

KIC 008043142

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})
008043142-01	OBS	No	487.051372	147.096964	537.0	4.421	8.5	7.1	1.07	5906	2.60	0.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008043142-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—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.

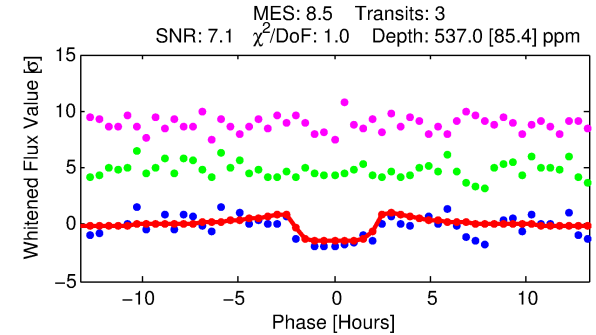
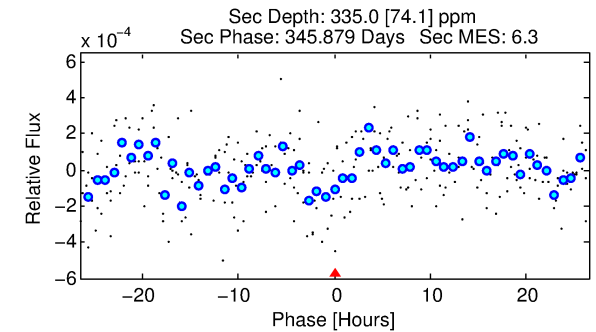
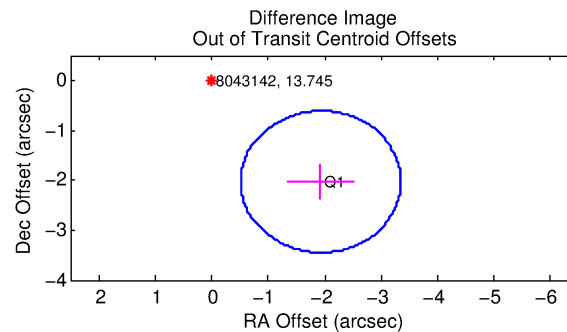
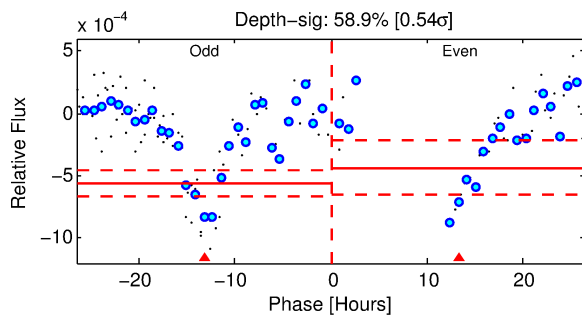
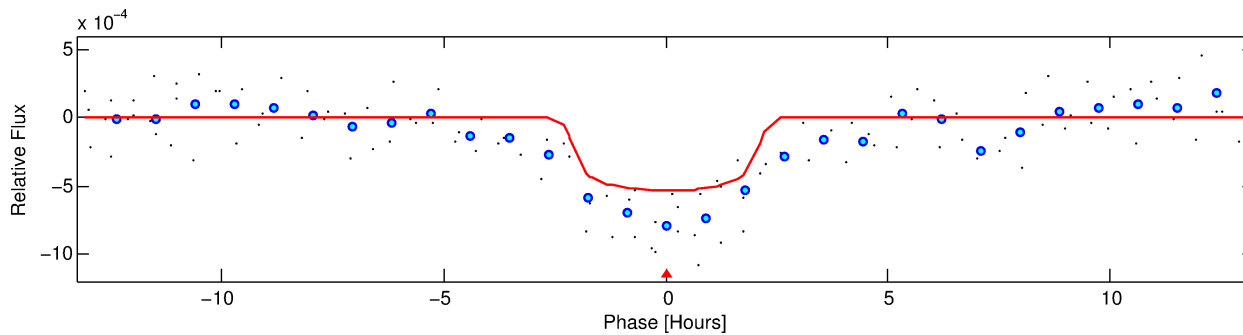
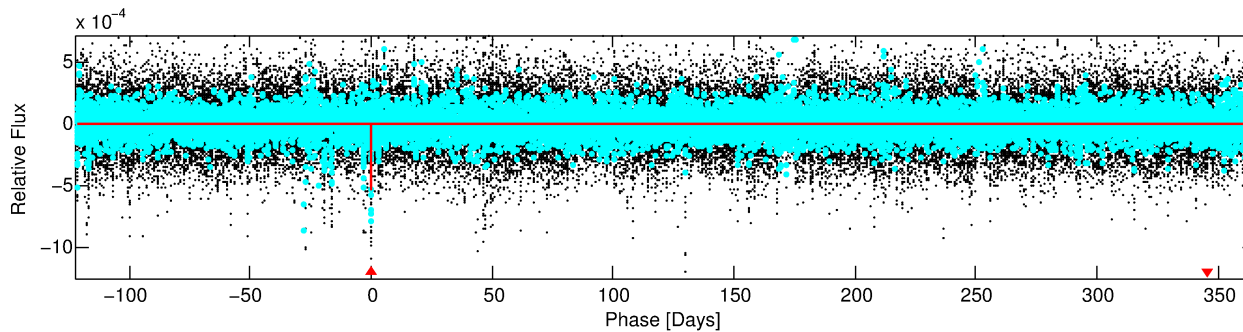
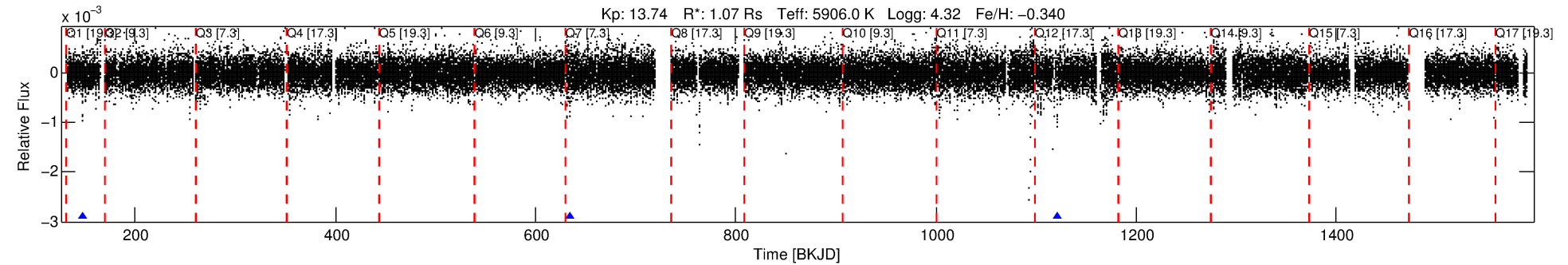
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008043142-01

No Significant Match Found

DV One-Page Summary

KIC: 8043142 Candidate: 1 of 1 Period: 487.051 d



DV Fit Results:

Period = 487.05137 [0.00724] d
Epoch = 147.0970 [0.0078] BKJD
Rp/R* = 0.0221 [0.0631]
a/R* = 704.05 [9689.30]
b = 0.59 [15.53]
Seff = 0.93 [0.34]
Teff = 251 [23] K
Rp = 2.60 [7.44] Re
a = 1.1624 [0.2788] AU
Ag = 36947.36 [211386.60] [0.17 σ]
Teffp = 5371 [7670] K [0.67 σ]

