

KIC 006586988

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})
006586988-01	OBS	No	527.764092	436.820035	212.9	9.443	7.9	6.7	1.51	6773	2.42	2.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006586988-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—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.

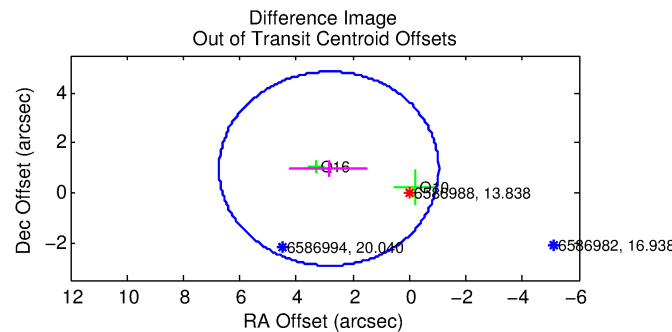
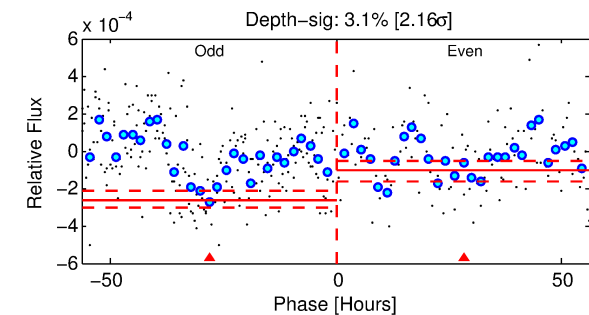
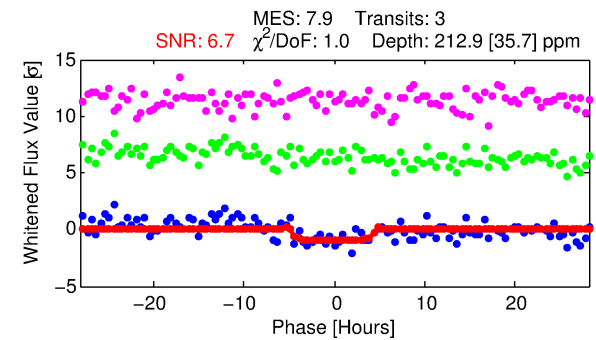
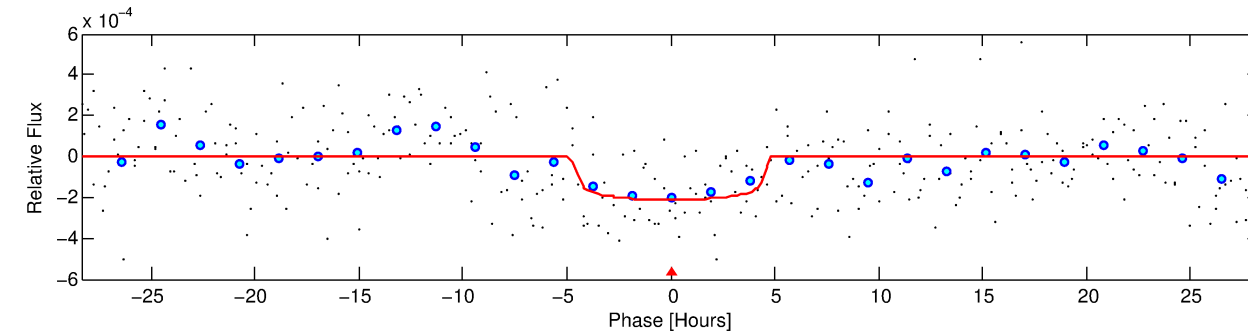
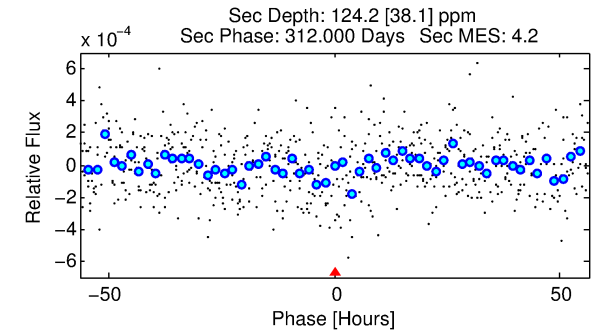
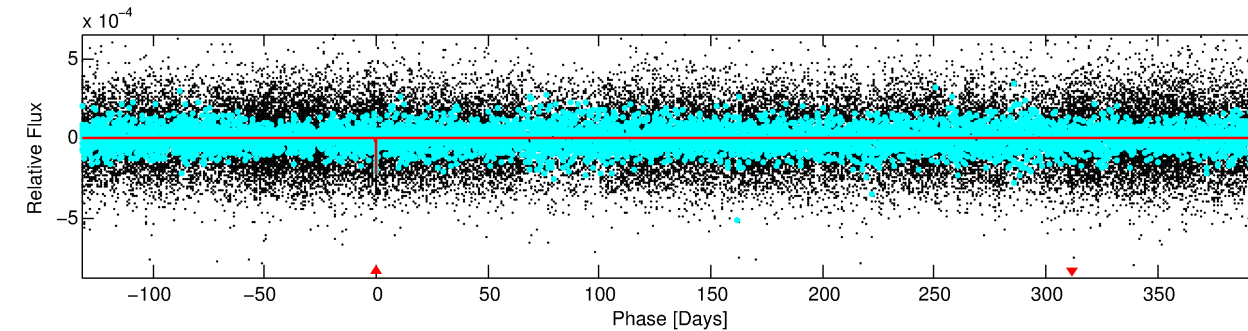
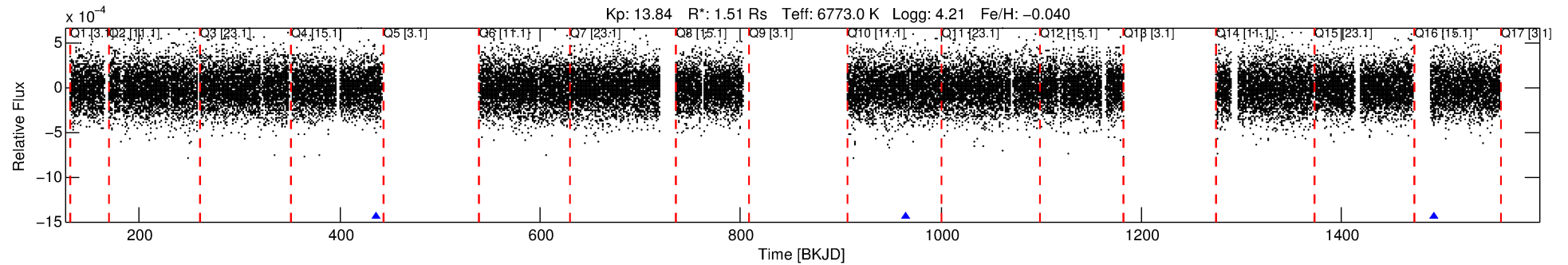
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006586988-01

No Significant Match Found

DV One-Page Summary

KIC: 6586988 Candidate: 1 of 1 Period: 527.764 d



DV Fit Results:

Period = 527.76409 [0.01428] d
Epoch = 436.8200 [0.0204] BKJD
Rp/R* = 0.0147 [0.0073]
a/R* = 275.72 [774.13]
b = 0.78 [1.40]
Seff = 2.16 [0.84]
Teq = 309 [30] K
Rp = 2.42 [1.44] Re
a = 1.4114 [0.3684] AU
Ag = 23326.95 [25628.85] [0.91σ]
Teffp = 5905 [1549] K [3.61σ]

