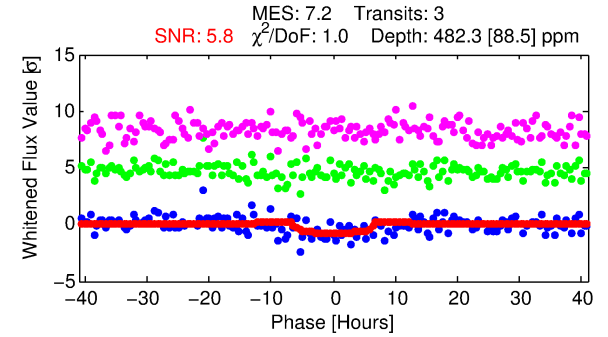
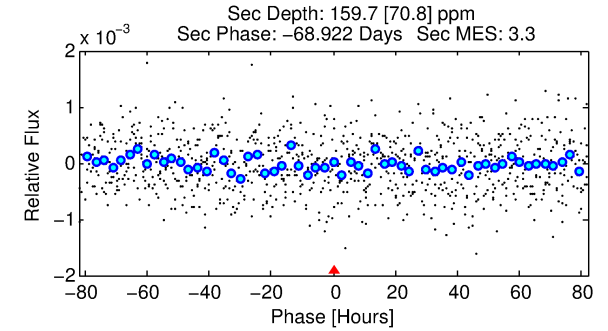
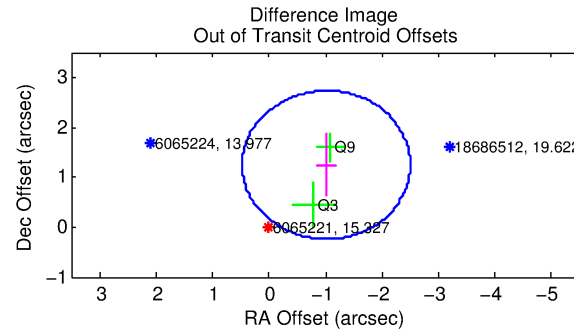
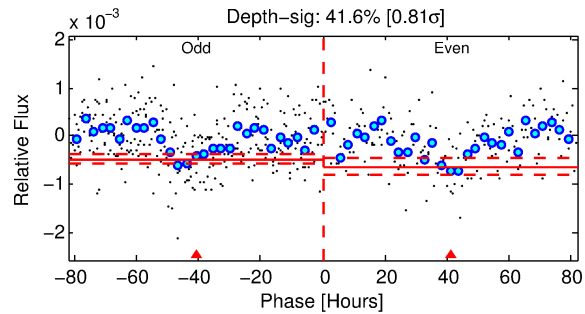
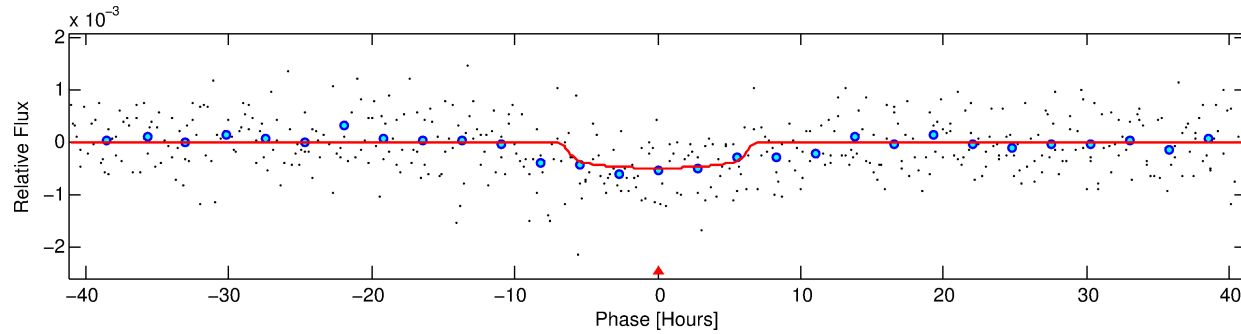
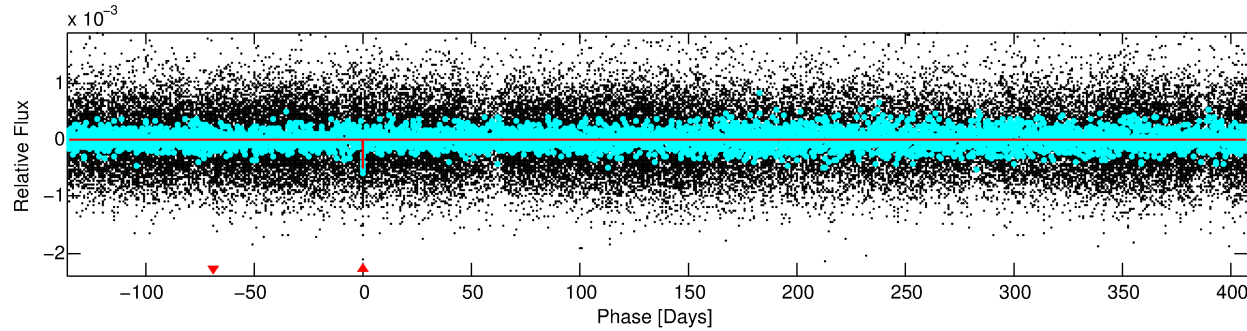
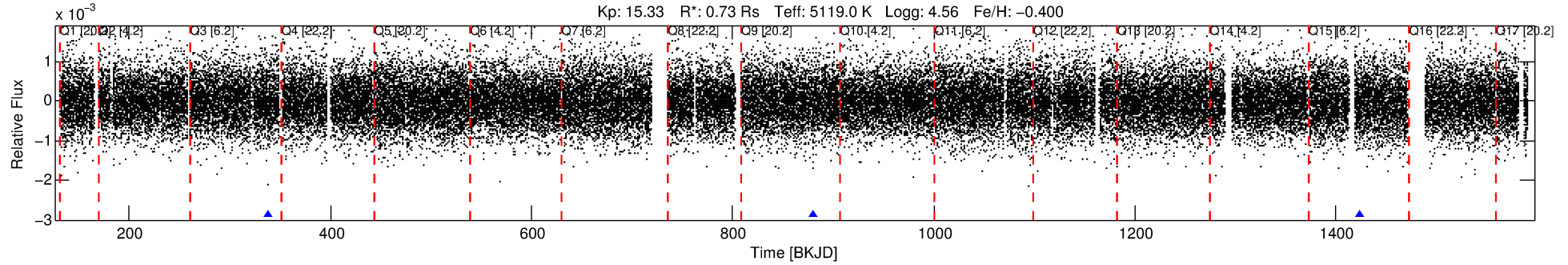
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006065221-01

No Significant Match Found

DV One-Page Summary

KIC: 6065221 Candidate: 1 of 1 Period: 543.053 d



DV Fit Results:

