

KIC 008953426

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})
008953426-01	OBS	7113.01	2.665876	131.618646	153872.1	7.568	16765.3	10038.9	1.16	6234	68.58	1204.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008953426-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED

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.

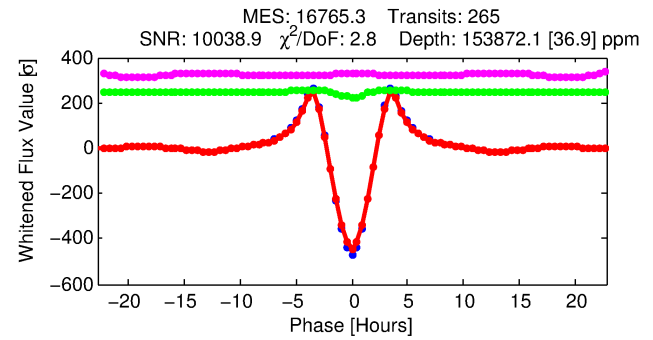
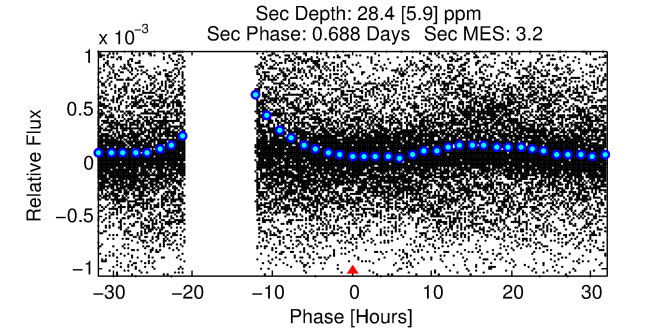
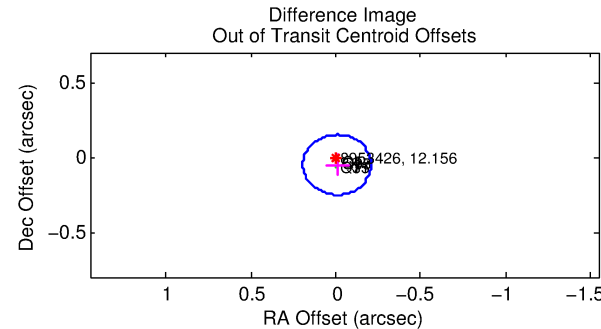
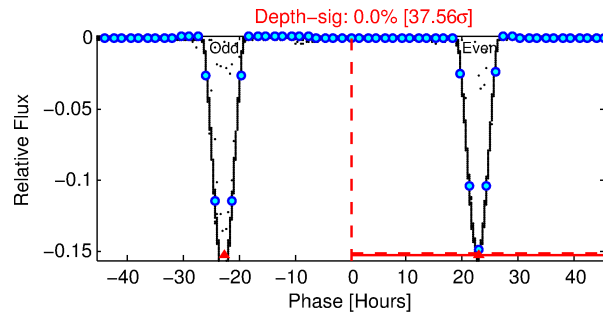
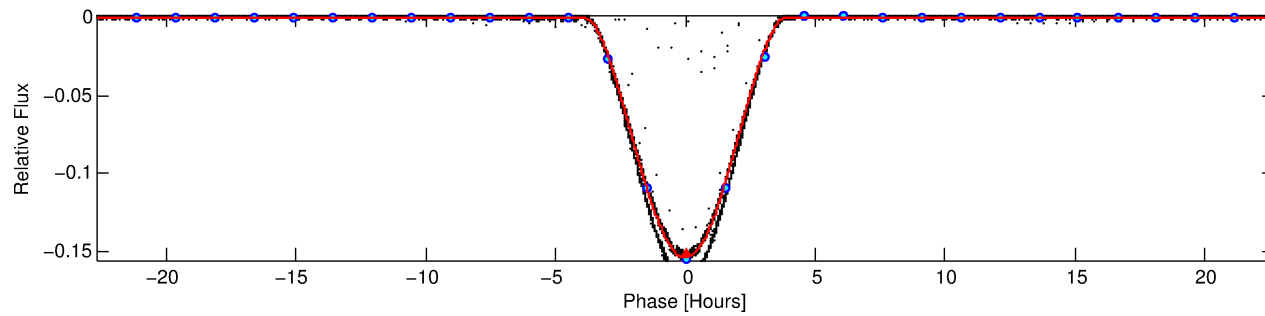
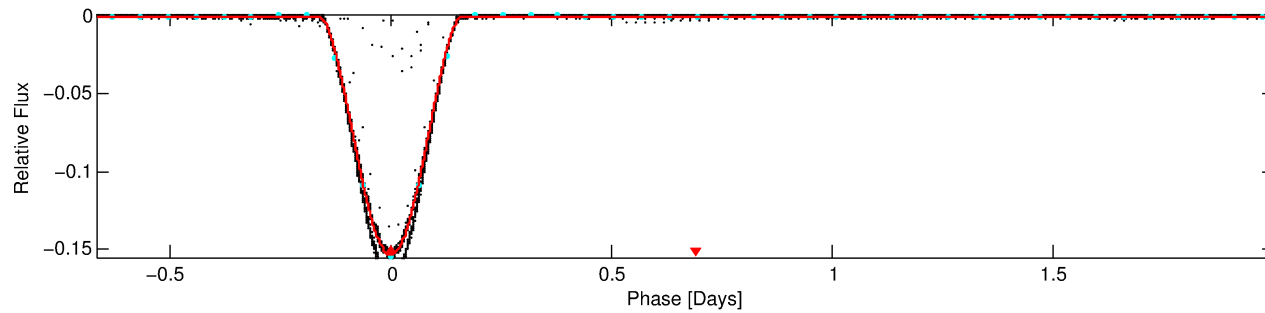
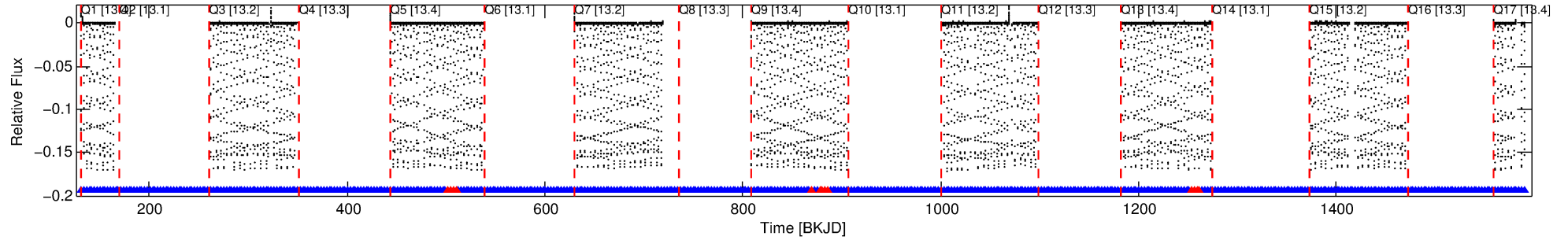
Ephemeris Match Information For 008953426-01

No Significant Match Found

DV One-Page Summary

KIC: 8953426 Candidate: 1 of 1 Period: 2.666 d
KOI: K07113.01 Corr: 0.998

Kp: 12.16 R*: 1.16 Rs Teff: 6234.0 K Logg: 4.35 Fe/H: -0.020



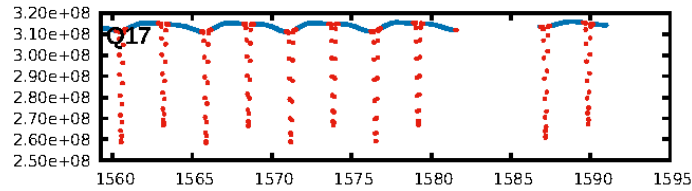
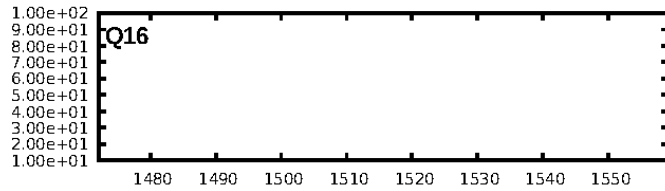
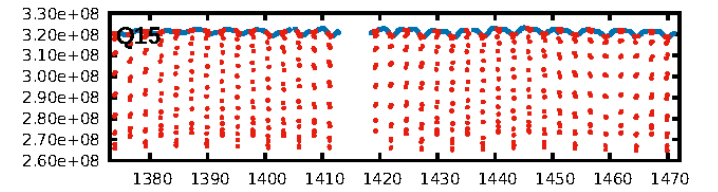
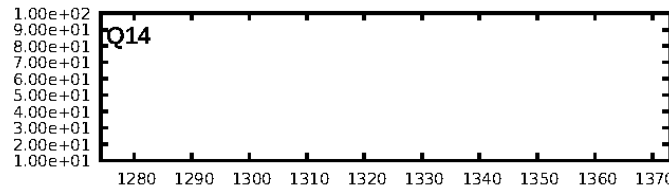
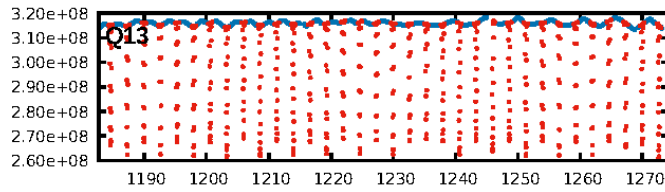
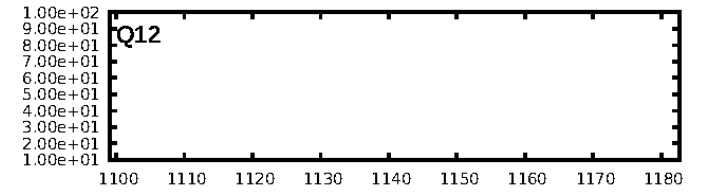
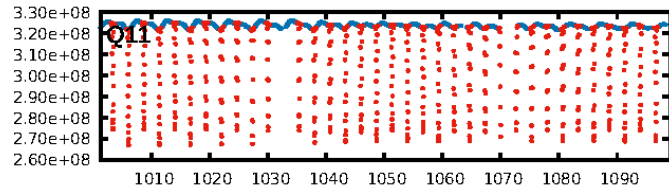
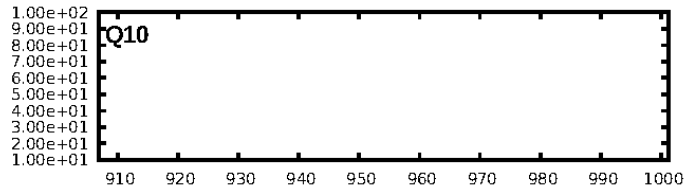
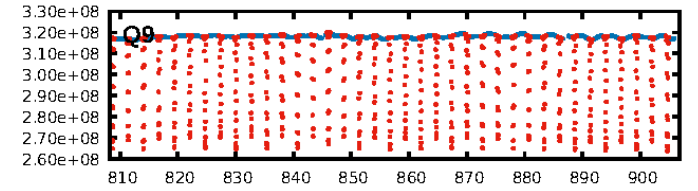
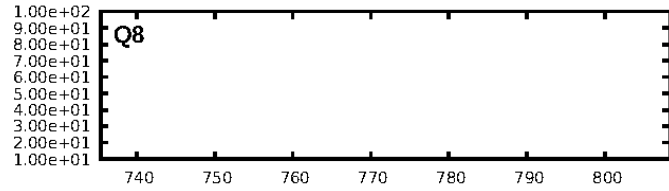
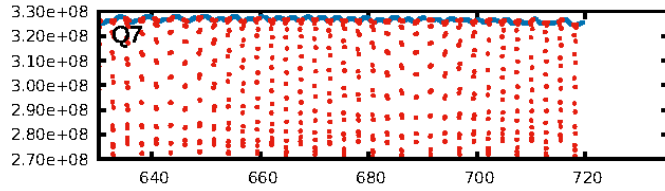
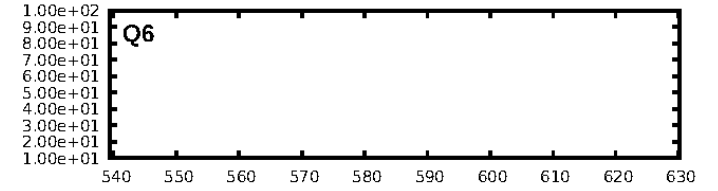
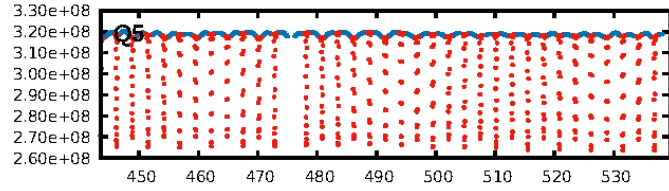
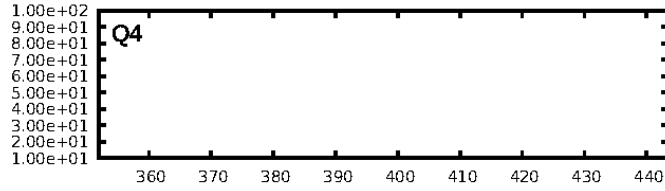
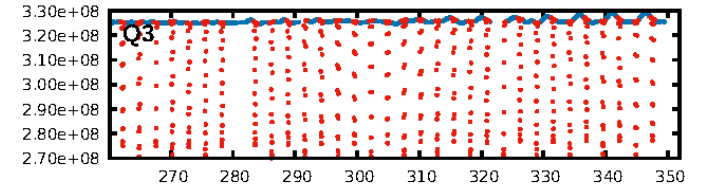
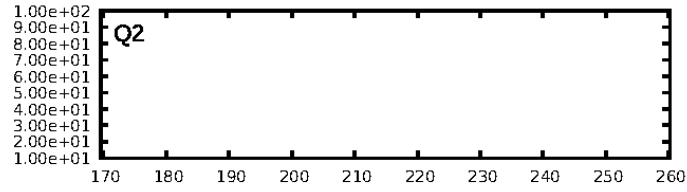
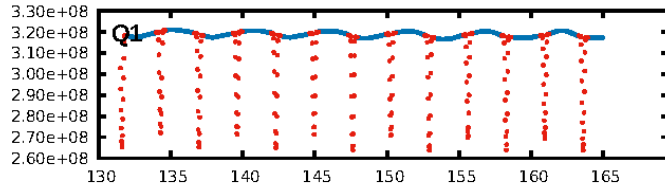
DV Fit Results:

