

KIC 009529733

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})
009529733-01	OBS	3600.01	2.404551	131.679004	130897.7	7.833	3504.8	2743.9	1.17	6462	43.66	1553.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009529733-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—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.

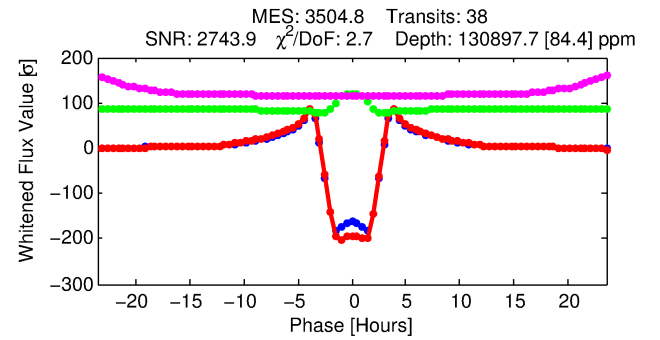
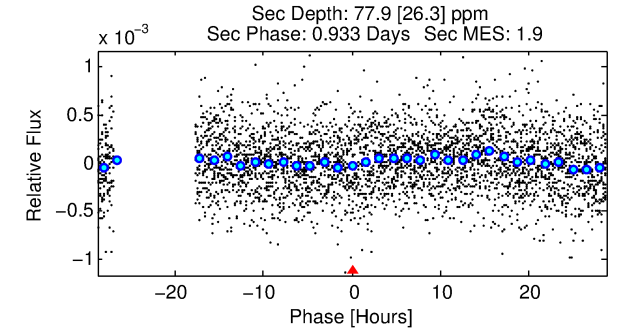
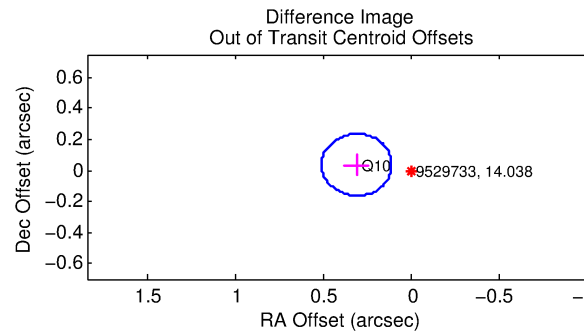
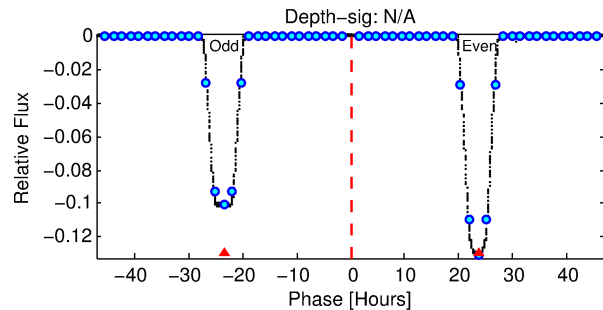
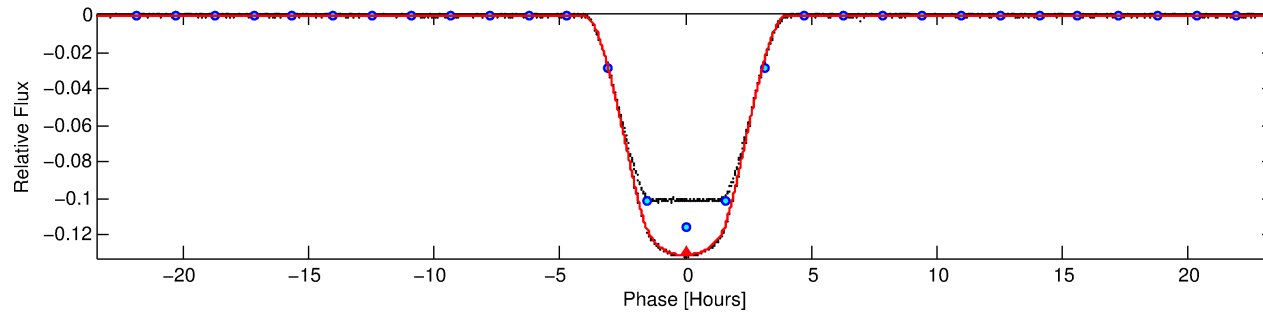
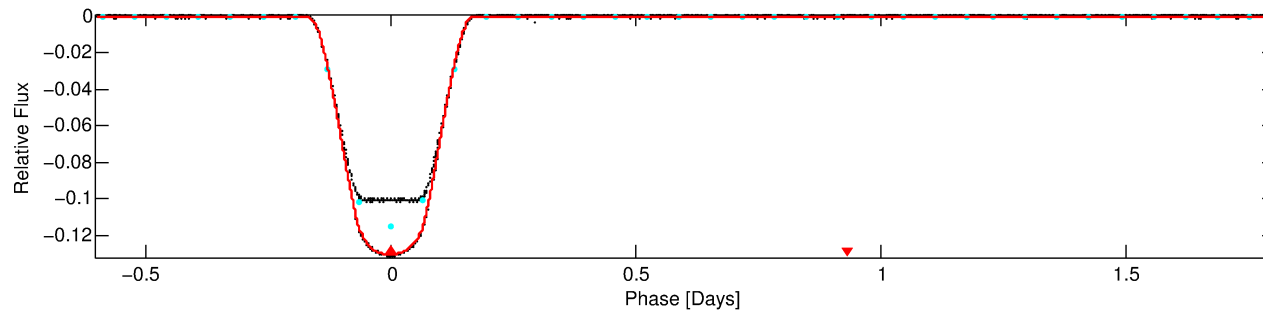
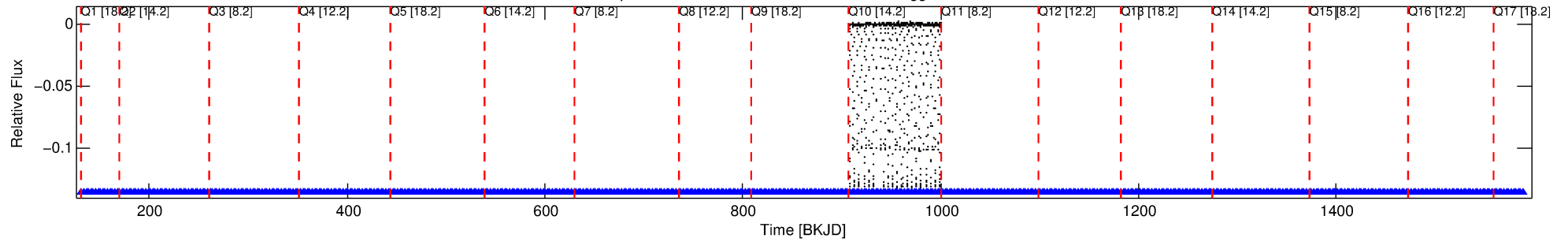
Ephemeris Match Information For 009529733-01

No Significant Match Found

DV One-Page Summary

KIC: 9529733 Candidate: 1 of 1 Period: 2.405 d
KOI: K03600 Corr: No Ephemeris Match

Kp: 14.04 R*: 1.17 Rs Teff: 6462.0 K Logg: 4.37 Fe/H: -0.120



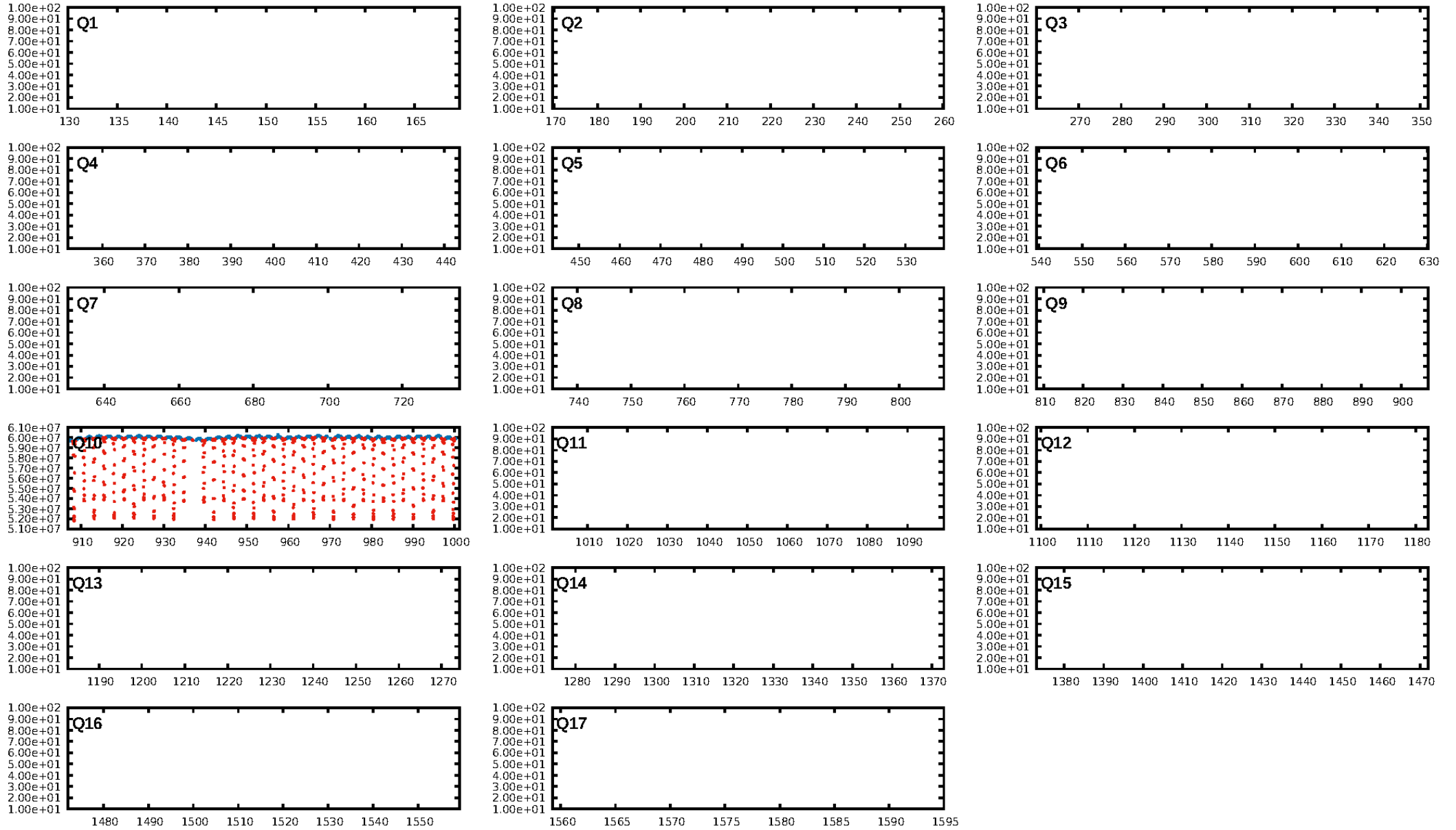
DV Fit Results:

Period = 2.40455 [0.00000] d
Epoch = 131.6790 [0.0001] BKJD
Rp/R* = 0.3432 [0.0001]
a/R* = 3.09 [0.00]
b = 0.45 [0.00]
Seff = 1553.99 [649.26]
Teq = 1601 [167] K
Rp = 43.66 [14.27] Re
a = 0.0370 [0.0100] AU
Ag = 0.03 [0.02] [-61.30σ]
Teffp = 1036 [96] K [-2.93σ]

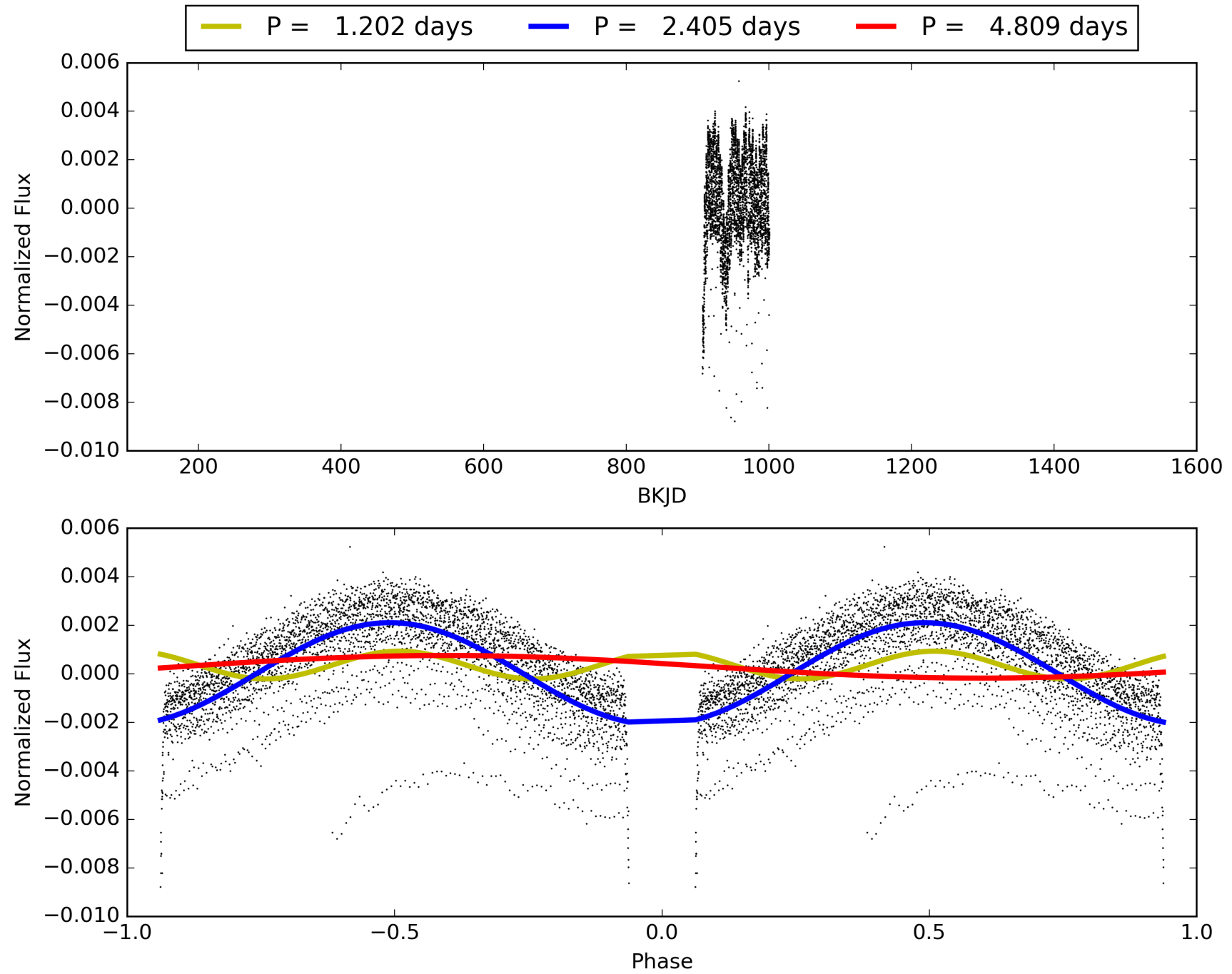
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 50.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [38/38]
GhostDiagnostic-chr: 0.7726
Centroid-sig: 0.0%
Centroid-so: 0.420 arcsec [164.48σ]
OotOffset-rm: 0.316 arcsec [4.74σ]
KicOffset-rm: 0.244 arcsec [3.65σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