Period = 543.05324 [0.02521] d
Epoch = 337.6508 [0.0335] BKJD
Rp/R* = 0.0235 [0.0074]
a/R* = 165.47 [202.31]
b = 0.86 [0.36]
Seff = 0.24 [0.05]
Teq = 179 [8] K
Rp = 1.86 [0.63] Re
a = 1.1533 [0.1100] AU
Ag = 33730.44 [26555.22] [1.27 σ]
Teffp = 3757 [736] K [4.86 σ]

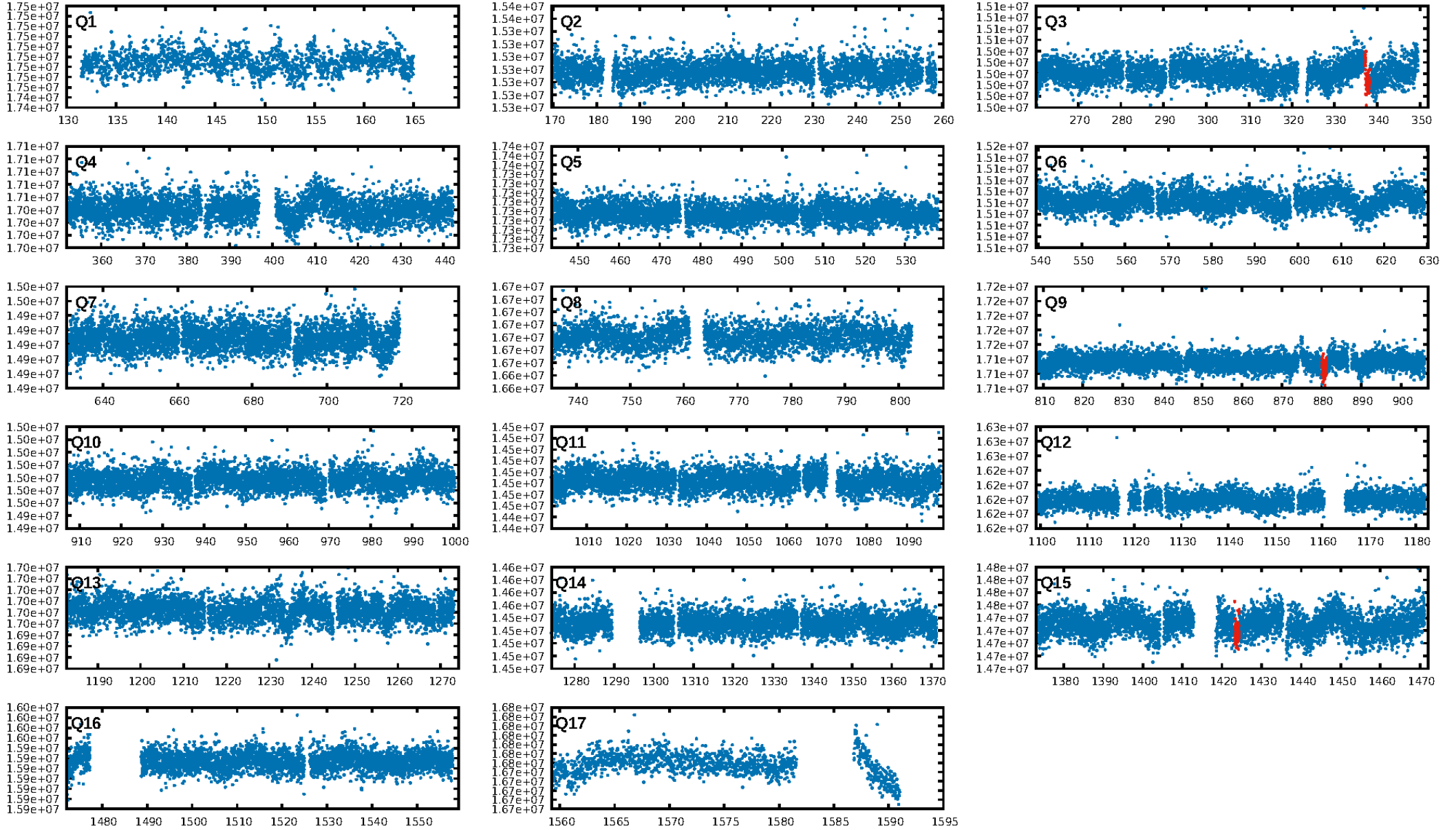
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 43.2%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 2.92e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.4238
Centroid-sig: 72.1%
Centroid-so: 2.231 arcsec [1.72 σ]
OotOffset-rm: 1.604 arcsec [3.24 σ]
KicOffset-rm: 1.851 arcsec [4.58 σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

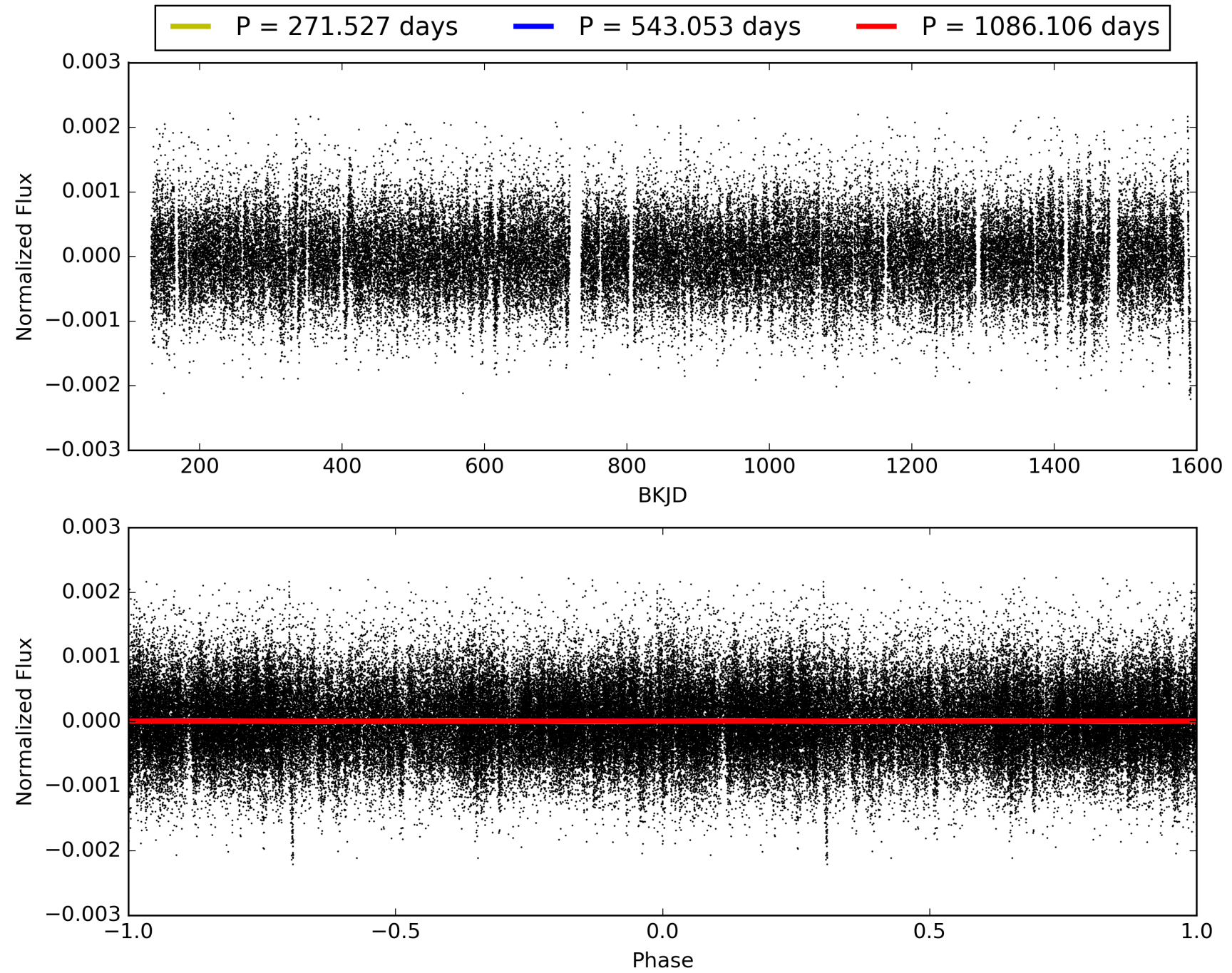
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 19:31:08 Z

