

KIC 008613594

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})
008613594-01	OBS	No	1.188224	132.341959	166.0	3.500	14.4	-1.0	2.09	9135	2.75	33955.13
008613594-02	OBS	No	2.376500	132.903881	123.1	6.000	14.8	-1.0	2.09	9135	2.37	13474.70
008613594-03	OBS	No	2.376392	131.888097	25.6	4.131	11.0	12.3	2.09	9135	1.51	13475.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008613594-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008613594-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
008613594-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

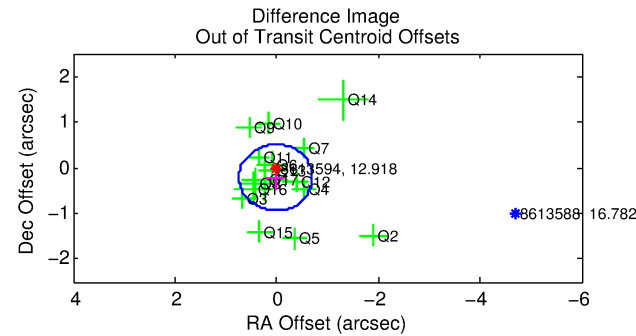
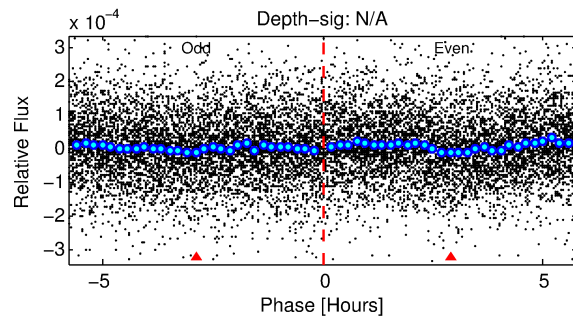
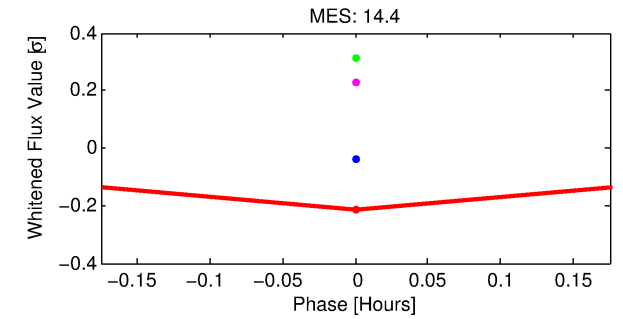
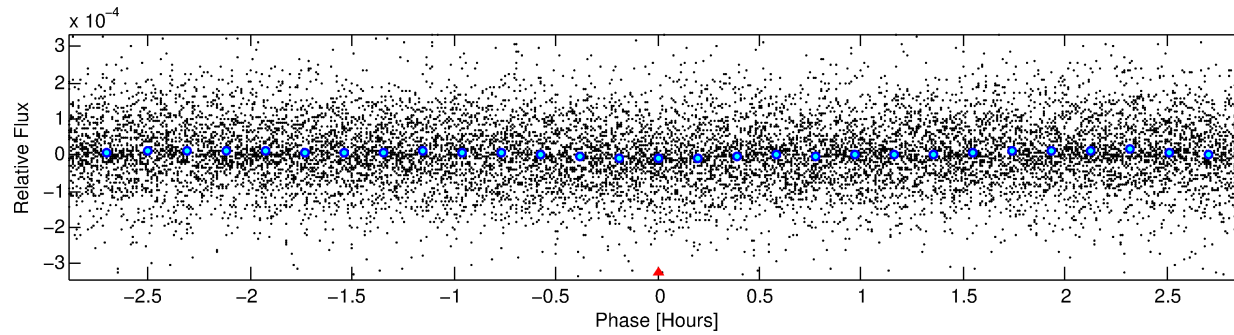
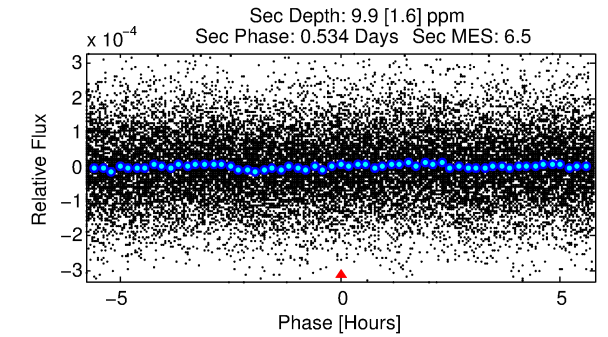
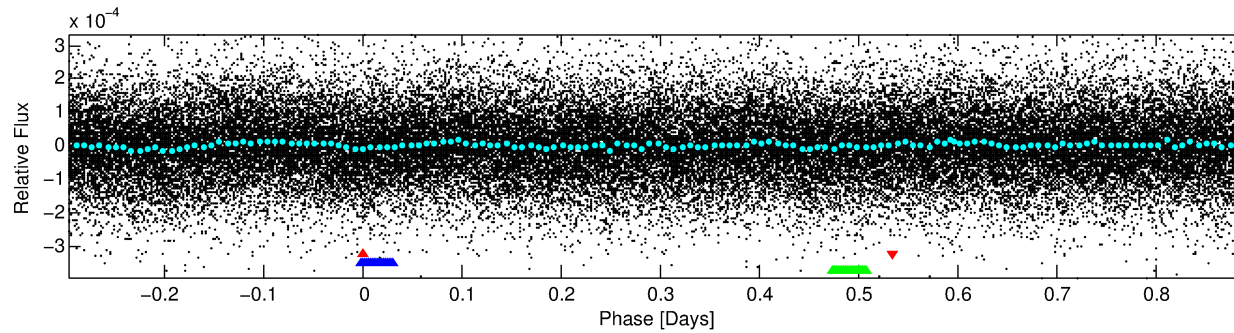
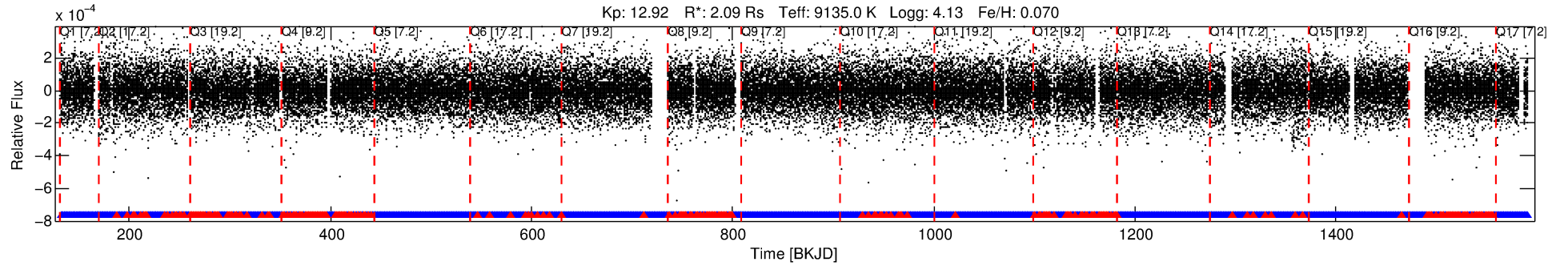
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008613594-01

No Significant Match Found

DV One-Page Summary

KIC: 8613594 Candidate: 1 of 3 Period: 1.188 d



TPS TCE Results:

Period = 1.18822 d
Epoch = 132.3420 BKJD

DV fit results are unavailable

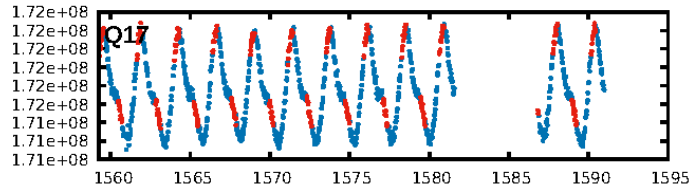
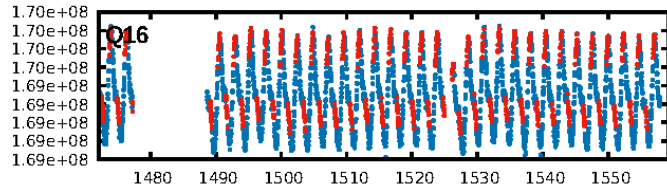
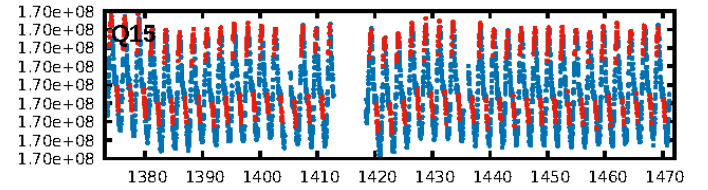
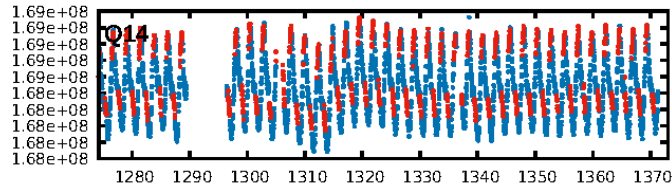
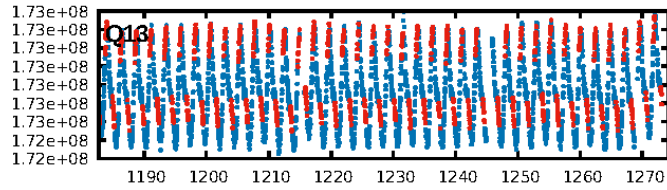
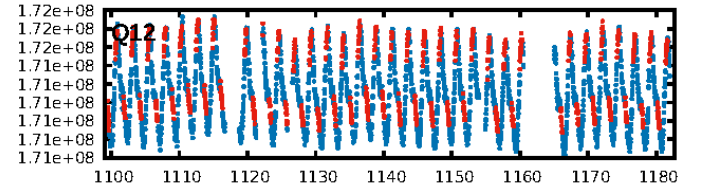
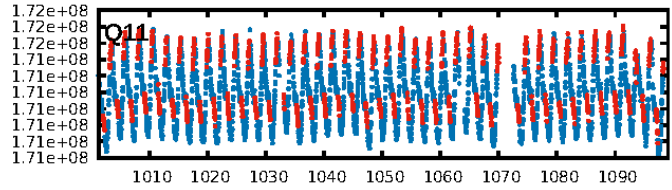
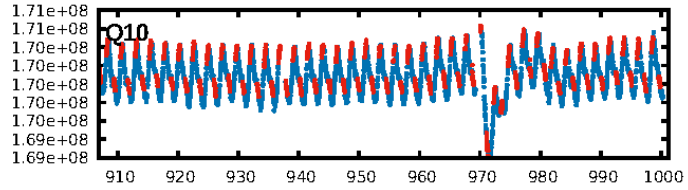
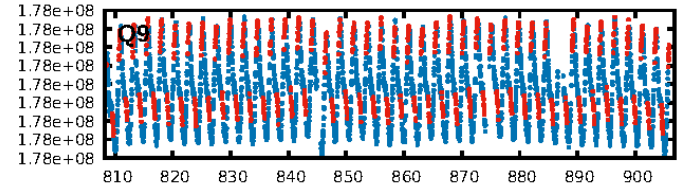
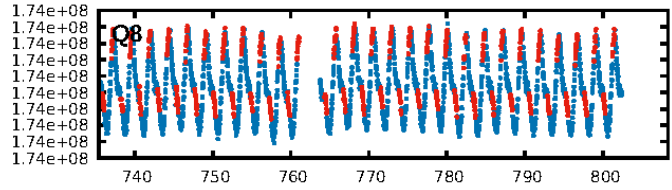
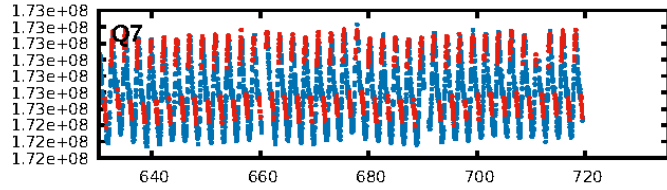
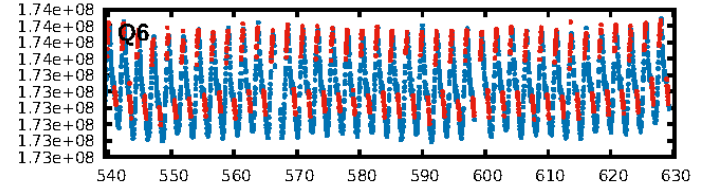
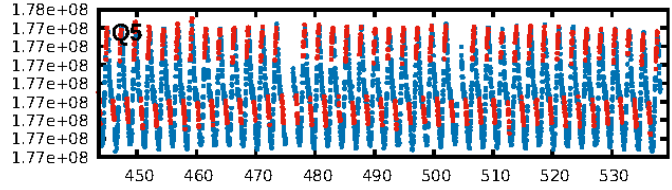
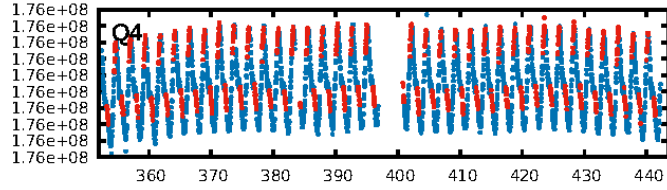
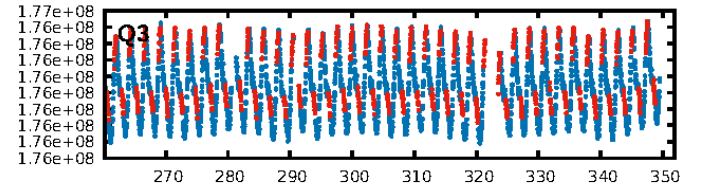
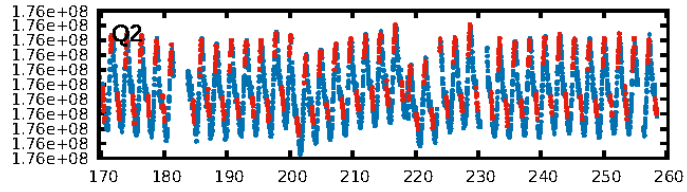
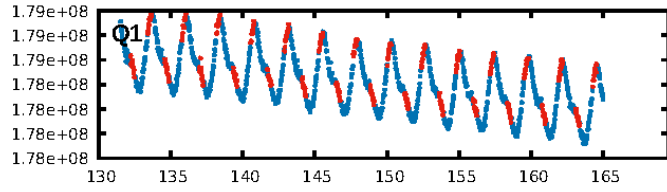
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [5.27σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.05e-70
RollingBand-fgt: 0.77 [828/1073]
GhostDiagnostic-chr: 0.9901
Centroid-sig: 29.5%
Centroid-so: 5.453 arcsec [1.07σ]
OotOffset-rm: 0.214 arcsec [0.89σ]
KicOffset-rm: 0.210 arcsec [0.88σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.00 [0/16]
DiffImageOverlap-fno: 1.00 [17/17]

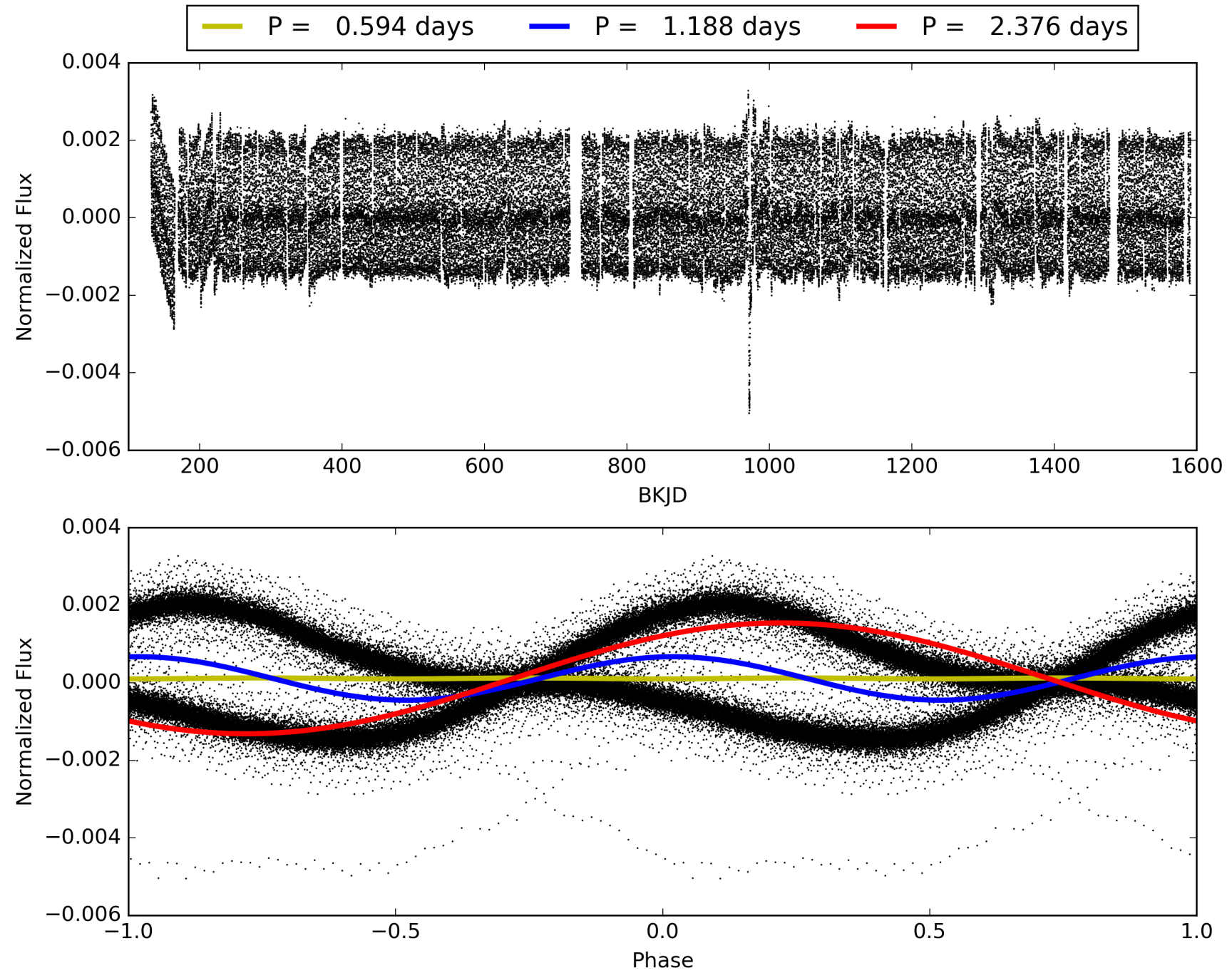
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008613594-01, PDC Light Curves

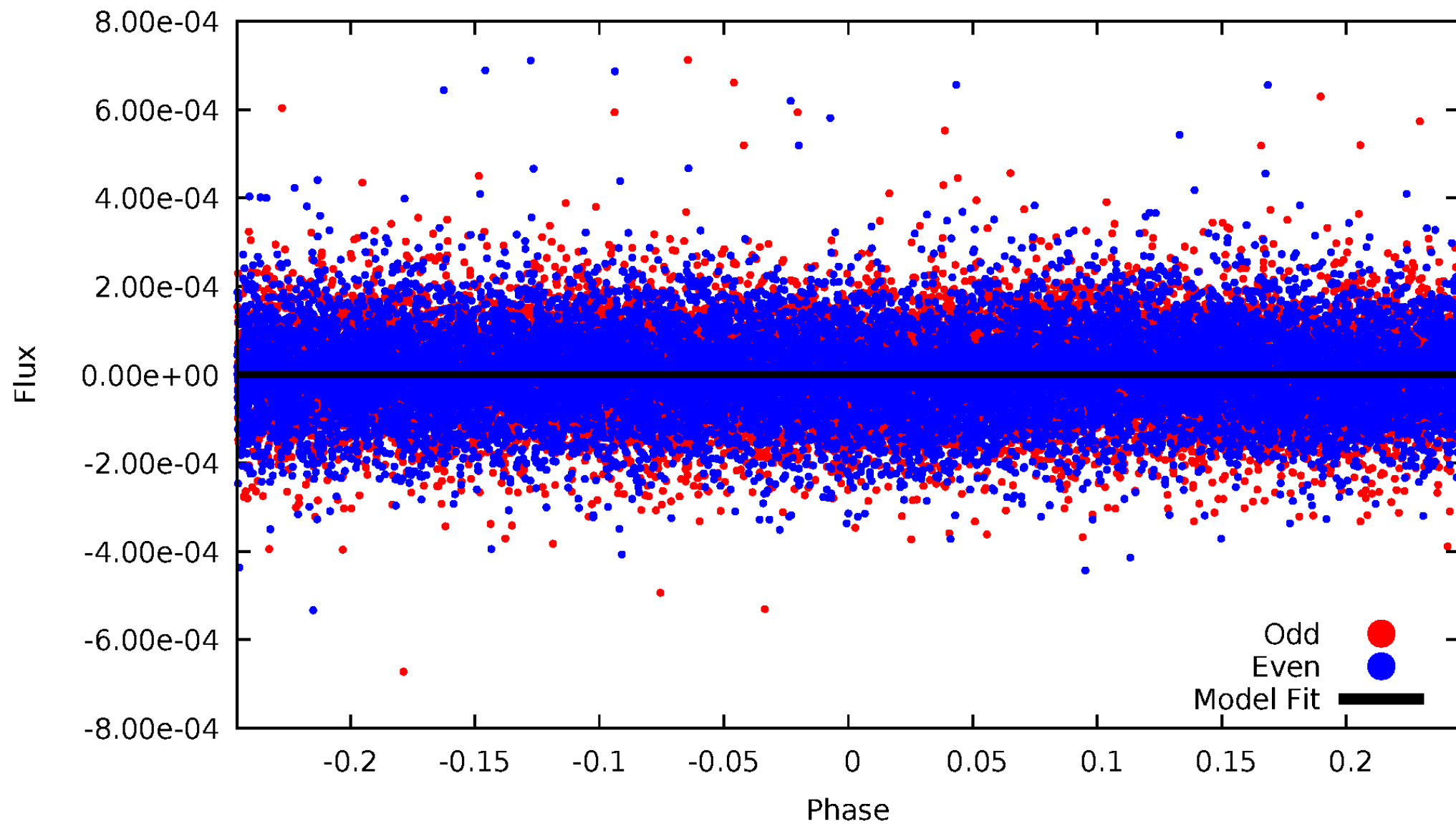


TCE 008613594-01



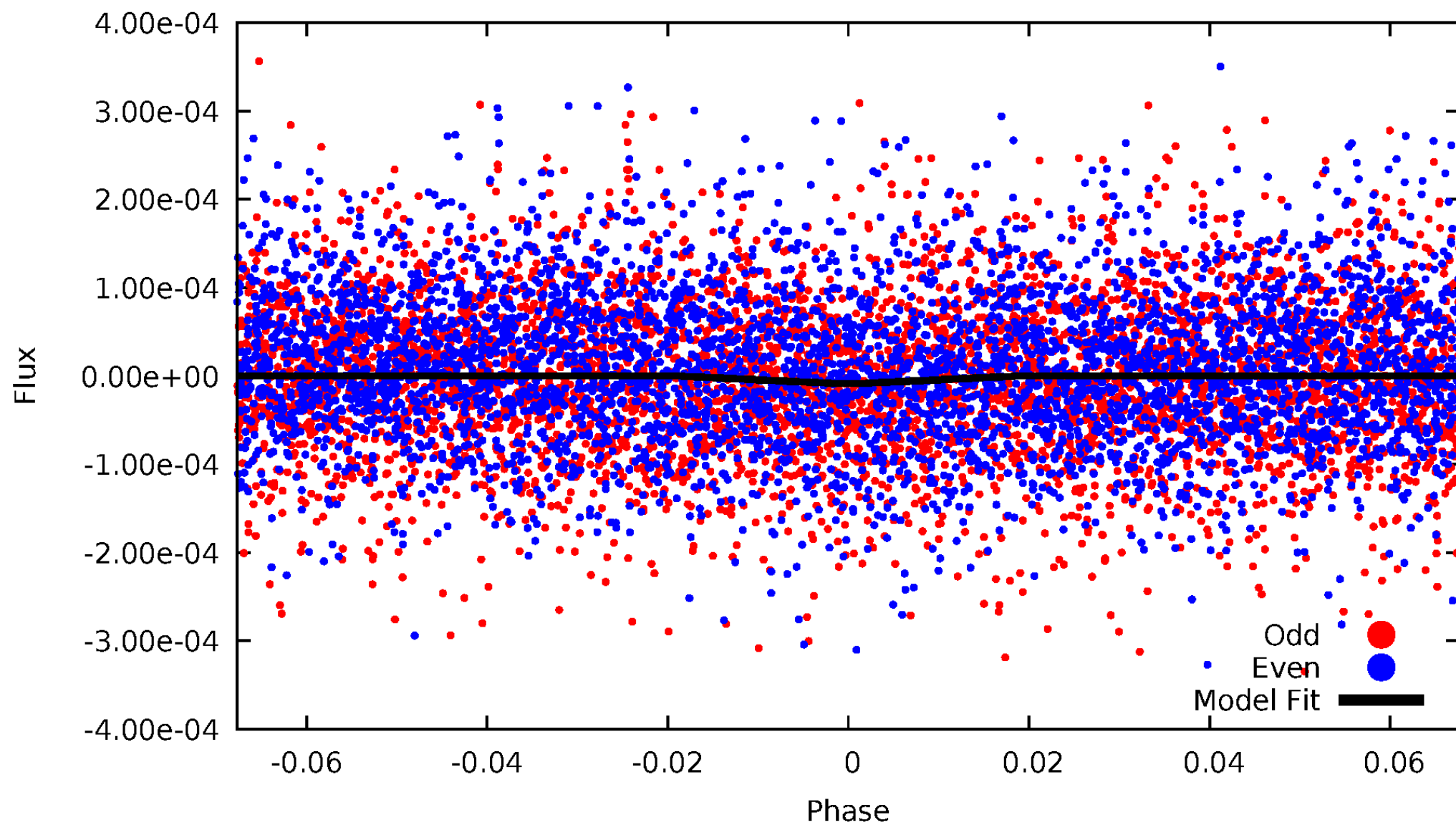
DV Odd/Even

TCE 008613594-01

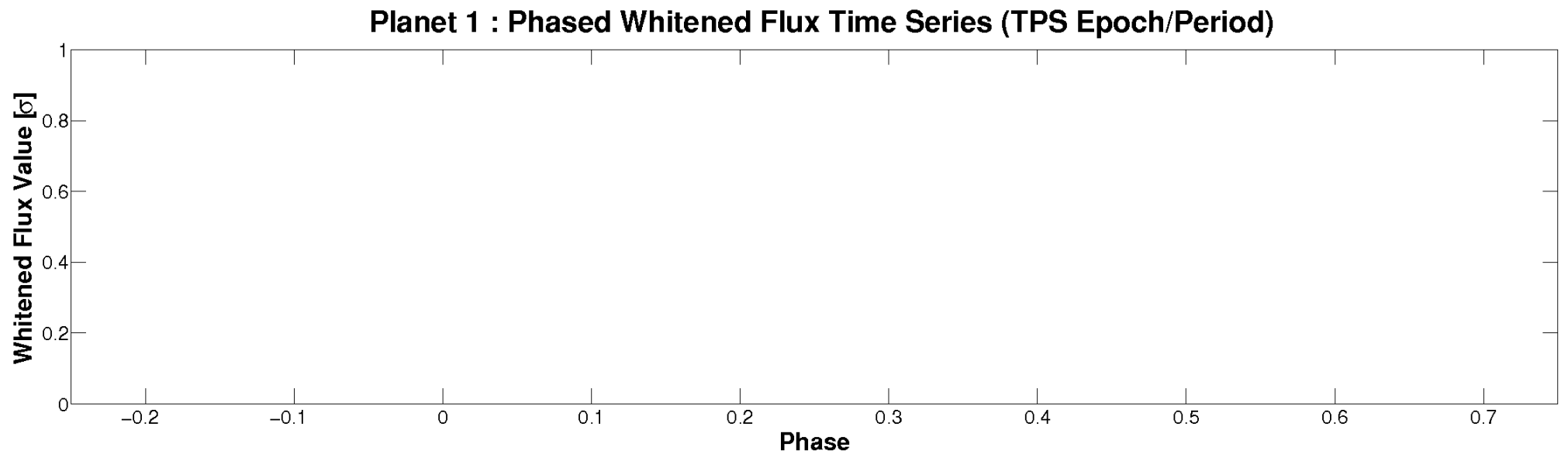
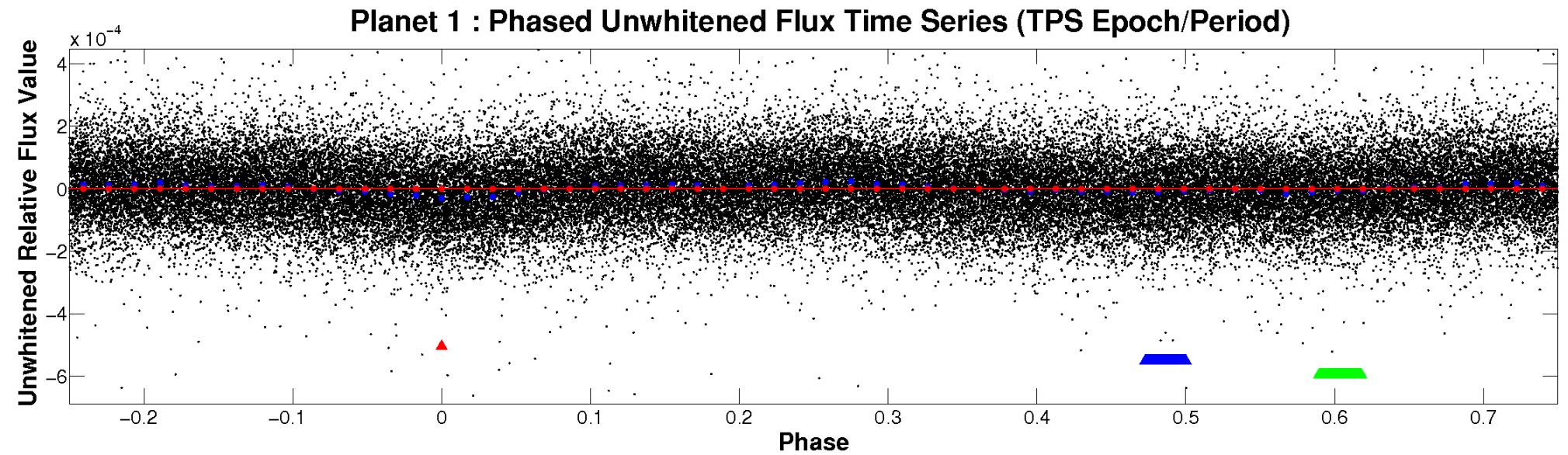


