

KIC 008758366

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})
008758366-01	OBS	No	0.993768	131.634696	29.3	4.008	8.5	6.8	1.63	7440	1.03	14704.94
008758366-02	OBS	No	41.909771	171.880804	205.7	4.629	8.2	6.0	1.63	7440	2.71	100.17
008758366-03	OBS	No	185.155359	247.031244	541.8	2.979	7.3	7.4	1.63	7440	4.19	13.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008758366-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008758366-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008758366-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

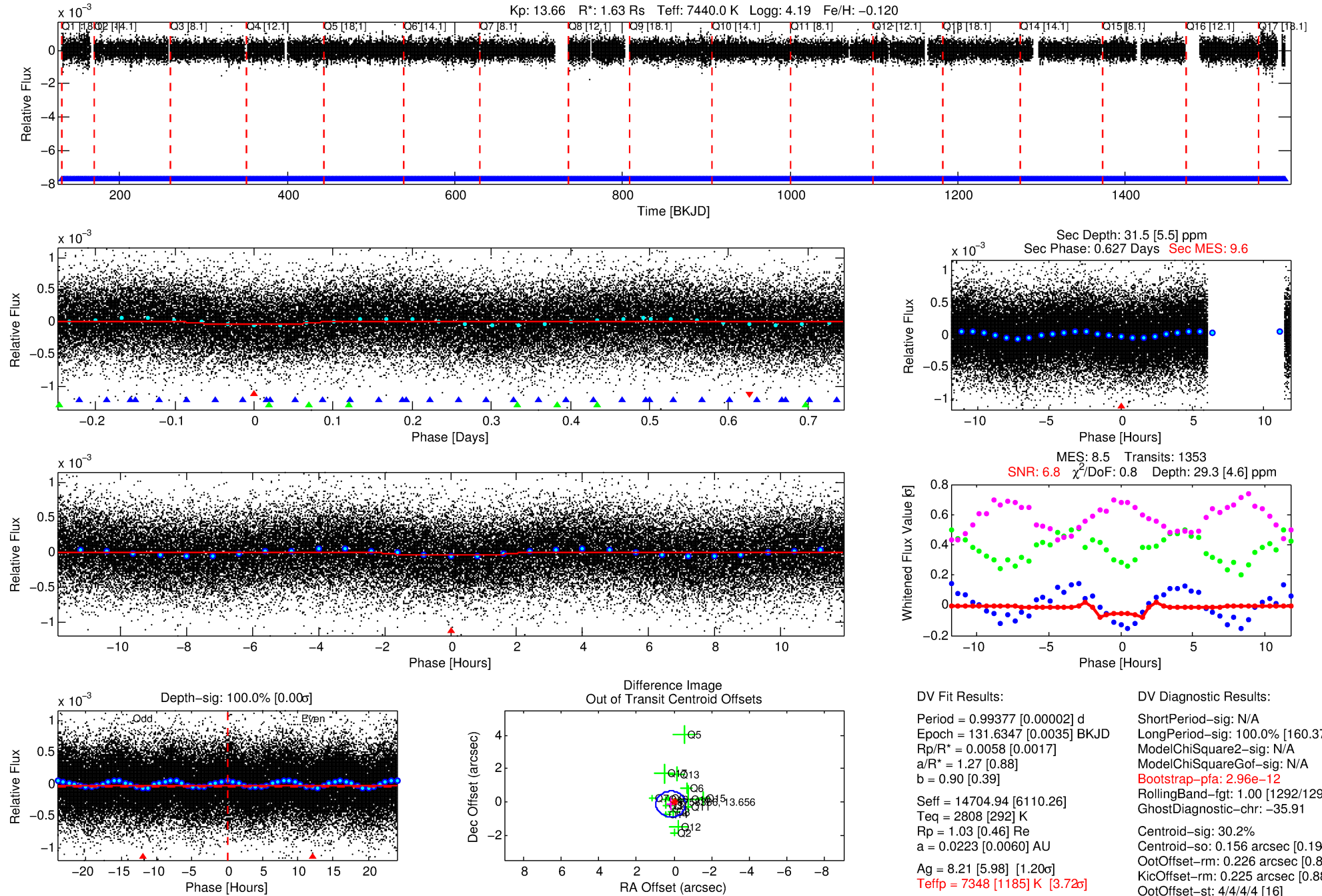
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008758366-01

No Significant Match Found

DV One-Page Summary

KIC: 8758366 Candidate: 1 of 3 Period: 0.994 d



DV Fit Results:

Period = 0.99377 [0.00002] d
Epoch = 131.6347 [0.0035] BKJD
Rp/R* = 0.0058 [0.0017]
a/R* = 1.27 [0.88]
b = 0.90 [0.39]
Seff = 14704.94 [6110.26]
Teq = 2808 [292] K
Rp = 1.03 [0.46] Re
a = 0.0223 [0.0060] AU
Ag = 8.21 [5.98] [1.20σ]
Teffp = 7348 [1185] K [3.72σ]

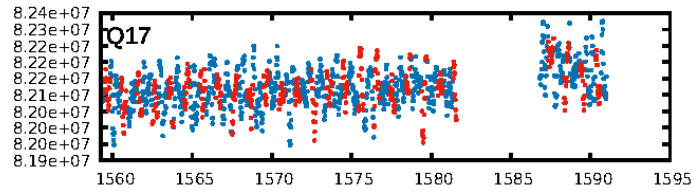
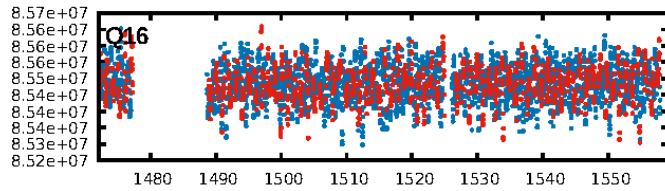
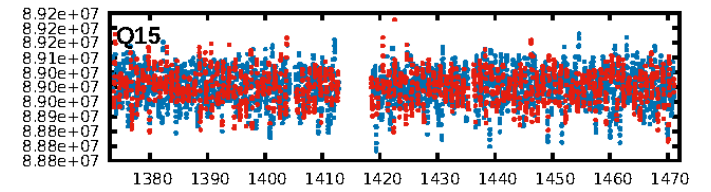
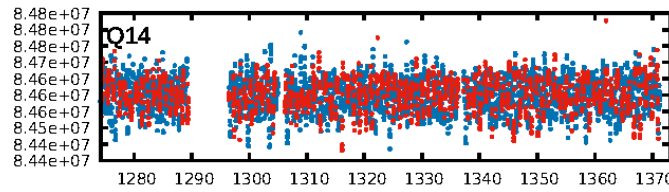
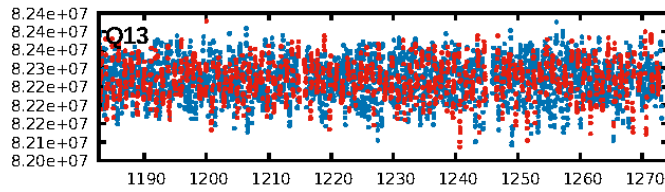
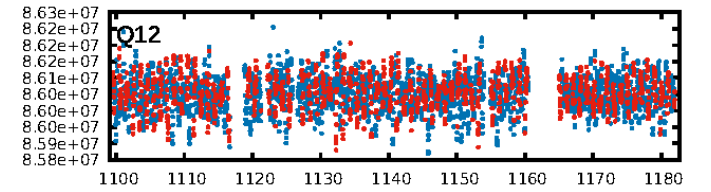
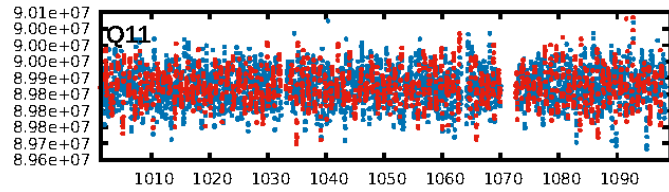
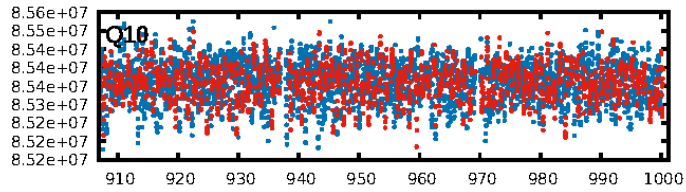
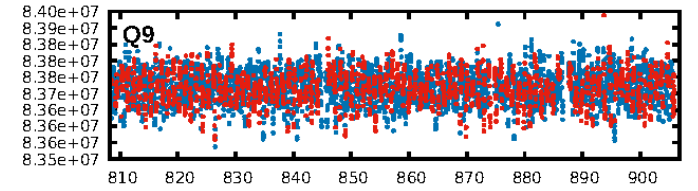
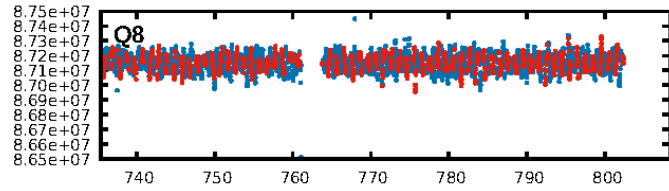
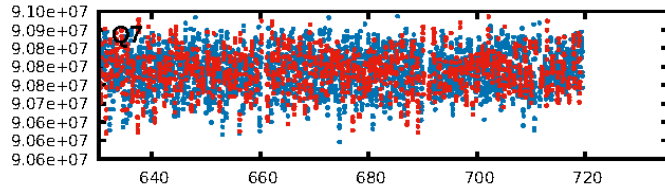
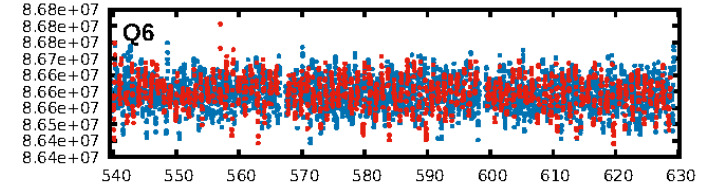
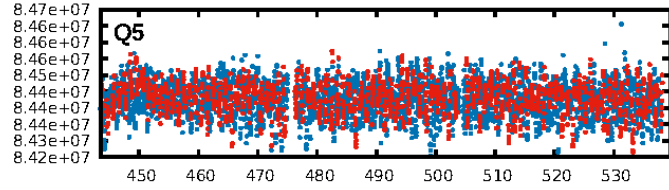
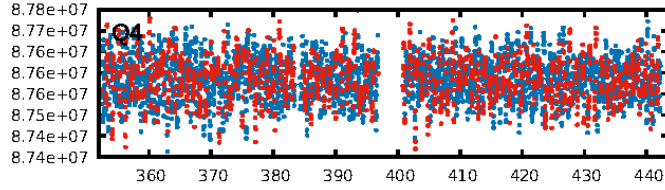
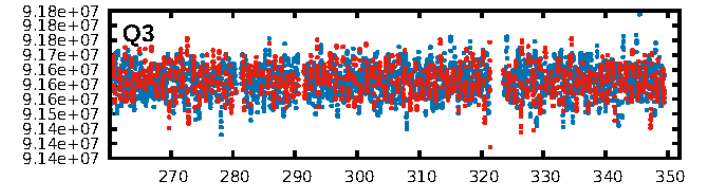
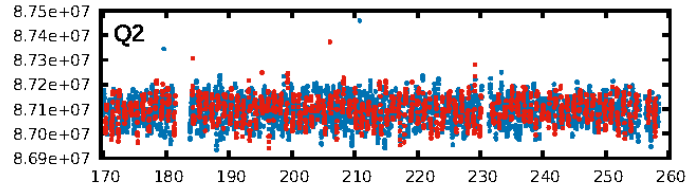
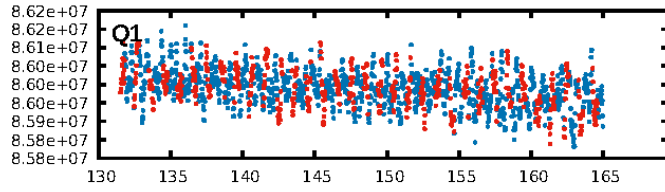
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [160.37σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.96e-12
RollingBand-fgt: 1.00 [1292/1292]
GhostDiagnostic-chr: -35.91
Centroid-sig: 30.2%
Centroid-so: 0.156 arcsec [0.19σ]
OotOffset-rm: 0.226 arcsec [0.87σ]
KicOffset-rm: 0.225 arcsec [0.88σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.88 [14/16]
DiffImageOverlap-fno: 1.00 [17/17]

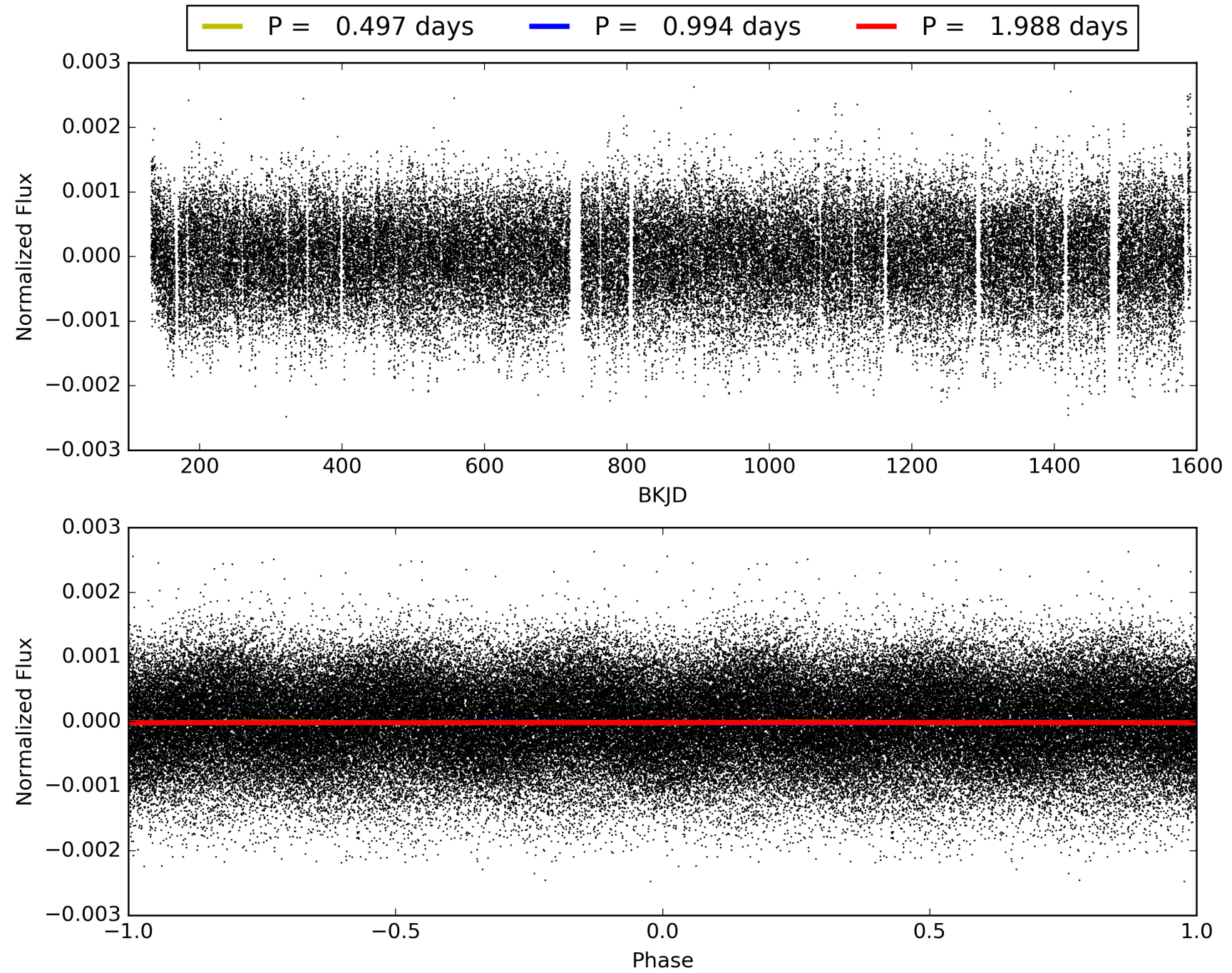
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008758366-01, PDC Light Curves

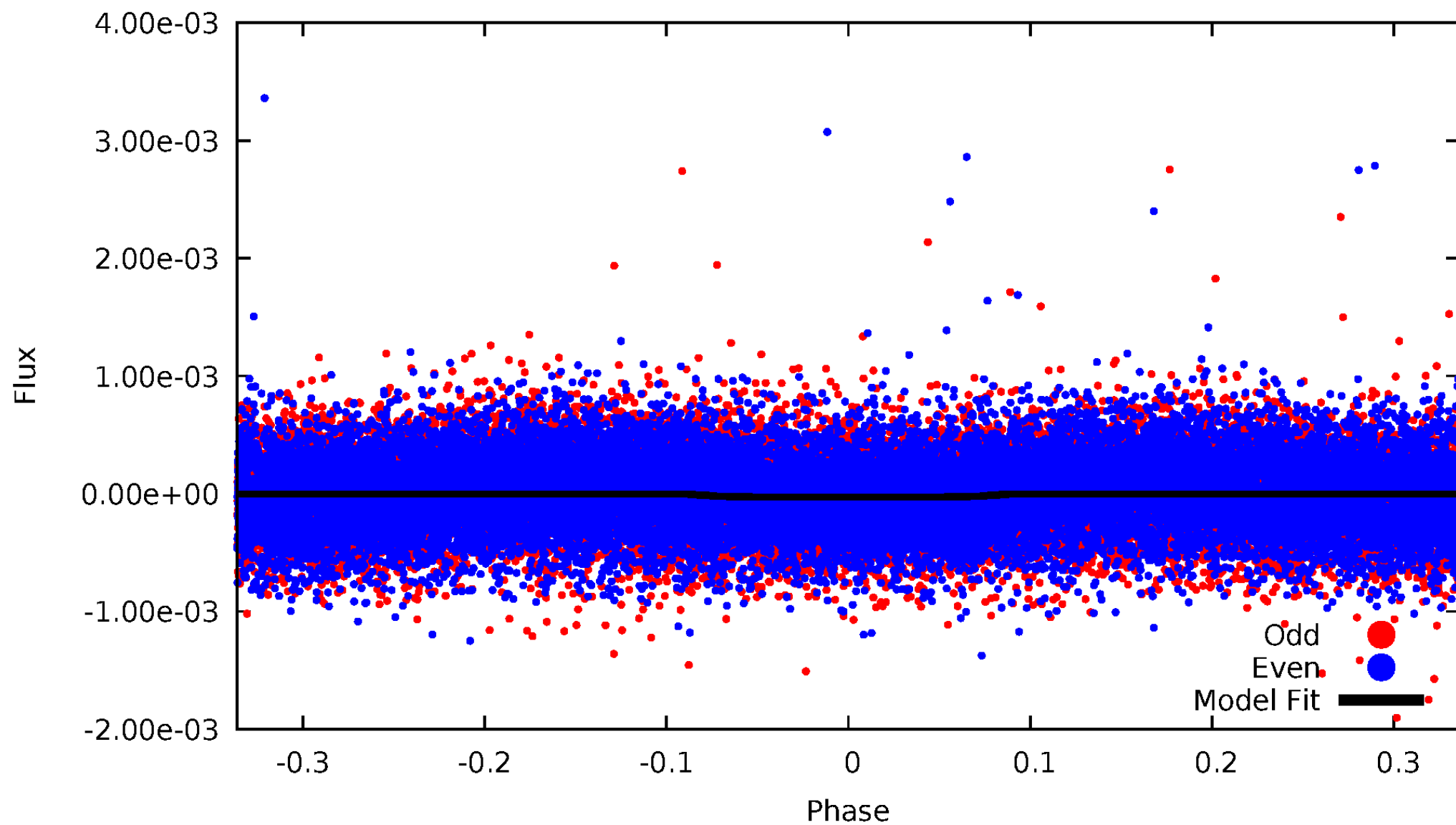


TCE 008758366-01



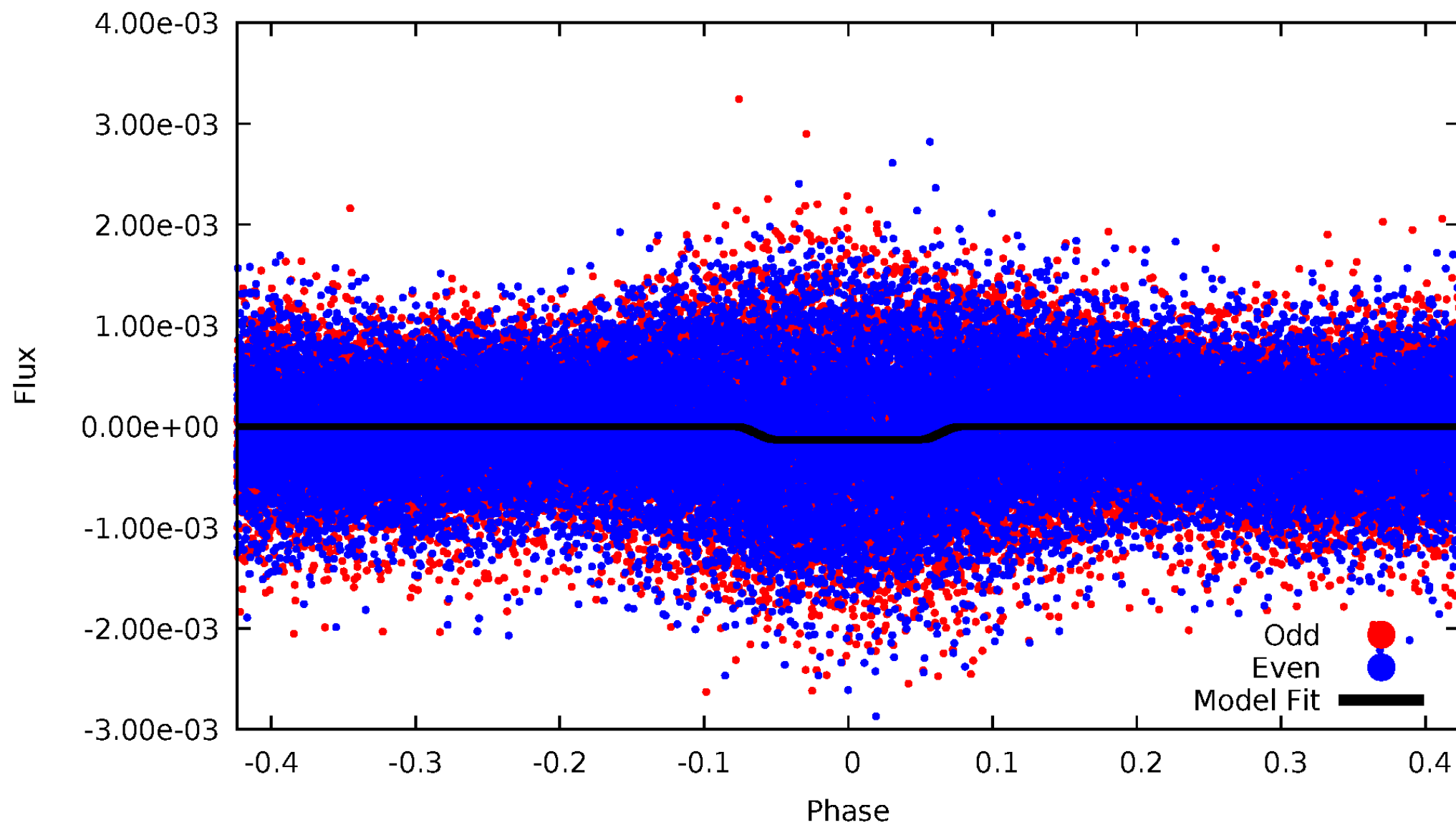
DV Odd/Even

TCE 008758366-01

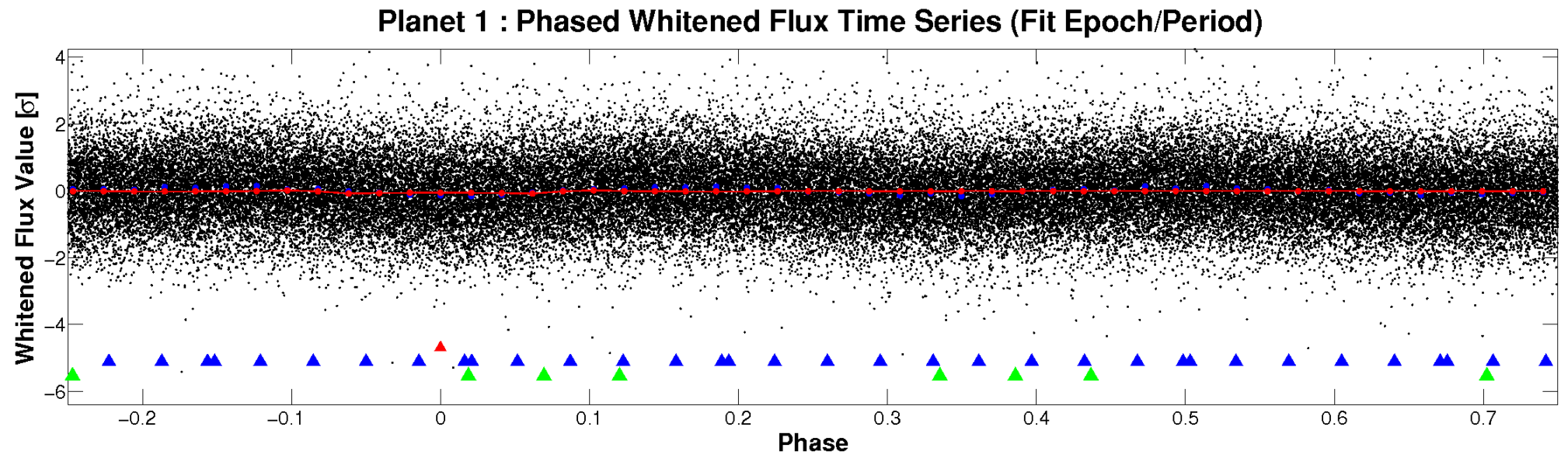
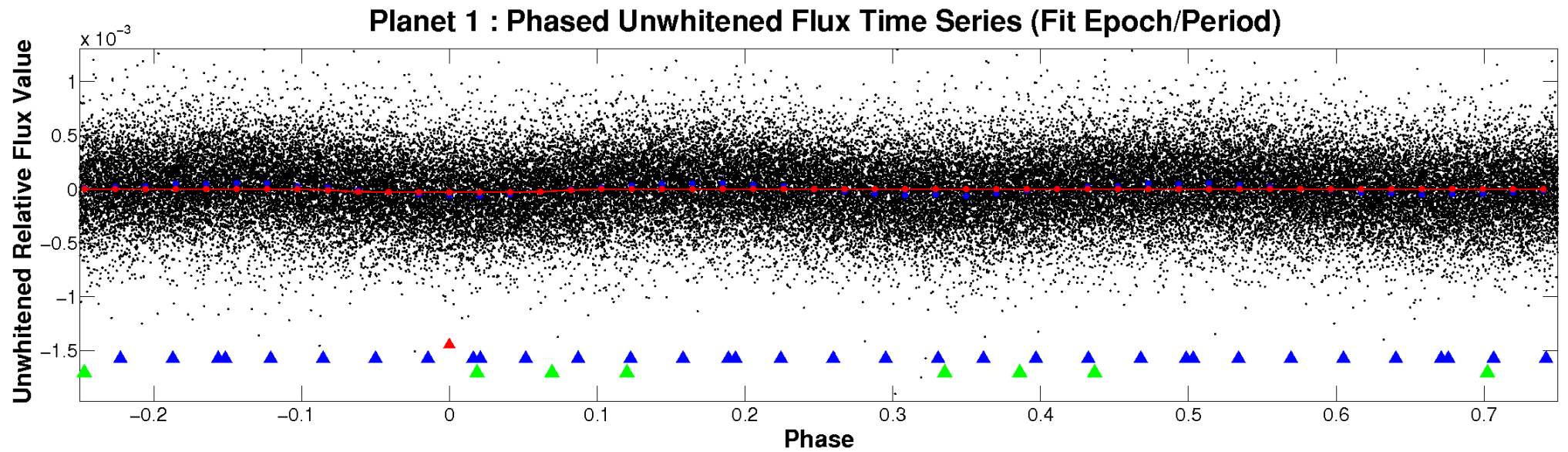


