

KIC 008491374

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})
008491374-01	OBS	No	390.356525	430.471364	118.5	10.523	7.3	7.1	1.96	6227	2.39	3.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008491374-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—INCONSISTENT_TRANS—CENT_SATURATED

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

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

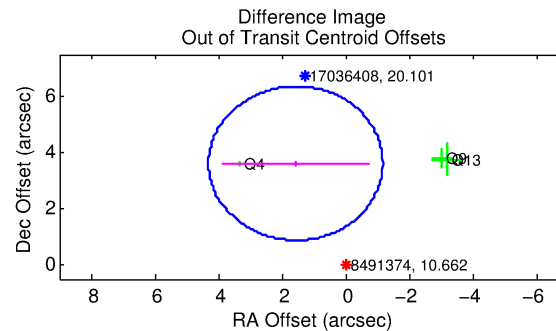
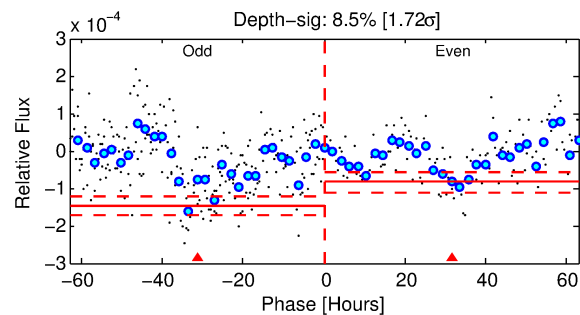
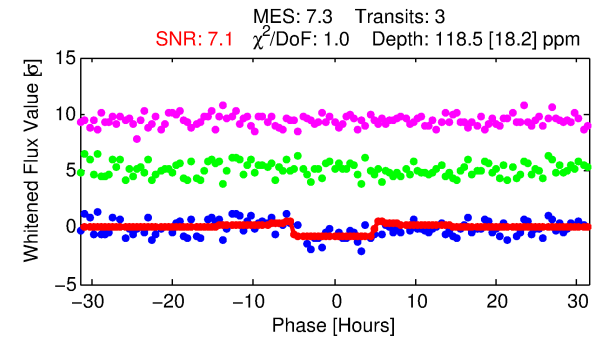
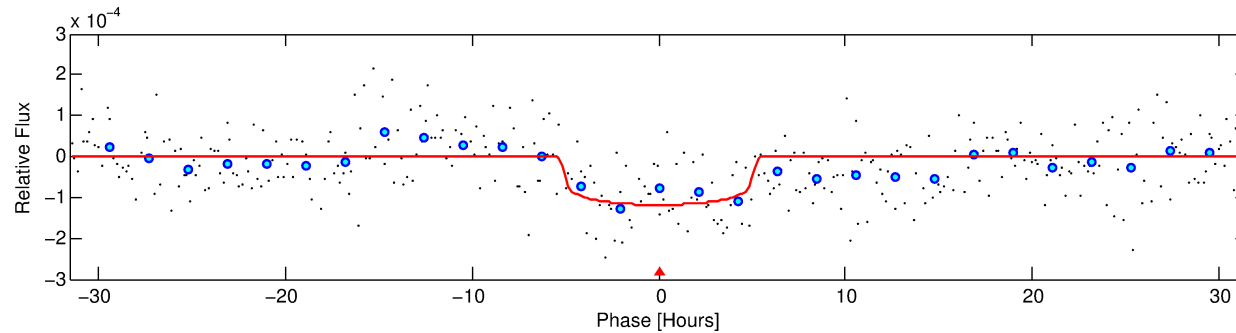
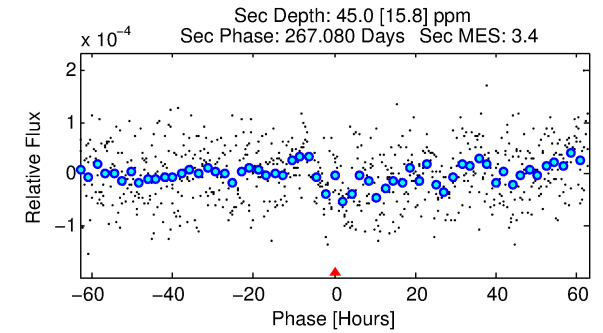
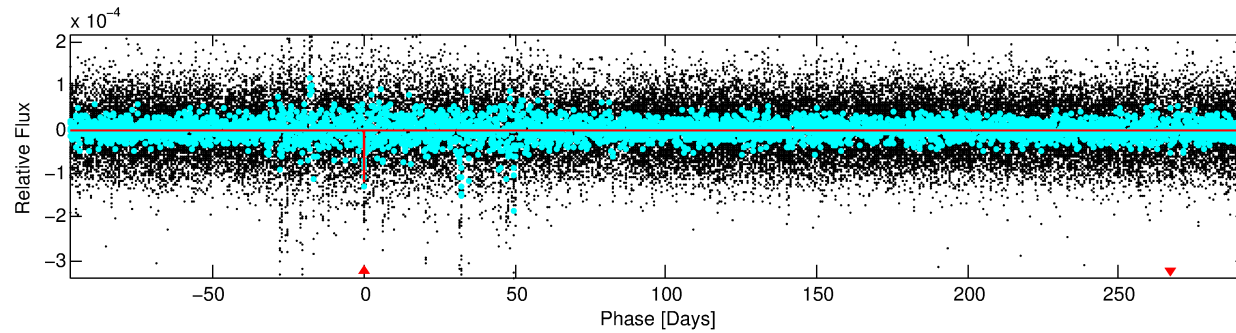
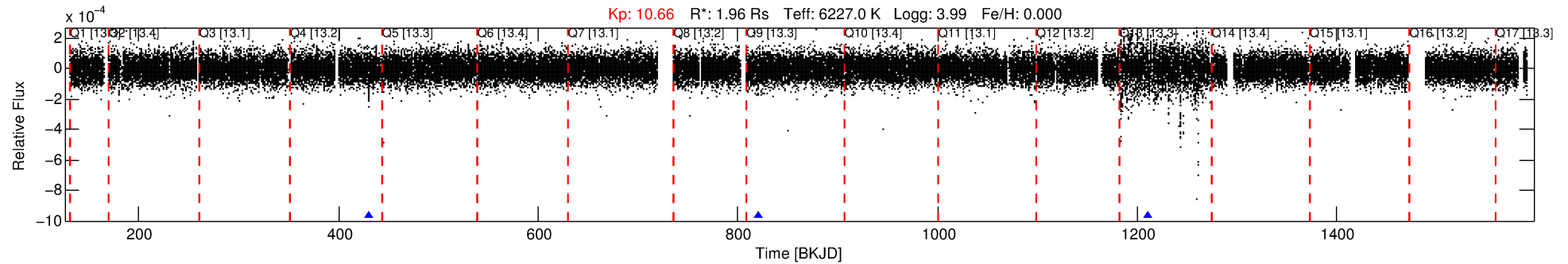
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008491374-01

No Significant Match Found

DV One-Page Summary

KIC: 8491374 Candidate: 1 of 1 Period: 390.357 d



DV Fit Results:

Period = 390.35652 [0.01004] d
Epoch = 430.4714 [0.0117] BKJD
Rp/R* = 0.0112 [0.0030]
a/R* = 162.45 [211.90]
b = 0.83 [0.48]
Seff = 3.86 [0.31]
Teff = 357 [7] K
Rp = 2.39 [0.66] Re
a = 1.1567 [0.0587] AU
Ag = 5775.56 [3691.89] [1.56σ]
Teffp = 4817 [769] K [5.80σ]