ALT Odd/Even

TCE 008613594-01

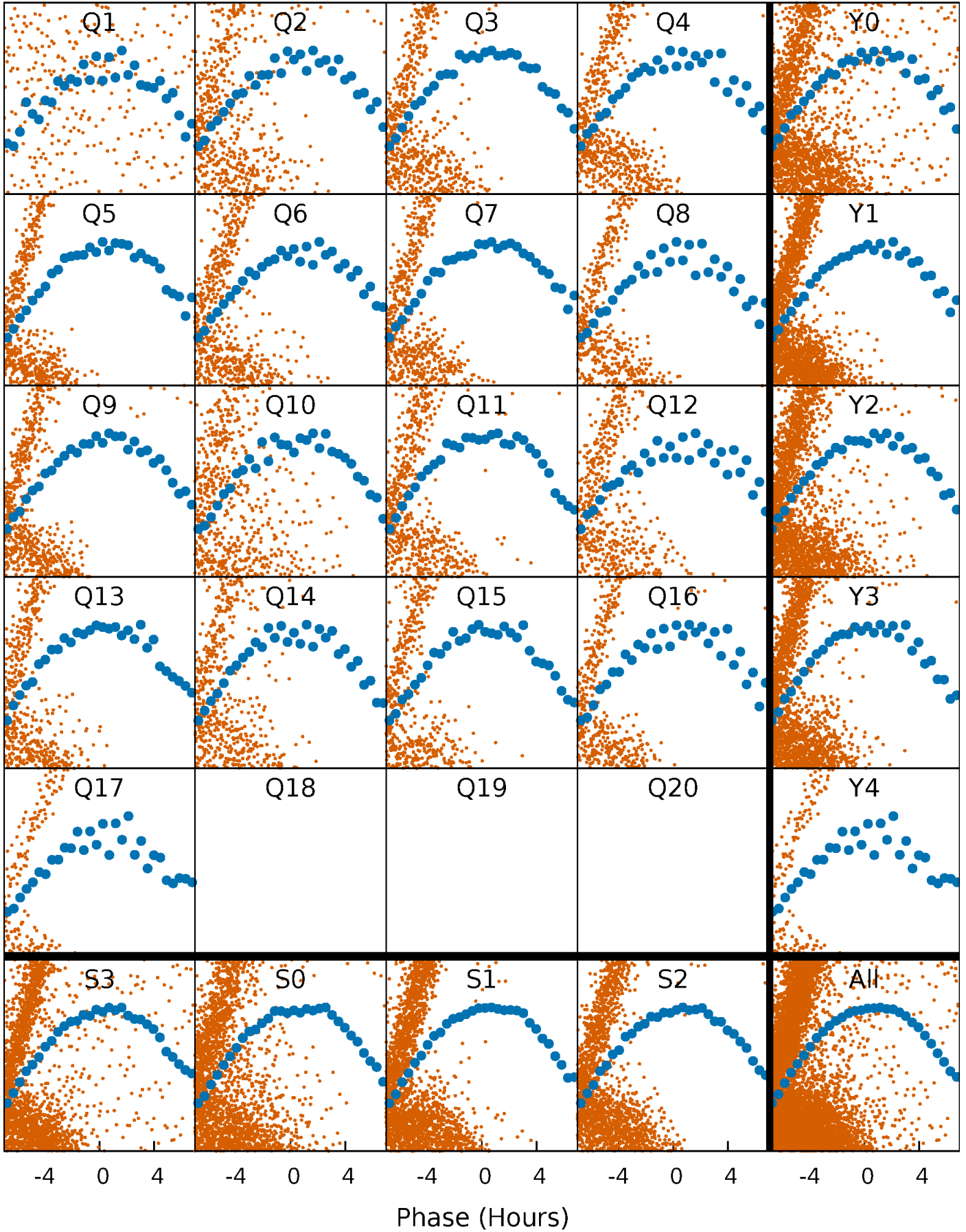


Non-Whitened Vs. Whitened Light Curve



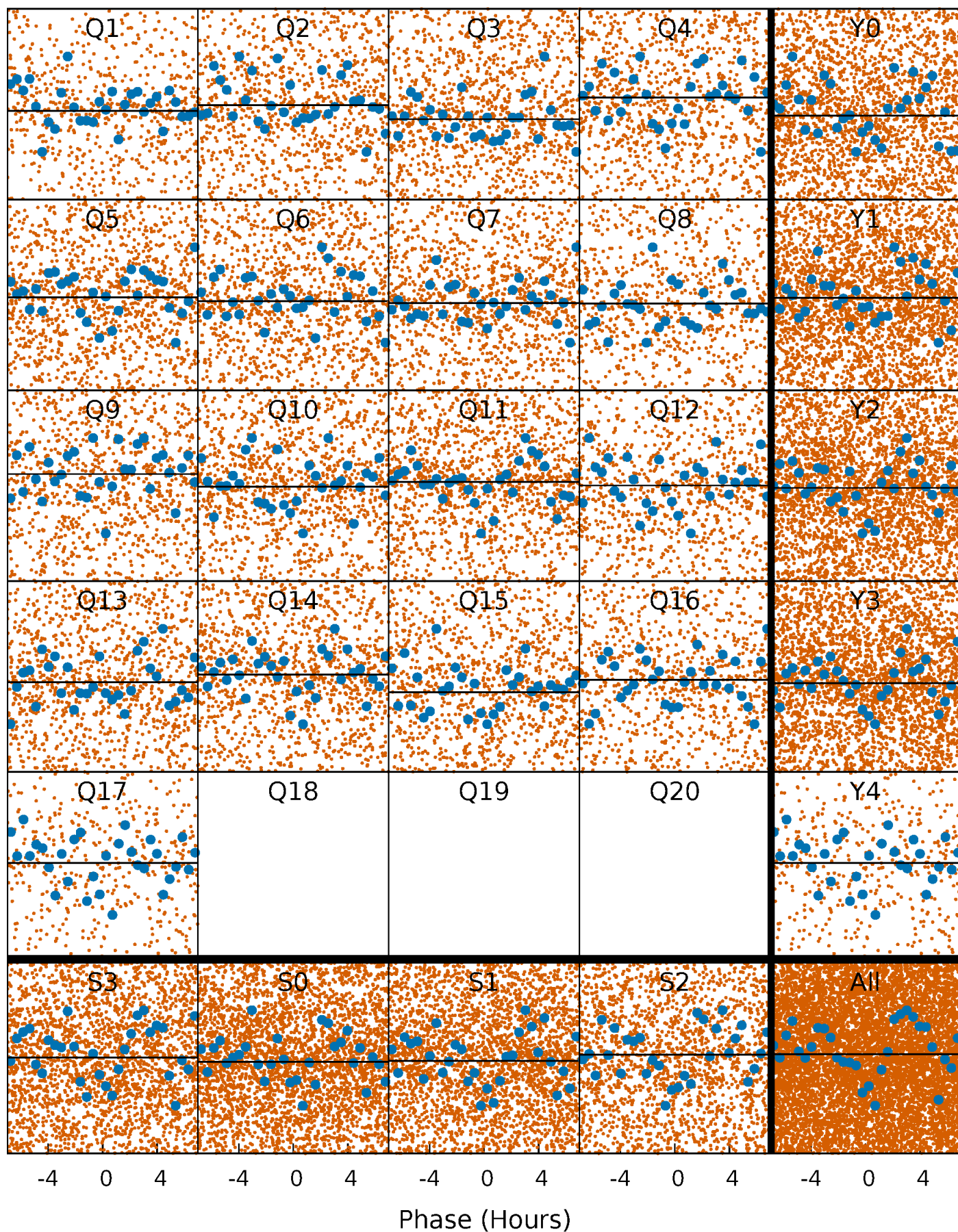
PDC Quarter-Phased Transit Curves

TCE 008613594-01 P= 1.188224 Days $T_0=132.341959$ (BKJD)



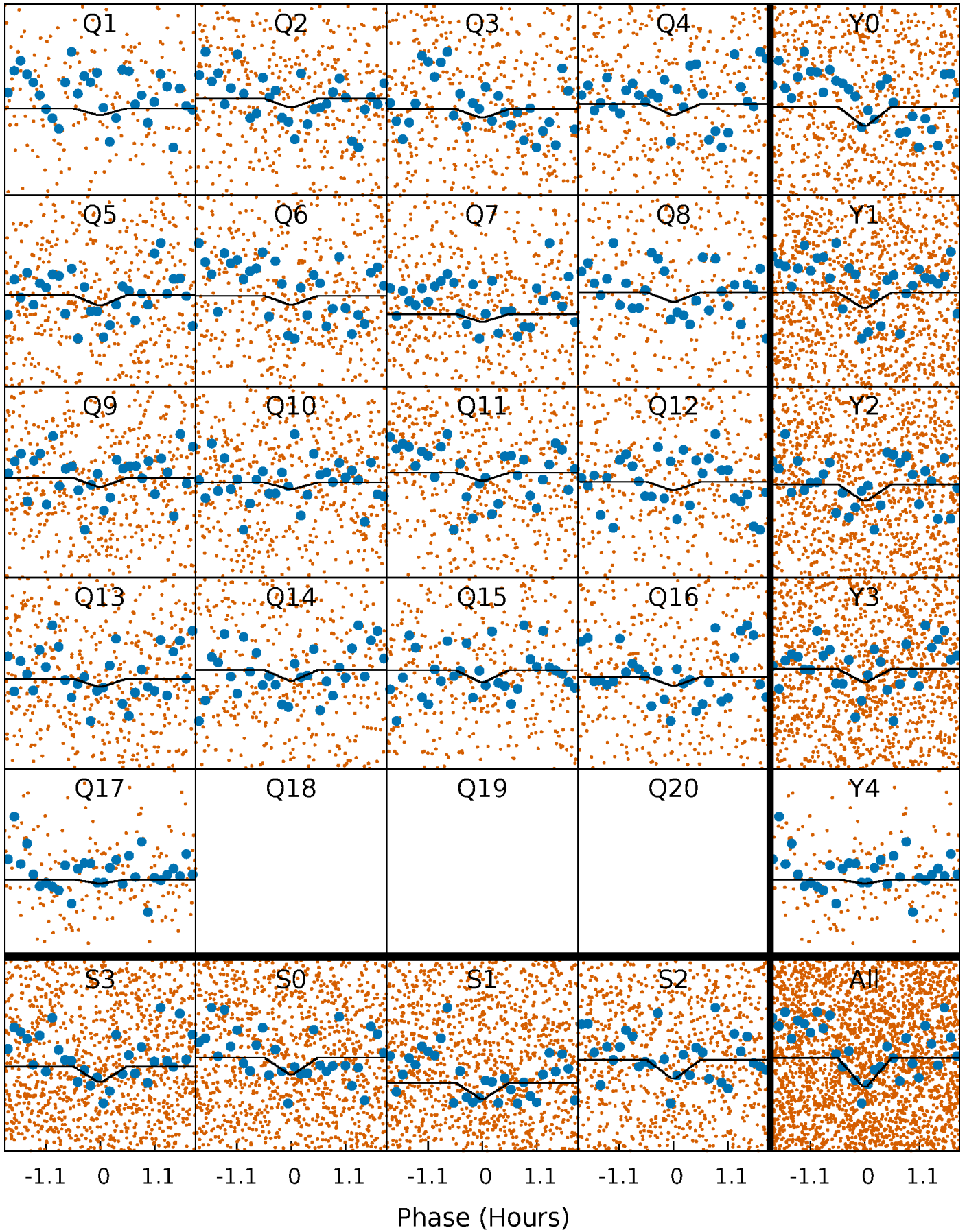
DV Quarter-Phased Transit Curves

TCE 008613594-01 P= 1.188224 Days $T_0=132.341959$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

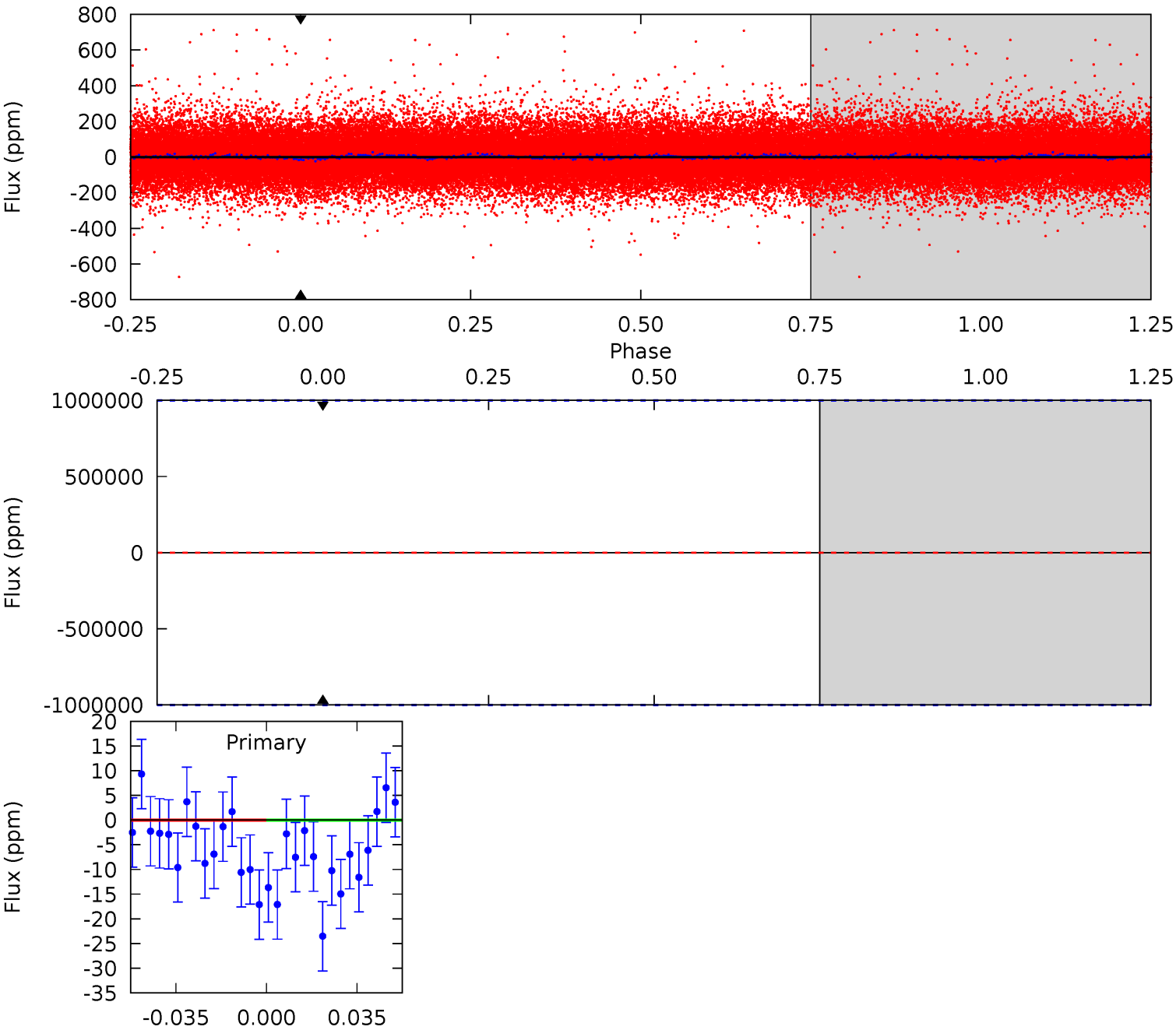
TCE 008613594-01 P= 1.188224 Days $T_0=132.569086$ (BKJD)



DV Model-Shift Uniqueness Test

008613594-01, P = 1.188224 Days, E = 131.153735 Days

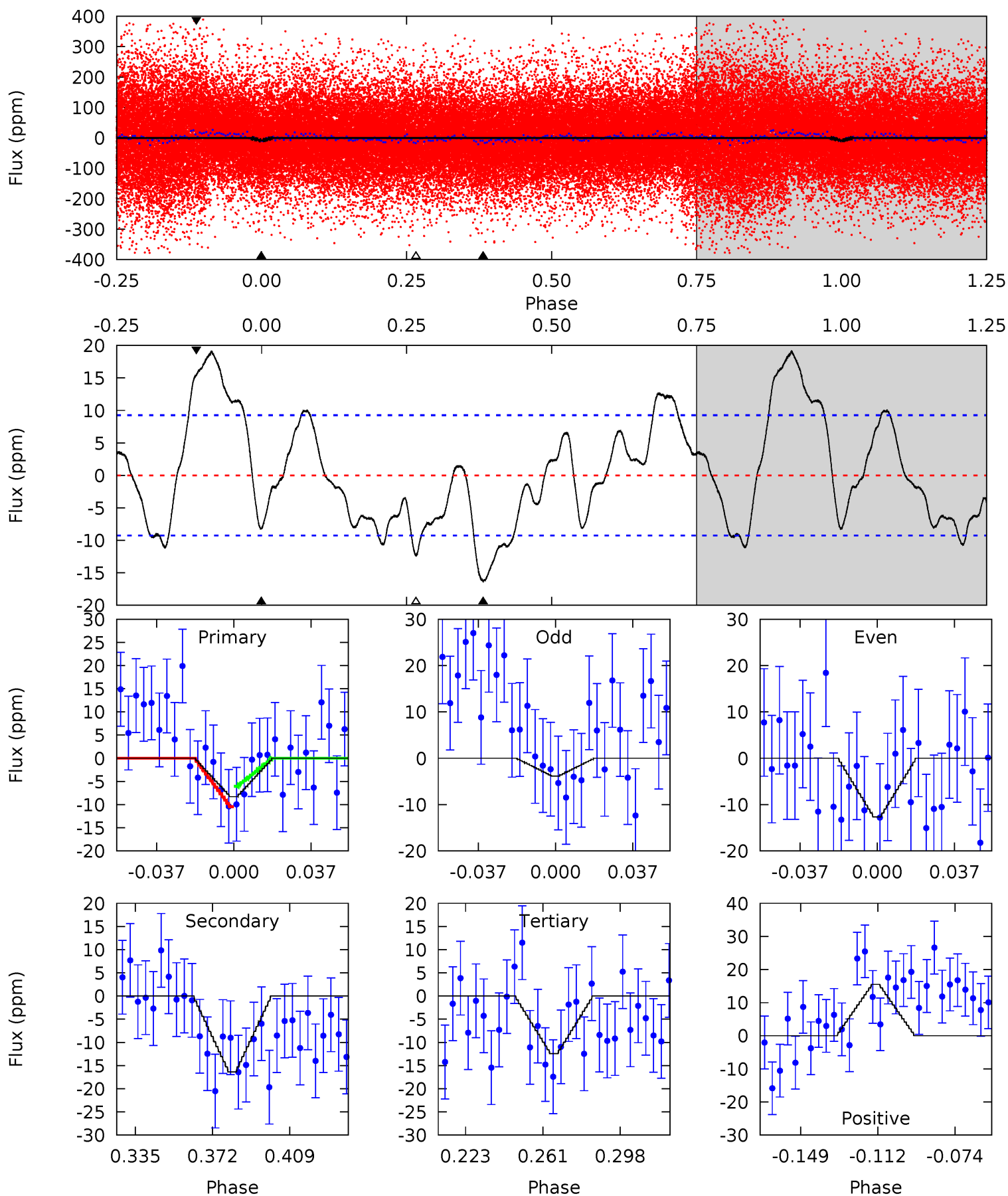
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008613594-01, P = 1.188224 Days, E = 131.380862 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.27	8.43	6.40	7.98	4.77	2.08	4.00	-2.13	-3.71	2.03	0.45	2.28	0.95	0.54	1.16



Stellar Parameters For KIC 008613594

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9135^{+292}_{-438}	$4.130^{+0.124}_{-0.186}$	$0.070^{+0.150}_{-0.600}$	$2.092^{+0.728}_{-0.485}$	$2.152^{+0.407}_{-0.542}$	$0.331^{+0.216}_{-0.175}$
	+3%/-5%	+3%/-5%	+214%/-857%	+35%/-23%	+19%/-25%	+65%/-53%
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 008613594-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$15.40^{+18.52}_{-10.75}$	4866^{+407}_{-353}	5263^{+73406}_{-75967}	$1.330^{+332.654}_{-294.544}$
Alt.	-16 ± 2	$16.31^{+16.82}_{-11.10}$	4851^{+375}_{-356}	-3925^{+955}_{-255}	$0.027^{+0.230}_{-0.020}$

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

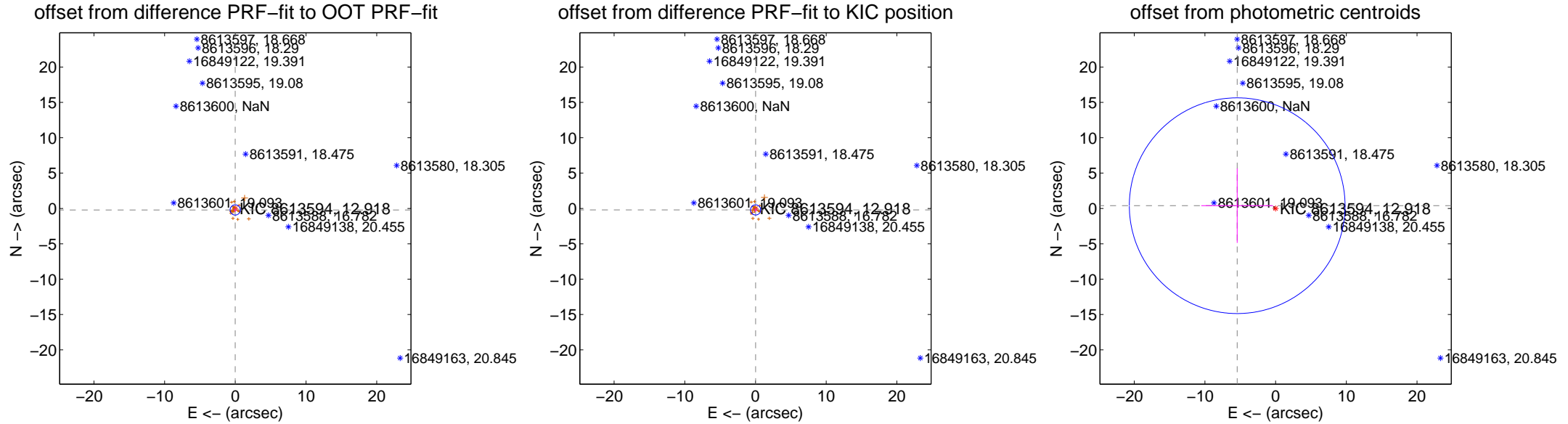
DV Centroid Data

Supplemental centroid analysis for 008613594-01. Kepler magnitude: 12.92. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

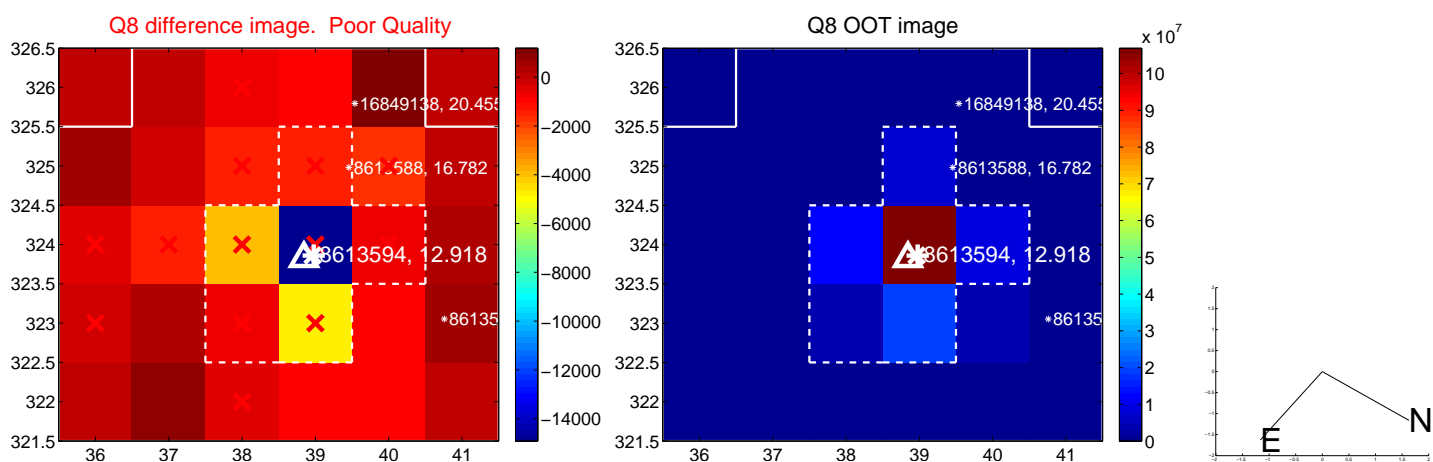
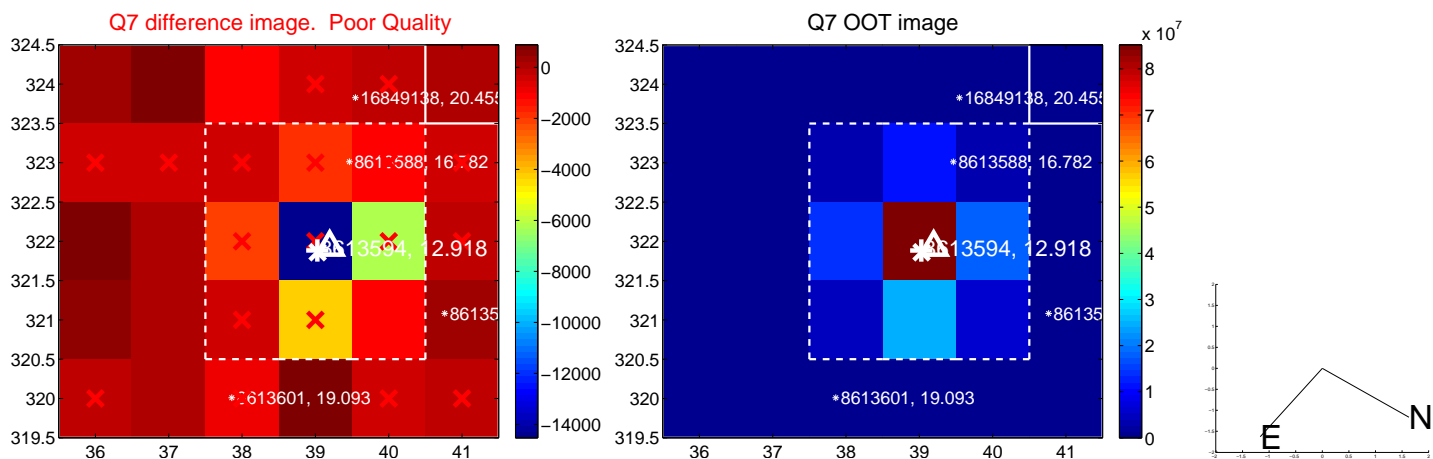
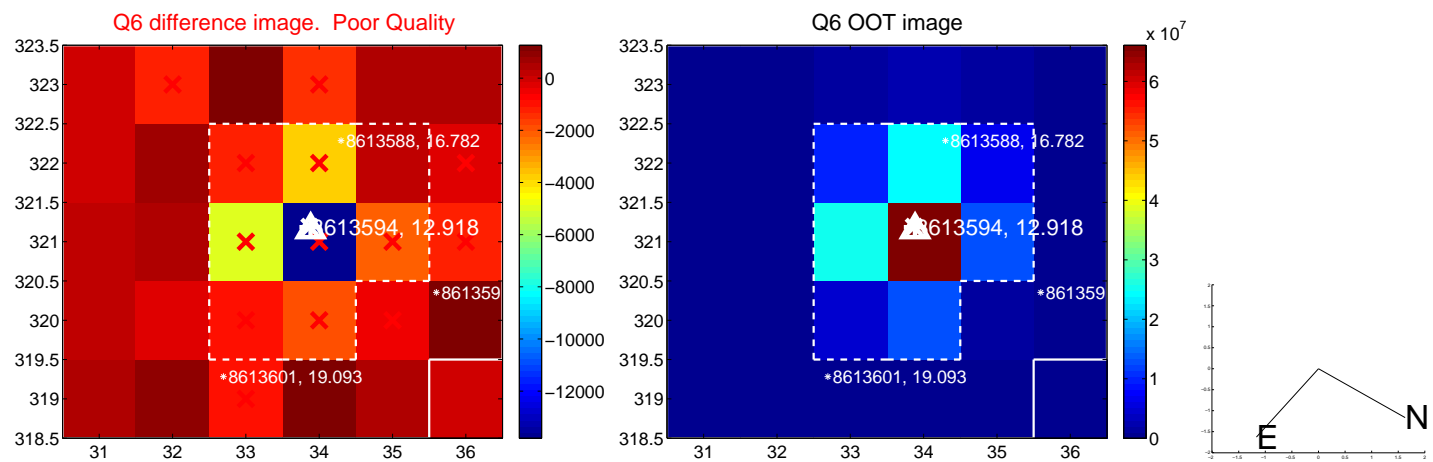
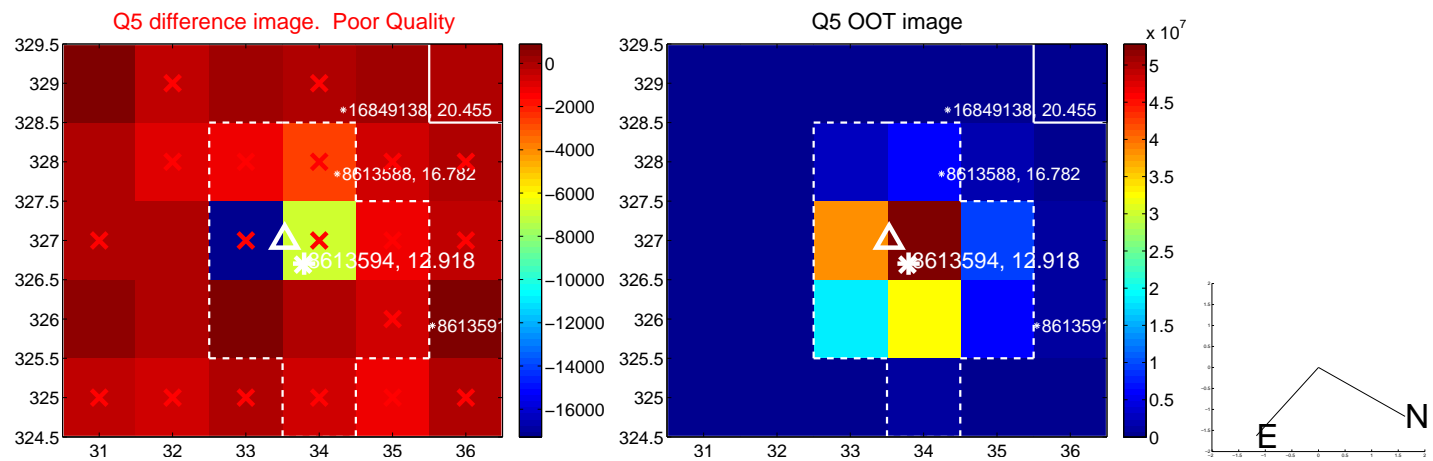
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.214 ± 0.241	0.89	0.018 ± 0.164	-0.213 ± 0.242
PRF-fit source offset from KIC position	0.210 ± 0.240	0.88	-0.018 ± 0.171	-0.209 ± 0.240
photometric centroid source offset	5.45 ± 5.08	1.07	5.44 ± 5.08	0.39 ± 5.27

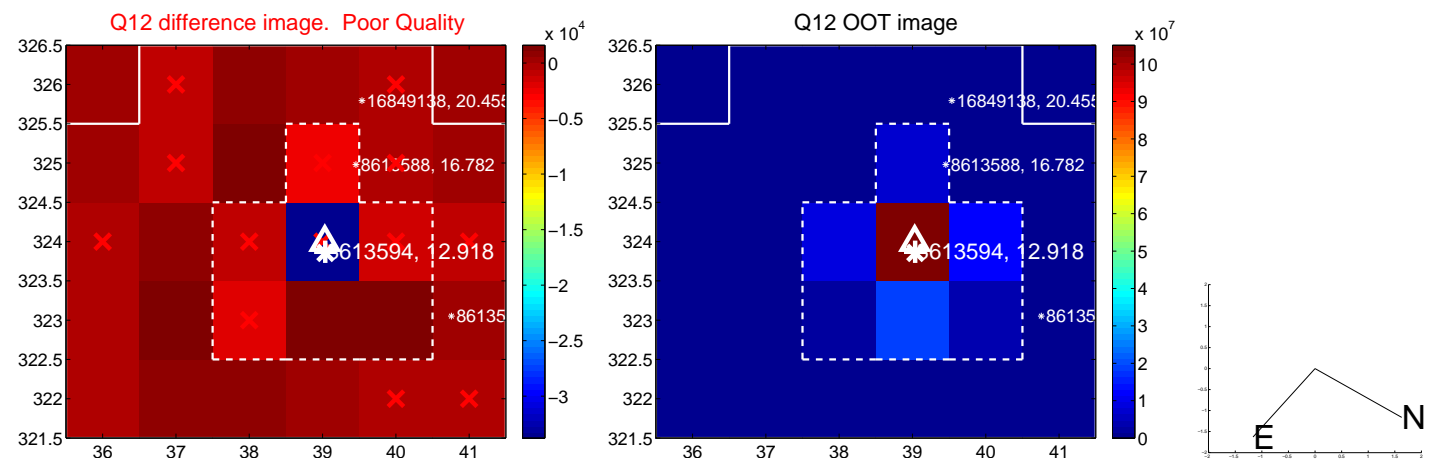
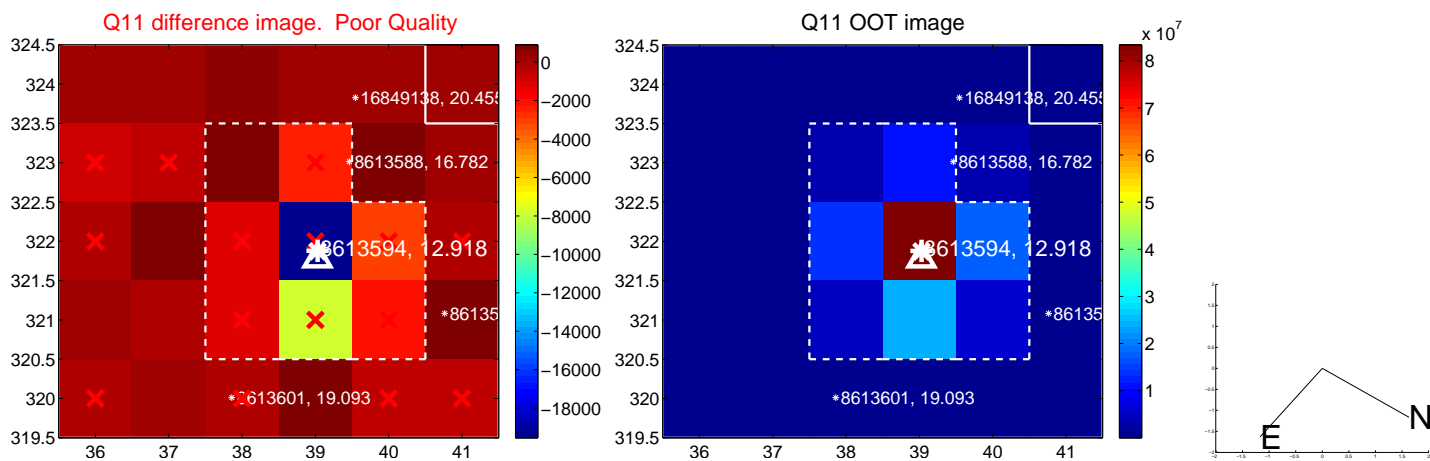
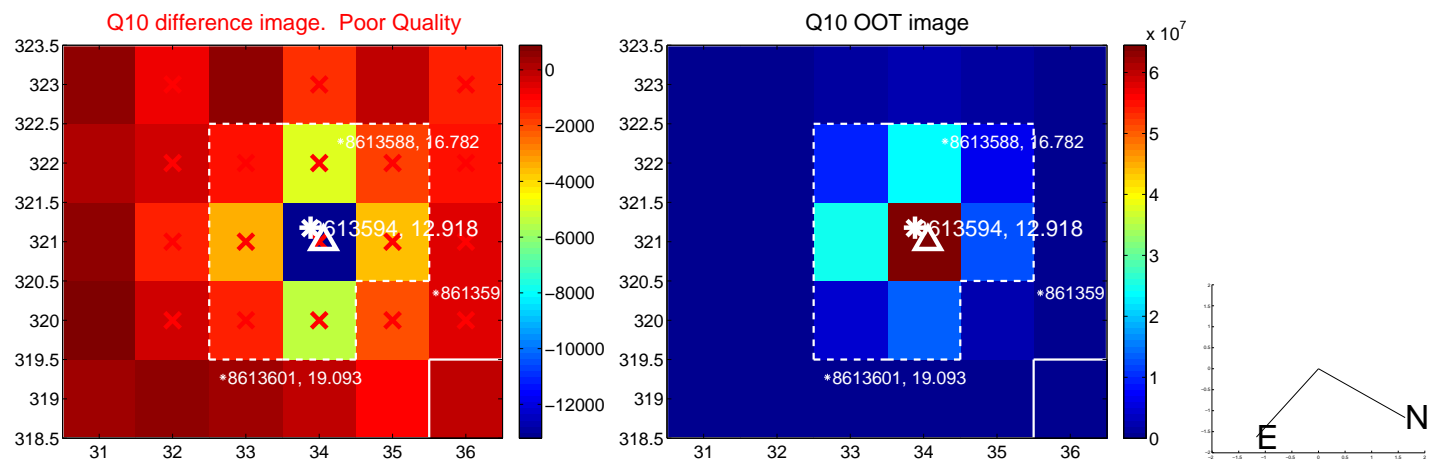
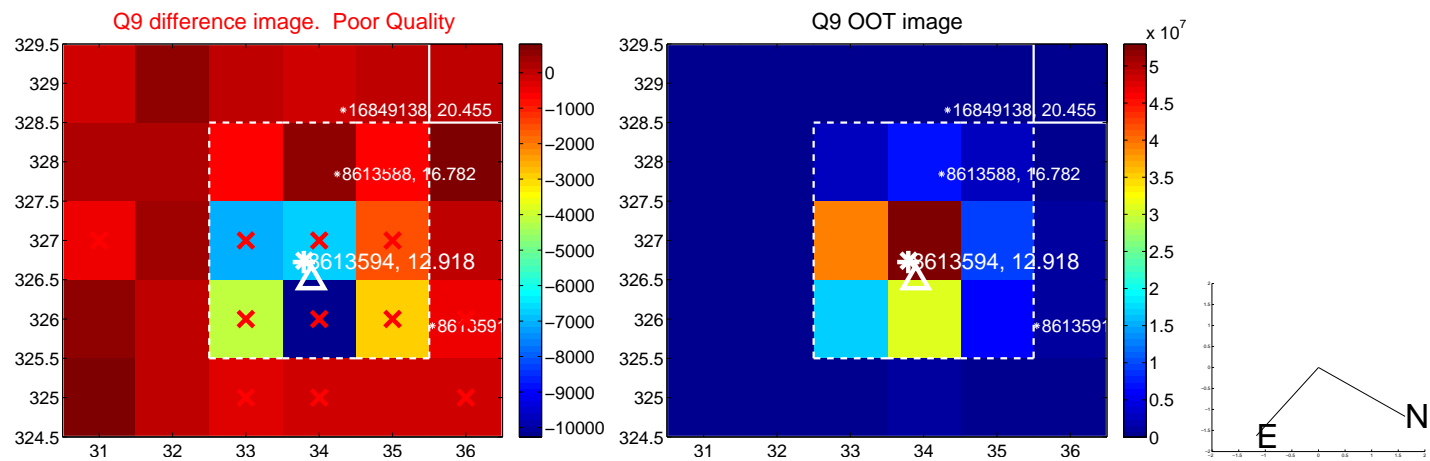


