

KIC 004839180

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})
004839180-01	OBS	6456.01	4.426360	134.221846	232208.2	3.500	26435.9	-1.0	1.23	6228	63.95	709.94
004839180-02	OBS	No	6.639666	134.216205	374.8	12.122	662.4	32.1	1.23	6228	2.38	413.45
004839180-03	OBS	No	6.639571	136.197090	10102.6	15.000	558.6	-1.0	1.23	6228	12.35	413.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004839180-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—CENT_NOFITS
004839180-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
004839180-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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.

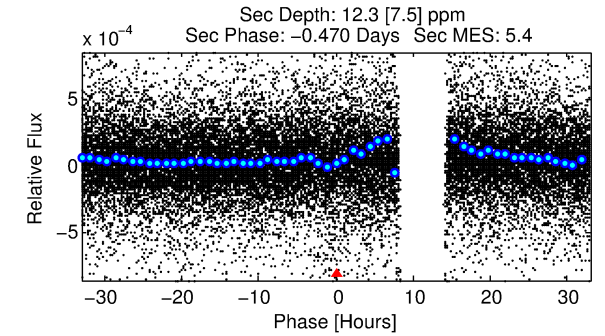
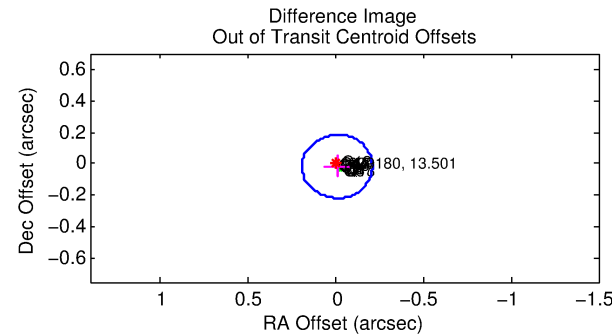
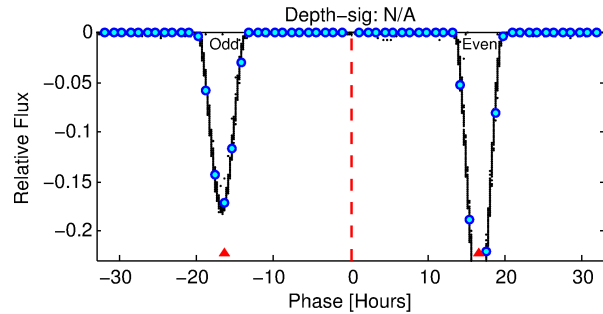
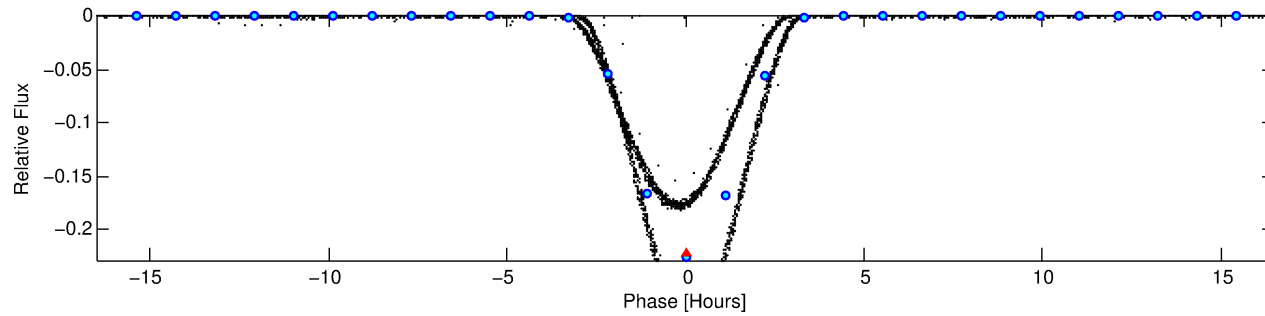
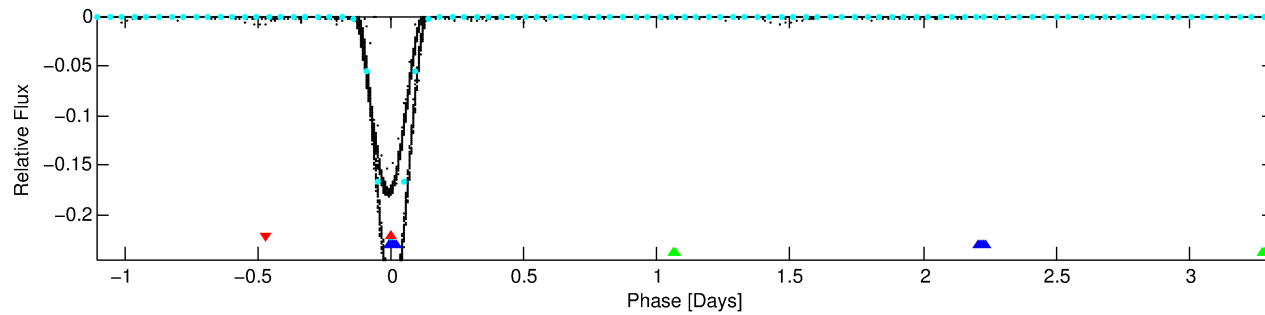
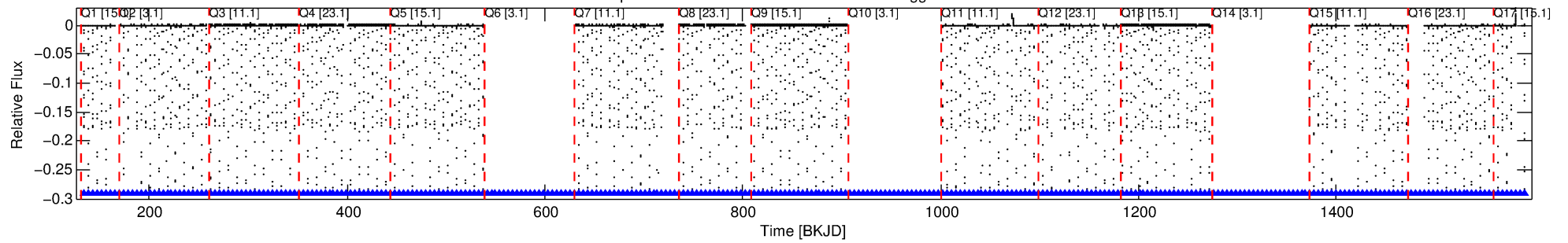
Ephemeris Match Information For 004839180-01

No Significant Match Found

DV One-Page Summary

KIC: 4839180 Candidate: 1 of 3 Period: 4.426 d
KOI: K06456.01 Corr: 0.761

Kp: 13.50 R*: 1.23 Rs Teff: 6228.0 K Logg: 4.28 Fe/H: -0.200



TPS TCE Results:

Period = 4.42636 d
Epoch = 134.2218 BKJD

DV fit results are unavailable

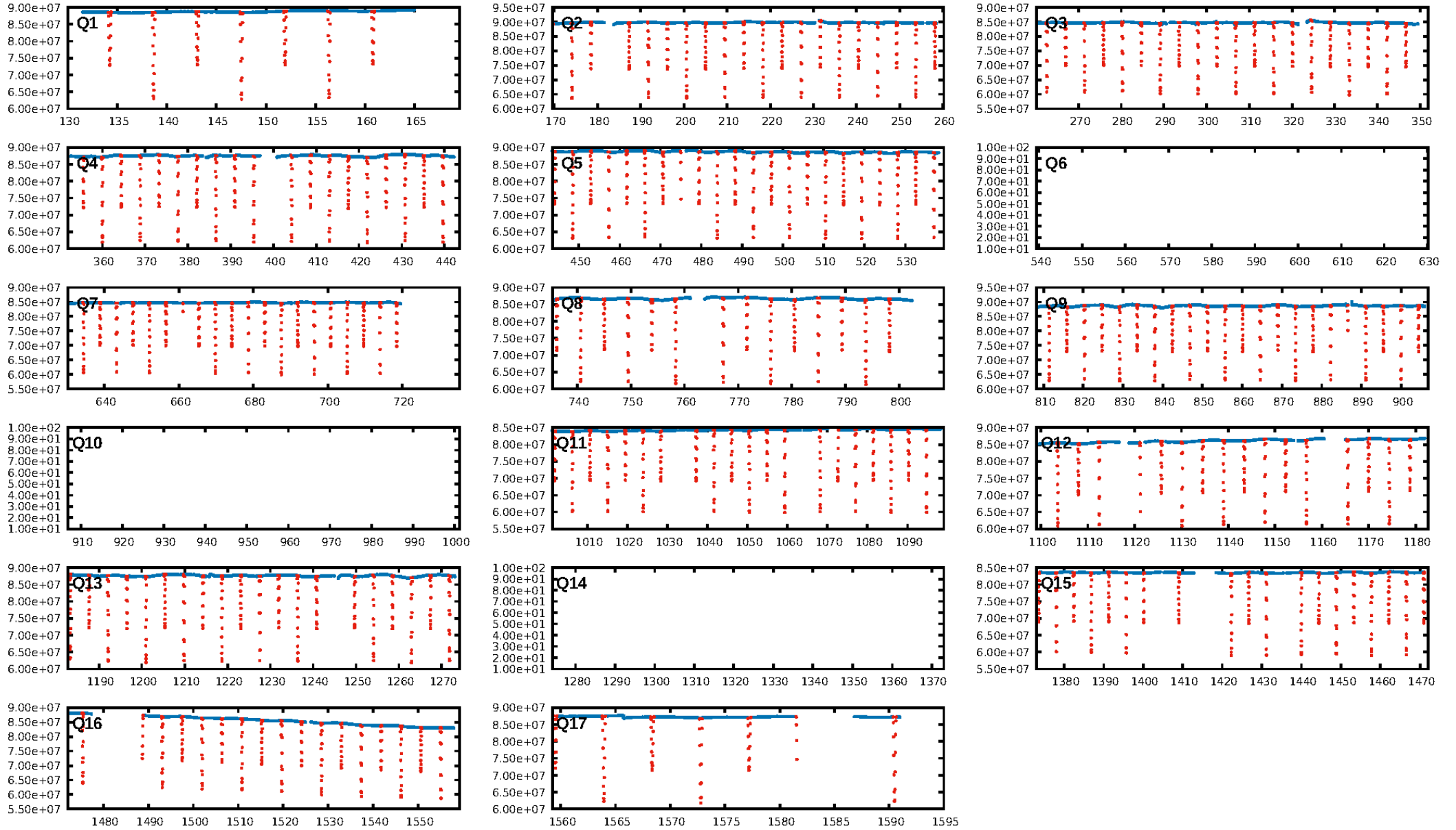
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 99.9% [3.45σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [227/227]
GhostDiagnostic-chr: 2.063
Centroid-sig: N/A
Centroid-so: 0.156 arcsec [422.59σ]
OotOffset-rm: 0.020 arcsec [0.29σ]
KicOffset-rm: 0.126 arcsec [1.82σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

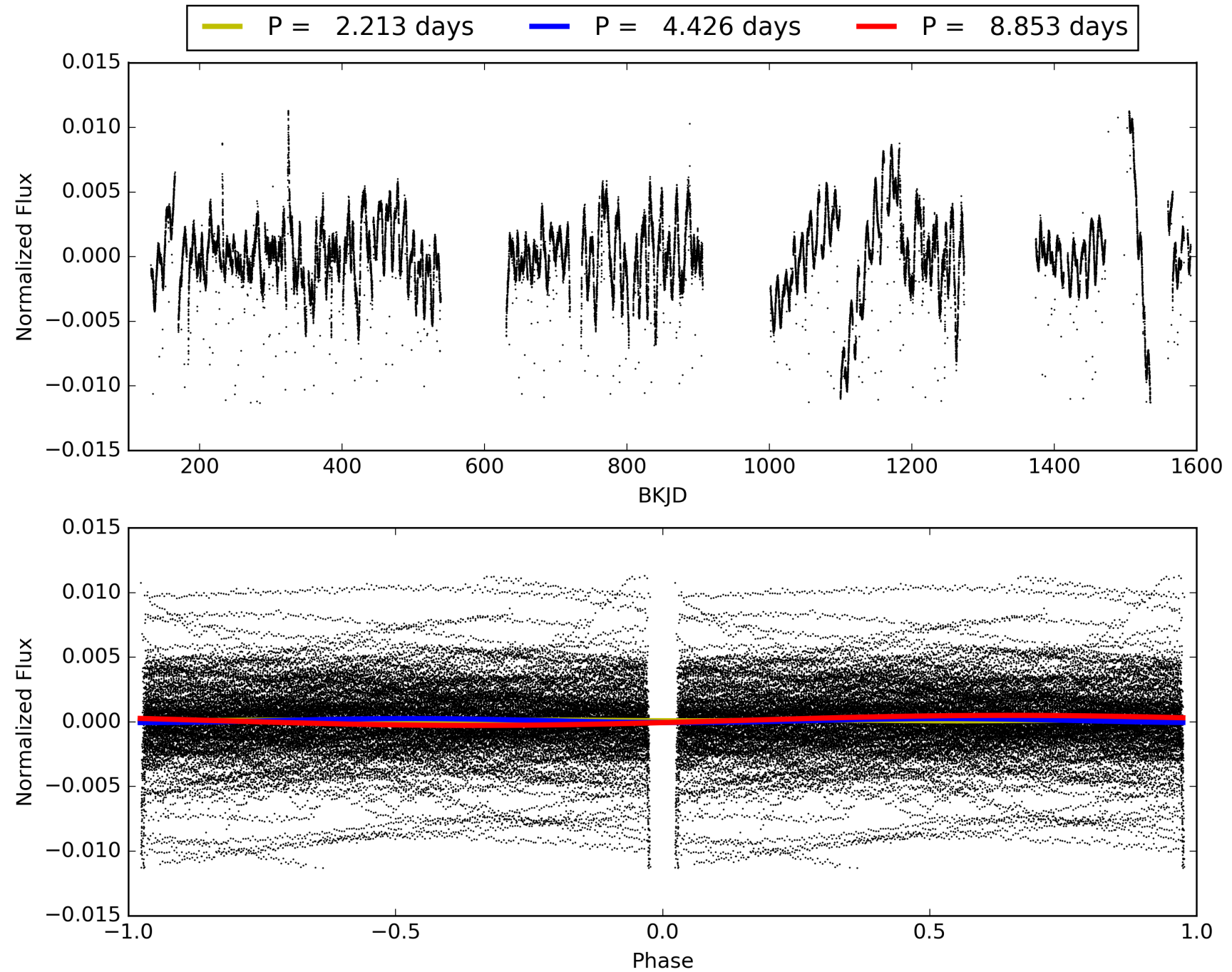
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 13:34:57 Z

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

TCE 004839180-01, PDC Light Curves

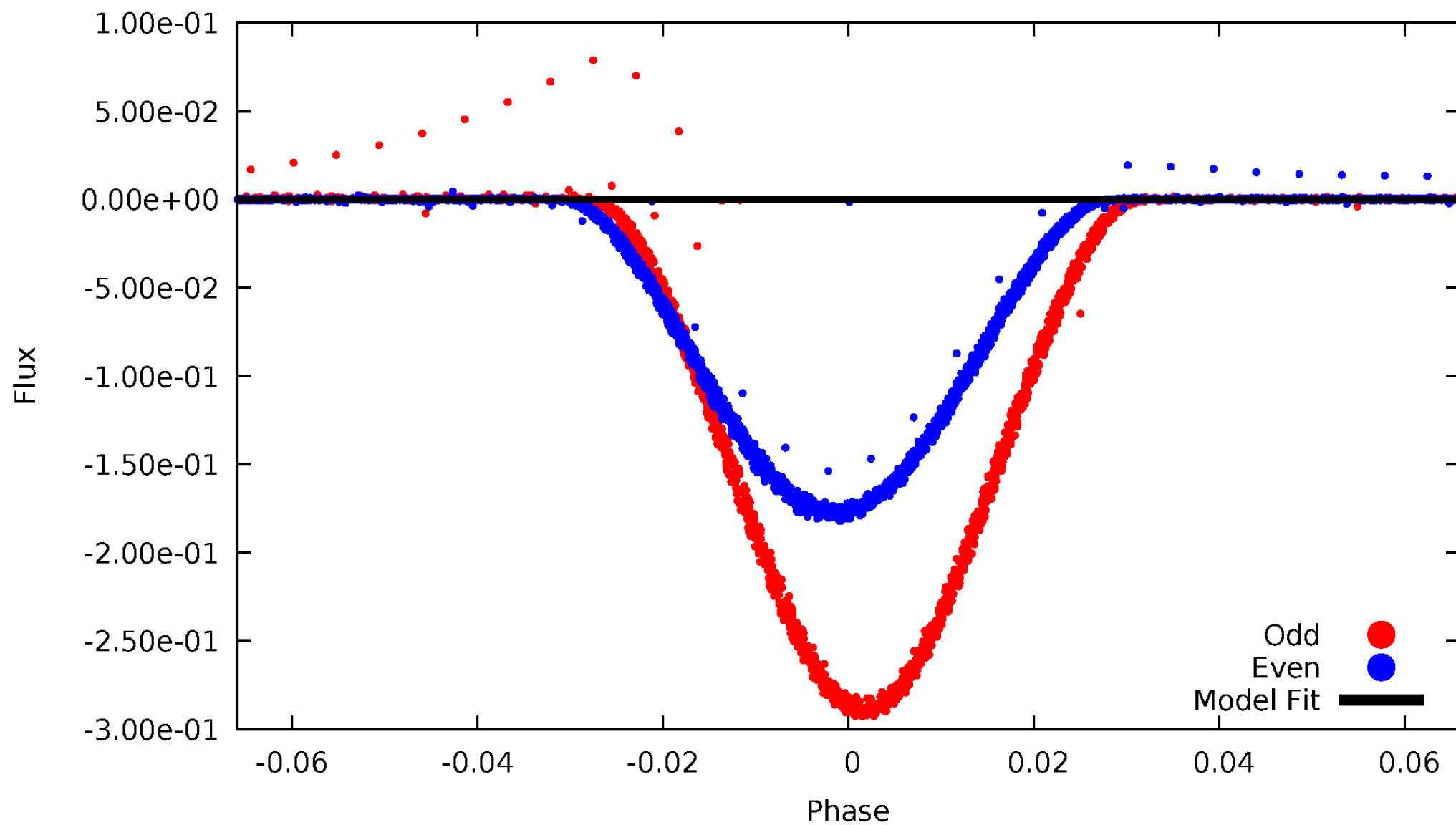


TCE 004839180-01



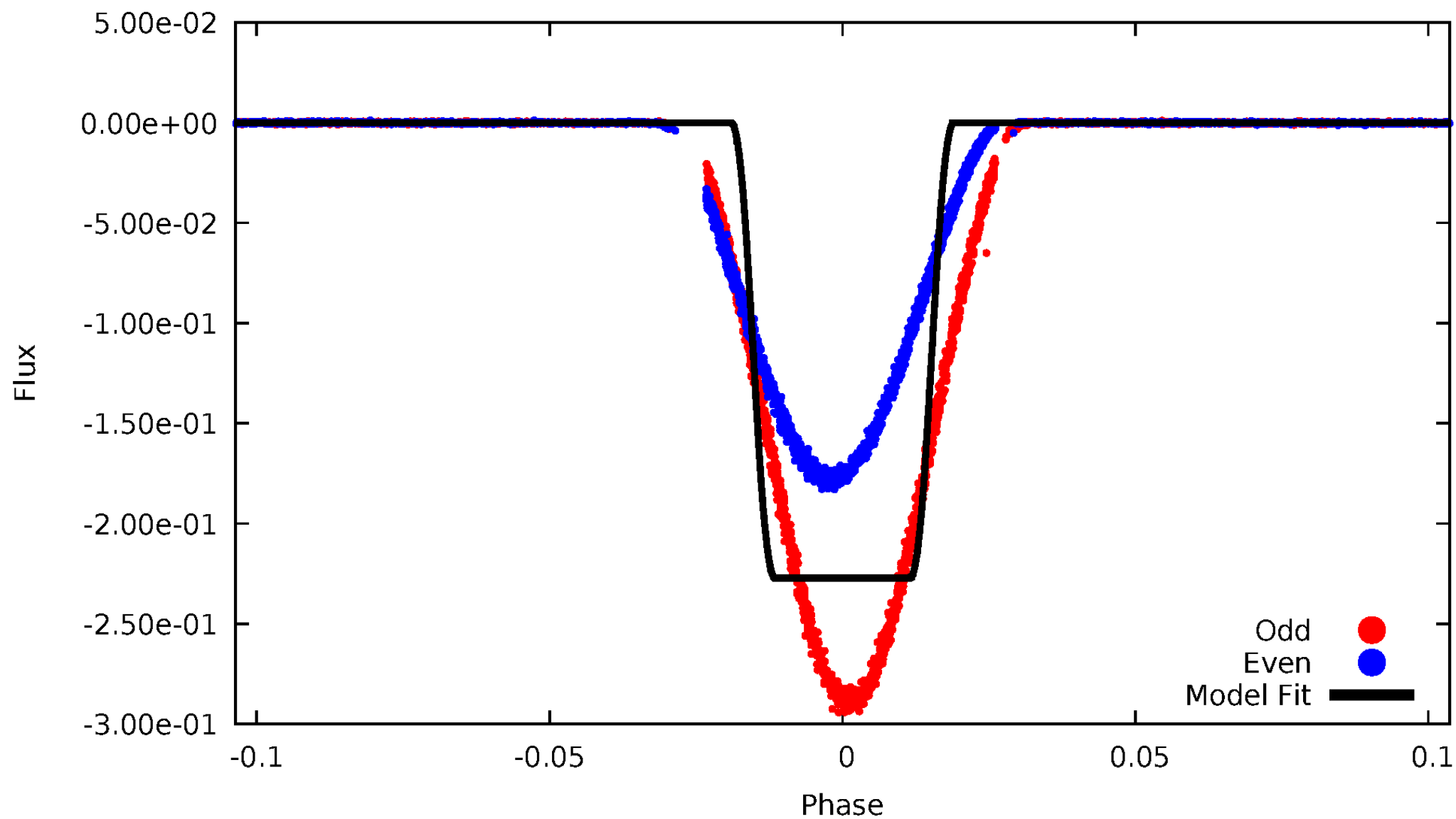
DV Odd/Even

TCE 004839180-01



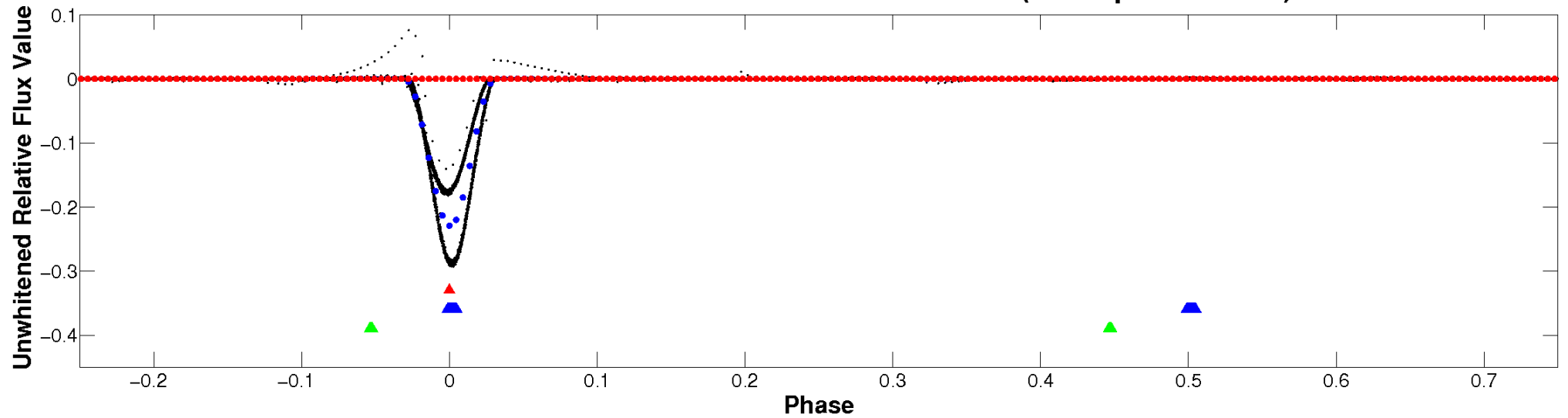
ALT Odd/Even

TCE 004839180-01



Non-Whitened Vs. Whitened Light Curve

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

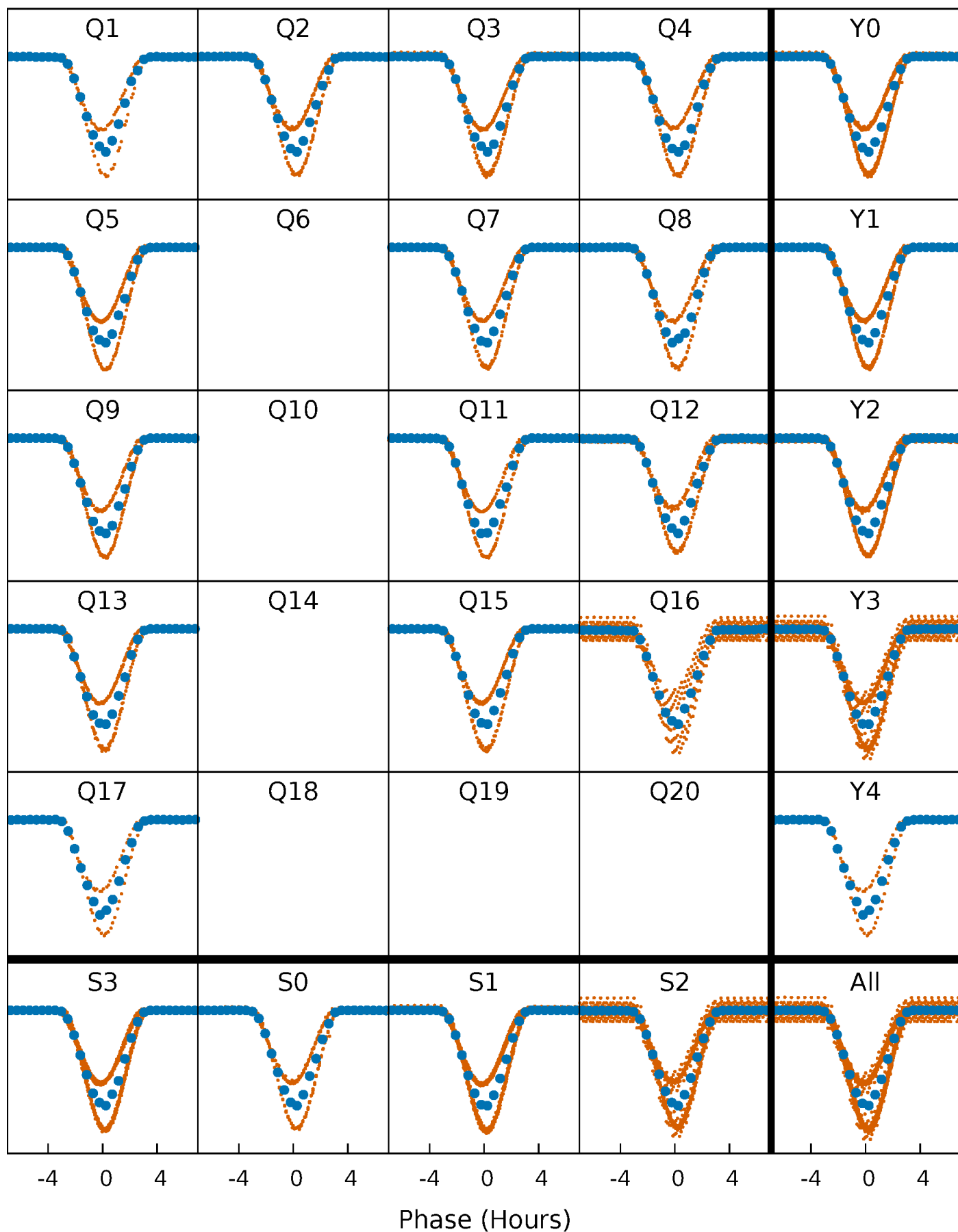


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



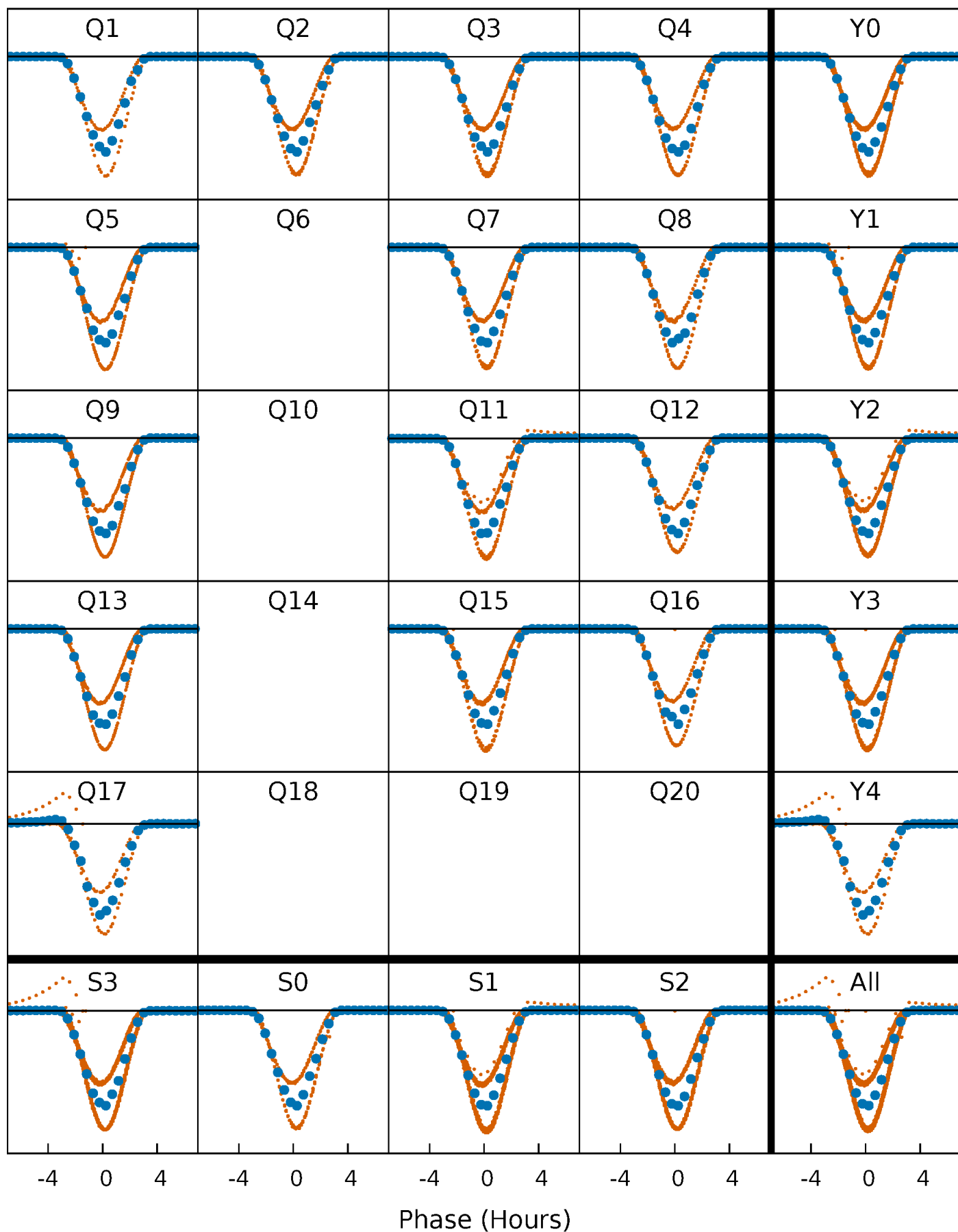
PDC Quarter-Phased Transit Curves

TCE 004839180-01 P= 4.426360 Days $T_0=134.221846$ (BKJD)