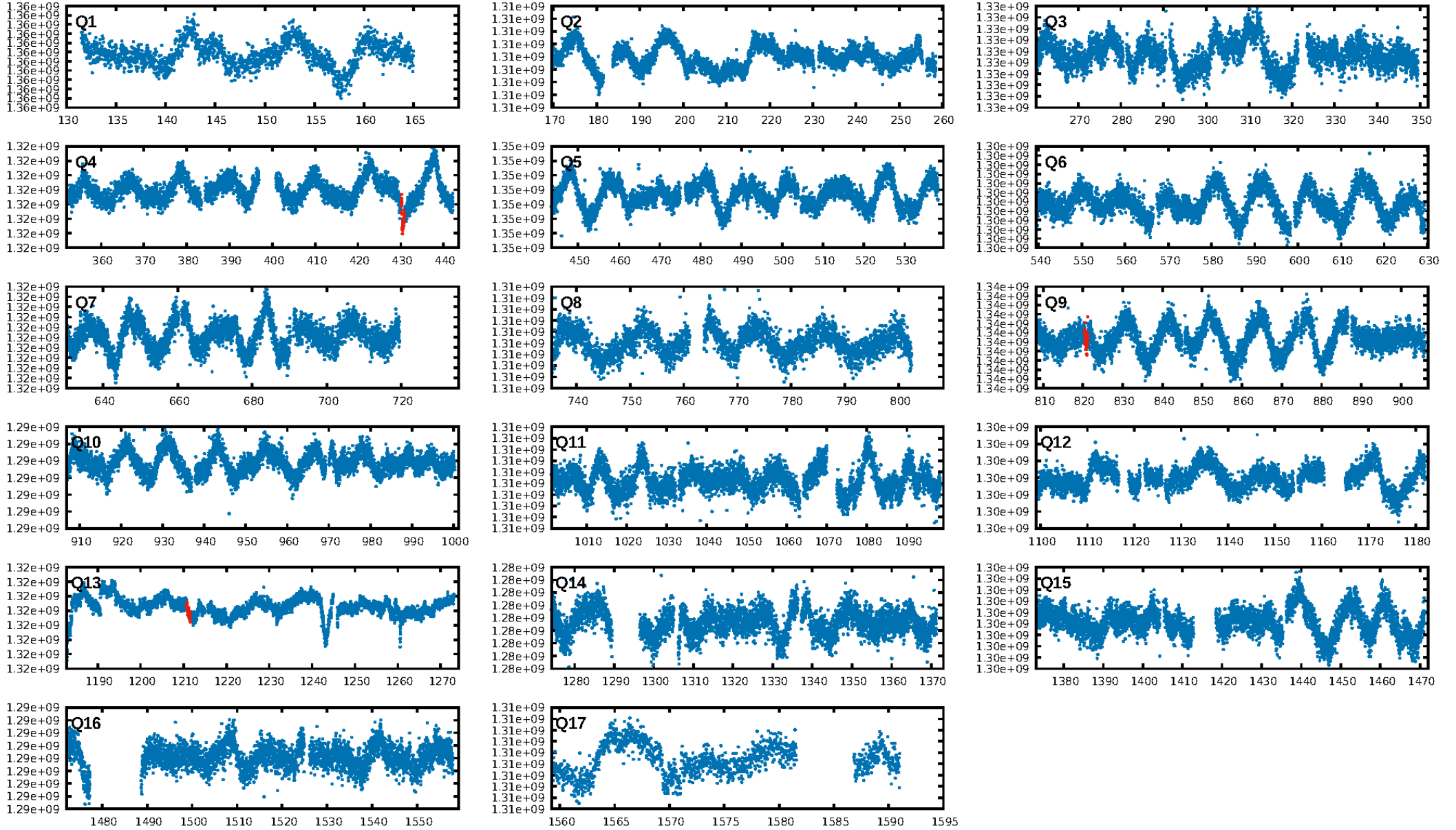
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.8%
ModelChiSquareGof-sig: 93.7%
Bootstrap-pfa: 2.82e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.538
Centroid-sig: 97.4%
Centroid-so: 0.576 arcsec [0.45σ]
OotOffset-rm: 3.940 arcsec [4.31σ]
KicOffset-rm: 3.195 arcsec [4.08σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

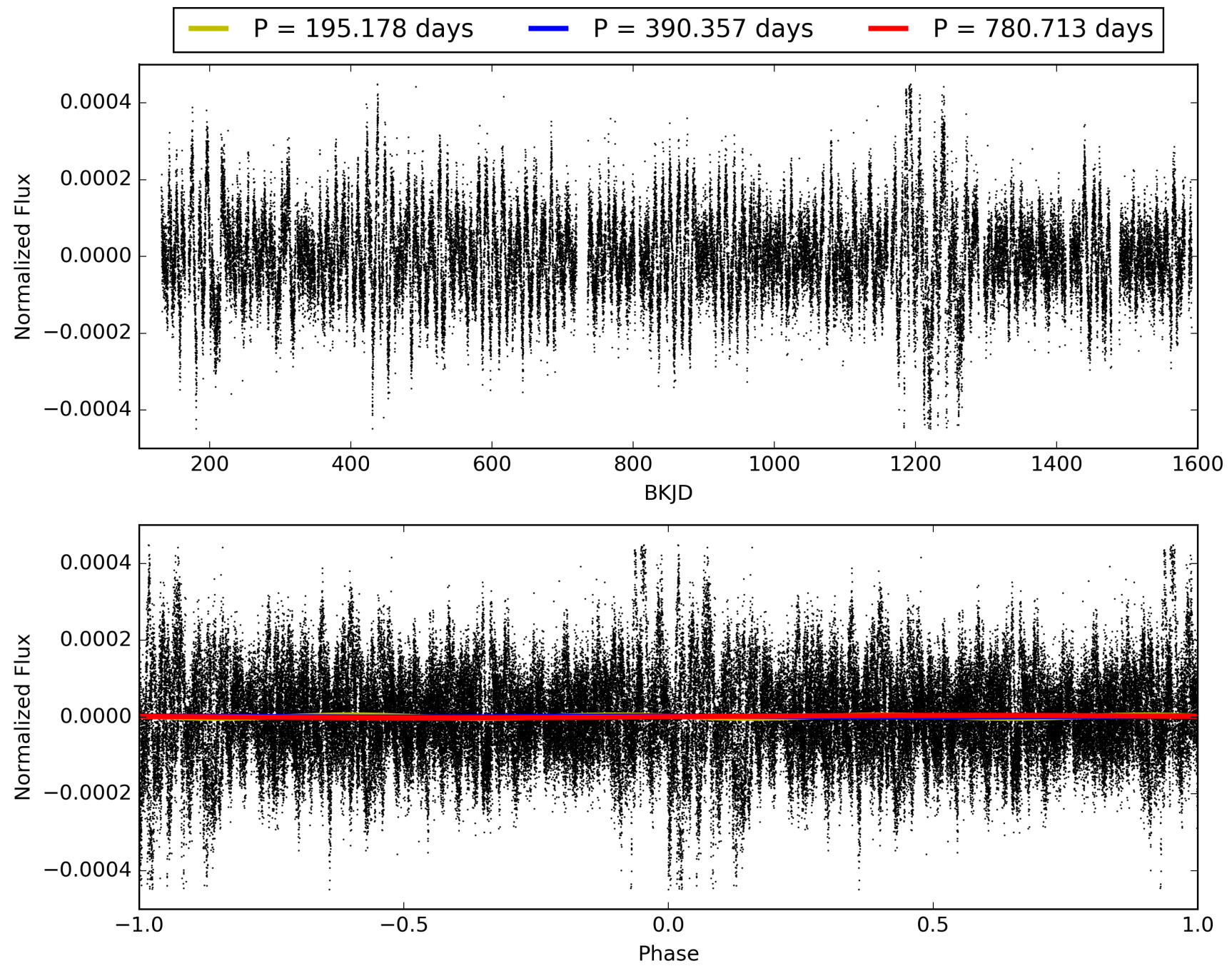
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:12:29 Z

