

KIC 009466573

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})
009466573-01	OBS	No	375.884621	489.829077	744.5	29.092	8.2	8.8	2.09	5305	9.73	2.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009466573-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—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.

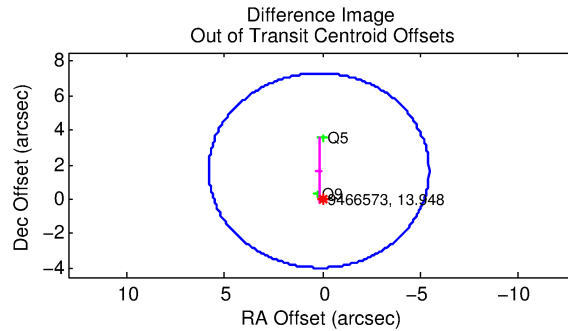
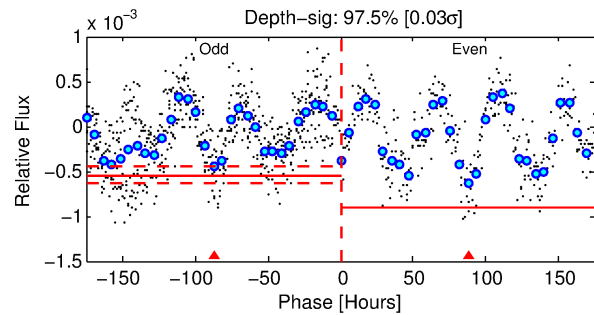
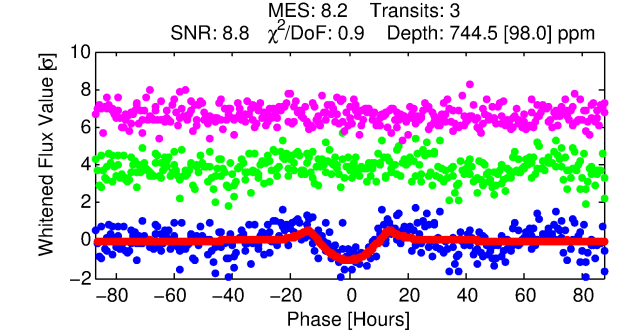
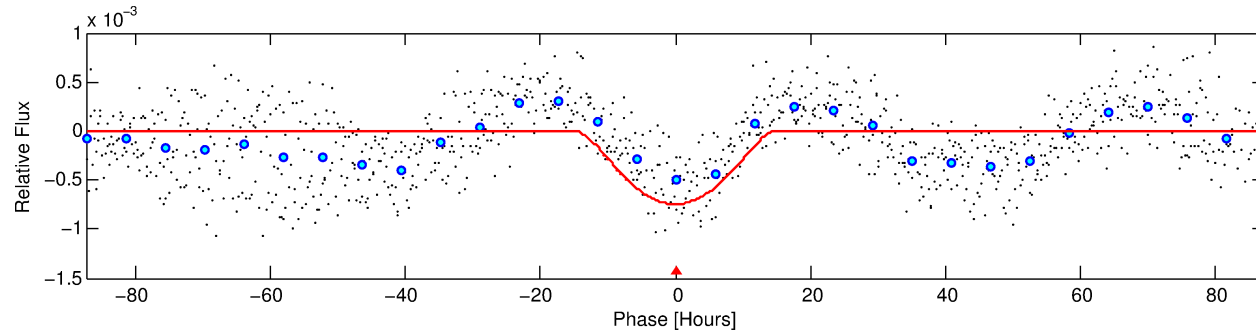
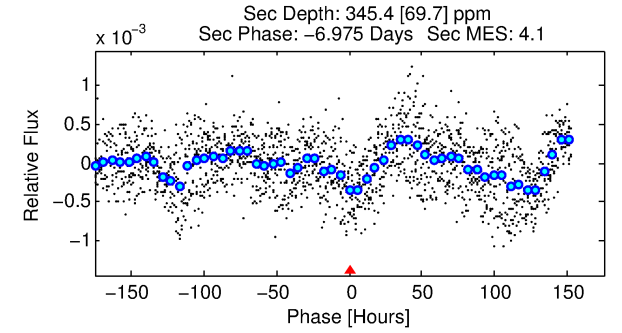
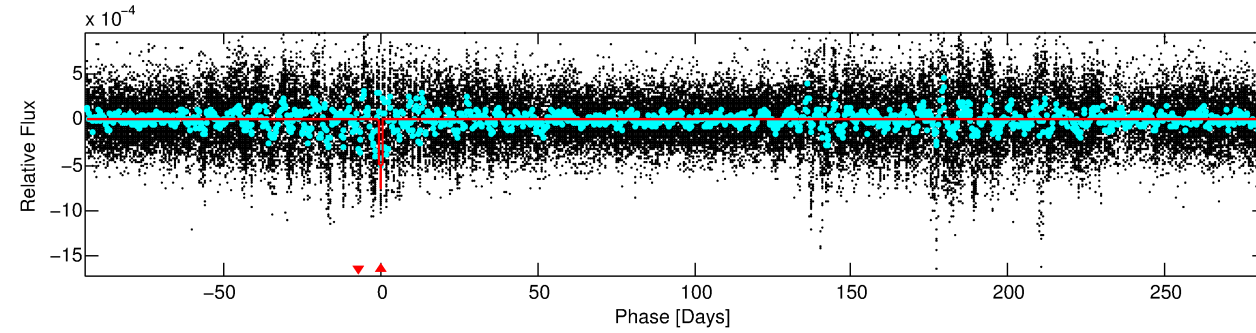
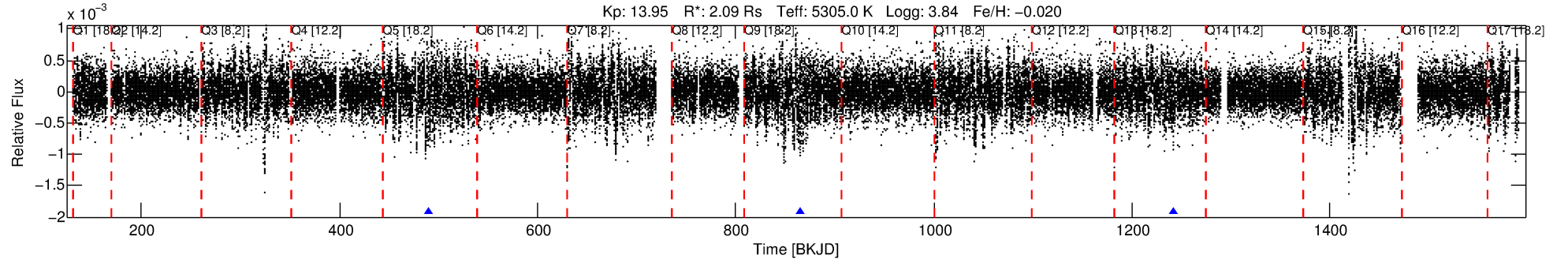
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009466573-01

No Significant Match Found

DV One-Page Summary

KIC: 9466573 Candidate: 1 of 1 Period: 375.885 d



DV Fit Results:

Period = 375.88462 [0.03097] d
Epoch = 489.8291 [0.0420] BKJD
Rp/R* = 0.0426 [0.0390]
a/R* = 33.02 [9.45]
b = 0.99 [0.07]
Seff = 2.80 [3.13]
Teff = 330 [92] K
Rp = 9.73 [10.57] Re
a = 1.0519 [0.6825] AU
Ag = 2220.84 [4768.39] [0.47σ]
Teffp = 3502 [1615] K [1.96σ]