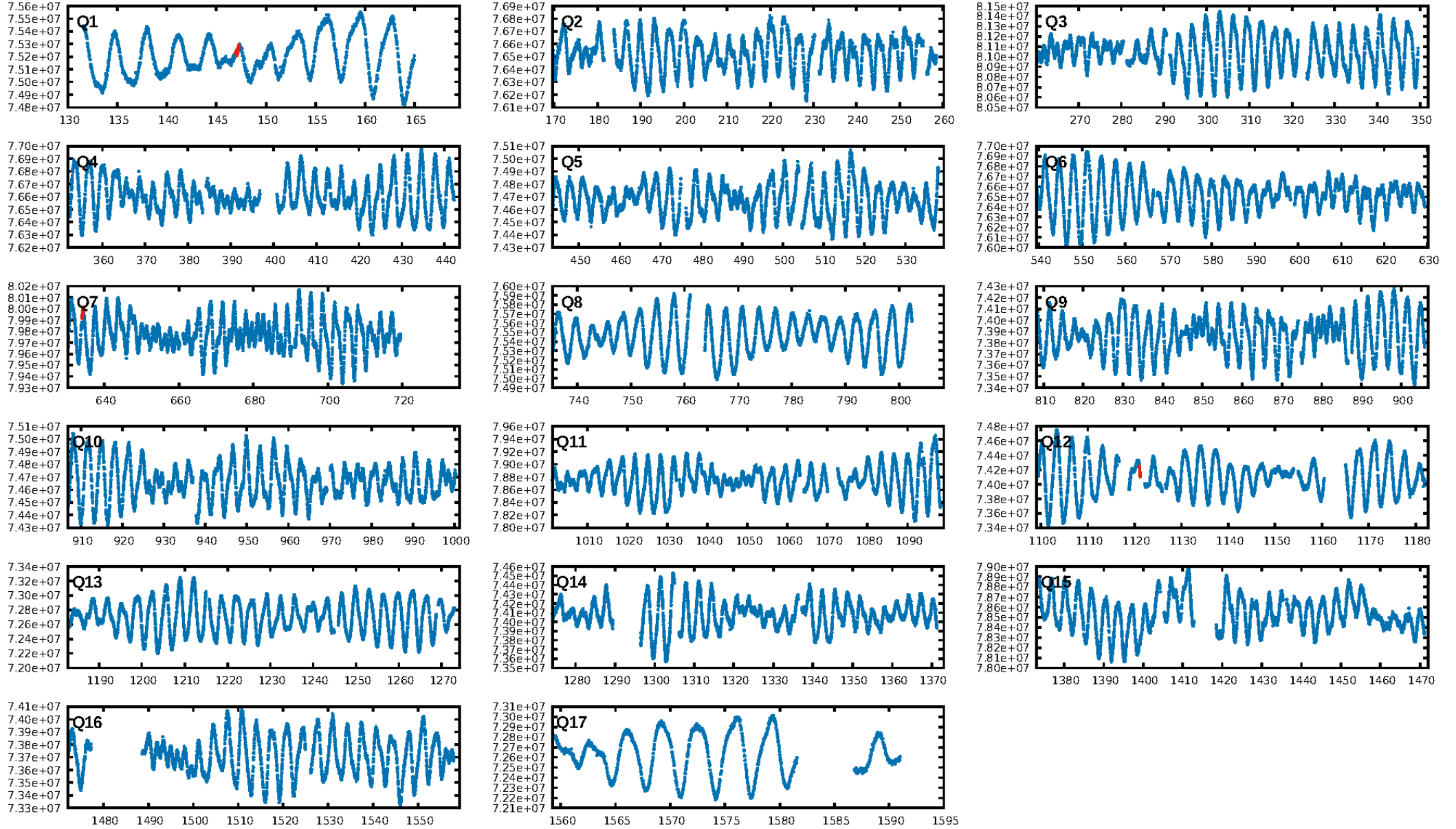
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 14.5%
ModelChiSquareGof-sig: 91.2%
Bootstrap-pfa: 6.04e-10
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -0.5739
Centroid-sig: 17.7%
Centroid-so: 0.960 arcsec [1.02 σ]
OotOffset-rm: 2.804 arcsec [5.93 σ]
KicOffset-rm: 2.857 arcsec [6.14 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

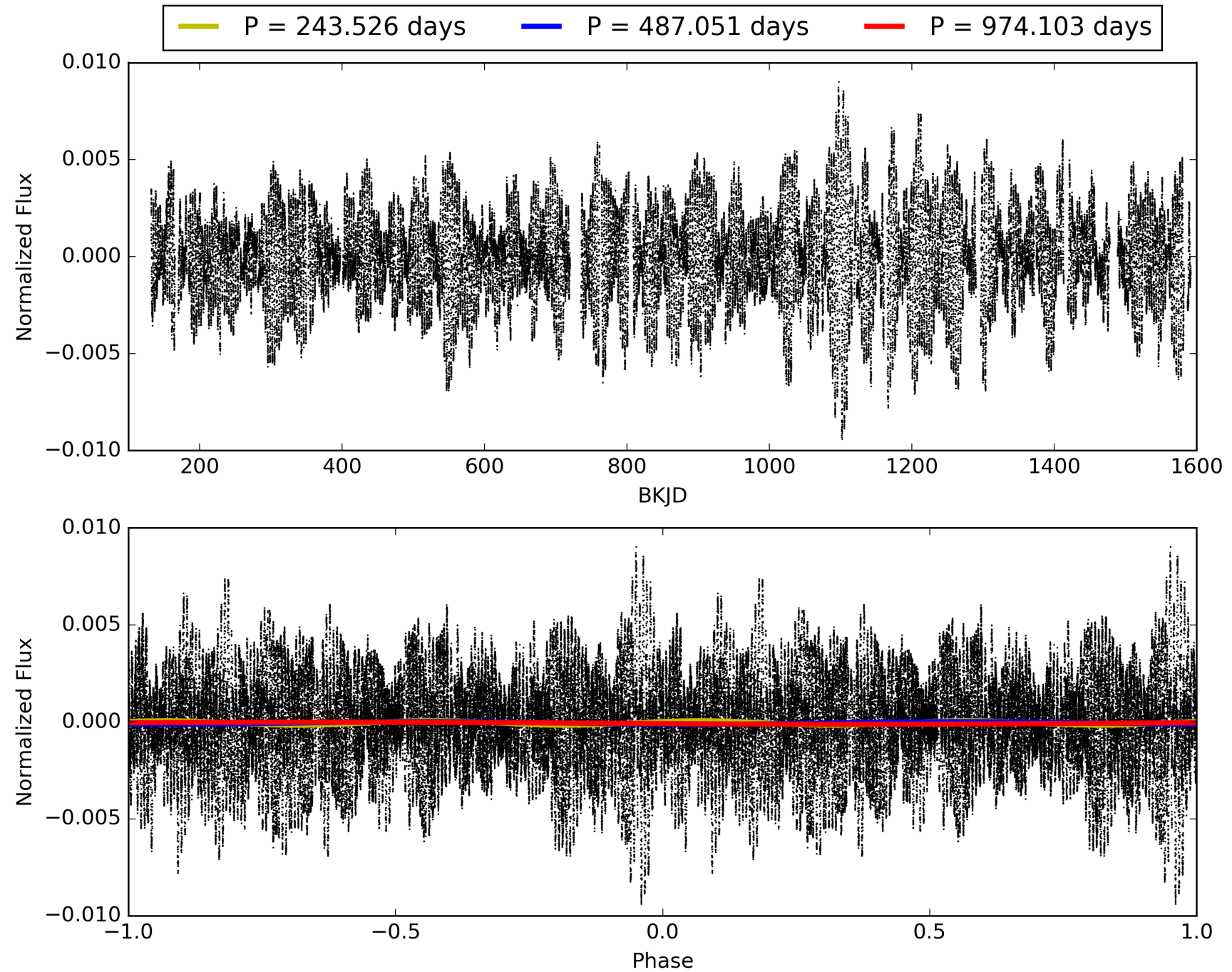
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:08:47 Z

