

KIC 005976435

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})
005976435-01	OBS	No	531.057443	287.336092	1602.3	4.297	7.7	6.7	14.65	4648	71.70	35.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005976435-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS

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

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

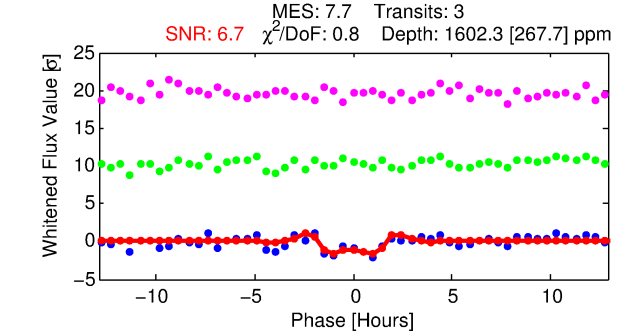
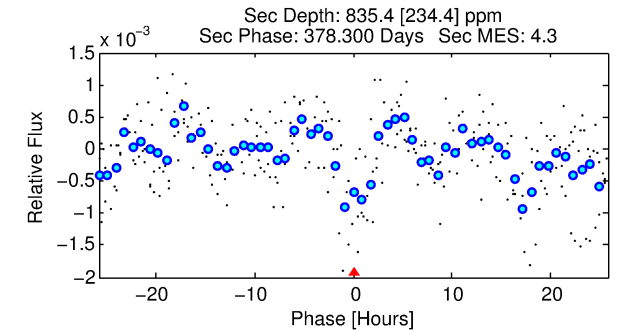
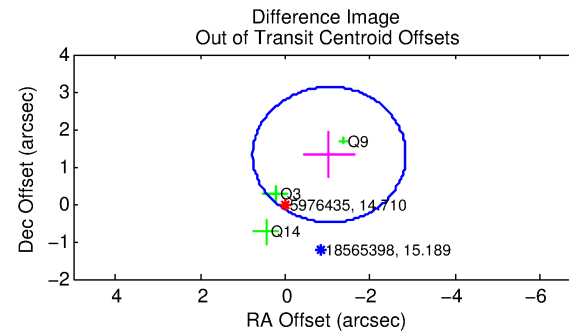
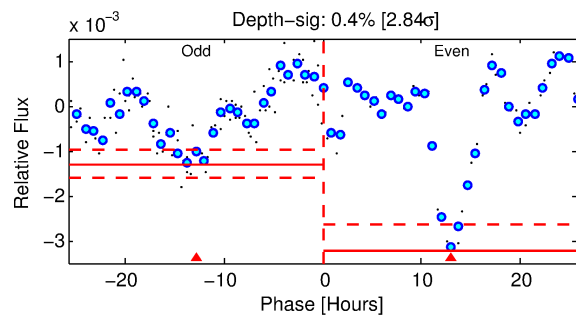
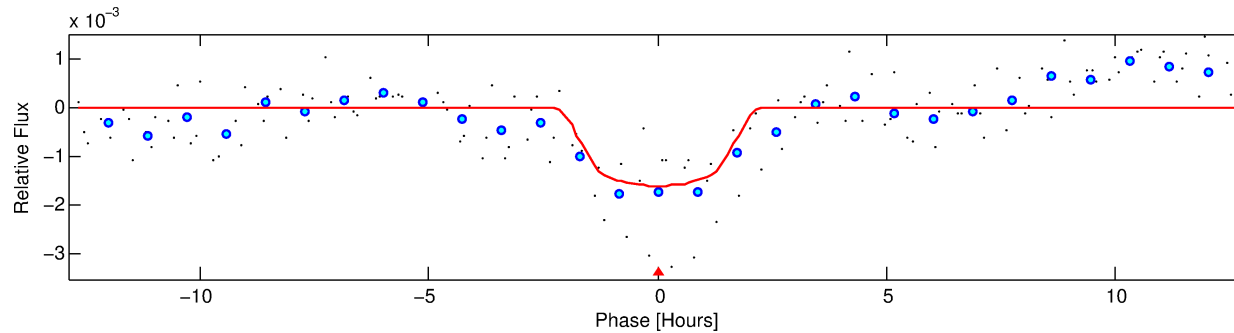
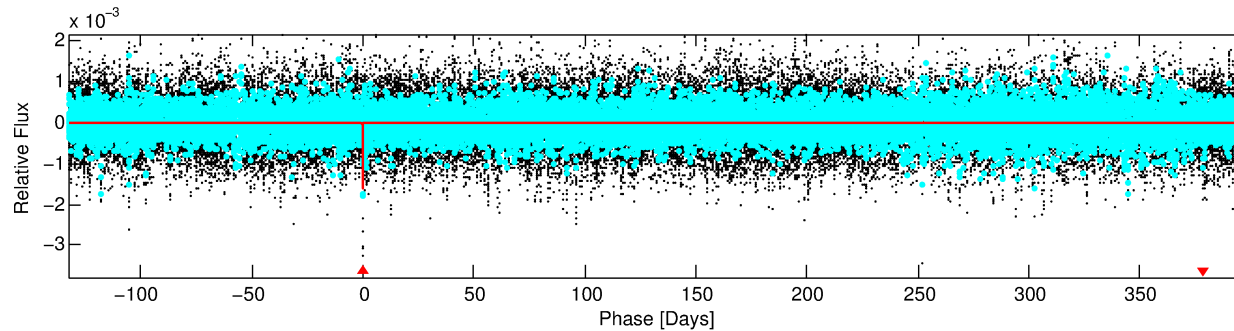
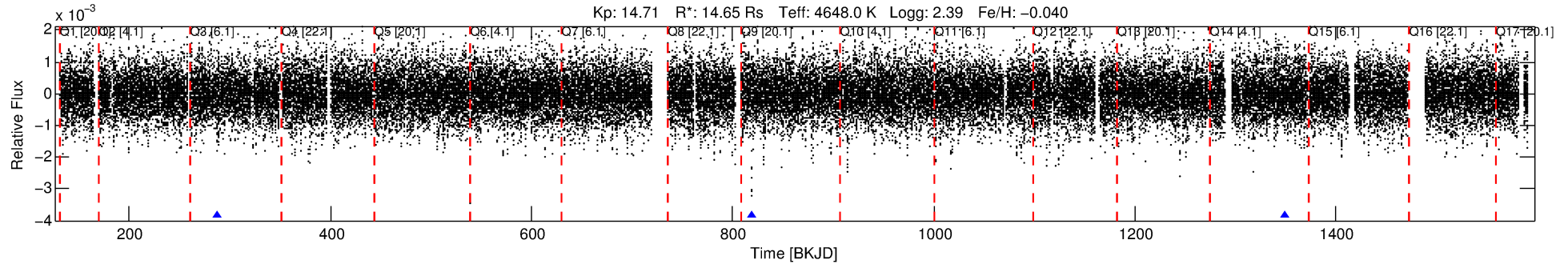
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005976435-01

No Significant Match Found

DV One-Page Summary

KIC: 5976435 Candidate: 1 of 1 Period: 531.057 d



DV Fit Results:

Period = 531.05744 [0.00417] d
Epoch = 287.3361 [0.0060] BKJD
Rp/R* = 0.0448 [0.0068]
a/R* = 511.72 [178.47]
b = 0.89 [0.08]
Seff = 35.14 [6.65]
Teq = 621 [29] K
Rp = 71.70 [20.02] Re
a = 1.5987 [0.2532] AU
Ag = 228.48 [101.27] [2.25 σ]
Teffp = 3732 [395] K [7.86 σ]

