

KIC 009962731

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})
009962731-01	OBS	8191.01	385.434766	340.672121	106.2	22.877	8.1	6.3	1.34	5676	1.55	1.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009962731-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_SKYE—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

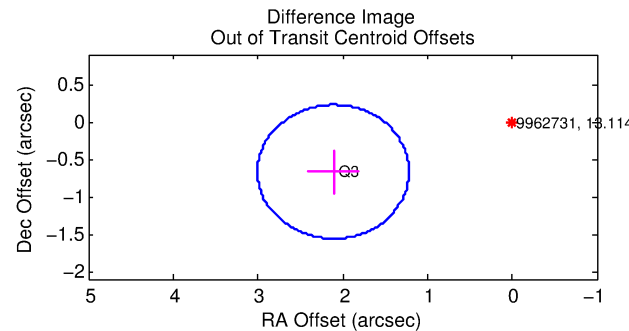
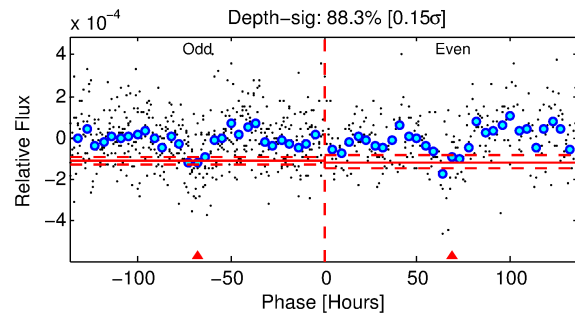
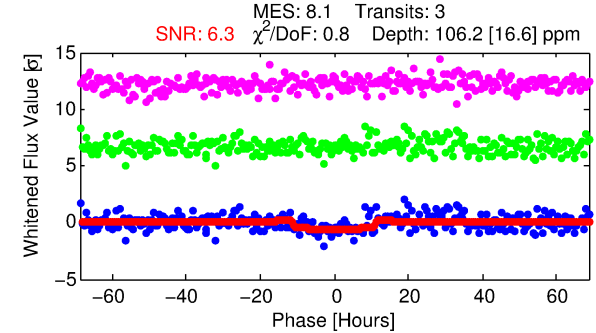
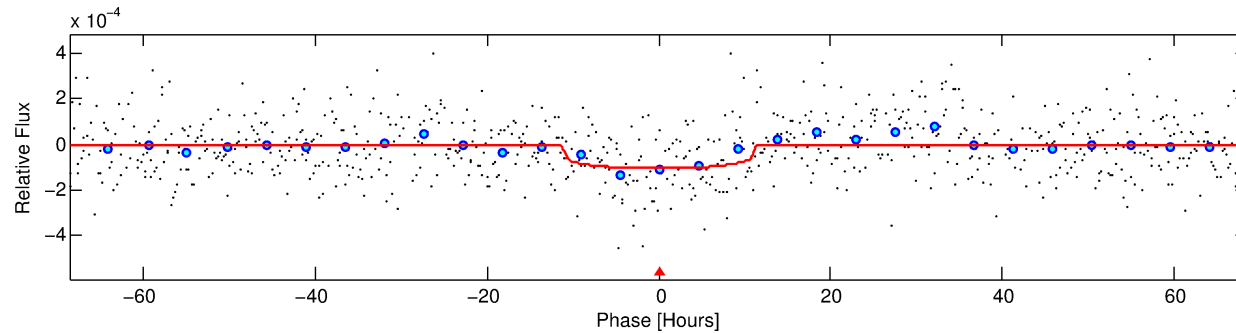
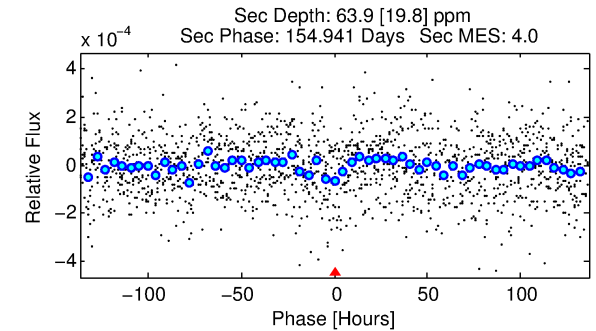
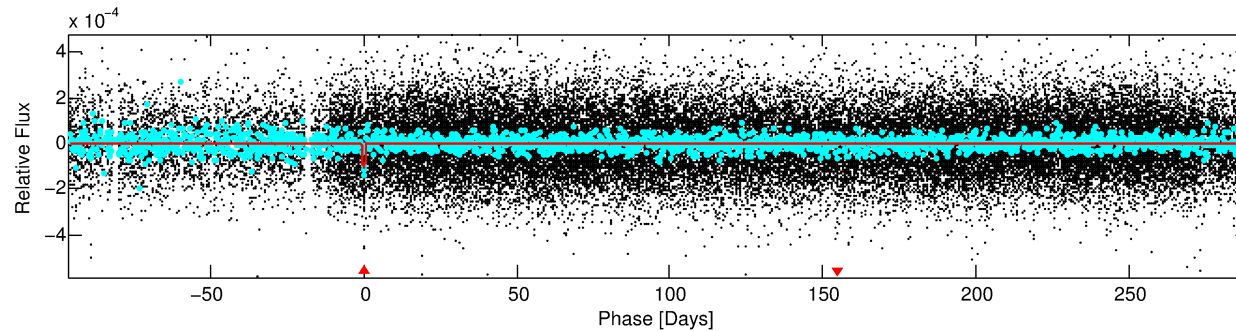
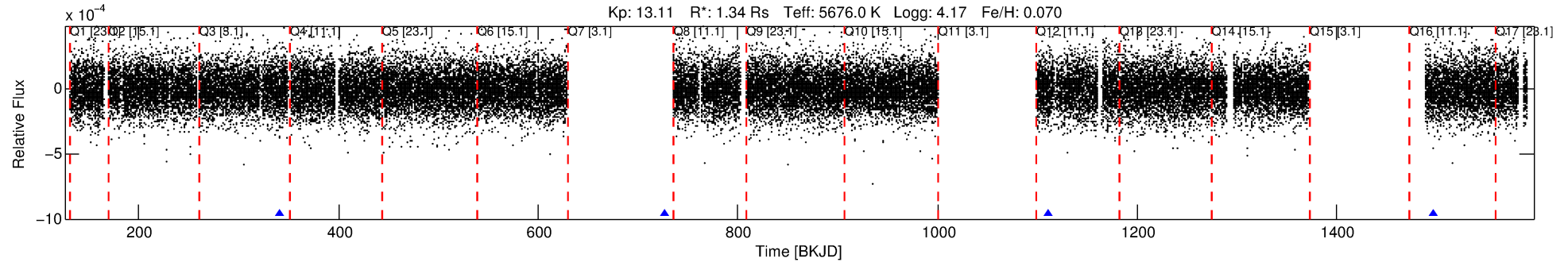
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009962731-01

No Significant Match Found

DV One-Page Summary

KIC: 9962731 Candidate: 1 of 1 Period: 385.435 d



DV Fit Results:

Period = 385.43477 [0.01702] d
Epoch = 340.6721 [0.0362] BKJD
Rp/R* = 0.0106 [0.0029]
a/R* = 75.86 [87.99]
b = 0.82 [0.46]
Seff = 1.57 [0.50]
Teq = 286 [23] K
Rp = 1.55 [0.52] Re
a = 1.0277 [0.1994] AU
Ag = 15524.98 [10897.33] [1.42σ]
Teffp = 4927 [775] K [5.99σ]

