

KIC 008444868

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})
008444868-01	OBS	No	4.281146	135.199810	57.5	8.374	10.8	10.8	1.27	6519	1.97	888.27
008444868-02	OBS	No	4.281020	132.815043	30.0	9.543	10.5	8.3	1.27	6519	0.80	888.30
008444868-03	OBS	No	244.681438	216.665636	182.1	19.500	10.6	7.1	1.27	6519	1.86	4.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008444868-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
008444868-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
008444868-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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 008444868-01

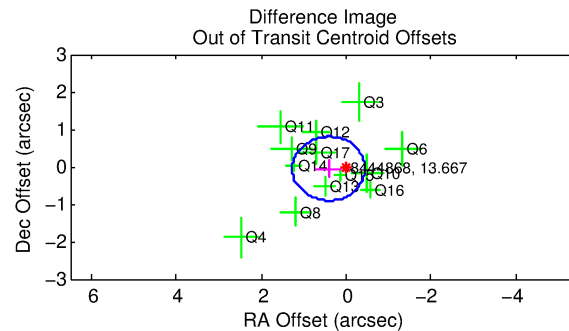
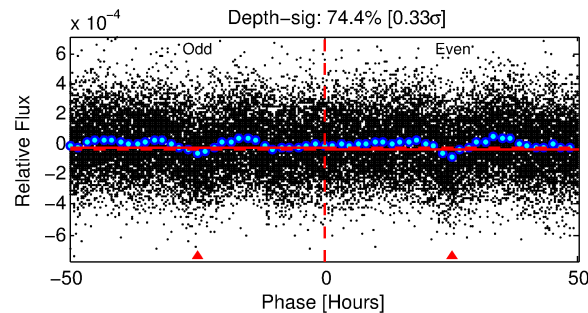
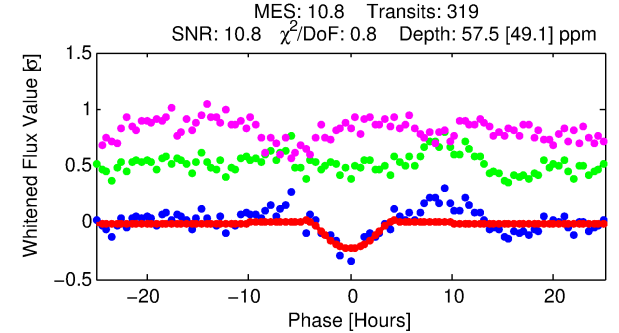
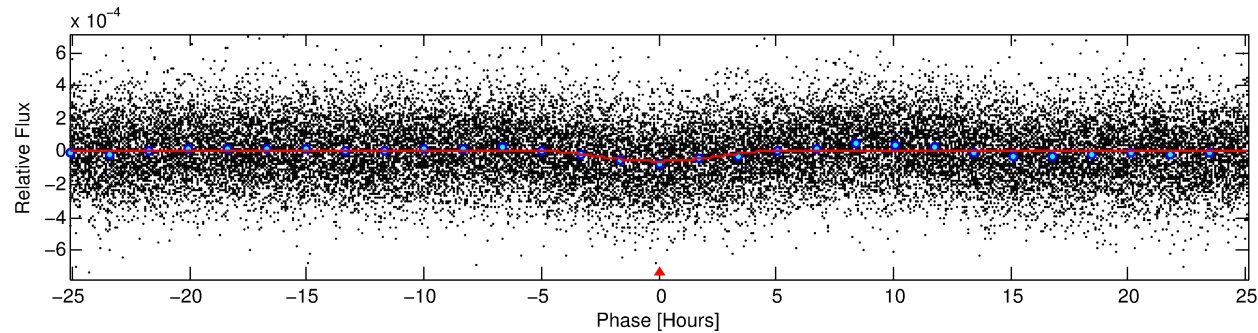
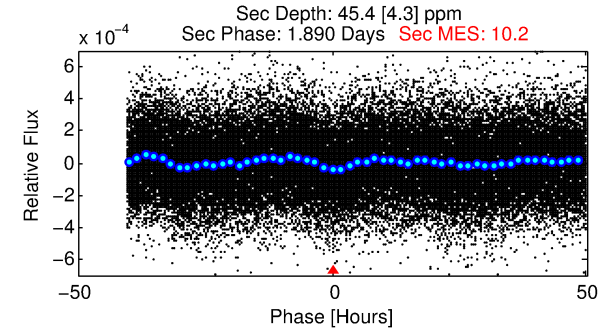
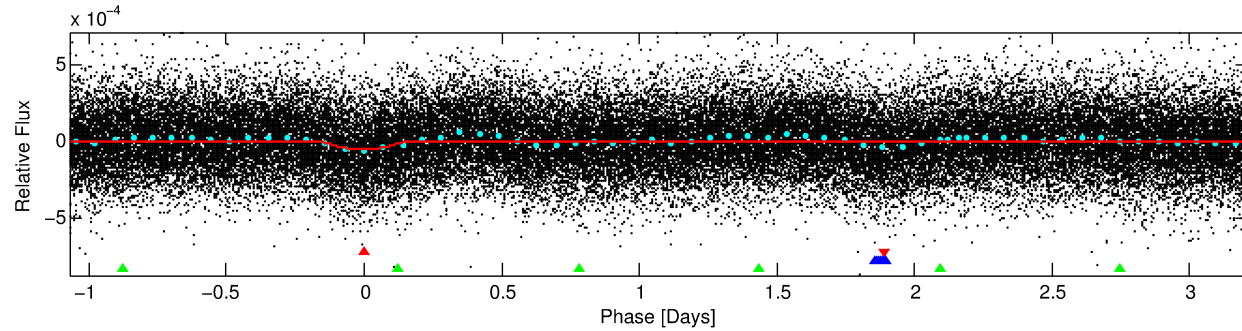
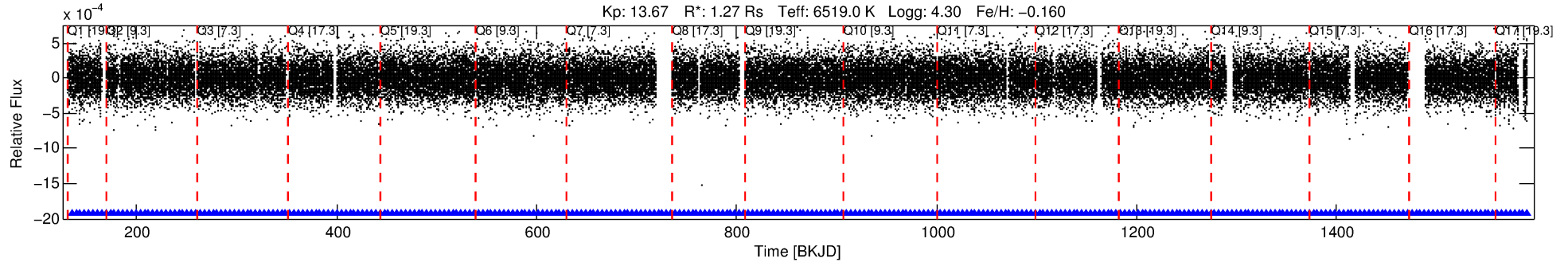
No Significant Match Found

DV One-Page Summary

KIC: 8444868 Candidate: 1 of 3 Period: 4.281 d

KOI: K07593 Corr: No Ephemeris Match

Kp: 13.67 R*: 1.27 Rs Teff: 6519.0 K Logg: 4.30 Fe/H: -0.160



DV Fit Results:

Period = 4.28115 [0.00009] d
Epoch = 135.1998 [0.0166] BKJD
Rp/R* = 0.0142 [0.0362]
a/R* = 1.20 [0.22]
b = 1.00 [0.05]
Seff = 888.27 [345.70]
Teq = 1392 [135] K
Rp = 1.97 [5.08] Re
a = 0.0544 [0.0141] AU
Ag = 18.99 [97.36] [0.18σ]
Teffp = 4493 [5746] K [0.54σ]

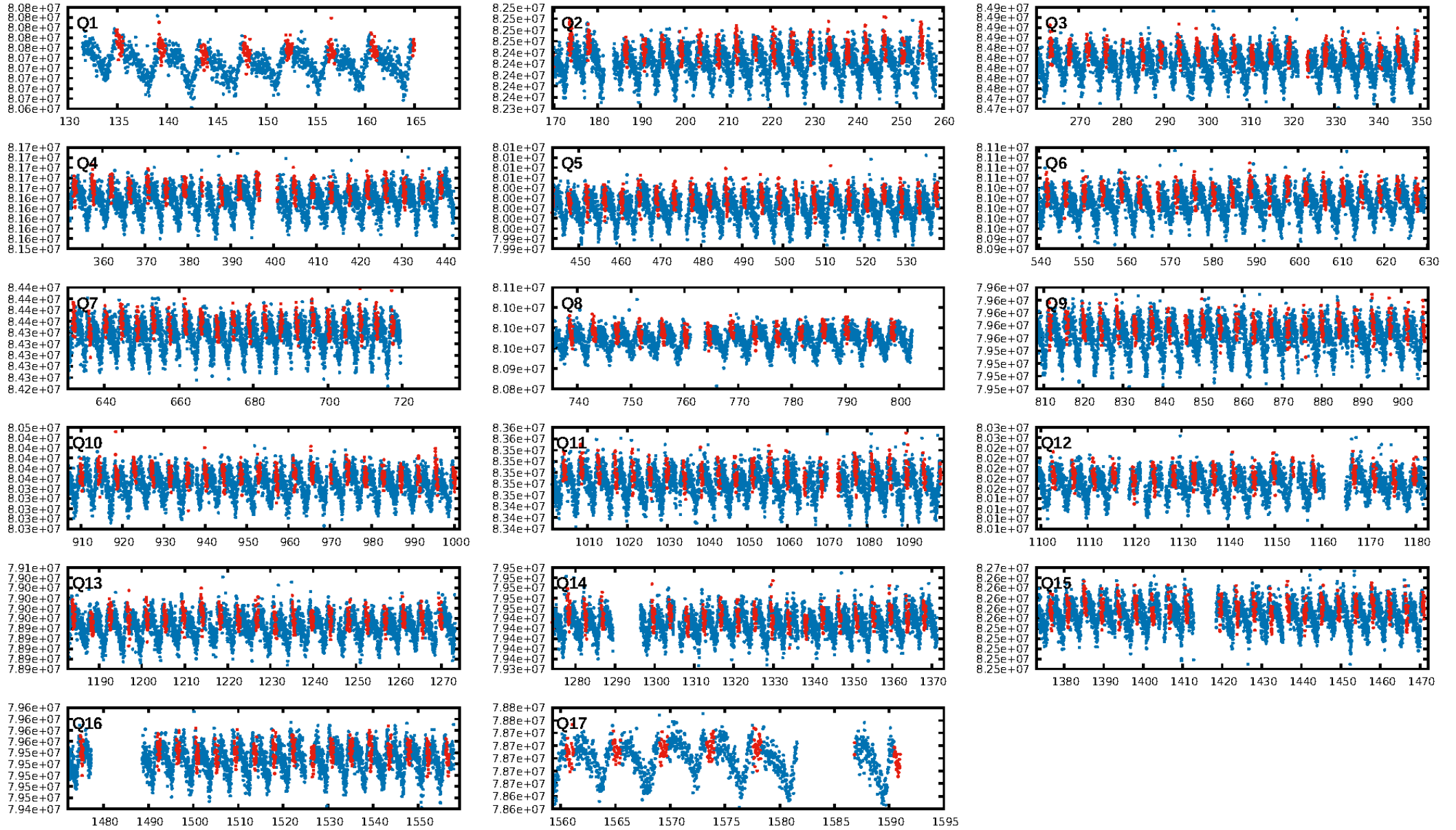
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [271.87σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.27e-19
RollingBand-fgt: 1.00 [305/305]
GhostDiagnostic-chr: 14.51
Centroid-sig: 25.1%
Centroid-so: 0.668 arcsec [0.85σ]
OotOffset-rm: 0.410 arcsec [1.44σ]
KicOffset-rm: 0.401 arcsec [1.23σ]
OotOffset-st: 3/3/4/3 [13]
KicOffset-st: 3/3/4/3 [13]
DiffImageQuality-fgm: 0.92 [12/13]
DiffImageOverlap-fno: 1.00 [17/17]

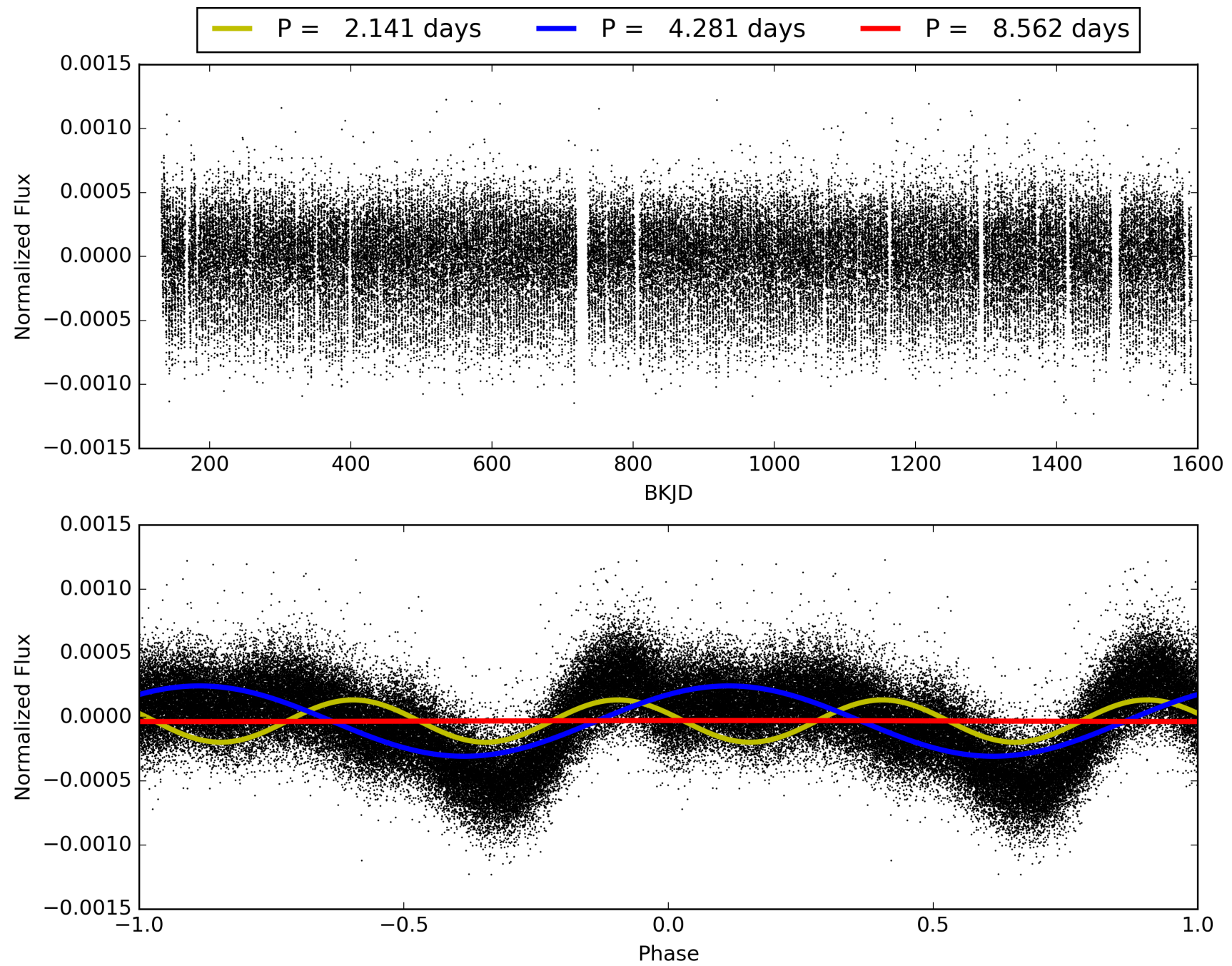
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:17:07 Z

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

TCE 008444868-01, PDC Light Curves

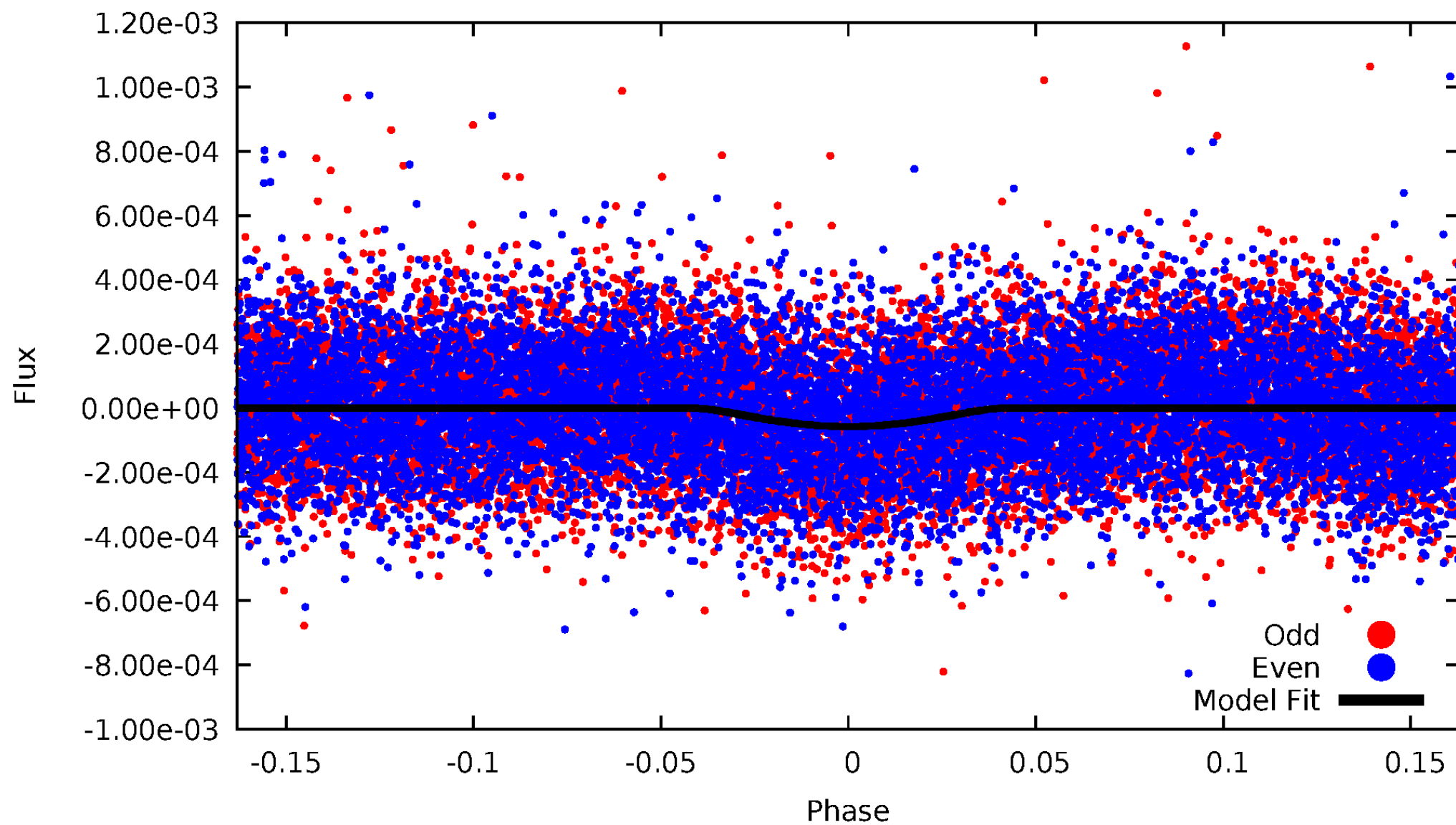


TCE 008444868-01



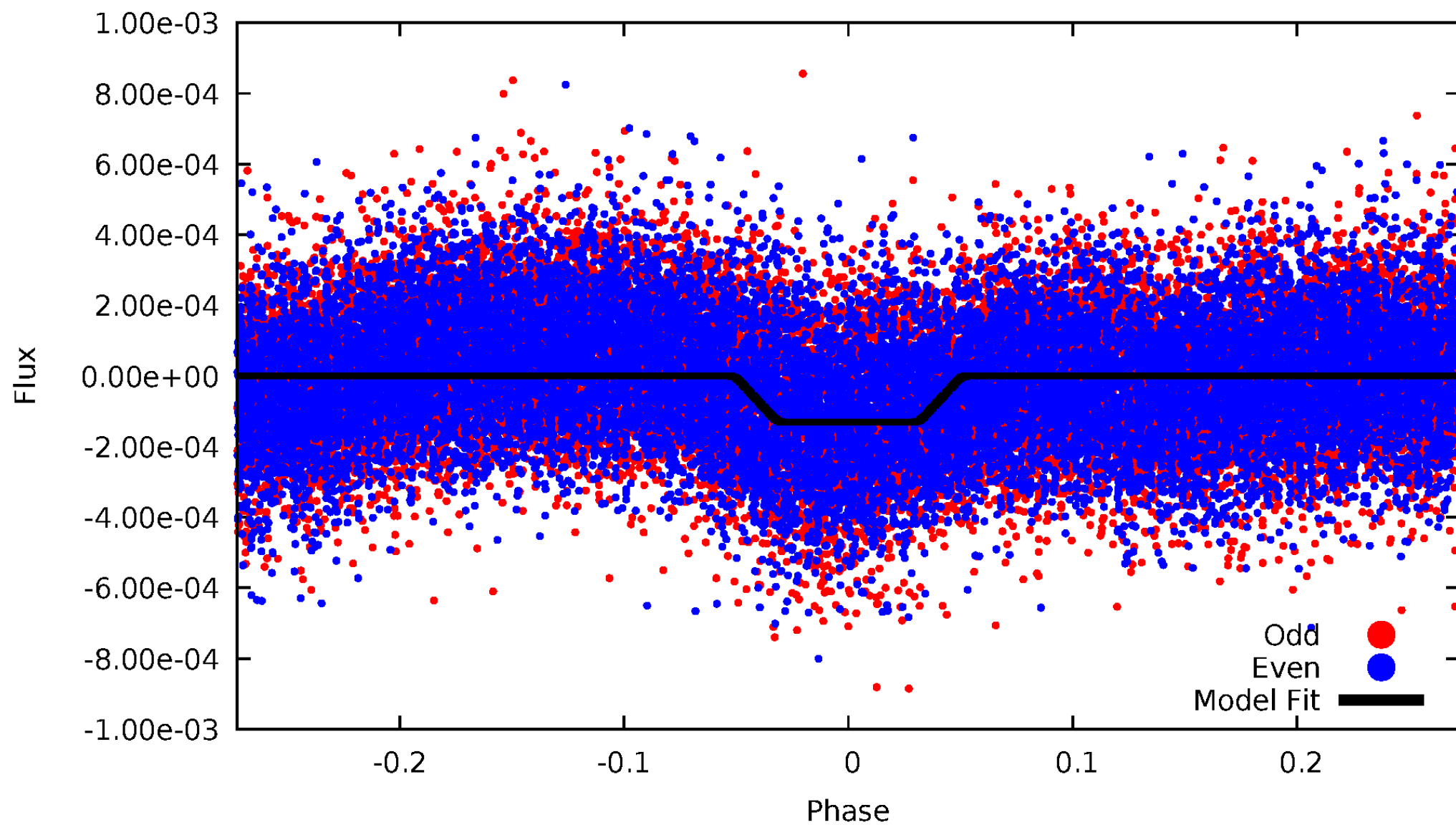
DV Odd/Even

TCE 008444868-01



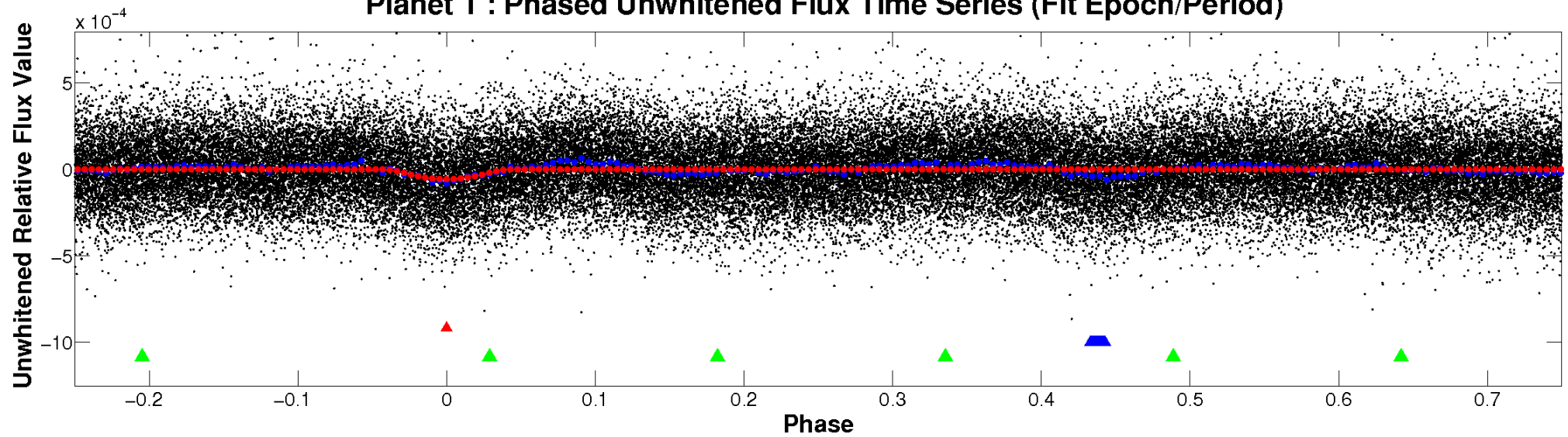
ALT Odd/Even

TCE 008444868-01

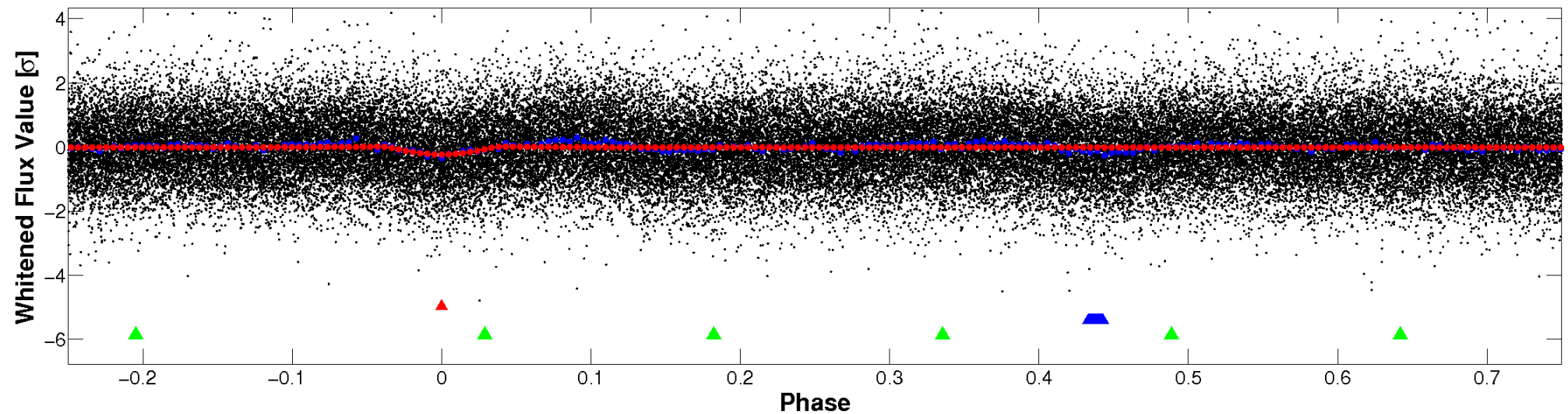


Non-Whitened Vs. Whitened Light Curve

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

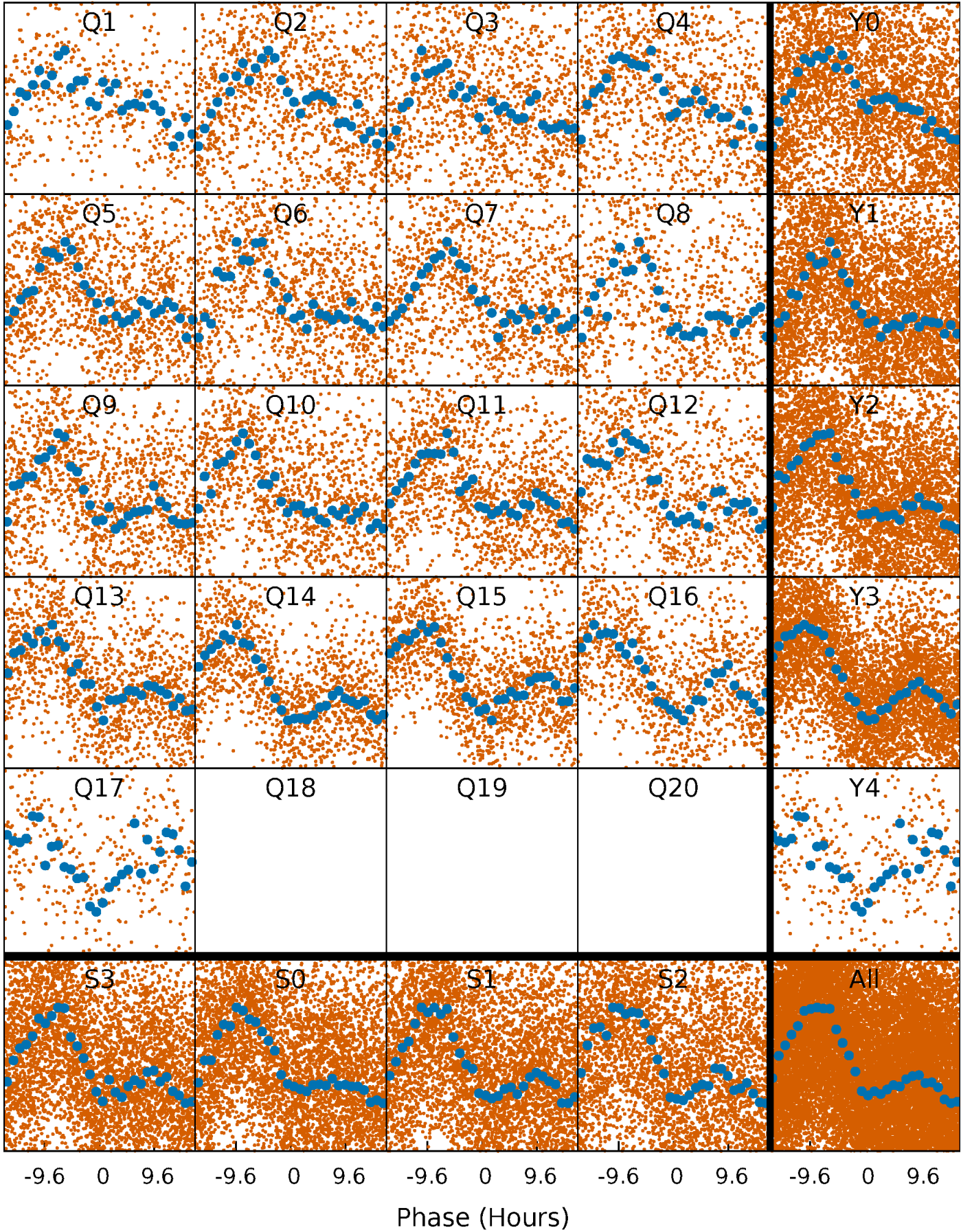


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



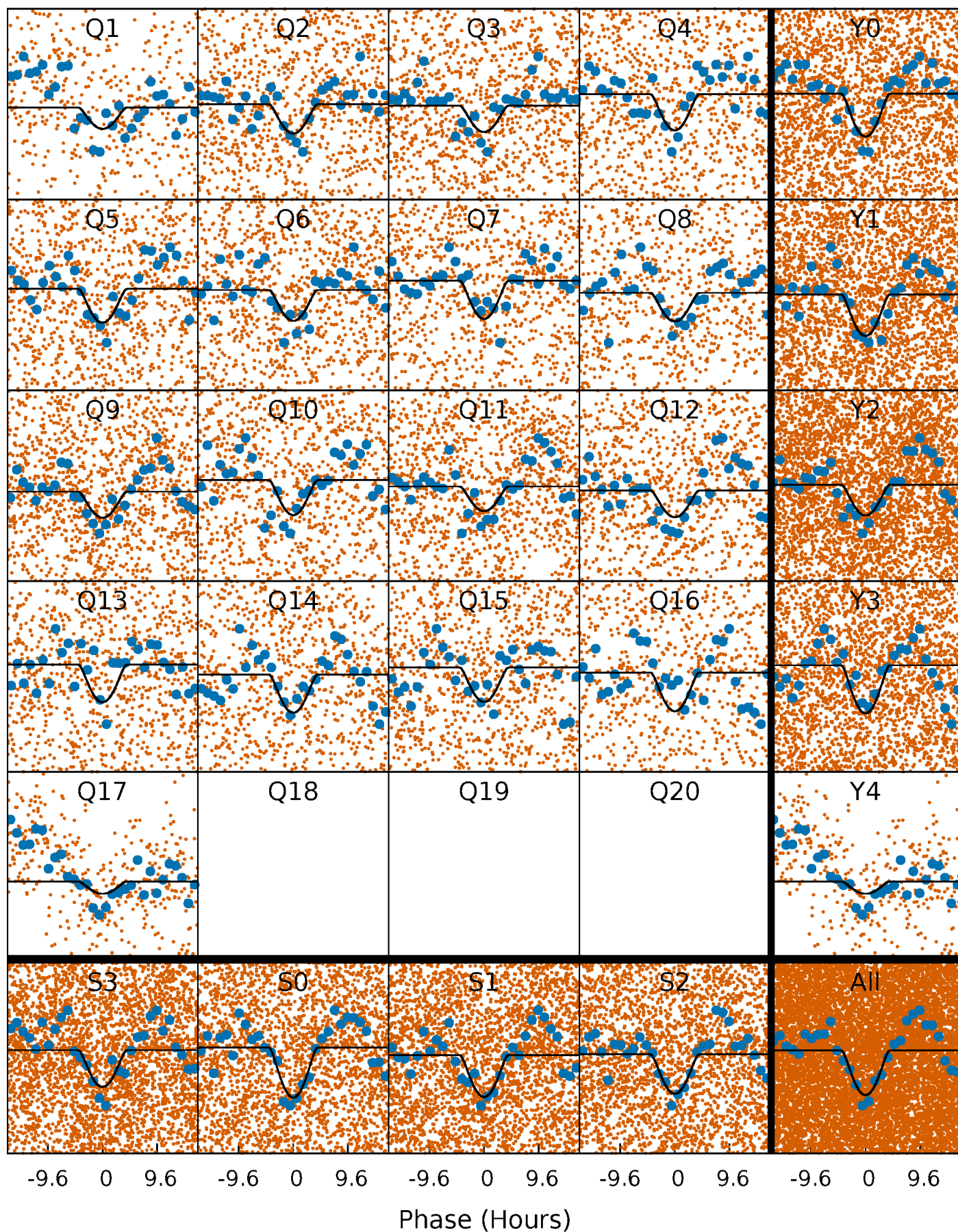
PDC Quarter-Phased Transit Curves

TCE 008444868-01 P= 4.281146 Days $T_0=135.199810$ (BKJD)