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

TCE 008043142-01, PDC Light Curves

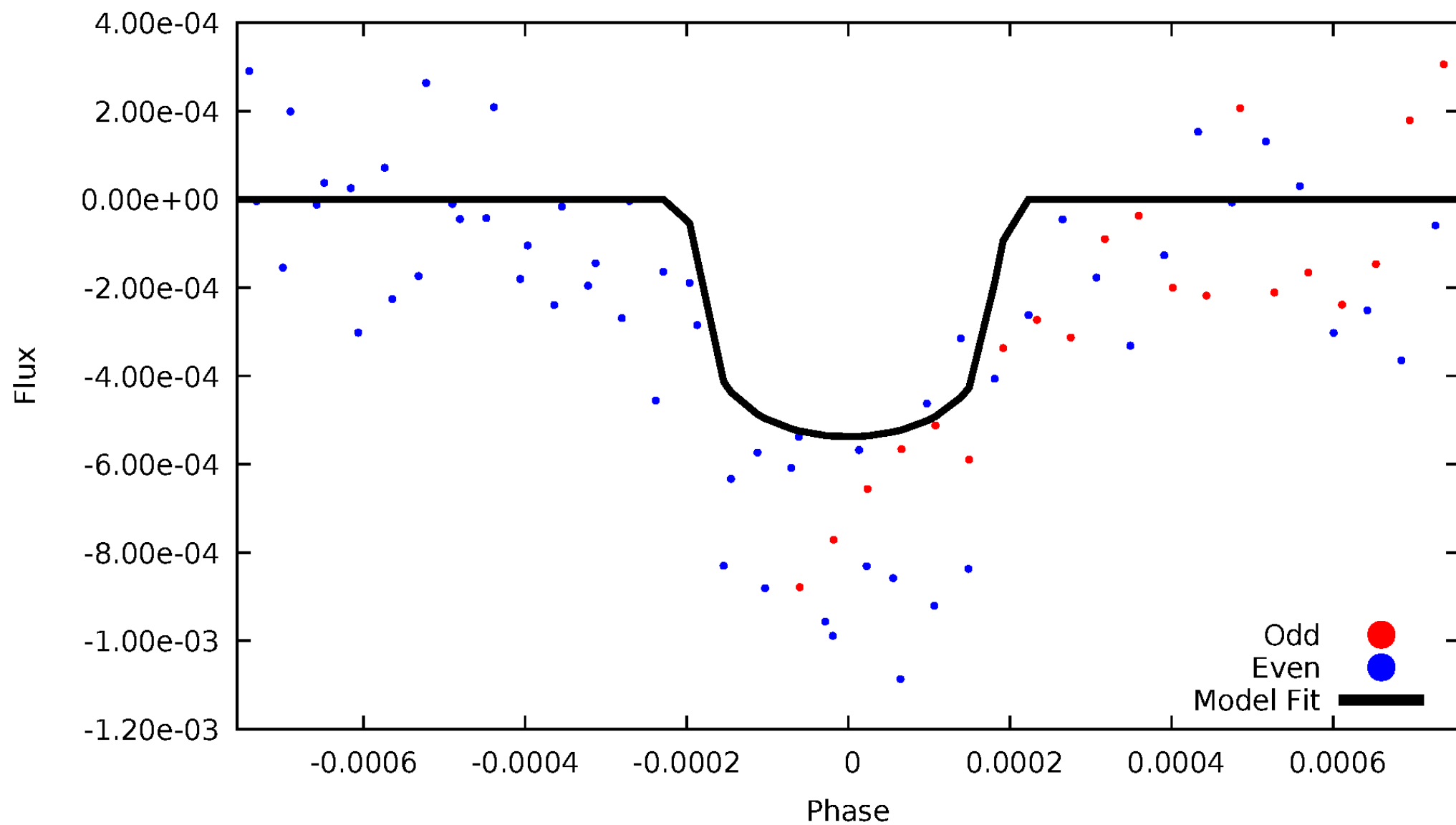


TCE 008043142-01



