

KIC 004917786

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})
004917786-01	OBS	No	0.516379	131.778870	2762.8	2.599	6214.2	111.3	0.74	5547	4.19	3364.59

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004917786-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET

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

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

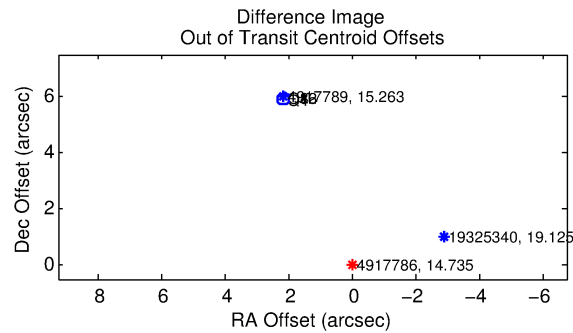
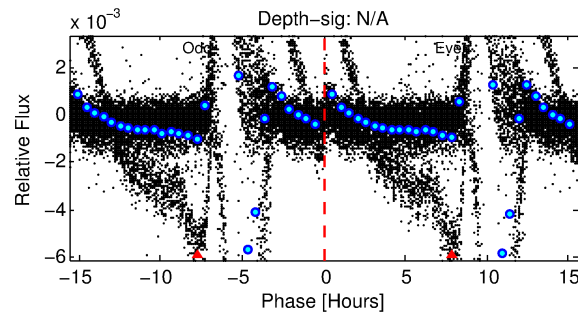
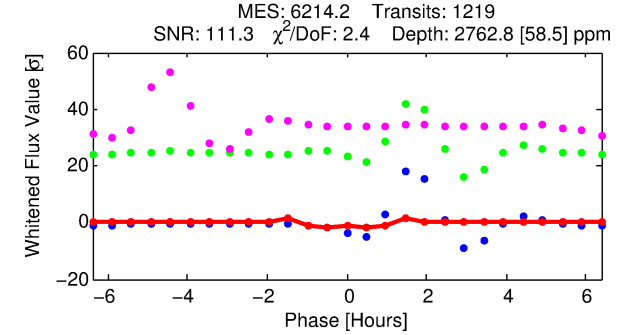
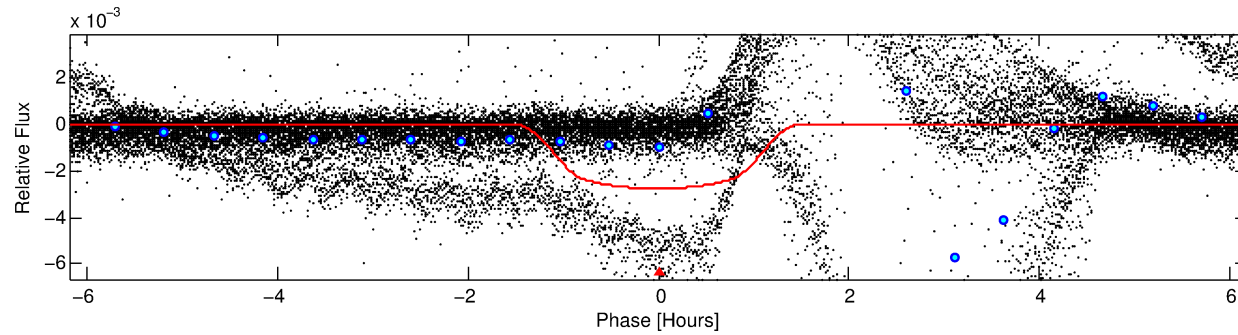
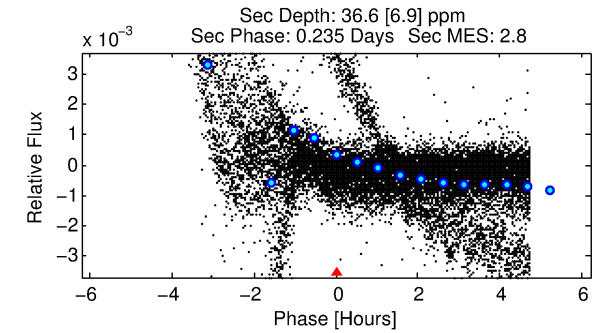
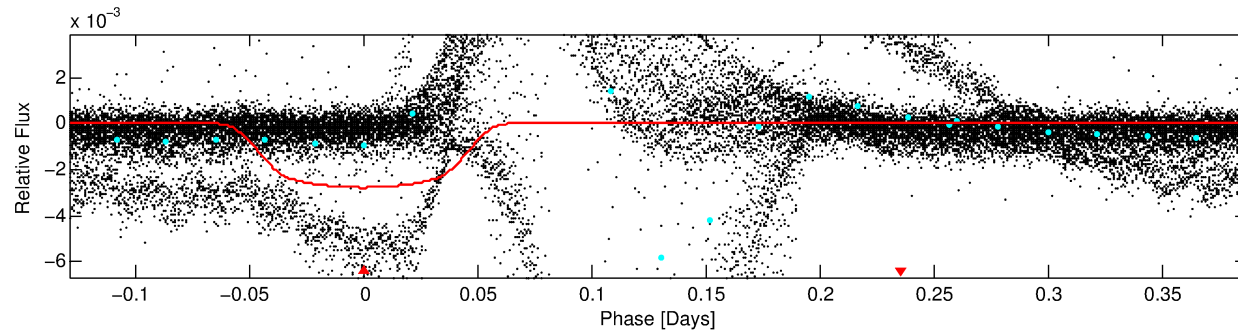
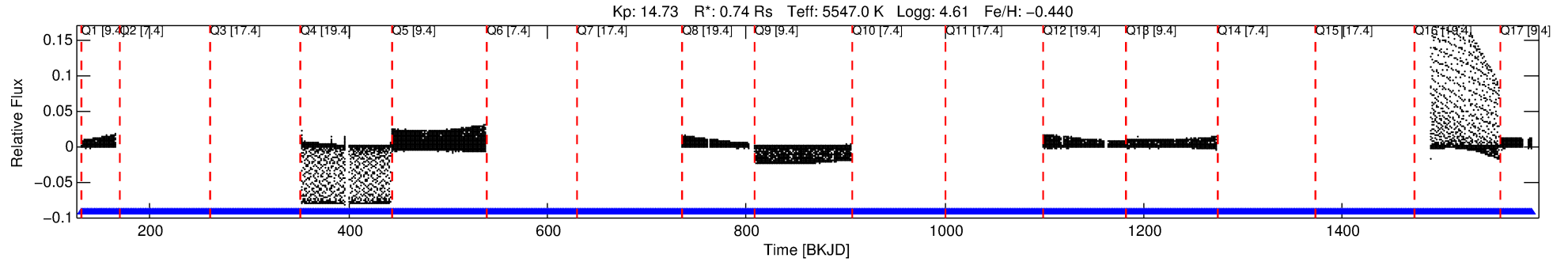
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004917786-01

No Significant Match Found

DV One-Page Summary

KIC: 4917786 Candidate: 1 of 1 Period: 0.516 d



DV Fit Results:

Period = 0.51638 [0.00000] d
Epoch = 131.7789 [0.0002] BKJD
Rp/R* = 0.0520 [0.0016]
a/R* = 1.44 [0.08]
b = 0.73 [0.07]
Seff = 3364.59 [898.85]
Teff = 1942 [130] K
Rp = 4.19 [0.85] Re
a = 0.0117 [0.0019] AU
Ag = 0.16 [0.05] [-17.65σ]
Teffp = 1893 [115] K [-0.28σ]

