

KIC 004904941

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})
004904941-01	OBS	No	428.764373	236.194430	851.1	13.821	8.1	6.8	0.76	5541	2.30	0.44

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004904941-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—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.

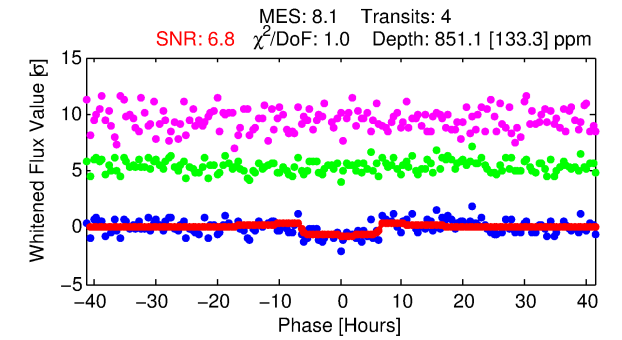
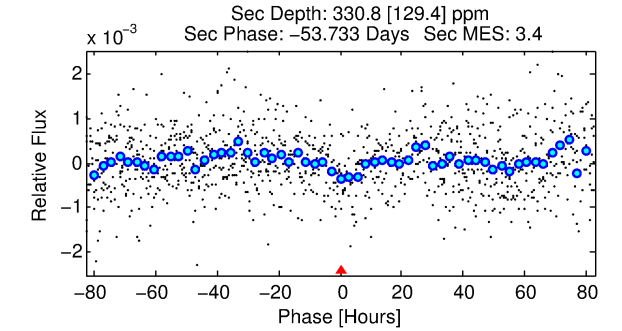
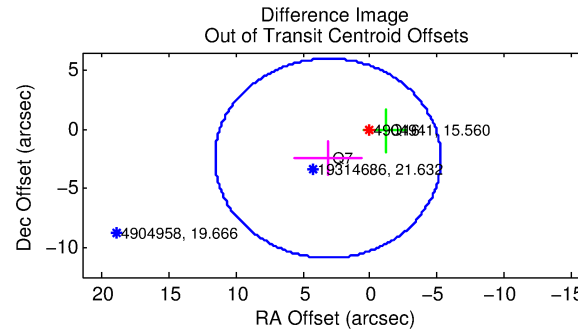
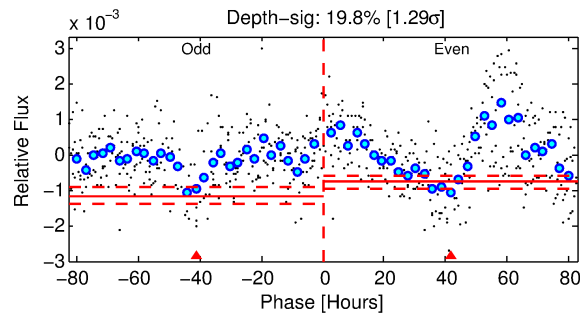
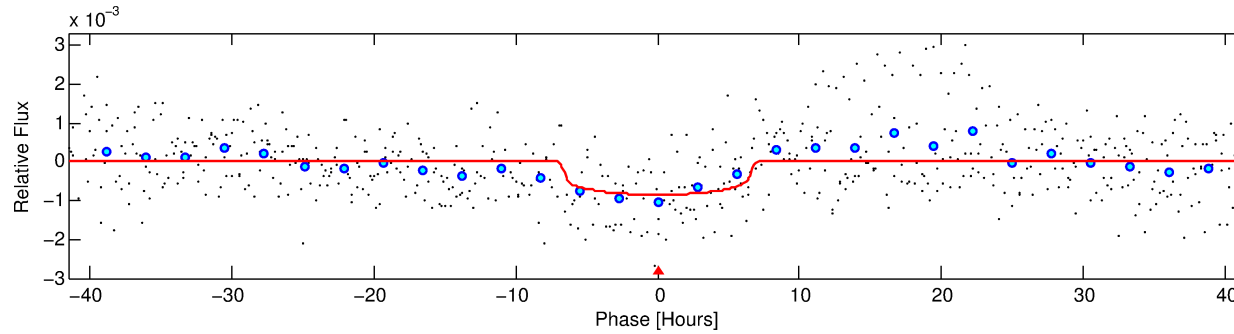
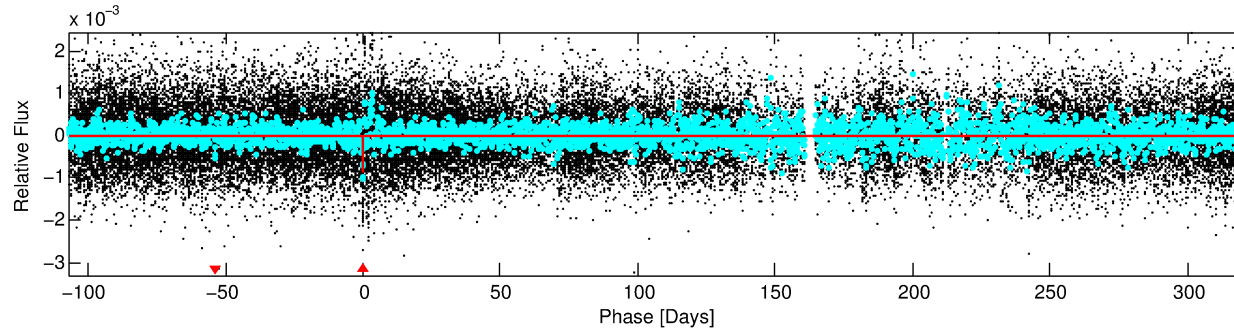
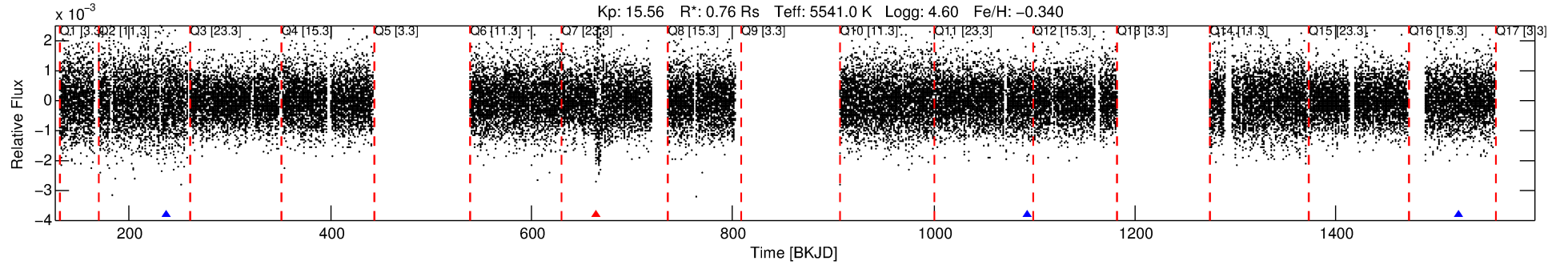
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004904941-01

No Significant Match Found

DV One-Page Summary

KIC: 4904941 Candidate: 1 of 1 Period: 428.764 d



DV Fit Results:

Period = 428.76437 [0.01153] d
Epoch = 236.1944 [0.0220] BKJD
Rp/R* = 0.0277 [0.0118]
a/R* = 198.99 [352.38]
b = 0.59 [1.95]
Seff = 0.44 [0.12]
Teq = 208 [15] K
Rp = 2.30 [1.09] Re
a = 1.0498 [0.1842] AU
Ag = 37777.99 [36621.05] [1.03 σ]
Teff = 4486 [1059] K [4.04 σ]