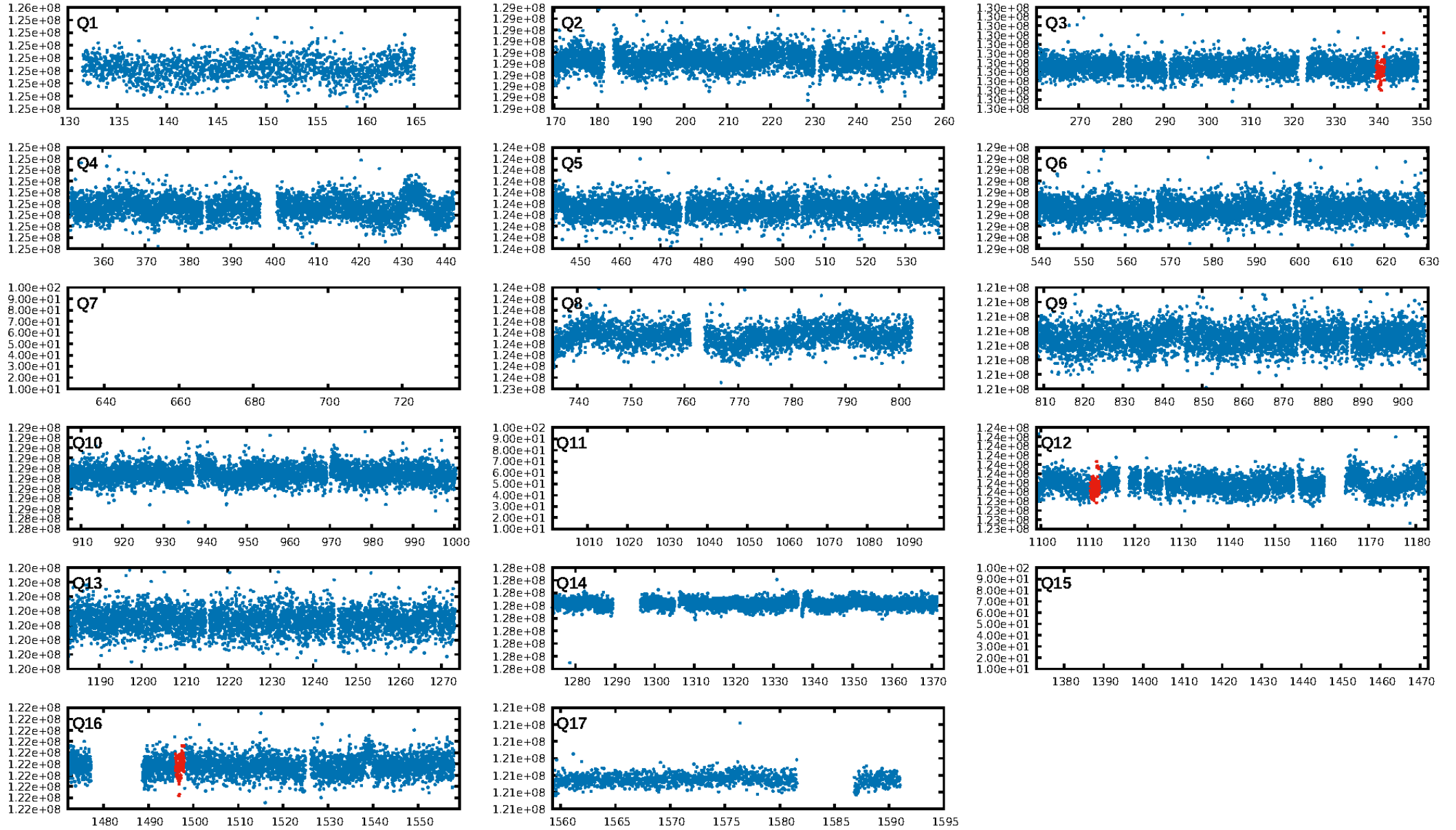
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 83.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.58e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.08216
Centroid-sig: 0.0%
Centroid-so: 8.541 arcsec [3.13σ]
OotOffset-rm: 2.213 arcsec [7.43σ]
KicOffset-rm: 2.326 arcsec [7.83σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

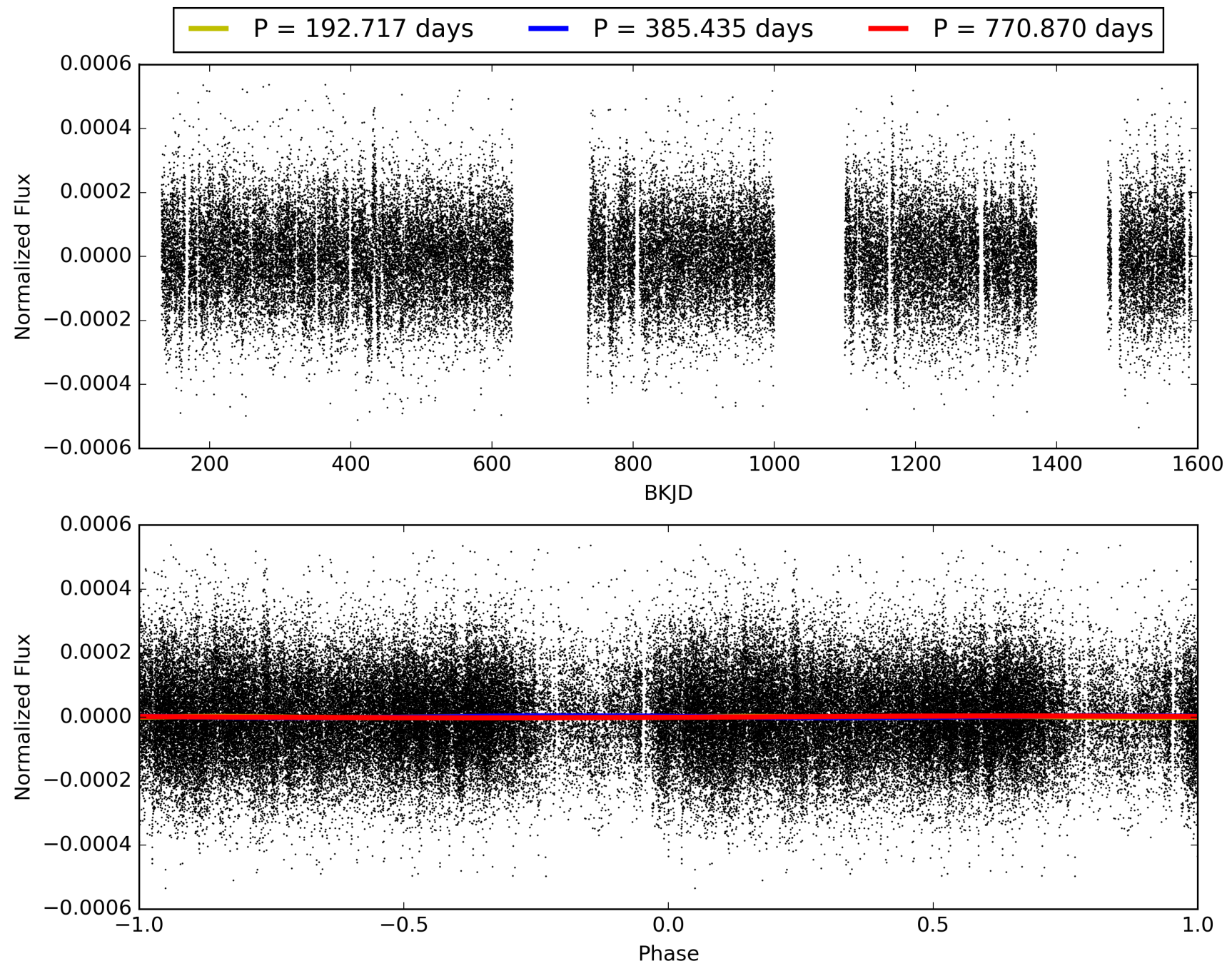
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 07:14:06 Z

