

KIC 008488878

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})
008488878-01	OBS	1248.01	5.801883	136.981776	35973.6	4.138	1286.6	618.5	0.87	5845	17.90	204.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008488878-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—SEASONAL_DEPTH_DV—SEASONAL_DEPTH_ALT—CENT_KIC_POS

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.

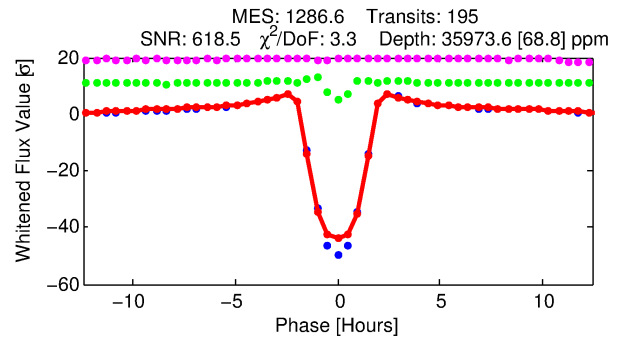
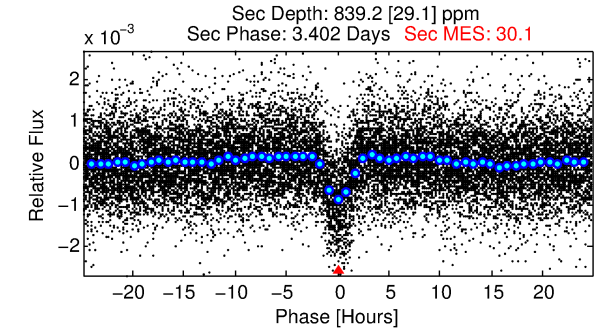
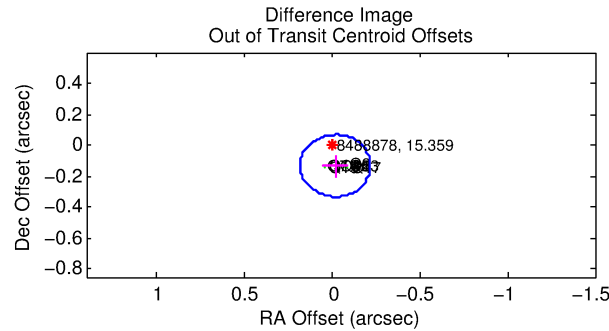
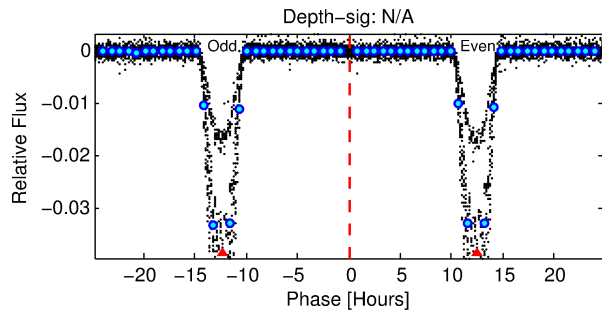
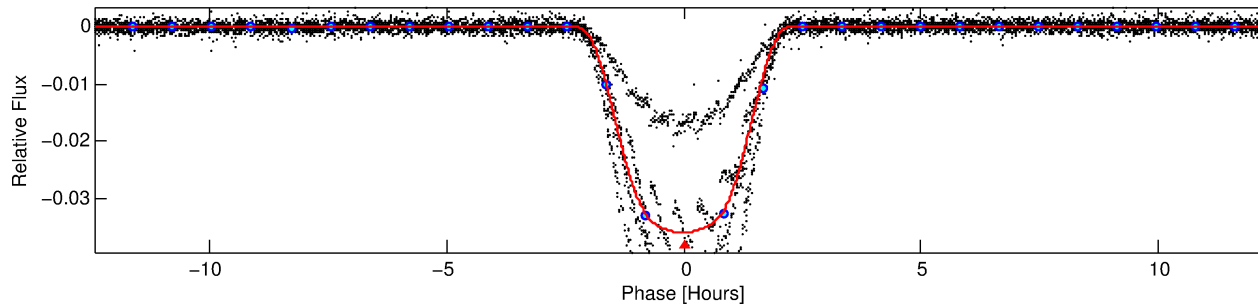
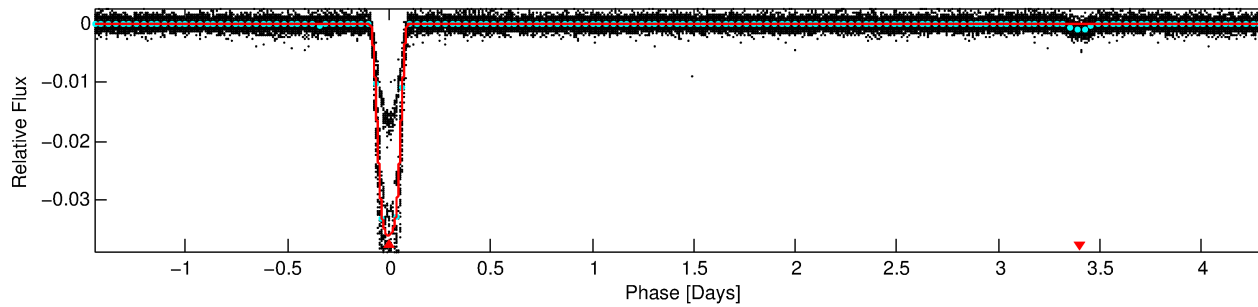
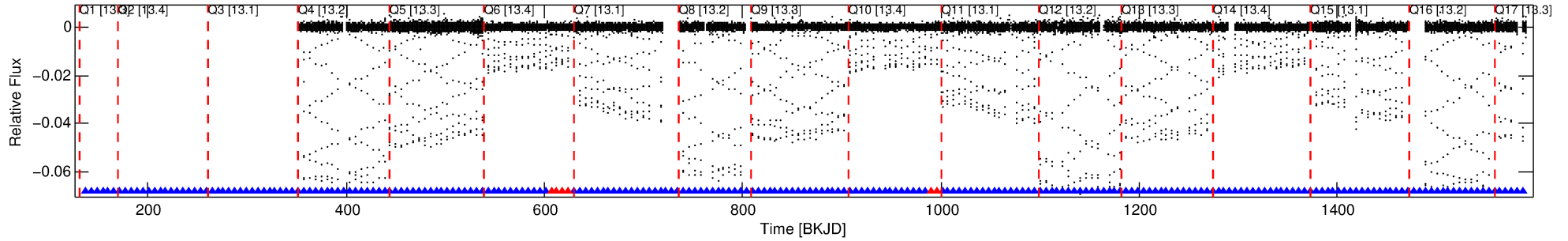
Ephemeris Match Information For 008488878-01

No Significant Match Found

DV One-Page Summary

KIC: 8488878 Candidate: 1 of 1 Period: 5.802 d
KOI: K01248.01 Corr: 0.992

Kp: 15.36 R*: 0.87 Rs Teff: 5845.0 K Logg: 4.54 Fe/H: -0.160



DV Fit Results:

Period = 5.80188 [0.00000] d
Epoch = 136.9818 [0.0002] BKJD
Rp/R* = 0.1877 [0.0003]
a/R* = 10.24 [0.05]
b = 0.71 [0.00]
Seff = 204.31 [78.14]
Teq = 964 [92] K
Rp = 17.90 [5.10] Re
a = 0.0625 [0.0152] AU
Ag = 5.63 [2.01] [2.30σ]
Teffp = 2296 [83] K [10.74σ]

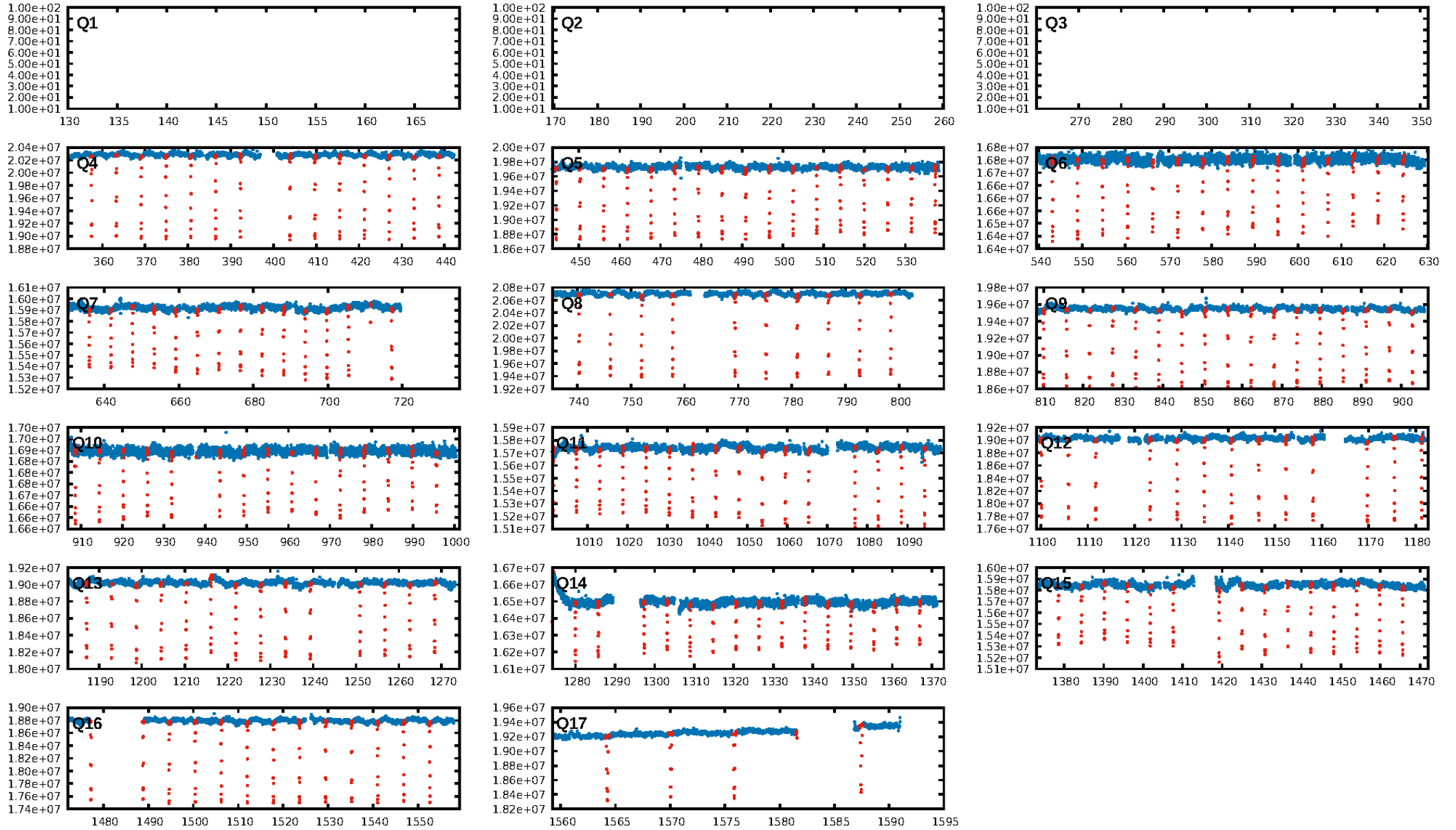
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.97 [184/190]
GhostDiagnostic-chr: -0.5712
Centroid-sig: 0.0%
Centroid-so: 4.232 arcsec [4068.52σ]
OotOffset-rm: 0.133 arcsec [1.99σ]
OotOffset-st: 0/3/4/4 [11]
KicOffset-rm: 5.292 arcsec [74.54σ]
KicOffset-st: 0/3/4/4 [11]
DiffImageQuality-fgm: 1.00 [11/11]
DiffImageOverlap-fno: 1.00 [14/14]

