

KIC 011599264

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})
011599264-01	OBS	1417.01	8.428089	139.173219	11246.2	1.881	188.6	184.2	0.81	5761	12.13	105.63
011599264-02	OBS	No	8.428064	134.969692	1219.5	1.681	16.4	20.4	0.81	5761	3.65	105.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011599264-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
011599264-02	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.

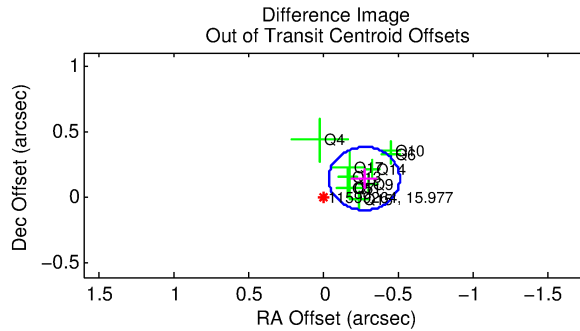
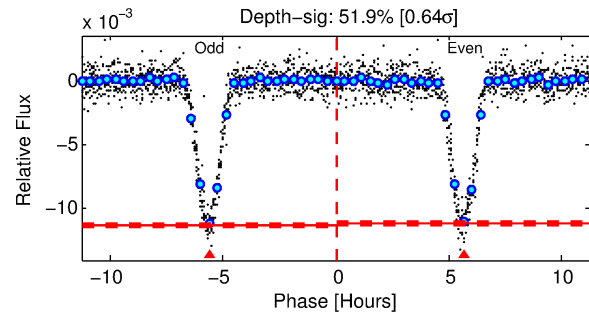
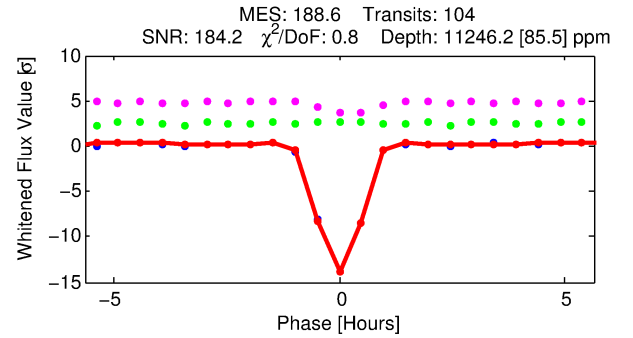
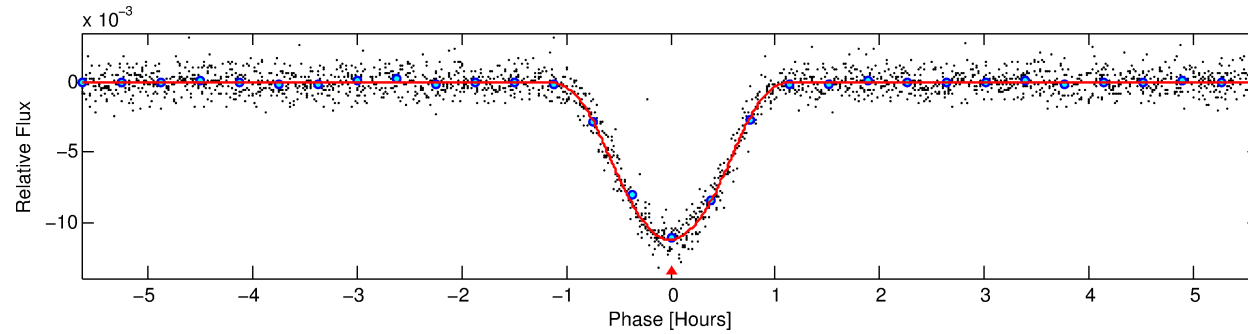
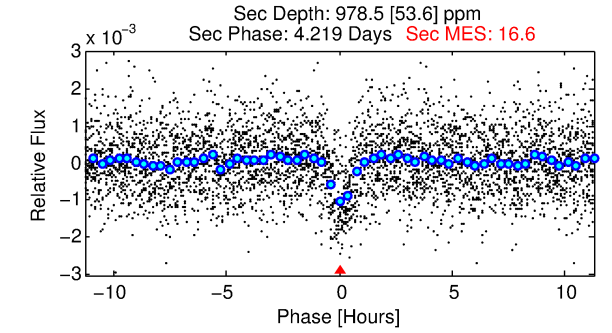
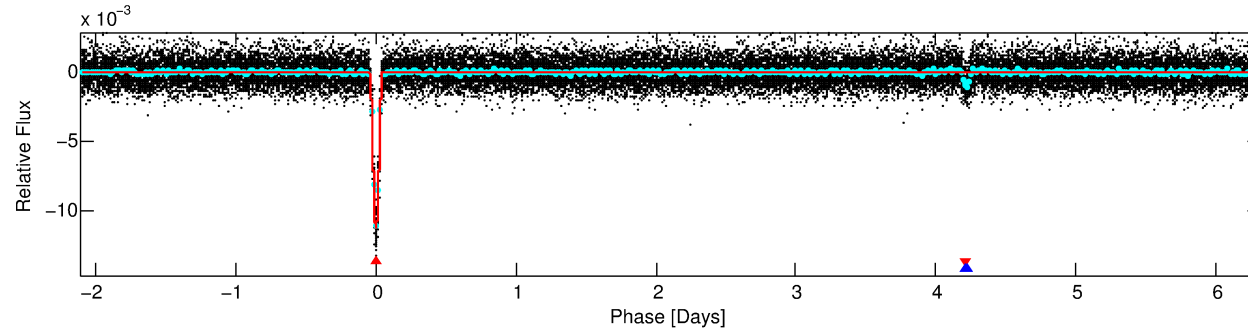
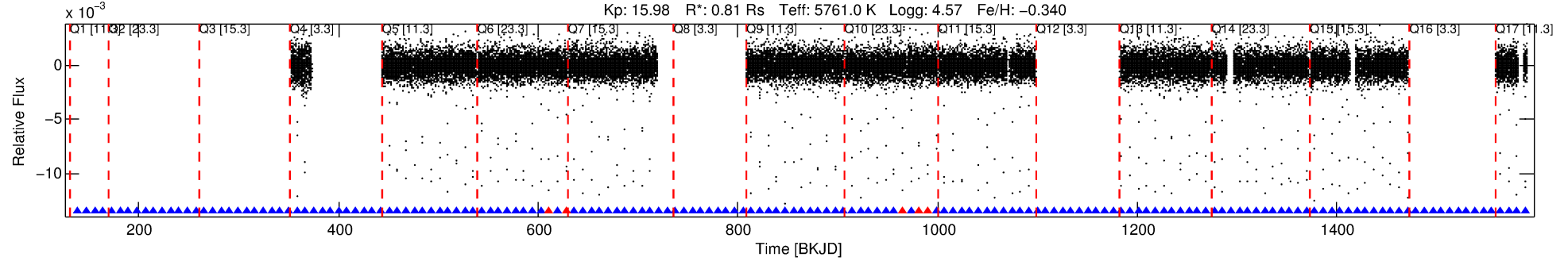
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011599264-01

No Significant Match Found

DV One-Page Summary

KIC: 11599264 Candidate: 1 of 2 Period: 8.428 d
KOI: K01417.01 Corr: 0.998



DV Fit Results:

Period = 8.42809 [0.00000] d
Epoch = 139.1732 [0.0003] BKJD
Rp/R* = 0.1381 [0.0215]
a/R* = 22.04 [0.99]
b = 0.94 [0.04]
Seff = 105.63 [38.76]
Teq = 817 [75] K
Rp = 12.13 [3.90] Re
a = 0.0778 [0.0184] AU
Ag = 22.15 [10.33] [2.05 σ]
Teffp = 2742 [235] K [7.81 σ]

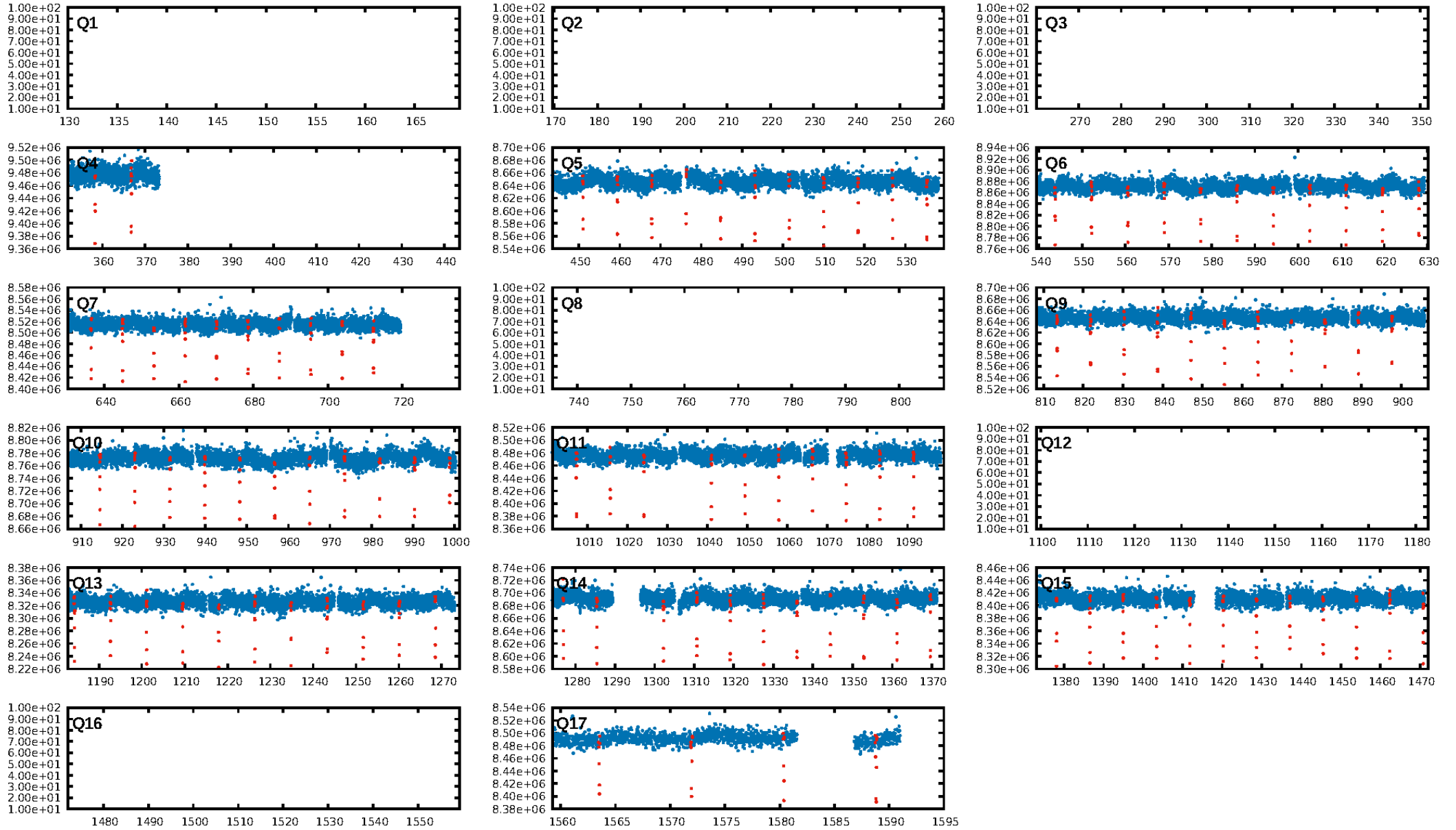
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 91.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.95 [93/98]
GhostDiagnostic-chr: 4.046
Centroid-sig: 0.0%
Centroid-so: 0.231 arcsec [3.51 σ]
OotOffset-rm: 0.312 arcsec [3.93 σ]
KicOffset-rm: 0.192 arcsec [2.67 σ]
OotOffset-st: 3/3/1/4 [11]
KicOffset-st: 3/3/1/4 [11]
DiffImageQuality-fgm: 1.00 [11/11]
DiffImageOverlap-fno: 1.00 [11/11]

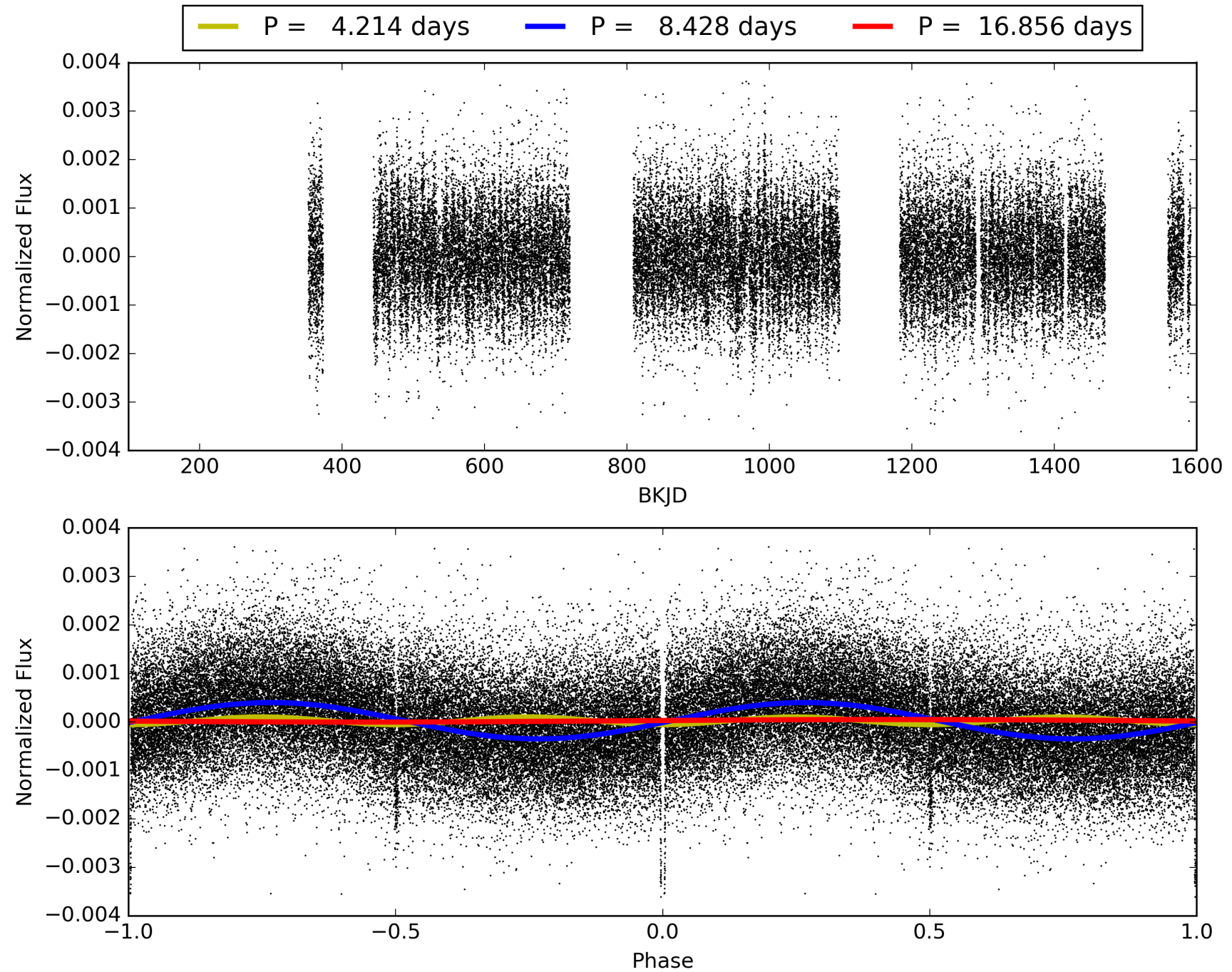
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:45:22 Z

