

KIC 007880929

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})
007880929-01	OBS	No	599.727947	302.701969	653.9	6.758	12.8	10.8	1.10	6170	2.98	0.79

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007880929-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—CENT_FEW_DIFFS—HALO_GHOST

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

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

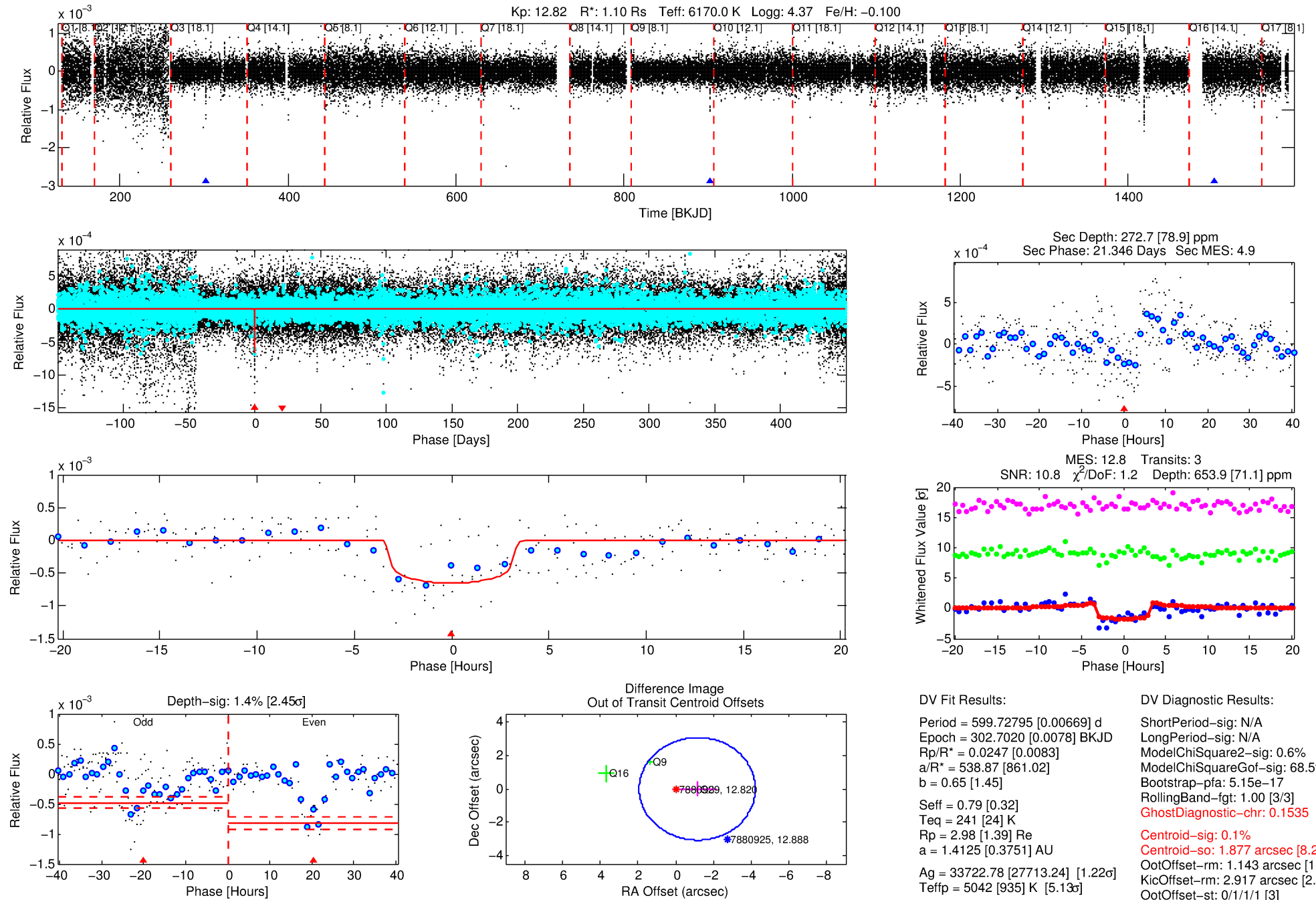
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007880929-01

No Significant Match Found

DV One-Page Summary

KIC: 7880929 Candidate: 1 of 1 Period: 599.728 d



DV Fit Results:

Period = 599.72795 [0.00669] d
Epoch = 302.7020 [0.0078] BKJD
Rp/R* = 0.0247 [0.0083]
a/R* = 538.87 [861.02]
b = 0.65 [1.45]
Seff = 0.79 [0.32]
Teq = 241 [24] K
Rp = 2.98 [1.39] Re
a = 1.4125 [0.3751] AU
Ag = 33722.78 [27713.24] [1.22σ]
Teff = 5042 [935] K [5.13σ]

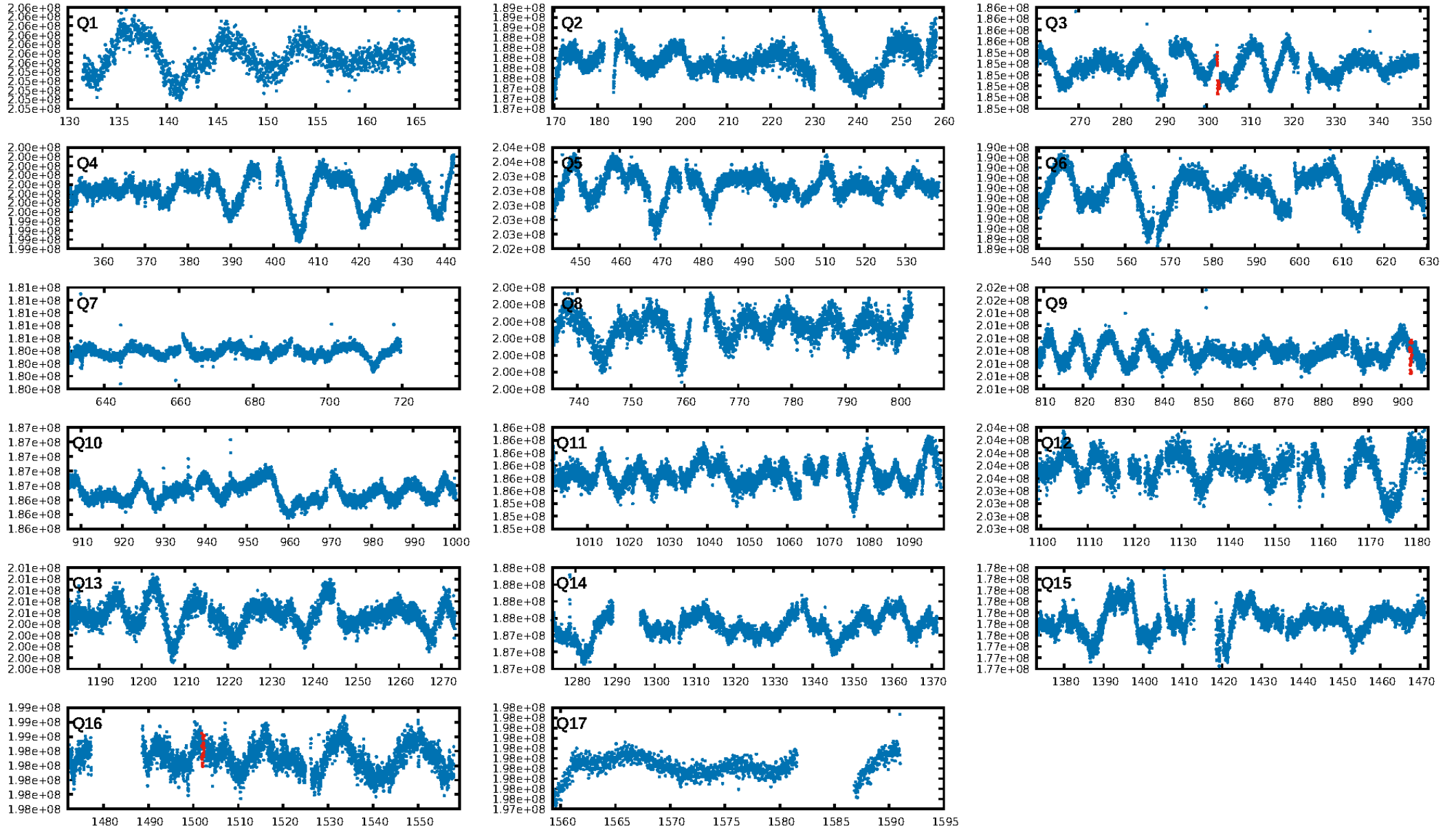
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.6%
ModelChiSquareGof-sig: 68.5%
Bootstrap-pfa: 5.15e-17
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.1535
Centroid-sig: 0.1%
Centroid-so: 1.877 arcsec [8.24σ]
OotOffset-rm: 1.143 arcsec [1.12σ]
KicOffset-rm: 2.917 arcsec [2.99σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