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

TCE 006065221-01, PDC Light Curves

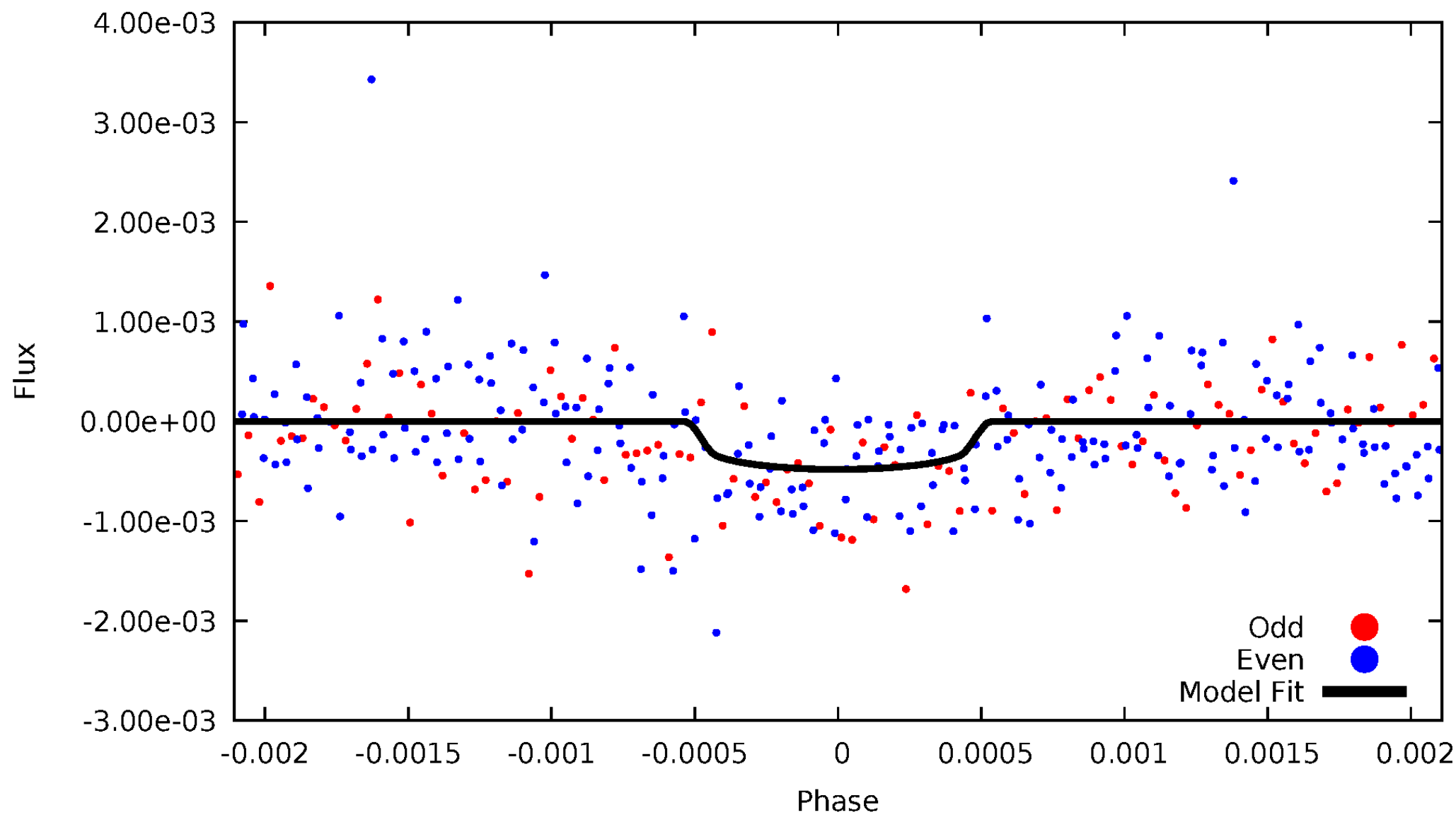


TCE 006065221-01



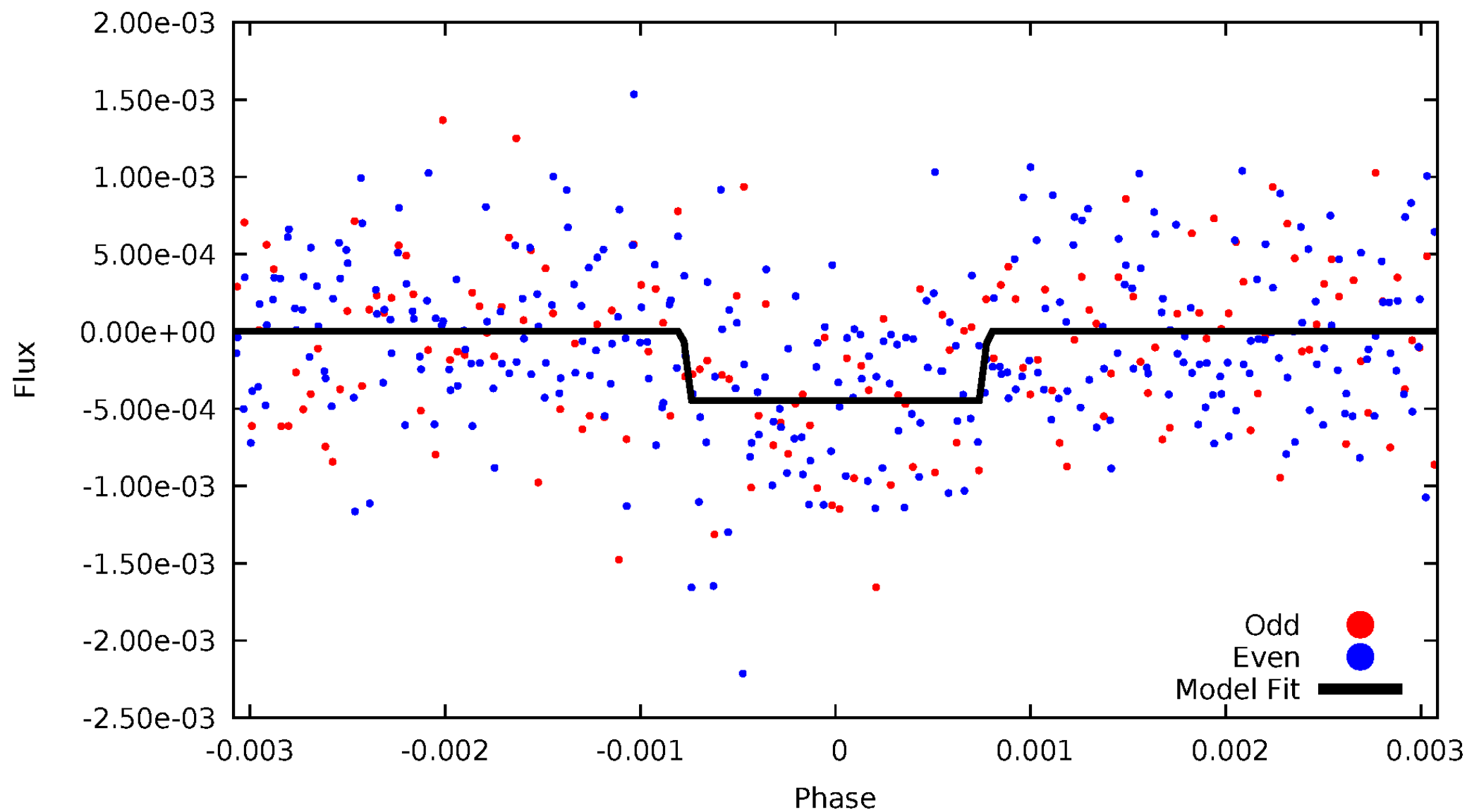
DV Odd/Even

TCE 006065221-01



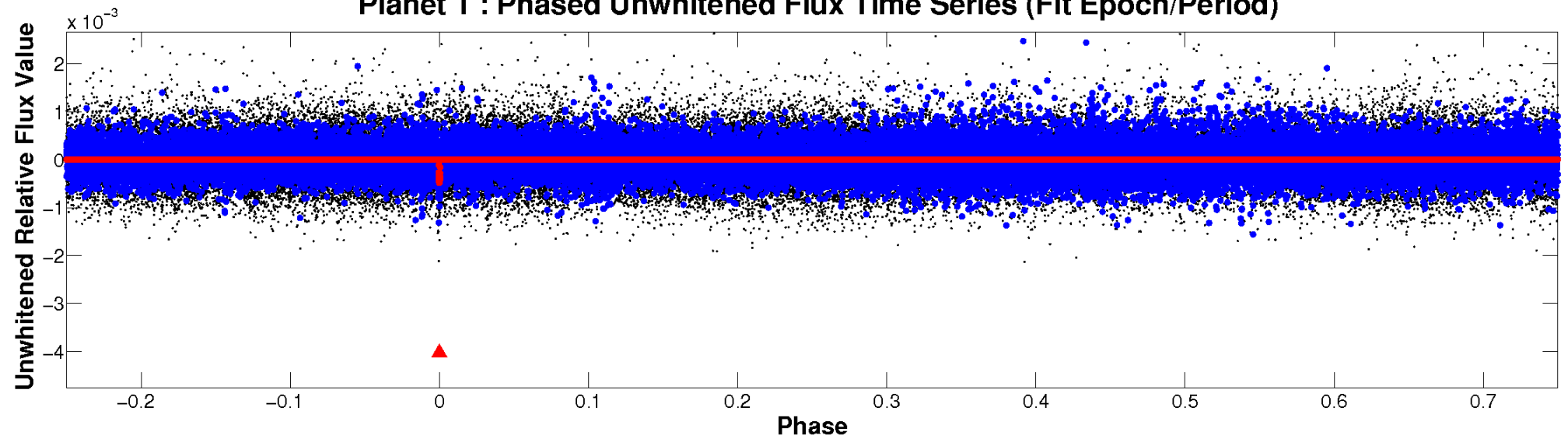
ALT Odd/Even

TCE 006065221-01

