

KIC 010489521

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})
010489521-01	OBS	3625.01	1.612239	131.854744	285100.7	2.500	6172.3	-1.0	1.16	6389	63.29	2681.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010489521-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—CENT_NOFITS

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.

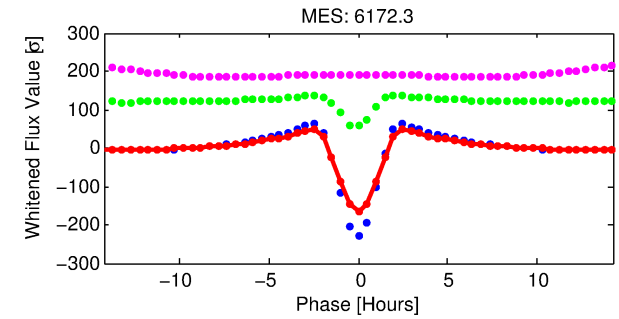
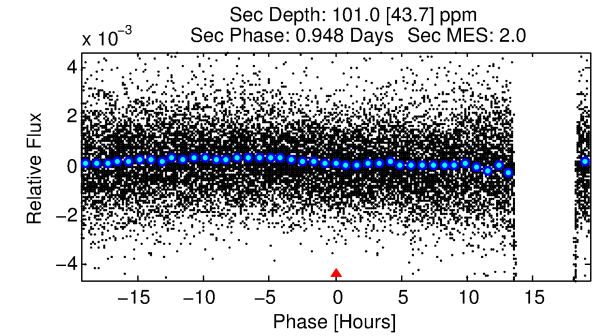
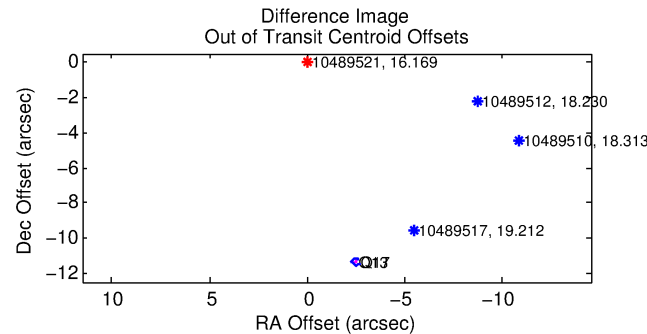
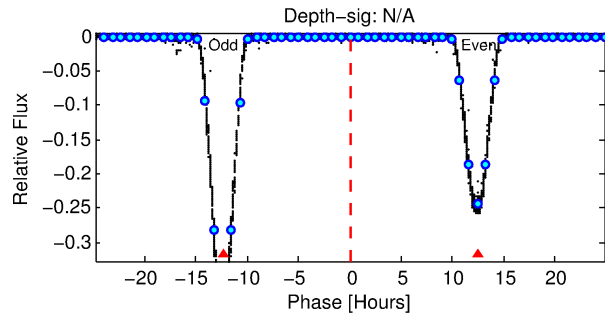
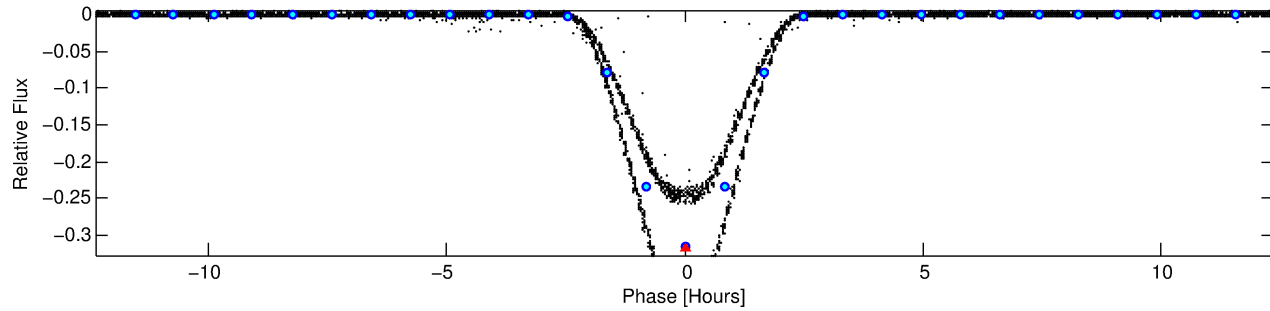
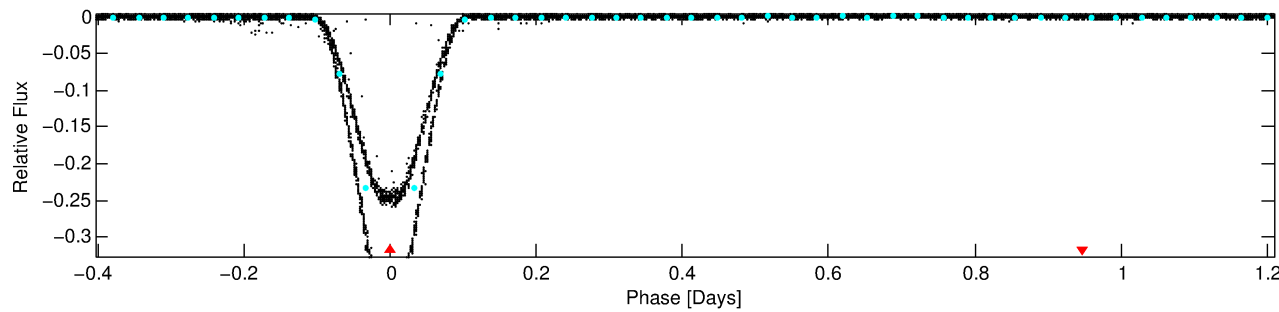
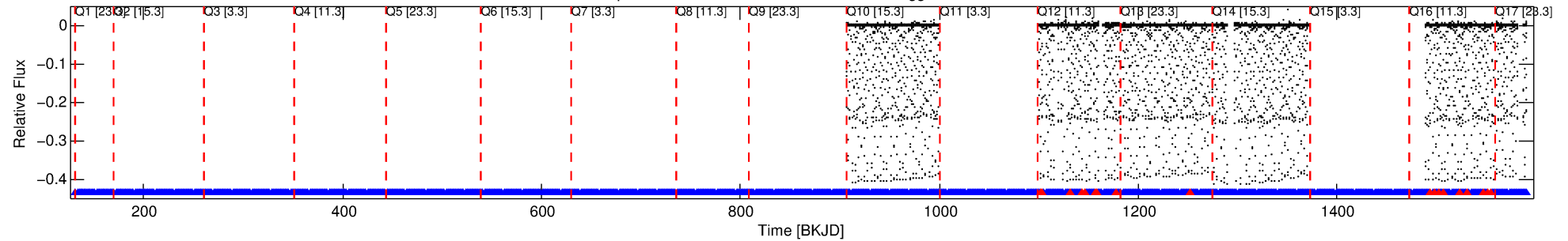
Ephemeris Match Information For 010489521-01

No Significant Match Found

DV One-Page Summary

KIC: 10489521 Candidate: 1 of 1 Period: 1.612 d
KOI: K03625 Corr: No Ephemeris Match

Kp: 16.17 R*: 1.16 Rs Teff: 6389.0 K Logg: 4.33 Fe/H: -0.240



TPS TCE Results:

