

KIC 010548319

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})
010548319-01	OBS	No	266.507935	182.980514	233.2	30.407	7.3	8.5	4.73	5026	7.92	15.42

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010548319-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES

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

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

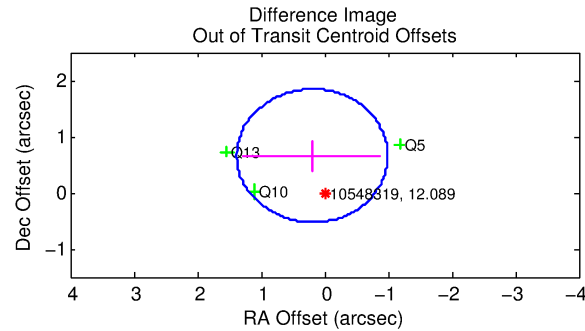
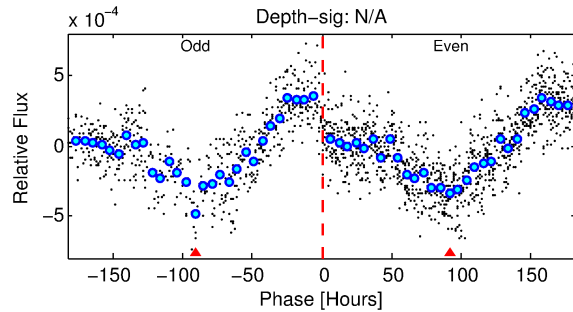
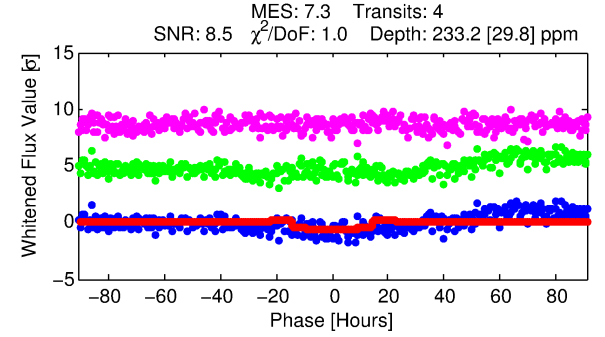
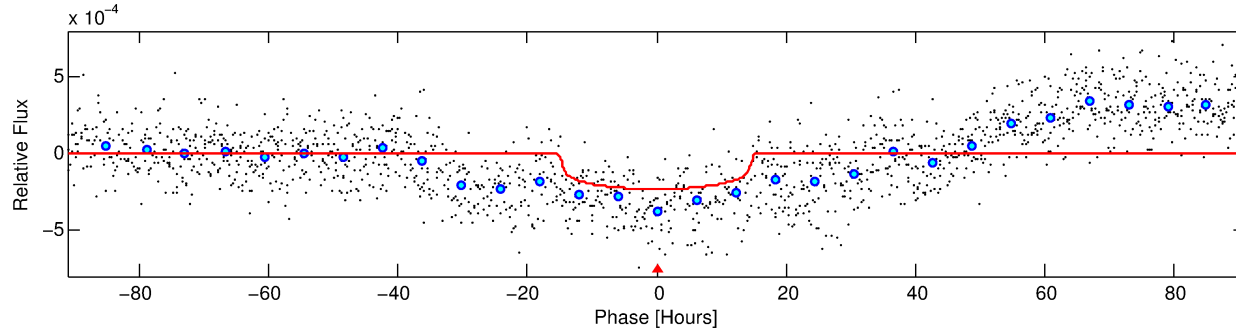
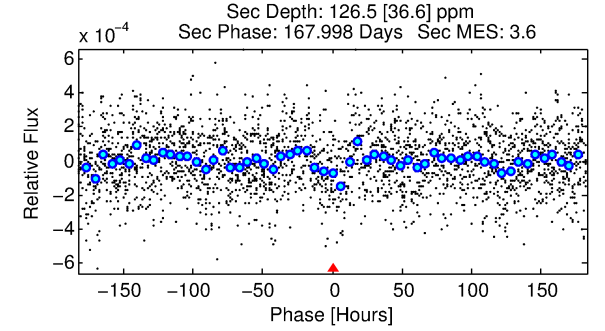
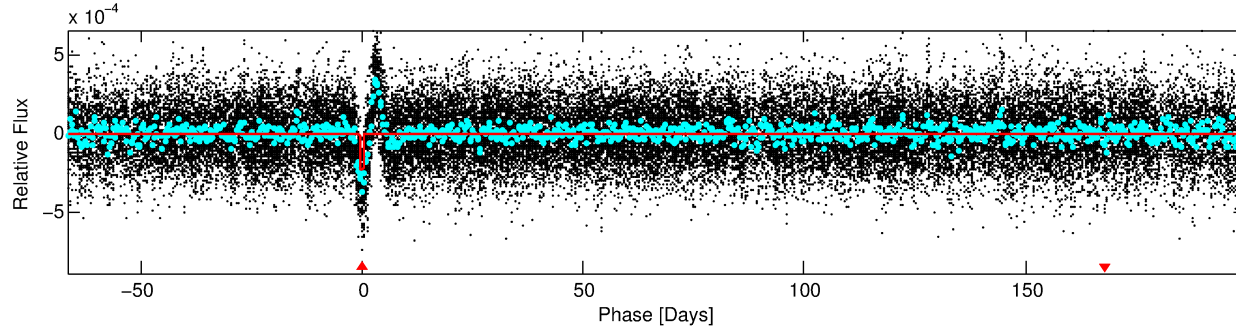
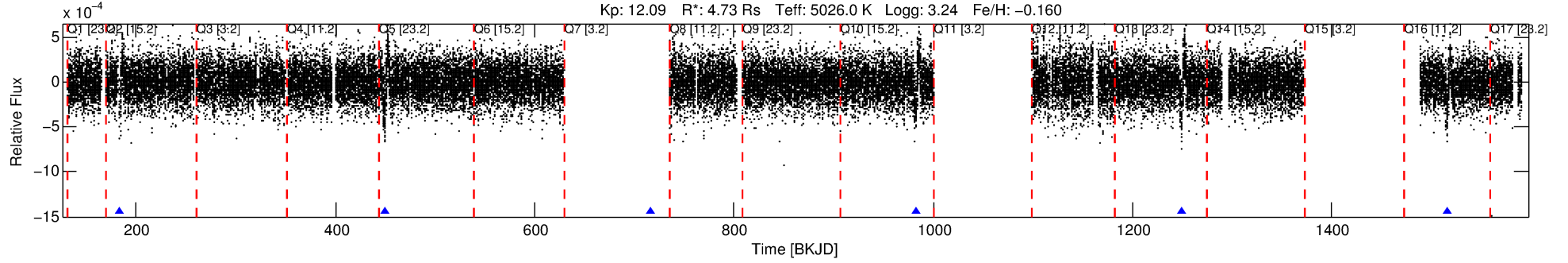
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010548319-01

No Significant Match Found

DV One-Page Summary

KIC: 10548319 Candidate: 1 of 1 Period: 266.508 d



DV Fit Results:

Period = 266.50794 [0.01141] d
Epoch = 182.9805 [0.0410] BKJD
Rp/R* = 0.0154 [0.0025]
a/R* = 44.61 [24.75]
b = 0.77 [0.30]
Seff = 15.42 [5.03]
Teff = 505 [41] K
Rp = 7.92 [2.47] Re
a = 0.9106 [0.2024] AU
Ag = 919.37 [496.59] [1.85σ]
Teffp = 4302 [472] K [8.02σ]