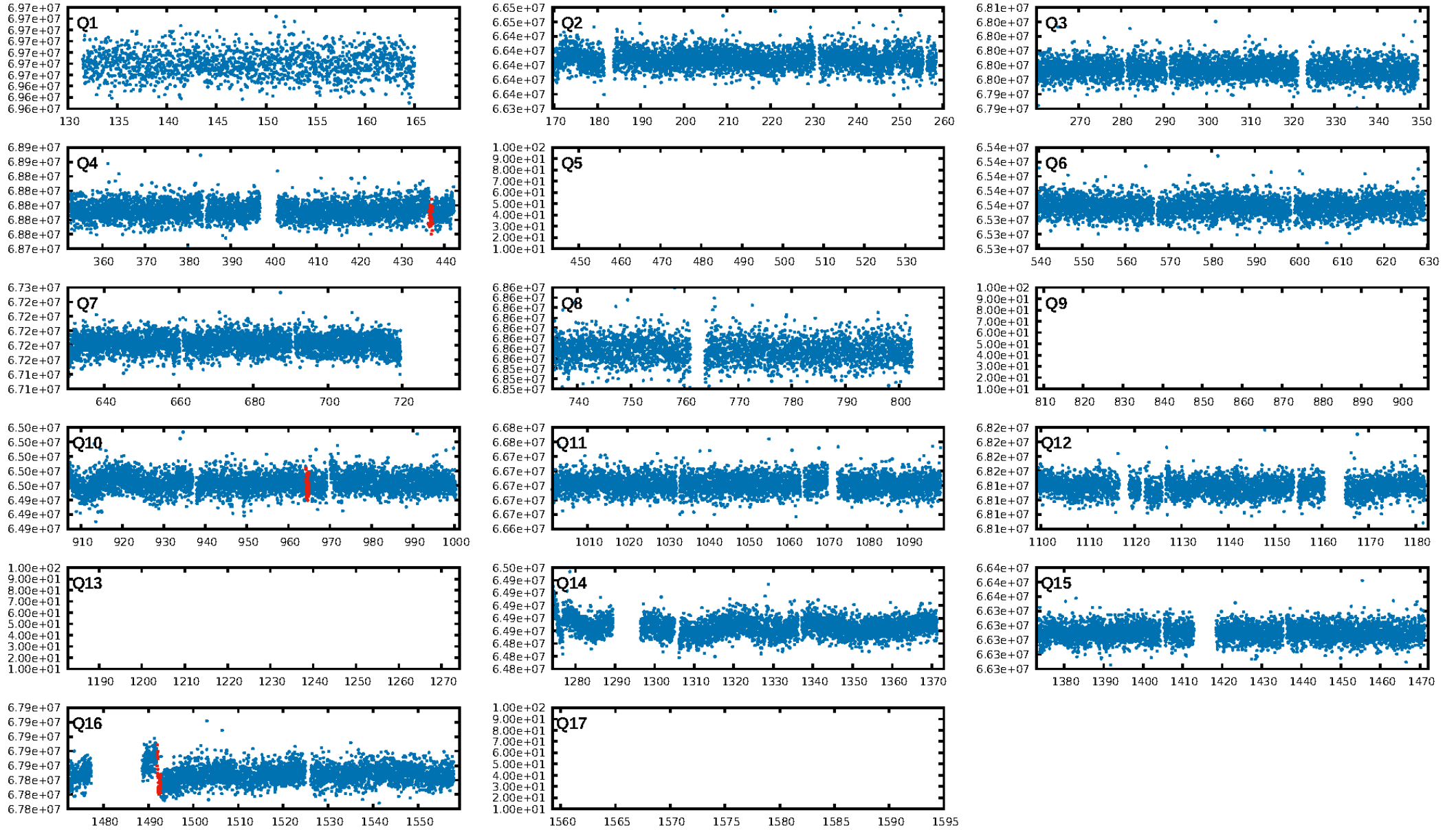
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.9%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 8.78e-16
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.896
Centroid-sig: 84.1%
Centroid-so: 0.574 arcsec [0.30σ]
OotOffset-rm: 3.002 arcsec [2.32σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-rm: 2.973 arcsec [2.08σ]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

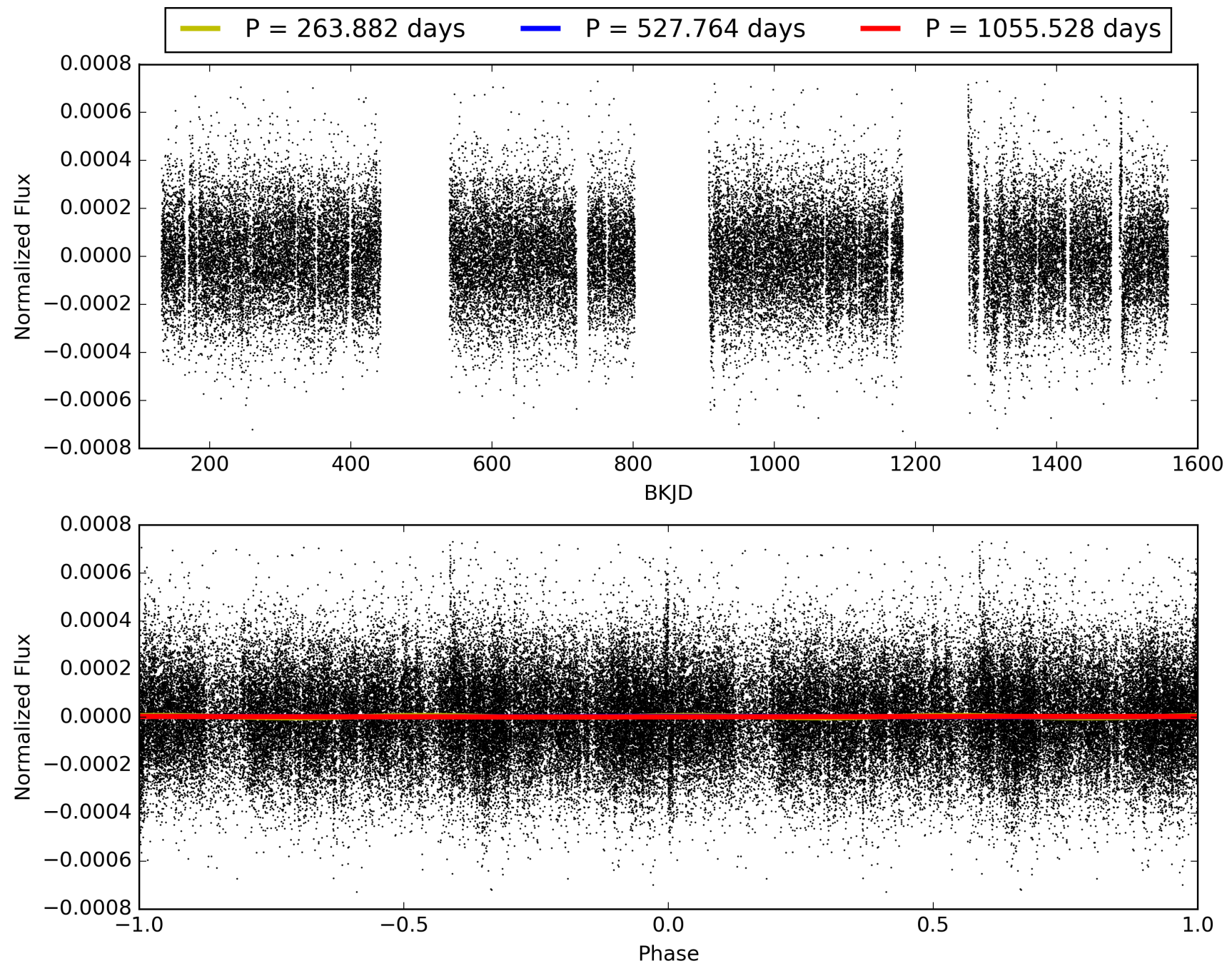
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:26:22 Z