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

TCE 009962731-01, PDC Light Curves

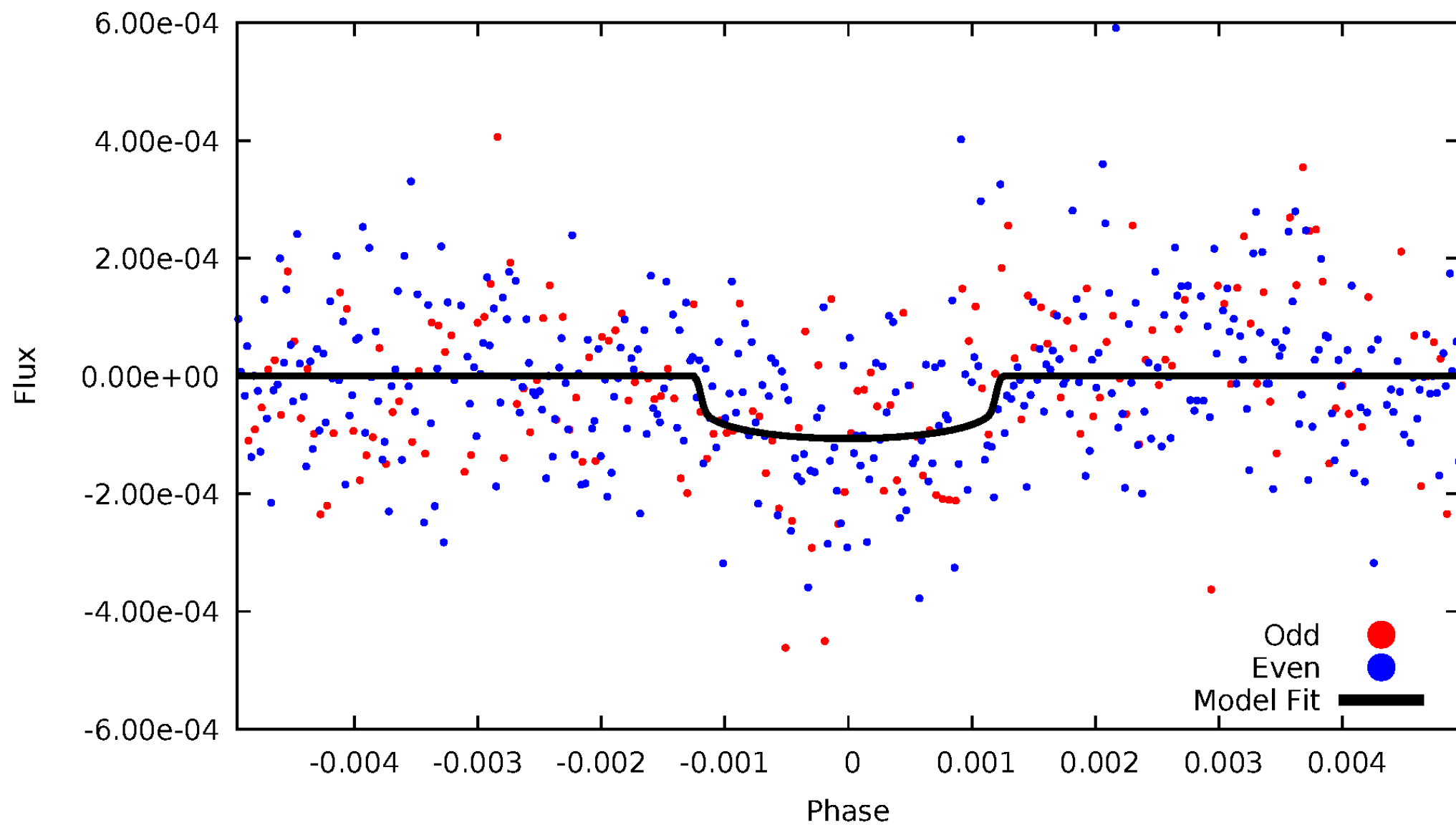


TCE 009962731-01



