

KIC 002975340

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})
002975340-01	OBS	No	329.942304	429.562830	871.0	22.625	10.7	9.7	0.78	4835	3.01	0.41

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002975340-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—ALL_TRANS_CHASES—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.

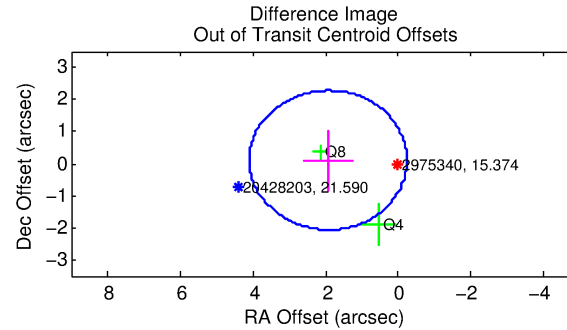
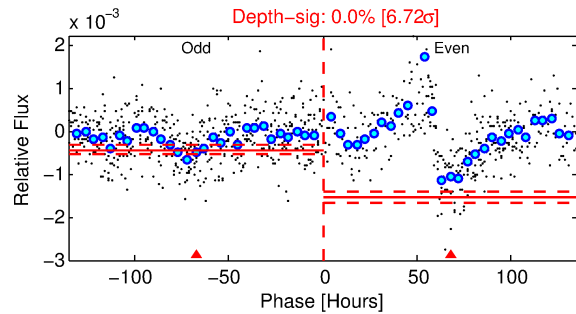
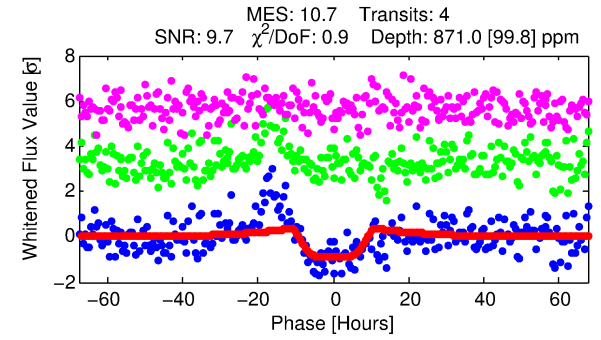
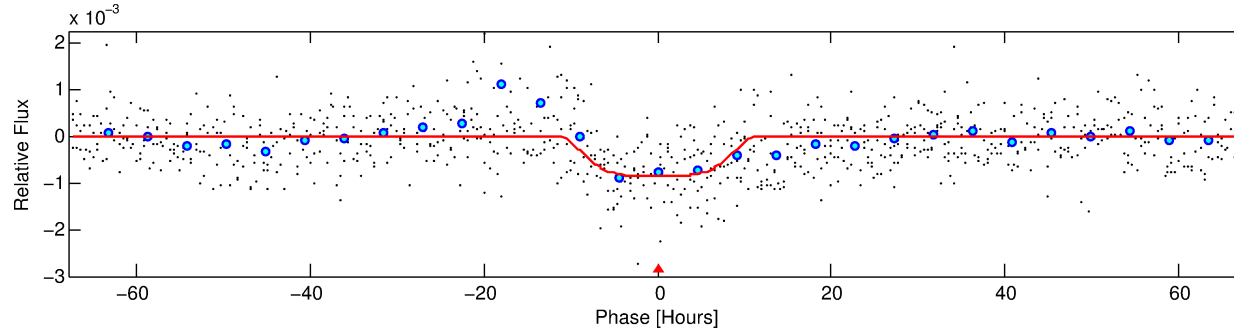
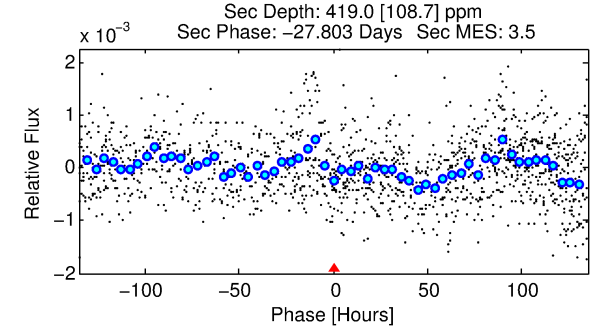
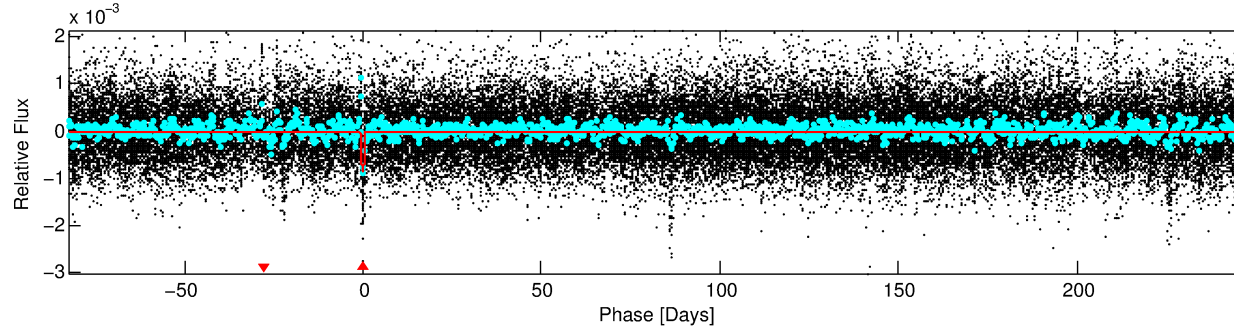
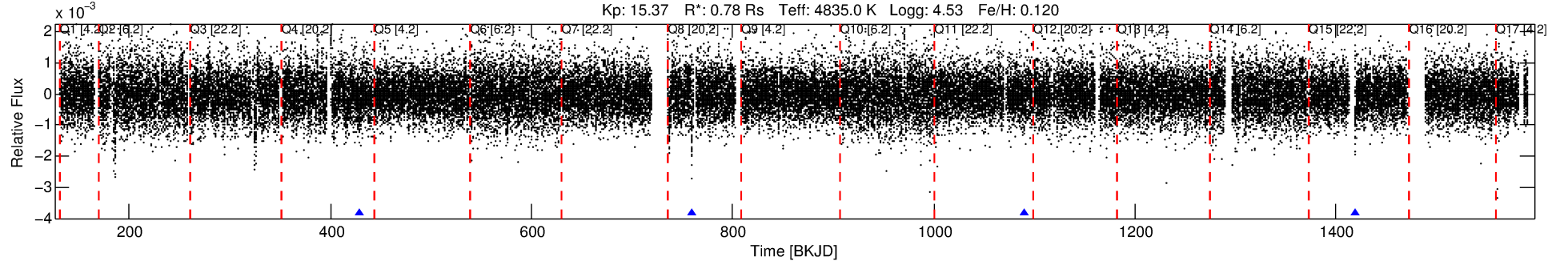
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002975340-01

