

KIC 008564976

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})
008564976-01	OBS	3890.01	152.826557	197.412757	2270.4	22.523	26.0	40.5	7.51	4991	35.11	68.60

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008564976-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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 008564976-01

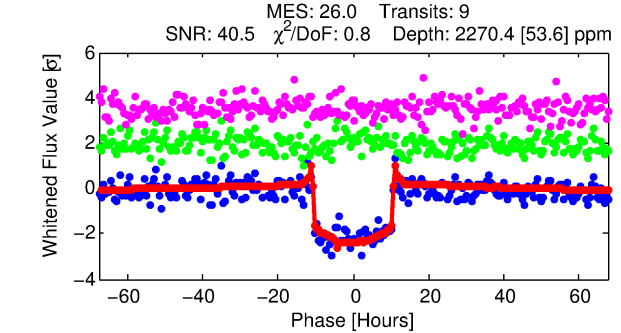
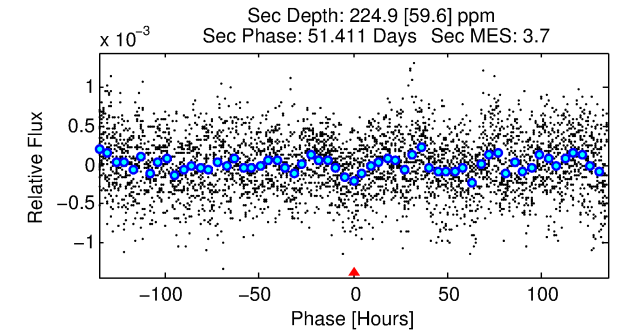
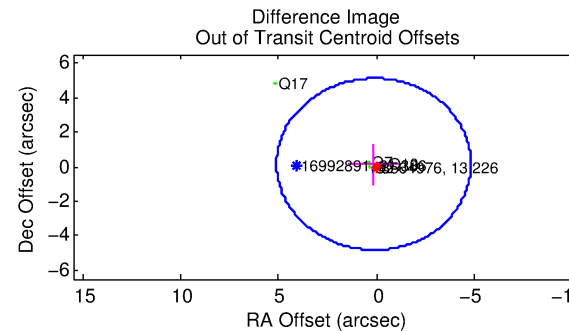
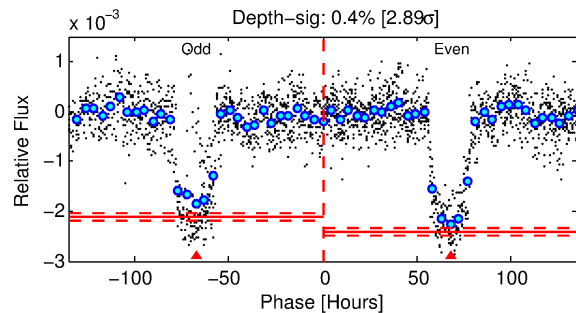
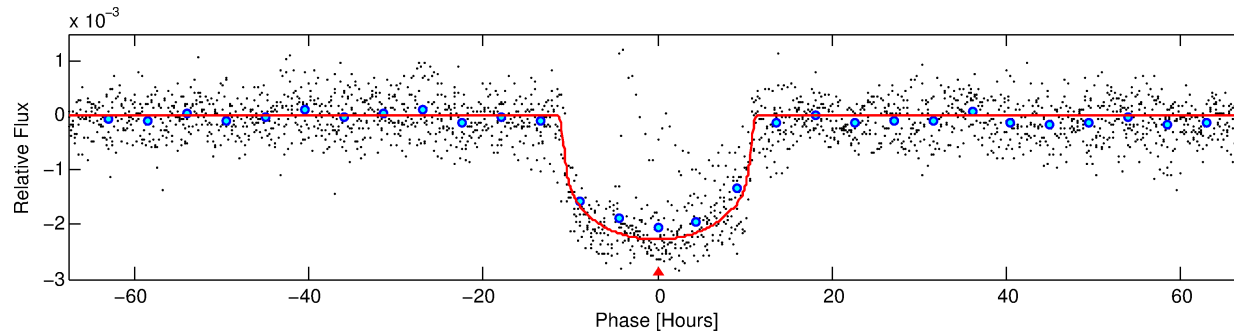
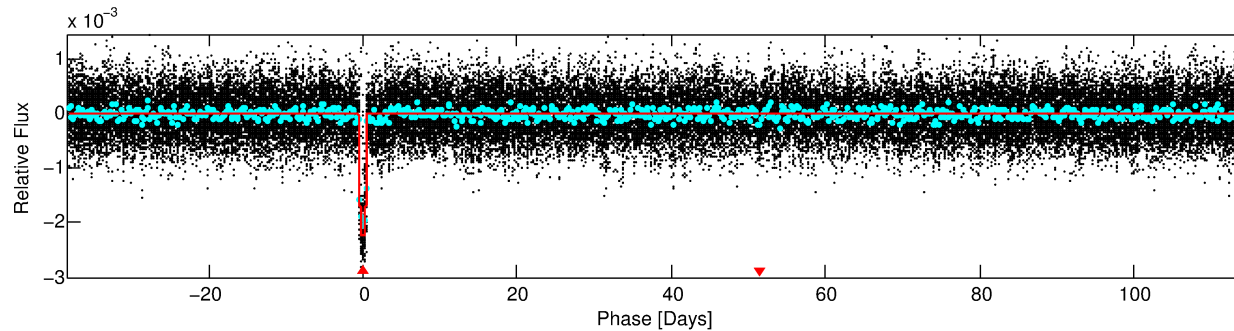
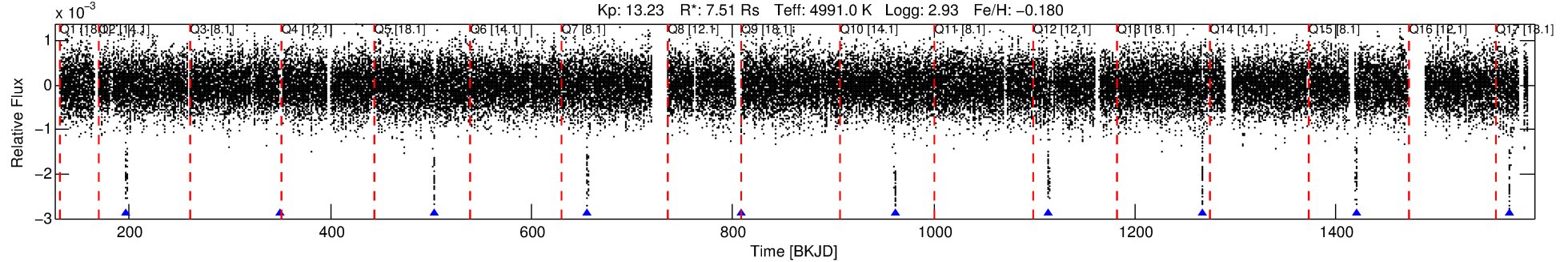
No Significant Match Found

DV One-Page Summary

KIC: 8564976 Candidate: 1 of 1 Period: 152.827 d

KOI: K03890.01 Corr: 0.991

Kp: 13.23 R*: 7.51 Rs Teff: 4991.0 K Logg: 2.93 Fe/H: -0.180



DV Fit Results:

Period = 152.82656 [0.00075] d
Epoch = 197.4128 [0.0043] BKJD
Rp/R* = 0.0429 [0.0012]
a/R* = 51.99 [4.59]
b = 0.29 [0.28]
Seff = 68.60 [12.94]
Teq = 734 [35] K
Rp = 35.11 [7.83] Re
a = 0.6757 [0.1009] AU
Ag = 45.82 [14.29] [3.14σ]
Teffp = 2952 [215] K [10.18σ]