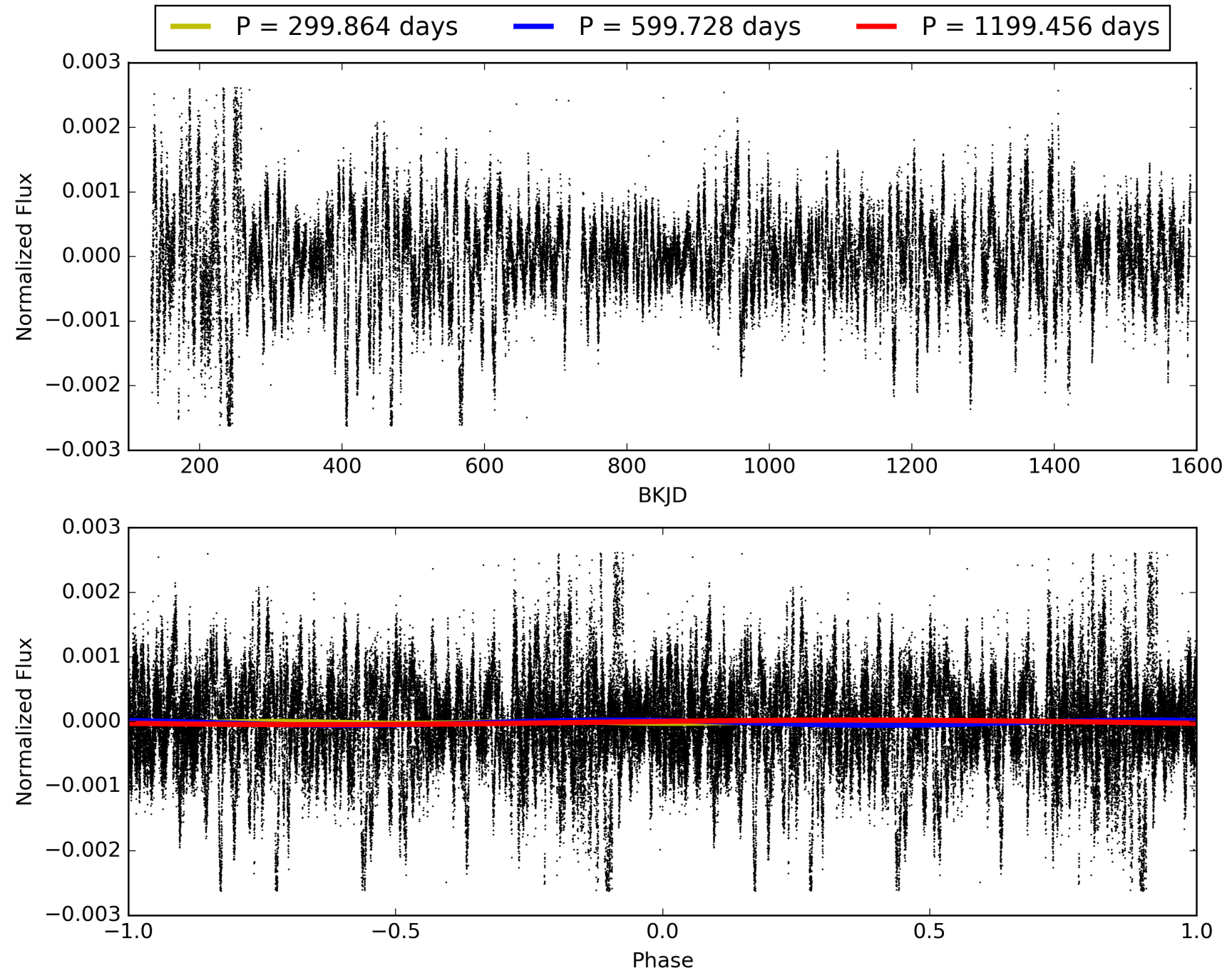
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:34:51 Z

