

KIC 008047283

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})
008047283-01	OBS	3760.01	0.775440	131.689710	9348.8	1.663	681.1	301.9	0.86	5861	10.26	2978.94
008047283-02	OBS	No	0.775428	132.082952	1415.1	1.076	305.3	69.3	0.86	5861	4.75	2979.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008047283-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—CENT_RESOLVED_OFFSET
008047283-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET

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.

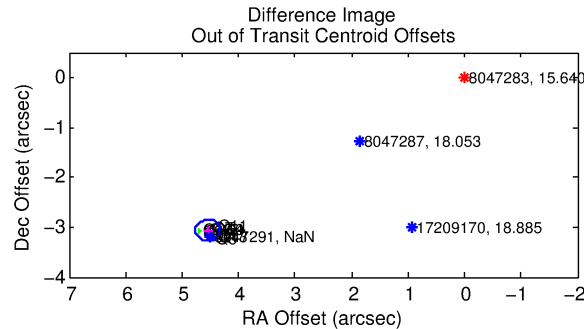
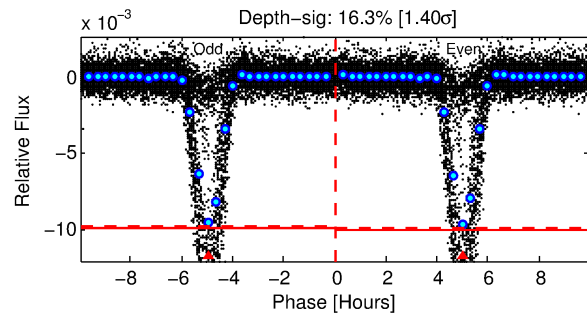
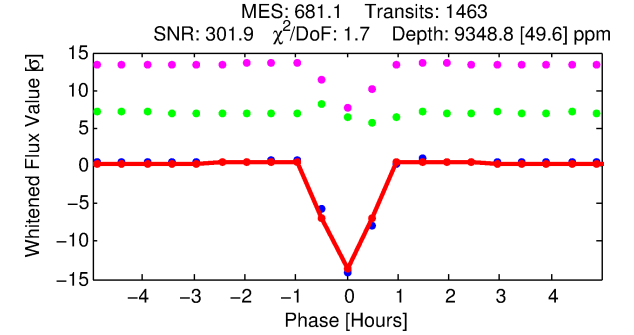
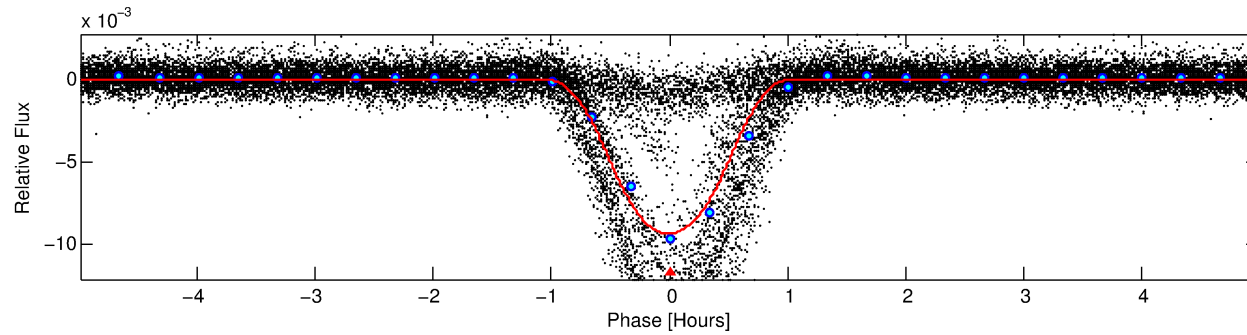
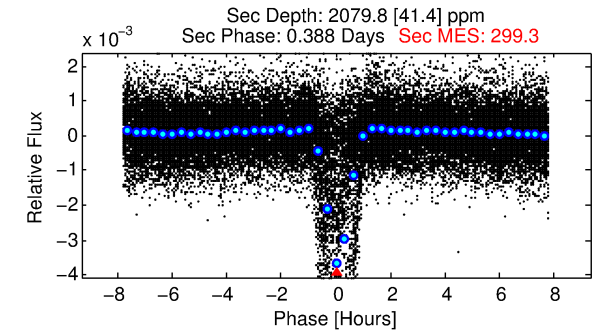
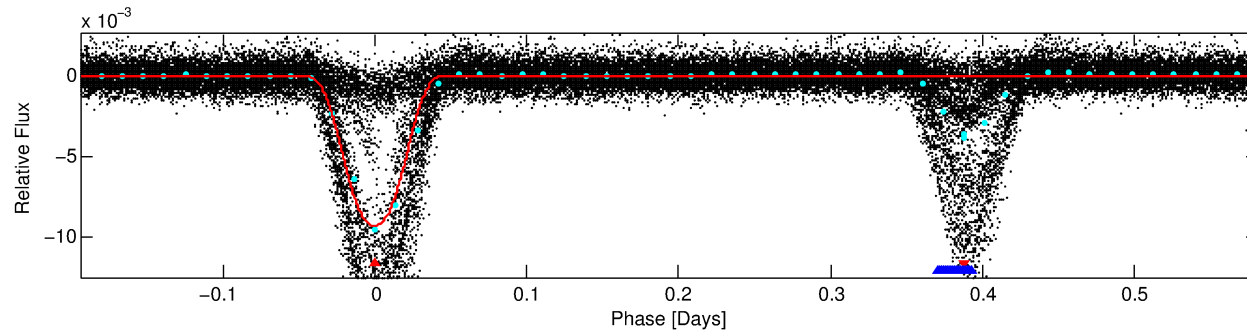
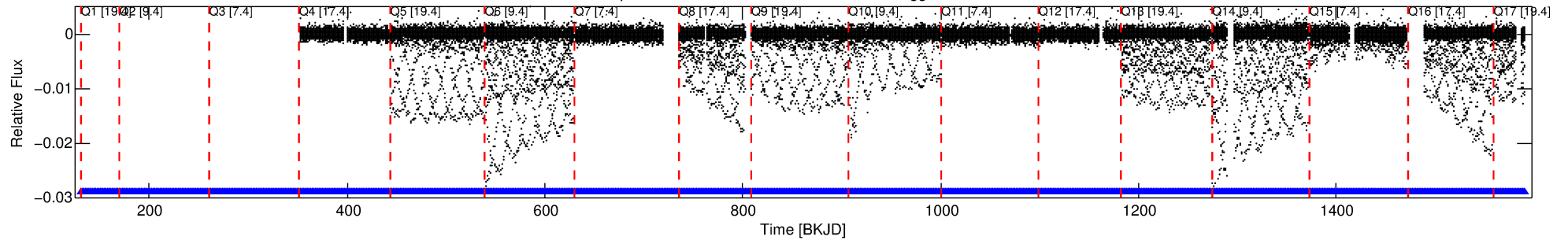
Ephemeris Match Information For 008047283-01

No Significant Match Found

DV One-Page Summary

KIC: 8047283 Candidate: 1 of 2 Period: 0.775 d
KOI: K03760 Corr: No Ephemeris Match

Kp: 15.64 R*: 0.86 Rs Teff: 5861.0 K Logg: 4.55 Fe/H: -0.200



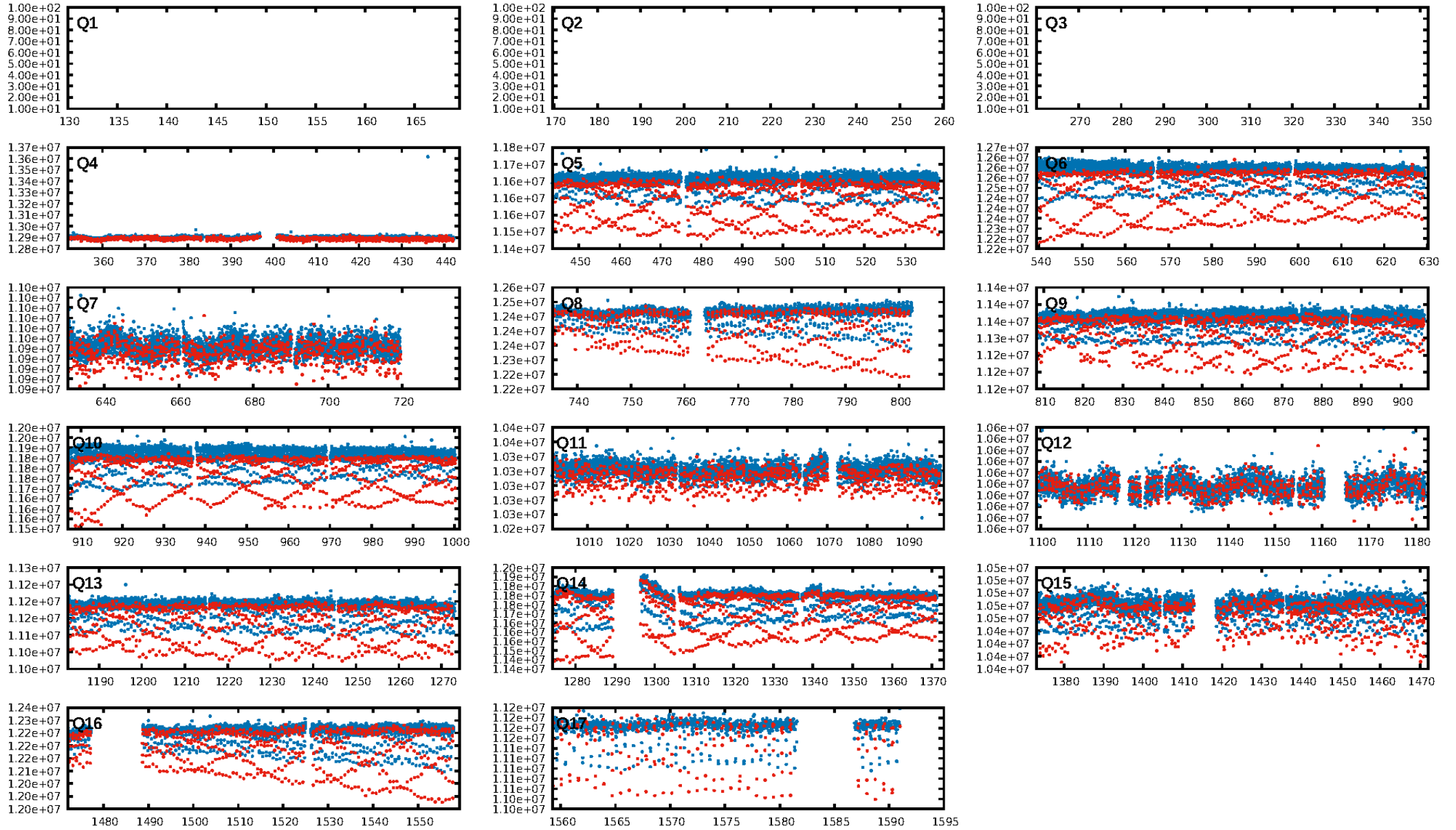
DV Fit Results:

Period = 0.77544 [0.00000] d
Epoch = 131.6897 [0.0000] BKJD
Rp/R* = 0.1087 [0.0016]
a/R* = 2.51 [0.02]
b = 0.90 [0.01]
Seff = 2978.94 [1232.82]
Teff = 1884 [195] K
Rp = 10.26 [3.25] Re
a = 0.0163 [0.0044] AU
Ag = 2.89 [1.13] [1.67σ]
Teffp = 3797 [138] K [8.02σ]

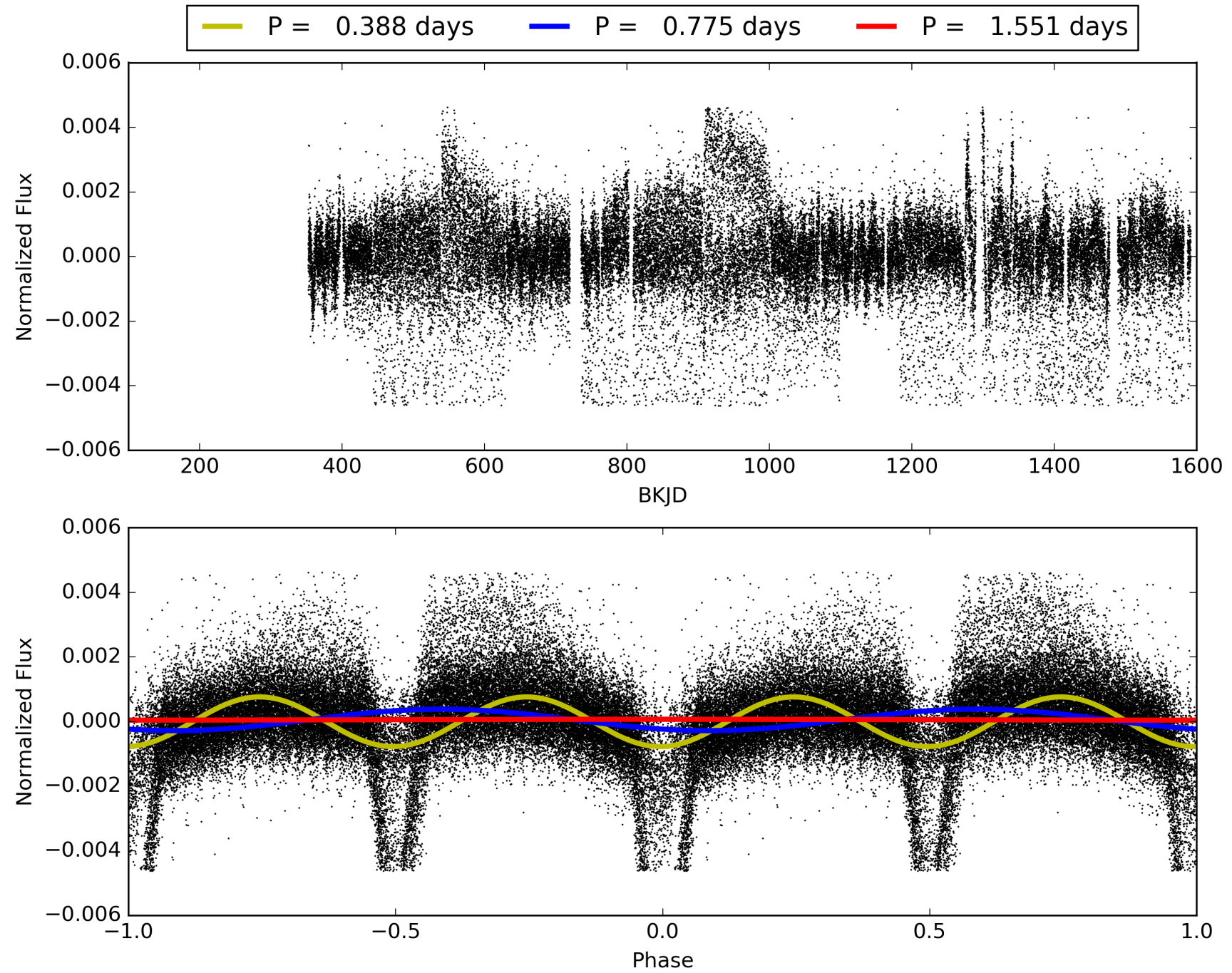
DV Diagnostic Results:

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 [1429/1429]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 5.482 arcsec [76.26σ]
KicOffset-rm: 5.673 arcsec [81.76σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 008047283-01, PDC Light Curves