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

TCE 006586988-01, PDC Light Curves

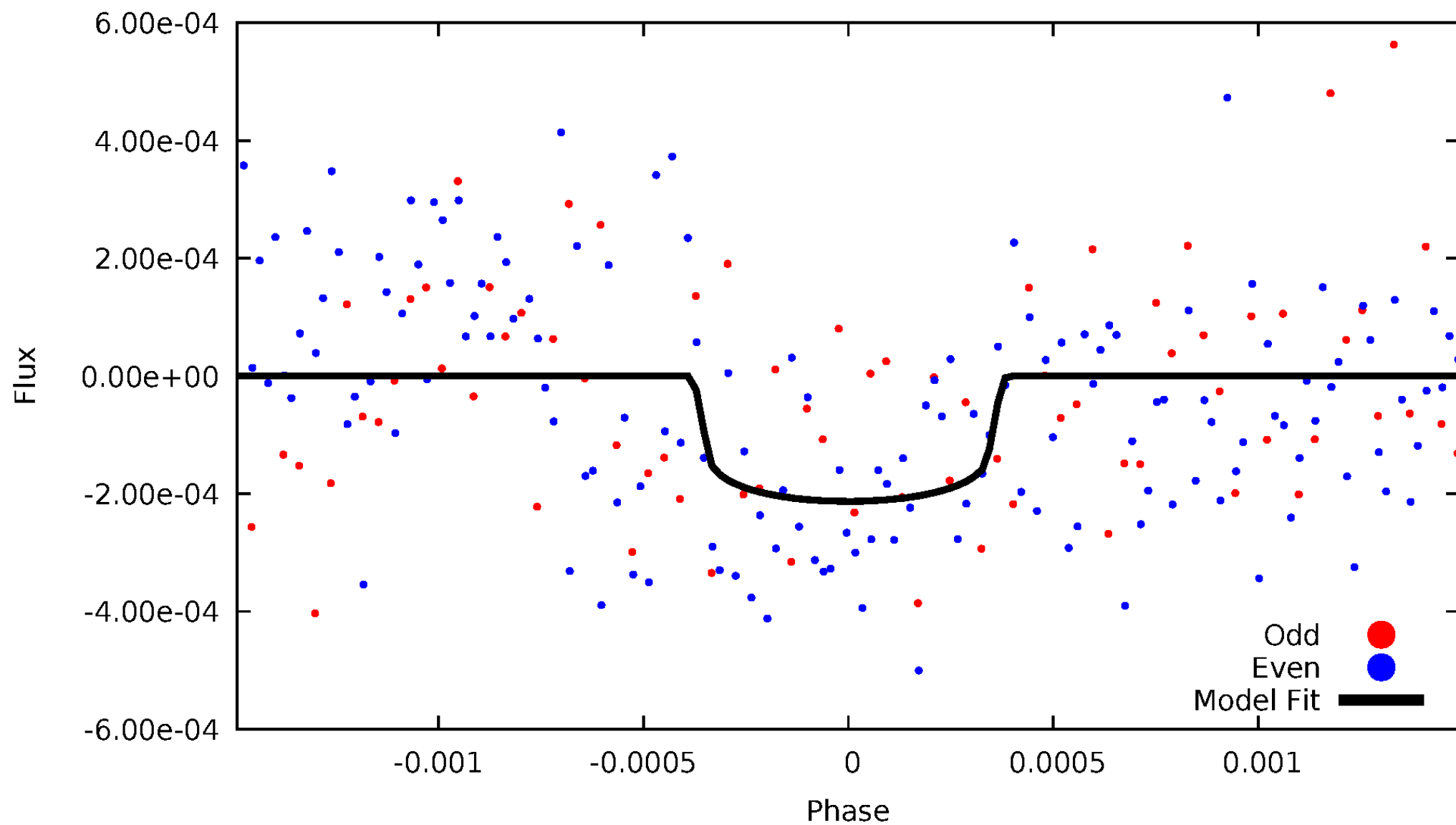


TCE 006586988-01



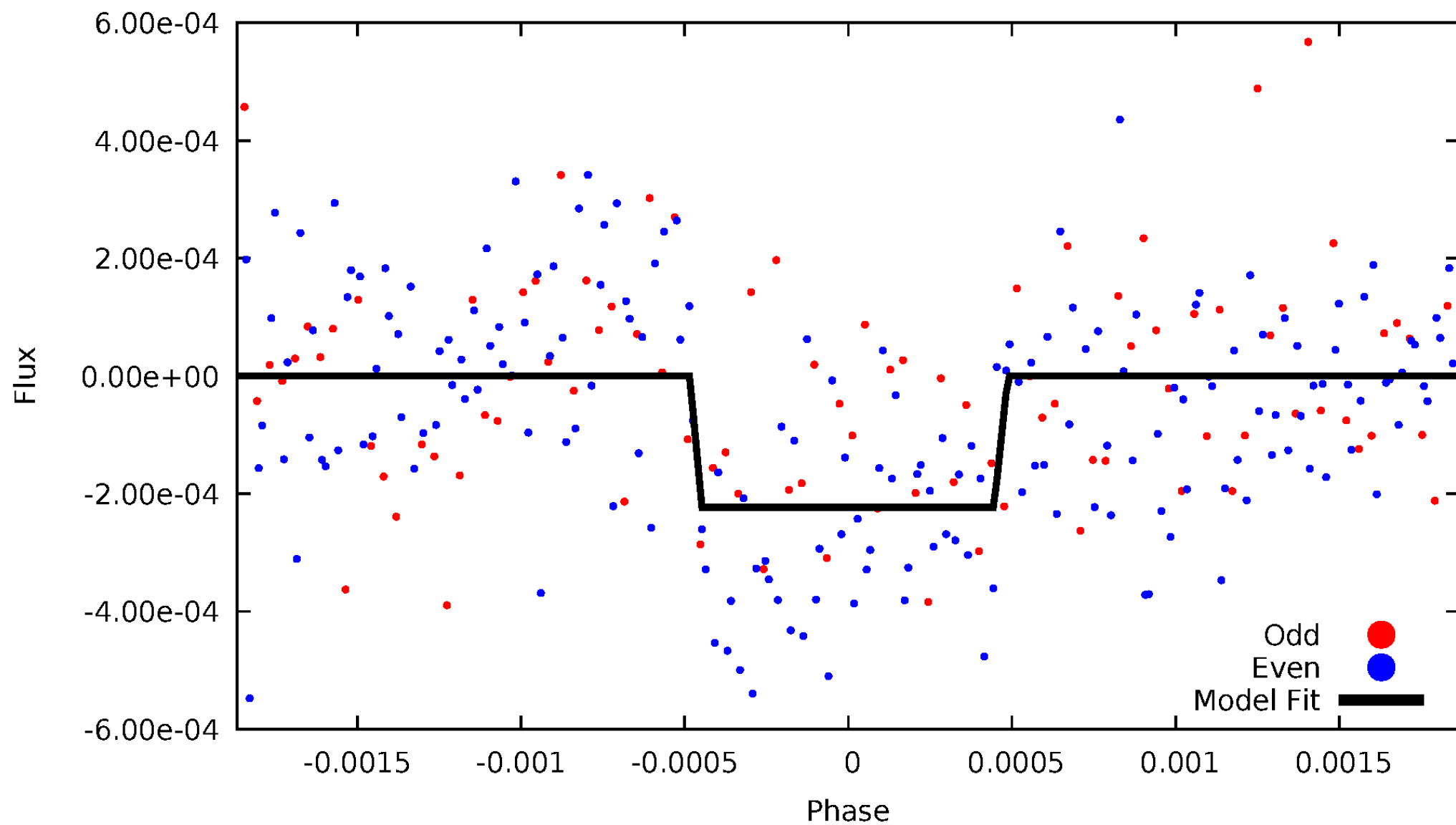
DV Odd/Even

TCE 006586988-01



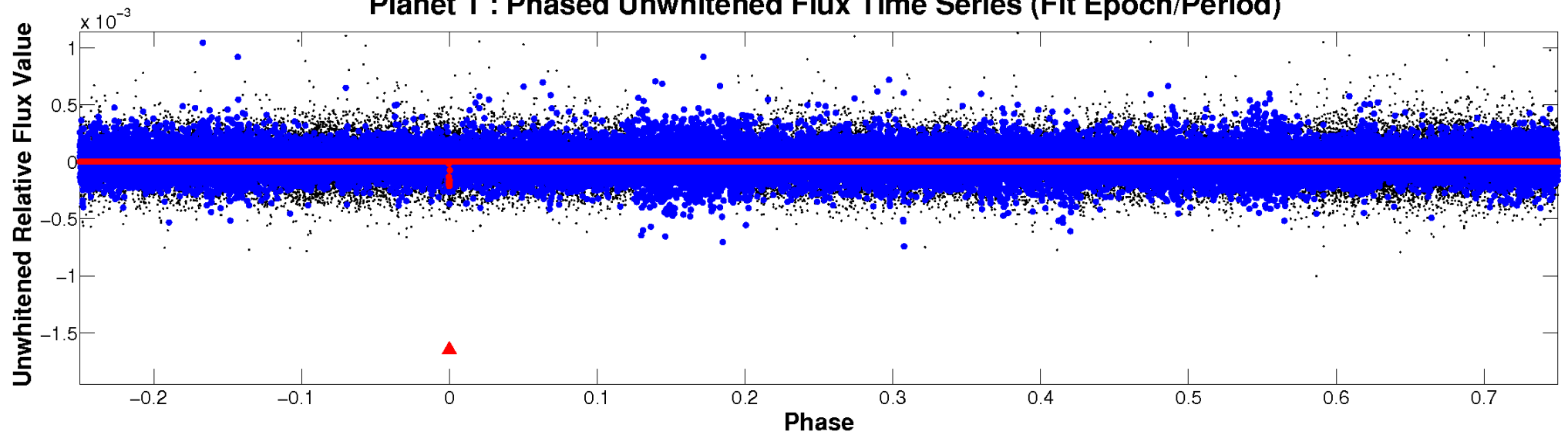
ALT Odd/Even