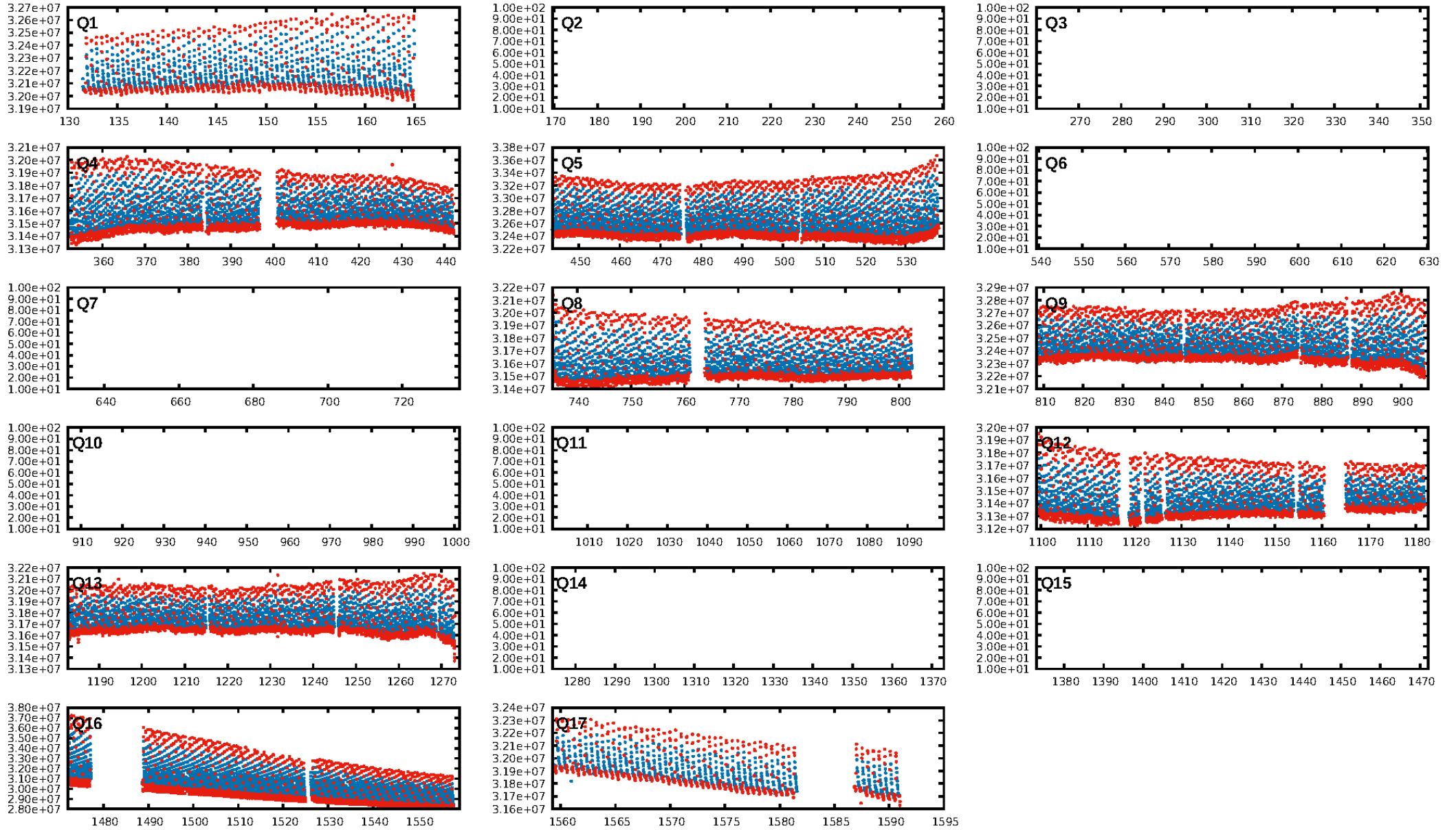
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1103/1103]
GhostDiagnostic-chr: -5.02
Centroid-sig: 0.0%
Centroid-so: 5.827 arcsec [13.23σ]
OotOffset-rm: 6.289 arcsec [93.10σ]
KicOffset-rm: 6.485 arcsec [95.11σ]
OotOffset-st: 0/0/4/0 [4]
KicOffset-st: 0/0/4/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [9/9]

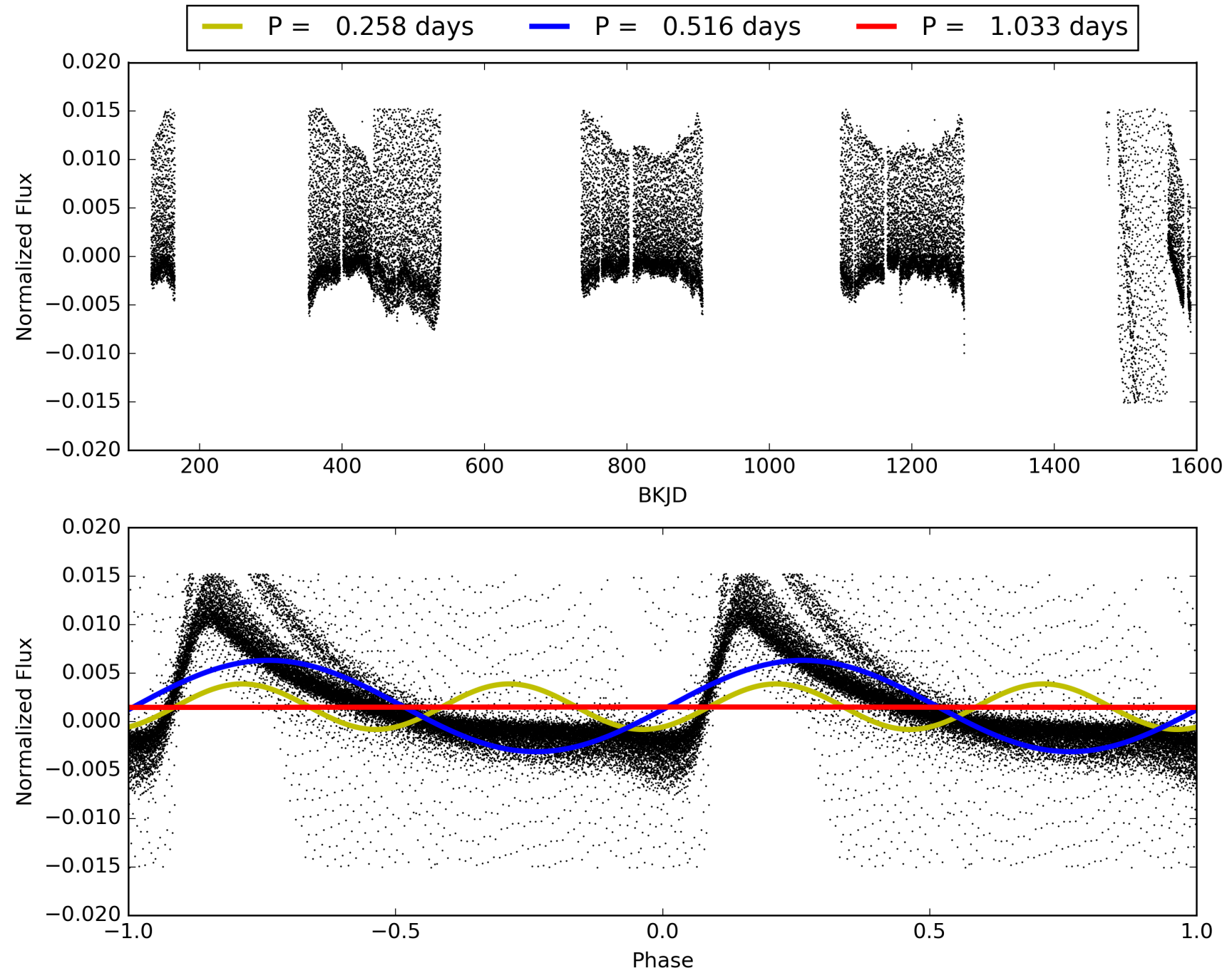
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 23:58:02 Z