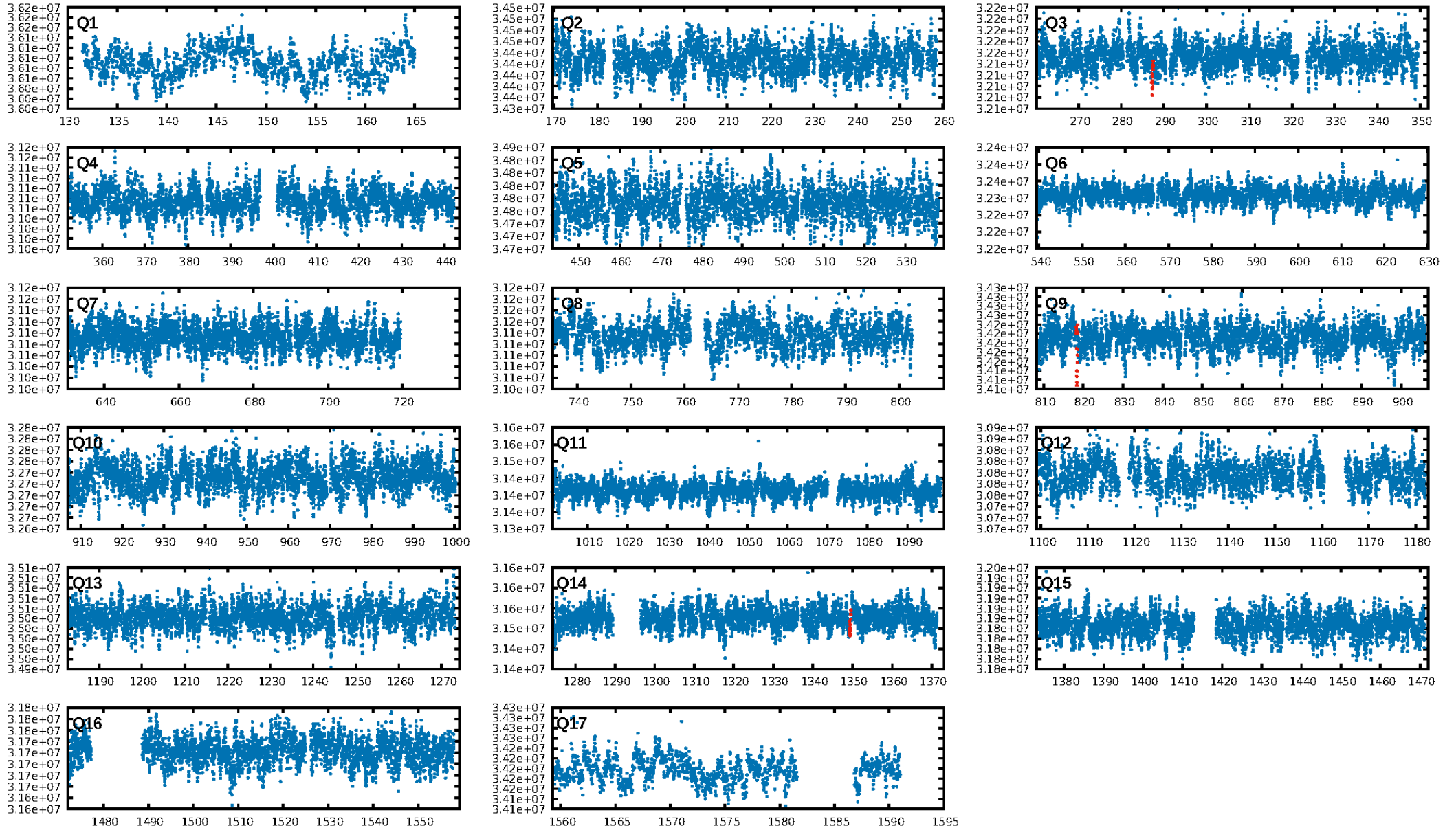
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 11.4%
ModelChiSquareGof-sig: 94.4%
Bootstrap-pfa: 2.61e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.946
Centroid-sig: 23.3%
Centroid-so: 0.236 arcsec [0.39 σ]
OotOffset-rm: 1.682 arcsec [2.79 σ]
KicOffset-rm: 1.386 arcsec [2.38 σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

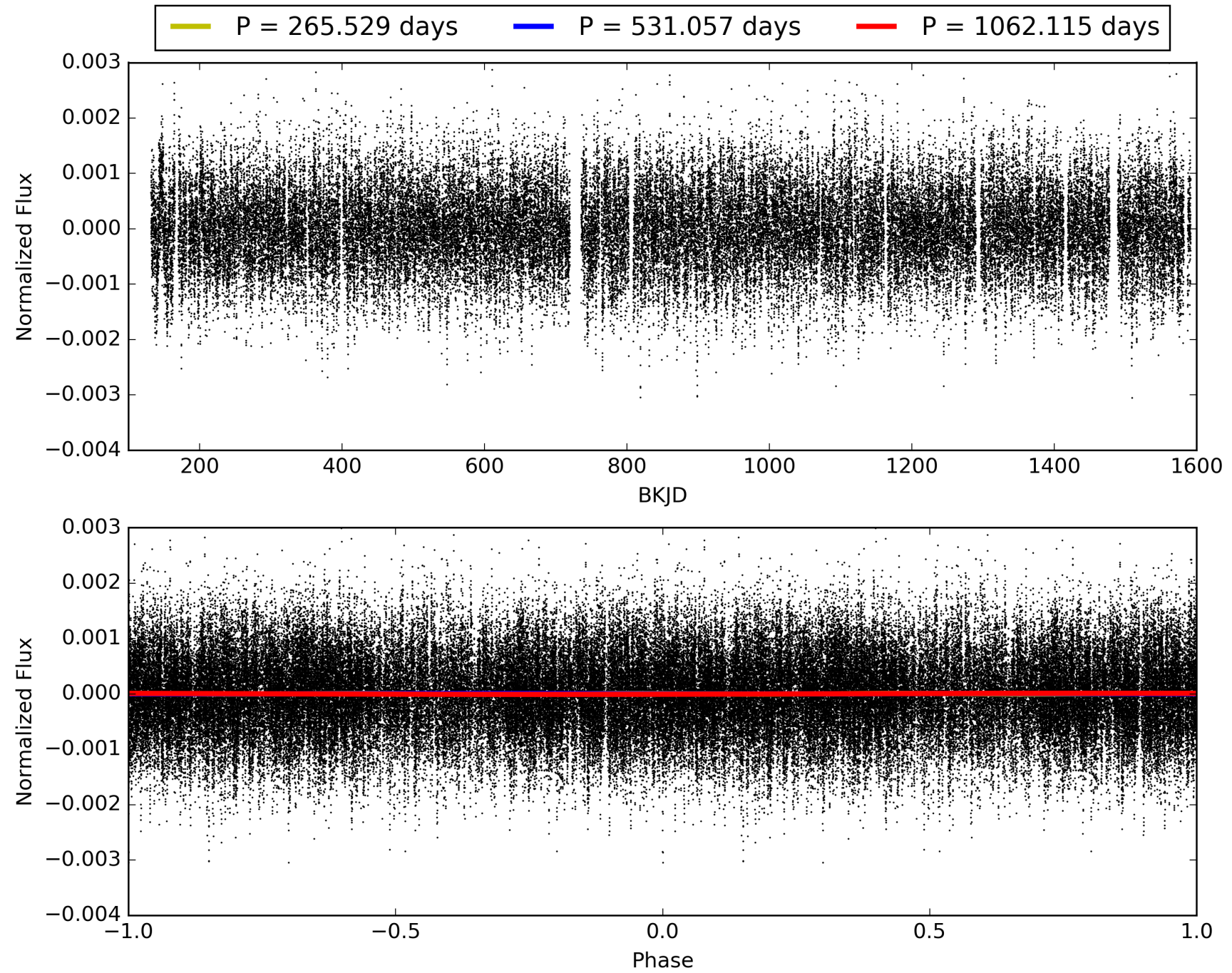
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 12:16:32 Z