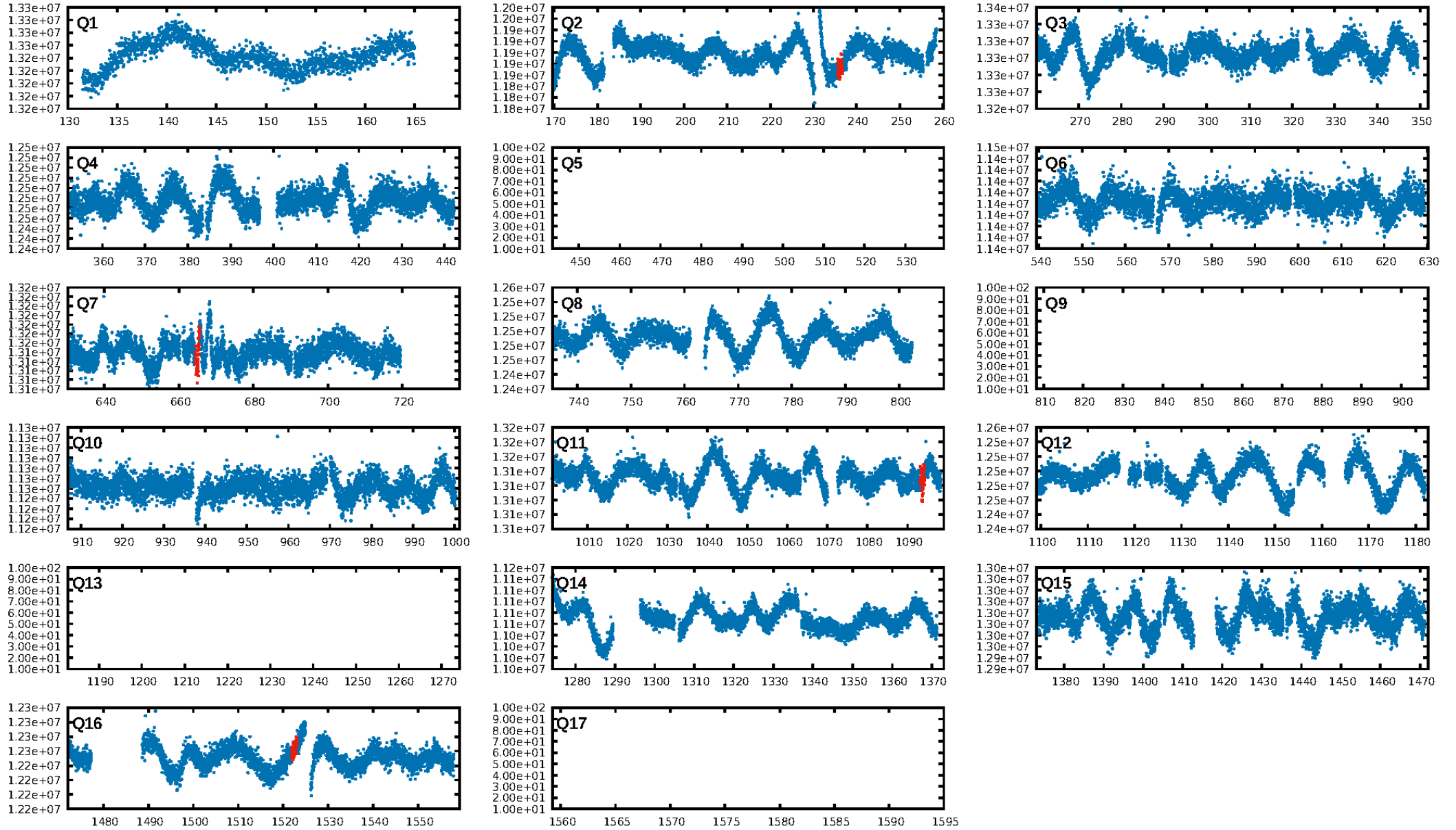
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.49e-14
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: 1.302
Centroid-sig: 0.8%
Centroid-so: 2.565 arcsec [1.79 σ]
OotOffset-rm: 3.998 arcsec [1.42 σ]
KicOffset-rm: 4.071 arcsec [2.80 σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

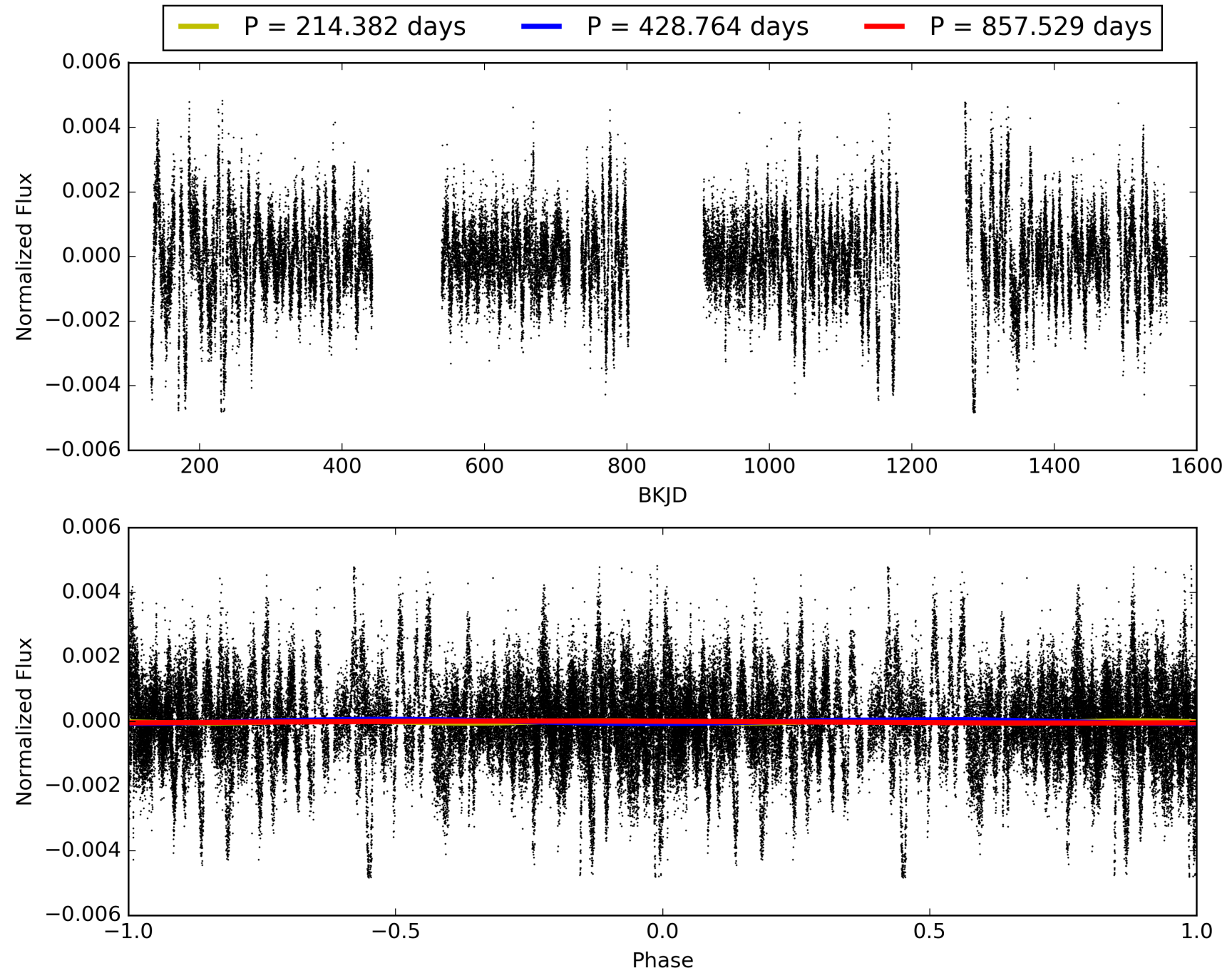
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:59:25 Z