TCE 009529733-01, PDC Light Curves

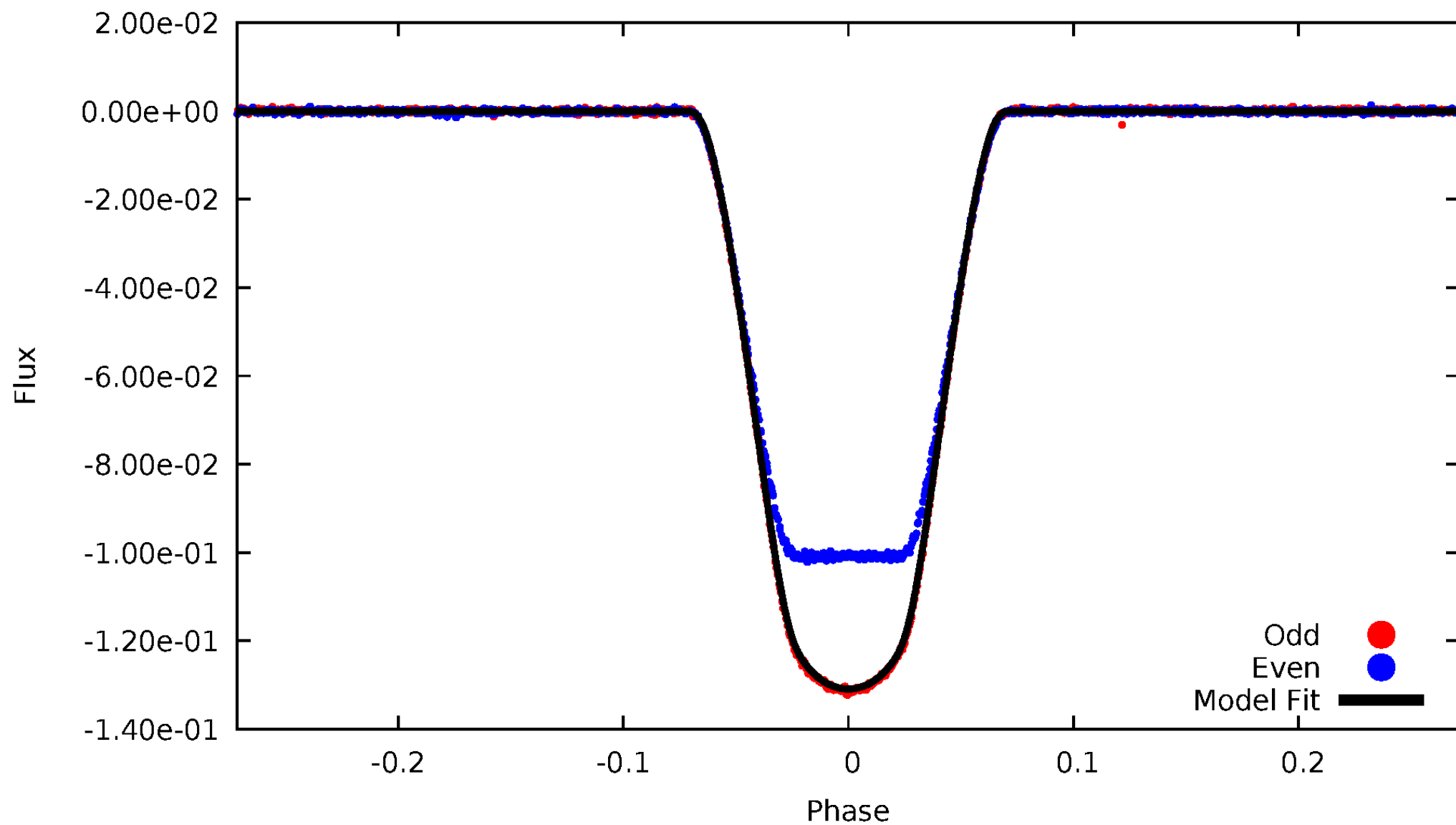


TCE 009529733-01



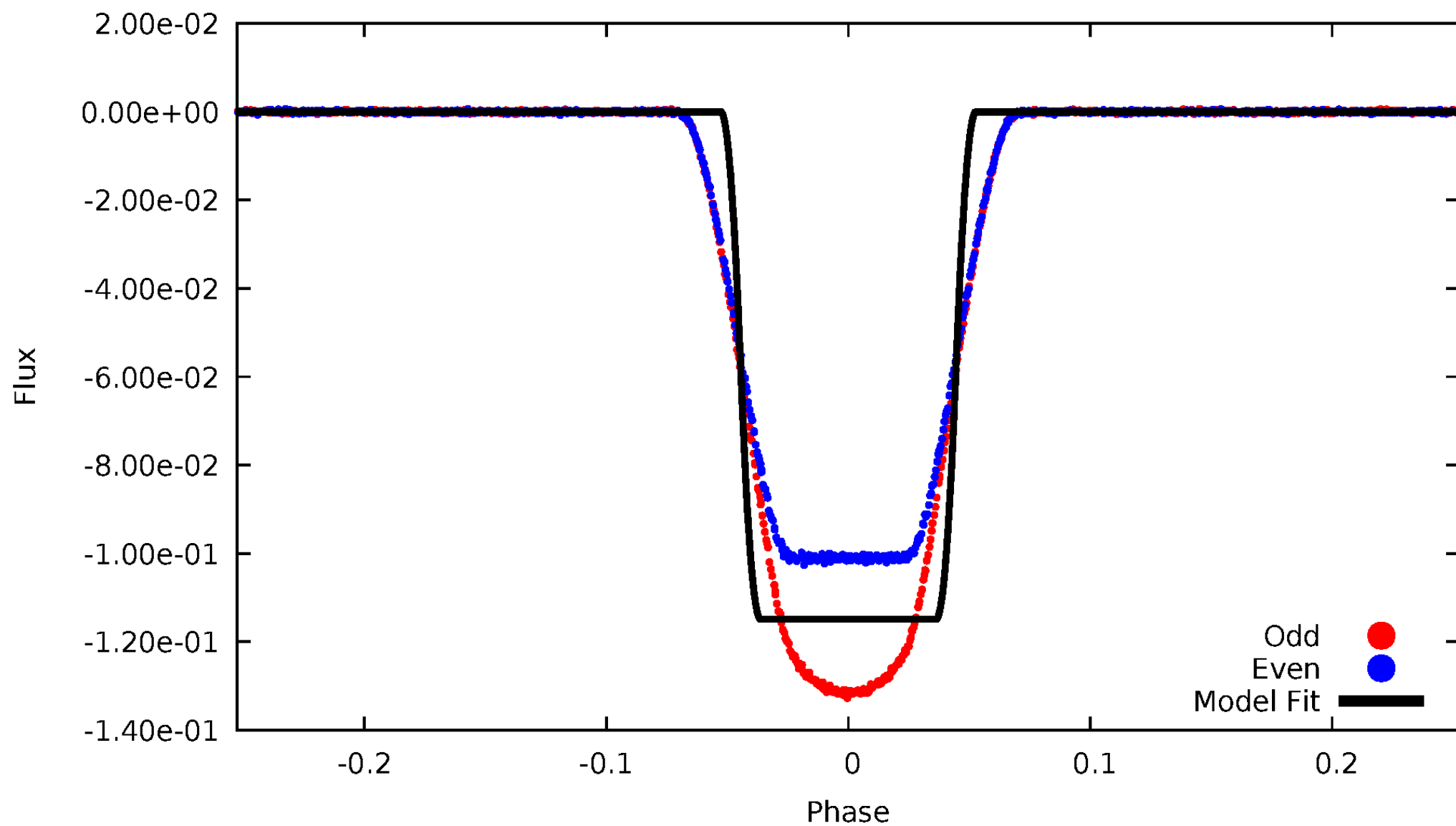
DV Odd/Even

TCE 009529733-01



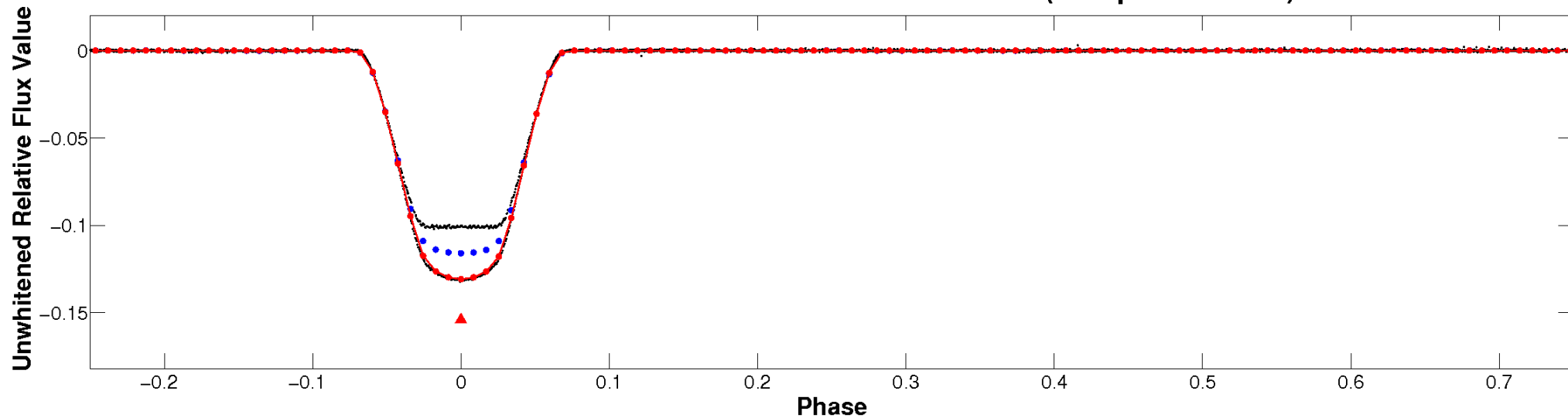
ALT Odd/Even

TCE 009529733-01

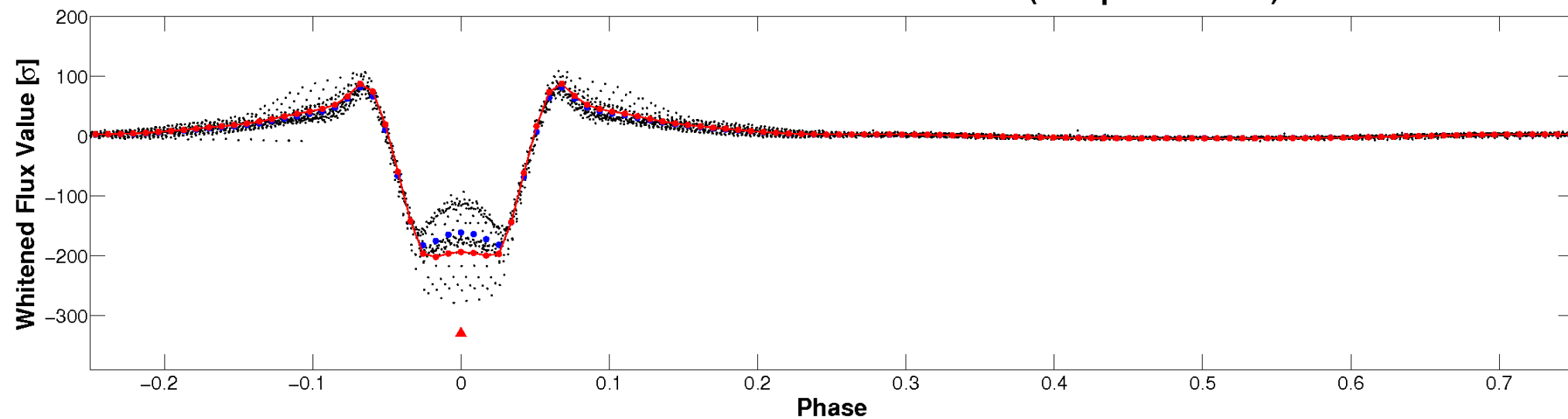


Non-Whitened Vs. Whitened Light Curve

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