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

TCE 005976435-01, PDC Light Curves

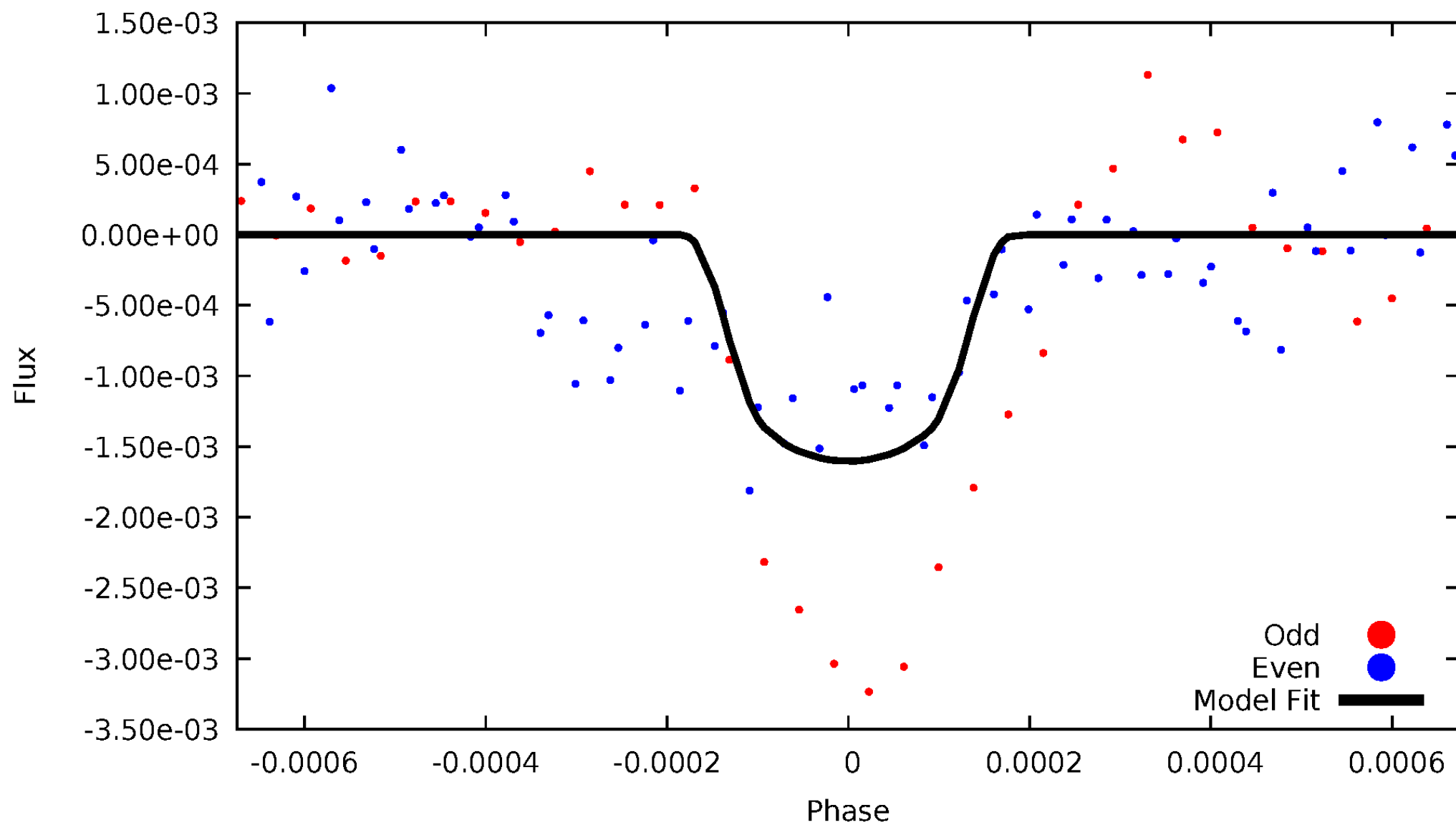


TCE 005976435-01



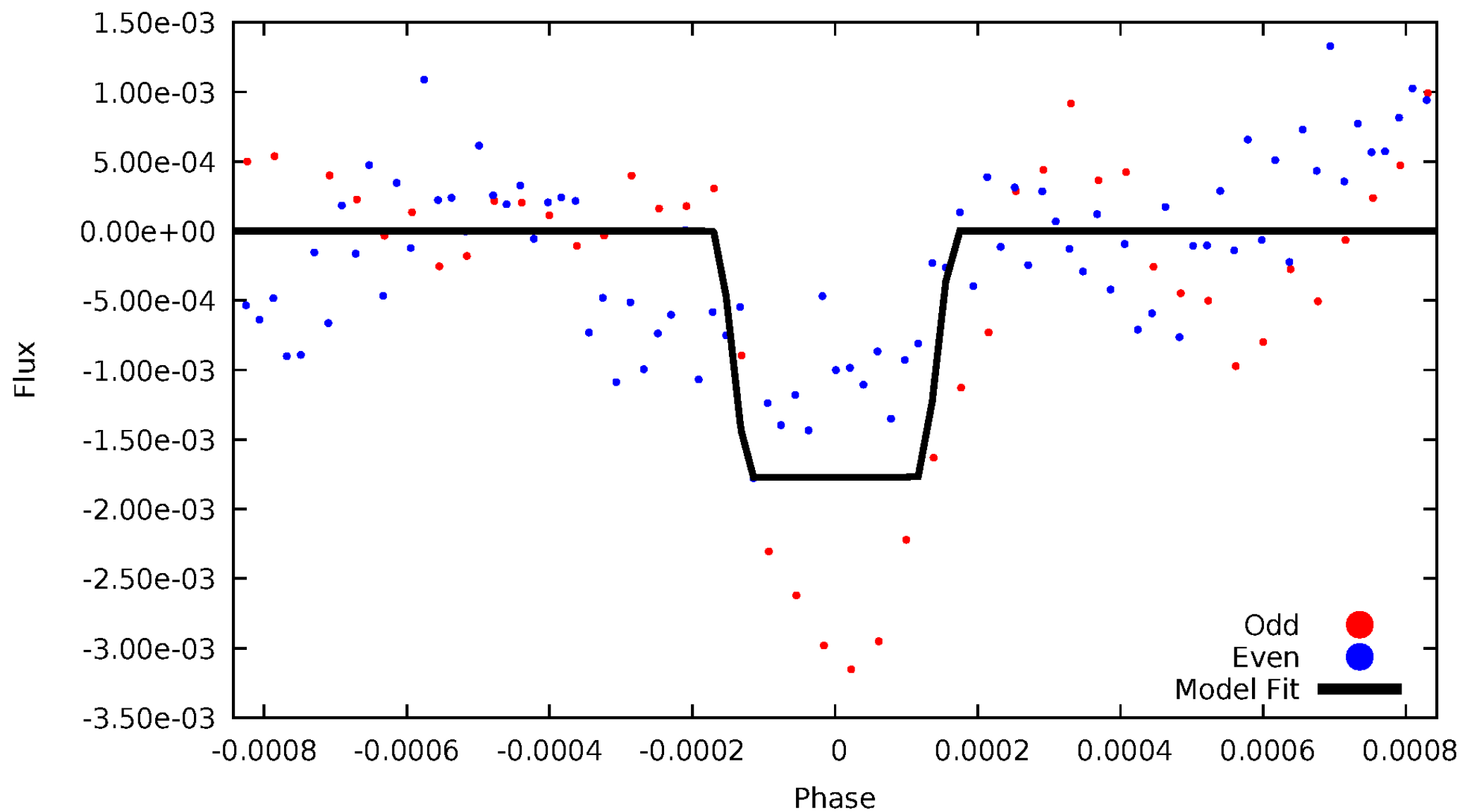
DV Odd/Even

TCE 005976435-01



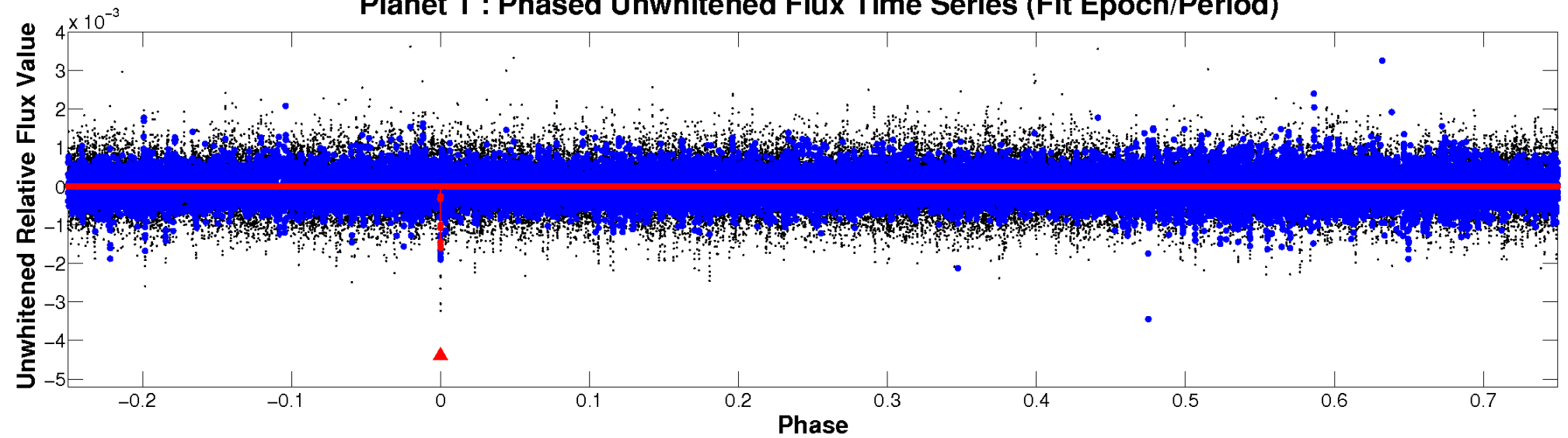
ALT Odd/Even

TCE 005976435-01

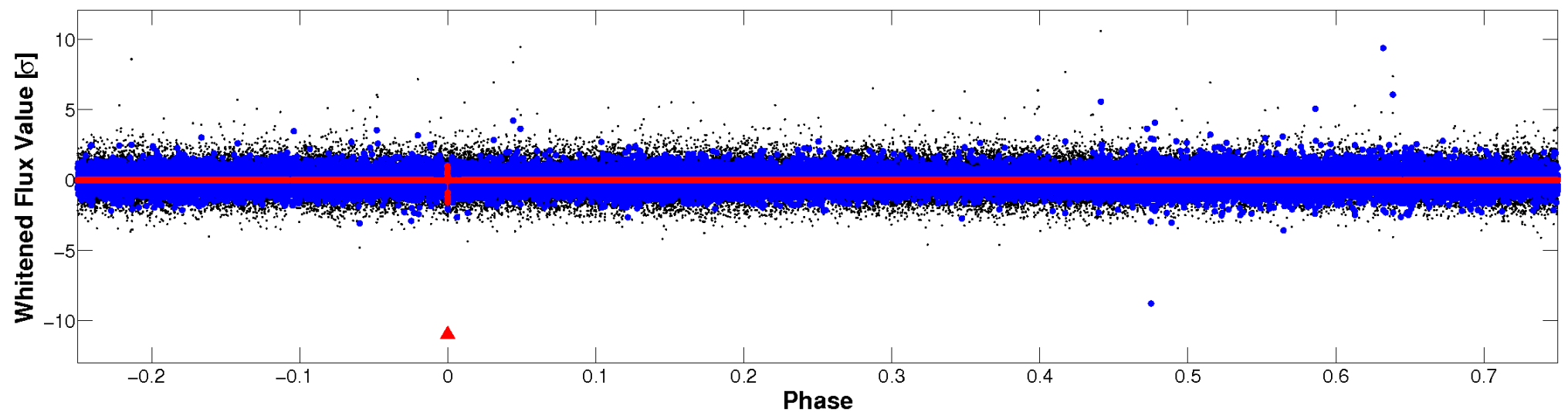