Period = 2.66588 [0.00000] d
Epoch = 131.6186 [0.0000] BKJD
Rp/R* = 0.5422 [0.0074]
a/R* = 3.55 [0.01]
b = 0.91 [0.01]
Seff = 1204.75 [502.36]
Teq = 1502 [157] K
Rp = 68.58 [23.21] Re
a = 0.0388 [0.0106] AU
Ag = 0.01 [0.00] [-454.78σ]
Teffp = 618 [41] K [-5.46σ]

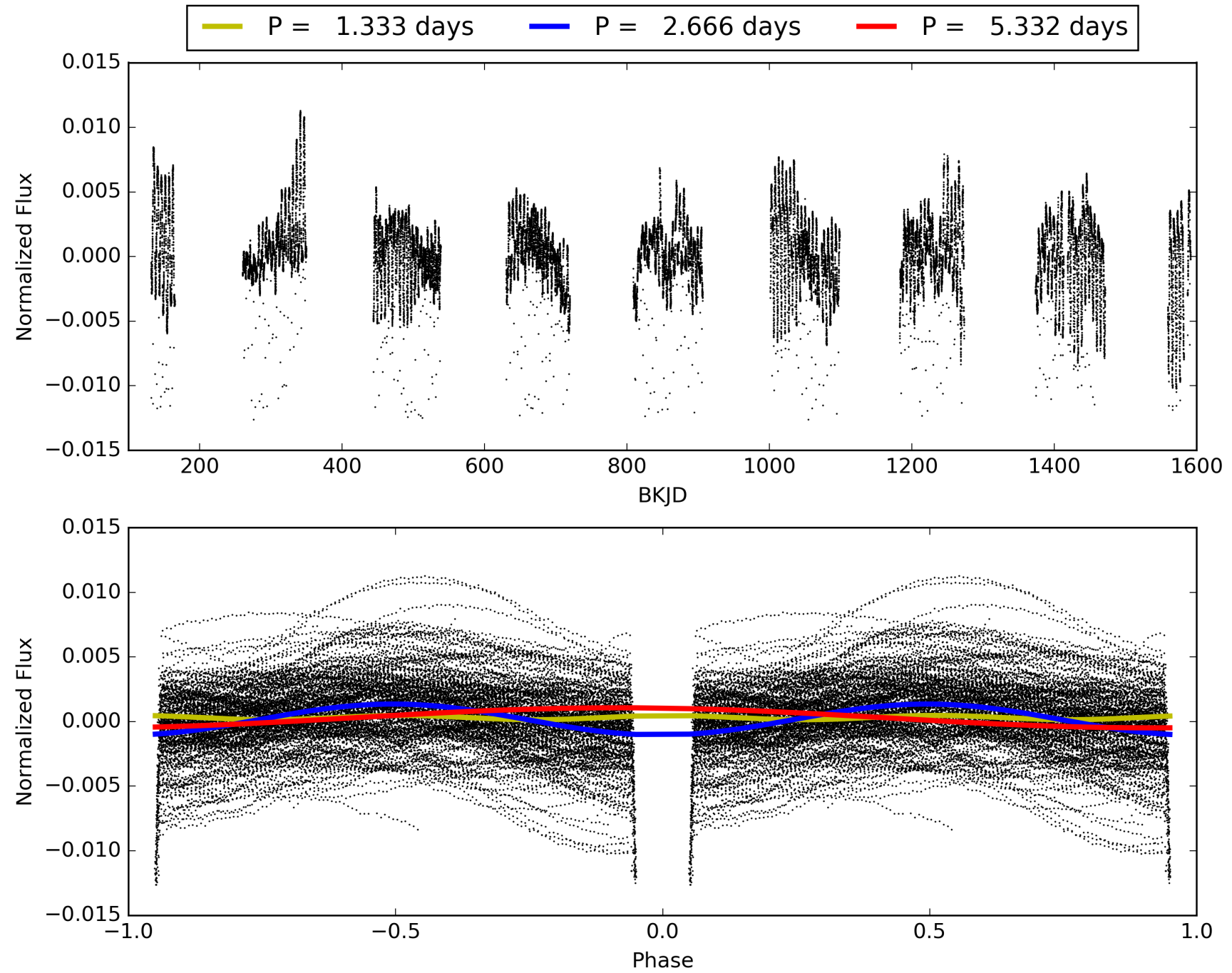
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.95 [229/242]
GhostDiagnostic-chr: 1.584
Centroid-sig: N/A
Centroid-so: 0.044 arcsec [120.65σ]
OotOffset-rm: 0.051 arcsec [0.76σ]
KicOffset-rm: 0.124 arcsec [1.74σ]
OotOffset-st: 0/4/0/5 [9]
KicOffset-st: 0/4/0/5 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [9/9]