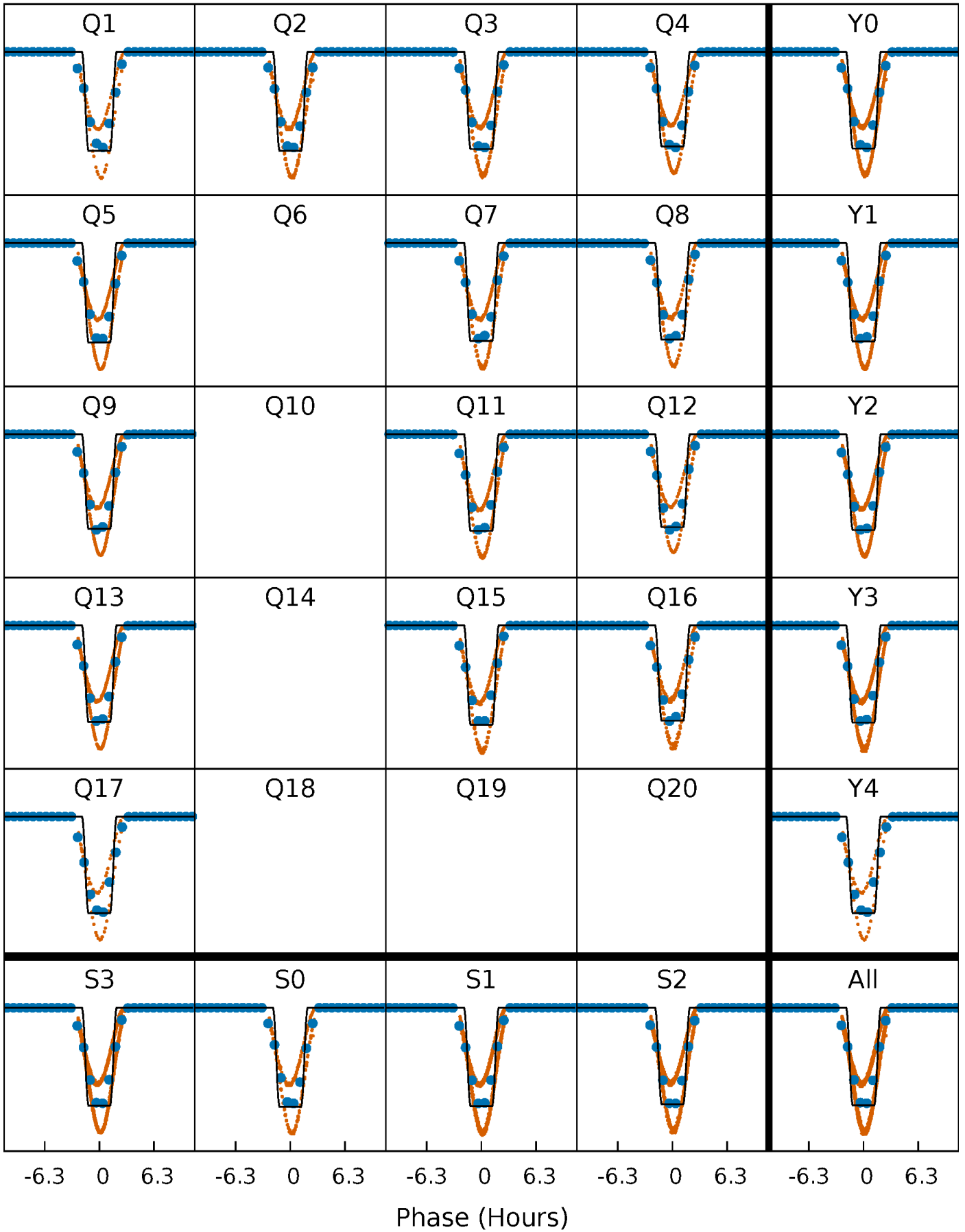
DV Quarter-Phased Transit Curves

TCE 004839180-01 P= 4.426360 Days $T_0=134.221846$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

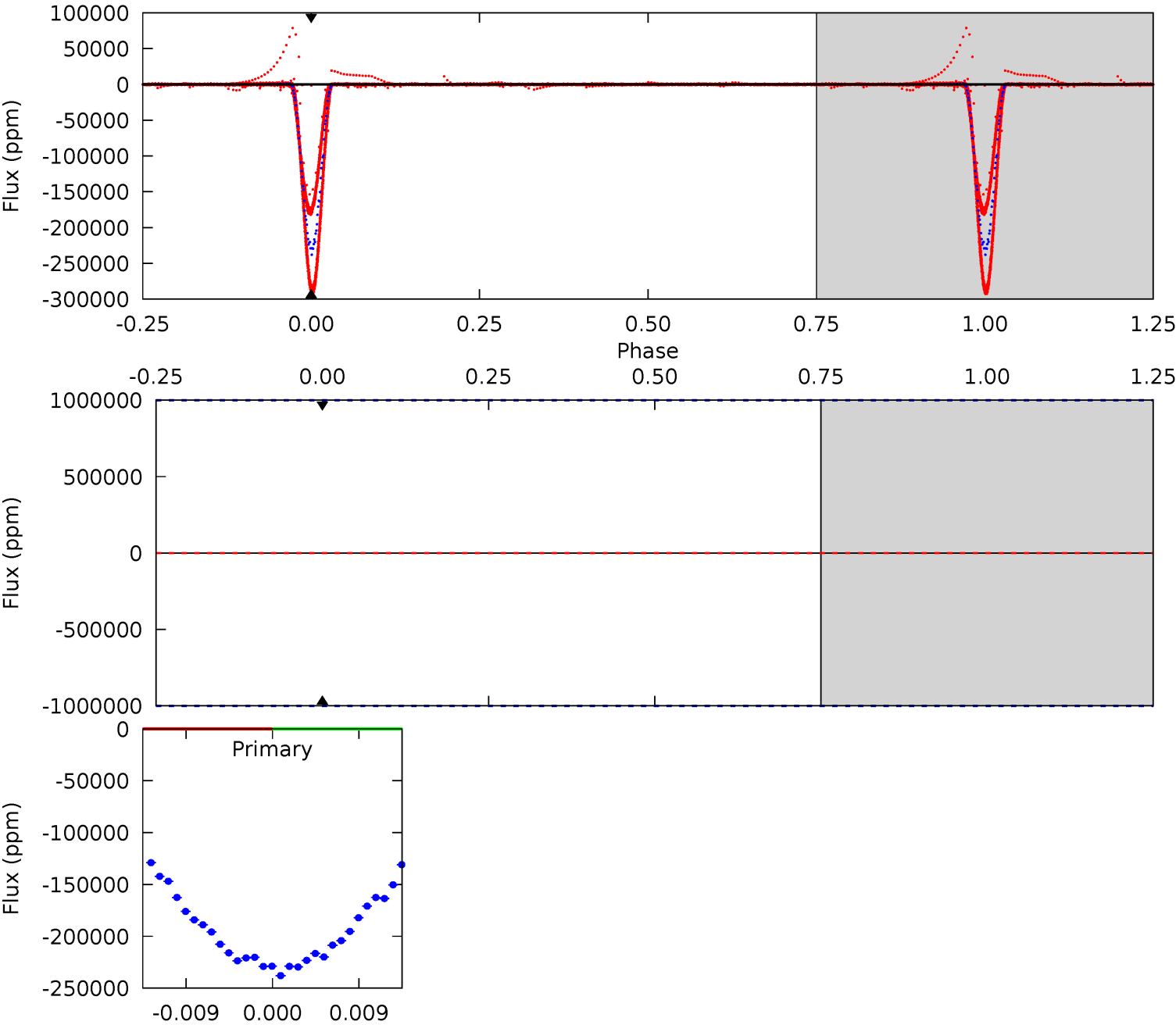
TCE 004839180-01 P= 4.426360 Days $T_0=134.223934$ (BKJD)



DV Model-Shift Uniqueness Test

004839180-01, P = 4.426360 Days, E = 129.795486 Days

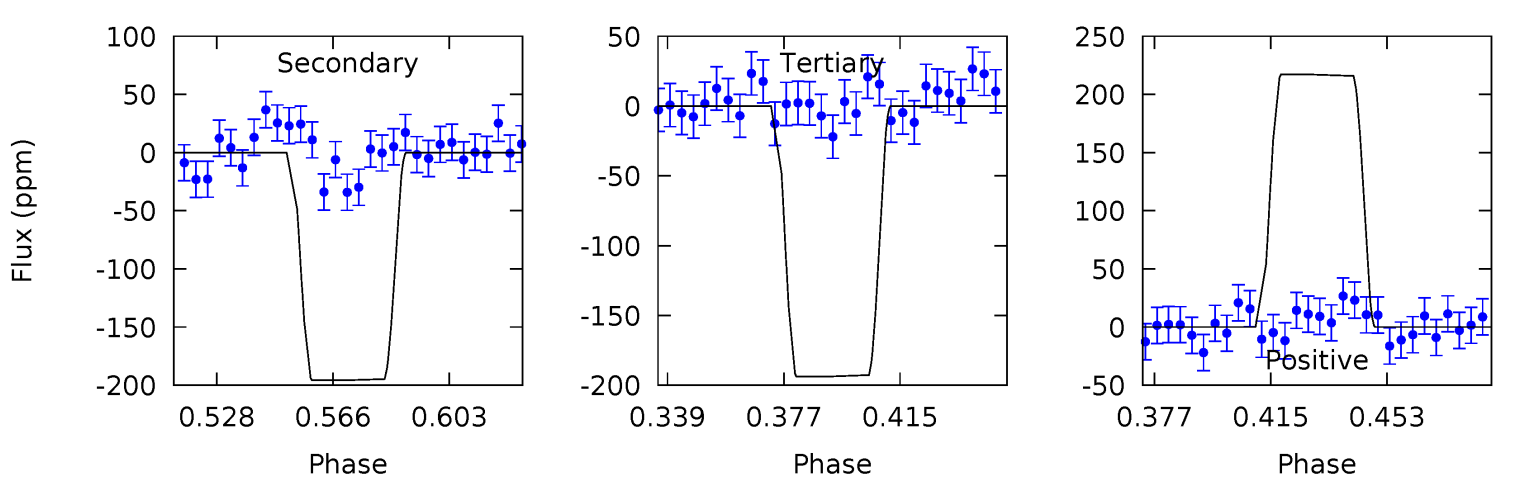
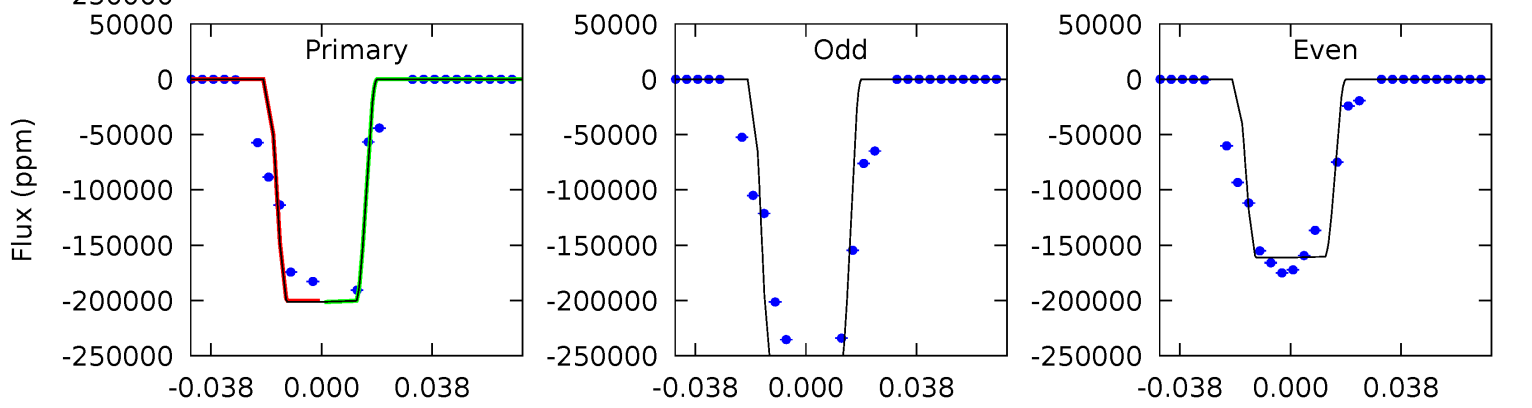
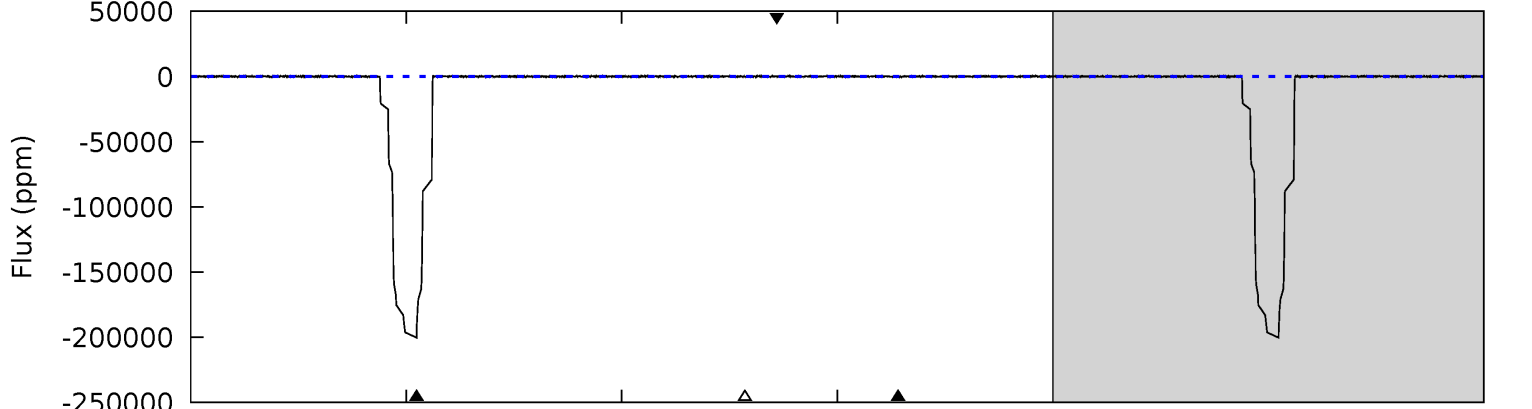
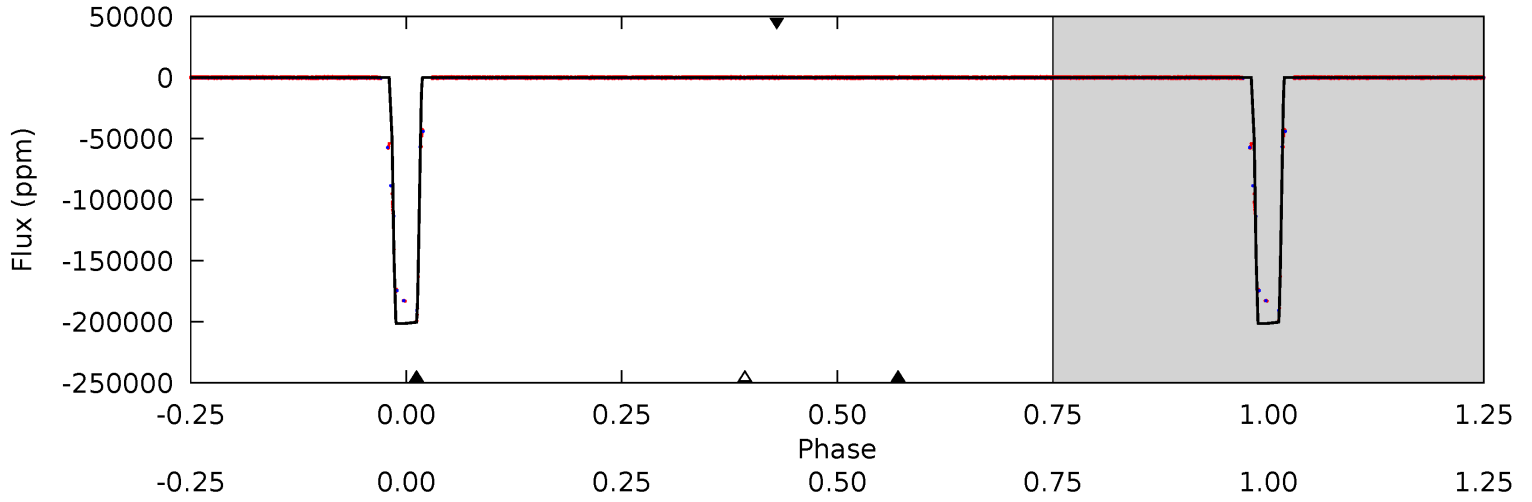
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

004839180-01, P = 4.426360 Days, E = 129.797574 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5351	5.20	5.15	5.77	4.77	2.08	4.28	5346	5346	0.06	-0.56	3624	1.08	0.00	0



Stellar Parameters For KIC 004839180

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6228^{+169}_{-206}	$4.277^{+0.158}_{-0.193}$	$-0.200^{+0.250}_{-0.300}$	$1.226^{+0.361}_{-0.240}$	$1.034^{+0.173}_{-0.115}$	$0.791^{+0.592}_{-0.391}$
	+3%/-3%	+4%/-5%	+125%/-150%	+29%/-20%	+17%/-11%	+75%/-49%
Source	PHO1	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 004839180-01 / KOI 6456.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$63.75^{+17.68}_{-15.46}$	1841^{+131}_{-121}	3191^{+2020}_{-8276}	$2.445^{+40.762}_{-39.571}$
Alt.	-195 ± 37	$65.38^{+16.91}_{-16.79}$	1852^{+146}_{-128}	-2320^{+125}_{-115}	$0.072^{+0.053}_{-0.029}$

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 $A_{obs} \gg 1.0$

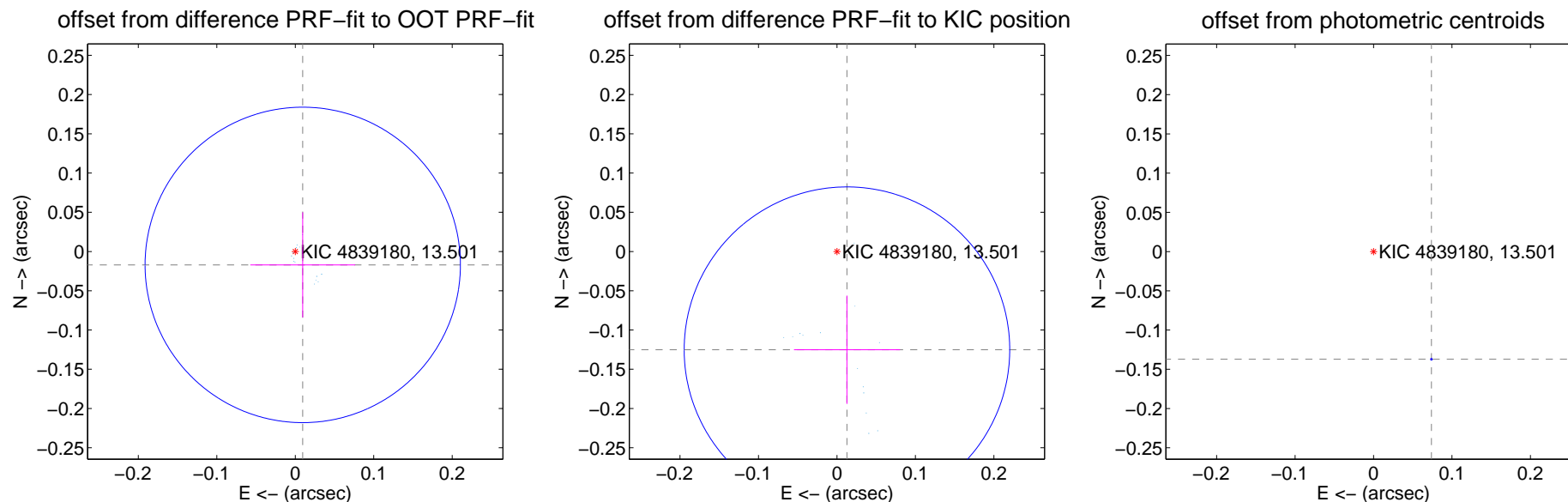
DV Centroid Data

Supplemental centroid analysis for 004839180-01. Kepler magnitude: 13.50. Transit SNR -1.00

There are 14 quarters with good PRF difference image offsets

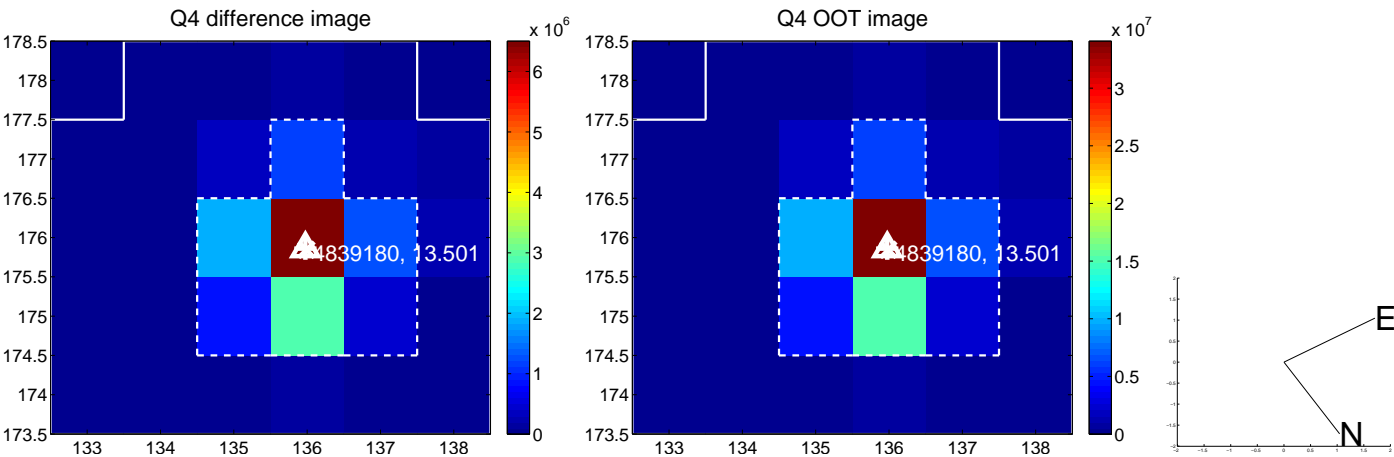
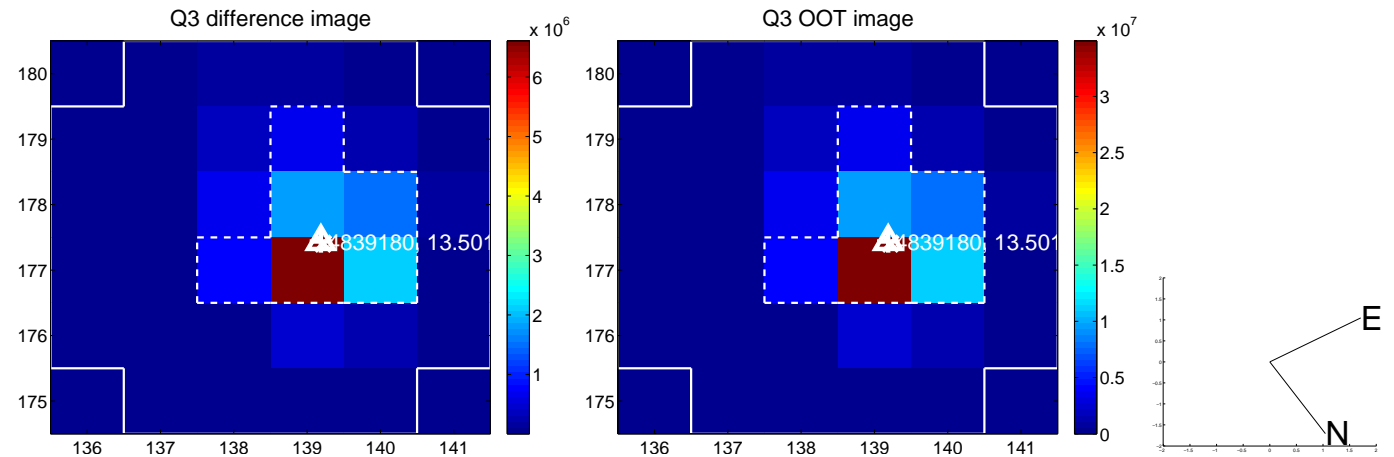
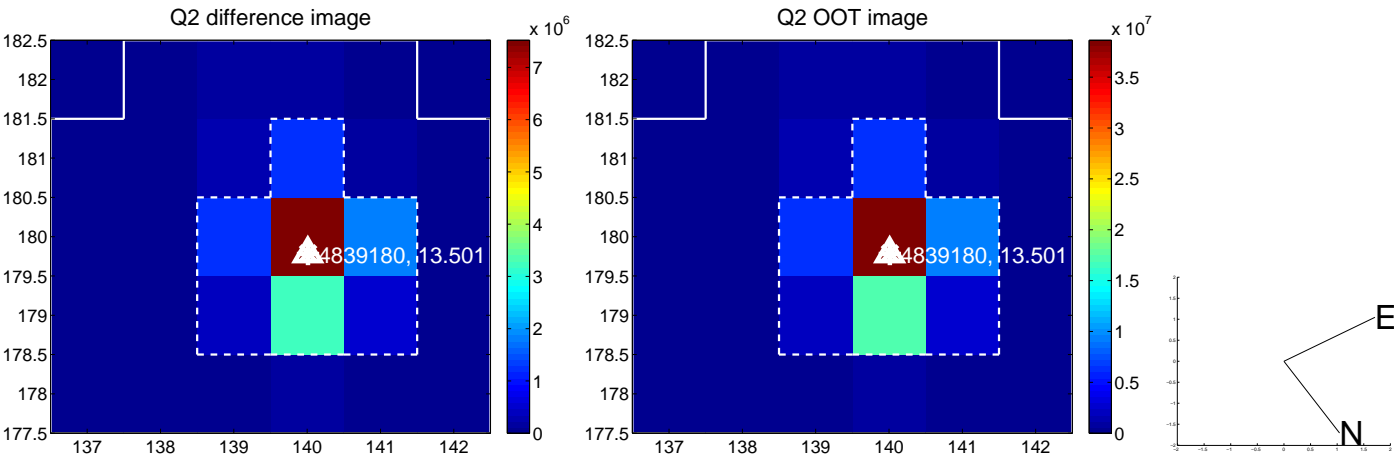
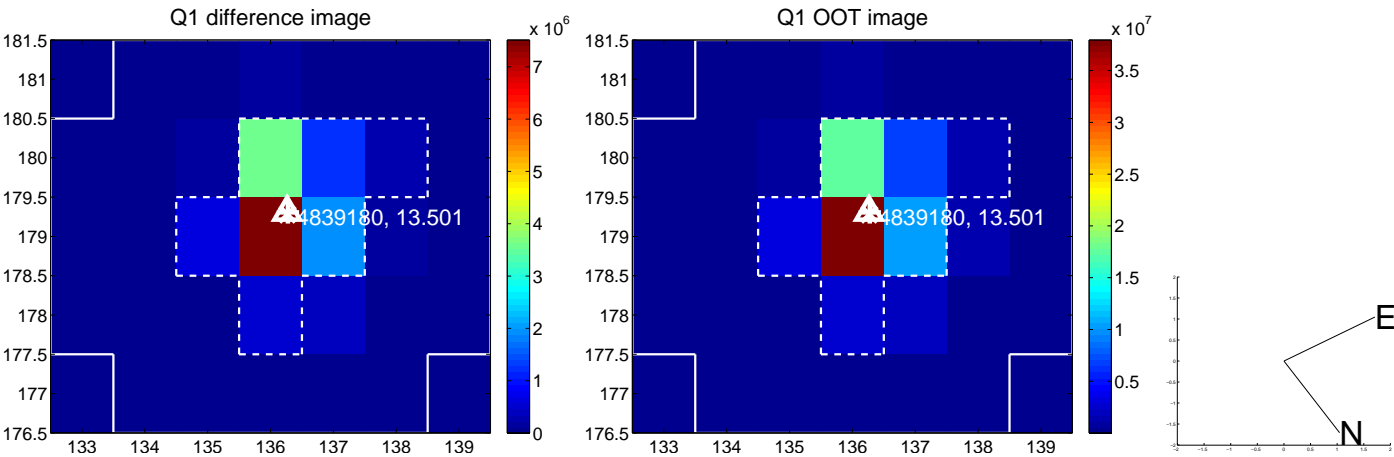
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.020 ± 0.067	0.29	-0.010 ± 0.067	-0.017 ± 0.067
PRF-fit source offset from KIC position	0.126 ± 0.069	1.82	-0.013 ± 0.068	-0.125 ± 0.069
photometric centroid source offset	0.16 ± 0.00	422.59	-0.07 ± 0.00	-0.14 ± 0.00