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

TCE 008491374-01, PDC Light Curves

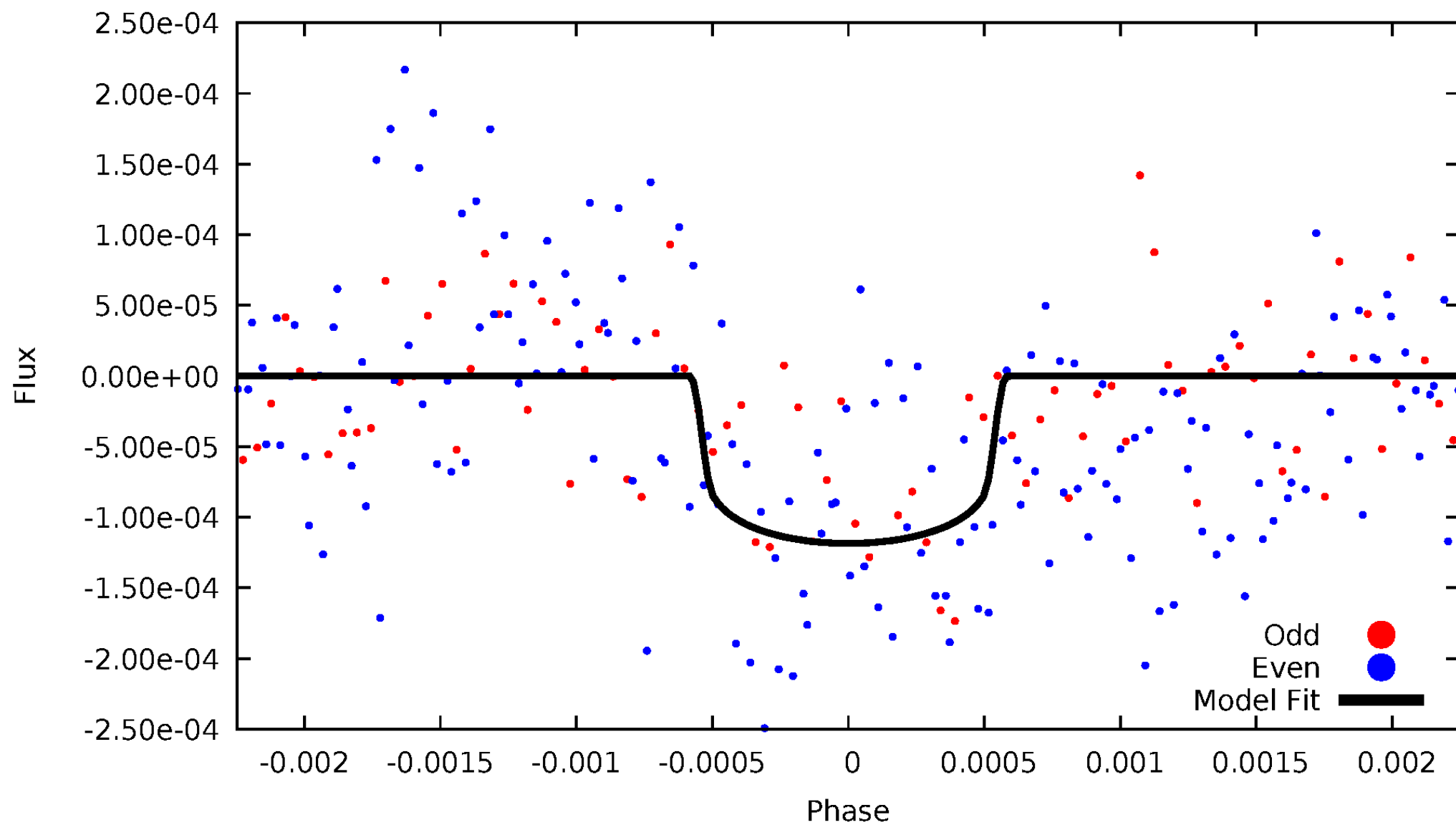


TCE 008491374-01



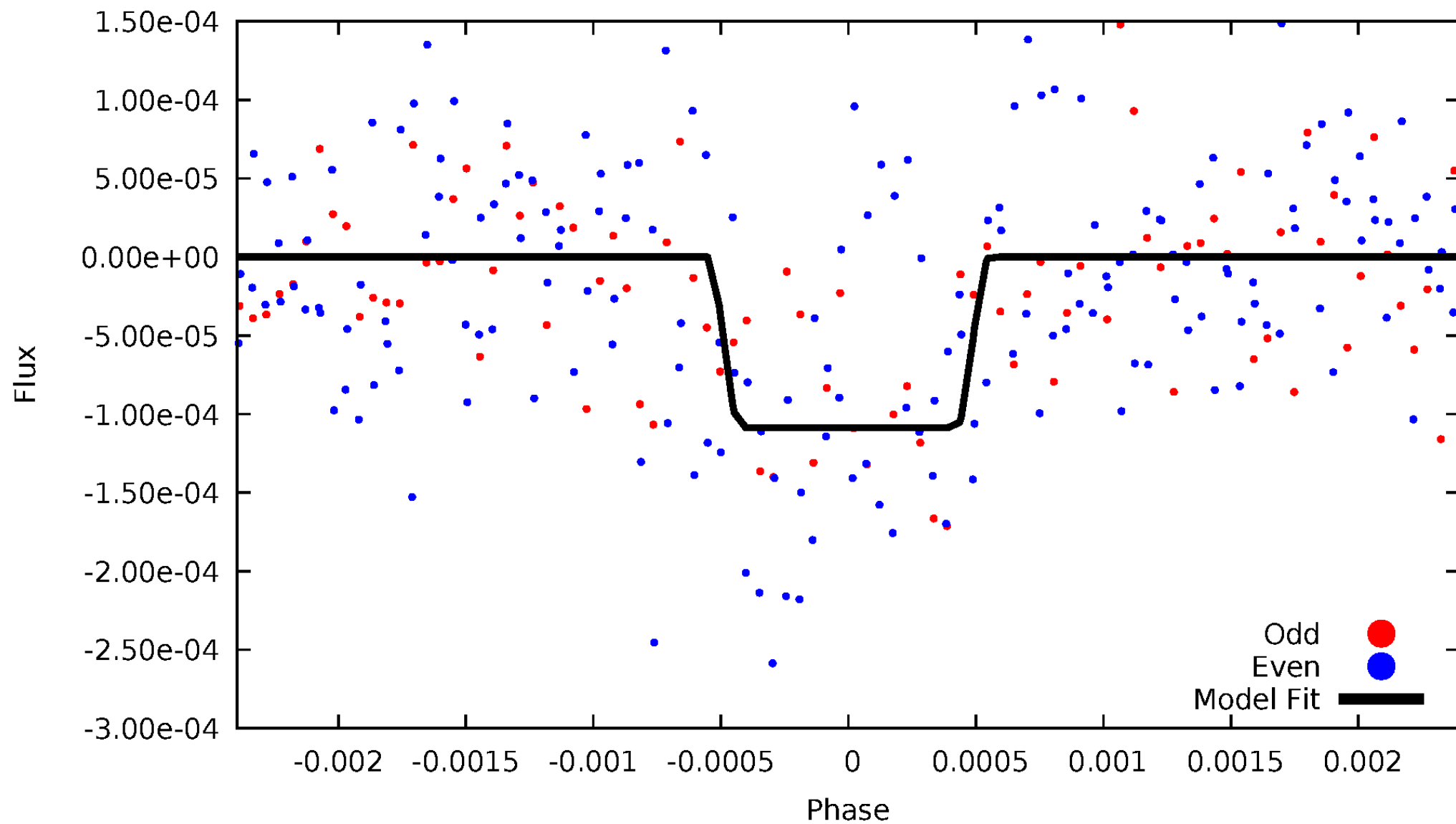
DV Odd/Even

TCE 008491374-01



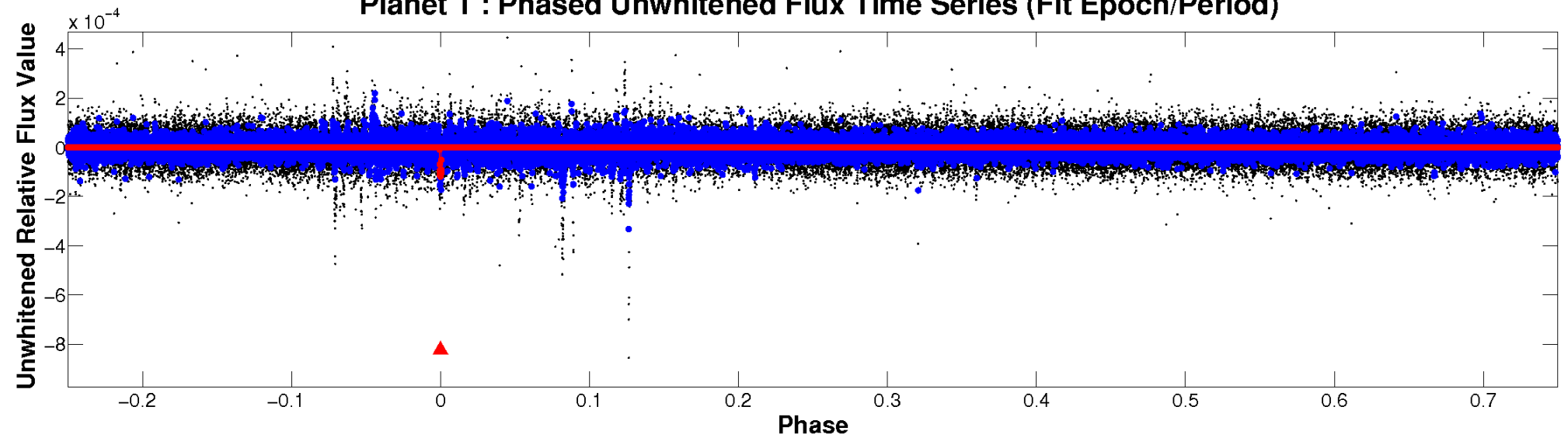
ALT Odd/Even

TCE 008491374-01

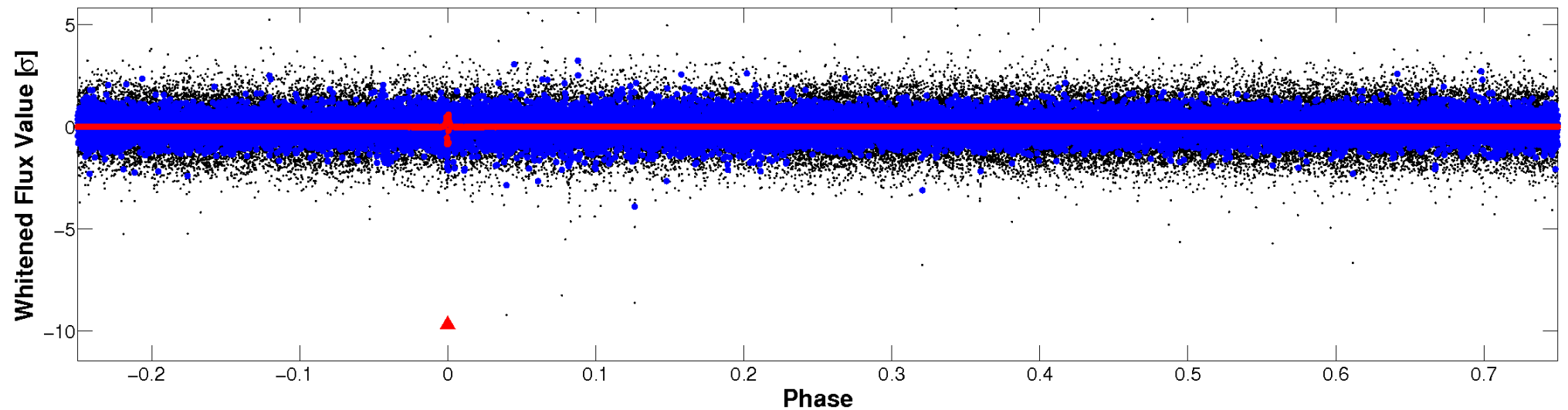