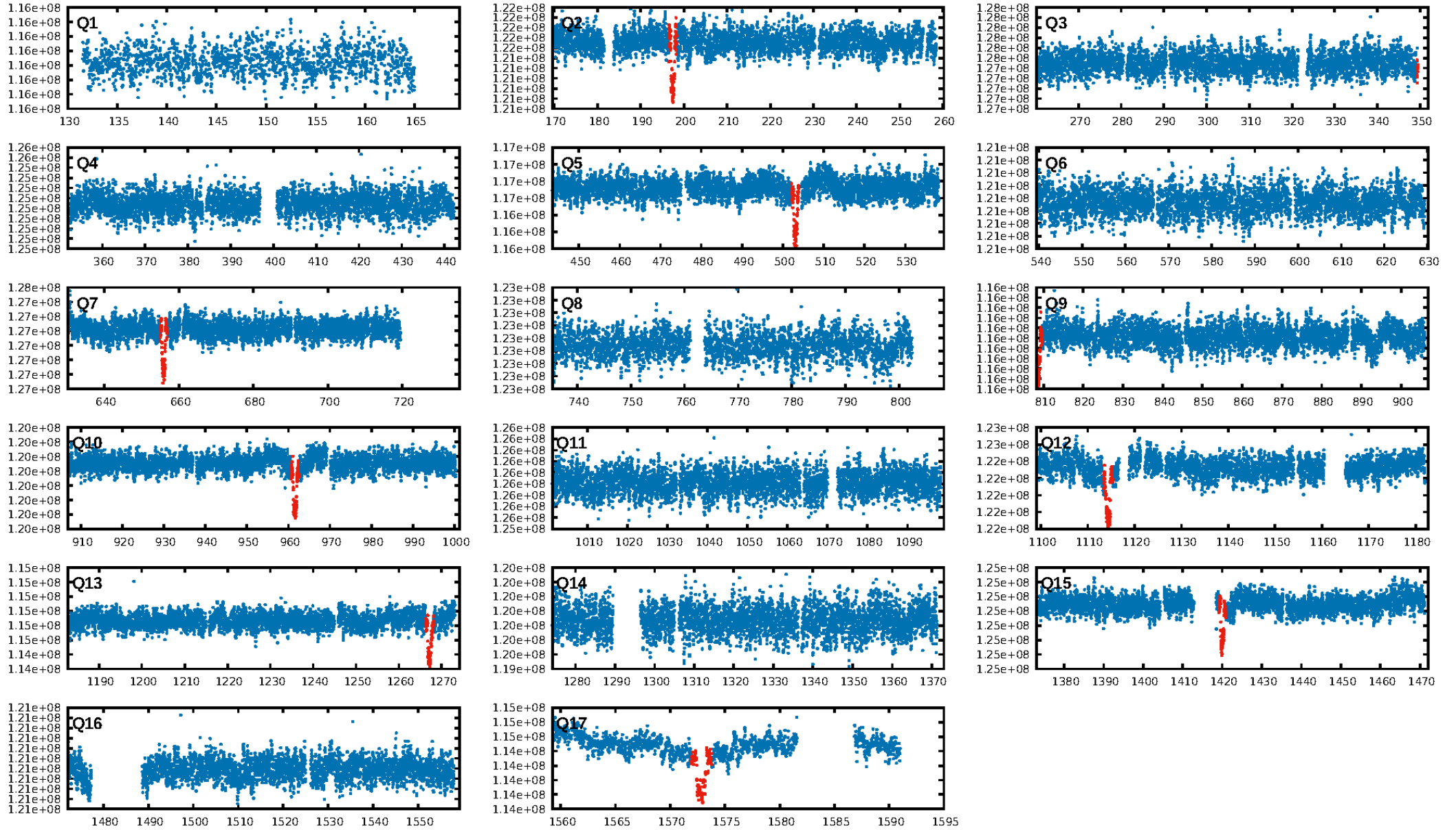
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.19e-139
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 42.63
Centroid-sig: 0.0%
Centroid-so: 1.089 arcsec [13.94σ]
OotOffset-rm: 0.195 arcsec [0.12σ]
KicOffset-rm: 0.195 arcsec [1.26σ]
OotOffset-st: 2/1/0/1 [4]
KicOffset-st: 2/1/0/1 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [4/4]

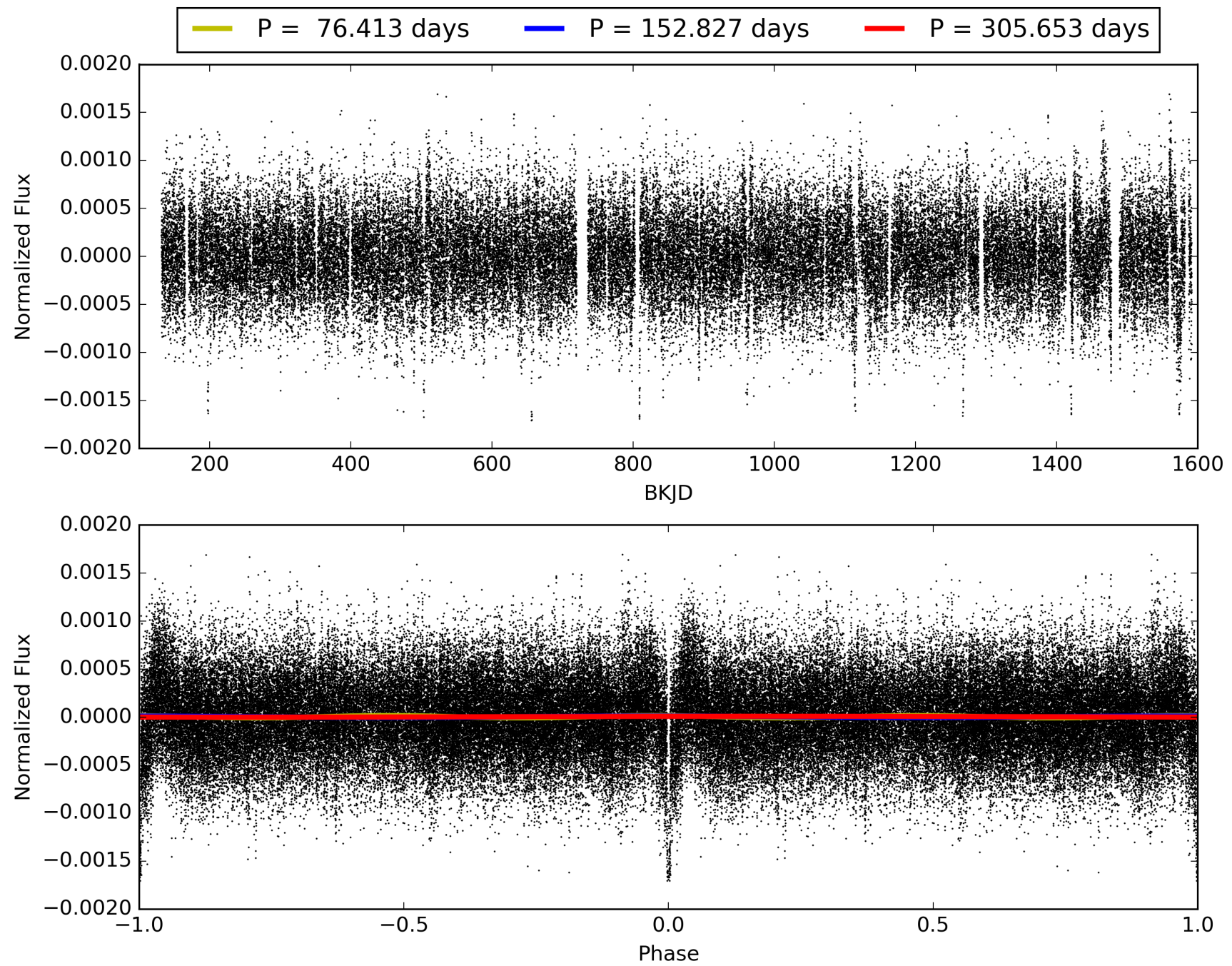
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:14:20 Z

