

KIC 009908426

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})
009908426-01	OBS	No	260.922961	333.687515	608.7	10.011	8.1	5.2	0.86	5764	2.39	1.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009908426-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_ALT—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.

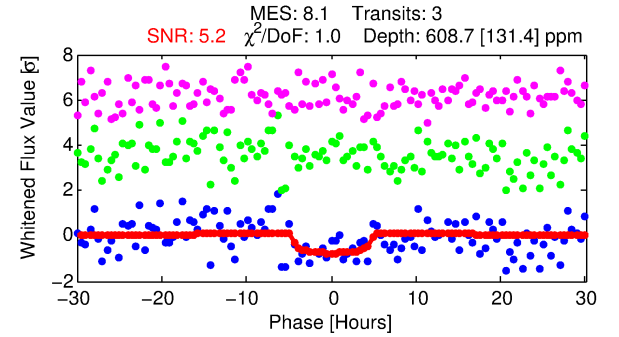
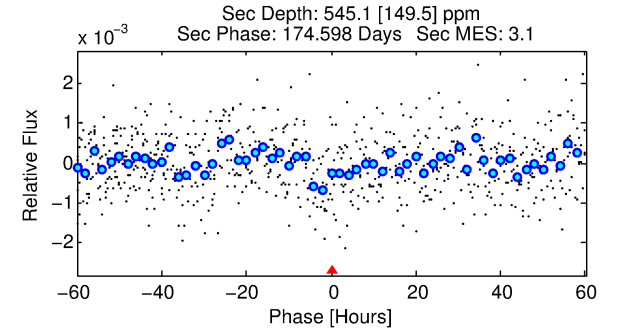
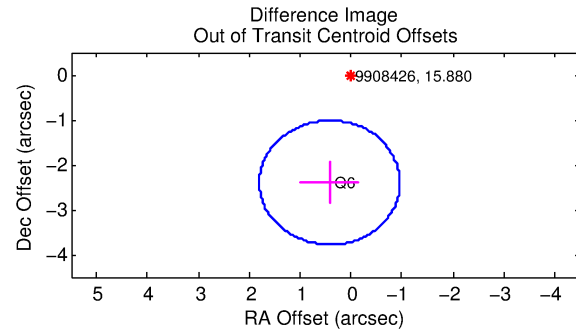
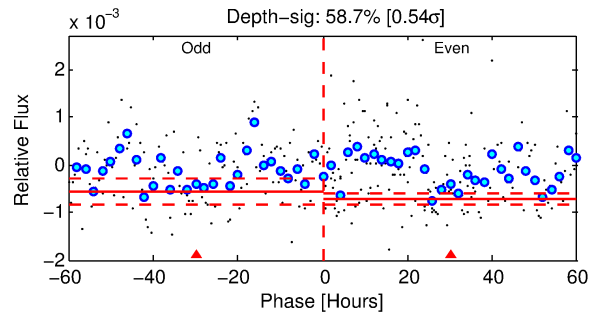
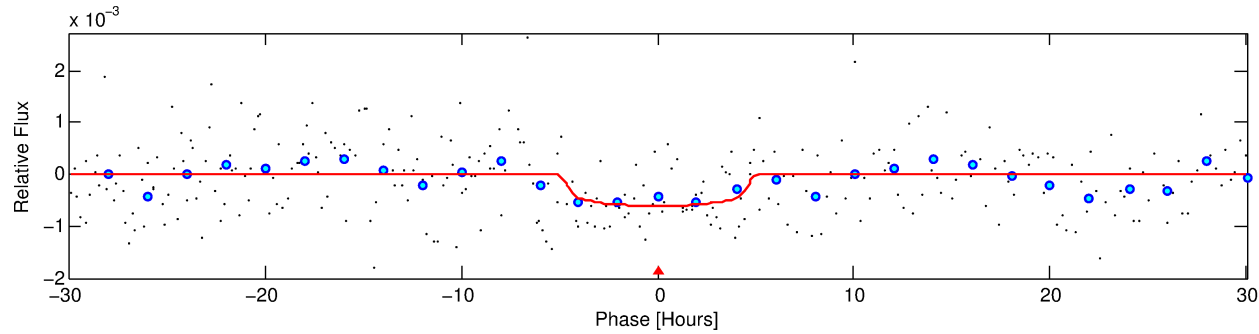
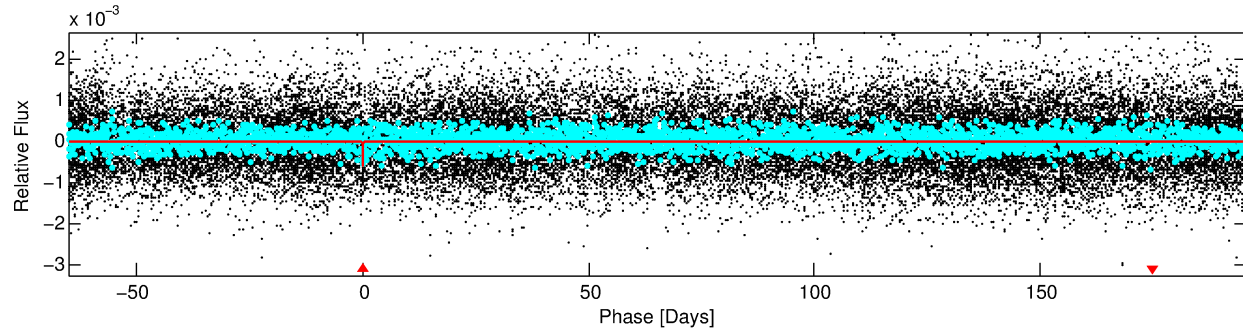
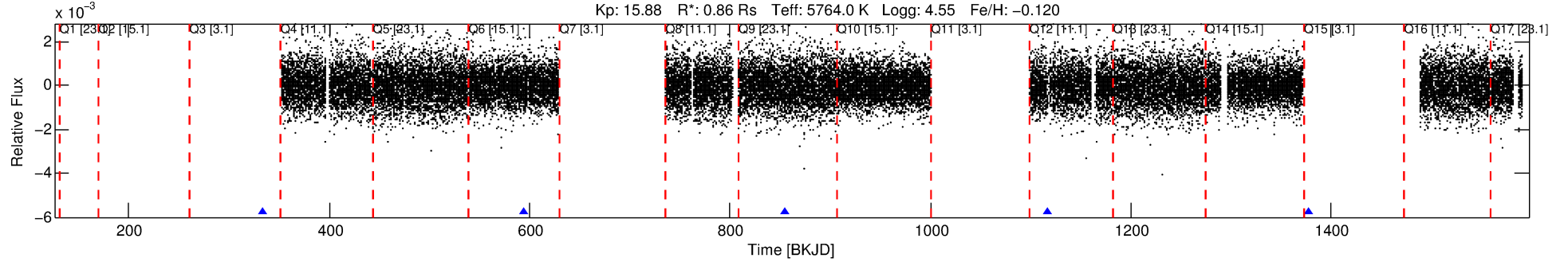
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009908426-01

No Significant Match Found

DV One-Page Summary

KIC: 9908426 Candidate: 1 of 1 Period: 260.923 d



DV Fit Results:

Period = 260.92296 [0.02536] d
Epoch = 333.6875 [0.0475] BKJD
Rp/R* = 0.0254 [0.0123]
a/R* = 122.10 [258.50]
b = 0.82 [0.85]
Seff = 1.19 [0.41]
Teq = 266 [23] K
Rp = 2.39 [1.31] Re
a = 0.7883 [0.1702] AU
Ag = 32661.68 [34524.39] [0.95 σ]
Teffp = 5530 [1407] K [3.74 σ]

