

KIC 008491288

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})
008491288-01	OBS	No	374.678974	171.779199	1039.1	12.236	7.7	7.7	0.88	5102	2.79	0.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008491288-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—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.

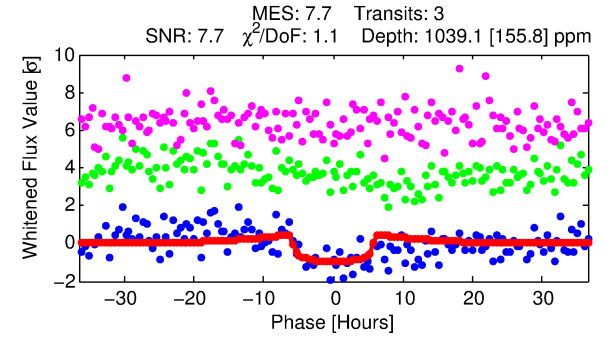
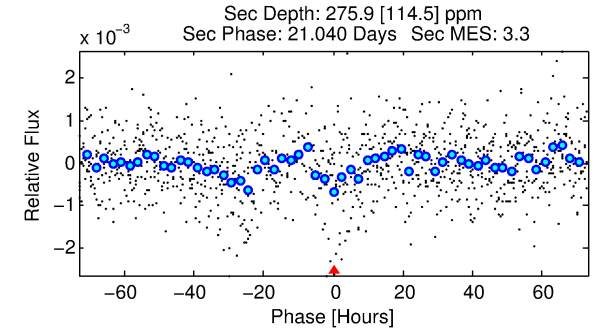
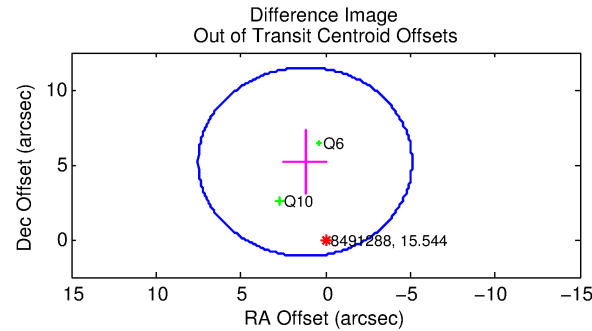
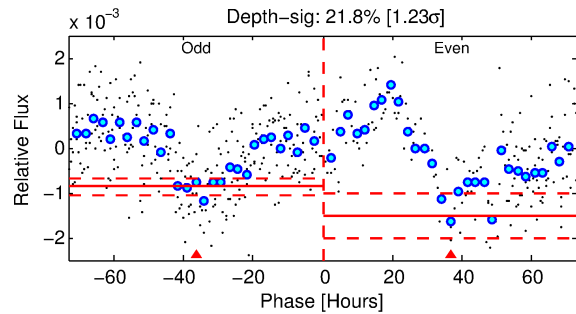
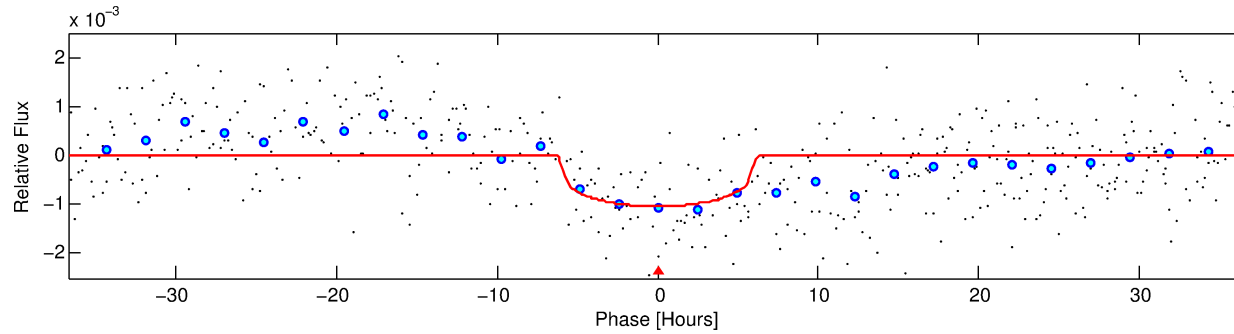
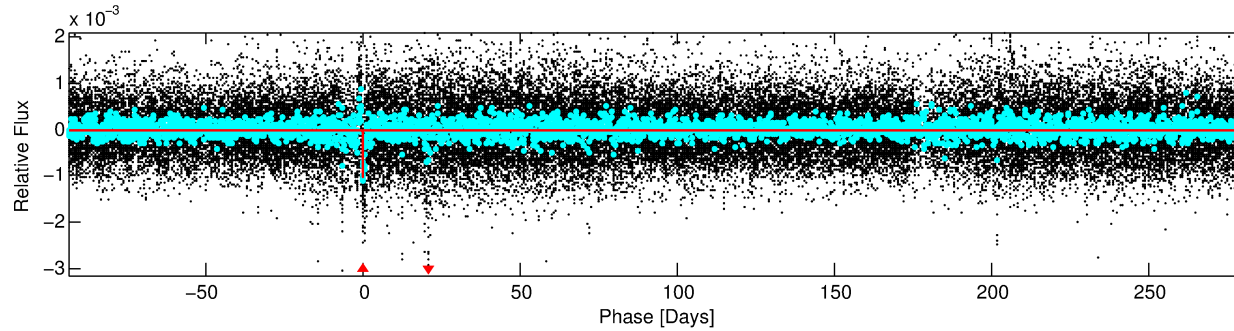
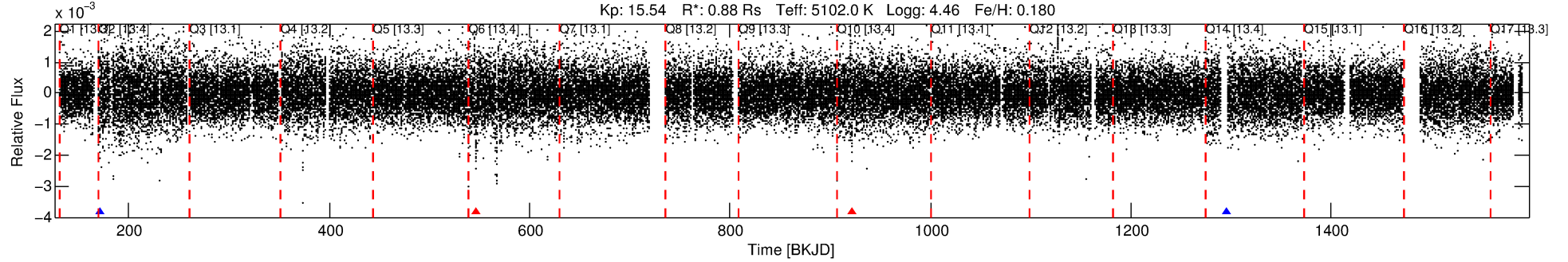
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008491288-01

No Significant Match Found

DV One-Page Summary

KIC: 8491288 Candidate: 1 of 1 Period: 374.679 d



DV Fit Results:

Period = 374.67897 [0.01841] d
Epoch = 171.7792 [0.0227] BKJD
Rp/R* = 0.0291 [0.0318]
a/R* = 228.30 [853.66]
b = 0.33 [10.36]
Seff = 0.52 [0.12]
Teq = 216 [13] K
Rp = 2.79 [3.09] Re
a = 0.9523 [0.1279] AU
Ag = 17688.65 [39642.89] [0.45σ]
Teff = 3858 [2155] K [1.69σ]