TCE 008953426-01, PDC Light Curves

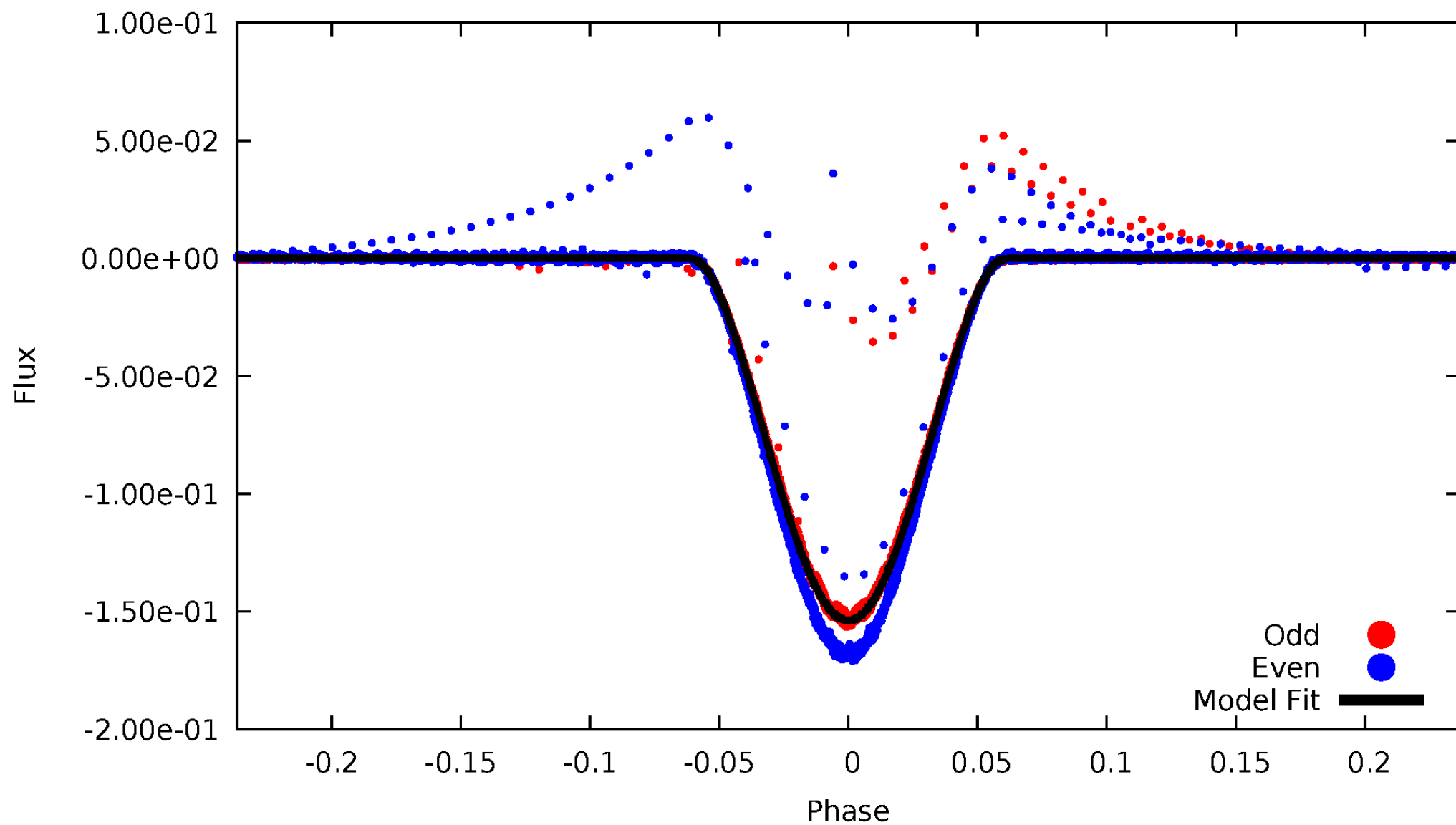


TCE 008953426-01



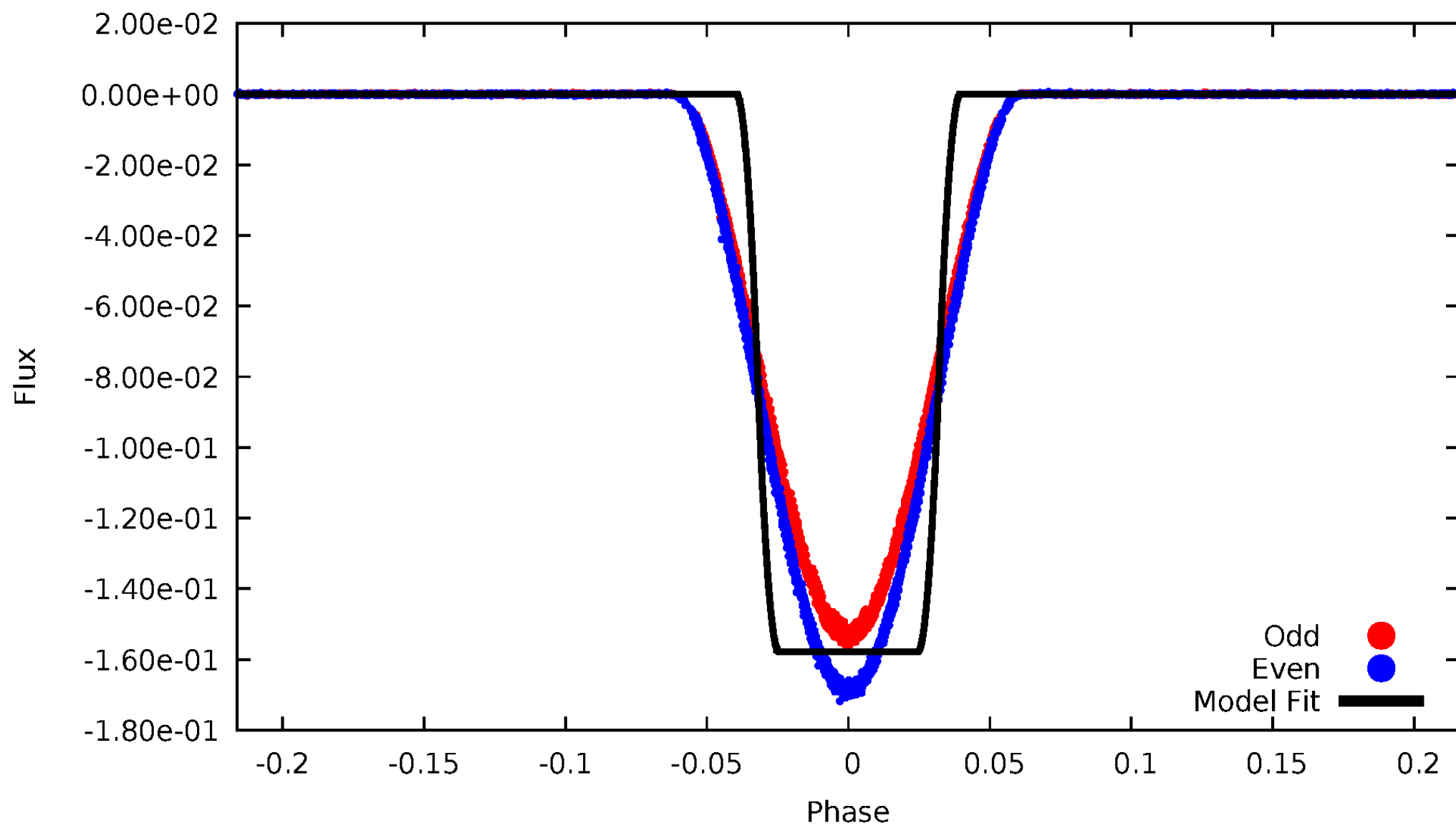
DV Odd/Even

TCE 008953426-01



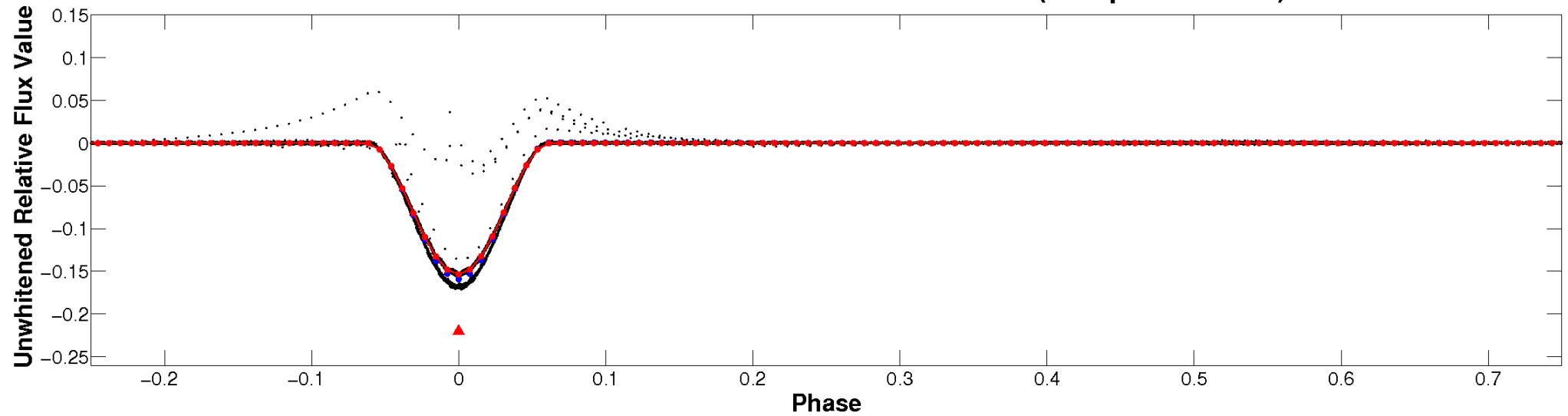
ALT Odd/Even

TCE 008953426-01

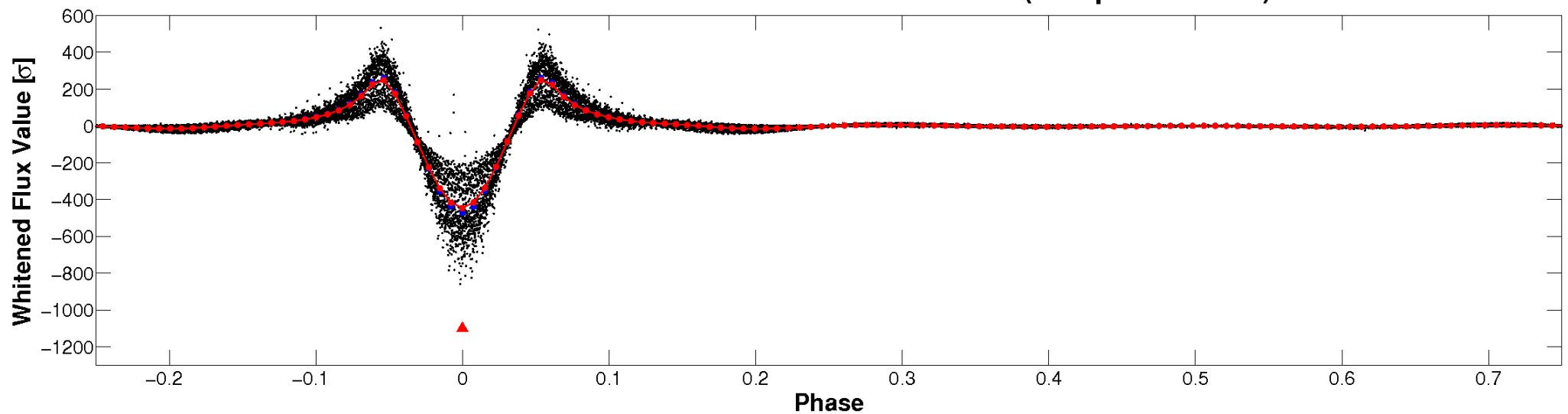


Non-Whitened Vs. Whitened Light Curve

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

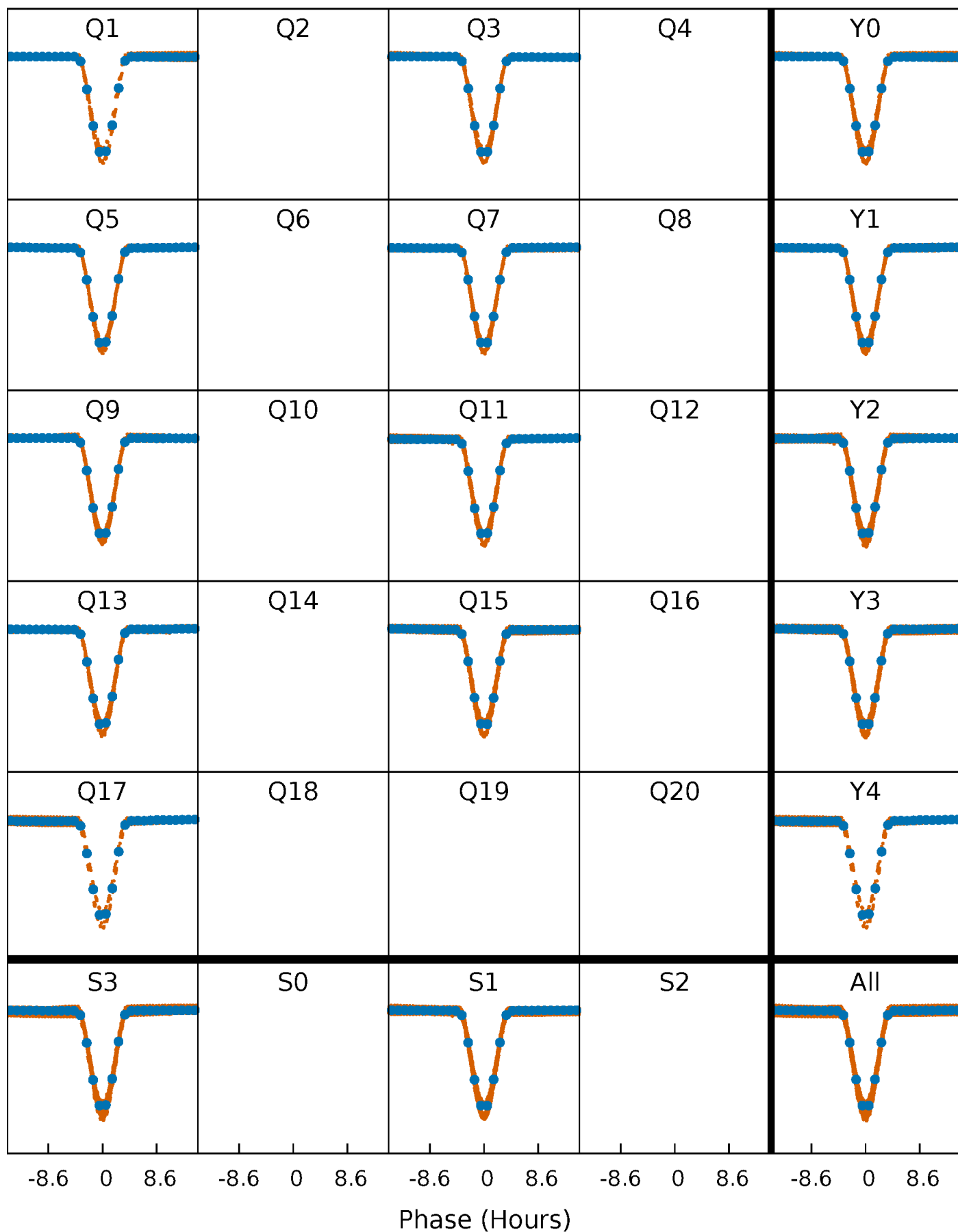


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



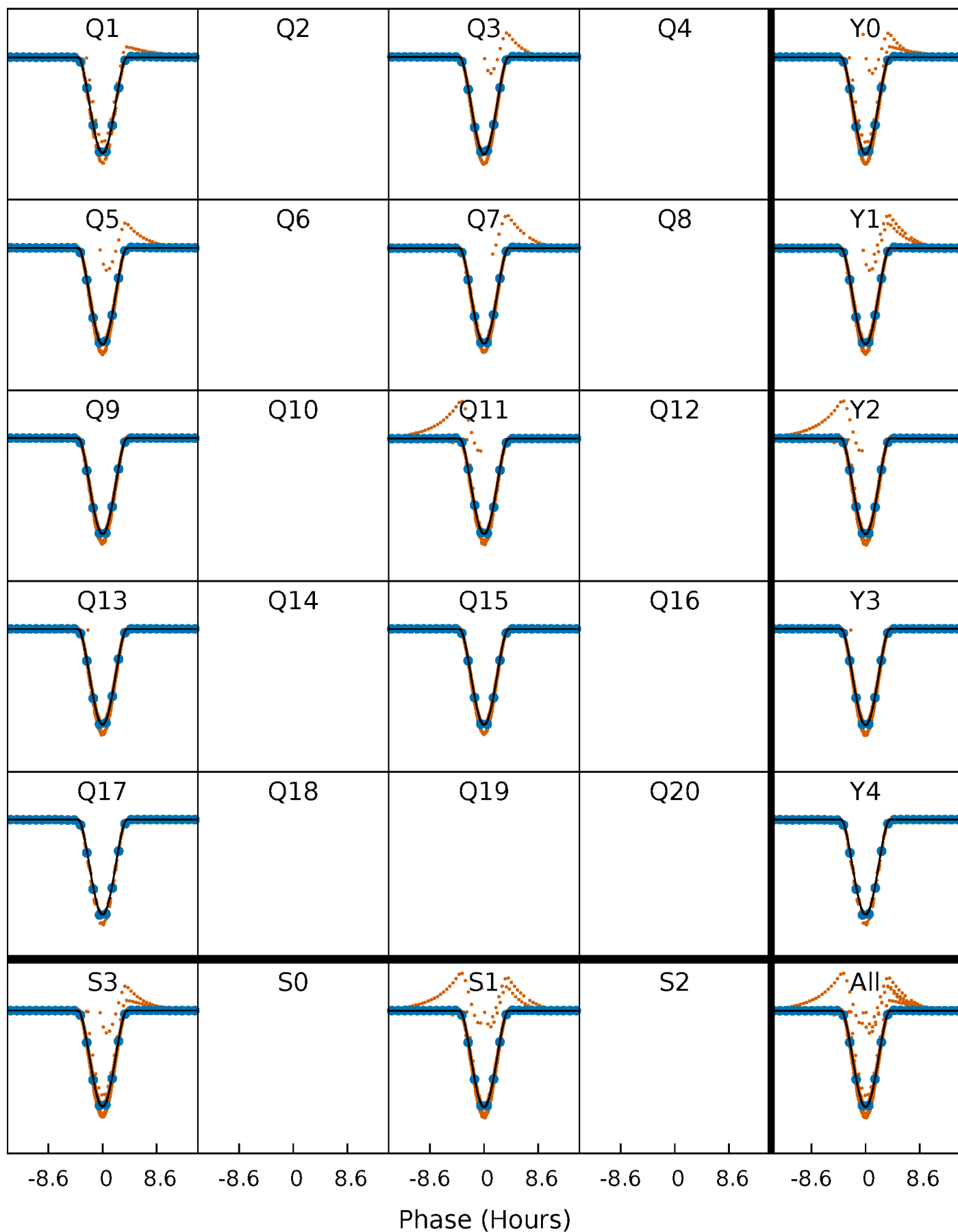