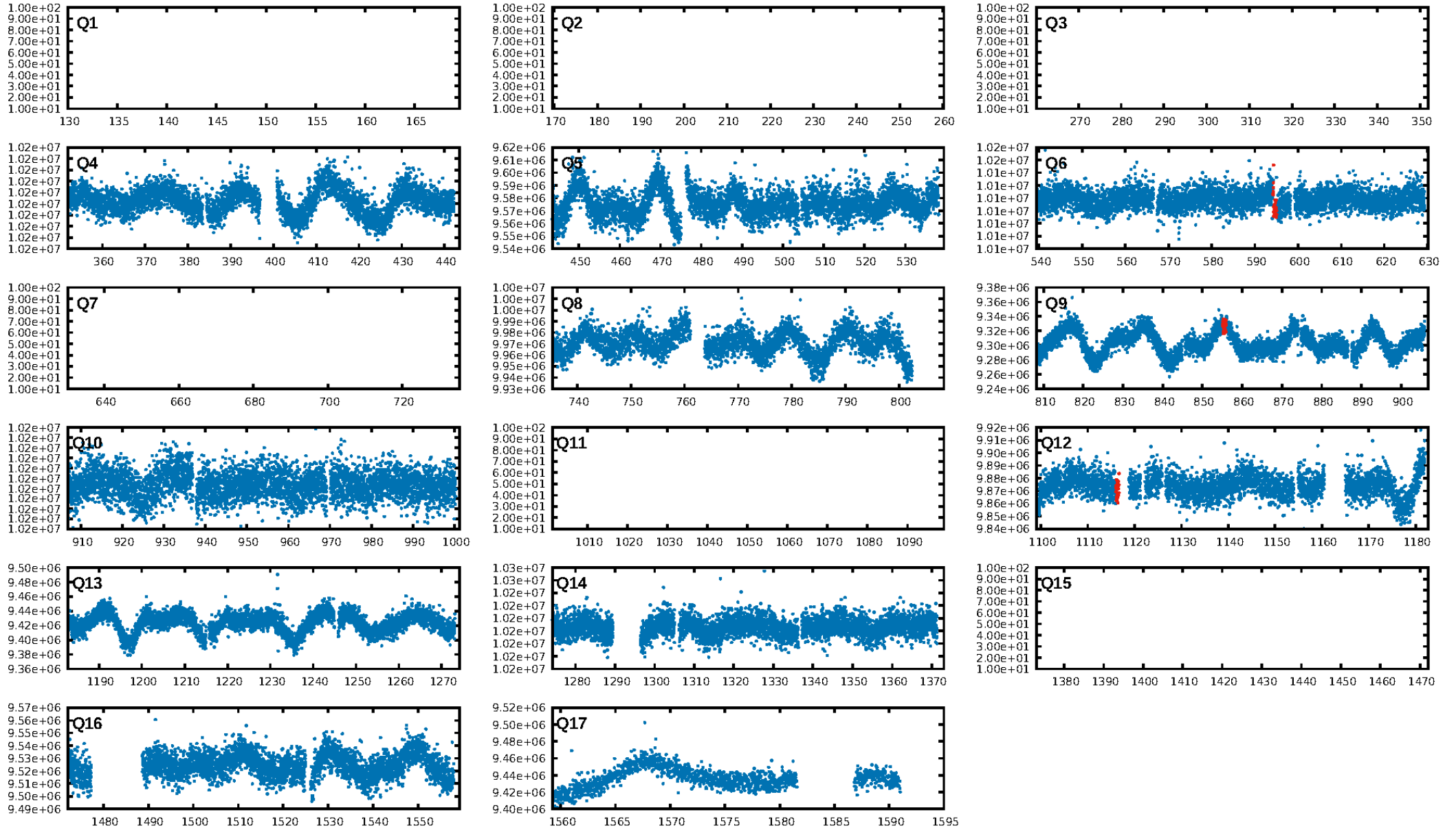
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 56.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.72e-15
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.242
Centroid-sig: 0.8%
Centroid-so: 5.186 arcsec [2.11 σ]
OotOffset-rm: 2.438 arcsec [5.29 σ]
KicOffset-rm: 2.298 arcsec [4.88 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

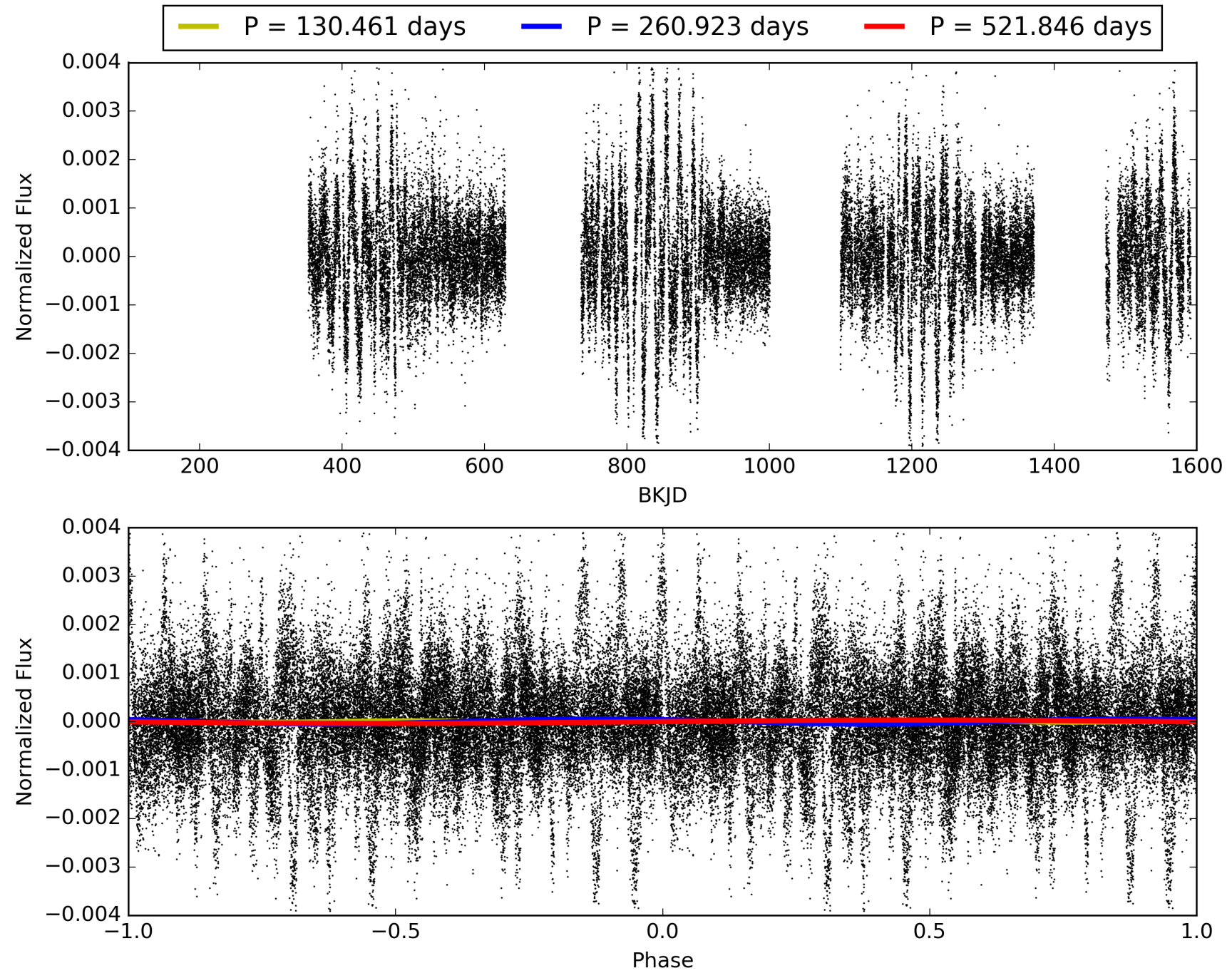
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:01:43 Z