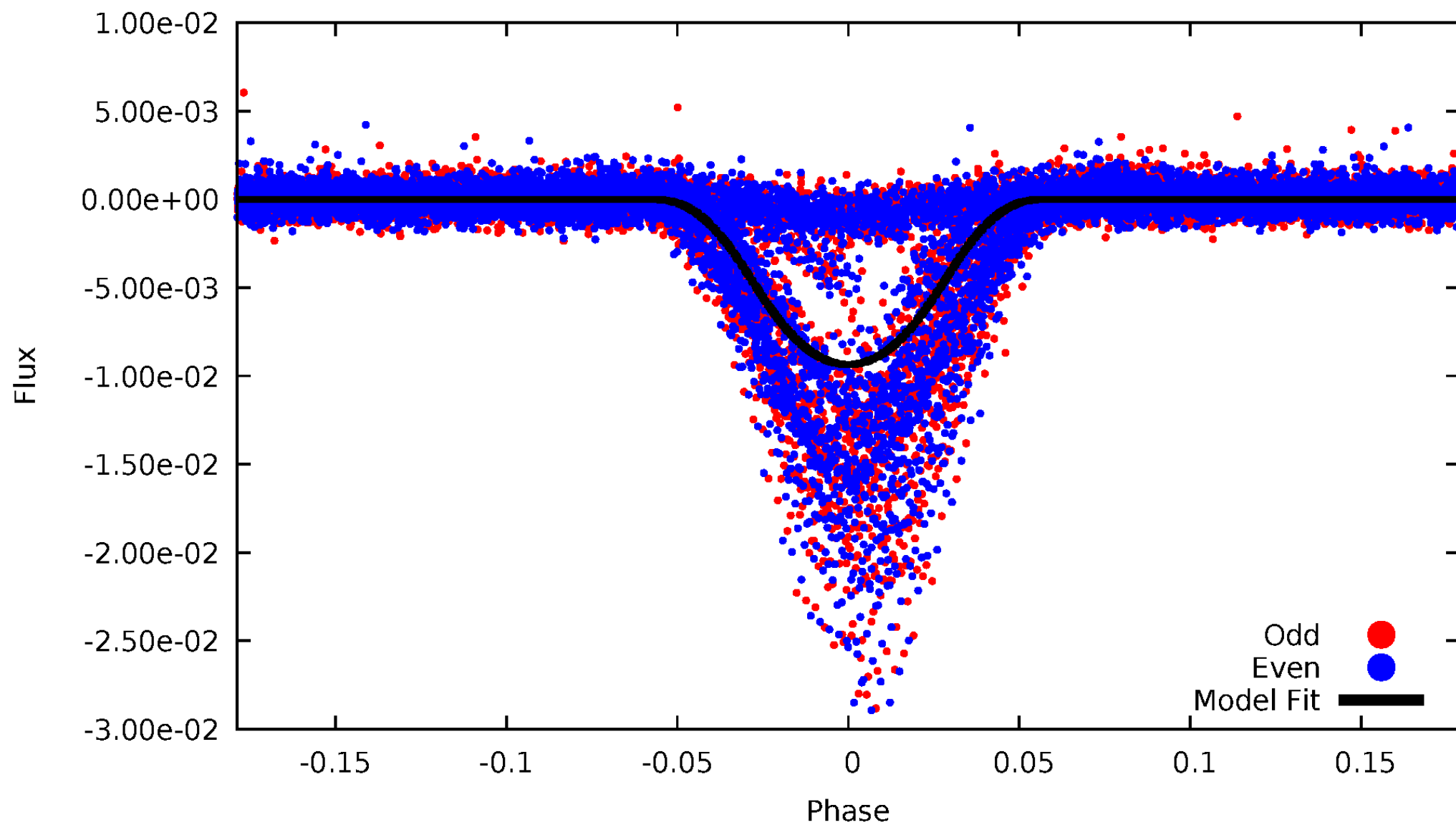


TCE 008047283-01



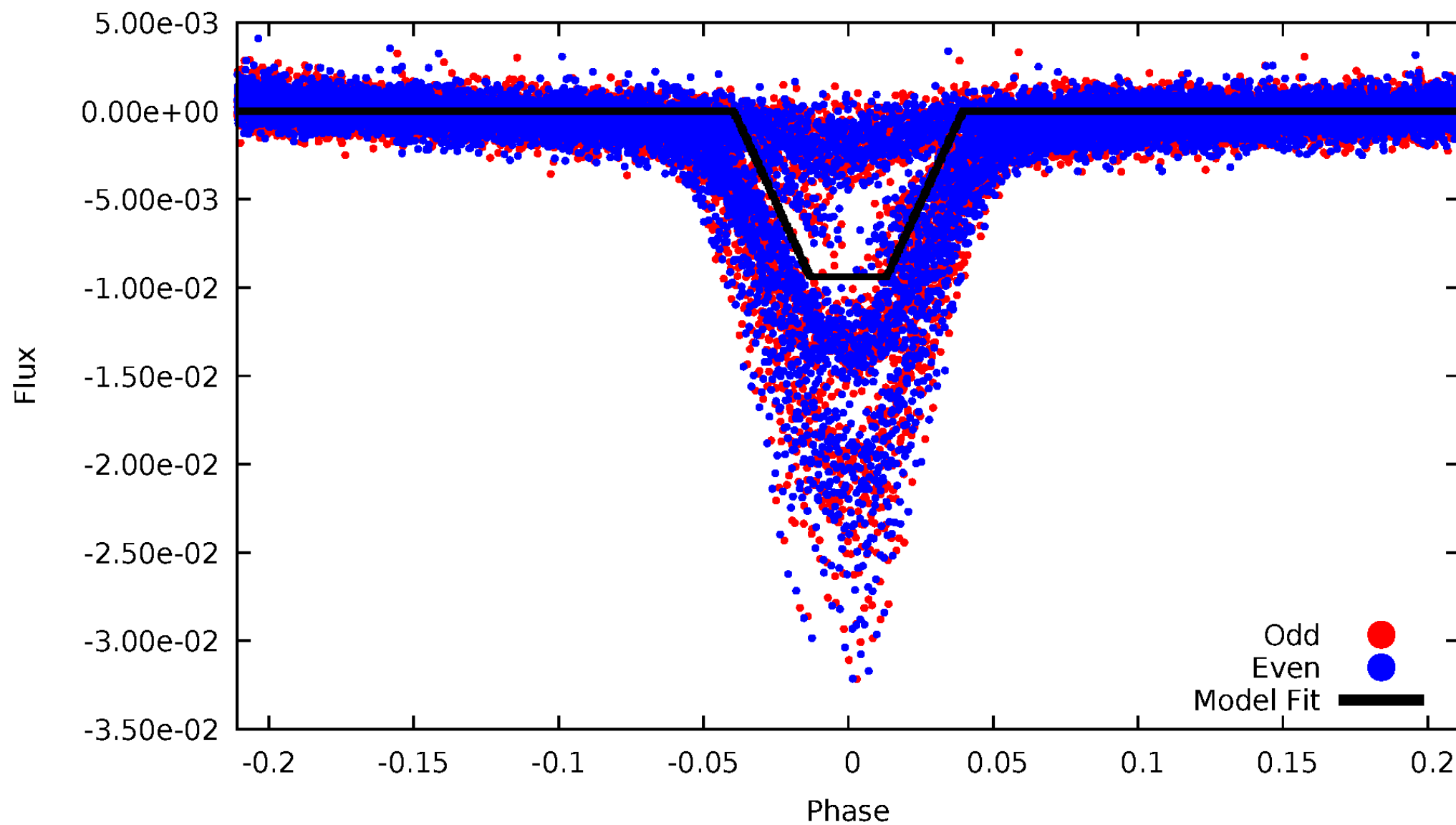
DV Odd/Even

TCE 008047283-01



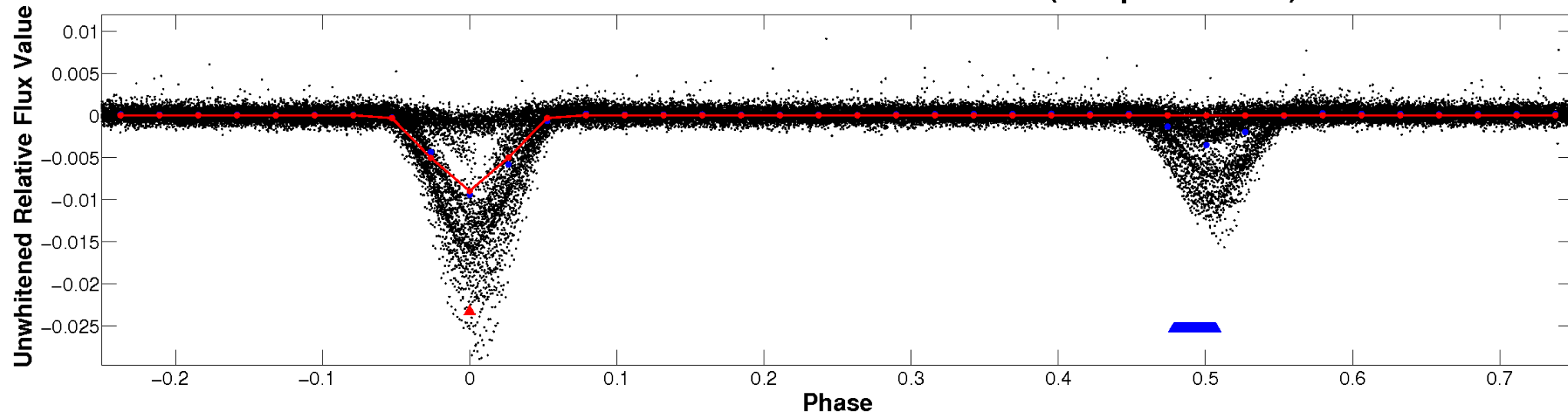
ALT Odd/Even

TCE 008047283-01

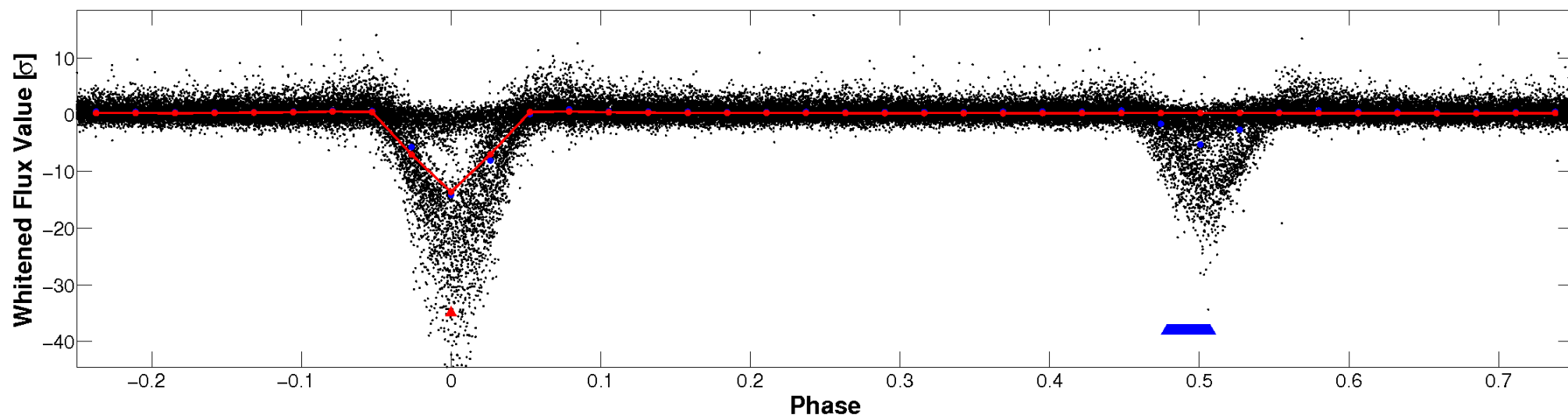


Non-Whitened Vs. Whitened Light Curve

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

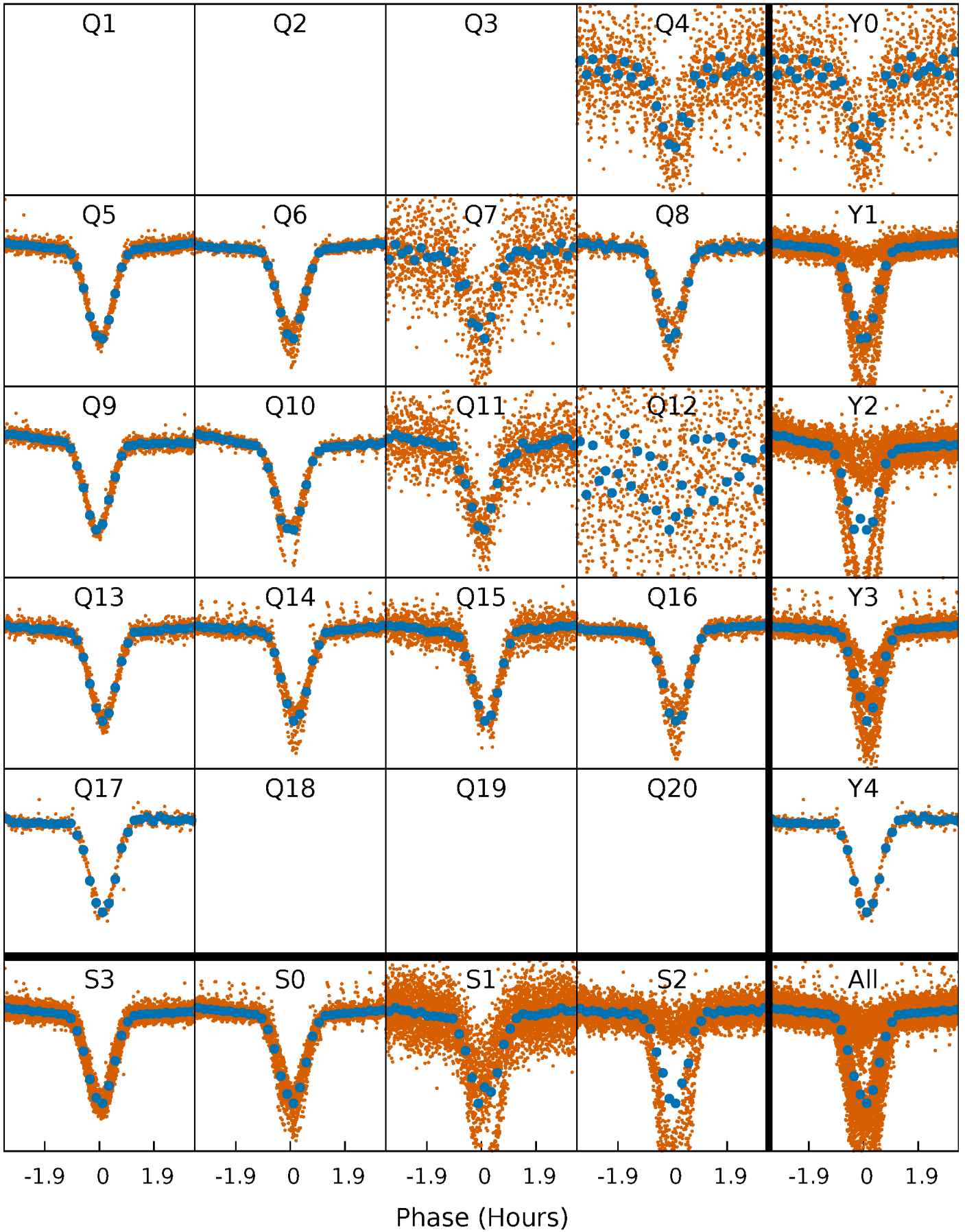


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



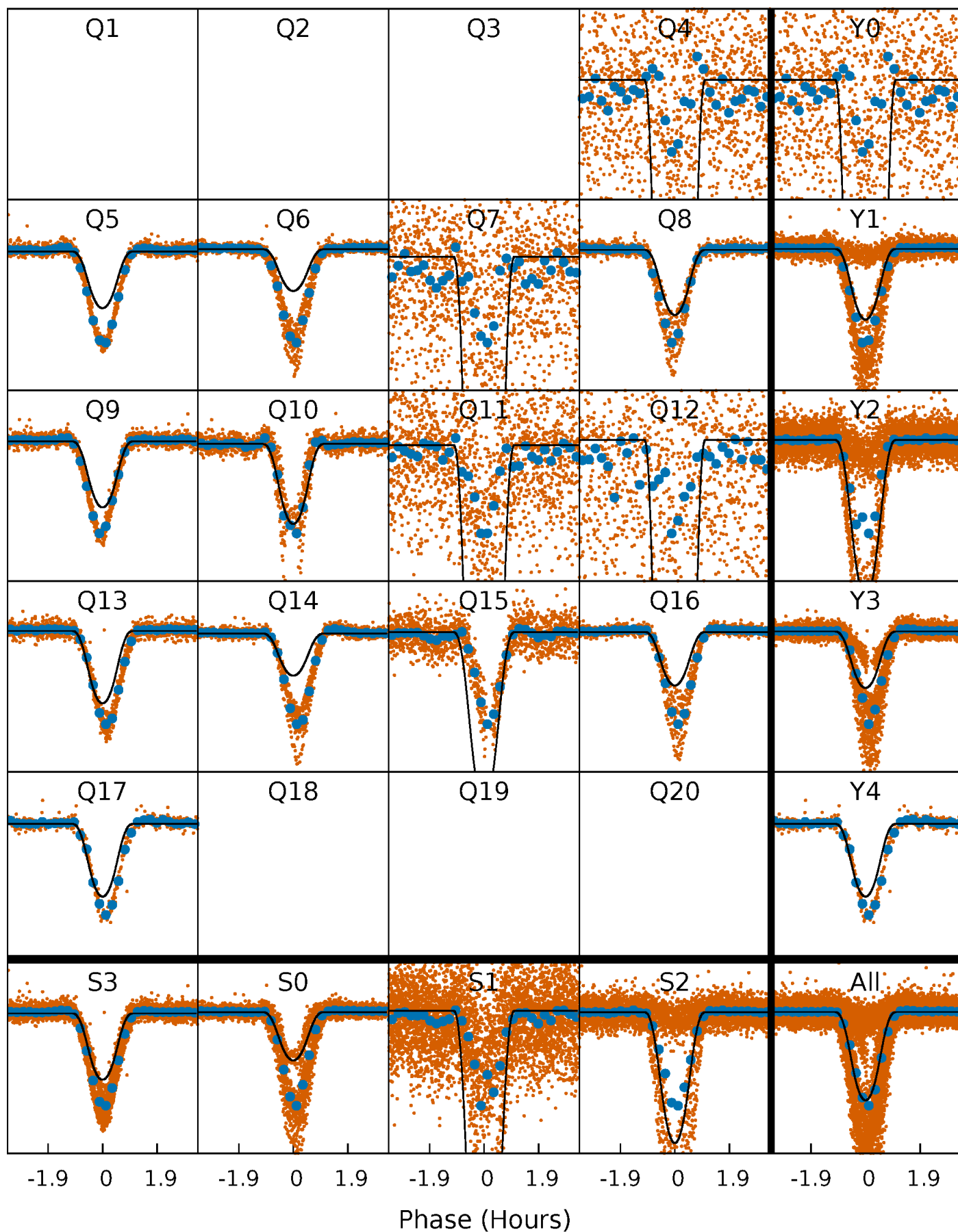
PDC Quarter-Phased Transit Curves

TCE 008047283-01 P= 0.775440 Days $T_0=131.689710$ (BKJD)



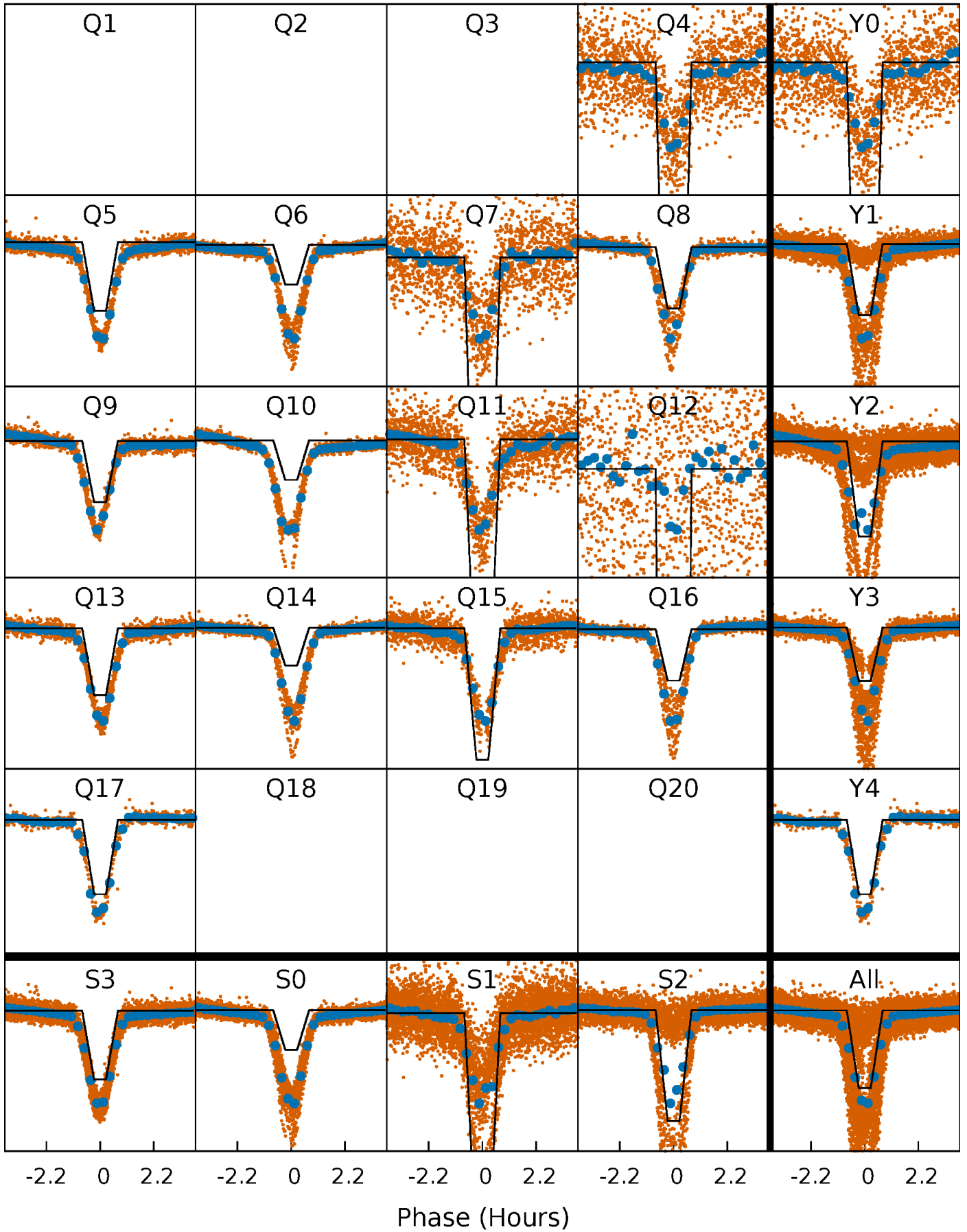
DV Quarter-Phased Transit Curves

TCE 008047283-01 P= 0.775440 Days $T_0=131.689710$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

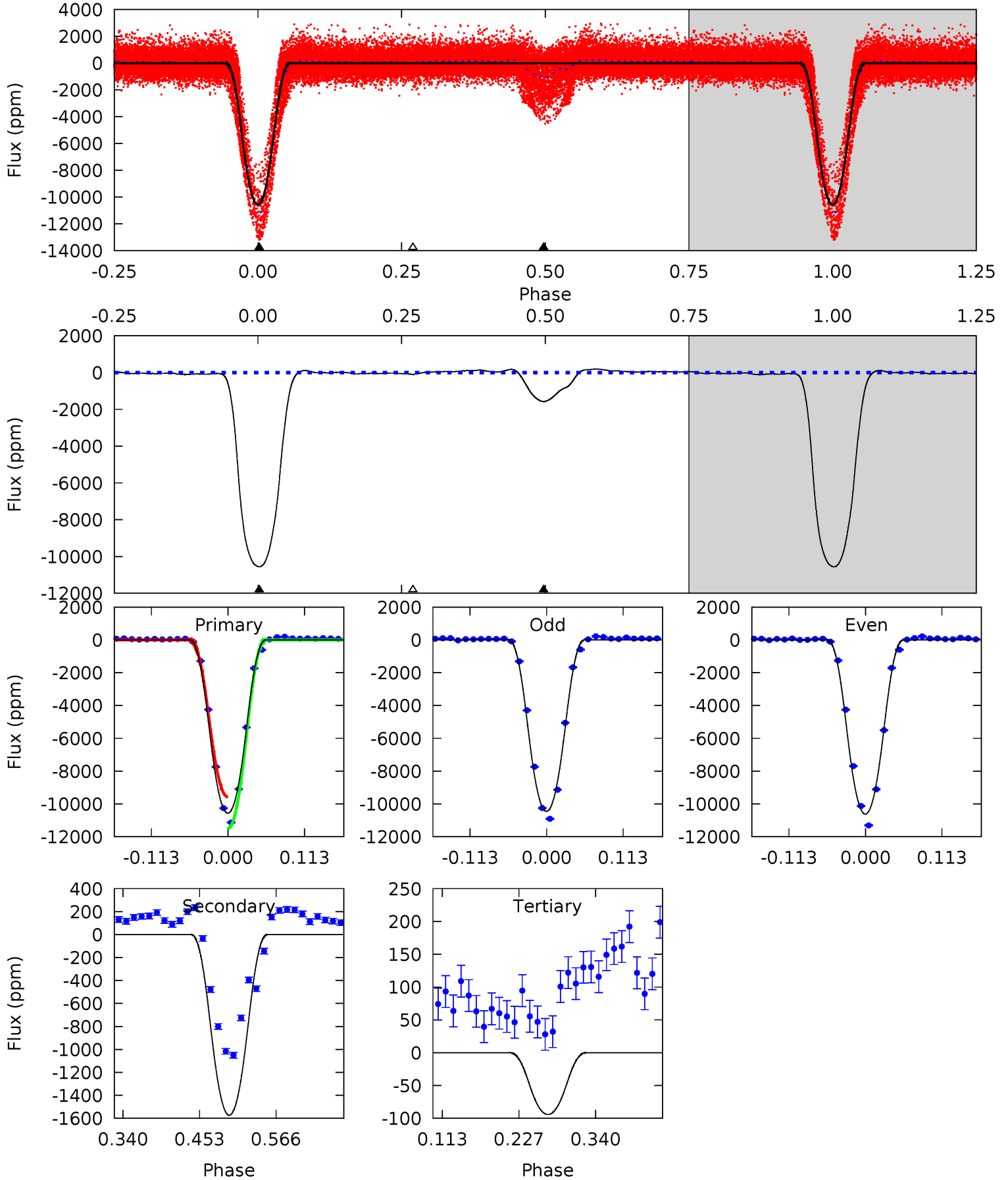
TCE 008047283-01 P= 0.775444 Days $T_0=131.687830$ (BKJD)