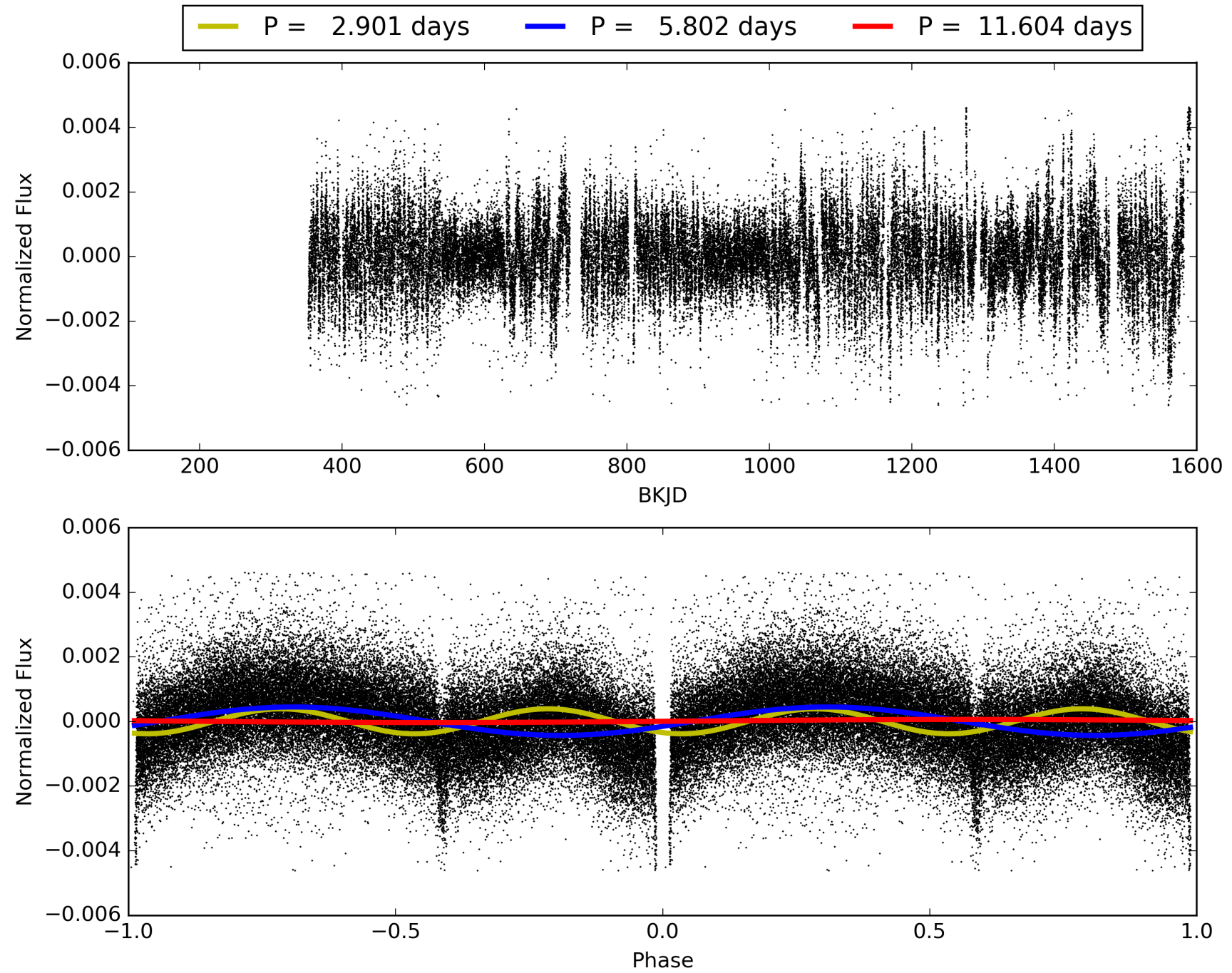
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:16:00 Z