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

TCE 009908426-01, PDC Light Curves

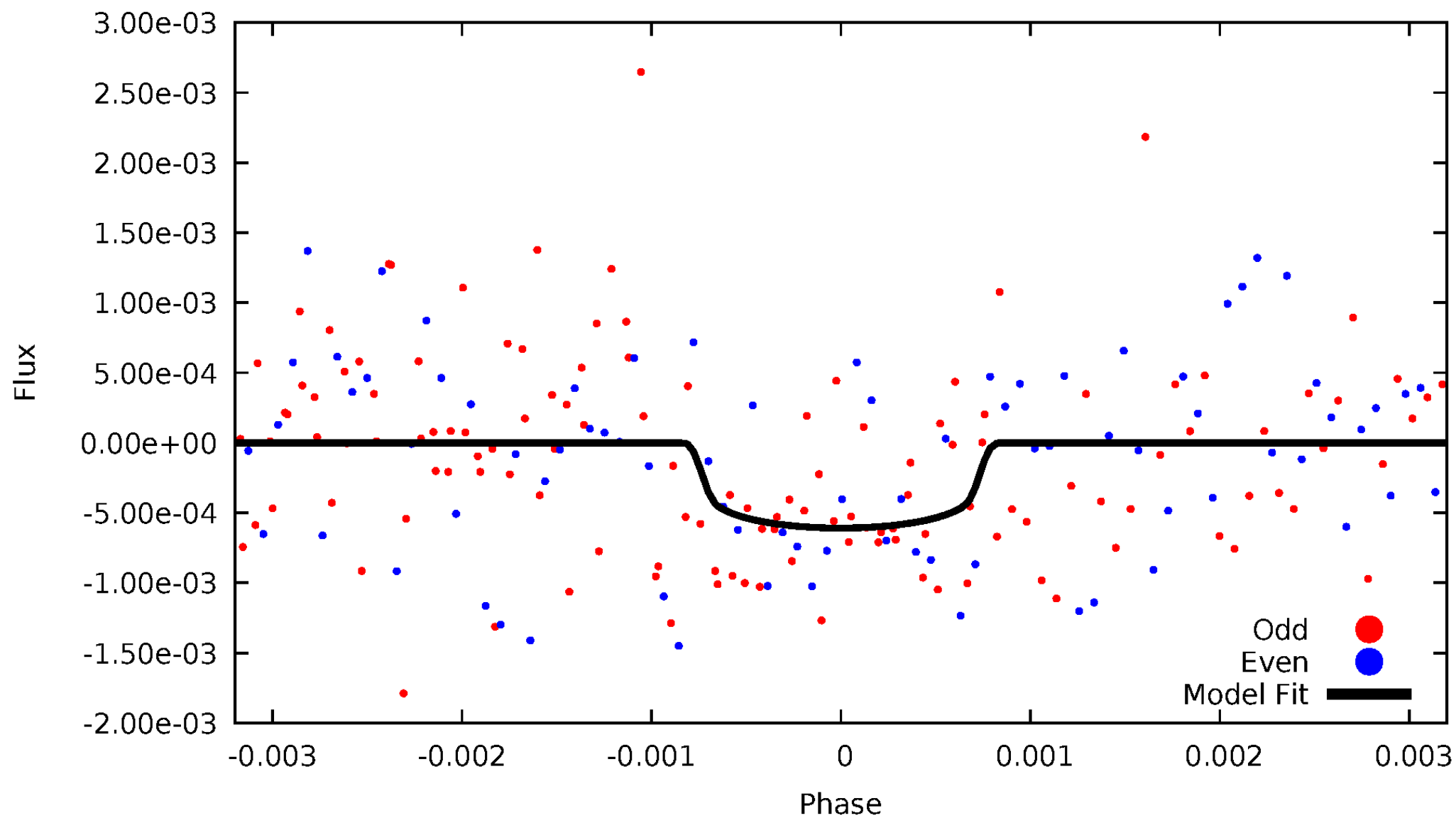


TCE 009908426-01



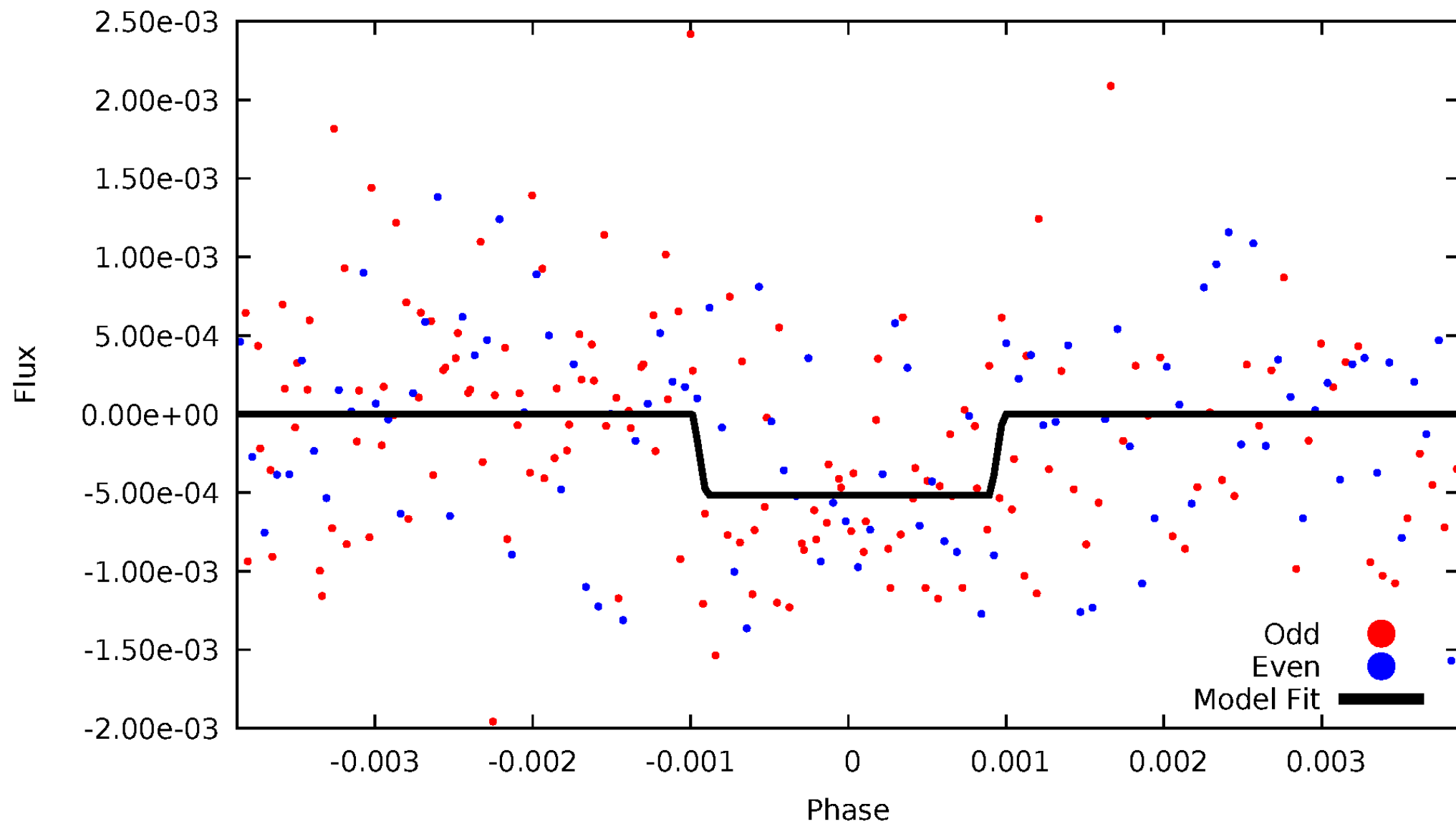
DV Odd/Even

TCE 009908426-01



