

KIC 008229270

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})
008229270-01	OBS	No	373.695490	266.079992	479.2	29.149	9.7	10.7	1.02	6289	2.57	1.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008229270-01	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.

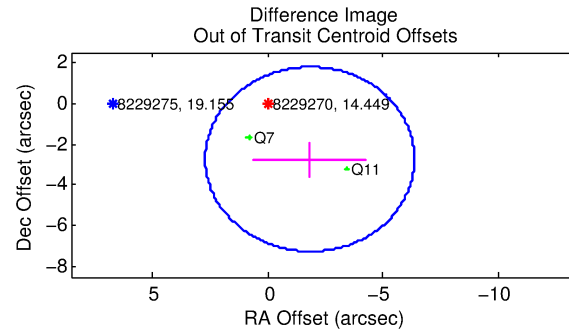
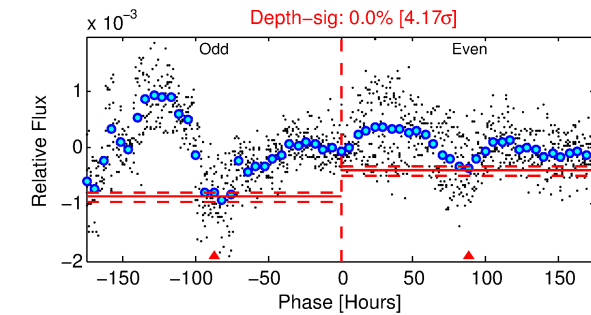
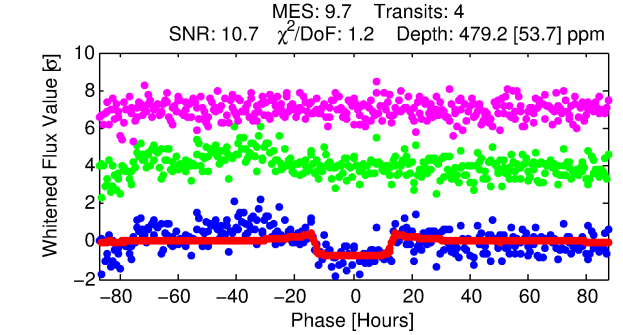
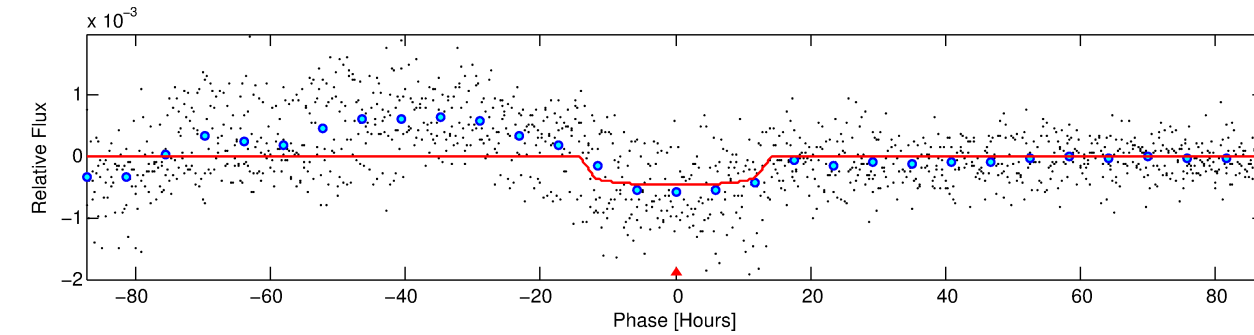
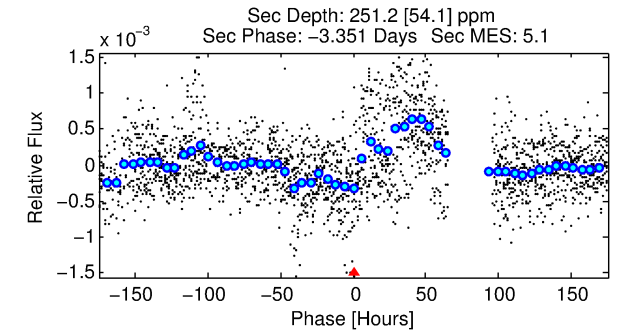
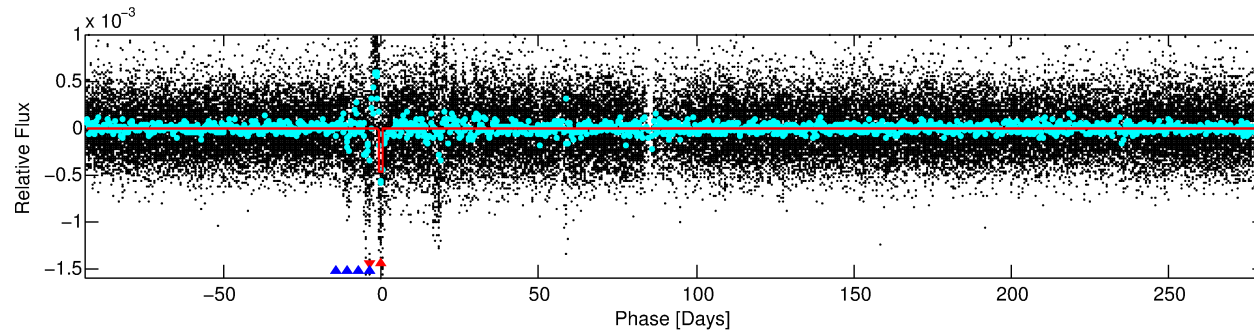
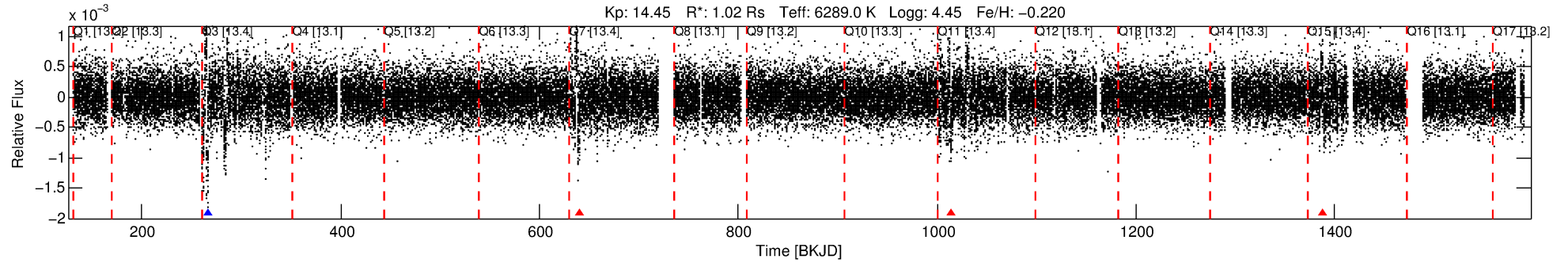
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008229270-01

No Significant Match Found

DV One-Page Summary

KIC: 8229270 Candidate: 1 of 2 Period: 373.695 d



DV Fit Results:

Period = 373.69549 [0.01781] d
Epoch = 266.0800 [0.0343] BKJD
Rp/R* = 0.0231 [0.0020]
a/R* = 51.55 [17.22]
b = 0.88 [0.09]
Seff = 1.34 [0.56]
Teff = 275 [29] K
Rp = 2.57 [0.87] Re
a = 1.0418 [0.2861] AU
Ag = 22686.04 [10991.95] [2.06 σ]
Teffp = 5209 [399] K [12.32 σ]