Non-Whitened Vs. Whitened Light Curve

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

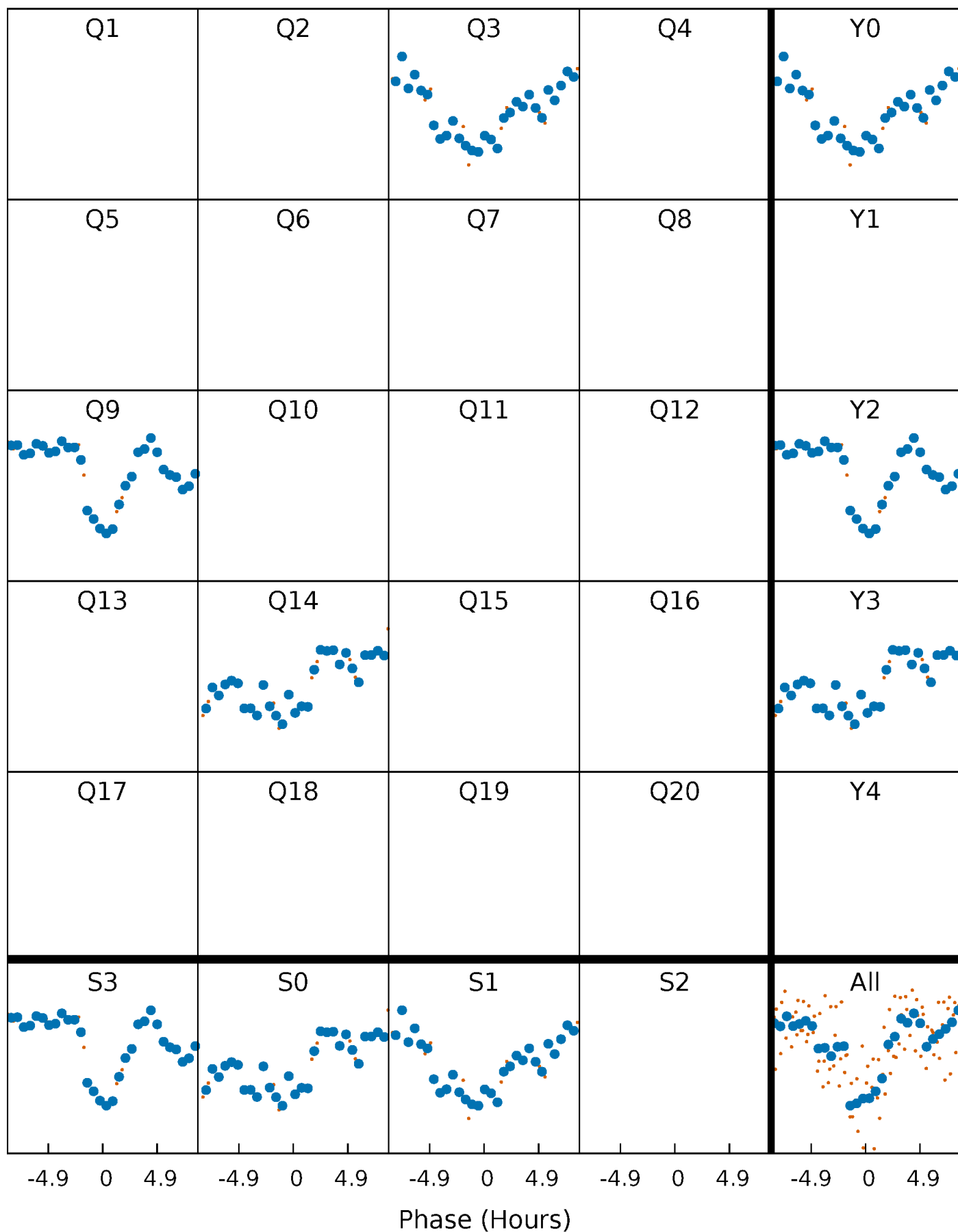


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



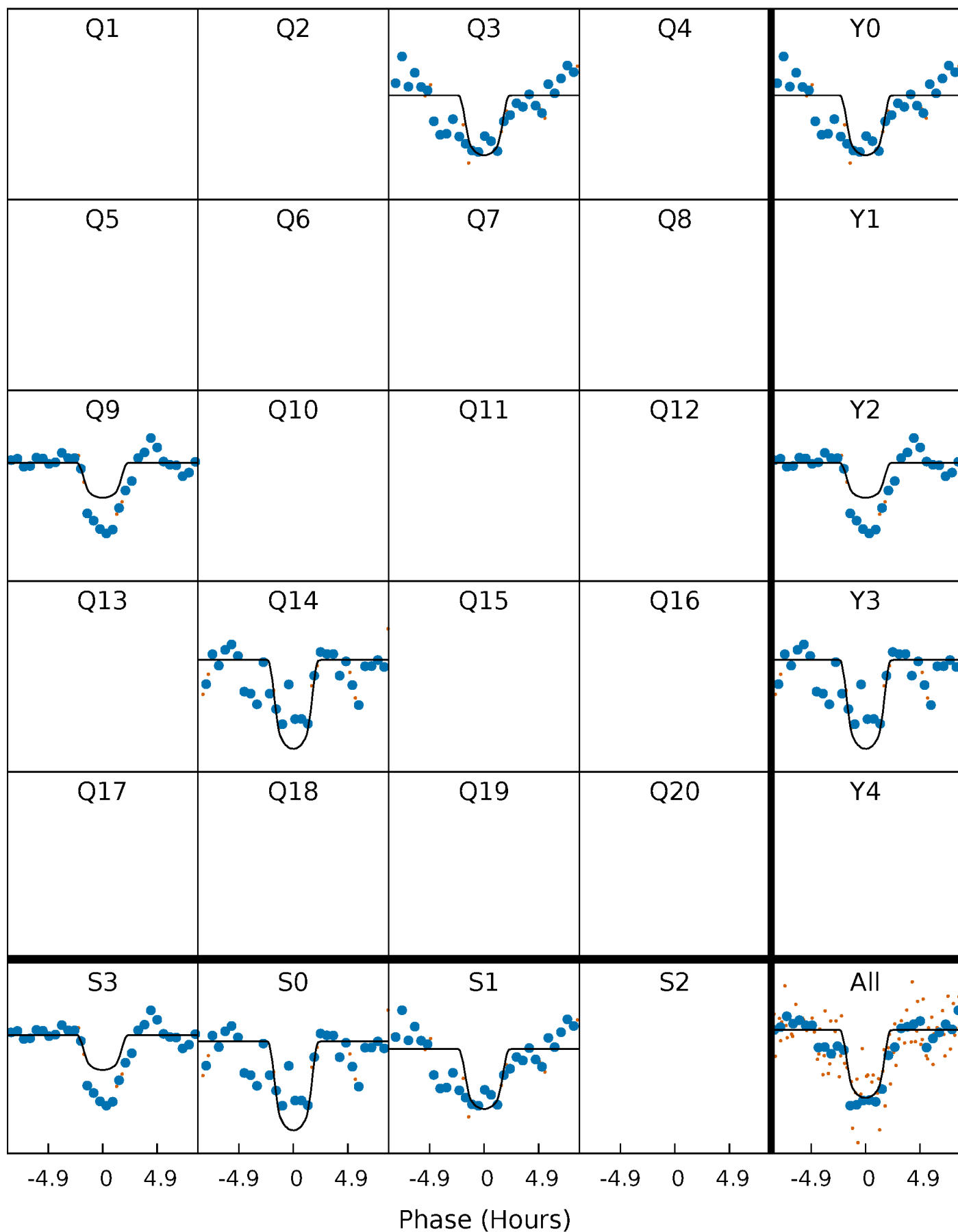
PDC Quarter-Phased Transit Curves

TCE 005976435-01 P=531.057443 Days $T_0=287.336092$ (BKJD)



