

KIC 005649836

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})
005649836-01	OBS	3831.01	0.597934	131.957216	269520.5	3.046	1226.3	581.6	1.00	5780	65.55	5180.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005649836-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—CENT_KIC_POS

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 005649836-01

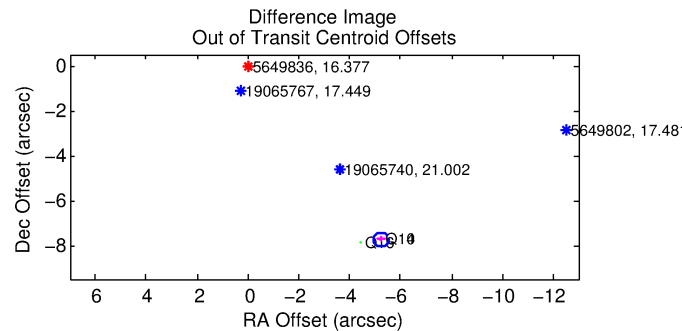
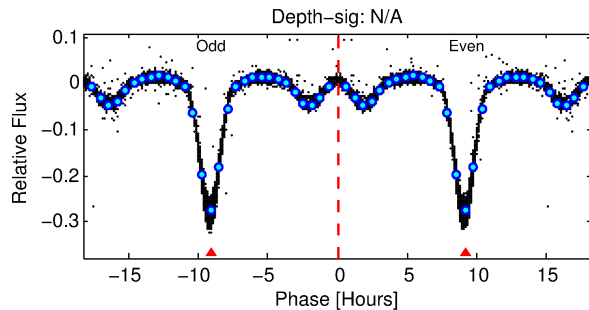
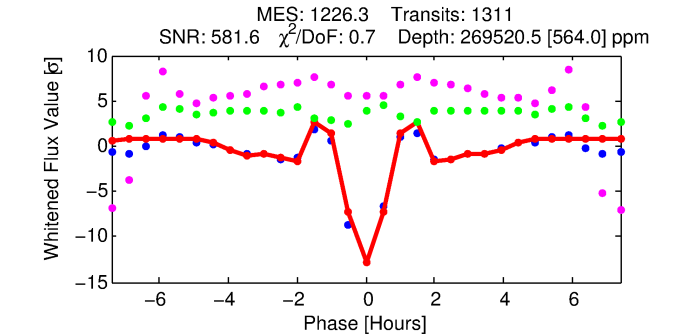
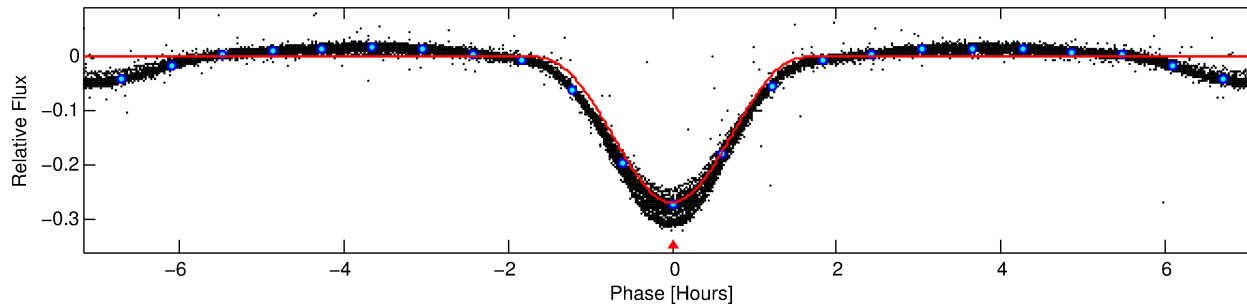
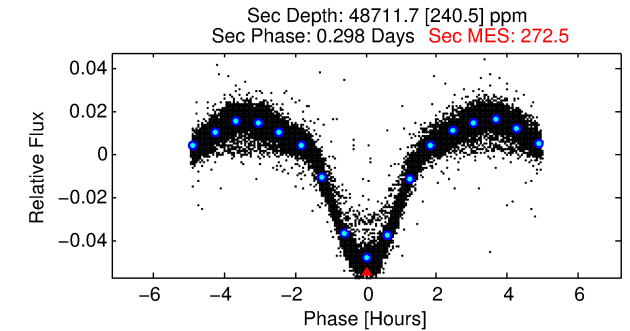
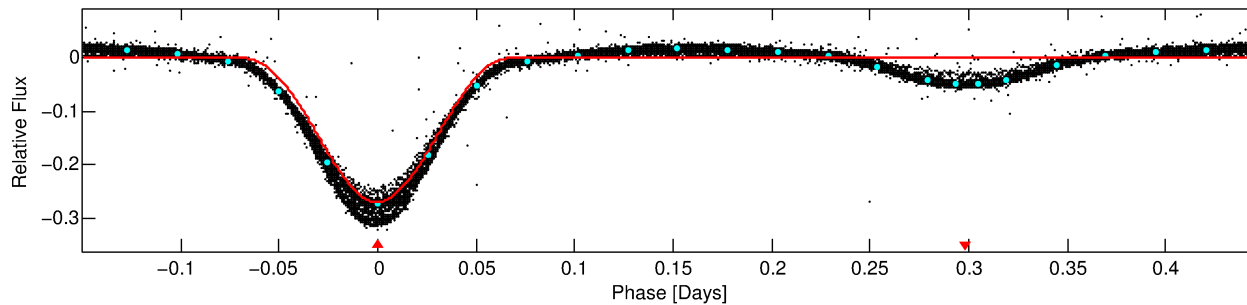
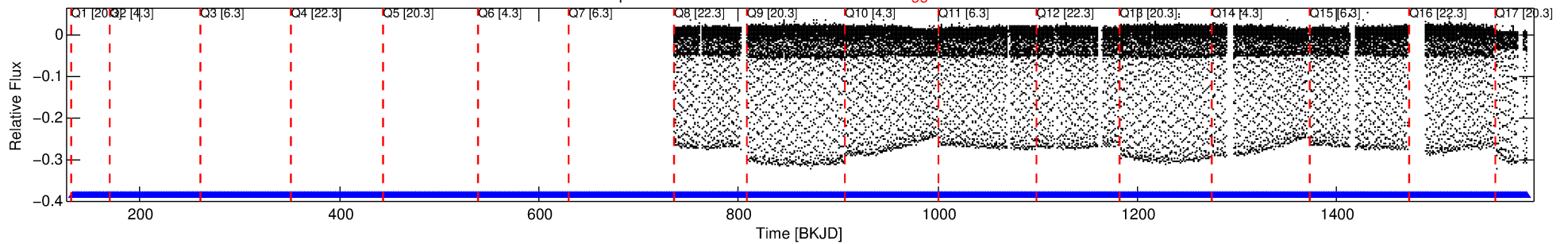
No Significant Match Found

DV One-Page Summary

KIC: 5649836 Candidate: 1 of 1 Period: 0.598 d

KOI: K03831.01 Corr: 0.956

Kp: 16.38 $R^* = 1.00 R_s$ $T_{\text{eff}} = 5780.0 \text{ K}$ $\text{Logg} = 4.44$ $\text{Fe/H} = 0.000$



DV Fit Results:

Period = 0.59793 [0.00000] d
Epoch = 131.9572 [0.0000] BKJD
Rp/R* = 0.6007 [0.0231]
a/R* = 2.43 [0.02]
b = 0.70 [0.04]
Seff = 5180.86 [0.00]
Teq = 2163 [0] K
 $R_p = 65.55 [2.52] R_e$
a = 0.0139 [0.0000] AU
Ag = 1.20 [0.09] [2.20σ]
Teffp = 3504 [68] K [19.83σ]