Period = 1.61224 d
Epoch = 131.8547 BKJD

DV fit results are unavailable

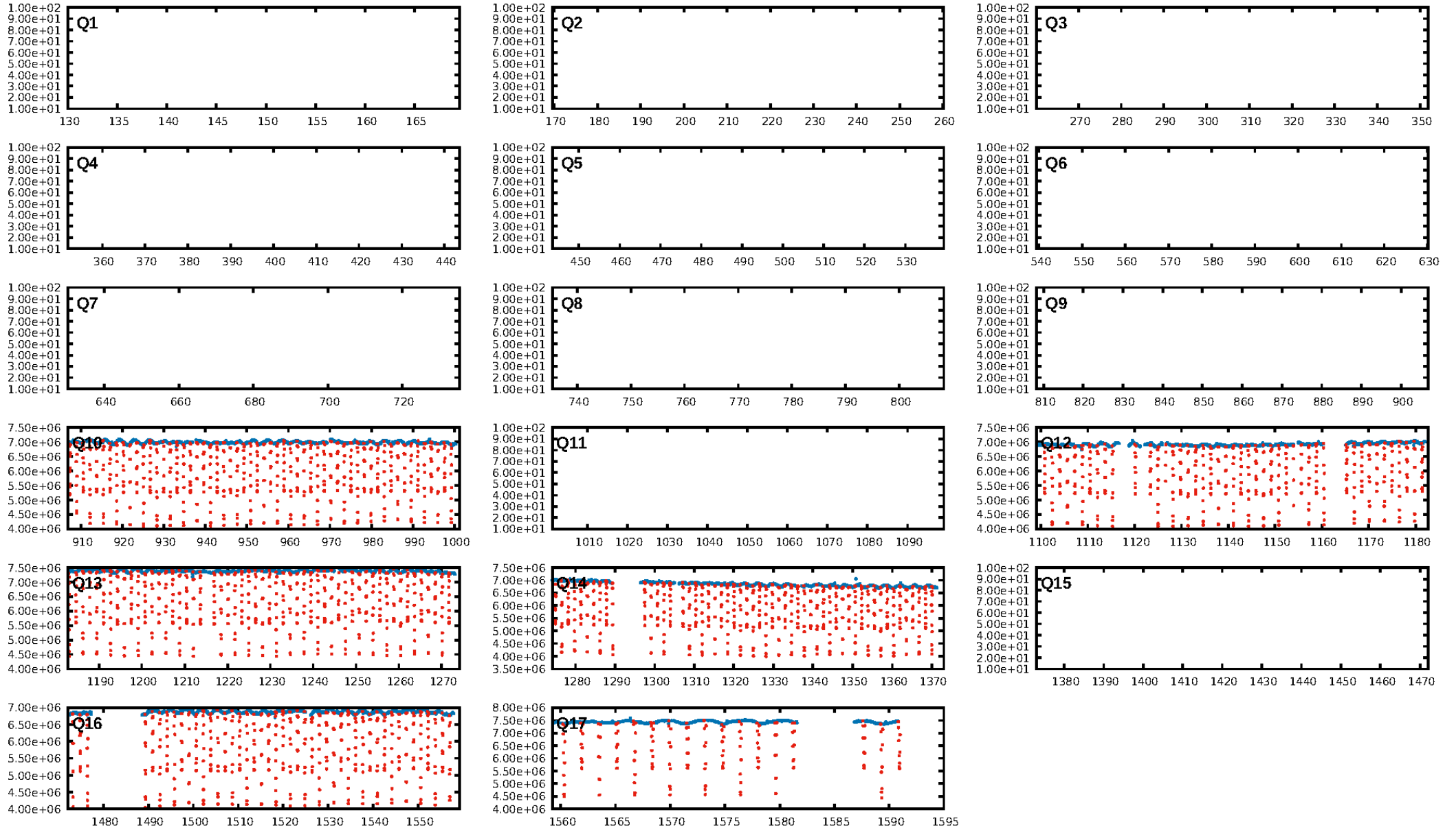
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.93 [239/257]
GhostDiagnostic-chr: 1.095
Centroid-sig: N/A
Centroid-so: 4.606 arcsec [3069.83σ]
OotOffset-rm: 11.612 arcsec [166.24σ]
KicOffset-rm: 0.083 arcsec [1.19σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-st: 2/0/2/2 [6]
DiffImageQuality-fgm: 1.00 [6/6]
DiffImageOverlap-fno: 1.00 [6/6]

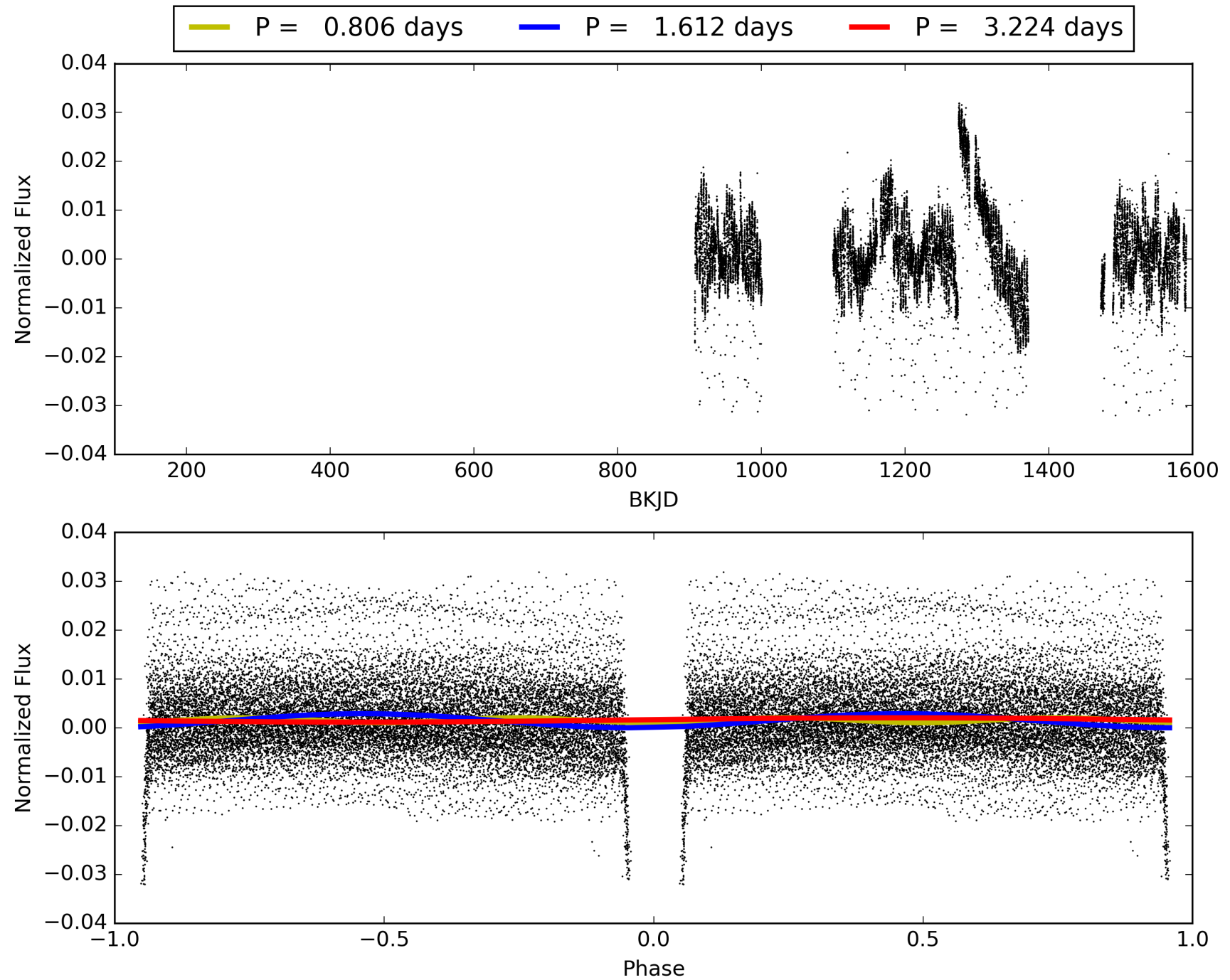
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:48:55 Z

