

KIC 008088354

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})
008088354-01	OBS	6959.01	2.897830	132.604828	162797.9	3.177	10681.0	7379.9	1.08	6318	65.13	1058.26
008088354-02	OBS	No	2.897829	134.054430	20639.7	2.982	1389.7	1244.3	1.08	6318	26.99	1058.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008088354-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
008088354-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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.

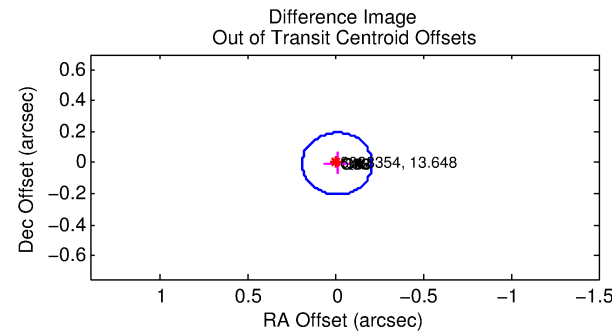
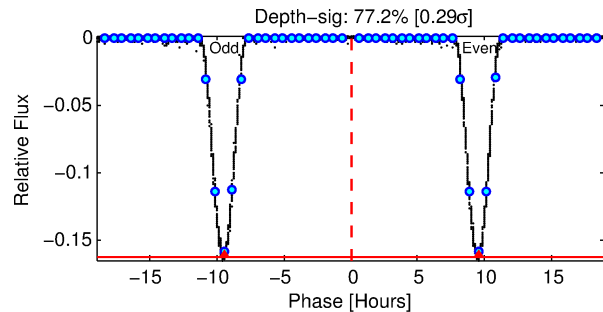
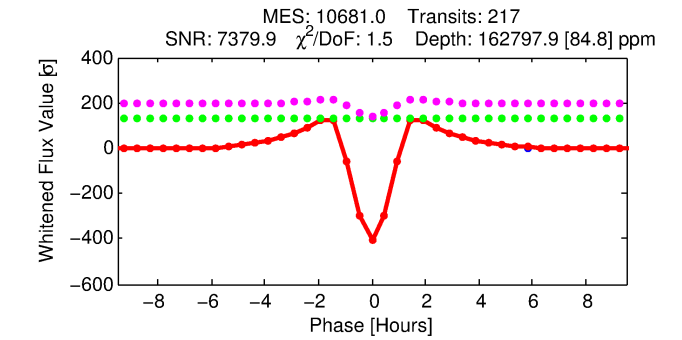
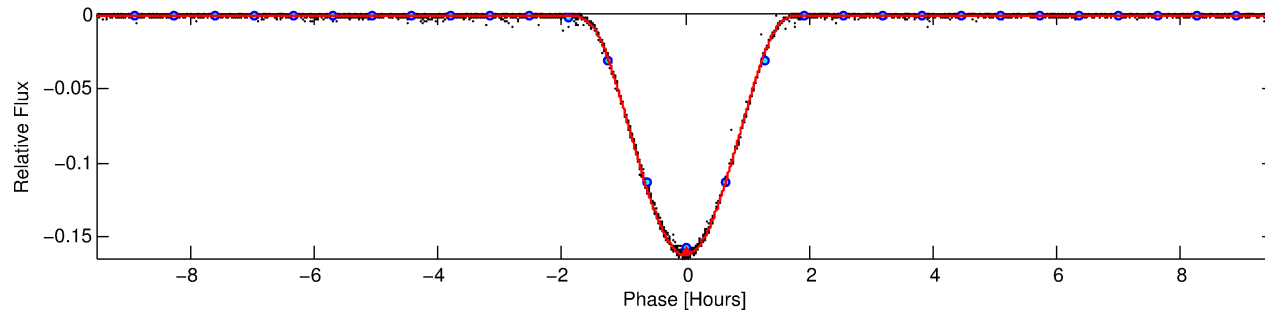
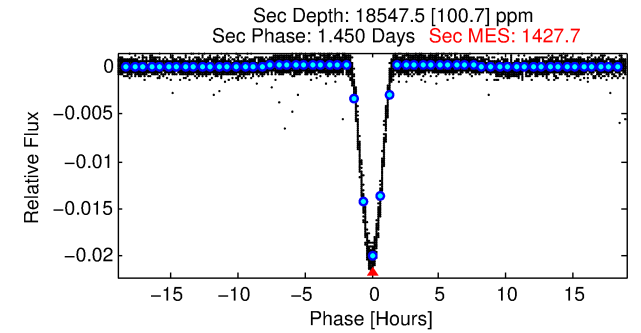
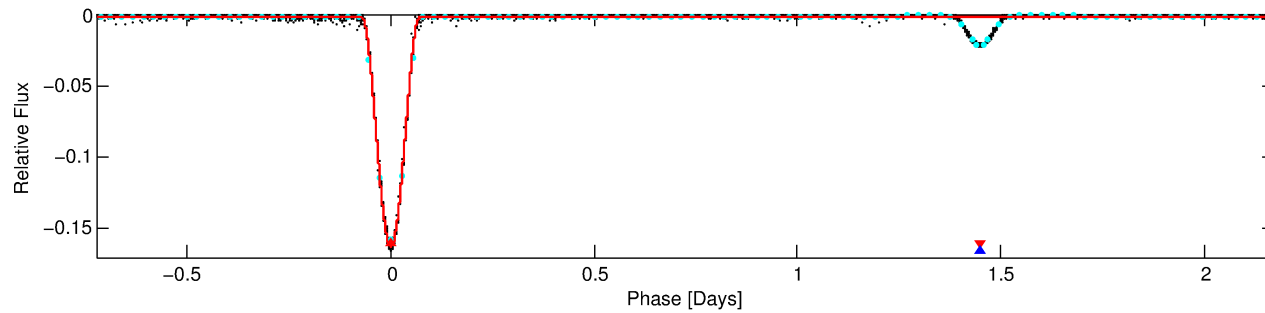
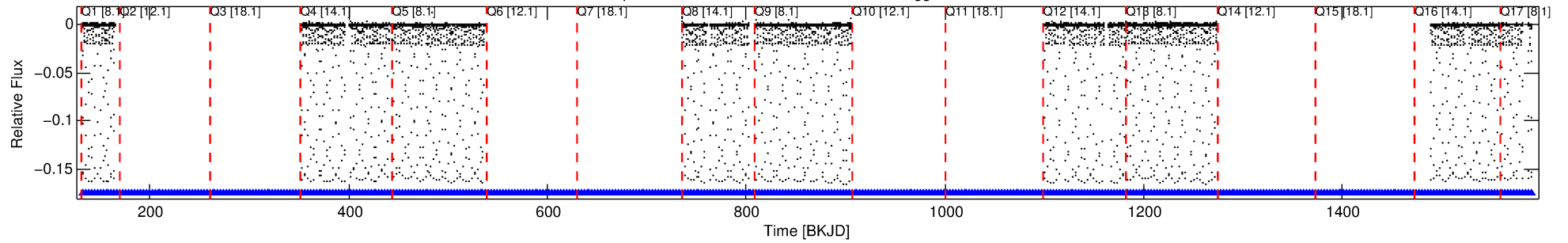
Ephemeris Match Information For 008088354-01

No Significant Match Found

DV One-Page Summary

KIC: 8088354 Candidate: 1 of 2 Period: 2.898 d
KOI: K06959.01 Corr: 0.998

Kp: 13.65 R*: 1.08 Rs Teff: 6318.0 K Logg: 4.37 Fe/H: -0.420



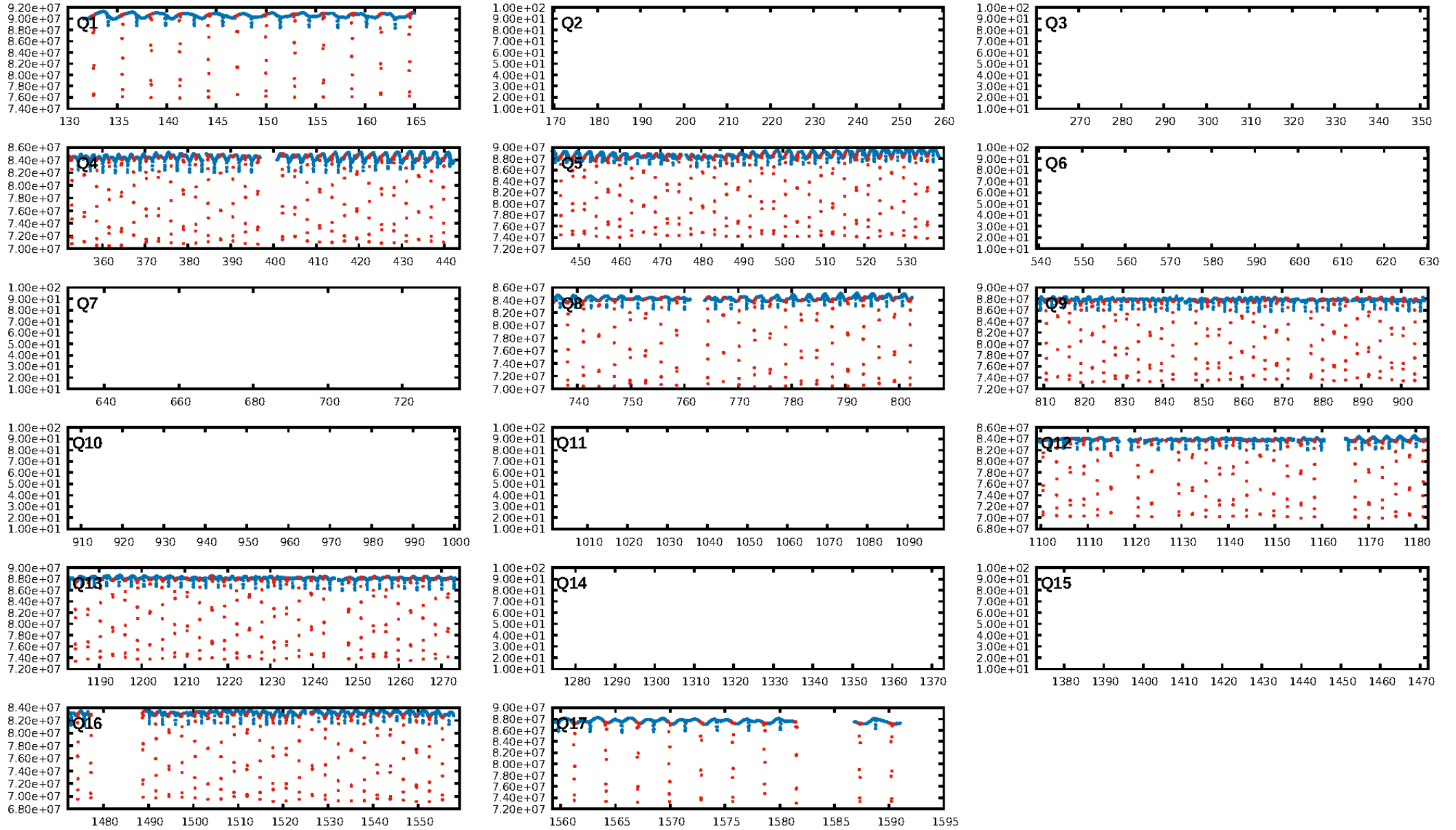
DV Fit Results:

Period = 2.89783 [0.00000] d
Epoch = 132.6048 [0.0000] BKJD
Rp/R* = 0.5542 [0.0189]
a/R* = 8.91 [0.04]
b = 0.90 [0.03]
Seff = 1058.26 [400.08]
Teff = 1454 [137] K
Rp = 65.13 [19.06] Re
a = 0.0396 [0.0095] AU
Ag = 3.76 [1.32] [2.09σ]
Teffp = 3132 [132] K [8.79σ]

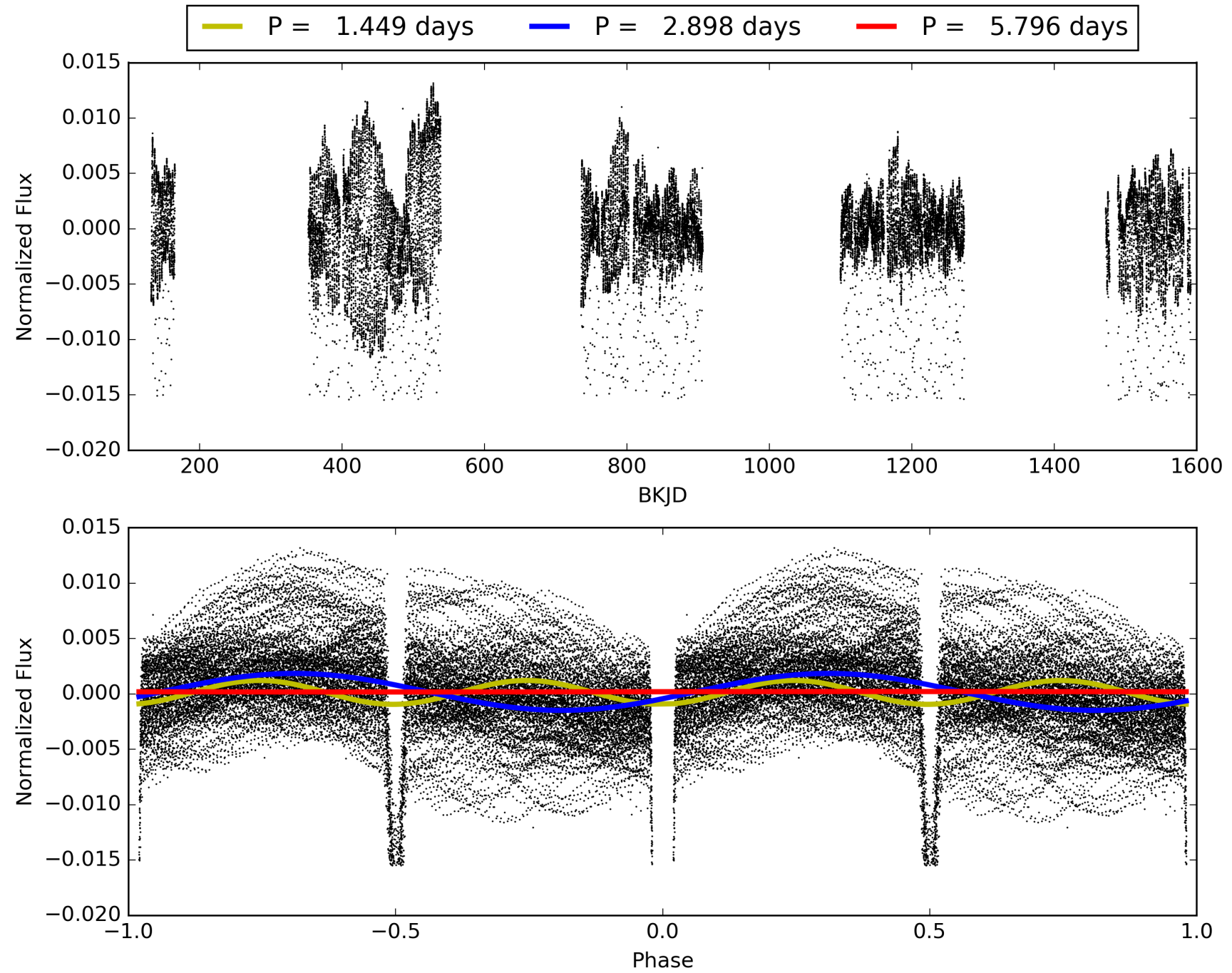
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [195/195]
GhostDiagnostic-chr: 4.534
Centroid-sig: N/A
Centroid-so: 0.136 arcsec [218.15σ]
OotOffset-rm: 0.010 arcsec [0.15σ]
KicOffset-rm: 0.107 arcsec [1.57σ]
OotOffset-st: 0/0/4/5 [9]
KicOffset-st: 0/0/4/5 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [9/9]