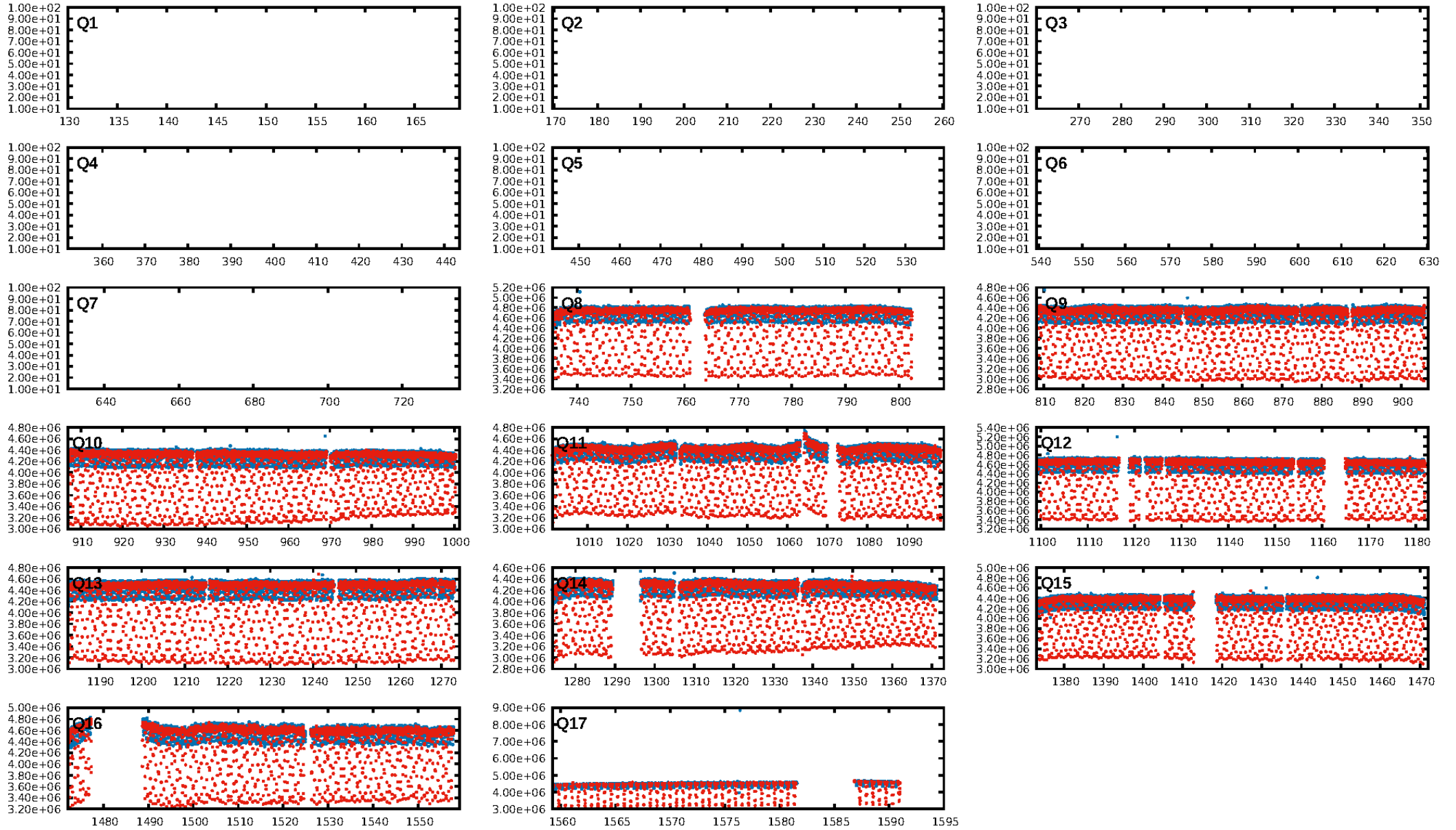
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1266/1266]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 9.342 arcsec [90.86σ]
KicOffset-rm: 1.129 arcsec [16.23σ]
OotOffset-st: 2/0/1/0 [3]
KicOffset-st: 2/2/3/3 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [10/10]

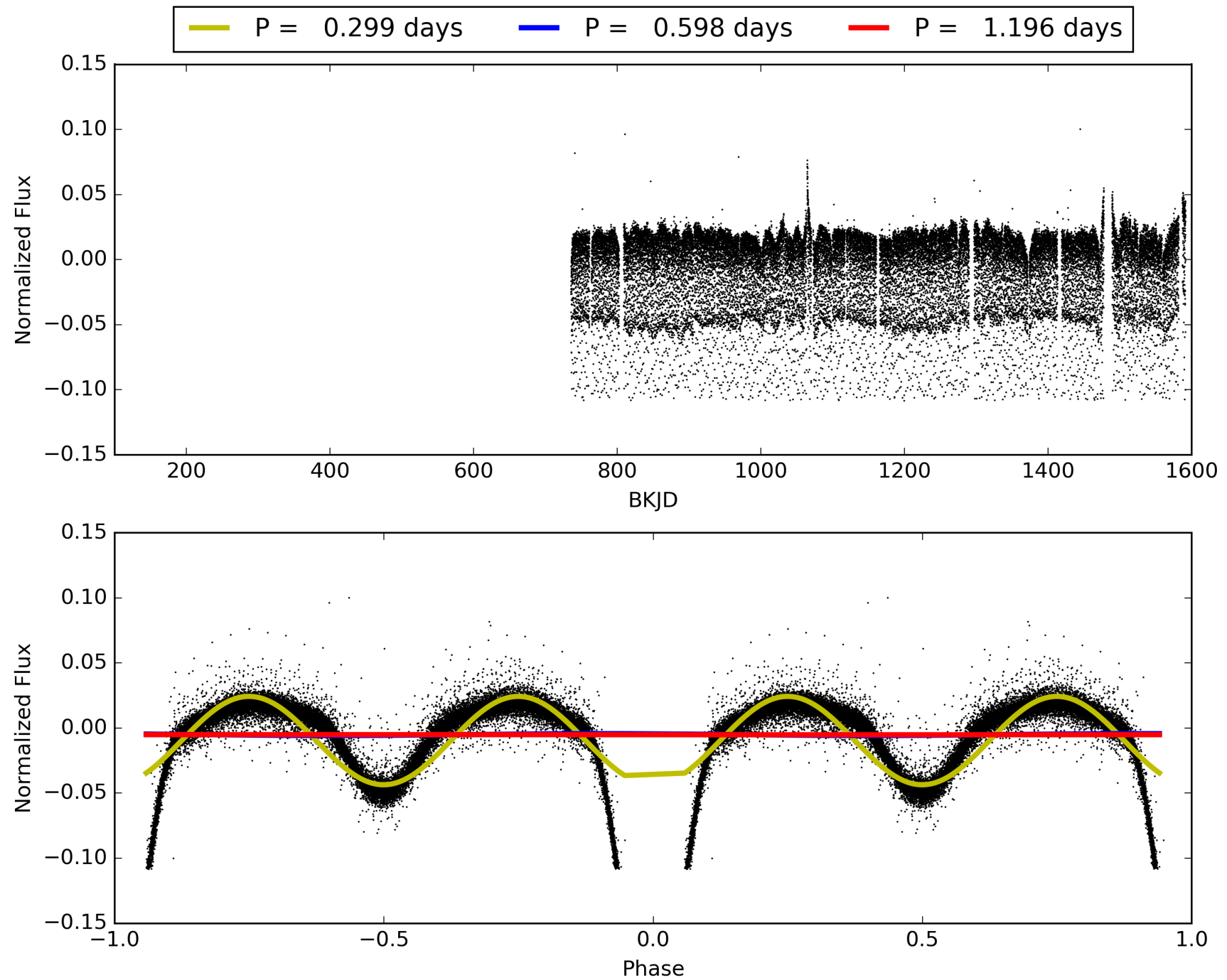
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 20:41:14 Z

