

KIC 006357780

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})
006357780-01	OBS	No	266.964870	228.192987	516.7	25.729	7.2	9.2	0.93	5841	2.16	1.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006357780-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—ALL_TRANS_CHASES—MOD_NONUNIQ_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.

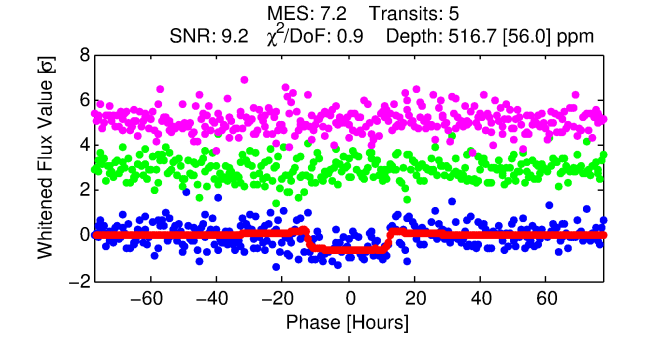
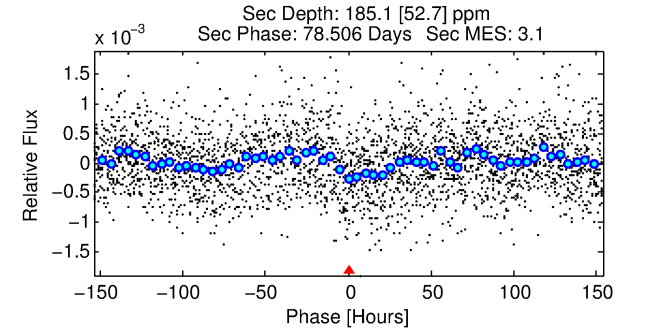
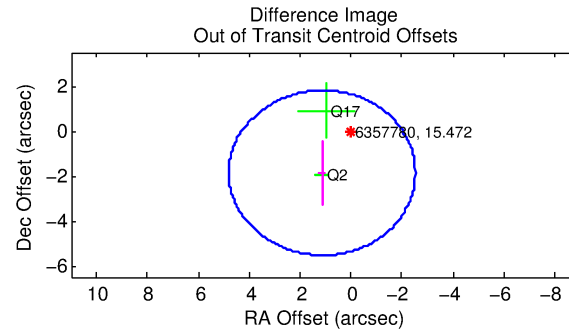
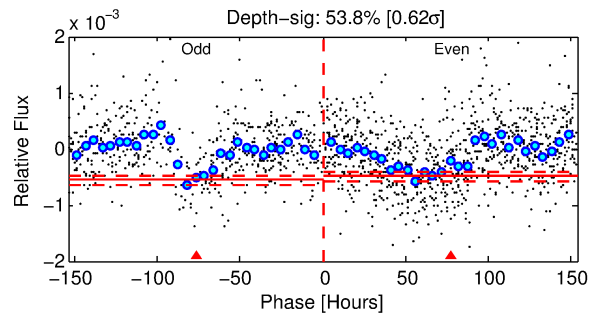
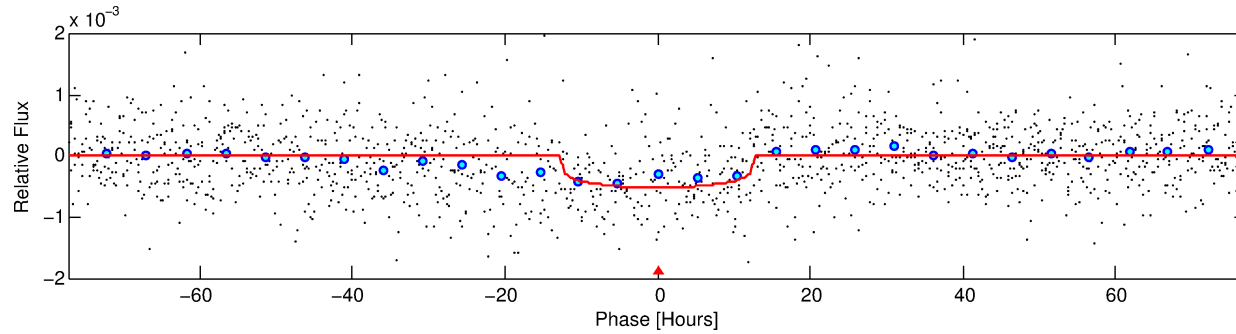
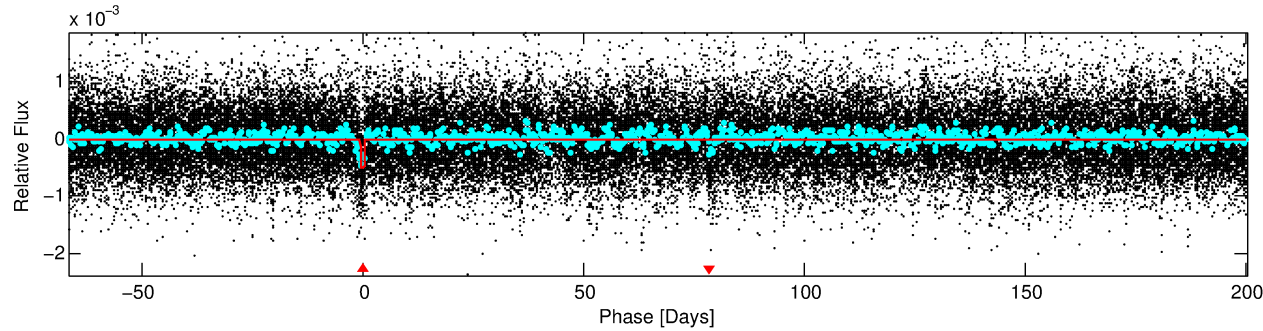
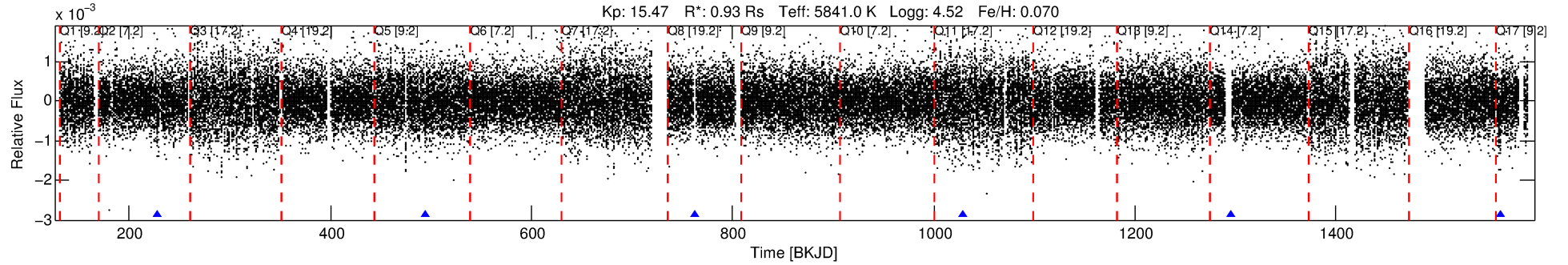
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006357780-01

No Significant Match Found

DV One-Page Summary

KIC: 6357780 Candidate: 1 of 1 Period: 266.965 d



DV Fit Results:

Period = 266.96487 [0.00702] d
Epoch = 228.1930 [0.0217] BKJD
Rp/R* = 0.0213 [0.0109]
a/R* = 70.51 [158.48]
b = 0.50 [3.38]
Seff = 1.33 [0.46]
Teq = 274 [23] K
Rp = 2.16 [1.23] Re
a = 0.8241 [0.1751] AU
Ag = 14775.65 [16434.62] [0.90 σ]
Teffp = 4669 [1254] K [3.50 σ]