DV Model-Shift Uniqueness Test

008047283-01, P = 0.775440 Days, E = 131.689710 Days

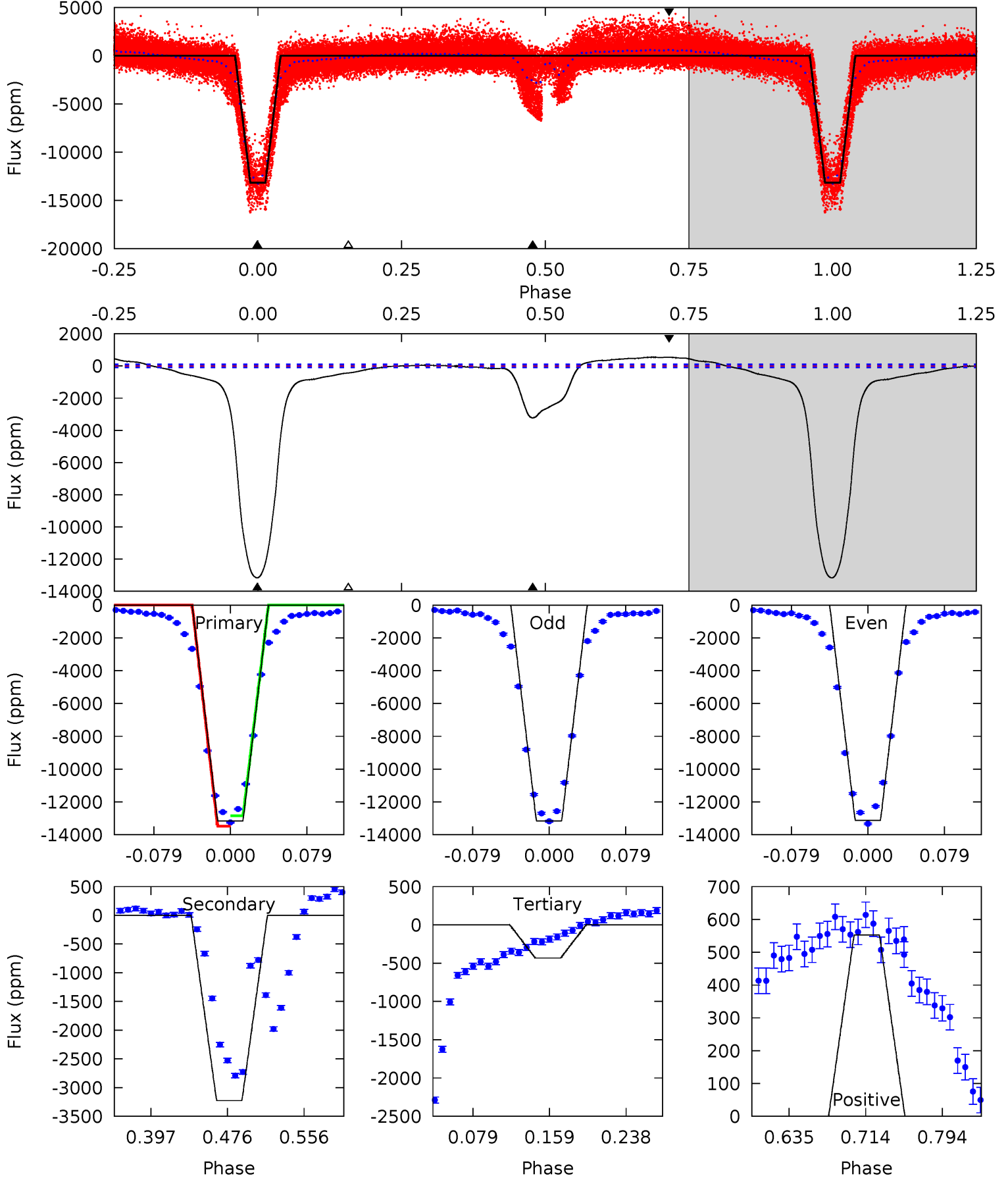
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1028	153.1	9.17	0	4.54	1.58	5.57	1019	1028	143.9	153.1	8.29	0.86	0.02	0



Alt Model-Shift Uniqueness Test

008047283-01, P = 0.775444 Days, E = 131.687830 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
691.5	169.5	22.7	29.0	4.61	1.75	21.2	668.8	662.5	146.8	140.5	0.80	0.94	0.04	0



Stellar Parameters For KIC 008047283

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5861^{+186}_{-206}	$4.546^{+0.037}_{-0.213}$	$-0.200^{+0.300}_{-0.300}$	$0.865^{+0.274}_{-0.091}$	$0.957^{+0.108}_{-0.120}$	$2.084^{+0.417}_{-1.075}$
	+3%/-4%	+1%/-5%	+150%/-150%	+32%/-11%	+11%/-13%	+20%/-52%
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 008047283-01 / KOI 3760.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1573 ± 10	$10.66^{+1.75}_{-0.90}$	2706^{+208}_{-138}	3779^{+97}_{-99}	$1.985^{+0.296}_{-0.491}$
Alt.	-3226 ± 19	$9.52^{+1.61}_{-0.81}$	2714^{+203}_{-138}	4588^{+127}_{-145}	$5.153^{+0.796}_{-1.282}$

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 $A_{obs} \gg 1.0$

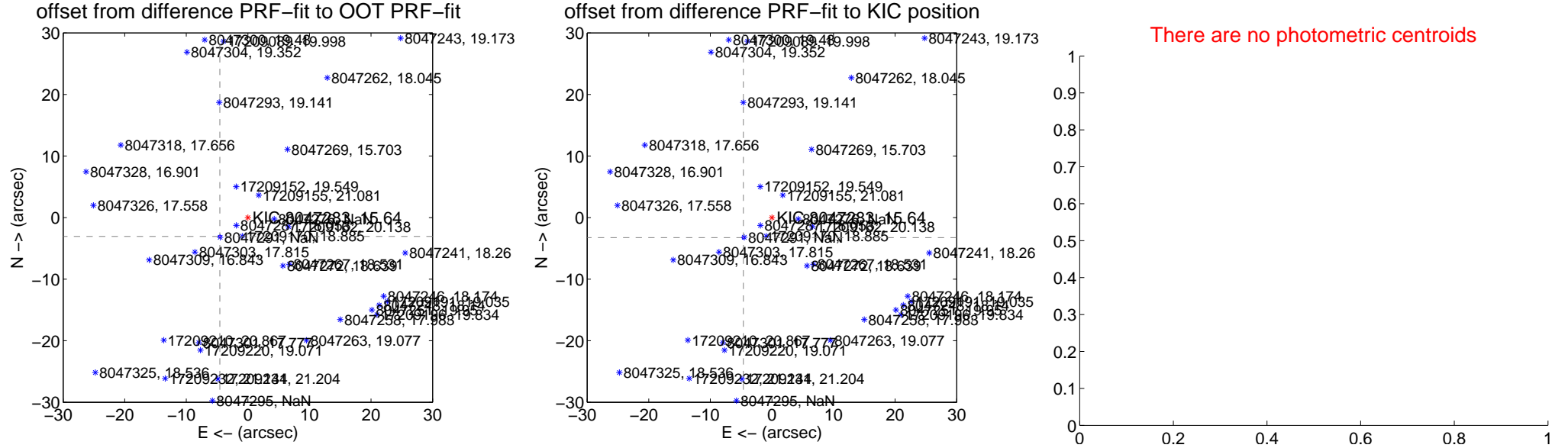
DV Centroid Data

Supplemental centroid analysis for 008047283-01. Kepler magnitude: 15.64. Transit SNR 301.87

There are 14 quarters with good PRF difference image offsets

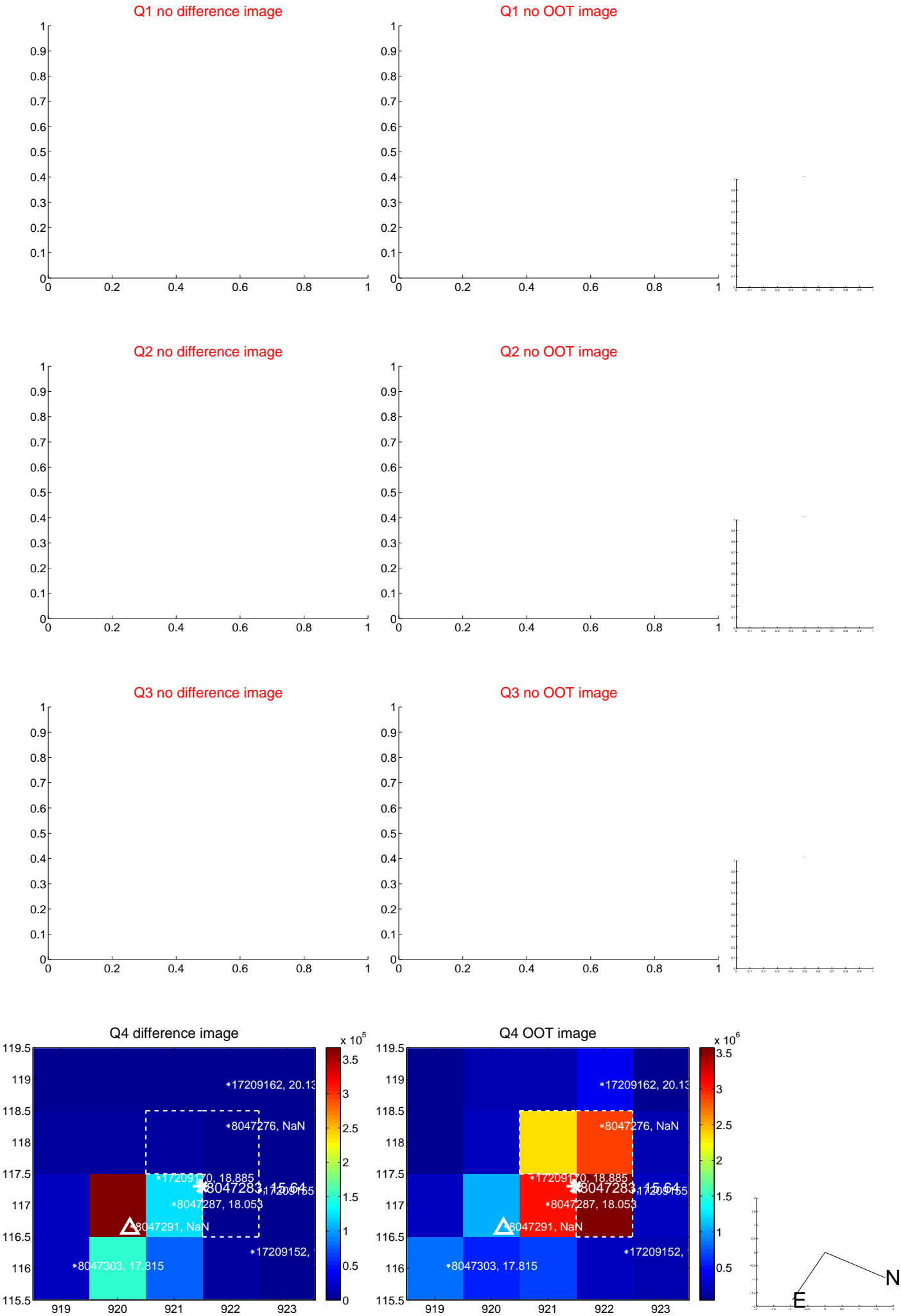
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.482 \pm 0.072	76.26	4.545 \pm 0.073	-3.066 \pm 0.070
PRF-fit source offset from KIC position	5.673 \pm 0.069	81.76	4.642 \pm 0.069	-3.262 \pm 0.068
photometric centroid source offset	—	—	—	—

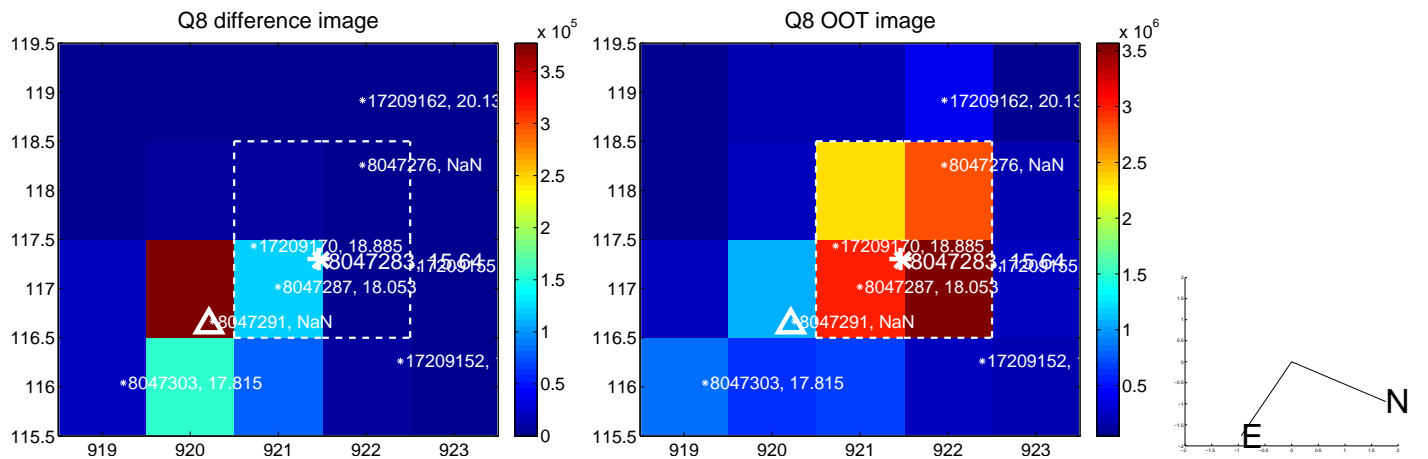
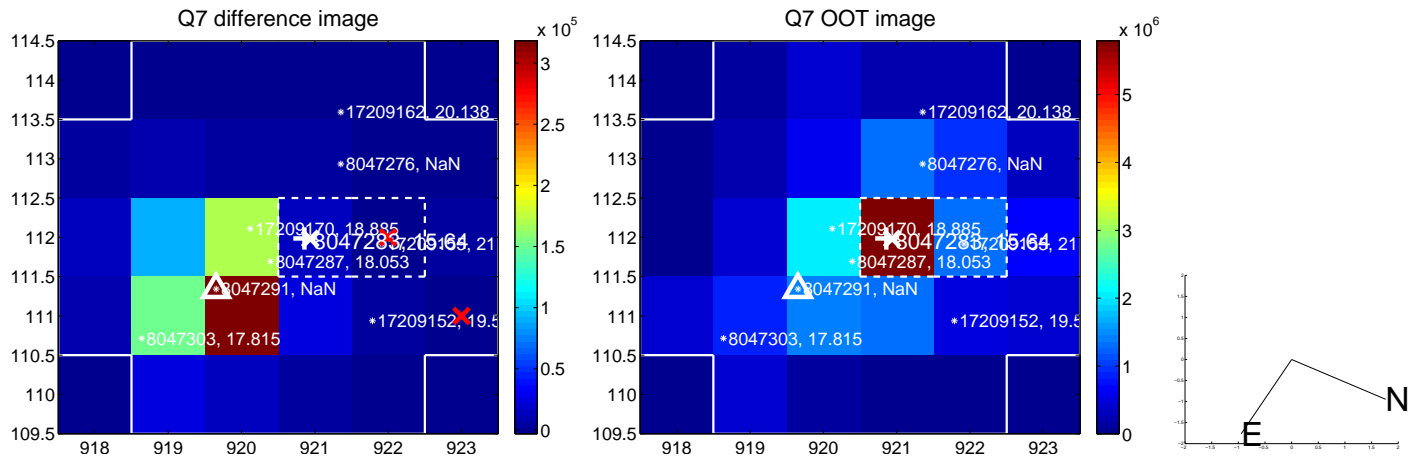
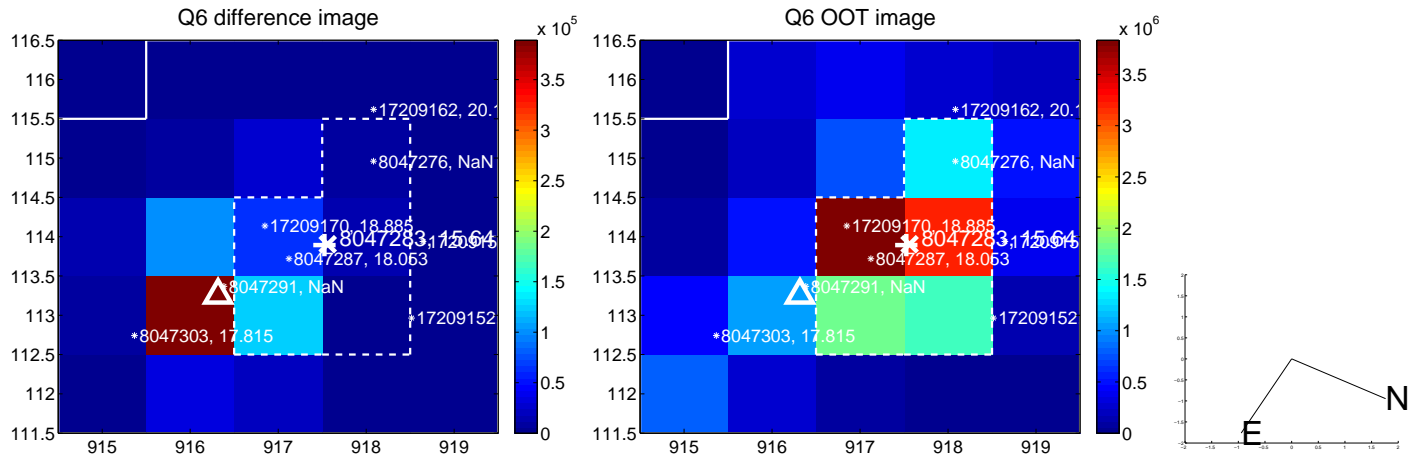
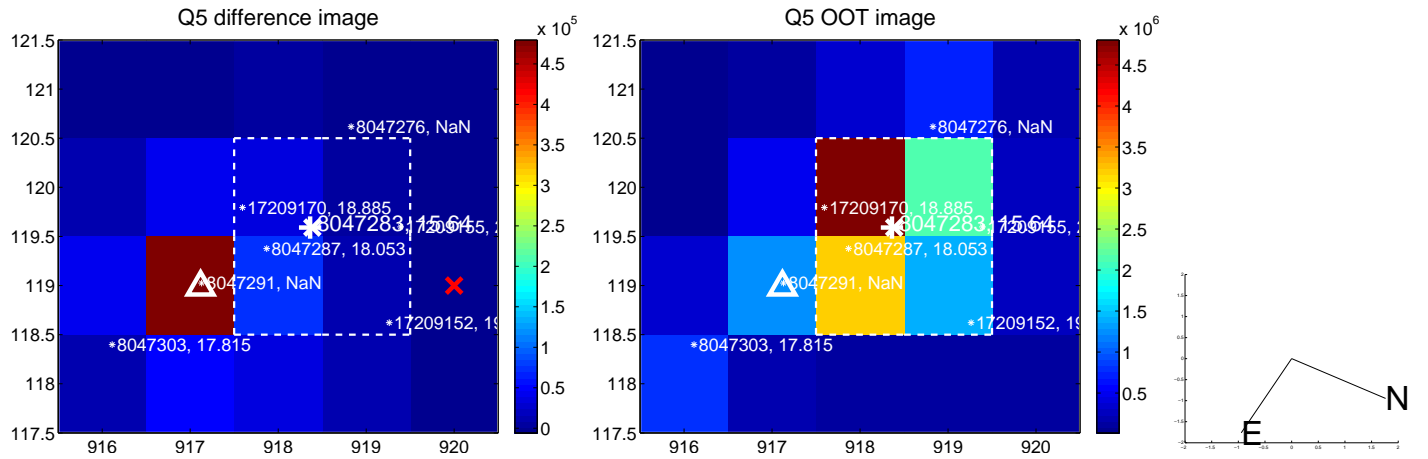