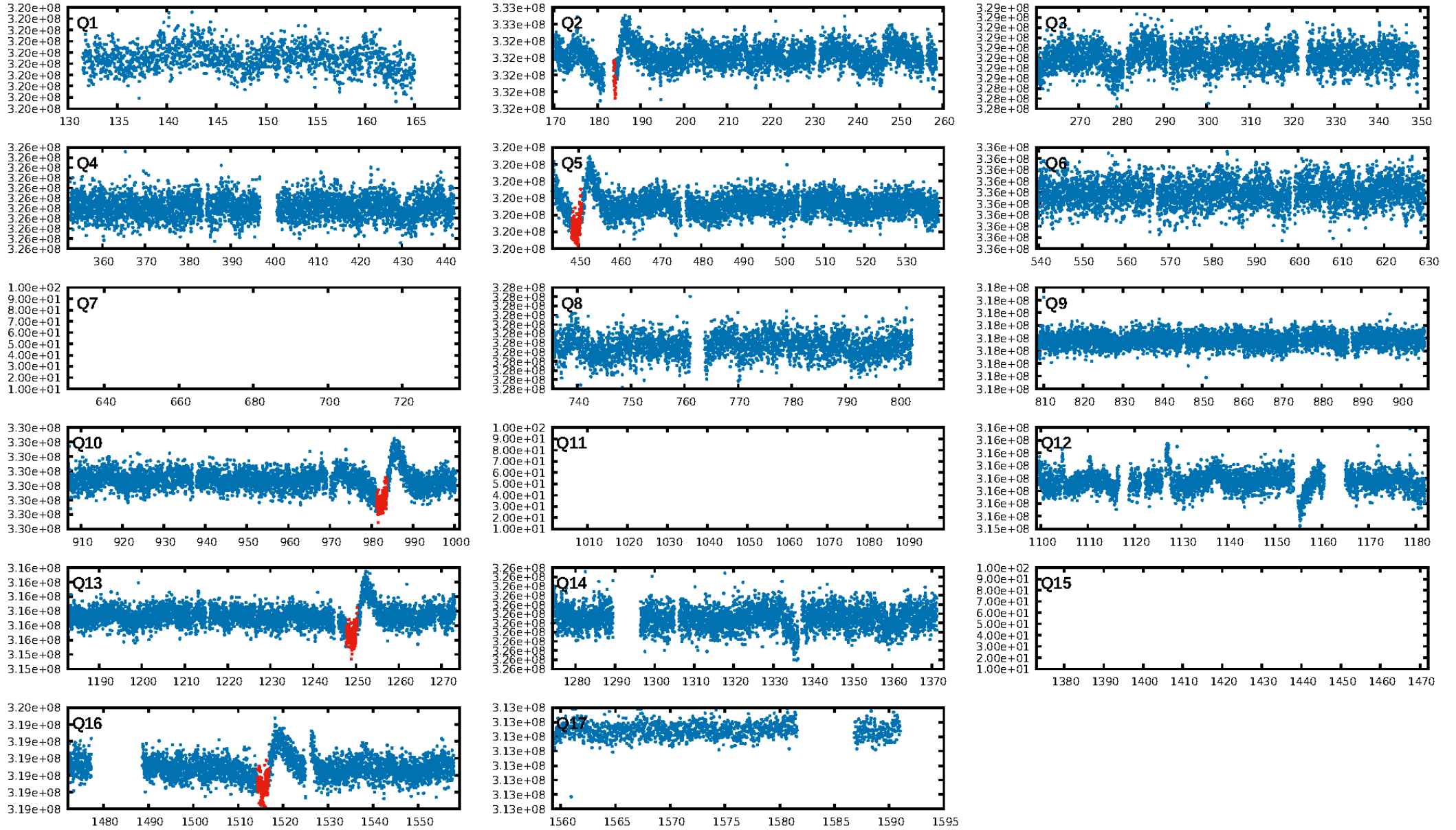
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 94.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.55e-14
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 5.73
Centroid-sig: 46.9%
Centroid-so: 0.523 arcsec [1.05σ]
OotOffset-rm: 0.688 arcsec [1.74σ]
OotOffset-st: 1/0/0/2 [3]
KicOffset-rm: 0.580 arcsec [1.23σ]
KicOffset-st: 1/0/0/2 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

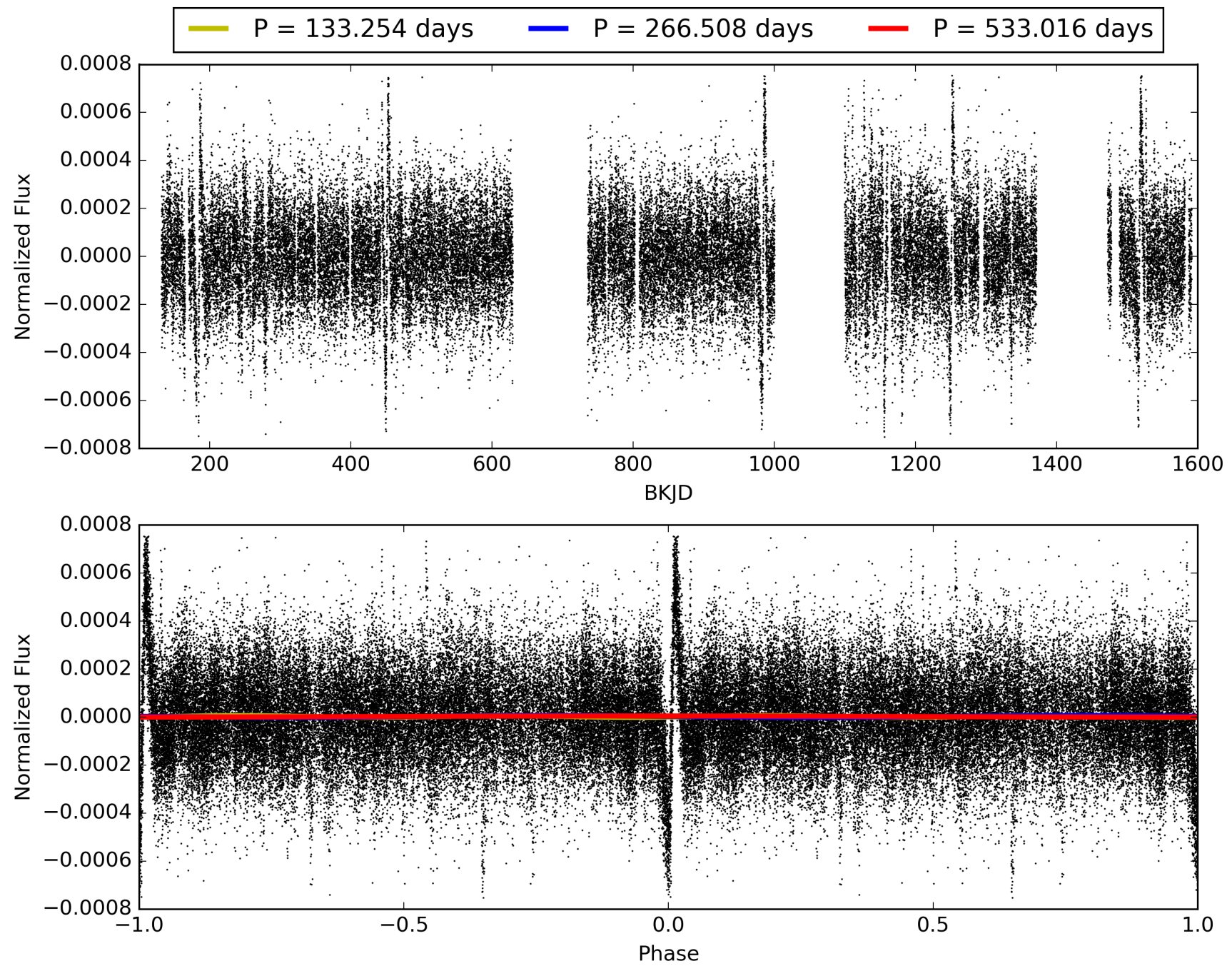
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:21:01 Z

