

KIC 007812283

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})
007812283-01	OBS	No	672.860985	191.852158	1058.0	7.014	7.8	7.5	0.70	5459	2.34	0.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007812283-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—INCONSISTENT_TRANS—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.

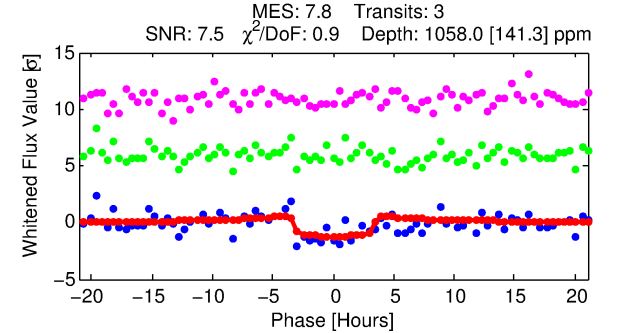
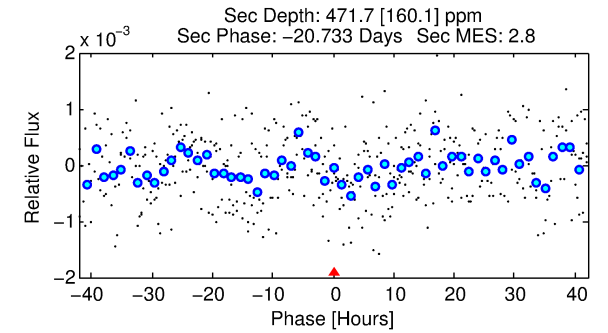
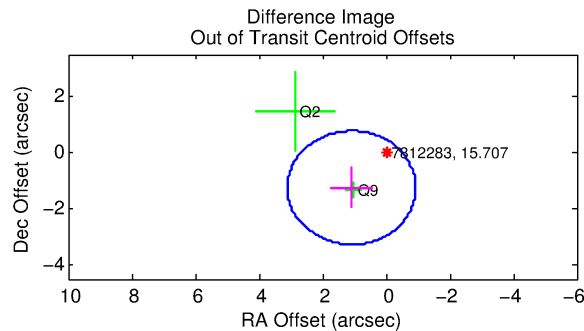
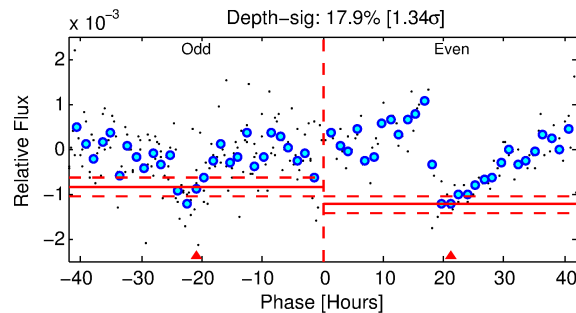
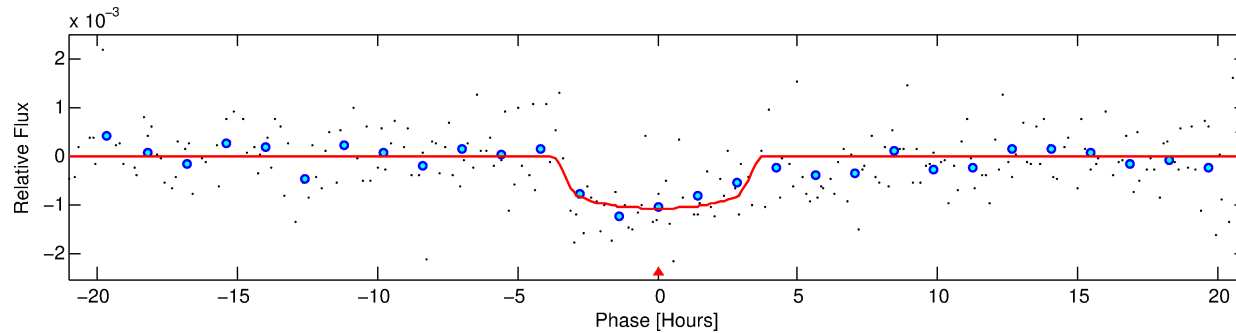
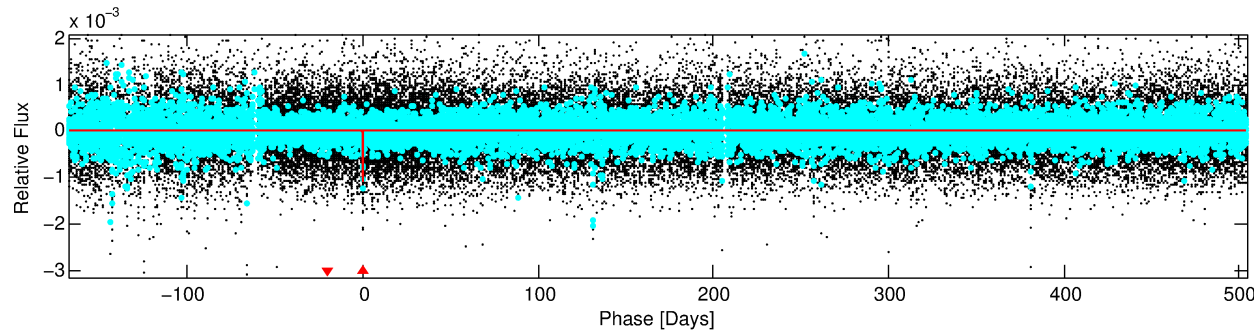
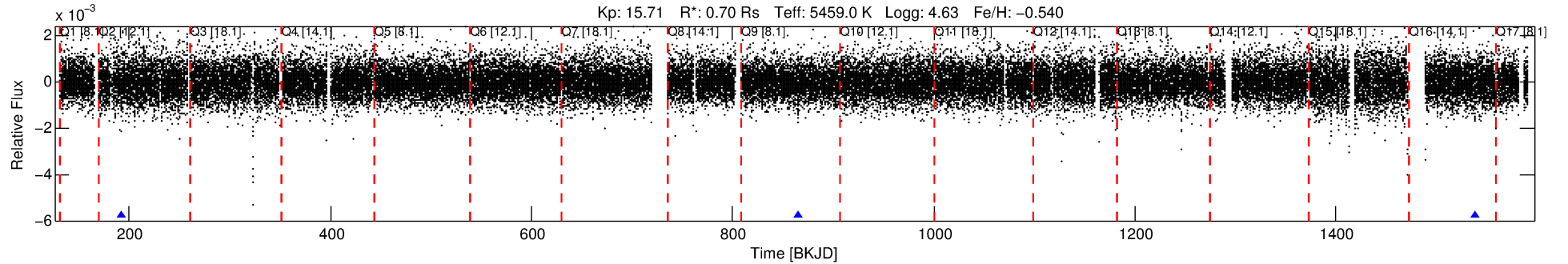
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007812283-01

No Significant Match Found

DV One-Page Summary

KIC: 7812283 Candidate: 1 of 1 Period: 672.861 d



DV Fit Results:

Period = 672.86099 [0.00933] d
Epoch = 191.8522 [0.0117] BKJD
Rp/R* = 0.0304 [0.0421]
a/R* = 660.92 [3951.99]
b = 0.50 [9.10]
Seff = 0.21 [0.05]
Teq = 172 [10] K
Rp = 2.34 [3.26] Re
a = 1.3762 [0.1896] AU
Ag = 89923.25 [251413.88] [0.36 σ]
Teff = 4612 [3218] K [1.38 σ]

