

KIC 010979716

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})
010979716-01	OBS	7394.01	10.684076	134.084770	83958.7	3.408	2057.4	1365.2	0.52	3887	22.74	9.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010979716-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_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.

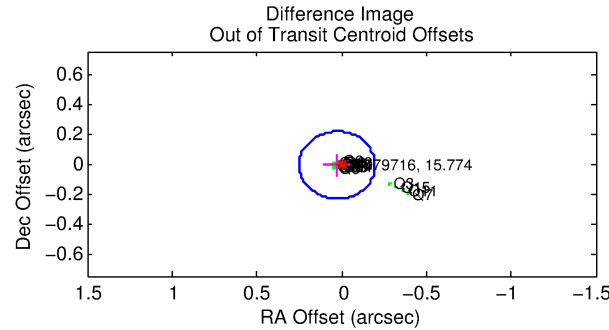
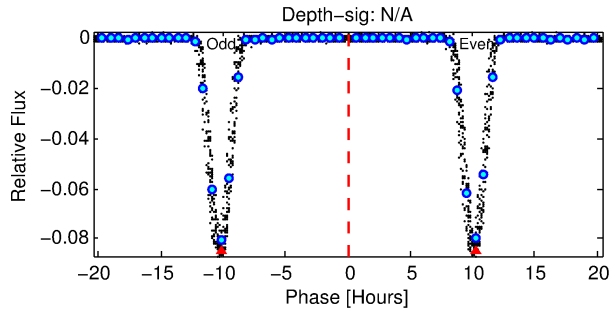
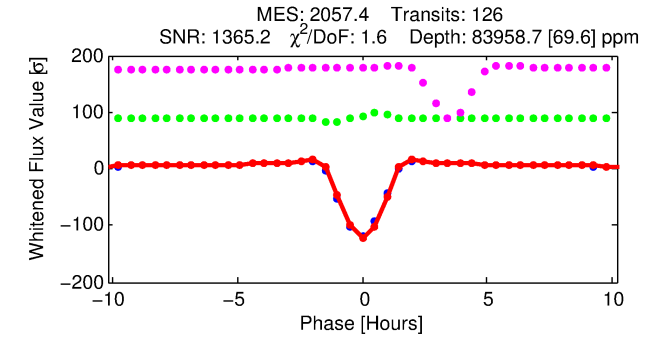
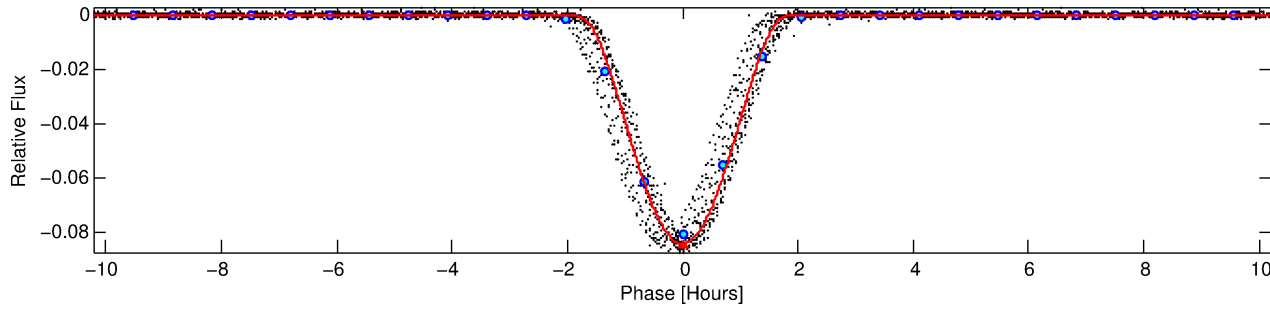
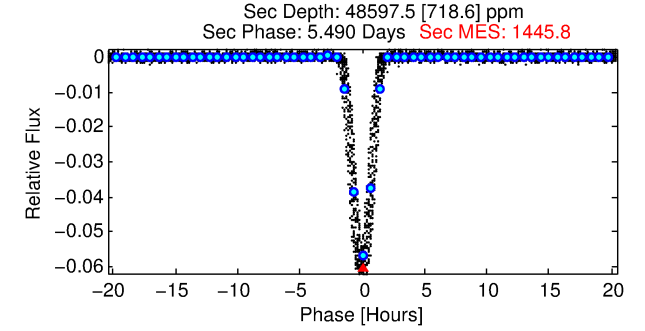
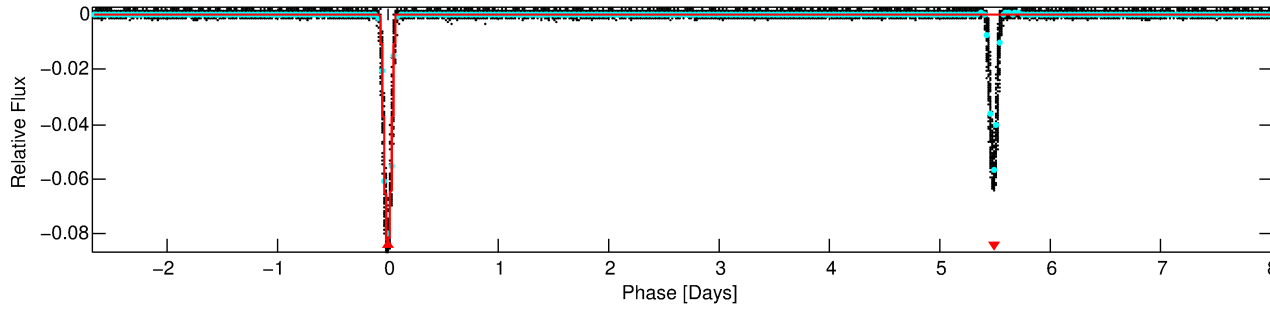
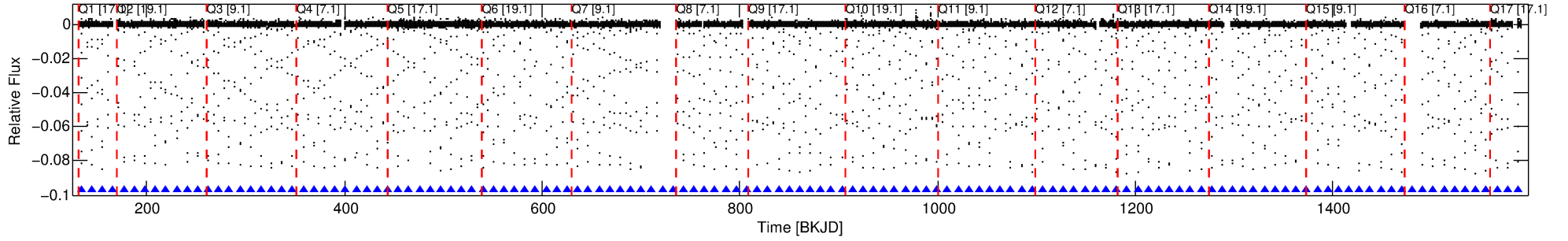
Ephemeris Match Information For 010979716-01

No Significant Match Found

DV One-Page Summary

KIC: 10979716 Candidate: 1 of 1 Period: 10.684 d
KOI: K07394.01 Corr: 0.981

Kp: 15.77 R*: 0.52 Rs Teff: 3887.0 K Logg: 4.74 Fe/H: -0.100



DV Fit Results:

Period = 10.68408 [0.00000] d
Epoch = 134.0848 [0.0000] BKJD
Rp/R* = 0.3984 [0.0246]
a/R* = 25.24 [0.02]
b = 0.92 [0.04]
Seff = 9.22 [1.13]
Teq = 444 [14] K
Rp = 22.74 [2.20] Re
a = 0.0779 [0.0045] AU
Ag = 313.73 [45.87] [6.82σ]
Teffp = 2891 [114] K [21.40σ]

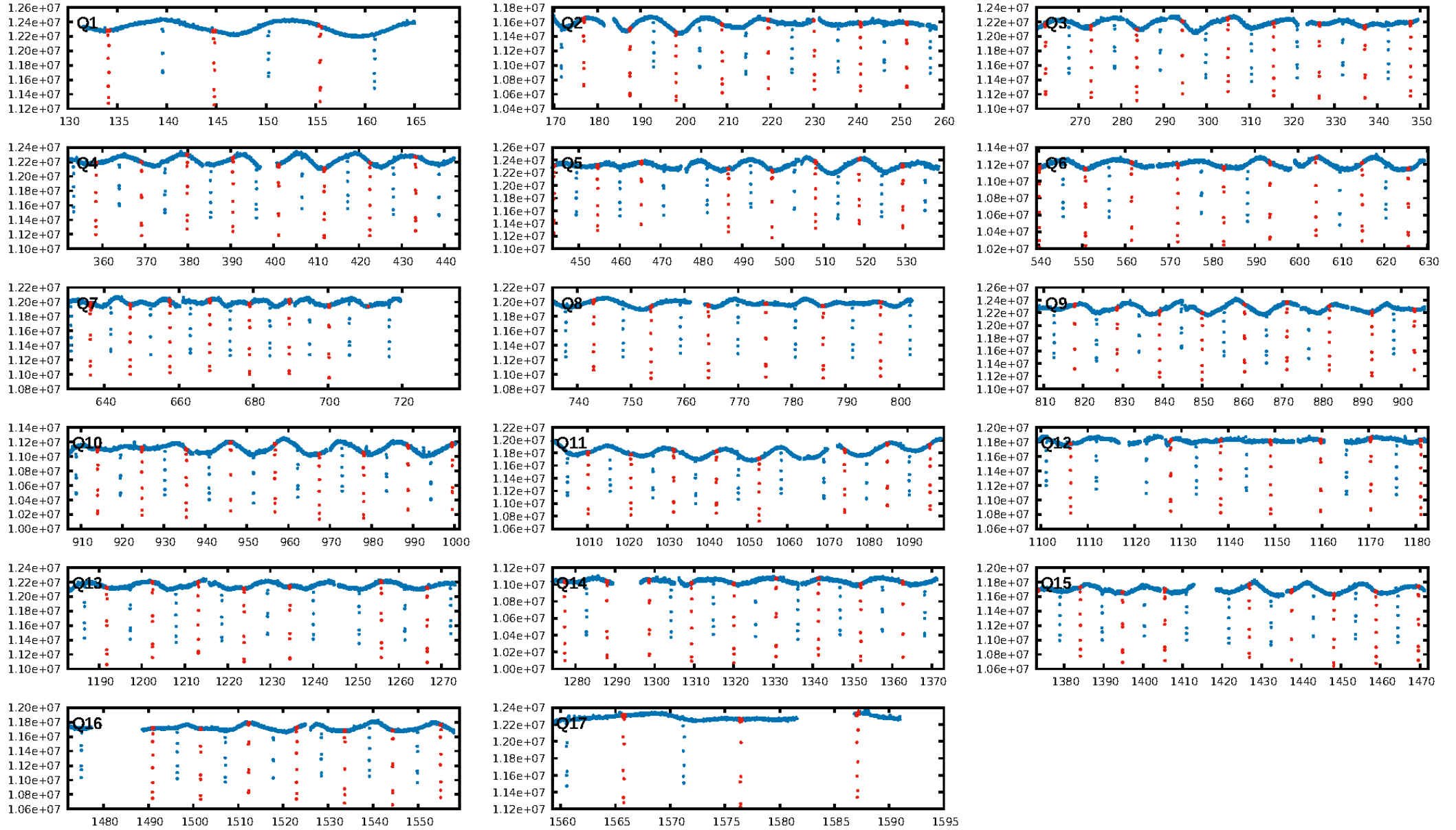
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [120/120]
GhostDiagnostic-chr: 3.227
Centroid-sig: 0.0%
Centroid-so: 0.142 arcsec [25.36σ]
OotOffset-rm: 0.028 arcsec [0.37σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.179 arcsec [1.68σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