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

TCE 008564976-01, PDC Light Curves

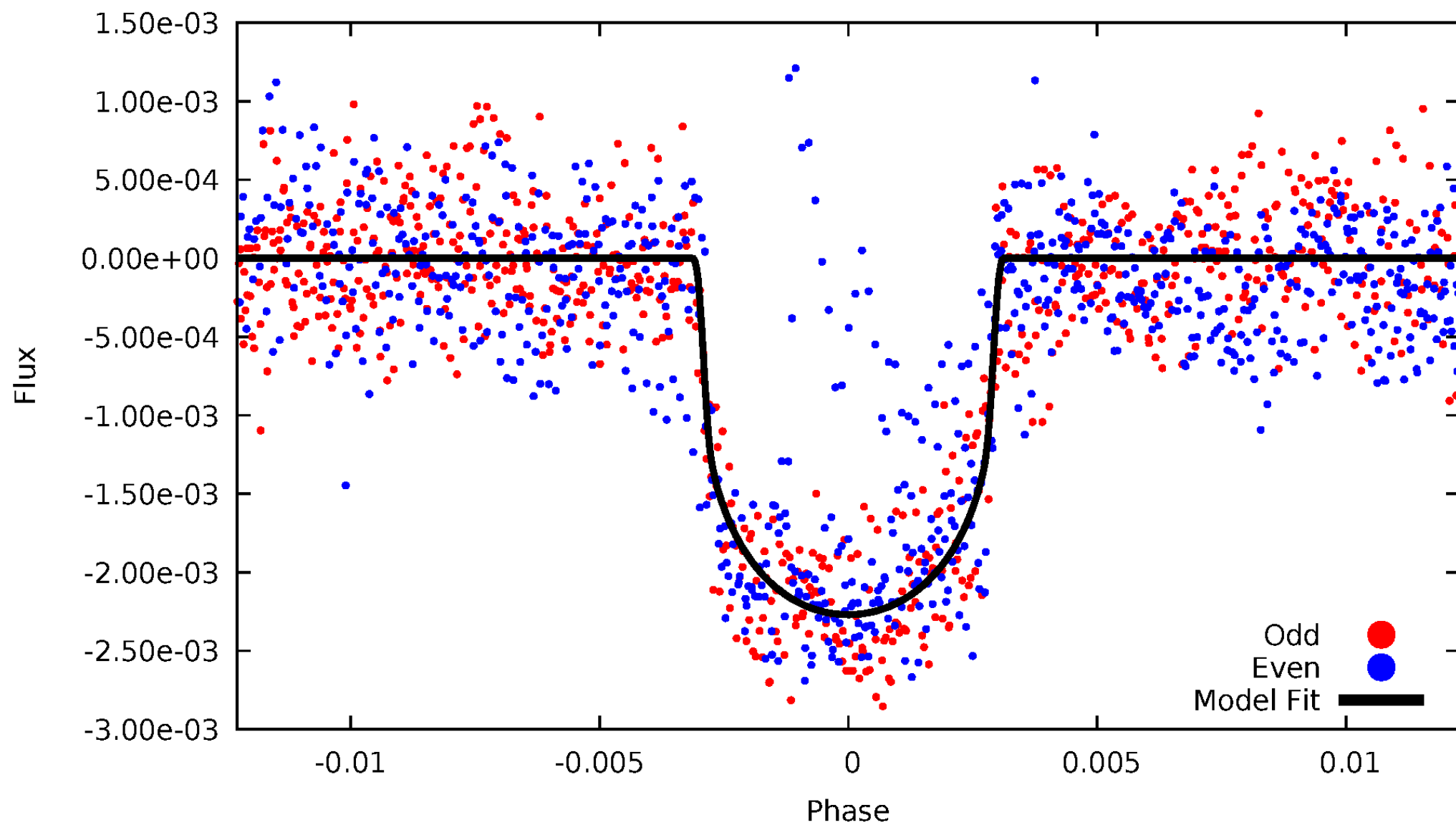


TCE 008564976-01



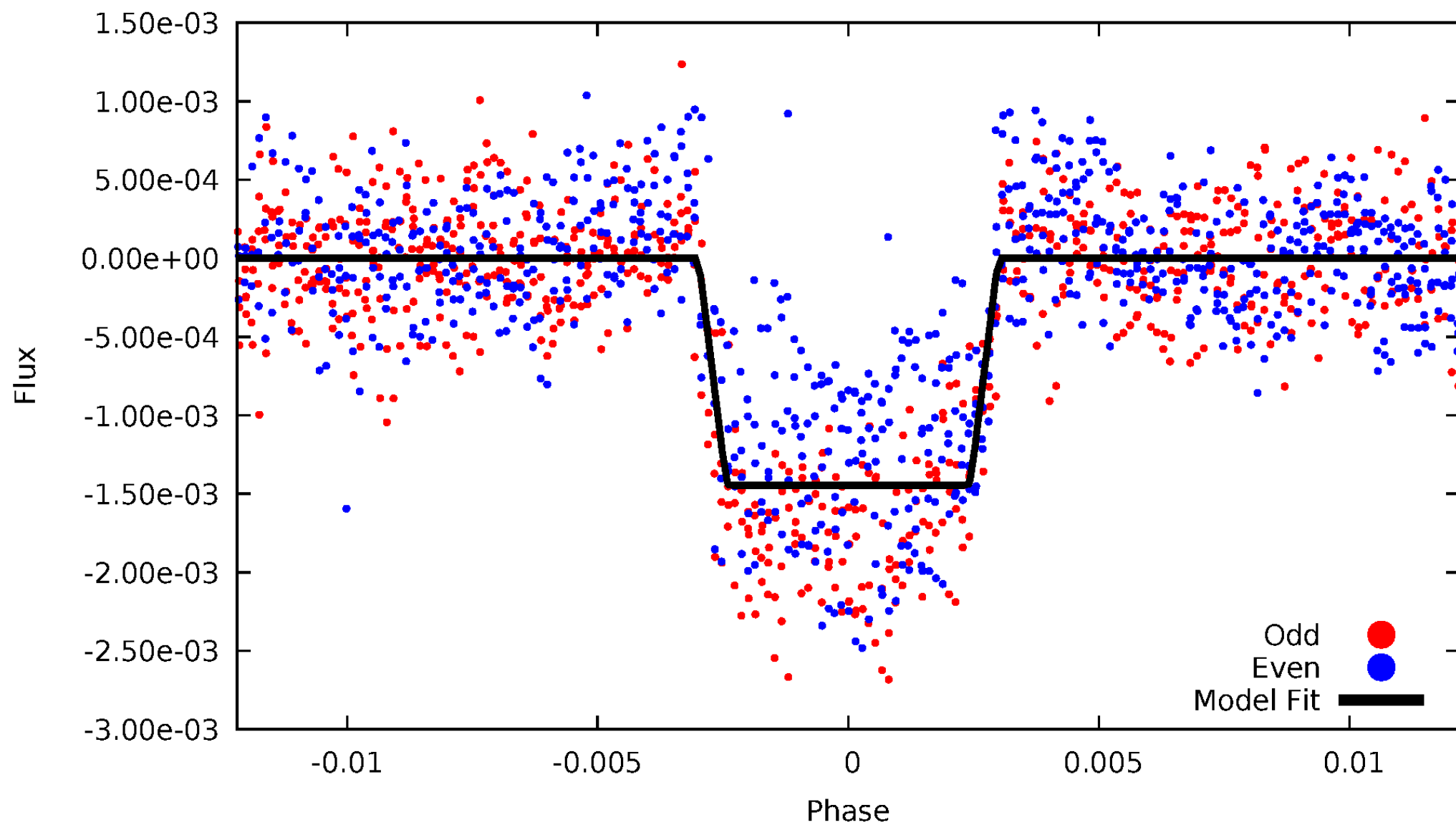
DV Odd/Even

TCE 008564976-01



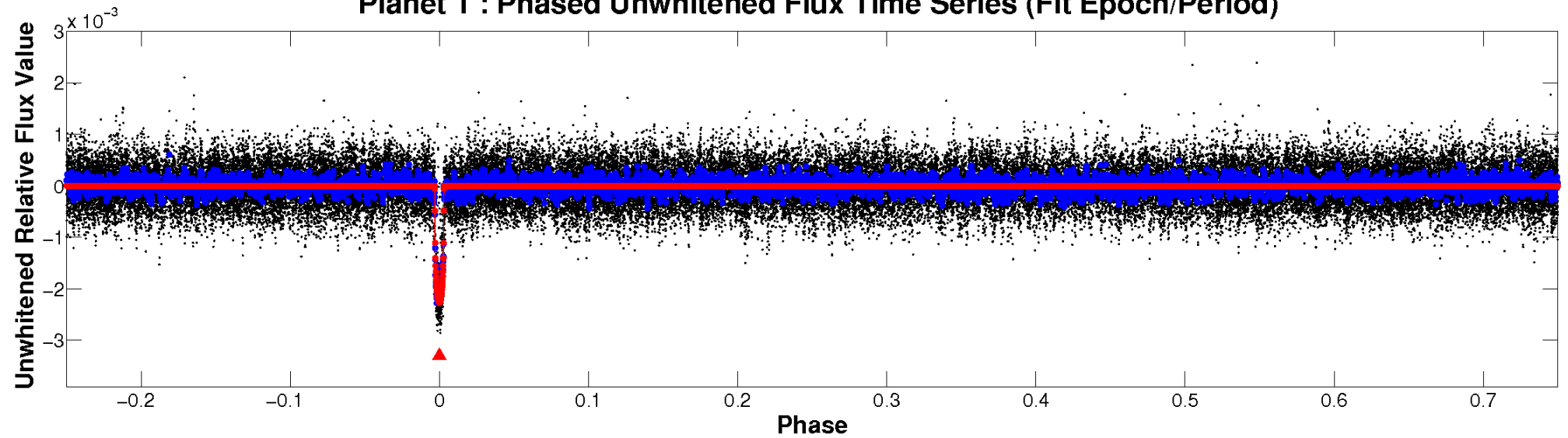
ALT Odd/Even

TCE 008564976-01

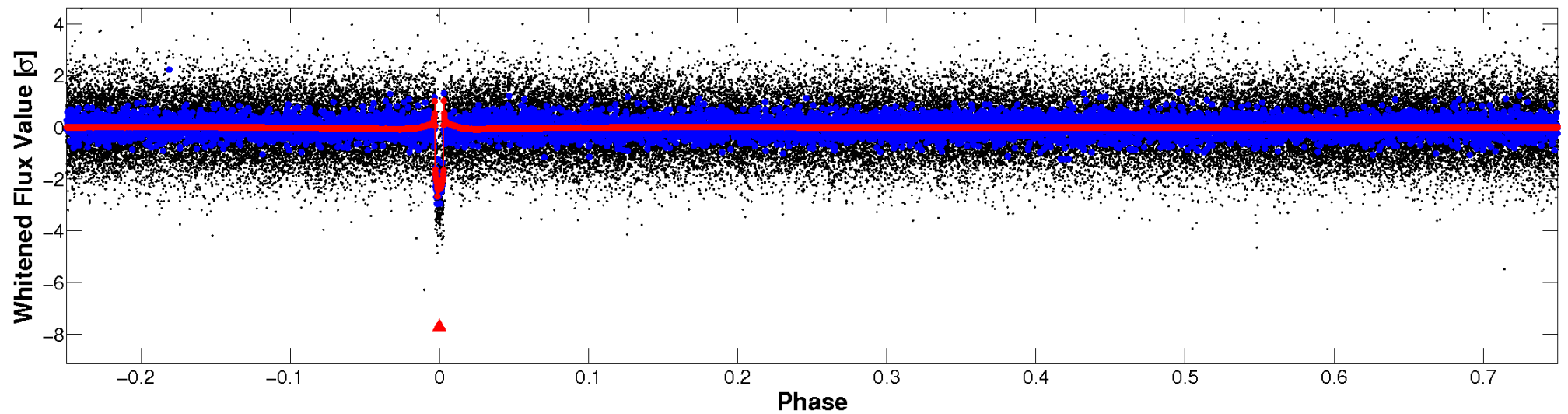