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

TCE 004917786-01, PDC Light Curves

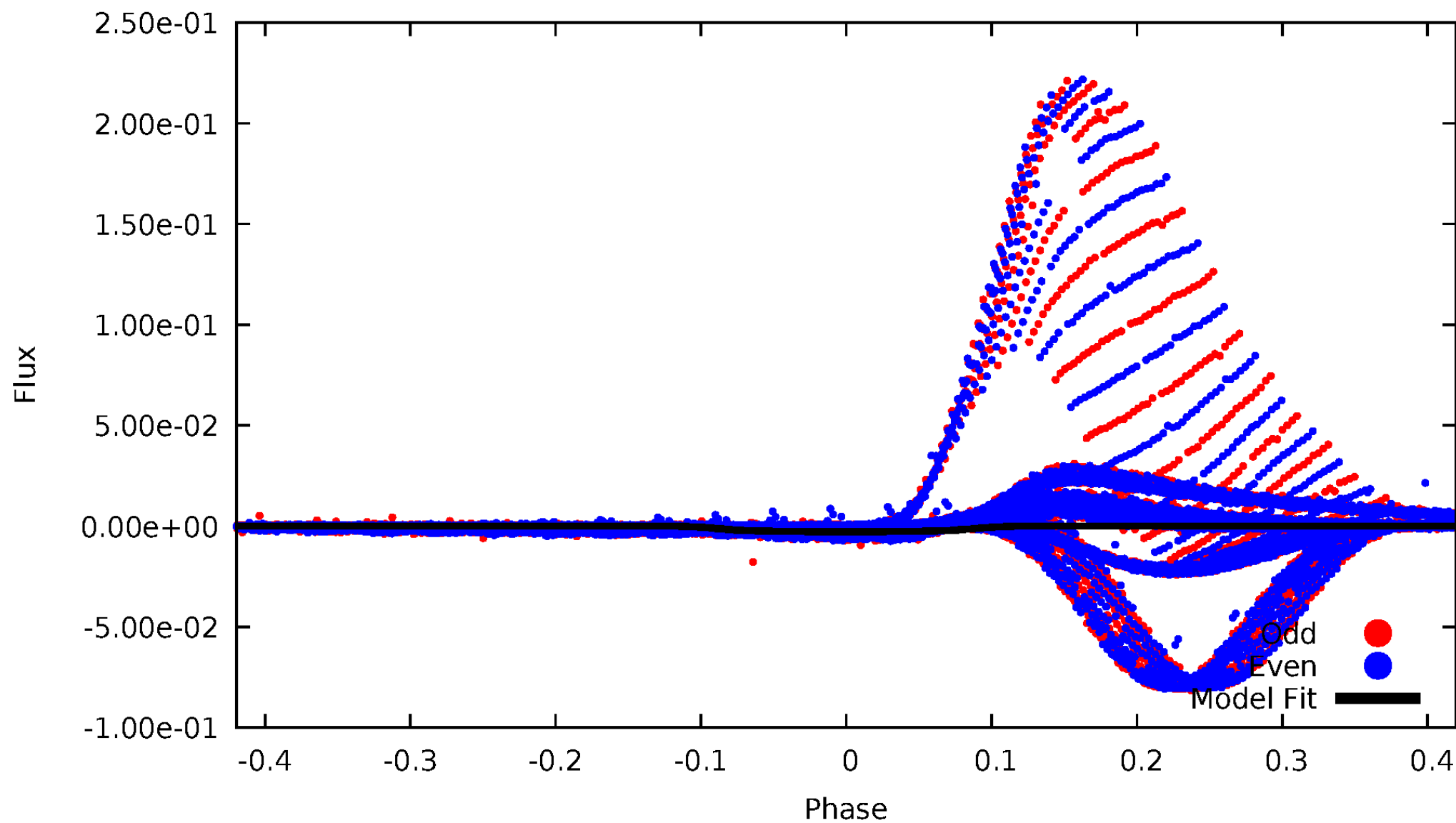


TCE 004917786-01



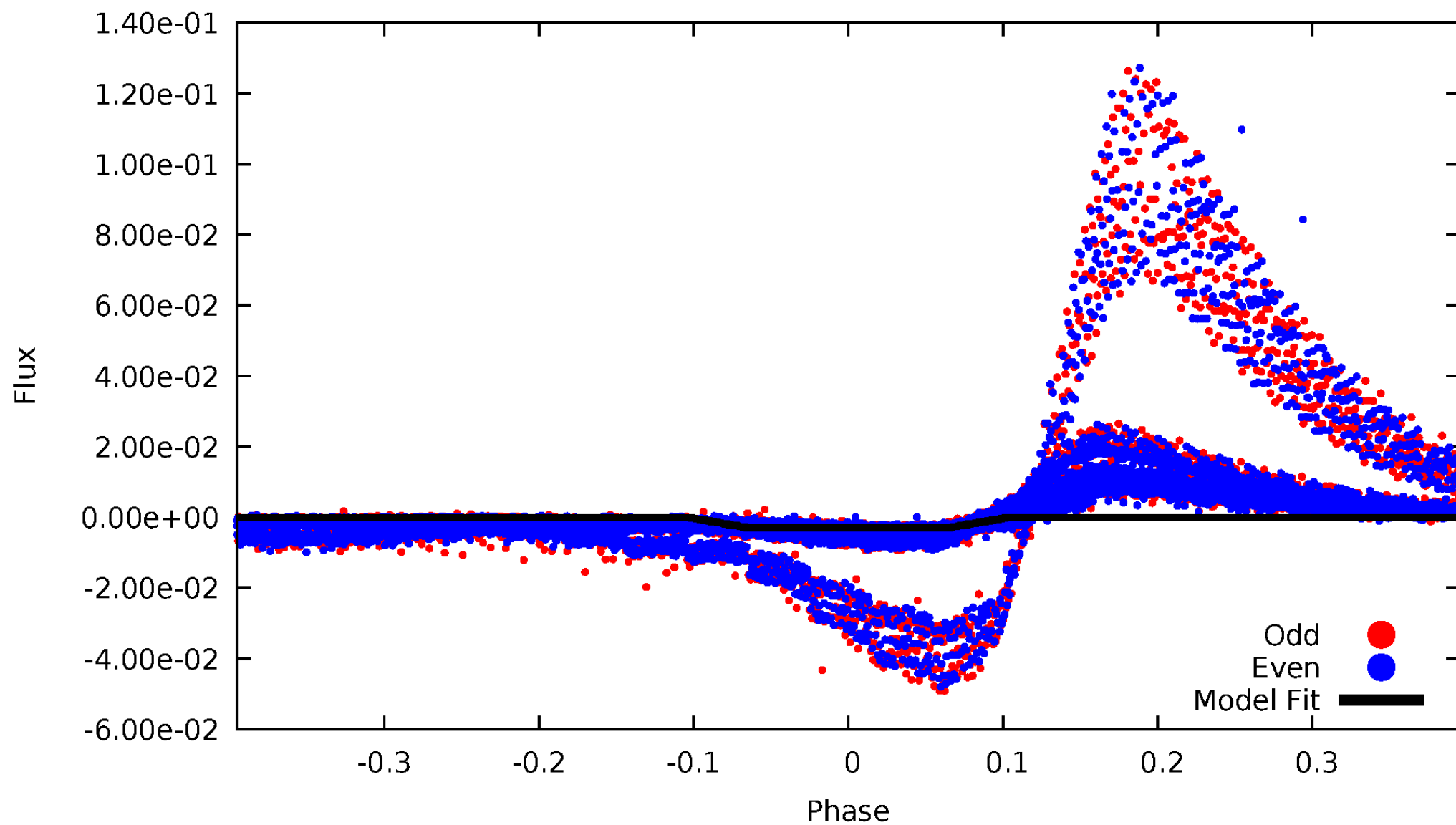
DV Odd/Even

TCE 004917786-01



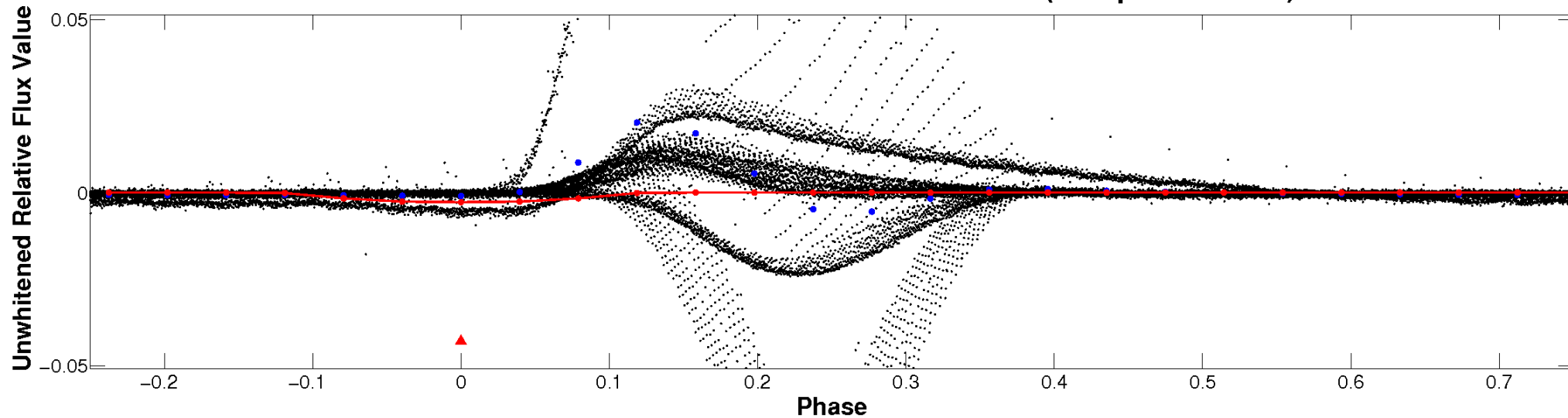
ALT Odd/Even

TCE 004917786-01

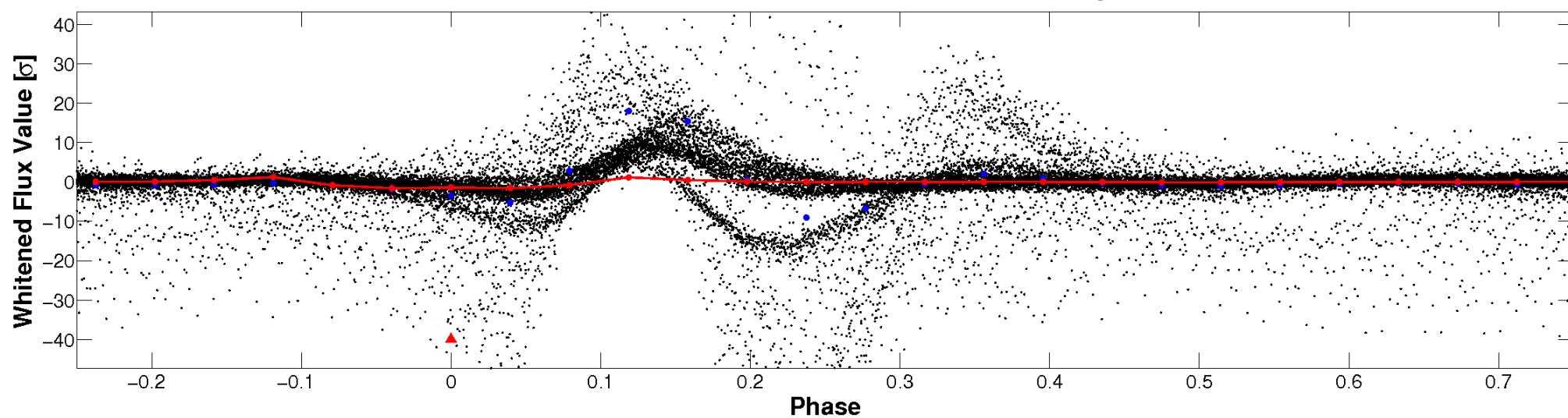