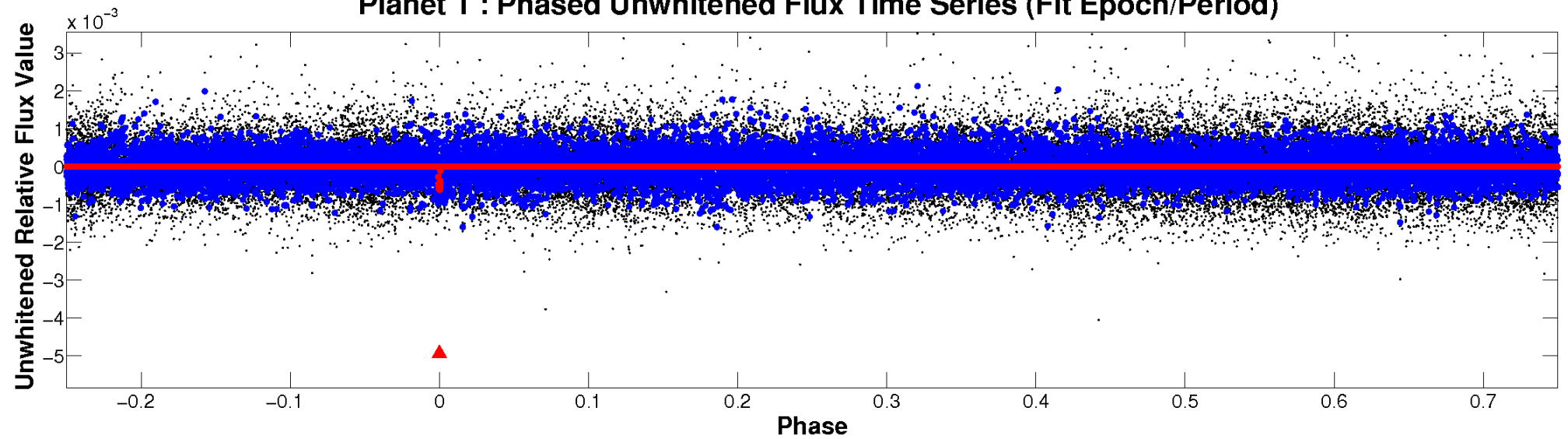
ALT Odd/Even

TCE 009908426-01

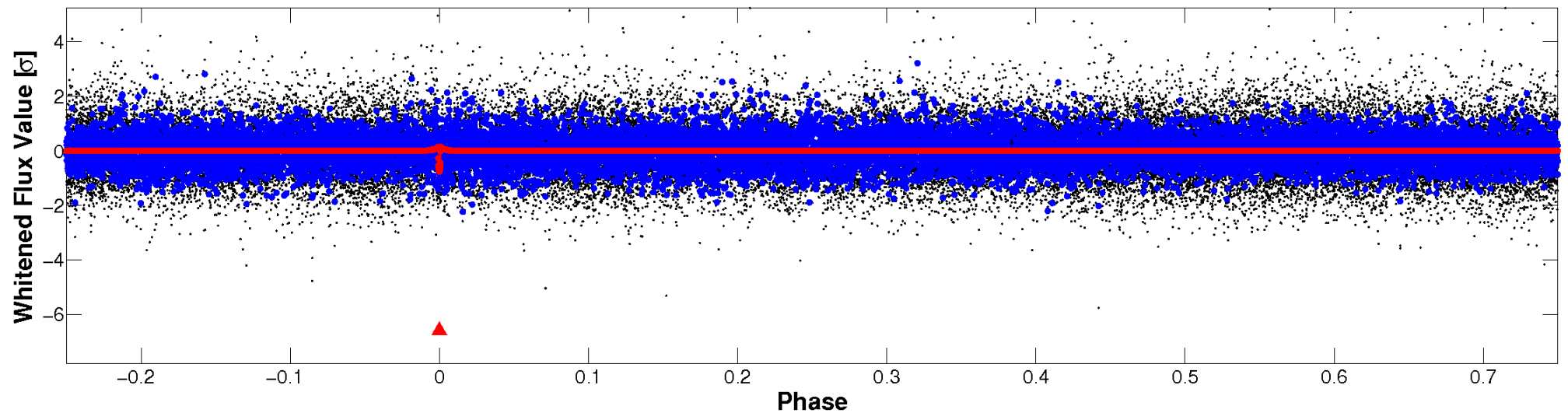


Non-Whitened Vs. Whitened Light Curve

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