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

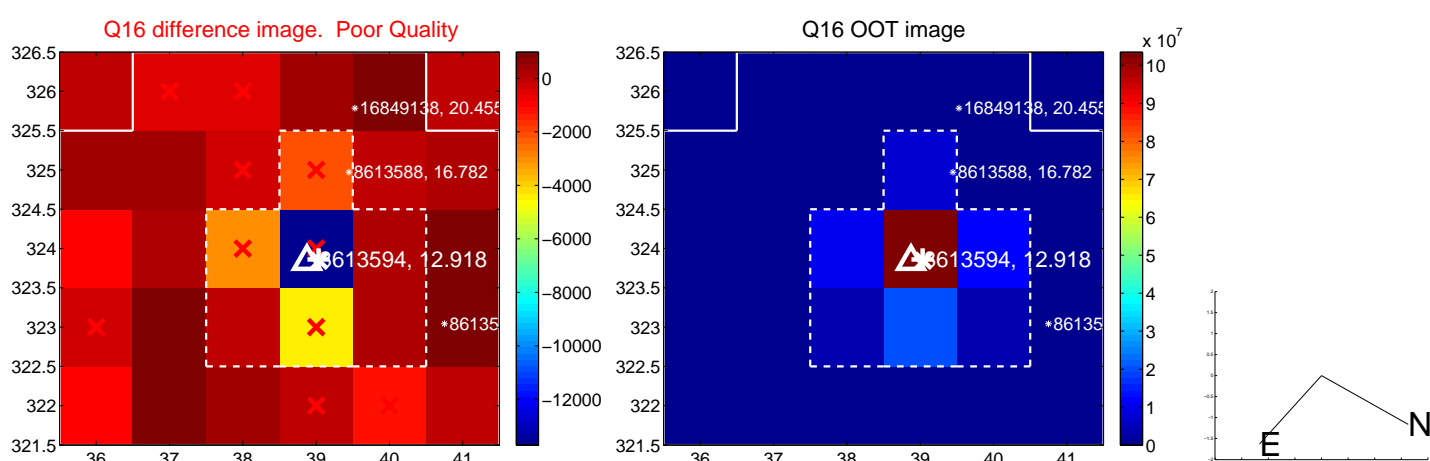
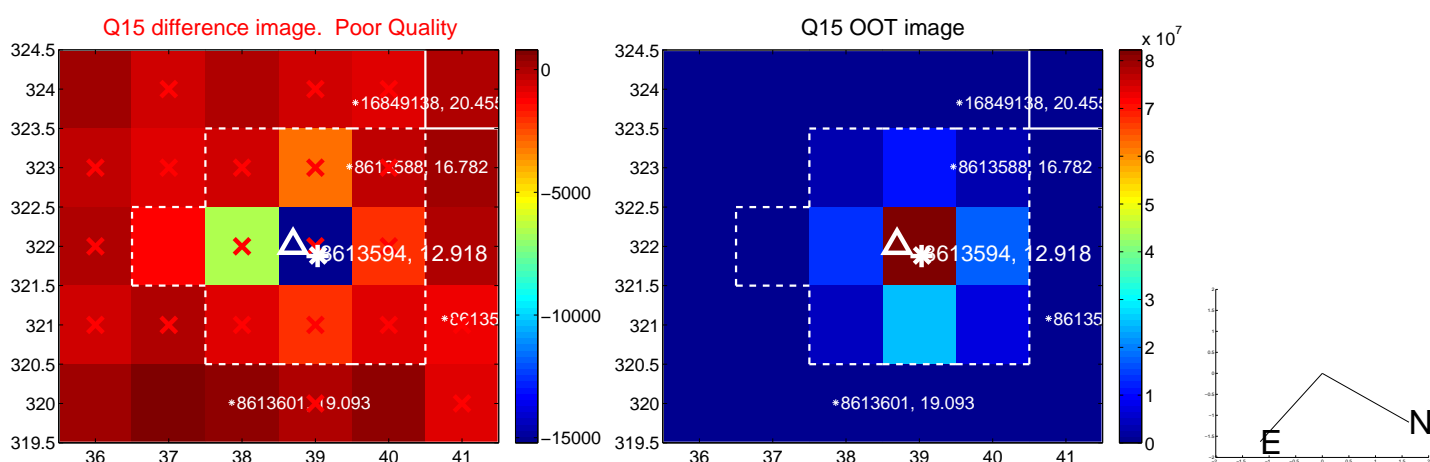
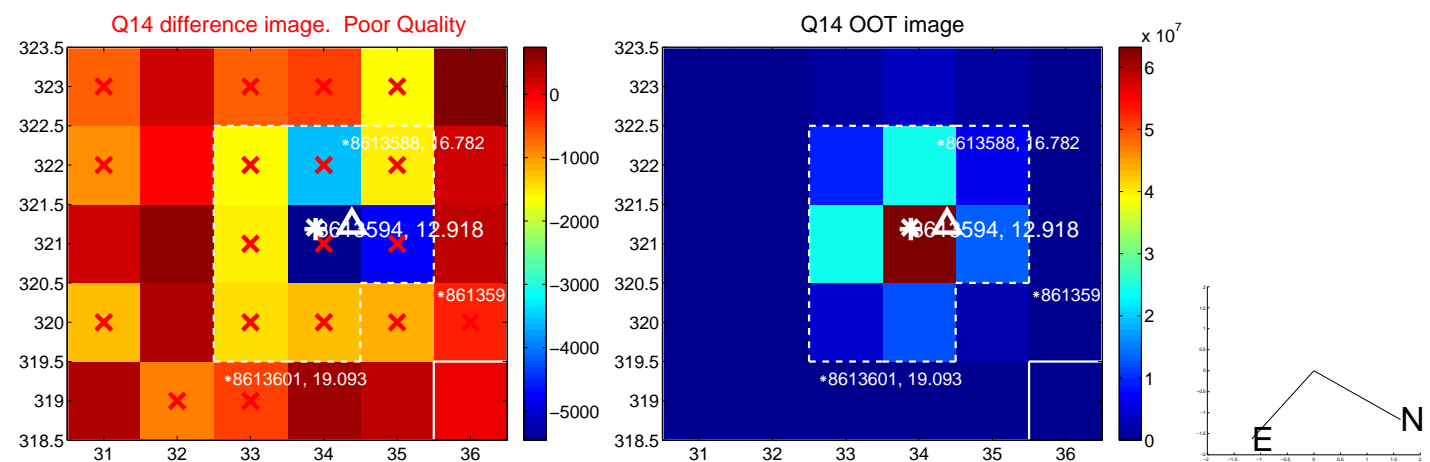
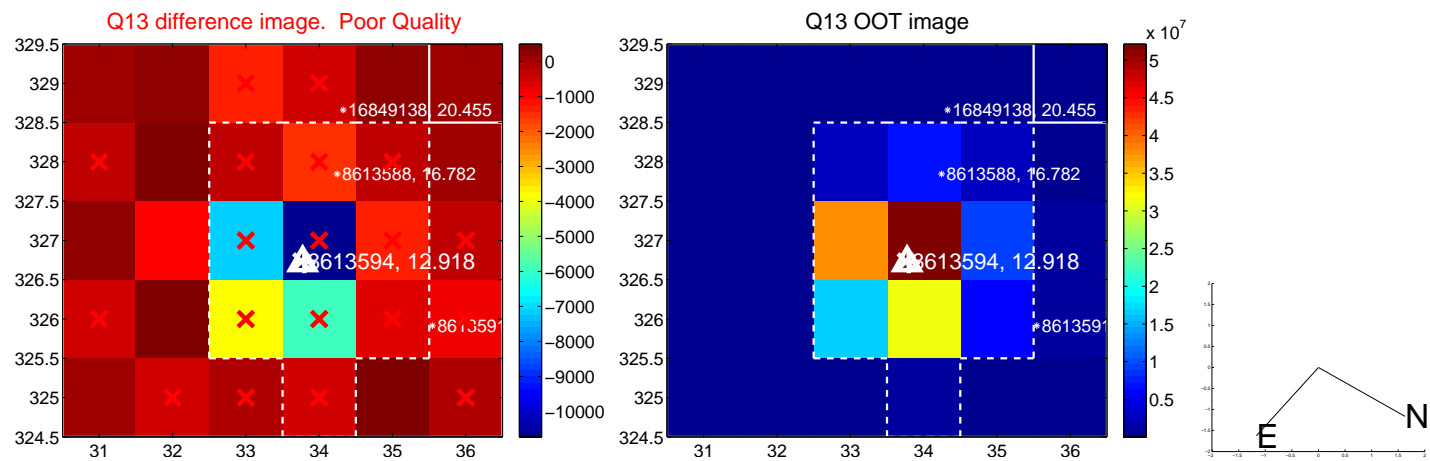
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



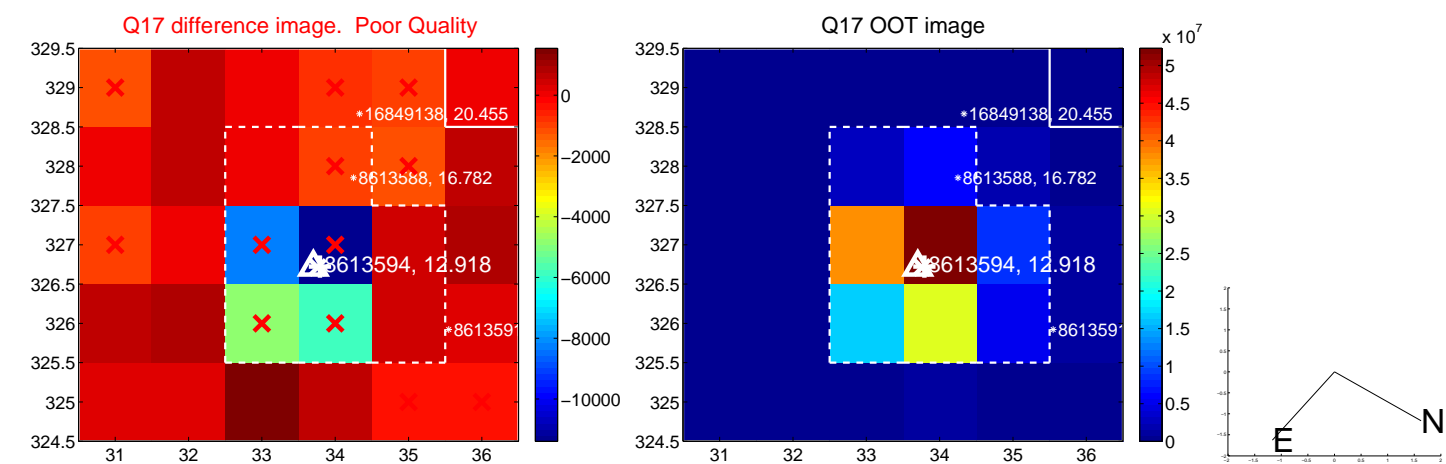
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



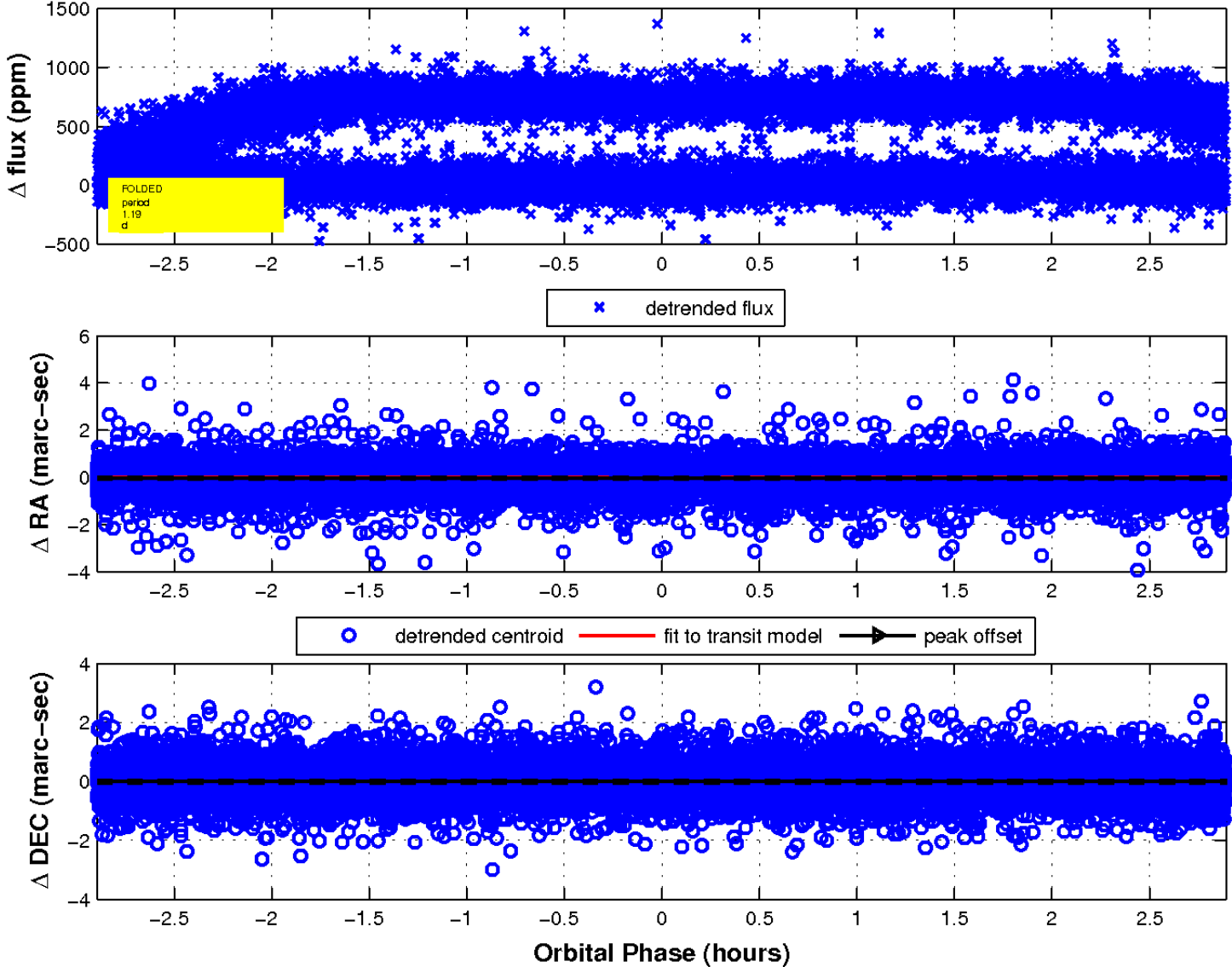
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

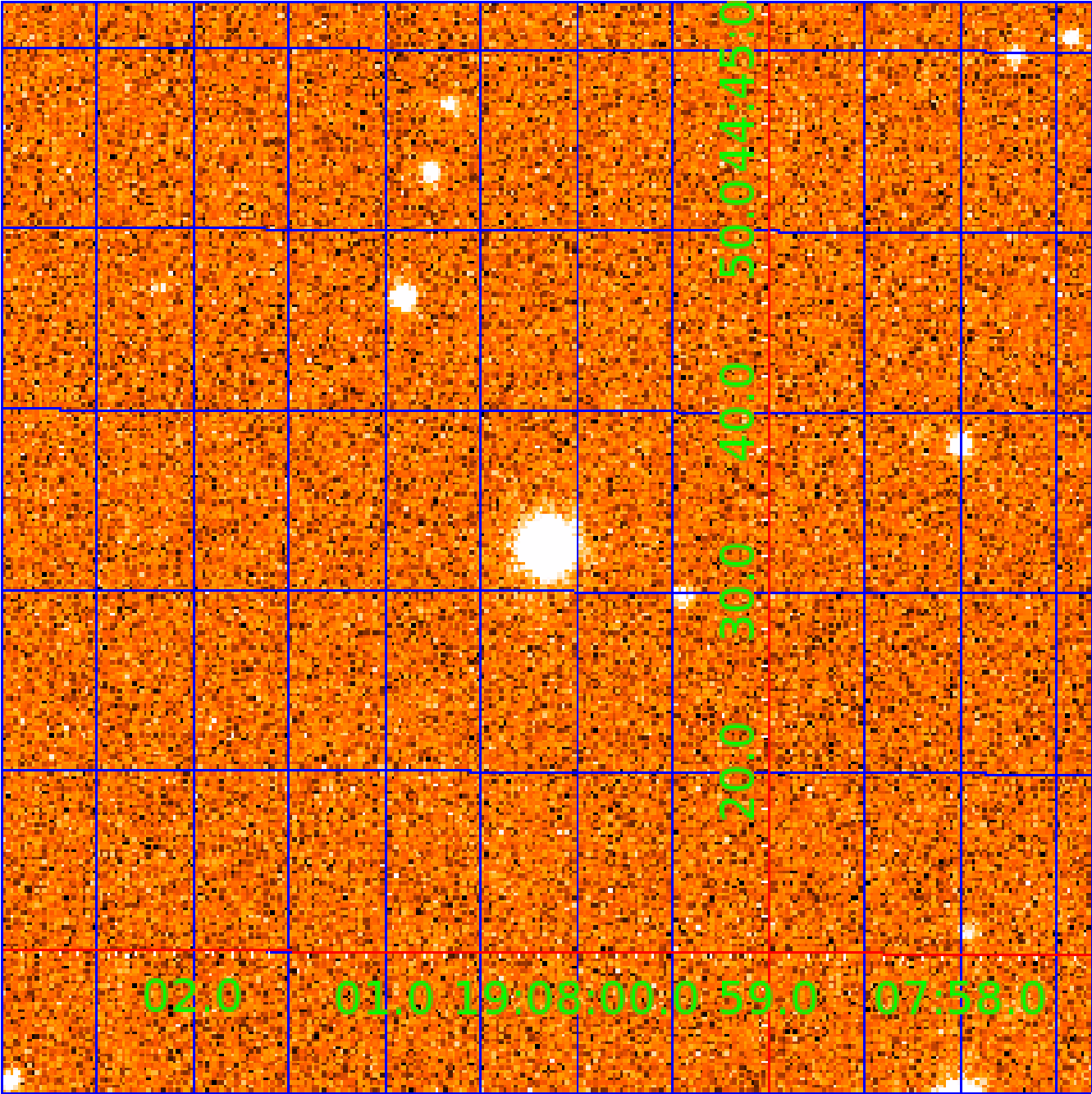


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 008613594

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
008613594-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008613594-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
008613594-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

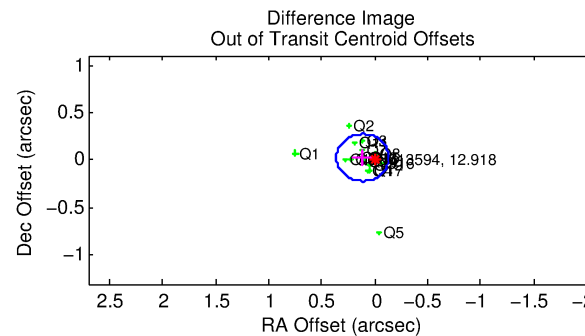
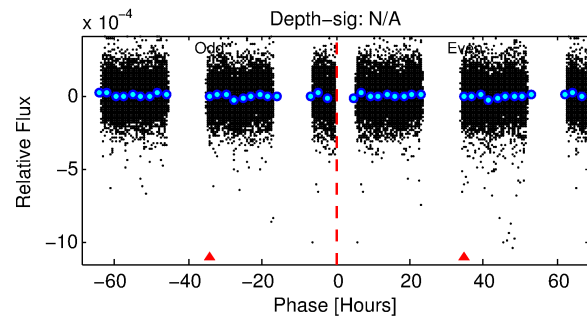
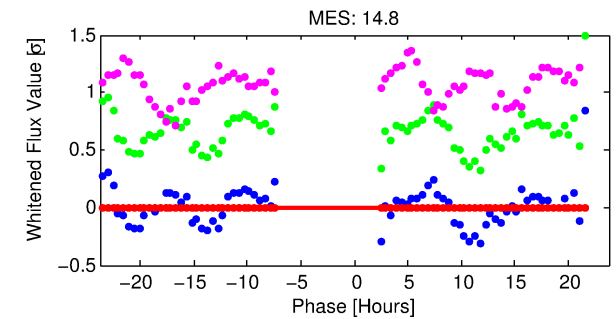
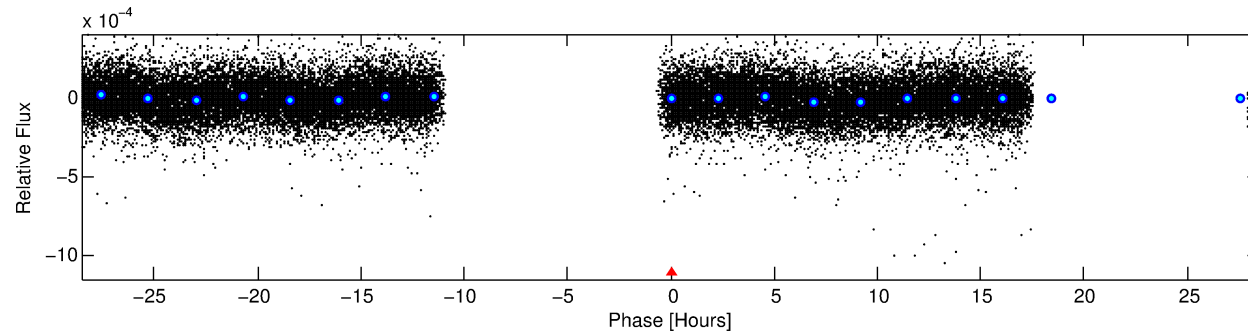
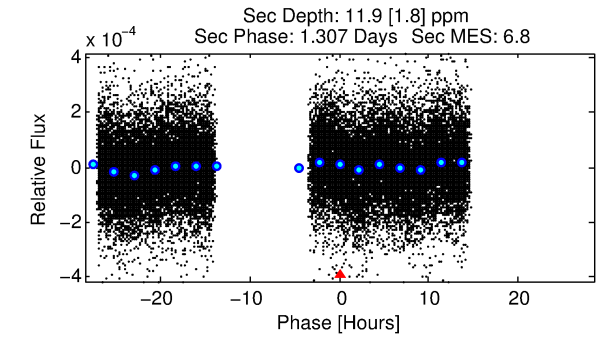
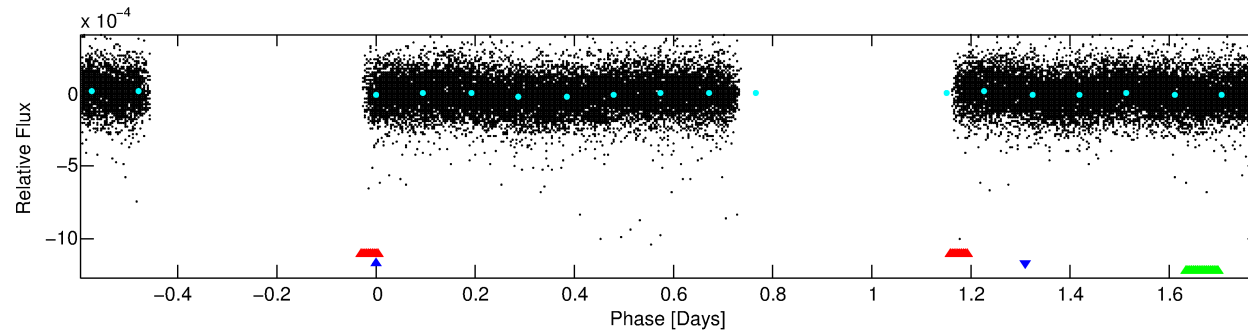
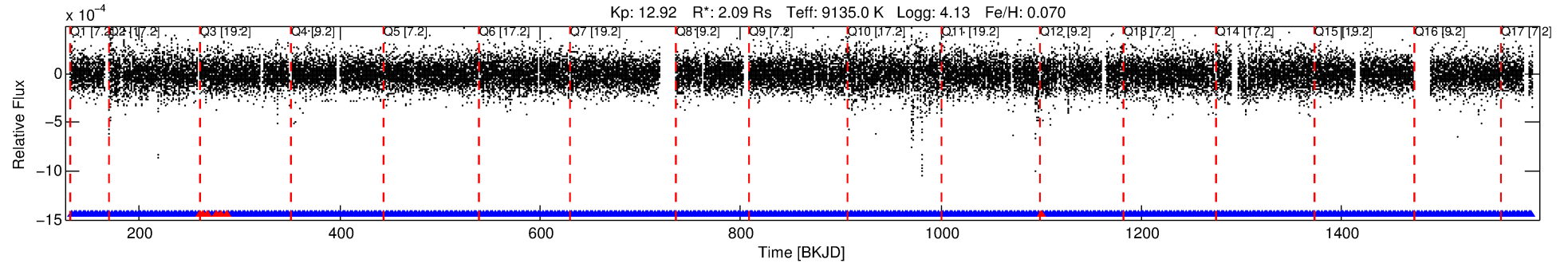
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008613594-02

No Significant Match Found

DV One-Page Summary

KIC: 8613594 Candidate: 2 of 3 Period: 2.376 d



TPS TCE Results:

Period = 2.37650 d
Epoch = 132.9039 BKJD

DV fit results are unavailable

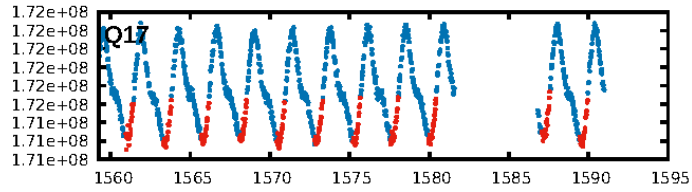
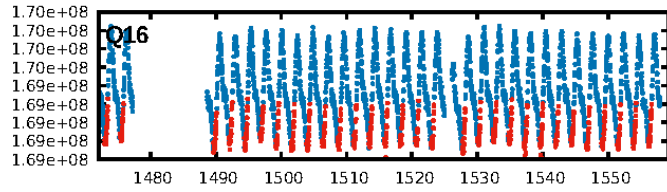
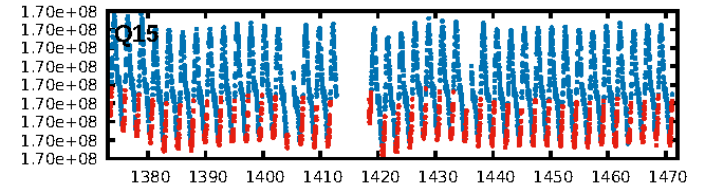
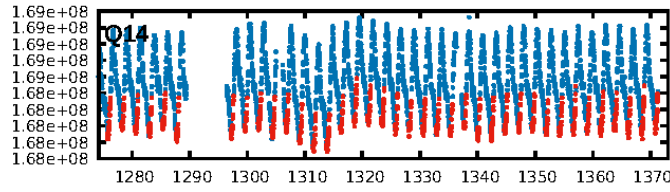
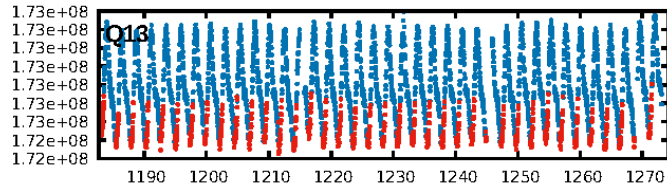
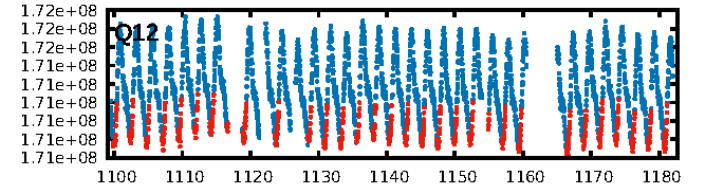
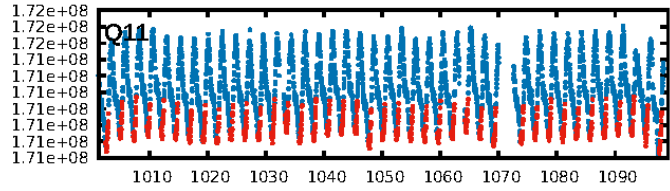
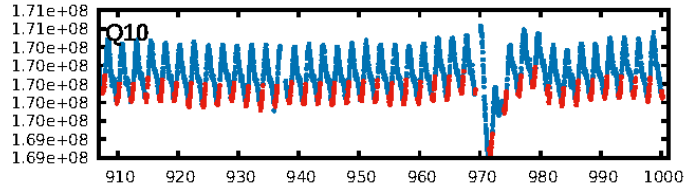
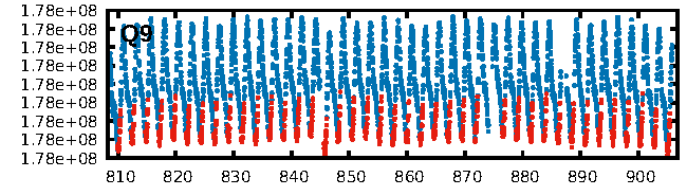
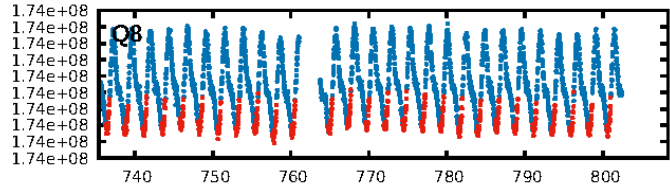
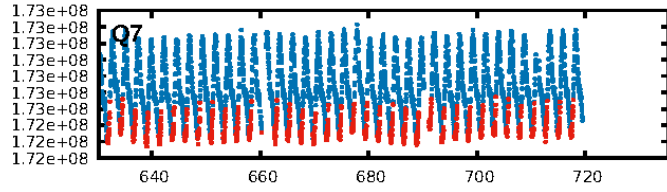
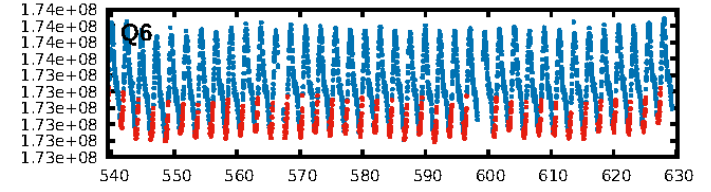
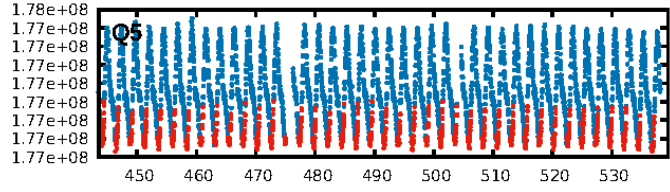
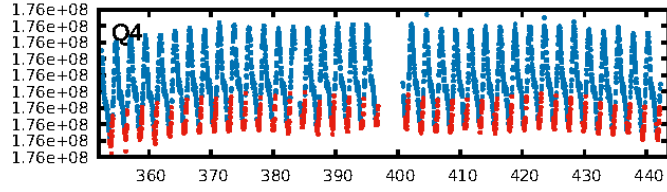
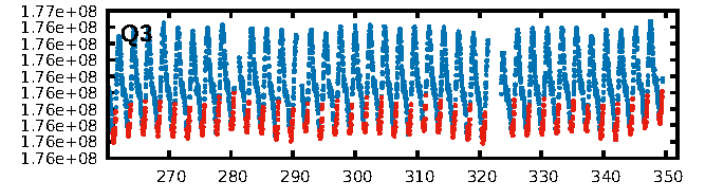
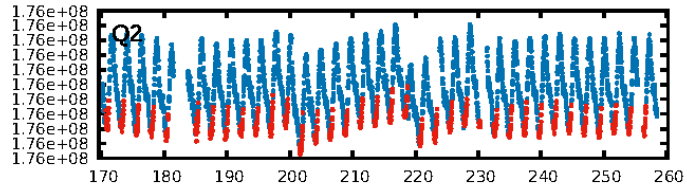
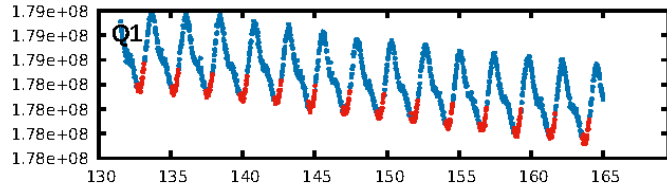
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.62e-79
RollingBand-fgt: 0.99 [539/546]
GhostDiagnostic-chr: -2.861
Centroid-sig: 8.6%
Centroid-so: 0.063 arcsec [2.21σ]
OotOffset-rm: 0.118 arcsec [1.43σ]
KicOffset-rm: 0.110 arcsec [1.26σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