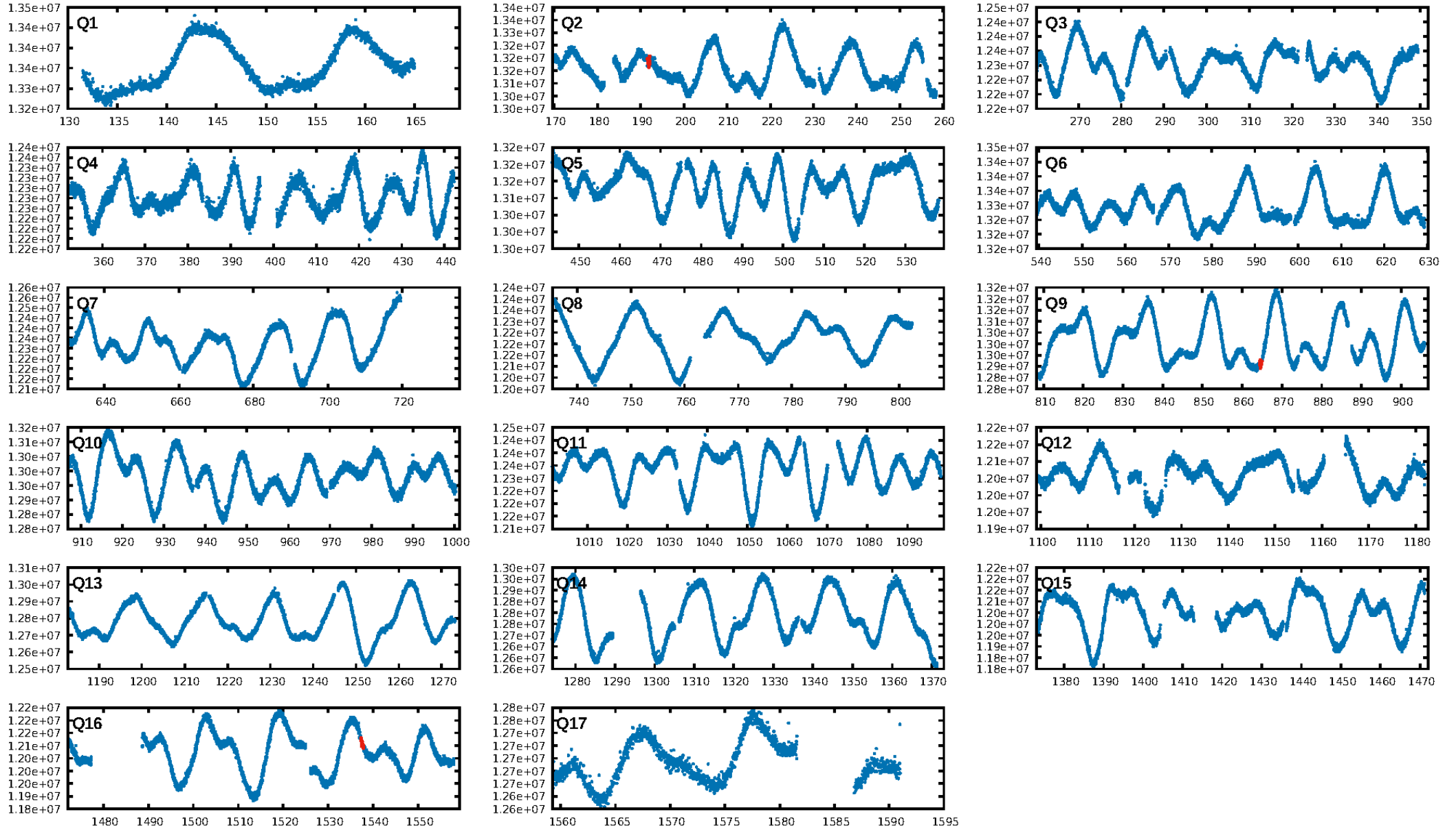
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 82.7%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 3.93e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -3.855
Centroid-sig: 18.5%
Centroid-so: 1.505 arcsec [1.19 σ]
OotOffset-rm: 1.659 arcsec [2.46 σ]
KicOffset-rm: 1.709 arcsec [2.54 σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

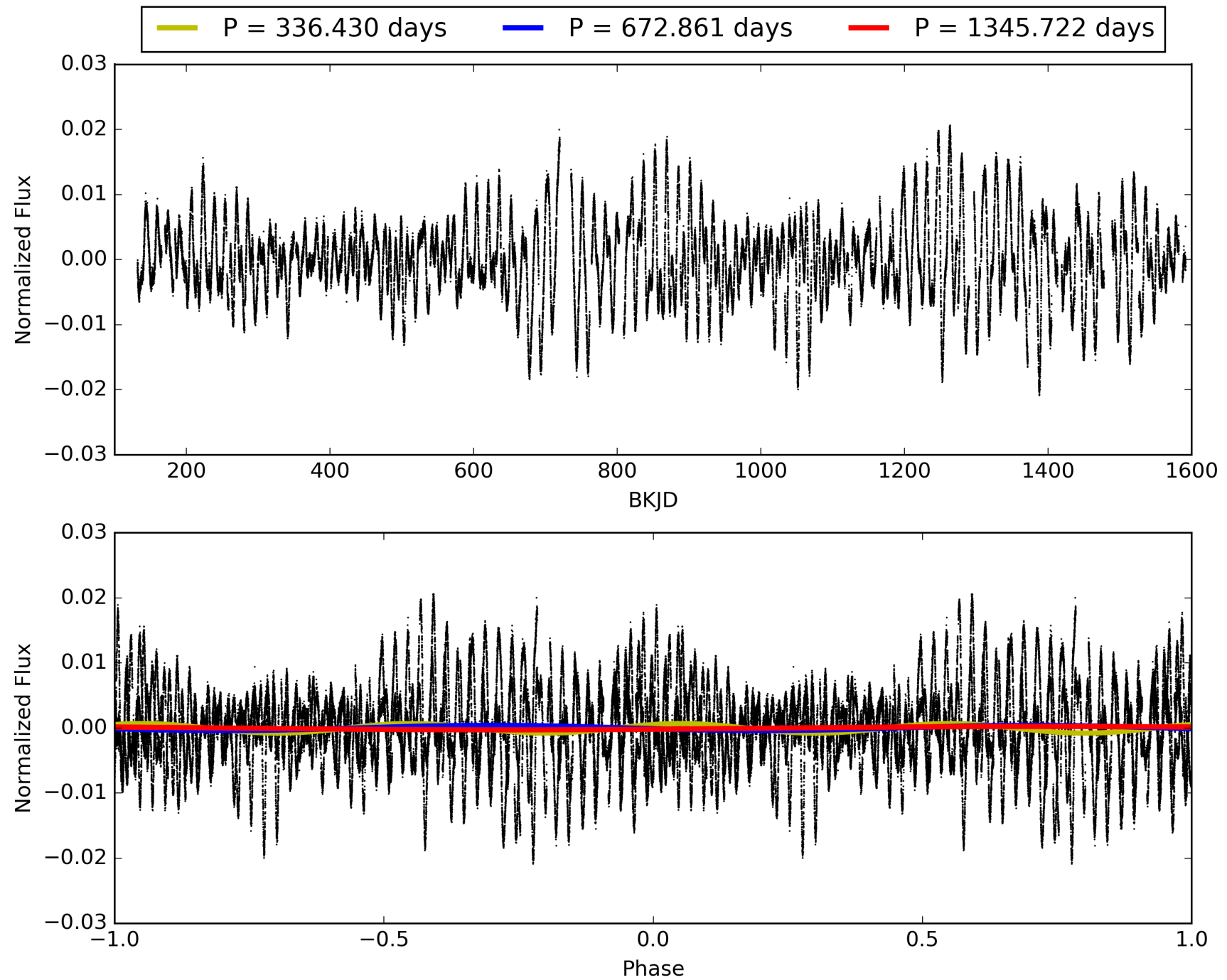
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:07:51 Z