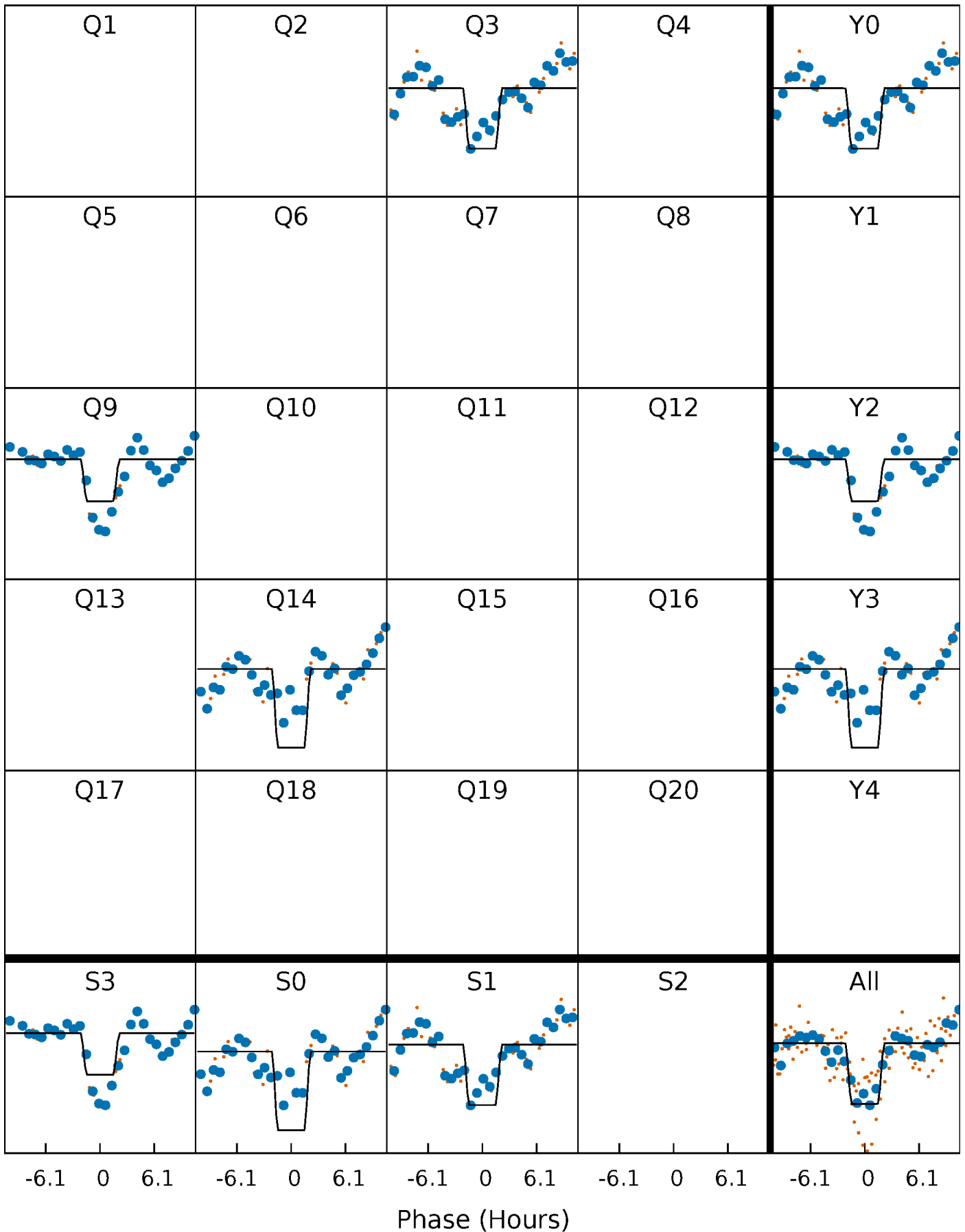
DV Quarter-Phased Transit Curves

TCE 005976435-01 P=531.057443 Days $T_0=287.336092$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

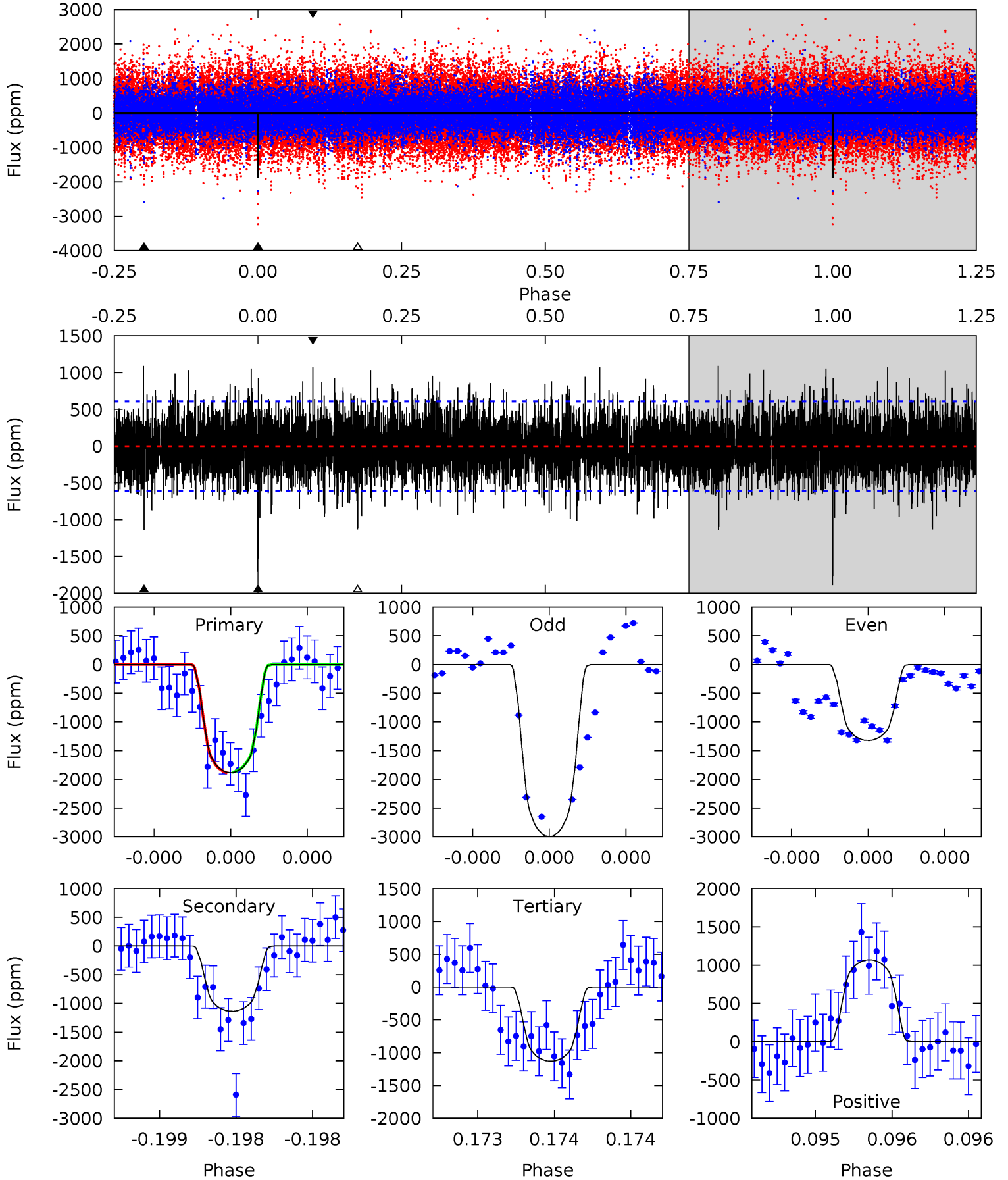
TCE 005976435-01 P=531.054602 Days $T_0=287.338917$ (BKJD)