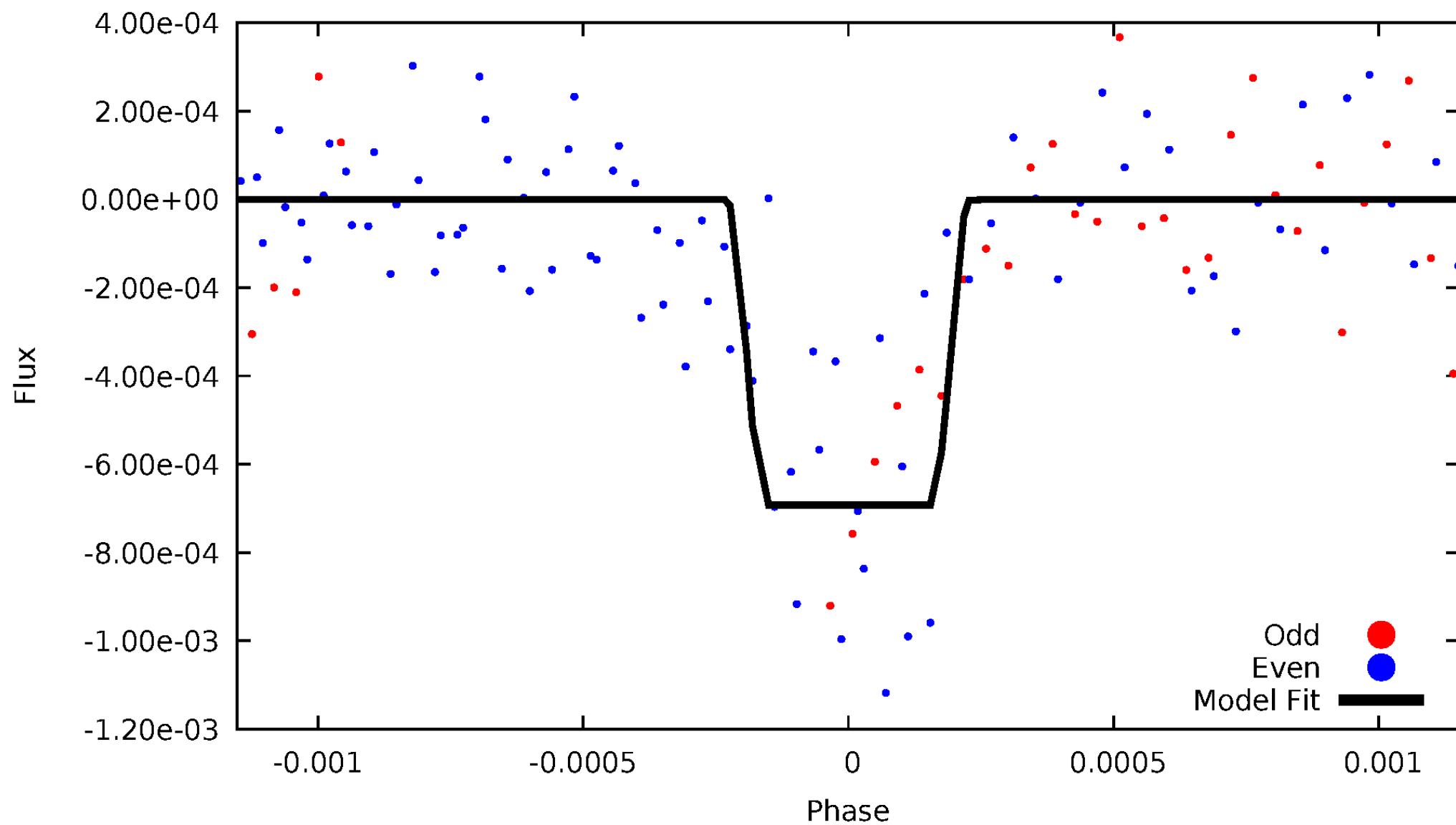
DV Odd/Even

TCE 008043142-01

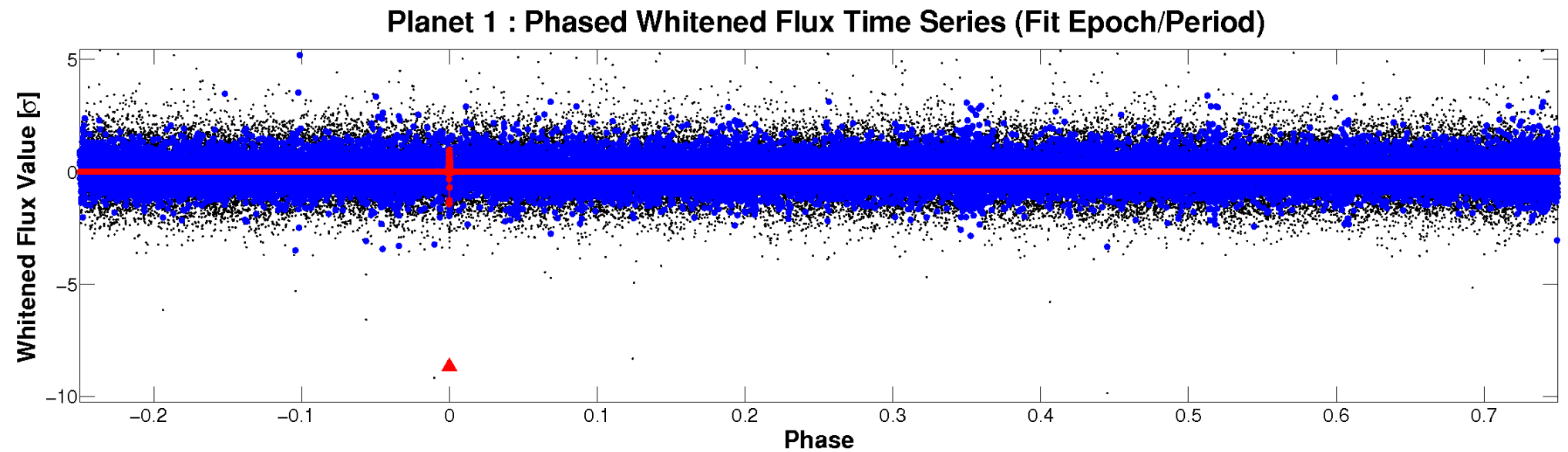
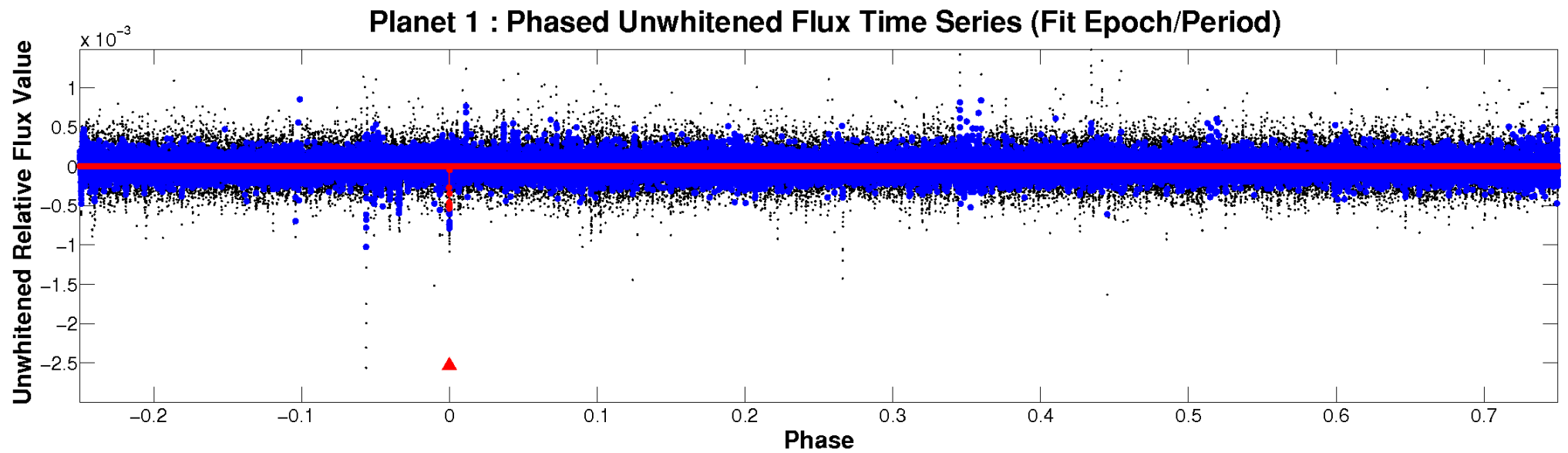