ALT Odd/Even

TCE 008758366-01

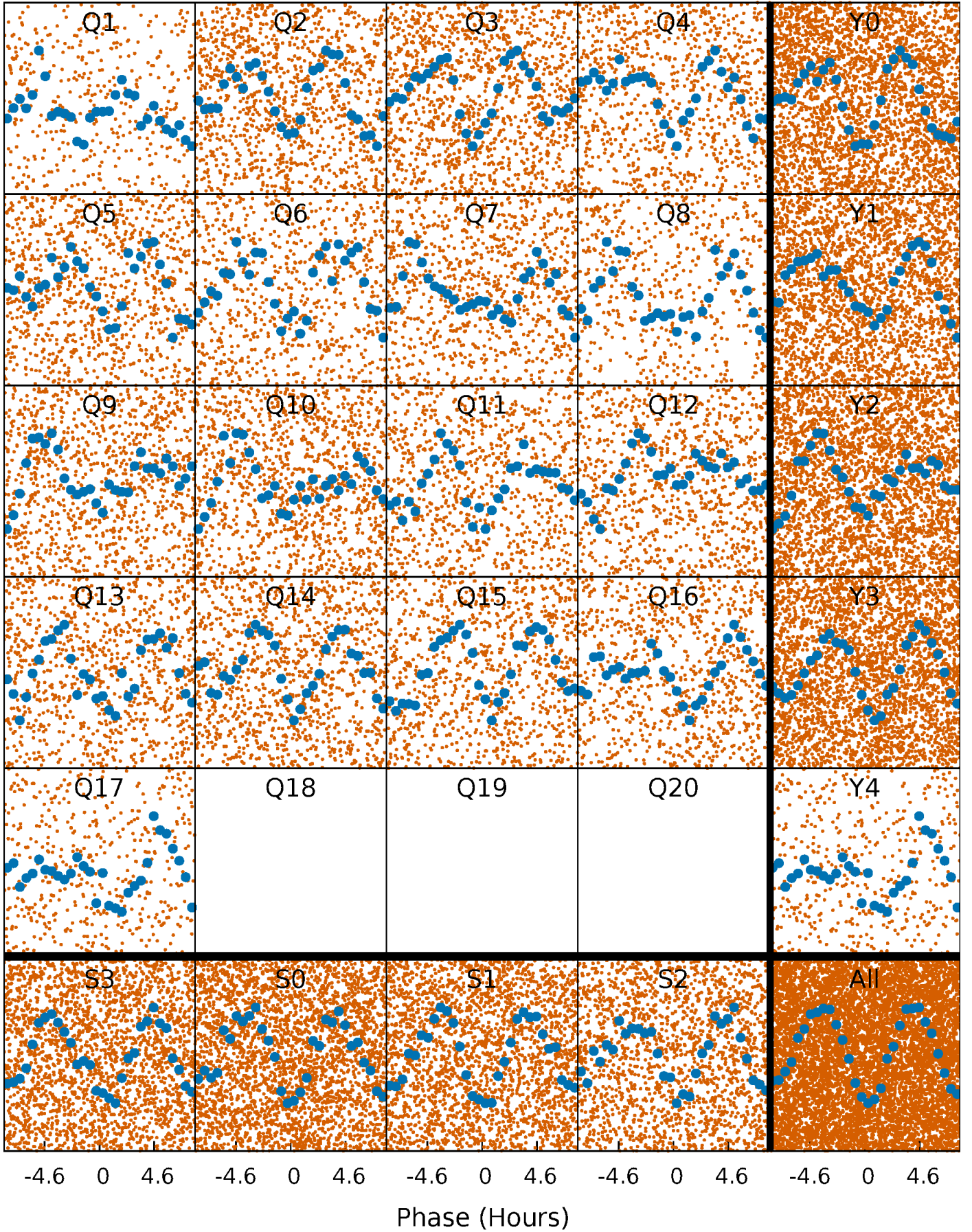


Non-Whitened Vs. Whitened Light Curve



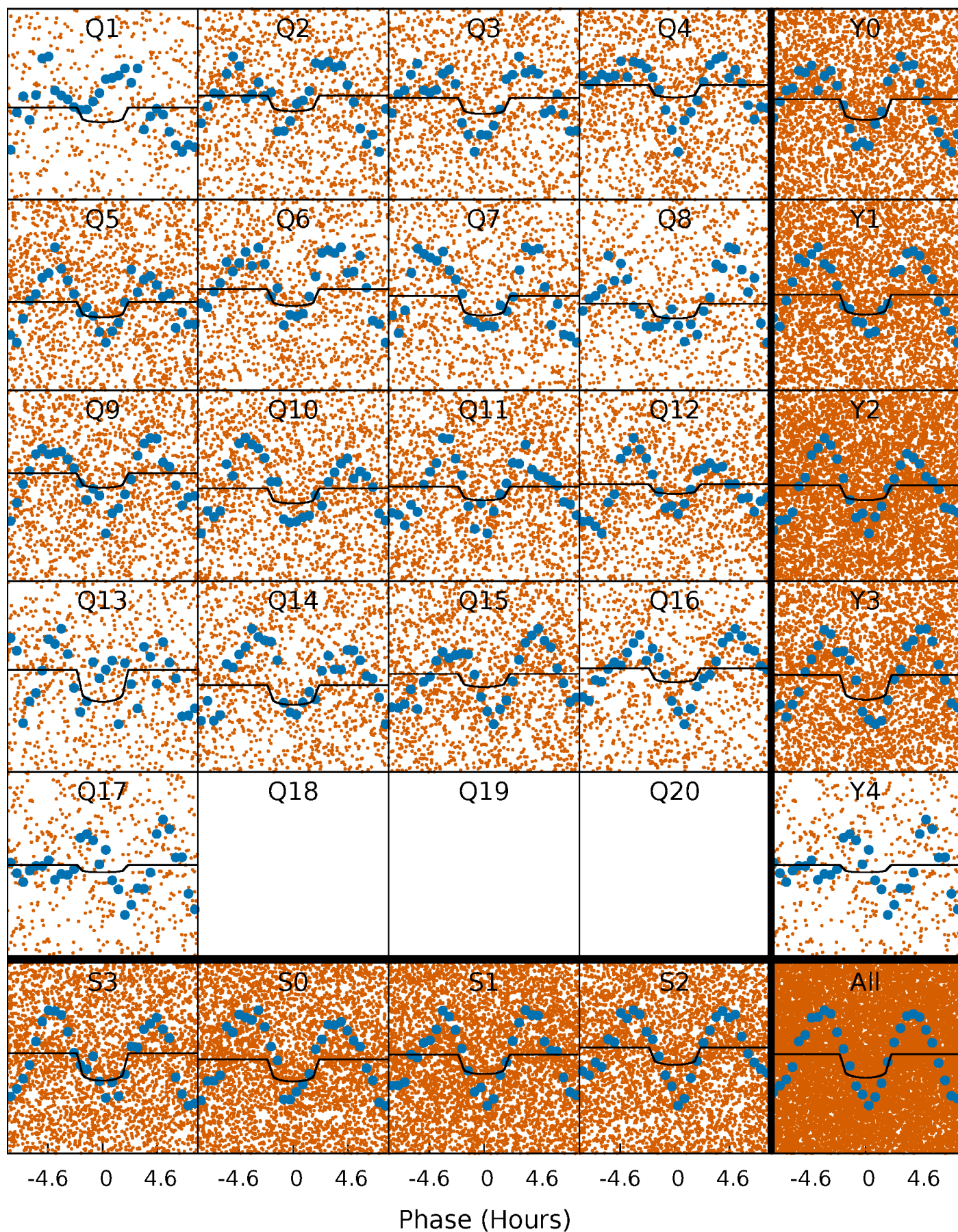
PDC Quarter-Phased Transit Curves

TCE 008758366-01 P= 0.993768 Days $T_0=131.634696$ (BKJD)



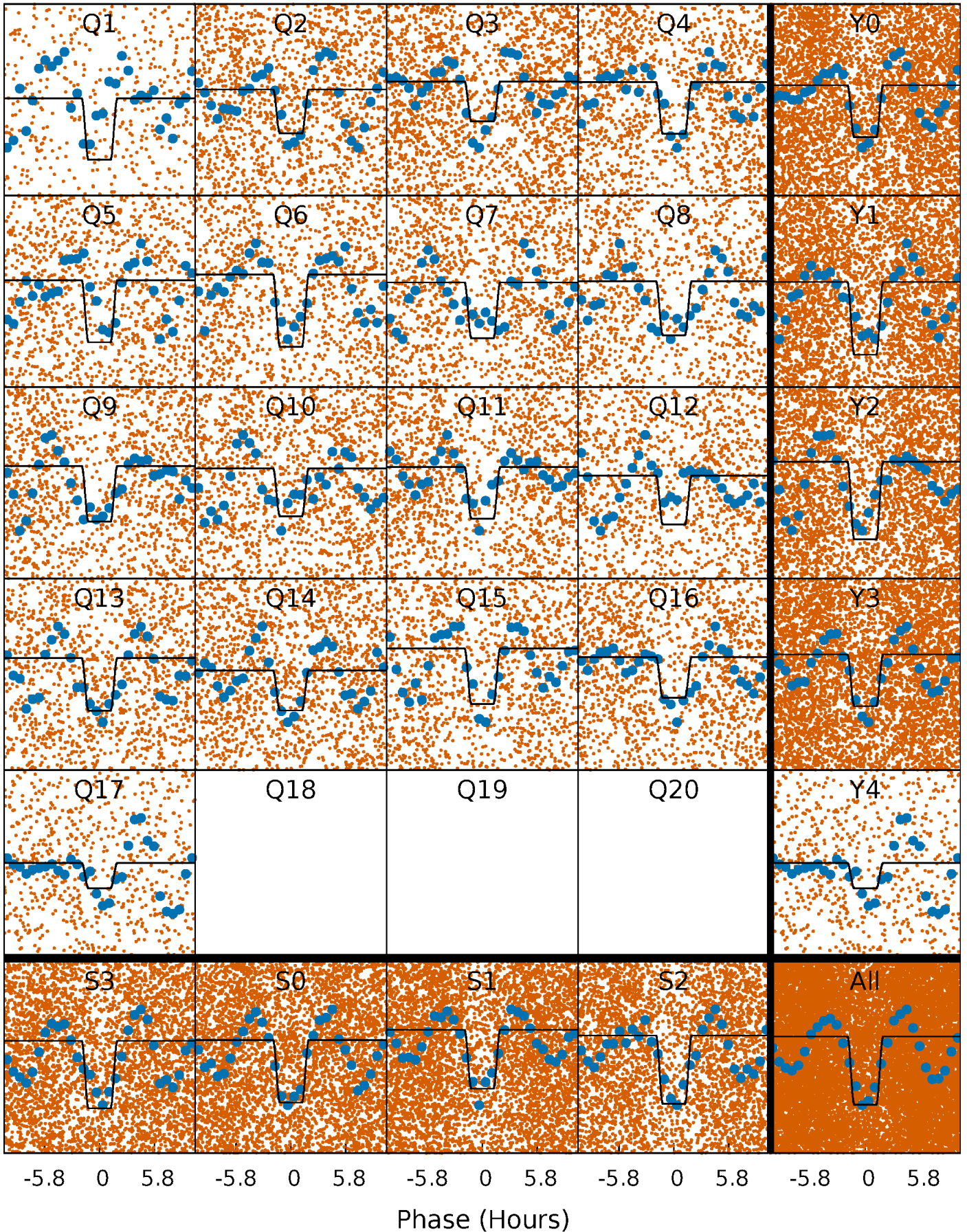
DV Quarter-Phased Transit Curves

TCE 008758366-01 P= 0.993768 Days $T_0=131.634696$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

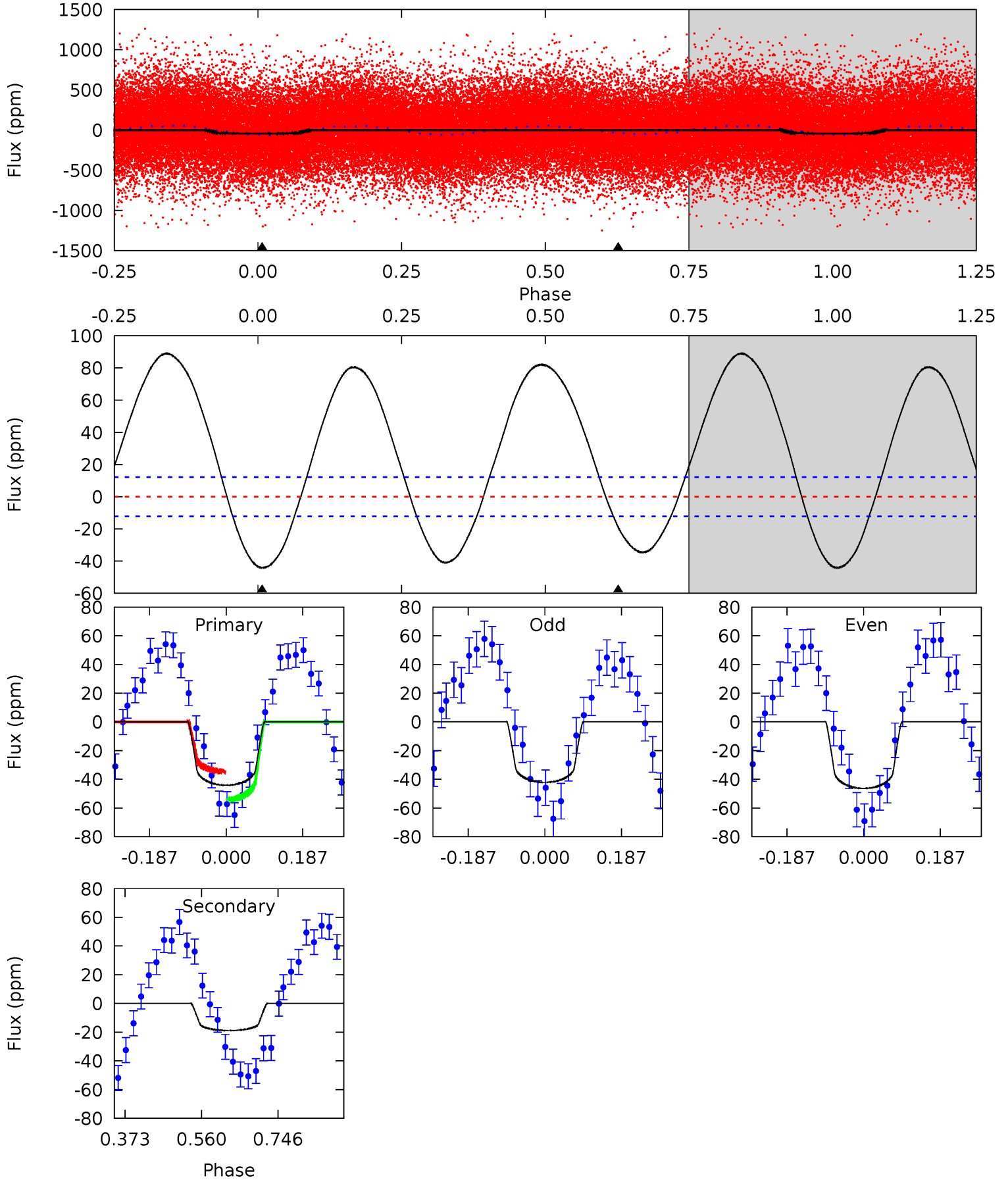
TCE 008758366-01 P= 0.993811 Days $T_0=131.615885$ (BKJD)



DV Model-Shift Uniqueness Test

008758366-01, P = 0.993768 Days, E = 130.640928 Days

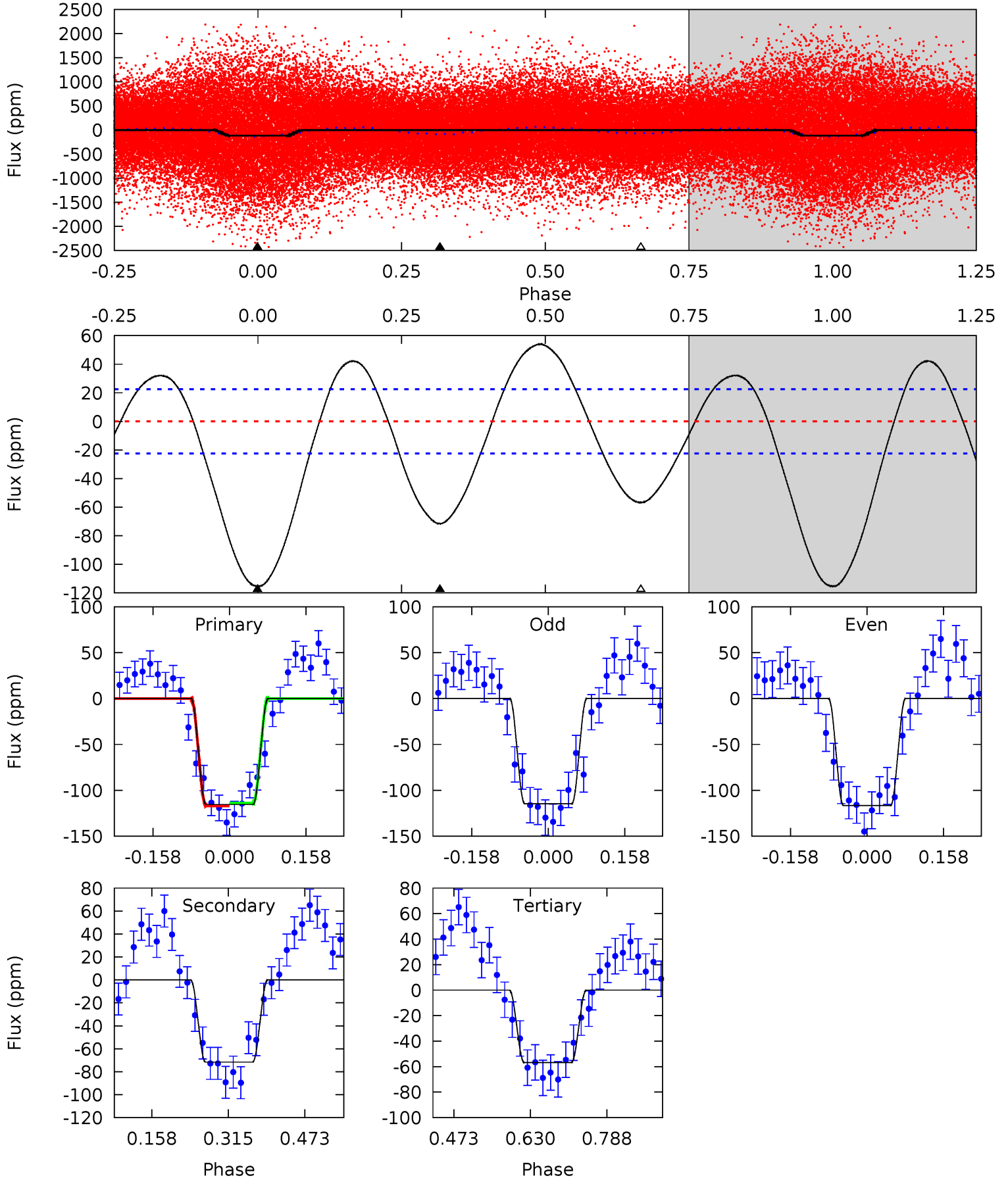
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	6.85	0	0	4.43	1.32	13.3	16.0	16.0	6.85	6.85	0.76	0.97	0.67	3.54



Alt Model-Shift Uniqueness Test

008758366-01, P = 0.993811 Days, E = 130.622074 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.9	14.2	11.3	0	4.47	1.41	7.35	11.6	22.9	2.95	14.2	0.20	0.89	0.32	0



Stellar Parameters For KIC 008758366

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7440^{+209}_{-314}	$4.188^{+0.108}_{-0.201}$	$-0.120^{+0.200}_{-0.350}$	$1.633^{+0.542}_{-0.292}$	$1.498^{+0.212}_{-0.235}$	$0.484^{+0.250}_{-0.262}$
	+3%/-4%	+3%/-5%	+167%/-292%	+33%/-18%	+14%/-16%	+52%/-54%
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 008758366-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-19 ± 3	$1.03^{+0.39}_{-0.32}$	3952^{+311}_{-244}	6264^{+1341}_{-881}	$4.809^{+4.989}_{-2.333}$
Alt.	-72 ± 5	$2.13^{+0.47}_{-0.41}$	3954^{+317}_{-234}	6089^{+603}_{-470}	$4.211^{+2.154}_{-1.340}$

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

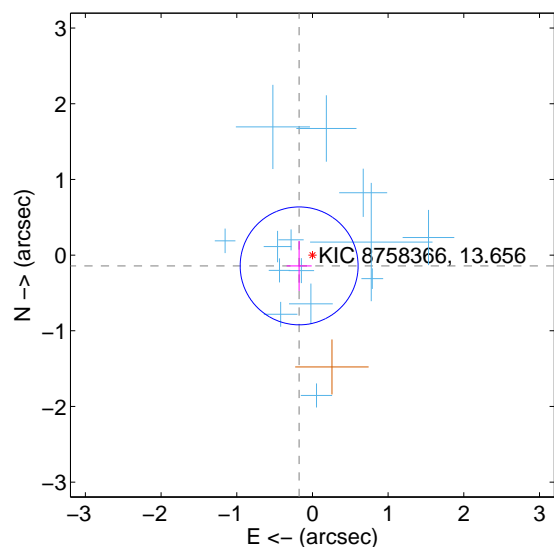
Supplemental centroid analysis for 008758366-01. Kepler magnitude: 13.66. Transit SNR 6.79

There are 14 quarters with good PRF difference image offsets

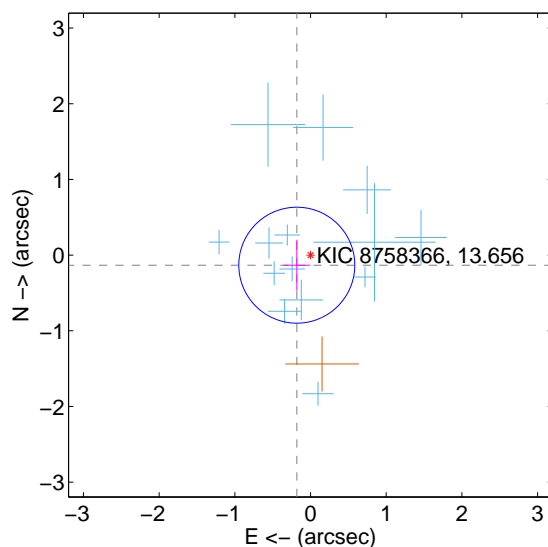
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.226 ± 0.260	0.87	0.176 ± 0.166	-0.143 ± 0.330
PRF-fit source offset from KIC position	0.225 ± 0.255	0.88	0.181 ± 0.178	-0.133 ± 0.335
photometric centroid source offset	0.16 ± 0.84	0.19	-0.14 ± 0.85	-0.06 ± 0.75

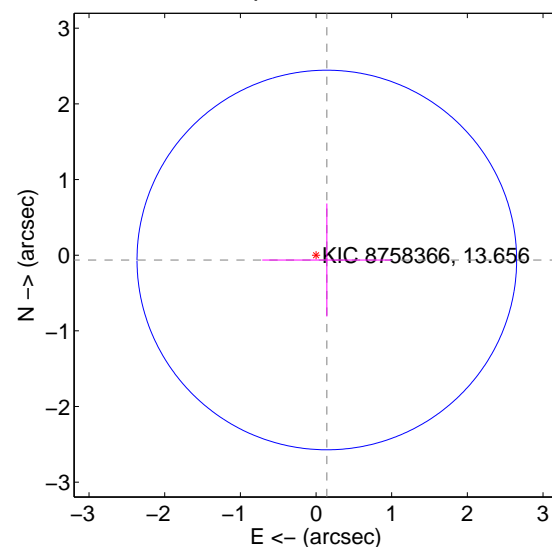
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

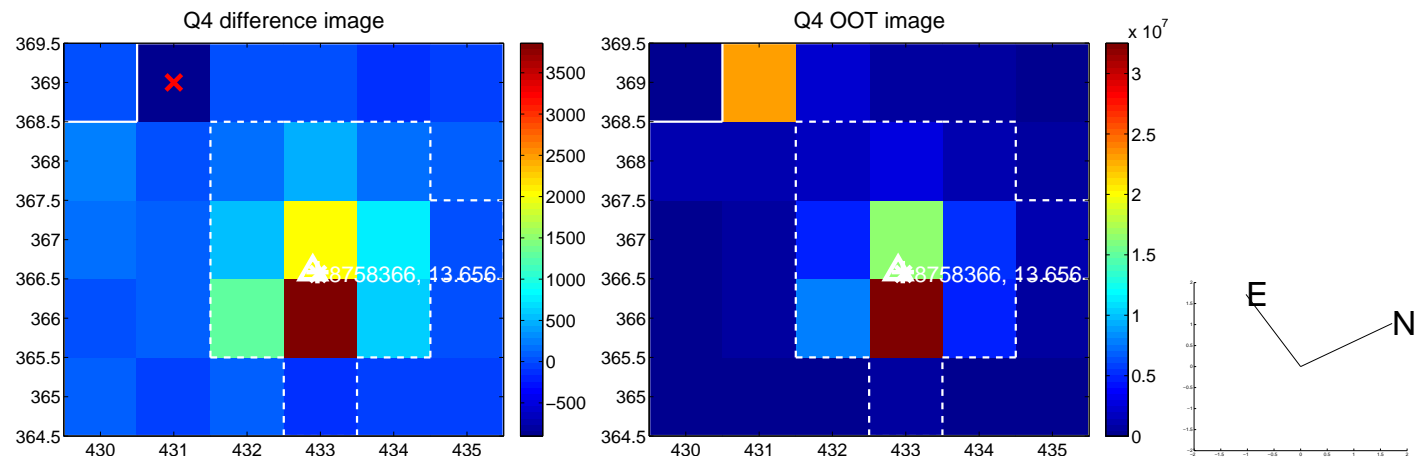
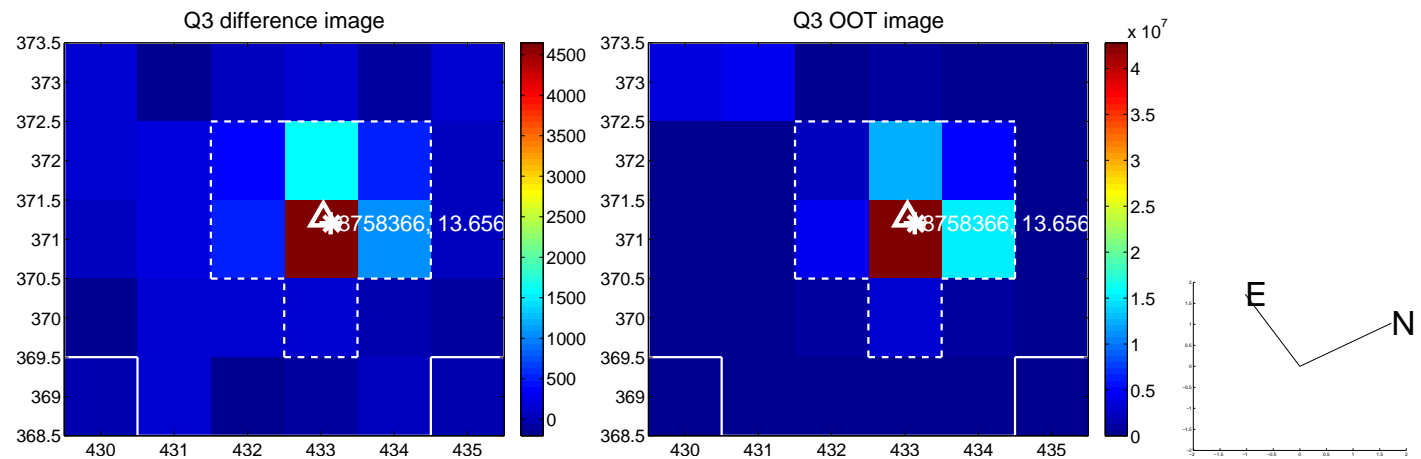
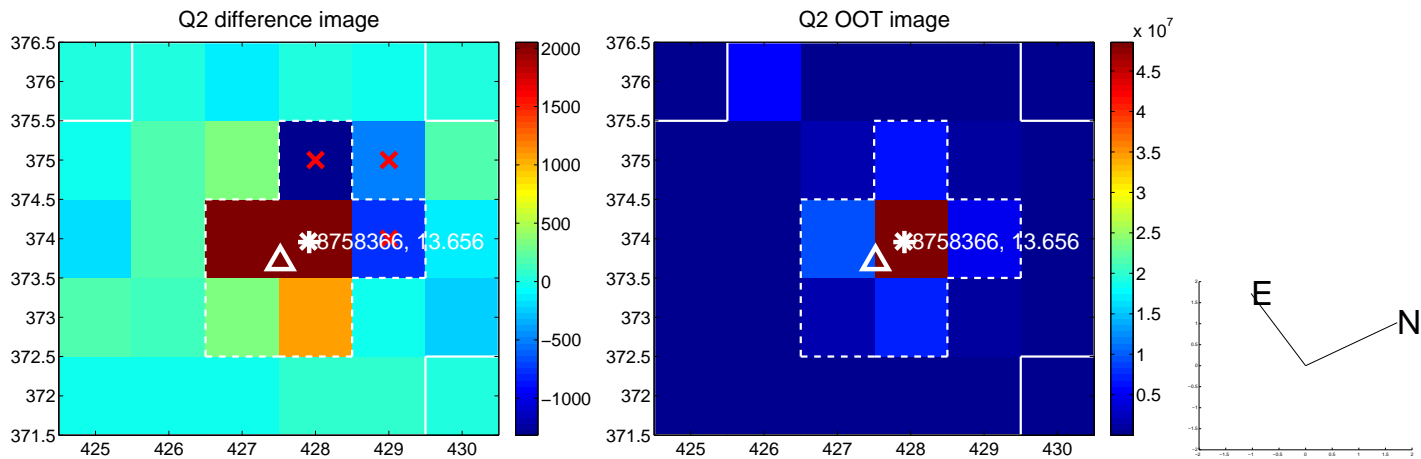
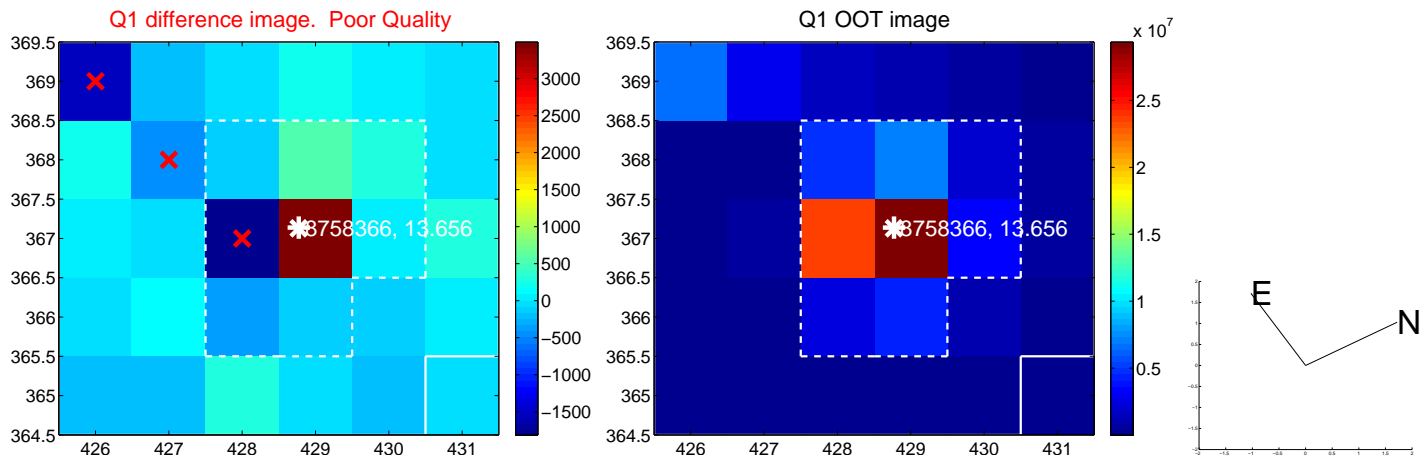