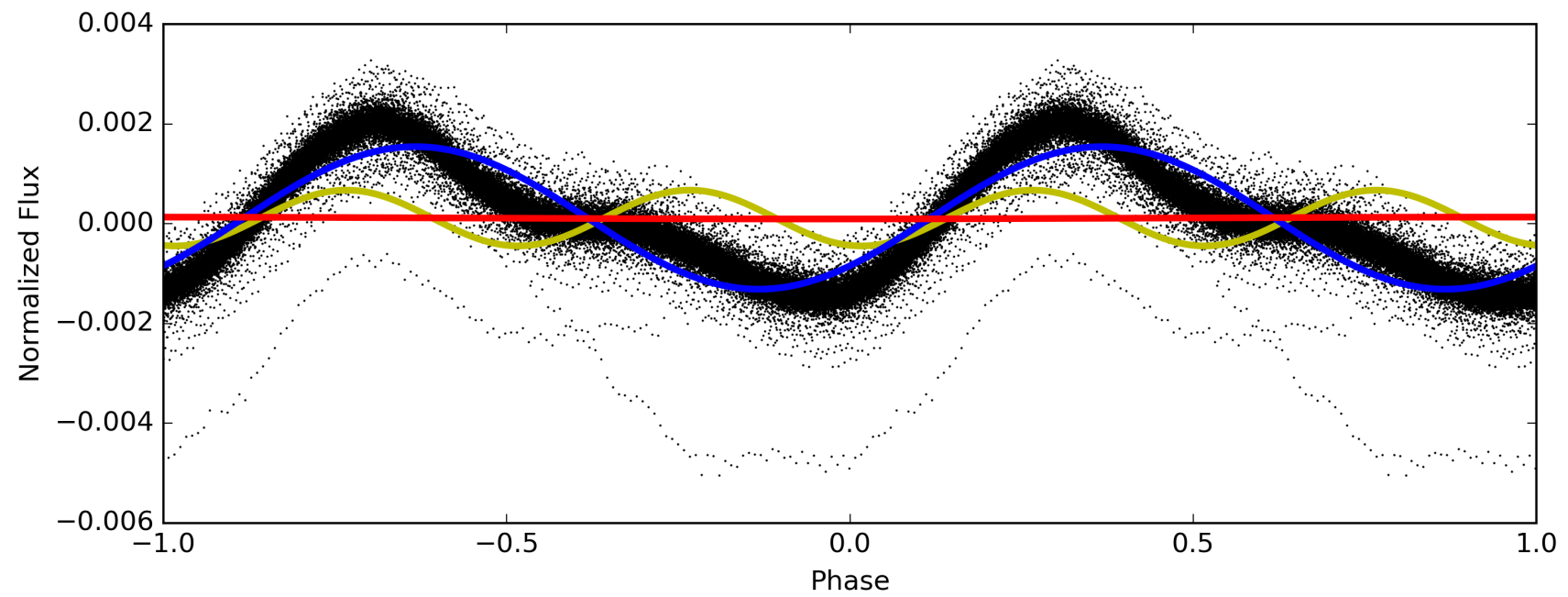
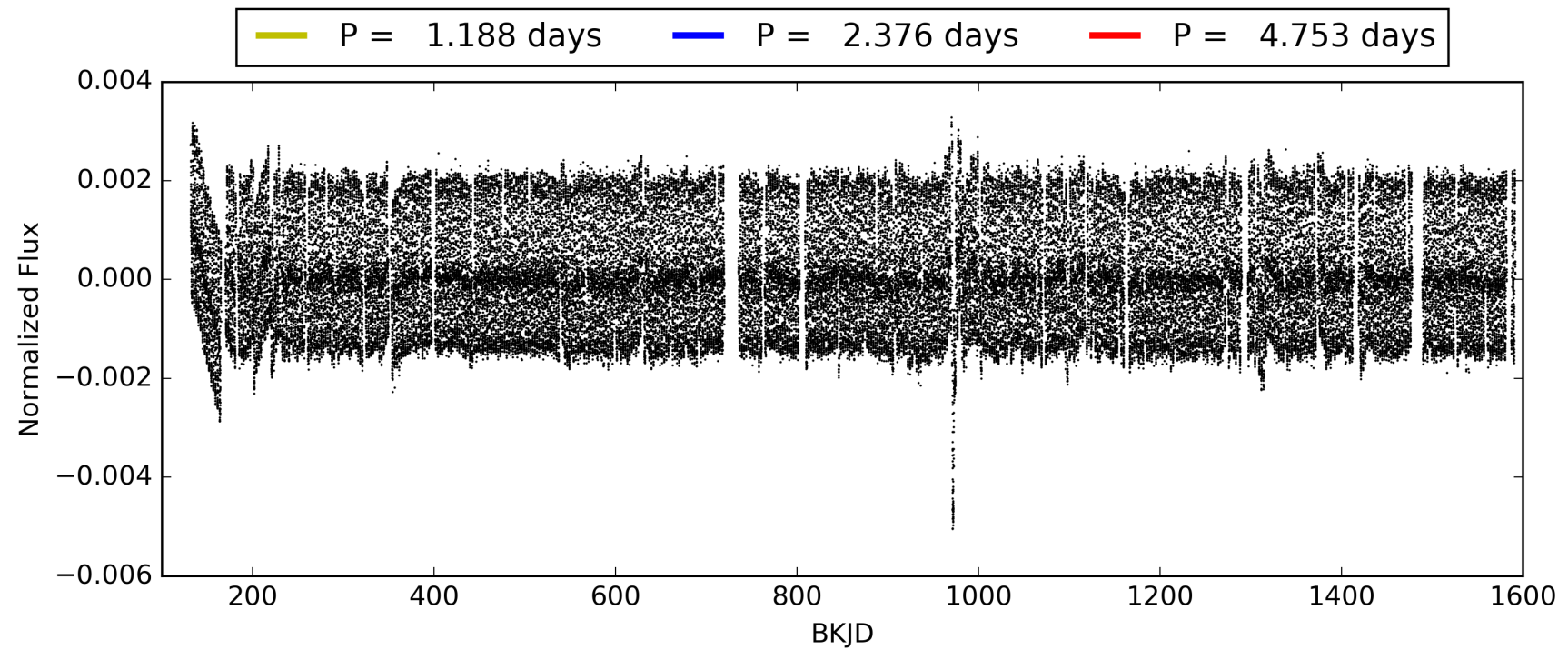
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:48:35 Z

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

TCE 008613594-02, PDC Light Curves

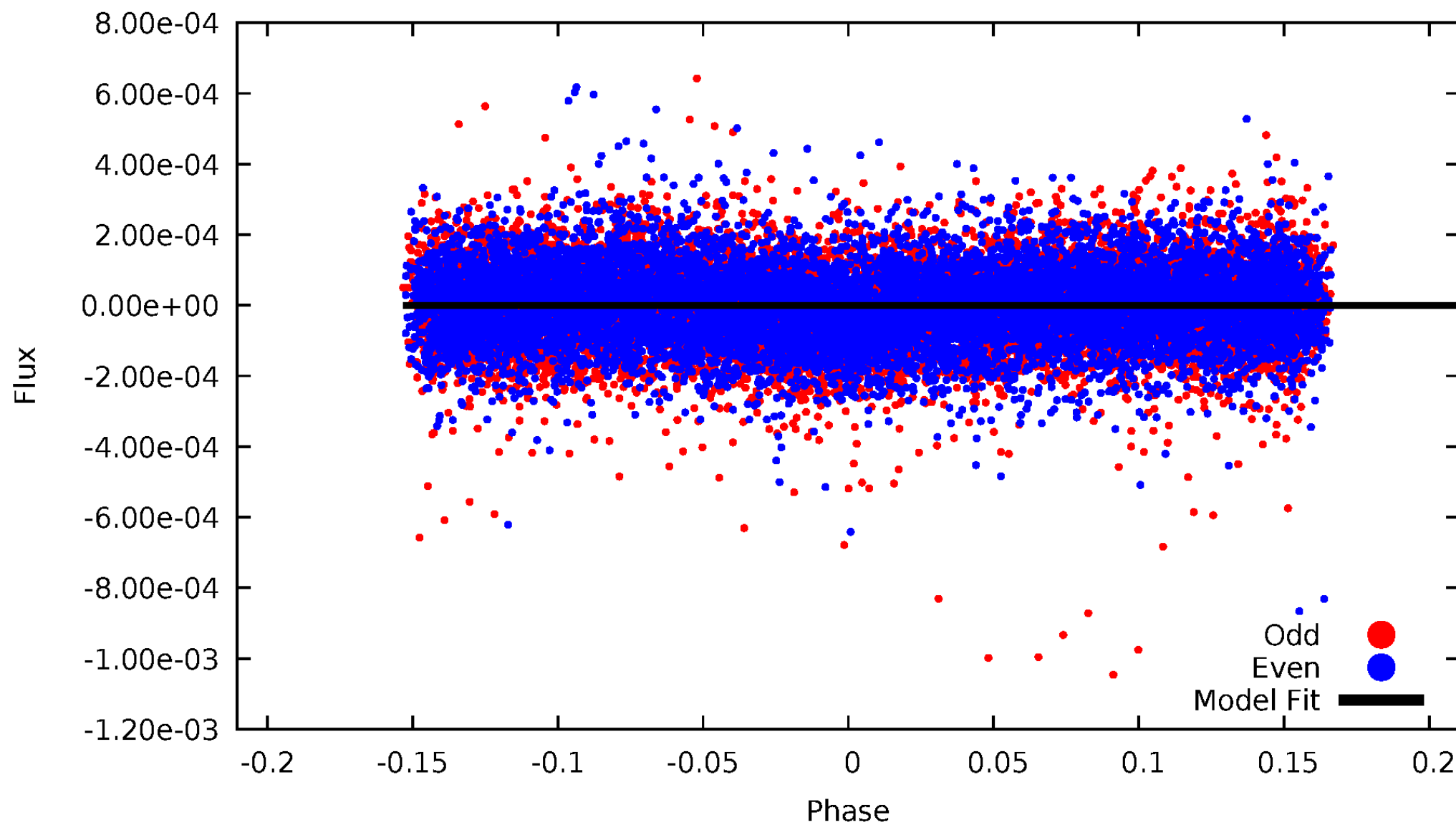


TCE 008613594-02



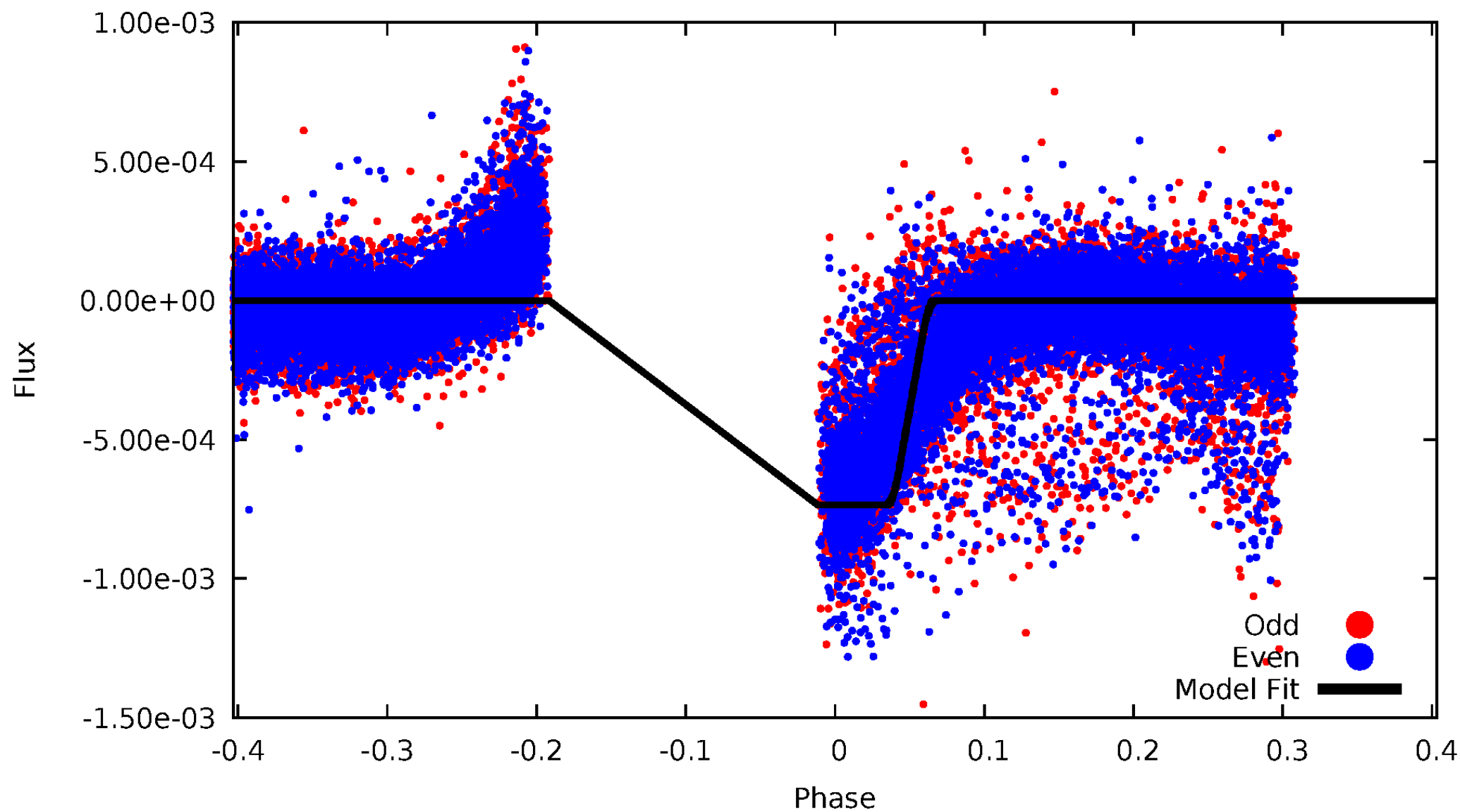
DV Odd/Even

TCE 008613594-02



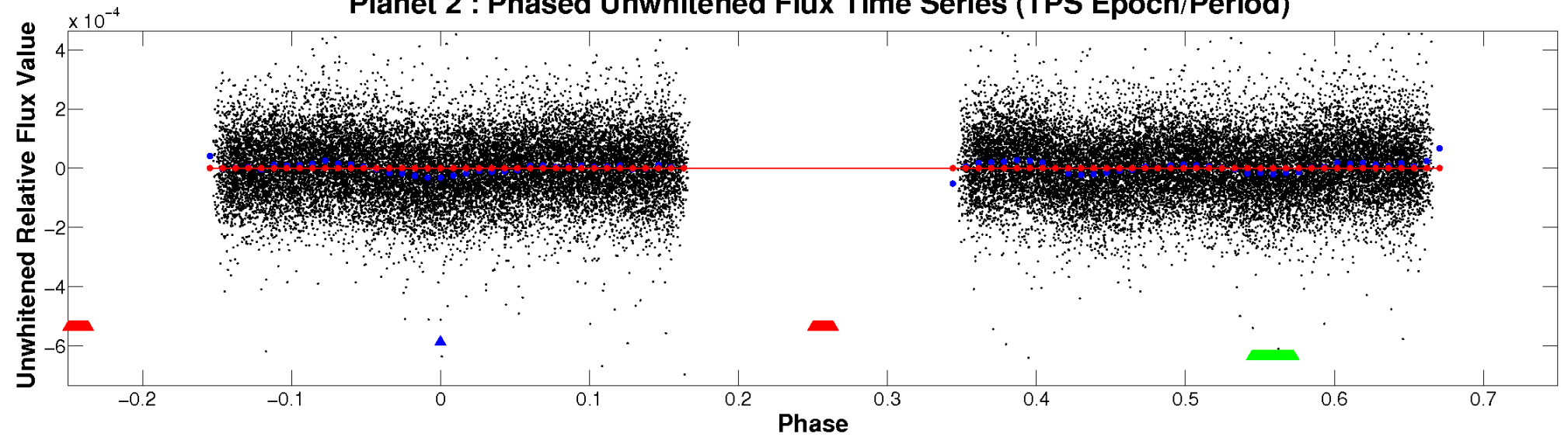
ALT Odd/Even

TCE 008613594-02

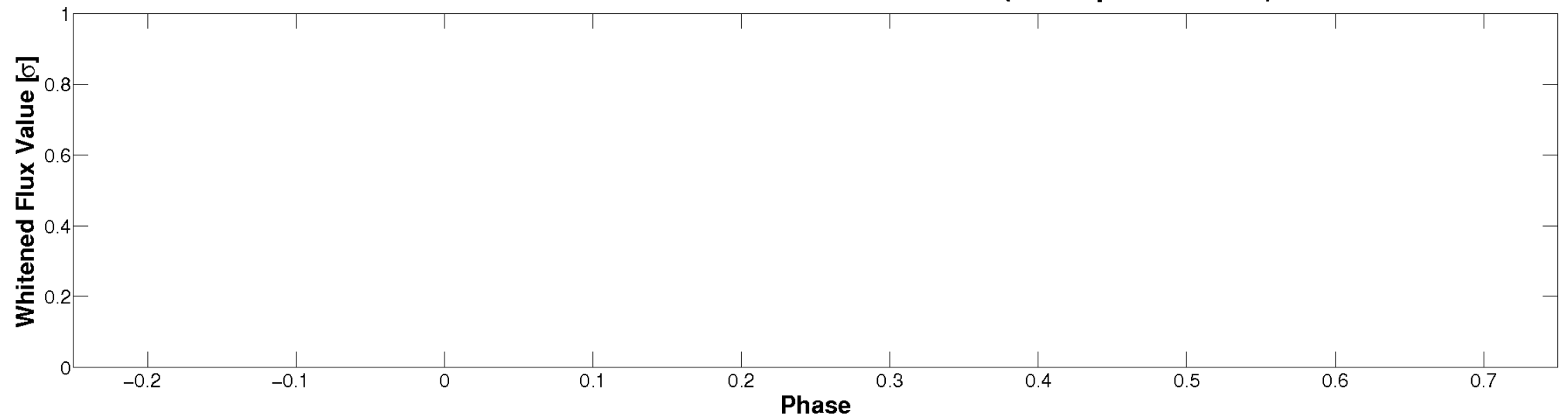


Non-Whitened Vs. Whitened Light Curve

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

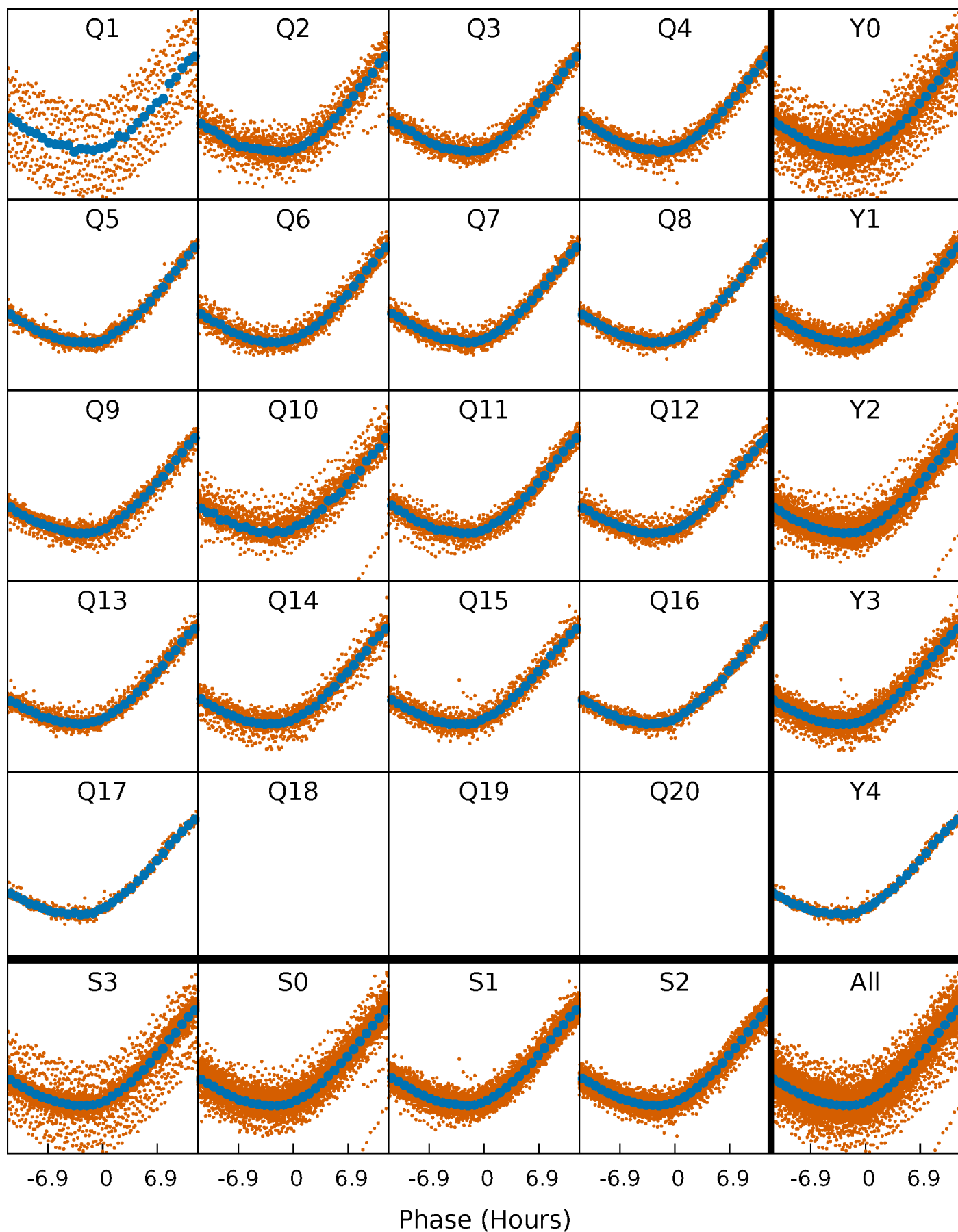


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



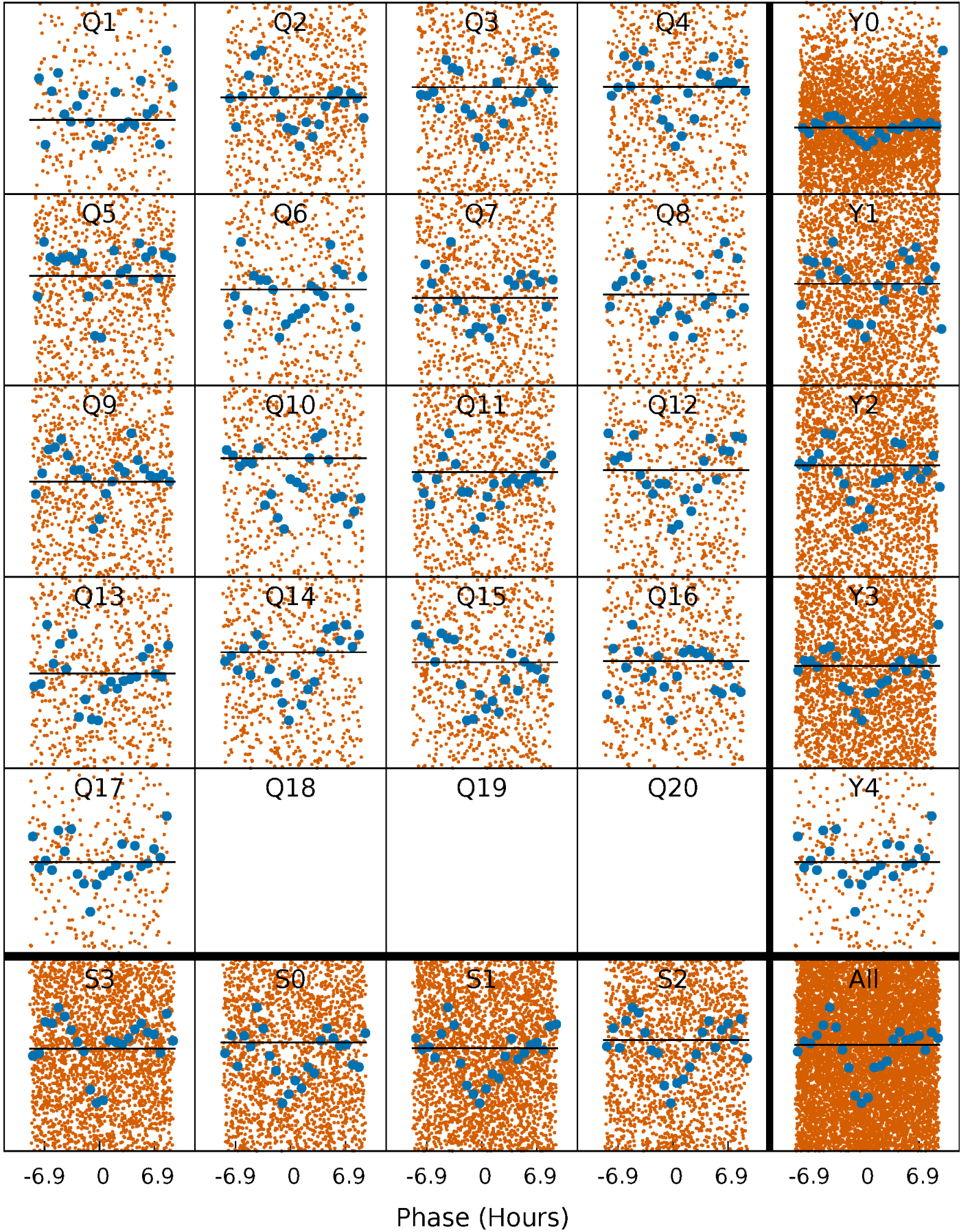
PDC Quarter-Phased Transit Curves

TCE 008613594-02 P= 2.376500 Days $T_0=132.903882$ (BKJD)



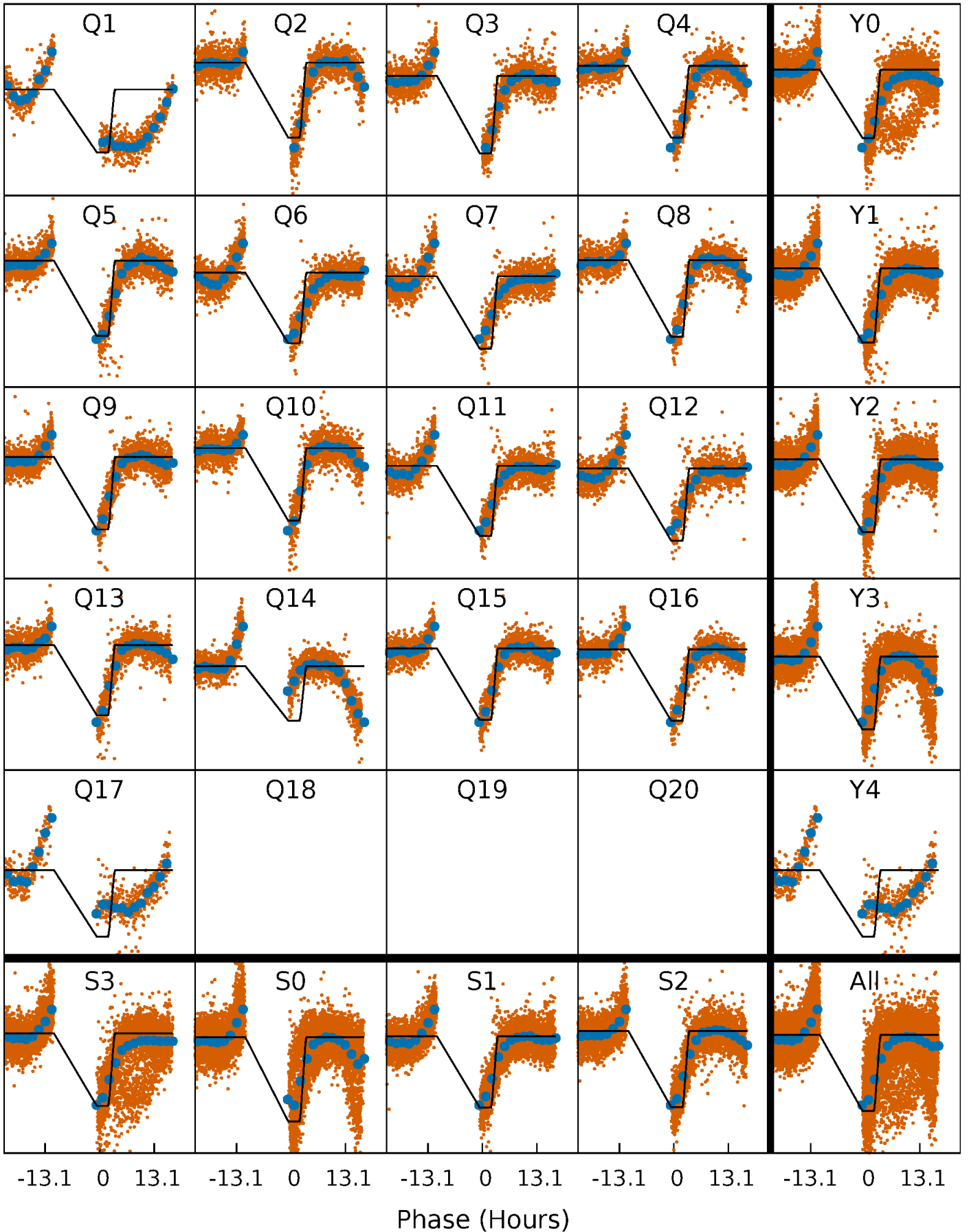
DV Quarter-Phased Transit Curves

TCE 008613594-02 P= 2.376500 Days $T_0=132.903882$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

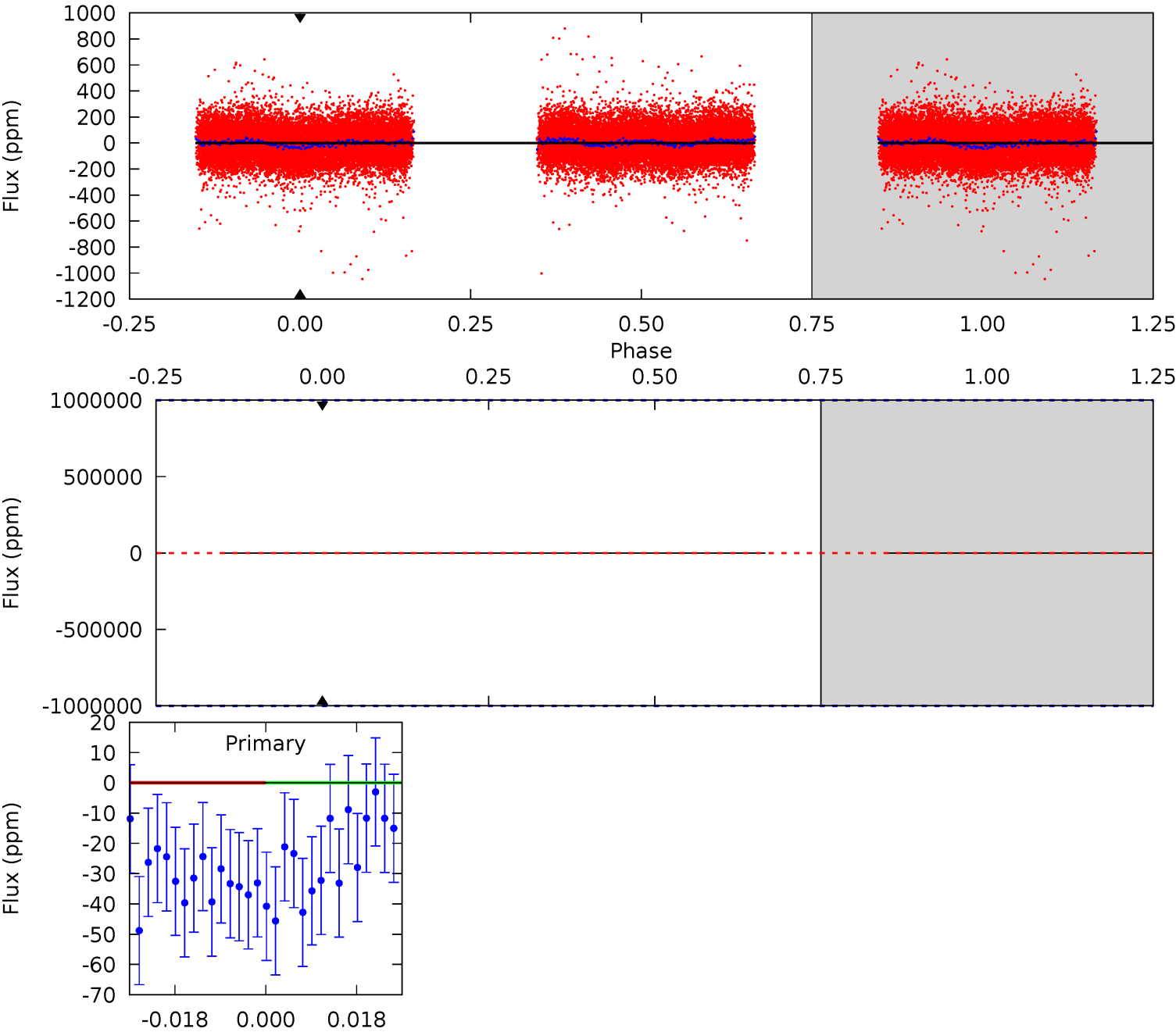
TCE 008613594-02 P= 2.376500 Days $T_0=132.566919$ (BKJD)