TCE 008088354-01, PDC Light Curves

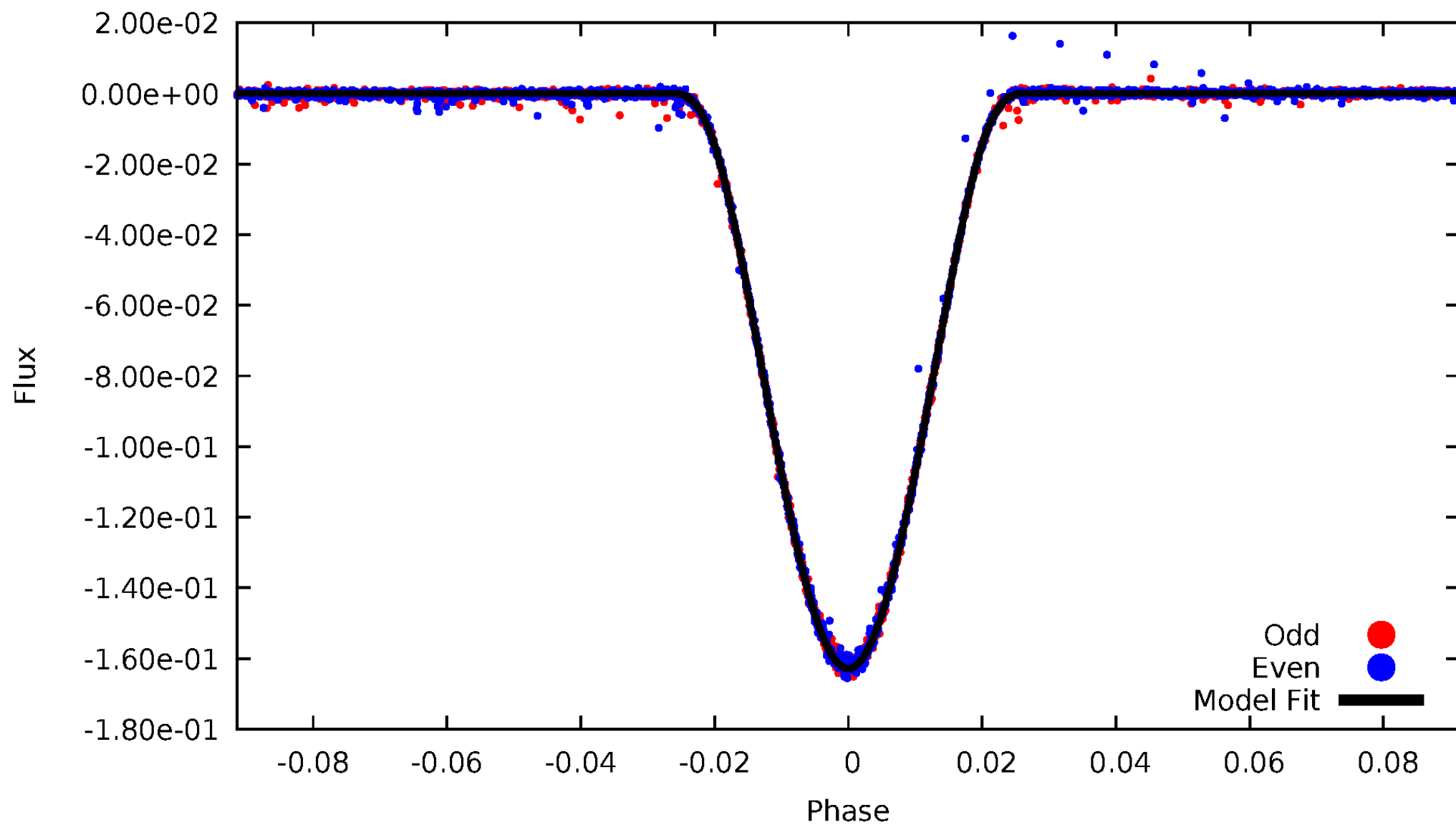


TCE 008088354-01



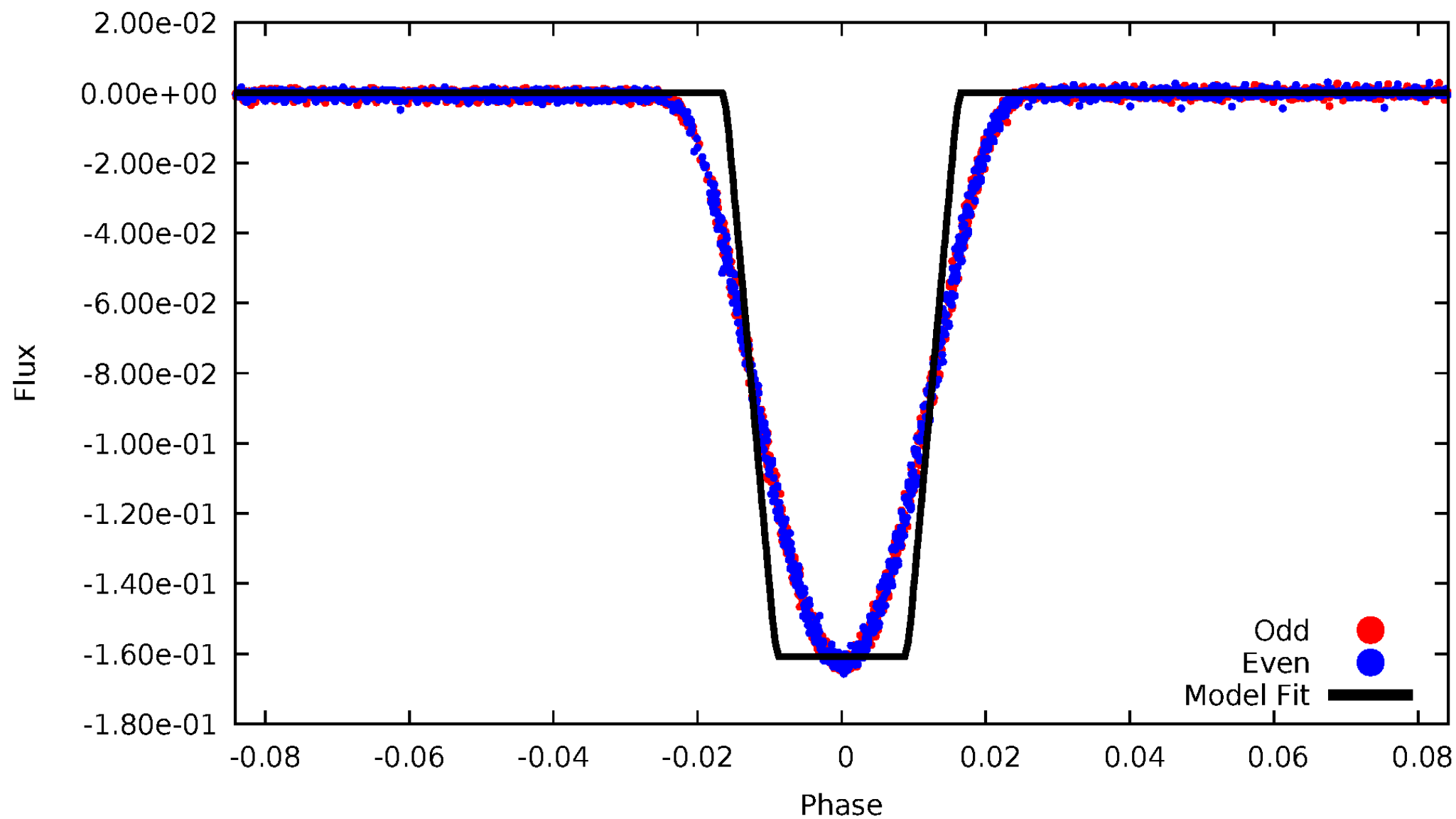
DV Odd/Even

TCE 008088354-01



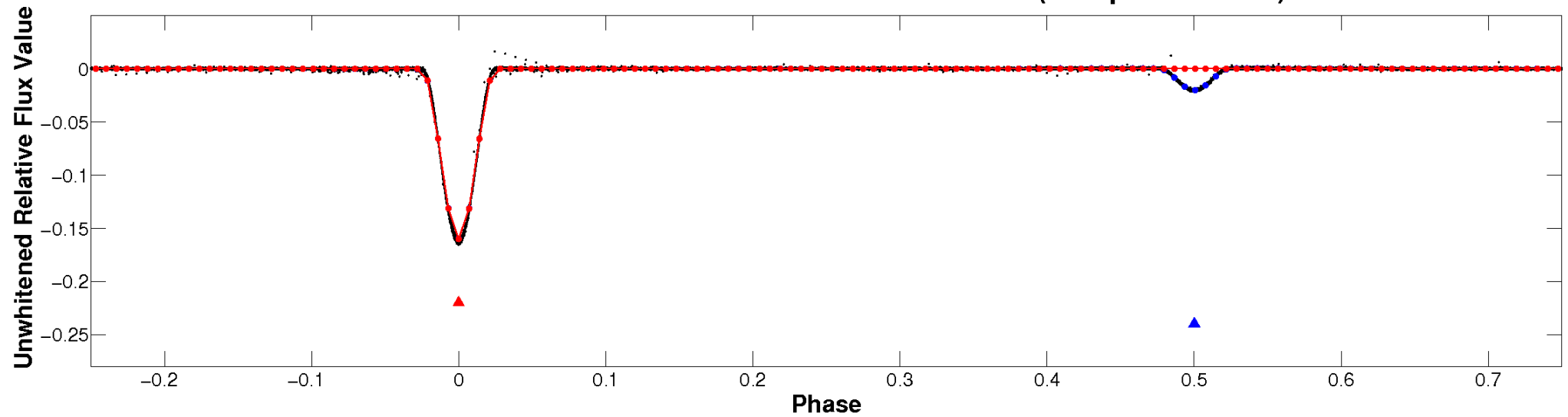
ALT Odd/Even

TCE 008088354-01

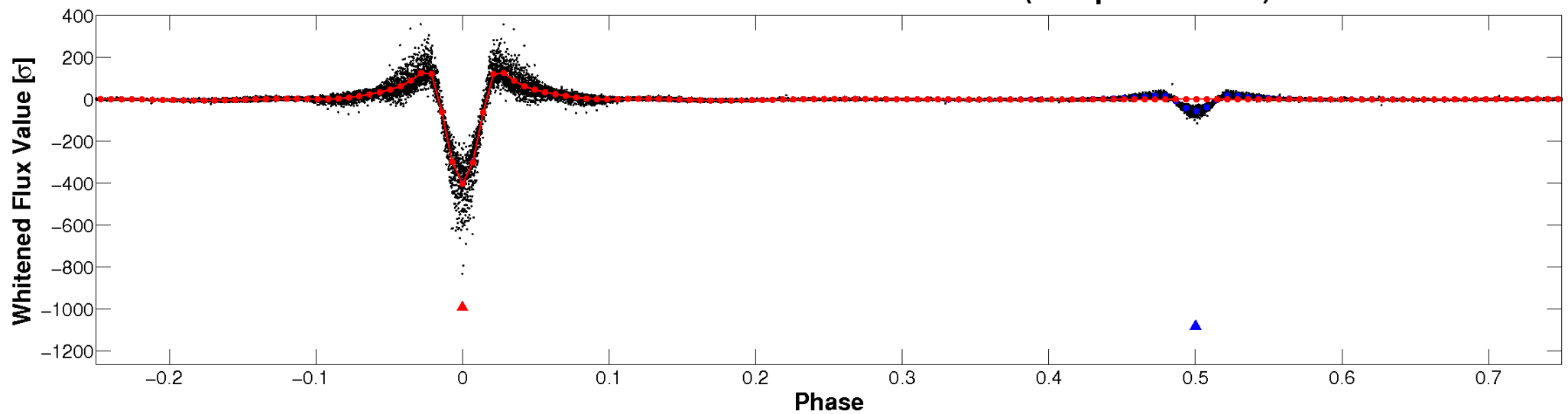


Non-Whitened Vs. Whitened Light Curve

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

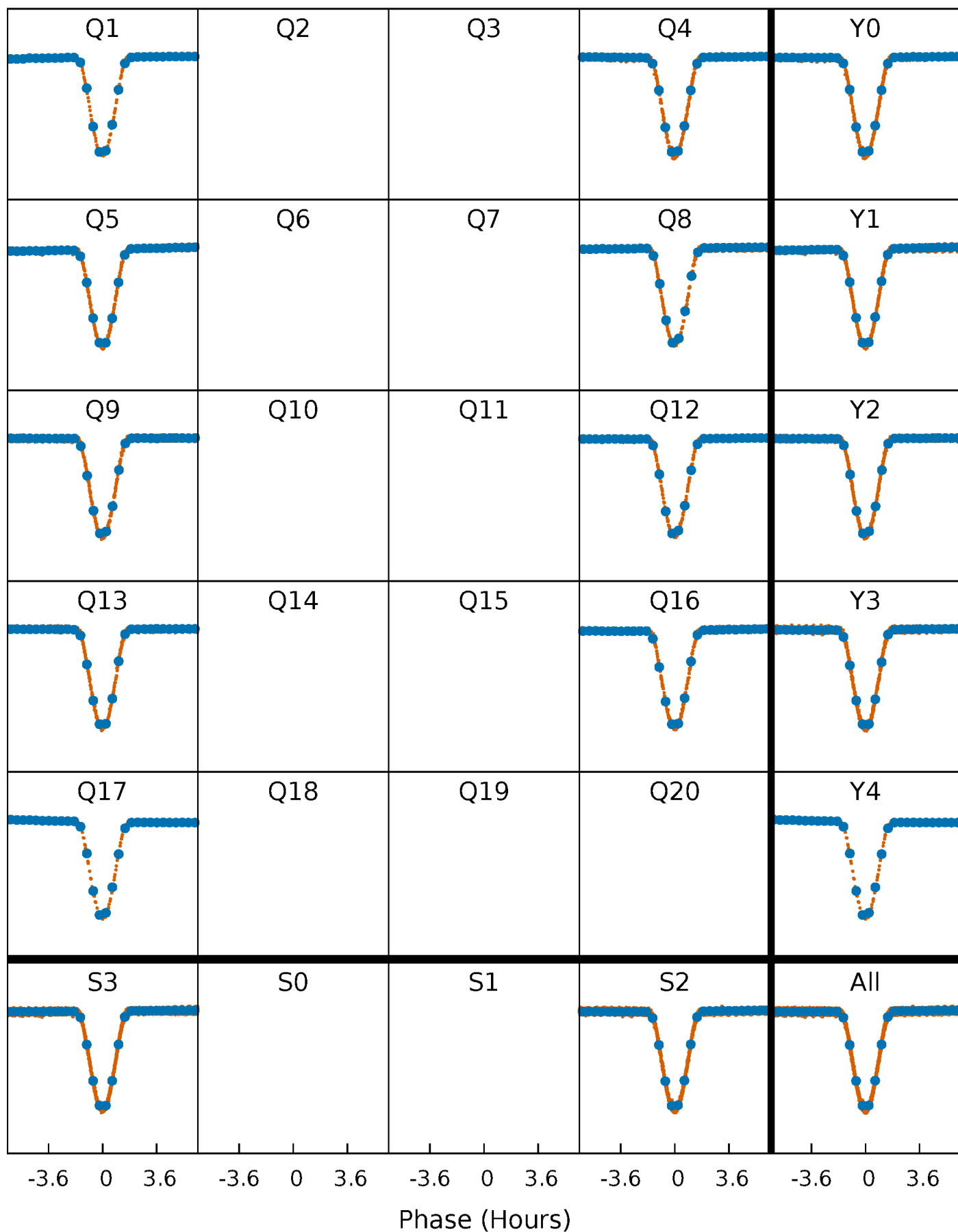


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



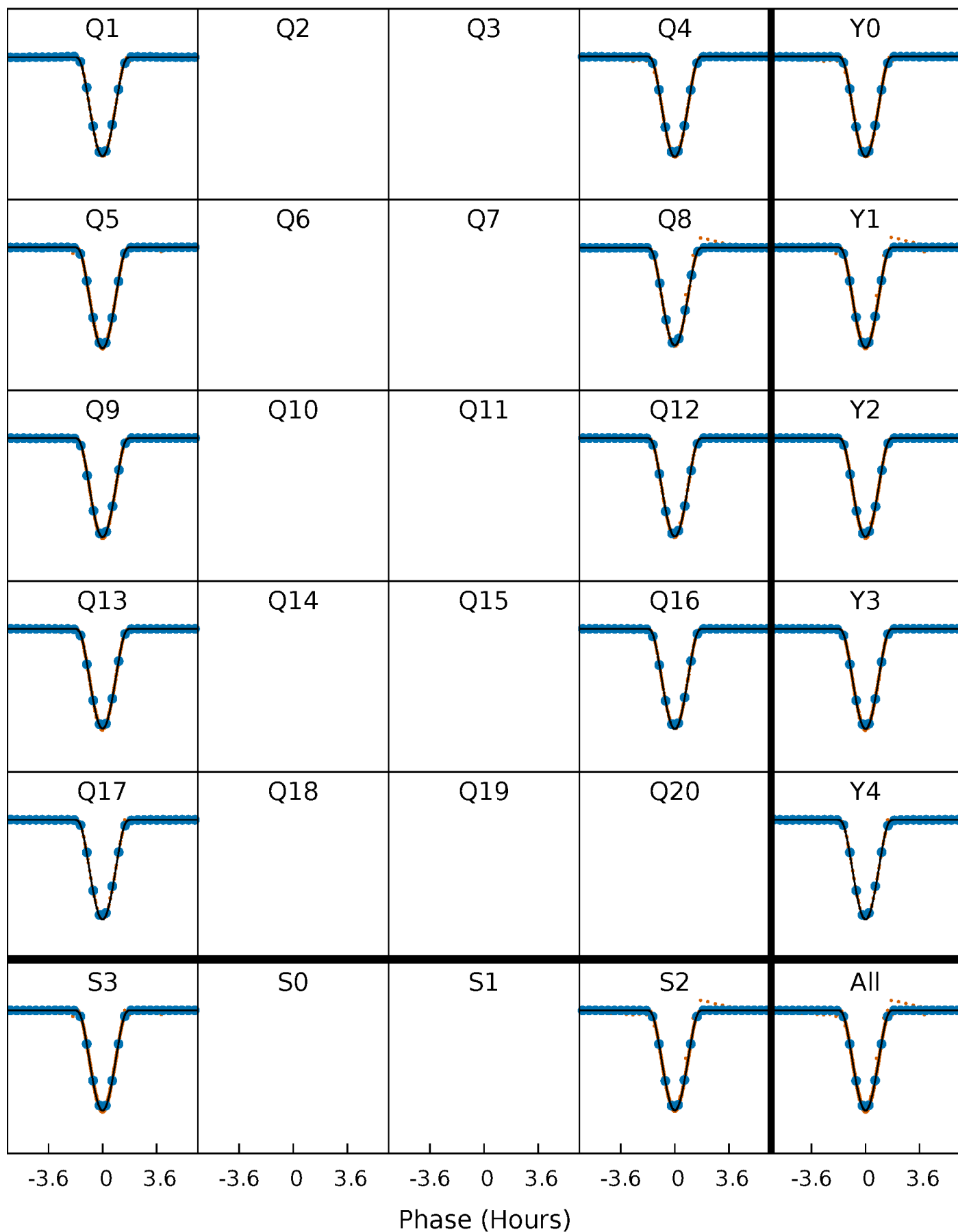
PDC Quarter-Phased Transit Curves

TCE 008088354-01 P= 2.897830 Days $T_0=132.604828$ (BKJD)



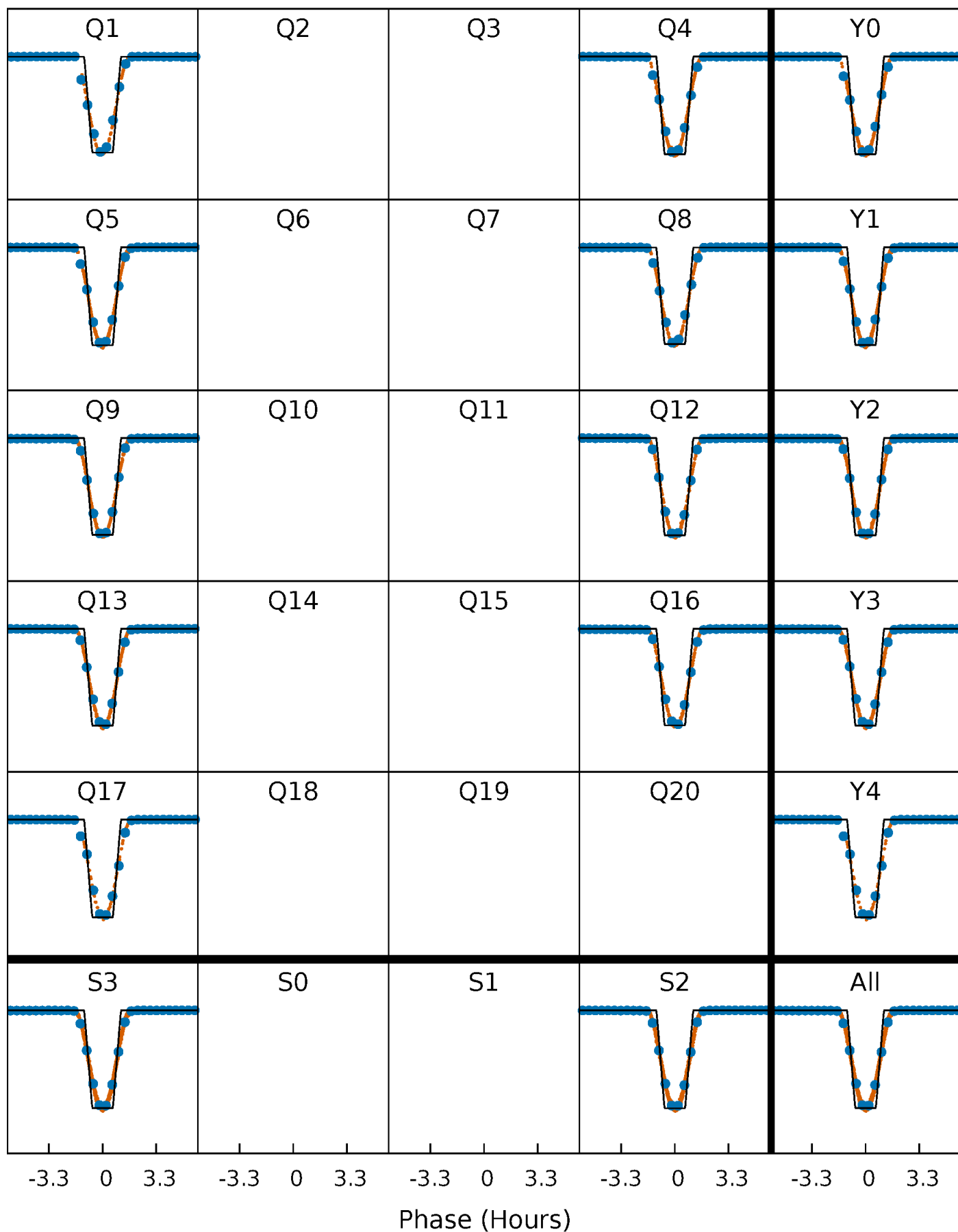
DV Quarter-Phased Transit Curves

TCE 008088354-01 P= 2.897830 Days $T_0=132.604828$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