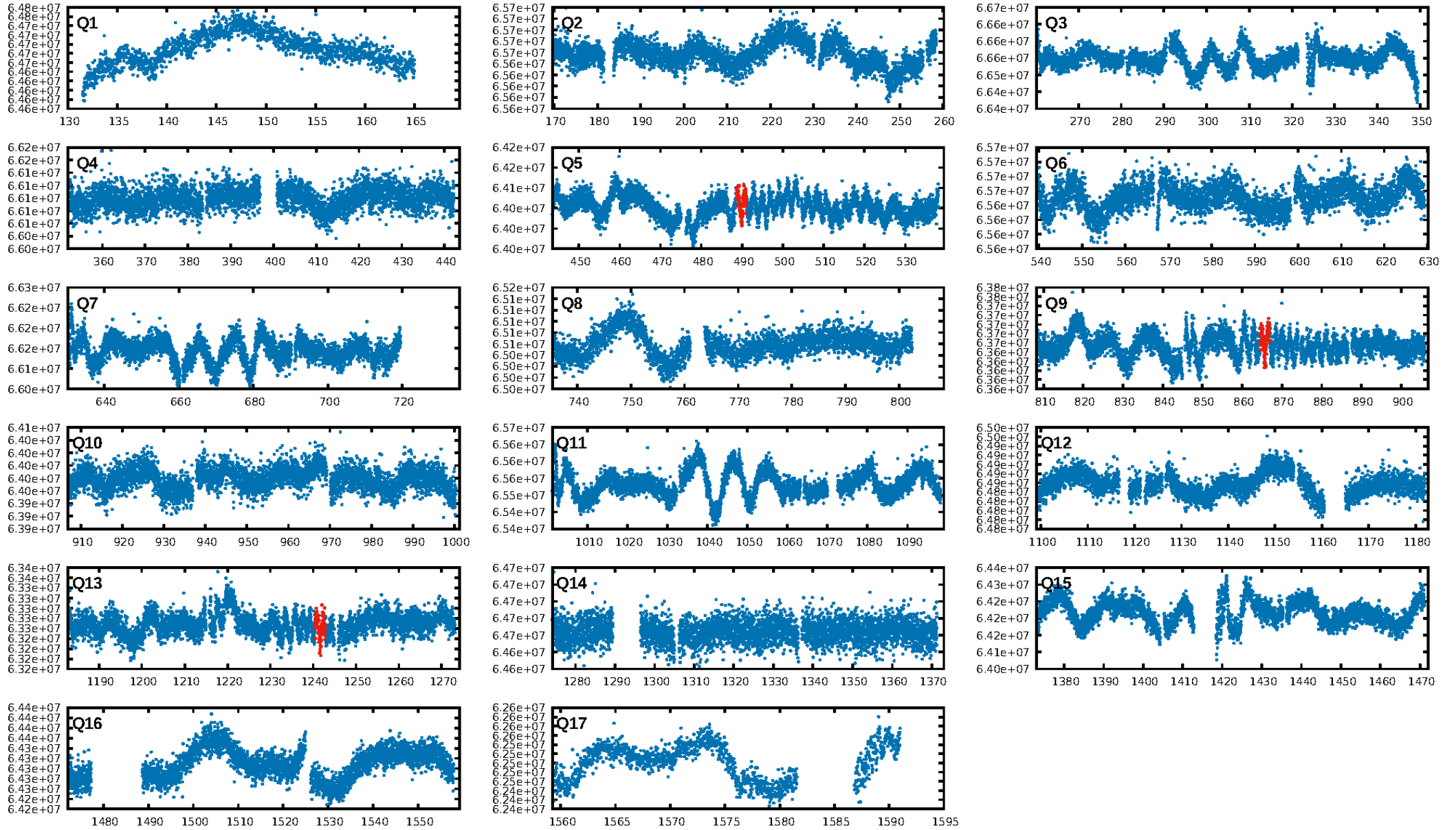
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 66.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.82e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -3.444
Centroid-sig: 85.2%
Centroid-so: 0.280 arcsec [0.31σ]
OotOffset-rm: 1.670 arcsec [0.89σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-rm: 1.503 arcsec [0.79σ]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

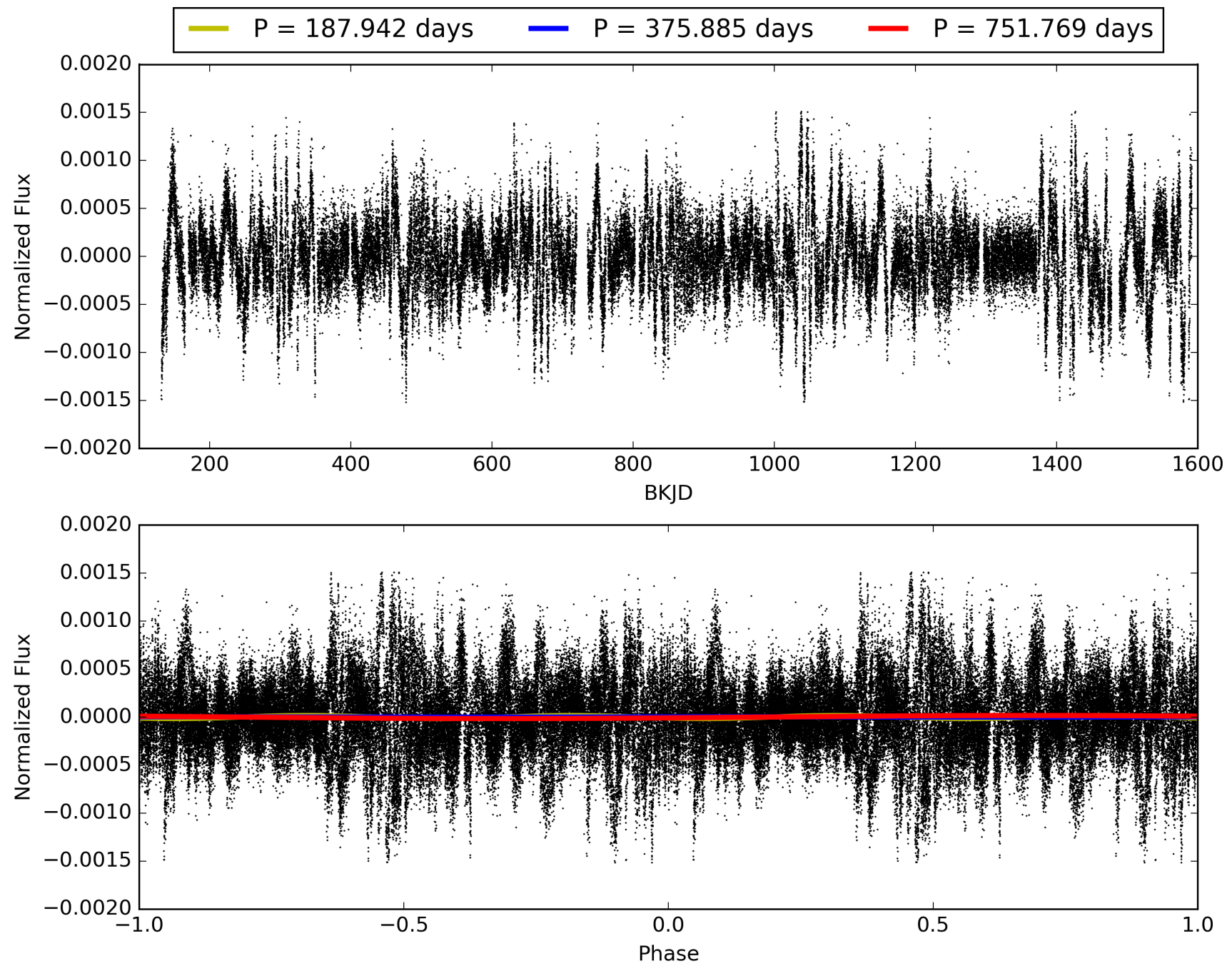
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:14:42 Z