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

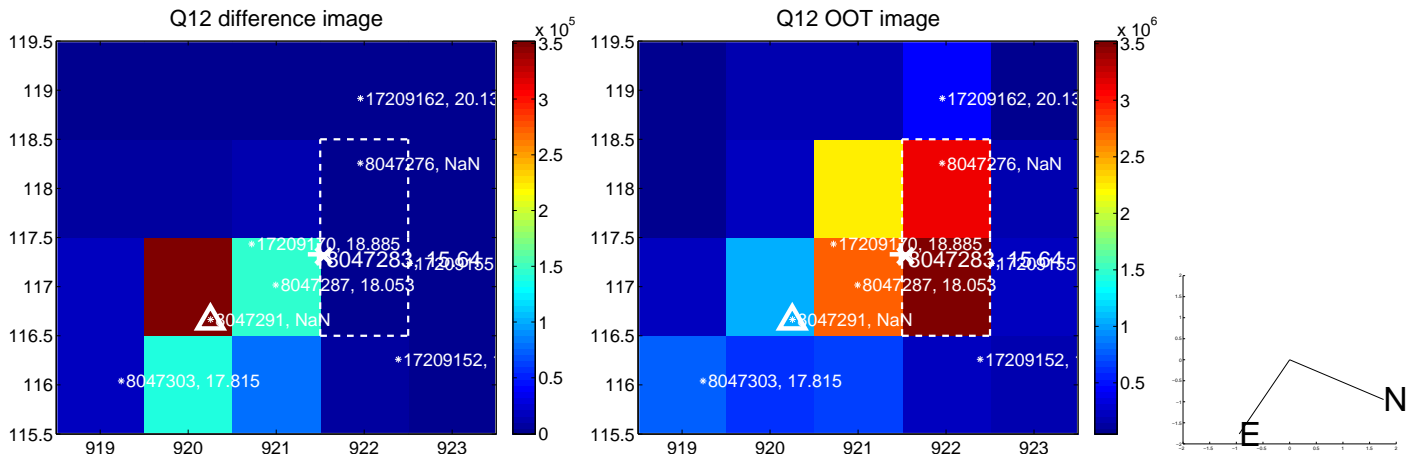
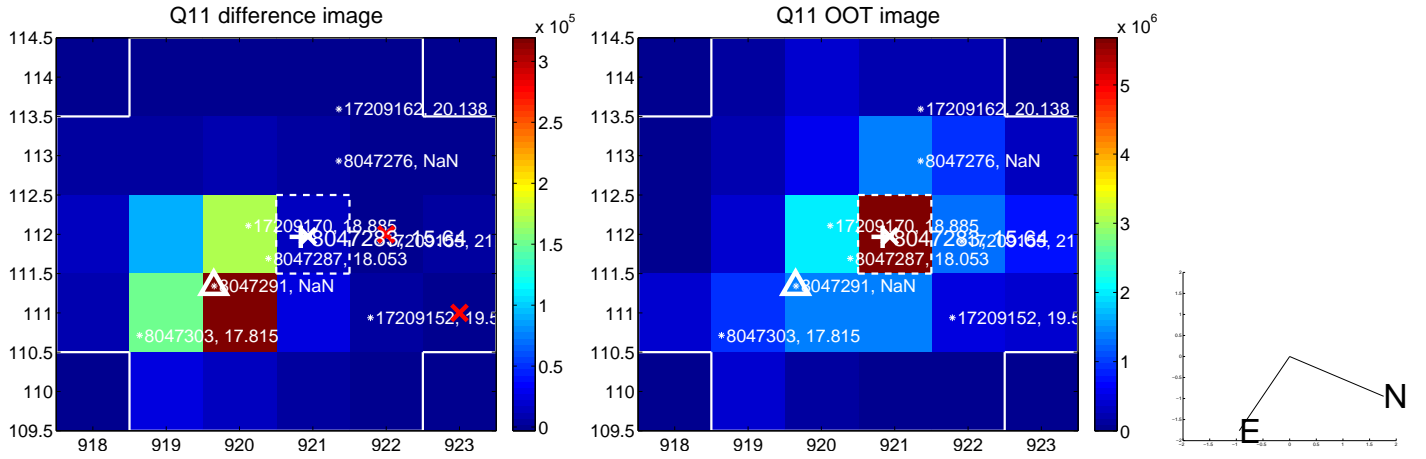
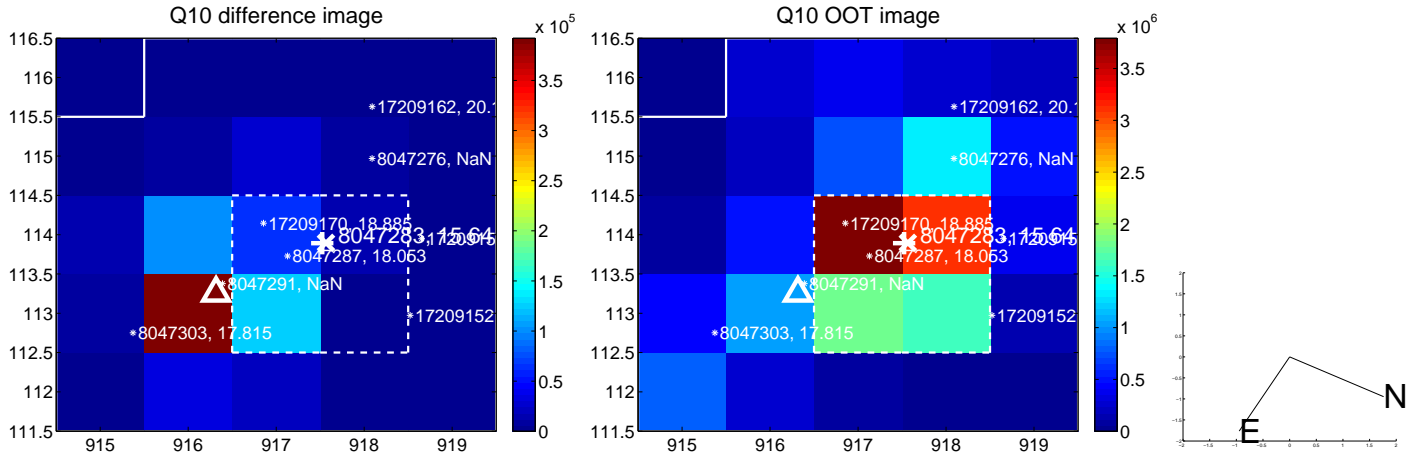
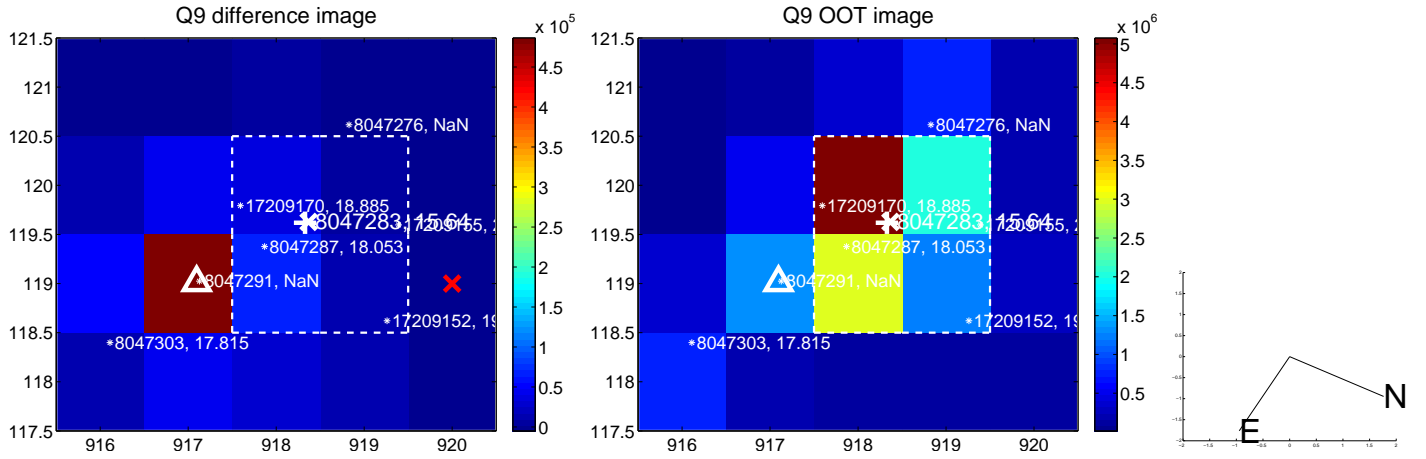
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



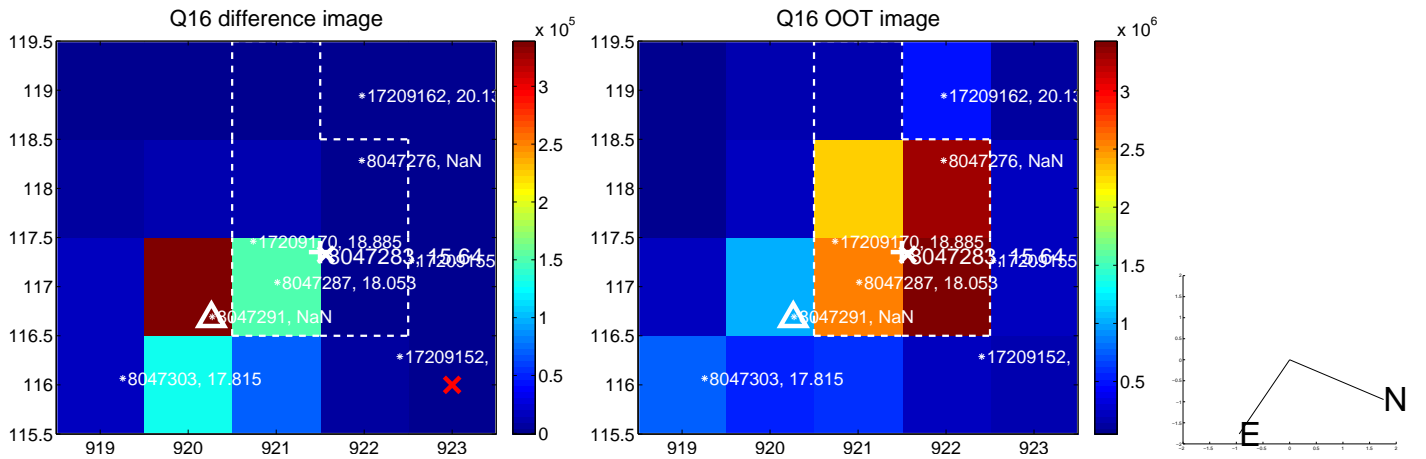
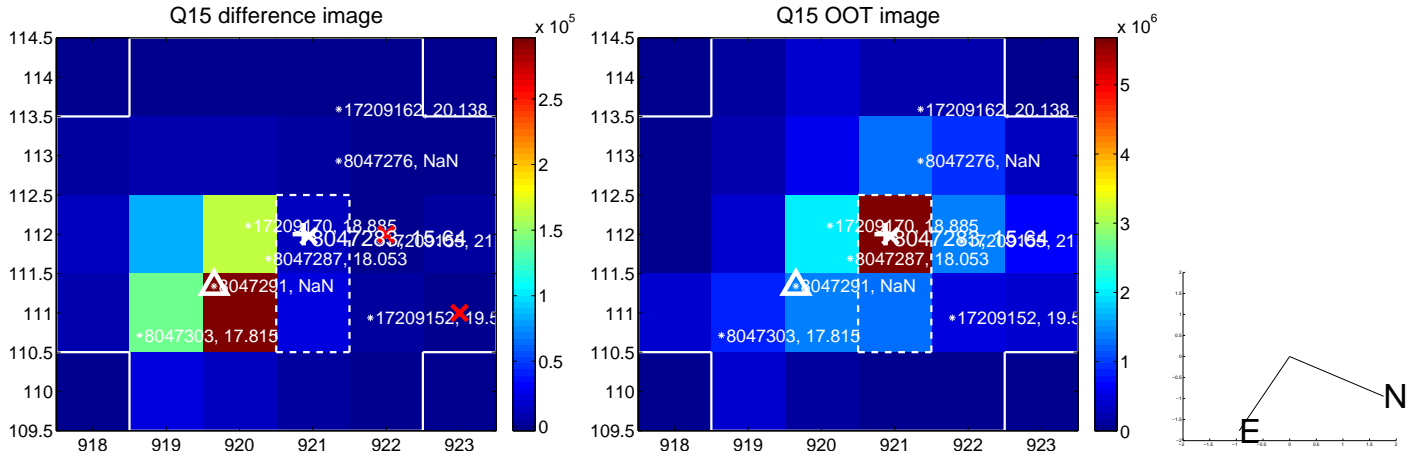
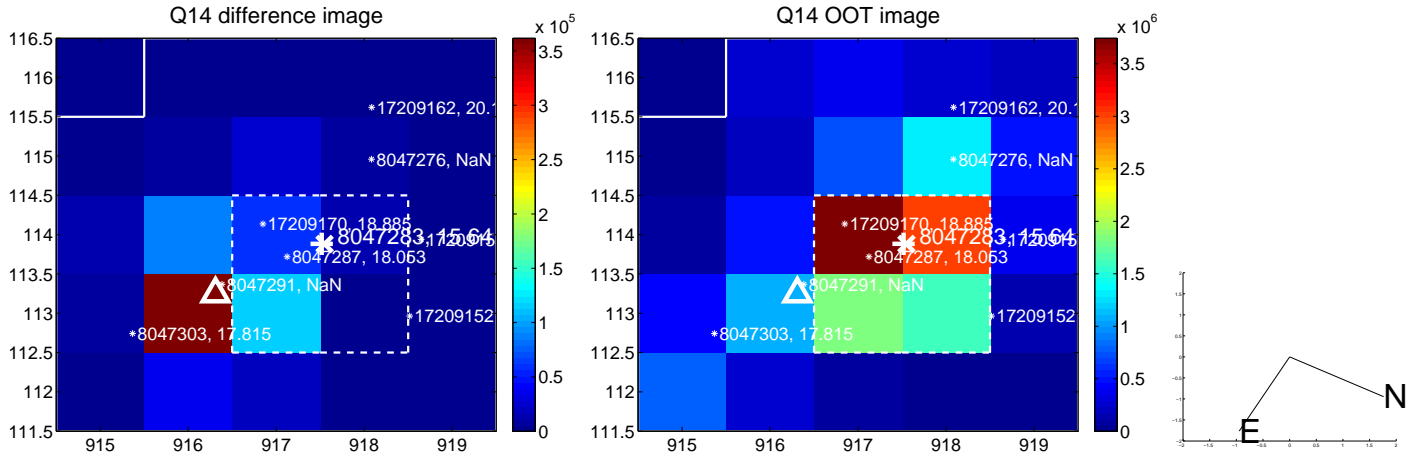
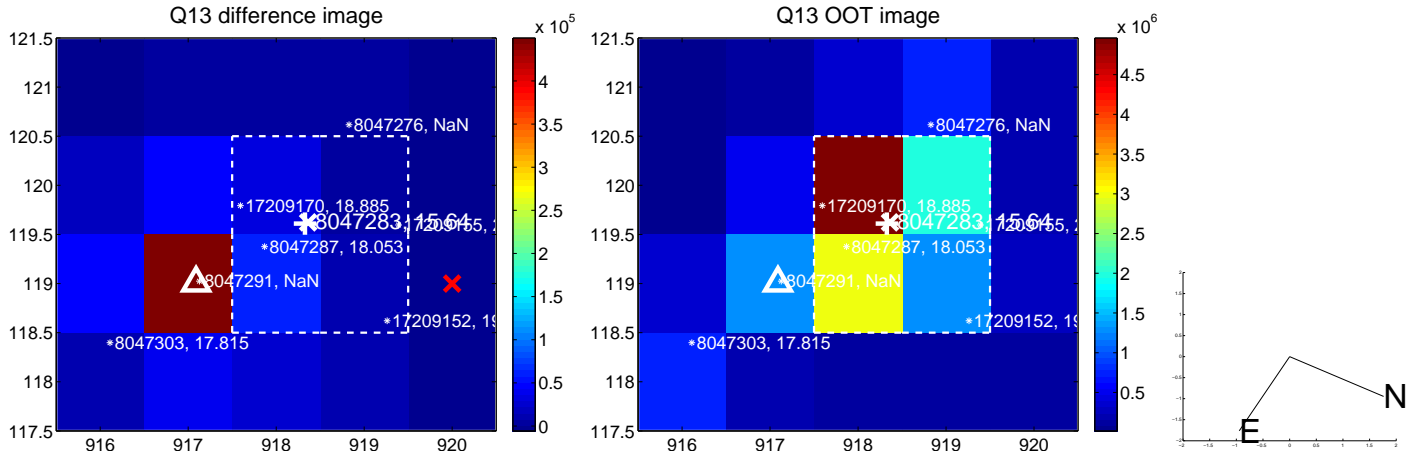
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



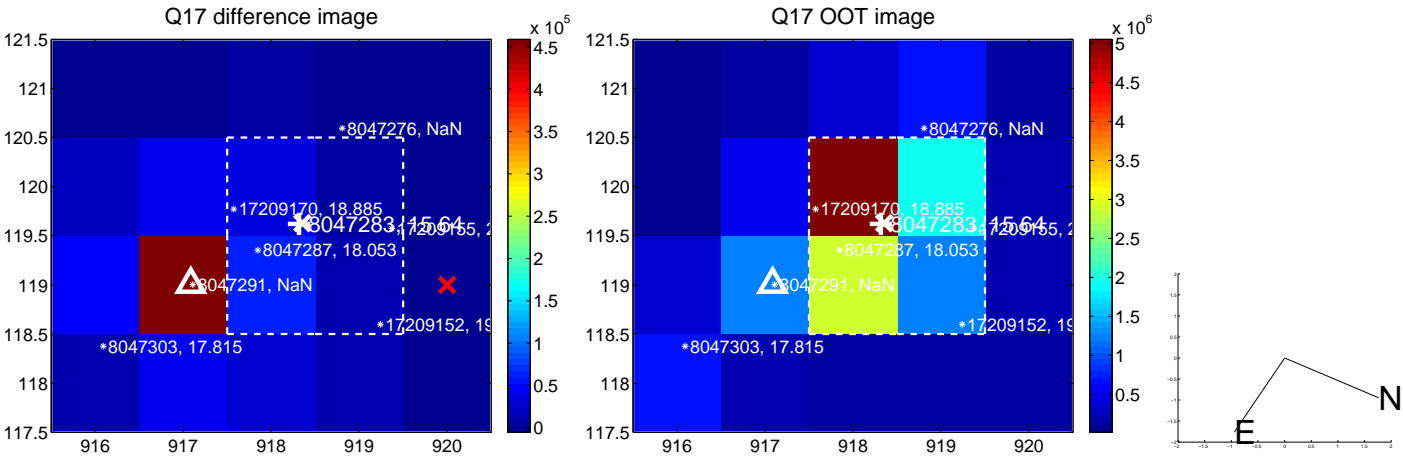
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



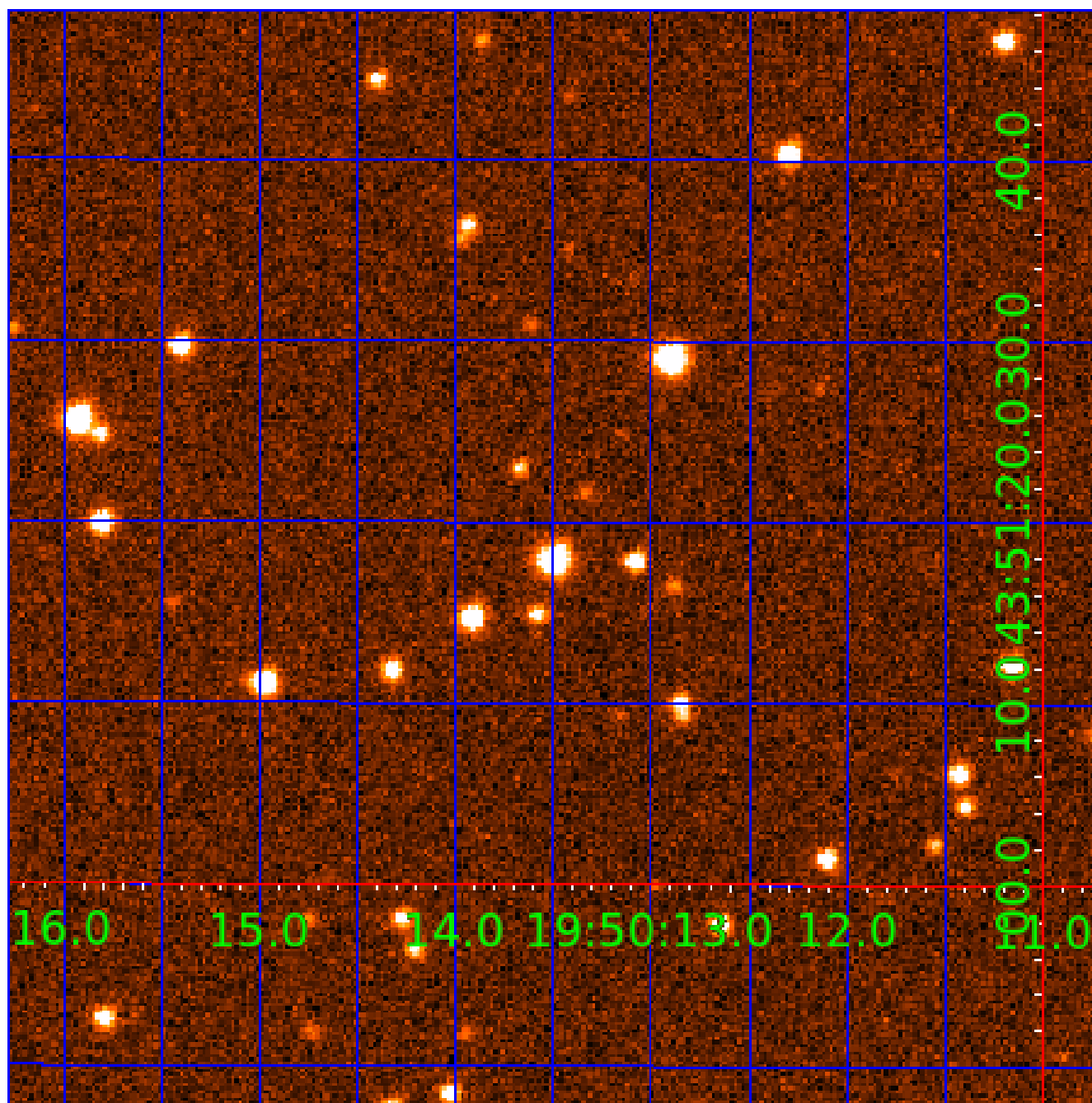
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 008047283

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})
008047283-01	OBS	3760.01	0.775440	131.689710	9348.8	1.663	681.1	301.9	0.86	5861	10.26	2978.94
008047283-02	OBS	No	0.775428	132.082952	1415.1	1.076	305.3	69.3	0.86	5861	4.75	2979.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008047283-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—CENT_RESOLVED_OFFSET
008047283-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET

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.