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

TCE 005649836-01, PDC Light Curves

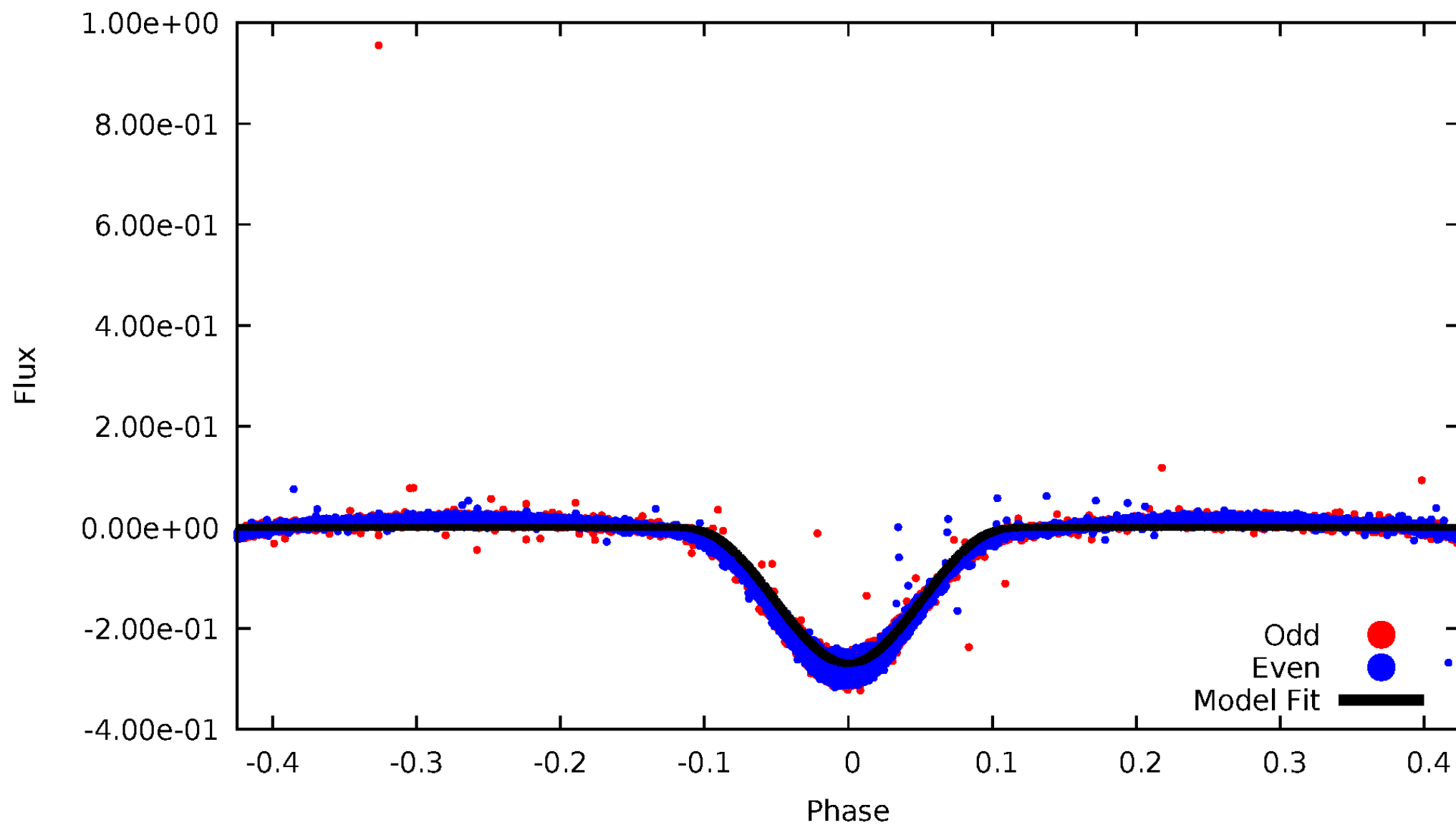


TCE 005649836-01



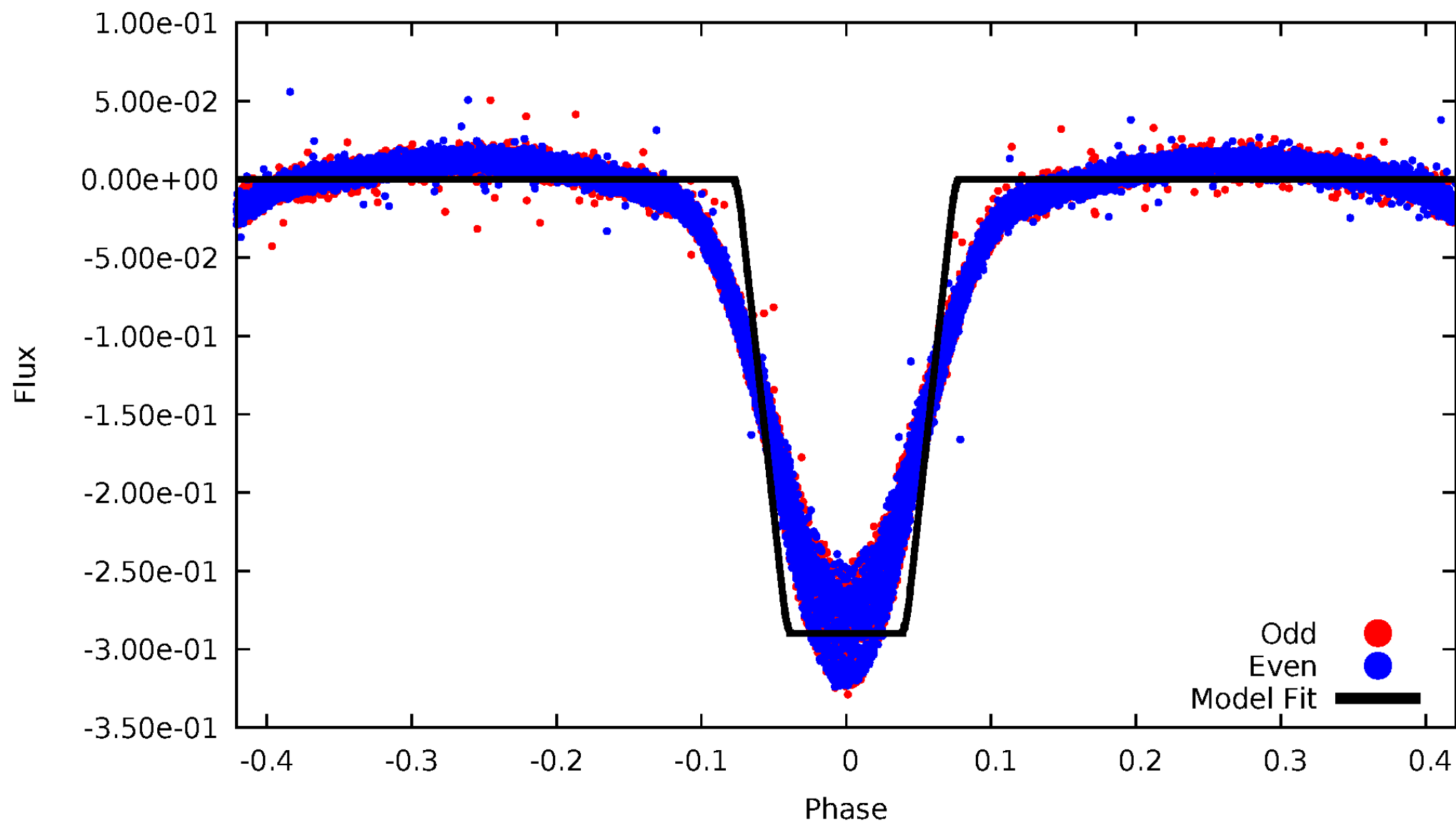
DV Odd/Even

TCE 005649836-01



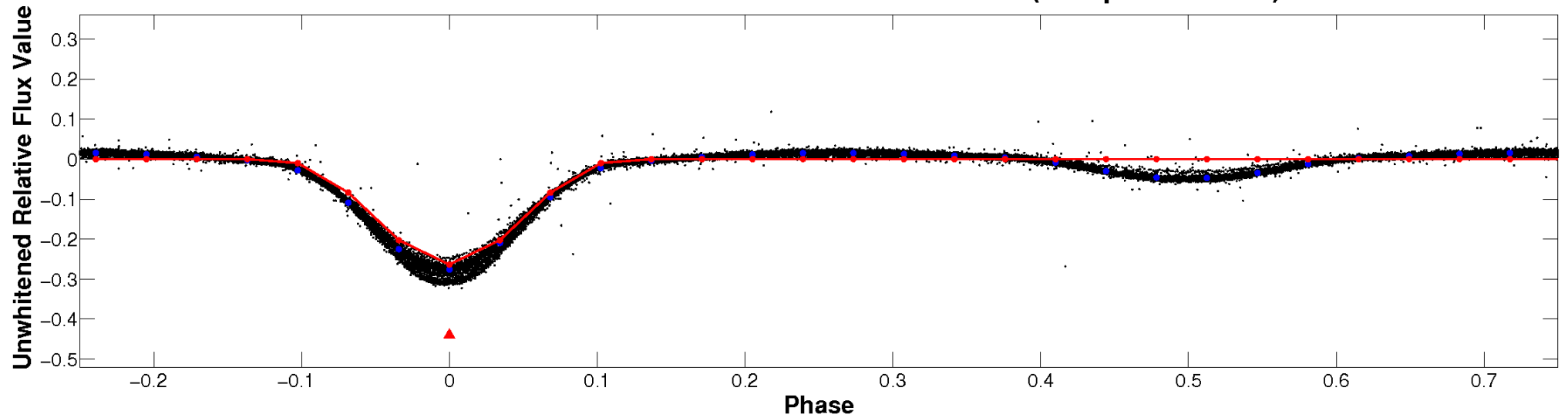
ALT Odd/Even

TCE 005649836-01

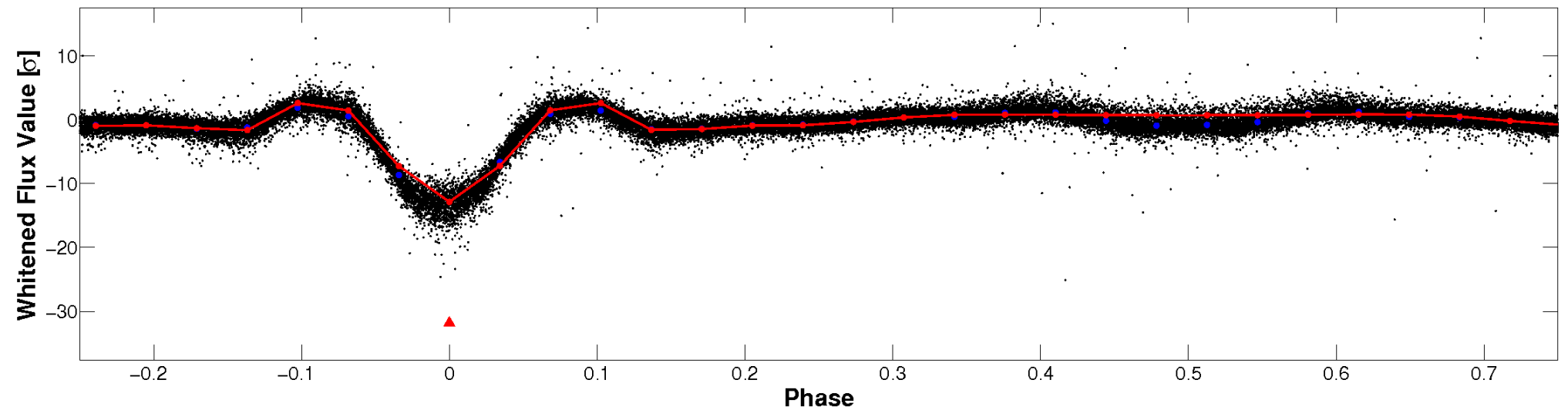