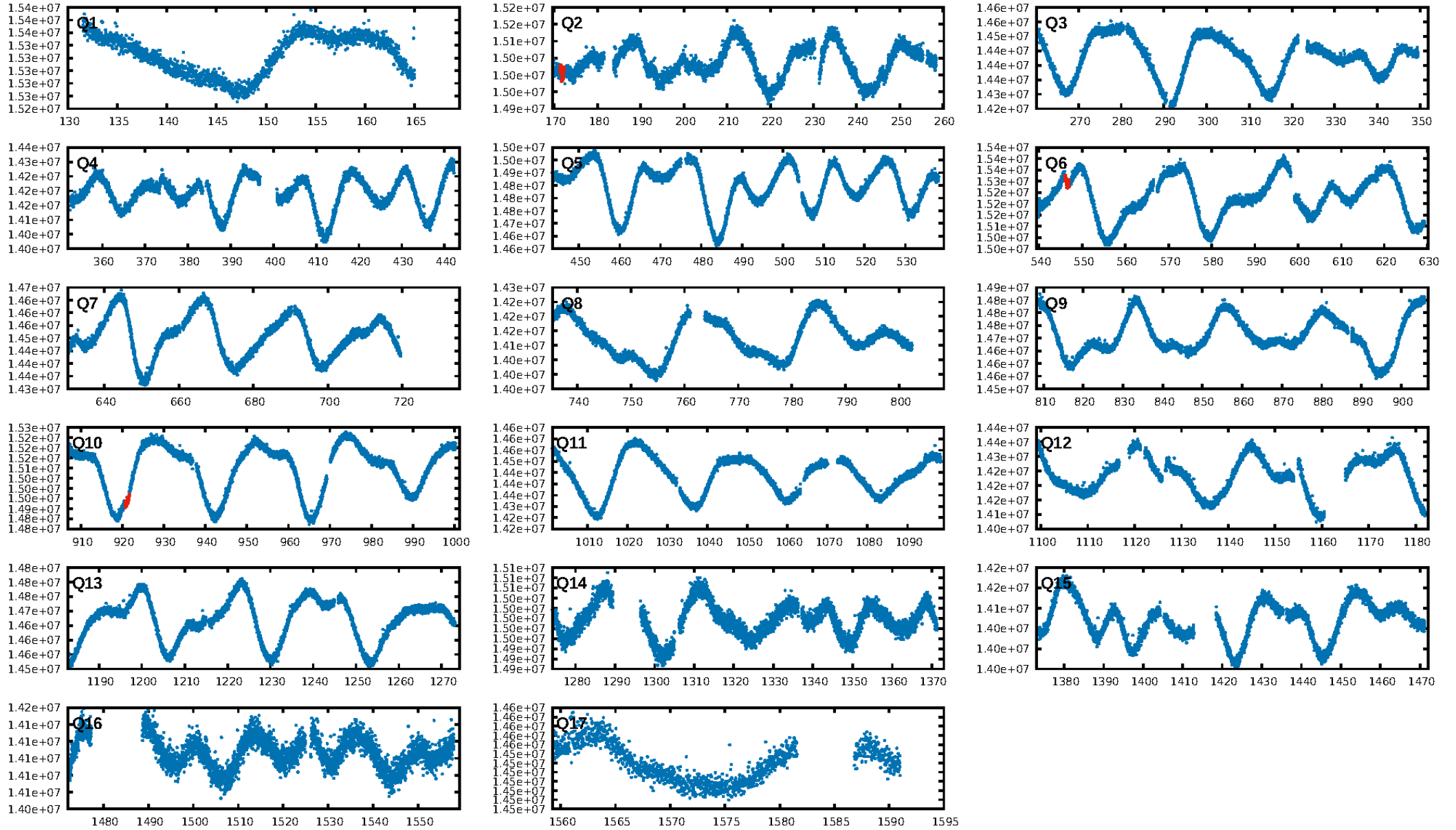
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 42.1%
ModelChiSquareGof-sig: 98.9%
Bootstrap-pfa: 3.12e-10
RollingBand-fgt: 0.33 [1/3]
GhostDiagnostic-chr: 0.5865
Centroid-sig: N/A
Centroid-so: 5.249 arcsec [3.33σ]
OotOffset-rm: 5.323 arcsec [2.53σ]
KicOffset-rm: 5.477 arcsec [2.54σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

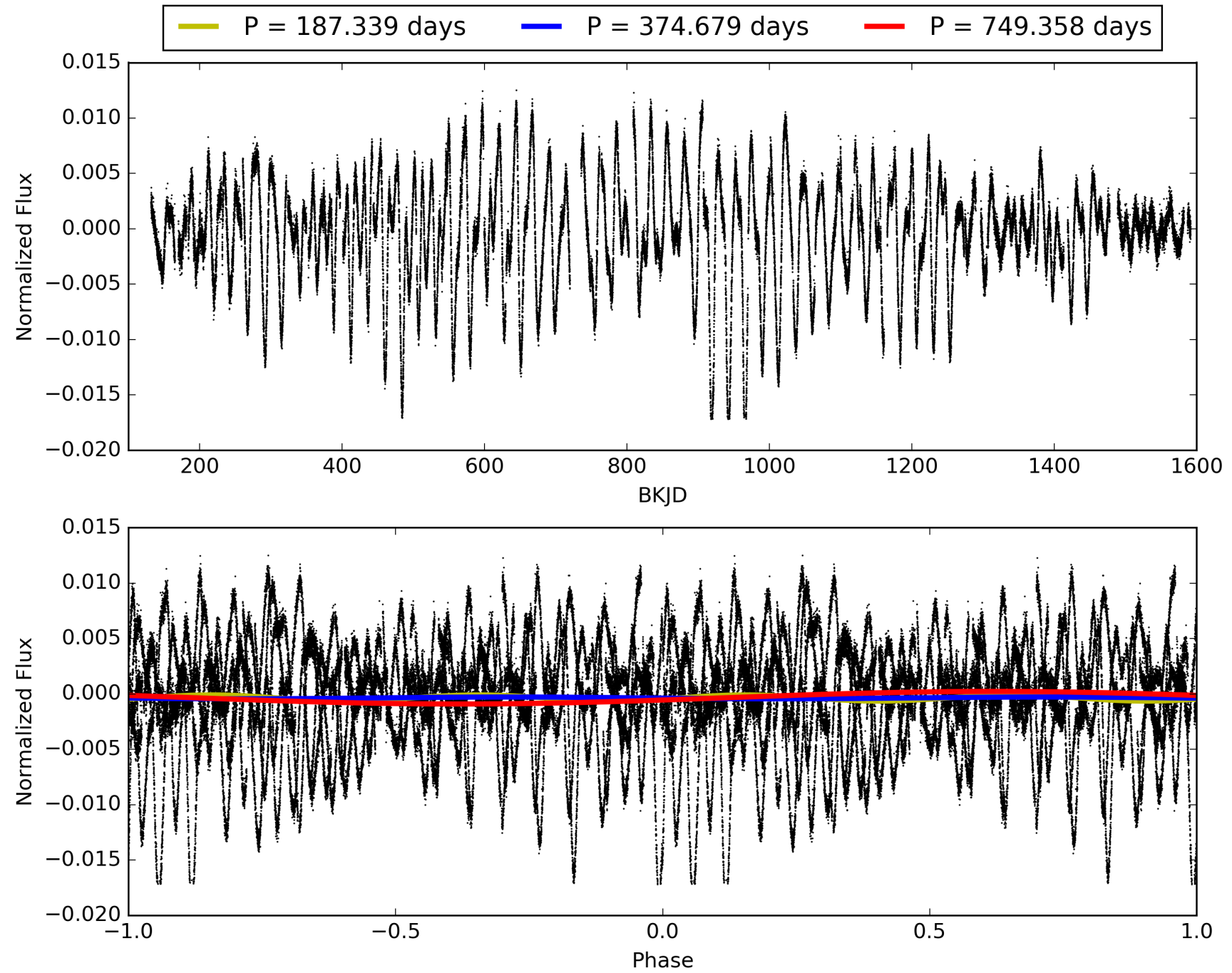
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:28:51 Z