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

TCE 010548319-01, PDC Light Curves

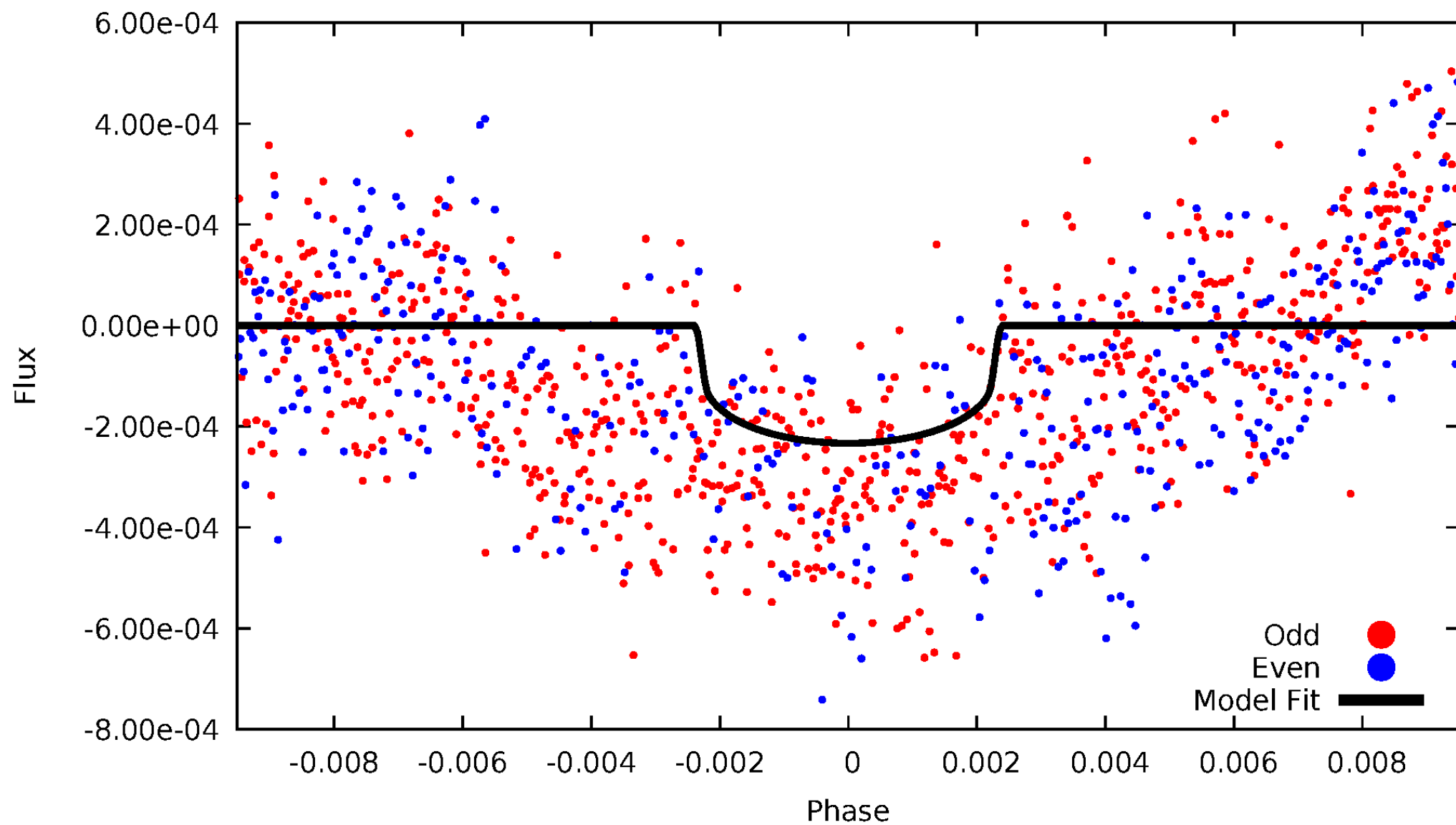


TCE 010548319-01