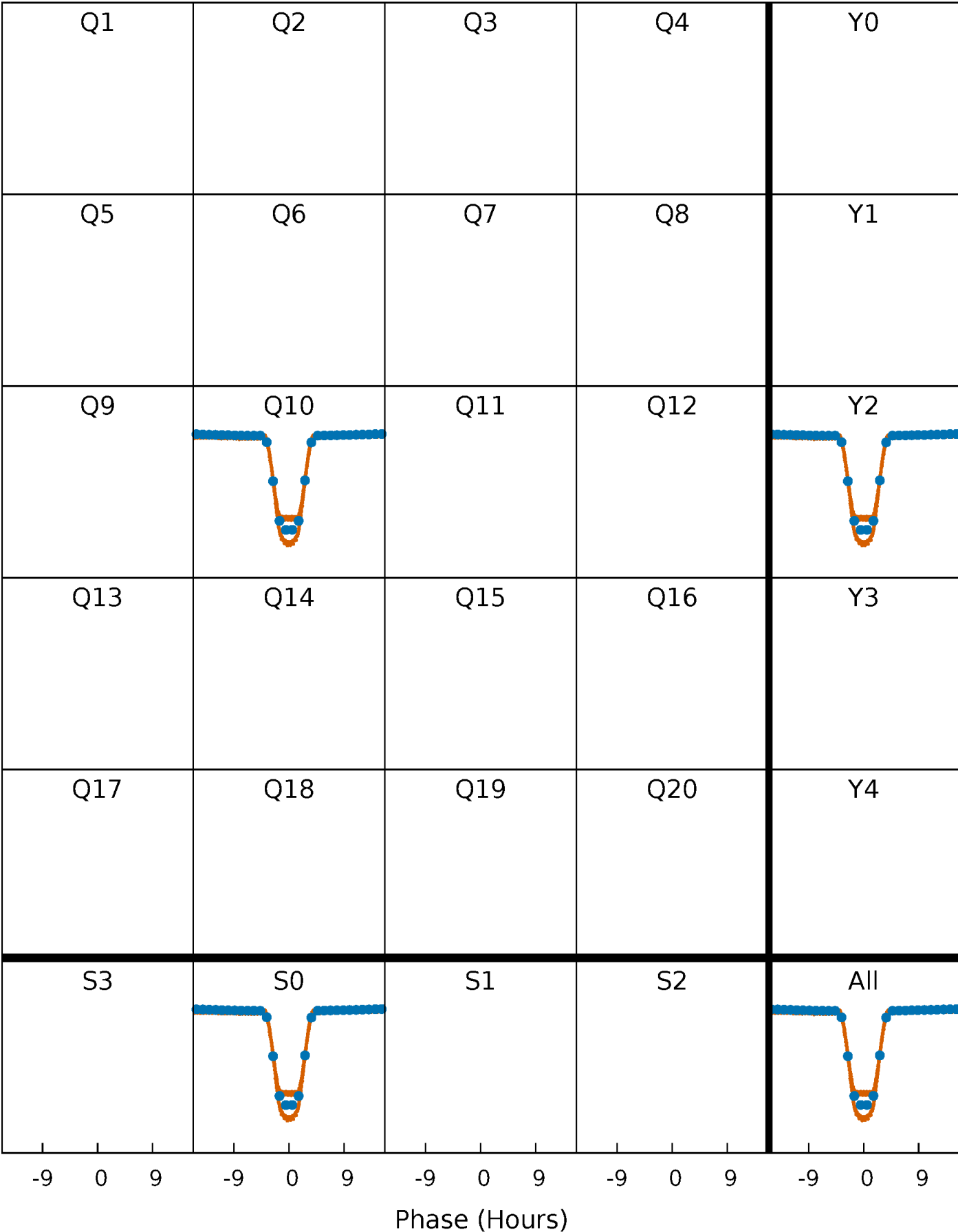


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



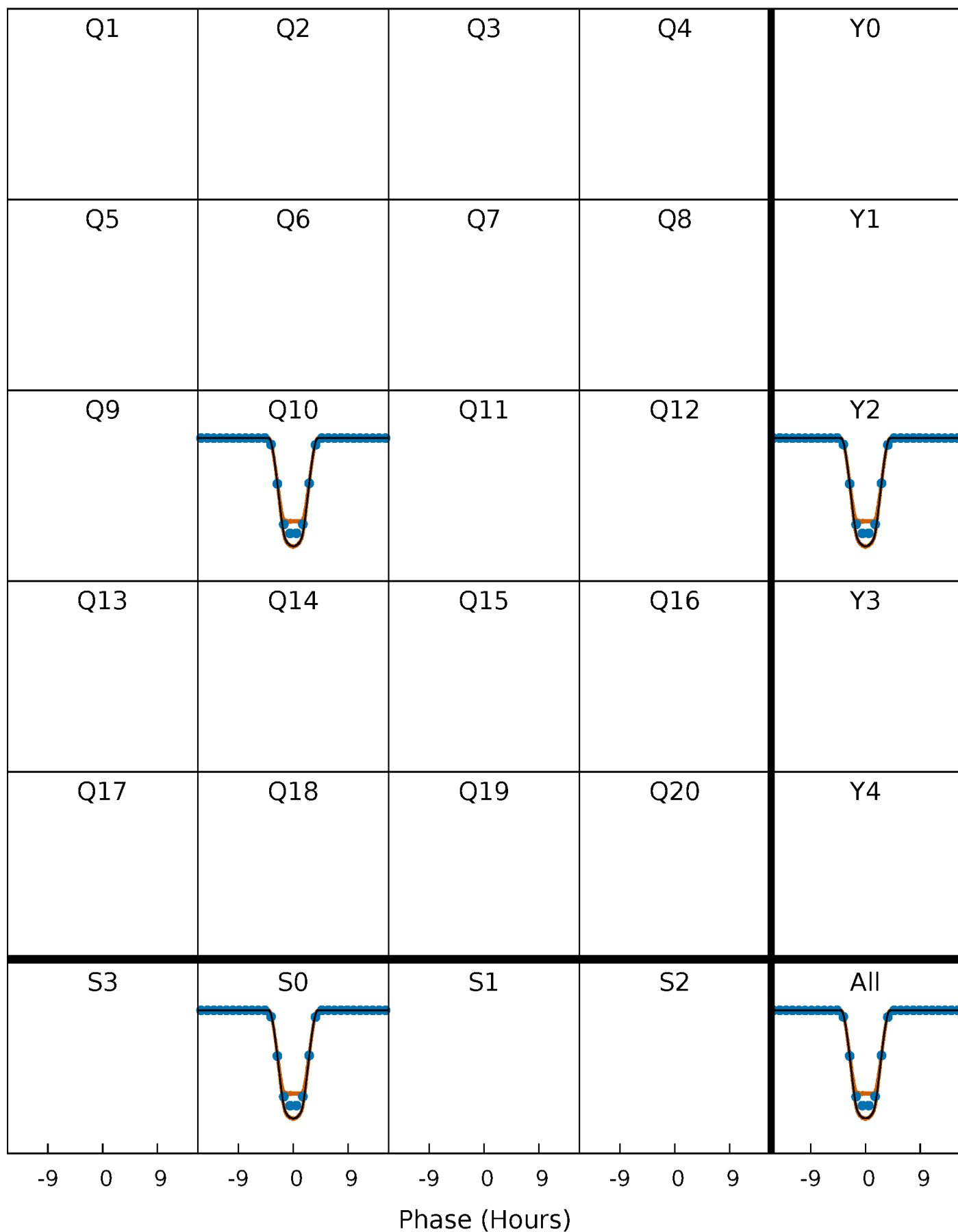
PDC Quarter-Phased Transit Curves

TCE 009529733-01 P= 2.404551 Days $T_0=131.679004$ (BKJD)



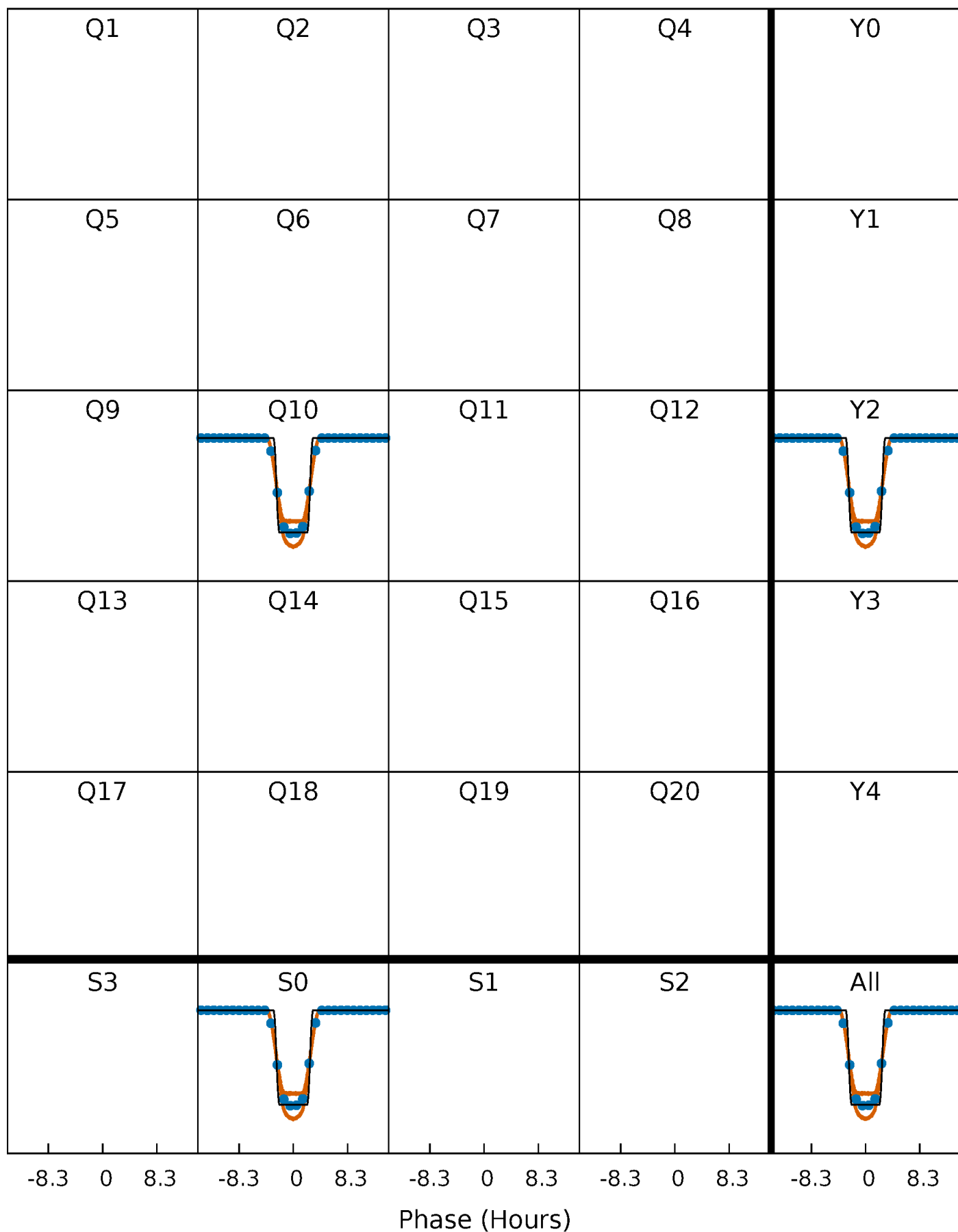
DV Quarter-Phased Transit Curves

TCE 009529733-01 P= 2.404551 Days $T_0=131.679004$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