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

TCE 007880929-01, PDC Light Curves

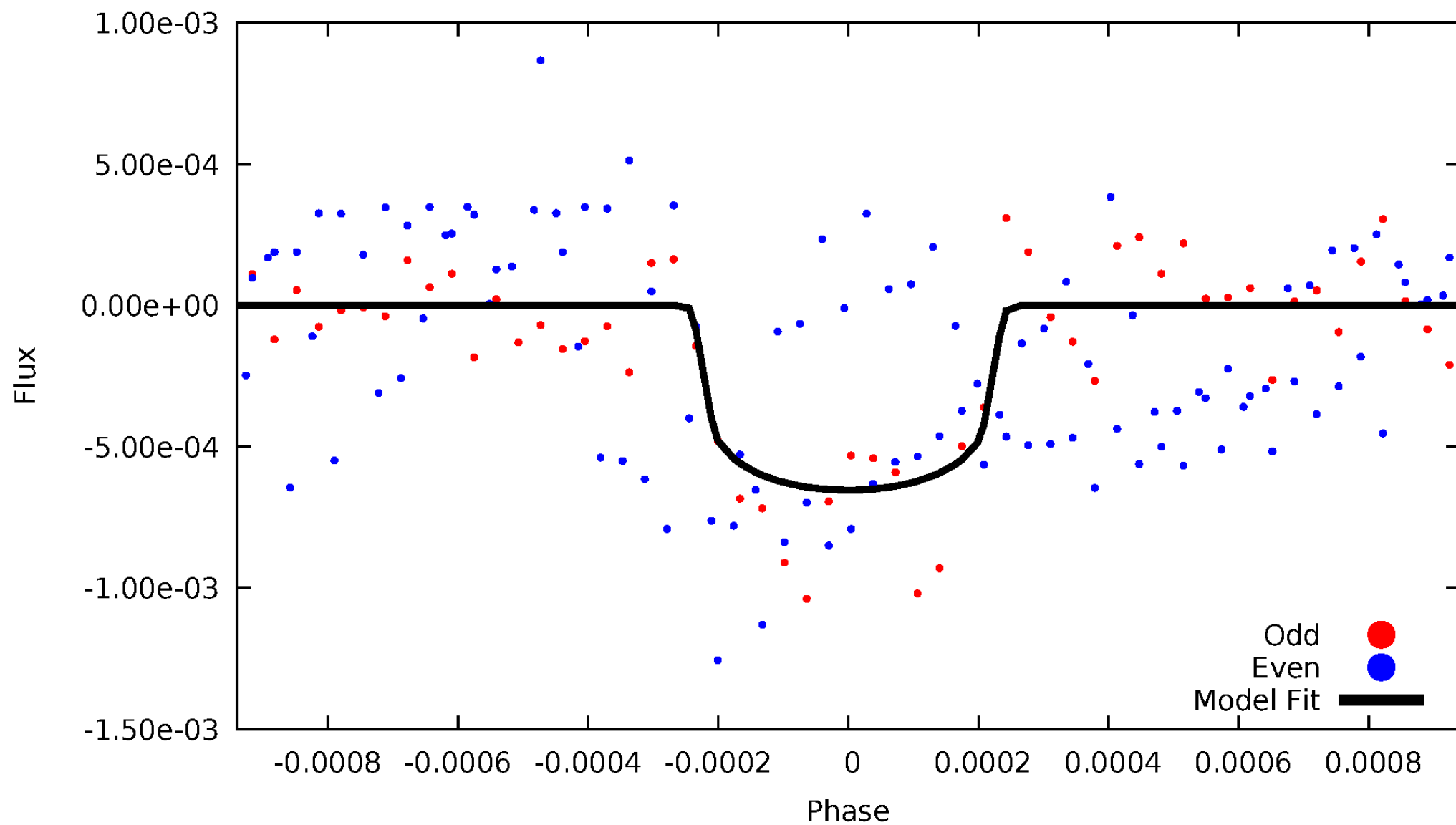


TCE 007880929-01



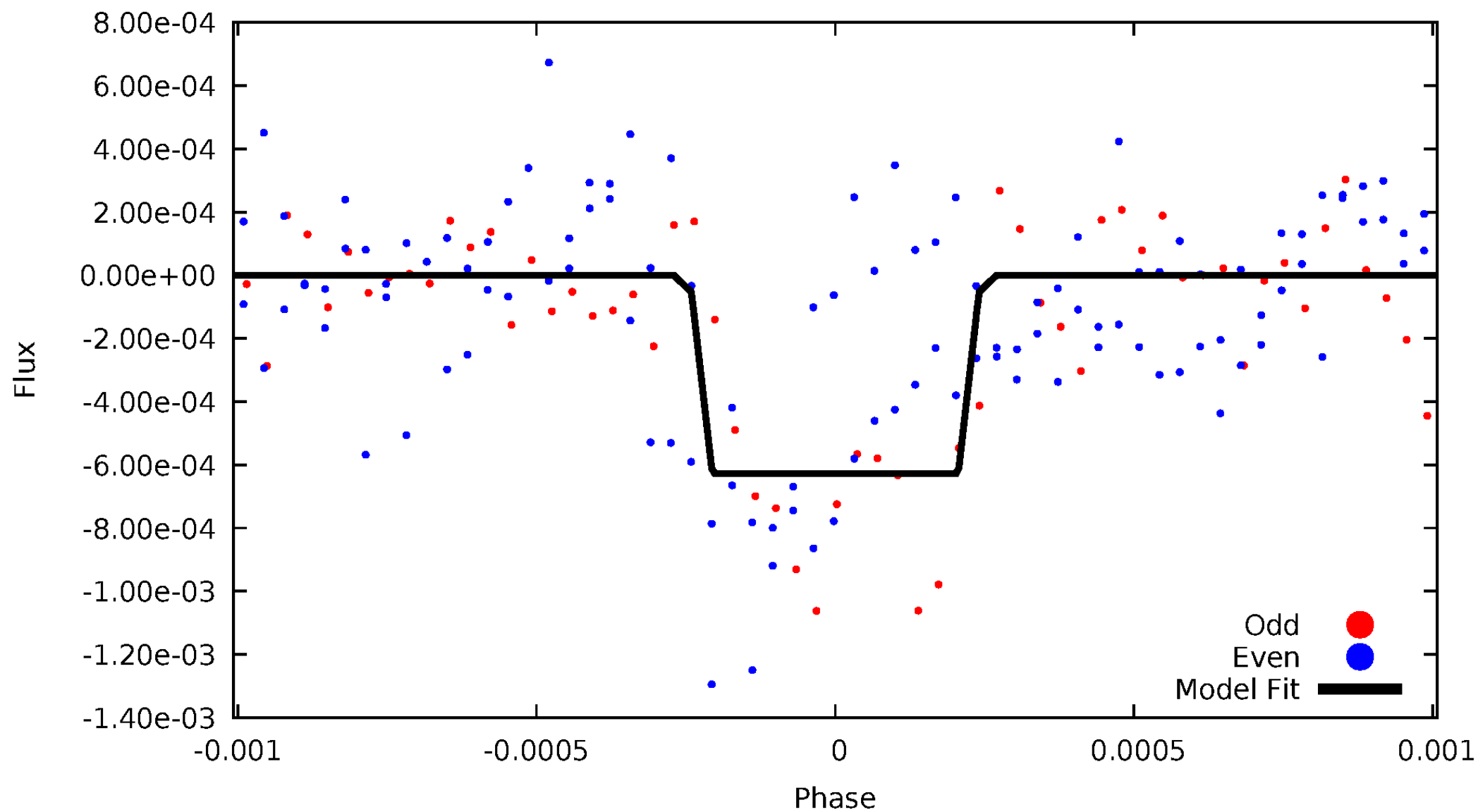
DV Odd/Even

TCE 007880929-01



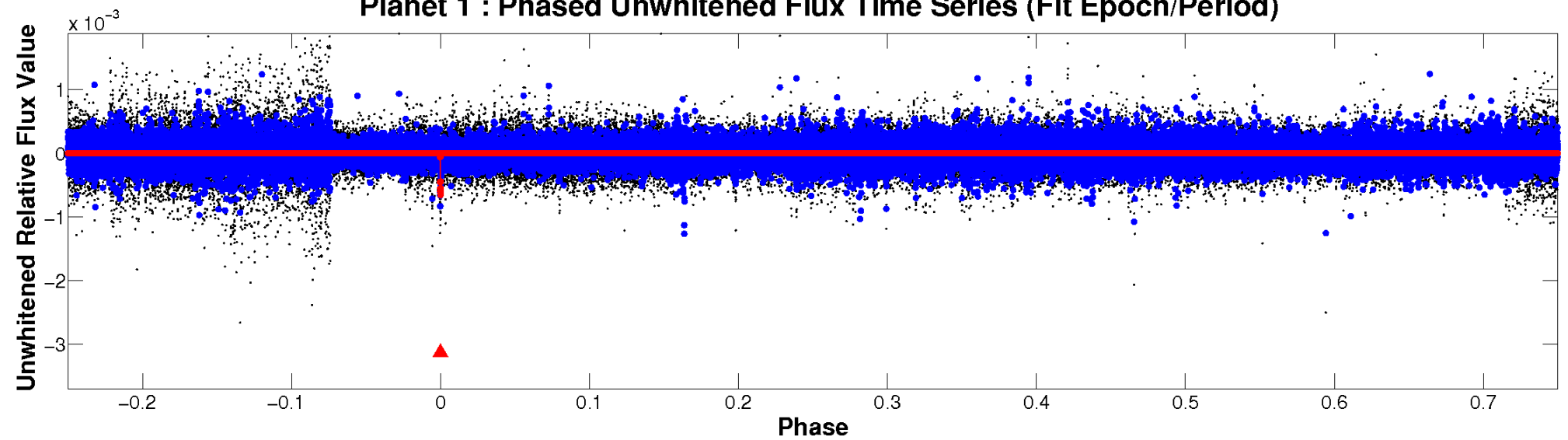
ALT Odd/Even

TCE 007880929-01

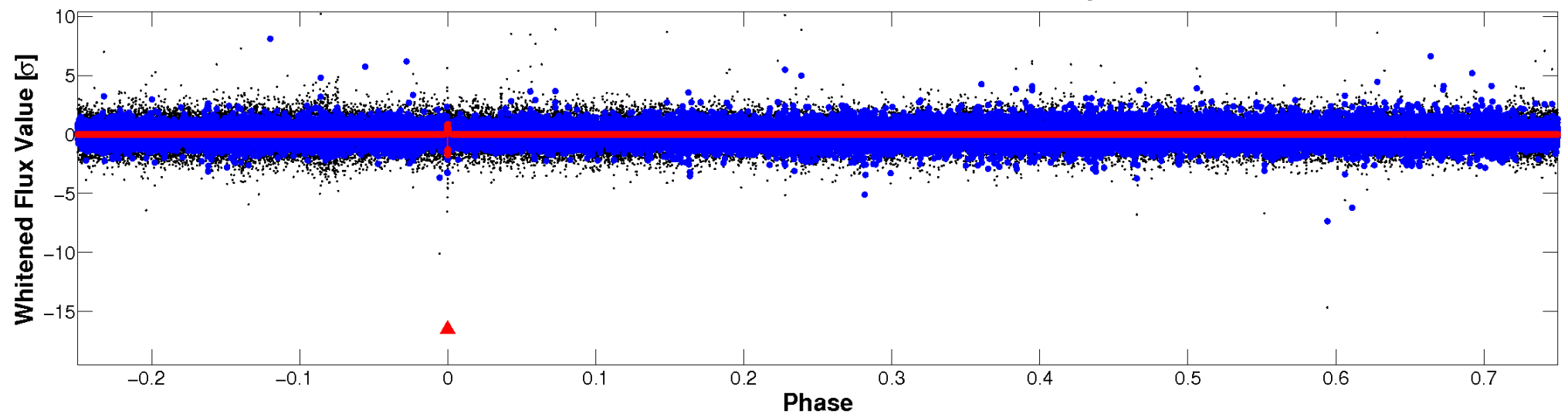