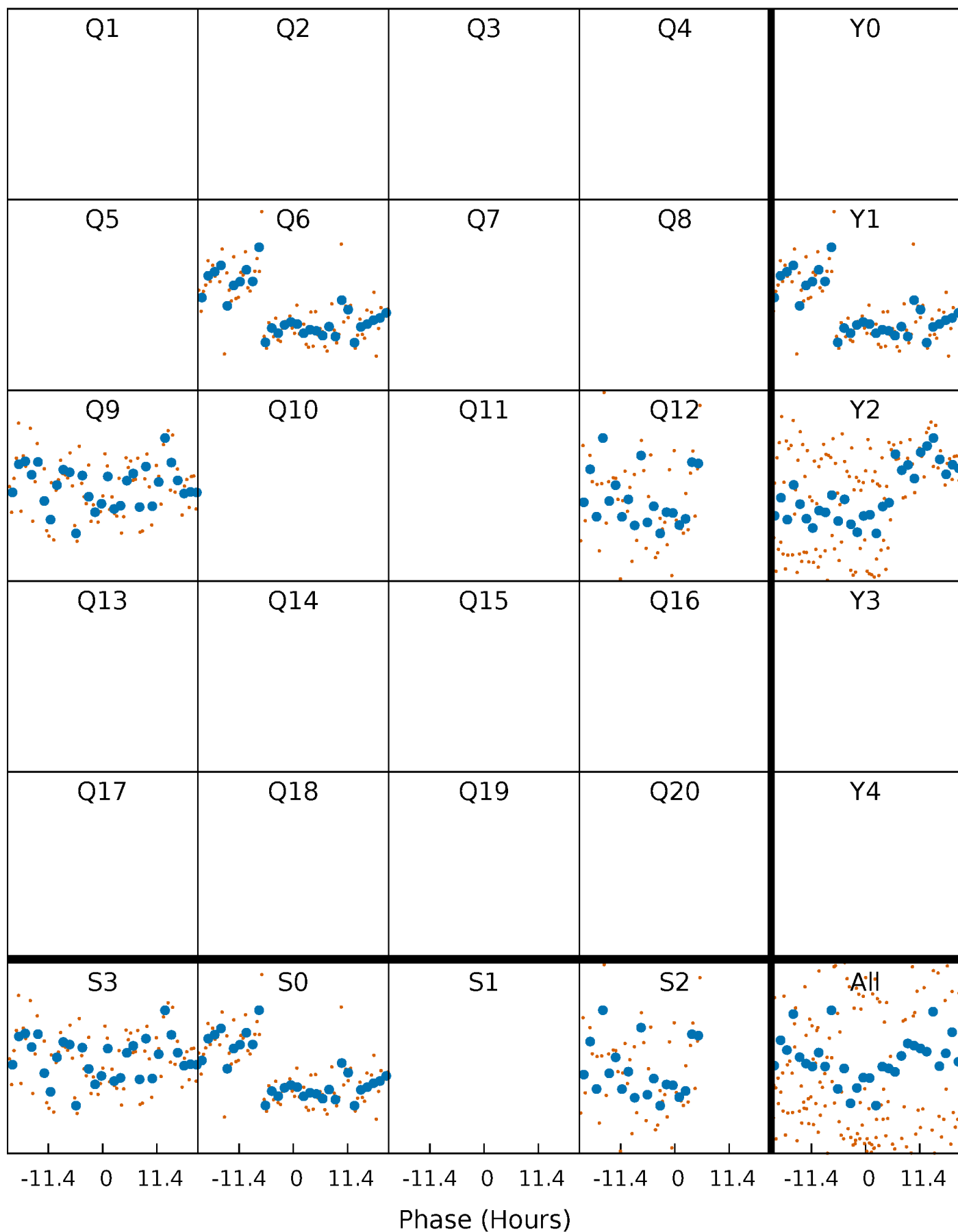


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



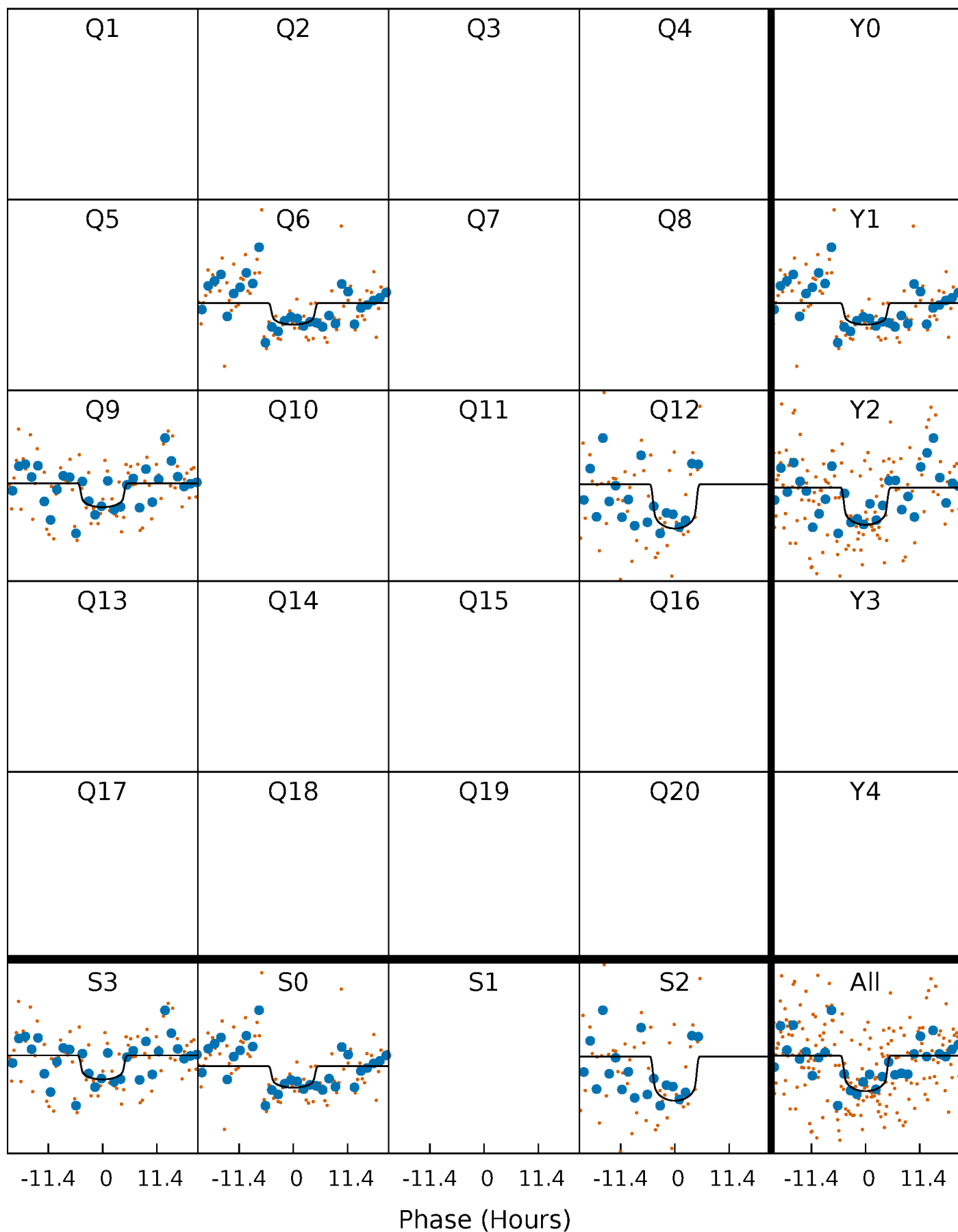
PDC Quarter-Phased Transit Curves

TCE 009908426-01 P=260.922961 Days $T_0=333.687515$ (BKJD)