Non-Whitened Vs. Whitened Light Curve

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

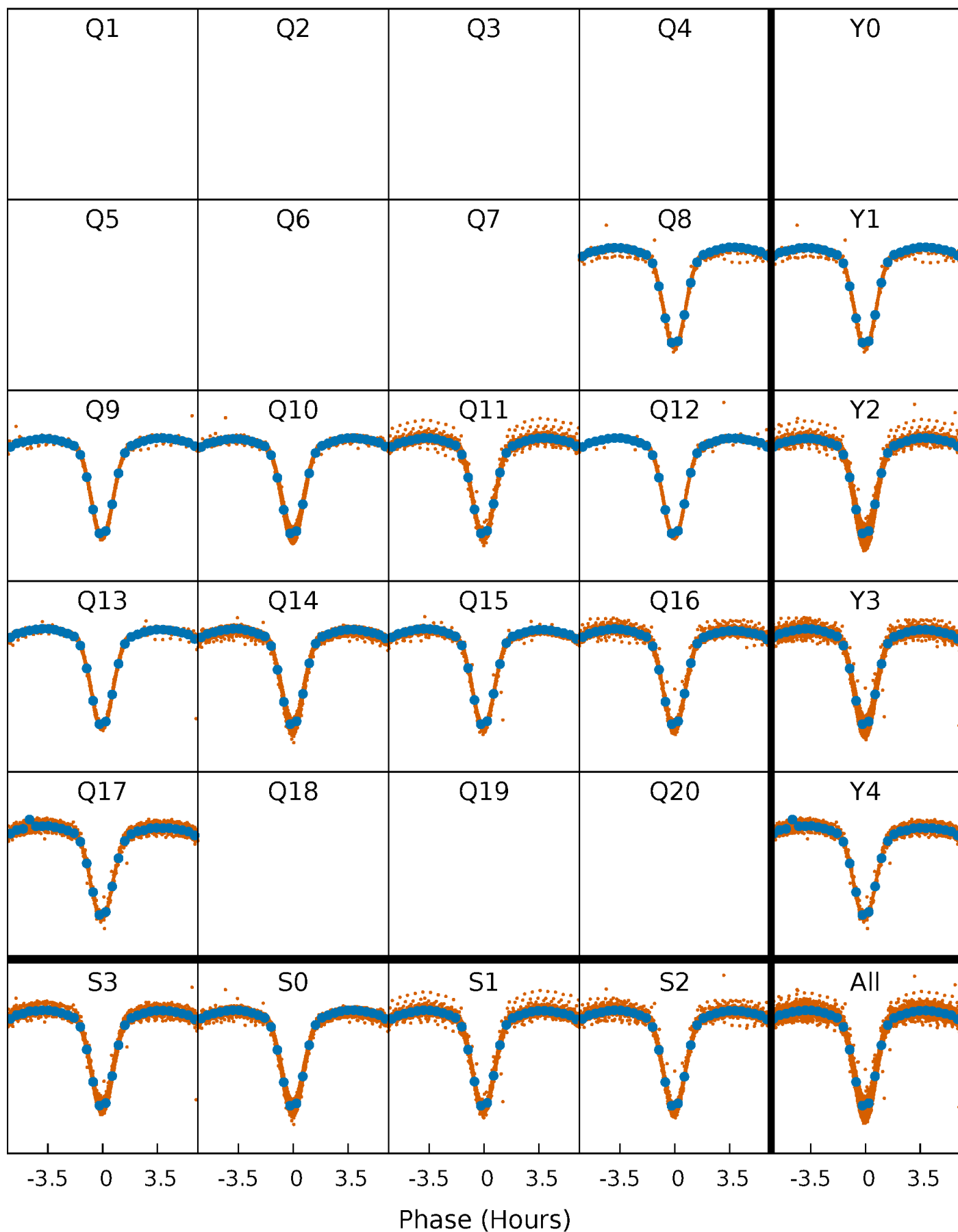


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



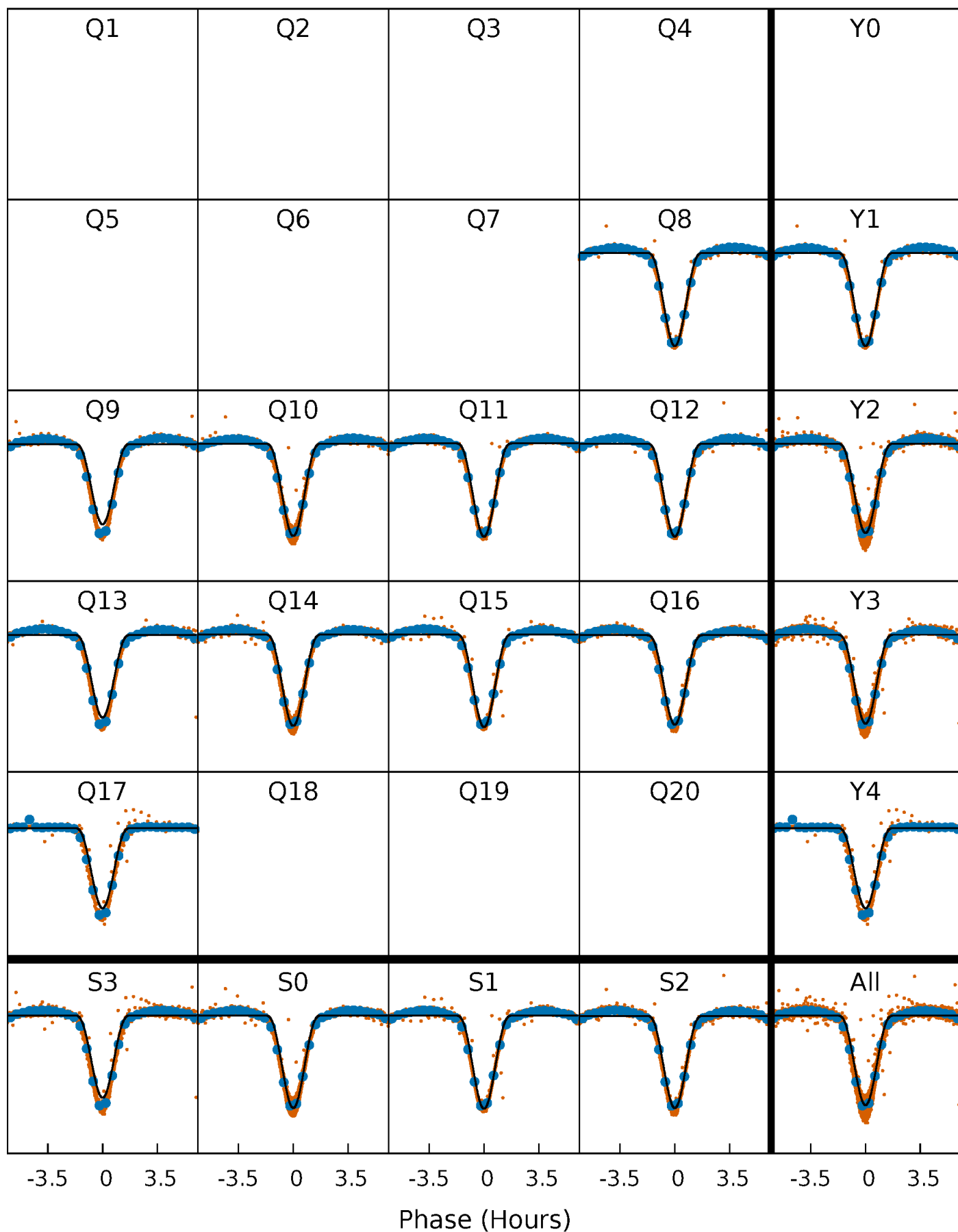
PDC Quarter-Phased Transit Curves

TCE 005649836-01 P= 0.597934 Days $T_0=131.957216$ (BKJD)