Non-Whitened Vs. Whitened Light Curve

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

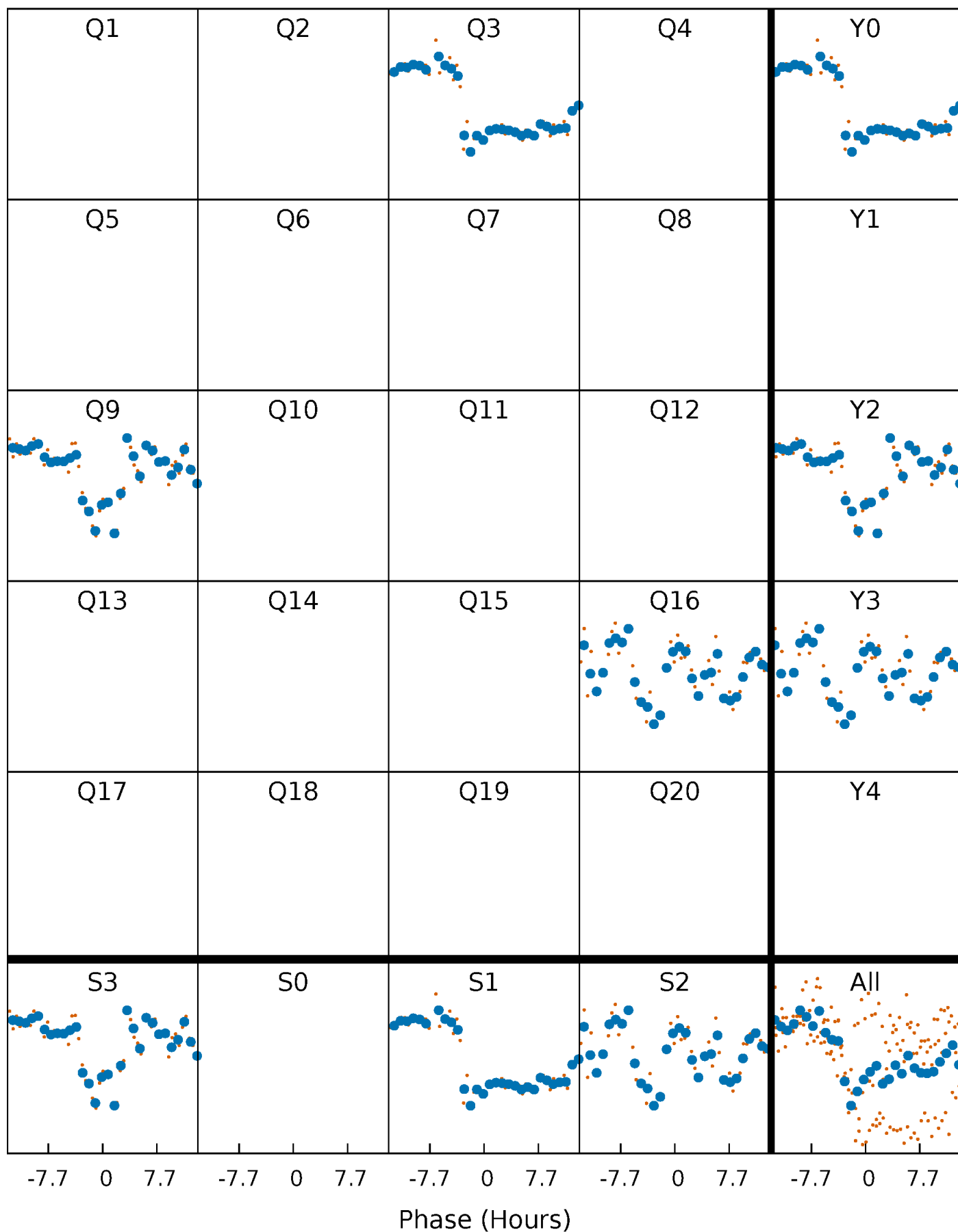


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



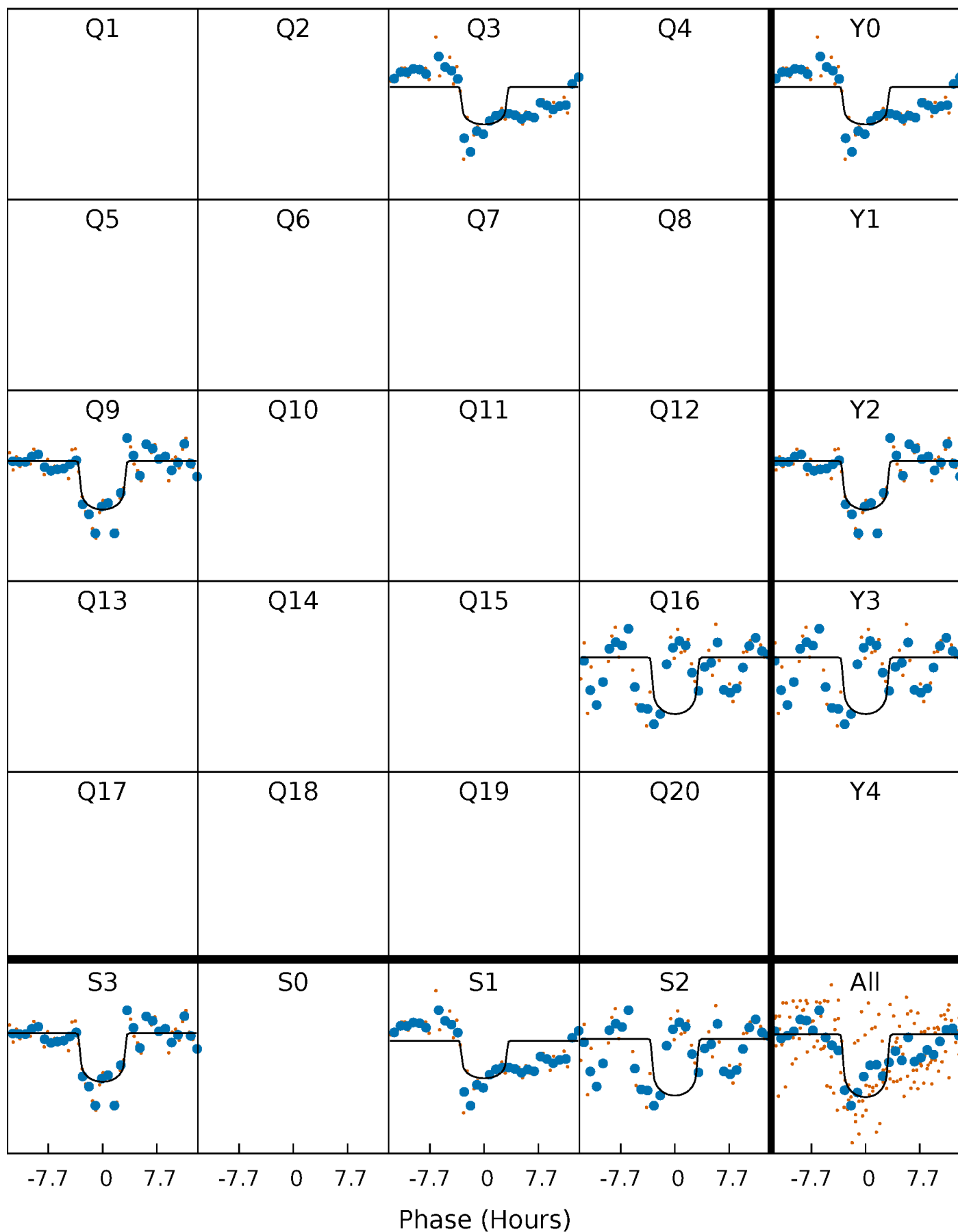
PDC Quarter-Phased Transit Curves

TCE 007880929-01 P=599.727947 Days $T_0=302.701969$ (BKJD)