No Significant Match Found

DV One-Page Summary

KIC: 2975340 Candidate: 1 of 1 Period: 329.942 d



DV Fit Results:

Period = 329.94230 [0.01875] d
Epoch = 429.5628 [0.0379] BKJD
Rp/R* = 0.0353 [0.0031]
a/R* = 48.11 [9.74]
b = 0.94 [0.03]
Seff = 0.41 [0.07]
Teq = 204 [9] K
Rp = 3.01 [0.41] Re
a = 0.8527 [0.0748] AU
Ag = 18446.53 [6252.59] [2.95σ]
Teffp = 3681 [308] K [11.27σ]

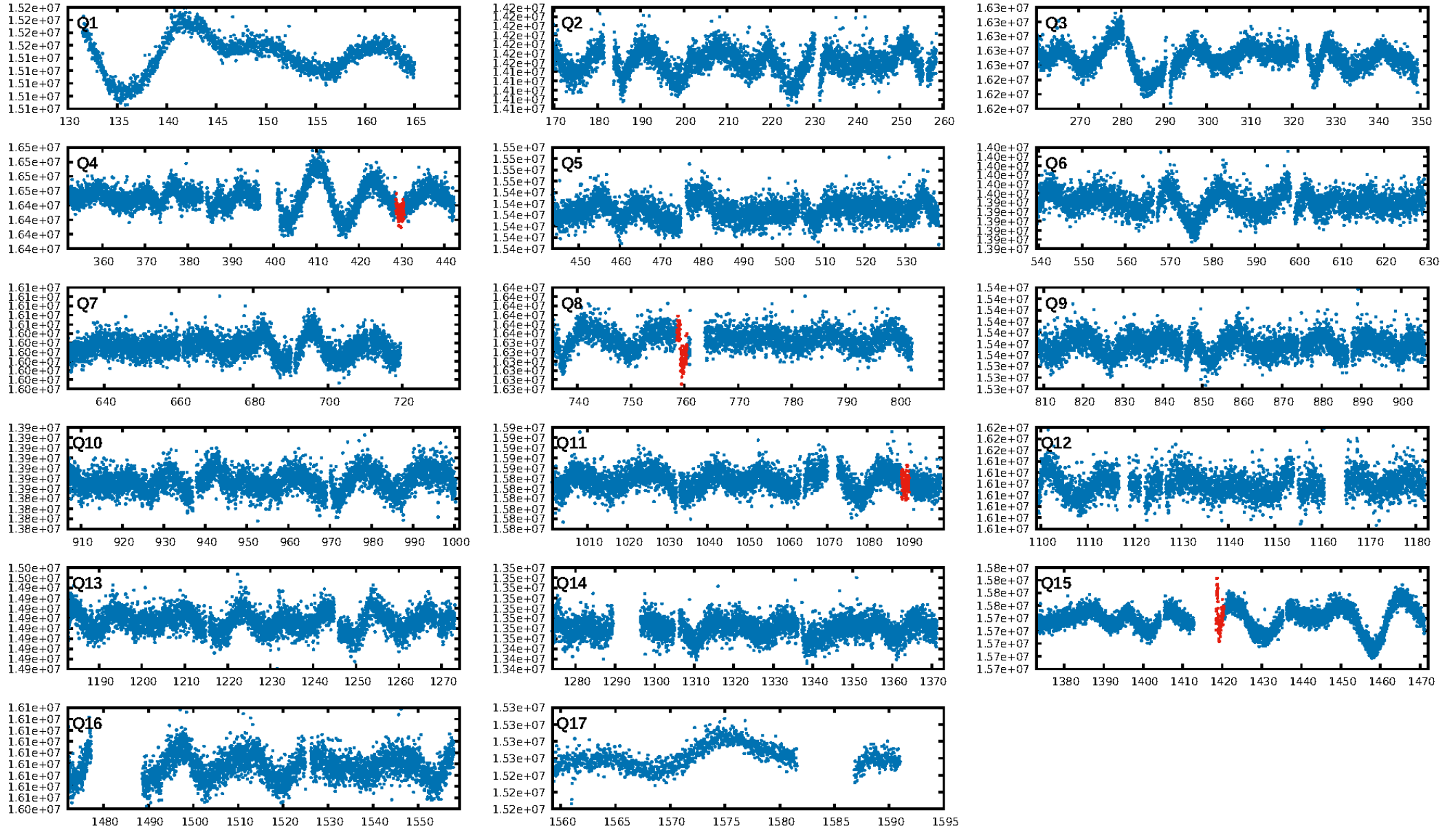
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 3.98e-19
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 2.811
Centroid-sig: 36.4%
Centroid-so: 1.340 arcsec [1.13σ]
OotOffset-rm: 1.932 arcsec [2.67σ]
KicOffset-rm: 1.868 arcsec [2.37σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