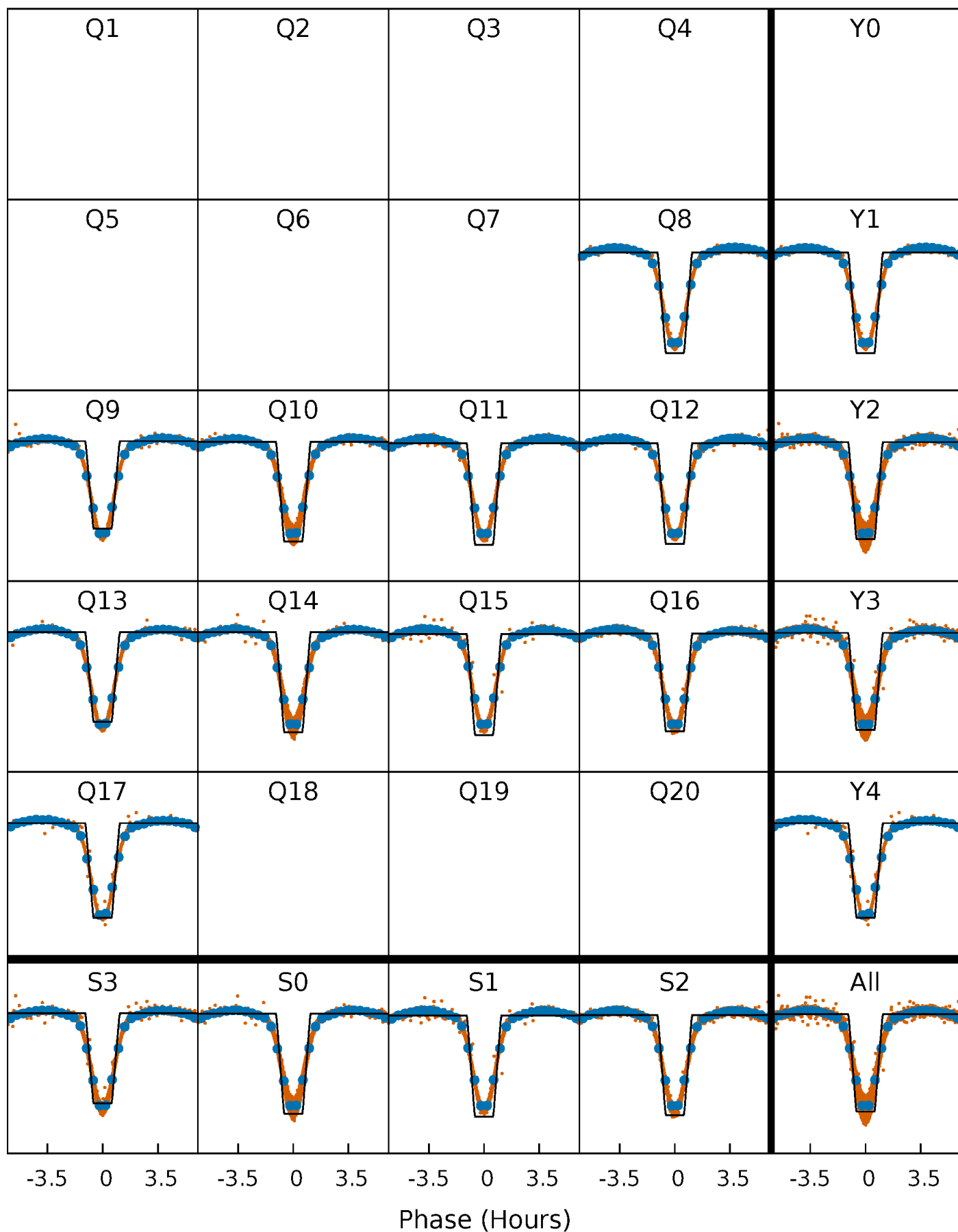
DV Quarter-Phased Transit Curves

TCE 005649836-01 P= 0.597934 Days $T_0=131.957216$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

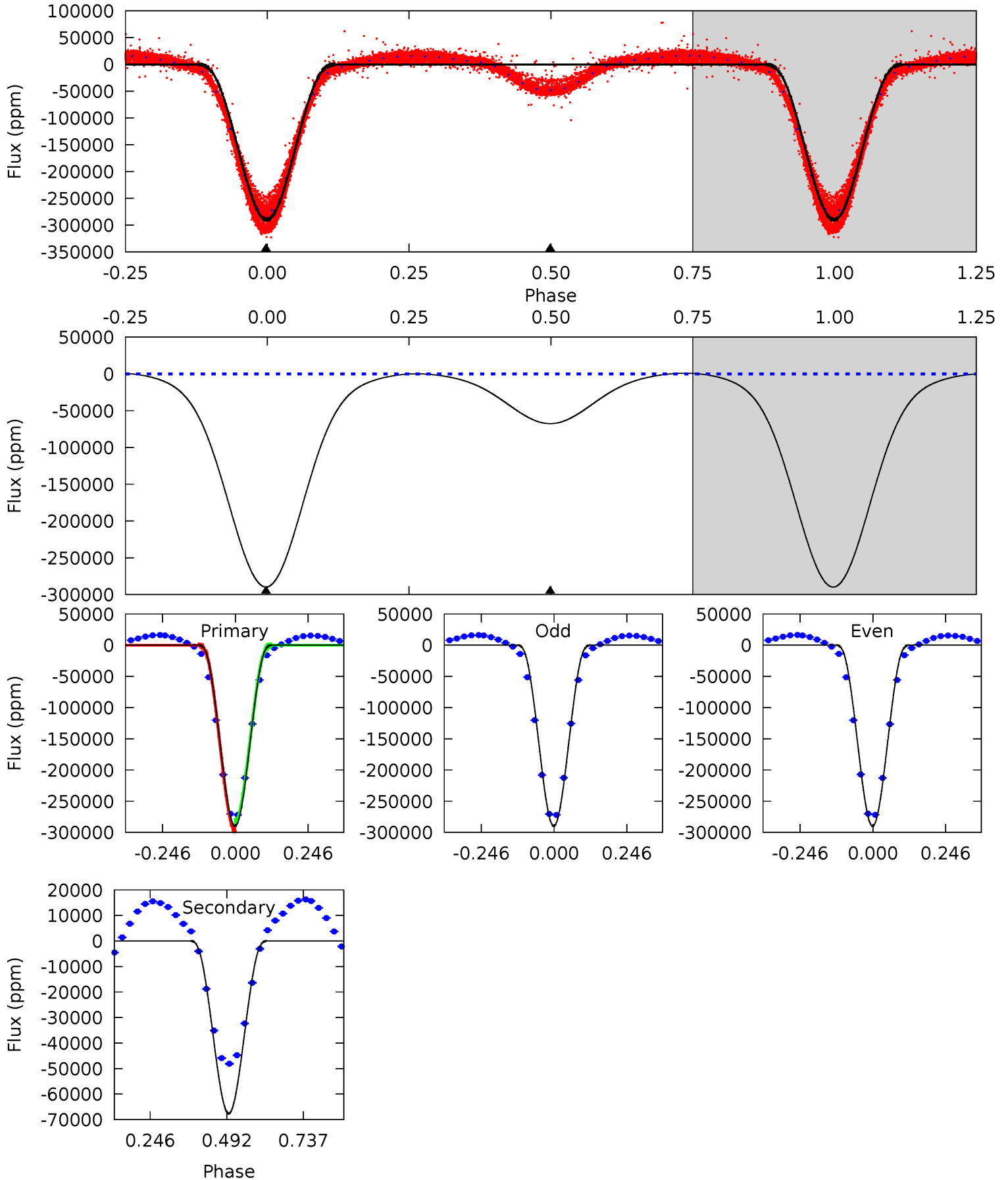
TCE 005649836-01 P= 0.597933 Days $T_0=131.957299$ (BKJD)