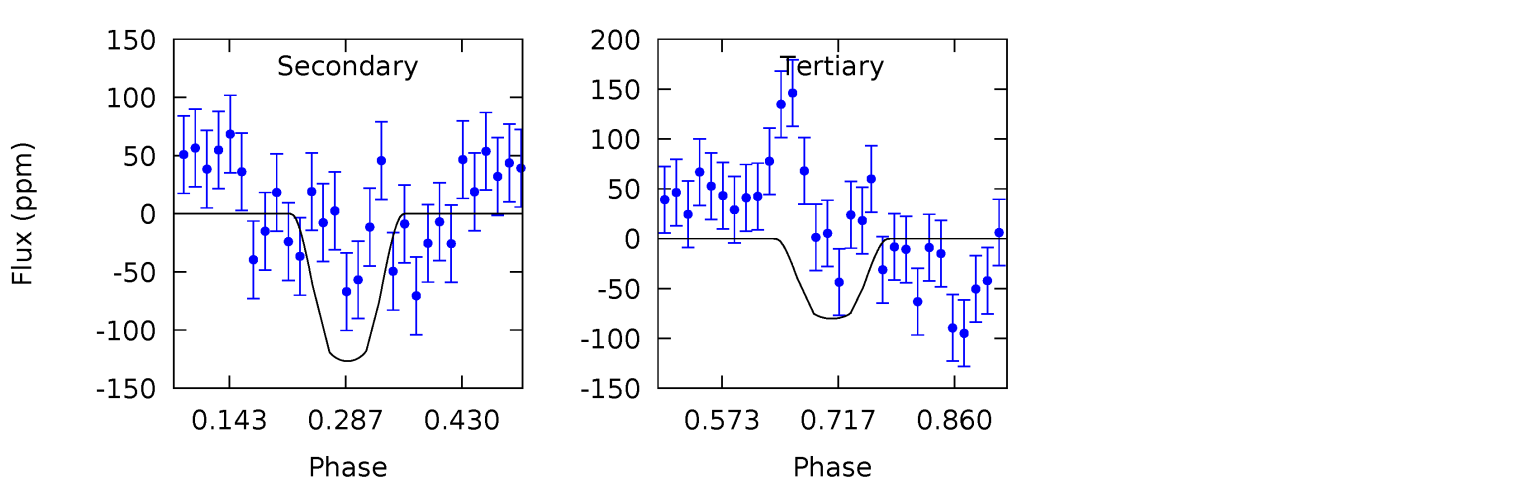
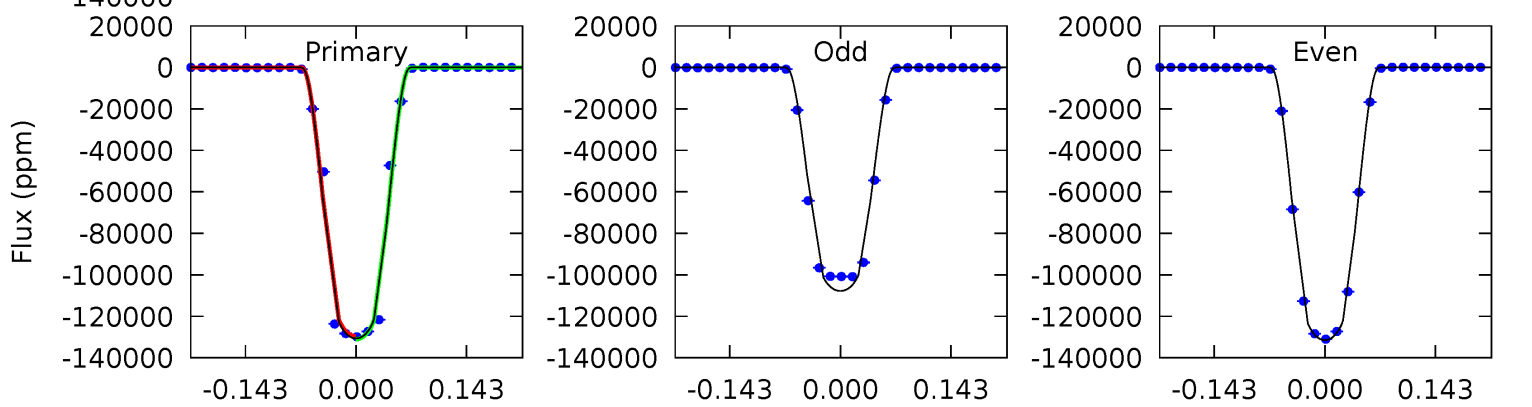
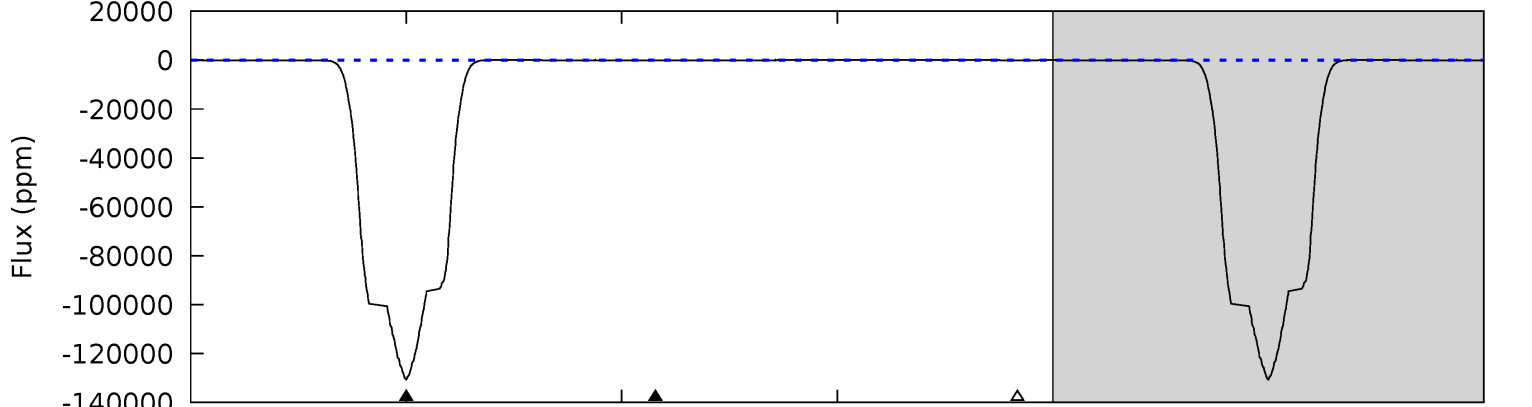
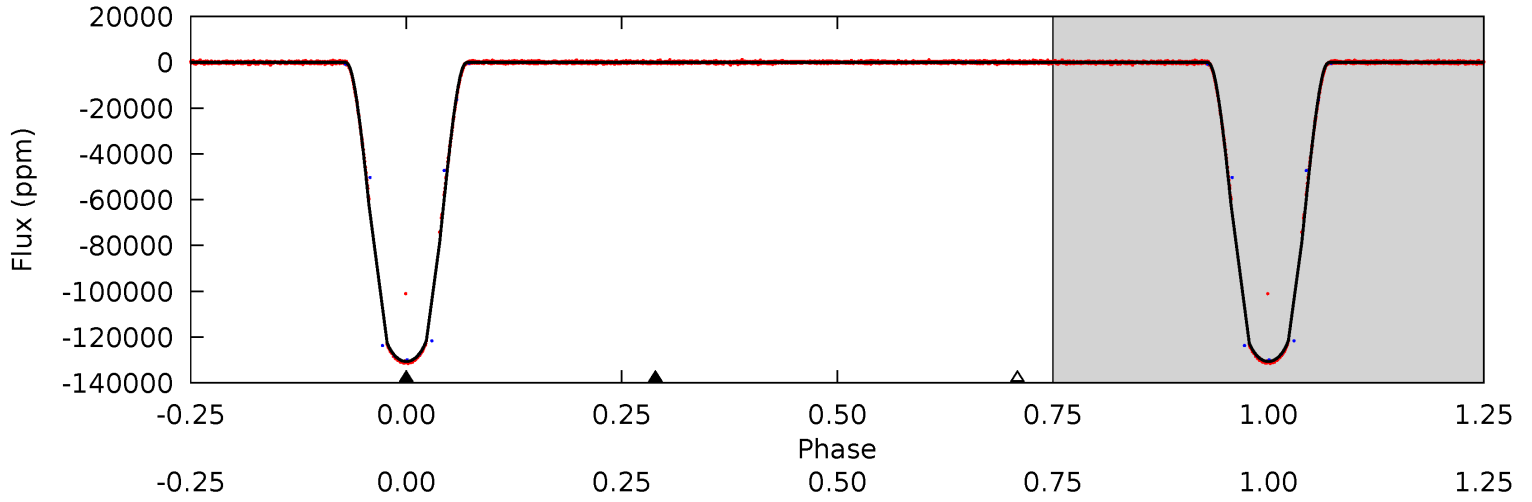
TCE 009529733-01 P= 2.404566 Days $T_0=131.674012$ (BKJD)