PDC Quarter-Phased Transit Curves

TCE 008953426-01 P= 2.665876 Days $T_0=131.618646$ (BKJD)



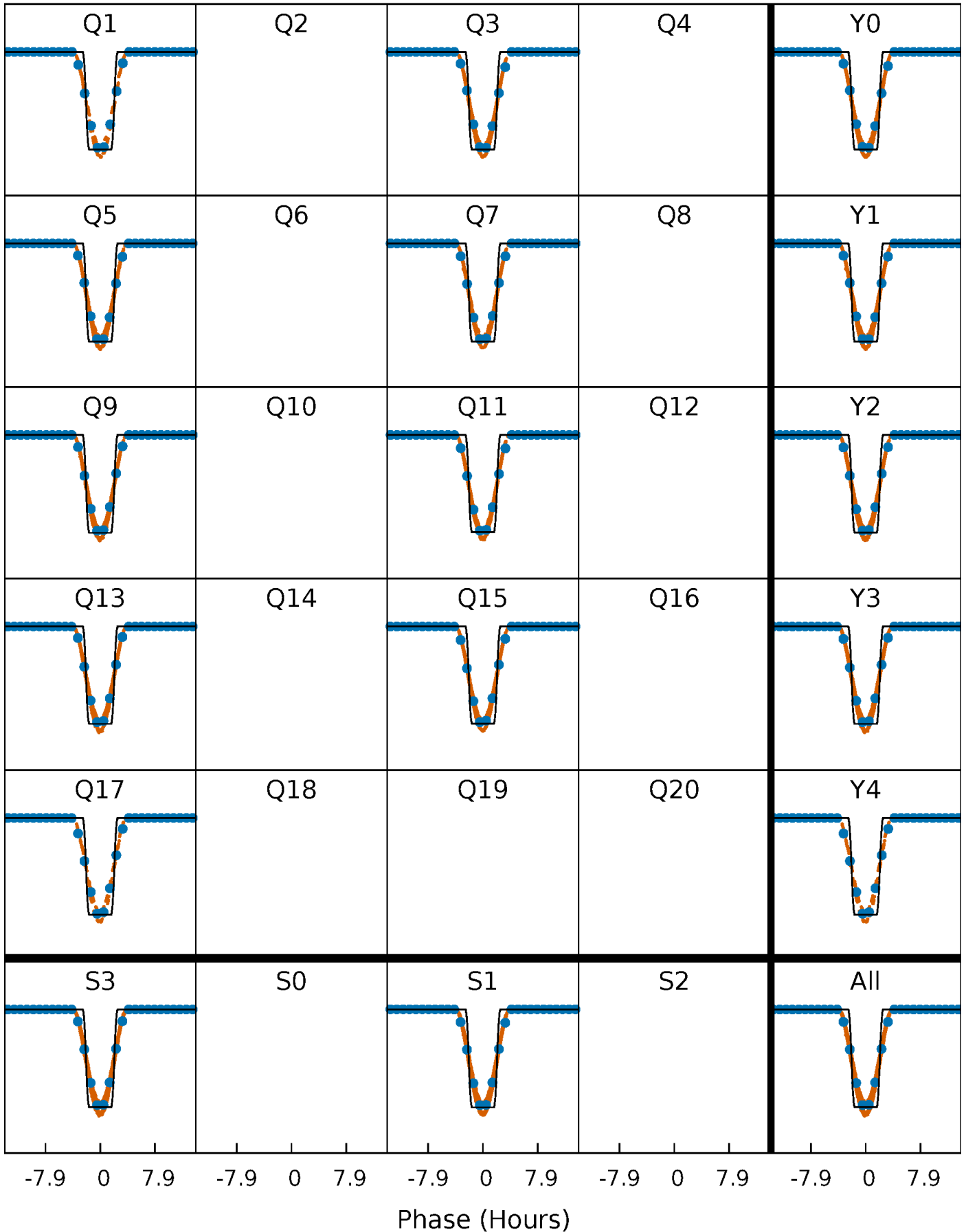
DV Quarter-Phased Transit Curves

TCE 008953426-01 P= 2.665876 Days $T_0=131.618646$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

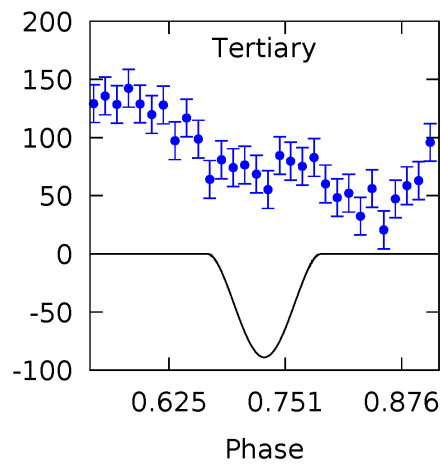
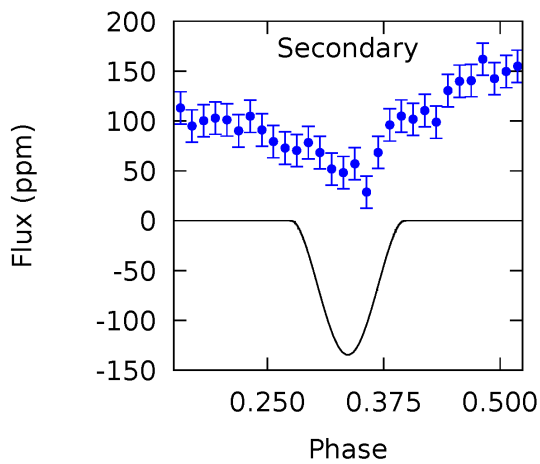
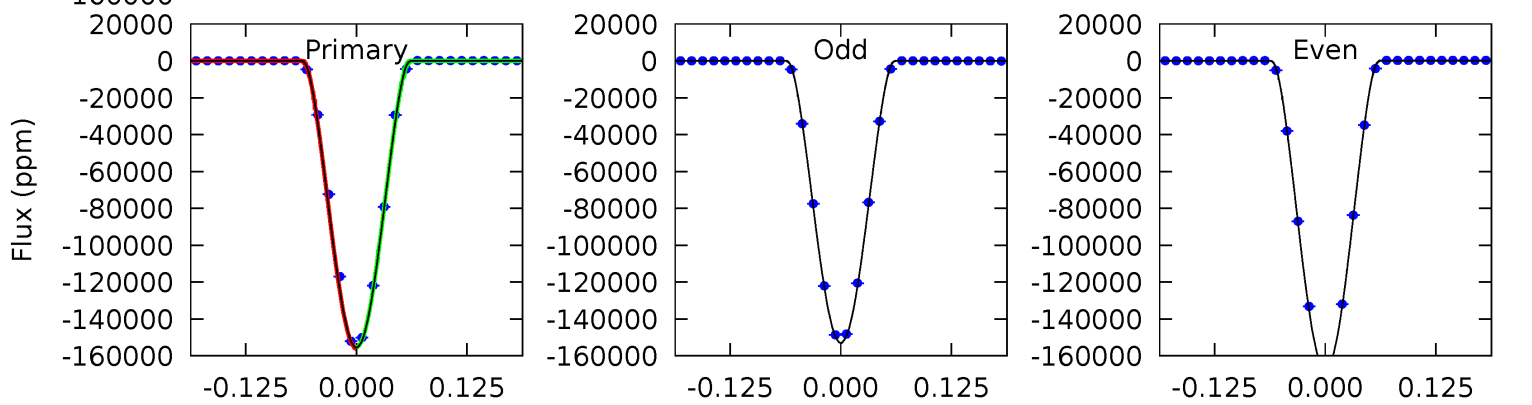
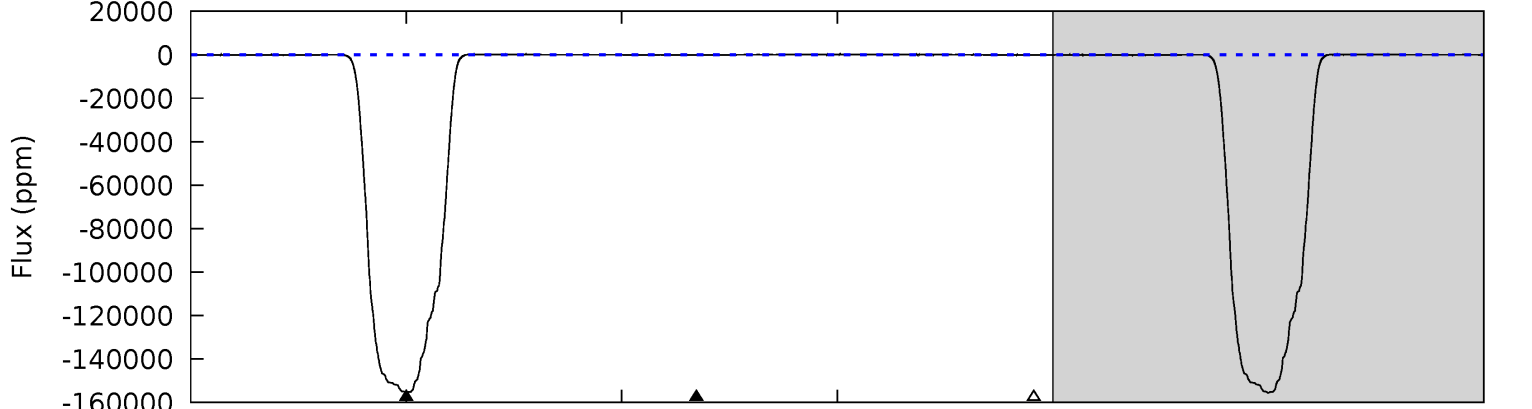
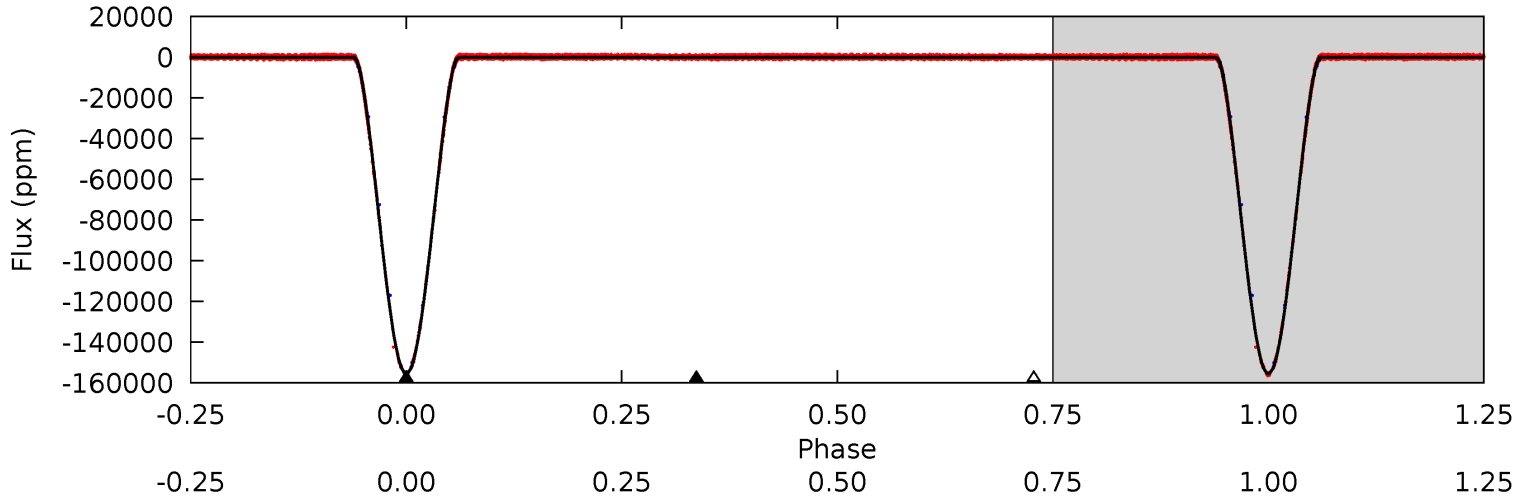
TCE 008953426-01 P= 2.665883 Days $T_0=131.617166$ (BKJD)