DV Model-Shift Uniqueness Test

005976435-01, P = 531.057443 Days, E = 287.336092 Days

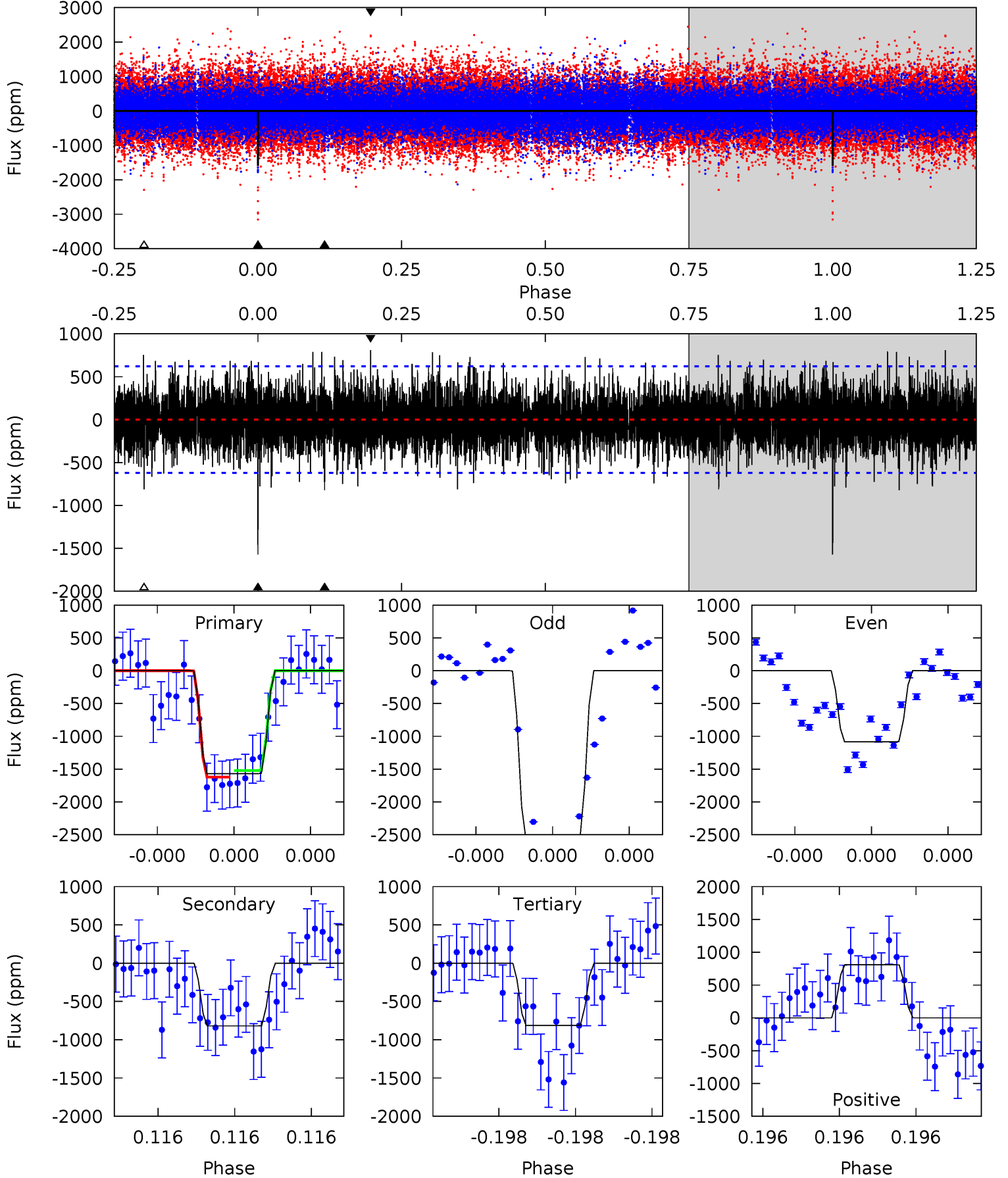
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.4	10.5	10.4	9.87	5.63	3.57	2.67	6.97	7.52	0.06	0.60	7.23	1.21	0.37	0.05



Alt Model-Shift Uniqueness Test

005976435-01, P = 531.054602 Days, E = 287.338917 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	7.46	7.39	7.37	5.65	3.59	2.03	6.89	6.91	0.07	0.09	6.35	1.22	0.34	0.45



Stellar Parameters For KIC 005976435

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4648^{+83}_{-111}	$2.392^{+0.027}_{-0.030}$	$-0.040^{+0.200}_{-0.300}$	$14.654^{+3.444}_{-3.444}$	$1.929^{+1.066}_{-0.872}$	$0.001^{+0.000}_{-0.000}$
	+2%/-2%	+1%/-1%	+500%/-750%	+24%/-24%	+55%/-45%	+33%/-13%
Source	PHO1	AST71	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 005976435-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1135 ± 108	$73.60^{+18.48}_{-15.98}$	872^{+27}_{-34}	4161^{+304}_{-248}	305^{+136}_{-84}
Alt.	-820 ± 110	$68.56^{+17.06}_{-15.77}$	871^{+31}_{-31}	4022^{+299}_{-241}	254^{+122}_{-75}

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

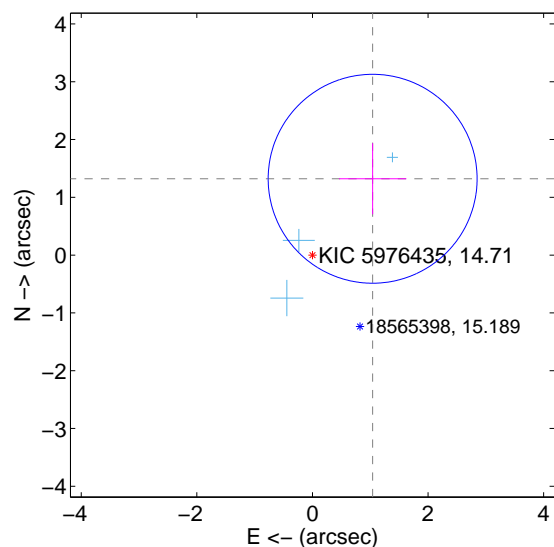
Supplemental centroid analysis for 005976435-01. Kepler magnitude: 14.71. Transit SNR 6.73

There are 3 quarters with good PRF difference image offsets

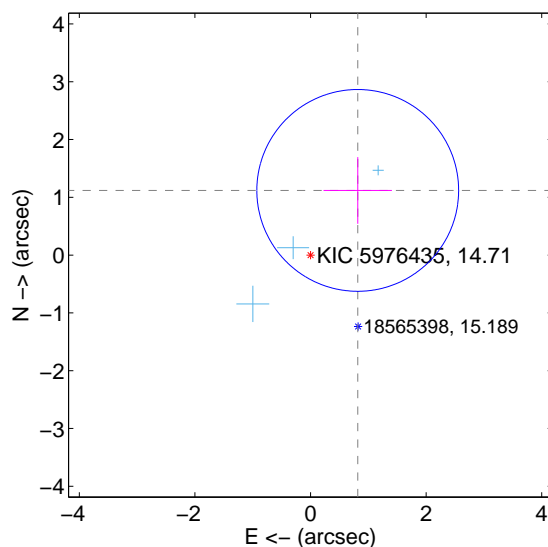
The direct PRF centroid is offset from the target star catalog position by about 0.57 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.682 ± 0.603	2.79	-1.042 ± 0.582	1.321 ± 0.615
PRF-fit source offset from KIC position	1.386 ± 0.582	2.38	-0.817 ± 0.591	1.119 ± 0.577
photometric centroid source offset	0.24 ± 0.60	0.39	-0.21 ± 0.59	0.11 ± 0.61

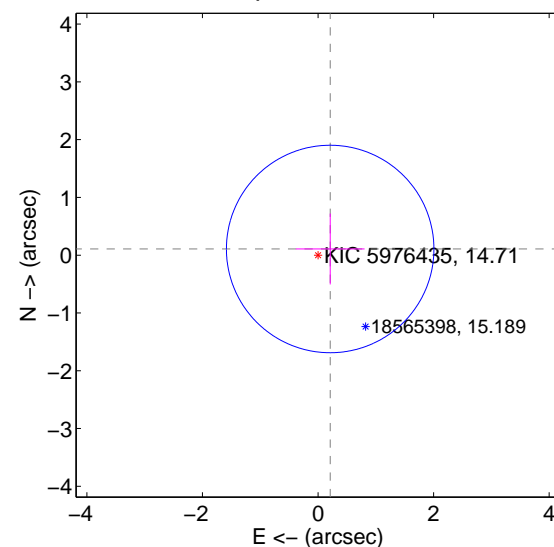
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