offset from photometric centroids

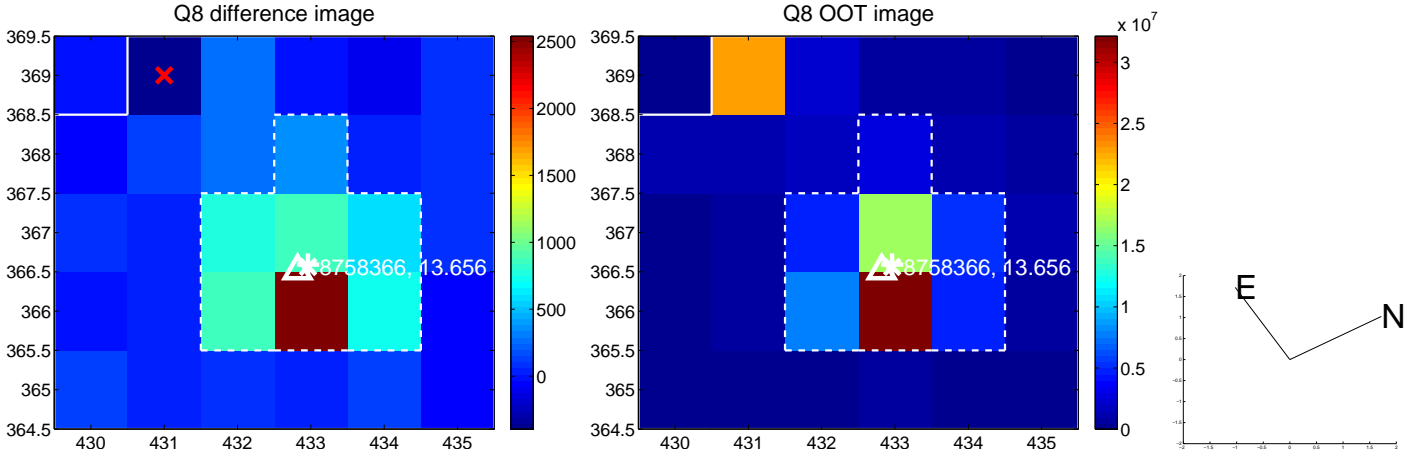
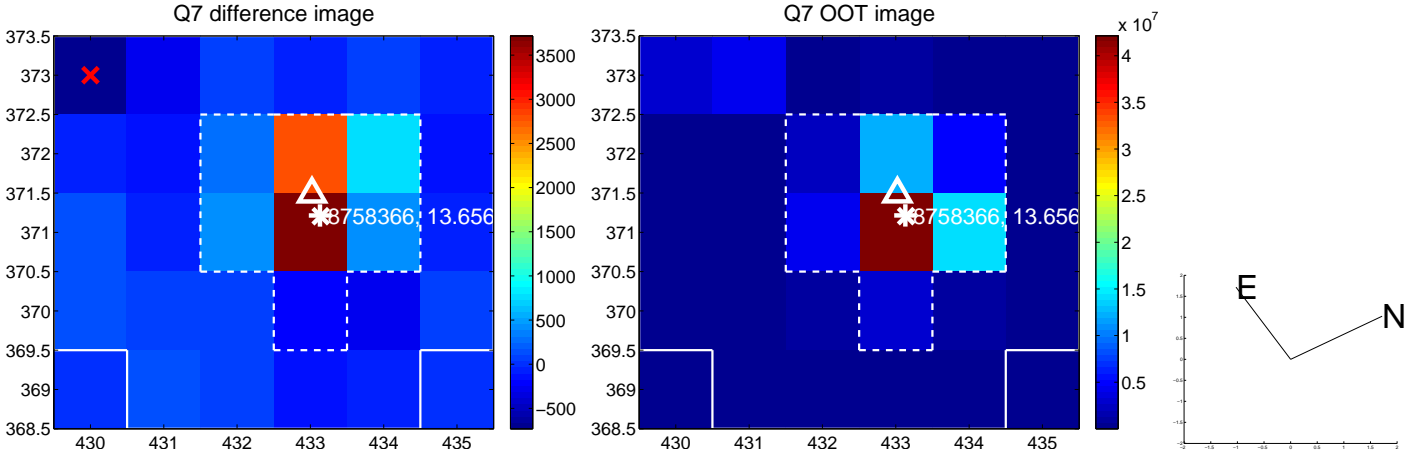
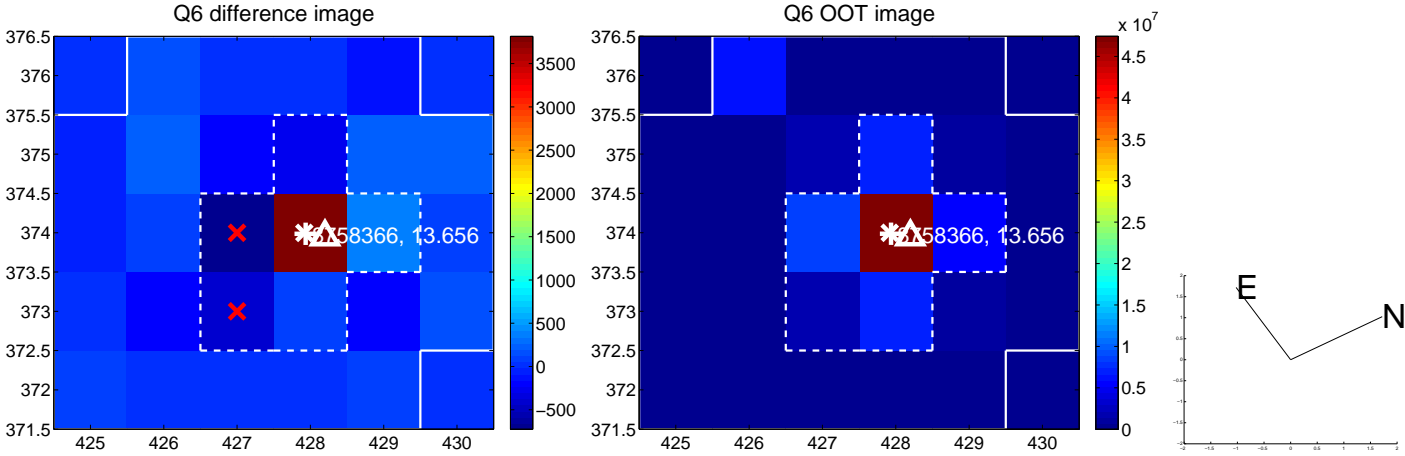
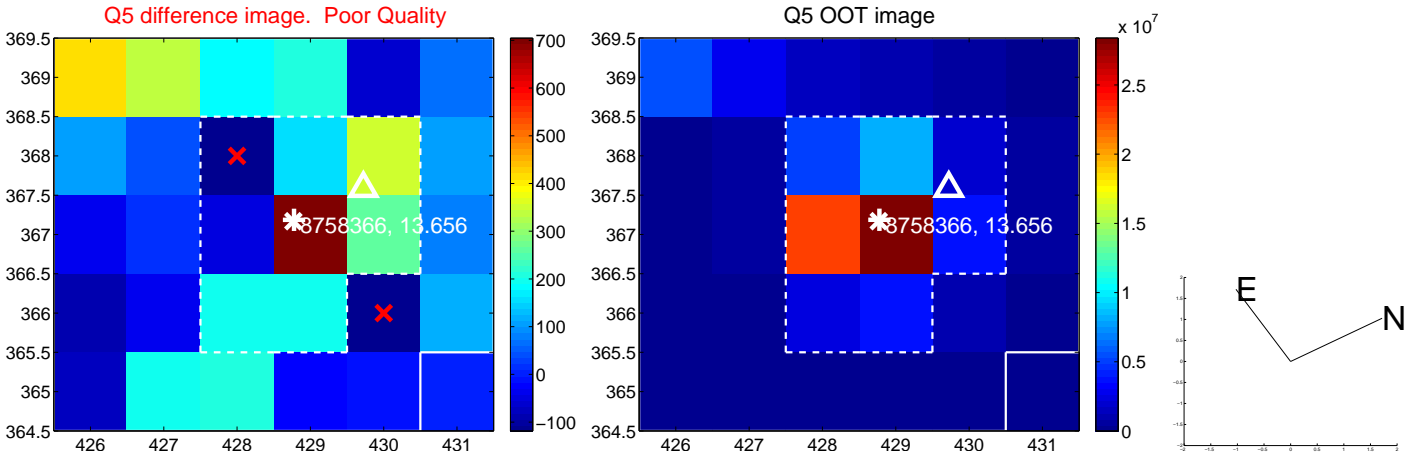


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

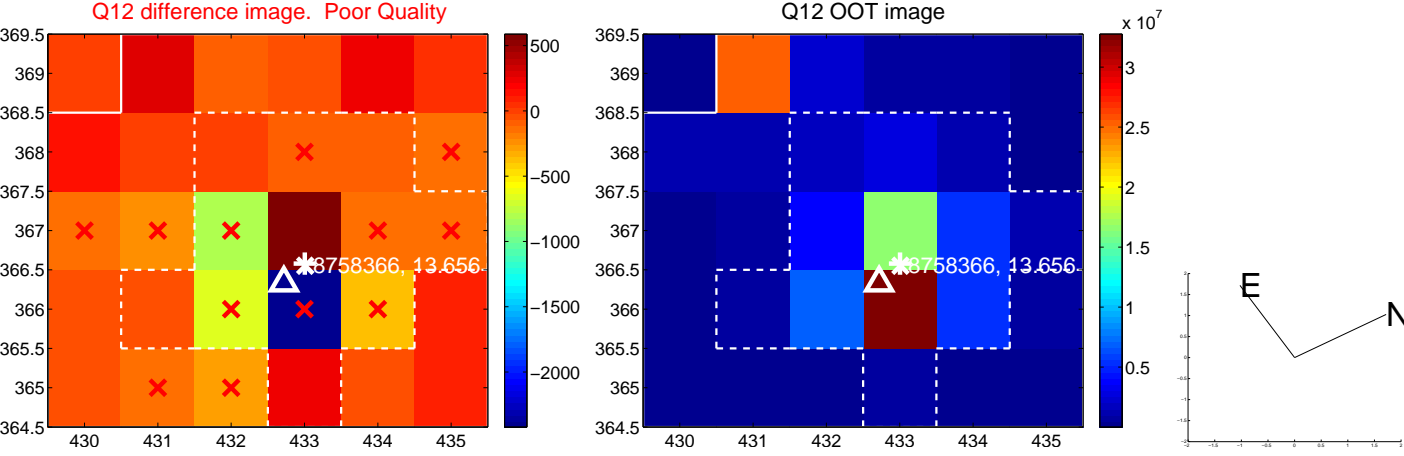
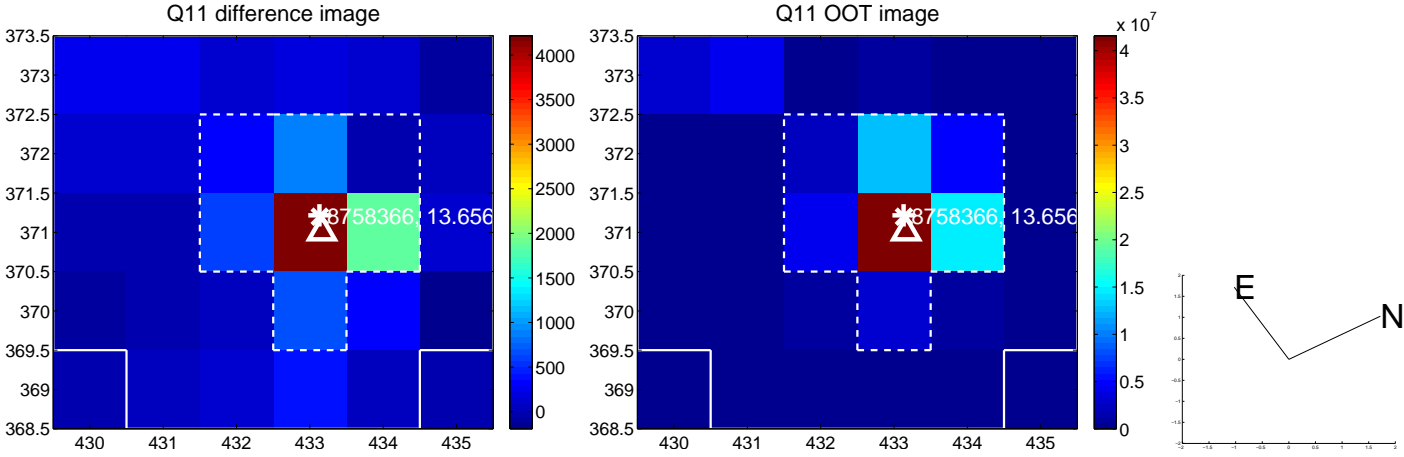
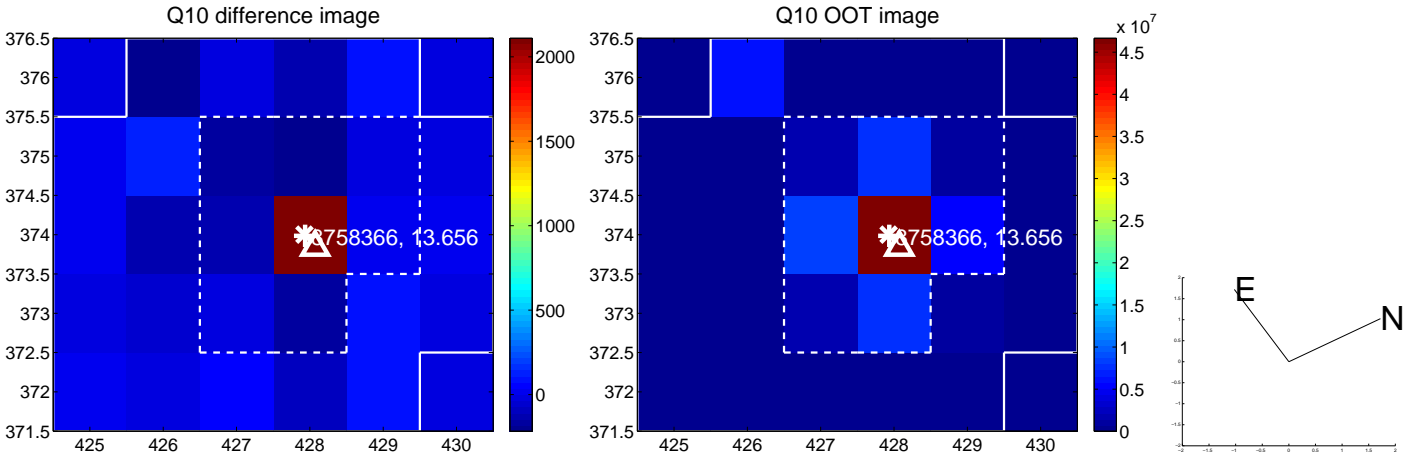
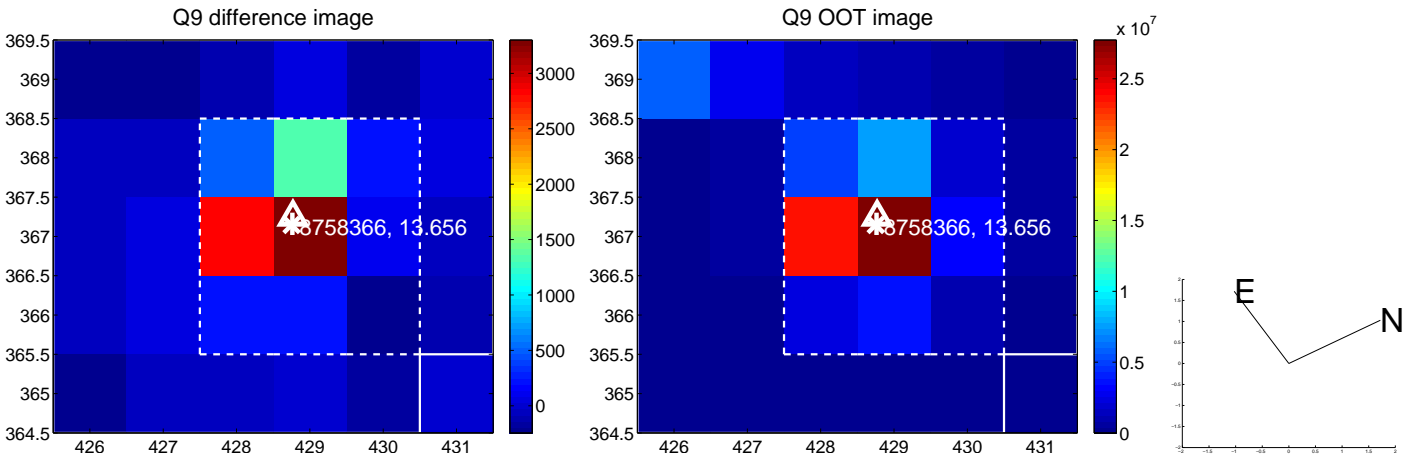
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



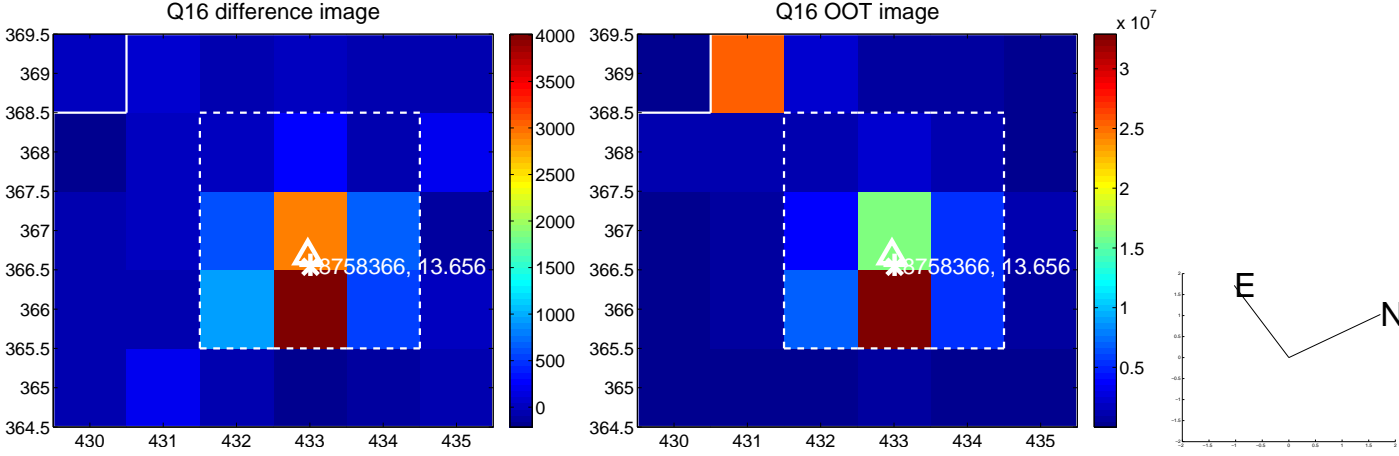
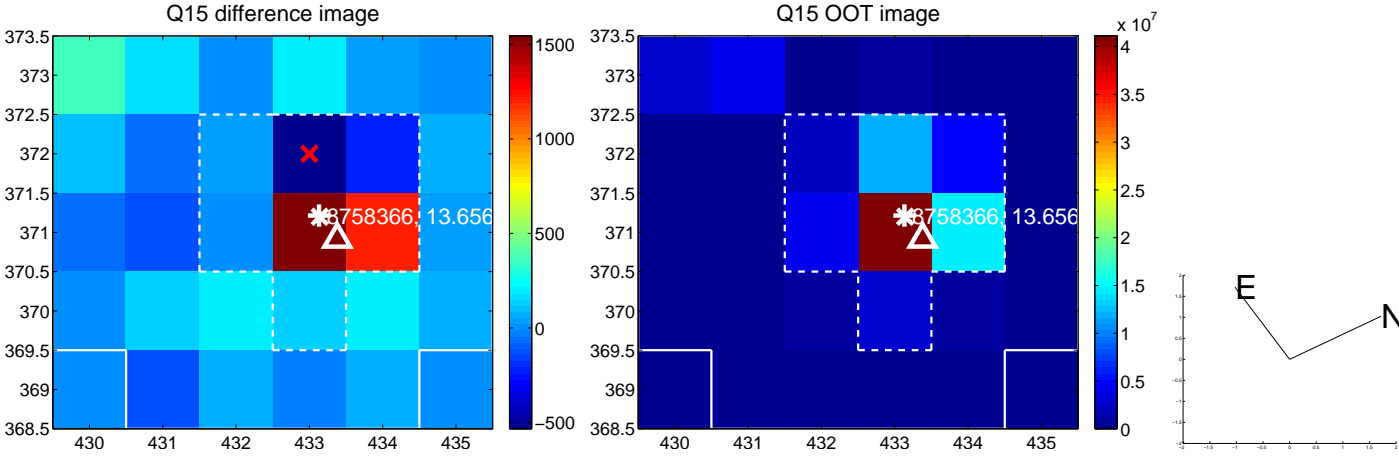
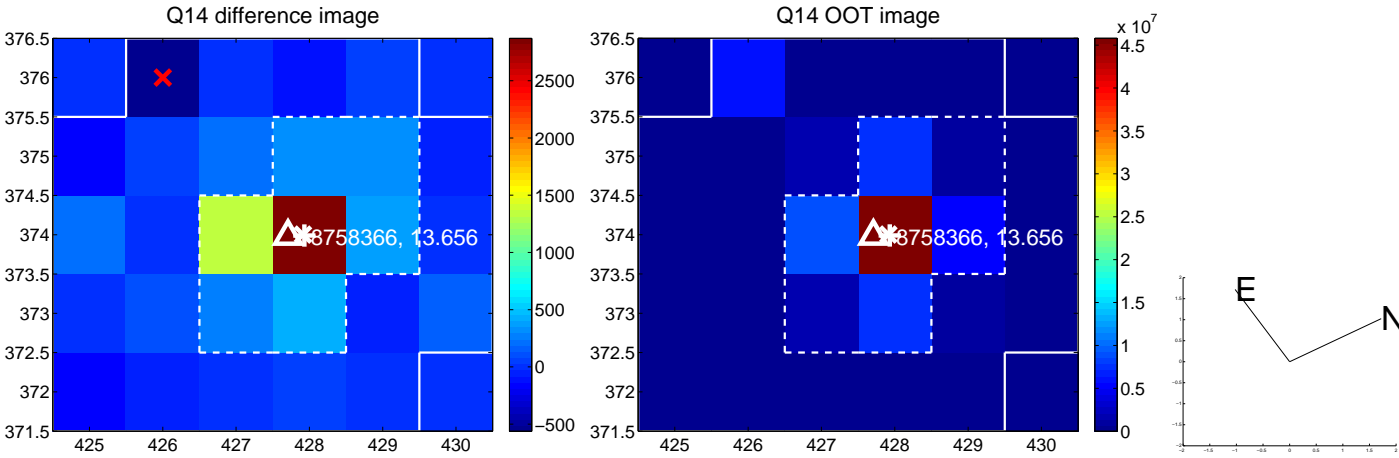
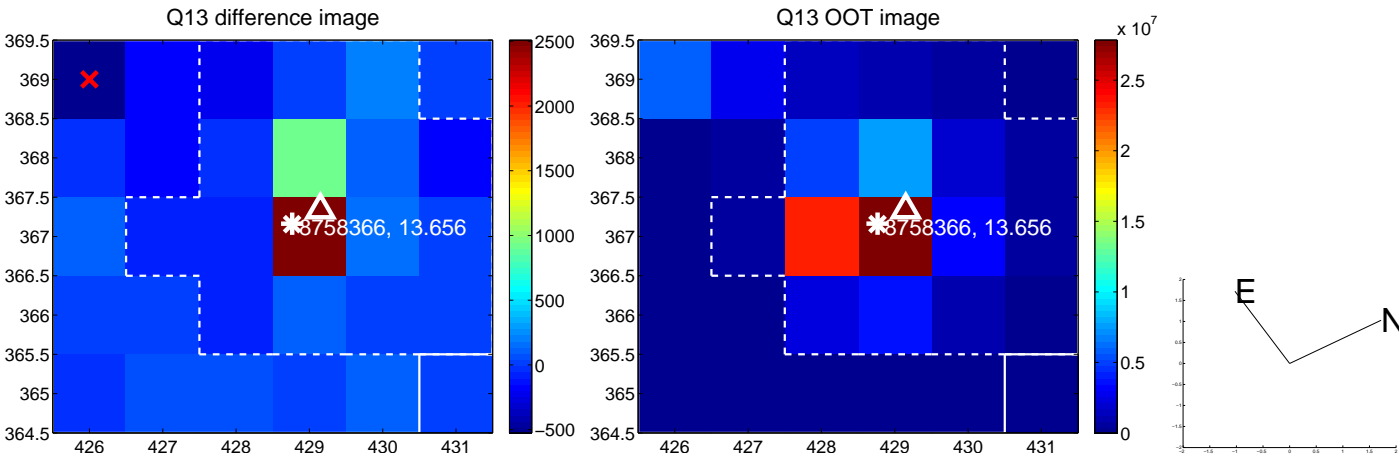
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



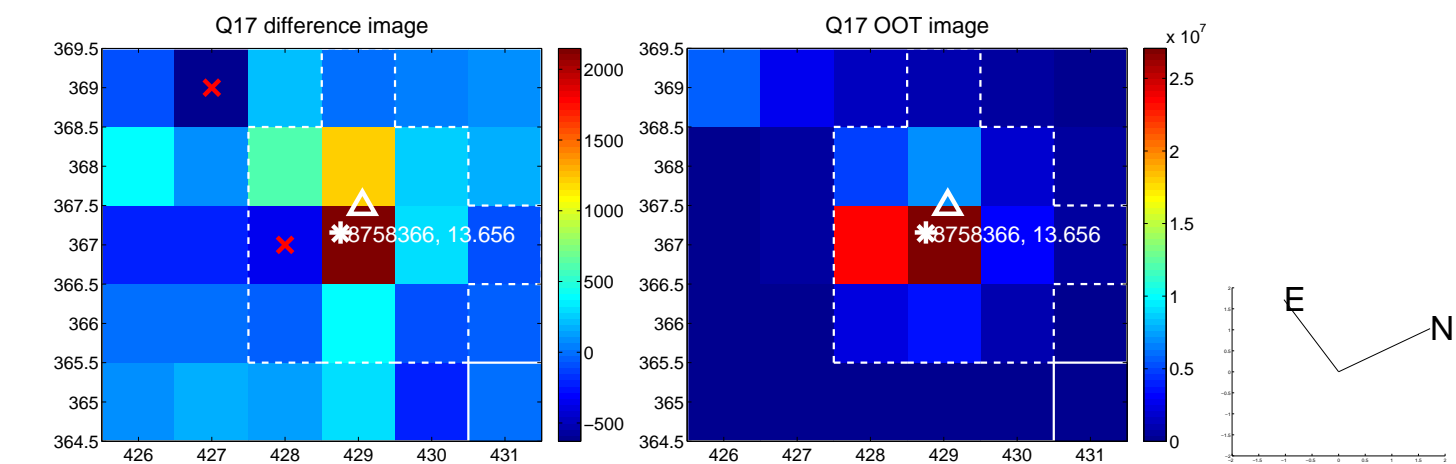
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



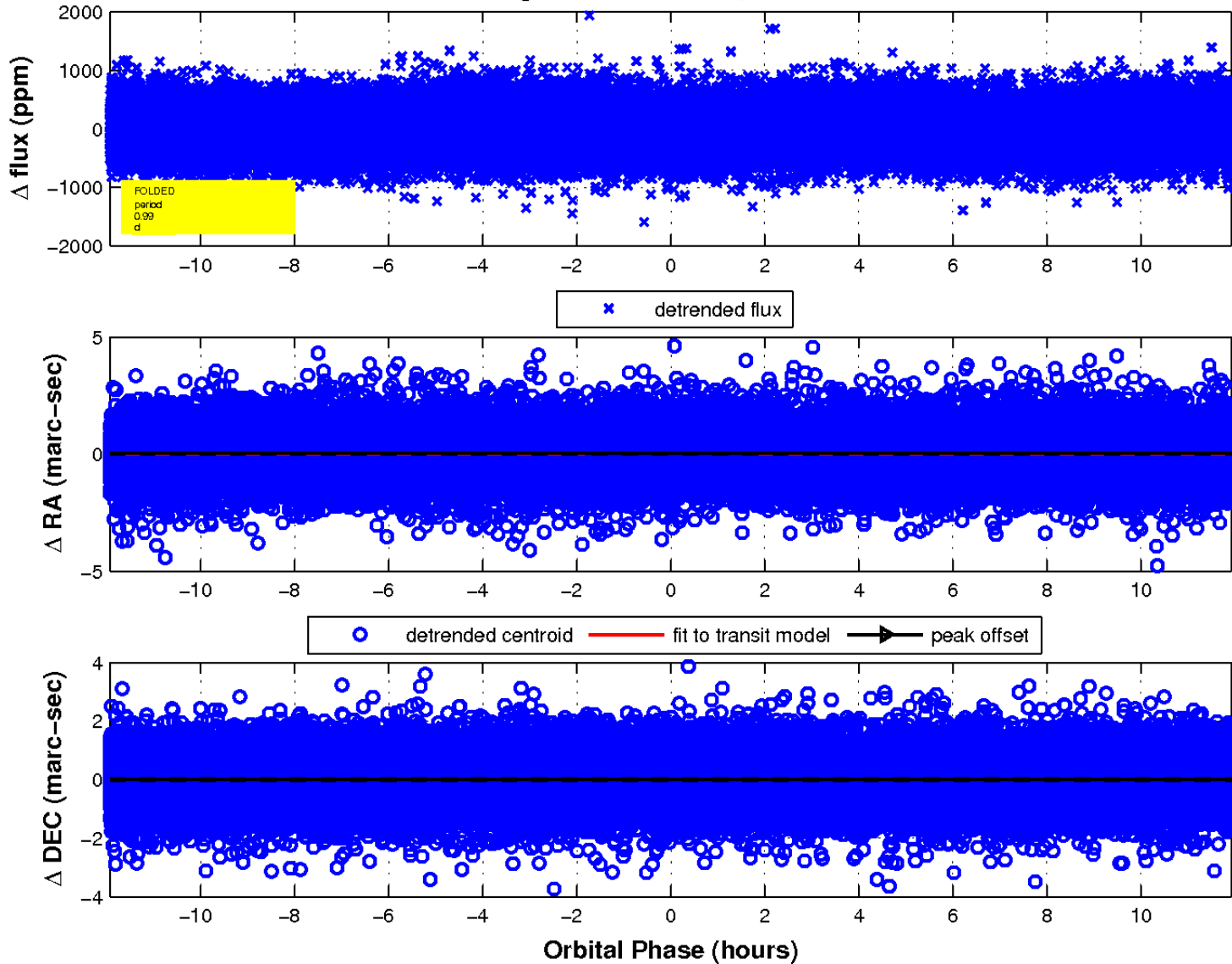
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