Non-Whitened Vs. Whitened Light Curve

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

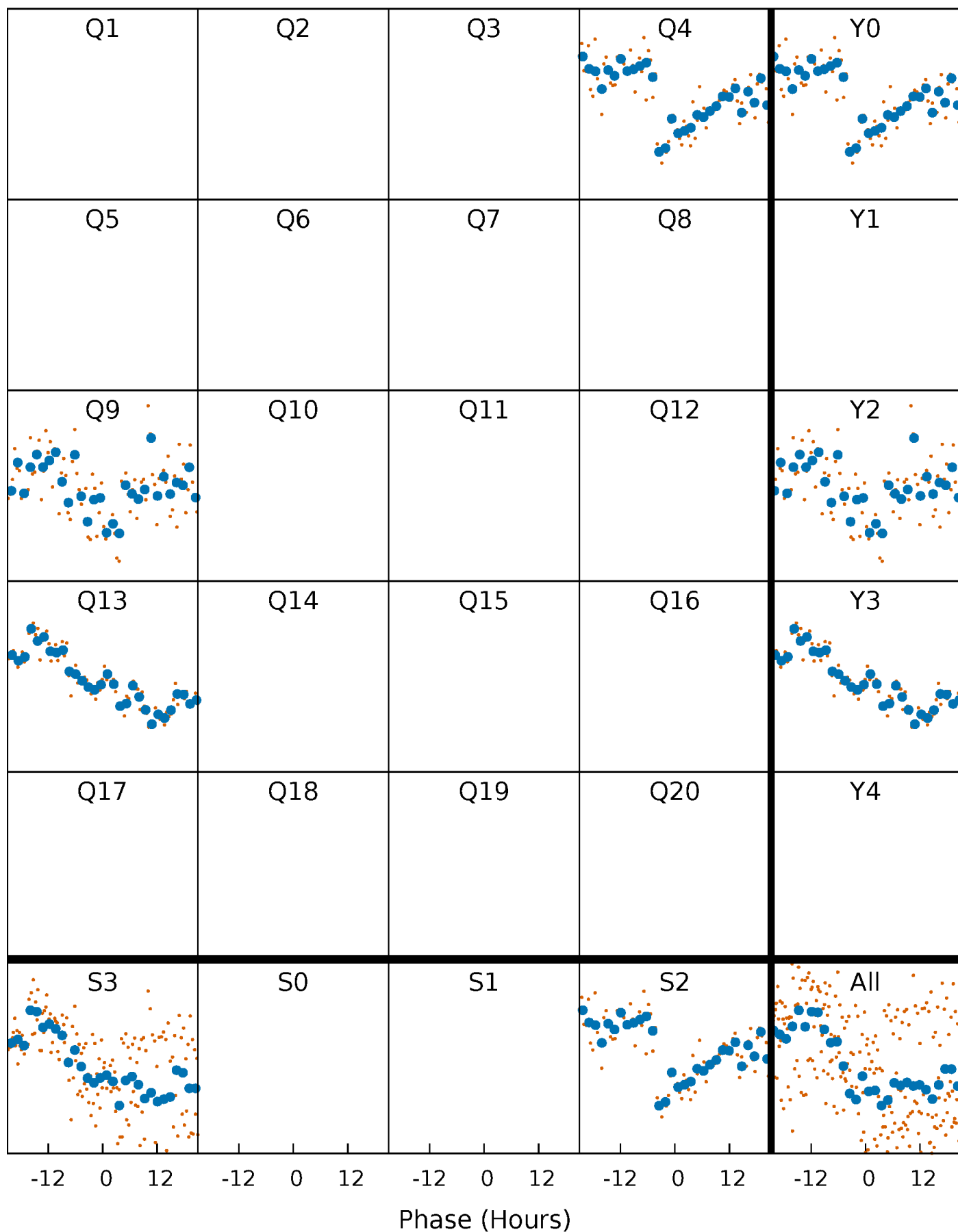


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



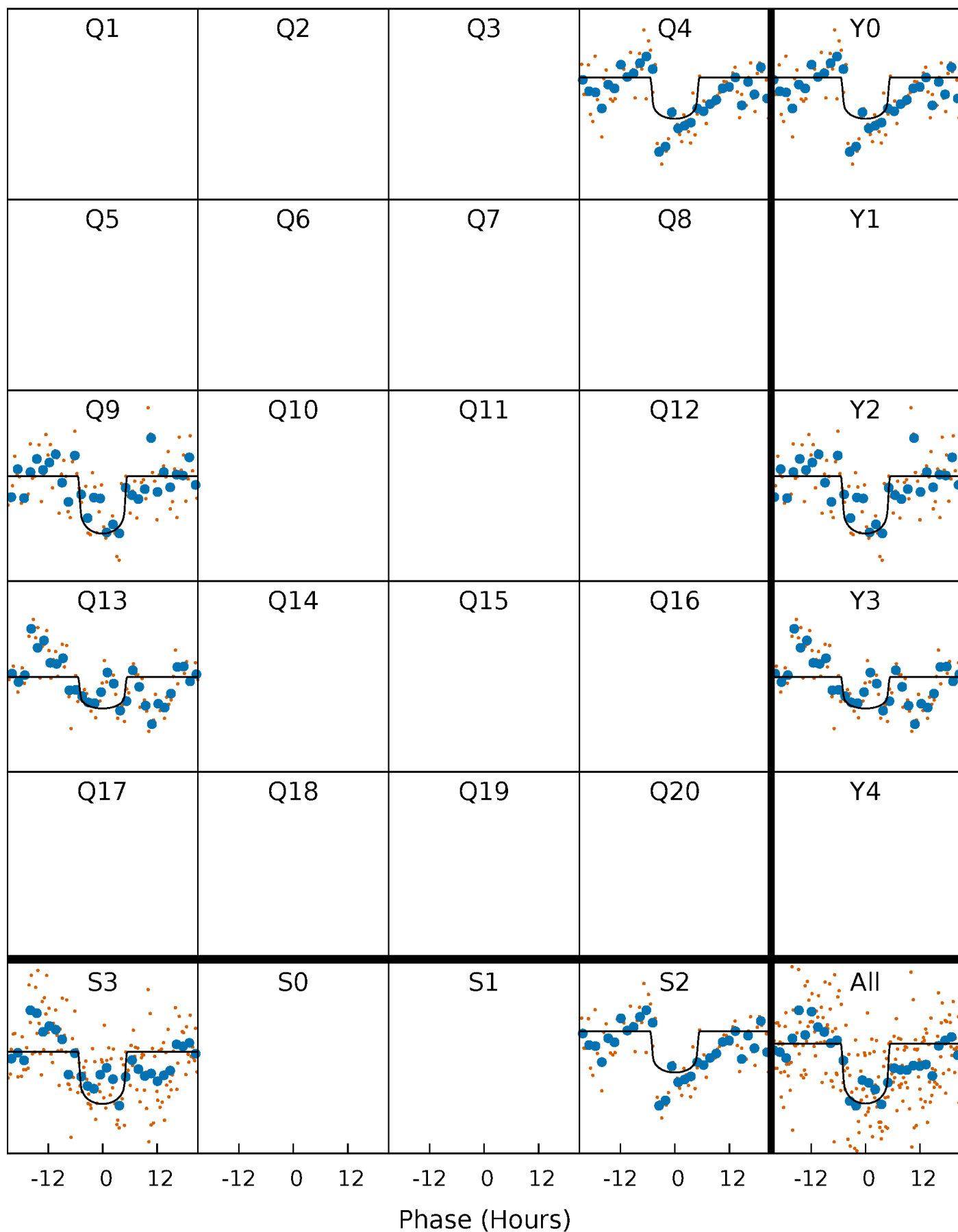
PDC Quarter-Phased Transit Curves

TCE 008491374-01 P=390.356525 Days $T_0=430.471364$ (BKJD)