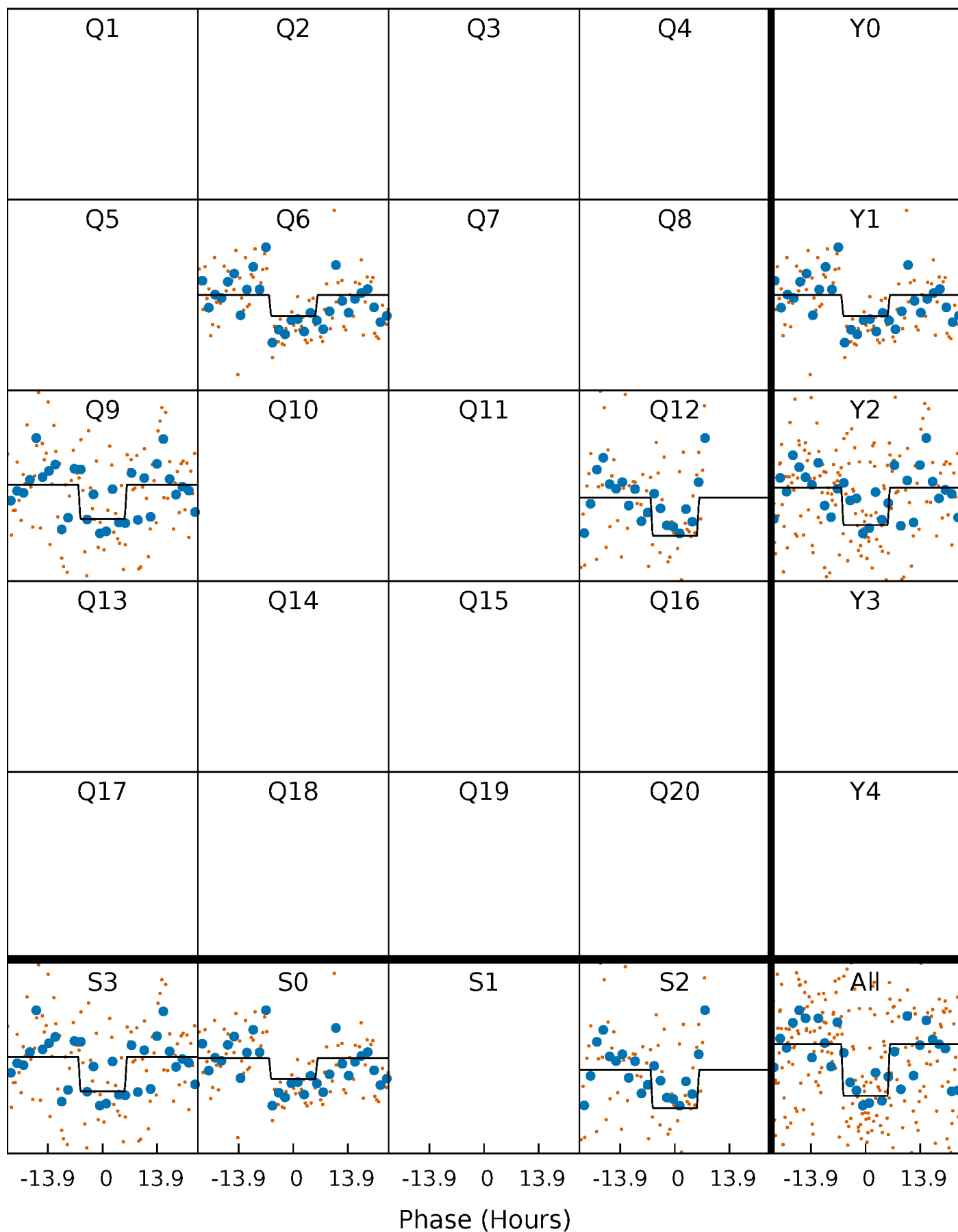
DV Quarter-Phased Transit Curves

TCE 009908426-01 P=260.922961 Days $T_0=333.687515$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

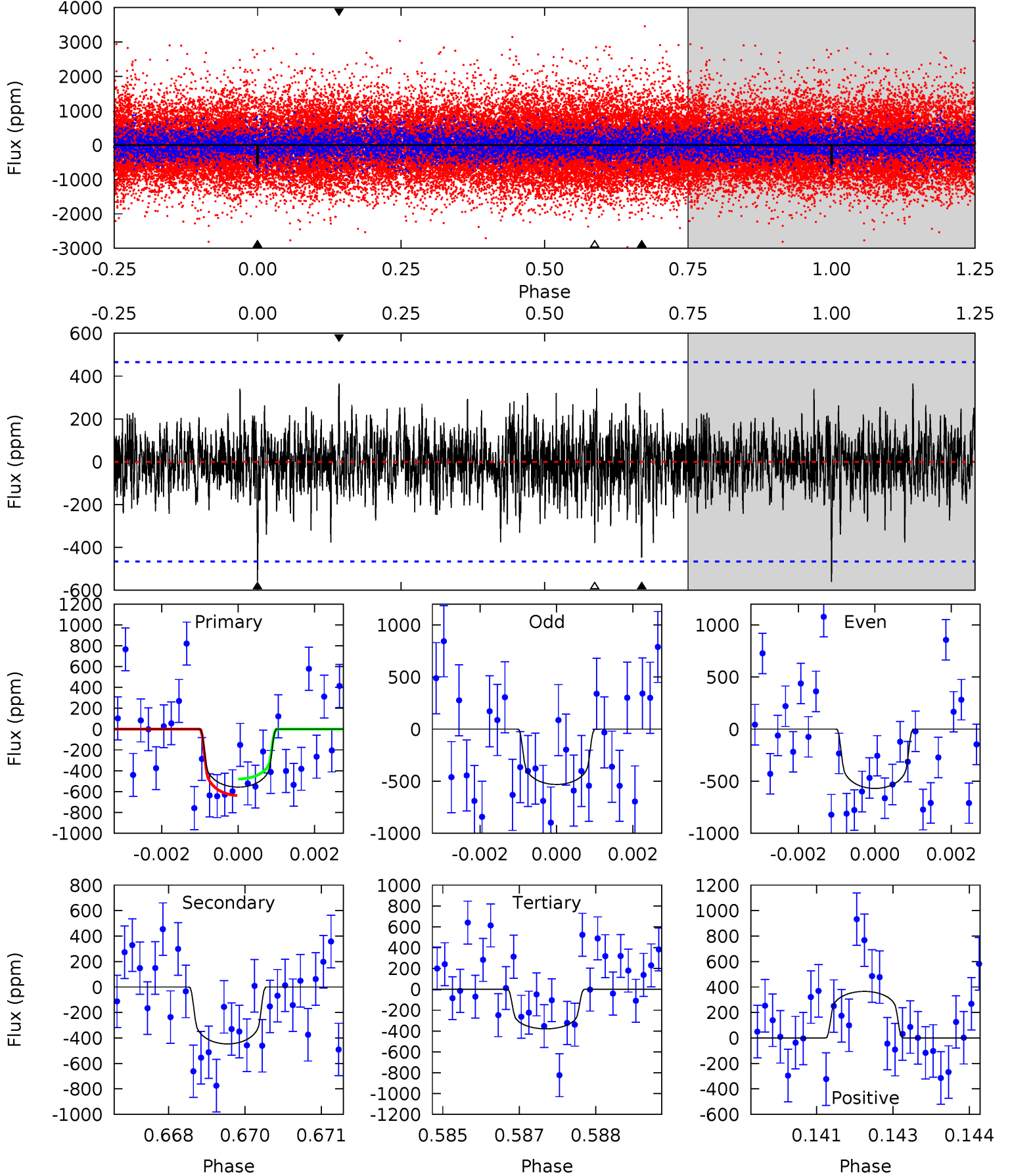
TCE 009908426-01 P=260.882072 Days $T_0=333.713889$ (BKJD)



DV Model-Shift Uniqueness Test

009908426-01, P = 260.922961 Days, E = 333.687515 Days

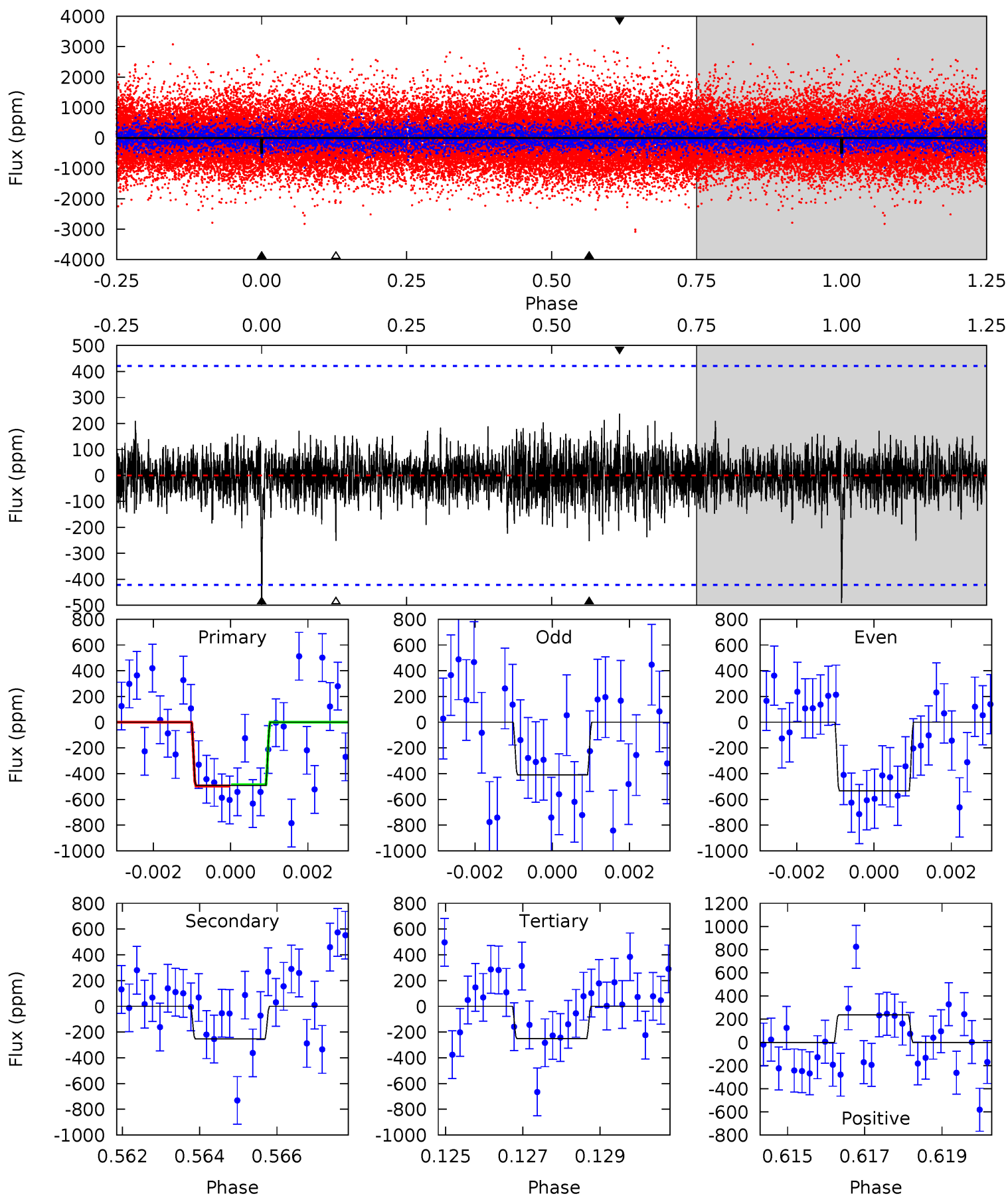
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.41	5.14	4.37	4.21	5.36	3.15	1.18	2.05	2.20	0.78	0.93	0.21	1.05	0.40	0.91