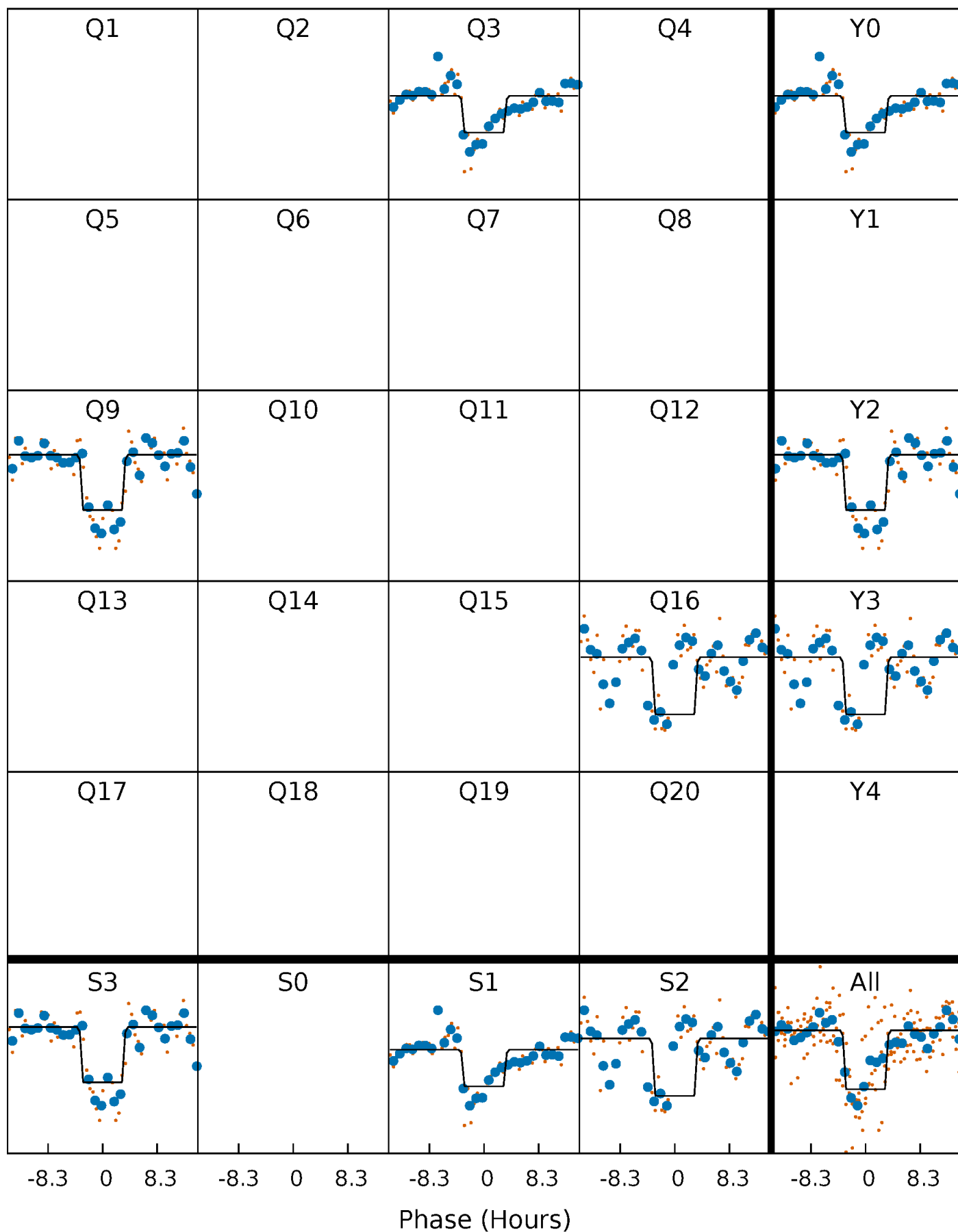
DV Quarter-Phased Transit Curves

TCE 007880929-01 P=599.727947 Days $T_0=302.701969$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

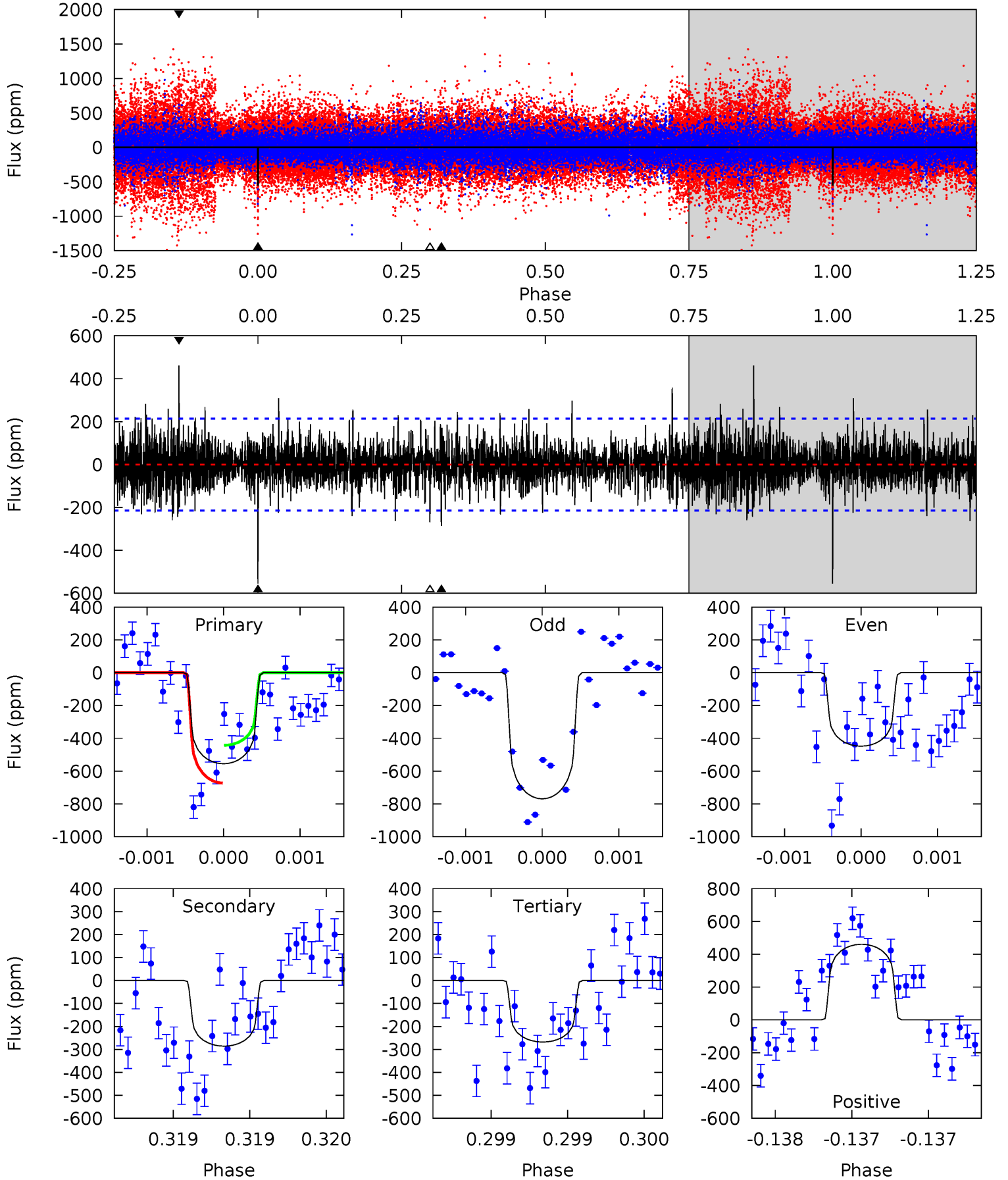
TCE 007880929-01 P=599.704552 Days $T_0=302.705813$ (BKJD)