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

TCE 004904941-01, PDC Light Curves

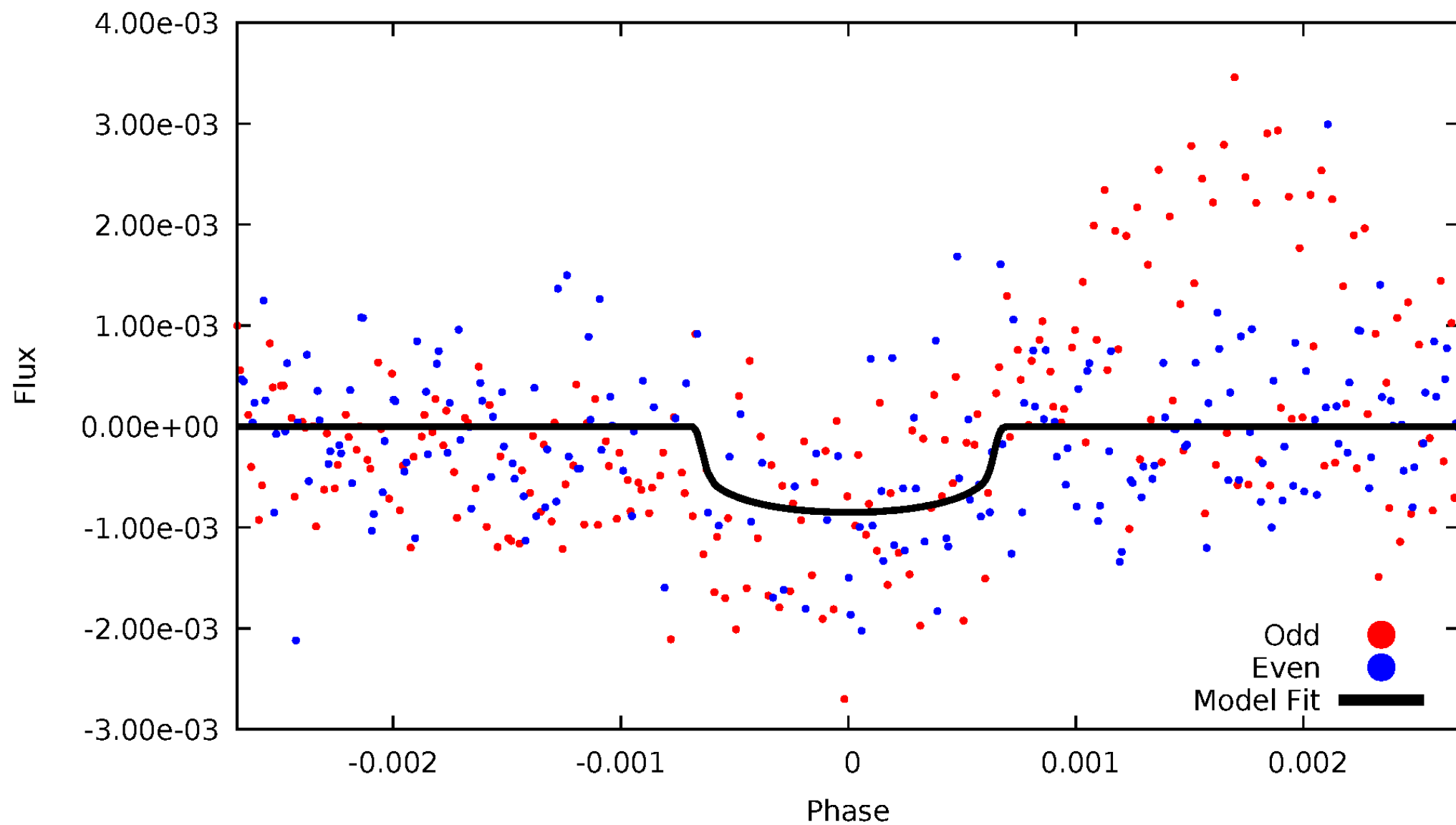


TCE 004904941-01



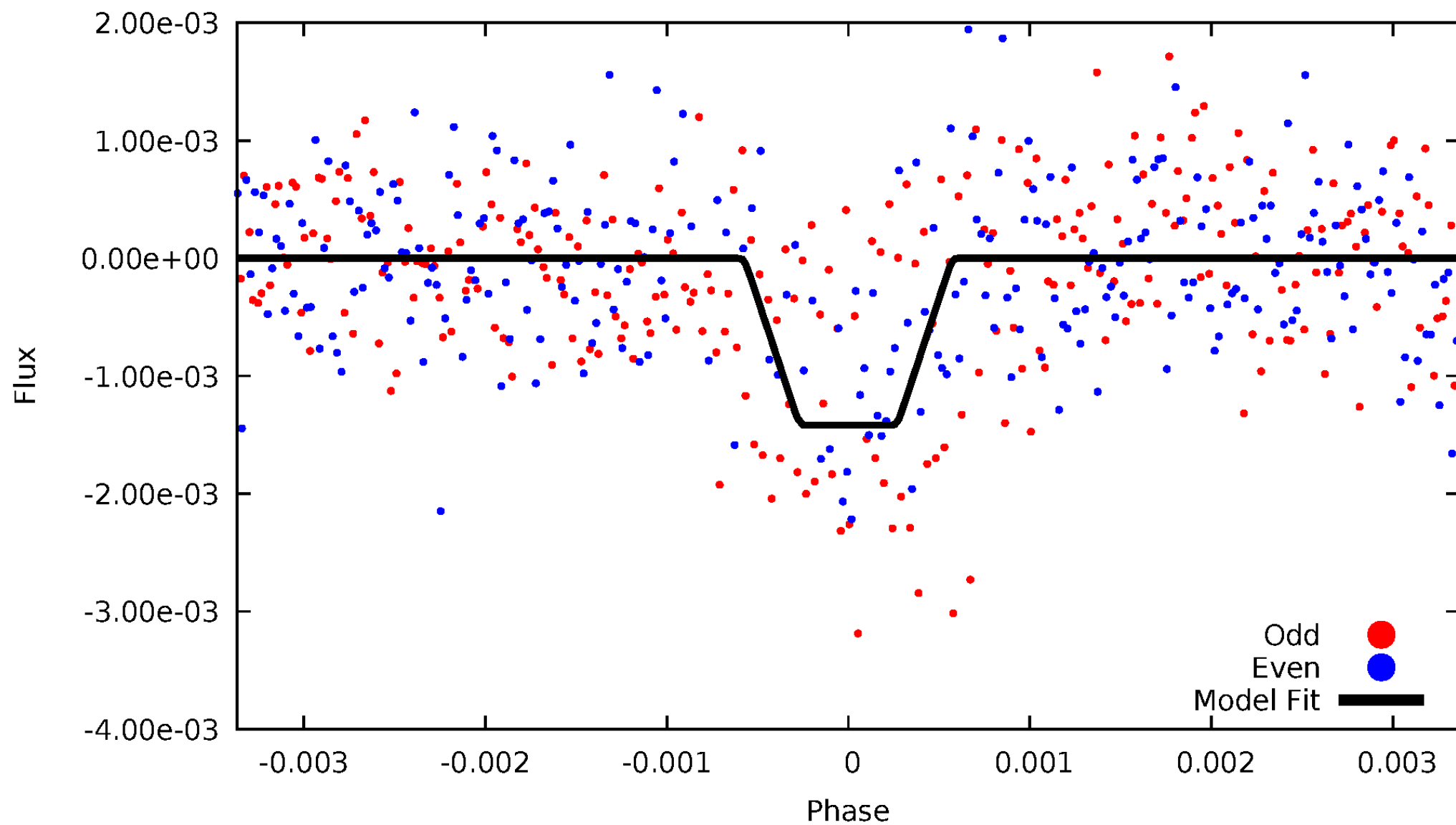
DV Odd/Even

TCE 004904941-01



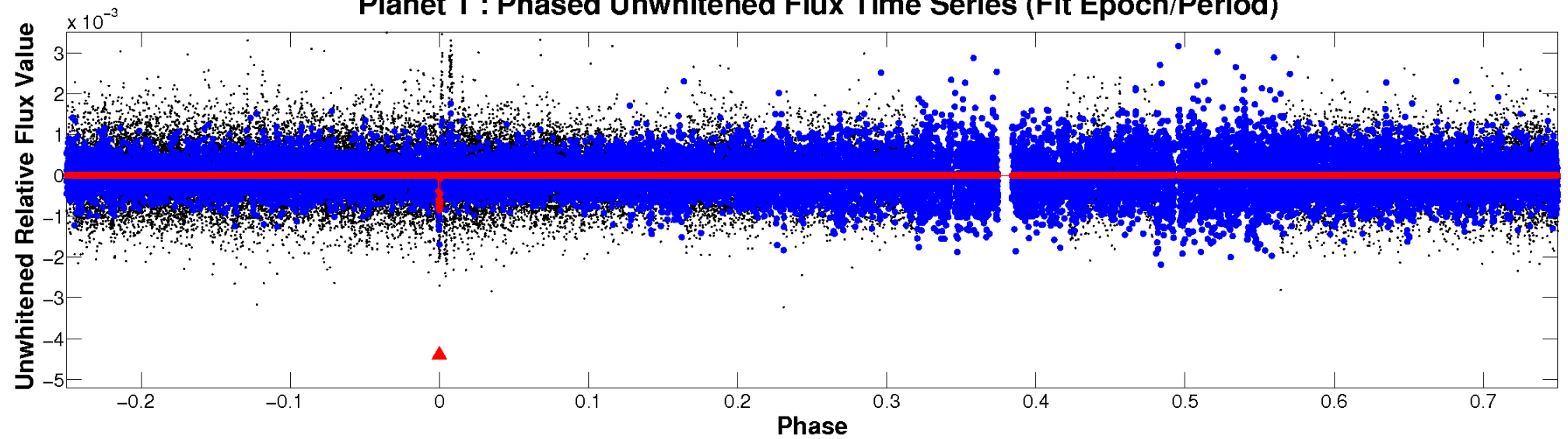
ALT Odd/Even

TCE 004904941-01

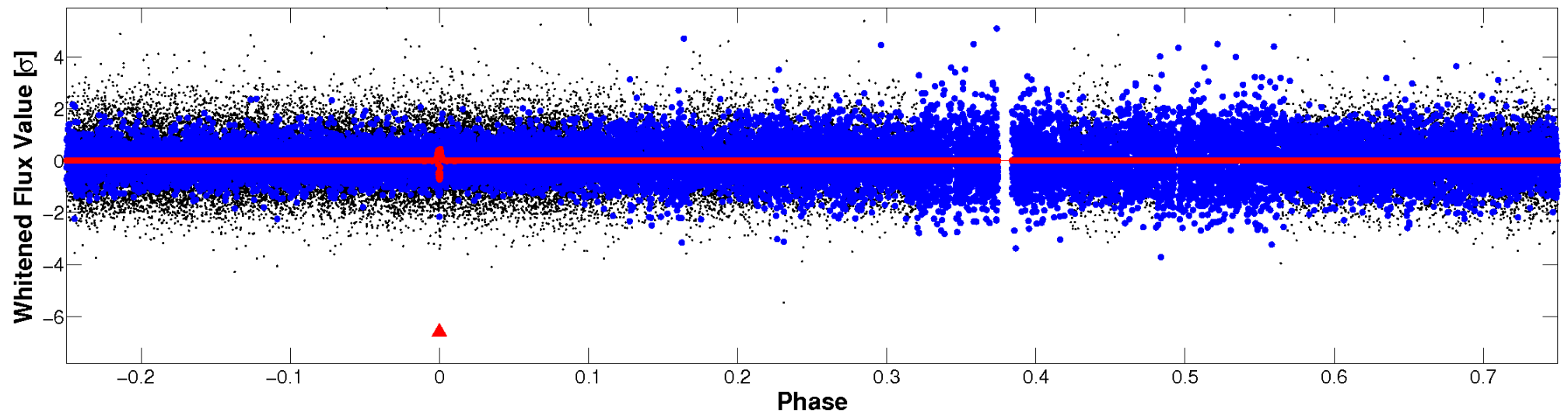