DV Model-Shift Uniqueness Test

005649836-01, P = 0.597934 Days, E = 131.957216 Days

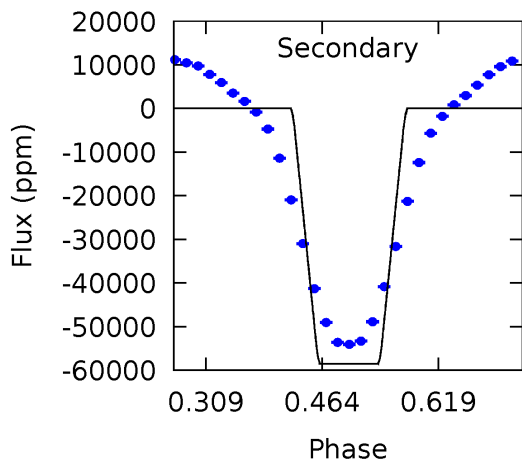
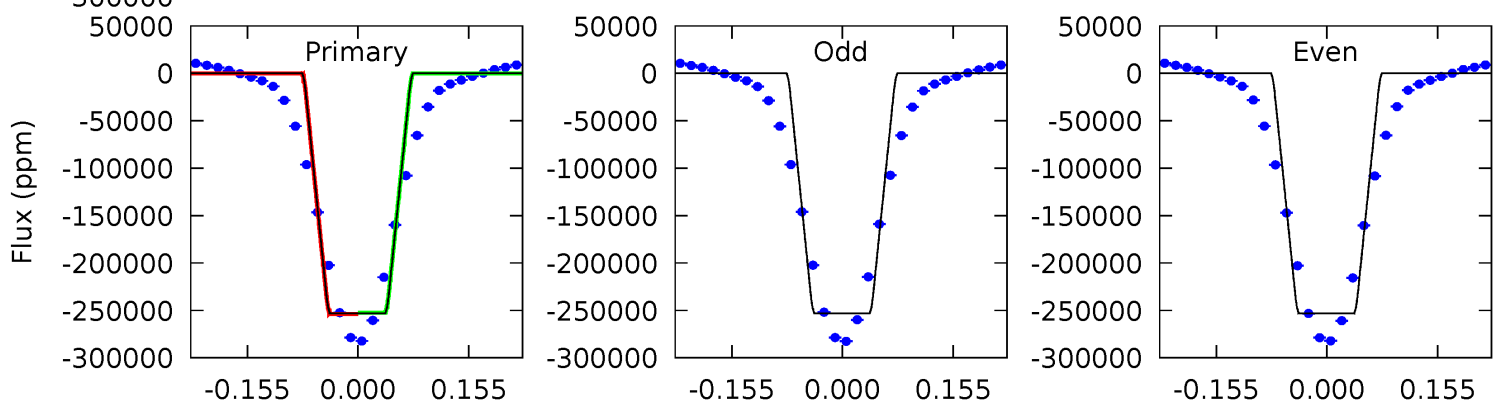
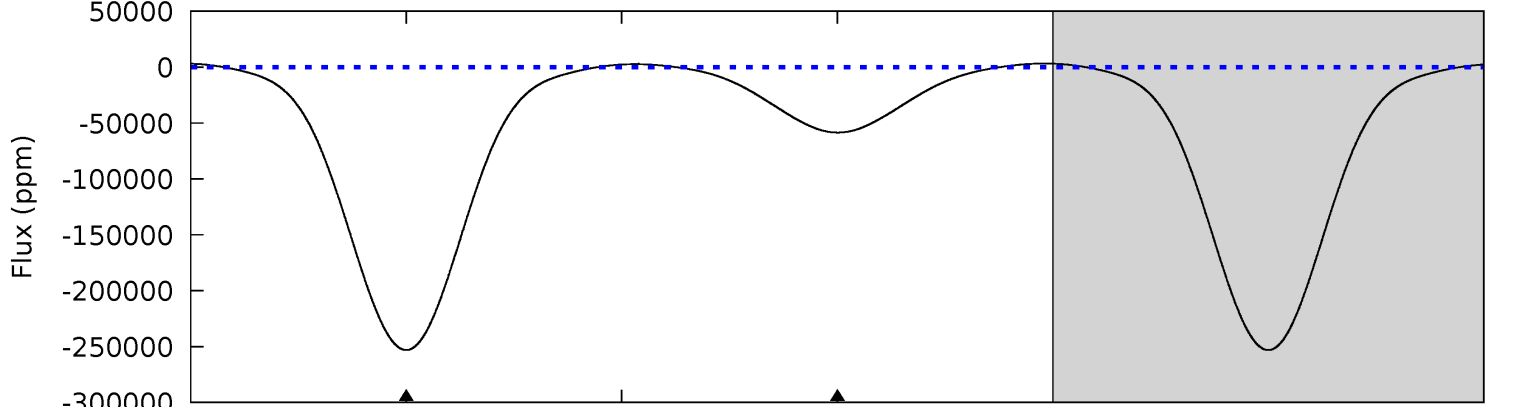
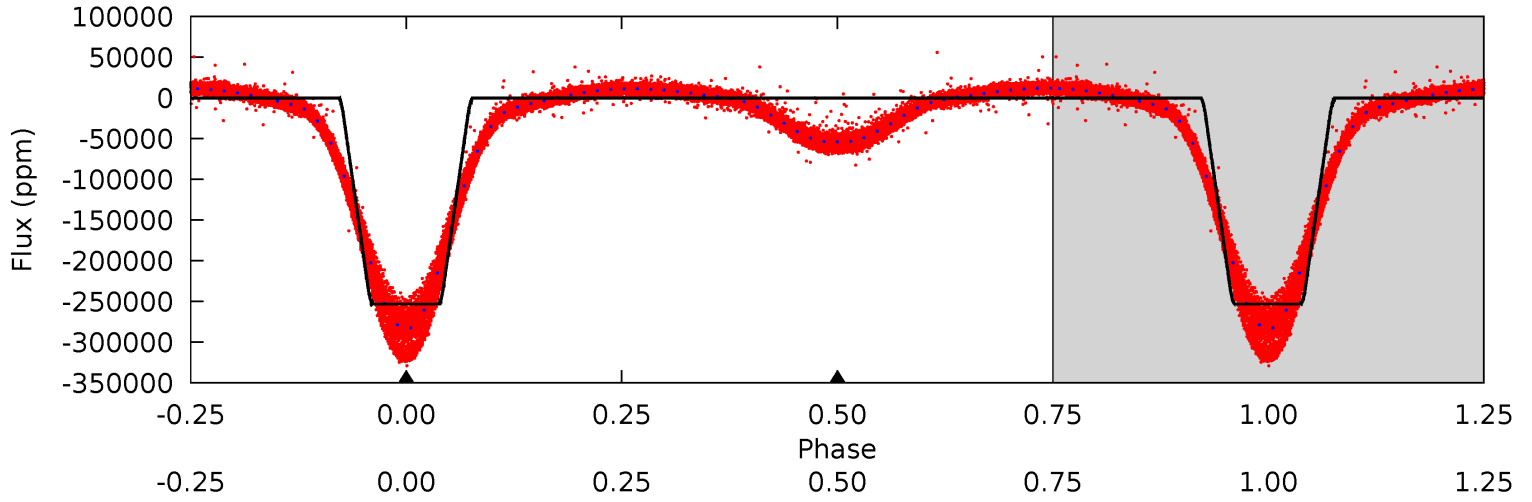
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1696	395.8	0	0	4.37	1.16	4.90	1696	1696	395.8	395.8	0.36	1.02	0.00	42.6



Alt Model-Shift Uniqueness Test

005649836-01, P = 0.597933 Days, E = 131.957299 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2076	480.2	0	0	4.47	1.42	35.3	2076	2076	480.2	480.2	0.70	1.02	0.01	6.38



Stellar Parameters For KIC 005649836

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 005649836-01 / KOI 3831.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-67598 ± 171	$65.38^{+5.33}_{-4.90}$	3029^{+135}_{-148}	4014^{+127}_{-132}	$1.797^{+0.291}_{-0.243}$
Alt.	-58531 ± 122	$58.69^{+5.17}_{-4.47}$	3026^{+136}_{-146}	4064^{+138}_{-132}	$1.914^{+0.322}_{-0.283}$

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 $A_{obs} \gg 1.0$

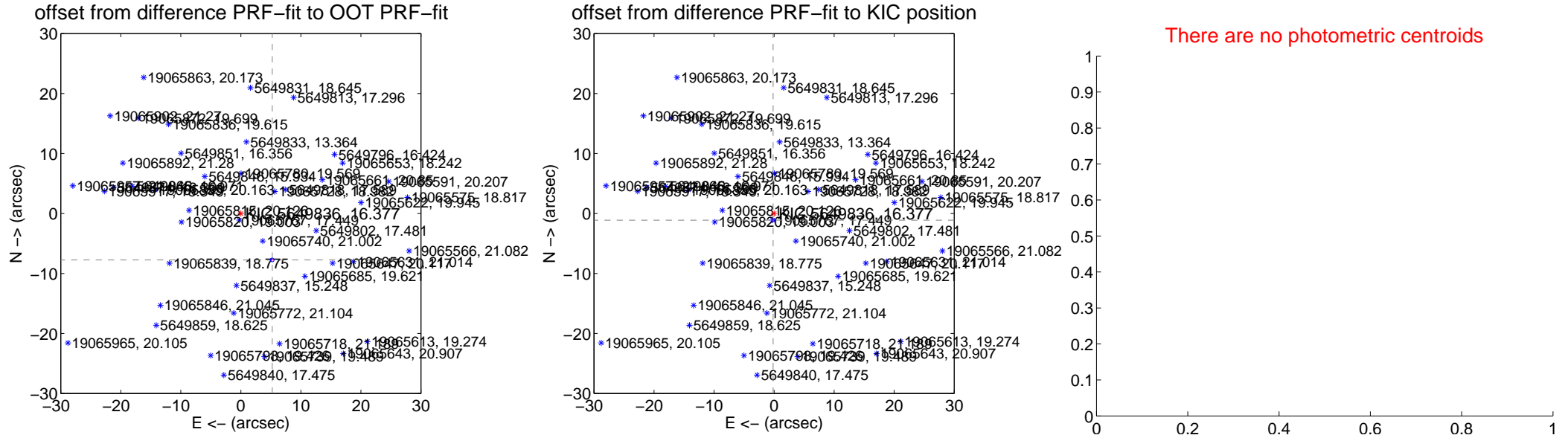
DV Centroid Data

Supplemental centroid analysis for 005649836-01. Kepler magnitude: 16.38. Transit SNR 581.60

There are 10 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 8.20 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	9.342 \pm 0.103	90.86	-5.228 \pm 0.128	-7.743 \pm 0.089
PRF-fit source offset from KIC position	1.129 \pm 0.070	16.23	0.169 \pm 0.068	-1.117 \pm 0.070
photometric centroid source offset	—	—	—	—