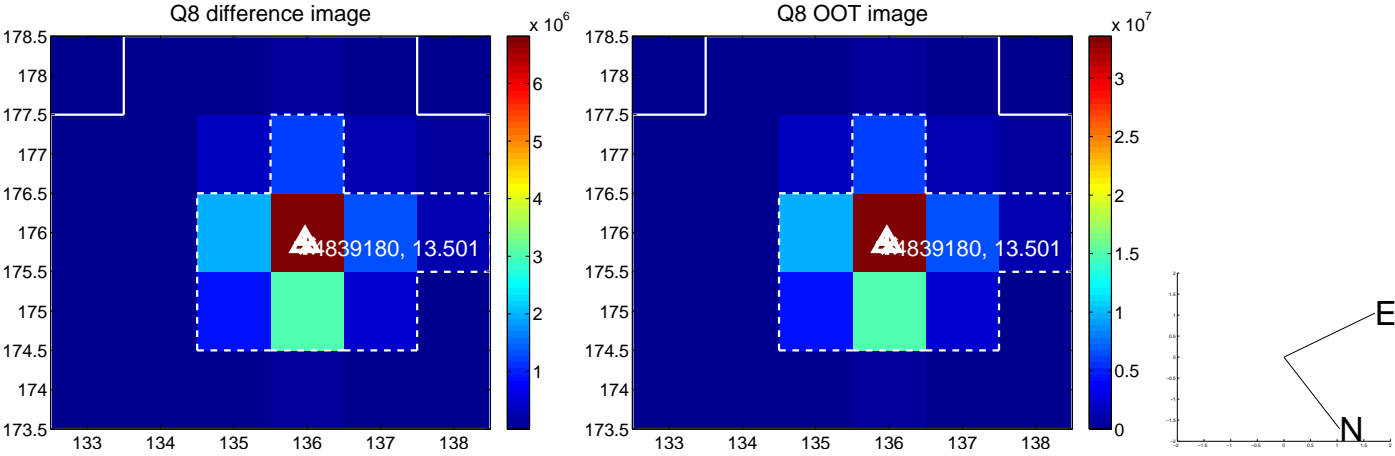
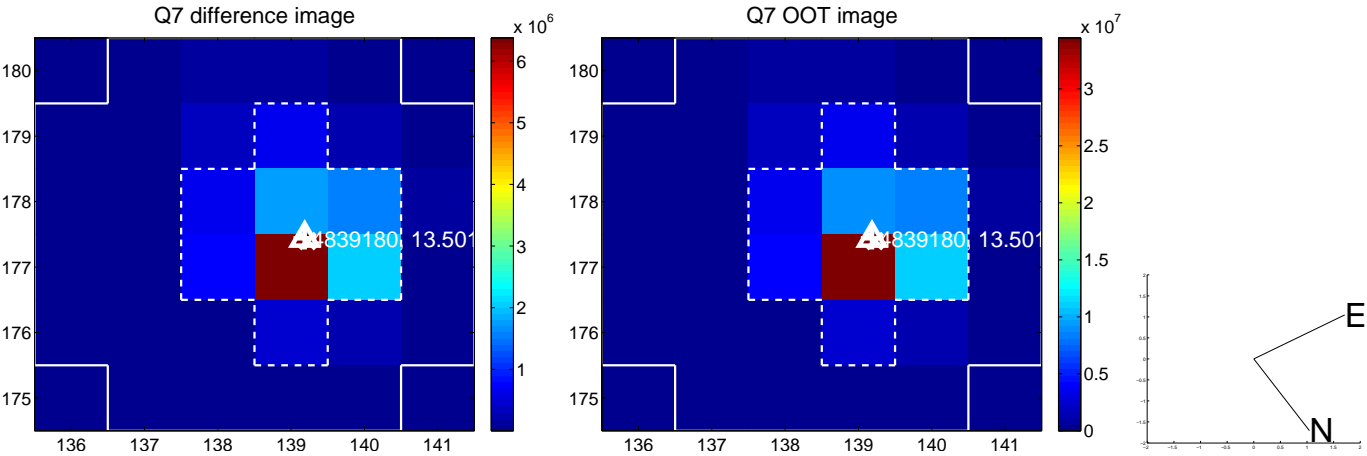
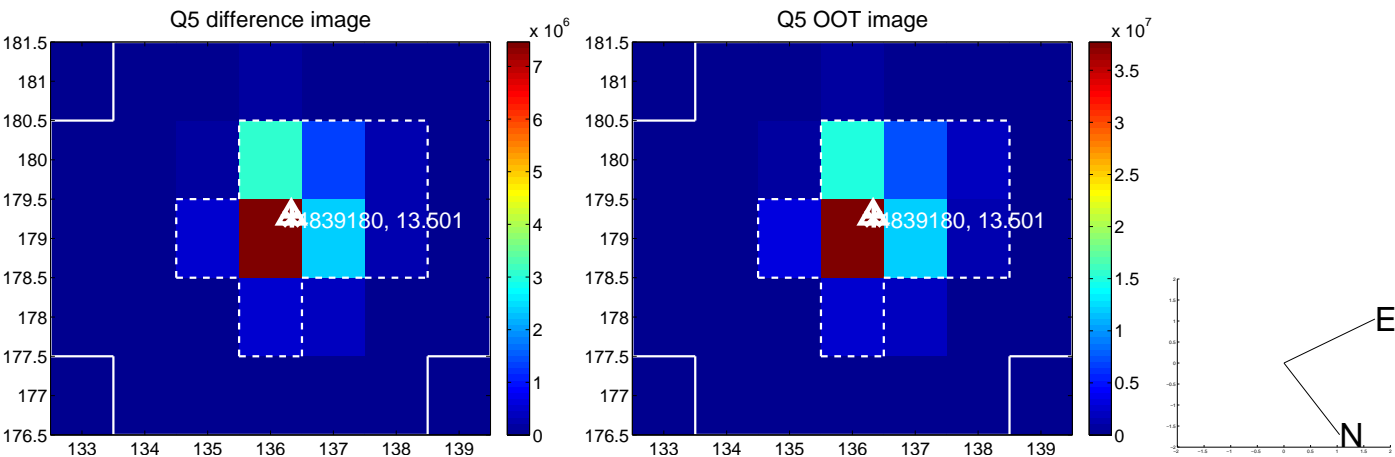


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

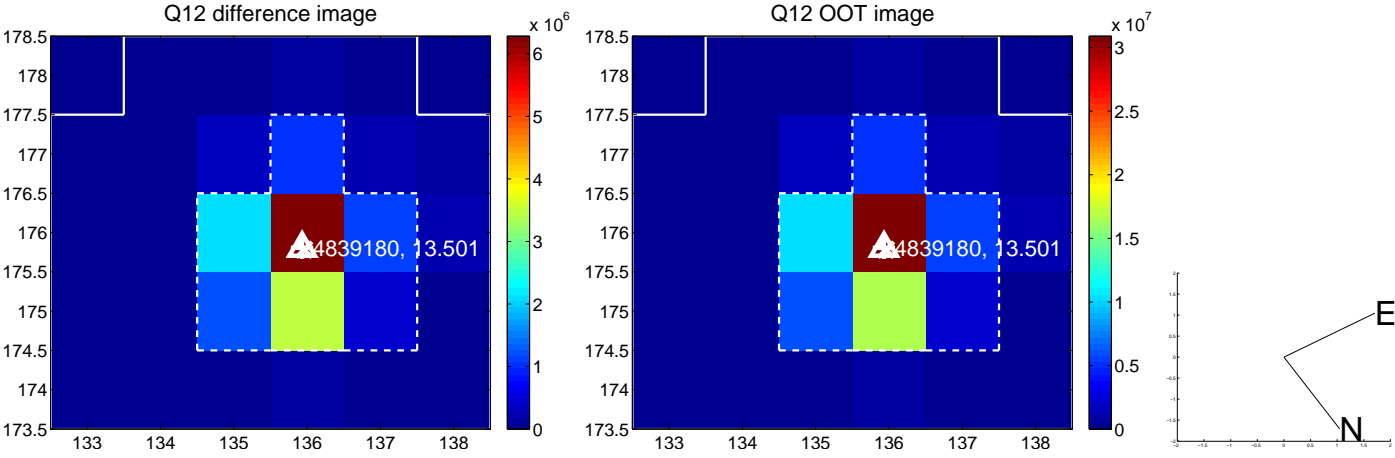
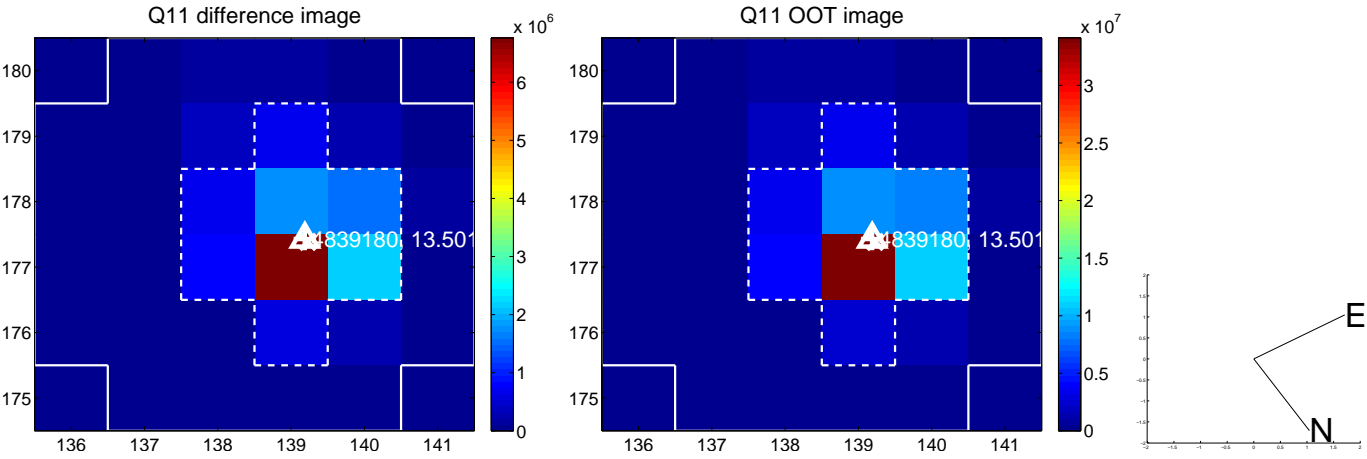
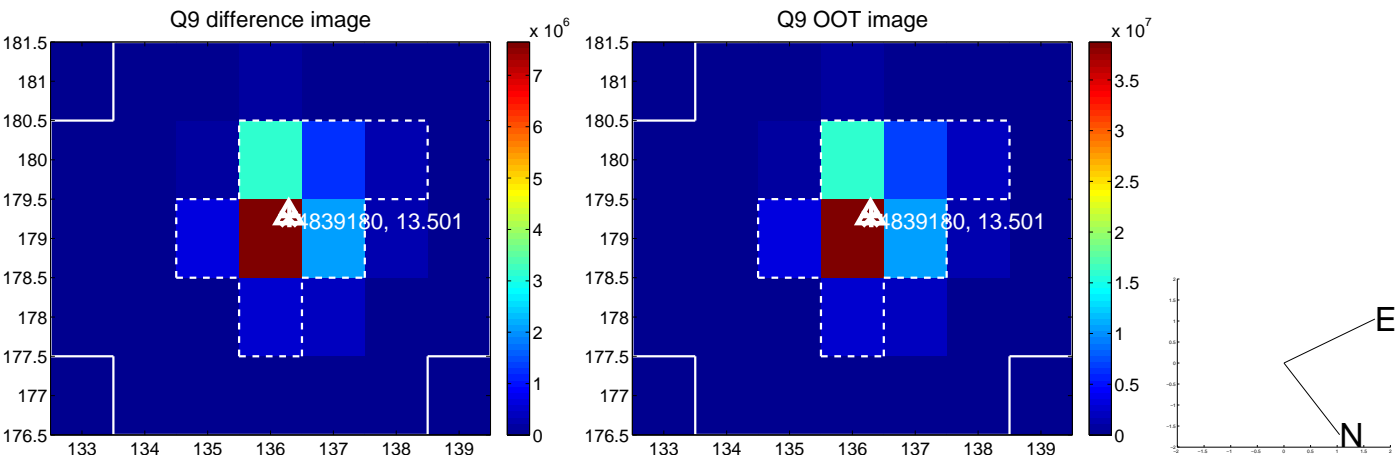
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



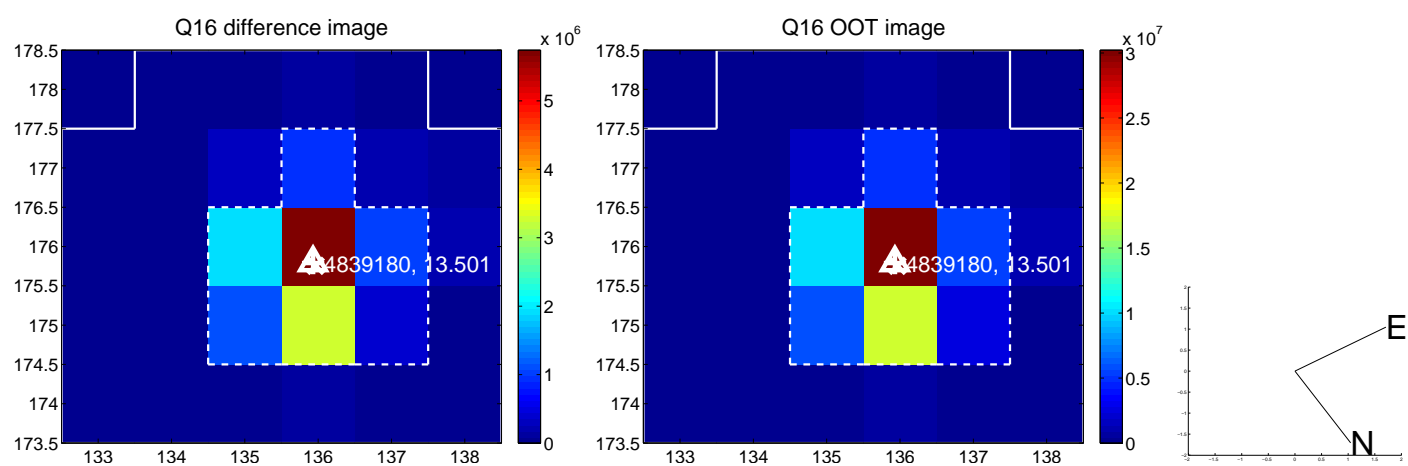
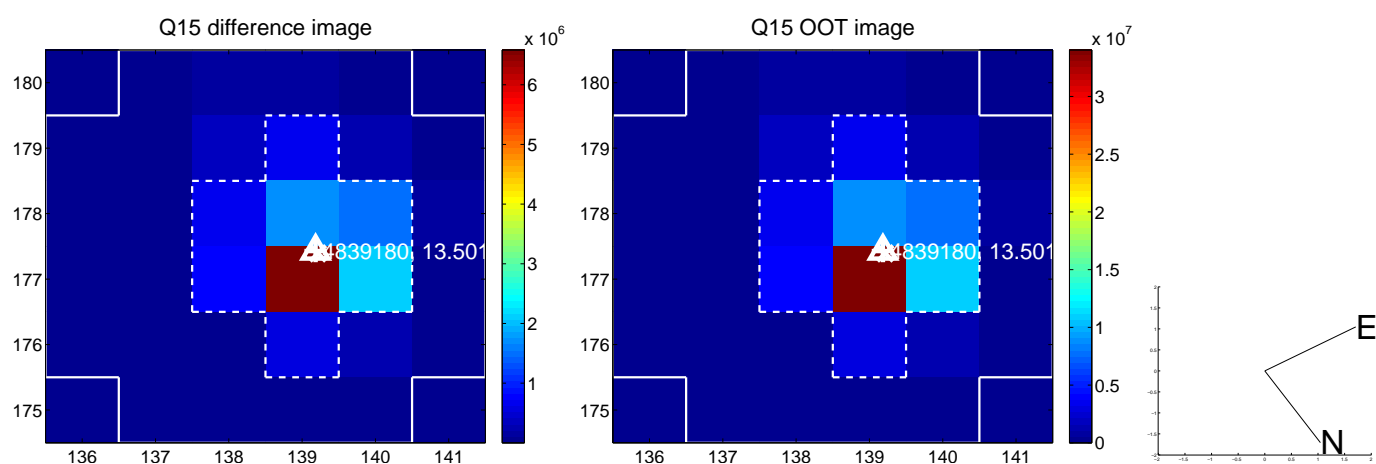
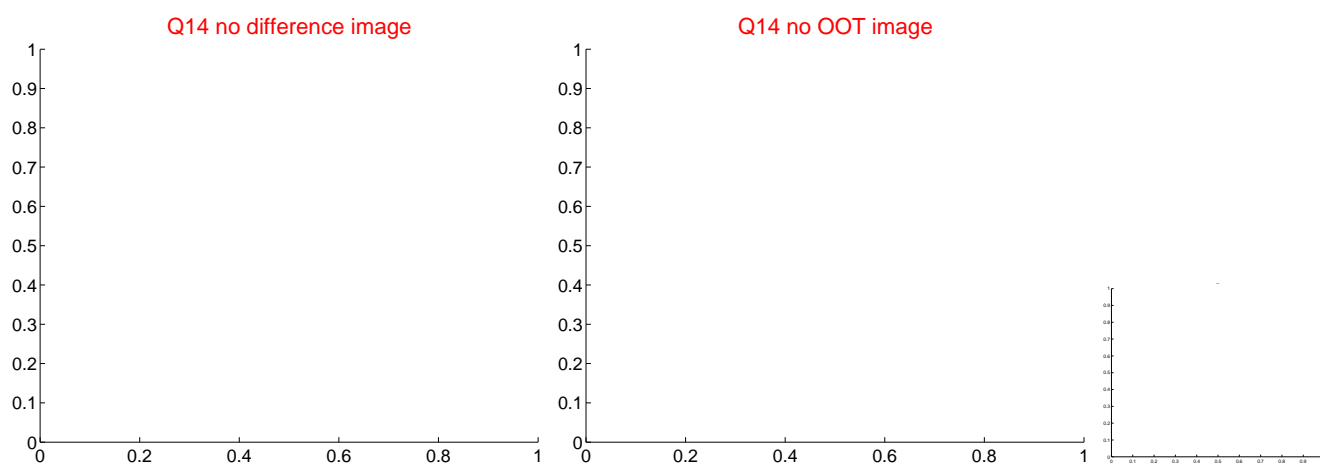
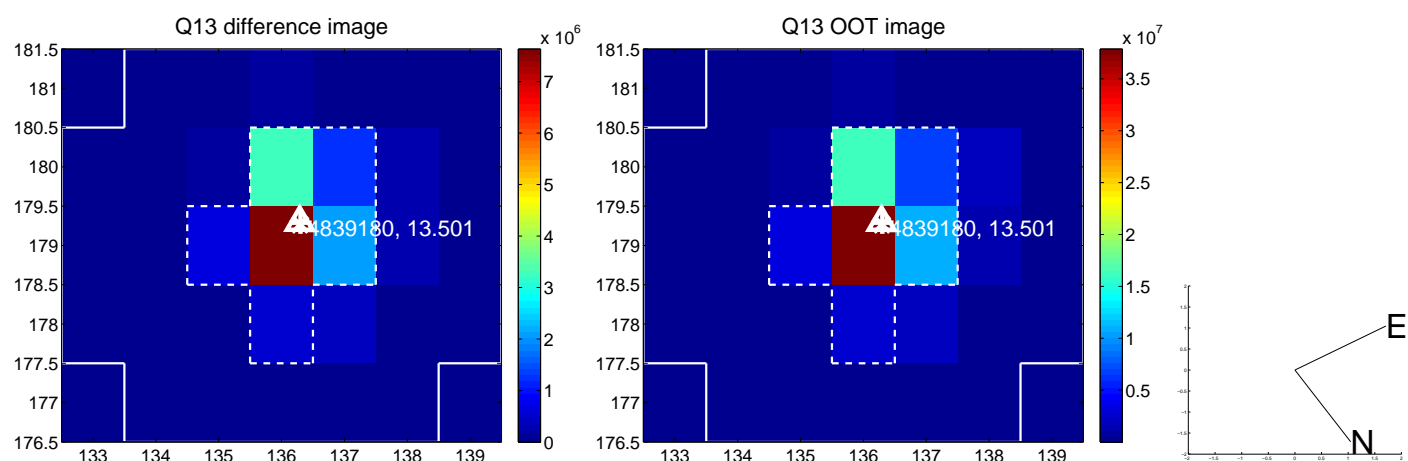
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



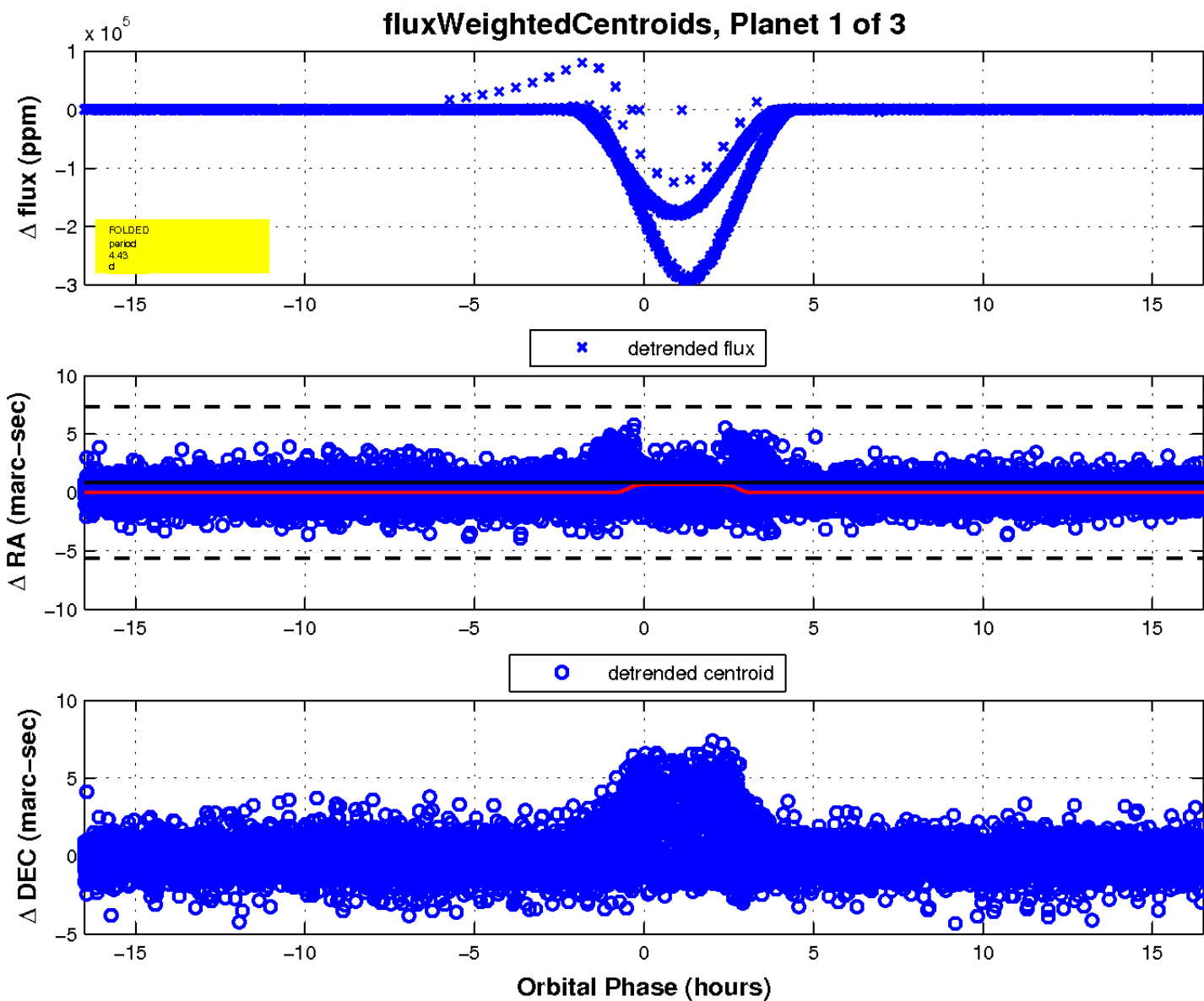
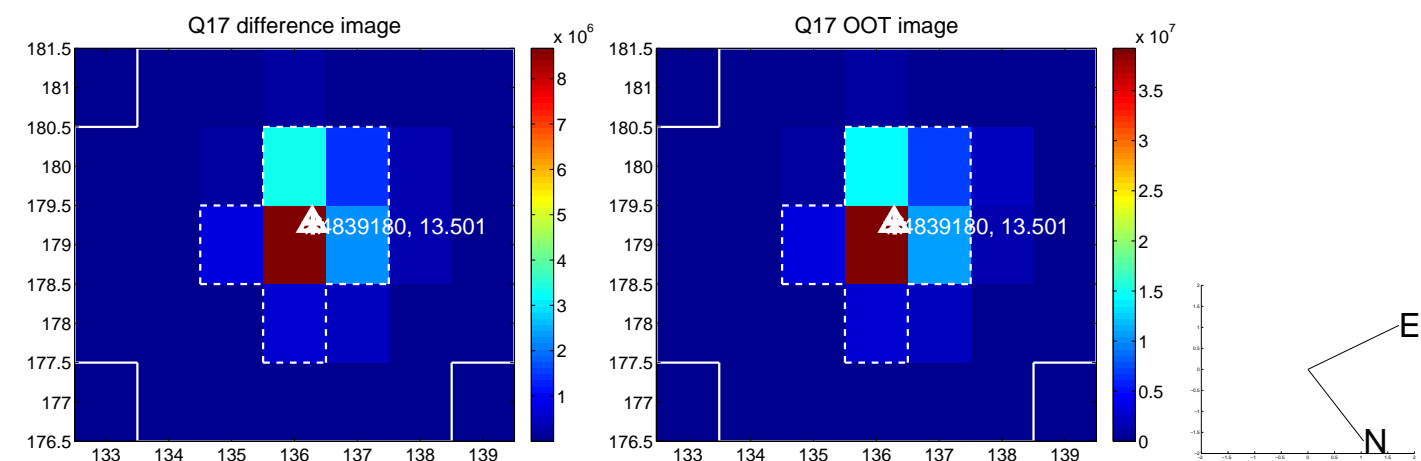
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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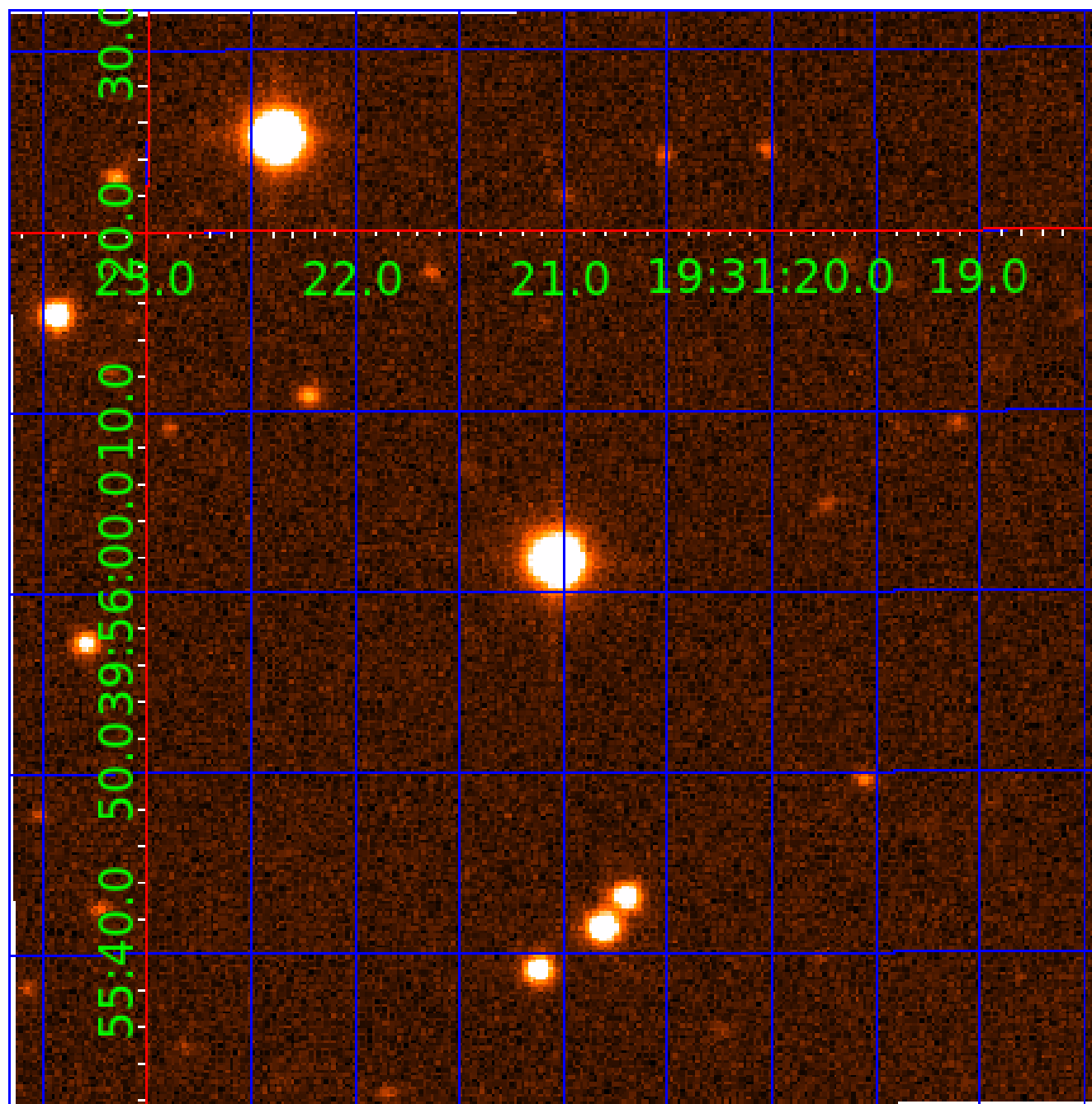


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004839180

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004839180-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—CENT_NOFITS
004839180-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
004839180-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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.