DV Model-Shift Uniqueness Test

008613594-02, P = 2.376500 Days, E = 130.527382 Days

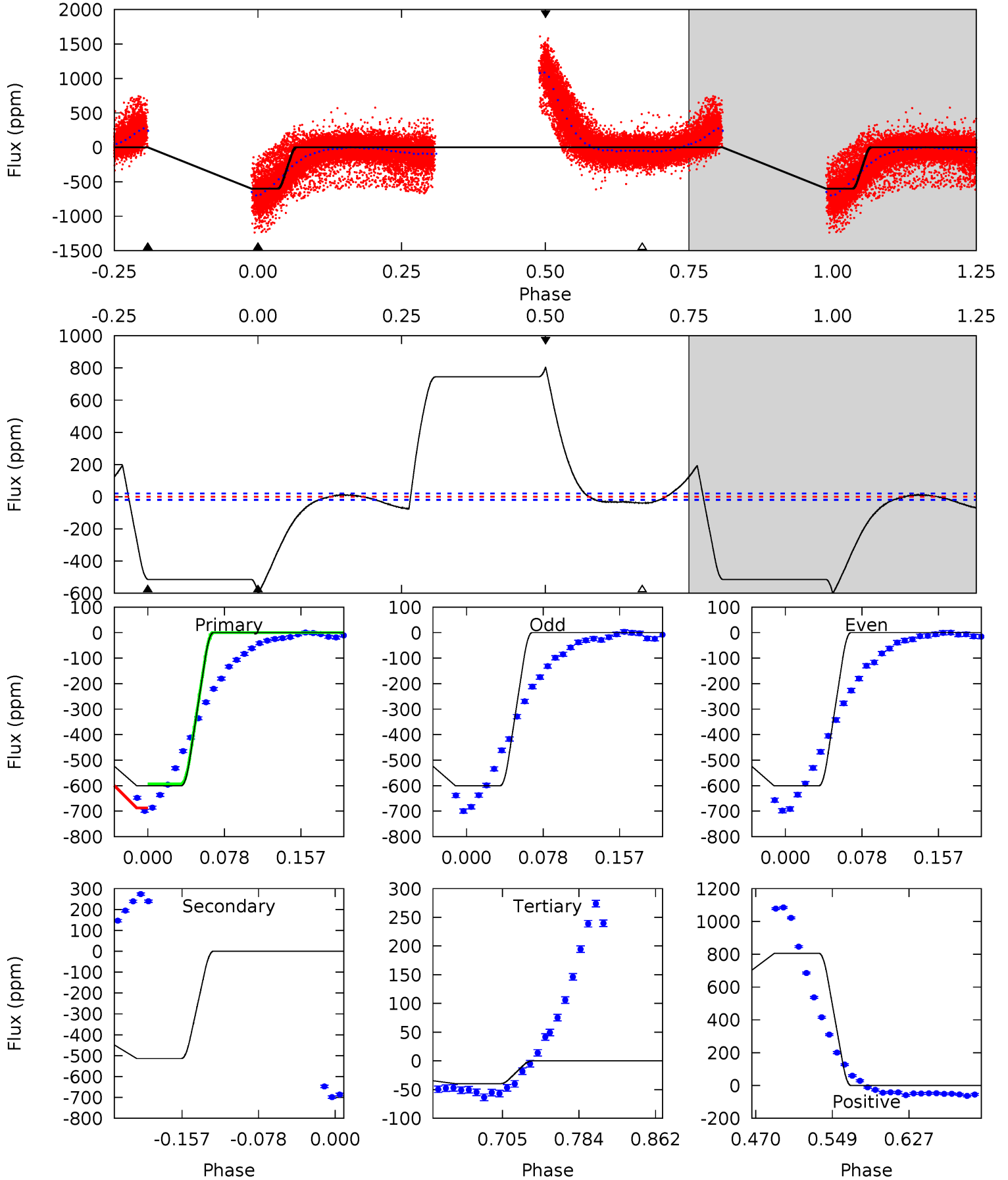
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008613594-02, P = 2.376500 Days, E = 130.190419 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
138.4	118.5	9.16	185.7	4.62	1.76	47.4	129.2	-47.3	109.3	-67.2	0.06	0.96	0.57	10.7



Stellar Parameters For KIC 008613594

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	9135^{+292}_{-438}	$4.130^{+0.124}_{-0.186}$	$0.070^{+0.150}_{-0.600}$	$2.092^{+0.728}_{-0.485}$	$2.152^{+0.407}_{-0.542}$	$0.331^{+0.216}_{-0.175}$
	+3%/-5%	+3%/-5%	+214%/-857%	+35%/-23%	+19%/-25%	+65%/-53%
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 008613594-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$16.47^{+18.58}_{-11.02}$	3858^{+330}_{-270}	6176^{+60875}_{-69315}	$5.046^{+675.842}_{-661.882}$
Alt.	-514 ± 4	$17.68^{+18.19}_{-12.03}$	3847^{+301}_{-278}	4598^{+3904}_{-1453}	$1.722^{+15.987}_{-1.274}$

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

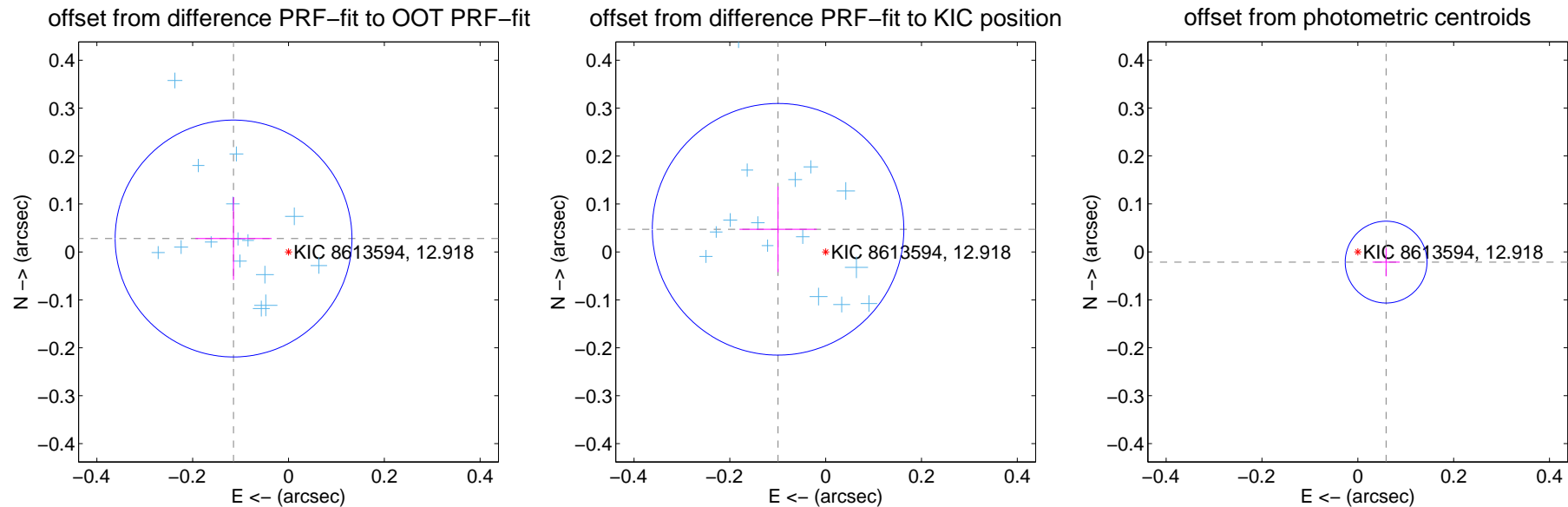
DV Centroid Data

Supplemental centroid analysis for 008613594-02. Kepler magnitude: 12.92. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

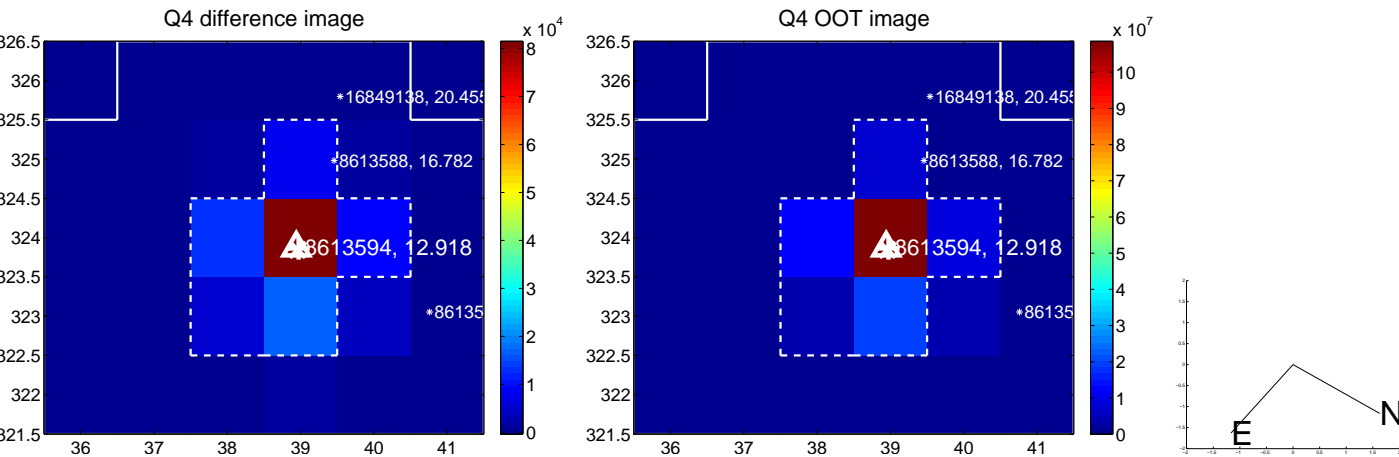
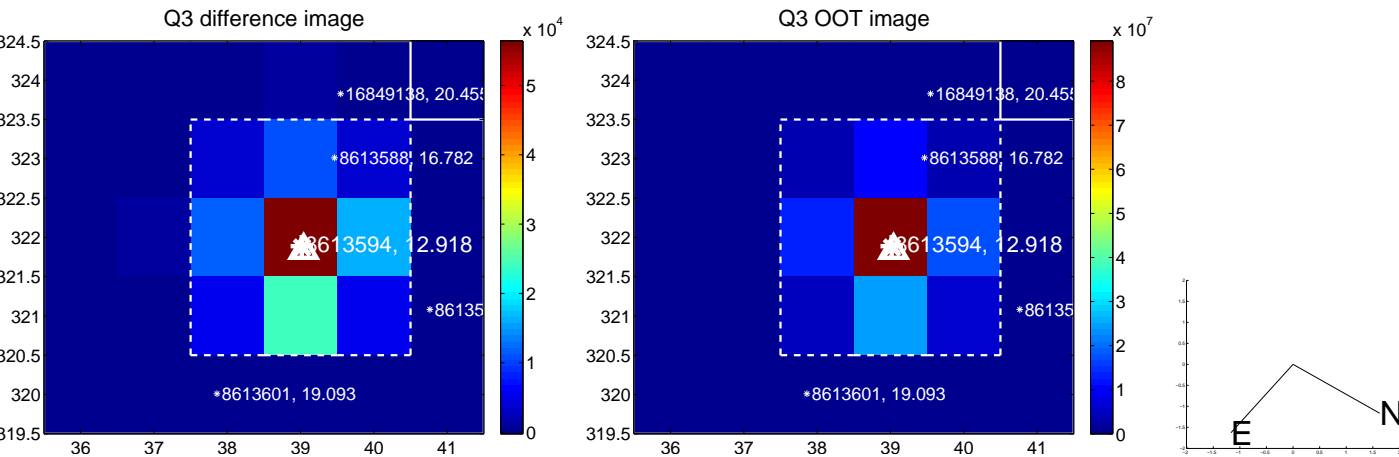
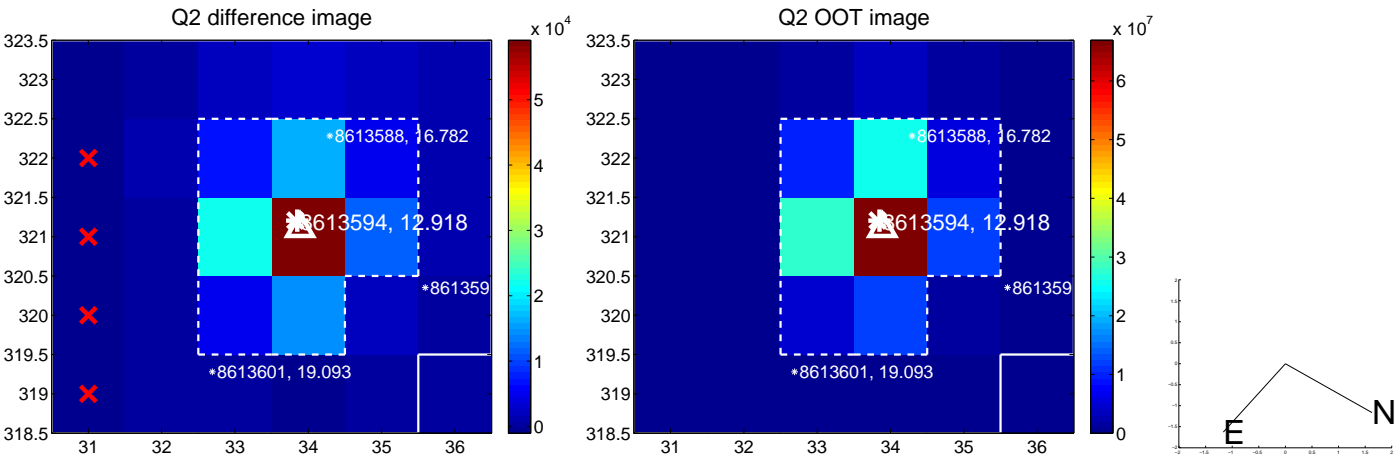
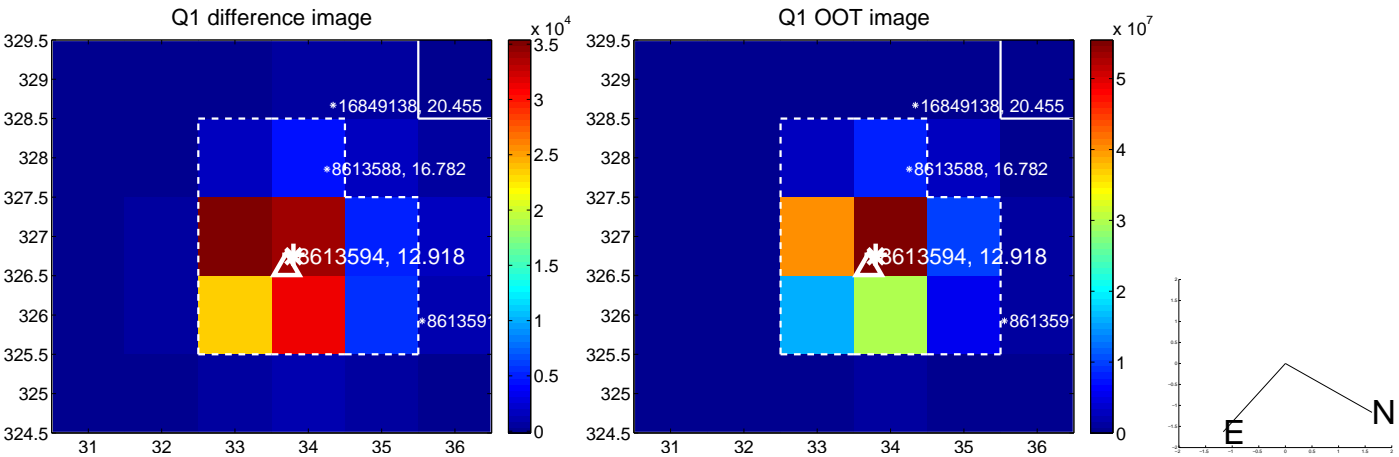
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.118 ± 0.082	1.43	0.115 ± 0.080	0.028 ± 0.086
PRF-fit source offset from KIC position	0.110 ± 0.087	1.26	0.099 ± 0.081	0.047 ± 0.089
photometric centroid source offset	0.06 ± 0.03	2.21	-0.06 ± 0.03	-0.02 ± 0.03

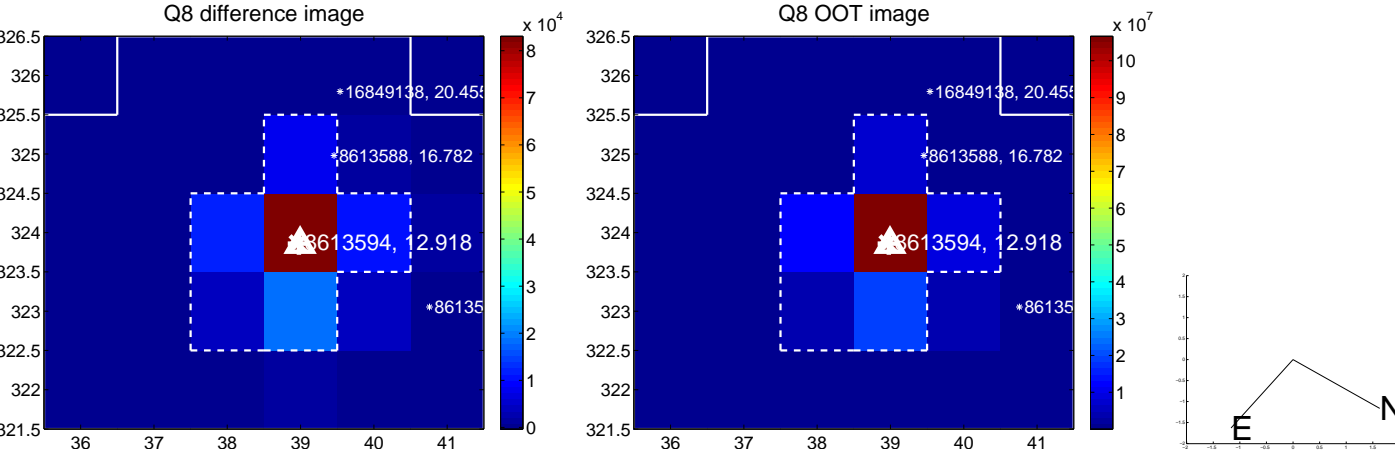
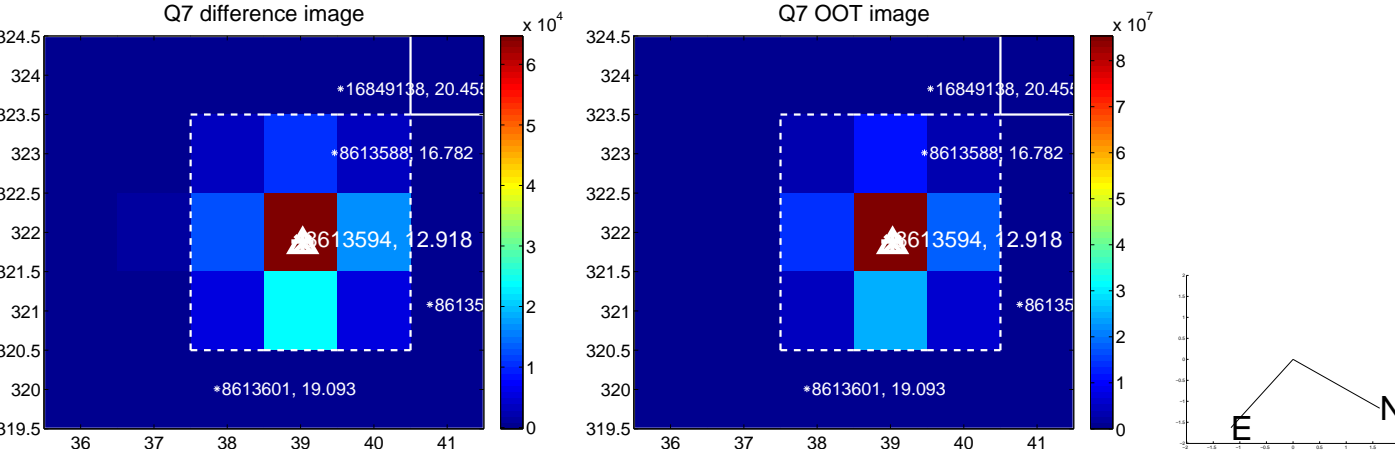
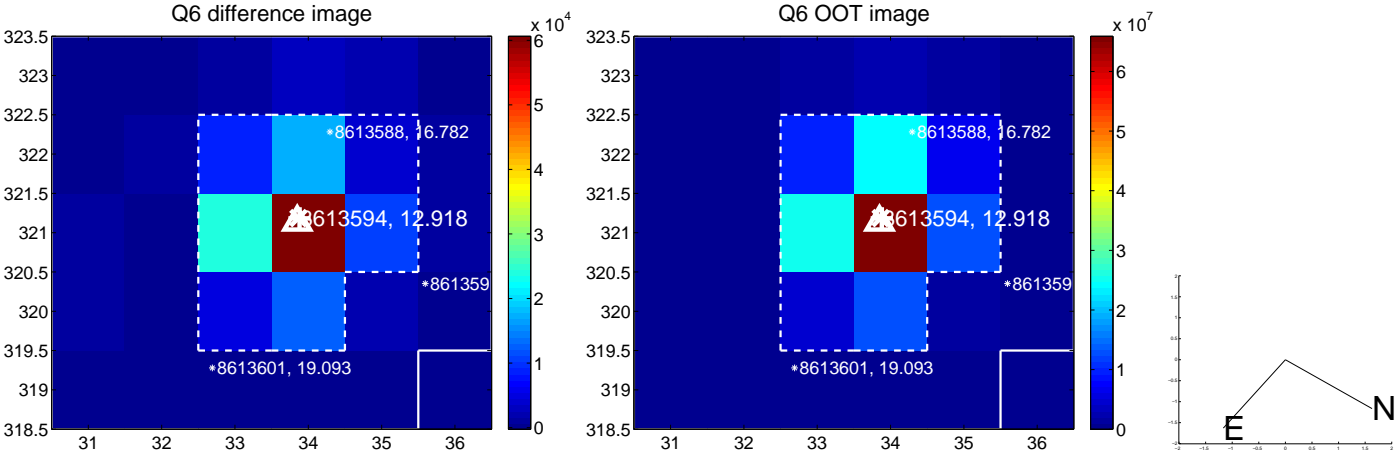
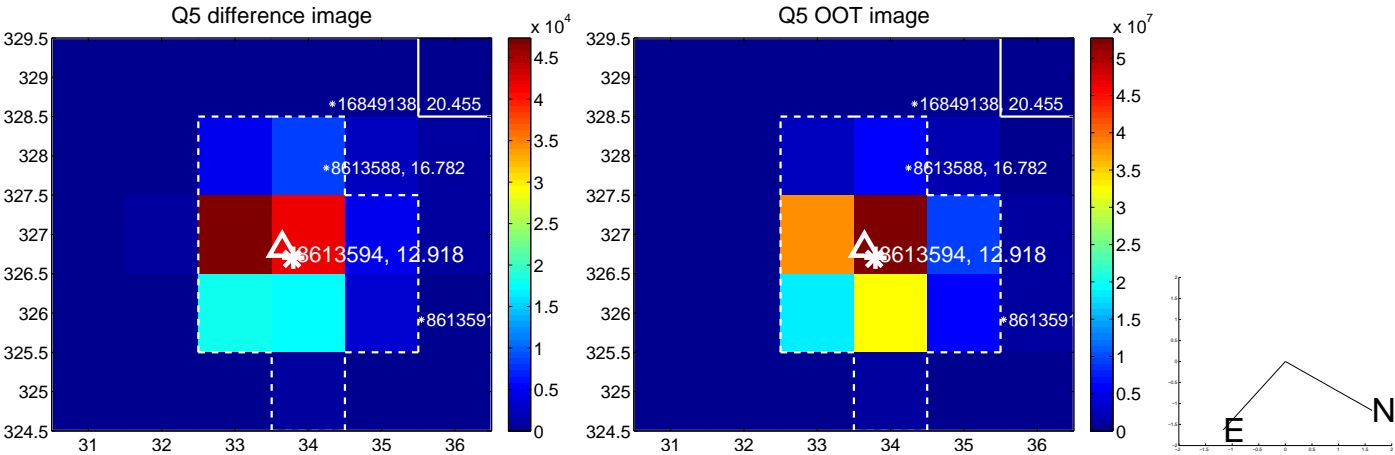


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

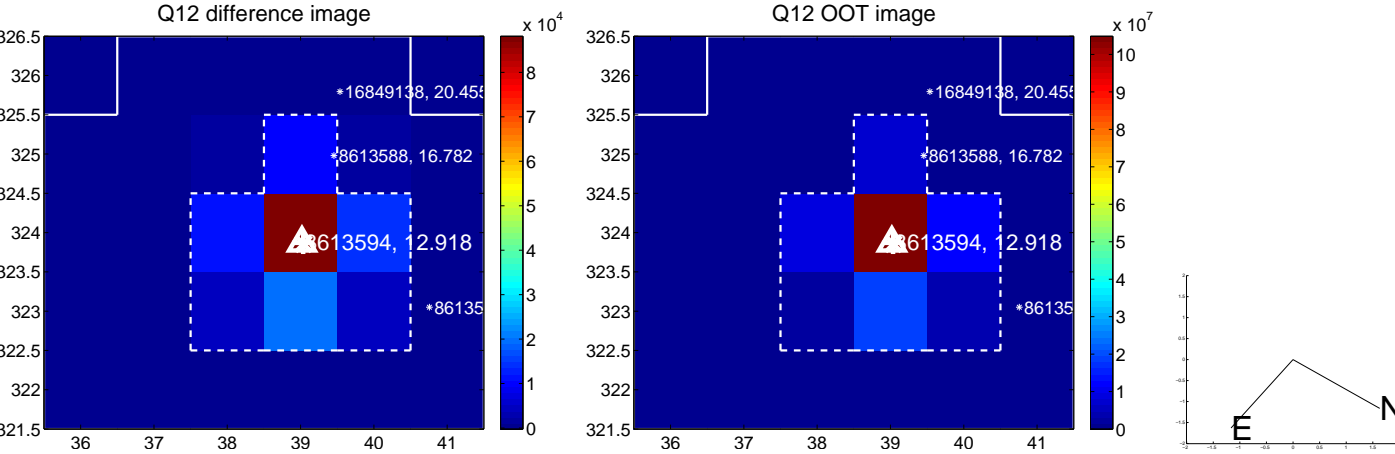
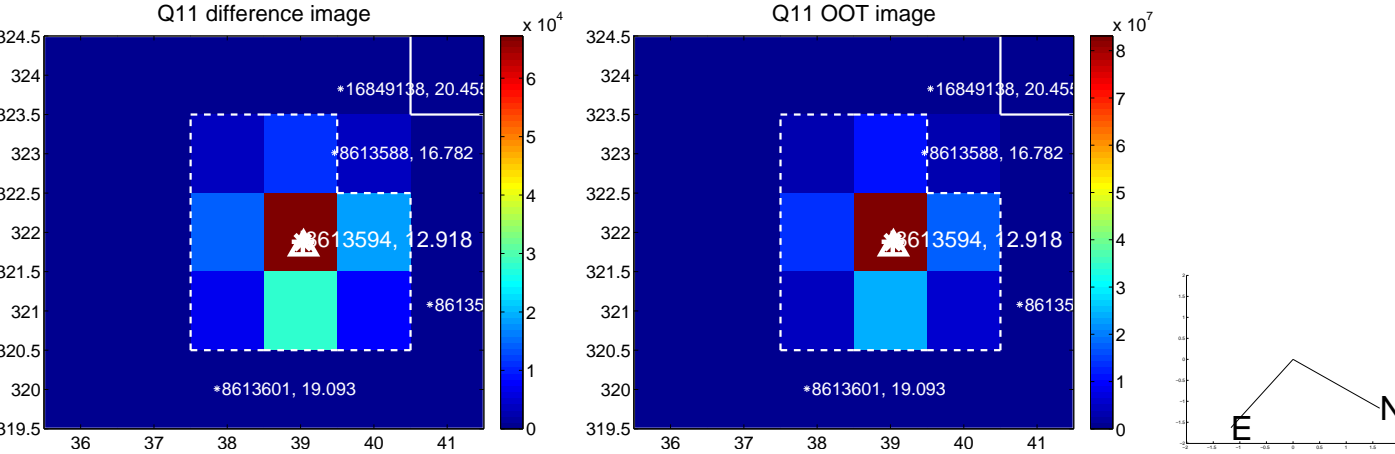
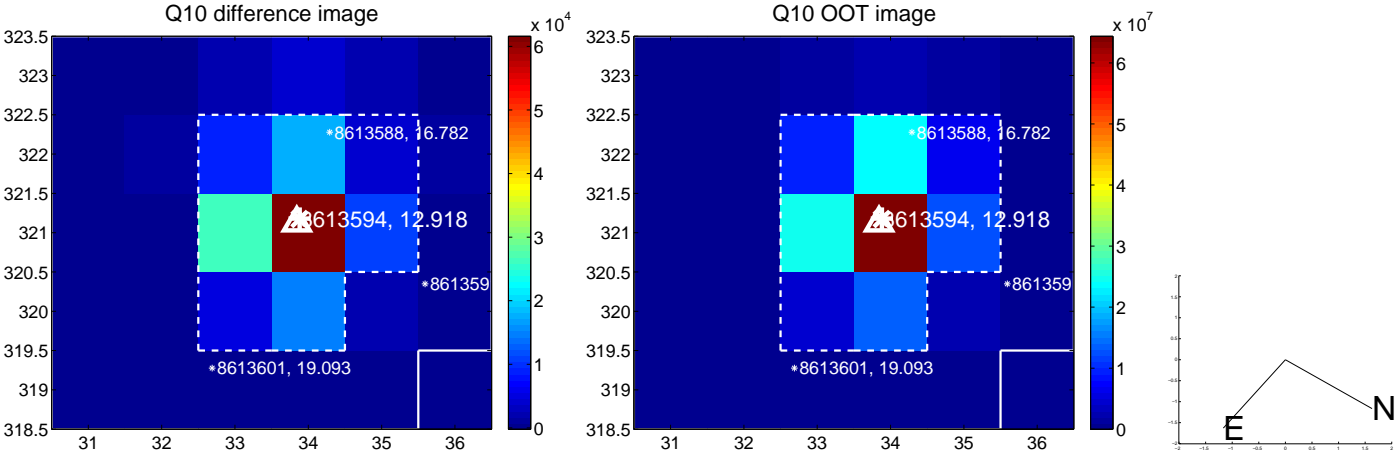
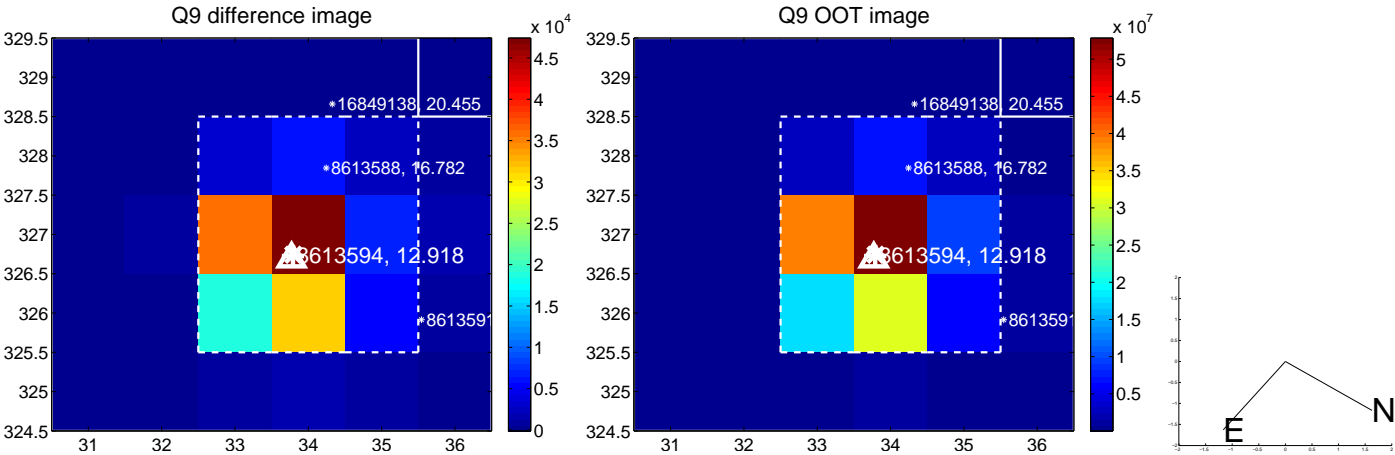
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