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

TCE 010489521-01, PDC Light Curves

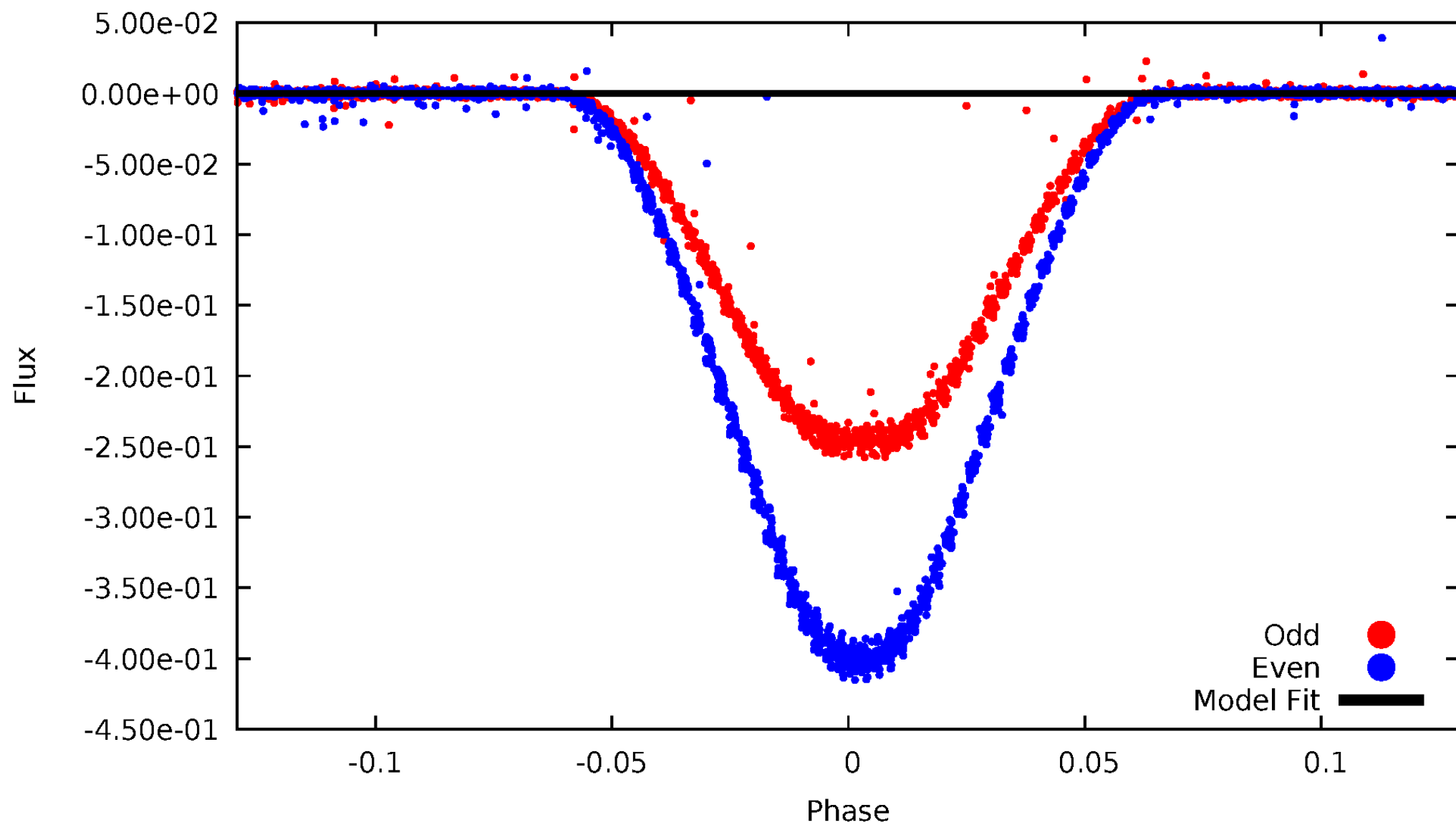


TCE 010489521-01



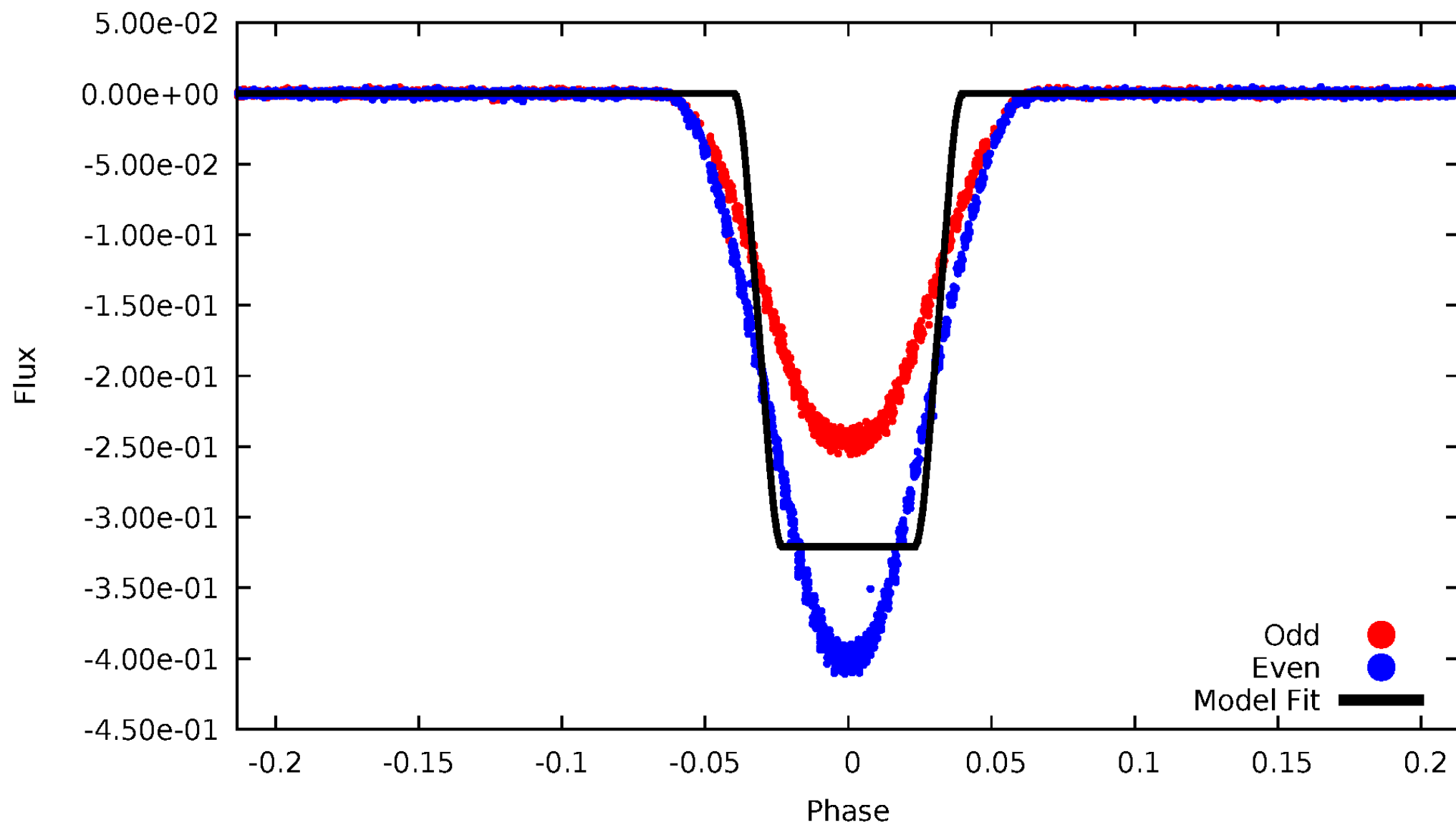
DV Odd/Even

TCE 010489521-01



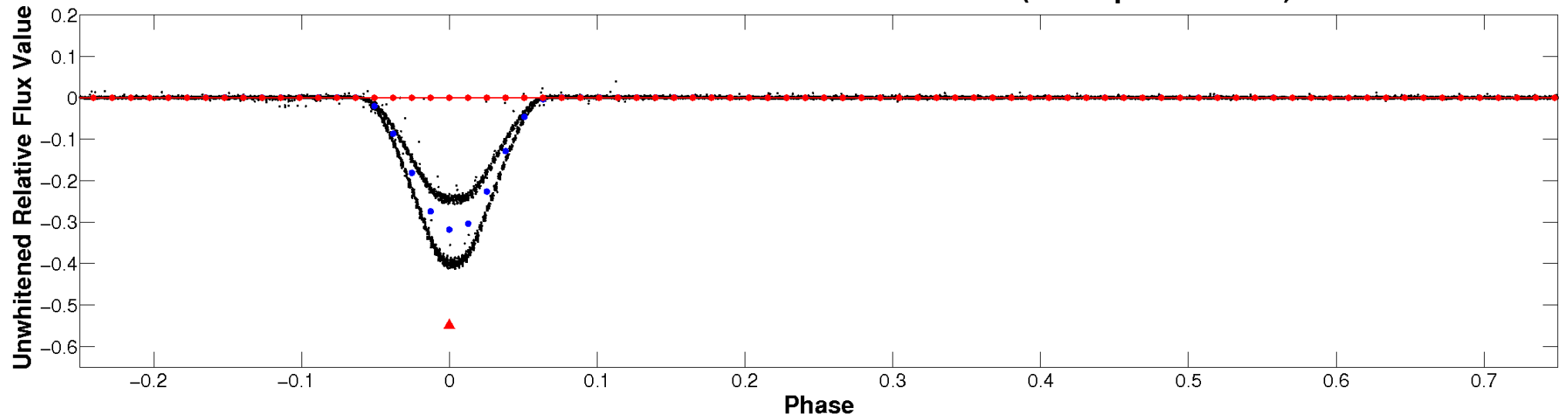
ALT Odd/Even

TCE 010489521-01