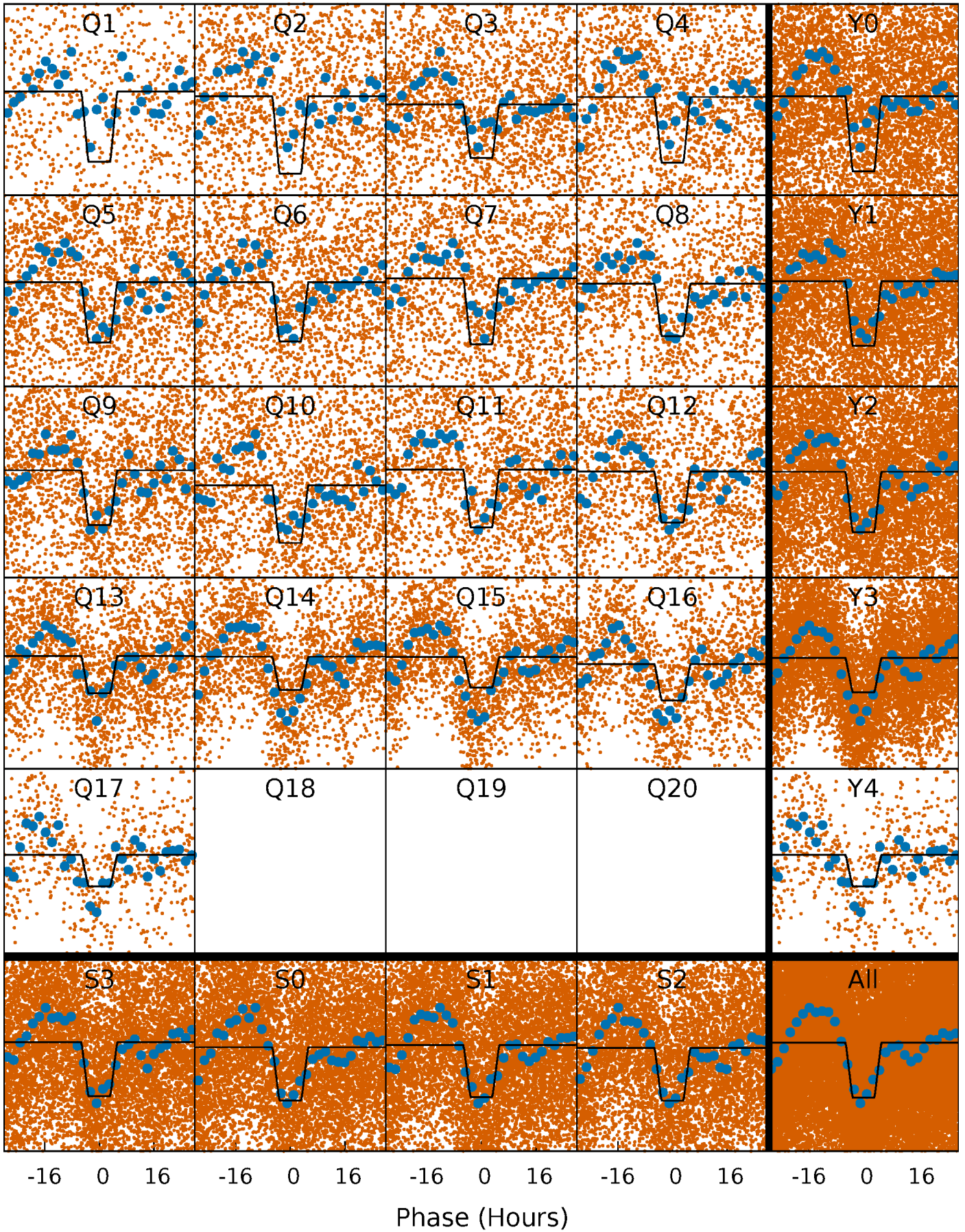
DV Quarter-Phased Transit Curves

TCE 008444868-01 P= 4.281146 Days $T_0=135.199810$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

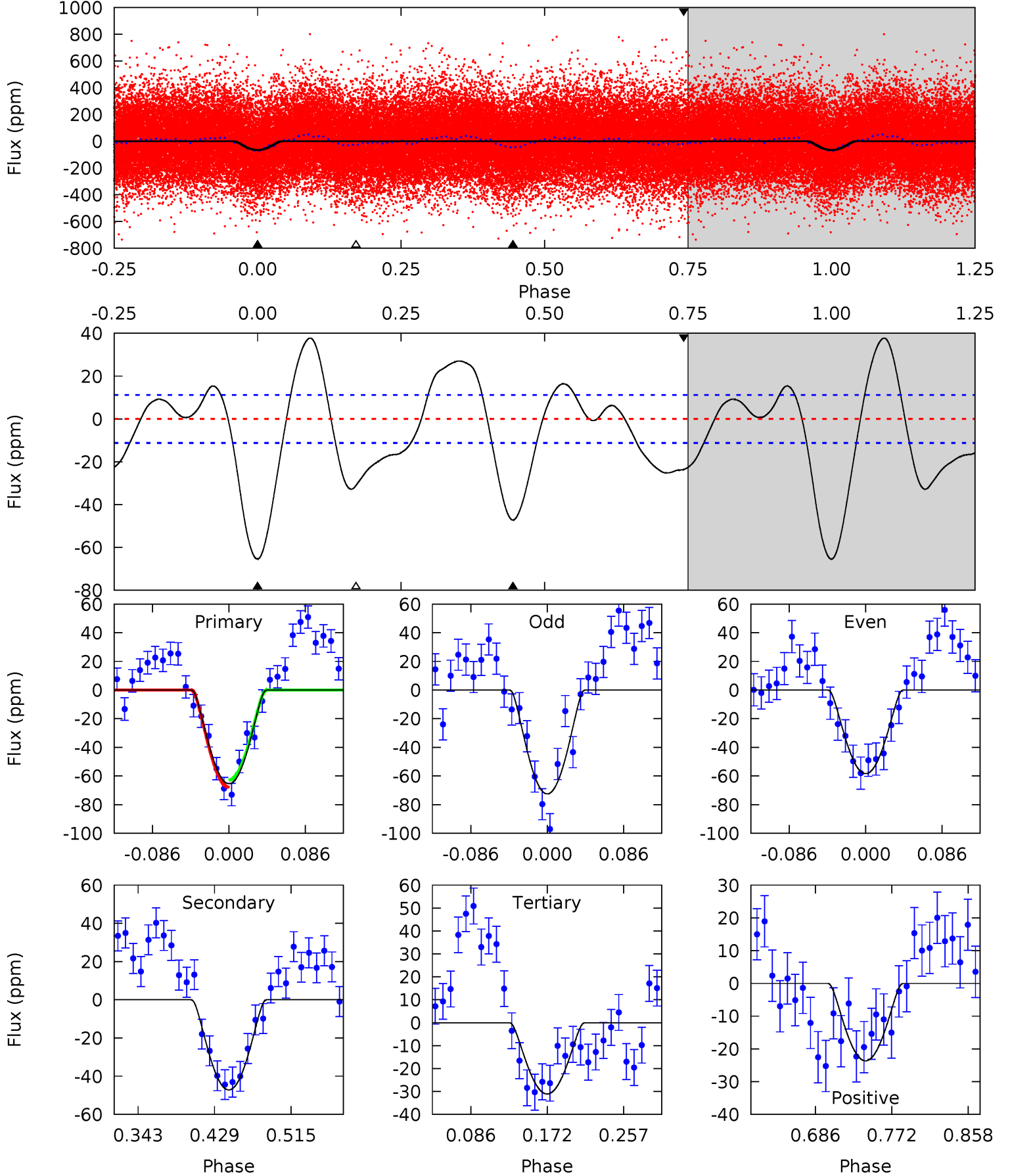
TCE 008444868-01 P= 4.281081 Days $T_0=135.266327$ (BKJD)



DV Model-Shift Uniqueness Test

008444868-01, P = 4.281146 Days, E = 130.918664 Days

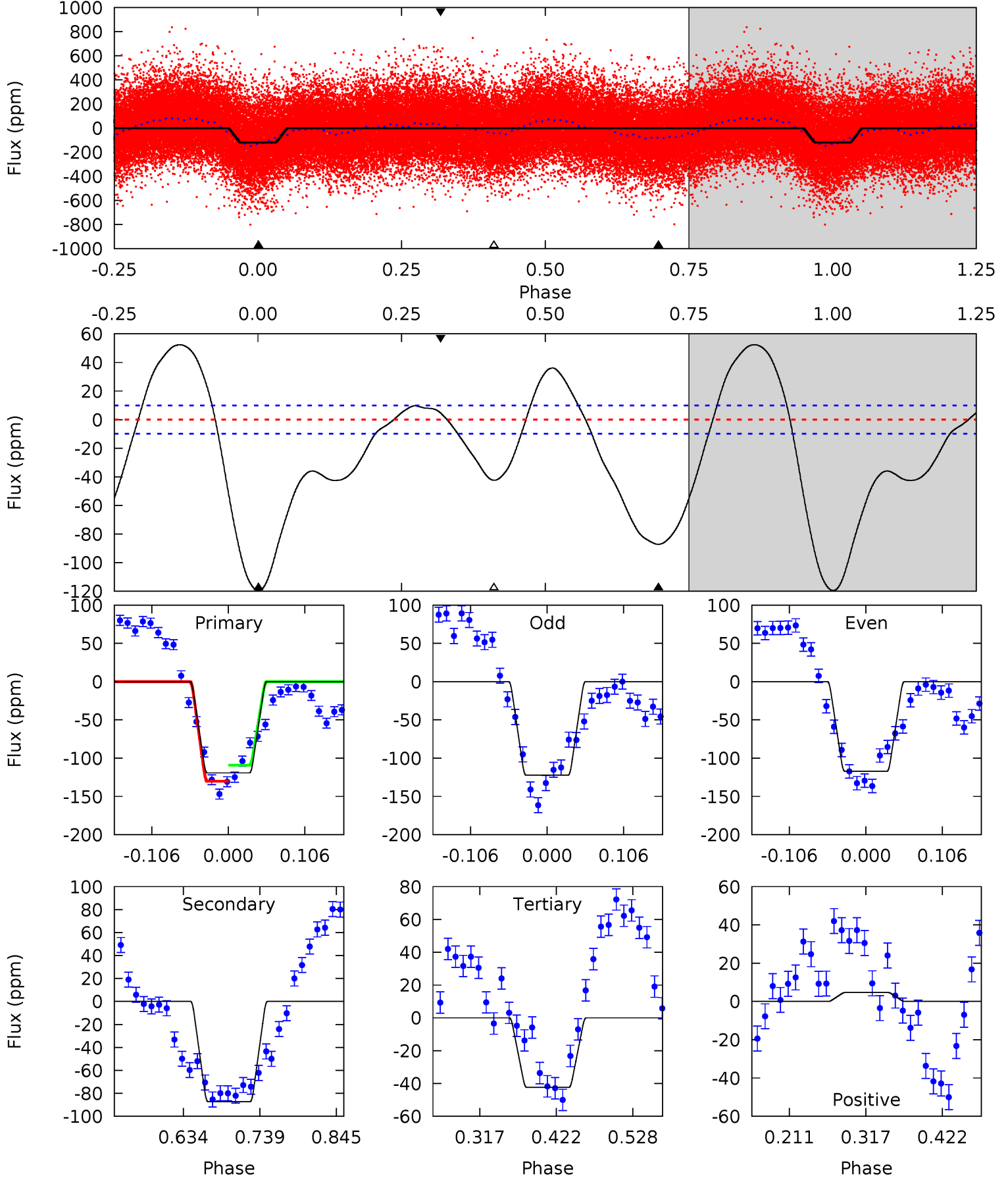
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.8	19.3	12.7	-9.69	4.60	1.72	7.11	14.1	36.5	6.60	29.0	2.90	0.97	0.37	1.04



Alt Model-Shift Uniqueness Test

008444868-01, P = 4.281081 Days, E = 130.985246 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
55.1	40.3	19.6	2.18	4.55	1.62	13.3	35.5	53.0	20.7	38.1	1.15	0.98	0.31	4.77



Stellar Parameters For KIC 008444868

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6519^{+155}_{-214}	$4.296^{+0.105}_{-0.195}$	$-0.160^{+0.250}_{-0.300}$	$1.275^{+0.404}_{-0.218}$	$1.175^{+0.192}_{-0.157}$	$0.798^{+0.382}_{-0.410}$
	+2%/-3%	+2%/-5%	+156%/-188%	+32%/-17%	+16%/-13%	+48%/-51%
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 008444868-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-47 ± 2	$4.28^{+4.20}_{-2.81}$	1963^{+137}_{-111}	3546^{+1828}_{-776}	$4.154^{+31.207}_{-3.097}$
Alt.	-87 ± 2	$4.35^{+4.25}_{-3.00}$	1966^{+138}_{-111}	3965^{+2355}_{-875}	$7.601^{+68.806}_{-5.667}$

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

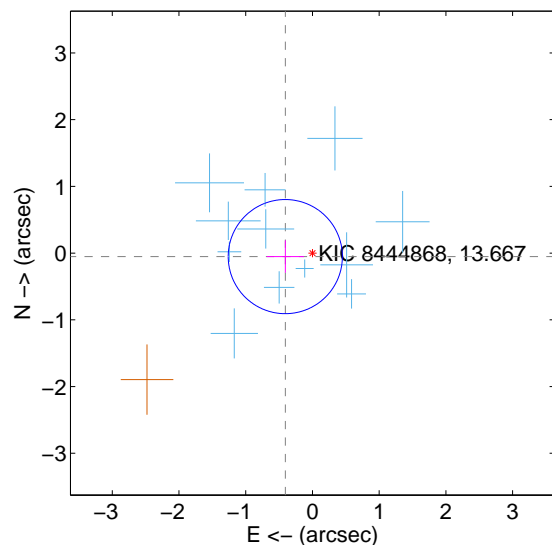
Supplemental centroid analysis for 008444868-01. Kepler magnitude: 13.67. Transit SNR 10.83

There are 12 quarters with good PRF difference image offsets

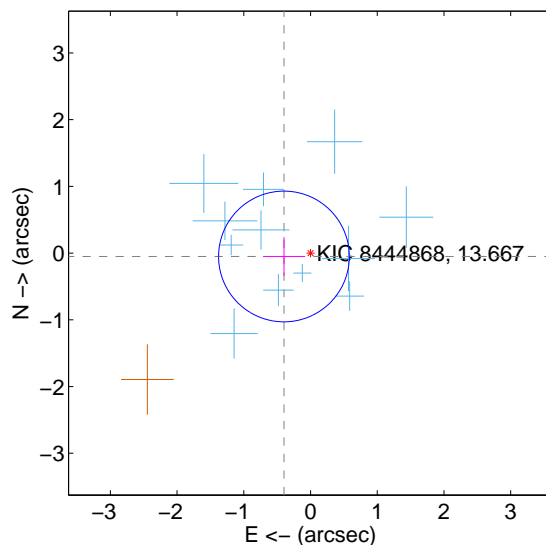
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.410 ± 0.285	1.44	0.407 ± 0.279	-0.052 ± 0.242
PRF-fit source offset from KIC position	0.401 ± 0.327	1.23	0.398 ± 0.314	-0.051 ± 0.290
photometric centroid source offset	0.67 ± 0.79	0.85	0.25 ± 0.73	-0.62 ± 0.79

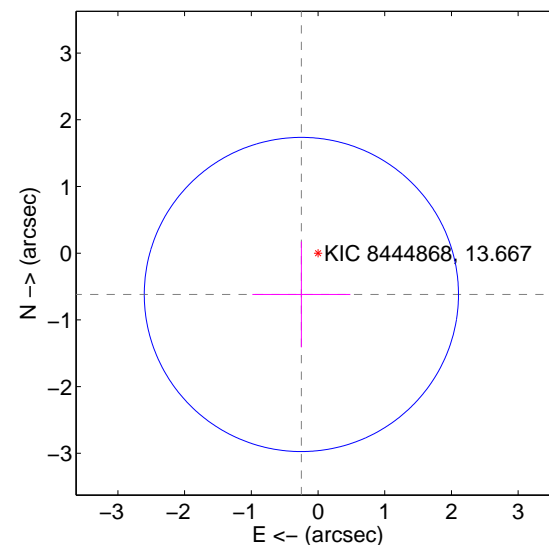
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

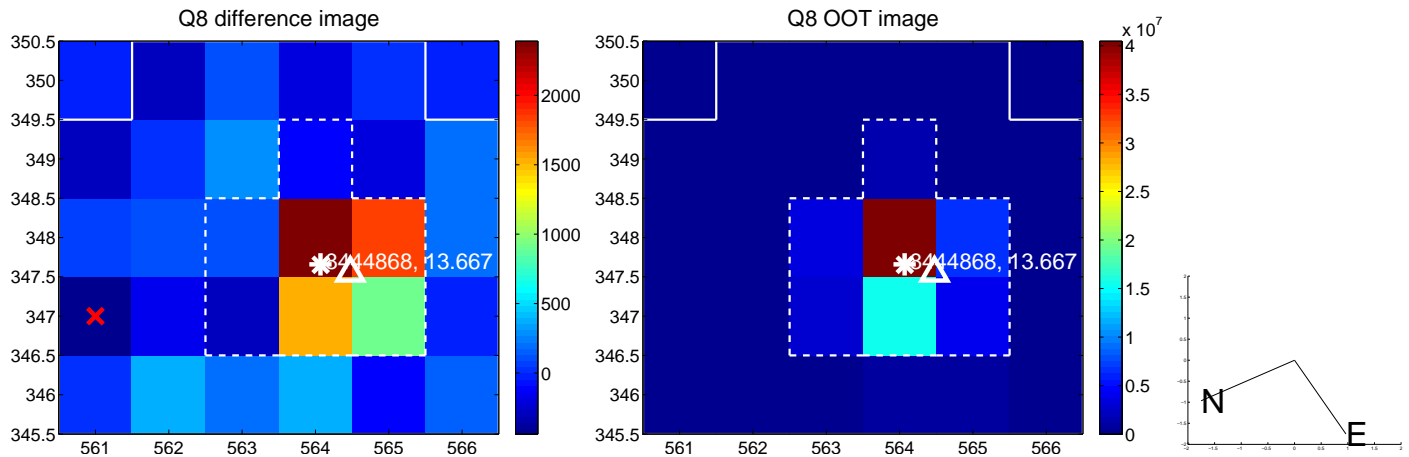
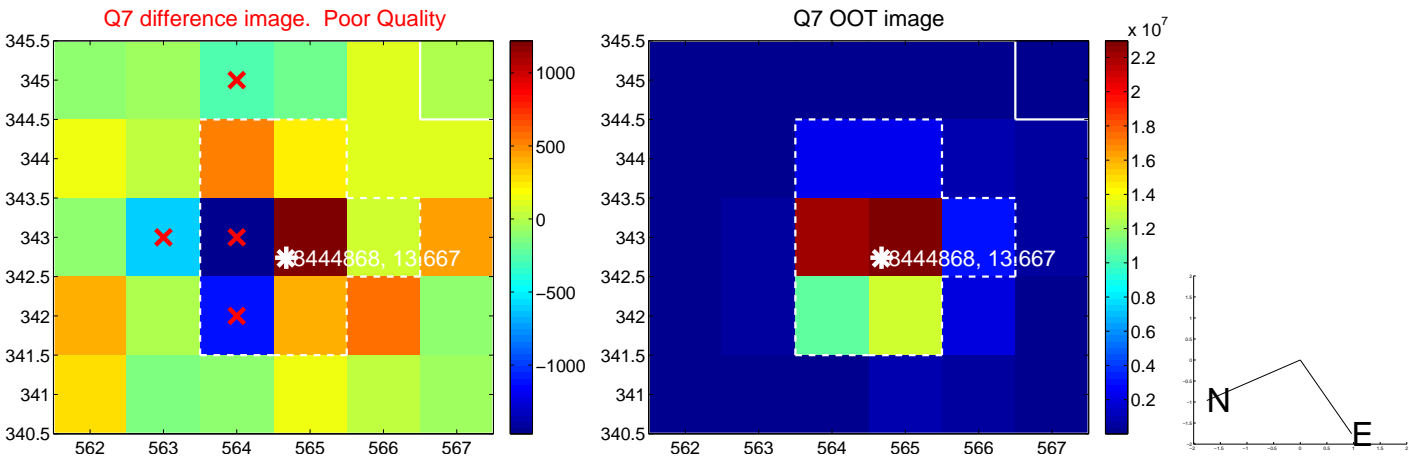
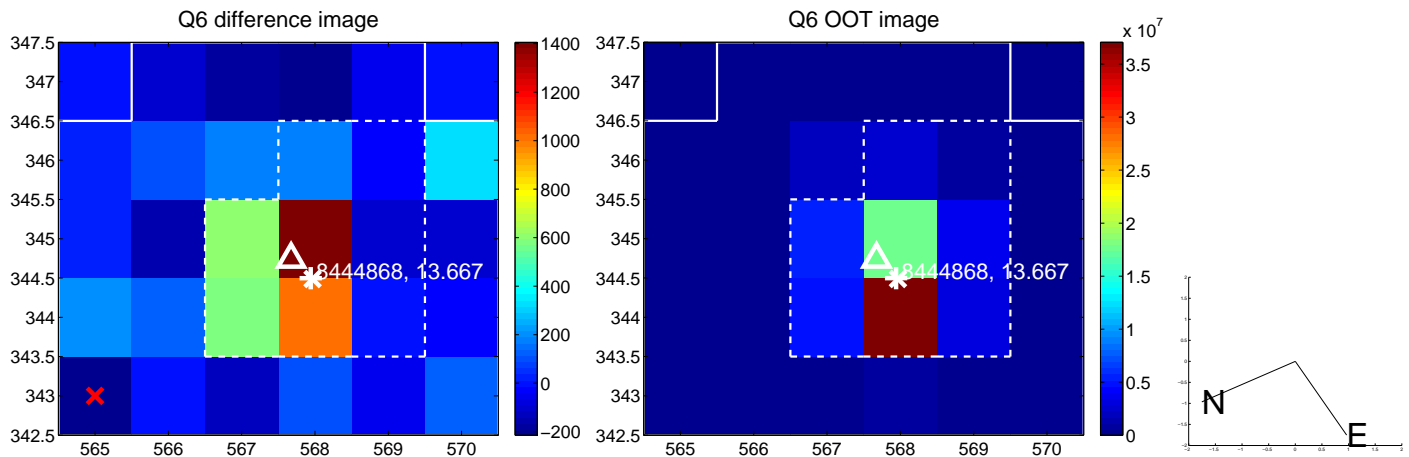
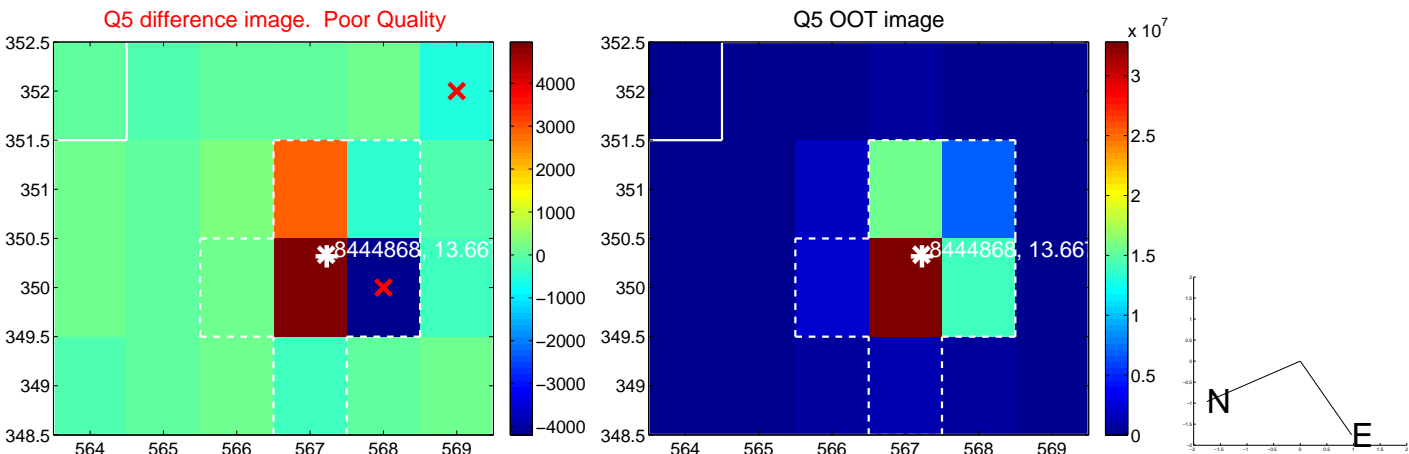