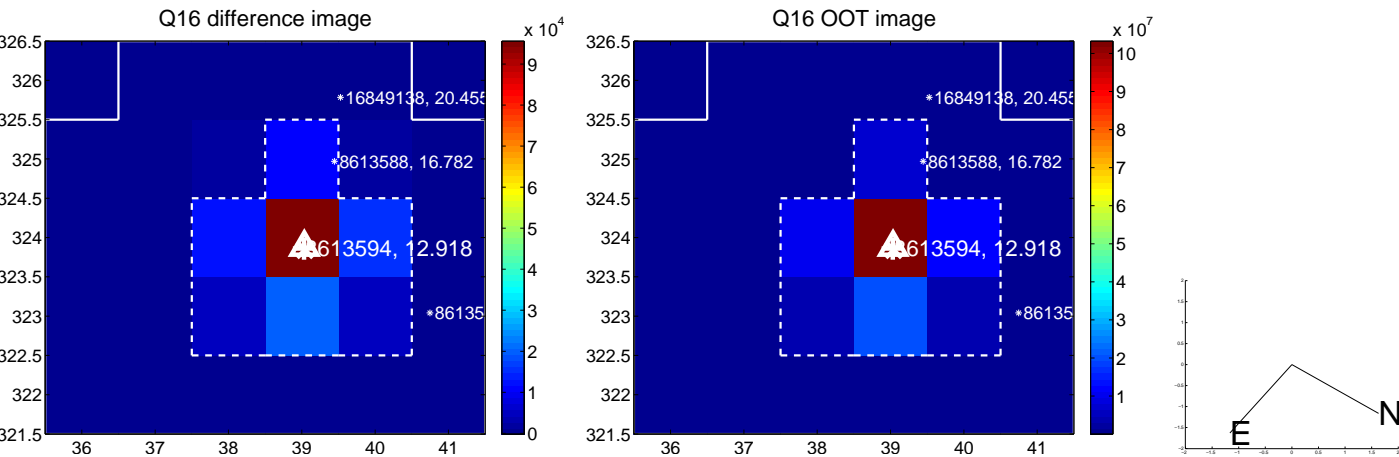
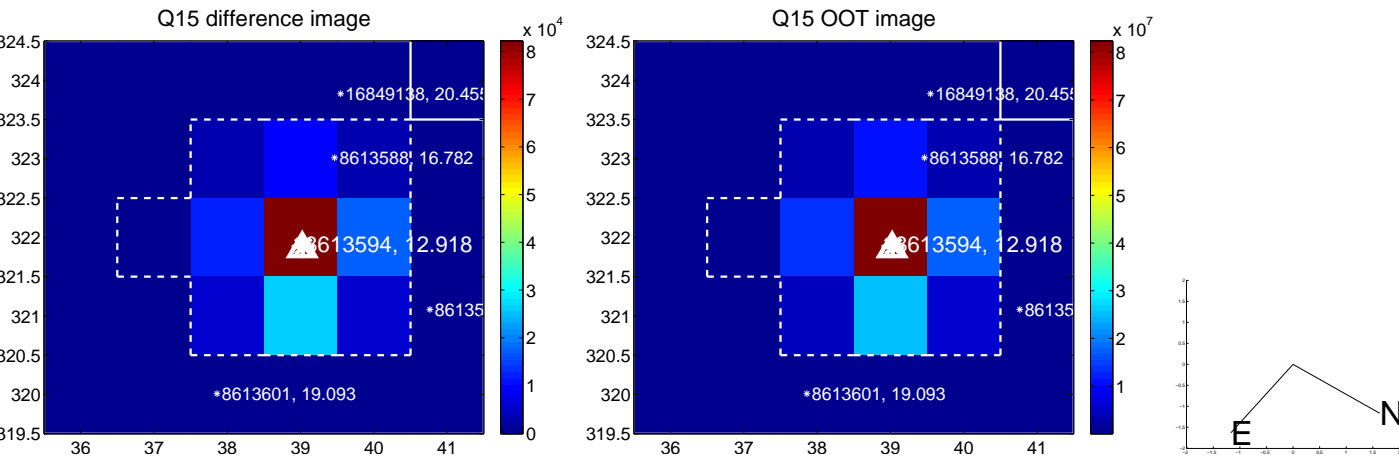
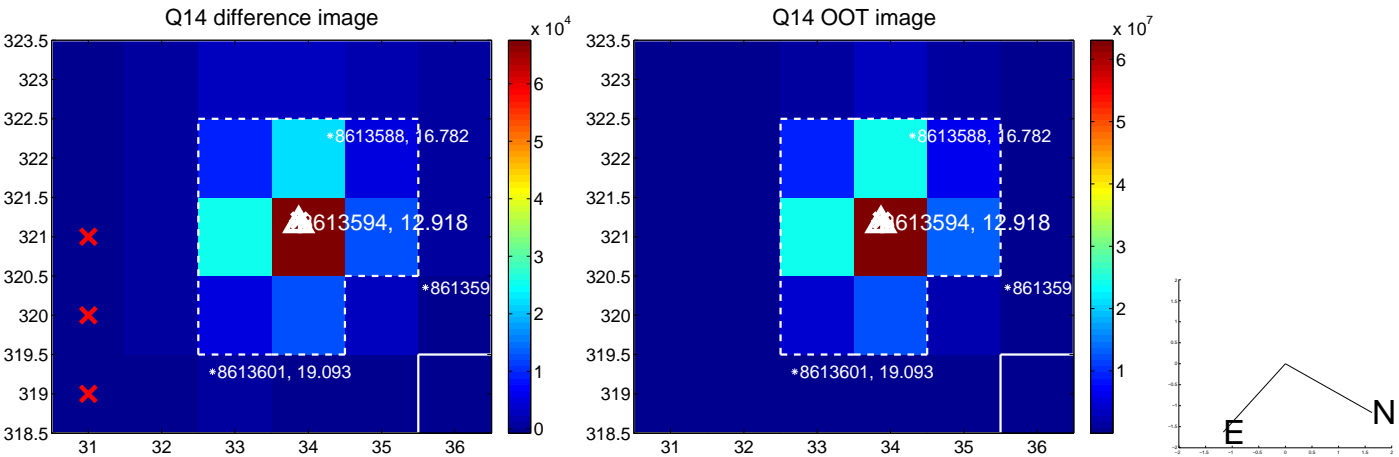
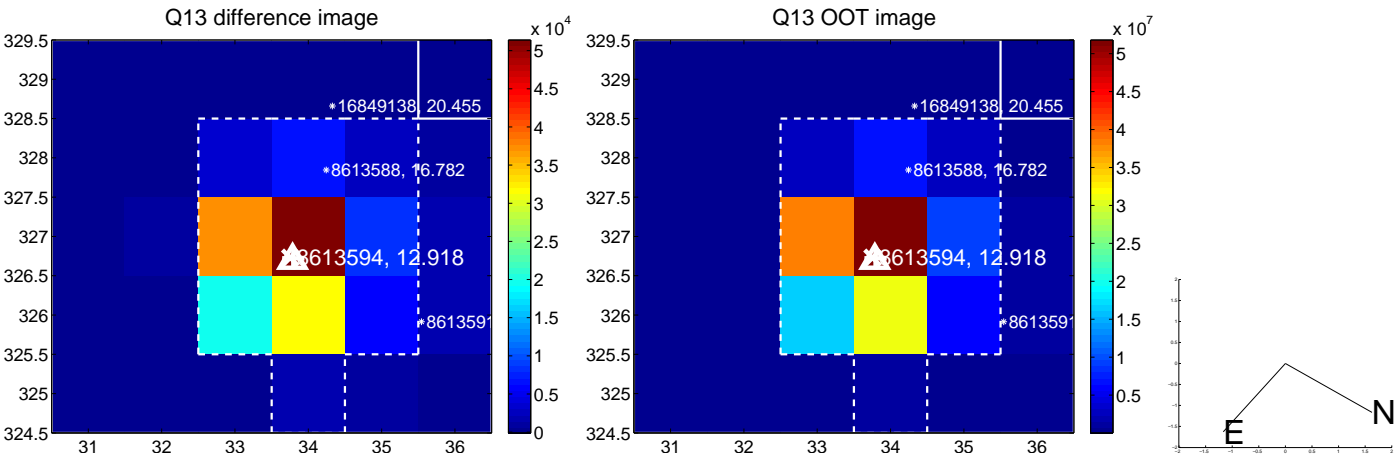
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



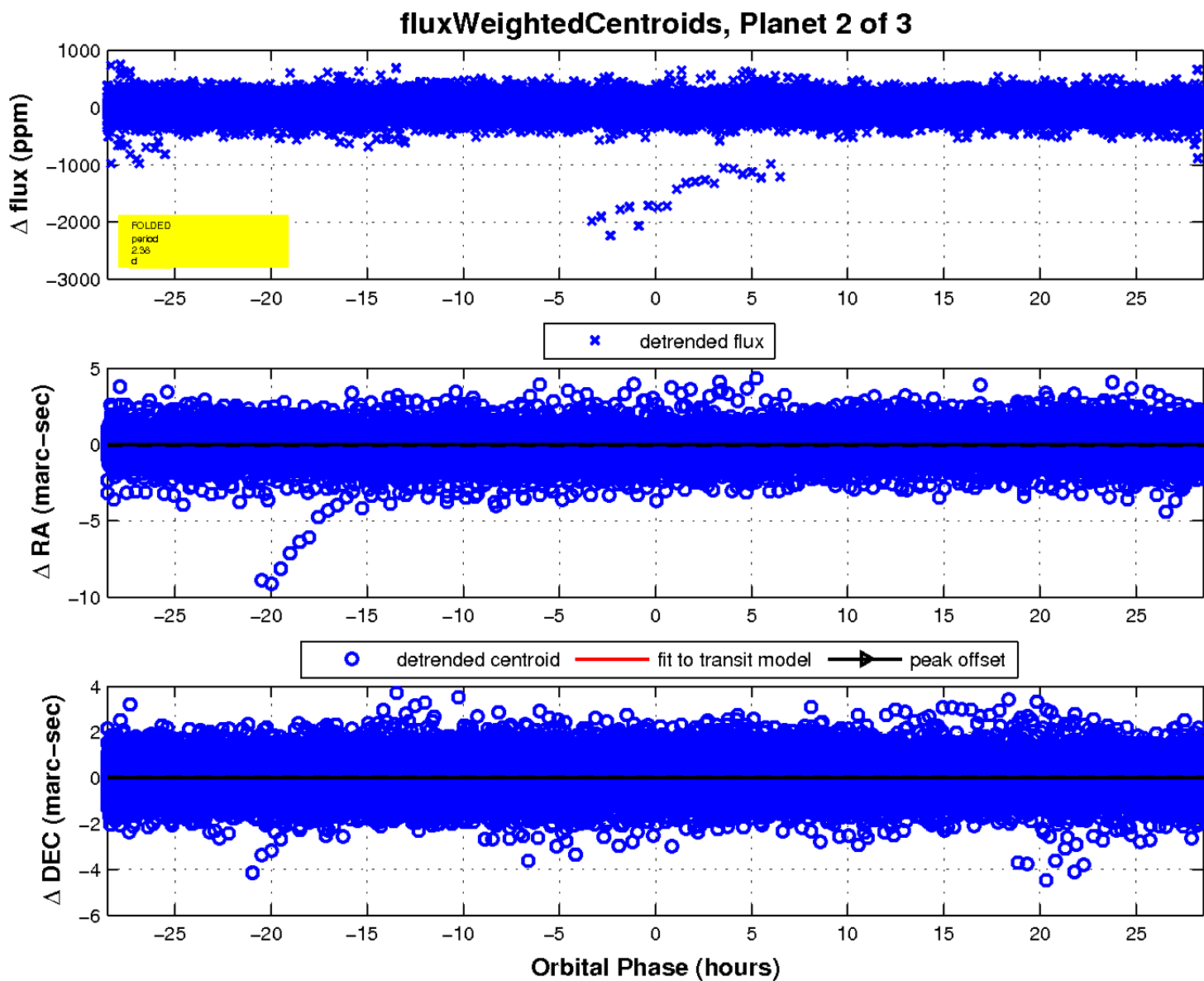
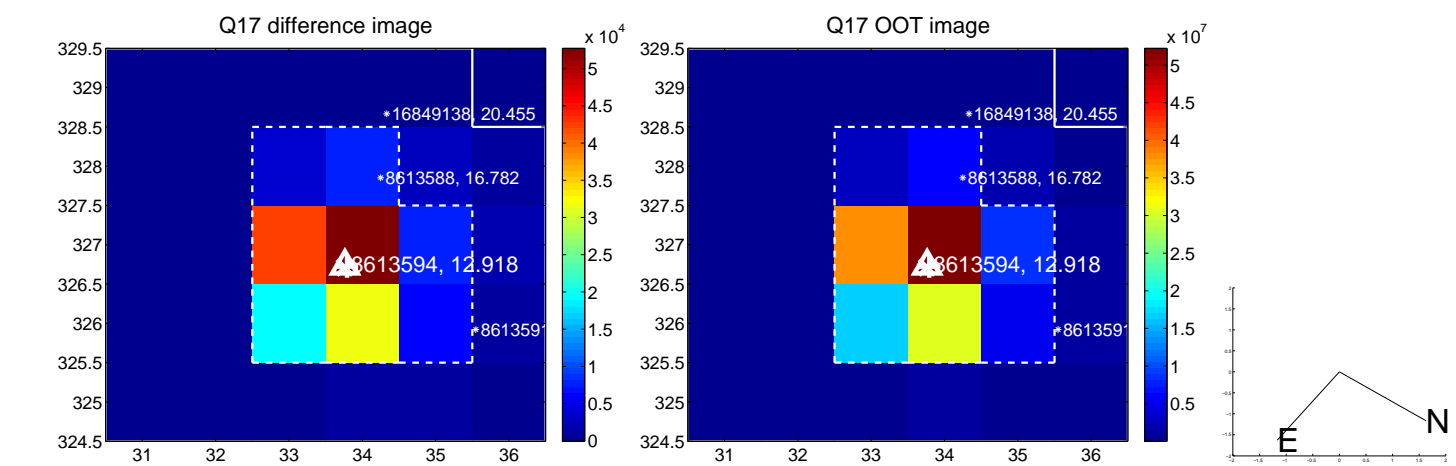
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

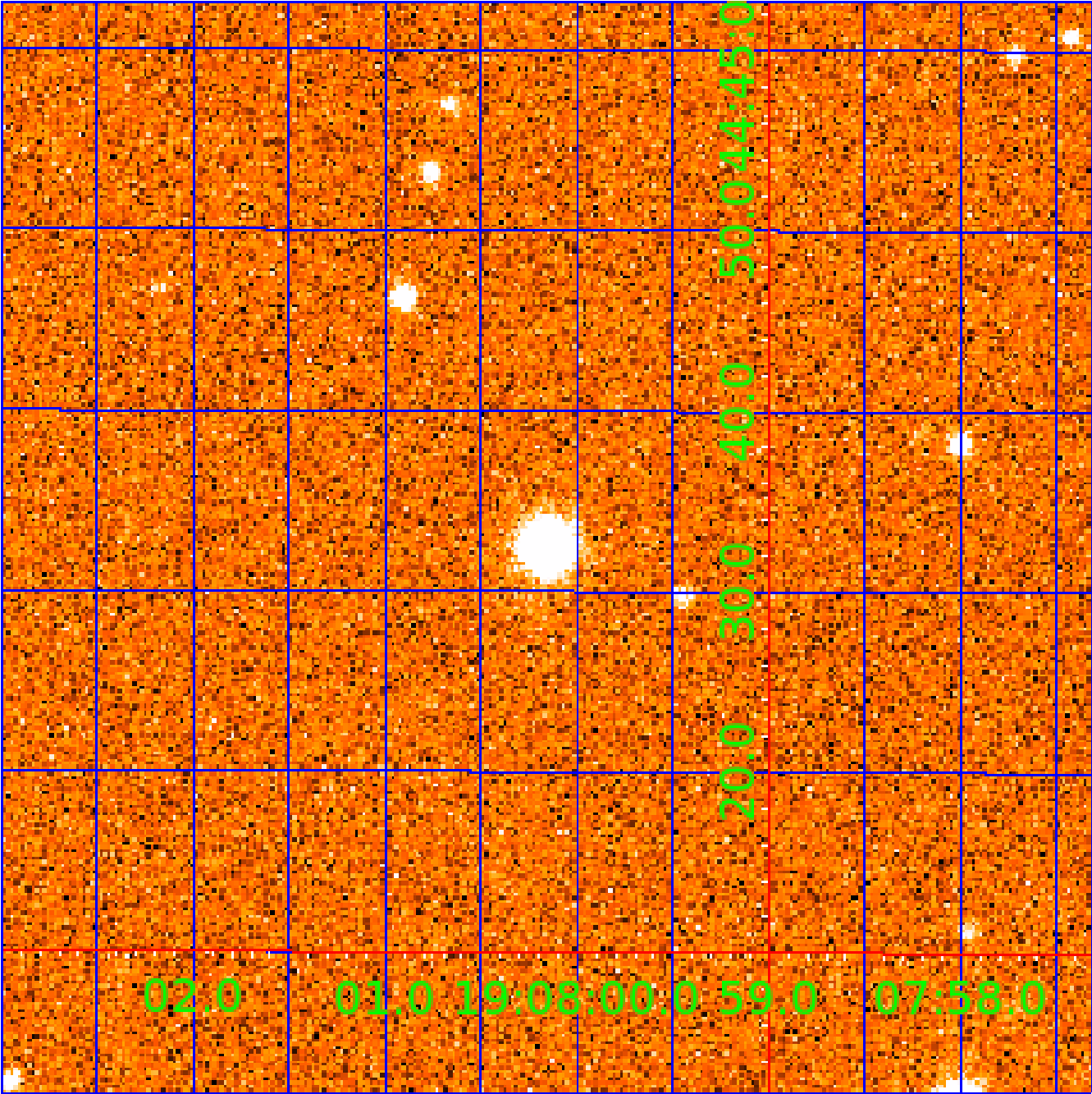


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008613594

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})
008613594-01	OBS	No	1.188224	132.341959	166.0	3.500	14.4	-1.0	2.09	9135	2.75	33955.13
008613594-02	OBS	No	2.376500	132.903881	123.1	6.000	14.8	-1.0	2.09	9135	2.37	13474.70
008613594-03	OBS	No	2.376392	131.888097	25.6	4.131	11.0	12.3	2.09	9135	1.51	13475.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008613594-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008613594-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
008613594-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

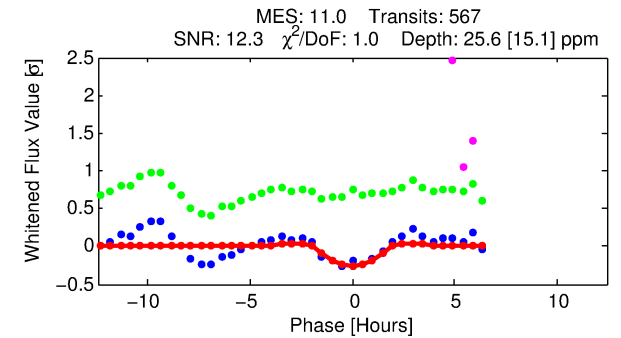
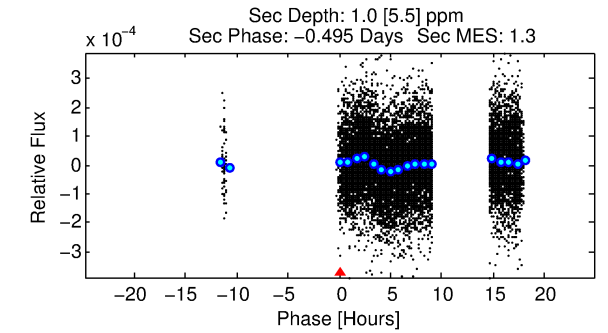
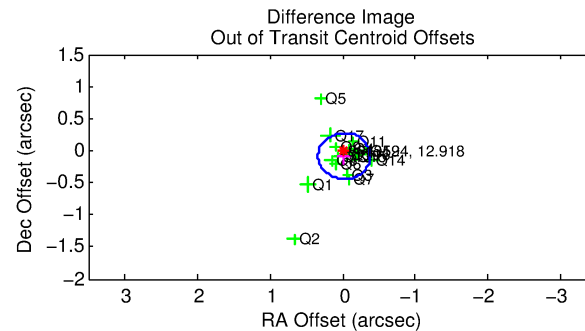
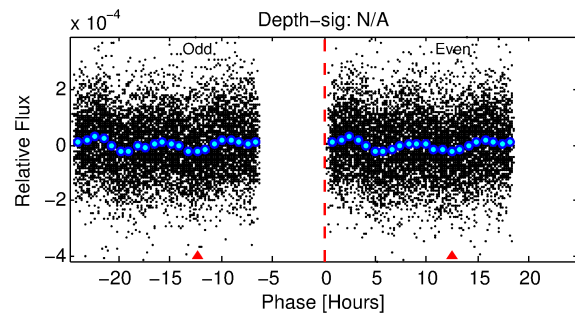
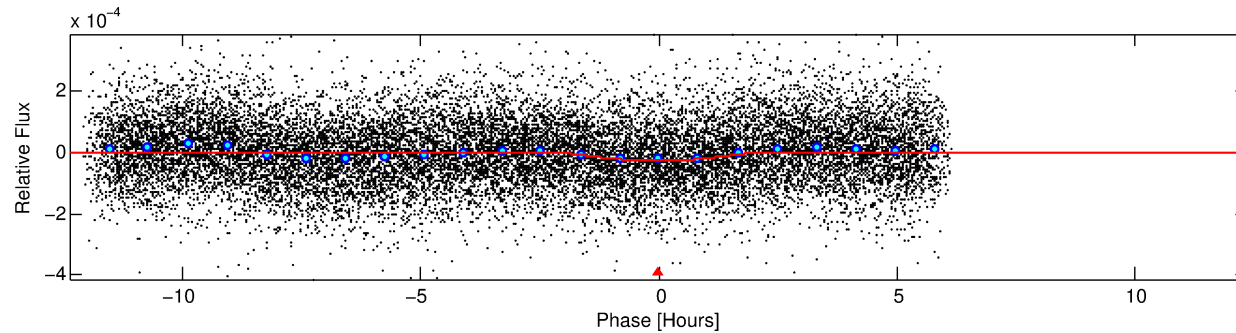
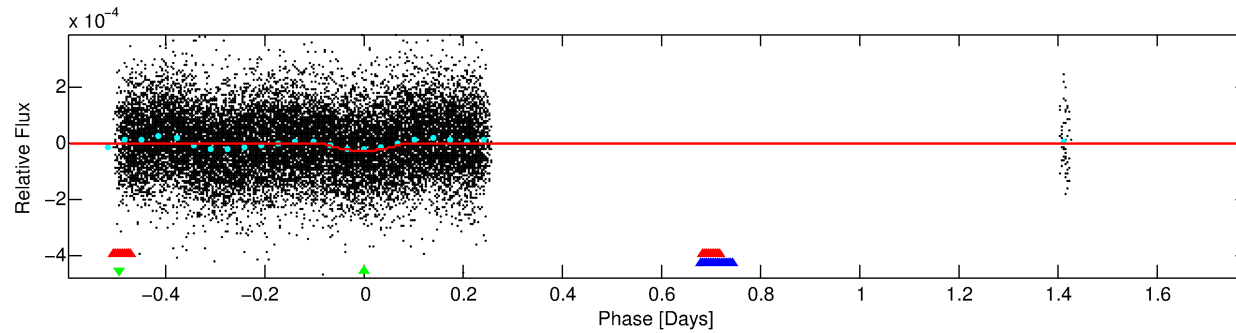
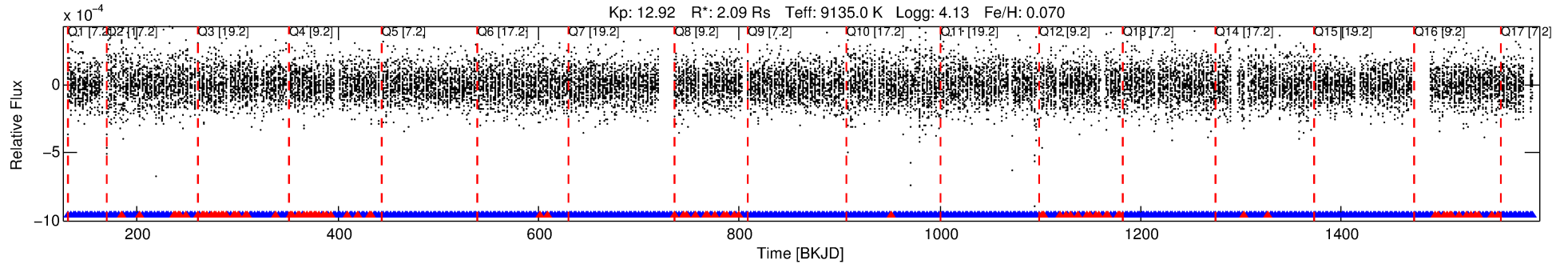
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008613594-03

No Significant Match Found

DV One-Page Summary

KIC: 8613594 Candidate: 3 of 3 Period: 2.376 d



DV Fit Results:

Period = 2.37639 [0.00002] d
Epoch = 131.8881 [0.0067] BKJD
Rp/R* = 0.0066 [0.0030]
a/R* = 1.20 [0.13]
b = 1.00 [0.01]
Seff = 13475.52 [5590.75]
Teff = 2747 [285] K
Rp = 1.51 [0.86] Re
a = 0.0450 [0.0123] AU
Ag = 0.49 [2.76] [-0.18σ]
Teffp = 3558 [4983] K [0.16σ]

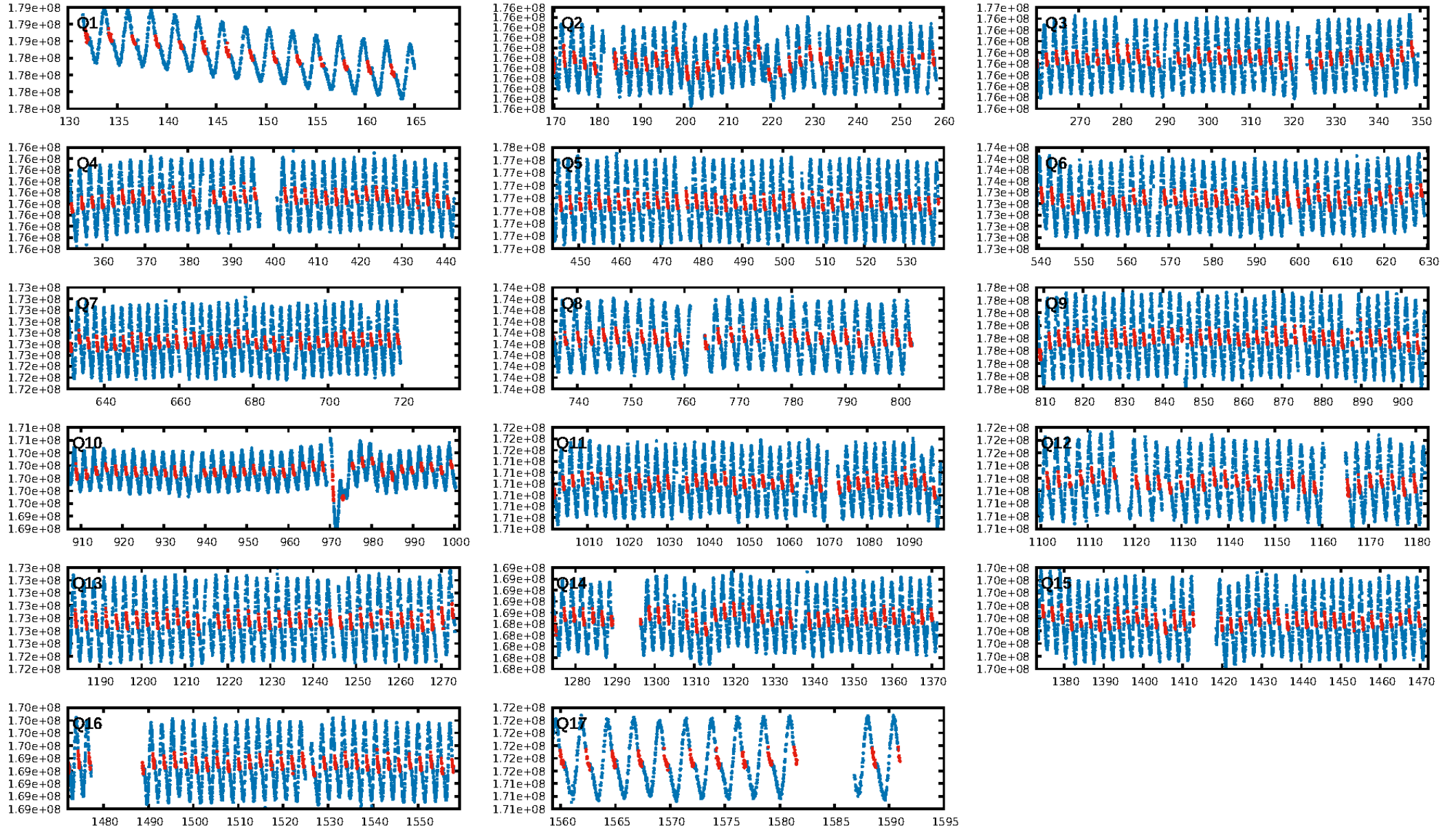
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [5.27σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.12e-37
RollingBand-fgt: 0.84 [456/541]
GhostDiagnostic-chr: 2.514
Centroid-sig: 57.5%
Centroid-so: 0.674 arcsec [0.57σ]
OotOffset-rm: 0.087 arcsec [0.73σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.079 arcsec [0.78σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

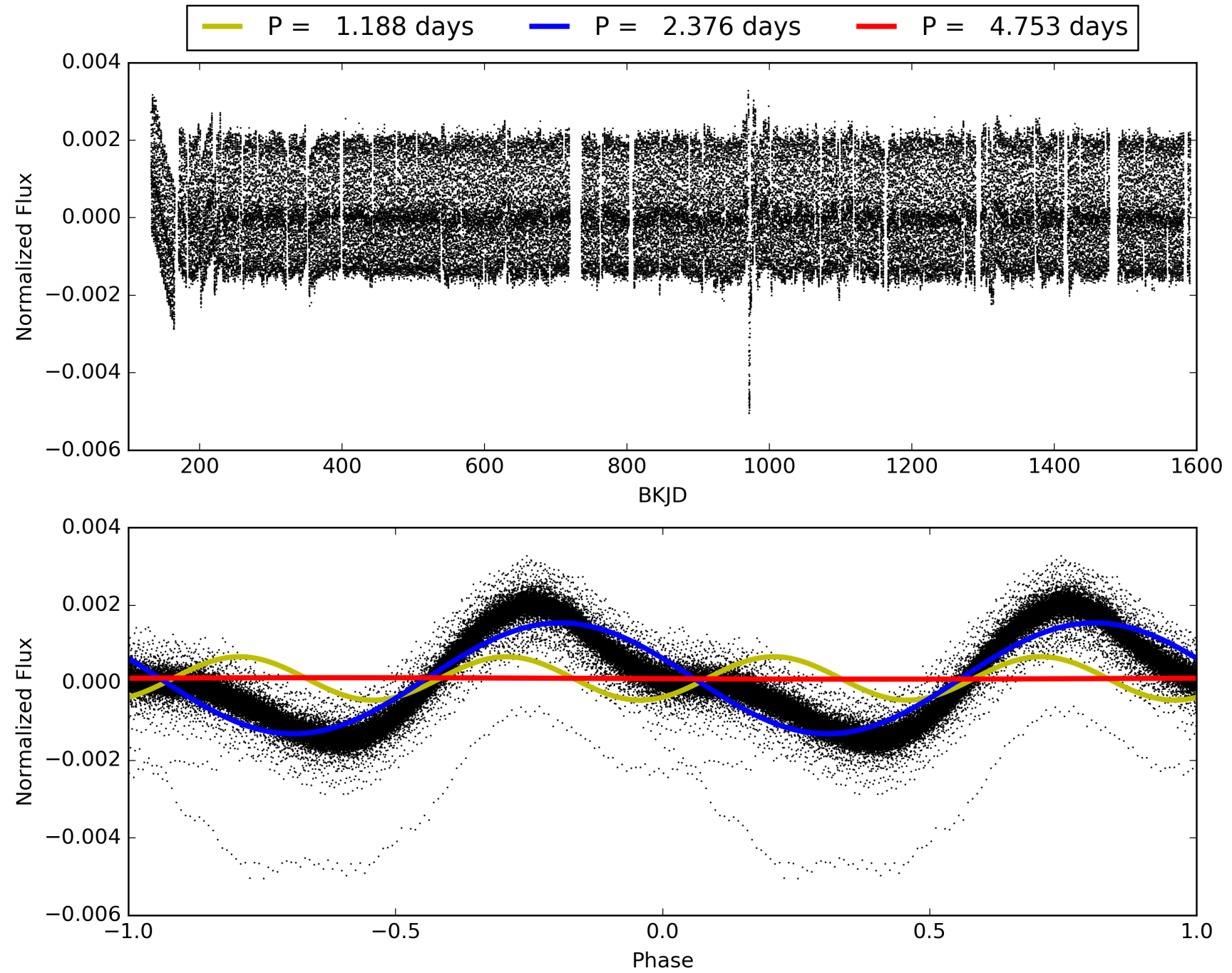
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:48:43 Z