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

TCE 007812283-01, PDC Light Curves

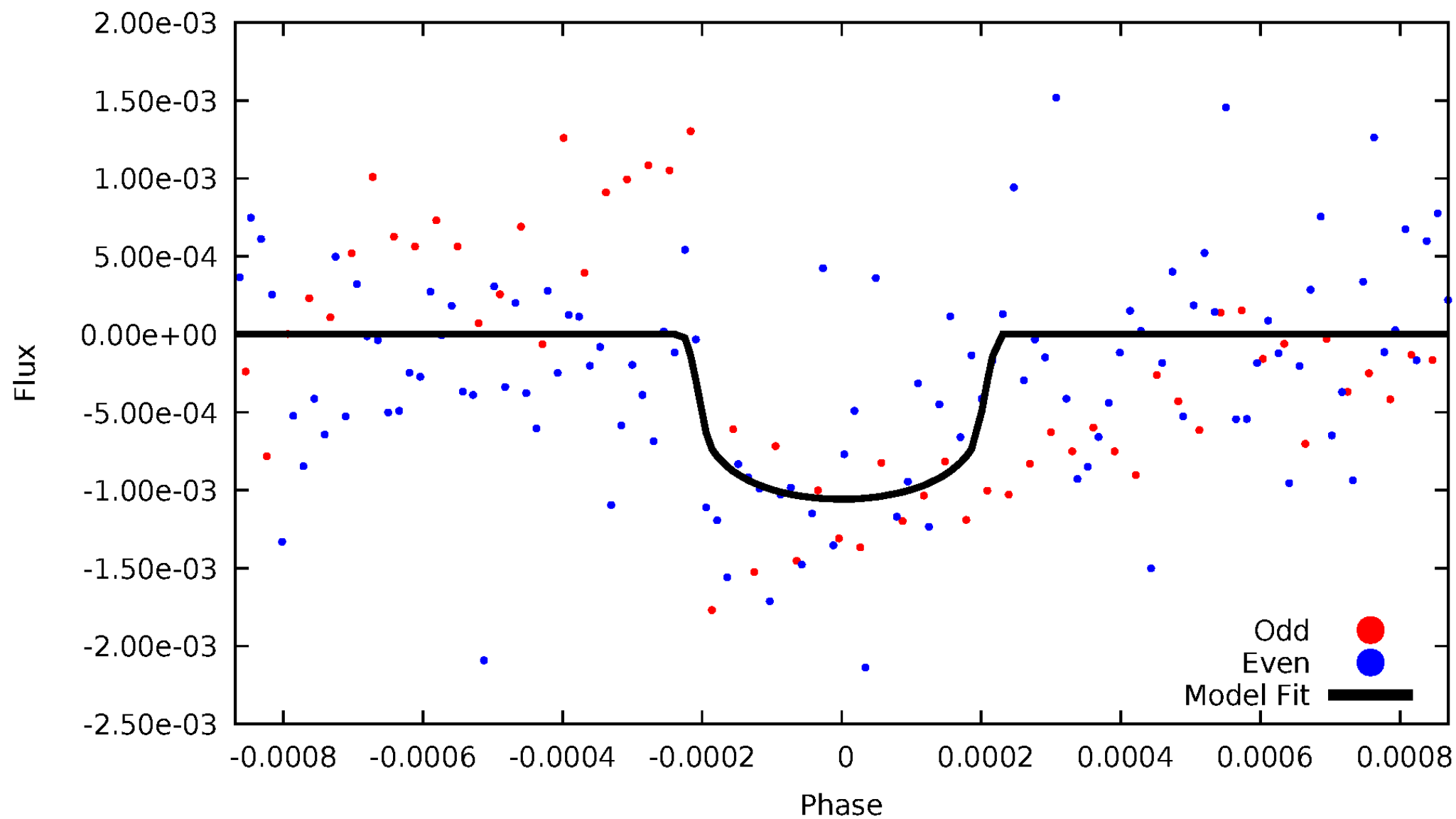


TCE 007812283-01



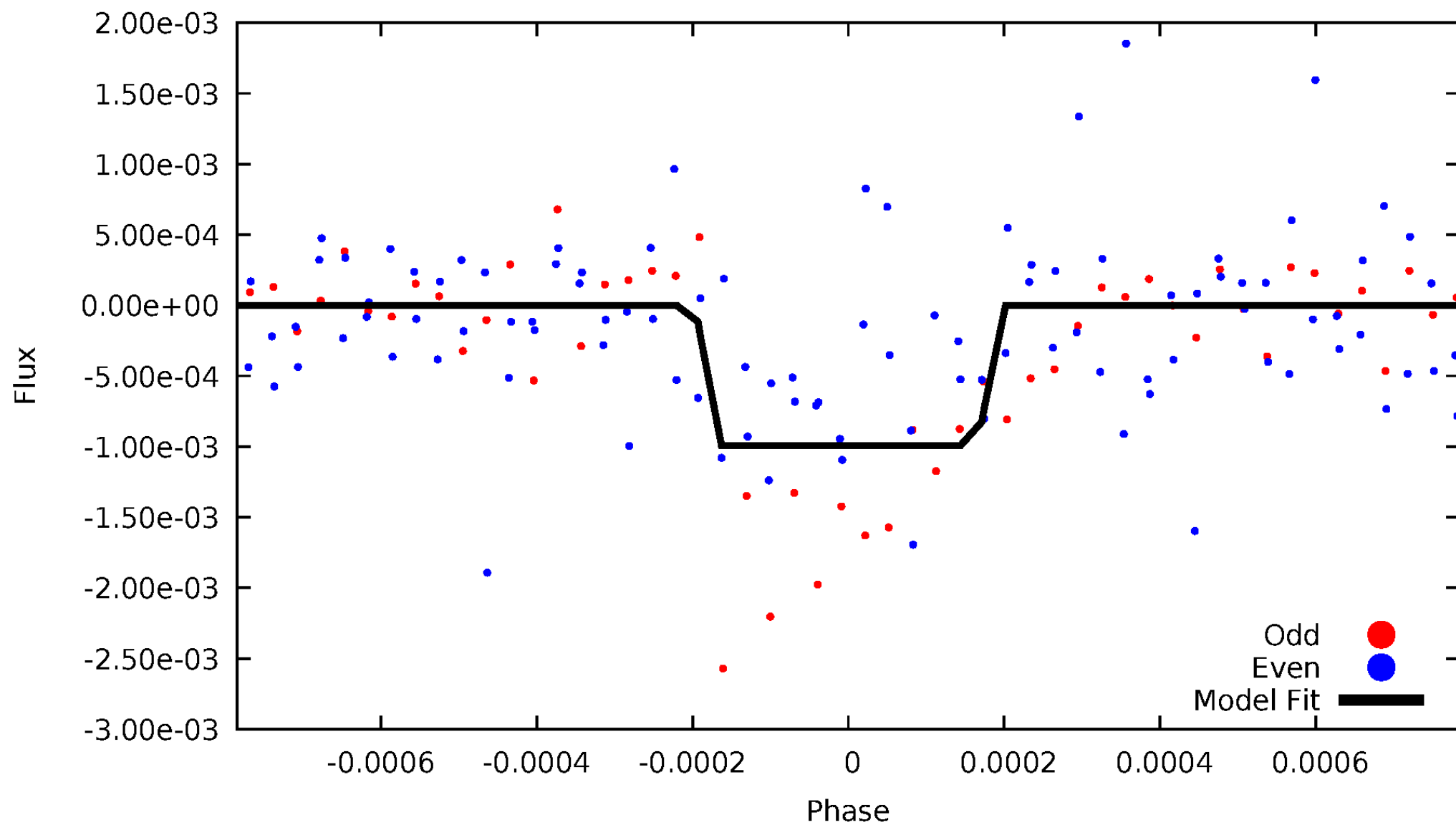
DV Odd/Even

TCE 007812283-01



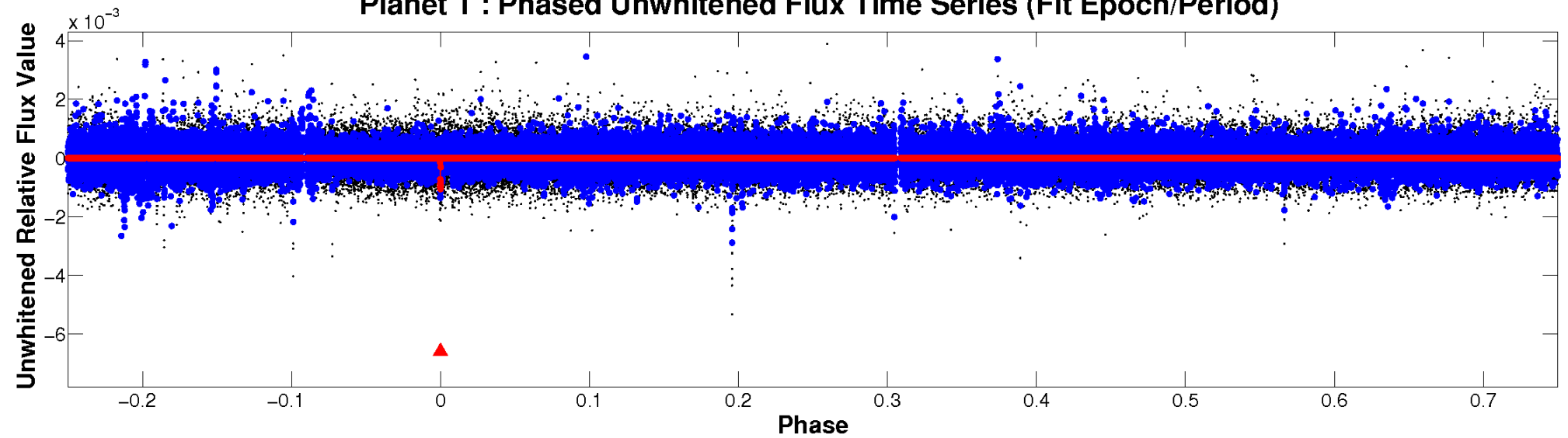
ALT Odd/Even

TCE 007812283-01

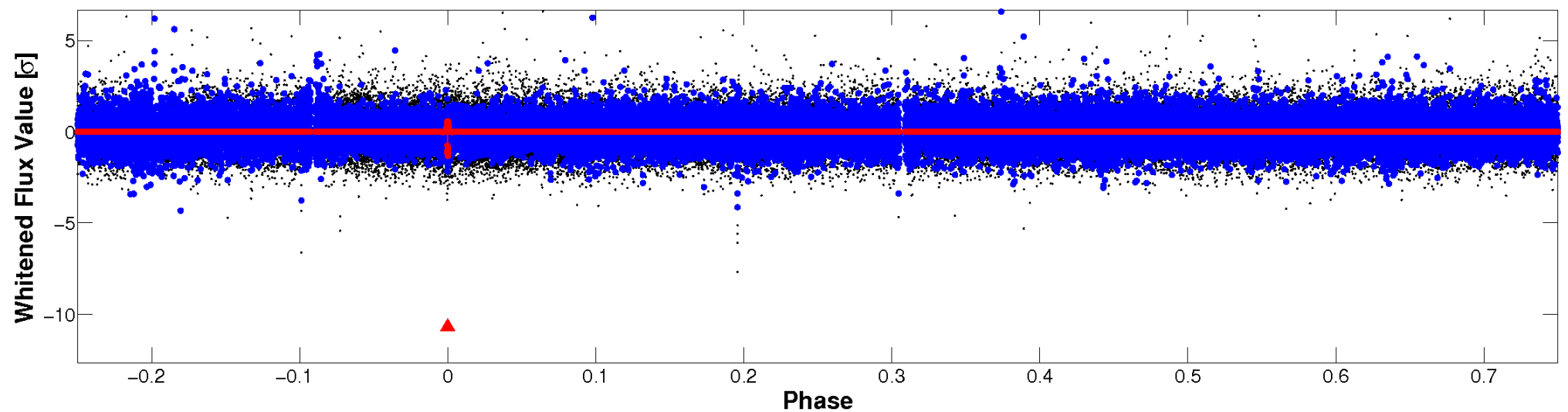