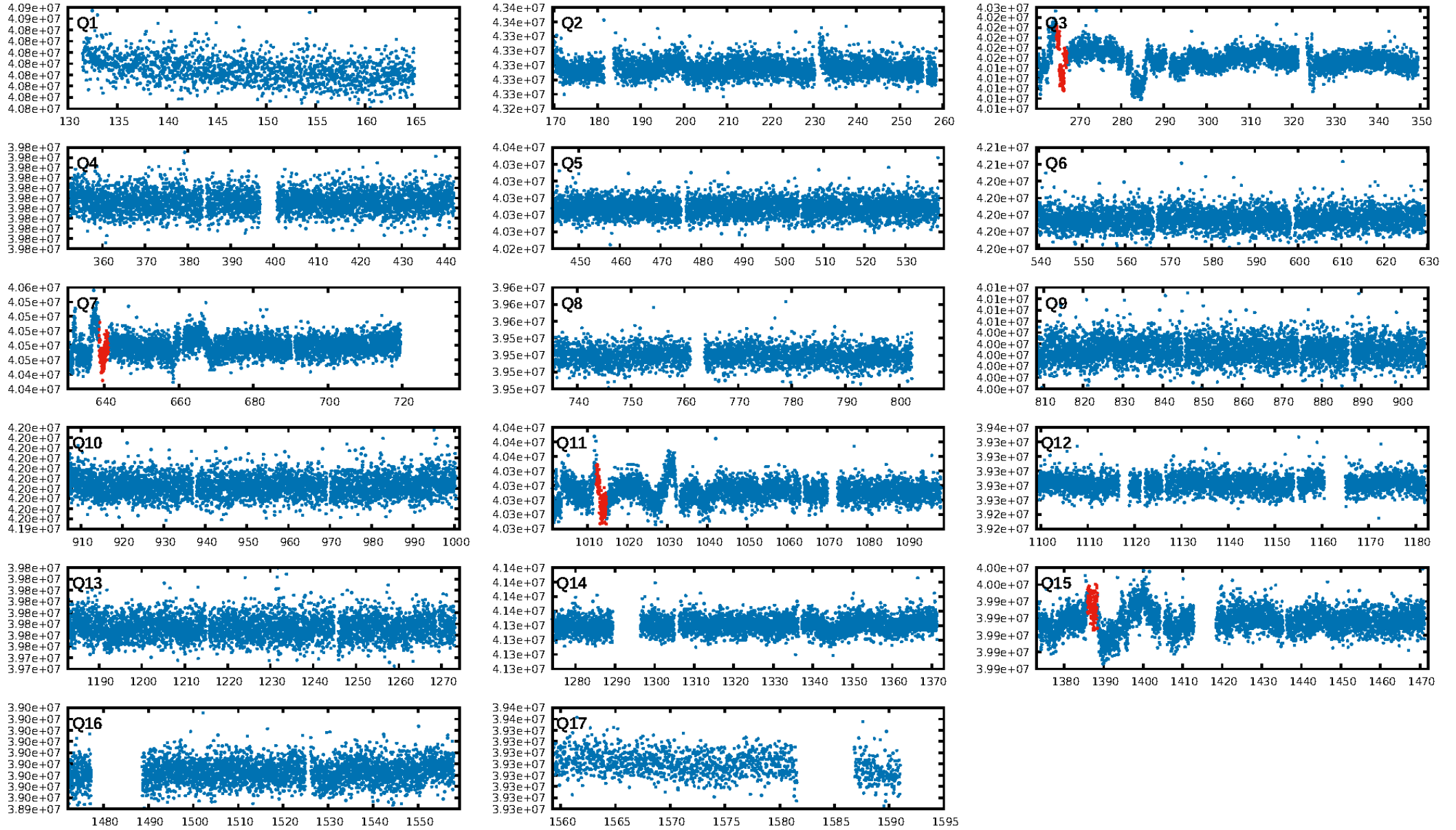
DV Diagnostic Results:

ShortPeriod-sig: 96.8% [2.15 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 60.0%
Bootstrap-pfa: 5.07e-14
RollingBand-fgt: 0.25 [1/4]
GhostDiagnostic-chr: 5.866
Centroid-sig: 16.2%
Centroid-so: 0.866 arcsec [0.70 σ]
OotOffset-rm: 3.289 arcsec [2.18 σ]
KicOffset-rm: 3.261 arcsec [2.23 σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

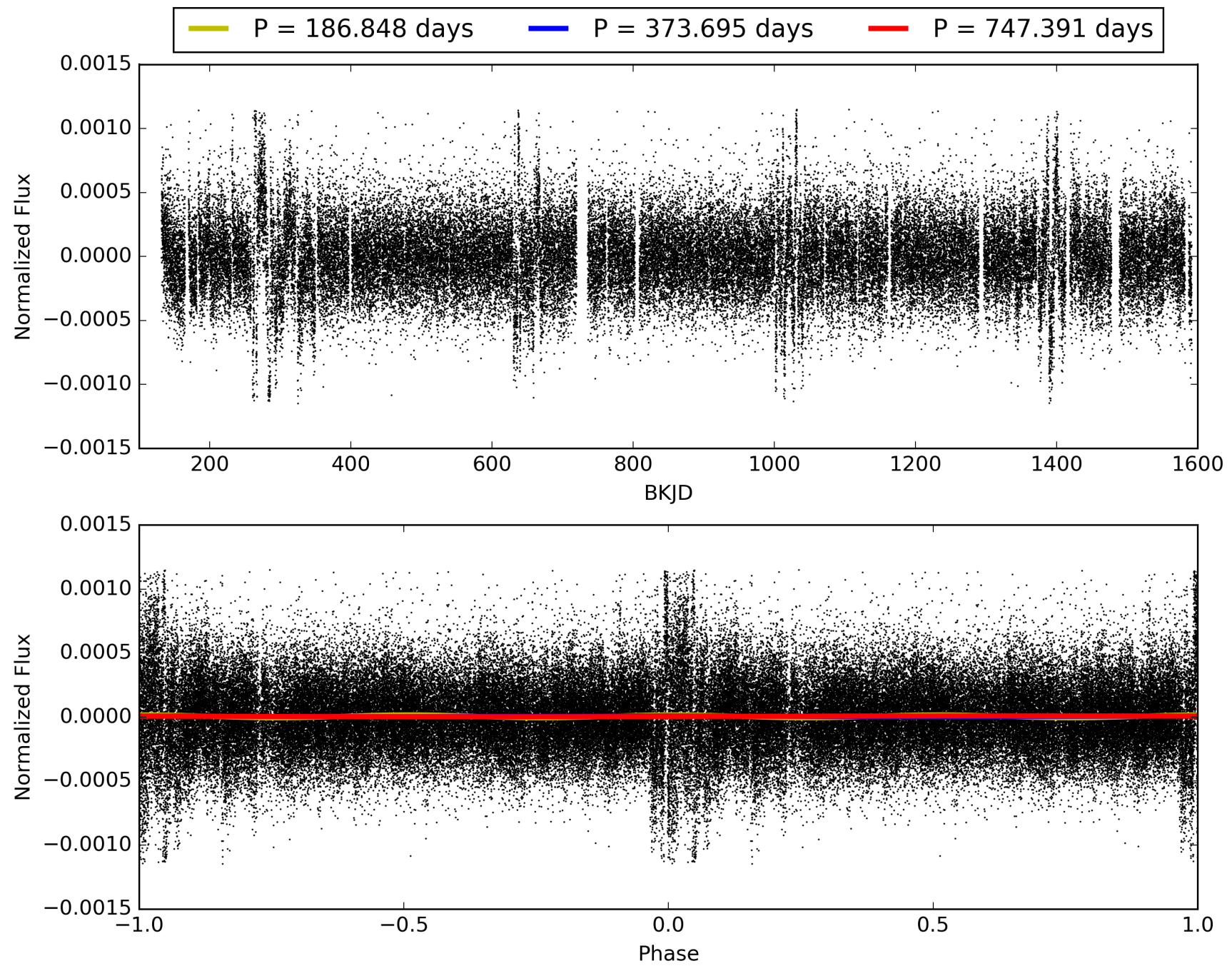
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:45:50 Z

