

KIC 004484271

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})
004484271-01	OBS	No	0.561409	131.722354	218.7	1.139	12.5	12.0	1.86	7194	3.20	39396.35
004484271-02	OBS	No	0.561419	131.854265	257.0	1.185	11.7	13.5	1.86	7194	3.47	39395.41
004484271-03	OBS	No	0.561405	132.002679	219.7	1.350	11.9	12.1	1.86	7194	2.87	39396.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004484271-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
004484271-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD
004484271-03	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

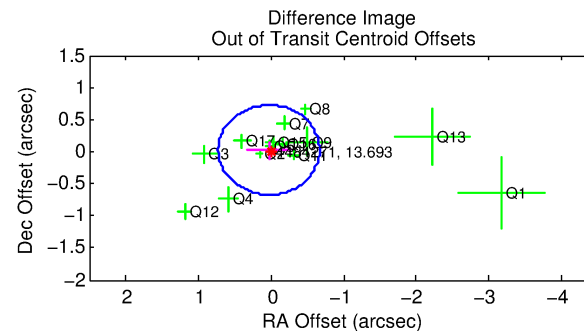
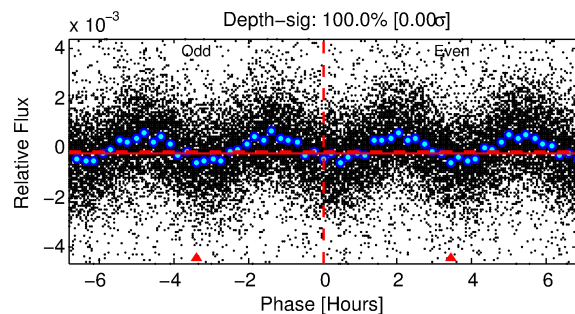
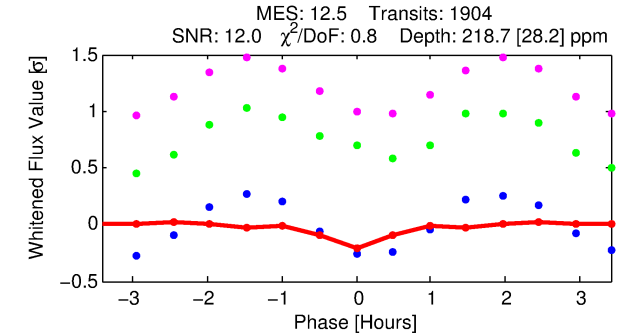
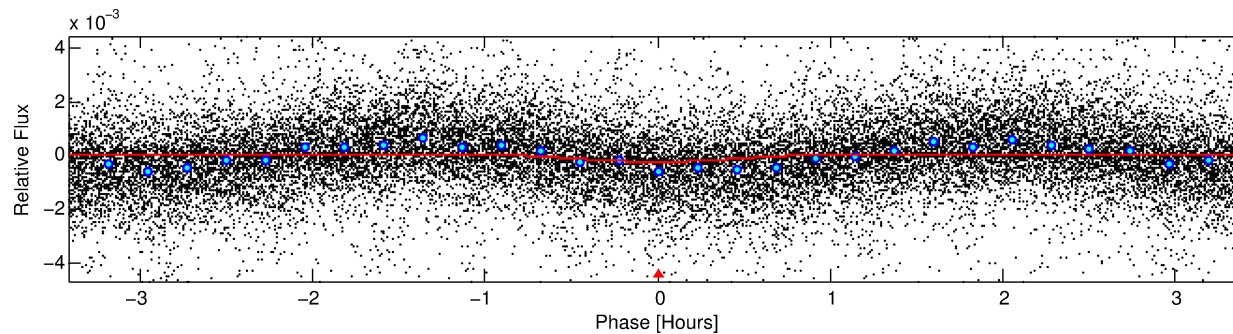
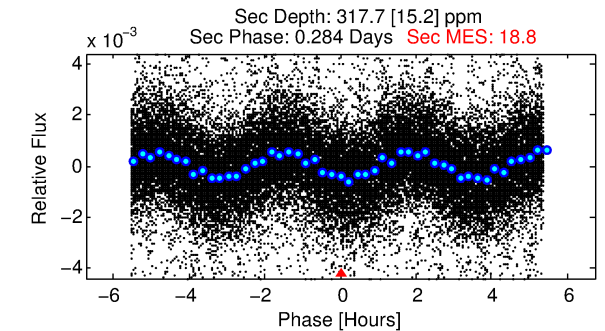
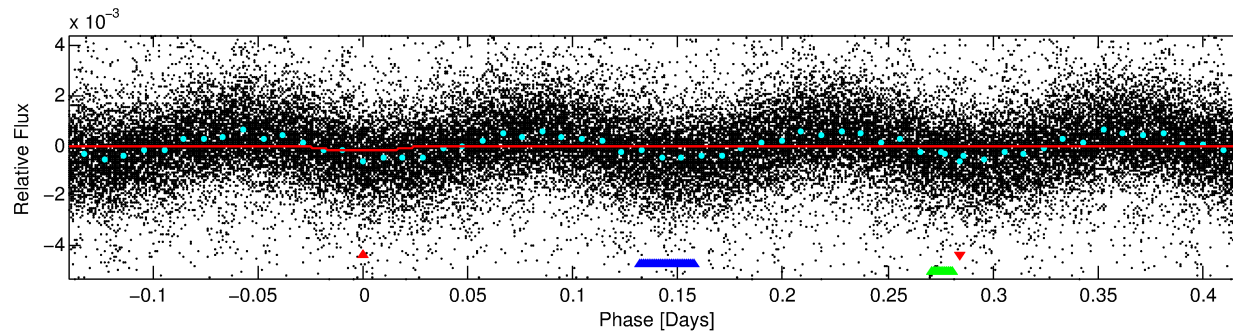
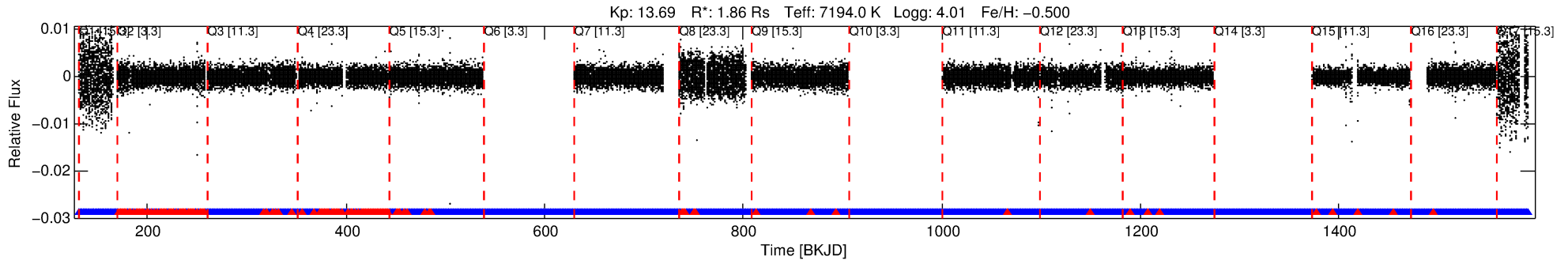
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004484271-01

No Significant Match Found

DV One-Page Summary

KIC: 4484271 Candidate: 1 of 3 Period: 0.561 d



DV Fit Results:

Period = 0.56141 [0.00001] d
Epoch = 131.7224 [0.0015] BKJD
Rp/R* = 0.0158 [0.0055]
a/R* = 2.01 [3.24]
b = 0.90 [0.46]
Seff = 39396.35 [20315.92]
Teff = 3592 [463] K
Rp = 3.20 [1.54] Re
a = 0.0145 [0.0045] AU
Ag = 3.58 [3.06] [0.84 σ]
Teffp = 7640 [1366] K [2.81 σ]

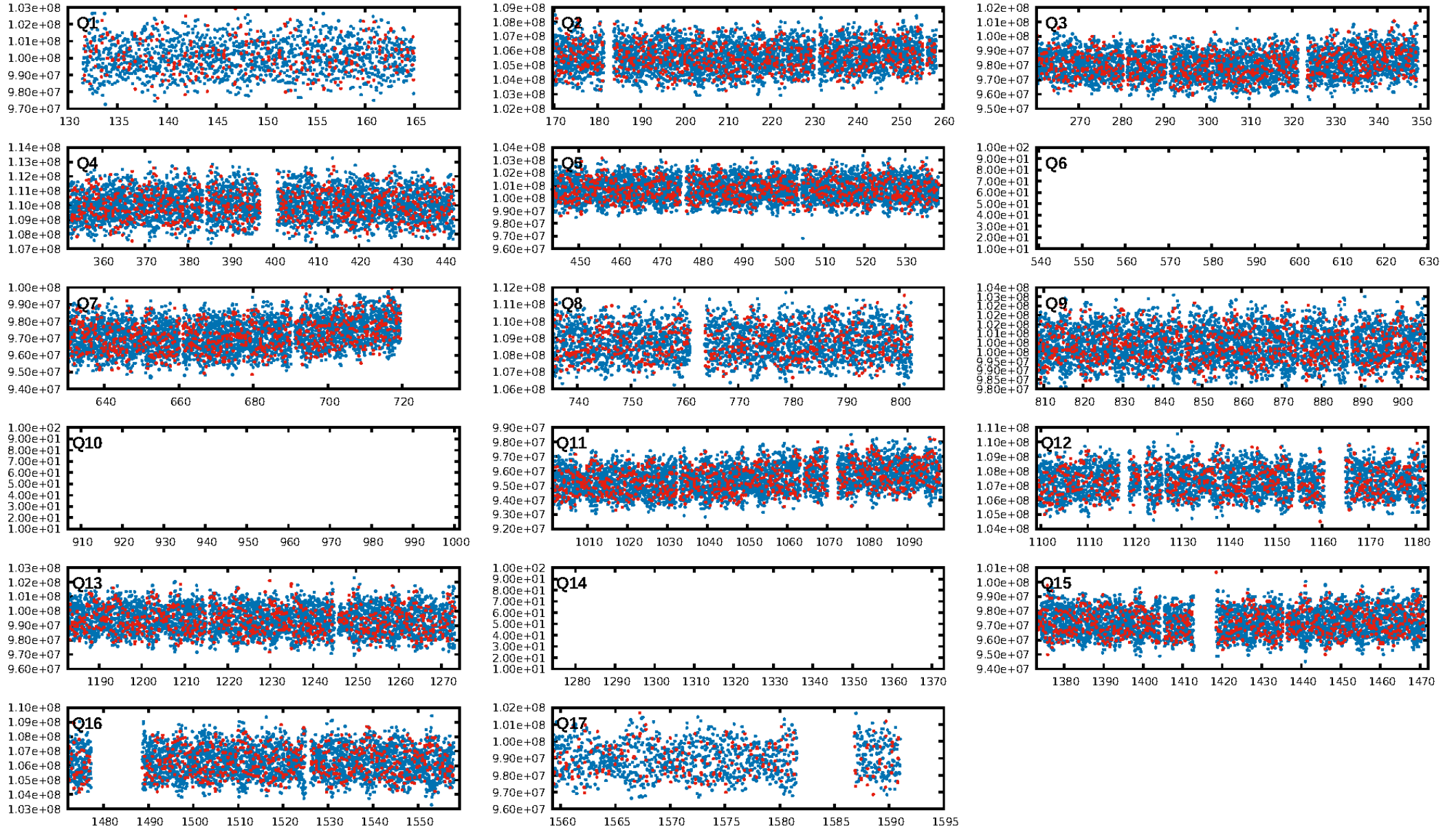
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.91 [1629/1796]
GhostDiagnostic-chr: 2.84
Centroid-sig: 0.0%
Centroid-so: 0.502 arcsec [2.58 σ]
OotOffset-rm: 0.038 arcsec [0.16 σ]
KicOffset-rm: 0.090 arcsec [0.40 σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.57 [8/14]
DiffImageOverlap-fno: 0.00 [0/14]

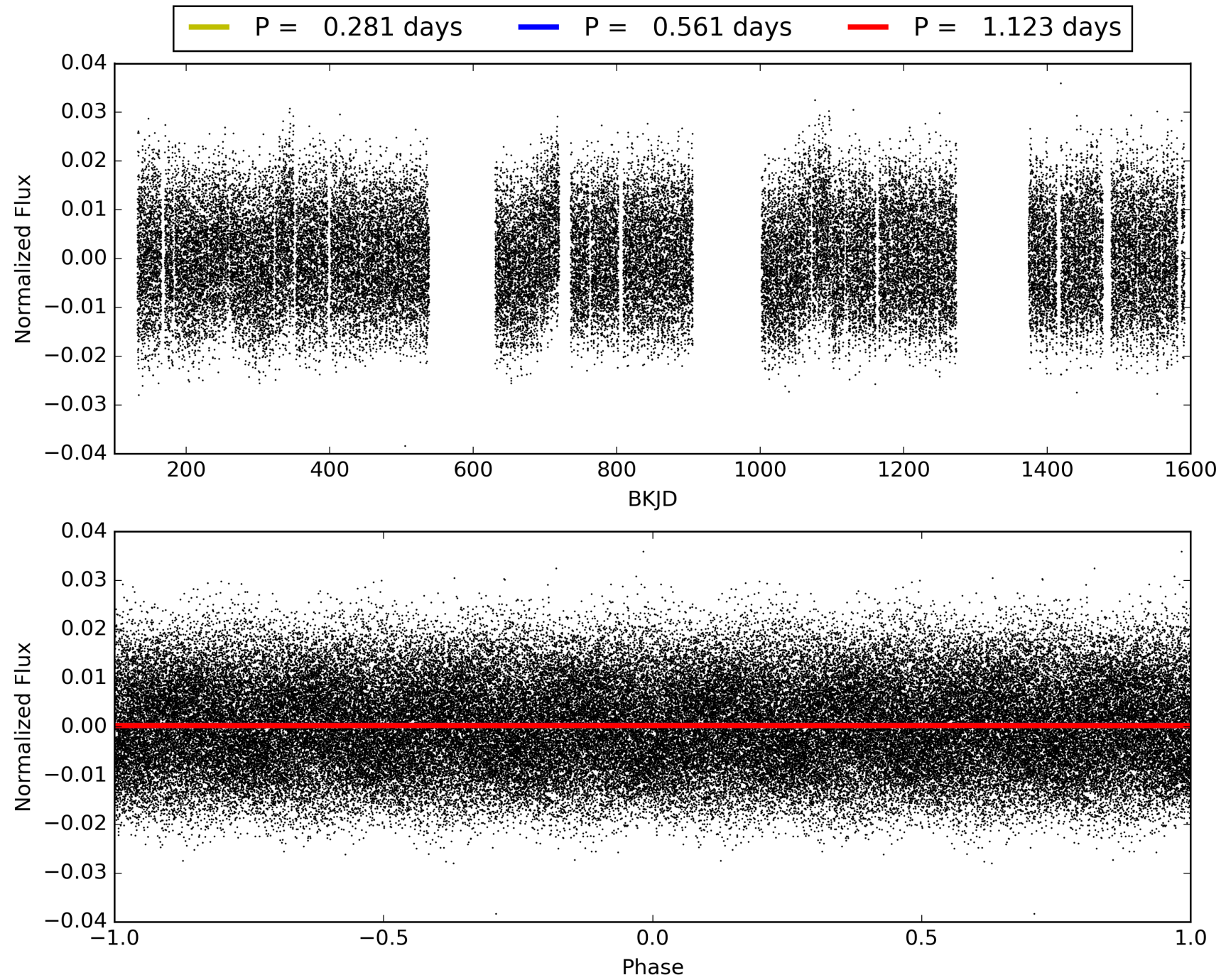
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:35:35 Z

