

KIC 002580632

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})
002580632-01	OBS	No	567.490032	375.597286	417.5	7.628	8.7	8.8	1.03	5960	2.33	0.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002580632-01	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.

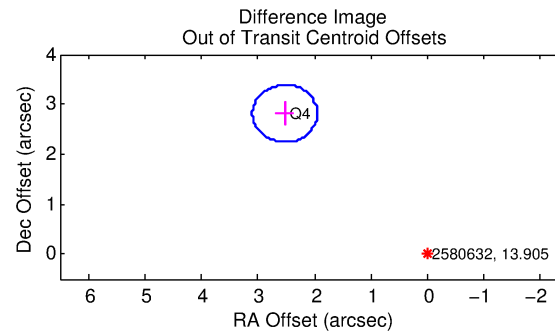
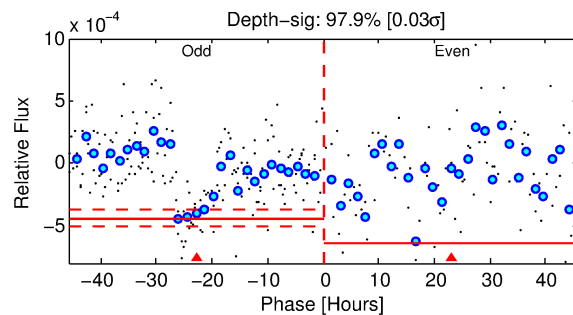
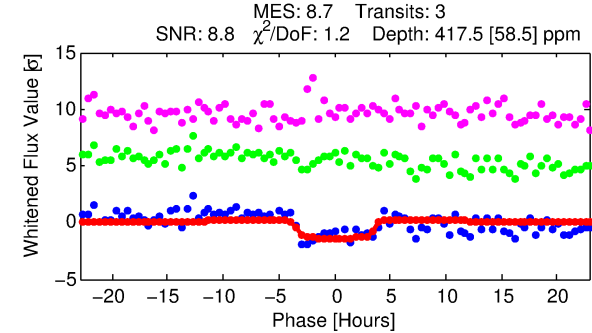
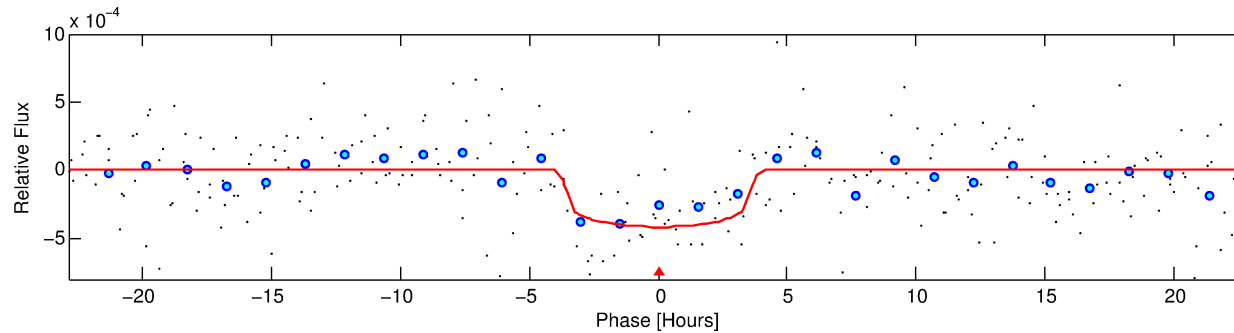
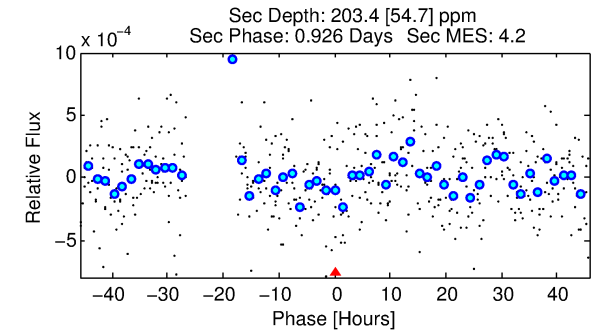
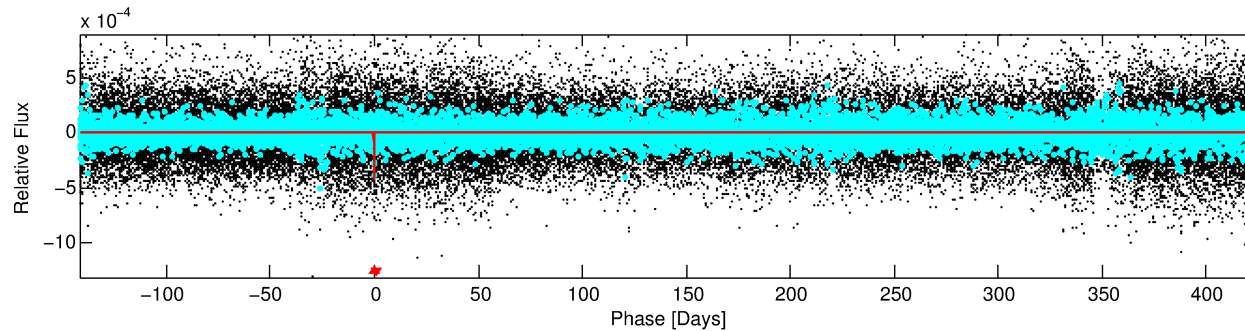
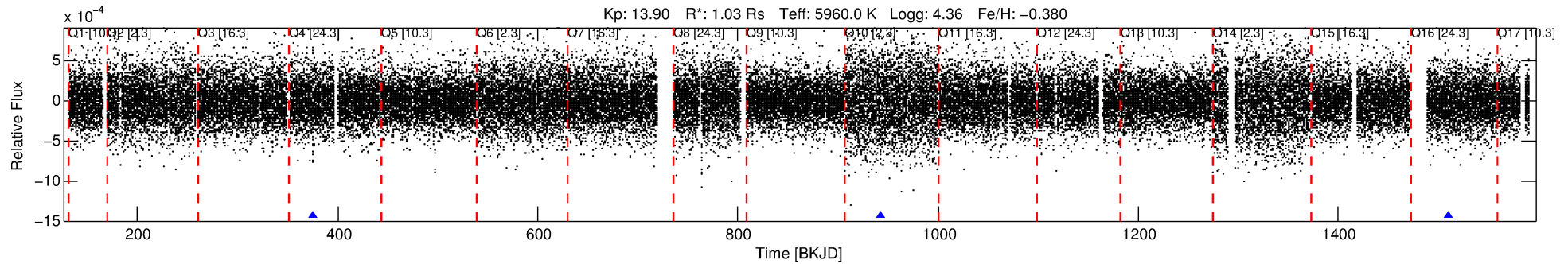
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002580632-01

No Significant Match Found

DV One-Page Summary

KIC: 2580632 Candidate: 1 of 1 Period: 567.490 d



DV Fit Results:

Period = 567.49003 [0.00994] d
Epoch = 375.5973 [0.0136] BKJD
Rp/R* = 0.0208 [0.0105]
a/R* = 352.93 [875.98]
b = 0.81 [1.07]
Seff = 0.72 [0.25]
Teq = 235 [21] K
Rp = 2.33 [1.34] Re
a = 1.2895 [0.2951] AU
Ag = 34251.83 [37571.73] [0.91σ]
Teffp = 4933 [1297] K [3.62σ]