DV Model-Shift Uniqueness Test

008953426-01, P = 2.665876 Days, E = 128.952770 Days

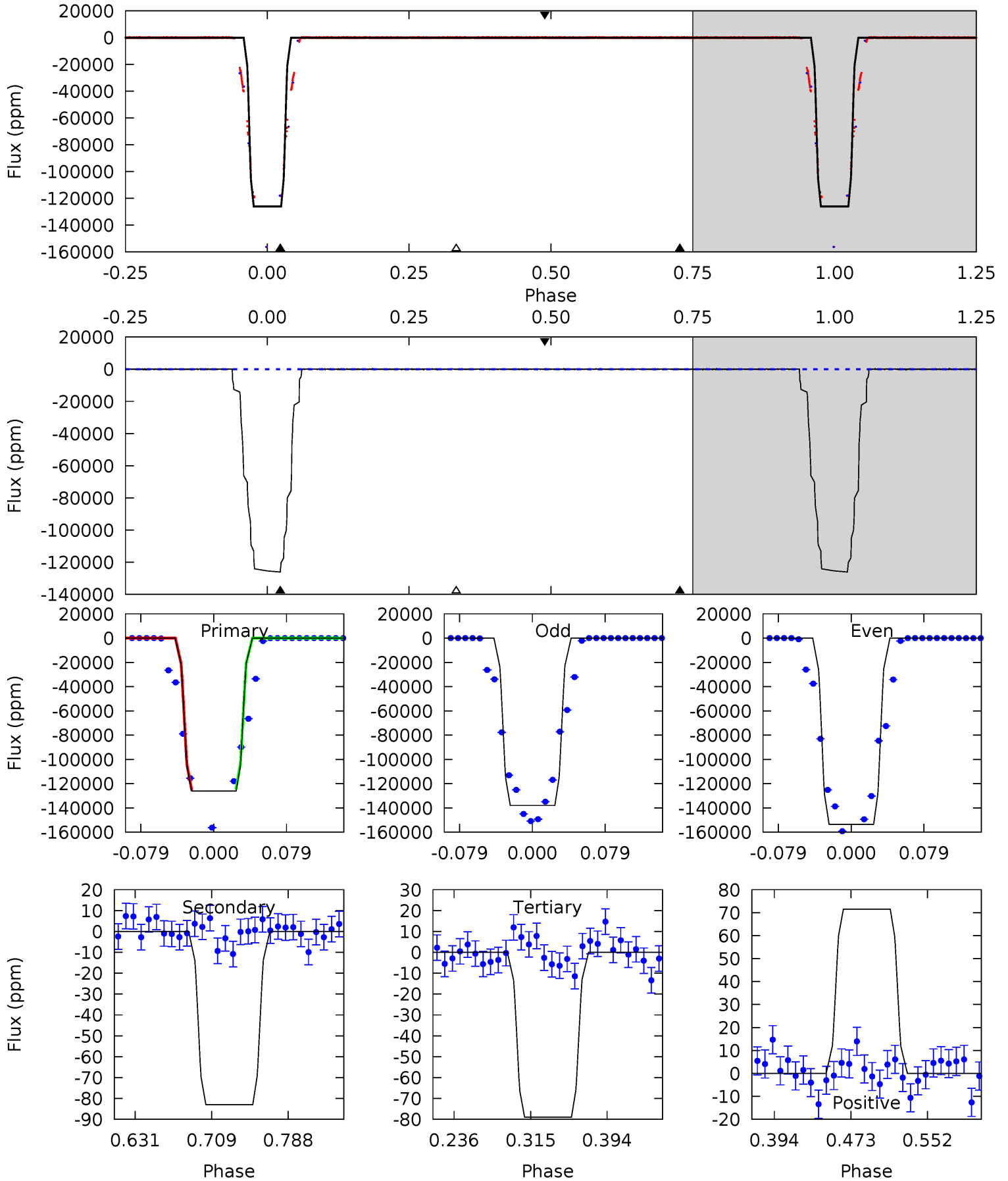
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14144	12.2	8.09	0	4.52	1.53	6.42	14136	14144	4.16	12.2	986.8	1.01	0.00	0



Alt Model-Shift Uniqueness Test

008953426-01, P = 2.665883 Days, E = 128.951283 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7155	4.71	4.48	4.06	4.61	1.76	8.84	7150	7151	0.23	0.65	1483	0.99	0.00	0



Stellar Parameters For KIC 008953426

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6234^{+195}_{-260}	$4.351^{+0.093}_{-0.201}$	$-0.020^{+0.250}_{-0.300}$	$1.159^{+0.392}_{-0.168}$	$1.097^{+0.189}_{-0.142}$	$0.992^{+0.417}_{-0.532}$
	+3%/-4%	+2%/-5%	+1250%/-1500%	+34%/-14%	+17%/-13%	+42%/-54%
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 008953426-01 / KOI 7113.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-135 ± 11	$69.39^{+12.69}_{-5.93}$	2130^{+162}_{-132}	-2549^{+82}_{-105}	$0.022^{+0.005}_{-0.006}$
Alt.	-83 ± 18	$51.06^{+8.92}_{-4.43}$	2124^{+154}_{-122}	-2540^{+74}_{-102}	$0.025^{+0.009}_{-0.007}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

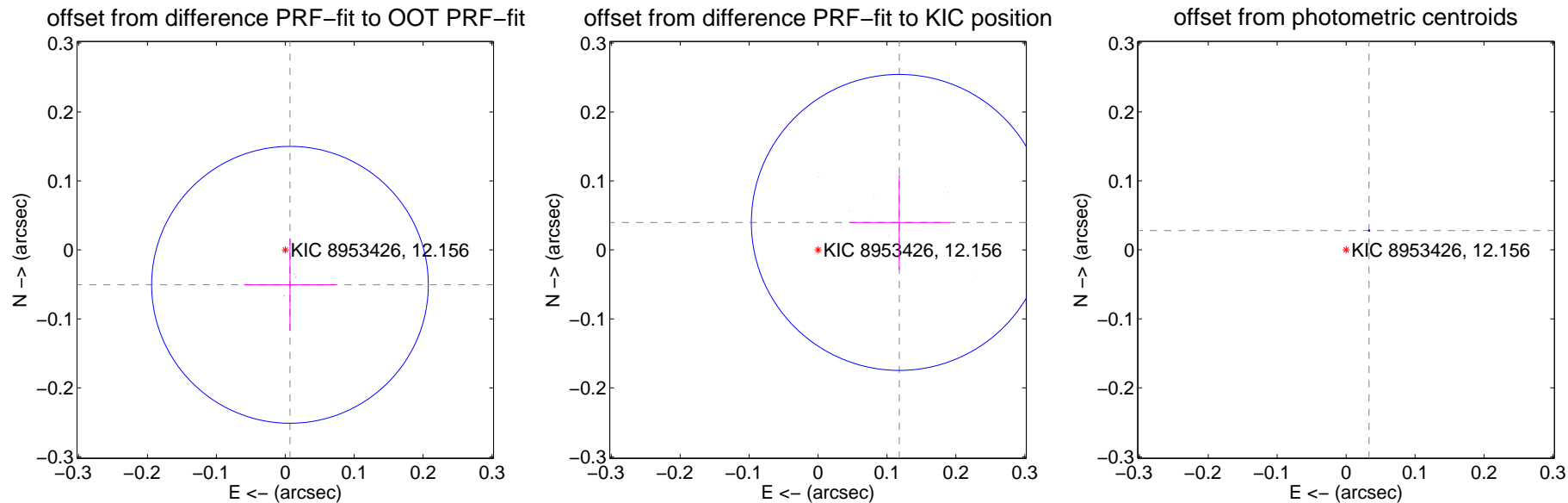
DV Centroid Data

Supplemental centroid analysis for 008953426-01. Kepler magnitude: 12.16. Transit SNR 10038.86