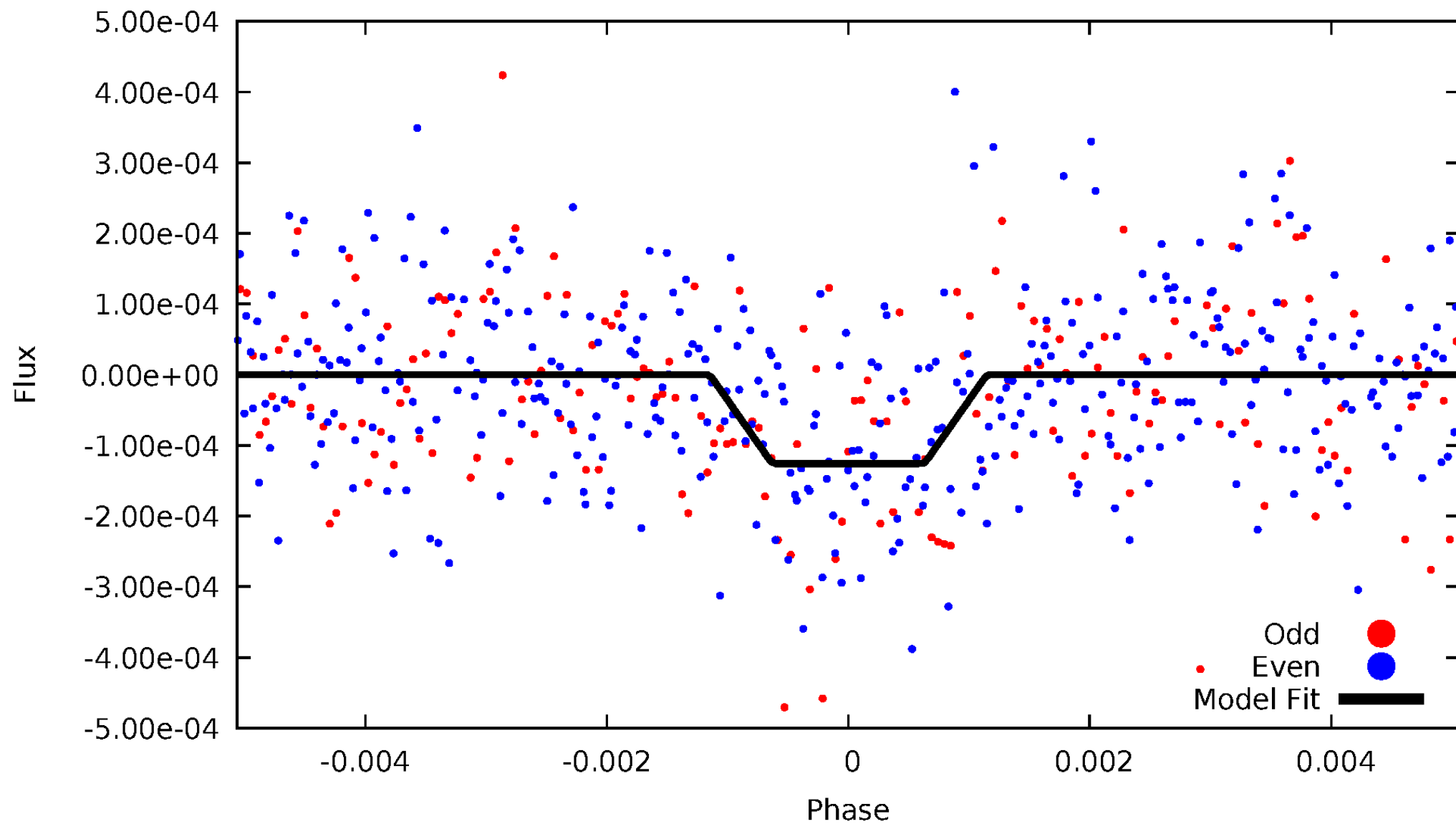
DV Odd/Even

TCE 009962731-01

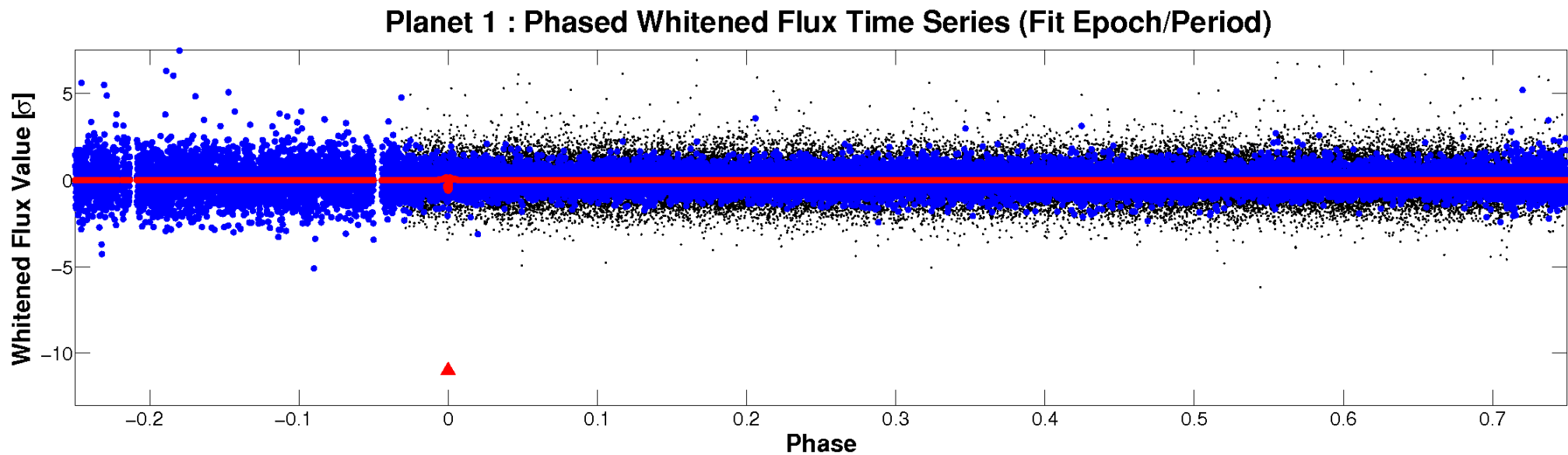
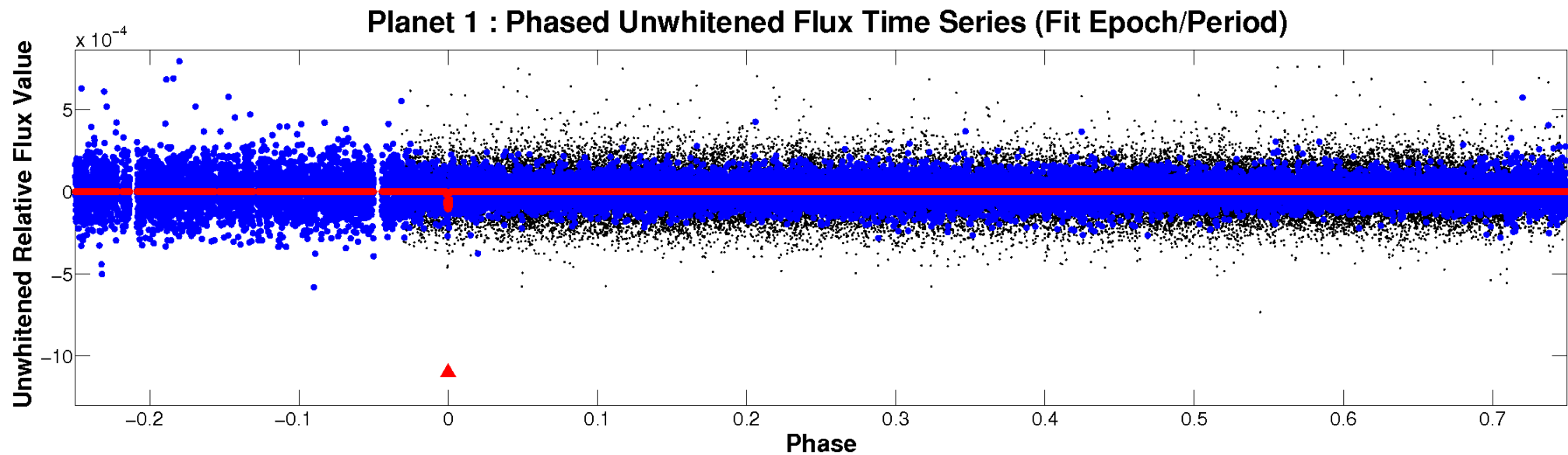