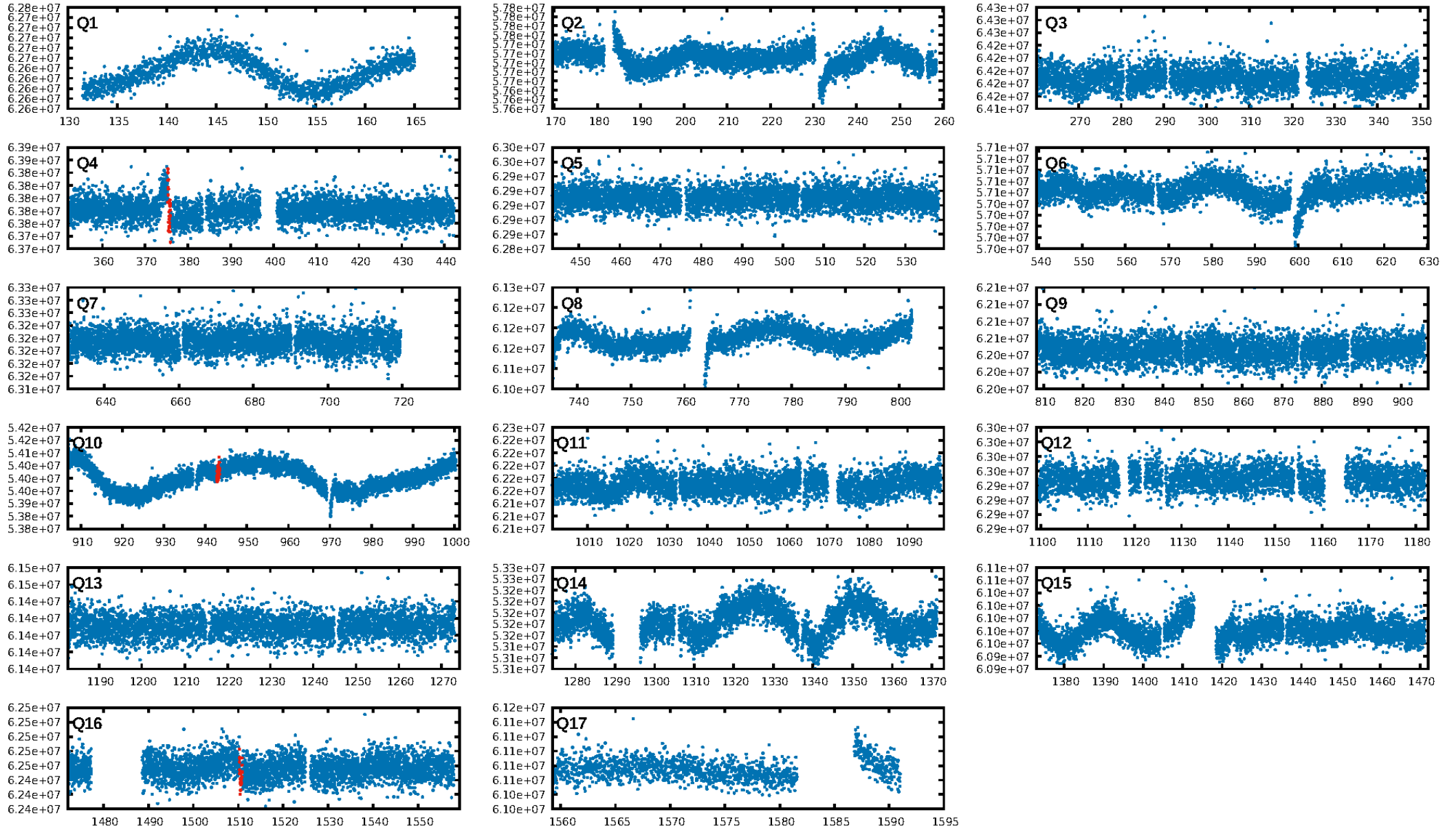
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 38.7%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 5.43e-20
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.517
Centroid-sig: 45.1%
Centroid-so: 1.352 arcsec [0.94σ]
OotOffset-rm: 3.780 arcsec [19.76σ]
KicOffset-rm: 3.693 arcsec [19.53σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

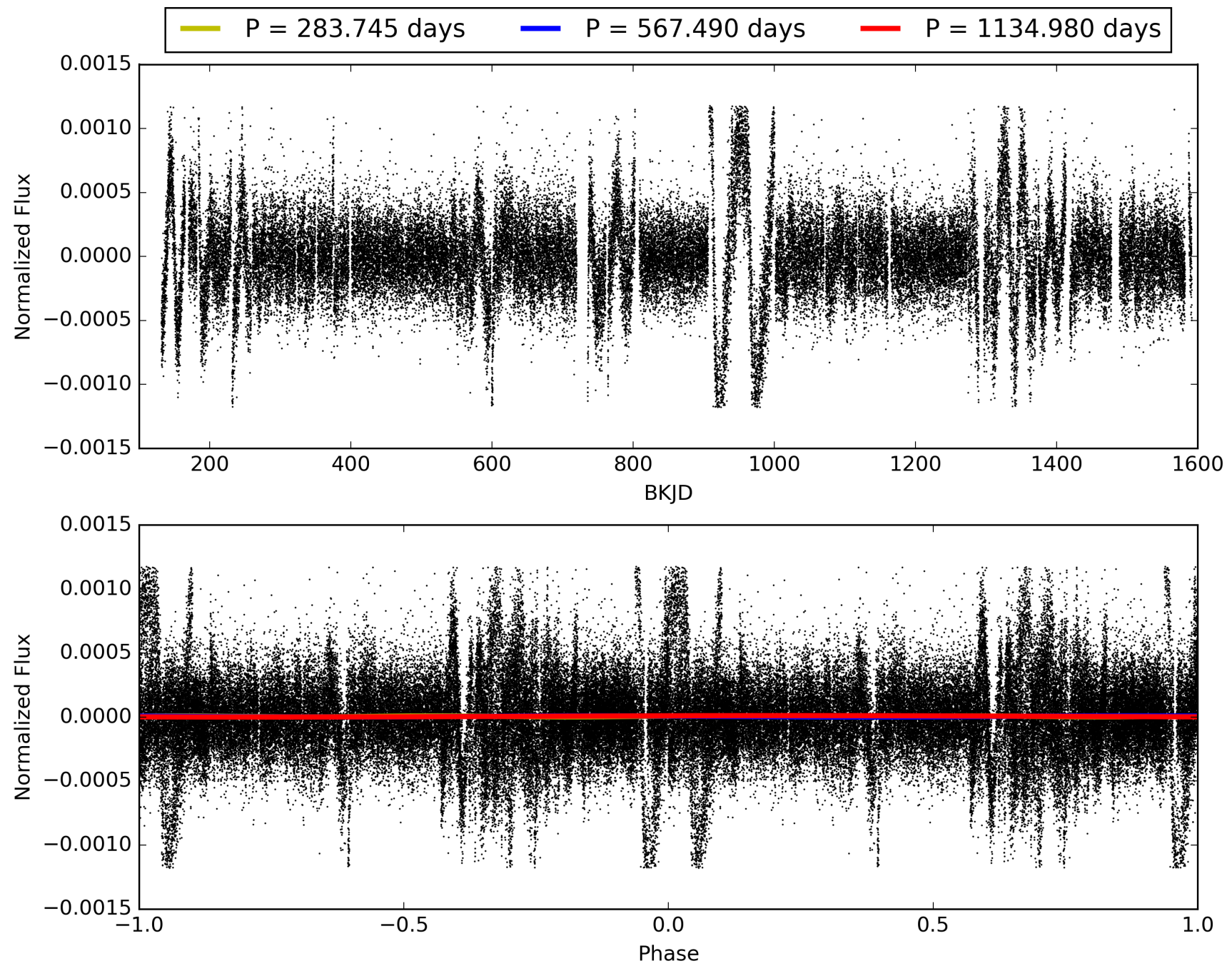
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:10:45 Z