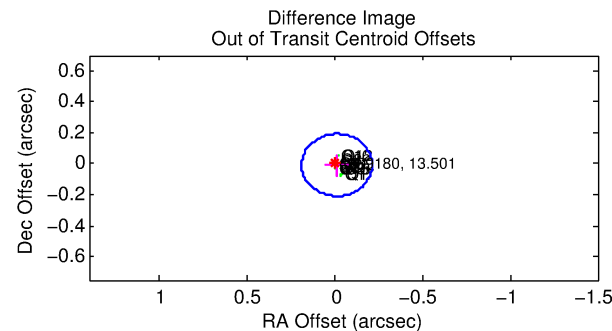
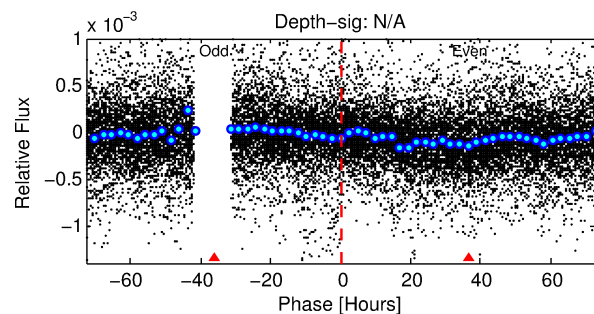
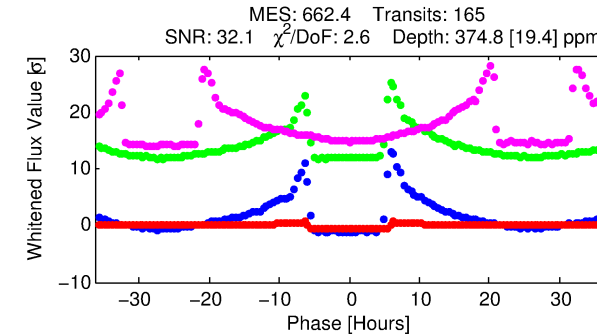
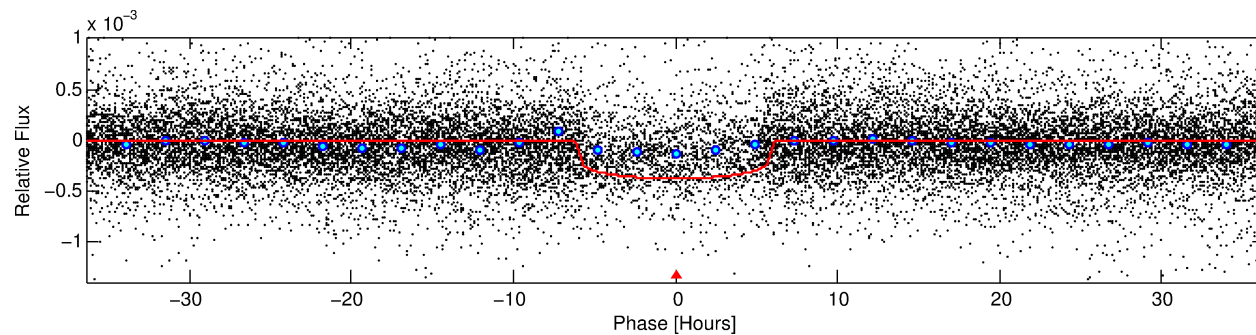
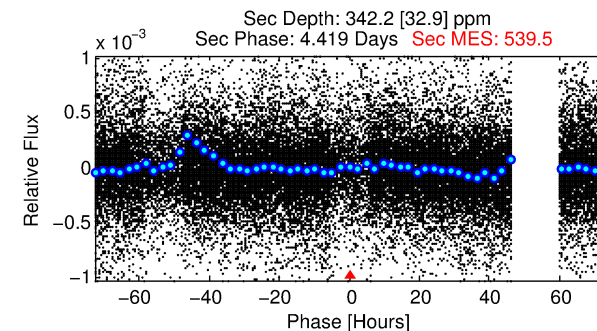
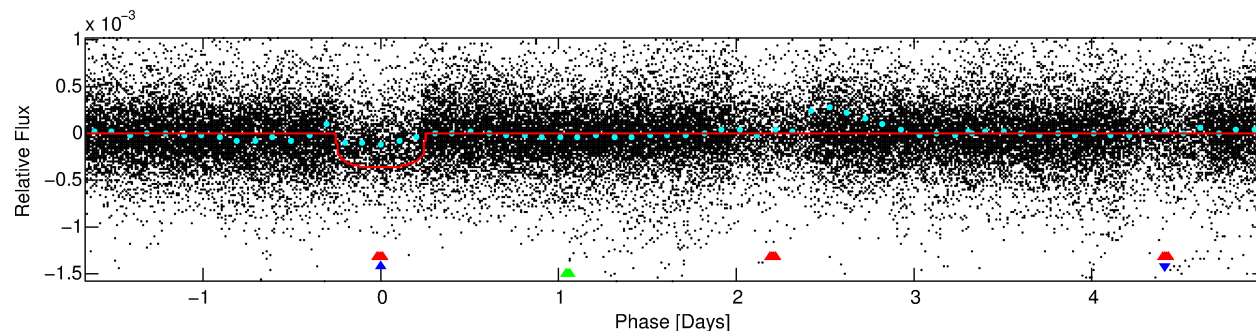
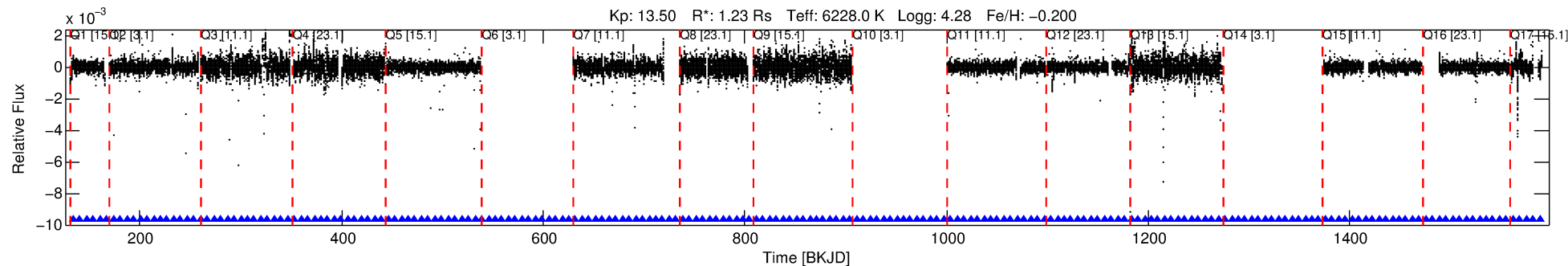
Ephemeris Match Information For 004839180-02

No Significant Match Found

DV One-Page Summary

KIC: 4839180 Candidate: 2 of 3 Period: 6.640 d
KOI: K06456 Corr: No Ephemeris Match

Kp: 13.50 R*: 1.23 Rs Teff: 6228.0 K Logg: 4.28 Fe/H: -0.200



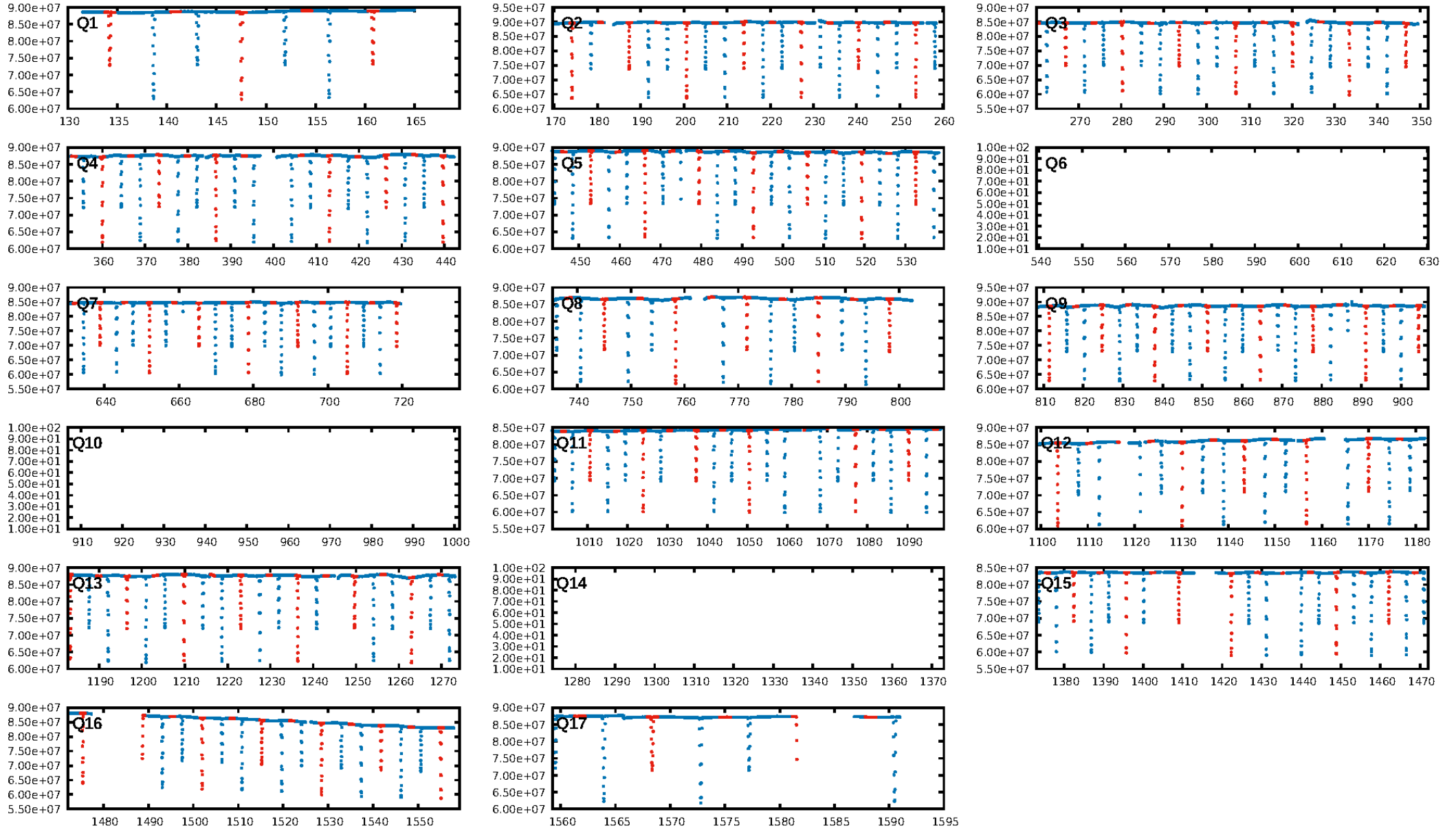
DV Fit Results:

Period = 6.63967 [0.00003] d
Epoch = 134.2162 [0.0028] BKJD
Rp/R* = 0.0178 [0.0055]
a/R* = 4.25 [6.19]
b = 0.16 [9.37]
Seff = 413.45 [156.79]
Teq = 1150 [109] K
Rp = 2.38 [1.01] Re
a = 0.0700 [0.0172] AU
Ag = 162.72 [116.32] [1.39σ]
Teffp = 6349 [1007] K [5.13σ]

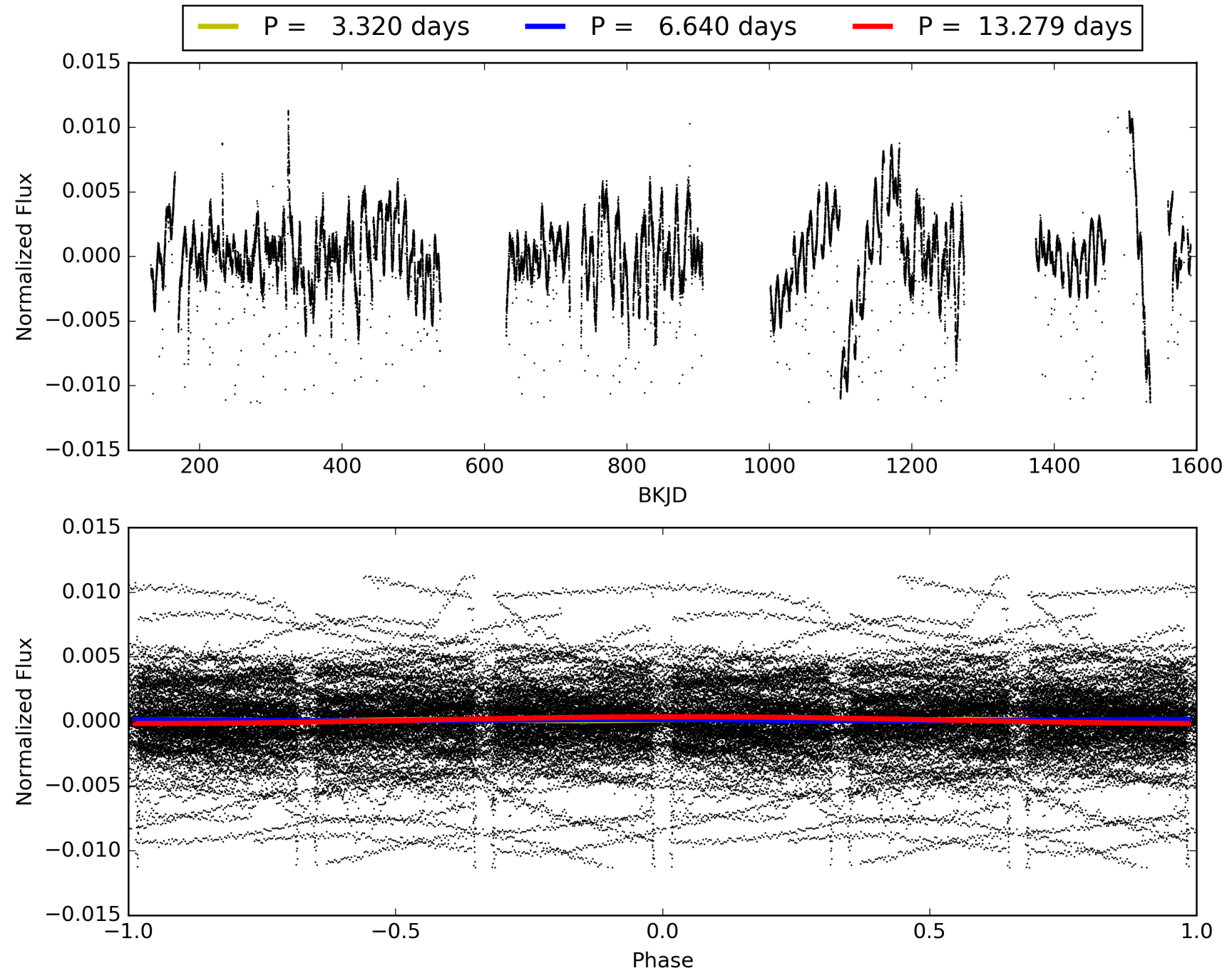
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 14.7%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [156/156]
GhostDiagnostic-chr: 0.9323
Centroid-sig: N/A
Centroid-so: 0.112 arcsec [0.92σ]
OotOffset-rm: 0.014 arcsec [0.22σ]
KicOffset-rm: 0.118 arcsec [1.70σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 0.00 [0/14]

TCE 004839180-02, PDC Light Curves

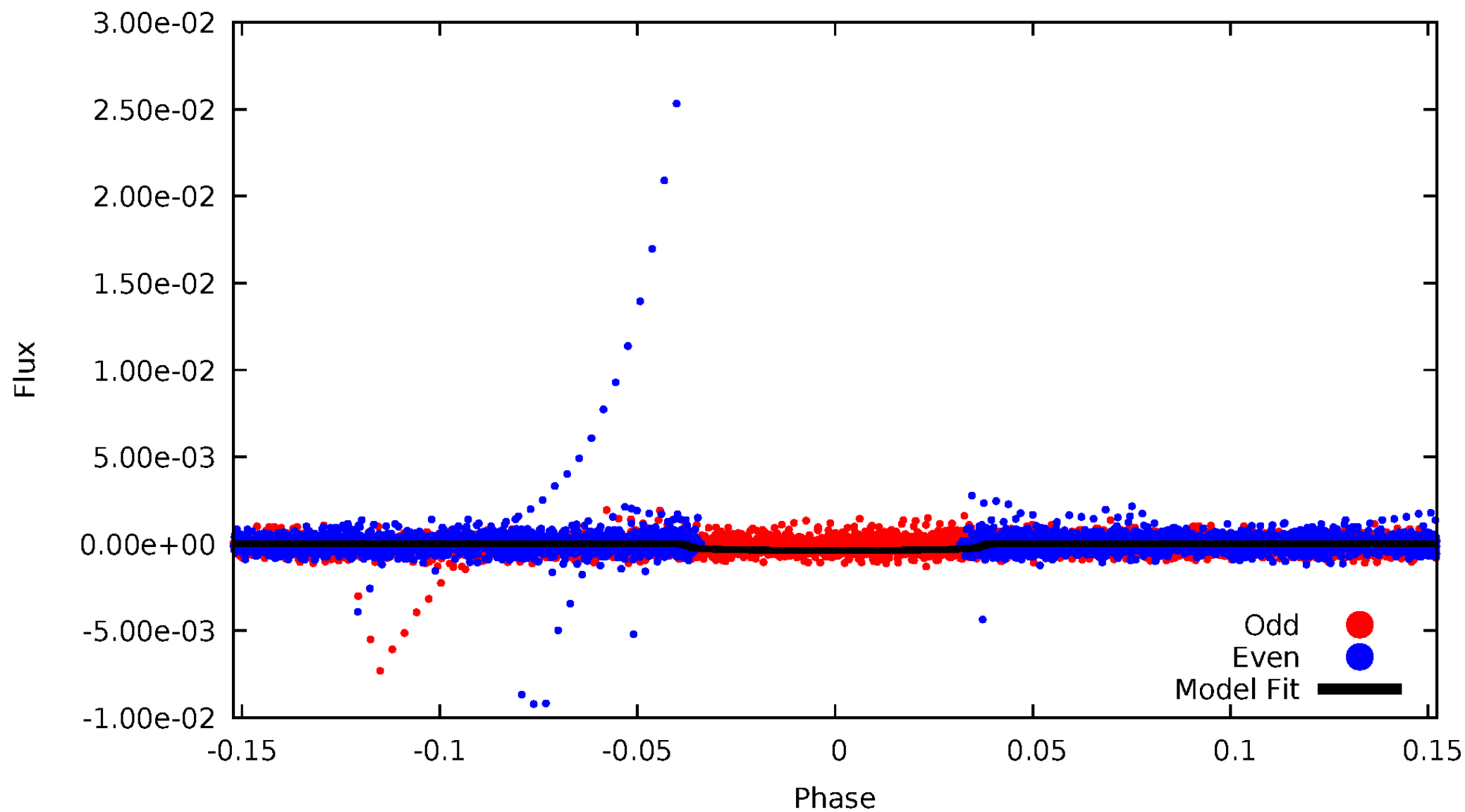


TCE 004839180-02



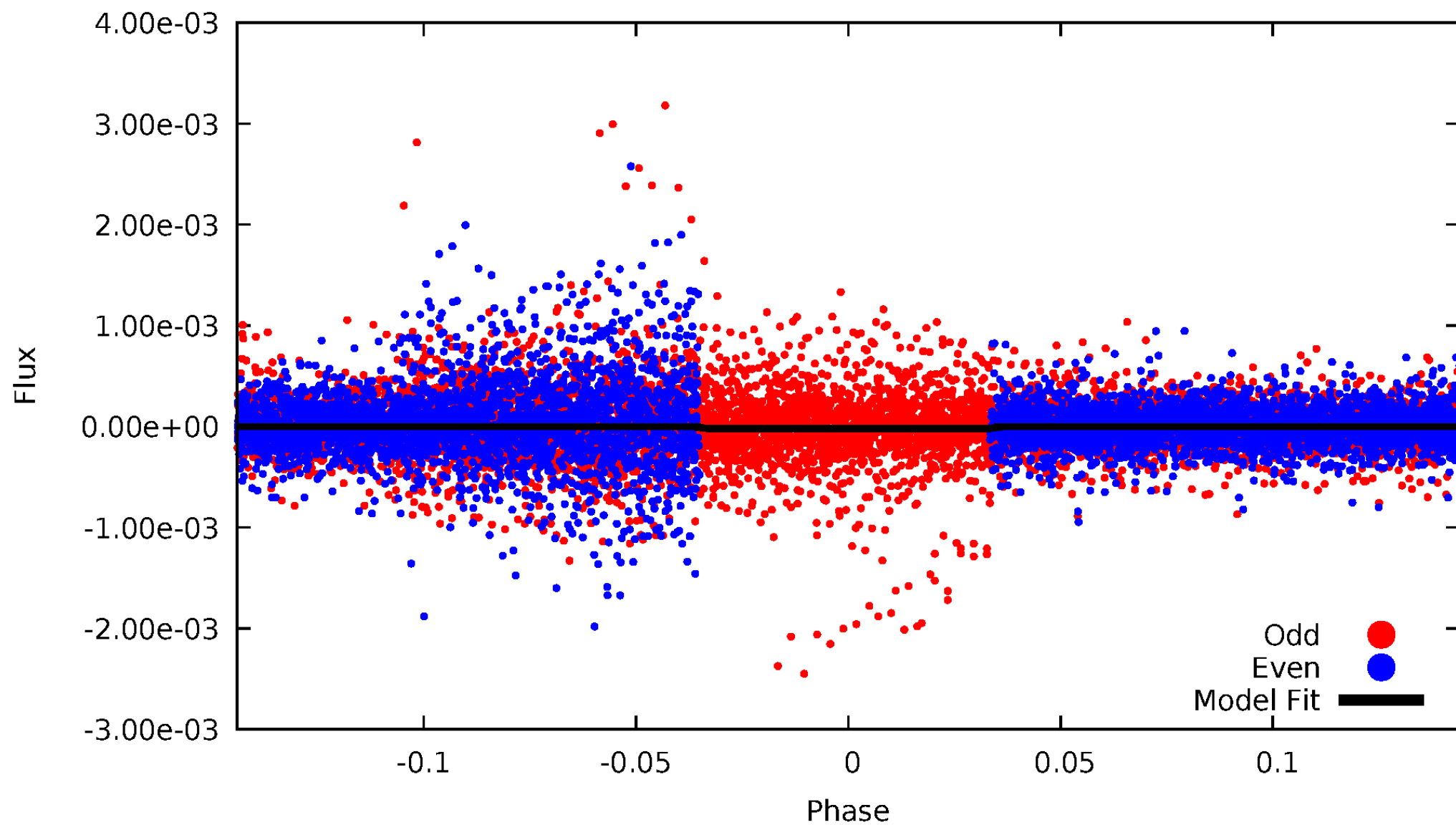
DV Odd/Even

TCE 004839180-02



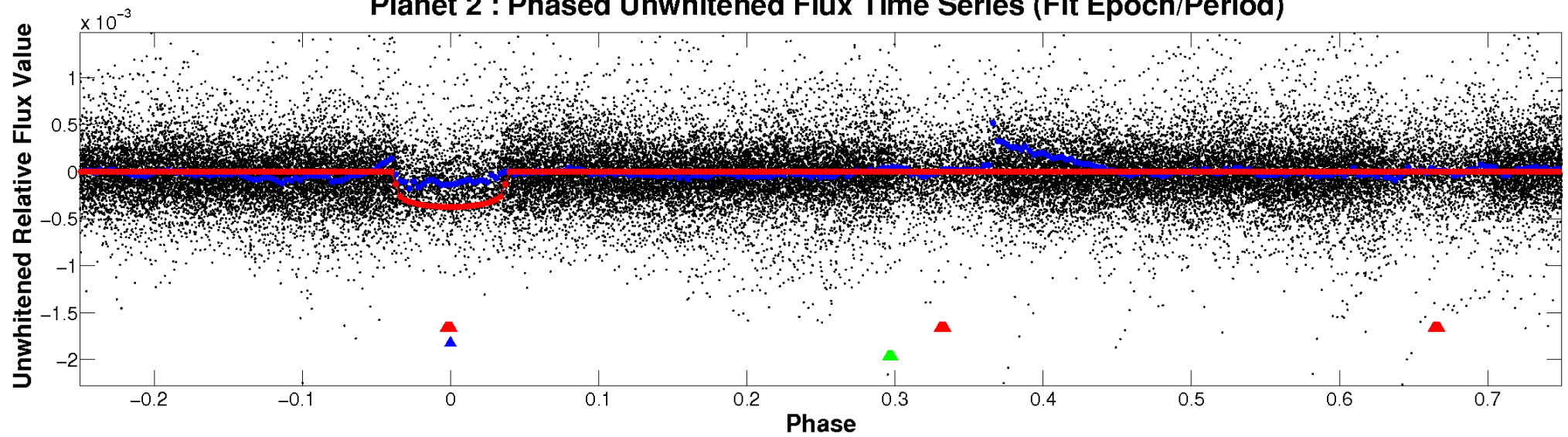
ALT Odd/Even

TCE 004839180-02

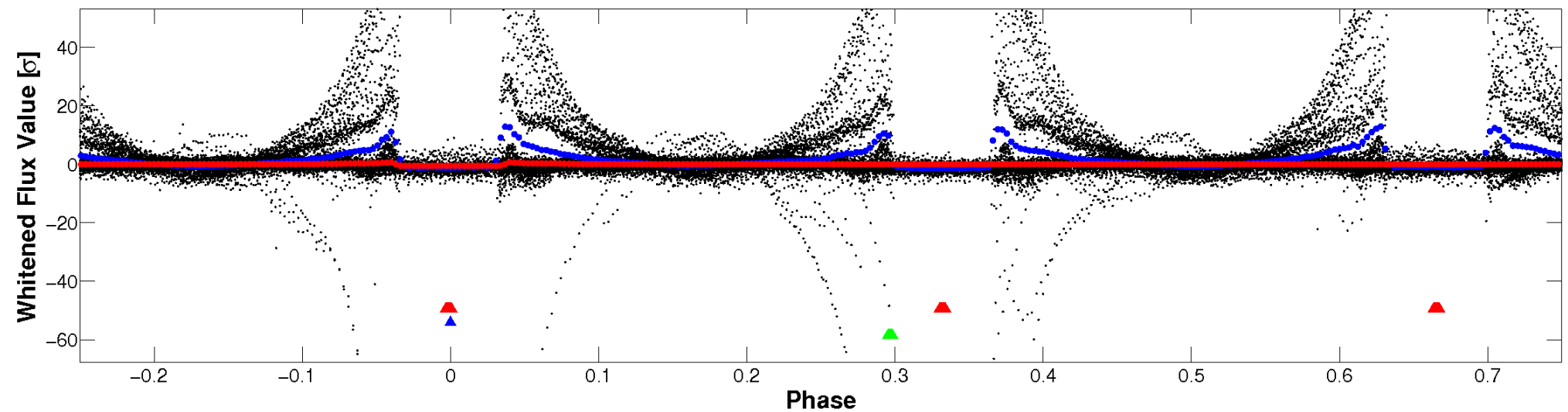


Non-Whitened Vs. Whitened Light Curve

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

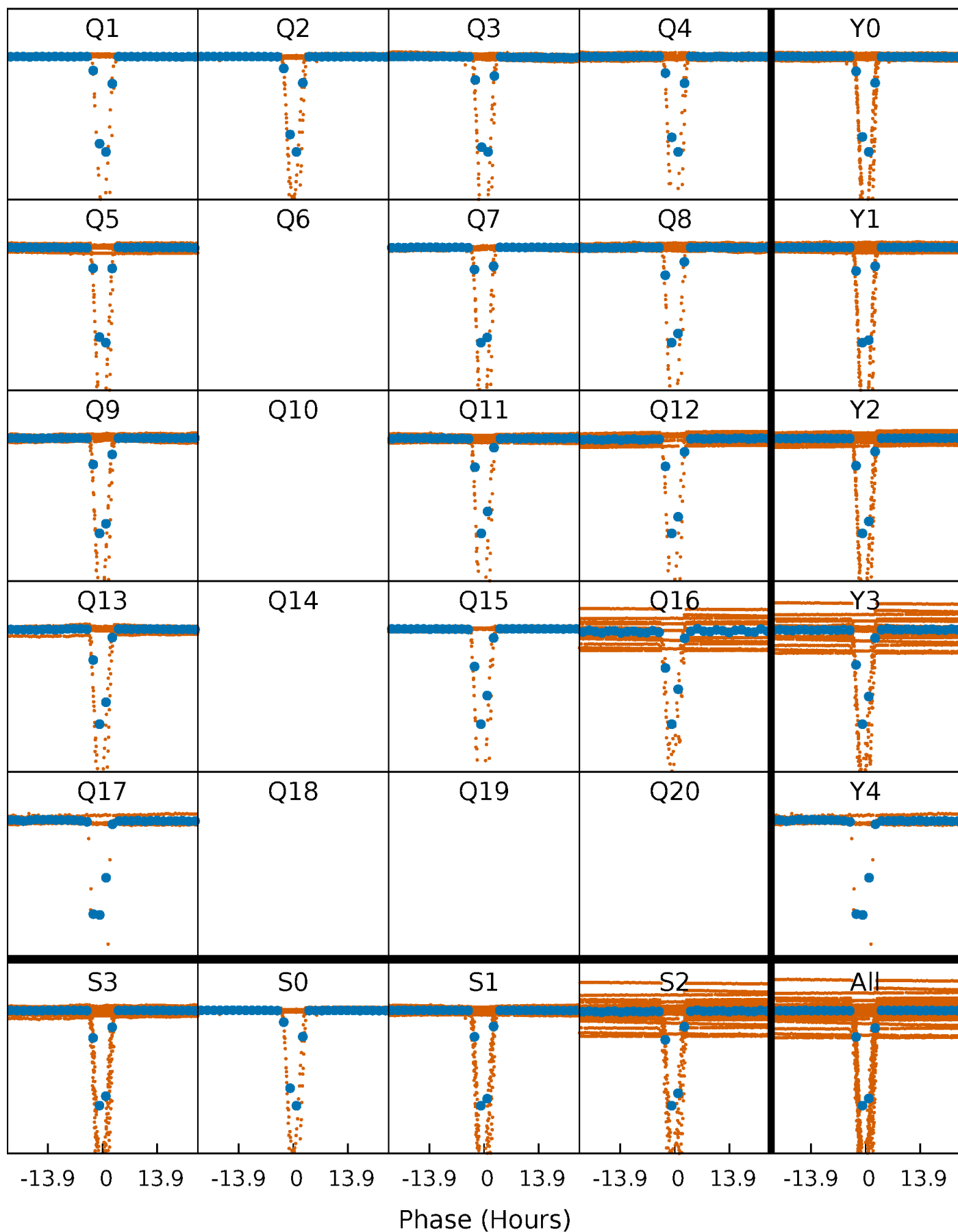


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



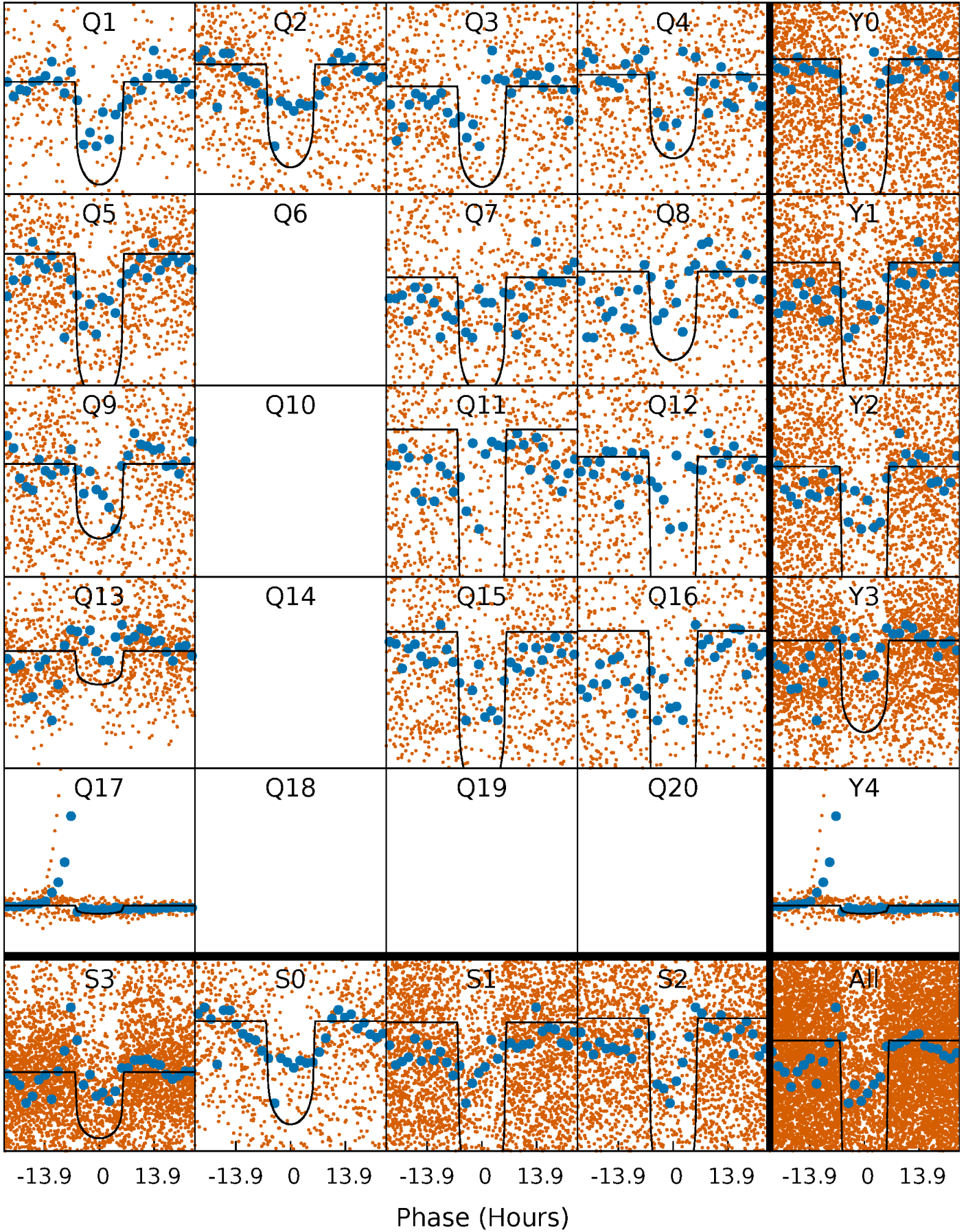
PDC Quarter-Phased Transit Curves

TCE 004839180-02 P= 6.639666 Days $T_0=134.216205$ (BKJD)



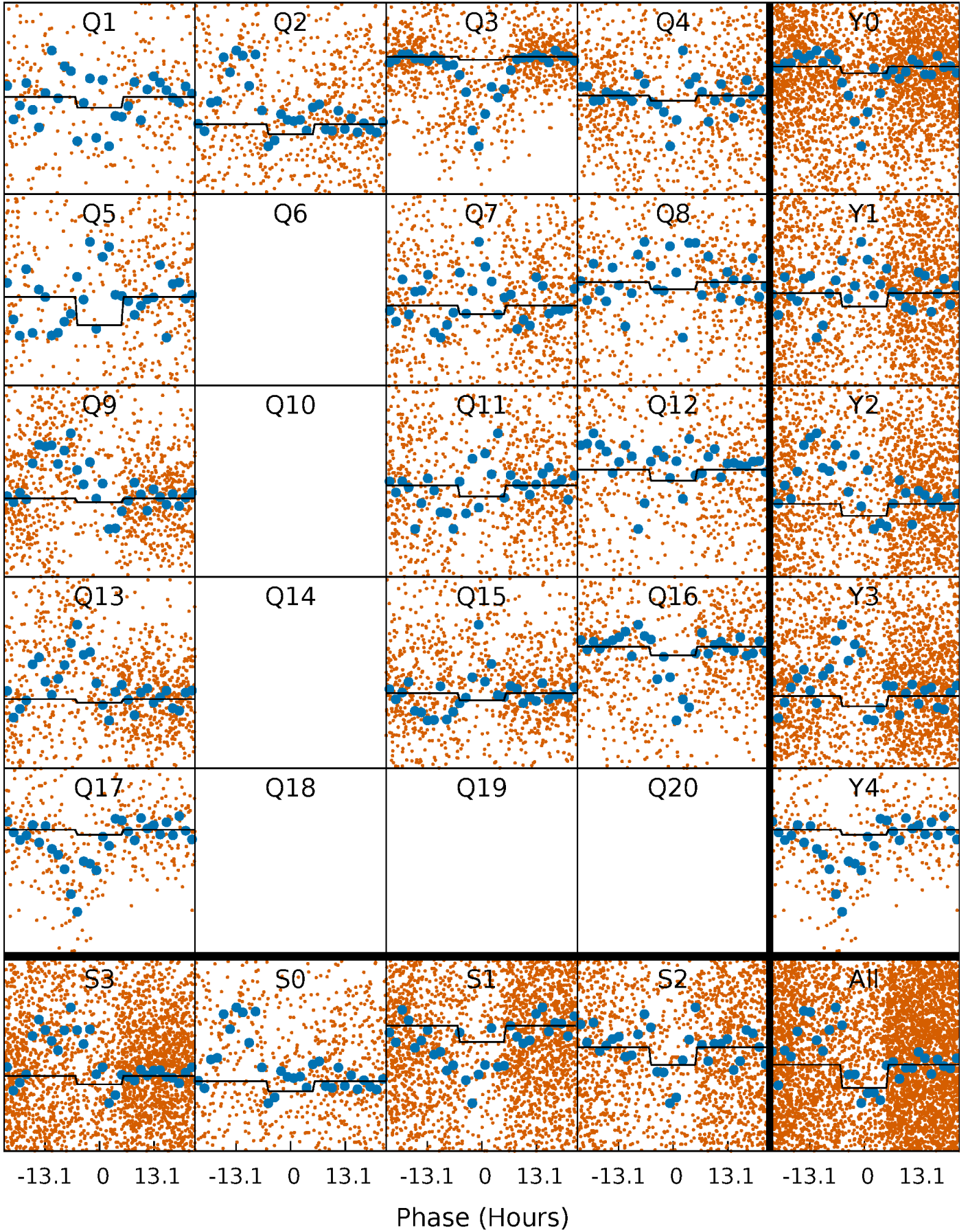
DV Quarter-Phased Transit Curves

TCE 004839180-02 P= 6.639666 Days $T_0=134.216205$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