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

TCE 009466573-01, PDC Light Curves

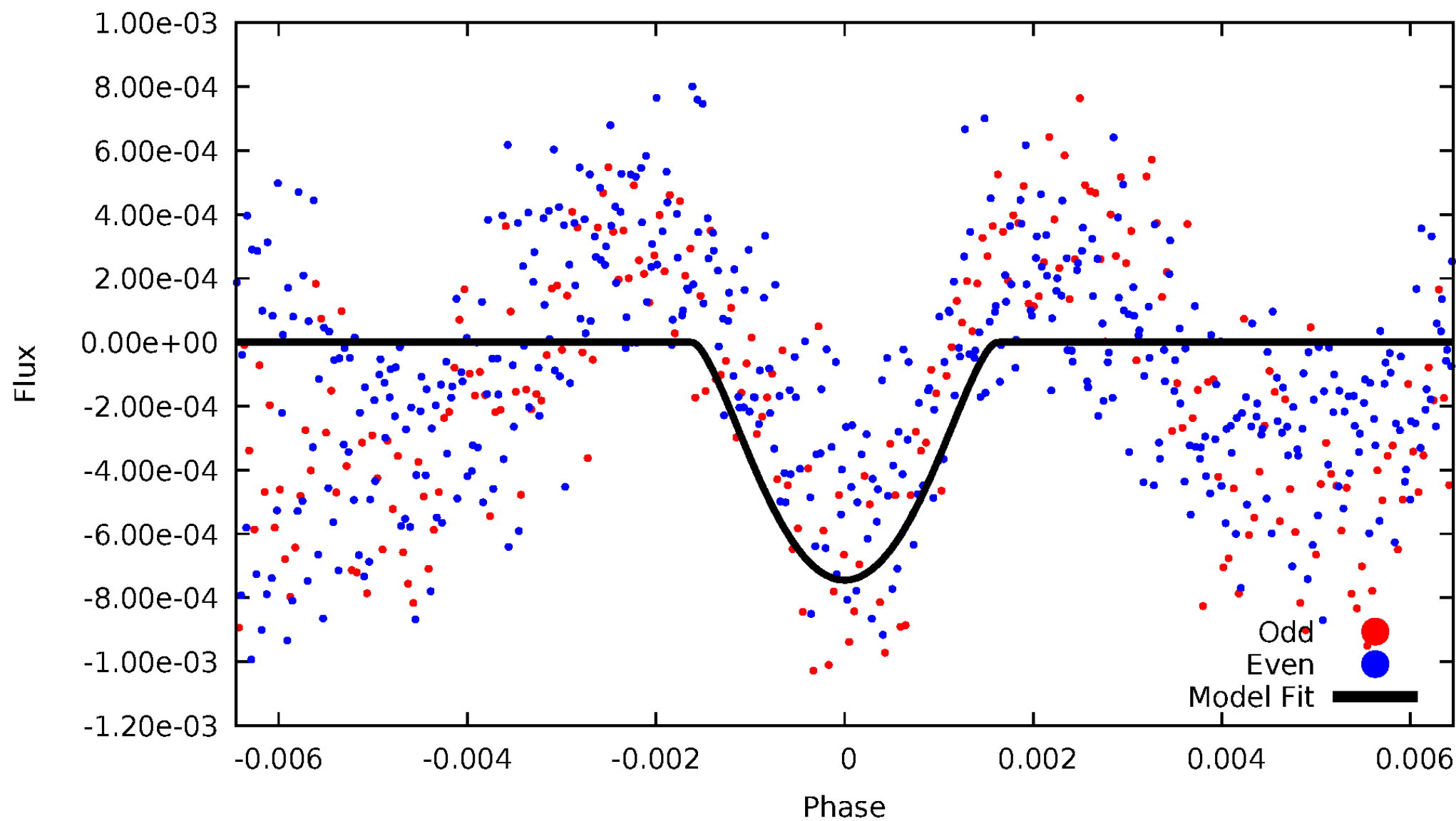


TCE 009466573-01