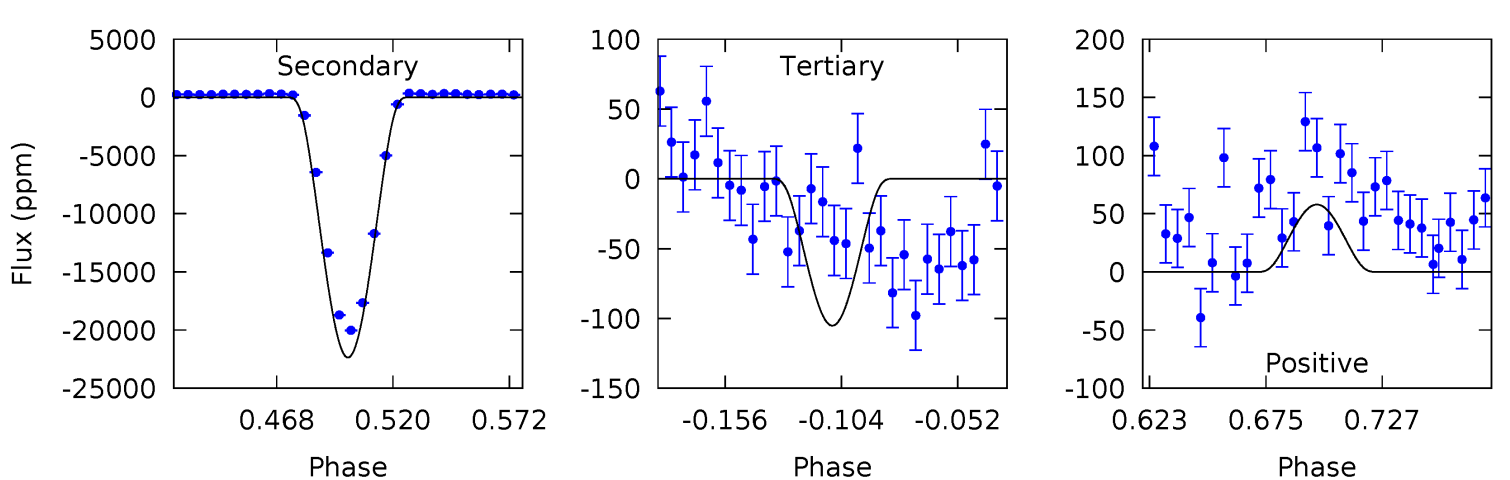
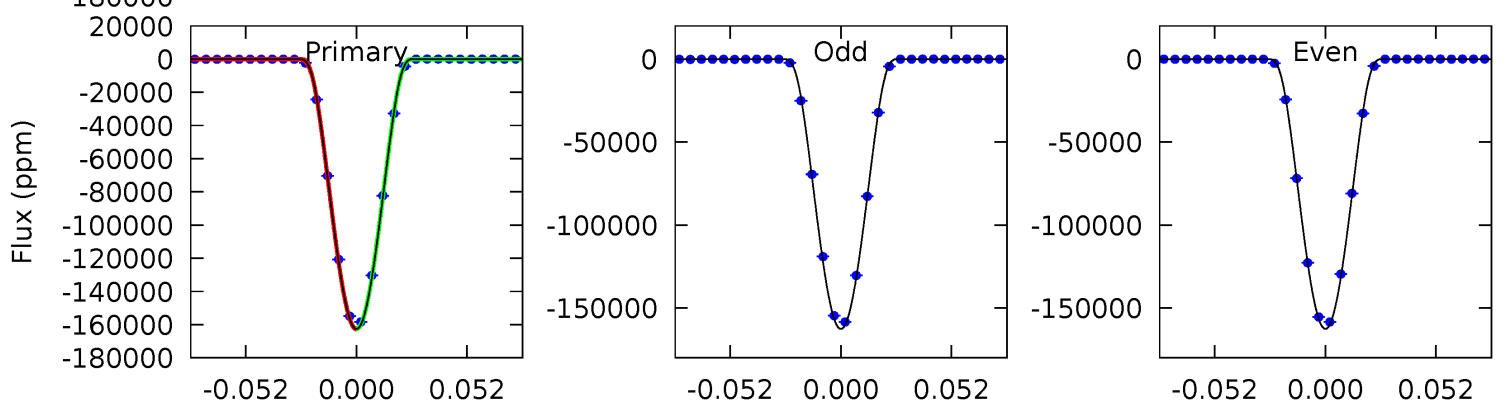
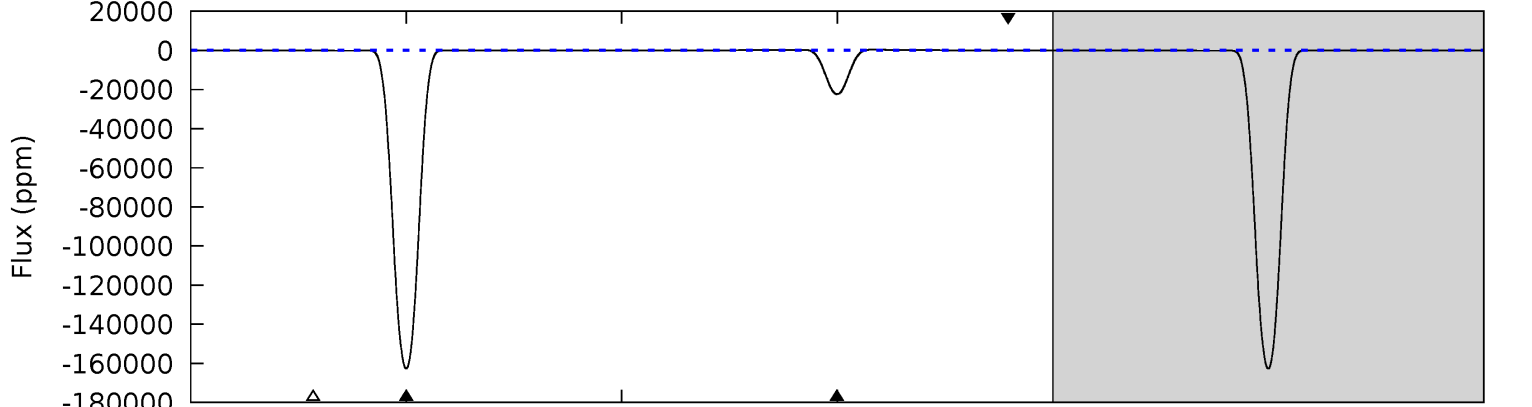
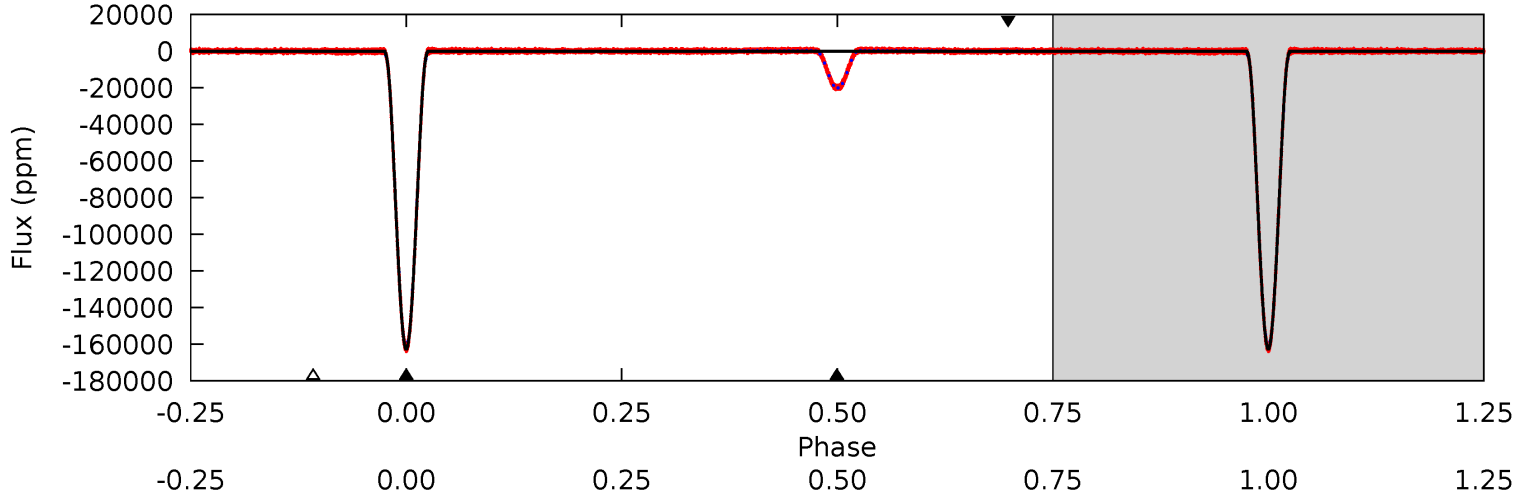
TCE 008088354-01 P= 2.897823 Days $T_0=132.606162$ (BKJD)



DV Model-Shift Uniqueness Test

008088354-01, P = 2.897830 Days, E = 129.706998 Days

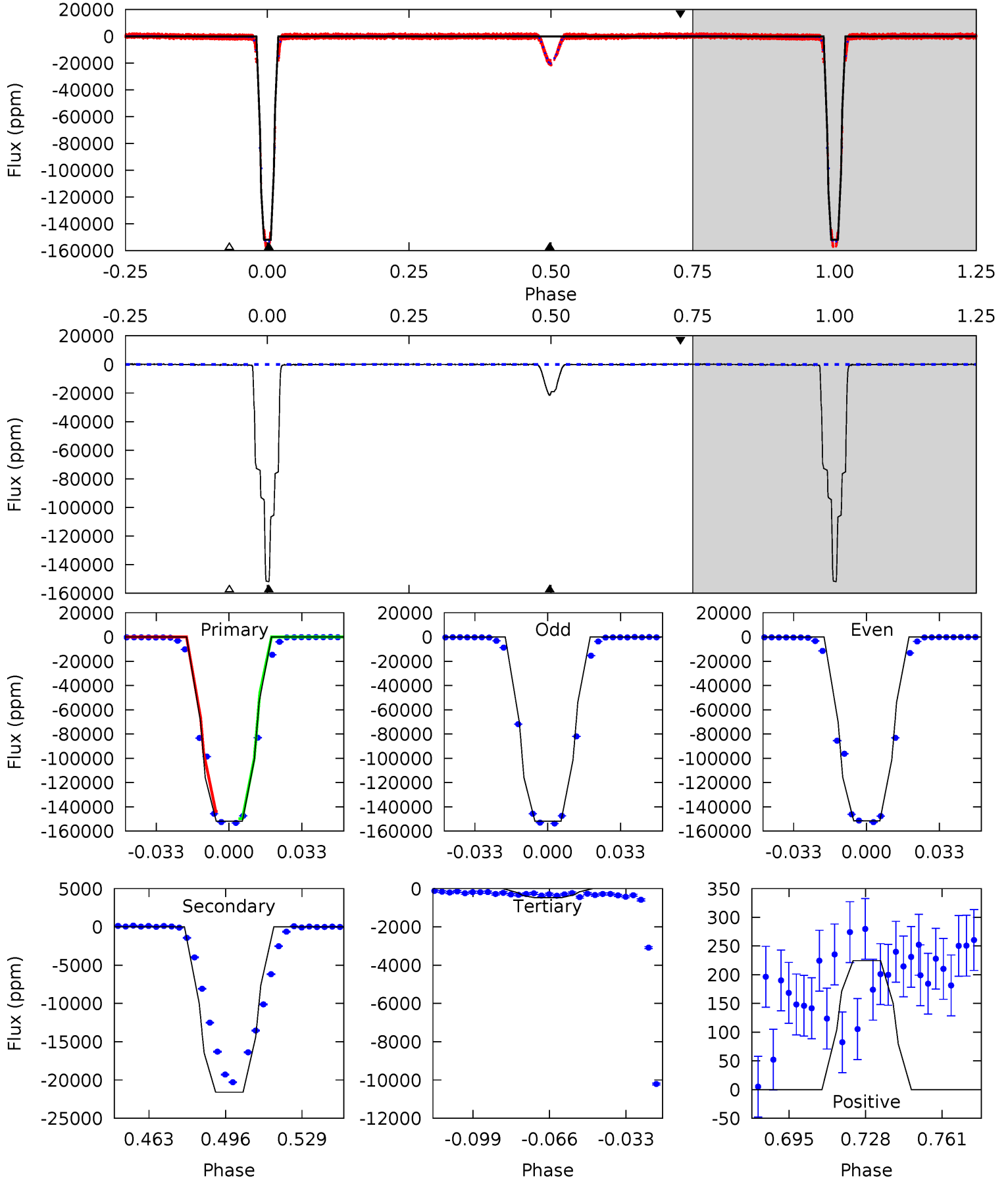
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14983	2060	9.69	5.33	4.70	1.94	9.78	14973	14978	2050	2055	2.09	1.00	0.00	9.58



Alt Model-Shift Uniqueness Test

008088354-01, P = 2.897823 Days, E = 129.708339 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2977	423.2	9.22	4.40	4.79	2.13	2.93	2968	2973	414.0	418.8	2.50	1.00	0.00	0



Stellar Parameters For KIC 008088354

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6318^{+199}_{-244}	$4.366^{+0.124}_{-0.186}$	$-0.420^{+0.300}_{-0.300}$	$1.077^{+0.313}_{-0.168}$	$0.980^{+0.145}_{-0.119}$	$1.105^{+0.621}_{-0.542}$
	+3%/-4%	+3%/-4%	+71%/-71%	+29%/-16%	+15%/-12%	+56%/-49%
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 008088354-01 / KOI 6959.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-22362 ± 11	$65.14^{+9.70}_{-6.48}$	2036^{+151}_{-132}	3671^{+97}_{-107}	$4.603^{+1.076}_{-1.035}$
Alt.	-21587 ± 51	$47.47^{+7.38}_{-5.27}$	2036^{+157}_{-117}	4095^{+121}_{-131}	$8.386^{+1.976}_{-1.974}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

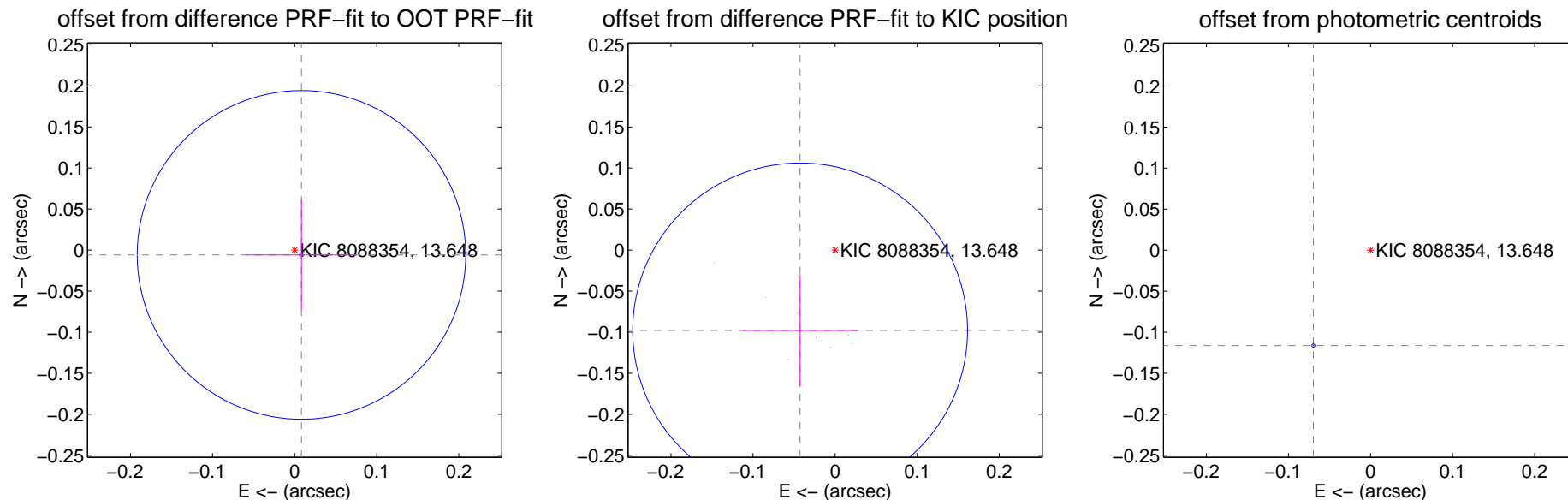
DV Centroid Data

Supplemental centroid analysis for 008088354-01. Kepler magnitude: 13.65. Transit SNR 7379.93

There are 9 quarters with good PRF difference image offsets

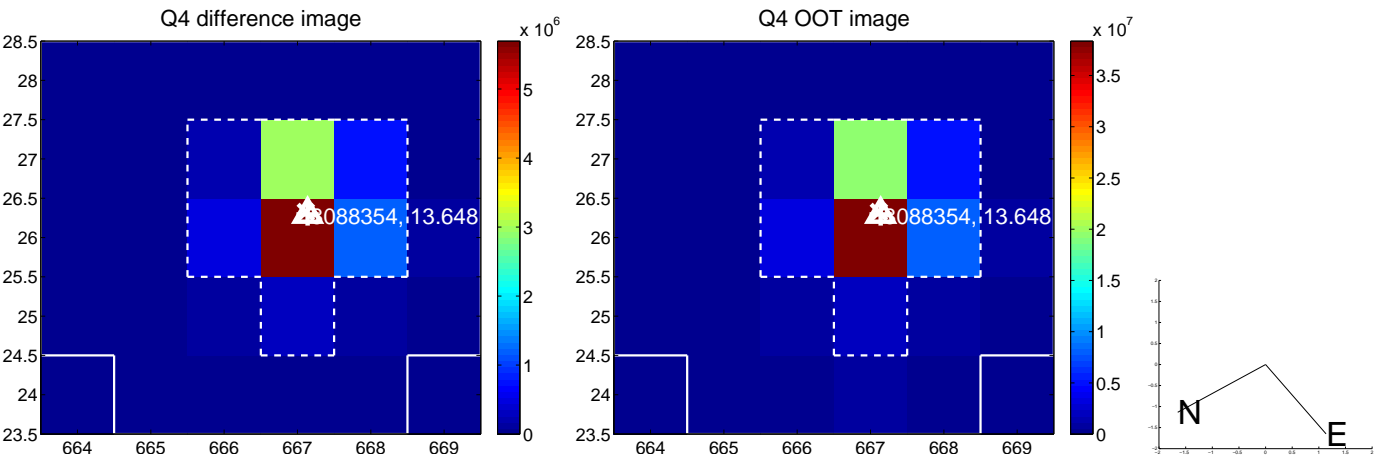
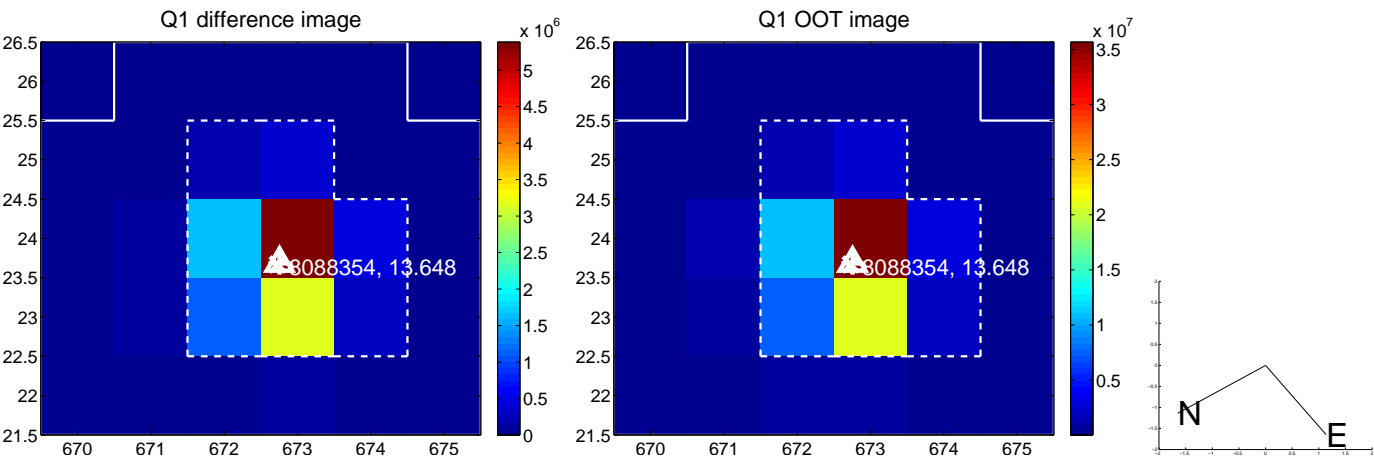
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.010 ± 0.067	0.15	-0.008 ± 0.067	-0.006 ± 0.067
PRF-fit source offset from KIC position	0.107 ± 0.068	1.57	0.043 ± 0.070	-0.098 ± 0.068
photometric centroid source offset	0.14 ± 0.00	218.15	0.07 ± 0.00	-0.12 ± 0.00