Non-Whitened Vs. Whitened Light Curve

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

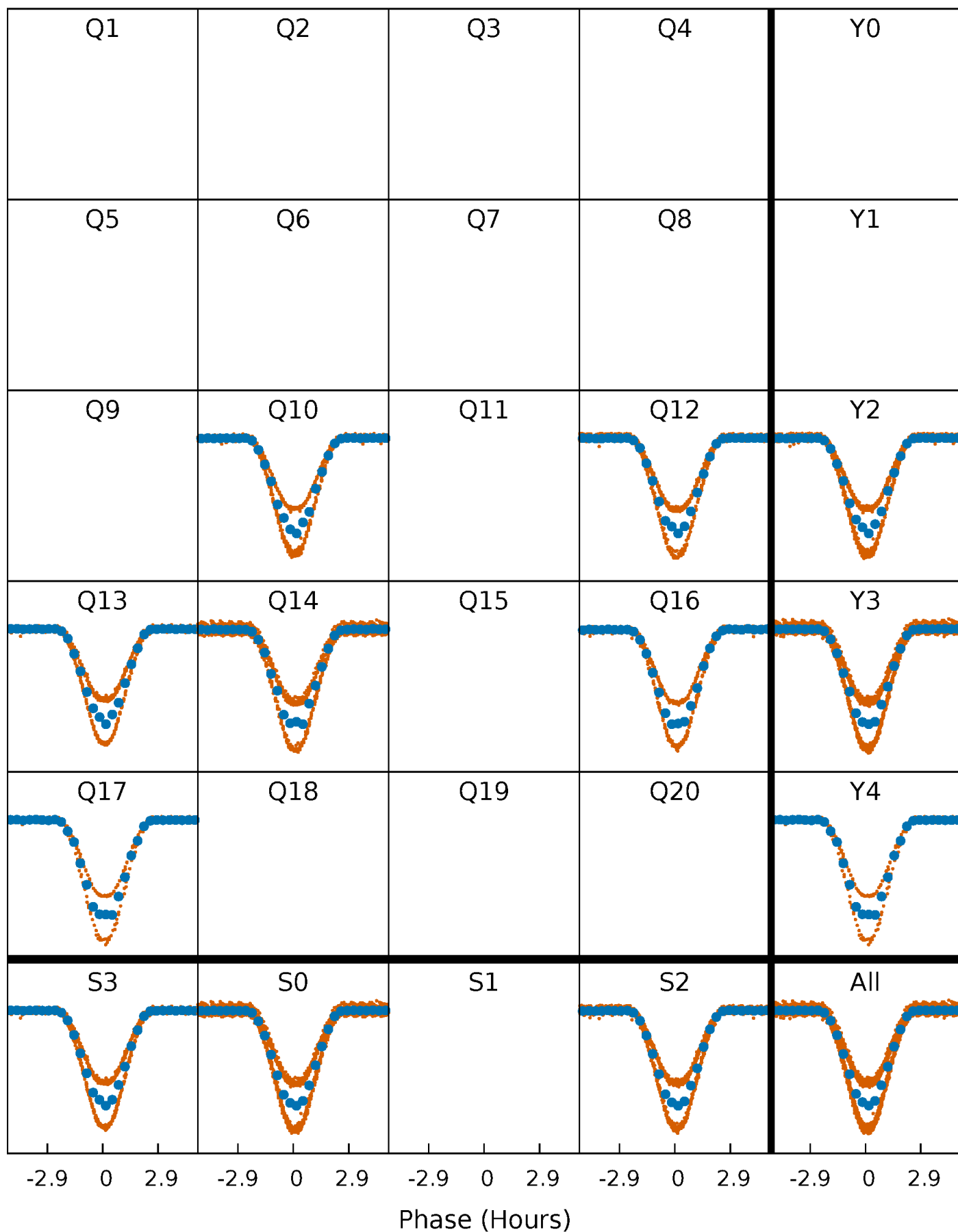


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



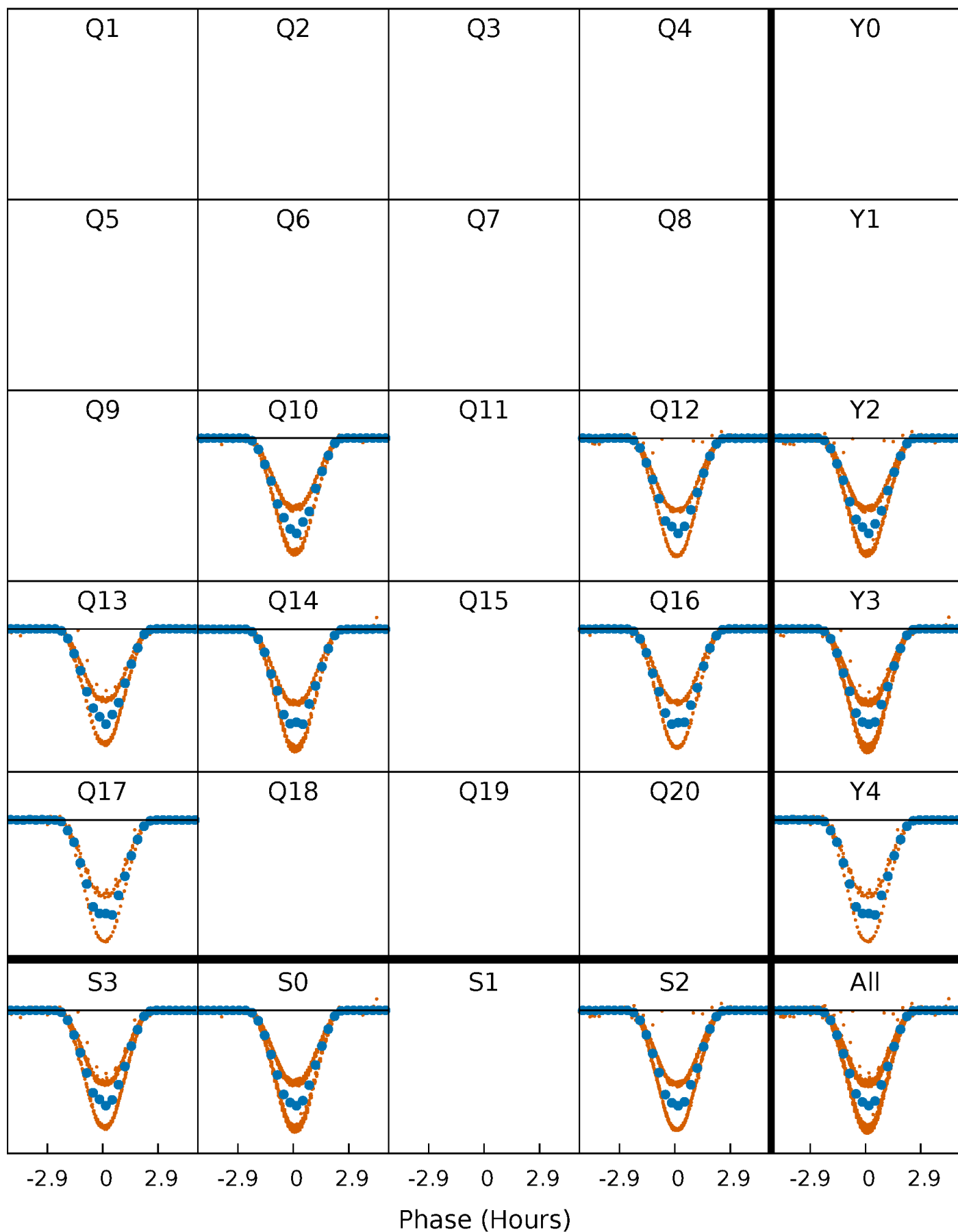
PDC Quarter-Phased Transit Curves

TCE 010489521-01 P= 1.612239 Days $T_0=131.854744$ (BKJD)



