

KIC 008827930

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})
008827930-01	OBS	3801.01	288.312814	374.799289	11135.0	5.397	95.7	92.0	1.22	5672	13.22	1.93

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008827930-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT

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

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

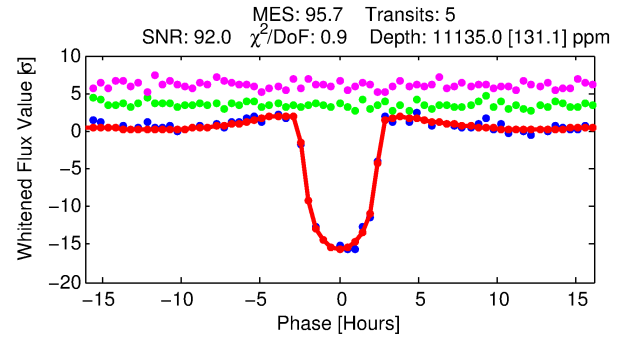
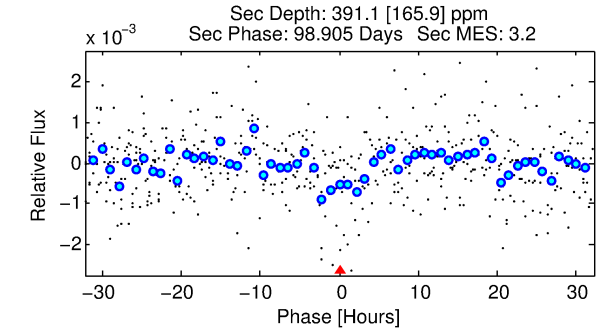
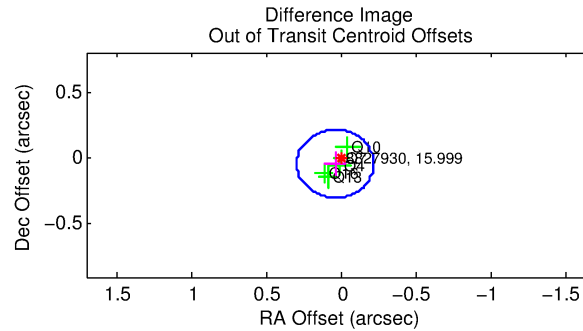
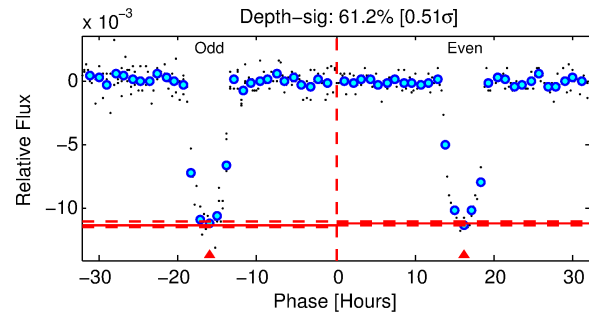
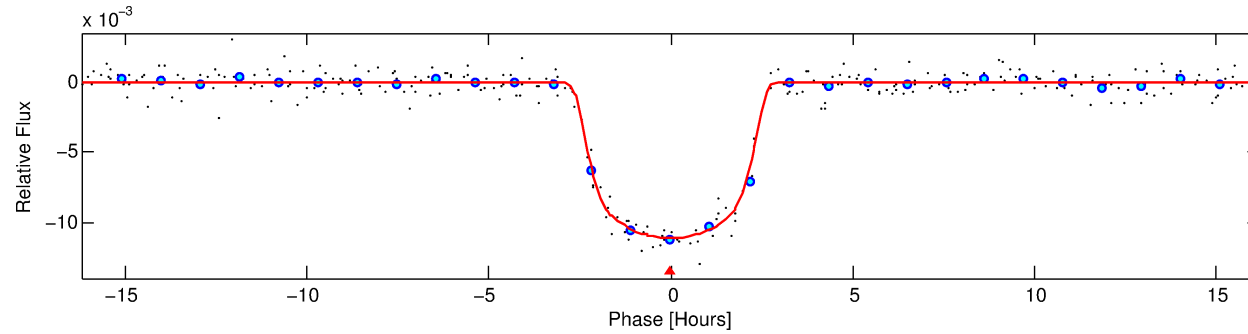
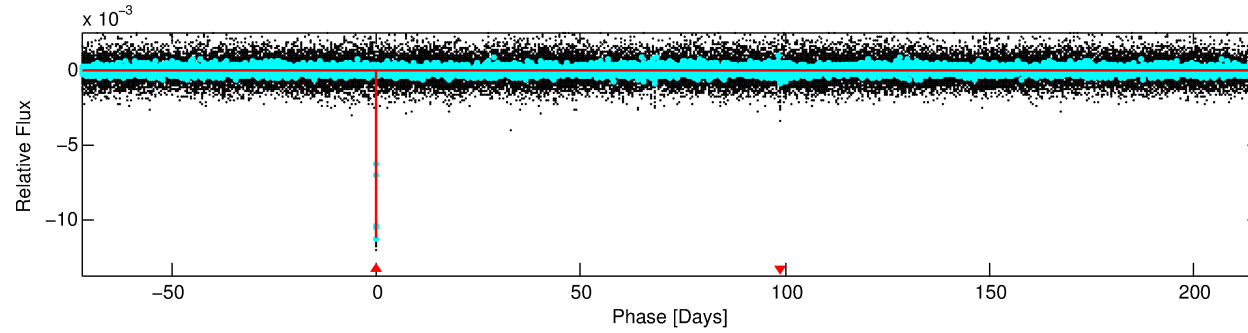
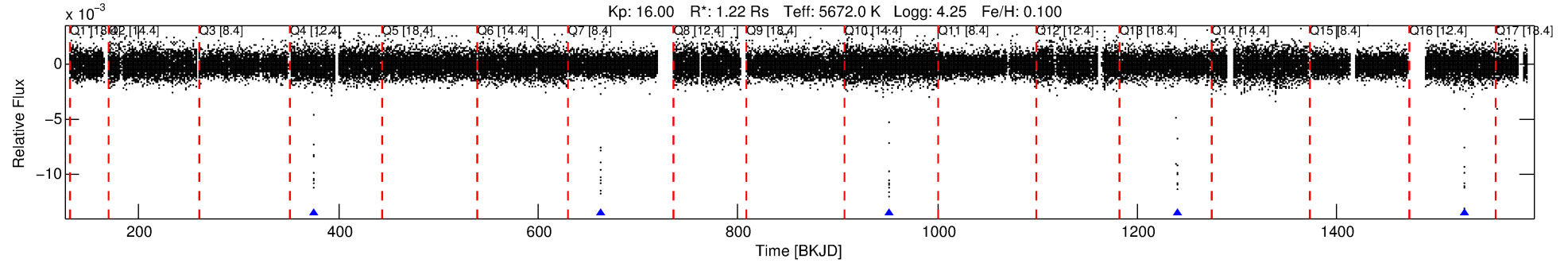
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008827930-01

No Significant Match Found

DV One-Page Summary

KIC: 8827930 Candidate: 1 of 1 Period: 288.313 d
KOI: K03801.01 Corr: 0.991



DV Fit Results:

Period = 288.31281 [0.00052] d
Epoch = 374.7993 [0.0013] BKJD
Rp/R* = 0.0993 [0.0027]
a/R* = 391.76 [42.10]
b = 0.54 [0.14]
Seff = 1.93 [0.54]
Teq = 301 [21] K
Rp = 13.22 [2.33] Re
a = 0.8456 [0.1437] AU
Ag = 880.47 [447.33] [1.97 σ]
Teffp = 2531 [273] K [8.16 σ]