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

TCE 008229270-01, PDC Light Curves

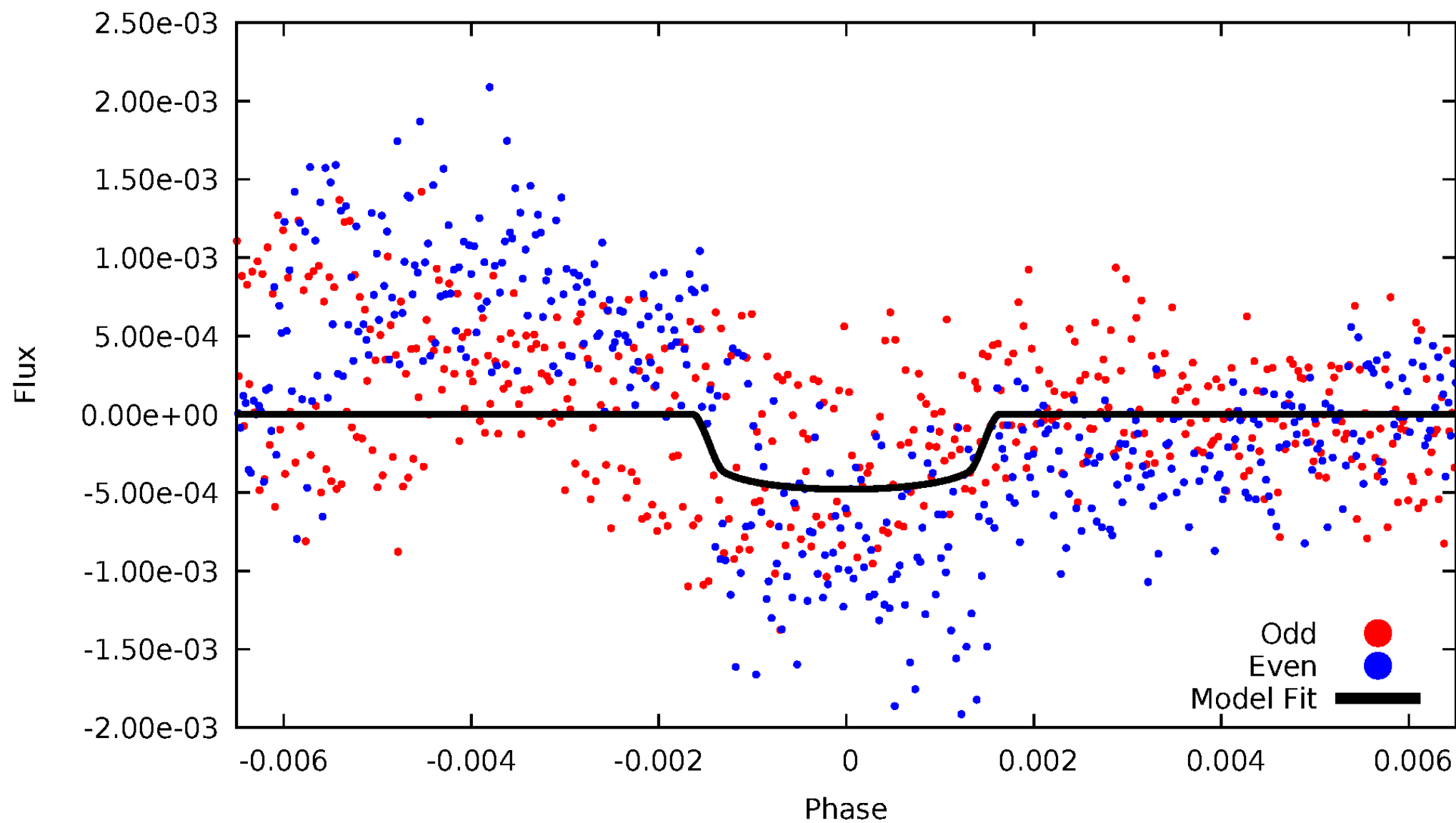


TCE 008229270-01



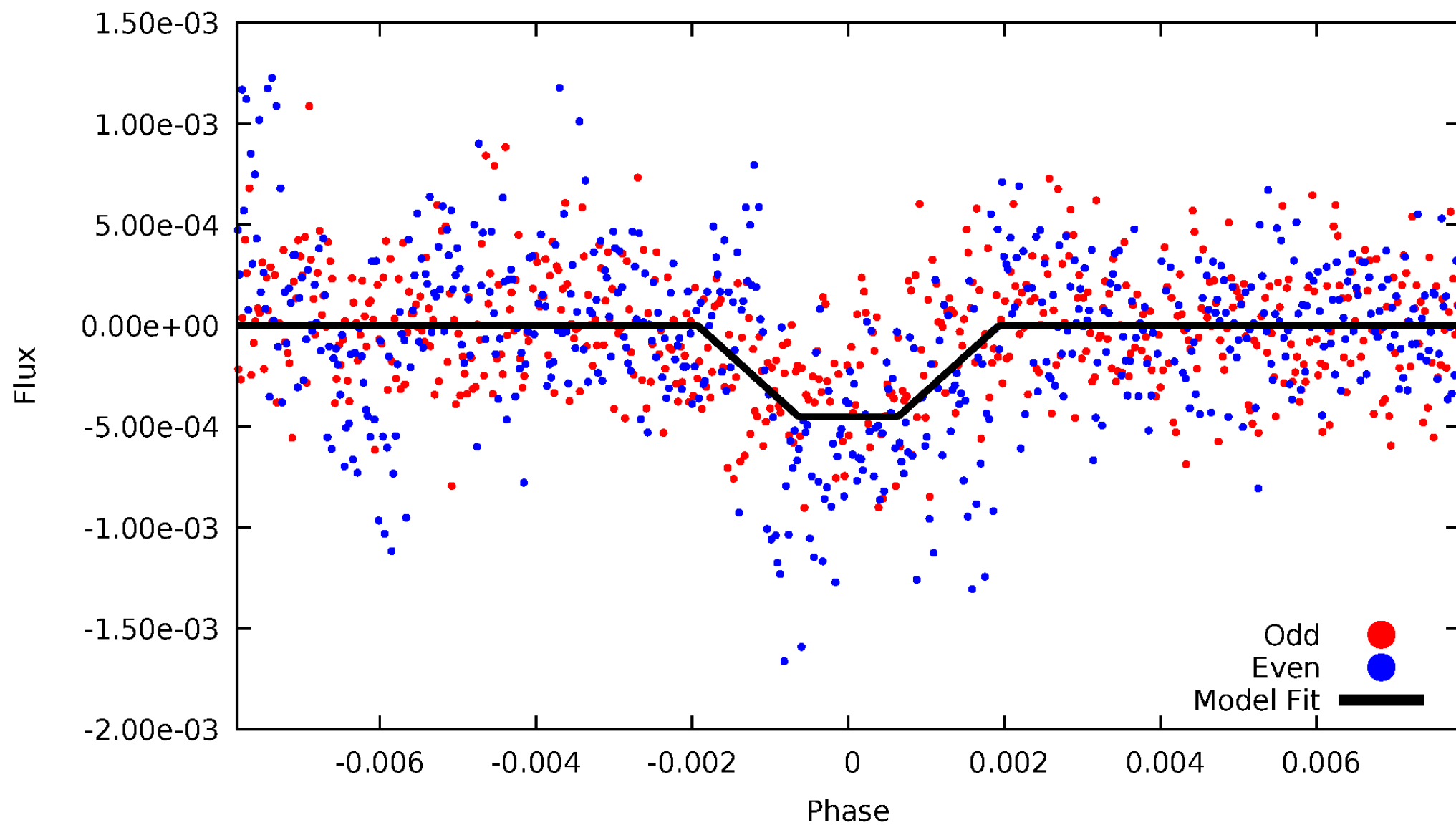
DV Odd/Even

TCE 008229270-01



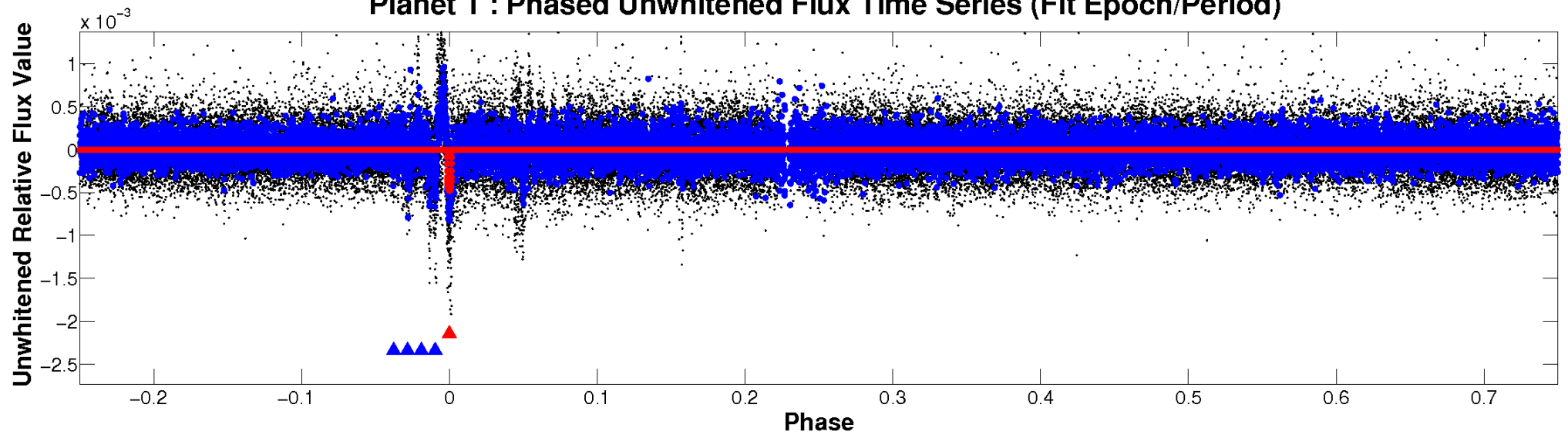