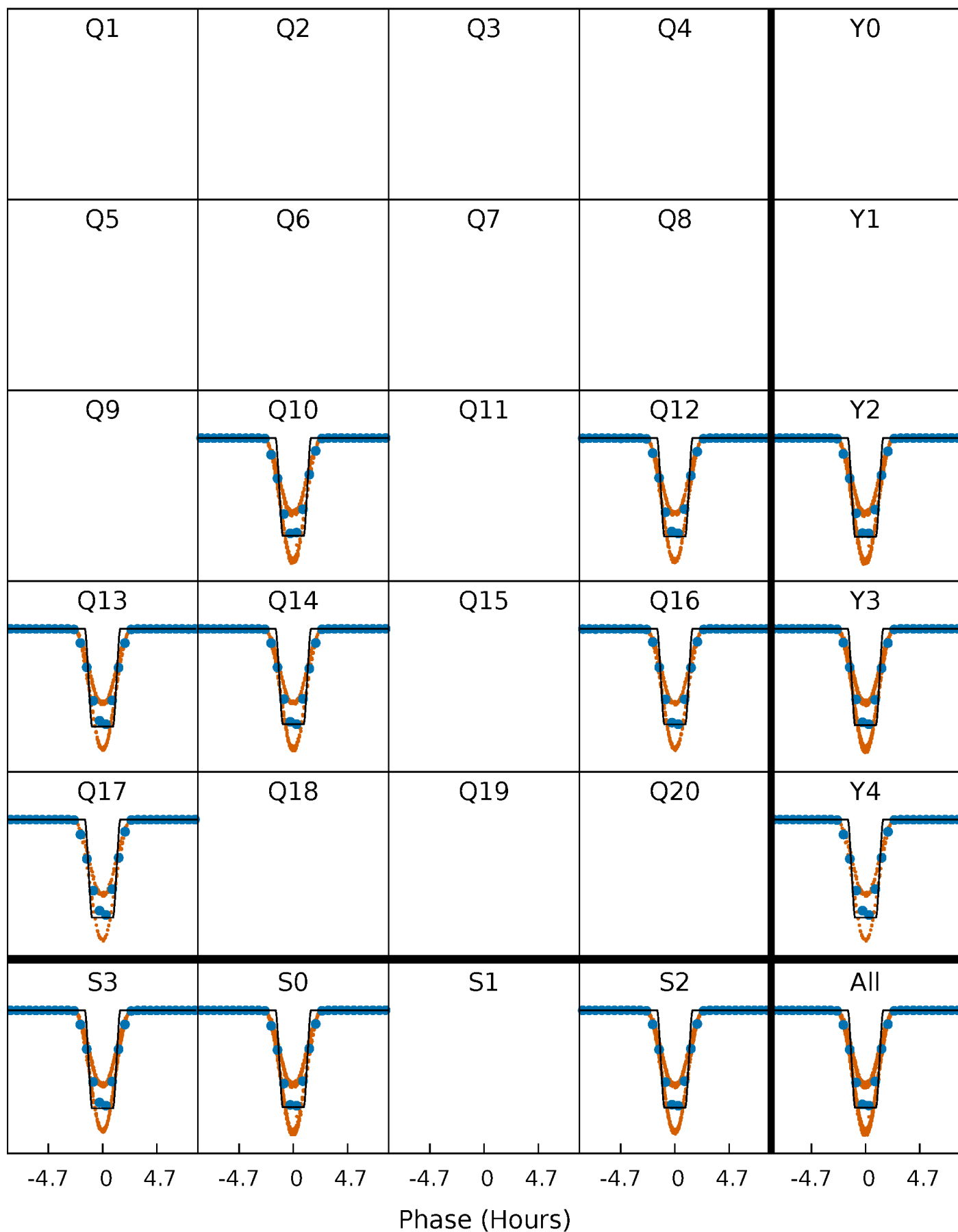
DV Quarter-Phased Transit Curves

TCE 010489521-01 P= 1.612239 Days $T_0=131.854744$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

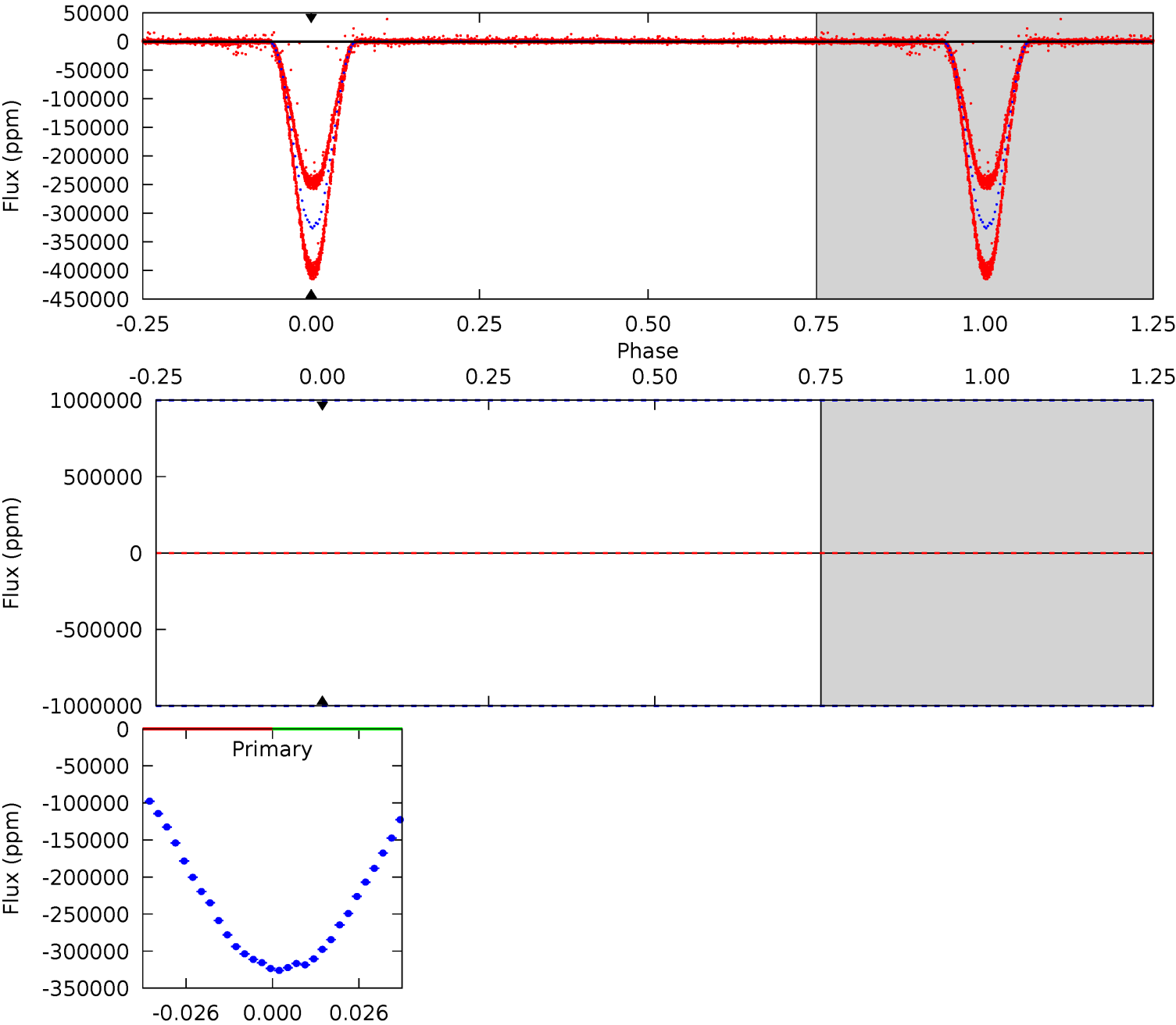
TCE 010489521-01 $P = 1.612239$ Days $T_0 = 131.859052$ (BKJD)