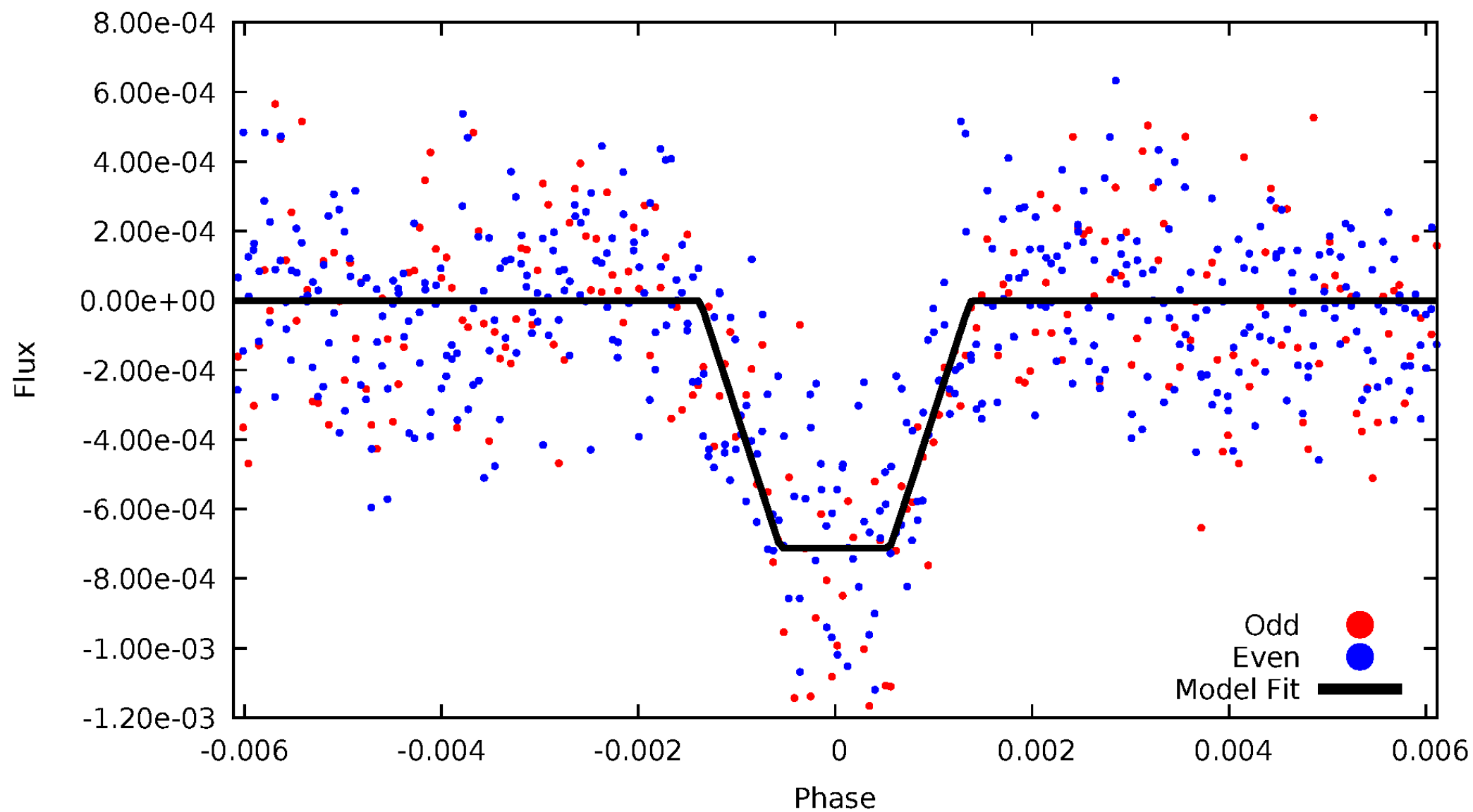
DV Odd/Even

TCE 009466573-01

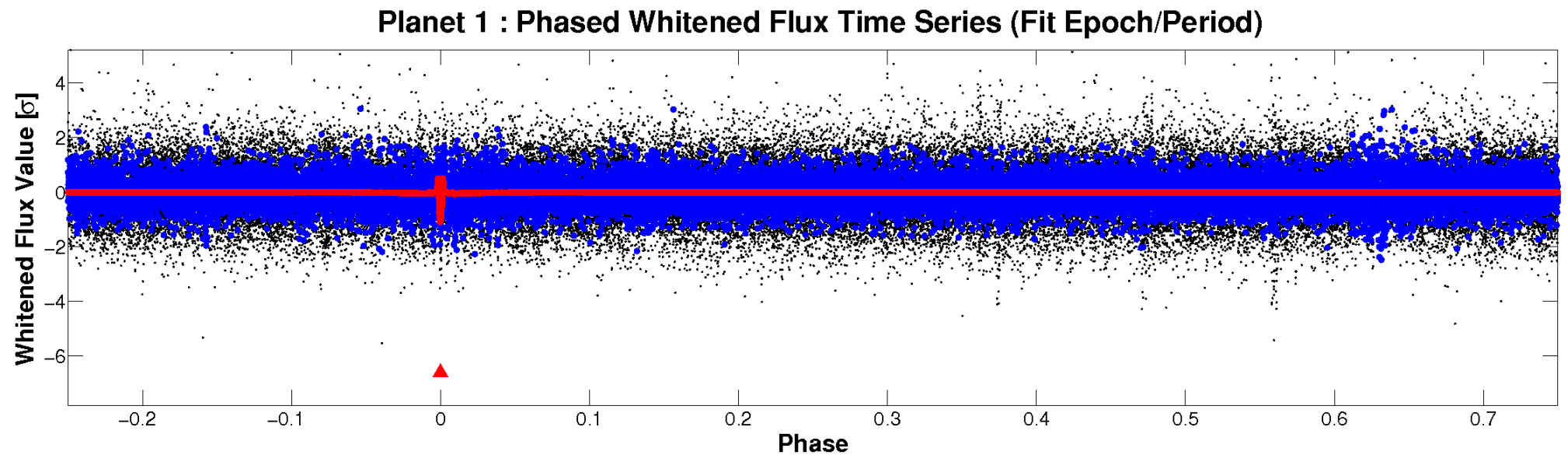
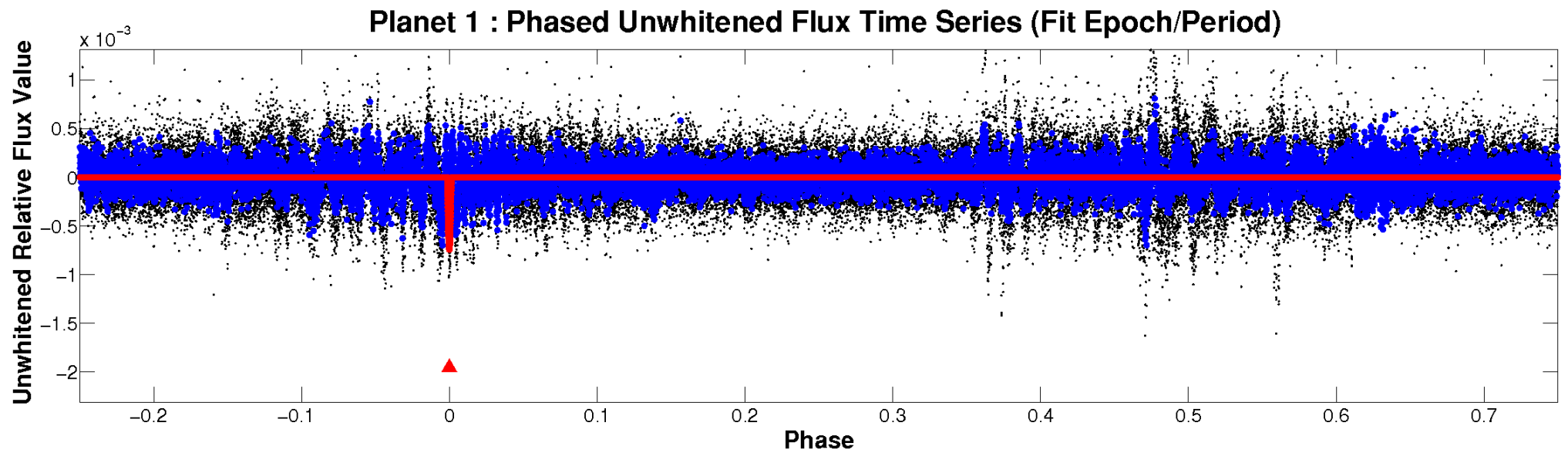