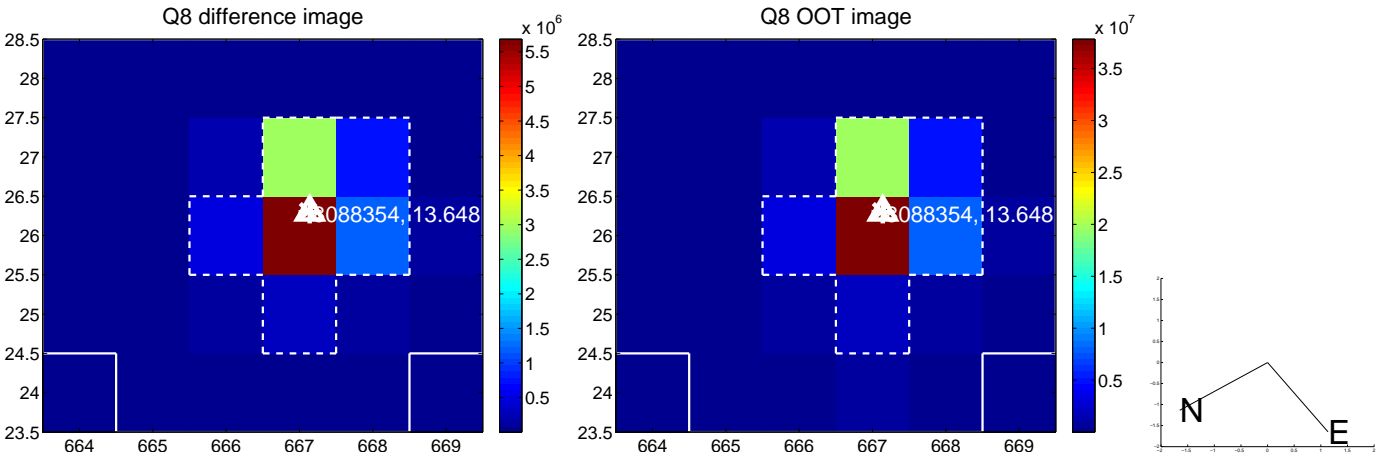
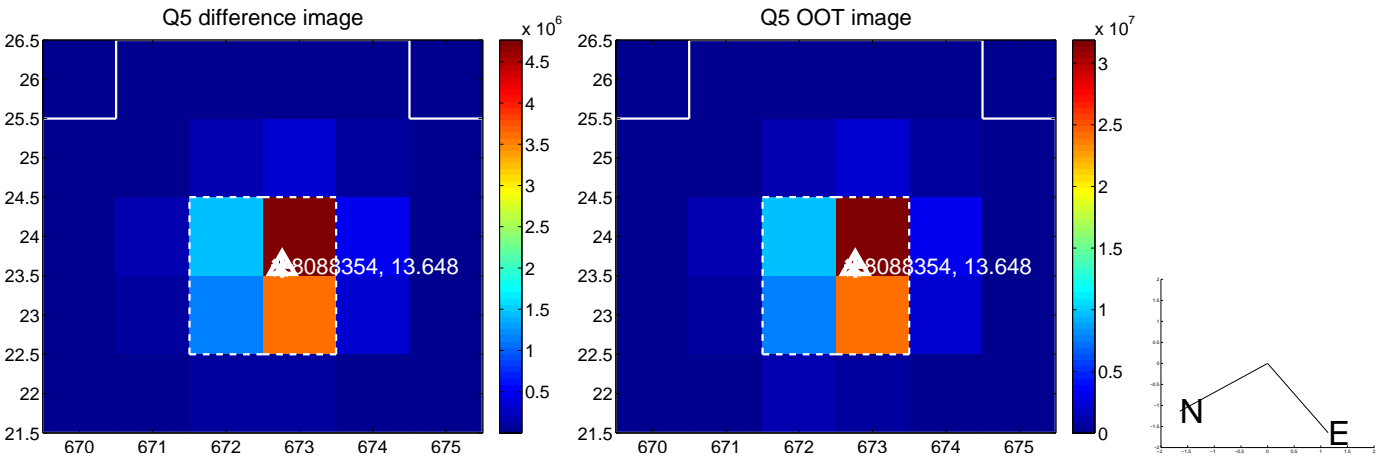


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

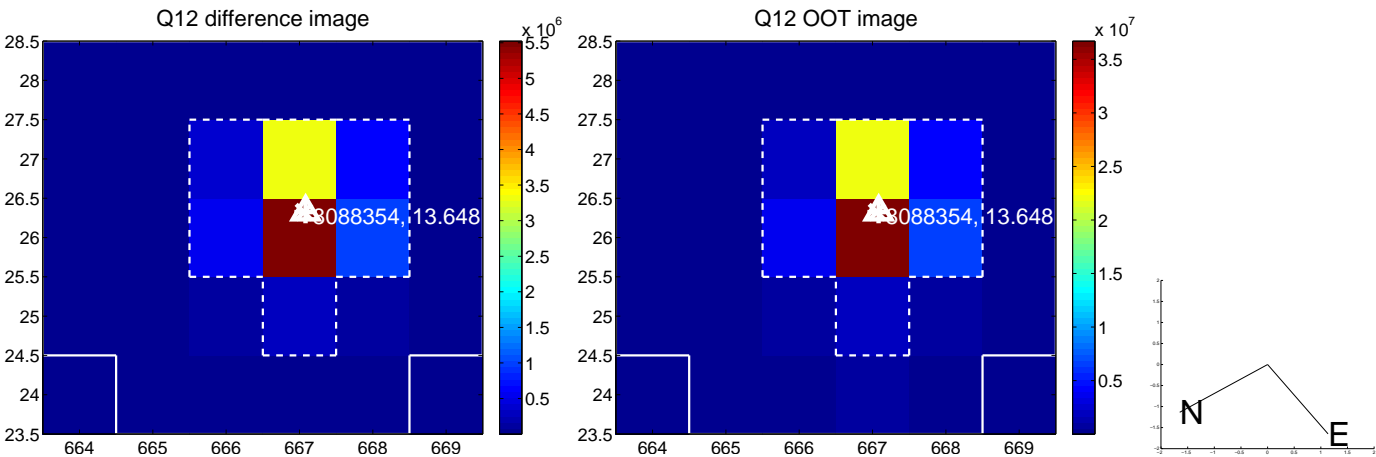
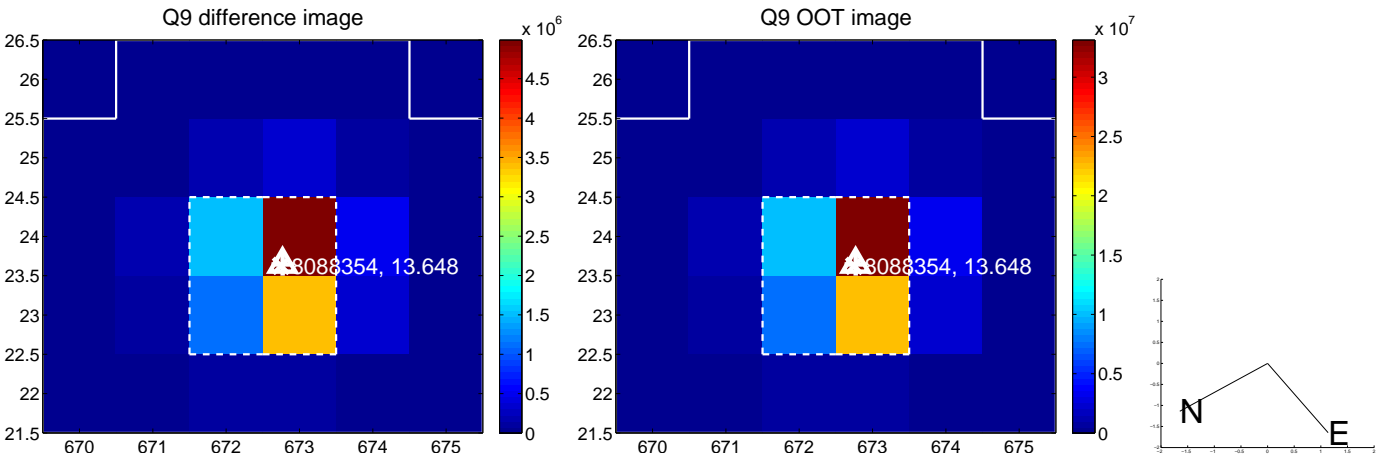
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



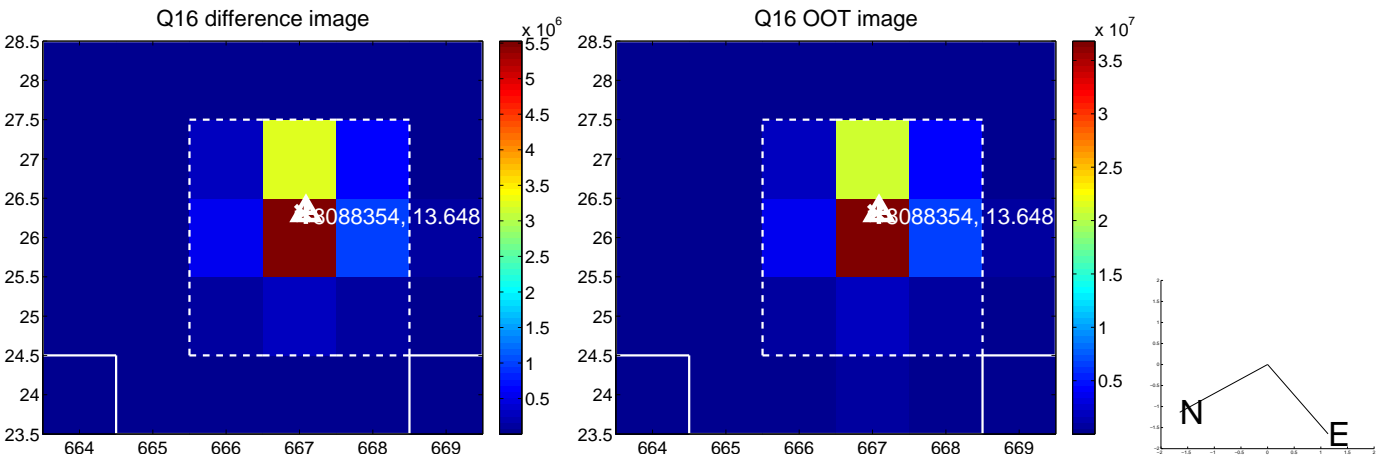
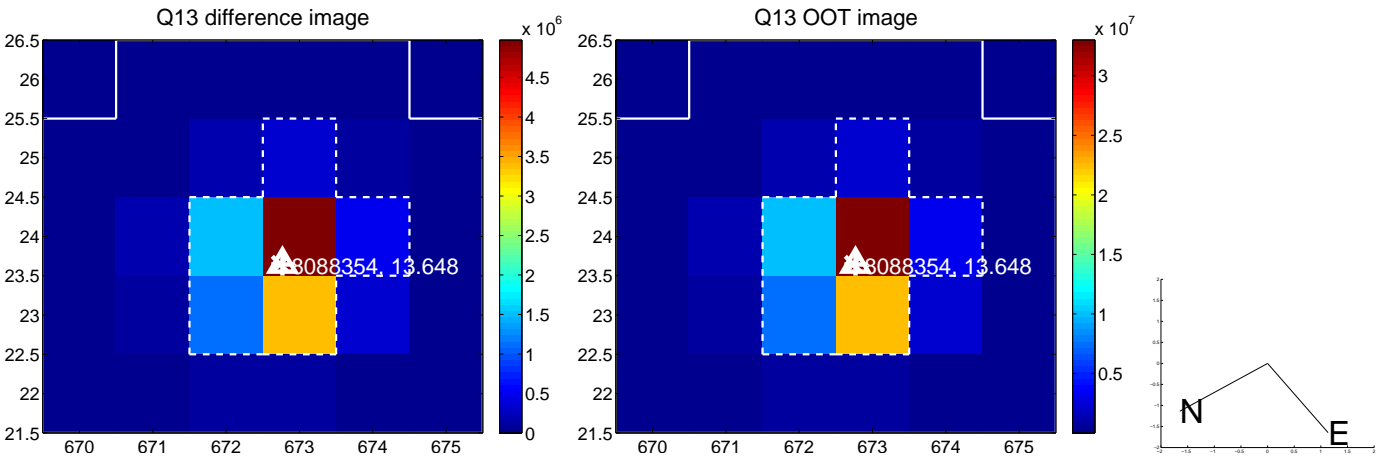
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



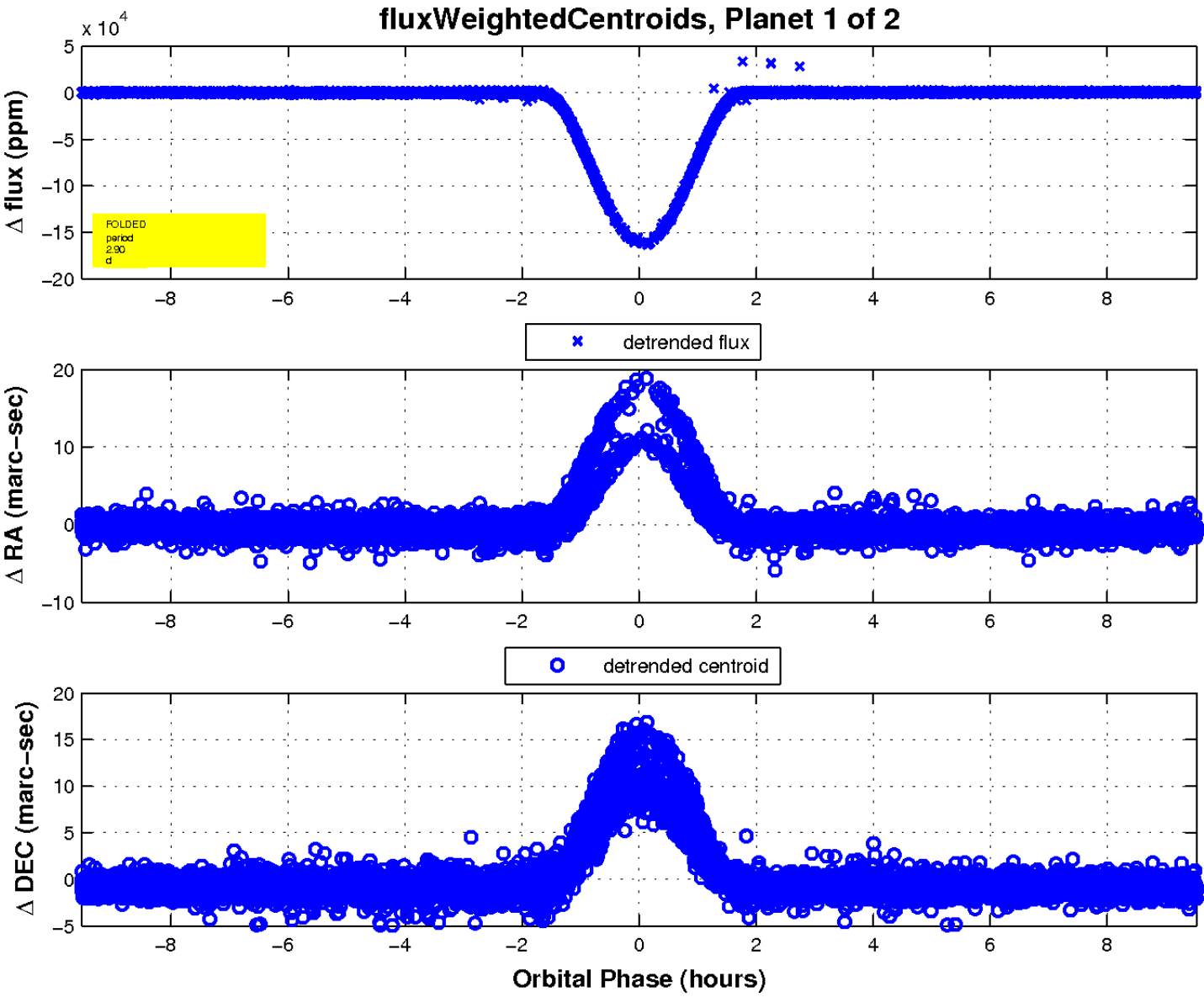
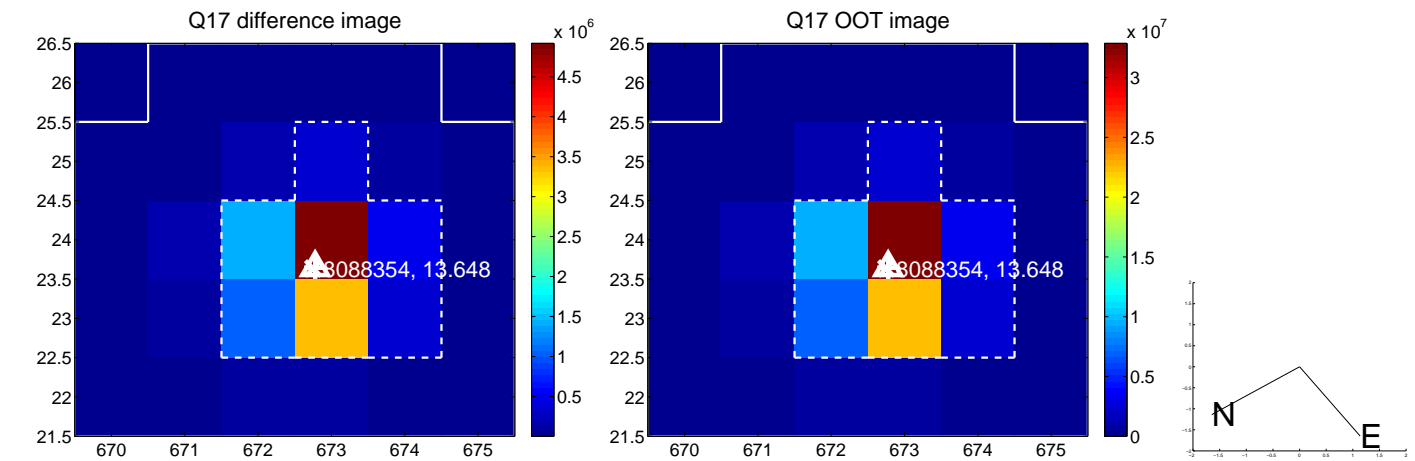
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



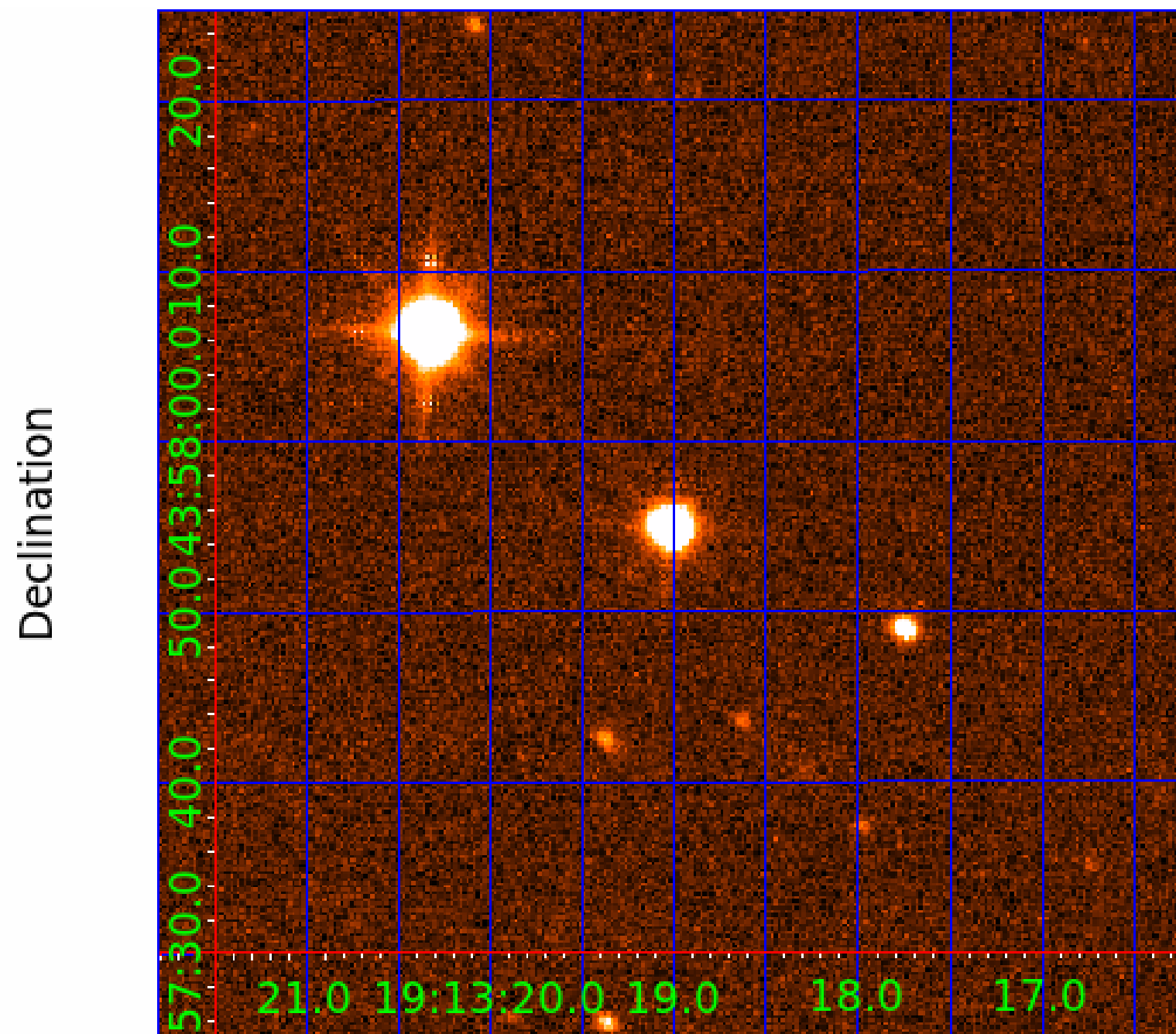
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 008088354