Non-Whitened Vs. Whitened Light Curve

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

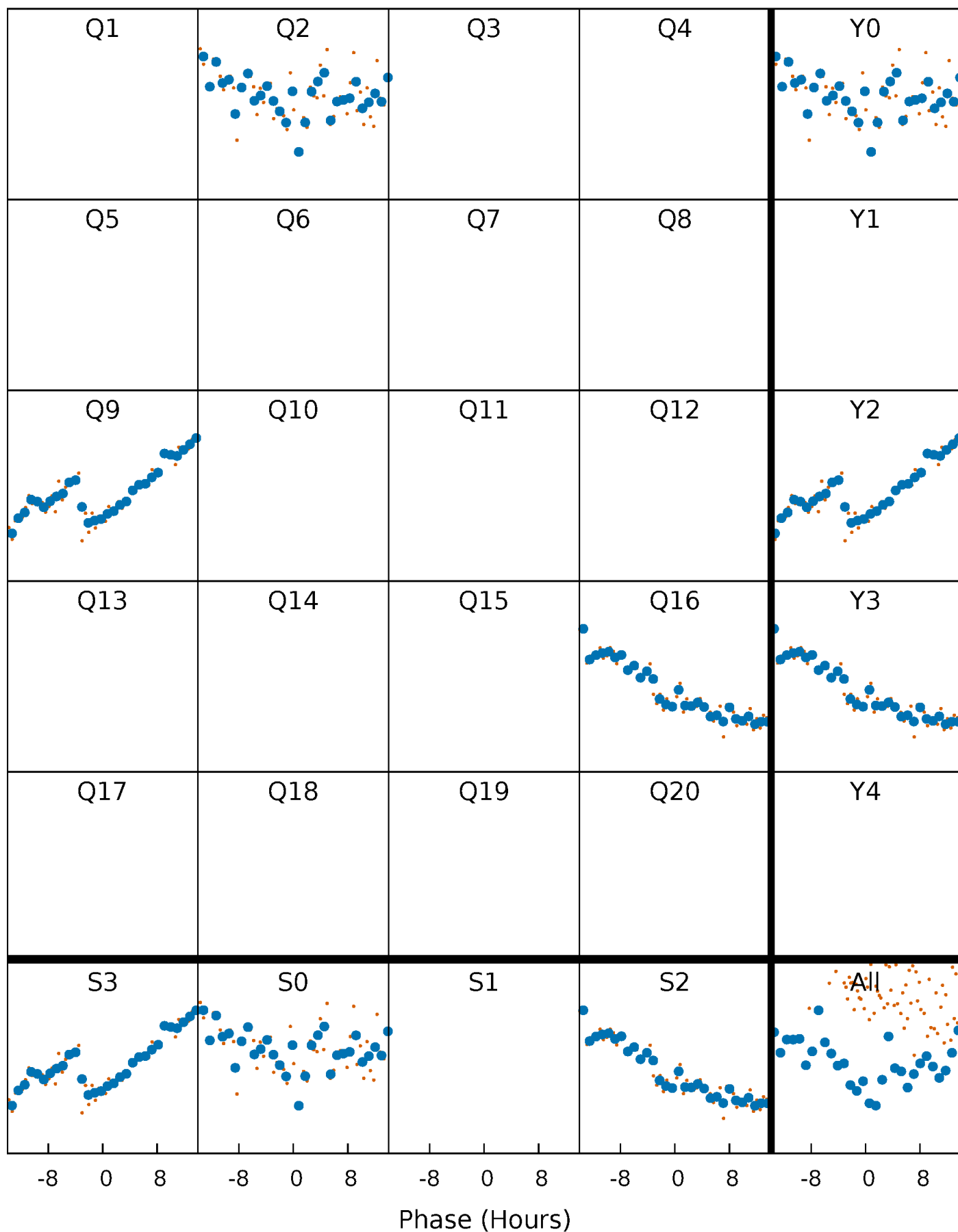


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



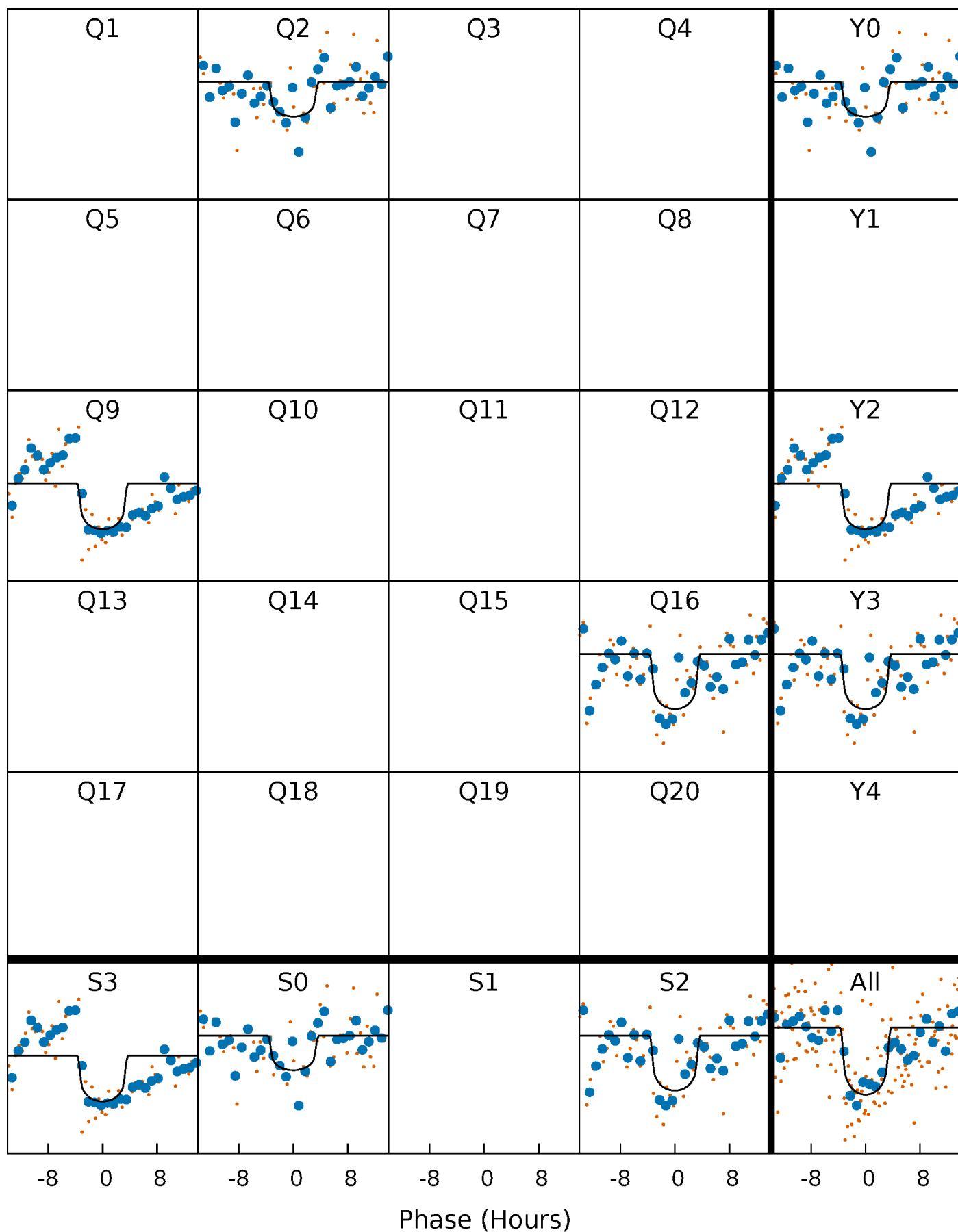
PDC Quarter-Phased Transit Curves

TCE 007812283-01 P=672.860985 Days $T_0=191.852158$ (BKJD)