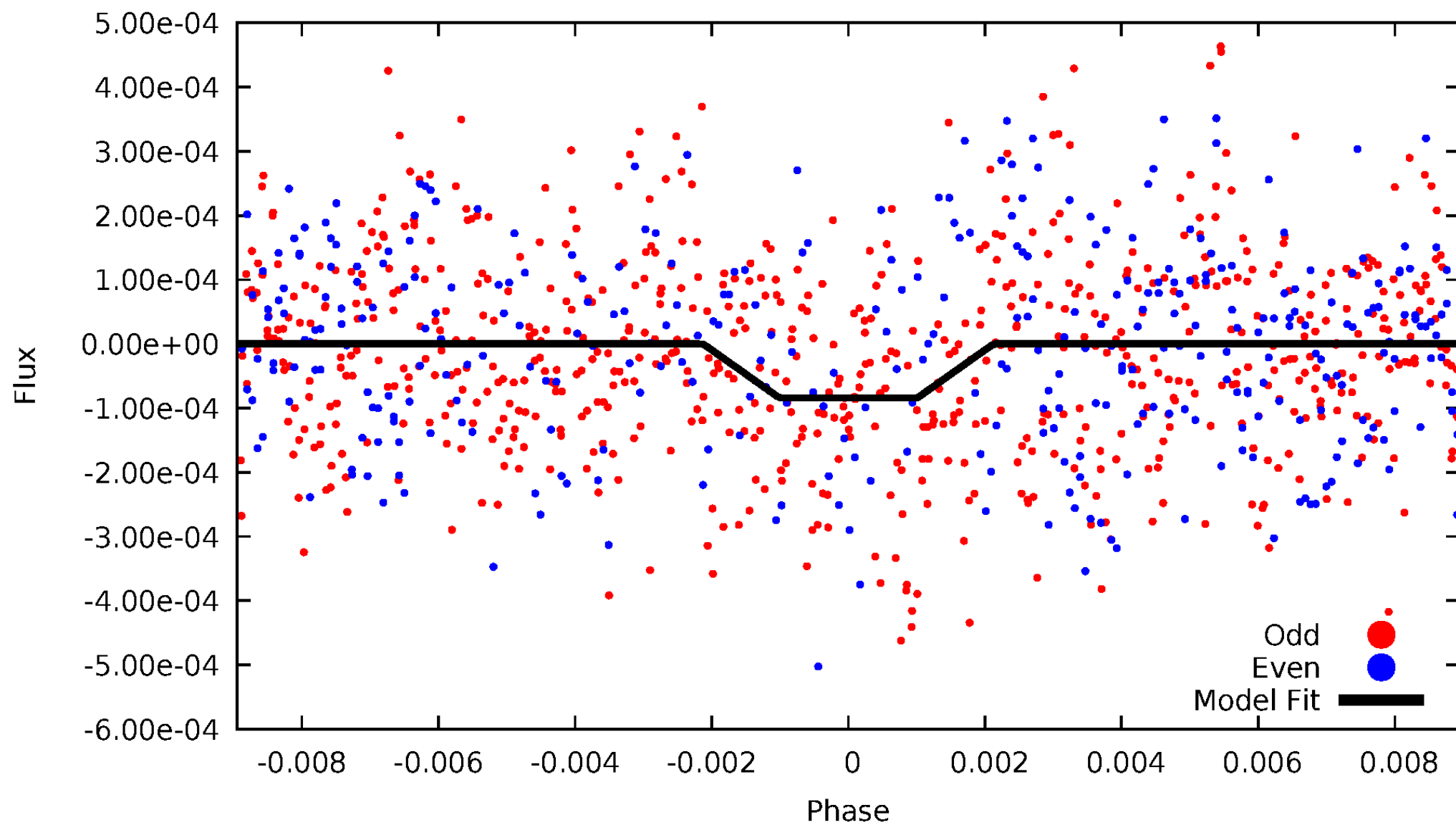
DV Odd/Even

TCE 010548319-01

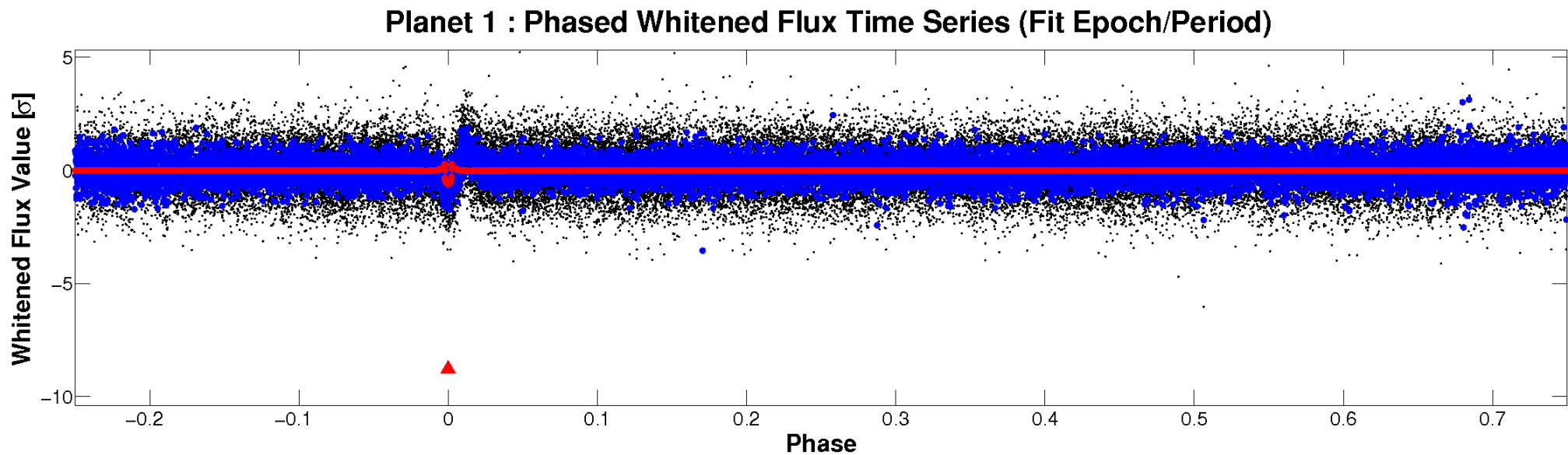
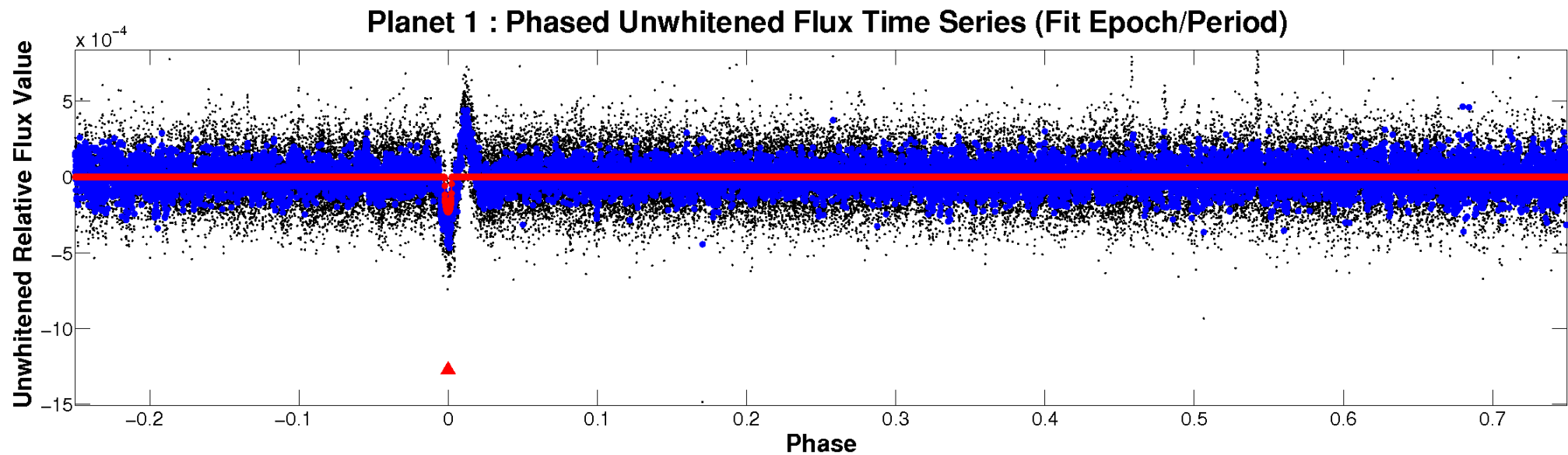