ALT Odd/Even

TCE 008229270-01

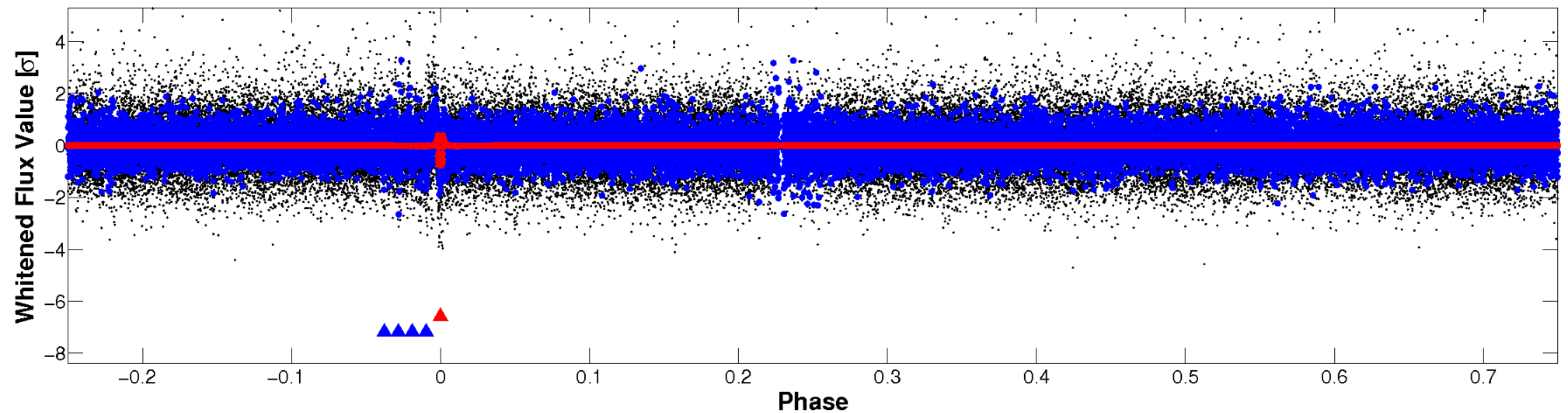


Non-Whitened Vs. Whitened Light Curve

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

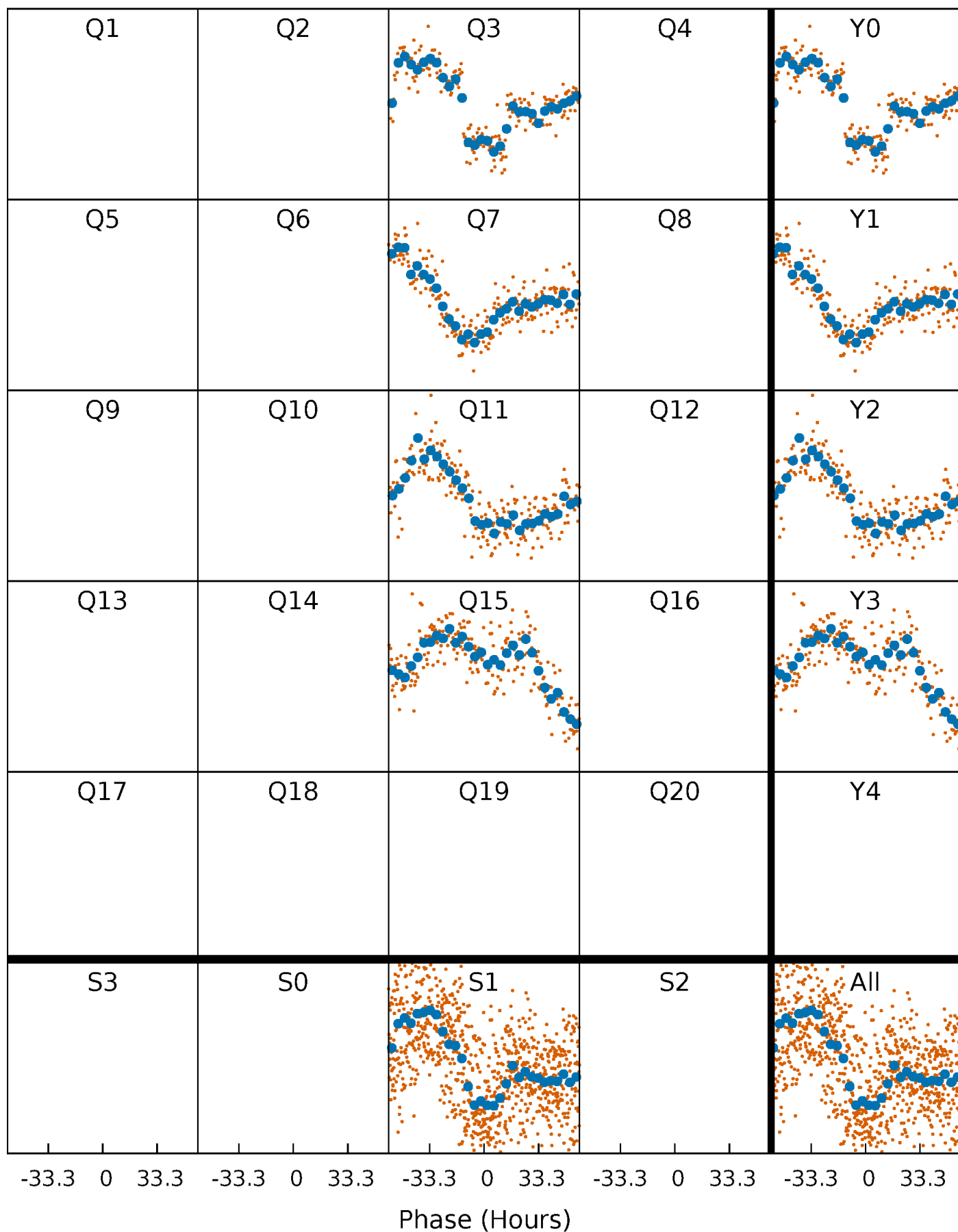


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