Non-Whitened Vs. Whitened Light Curve

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

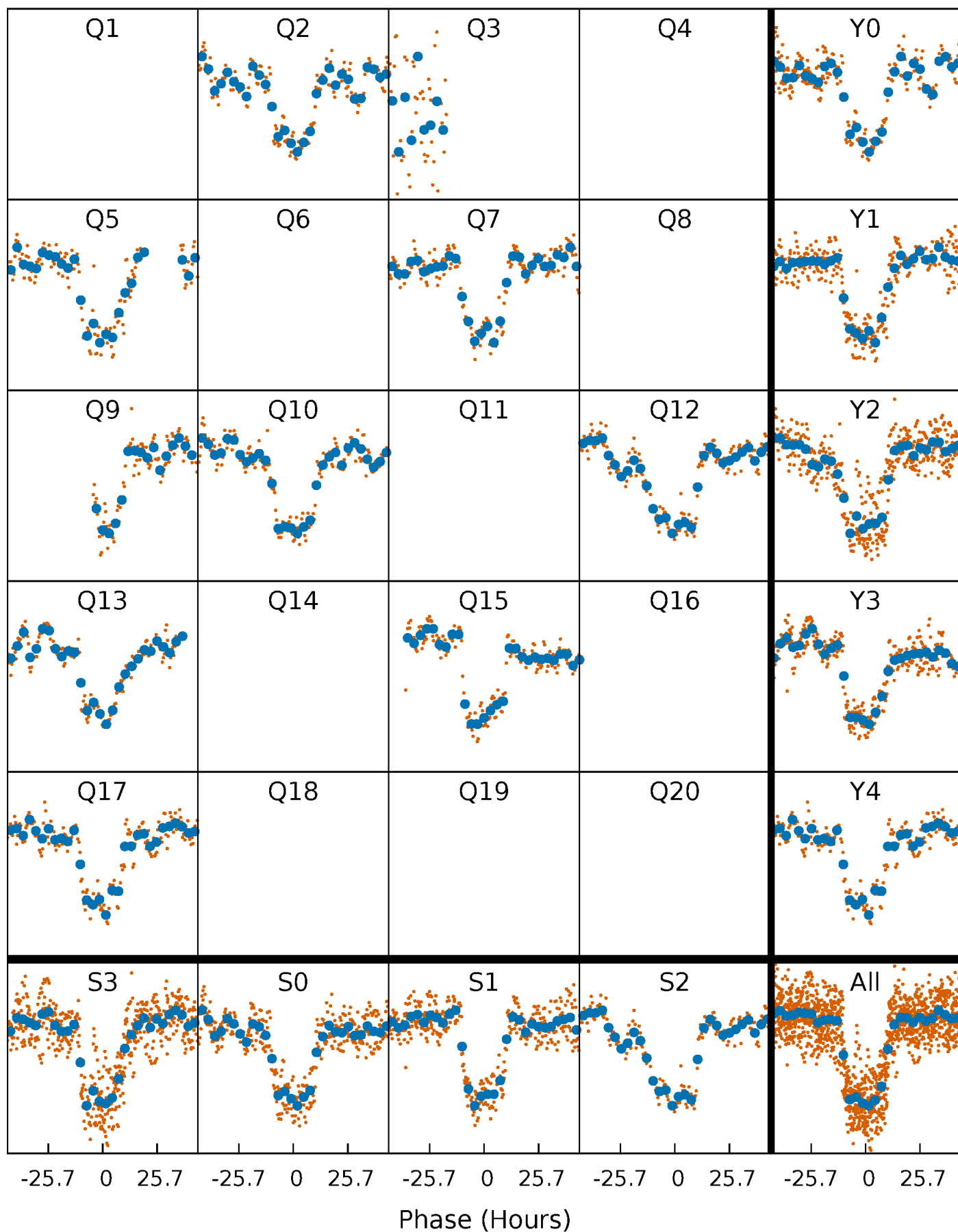


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



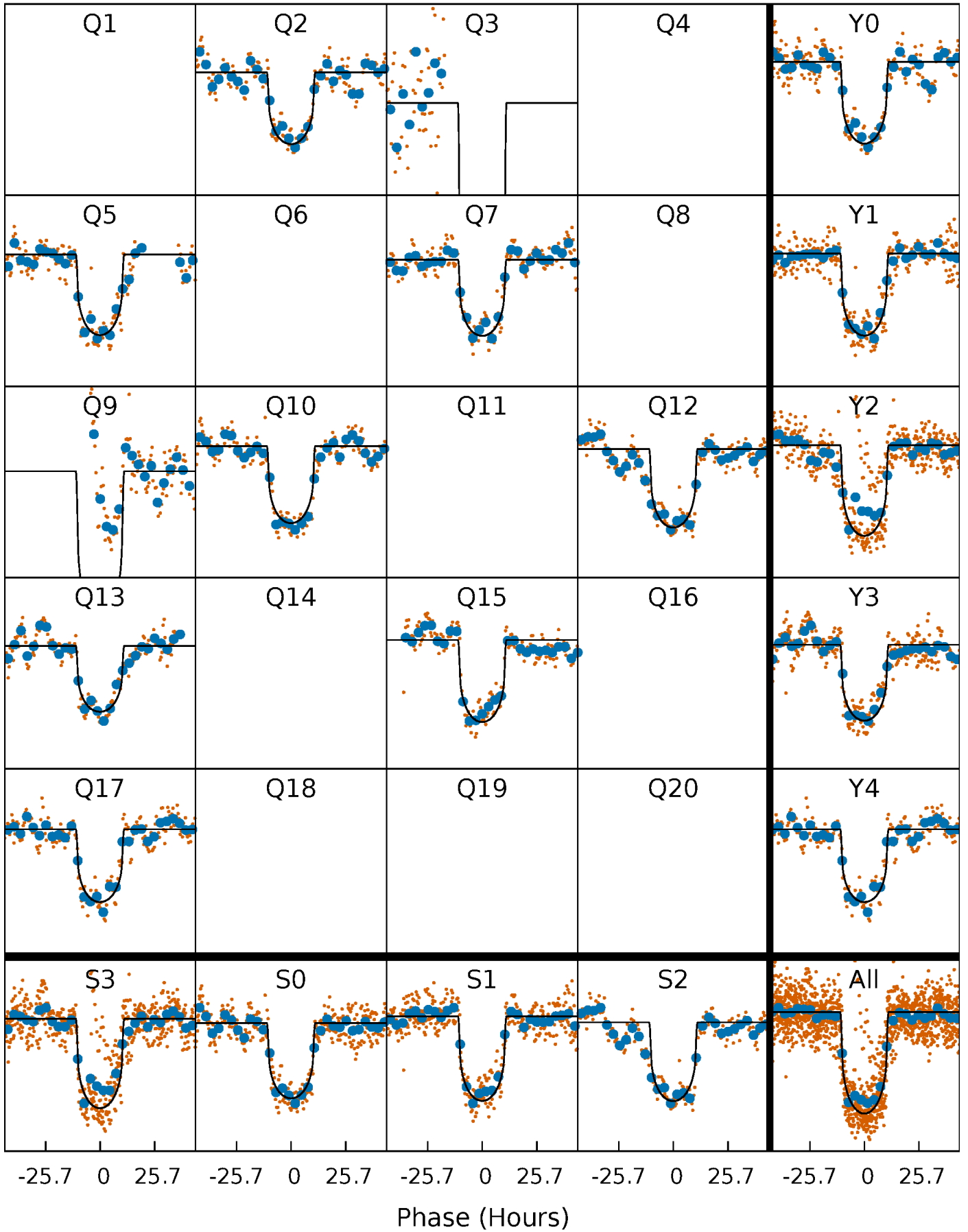
PDC Quarter-Phased Transit Curves

TCE 008564976-01 P=152.826557 Days $T_0=197.412757$ (BKJD)