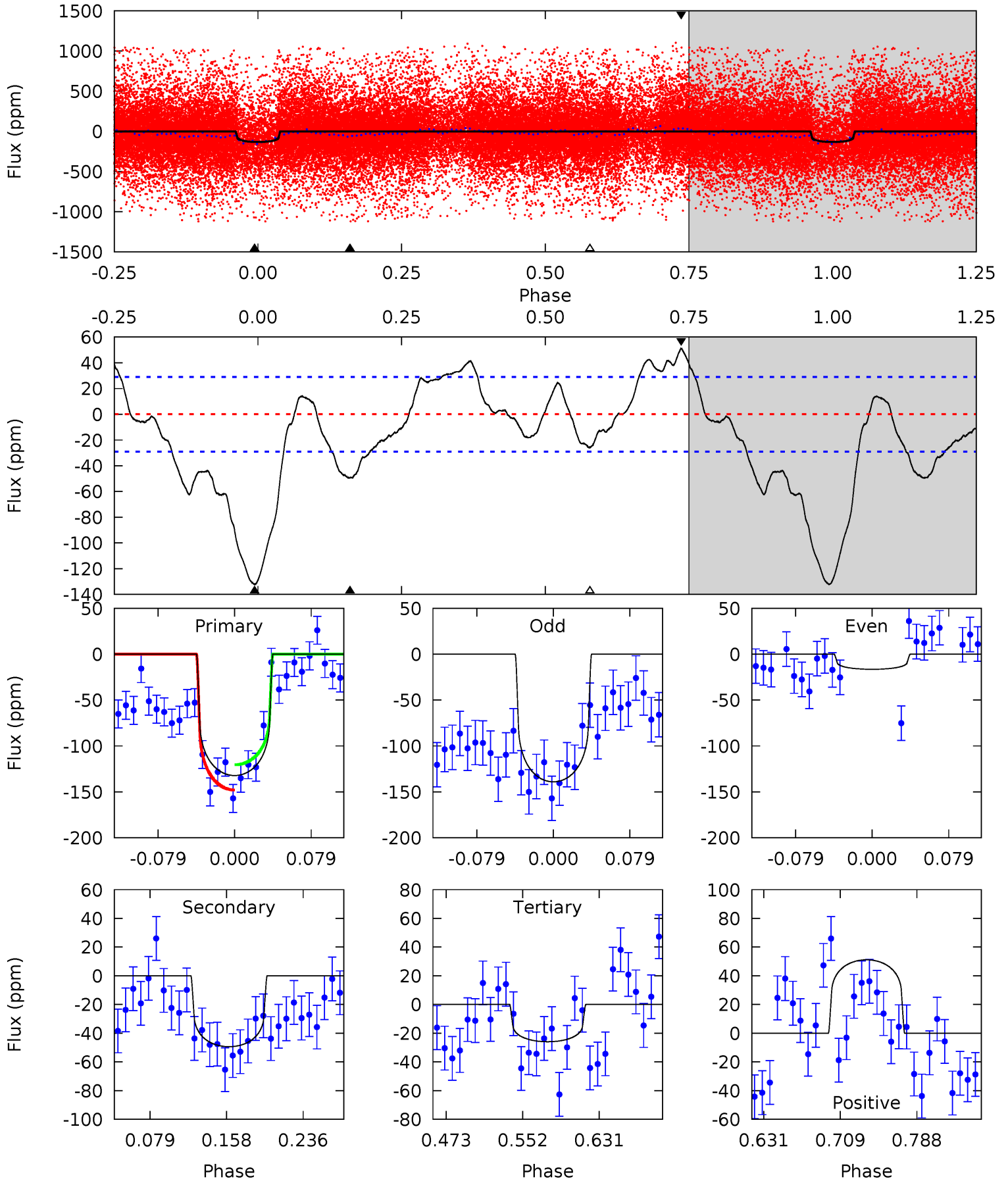
TCE 004839180-02 P= 6.639571 Days $T_0=134.224157$ (BKJD)



DV Model-Shift Uniqueness Test

004839180-02, P = 6.639666 Days, E = 127.576539 Days

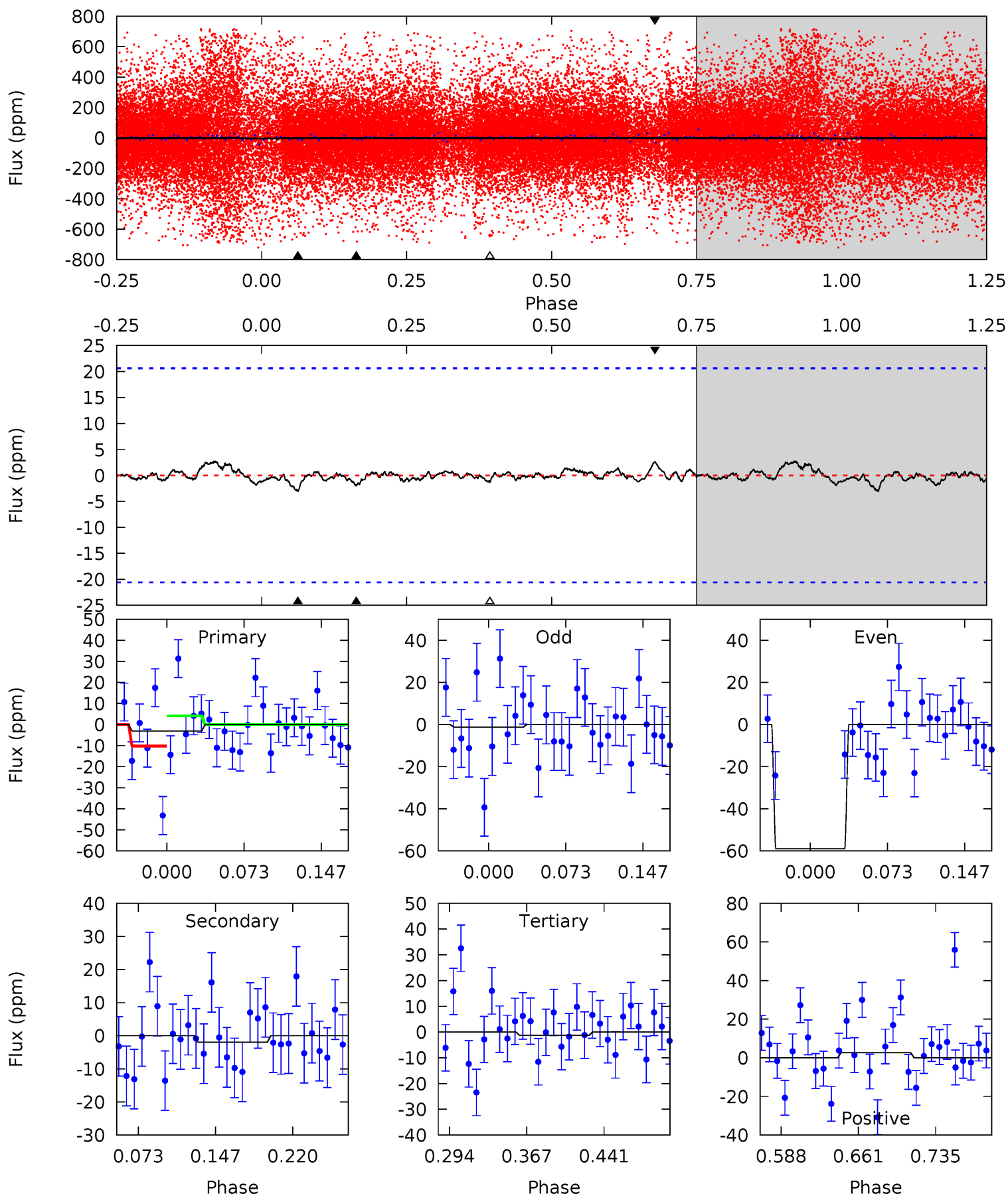
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.0	7.85	4.12	8.13	4.61	1.76	4.18	16.9	12.9	3.73	-0.27	6.11	0.27	0.28	2.20



Alt Model-Shift Uniqueness Test

004839180-02, P = 6.639571 Days, E = 127.584586 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.69	0.44	0.29	0.58	4.63	1.79	0.19	0.40	0.10	0.16	-0.14	3.11	1.90	0.47	0.73



Stellar Parameters For KIC 004839180

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6228^{+169}_{-206}	$4.277^{+0.158}_{-0.193}$	$-0.200^{+0.250}_{-0.300}$	$1.226^{+0.361}_{-0.240}$	$1.034^{+0.173}_{-0.115}$	$0.791^{+0.592}_{-0.391}$
	+3%/-3%	+4%/-5%	+125%/-150%	+29%/-20%	+17%/-11%	+75%/-49%
Source	PHO1	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 004839180-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-49 ± 6	$2.47^{+0.83}_{-0.79}$	1618^{+130}_{-105}	4155^{+600}_{-426}	21^{+25}_{-9}
Alt.	-2 ± 4	$0.83^{+0.67}_{-0.52}$	1615^{+122}_{-111}	3238^{+1778}_{-6849}	$4.977^{+50.490}_{-14.495}$

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 $A_{obs} \gg 1.0$

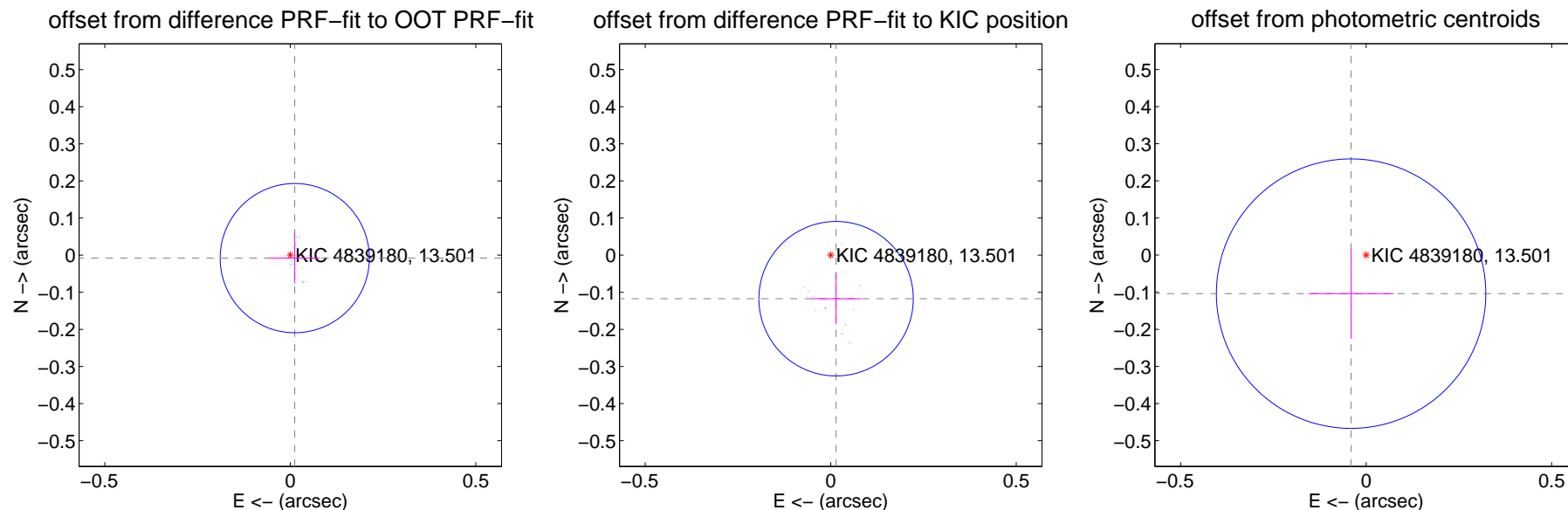
DV Centroid Data

Supplemental centroid analysis for 004839180-02. Kepler magnitude: 13.50. Transit SNR 32.15

There are 14 quarters with good PRF difference image offsets

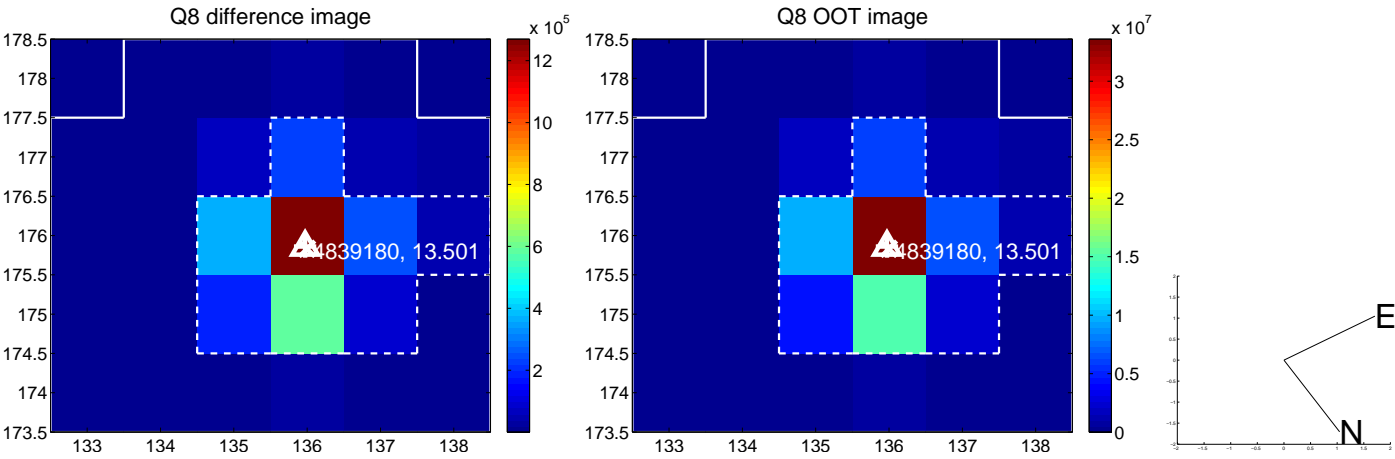
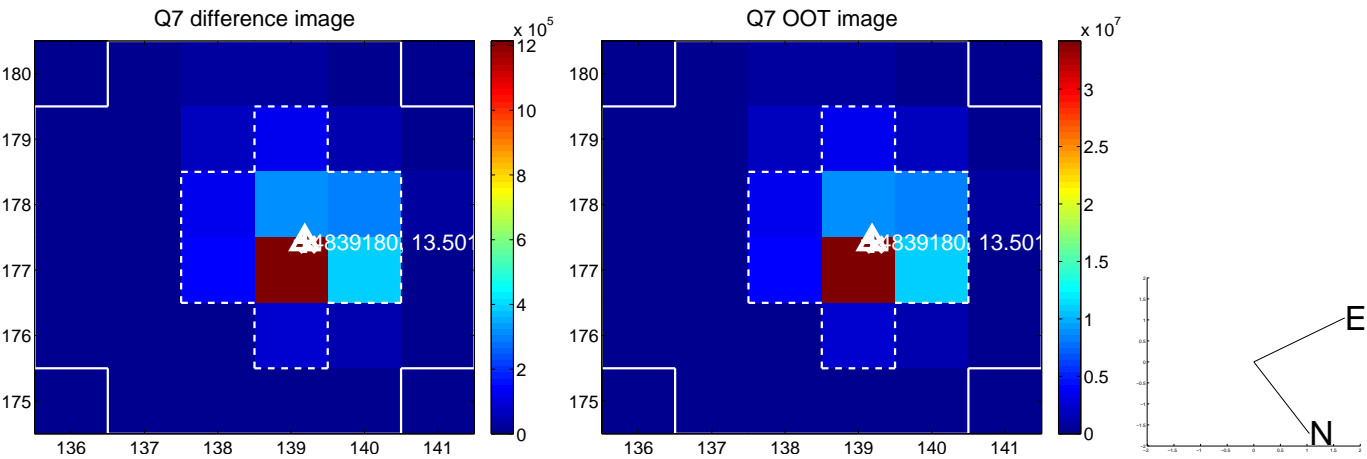
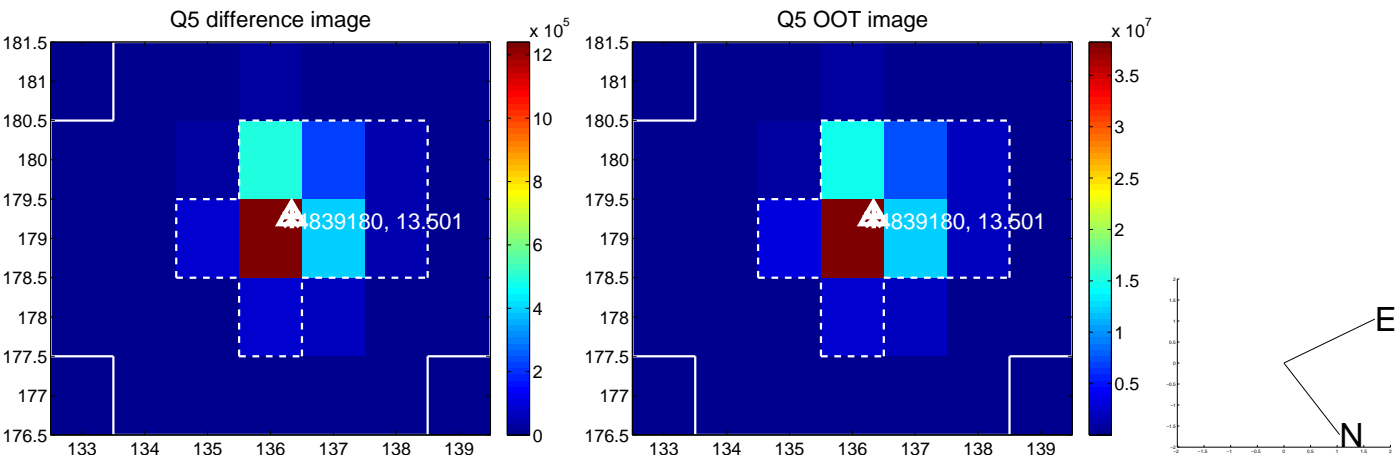
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.014 ± 0.067	0.22	-0.012 ± 0.067	-0.008 ± 0.067
PRF-fit source offset from KIC position	0.118 ± 0.069	1.70	-0.014 ± 0.068	-0.117 ± 0.069
photometric centroid source offset	0.11 ± 0.12	0.92	0.04 ± 0.12	-0.10 ± 0.12

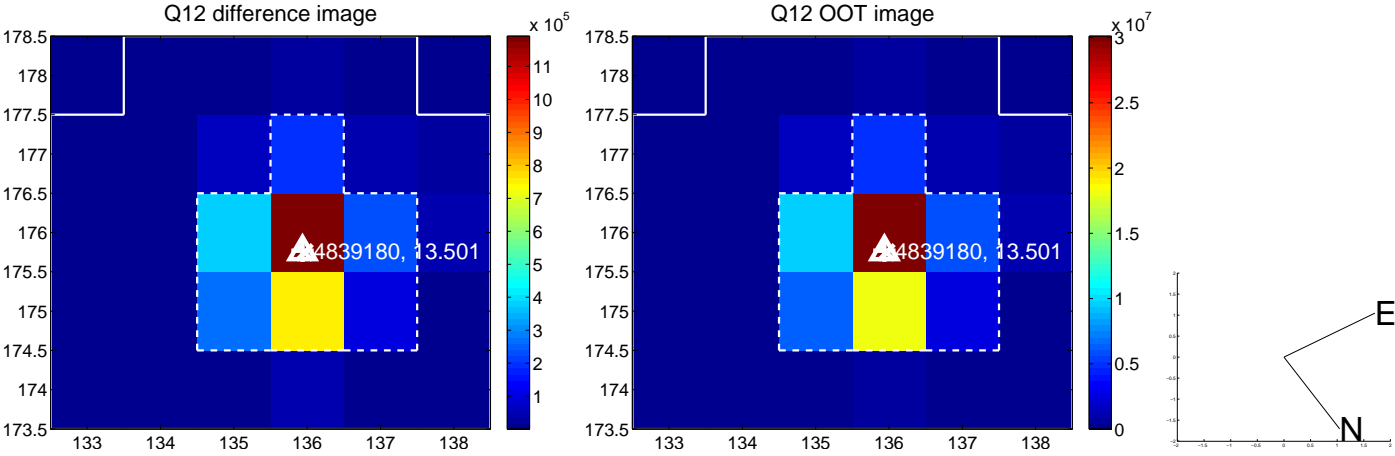
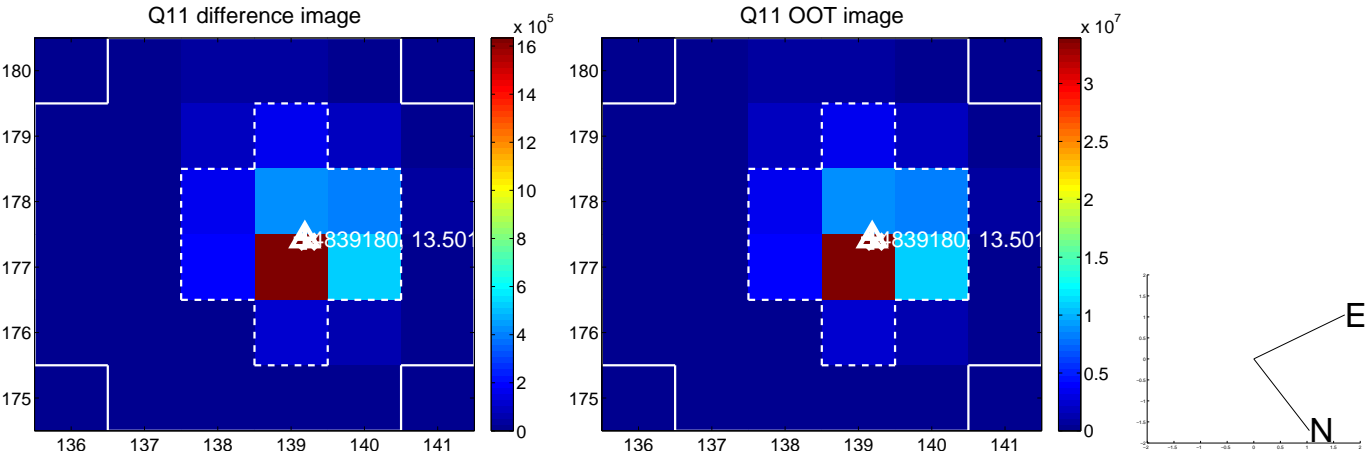
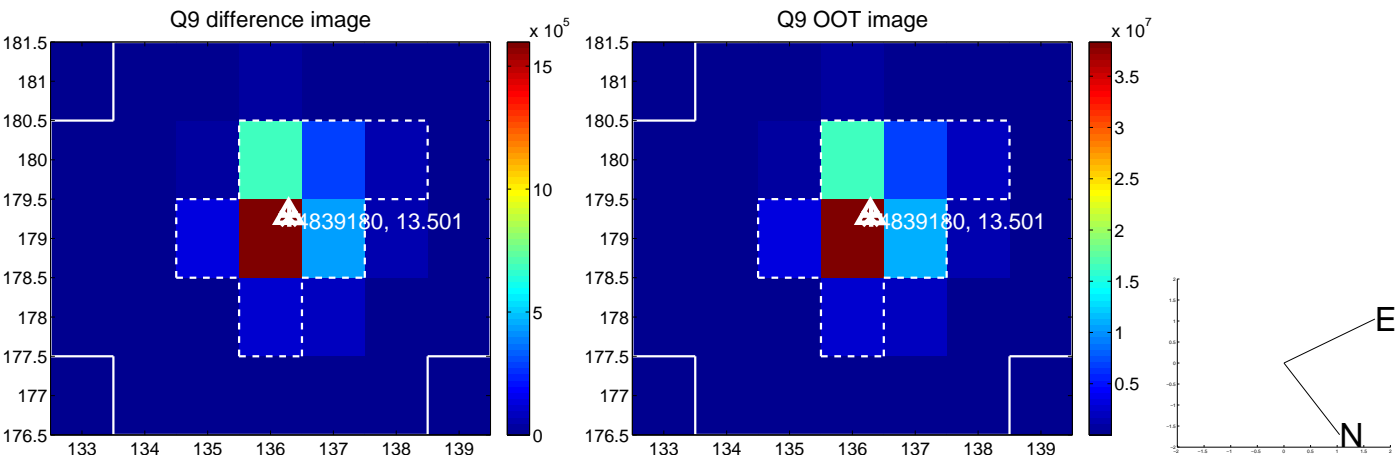


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

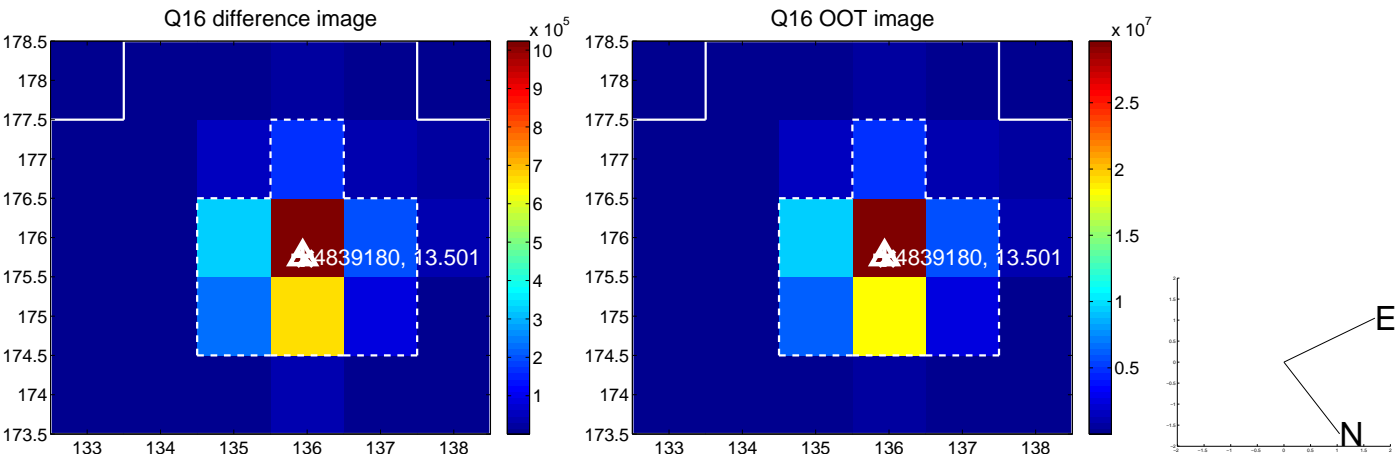
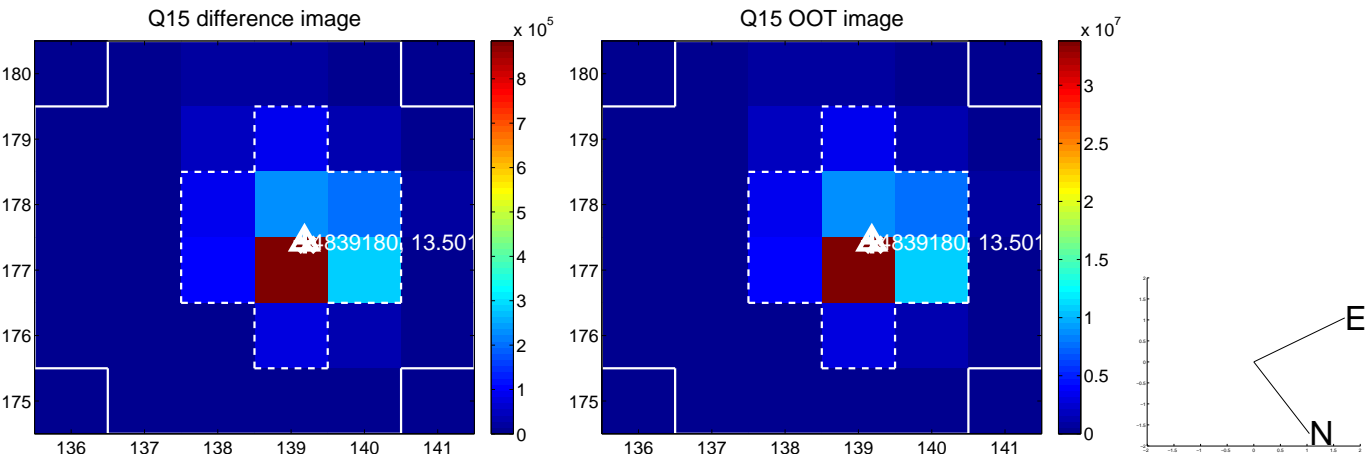
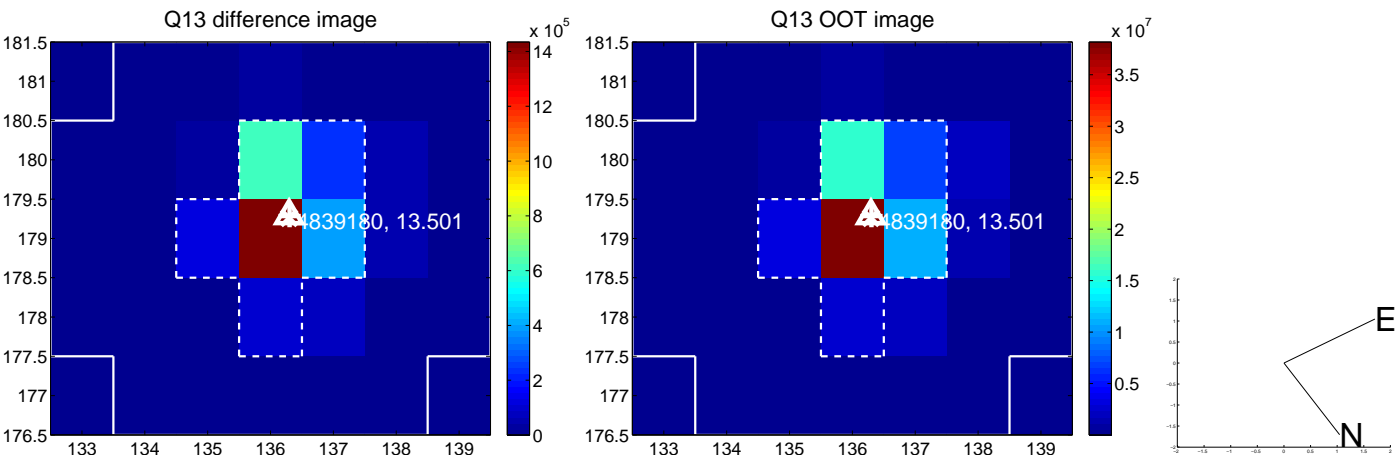
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