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

TCE 008491288-01, PDC Light Curves

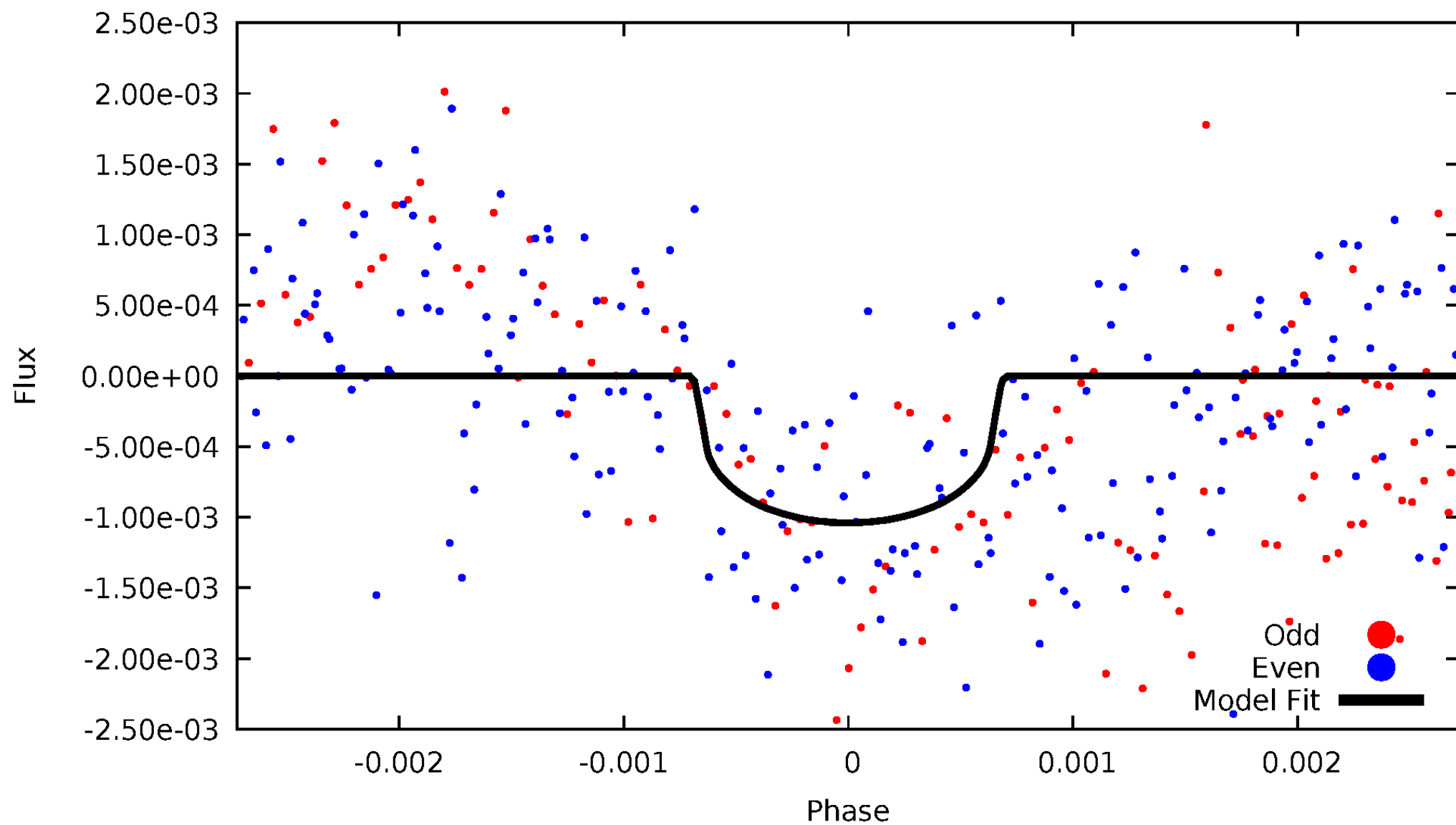


TCE 008491288-01



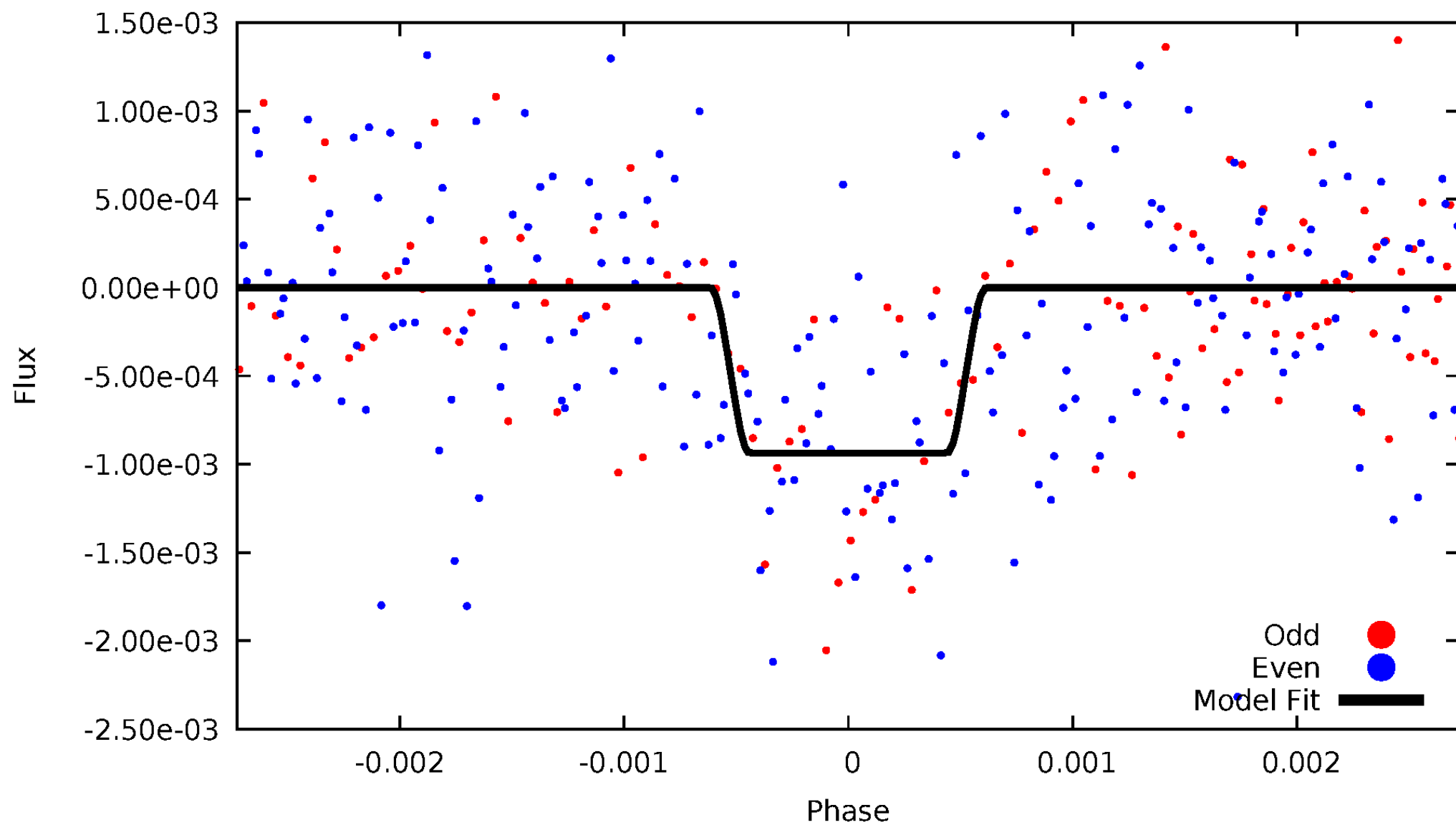
DV Odd/Even

TCE 008491288-01



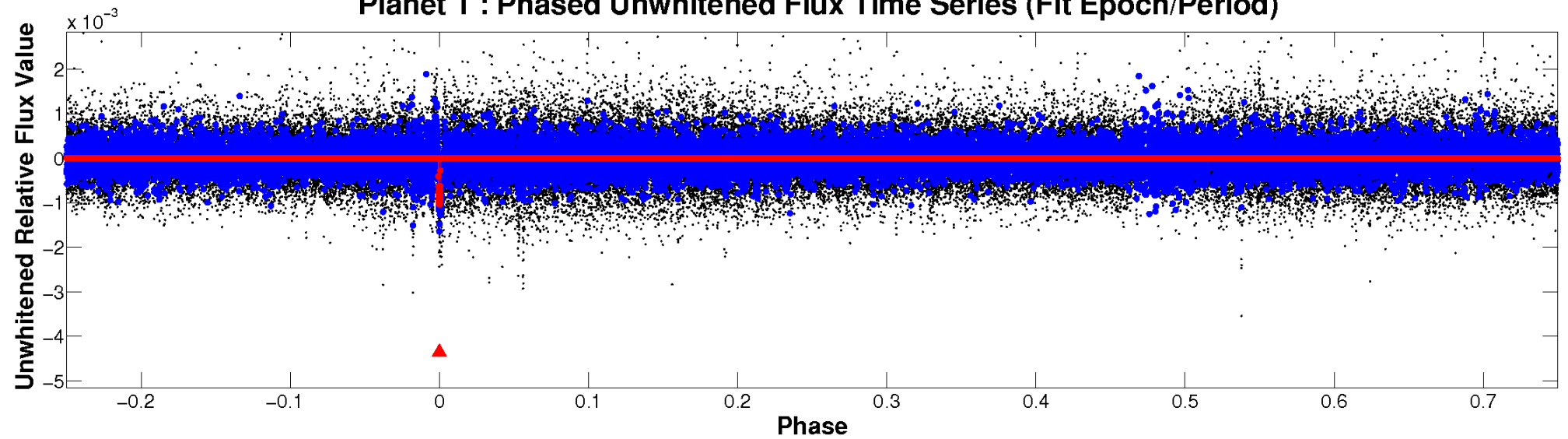
ALT Odd/Even

TCE 008491288-01