TCE 006586988-01

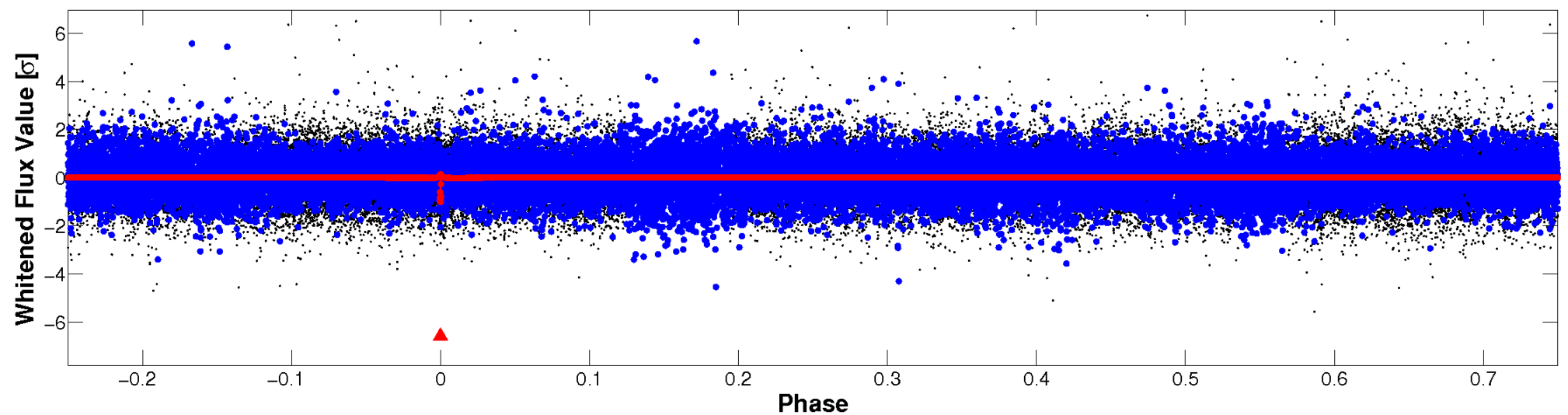


Non-Whitened Vs. Whitened Light Curve

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

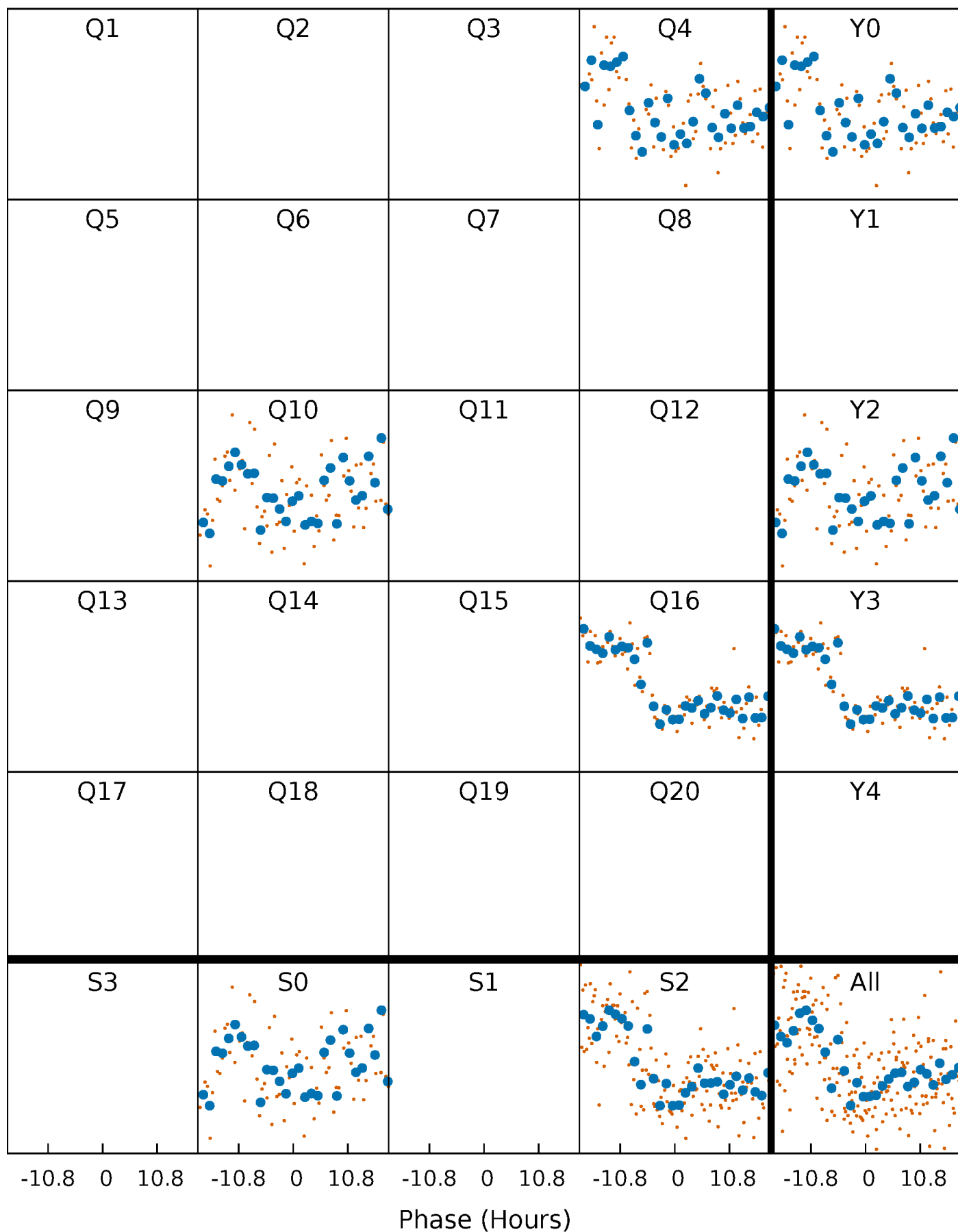


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



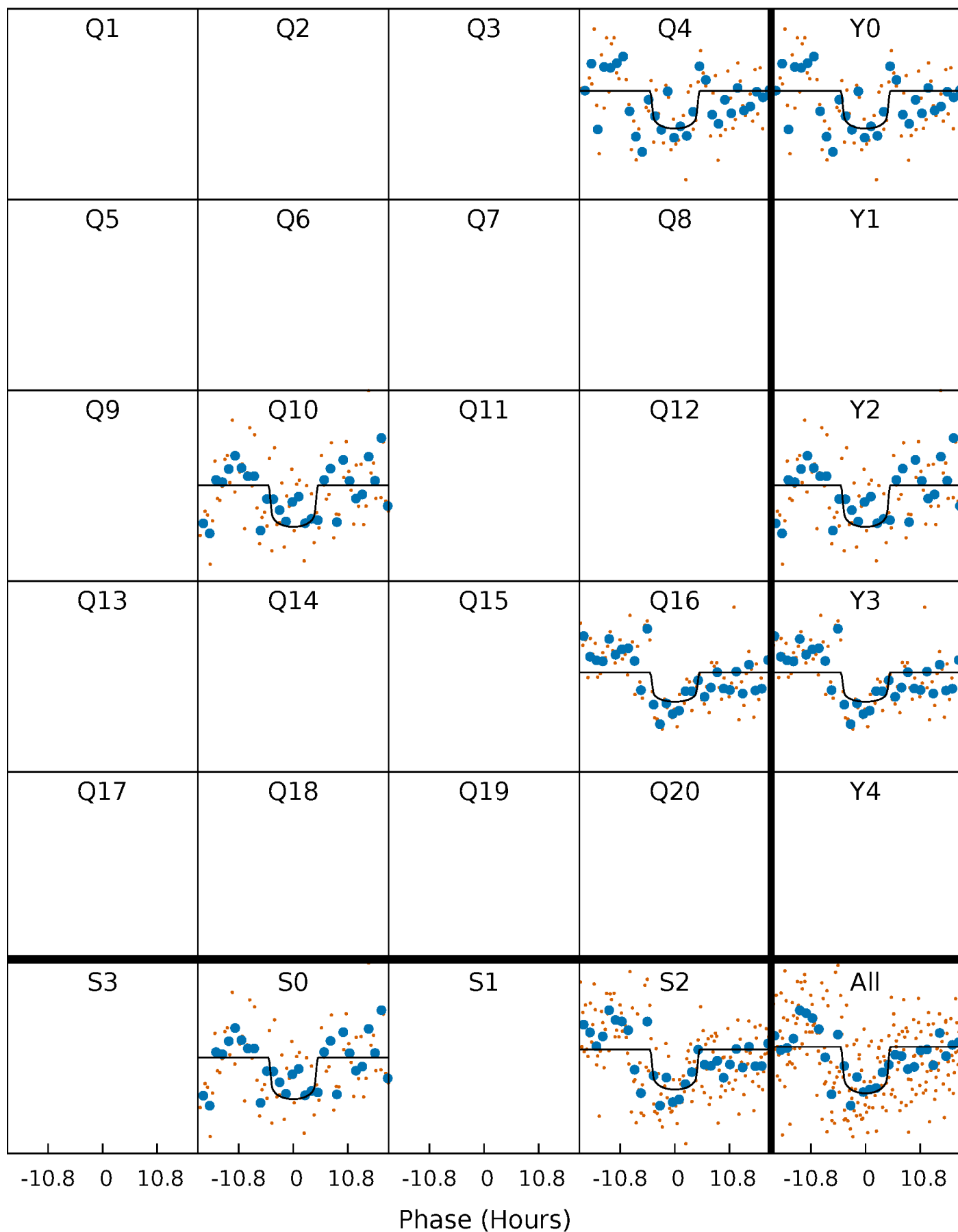