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

TCE 011599264-01, PDC Light Curves

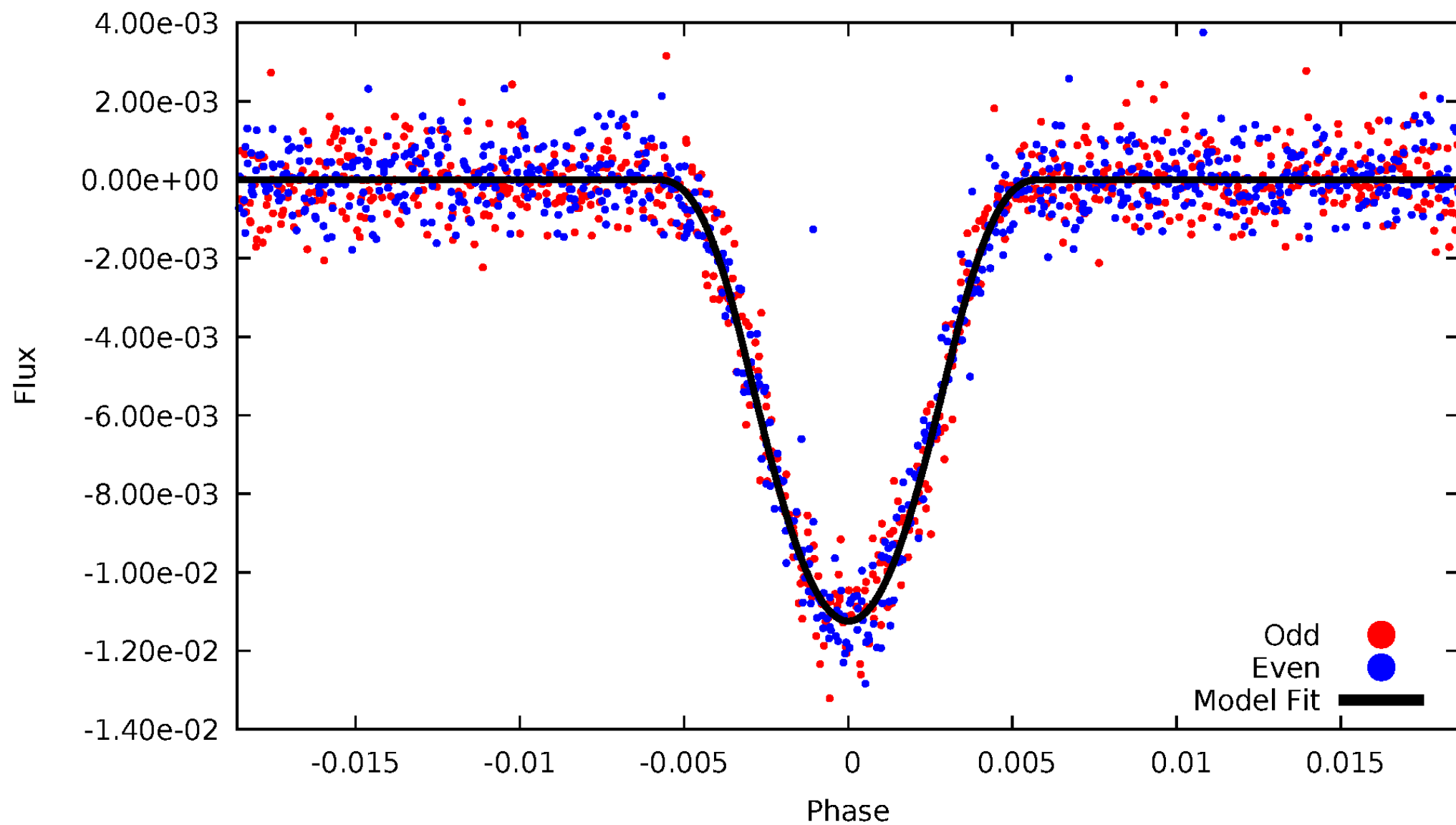


TCE 011599264-01



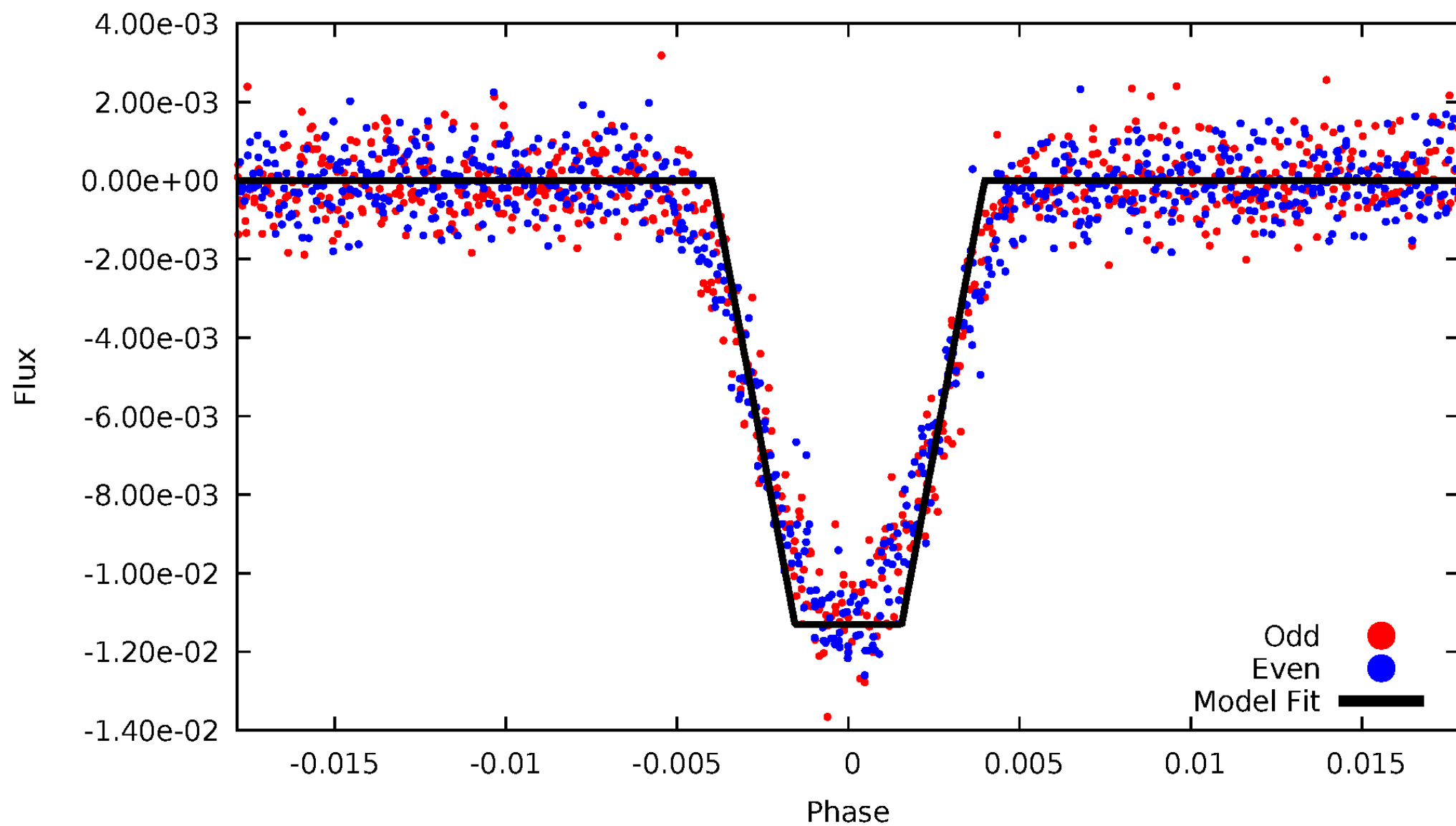
DV Odd/Even

TCE 011599264-01



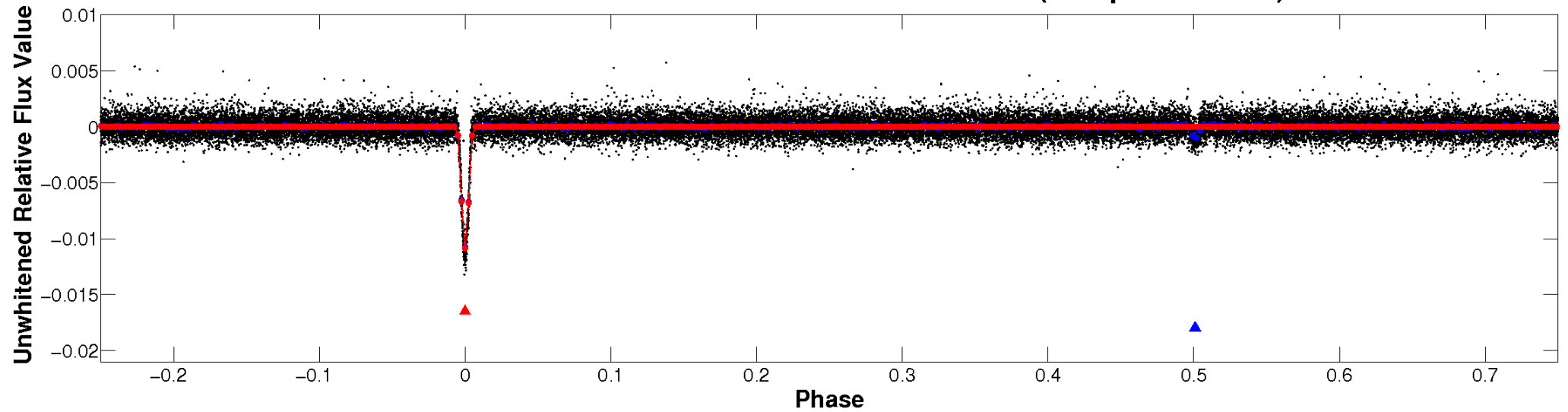
ALT Odd/Even

TCE 011599264-01

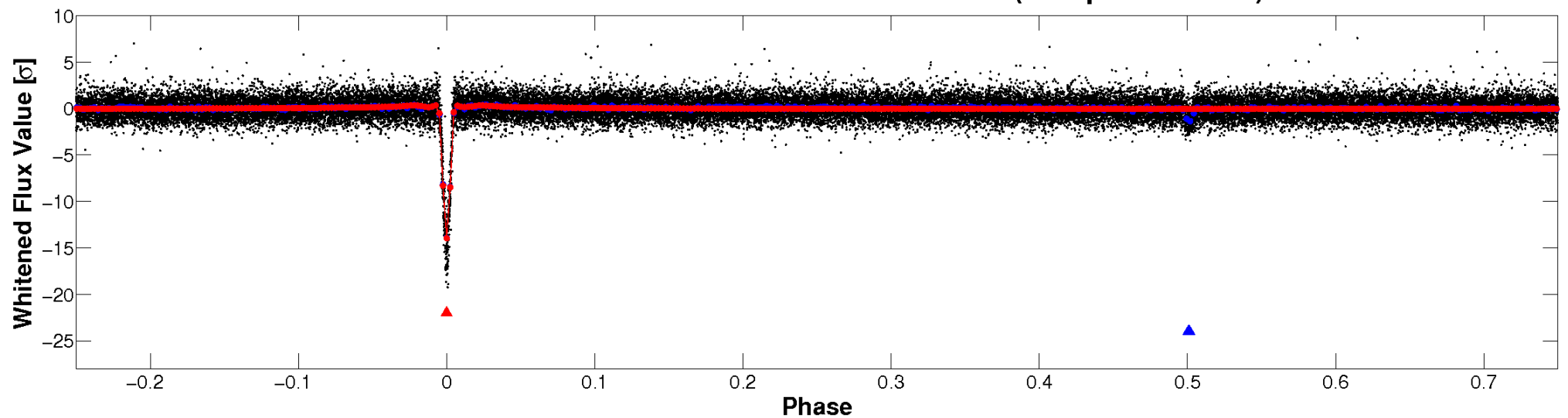


Non-Whitened Vs. Whitened Light Curve

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

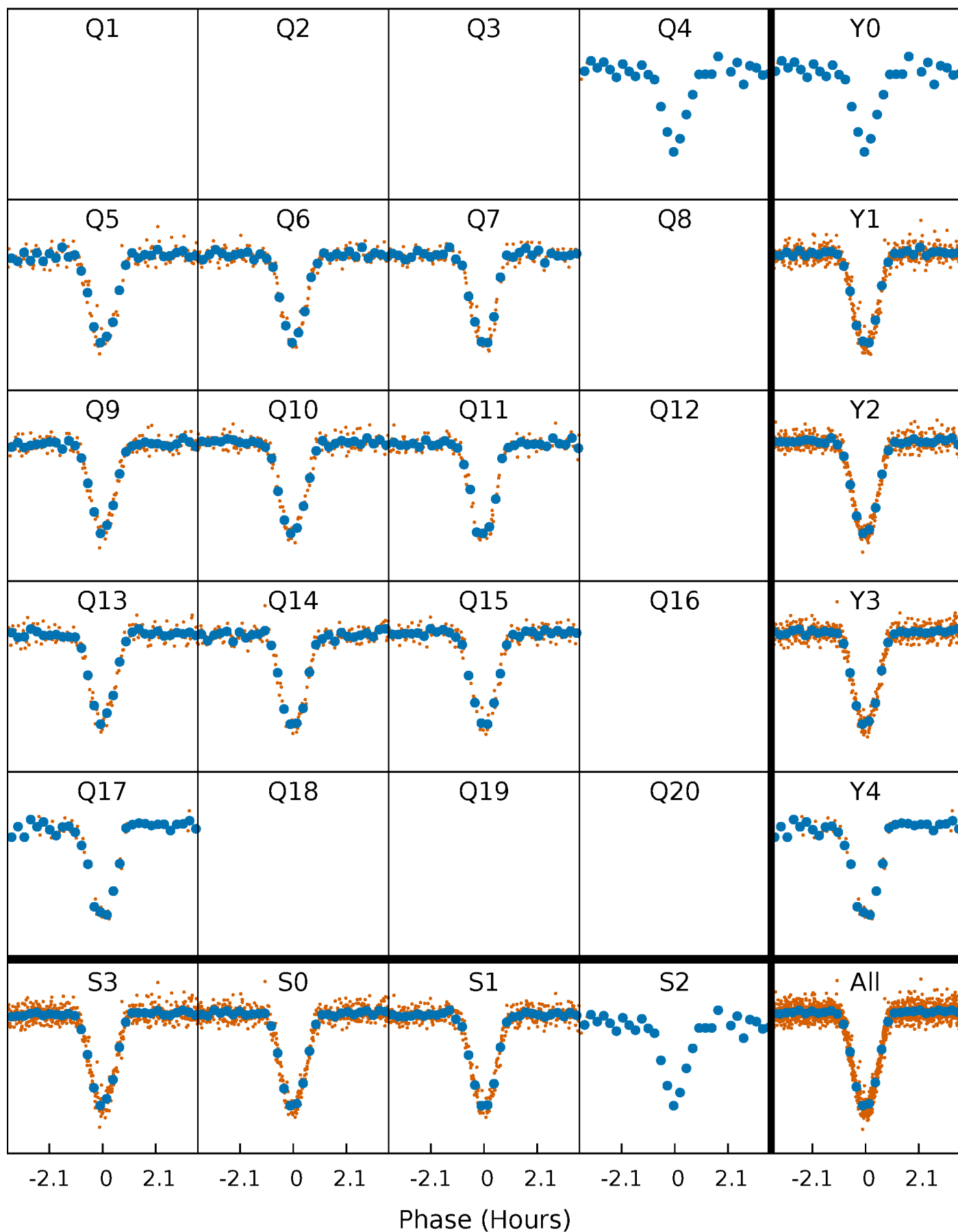


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



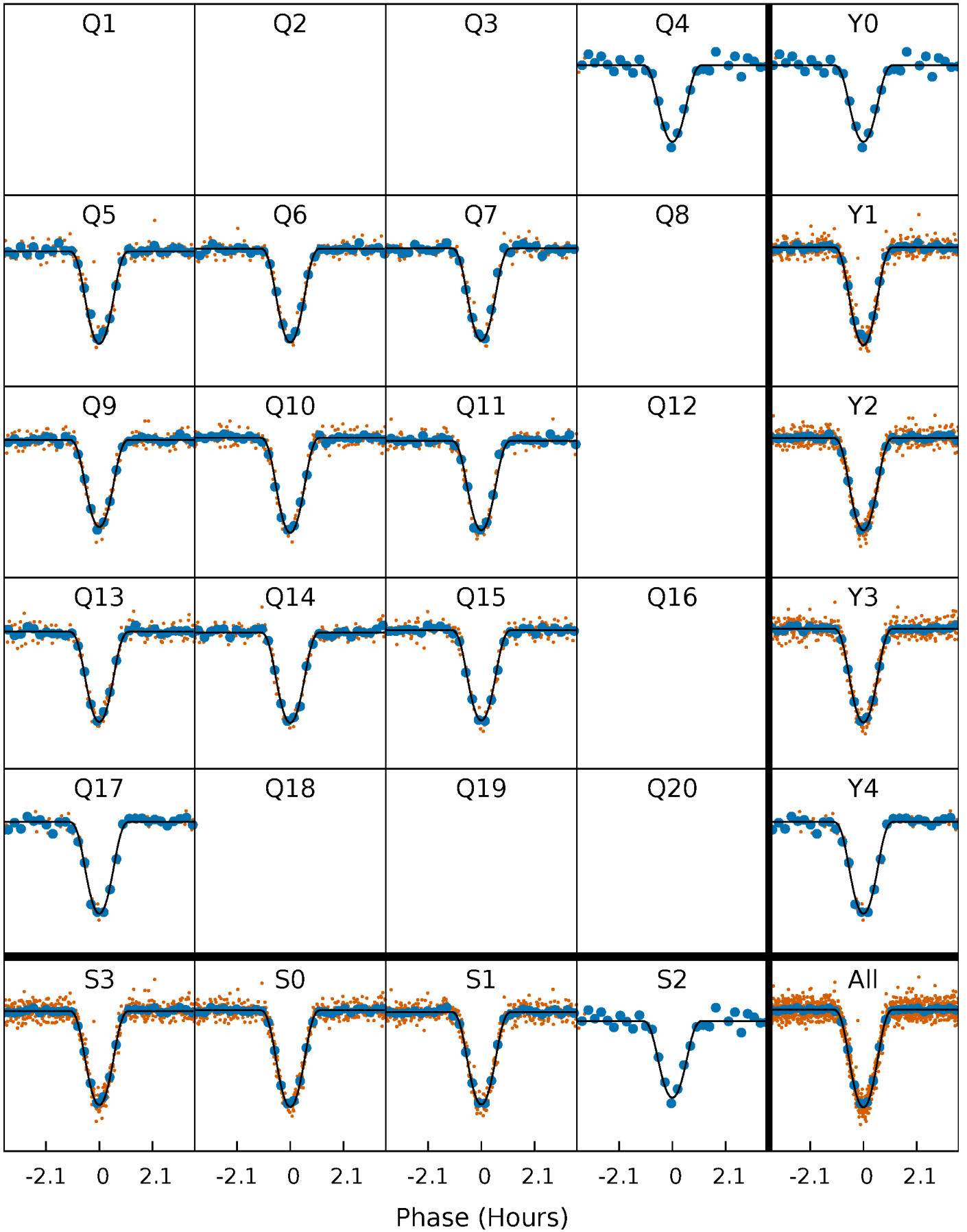
PDC Quarter-Phased Transit Curves

TCE 011599264-01 P= 8.428089 Days $T_0=139.173219$ (BKJD)



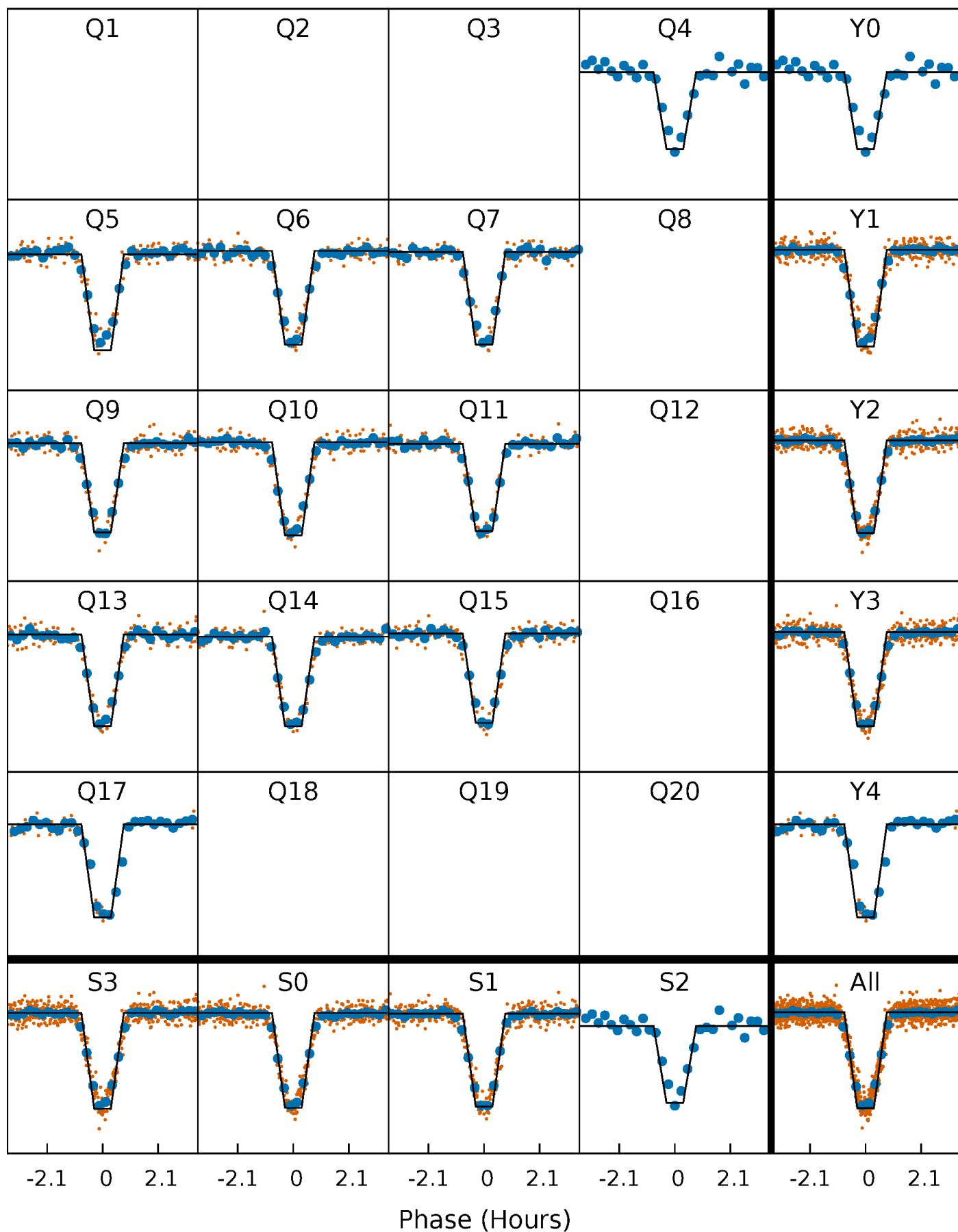
DV Quarter-Phased Transit Curves

TCE 011599264-01 P= 8.428089 Days $T_0=139.173219$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

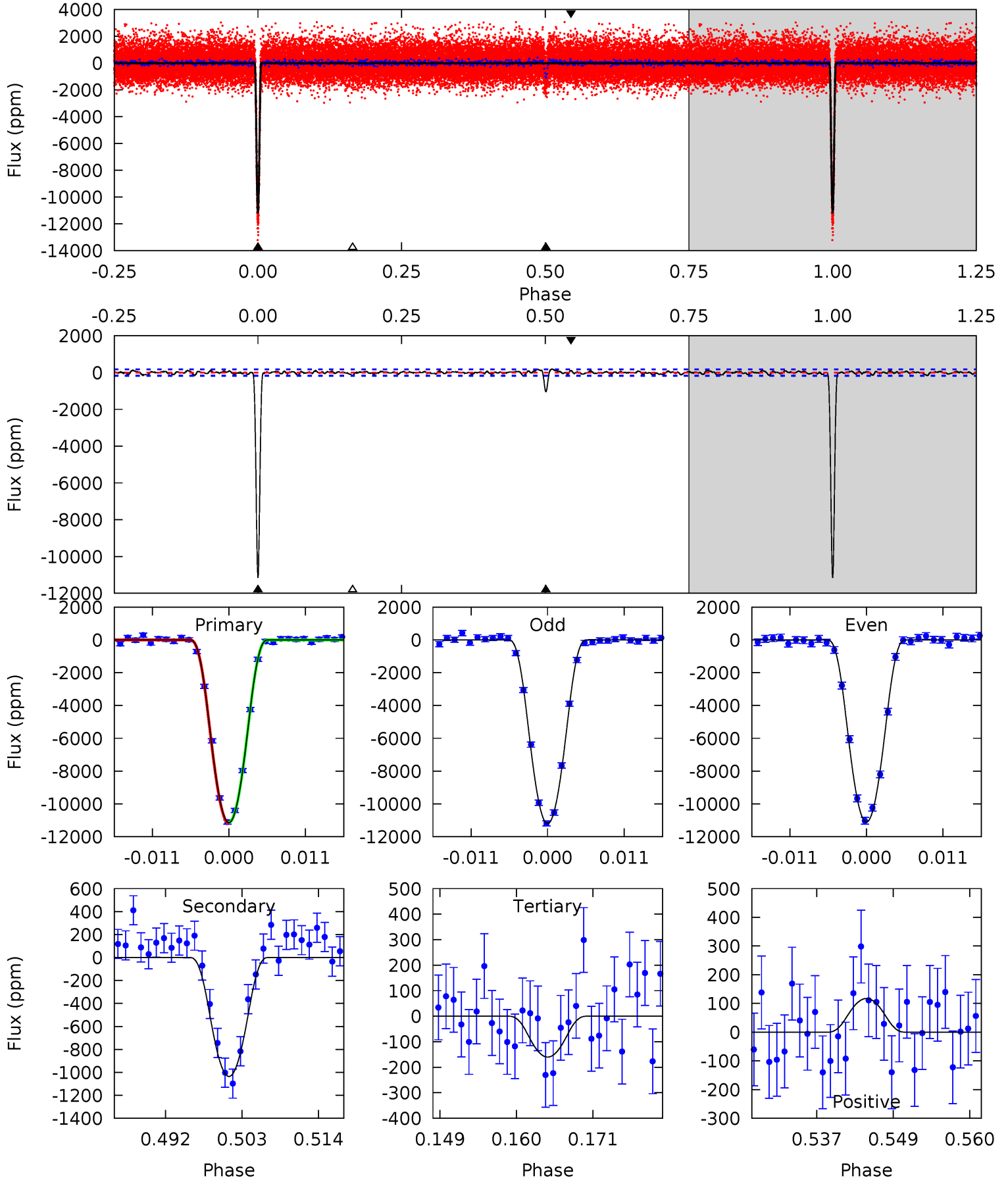
TCE 011599264-01 P= 8.428069 Days $T_0=139.175211$ (BKJD)