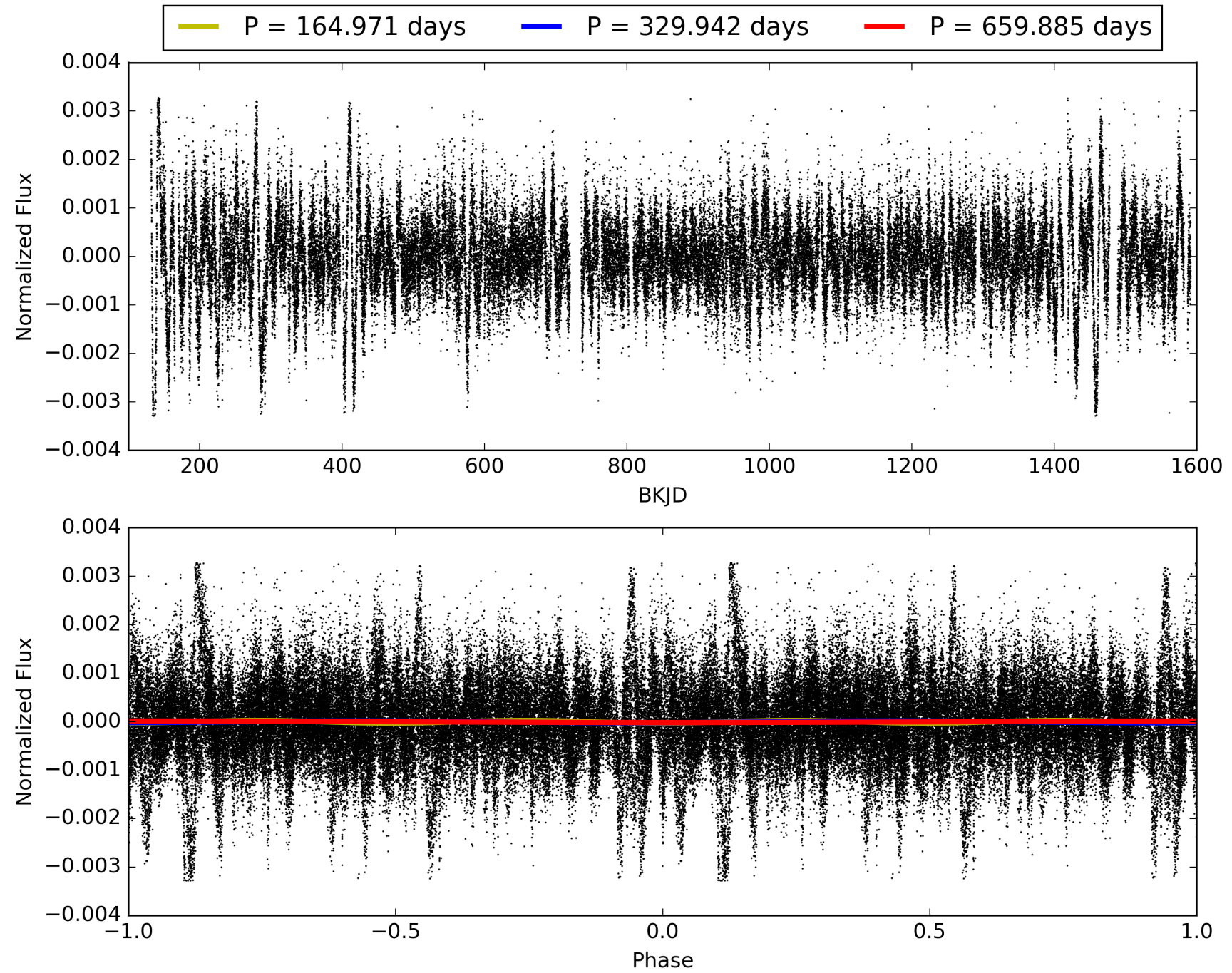
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:04:43 Z