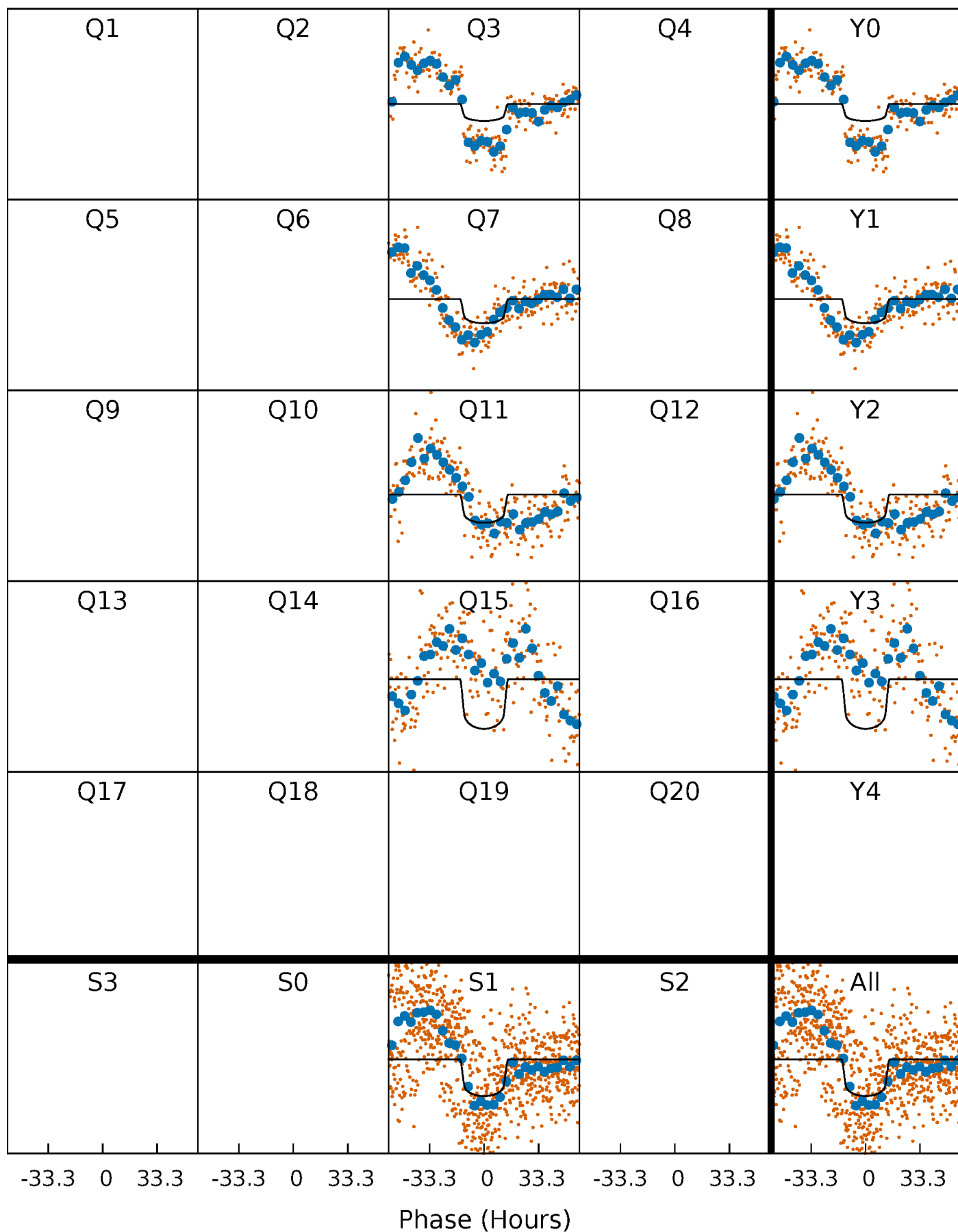
PDC Quarter-Phased Transit Curves

TCE 008229270-01 P=373.695490 Days $T_0=266.079992$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008229270-01 P=373.695490 Days $T_0=266.079992$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