Alt Model-Shift Uniqueness Test

009908426-01, P = 260.882072 Days, E = 333.713889 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.21	3.20	3.18	3.01	5.33	3.10	0.79	3.03	3.20	0.02	0.19	0.73	1.18	0.33	0.06



Stellar Parameters For KIC 009908426

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5764^{+159}_{-199}	$4.548^{+0.044}_{-0.176}$	$-0.120^{+0.300}_{-0.300}$	$0.863^{+0.218}_{-0.078}$	$0.959^{+0.095}_{-0.116}$	$2.100^{+0.383}_{-1.030}$
	+3%/-3%	+1%/-4%	+250%/-250%	+25%/-9%	+10%/-12%	+18%/-49%
Source	KIC0	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 009908426-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-447 ± 87	$2.58^{+1.33}_{-1.26}$	378^{+24}_{-17}	5238^{+1962}_{-852}	23081^{+60089}_{-13512}
Alt.	-253 ± 79	$2.31^{+1.27}_{-1.21}$	378^{+25}_{-17}	4828^{+1942}_{-763}	15712^{+49864}_{-9267}

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 $A_{obs} \gg 1.0$

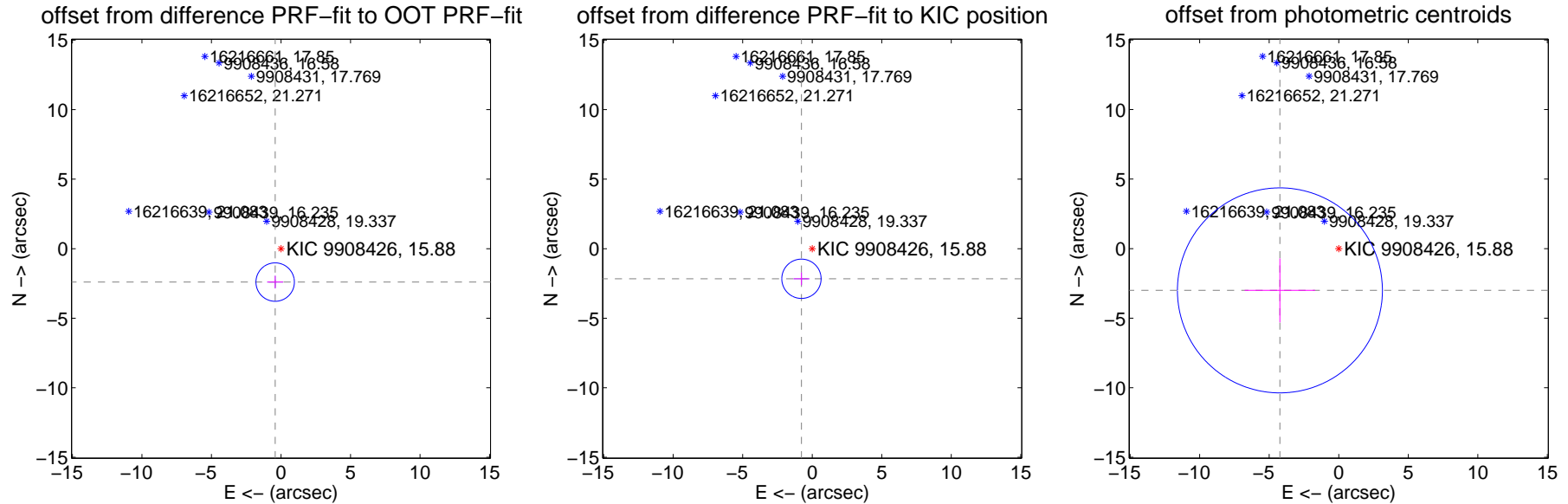
DV Centroid Data

Supplemental centroid analysis for 009908426-01. Kepler magnitude: 15.88. Transit SNR 5.20

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.43 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.438 \pm 0.461	5.29	0.419 \pm 0.570	-2.401 \pm 0.457
PRF-fit source offset from KIC position	2.298 \pm 0.471	4.88	0.774 \pm 0.570	-2.163 \pm 0.457
photometric centroid source offset	5.19 \pm 2.46	2.11	4.23 \pm 2.53	-3.00 \pm 2.30



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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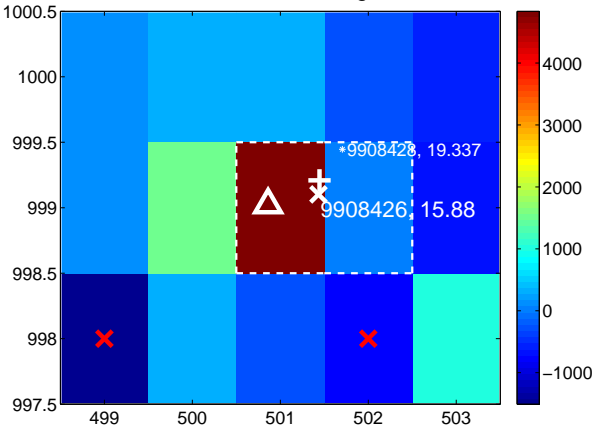
Q5 no difference image