Non-Whitened Vs. Whitened Light Curve

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

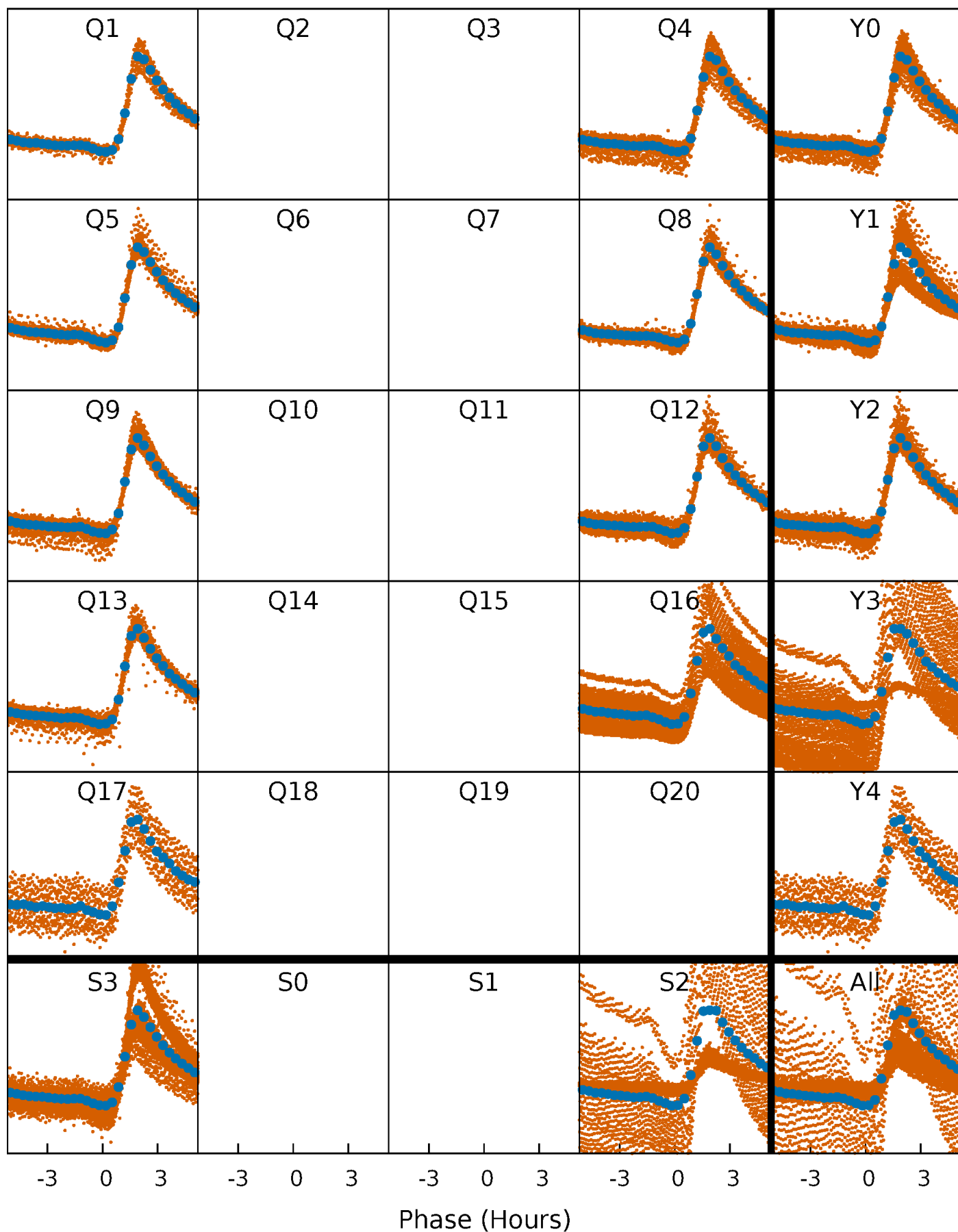


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



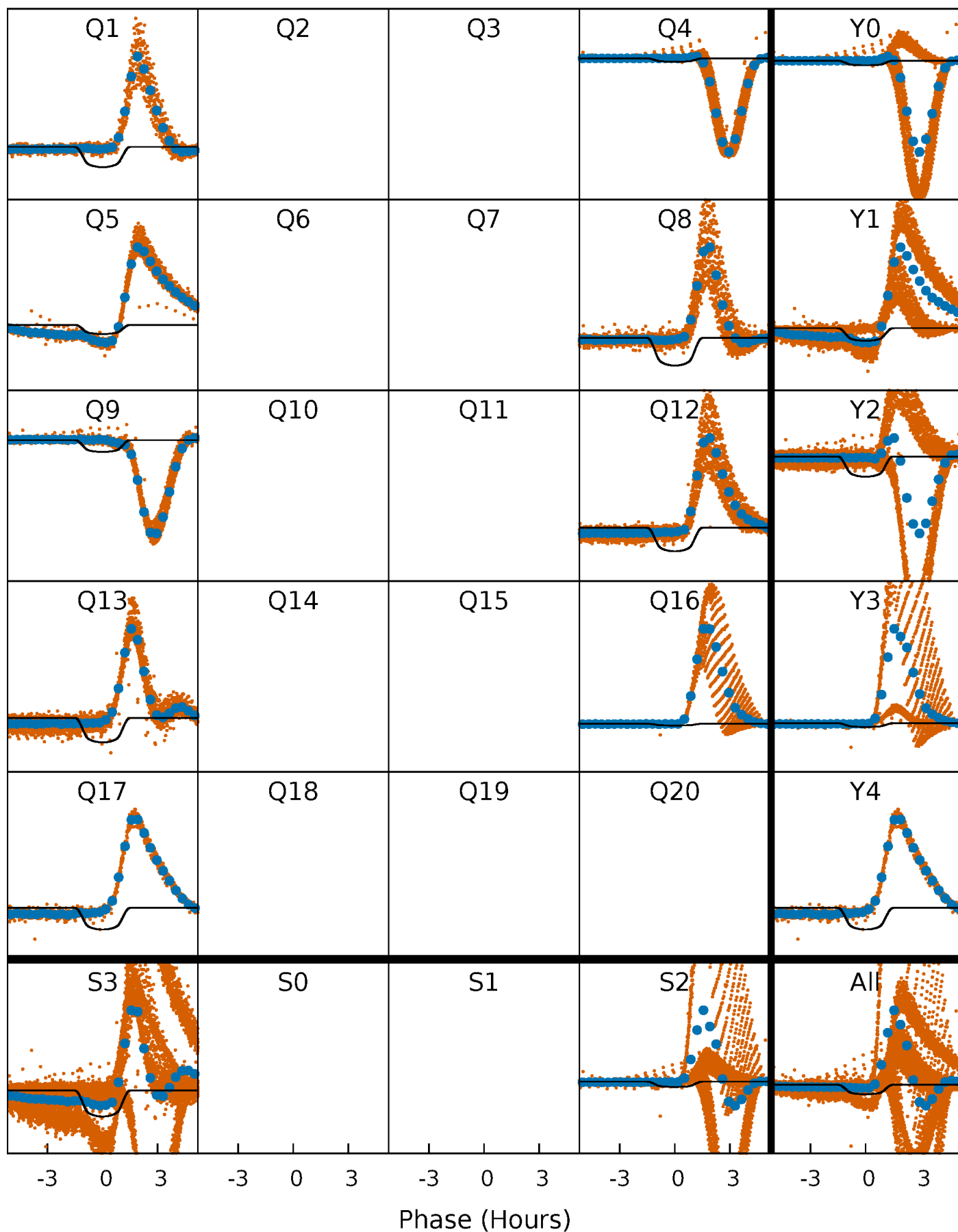
PDC Quarter-Phased Transit Curves

TCE 004917786-01 P= 0.516379 Days $T_0=131.778870$ (BKJD)