ALT Odd/Even

TCE 010548319-01

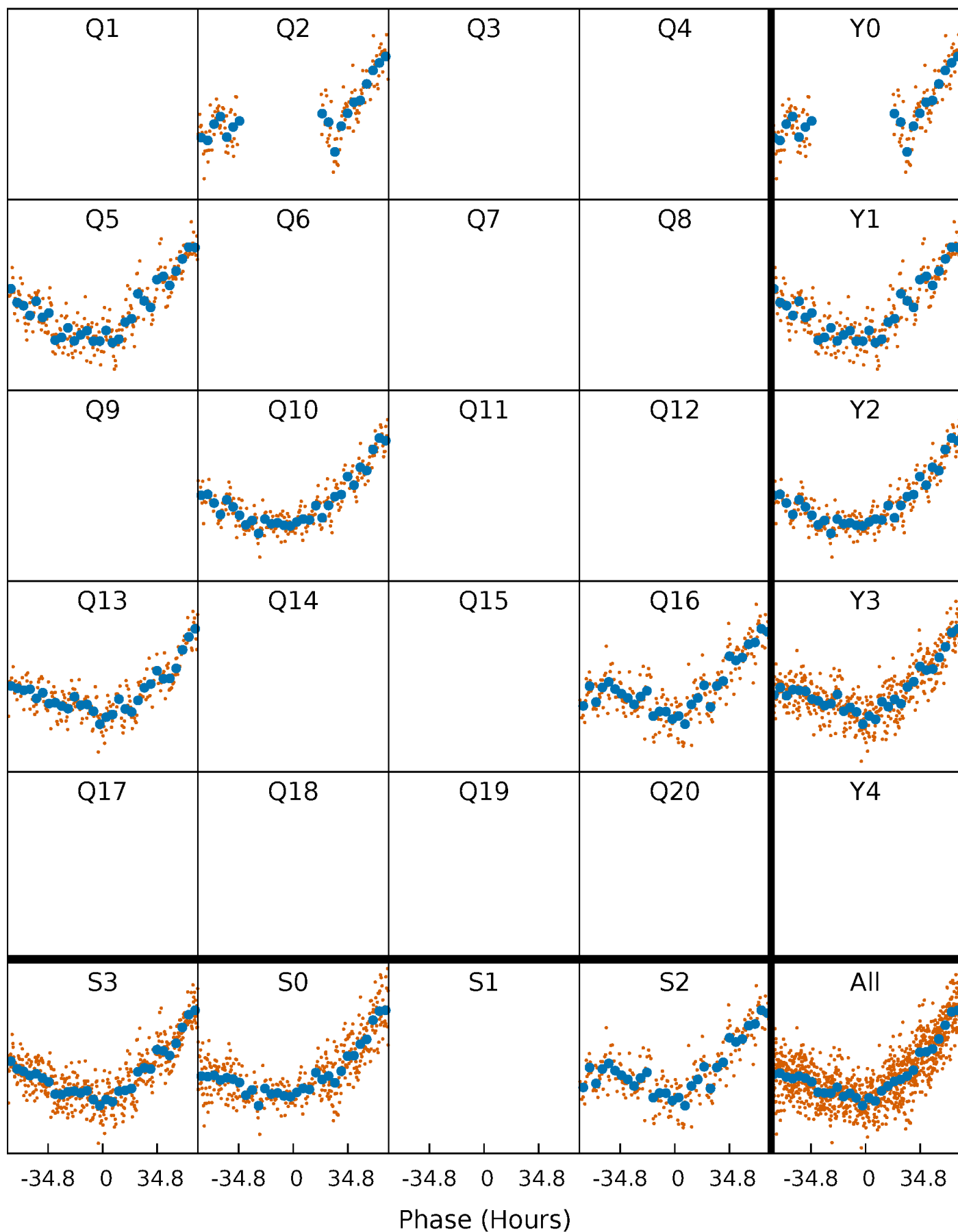


Non-Whitened Vs. Whitened Light Curve



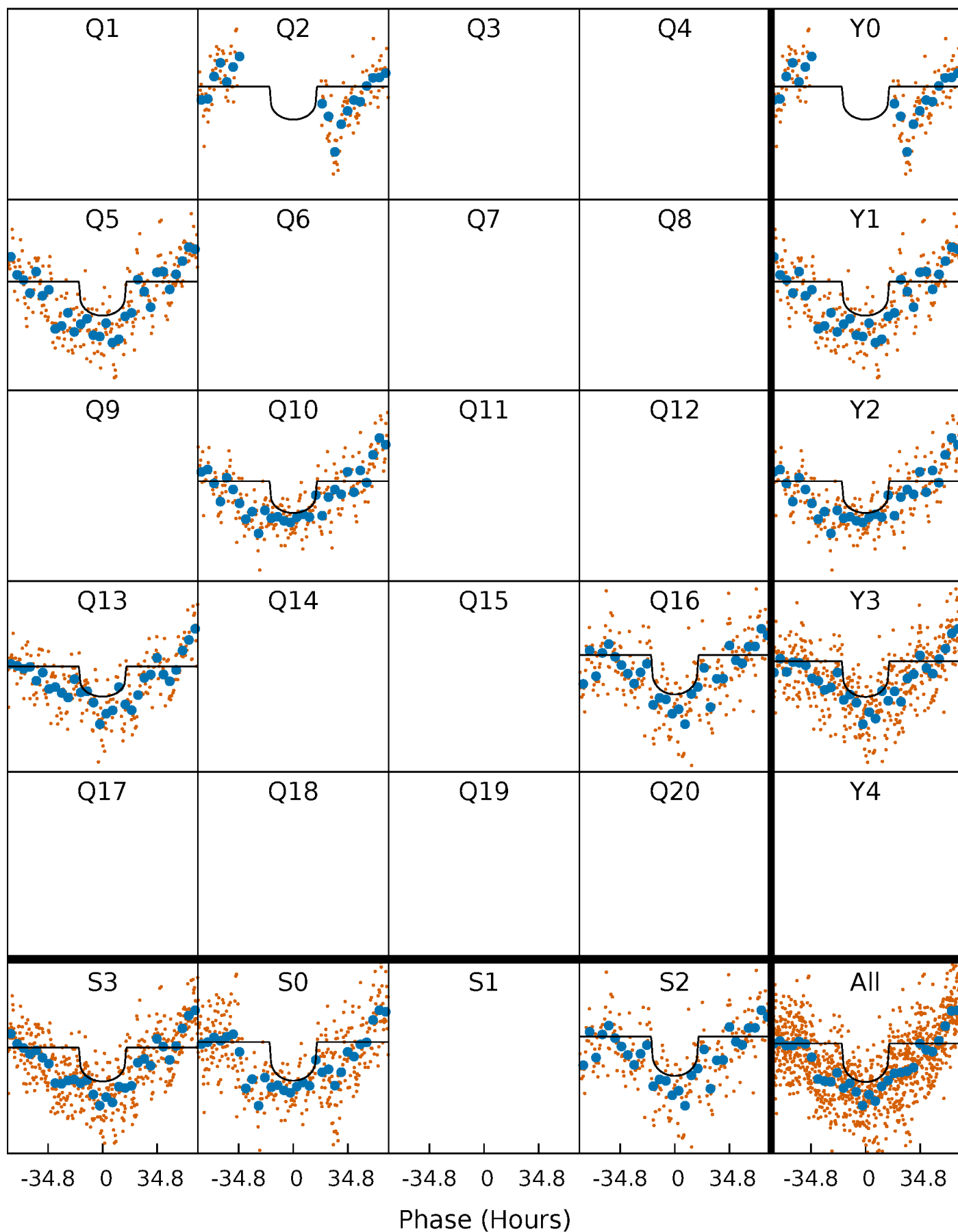
PDC Quarter-Phased Transit Curves

TCE 010548319-01 P=266.507935 Days $T_0=182.980514$ (BKJD)



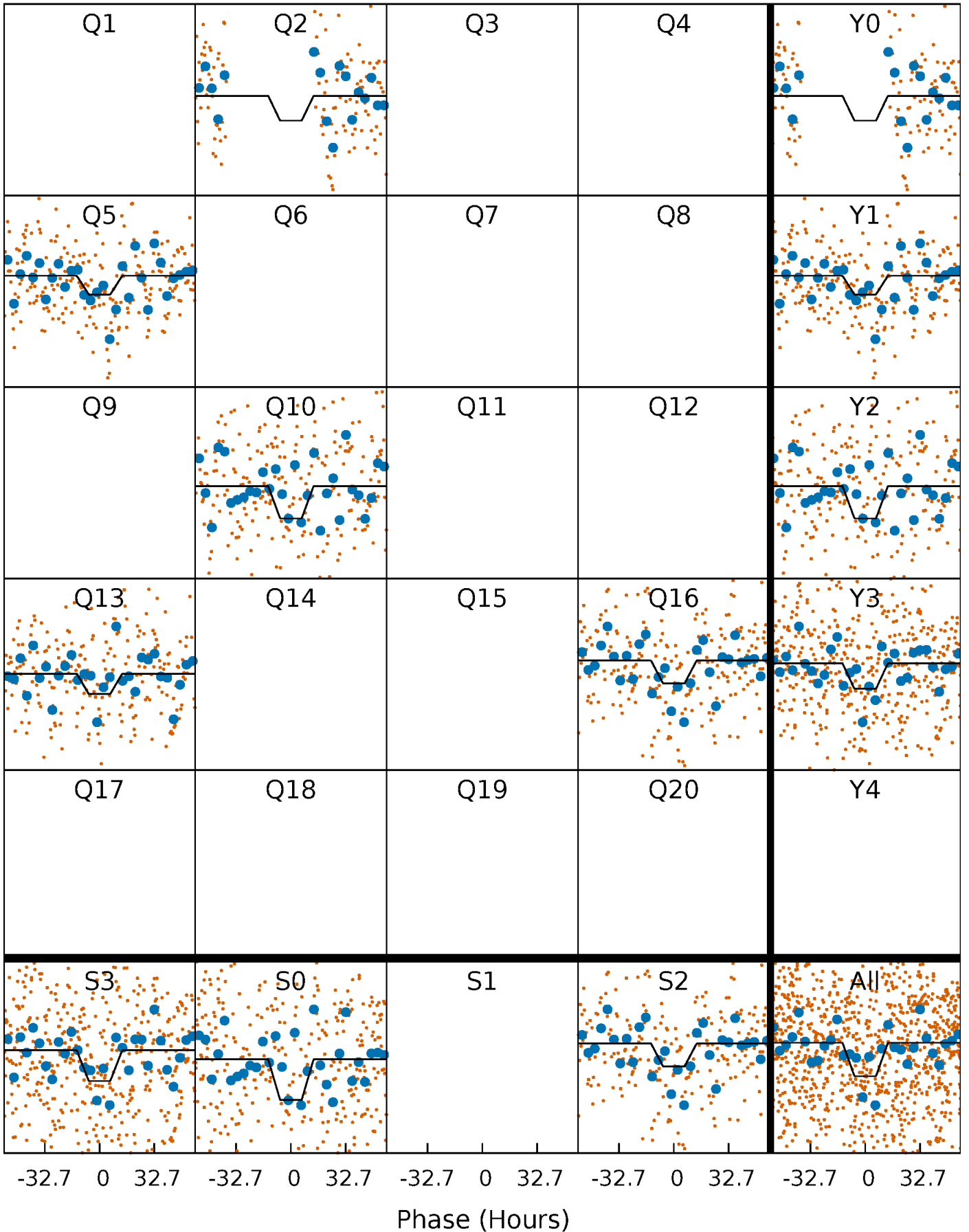
DV Quarter-Phased Transit Curves

TCE 010548319-01 P=266.507935 Days $T_0=182.980514$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