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

TCE 002580632-01, PDC Light Curves

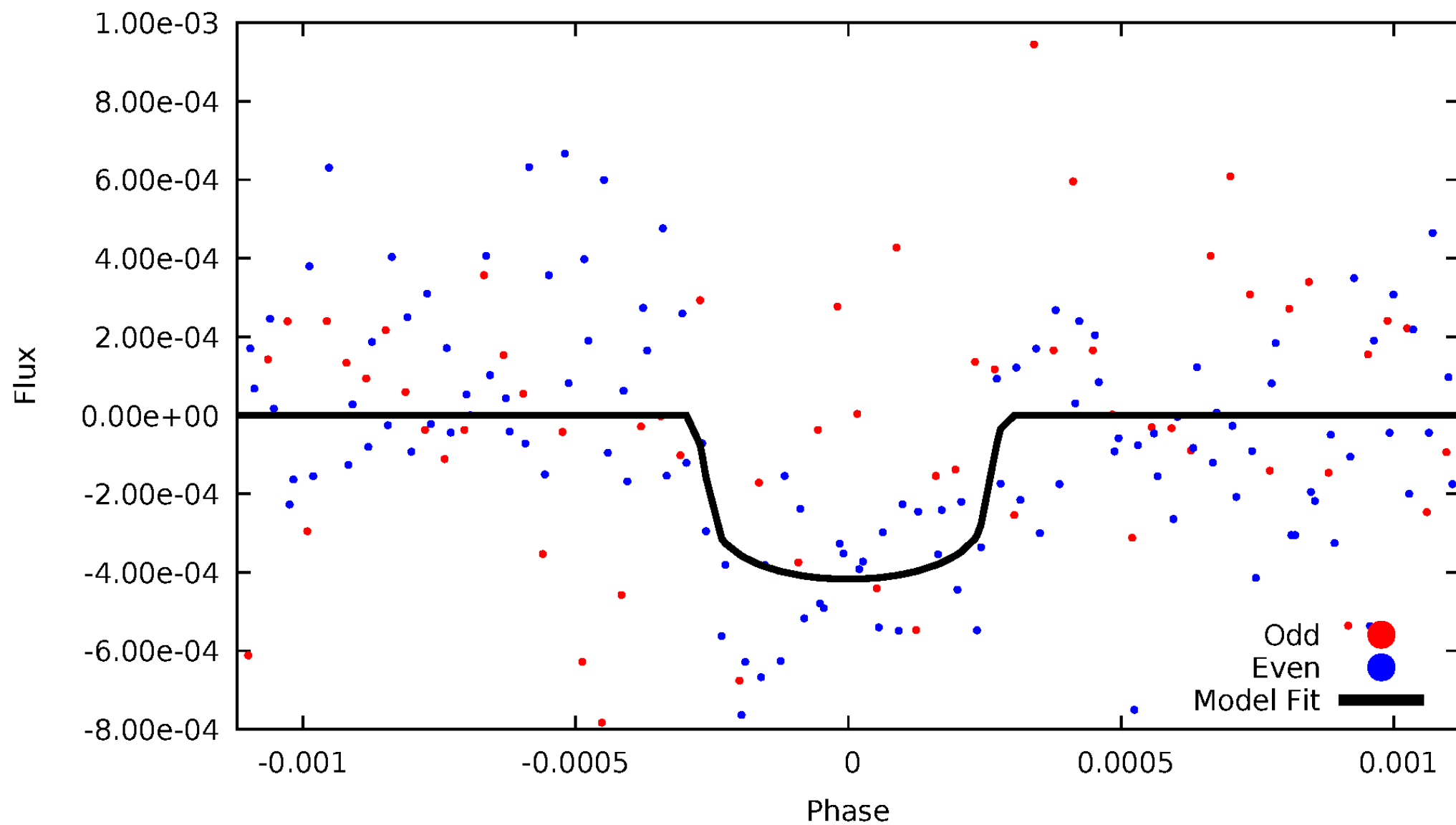


TCE 002580632-01



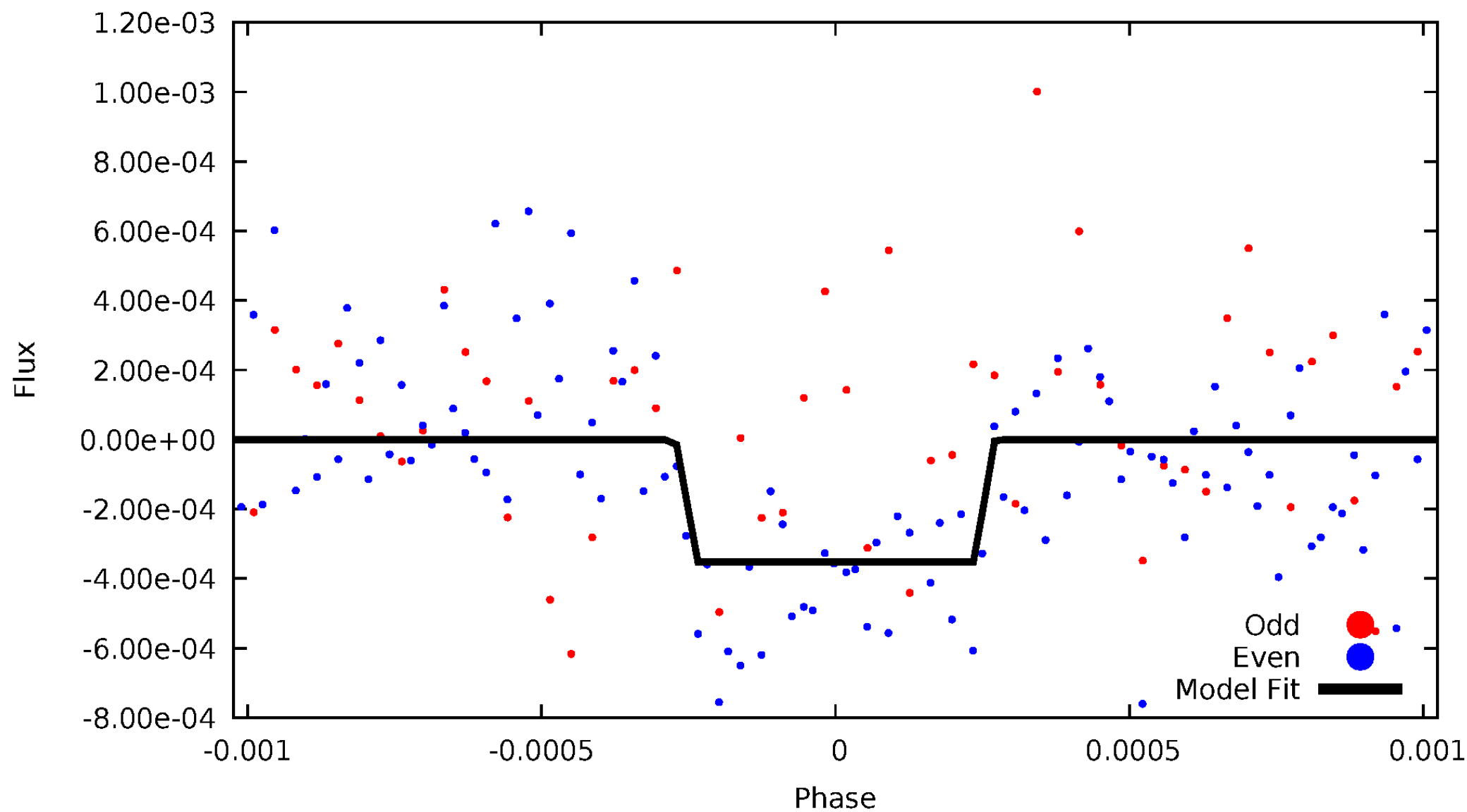
DV Odd/Even

TCE 002580632-01



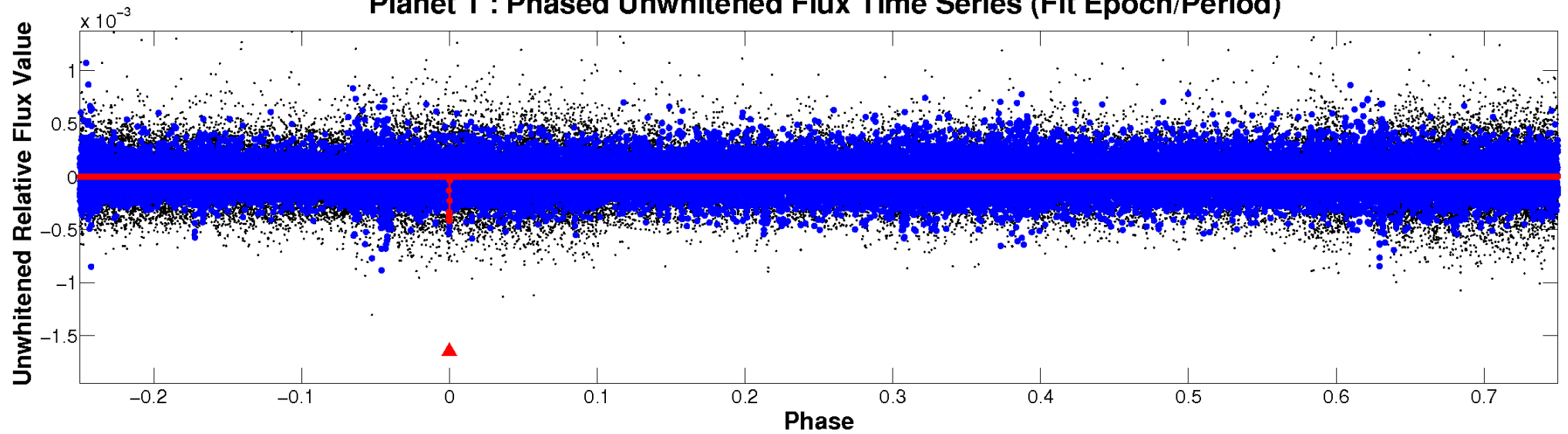
ALT Odd/Even

TCE 002580632-01

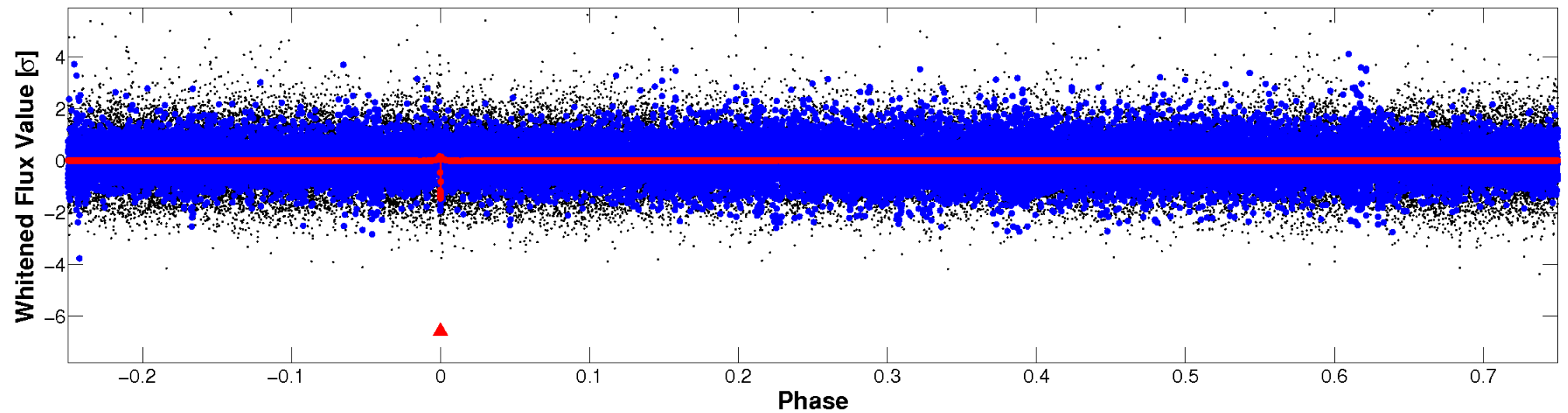