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

TCE 008488878-01, PDC Light Curves

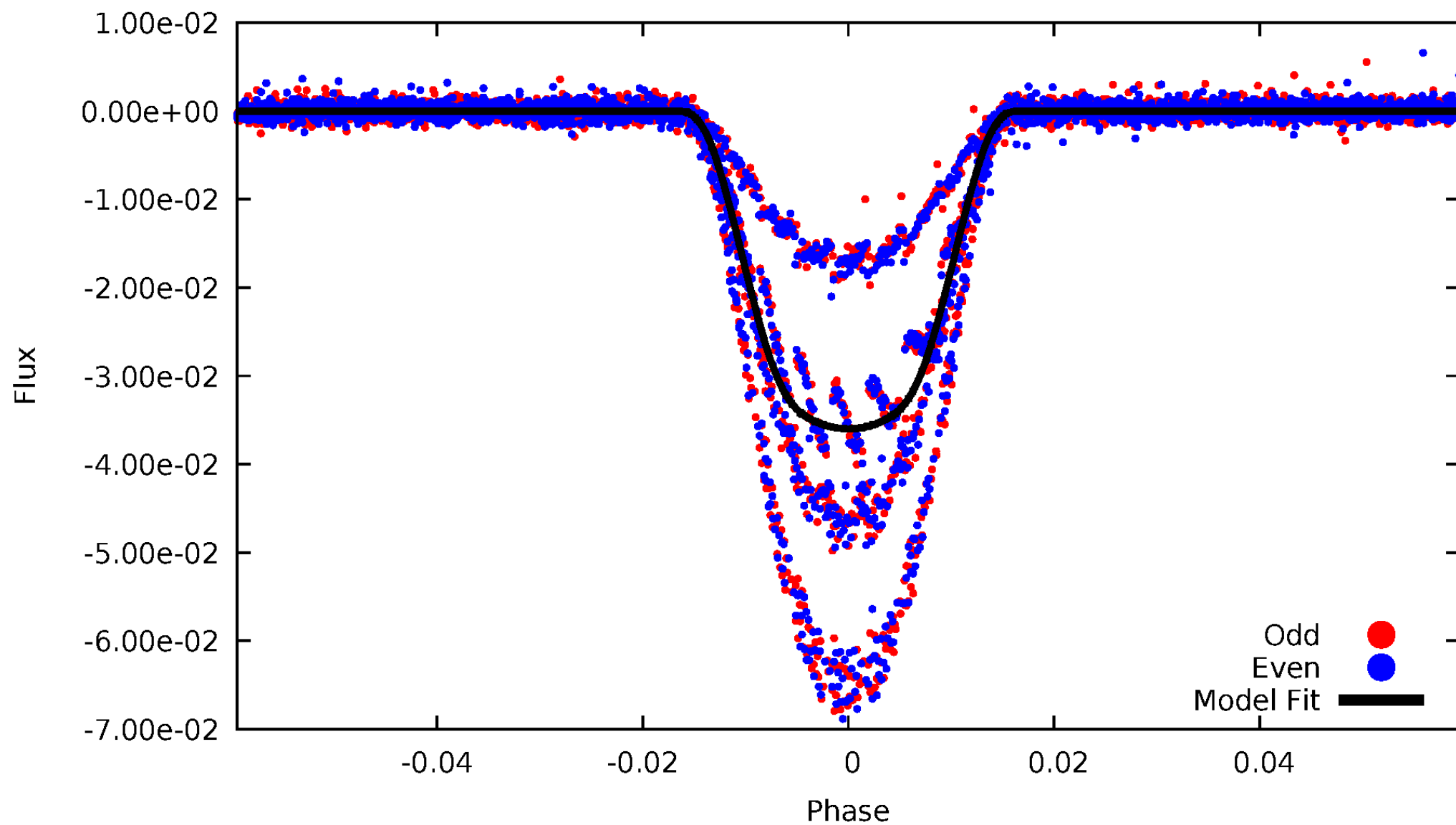


TCE 008488878-01



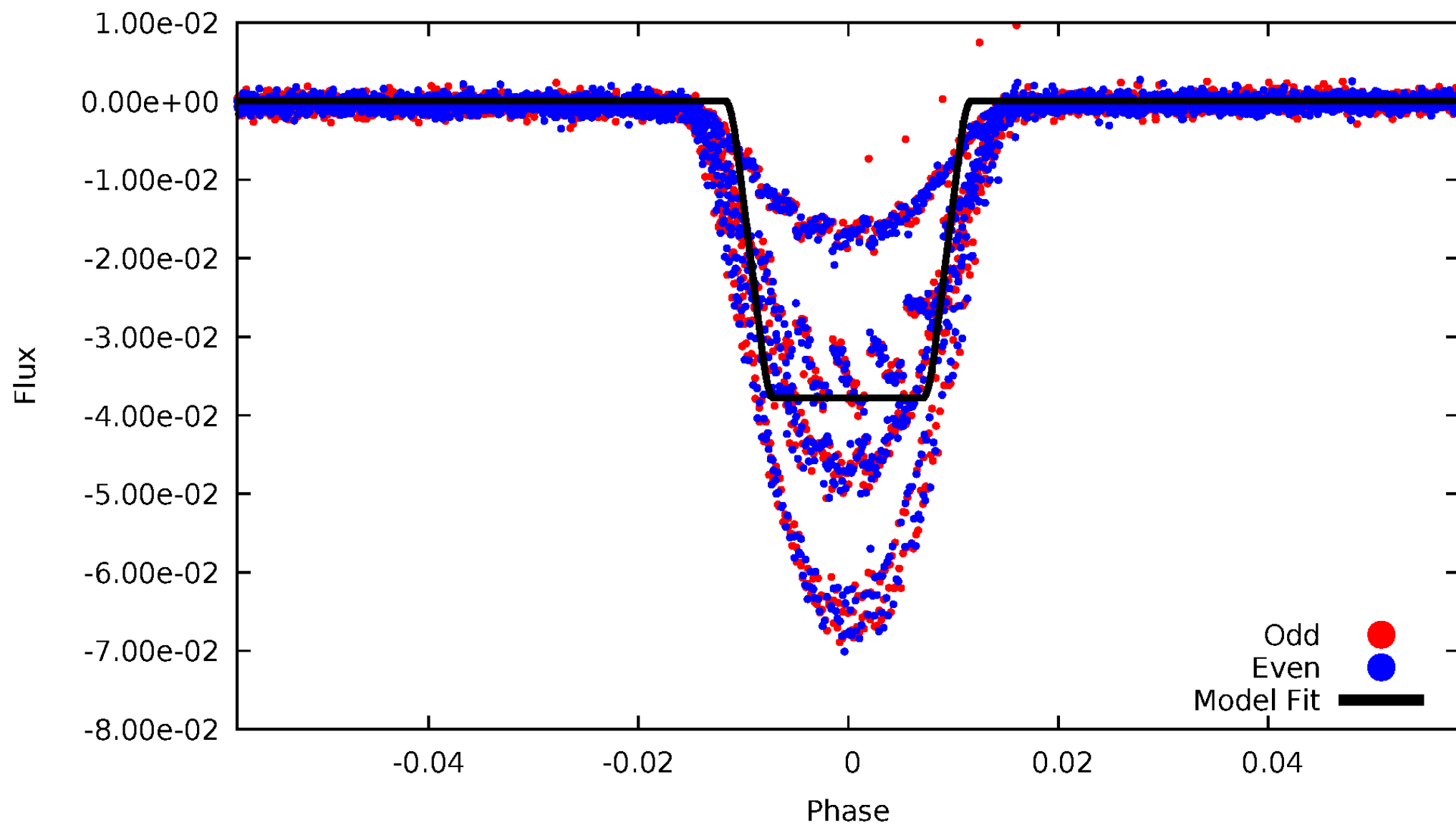
DV Odd/Even

TCE 008488878-01



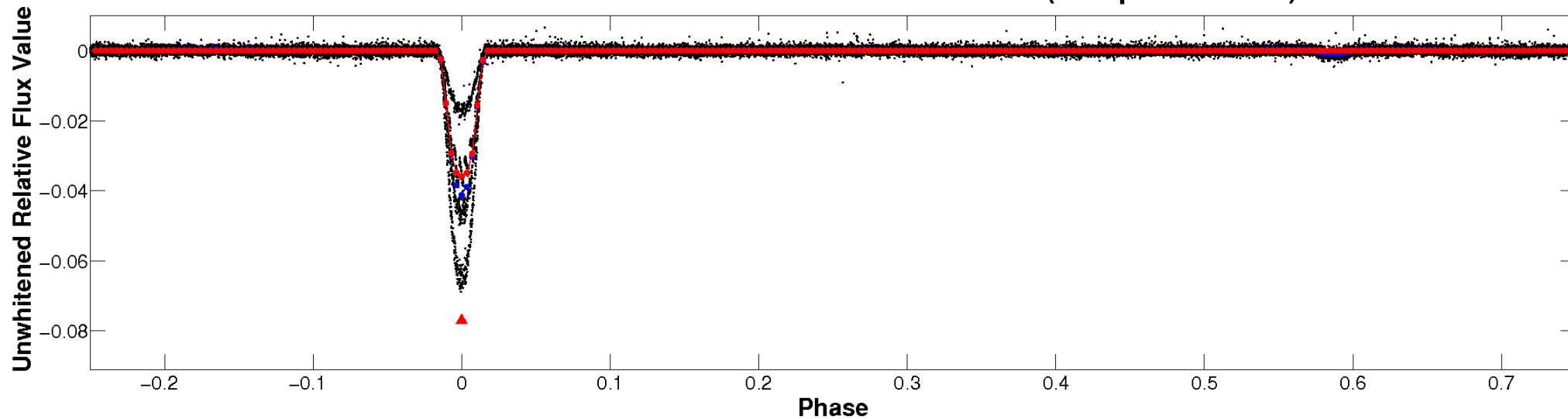
ALT Odd/Even

TCE 008488878-01

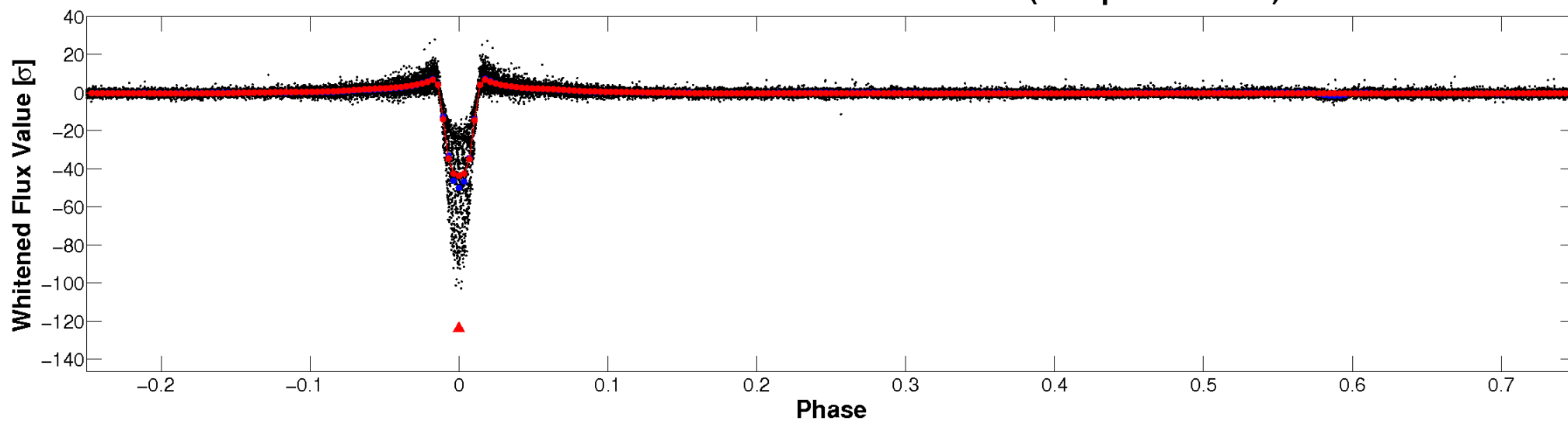


Non-Whitened Vs. Whitened Light Curve

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

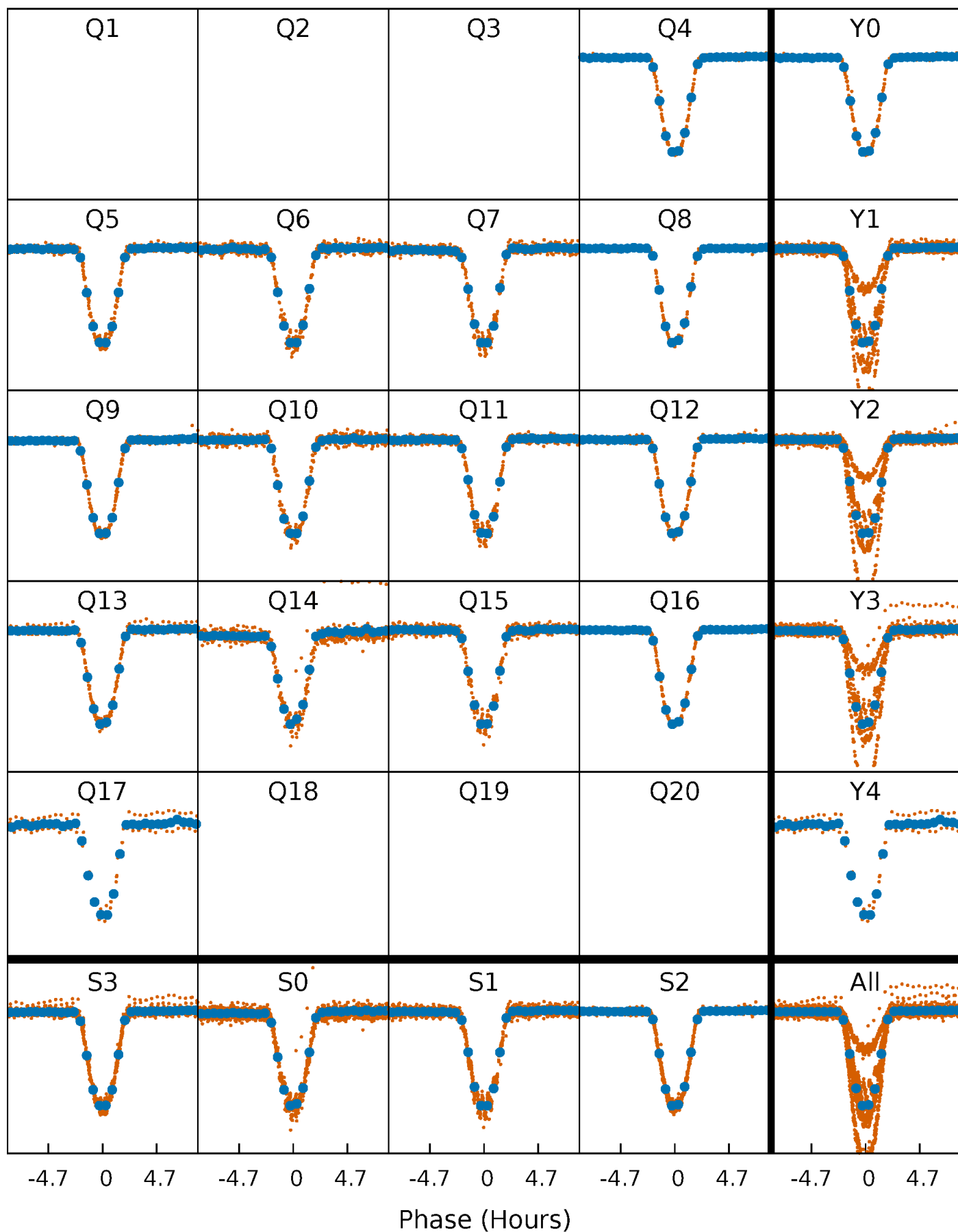