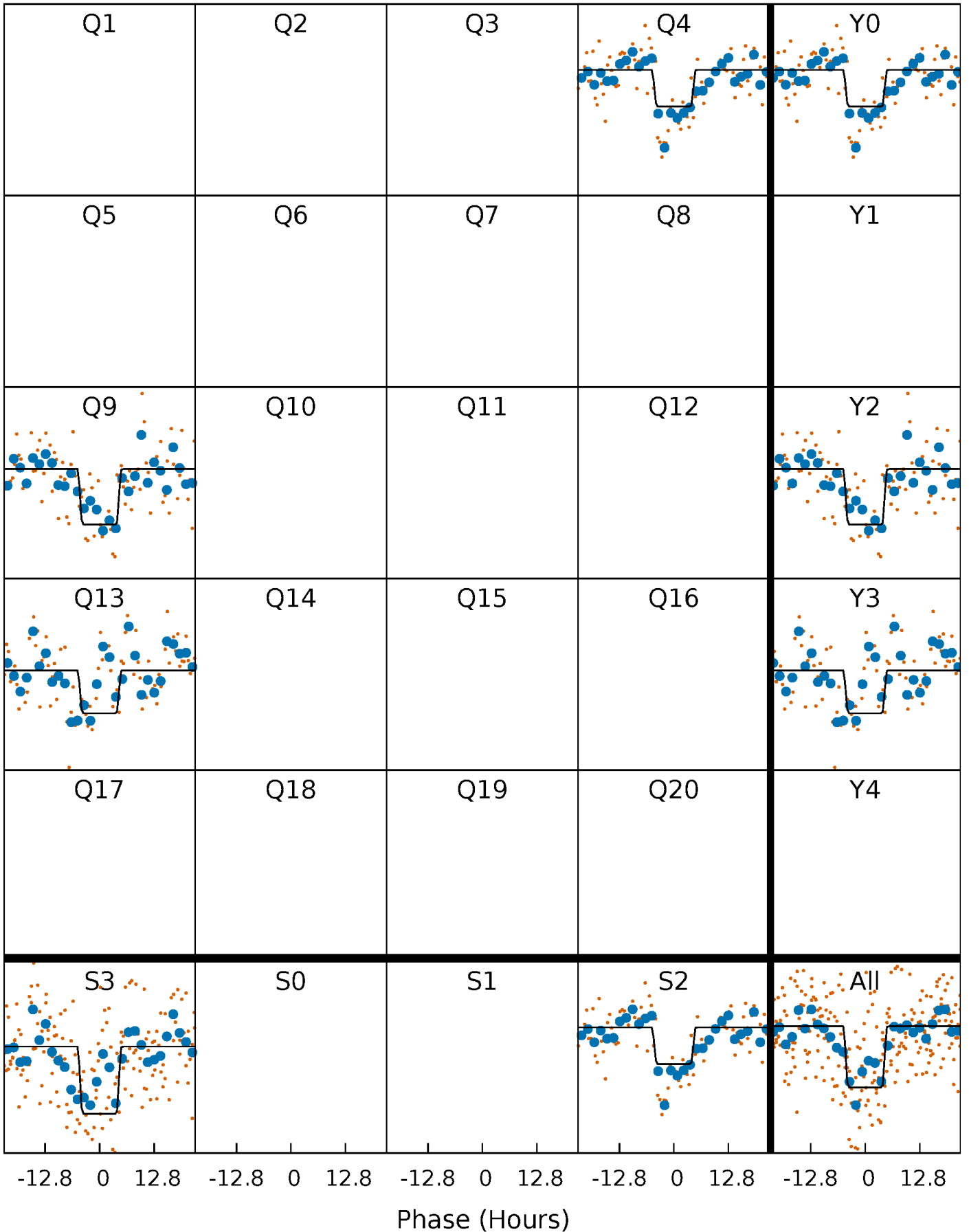
DV Quarter-Phased Transit Curves

TCE 008491374-01 $P=390.356525$ Days $T_0=430.471364$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

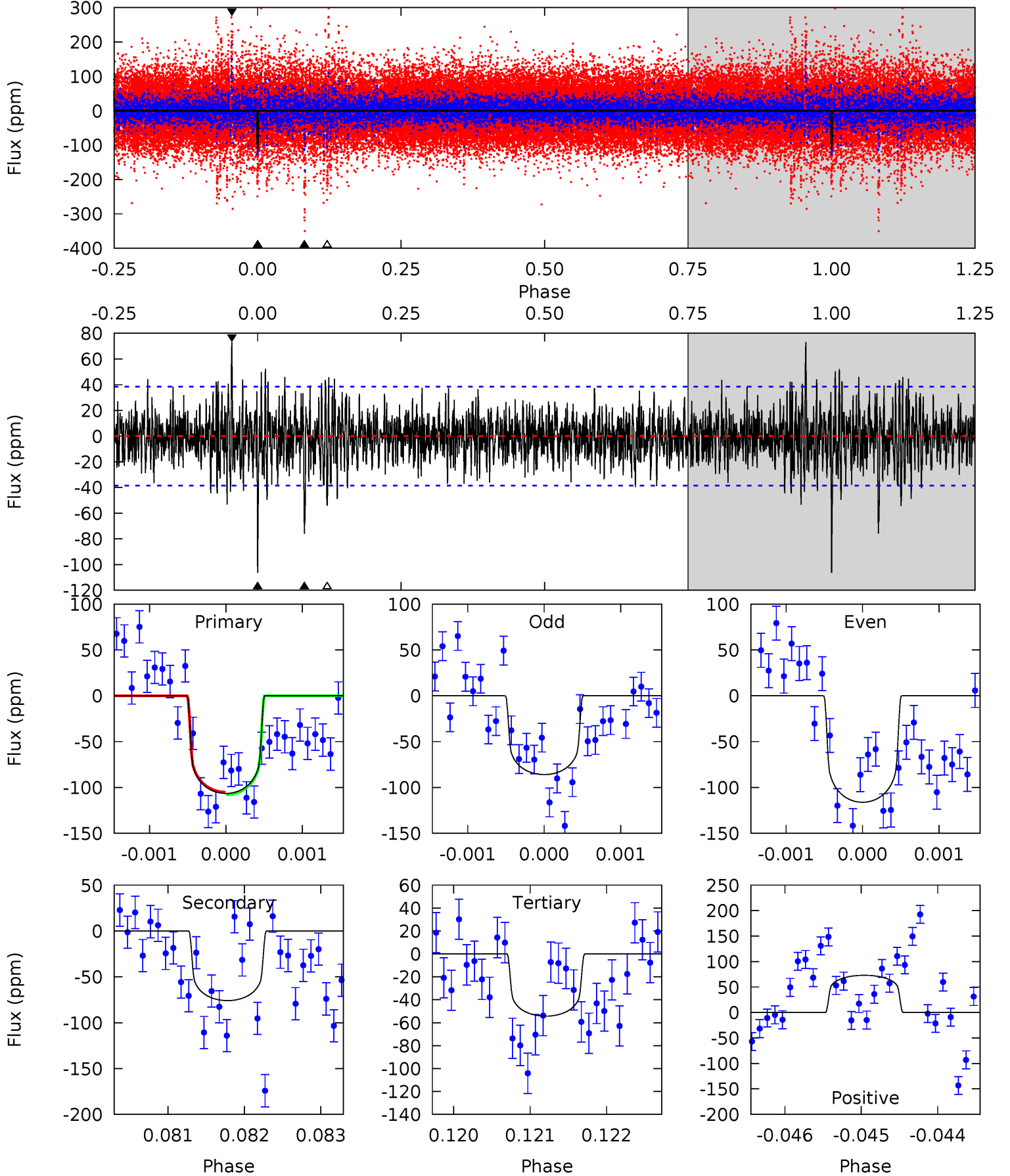
TCE 008491374-01 $P=390.362730$ Days $T_0=430.467026$ (BKJD)



DV Model-Shift Uniqueness Test

008491374-01, $P = 390.356525$ Days, $E = 40.114839$ Days

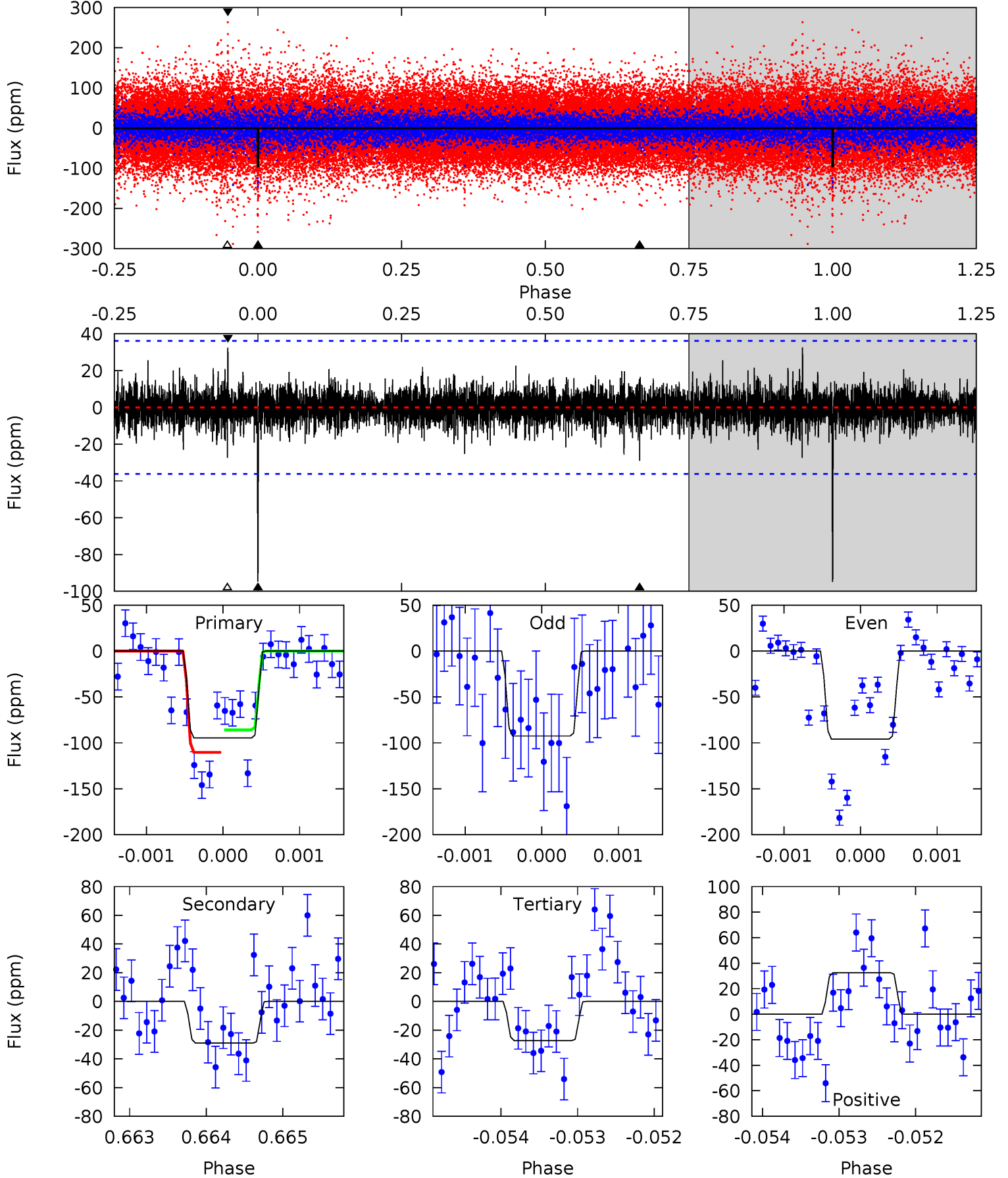
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	10.7	7.65	10.3	5.43	3.25	2.00	7.36	4.72	3.05	0.41	2.02	1.23	0.41	0.19