DV Model-Shift Uniqueness Test

009529733-01, P = 2.404551 Days, E = 131.679004 Days

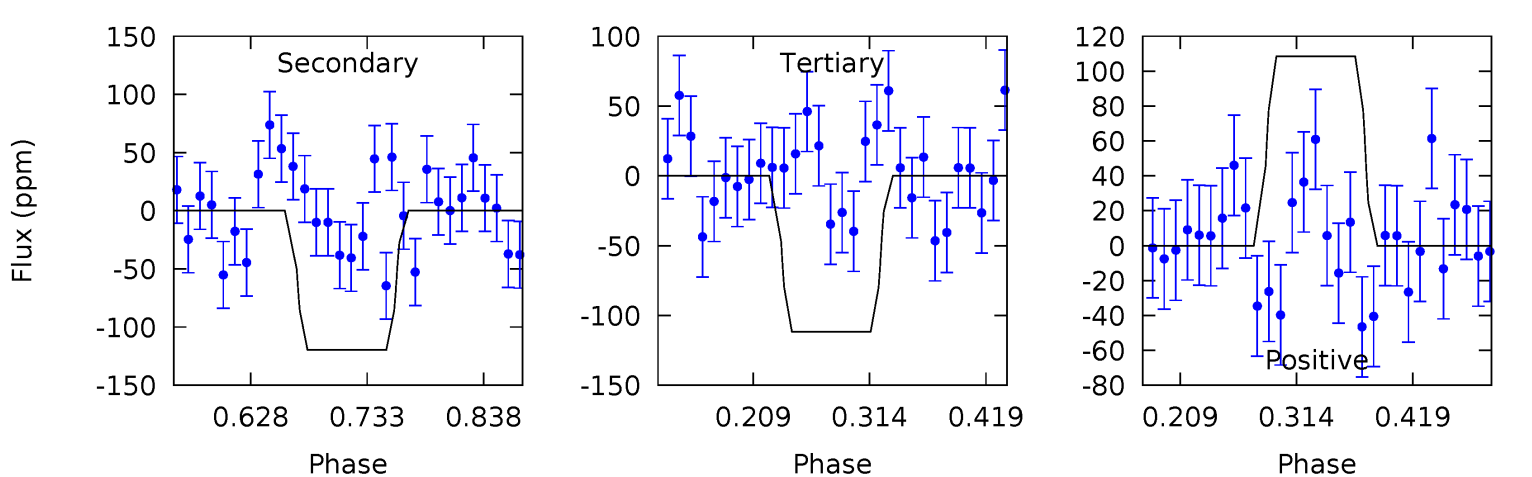
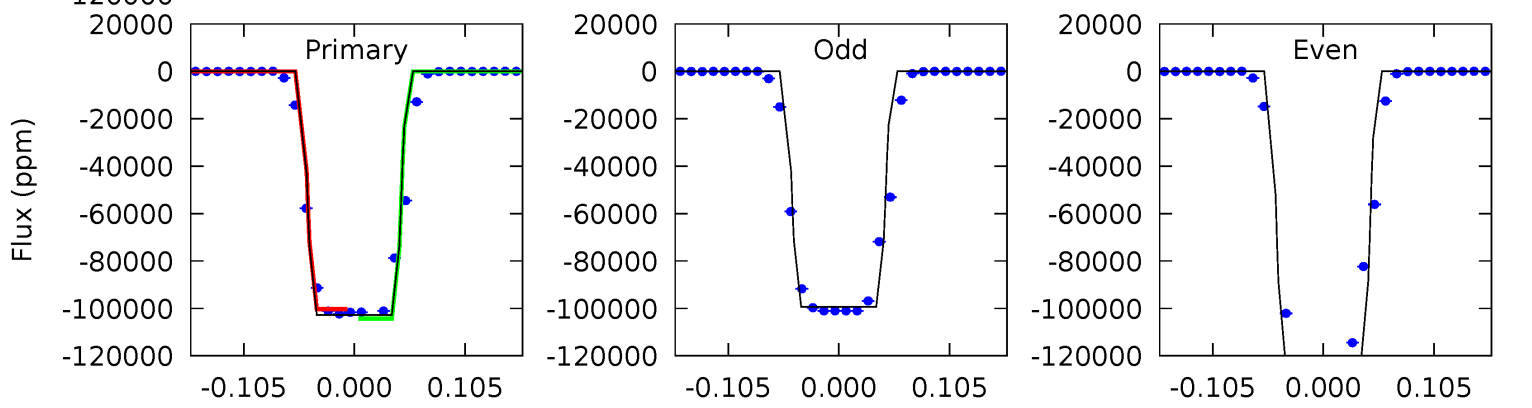
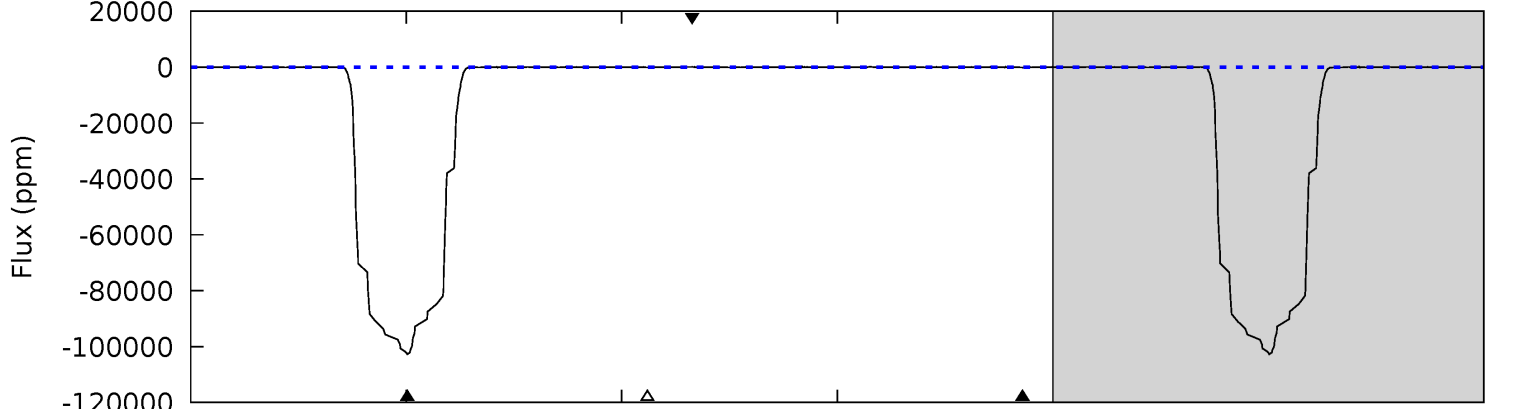
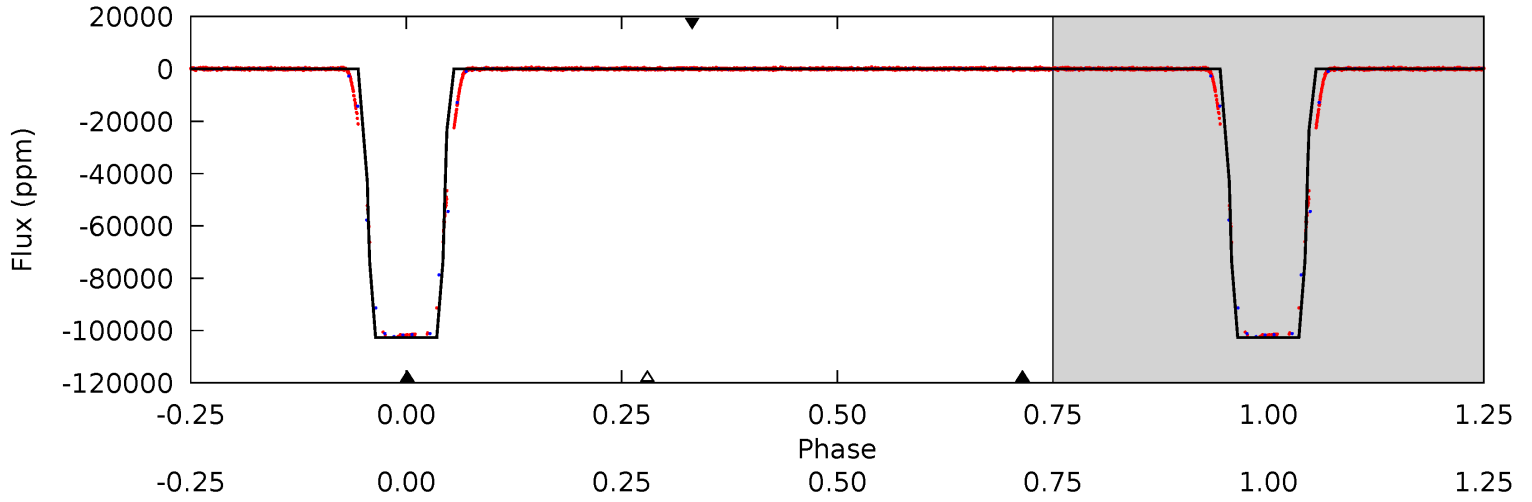
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7906	7.67	4.85	0	4.49	1.46	3.23	7901	7906	2.81	7.67	992.8	1.00	0.00	0



Alt Model-Shift Uniqueness Test

009529733-01, P = 2.404566 Days, E = 131.674012 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3293	3.84	3.58	3.48	4.56	1.62	1.35	3290	3290	0.26	0.36	1043	1.00	0.00	0