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



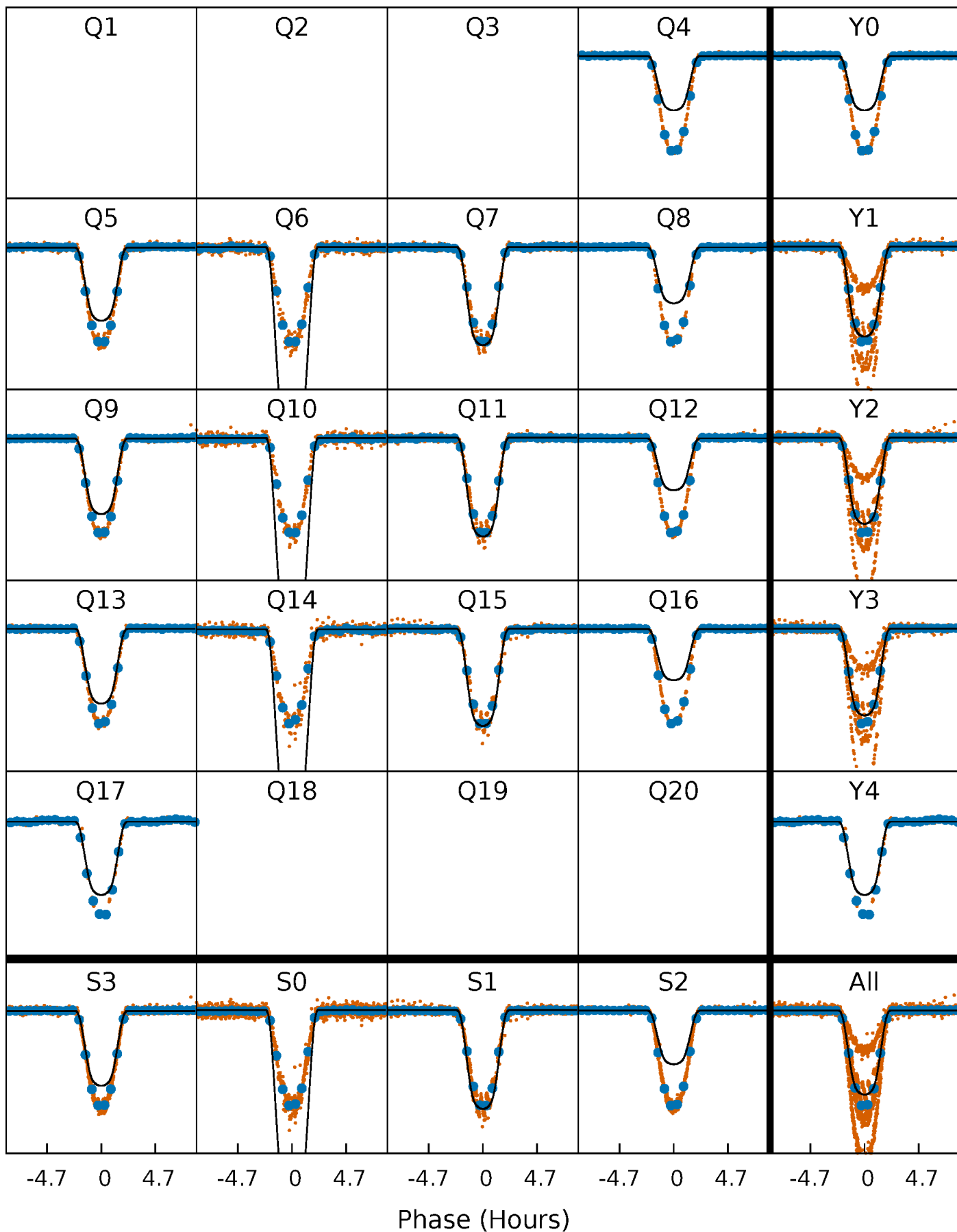
PDC Quarter-Phased Transit Curves

TCE 008488878-01 P= 5.801883 Days $T_0=136.981776$ (BKJD)



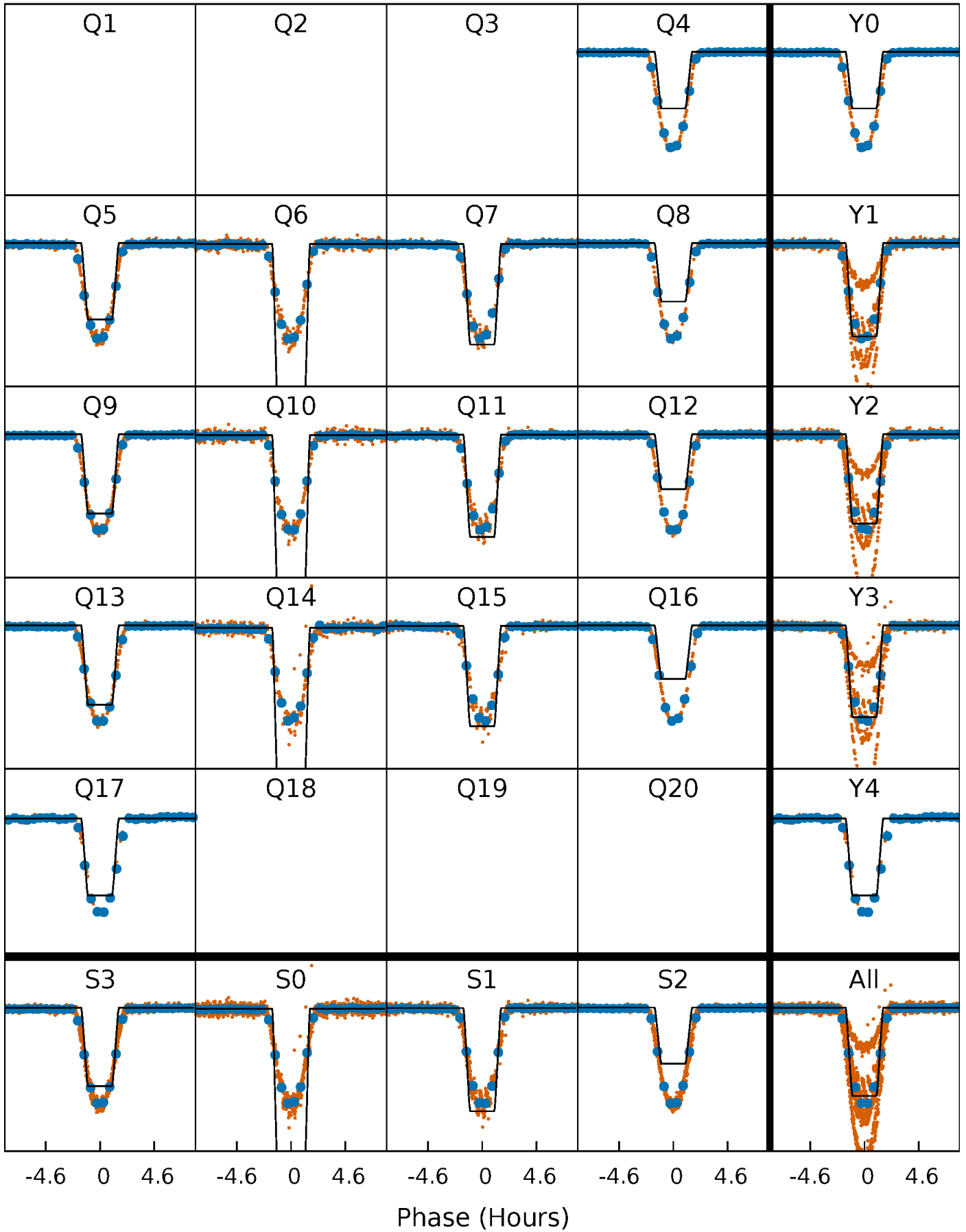
DV Quarter-Phased Transit Curves

TCE 008488878-01 P= 5.801883 Days $T_0=136.981776$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

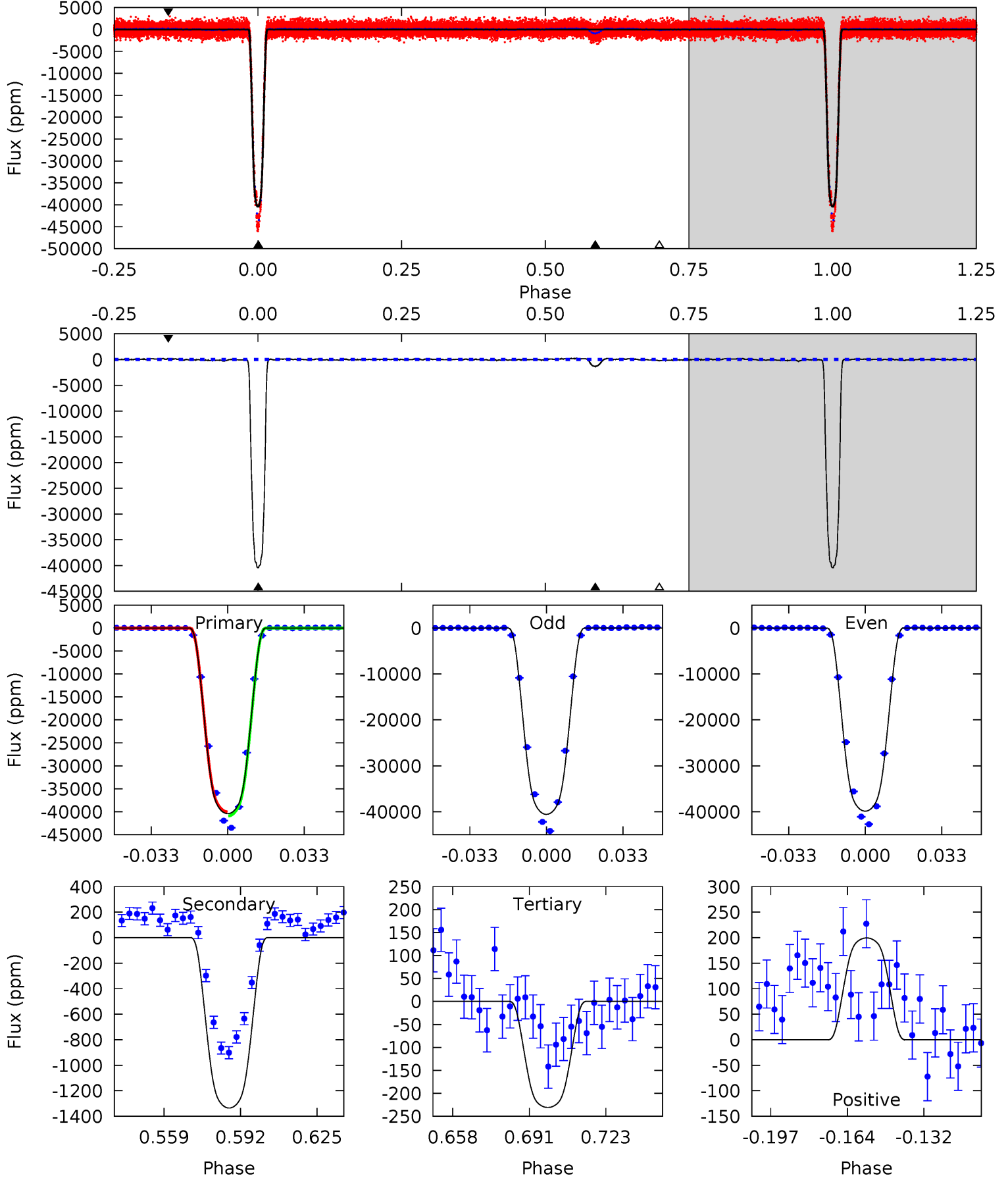
TCE 008488878-01 P= 5.801847 Days $T_0=136.986834$ (BKJD)