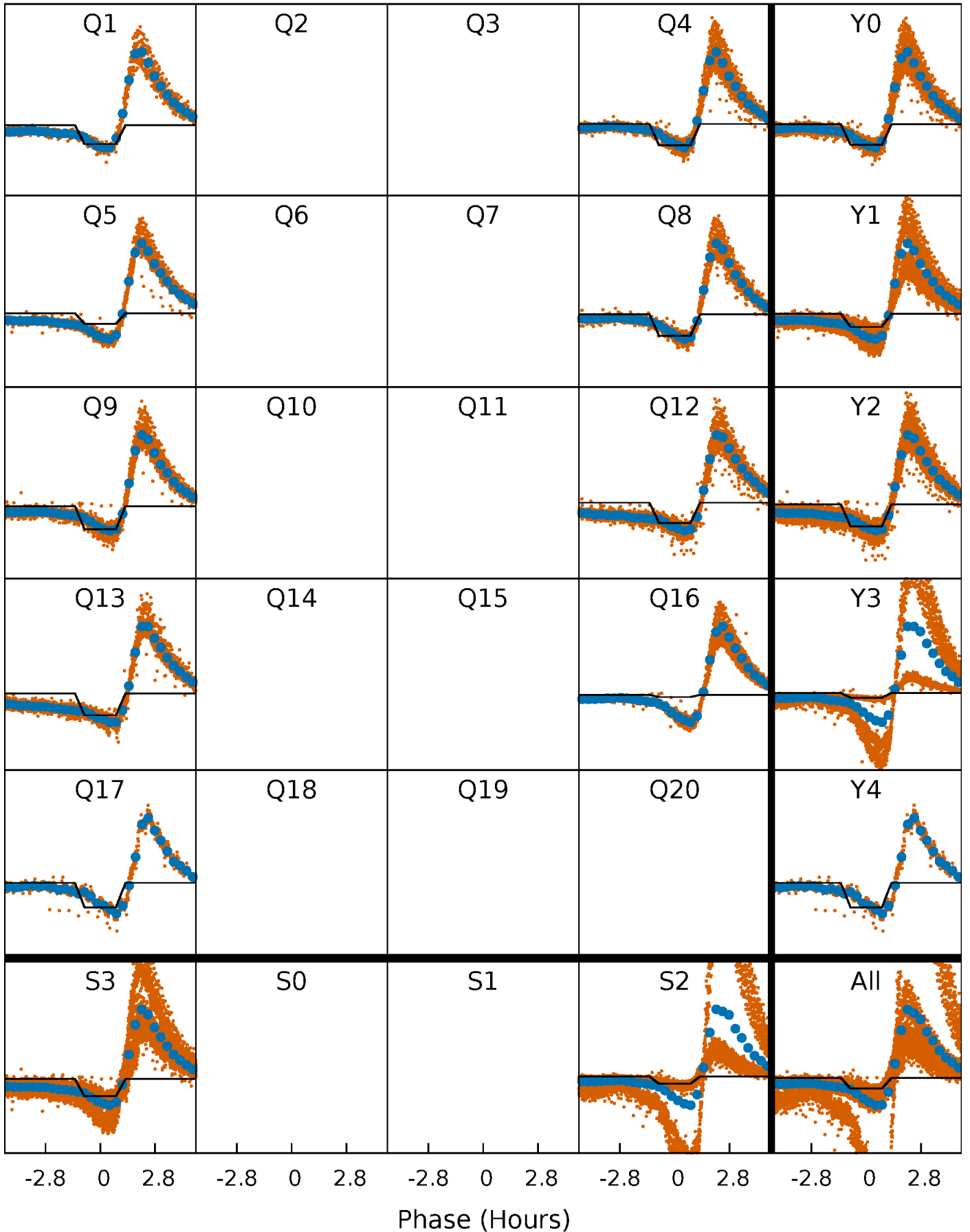
DV Quarter-Phased Transit Curves

TCE 004917786-01 P= 0.516379 Days $T_0=131.778870$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

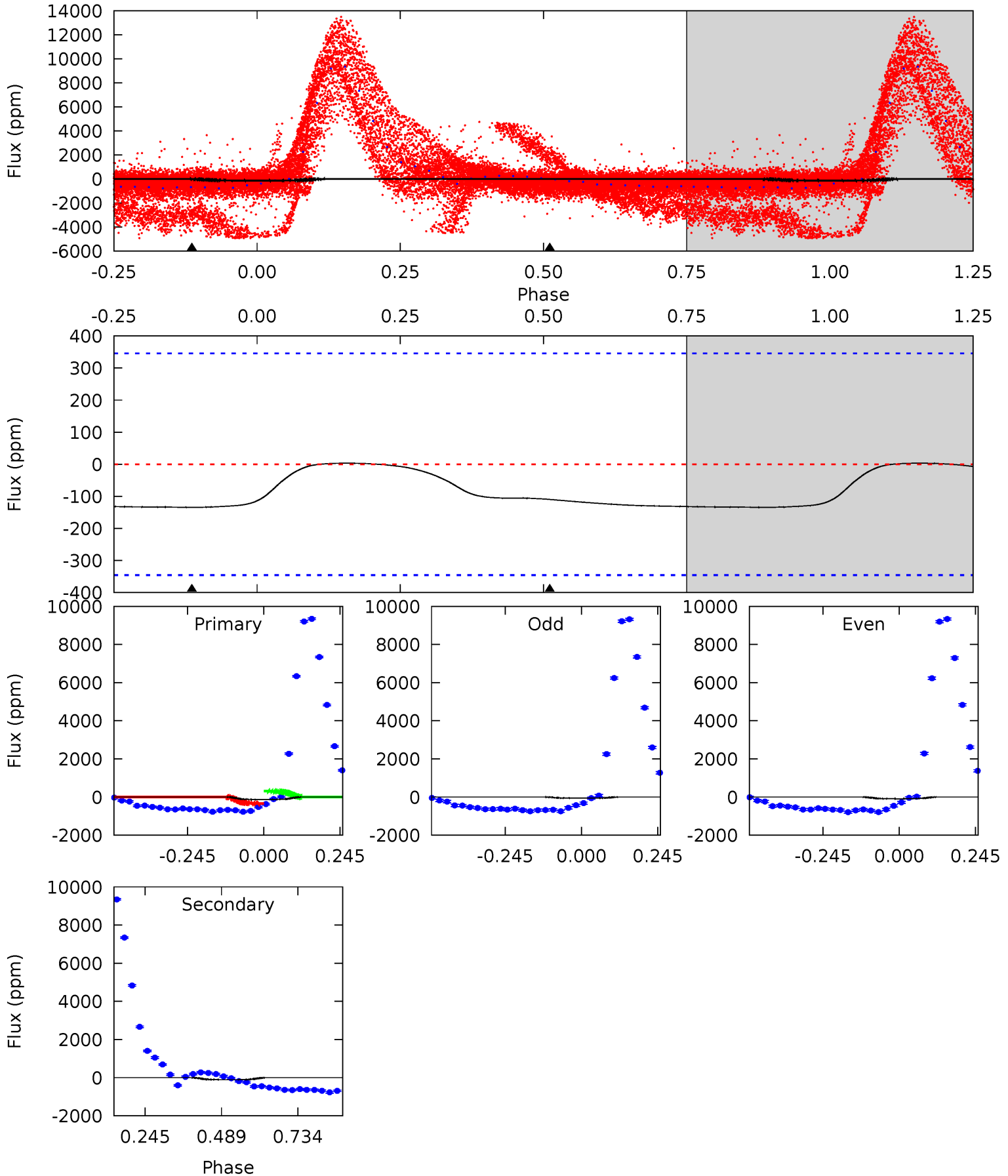
TCE 004917786-01 P= 0.516369 Days $T_0=131.780712$ (BKJD)



DV Model-Shift Uniqueness Test

004917786-01, P = 0.516379 Days, E = 131.262491 Days

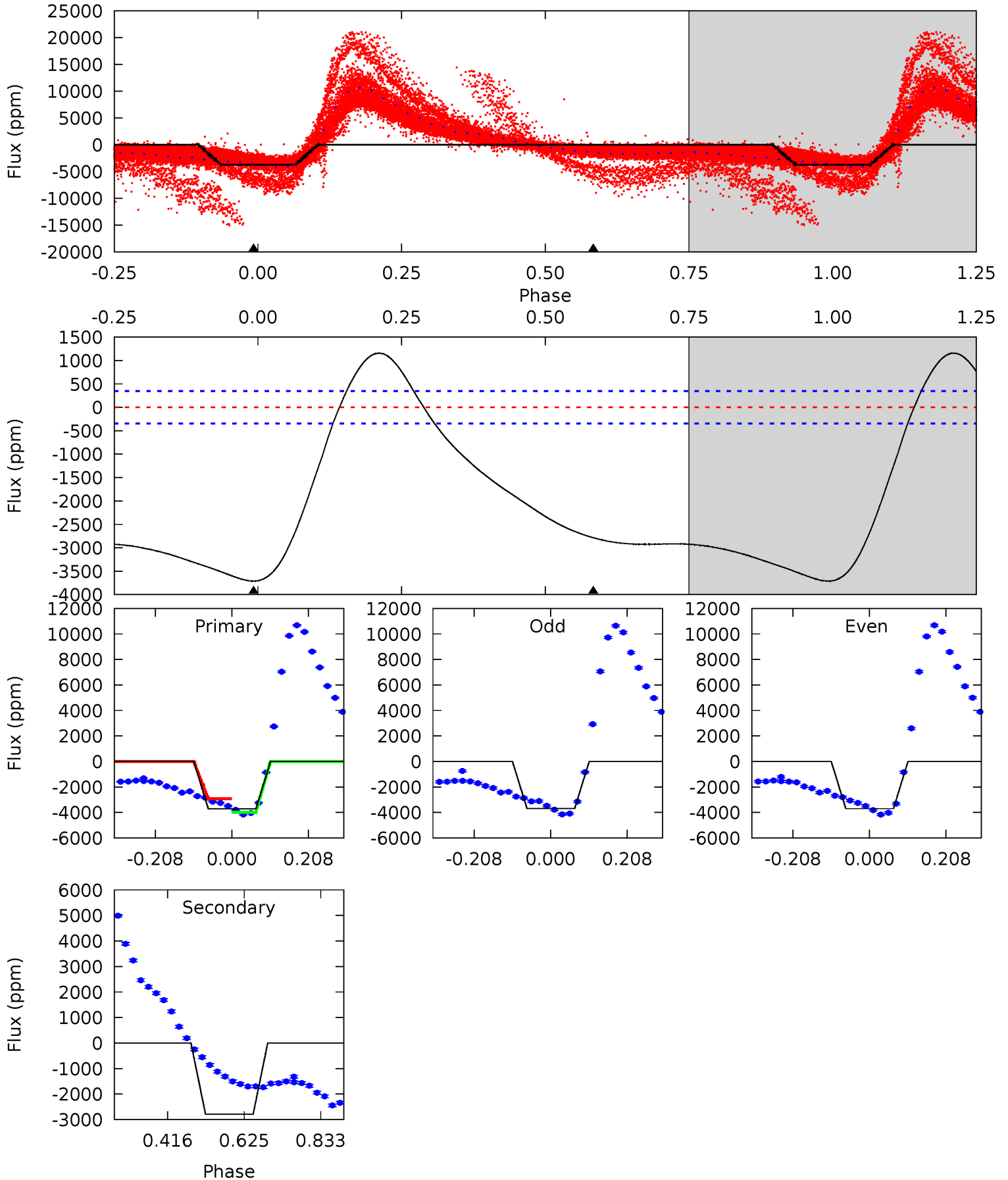
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.70	1.39	0	0	4.37	1.16	0.10	1.70	1.70	1.39	1.39	0.20	4.61	0.02	0.32