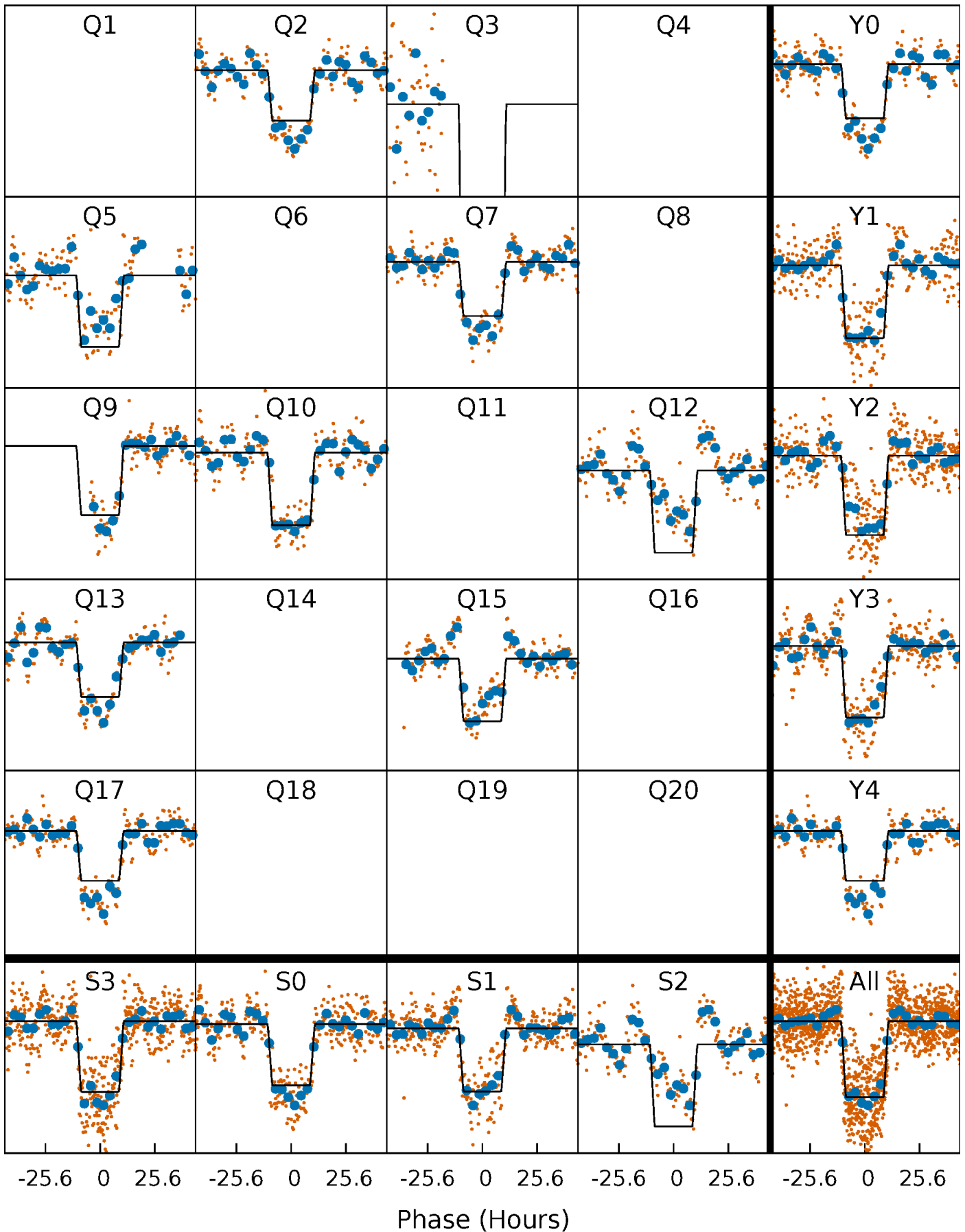
DV Quarter-Phased Transit Curves

TCE 008564976-01 P=152.826557 Days $T_0=197.412757$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

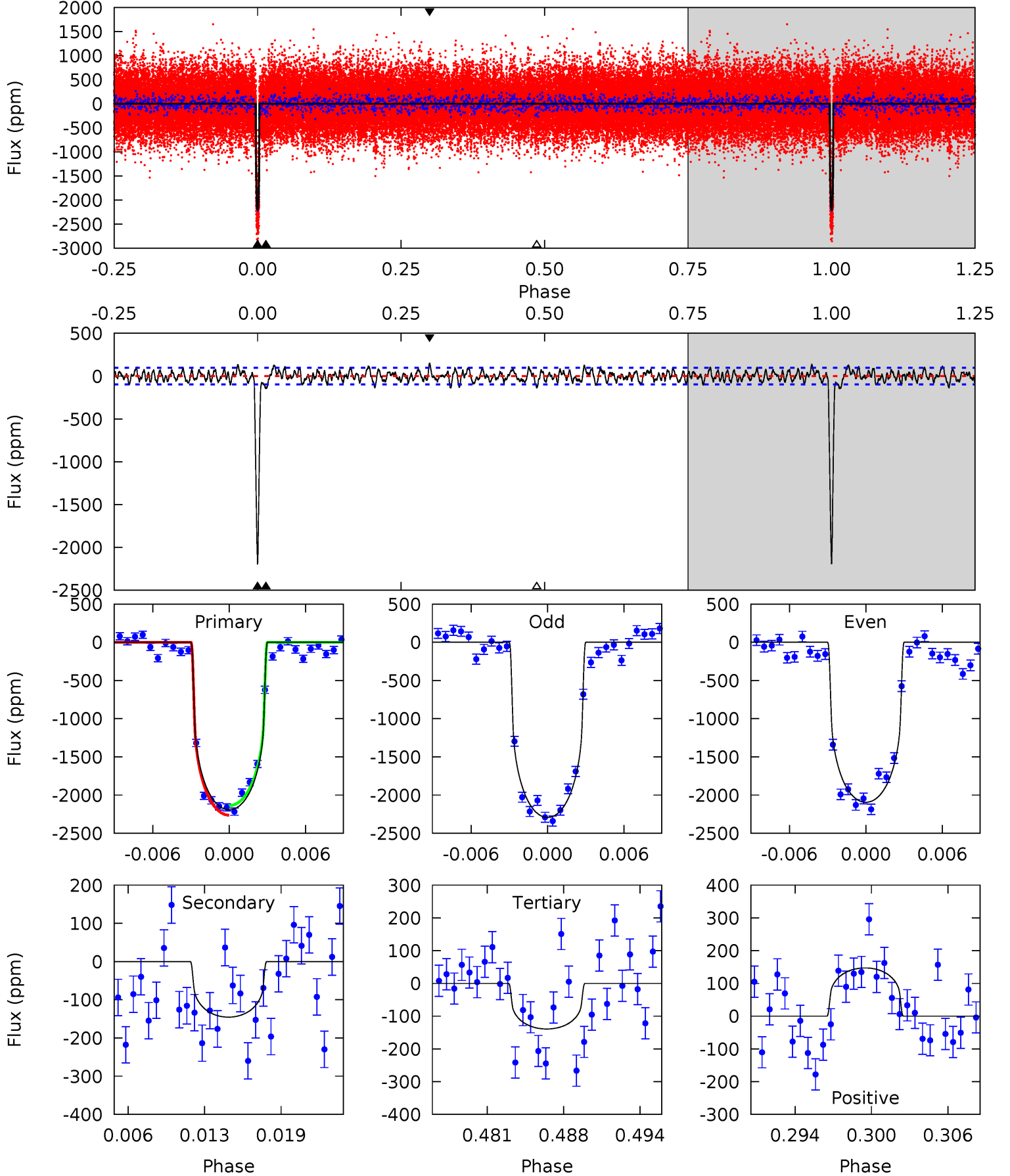
TCE 008564976-01 P=152.822595 Days $T_0=197.431362$ (BKJD)