DV Model-Shift Uniqueness Test

010489521-01, P = 1.612239 Days, E = 131.854744 Days

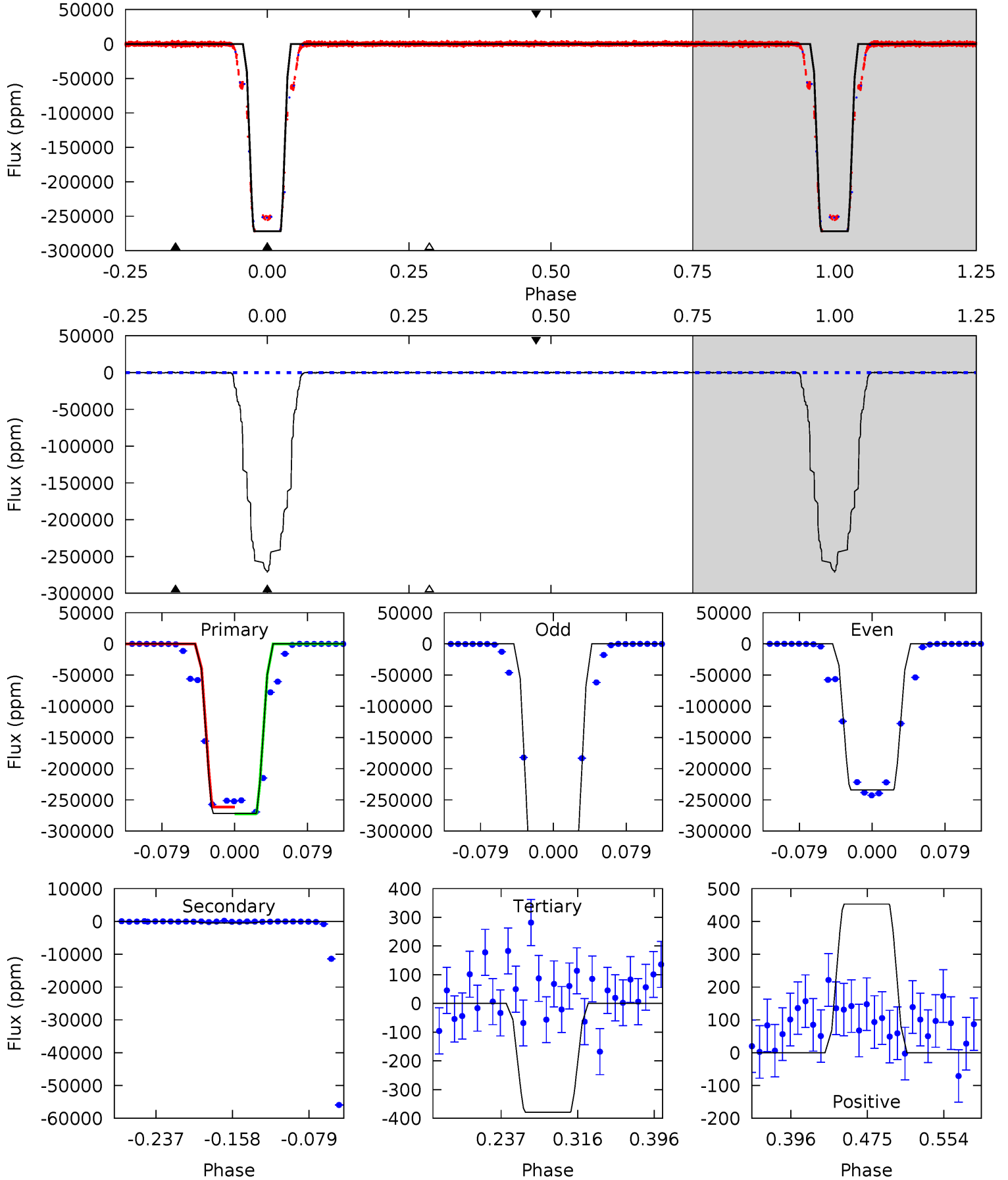
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010489521-01, P = 1.612239 Days, E = 131.859052 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2343	3.85	3.27	3.90	4.61	1.76	1.23	2339	2339	0.58	-0.05	1528	1.21	0.00	45.8



Stellar Parameters For KIC 010489521

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6389^{+176}_{-242}	$4.331^{+0.108}_{-0.201}$	$-0.240^{+0.250}_{-0.300}$	$1.160^{+0.352}_{-0.190}$	$1.046^{+0.184}_{-0.123}$	$0.944^{+0.465}_{-0.499}$
	+3%/-4%	+2%/-5%	+104%/-125%	+30%/-16%	+18%/-12%	+49%/-53%
Source	KIC0	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 010489521-01 / KOI 3625.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$64.41^{+16.32}_{-15.29}$	2574^{+186}_{-147}	-3388^{+8751}_{-1728}	$-0.601^{+12.672}_{-8.749}$
Alt.	-447 ± 116	$74.40^{+16.95}_{-14.68}$	2600^{+191}_{-153}	-2804^{+101}_{-126}	$0.033^{+0.021}_{-0.013}$

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 $A_{\text{obs}} \gg 1.0$

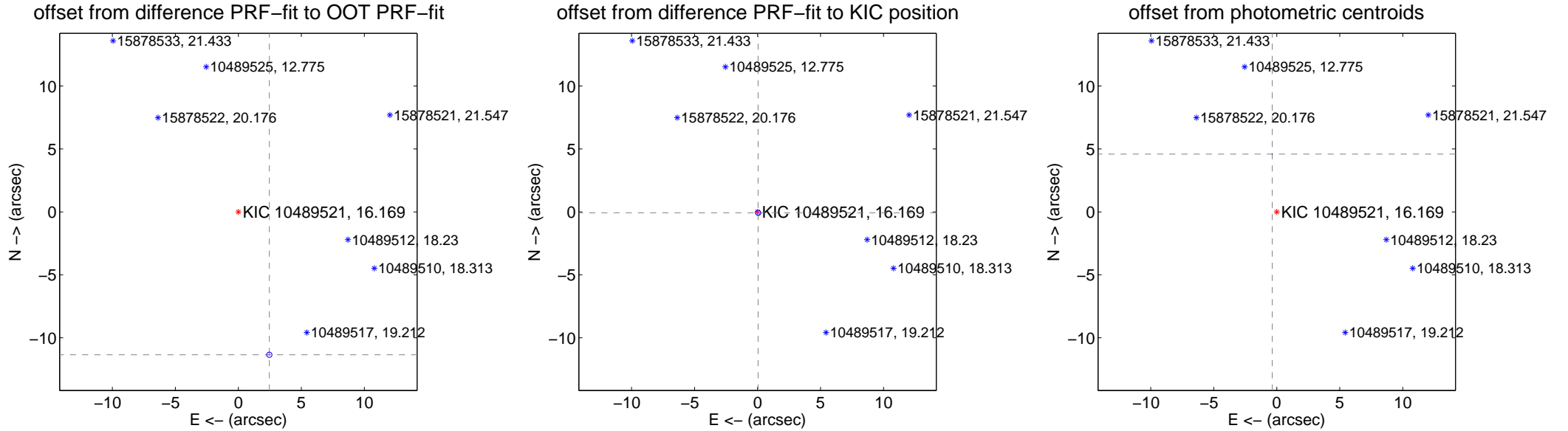
DV Centroid Data

Supplemental centroid analysis for 010489521-01. Kepler magnitude: 16.17. Transit SNR -1.00

There are 6 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 11.53 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	11.612 \pm 0.070	166.24	-2.458 \pm 0.067	-11.349 \pm 0.070
PRF-fit source offset from KIC position	0.083 \pm 0.070	1.19	-0.044 \pm 0.072	-0.070 \pm 0.068
photometric centroid source offset	4.61 \pm 0.00	3069.83	0.36 \pm 0.00	4.59 \pm 0.00



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.