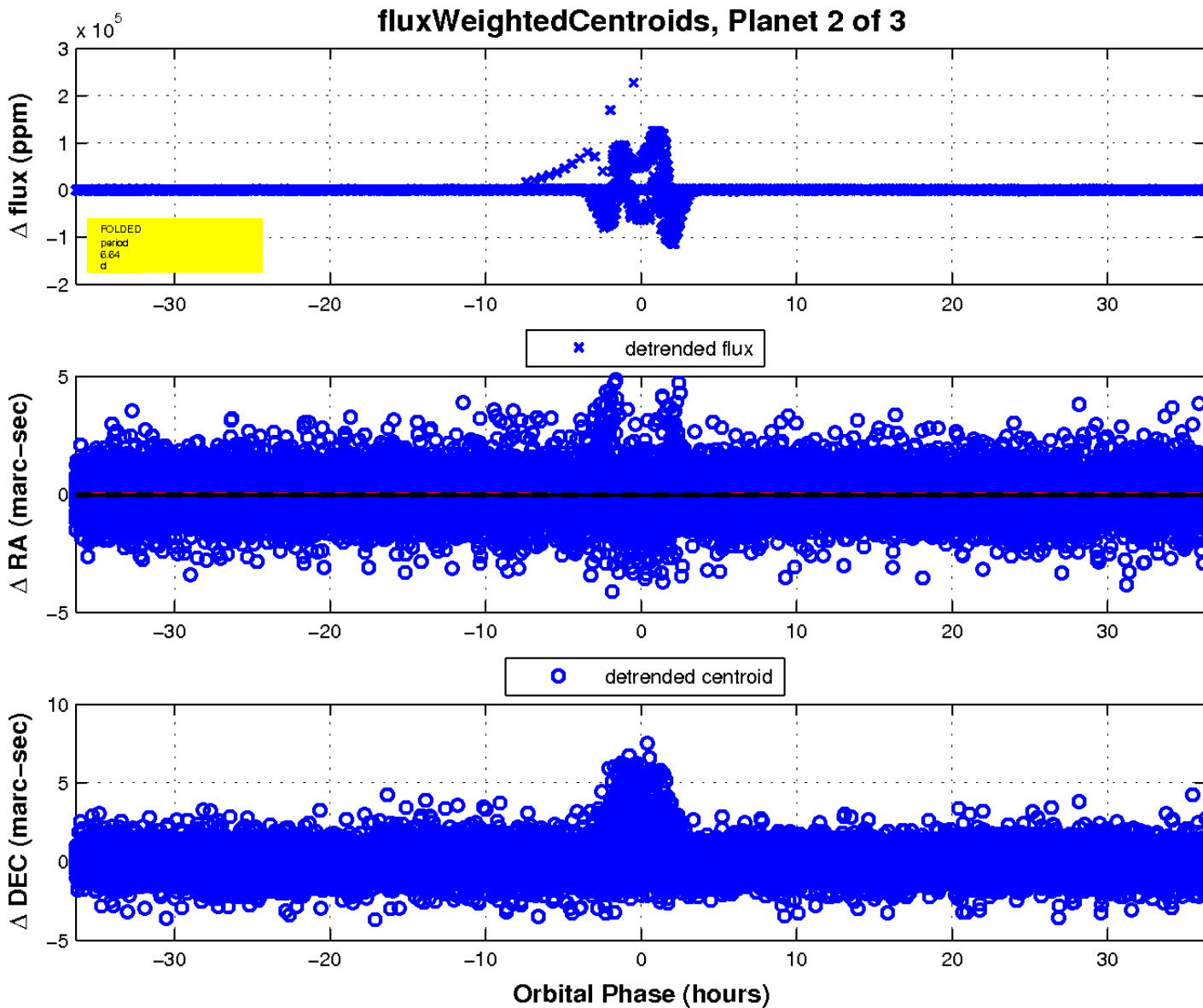
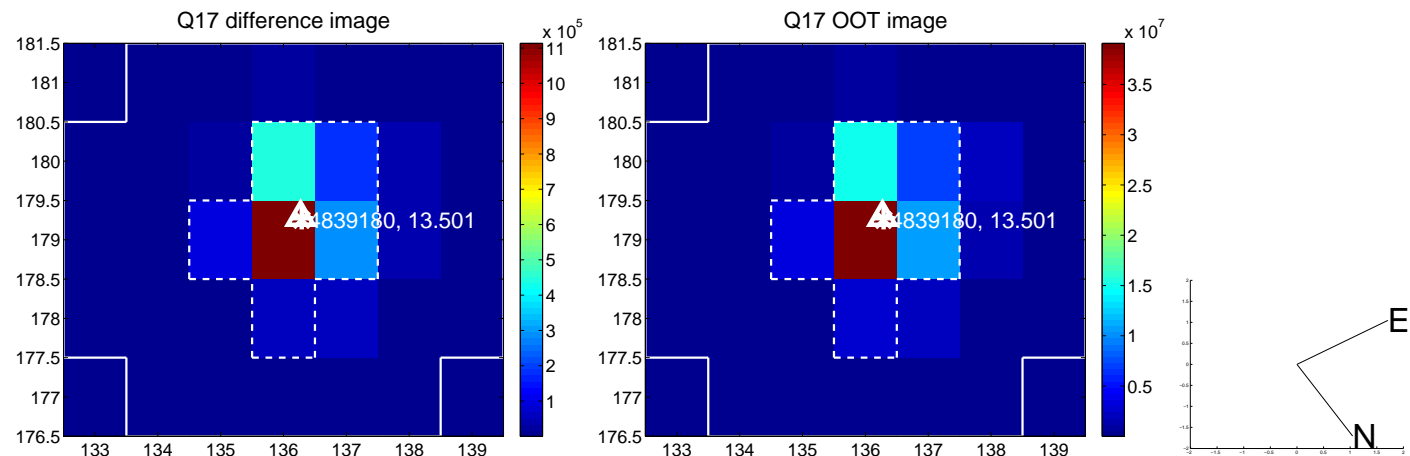
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

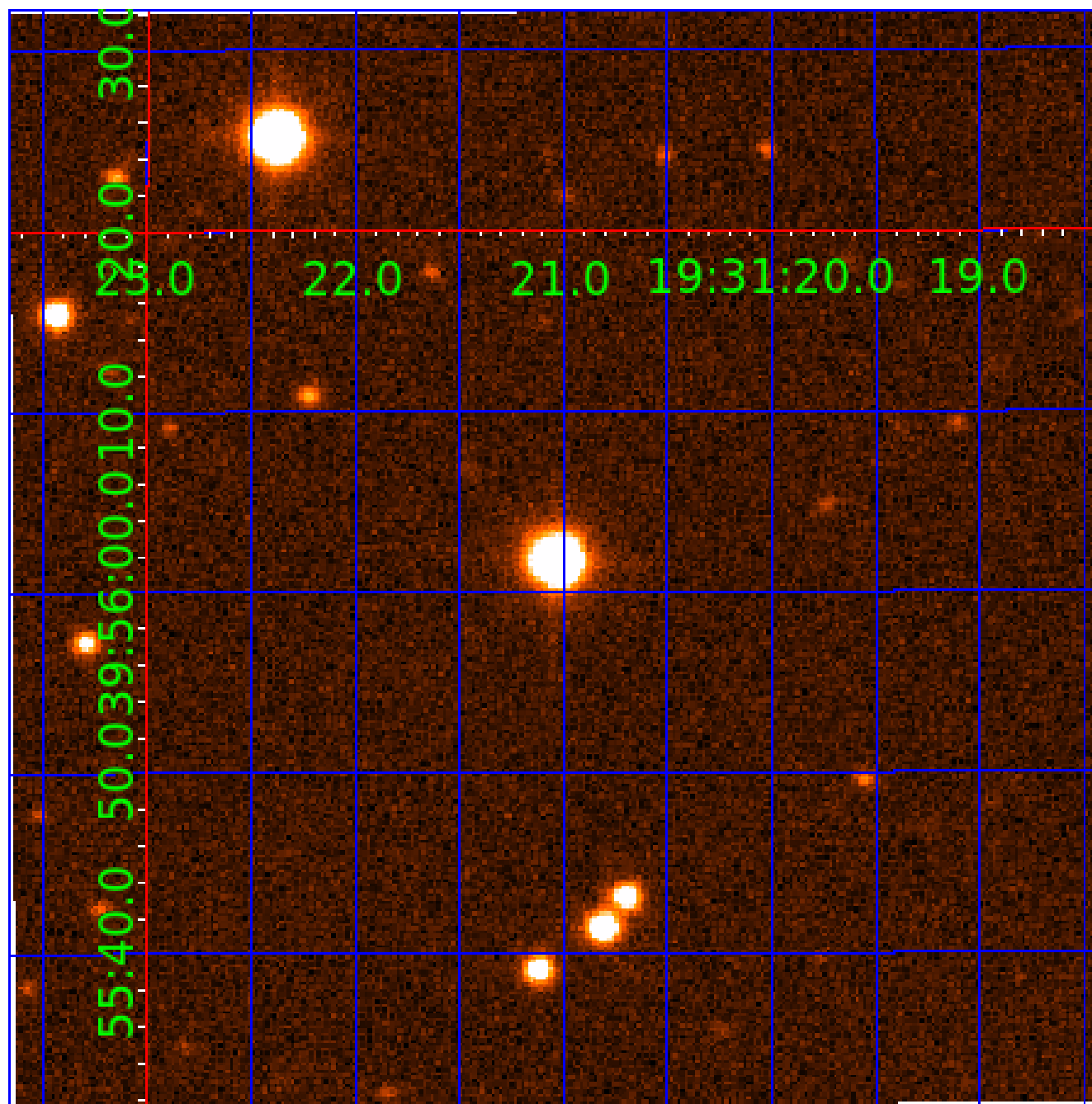


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004839180

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})
004839180-01	OBS	6456.01	4.426360	134.221846	232208.2	3.500	26435.9	-1.0	1.23	6228	63.95	709.94
004839180-02	OBS	No	6.639666	134.216205	374.8	12.122	662.4	32.1	1.23	6228	2.38	413.45
004839180-03	OBS	No	6.639571	136.197090	10102.6	15.000	558.6	-1.0	1.23	6228	12.35	413.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004839180-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—CENT_NOFITS
004839180-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
004839180-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_NOFITS

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.

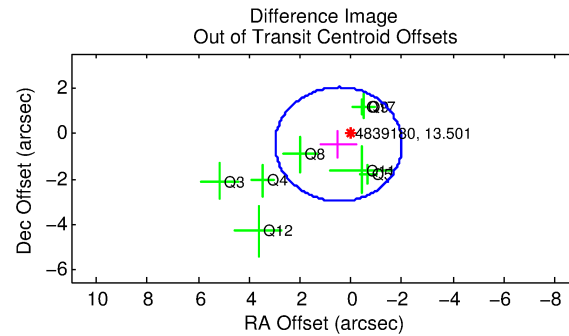
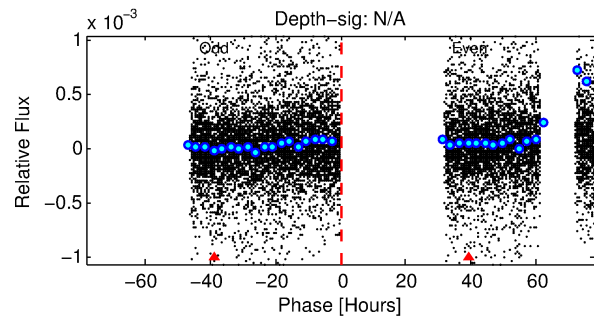
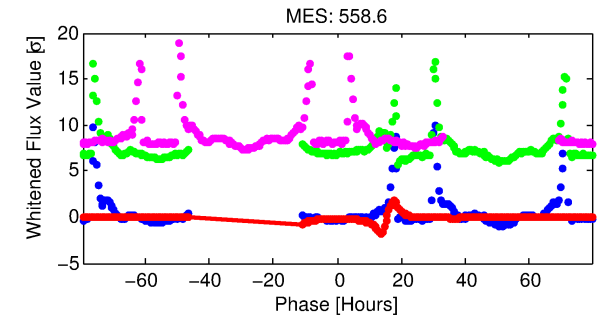
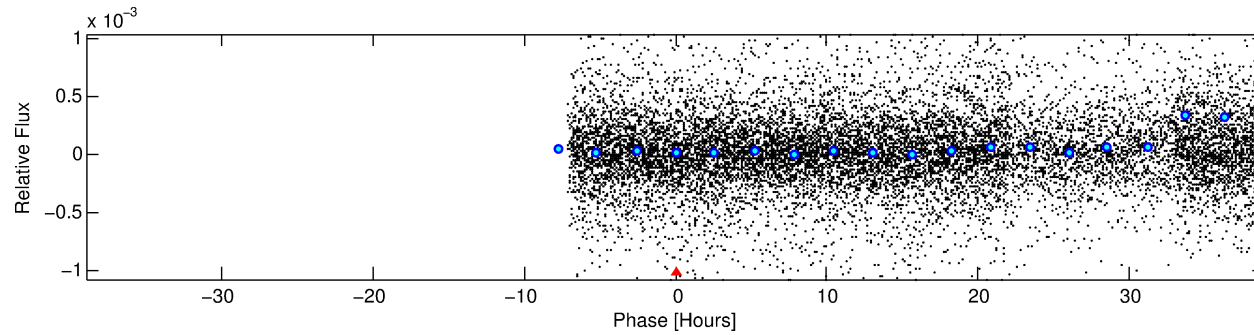
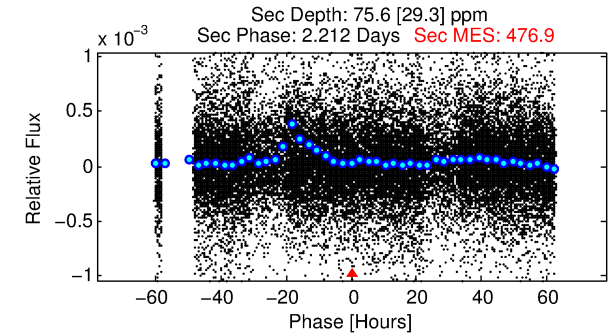
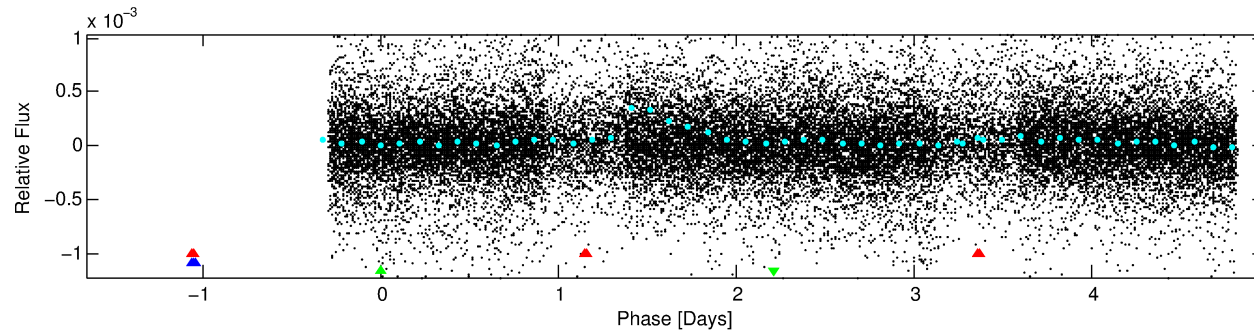
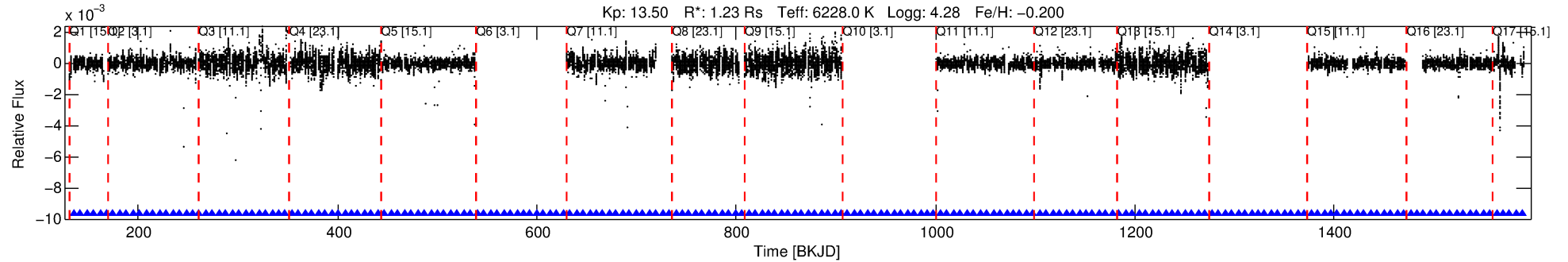
Ephemeris Match Information For 004839180-03

No Significant Match Found

DV One-Page Summary

KIC: 4839180 Candidate: 3 of 3 Period: 6.640 d
KOI: K06456 Corr: No Ephemeris Match

Kp: 13.50 R*: 1.23 Rs Teff: 6228.0 K Logg: 4.28 Fe/H: -0.200



TPS TCE Results:

Period = 6.63957 d
Epoch = 136.1971 BKJD

DV fit results are unavailable

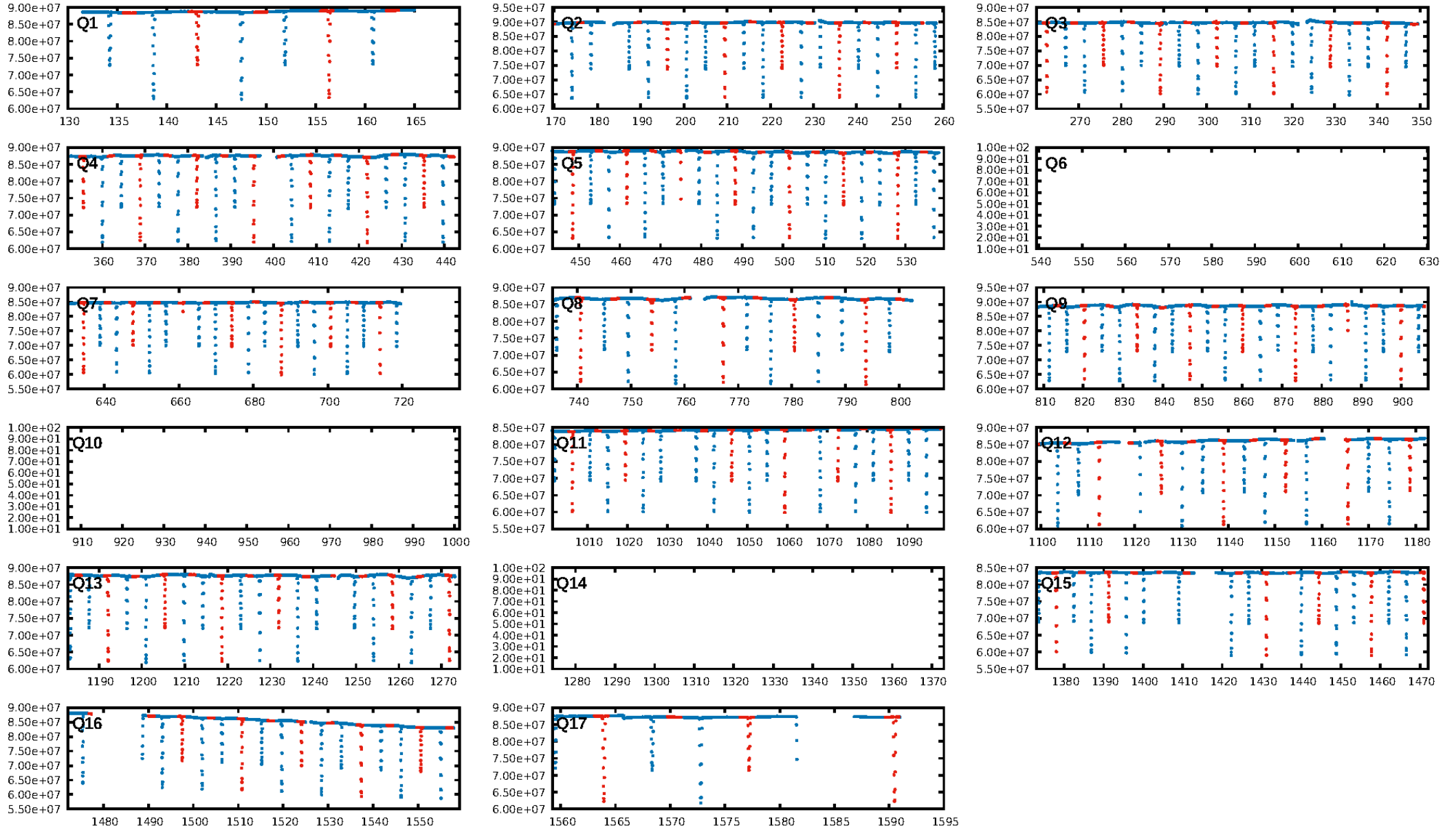
DV Diagnostic Results:

ShortPeriod-sig: 99.9% [3.45σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [157/157]
GhostDiagnostic-chr: 0.9691
Centroid-sig: N/A
Centroid-so: 1.821 arcsec [0.97σ]
OotOffset-rm: 0.677 arcsec [0.81σ]
KicOffset-rm: 0.770 arcsec [0.95σ]
OotOffset-st: 0/2/3/3 [8]
KicOffset-st: 0/2/3/3 [8]
DiffImageQuality-fgm: 0.12 [1/8]
DiffImageOverlap-fno: 0.00 [0/14]

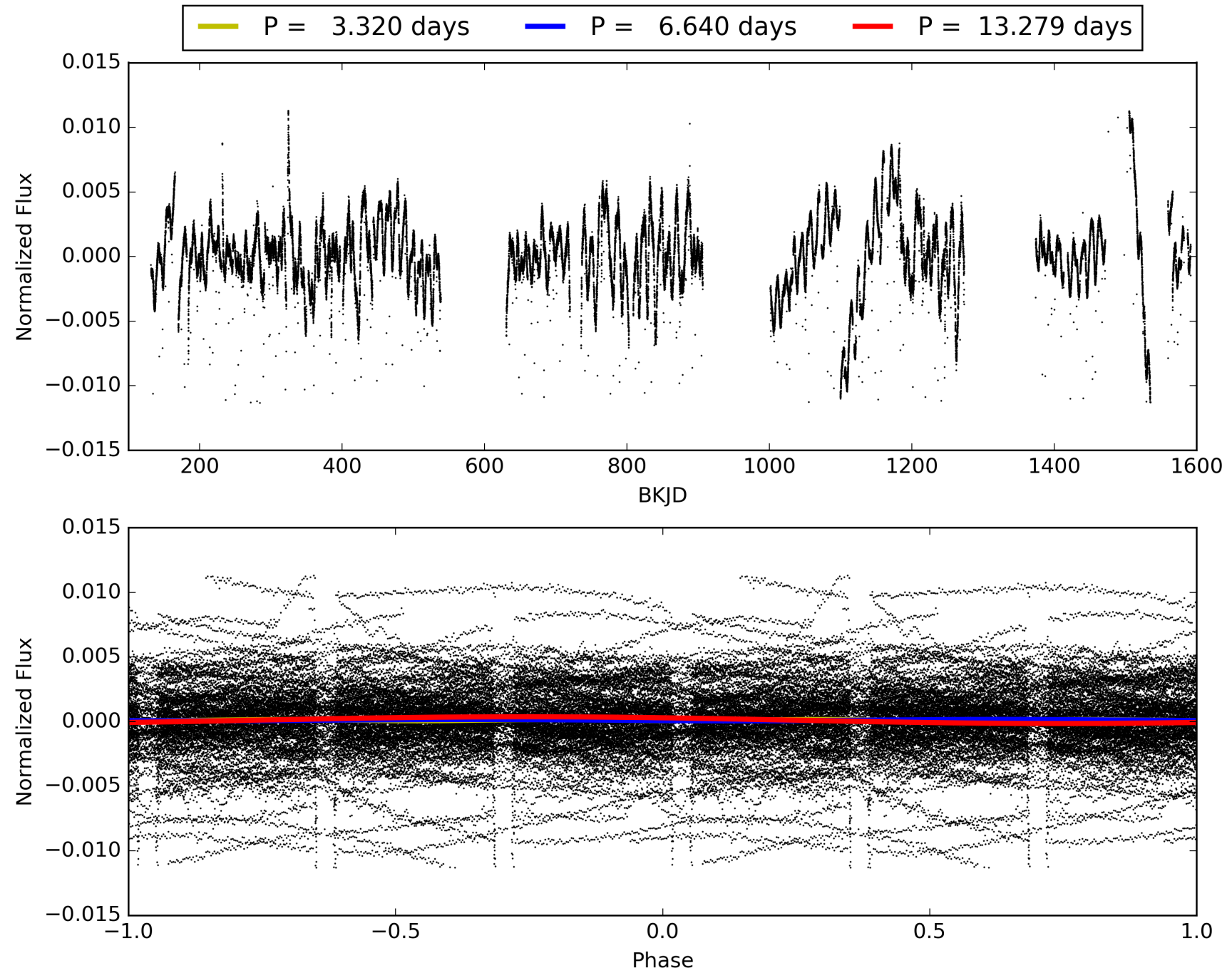
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 13:35:10 Z