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

TCE 004484271-01, PDC Light Curves

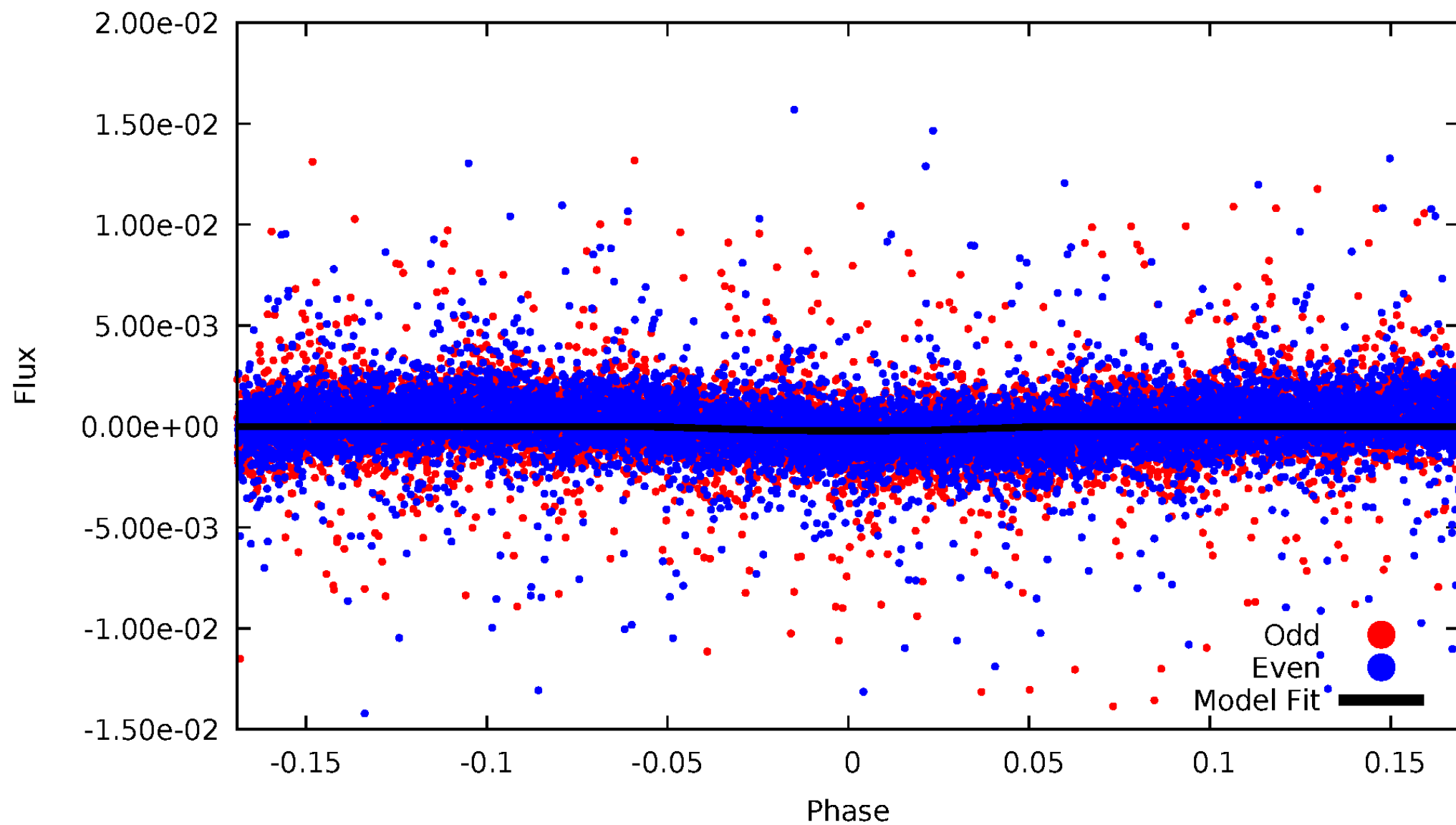


TCE 004484271-01



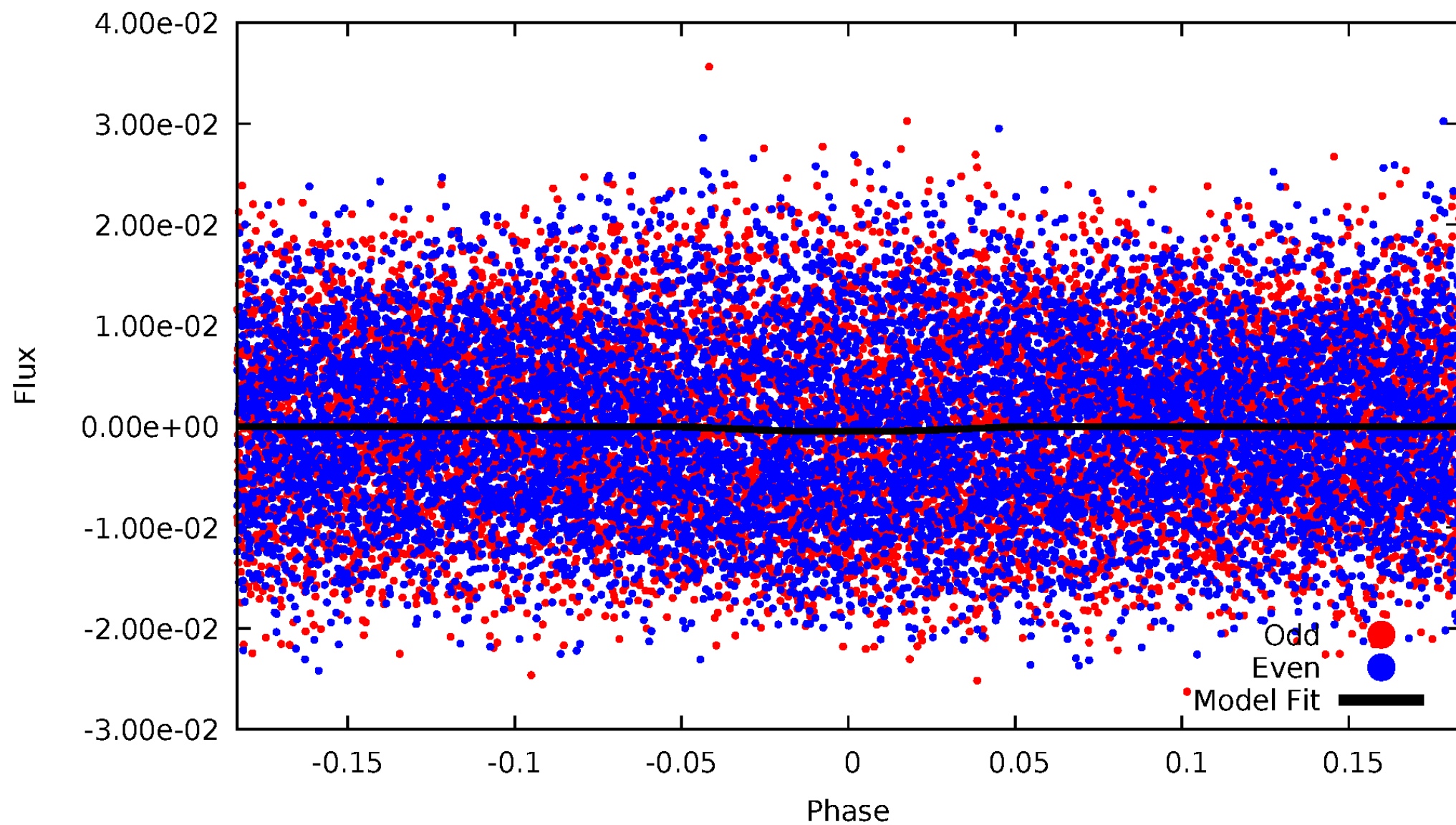
DV Odd/Even

TCE 004484271-01



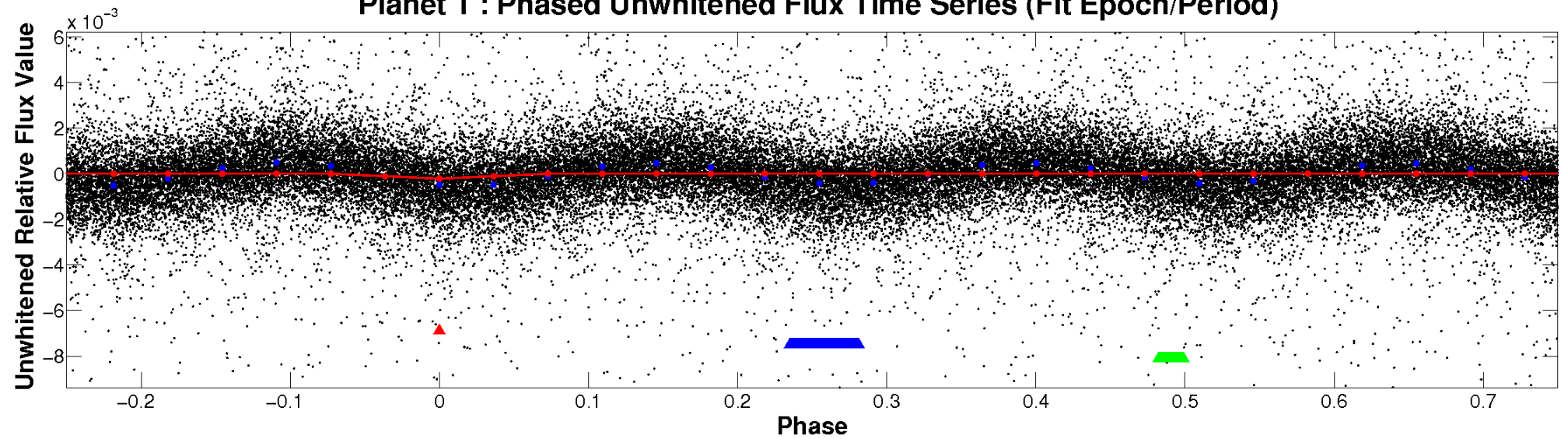
ALT Odd/Even

TCE 004484271-01

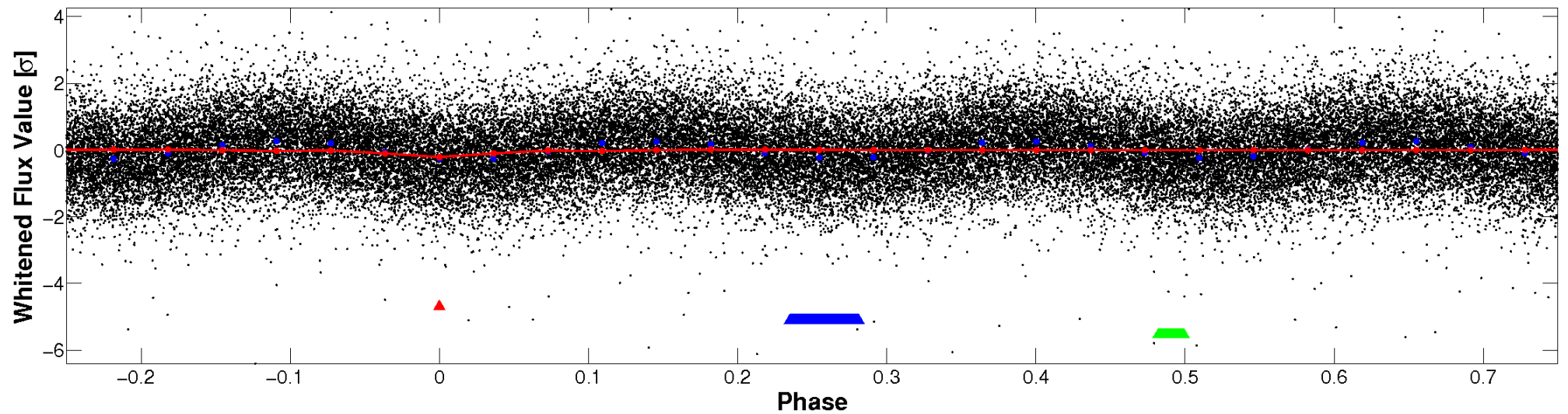


Non-Whitened Vs. Whitened Light Curve

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

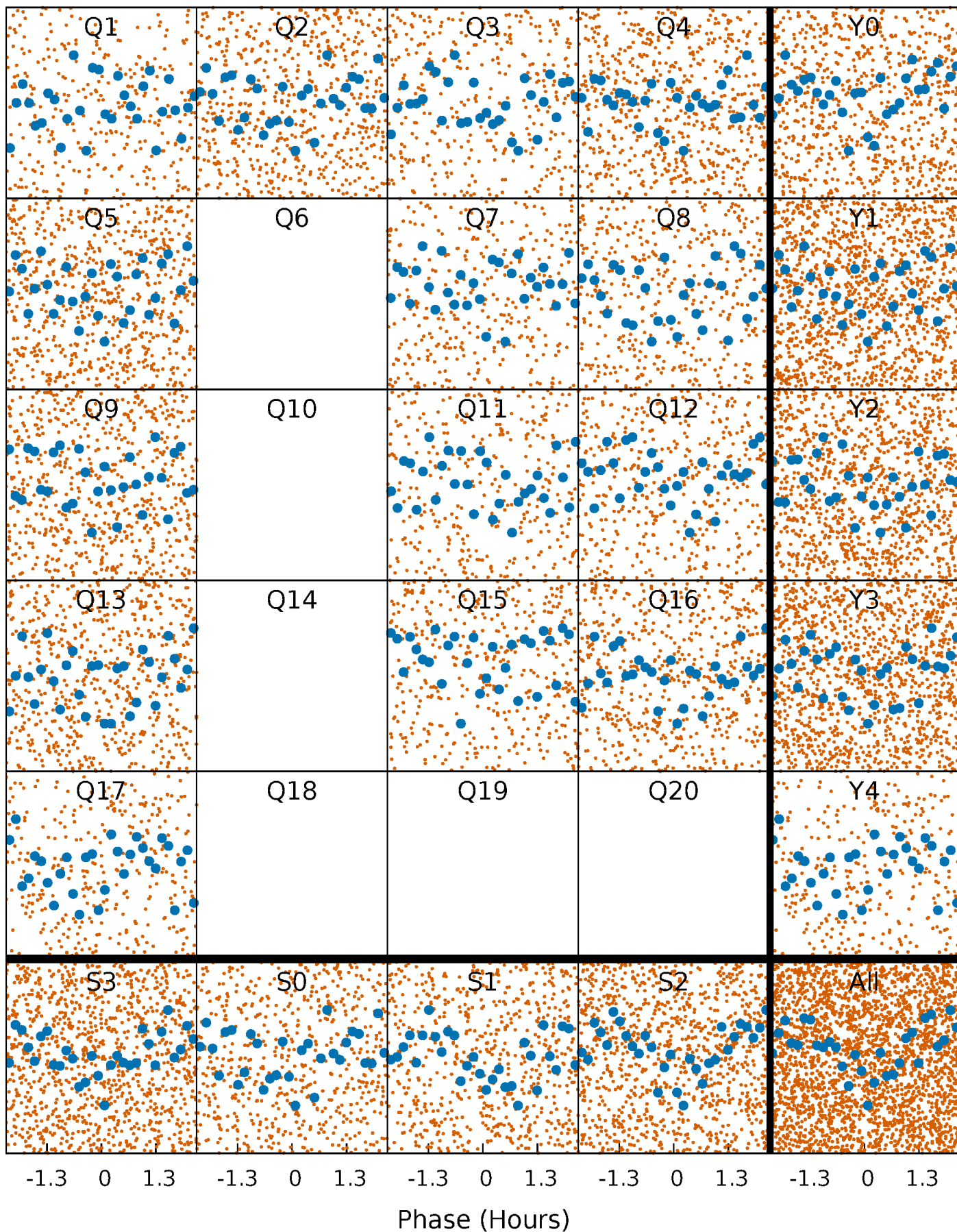


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



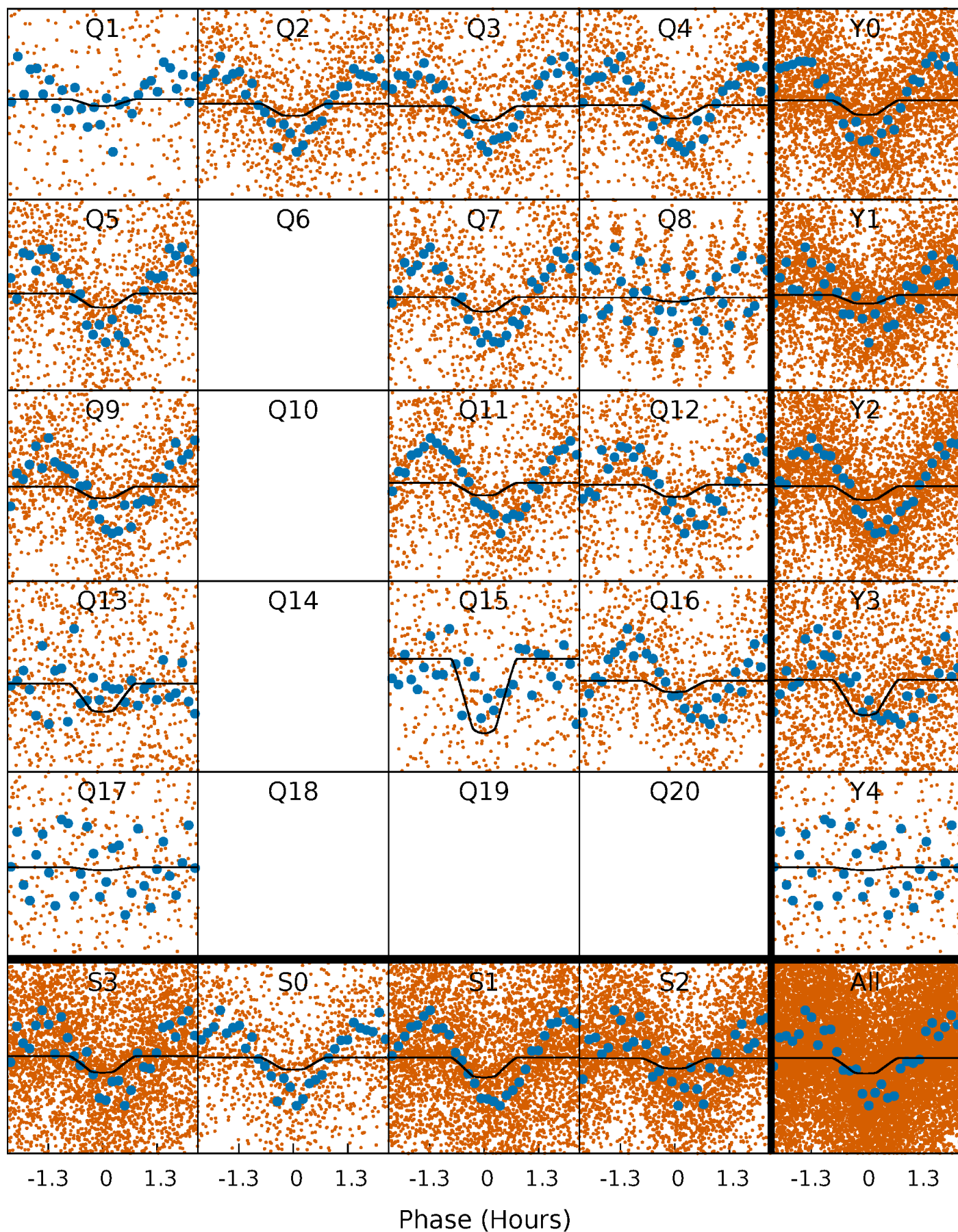
PDC Quarter-Phased Transit Curves

TCE 004484271-01 P= 0.561409 Days $T_0=131.722354$ (BKJD)



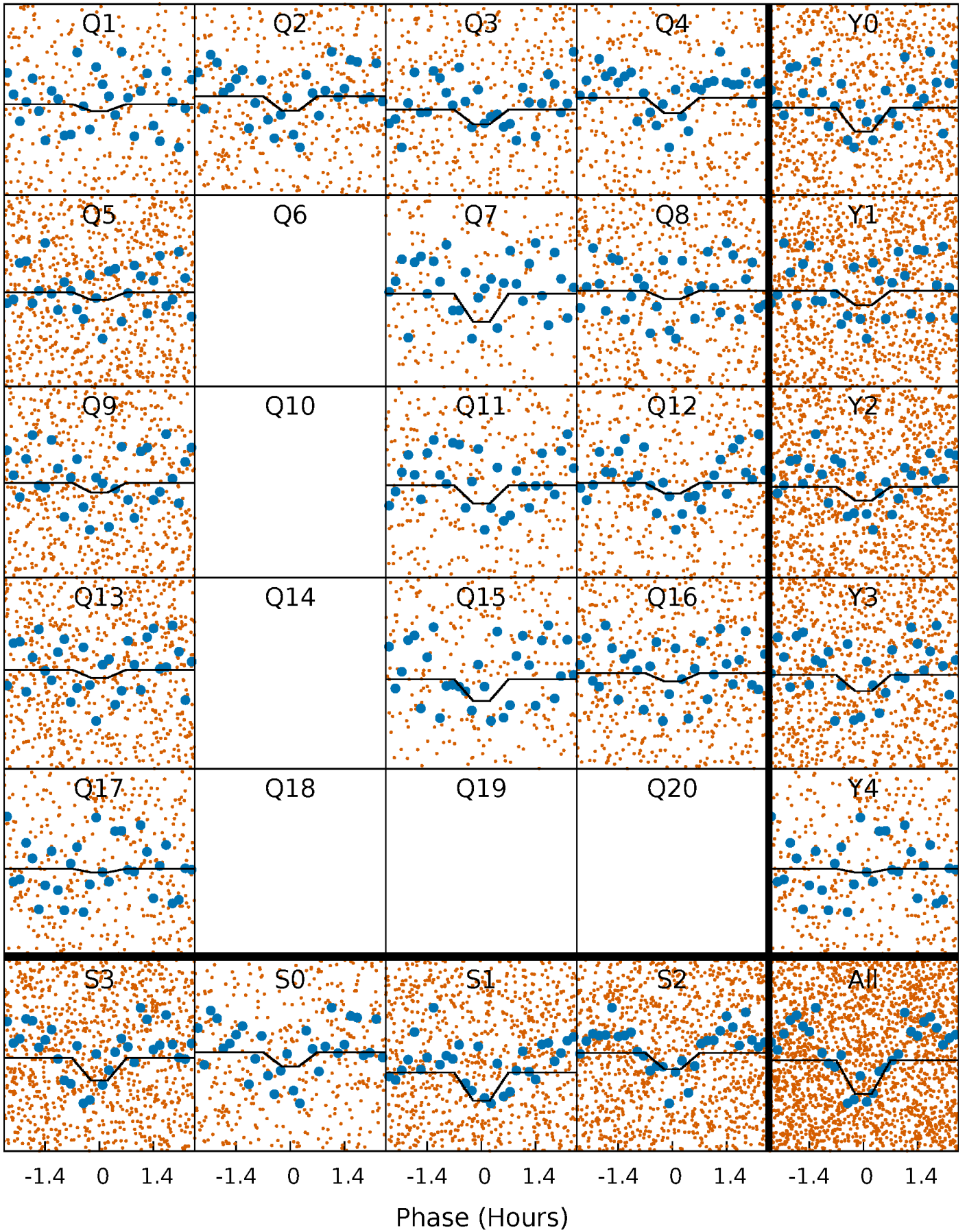
DV Quarter-Phased Transit Curves

TCE 004484271-01 P= 0.561409 Days $T_0=131.722354$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

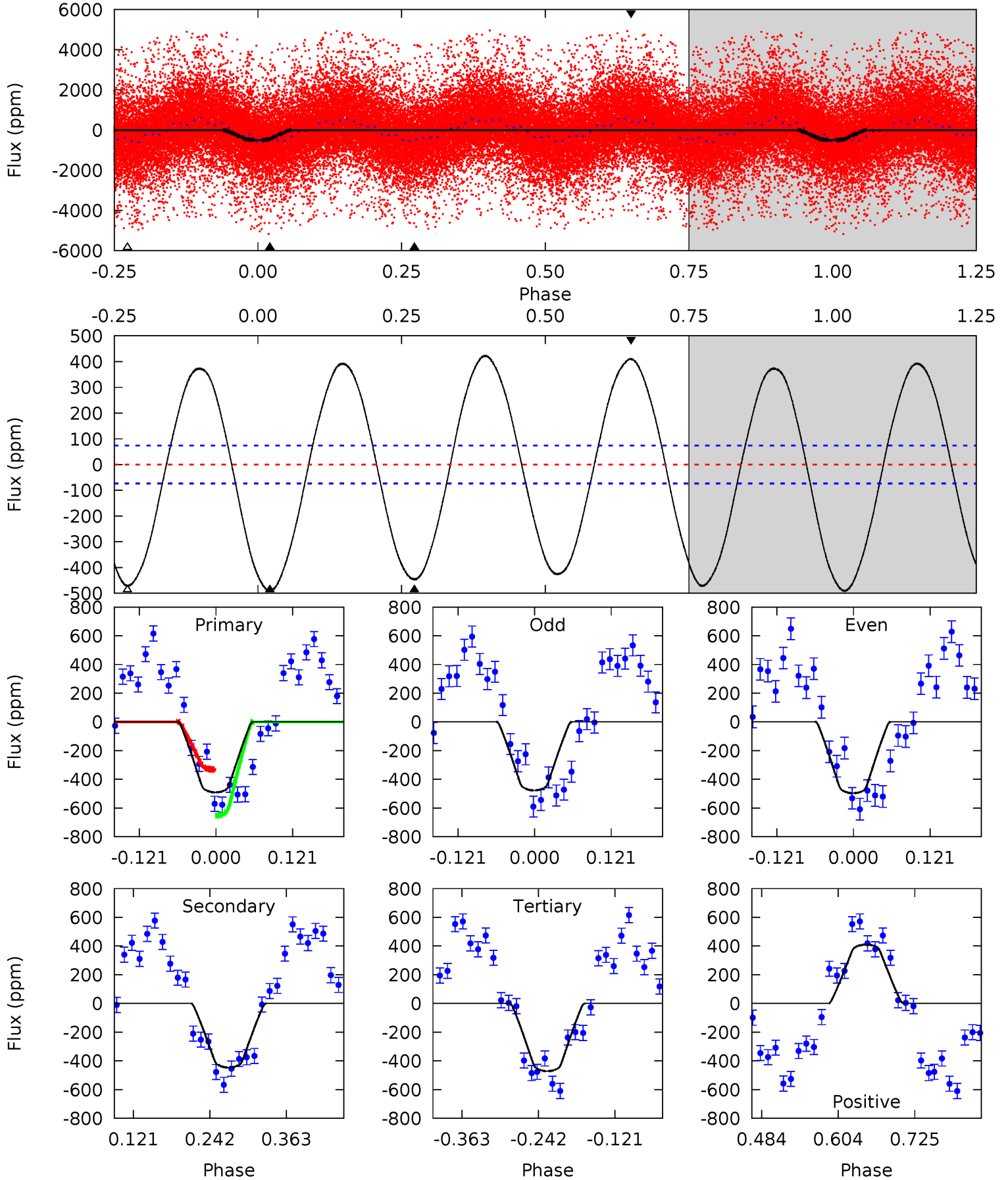
TCE 004484271-01 P= 0.561417 Days $T_0=131.715810$ (BKJD)



DV Model-Shift Uniqueness Test

004484271-01, P = 0.561409 Days, E = 131.160945 Days

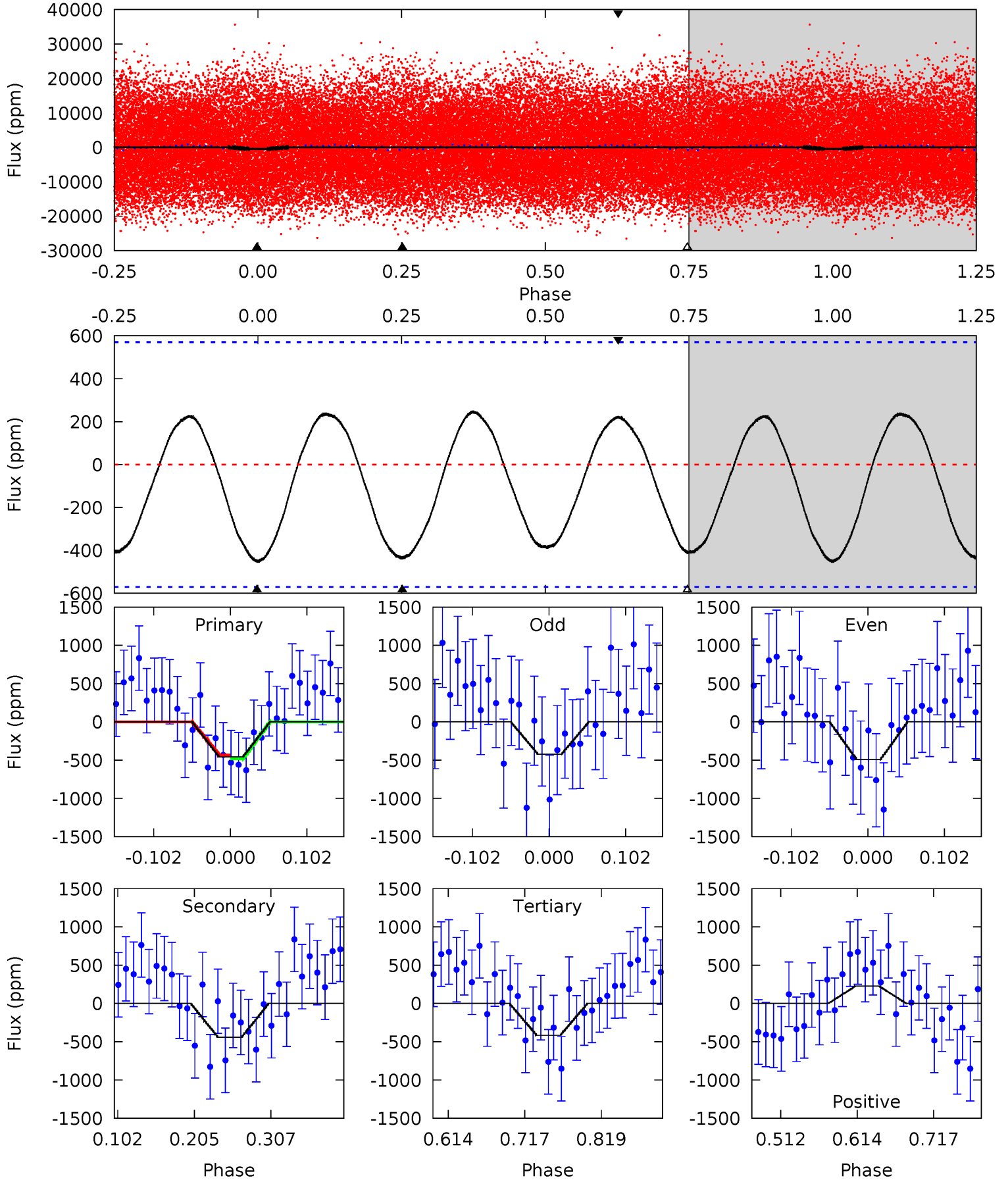
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.1	27.4	28.9	25.1	4.52	1.55	18.7	1.18	4.97	-1.56	2.22	0.61	1.09	0.46	10.1



Alt Model-Shift Uniqueness Test

004484271-01, P = 0.561417 Days, E = 131.154393 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.66	3.53	3.33	1.81	4.56	1.63	1.84	0.33	1.85	0.20	1.73	0.28	0.36	0.36	0.20



Stellar Parameters For KIC 004484271

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7194^{+228}_{-279}	$4.010^{+0.286}_{-0.154}$	$-0.500^{+0.250}_{-0.300}$	$1.856^{+0.505}_{-0.617}$	$1.283^{+0.202}_{-0.184}$	$0.283^{+0.523}_{-0.120}$
	+3%/-4%	+7%/-4%	+50%/-60%	+27%/-33%	+16%/-14%	+185%/-43%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 004484271-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-446 ± 16	$3.06^{+1.31}_{-1.06}$	4969^{+376}_{-491}	8355^{+2935}_{-1515}	$5.563^{+6.728}_{-2.878}$
Alt.	-442 ± 125	$4.18^{+1.33}_{-1.15}$	4910^{+427}_{-475}	6710^{+1485}_{-953}	$2.862^{+2.831}_{-1.344}$

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 $A_{obs} \gg 1.0$

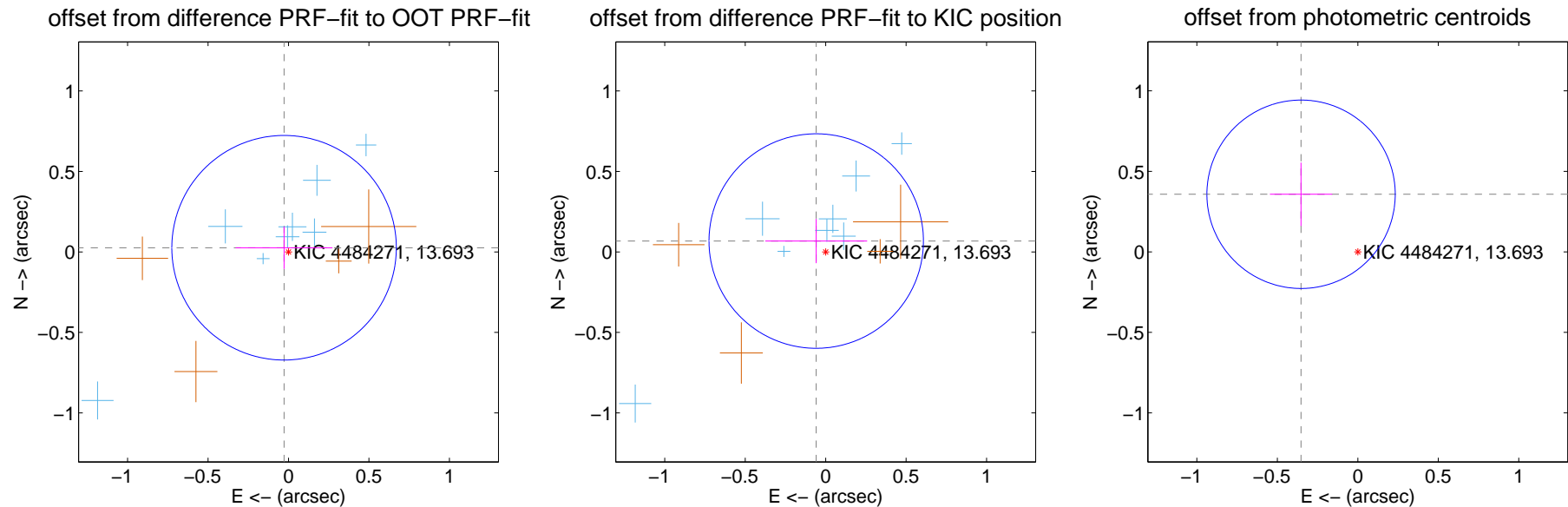
DV Centroid Data

Supplemental centroid analysis for 004484271-01. Kepler magnitude: 13.69. Transit SNR 12.01

There are 8 quarters with good PRF difference image offsets

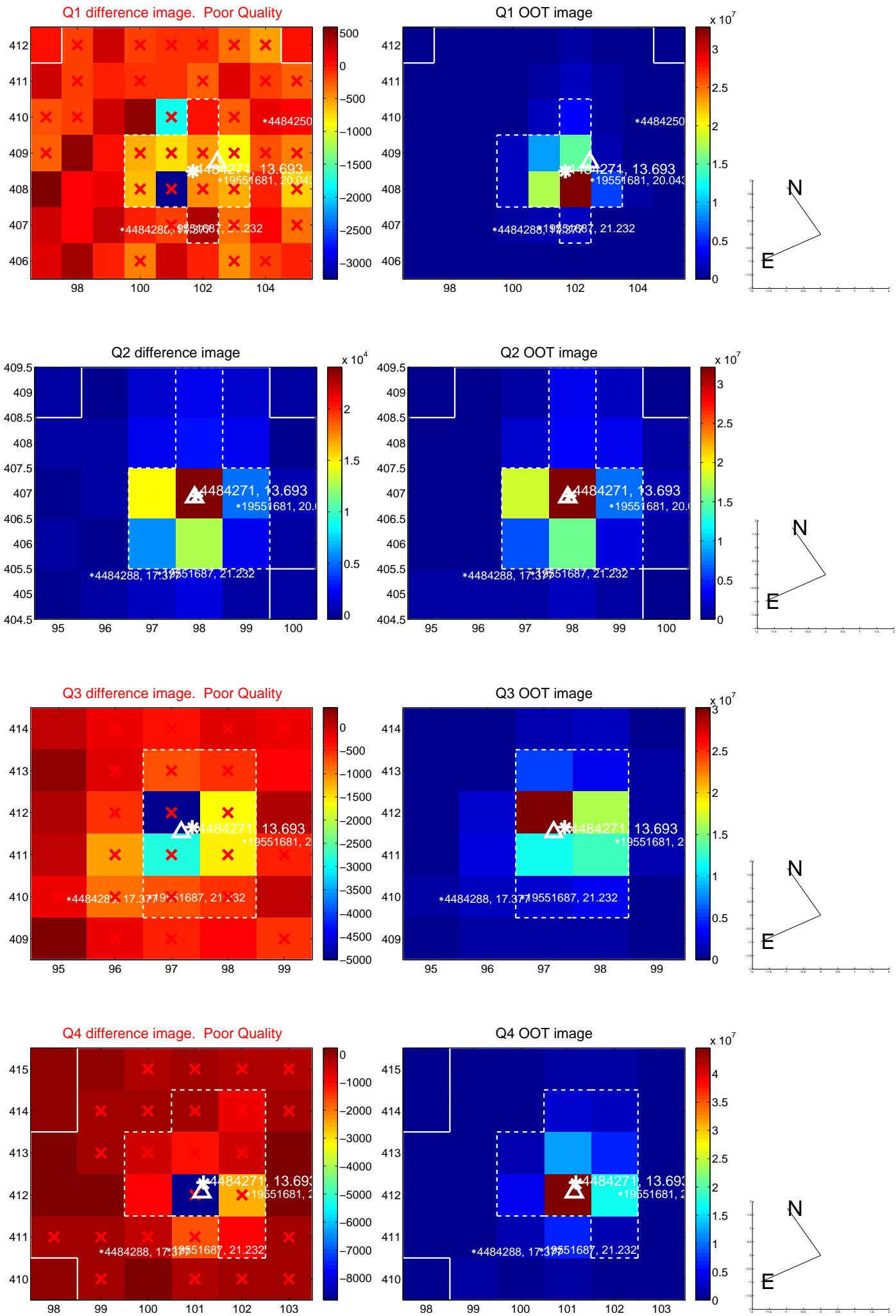
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.038 ± 0.232	0.16	0.027 ± 0.301	0.026 ± 0.131
PRF-fit source offset from KIC position	0.090 ± 0.222	0.40	0.059 ± 0.317	0.068 ± 0.137
photometric centroid source offset	0.50 ± 0.19	2.58	0.35 ± 0.19	0.36 ± 0.20

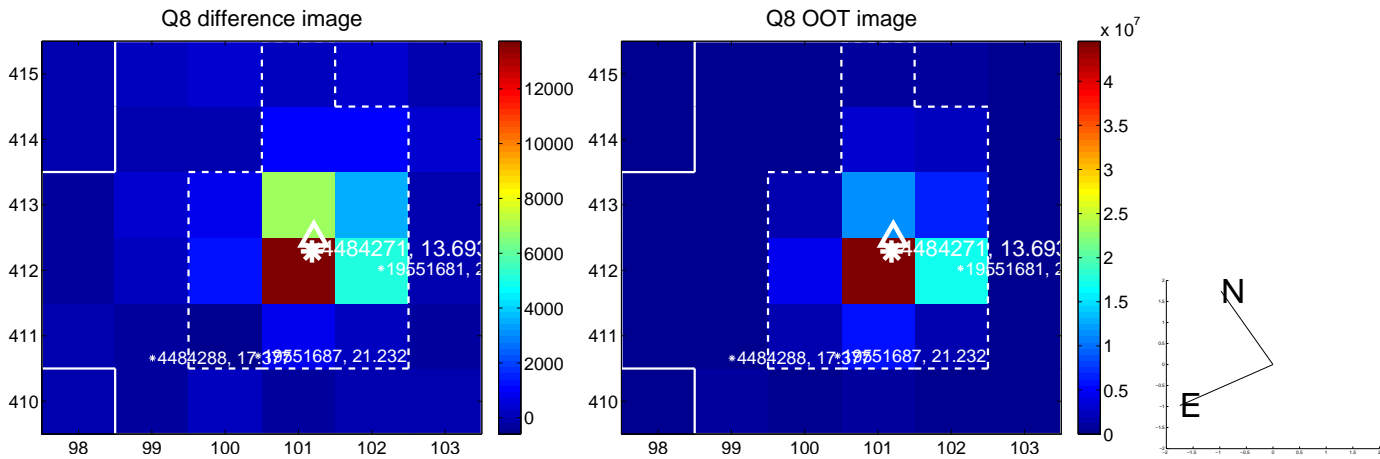
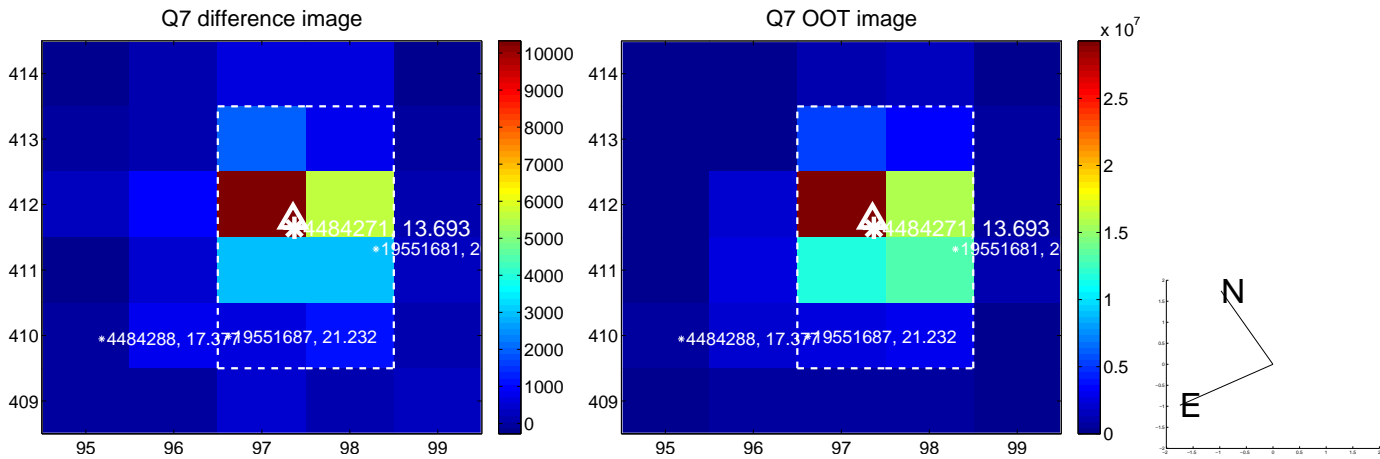
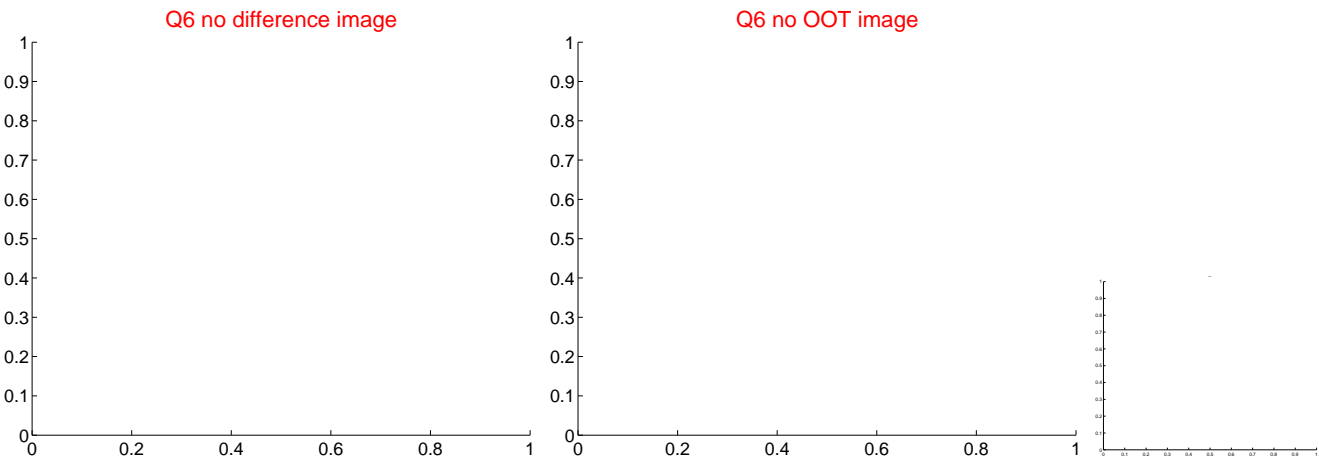
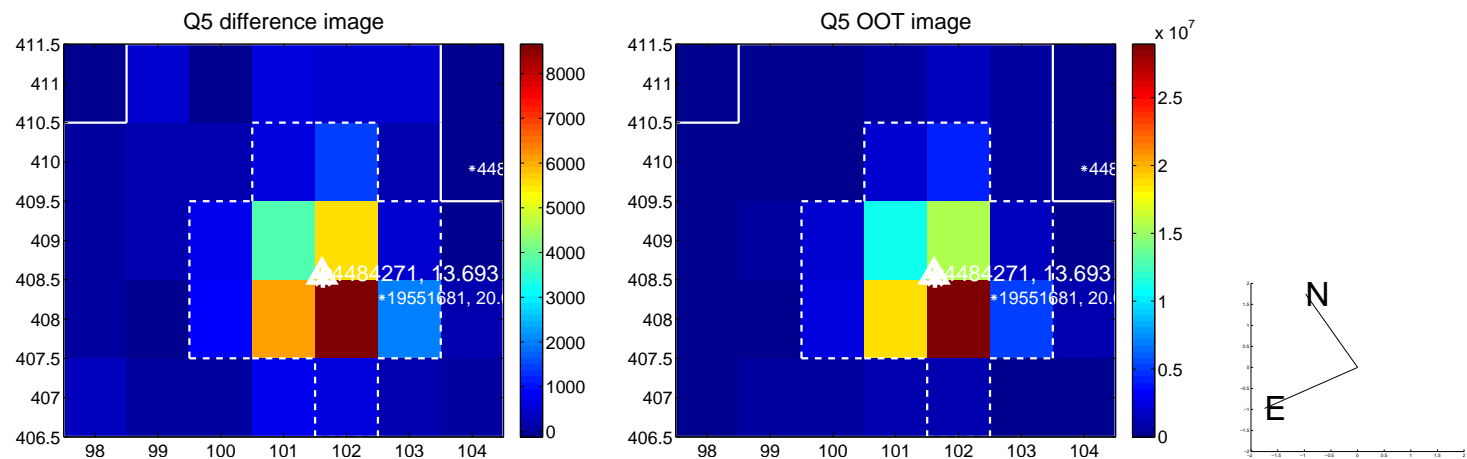