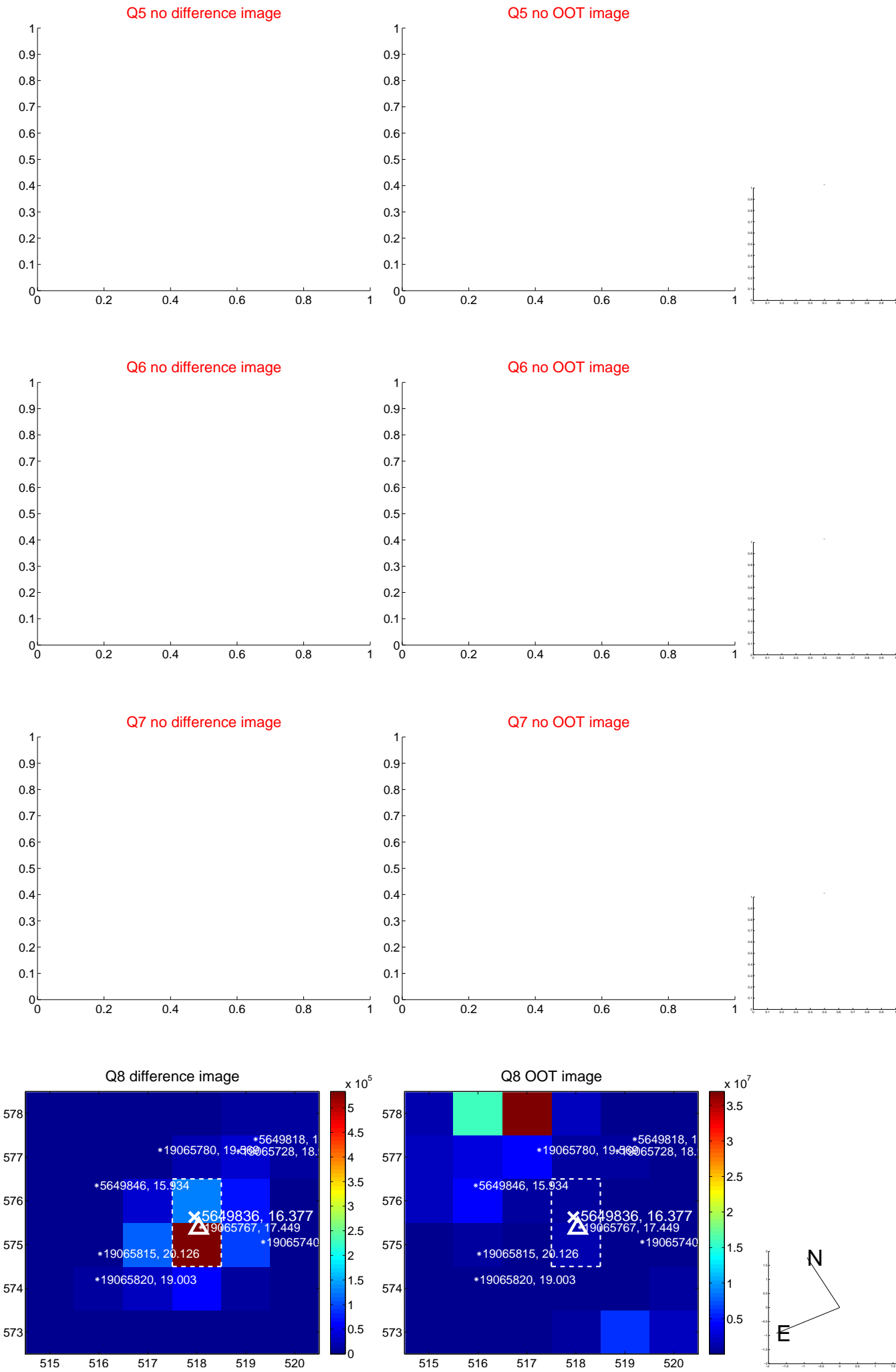


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

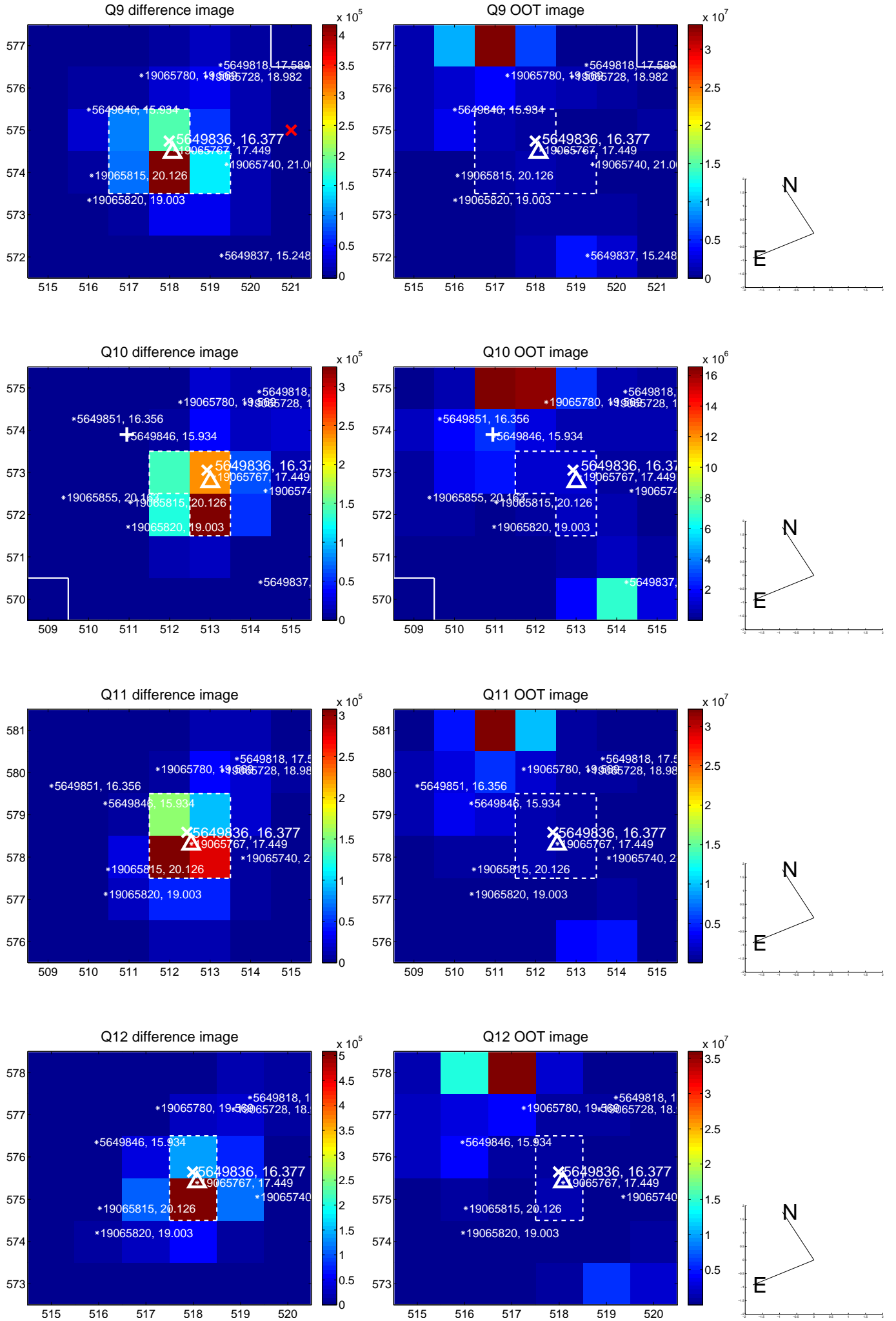
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