There are 9 quarters with good PRF difference image offsets

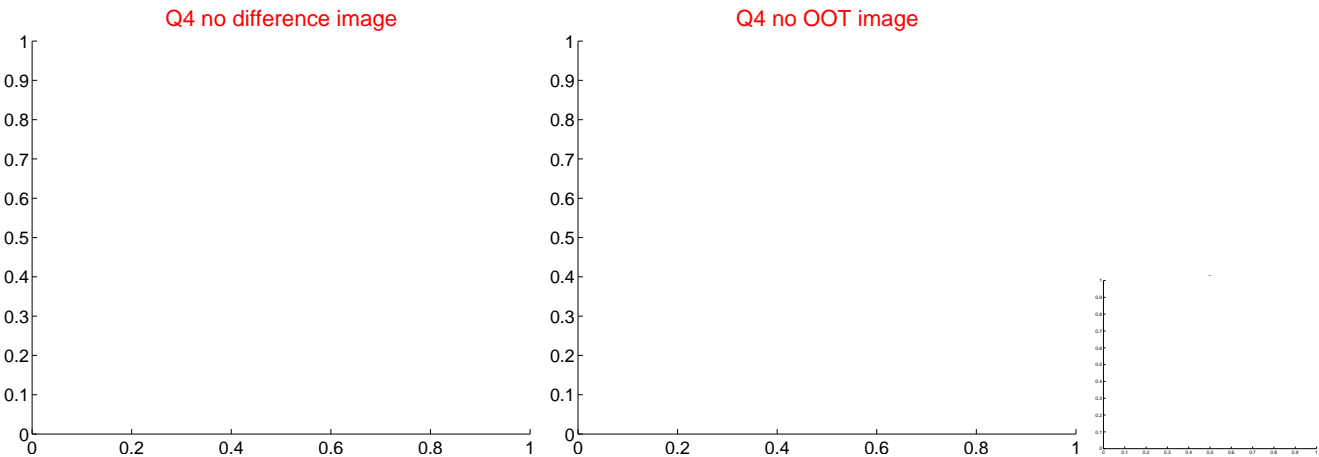
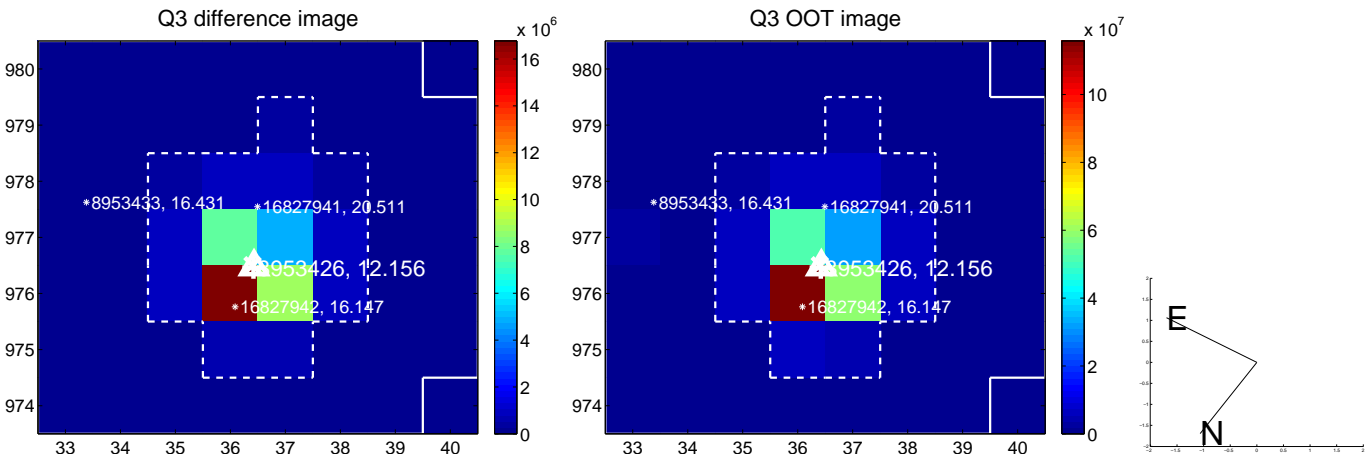
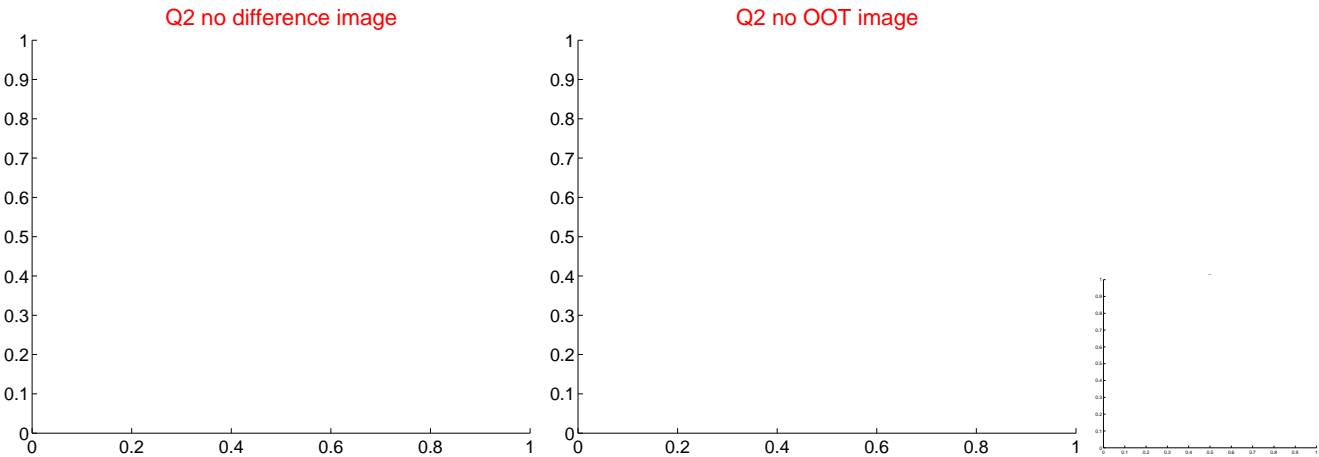
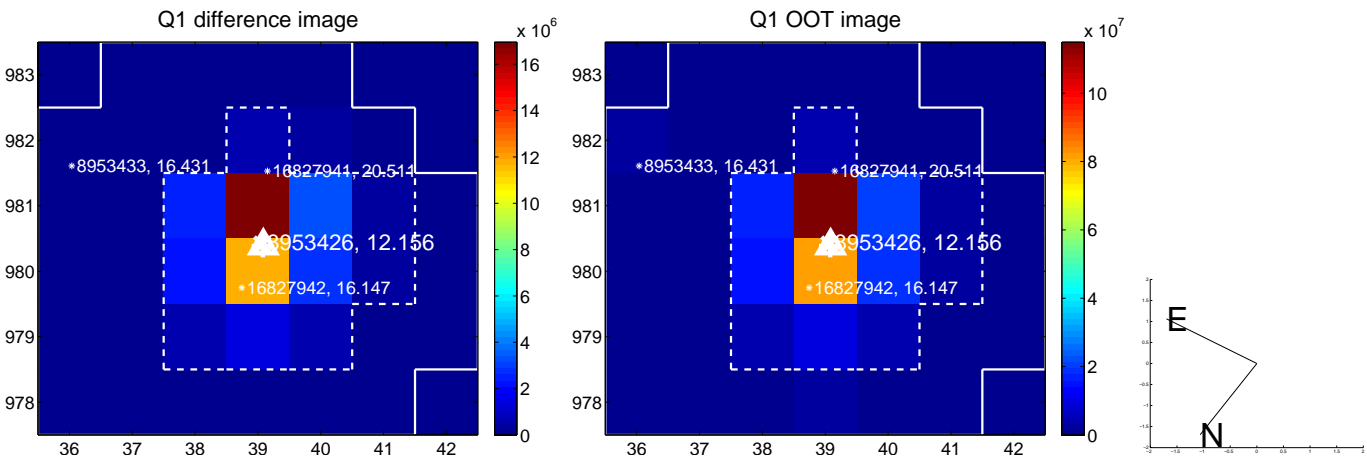
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.051 ± 0.067	0.76	-0.007 ± 0.067	-0.051 ± 0.067
PRF-fit source offset from KIC position	0.124 ± 0.072	1.74	-0.118 ± 0.072	0.040 ± 0.069
photometric centroid source offset	0.04 ± 0.00	120.65	-0.03 ± 0.00	0.03 ± 0.00

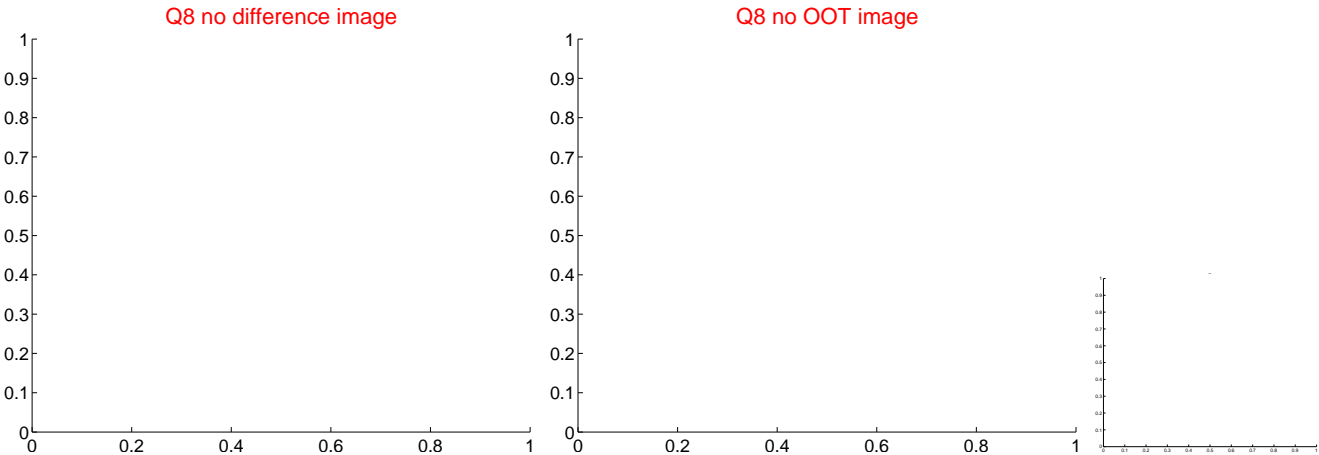
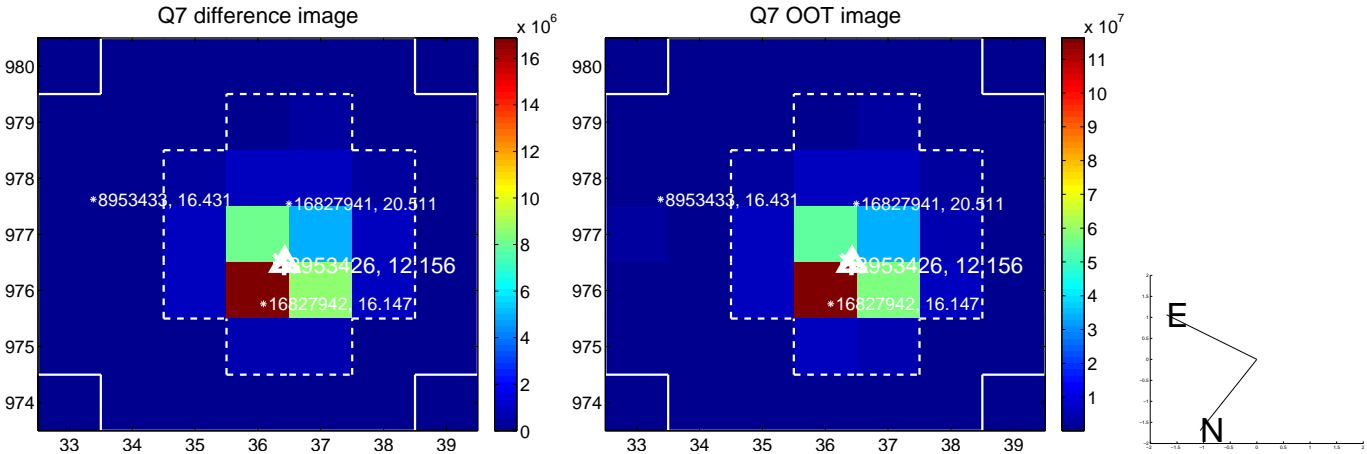
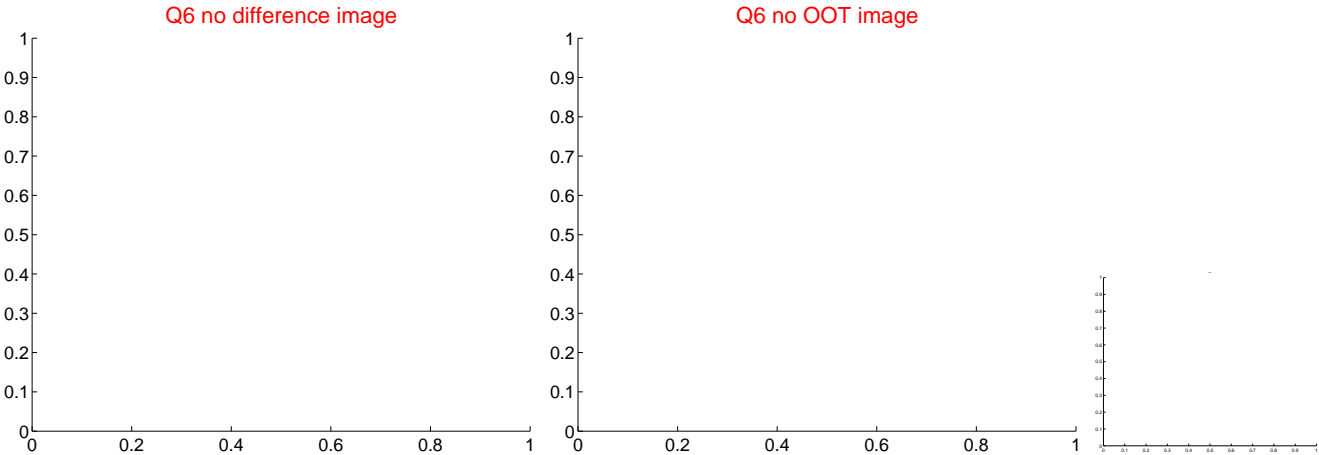
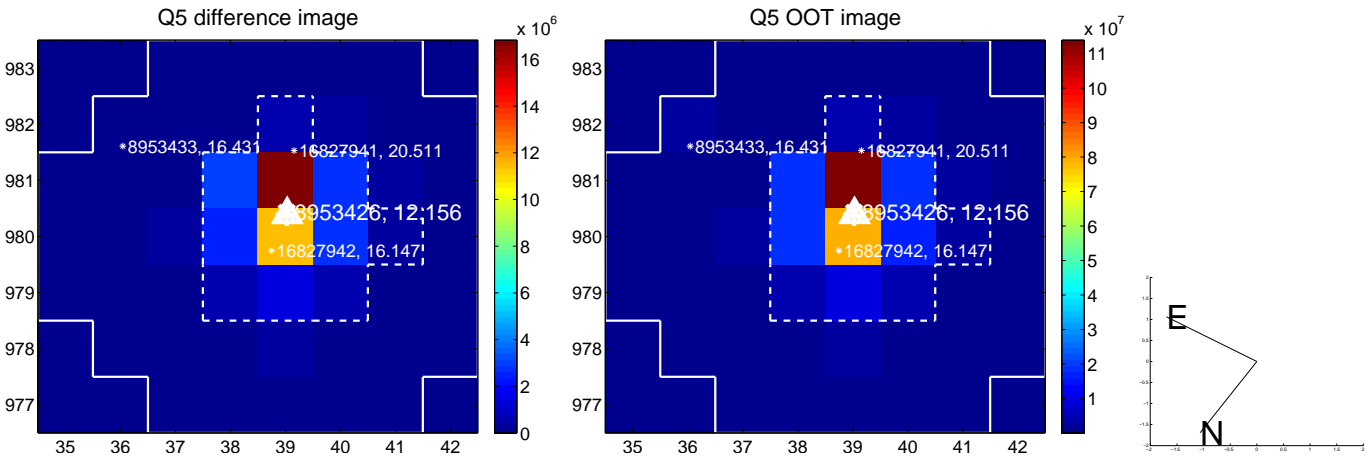