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})
008088354-01	OBS	6959.01	2.897830	132.604828	162797.9	3.177	10681.0	7379.9	1.08	6318	65.13	1058.26
008088354-02	OBS	No	2.897829	134.054430	20639.7	2.982	1389.7	1244.3	1.08	6318	26.99	1058.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008088354-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
008088354-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE

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 008088354-02

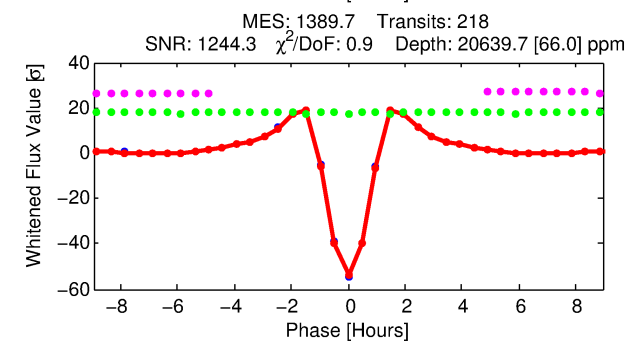
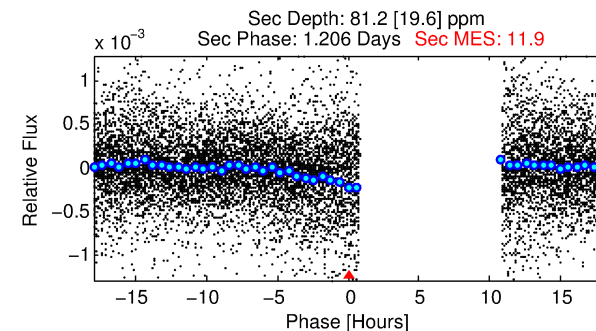
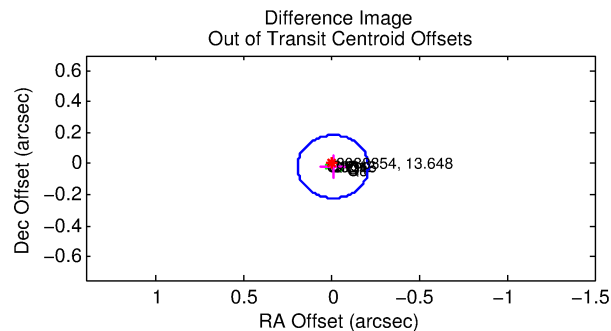
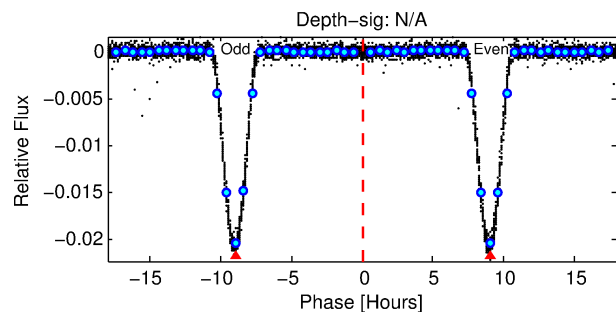
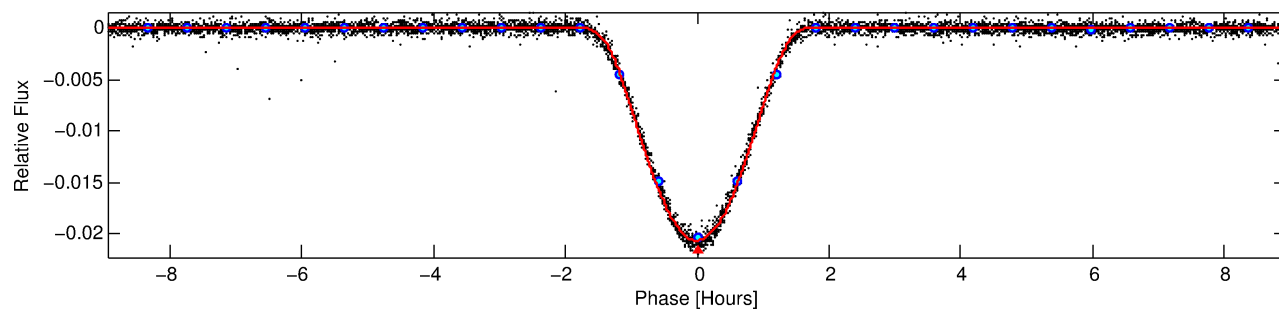
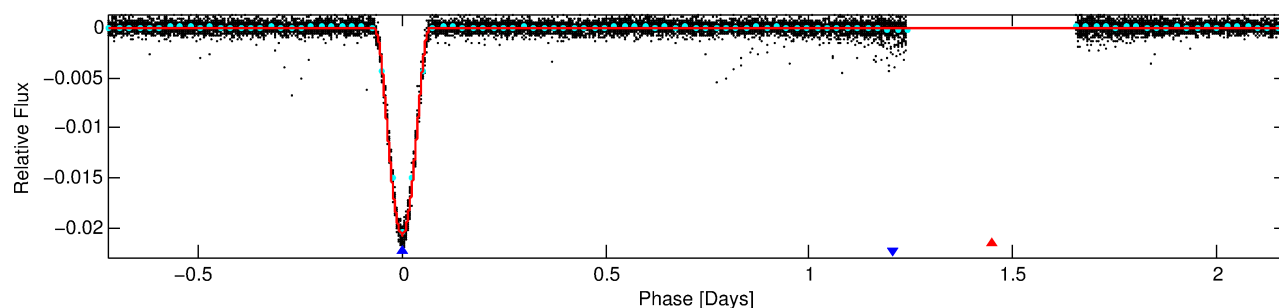
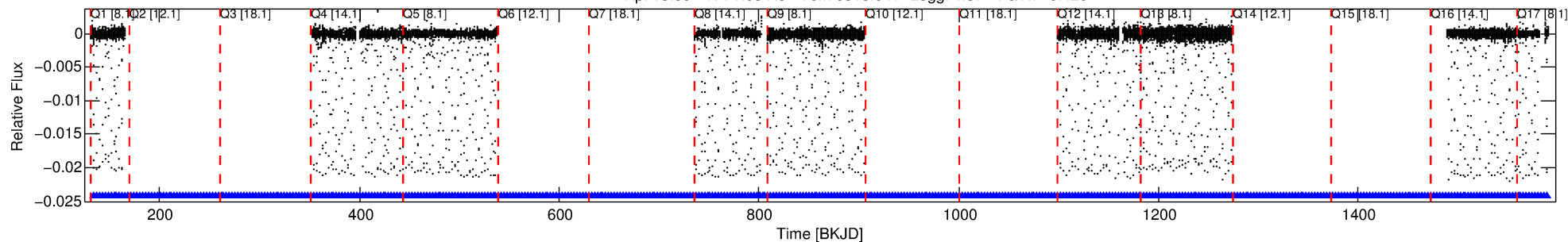
No Significant Match Found

DV One-Page Summary

KIC: 8088354 Candidate: 2 of 2 Period: 2.898 d

KOI: K06959 Corr: No Ephemeris Match

Kp: 13.65 R*: 1.08 Rs Teff: 6318.0 K Logg: 4.37 Fe/H: -0.420



DV Fit Results:

Period = 2.89783 [0.00000] d
Epoch = 134.0544 [0.0000] BKJD
Rp/R* = 0.2297 [0.0097]
a/R* = 5.43 [0.02]
b = 1.00 [0.01]
Seff = 1058.26 [400.08]
Teq = 1454 [137] K
Rp = 26.99 [7.93] Re
a = 0.0396 [0.0095] AU
Ag = 0.10 [0.04] [-21.92σ]
Teffp = 1252 [94] K [-1.22σ]

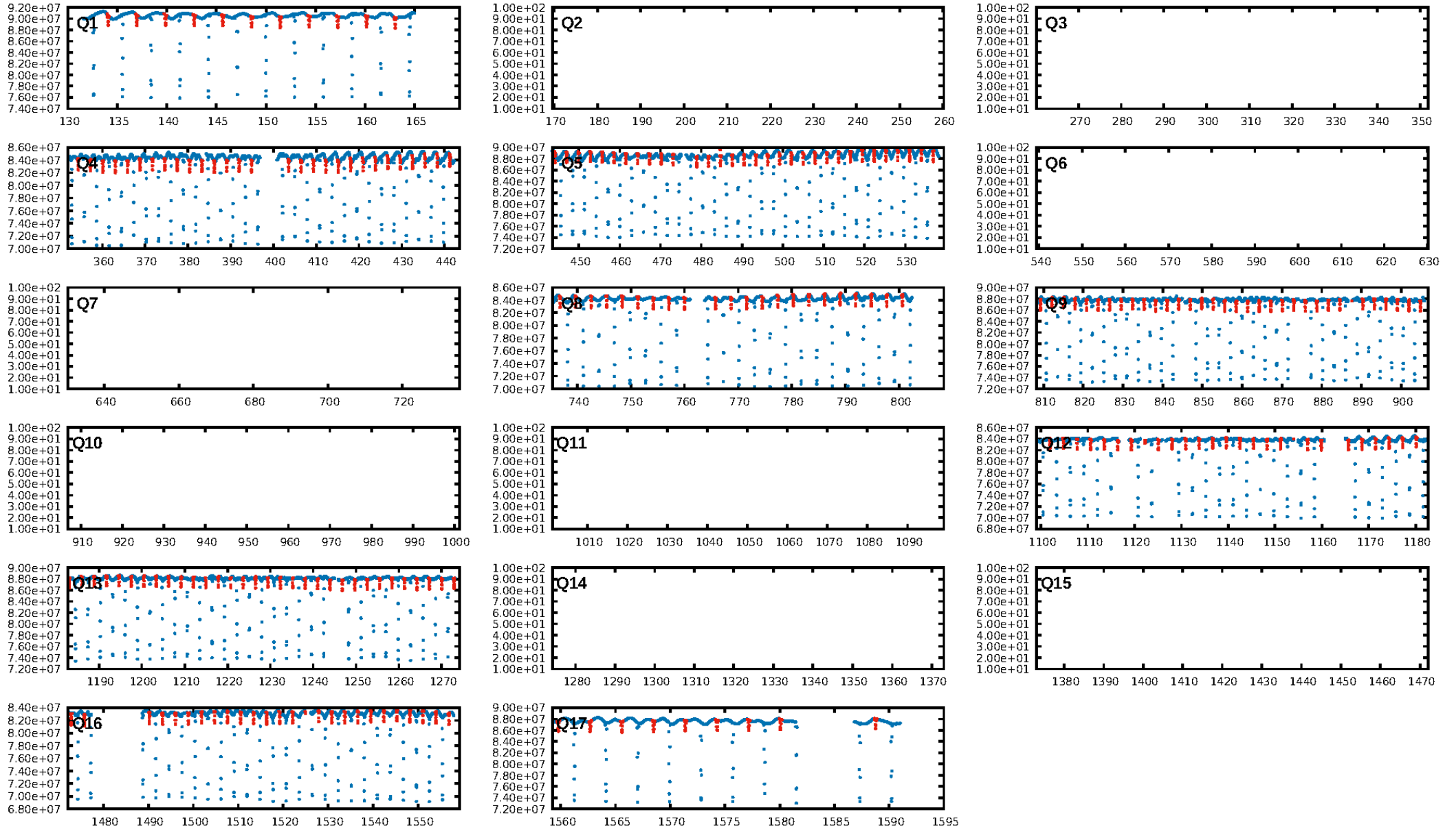
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [198/198]
GhostDiagnostic-chr: 2.26
Centroid-sig: N/A
Centroid-so: 0.135 arcsec [33.52σ]
OotOffset-rm: 0.021 arcsec [0.31σ]
KicOffset-rm: 0.118 arcsec [1.75σ]
OotOffset-st: 0/0/4/5 [9]
KicOffset-st: 0/0/4/5 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [9/9]

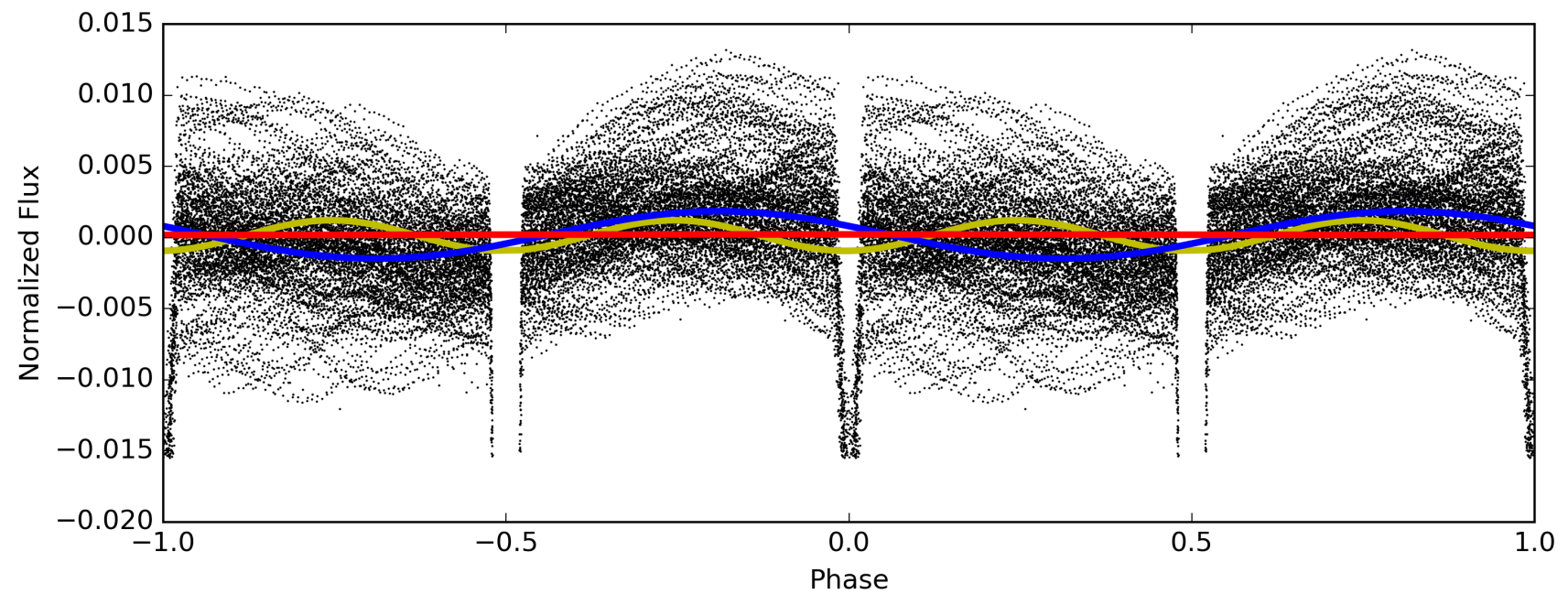
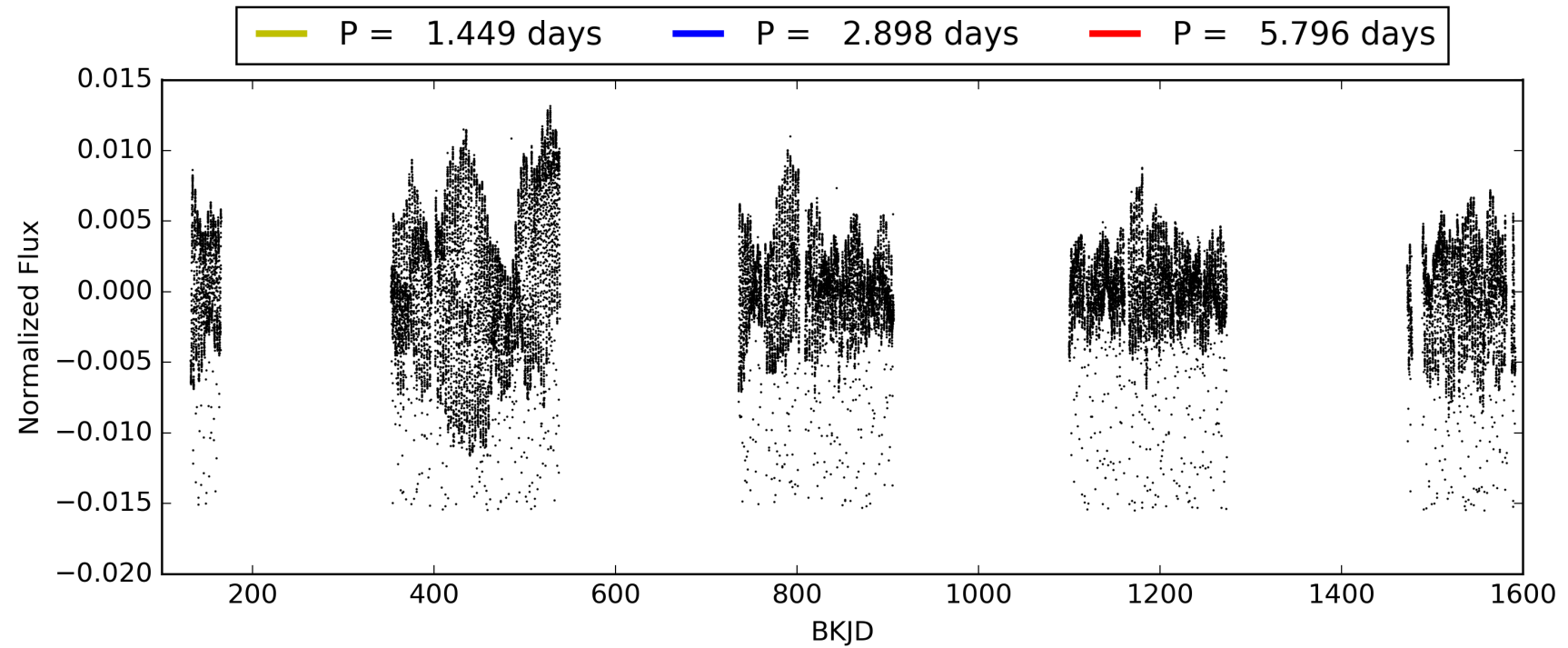
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 09:36:52 Z