DV Model-Shift Uniqueness Test

007880929-01, P = 599.727947 Days, E = 302.701969 Days

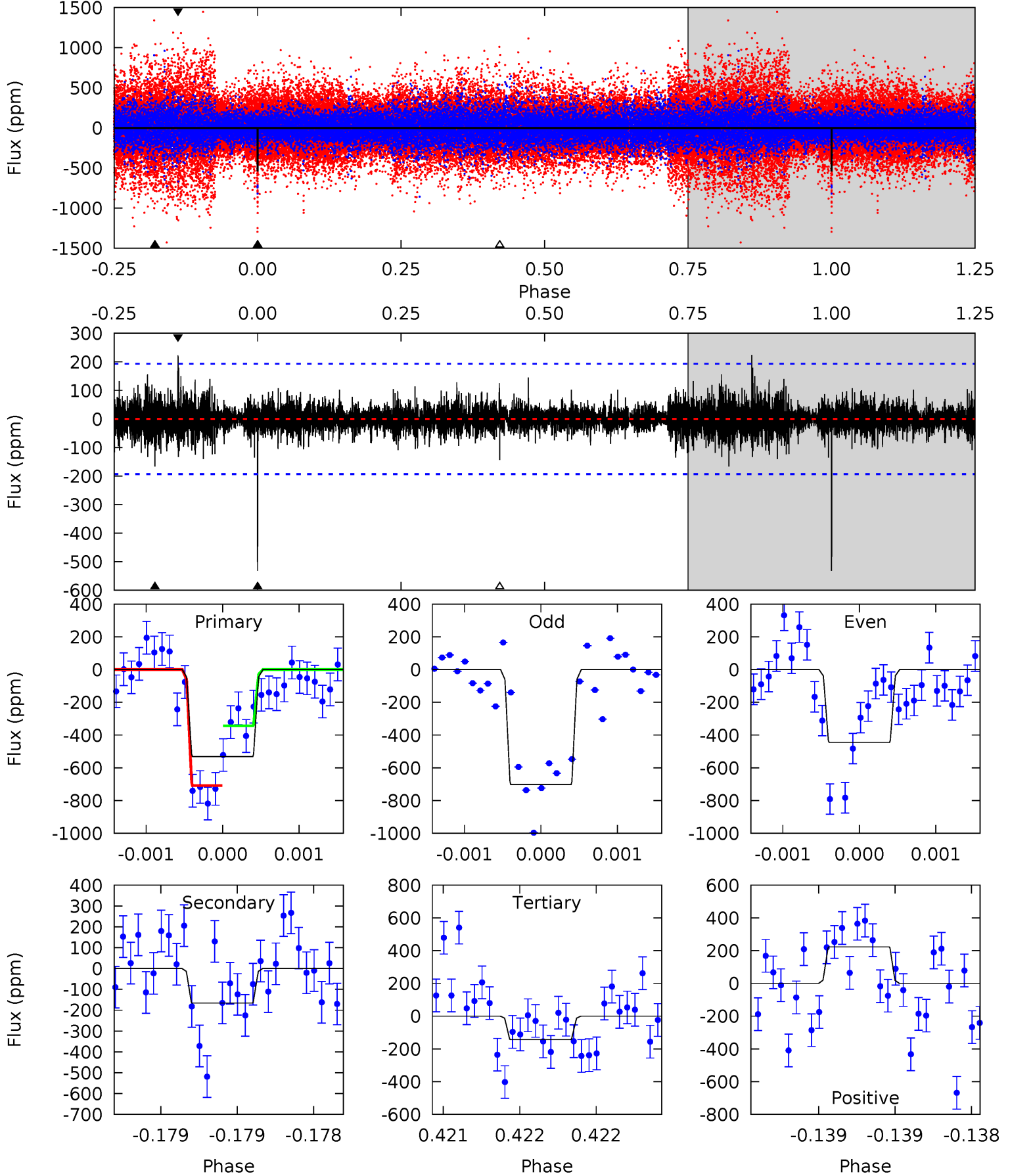
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	7.43	6.97	12.0	5.57	3.47	1.83	7.47	2.45	0.46	-4.55	4.16	0.72	0.45	3.00



Alt Model-Shift Uniqueness Test

007880929-01, P = 599.704552 Days, E = 302.705813 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.3	4.78	4.13	6.41	5.57	3.47	0.93	11.2	8.90	0.65	-1.63	3.69	0.77	0.30	5.29



Stellar Parameters For KIC 007880929

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6170^{+166}_{-203}	$4.371^{+0.093}_{-0.201}$	$-0.100^{+0.250}_{-0.300}$	$1.104^{+0.358}_{-0.154}$	$1.041^{+0.169}_{-0.127}$	$1.089^{+0.440}_{-0.602}$
	+3%/-3%	+2%/-5%	+250%/-300%	+32%/-14%	+16%/-12%	+40%/-55%
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 007880929-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-286 ± 38	$3.08^{+1.07}_{-1.06}$	341^{+25}_{-19}	5175^{+1114}_{-609}	33053^{+43480}_{-15231}
Alt.	-166 ± 35	$3.15^{+1.22}_{-1.07}$	341^{+26}_{-18}	4576^{+870}_{-492}	18122^{+24246}_{-8489}

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 $A_{obs} \gg 1.0$

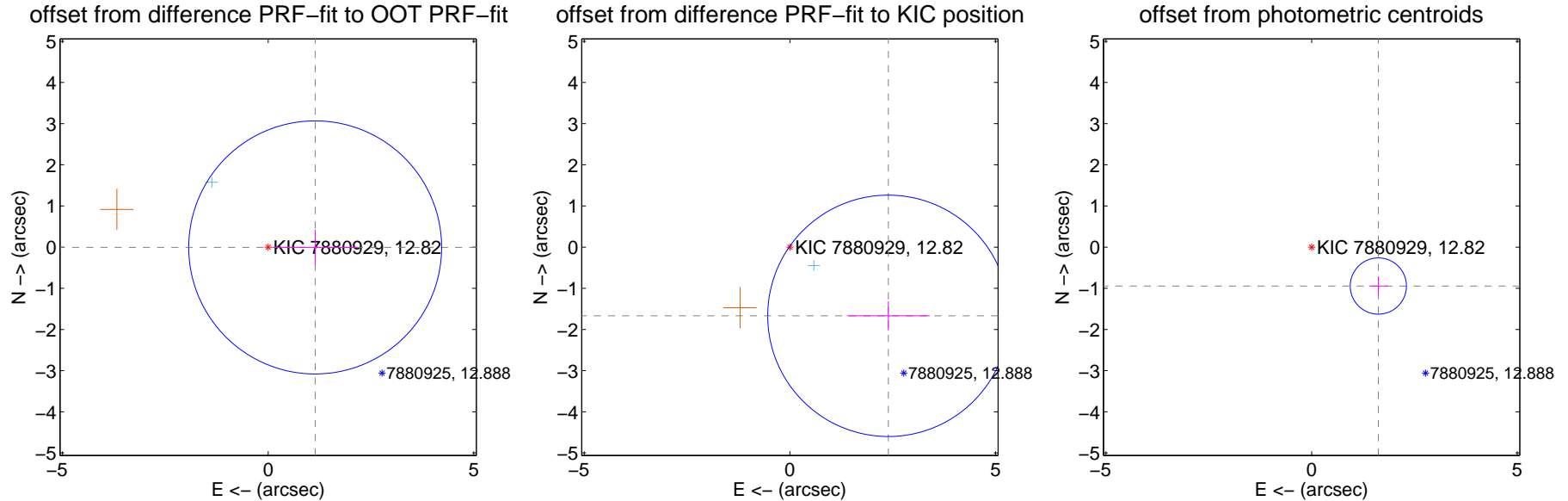
DV Centroid Data

Supplemental centroid analysis for 007880929-01. Kepler magnitude: 12.82. Transit SNR 10.81

There are 2 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 3.43 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	1.143 ± 1.025	1.12	-1.143 ± 1.024	-0.007 ± 0.429
PRF-fit source offset from KIC position	2.917 ± 0.977	2.99	-2.393 ± 1.006	-1.669 ± 0.357
photometric centroid source offset	1.88 ± 0.23	8.24	-1.62 ± 0.23	-0.94 ± 0.23



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.