DV Model-Shift Uniqueness Test

008488878-01, P = 5.801883 Days, E = 136.981776 Days

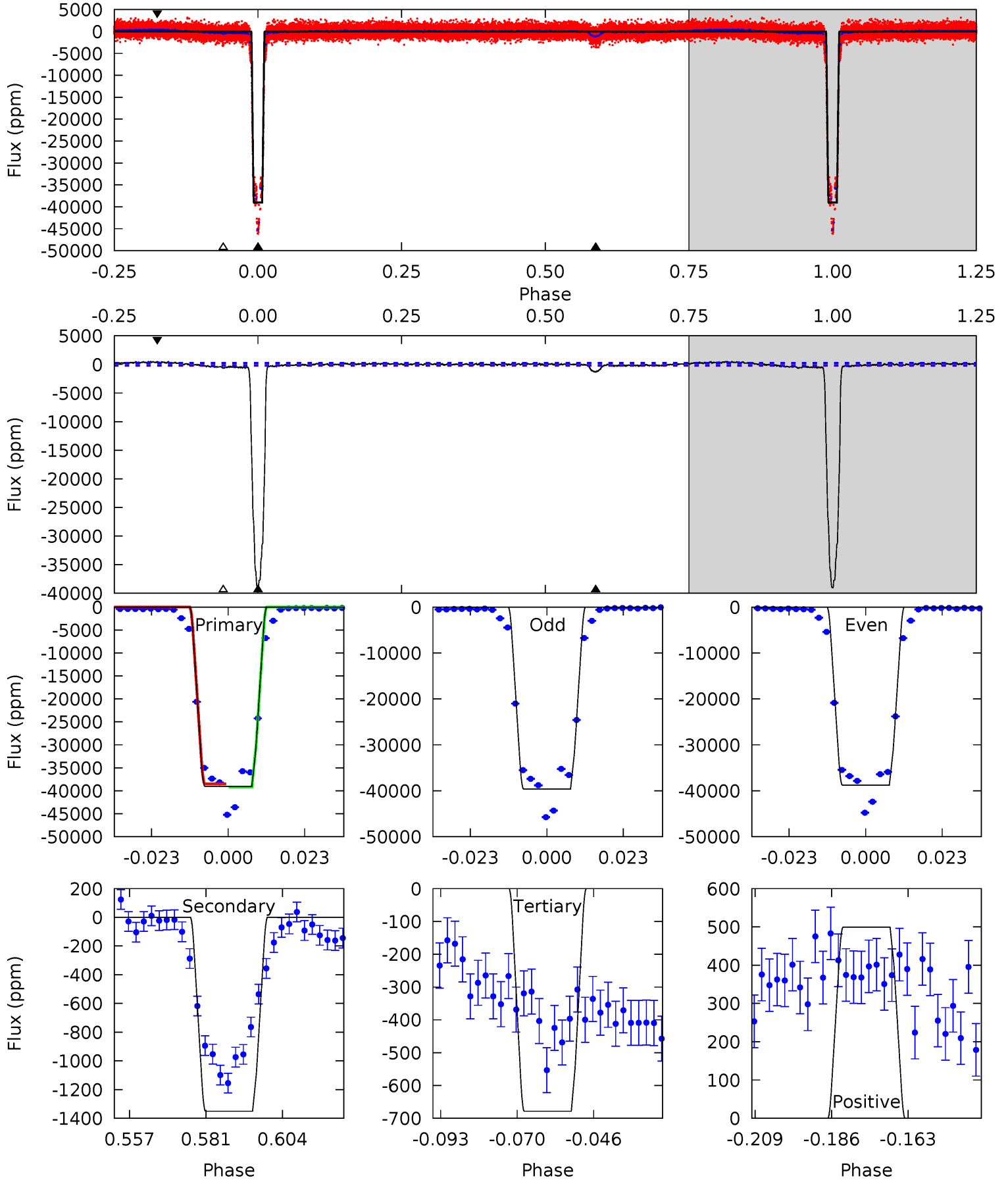
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1550	51.2	8.85	7.65	4.79	2.13	3.37	1541	1543	42.4	43.6	13.1	0.94	0.01	0



Alt Model-Shift Uniqueness Test

008488878-01, P = 5.801847 Days, E = 136.986834 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
767.0	26.5	13.3	9.81	4.86	2.27	3.84	753.6	757.1	13.2	16.7	8.32	0.93	0.01	0



Stellar Parameters For KIC 008488878

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5845^{+185}_{-205}	$4.541^{+0.035}_{-0.196}$	$-0.160^{+0.300}_{-0.300}$	$0.874^{+0.249}_{-0.078}$	$0.968^{+0.108}_{-0.120}$	$2.042^{+0.395}_{-1.041}$
	+3%/-4%	+1%/-4%	+188%/-188%	+28%/-9%	+11%/-12%	+19%/-51%
Source	KIC0	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 008488878-01 / KOI 1248.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1335 ± 26	$18.49^{+2.60}_{-1.24}$	1384^{+89}_{-69}	3162^{+65}_{-65}	$8.241^{+1.105}_{-1.749}$
Alt.	-1351 ± 51	$19.03^{+2.91}_{-1.25}$	1380^{+88}_{-69}	3134^{+61}_{-72}	$7.799^{+1.108}_{-1.686}$

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 $A_{obs} \gg 1.0$

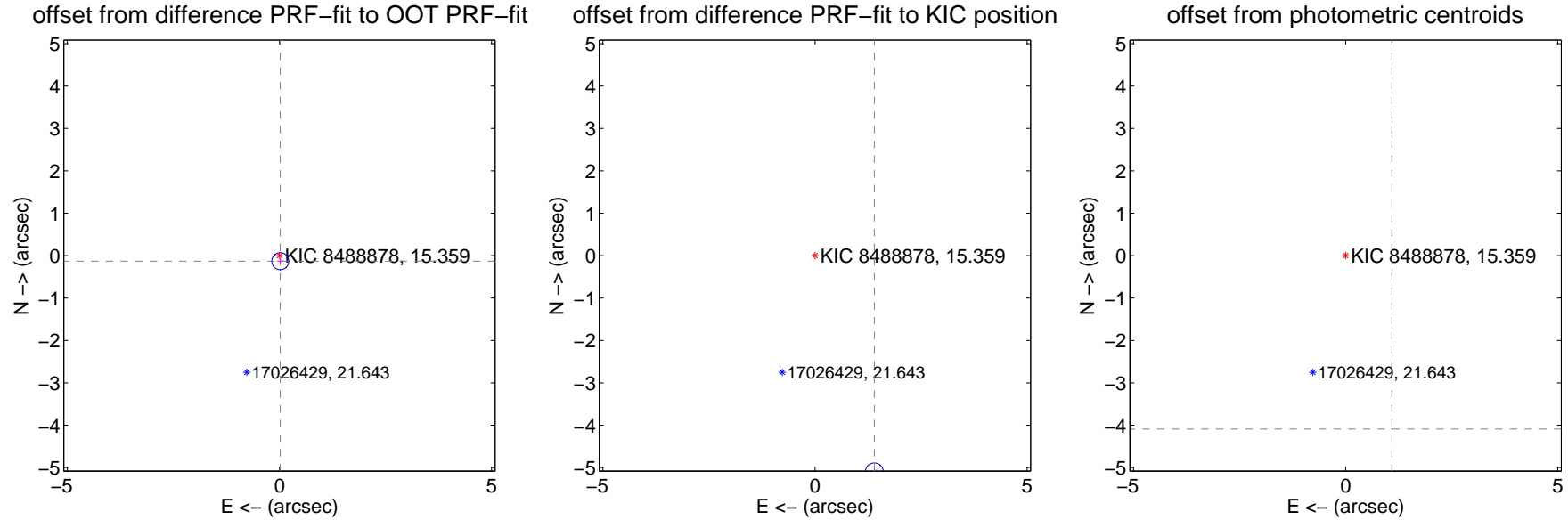
DV Centroid Data

Supplemental centroid analysis for 008488878-01. Kepler magnitude: 15.36. Transit SNR 618.53

There are 11 quarters with good PRF difference image offsets

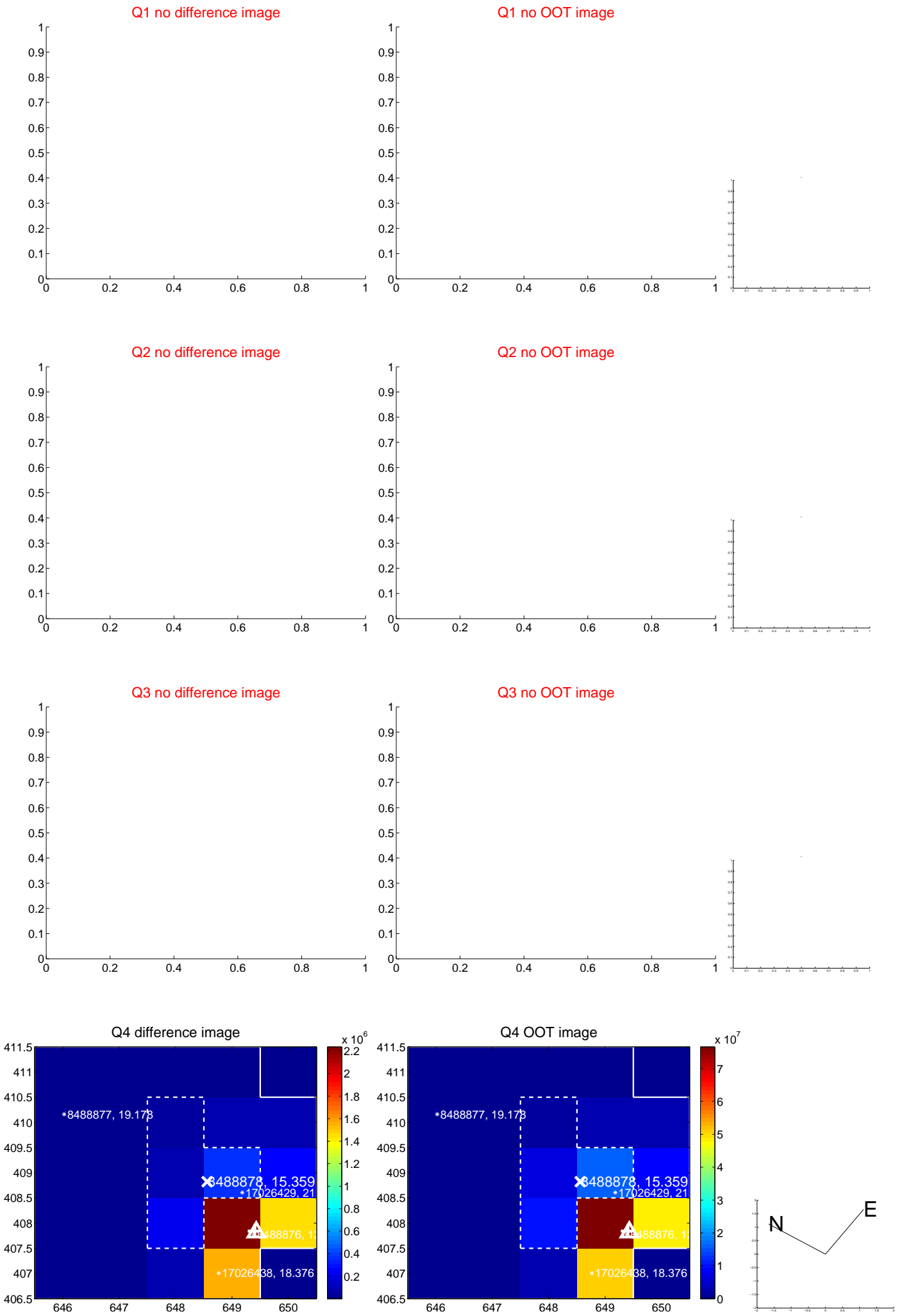
The OOT PRF centroid is offset from the target star catalog position by about 5.09 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.133 ± 0.067	1.99	-0.019 ± 0.069	-0.132 ± 0.067
PRF-fit source offset from KIC position	5.292 ± 0.071	74.54	-1.399 ± 0.068	-5.104 ± 0.071
photometric centroid source offset	4.23 ± 0.00	4068.52	-1.09 ± 0.00	-4.09 ± 0.00