Non-Whitened Vs. Whitened Light Curve

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

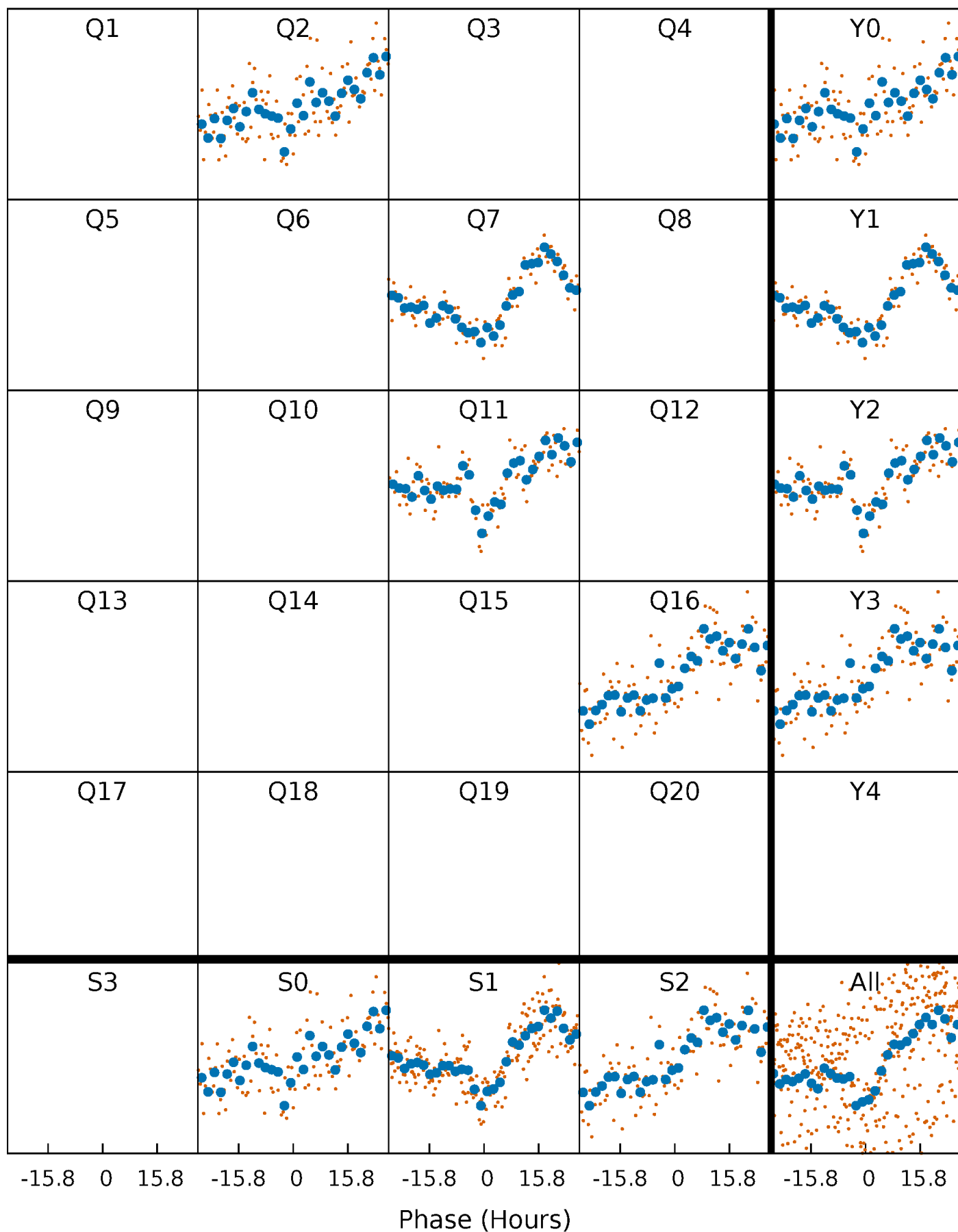


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



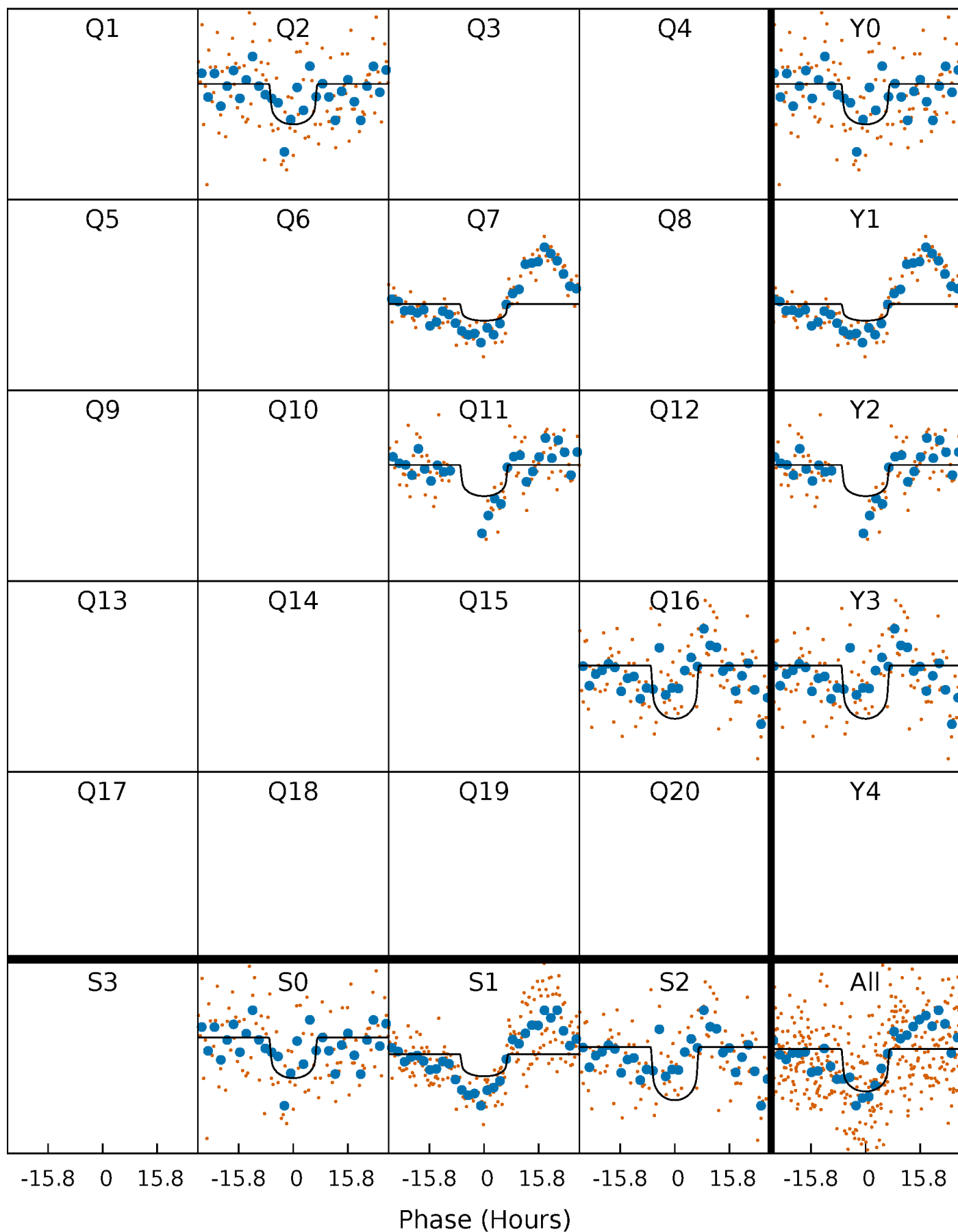
PDC Quarter-Phased Transit Curves

TCE 004904941-01 P=428.764373 Days $T_0=236.194430$ (BKJD)