Q1 no difference image



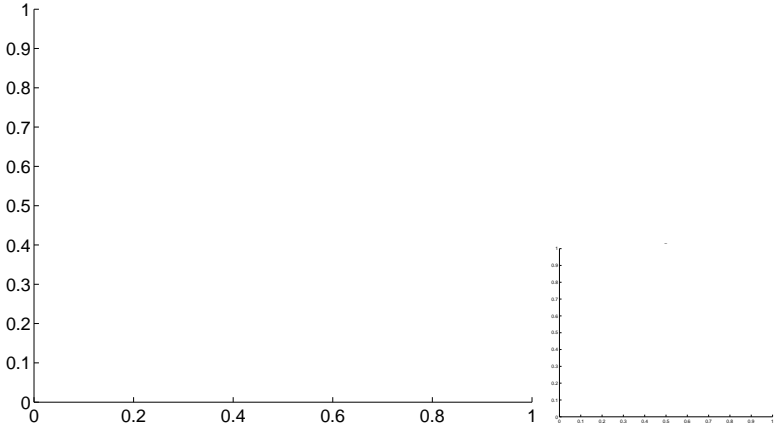
Q1 no OOT image



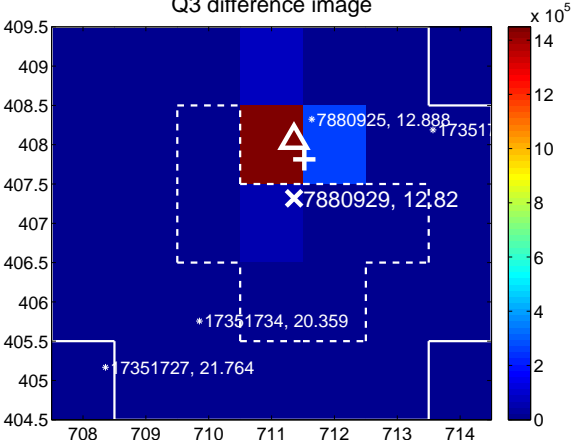
Q2 no difference image



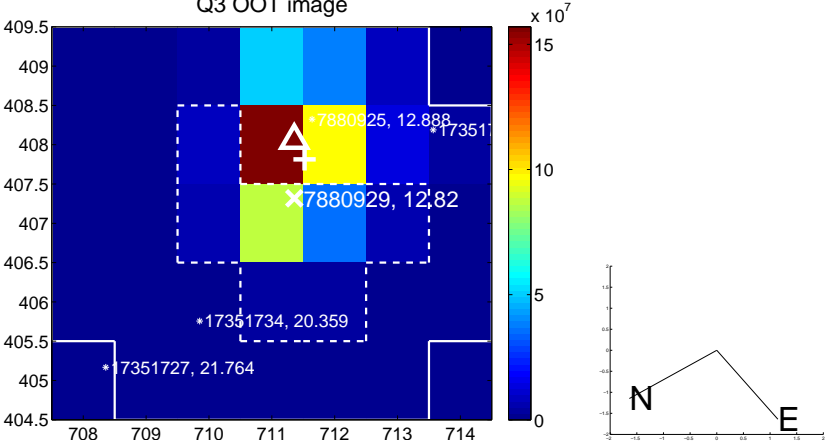
Q2 no OOT image



Q3 difference image



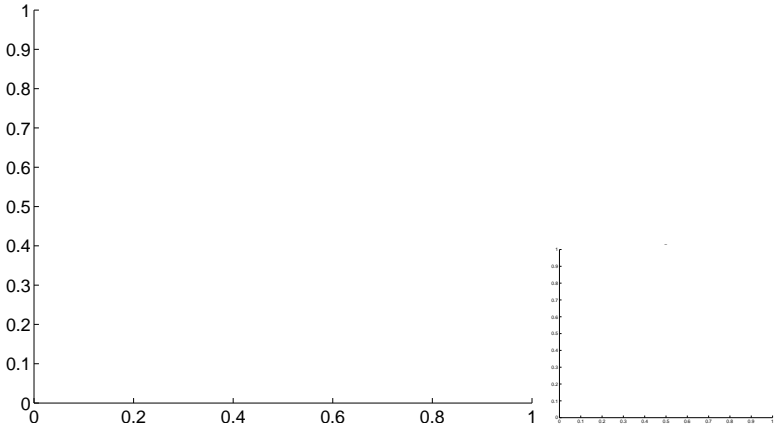
Q3 OOT image



Q4 no difference image



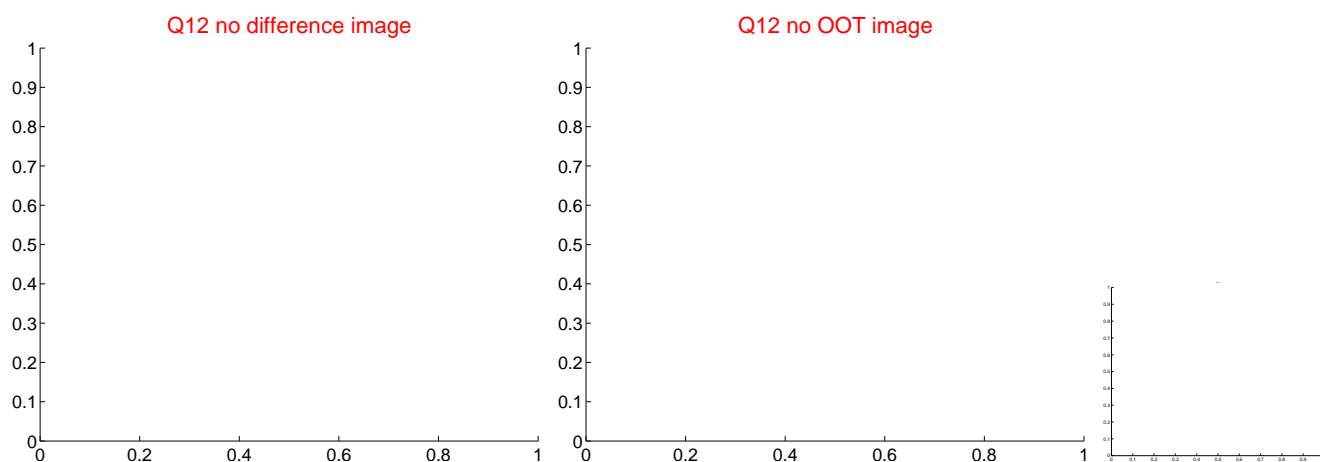
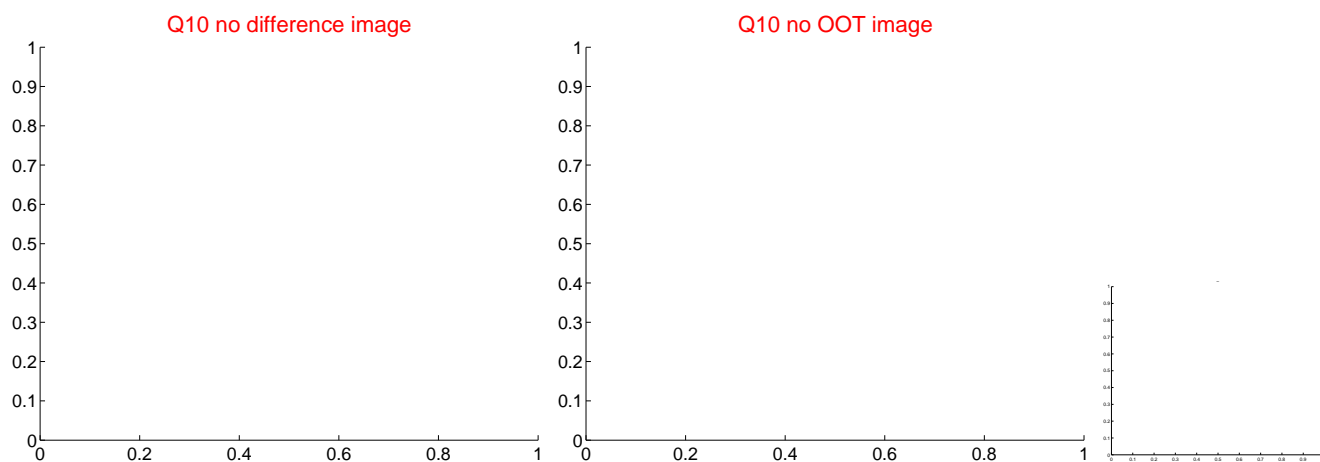
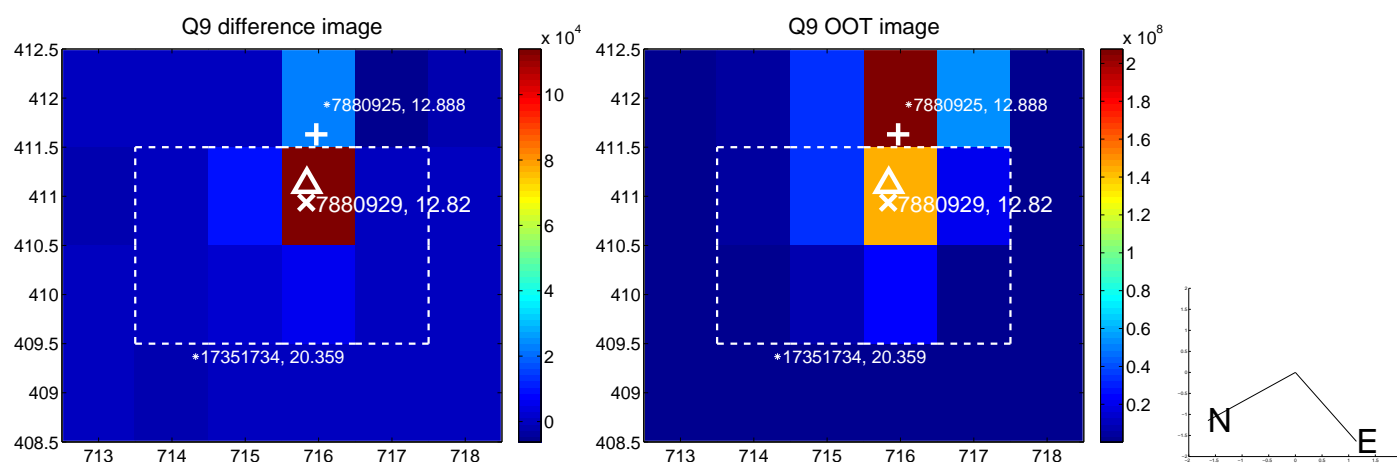
Q4 no OOT image