ALT Odd/Even

TCE 008043142-01

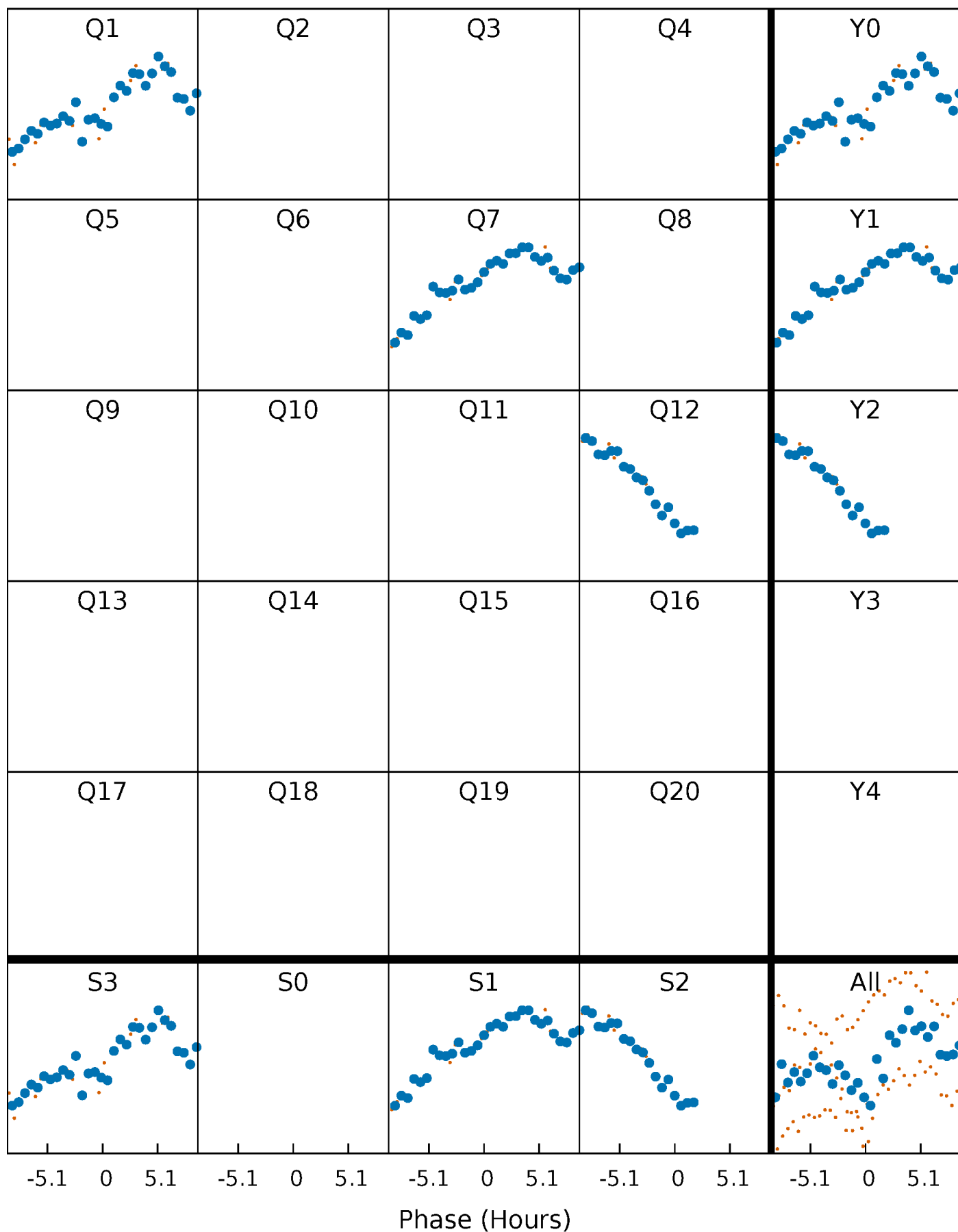


Non-Whitened Vs. Whitened Light Curve



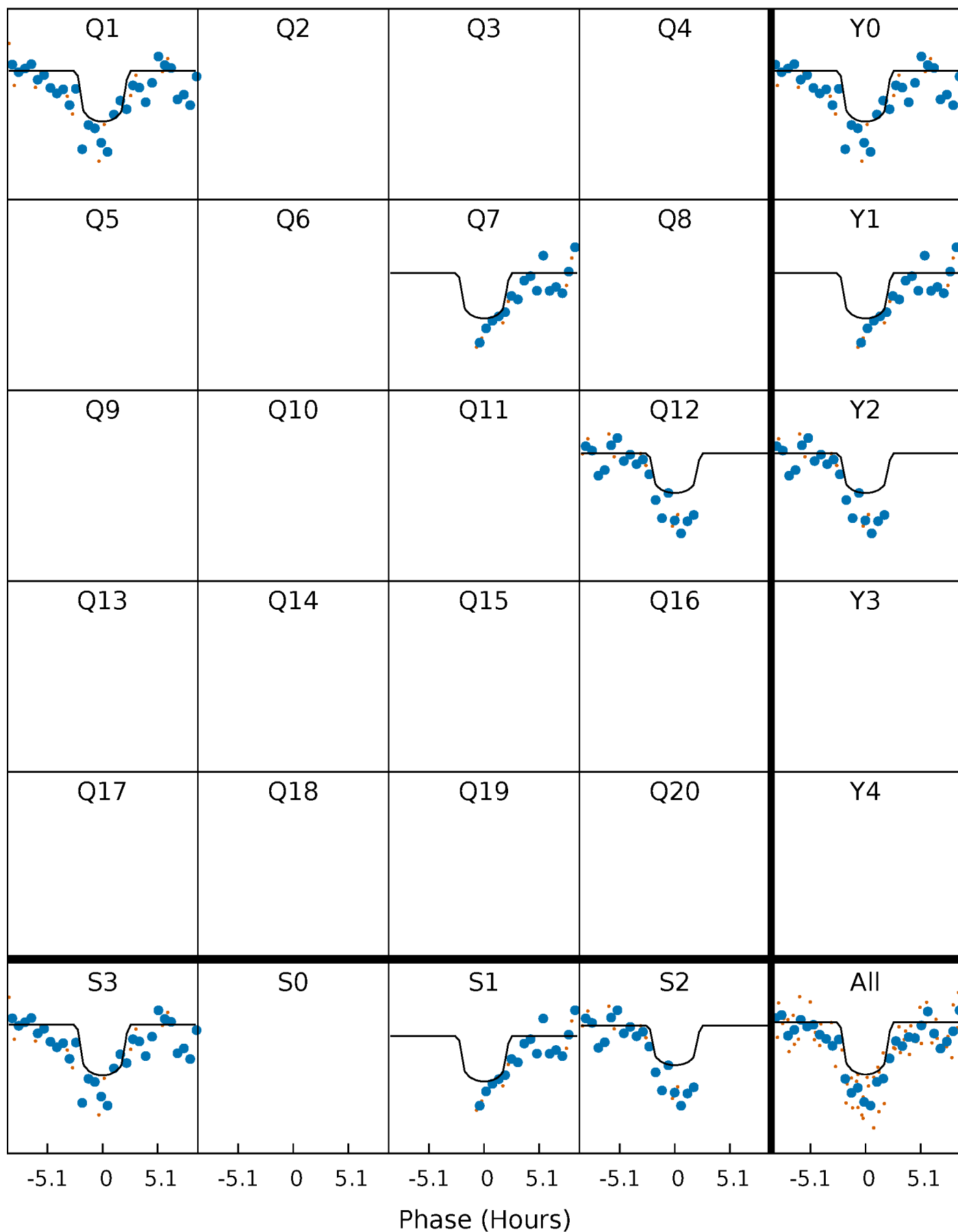
PDC Quarter-Phased Transit Curves

TCE 008043142-01 P=487.051372 Days $T_0=147.096964$ (BKJD)