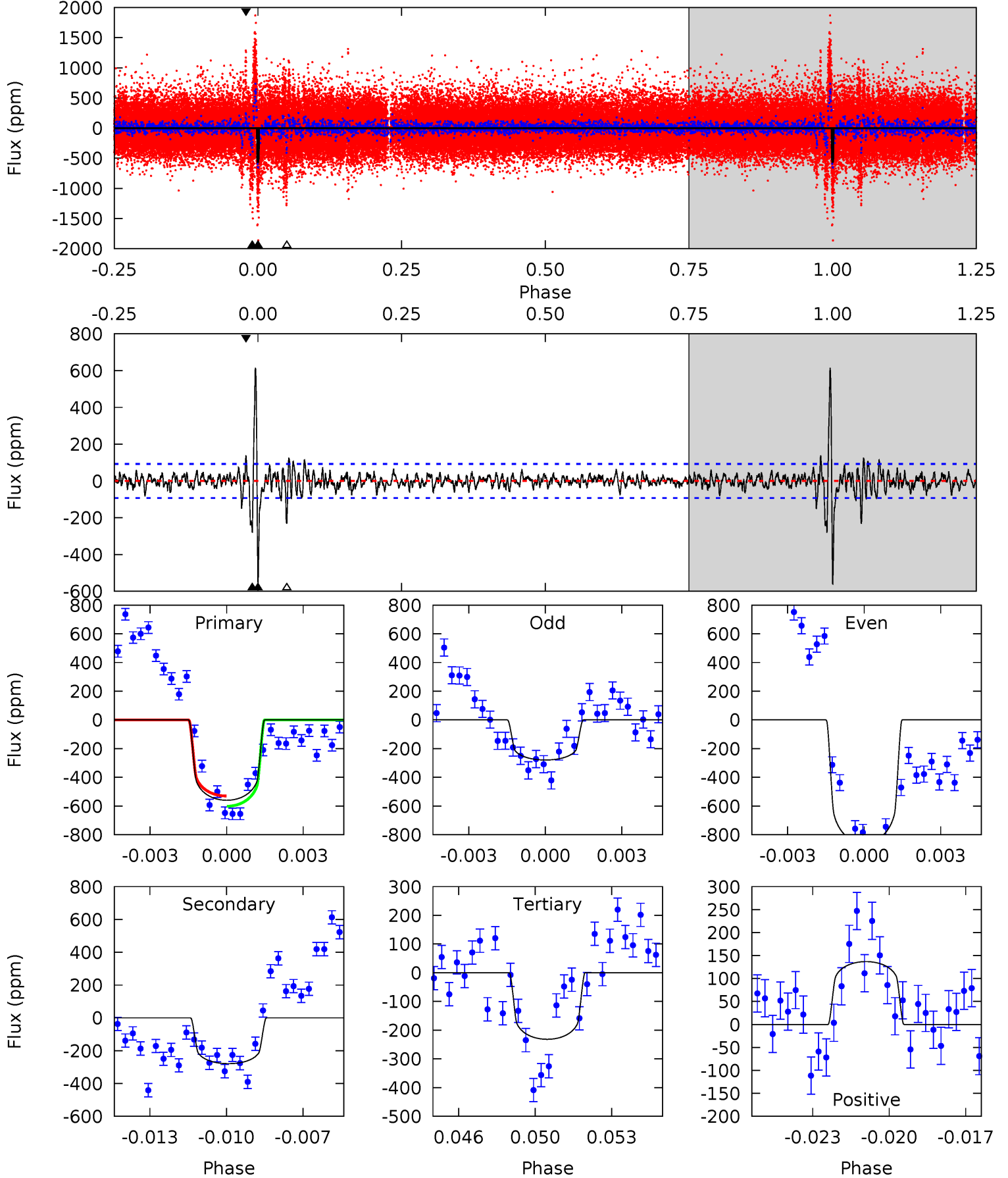
TCE 008229270-01 P=373.777491 Days $T_0=265.946071$ (BKJD)



DV Model-Shift Uniqueness Test

008229270-01, $P = 373.695490$ Days, $E = 266.079992$ Days

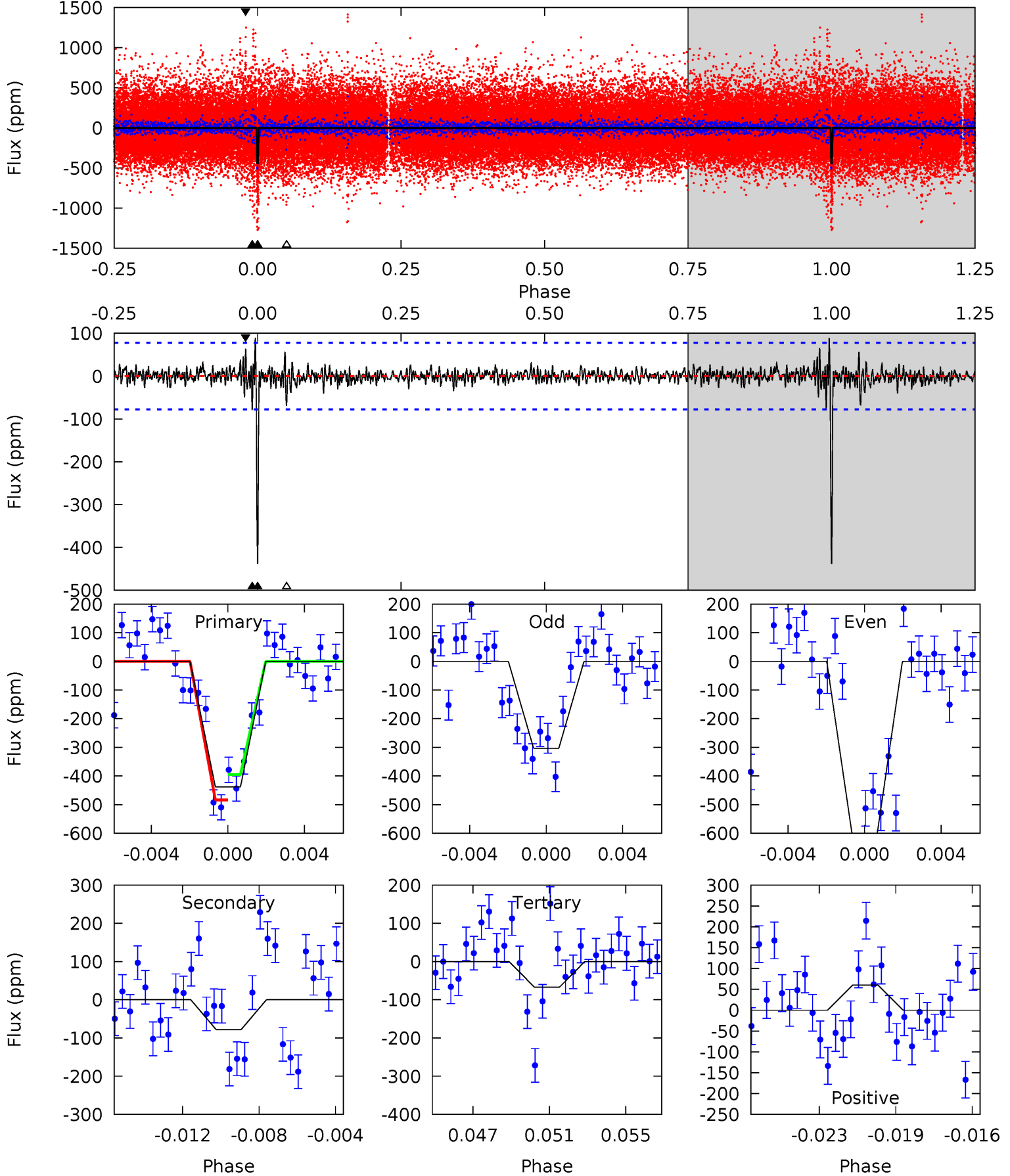
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.6	15.8	13.1	7.72	5.23	2.94	2.55	18.5	23.9	2.69	8.06	16.8	1.01	0.52	2.01



Alt Model-Shift Uniqueness Test

008229270-01, P = 373.777491 Days, E = 265.946071 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.3	5.21	4.48	4.04	5.20	2.89	0.79	24.8	25.2	0.73	1.17	9.99	1.14	0.17	2.95



Stellar Parameters For KIC 008229270

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6289^{+169}_{-206}	$4.454^{+0.054}_{-0.216}$	$-0.220^{+0.250}_{-0.300}$	$1.020^{+0.335}_{-0.112}$	$1.075^{+0.144}_{-0.144}$	$1.427^{+0.407}_{-0.752}$
	+3%/-3%	+1%/-5%	+114%/-136%	+33%/-11%	+13%/-13%	+29%/-53%
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 008229270-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-279 ± 18	$2.68^{+0.49}_{-0.34}$	392^{+29}_{-19}	5376^{+283}_{-260}	22765^{+6874}_{-6250}
Alt.	-78 ± 15	$2.49^{+0.43}_{-0.33}$	392^{+31}_{-20}	4275^{+238}_{-206}	7253^{+2801}_{-2265}