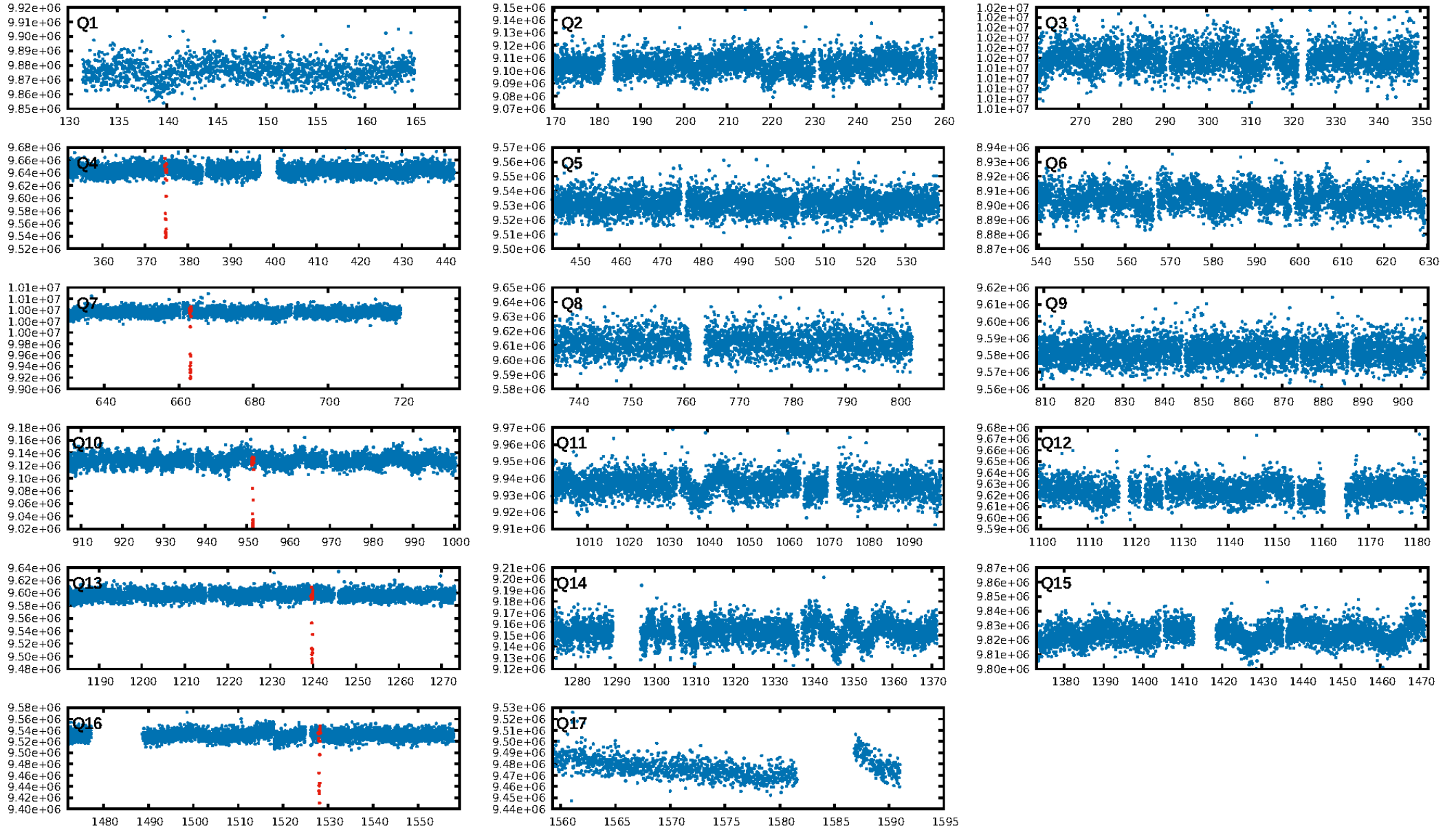
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 79.5%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 6.671
Centroid-sig: 49.6%
Centroid-so: 0.343 arcsec [1.86 σ]
OotOffset-rm: 0.056 arcsec [0.65 σ]
KicOffset-rm: 0.131 arcsec [1.25 σ]
OotOffset-st: 1/1/2/1 [5]
KicOffset-st: 1/1/2/1 [5]
DiffImageQuality-fgm: 1.00 [5/5]
DiffImageOverlap-fno: 1.00 [5/5]

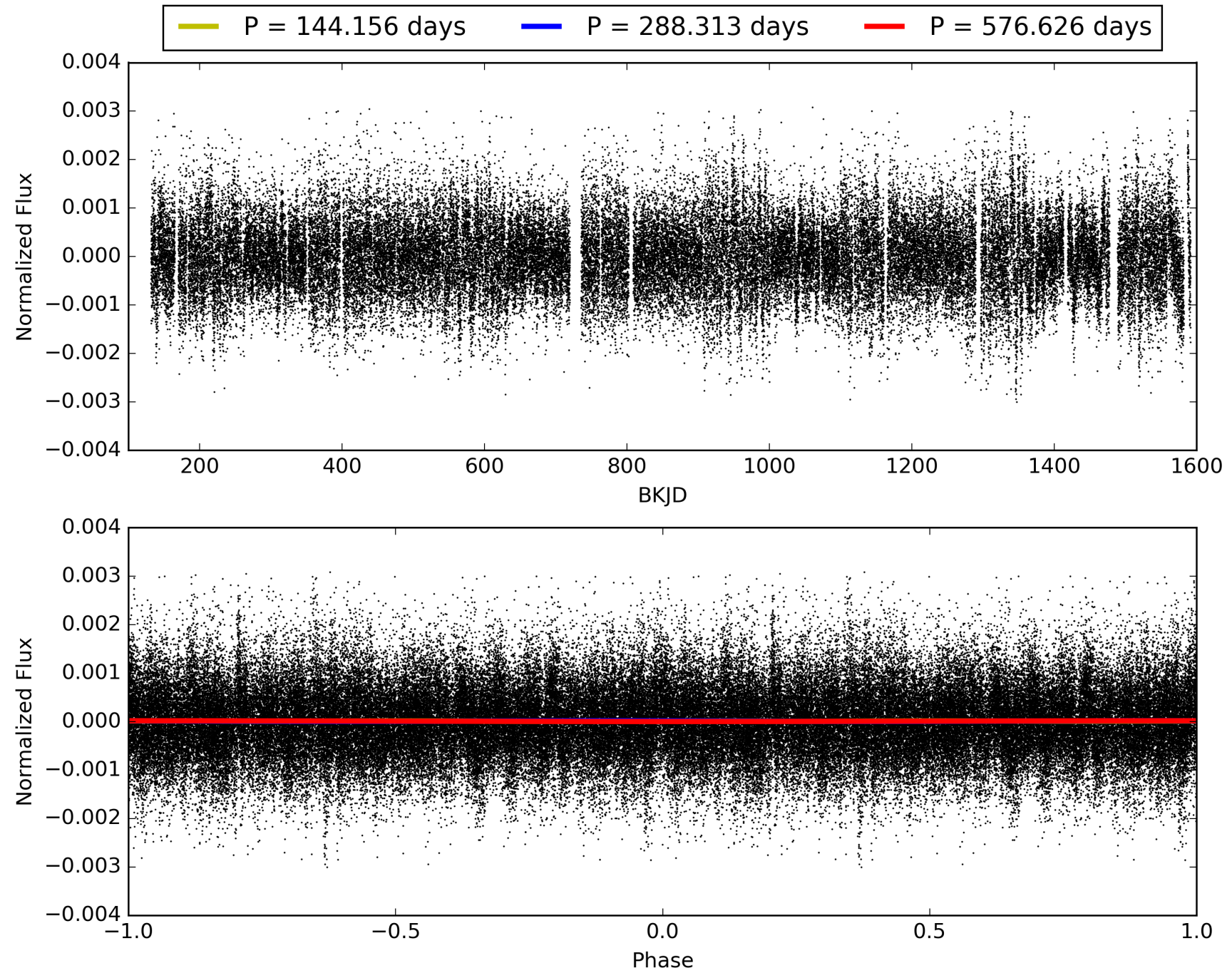
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 23:29:57 Z