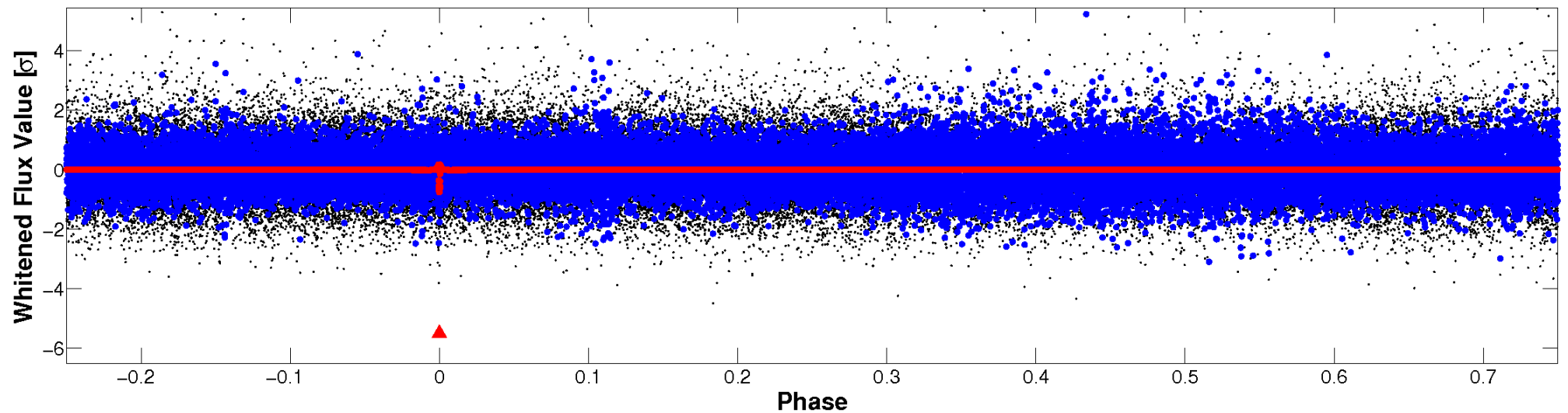


Non-Whitened Vs. Whitened Light Curve

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 006065221-01 P=543.053239 Days $T_0=337.650821$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006065221-01 P=543.053239 Days $T_0=337.650821$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