PDC Quarter-Phased Transit Curves

TCE 006586988-01 P=527.764092 Days $T_0=436.820035$ (BKJD)



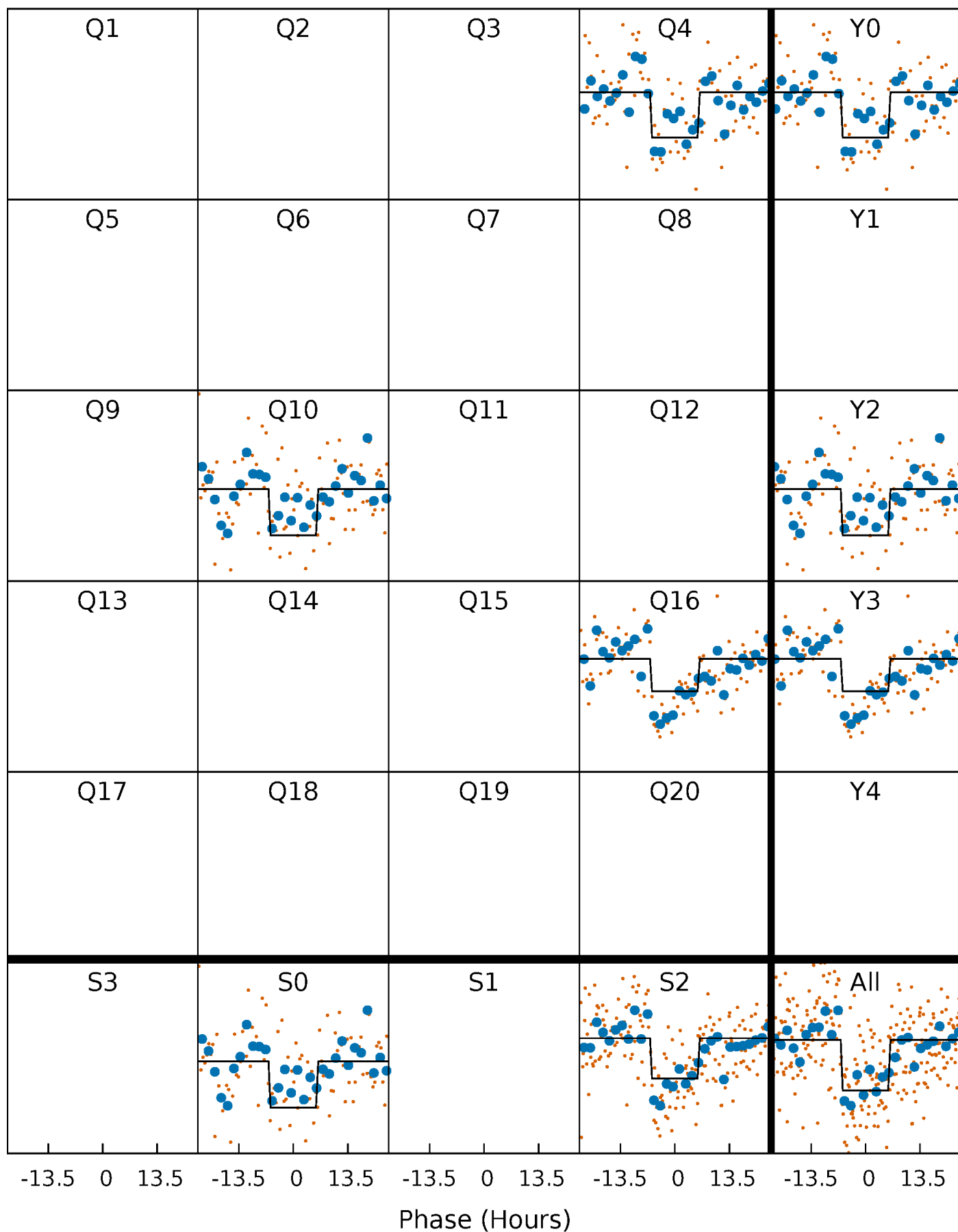
DV Quarter-Phased Transit Curves

TCE 006586988-01 P=527.764092 Days $T_0=436.820035$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