Non-Whitened Vs. Whitened Light Curve

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

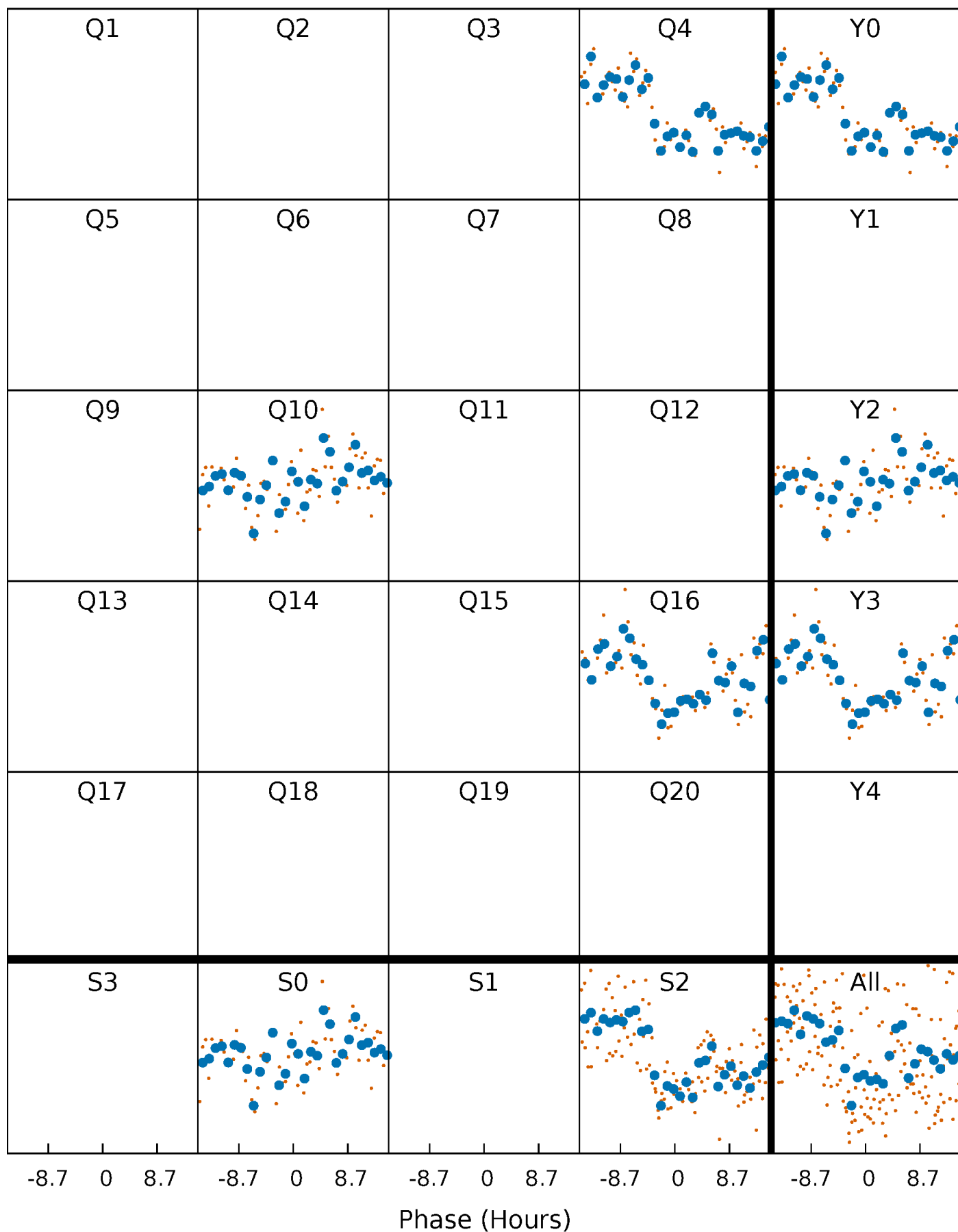


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



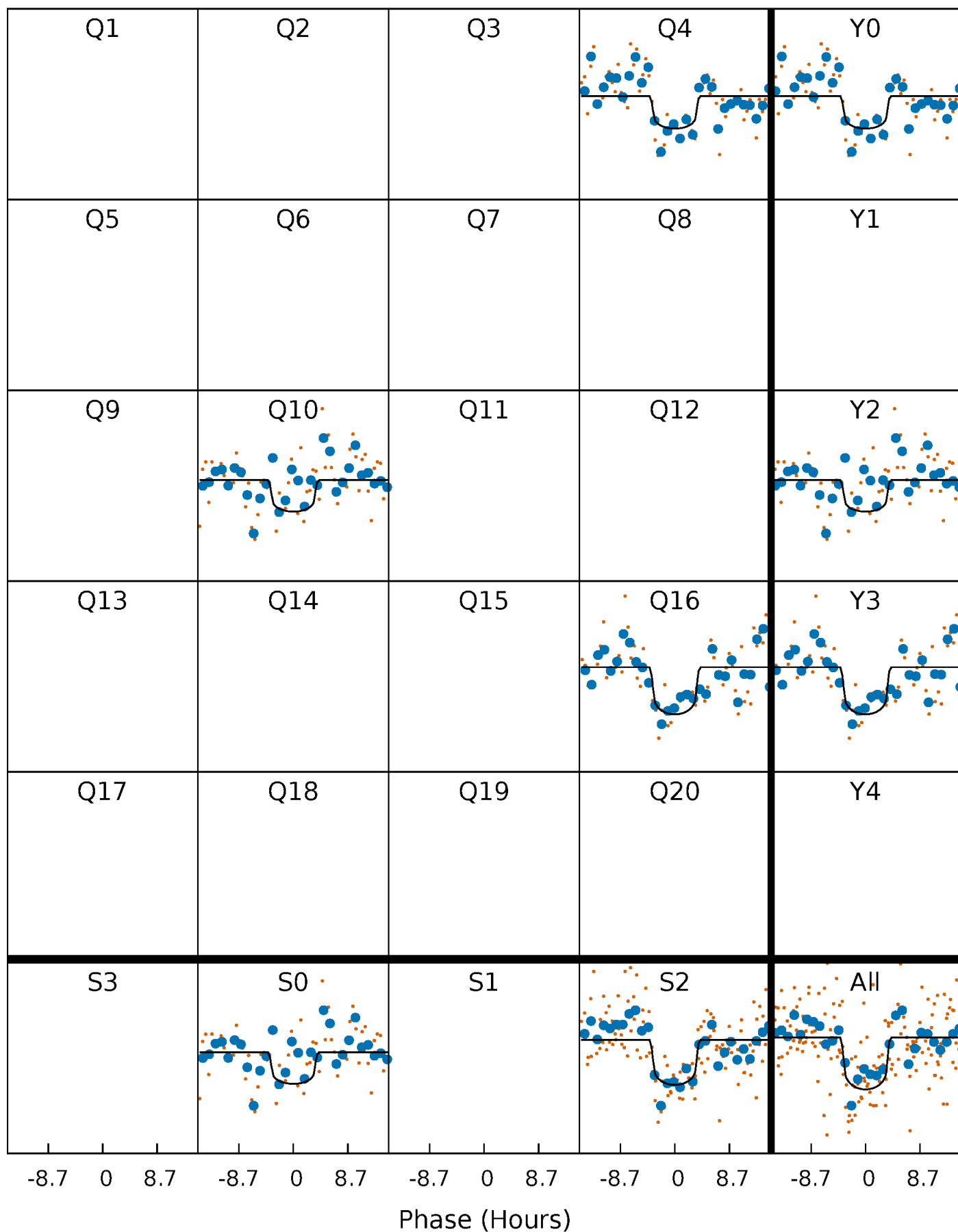
PDC Quarter-Phased Transit Curves

TCE 002580632-01 P=567.490032 Days $T_0=375.597286$ (BKJD)