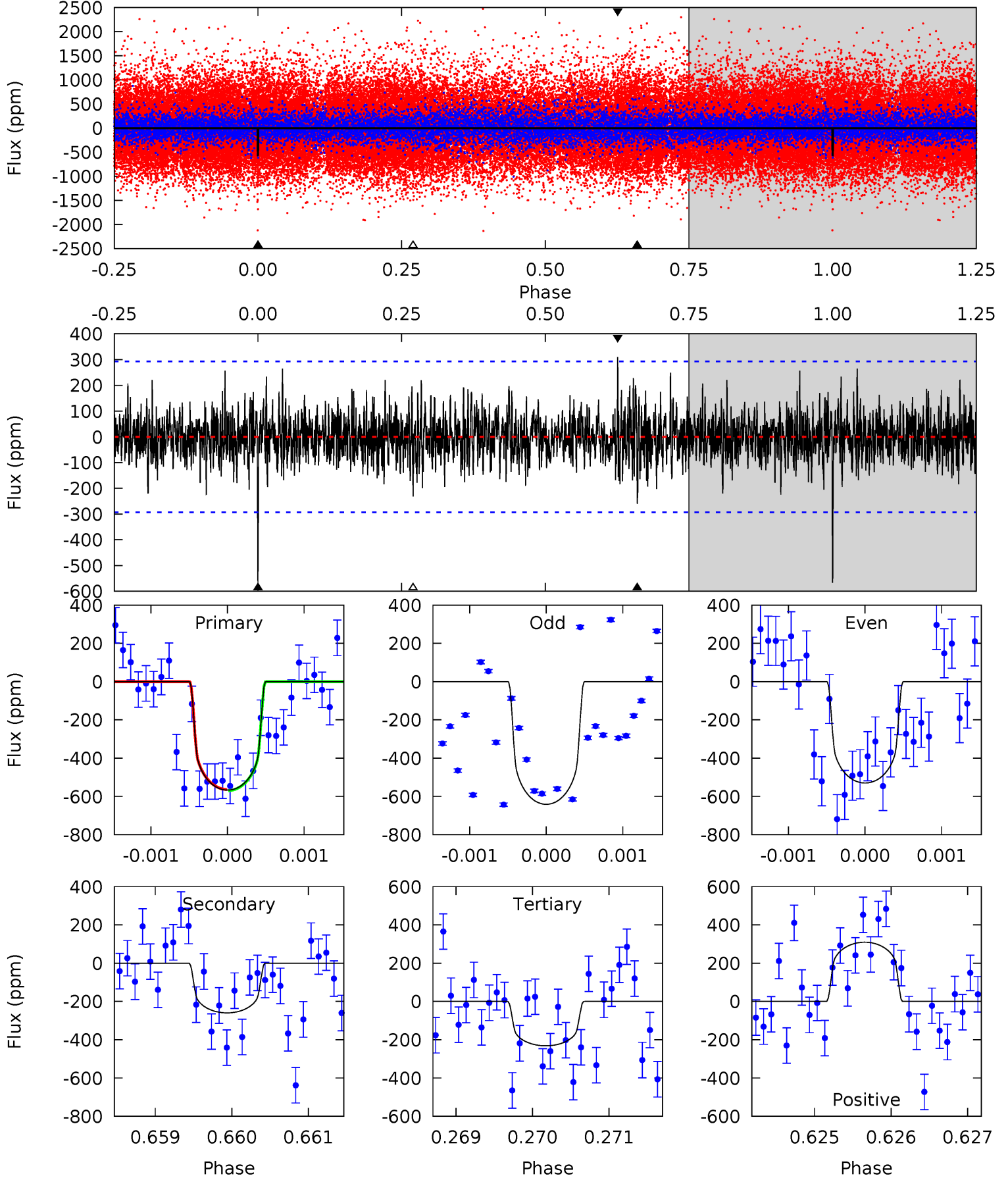
TCE 006065221-01 P=543.042291 Days $T_0=337.677424$ (BKJD)



DV Model-Shift Uniqueness Test

006065221-01, P = 543.053239 Days, E = 337.650821 Days

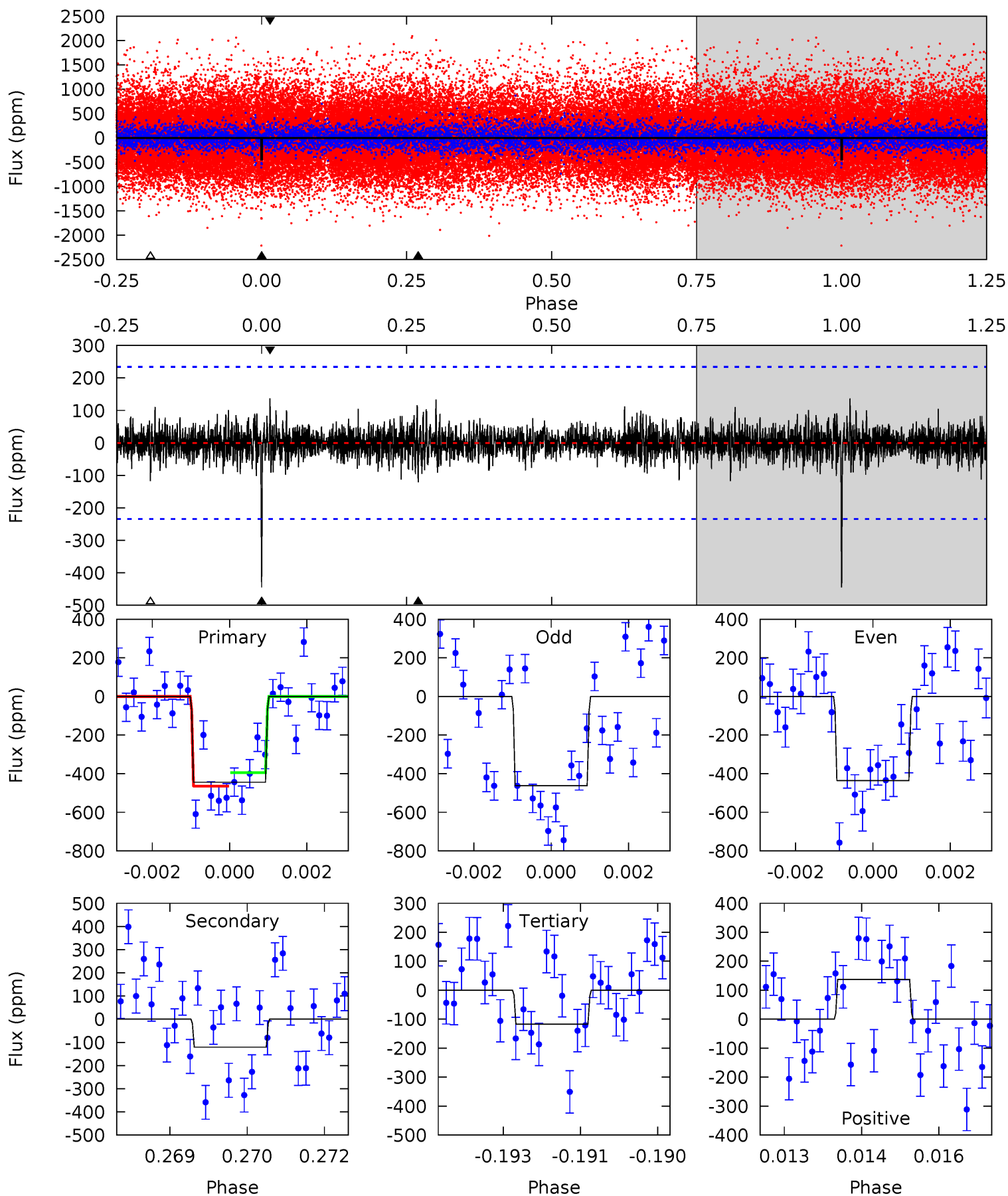
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	4.82	4.30	5.74	5.44	3.27	1.30	6.22	4.78	0.52	-0.92	0.98	0.88	0.35	0.05