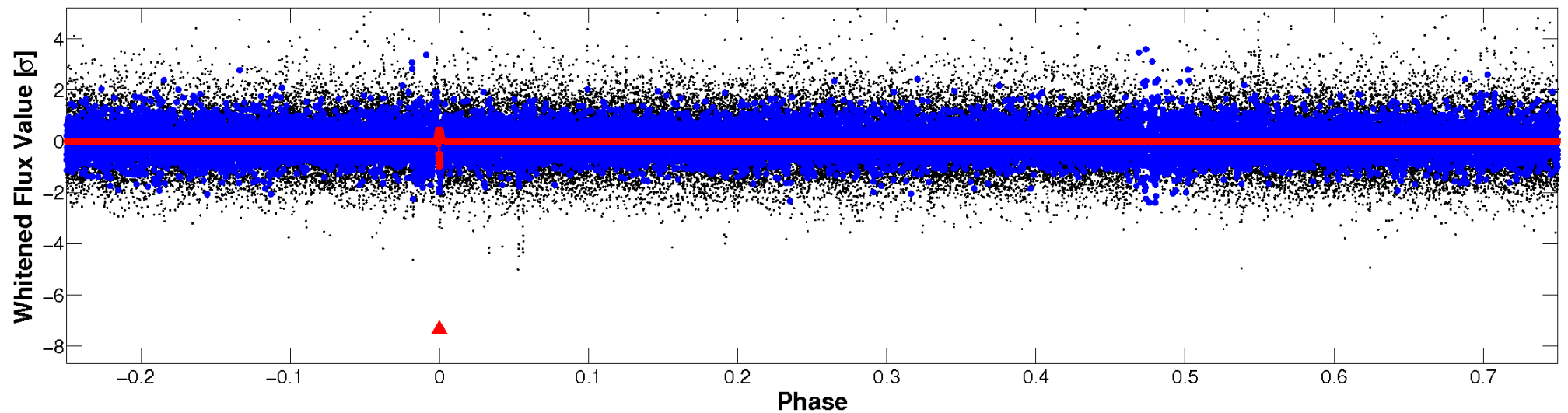


Non-Whitened Vs. Whitened Light Curve

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

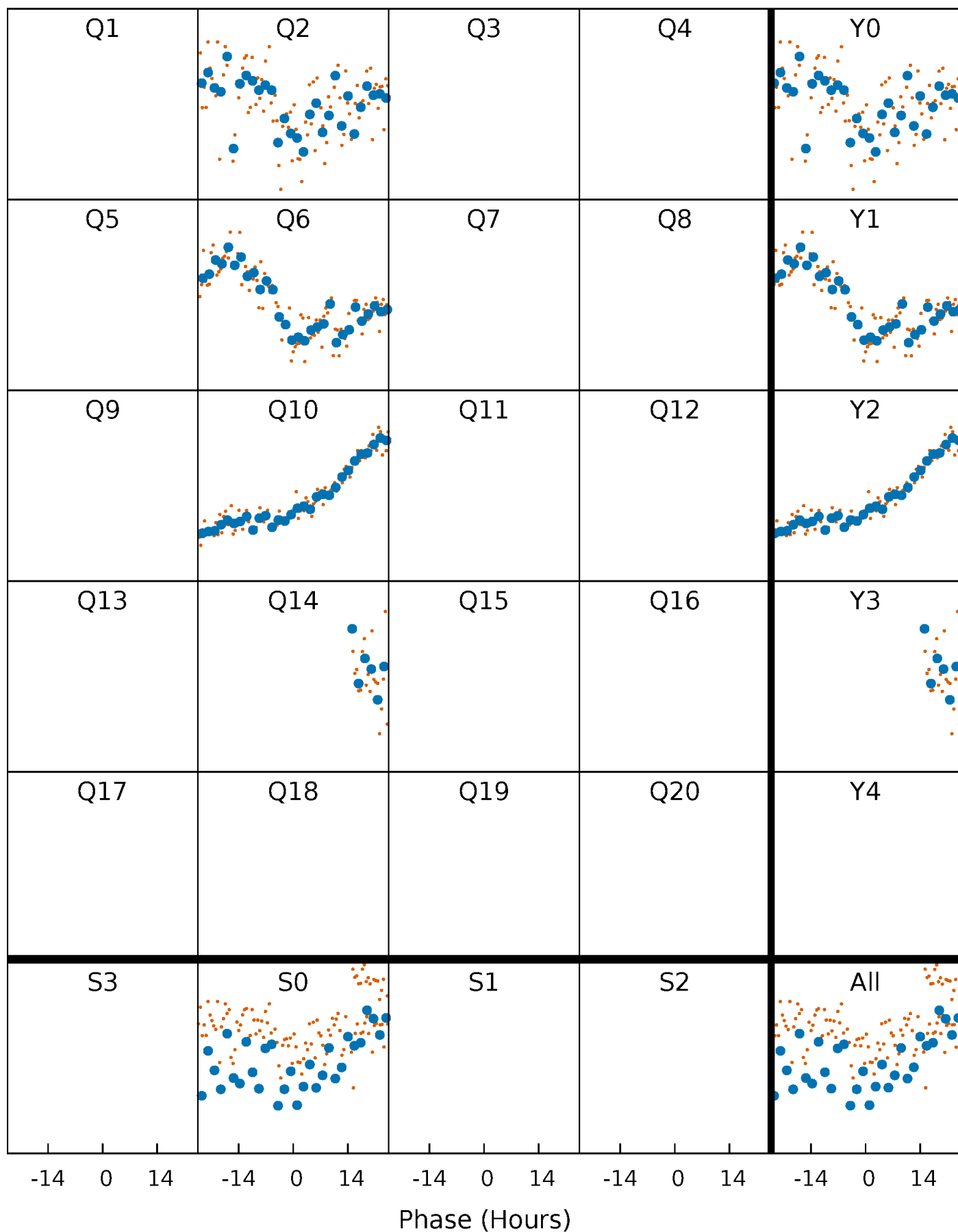


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



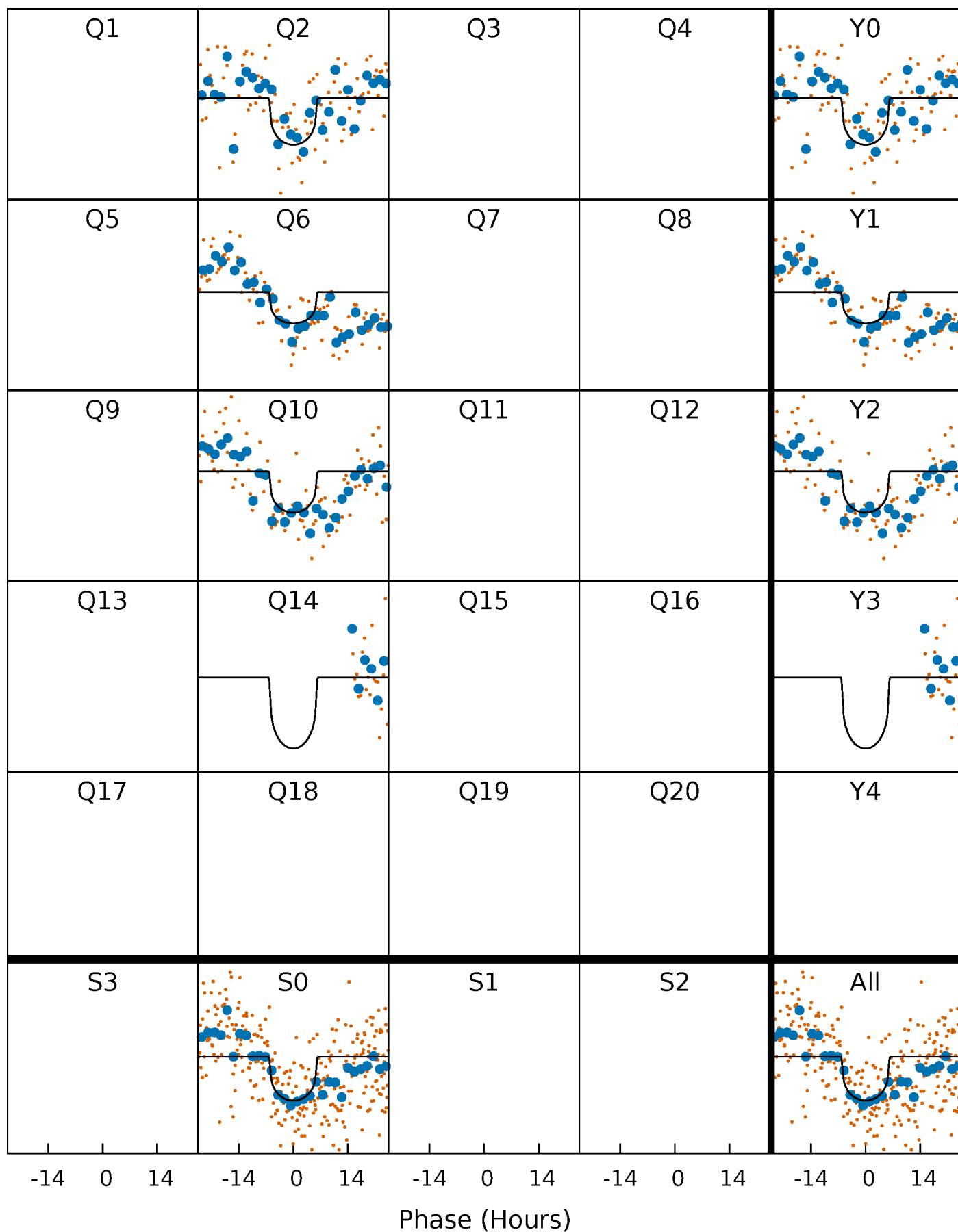
PDC Quarter-Phased Transit Curves