Alt Model-Shift Uniqueness Test

008491374-01, $P = 390.362730$ Days, $E = 40.104296$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	4.37	4.11	4.90	5.44	3.28	0.95	10.2	9.37	0.26	-0.53	0.25	1.02	0.26	1.84



Stellar Parameters For KIC 008491374

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6227^{+80}_{-68}	$3.986^{+0.025}_{-0.020}$	$0.000^{+0.150}_{-0.100}$	$1.958^{+0.079}_{-0.138}$	$1.358^{+0.065}_{-0.152}$	$0.255^{+0.031}_{-0.020}$
	+1%/-1%	+1%/-1%	+inf%/-inf%	+4%/-7%	+5%/-11%	+12%/-8%
Source	SPE72	AST10	SPE72	DSEP		

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

Secondary Eclipse Parameters for KIC 008491374-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-76 ± 7	$2.39^{+0.69}_{-0.64}$	499^{+8}_{-8}	5511^{+937}_{-559}	9667^{+9379}_{-3769}
Alt.	-29 ± 7	$2.23^{+0.61}_{-0.66}$	499^{+8}_{-8}	4651^{+745}_{-465}	4411^{+4356}_{-1879}

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 $A_{obs} \gg 1.0$

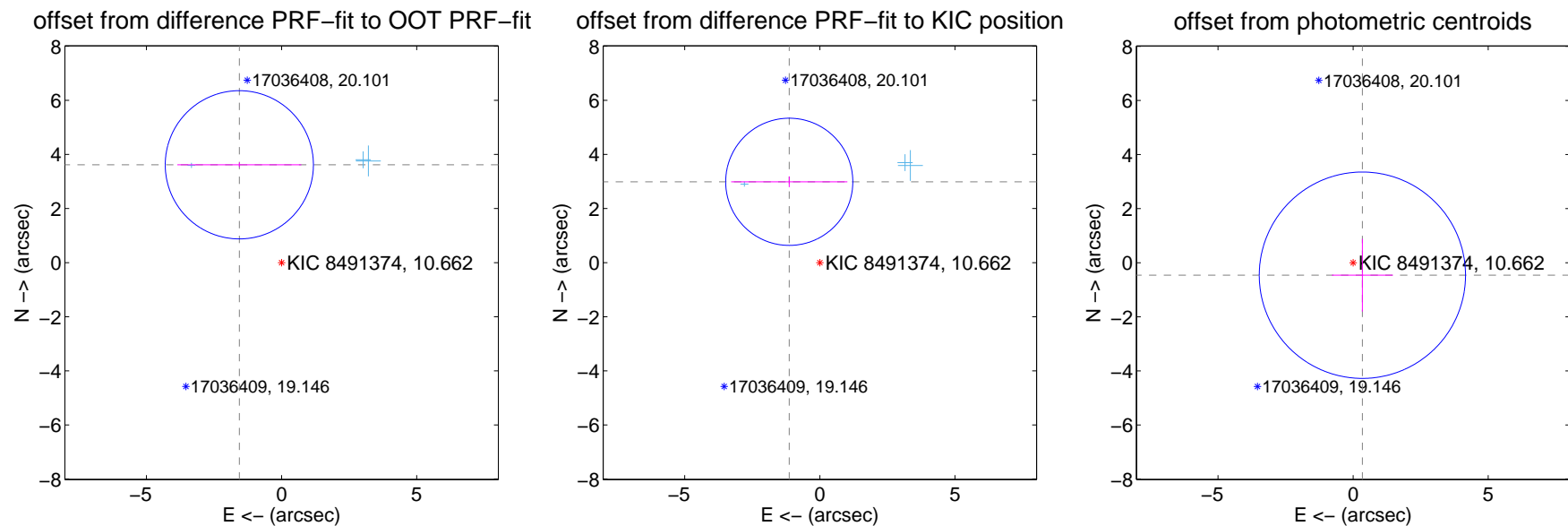
DV Centroid Data

Supplemental centroid analysis for 008491374-01. **Kepler magnitude: 10.66.** Transit SNR 7.09

There are 3 quarters with good PRF difference image offsets

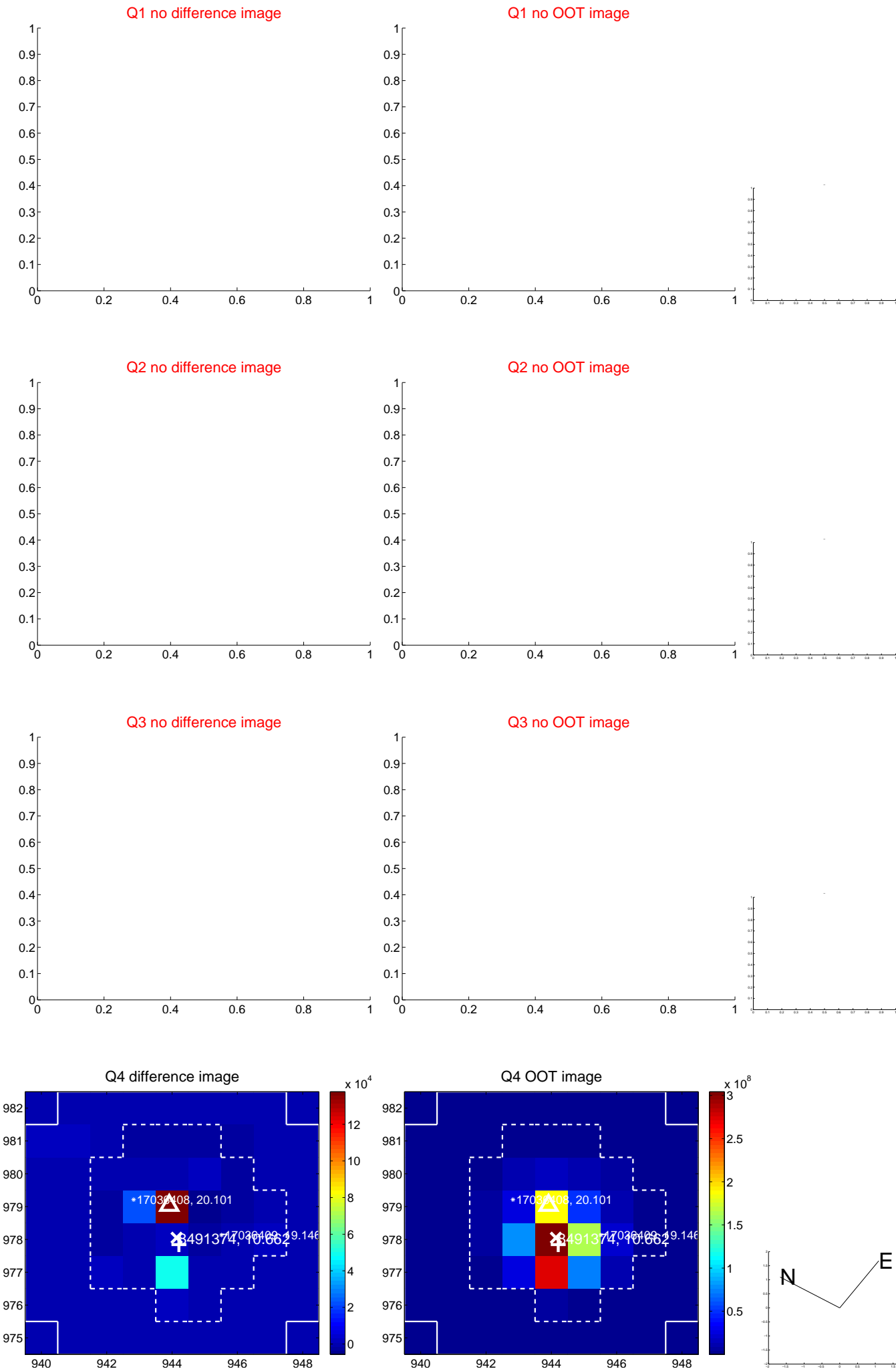
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.940 ± 0.913	4.31	1.563 ± 2.295	3.617 ± 0.082
PRF-fit source offset from KIC position	3.195 ± 0.784	4.08	1.132 ± 2.149	2.988 ± 0.200
photometric centroid source offset	0.58 ± 1.27	0.45	-0.34 ± 1.13	-0.46 ± 1.34



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.