Alt Model-Shift Uniqueness Test

006065221-01, P = 543.042291 Days, E = 337.677424 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	2.77	2.69	3.15	5.37	3.16	0.70	7.51	7.05	0.08	-0.38	0.29	0.96	0.24	0.79



Stellar Parameters For KIC 006065221

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5119^{+153}_{-153}	$4.556^{+0.078}_{-0.052}$	$-0.400^{+0.350}_{-0.300}$	$0.727^{+0.081}_{-0.074}$	$0.693^{+0.103}_{-0.044}$	$2.544^{+0.849}_{-0.493}$
	+3%/-3%	+2%/-1%	+87%/-75%	+11%/-10%	+15%/-6%	+33%/-19%
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 006065221-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-260 ± 54	$1.81^{+0.61}_{-0.56}$	249^{+9}_{-9}	4406^{+824}_{-451}	55441^{+72349}_{-23600}
Alt.	-121 ± 44	$1.72^{+0.62}_{-0.62}$	249^{+11}_{-10}	3932^{+722}_{-490}	30373^{+45859}_{-16481}

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

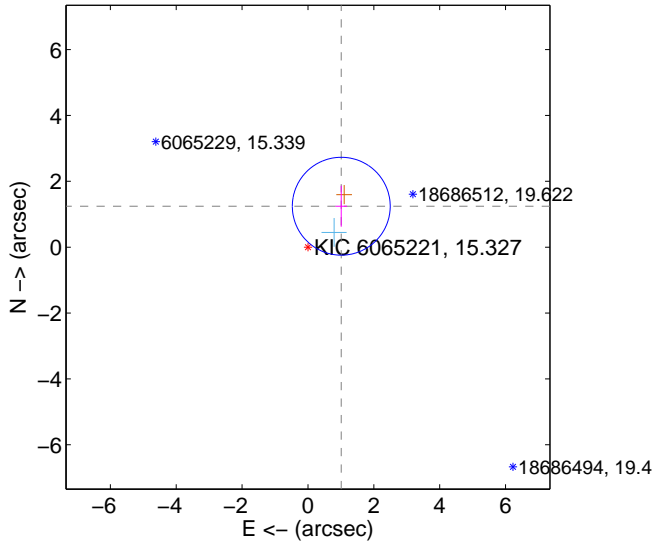
Supplemental centroid analysis for 006065221-01. Kepler magnitude: 15.33. Transit SNR 5.85

There are 1 quarters with good PRF difference image offsets

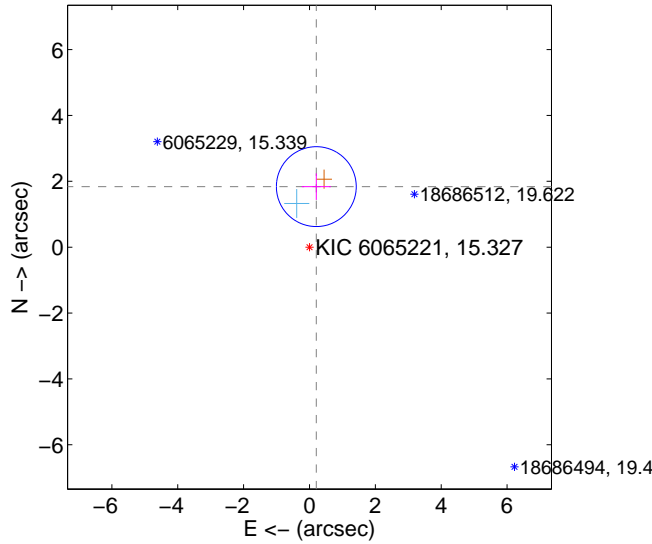
The direct PRF centroid is offset from the target star catalog position by about 0.81 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.604 ± 0.495	3.24	-1.012 ± 0.175	1.244 ± 0.623
PRF-fit source offset from KIC position	1.851 ± 0.404	4.58	-0.208 ± 0.443	1.839 ± 0.404
photometric centroid source offset	2.23 ± 1.30	1.72	1.72 ± 1.34	1.42 ± 1.23

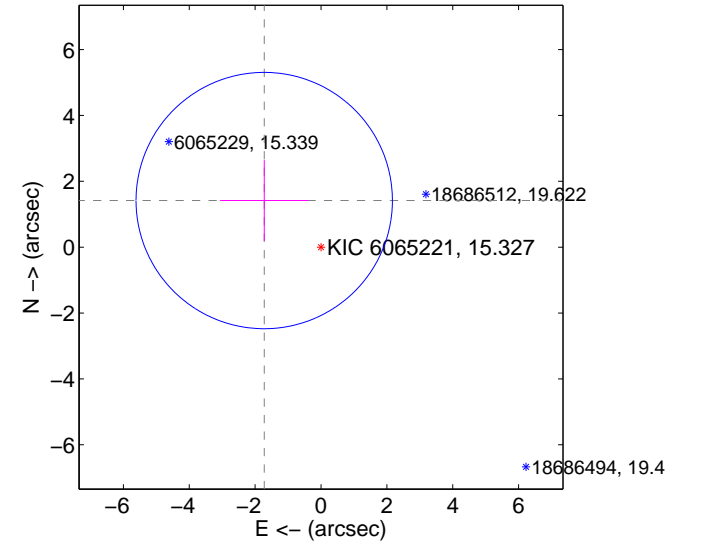
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