TCE 008491288-01 P=374.678974 Days $T_0=171.779199$ (BKJD)



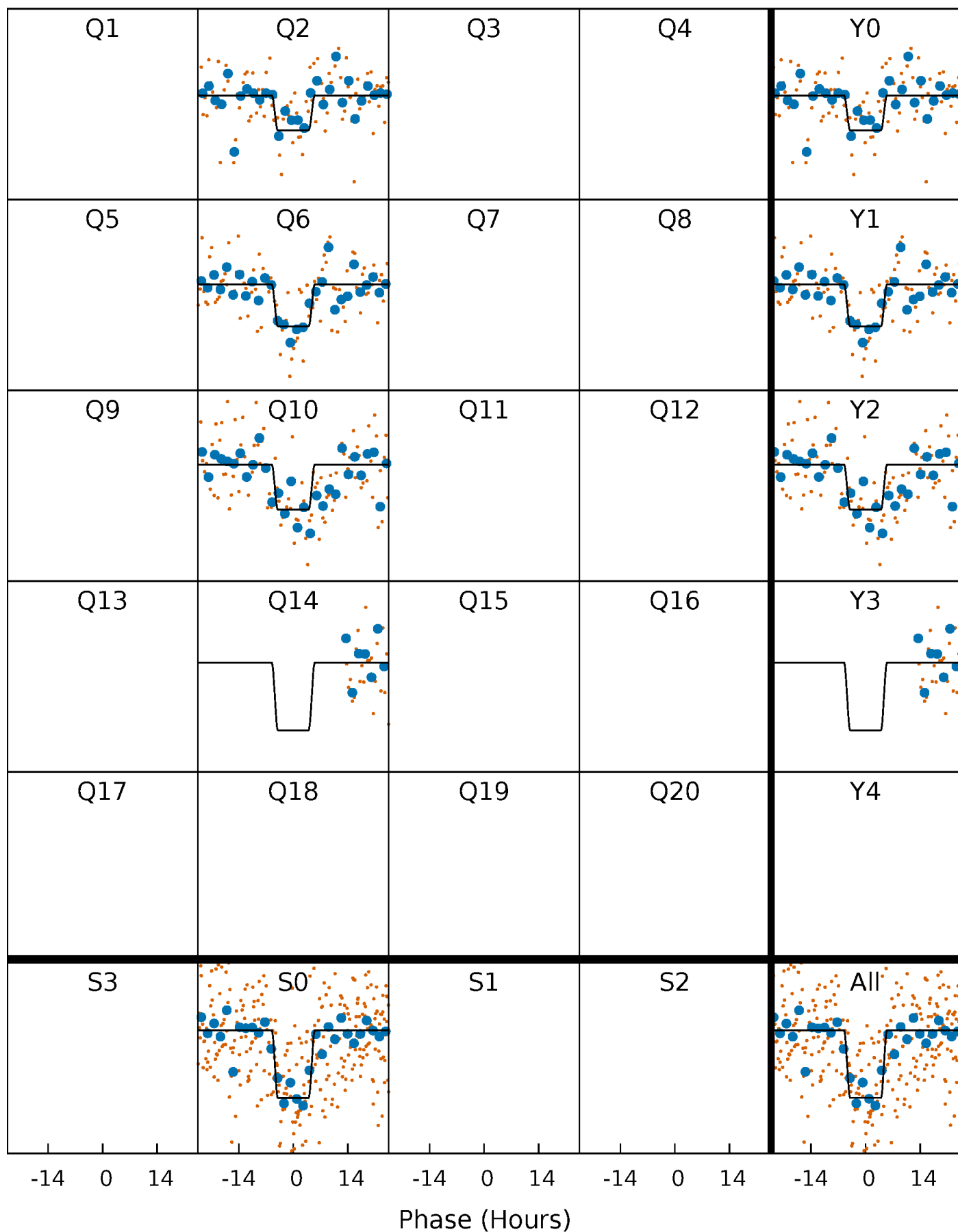
DV Quarter-Phased Transit Curves

TCE 008491288-01 P=374.678974 Days $T_0=171.779199$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

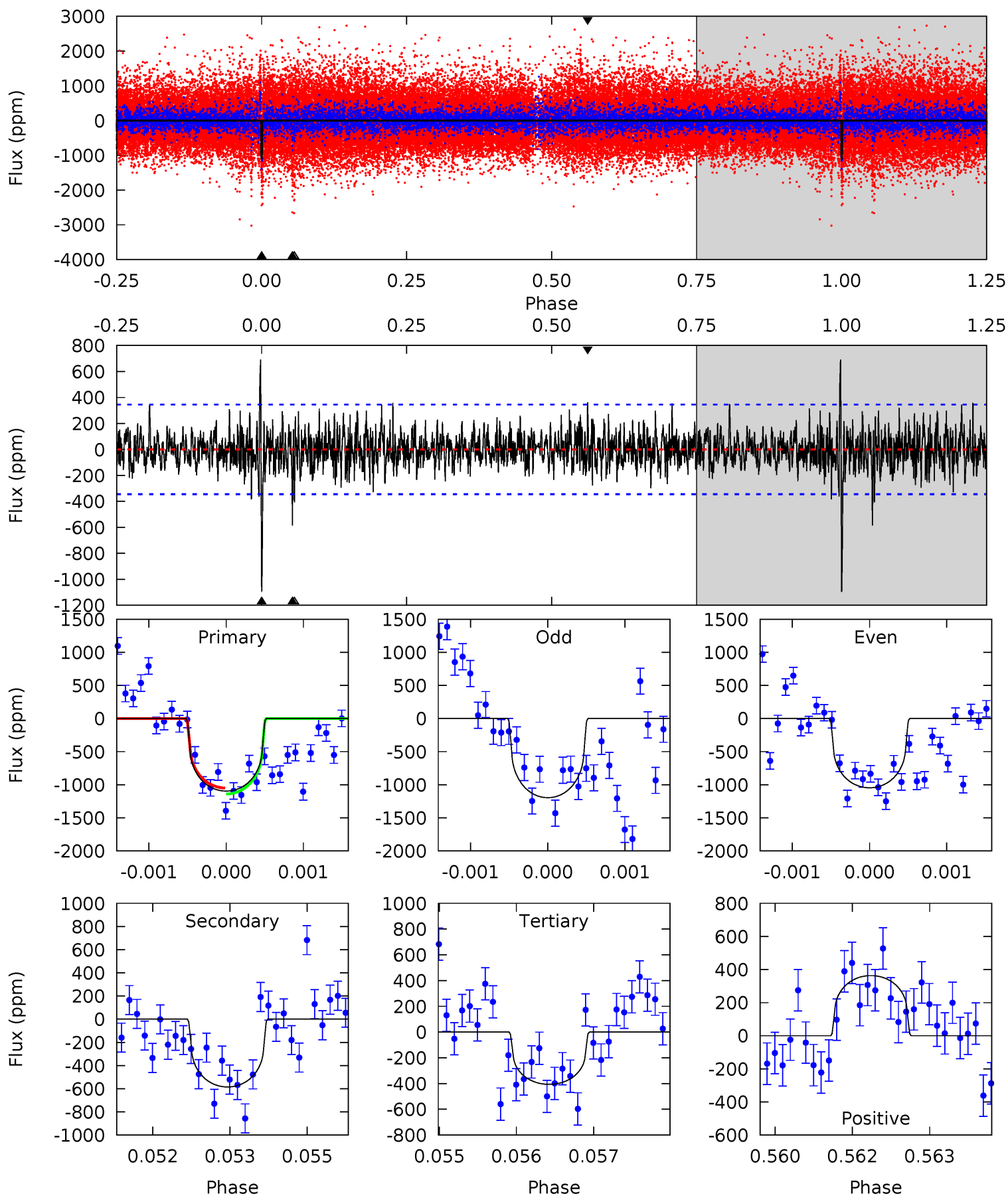
TCE 008491288-01 P=374.703812 Days $T_0=171.771513$ (BKJD)