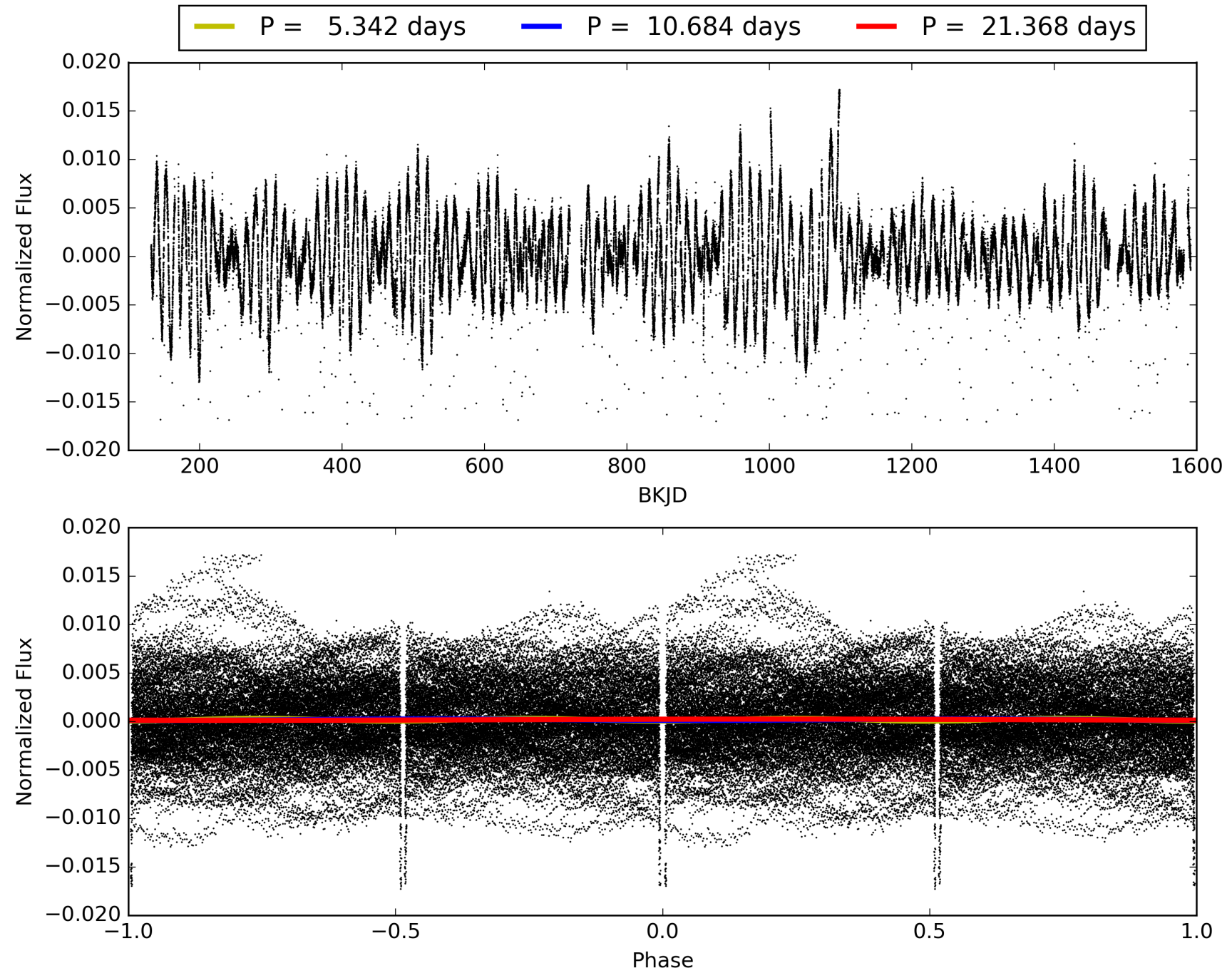
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:06:05 Z