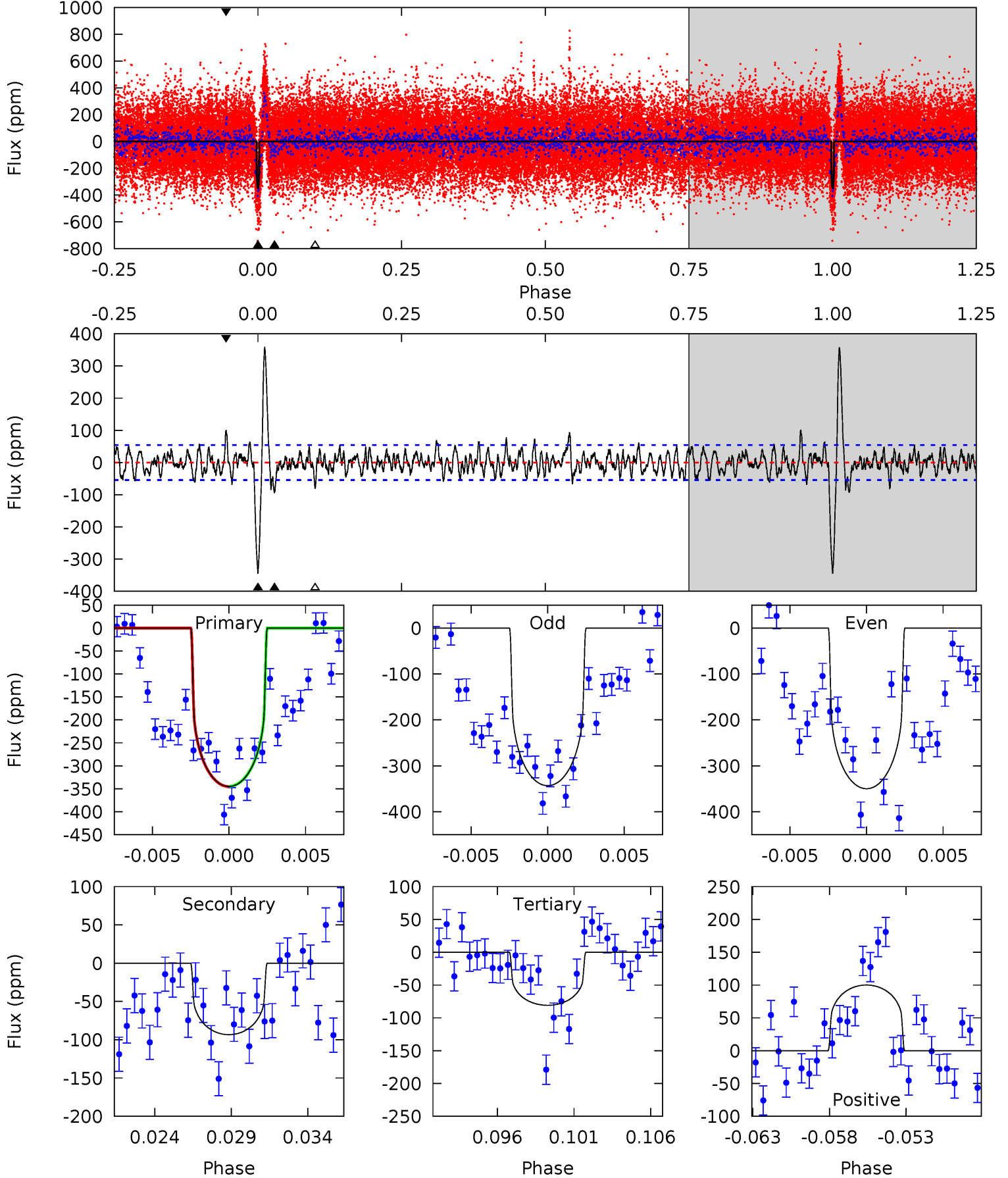
TCE 010548319-01 P=266.474056 Days $T_0=183.124125$ (BKJD)



DV Model-Shift Uniqueness Test

010548319-01, P = 266.507935 Days, E = 182.980514 Days

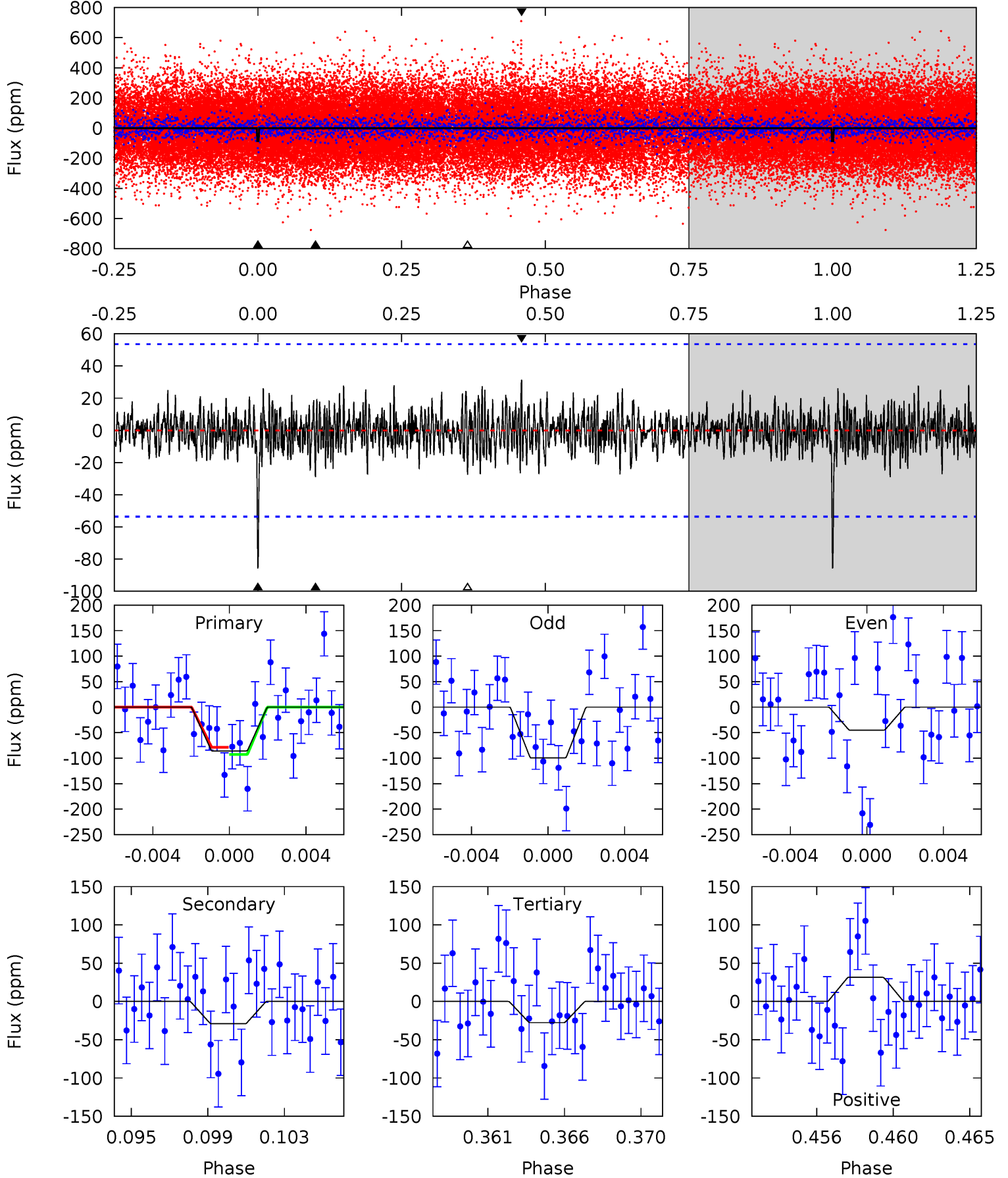
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.8	8.87	7.69	9.51	5.16	2.82	3.80	25.1	23.3	1.18	-0.64	0.27	1.00	0.51	0.04