DV Model-Shift Uniqueness Test

011599264-01, P = 8.428089 Days, E = 139.173219 Days

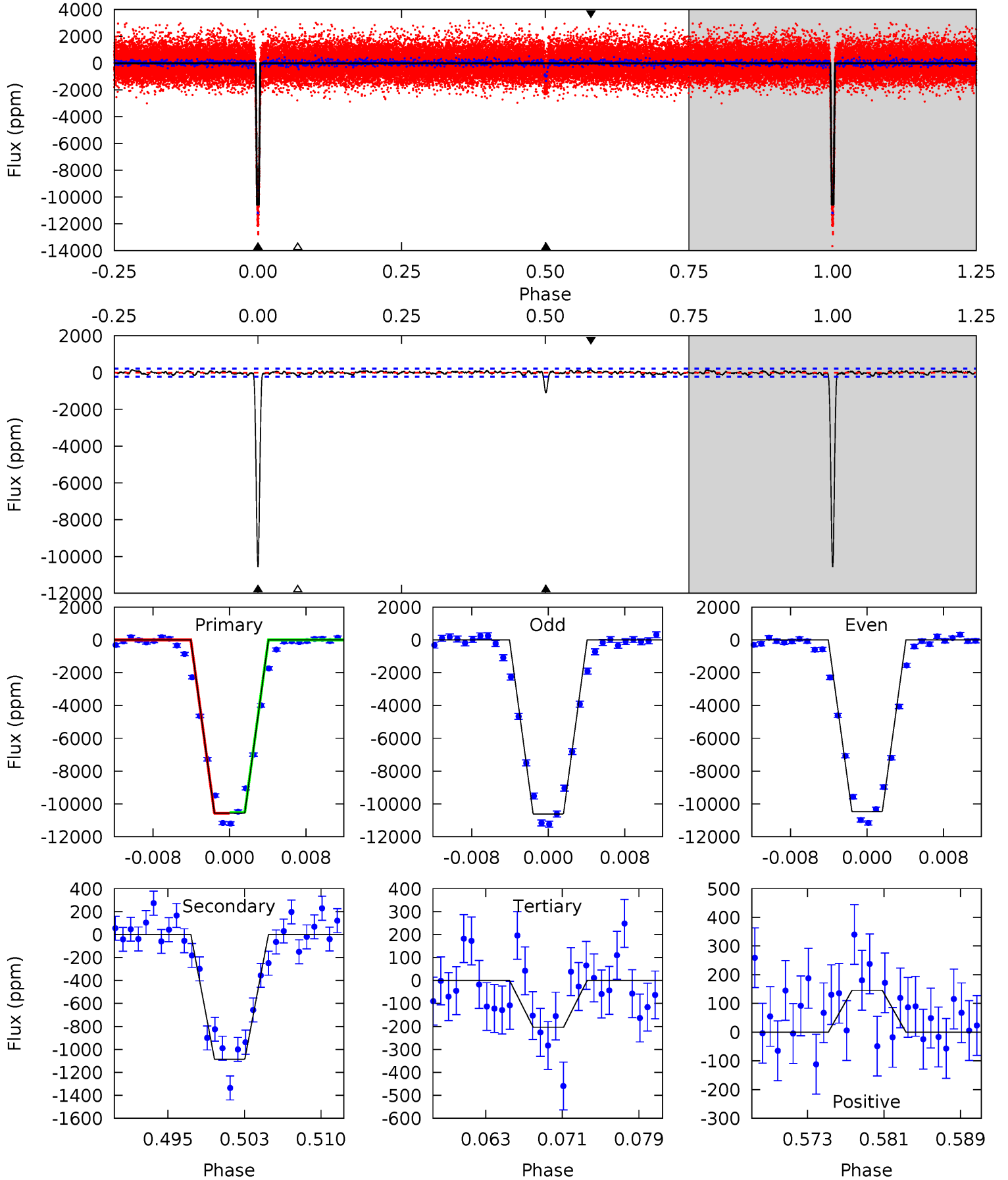
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
318.2	29.6	4.57	3.35	5.00	2.53	1.51	313.7	314.9	25.0	26.2	1.31	0.99	0.02	0.87



Alt Model-Shift Uniqueness Test

011599264-01, P = 8.428069 Days, E = 139.175211 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
248.6	25.6	4.79	3.43	5.07	2.66	1.26	243.9	245.2	20.8	22.1	1.60	0.98	0.01	0.56



Stellar Parameters For KIC 011599264

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5761^{+189}_{-189}	$4.573^{+0.033}_{-0.187}$	$-0.340^{+0.300}_{-0.300}$	$0.805^{+0.226}_{-0.071}$	$0.893^{+0.100}_{-0.100}$	$2.410^{+0.445}_{-1.131}$
	+3%/-3%	+1%/-4%	+88%/-88%	+28%/-9%	+11%/-11%	+18%/-47%
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 011599264-01 / KOI 1417.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1036 ± 35	$12.71^{+2.81}_{-2.34}$	1172^{+75}_{-55}	3318^{+209}_{-143}	21^{+9}_{-7}
Alt.	-1086 ± 42	$9.91^{+2.34}_{-2.06}$	1177^{+84}_{-58}	3640^{+302}_{-236}	36^{+21}_{-12}

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 $A_{\text{obs}} \gg 1.0$

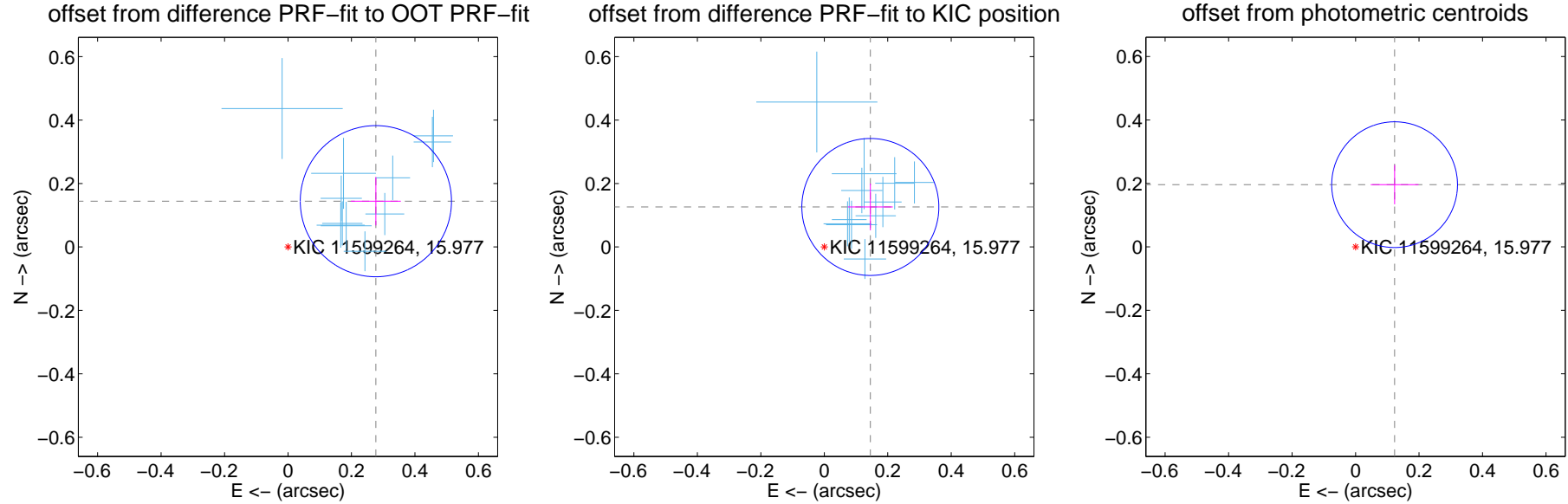
DV Centroid Data

Supplemental centroid analysis for 011599264-01. Kepler magnitude: 15.98. Transit SNR 184.21

There are 11 quarters with good PRF difference image offsets

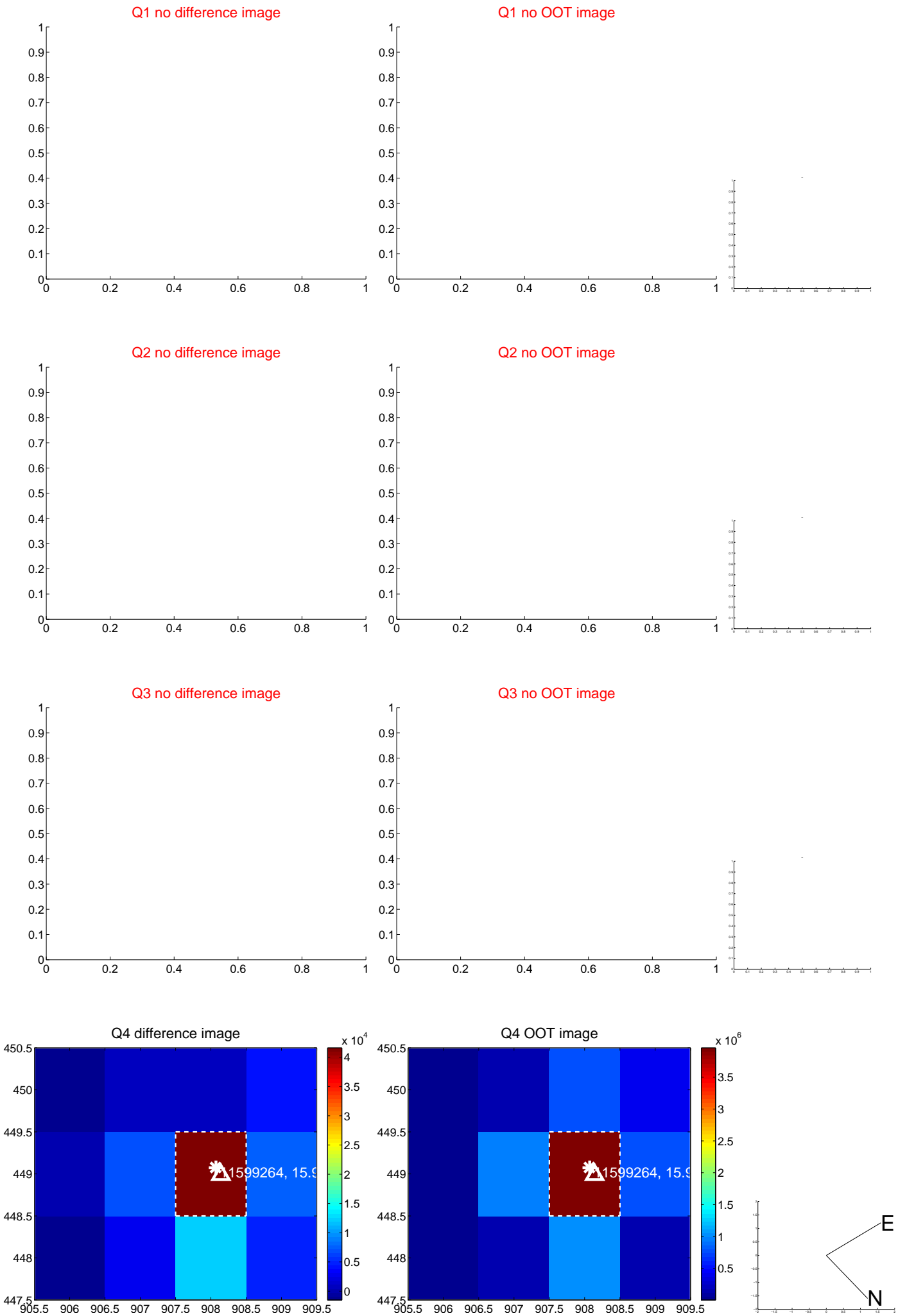
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.312 ± 0.079	3.93	-0.277 ± 0.079	0.144 ± 0.076
PRF-fit source offset from KIC position	0.192 ± 0.072	2.67	-0.145 ± 0.071	0.126 ± 0.074
photometric centroid source offset	0.23 ± 0.07	3.51	-0.12 ± 0.08	0.20 ± 0.06

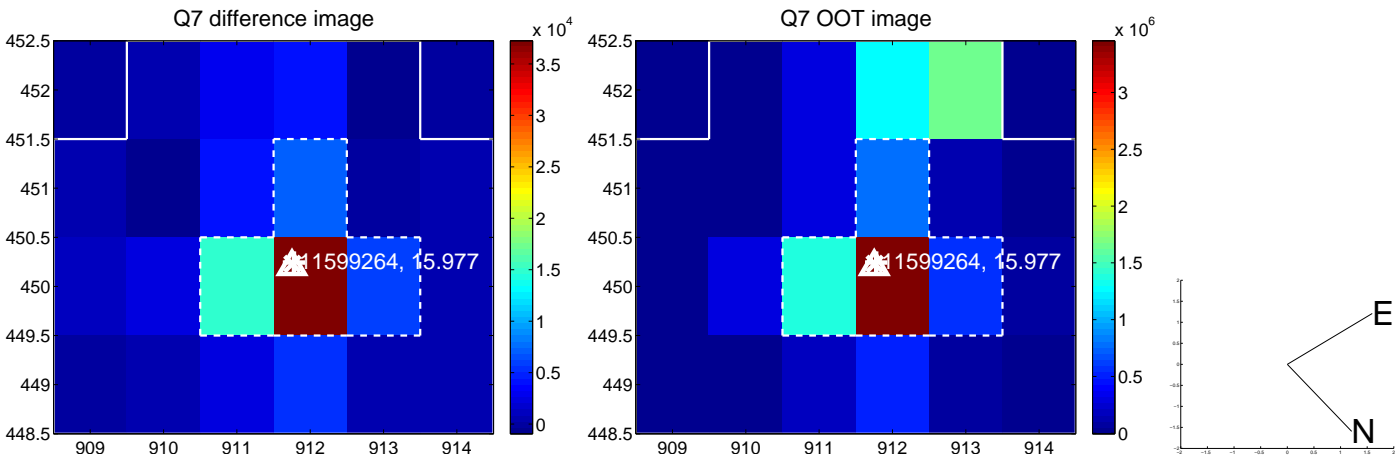
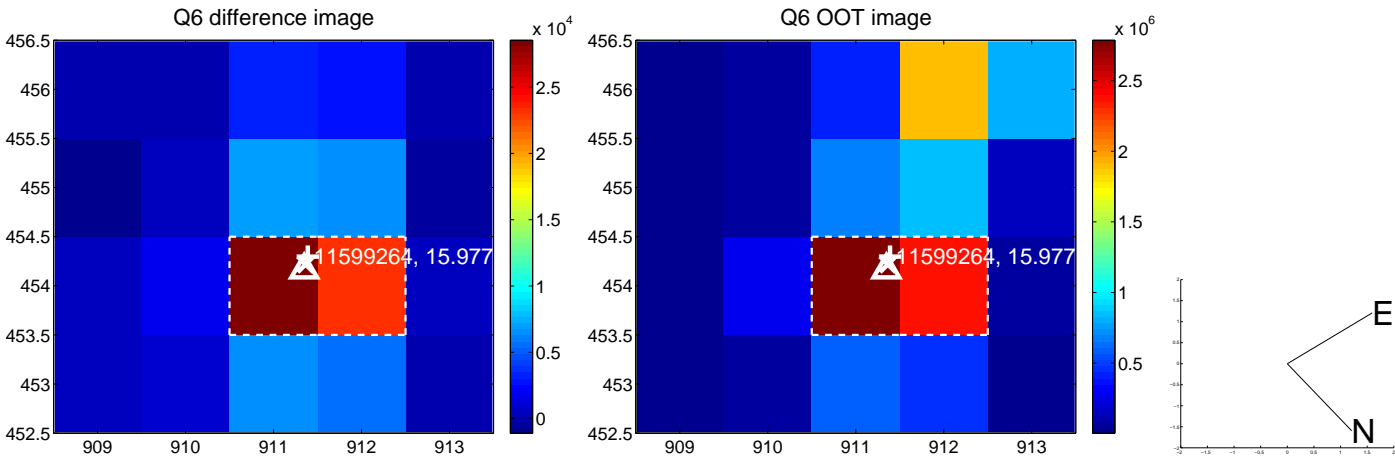
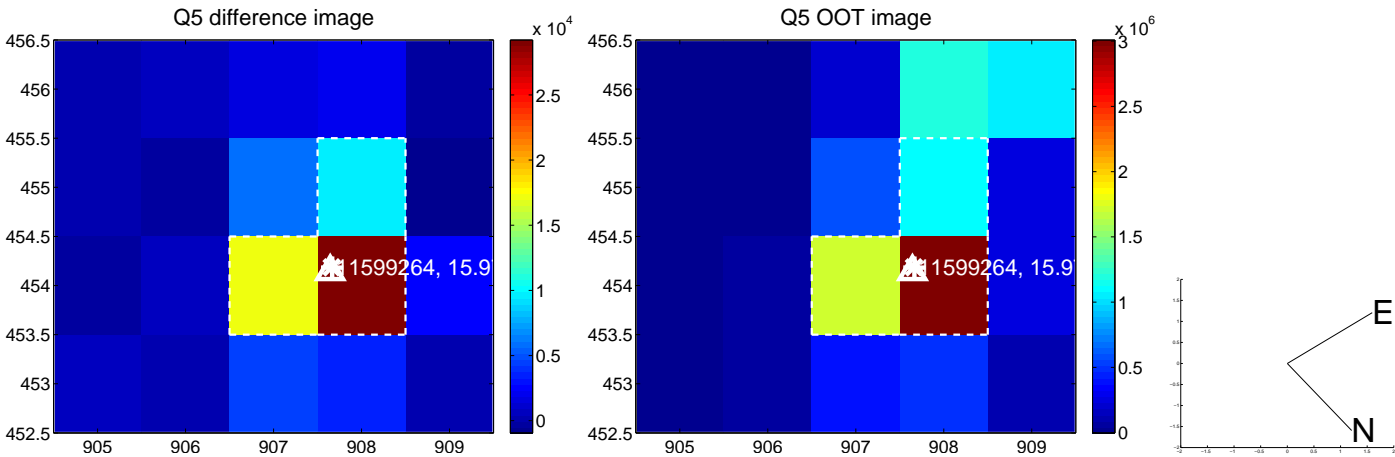