Alt Model-Shift Uniqueness Test

004917786-01, P = 0.516369 Days, E = 131.264343 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.3	35.5	0	0	4.41	1.26	10.3	47.3	47.3	35.5	35.5	0.07	1.89	0.24	7.54



Stellar Parameters For KIC 004917786

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5547^{+193}_{-193}	$4.608^{+0.040}_{-0.120}$	$-0.440^{+0.300}_{-0.300}$	$0.739^{+0.149}_{-0.064}$	$0.810^{+0.087}_{-0.087}$	$2.825^{+0.478}_{-1.059}$
	+3%/-3%	+1%/-3%	+68%/-68%	+20%/-9%	+11%/-11%	+17%/-37%
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 004917786-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-110 ± 79	$4.27^{+0.44}_{-0.31}$	2748^{+146}_{-112}	2616^{+497}_{-5316}	$0.420^{+0.330}_{-0.281}$
Alt.	-2785 ± 79	$4.44^{+0.42}_{-0.29}$	2746^{+141}_{-117}	5453^{+201}_{-220}	11^{+1}_{-1}

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

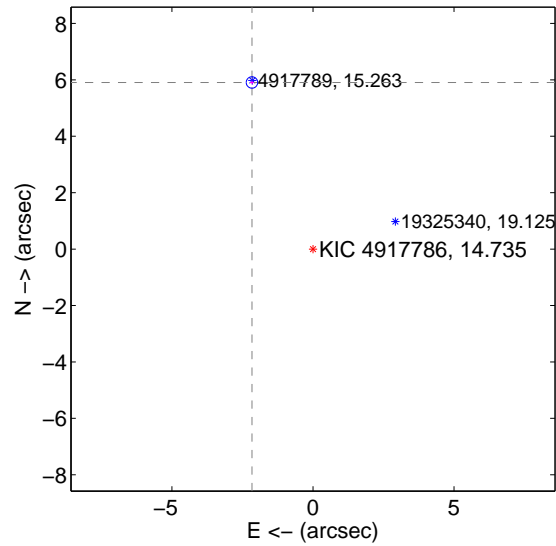
Supplemental centroid analysis for 004917786-01. Kepler magnitude: 14.73. Transit SNR 111.30

There are 4 quarters with good PRF difference image offsets

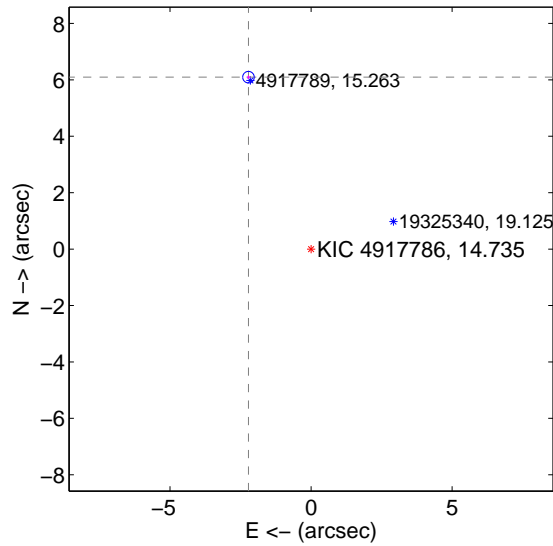
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.289 \pm 0.068	93.10	2.163 \pm 0.067	5.906 \pm 0.067
PRF-fit source offset from KIC position	6.485 \pm 0.068	95.11	2.219 \pm 0.071	6.094 \pm 0.068
photometric centroid source offset	5.83 \pm 0.44	13.23	2.63 \pm 0.17	5.20 \pm 0.49

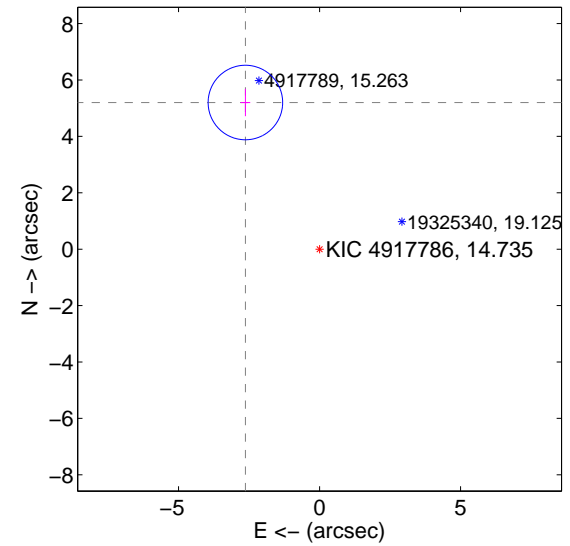
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

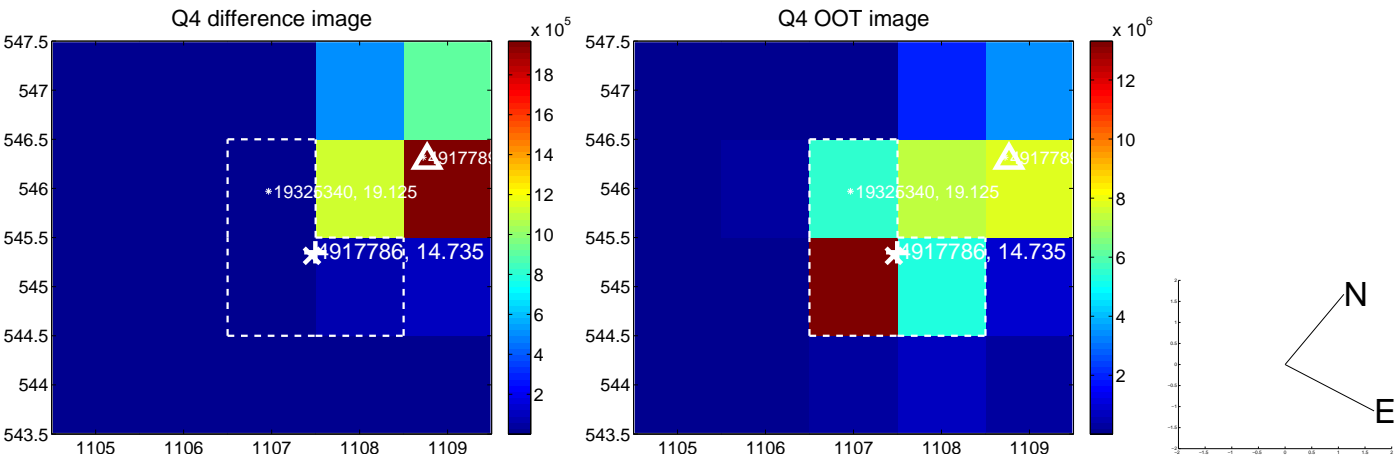
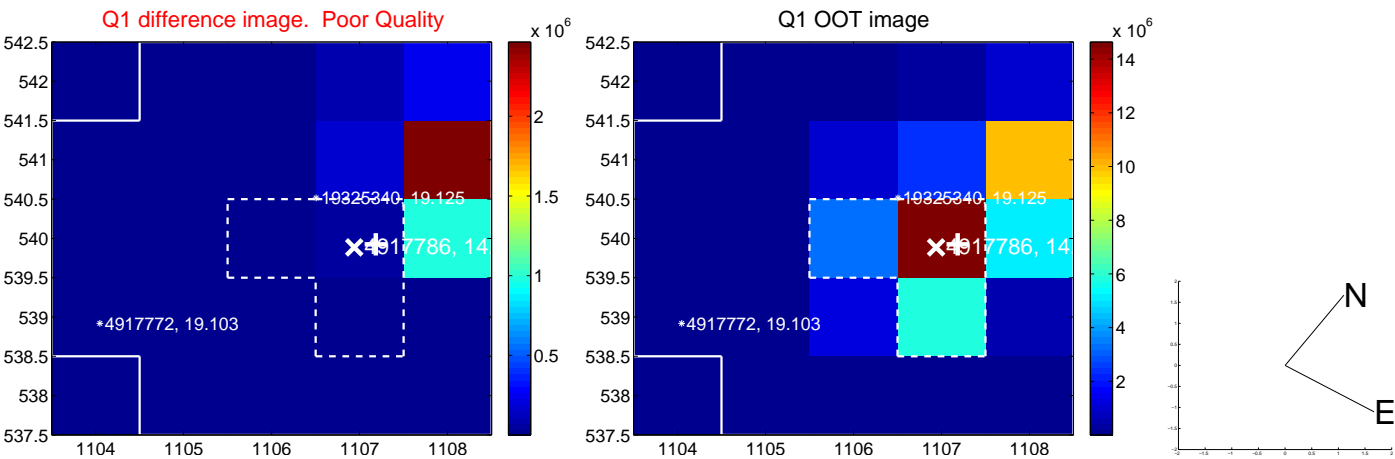