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

TCE 008827930-01, PDC Light Curves

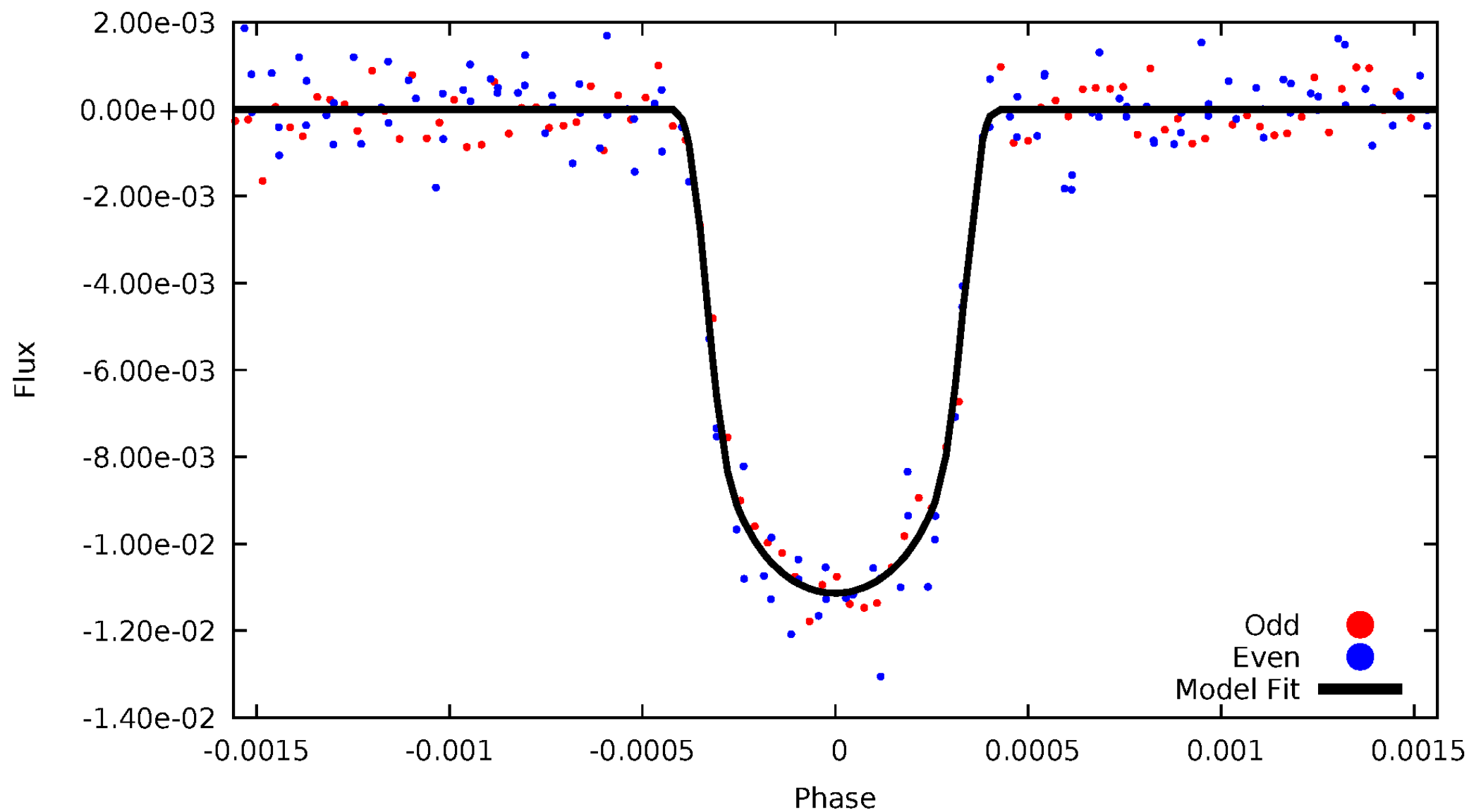


TCE 008827930-01



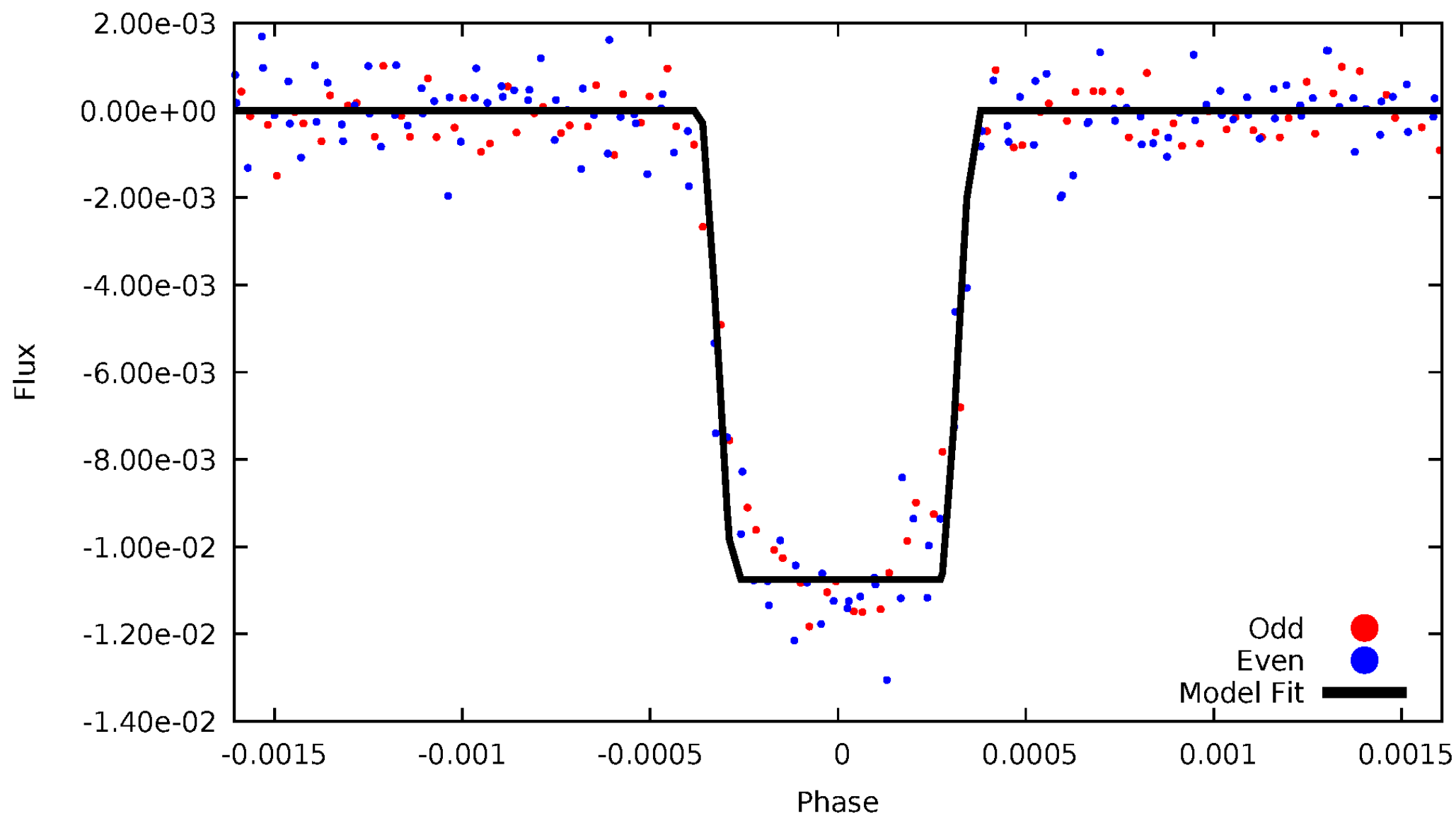
DV Odd/Even

TCE 008827930-01



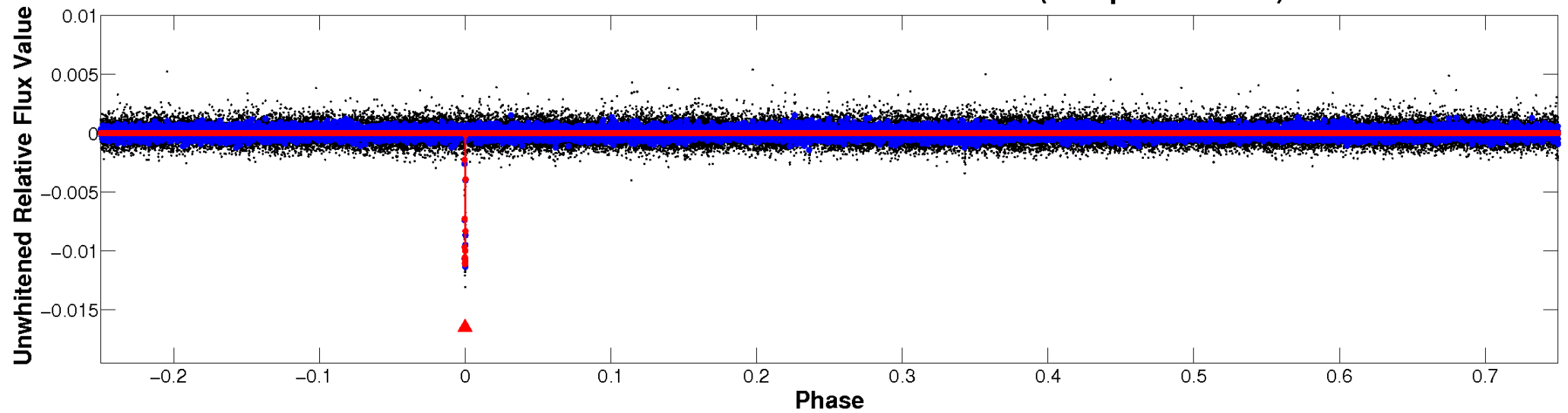
ALT Odd/Even

TCE 008827930-01

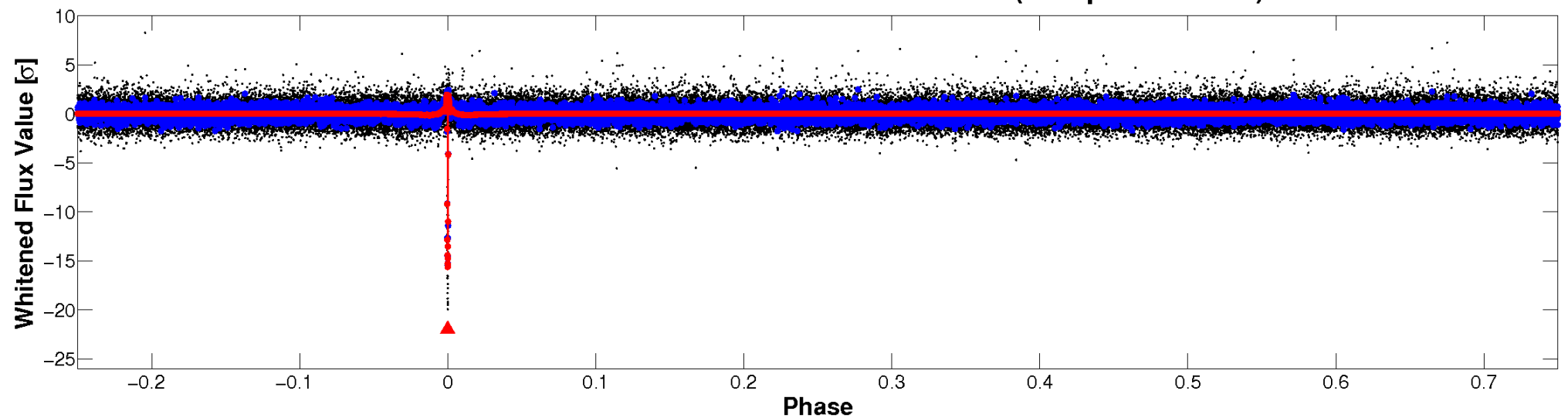