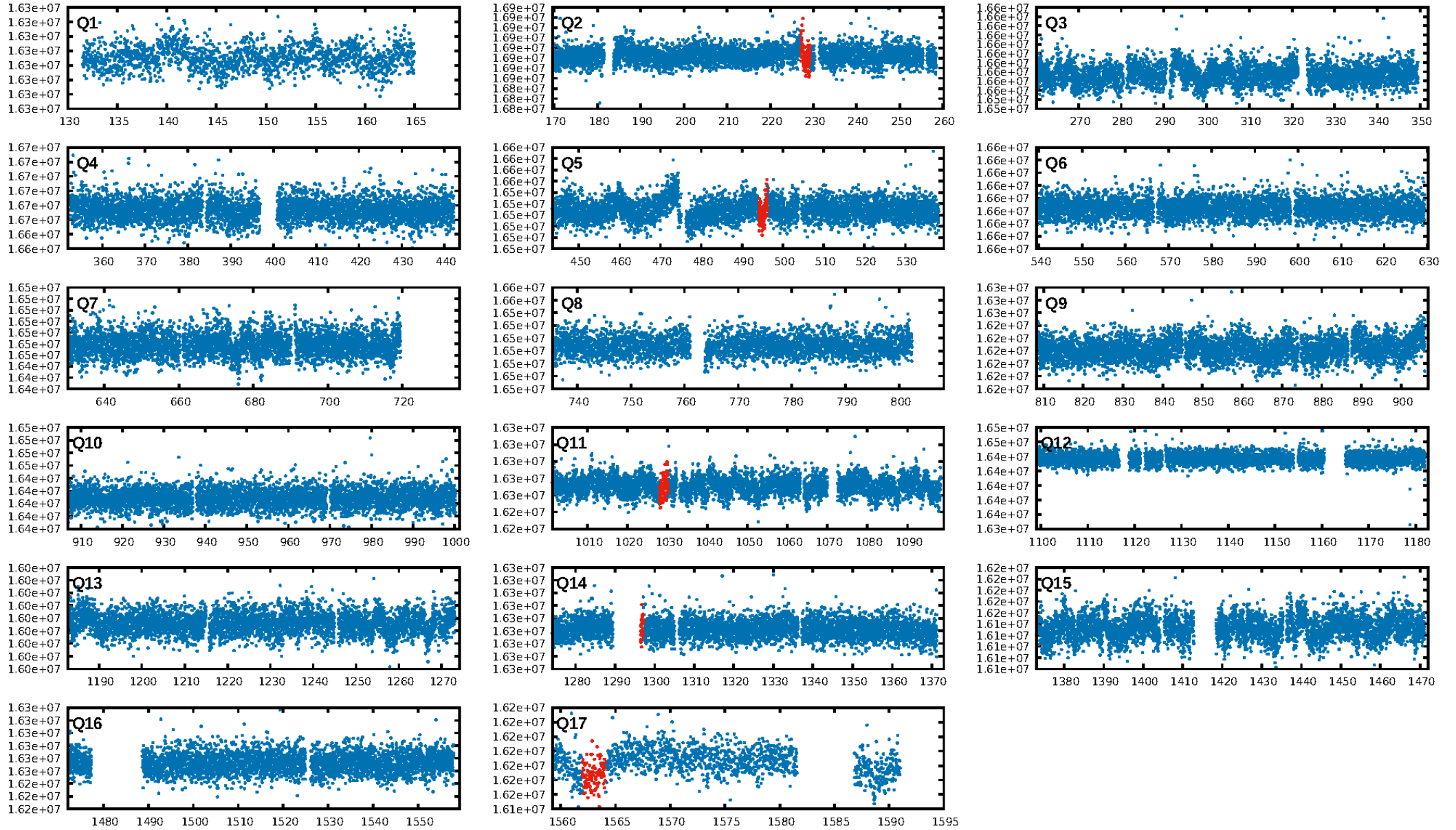
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 90.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.84e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -4.126
Centroid-sig: 47.6%
Centroid-so: 0.785 arcsec [0.56 σ]
OotOffset-rm: 2.183 arcsec [1.78 σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-rm: 2.327 arcsec [3.85 σ]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

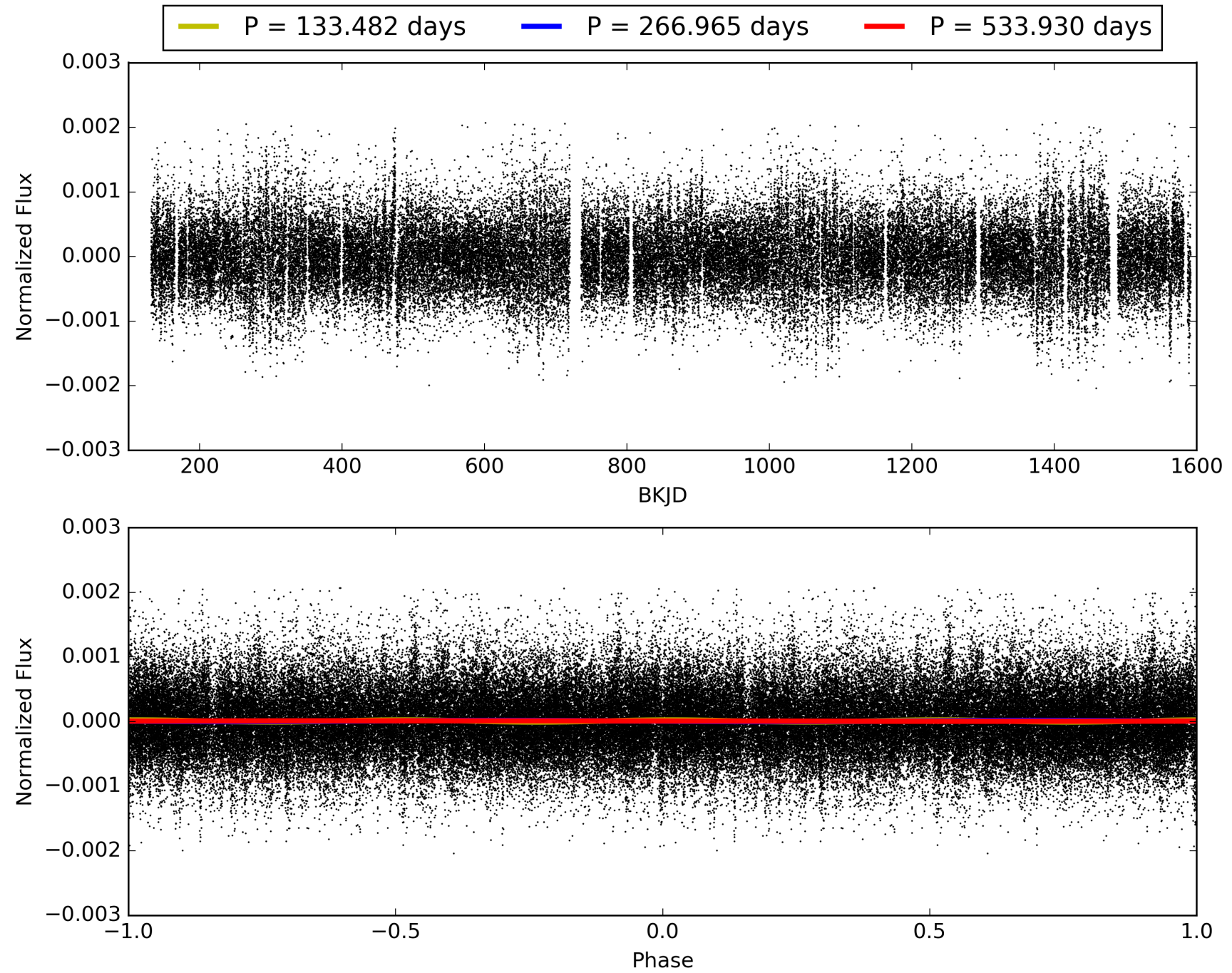
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 16:50:59 Z