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

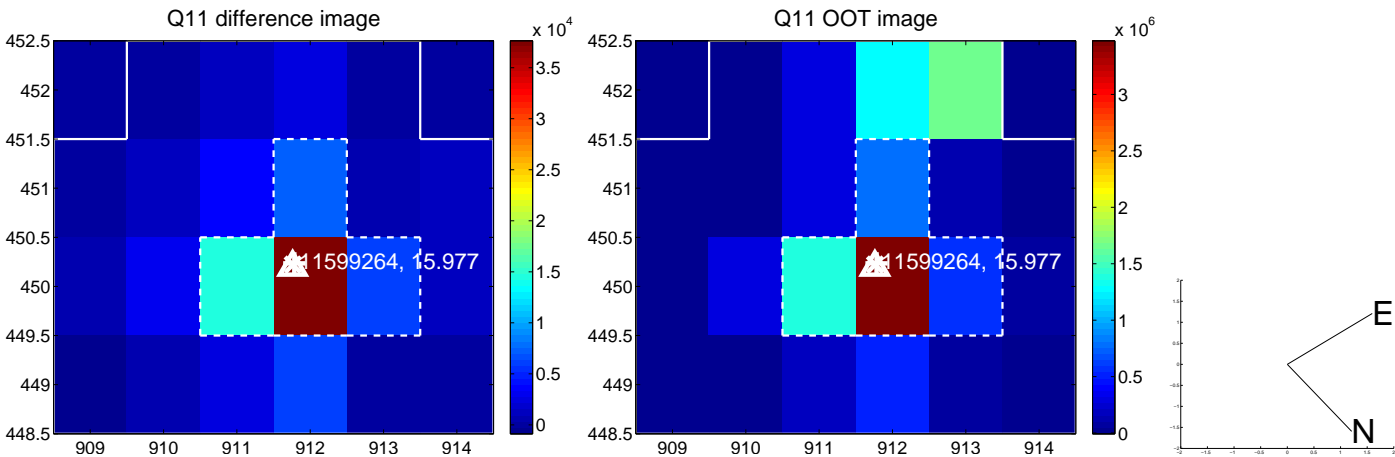
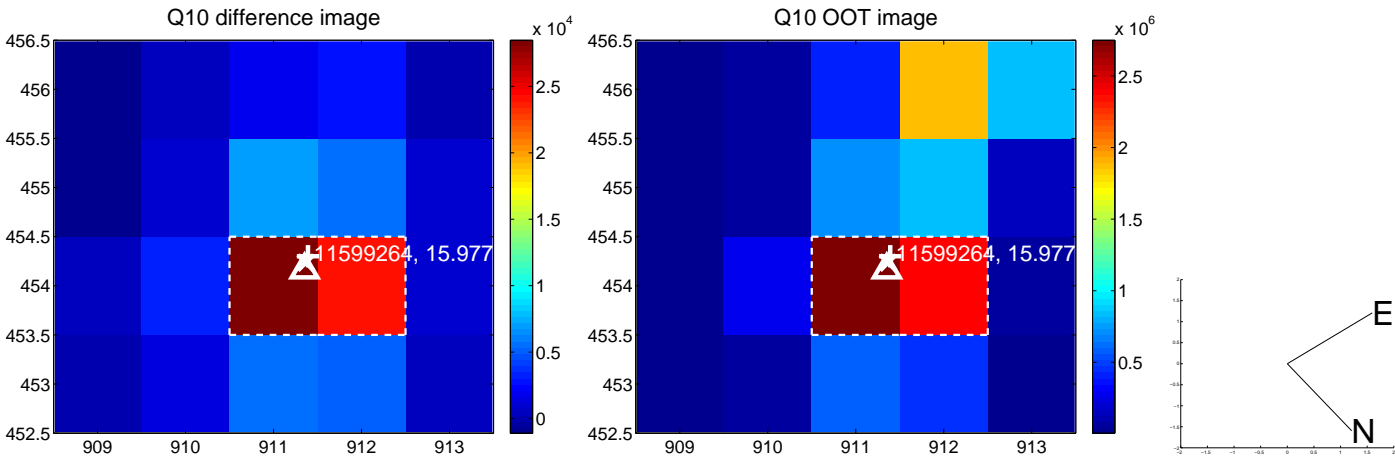
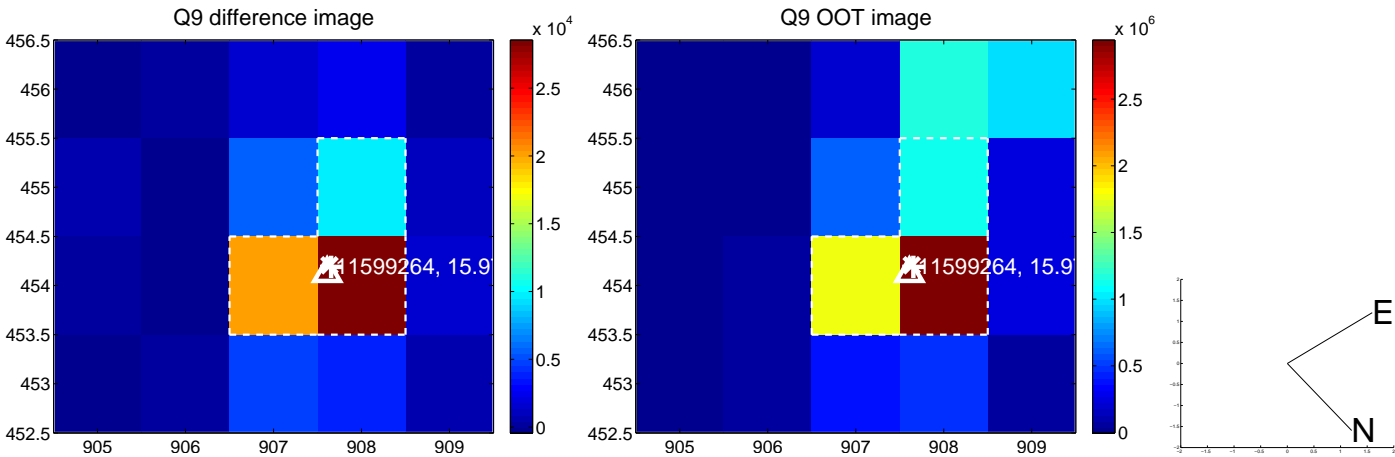
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



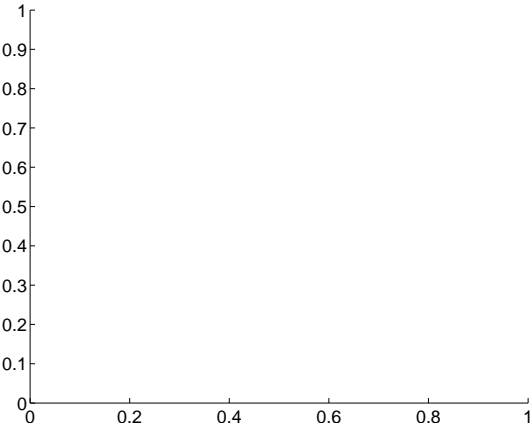
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



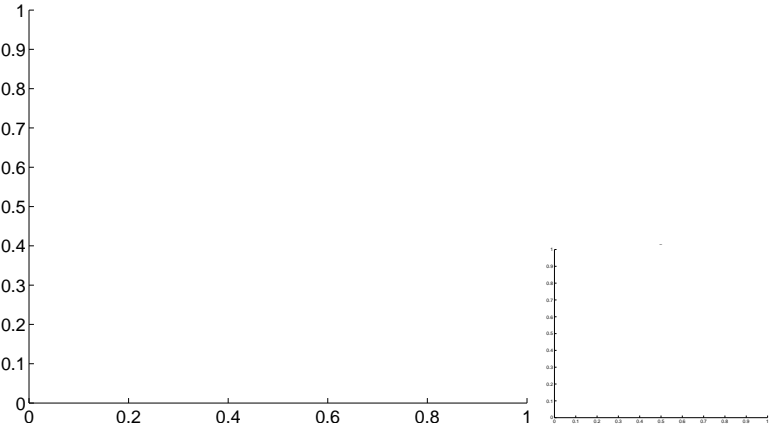
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



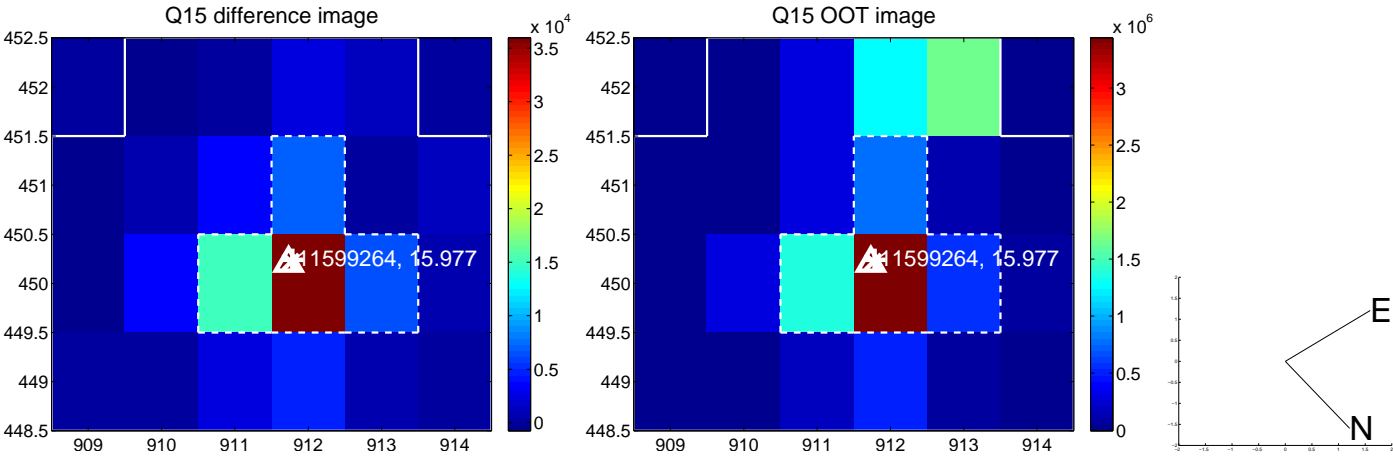
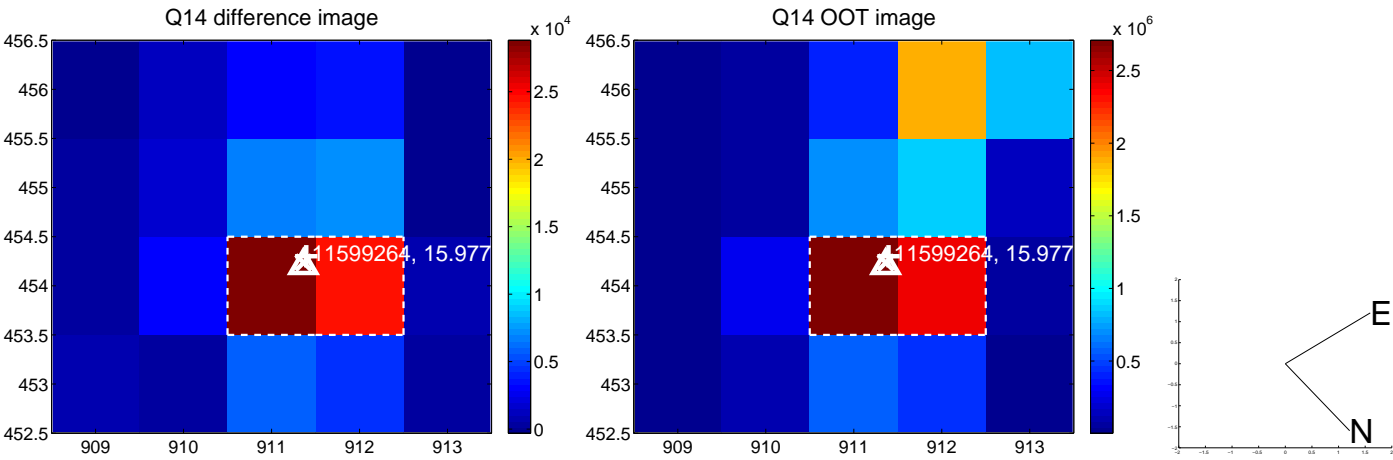
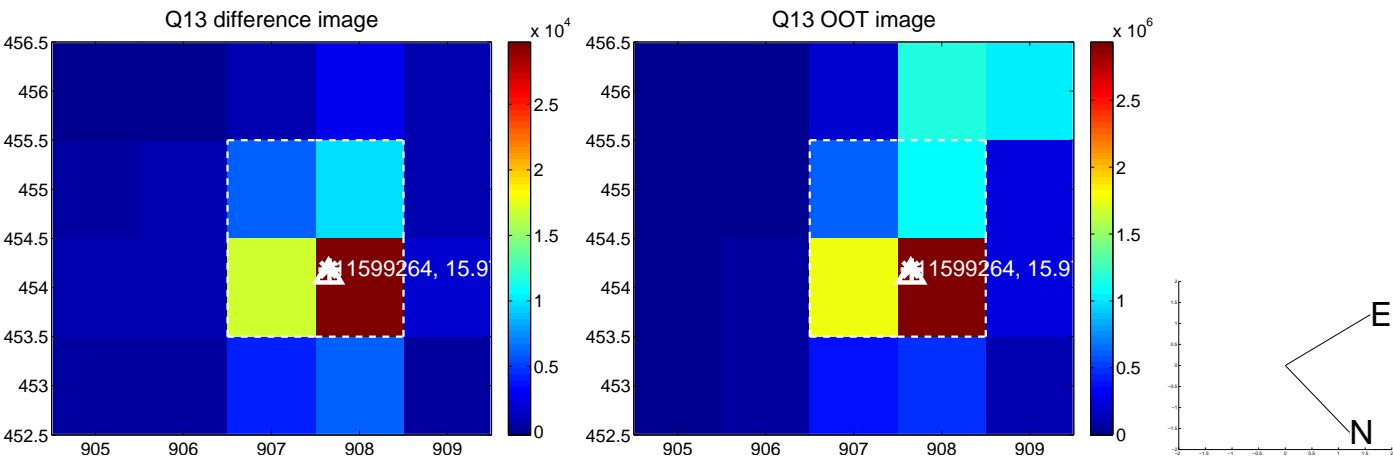
Q12 no difference image



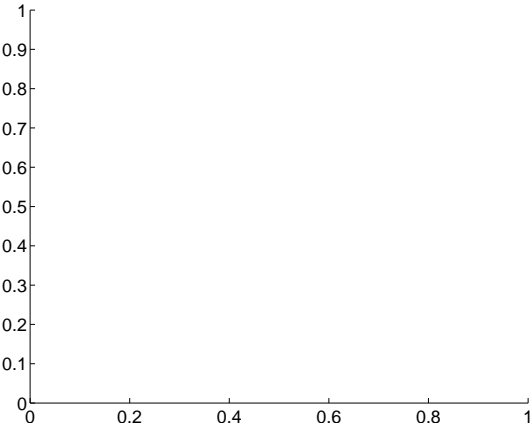
Q12 no OOT image



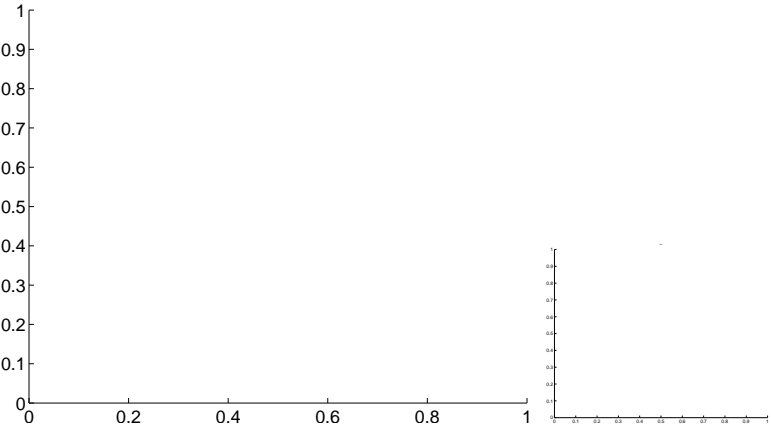
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



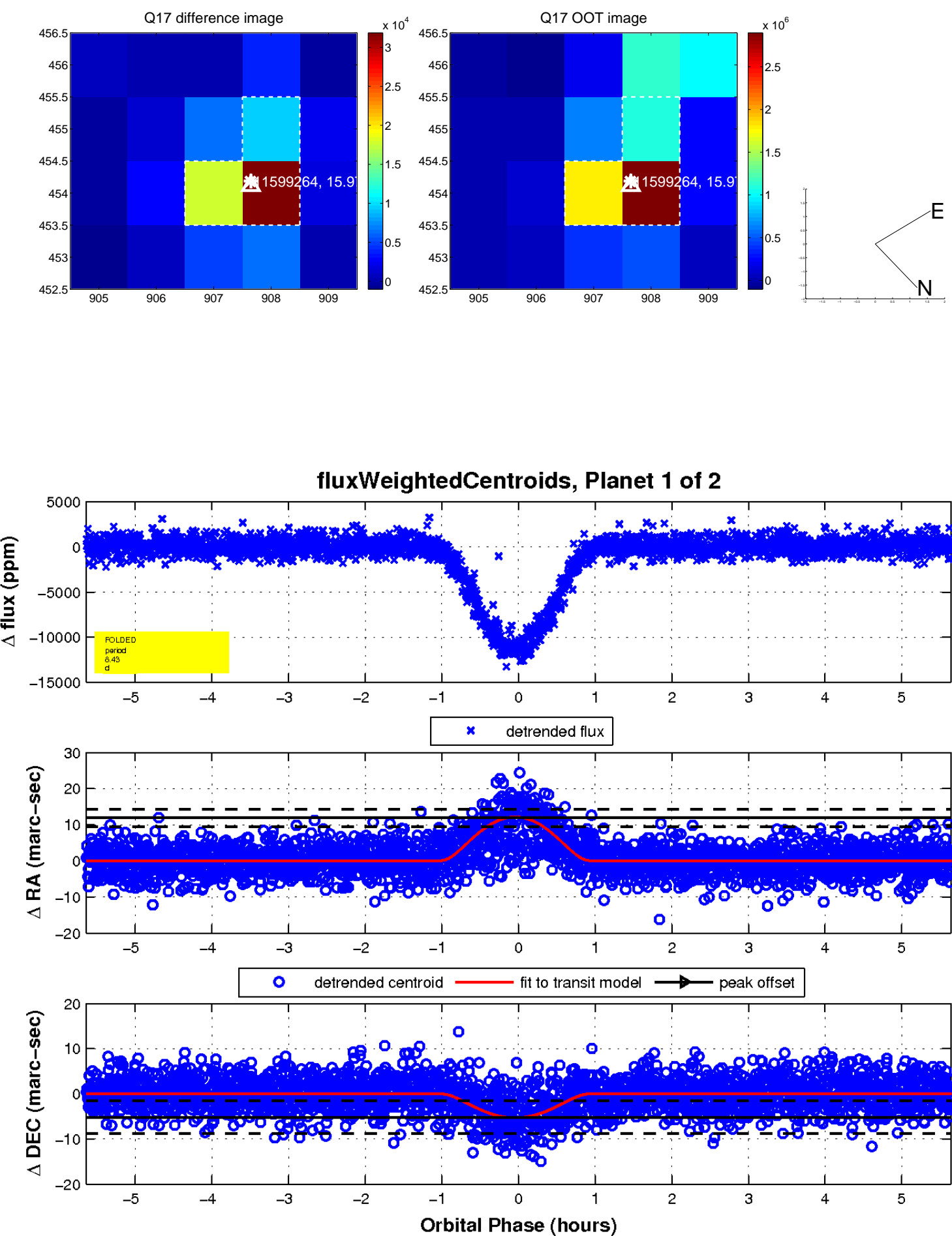
Q16 no difference image



Q16 no OOT image

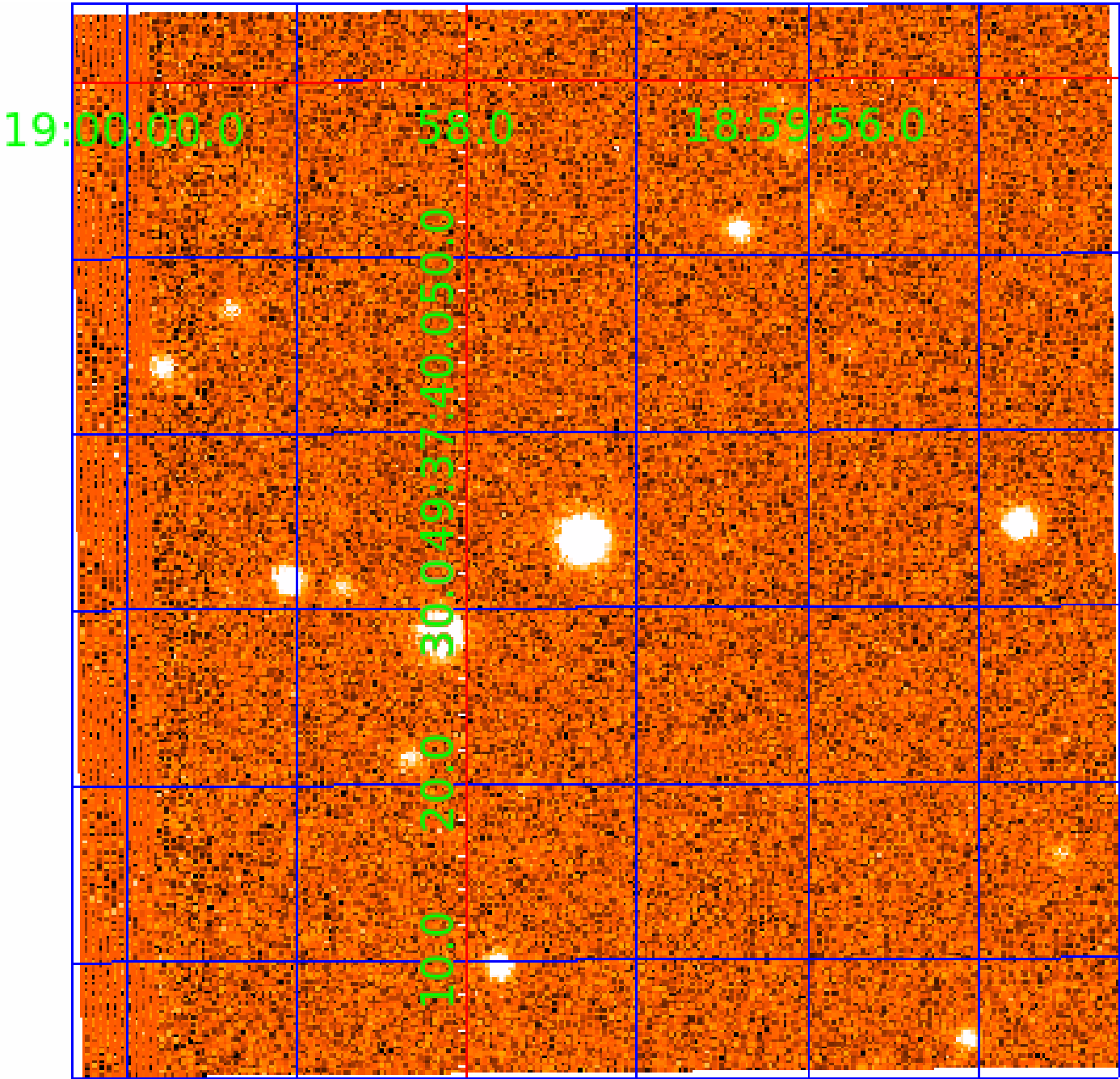


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011599264

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})
011599264-01	OBS	1417.01	8.428089	139.173219	11246.2	1.881	188.6	184.2	0.81	5761	12.13	105.63
011599264-02	OBS	No	8.428064	134.969692	1219.5	1.681	16.4	20.4	0.81	5761	3.65	105.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011599264-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—DEEP_V_SHAPED—HAS_SEC_TCE
011599264-02	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.