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

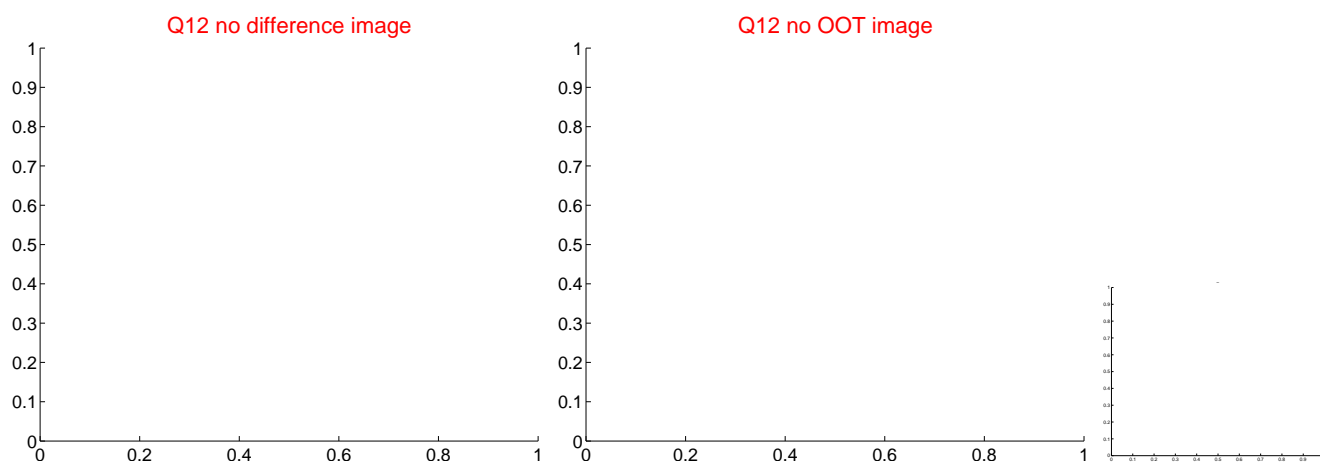
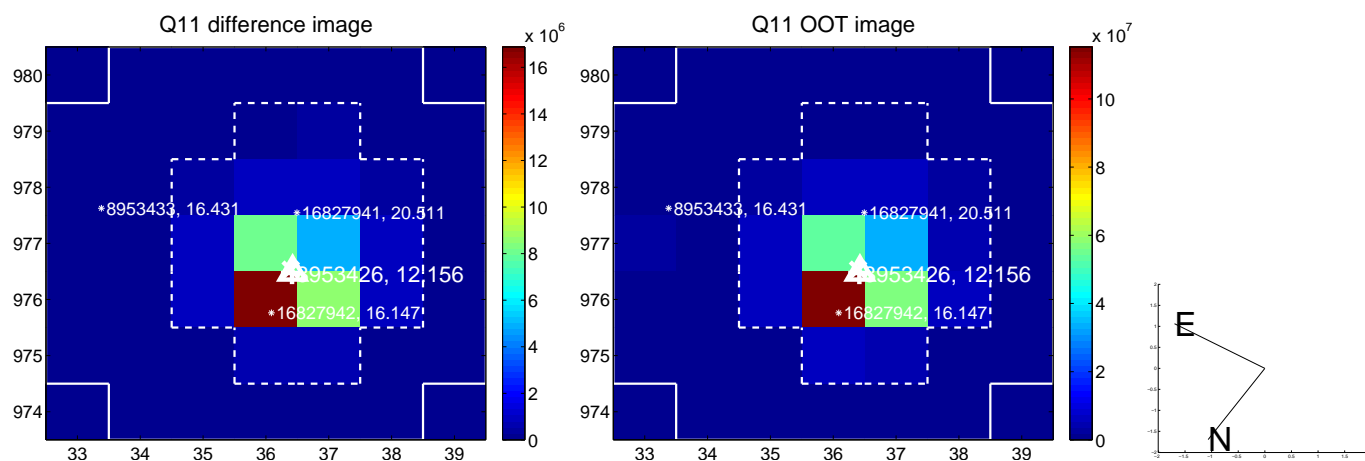
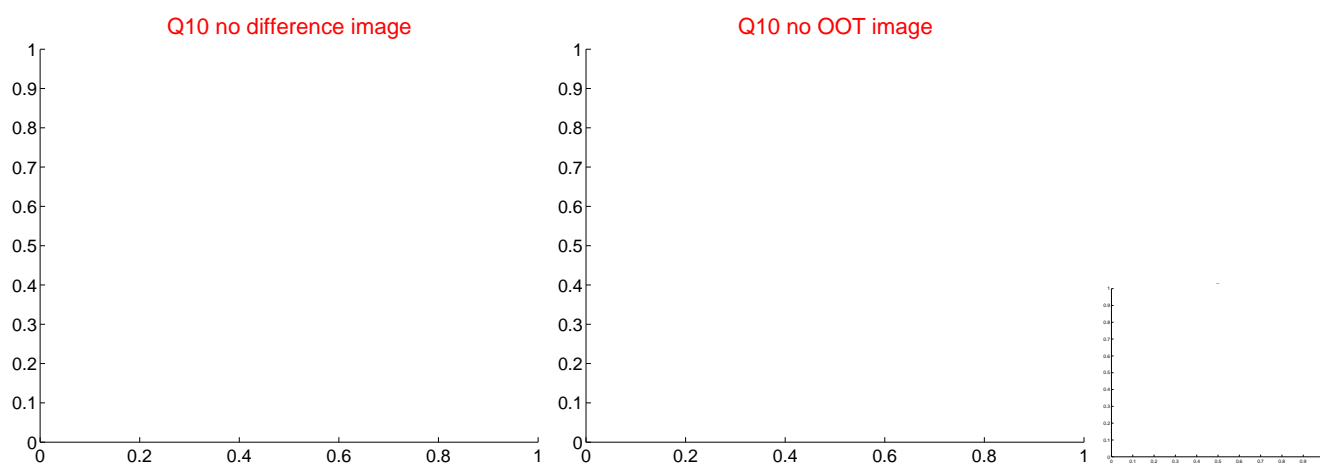
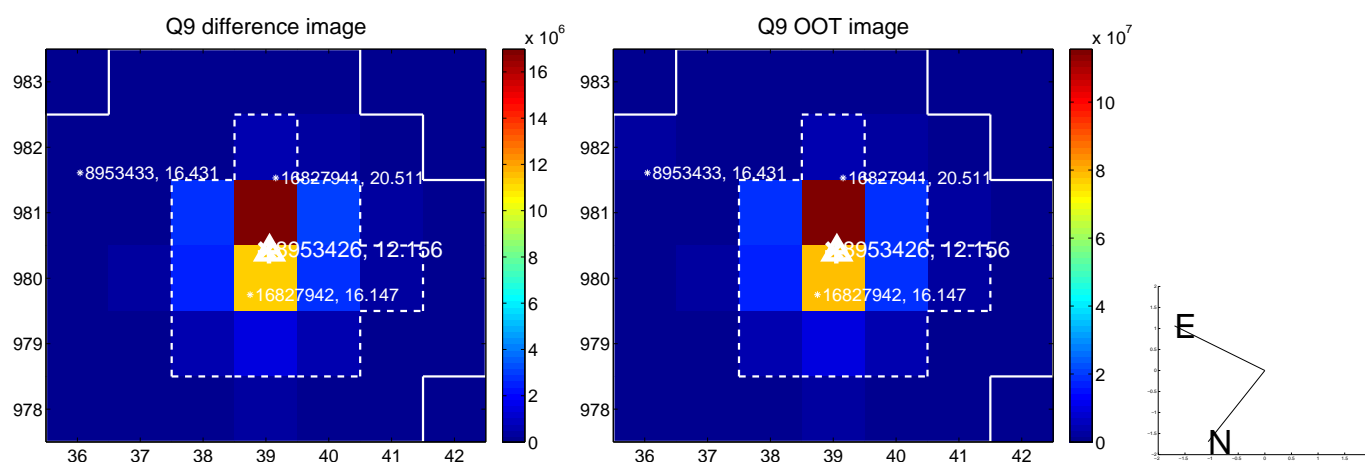
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