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

TCE 006357780-01, PDC Light Curves

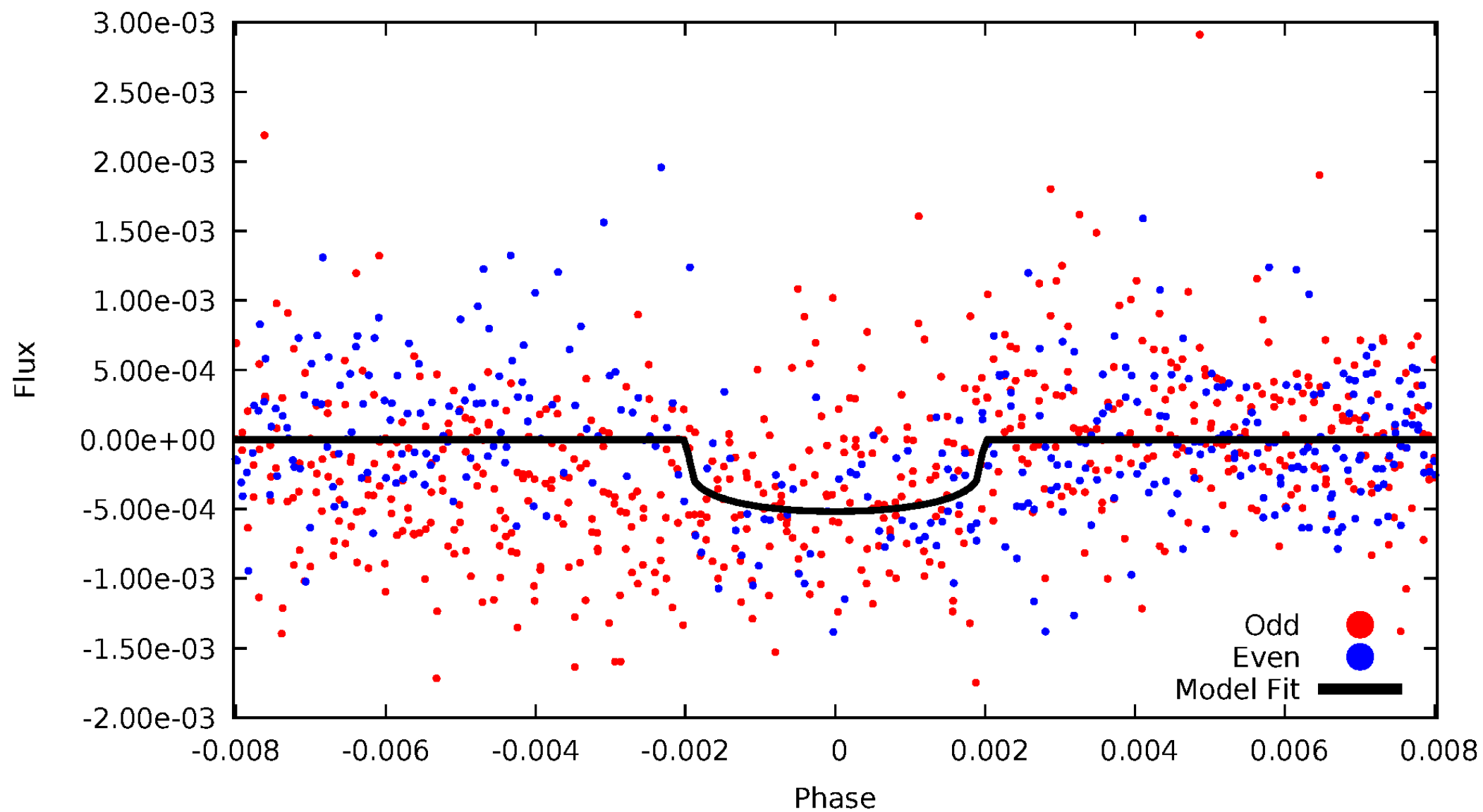


TCE 006357780-01



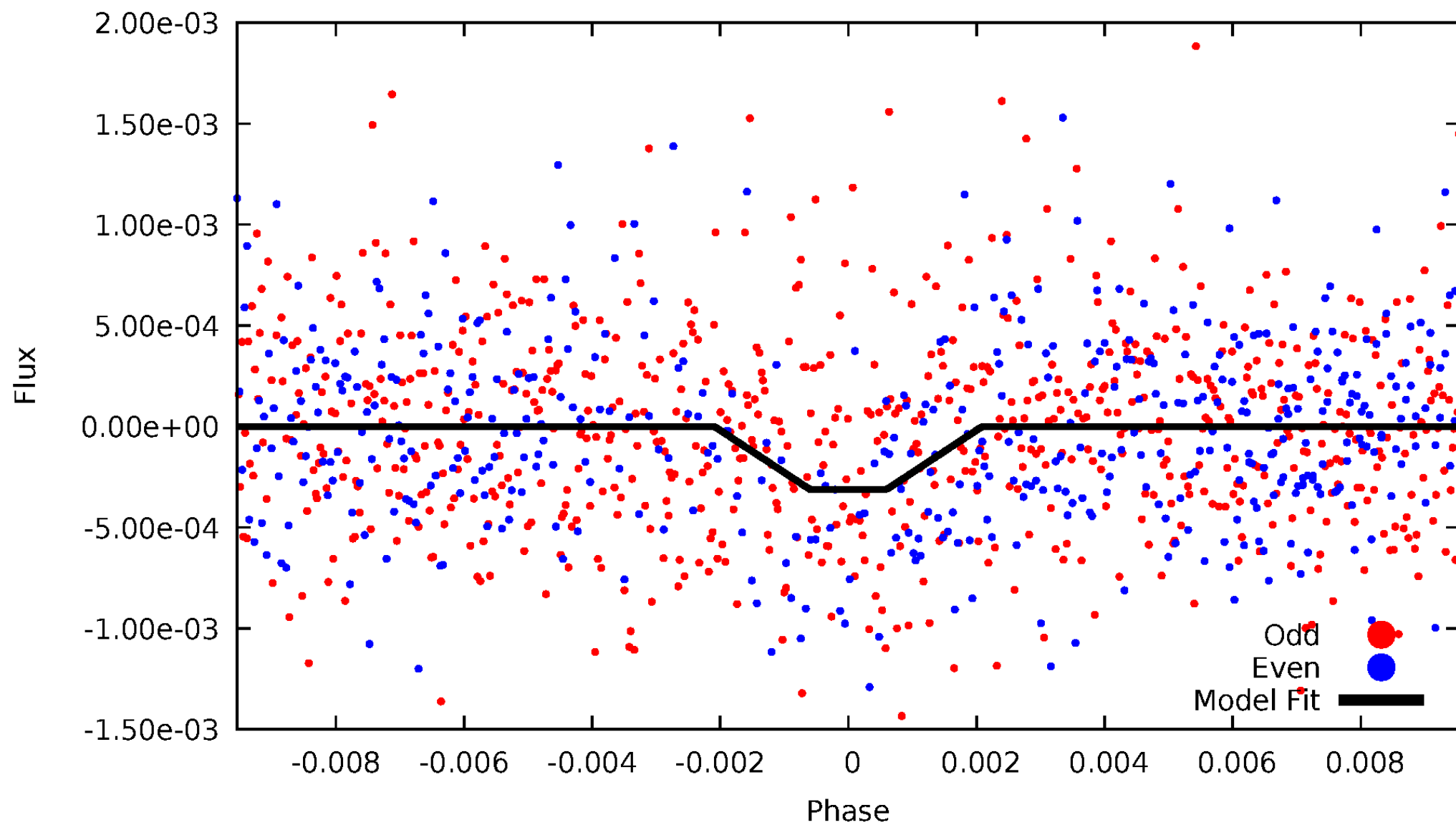
DV Odd/Even

TCE 006357780-01



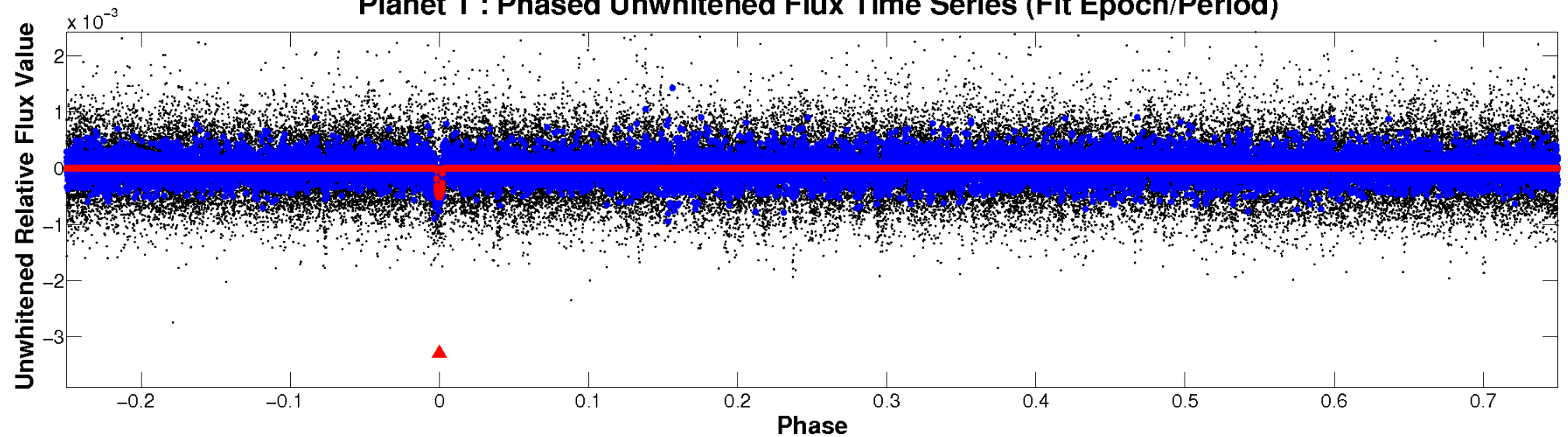
ALT Odd/Even