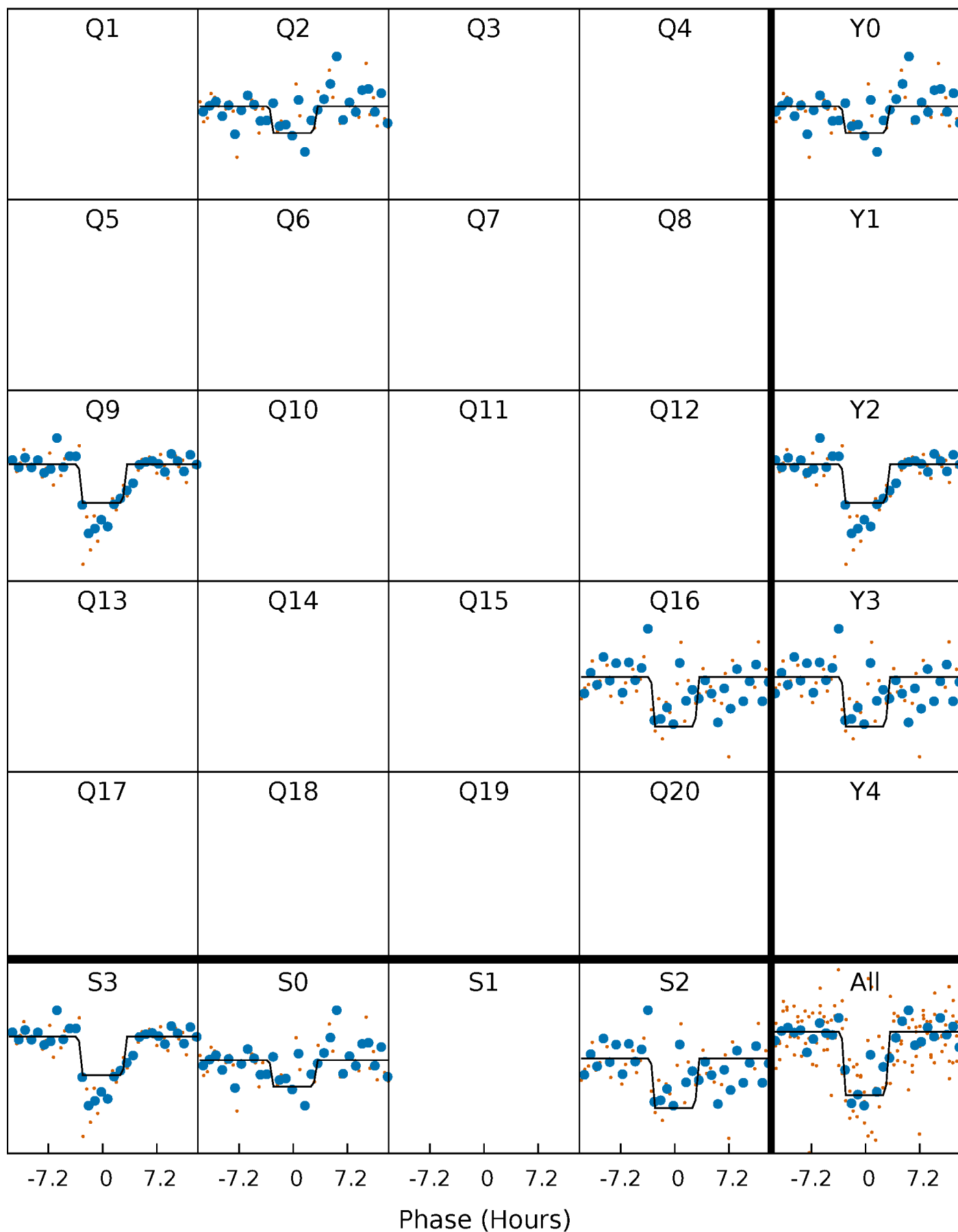
DV Quarter-Phased Transit Curves

TCE 007812283-01 P=672.860985 Days $T_0=191.852158$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

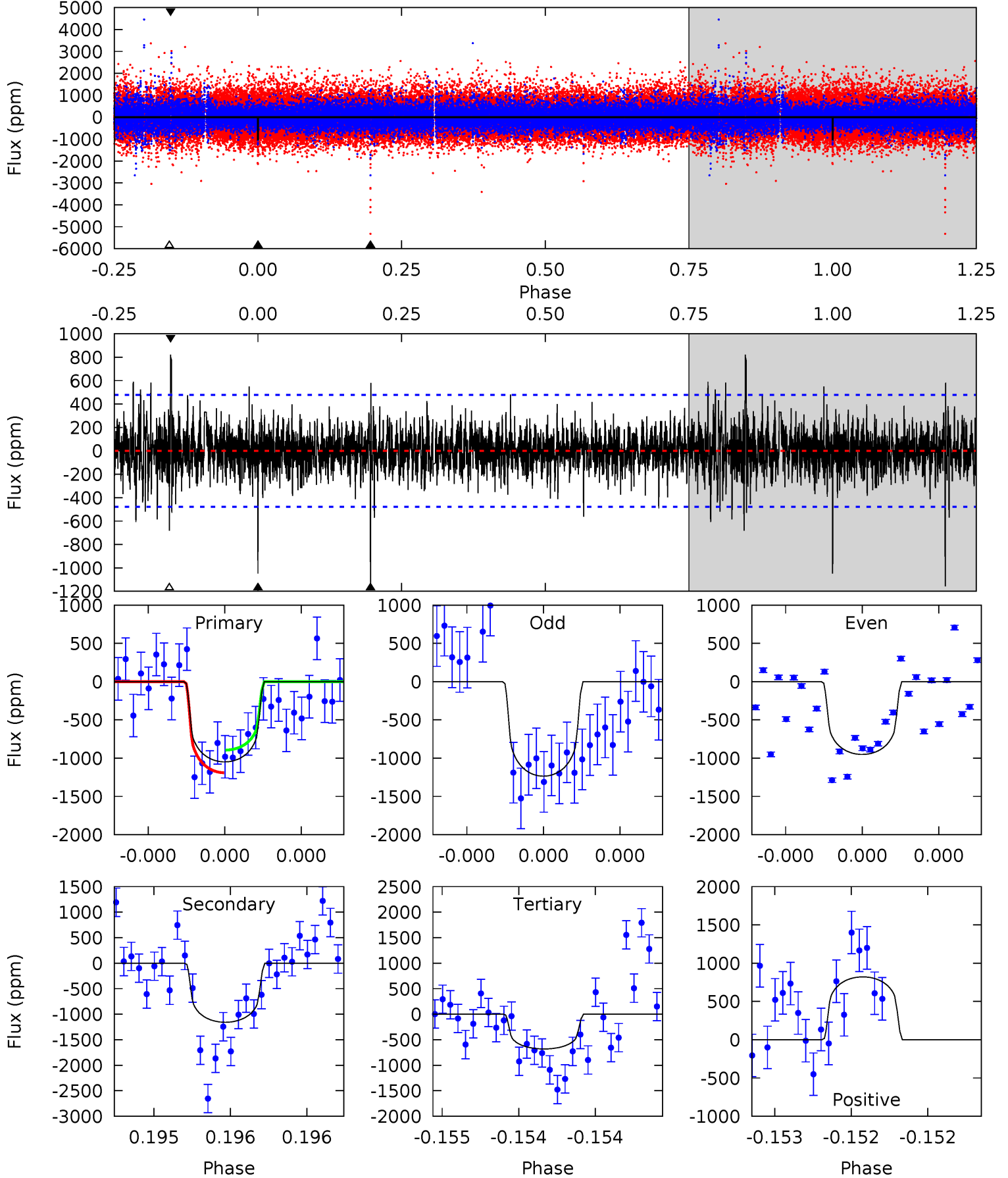
TCE 007812283-01 P=672.877131 Days $T_0=191.819016$ (BKJD)