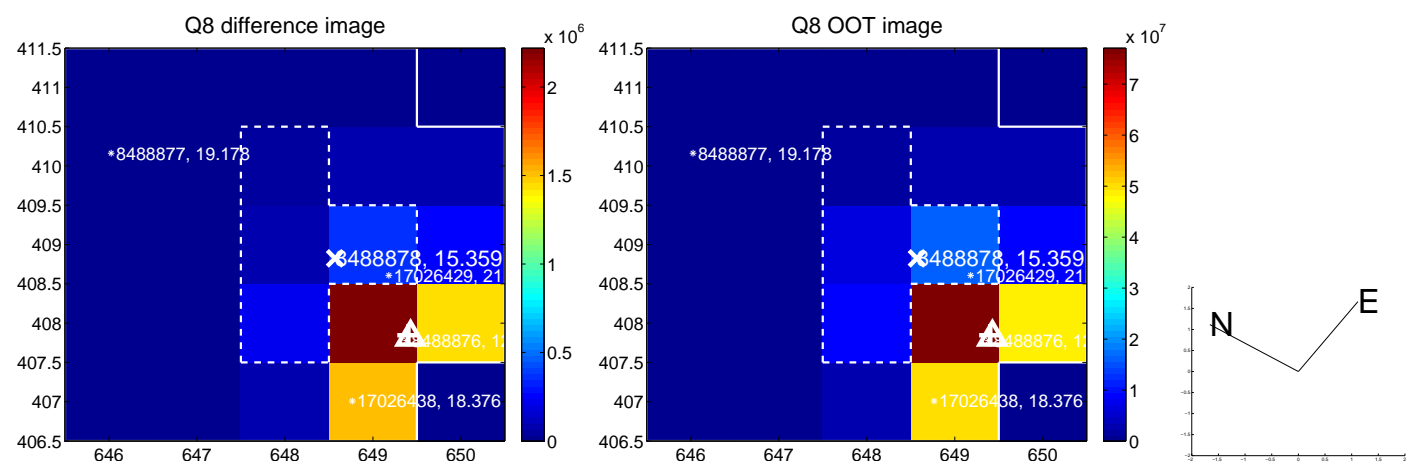
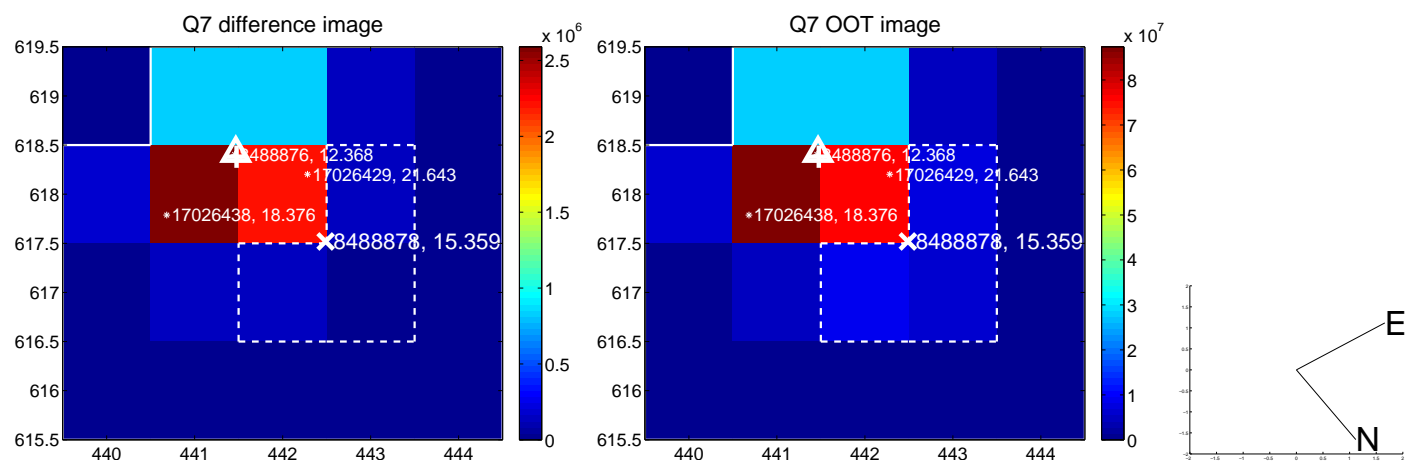
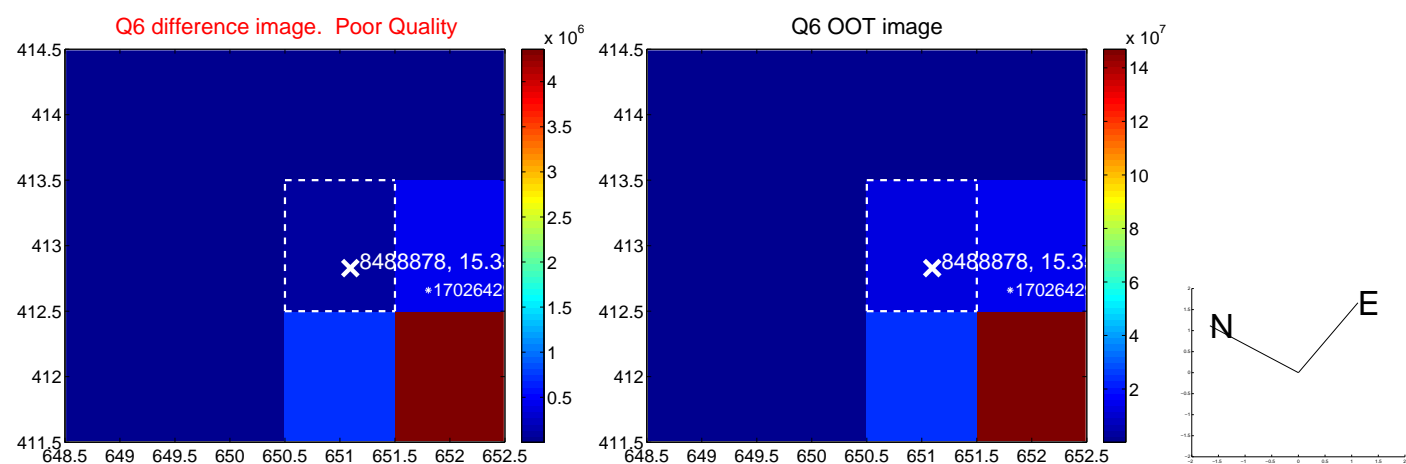
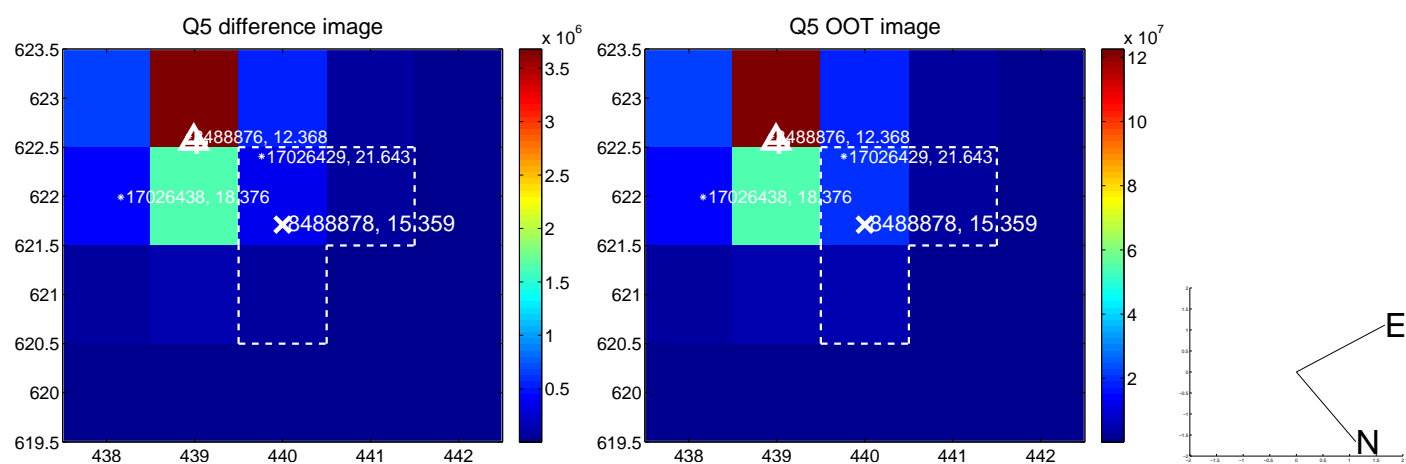