ALT Odd/Even

TCE 009962731-01

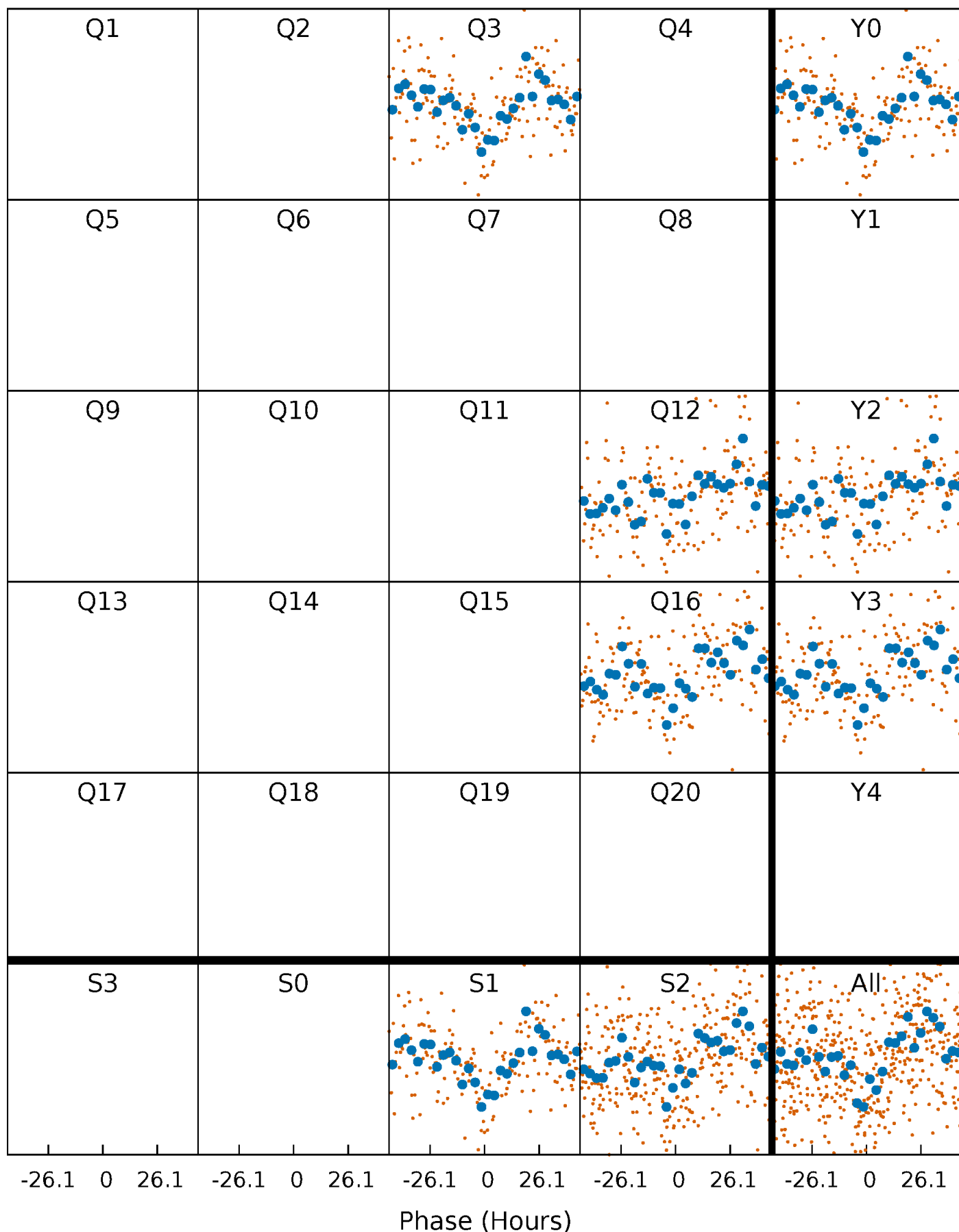


Non-Whitened Vs. Whitened Light Curve



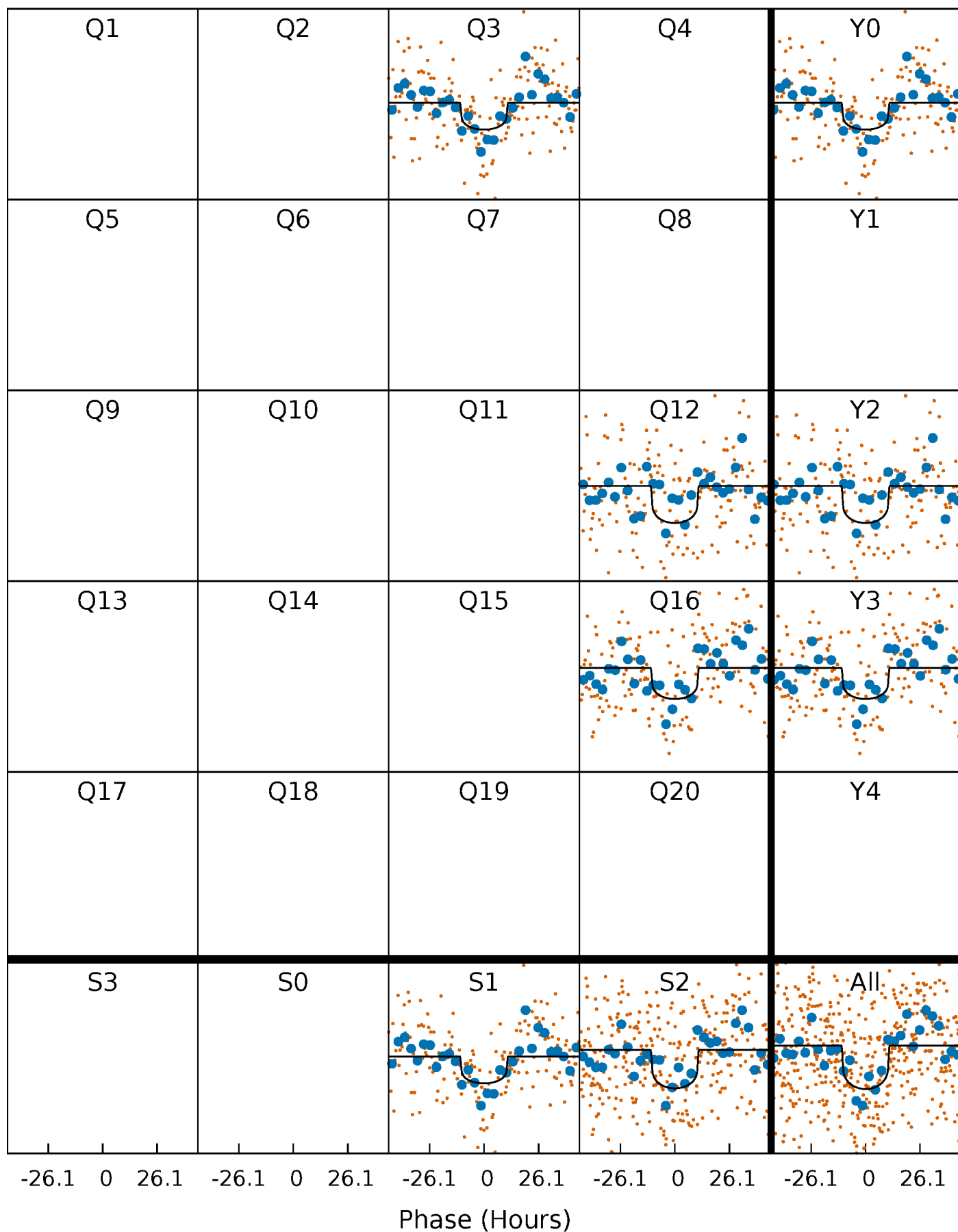
PDC Quarter-Phased Transit Curves

TCE 009962731-01 P=385.434766 Days $T_0=340.672121$ (BKJD)