DV Model-Shift Uniqueness Test

008564976-01, P = 152.826557 Days, E = 44.586200 Days

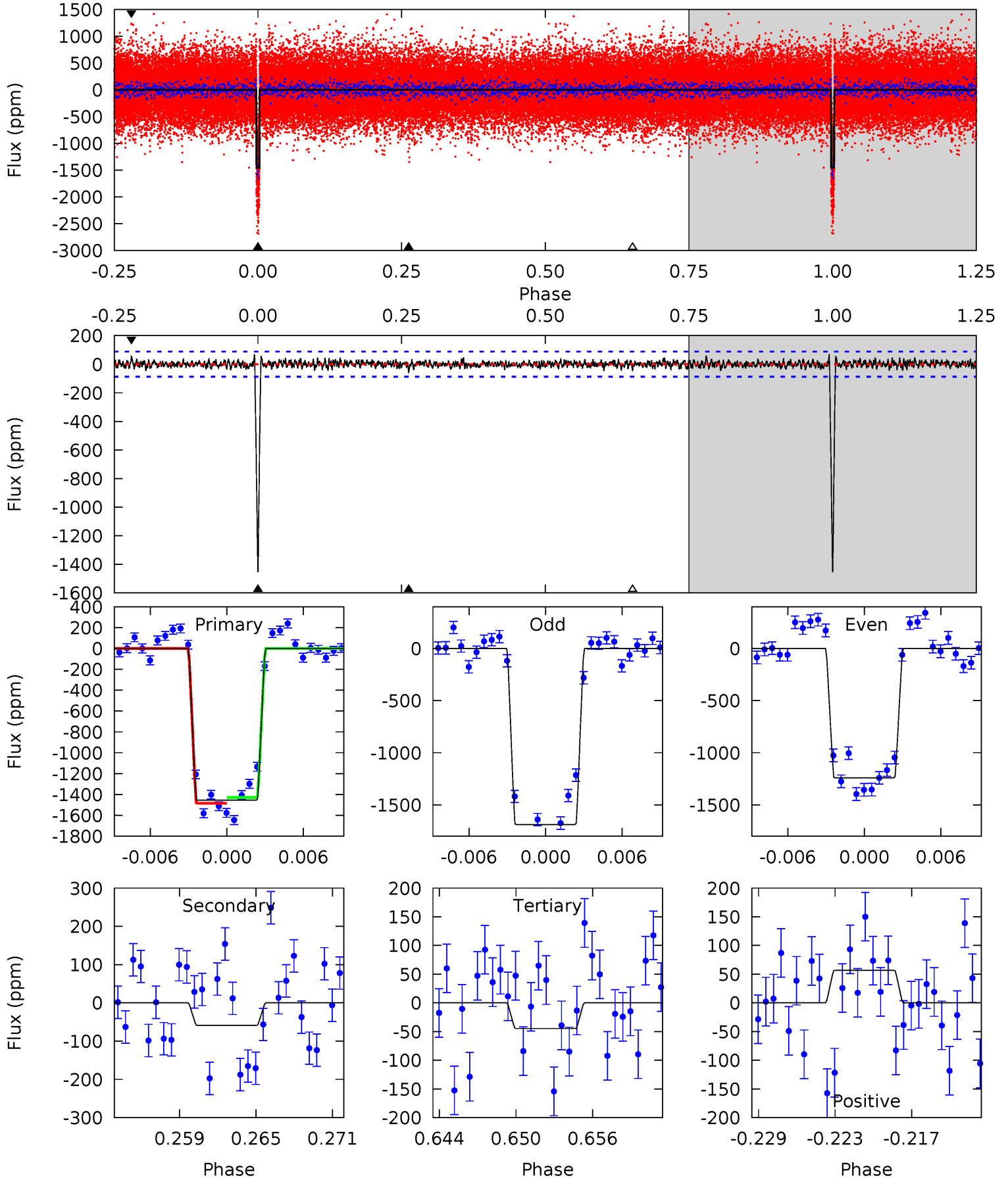
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
115.8	7.68	7.36	7.77	5.12	2.73	2.57	108.5	108.1	0.33	-0.09	5.26	0.90	0.06	3.31



Alt Model-Shift Uniqueness Test

008564976-01, $P = 152.822595$ Days, $E = 44.608767$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
84.7	3.42	2.60	3.29	5.12	2.75	0.88	82.1	81.5	0.81	0.12	13.1	0.94	0.04	1.58



Stellar Parameters For KIC 008564976

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4991^{+86}_{-135}	$2.933^{+0.030}_{-0.030}$	$-0.180^{+0.200}_{-0.300}$	$7.506^{+0.415}_{-1.661}$	$1.761^{+0.175}_{-0.702}$	$0.006^{+0.002}_{-0.001}$
	+2%/-3%	+1%/-1%	+111%/-167%	+6%/-22%	+10%/-40%	+30%/-9%
Source	PHO1	AST9	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 008564976-01 / KOI 3890.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-145 ± 19	$35.77^{+1.63}_{-2.60}$	1023^{+26}_{-30}	3183^{+85}_{-89}	29^{+5}_{-4}
Alt.	-59 ± 17	$31.84^{+1.46}_{-2.07}$	1027^{+21}_{-33}	2887^{+121}_{-144}	15^{+5}_{-4}

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

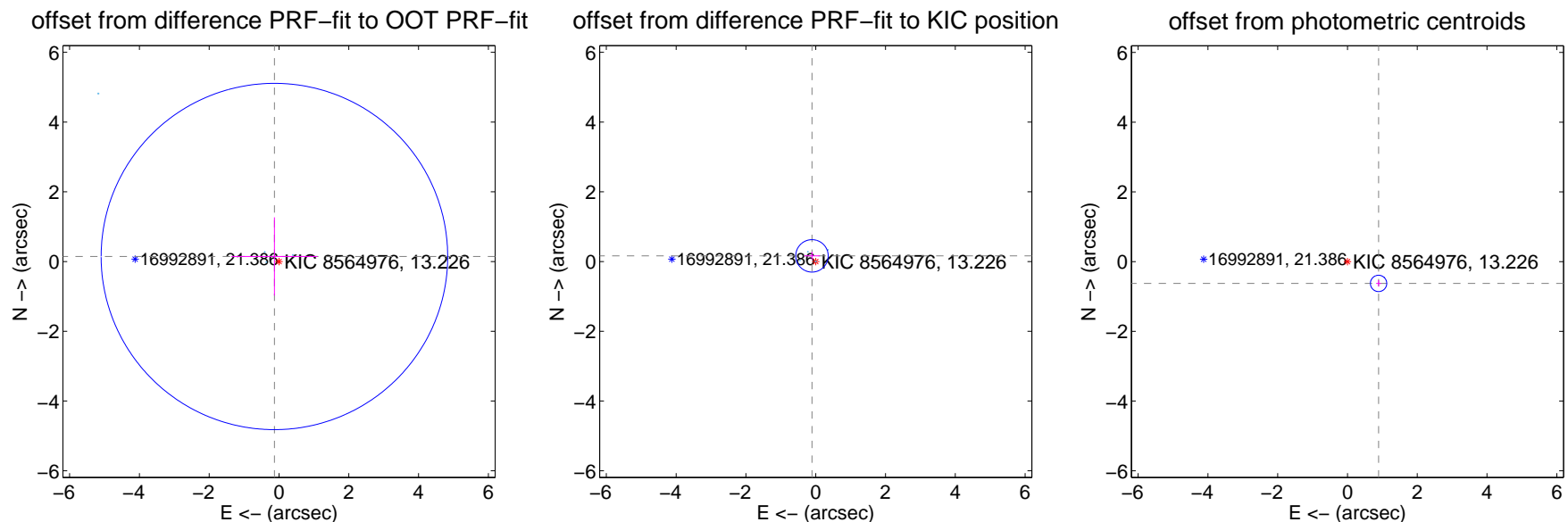
DV Centroid Data

Supplemental centroid analysis for 008564976-01. Kepler magnitude: 13.23. Transit SNR 40.49