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

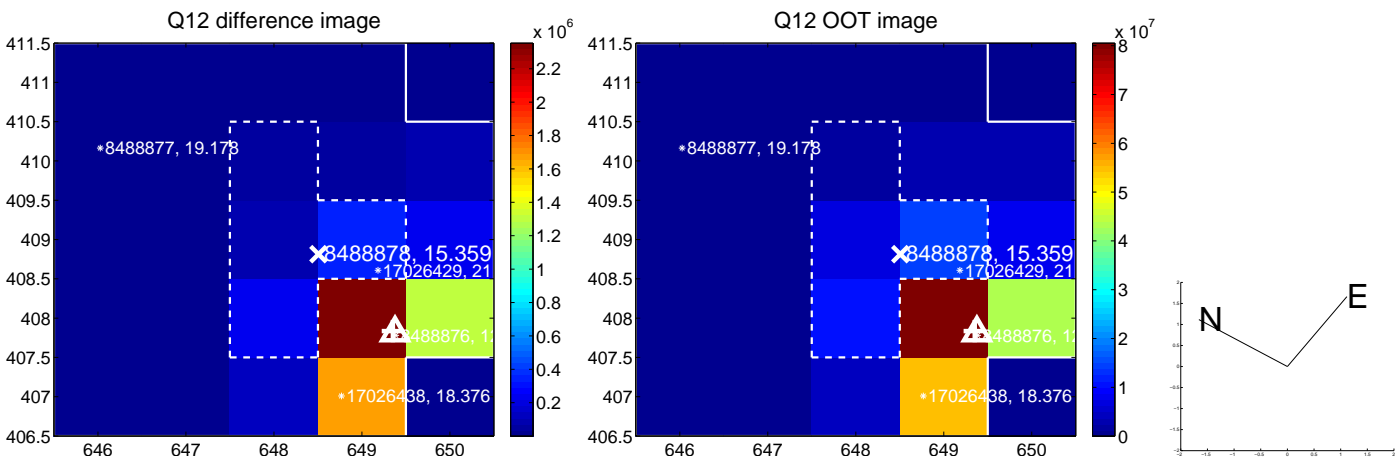
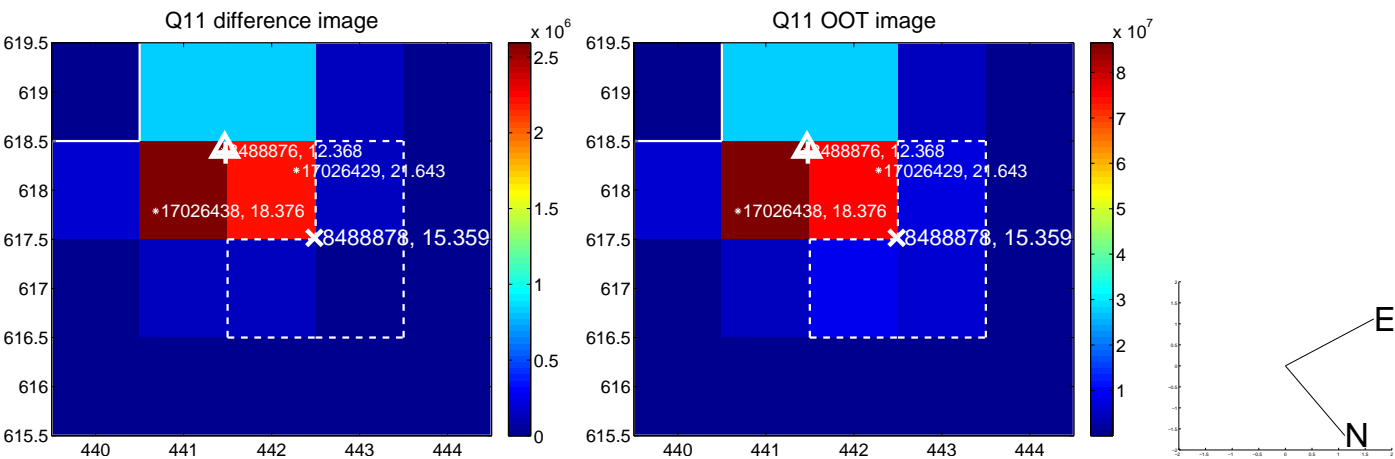
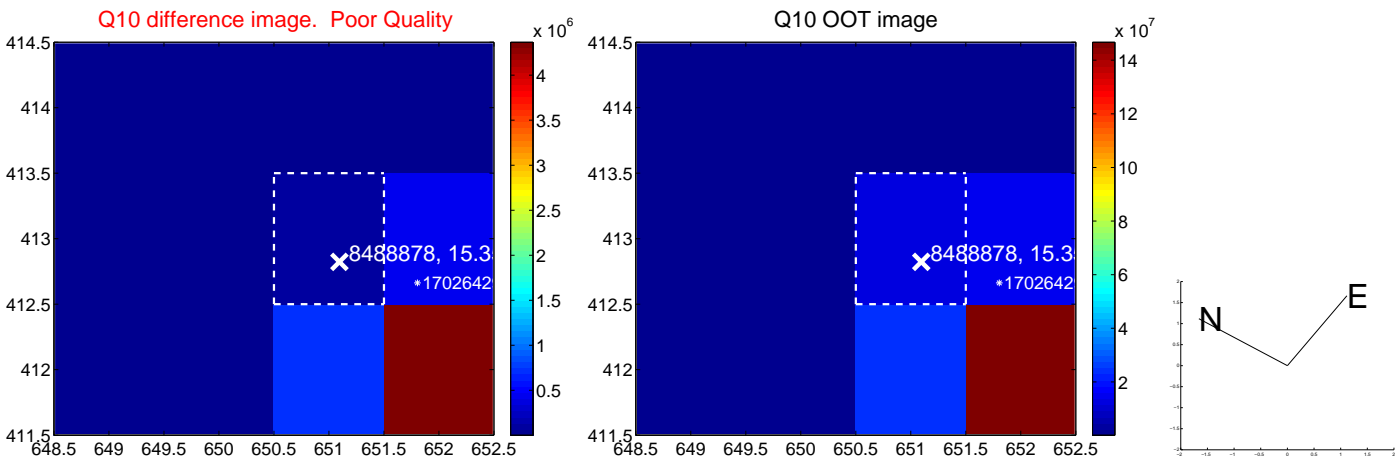
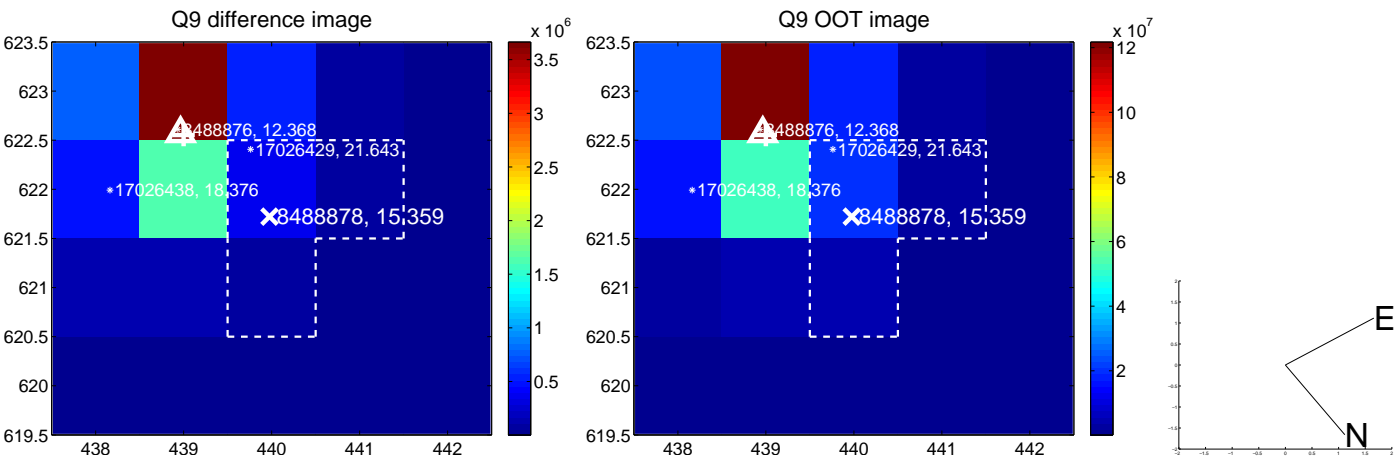
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