TCE 006357780-01

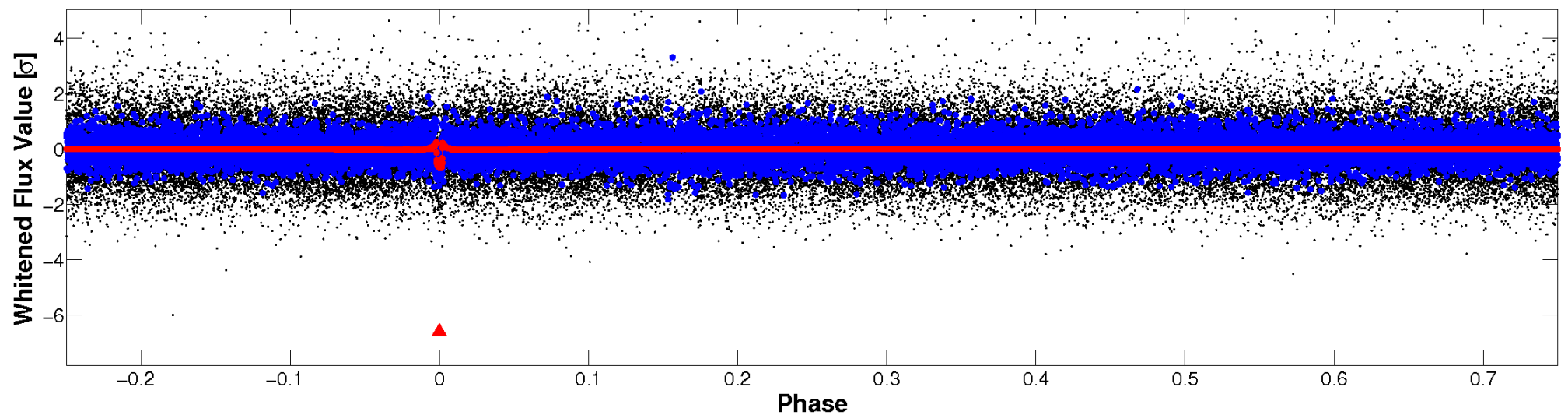


Non-Whitened Vs. Whitened Light Curve

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

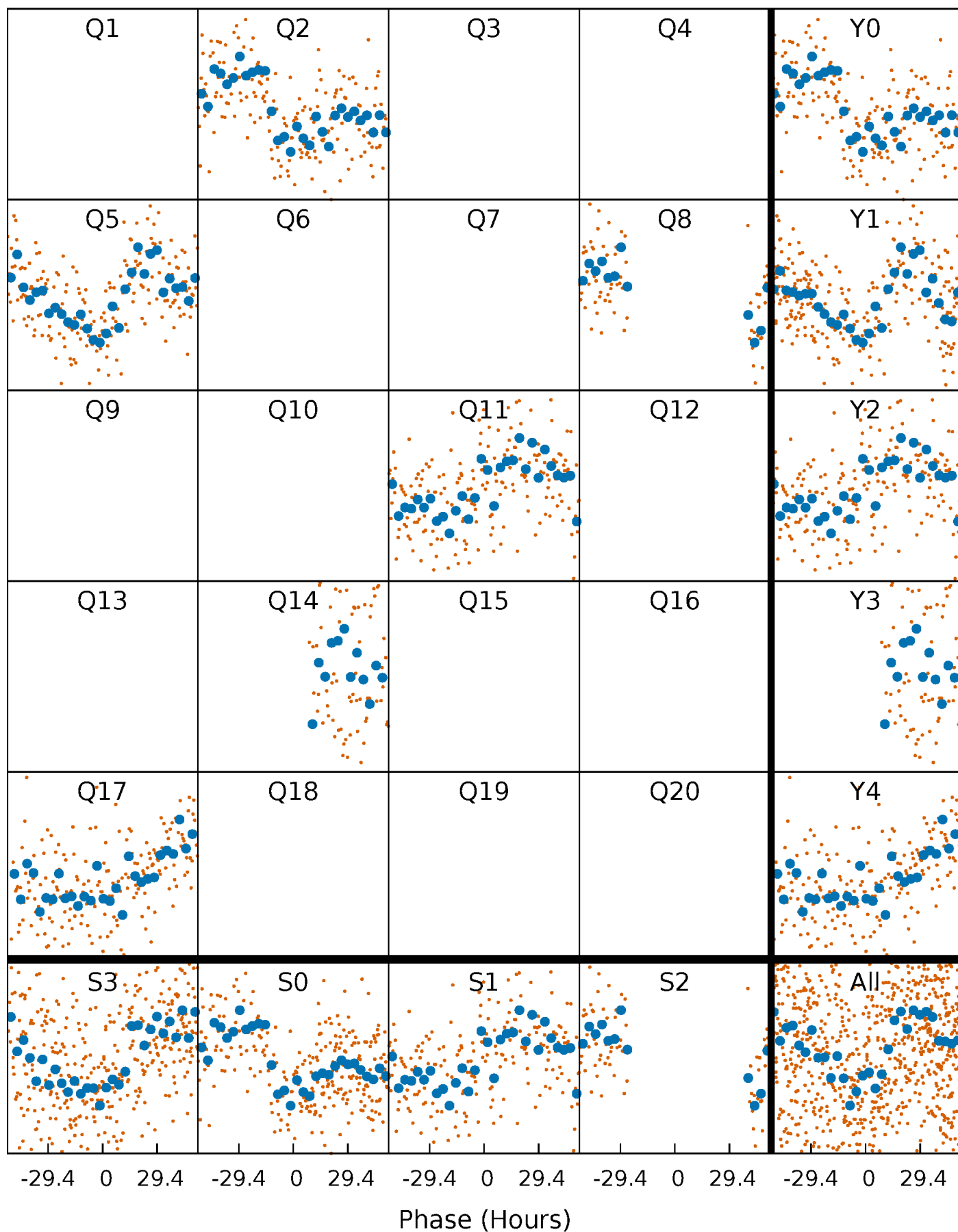


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



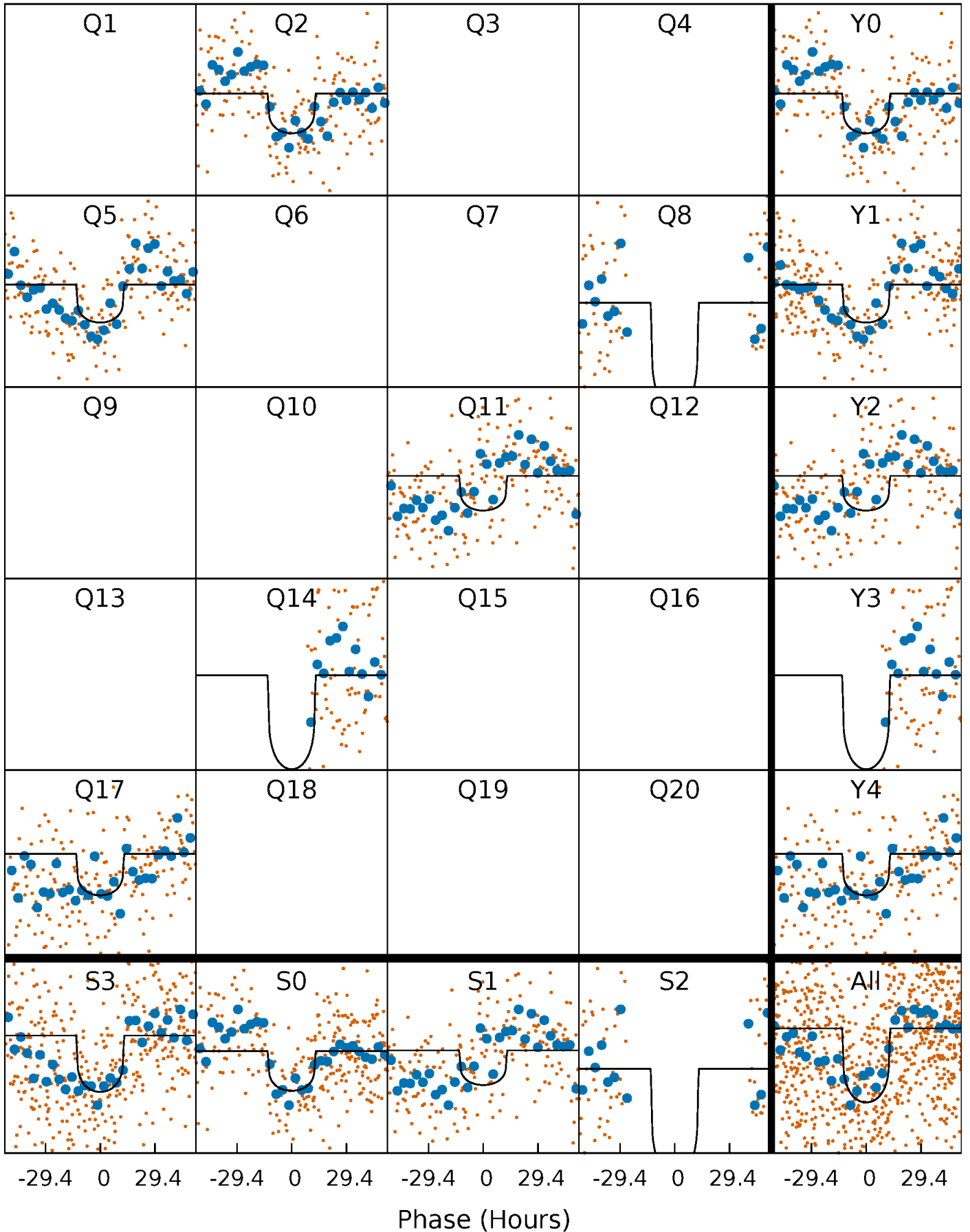