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 $A_{obs} \gg 1.0$

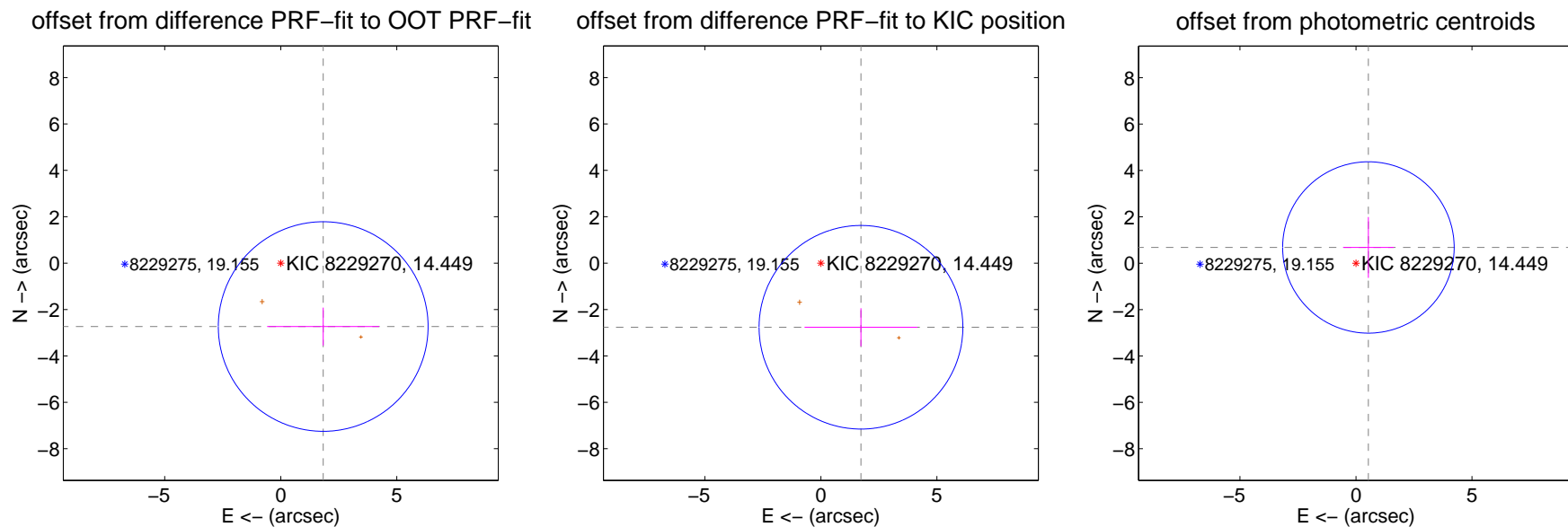
DV Centroid Data

Supplemental centroid analysis for 008229270-01. Kepler magnitude: 14.45. Transit SNR 10.75

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.289 ± 1.506	2.18	-1.829 ± 2.418	-2.733 ± 0.817
PRF-fit source offset from KIC position	3.261 ± 1.463	2.23	-1.728 ± 2.429	-2.765 ± 0.820
photometric centroid source offset	0.87 ± 1.23	0.70	-0.54 ± 1.09	0.68 ± 1.31