ALT Odd/Even

TCE 009466573-01

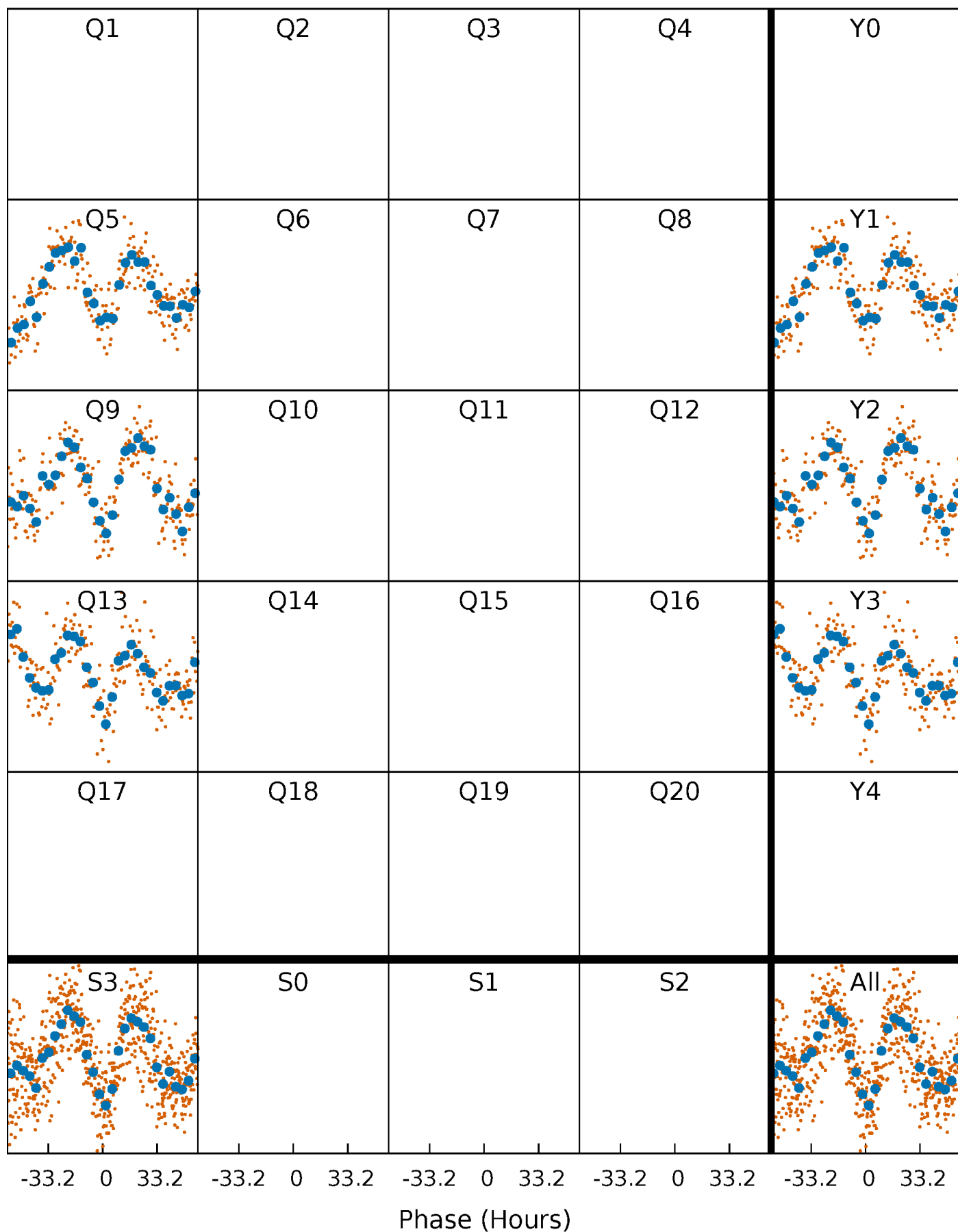


Non-Whitened Vs. Whitened Light Curve



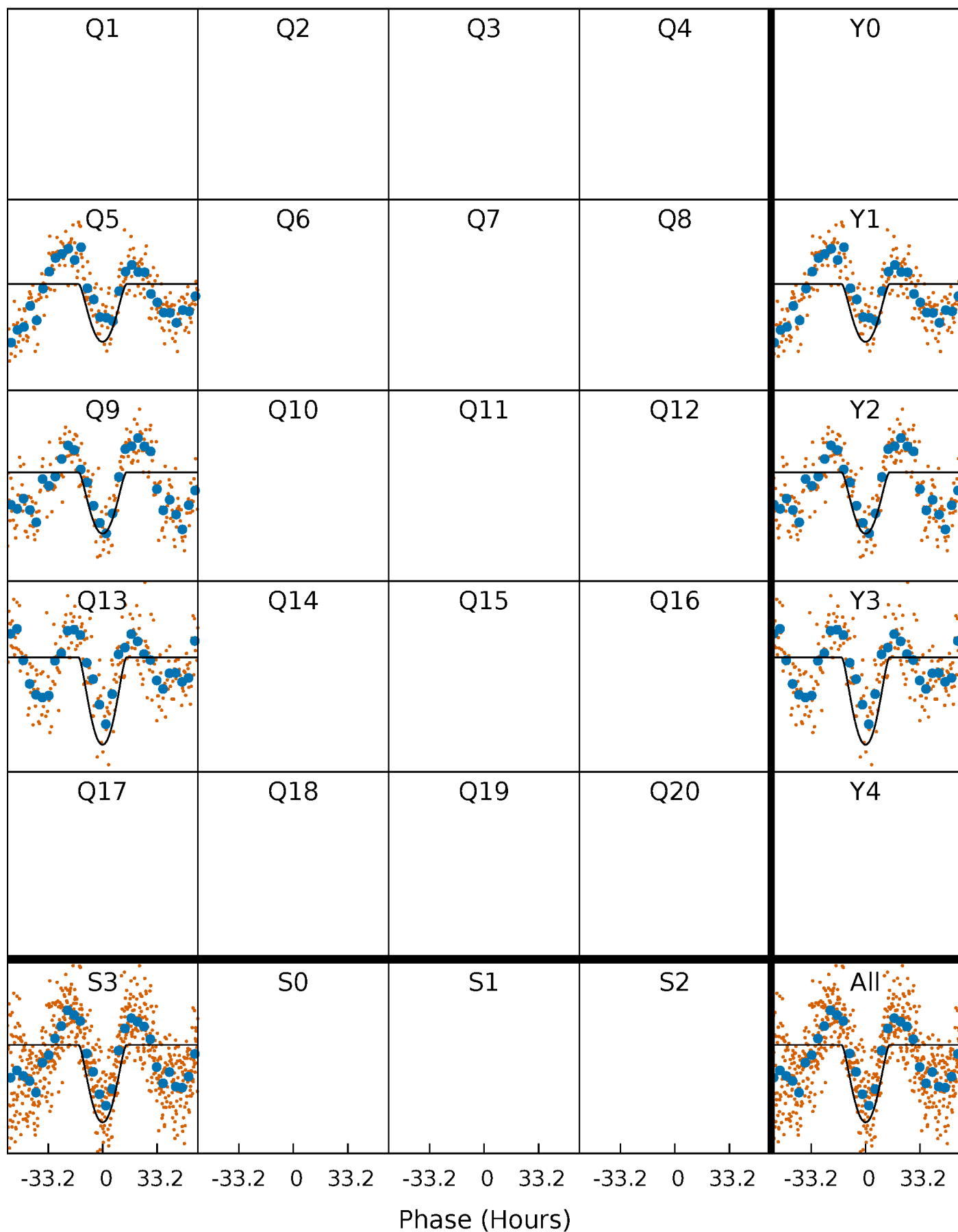
PDC Quarter-Phased Transit Curves

TCE 009466573-01 P=375.884621 Days $T_0=489.829077$ (BKJD)