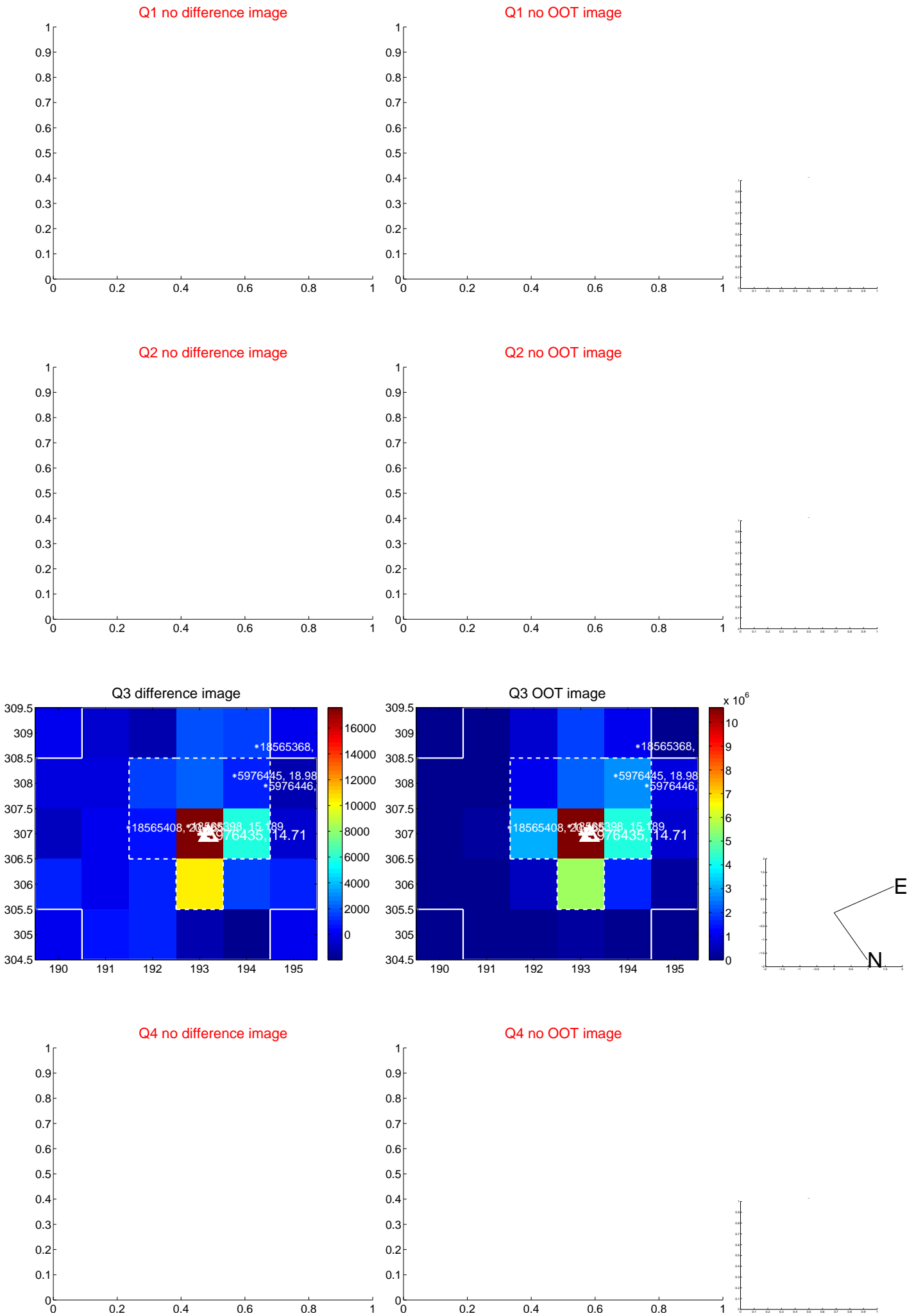


offset from photometric centroids



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.

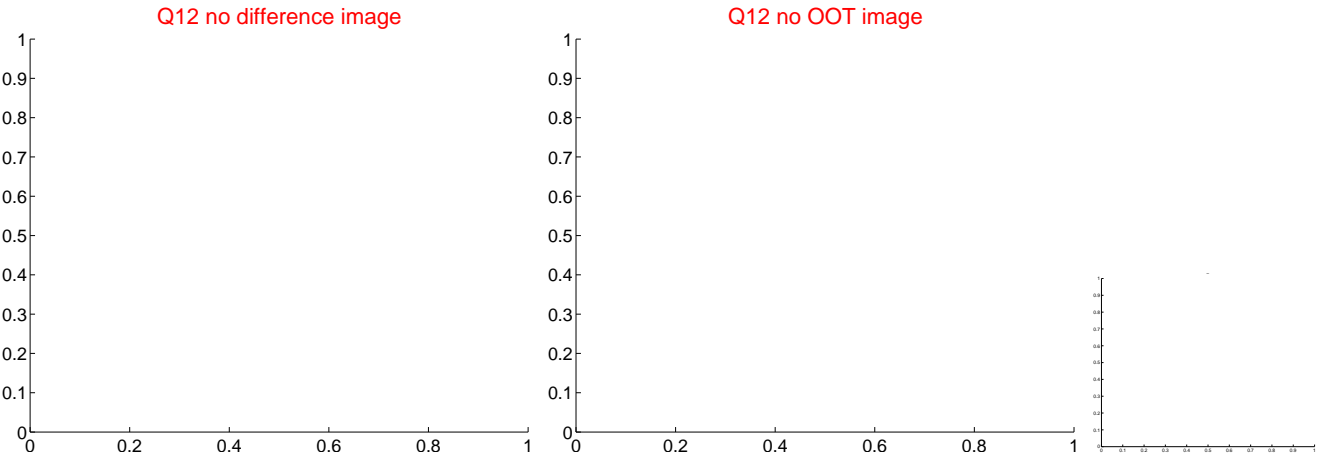
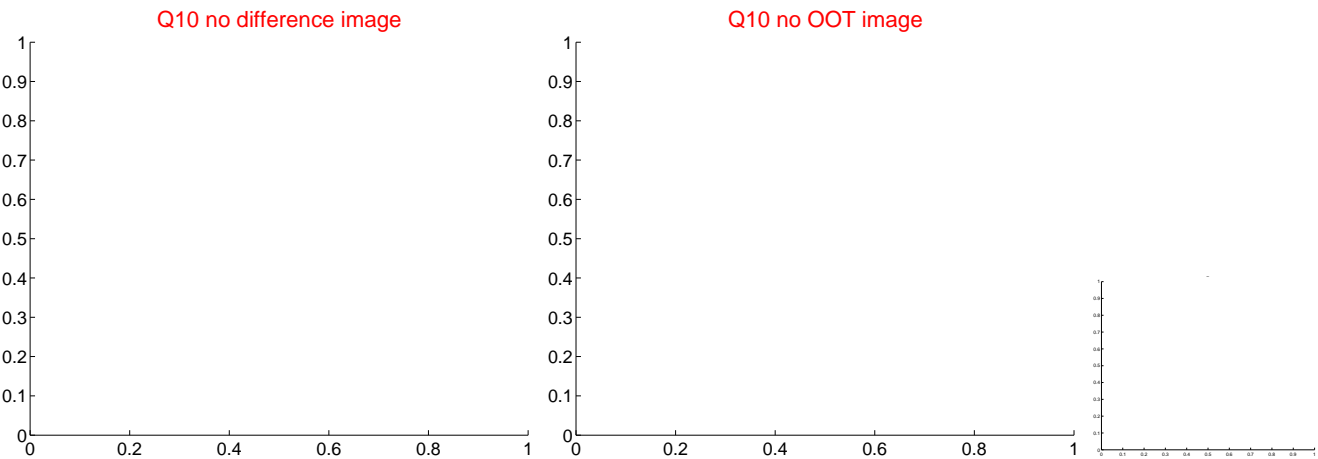
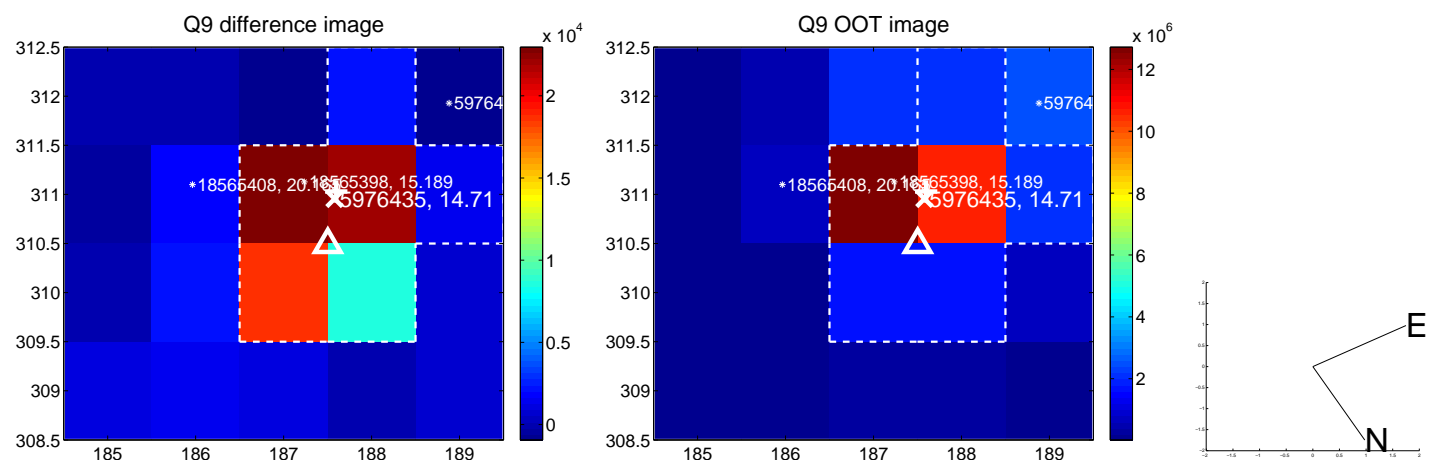
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