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

TCE 010979716-01, PDC Light Curves

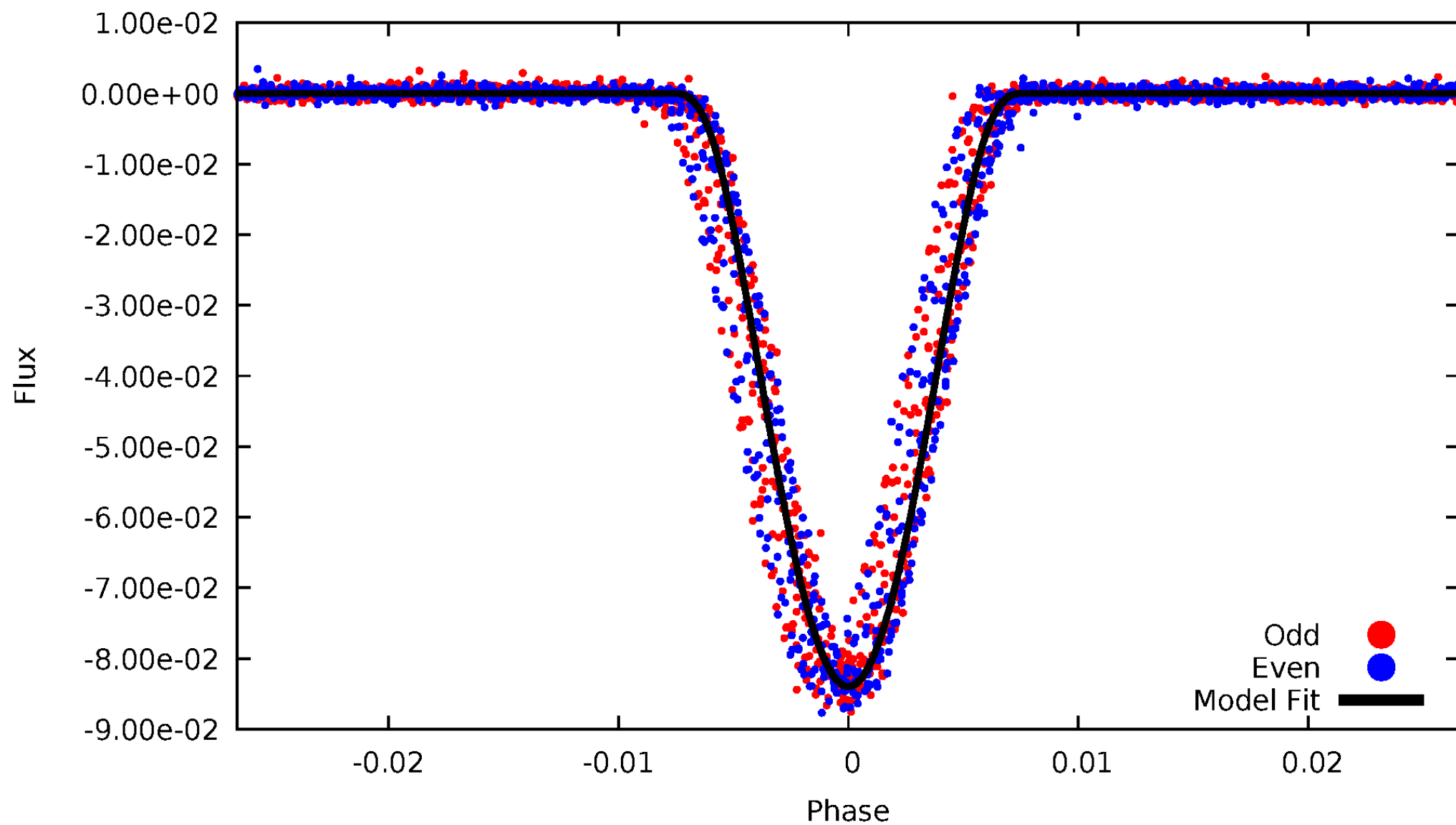


TCE 010979716-01



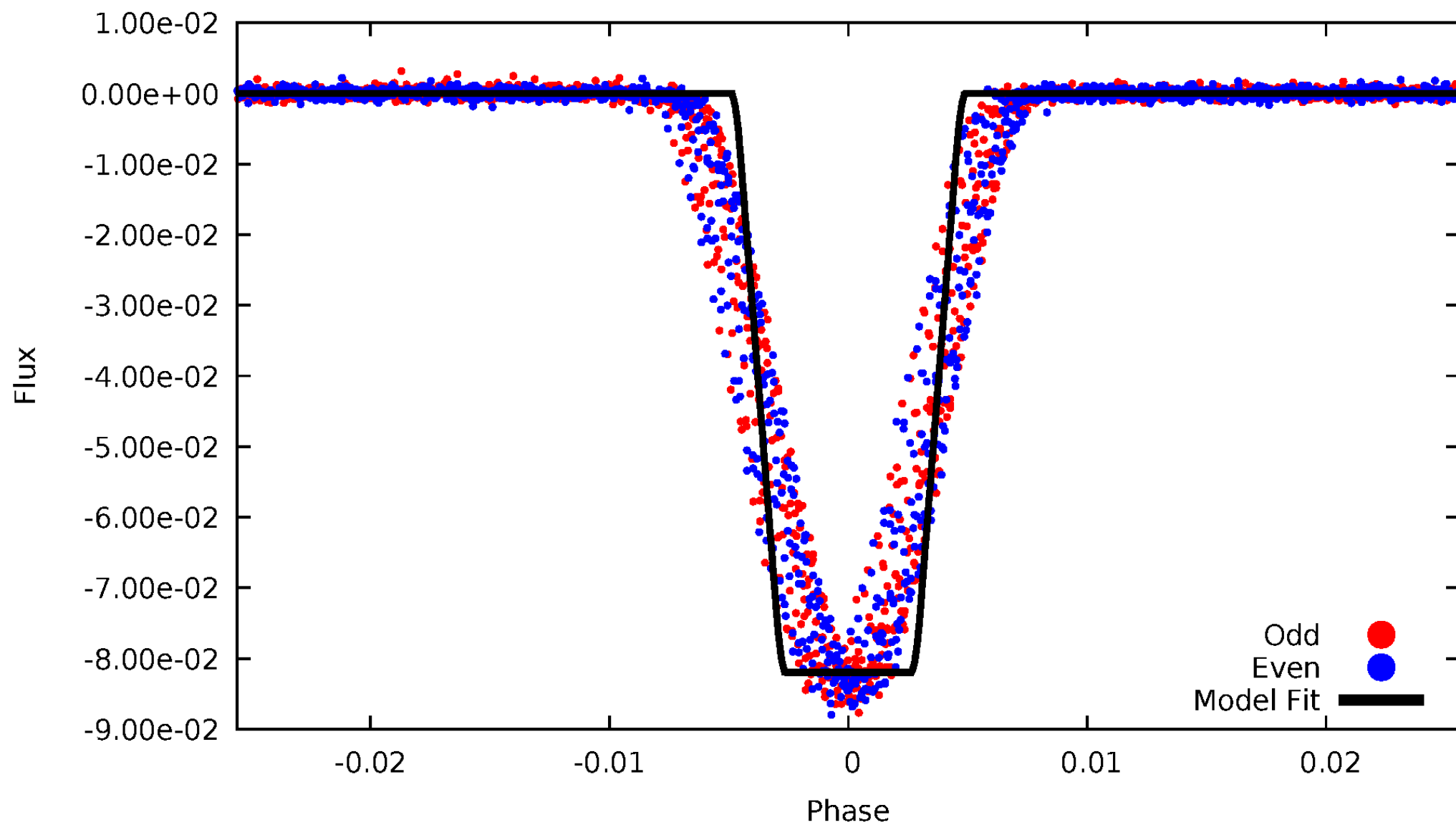
DV Odd/Even

TCE 010979716-01



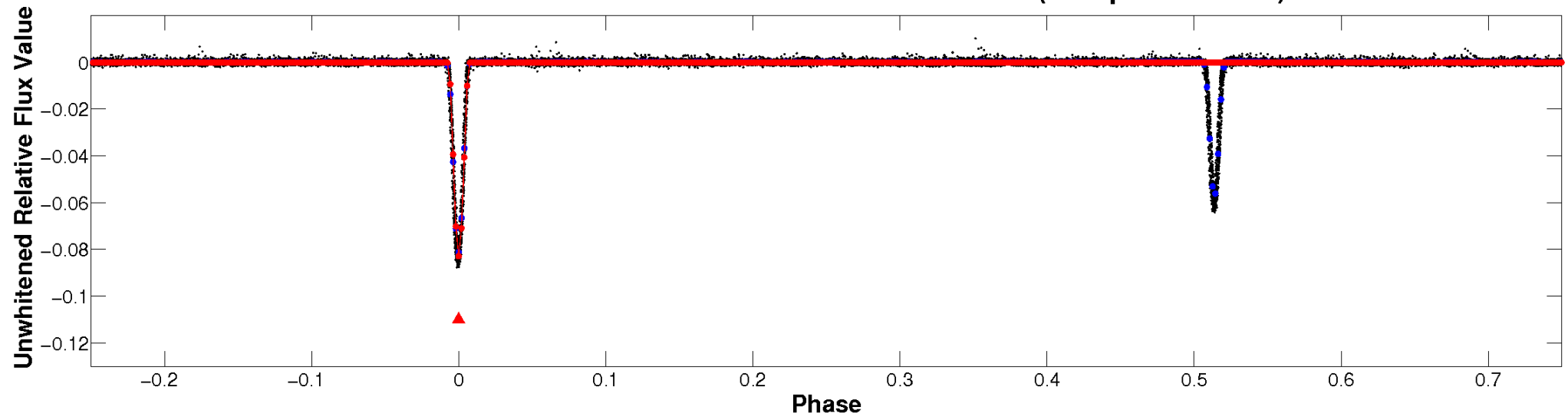
ALT Odd/Even

TCE 010979716-01

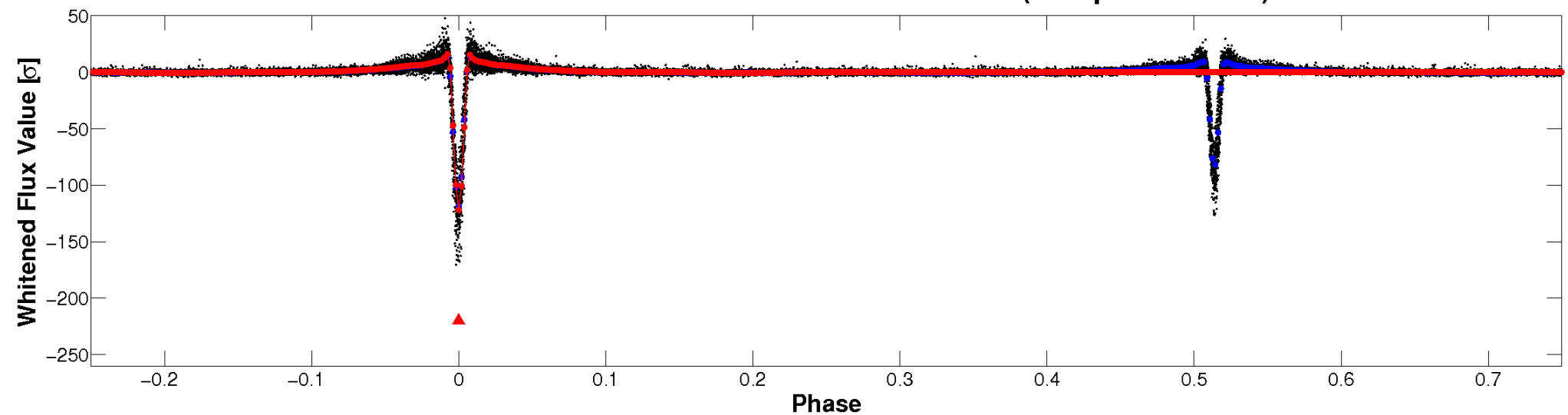


Non-Whitened Vs. Whitened Light Curve

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

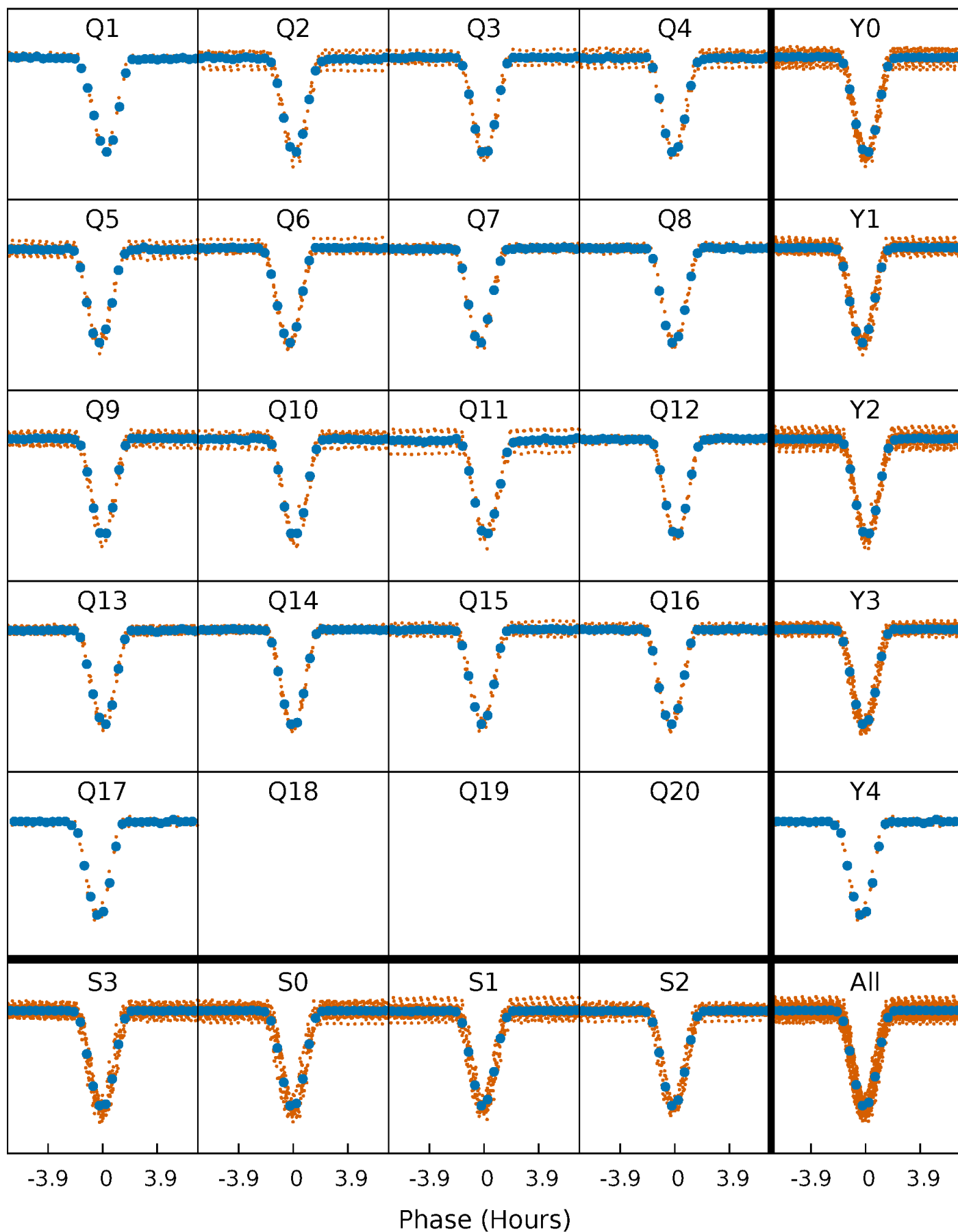


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



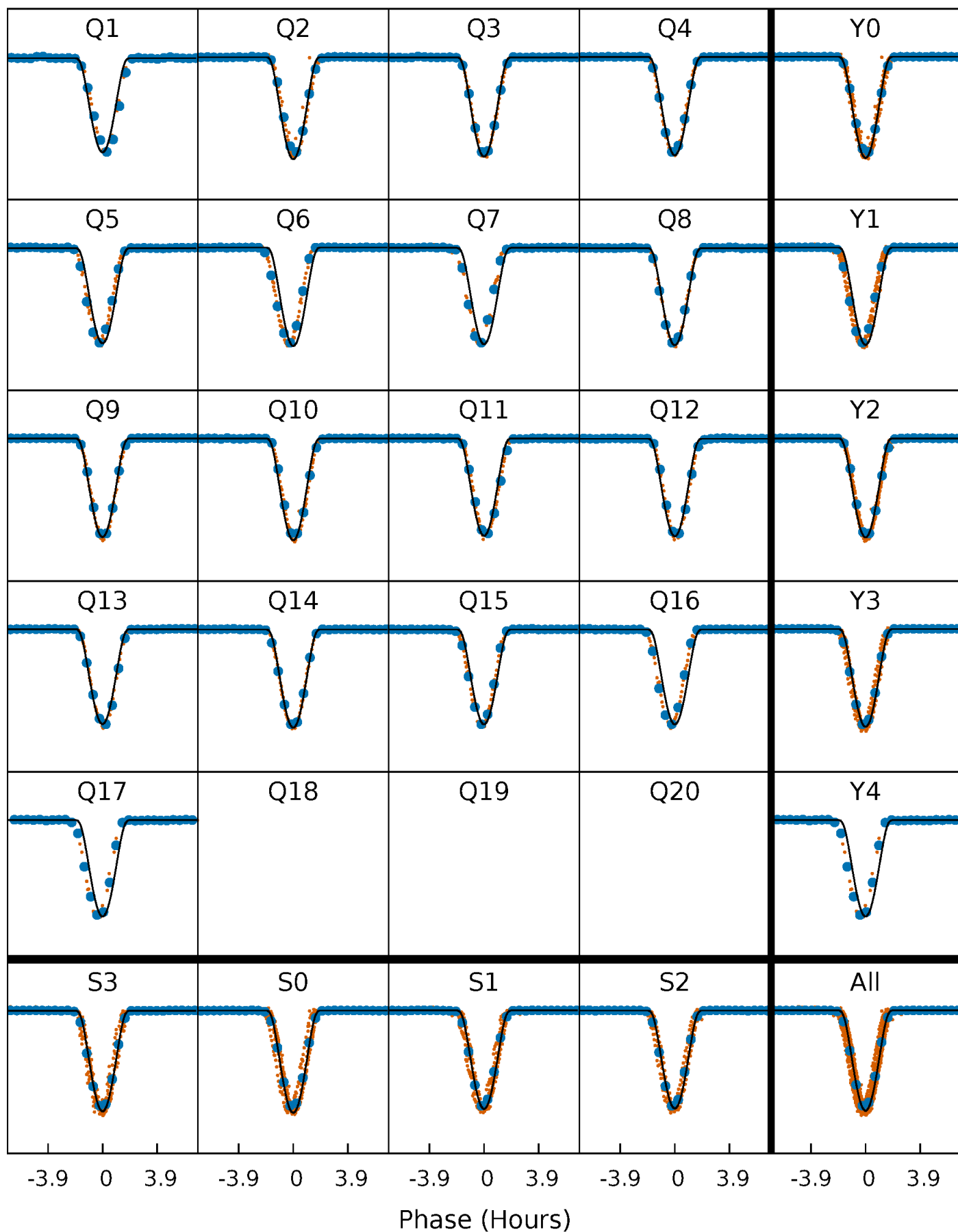
PDC Quarter-Phased Transit Curves

TCE 010979716-01 P= 10.684076 Days $T_0=134.084770$ (BKJD)