offset from photometric centroids

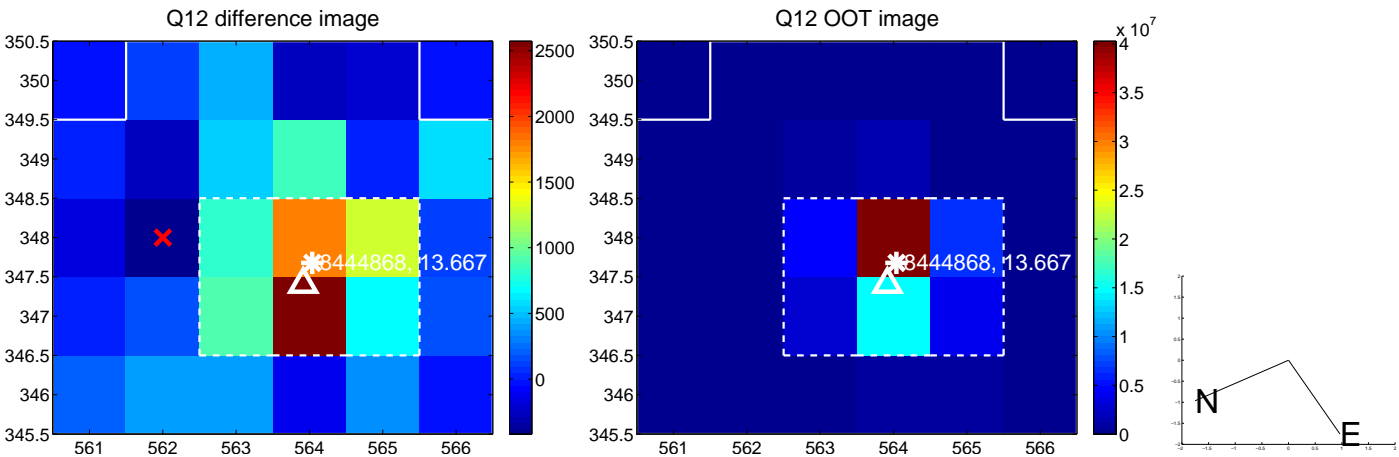
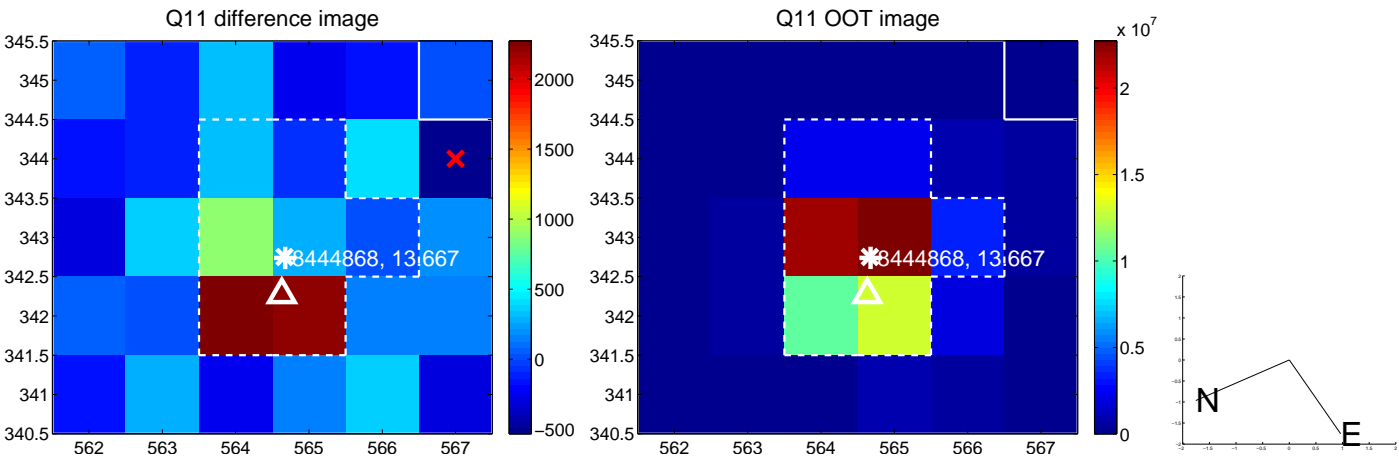
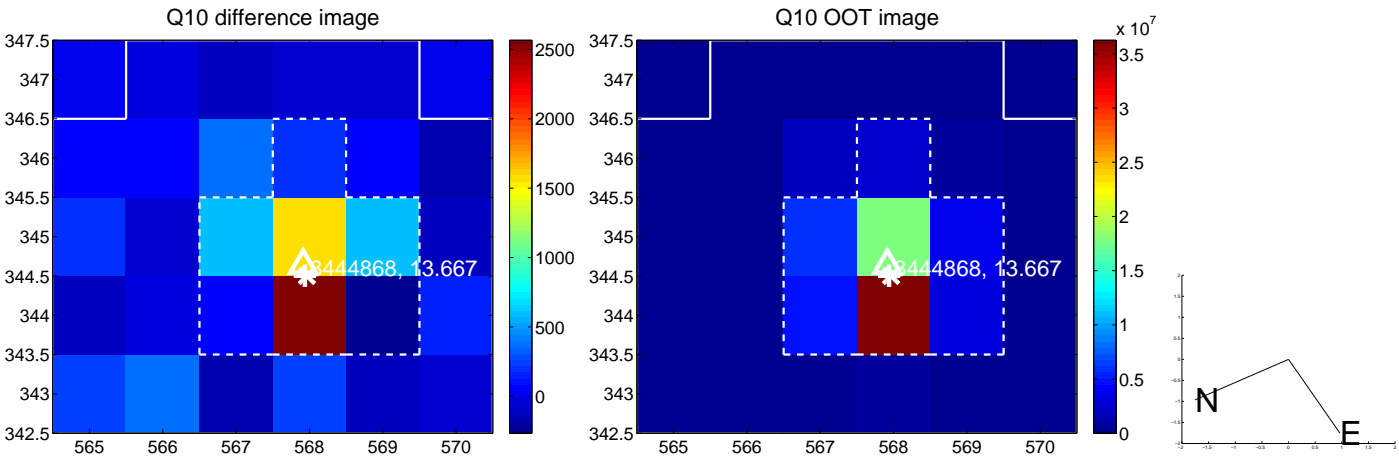
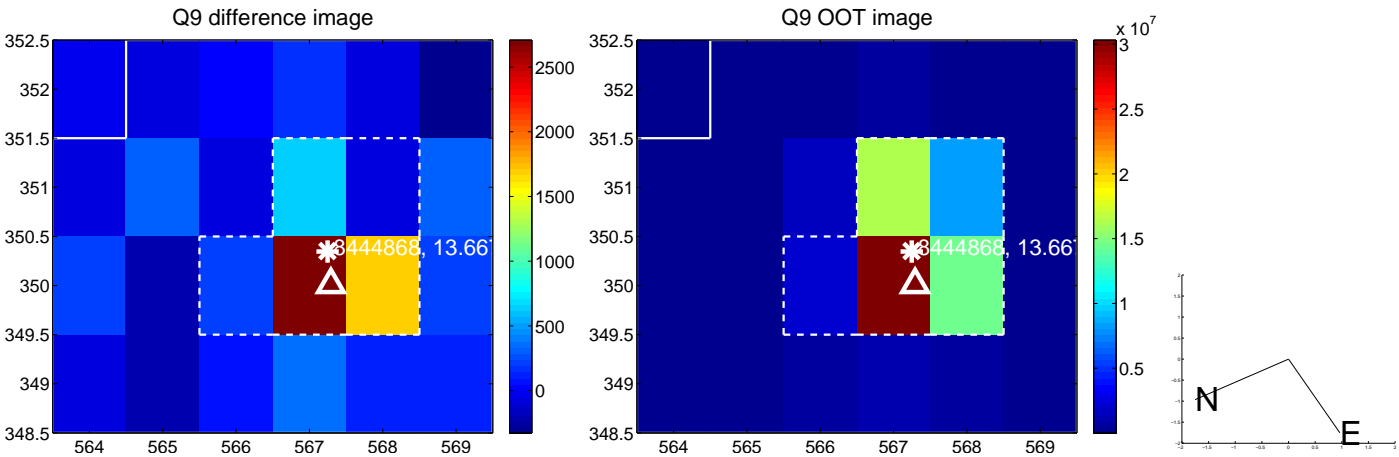


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

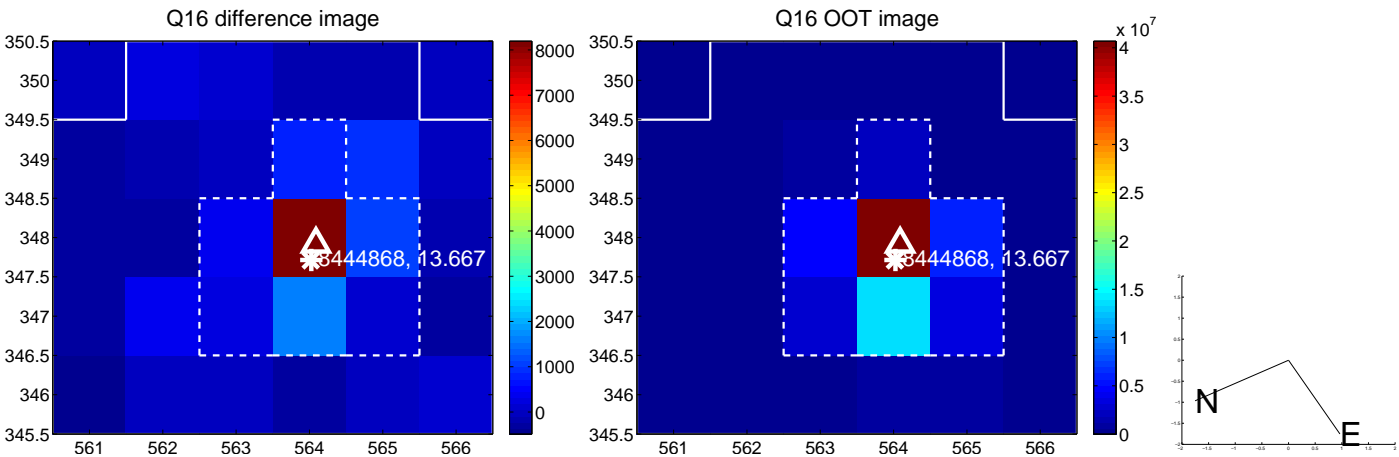
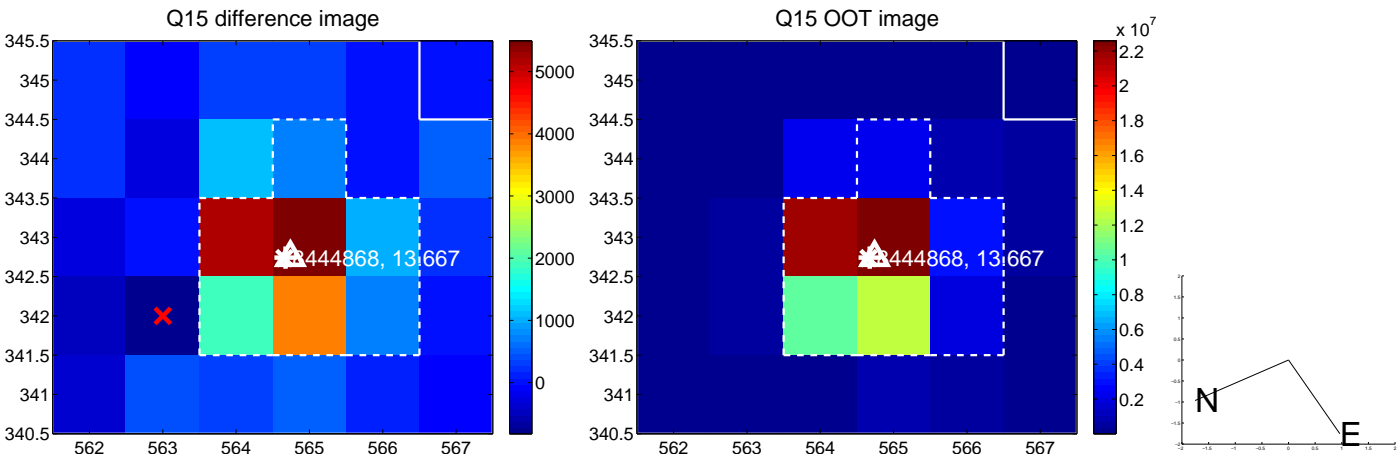
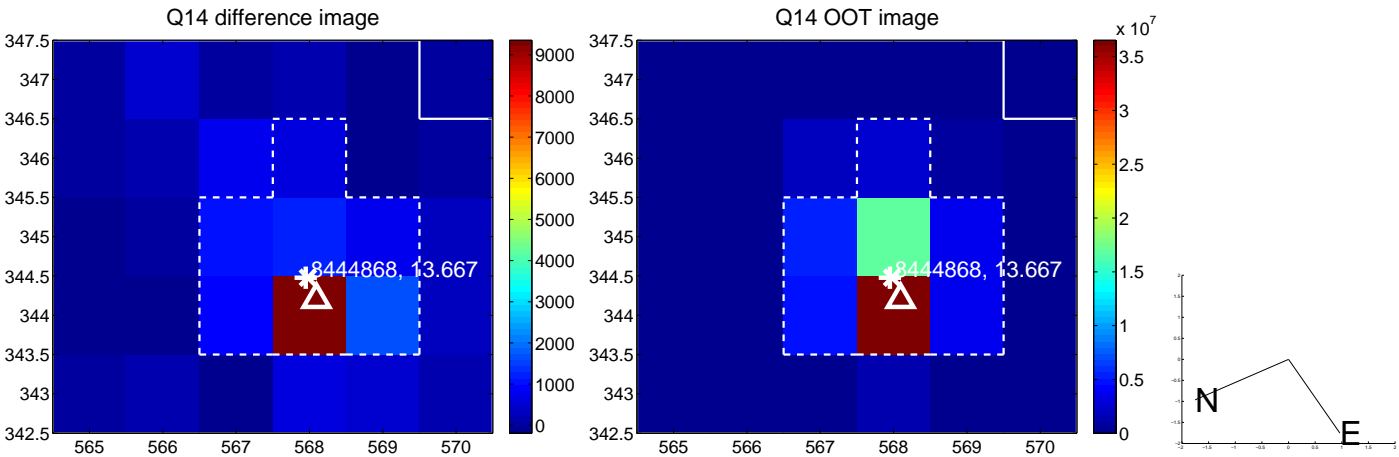
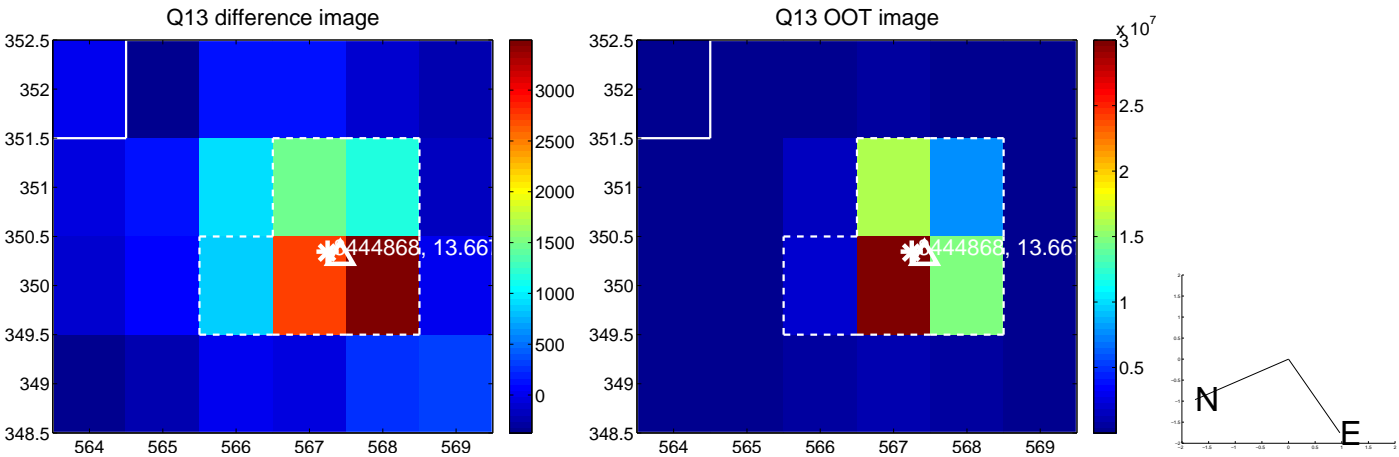
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



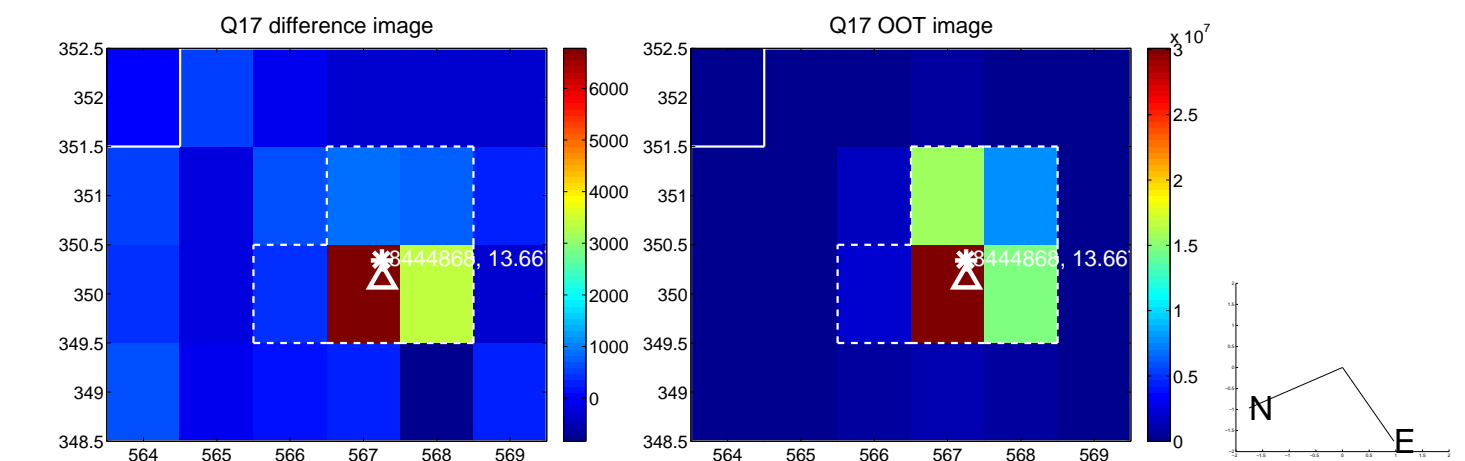
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



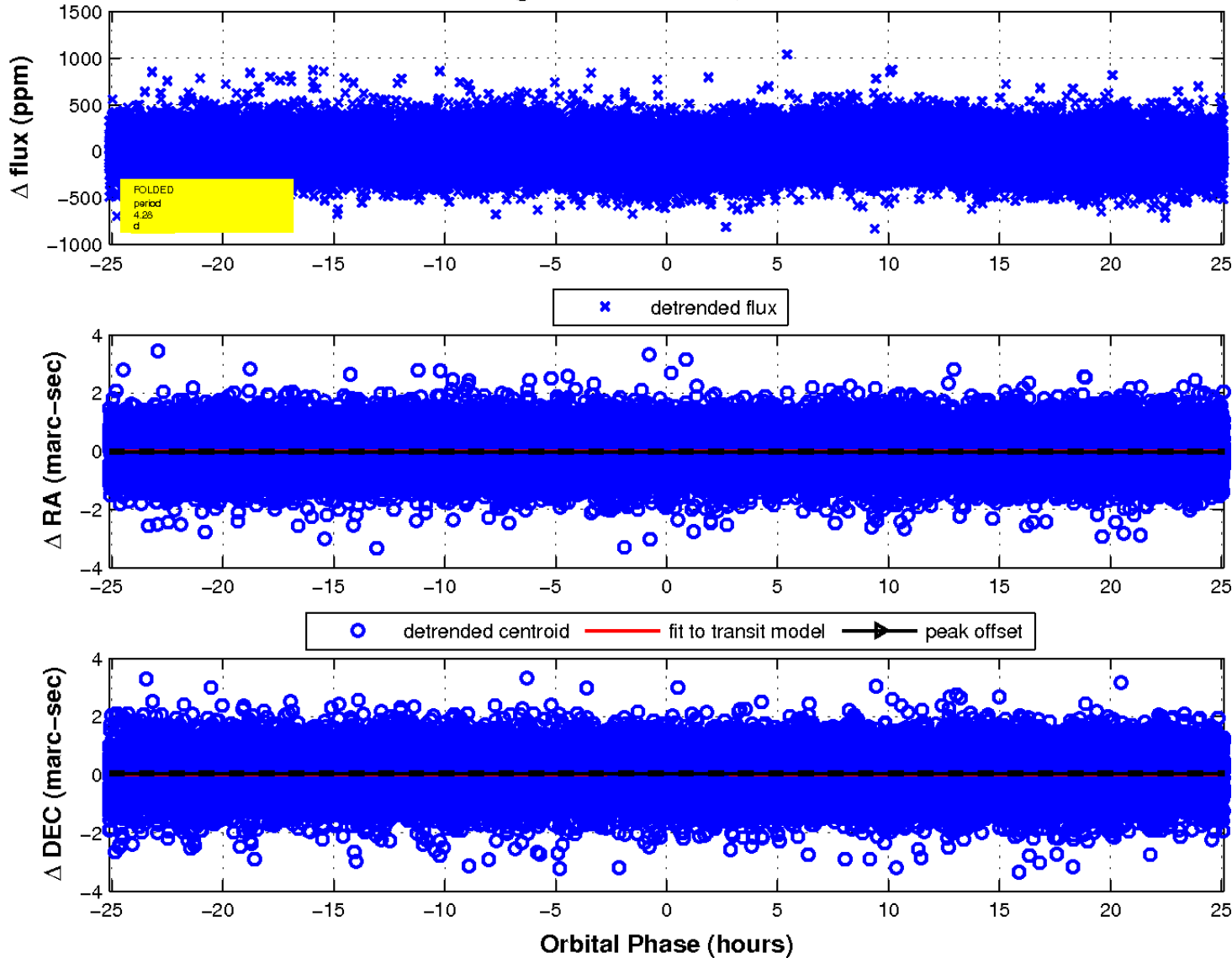
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

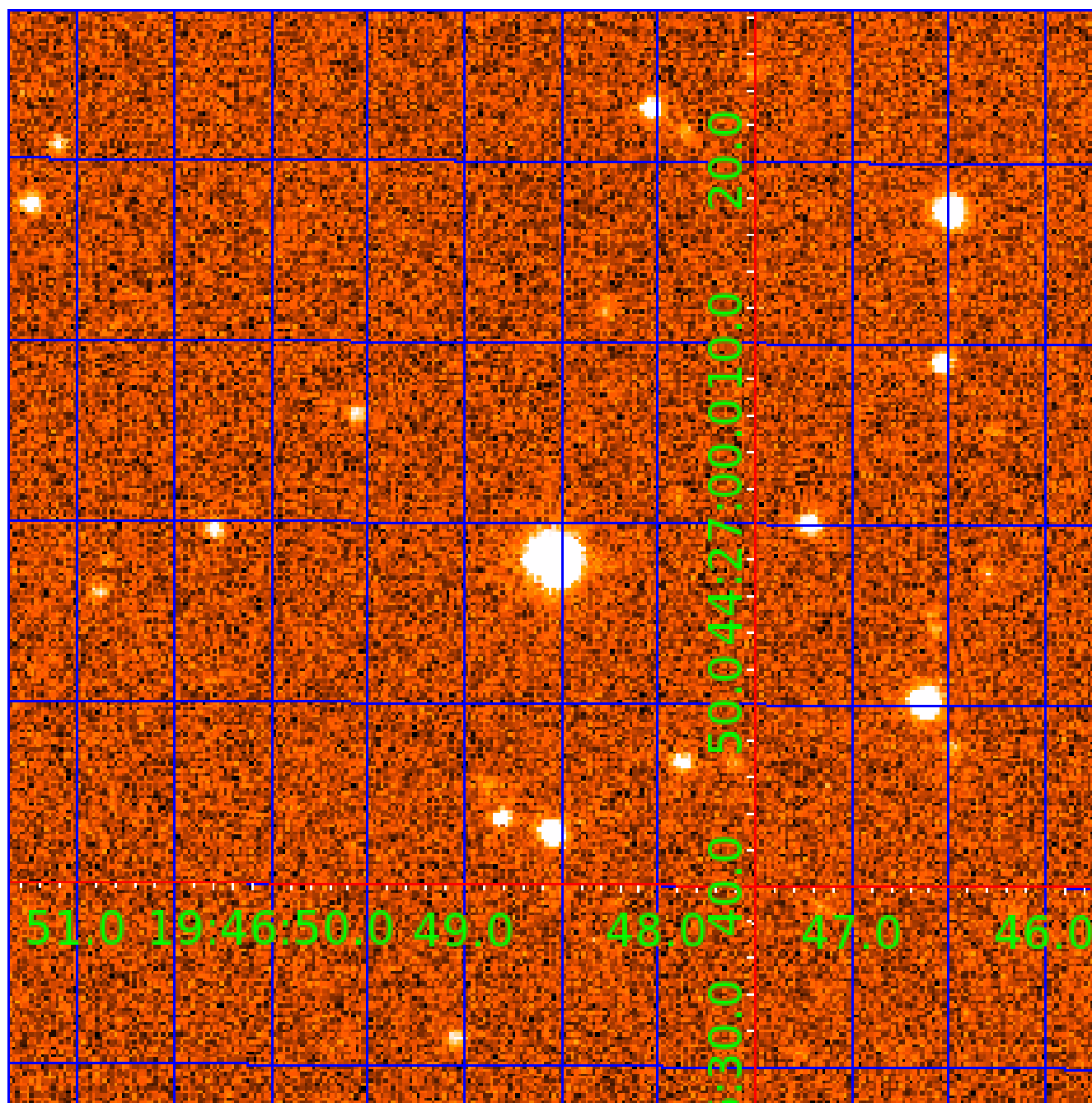


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 008444868

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})
008444868-01	OBS	No	4.281146	135.199810	57.5	8.374	10.8	10.8	1.27	6519	1.97	888.27
008444868-02	OBS	No	4.281020	132.815043	30.0	9.543	10.5	8.3	1.27	6519	0.80	888.30
008444868-03	OBS	No	244.681438	216.665636	182.1	19.500	10.6	7.1	1.27	6519	1.86	4.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008444868-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
008444868-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
008444868-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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.

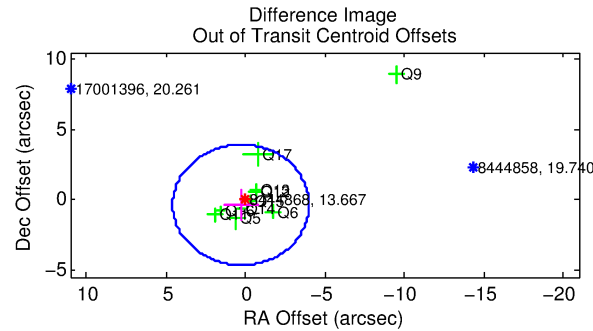
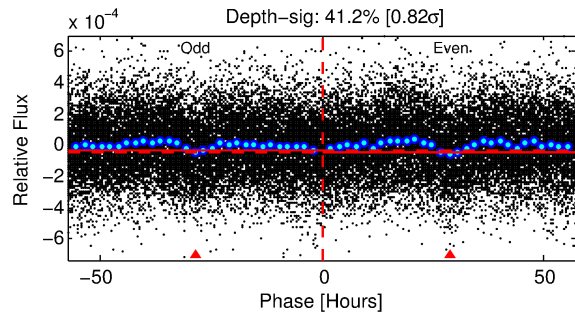
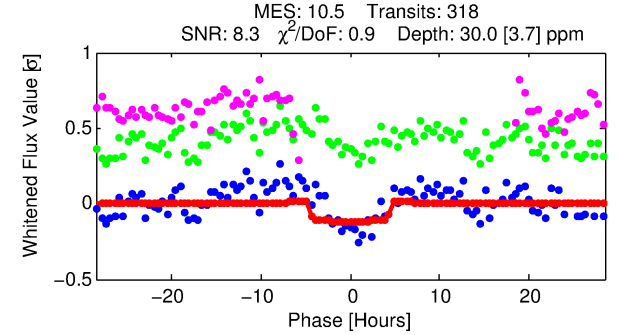
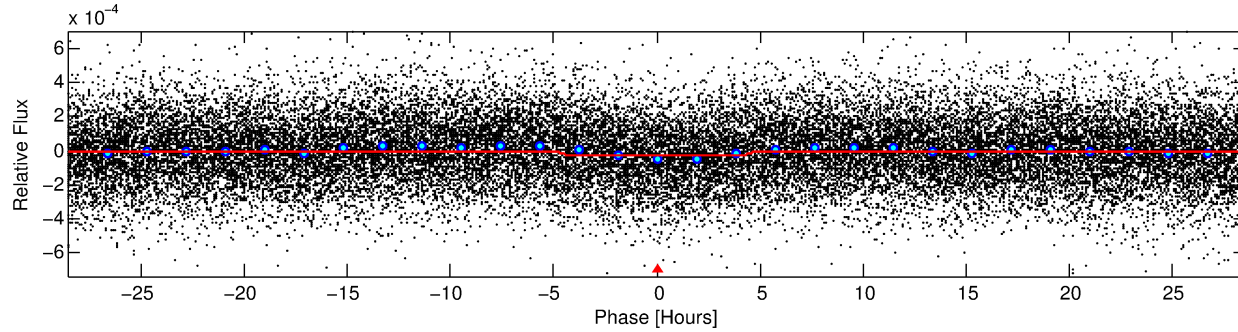
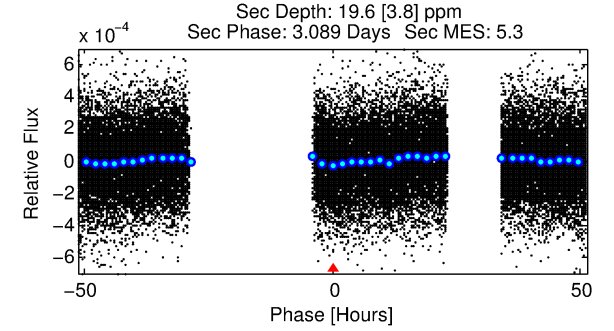
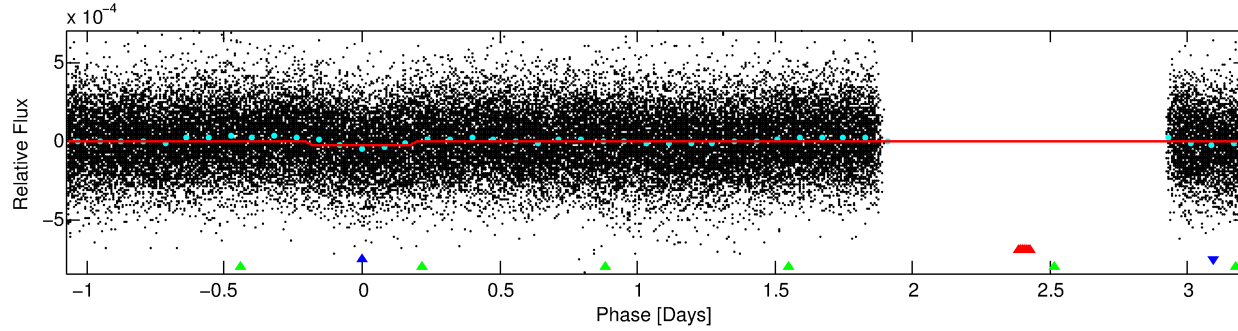
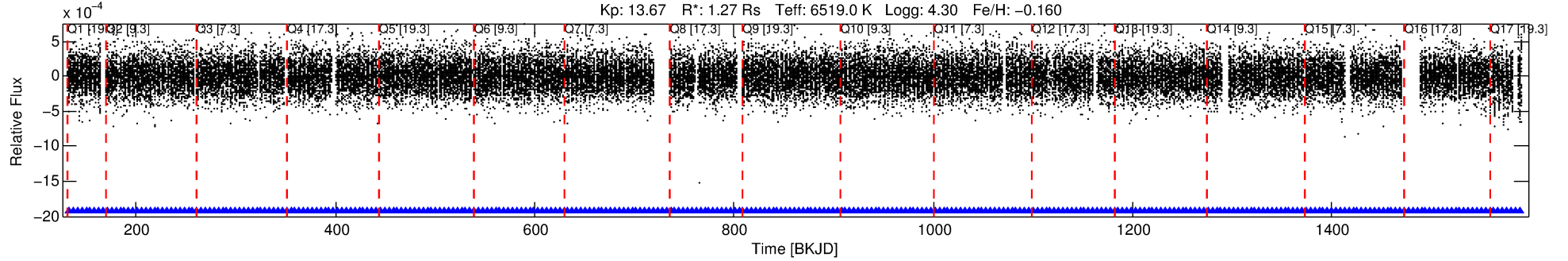
Ephemeris Match Information For 008444868-02

No Significant Match Found

DV One-Page Summary

KIC: 8444868 Candidate: 2 of 3 Period: 4.281 d
KOI: K07593 Corr: No Ephemeris Match

Kp: 13.67 R*: 1.27 Rs Teff: 6519.0 K Logg: 4.30 Fe/H: -0.160



DV Fit Results:

Period = 4.28102 [0.00006] d
Epoch = 132.8150 [0.0101] BKJD
Rp/R* = 0.0057 [0.0016]
a/R* = 1.95 [2.31]
b = 0.87 [0.44]
Seff = 888.30 [345.72]
Teq = 1392 [135] K
Rp = 0.80 [0.34] Re
a = 0.0544 [0.0141] AU
Ag = 49.87 [35.21] [1.39 σ]
Teffp = 5720 [883] K [4.84 σ]