Non-Whitened Vs. Whitened Light Curve

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

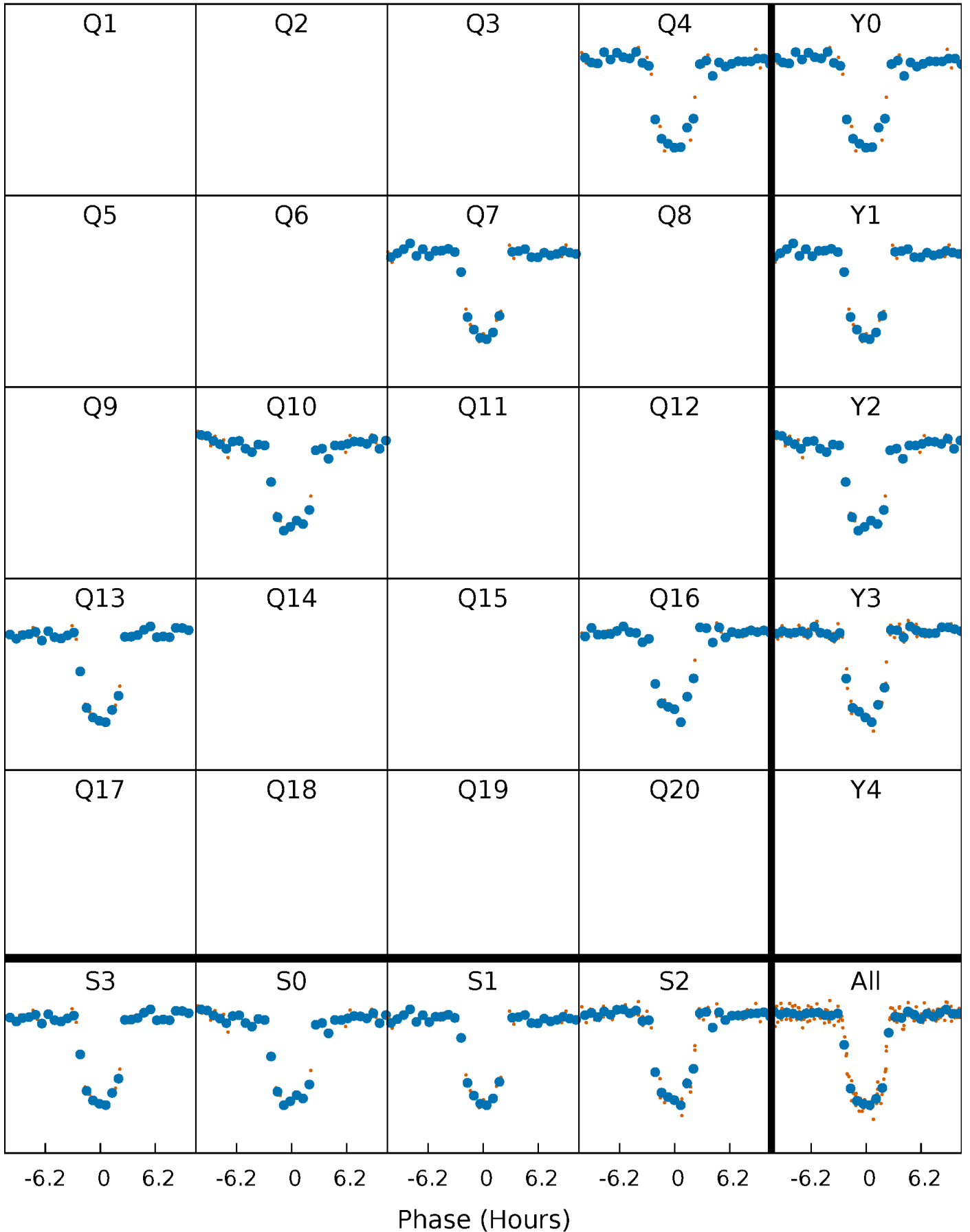


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



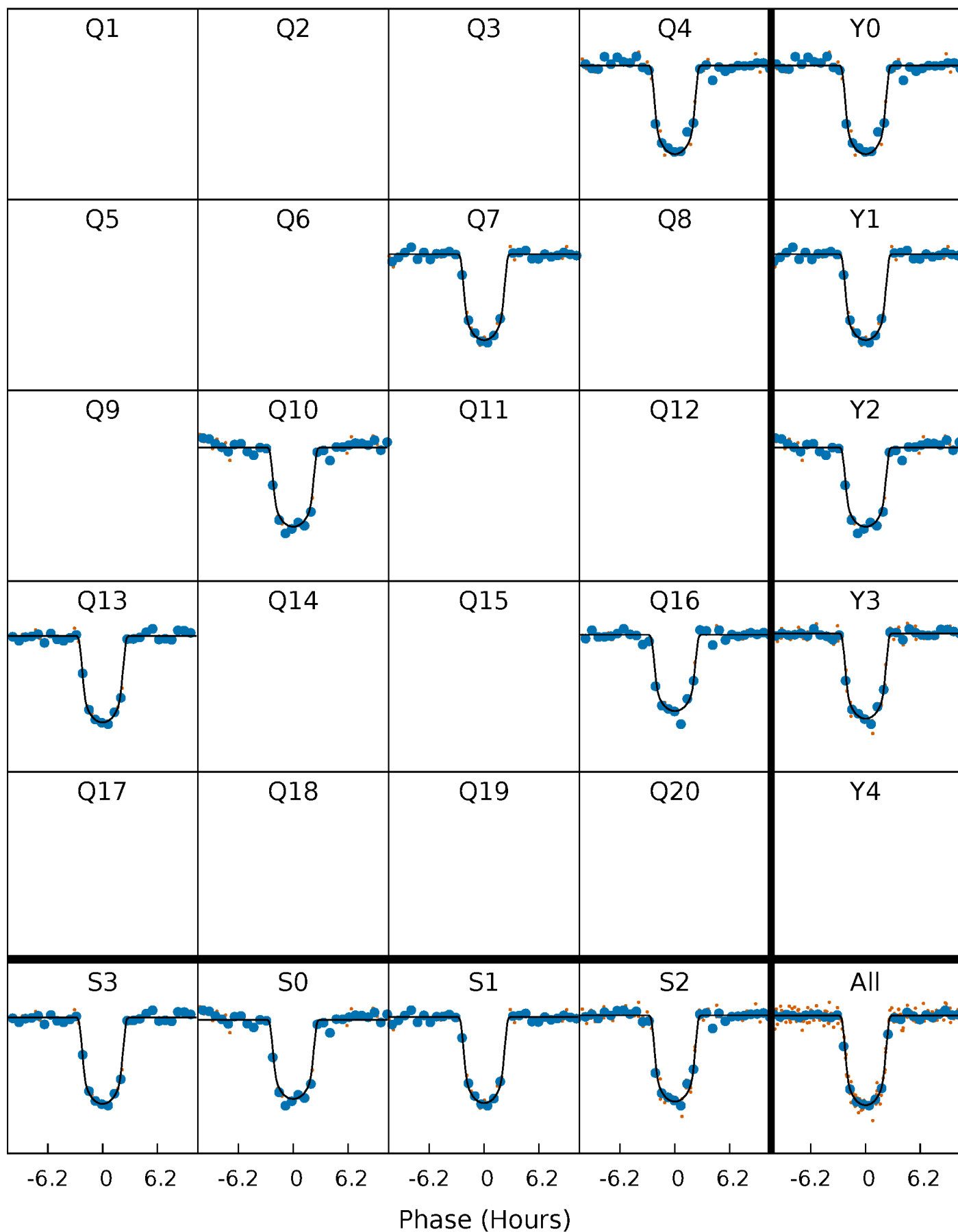
PDC Quarter-Phased Transit Curves

TCE 008827930-01 P=288.312814 Days $T_0=374.799289$ (BKJD)