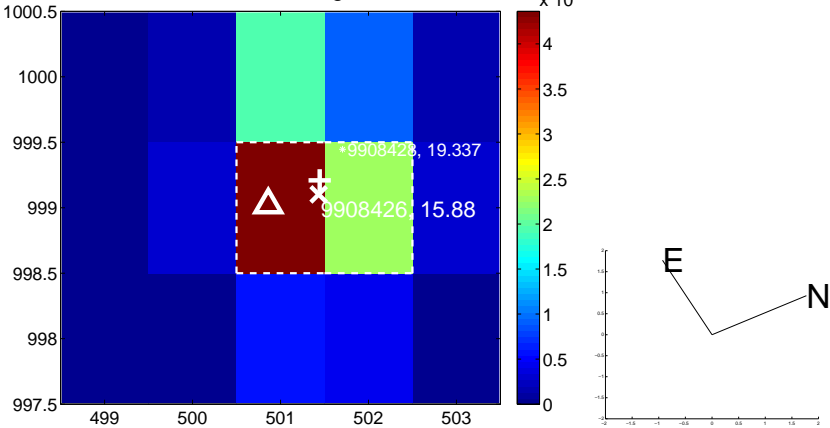
Q5 no OOT image



Q6 difference image



Q6 OOT image



Q7 no difference image



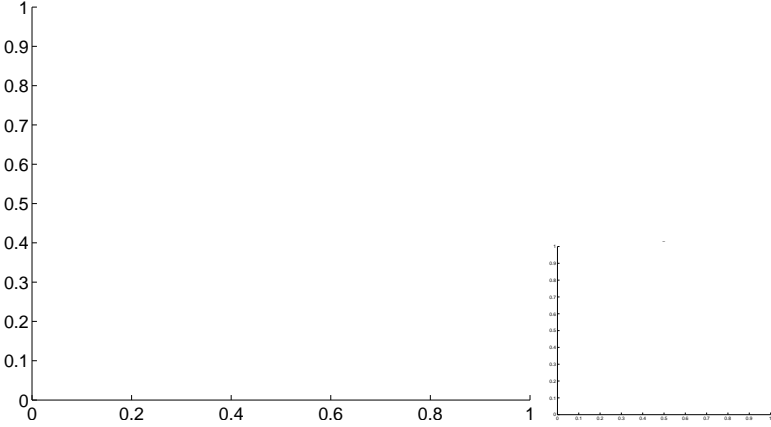
Q7 no OOT image



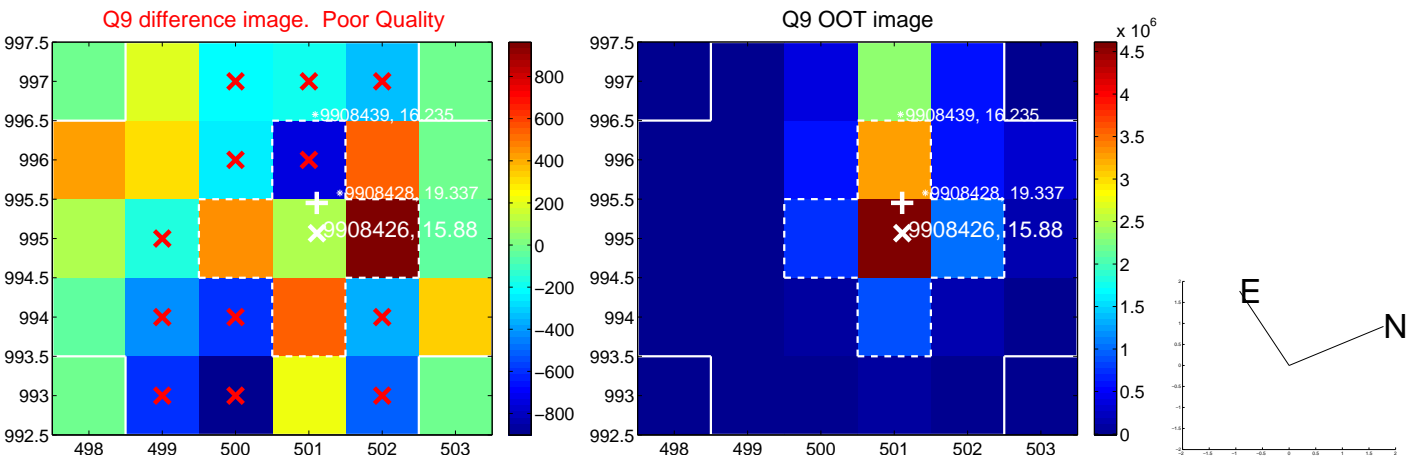
Q8 no difference image



Q8 no OOT image



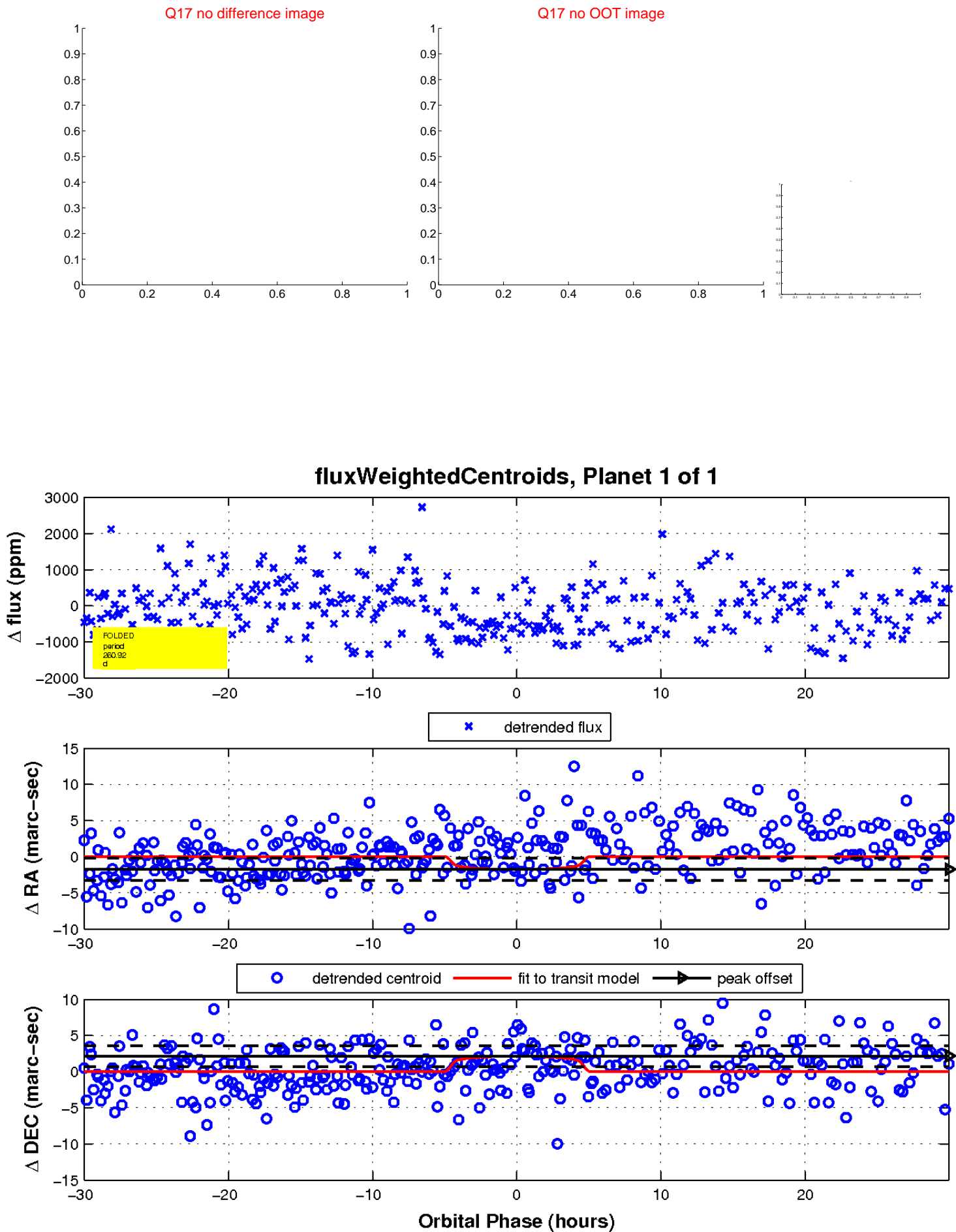
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