There are 4 quarters with good PRF difference image offsets

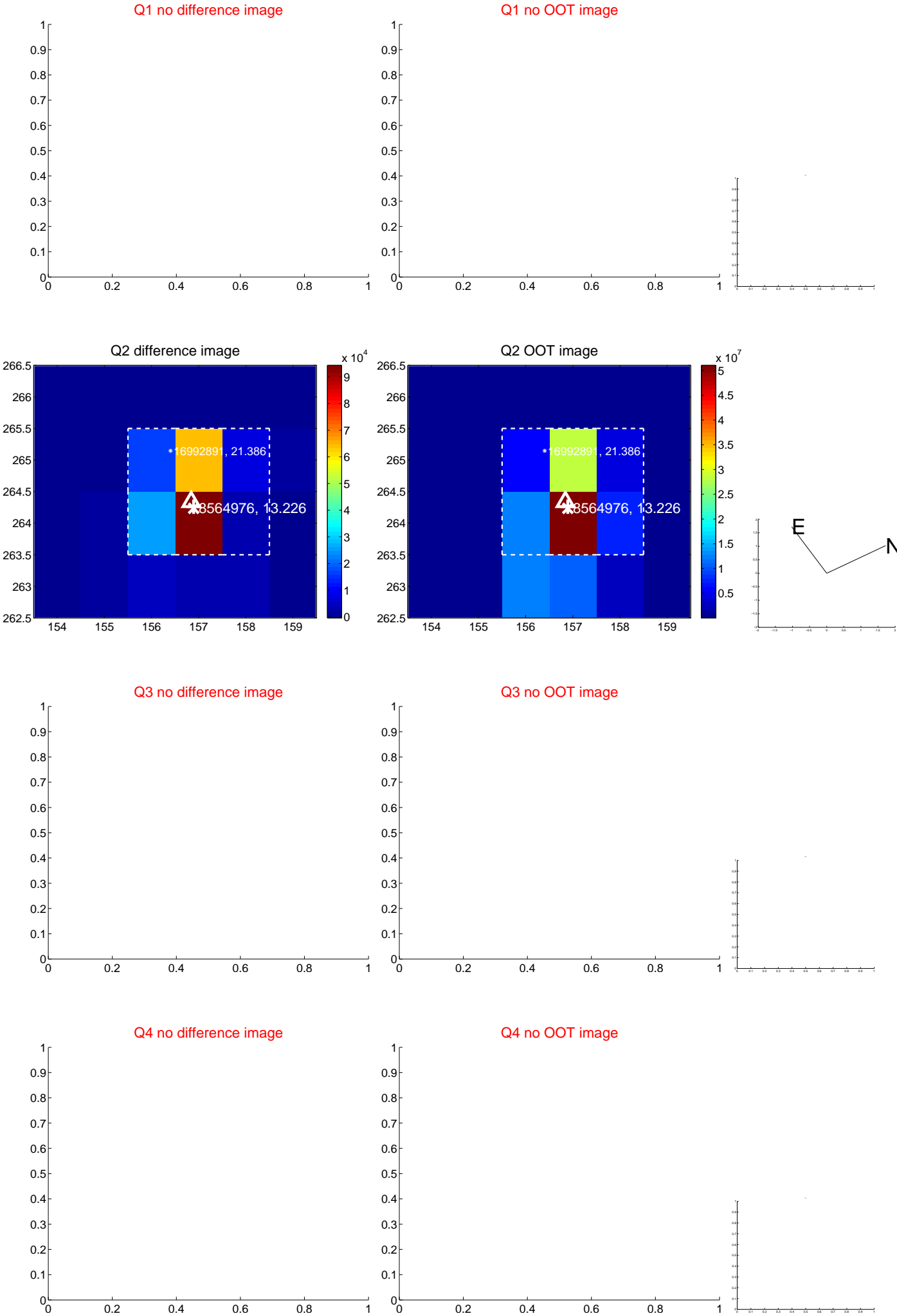
The OOT PRF centroid is offset from the target star catalog position by about 7.07 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.195 ± 1.655	0.12	0.131 ± 1.232	0.145 ± 1.122
PRF-fit source offset from KIC position	0.195 ± 0.155	1.26	0.107 ± 0.222	0.162 ± 0.114
photometric centroid source offset	1.09 ± 0.08	13.94	-0.89 ± 0.07	-0.63 ± 0.09