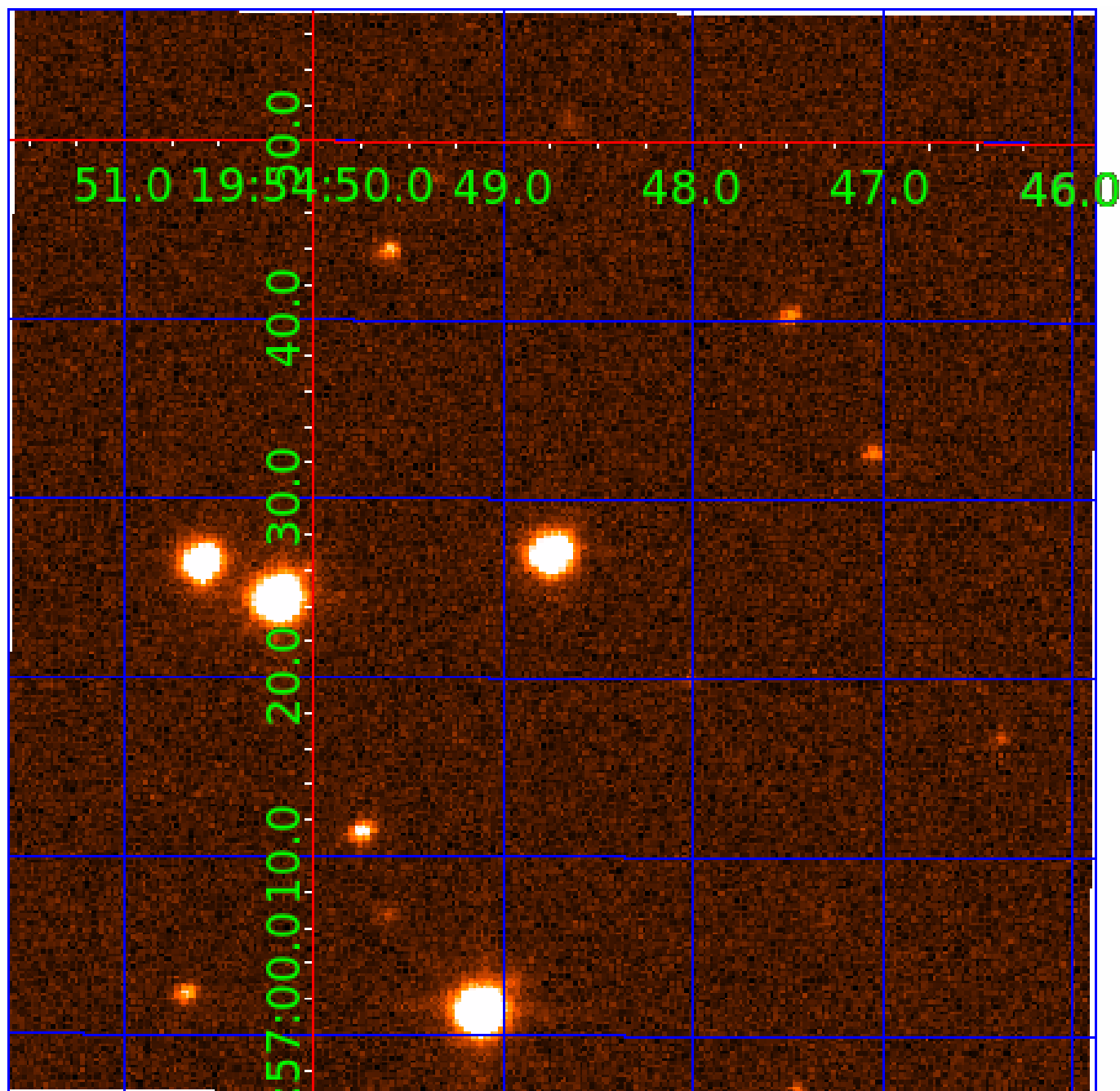


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 008758366

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})
008758366-01	OBS	No	0.993768	131.634696	29.3	4.008	8.5	6.8	1.63	7440	1.03	14704.94
008758366-02	OBS	No	41.909771	171.880804	205.7	4.629	8.2	6.0	1.63	7440	2.71	100.17
008758366-03	OBS	No	185.155359	247.031244	541.8	2.979	7.3	7.4	1.63	7440	4.19	13.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008758366-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008758366-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008758366-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

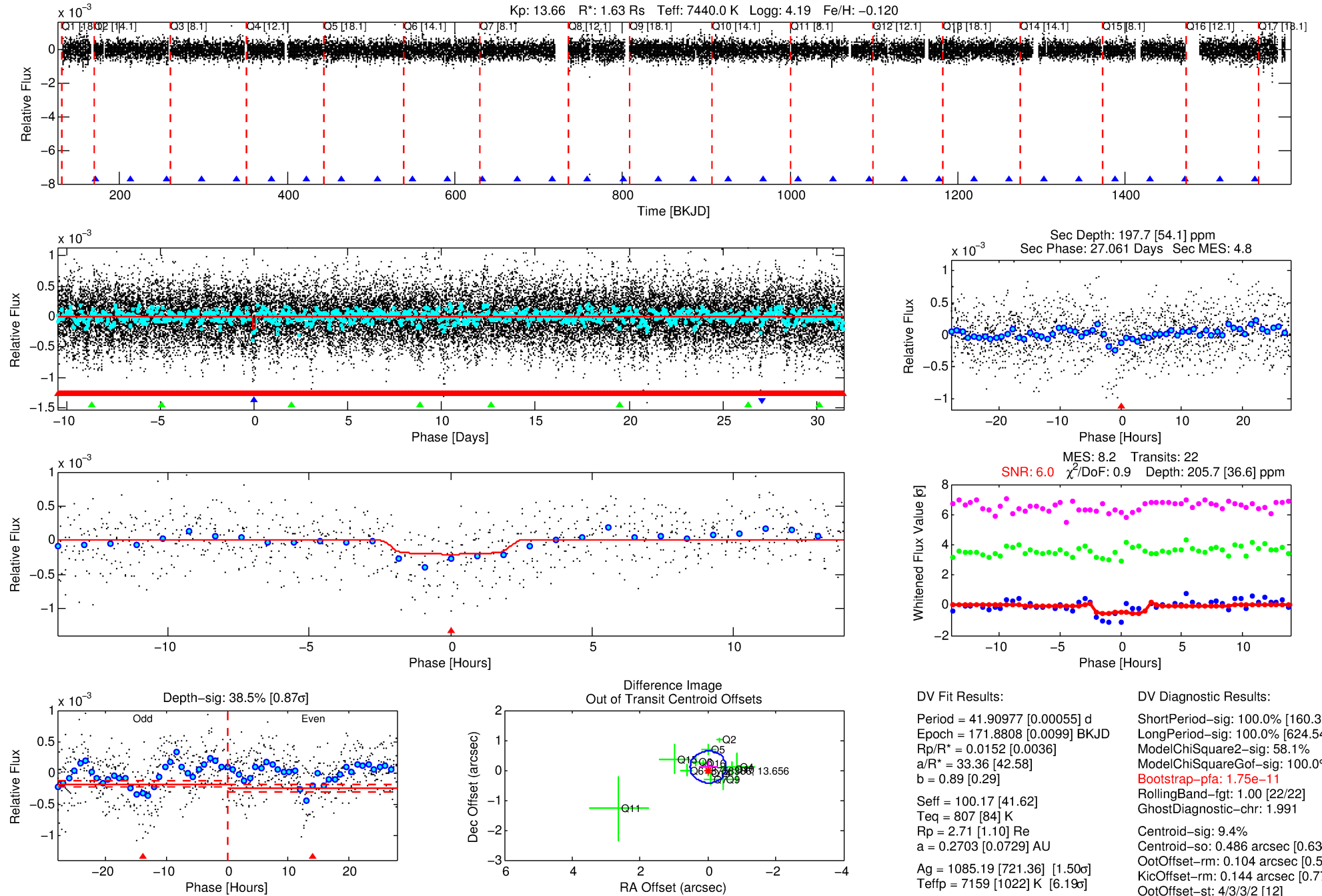
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008758366-02

No Significant Match Found

DV One-Page Summary

KIC: 8758366 Candidate: 2 of 3 Period: 41.910 d



DV Fit Results:

Period = 41.90977 [0.00055] d
Epoch = 171.8808 [0.0099] BKJD
Rp/R* = 0.0152 [0.0036]
a/R* = 33.36 [42.58]
b = 0.89 [0.29]
Seff = 100.17 [41.62]
Teff = 807 [84] K
Rp = 2.71 [1.10] Re
a = 0.2703 [0.0729] AU
Ag = 1085.19 [721.36] [1.50 σ]
Teffp = 7159 [1022] K [6.19 σ]

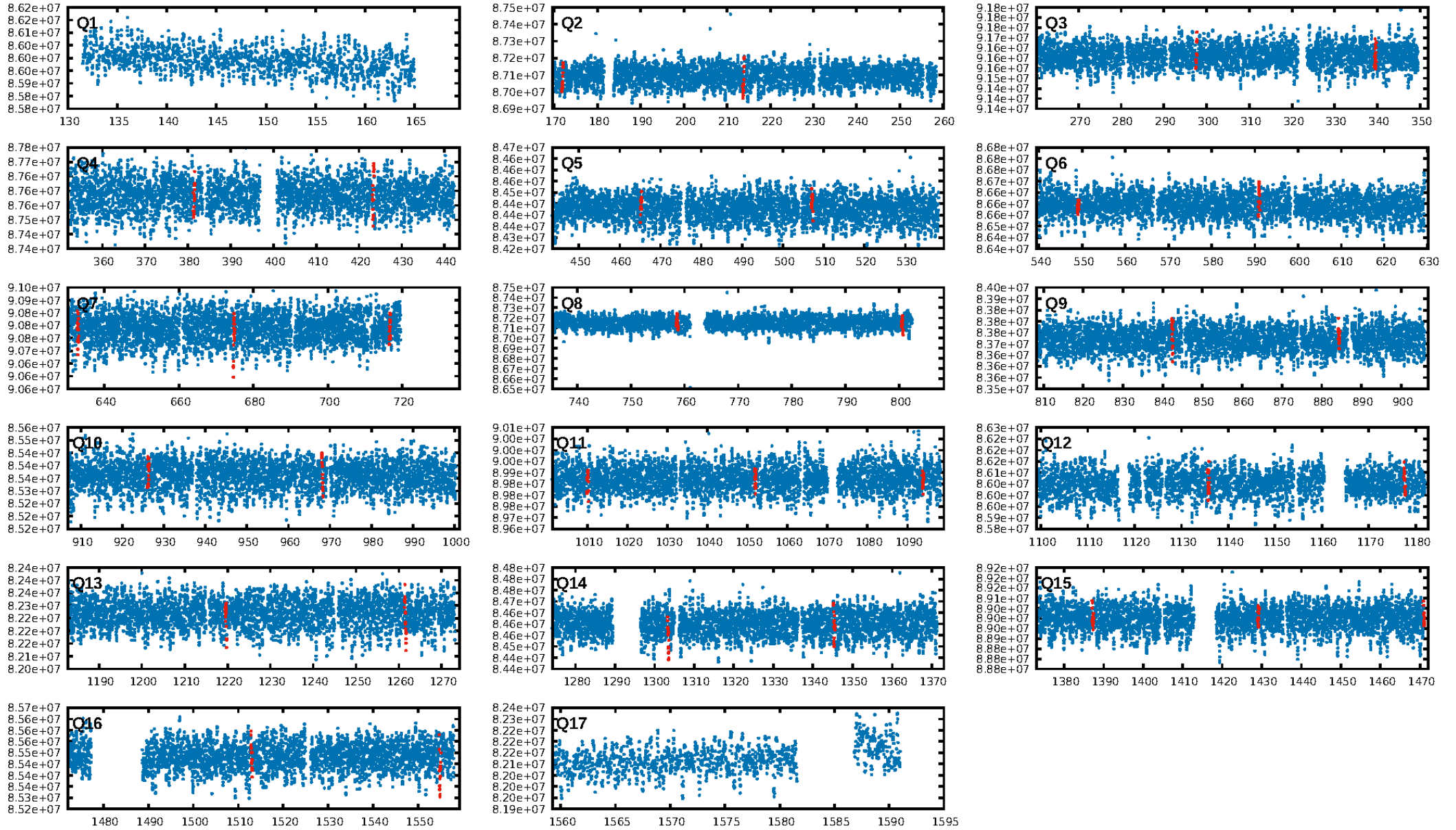
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [160.37 σ]
LongPeriod-sig: 100.0% [624.54 σ]
ModelChiSquare2-sig: 58.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.75e-11
RollingBand-fgt: 1.00 [22/22]
GhostDiagnostic-chr: 1.991
Centroid-sig: 9.4%
Centroid-so: 0.486 arcsec [0.63 σ]
OotOffset-rm: 0.104 arcsec [0.59 σ]
KicOffset-rm: 0.144 arcsec [0.77 σ]
OotOffset-st: 4/3/3/2 [12]
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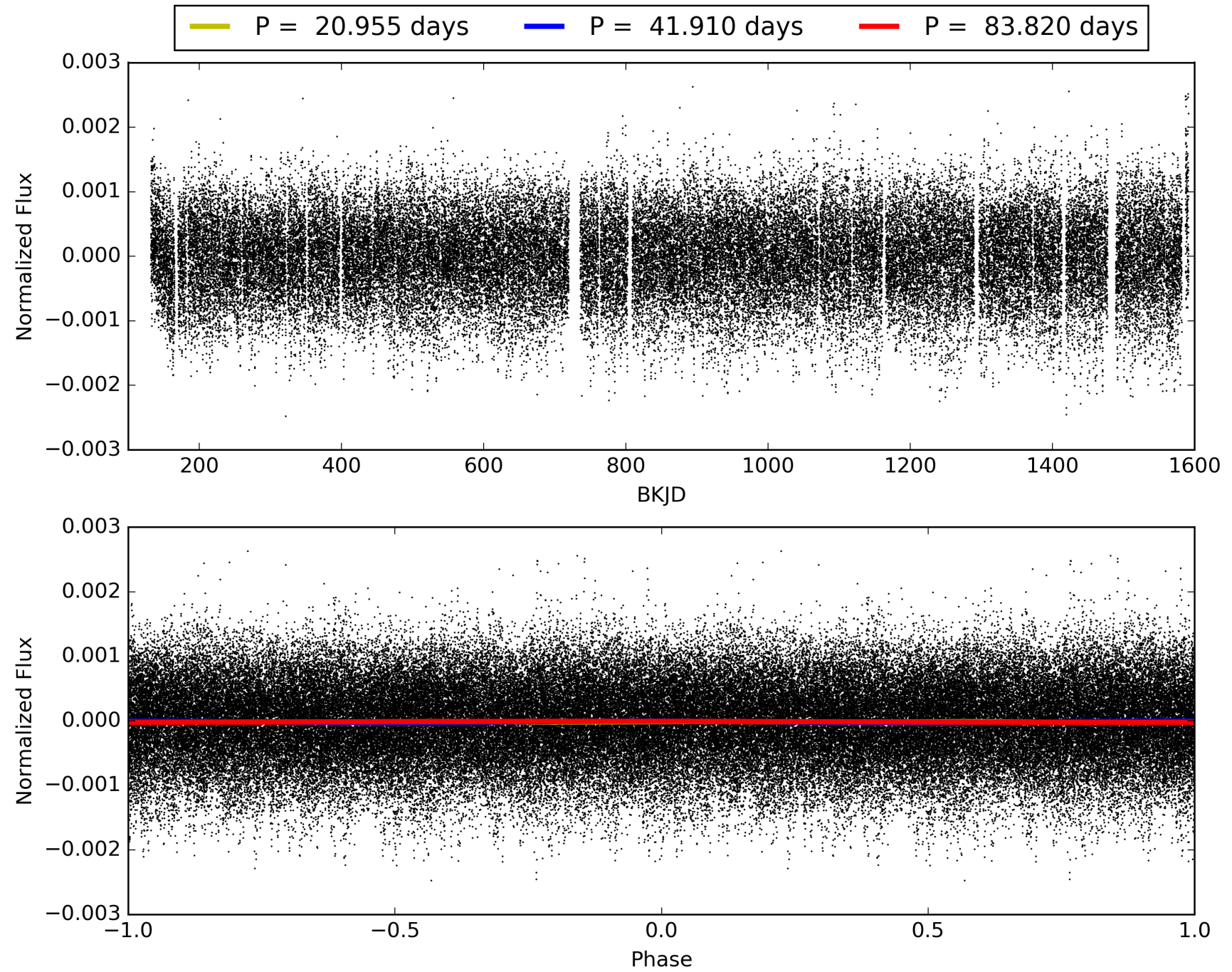
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008758366-02, PDC Light Curves