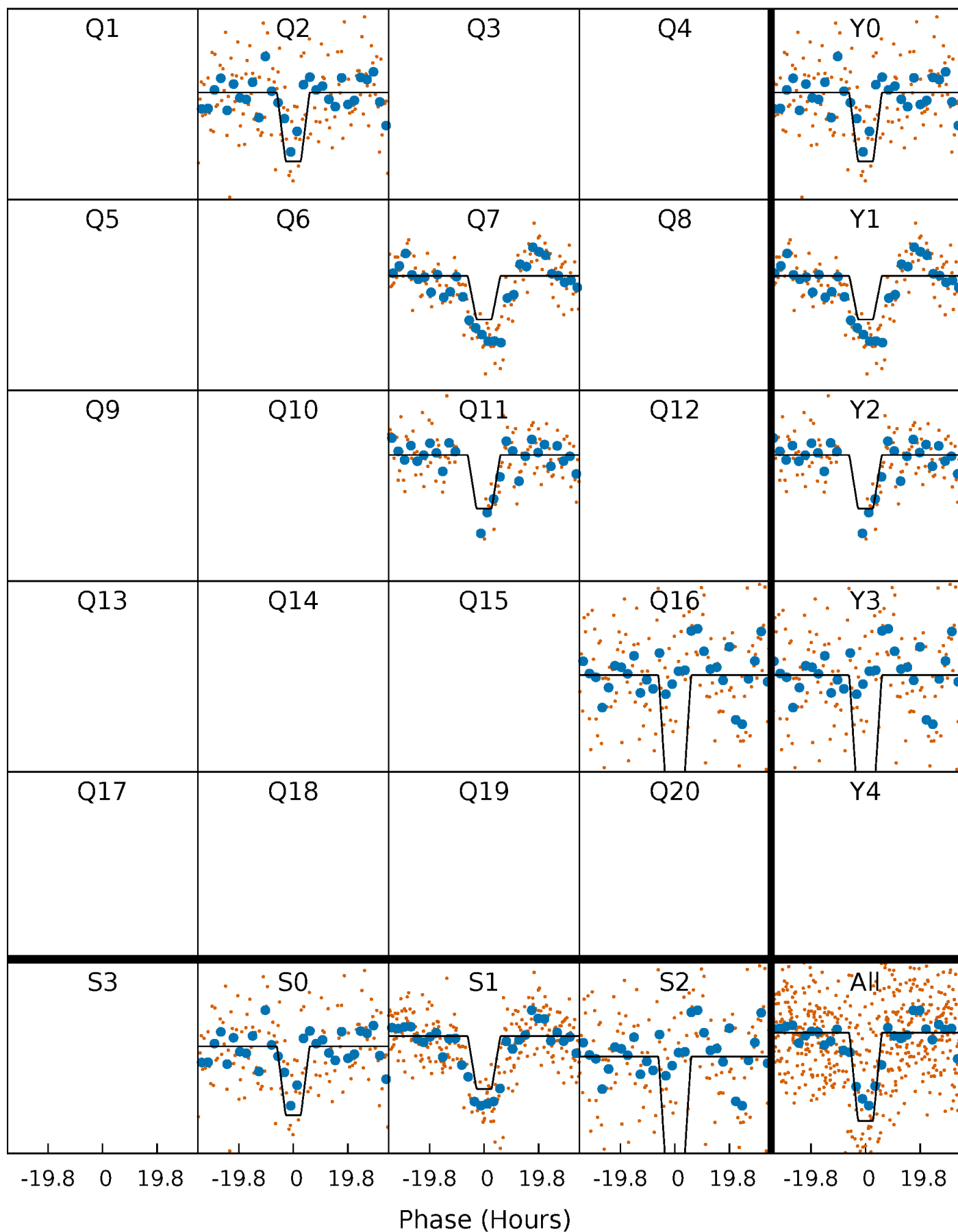
DV Quarter-Phased Transit Curves

TCE 004904941-01 P=428.764373 Days $T_0=236.194430$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

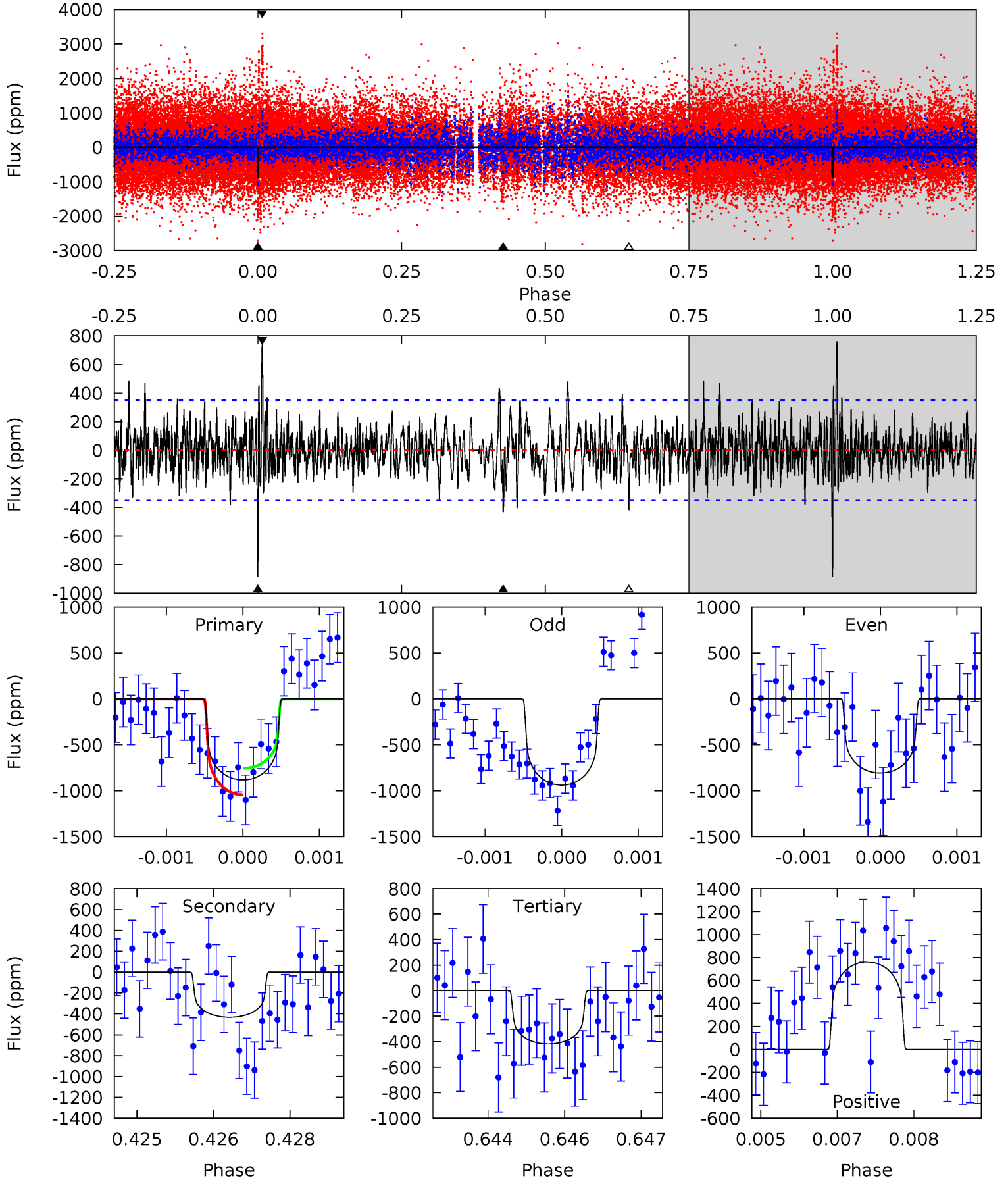
TCE 004904941-01 P=428.811879 Days $T_0=236.116738$ (BKJD)