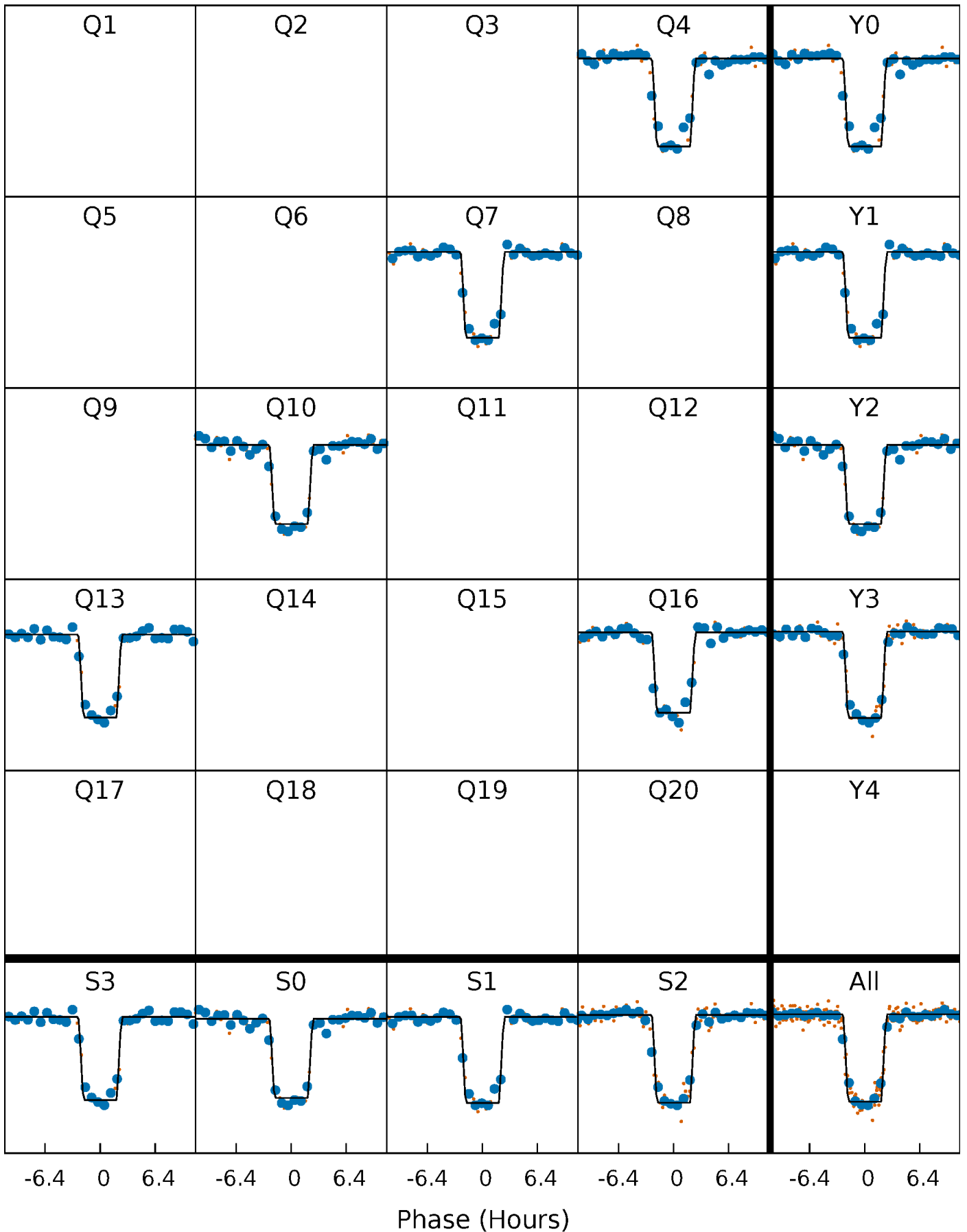
DV Quarter-Phased Transit Curves

TCE 008827930-01 P=288.312814 Days $T_0=374.799289$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

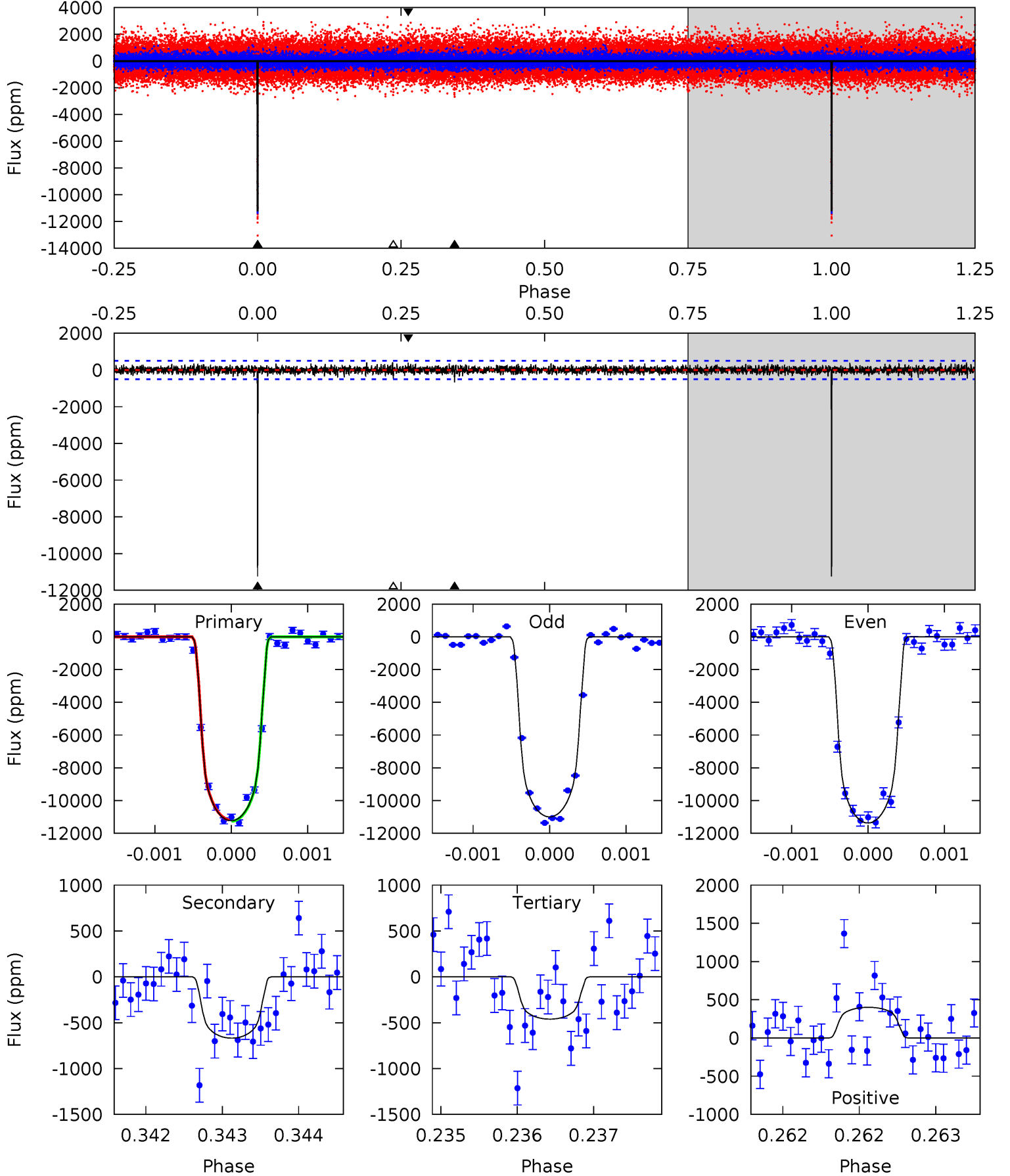
TCE 008827930-01 P=288.310720 Days $T_0=374.804072$ (BKJD)