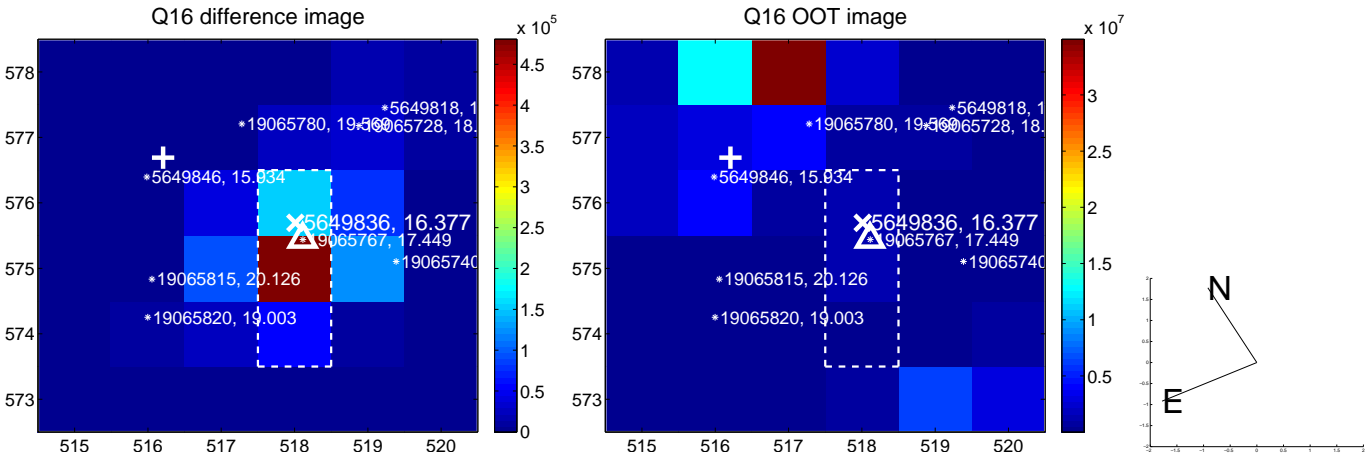
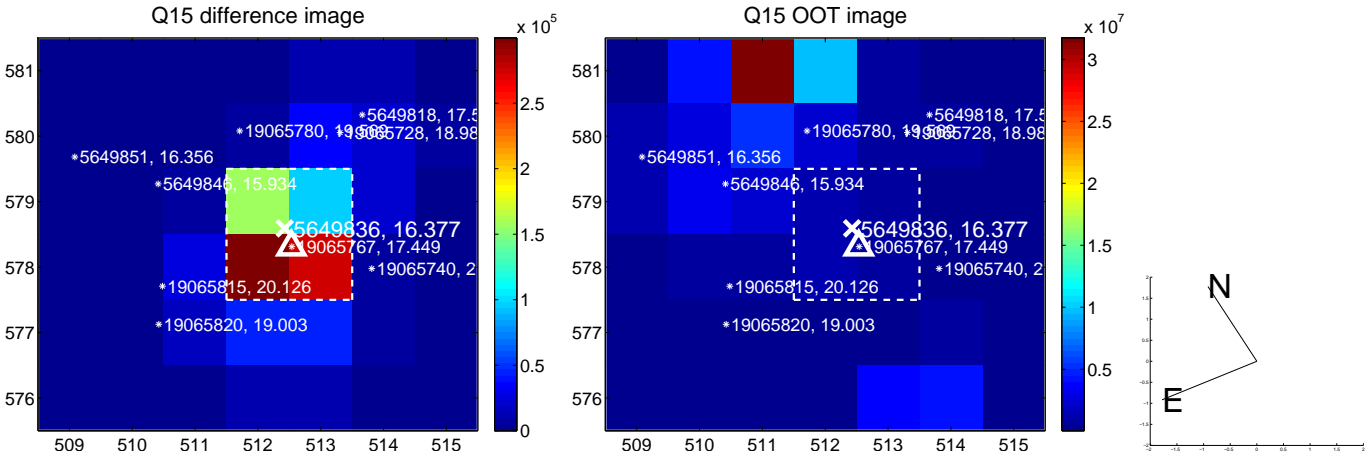
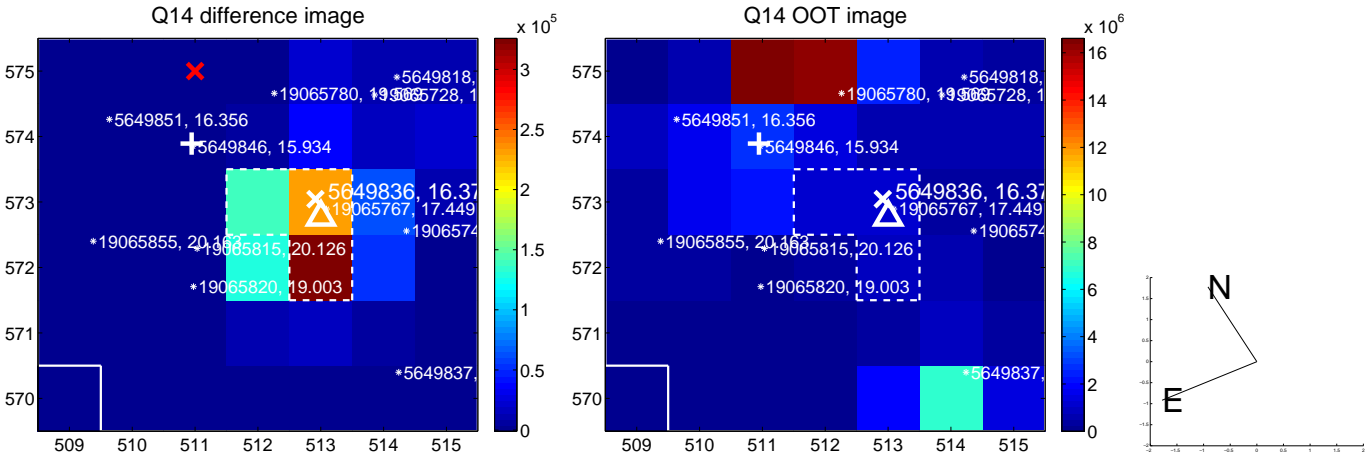
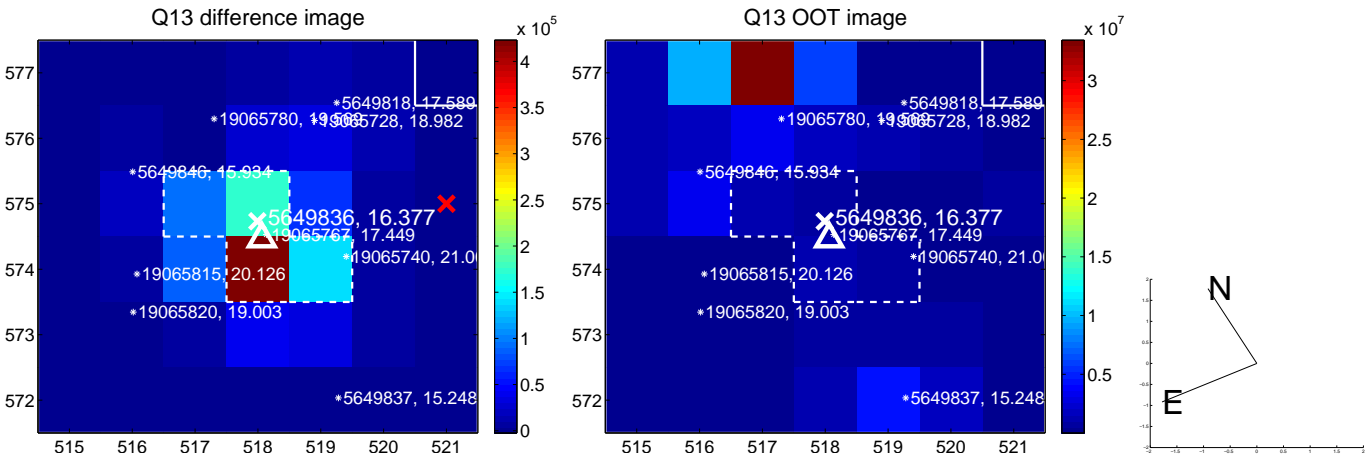
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



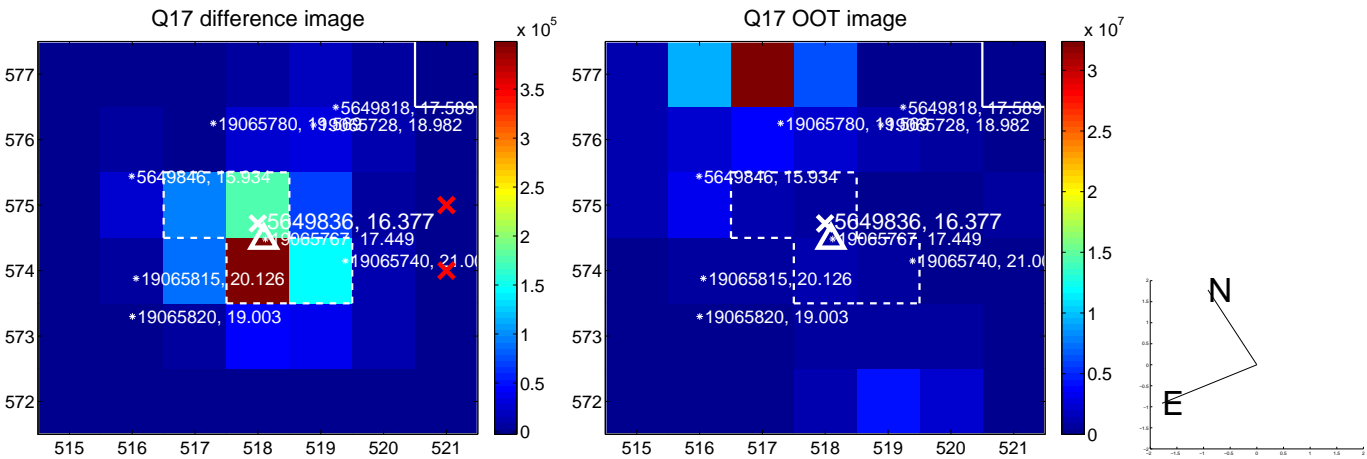
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



folded centroid time series figure for this object.

UKIRT Image

Declination