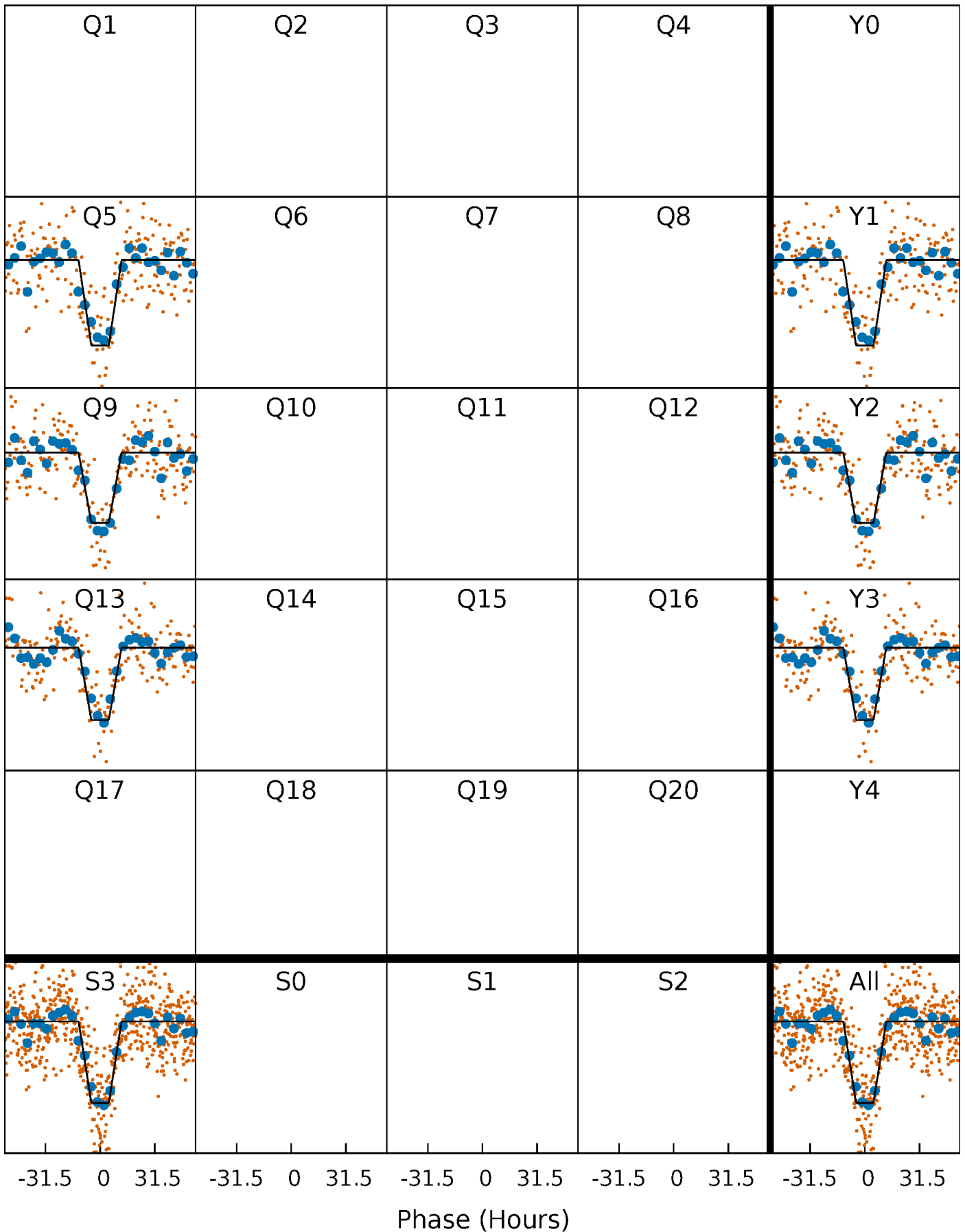
DV Quarter-Phased Transit Curves

TCE 009466573-01 P=375.884621 Days $T_0=489.829077$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

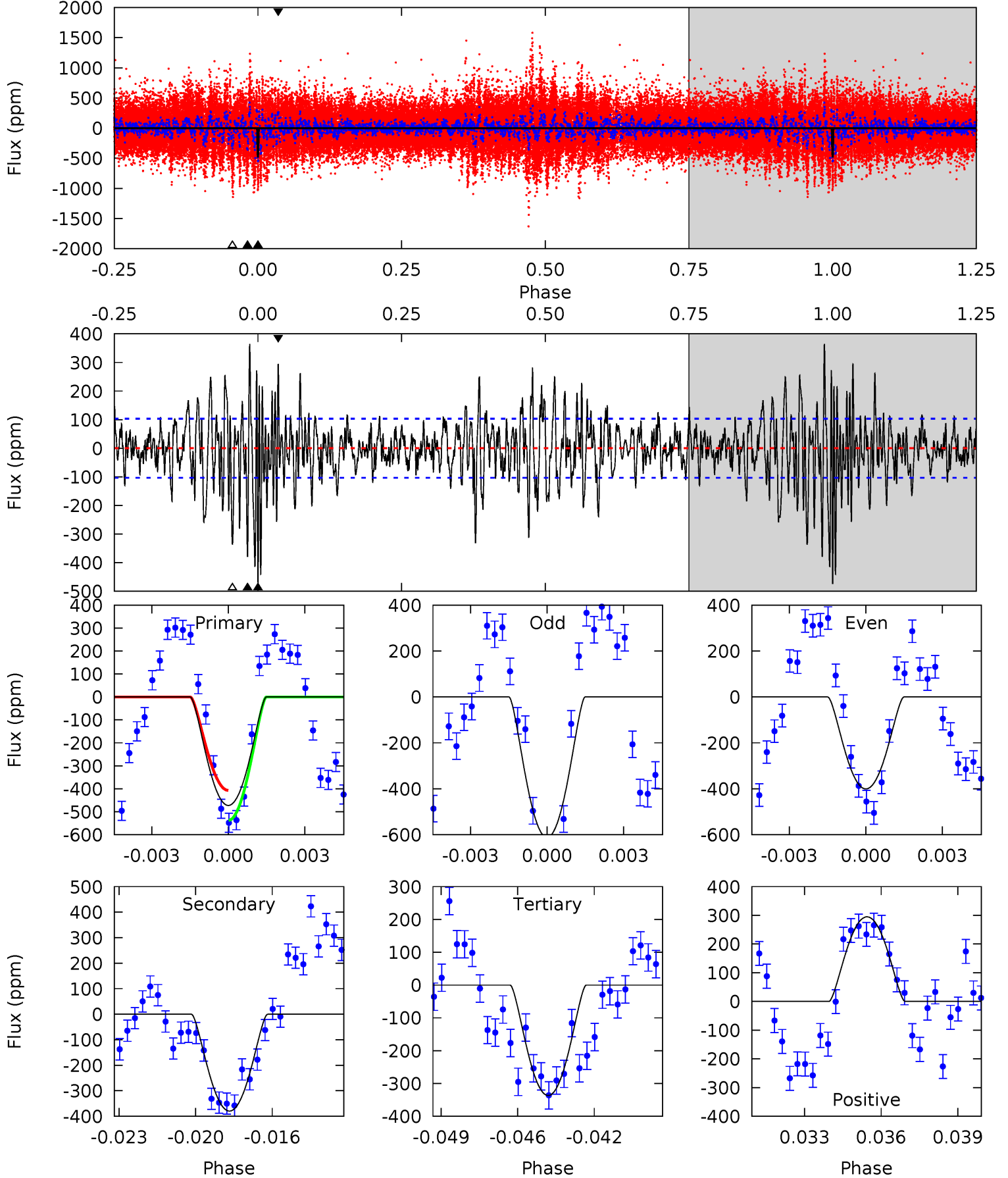
TCE 009466573-01 P=375.854903 Days $T_0=489.889629$ (BKJD)