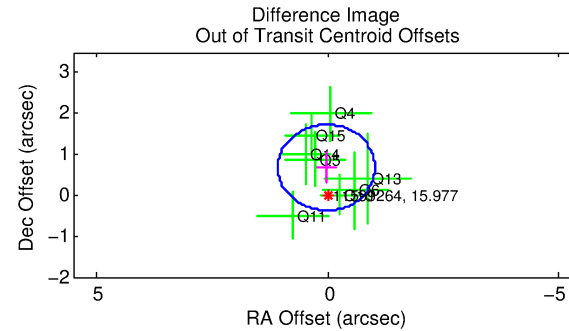
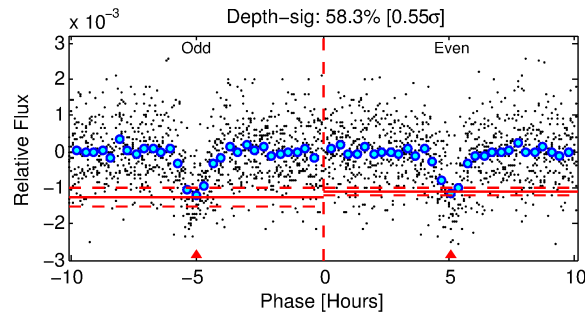
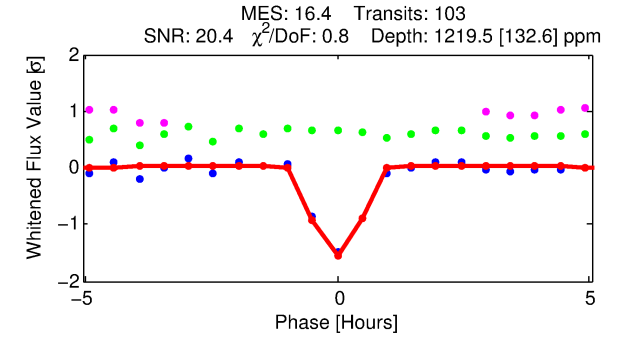
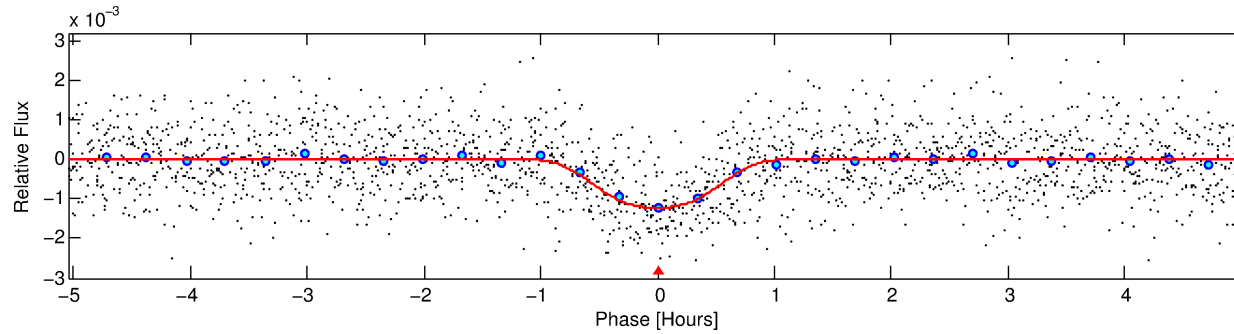
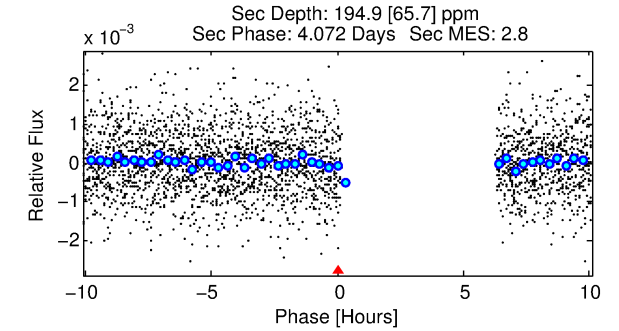
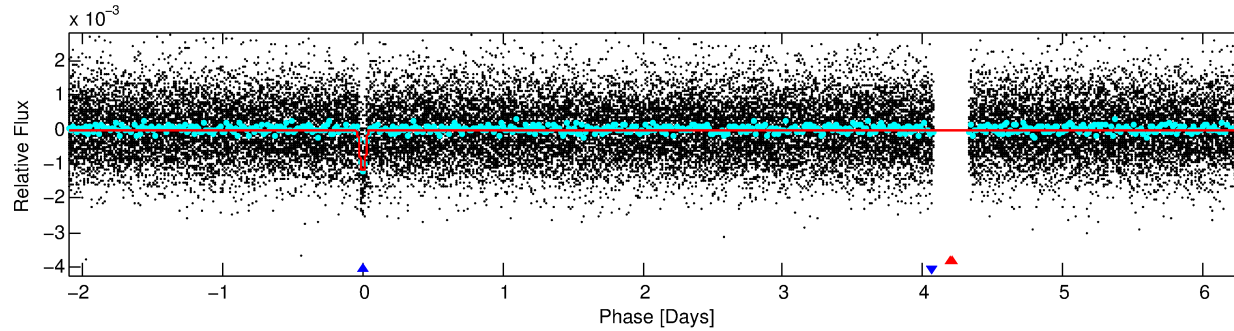
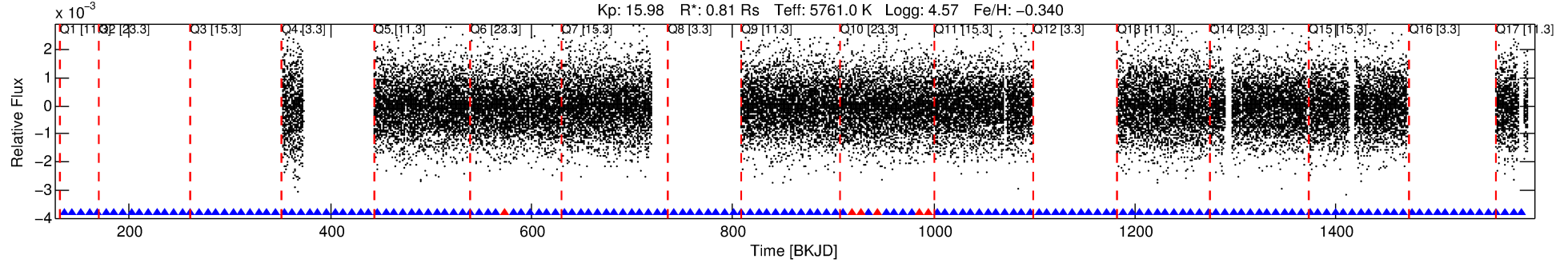
Ephemeris Match Information For 011599264-02

No Significant Match Found

DV One-Page Summary

KIC: 11599264 Candidate: 2 of 2 Period: 8.428 d
KOI: K01417 Corr: No Ephemeris Match

Kp: 15.98 R*: 0.81 Rs Teff: 5761.0 K Logg: 4.57 Fe/H: -0.340



DV Fit Results:

Period = 8.42806 [0.00003] d
Epoch = 134.9697 [0.0025] BKJD
Rp/R* = 0.0416 [0.0049]
a/R* = 15.80 [3.36]
b = 0.96 [0.02]
Seff = 105.63 [38.76]
Teq = 817 [75] K
Rp = 3.65 [1.11] Re
a = 0.0778 [0.0184] AU
Ag = 48.68 [26.06] [1.83σ]
Teff = 3339 [360] K [6.85σ]

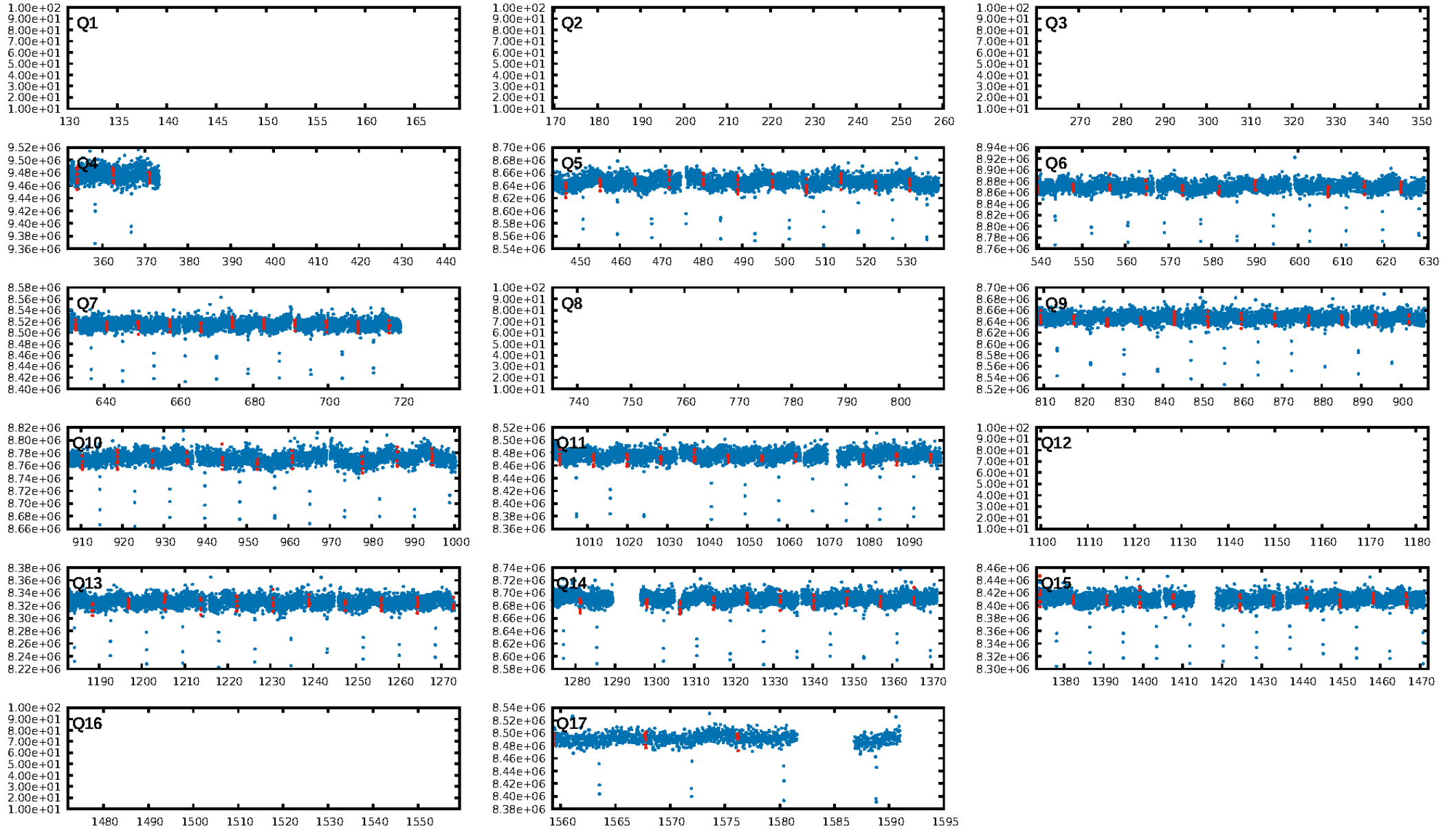
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 98.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.33e-60
RollingBand-fgt: 0.94 [91/97]
GhostDiagnostic-chr: 2.567
Centroid-sig: 0.1%
Centroid-so: 0.683 arcsec [1.19σ]
OotOffset-rm: 0.680 arcsec [1.94σ]
KicOffset-rm: 0.653 arcsec [1.87σ]
OotOffset-st: 3/2/1/2 [8]
KicOffset-st: 3/2/1/2 [8]
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DiffImageOverlap-fno: 1.00 [11/11]

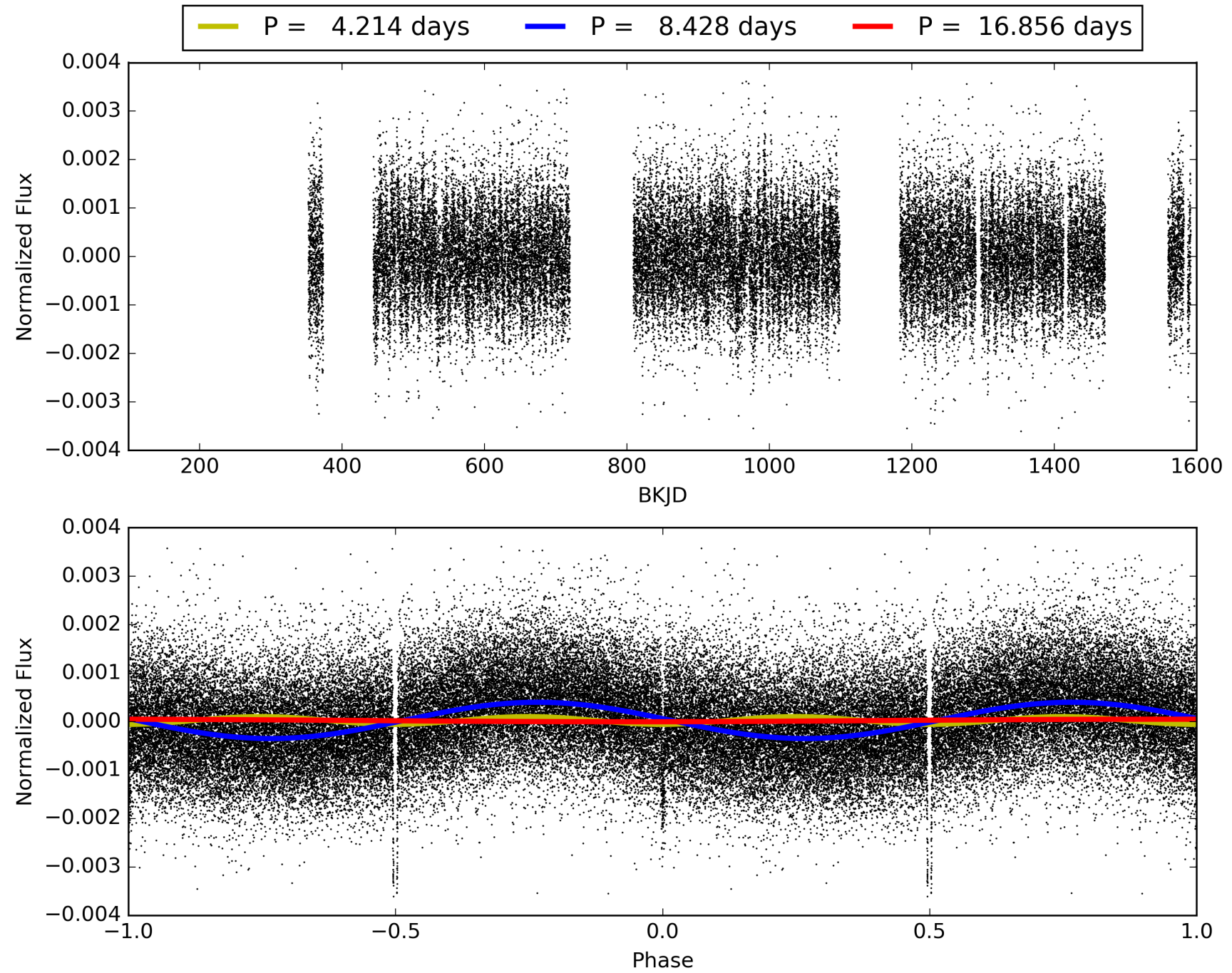
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:45:27 Z