DV Model-Shift Uniqueness Test

004904941-01, P = 428.764373 Days, E = 236.194430 Days

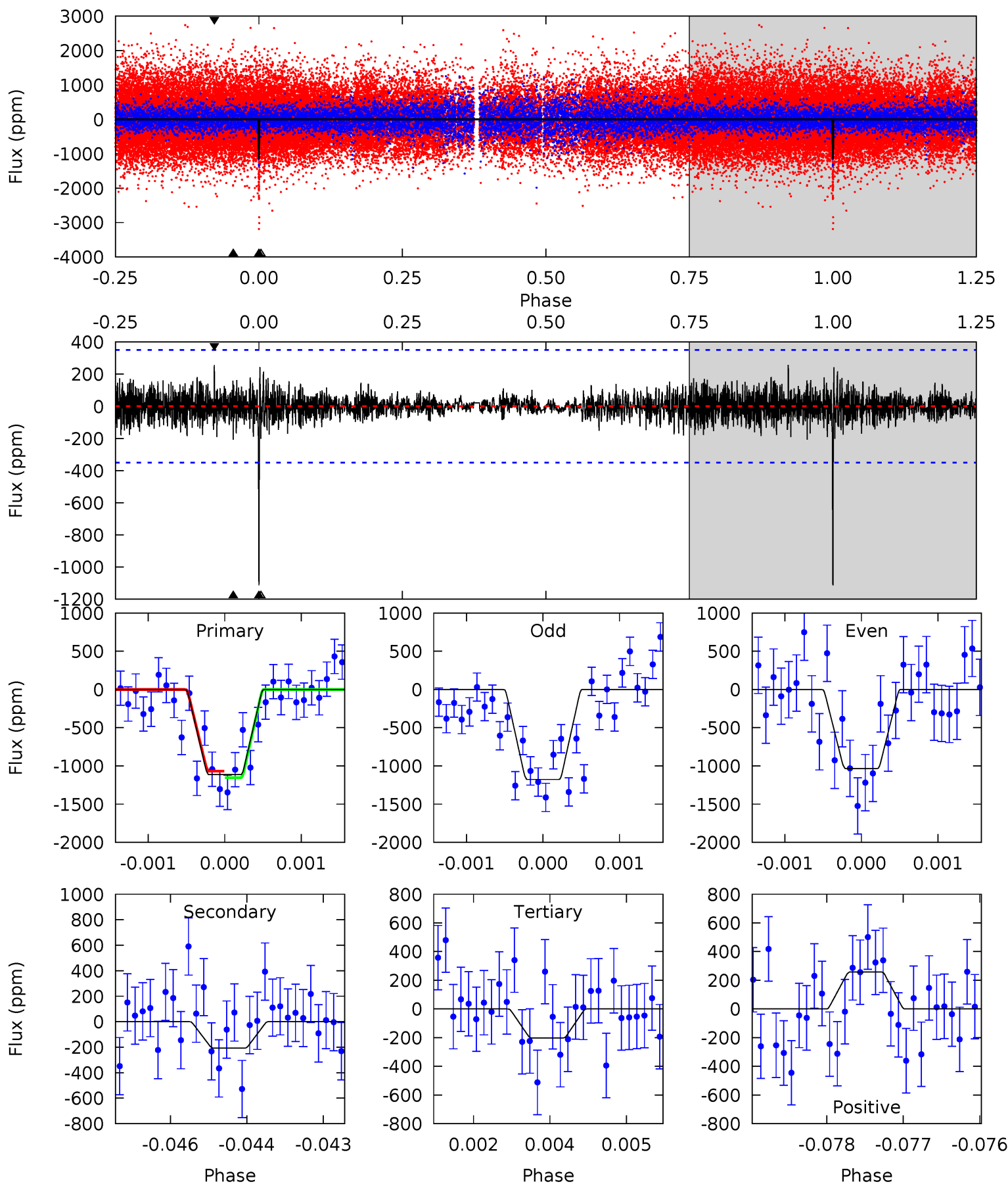
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	6.70	6.47	11.8	5.40	3.20	2.03	7.19	1.87	0.23	-5.09	1.01	0.99	0.46	2.22



Alt Model-Shift Uniqueness Test

004904941-01, $P = 428.811879$ Days, $E = 236.116738$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	3.19	3.13	3.98	5.42	3.25	0.89	14.1	13.3	0.07	-0.79	1.10	0.98	0.19	0.66



Stellar Parameters For KIC 004904941

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5541^{+150}_{-167}	$4.599^{+0.032}_{-0.136}$	$-0.340^{+0.300}_{-0.300}$	$0.761^{+0.161}_{-0.058}$	$0.851^{+0.082}_{-0.100}$	$2.722^{+0.477}_{-1.046}$
	+3%/-3%	+1%/-3%	+88%/-88%	+21%/-8%	+10%/-12%	+18%/-38%
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 004904941-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-432 ± 65	$2.41^{+1.07}_{-1.01}$	296^{+15}_{-12}	4837^{+1371}_{-666}	43847^{+88431}_{-23243}
Alt.	-206 ± 65	$3.20^{+1.06}_{-1.04}$	296^{+15}_{-13}	3815^{+565}_{-415}	11797^{+14368}_{-5614}

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

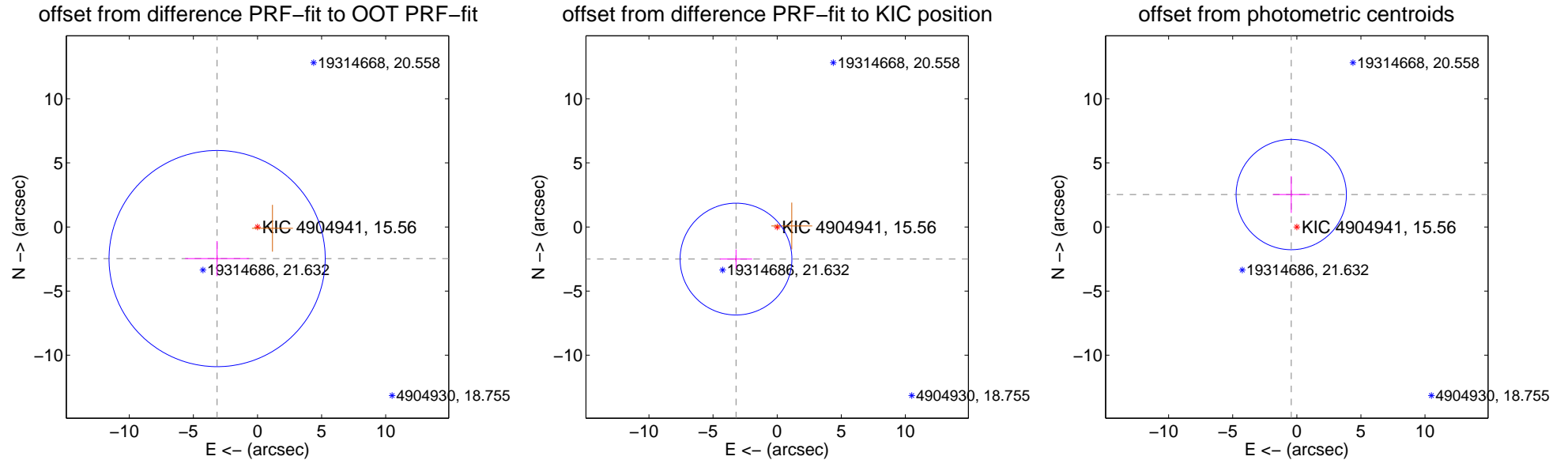
DV Centroid Data

Supplemental centroid analysis for 004904941-01. Kepler magnitude: 15.56. Transit SNR 6.80

There are 0 quarters with good PRF difference image offsets

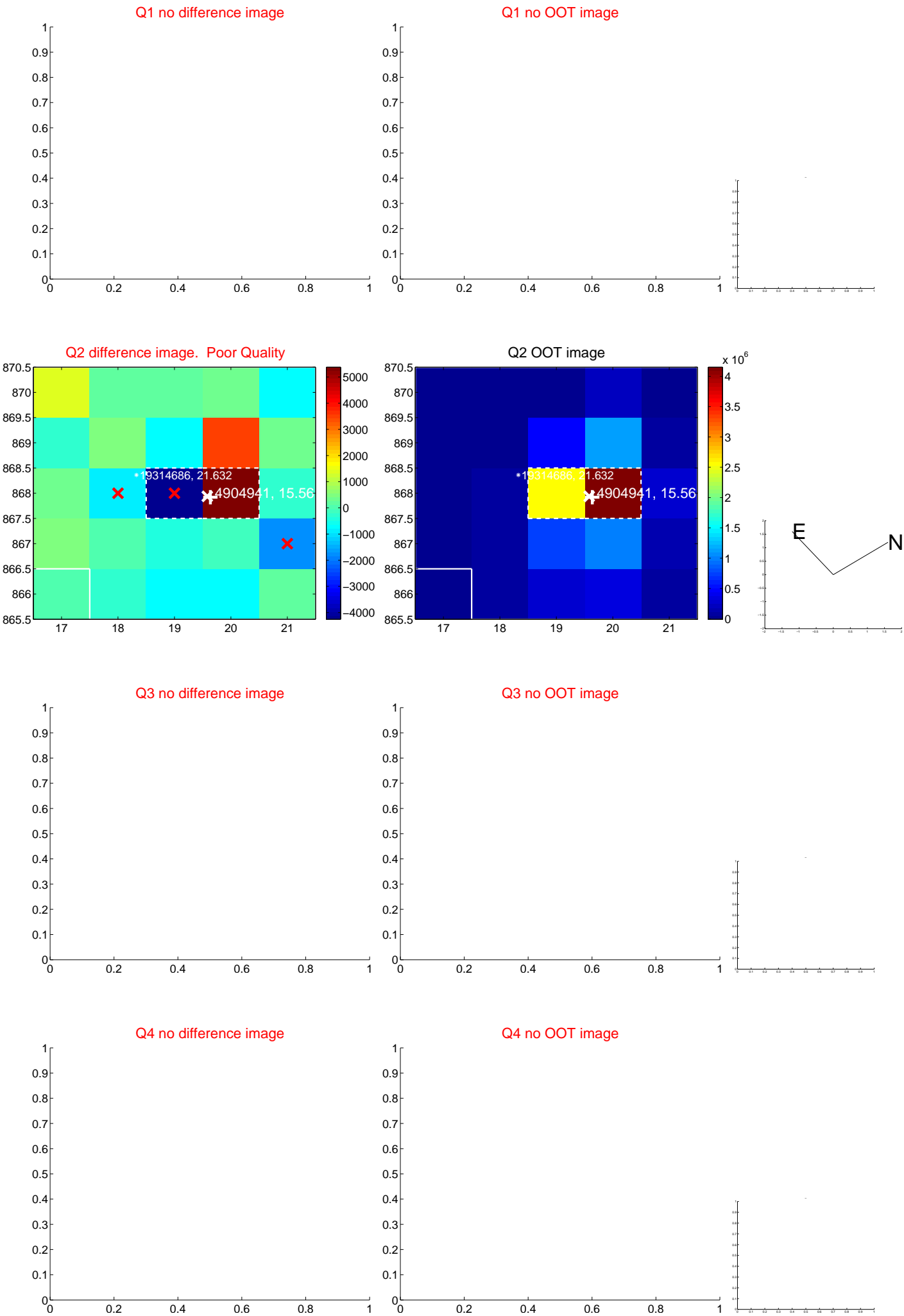
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.998 ± 2.810	1.42	3.148 ± 2.497	-2.465 ± 1.370
PRF-fit source offset from KIC position	4.071 ± 1.453	2.80	3.210 ± 1.260	-2.504 ± 0.751
photometric centroid source offset	2.57 ± 1.43	1.79	0.43 ± 1.44	2.53 ± 1.43