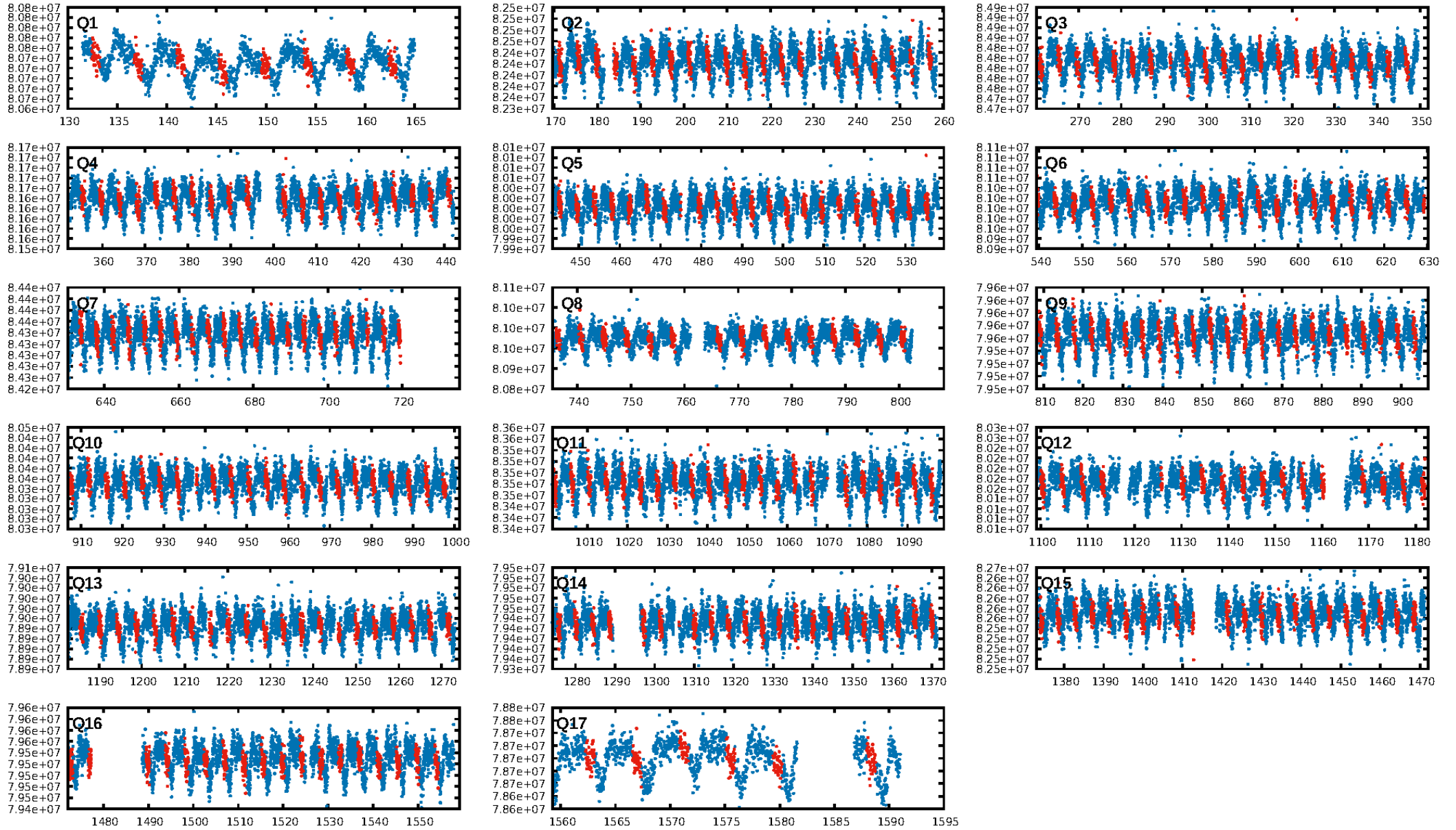
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.31e-19
RollingBand-fgt: 1.00 [304/304]
GhostDiagnostic-chr: 2.602
Centroid-sig: 0.2%
Centroid-so: 2.409 arcsec [2.38 σ]
OotOffset-rm: 0.451 arcsec [0.32 σ]
OotOffset-st: 2/2/2/4 [10]
KicOffset-rm: 0.422 arcsec [0.33 σ]
KicOffset-st: 2/2/2/4 [10]
DiffImageQuality-fgm: 0.80 [8/10]
DiffImageOverlap-fno: 1.00 [17/17]

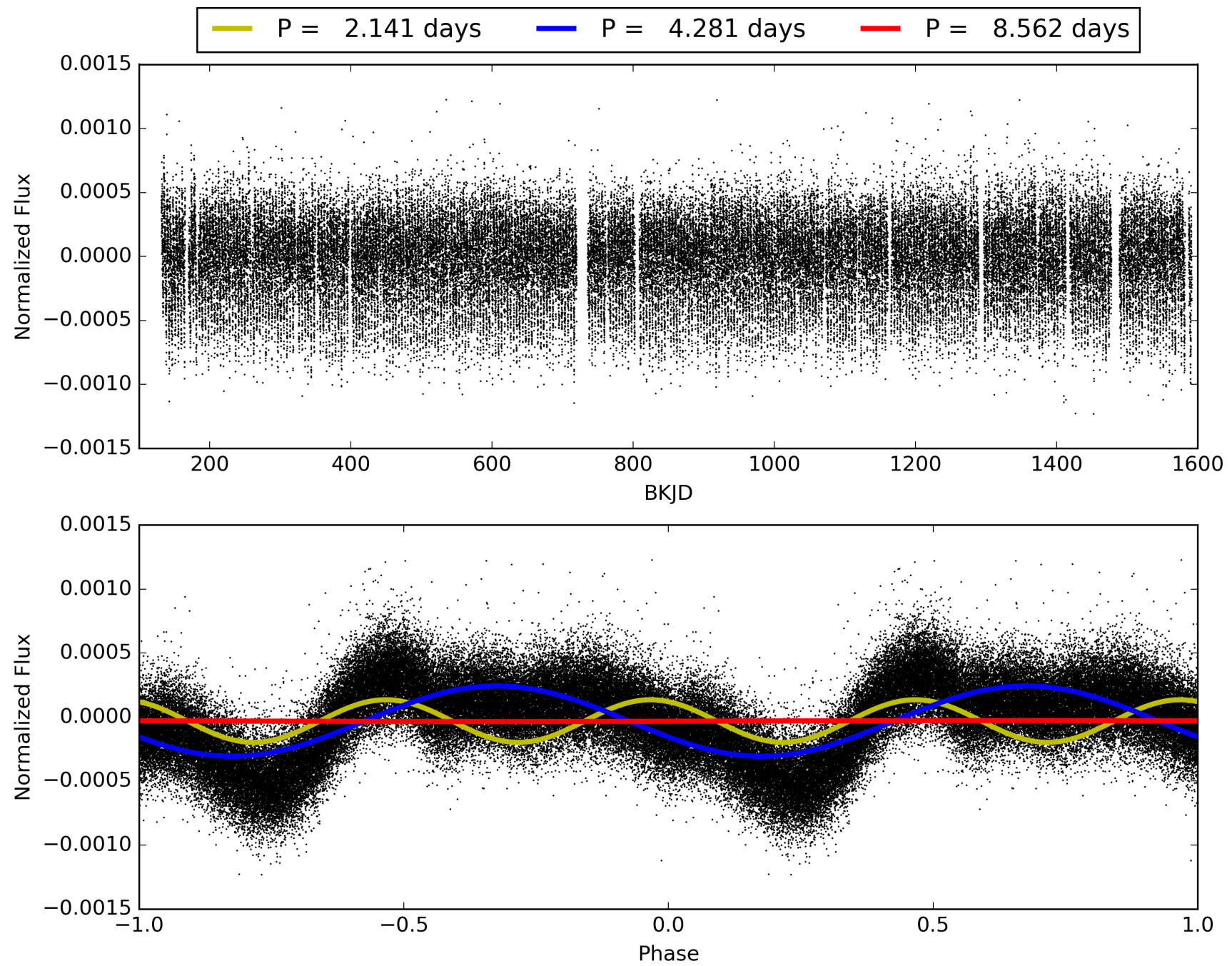
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:17:18 Z

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

TCE 008444868-02, PDC Light Curves

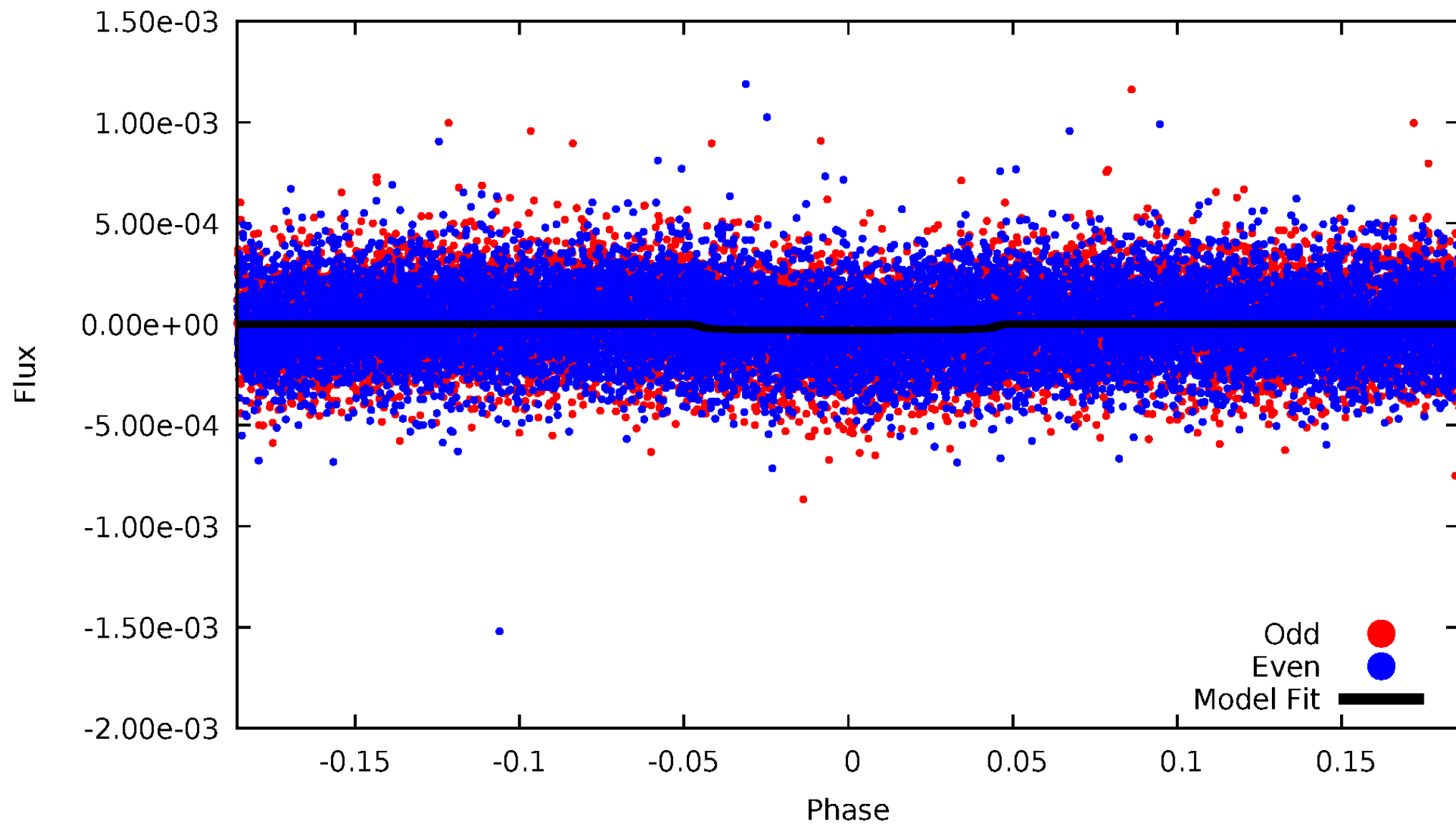


TCE 008444868-02



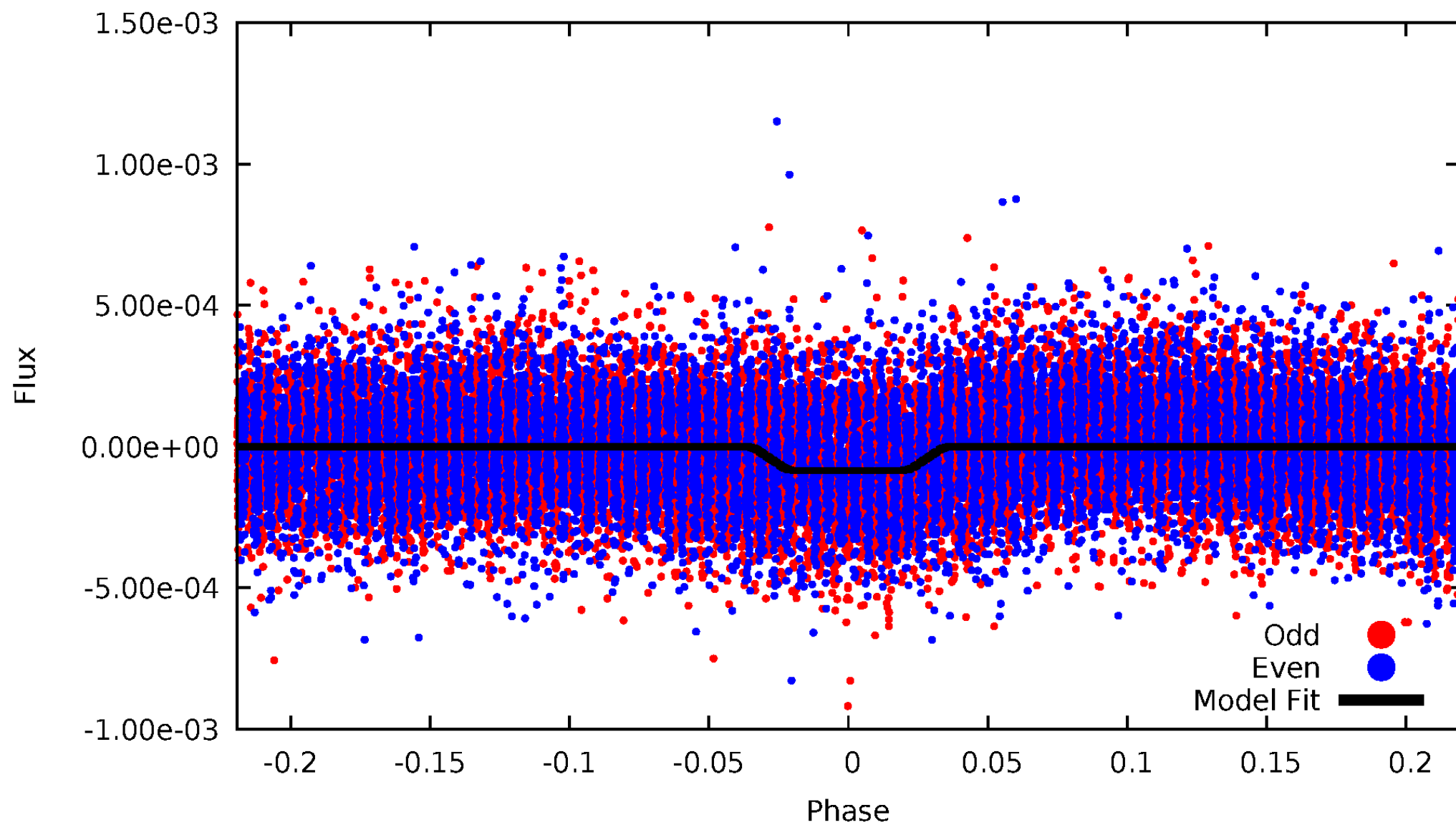
DV Odd/Even

TCE 008444868-02



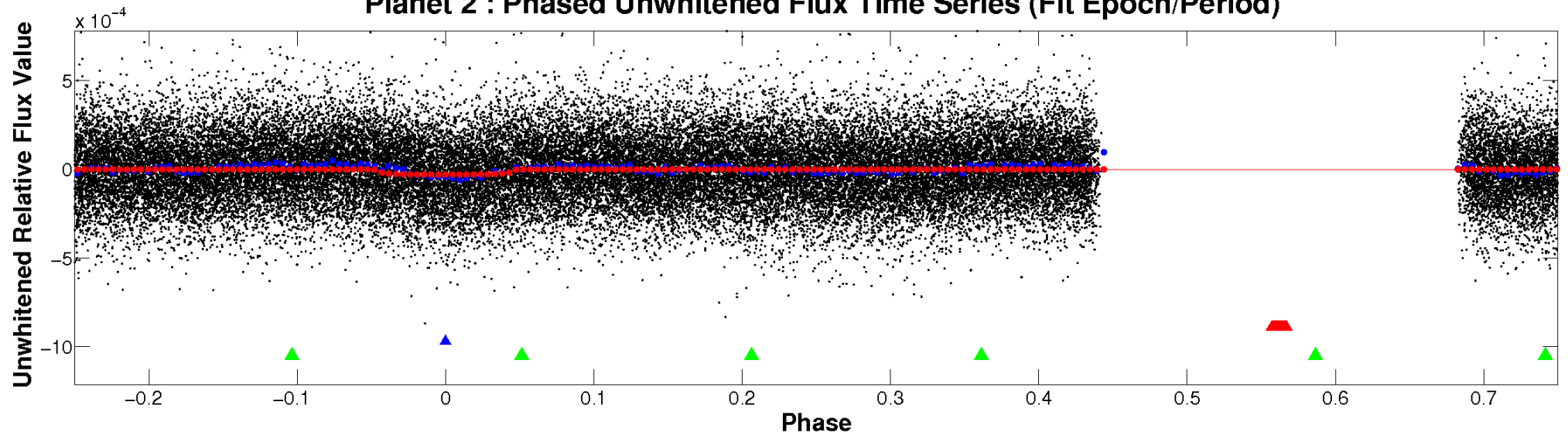
ALT Odd/Even

TCE 008444868-02

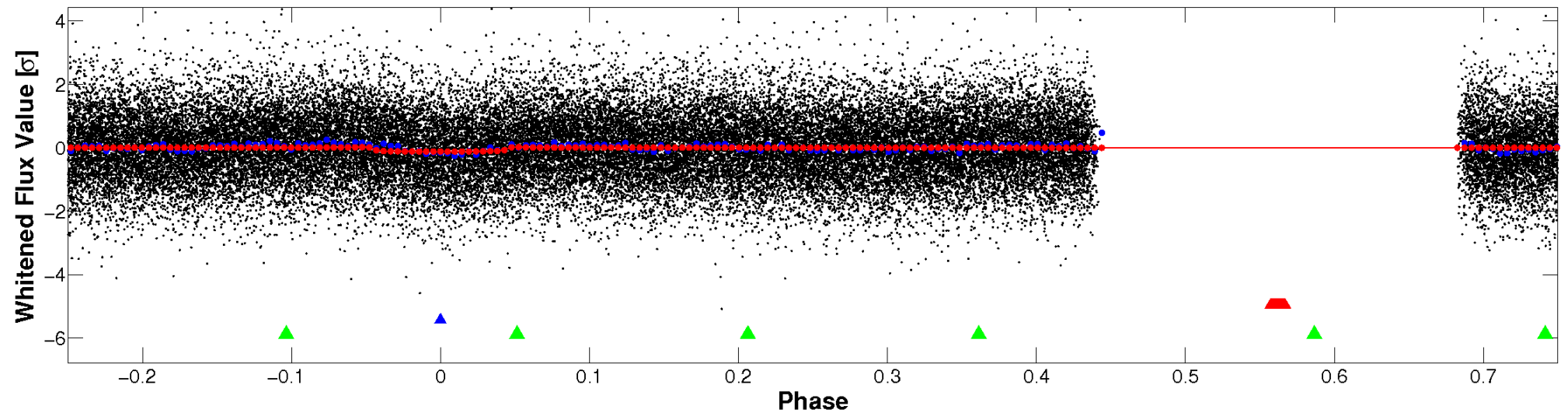


Non-Whitened Vs. Whitened Light Curve

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

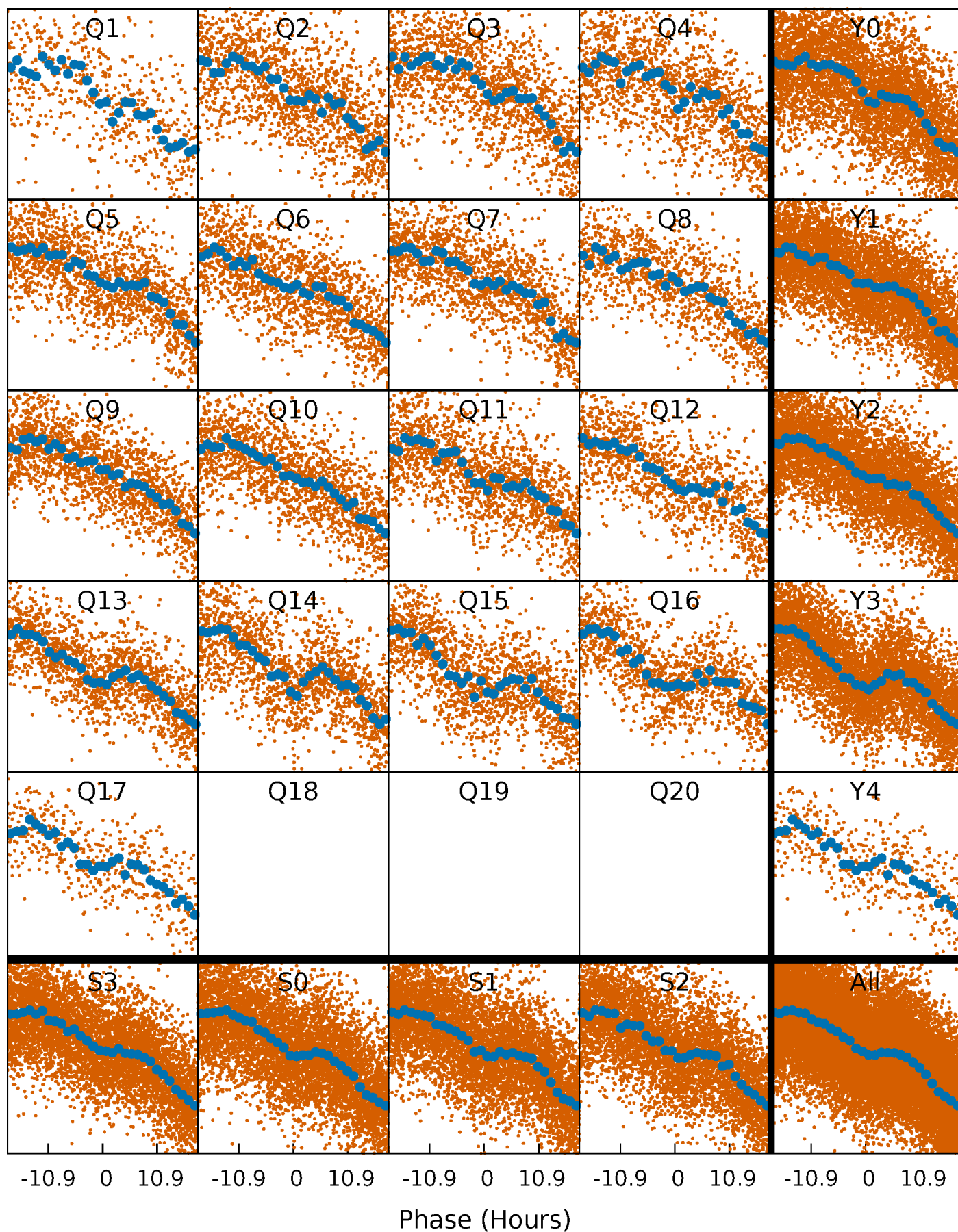


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



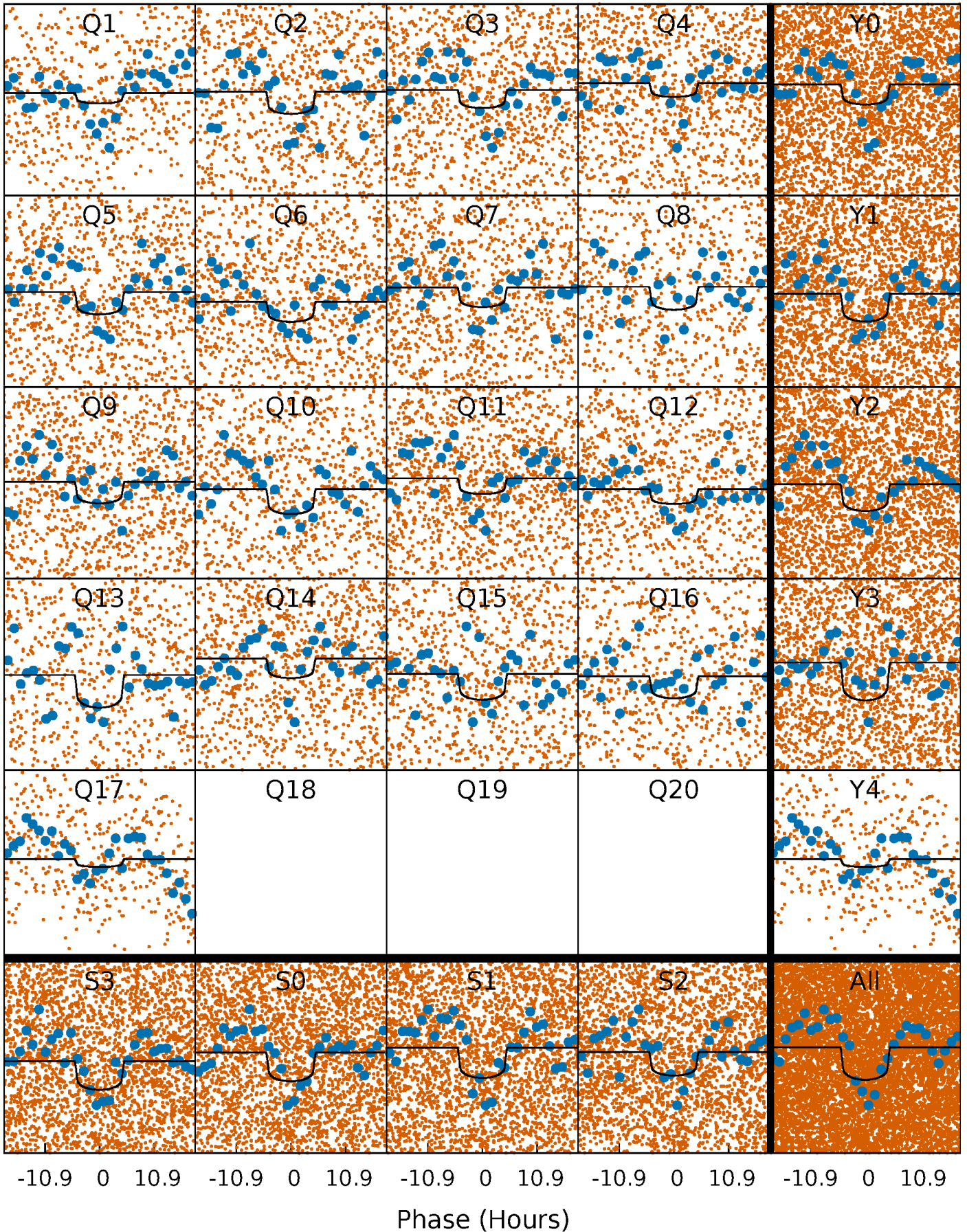
PDC Quarter-Phased Transit Curves

TCE 008444868-02 P= 4.281020 Days $T_0=132.815043$ (BKJD)



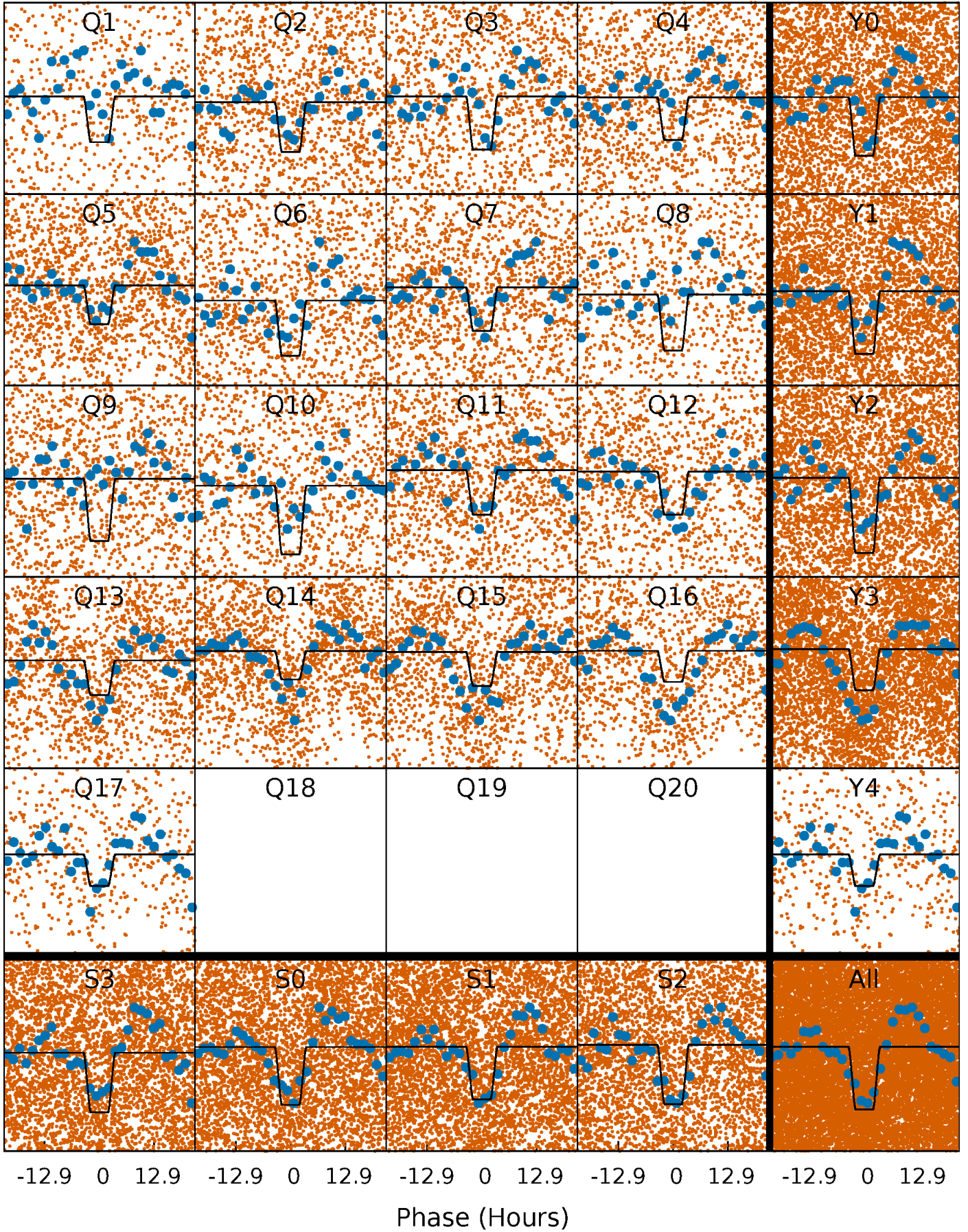
DV Quarter-Phased Transit Curves

TCE 008444868-02 P= 4.281020 Days $T_0=132.815043$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