Stellar Parameters For KIC 009529733

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6462^{+179}_{-246}	$4.371^{+0.070}_{-0.210}$	$-0.120^{+0.250}_{-0.300}$	$1.166^{+0.381}_{-0.136}$	$1.166^{+0.185}_{-0.169}$	$1.037^{+0.380}_{-0.531}$
	+3%/-4%	+2%/-5%	+208%/-250%	+33%/-12%	+16%/-14%	+37%/-51%
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 009529733-01 / KOI 3600.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-127 ± 17	$44.15^{+8.48}_{-3.07}$	2276^{+169}_{-118}	-2607^{+79}_{-109}	$0.046^{+0.011}_{-0.012}$
Alt.	-120 ± 31	$44.14^{+7.30}_{-3.46}$	2275^{+159}_{-117}	-2606^{+79}_{-106}	$0.043^{+0.016}_{-0.015}$

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

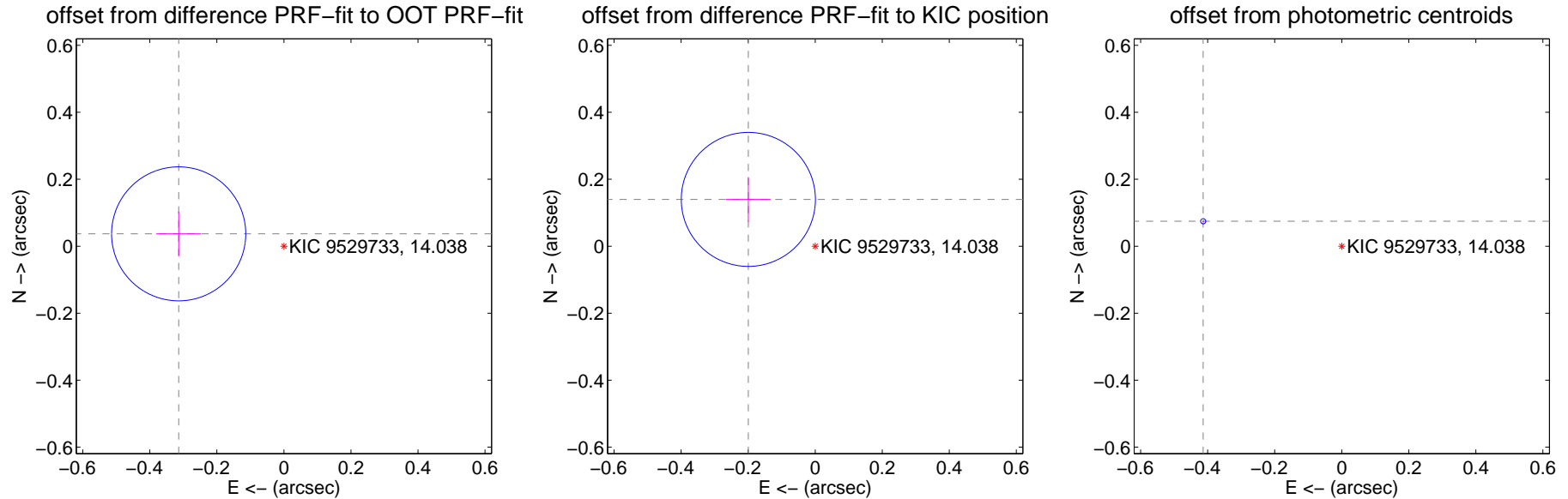
DV Centroid Data

Supplemental centroid analysis for 009529733-01. Kepler magnitude: 14.04. Transit SNR 2743.95

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.316 ± 0.067	4.74	0.314 ± 0.067	0.037 ± 0.067
PRF-fit source offset from KIC position	0.244 ± 0.067	3.65	0.199 ± 0.067	0.140 ± 0.067
photometric centroid source offset	0.42 ± 0.00	164.48	0.41 ± 0.00	0.07 ± 0.00

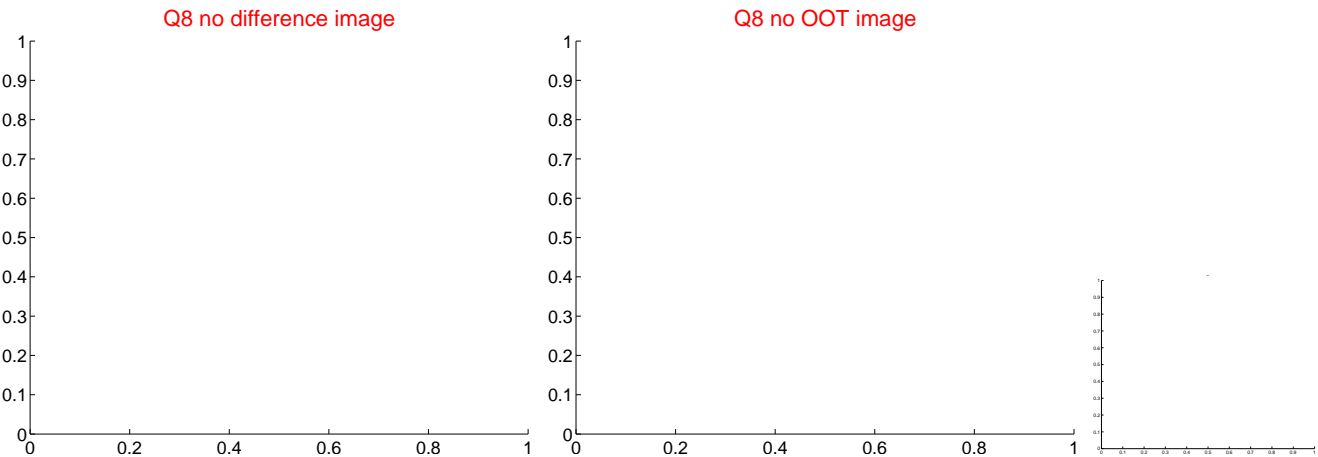
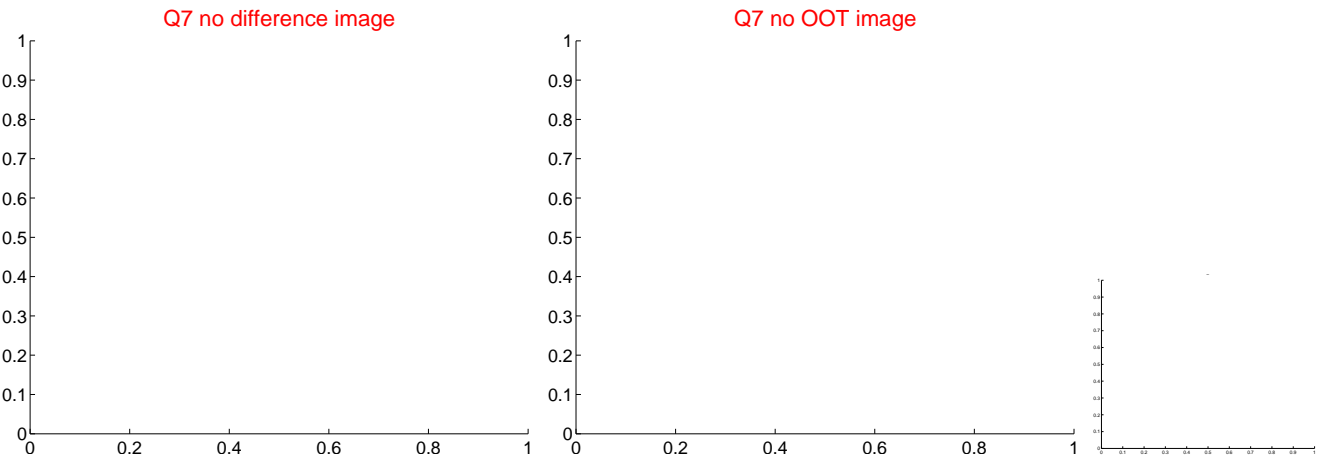
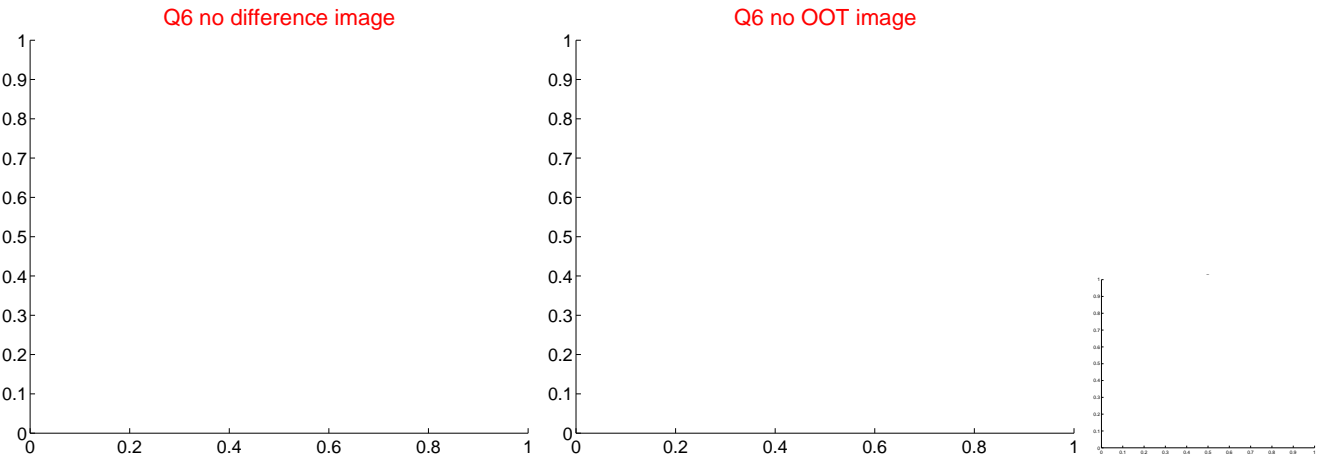
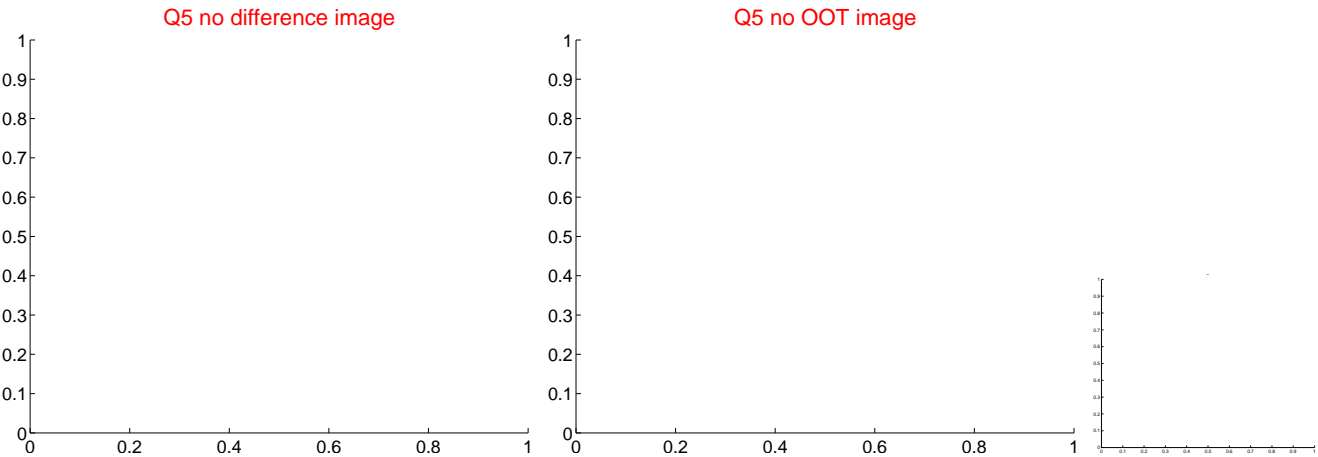