DV Model-Shift Uniqueness Test

008827930-01, P = 288.312814 Days, E = 86.486475 Days

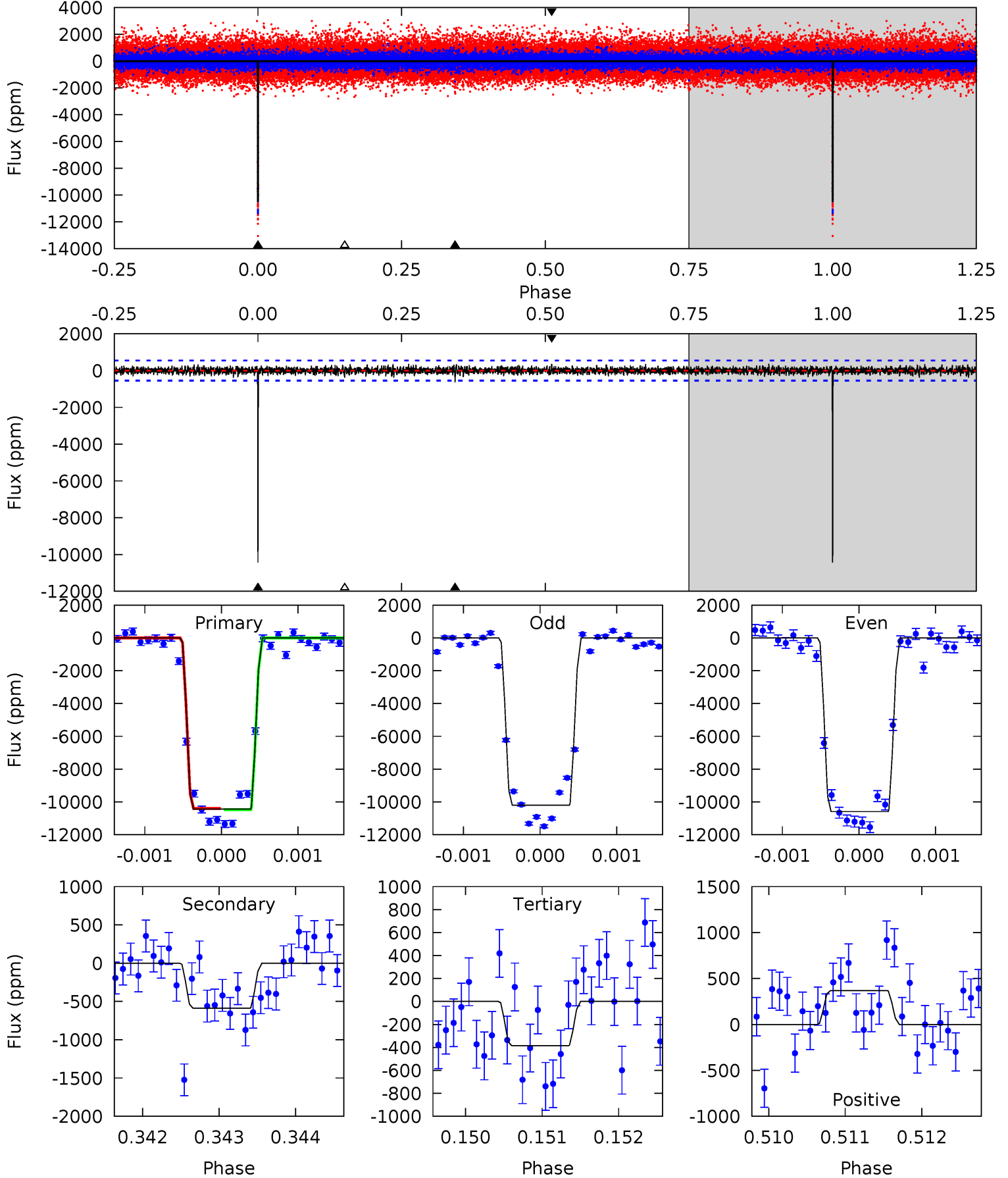
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
123.3	7.34	5.06	4.40	5.49	3.35	1.23	118.2	118.9	2.28	2.94	1.98	1.02	0.03	0.44



Alt Model-Shift Uniqueness Test

008827930-01, $P = 288.310720$ Days, $E = 86.493352$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
105.4	5.94	3.88	3.71	5.51	3.39	1.03	101.5	101.7	2.06	2.23	1.92	1.01	0.03	0.37



Stellar Parameters For KIC 008827930

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5672^{+76}_{-76}	$4.252^{+0.162}_{-0.108}$	$0.100^{+0.150}_{-0.150}$	$1.220^{+0.191}_{-0.212}$	$0.969^{+0.074}_{-0.061}$	$0.752^{+0.564}_{-0.233}$
	+1%/-1%	+4%/-3%	+150%/-150%	+16%/-17%	+8%/-6%	+75%/-31%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 008827930-01 / KOI 3801.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-669 ± 91	$13.18^{+1.23}_{-1.32}$	419^{+18}_{-23}	3407^{+85}_{-90}	1509^{+421}_{-313}
Alt.	-588 ± 99	$13.70^{+1.34}_{-1.49}$	418^{+19}_{-21}	3295^{+93}_{-104}	1250^{+372}_{-307}

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 $A_{obs} \gg 1.0$

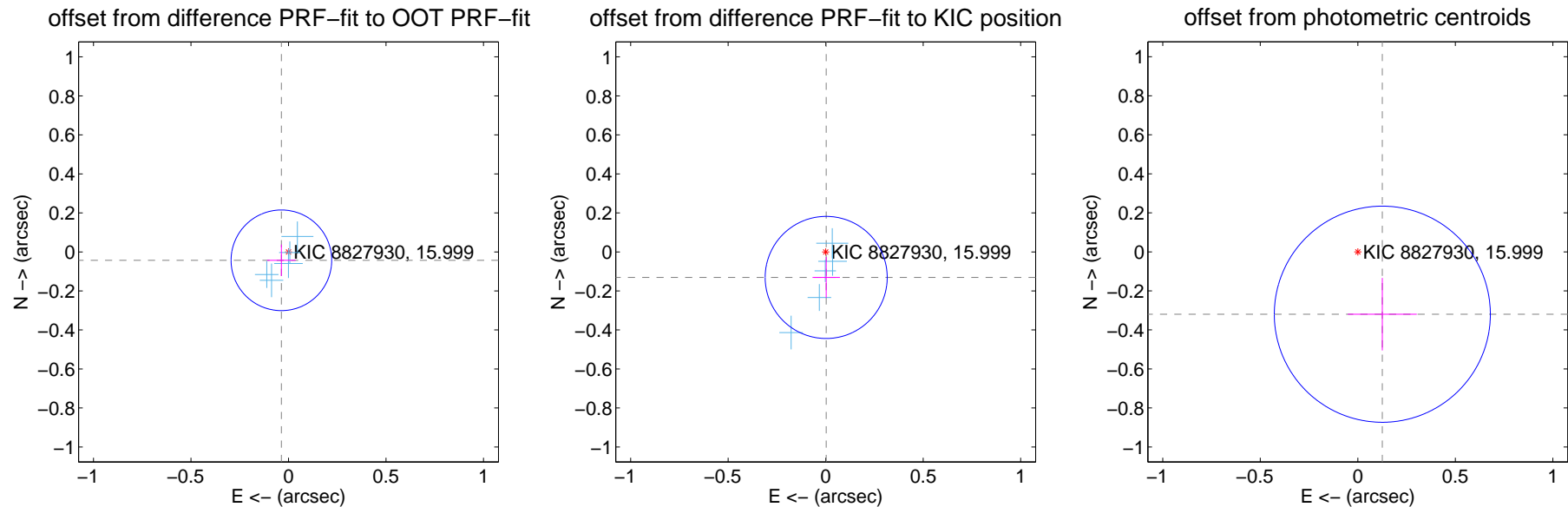
DV Centroid Data

Supplemental centroid analysis for 008827930-01. Kepler magnitude: 16.00. Transit SNR 91.97

There are 5 quarters with good PRF difference image offsets

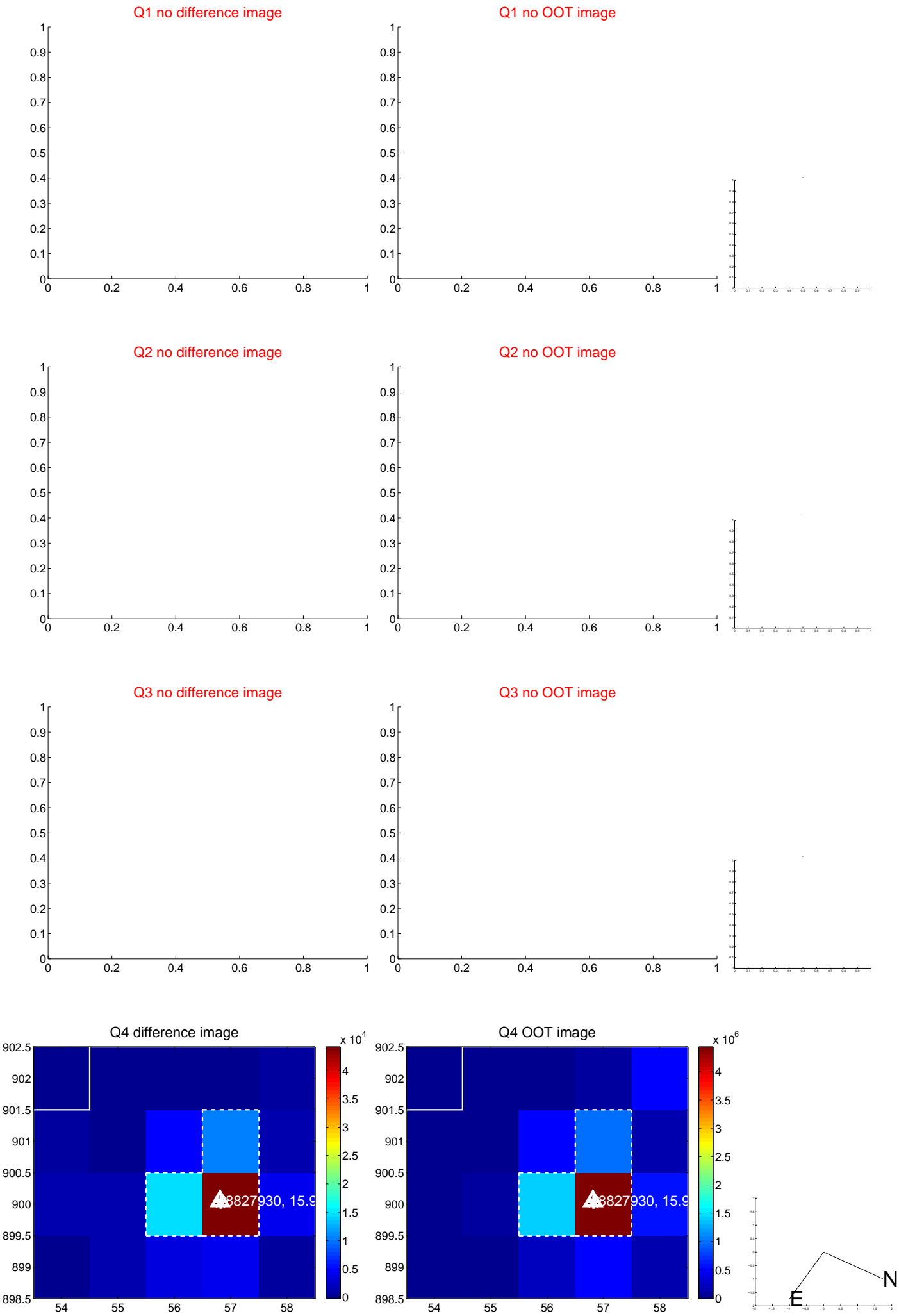
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.056 ± 0.086	0.65	0.036 ± 0.074	-0.043 ± 0.081
PRF-fit source offset from KIC position	0.131 ± 0.104	1.25	-0.003 ± 0.070	-0.131 ± 0.104
photometric centroid source offset	0.34 ± 0.18	1.86	-0.13 ± 0.18	-0.32 ± 0.19