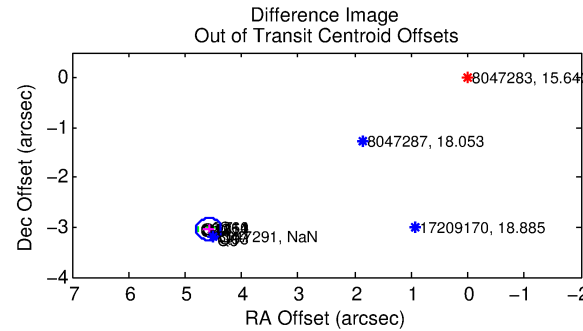
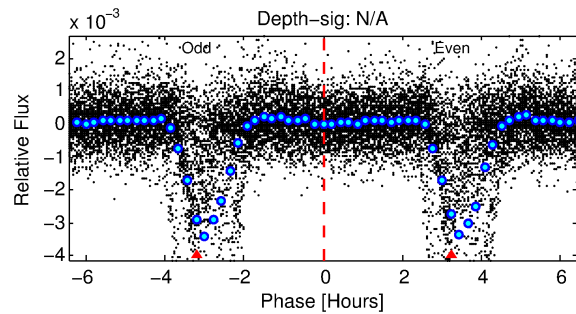
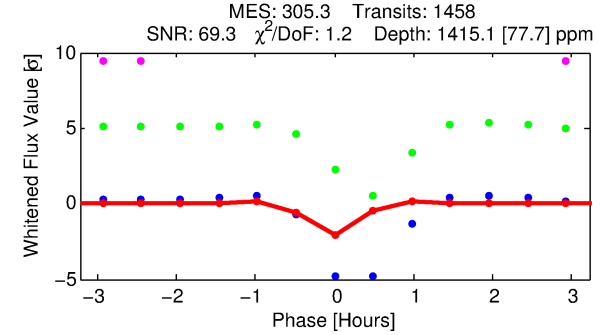
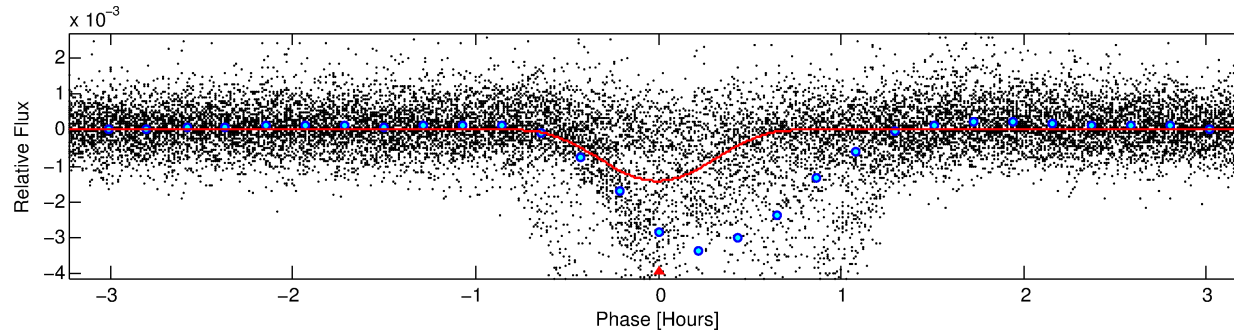
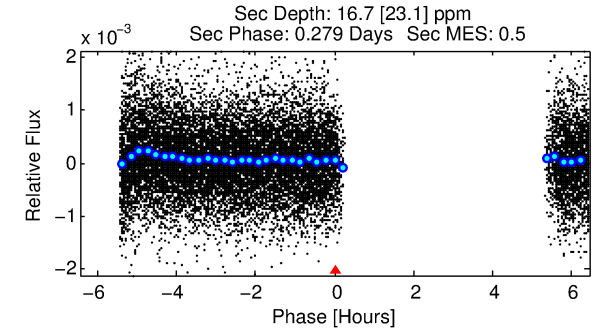
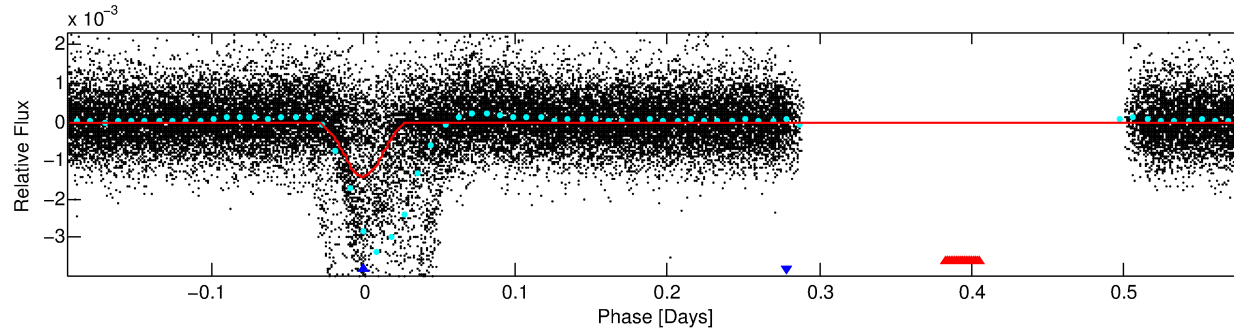
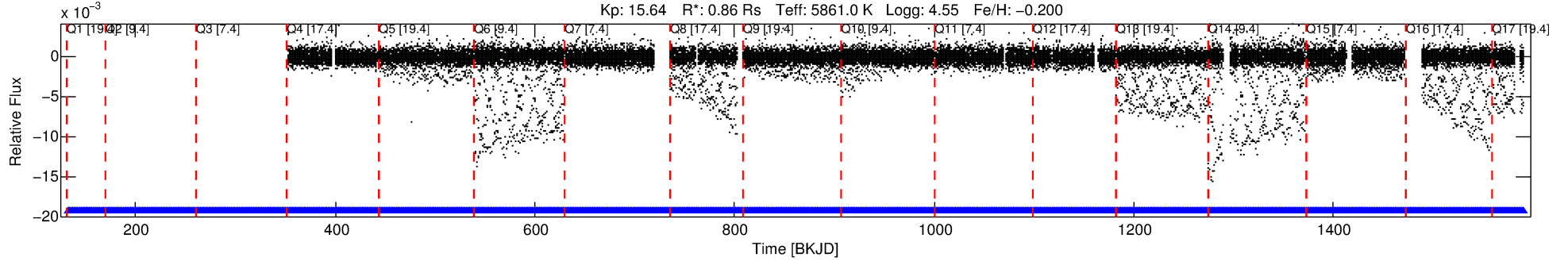
Ephemeris Match Information For 008047283-02

No Significant Match Found

DV One-Page Summary

KIC: 8047283 Candidate: 2 of 2 Period: 0.775 d
KOI: K03760 Corr: No Ephemeris Match

Kp: 15.64 R*: 0.86 Rs Teff: 5861.0 K Logg: 4.55 Fe/H: -0.200



DV Fit Results:

Period = 0.77543 [0.00000] d
Epoch = 132.0830 [0.0002] BKJD
Rp/R* = 0.0504 [0.0297]
a/R* = 2.46 [0.58]
b = 0.97 [0.07]
Seff = 2979.00 [1232.84]
Teq = 1884 [195] K
Rp = 4.75 [3.18] Re
a = 0.0163 [0.0044] AU
Ag = 0.11 [0.20] [-4.45σ]
Teffp = 1670 [760] K [-0.27σ]

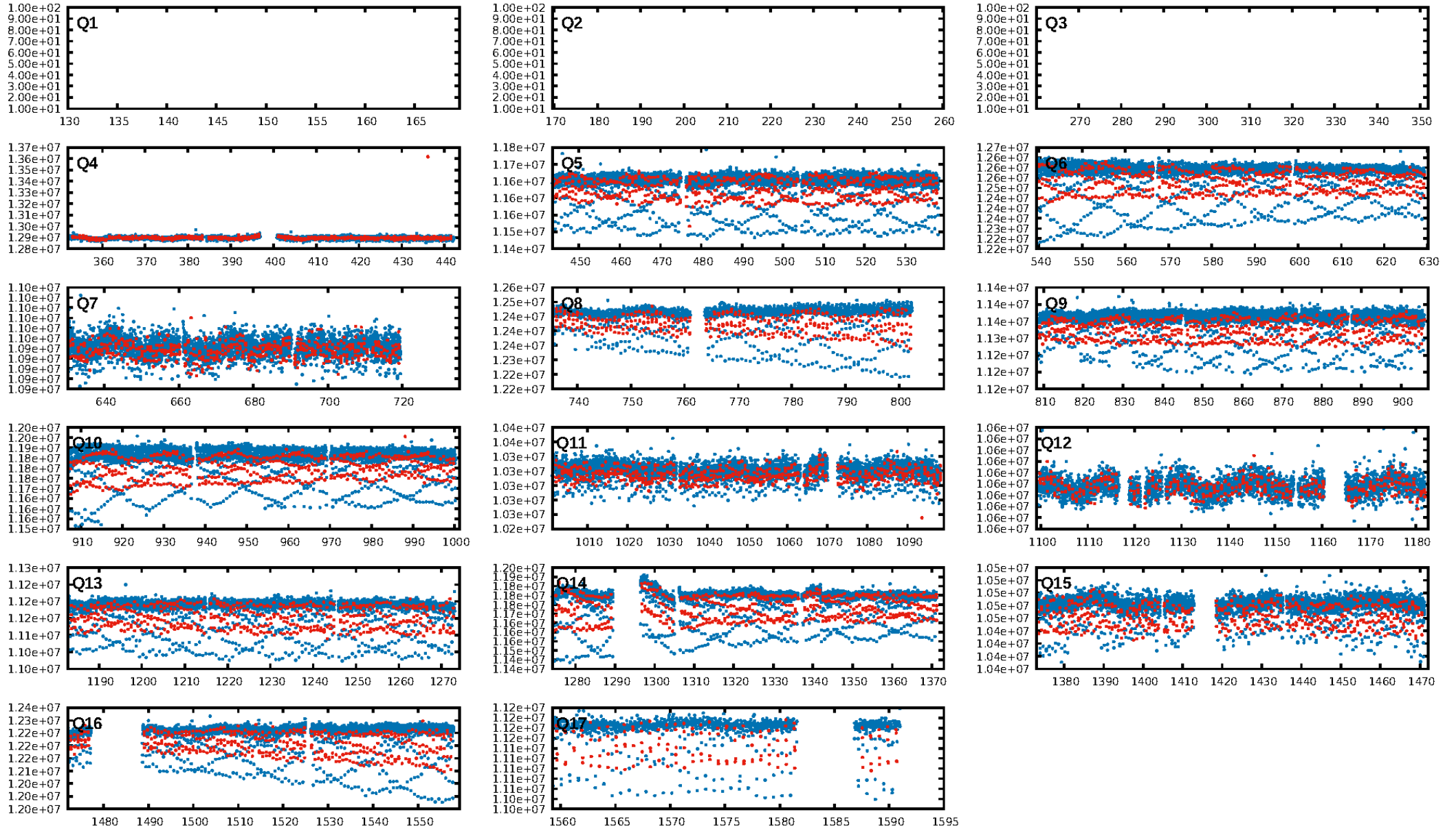
DV Diagnostic Results:

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 [1424/1424]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 5.501 arcsec [73.98σ]
KicOffset-rm: 5.704 arcsec [79.31σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 1.00 [14/14]
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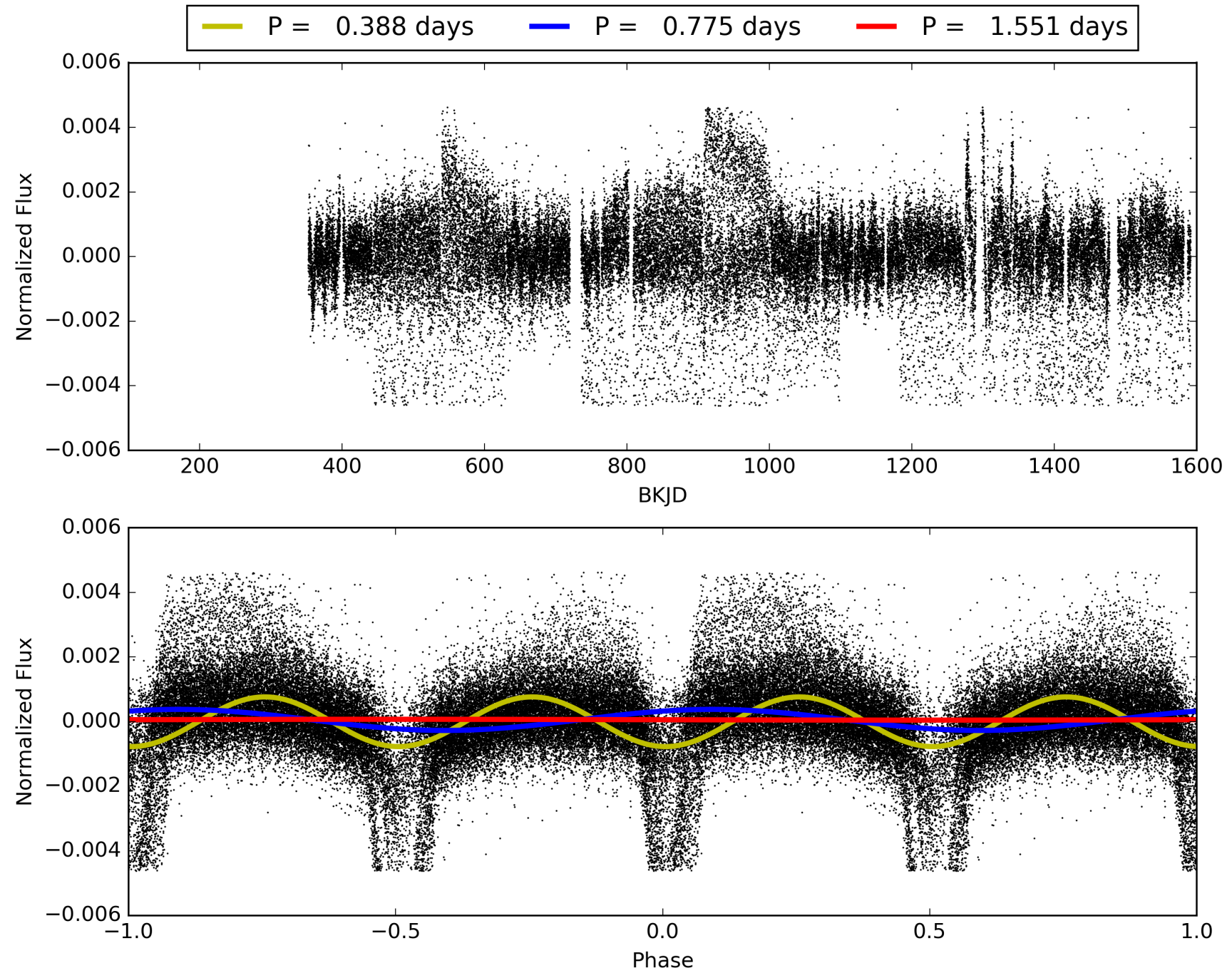
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008047283-02, PDC Light Curves