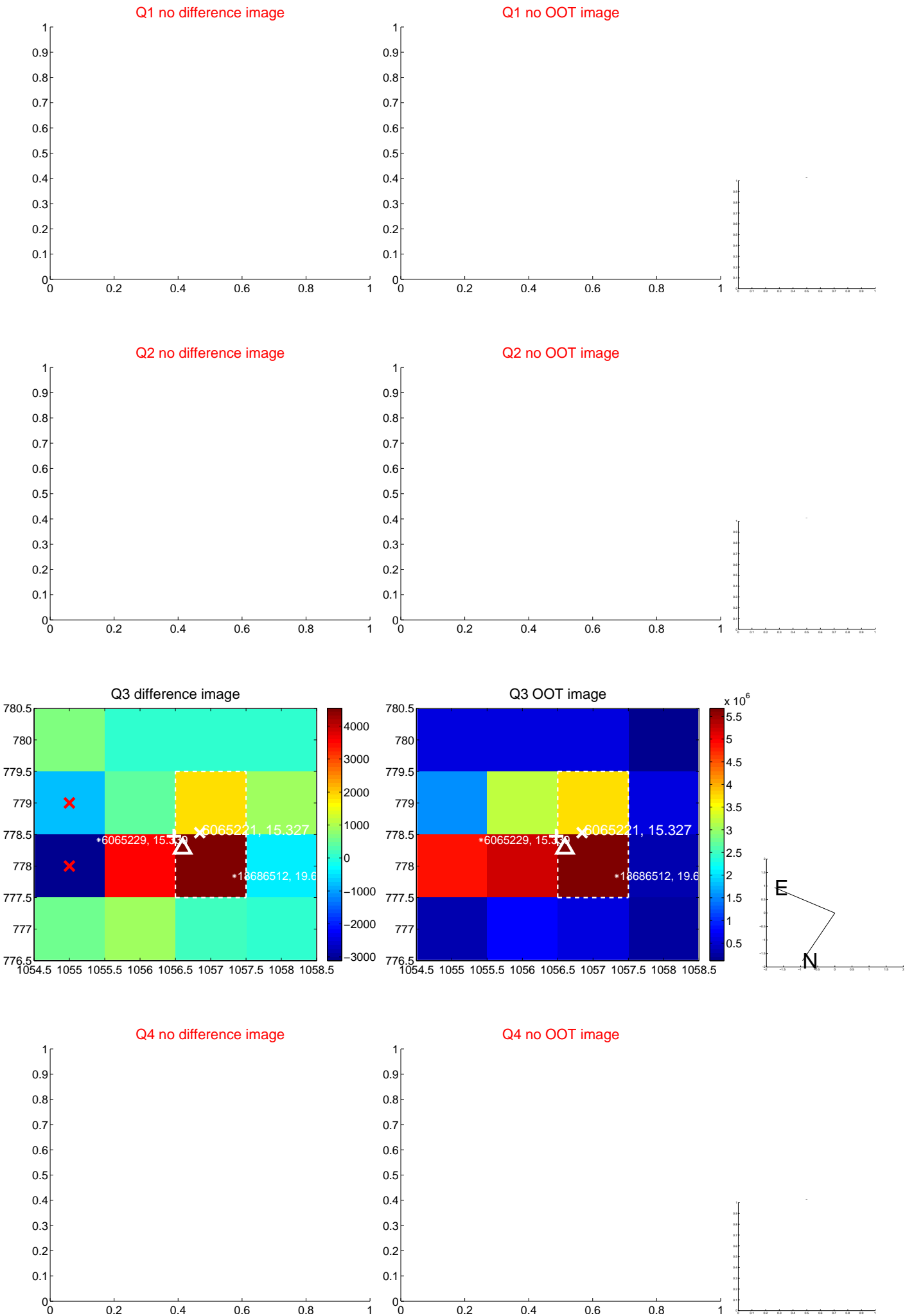


offset from photometric centroids



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.

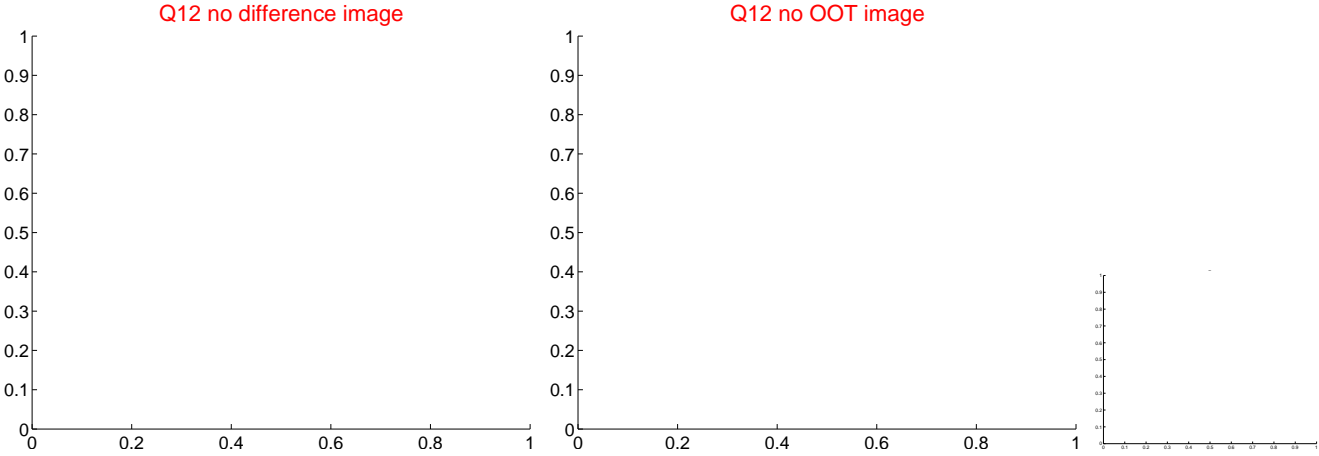
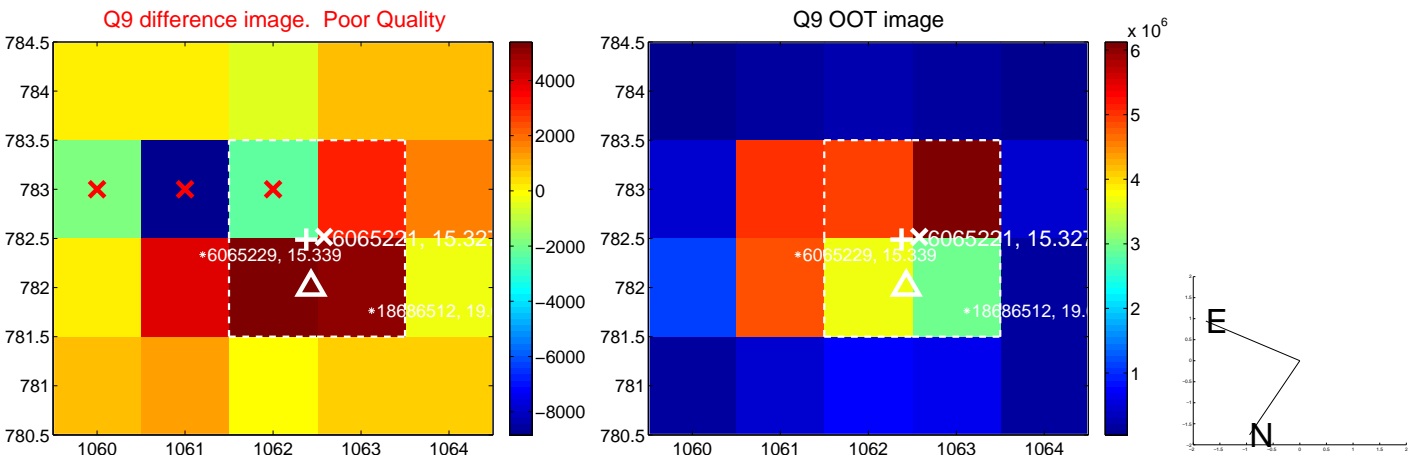
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