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

TCE 011599264-02, PDC Light Curves

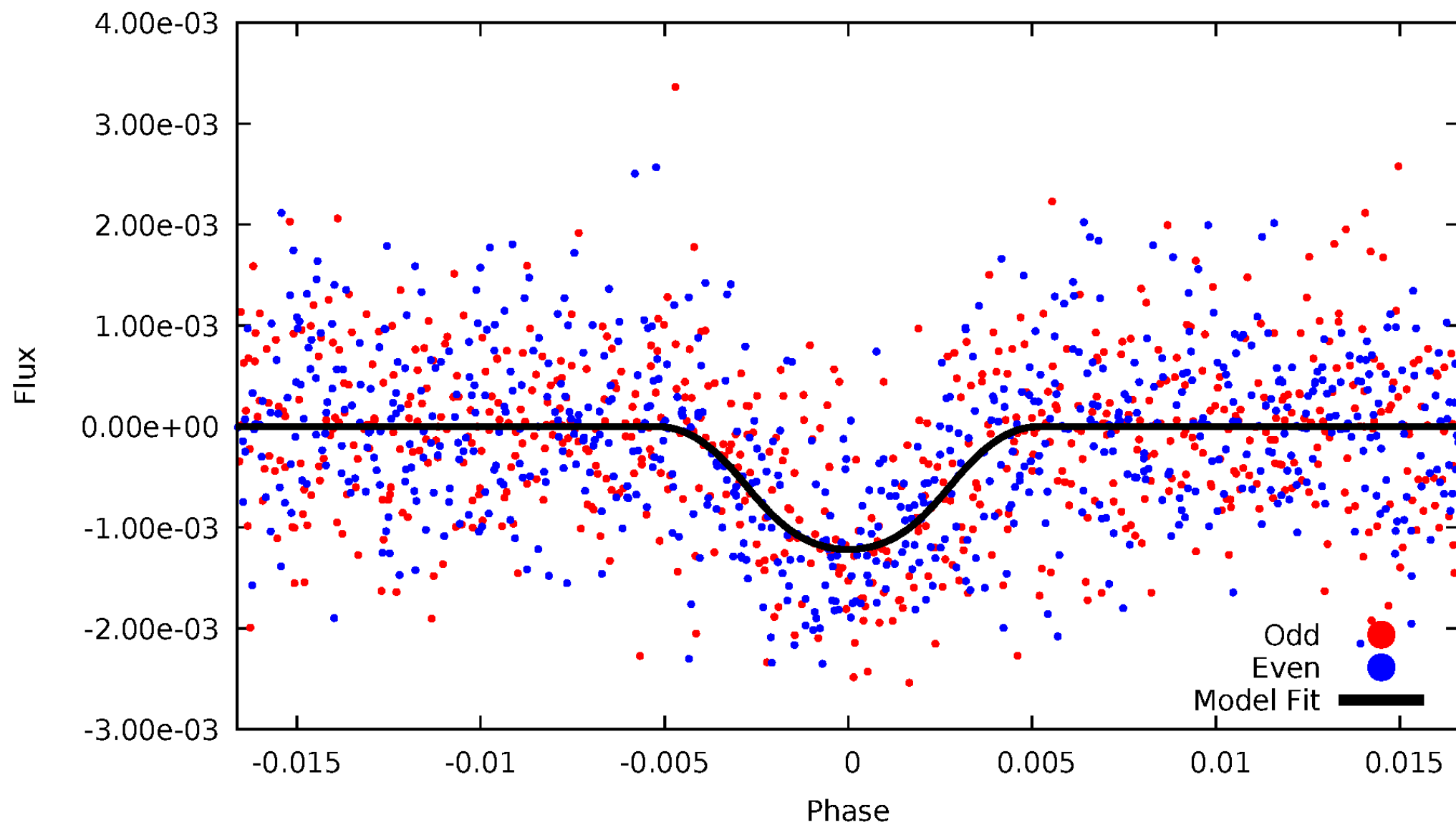


TCE 011599264-02



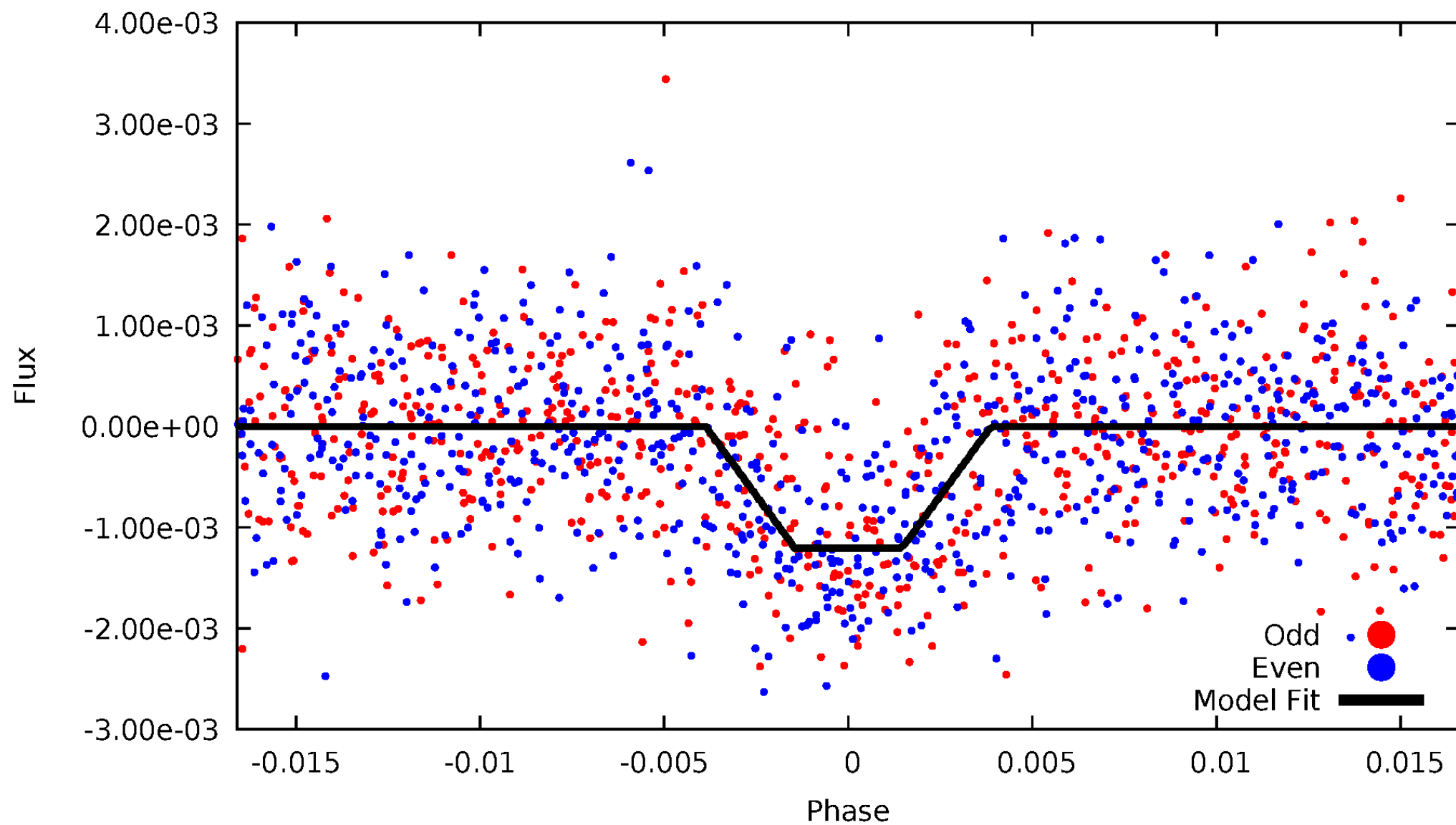
DV Odd/Even

TCE 011599264-02



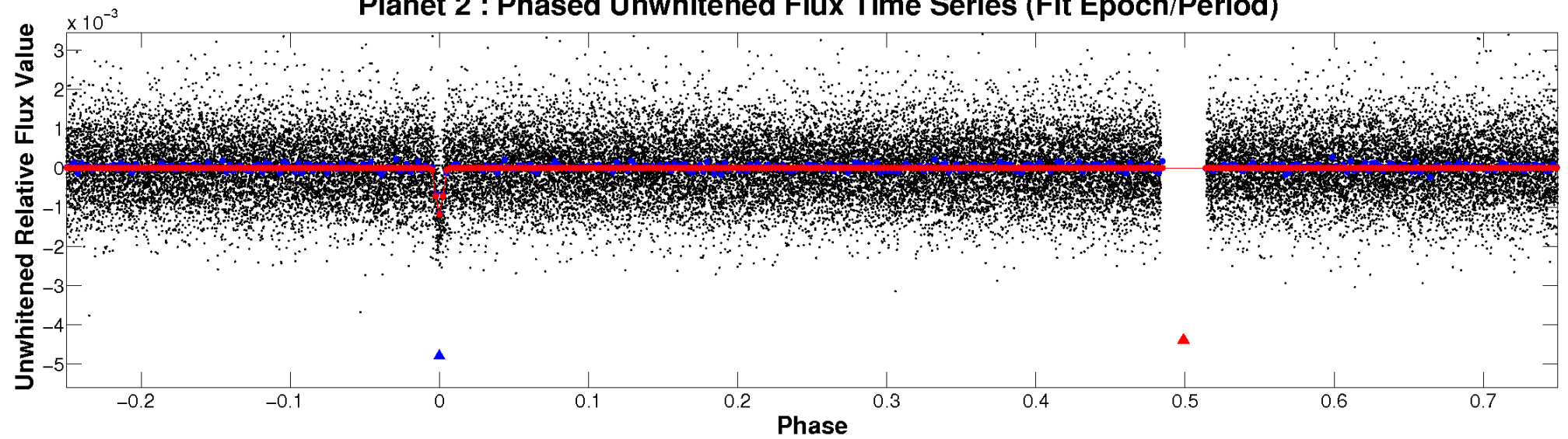
ALT Odd/Even

TCE 011599264-02

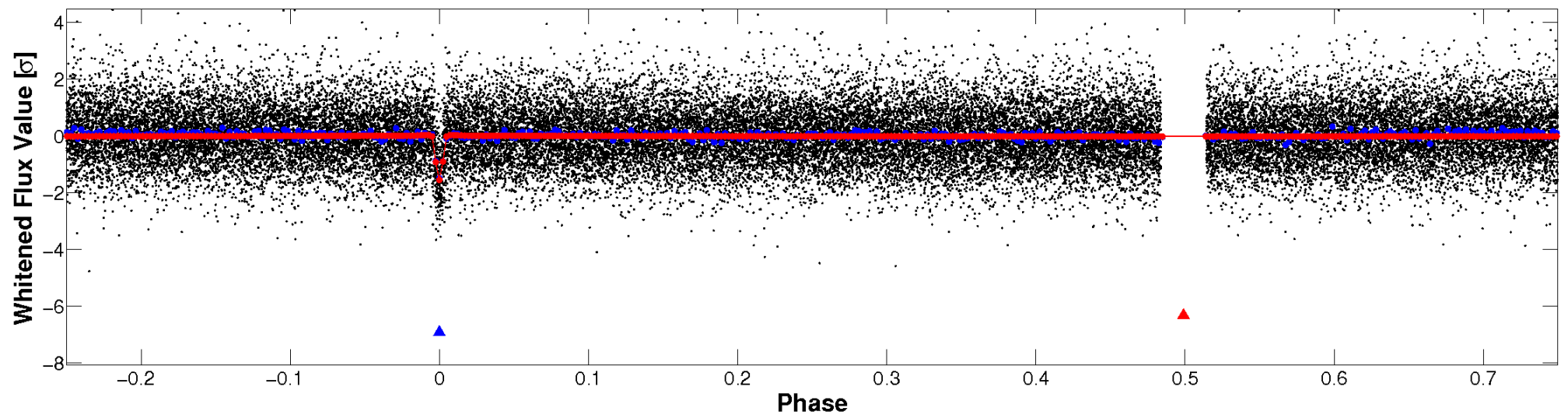


Non-Whitened Vs. Whitened Light Curve

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

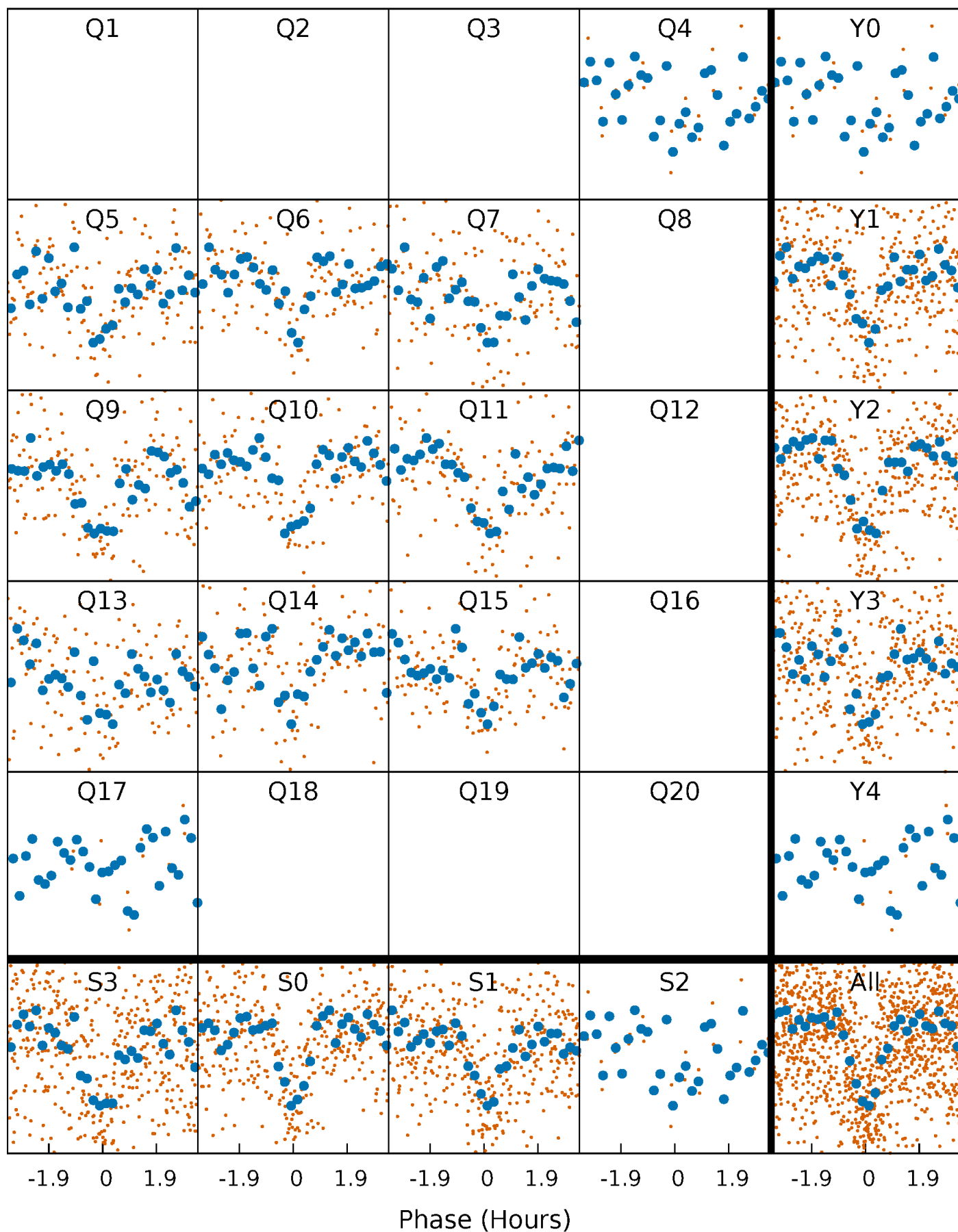


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



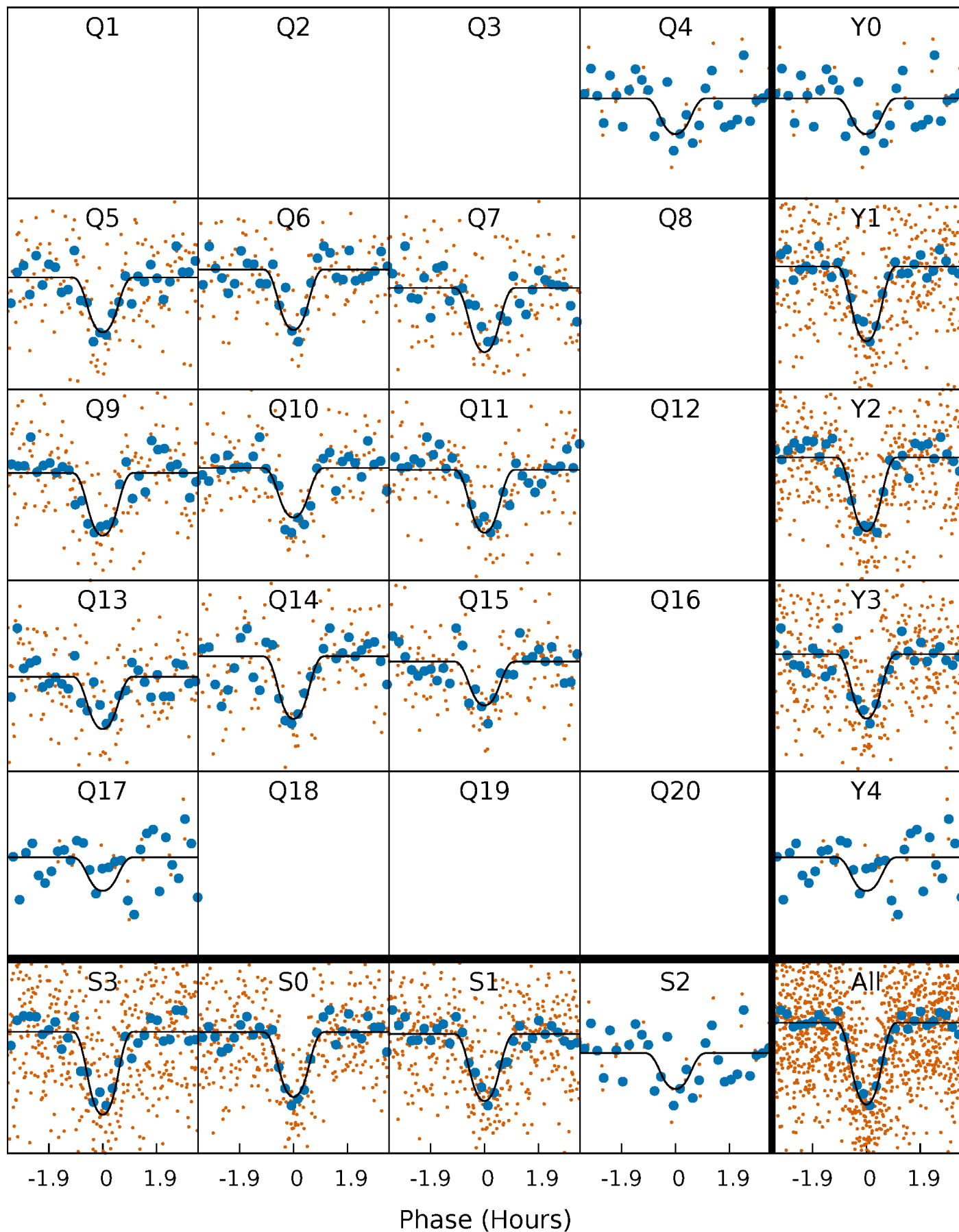
PDC Quarter-Phased Transit Curves

TCE 011599264-02 P= 8.428064 Days $T_0=134.969692$ (BKJD)



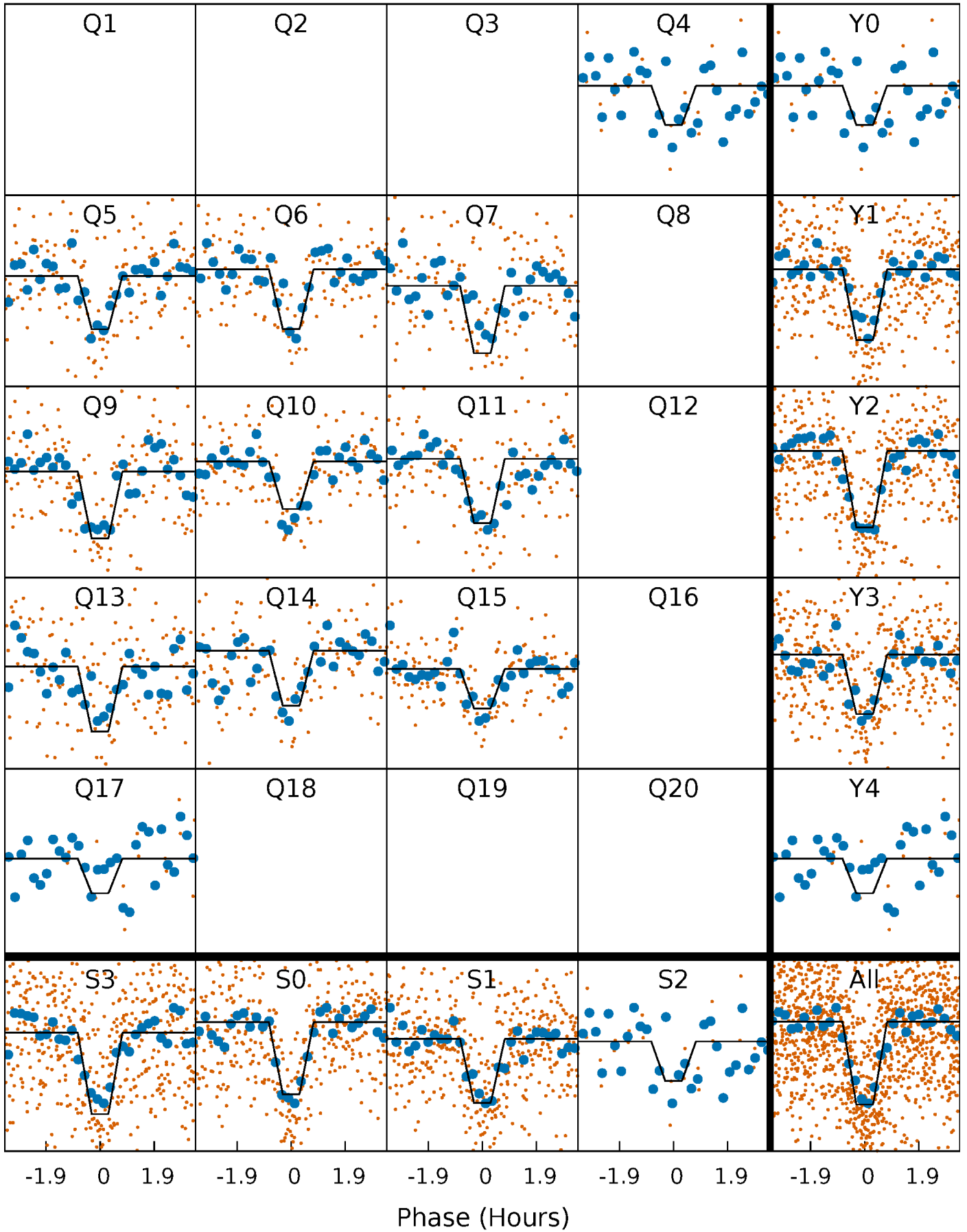
DV Quarter-Phased Transit Curves

TCE 011599264-02 P= 8.428064 Days $T_0=134.969692$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

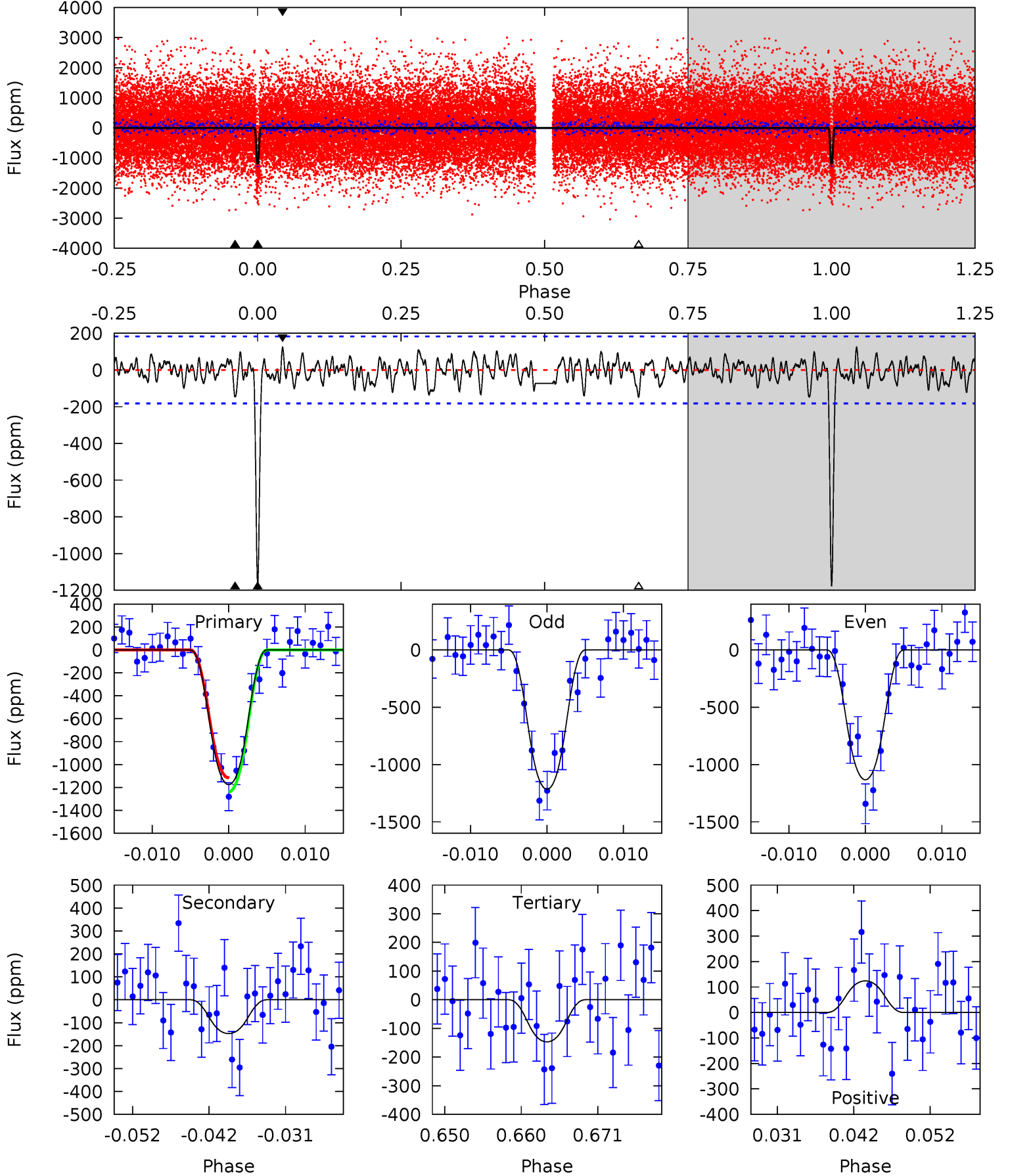
TCE 011599264-02 P= 8.428089 Days $T_0=134.968120$ (BKJD)