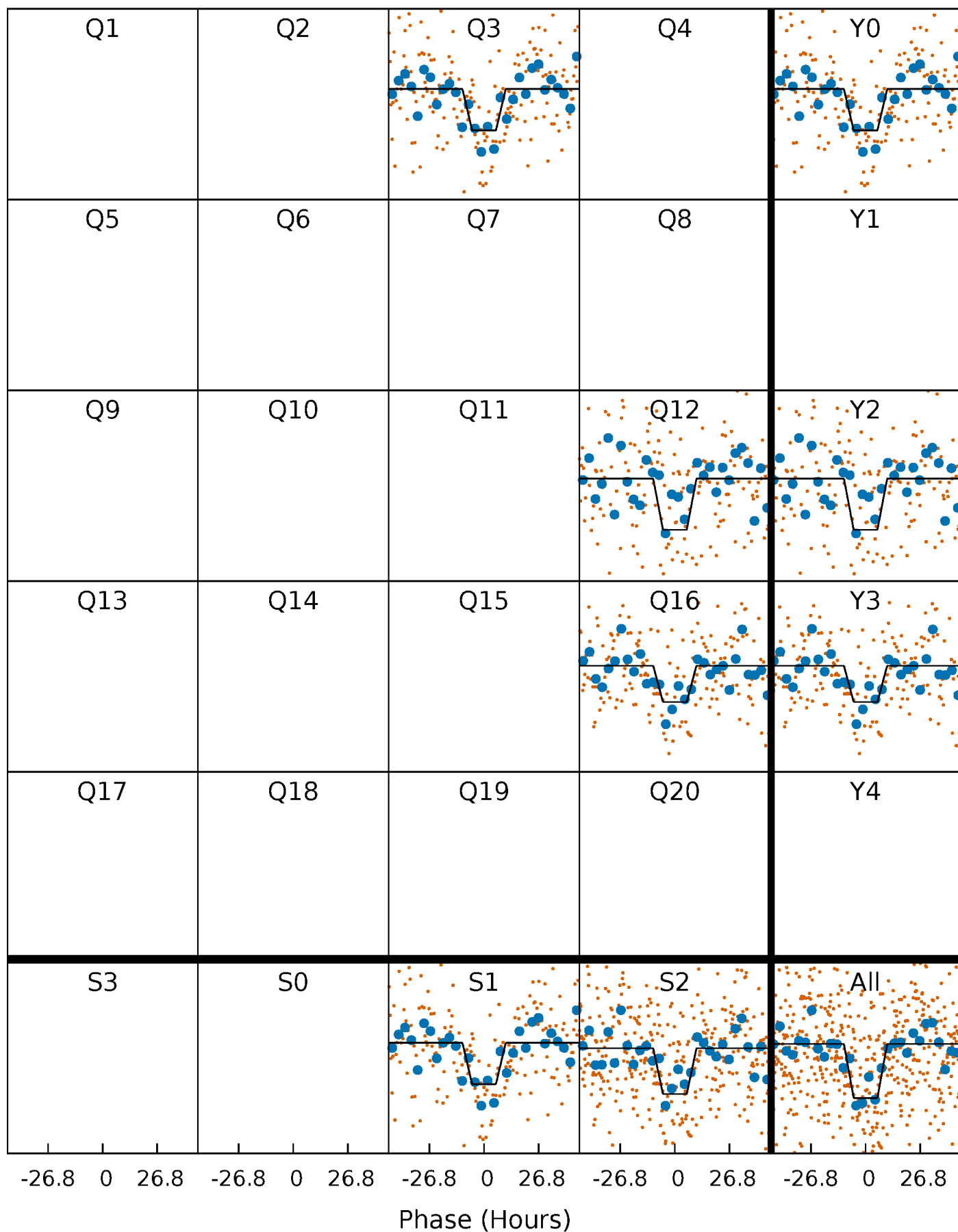
DV Quarter-Phased Transit Curves

TCE 009962731-01 P=385.434766 Days $T_0=340.672121$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

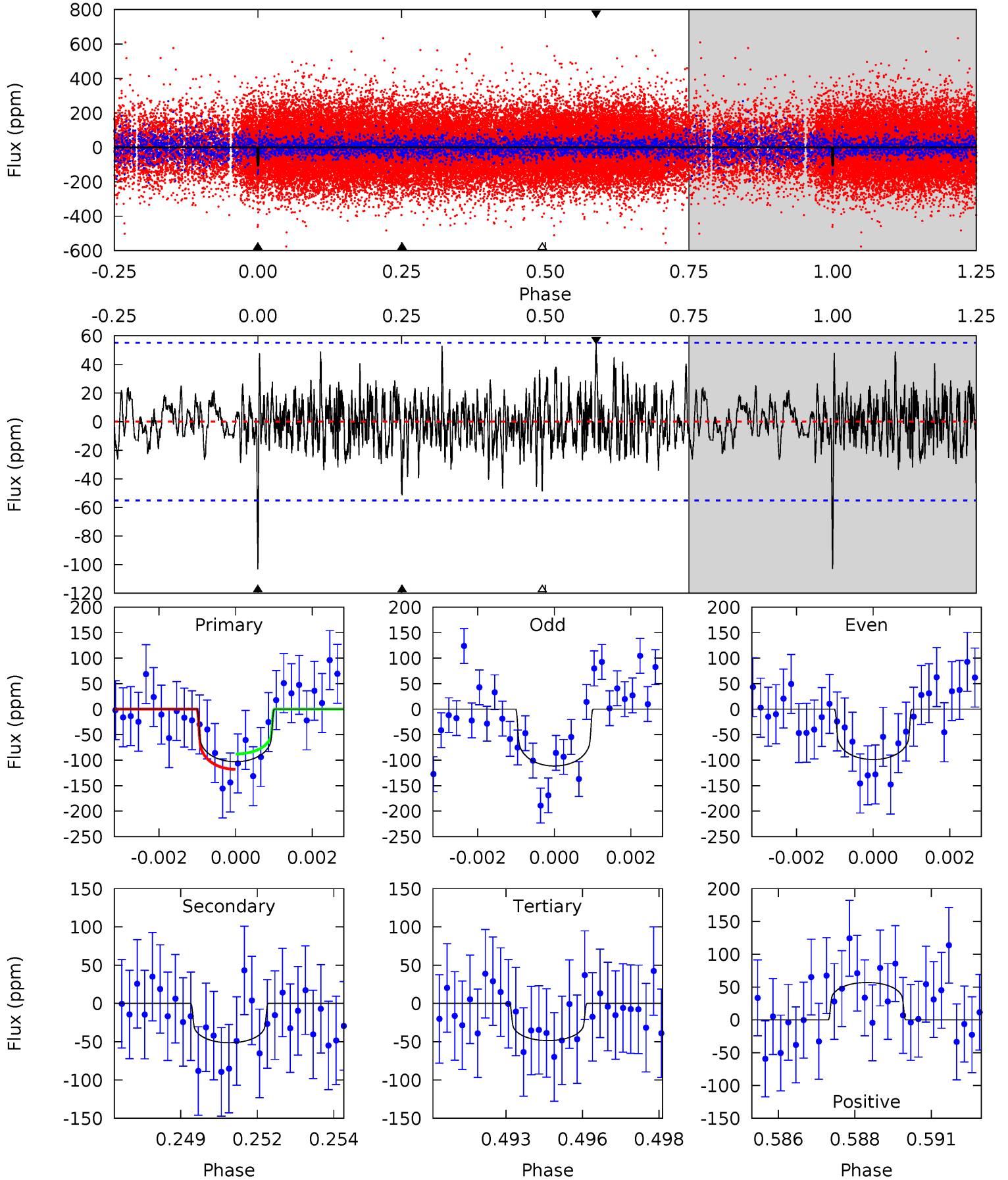
TCE 009962731-01 P=385.431431 Days $T_0=340.690533$ (BKJD)