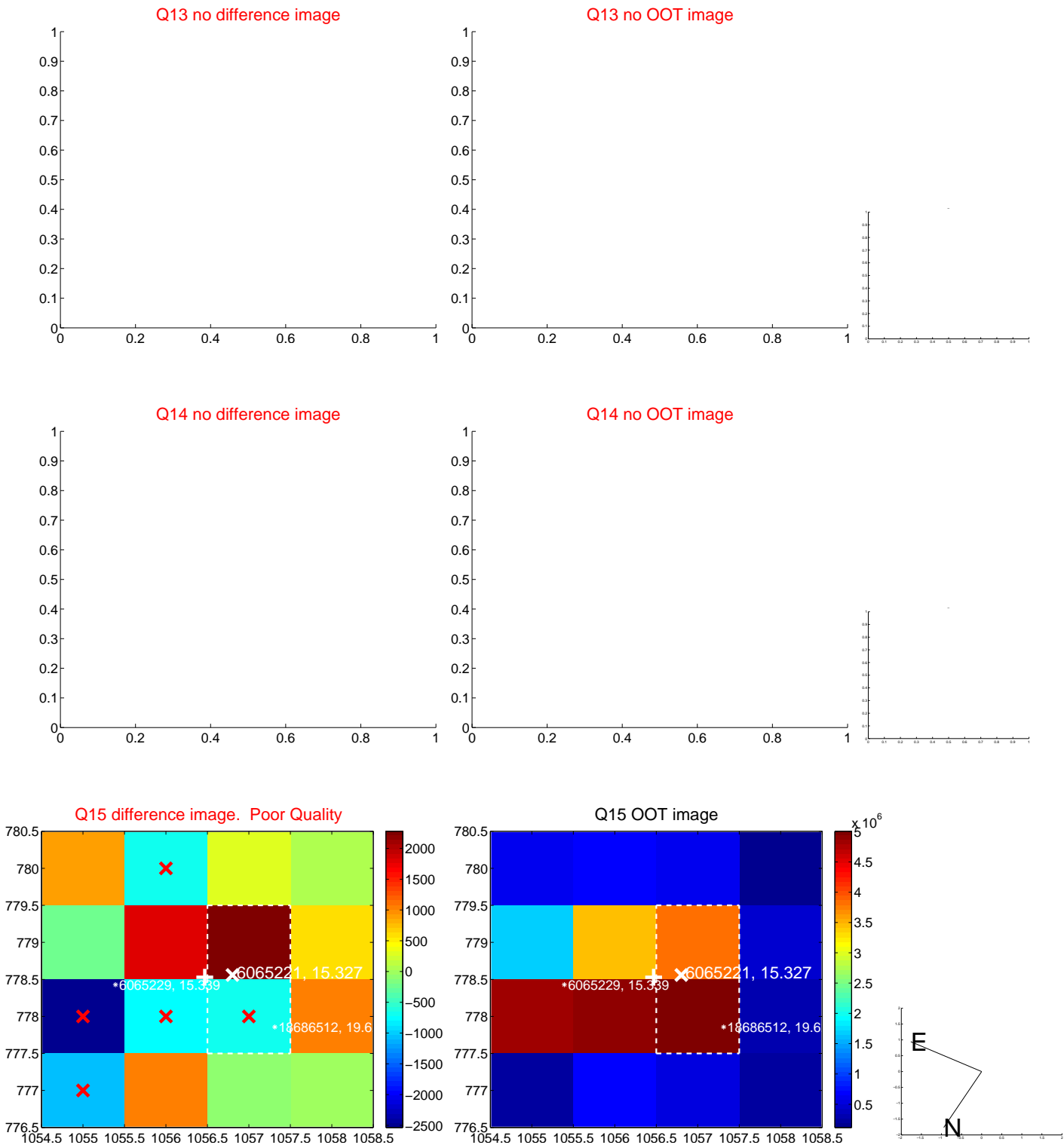
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



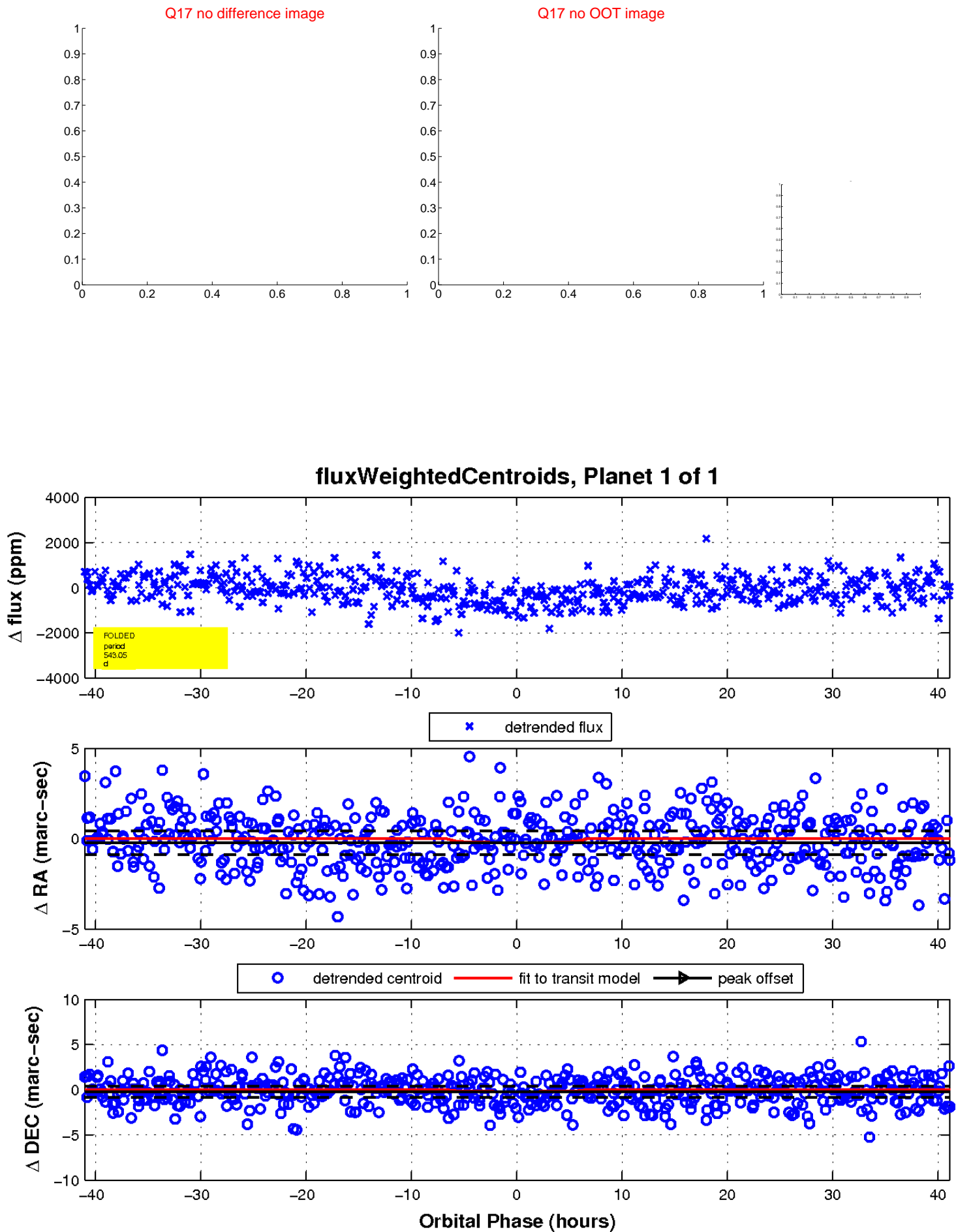
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