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

TCE 008088354-02, PDC Light Curves

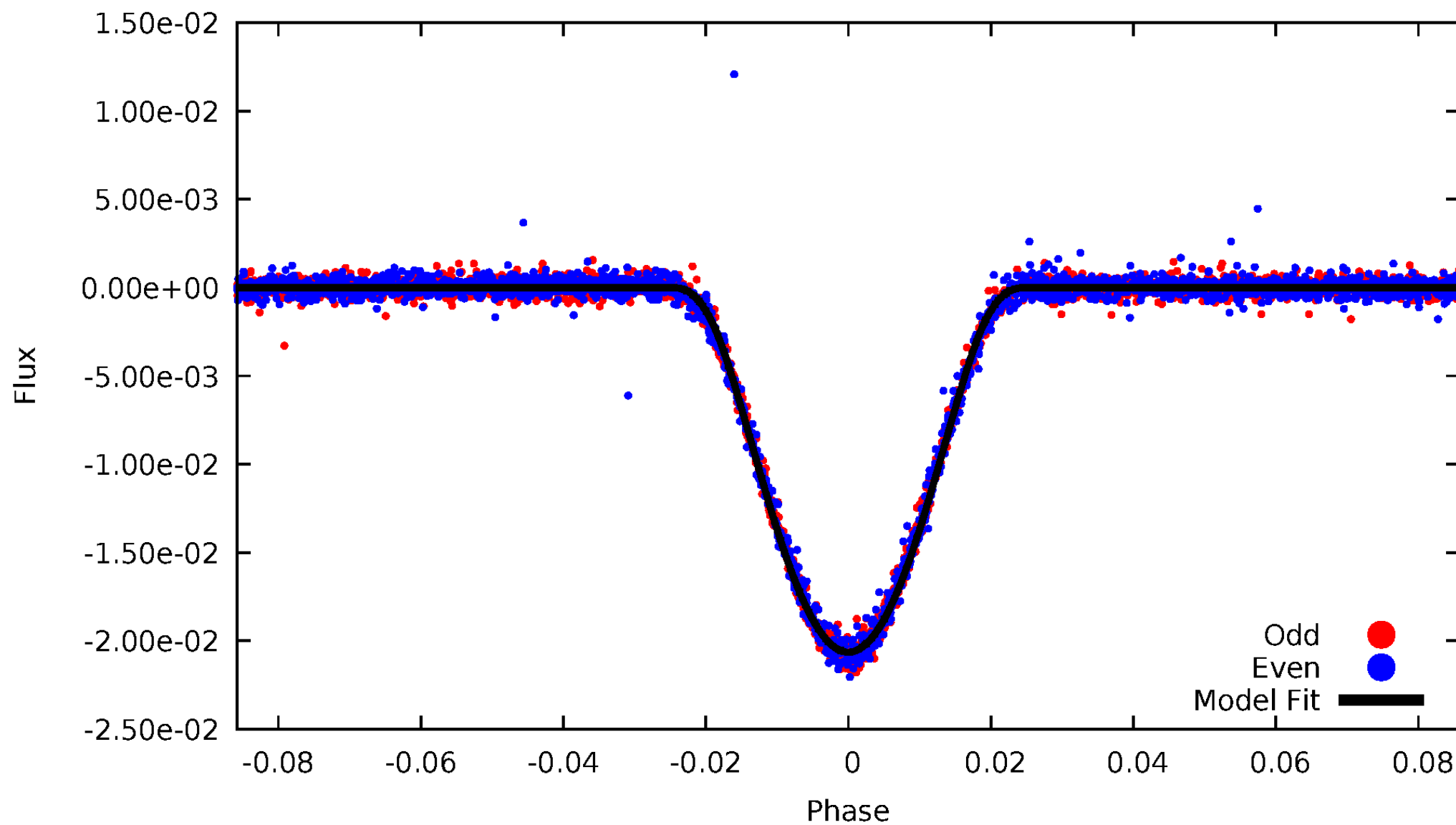


TCE 008088354-02



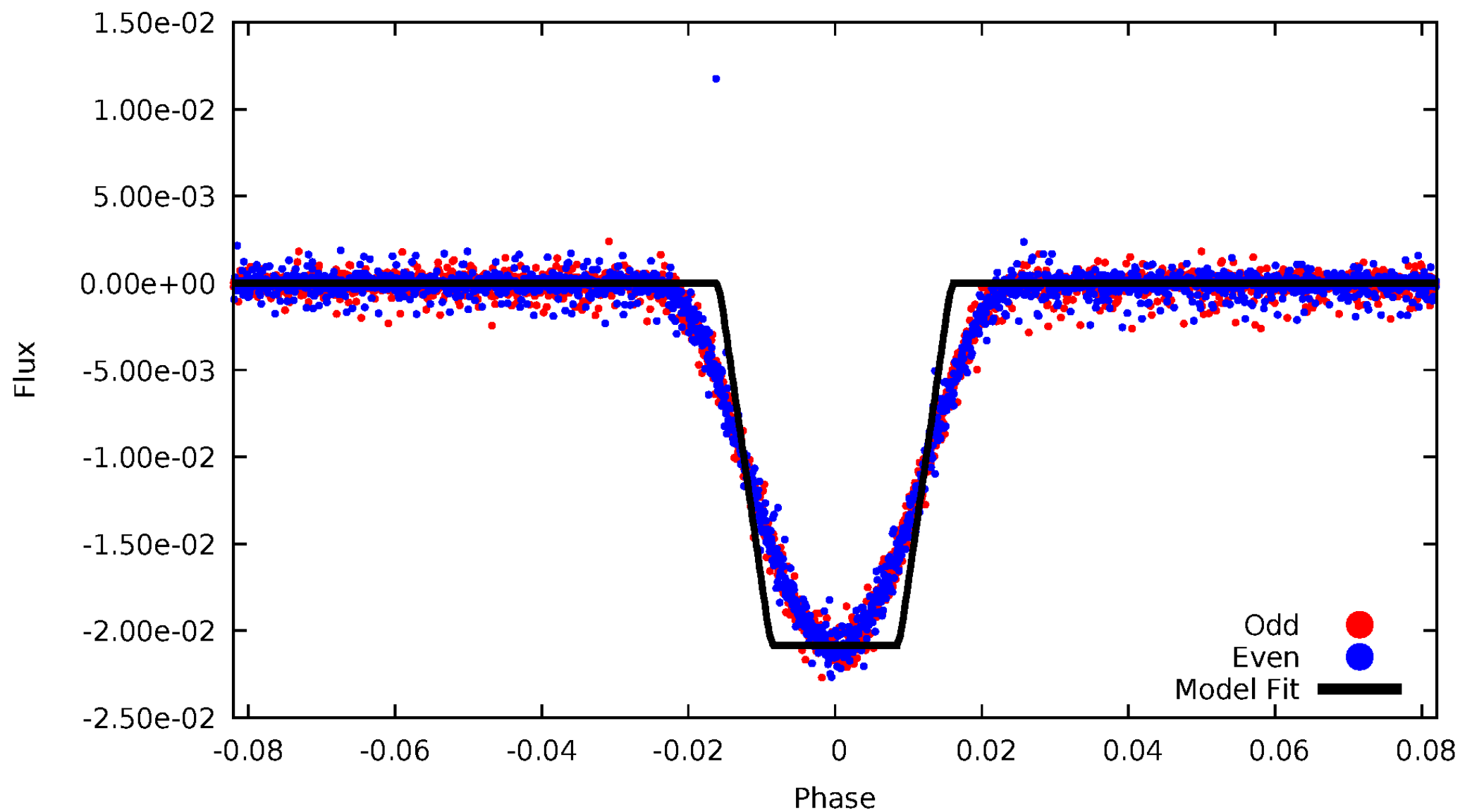
DV Odd/Even

TCE 008088354-02



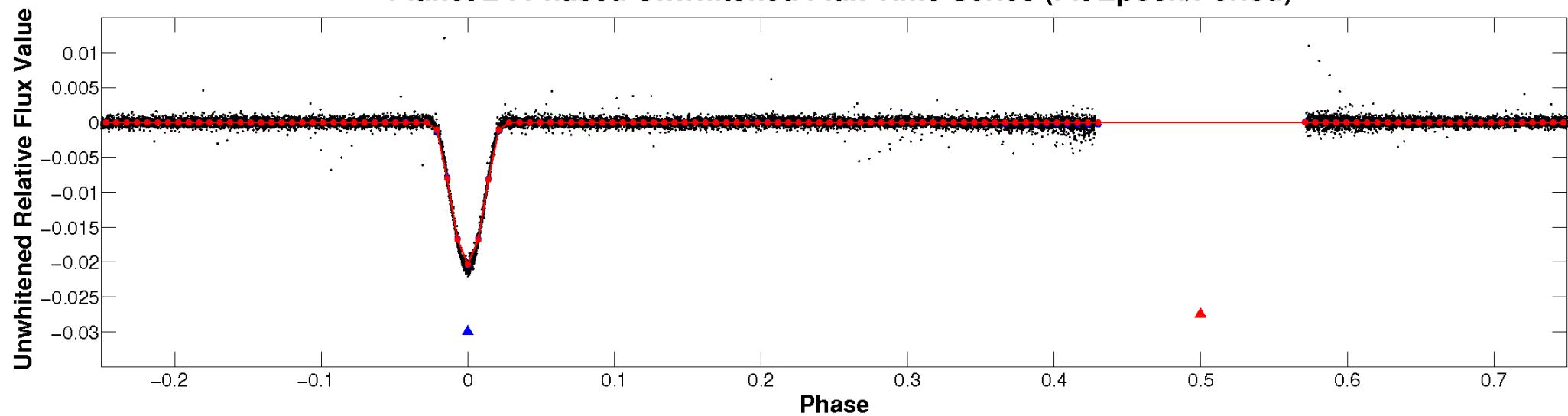
ALT Odd/Even

TCE 008088354-02

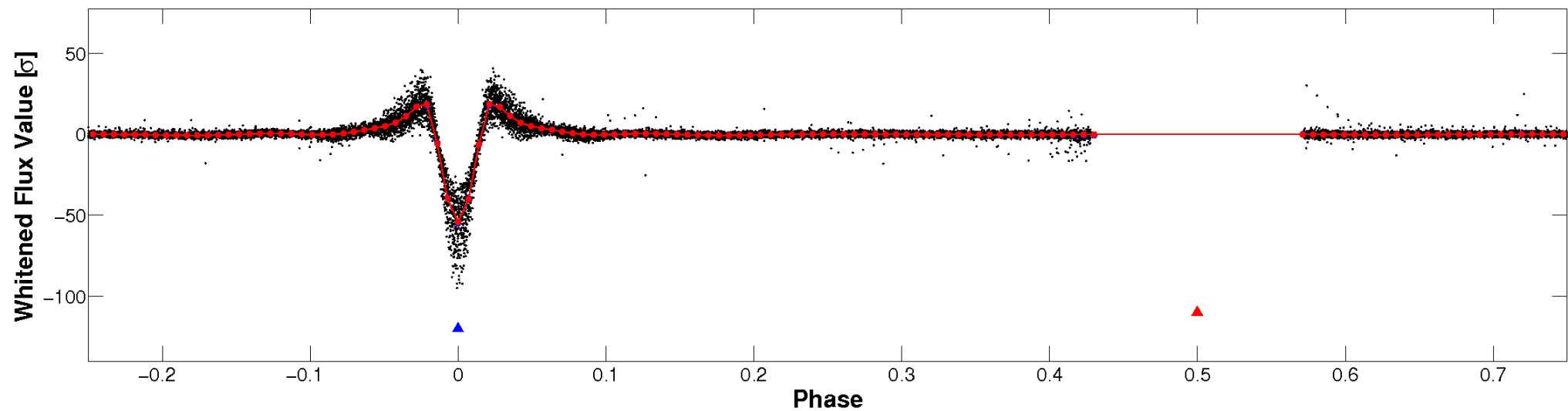


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

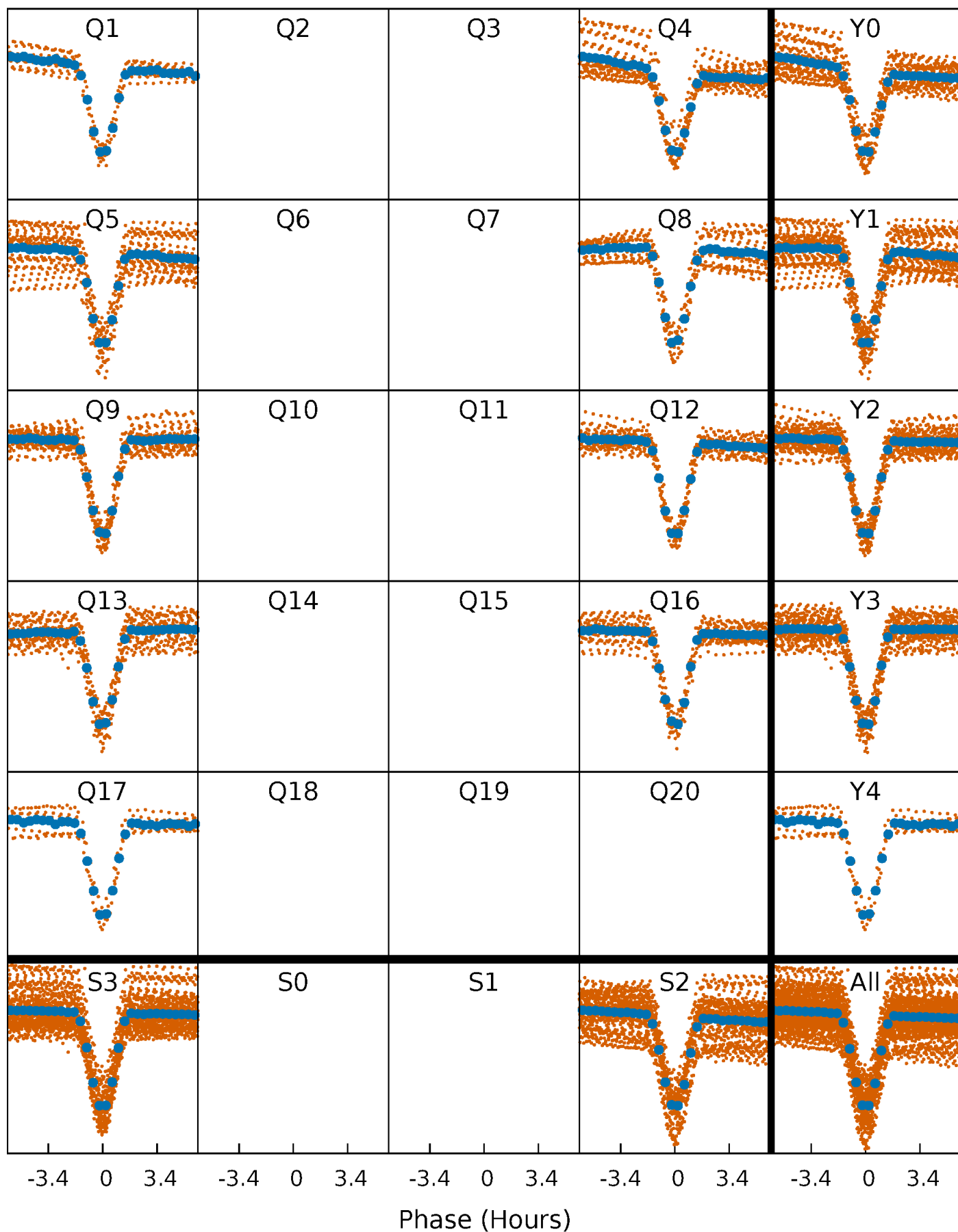


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



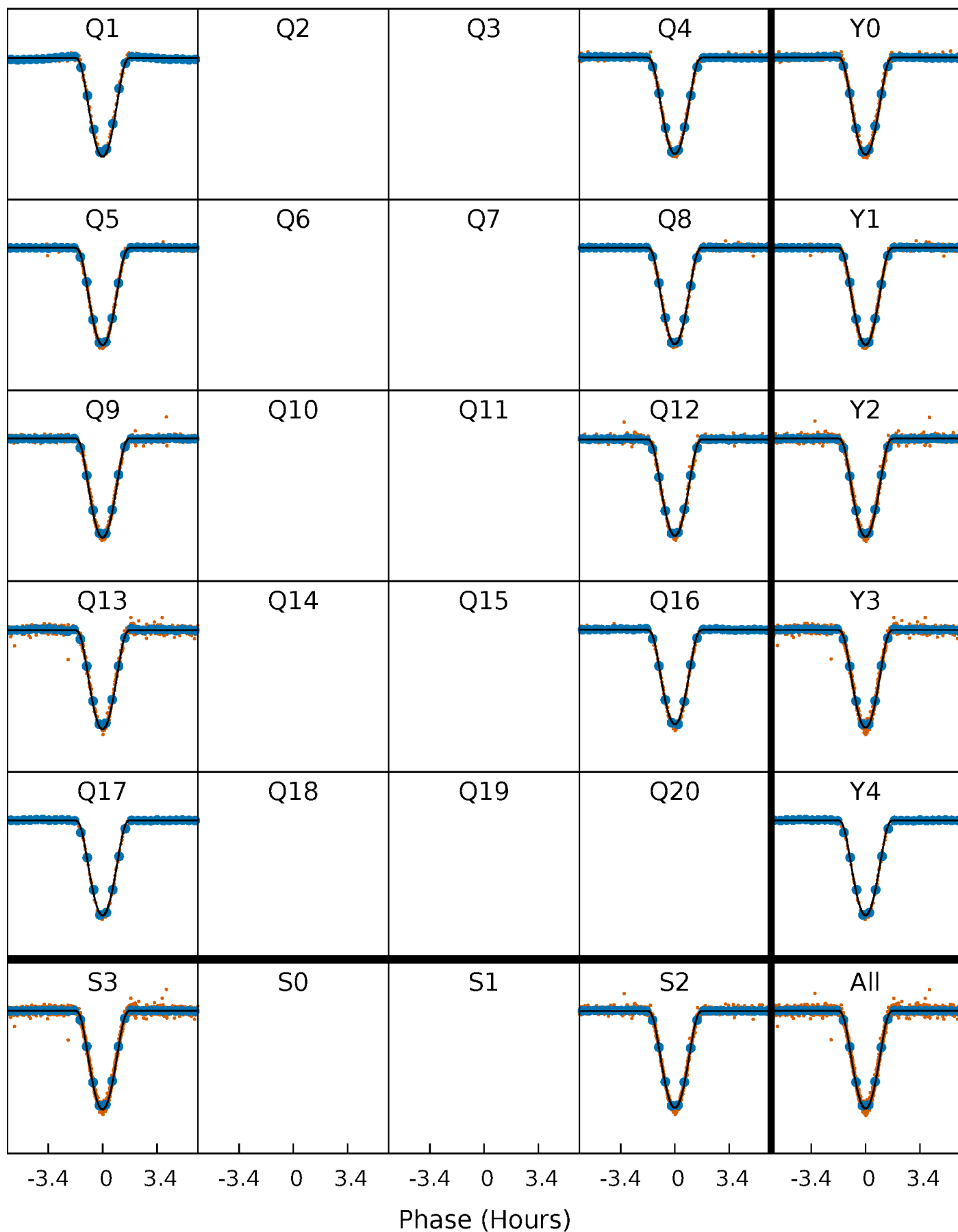
PDC Quarter-Phased Transit Curves

TCE 008088354-02 P= 2.897829 Days $T_0=134.054430$ (BKJD)