DV Model-Shift Uniqueness Test

007812283-01, P = 672.860985 Days, E = 191.852158 Days

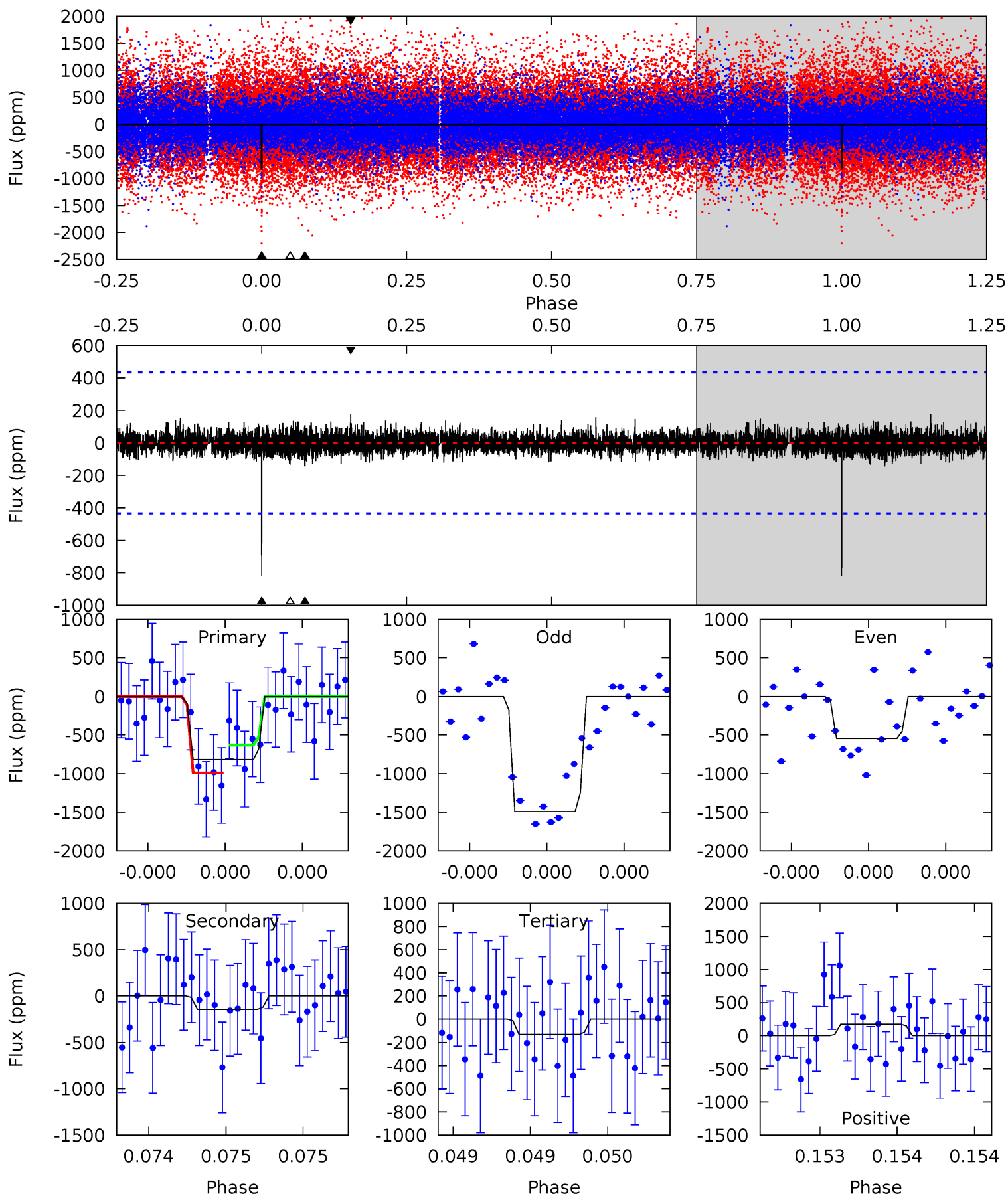
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	13.5	7.95	9.59	5.59	3.51	1.56	4.29	2.66	5.57	3.94	1.60	1.10	0.41	1.73



Alt Model-Shift Uniqueness Test

007812283-01, P = 672.877131 Days, E = 191.819016 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	1.86	1.70	2.27	5.62	3.54	0.44	8.84	8.28	0.16	-0.41	5.89	1.50	0.18	2.33



Stellar Parameters For KIC 007812283

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5459^{+163}_{-163}	$4.628^{+0.035}_{-0.105}$	$-0.540^{+0.300}_{-0.300}$	$0.704^{+0.118}_{-0.051}$	$0.767^{+0.081}_{-0.074}$	$3.094^{+0.557}_{-0.990}$
	+3%/-3%	+1%/-2%	+56%/-56%	+17%/-7%	+11%/-10%	+18%/-32%
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 007812283-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1158 ± 86	$3.30^{+2.93}_{-2.23}$	244^{+10}_{-8}	4974^{+3993}_{-1080}	$109834^{+885329}_{-79019}$
Alt.	-144 ± 77	$3.29^{+2.90}_{-1.99}$	244^{+11}_{-9}	3311^{+1473}_{-594}	11450^{+73378}_{-8780}

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

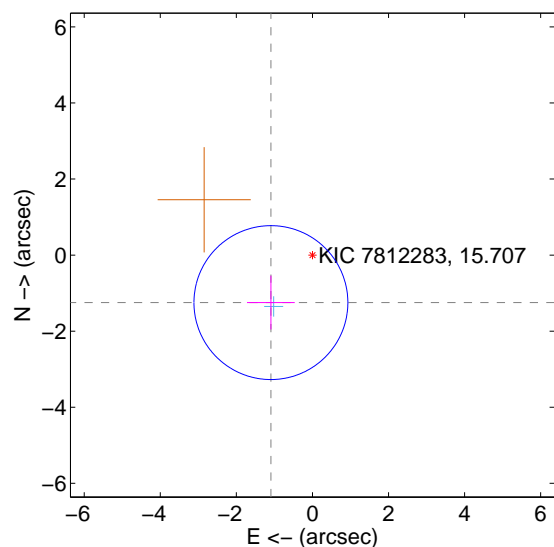
Supplemental centroid analysis for 007812283-01. Kepler magnitude: 15.71. Transit SNR 7.53

There are 1 quarters with good PRF difference image offsets

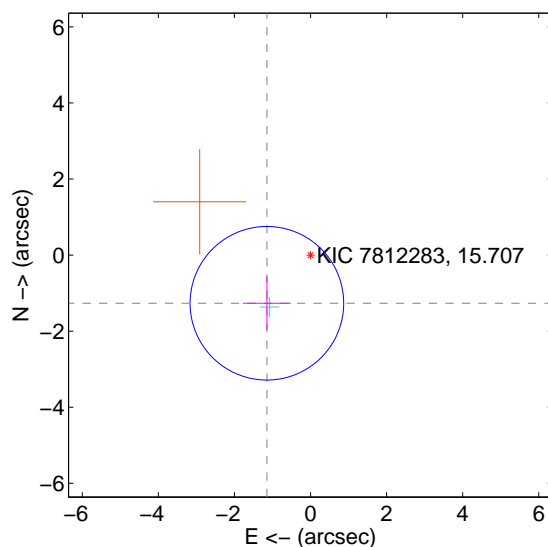
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.659 ± 0.674	2.46	1.092 ± 0.628	-1.249 ± 0.708
PRF-fit source offset from KIC position	1.709 ± 0.673	2.54	1.147 ± 0.628	-1.266 ± 0.708
photometric centroid source offset	1.50 ± 1.27	1.19	0.99 ± 1.32	1.14 ± 1.22

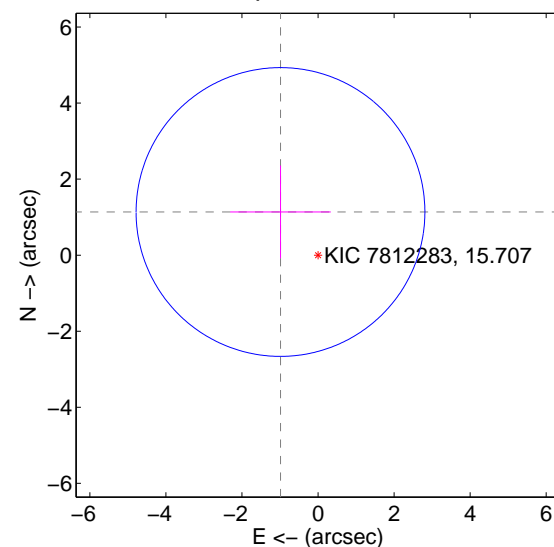
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