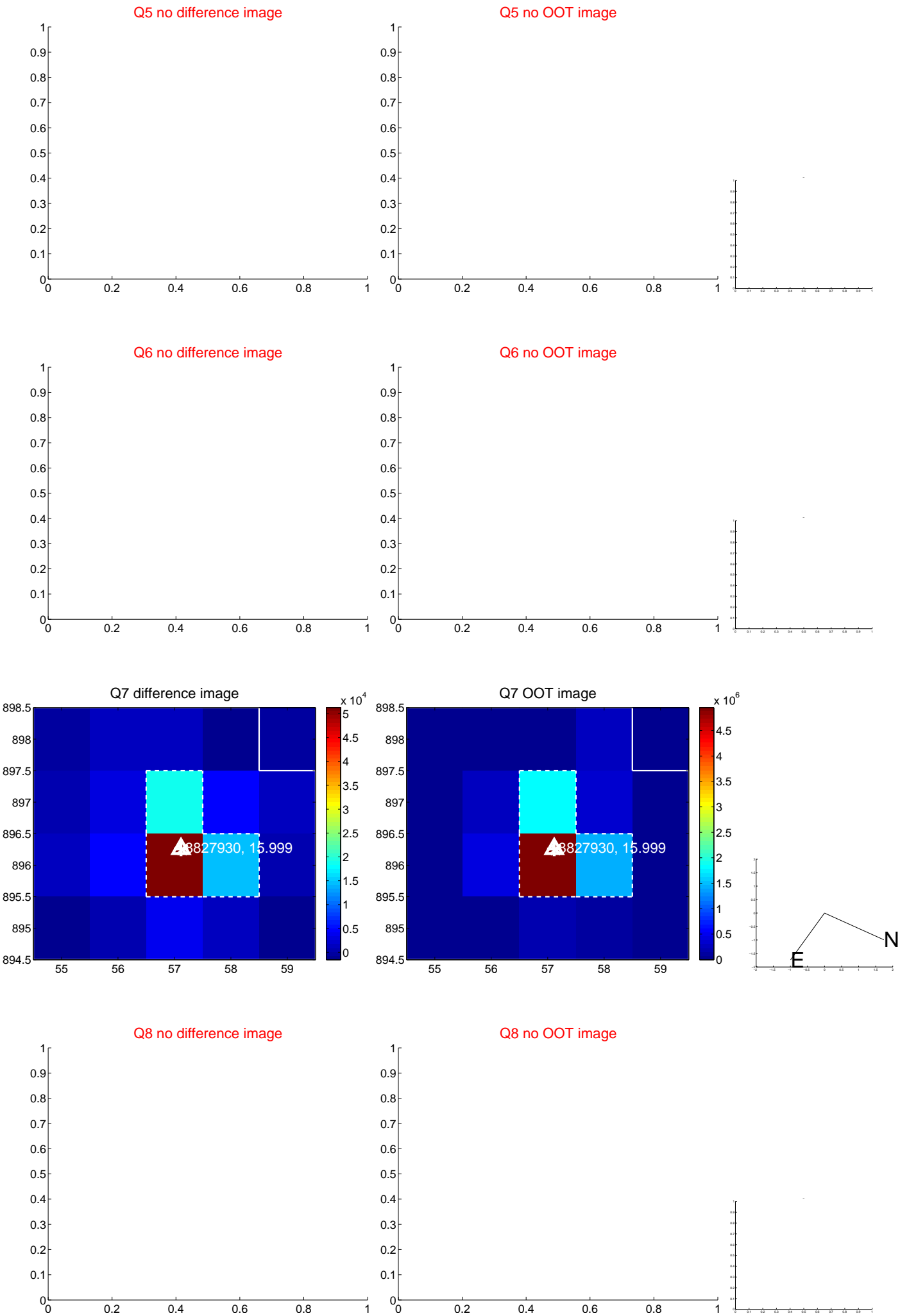


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

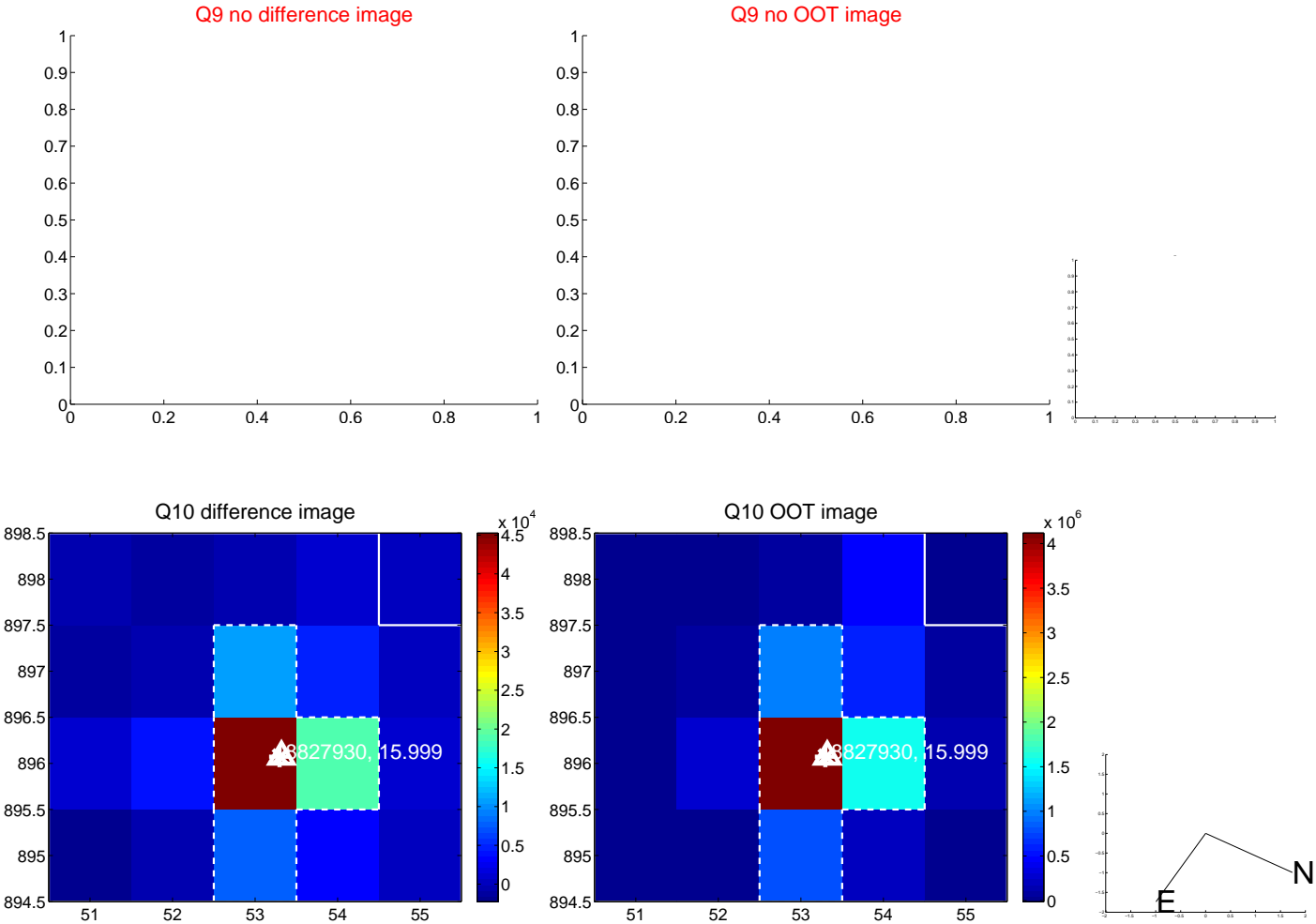
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