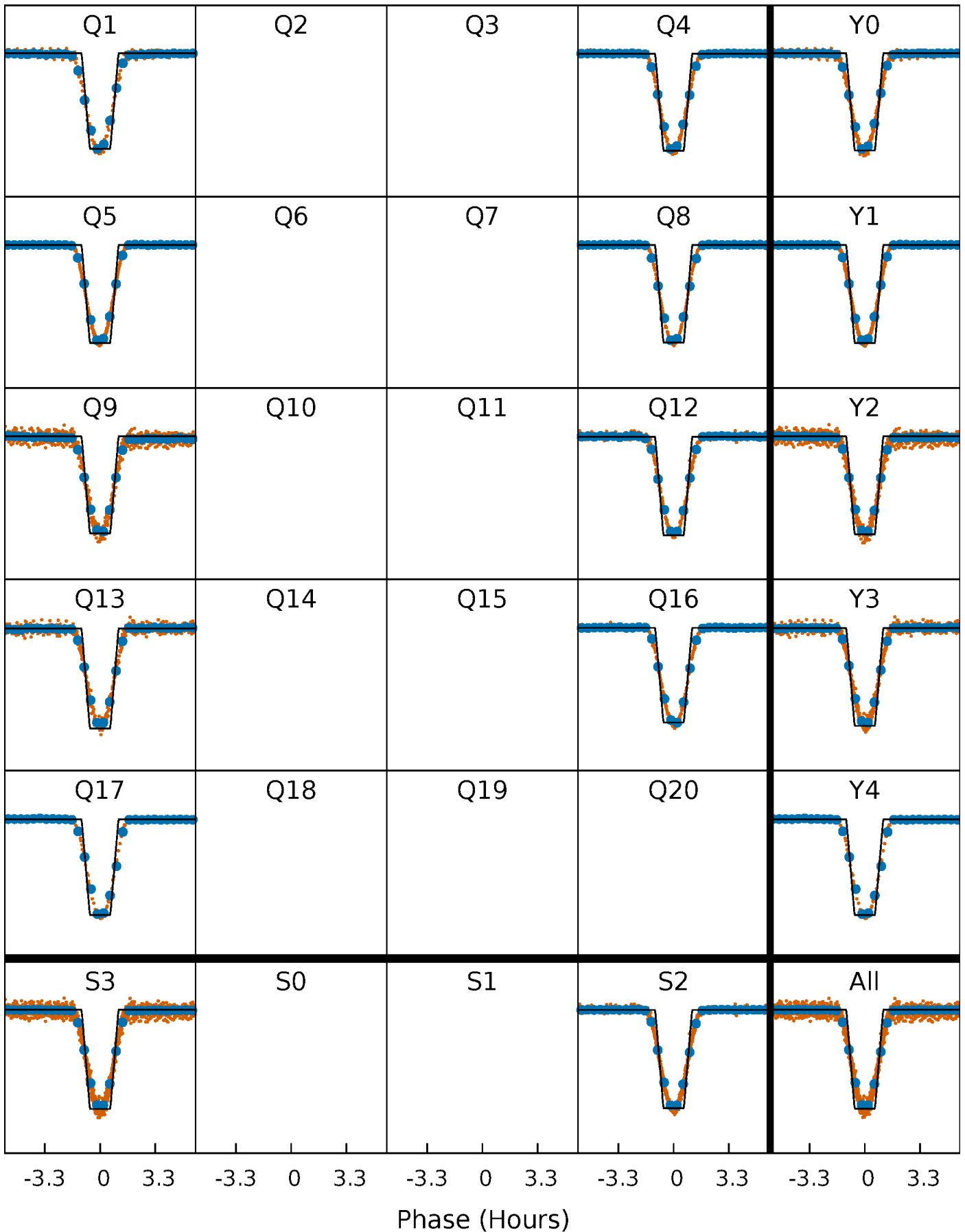
DV Quarter-Phased Transit Curves

TCE 008088354-02 P= 2.897829 Days $T_0=134.054430$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

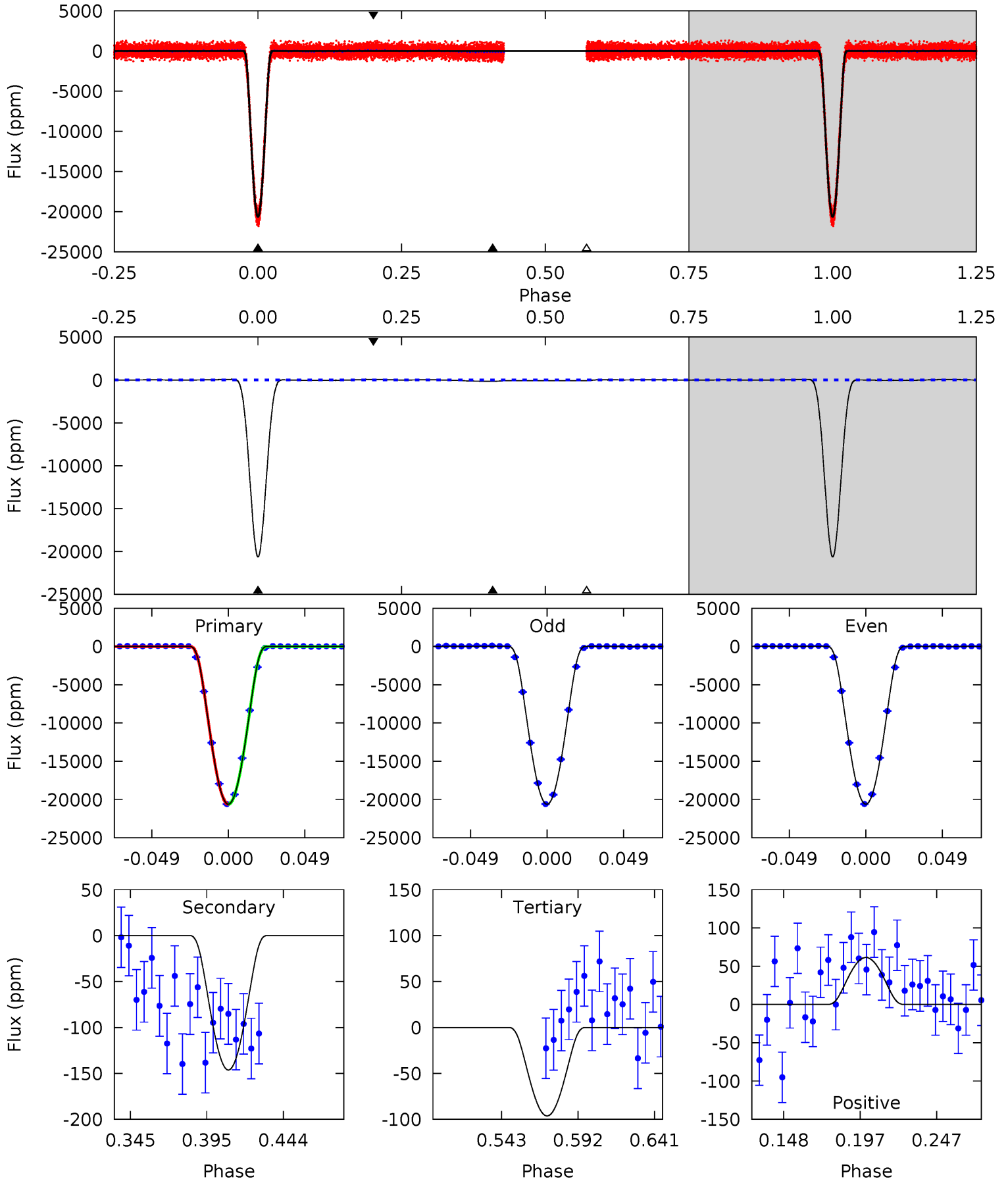
TCE 008088354-02 P= 2.897823 Days $T_0=134.055661$ (BKJD)



DV Model-Shift Uniqueness Test

008088354-02, P = 2.897829 Days, E = 131.156601 Days

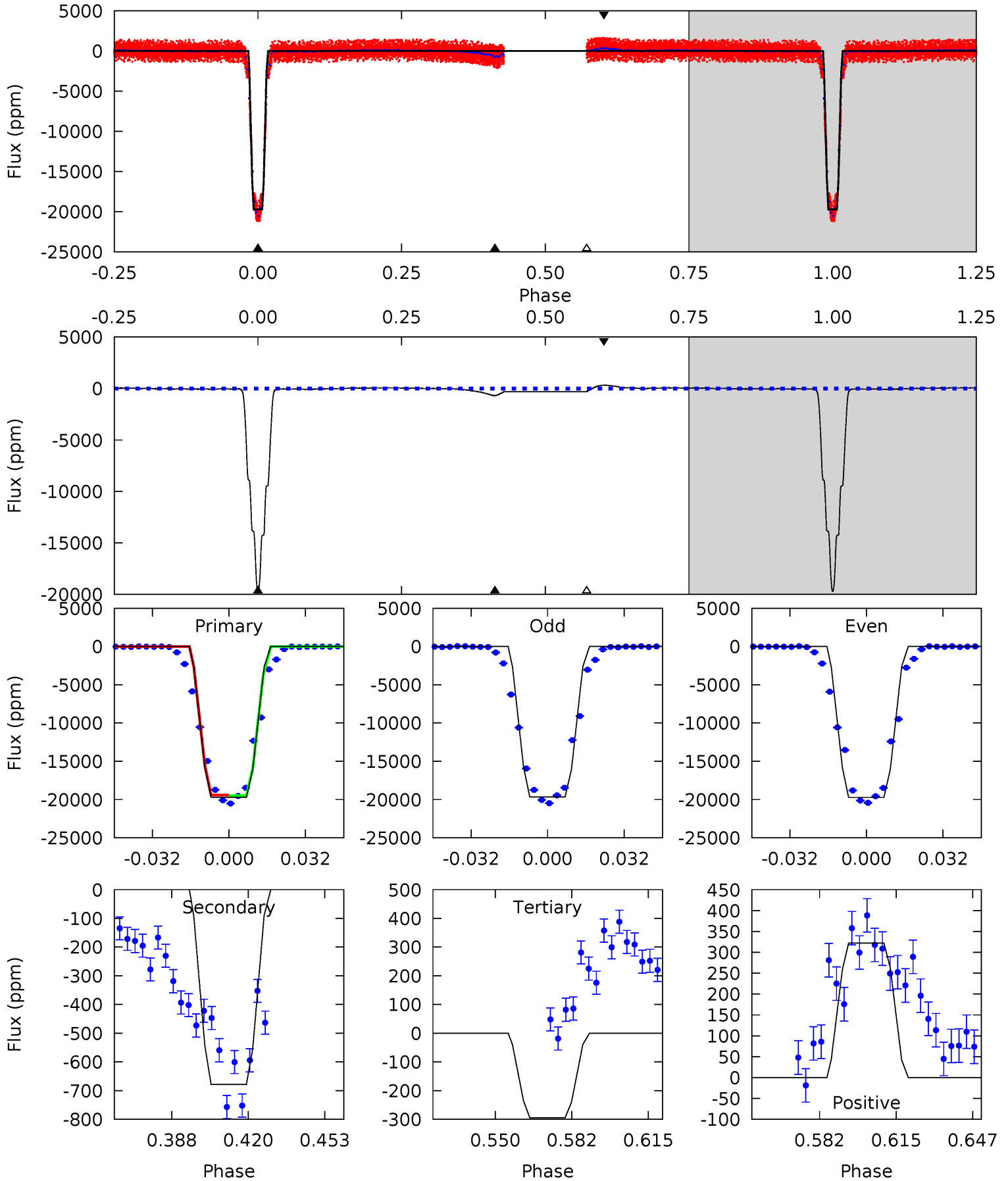
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2221	15.8	10.4	6.62	4.71	1.97	3.24	2211	2215	5.39	9.15	0.23	0.99	0.00	0.44



Alt Model-Shift Uniqueness Test

008088354-02, P = 2.897823 Days, E = 131.157838 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1049	36.1	15.7	17.1	4.80	2.14	4.15	1034	1032	20.4	18.9	1.36	1.00	0.02	1.93



Stellar Parameters For KIC 008088354

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6318^{+199}_{-244}	$4.366^{+0.124}_{-0.186}$	$-0.420^{+0.300}_{-0.300}$	$1.077^{+0.313}_{-0.168}$	$0.980^{+0.145}_{-0.119}$	$1.105^{+0.621}_{-0.542}$
	+3%/-4%	+3%/-4%	+71%/-71%	+29%/-16%	+15%/-12%	+56%/-49%
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 008088354-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-146 ± 9	$27.05^{+4.26}_{-2.73}$	2041^{+143}_{-125}	-2273^{+136}_{-152}	$0.172^{+0.040}_{-0.041}$
Alt.	-678 ± 19	$17.24^{+2.89}_{-2.07}$	2039^{+156}_{-124}	3165^{+103}_{-106}	$1.955^{+0.550}_{-0.503}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

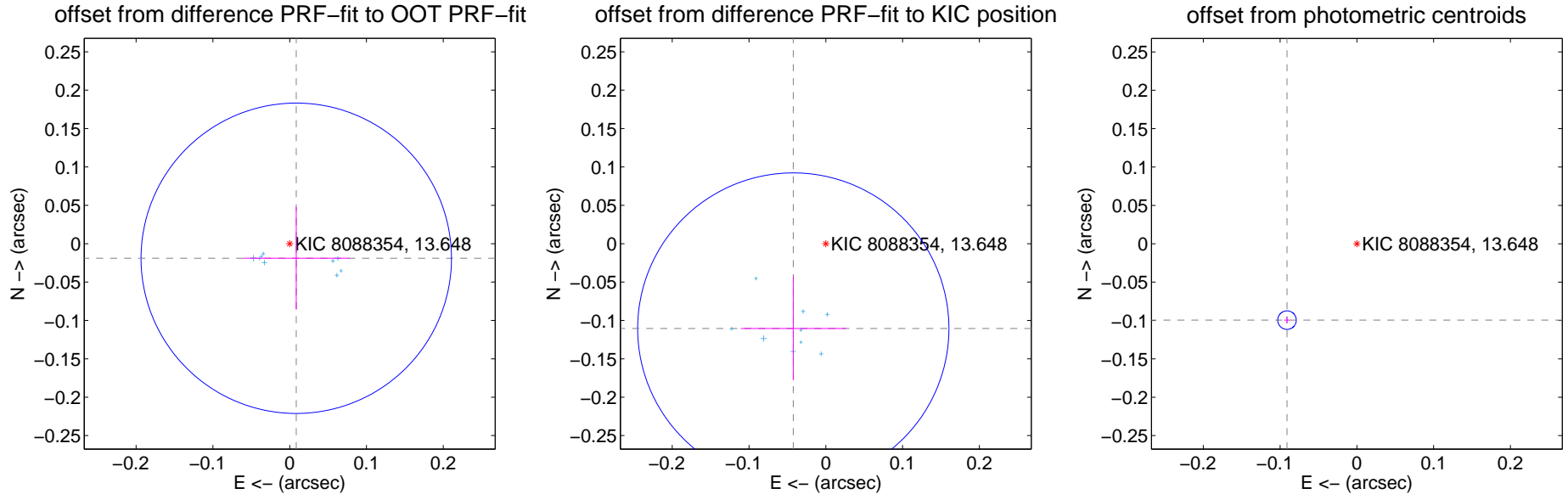
DV Centroid Data

Supplemental centroid analysis for 008088354-02. Kepler magnitude: 13.65. Transit SNR 1244.29

There are 9 quarters with good PRF difference image offsets

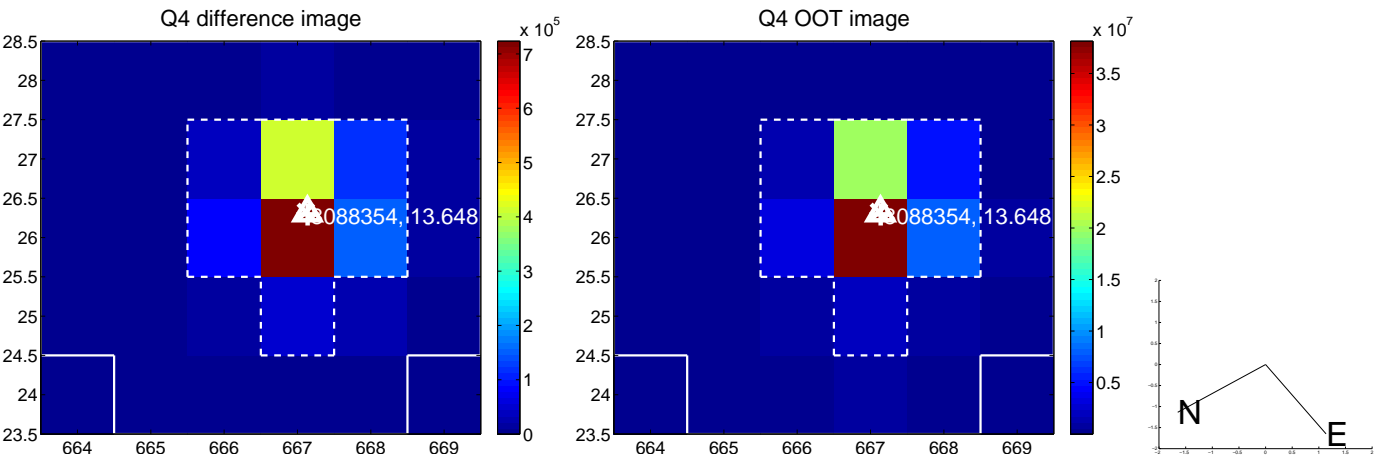
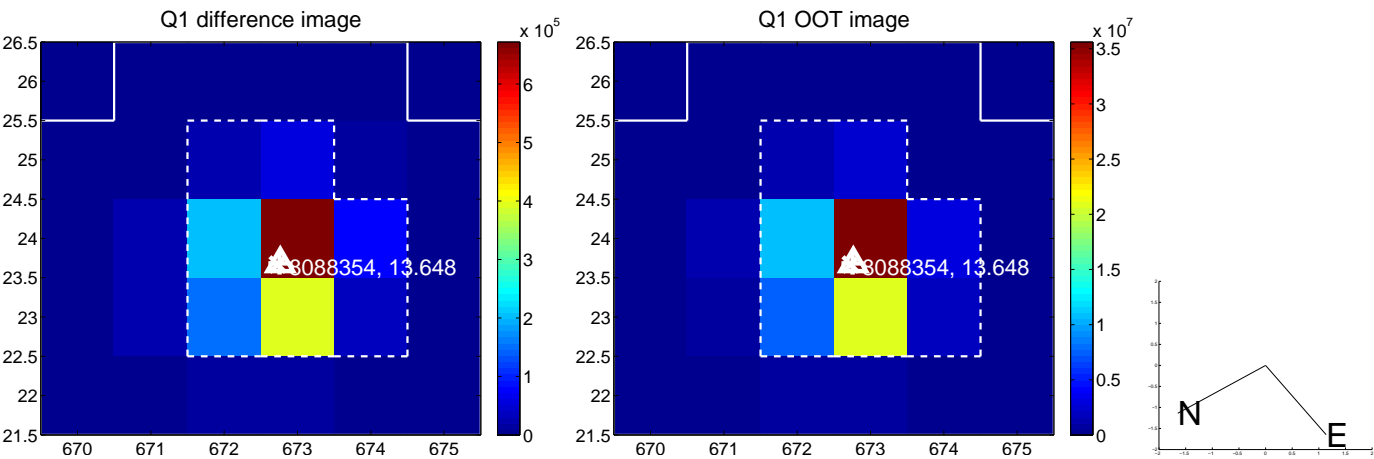
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.021 ± 0.067	0.31	-0.009 ± 0.069	-0.019 ± 0.067
PRF-fit source offset from KIC position	0.118 ± 0.068	1.75	0.042 ± 0.068	-0.110 ± 0.067
photometric centroid source offset	0.13 ± 0.00	33.52	0.09 ± 0.00	-0.10 ± 0.00