DV Model-Shift Uniqueness Test

008491288-01, P = 374.678974 Days, E = 171.779199 Days

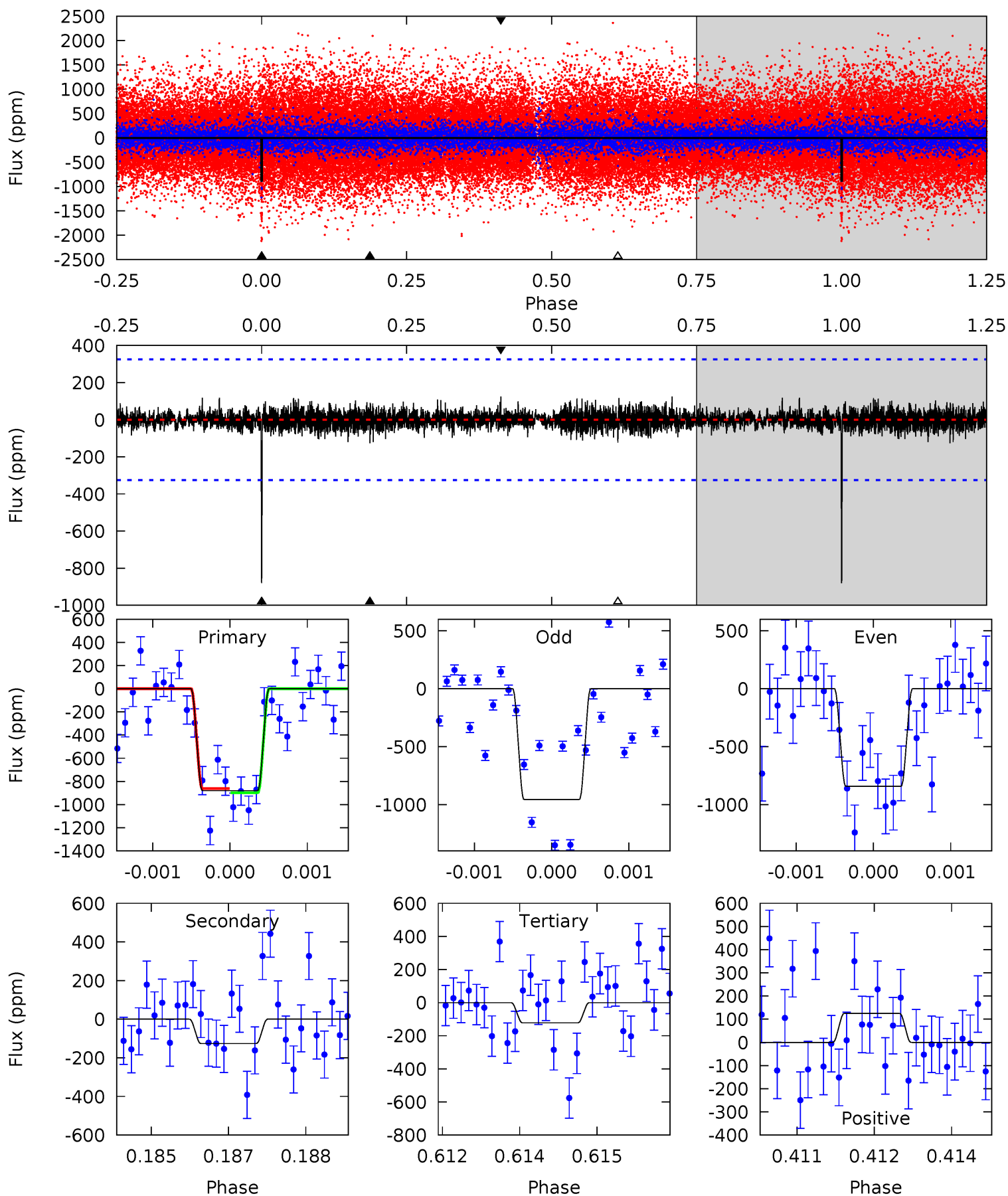
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.1	9.15	6.35	5.68	5.40	3.20	1.65	10.8	11.5	2.80	3.47	1.10	0.92	0.39	0.71



Alt Model-Shift Uniqueness Test

008491288-01, P = 374.703812 Days, E = 171.771513 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	2.10	2.04	2.08	5.42	3.23	0.53	12.6	12.6	0.07	0.02	0.90	0.92	0.12	0.30



Stellar Parameters For KIC 008491288

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5102^{+152}_{-152}	$4.463^{+0.108}_{-0.120}$	$0.180^{+0.200}_{-0.250}$	$0.880^{+0.129}_{-0.107}$	$0.819^{+0.077}_{-0.058}$	$1.692^{+0.723}_{-0.555}$
	+3%/-3%	+2%/-3%	+111%/-139%	+15%/-12%	+9%/-7%	+43%/-33%
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 008491288-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-585 ± 64	$3.44^{+2.80}_{-2.25}$	303^{+16}_{-14}	4346^{+2742}_{-814}	$24021^{+172841}_{-16678}$
Alt.	-126 ± 60	$3.55^{+2.92}_{-2.26}$	303^{+16}_{-15}	3286^{+1482}_{-577}	4678^{+35187}_{-3487}

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 $A_{obs} \gg 1.0$

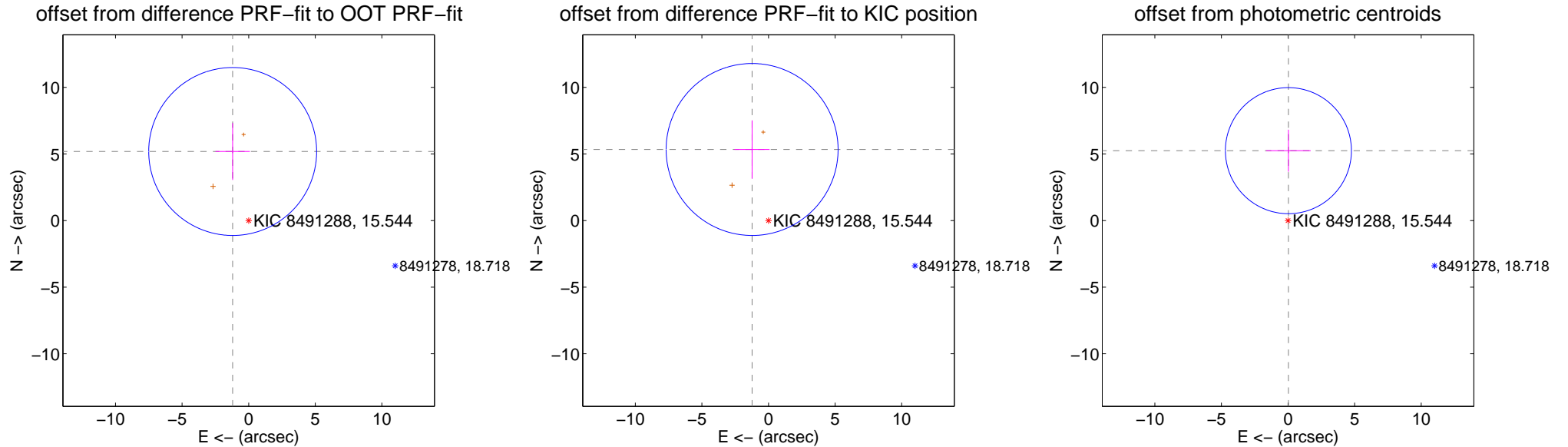
DV Centroid Data

Supplemental centroid analysis for 008491288-01. Kepler magnitude: 15.54. Transit SNR 7.70