Alt Model-Shift Uniqueness Test

010548319-01, P = 266.474056 Days, E = 183.124125 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.30	2.81	2.67	3.05	5.19	2.86	0.92	5.63	5.25	0.13	-0.25	2.28	0.96	0.27	0.69



Stellar Parameters For KIC 010548319

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5026^{+55}_{-75}	$3.240^{+0.174}_{-0.116}$	$-0.160^{+0.100}_{-0.150}$	$4.729^{+0.775}_{-1.260}$	$1.418^{+0.180}_{-0.360}$	$0.019^{+0.018}_{-0.006}$
	+1%/-1%	+5%/-4%	+62%/-94%	+16%/-27%	+13%/-25%	+93%/-32%
Source	SPE74	SPE74	SPE74	DSEP		

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

Secondary Eclipse Parameters for KIC 010548319-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-93 ± 11	$7.85^{+1.57}_{-1.51}$	705^{+31}_{-40}	4170^{+314}_{-229}	675^{+375}_{-202}
Alt.	-29 ± 10	$4.61^{+1.45}_{-1.33}$	703^{+36}_{-43}	4060^{+558}_{-463}	602^{+580}_{-318}

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

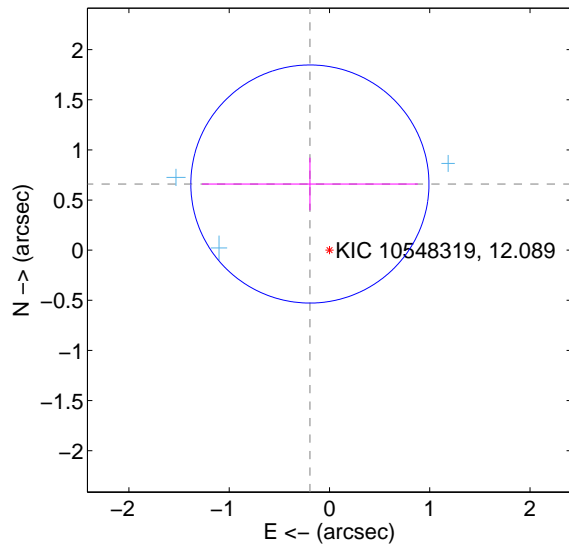
Supplemental centroid analysis for 010548319-01. Kepler magnitude: 12.09. Transit SNR 8.53

There are 3 quarters with good PRF difference image offsets

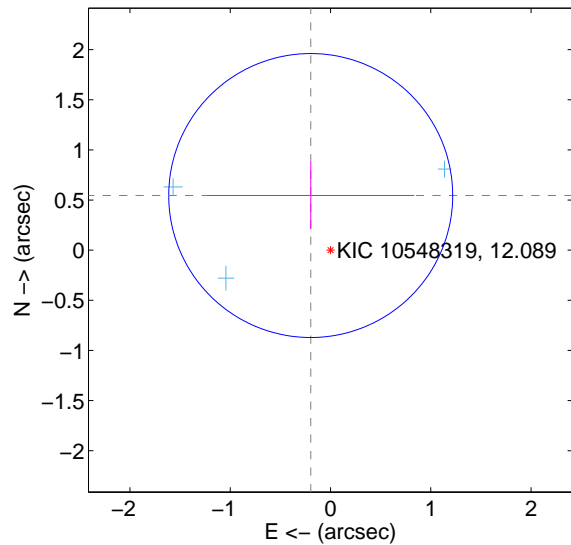
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.688 ± 0.396	1.74	0.195 ± 1.077	0.660 ± 0.262
PRF-fit source offset from KIC position	0.580 ± 0.472	1.23	0.198 ± 1.031	0.545 ± 0.335
photometric centroid source offset	0.52 ± 0.50	1.05	-0.24 ± 0.51	-0.47 ± 0.49

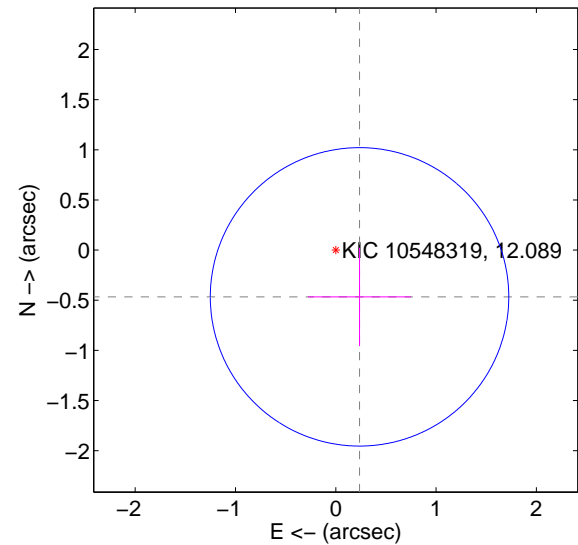
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