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

TCE 004839180-03, PDC Light Curves

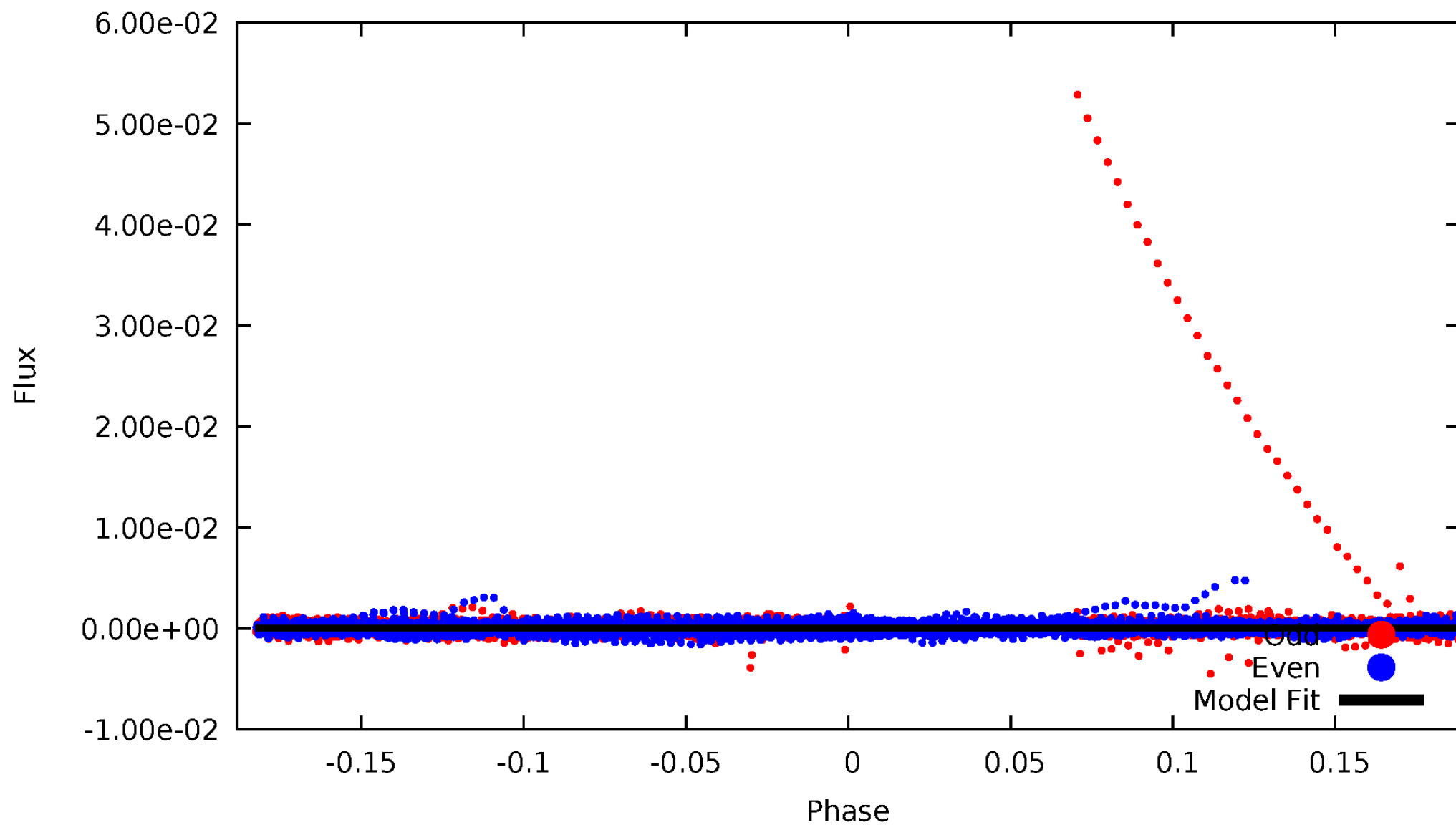


TCE 004839180-03



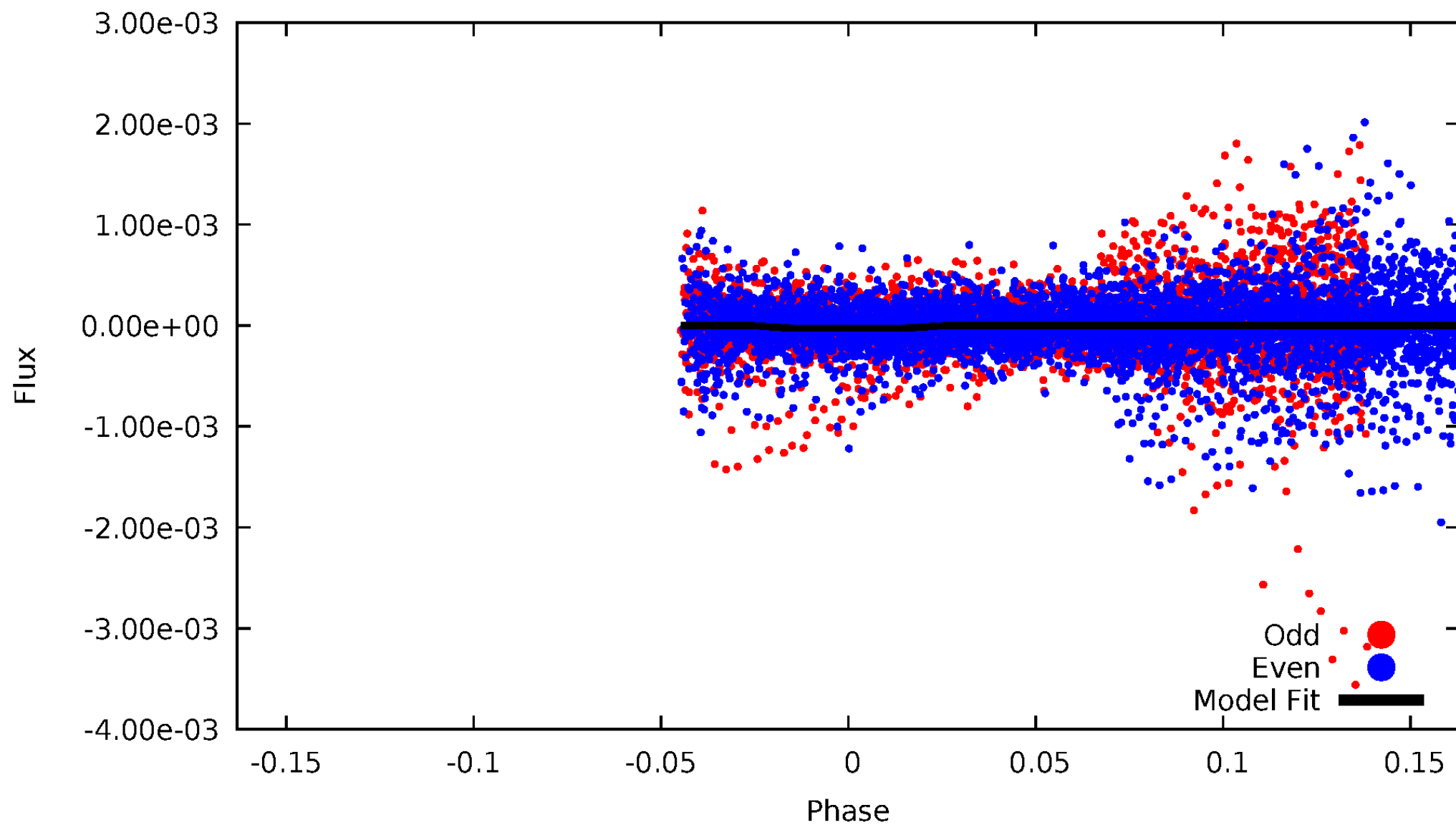
DV Odd/Even

TCE 004839180-03

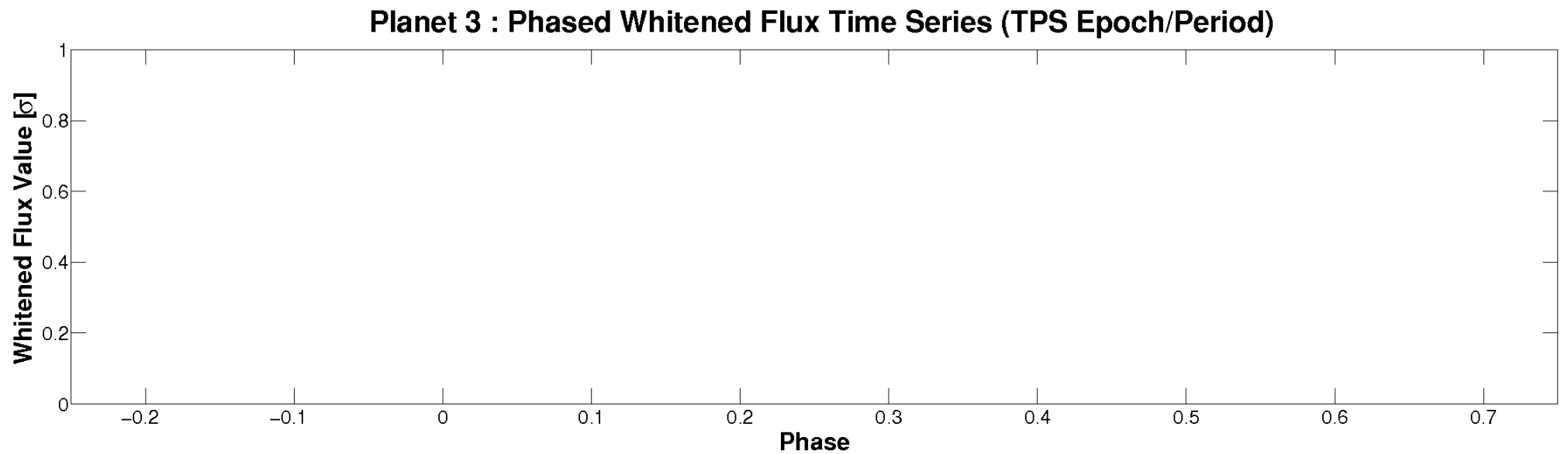
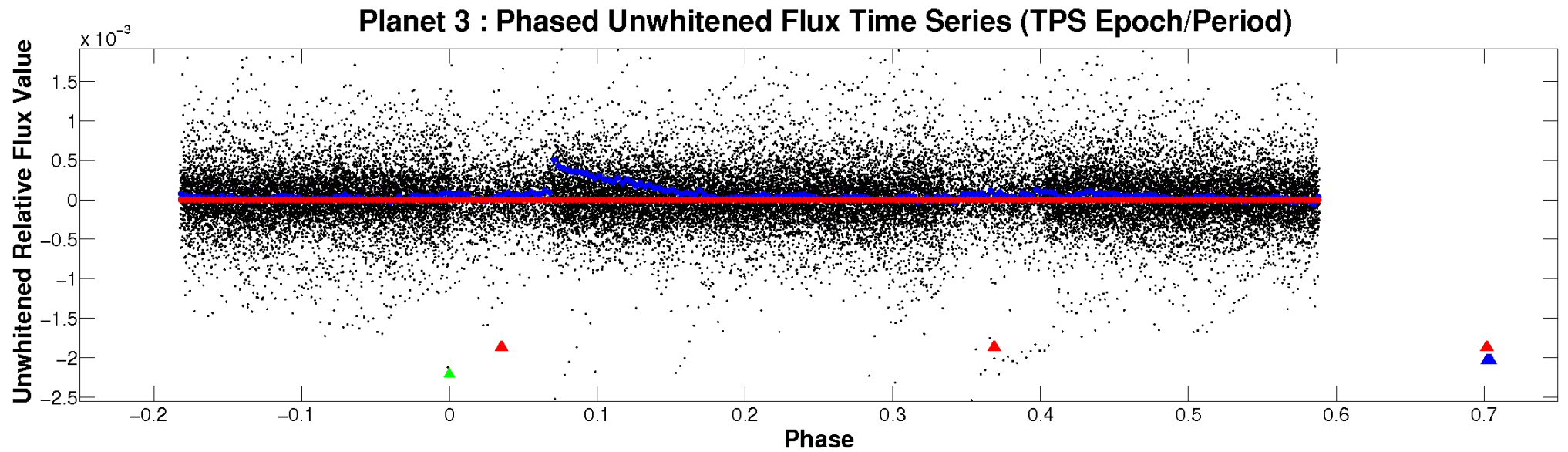


ALT Odd/Even

TCE 004839180-03

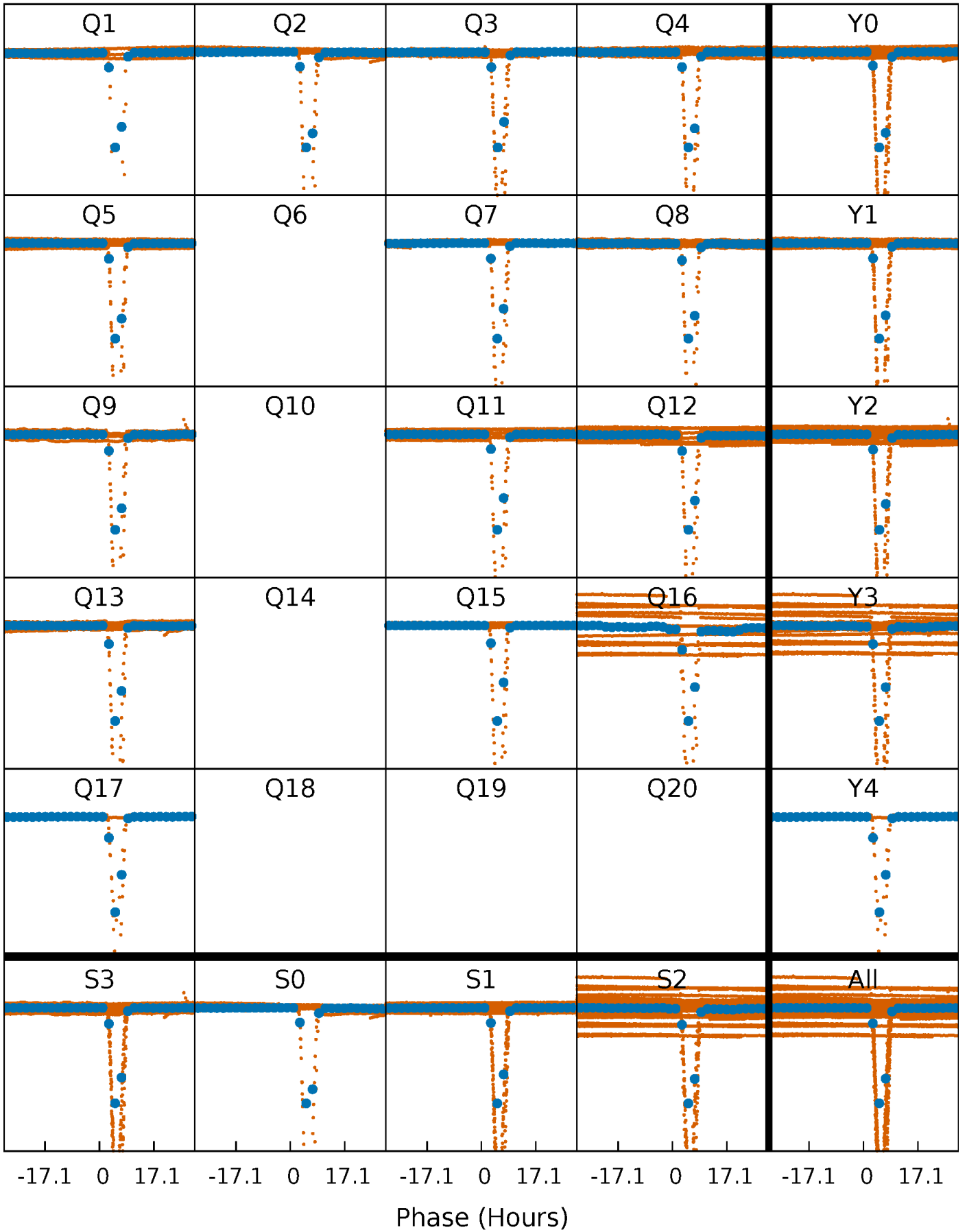


Non-Whitened Vs. Whitened Light Curve



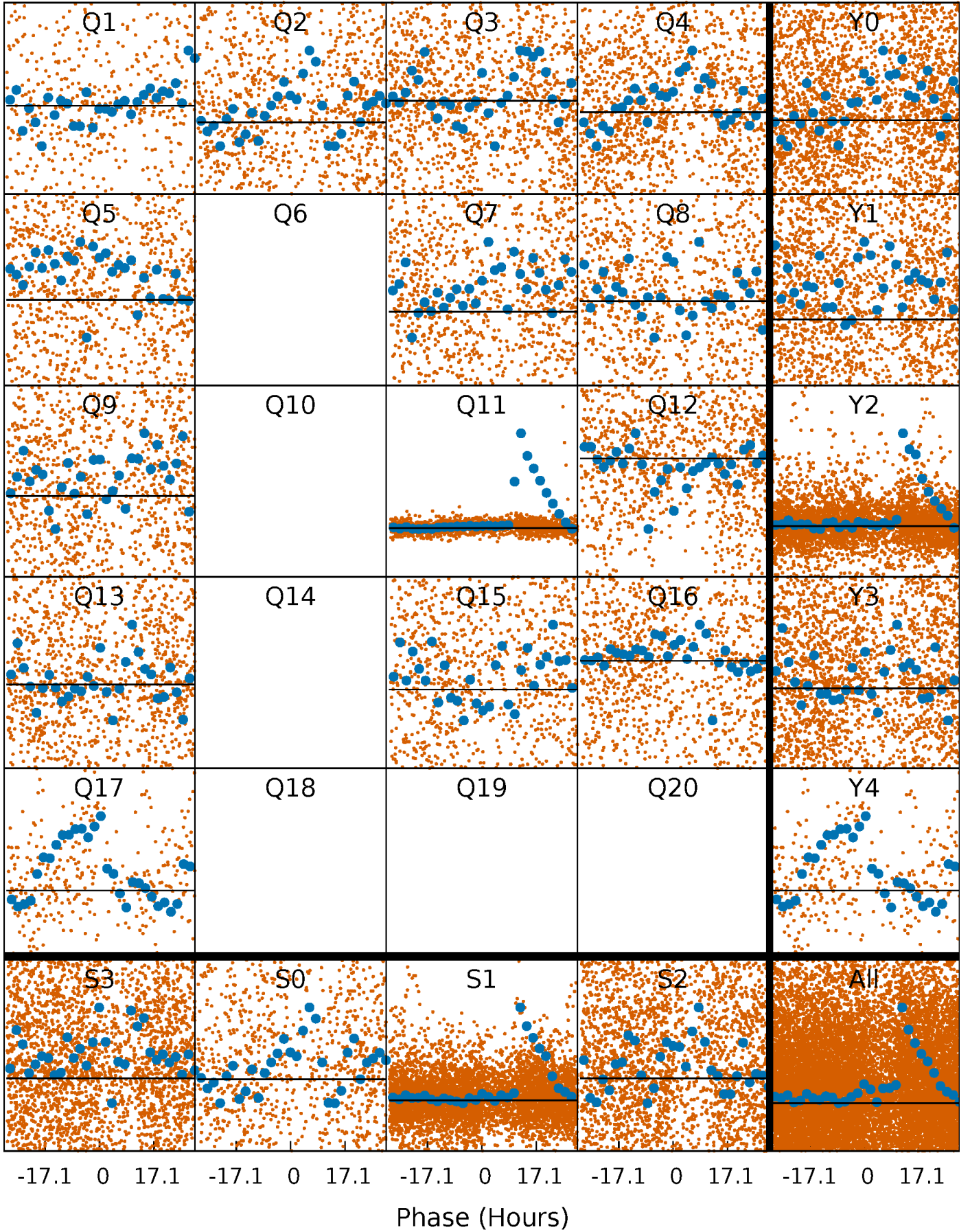
PDC Quarter-Phased Transit Curves

TCE 004839180-03 P= 6.639571 Days $T_0=136.197090$ (BKJD)



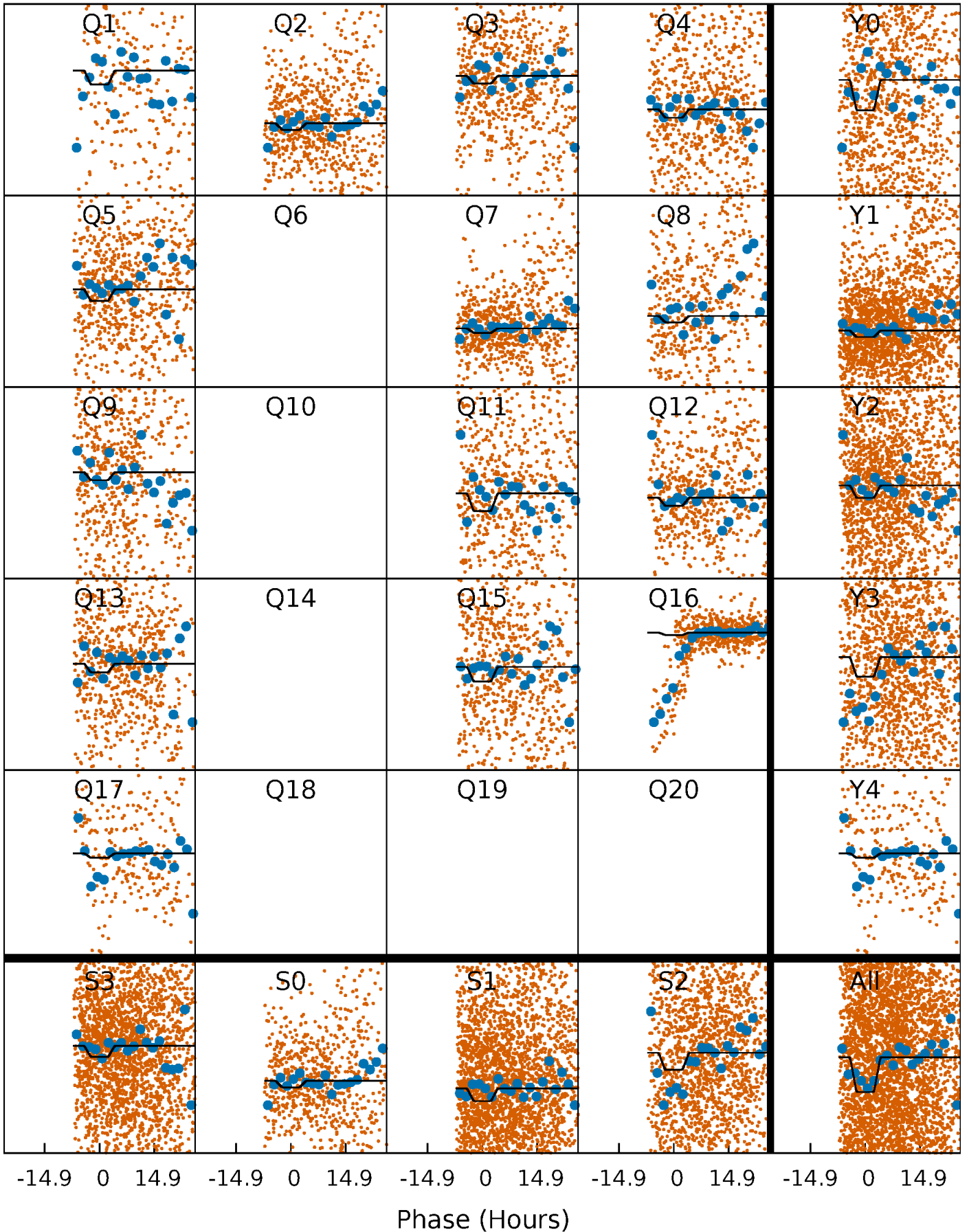
DV Quarter-Phased Transit Curves

TCE 004839180-03 P= 6.639571 Days $T_0=136.197090$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

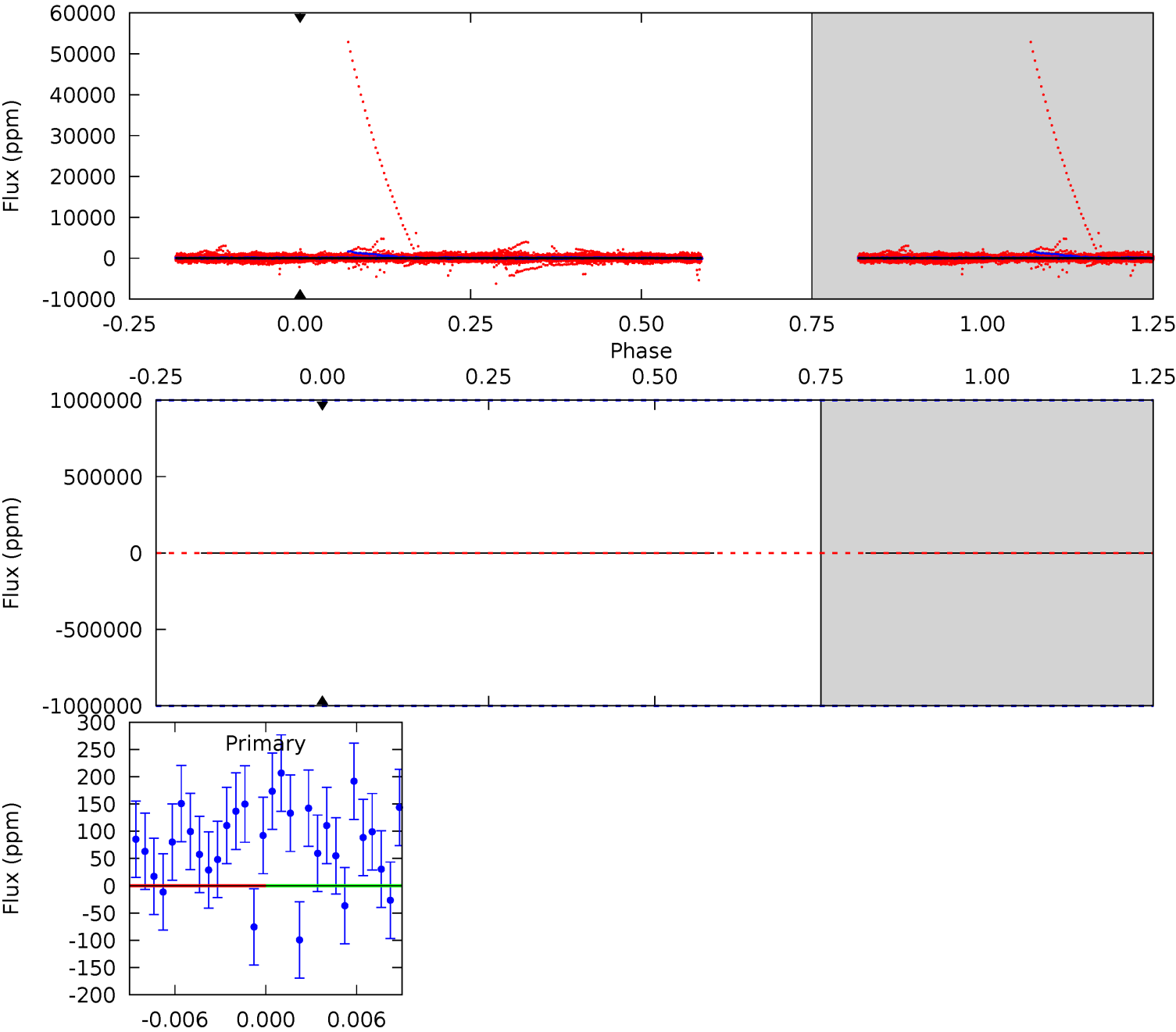
TCE 004839180-03 $P = 6.639571$ Days $T_0 = 135.282379$ (BKJD)



DV Model-Shift Uniqueness Test

004839180-03, P = 6.639571 Days, E = 129.557519 Days

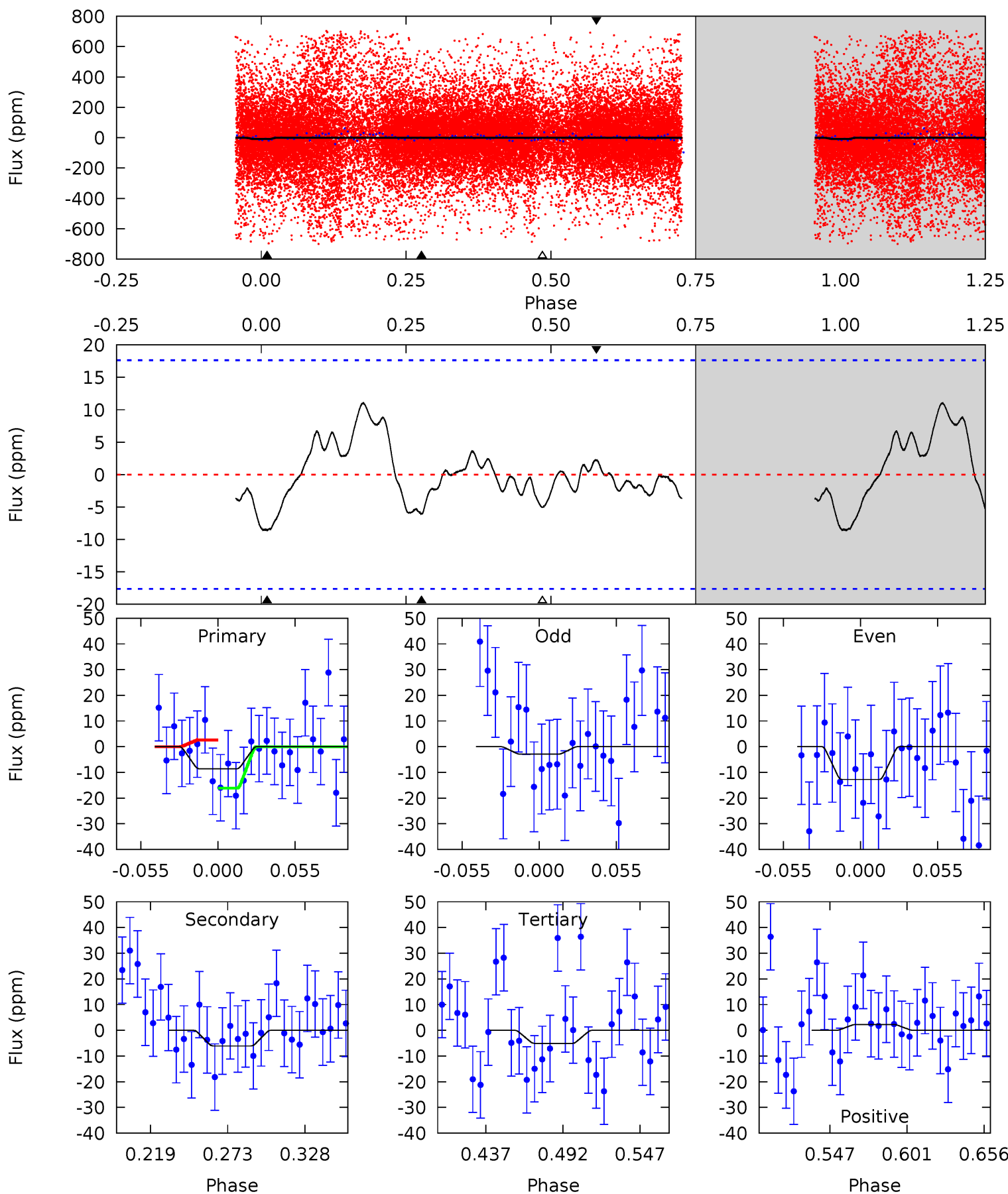
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

004839180-03, P = 6.639571 Days, E = 128.642808 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.28	1.61	1.35	0.60	4.69	1.92	0.87	0.93	1.68	0.27	1.01	1.34	18.8	0.56	1.90



Stellar Parameters For KIC 004839180

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6228^{+169}_{-206}	$4.277^{+0.158}_{-0.193}$	$-0.200^{+0.250}_{-0.300}$	$1.226^{+0.361}_{-0.240}$	$1.034^{+0.173}_{-0.115}$	$0.791^{+0.592}_{-0.391}$
	+3%/-3%	+4%/-5%	+125%/-150%	+29%/-20%	+17%/-11%	+75%/-49%
Source	PHO1	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 004839180-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$15.69^{+13.19}_{-10.87}$	1608^{+123}_{-112}	-3099^{+18485}_{-10786}	$-5.815^{+2121.265}_{-1604.288}$
Alt.	-6 ± 4	$9.09^{+10.51}_{-6.40}$	1616^{+126}_{-105}	-2076^{+4847}_{-193}	$0.152^{+1.752}_{-0.129}$

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

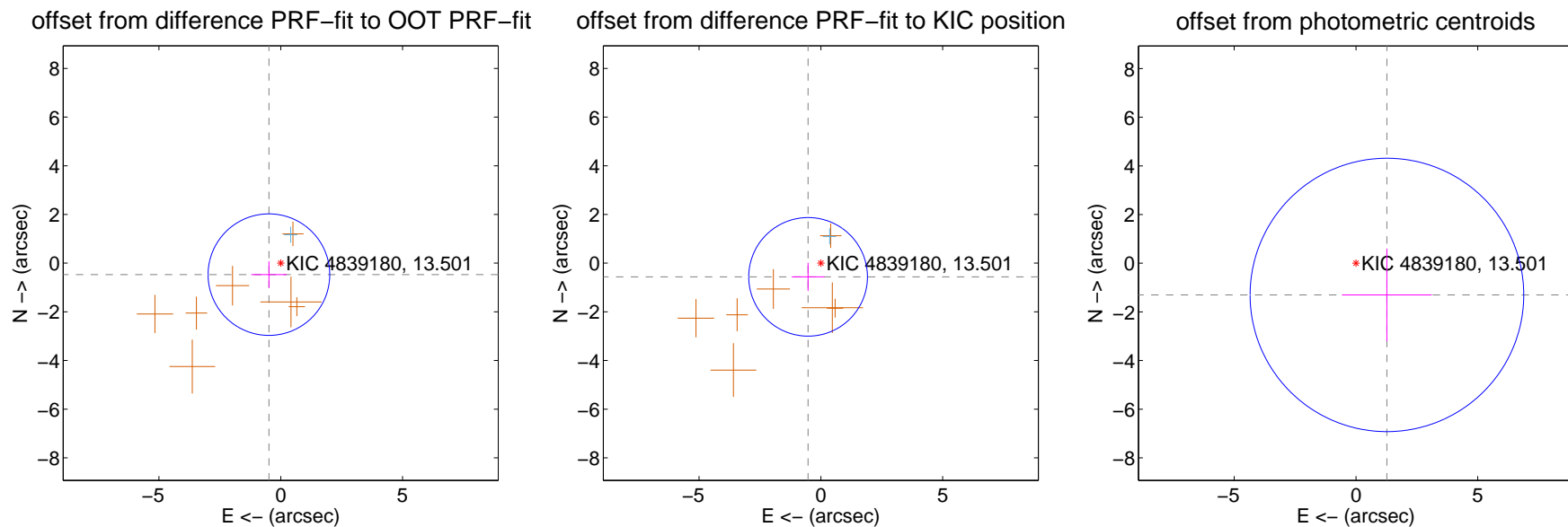
DV Centroid Data

Supplemental centroid analysis for 004839180-03. Kepler magnitude: 13.50. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