DV Model-Shift Uniqueness Test

011599264-02, P = 8.428064 Days, E = 134.969692 Days

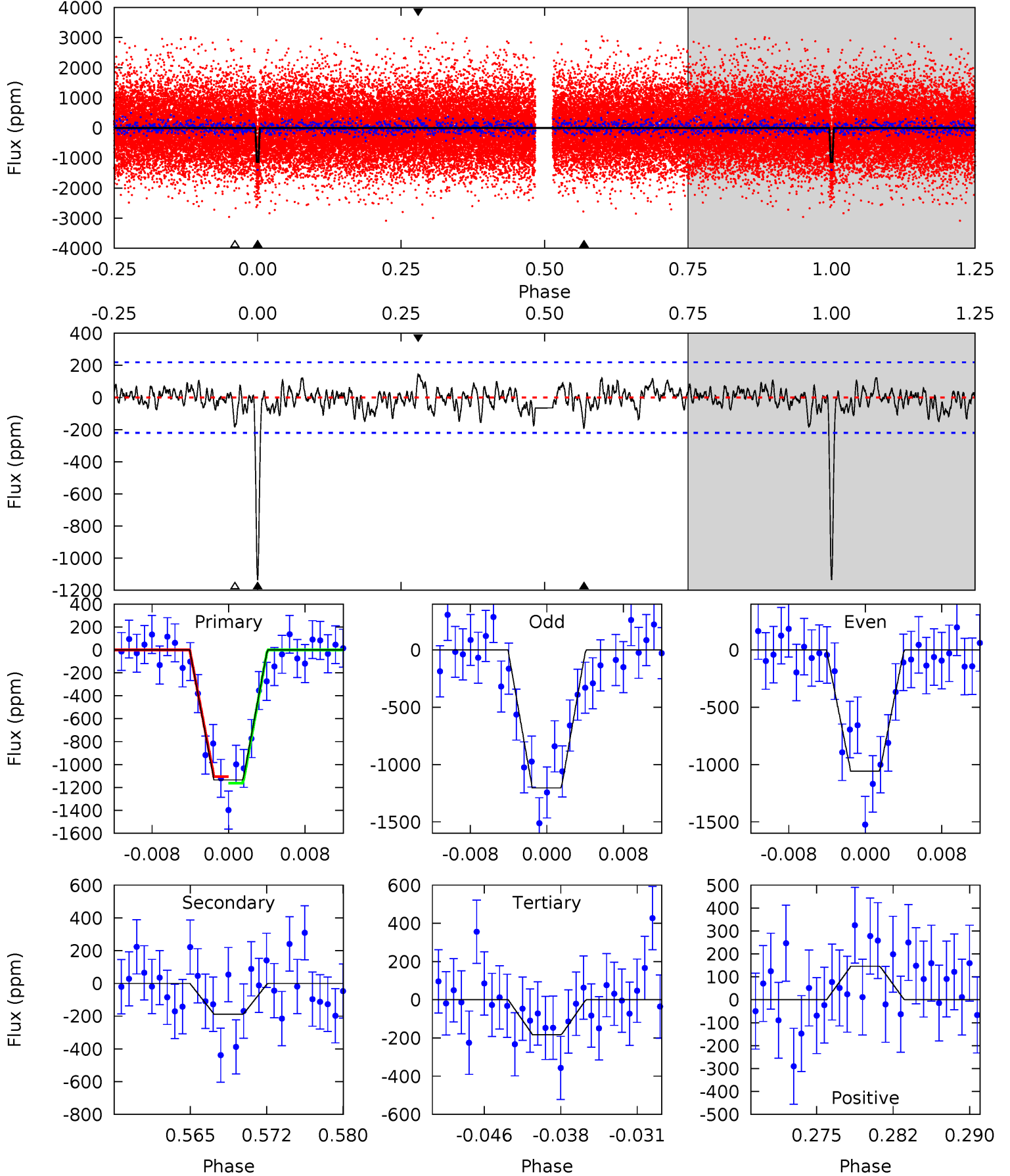
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.3	4.05	4.04	3.41	5.02	2.56	1.32	28.3	28.9	0.01	0.64	1.13	0.93	0.10	1.69



Alt Model-Shift Uniqueness Test

011599264-02, P = 8.428089 Days, E = 134.968120 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.2	4.36	4.21	3.38	5.08	2.67	1.25	22.0	22.8	0.15	0.99	1.69	0.93	0.11	0.65



Stellar Parameters For KIC 011599264

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5761^{+189}_{-189}	$4.573^{+0.033}_{-0.187}$	$-0.340^{+0.300}_{-0.300}$	$0.805^{+0.226}_{-0.071}$	$0.893^{+0.100}_{-0.100}$	$2.410^{+0.445}_{-1.131}$
	+3%/-3%	+1%/-4%	+88%/-88%	+28%/-9%	+11%/-11%	+18%/-47%
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 011599264-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-147 ± 36	$3.82^{+0.67}_{-0.53}$	1171^{+81}_{-56}	3563^{+198}_{-208}	32^{+13}_{-10}
Alt.	-189 ± 43	$3.21^{+0.67}_{-0.50}$	1172^{+77}_{-54}	3953^{+295}_{-273}	60^{+28}_{-21}

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 $A_{obs} \gg 1.0$

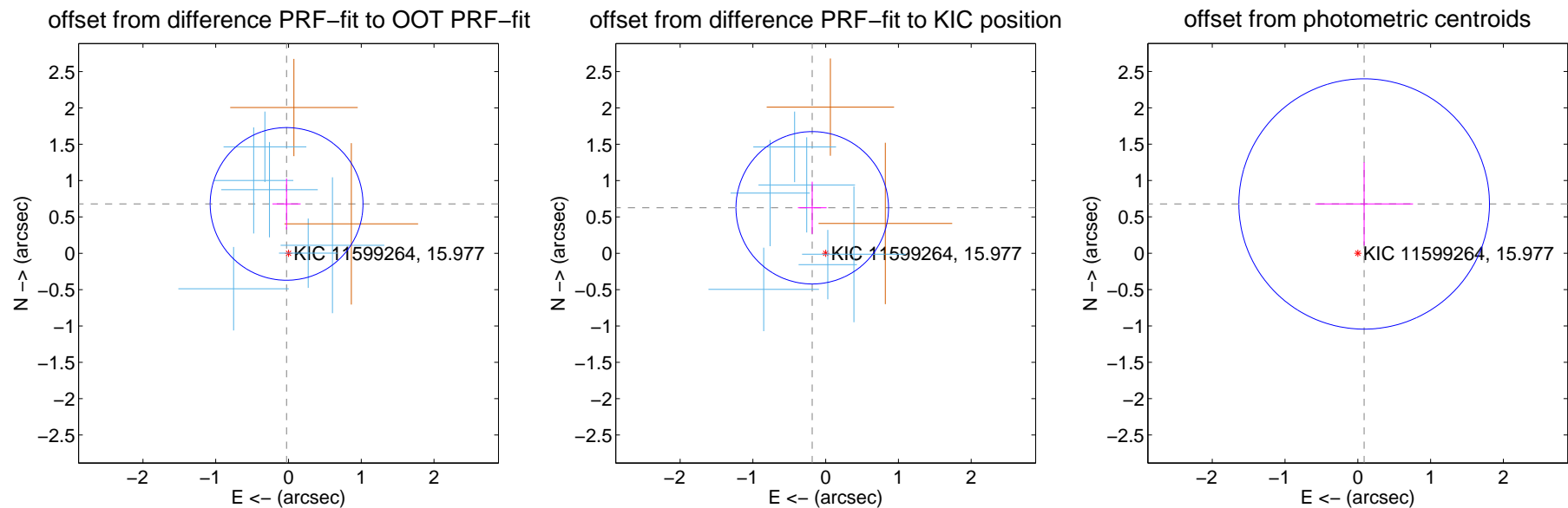
DV Centroid Data

Supplemental centroid analysis for 011599264-02. Kepler magnitude: 15.98. Transit SNR 20.36

There are 6 quarters with good PRF difference image offsets

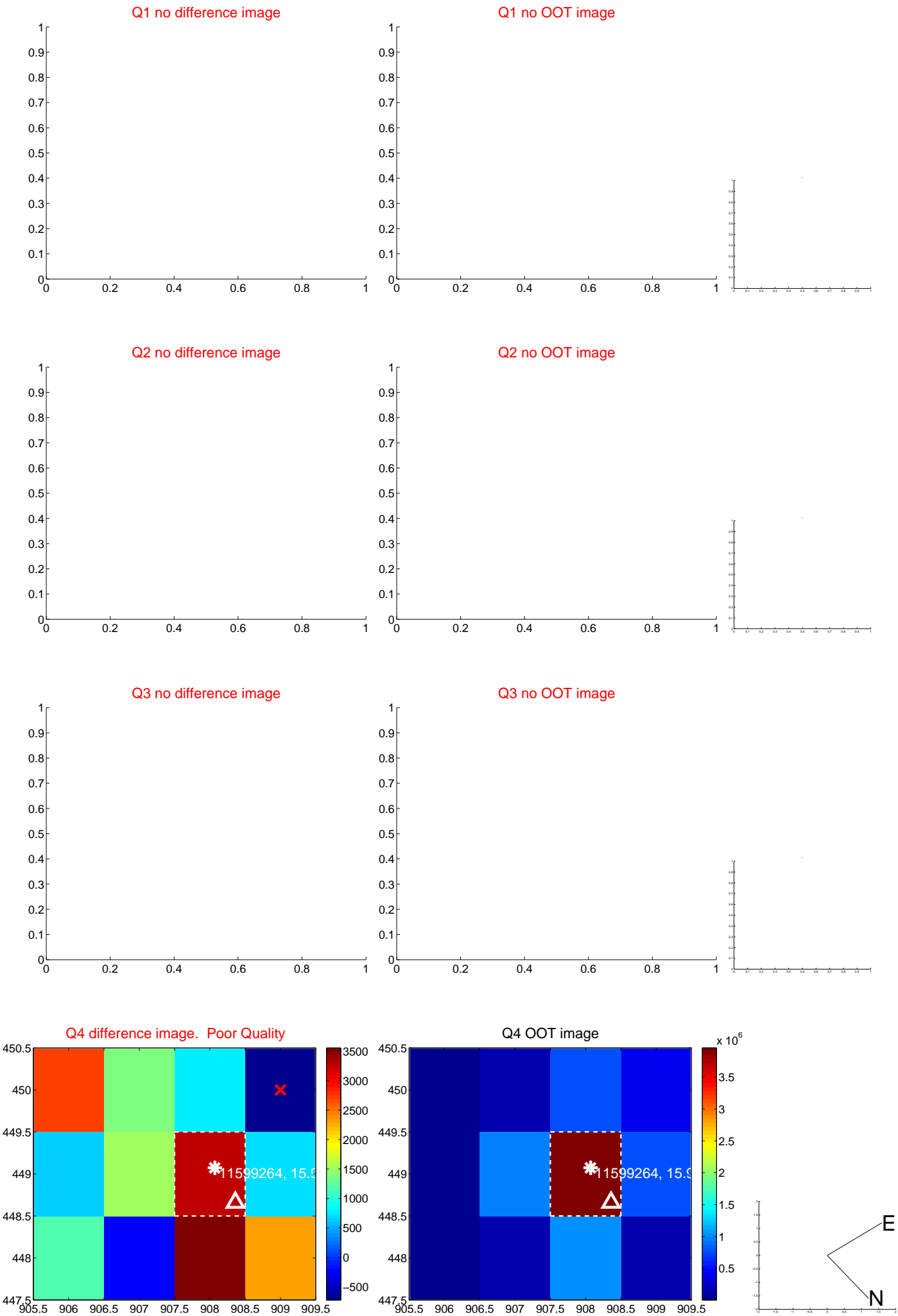
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.680 ± 0.350	1.94	0.026 ± 0.194	0.679 ± 0.350
PRF-fit source offset from KIC position	0.653 ± 0.349	1.87	0.184 ± 0.198	0.626 ± 0.360
photometric centroid source offset	0.68 ± 0.57	1.19	-0.09 ± 0.67	0.68 ± 0.57

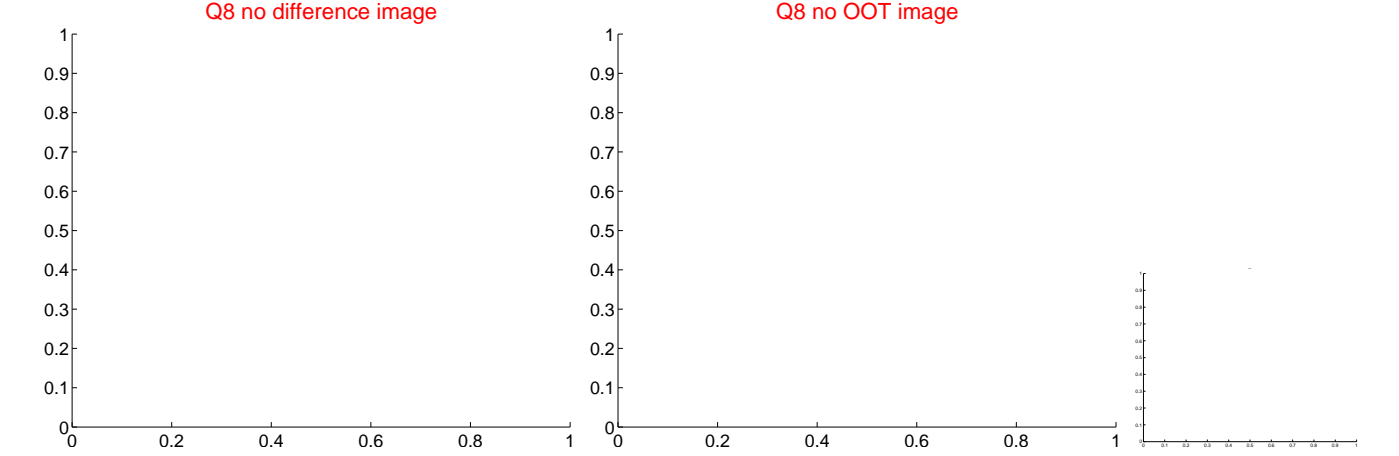
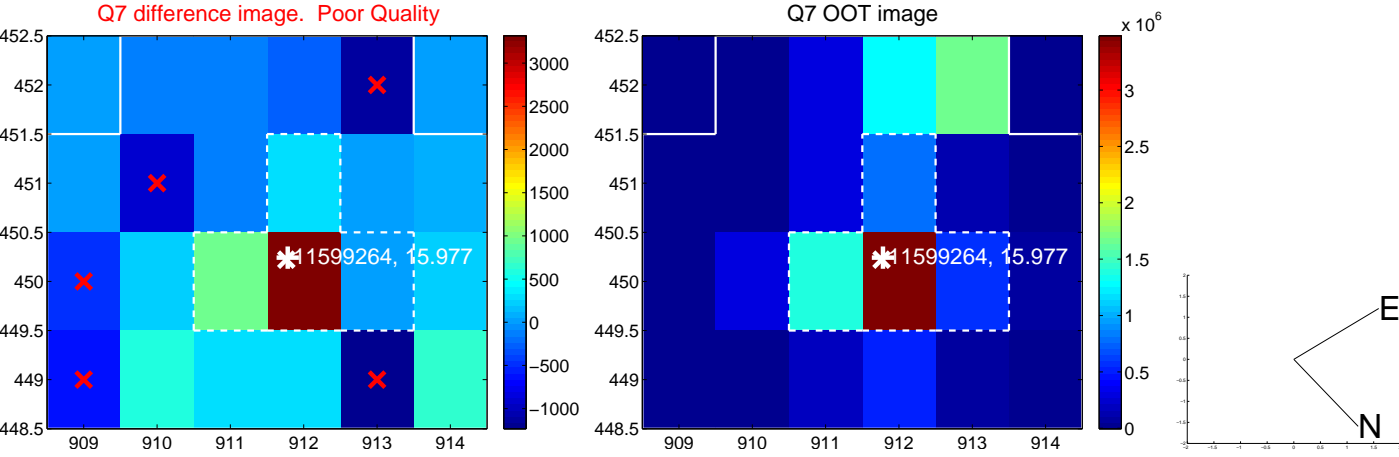
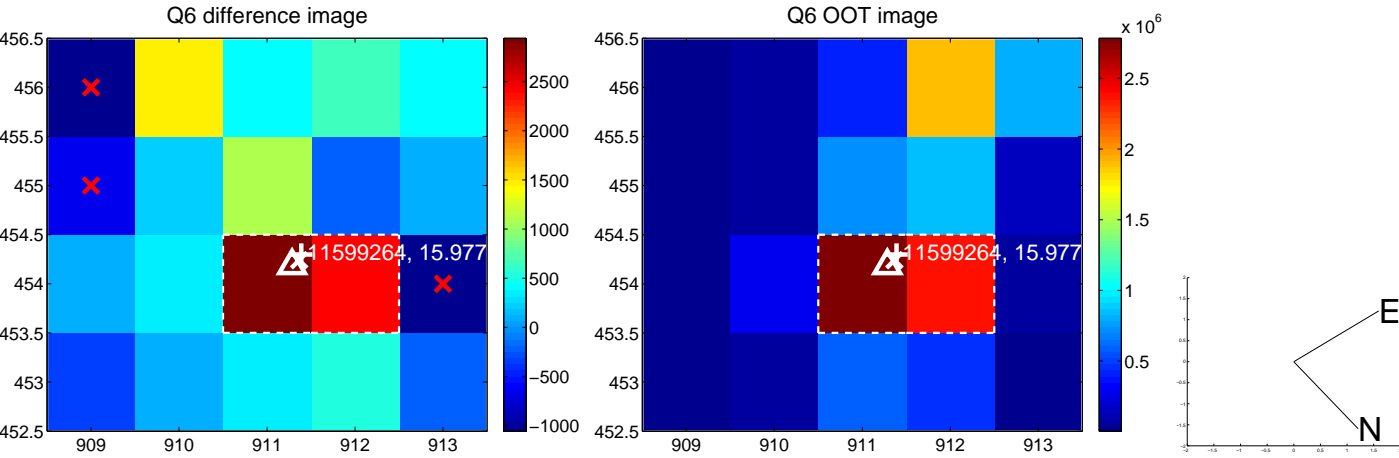
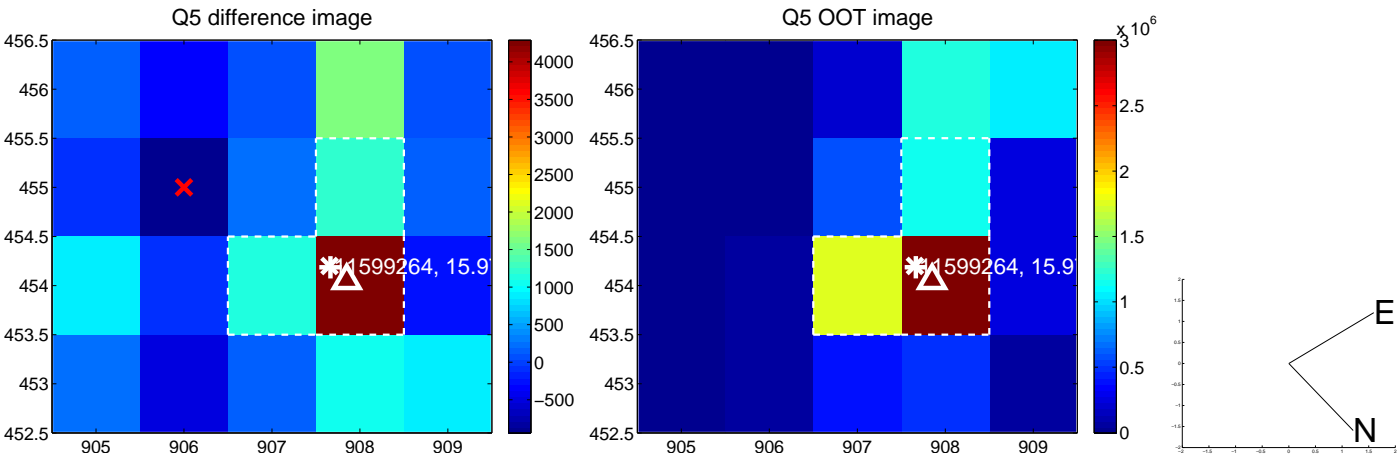