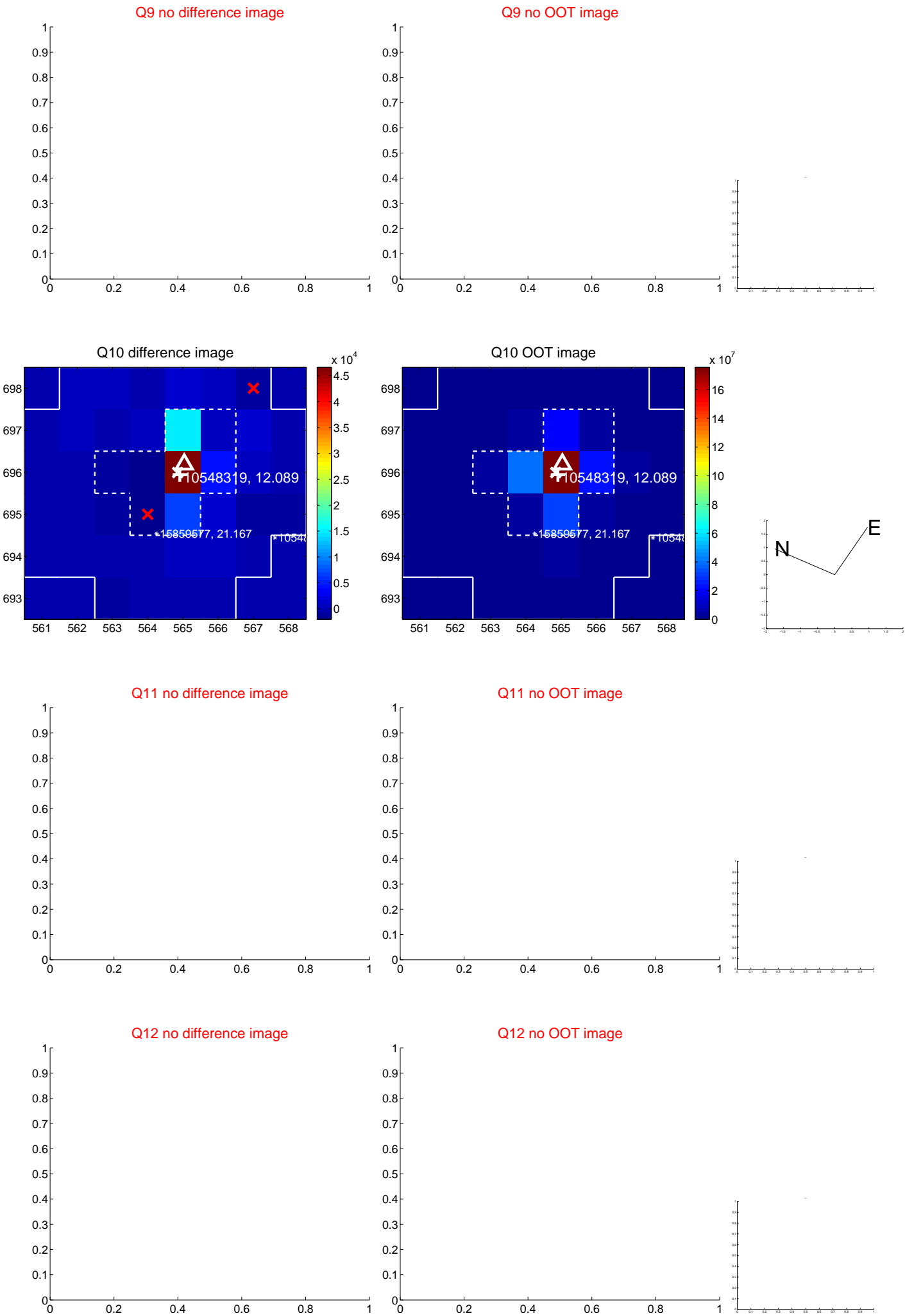


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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.

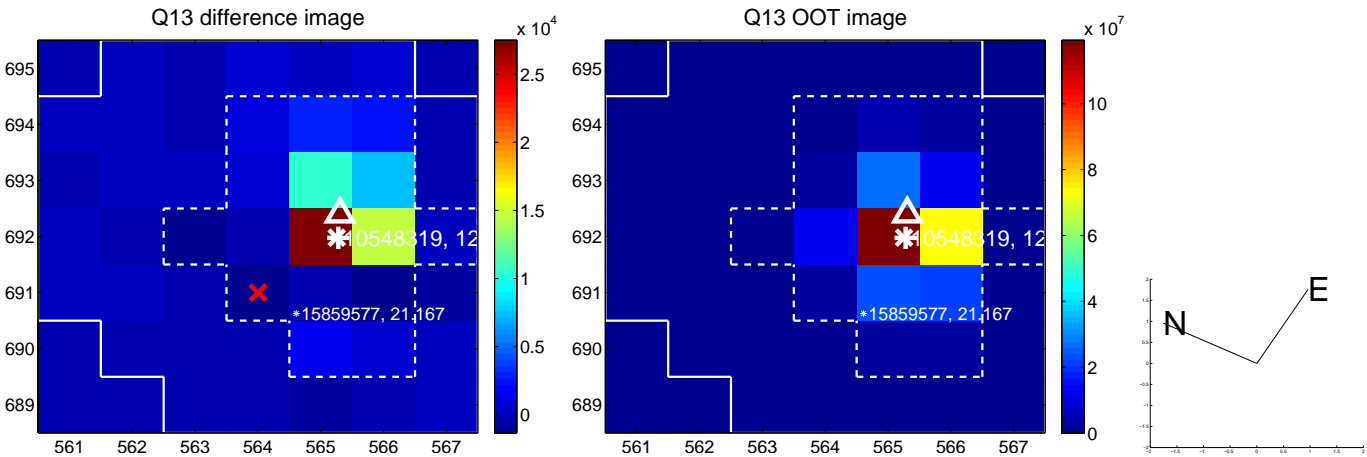
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



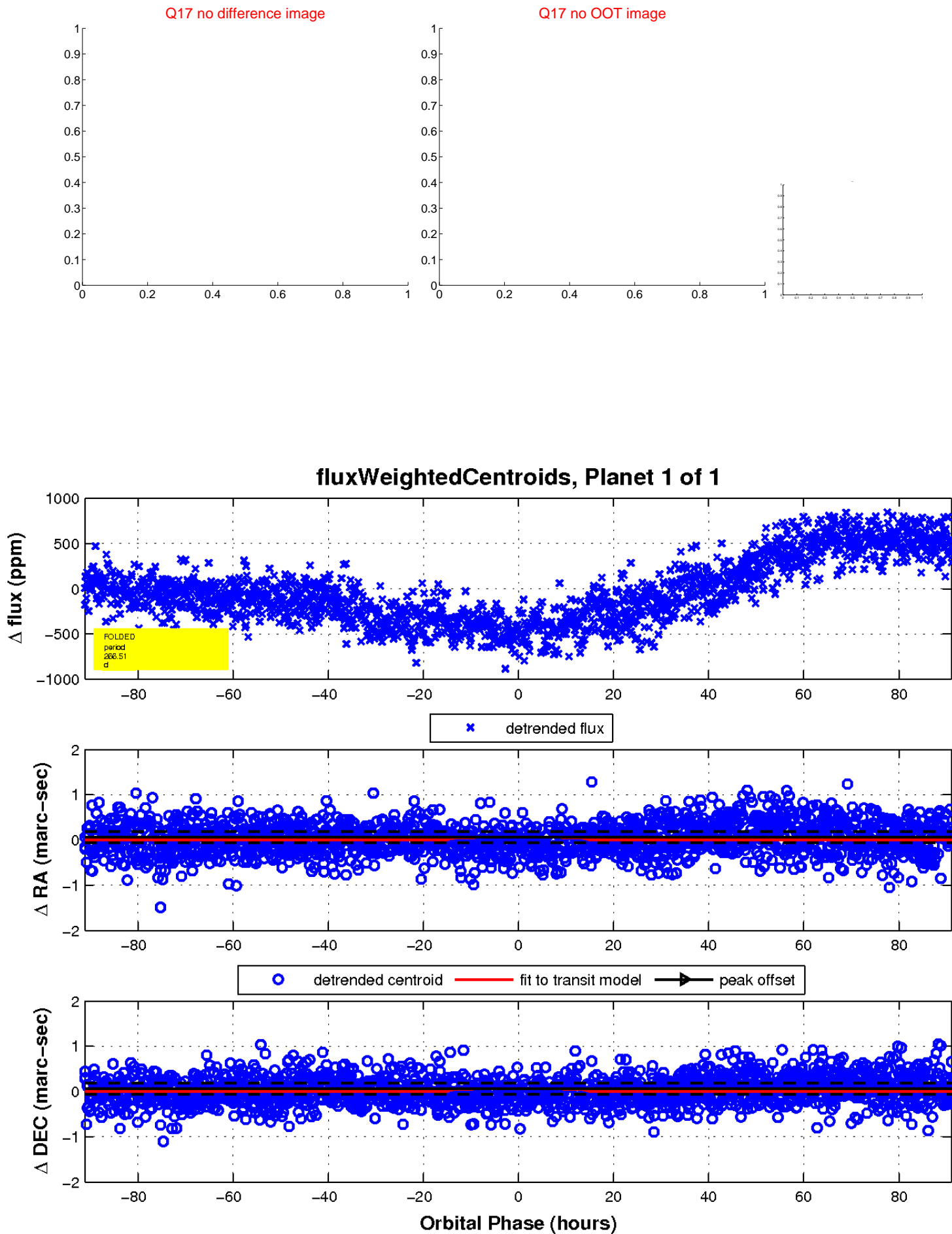
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