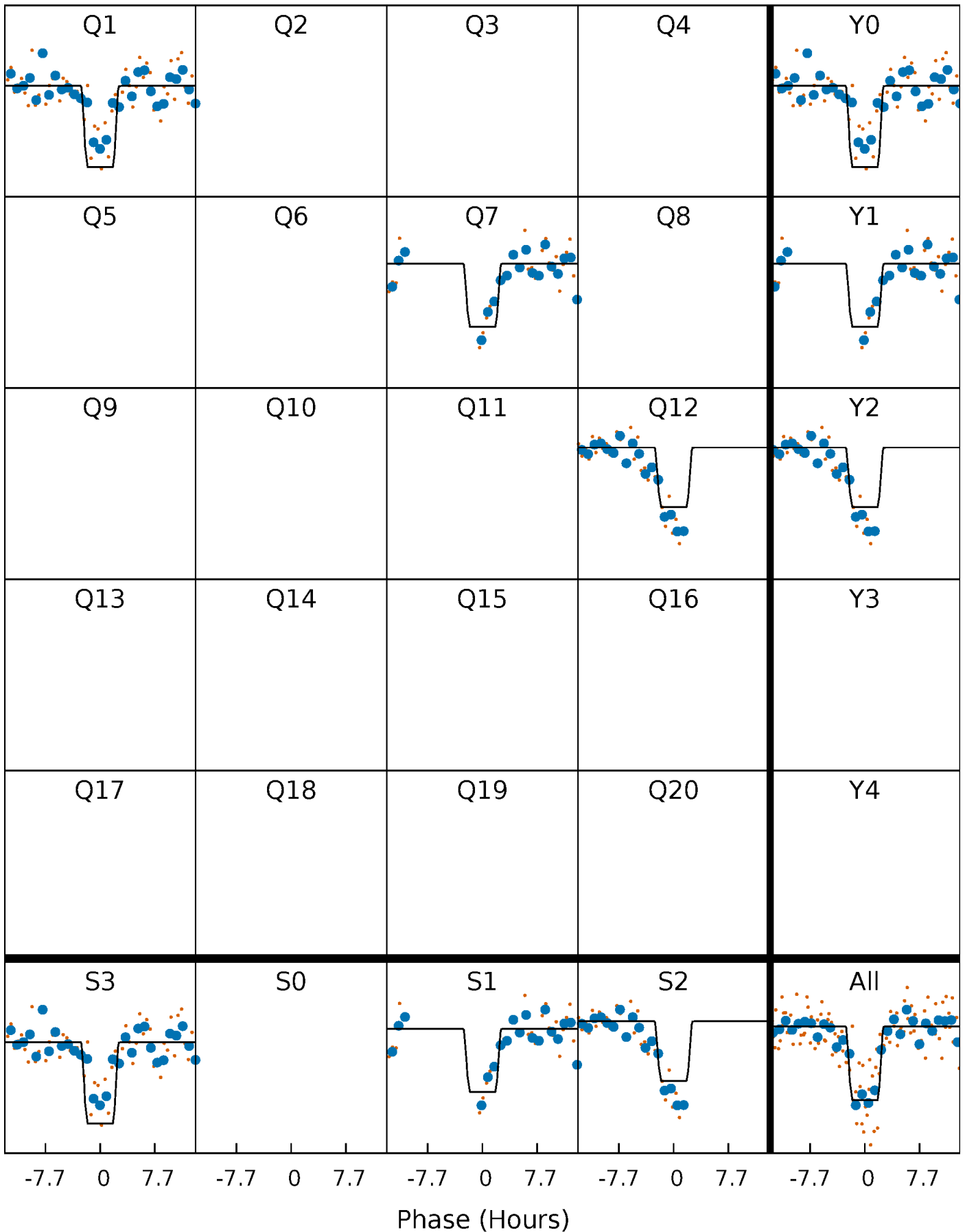
DV Quarter-Phased Transit Curves

TCE 008043142-01 P=487.051372 Days $T_0=147.096964$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

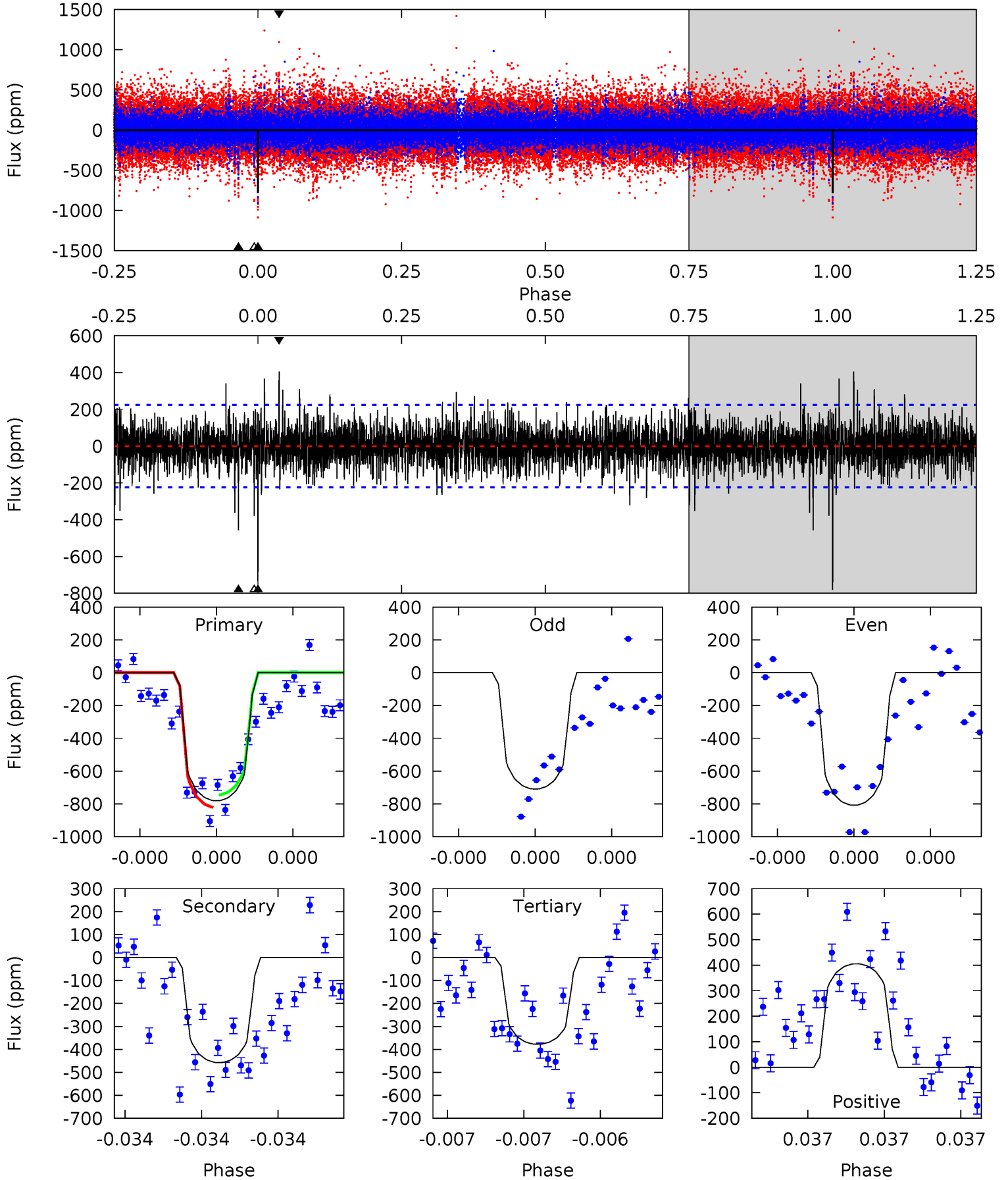
TCE 008043142-01 P=487.061147 Days $T_0=147.074442$ (BKJD)