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

TCE 002975340-01, PDC Light Curves

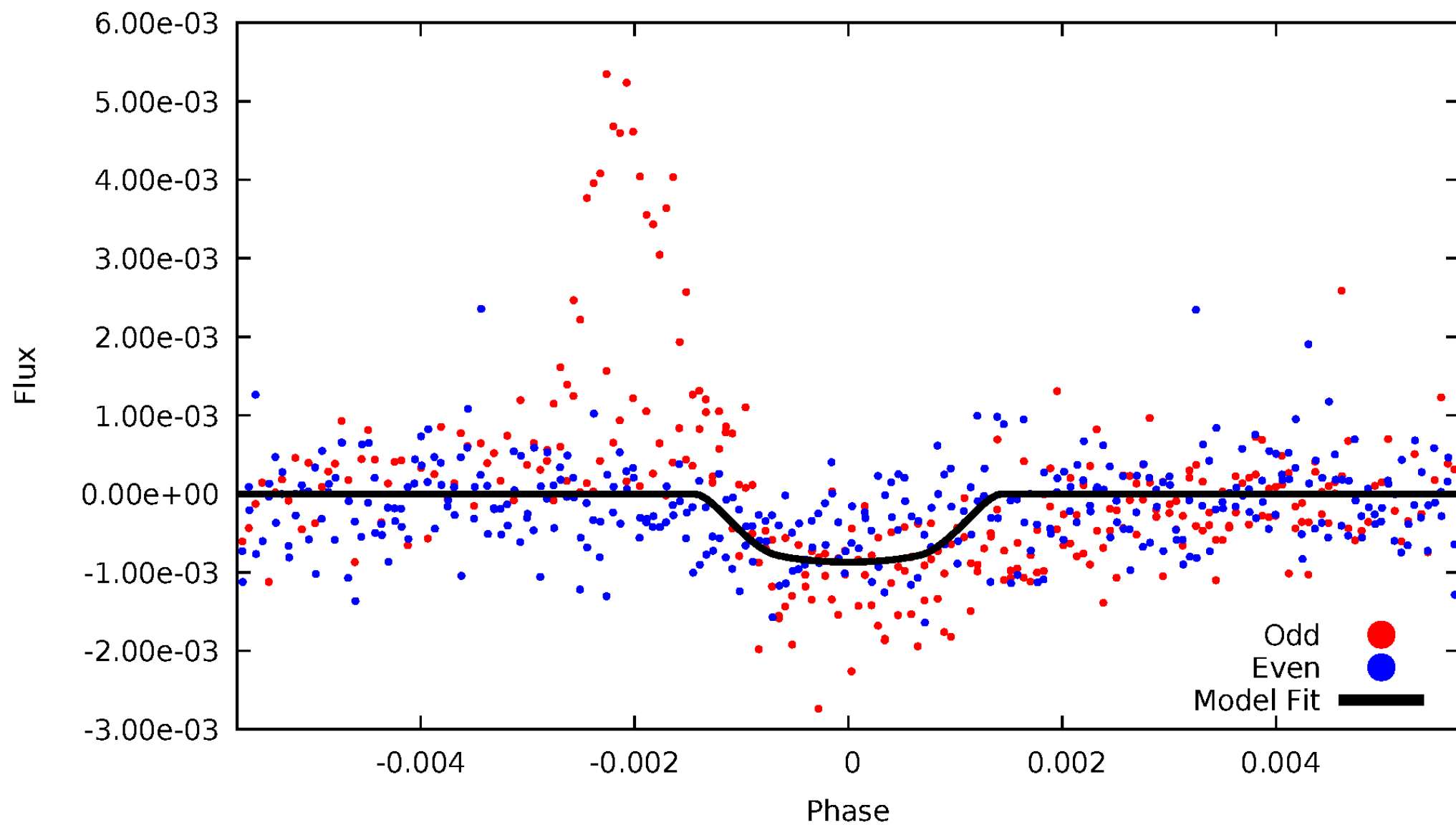


TCE 002975340-01



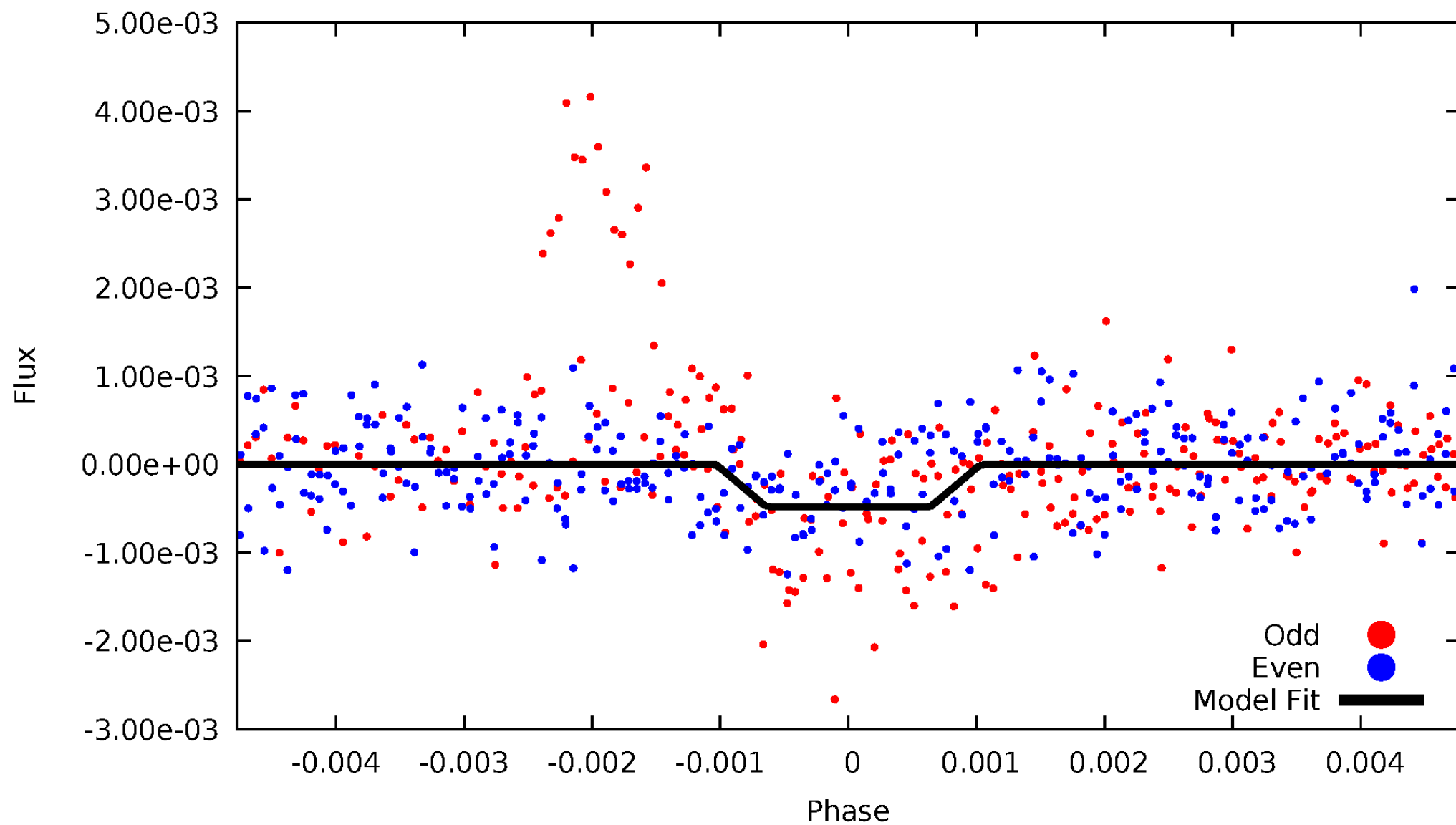
DV Odd/Even

TCE 002975340-01



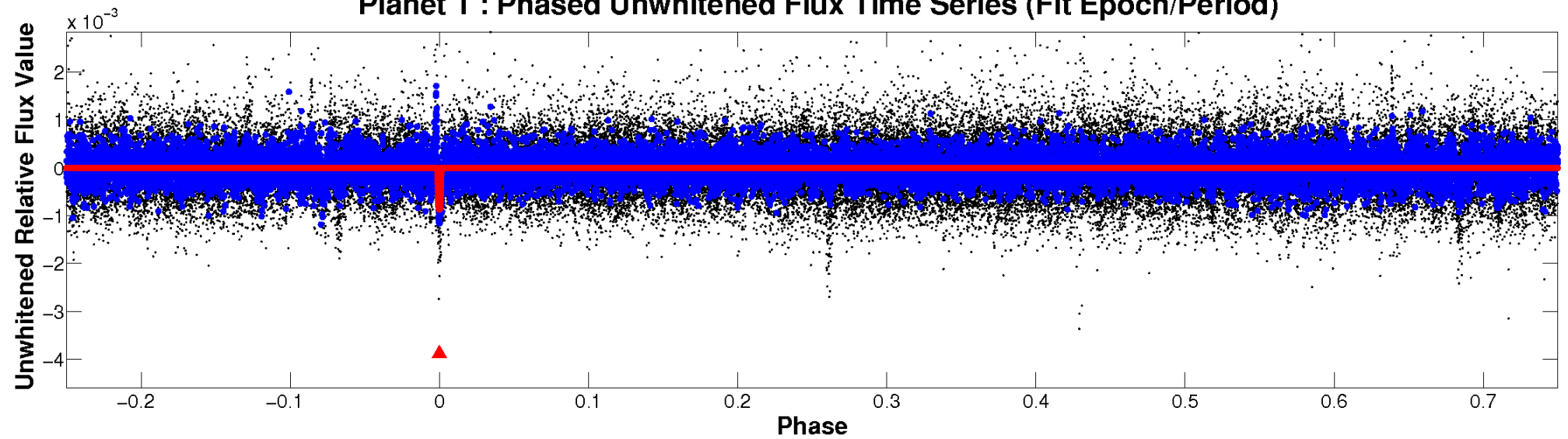
ALT Odd/Even

TCE 002975340-01

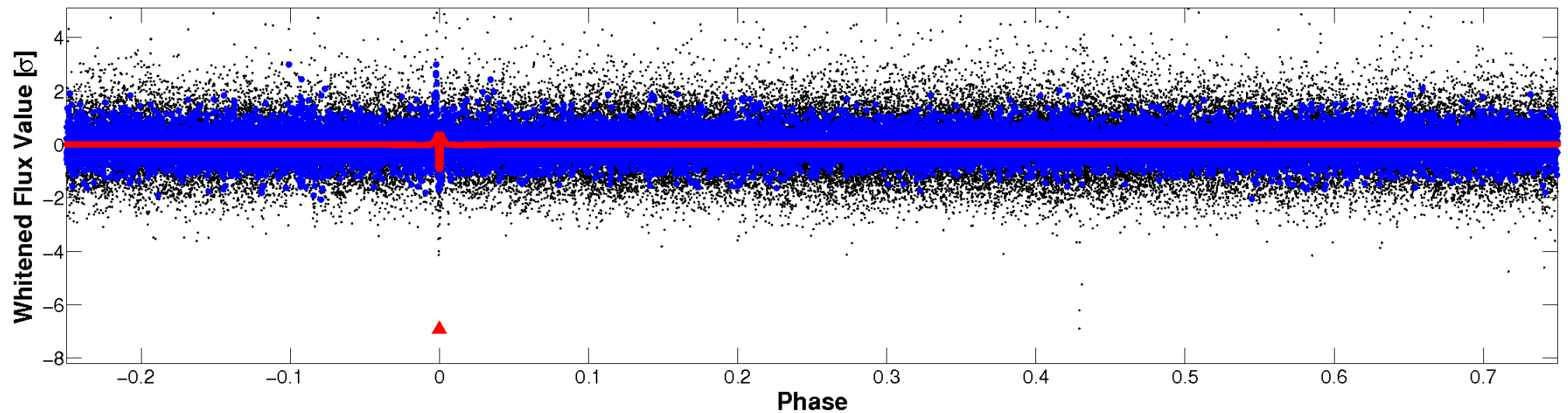


Non-Whitened Vs. Whitened Light Curve

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