PDC Quarter-Phased Transit Curves

TCE 006357780-01 P=266.964870 Days $T_0=228.192987$ (BKJD)



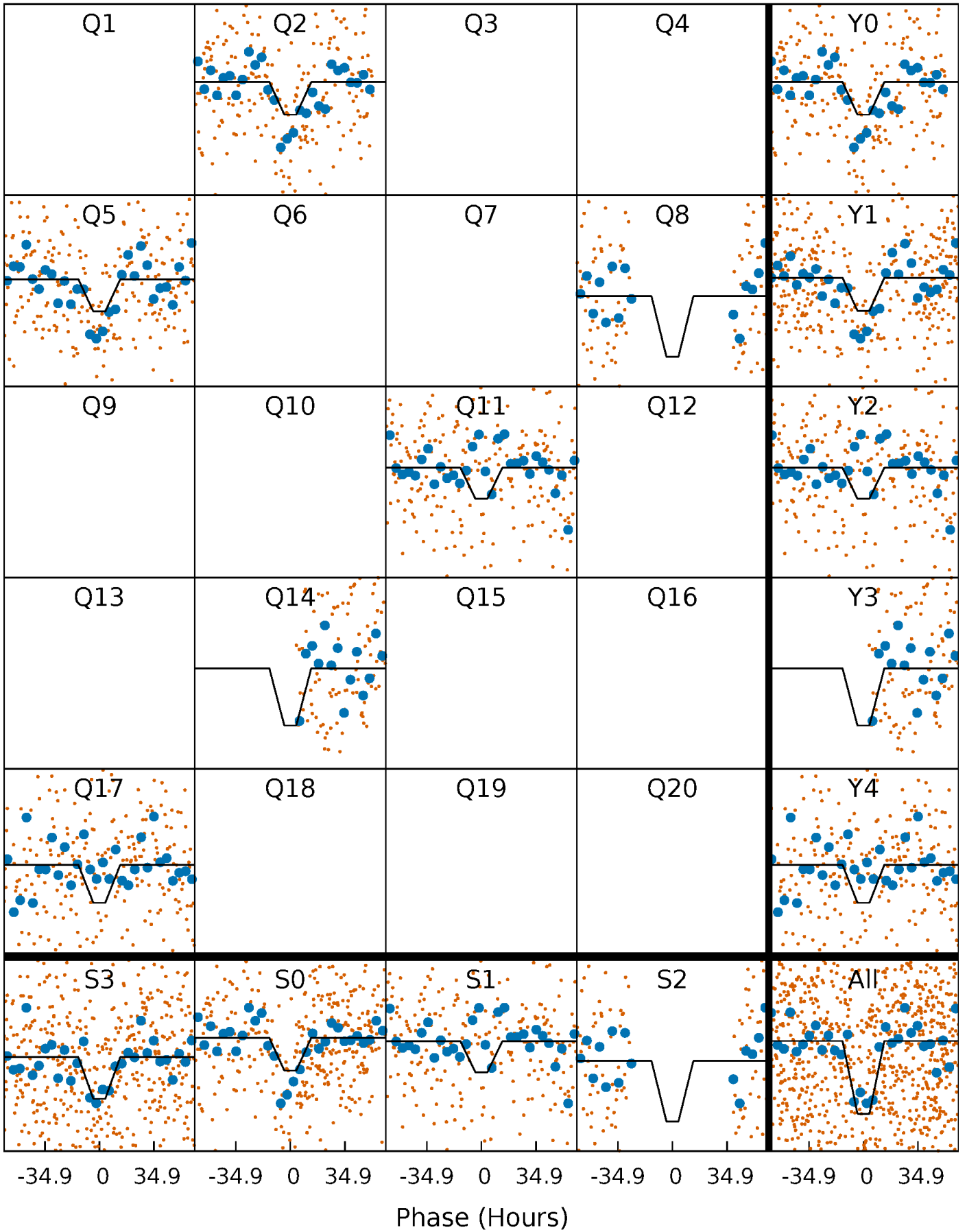
DV Quarter-Phased Transit Curves

TCE 006357780-01 P=266.964870 Days $T_0=228.192987$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