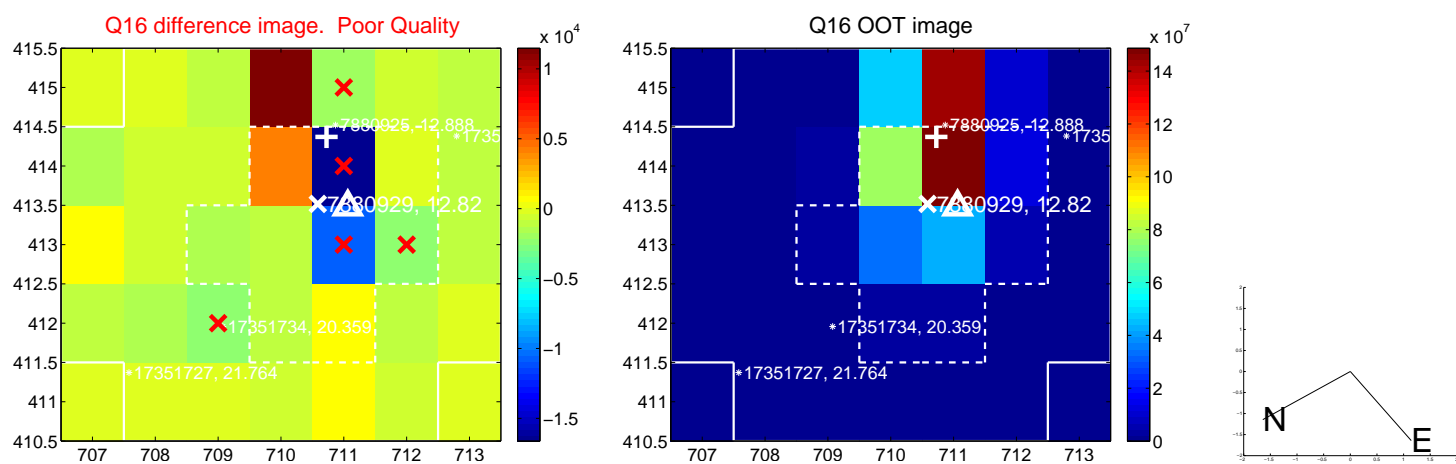
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



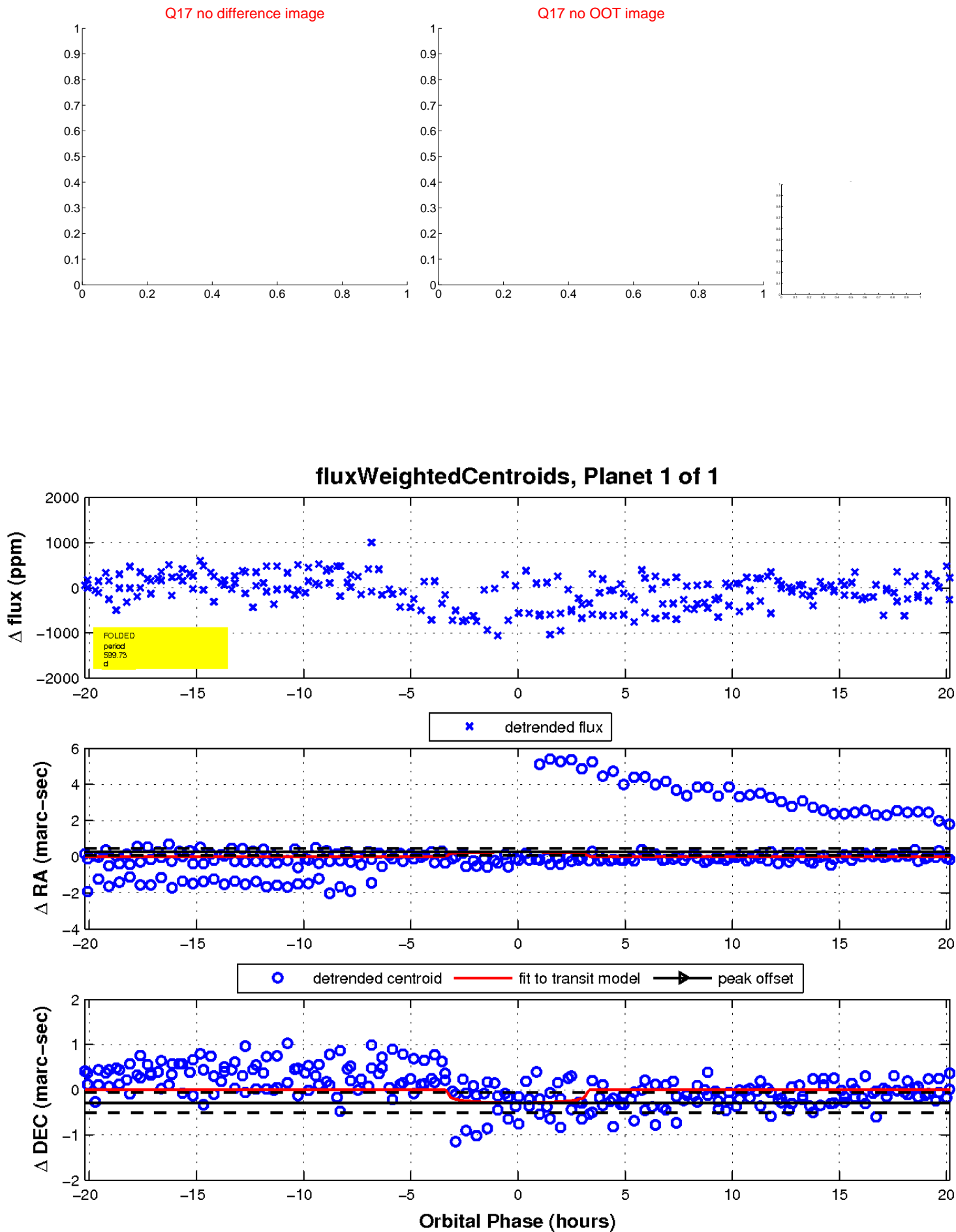
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



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



UKIRT Image

Declination