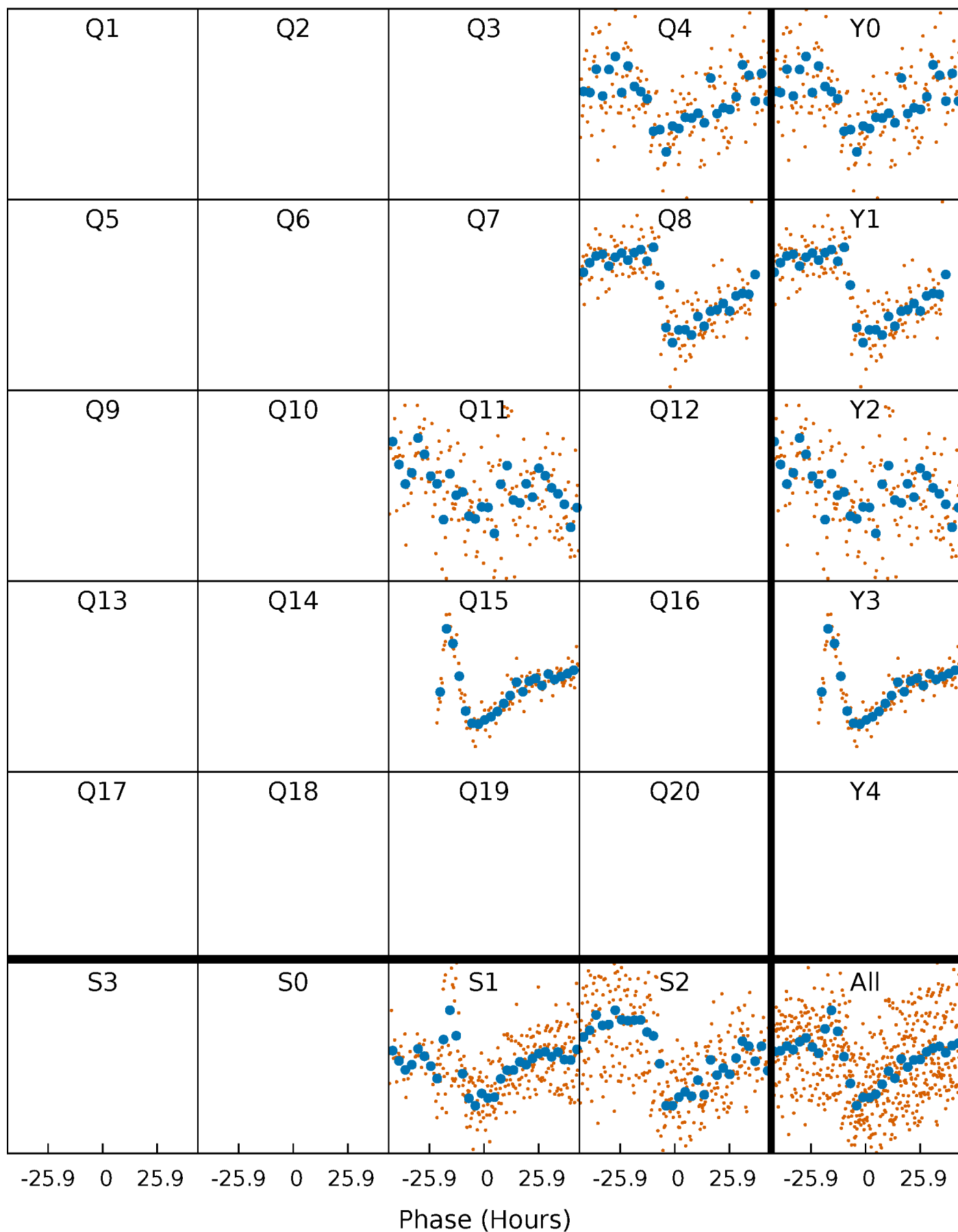


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 002975340-01 P=329.942304 Days $T_0=429.562830$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 002975340-01 P=329.942304 Days $T_0=429.562830$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

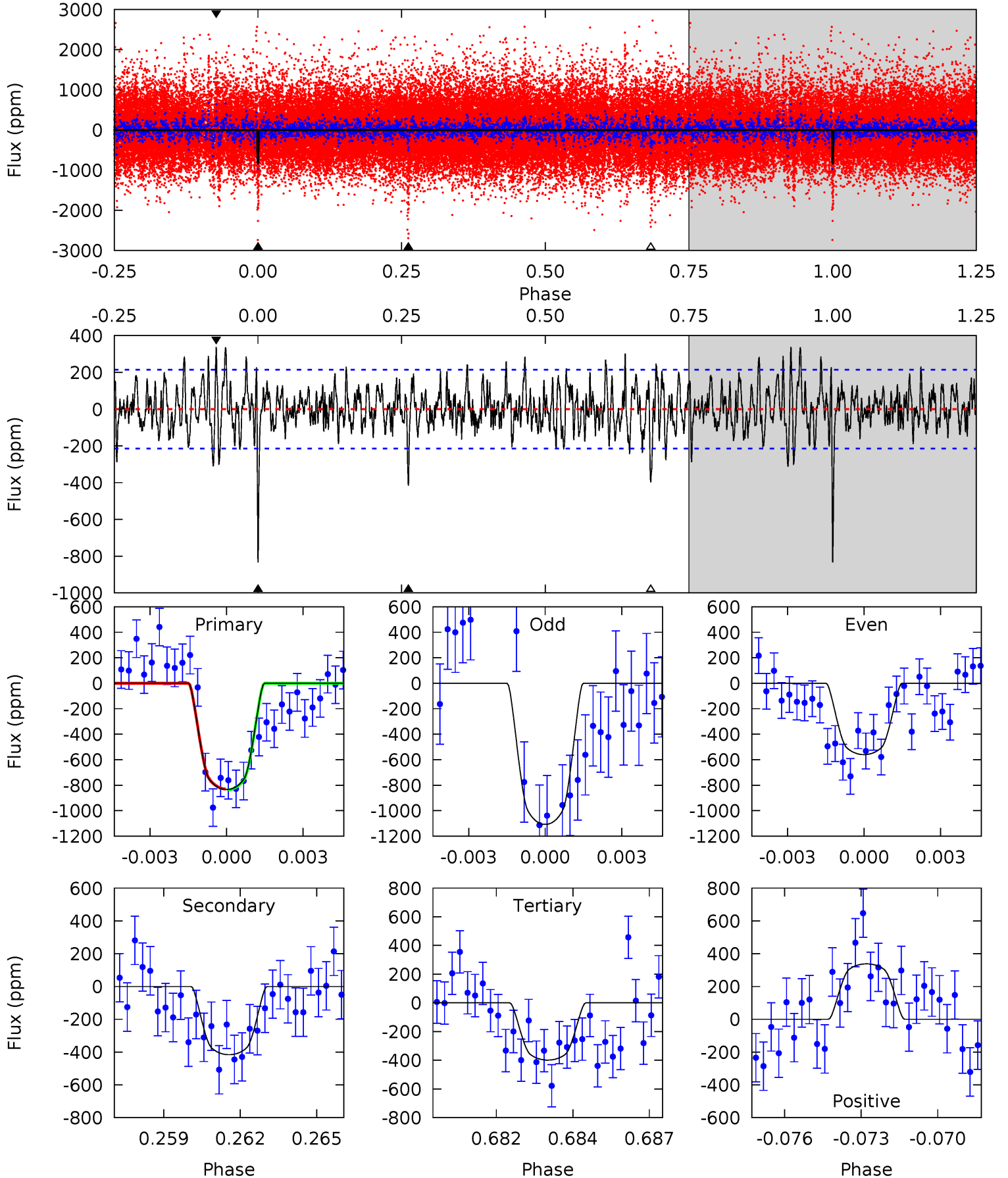
TCE 002975340-01 P=329.961127 Days $T_0=429.486540$ (BKJD)