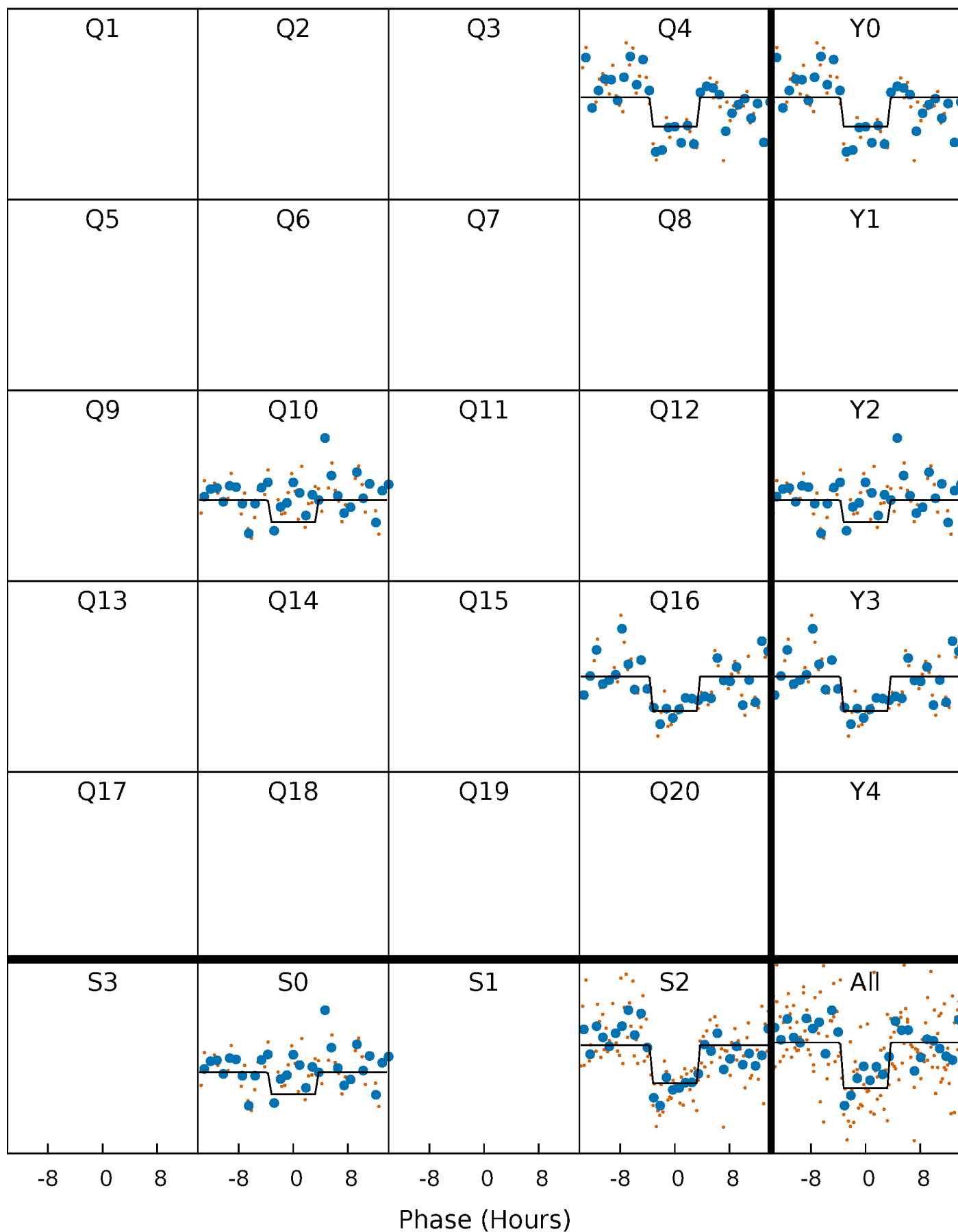
DV Quarter-Phased Transit Curves

TCE 002580632-01 P=567.490032 Days $T_0=375.597286$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

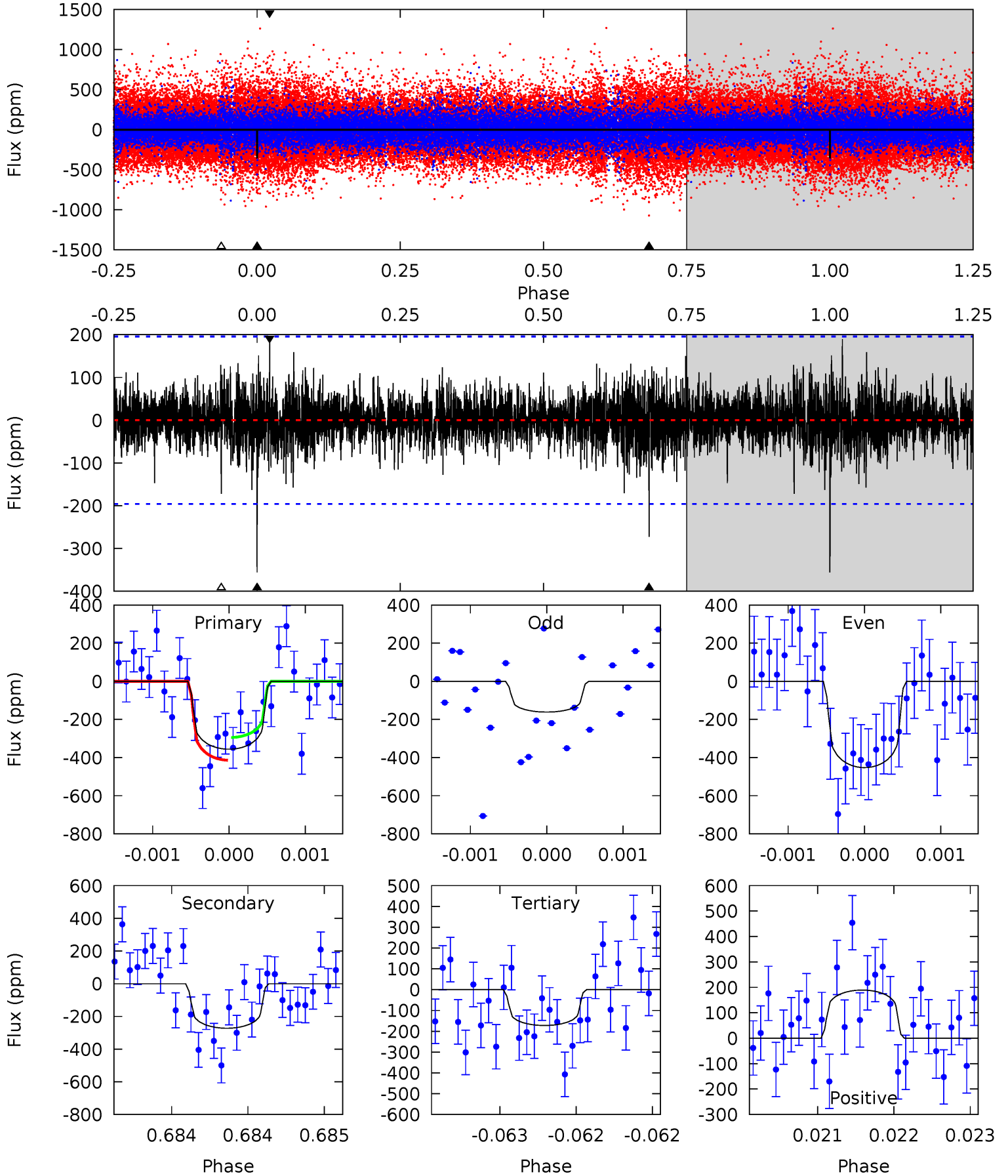
TCE 002580632-01 P=567.487640 Days $T_0=375.598344$ (BKJD)



DV Model-Shift Uniqueness Test

002580632-01, P = 567.490032 Days, E = 375.597286 Days

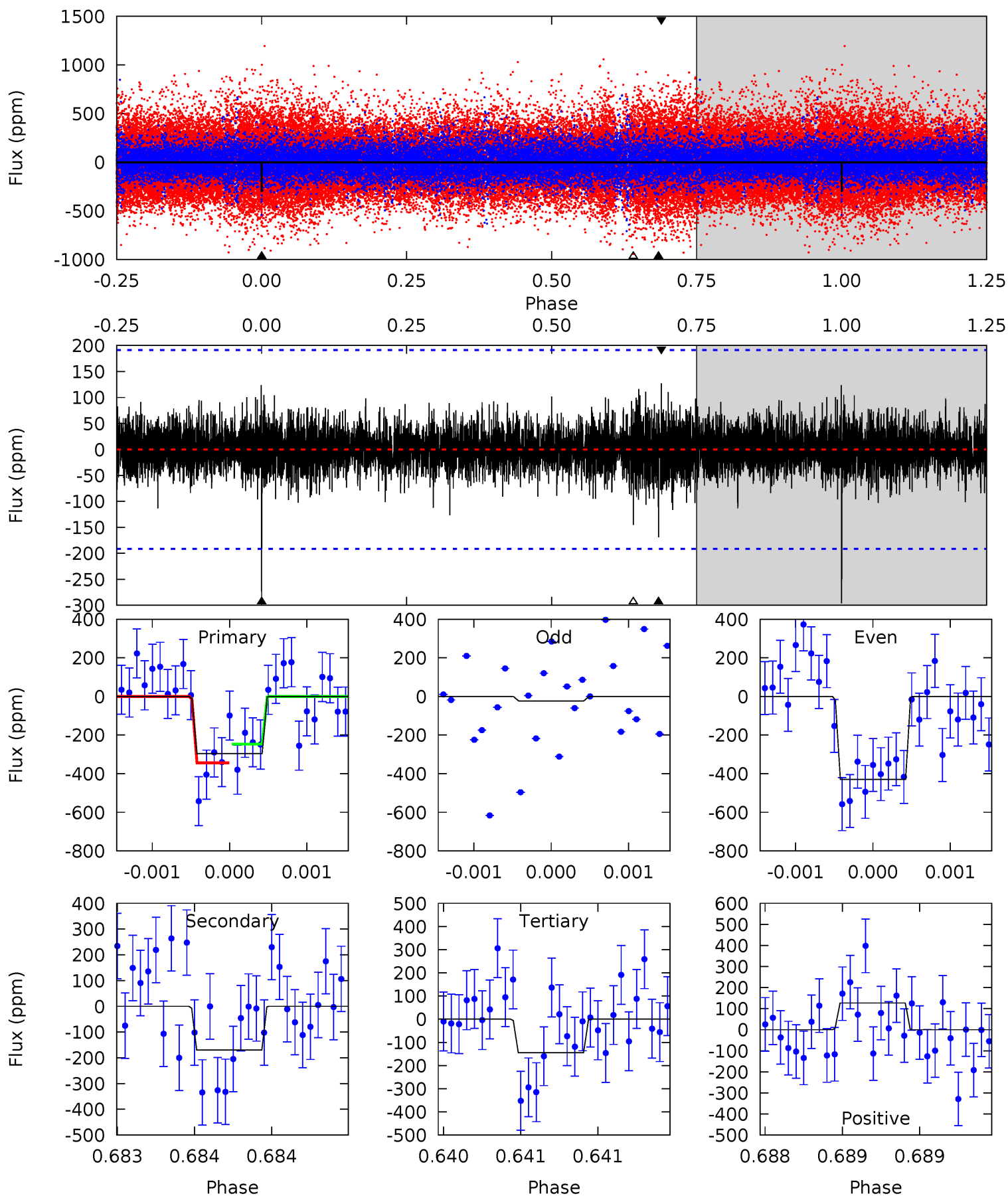
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	7.73	4.89	5.37	5.56	3.45	1.15	5.22	4.74	2.84	2.36	3.82	0.91	0.35	1.70