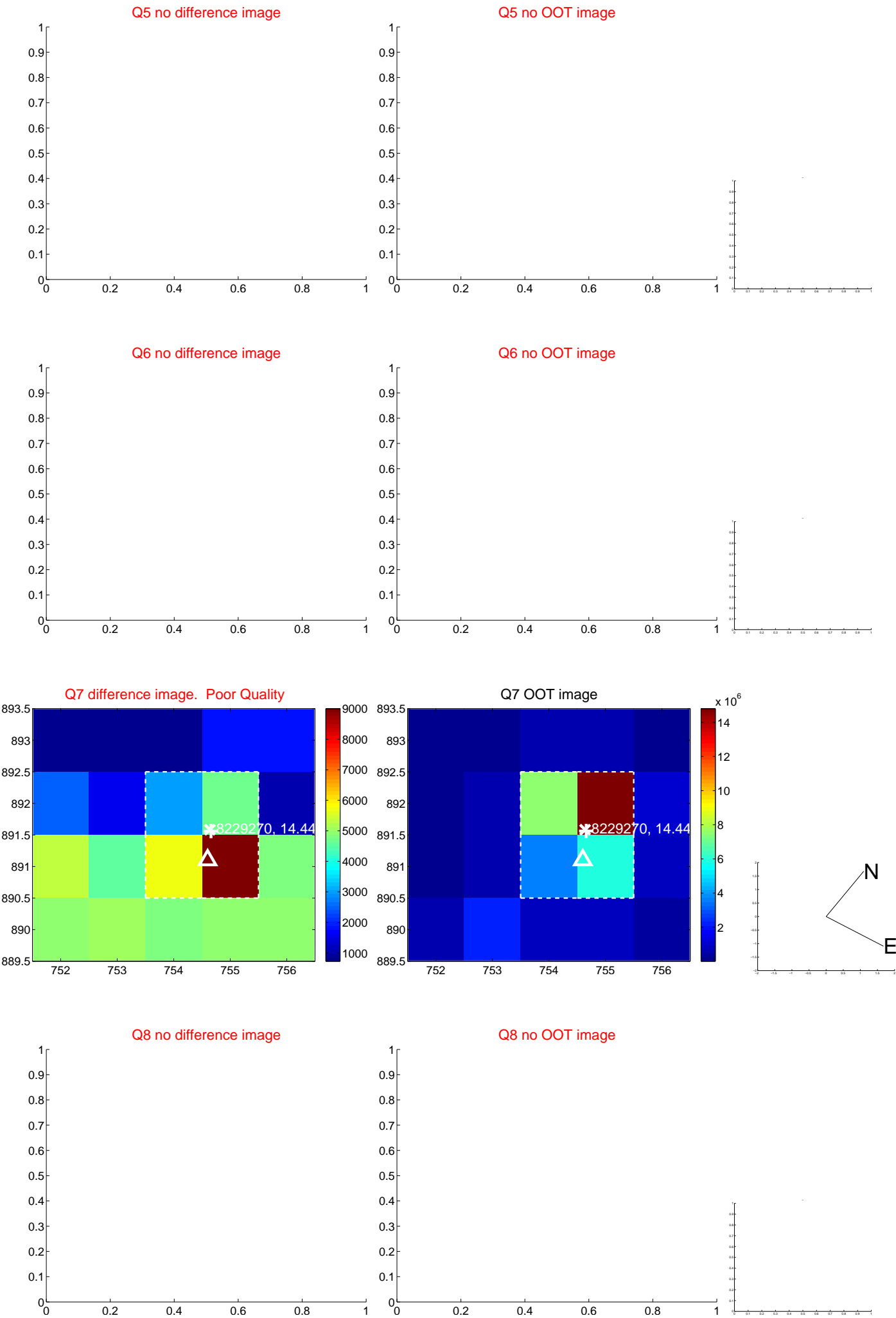


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

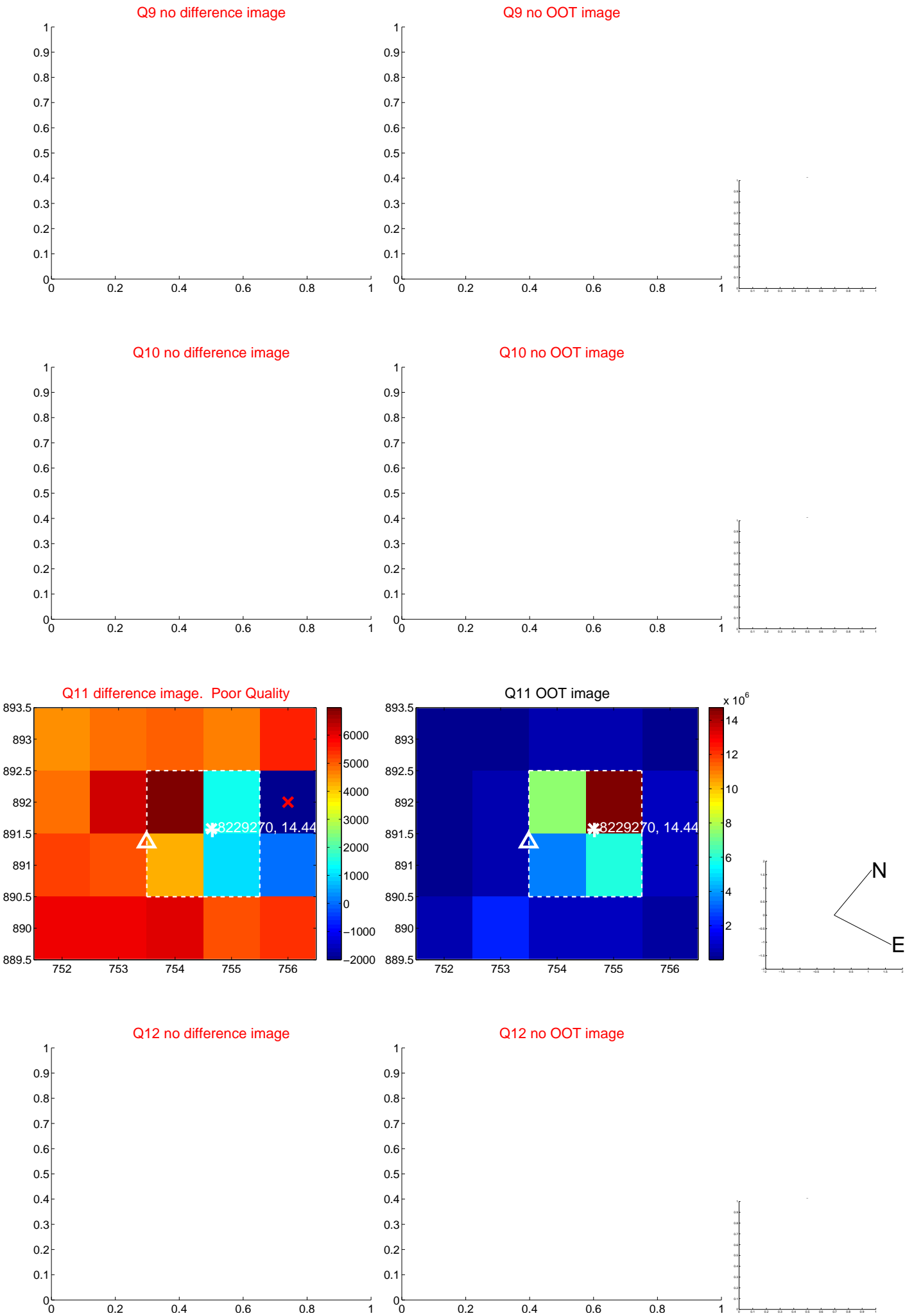
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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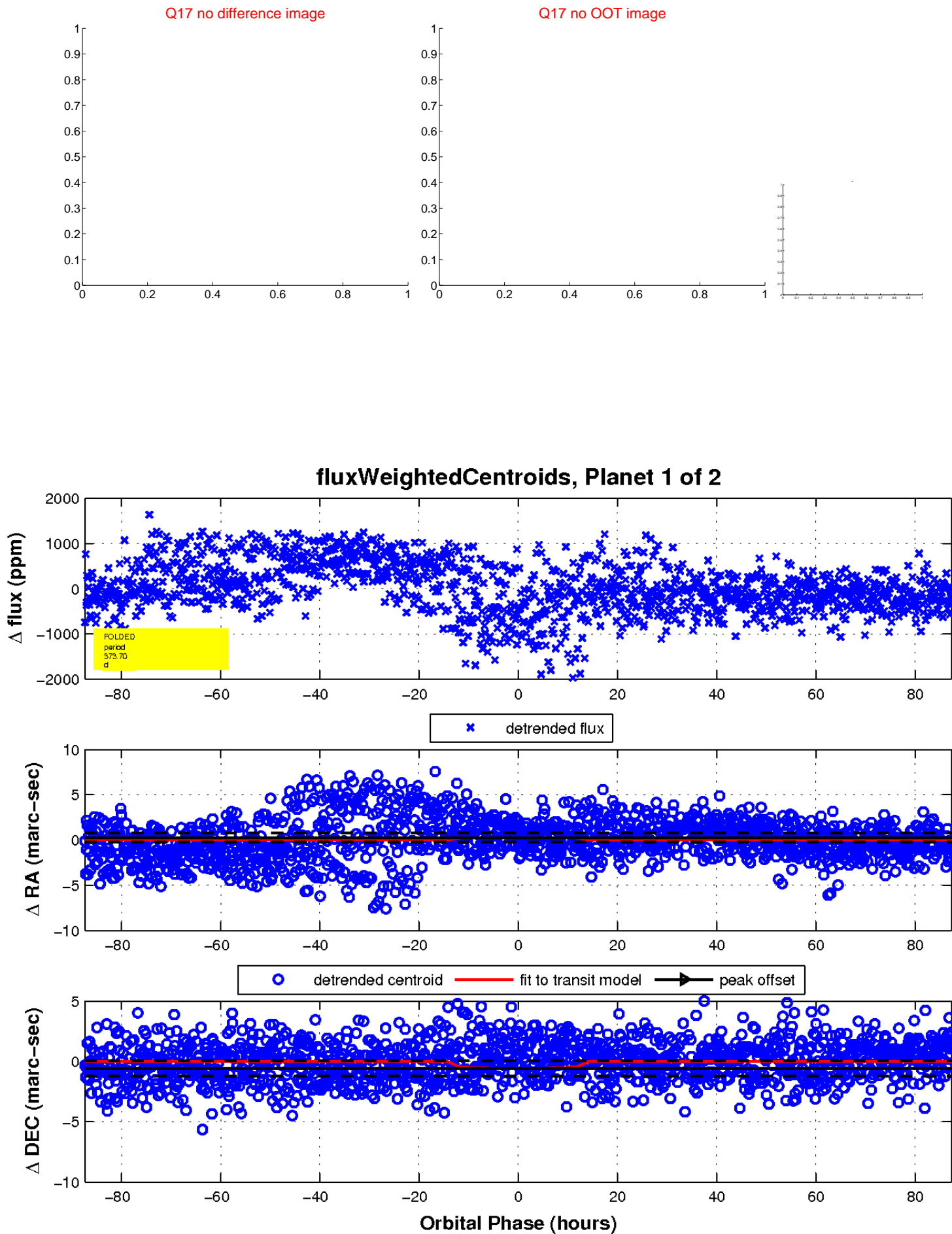
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