DV Model-Shift Uniqueness Test

008043142-01, P = 487.051372 Days, E = 147.096964 Days

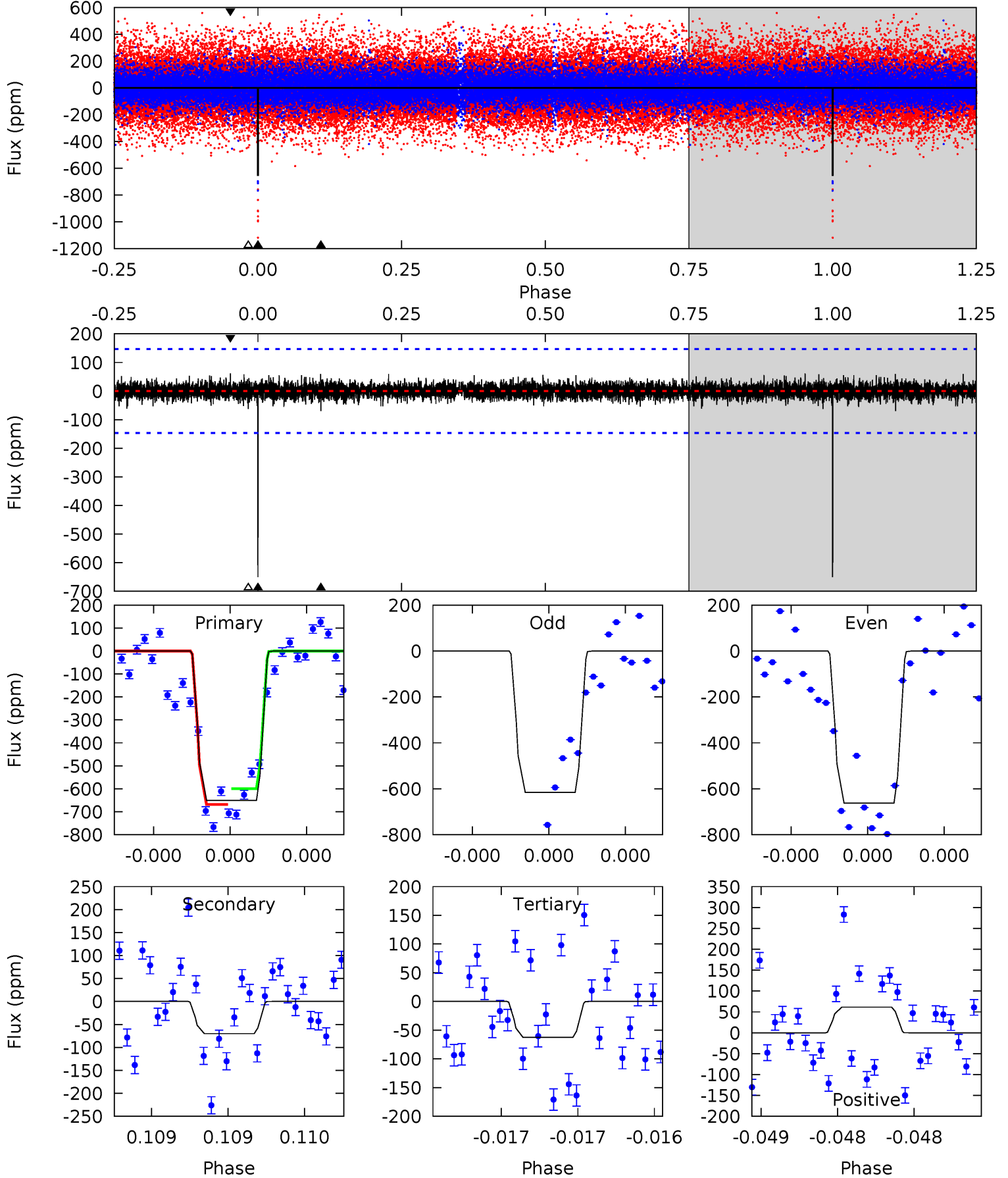
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.5	11.4	9.45	10.1	5.61	3.53	1.91	10.1	9.39	2.00	1.31	1.12	1.09	0.34	0.93



Alt Model-Shift Uniqueness Test

008043142-01, P = 487.061147 Days, E = 147.074442 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.8	2.67	2.39	2.34	5.59	3.51	0.53	22.4	22.5	0.28	0.32	0.81	1.01	0.09	1.28



Stellar Parameters For KIC 008043142

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5906^{+158}_{-175}	$4.321^{+0.190}_{-0.190}$	$-0.340^{+0.300}_{-0.300}$	$1.075^{+0.307}_{-0.231}$	$0.883^{+0.128}_{-0.079}$	$1.000^{+0.958}_{-0.491}$
	+3%/-3%	+4%/-4%	+88%/-88%	+29%/-21%	+14%/-9%	+96%/-49%
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 008043142-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-458 ± 40	$6.48^{+5.88}_{-4.38}$	350^{+27}_{-23}	4043^{+2385}_{-781}	7996^{+67572}_{-5692}
Alt.	-70 ± 26	$6.45^{+6.07}_{-4.62}$	350^{+26}_{-23}	2970^{+1477}_{-480}	1298^{+12862}_{-998}

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

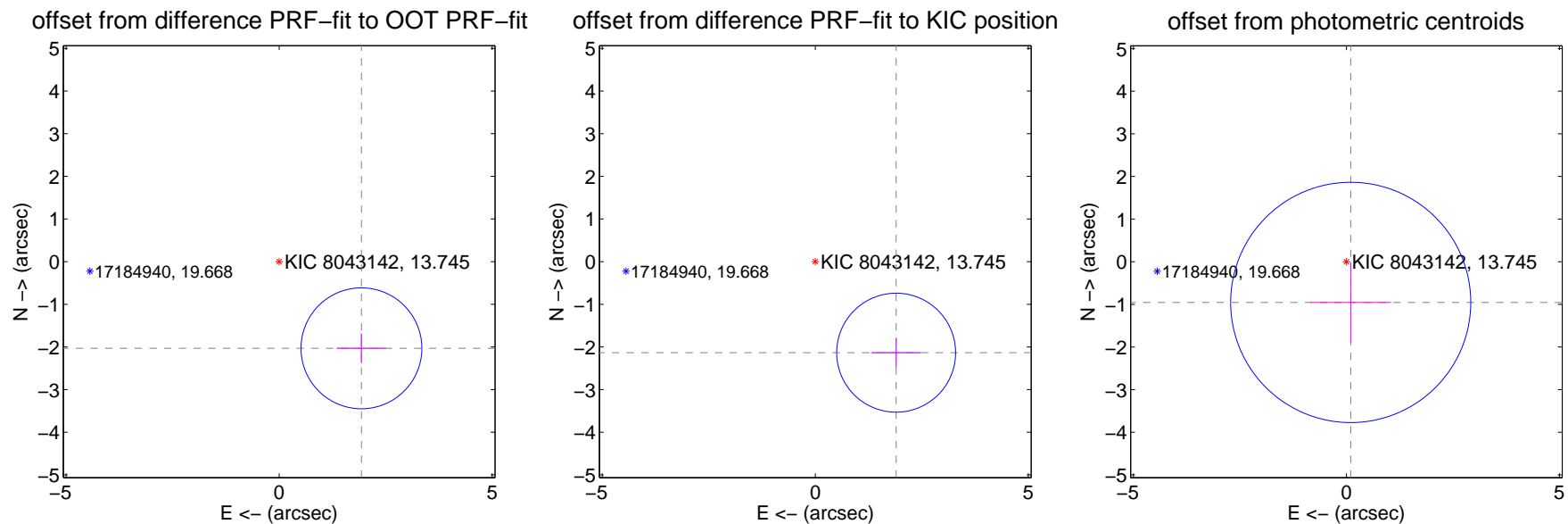
DV Centroid Data

Supplemental centroid analysis for 008043142-01. Kepler magnitude: 13.74. Transit SNR 7.12