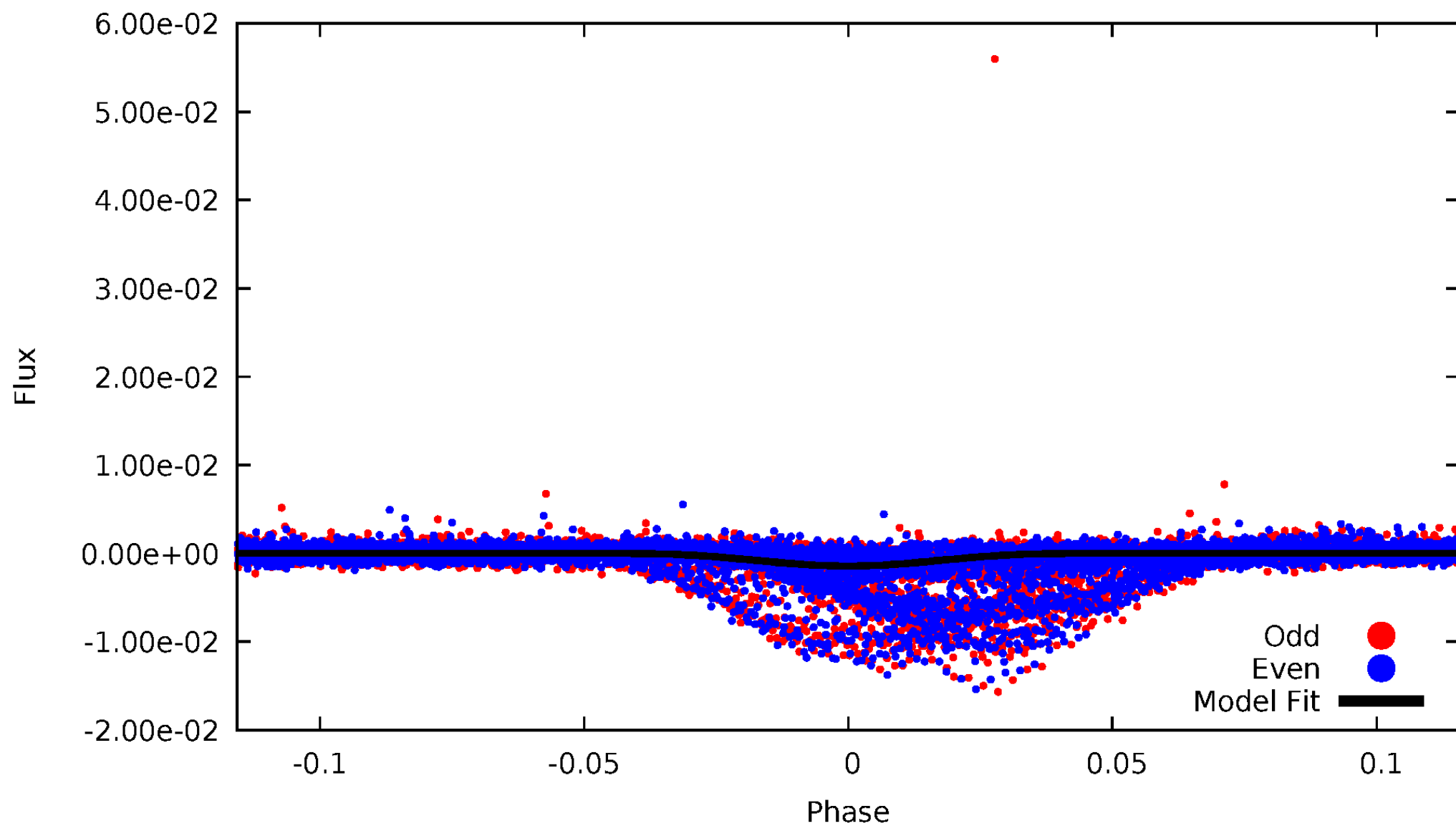


TCE 008047283-02



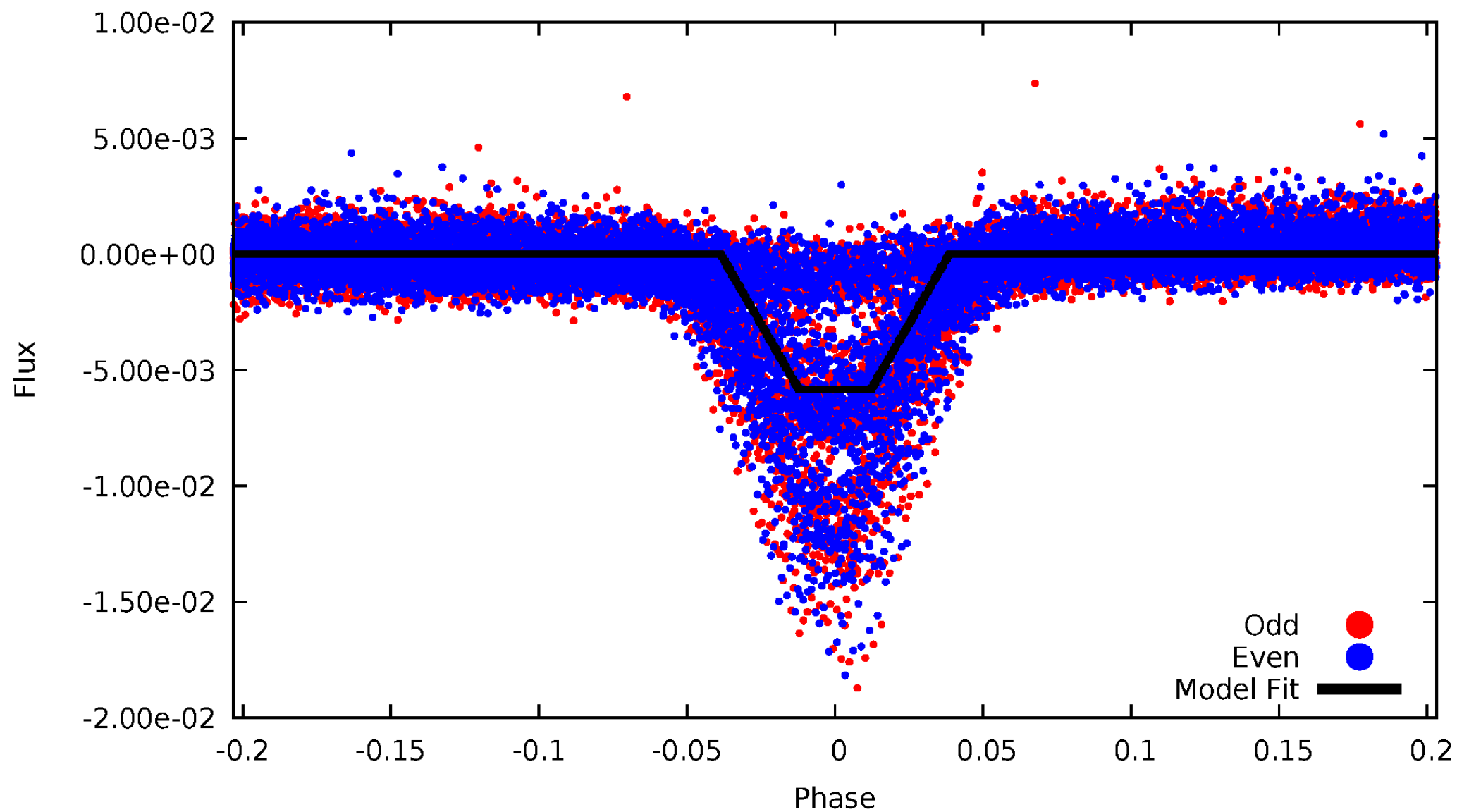
DV Odd/Even

TCE 008047283-02



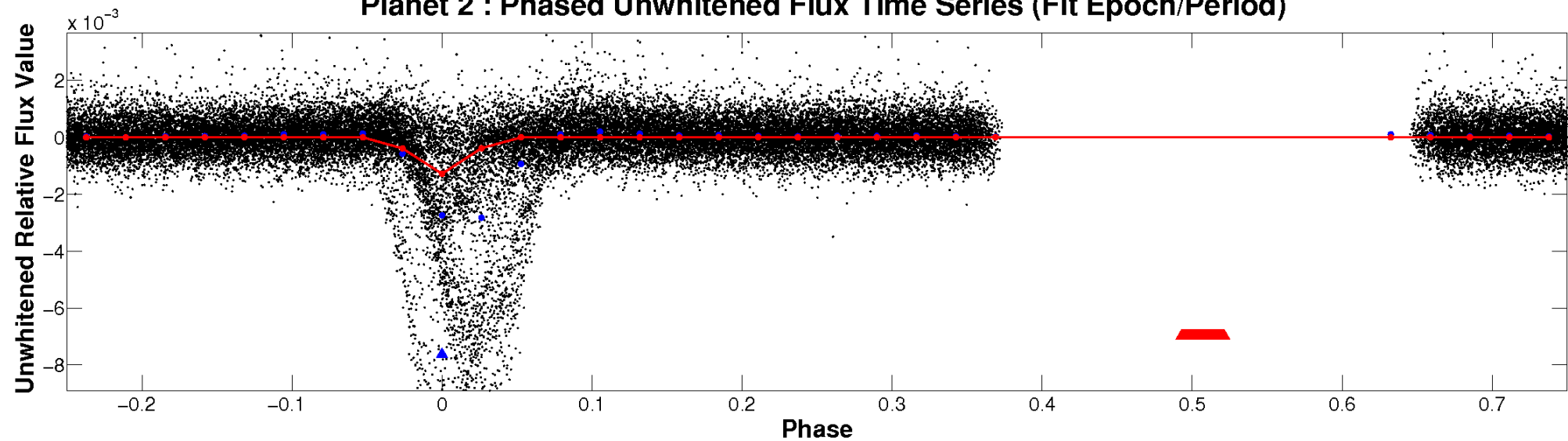
ALT Odd/Even

TCE 008047283-02

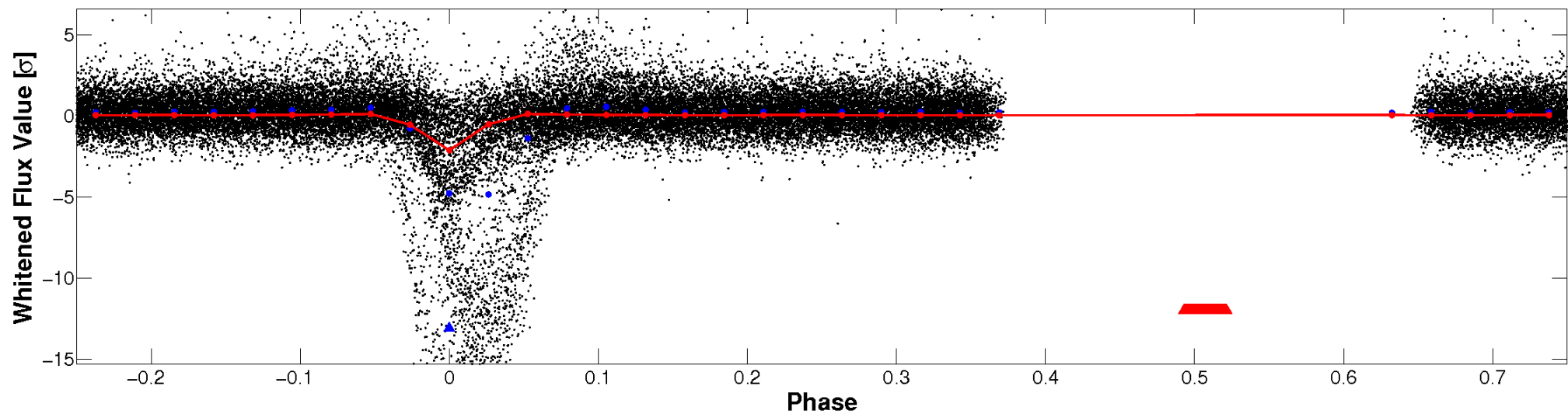


Non-Whitened Vs. Whitened Light Curve

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

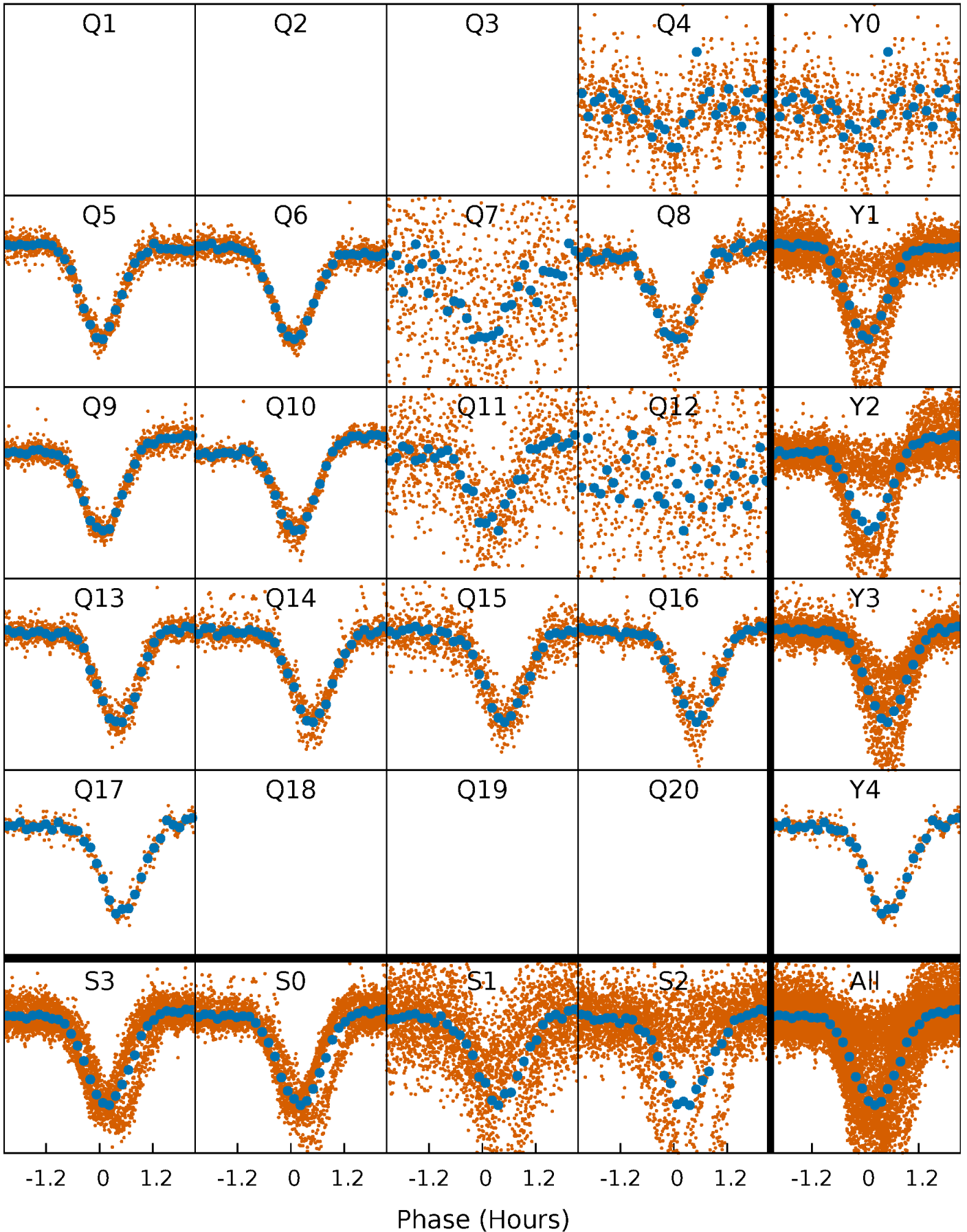


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



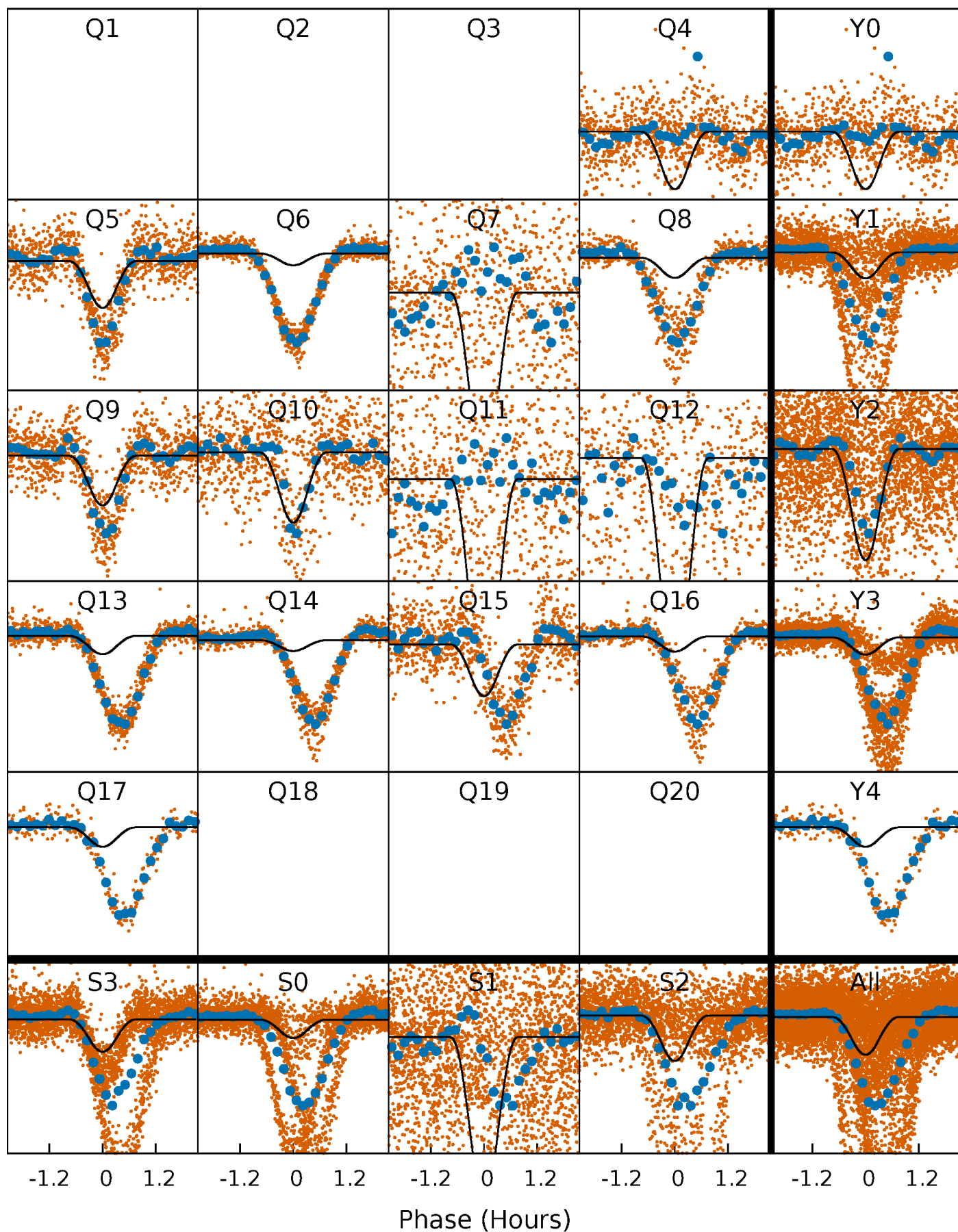
PDC Quarter-Phased Transit Curves

TCE 008047283-02 P= 0.775428 Days $T_0=132.082952$ (BKJD)



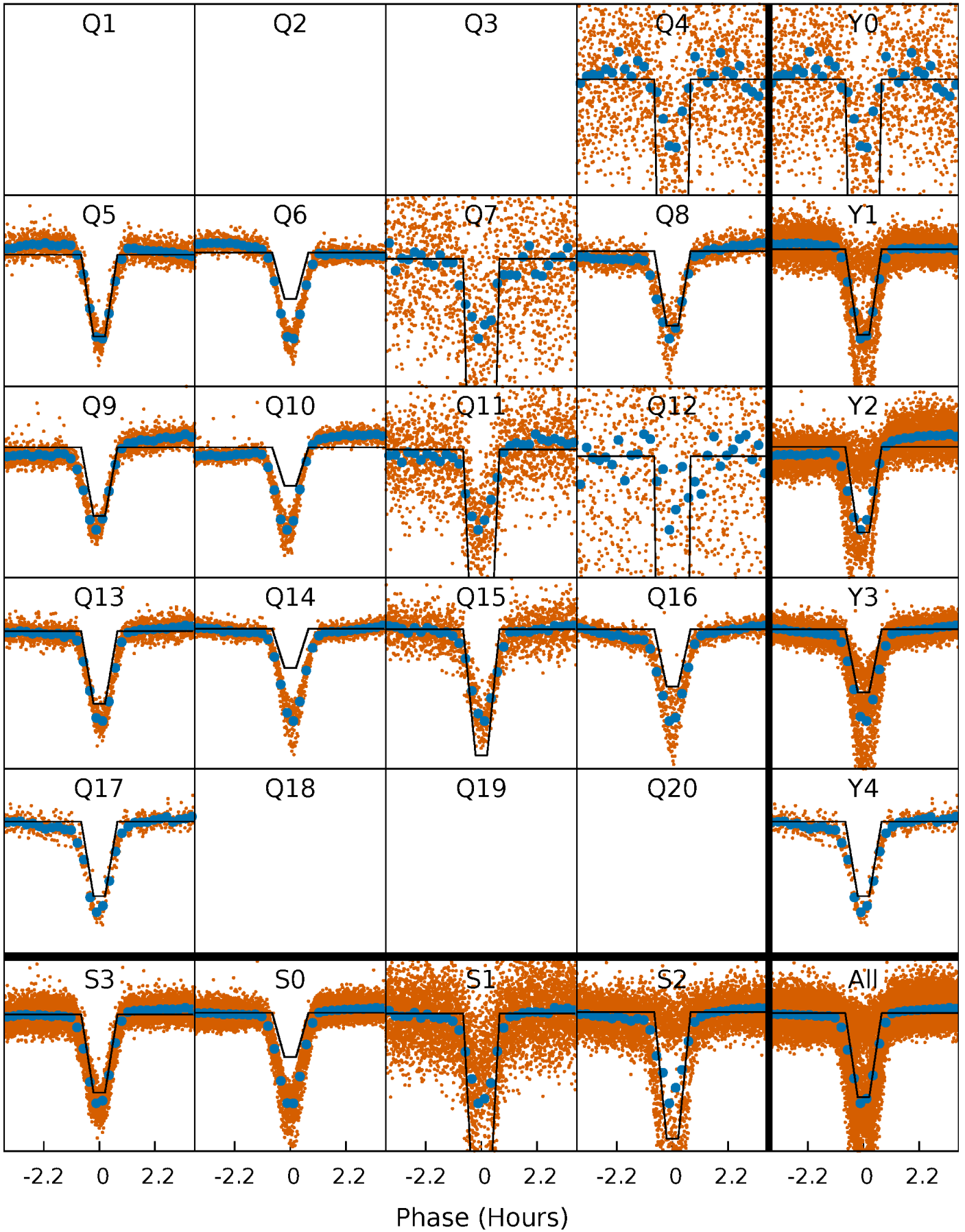
DV Quarter-Phased Transit Curves

TCE 008047283-02 P= 0.775428 Days $T_0=132.082952$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