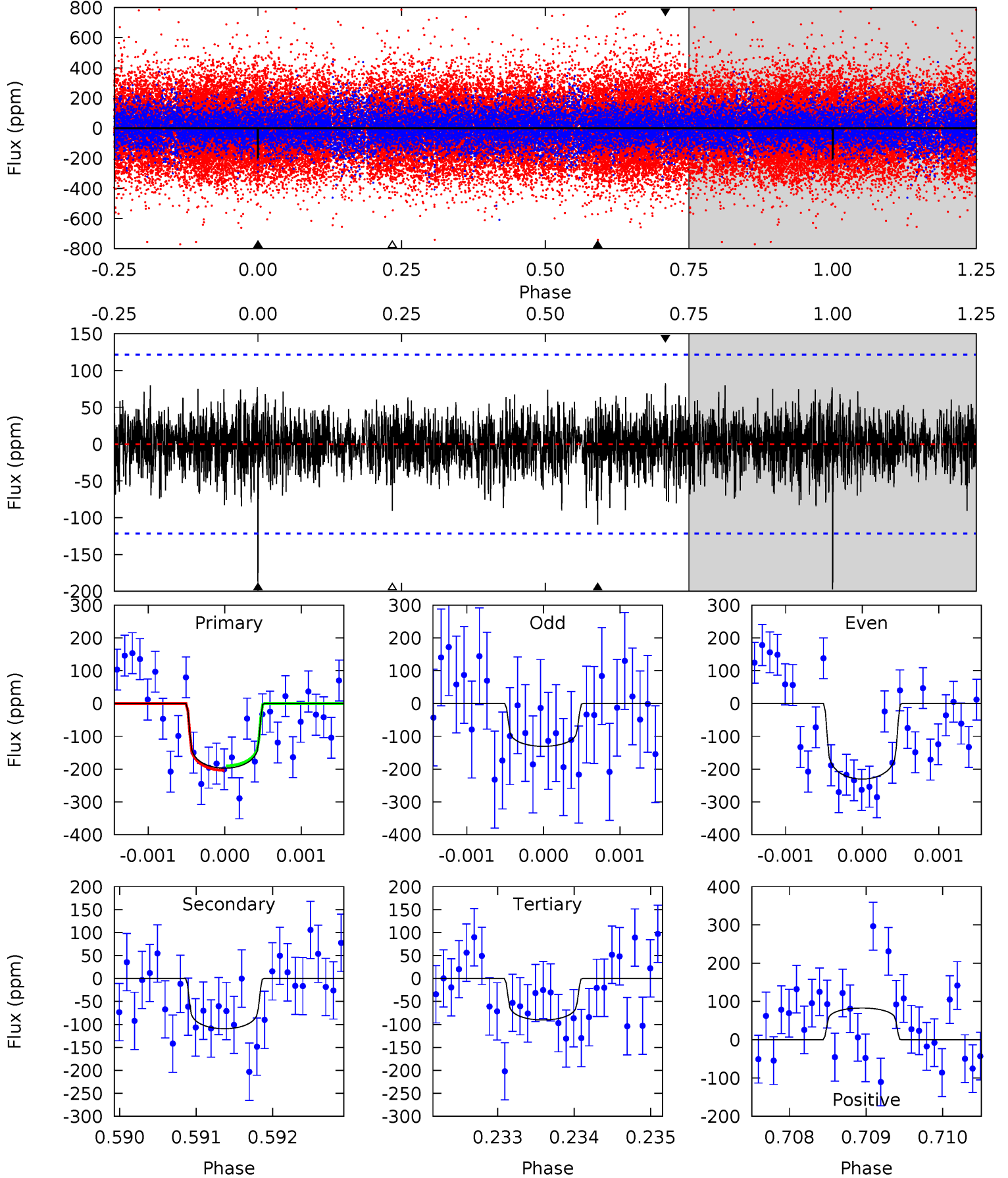
TCE 006586988-01 P=527.853344 Days $T_0=436.691528$ (BKJD)



DV Model-Shift Uniqueness Test

006586988-01, $P = 527.764092$ Days, $E = 436.820035$ Days

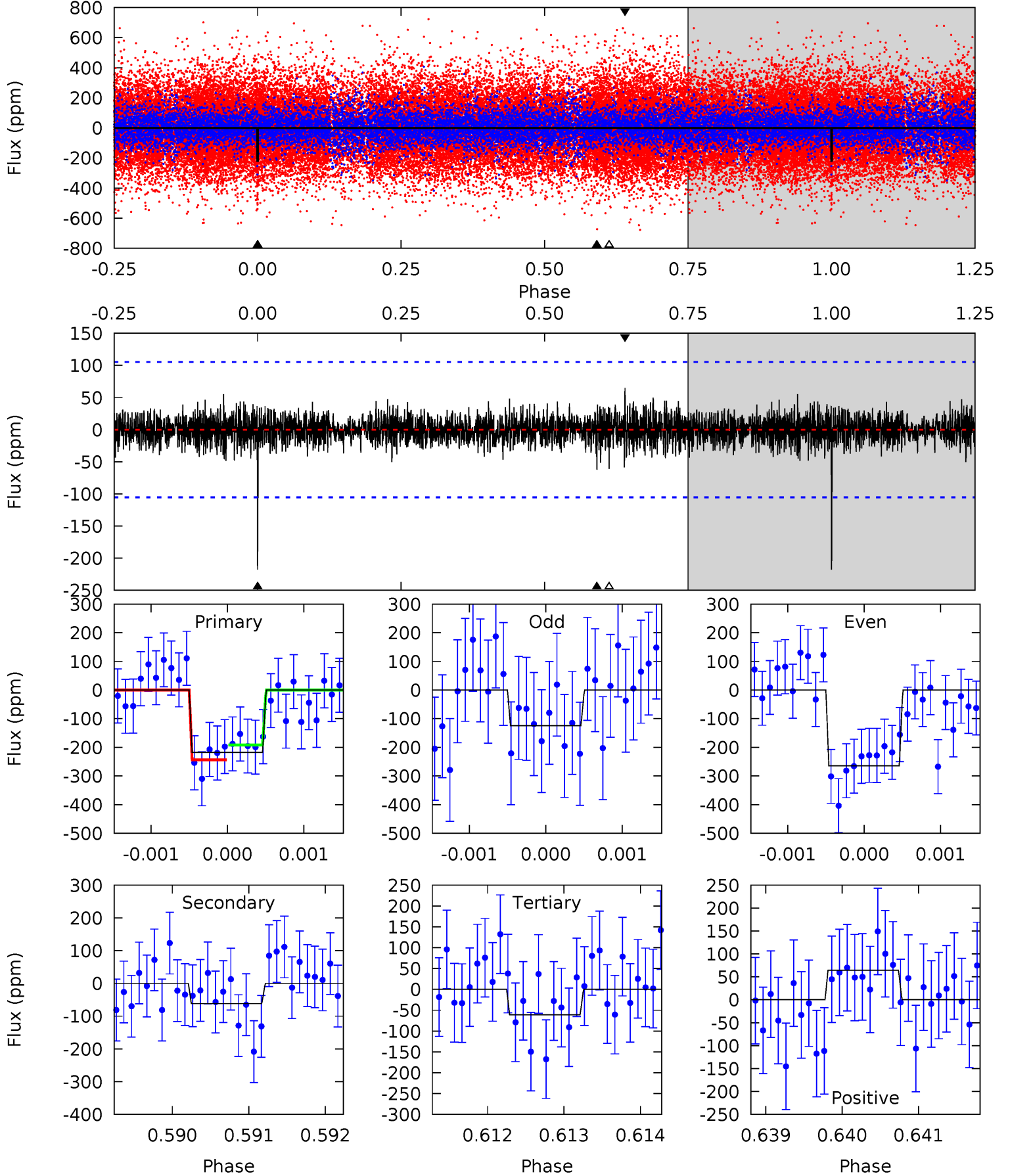
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.91	4.94	4.08	3.74	5.50	3.36	1.15	4.83	5.17	0.86	1.20	2.13	1.03	0.30	0.31