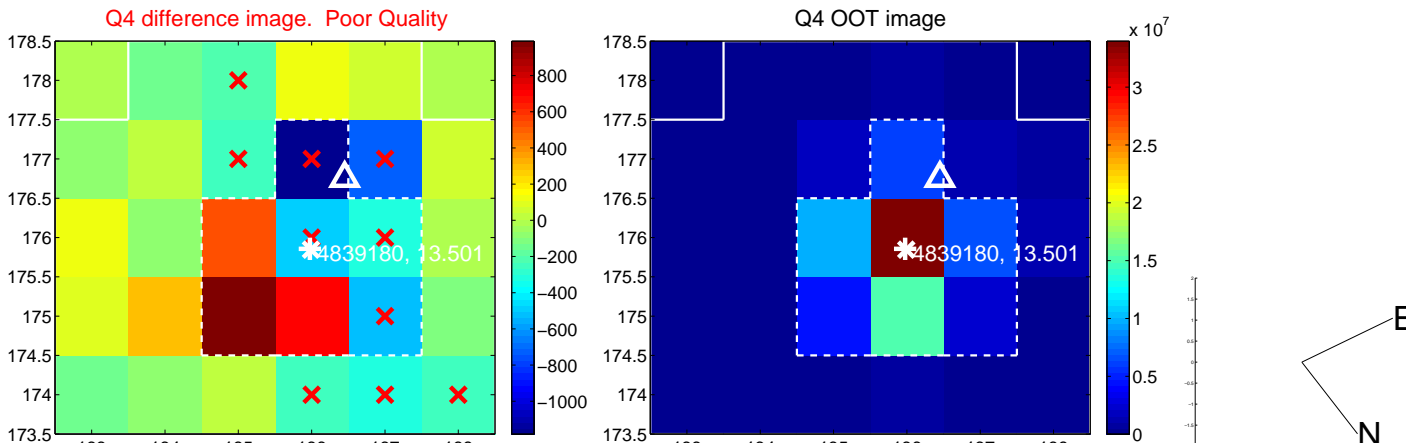
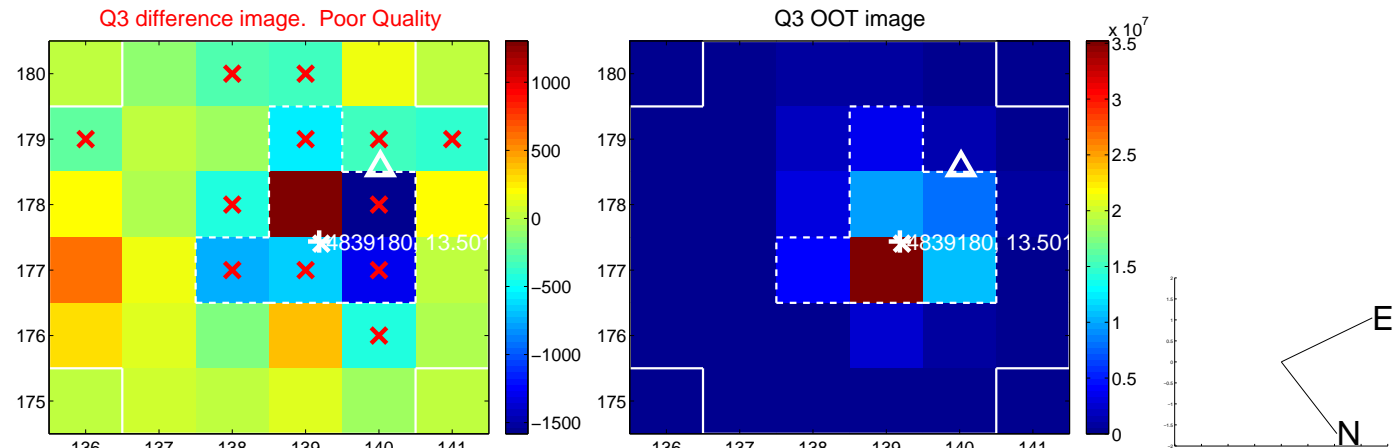
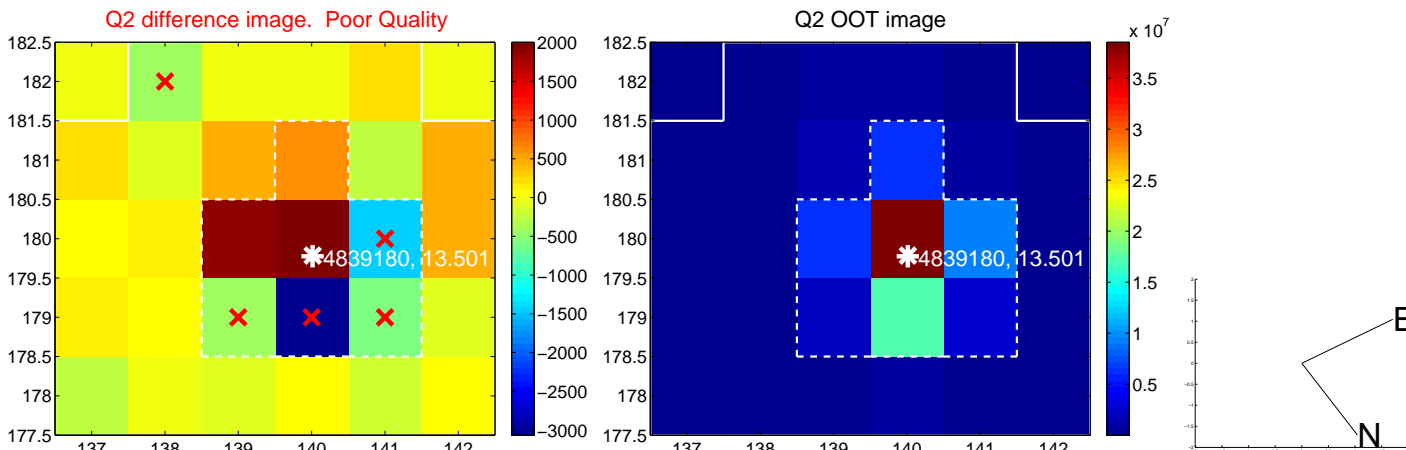
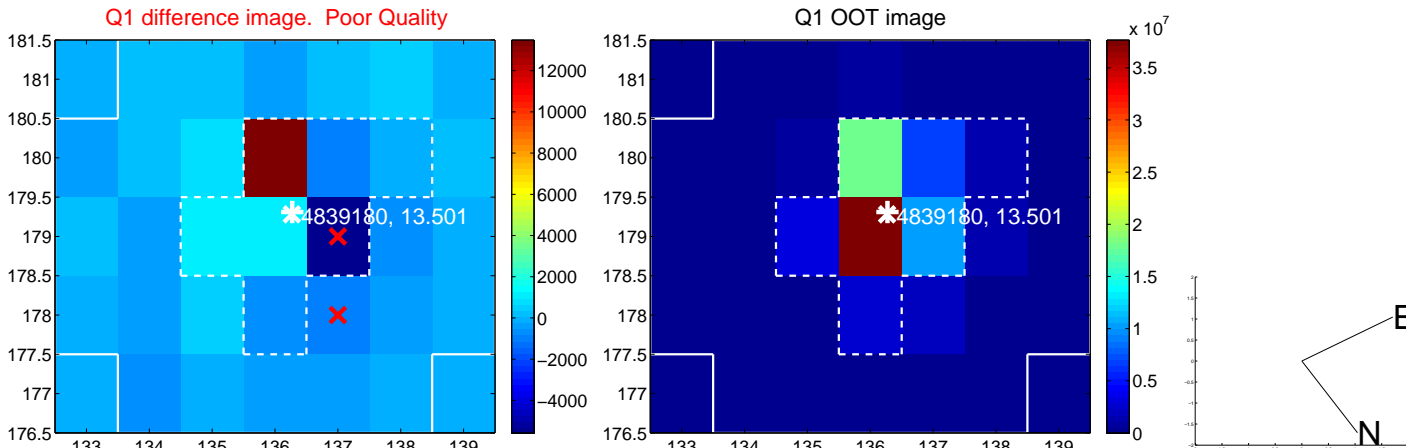
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.677 ± 0.832	0.81	0.486 ± 0.728	-0.472 ± 0.544
PRF-fit source offset from KIC position	0.770 ± 0.812	0.95	0.524 ± 0.675	-0.563 ± 0.578
photometric centroid source offset	1.82 ± 1.87	0.97	-1.27 ± 1.84	-1.30 ± 1.90

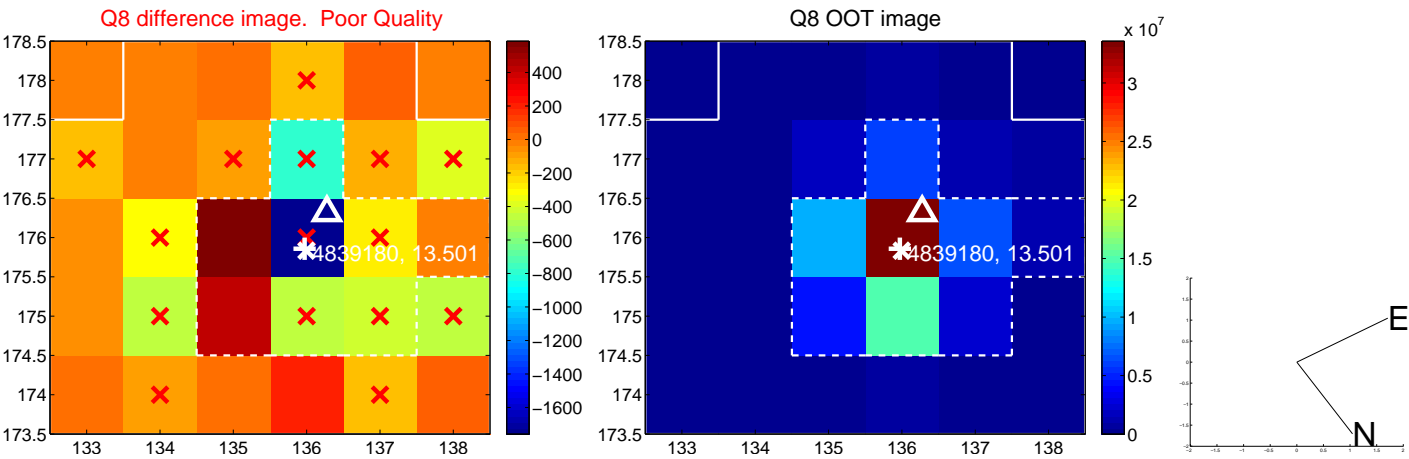
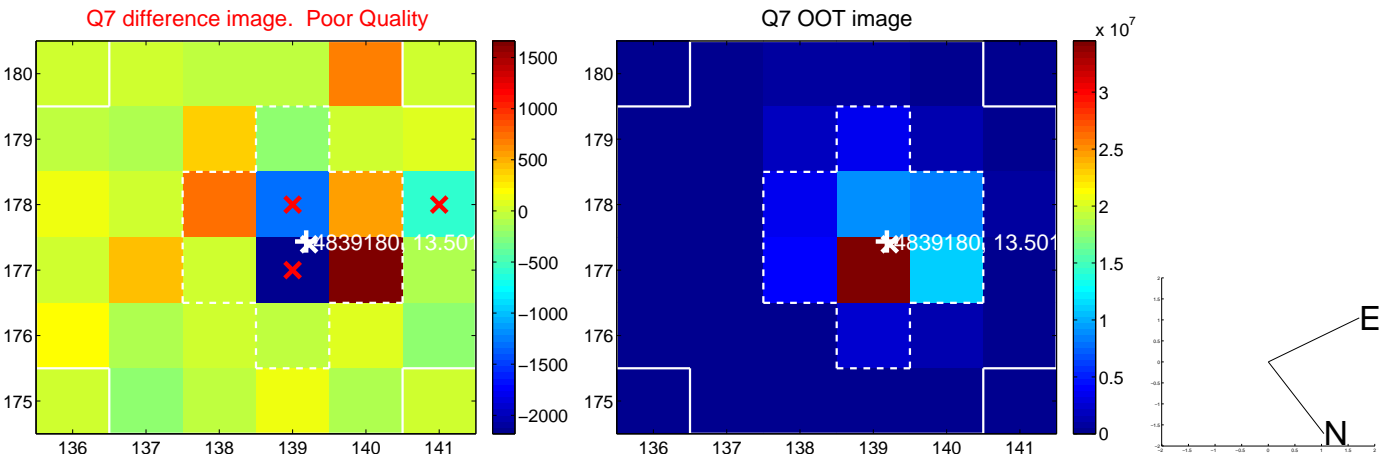
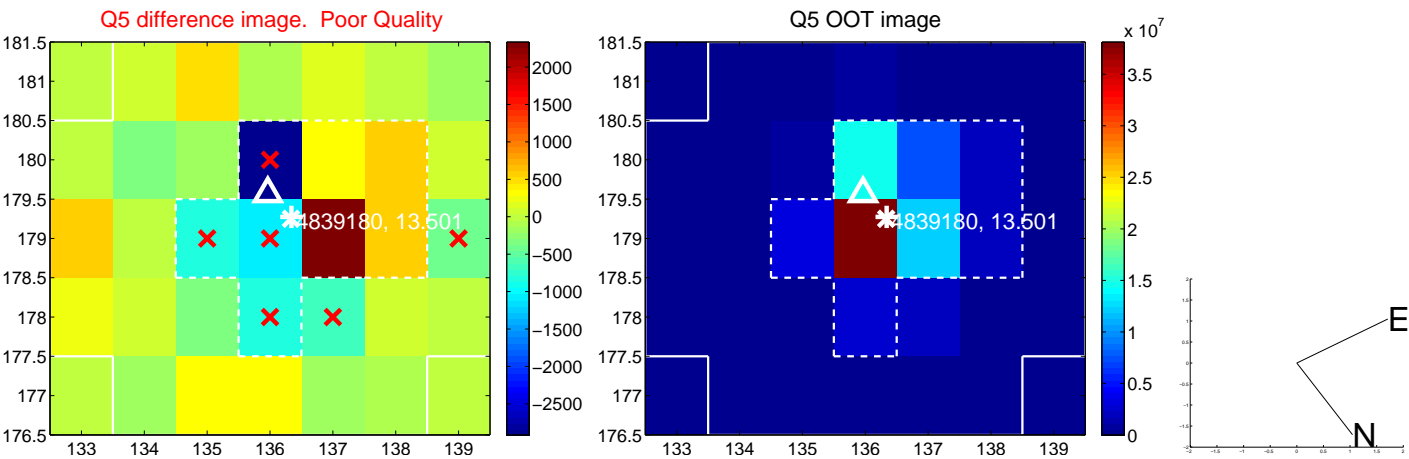


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

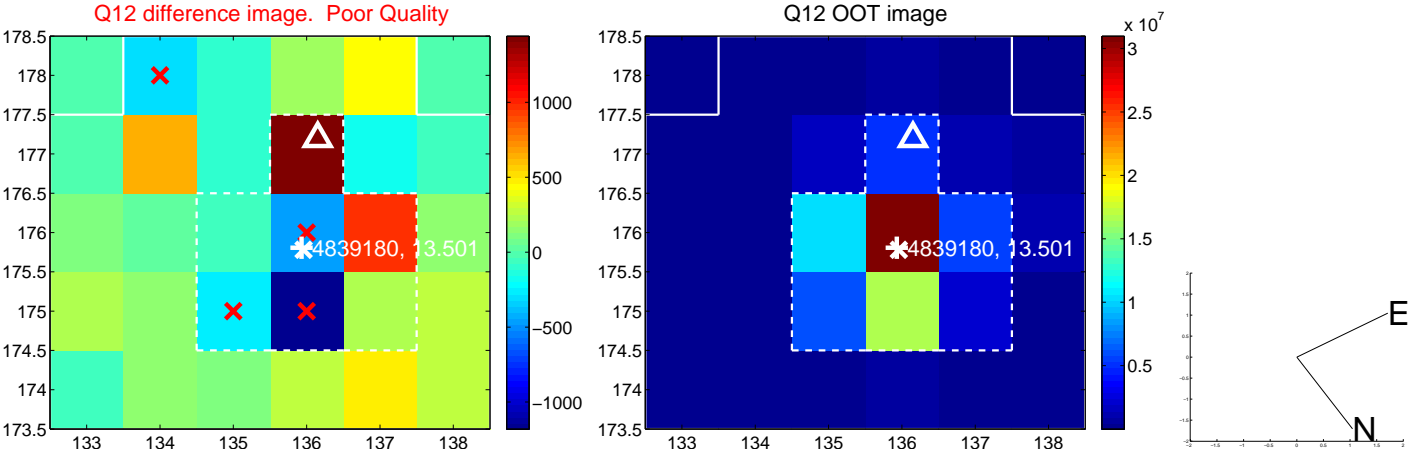
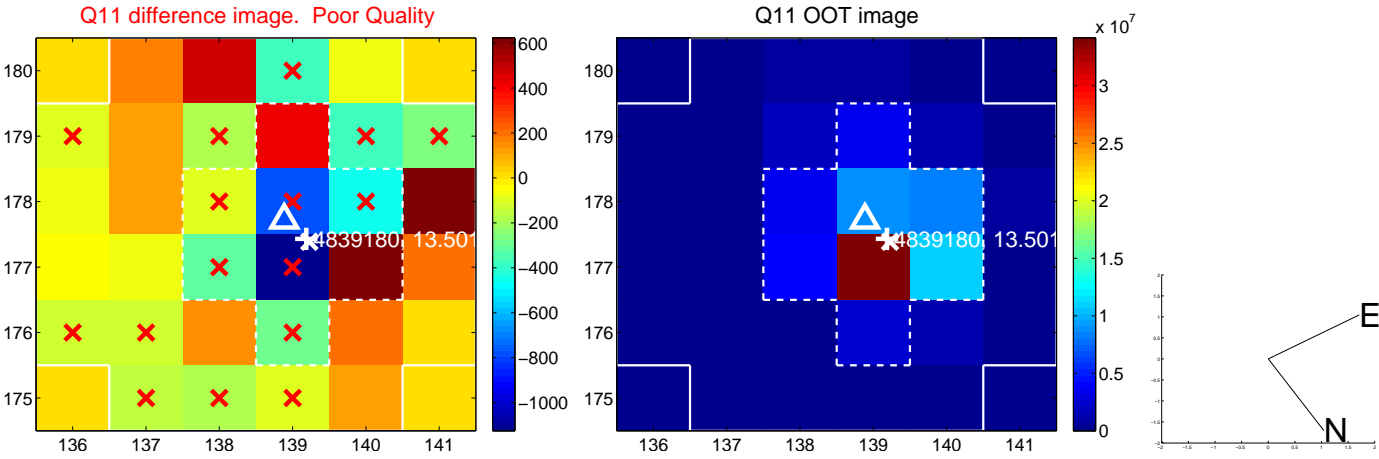
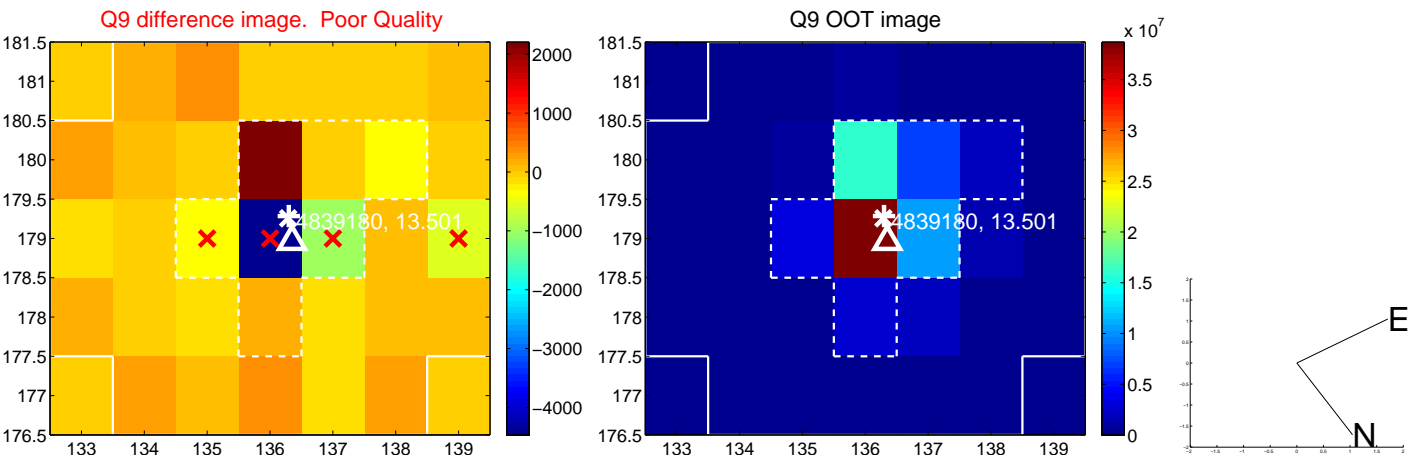
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



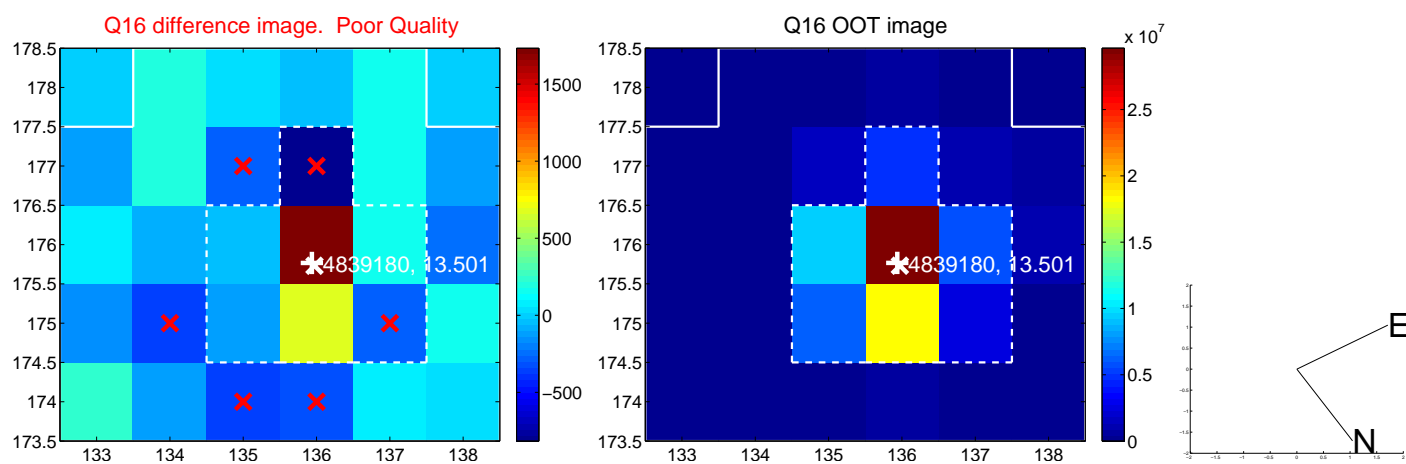
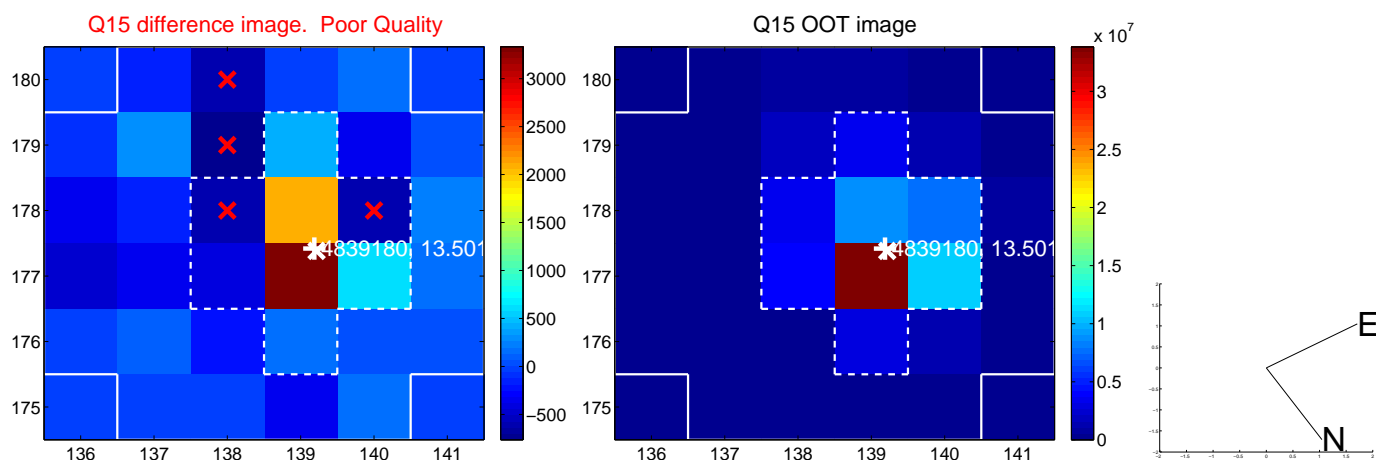
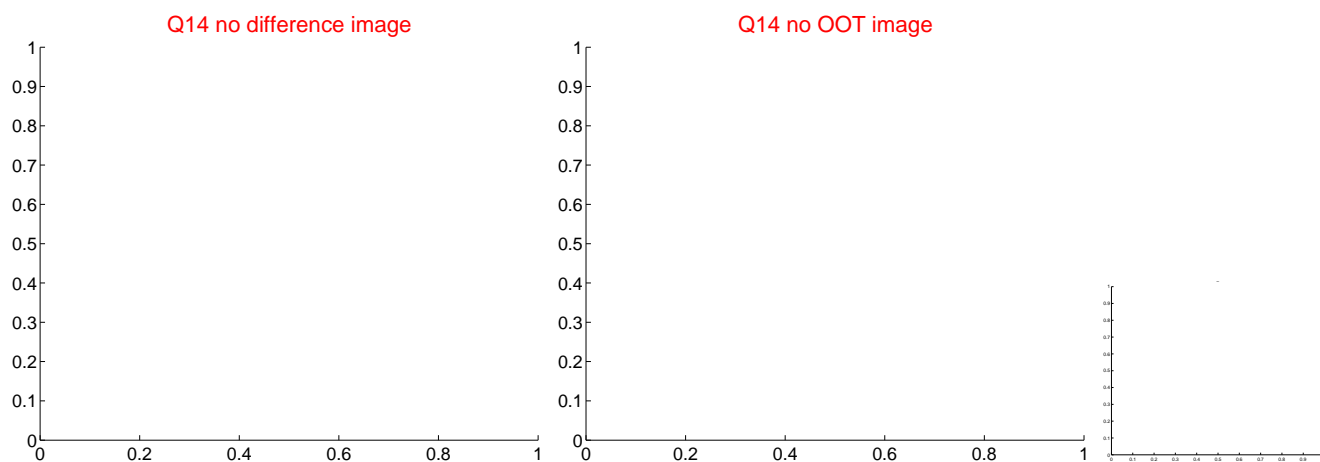
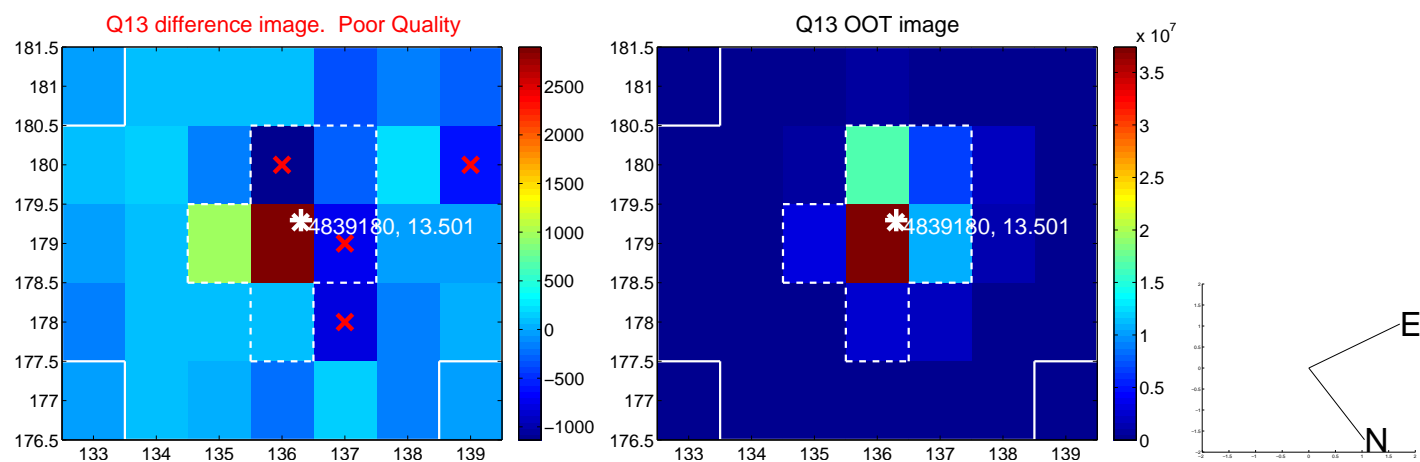
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



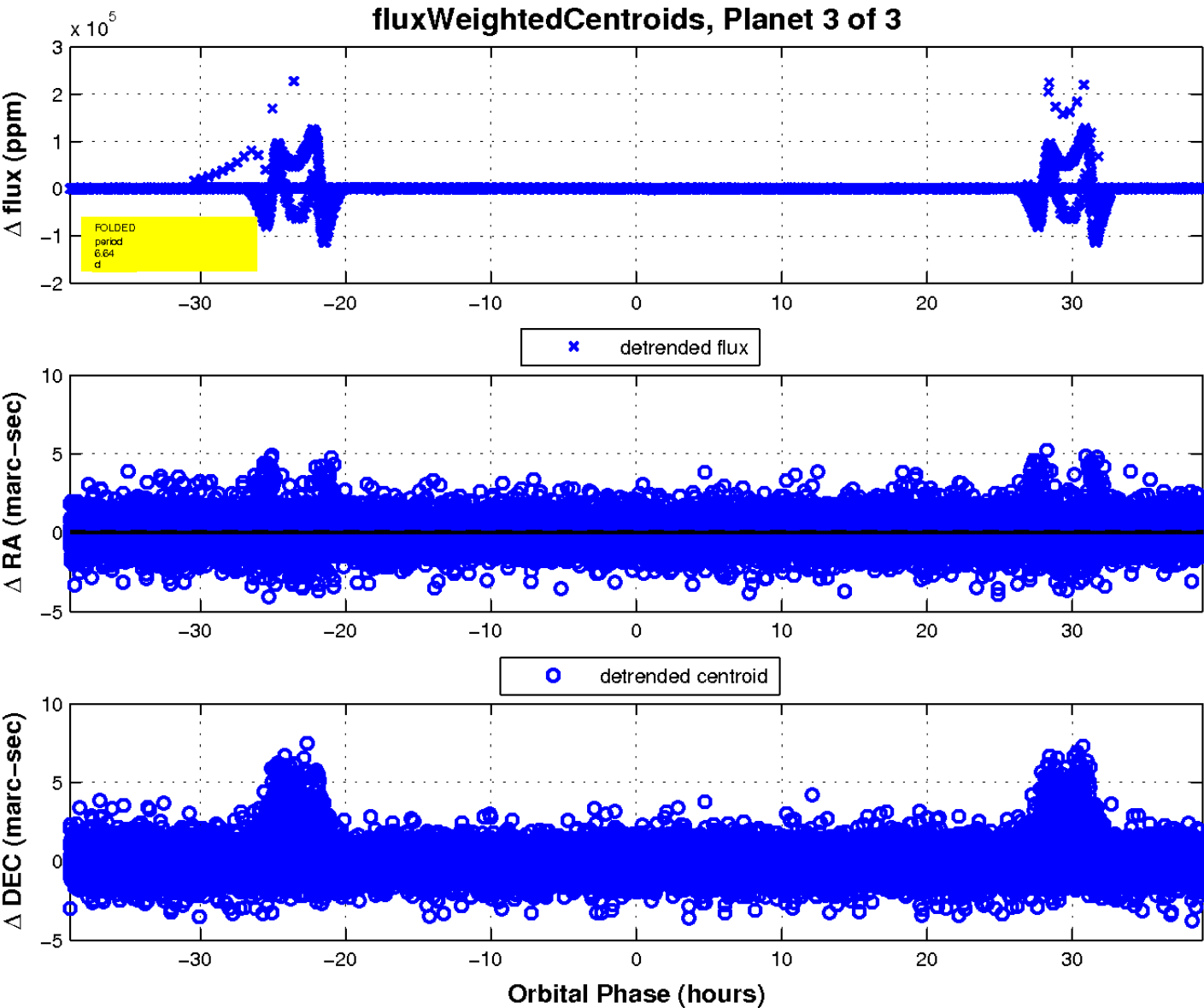
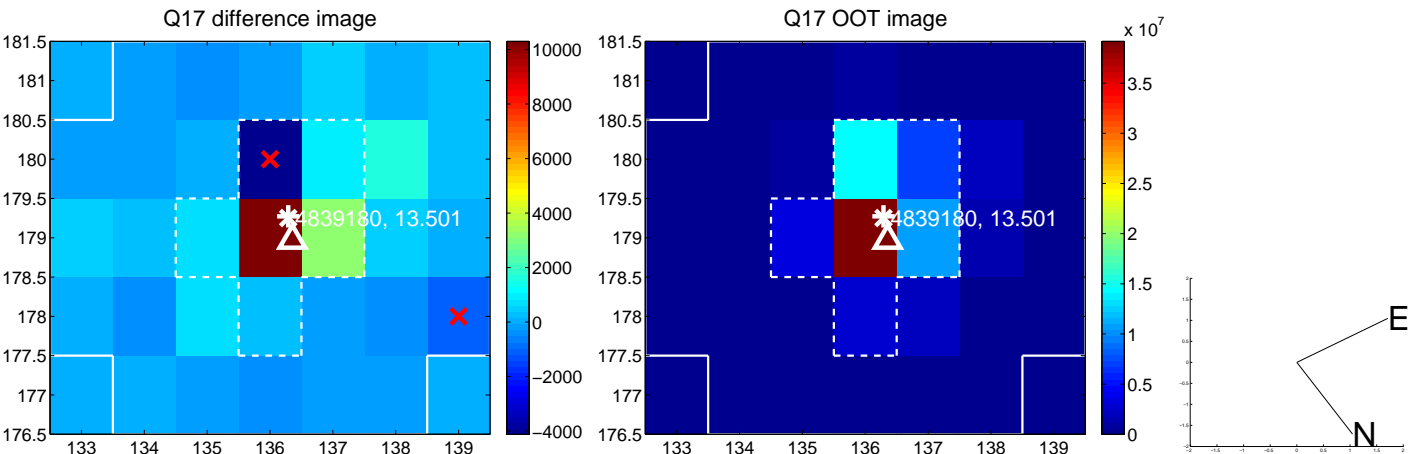
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

Declination