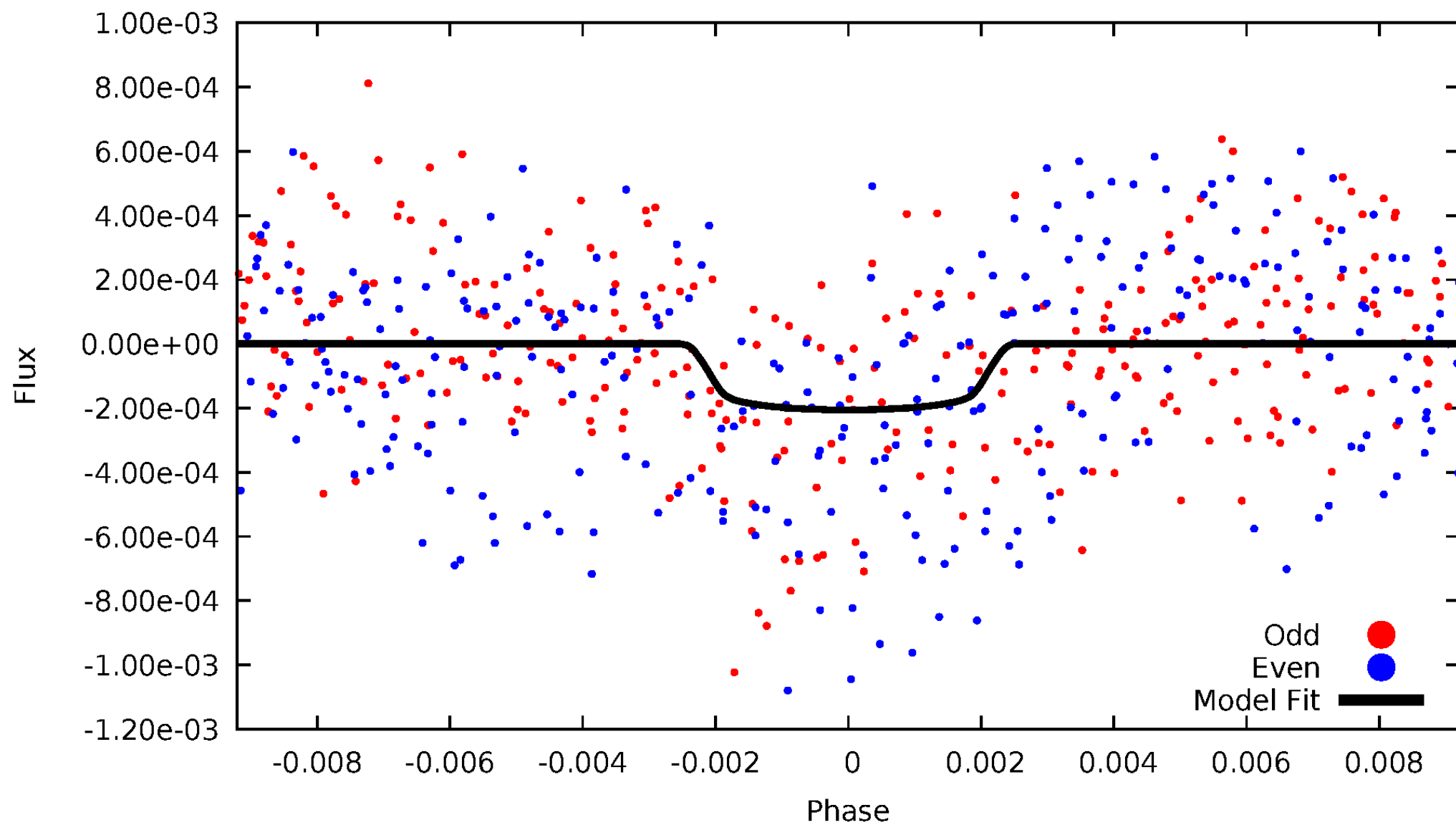


TCE 008758366-02



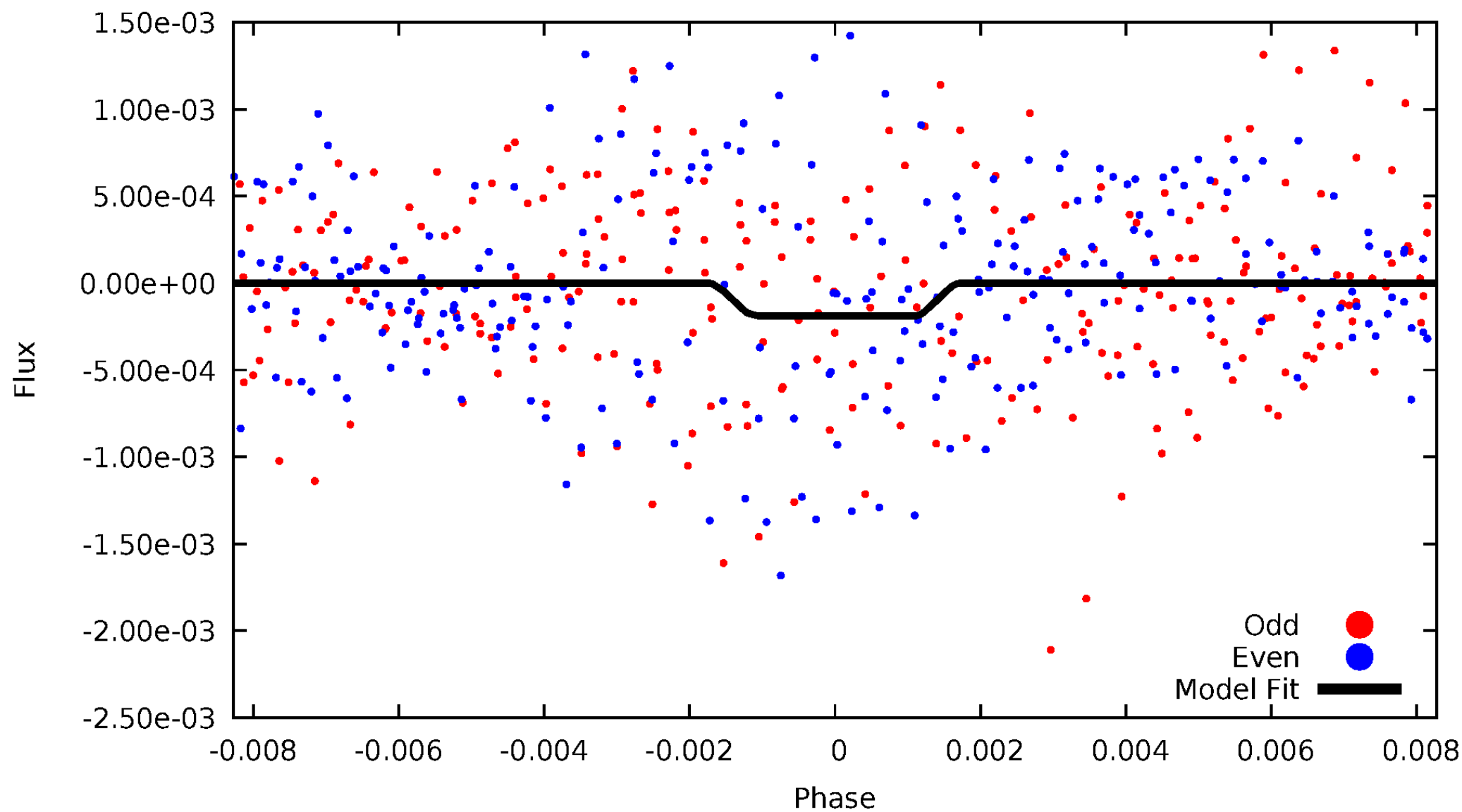
DV Odd/Even

TCE 008758366-02



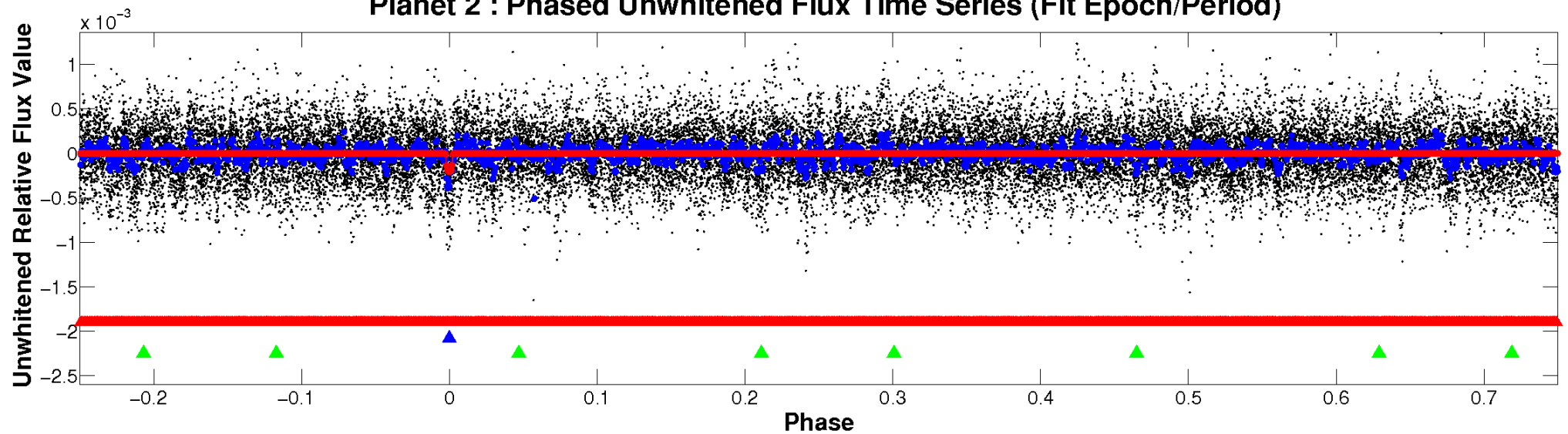
ALT Odd/Even

TCE 008758366-02

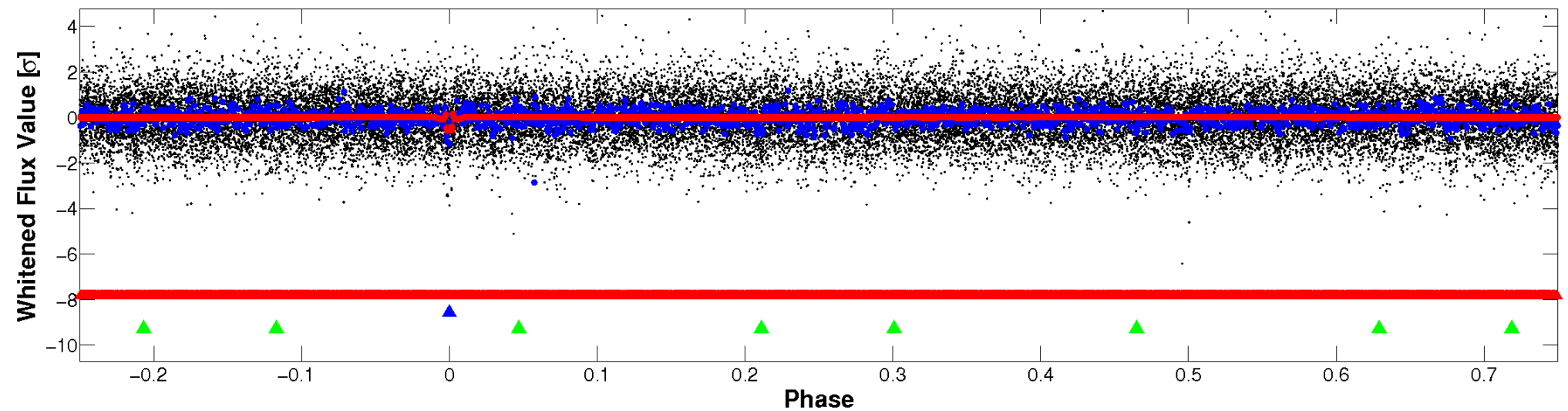


Non-Whitened Vs. Whitened Light Curve

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

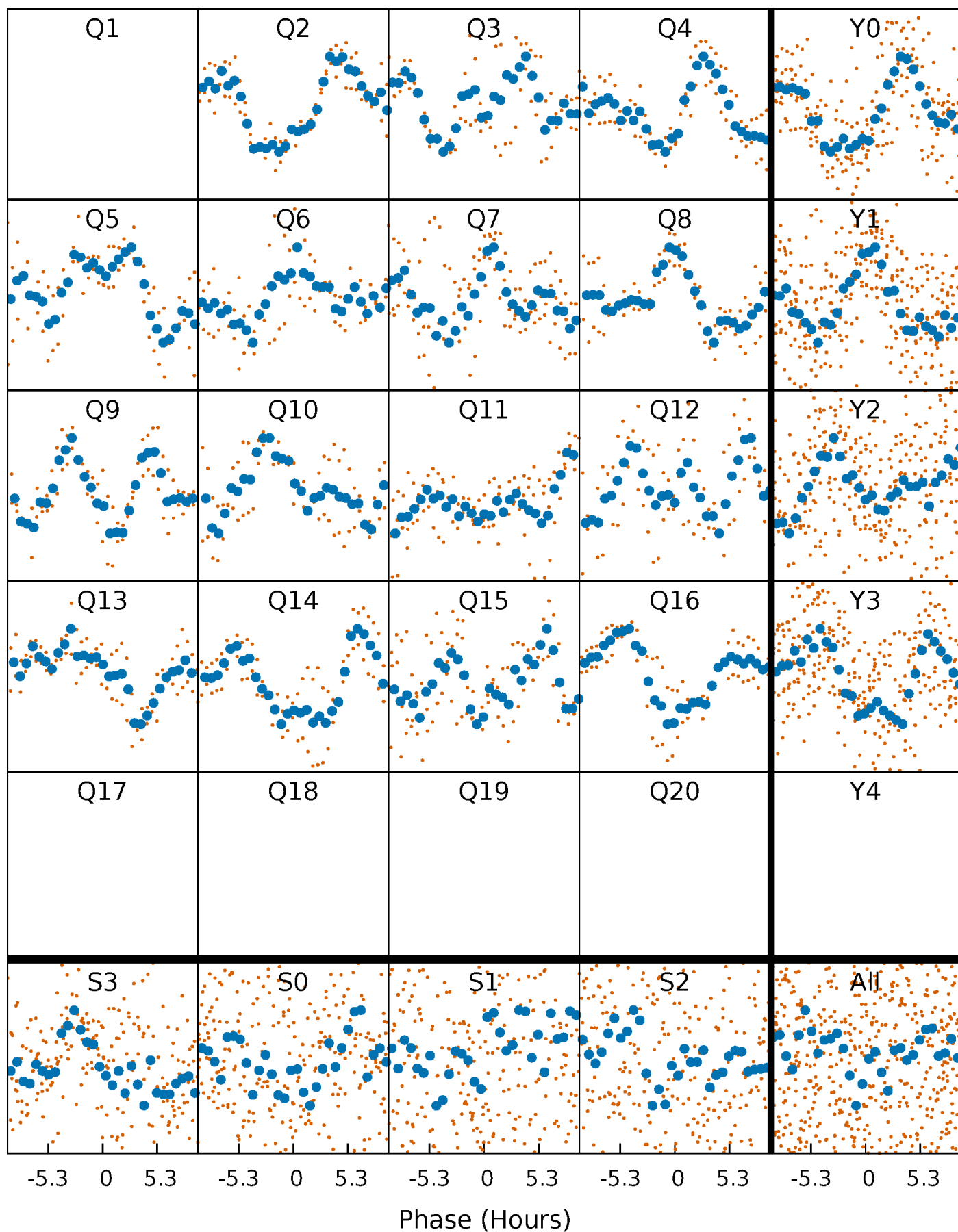


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



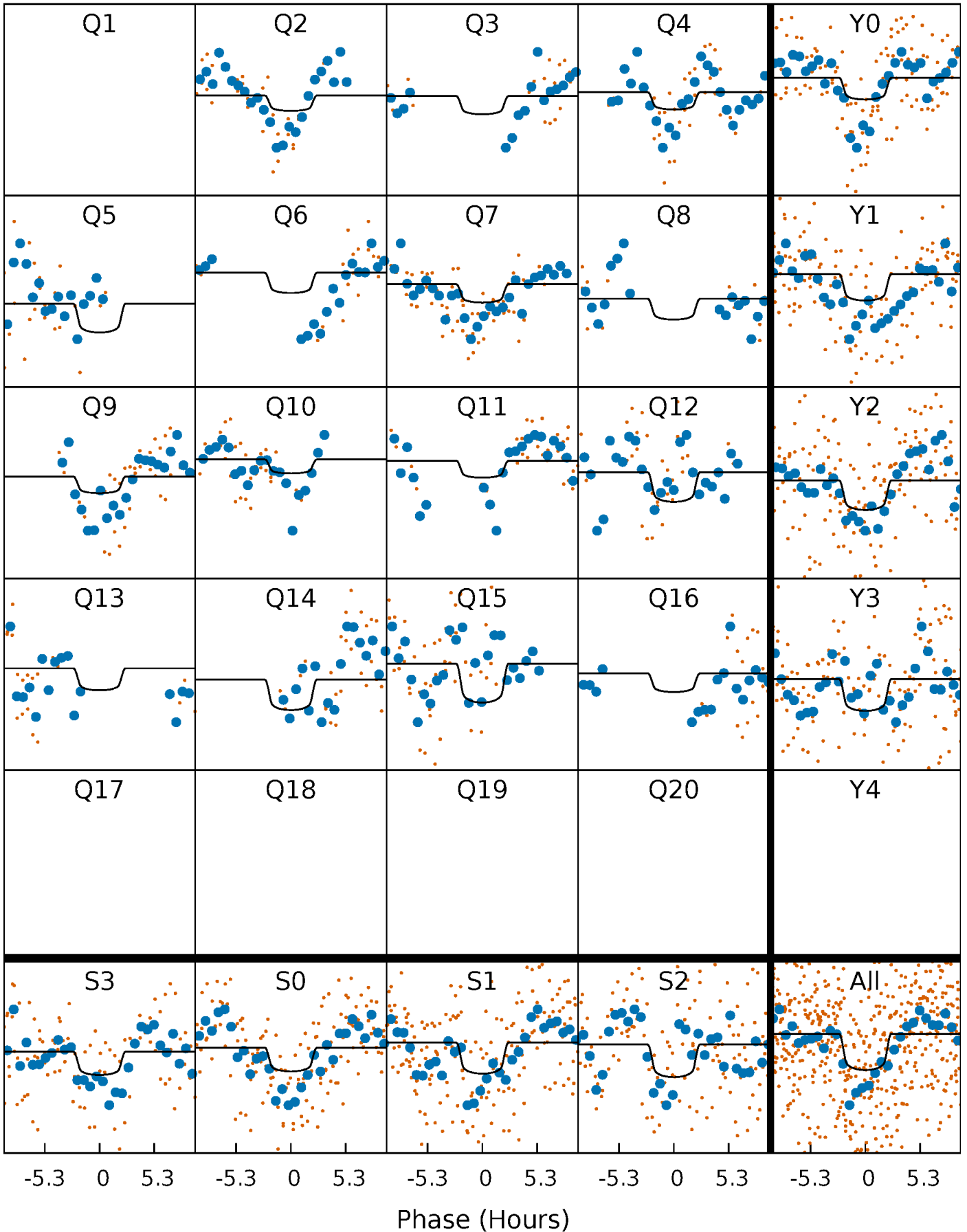
PDC Quarter-Phased Transit Curves

TCE 008758366-02 P= 41.909771 Days $T_0=171.880804$ (BKJD)



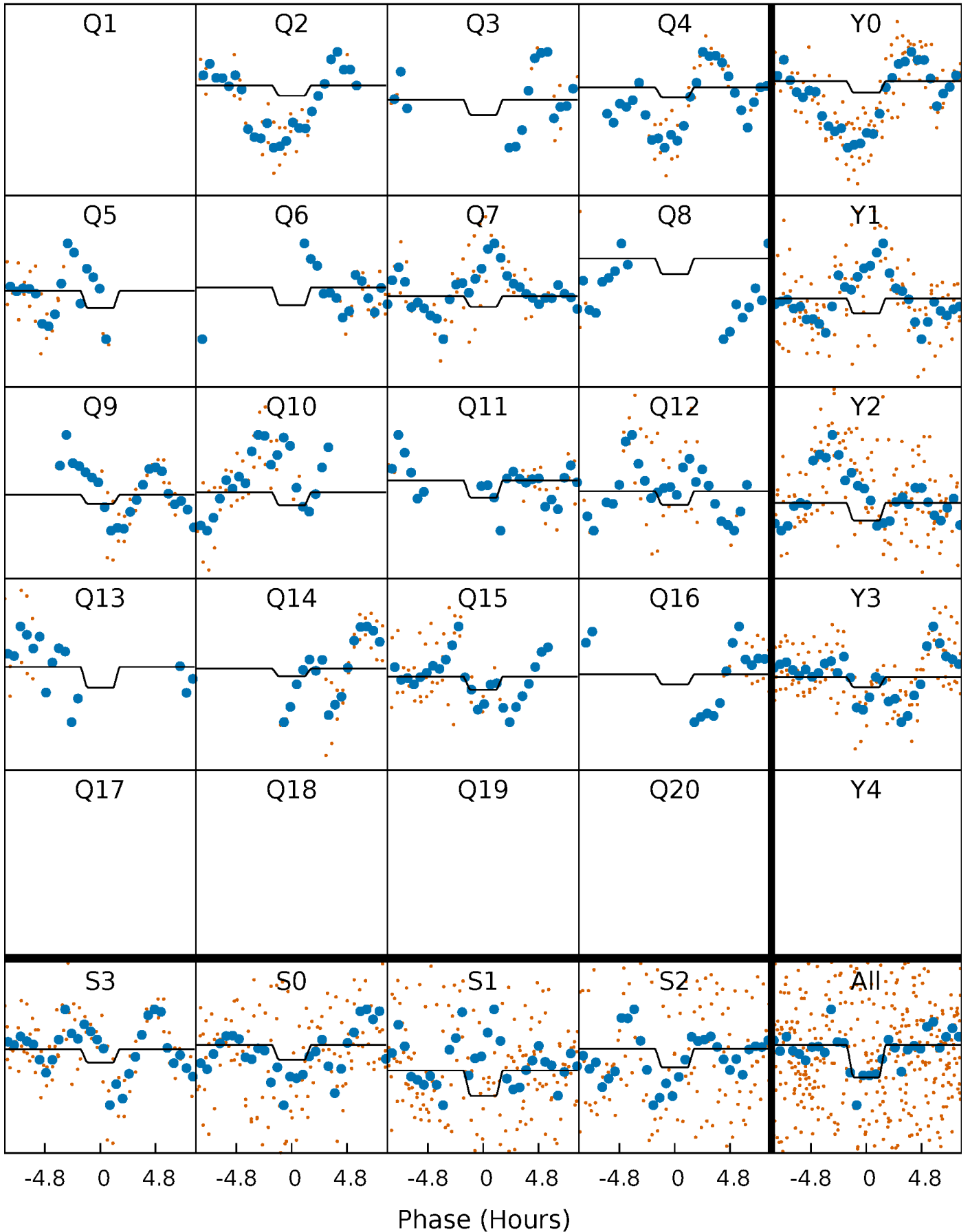
DV Quarter-Phased Transit Curves

TCE 008758366-02 $P = 41.909771$ Days $T_0 = 171.880804$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

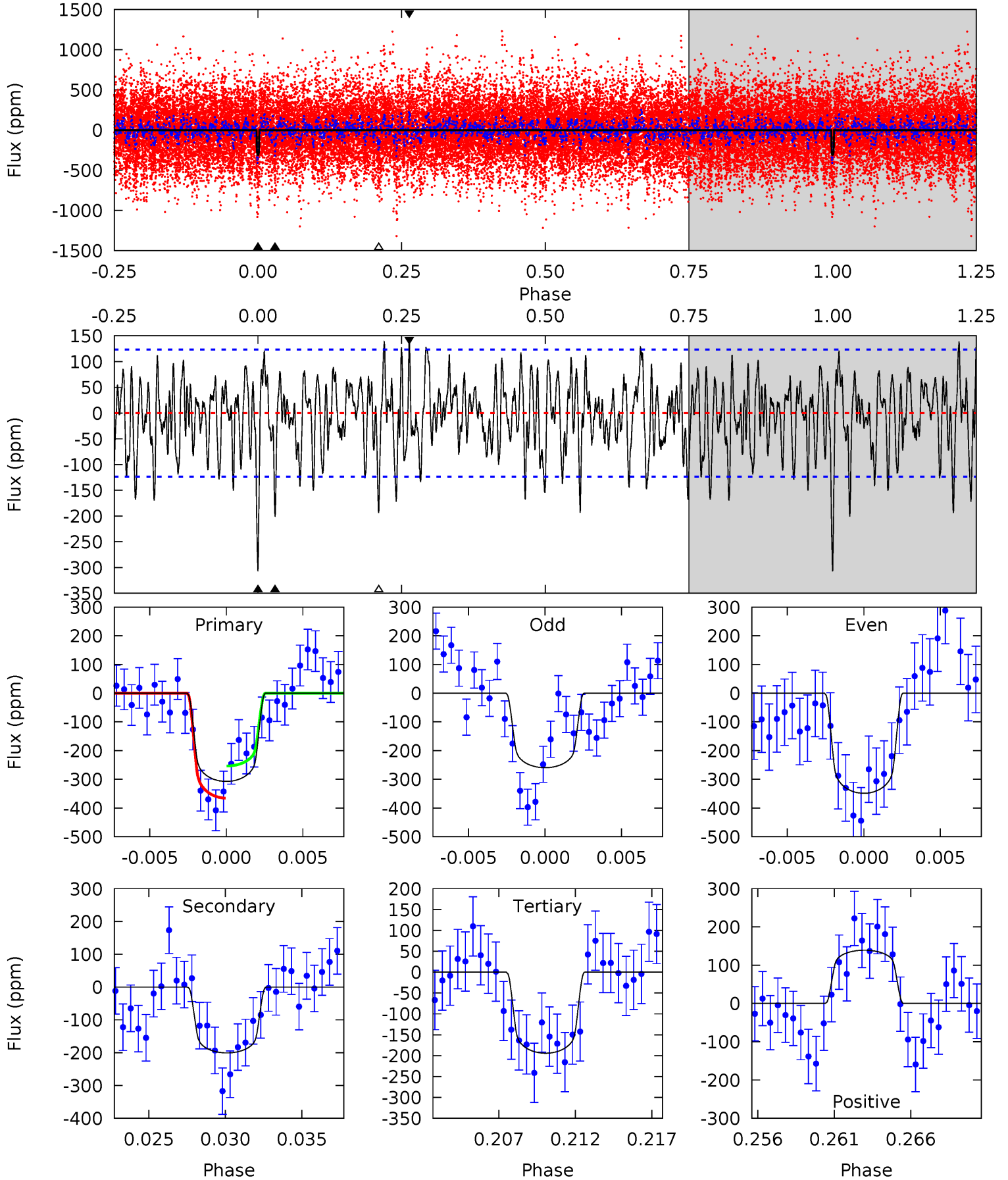
TCE 008758366-02 $P = 41.909904$ Days $T_0 = 171.873062$ (BKJD)



DV Model-Shift Uniqueness Test

008758366-02, $P = 41.909771$ Days, $E = 129.971033$ Days

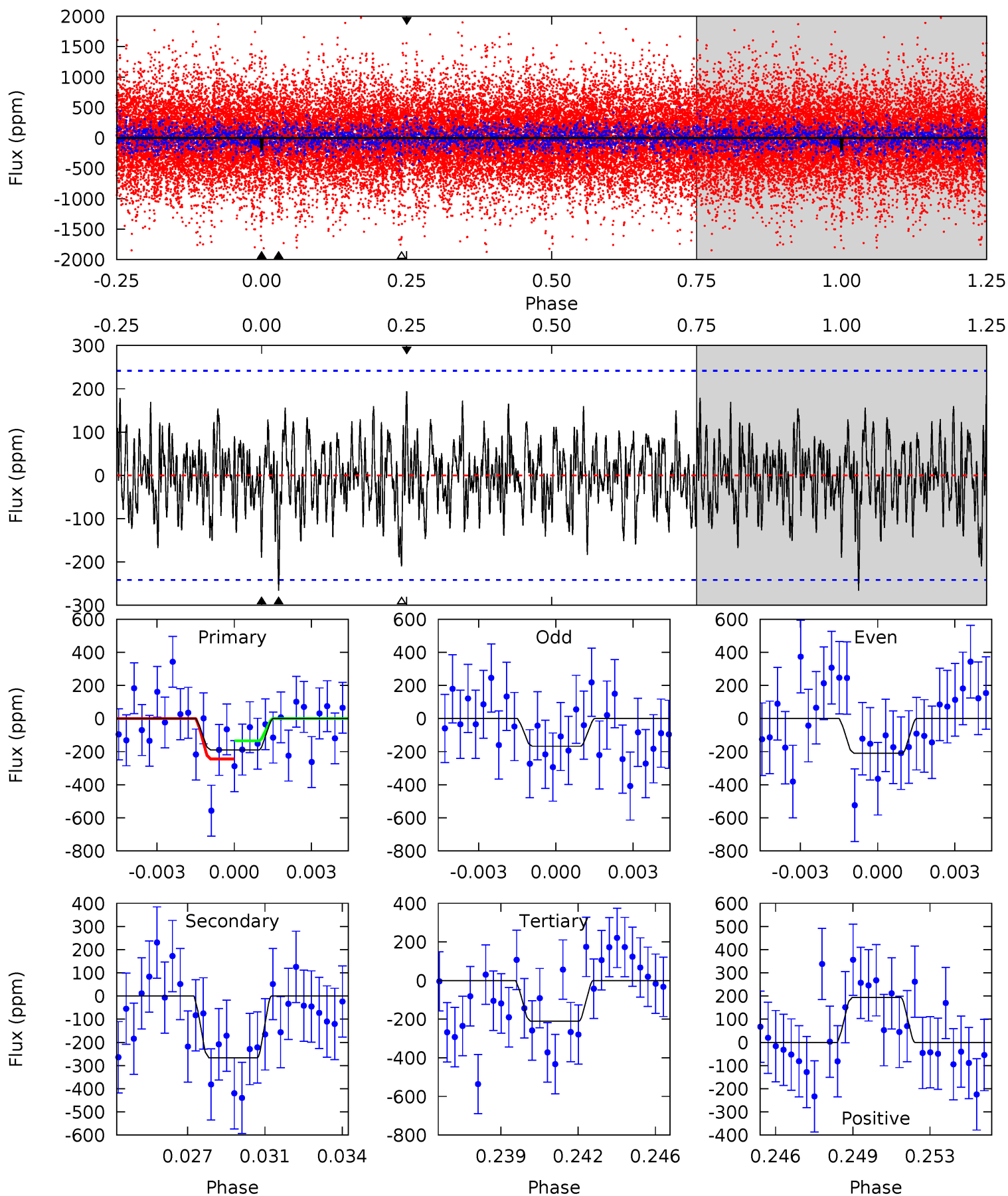
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	8.40	8.12	5.81	5.16	2.81	2.53	4.73	7.04	0.28	2.58	1.87	0.90	0.31	2.34



Alt Model-Shift Uniqueness Test

008758366-02, P = 41.909904 Days, E = 129.963158 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.11	5.76	4.55	4.20	5.23	2.93	1.39	-0.44	-0.09	1.21	1.56	0.46	1.65	0.42	1.20



Stellar Parameters For KIC 008758366

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7440^{+209}_{-314}	$4.188^{+0.108}_{-0.201}$	$-0.120^{+0.200}_{-0.350}$	$1.633^{+0.542}_{-0.292}$	$1.498^{+0.212}_{-0.235}$	$0.484^{+0.250}_{-0.262}$
	+3%/-4%	+3%/-5%	+167%/-292%	+33%/-18%	+14%/-16%	+52%/-54%
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 008758366-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-201 ± 24	$2.76^{+0.79}_{-0.70}$	1136^{+94}_{-69}	7079^{+1347}_{-780}	1047^{+821}_{-433}
Alt.	-266 ± 46	$2.51^{+0.79}_{-0.65}$	1137^{+93}_{-72}	8151^{+1897}_{-1161}	1641^{+1404}_{-706}

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 $A_{obs} \gg 1.0$

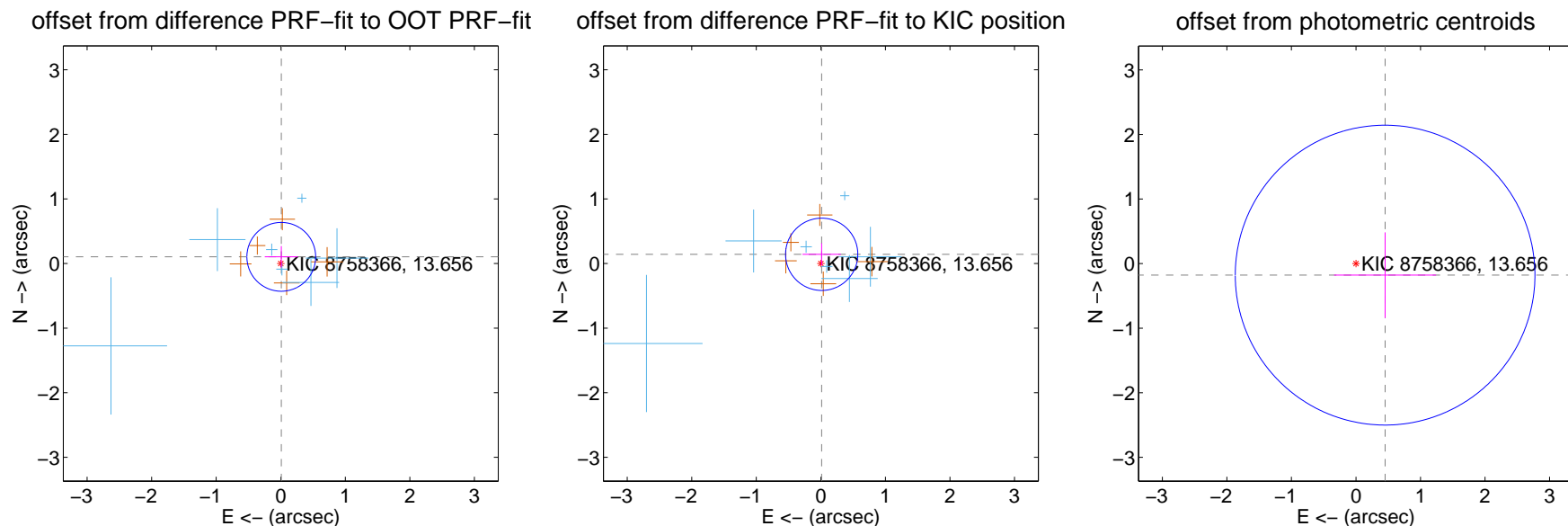
DV Centroid Data

Supplemental centroid analysis for 008758366-02. Kepler magnitude: 13.66. Transit SNR 5.99

There are 7 quarters with good PRF difference image offsets

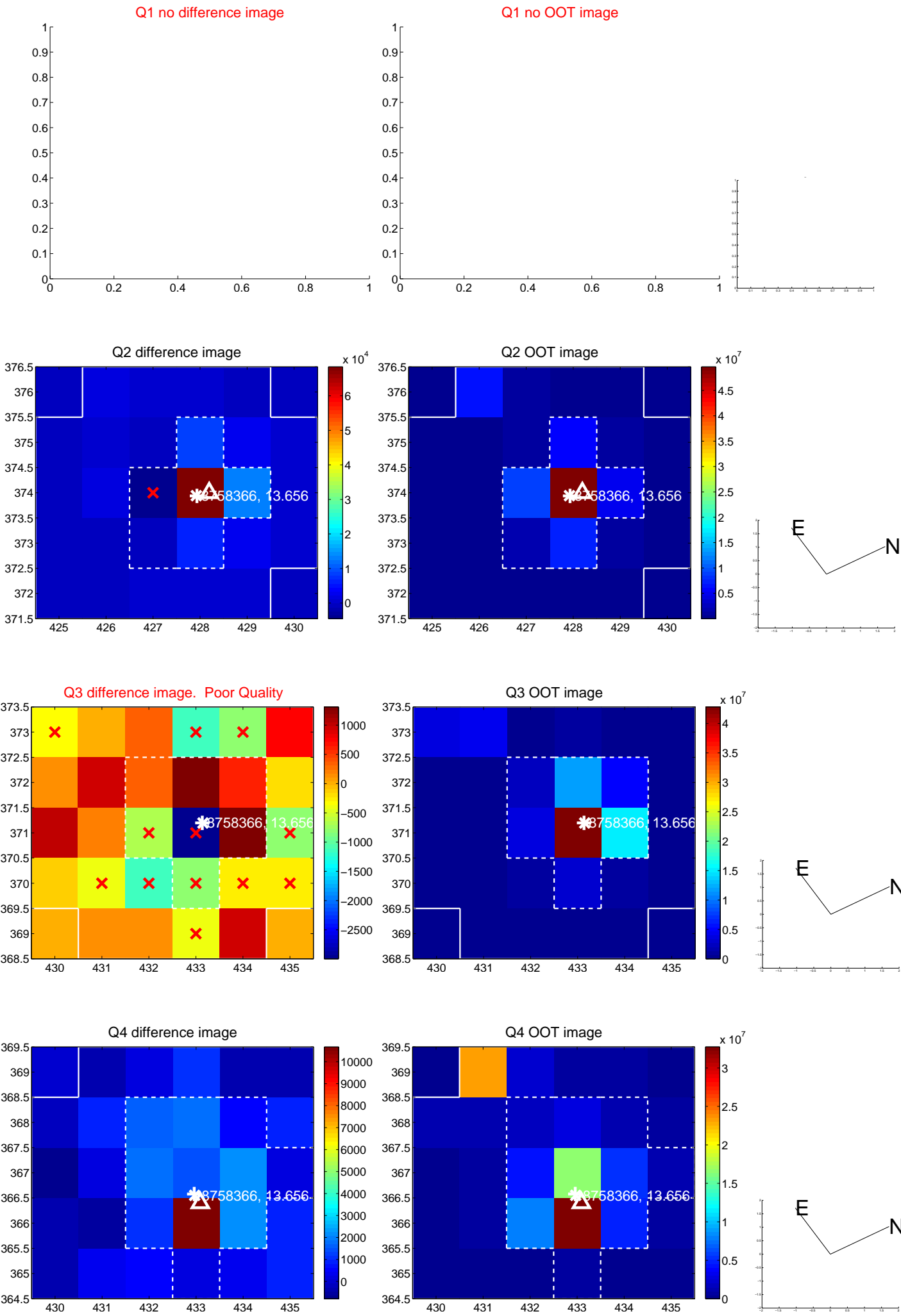
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.104 ± 0.178	0.59	-0.008 ± 0.256	0.104 ± 0.167
PRF-fit source offset from KIC position	0.144 ± 0.187	0.77	-0.013 ± 0.297	0.143 ± 0.171
photometric centroid source offset	0.49 ± 0.77	0.63	-0.45 ± 0.79	-0.18 ± 0.66