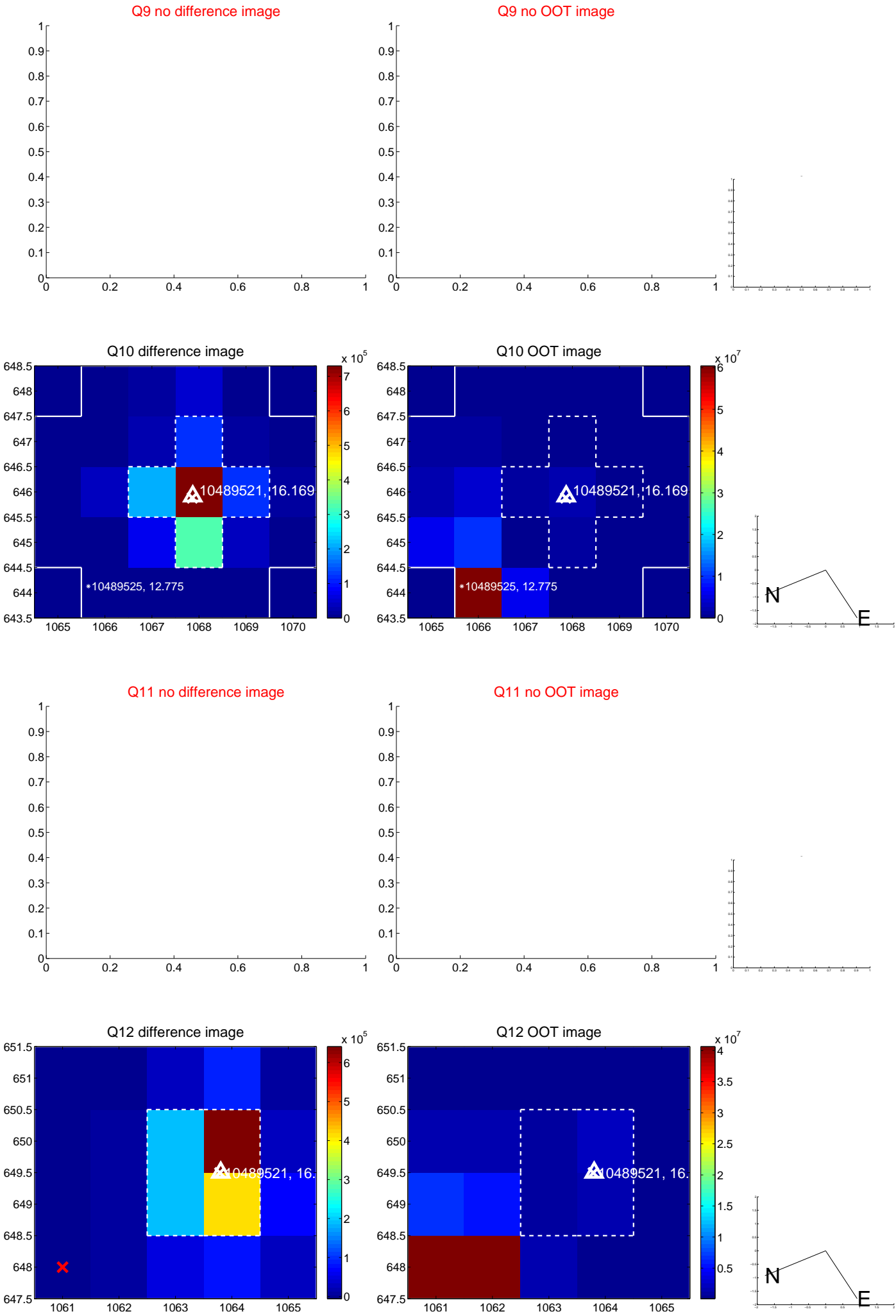
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



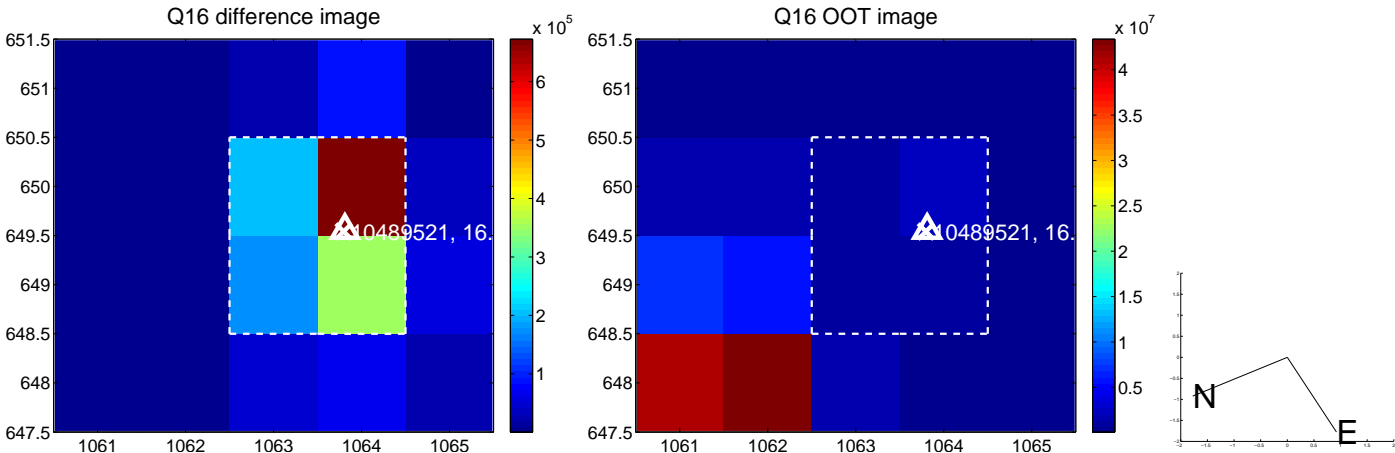
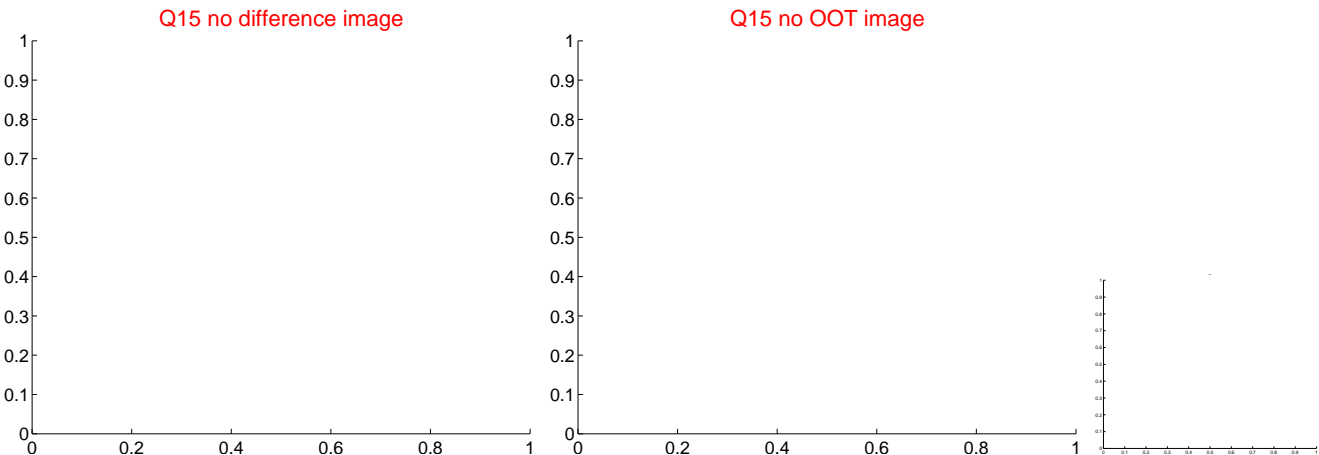
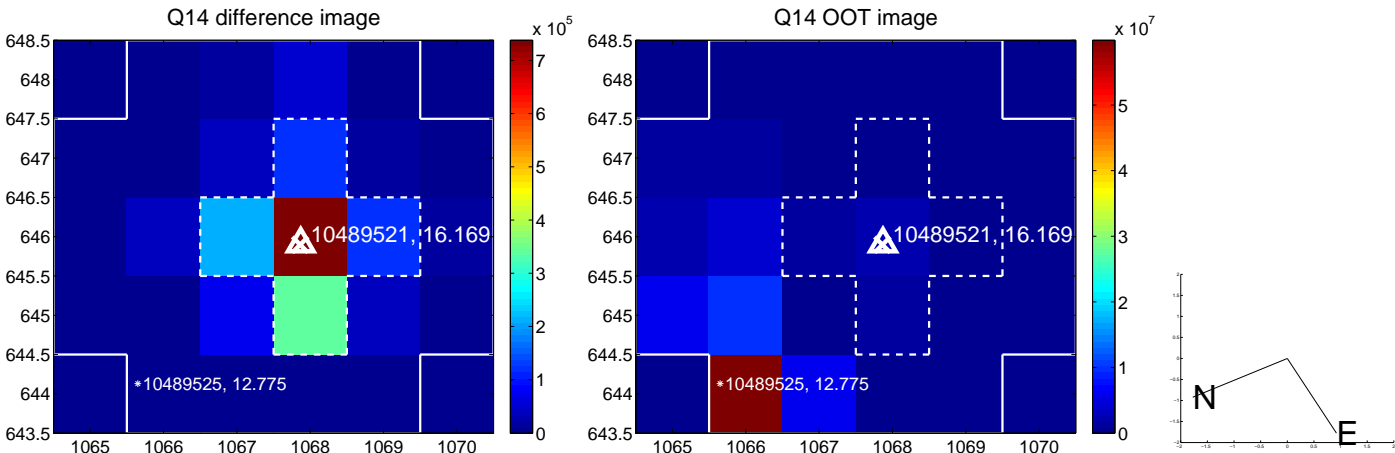
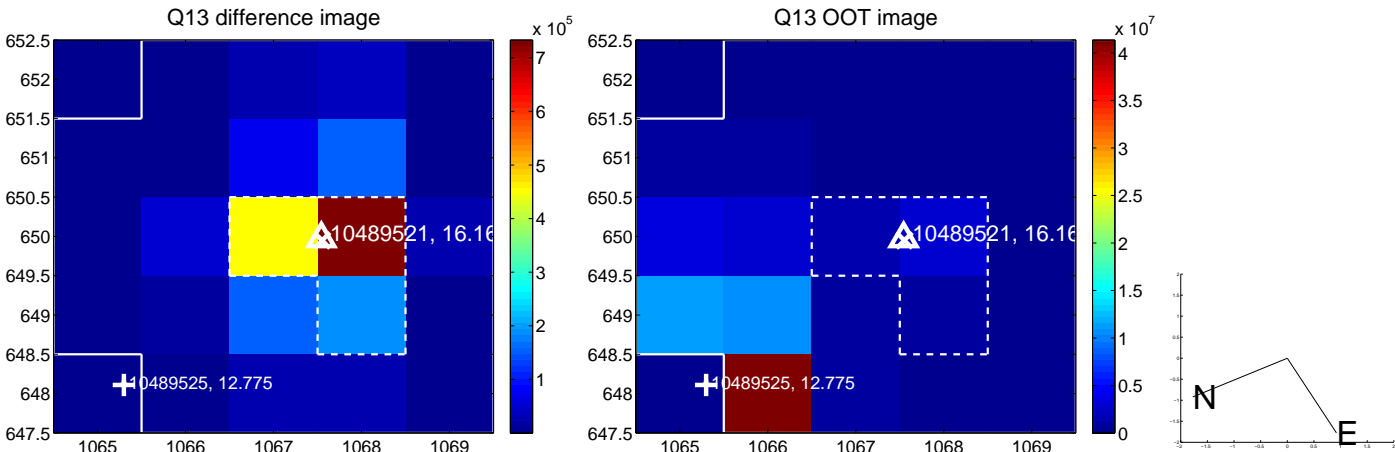
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