Alt Model-Shift Uniqueness Test

006586988-01, P = 527.853344 Days, E = 436.691528 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	3.20	3.16	3.35	5.46	3.30	0.79	8.13	7.93	0.05	-0.15	3.47	1.11	0.23	1.35



Stellar Parameters For KIC 006586988

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6773^{+165}_{-259}	$4.209^{+0.124}_{-0.186}$	$-0.040^{+0.250}_{-0.350}$	$1.510^{+0.495}_{-0.304}$	$1.351^{+0.204}_{-0.224}$	$0.552^{+0.347}_{-0.289}$
	+2%/-4%	+3%/-4%	+625%/-875%	+33%/-20%	+15%/-17%	+63%/-52%
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 006586988-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-109 ± 22	$2.42^{+1.34}_{-1.18}$	434^{+31}_{-27}	5688^{+2531}_{-938}	19091^{+56279}_{-10891}
Alt.	-62 ± 19	$2.50^{+1.32}_{-1.19}$	433^{+35}_{-25}	4917^{+1719}_{-765}	9892^{+26978}_{-5840}

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 $A_{\text{obs}} \gg 1.0$

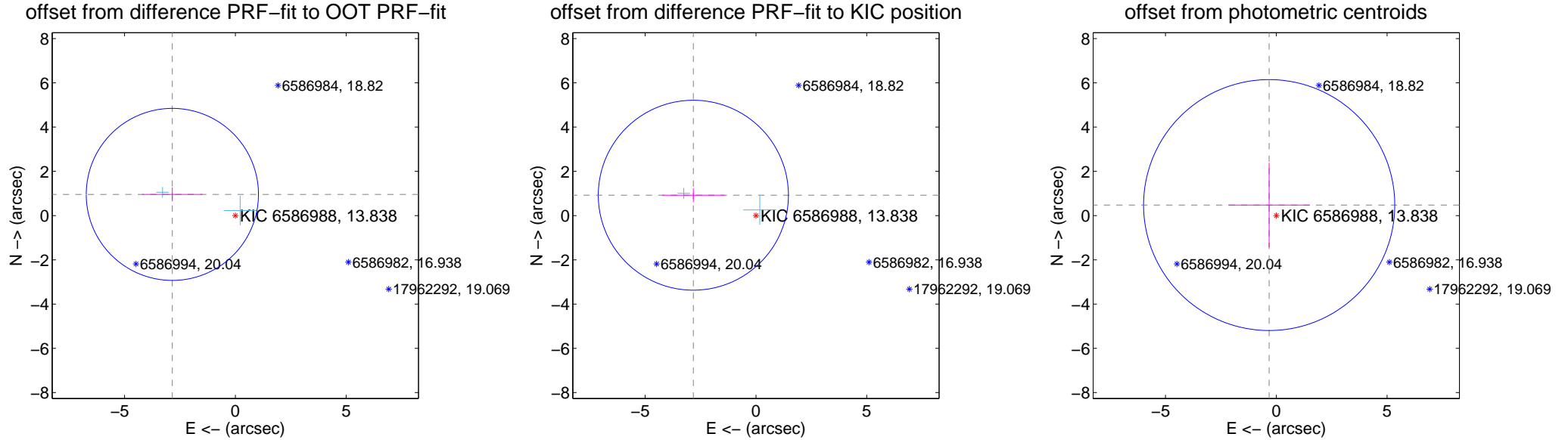
DV Centroid Data

Supplemental centroid analysis for 006586988-01. Kepler magnitude: 13.84. Transit SNR 6.72

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.002 ± 1.296	2.32	2.845 ± 1.363	0.958 ± 0.316
PRF-fit source offset from KIC position	2.973 ± 1.431	2.08	2.826 ± 1.405	0.921 ± 0.314
photometric centroid source offset	0.57 ± 1.89	0.30	0.32 ± 1.84	0.48 ± 1.91



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.

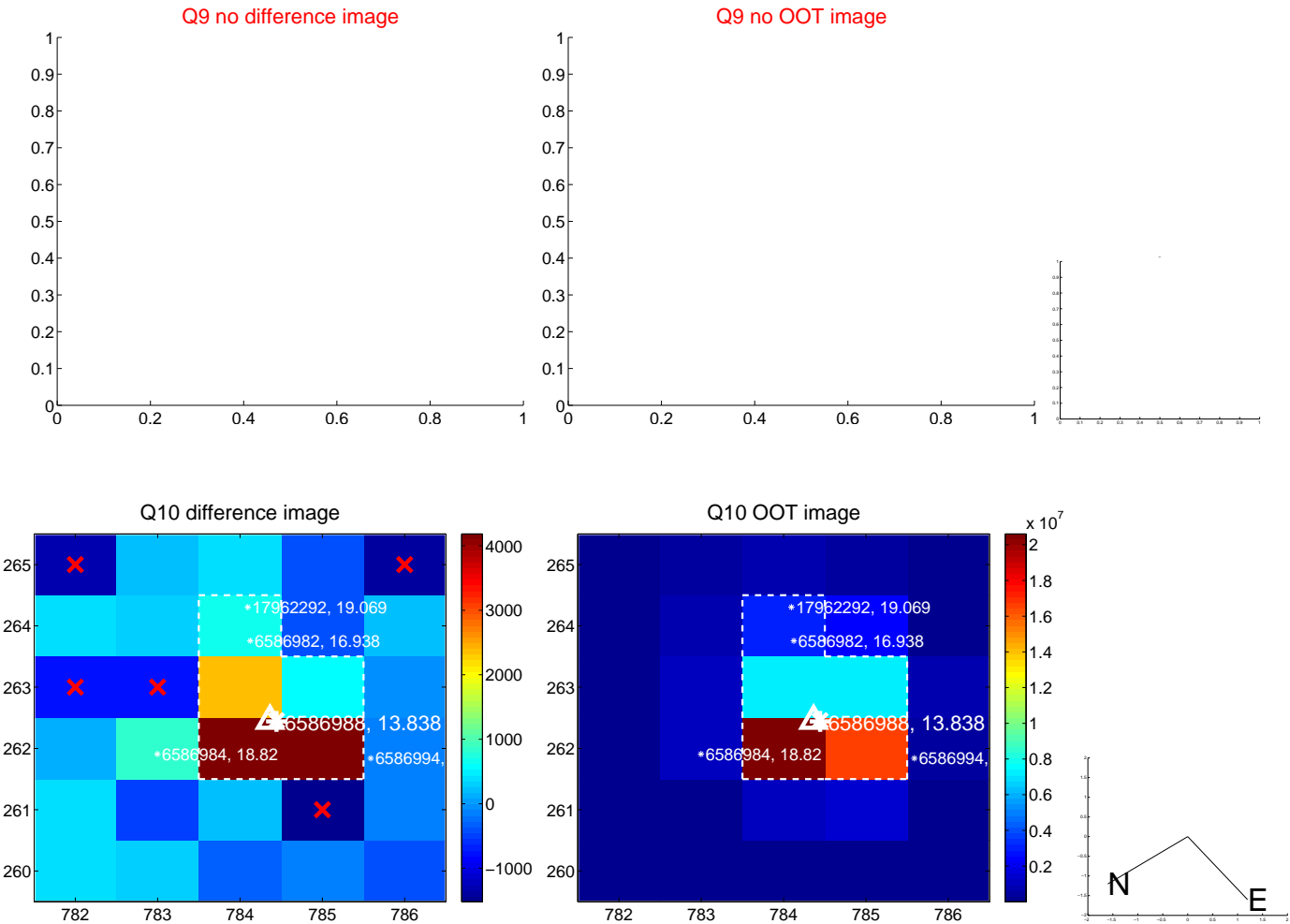
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