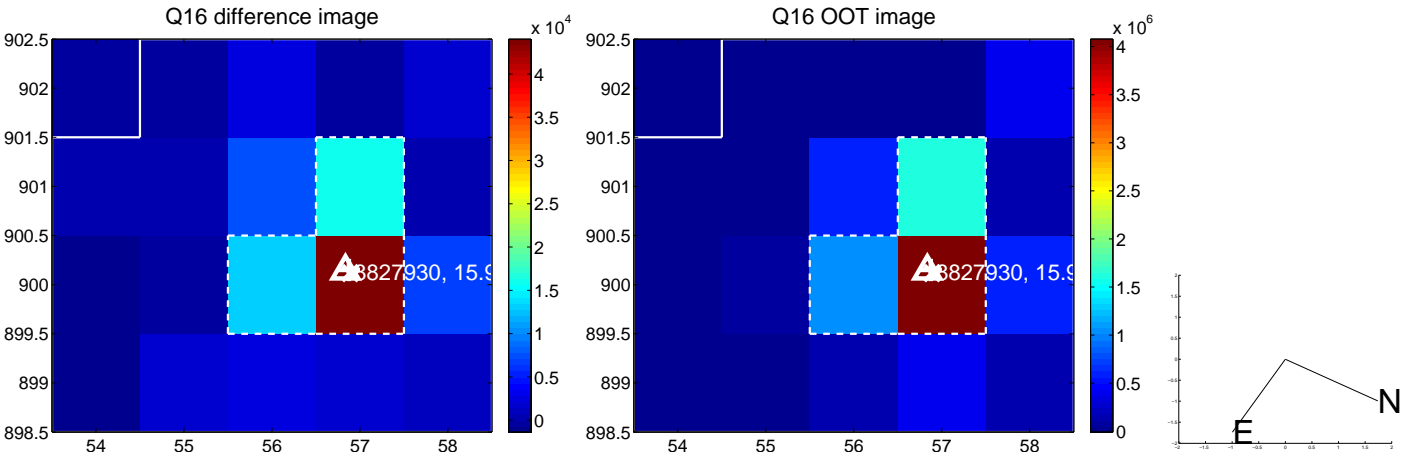
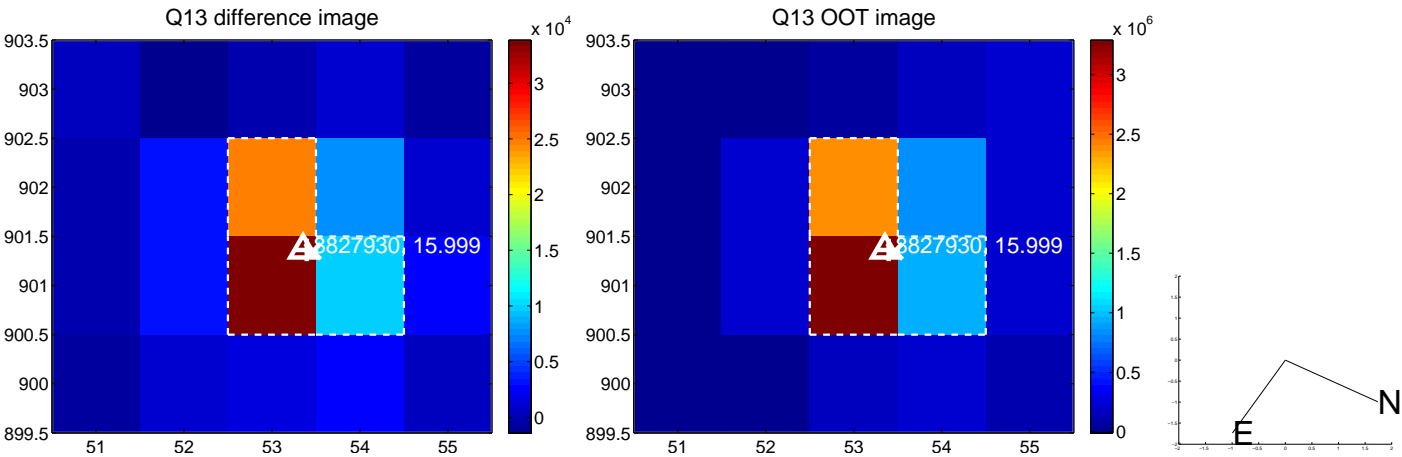
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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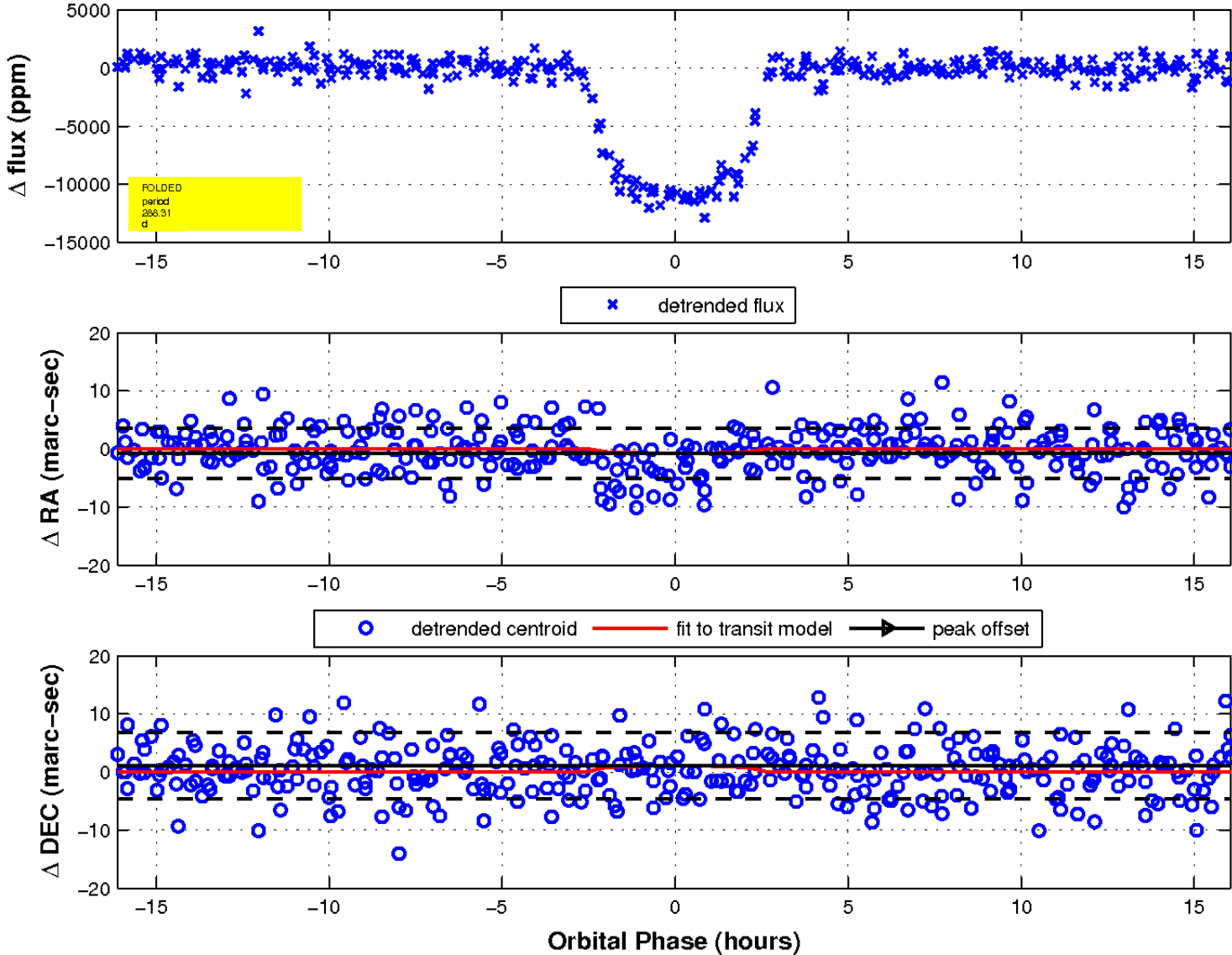
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q17 no difference image

Q17 no OOT image



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