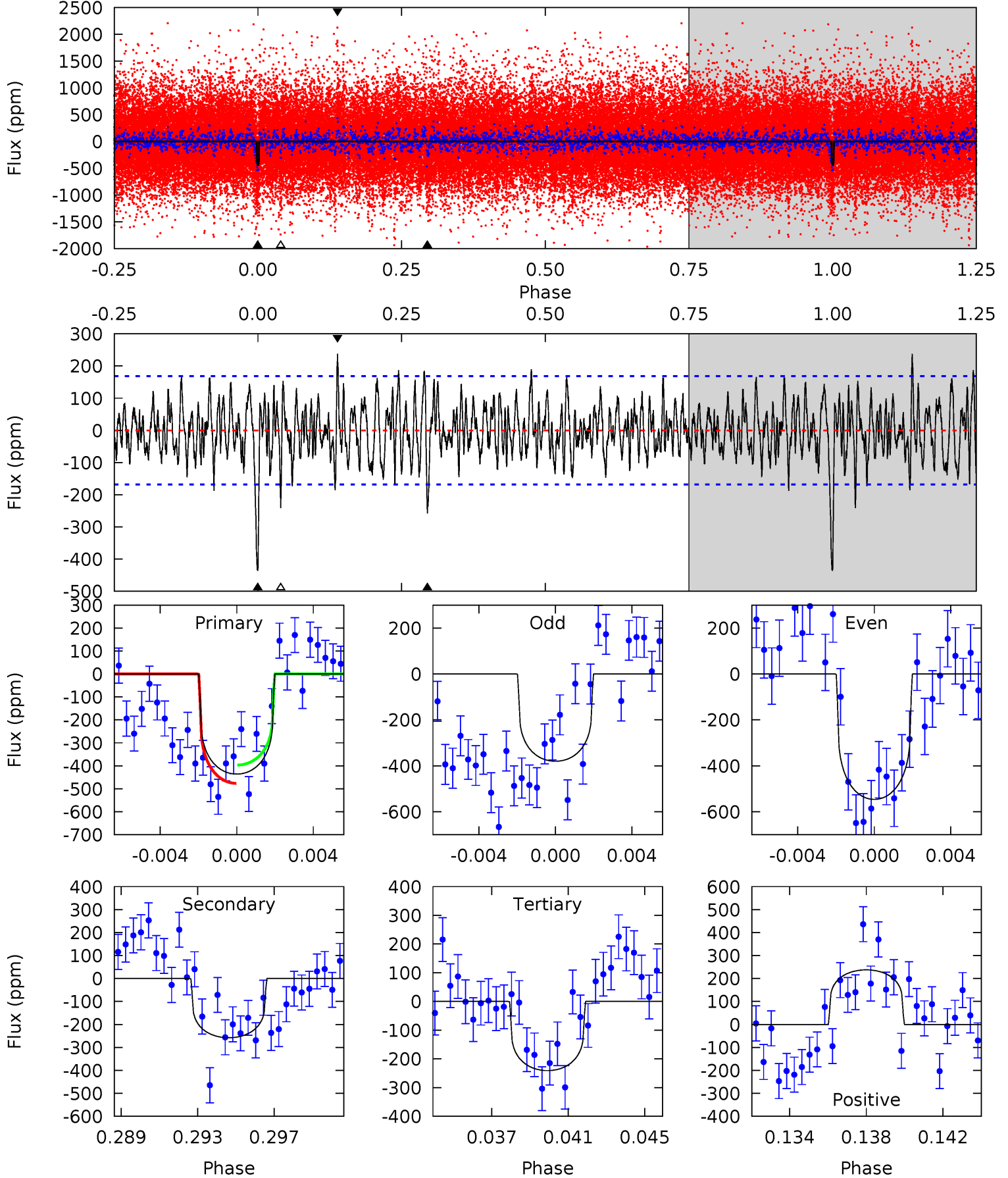
TCE 006357780-01 P=267.039384 Days $T_0=228.097457$ (BKJD)



DV Model-Shift Uniqueness Test

006357780-01, P = 266.964870 Days, E = 228.192987 Days

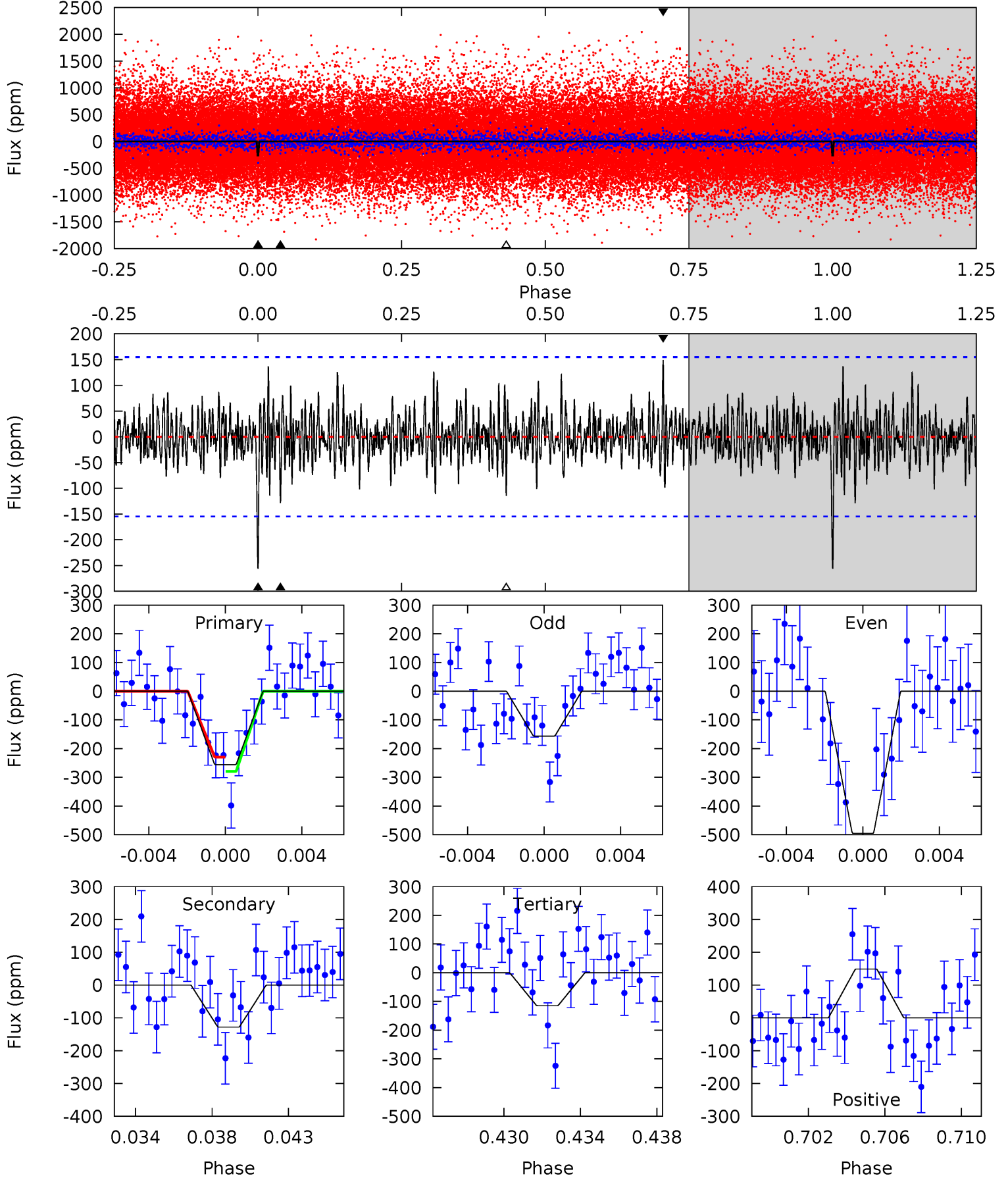
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	7.96	7.43	7.33	5.20	2.87	2.11	6.02	6.12	0.53	0.63	2.31	0.88	0.35	1.23



Alt Model-Shift Uniqueness Test

006357780-01, P = 267.039384 Days, E = 228.097457 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.57	4.30	3.84	4.98	5.19	2.86	1.23	4.74	3.59	0.46	-0.69	5.26	0.93	0.37	0.84