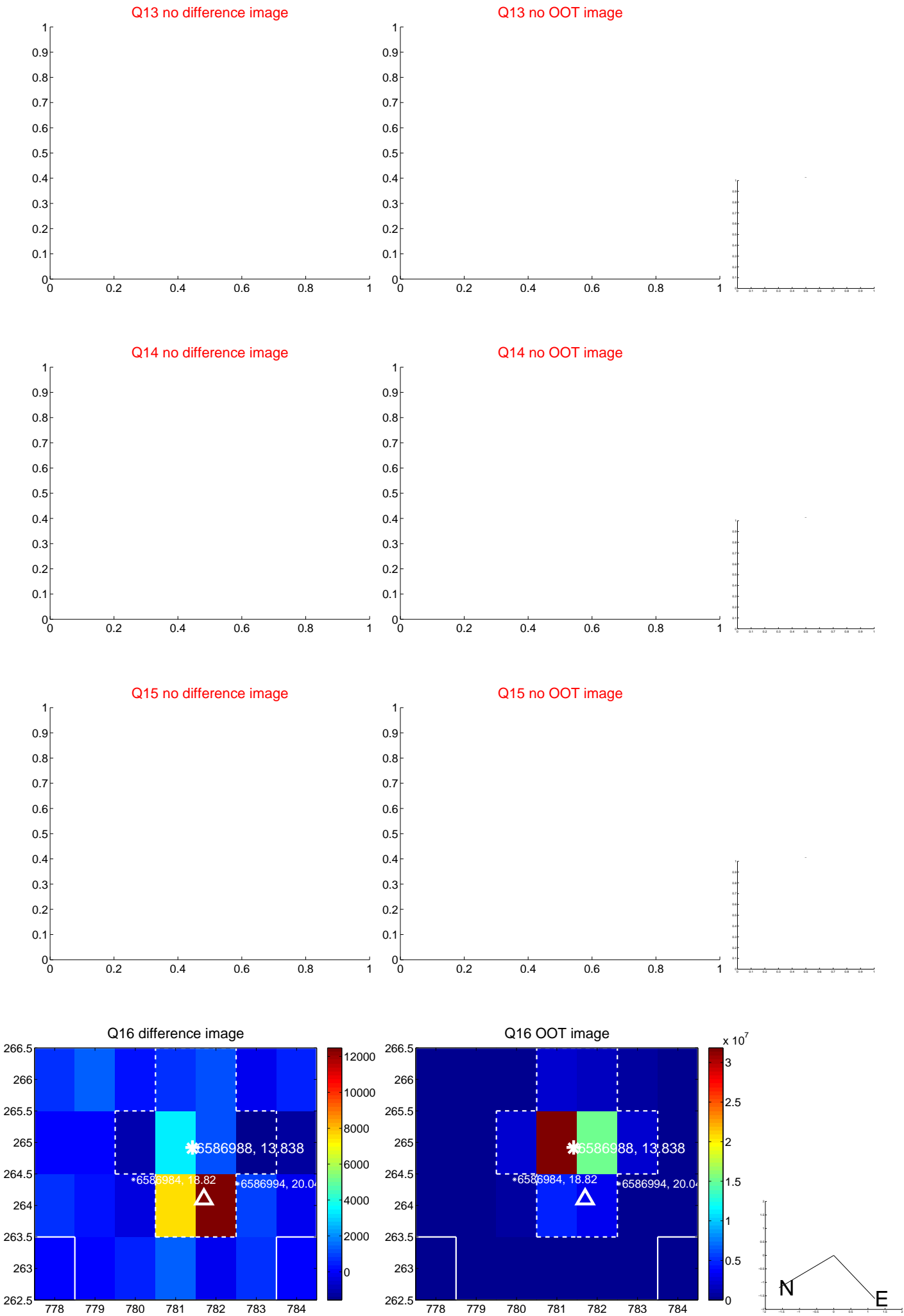
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



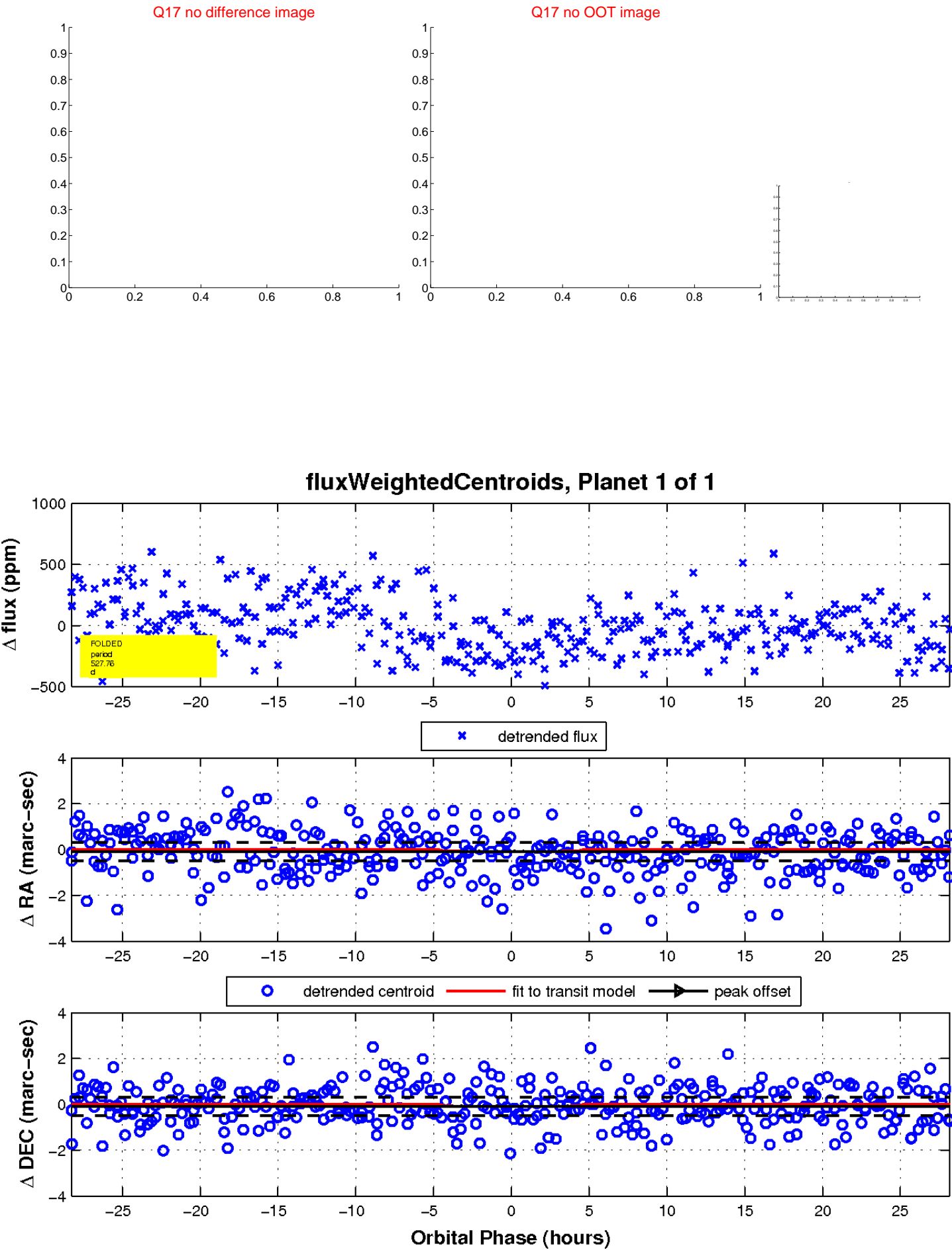
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