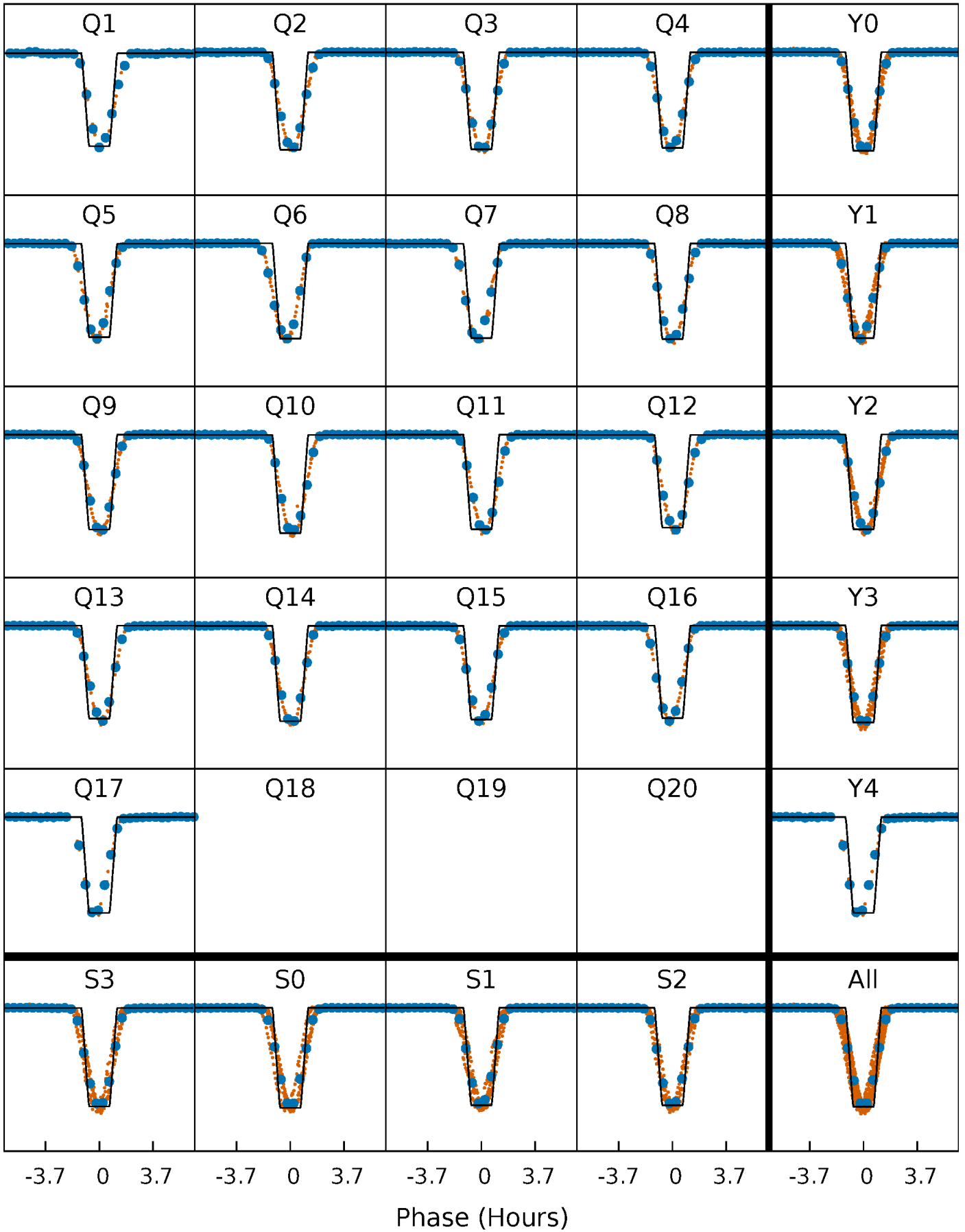
DV Quarter-Phased Transit Curves

TCE 010979716-01 P= 10.684076 Days $T_0=134.084770$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

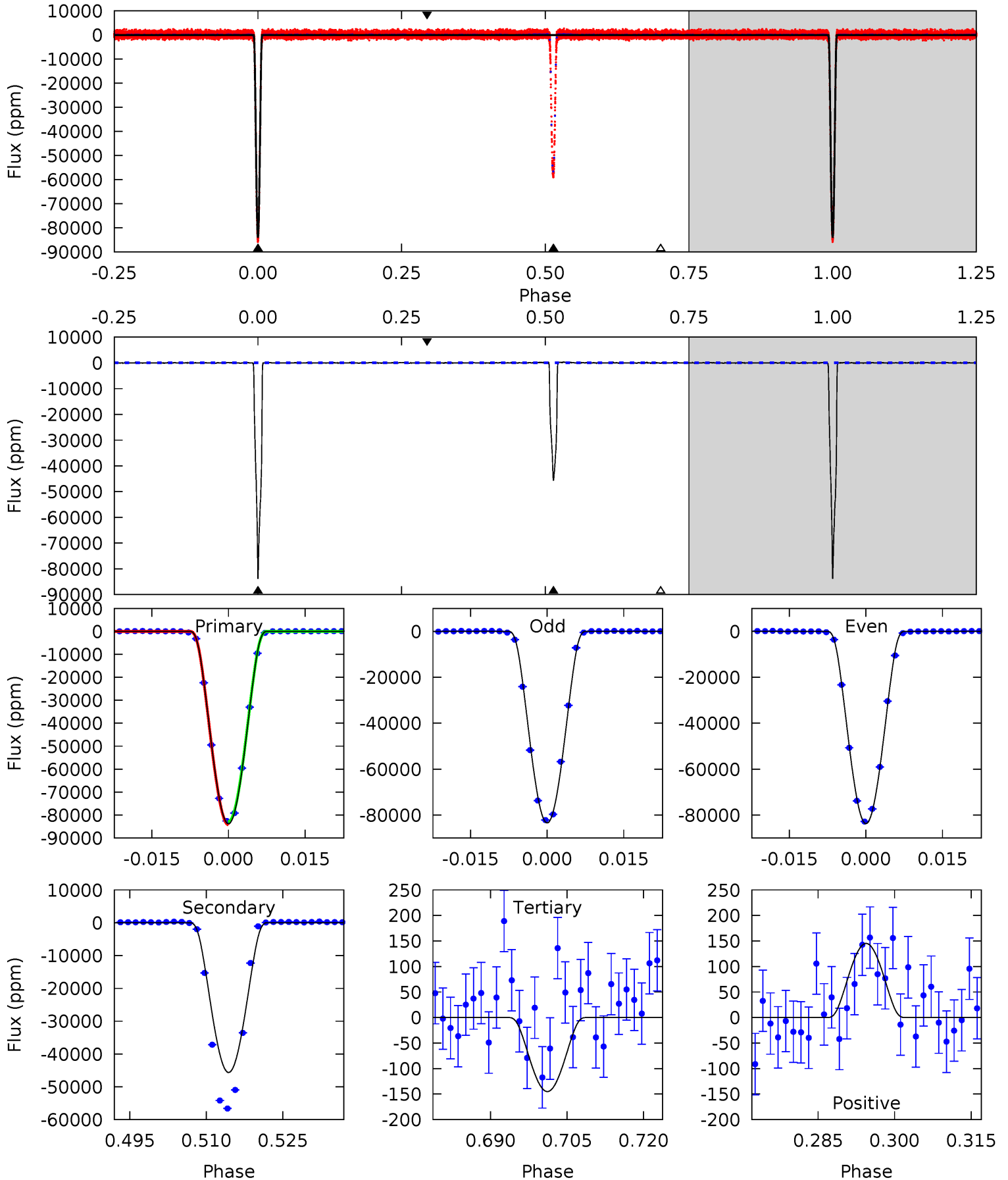
TCE 010979716-01 P= 10.684037 Days $T_0=134.085259$ (BKJD)



DV Model-Shift Uniqueness Test

010979716-01, P = 10.684076 Days, E = 123.400694 Days

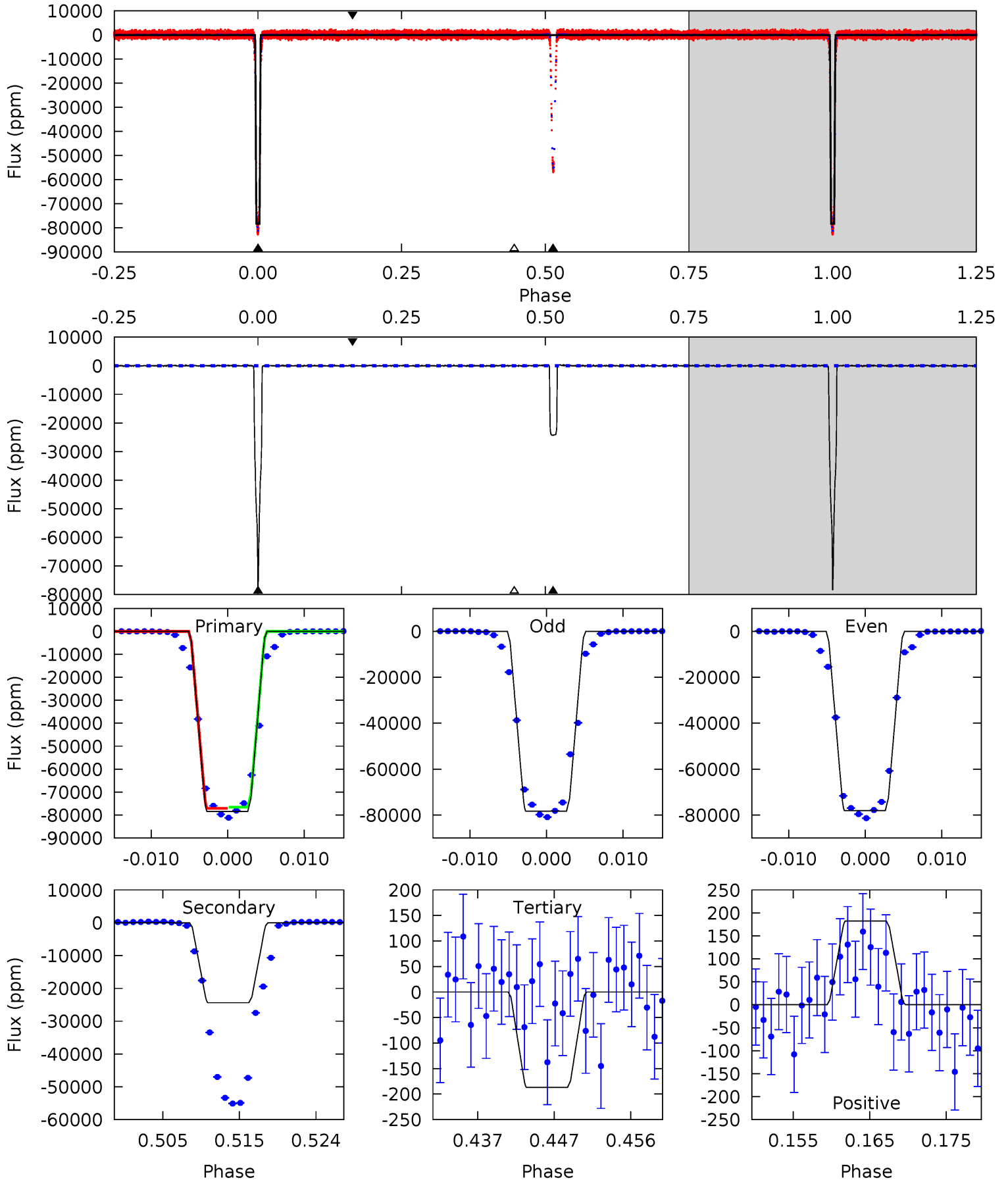
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2660	1448	4.60	4.61	4.95	2.43	1.98	2655	2655	1444	1444	4.55	1.00	0.00	0