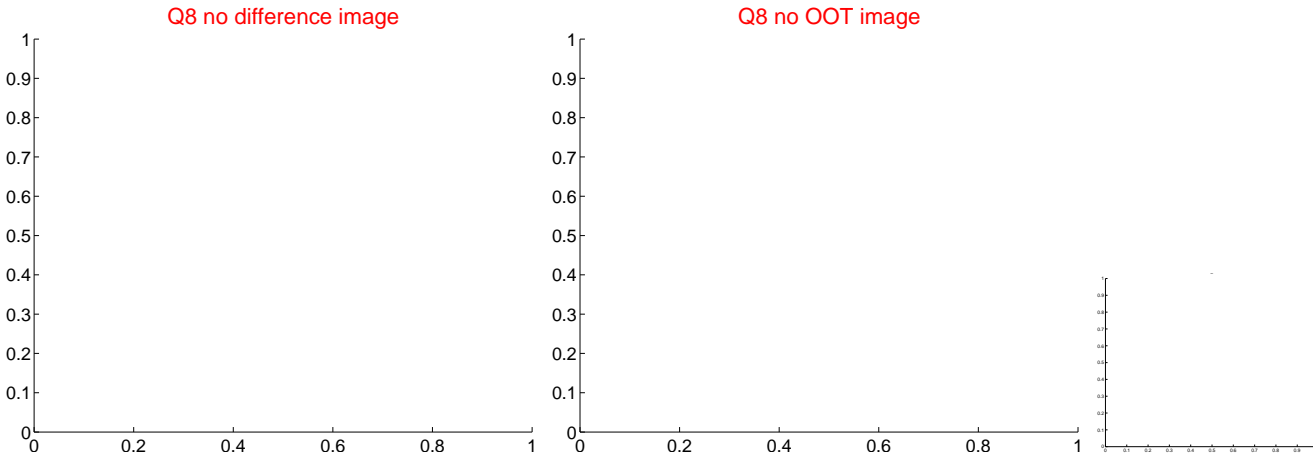
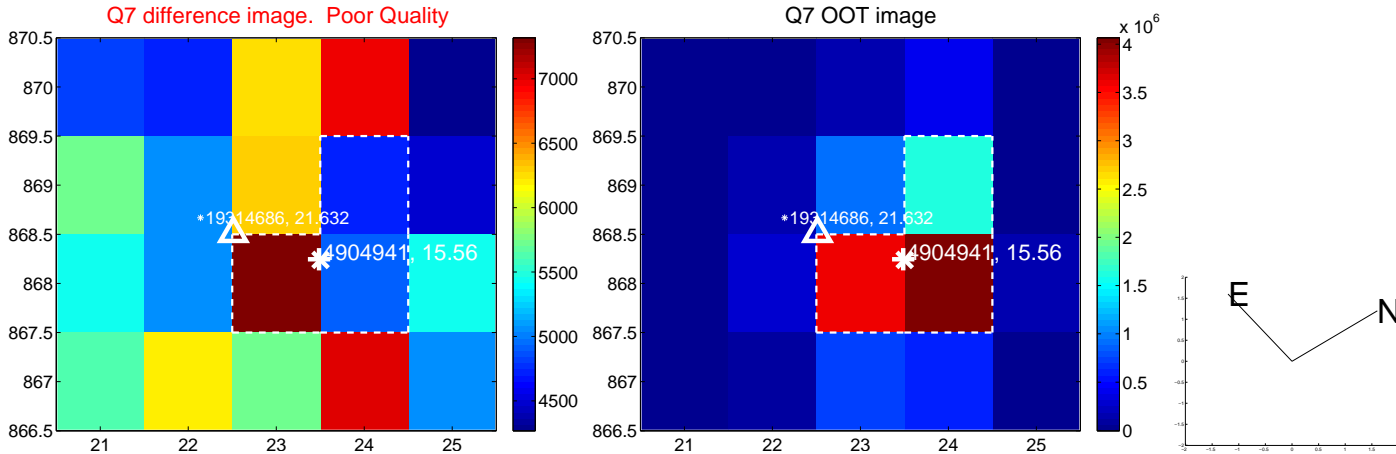
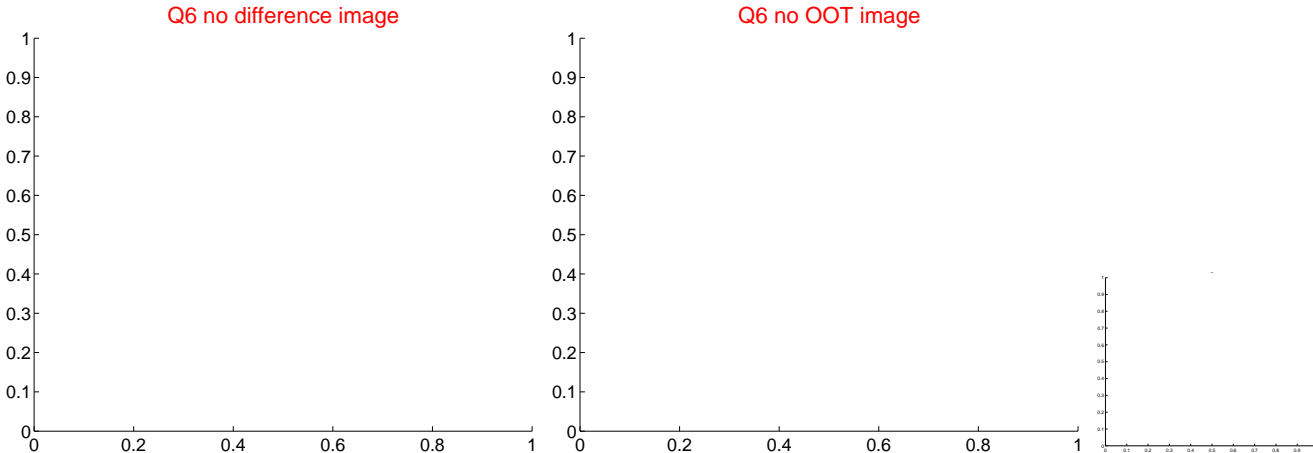
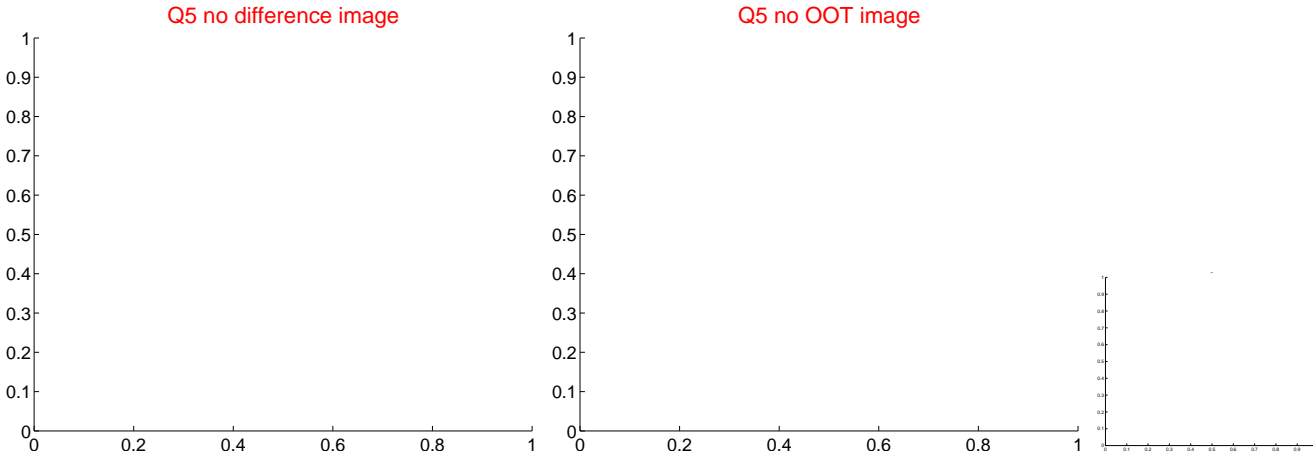