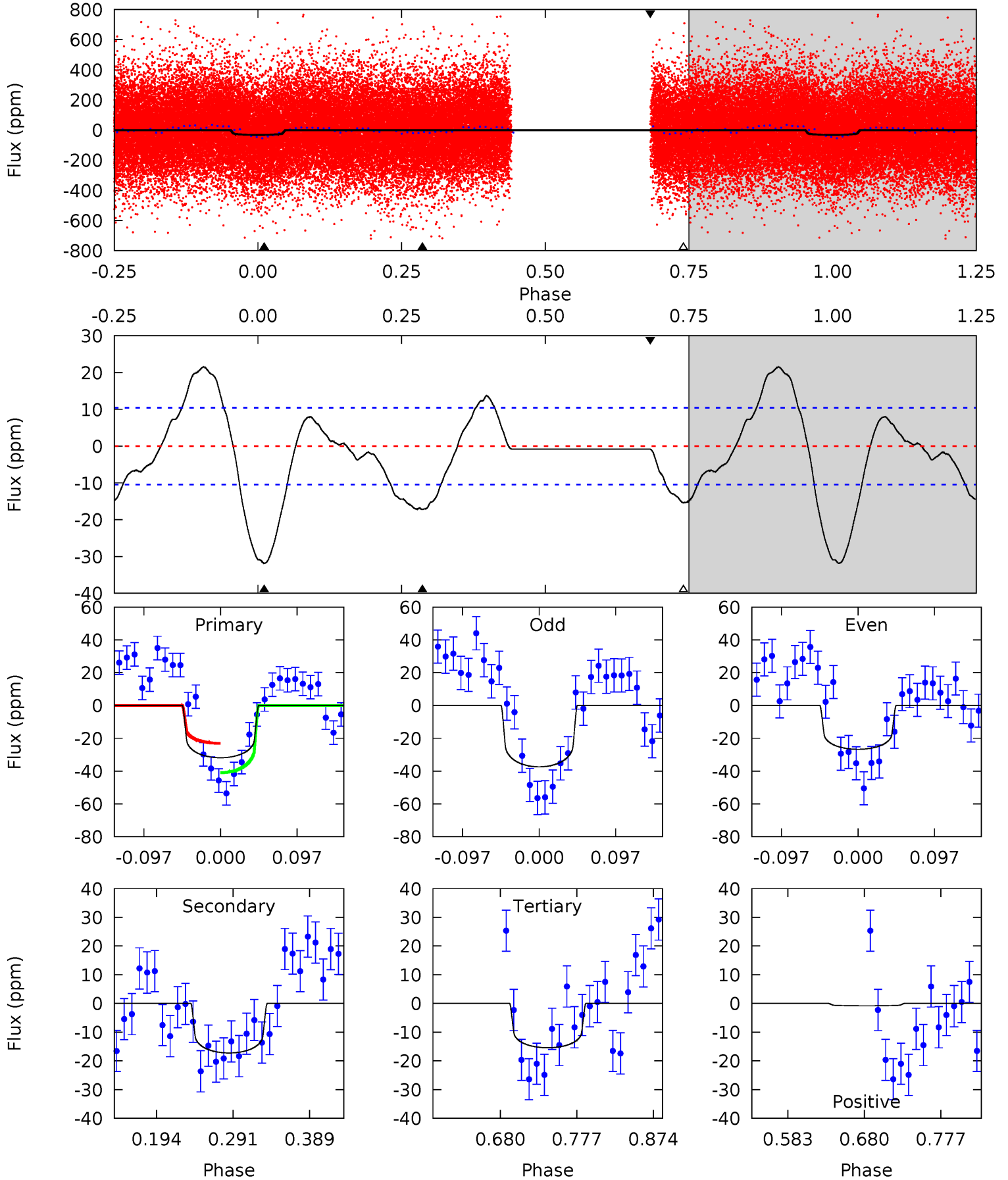
TCE 008444868-02 P= 4.280852 Days $T_0=132.806993$ (BKJD)



DV Model-Shift Uniqueness Test

008444868-02, P = 4.281020 Days, E = 128.534023 Days

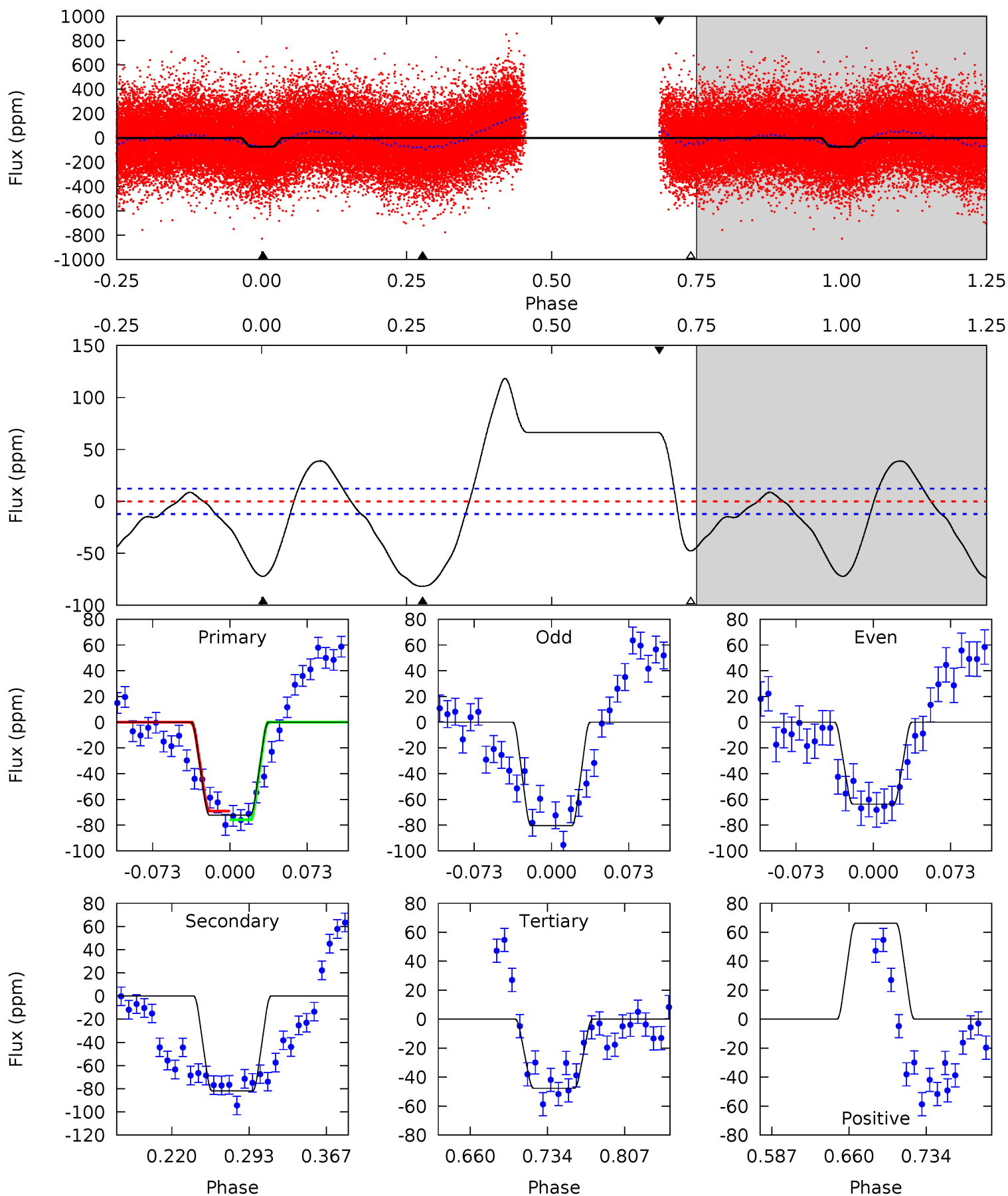
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	7.56	6.76	-0.36	4.57	1.66	4.42	7.20	14.3	0.80	7.92	2.33	0.99	0.40	3.87



Alt Model-Shift Uniqueness Test

008444868-02, P = 4.280852 Days, E = 128.526141 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.4	31.0	18.1	25.1	4.63	1.79	15.5	9.30	2.25	12.9	5.90	3.16	1.02	0.59	1.31



Stellar Parameters For KIC 008444868

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6519^{+155}_{-214}	$4.296^{+0.105}_{-0.195}$	$-0.160^{+0.250}_{-0.300}$	$1.275^{+0.404}_{-0.218}$	$1.175^{+0.192}_{-0.157}$	$0.798^{+0.382}_{-0.410}$
	+2%/-3%	+2%/-5%	+156%/-188%	+32%/-17%	+16%/-13%	+48%/-51%
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 008444868-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-17 ± 2	$0.82^{+0.28}_{-0.24}$	1956^{+140}_{-110}	5524^{+962}_{-640}	41^{+42}_{-18}
Alt.	-82 ± 3	$1.31^{+0.31}_{-0.28}$	1960^{+147}_{-114}	6420^{+753}_{-479}	78^{+46}_{-26}

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 $A_{obs} \gg 1.0$

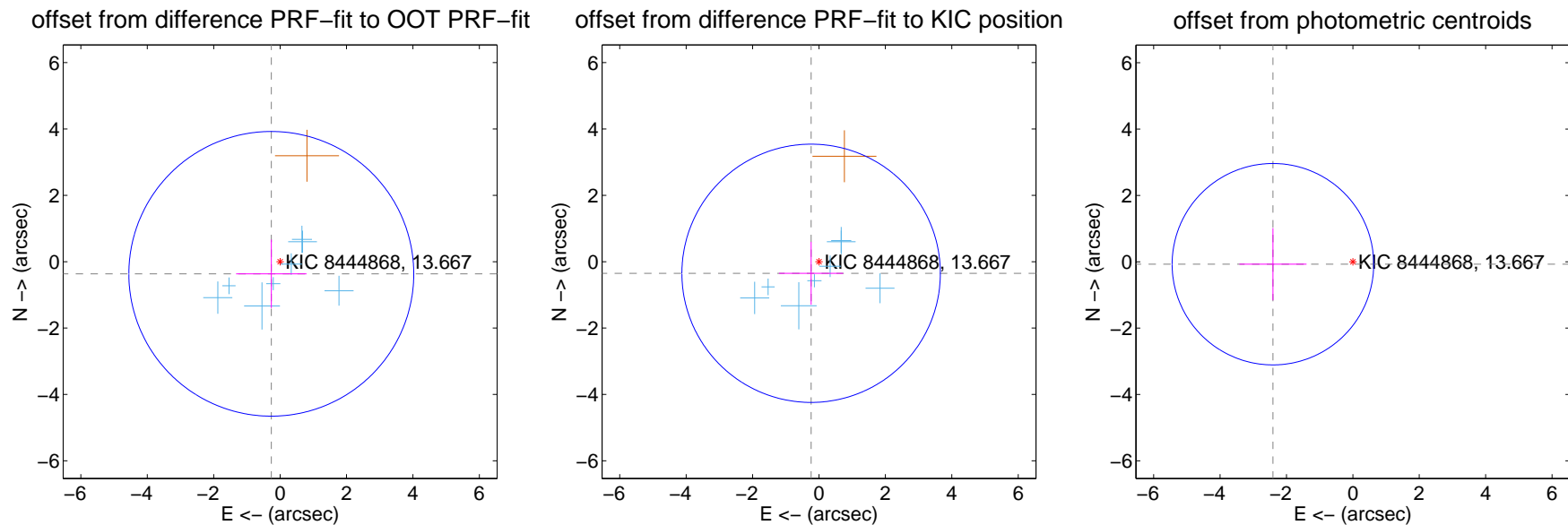
DV Centroid Data

Supplemental centroid analysis for 008444868-02. Kepler magnitude: 13.67. Transit SNR 8.32

There are 8 quarters with good PRF difference image offsets

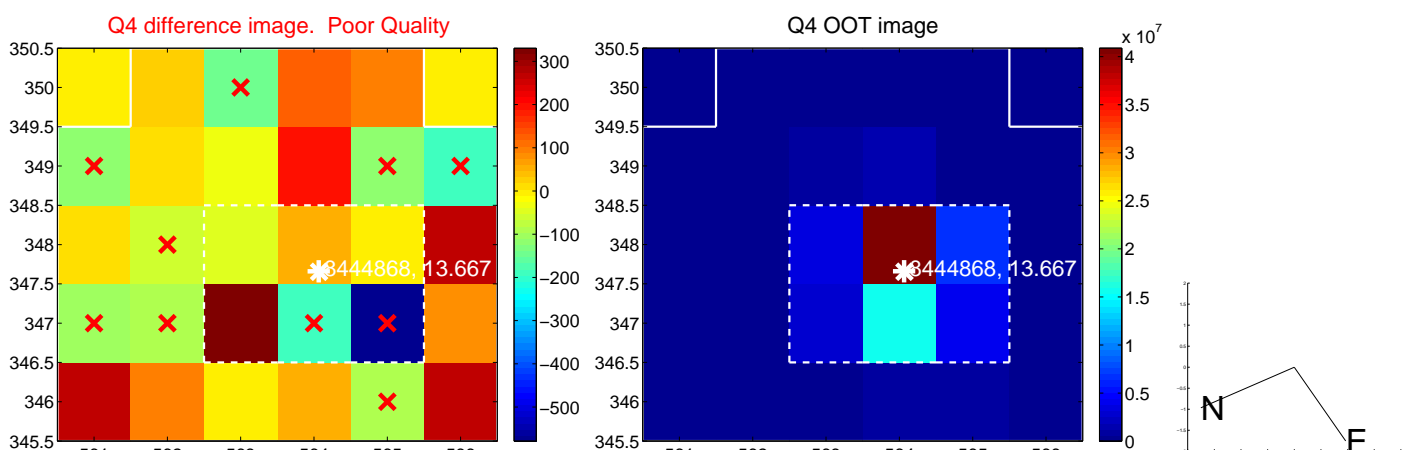
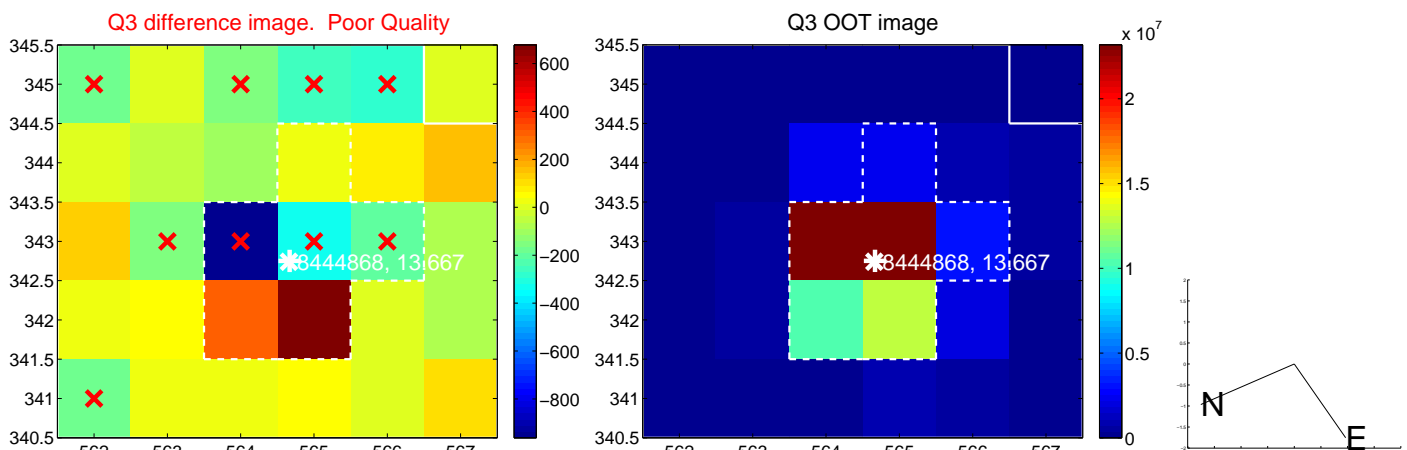
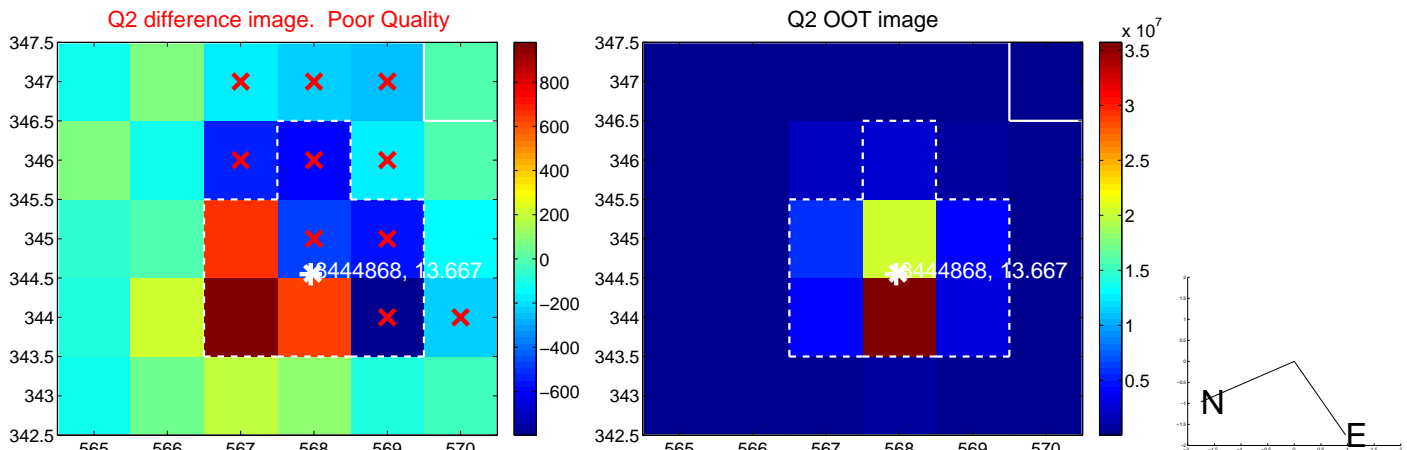
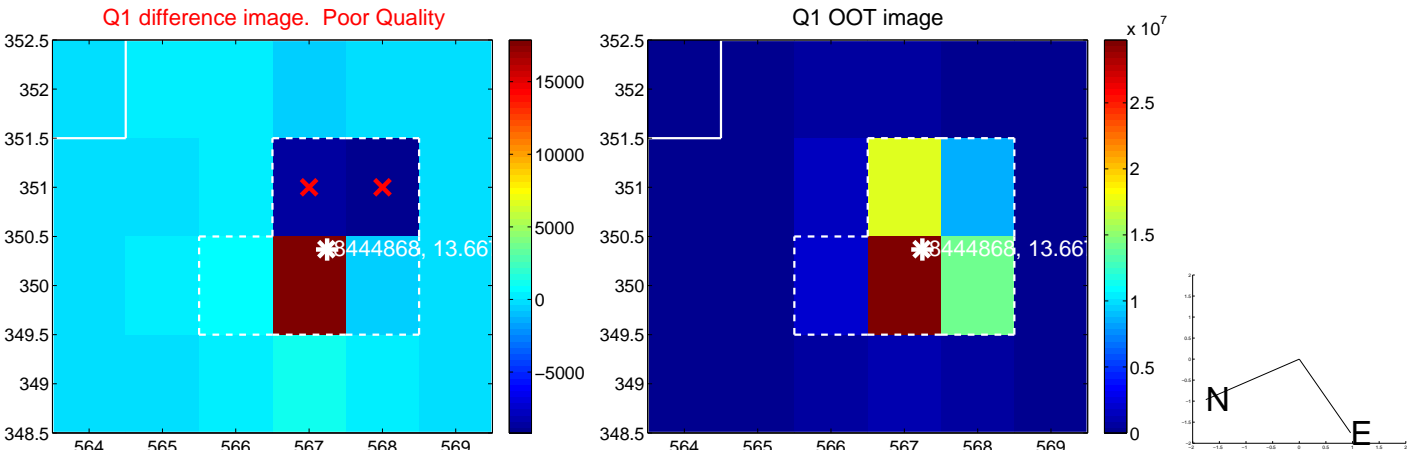
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.451 ± 1.430	0.32	0.265 ± 1.060	-0.365 ± 1.031
PRF-fit source offset from KIC position	0.422 ± 1.297	0.33	0.237 ± 0.966	-0.350 ± 0.946
photometric centroid source offset	2.41 ± 1.01	2.38	2.41 ± 1.01	-0.07 ± 1.09

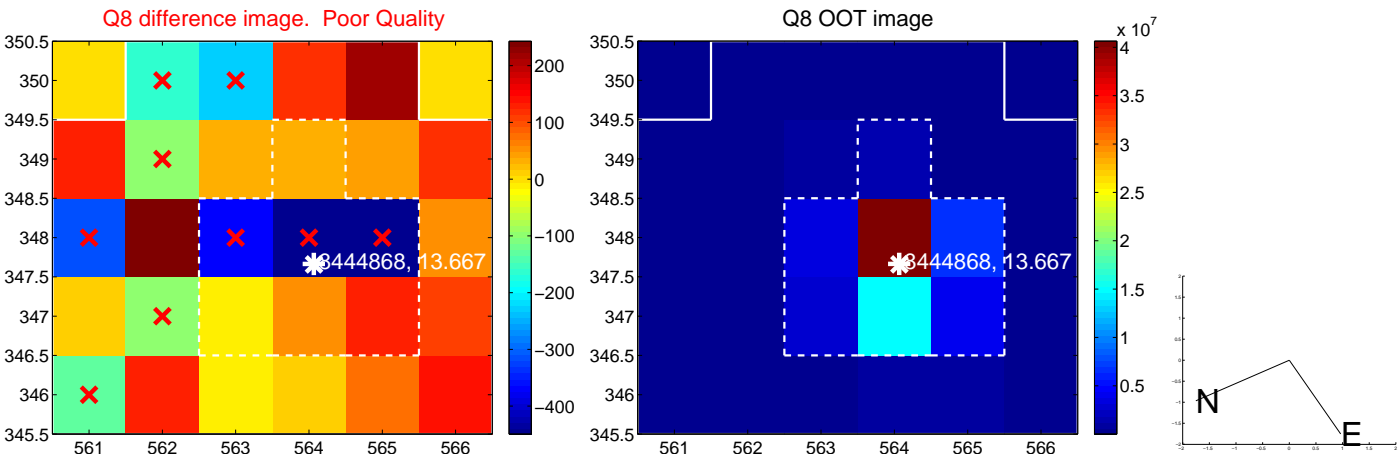
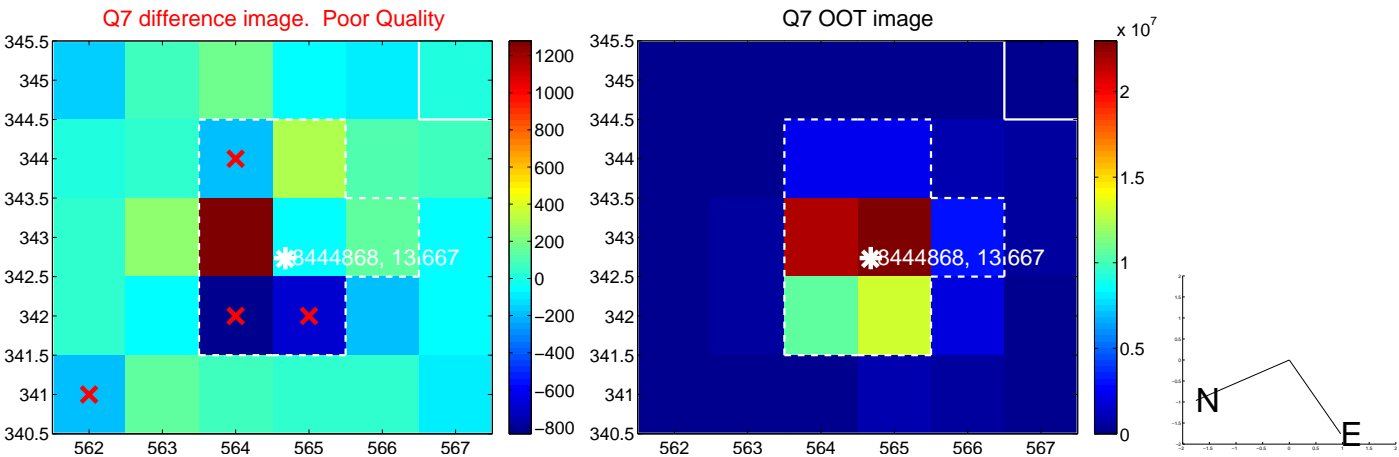
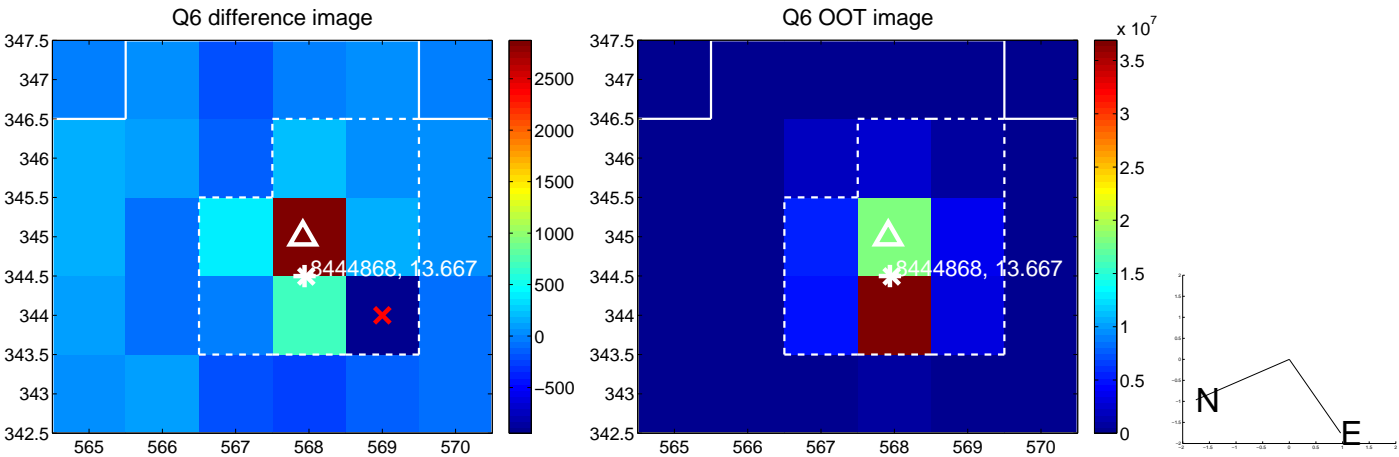
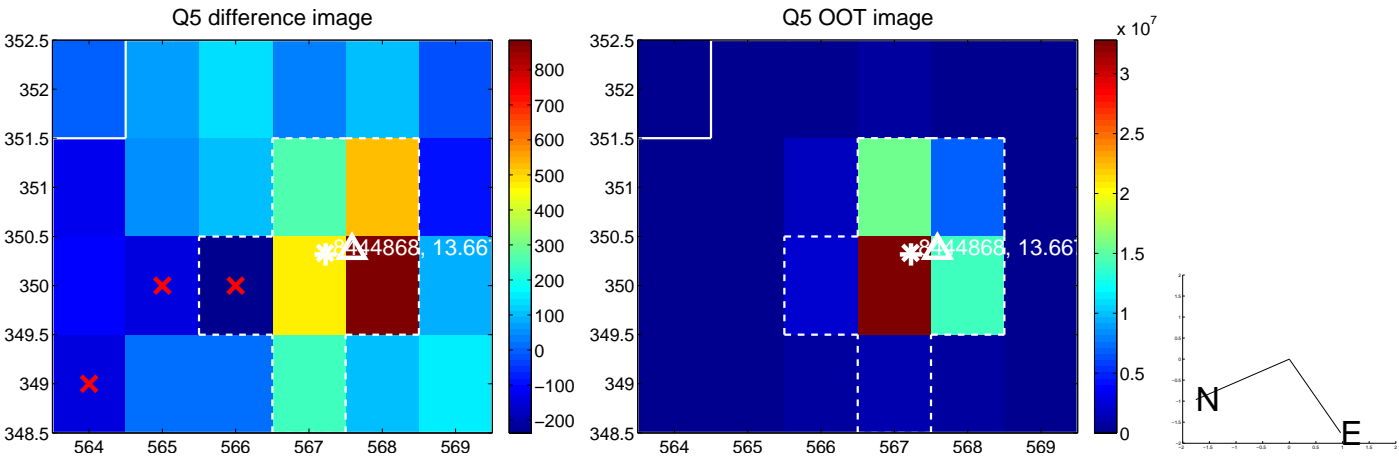