Alt Model-Shift Uniqueness Test

010979716-01, P = 10.684037 Days, E = 123.401222 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1575	489.7	3.76	3.66	5.03	2.59	1.25	1572	1572	485.9	486.0	2.01	1.00	0.00	0



Stellar Parameters For KIC 010979716

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3887^{+77}_{-93}	$4.743^{+0.031}_{-0.038}$	$-0.100^{+0.200}_{-0.200}$	$0.523^{+0.039}_{-0.039}$	$0.553^{+0.035}_{-0.047}$	$5.434^{+0.872}_{-0.751}$
	+2%/-2%	+1%/-1%	+200%/-200%	+7%/-7%	+6%/-8%	+16%/-14%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 010979716-01 / KOI 7394.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-45631 ± 32	$22.84^{+1.73}_{-1.63}$	621^{+17}_{-17}	3203^{+87}_{-86}	306^{+47}_{-39}
Alt.	-24369 ± 50	$16.53^{+1.54}_{-1.67}$	622^{+15}_{-17}	3207^{+111}_{-100}	306^{+68}_{-49}

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 $A_{obs} \gg 1.0$

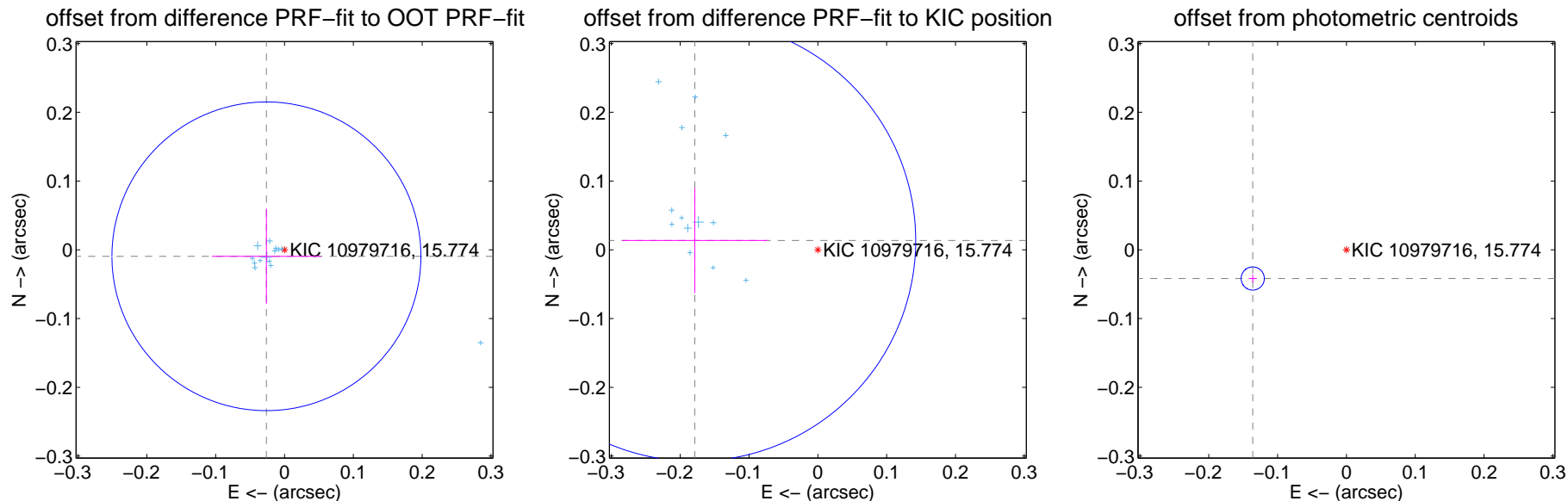
DV Centroid Data

Supplemental centroid analysis for 010979716-01. Kepler magnitude: 15.77. Transit SNR 1365.22

There are 17 quarters with good PRF difference image offsets

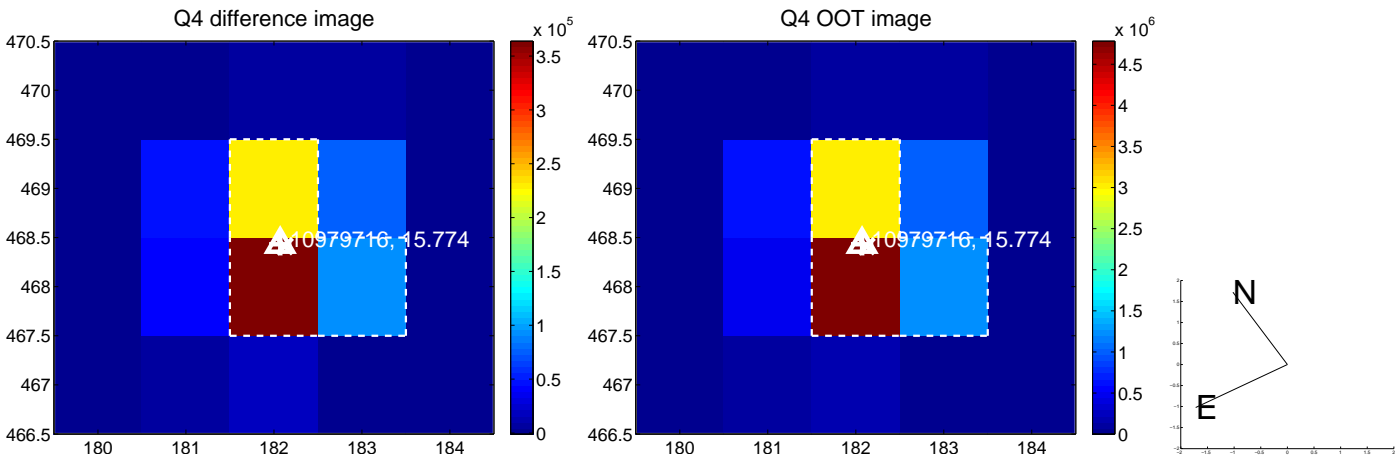
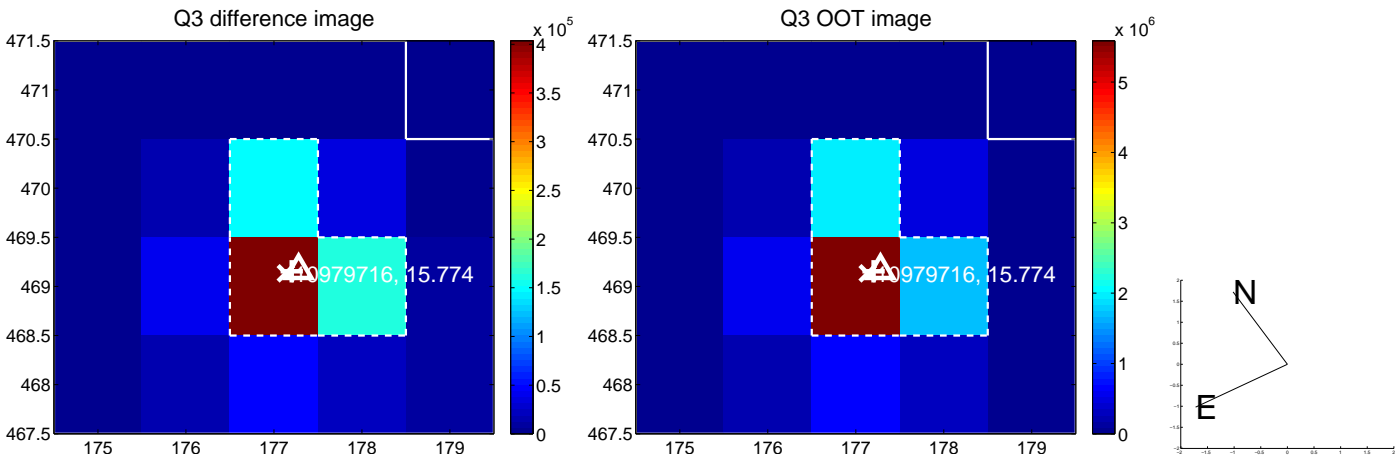
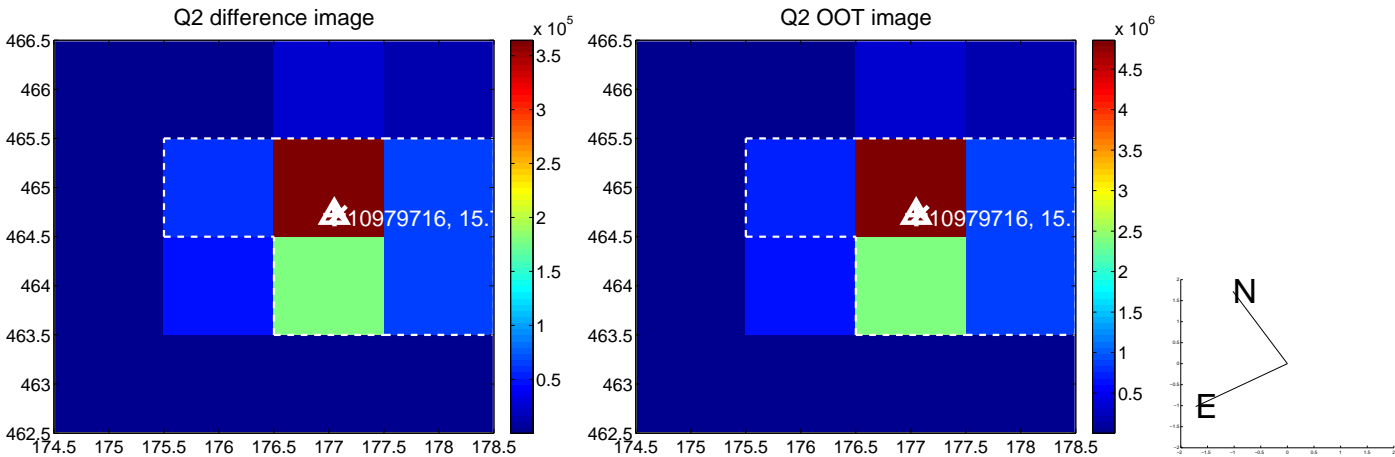
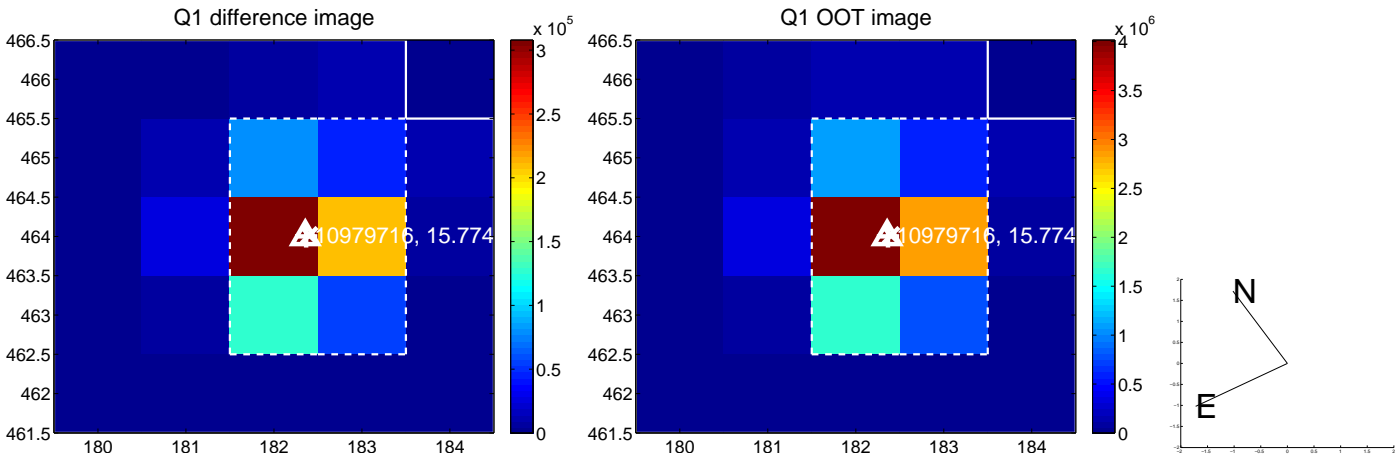
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.028 ± 0.075	0.37	0.026 ± 0.079	-0.009 ± 0.069
PRF-fit source offset from KIC position	0.179 ± 0.107	1.68	0.179 ± 0.105	0.014 ± 0.077
photometric centroid source offset	0.14 ± 0.01	25.36	0.14 ± 0.01	-0.04 ± 0.01