There are 0 quarters with good PRF difference image offsets

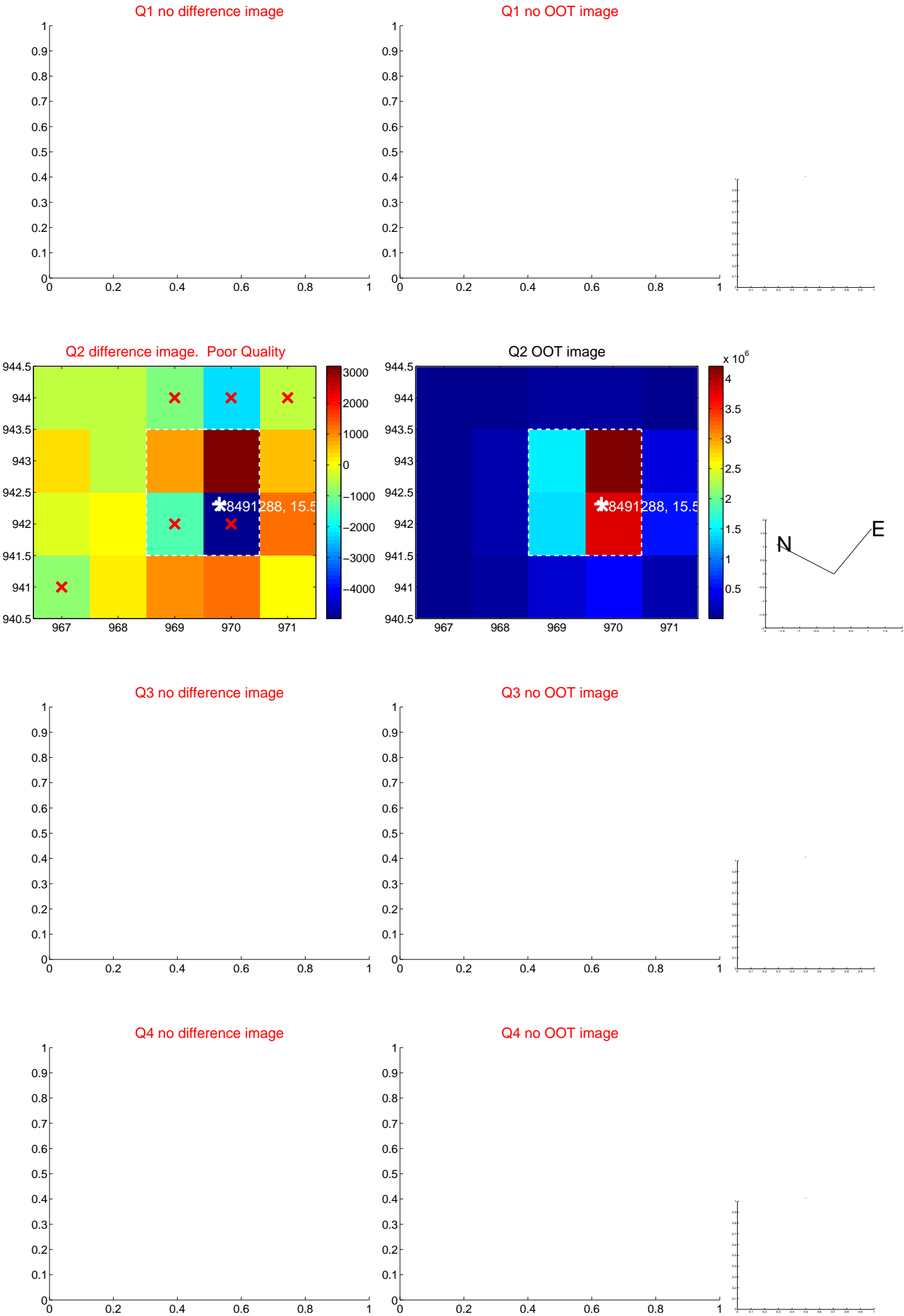
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.323 ± 2.102	2.53	1.202 ± 1.288	5.186 ± 2.137
PRF-fit source offset from KIC position	5.477 ± 2.152	2.54	1.231 ± 1.317	5.337 ± 2.188
photometric centroid source offset	5.25 ± 1.58	3.33	-0.03 ± 1.67	5.25 ± 1.58