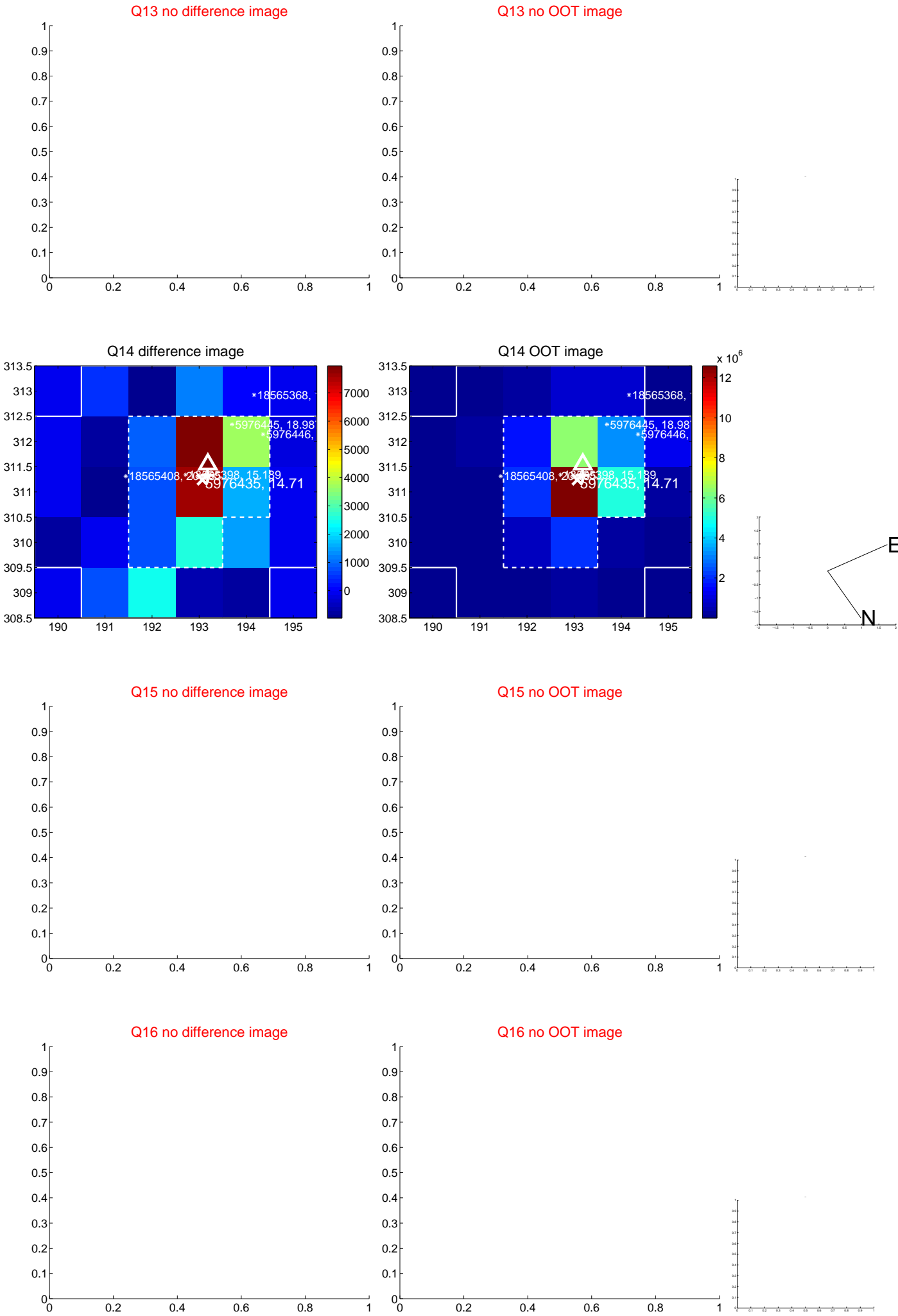
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



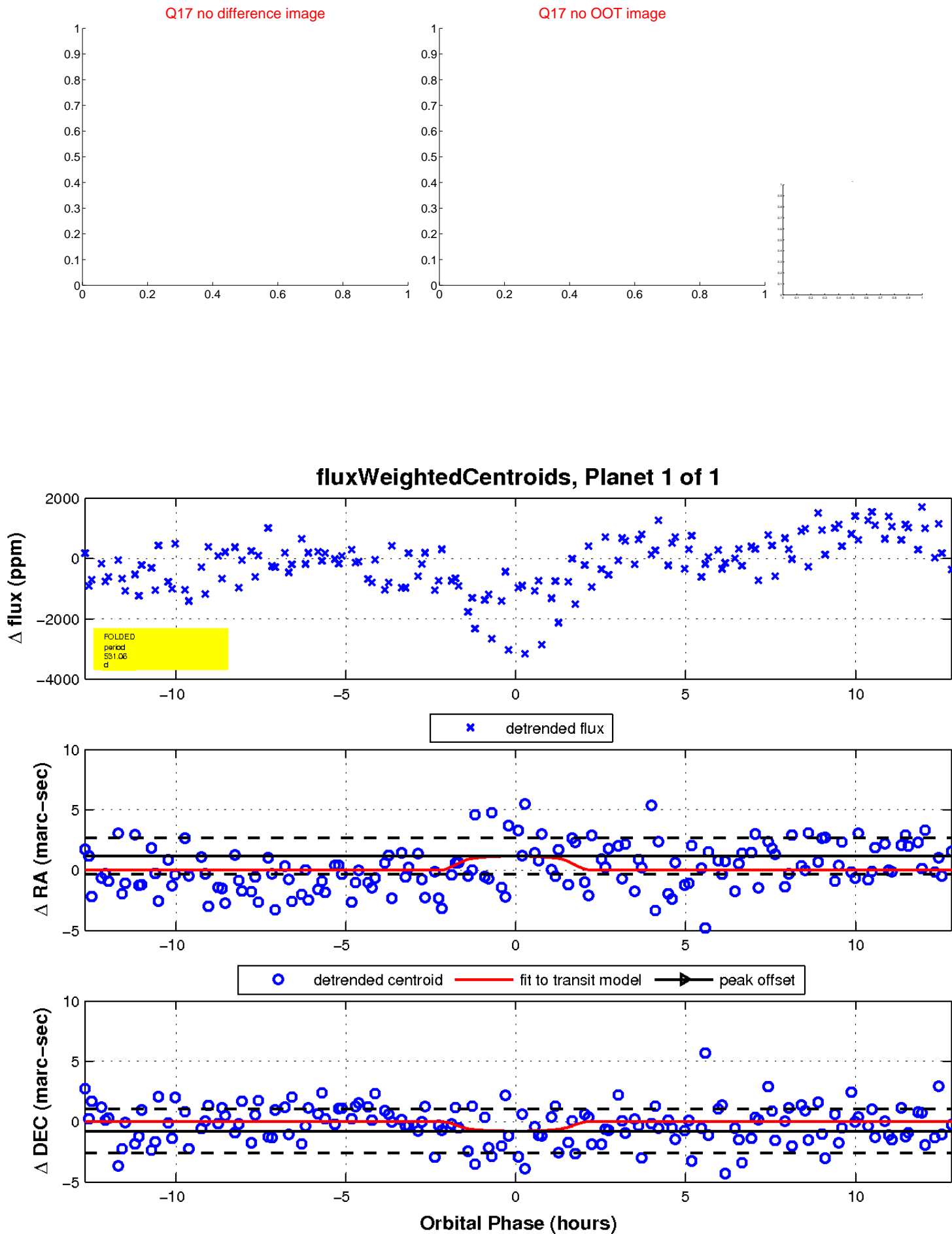
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