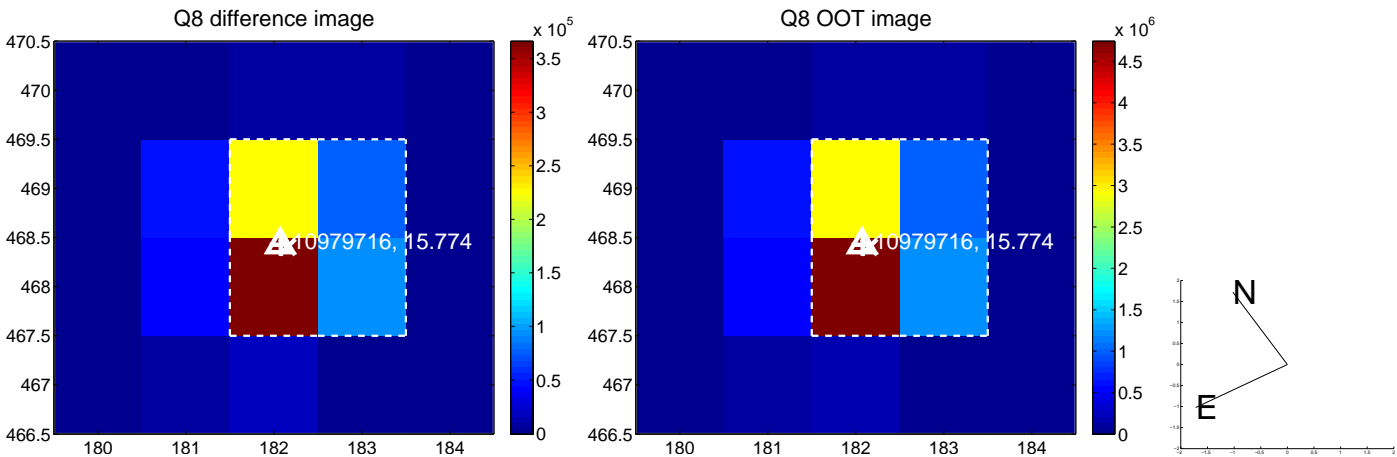
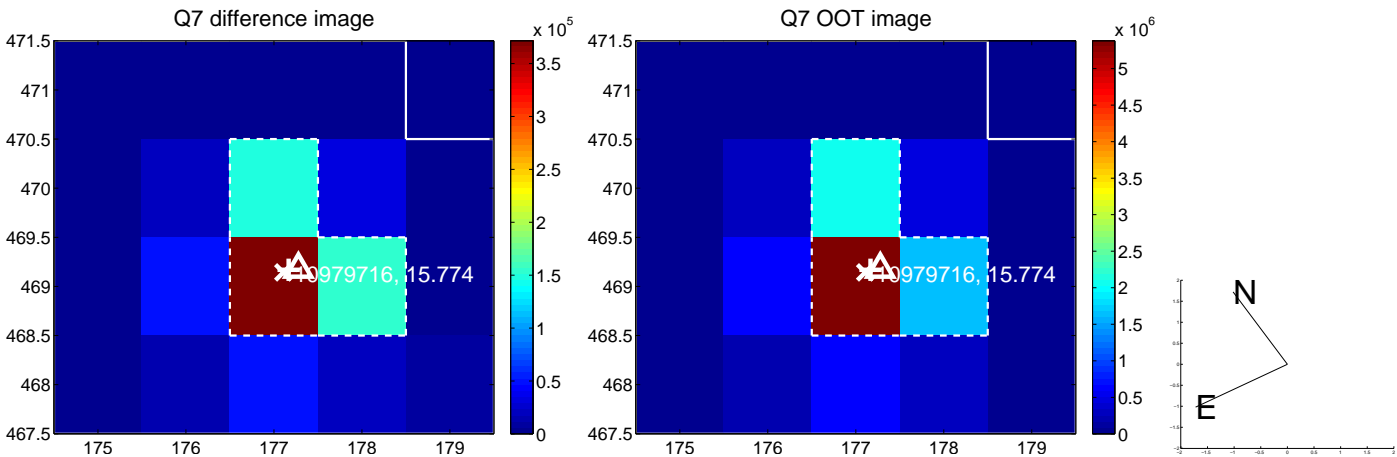
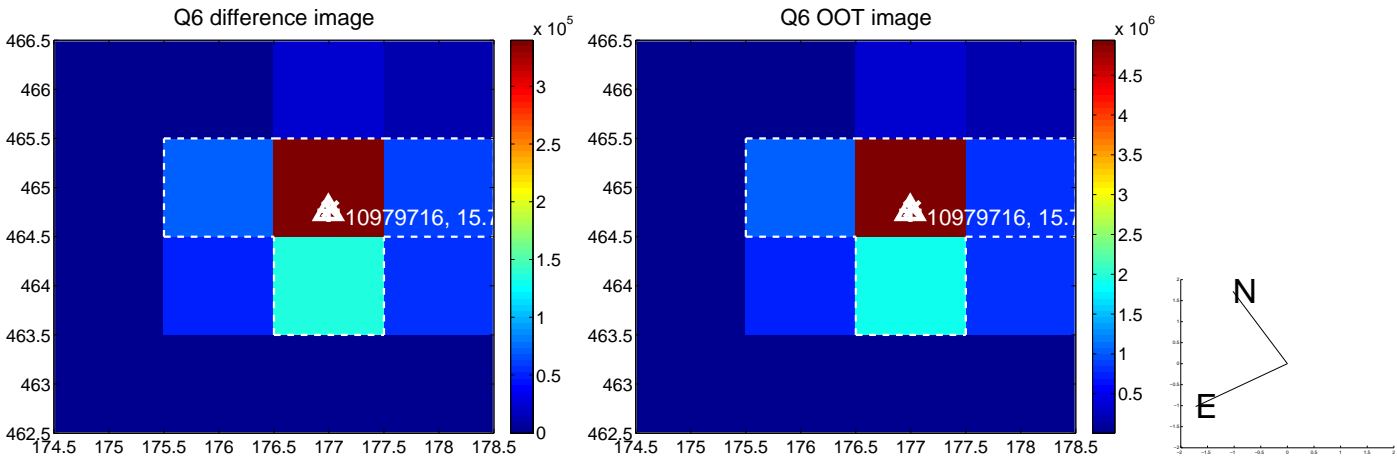
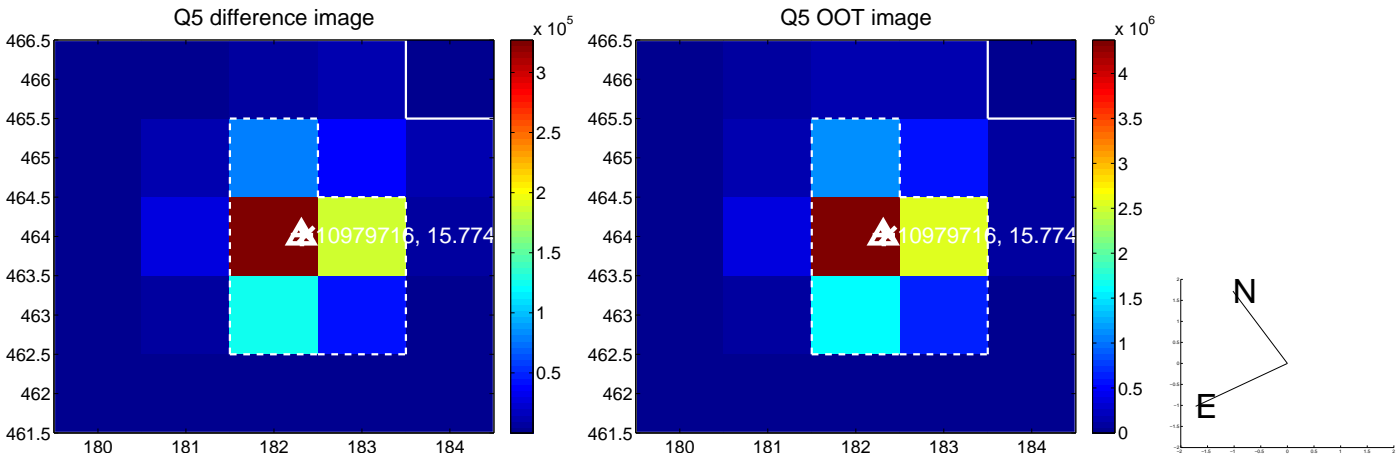