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



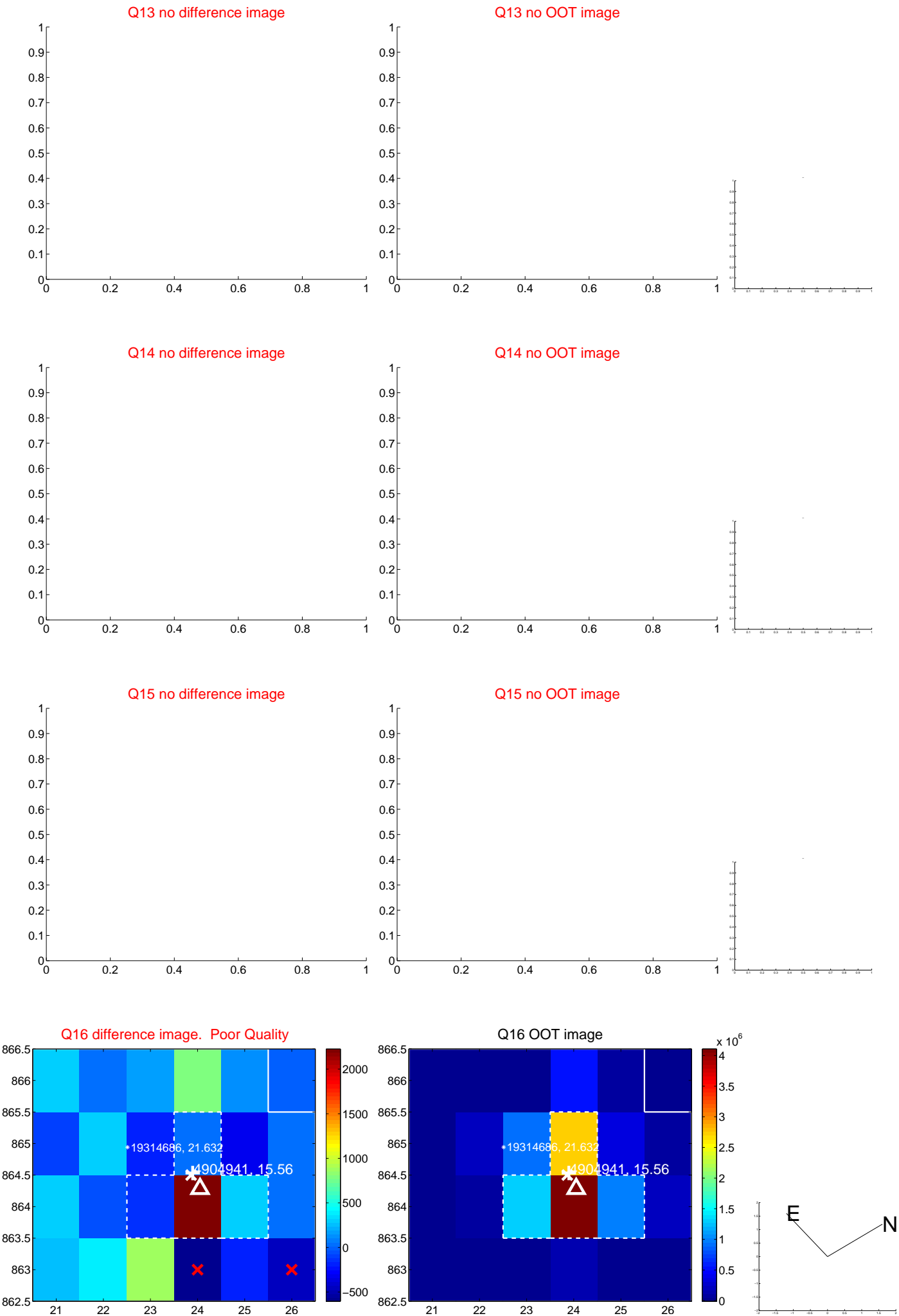
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



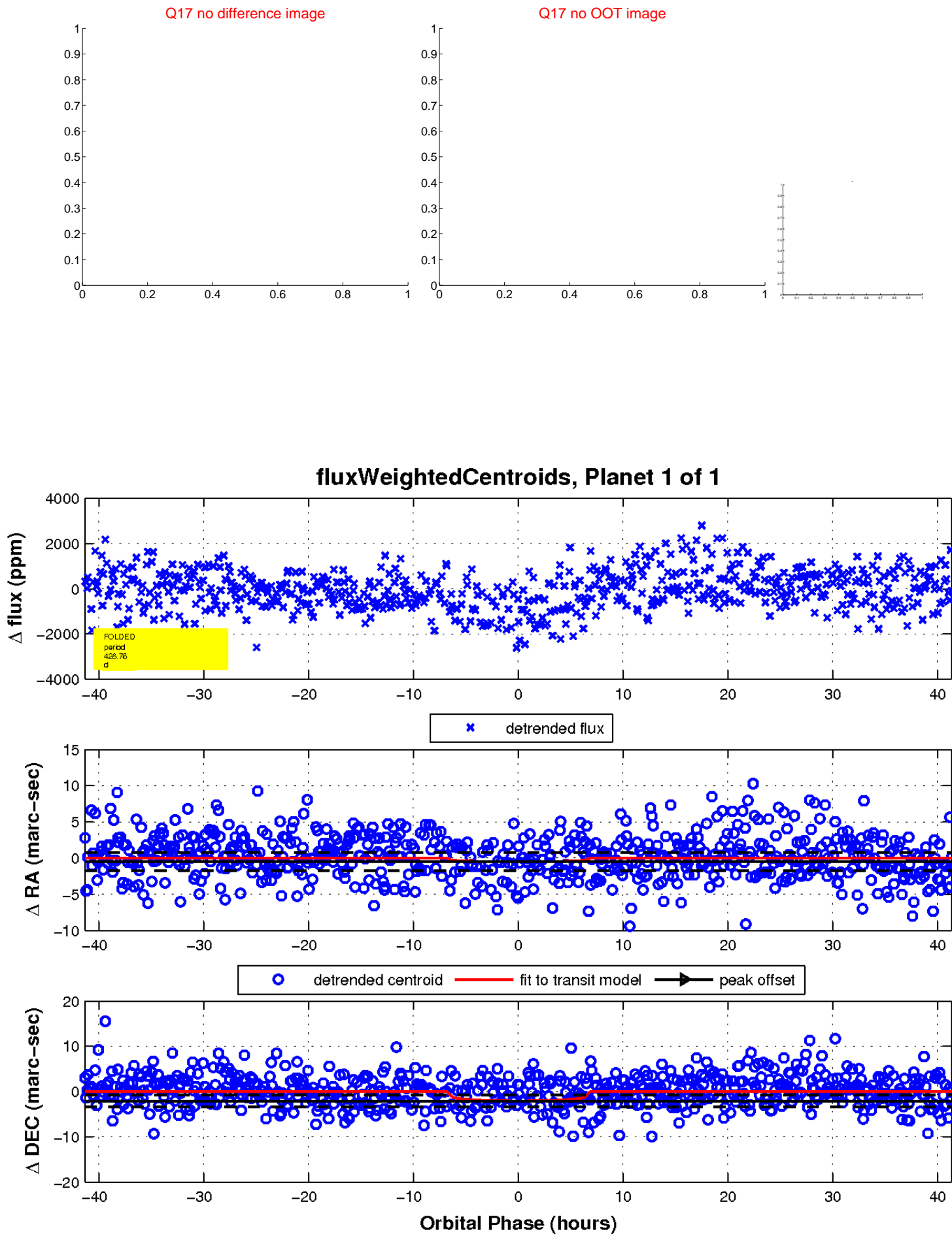
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