Alt Model-Shift Uniqueness Test

002580632-01, P = 567.487640 Days, E = 375.598344 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.60	4.91	4.21	3.68	5.55	3.45	0.88	4.39	4.92	0.70	1.23	5.60	0.81	0.30	1.42



Stellar Parameters For KIC 002580632

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5960^{+160}_{-178}	$4.364^{+0.149}_{-0.182}$	$-0.380^{+0.300}_{-0.300}$	$1.026^{+0.279}_{-0.186}$	$0.889^{+0.120}_{-0.090}$	$1.159^{+0.825}_{-0.557}$
	+3%/-3%	+3%/-4%	+79%/-79%	+27%/-18%	+13%/-10%	+71%/-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 002580632-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-272 ± 35	$2.40^{+1.23}_{-1.20}$	328^{+24}_{-20}	5325^{+2031}_{-837}	$44471^{+128479}_{-26450}$
Alt.	-169 ± 34	$2.16^{+1.36}_{-1.09}$	328^{+25}_{-19}	5005^{+2021}_{-873}	$33090^{+110485}_{-21392}$

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

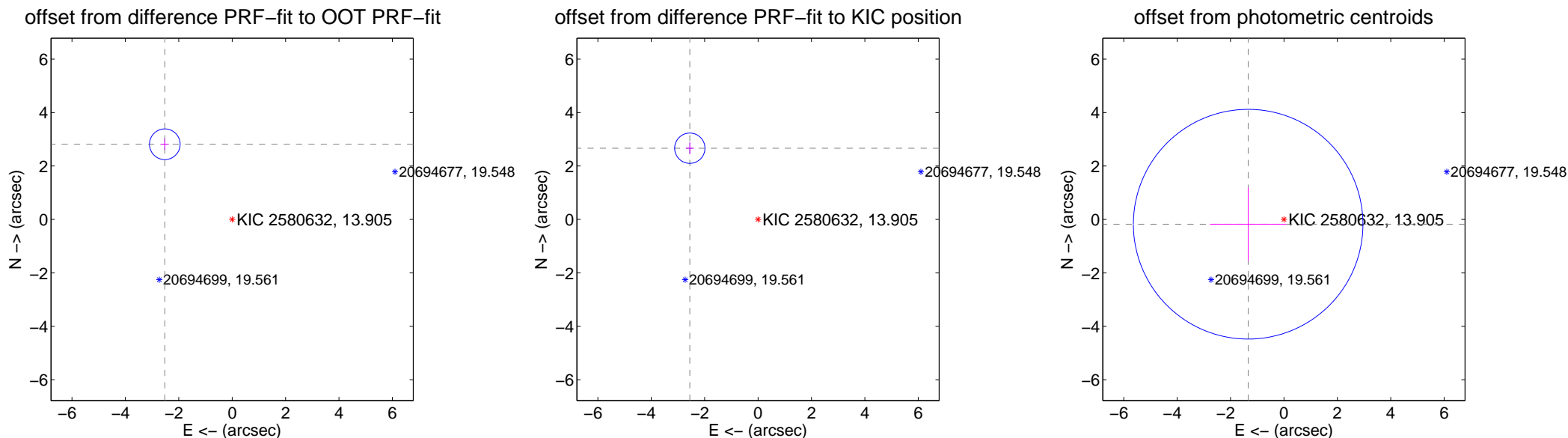
DV Centroid Data

Supplemental centroid analysis for 002580632-01. Kepler magnitude: 13.90. Transit SNR 8.82

There are 1 quarters with good PRF difference image offsets

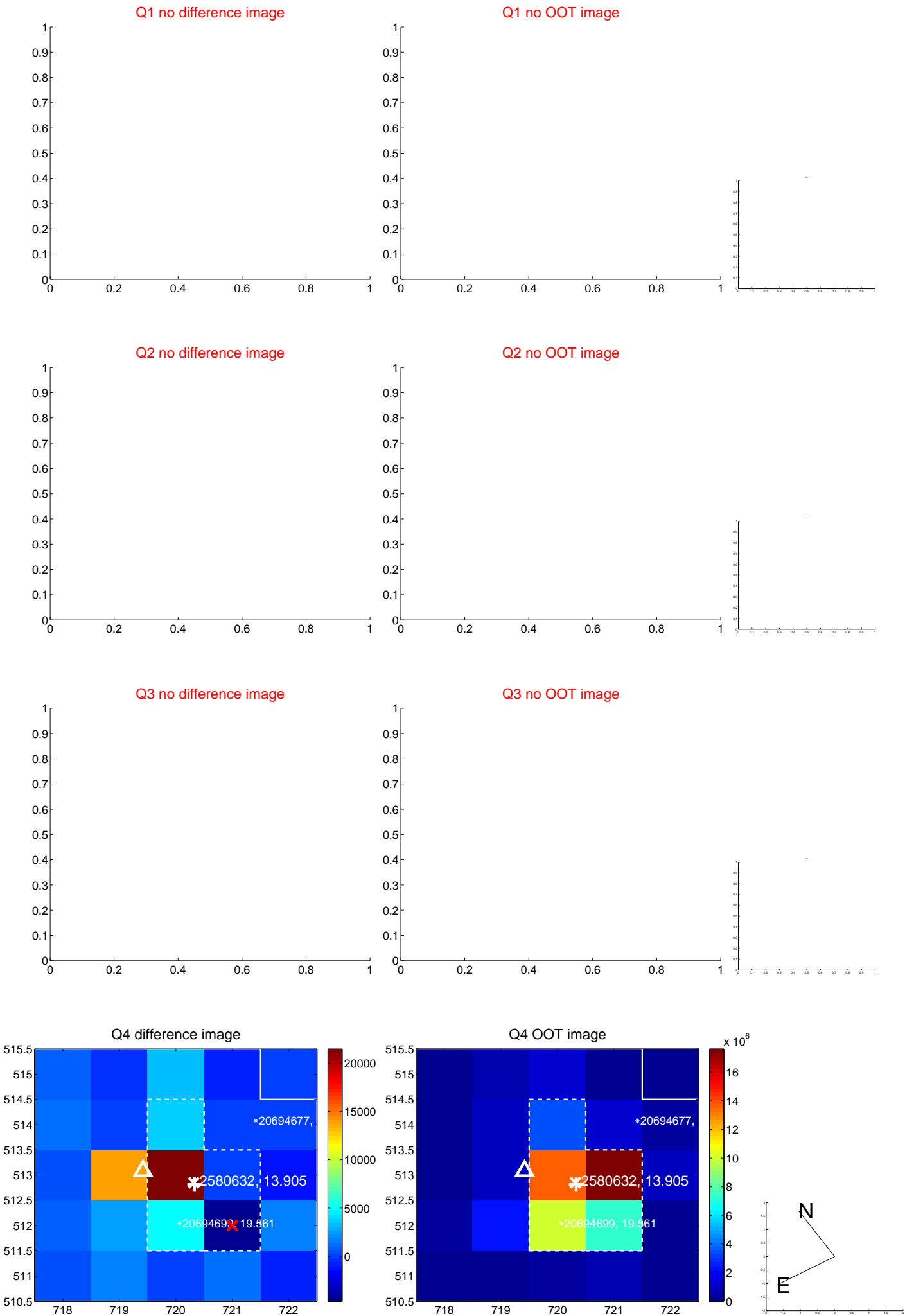
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.780 ± 0.191	19.76	2.523 ± 0.151	2.815 ± 0.219
PRF-fit source offset from KIC position	3.693 ± 0.189	19.53	2.556 ± 0.151	2.666 ± 0.219
photometric centroid source offset	1.35 ± 1.43	0.94	1.34 ± 1.43	-0.18 ± 1.37