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

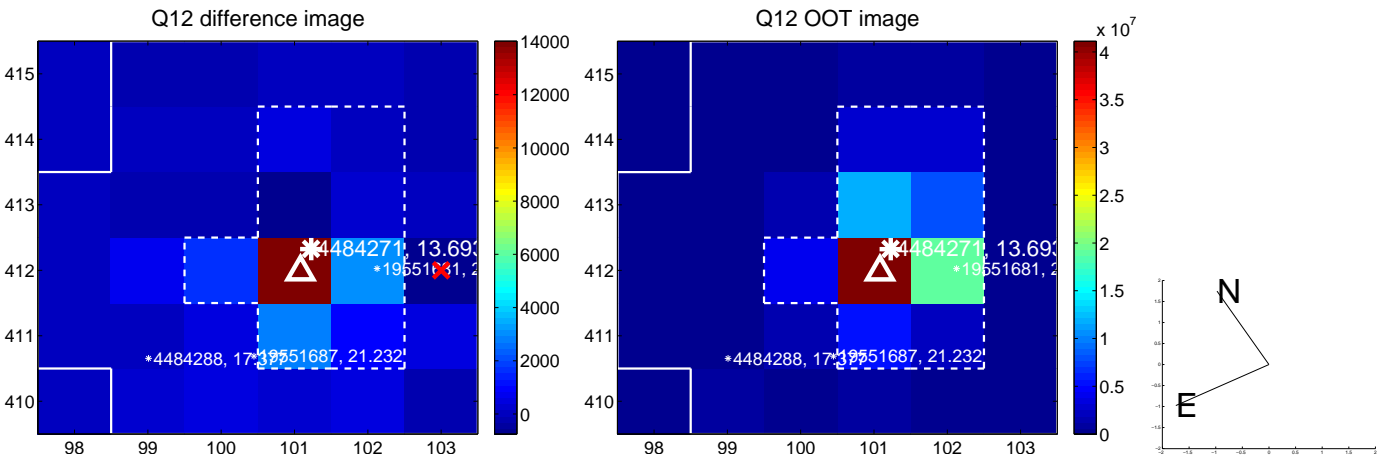
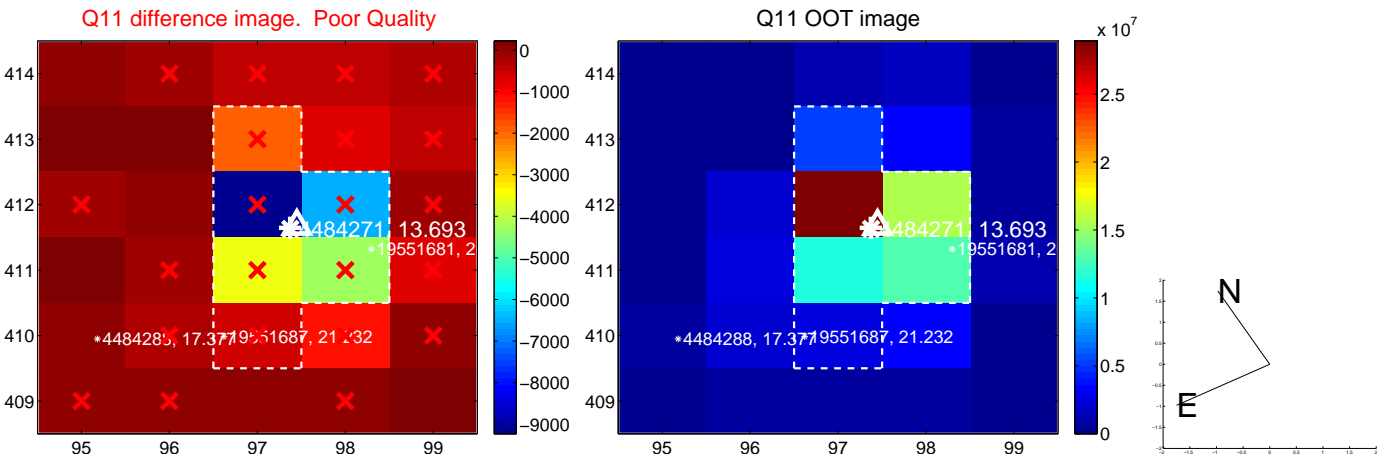
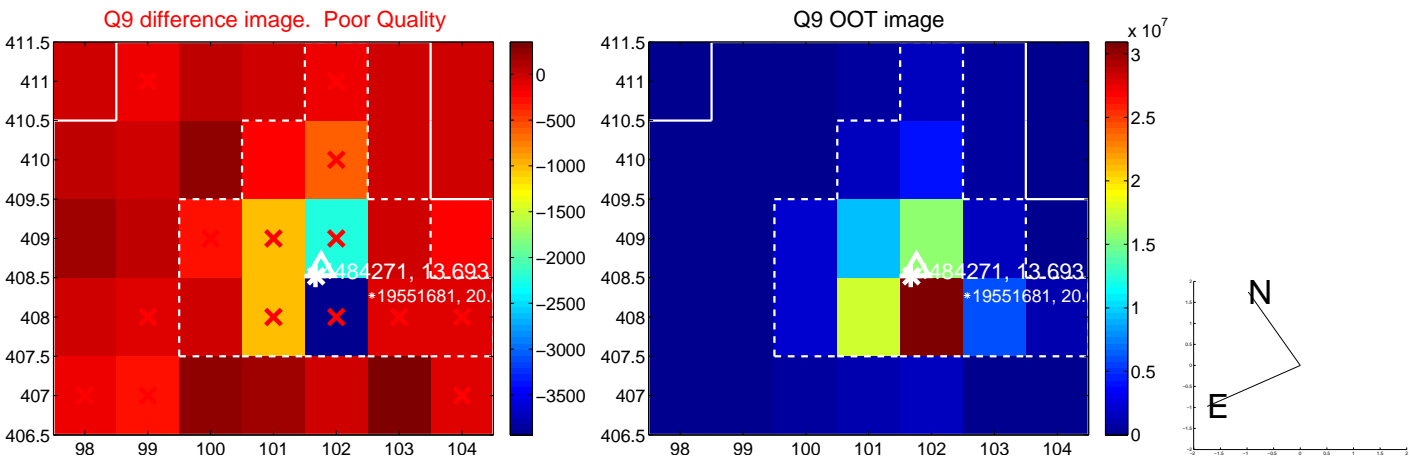
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



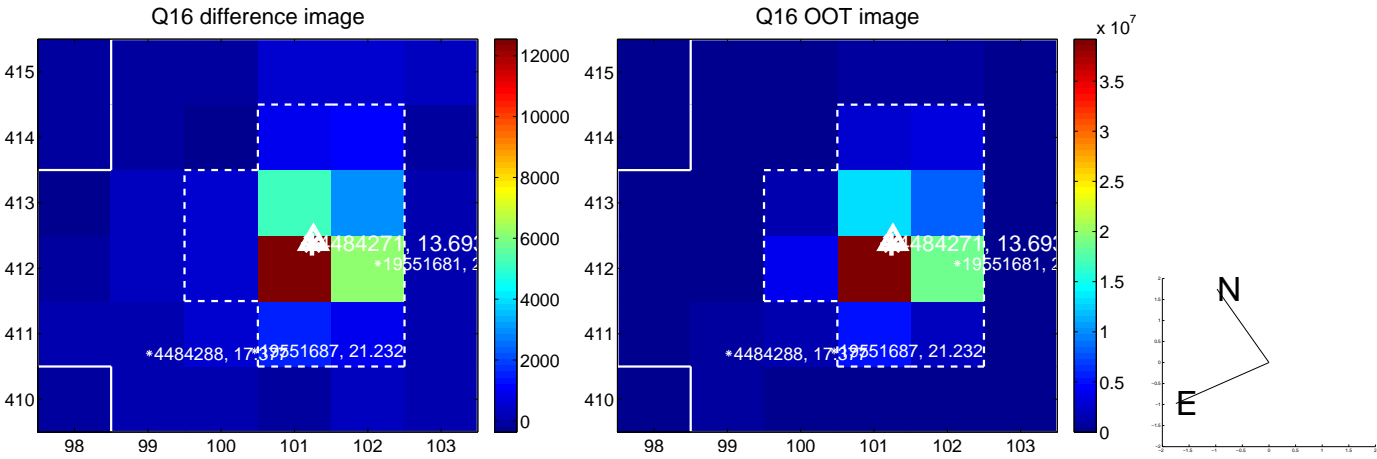
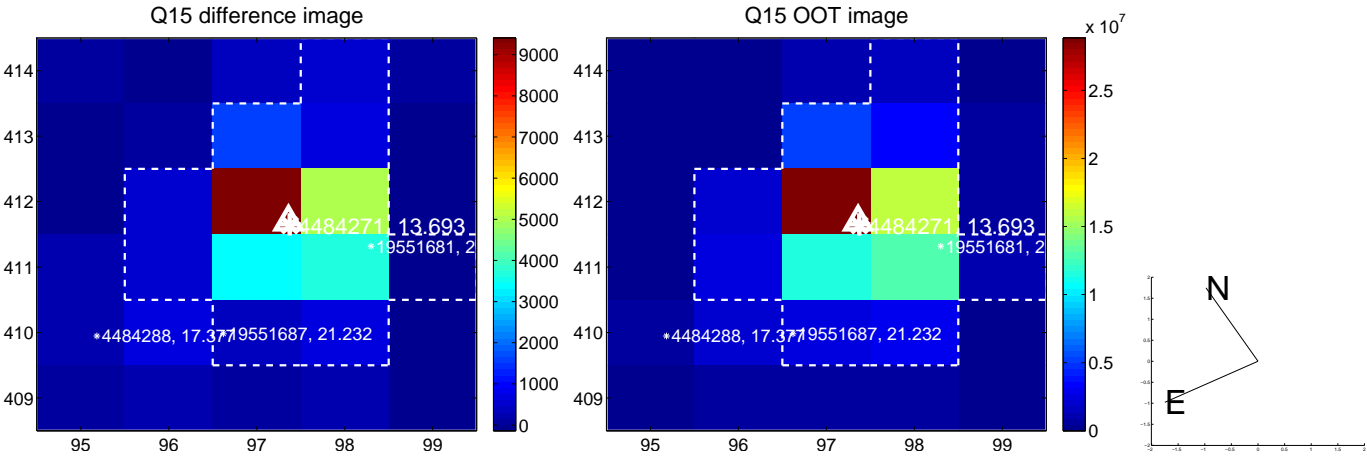
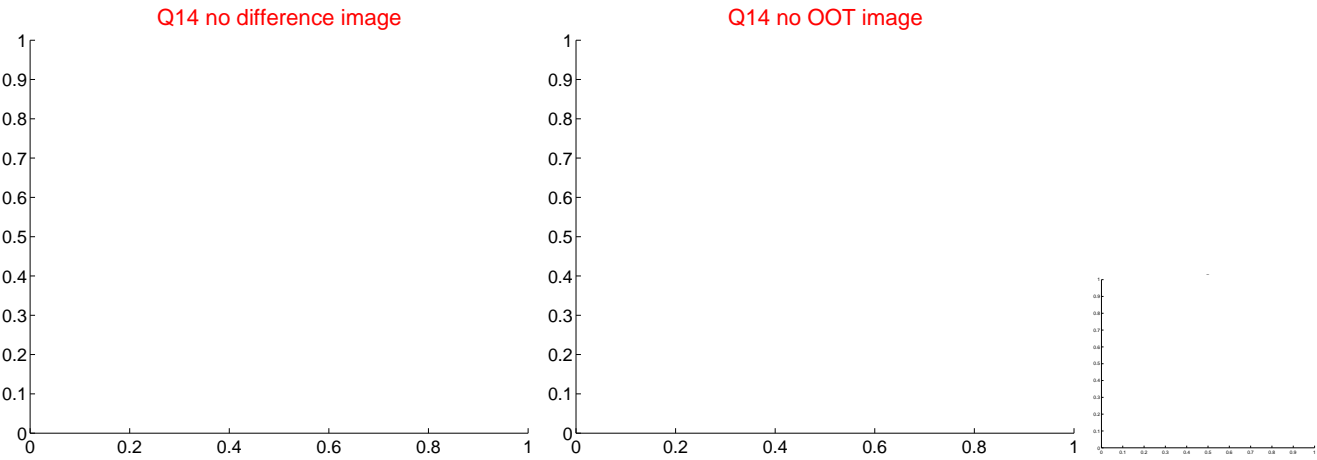
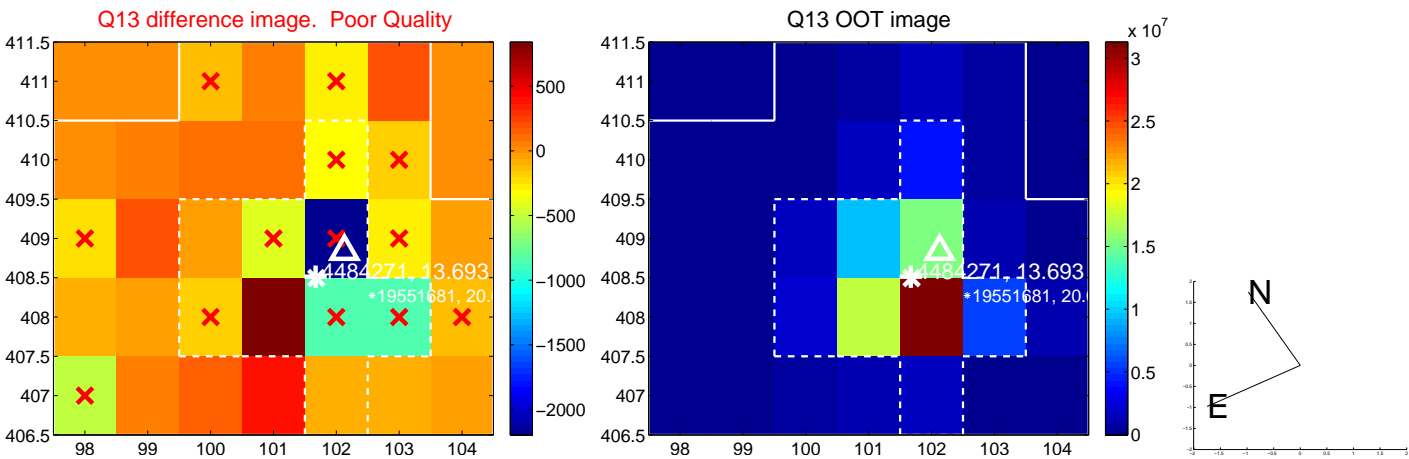
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



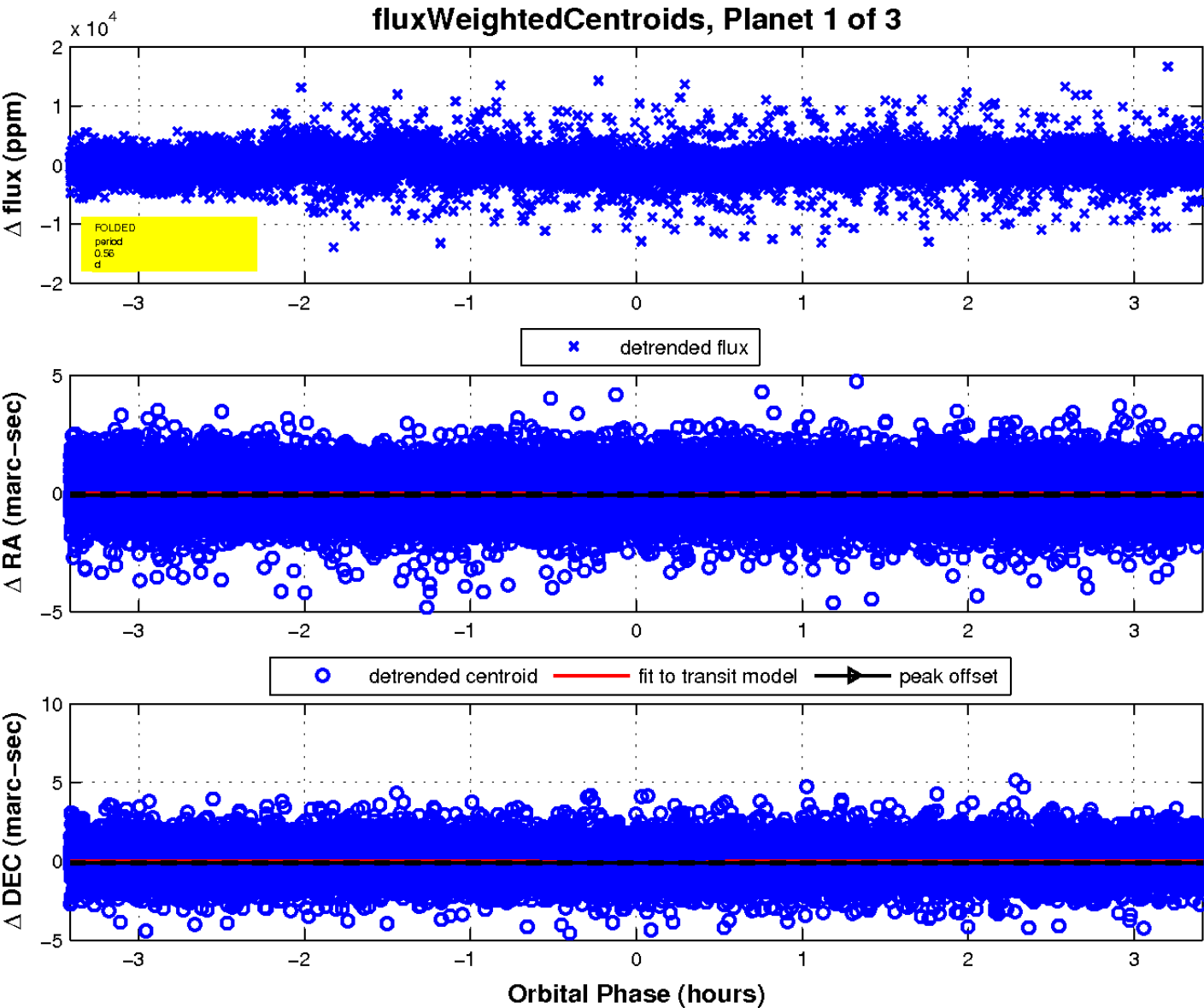
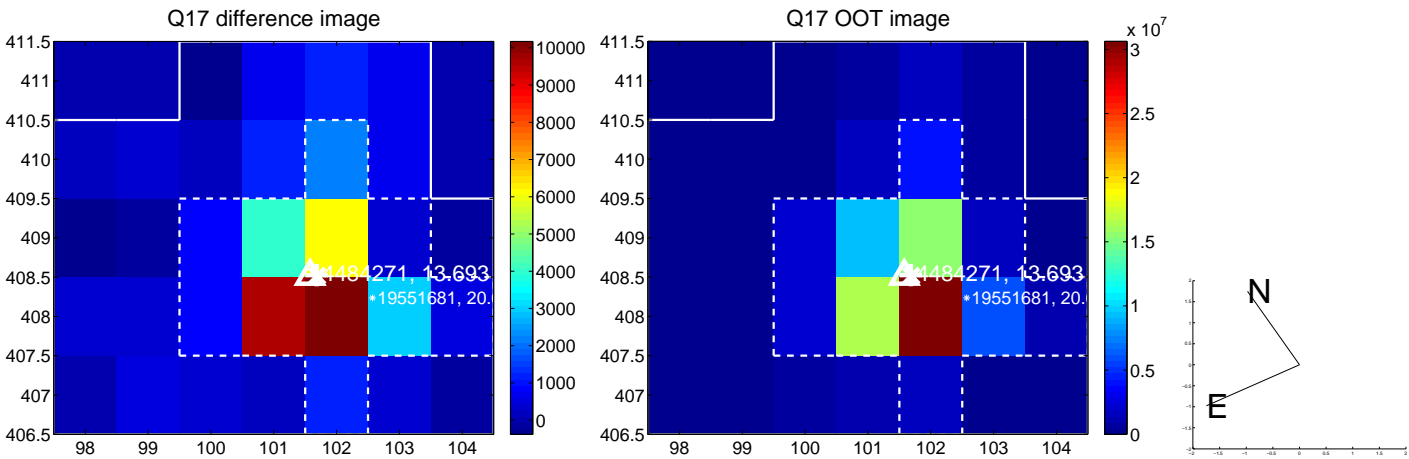
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

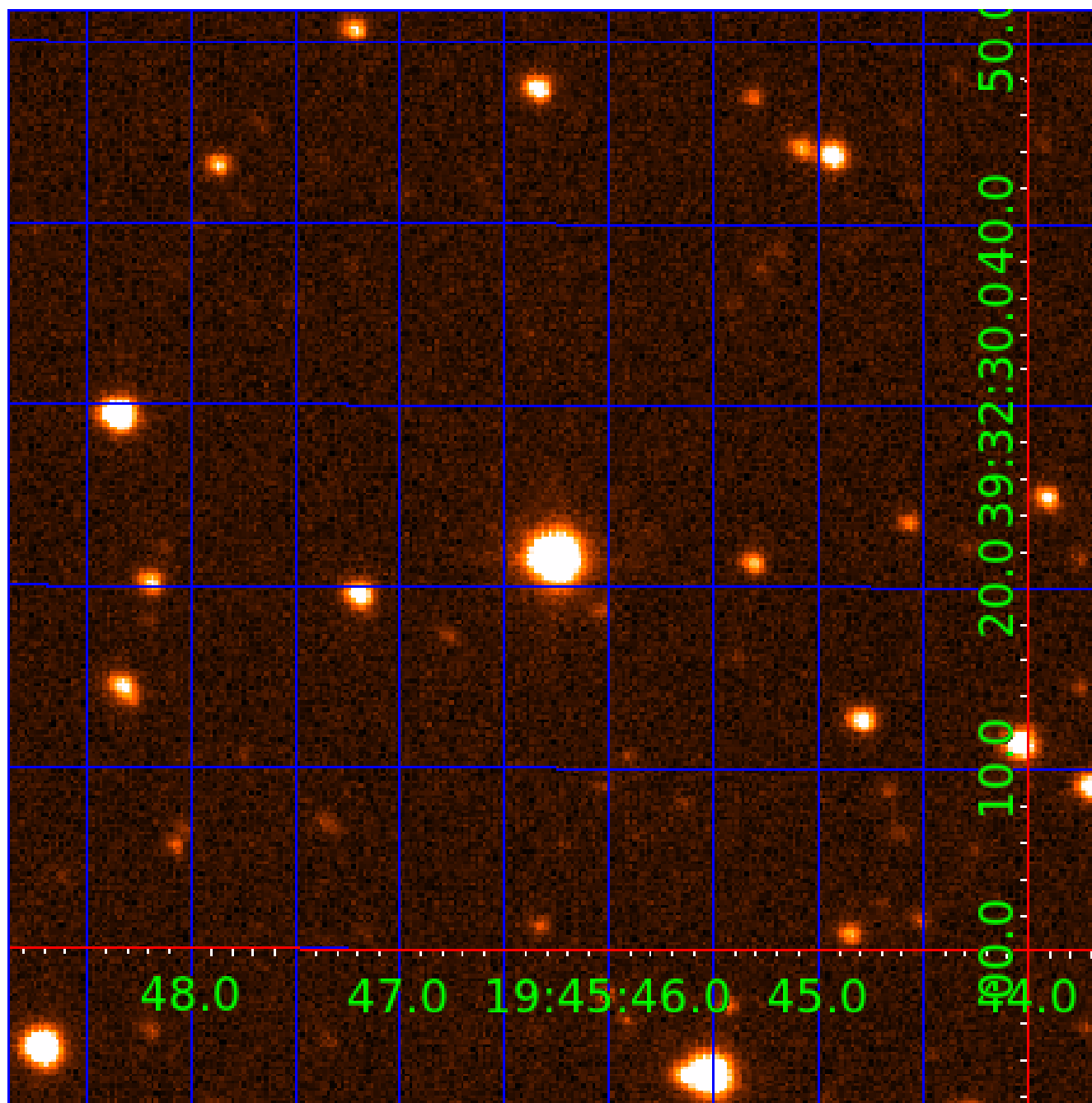


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004484271

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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004484271-03	OBS	No	0.561405	132.002679	219.7	1.350	11.9	12.1	1.86	7194	2.87	39396.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004484271-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
004484271-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD
004484271-03	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

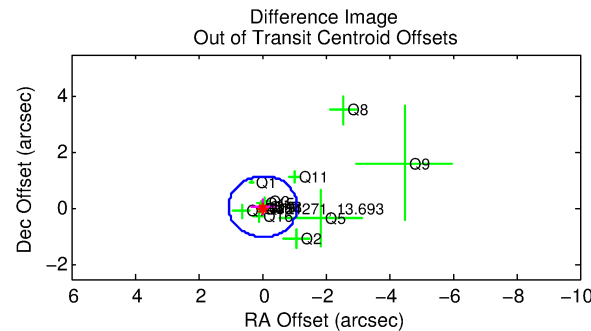
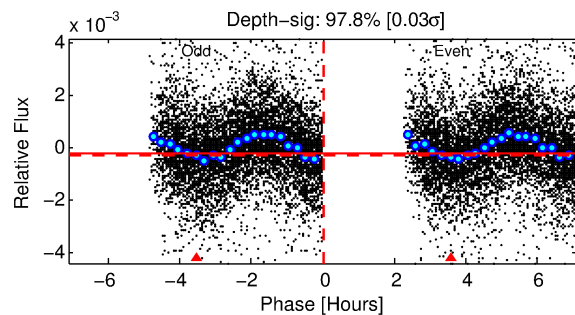
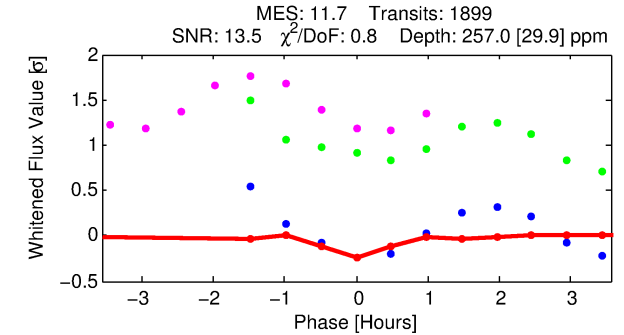
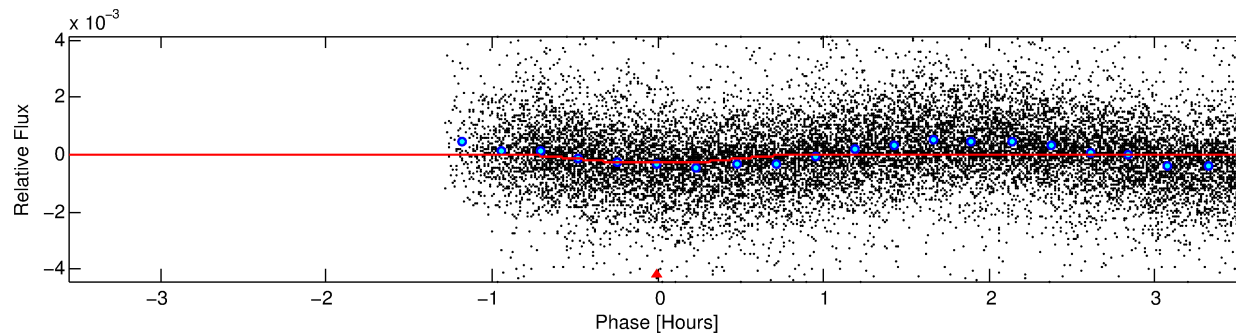
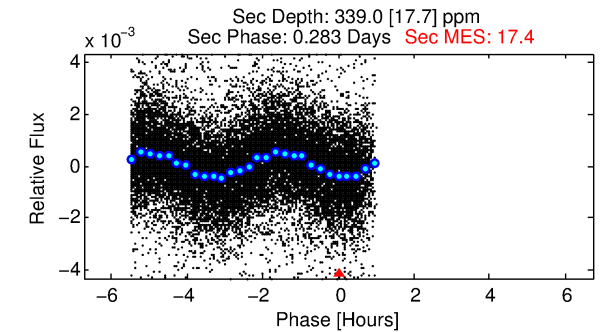
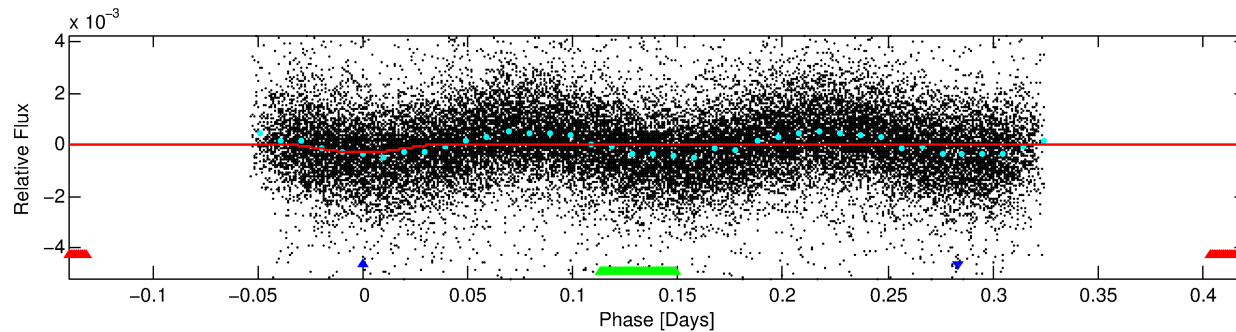
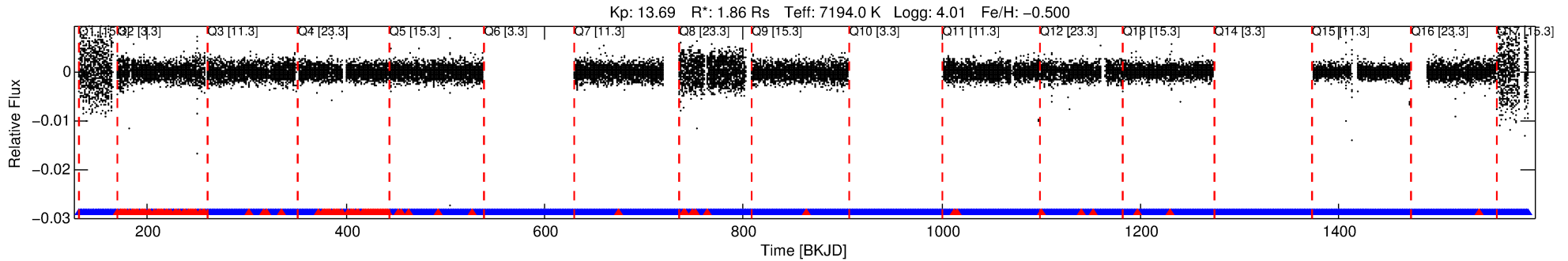
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004484271-02