offset from photometric centroids

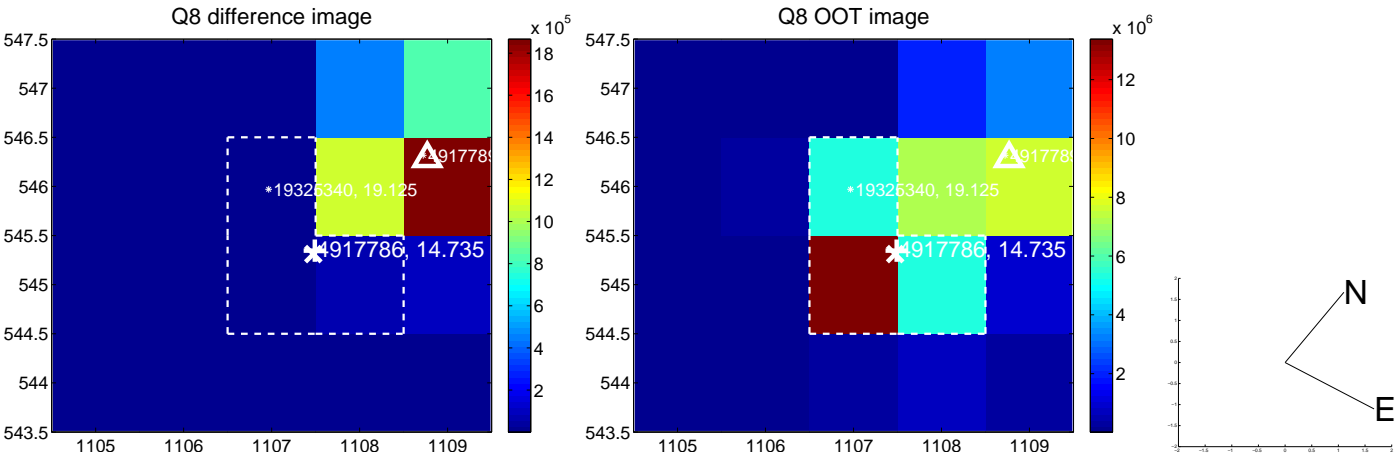
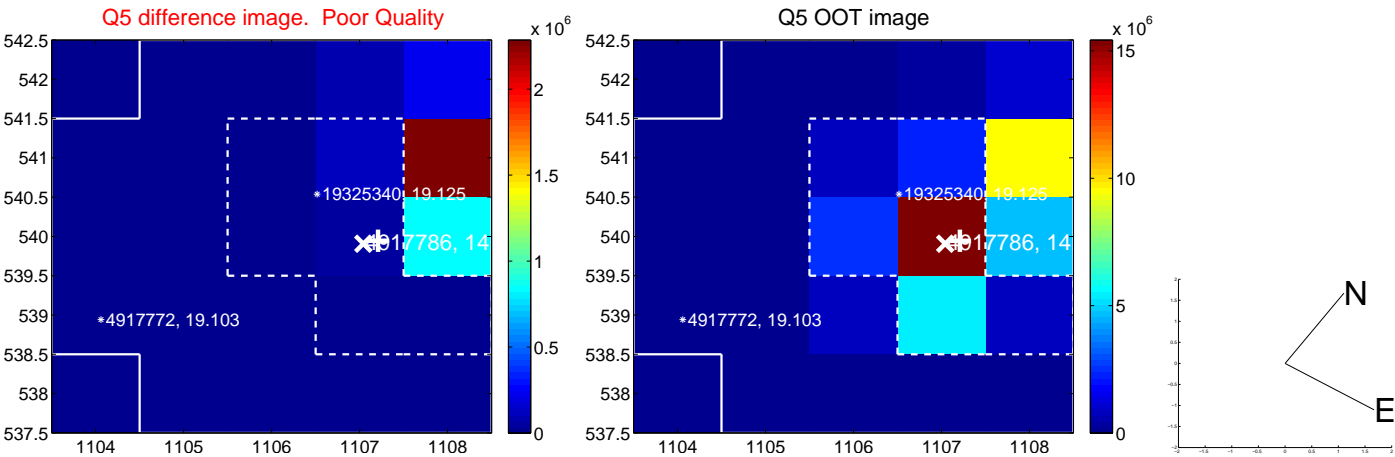


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

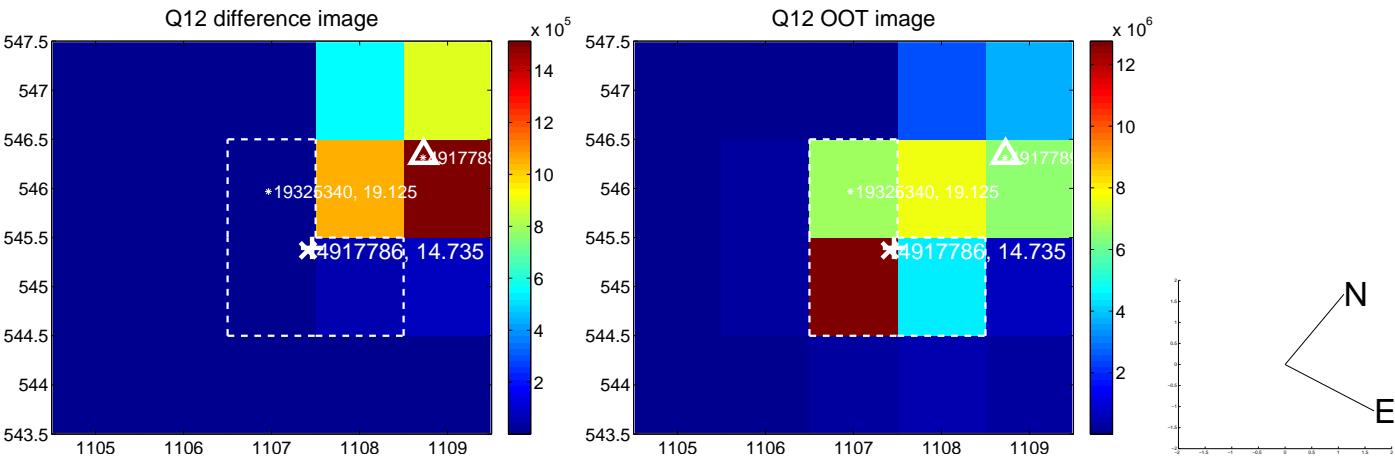
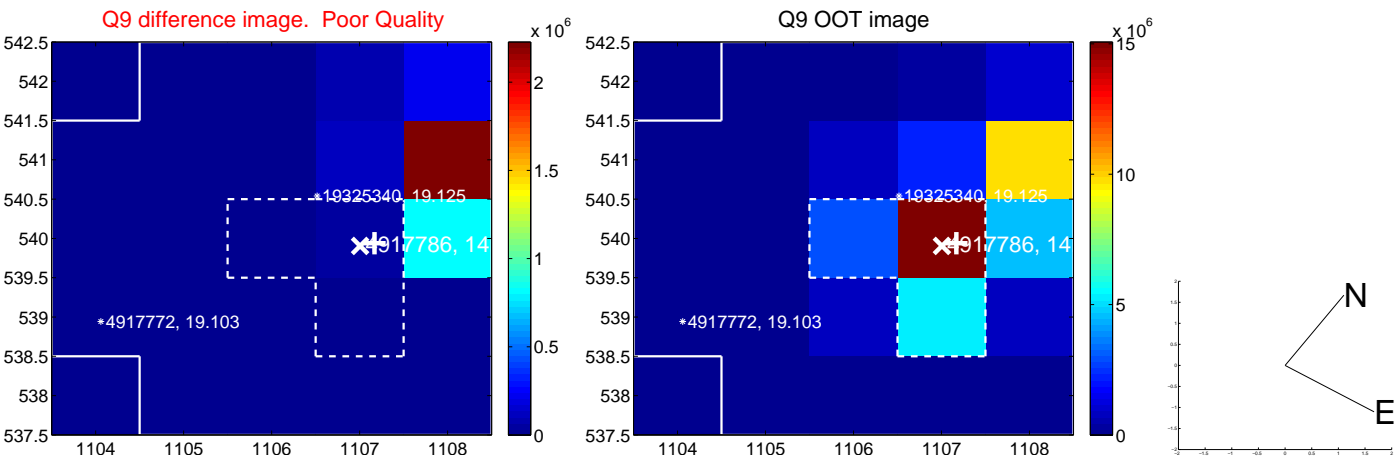
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