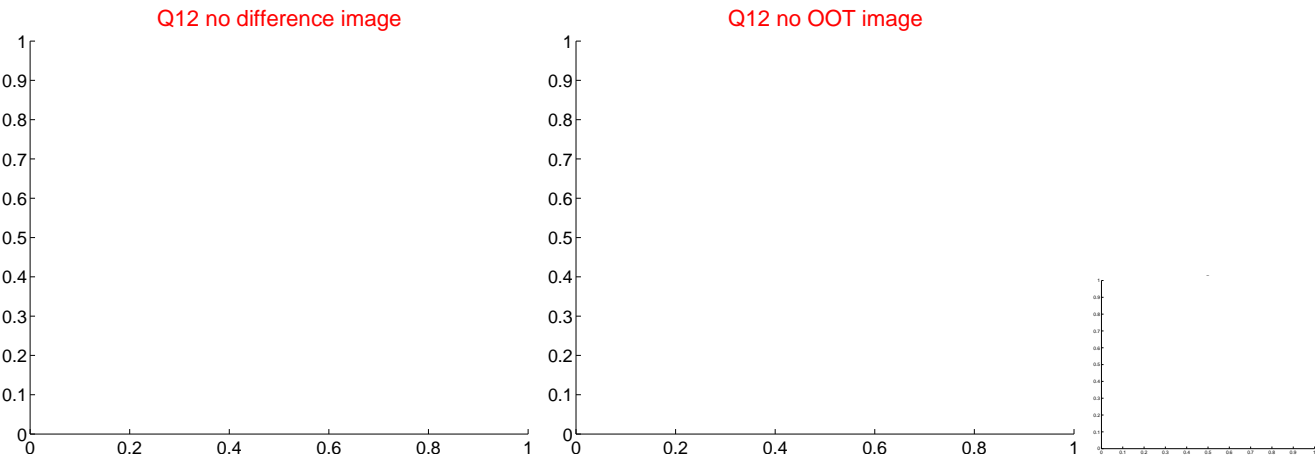
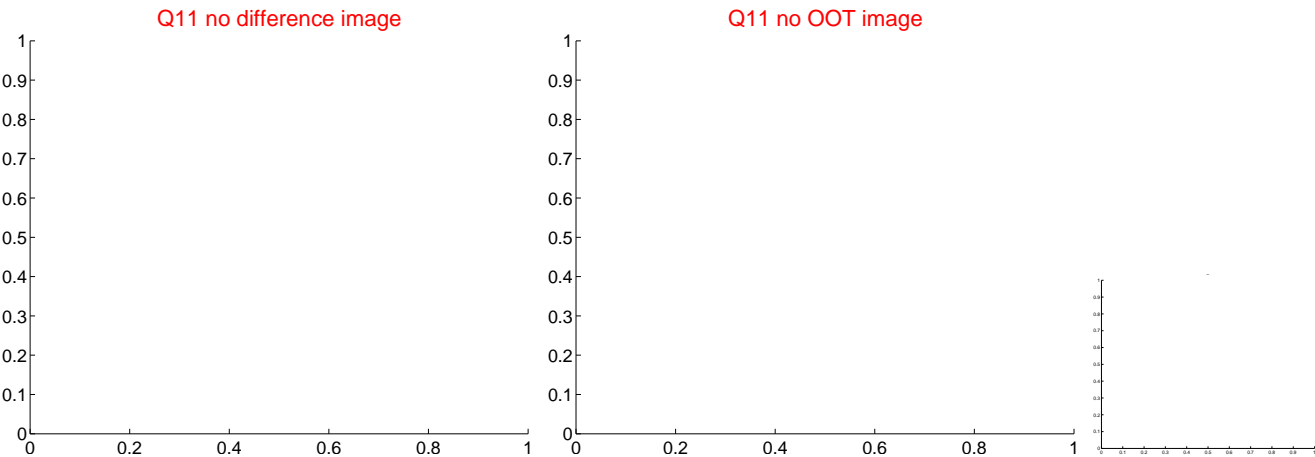
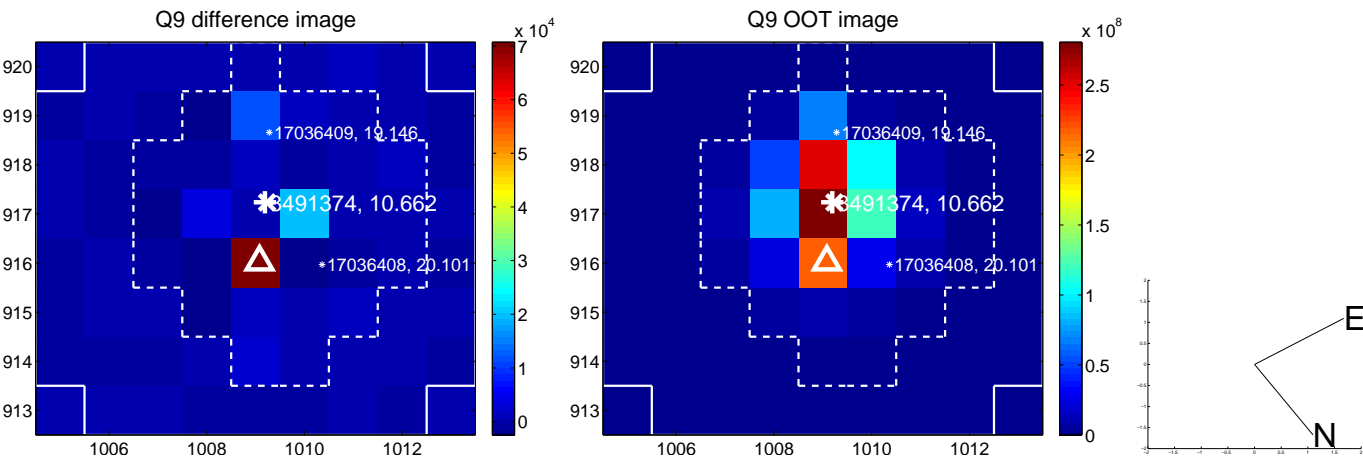
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