No Significant Match Found

DV One-Page Summary

KIC: 4484271 Candidate: 2 of 3 Period: 0.561 d



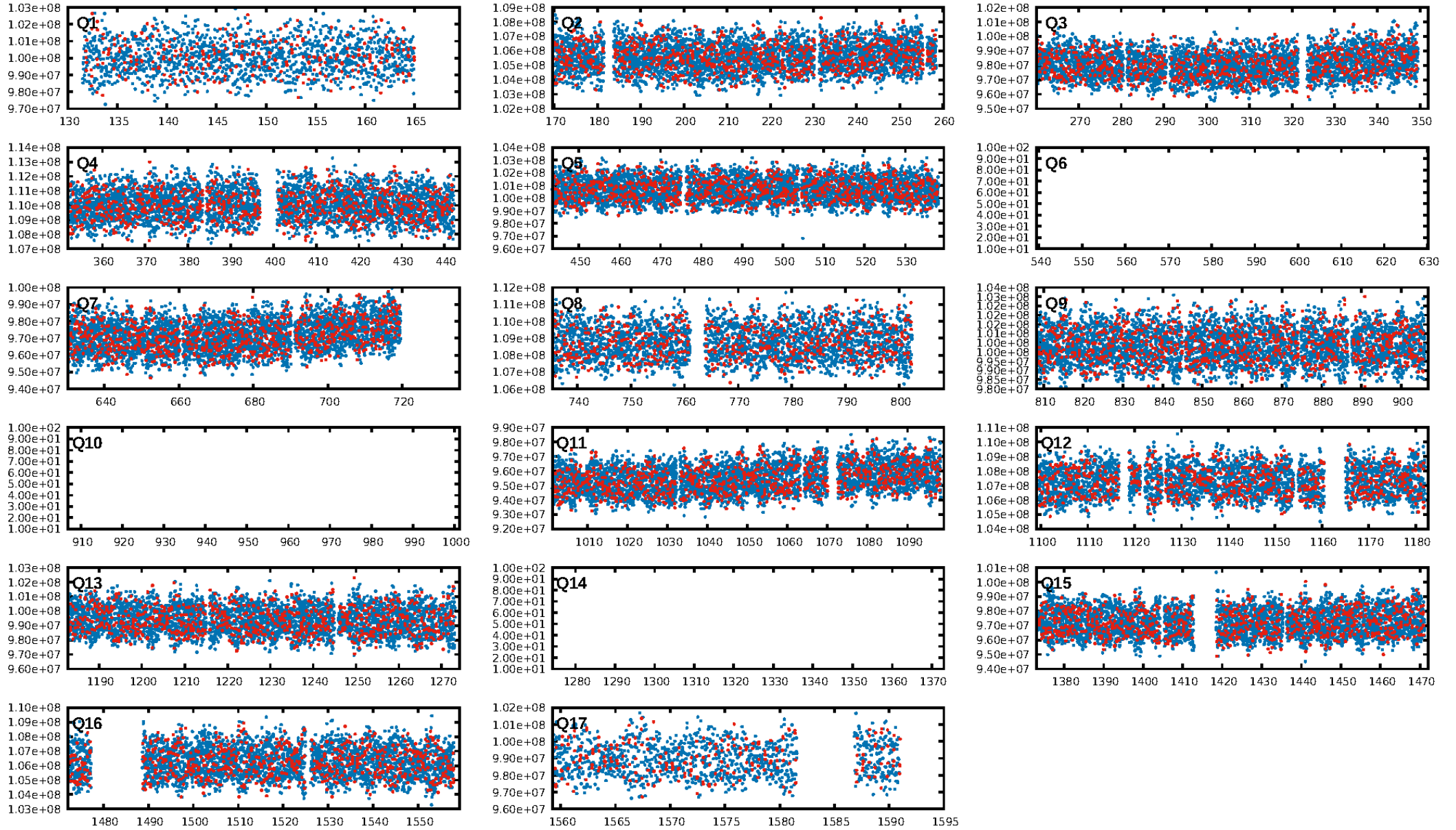
DV Fit Results:

Period = 0.56142 [0.00001] d
Epoch = 131.8543 [0.0014] BKJD
Rp/R* = 0.0171 [0.0062]
a/R* = 1.95 [3.23]
b = 0.90 [0.48]
Seff = 39395.41 [20315.44]
Teff = 3592 [463] K
Rp = 3.47 [1.71] Re
a = 0.0145 [0.0045] AU
Ag = 3.25 [2.86] [0.79σ]
Teffp = 7457 [1392] K [2.63σ]

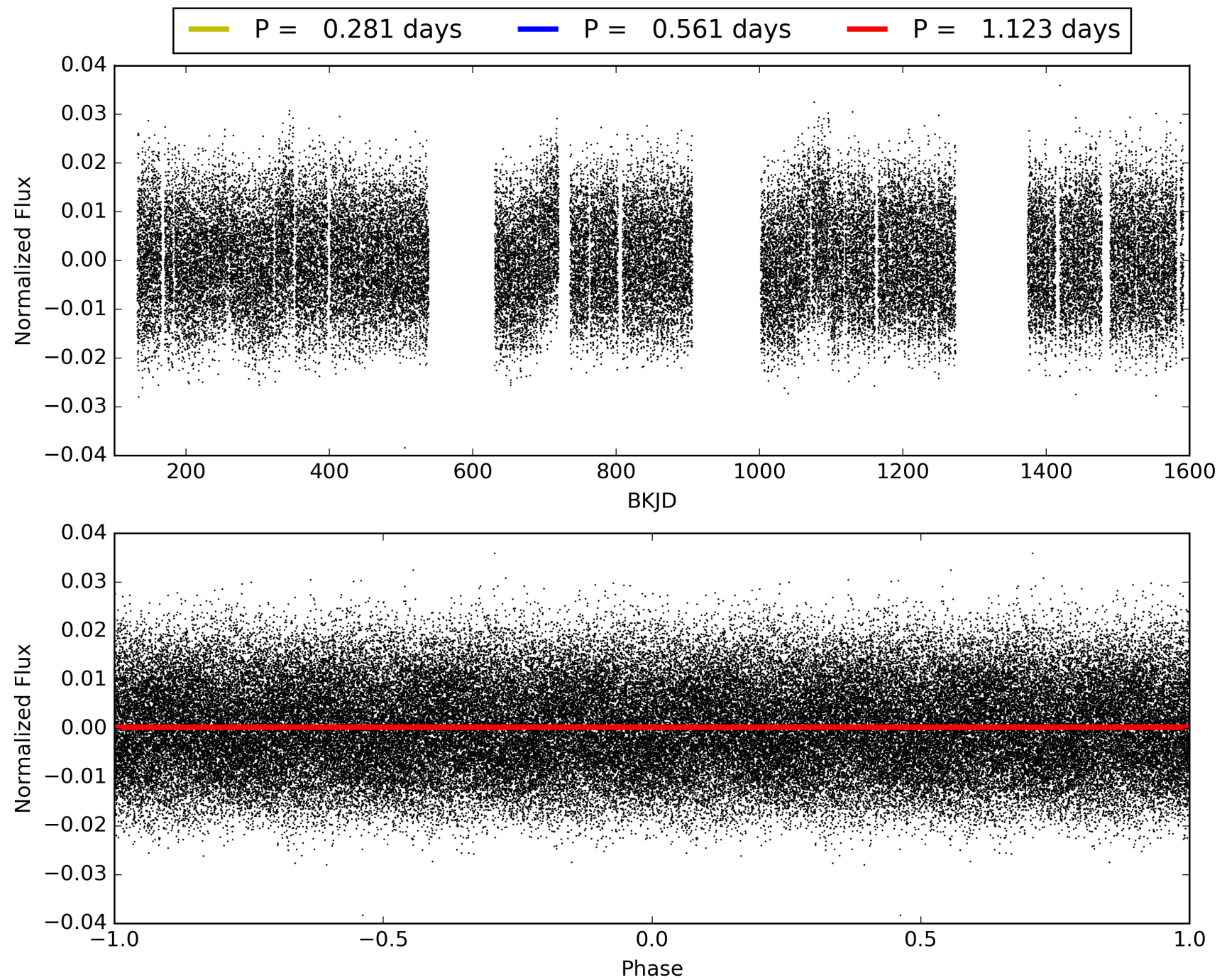
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.92 [1646/1791]
GhostDiagnostic-chr: 7.748
Centroid-sig: 0.2%
Centroid-so: 0.185 arcsec [1.13σ]
OotOffset-rm: 0.083 arcsec [0.23σ]
KicOffset-rm: 0.147 arcsec [0.40σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.64 [9/14]
DiffImageOverlap-fno: 0.00 [0/14]

TCE 004484271-02, PDC Light Curves

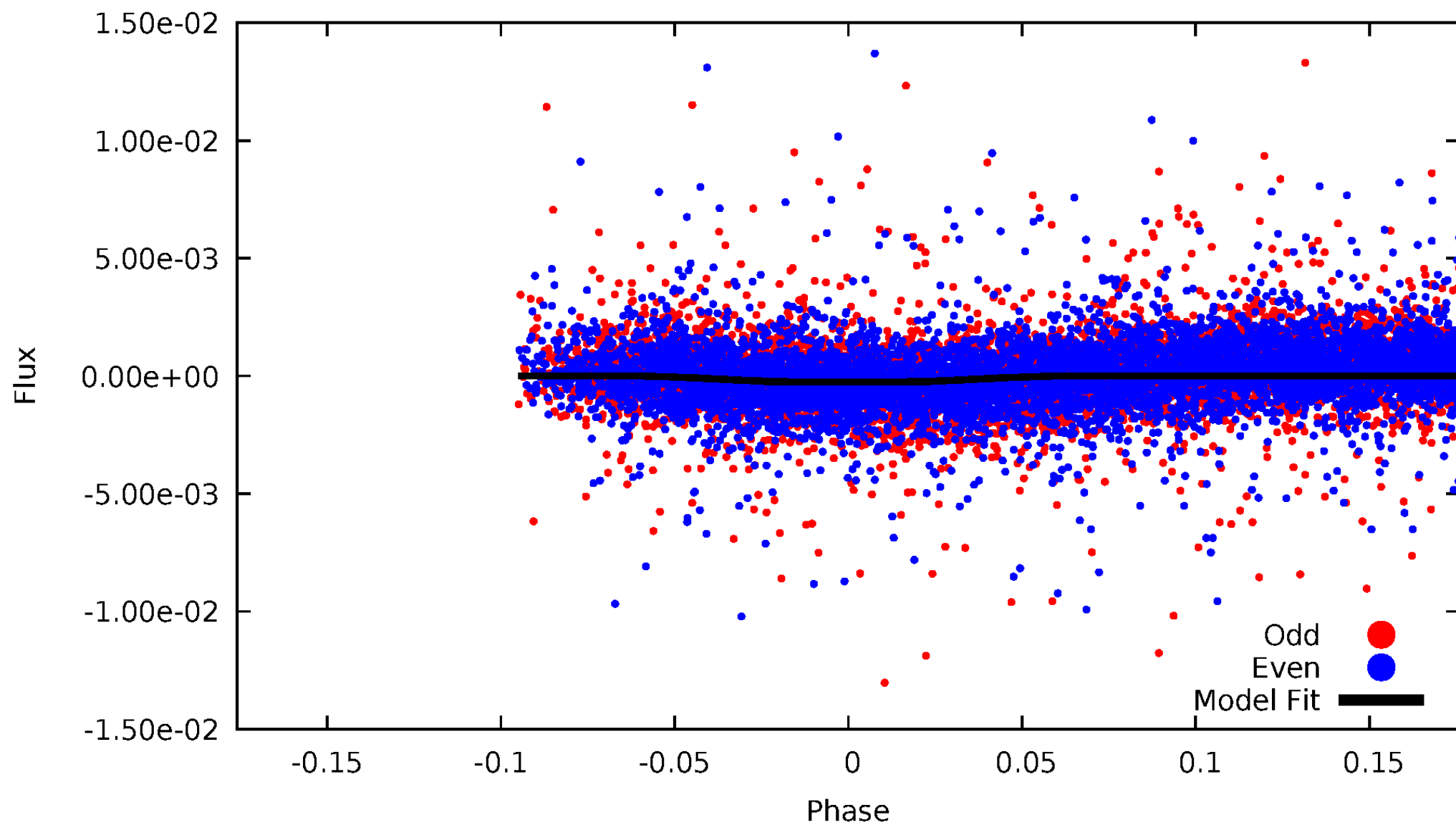


TCE 004484271-02



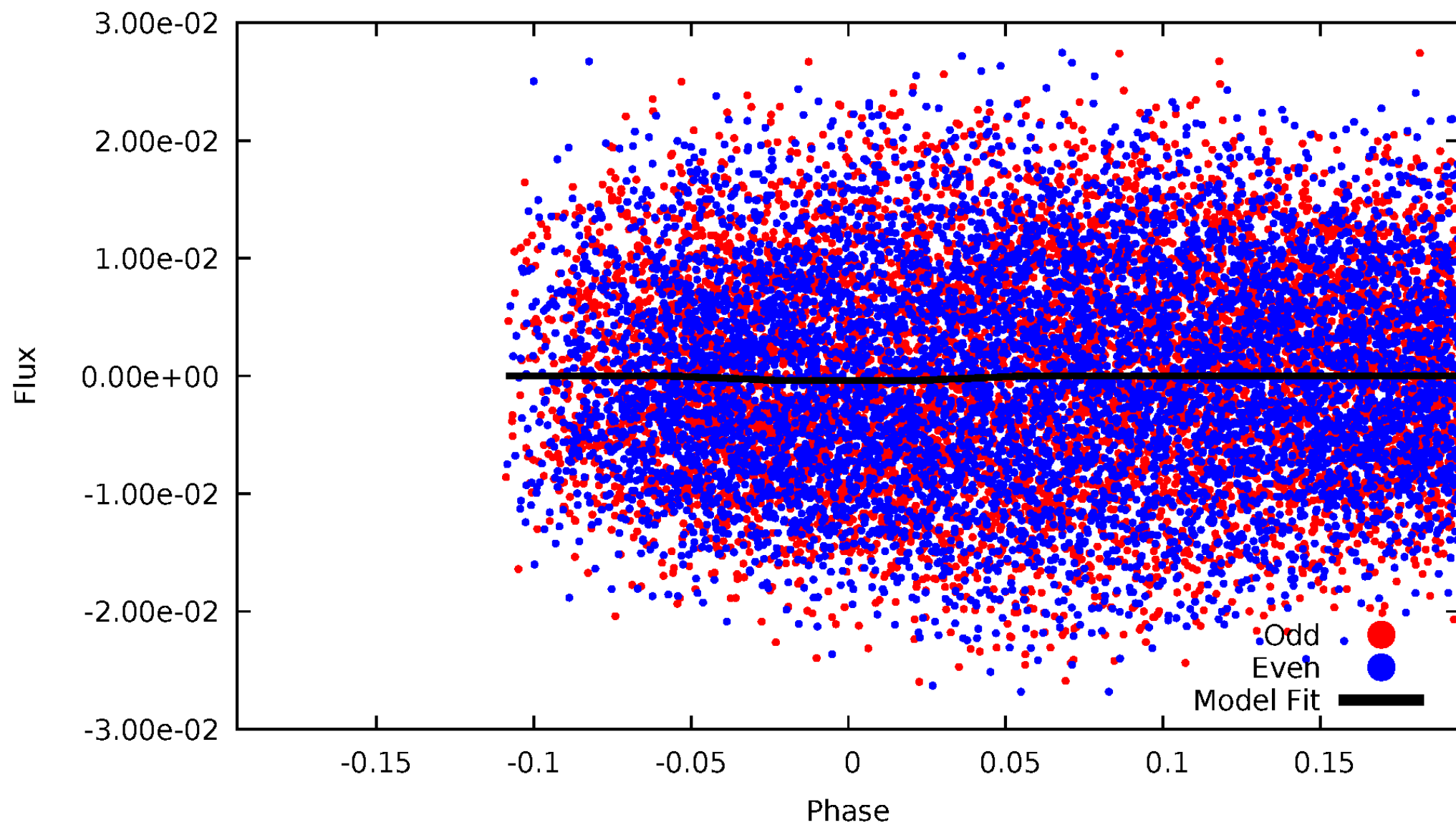
DV Odd/Even

TCE 004484271-02



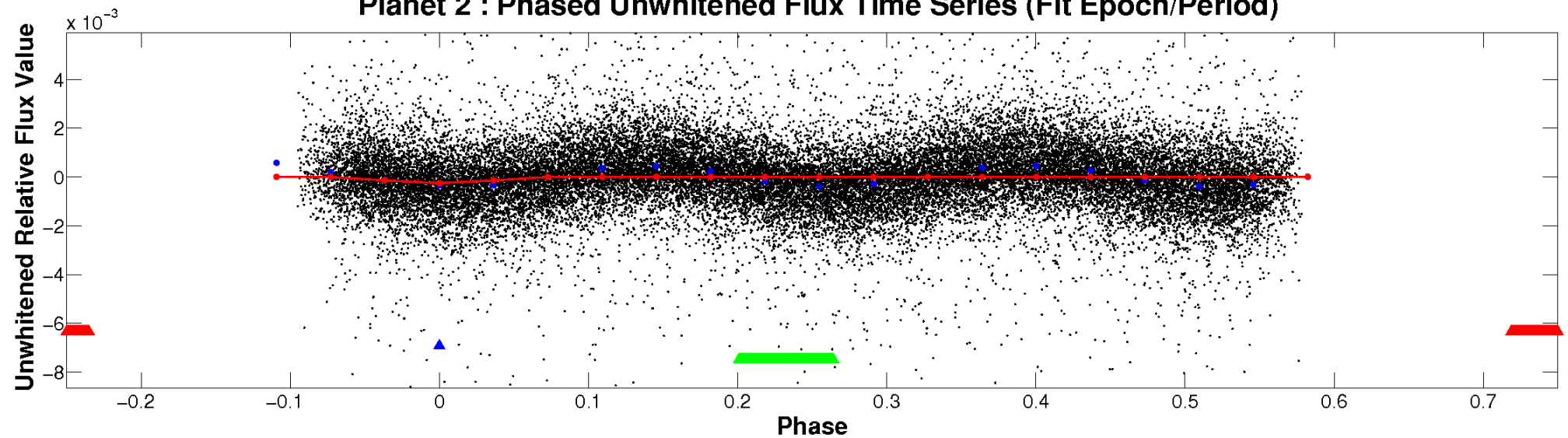
ALT Odd/Even

TCE 004484271-02

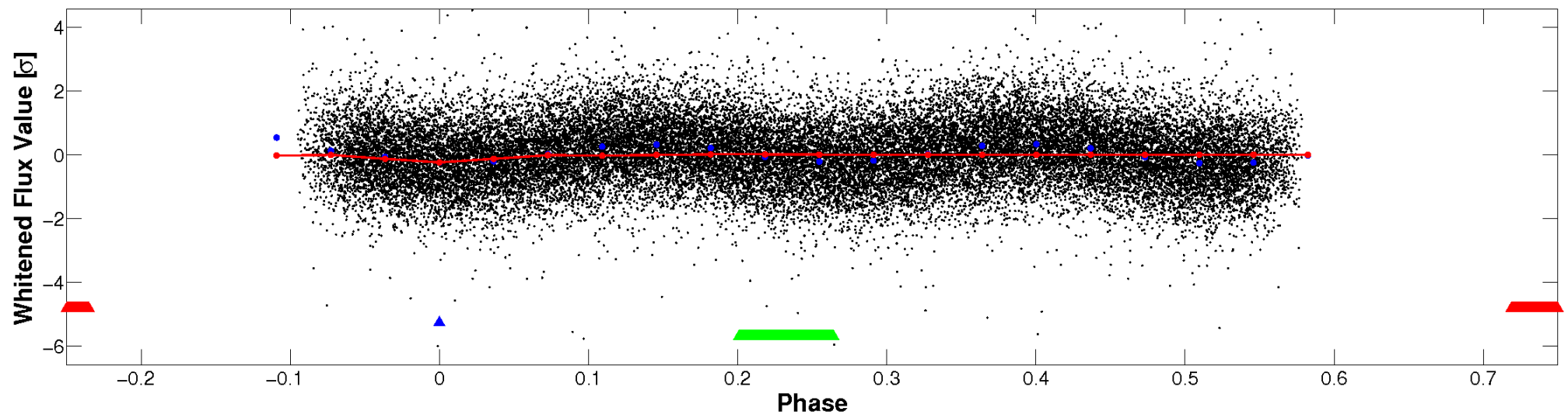


Non-Whitened Vs. Whitened Light Curve

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

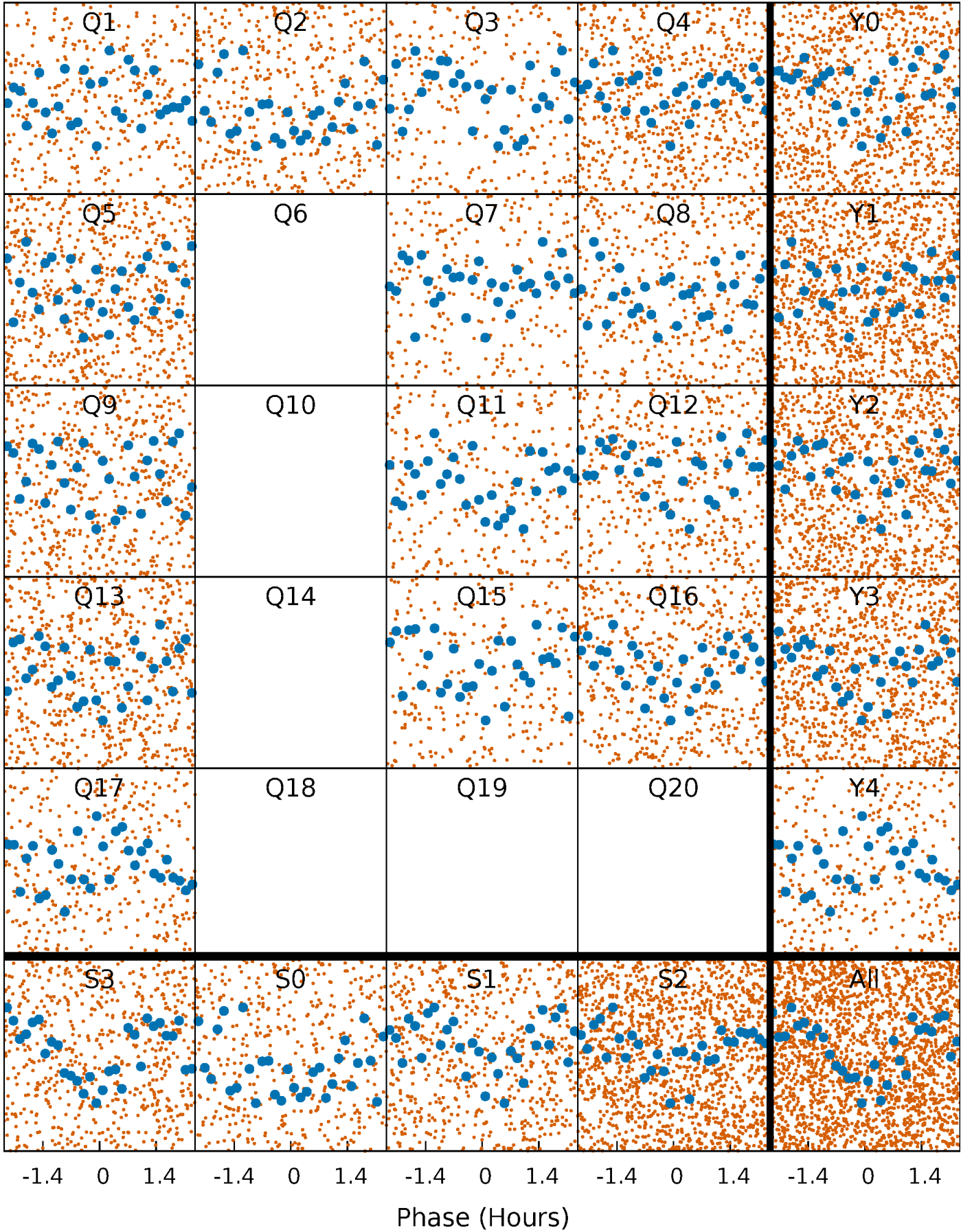


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



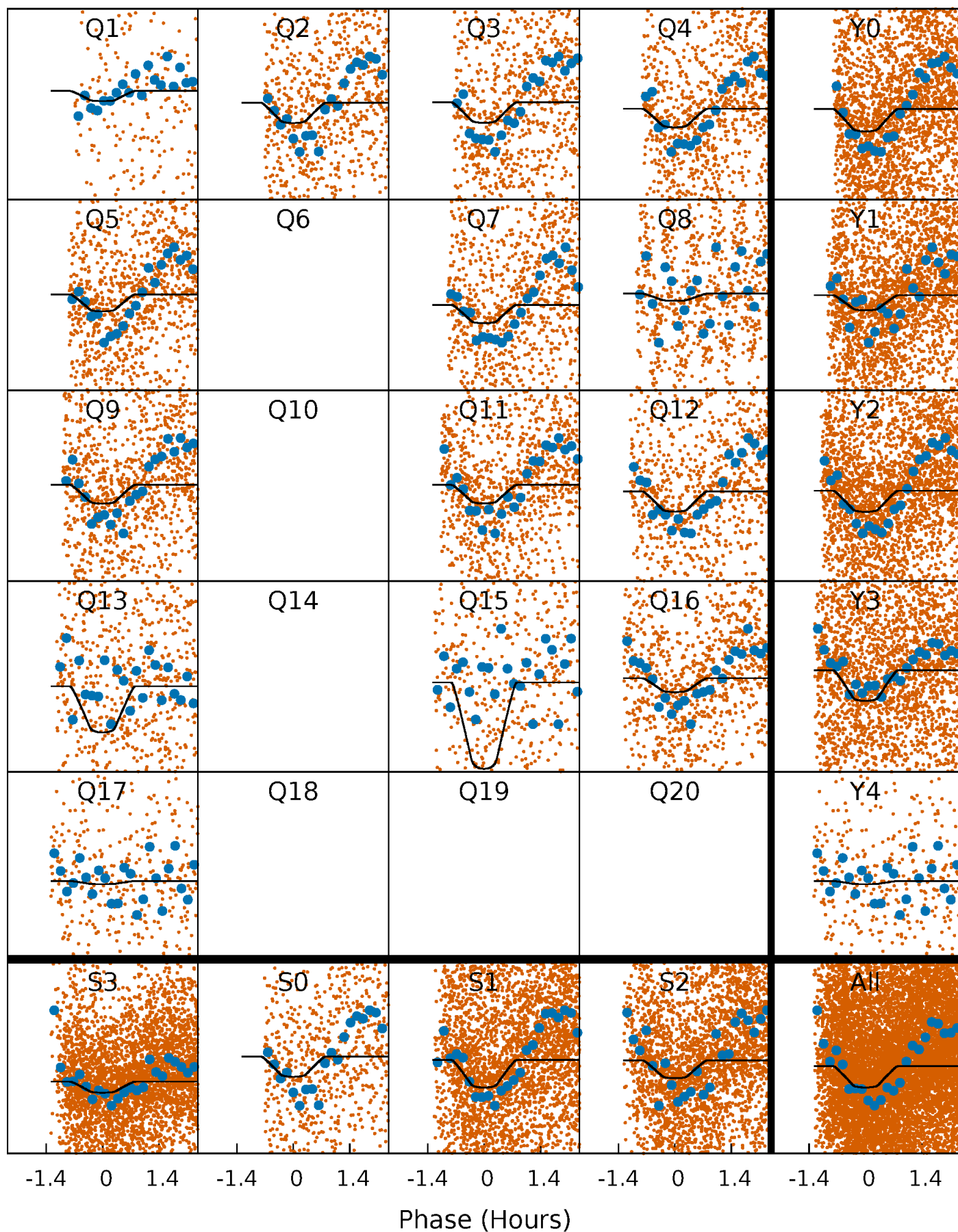
PDC Quarter-Phased Transit Curves

TCE 004484271-02 P= 0.561419 Days $T_0=131.854265$ (BKJD)