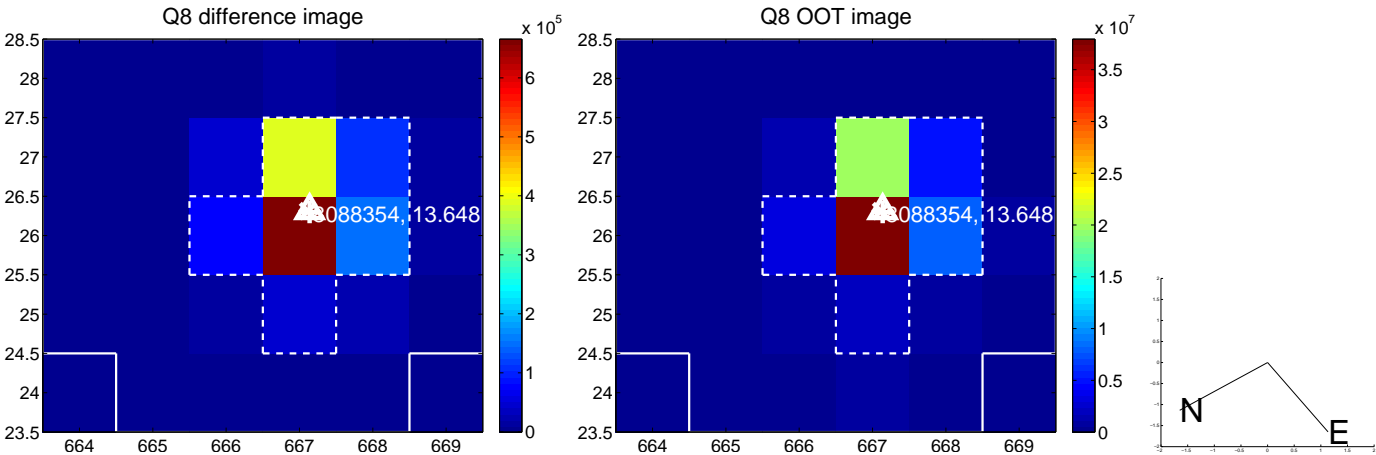
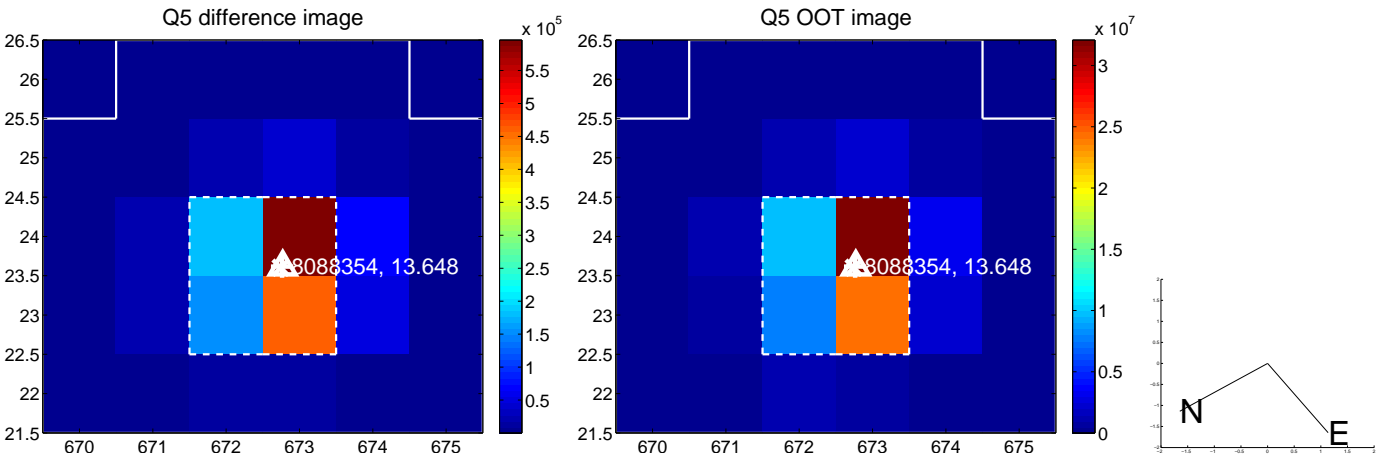


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

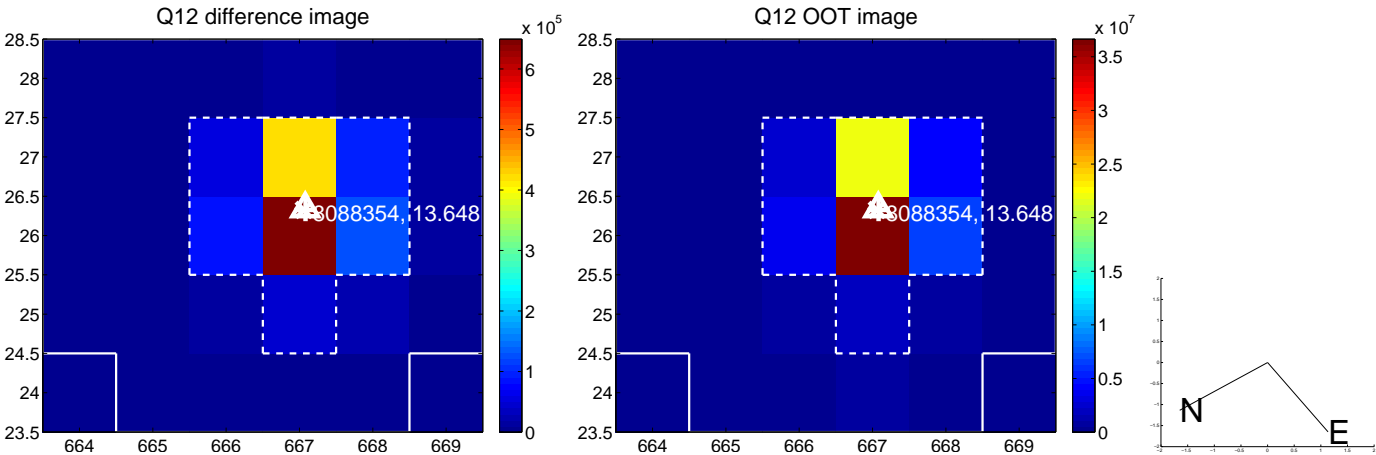
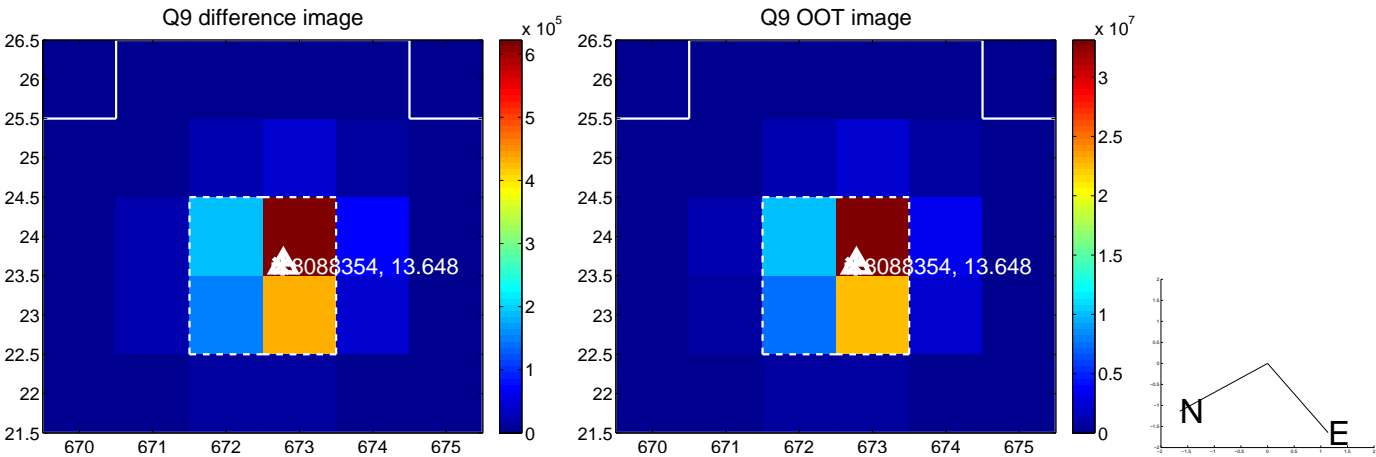
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



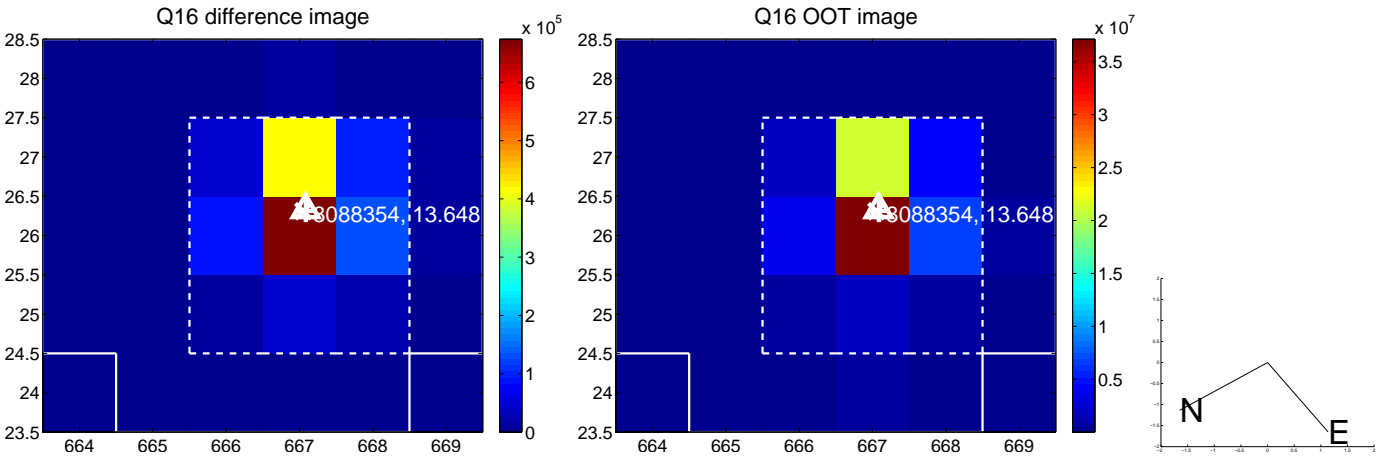
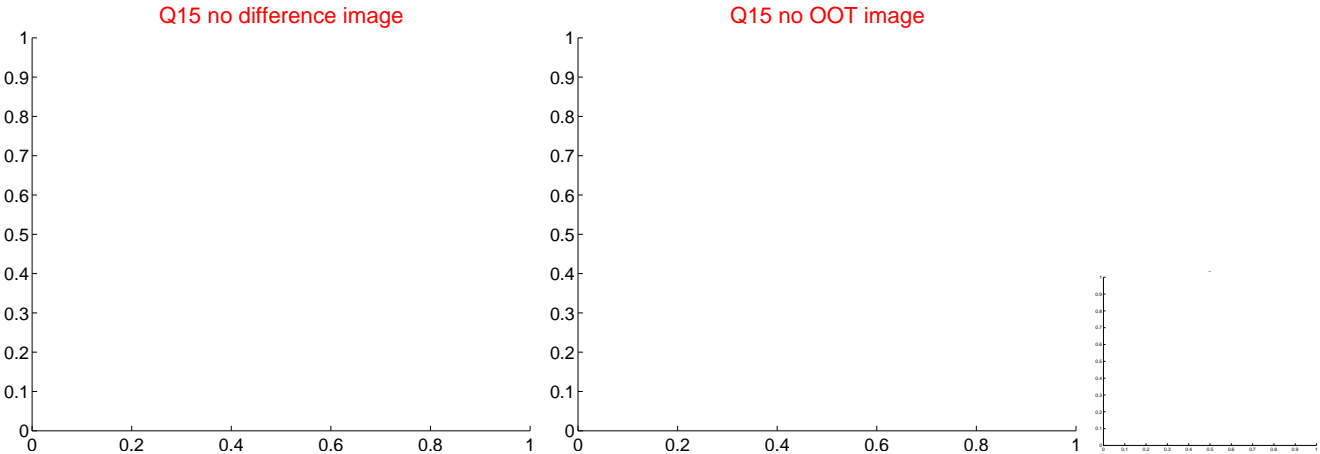
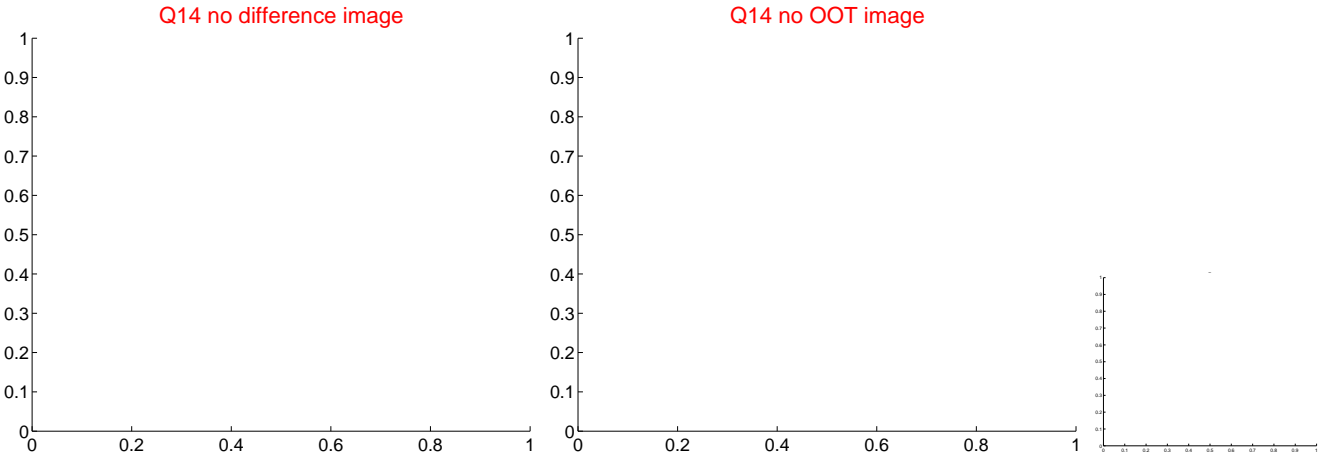
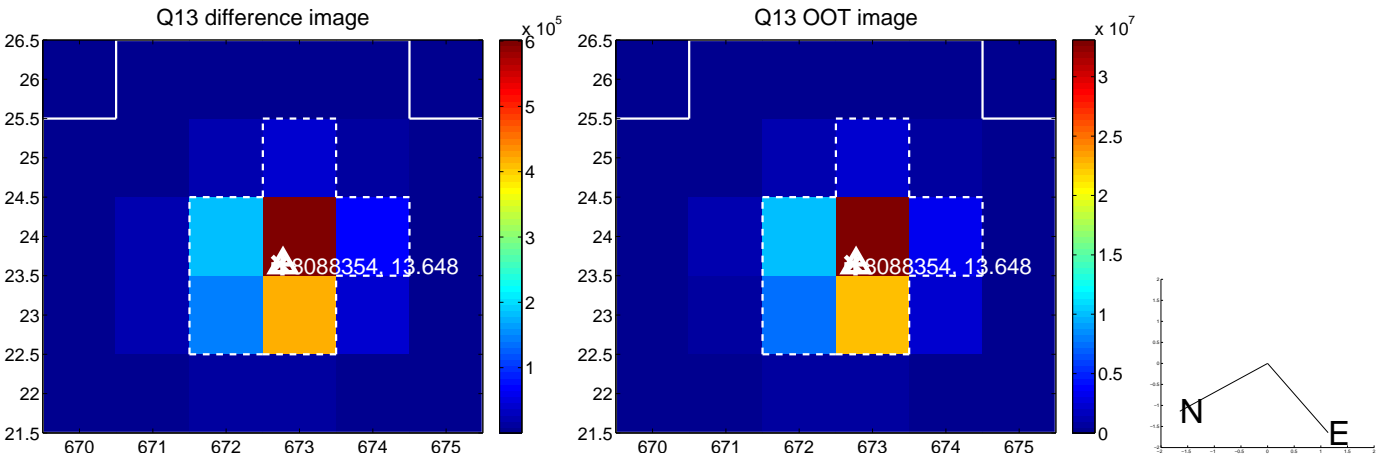
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



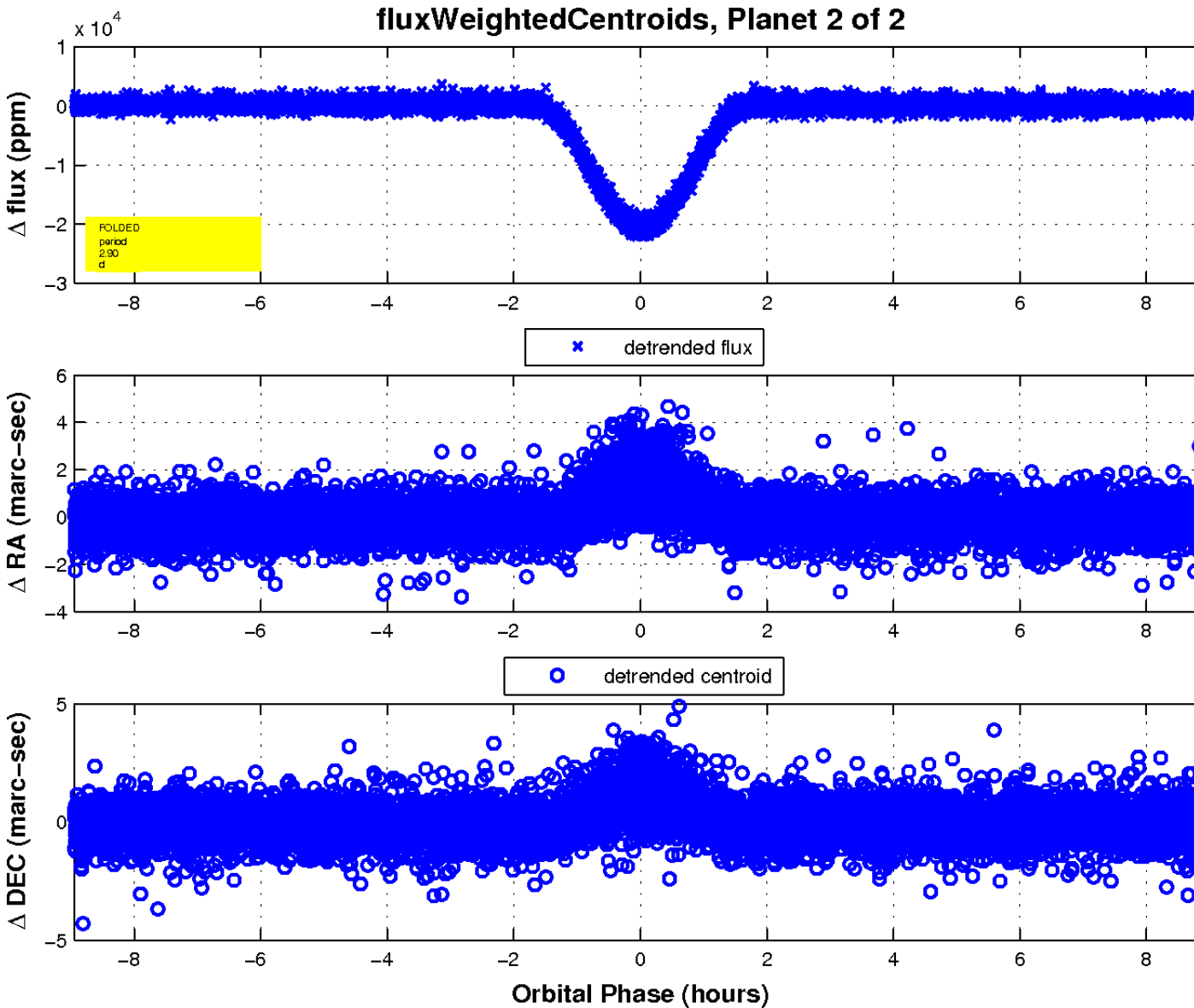
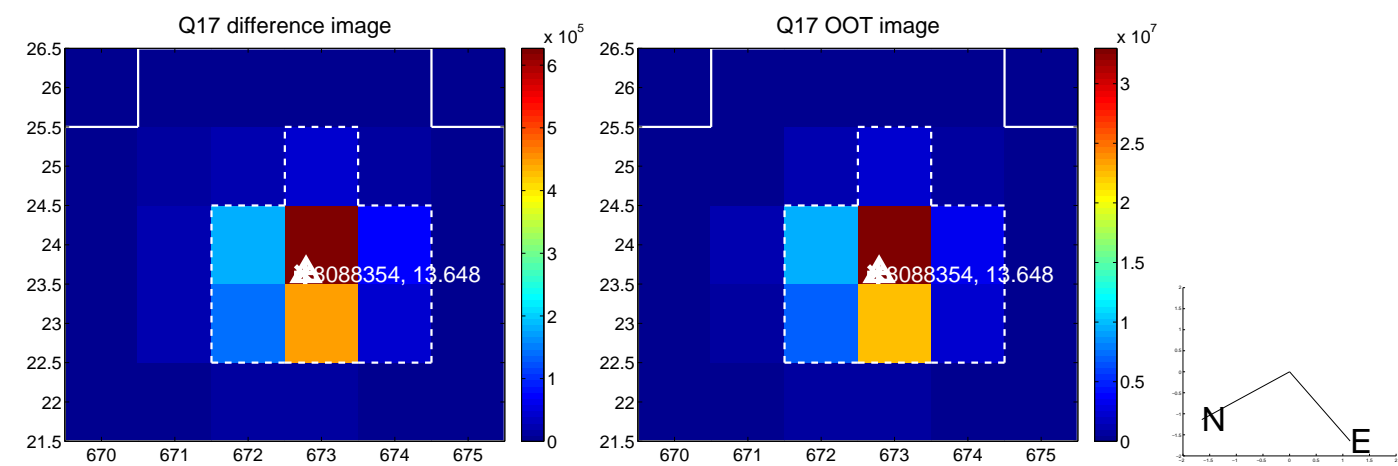
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UKIRT Image