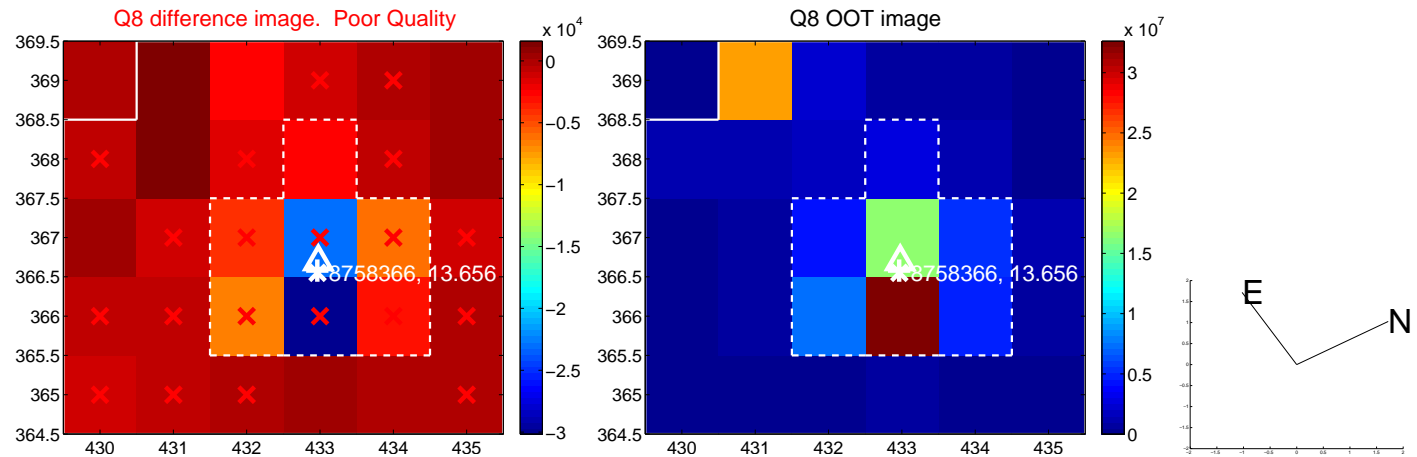
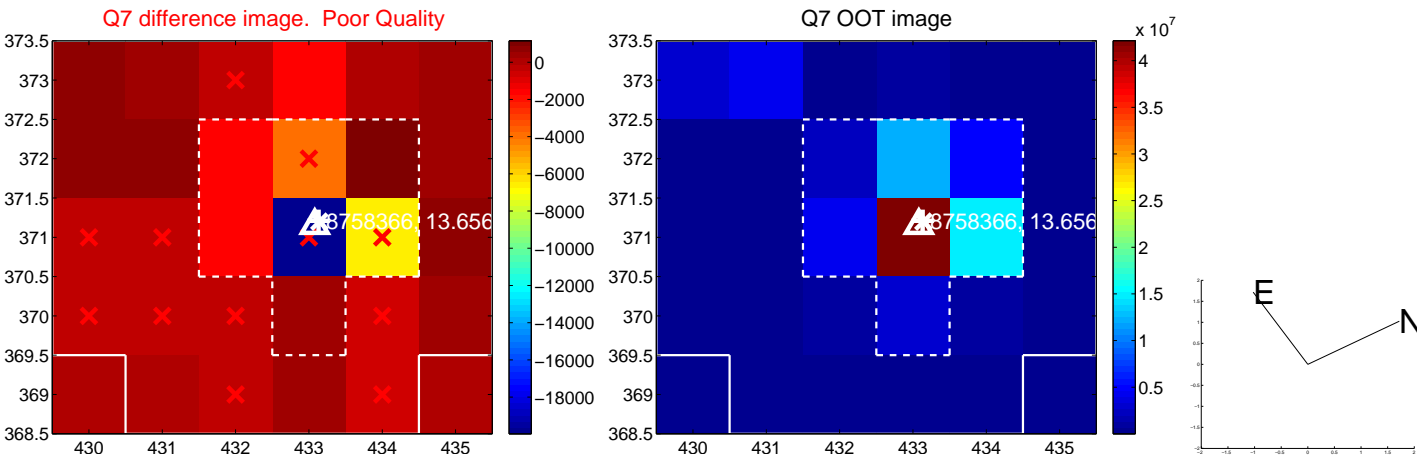
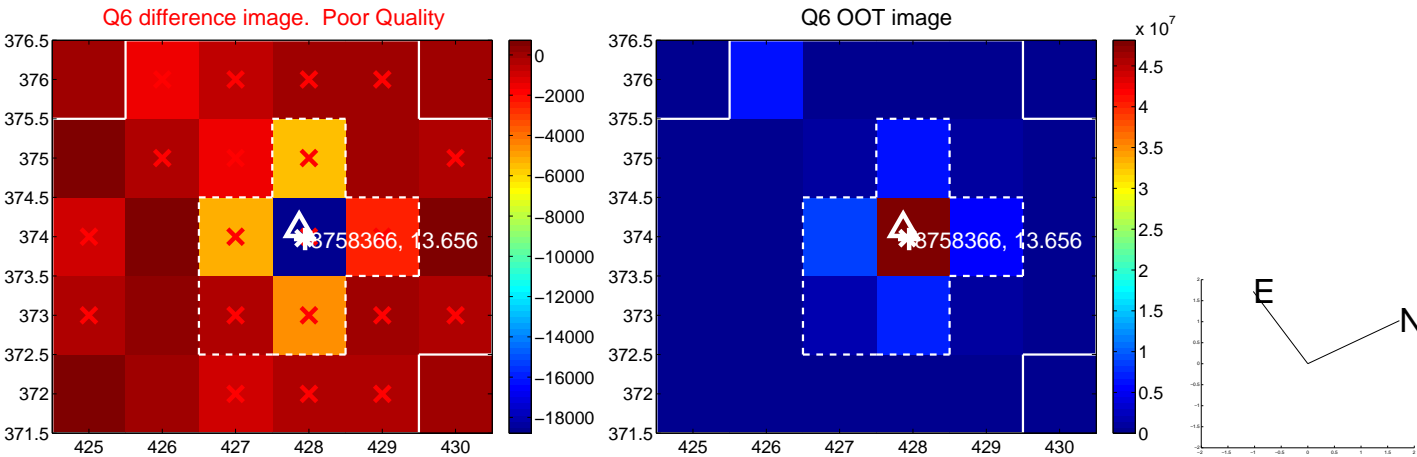
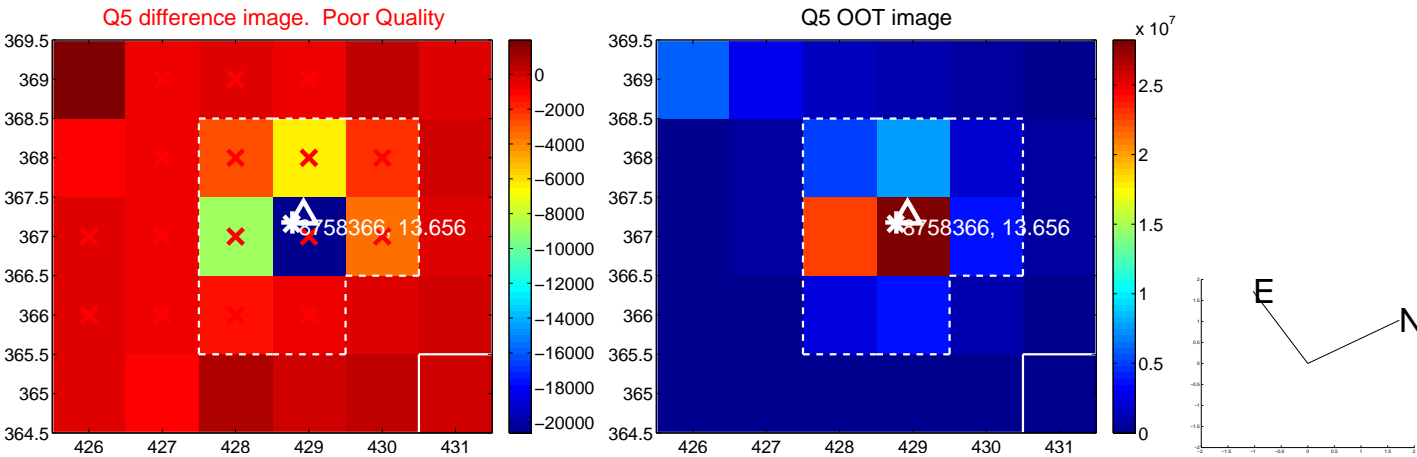


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

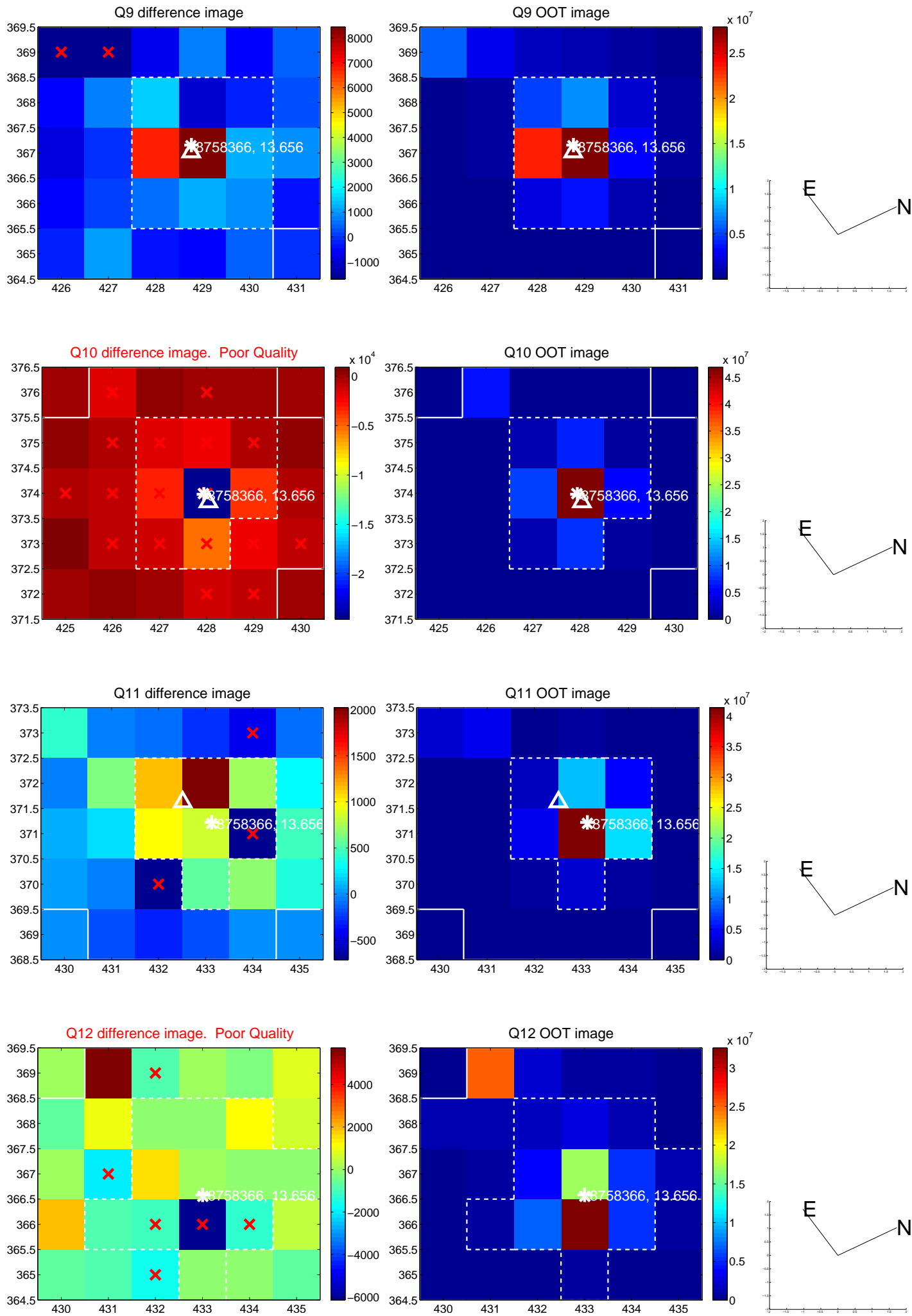
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



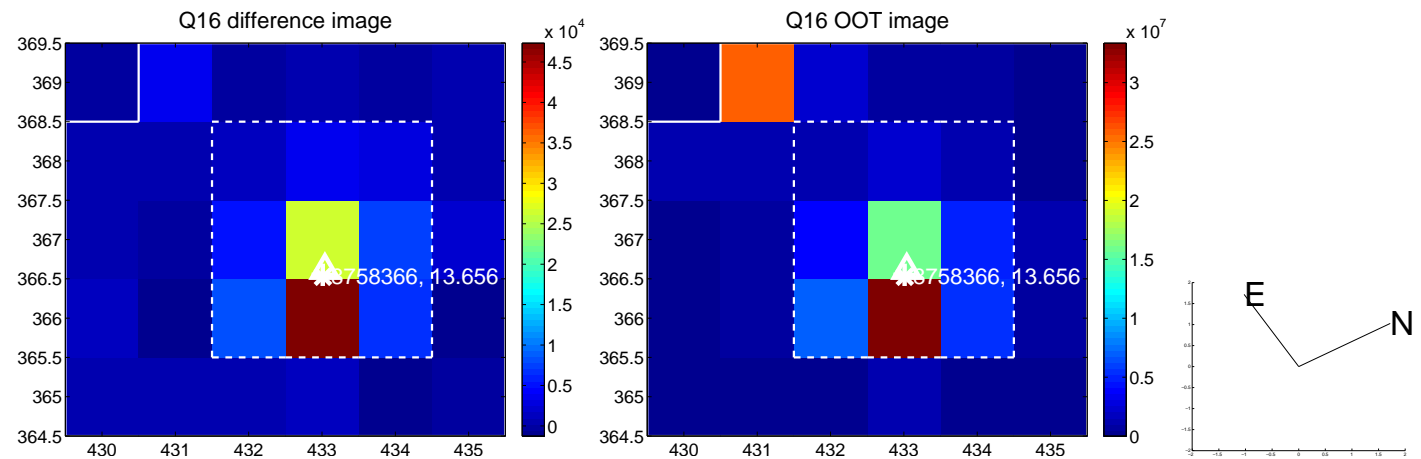
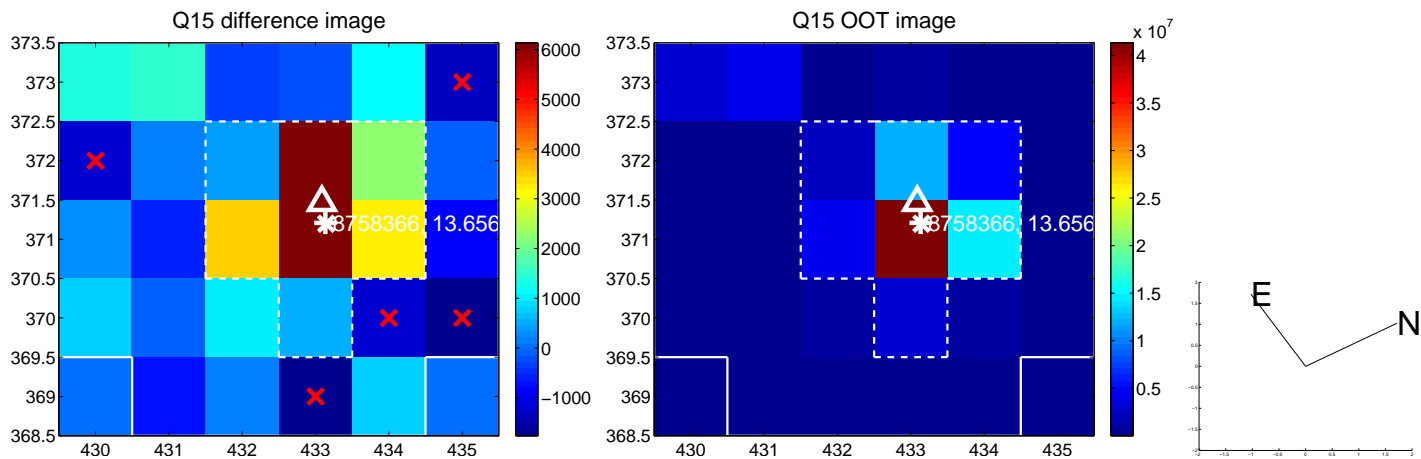
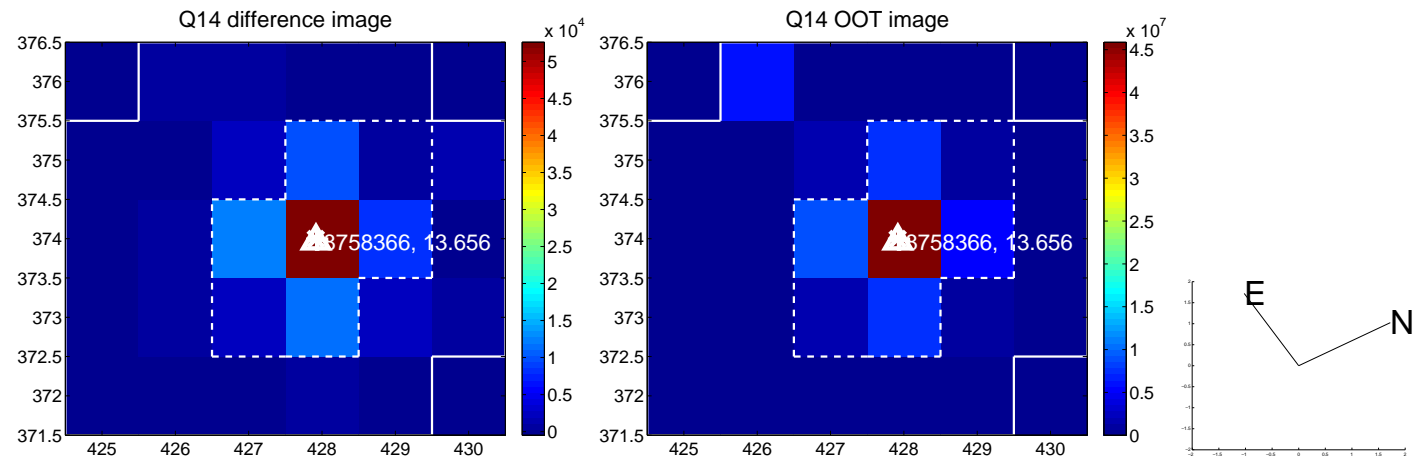
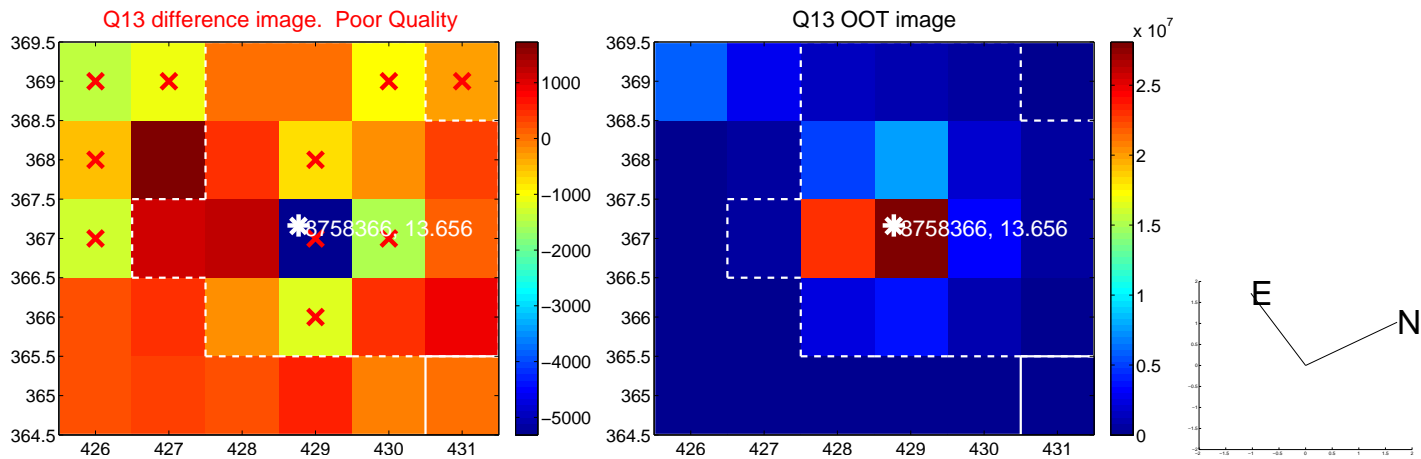
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



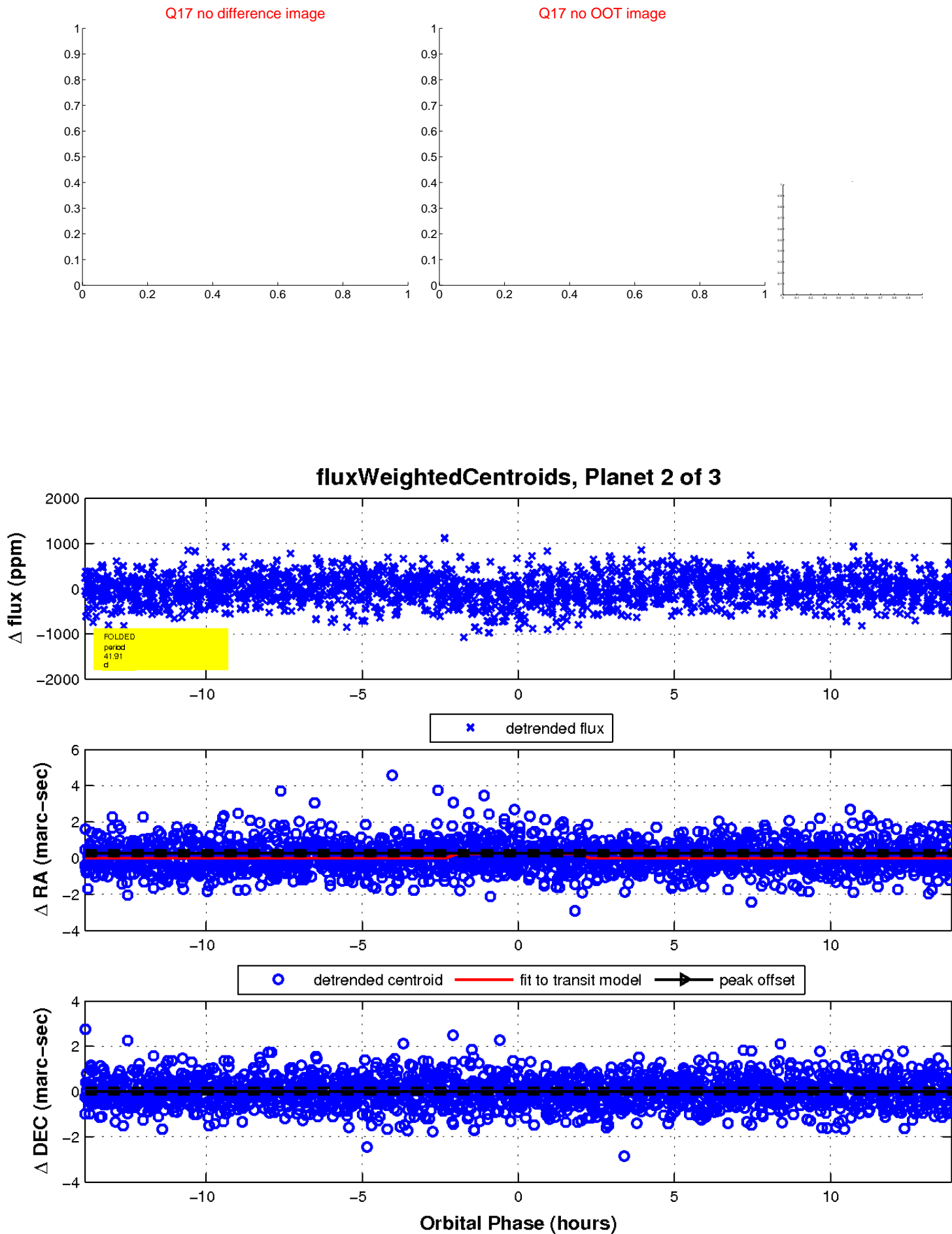
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

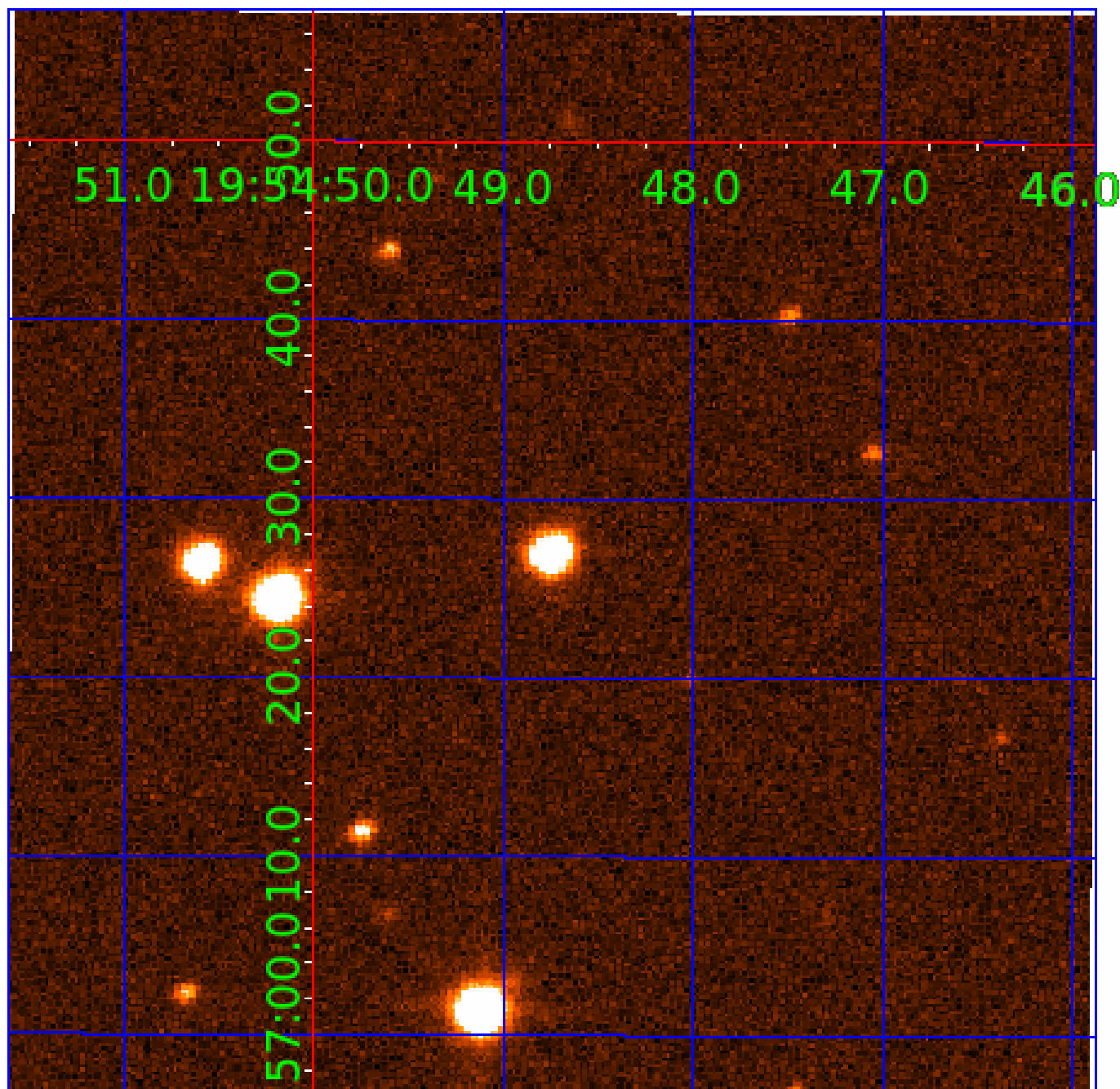


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008758366

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})
008758366-01	OBS	No	0.993768	131.634696	29.3	4.008	8.5	6.8	1.63	7440	1.03	14704.94
008758366-02	OBS	No	41.909771	171.880804	205.7	4.629	8.2	6.0	1.63	7440	2.71	100.17
008758366-03	OBS	No	185.155359	247.031244	541.8	2.979	7.3	7.4	1.63	7440	4.19	13.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008758366-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
008758366-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
008758366-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

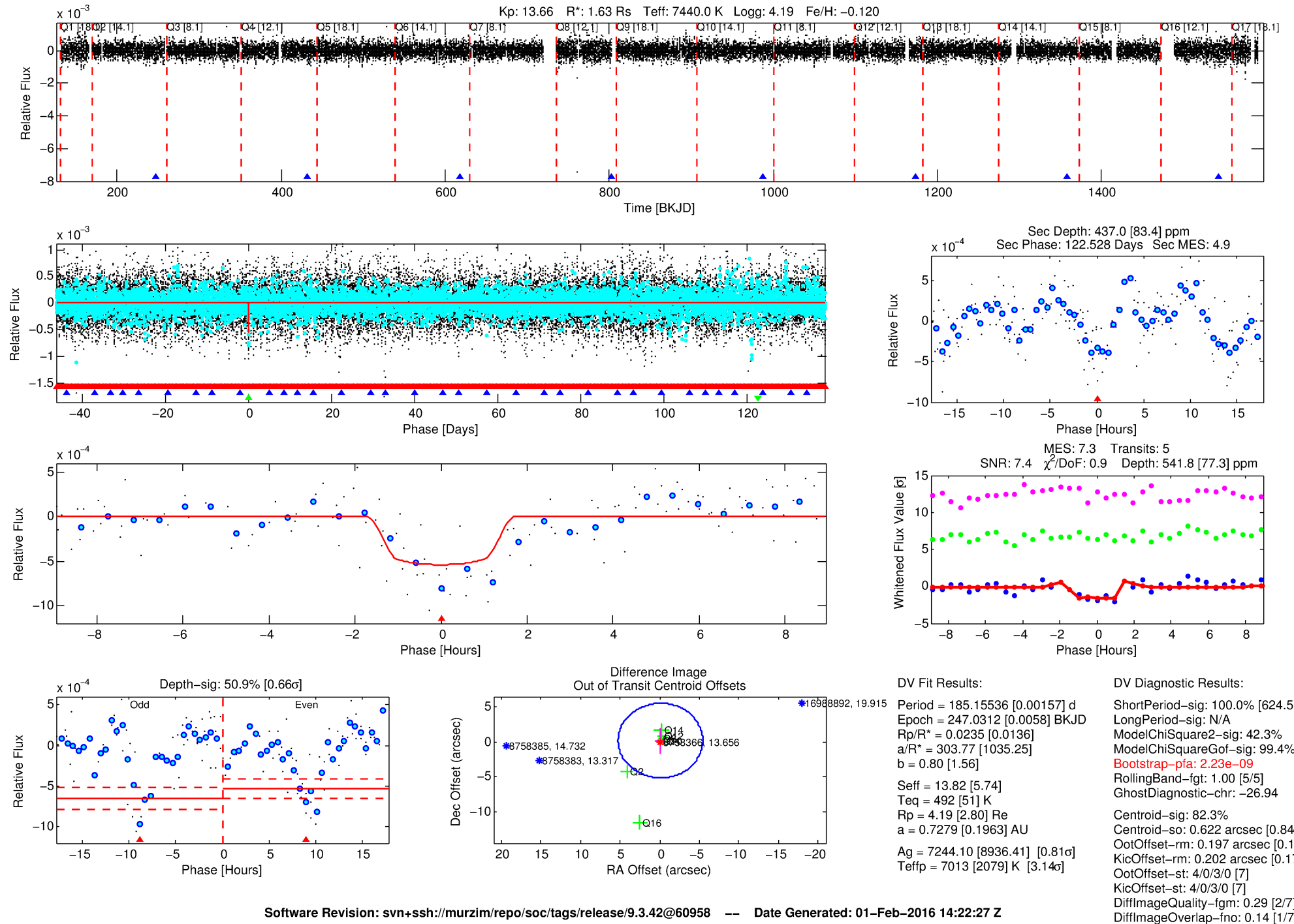
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008758366-03