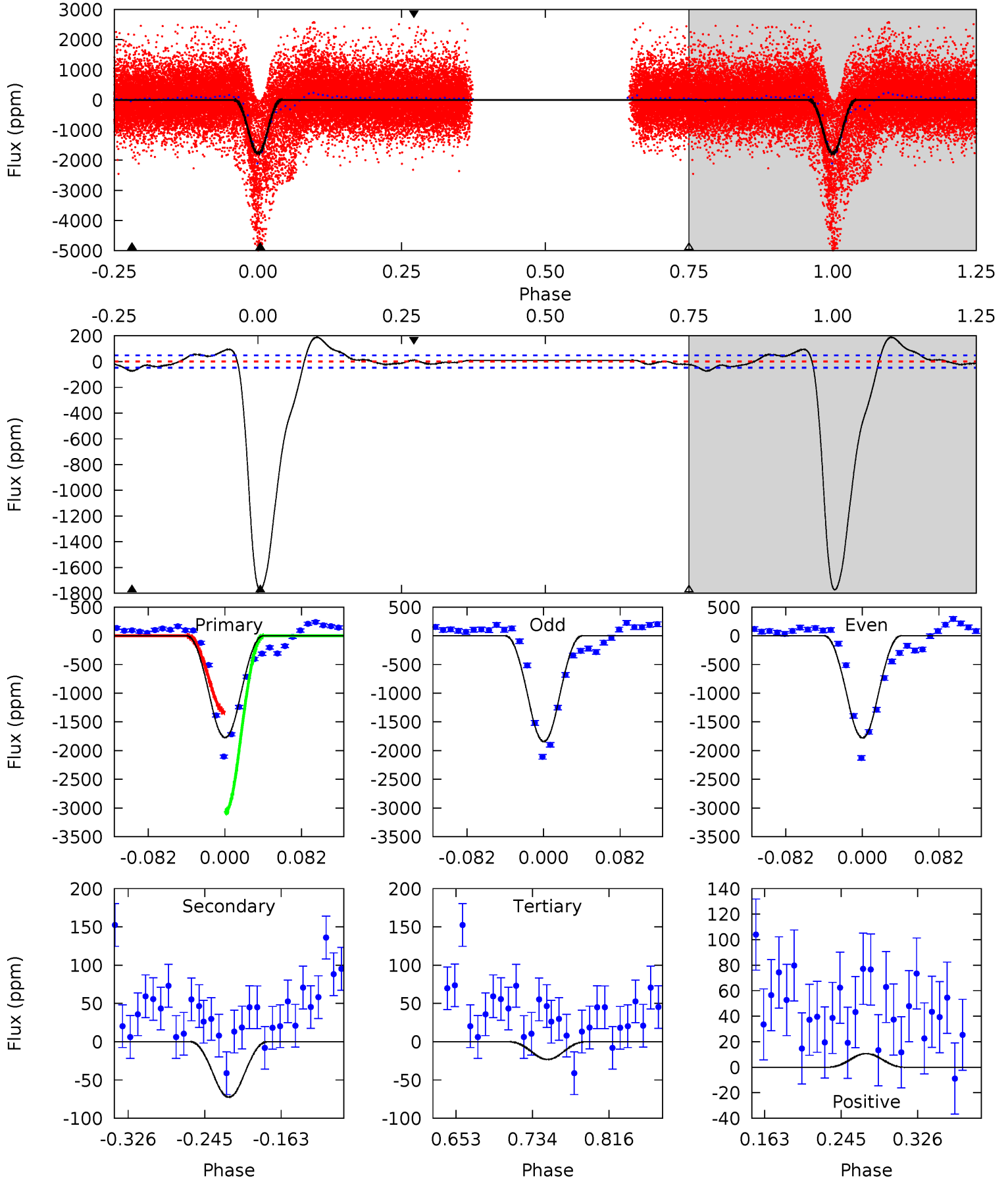
TCE 008047283-02 $P = 0.775444$ Days $T_0 = 132.075685$ (BKJD)



DV Model-Shift Uniqueness Test

008047283-02, P = 0.775428 Days, E = 132.082952 Days

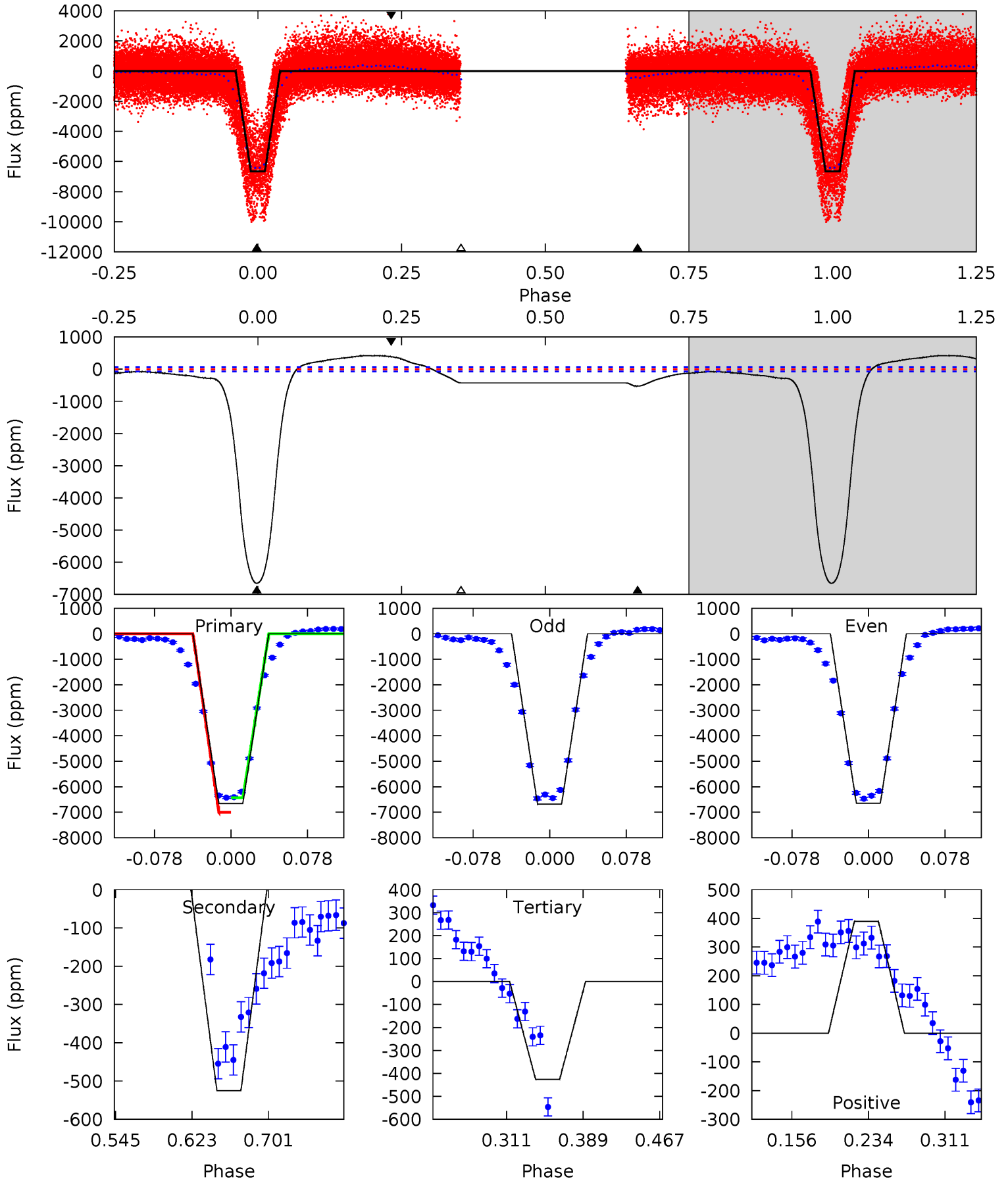
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
171.4	7.00	2.23	1.03	4.61	1.74	4.96	169.2	170.4	4.77	5.96	3.08	1.55	0.10	81.3



Alt Model-Shift Uniqueness Test

008047283-02, P = 0.775444 Days, E = 132.075685 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
433.8	34.3	27.8	25.4	4.62	1.76	16.2	406.0	408.4	6.49	8.87	1.40	0.99	0.06	0



Stellar Parameters For KIC 008047283

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5861^{+186}_{-206}	$4.546^{+0.037}_{-0.213}$	$-0.200^{+0.300}_{-0.300}$	$0.865^{+0.274}_{-0.091}$	$0.957^{+0.108}_{-0.120}$	$2.084^{+0.417}_{-1.075}$
	+3%/-4%	+1%/-5%	+150%/-150%	+32%/-11%	+11%/-13%	+20%/-52%
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 008047283-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-72 ± 10	$5.15^{+2.99}_{-2.47}$	2701^{+178}_{-135}	2480^{+1106}_{-5134}	$0.386^{+1.071}_{-0.229}$
Alt.	-525 ± 15	$7.48^{+3.28}_{-2.90}$	2703^{+167}_{-142}	3488^{+761}_{-491}	$1.330^{+2.177}_{-0.666}$

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 $A_{obs} \gg 1.0$

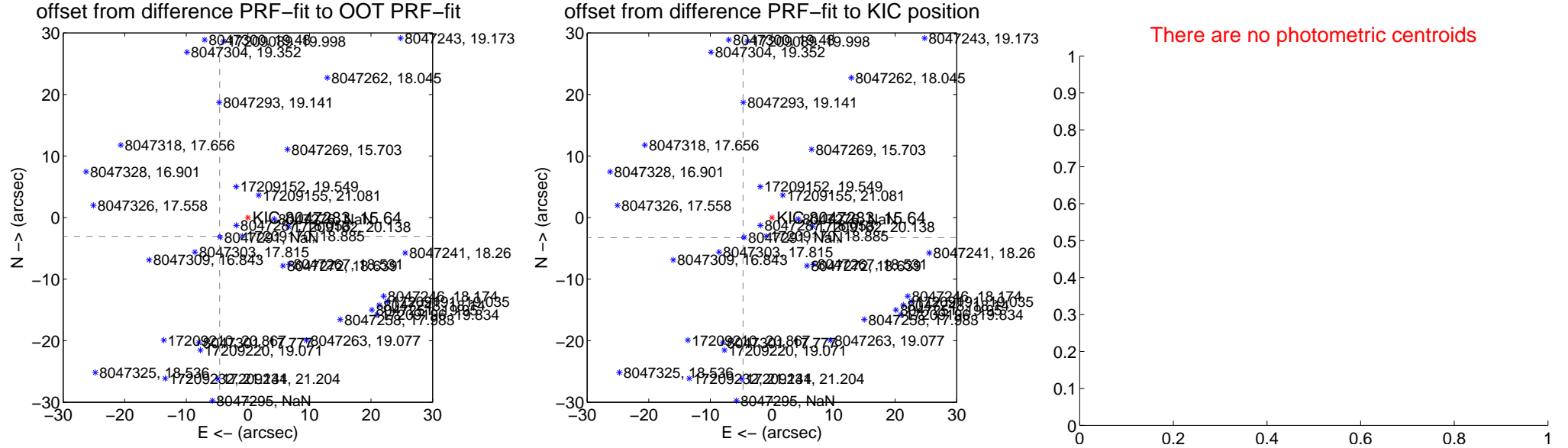
DV Centroid Data

Supplemental centroid analysis for 008047283-02. Kepler magnitude: 15.64. Transit SNR 69.26

There are 14 quarters with good PRF difference image offsets

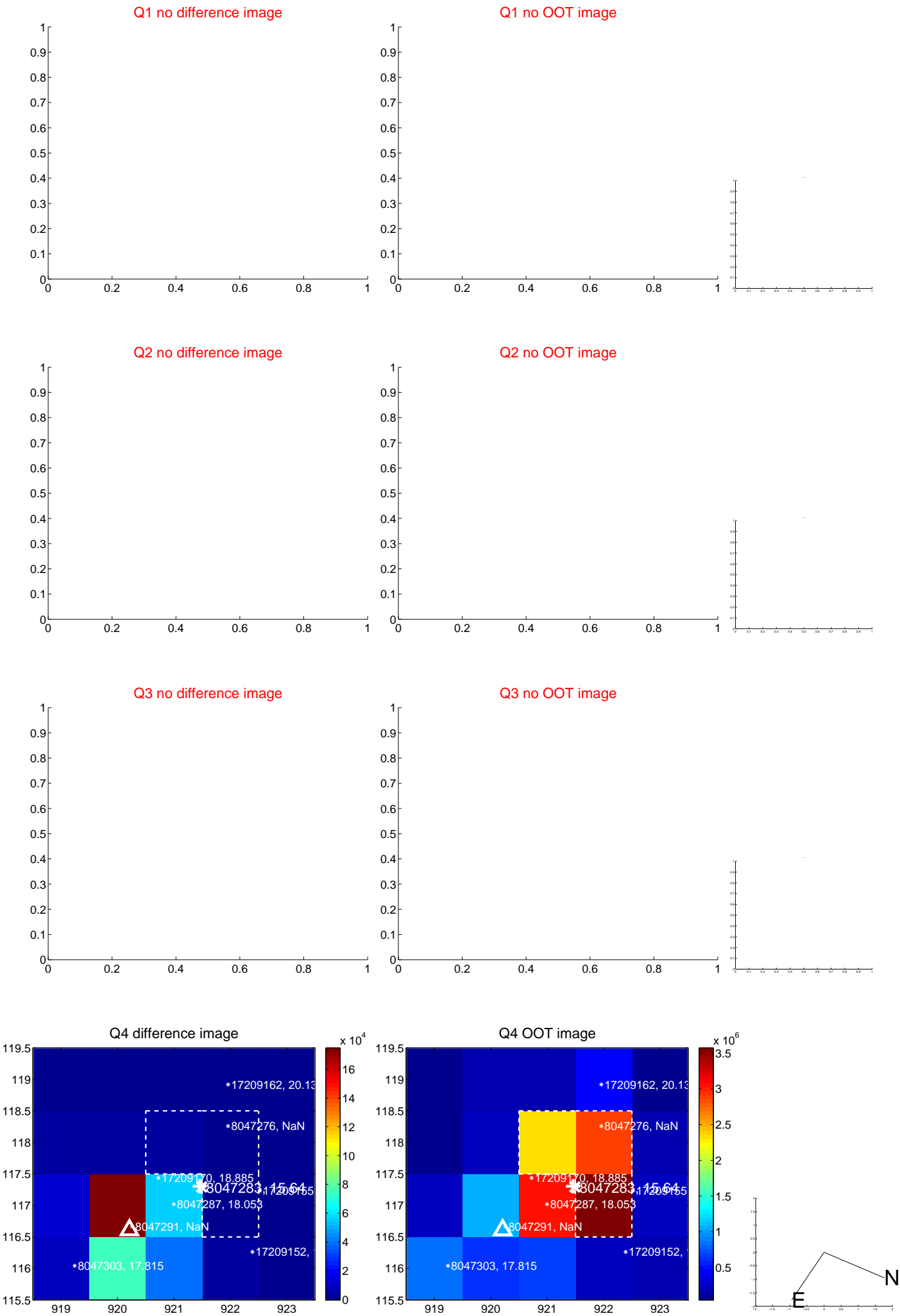
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.501 \pm 0.074	73.98	4.581 \pm 0.076	-3.045 \pm 0.070
PRF-fit source offset from KIC position	5.704 \pm 0.072	79.31	4.686 \pm 0.072	-3.252 \pm 0.072
photometric centroid source offset	—	—	—	—

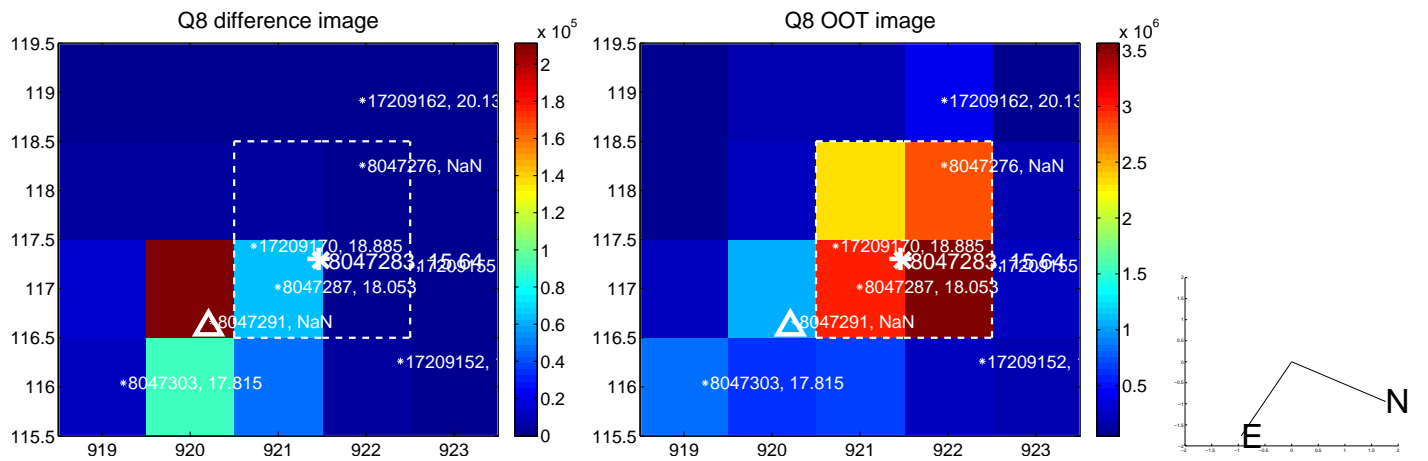
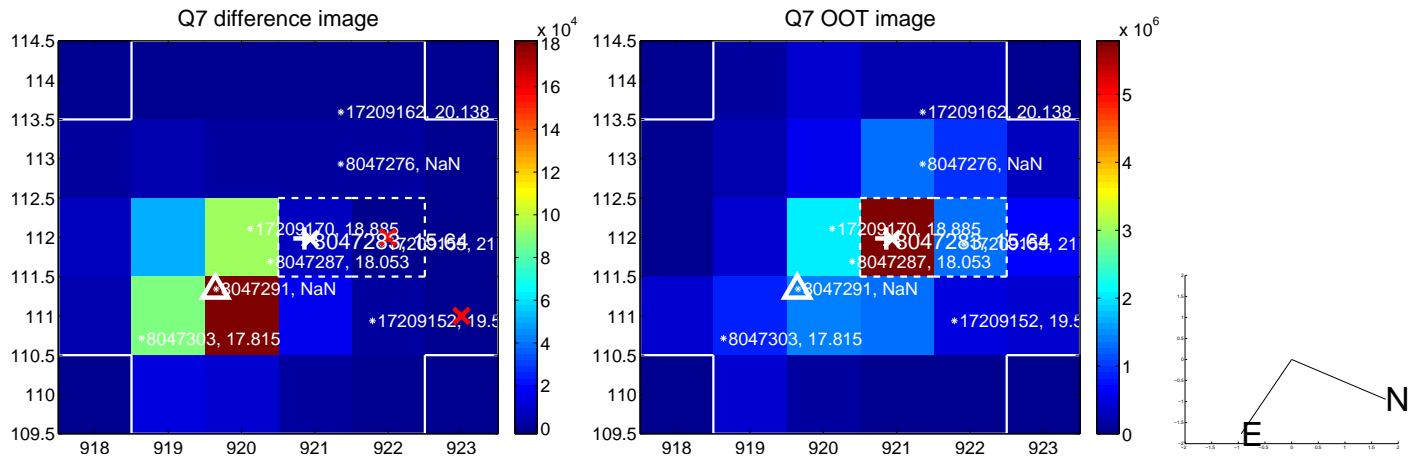
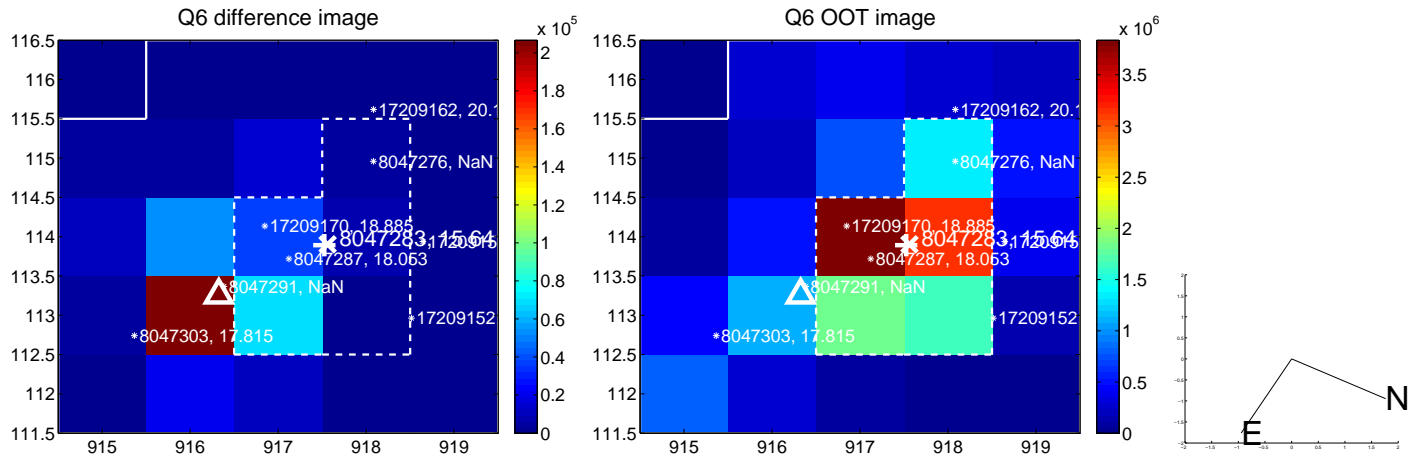
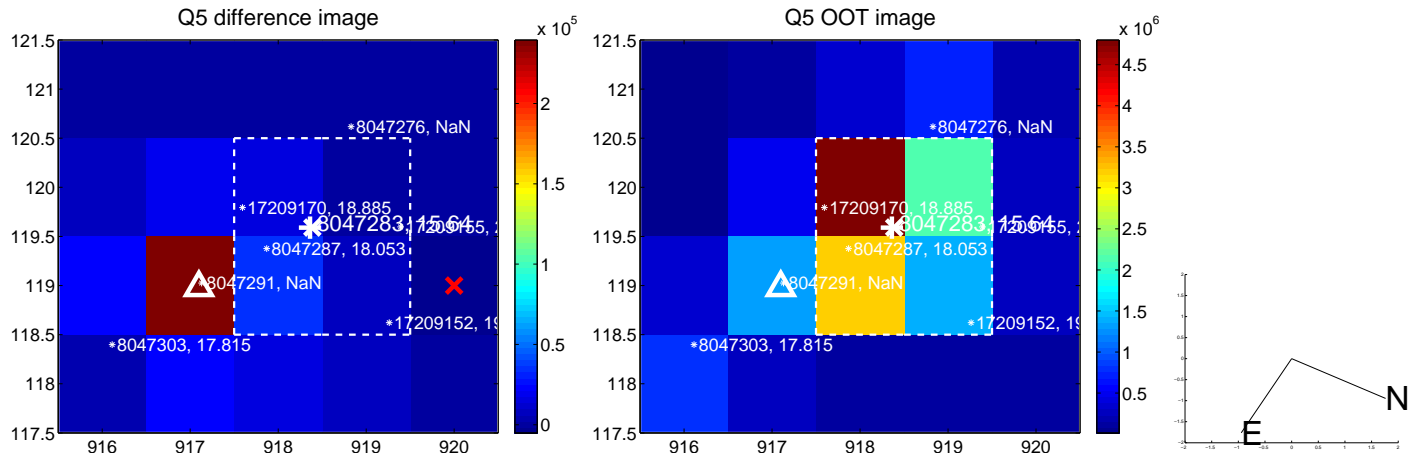