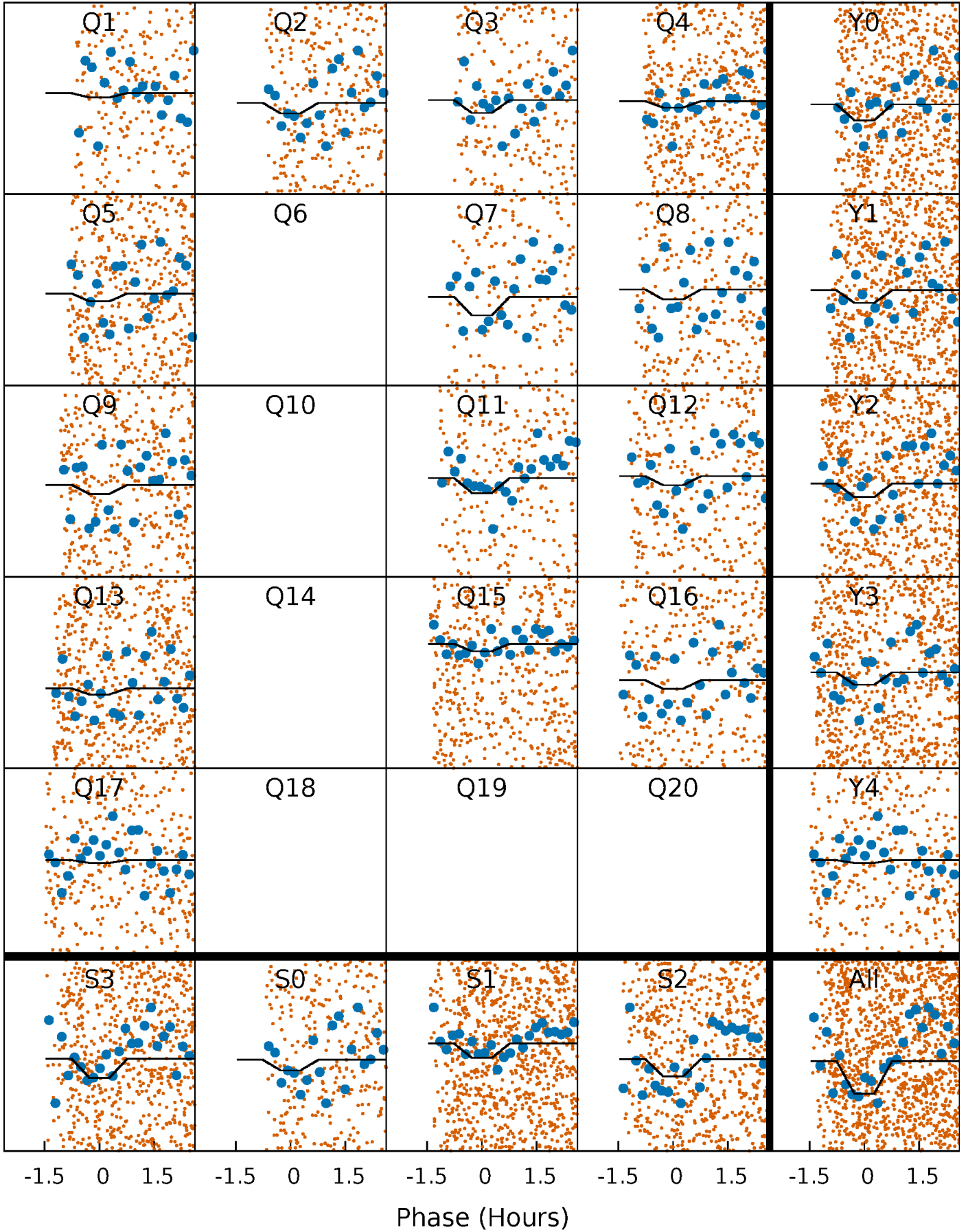
DV Quarter-Phased Transit Curves

TCE 004484271-02 P= 0.561419 Days $T_0=131.854265$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

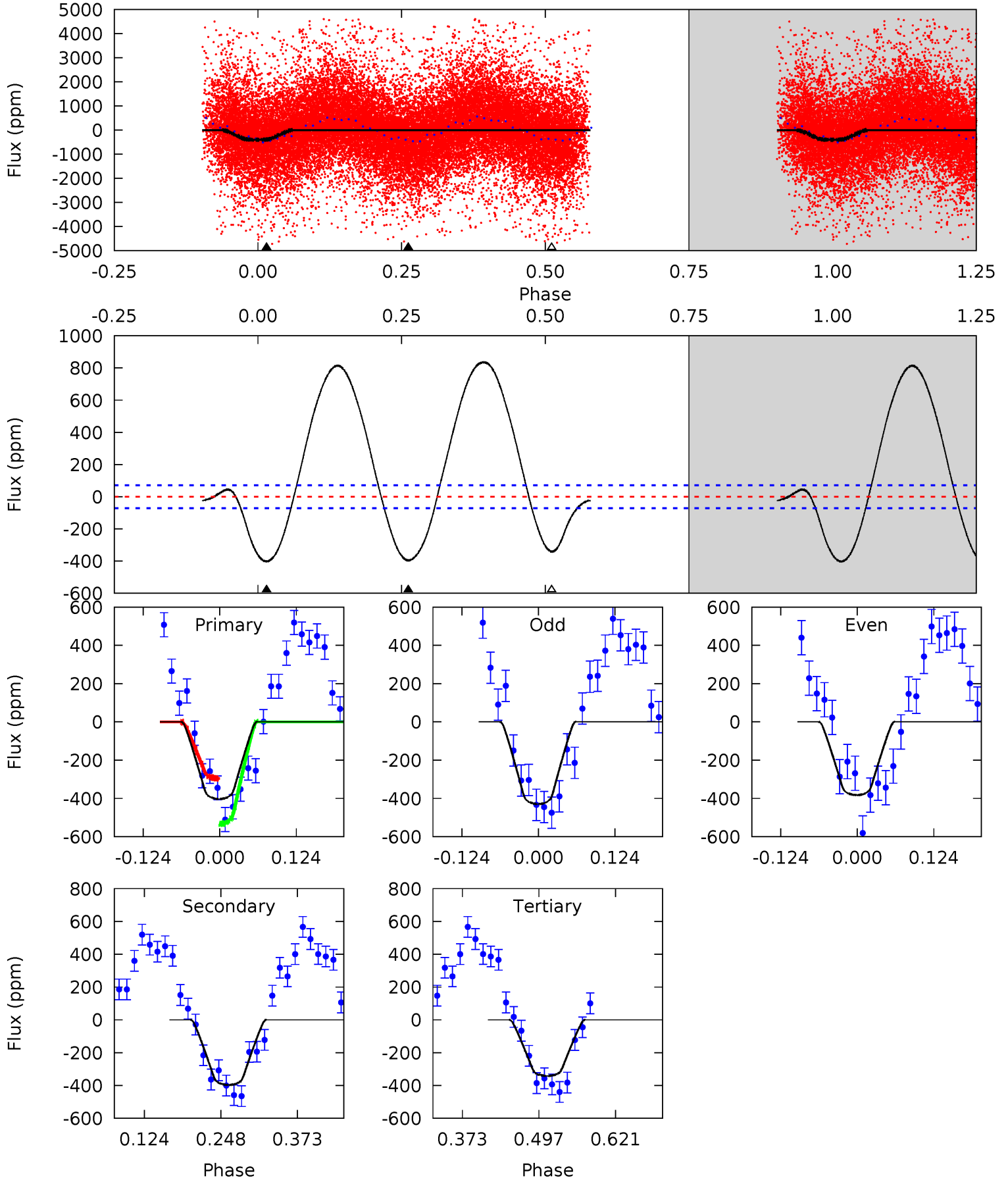
TCE 004484271-02 P= 0.561422 Days $T_0=131.852618$ (BKJD)



DV Model-Shift Uniqueness Test

004484271-02, P = 0.561419 Days, E = 131.292846 Days

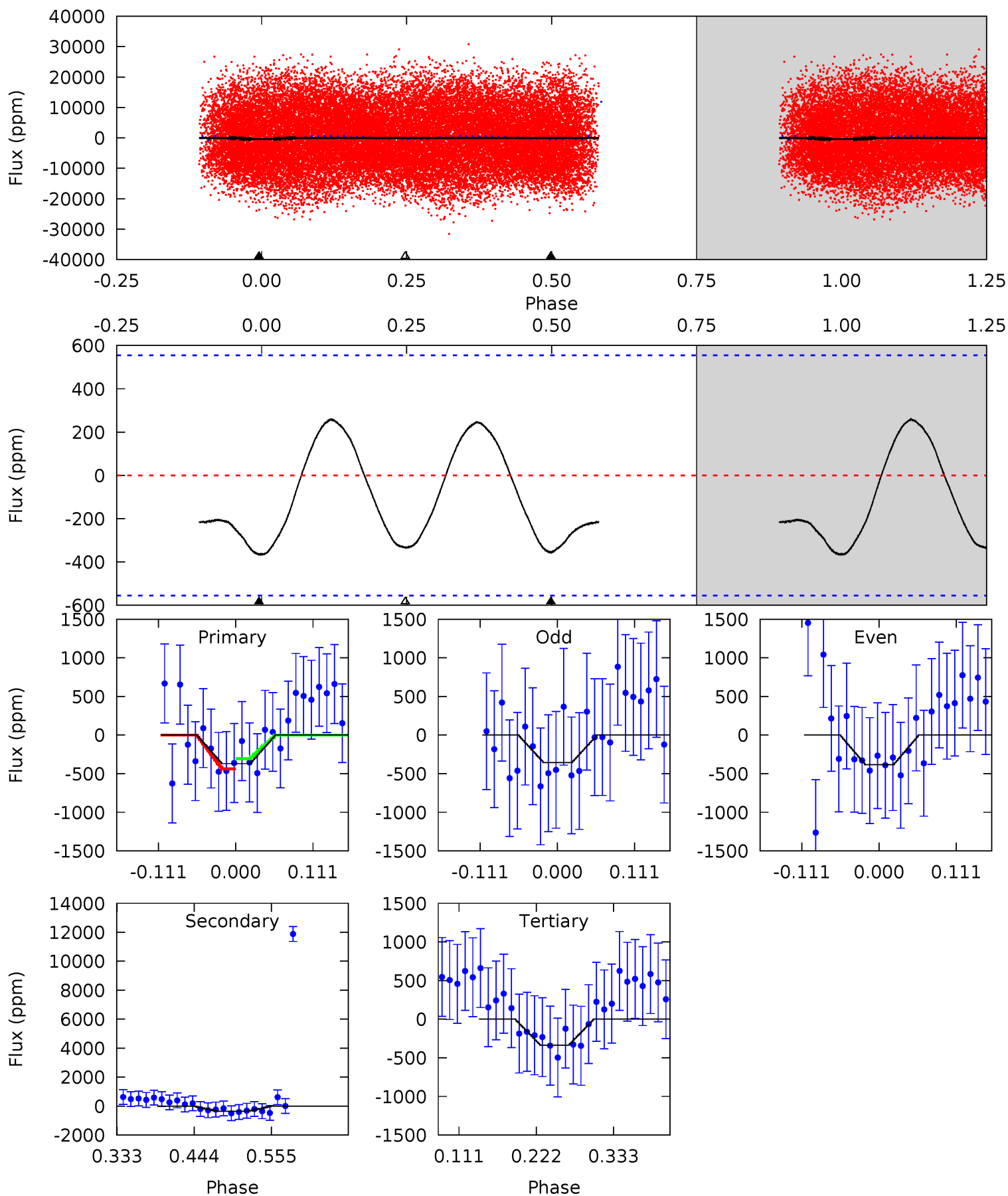
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.6	25.2	21.7	0	4.52	1.54	27.1	3.89	25.6	3.51	25.2	1.51	1.00	0.67	8.11



Alt Model-Shift Uniqueness Test

004484271-02, P = 0.561422 Days, E = 131.291196 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.03	2.95	2.76	0	4.54	1.59	1.76	0.27	3.03	0.19	2.95	0.11	0.31	0.41	0.58



Stellar Parameters For KIC 004484271

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7194^{+228}_{-279}	$4.010^{+0.286}_{-0.154}$	$-0.500^{+0.250}_{-0.300}$	$1.856^{+0.505}_{-0.617}$	$1.283^{+0.202}_{-0.184}$	$0.283^{+0.523}_{-0.120}$
	+3%/-4%	+7%/-4%	+50%/-60%	+27%/-33%	+16%/-14%	+185%/-43%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 004484271-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-397 ± 16	$3.38^{+1.42}_{-1.37}$	4969^{+361}_{-433}	7663^{+2999}_{-1449}	$4.003^{+7.339}_{-1.990}$
Alt.	-360 ± 122	$3.80^{+1.59}_{-1.28}$	4954^{+420}_{-413}	6737^{+2261}_{-1246}	$2.818^{+3.991}_{-1.563}$

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 $A_{obs} \gg 1.0$

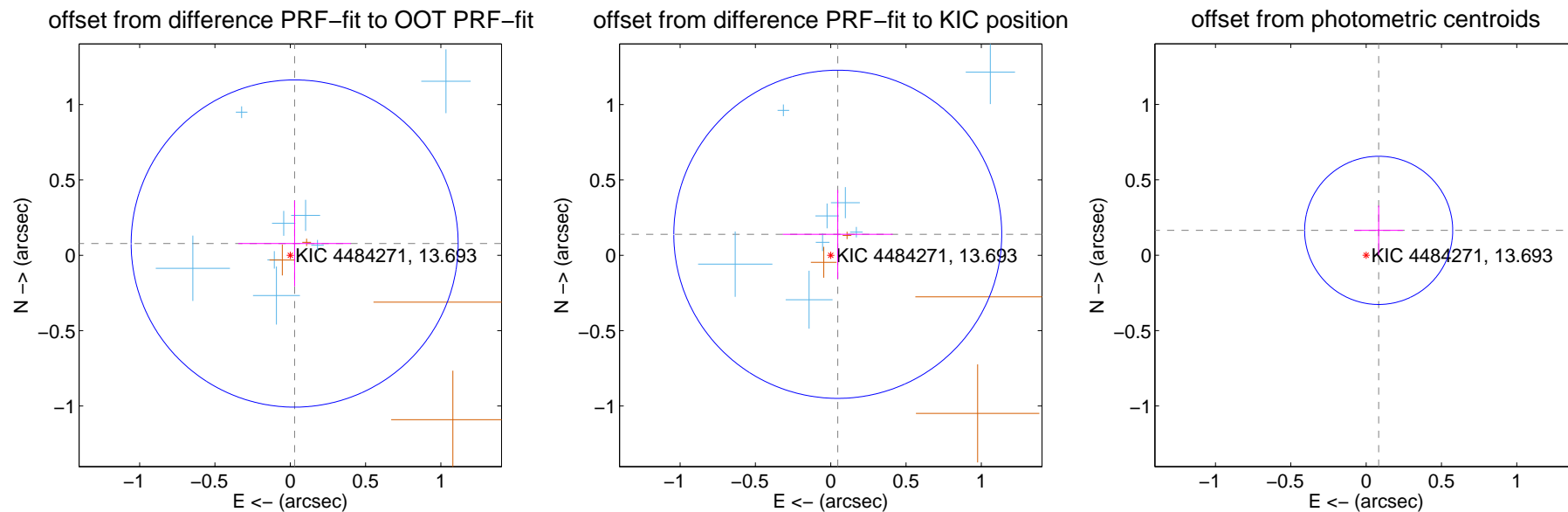
DV Centroid Data

Supplemental centroid analysis for 004484271-02. Kepler magnitude: 13.69. Transit SNR 13.55

There are 9 quarters with good PRF difference image offsets

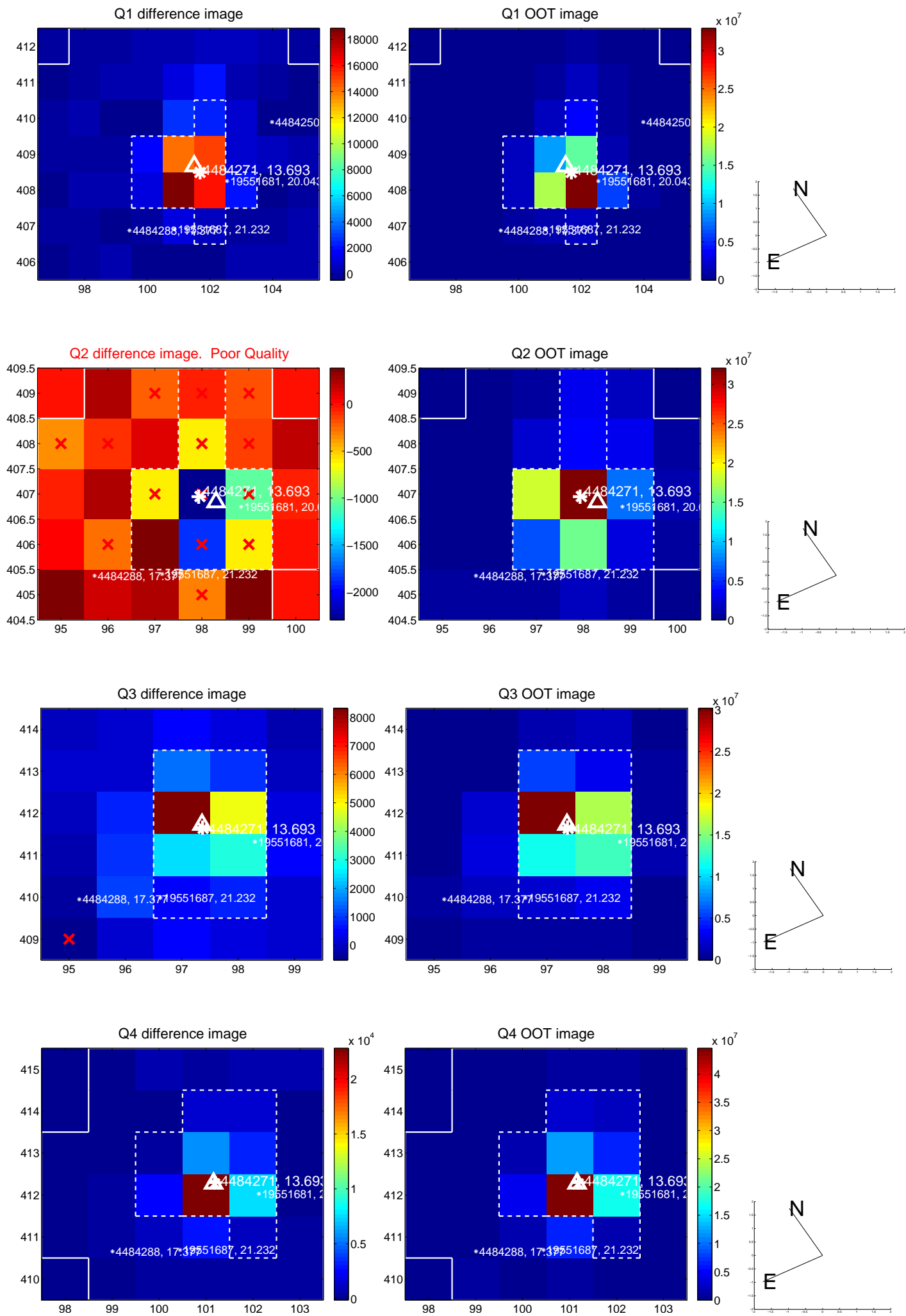
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.083 ± 0.362	0.23	-0.029 ± 0.374	0.078 ± 0.285
PRF-fit source offset from KIC position	0.147 ± 0.363	0.40	-0.047 ± 0.365	0.139 ± 0.294
photometric centroid source offset	0.18 ± 0.16	1.13	-0.08 ± 0.16	0.16 ± 0.16

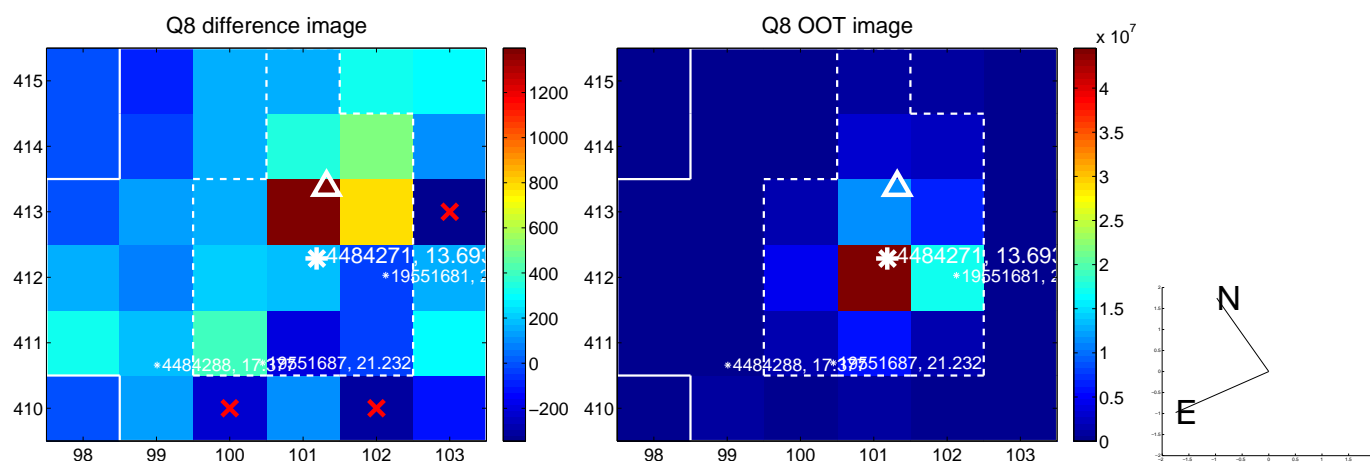
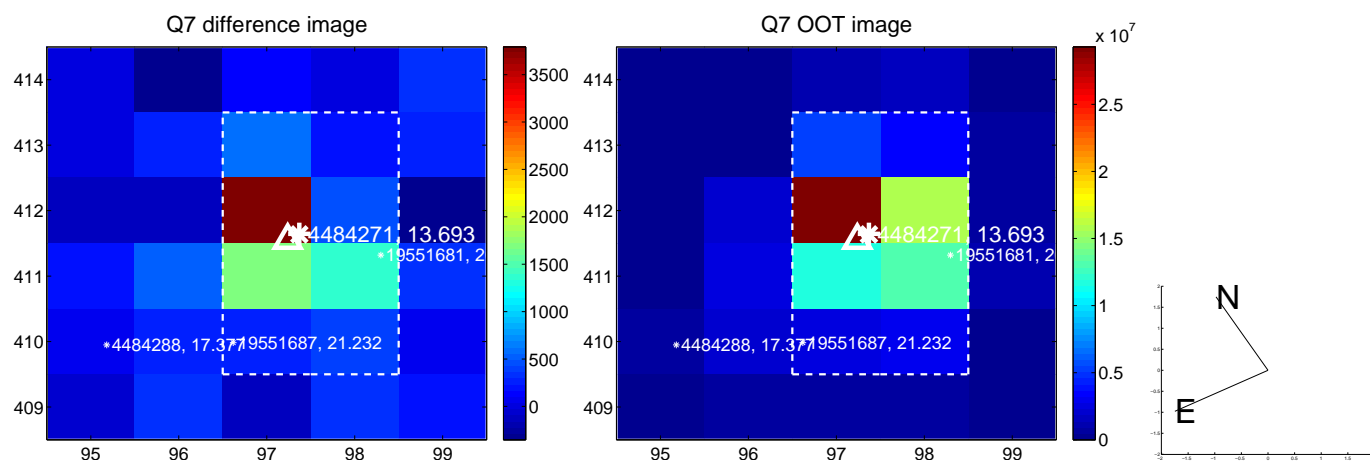
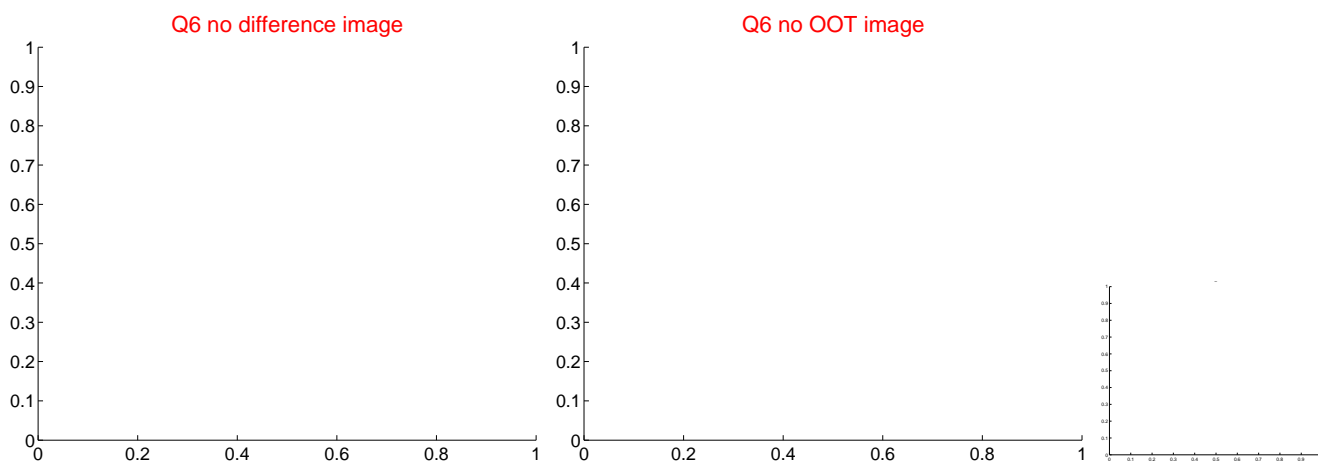
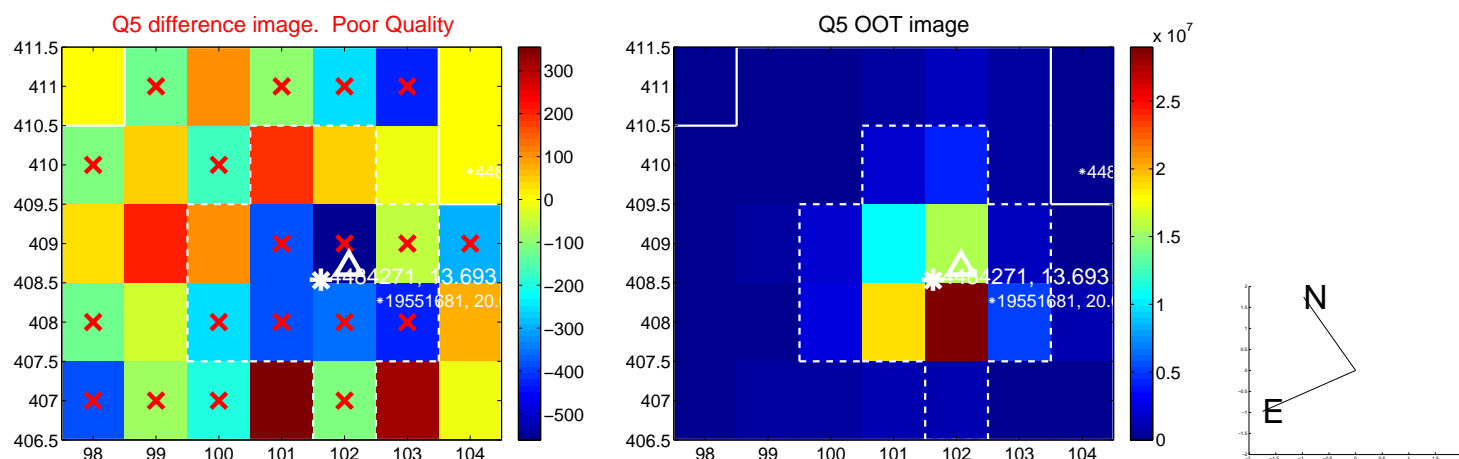