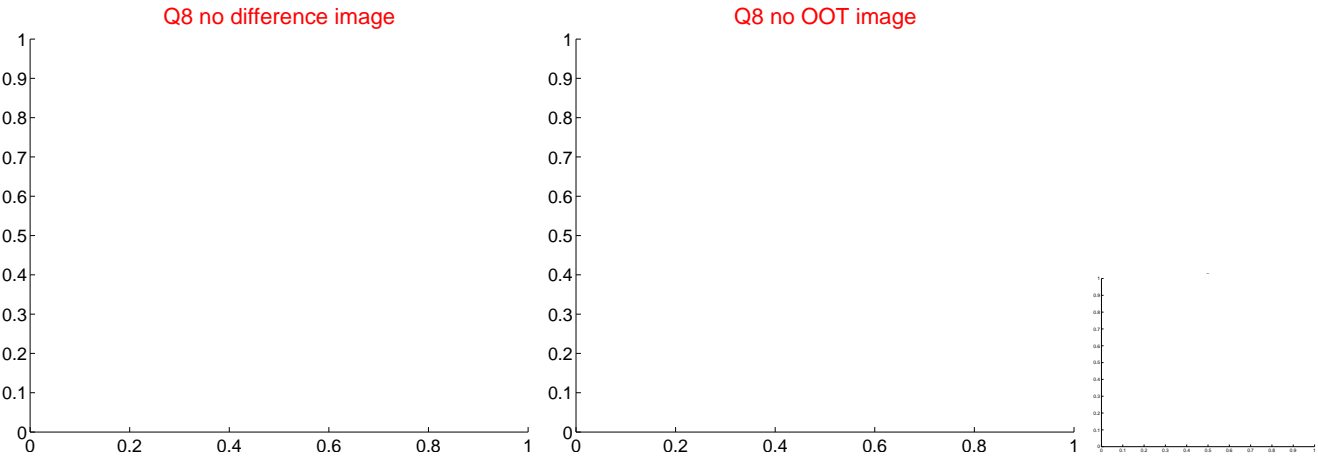
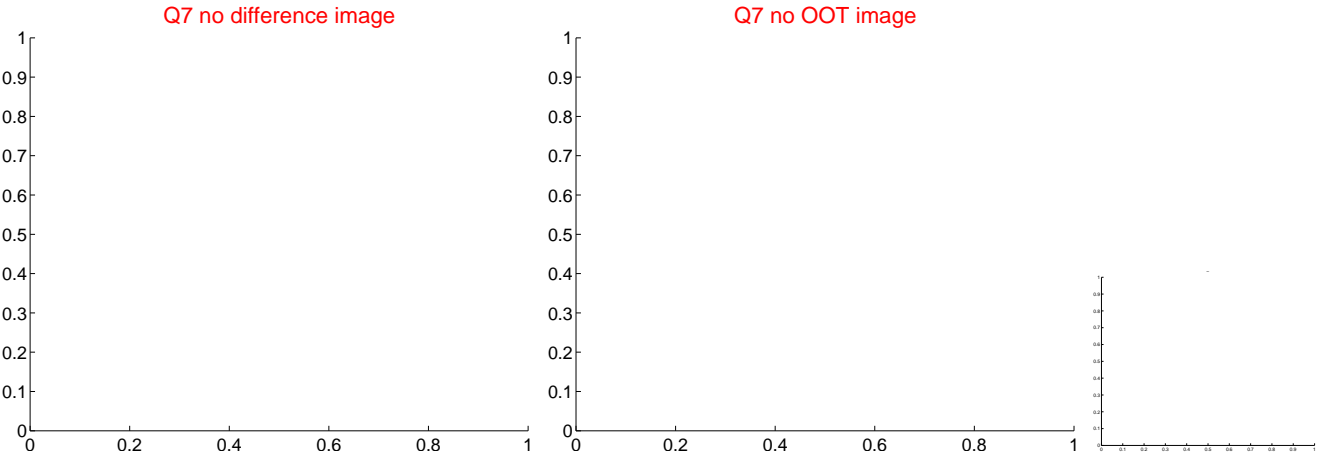
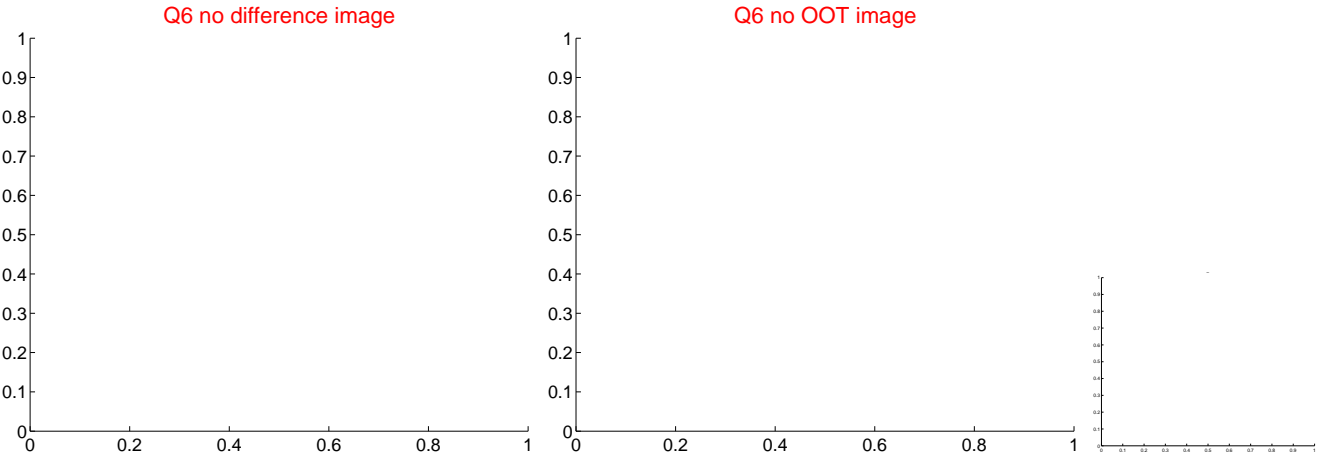
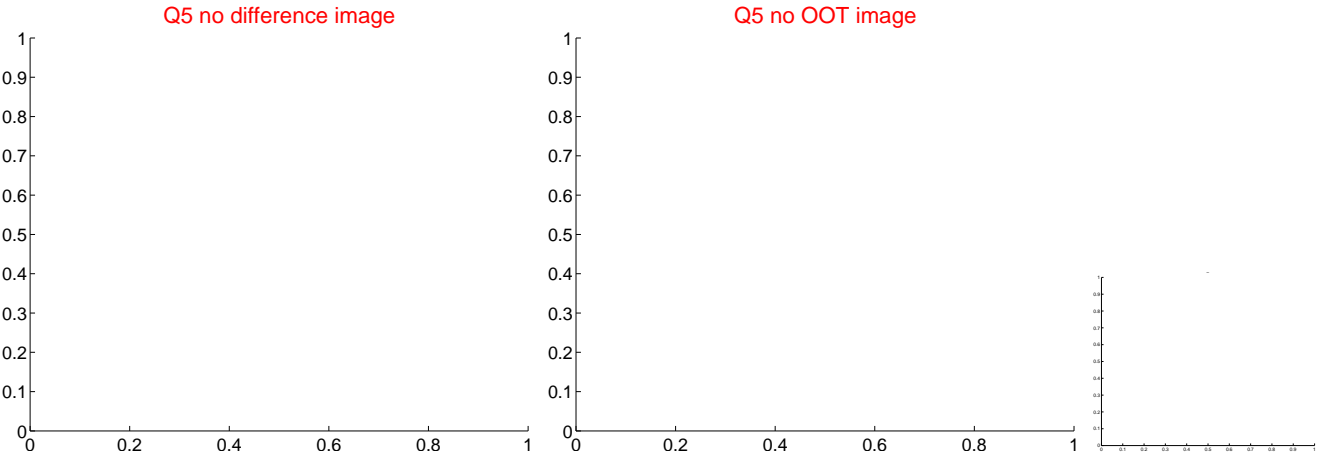