DV Model-Shift Uniqueness Test

009466573-01, P = 375.884621 Days, E = 113.944456 Days

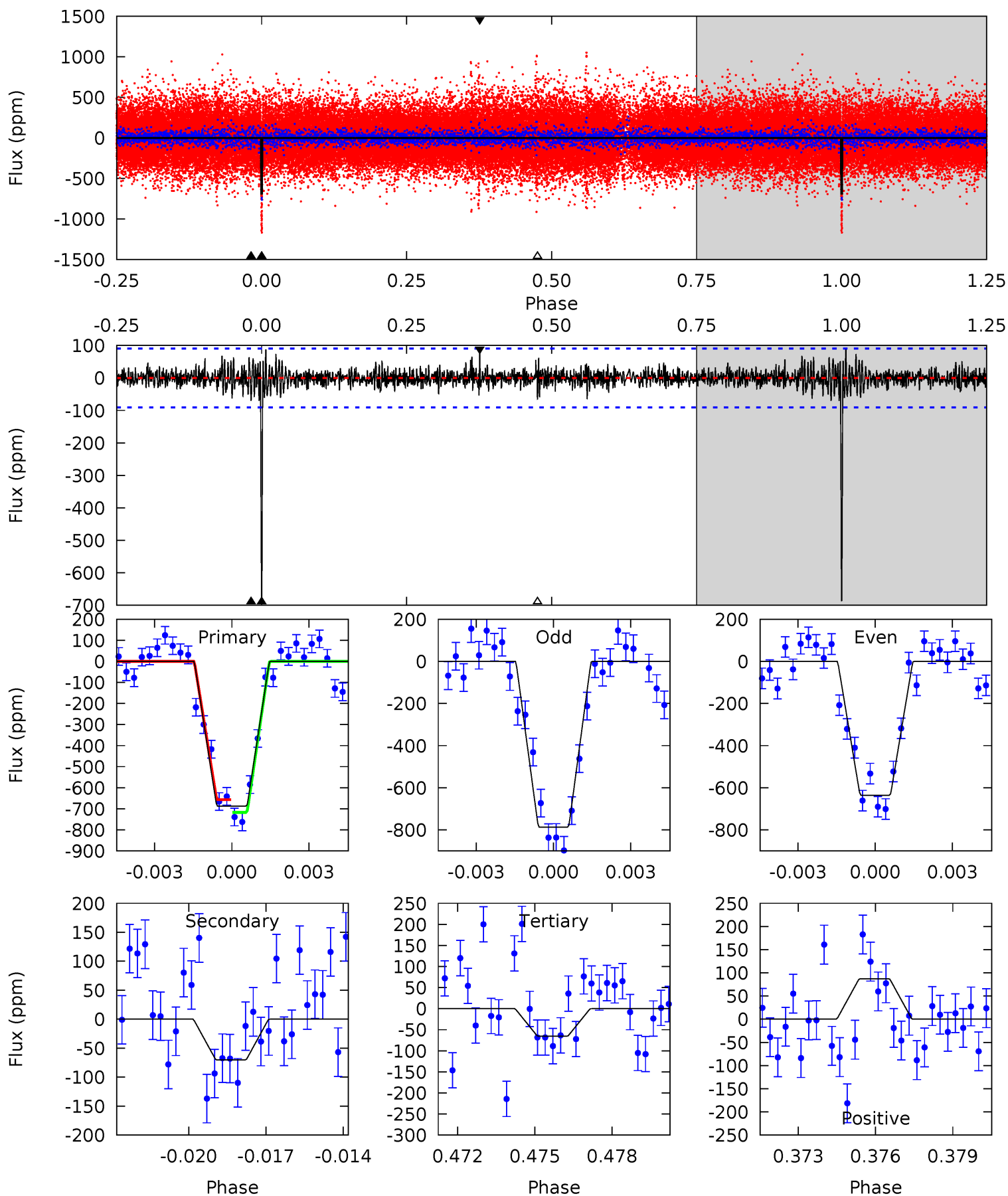
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.0	19.3	17.1	15.0	5.24	2.94	4.66	6.91	9.03	2.18	4.30	5.01	1.15	0.44	3.34



Alt Model-Shift Uniqueness Test

009466573-01, $P = 375.854903$ Days, $E = 114.034726$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.9	4.08	3.80	5.07	5.26	2.99	1.04	36.2	34.9	0.28	-0.99	4.19	1.06	0.11	1.76



Stellar Parameters For KIC 009466573

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5305^{+185}_{-148}	$3.838^{+0.675}_{-0.225}$	$-0.020^{+0.300}_{-0.250}$	$2.091^{+0.817}_{-1.225}$	$1.099^{+0.188}_{-0.251}$	$0.169^{+1.970}_{-0.101}$
	+3%/-3%	+18%/-6%	+1500%/-1250%	+39%/-59%	+17%/-23%	+1164%/-60%
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 009466573-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-379 ± 20	$9.60^{+9.12}_{-6.41}$	452^{+52}_{-68}	3753^{+1881}_{-640}	2403^{+19815}_{-1742}
Alt.	-70 ± 17	$7.81^{+8.63}_{-5.13}$	454^{+51}_{-78}	3092^{+1208}_{-512}	687^{+5191}_{-539}

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

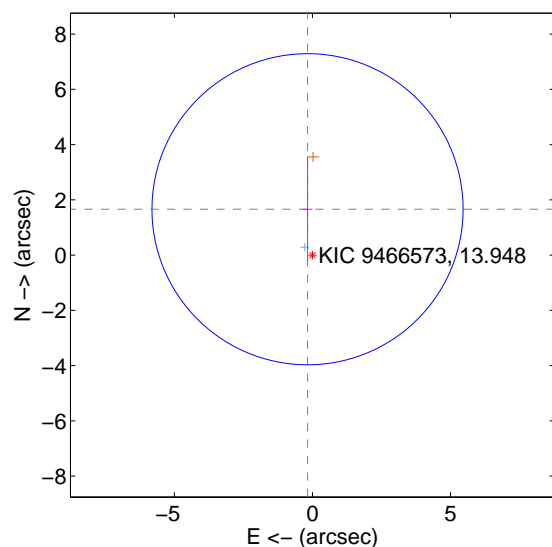
Supplemental centroid analysis for 009466573-01. Kepler magnitude: 13.95. Transit SNR 8.77

There are 1 quarters with good PRF difference image offsets

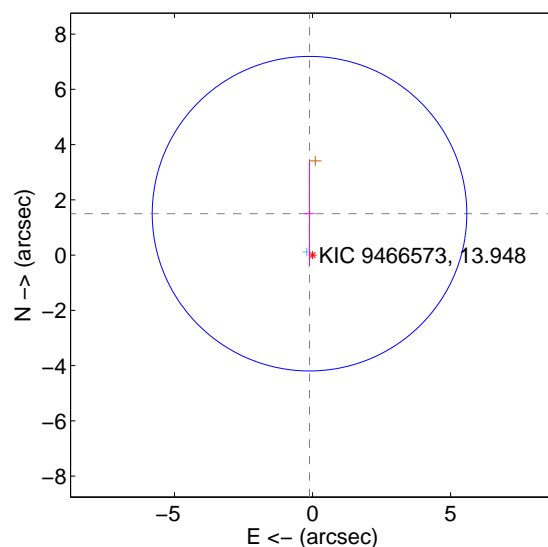
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.670 ± 1.877	0.89	0.178 ± 0.176	1.660 ± 1.888
PRF-fit source offset from KIC position	1.503 ± 1.898	0.79	0.109 ± 0.184	1.499 ± 1.903
photometric centroid source offset	0.28 ± 0.89	0.31	0.19 ± 0.73	-0.20 ± 1.01

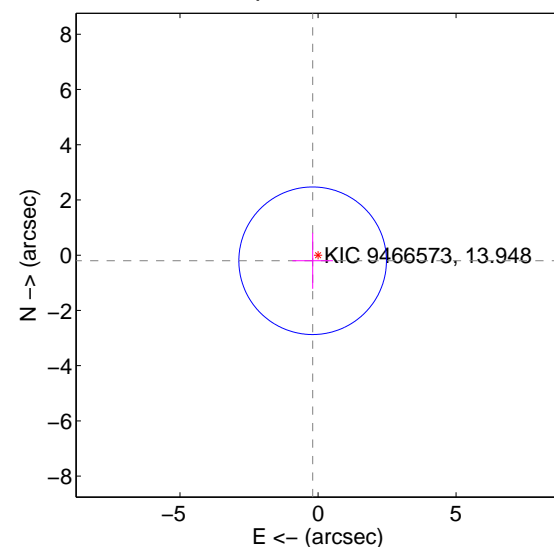
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