DV Model-Shift Uniqueness Test

009962731-01, P = 385.434766 Days, E = 340.672121 Days

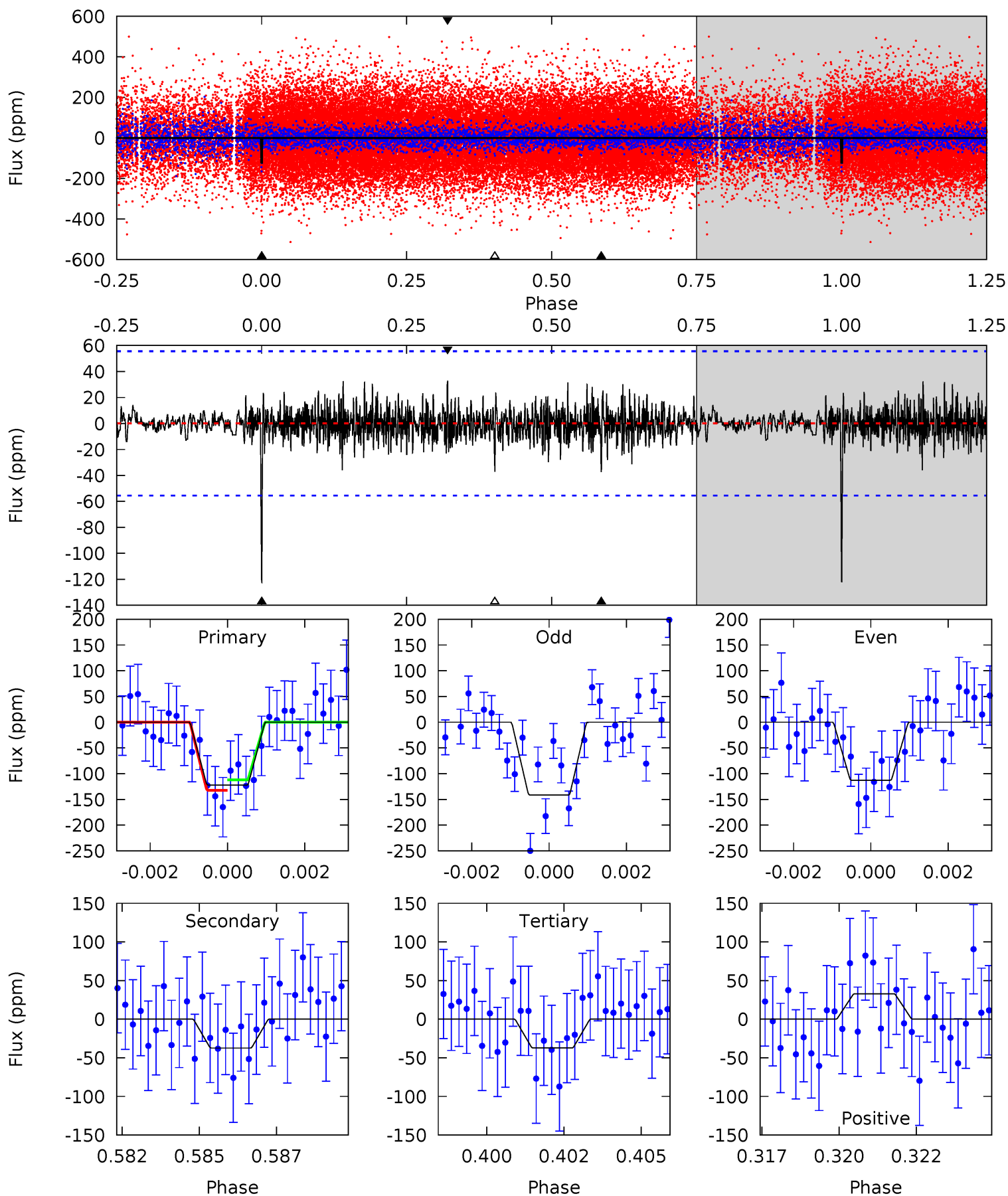
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.89	4.93	4.66	5.47	5.29	3.02	1.38	5.23	4.42	0.27	-0.54	0.57	0.89	0.36	1.45



Alt Model-Shift Uniqueness Test

009962731-01, P = 385.431431 Days, E = 340.690533 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	3.57	3.55	3.14	5.30	3.04	0.88	8.11	8.52	0.02	0.42	1.30	0.85	0.21	0.96



Stellar Parameters For KIC 009962731

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5676^{+76}_{-76}	$4.175^{+0.188}_{-0.101}$	$0.070^{+0.150}_{-0.150}$	$1.336^{+0.213}_{-0.260}$	$0.974^{+0.074}_{-0.061}$	$0.576^{+0.544}_{-0.172}$
	+1%/-1%	+5%/-2%	+214%/-214%	+16%/-19%	+8%/-6%	+95%/-30%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 009962731-01 / KOI 8191.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-51 ± 10	$1.52^{+0.41}_{-0.46}$	396^{+18}_{-22}	4775^{+759}_{-487}	12721^{+13285}_{-5227}
Alt.	-37 ± 10	$1.59^{+0.45}_{-0.47}$	396^{+18}_{-22}	4425^{+533}_{-457}	8894^{+8685}_{-4086}

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 $A_{obs} \gg 1.0$

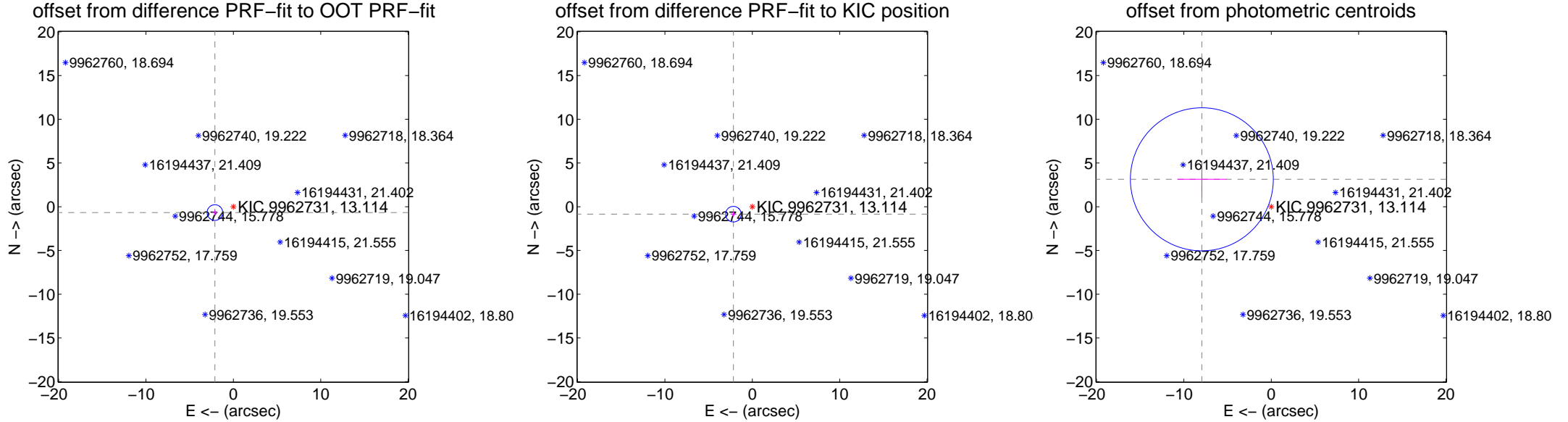
DV Centroid Data

Supplemental centroid analysis for 009962731-01. Kepler magnitude: 13.11. Transit SNR 6.27