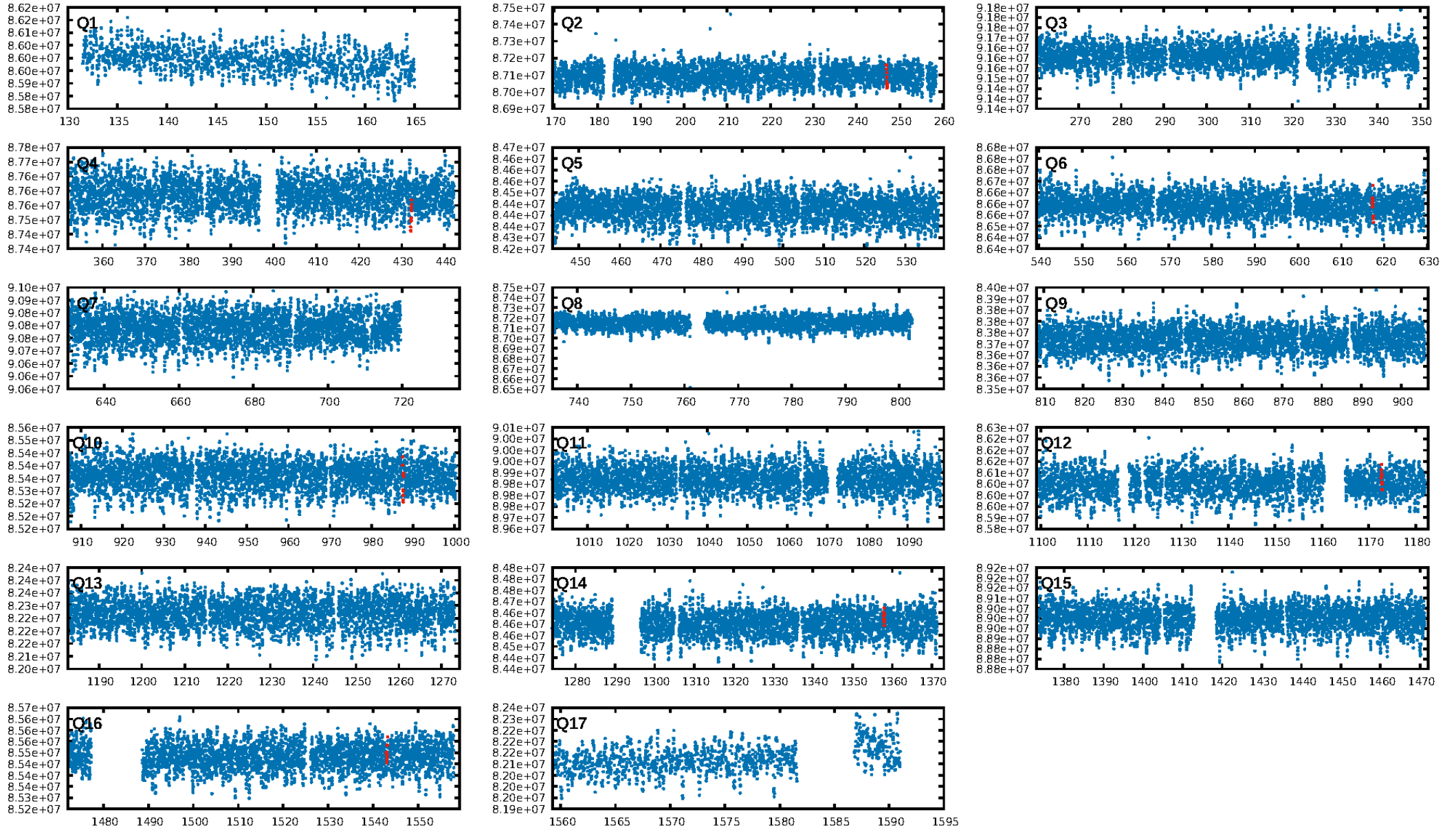
No Significant Match Found

DV One-Page Summary

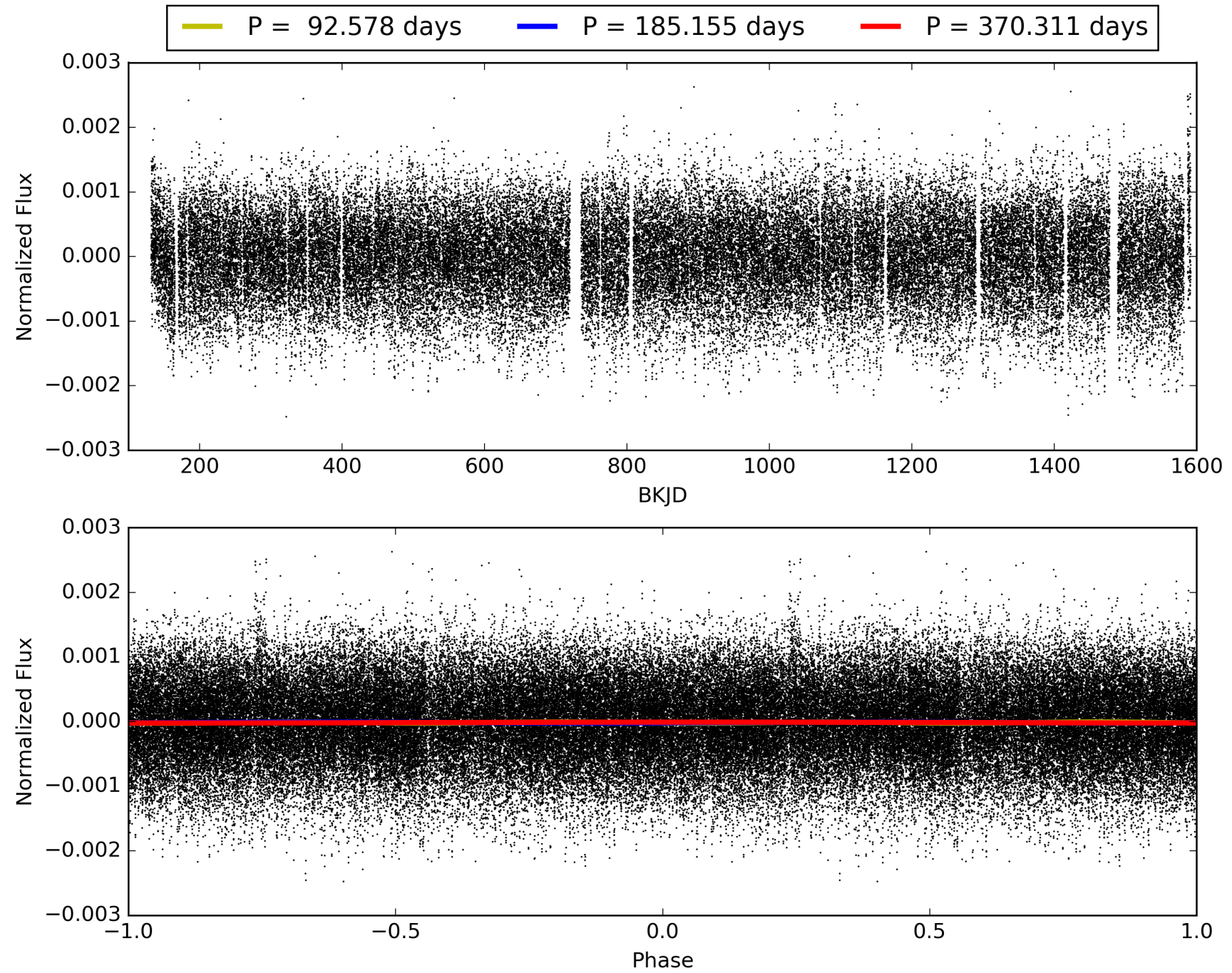
KIC: 8758366 Candidate: 3 of 3 Period: 185.155 d



TCE 008758366-03, PDC Light Curves

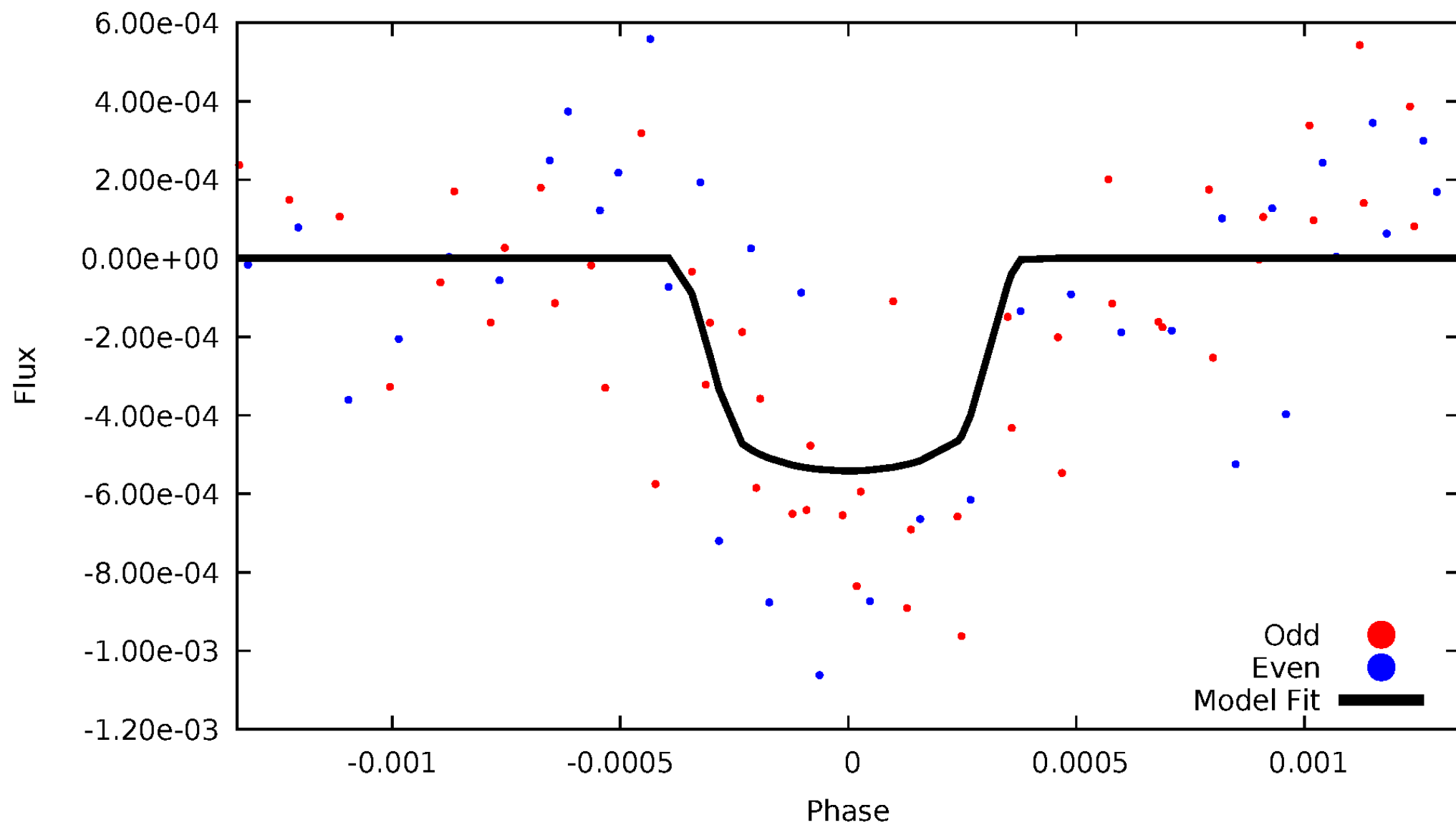


TCE 008758366-03



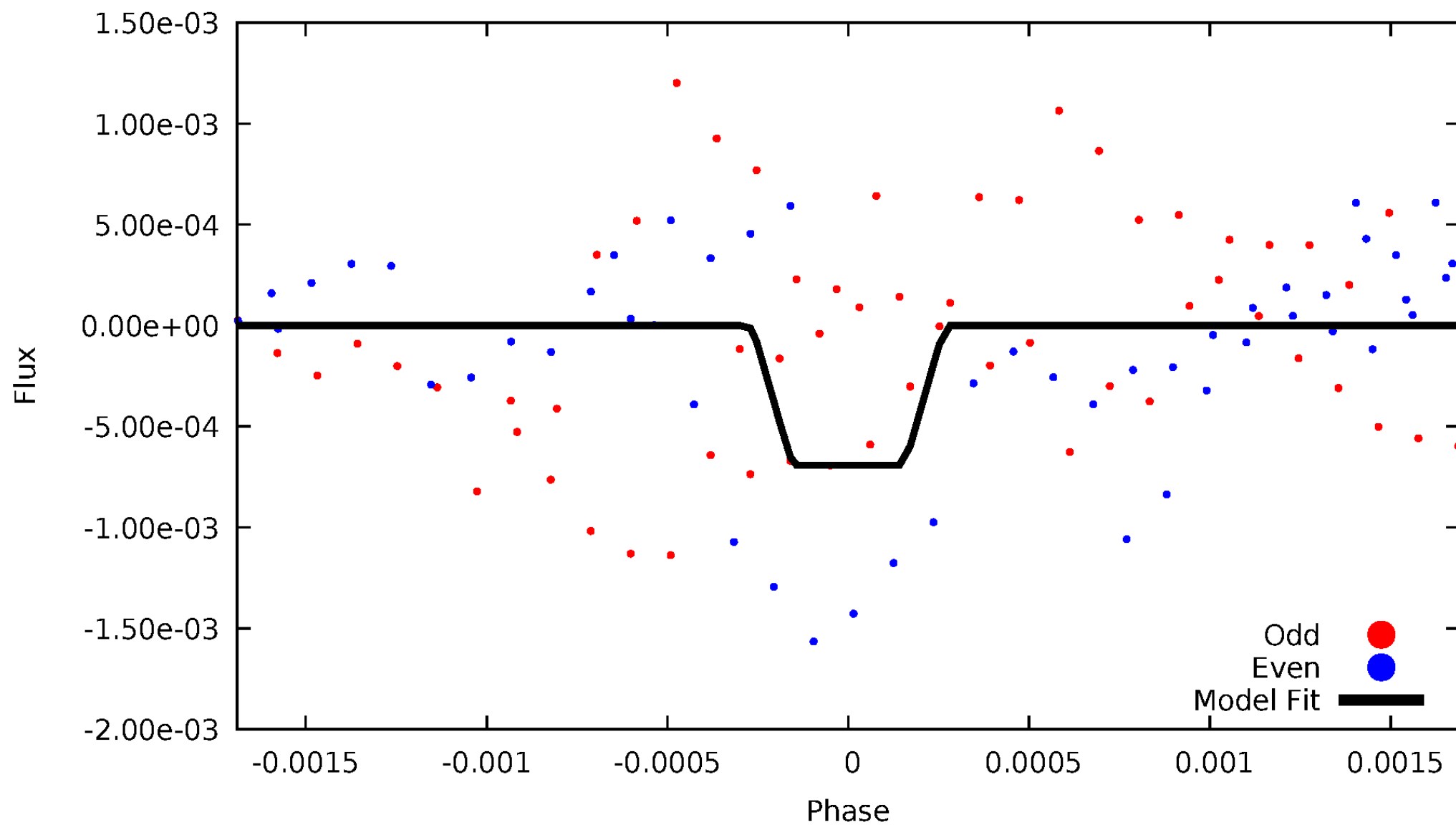
DV Odd/Even

TCE 008758366-03



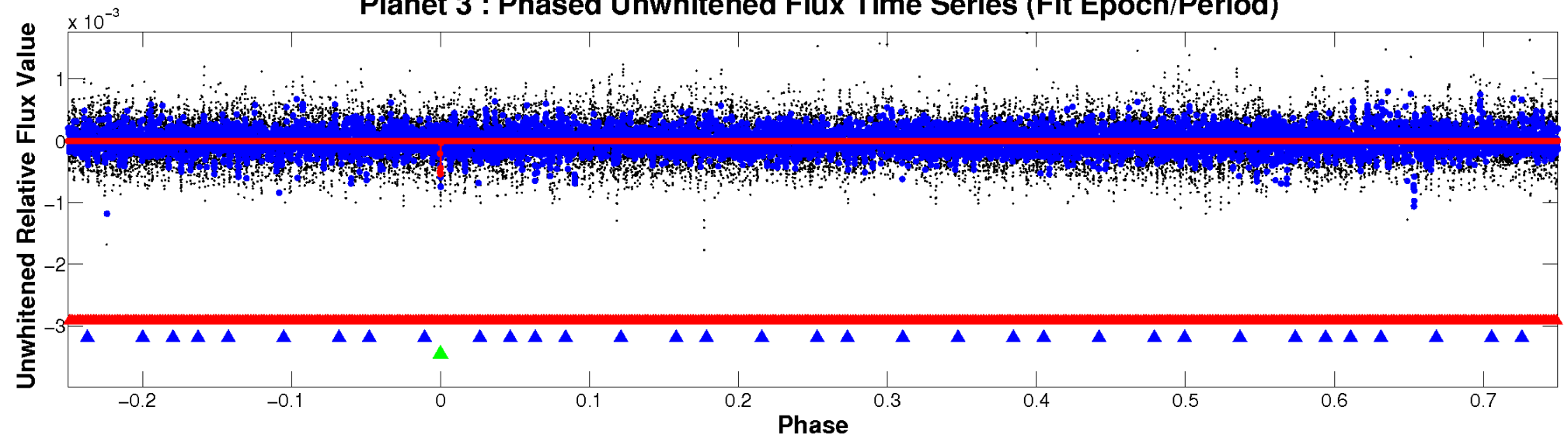
ALT Odd/Even

TCE 008758366-03

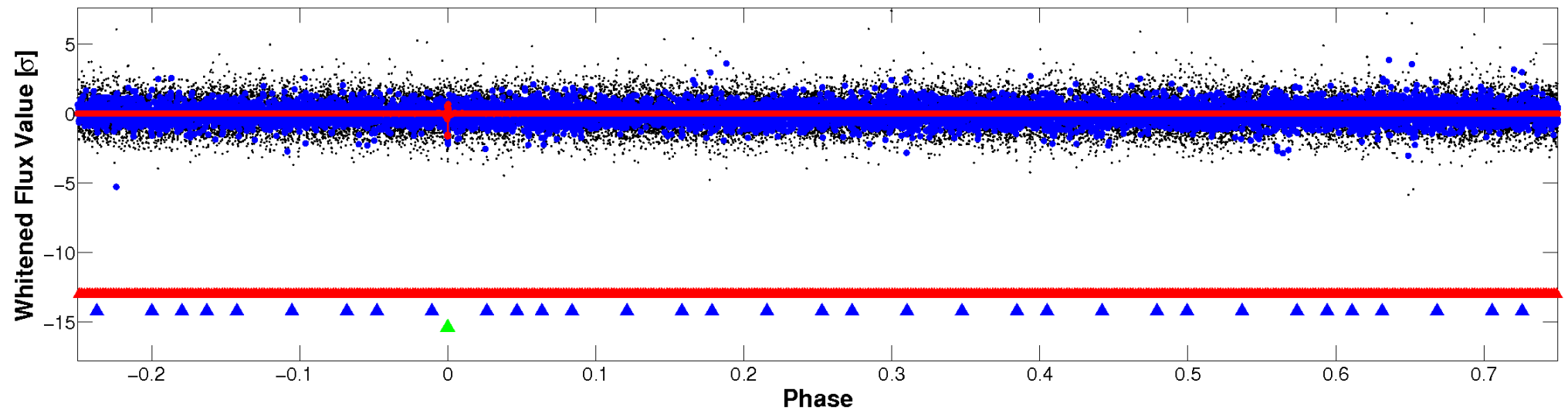


Non-Whitened Vs. Whitened Light Curve

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

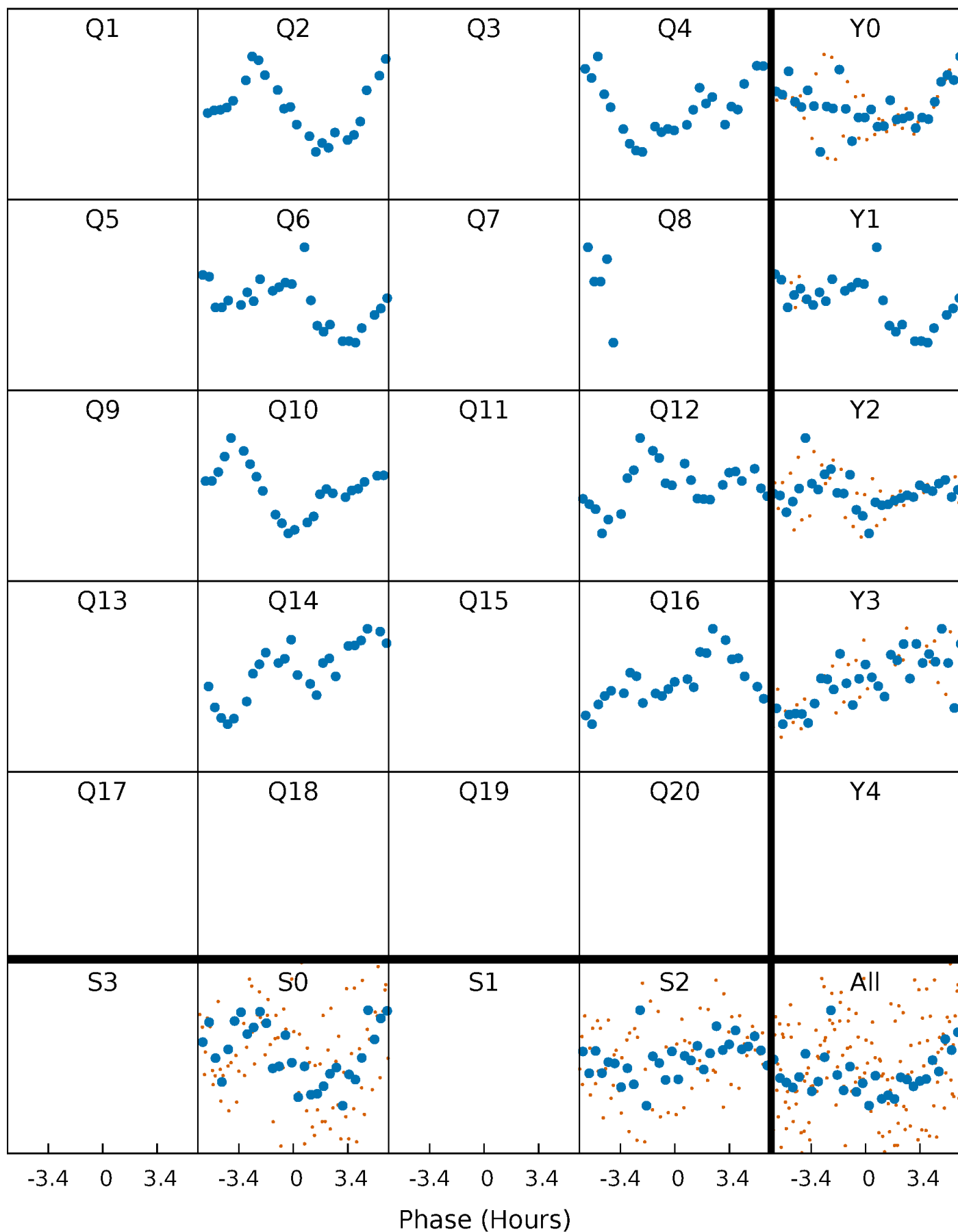


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



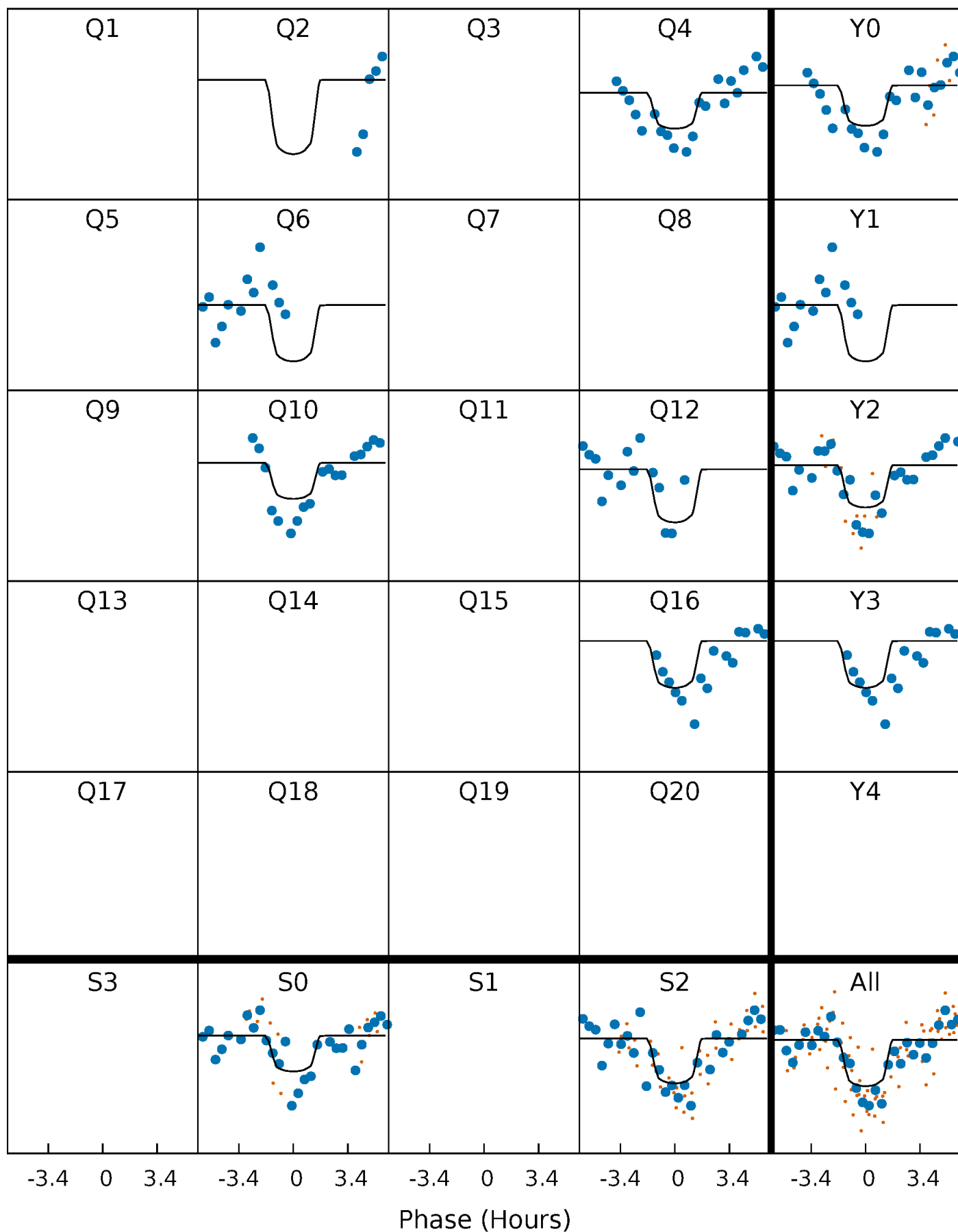
PDC Quarter-Phased Transit Curves

TCE 008758366-03 P=185.155359 Days $T_0=247.031244$ (BKJD)



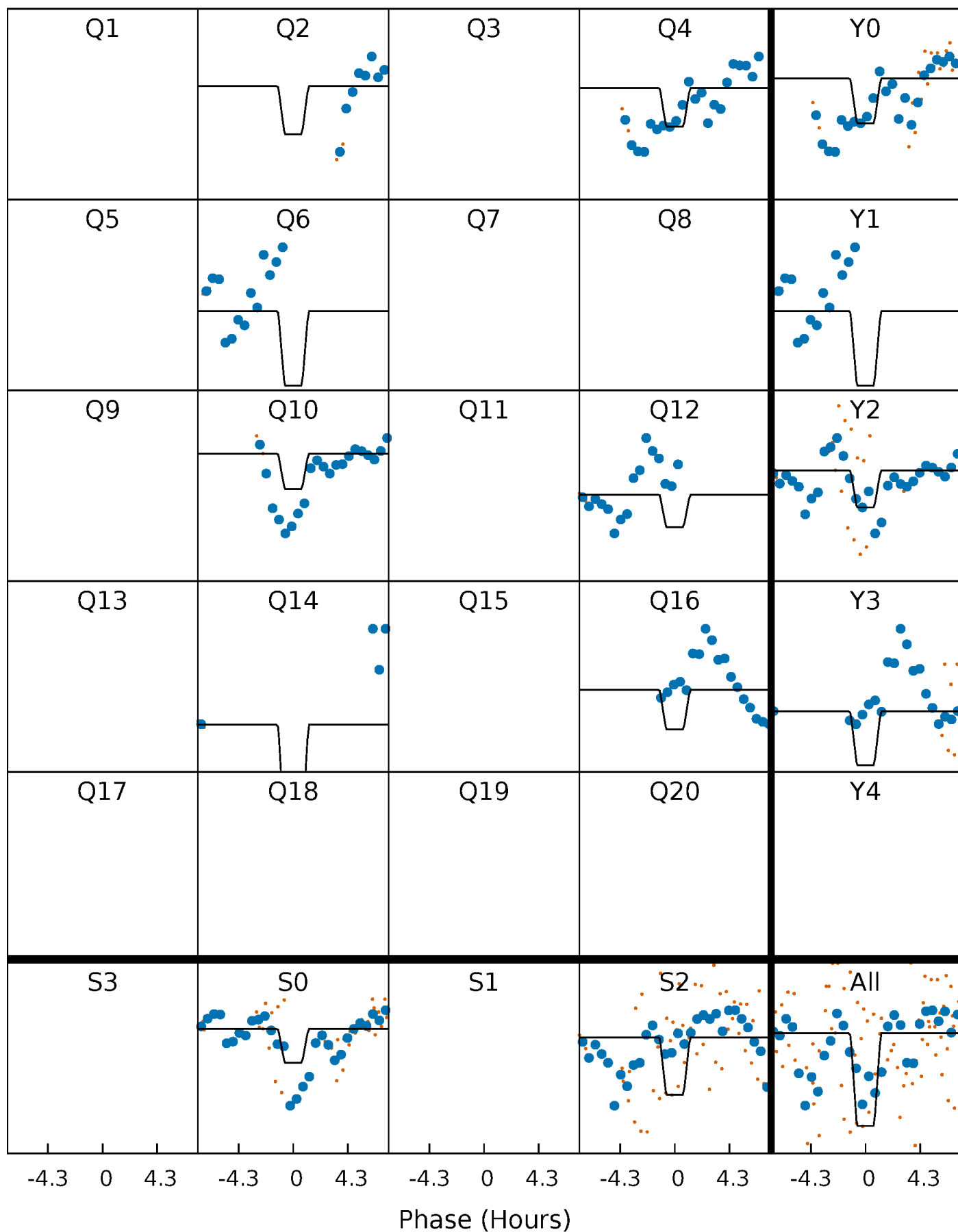
DV Quarter-Phased Transit Curves

TCE 008758366-03 $P=185.155359$ Days $T_0=247.031244$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