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

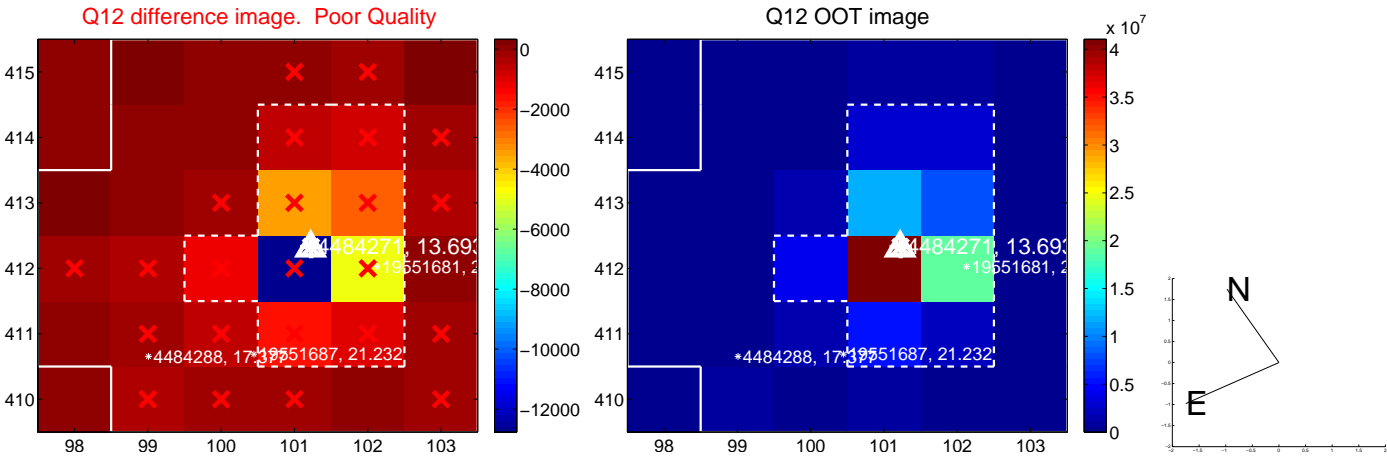
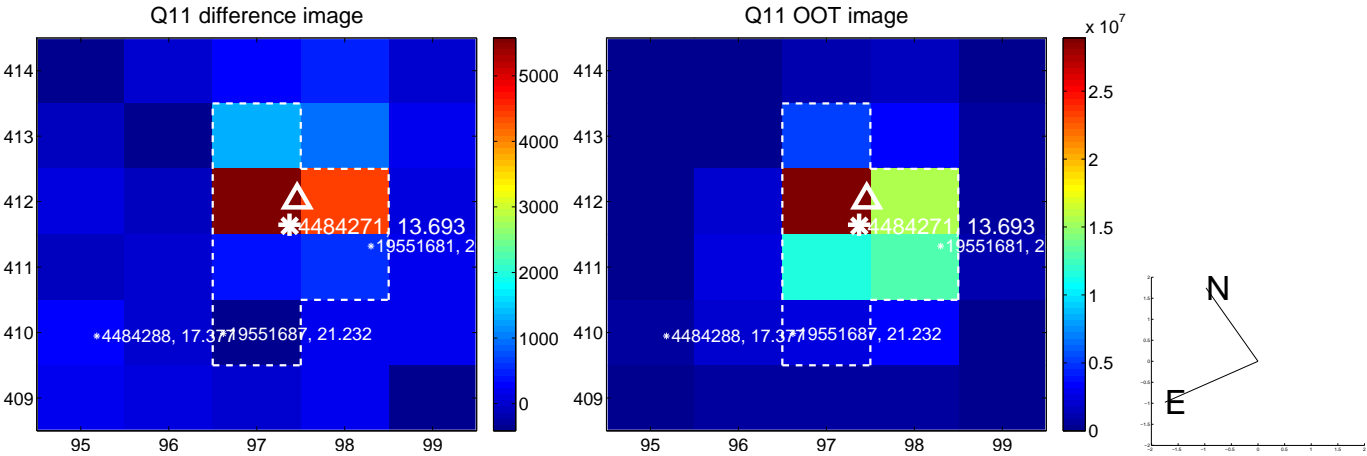
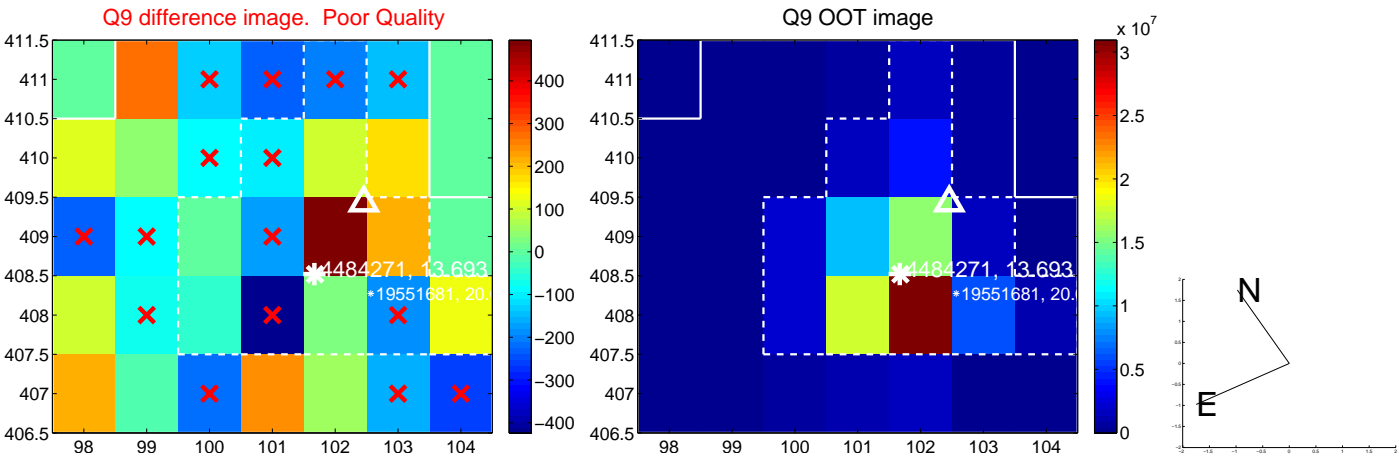
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



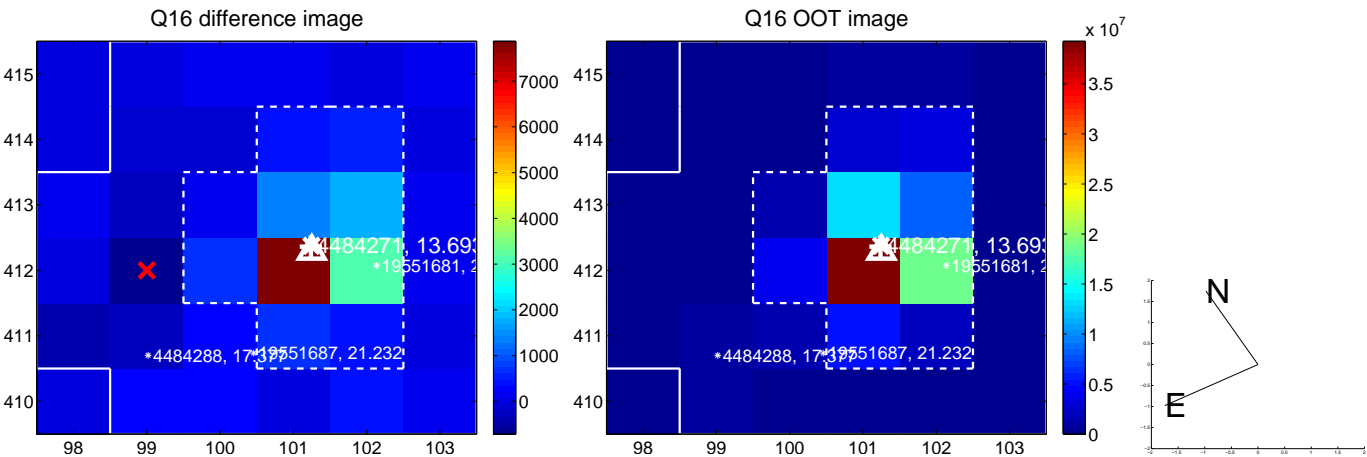
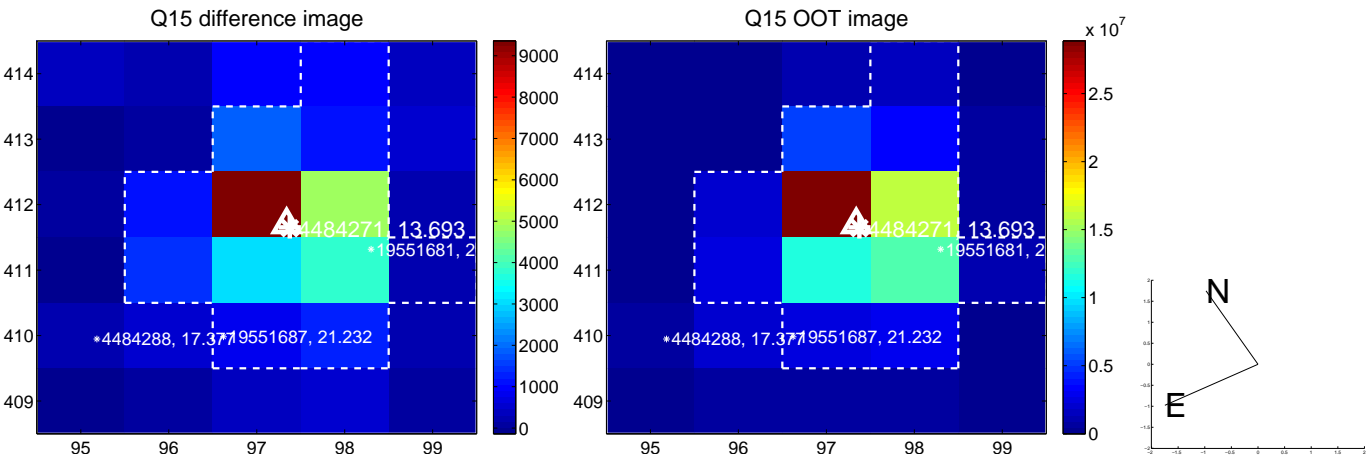
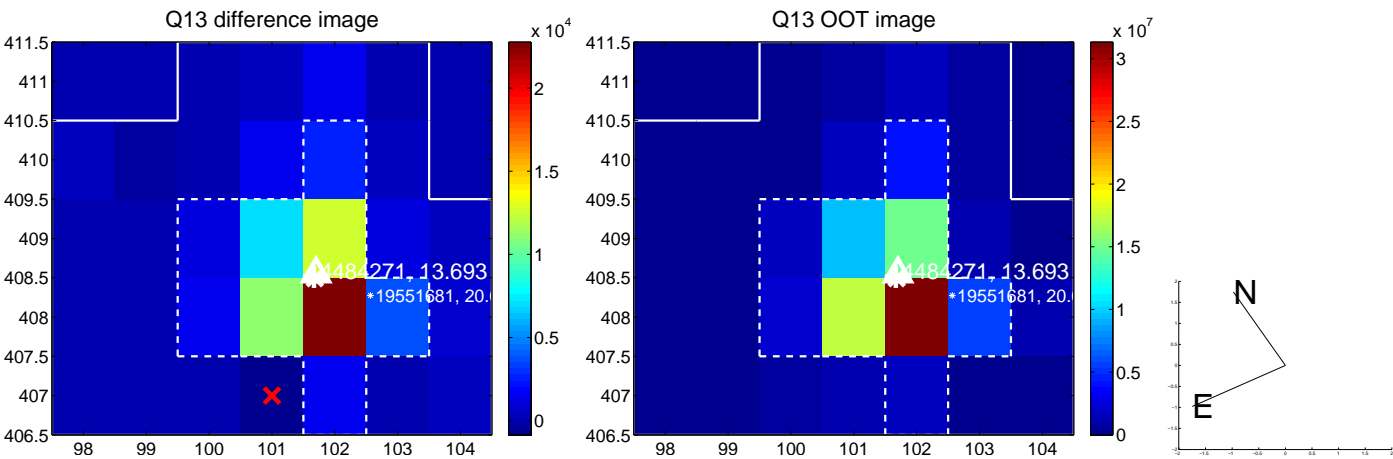
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



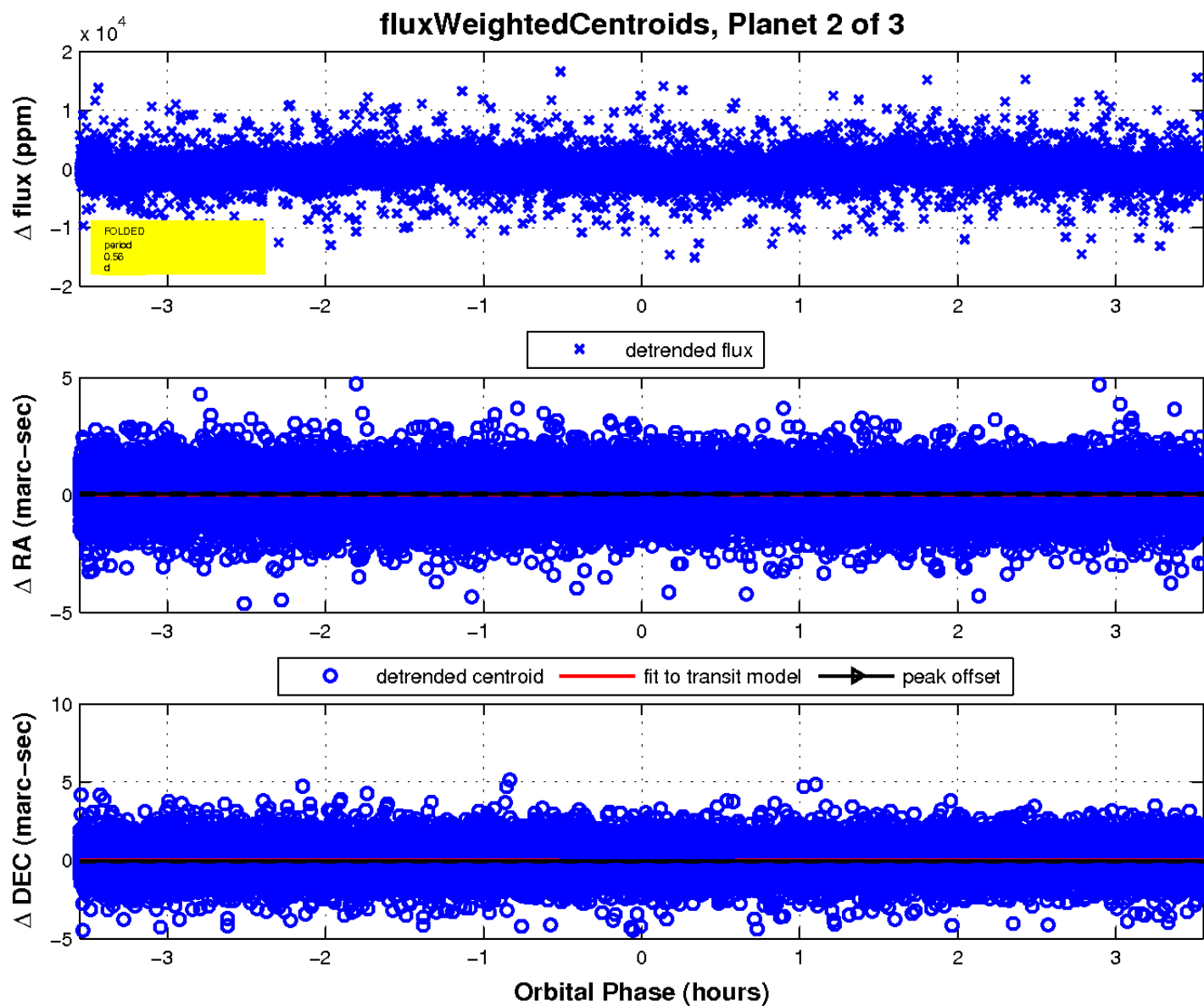
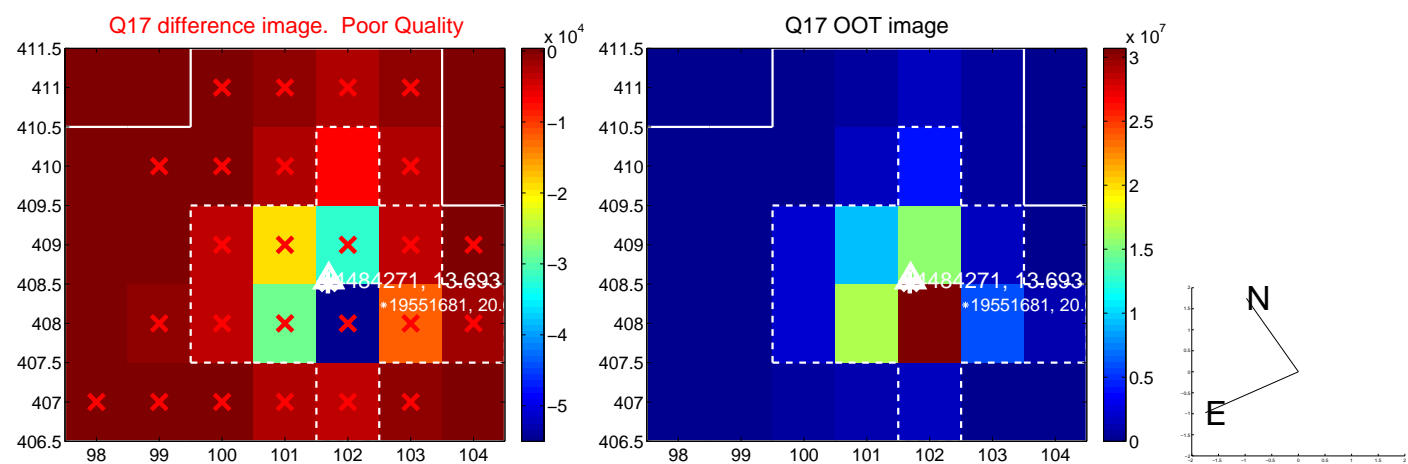
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

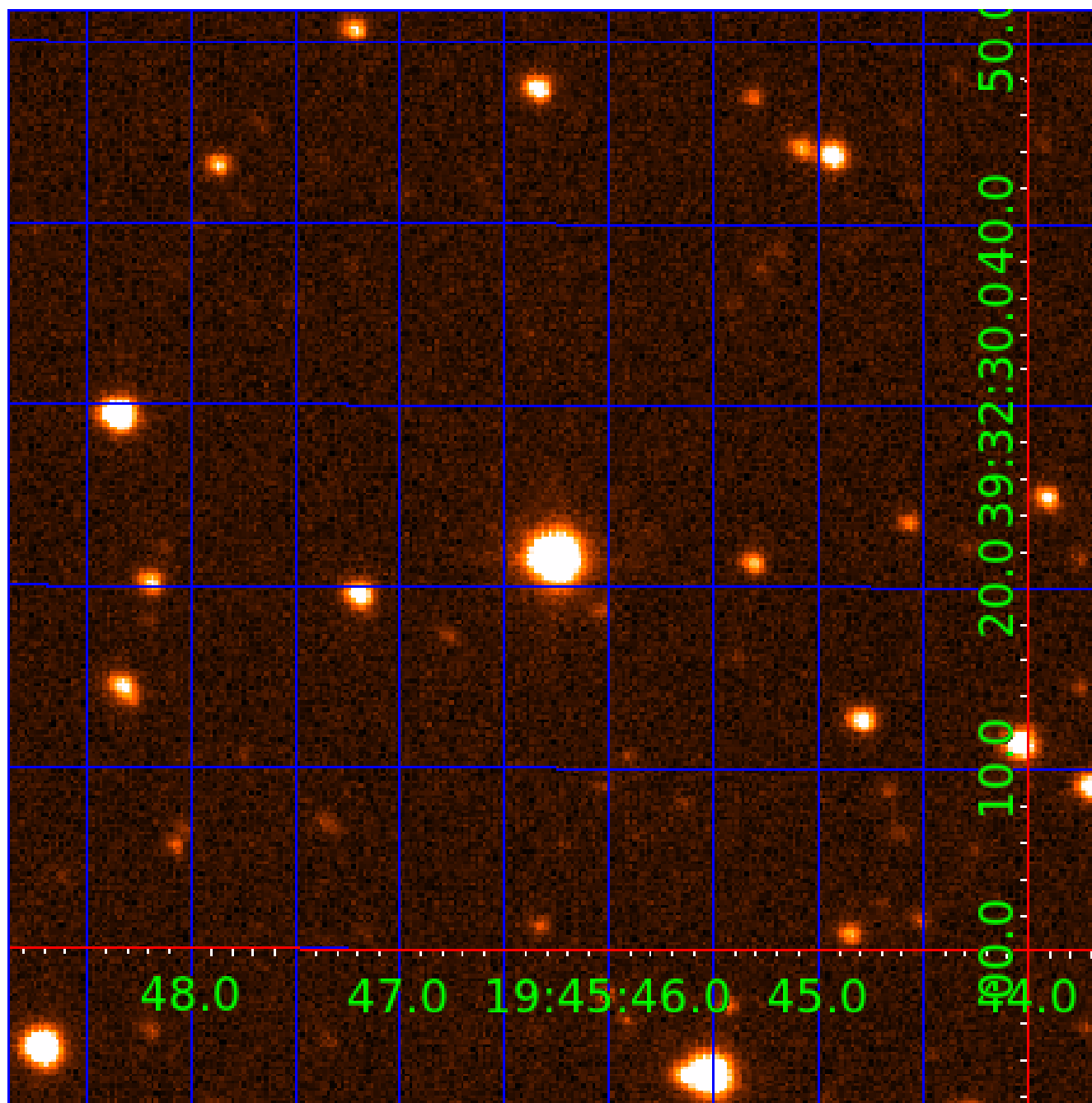


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004484271

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})
004484271-01	OBS	No	0.561409	131.722354	218.7	1.139	12.5	12.0	1.86	7194	3.20	39396.35
004484271-02	OBS	No	0.561419	131.854265	257.0	1.185	11.7	13.5	1.86	7194	3.47	39395.41
004484271-03	OBS	No	0.561405	132.002679	219.7	1.350	11.9	12.1	1.86	7194	2.87	39396.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004484271-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
004484271-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—SAME_NTL_PERIOD
004484271-03	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

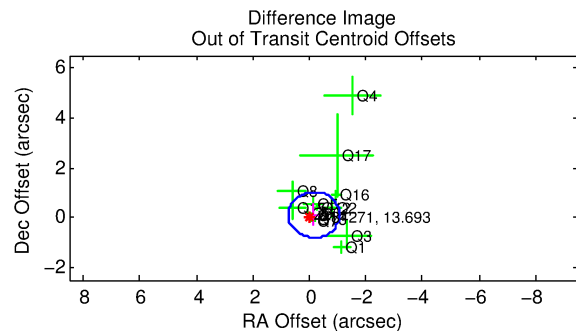
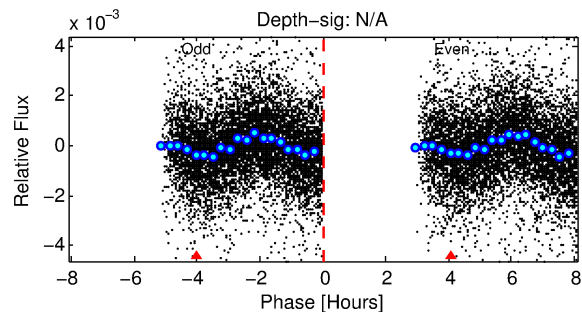
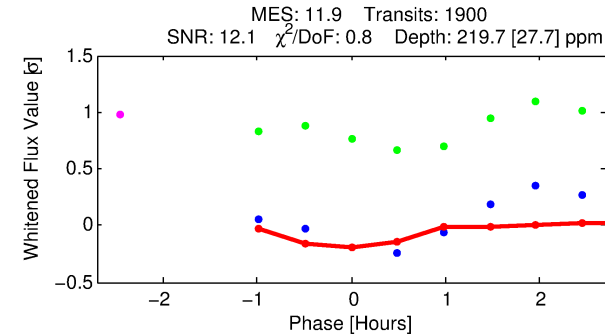
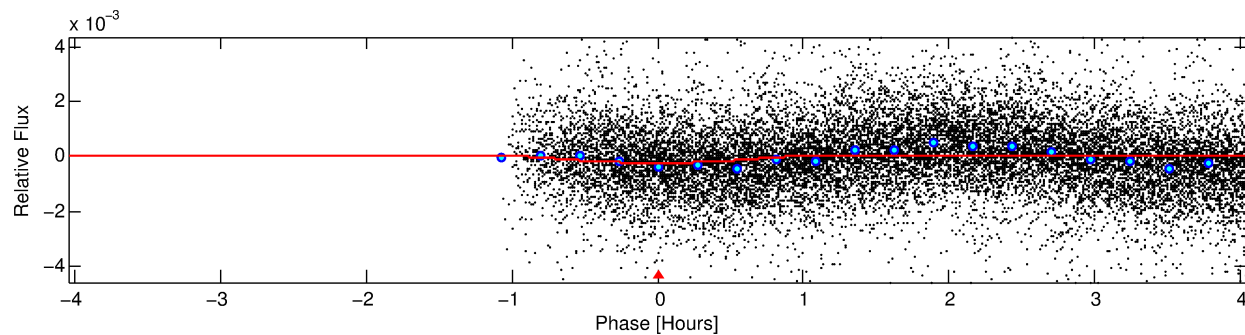
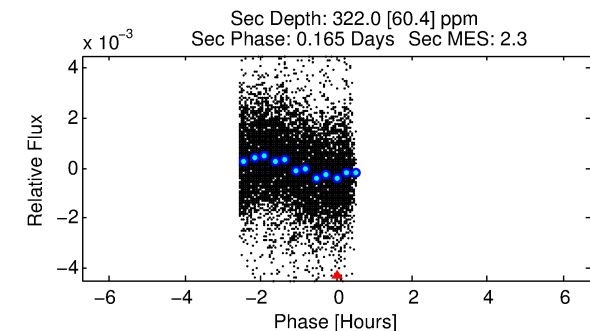
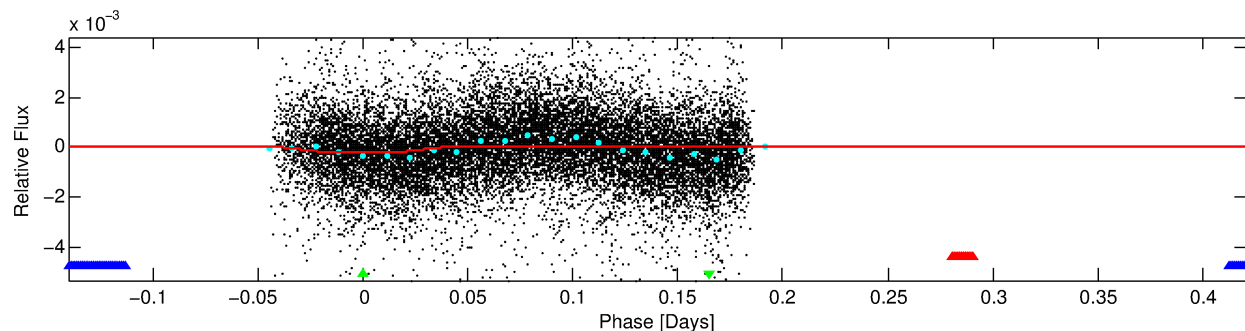
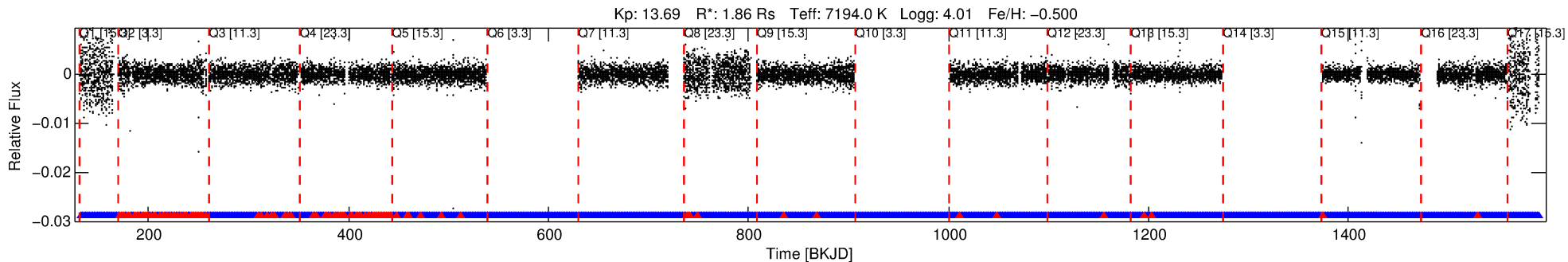
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004484271-03

No Significant Match Found

DV One-Page Summary

KIC: 4484271 Candidate: 3 of 3 Period: 0.561 d



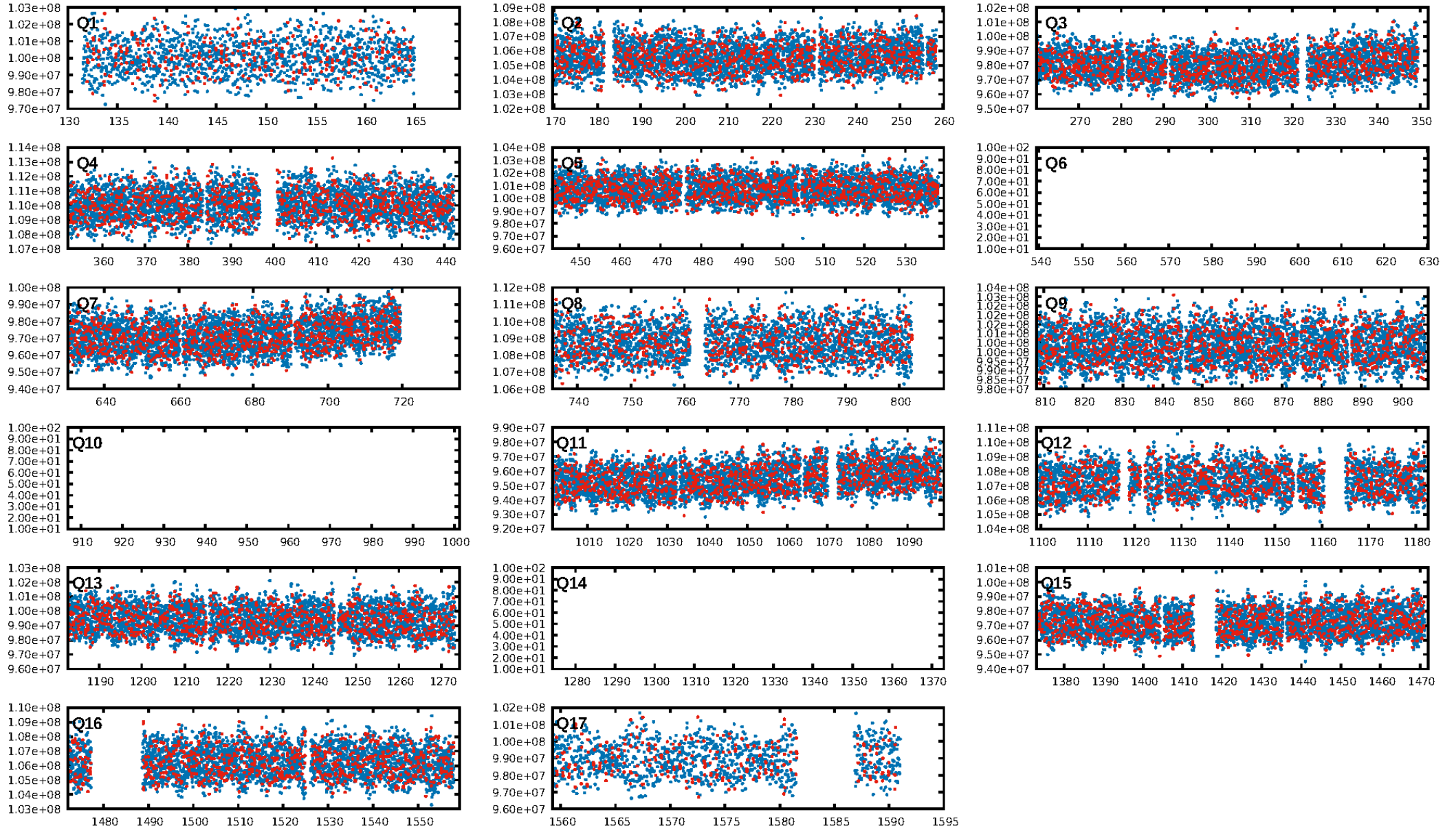
DV Fit Results:

Period = 0.56140 [0.00001] d
Epoch = 132.0027 [0.0020] BKJD
Rp/R* = 0.0141 [0.0068]
a/R* = 2.89 [7.19]
b = 0.50 [4.26]
Seff = 39396.70 [20316.10]
Teff = 3592 [463] K
Rp = 2.87 [1.67] Re
a = 0.0145 [0.0045] AU
Ag = 4.53 [4.93] [0.71σ]
Teffp = 8102 [1995] K [2.20σ]

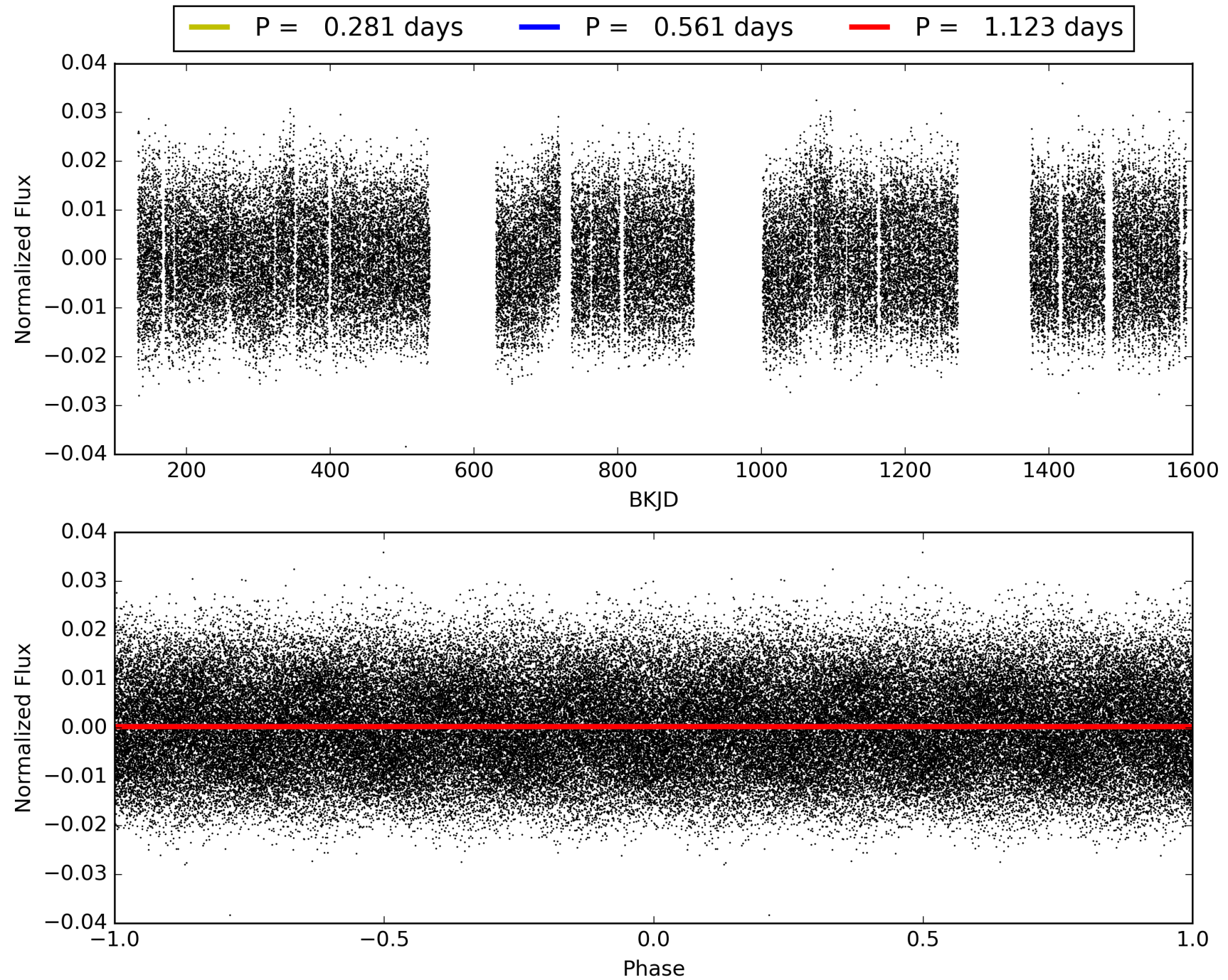
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.92 [1654/1794]
GhostDiagnostic-chr: 0.5612
Centroid-sig: 0.1%
Centroid-so: 0.223 arcsec [1.28σ]
OotOffset-rm: 0.193 arcsec [0.64σ]
KicOffset-rm: 0.223 arcsec [0.73σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.21 [3/14]
DiffImageOverlap-fno: 0.00 [0/14]

TCE 004484271-03, PDC Light Curves

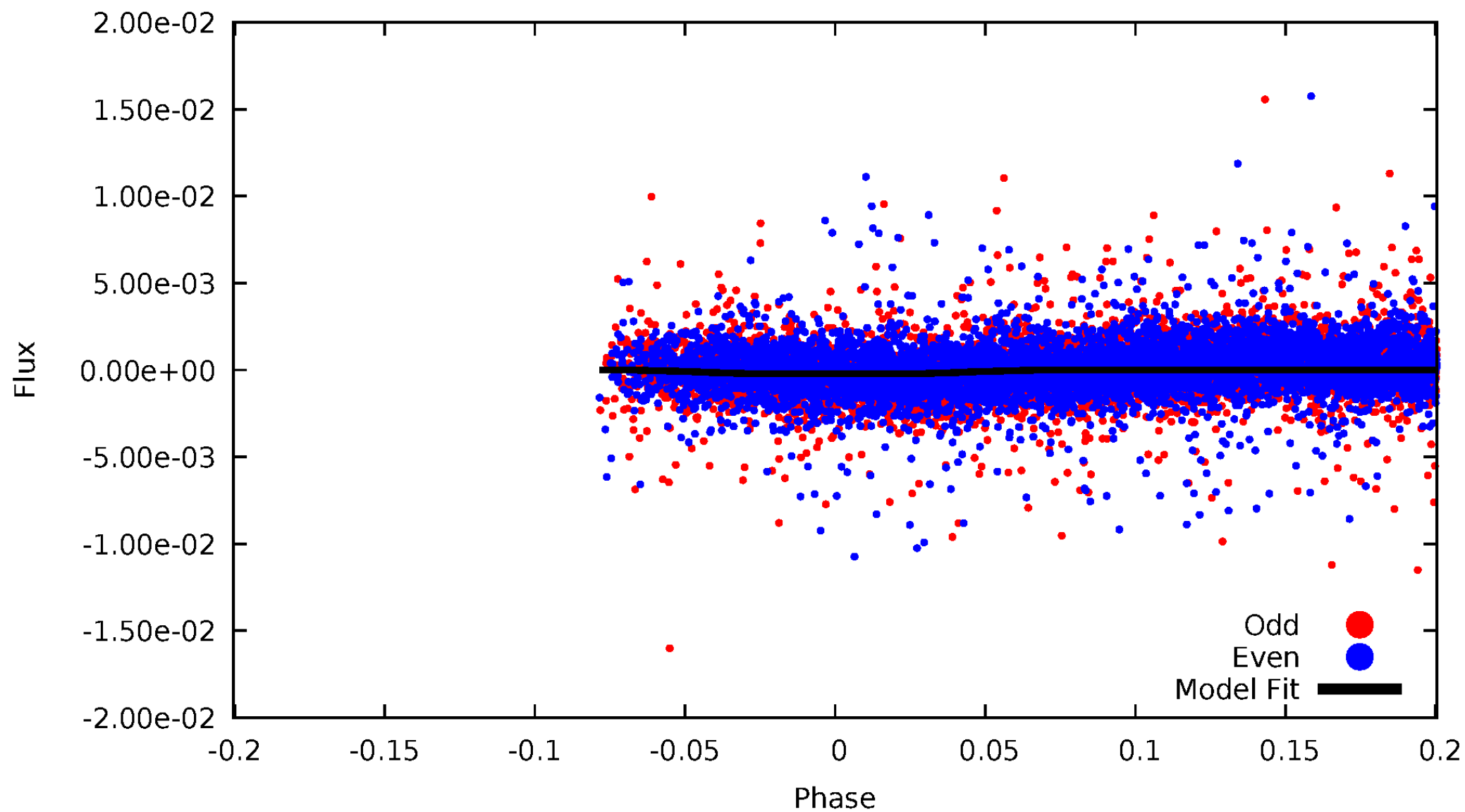


TCE 004484271-03



DV Odd/Even

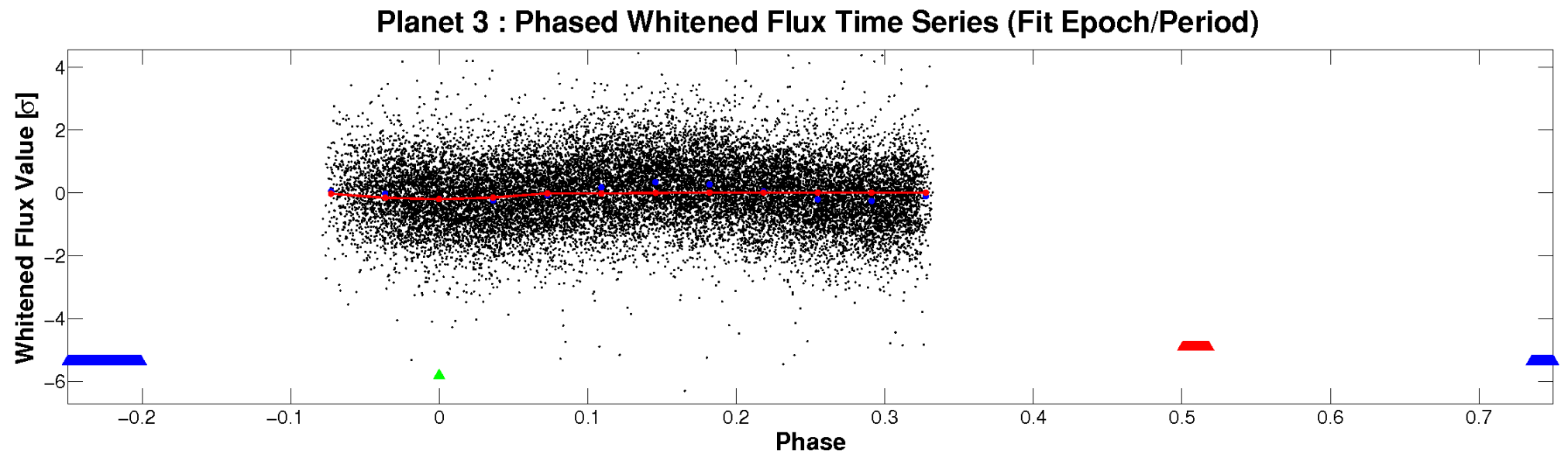
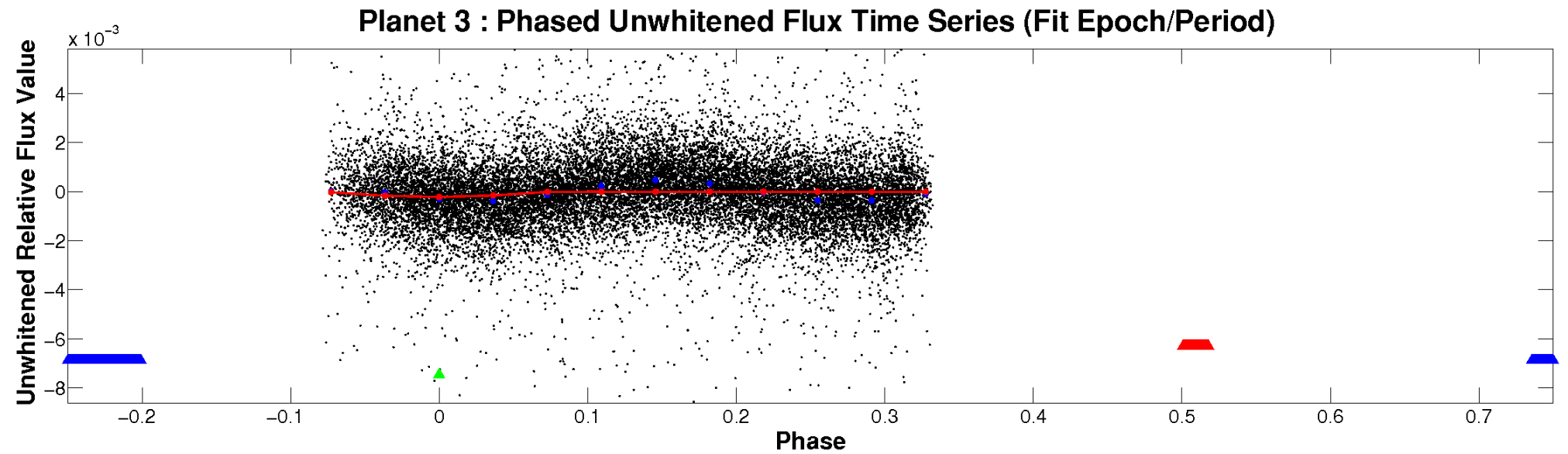
TCE 004484271-03



ALT Odd/Even

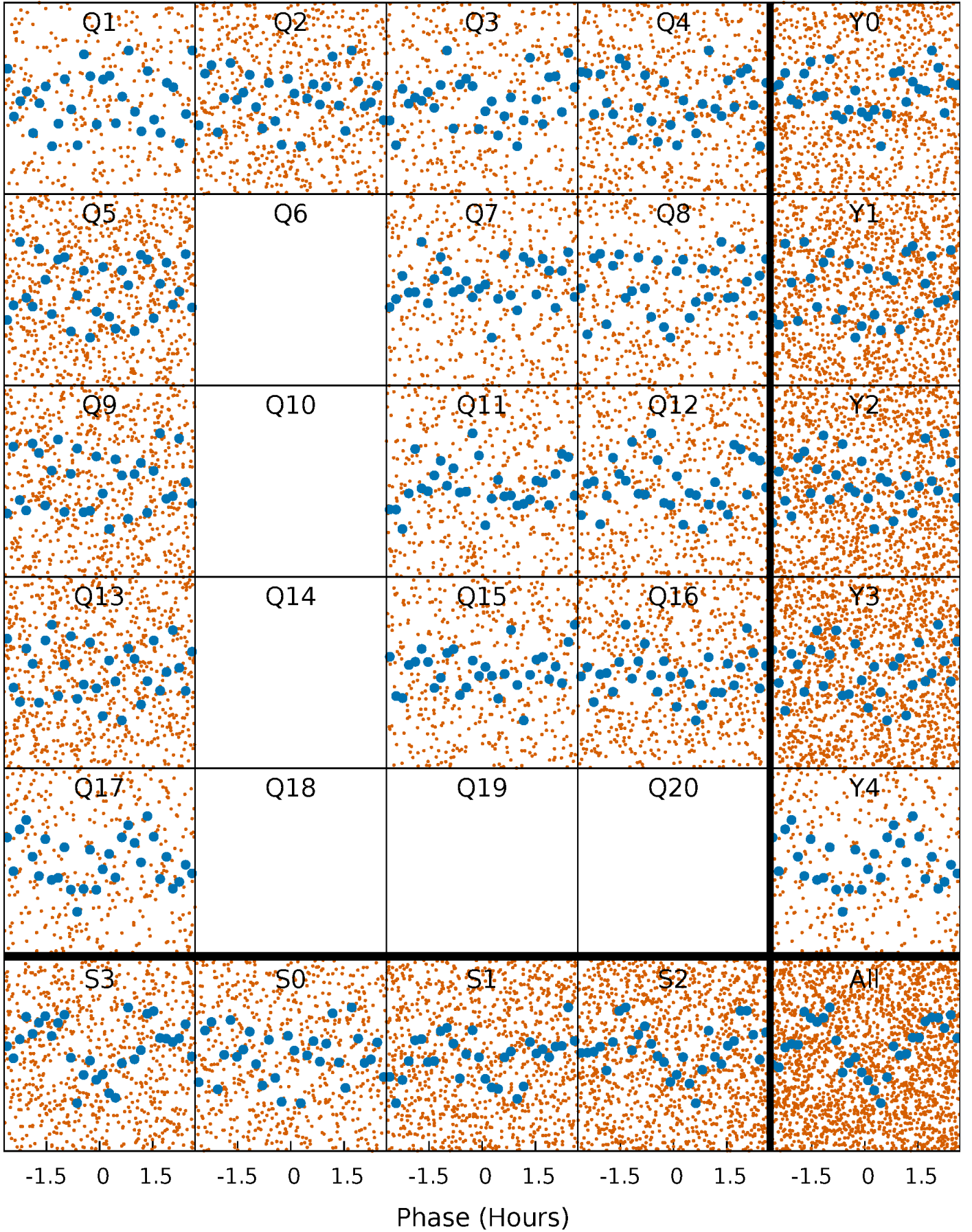
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve



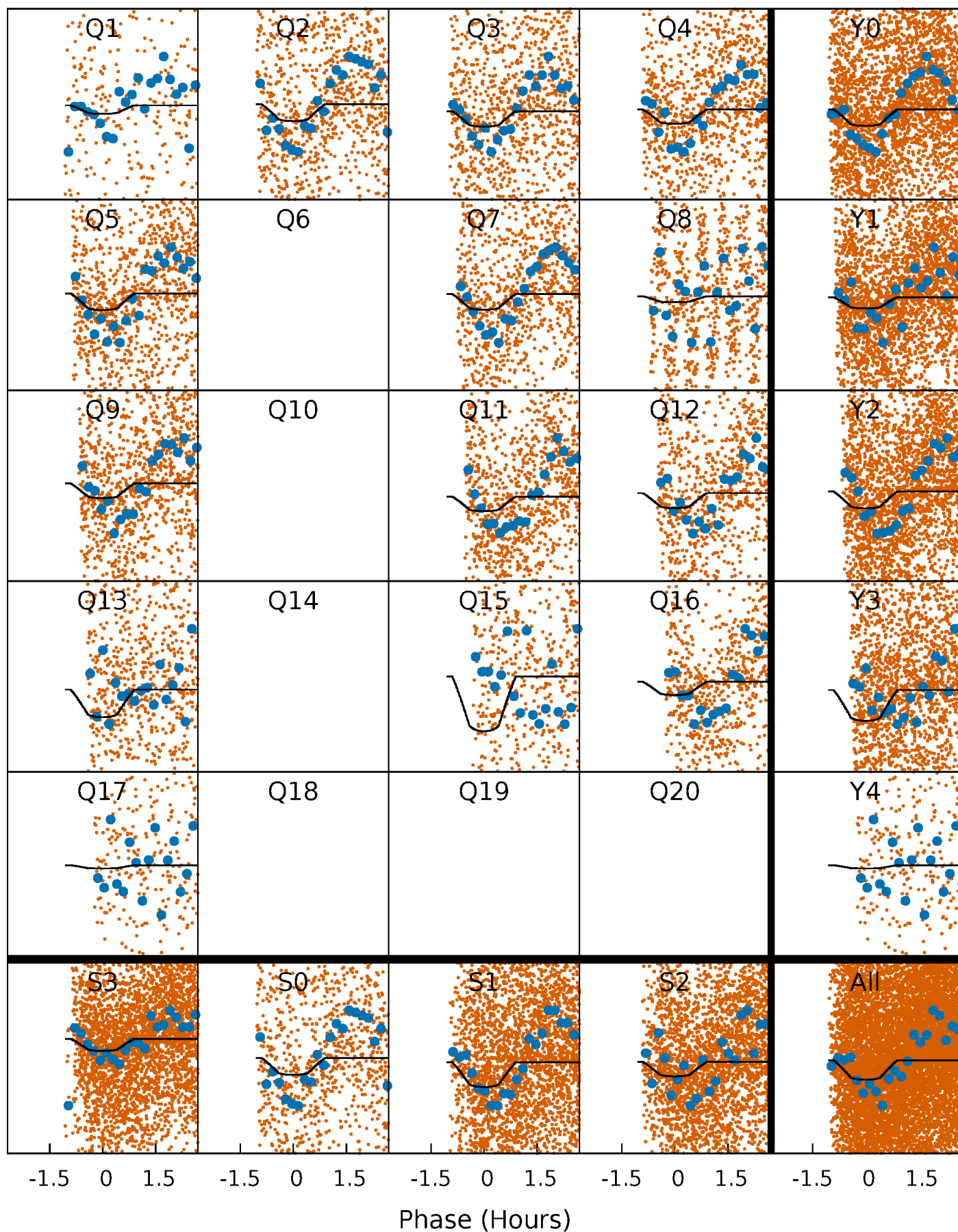
PDC Quarter-Phased Transit Curves

TCE 004484271-03 P= 0.561405 Days $T_0=132.002679$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 004484271-03 $P = 0.561405$ Days $T_0 = 132.002679$ (BKJD)

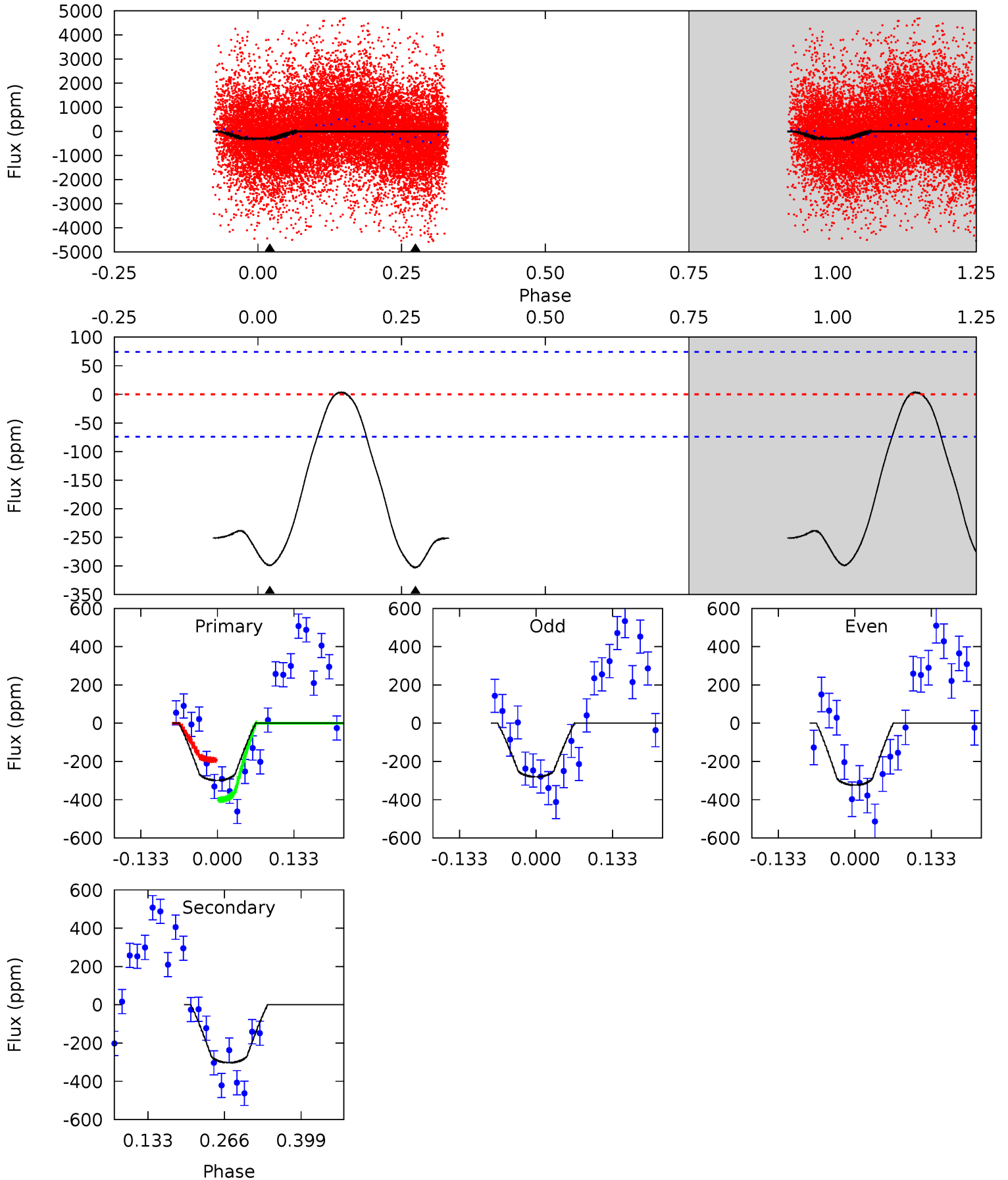


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

004484271-03, P = 0.561405 Days, E = 131.441274 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.2	18.4	0	0	4.50	1.50	0.26	18.2	18.2	18.4	18.4	1.36	0.97	0.01	6.51



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 004484271

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7194^{+228}_{-279}	$4.010^{+0.286}_{-0.154}$	$-0.500^{+0.250}_{-0.300}$	$1.856^{+0.505}_{-0.617}$	$1.283^{+0.202}_{-0.184}$	$0.283^{+0.523}_{-0.120}$
	+3%/-4%	+7%/-4%	+50%/-60%	+27%/-33%	+16%/-14%	+185%/-43%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 004484271-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-303 ± 16	$2.75^{+1.46}_{-1.37}$	4934^{+398}_{-370}	8026^{+5267}_{-1785}	$4.679^{+13.681}_{-2.709}$
Alt.	N/A	N/A	N/A	N/A	N/A

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

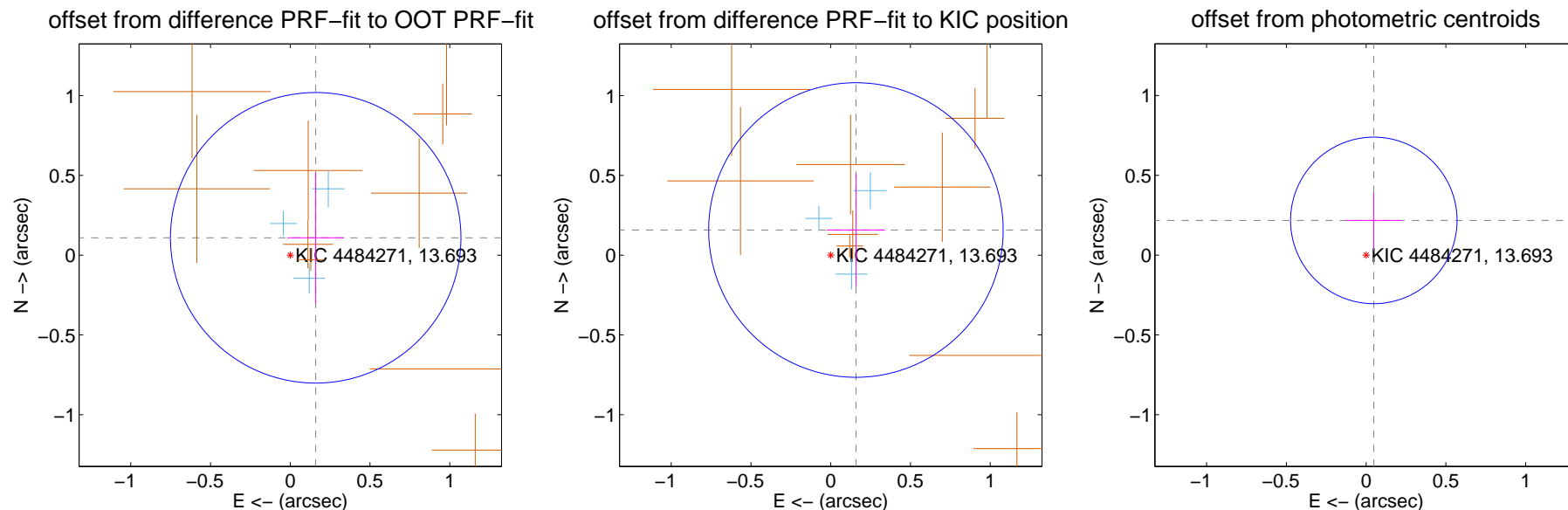
DV Centroid Data

Supplemental centroid analysis for 004484271-03. Kepler magnitude: 13.69. Transit SNR 12.13

There are 3 quarters with good PRF difference image offsets

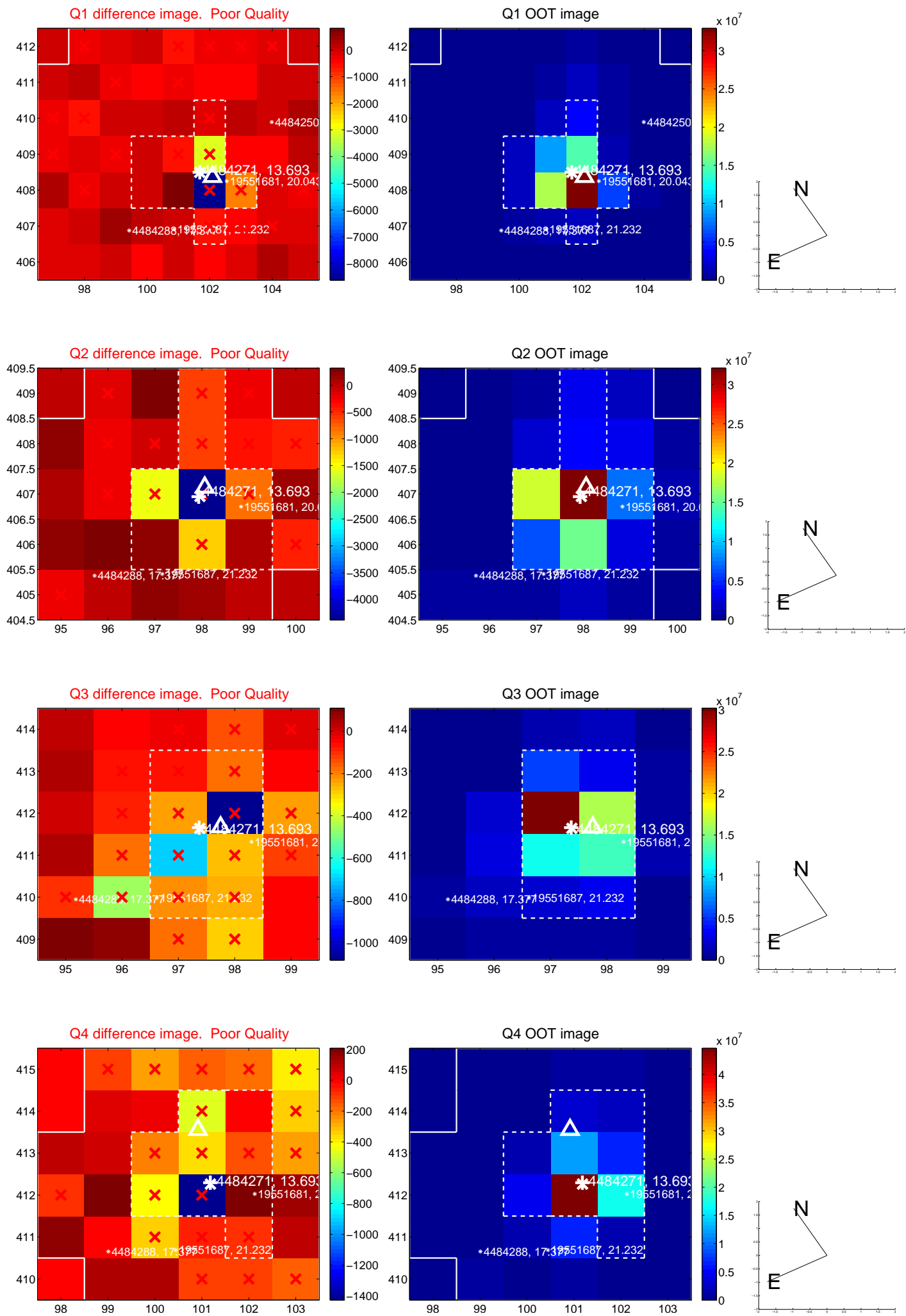
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.193 ± 0.303	0.64	-0.160 ± 0.178	0.109 ± 0.409
PRF-fit source offset from KIC position	0.223 ± 0.308	0.73	-0.158 ± 0.183	0.158 ± 0.352
photometric centroid source offset	0.22 ± 0.17	1.28	-0.05 ± 0.17	0.22 ± 0.17