Stellar Parameters For KIC 006357780

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5841^{+140}_{-192}	$4.520^{+0.033}_{-0.176}$	$0.070^{+0.250}_{-0.350}$	$0.931^{+0.229}_{-0.082}$	$1.047^{+0.101}_{-0.139}$	$1.828^{+0.411}_{-0.875}$
	+2%/-3%	+1%/-4%	+357%/-500%	+25%/-9%	+10%/-13%	+22%/-48%
Source	PHO1	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 006357780-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-258 ± 32	$2.22^{+1.21}_{-1.03}$	392^{+24}_{-17}	5144^{+1853}_{-803}	19128^{+45989}_{-11363}
Alt.	-128 ± 30	$1.84^{+1.11}_{-0.97}$	391^{+23}_{-17}	4799^{+2144}_{-830}	13640^{+48914}_{-8768}

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

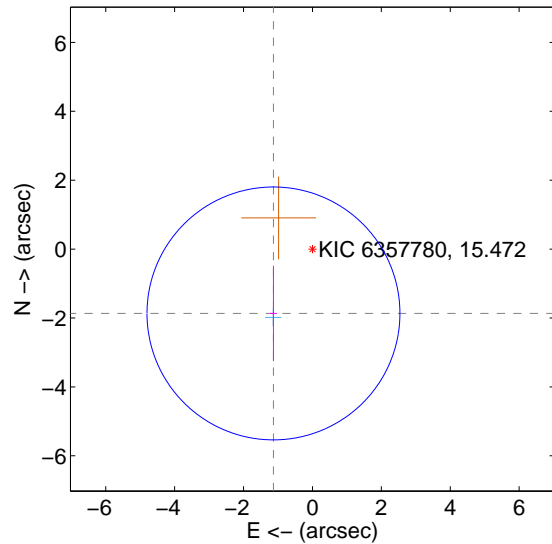
Supplemental centroid analysis for 006357780-01. Kepler magnitude: 15.47. Transit SNR 9.19

There are 1 quarters with good PRF difference image offsets

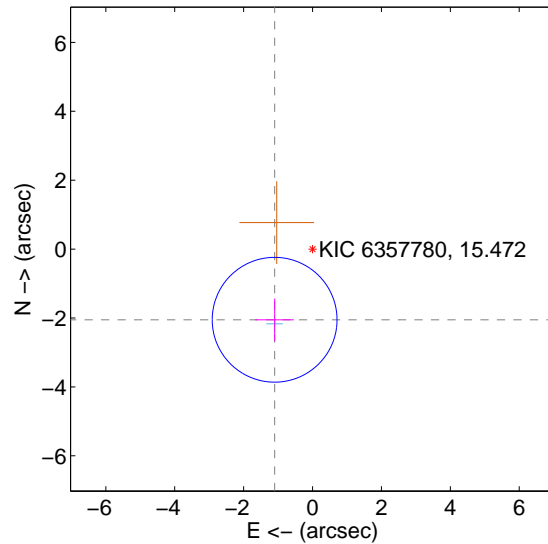
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.183 ± 1.223	1.78	1.131 ± 0.101	-1.867 ± 1.384
PRF-fit source offset from KIC position	2.327 ± 0.604	3.85	1.100 ± 0.559	-2.051 ± 0.616
photometric centroid source offset	0.78 ± 1.39	0.56	0.38 ± 1.51	0.69 ± 1.36

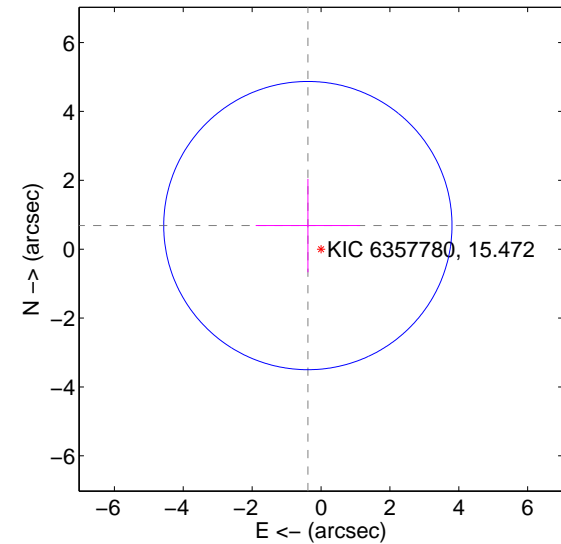
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