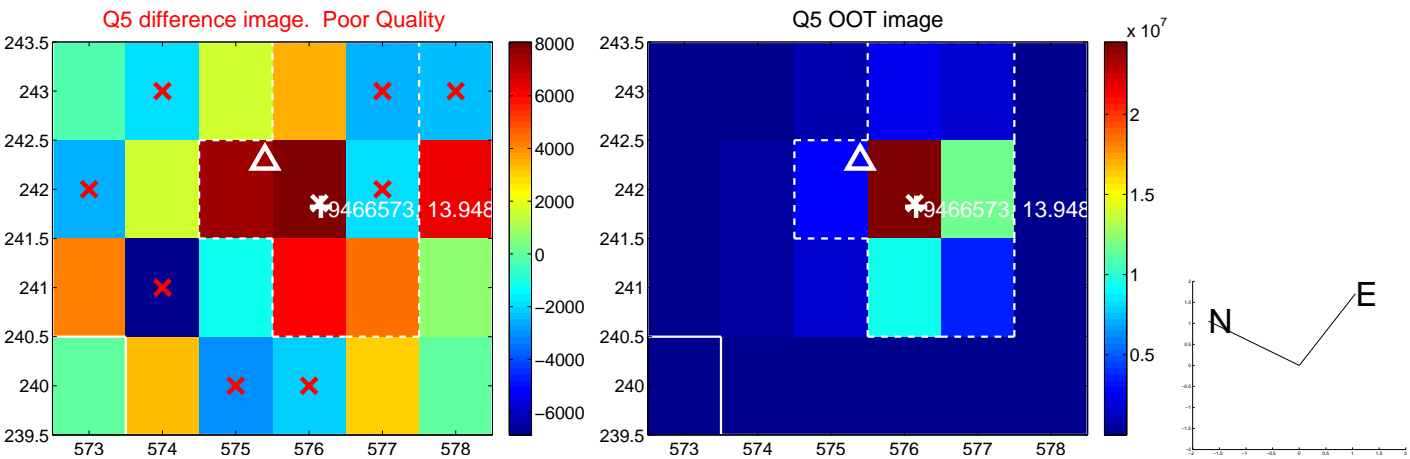


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

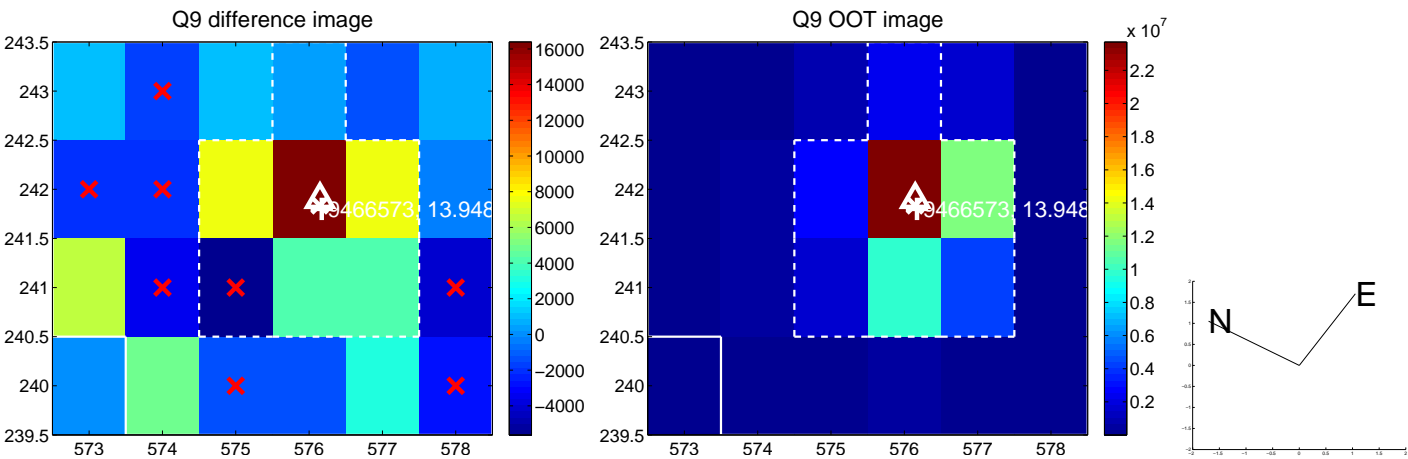
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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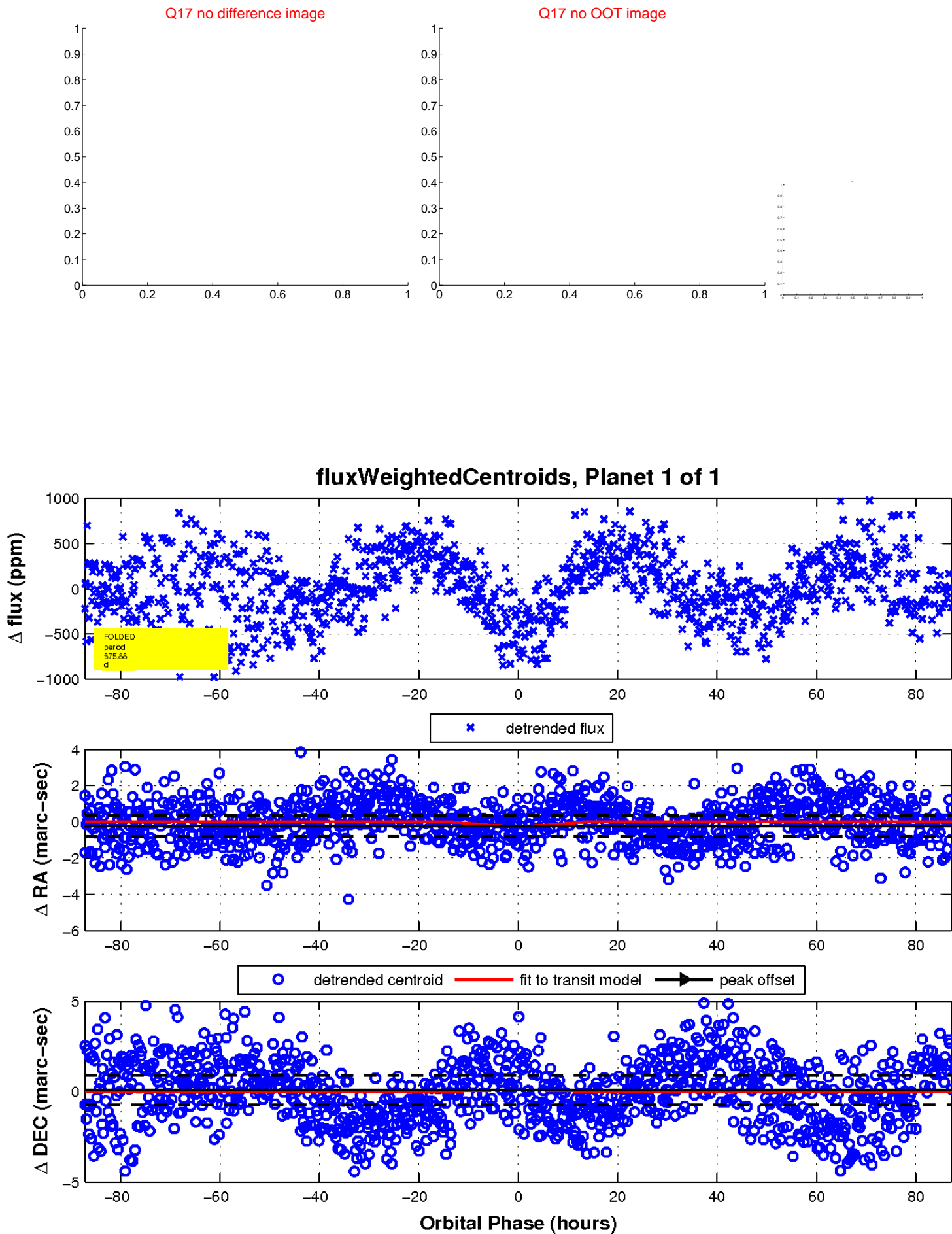
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UKIRT Image

Declination