There are 1 quarters with good PRF difference image offsets

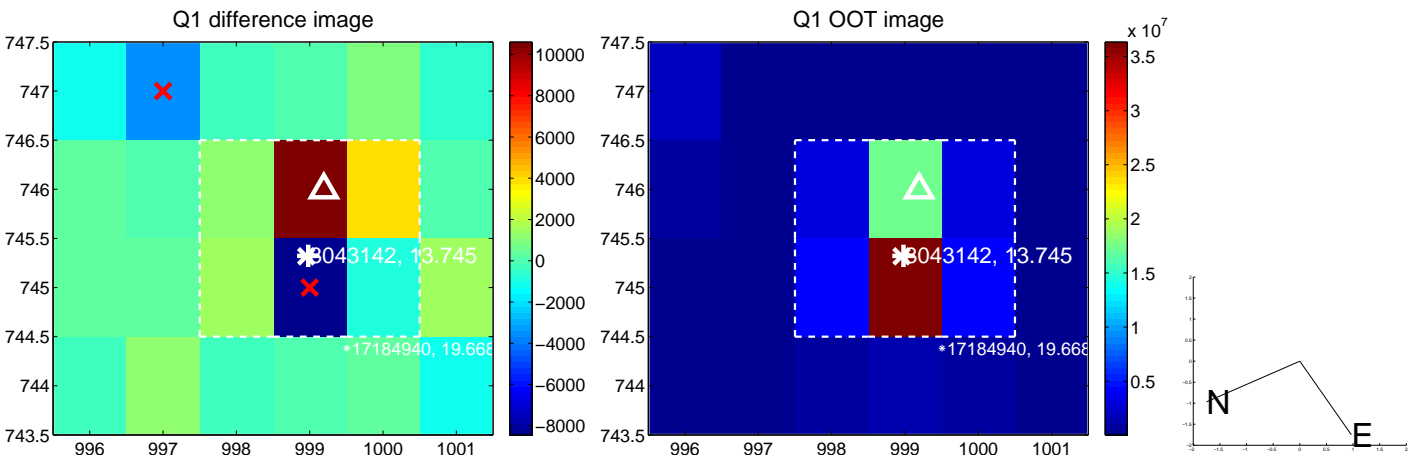
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.804 ± 0.473	5.93	-1.931 ± 0.581	-2.033 ± 0.348
PRF-fit source offset from KIC position	2.857 ± 0.465	6.14	-1.899 ± 0.581	-2.135 ± 0.348
photometric centroid source offset	0.96 ± 0.94	1.02	-0.10 ± 0.95	-0.96 ± 0.94



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.



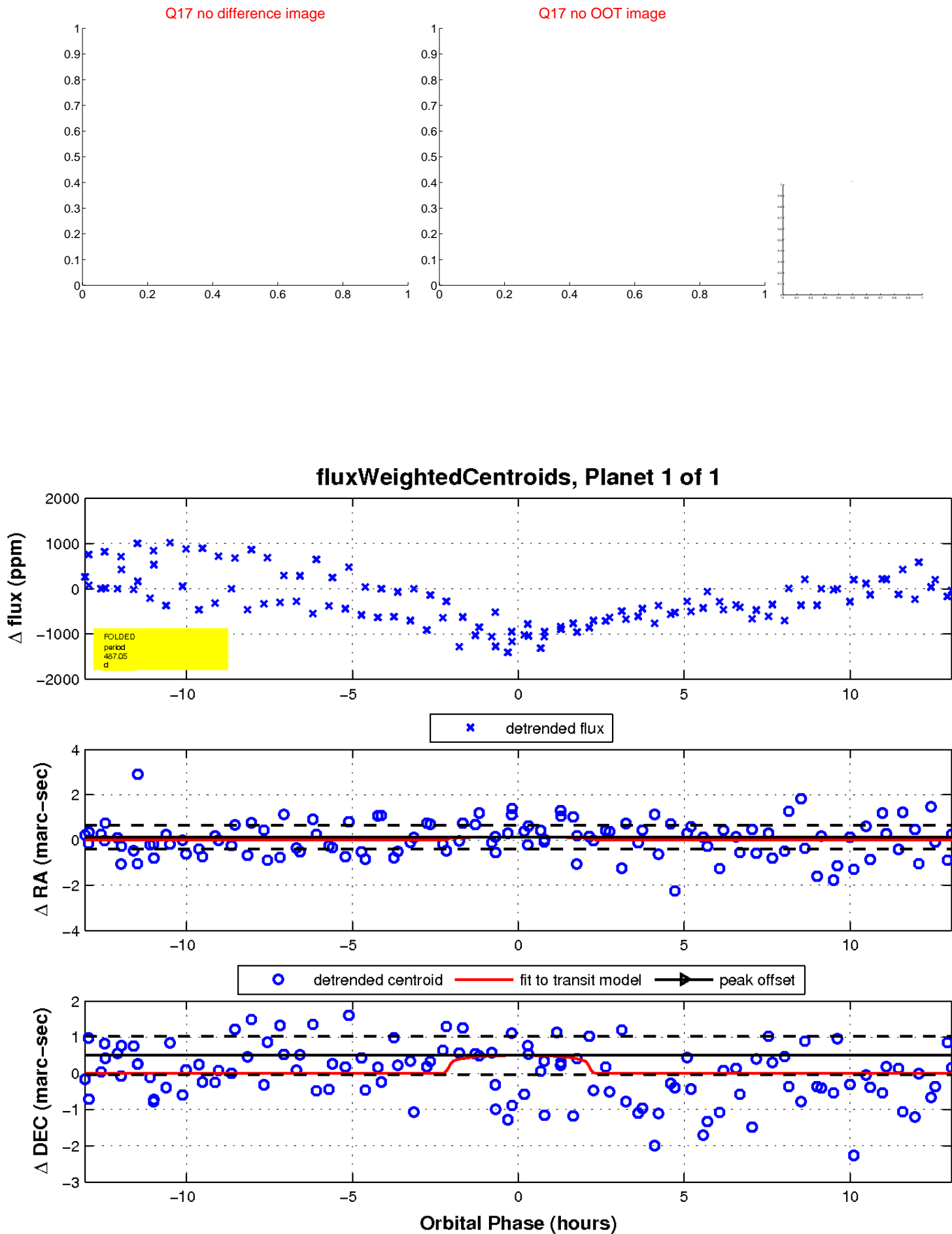
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