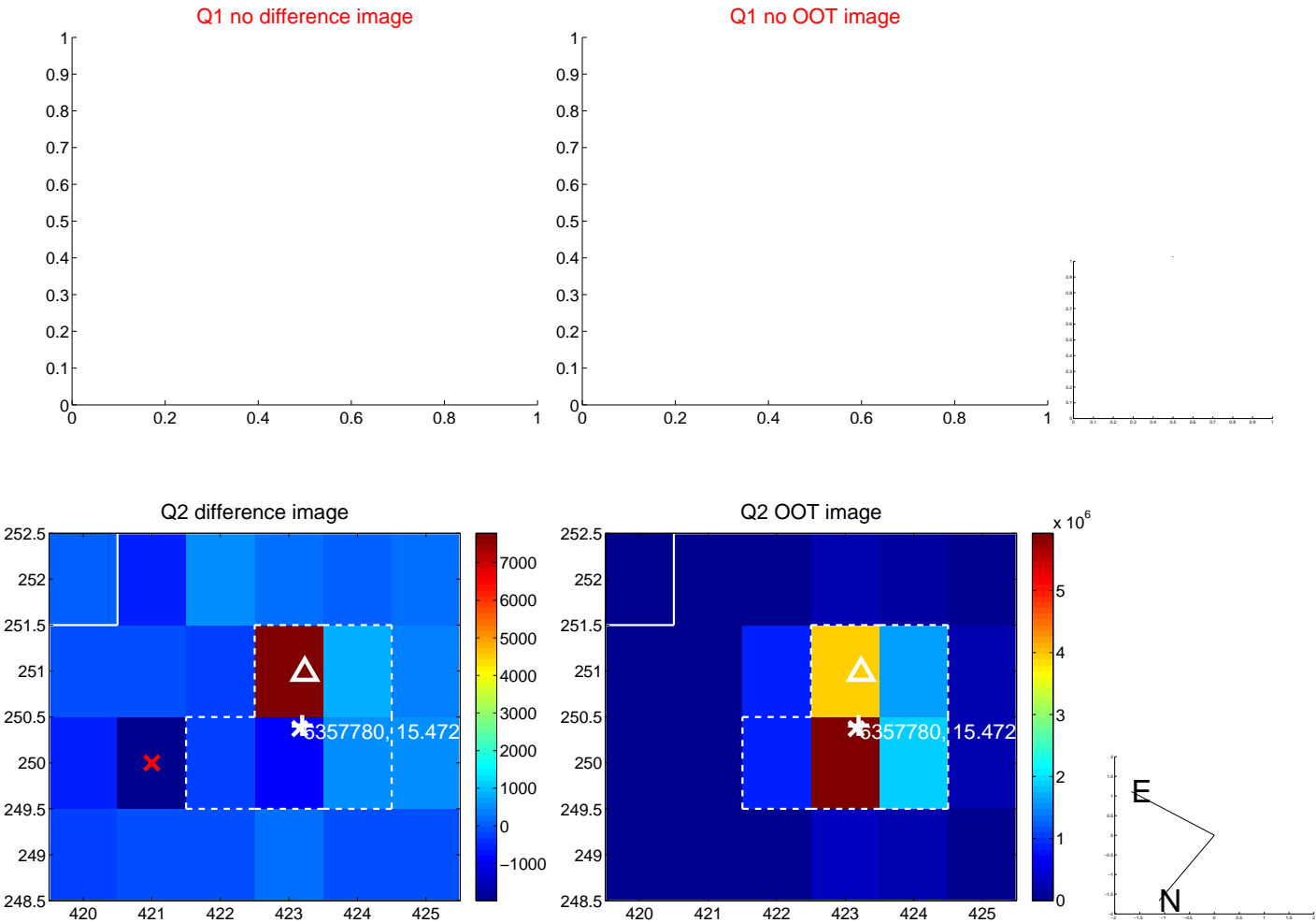


offset from photometric centroids

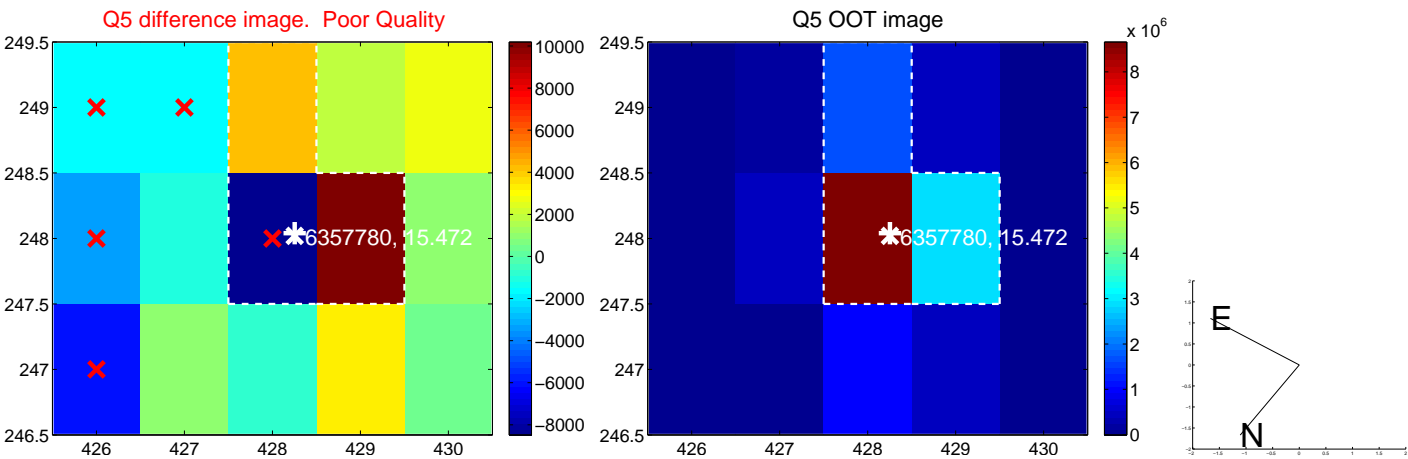


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



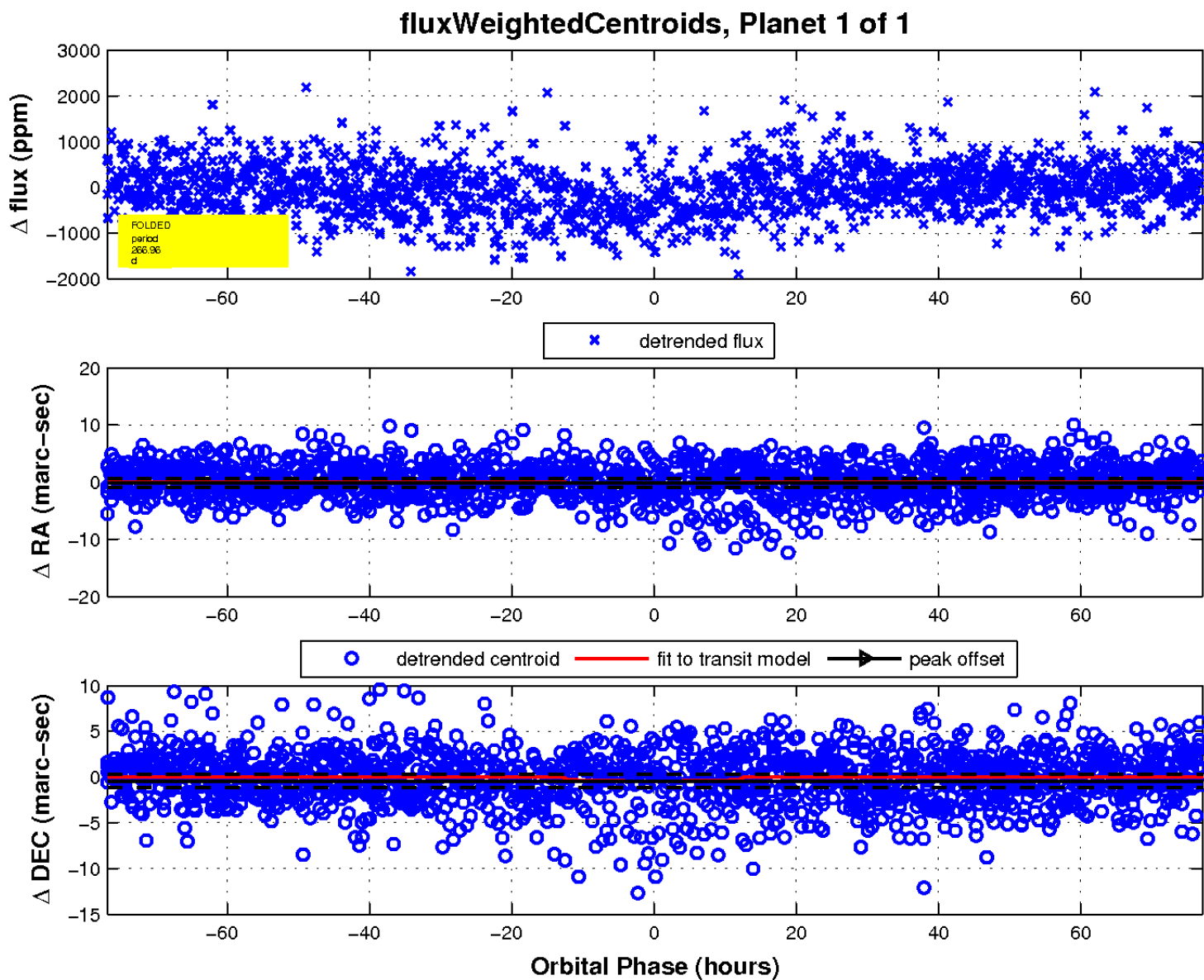
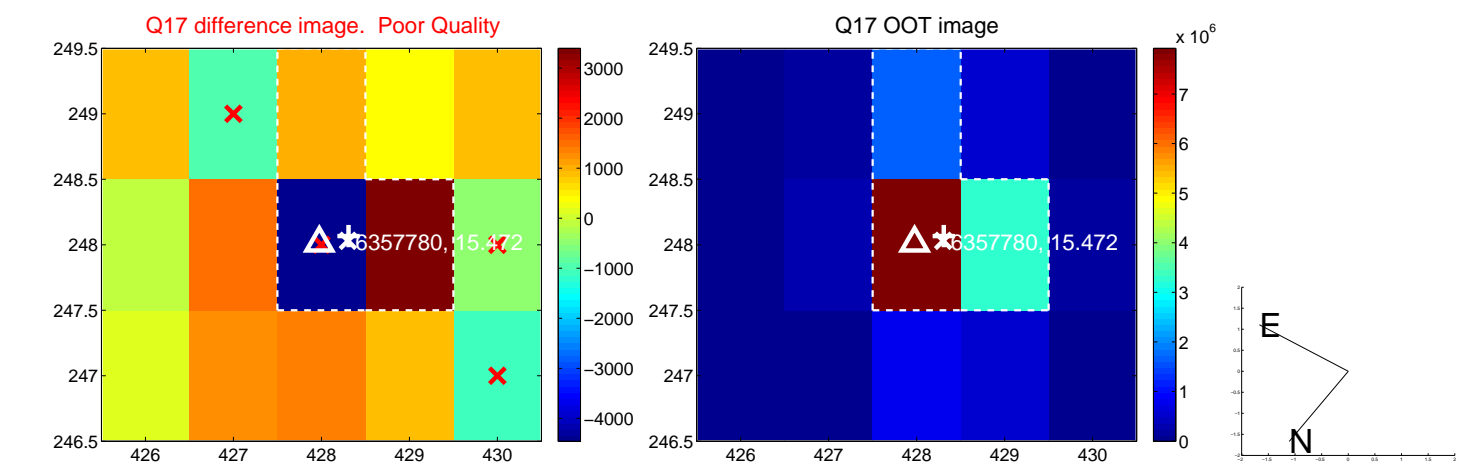
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