DV Model-Shift Uniqueness Test

002975340-01, P = 329.942304 Days, E = 99.620526 Days

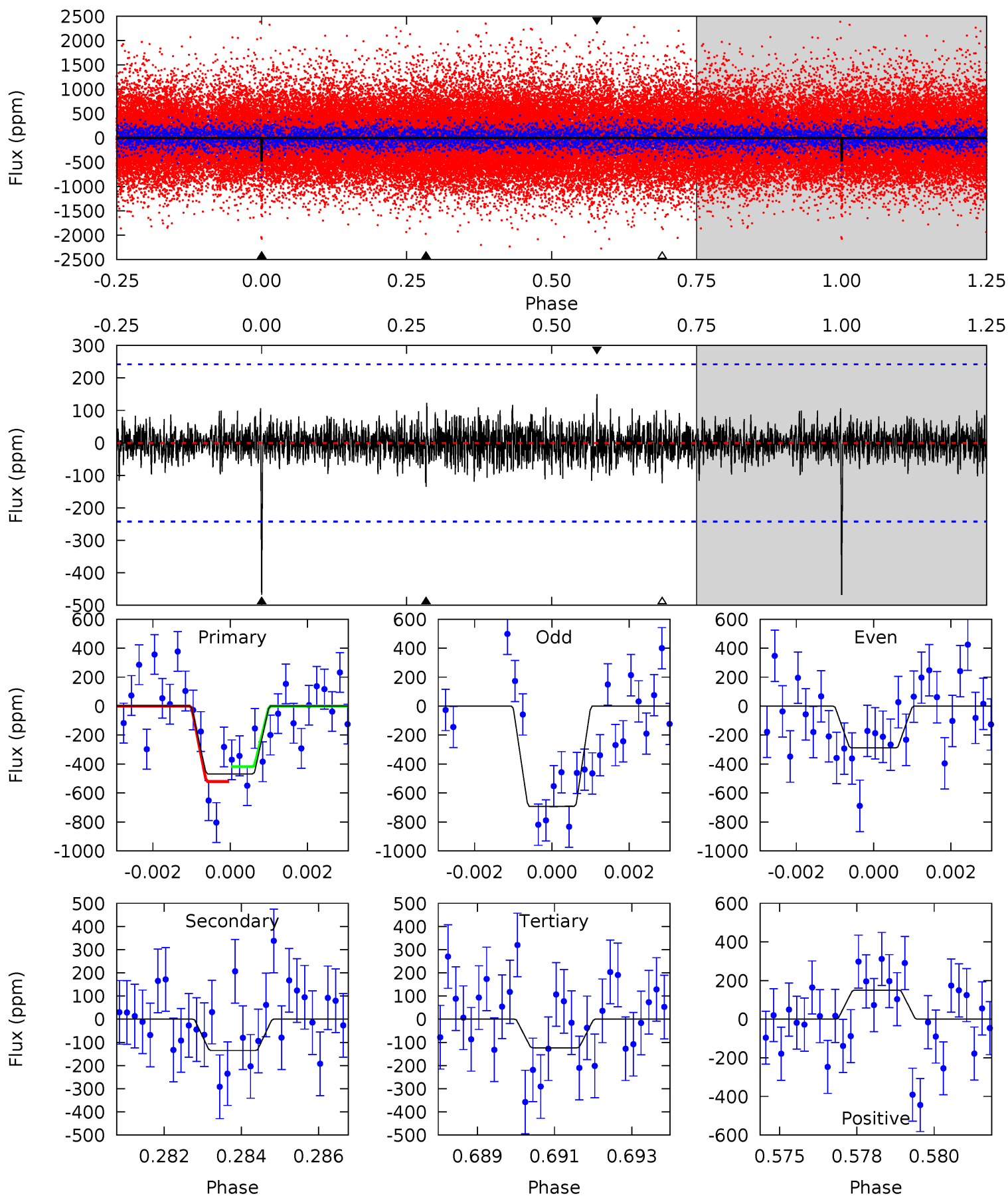
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.4	10.2	9.78	8.28	5.26	2.98	2.43	10.7	12.2	0.43	1.92	6.73	1.03	0.29	0.10



Alt Model-Shift Uniqueness Test

002975340-01, $P = 329.961127$ Days, $E = 99.525413$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	2.97	2.71	3.30	5.32	3.08	0.82	7.58	6.99	0.25	-0.34	4.46	1.68	0.24	1.13



Stellar Parameters For KIC 002975340

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4835^{+129}_{-144}	$4.532^{+0.072}_{-0.039}$	$0.120^{+0.250}_{-0.300}$	$0.782^{+0.043}_{-0.080}$	$0.759^{+0.072}_{-0.054}$	$2.233^{+0.693}_{-0.302}$
	+3%/-3%	+2%/-1%	+208%/-250%	+5%/-10%	+9%/-7%	+31%/-14%
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 002975340-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-416 ± 41	$3.01^{+0.30}_{-0.33}$	284^{+10}_{-10}	3927^{+181}_{-159}	18542^{+5021}_{-3421}
Alt.	-135 ± 45	$1.87^{+0.29}_{-0.29}$	284^{+10}_{-11}	3771^{+324}_{-285}	14914^{+8658}_{-5542}