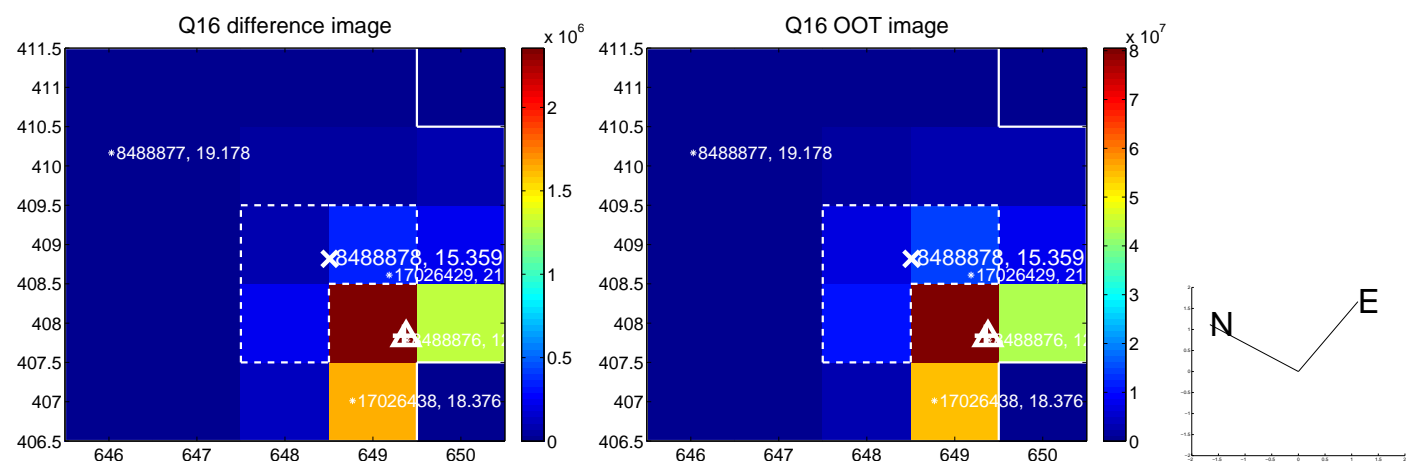
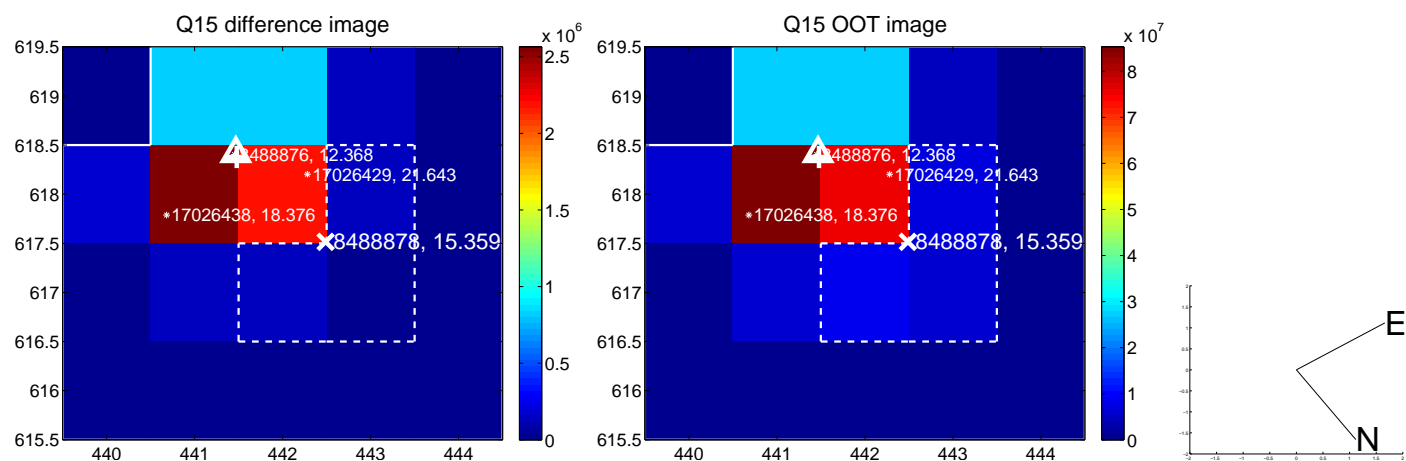
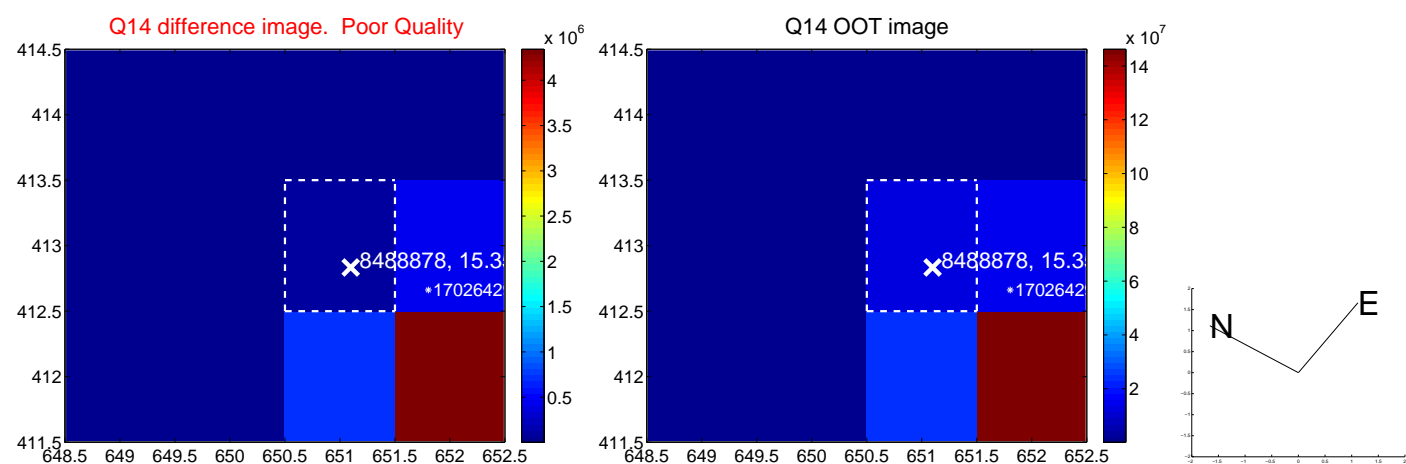
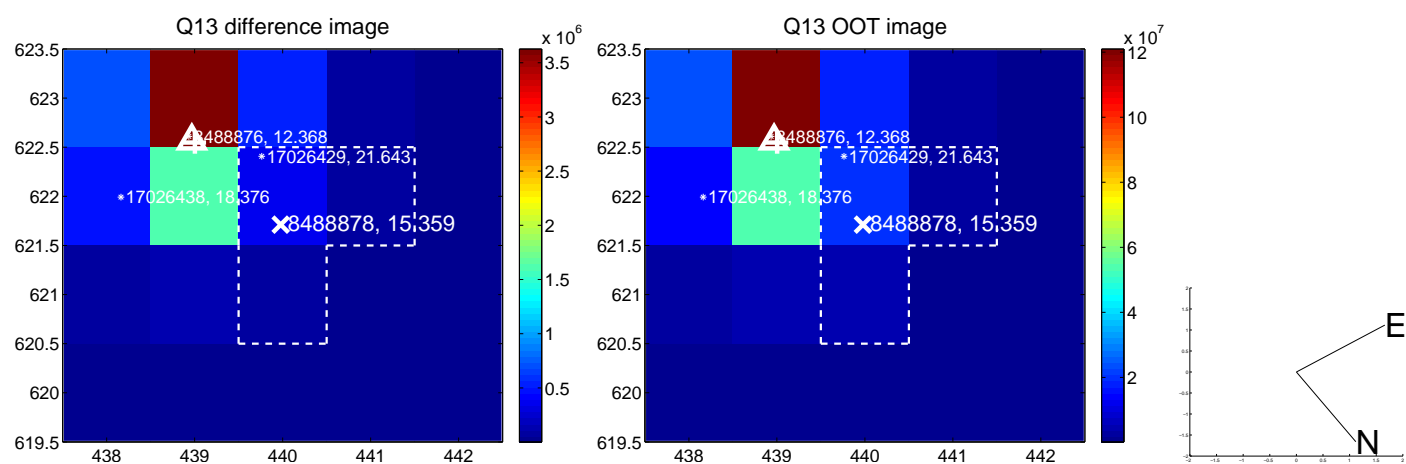
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



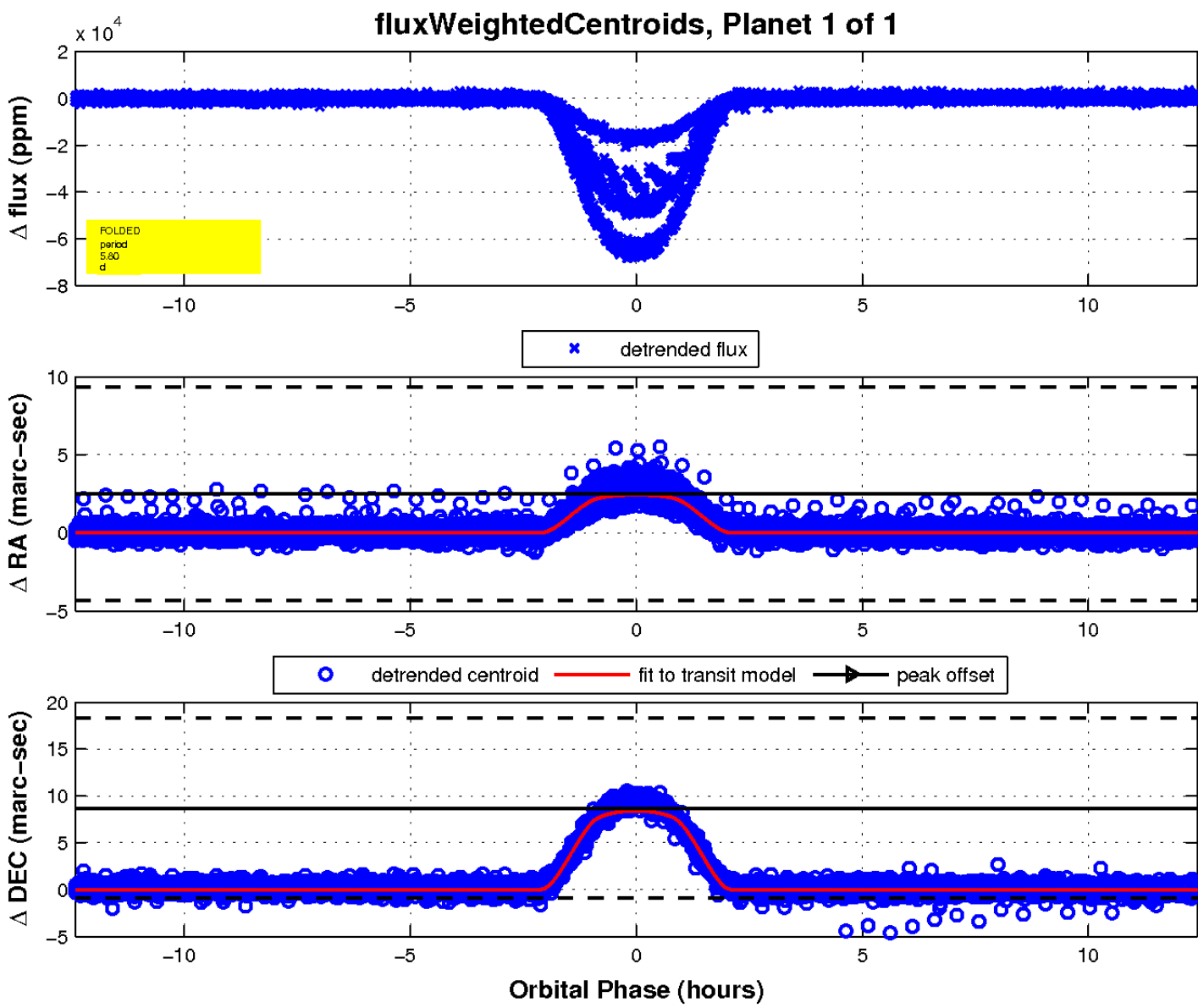
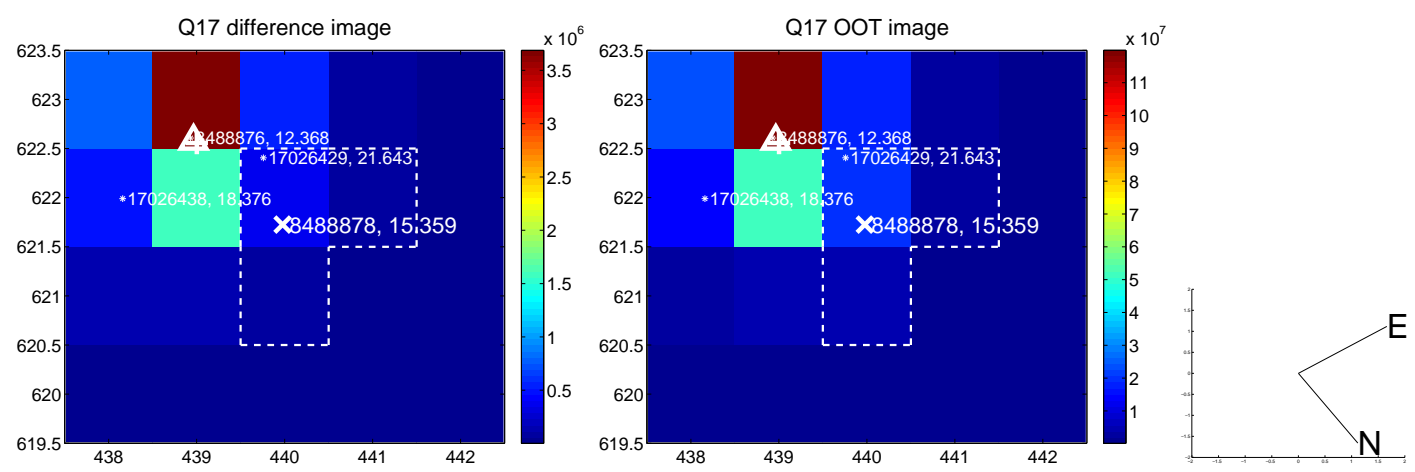
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