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

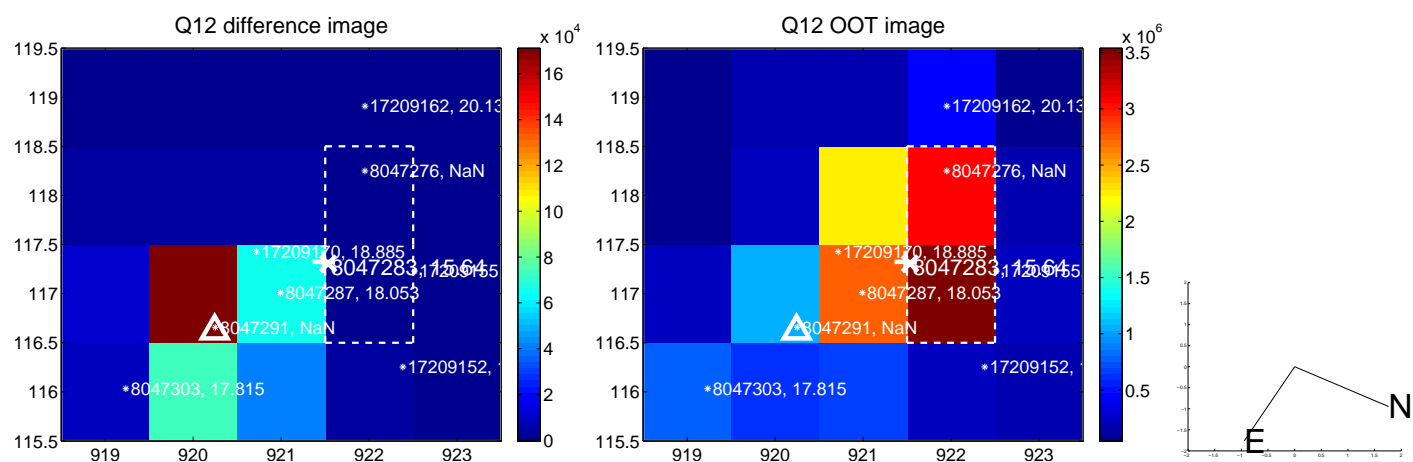
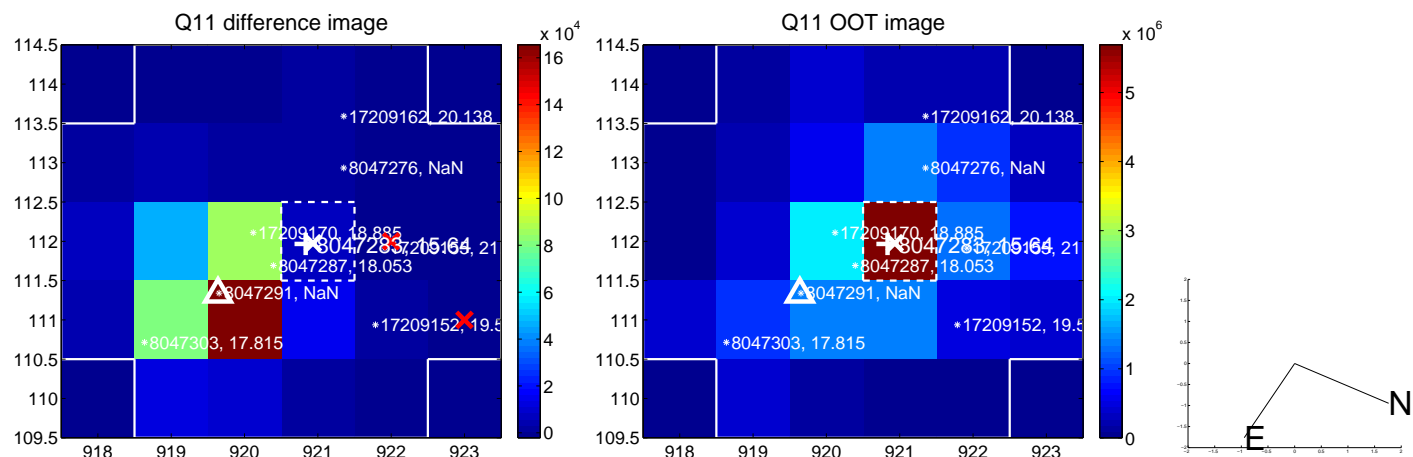
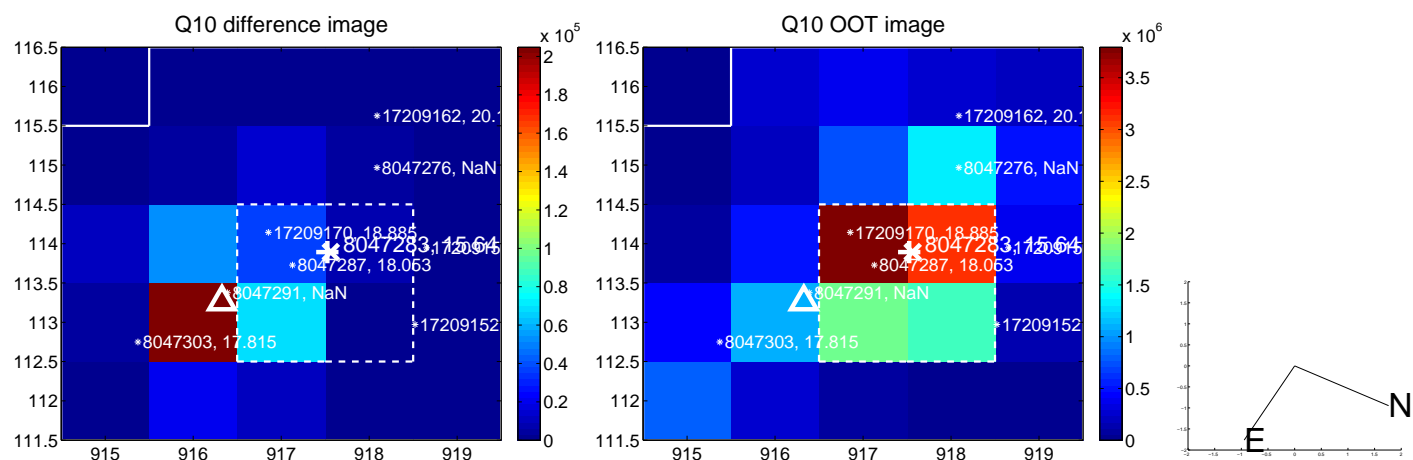
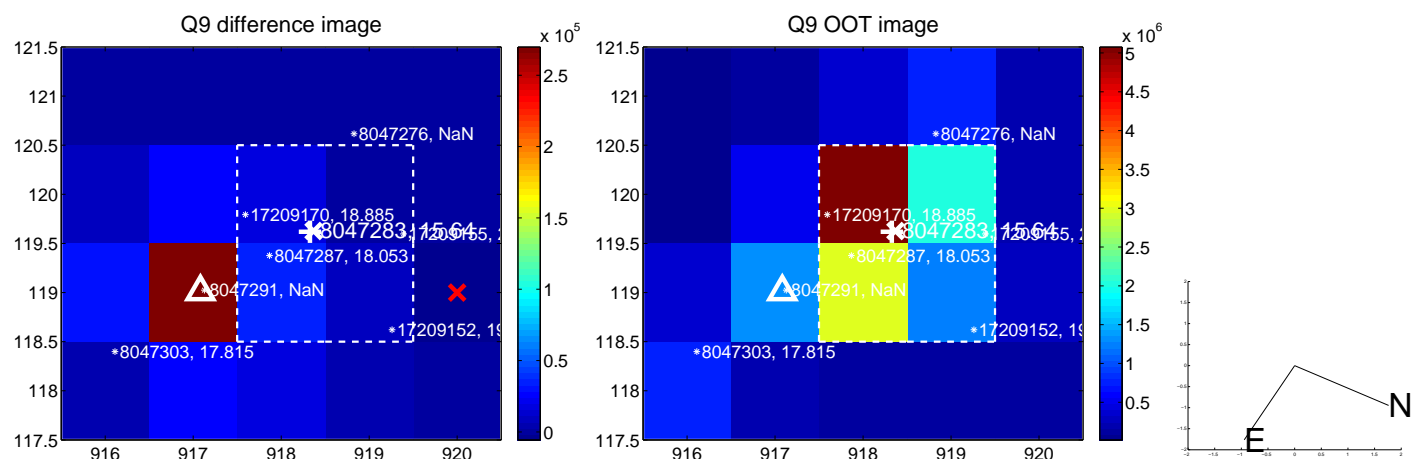
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



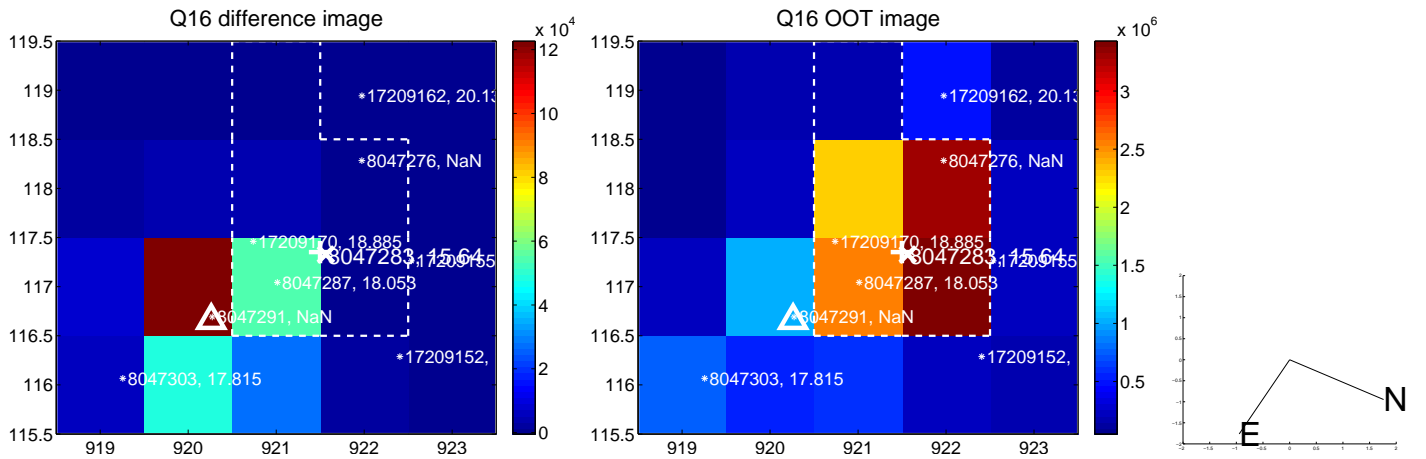
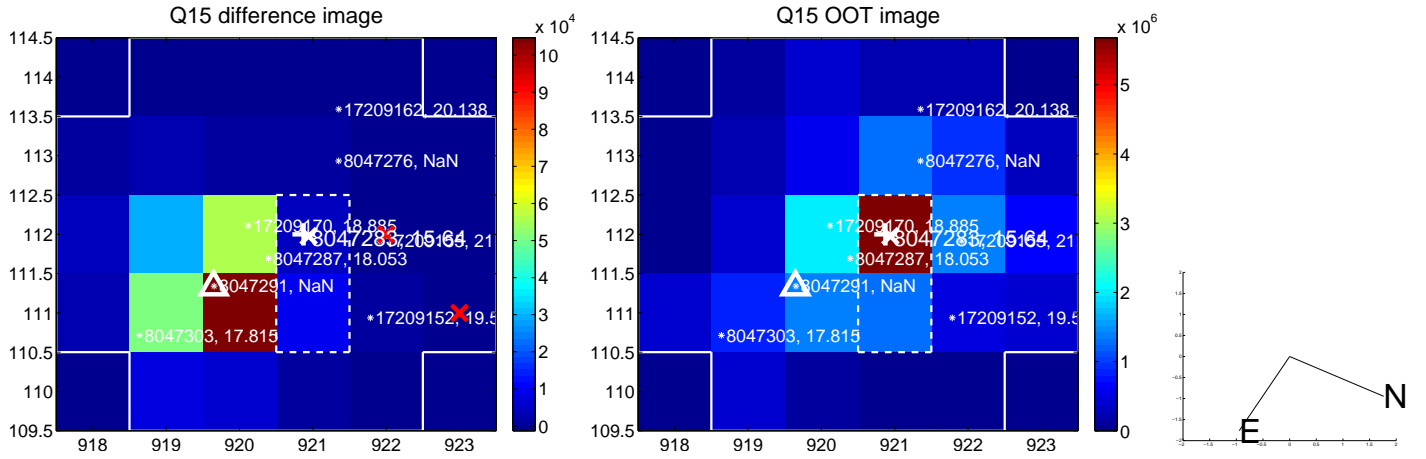
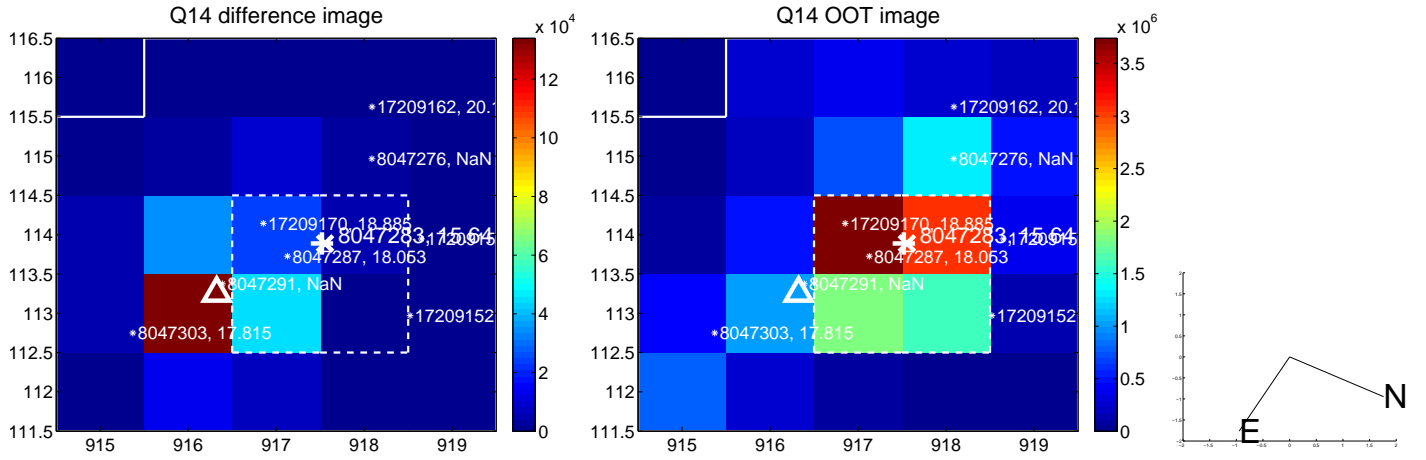
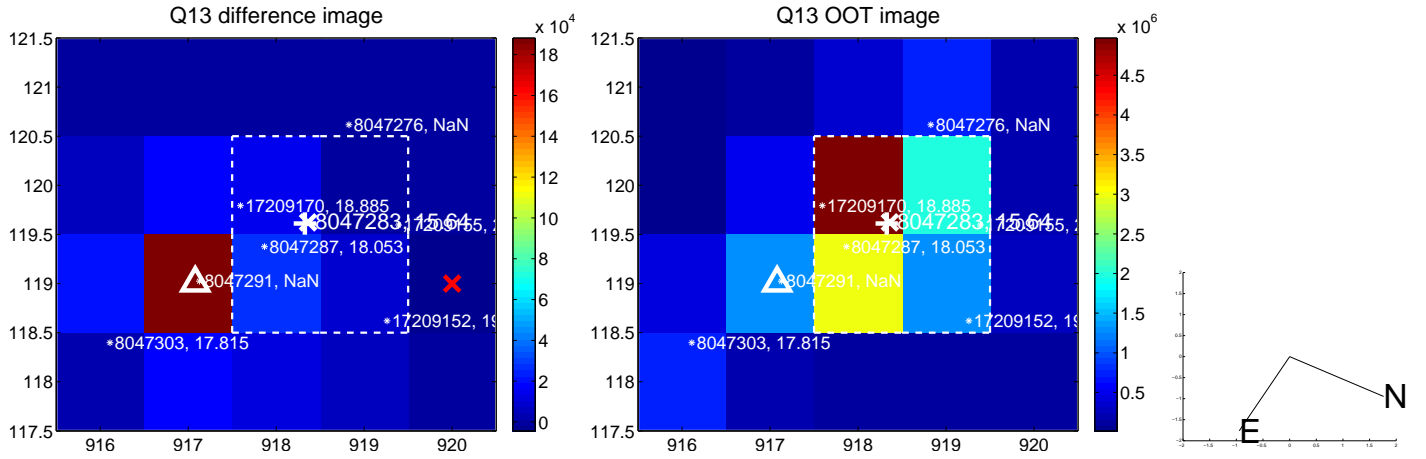
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



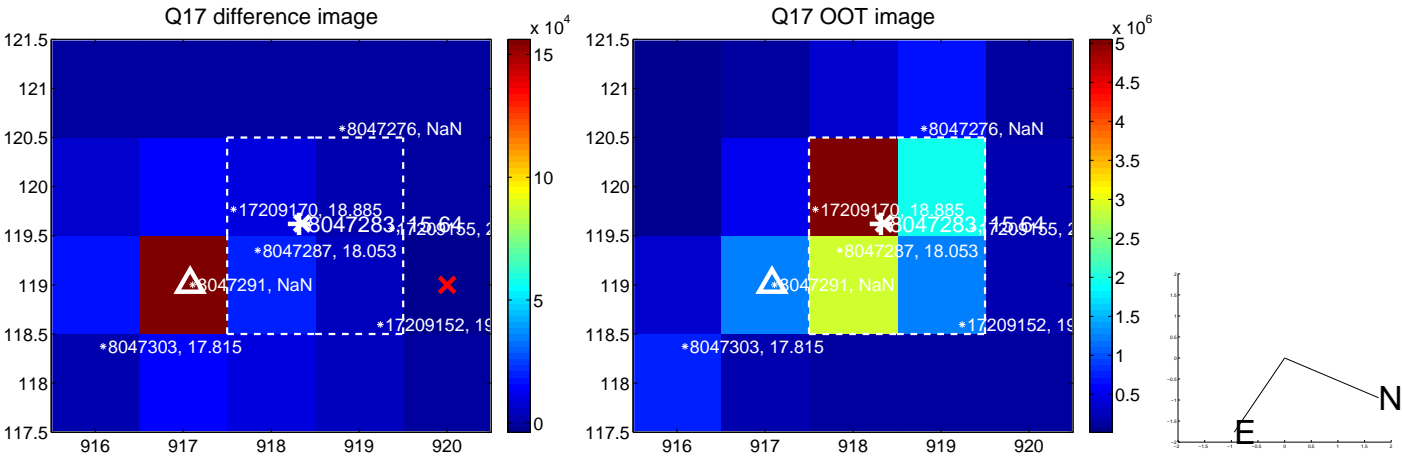
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



folded centroid time series figure for this object.

UKIRT Image

Declination