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 $A_{obs} \gg 1.0$

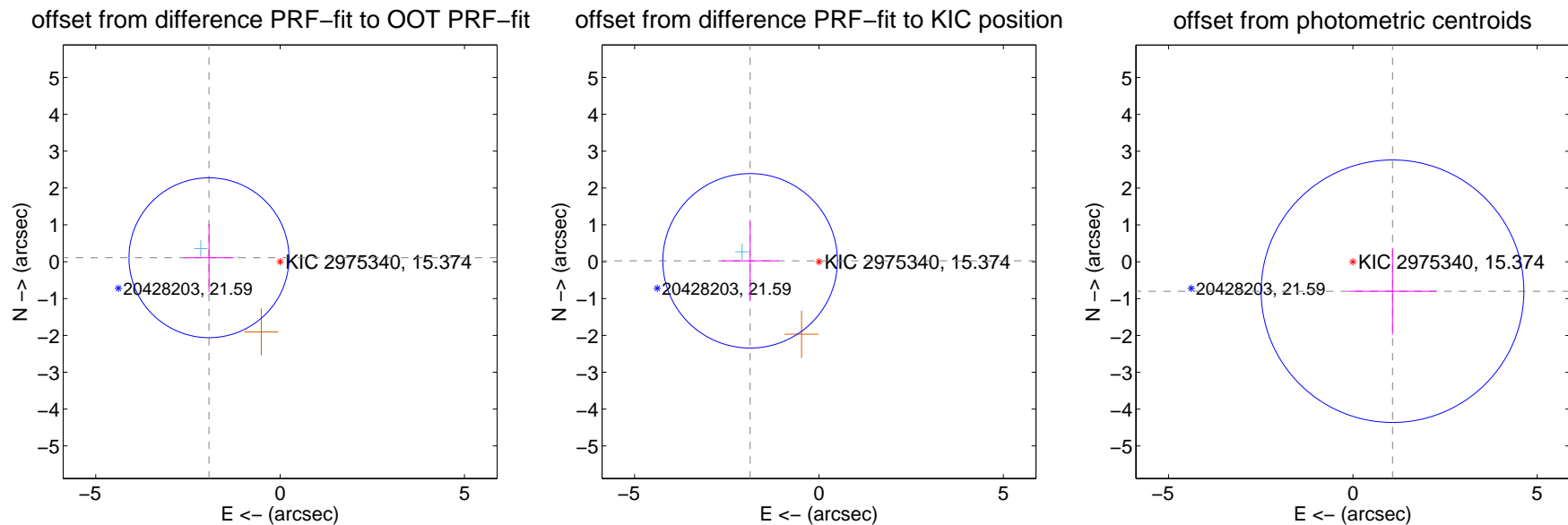
DV Centroid Data

Supplemental centroid analysis for 002975340-01. Kepler magnitude: 15.37. Transit SNR 9.66

There are 1 quarters with good PRF difference image offsets

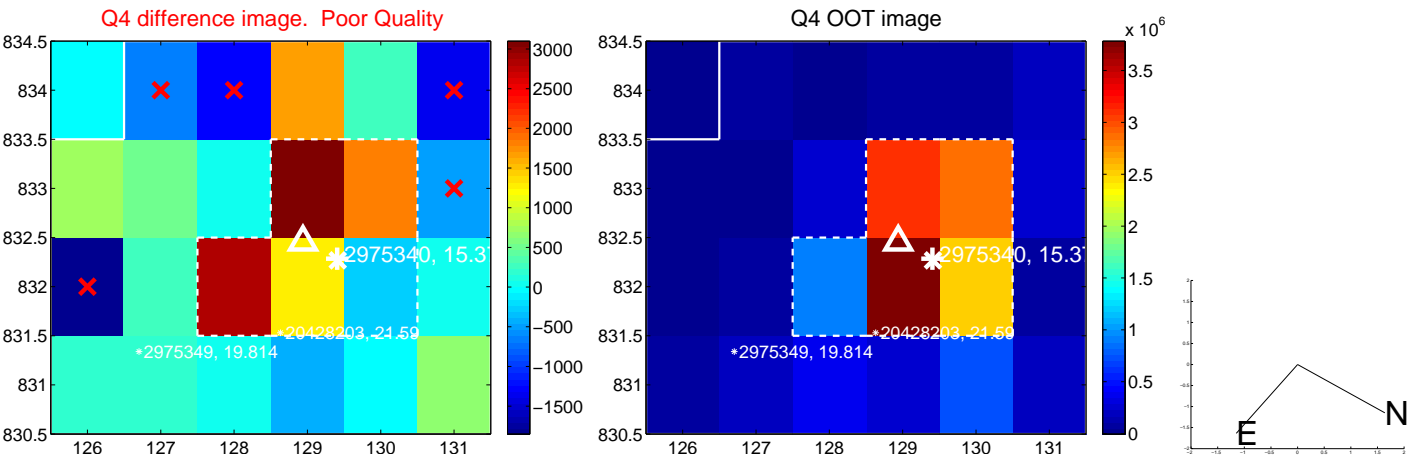
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.932 ± 0.723	2.67	1.929 ± 0.673	0.107 ± 0.926
PRF-fit source offset from KIC position	1.868 ± 0.789	2.37	1.867 ± 0.776	0.024 ± 1.074
photometric centroid source offset	1.34 ± 1.19	1.13	-1.08 ± 1.19	-0.80 ± 1.18



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.

Q5 no difference image



Q5 no OOT image



Q6 no difference image



Q6 no OOT image



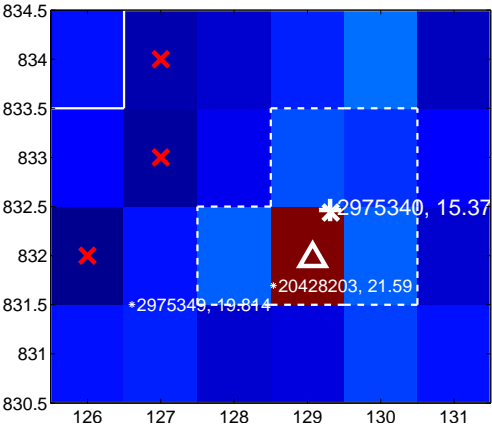
Q7 no difference image



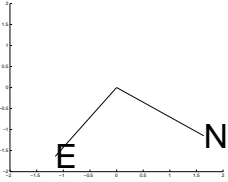
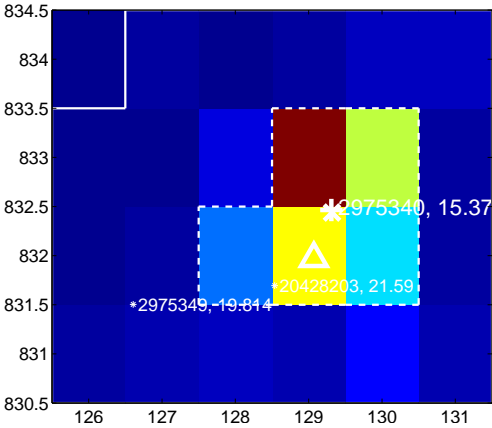
Q7 no OOT image