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

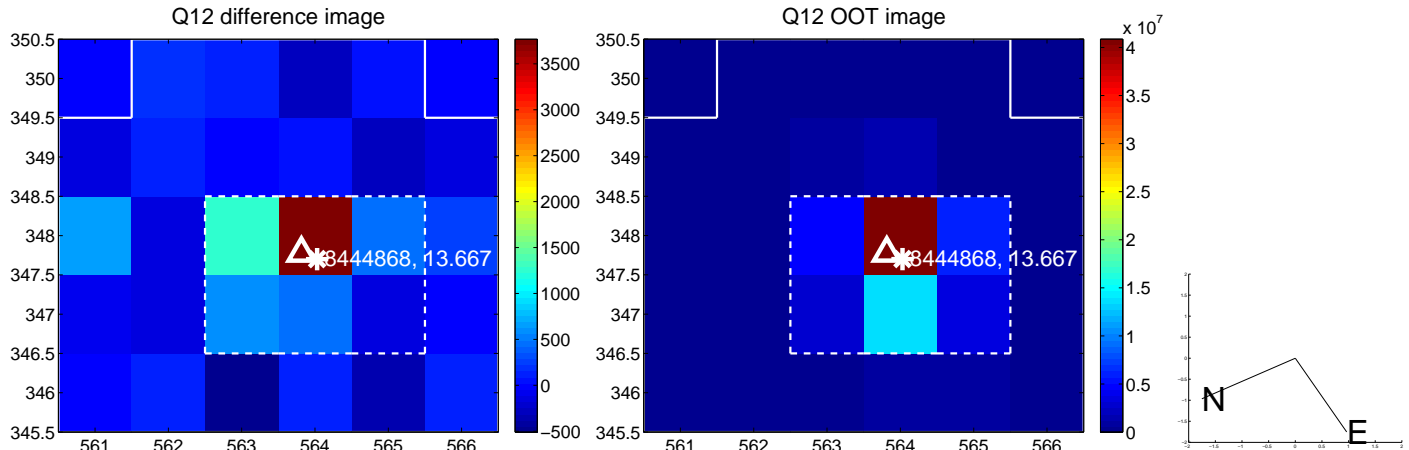
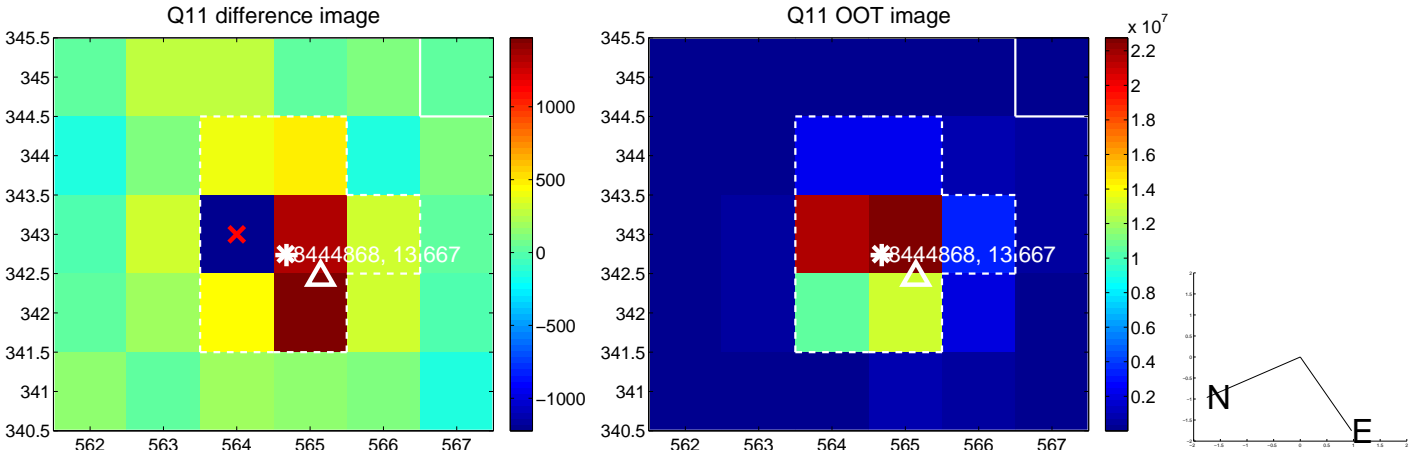
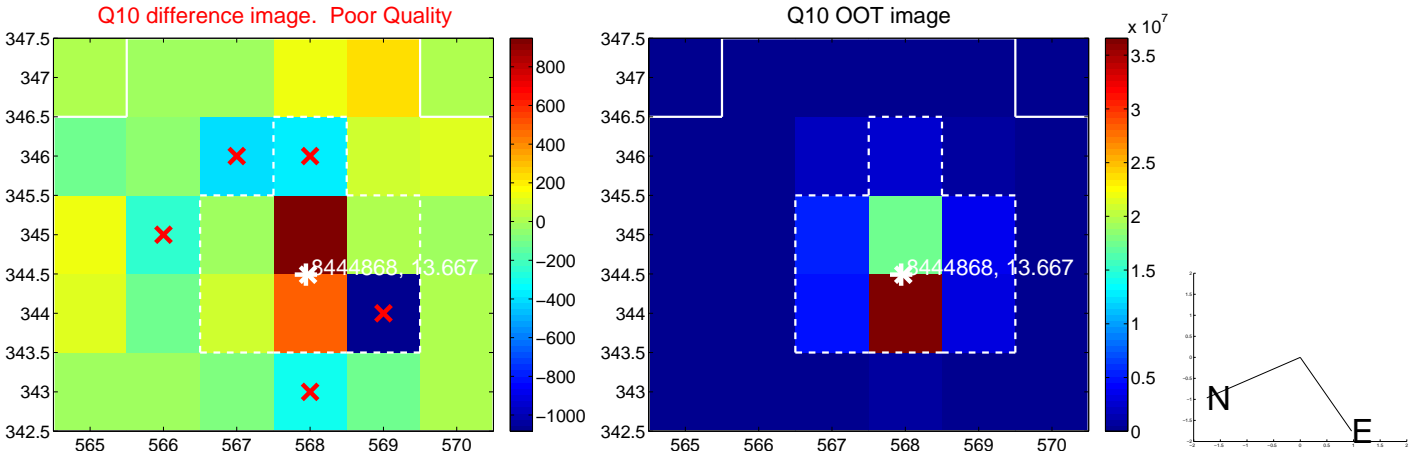
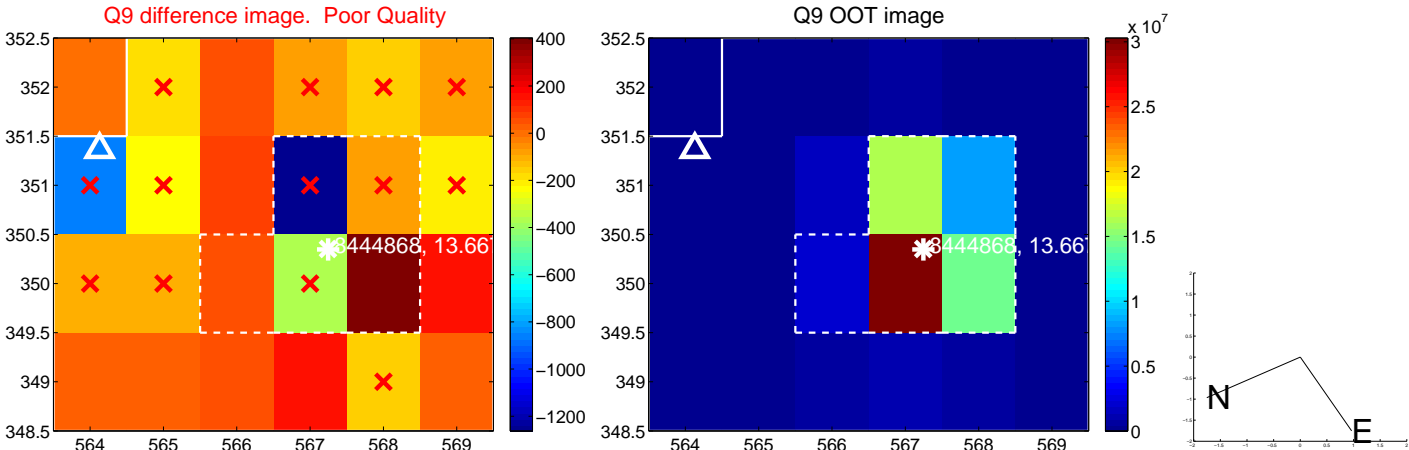
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



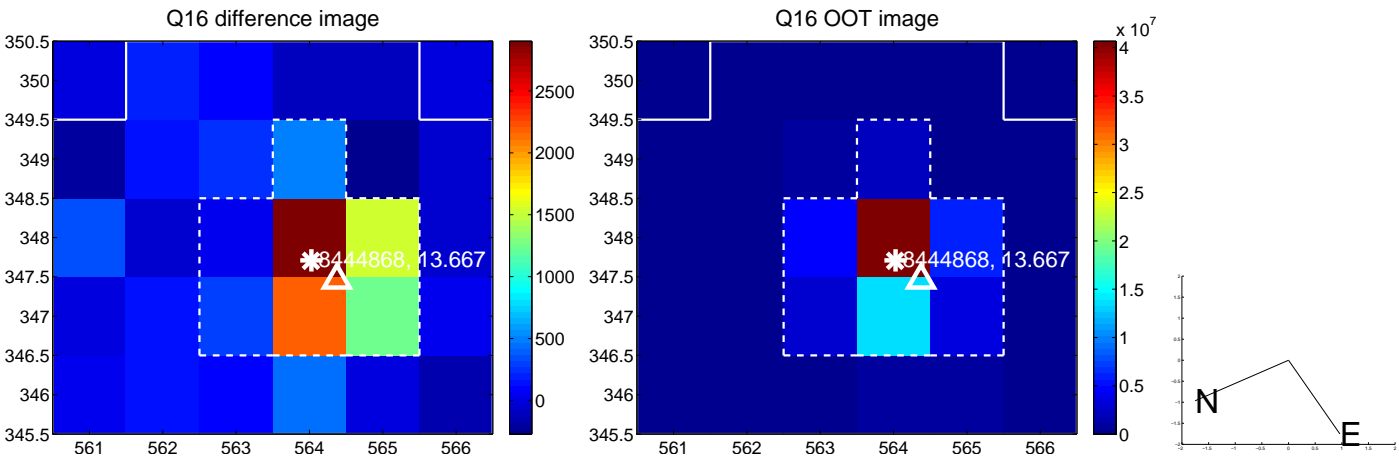
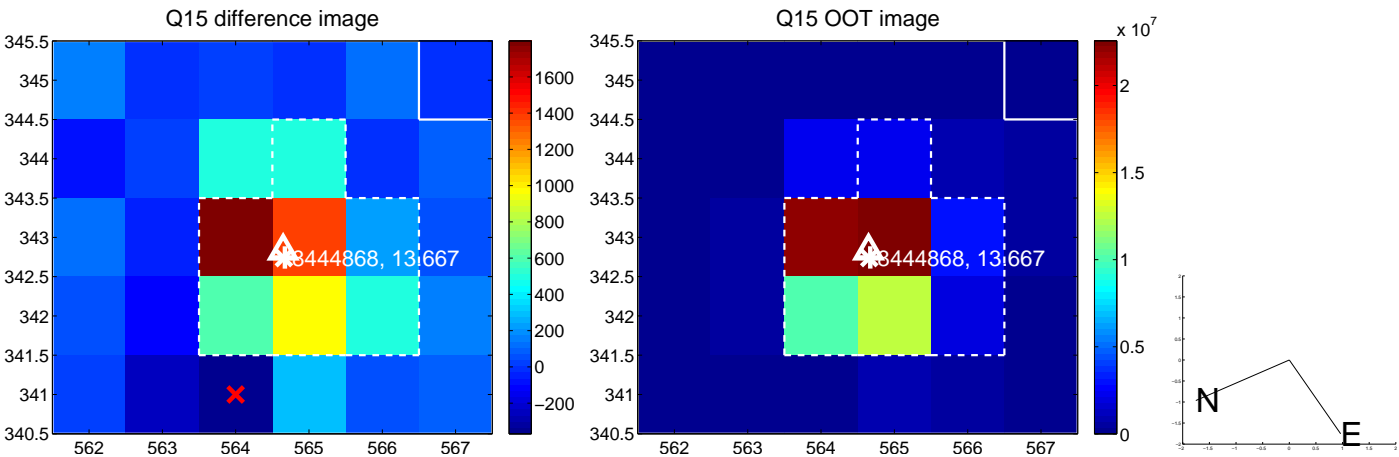
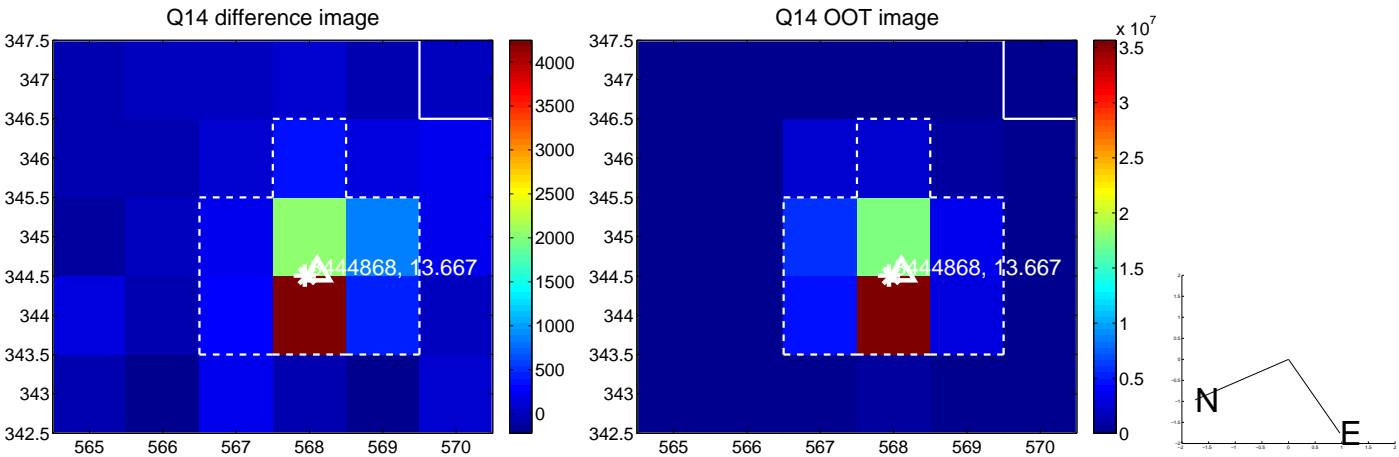
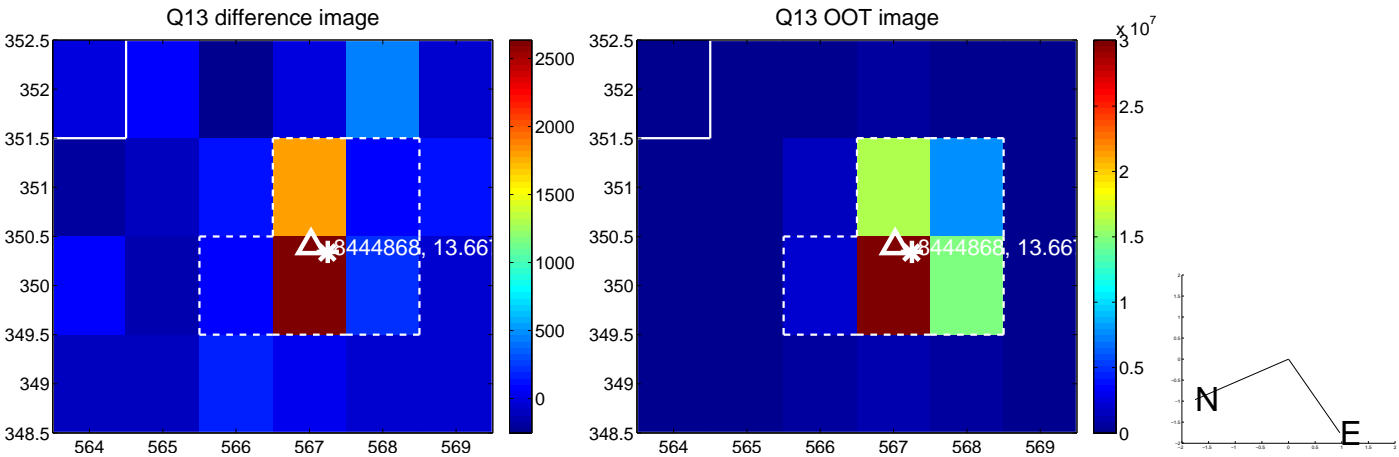
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



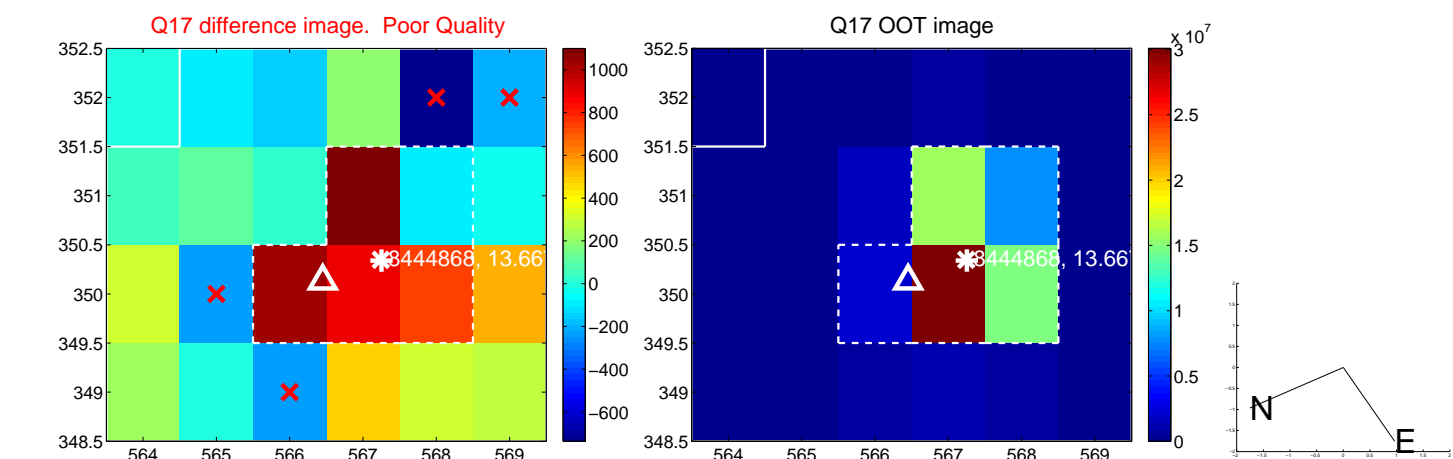
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



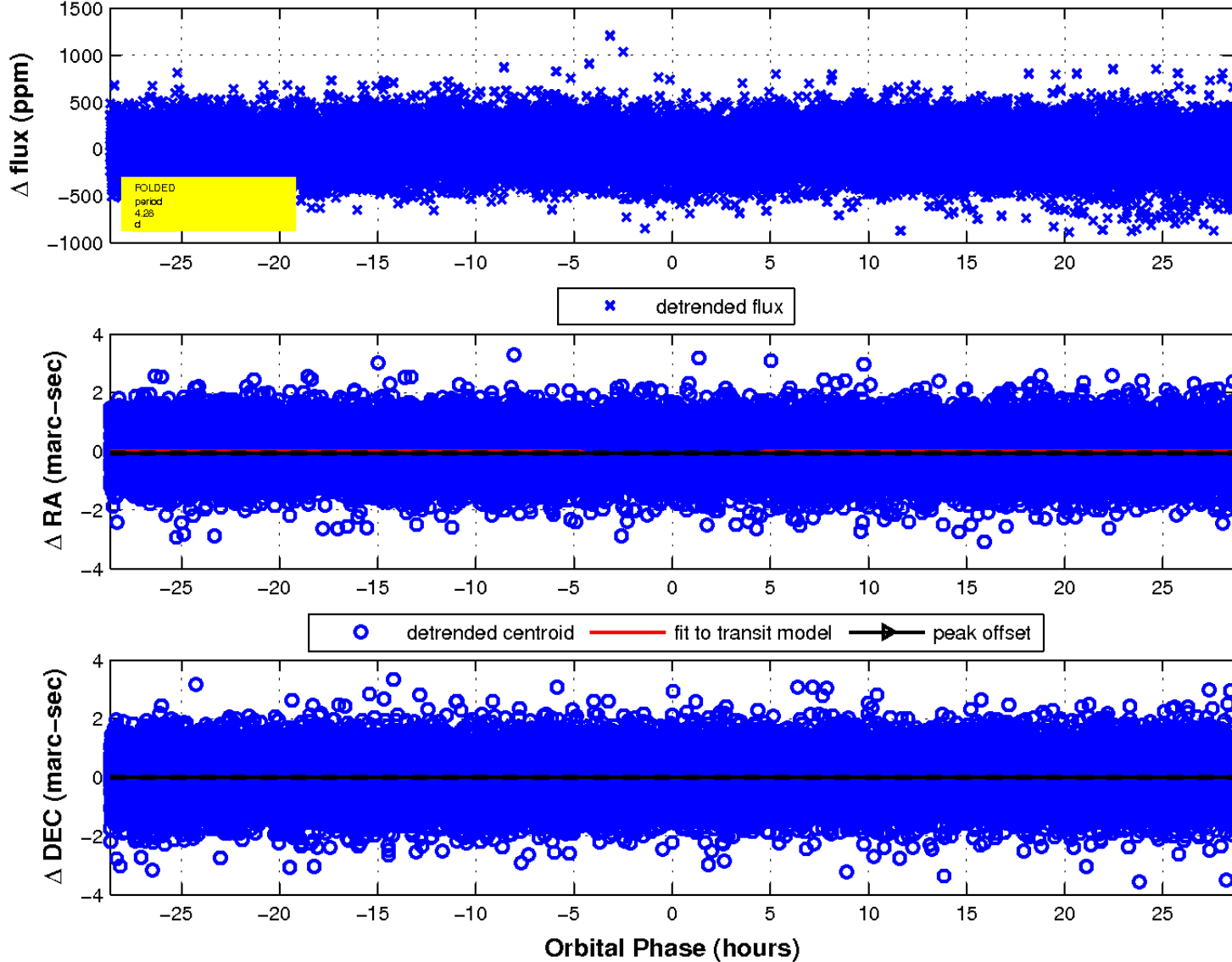
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

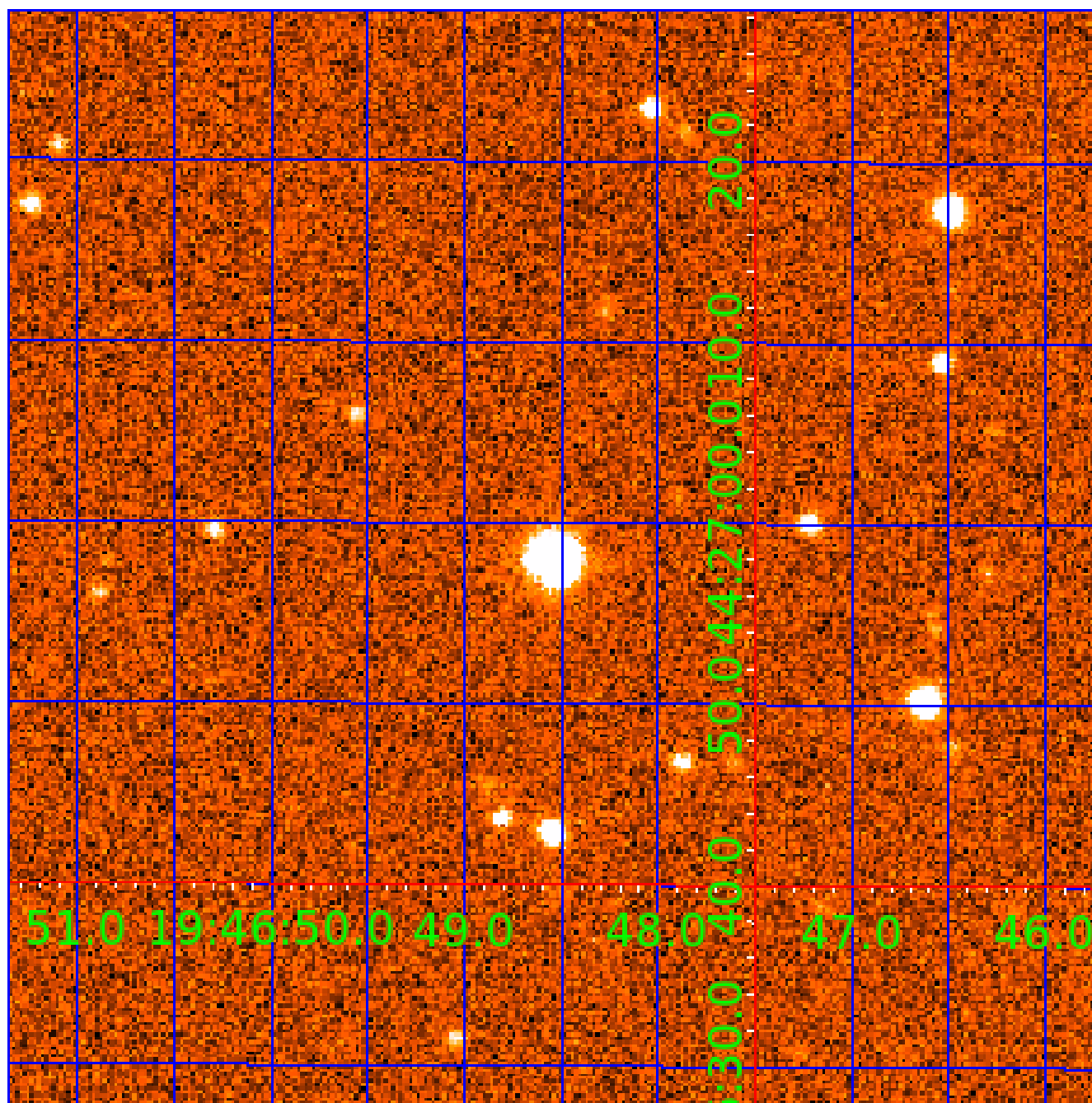


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 008444868

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})
008444868-01	OBS	No	4.281146	135.199810	57.5	8.374	10.8	10.8	1.27	6519	1.97	888.27
008444868-02	OBS	No	4.281020	132.815043	30.0	9.543	10.5	8.3	1.27	6519	0.80	888.30
008444868-03	OBS	No	244.681438	216.665636	182.1	19.500	10.6	7.1	1.27	6519	1.86	4.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008444868-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
008444868-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD
008444868-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

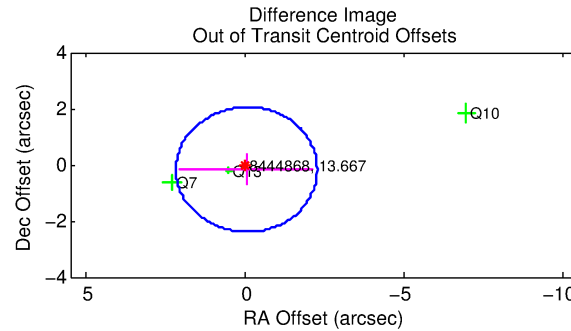
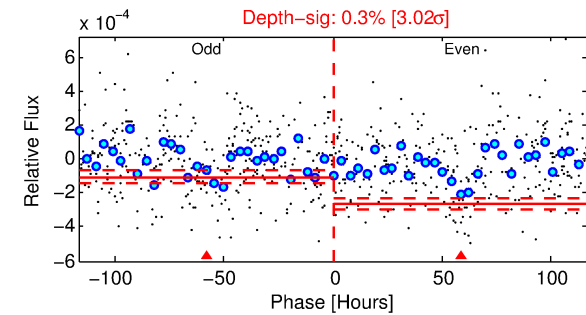
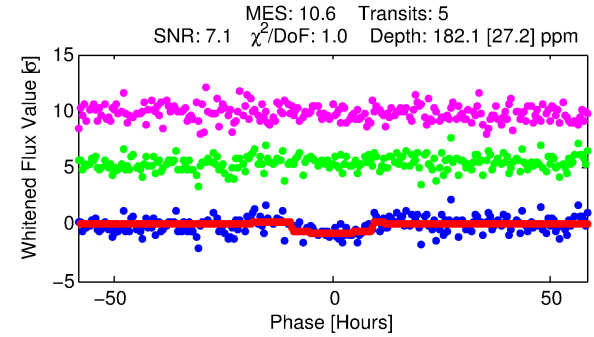
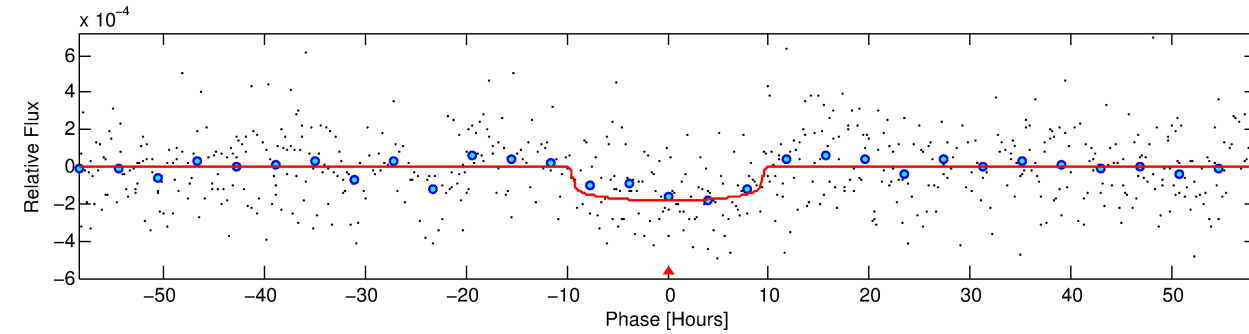
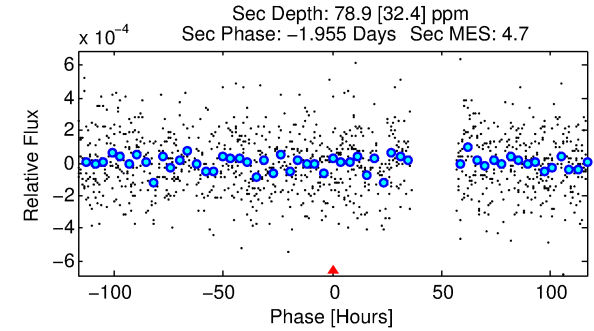
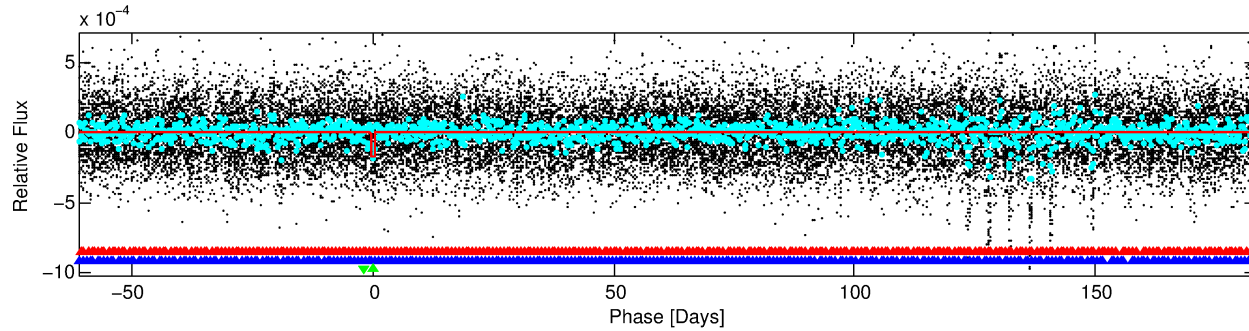
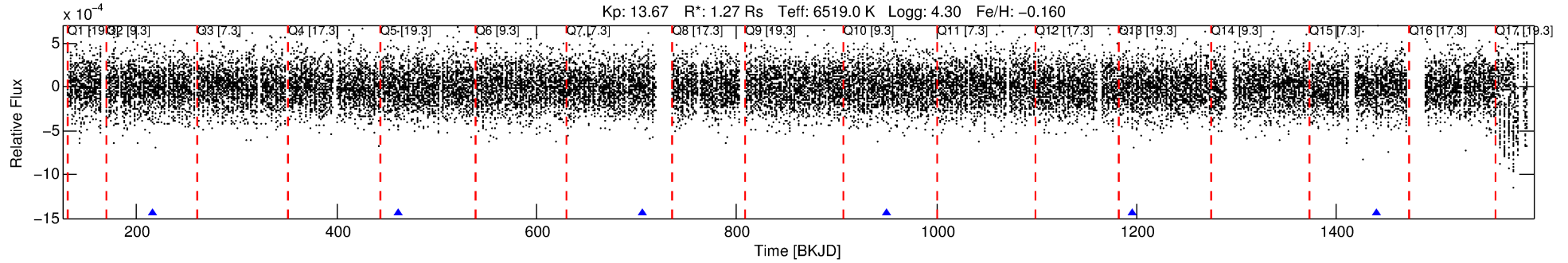
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008444868-03

No Significant Match Found

DV One-Page Summary

KIC: 8444868 Candidate: 3 of 3 Period: 244.681 d
KOI: K07593 Corr: No Ephemeris Match



DV Fit Results:

Period = 244.68144 [0.01340] d
Epoch = 216.6656 [0.0423] BKJD
Rp/R* = 0.0134 [0.0045]
a/R* = 66.70 [120.35]
b = 0.74 [1.13]
Seff = 4.03 [1.57]
Teff = 361 [35] K
Rp = 1.86 [0.86] Re
a = 0.8074 [0.2090] AU
Ag = 8191.31 [7130.29] [1.15σ]
Teffp = 5316 [1064] K [4.65σ]