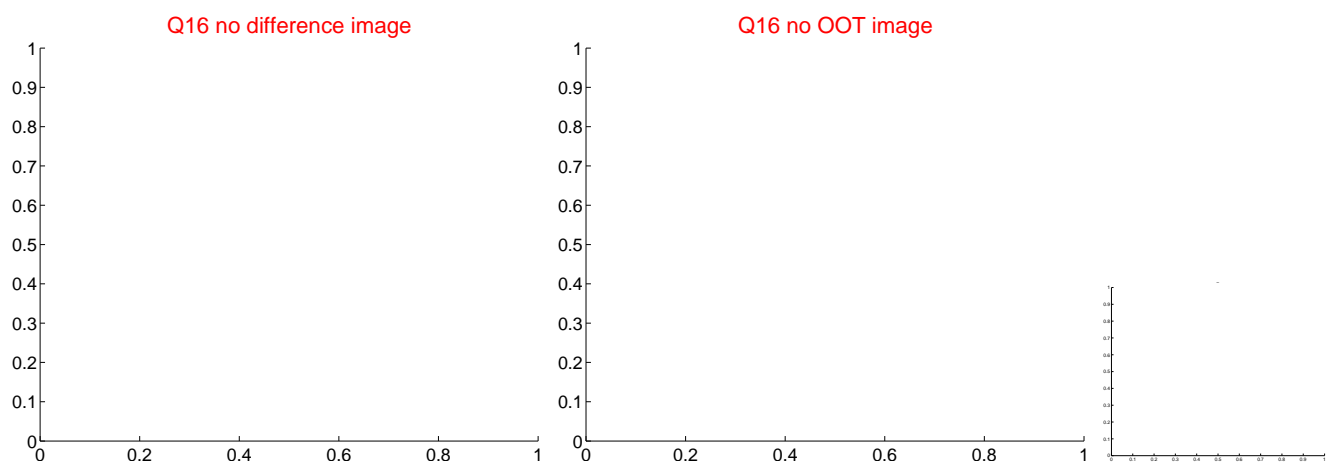
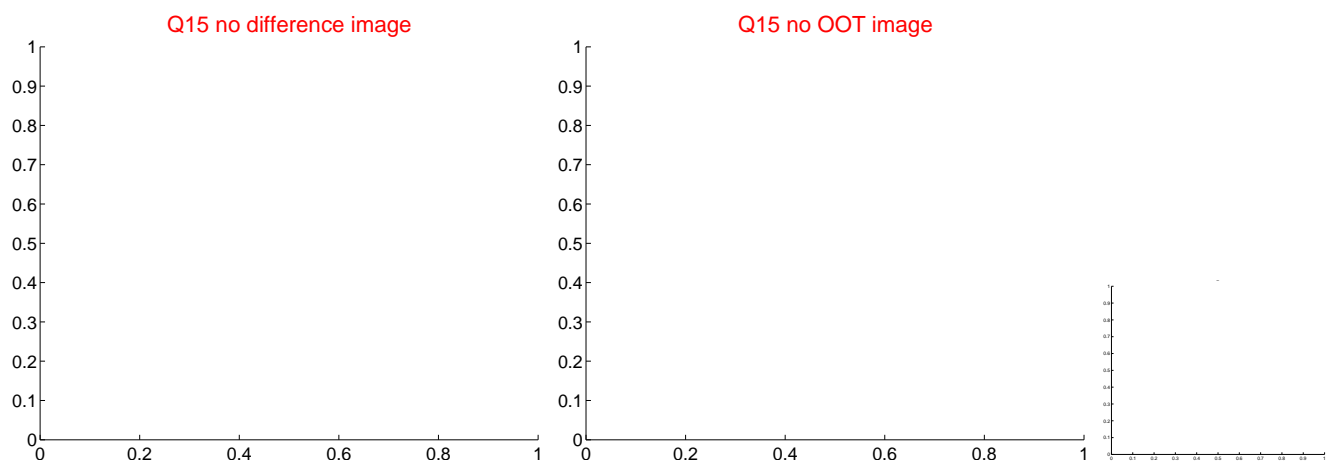
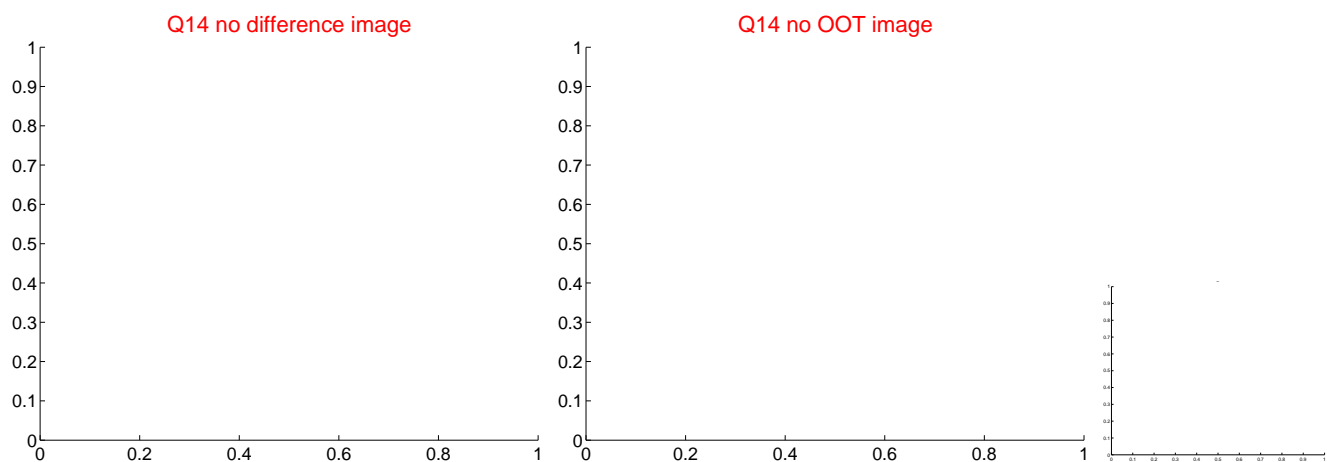
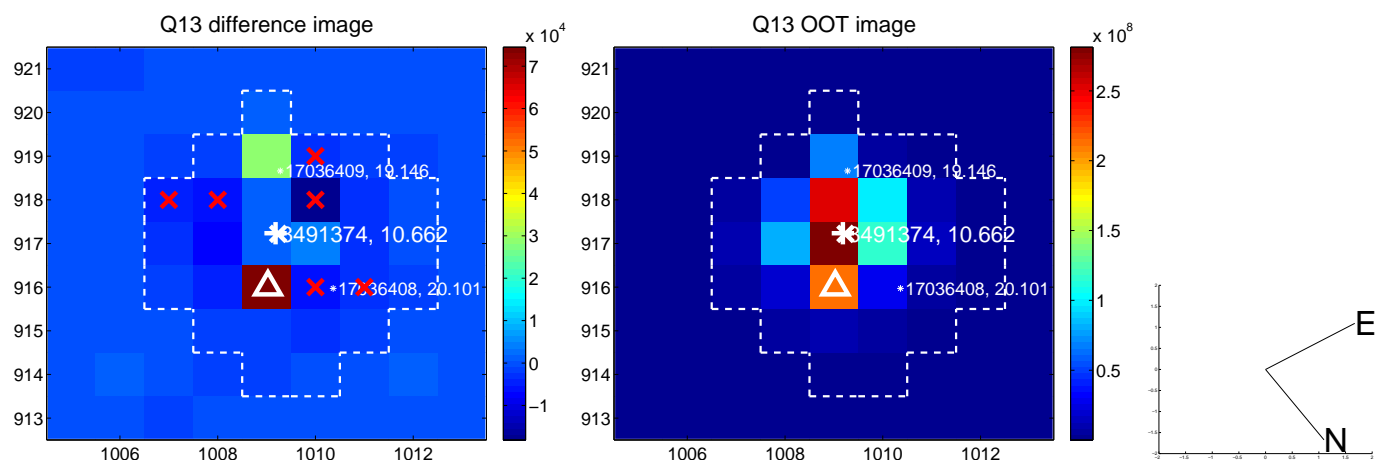
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



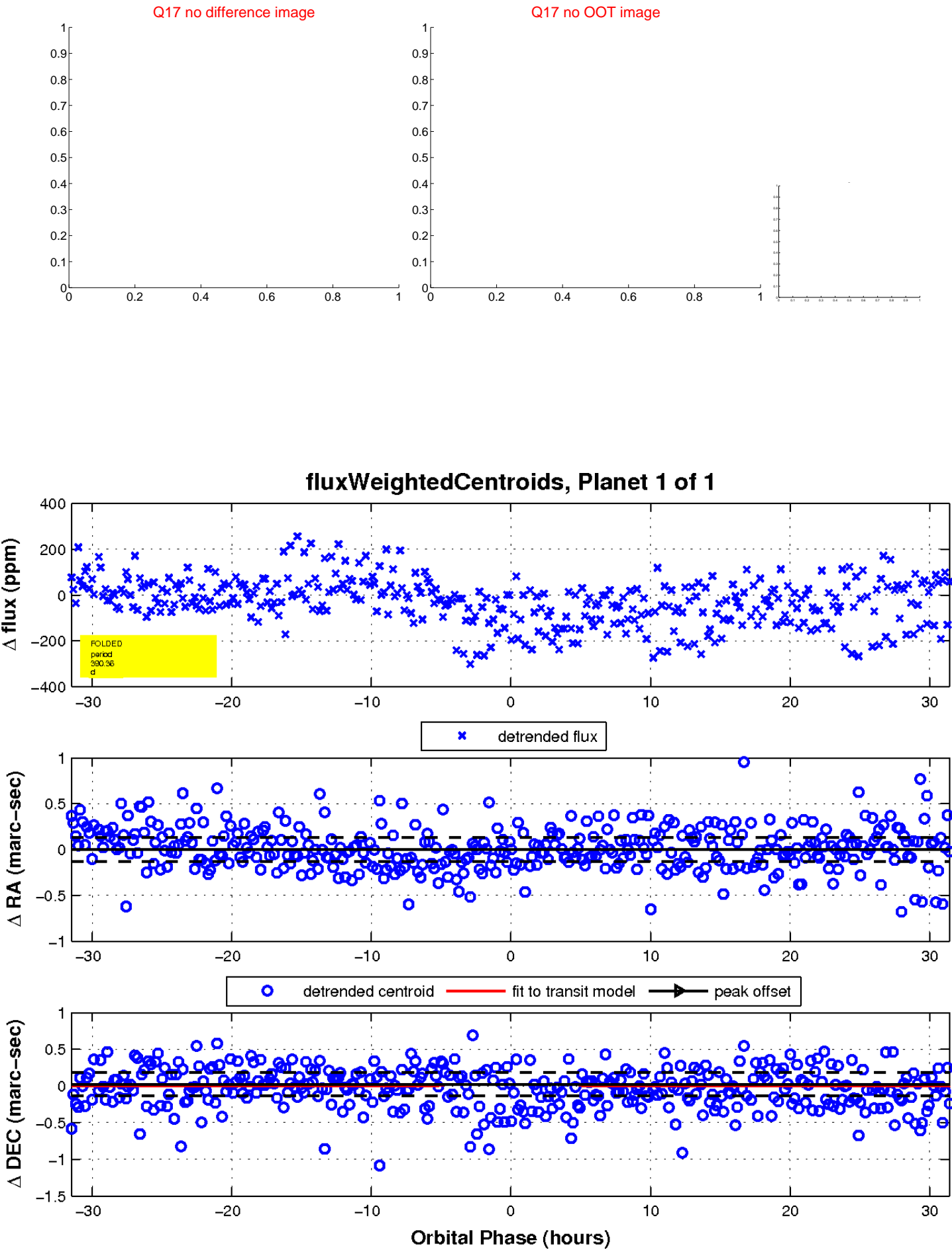
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