Q8 difference image



Q8 OOT image



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

Q9 no difference image



Q9 no OOT image



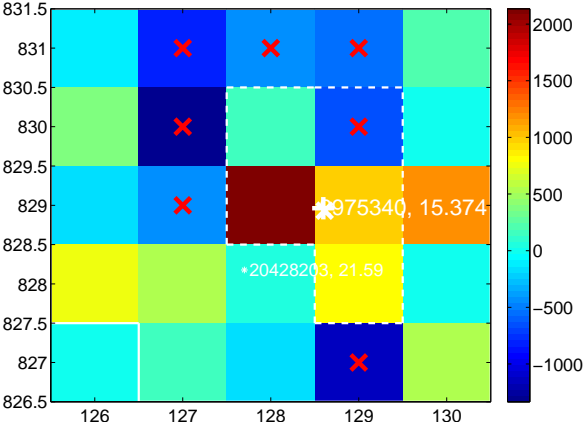
Q10 no difference image



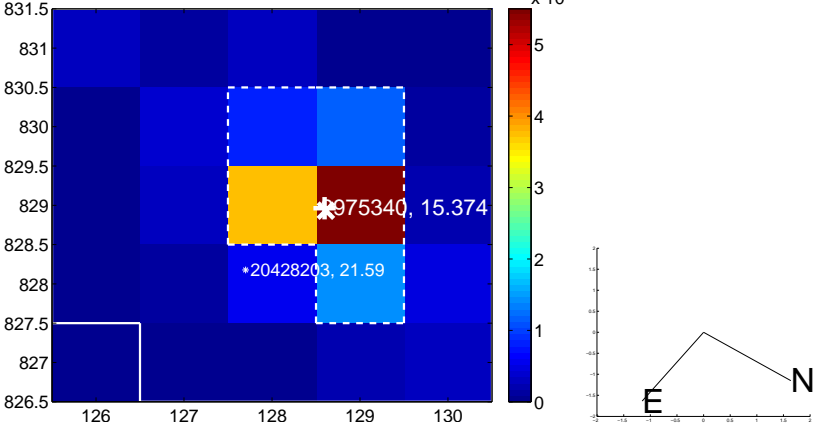
Q10 no OOT image



Q11 difference image. Poor Quality



Q11 OOT image



Q12 no difference image



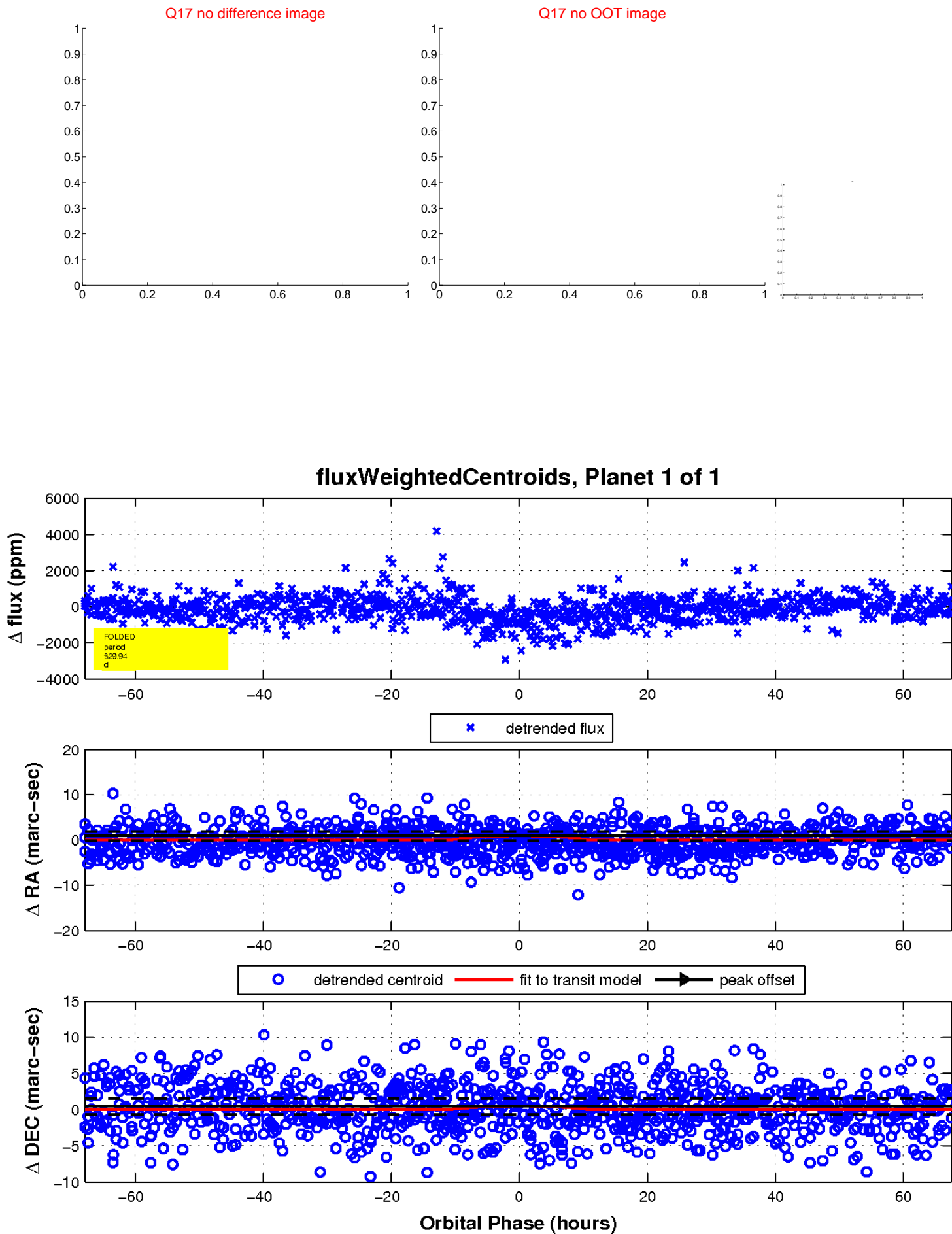
Q12 no OOT image



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