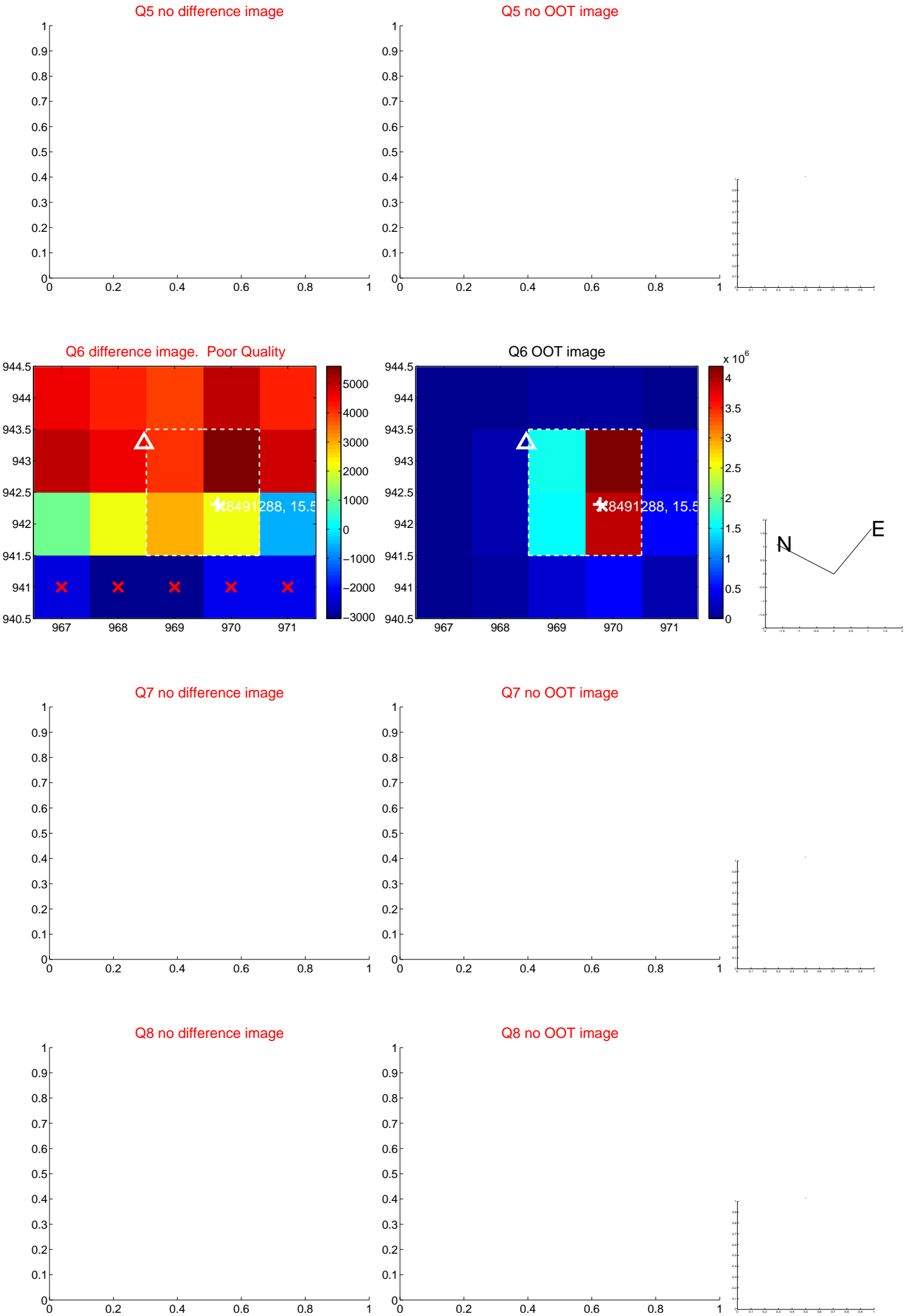


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

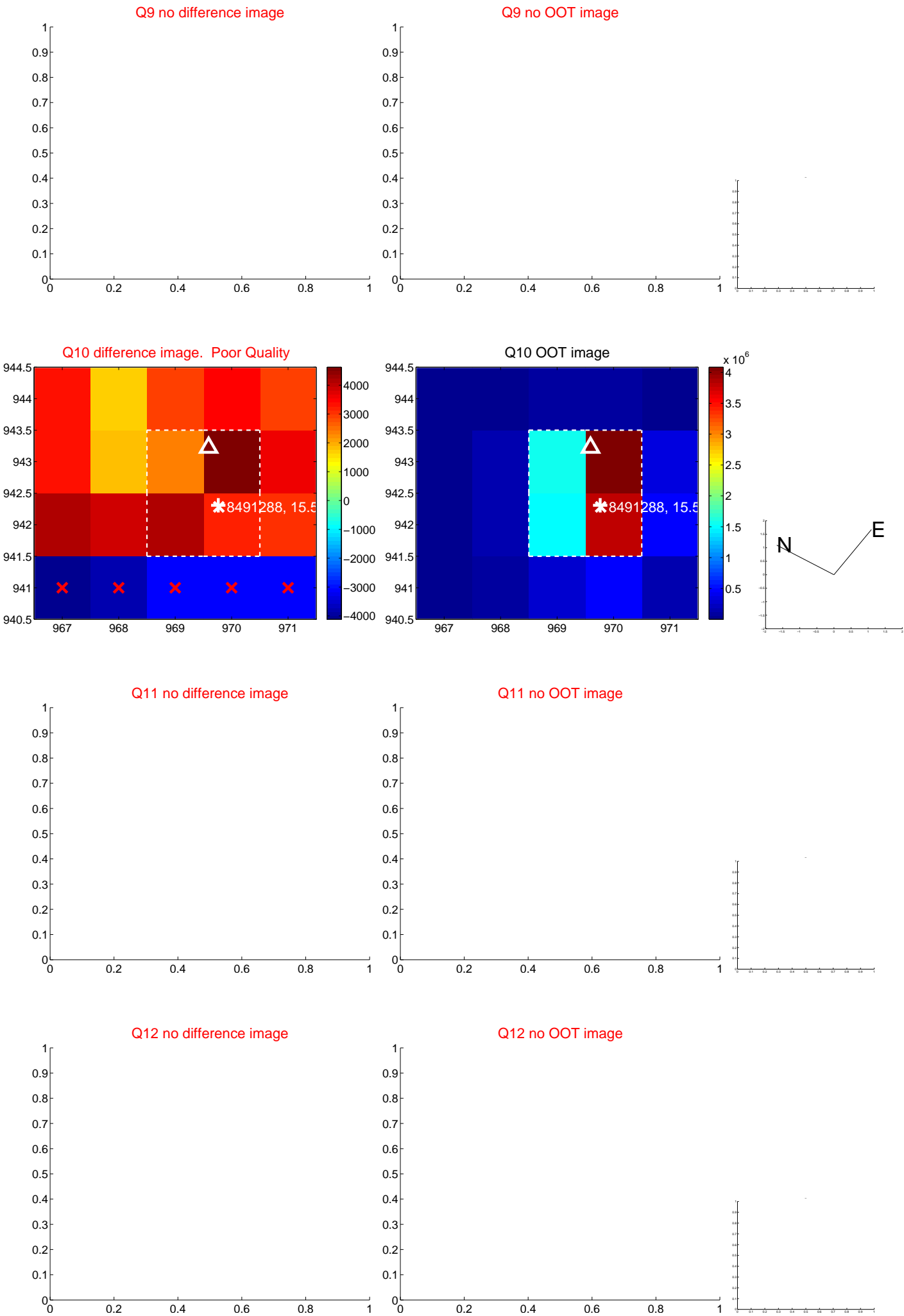
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



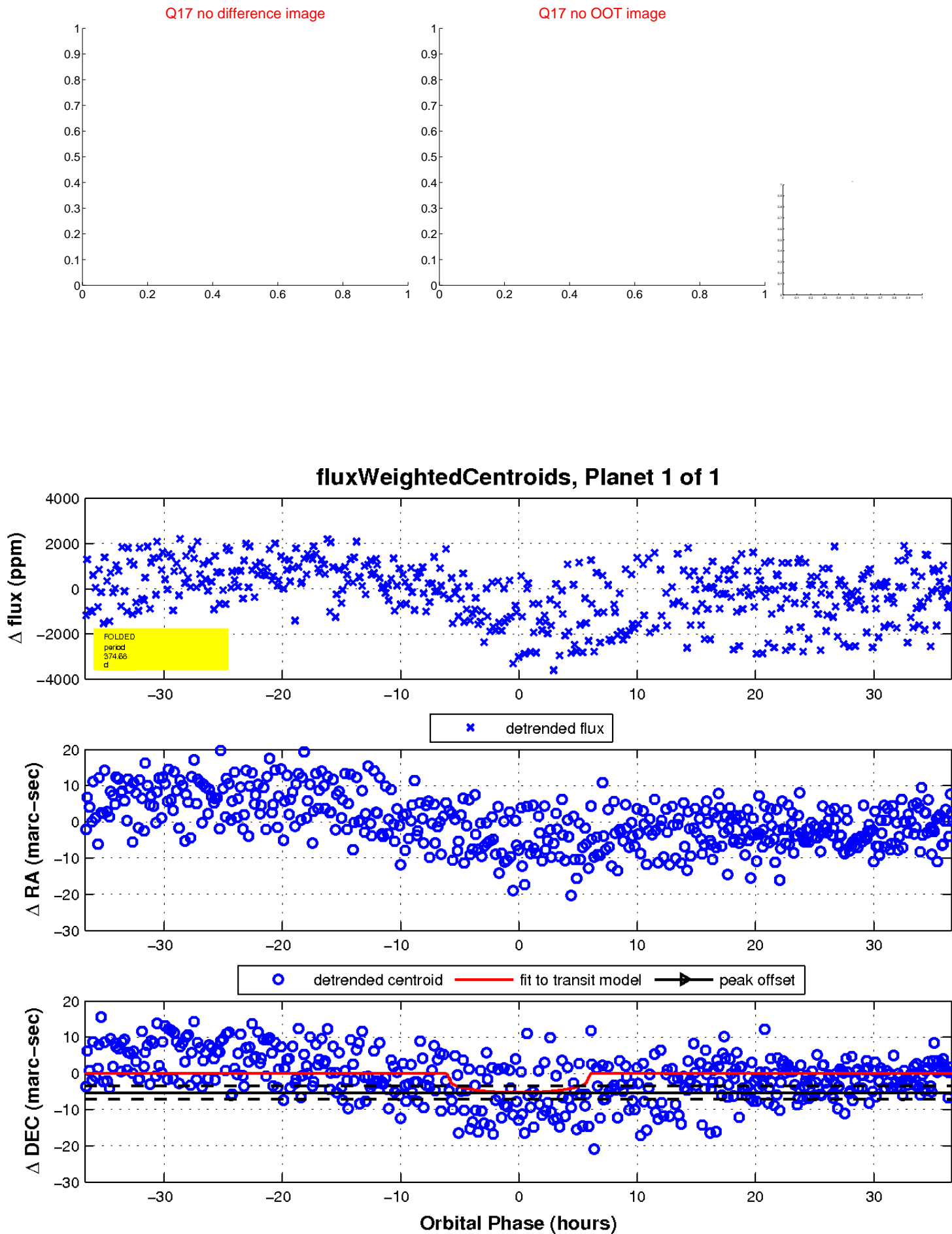
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