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

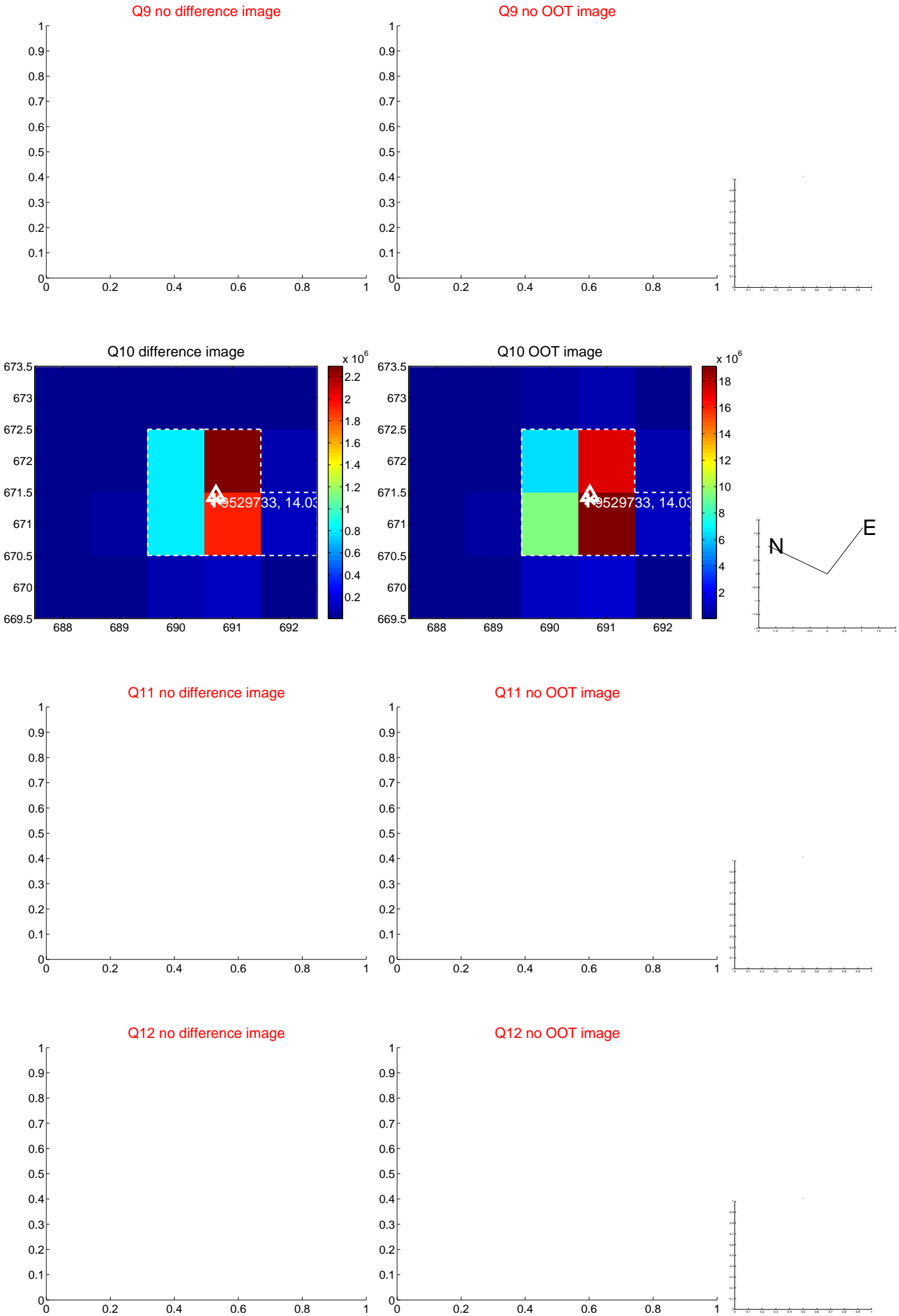
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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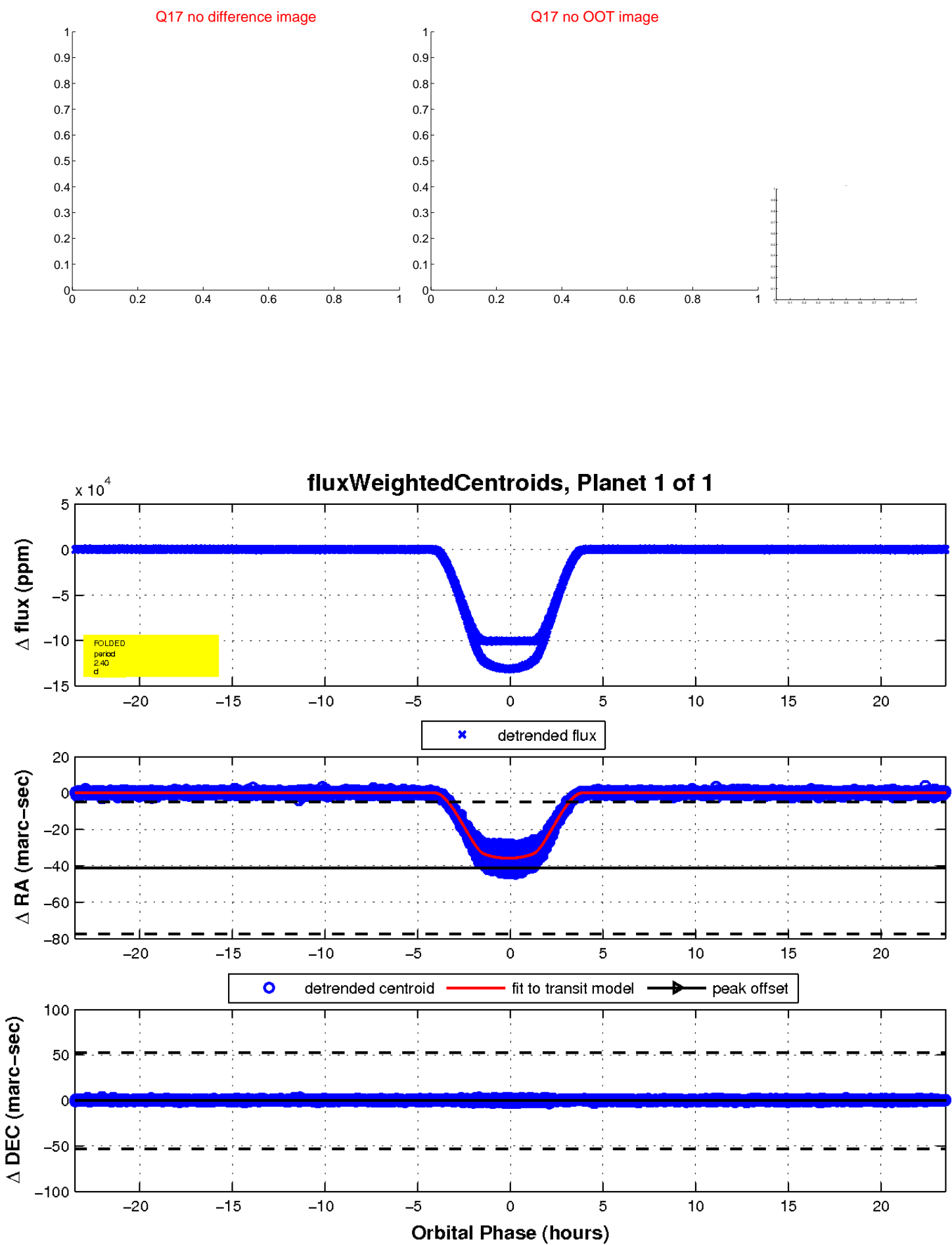
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UKIRT Image