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

TCE 008613594-03, PDC Light Curves

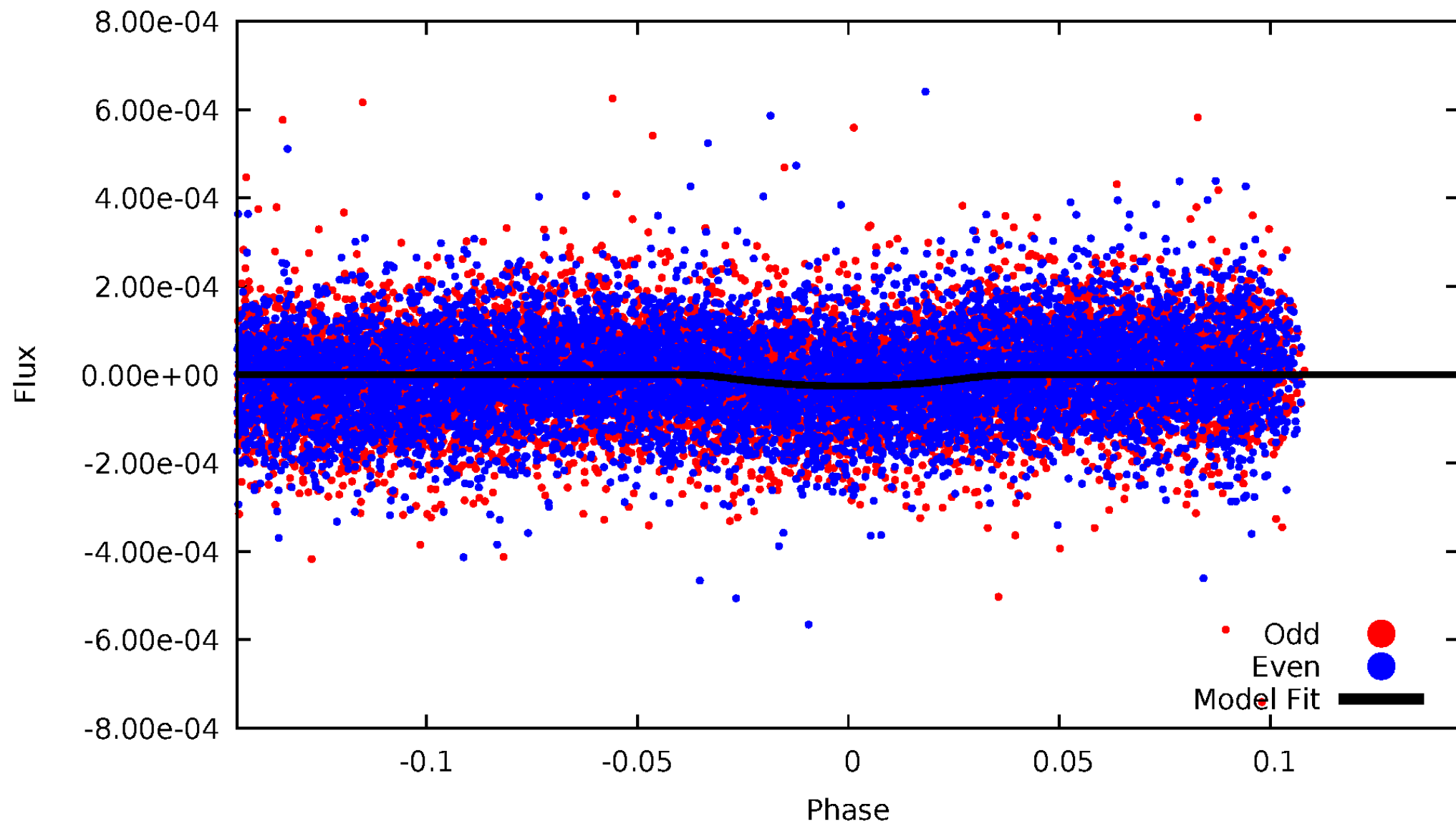


TCE 008613594-03



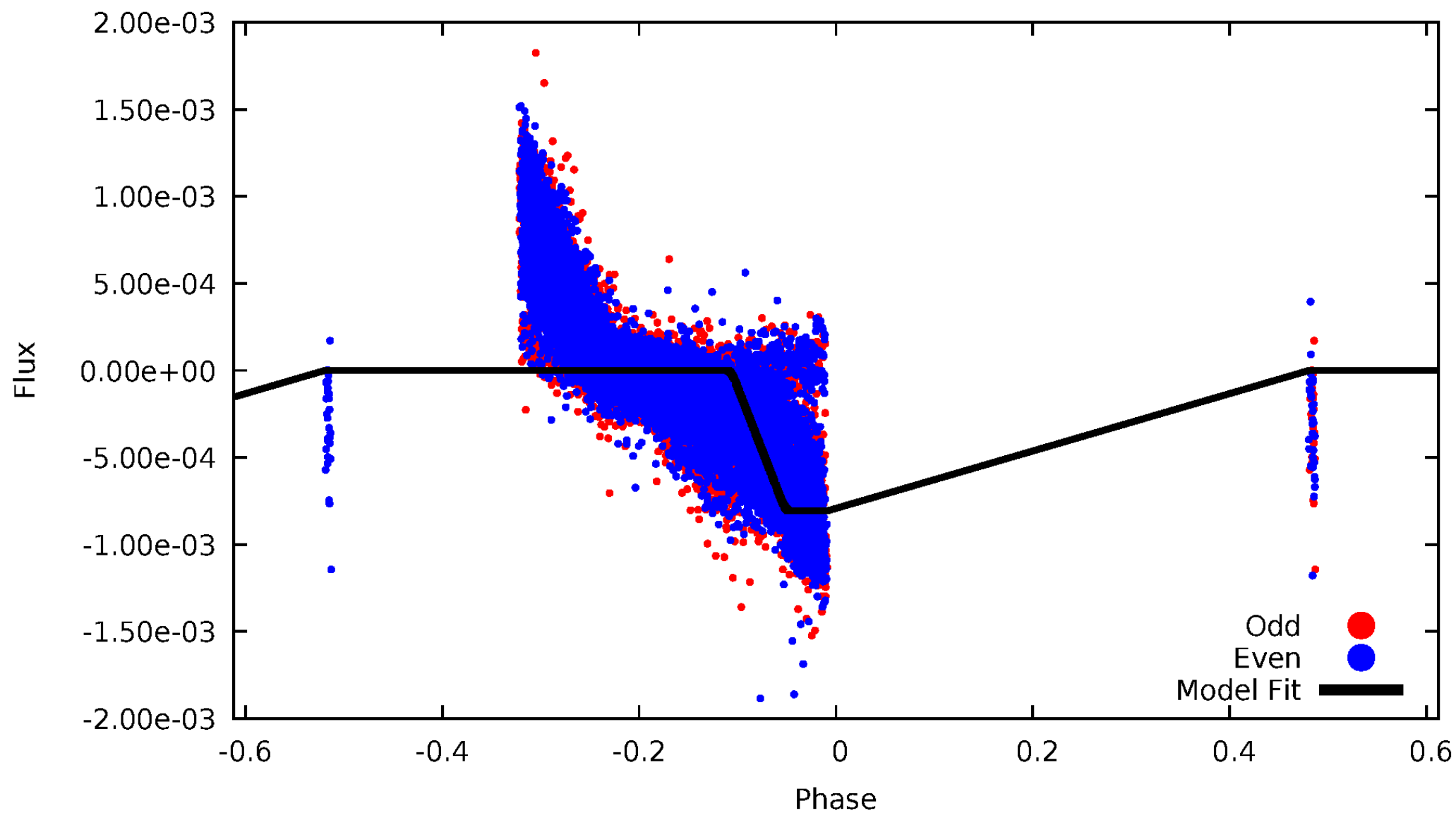
DV Odd/Even

TCE 008613594-03



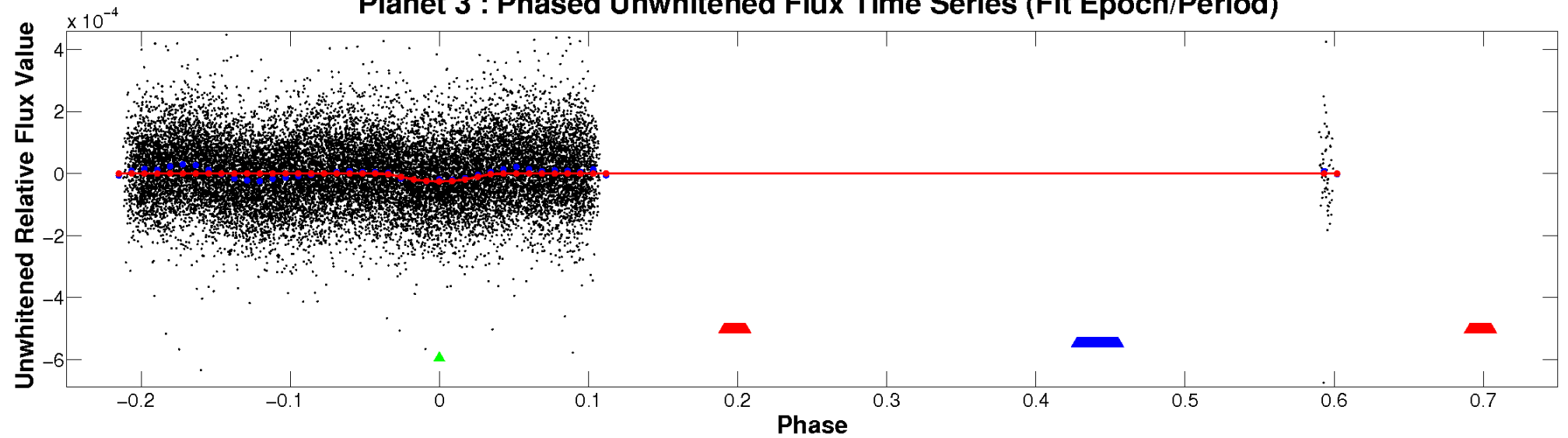
ALT Odd/Even

TCE 008613594-03

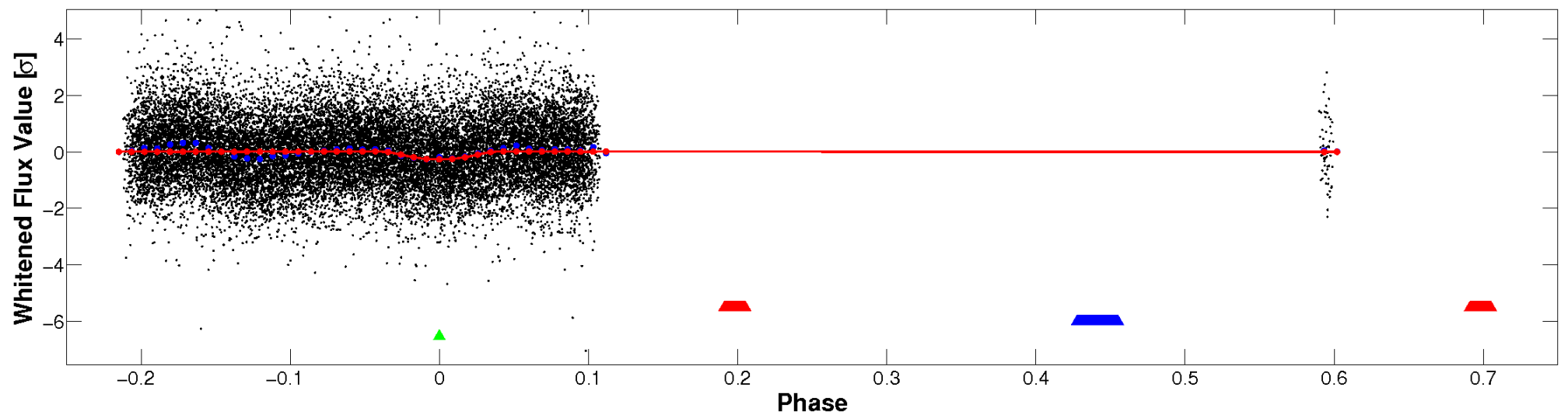


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

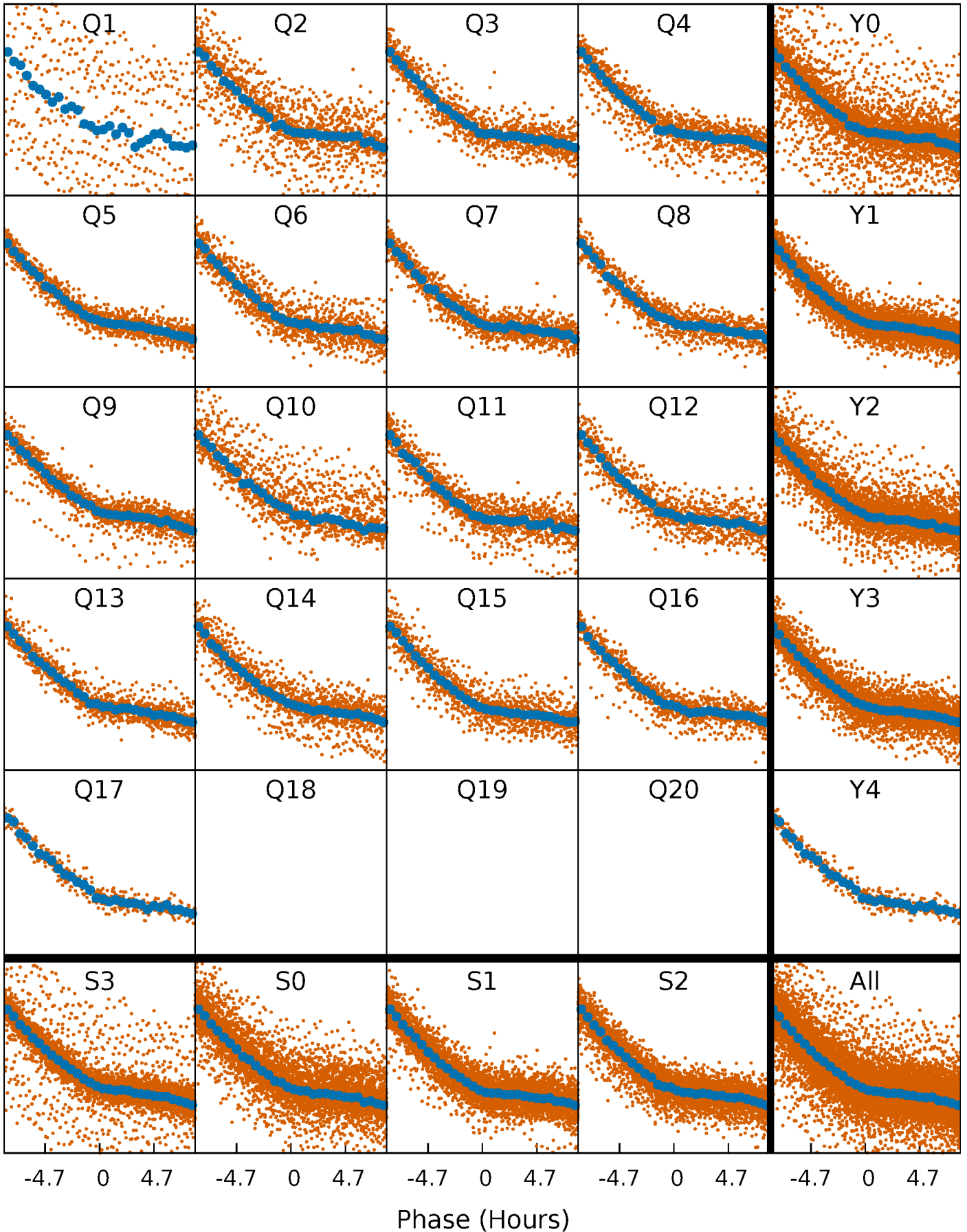


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



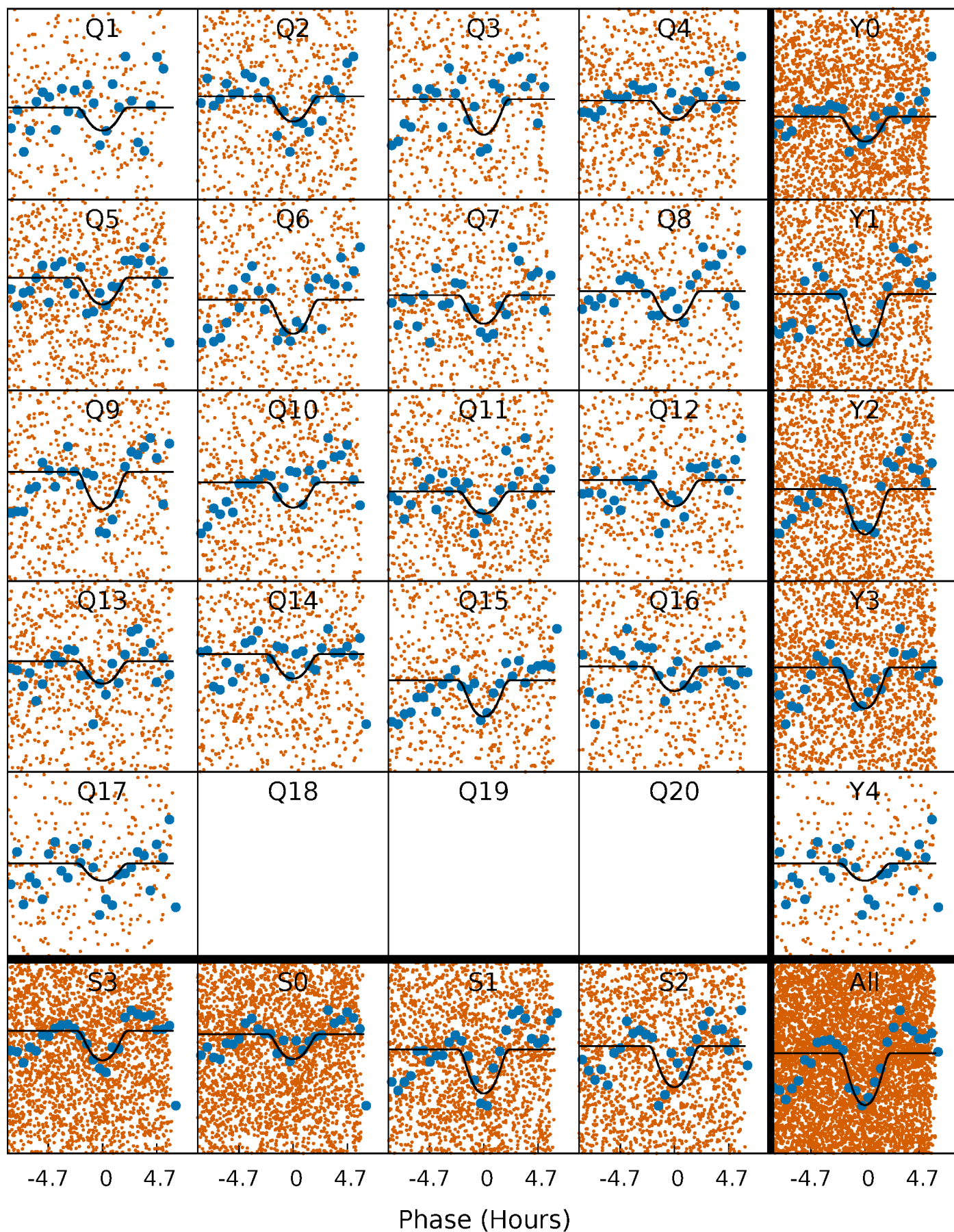
PDC Quarter-Phased Transit Curves

TCE 008613594-03 $P = 2.376392$ Days $T_0 = 131.888097$ (BKJD)



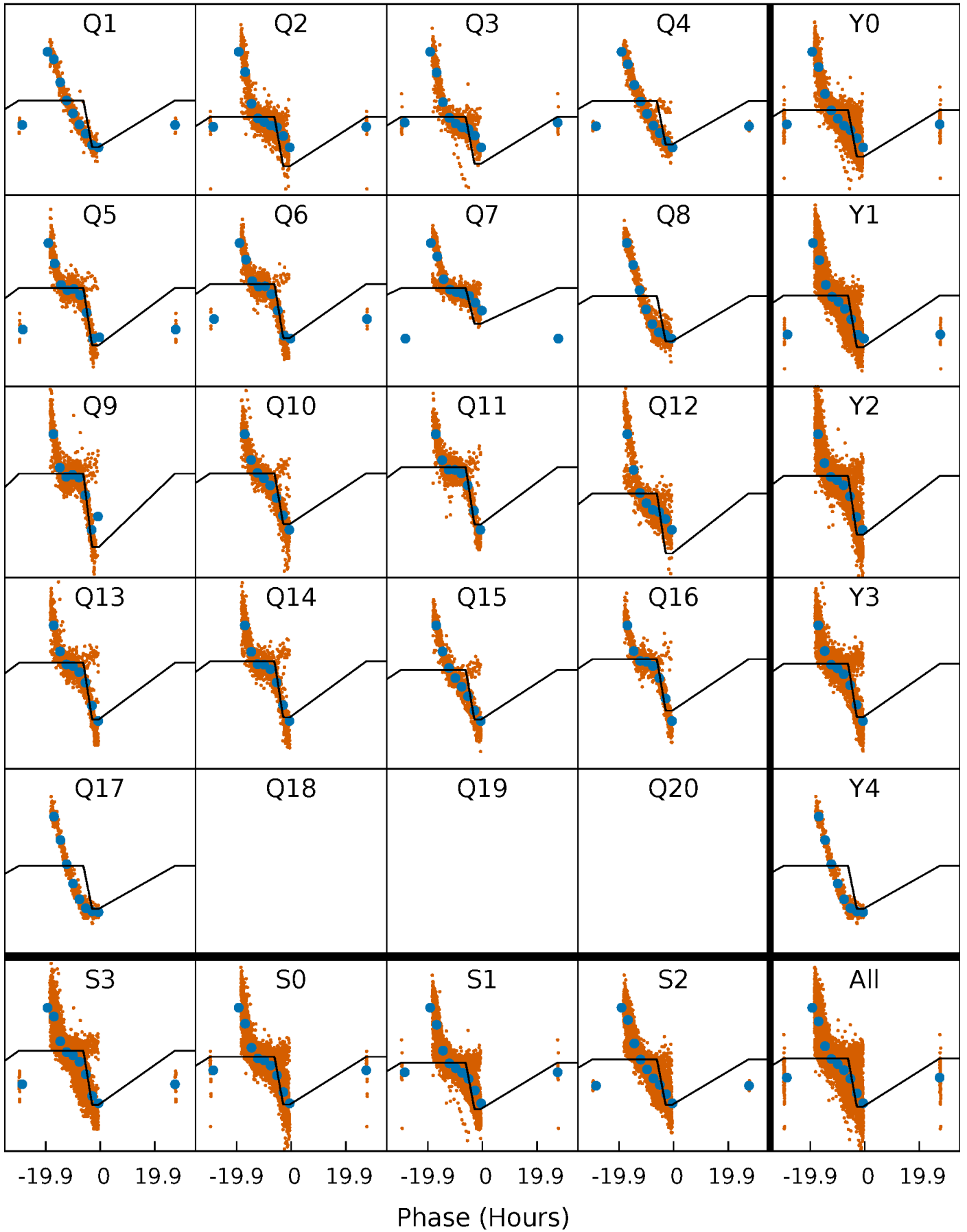
DV Quarter-Phased Transit Curves

TCE 008613594-03 P= 2.376392 Days $T_0=131.888097$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

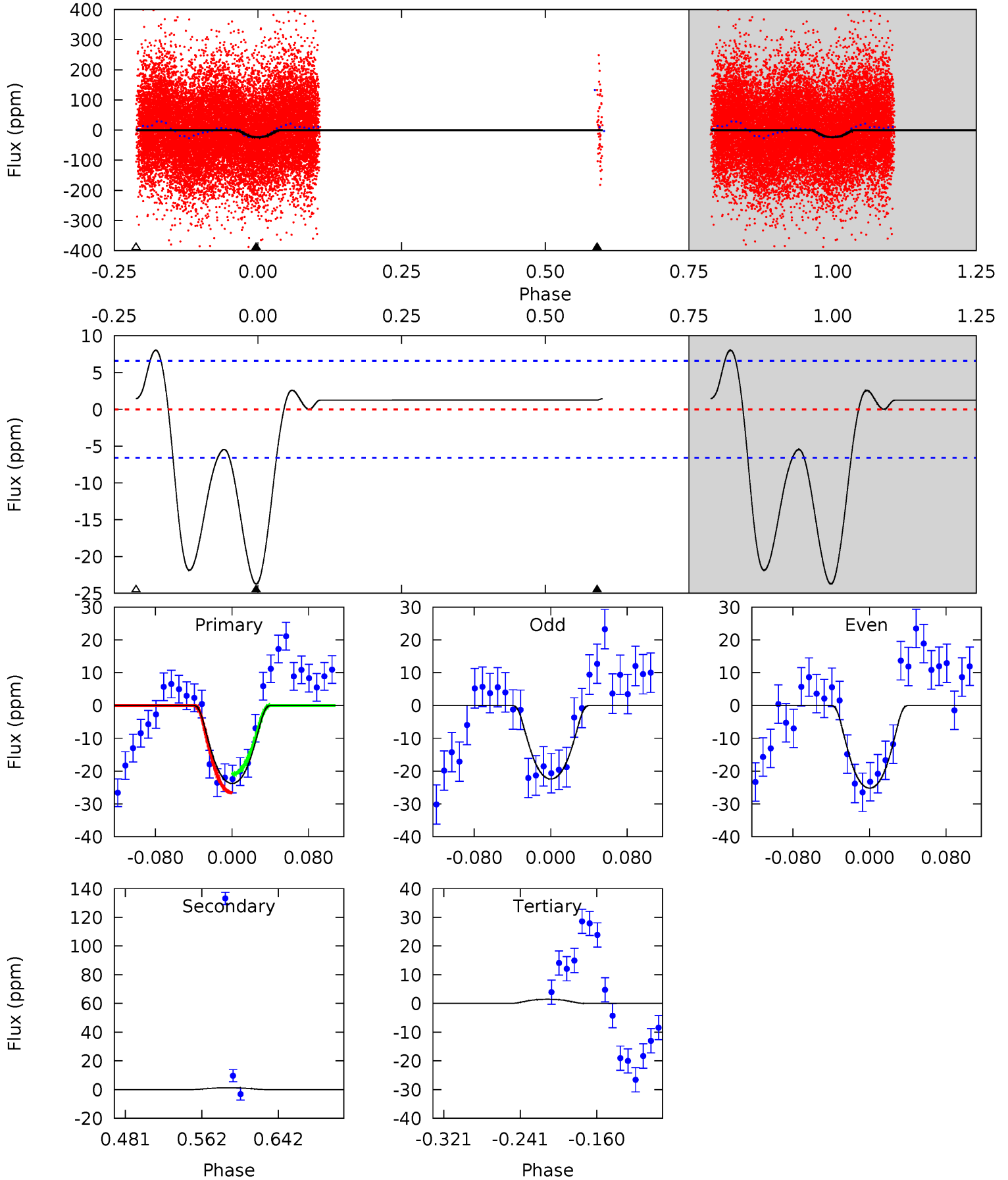
TCE 008613594-03 $P = 2.376422$ Days $T_0 = 132.148677$ (BKJD)



DV Model-Shift Uniqueness Test

008613594-03, P = 2.376392 Days, E = 129.511705 Days

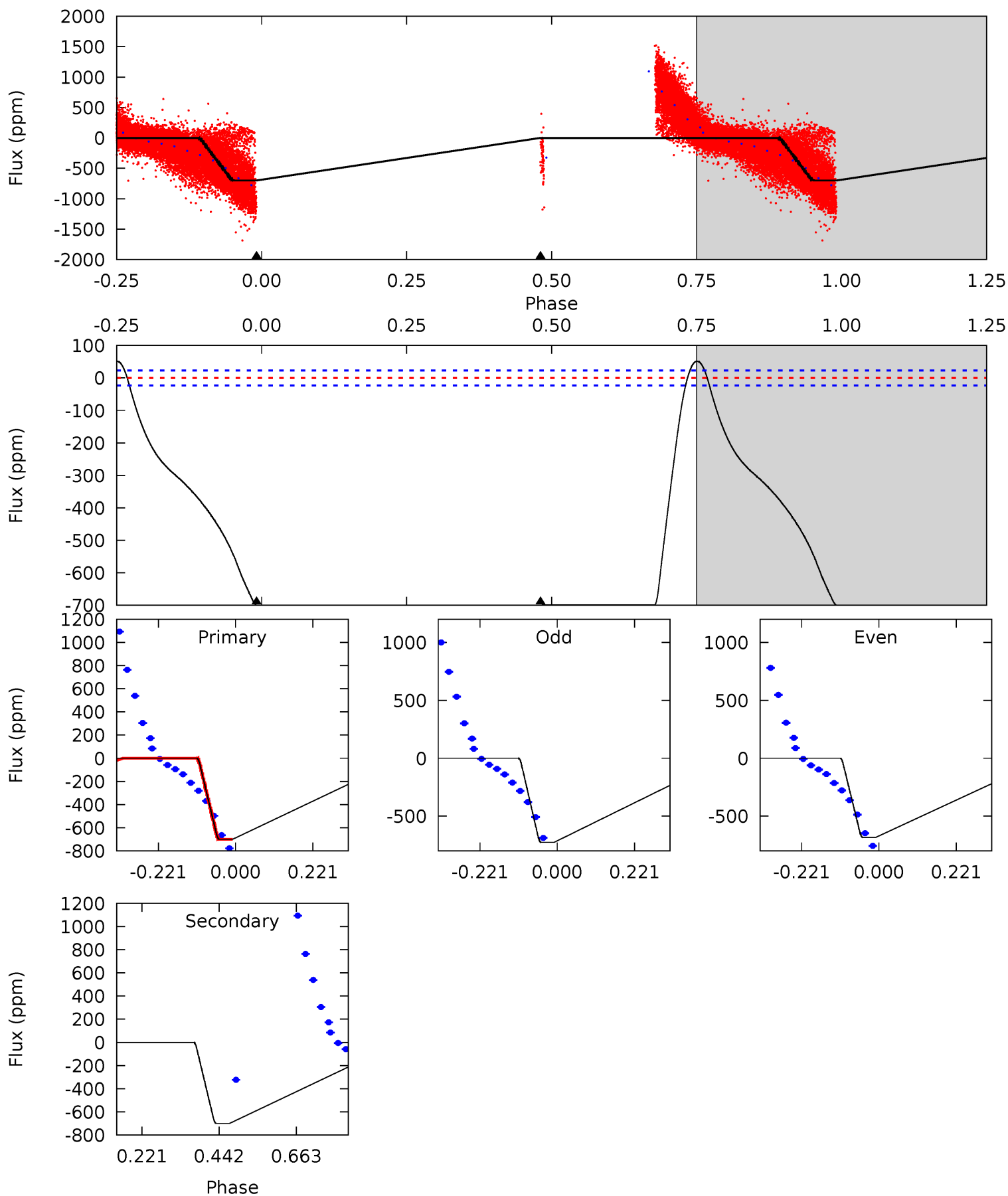
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.6	-0.88	-1.02	0	4.61	1.75	7.40	17.7	16.6	0.14	-0.88	0.99	0.81	0.25	2.00



Alt Model-Shift Uniqueness Test

008613594-03, P = 2.376422 Days, E = 129.772255 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
134.0	134.0	0	0	4.40	1.22	24.5	134.0	134.0	134.0	134.0	4.10	0	0.07	0



Stellar Parameters For KIC 008613594

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9135^{+292}_{-438}	$4.130^{+0.124}_{-0.186}$	$0.070^{+0.150}_{-0.600}$	$2.092^{+0.728}_{-0.485}$	$2.152^{+0.407}_{-0.542}$	$0.331^{+0.216}_{-0.175}$
	+3%/-5%	+3%/-5%	+214%/-857%	+35%/-23%	+19%/-25%	+65%/-53%
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 008613594-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	1 ± 1	$1.57^{+0.78}_{-0.68}$	3871^{+306}_{-237}	-4144^{+744}_{-931}	$-0.471^{+0.529}_{-1.660}$
Alt.	-700 ± 5	$6.54^{+1.27}_{-1.09}$	3854^{+294}_{-254}	8641^{+770}_{-670}	18^{+7}_{-5}

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

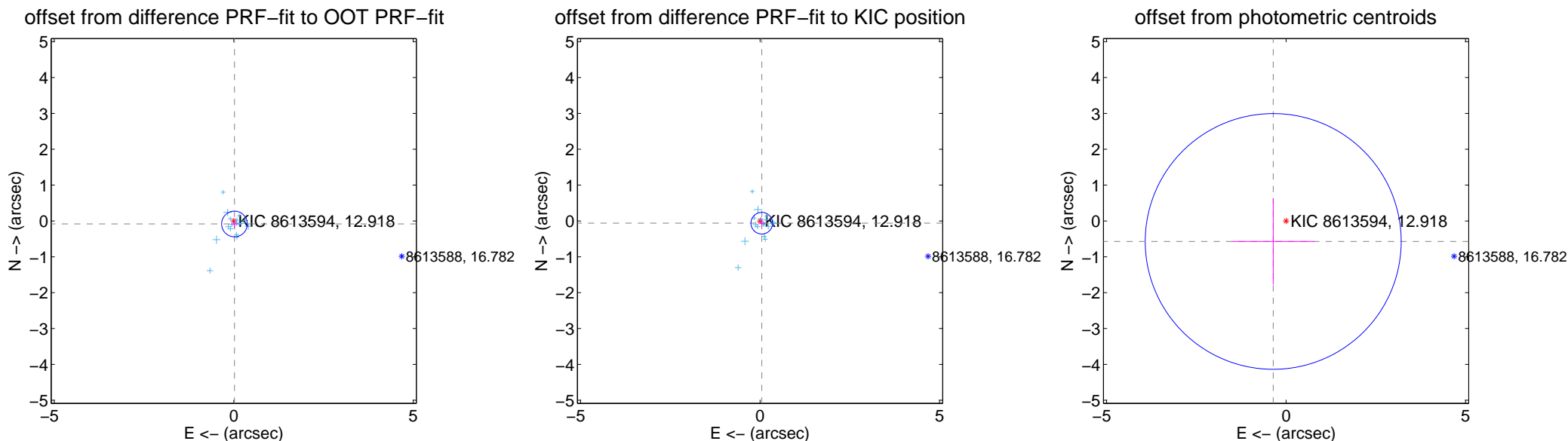
DV Centroid Data

Supplemental centroid analysis for 008613594-03. Kepler magnitude: 12.92. Transit SNR 12.31

There are 17 quarters with good PRF difference image offsets

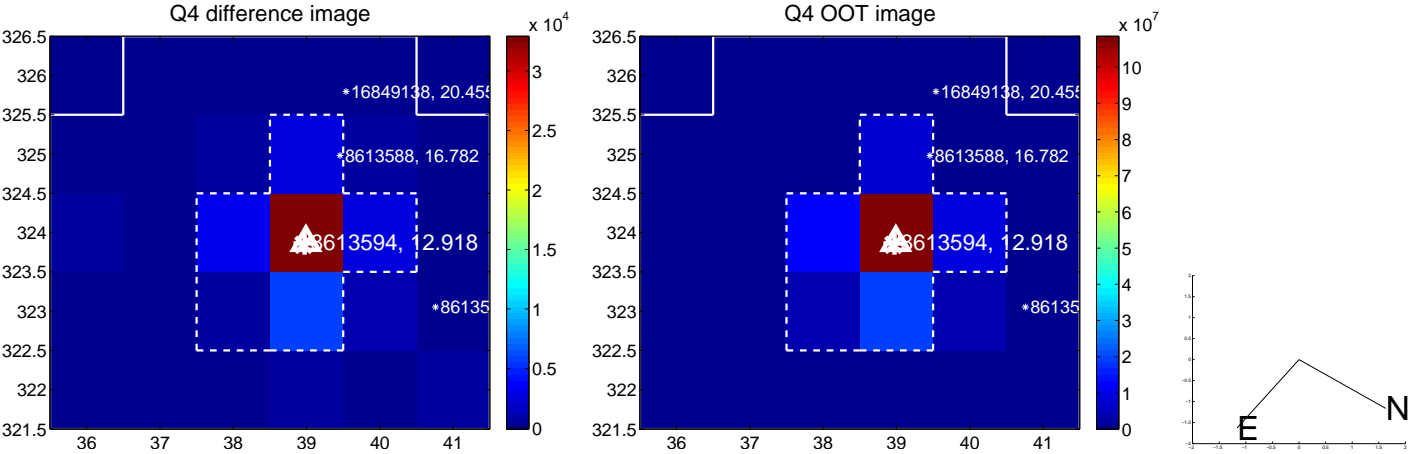
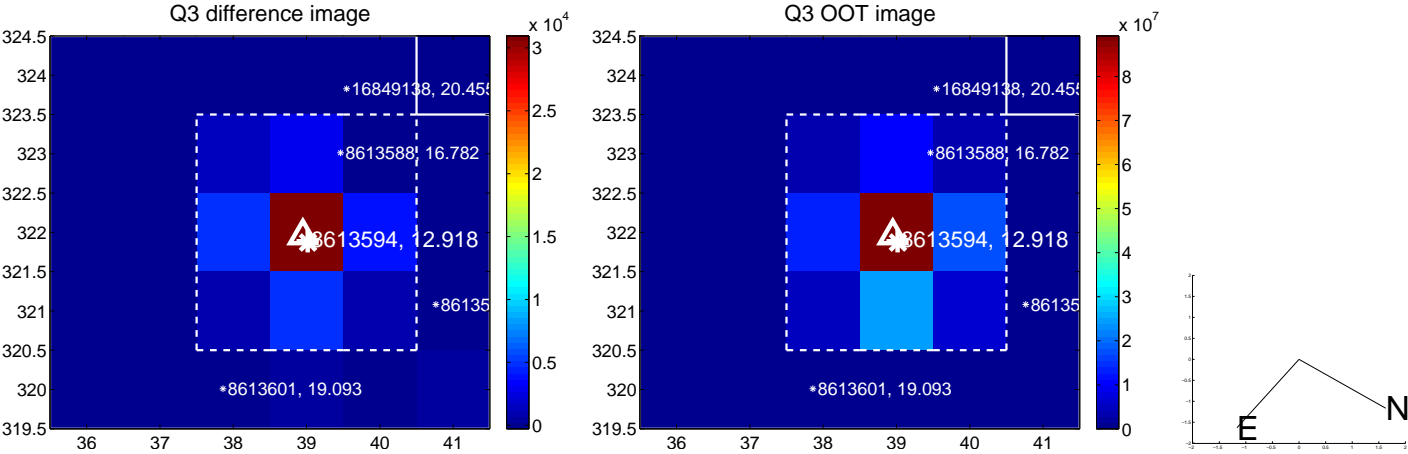
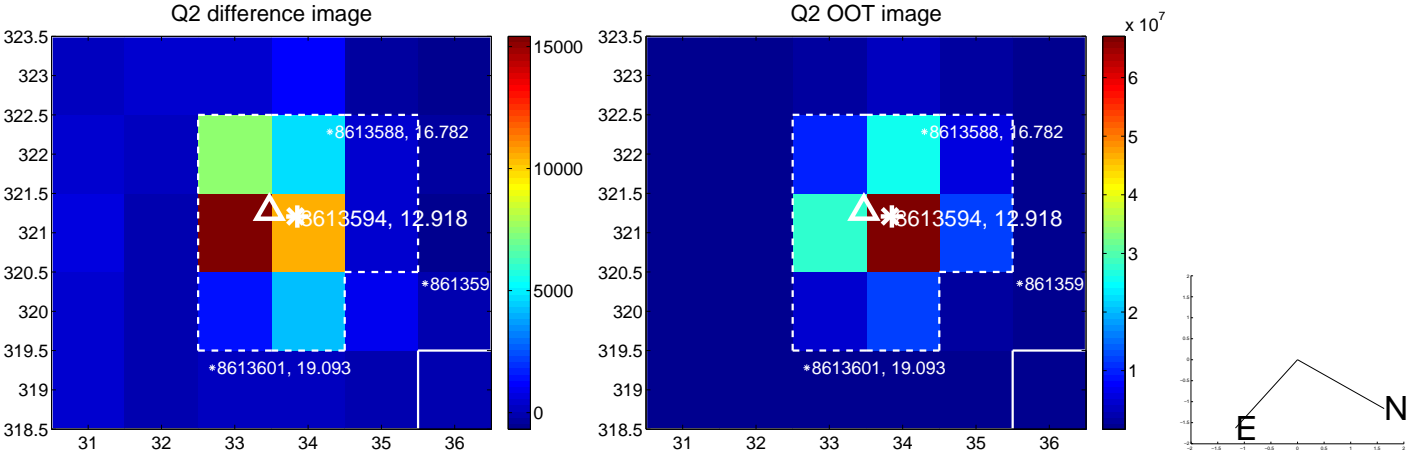
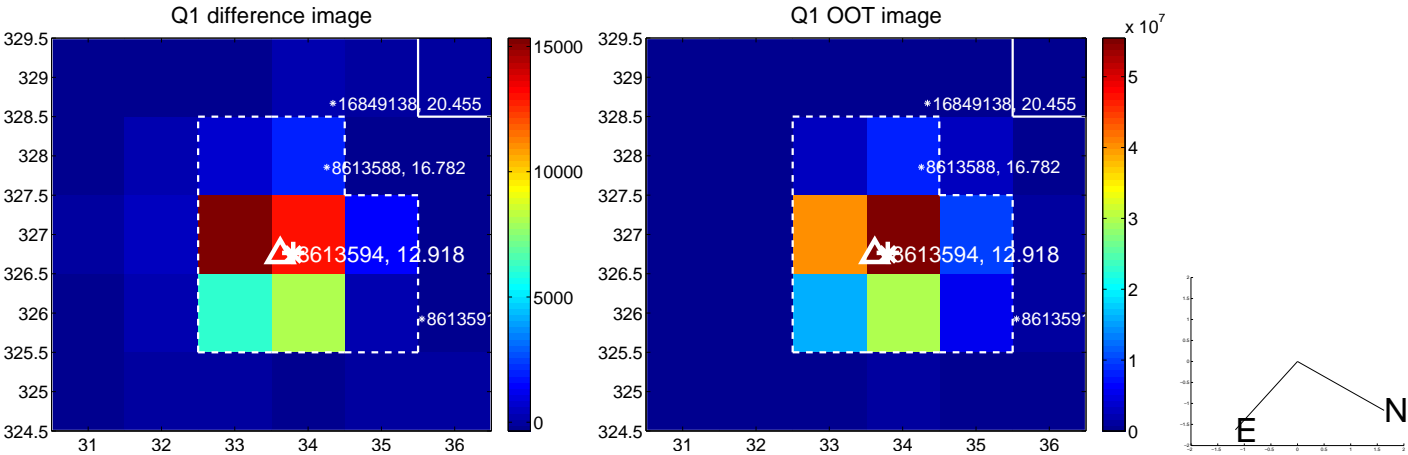
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.087 ± 0.119	0.73	-0.020 ± 0.094	-0.084 ± 0.127
PRF-fit source offset from KIC position	0.079 ± 0.101	0.78	-0.048 ± 0.091	-0.062 ± 0.123
photometric centroid source offset	0.67 ± 1.19	0.57	0.36 ± 1.15	-0.57 ± 1.20