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

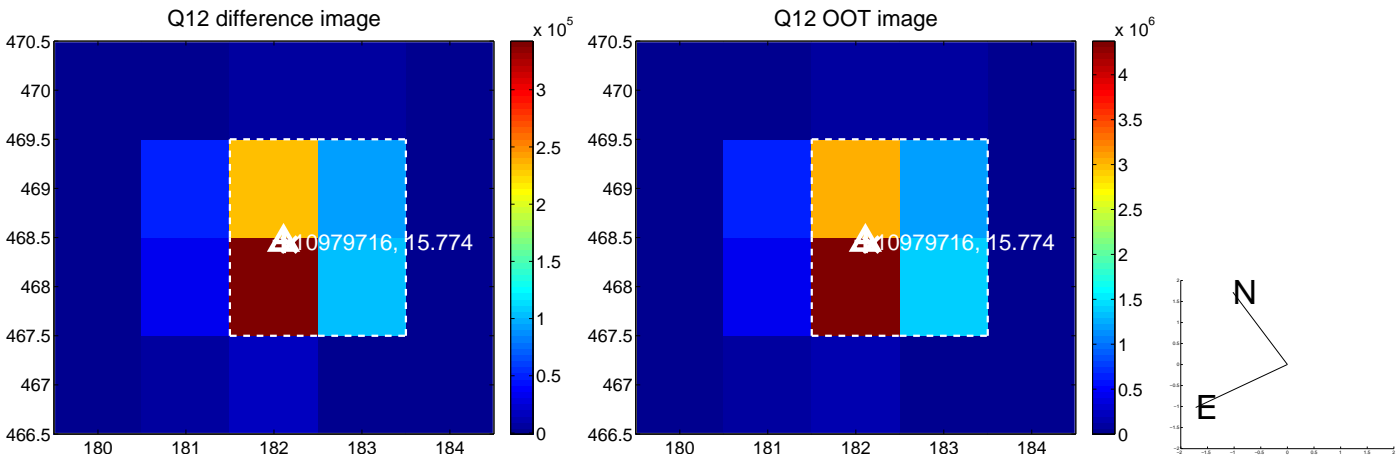
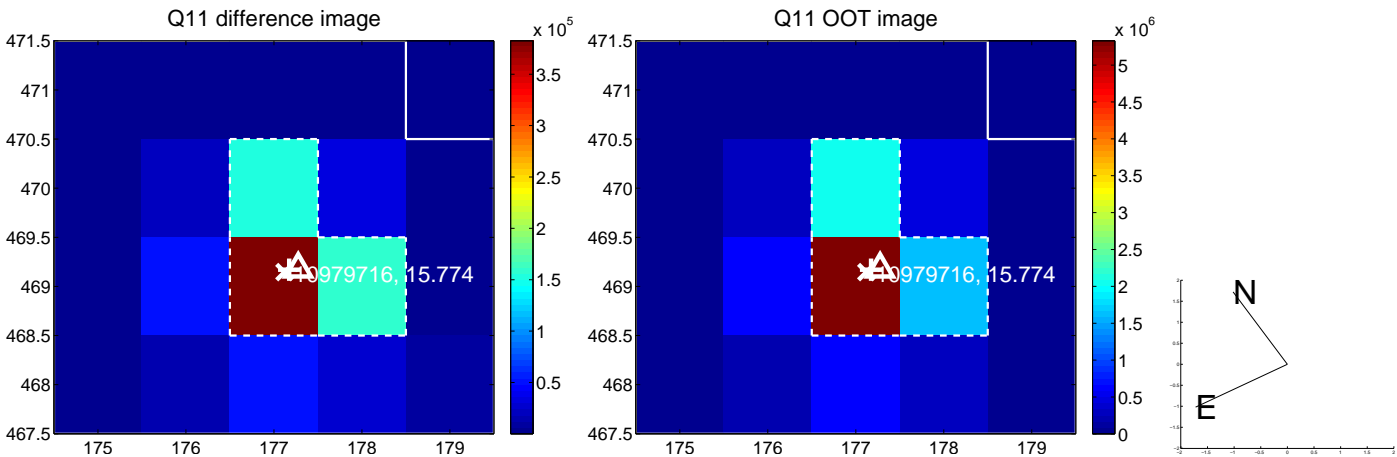
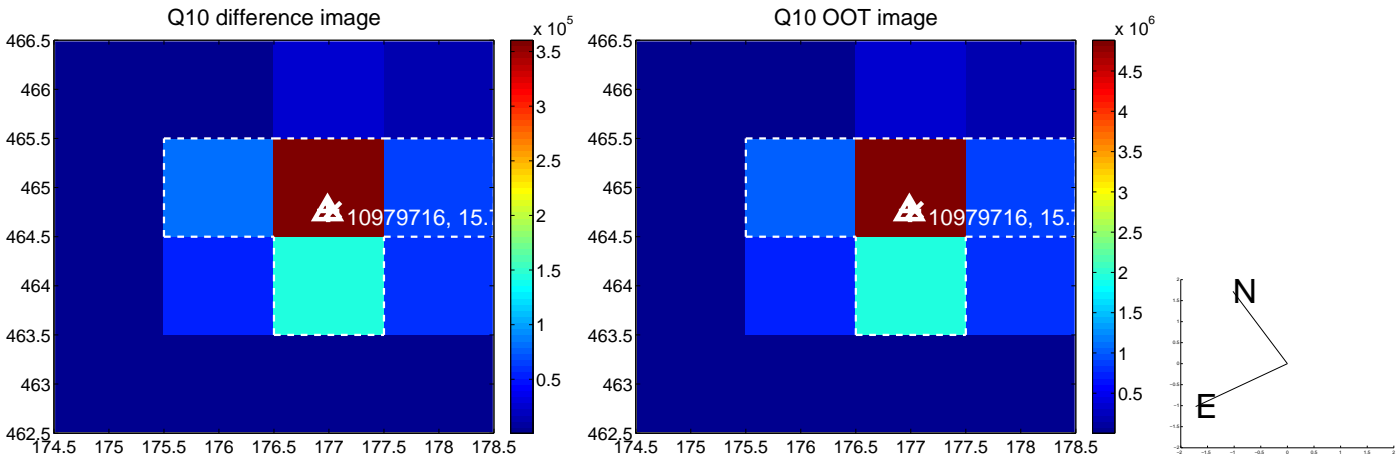
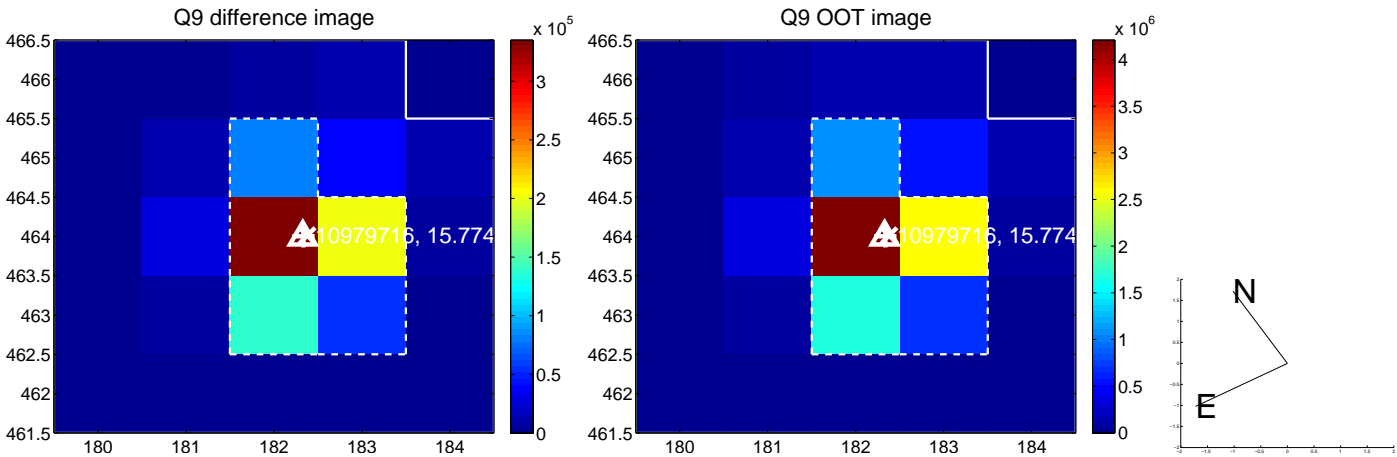
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