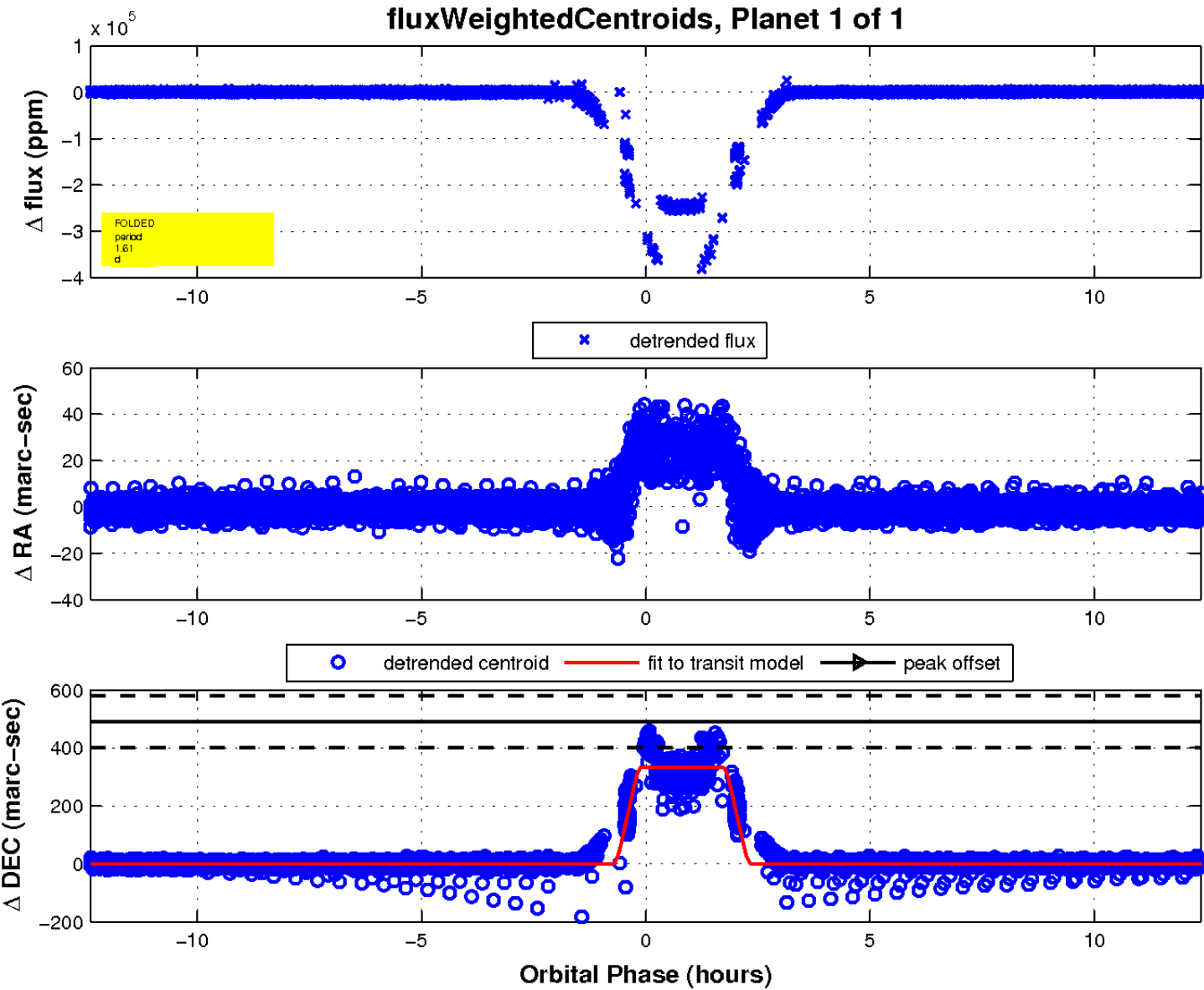
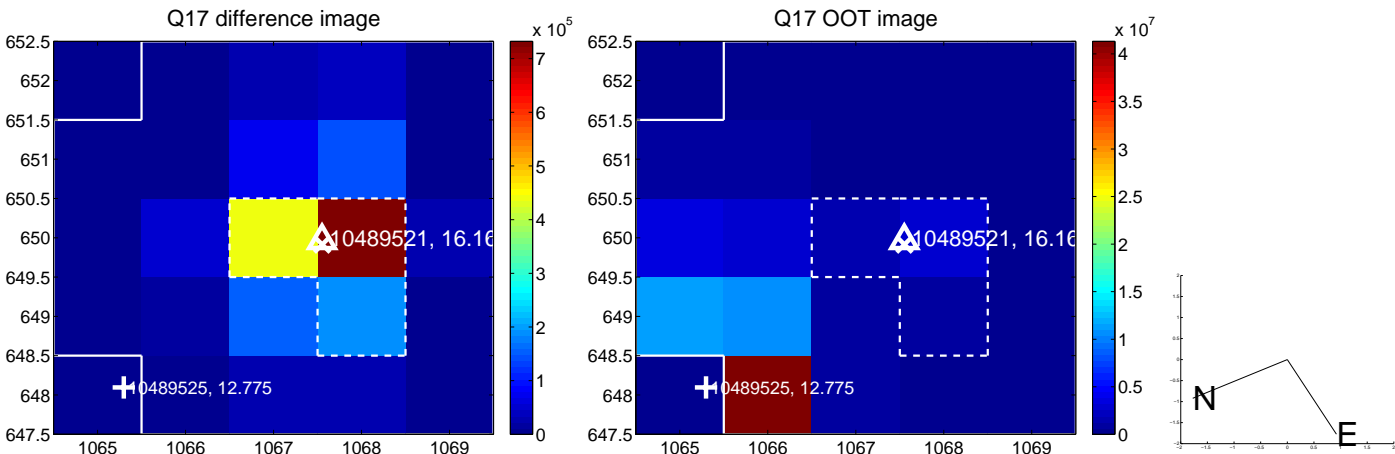
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