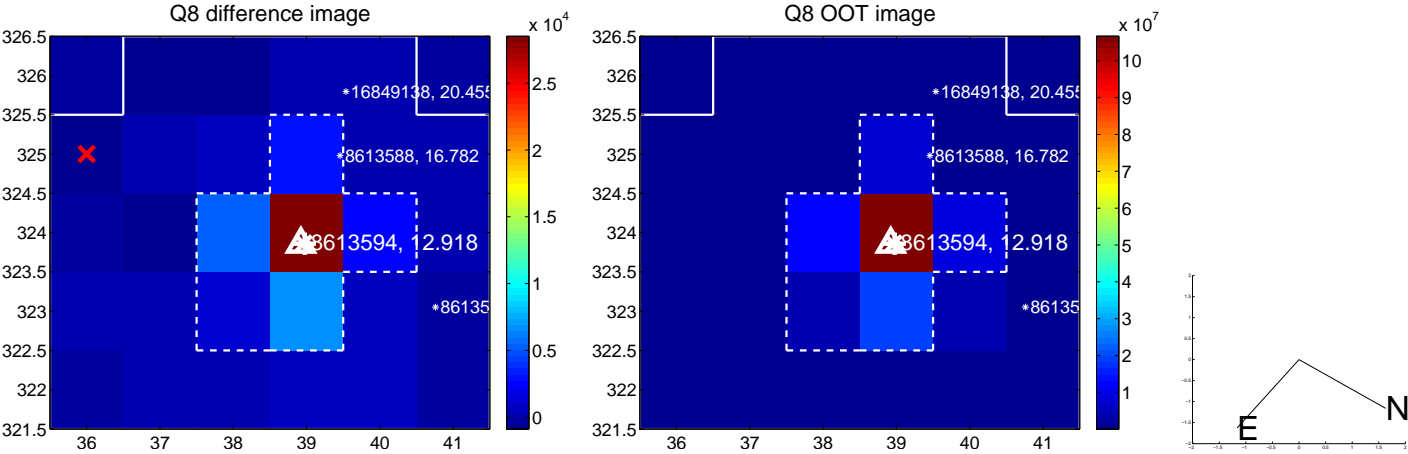
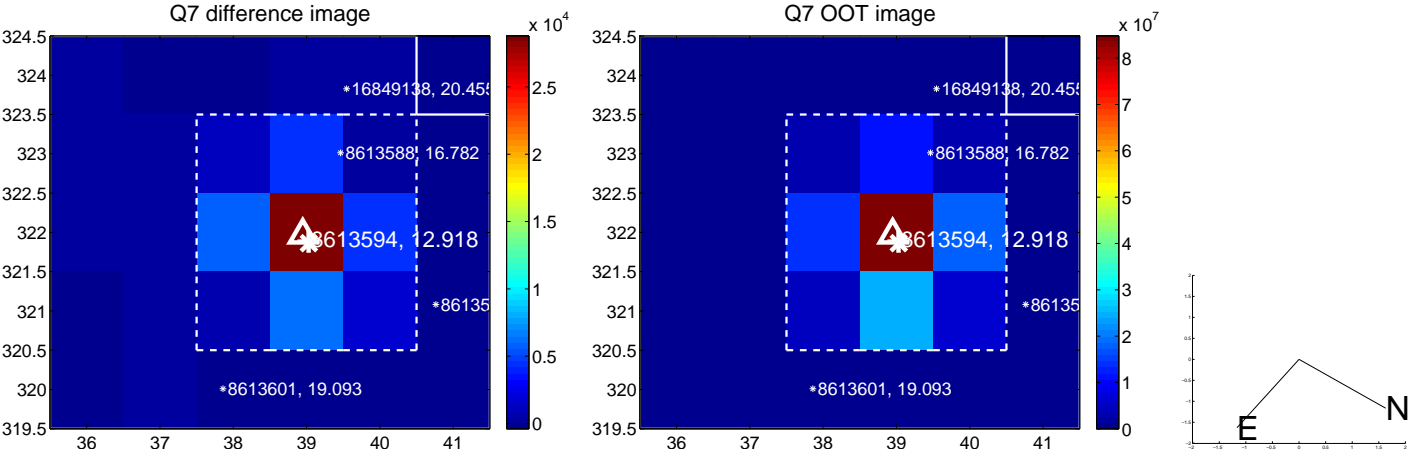
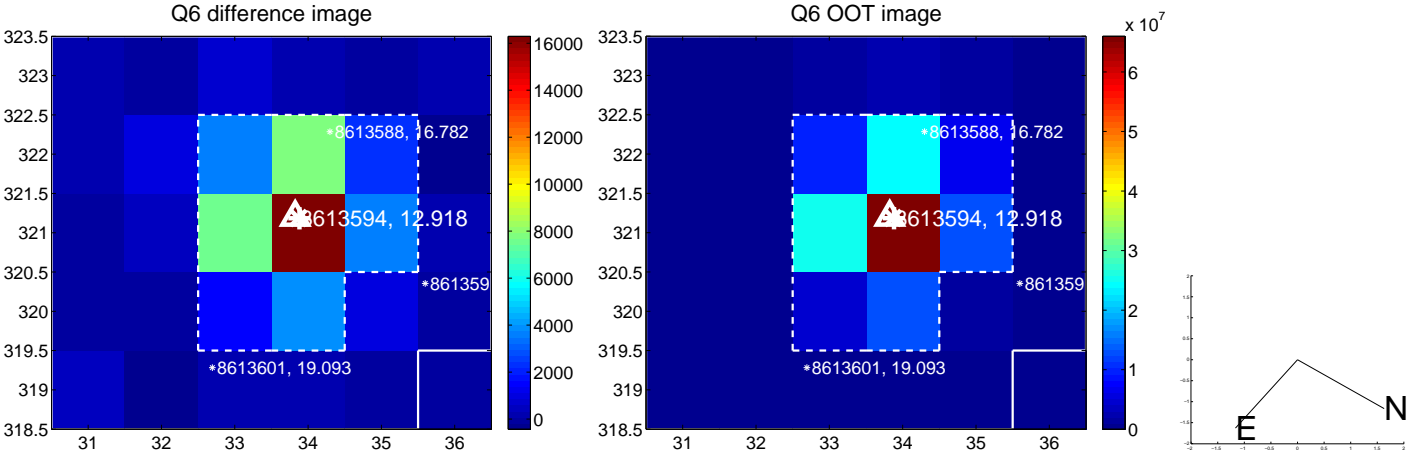
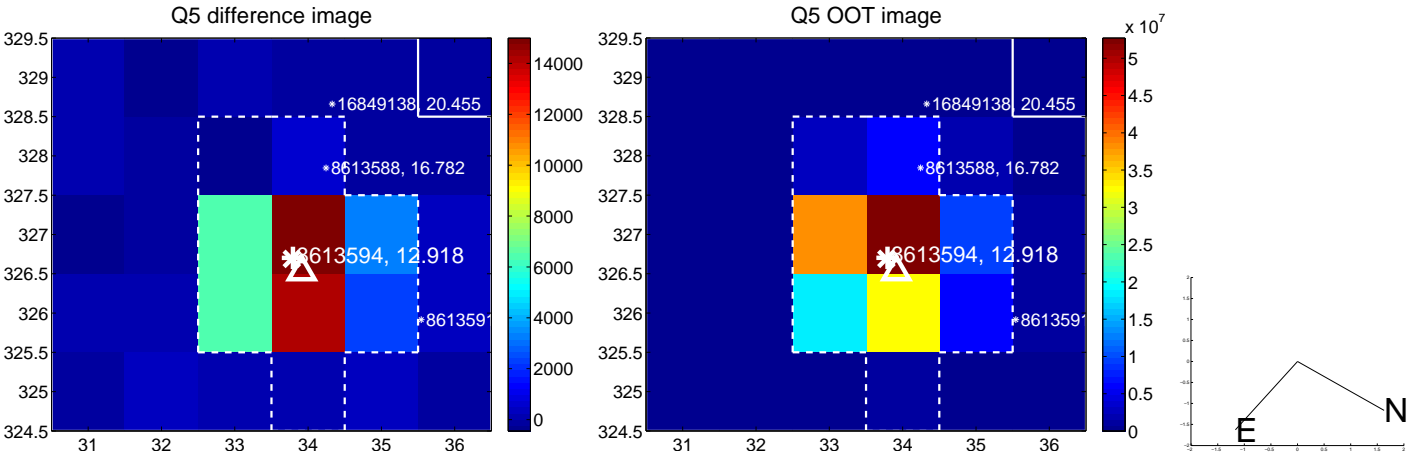


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

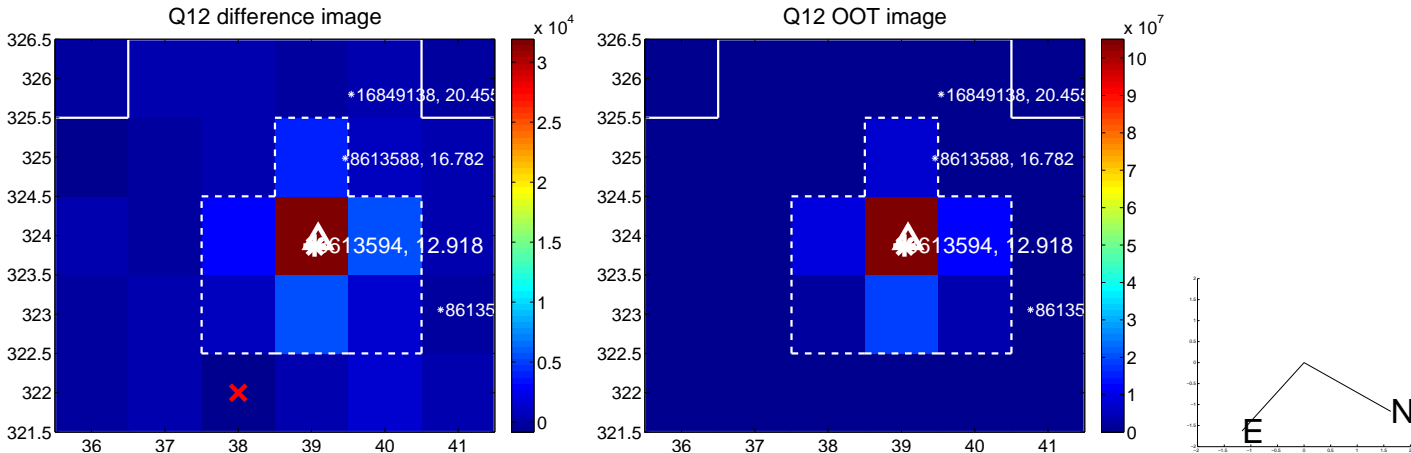
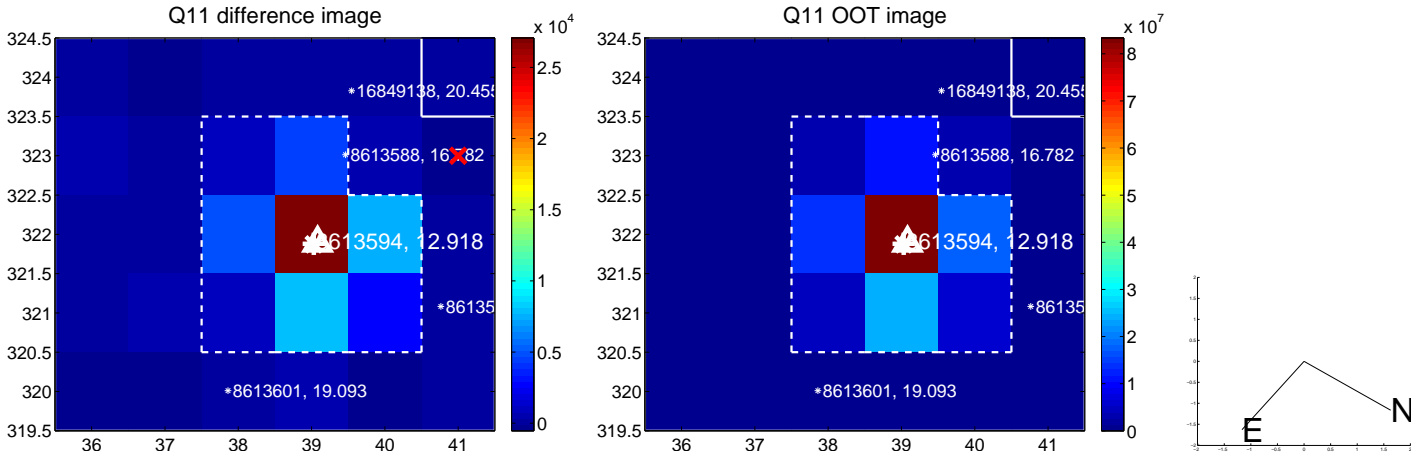
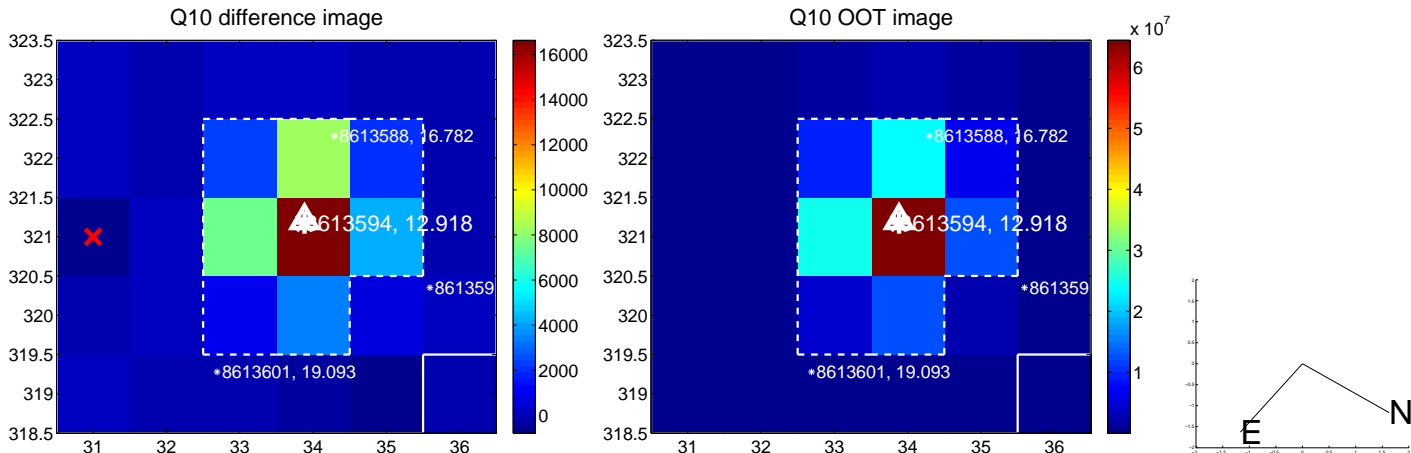
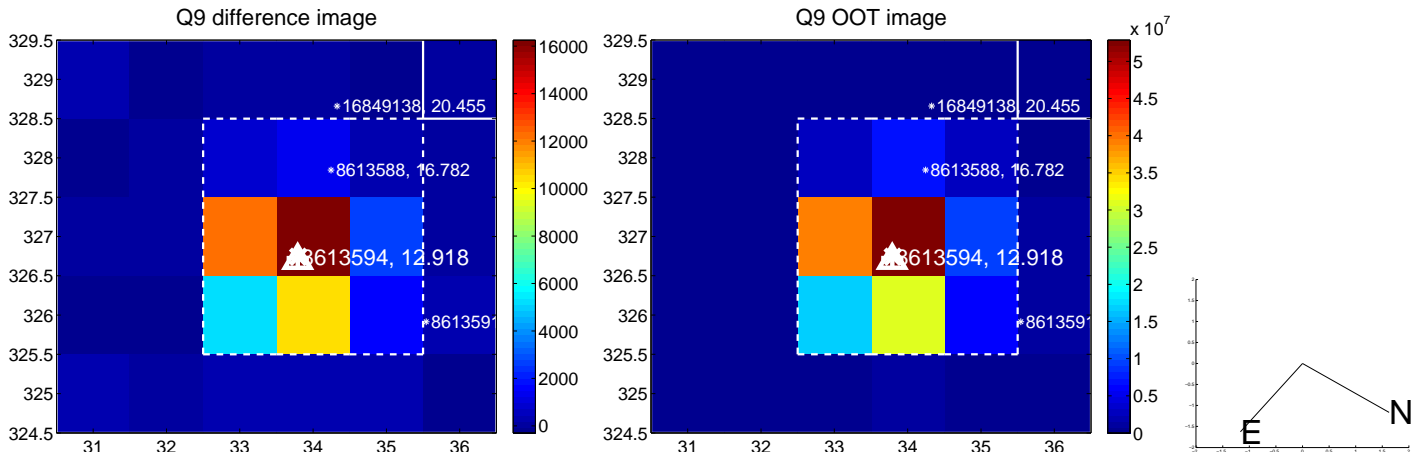
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



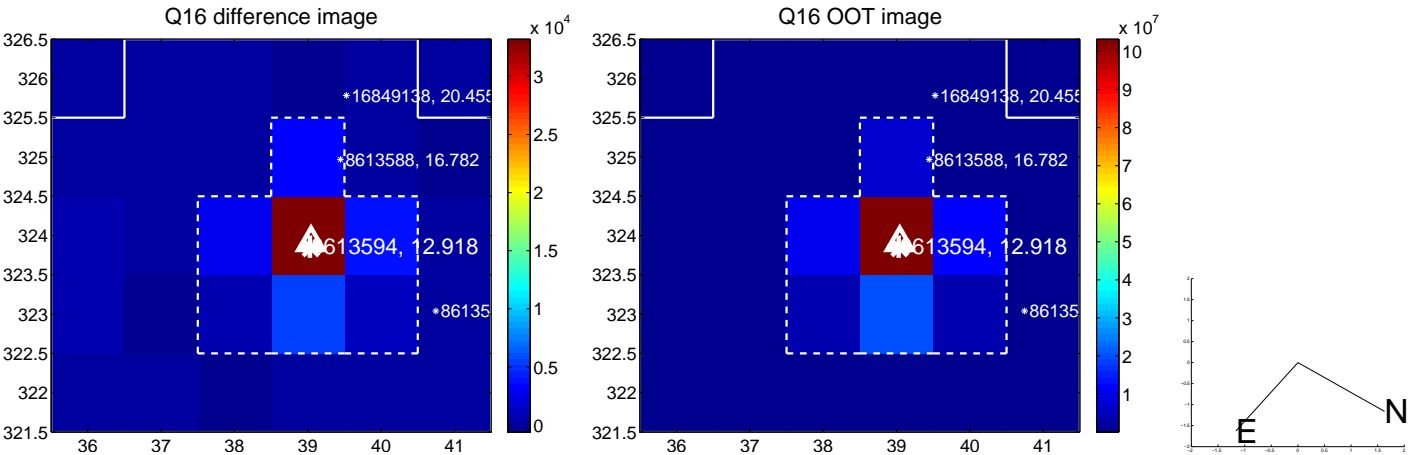
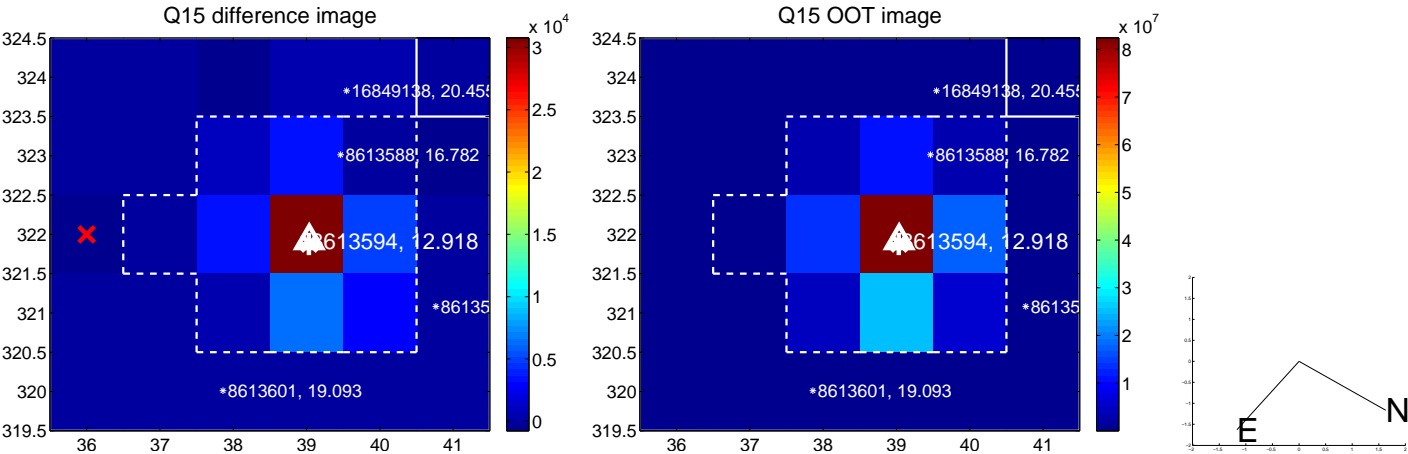
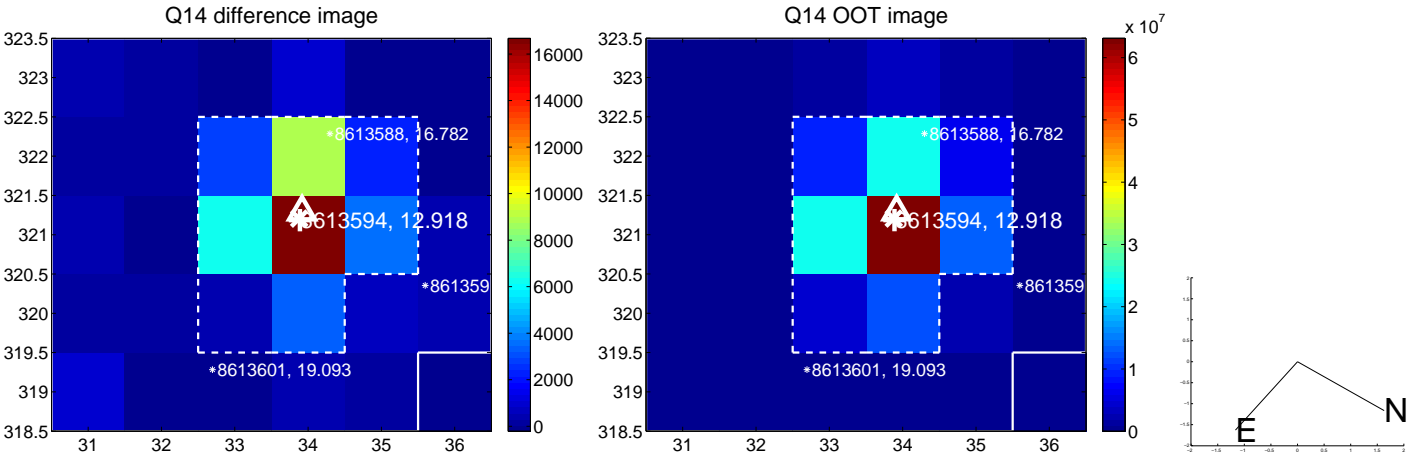
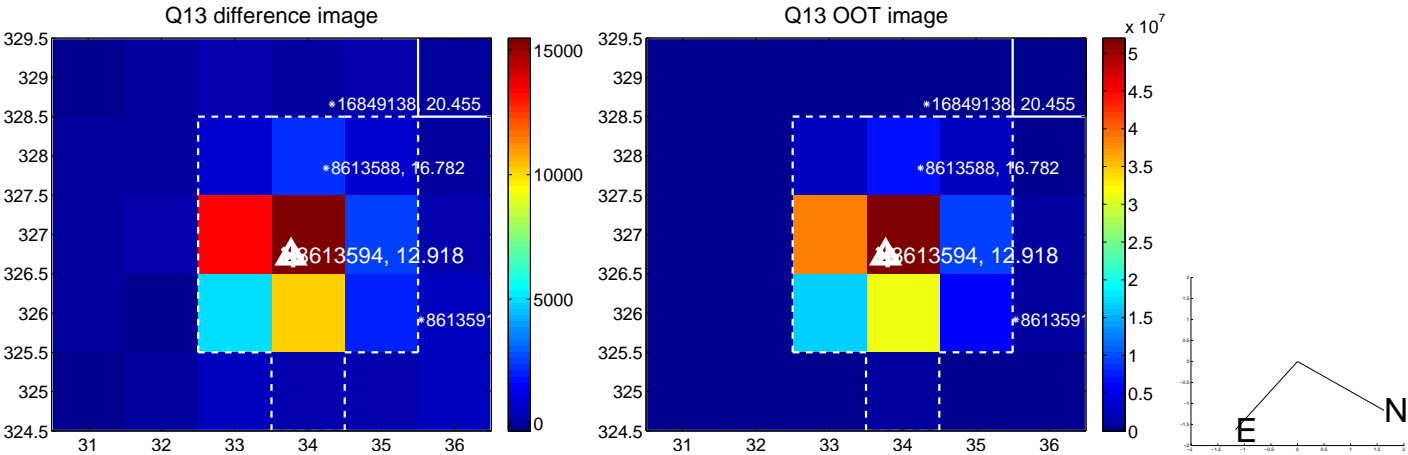
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



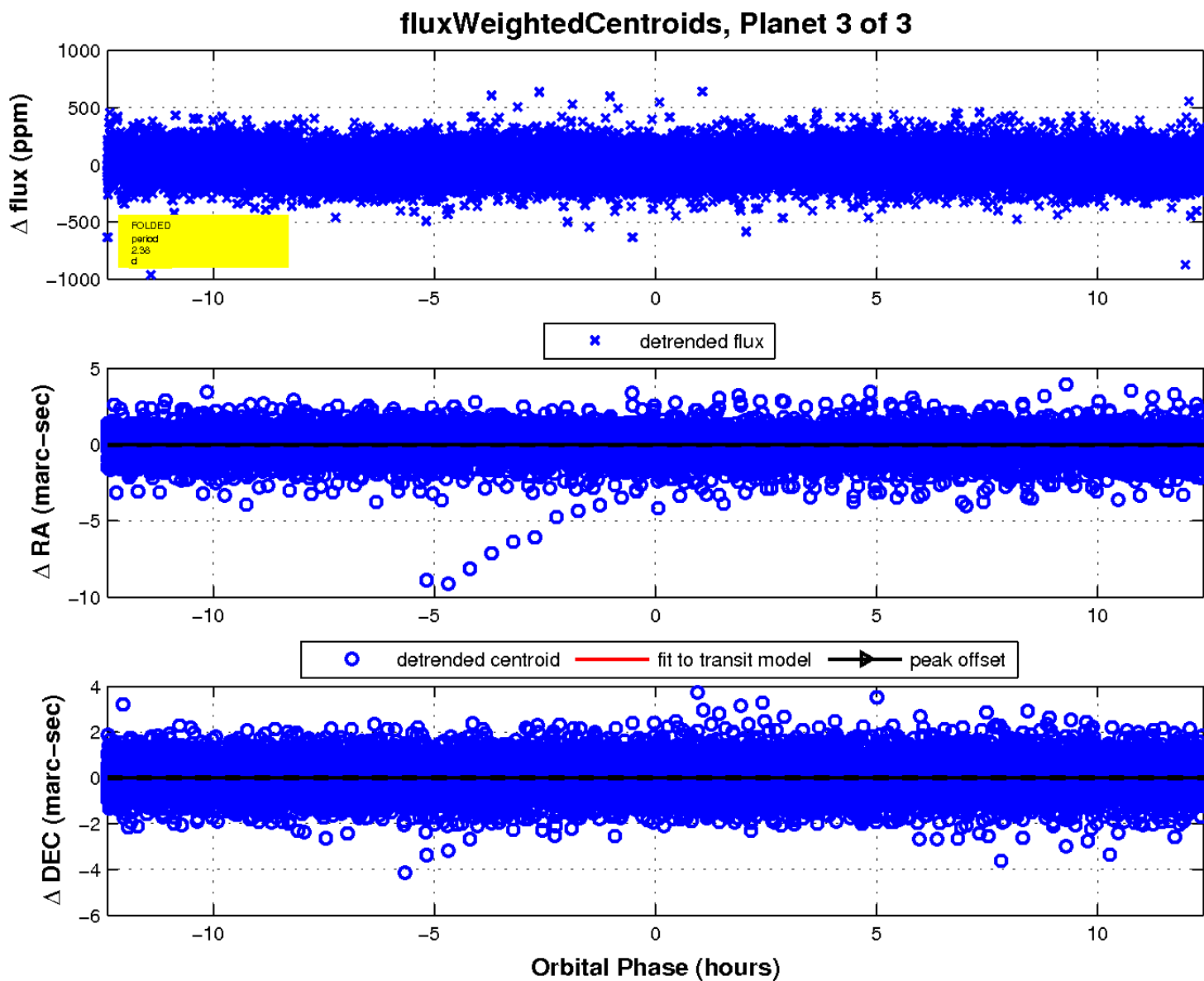
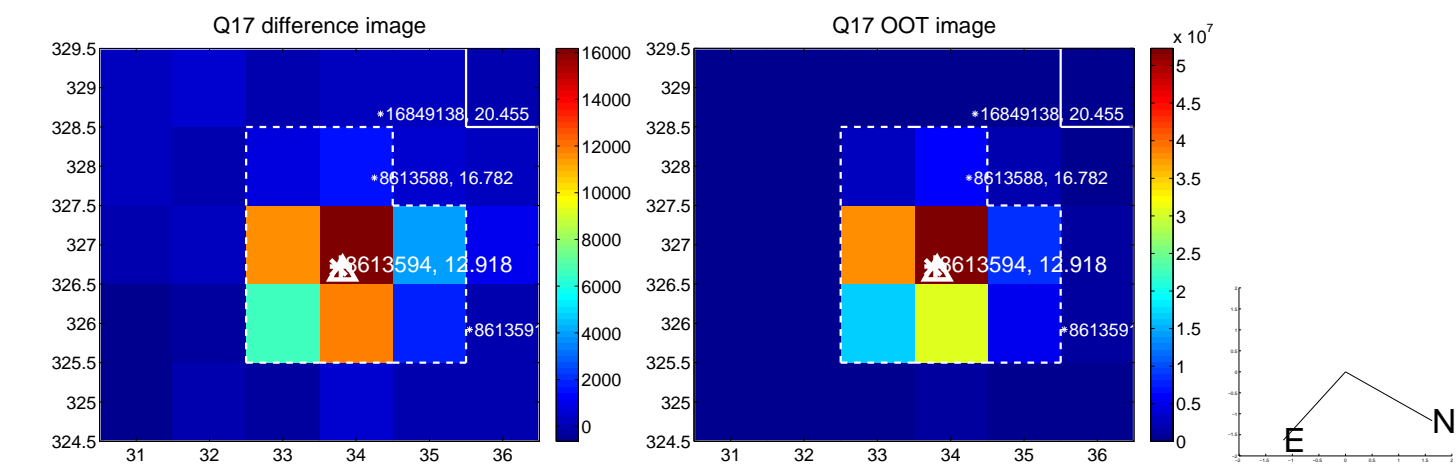
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