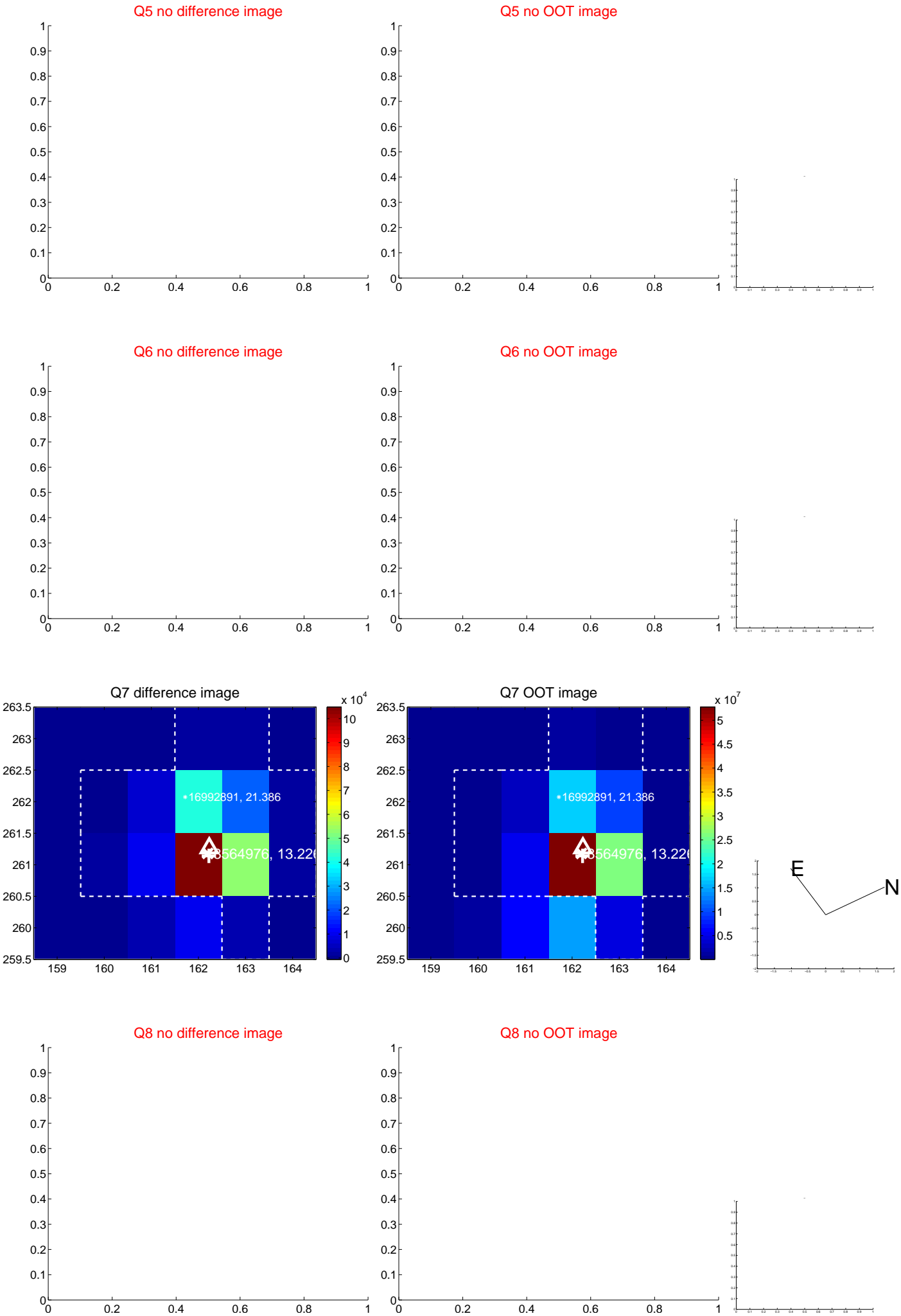


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

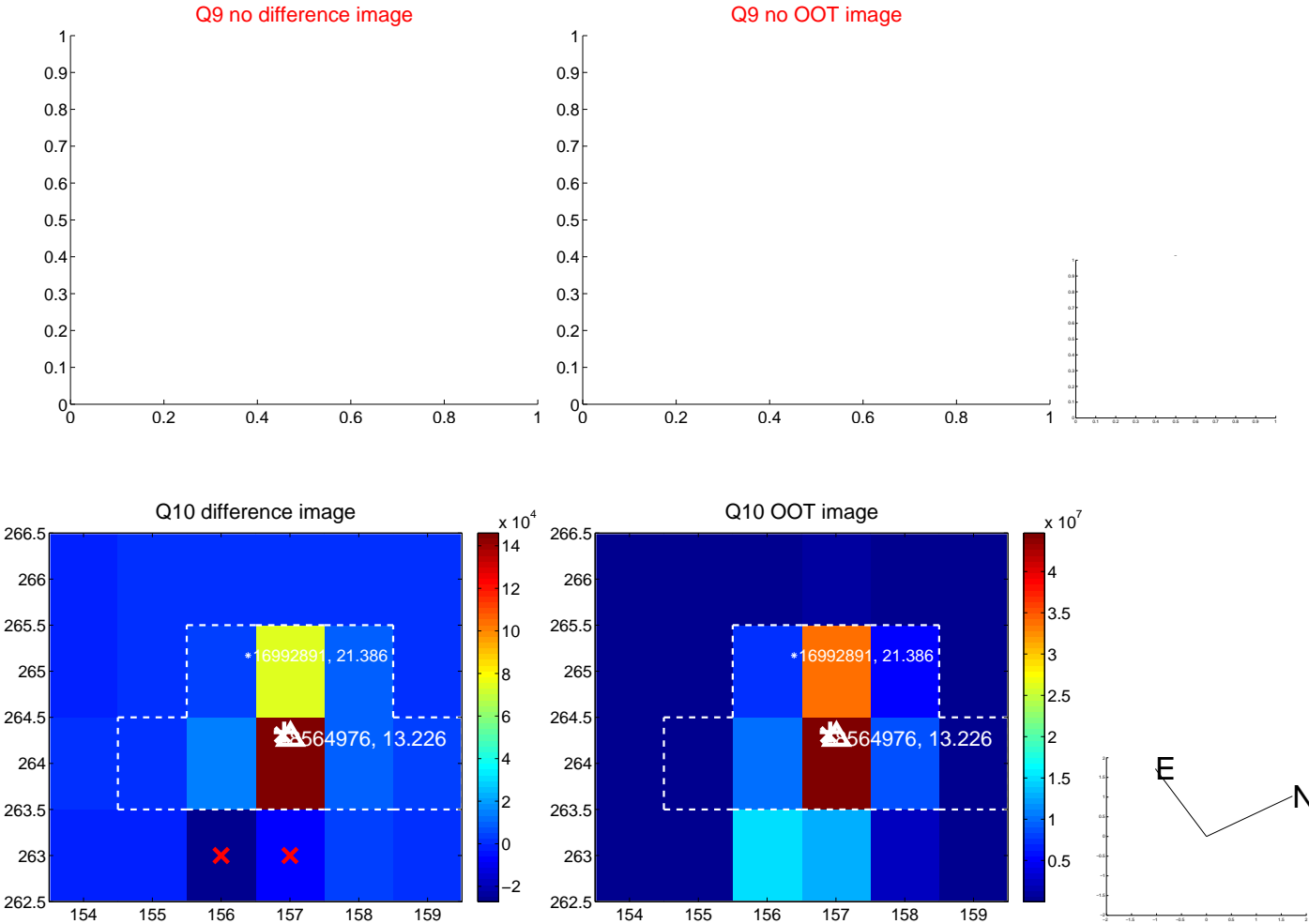
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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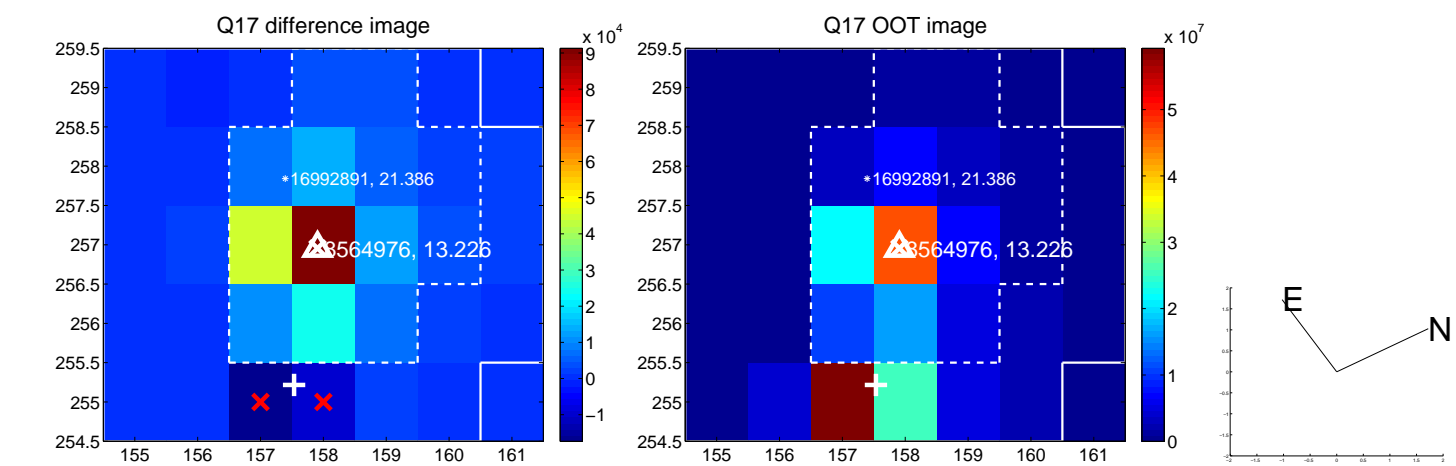
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



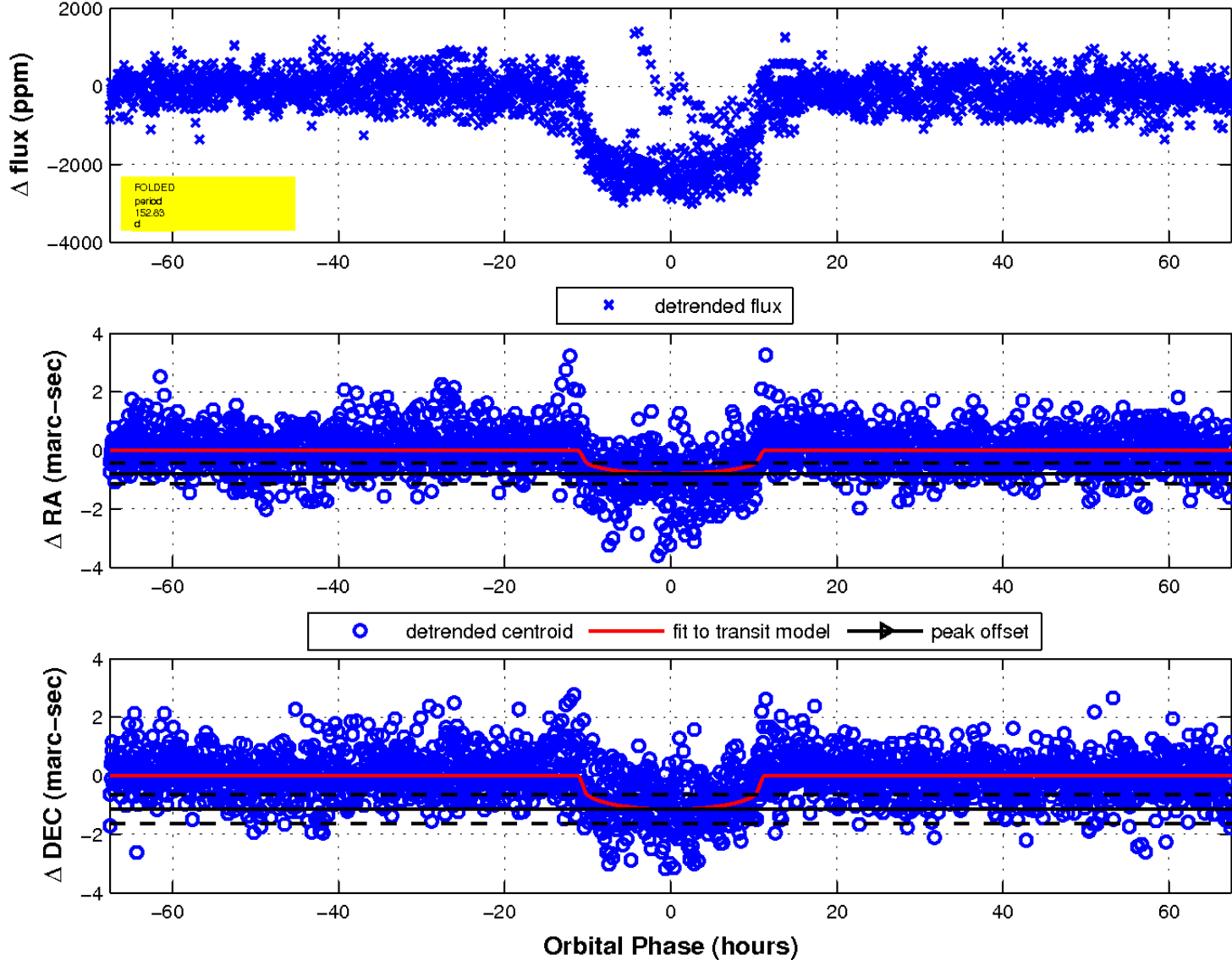
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