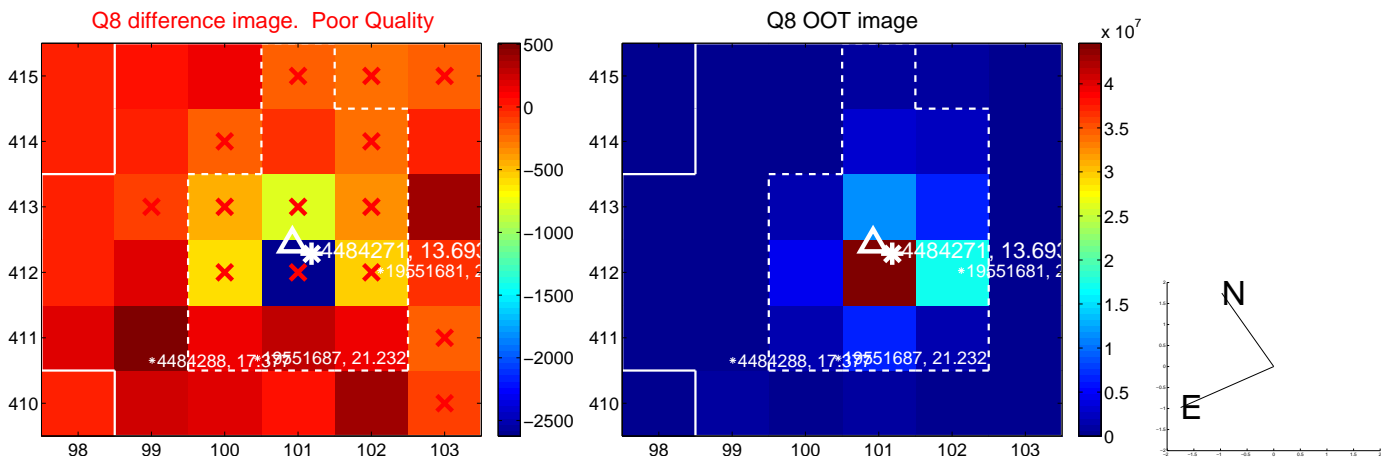
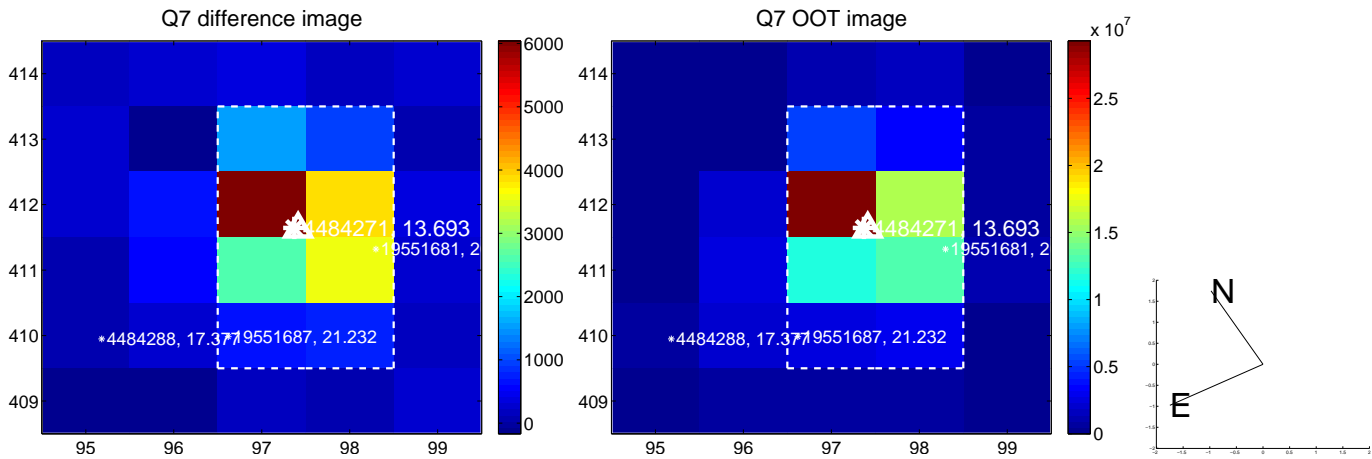
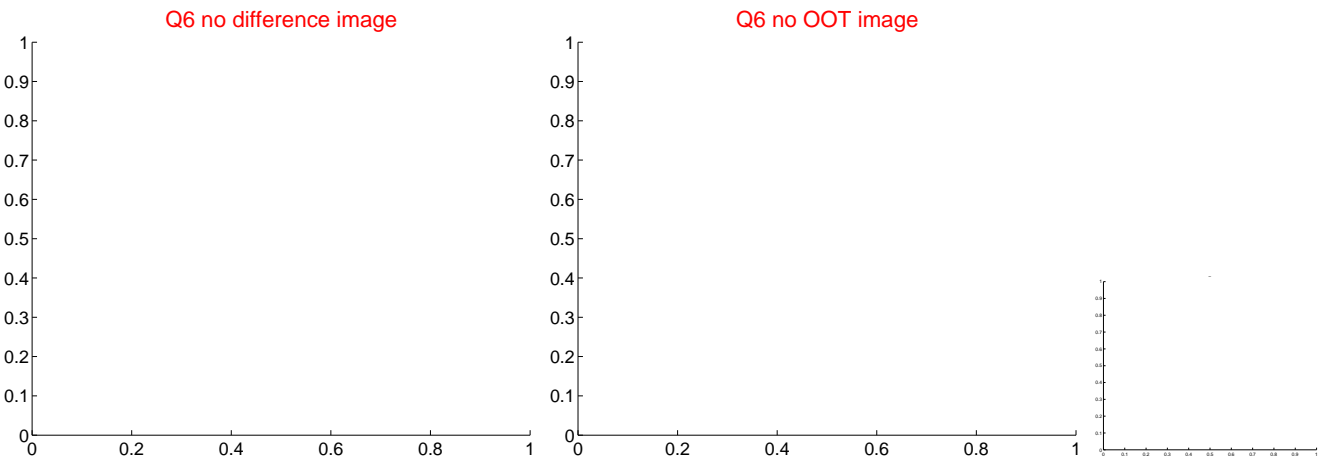
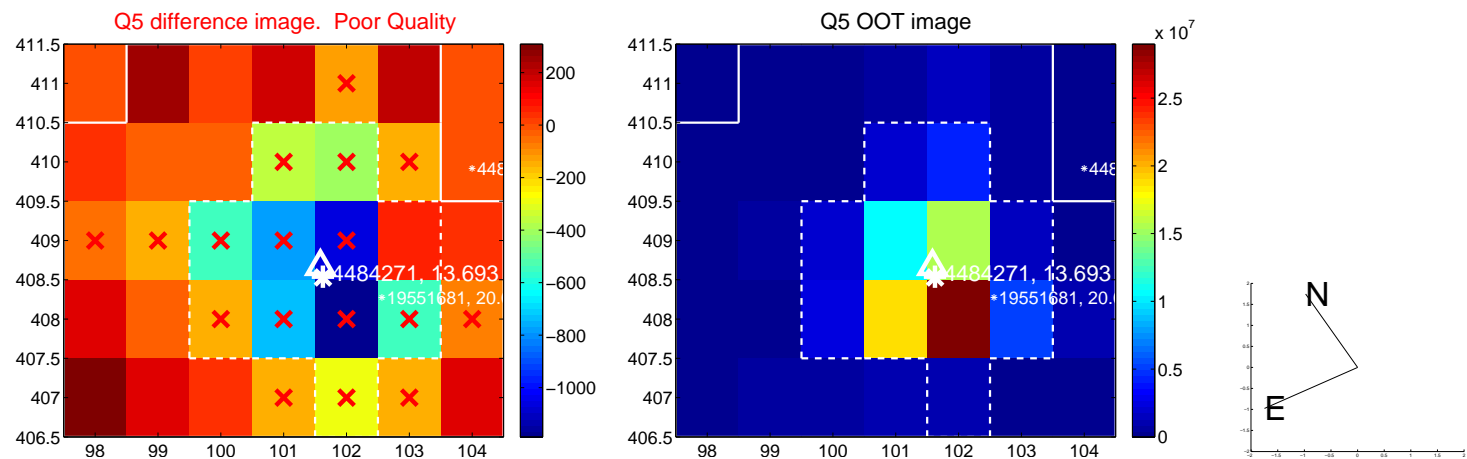


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

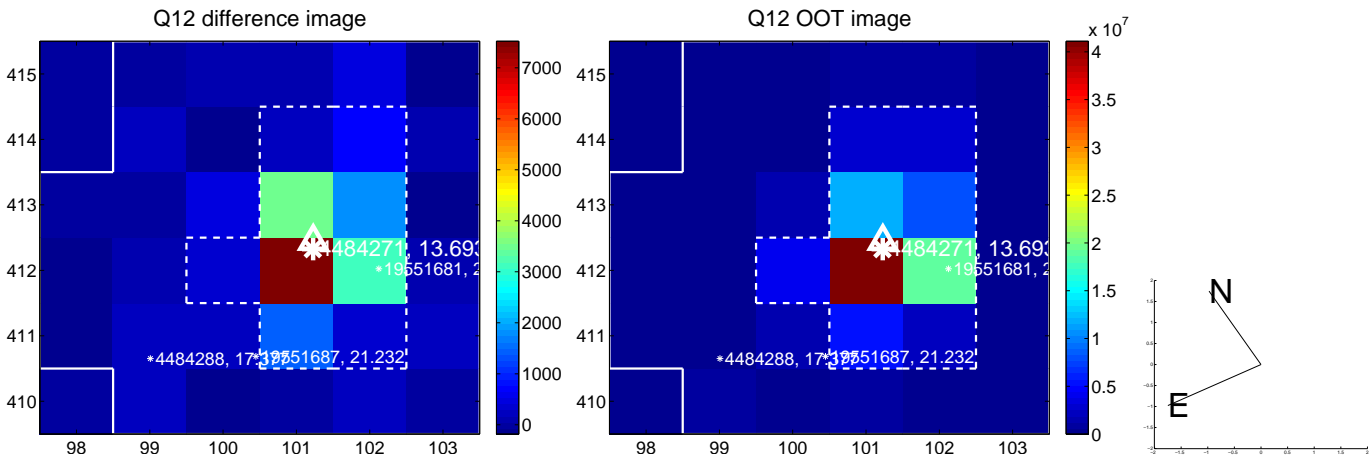
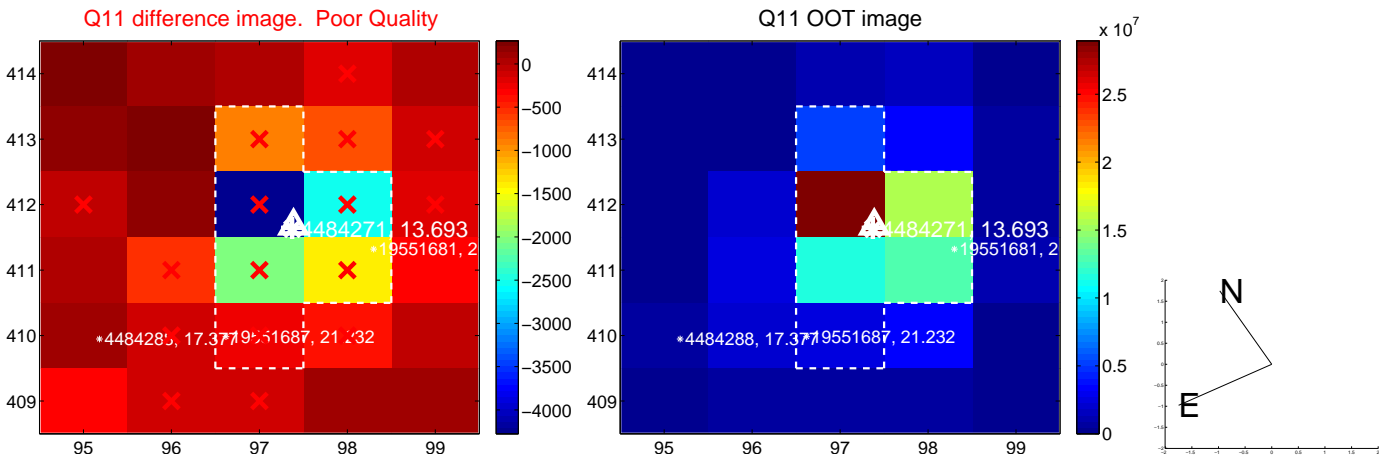
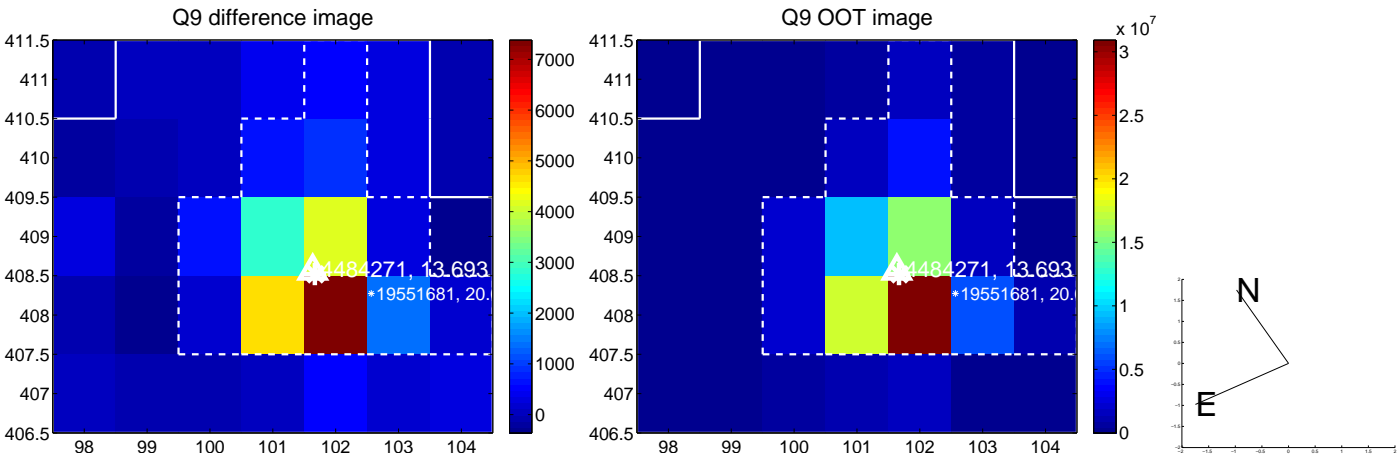
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



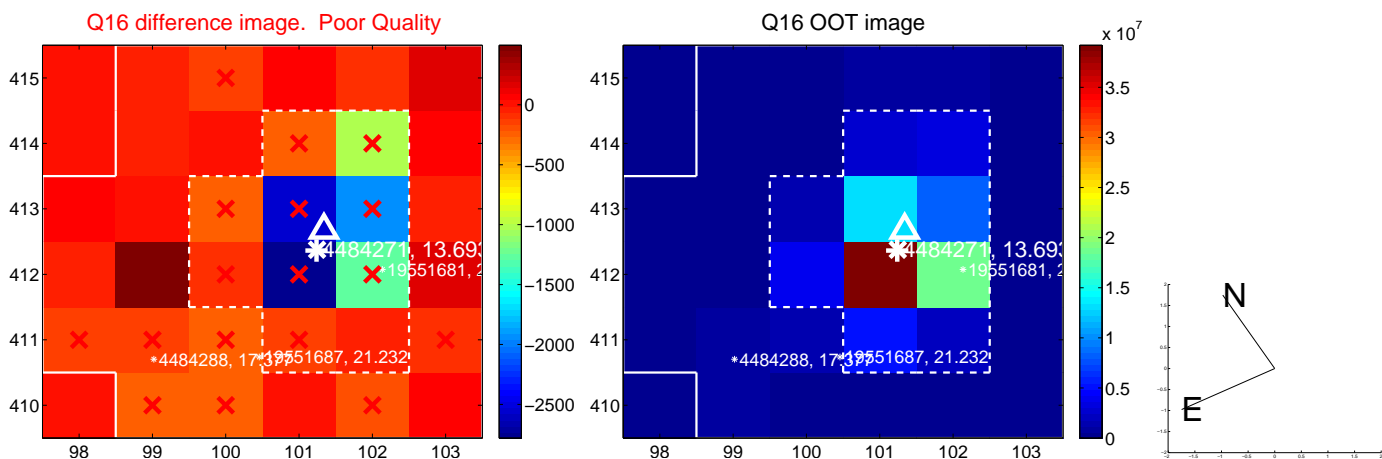
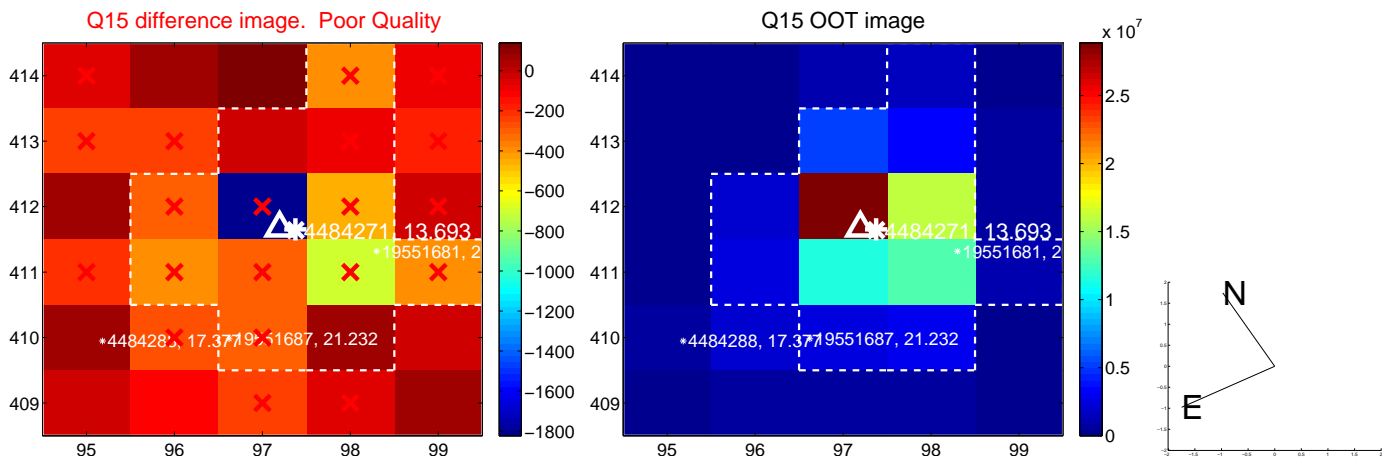
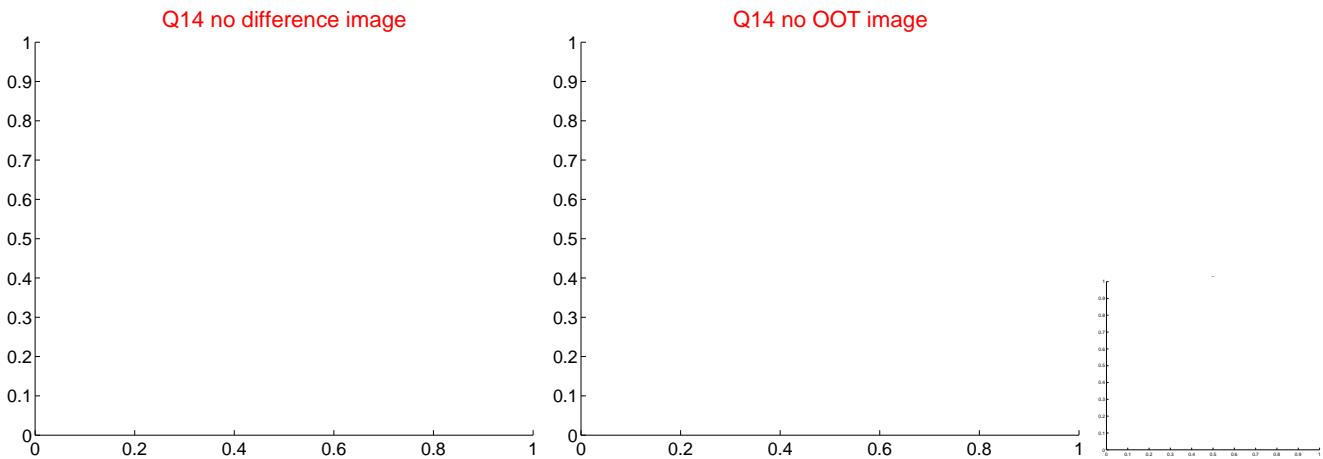
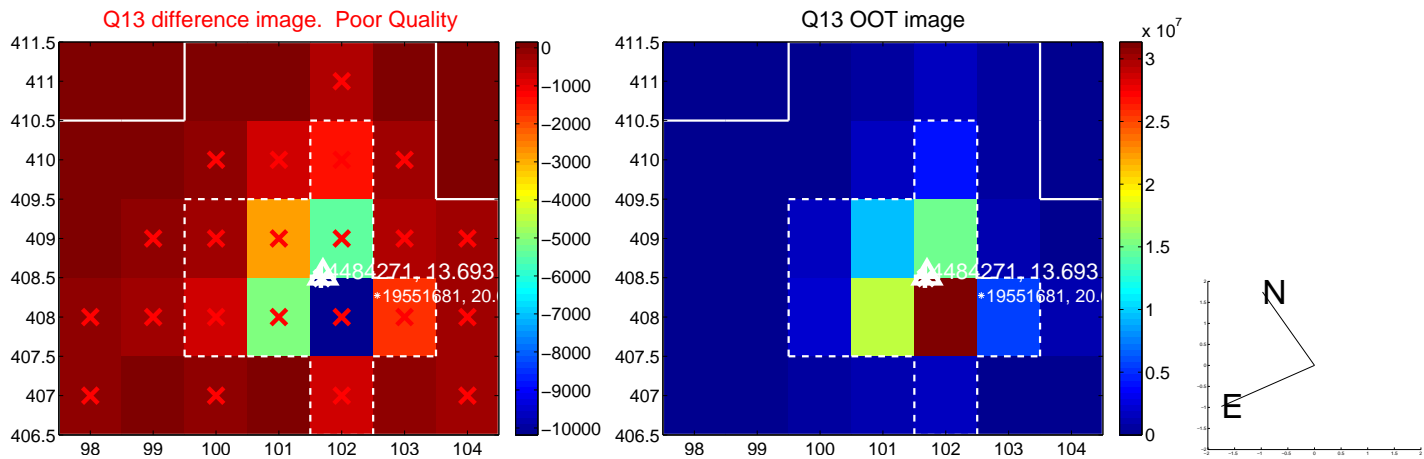
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



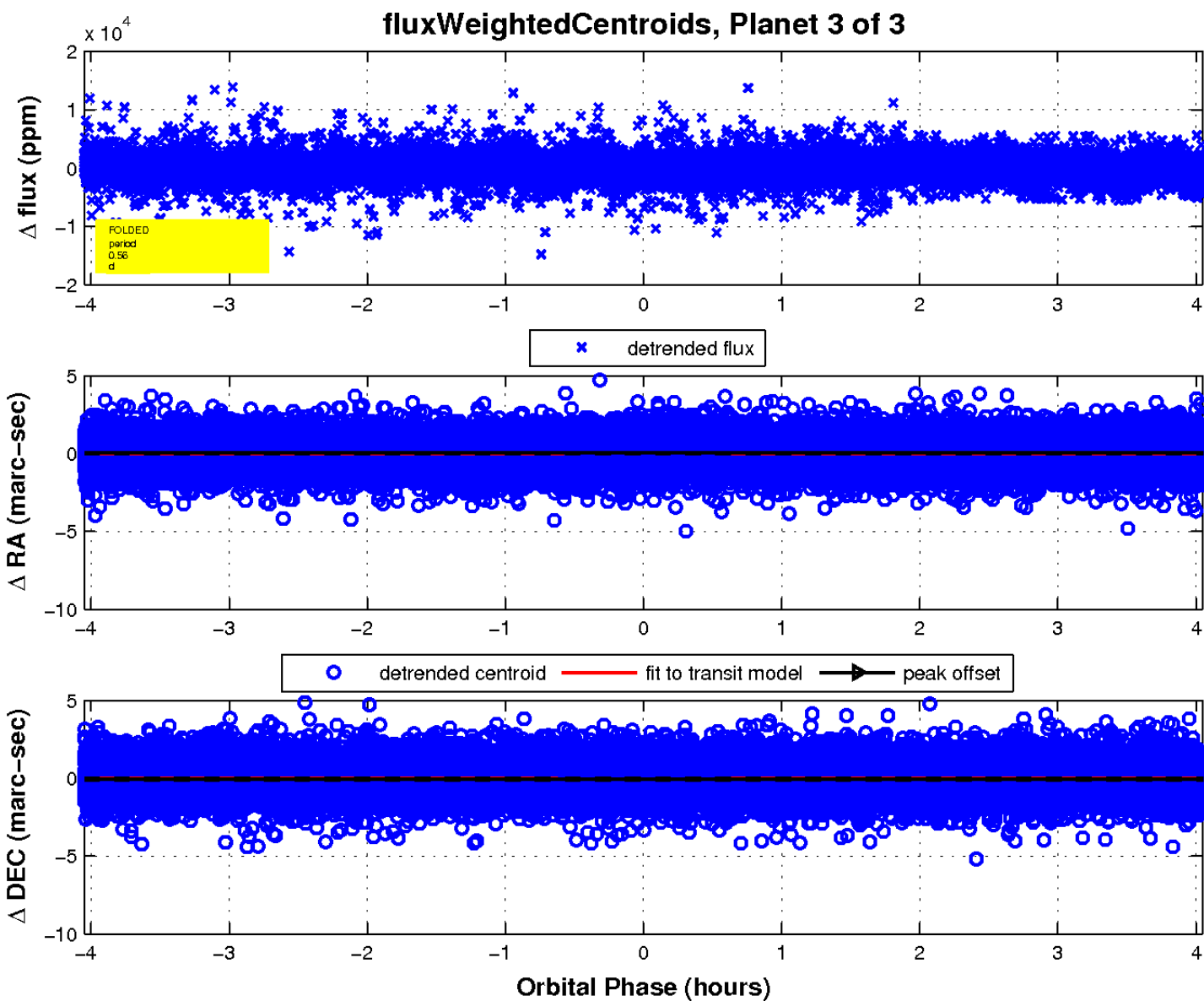
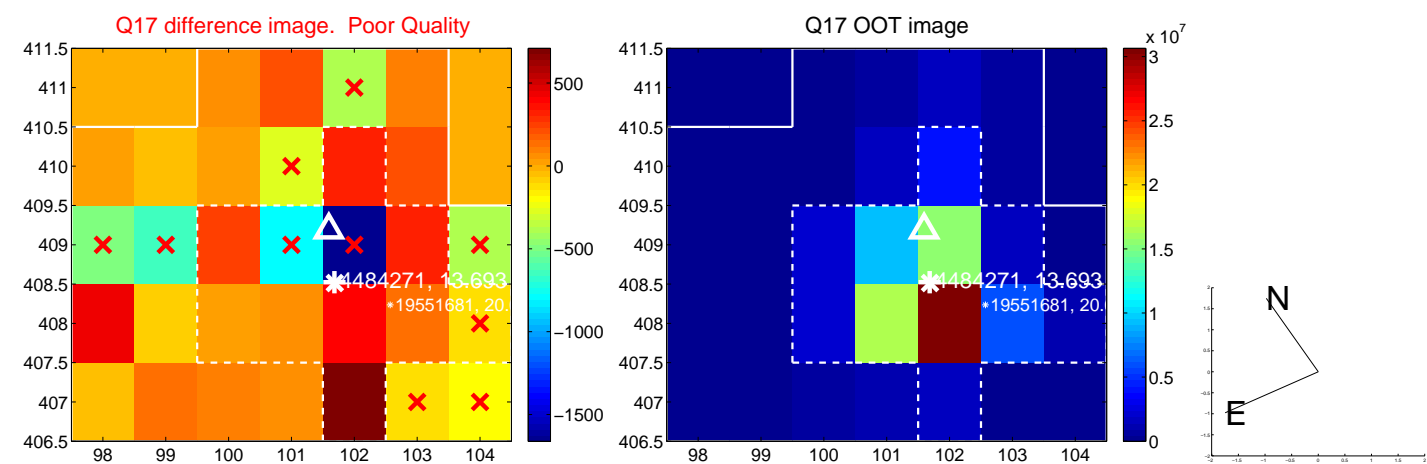
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