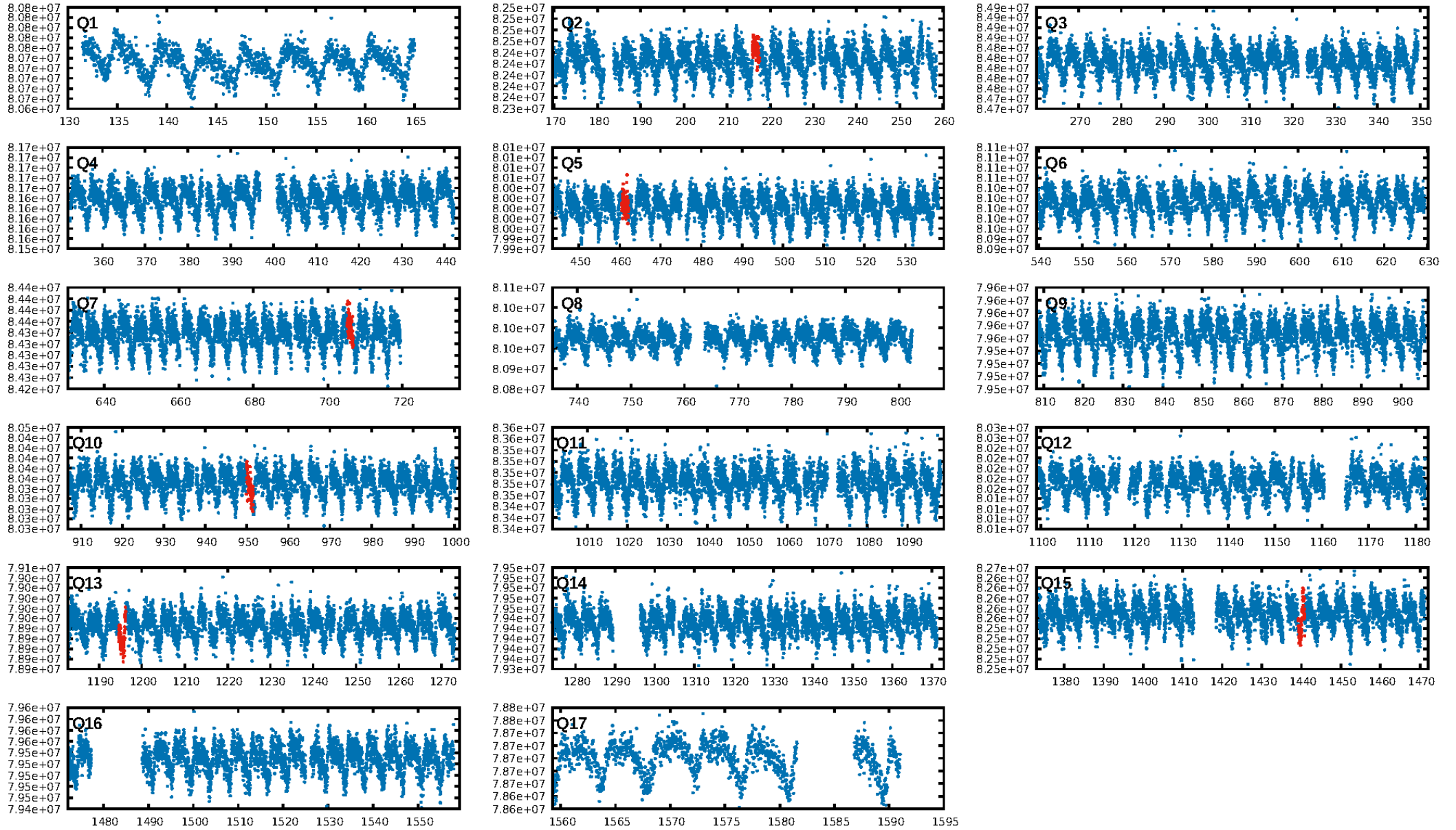
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [271.87σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.85e-15
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.0332
Centroid-sig: 0.3%
Centroid-so: 1.938 arcsec [1.95σ]
OotOffset-rm: 0.179 arcsec [0.24σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-rm: 0.193 arcsec [0.23σ]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 0.00 [0/6]

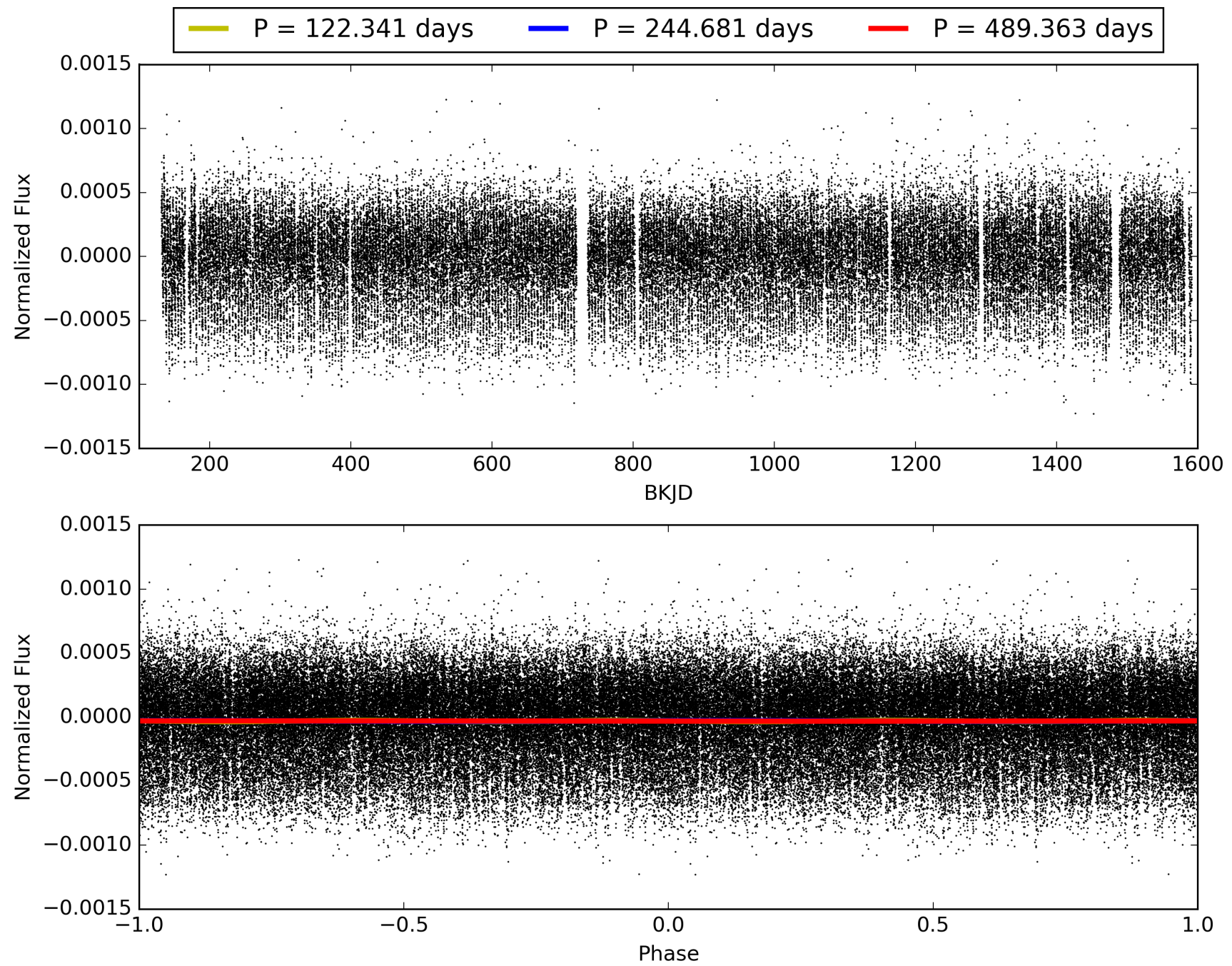
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:17:26 Z

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

TCE 008444868-03, PDC Light Curves

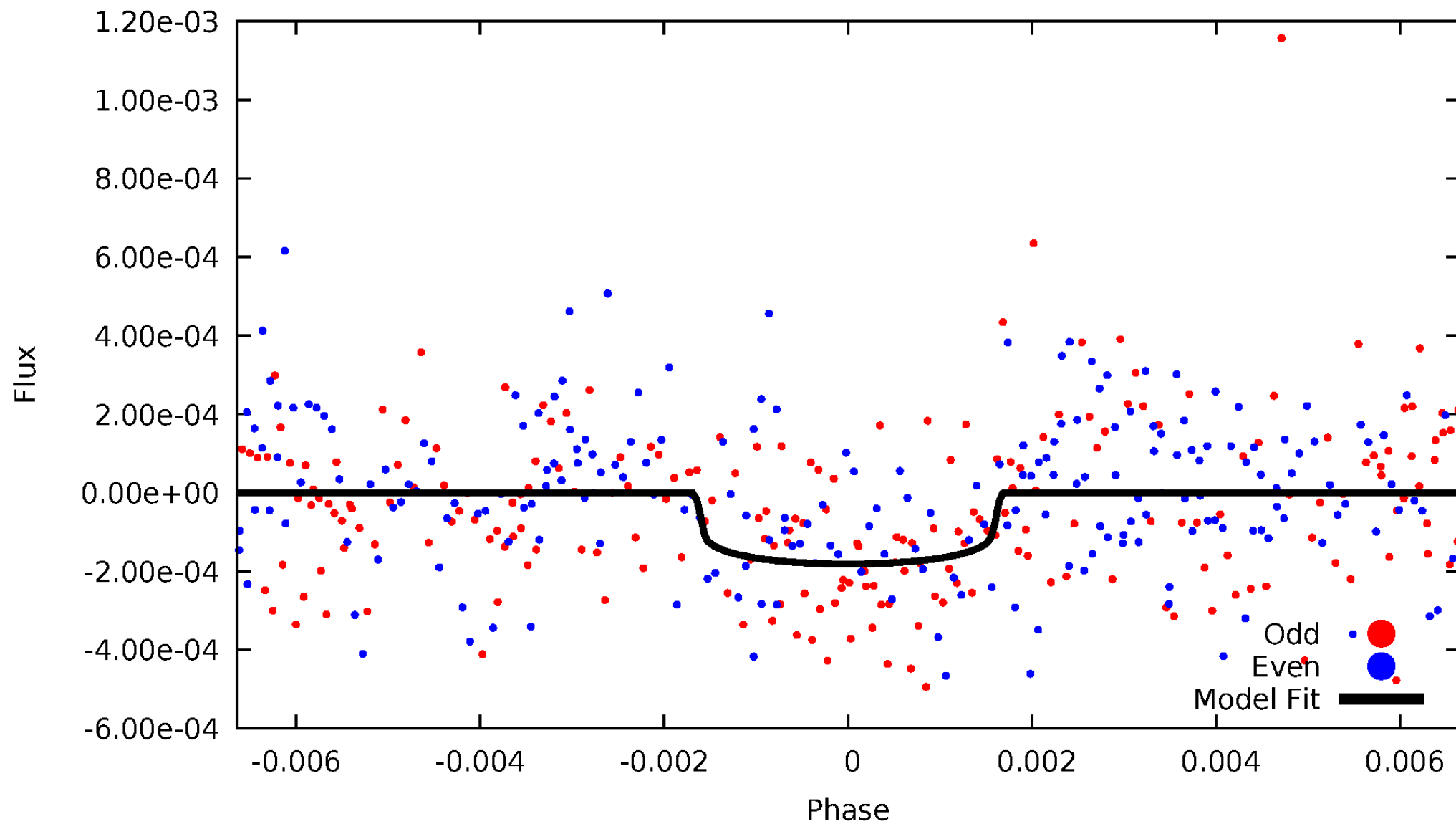


TCE 008444868-03



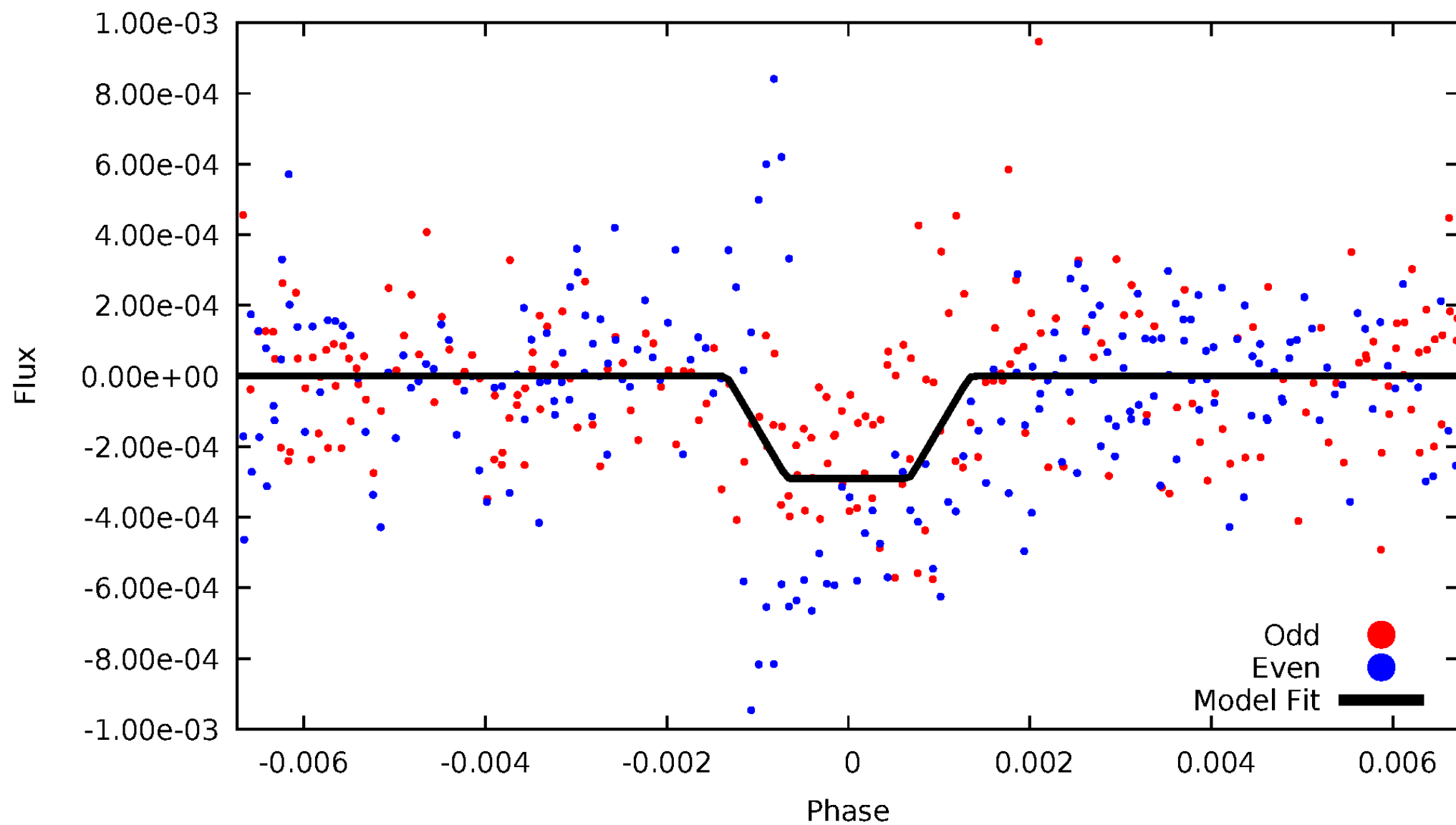
DV Odd/Even

TCE 008444868-03



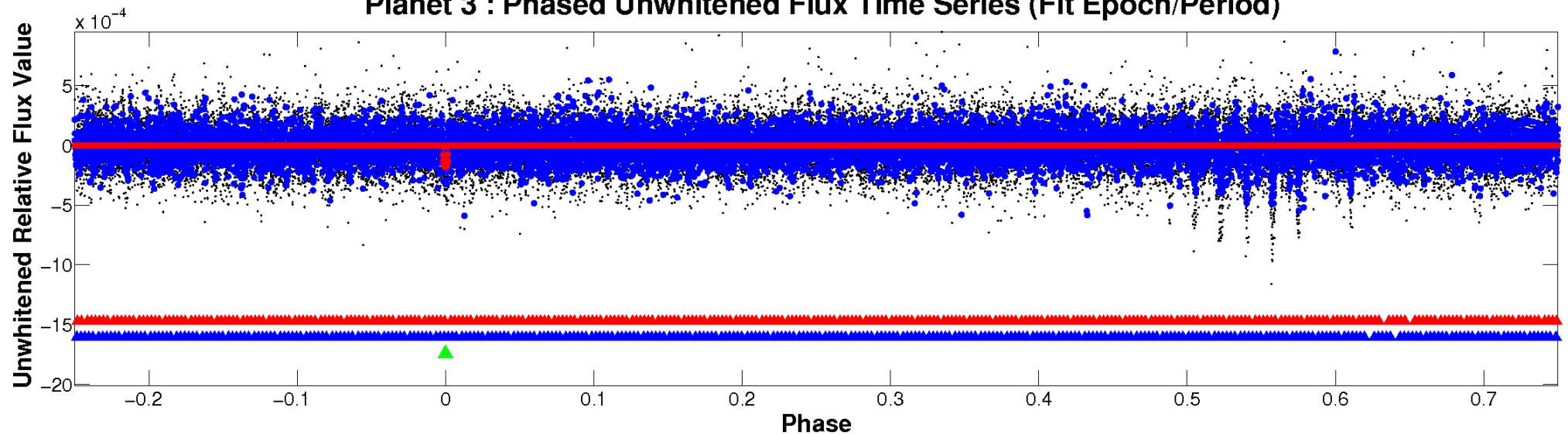
ALT Odd/Even

TCE 008444868-03

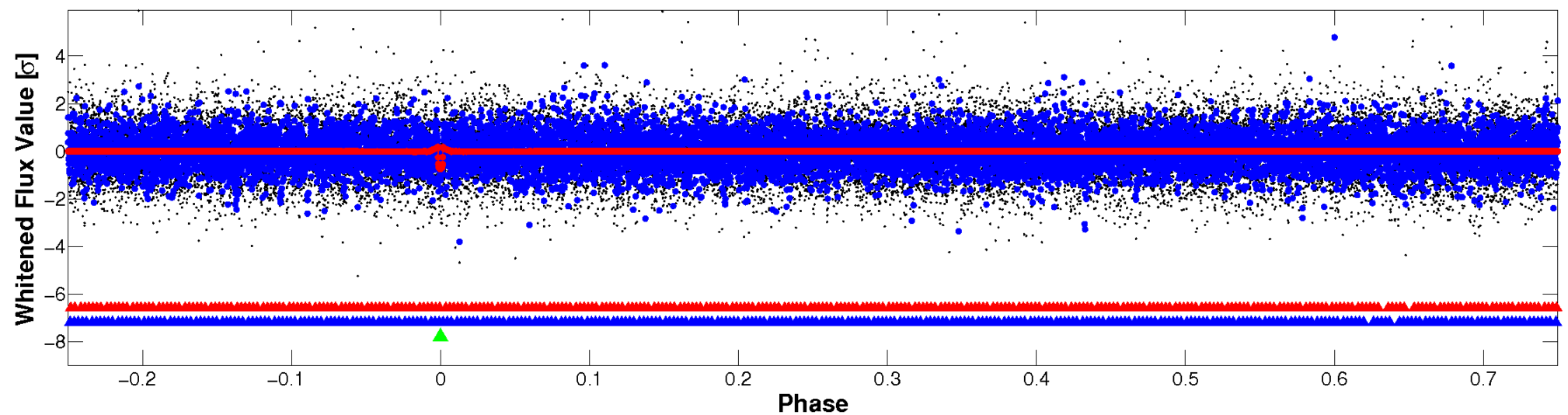


Non-Whitened Vs. Whitened Light Curve

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

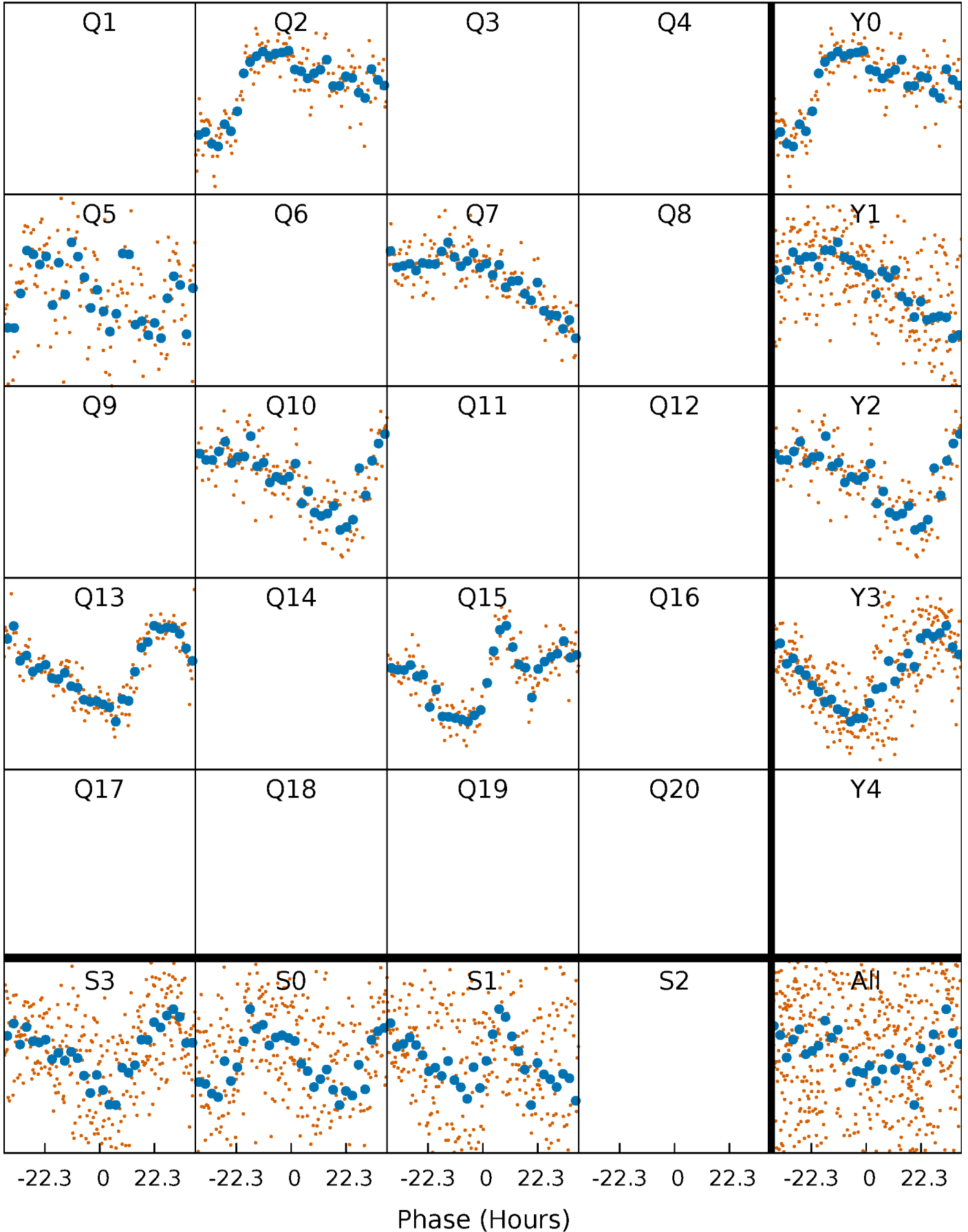


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 008444868-03 $P=244.681438$ Days $T_0=216.665636$ (BKJD)



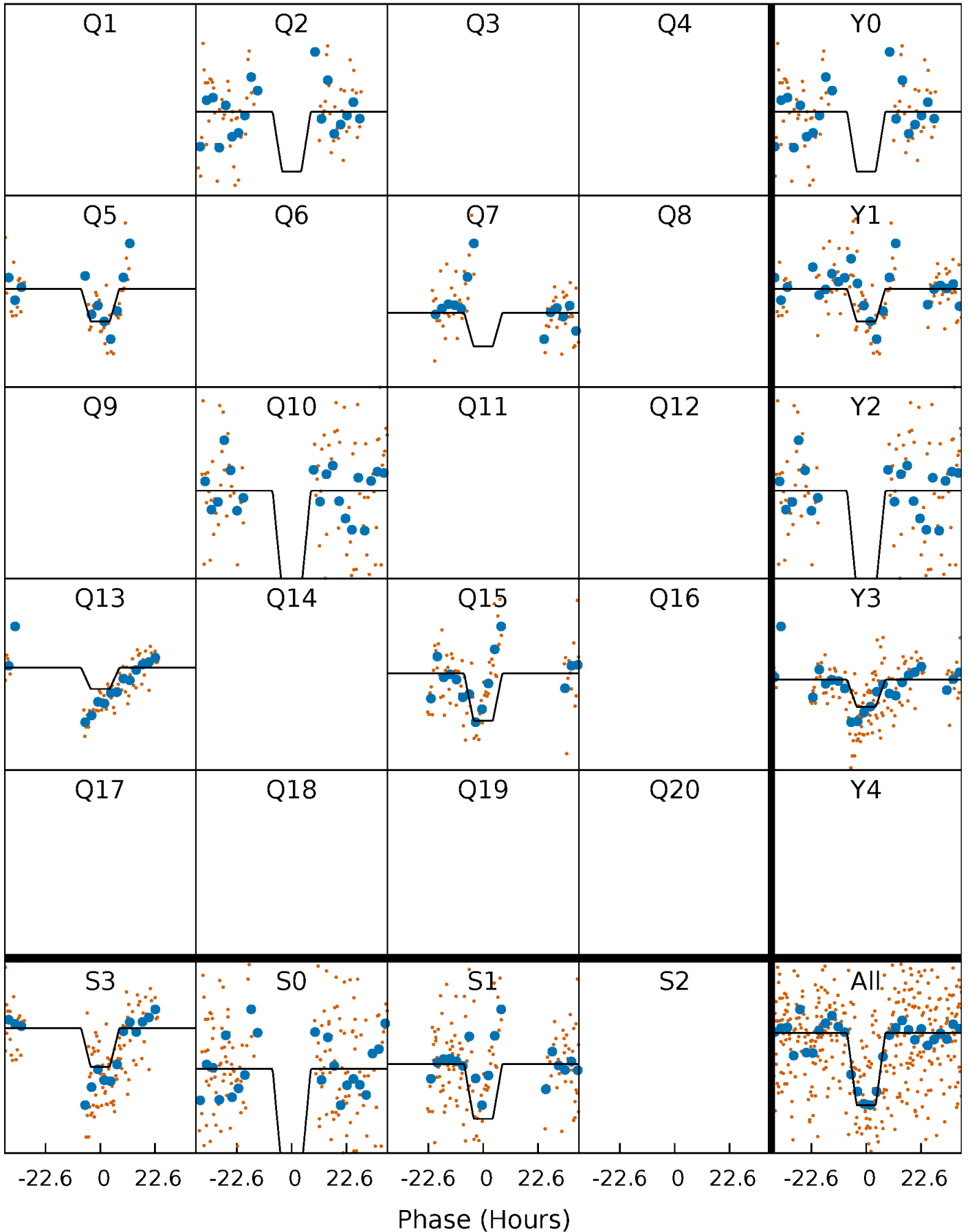
DV Quarter-Phased Transit Curves

TCE 008444868-03 P=244.681438 Days $T_0=216.665636$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

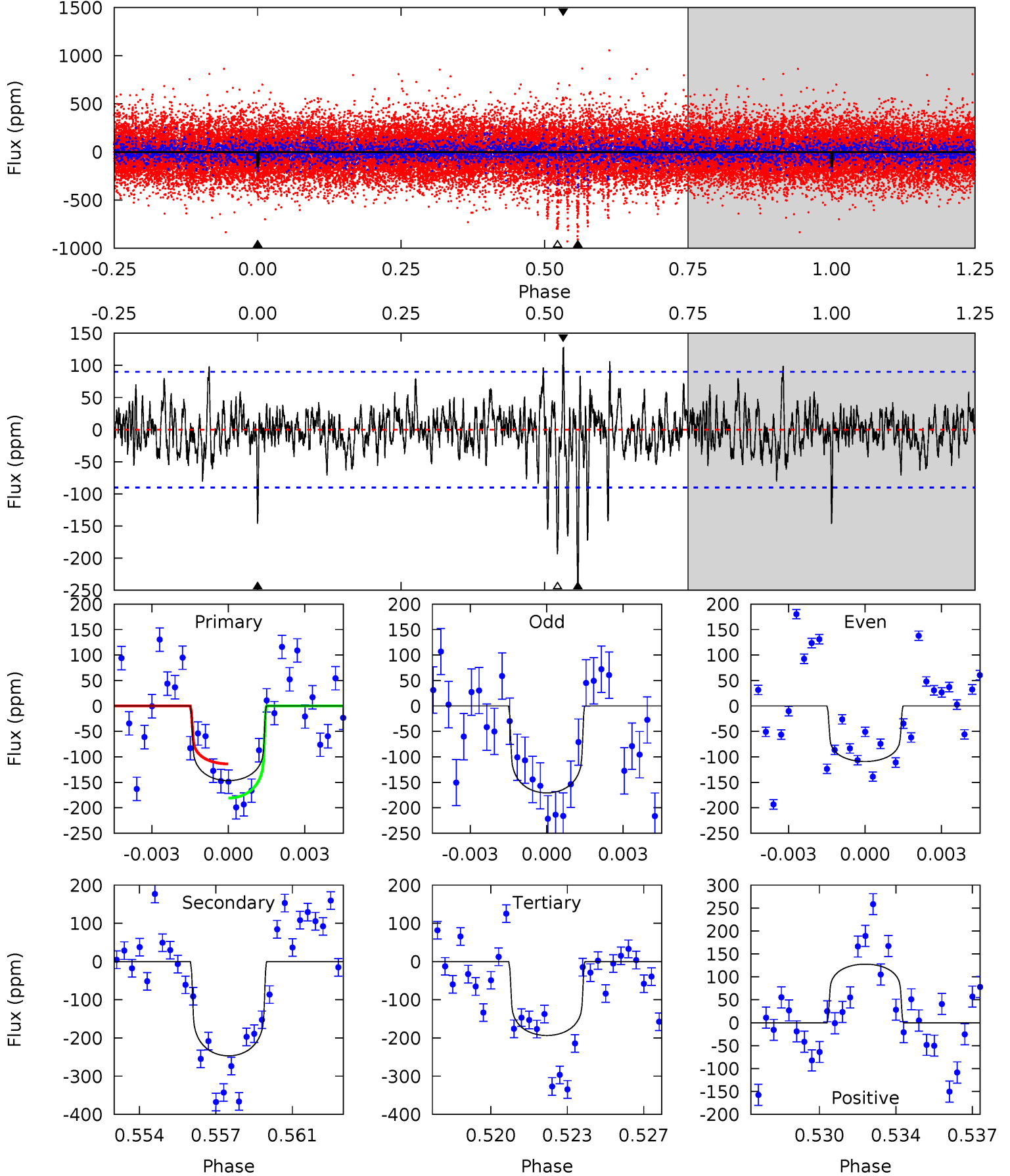
TCE 008444868-03 P=244.691881 Days $T_0=216.634499$ (BKJD)