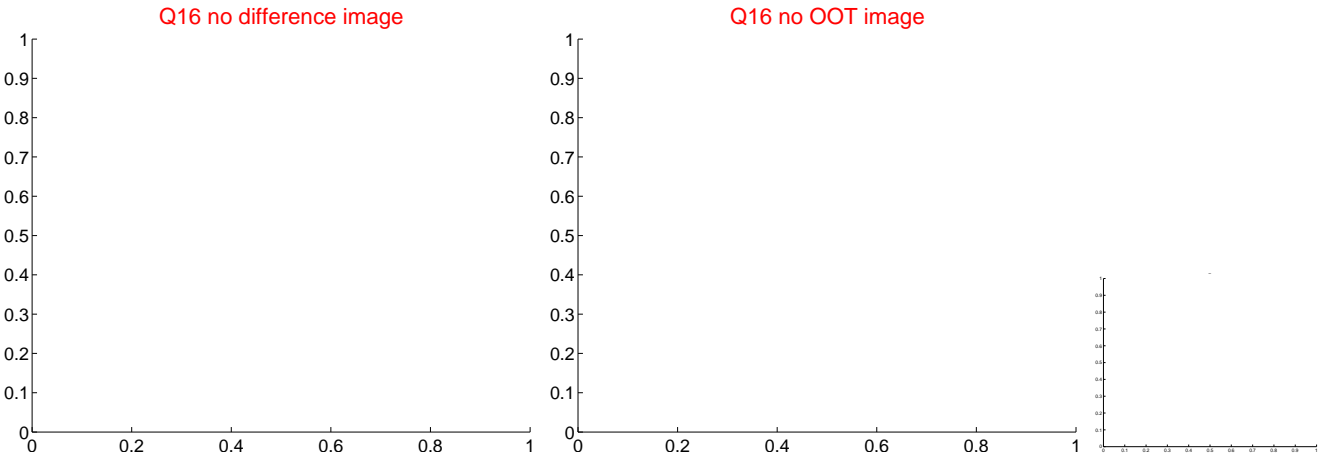
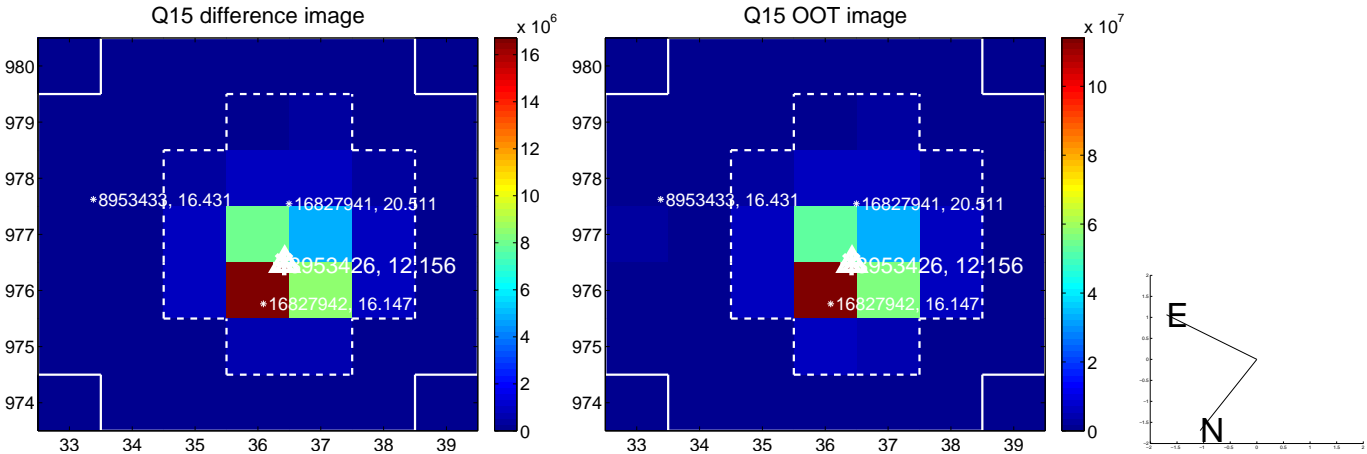
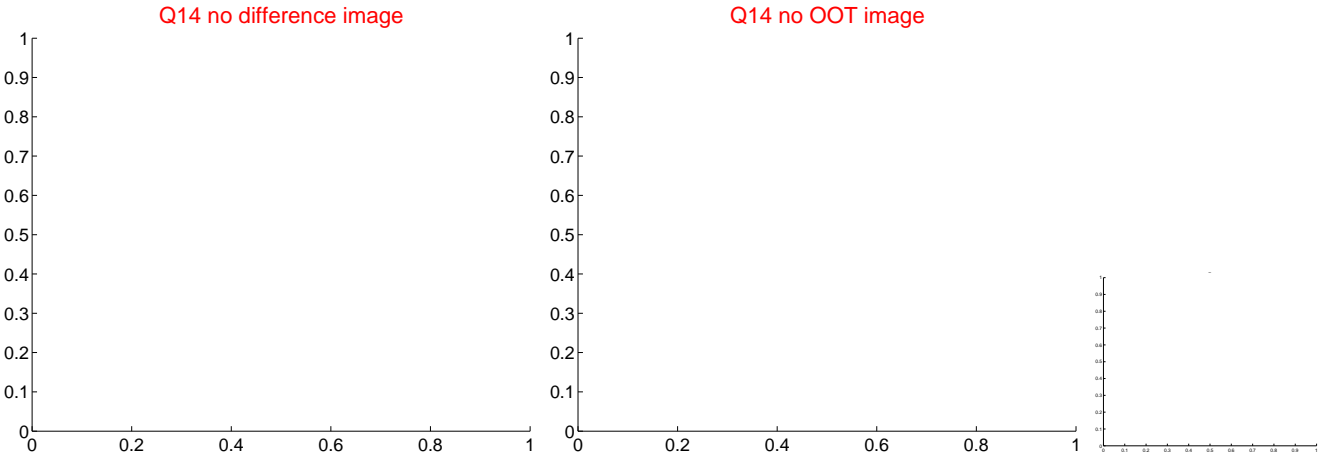
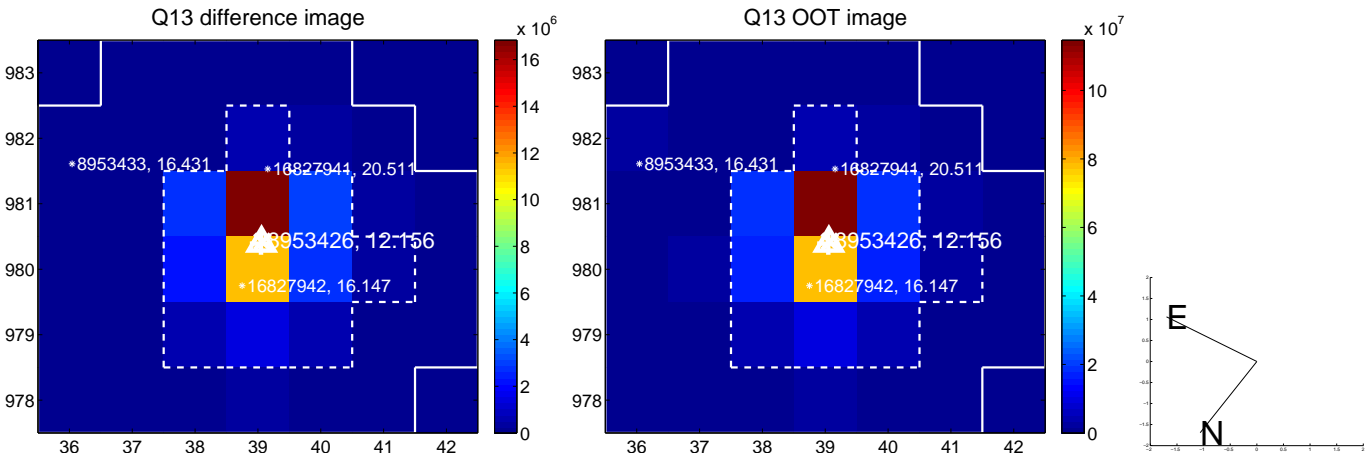
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



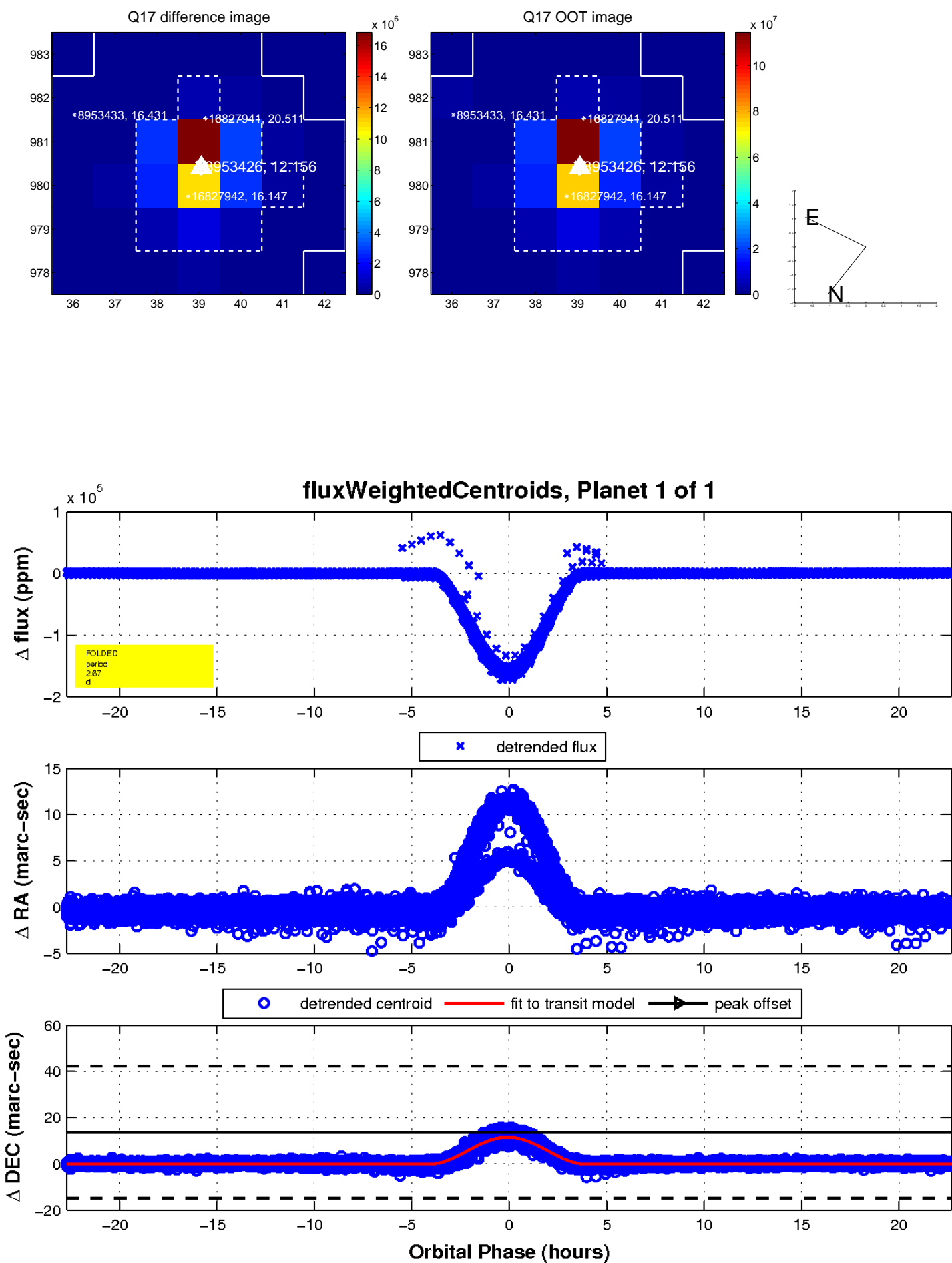
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image

Declination