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

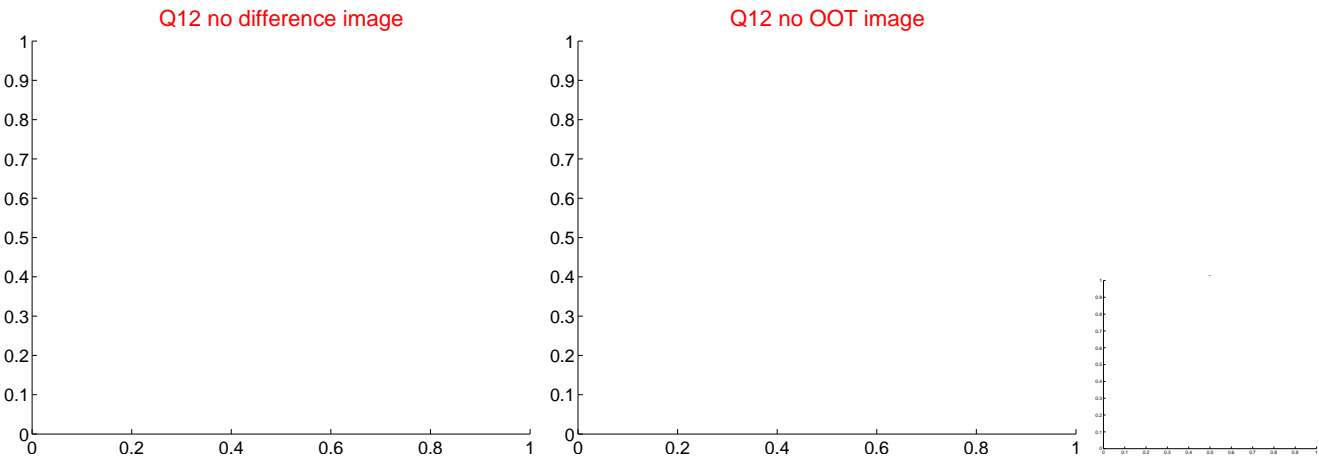
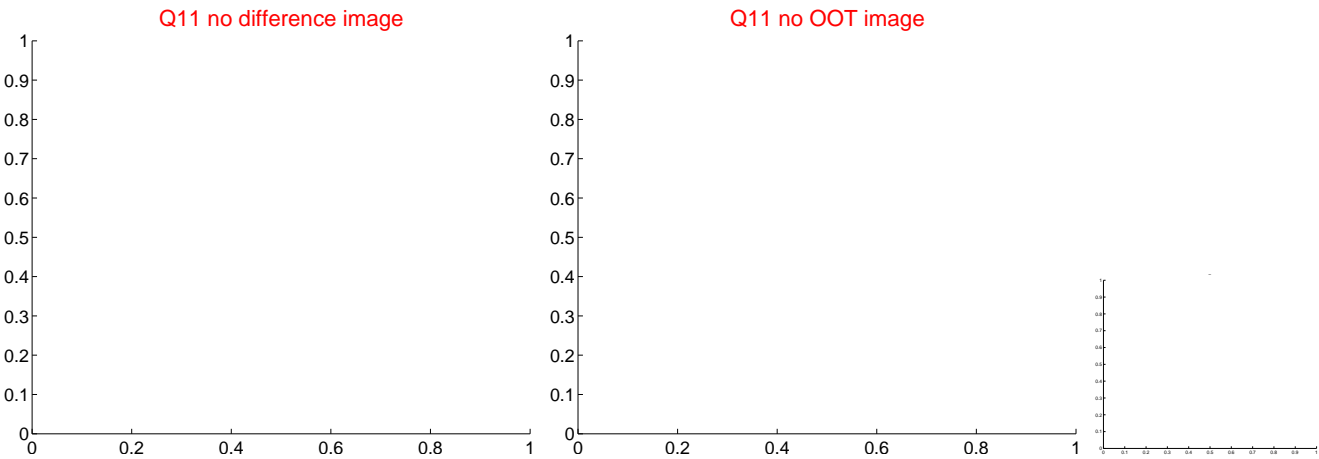
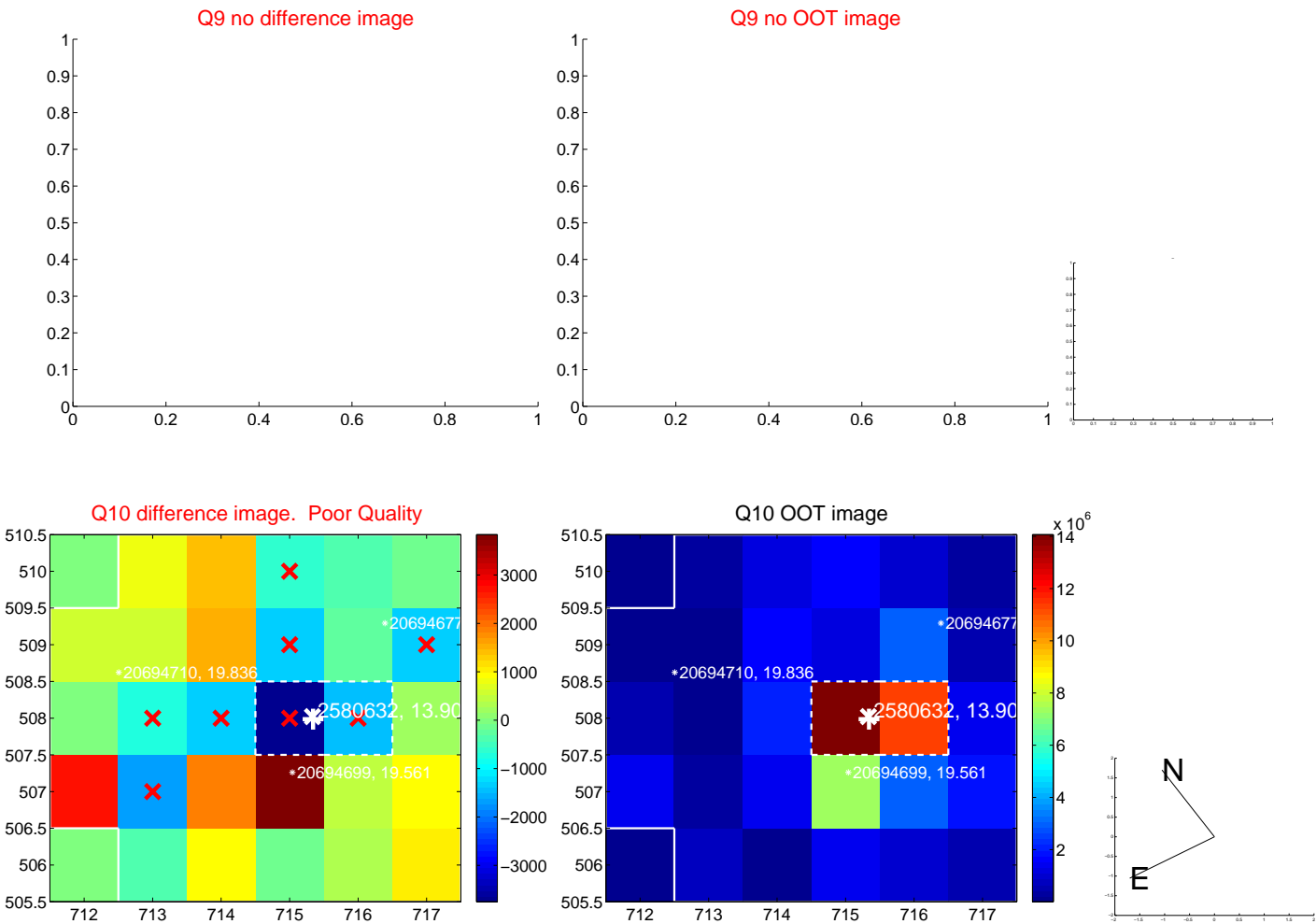
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



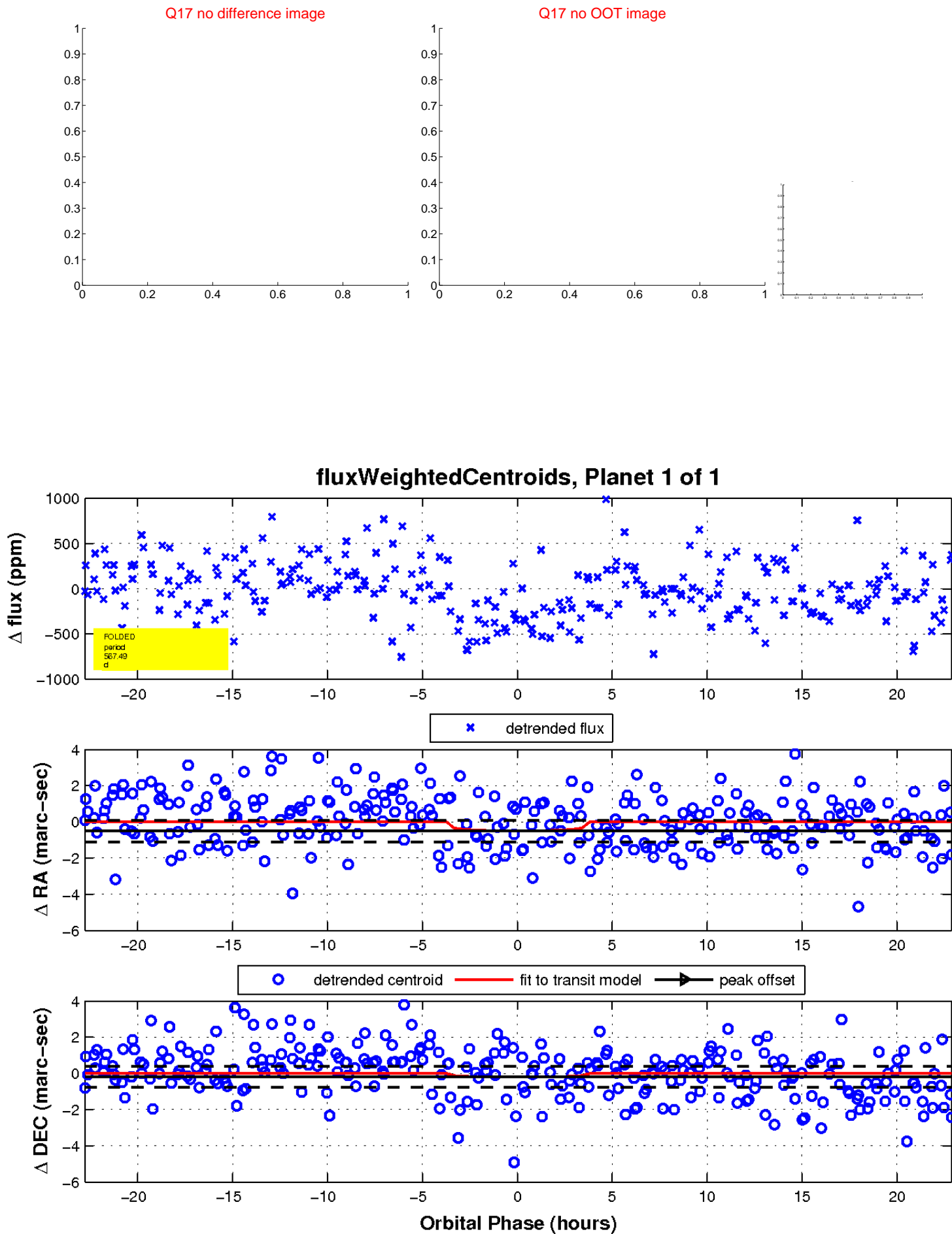
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