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

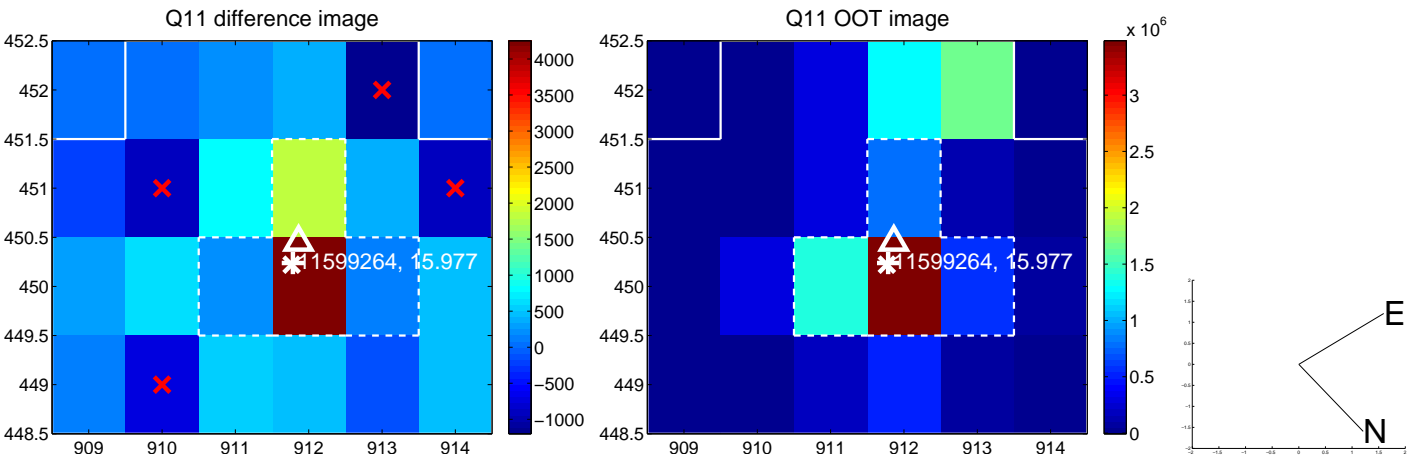
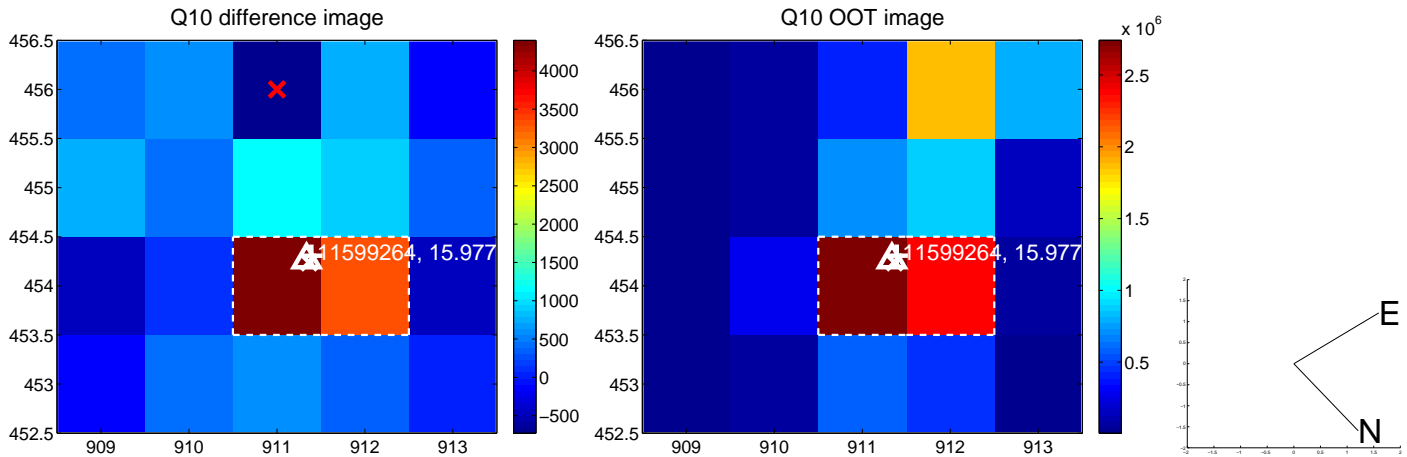
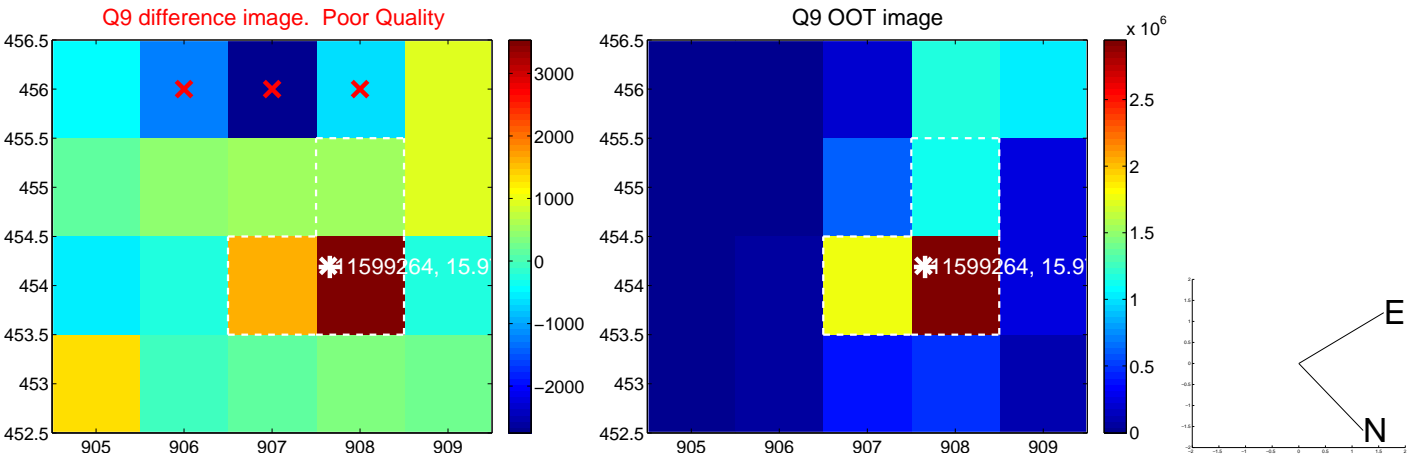
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



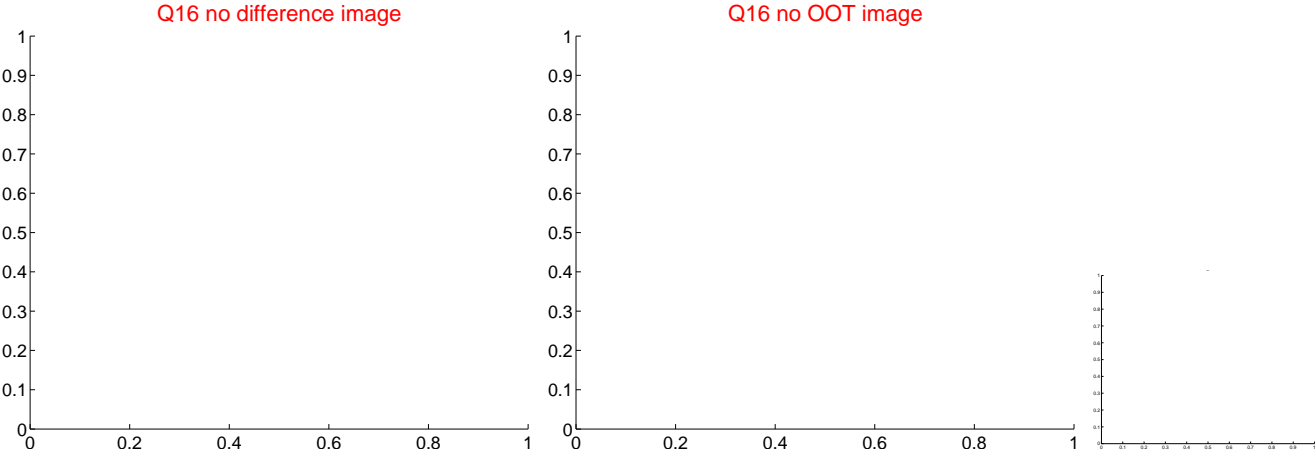
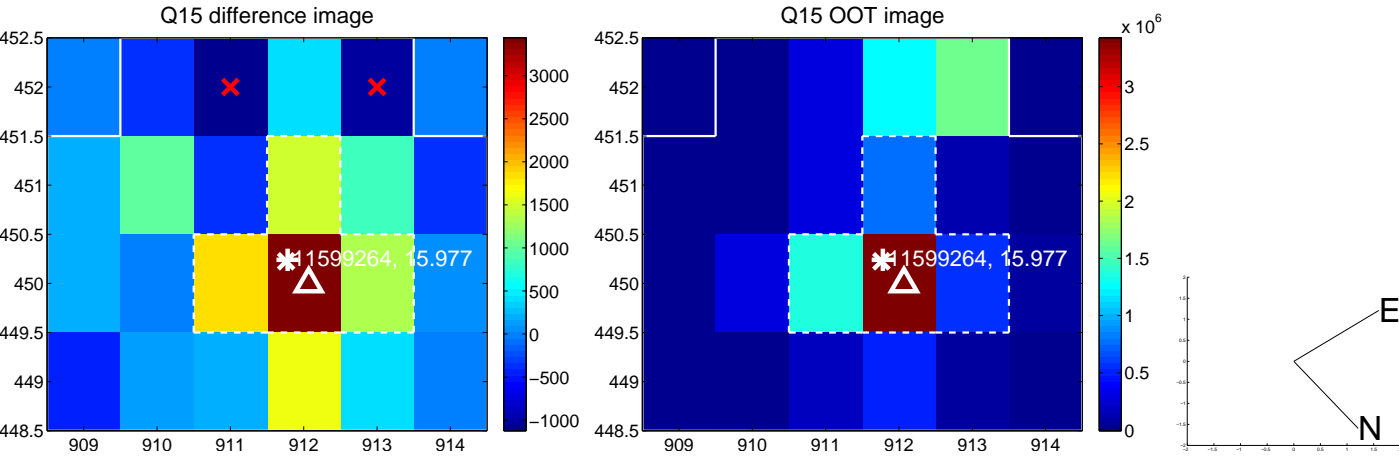
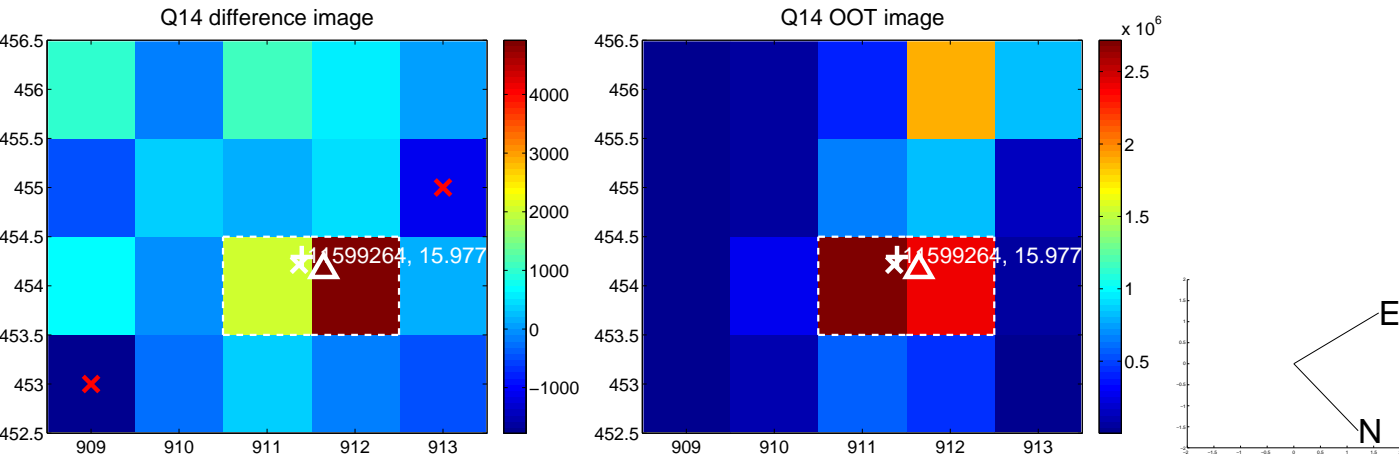
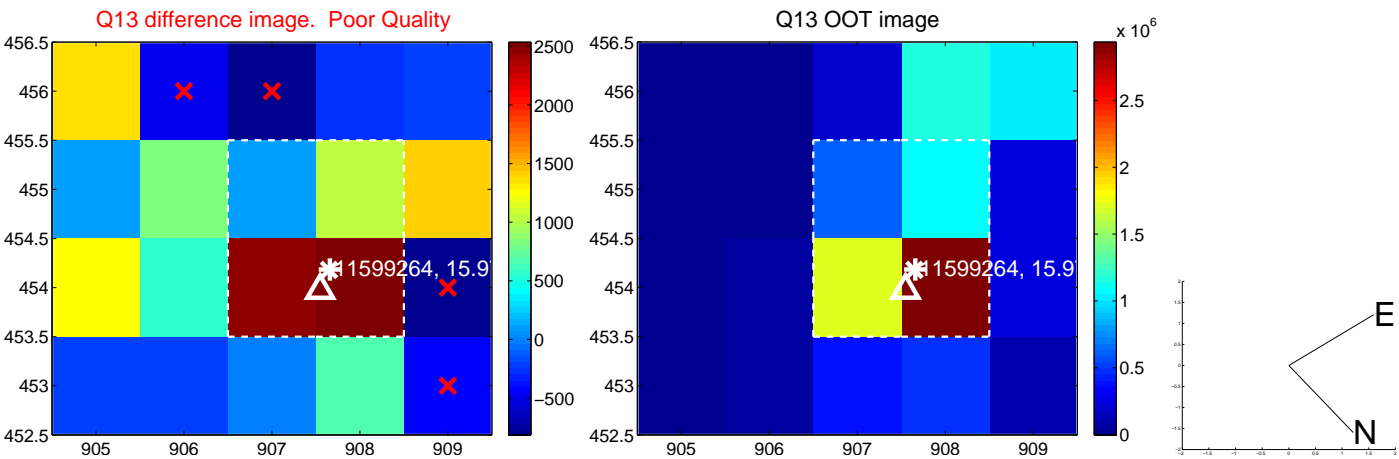
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



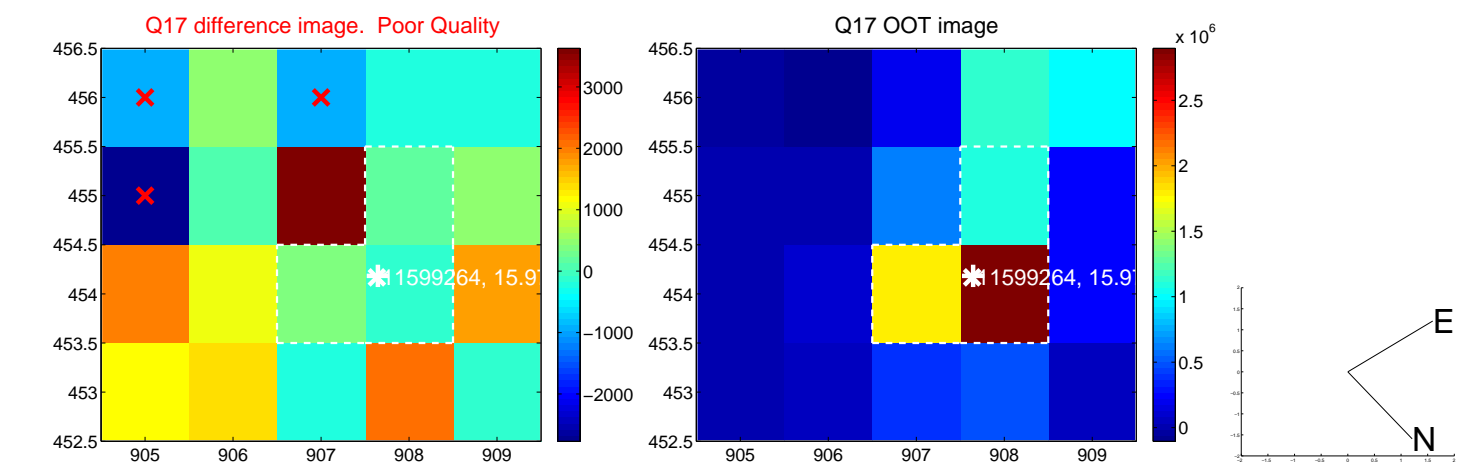
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



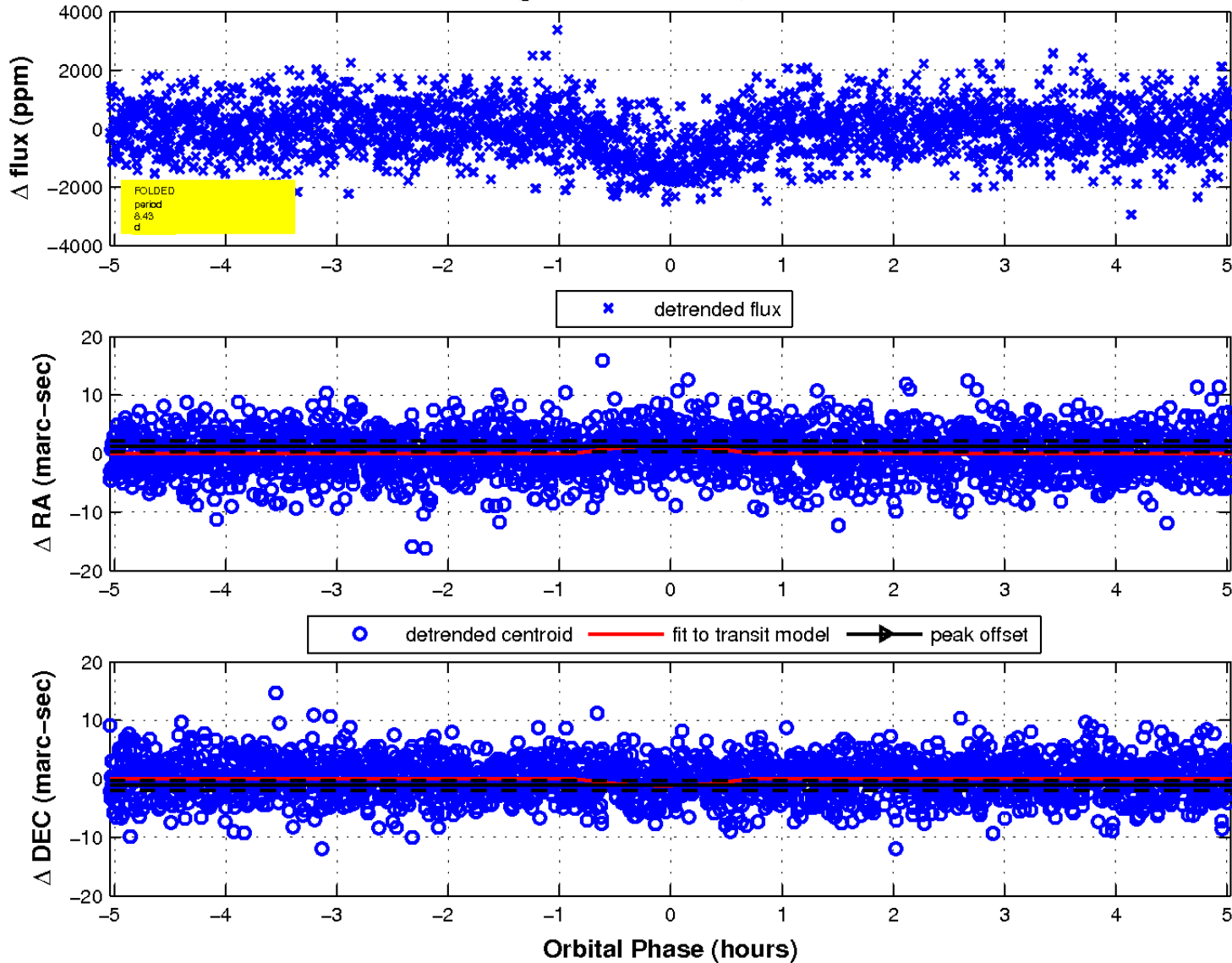
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