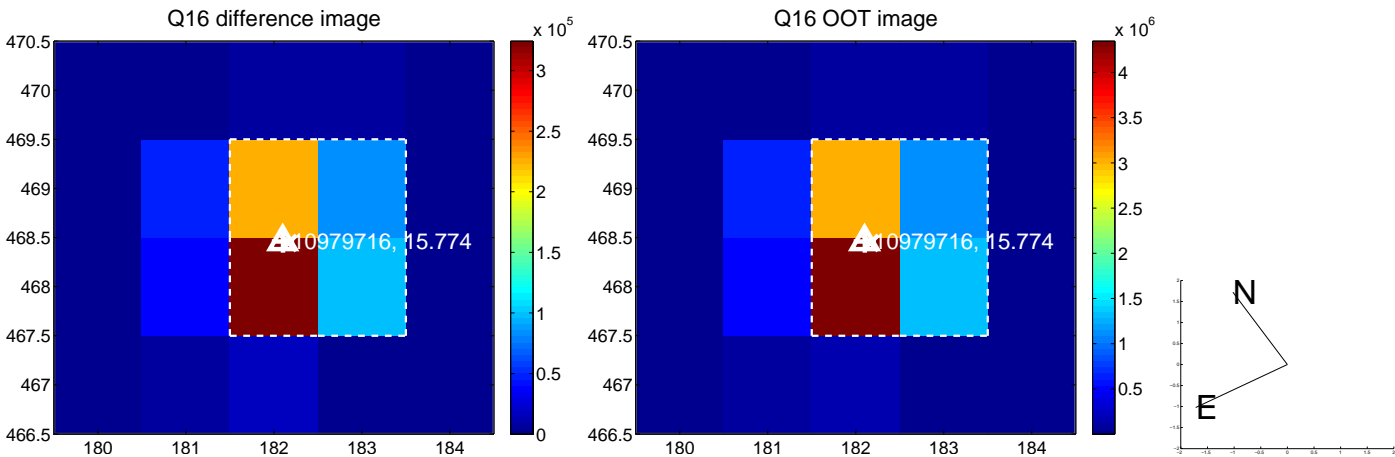
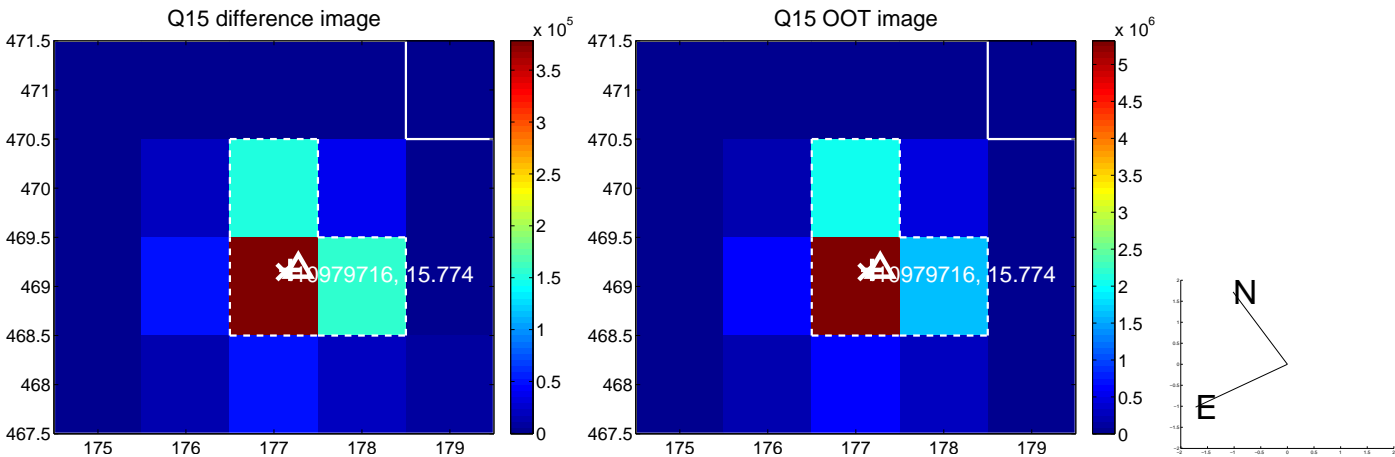
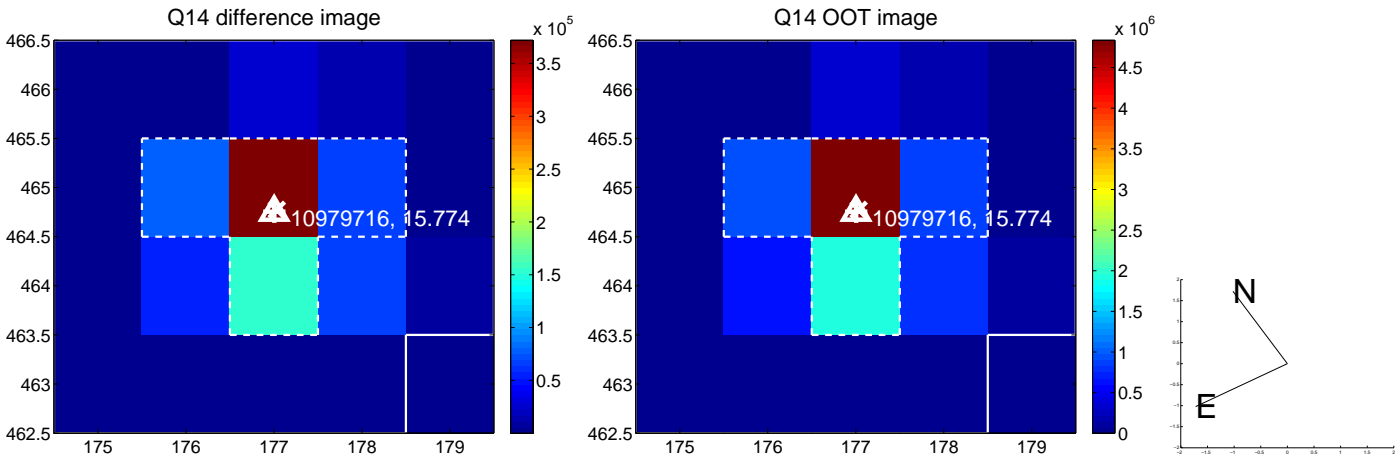
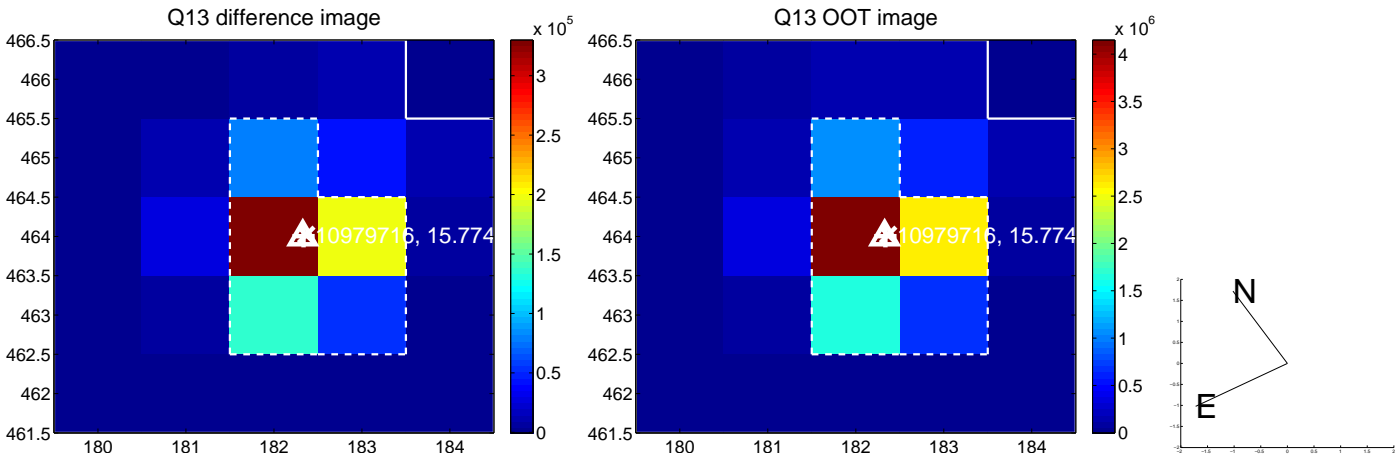
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



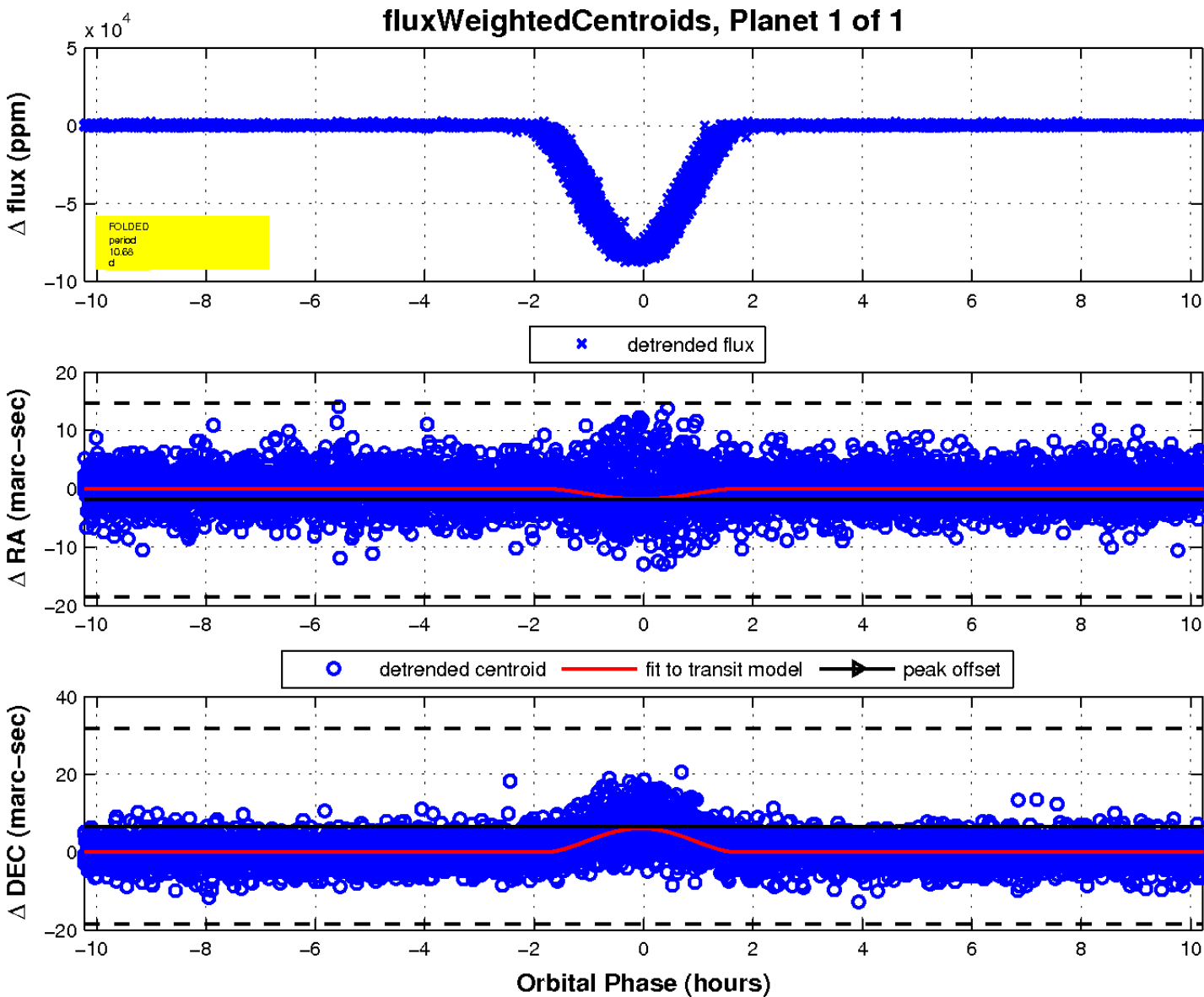
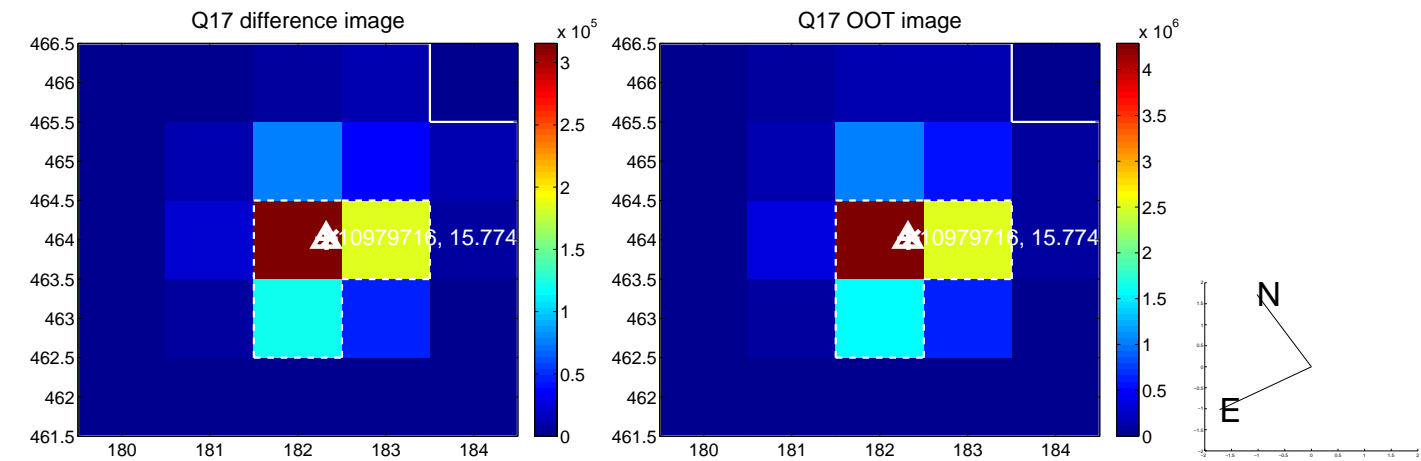
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UKIRT Image

Declination