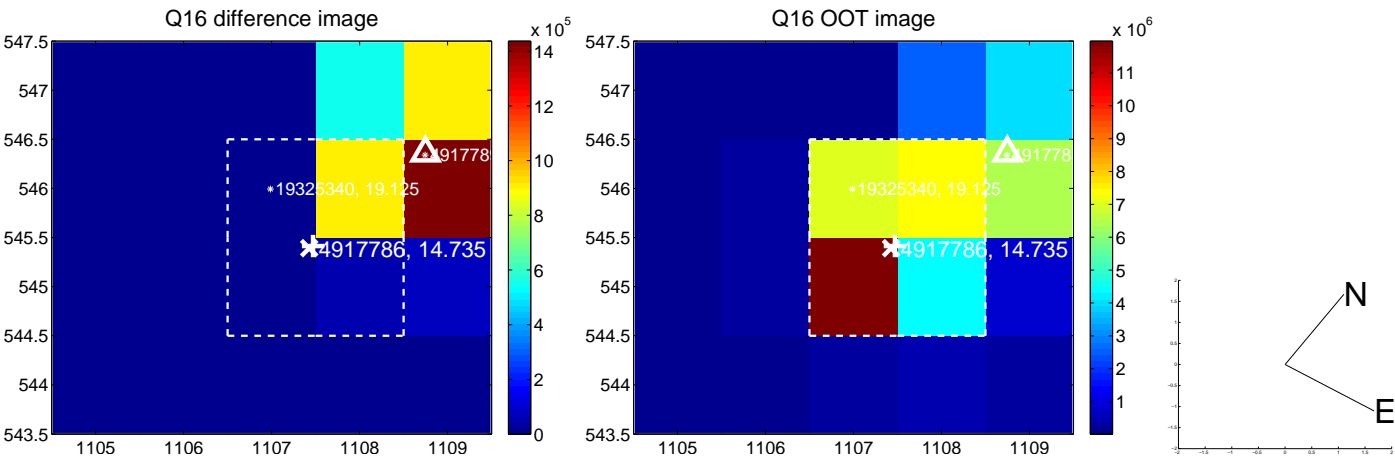
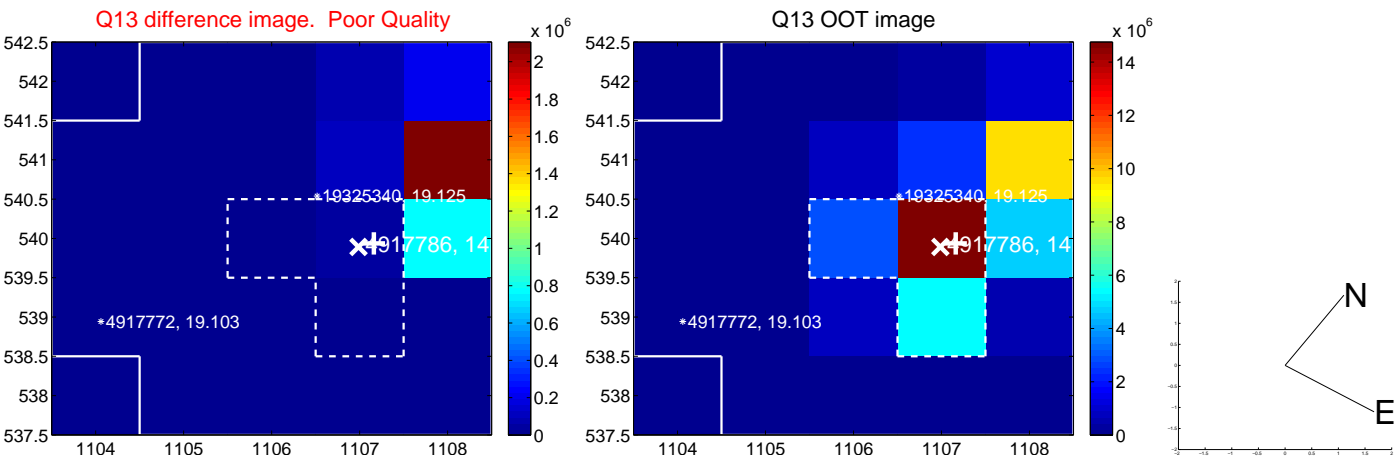
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



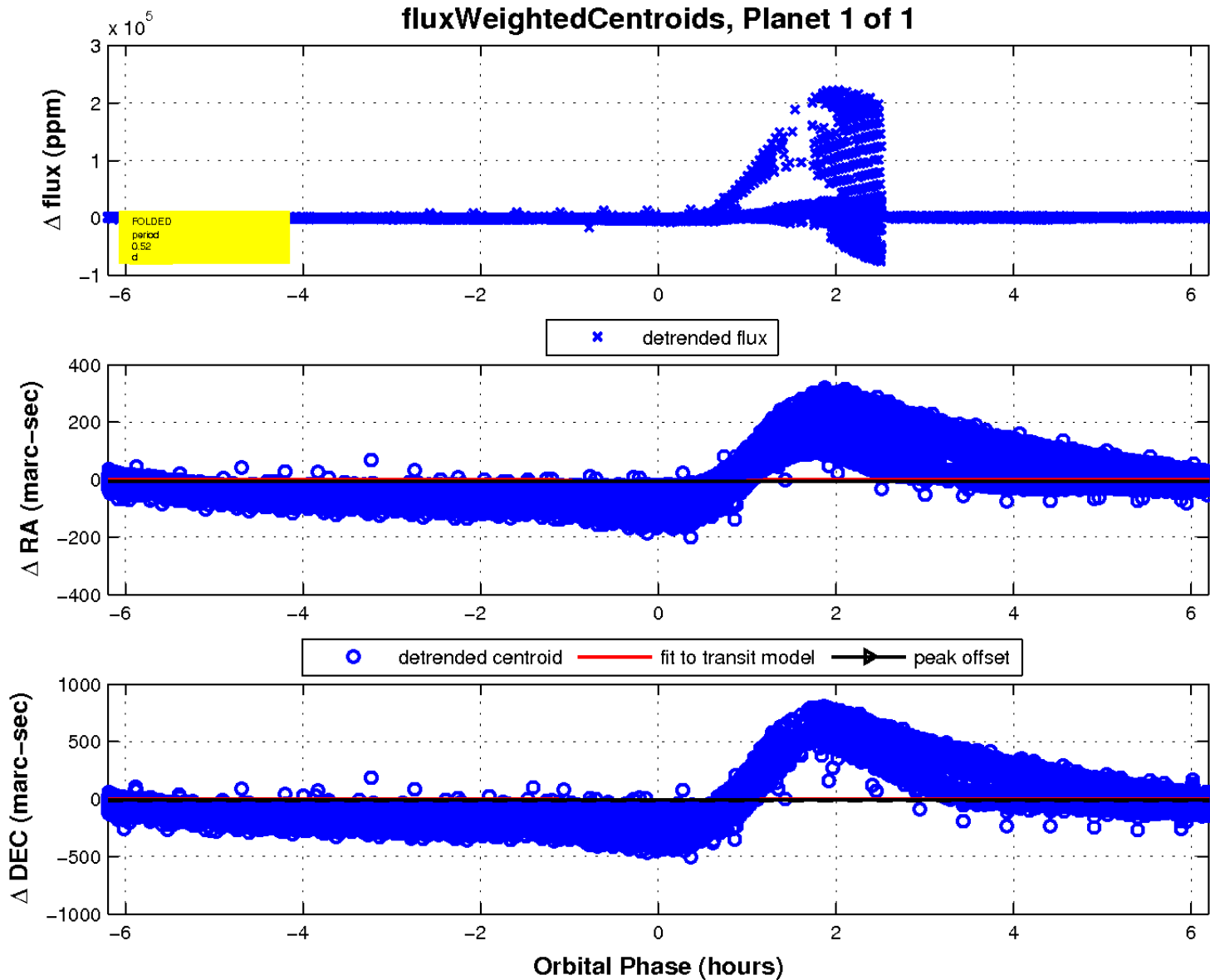
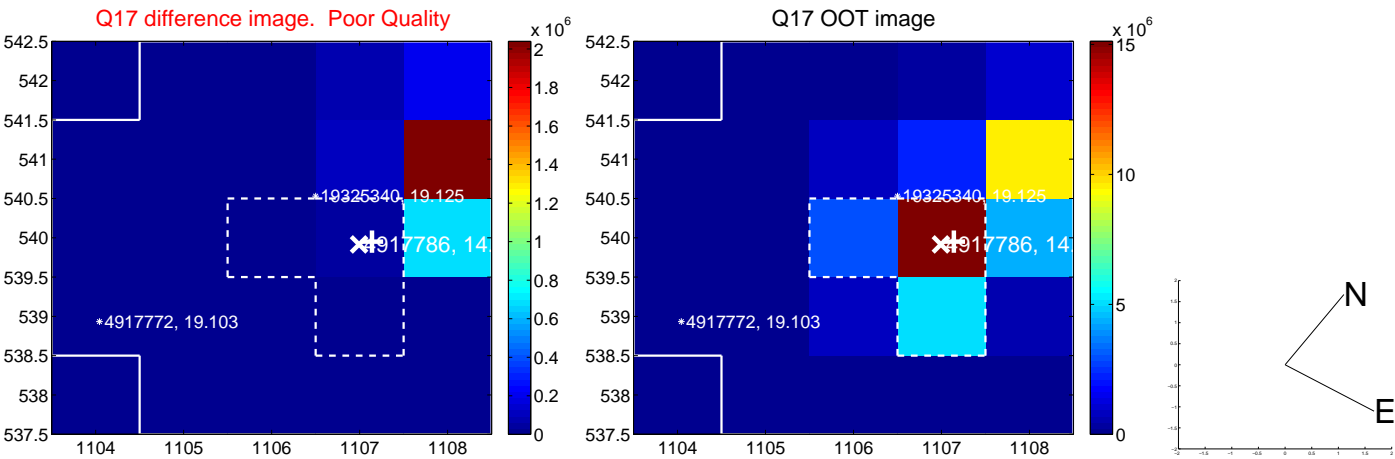
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