DV Model-Shift Uniqueness Test

008444868-03, P = 244.681438 Days, E = 216.665636 Days

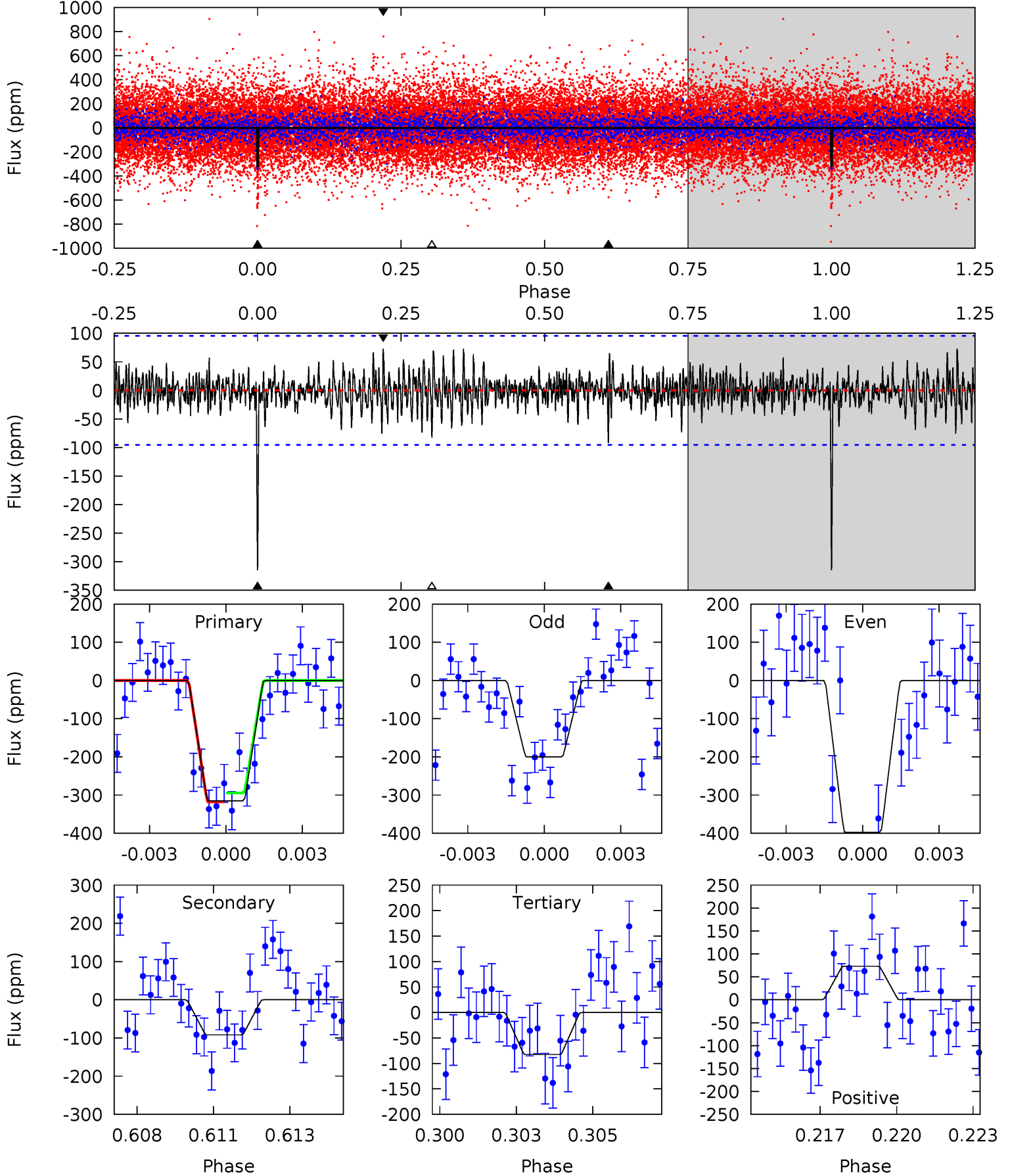
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.50	14.3	11.2	7.40	5.23	2.93	1.86	-2.72	1.10	3.09	6.91	1.74	0.72	0.34	1.95



Alt Model-Shift Uniqueness Test

008444868-03, P = 244.691881 Days, E = 216.634499 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.4	5.07	4.55	4.03	5.27	2.99	1.18	12.8	13.3	0.52	1.04	5.41	0.36	0.19	0.64



Stellar Parameters For KIC 008444868

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6519^{+155}_{-214}	$4.296^{+0.105}_{-0.195}$	$-0.160^{+0.250}_{-0.300}$	$1.275^{+0.404}_{-0.218}$	$1.175^{+0.192}_{-0.157}$	$0.798^{+0.382}_{-0.410}$
	+2%/-3%	+2%/-5%	+156%/-188%	+32%/-17%	+16%/-13%	+48%/-51%
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 008444868-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-247 ± 17	$1.90^{+0.72}_{-0.70}$	509^{+36}_{-29}	7044^{+2140}_{-1000}	24028^{+35089}_{-11364}
Alt.	-92 ± 18	$2.41^{+0.78}_{-0.70}$	508^{+40}_{-27}	5005^{+767}_{-553}	5532^{+5463}_{-2450}

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

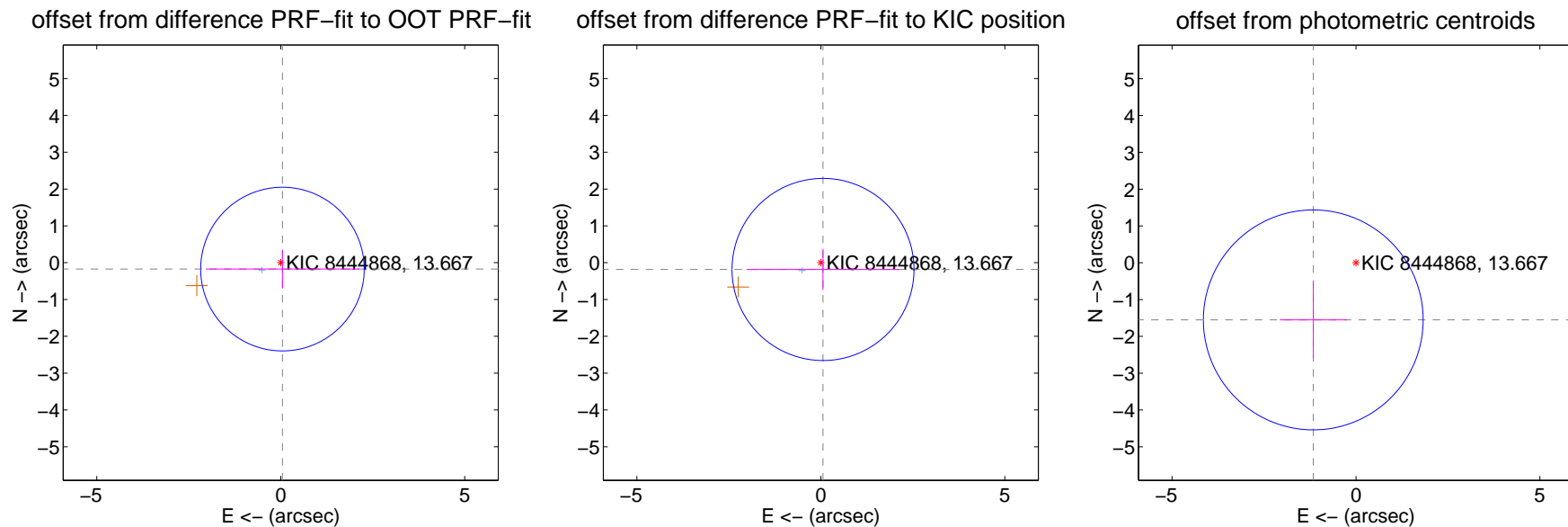
DV Centroid Data

Supplemental centroid analysis for 008444868-03. Kepler magnitude: 13.67. Transit SNR 7.14

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

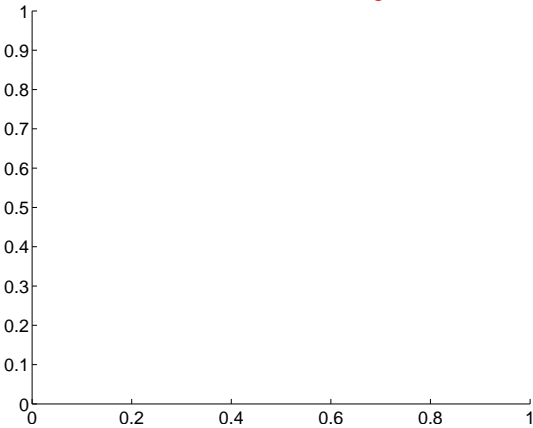
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.179 ± 0.741	0.24	-0.046 ± 2.088	-0.173 ± 0.527
PRF-fit source offset from KIC position	0.193 ± 0.824	0.23	-0.058 ± 2.084	-0.184 ± 0.557
photometric centroid source offset	1.94 ± 1.00	1.95	1.16 ± 0.91	-1.55 ± 1.04



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

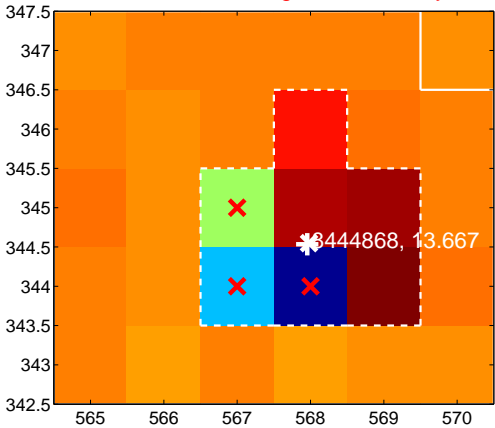
Q1 no difference image



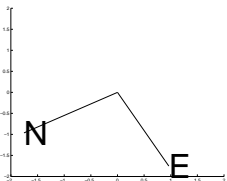
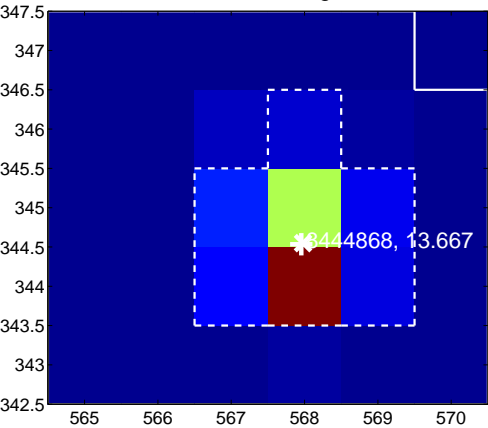
Q1 no OOT image



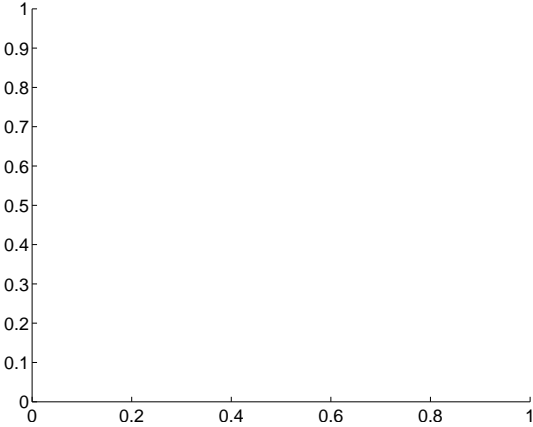
Q2 difference image. Poor Quality



Q2 OOT image



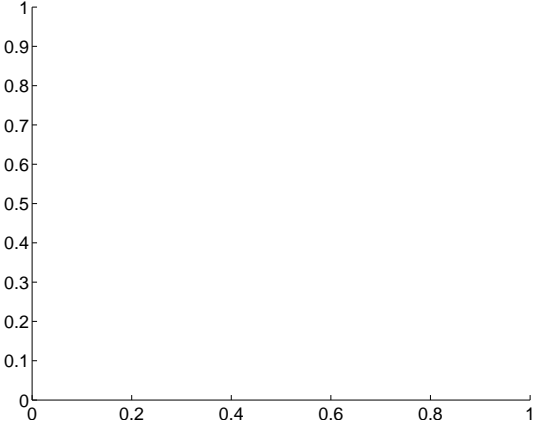
Q3 no difference image



Q3 no OOT image



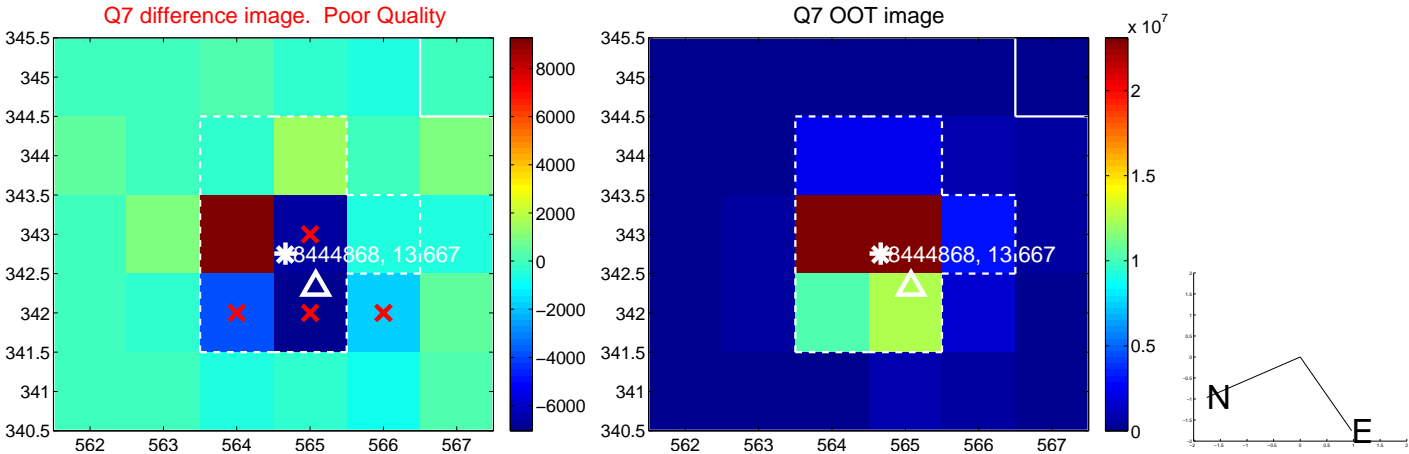
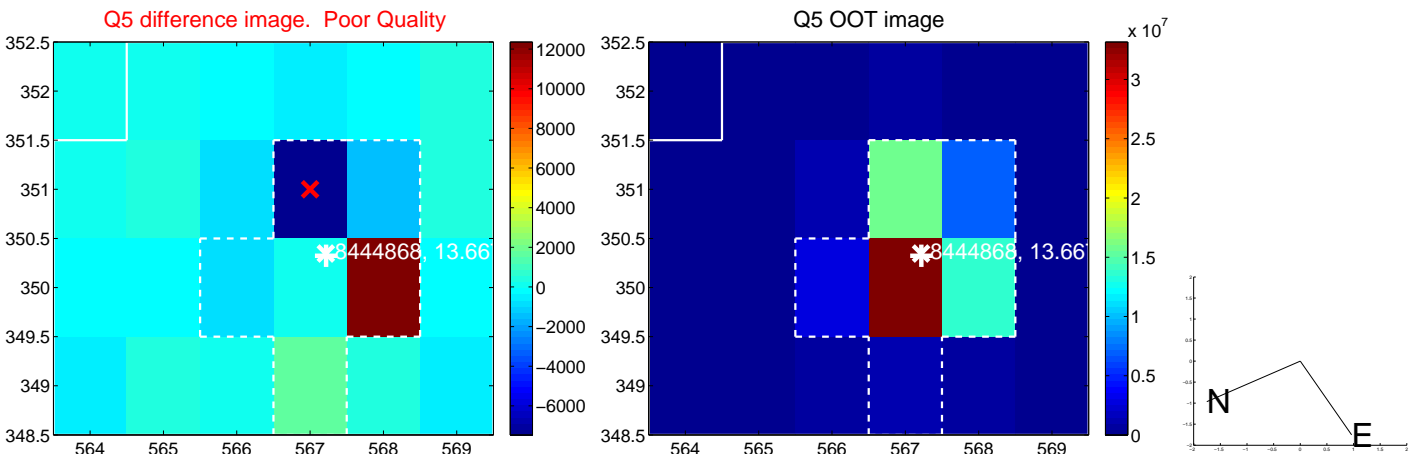
Q4 no difference image



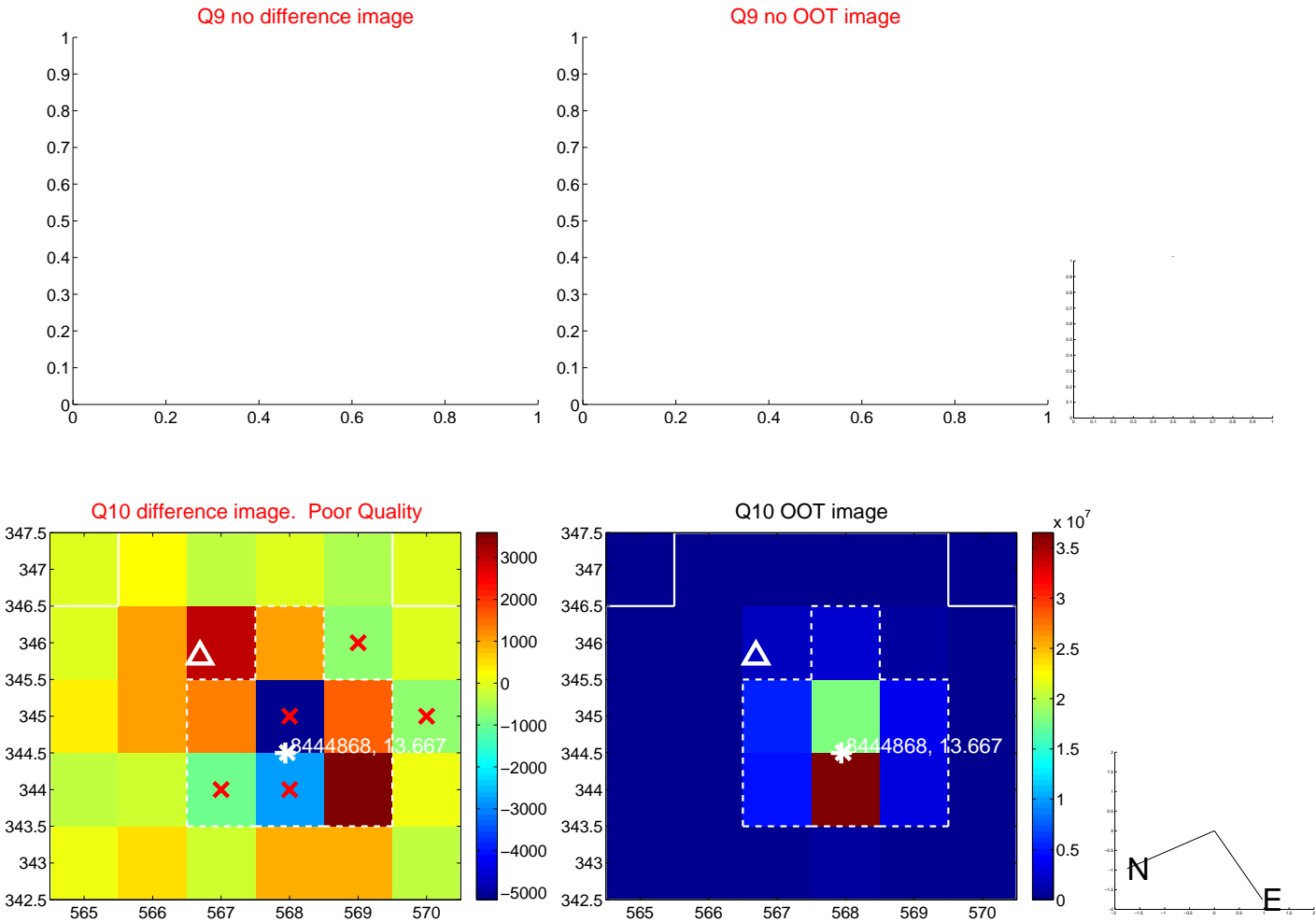
Q4 no OOT image



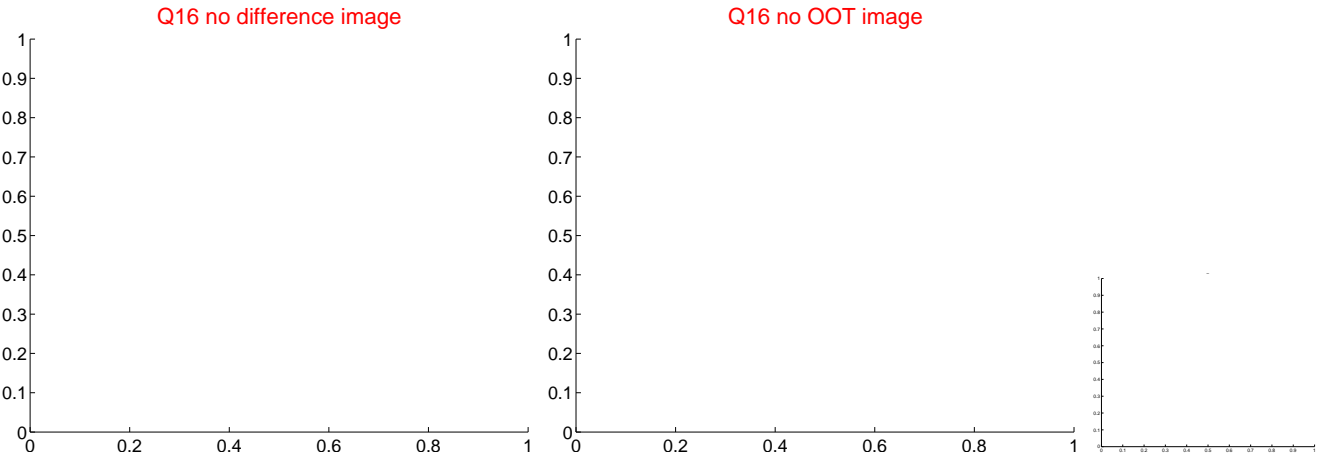
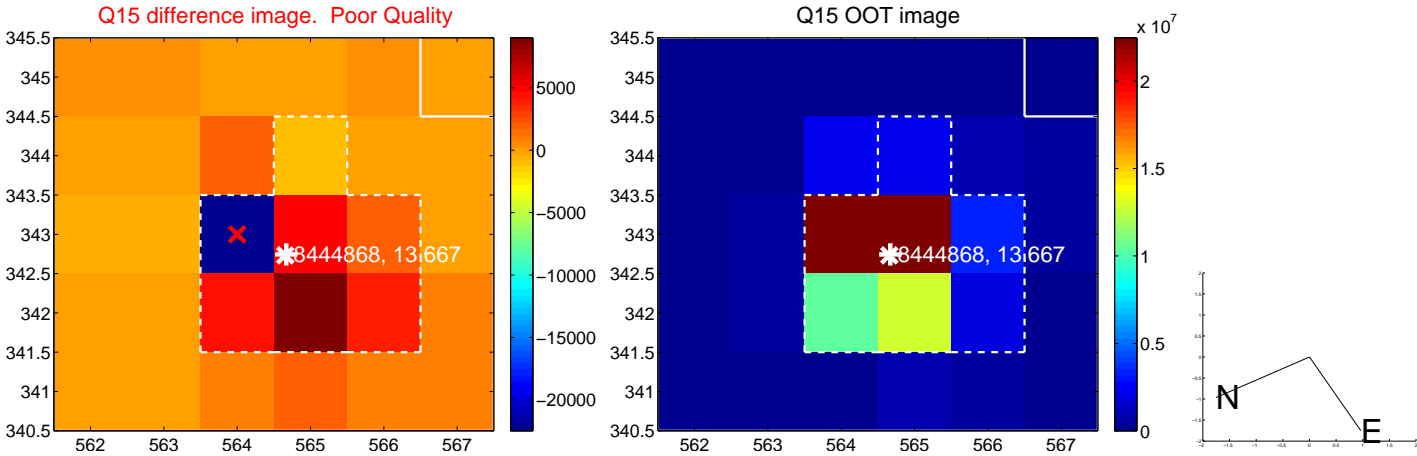
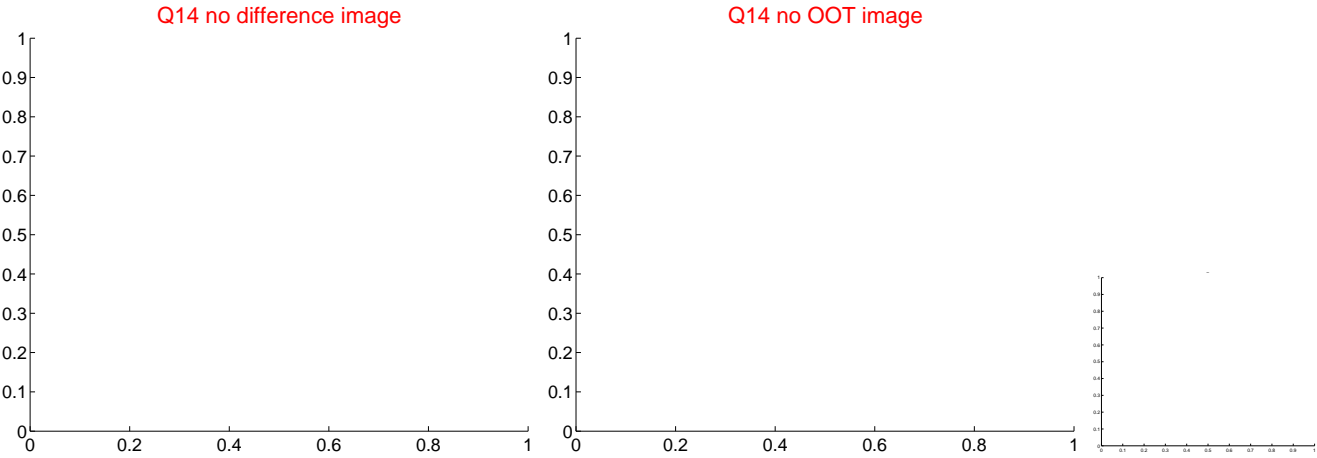
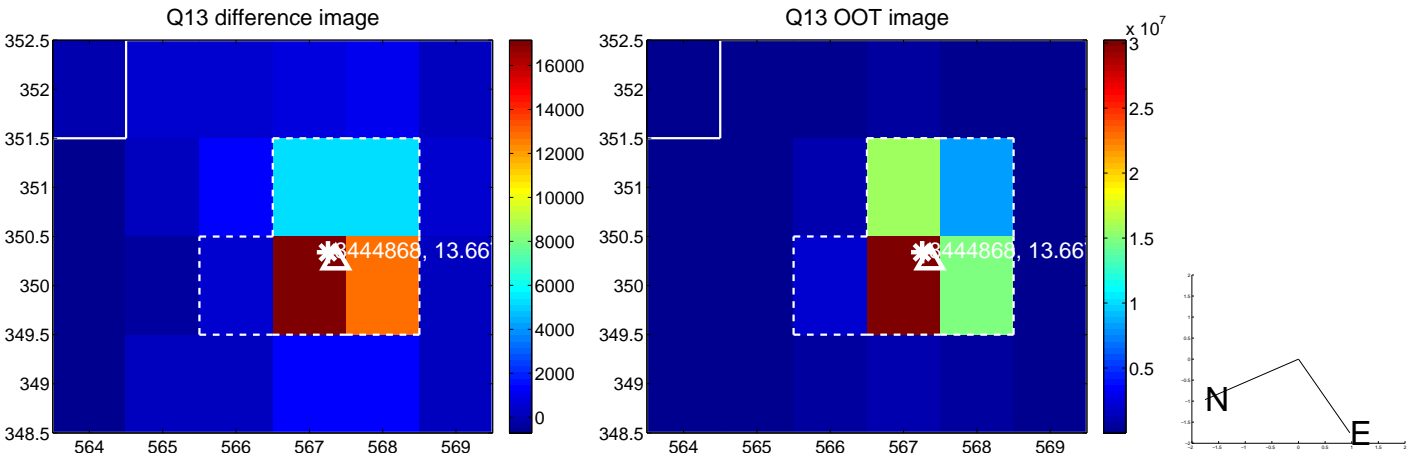
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



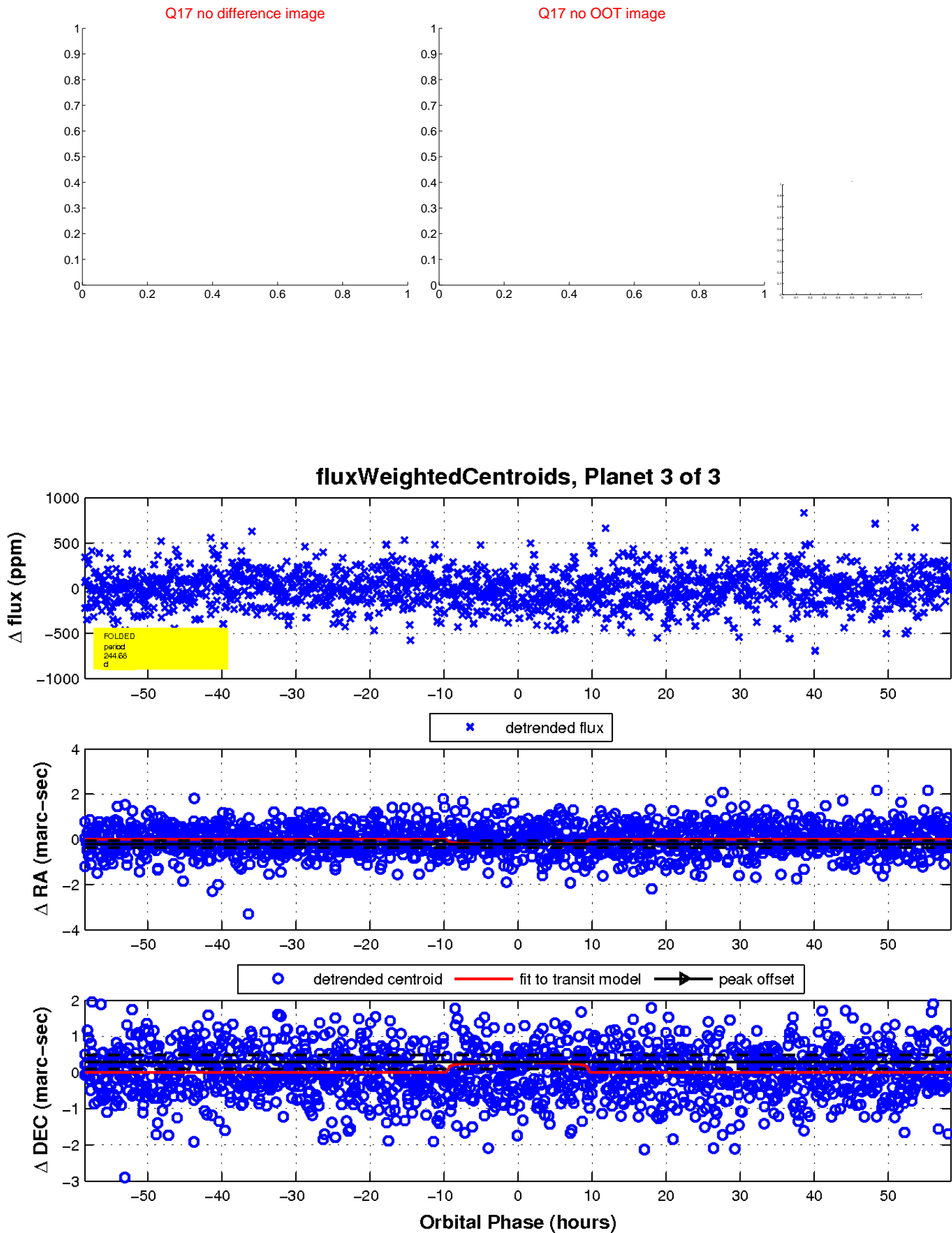
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