There are 1 quarters with good PRF difference image offsets

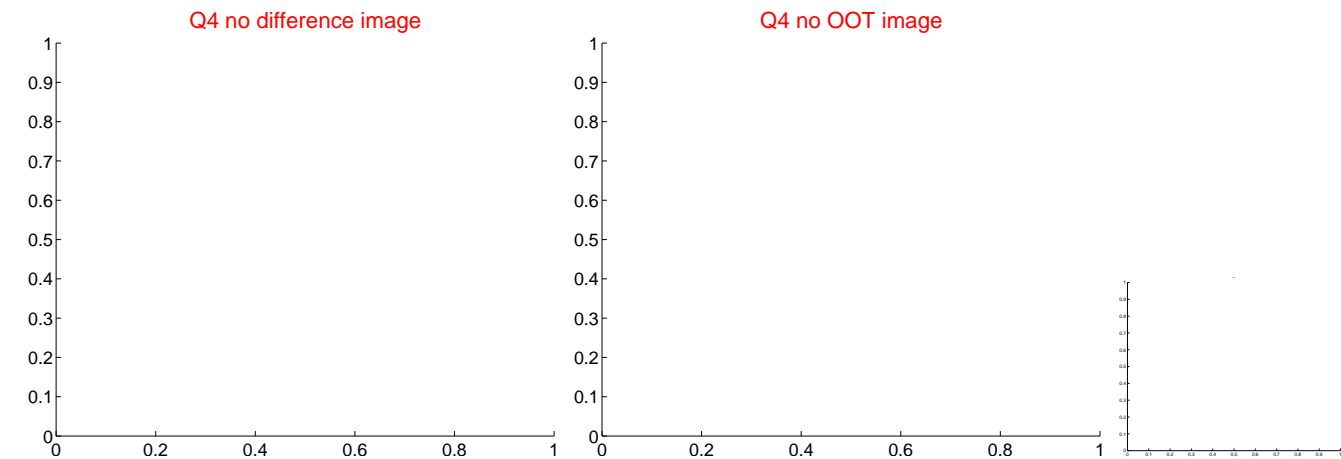
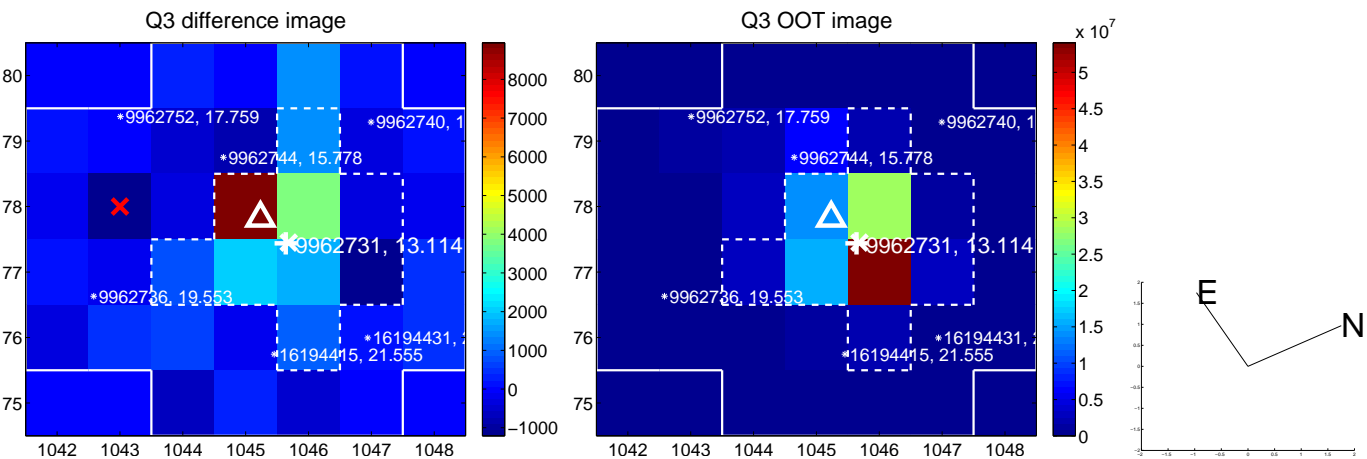
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.213 ± 0.298	7.43	2.110 ± 0.299	-0.667 ± 0.287
PRF-fit source offset from KIC position	2.326 ± 0.297	7.83	2.164 ± 0.299	-0.852 ± 0.287
photometric centroid source offset	8.54 ± 2.73	3.13	7.95 ± 2.82	3.13 ± 2.07



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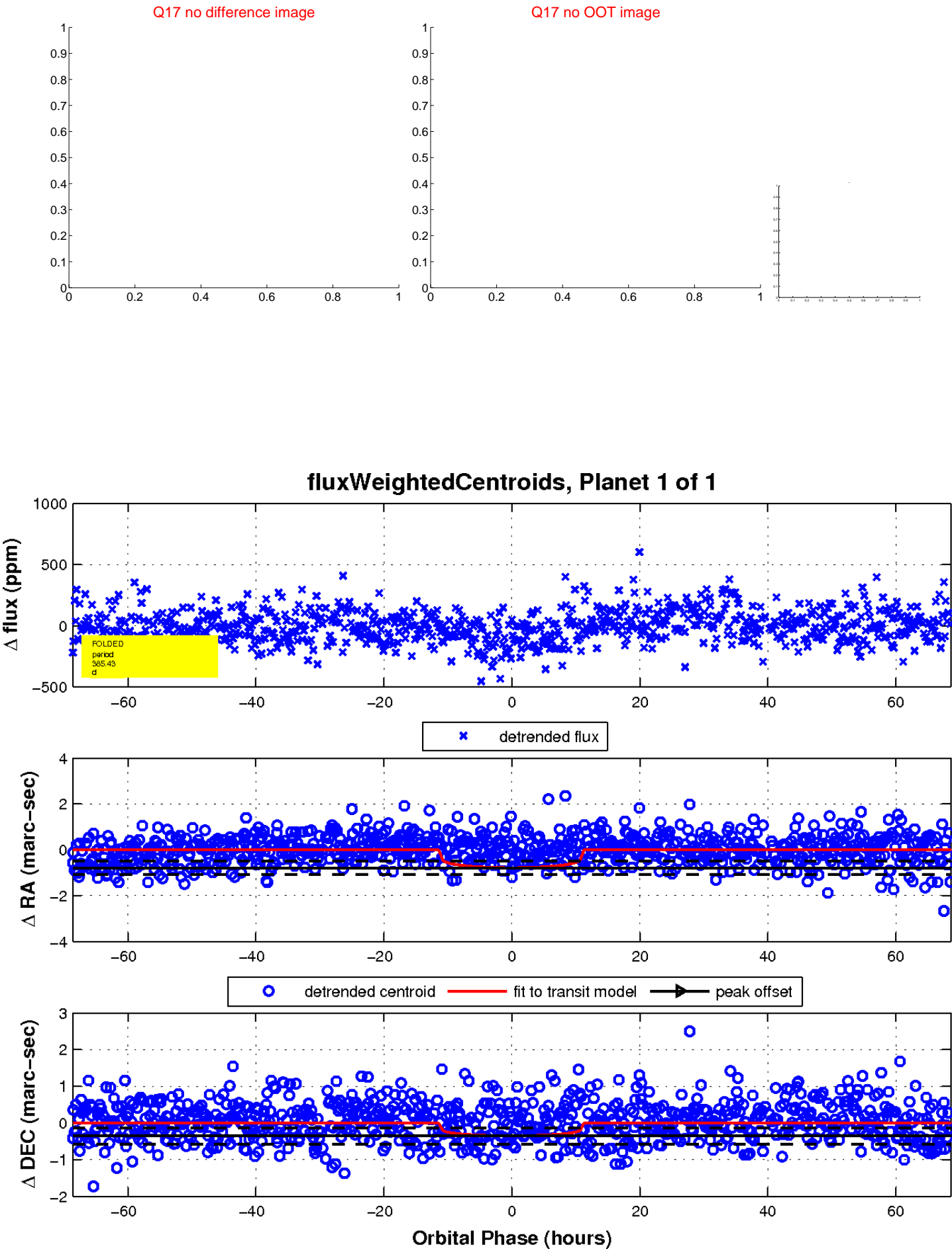
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