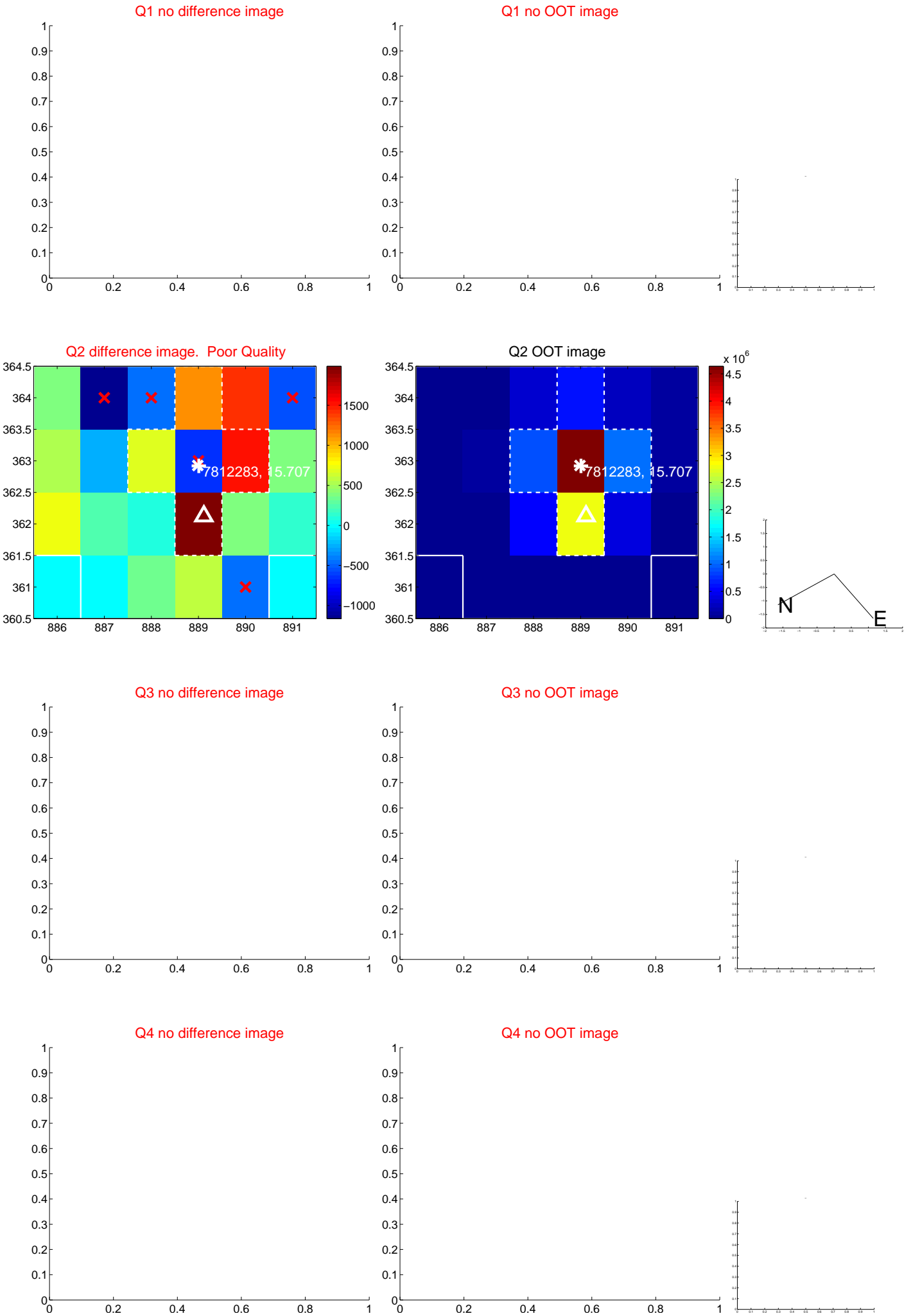


offset from photometric centroids



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.

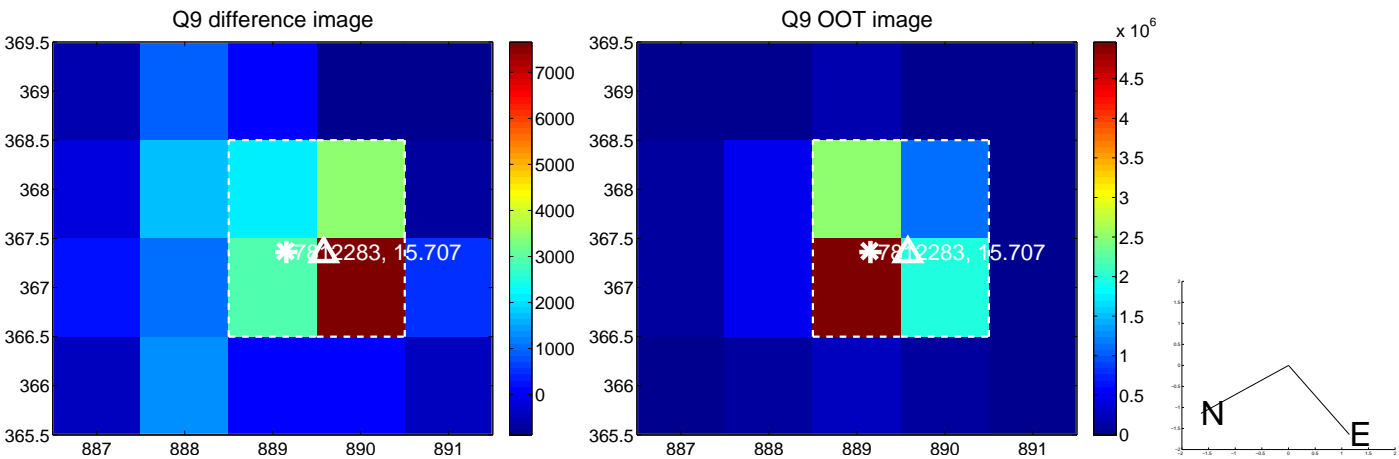
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