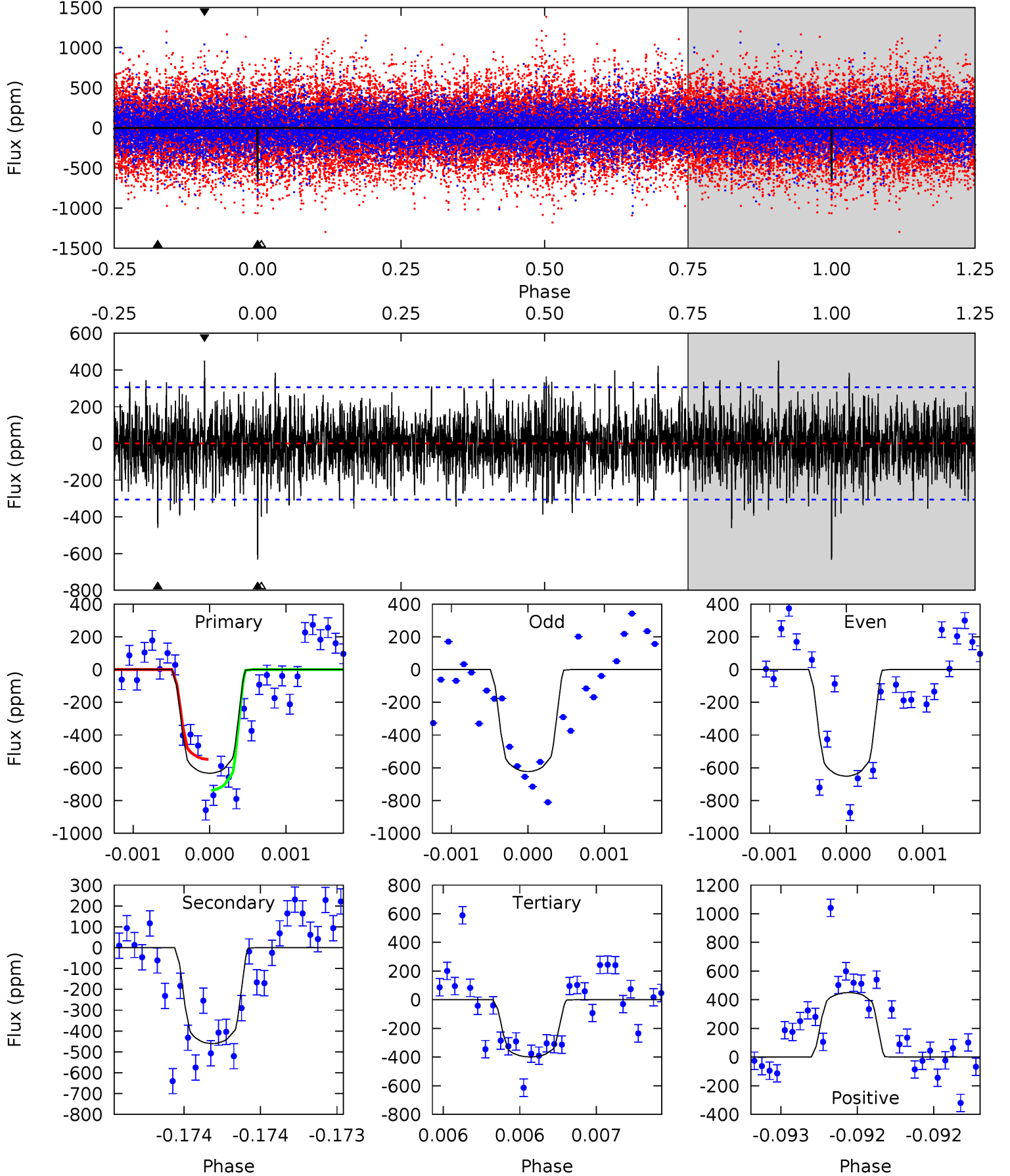
TCE 008758366-03 P=185.153144 Days $T_0=247.046122$ (BKJD)



DV Model-Shift Uniqueness Test

008758366-03, P = 185.155359 Days, E = 61.875885 Days

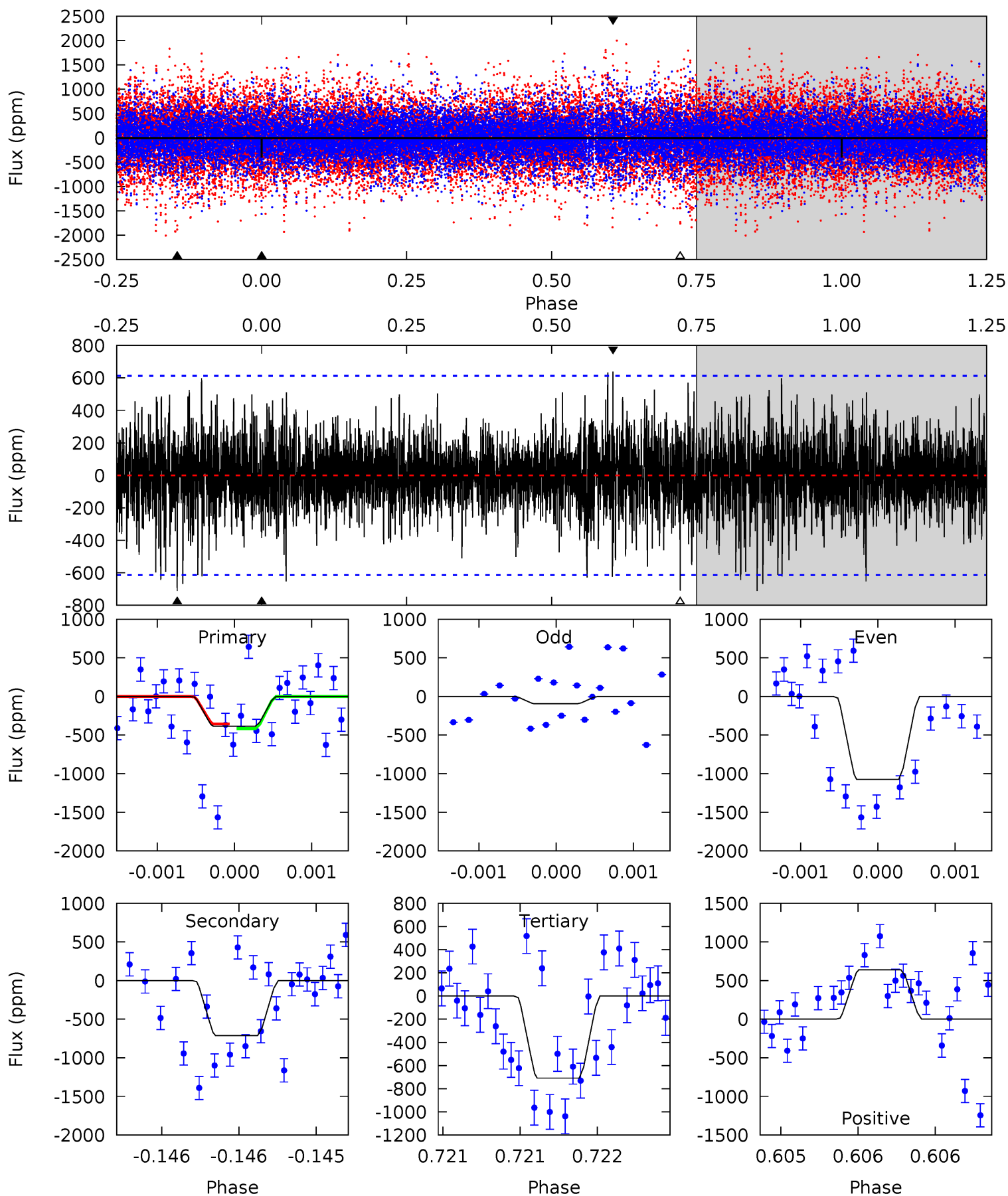
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	8.26	7.16	8.08	5.49	3.35	2.03	4.21	3.29	1.10	0.18	0.24	0.86	0.42	1.69



Alt Model-Shift Uniqueness Test

008758366-03, P = 185.153144 Days, E = 61.892978 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.50	6.46	6.43	5.80	5.57	3.47	1.50	-2.94	-2.31	0.03	0.66	4.24	-9.52	0.47	0.27



Stellar Parameters For KIC 008758366

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7440^{+209}_{-314}	$4.188^{+0.108}_{-0.201}$	$-0.120^{+0.200}_{-0.350}$	$1.633^{+0.542}_{-0.292}$	$1.498^{+0.212}_{-0.235}$	$0.484^{+0.250}_{-0.262}$
	+3%/-4%	+3%/-5%	+167%/-292%	+33%/-18%	+14%/-16%	+52%/-54%
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 008758366-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-460 ± 56	$4.58^{+2.57}_{-2.40}$	699^{+58}_{-47}	6878^{+3898}_{-1358}	6392^{+21203}_{-3828}
Alt.	-712 ± 110	$4.73^{+2.87}_{-2.42}$	694^{+54}_{-46}	7539^{+4360}_{-1620}	8840^{+27566}_{-5296}

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 $A_{obs} \gg 1.0$

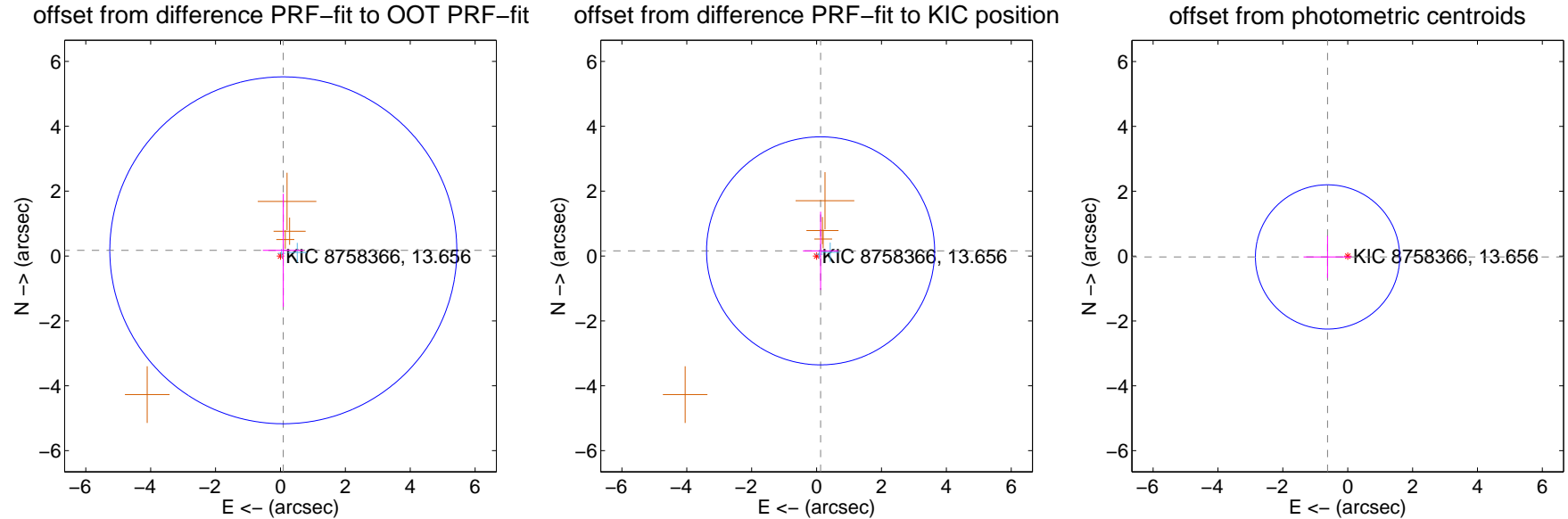
DV Centroid Data

Supplemental centroid analysis for 008758366-03. Kepler magnitude: 13.66. Transit SNR 7.40

There are 2 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.197 ± 1.782	0.11	-0.088 ± 0.631	0.176 ± 1.744
PRF-fit source offset from KIC position	0.202 ± 1.172	0.17	-0.124 ± 0.544	0.160 ± 1.206
photometric centroid source offset	0.62 ± 0.74	0.84	0.62 ± 0.74	-0.03 ± 0.65



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.

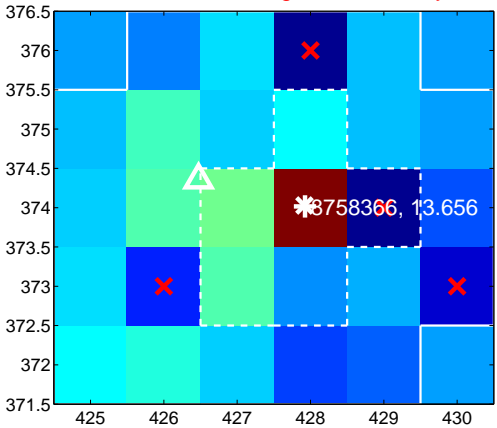
Q1 no difference image



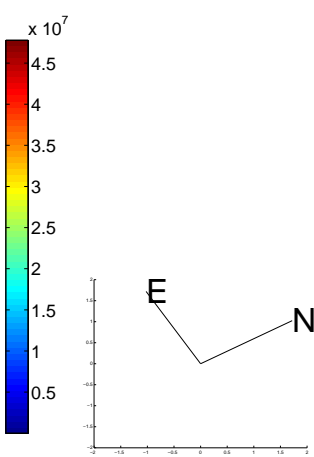
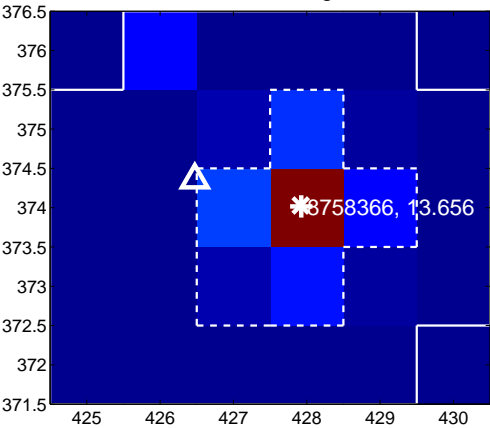
Q1 no OOT image



Q2 difference image. Poor Quality



Q2 OOT image



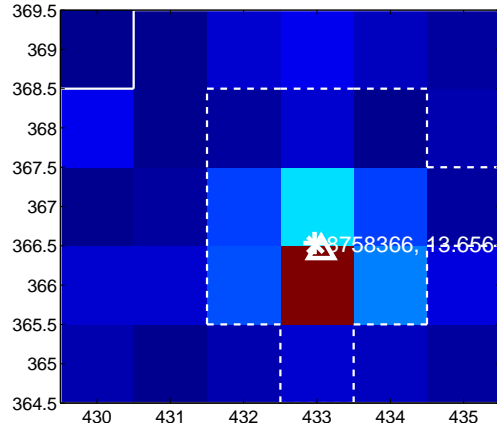
Q3 no difference image



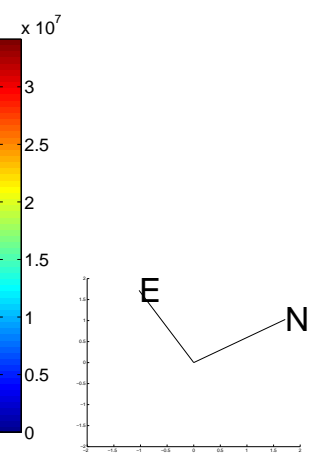
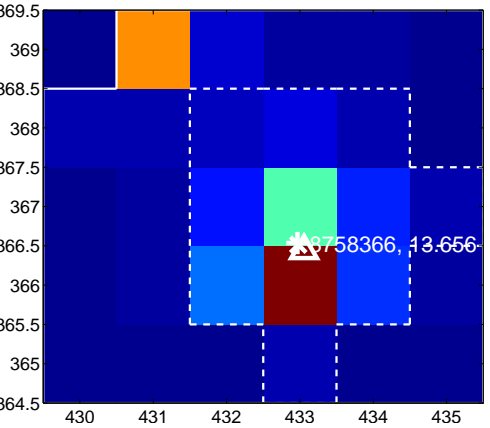
Q3 no OOT image



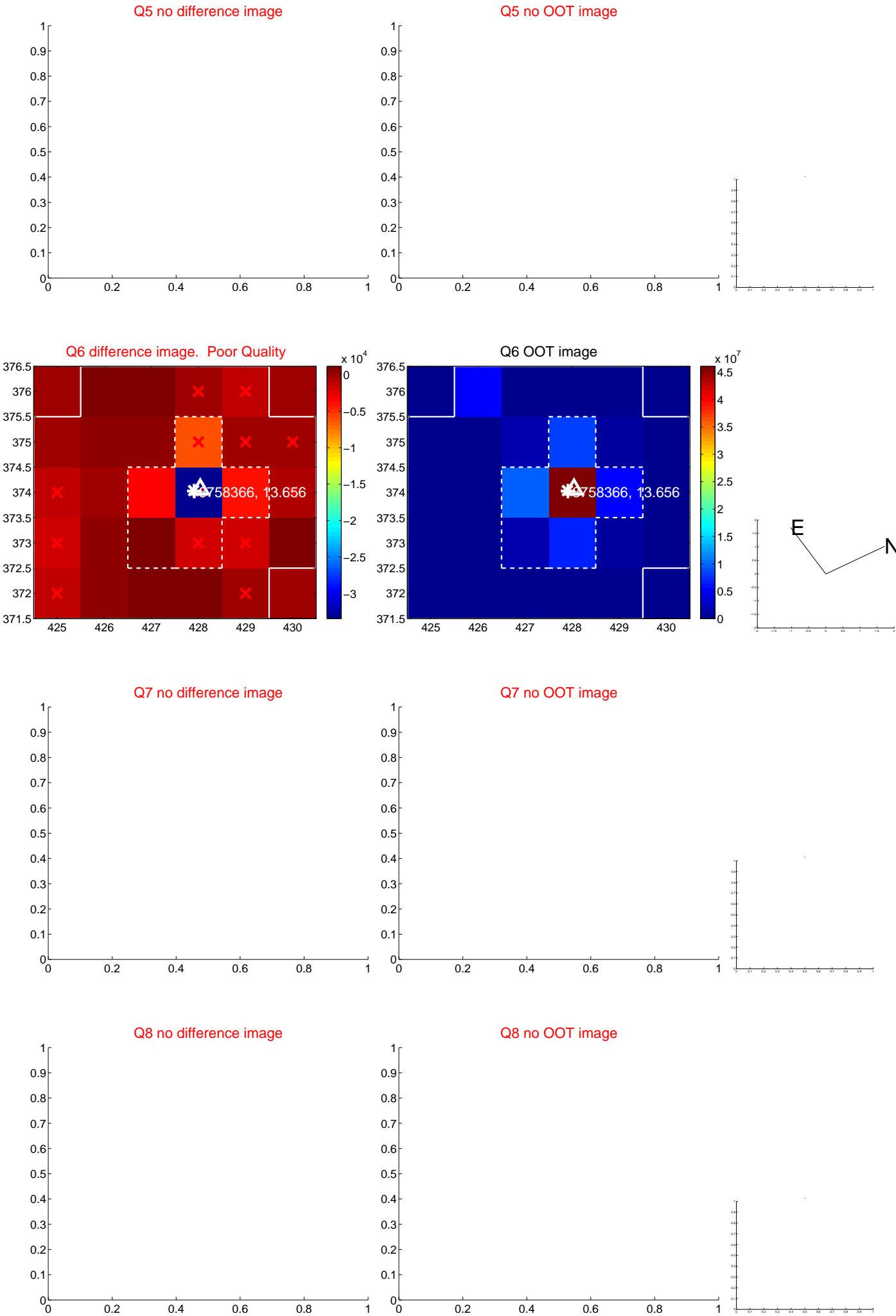
Q4 difference image



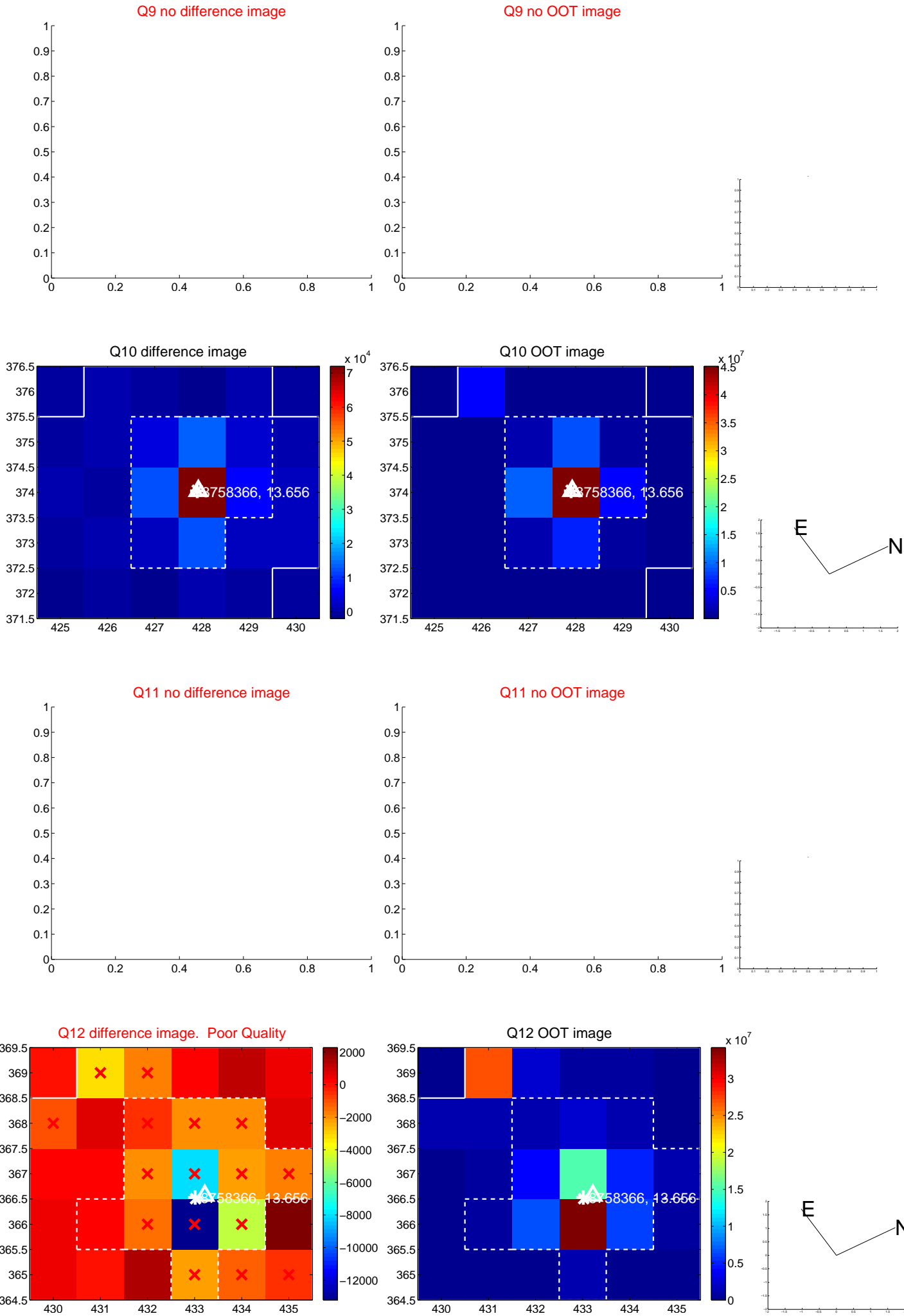
Q4 OOT image



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

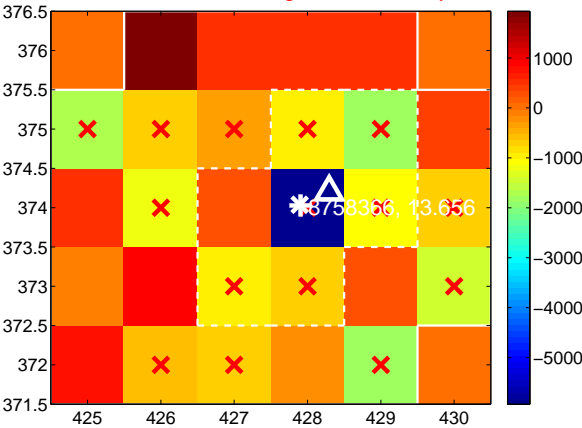
Q13 no difference image



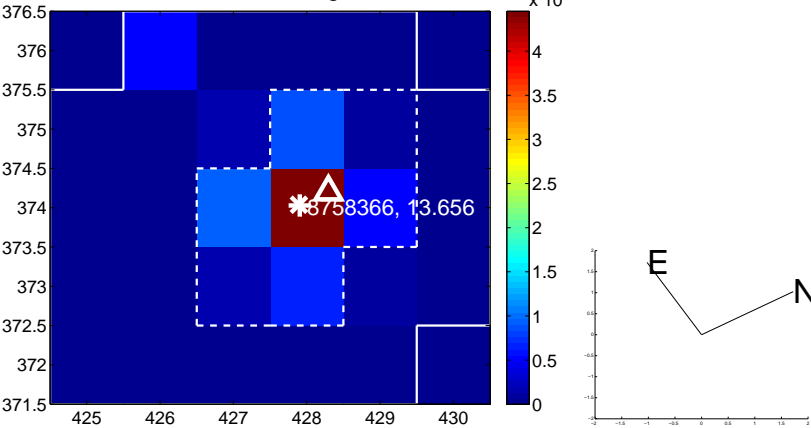
Q13 no OOT image



Q14 difference image. Poor Quality



Q14 OOT image



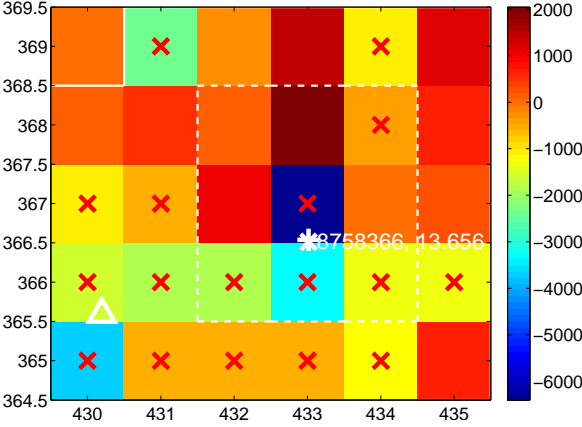
Q15 no difference image



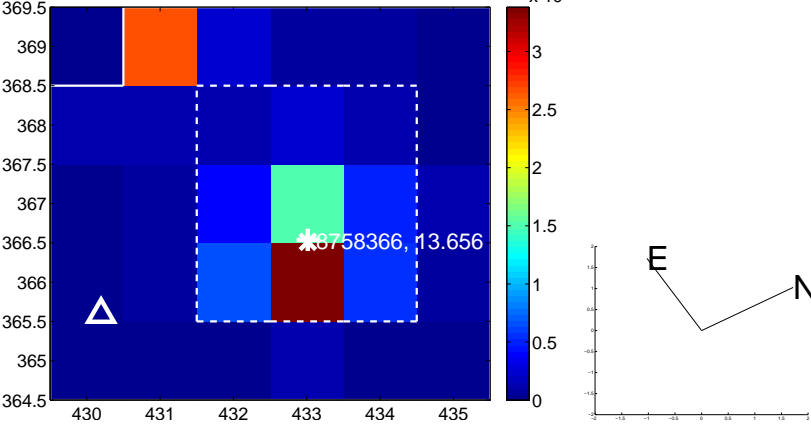
Q15 no OOT image



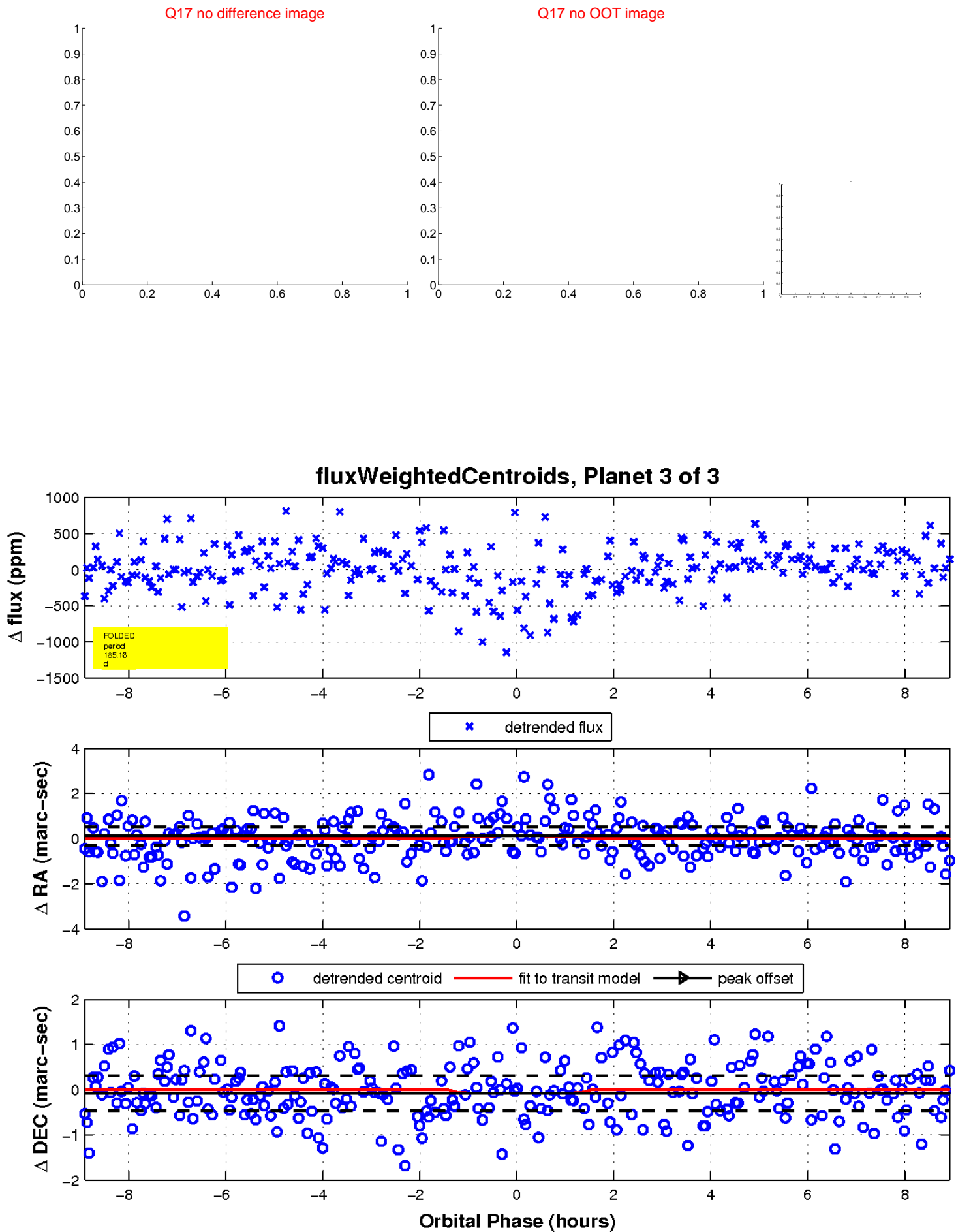
Q16 difference image. Poor Quality



Q16 OOT image



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



UKIRT Image

Declination