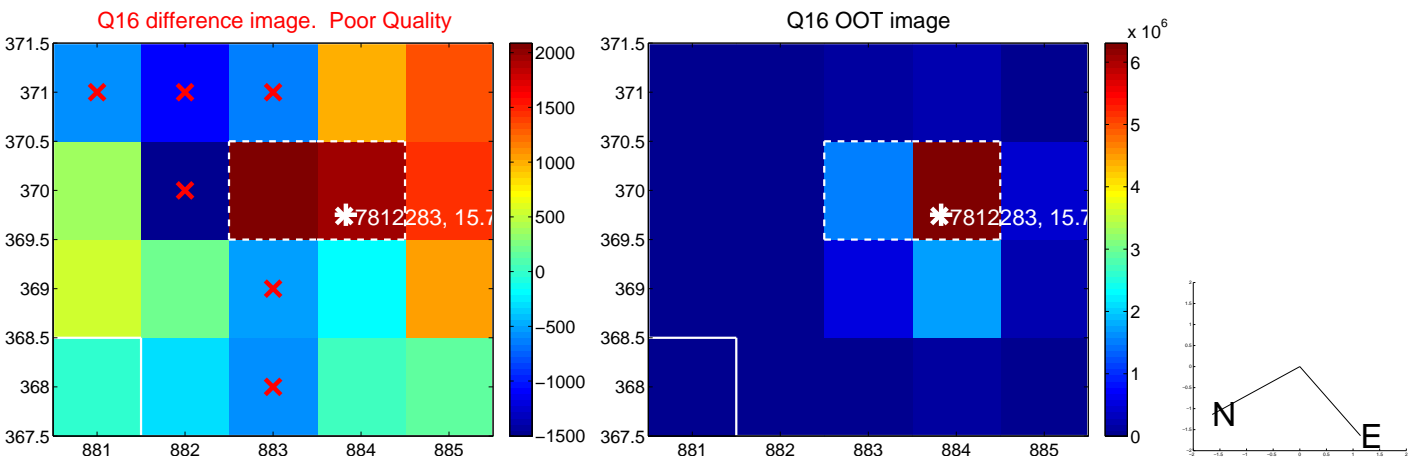
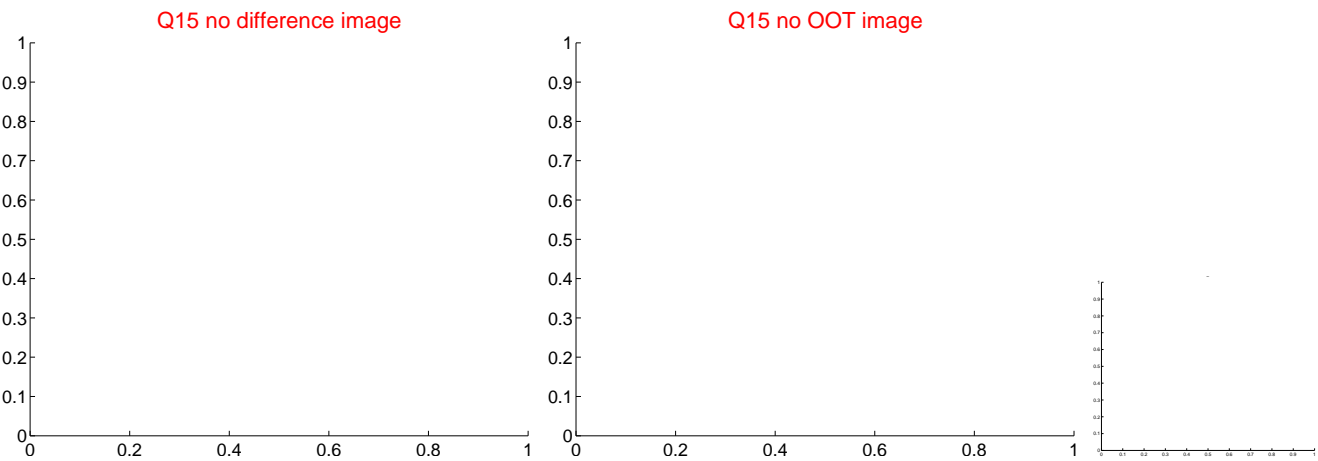
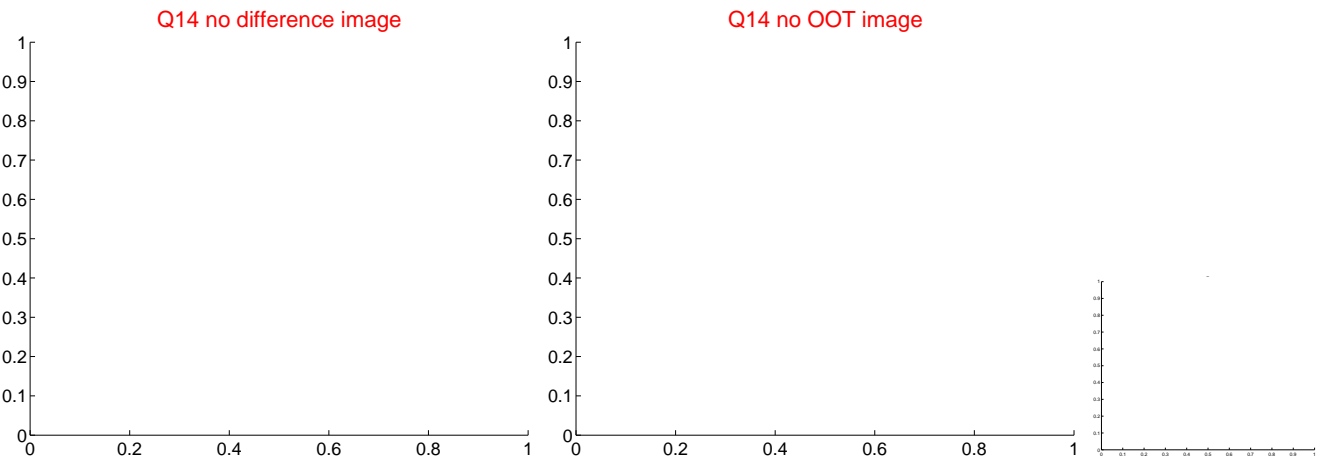
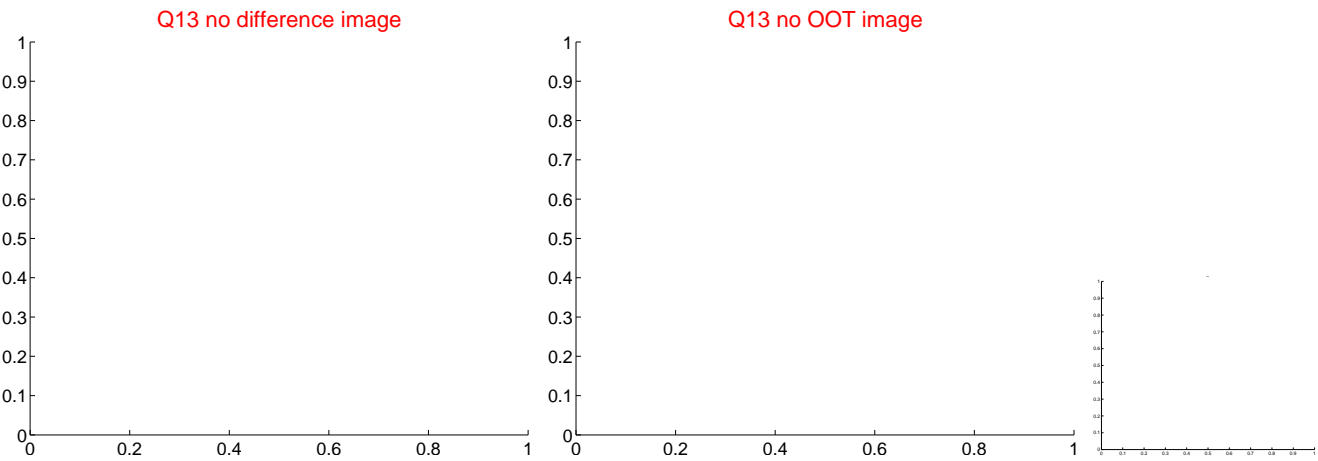
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



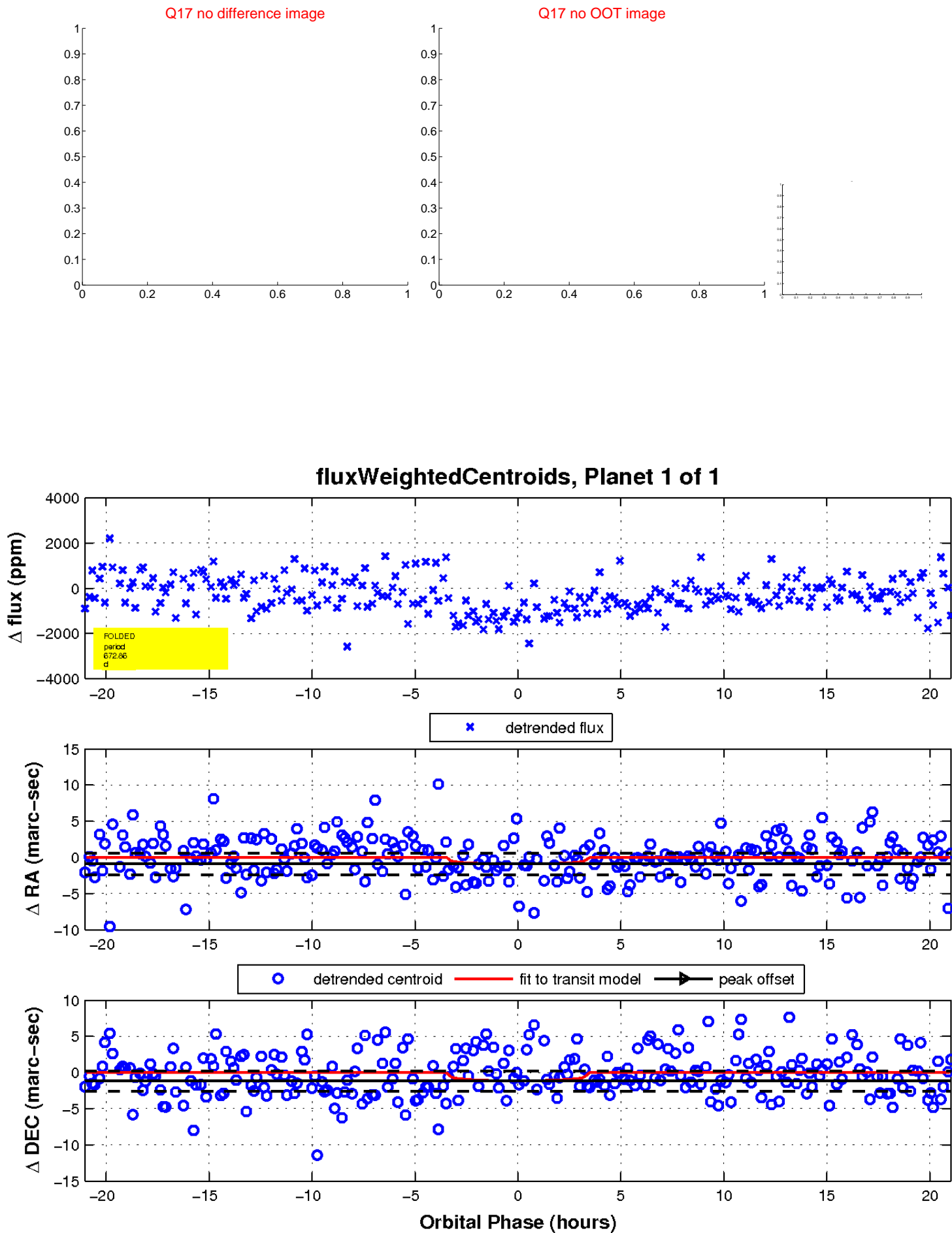
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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.



UKIRT Image

Declination

