

KIC 008414845

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})
008414845-01	OBS	No	253.608246	290.911787	1205.7	3.128	16.2	7.3	0.90	5693	3.26	1.43
008414845-02	OBS	No	360.450724	155.764876	703.1	2.510	17.1	5.7	0.90	5693	2.66	0.90
008414845-03	OBS	No	281.417800	199.915742	316.0	12.500	15.3	-1.0	0.90	5693	1.59	1.24
008414845-04	OBS	No	211.583289	168.484961	1032.0	2.500	14.1	-1.0	0.90	5693	2.87	1.82
008414845-05	OBS	No	363.040200	255.416190	2666.2	33.353	9.8	5.0	0.90	5693	5.69	0.89
008414845-06	OBS	No	469.264636	328.631306	1159.5	3.413	14.6	7.1	0.90	5693	3.04	0.63
008414845-08	OBS	No	384.628192	286.550814	628.3	3.000	13.4	-1.0	0.90	5693	2.24	0.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008414845-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008414845-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
008414845-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008414845-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
008414845-05	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008414845-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
008414845-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

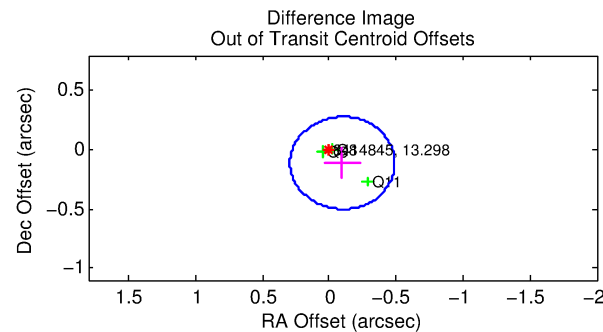
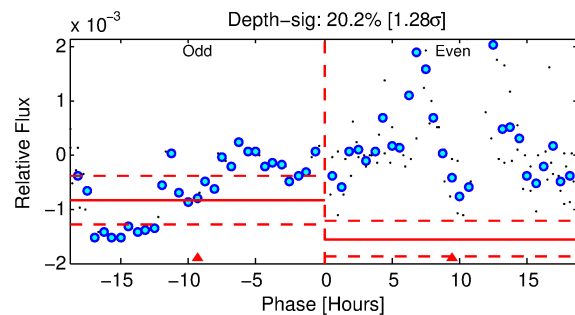
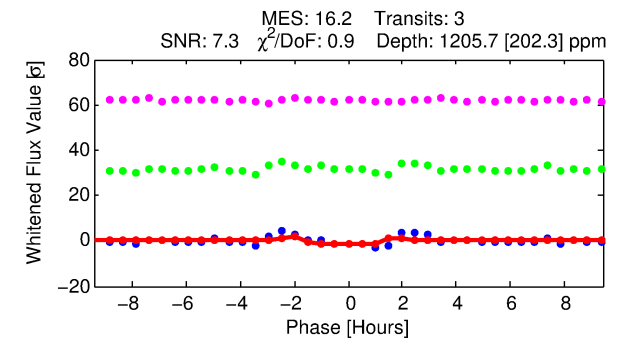
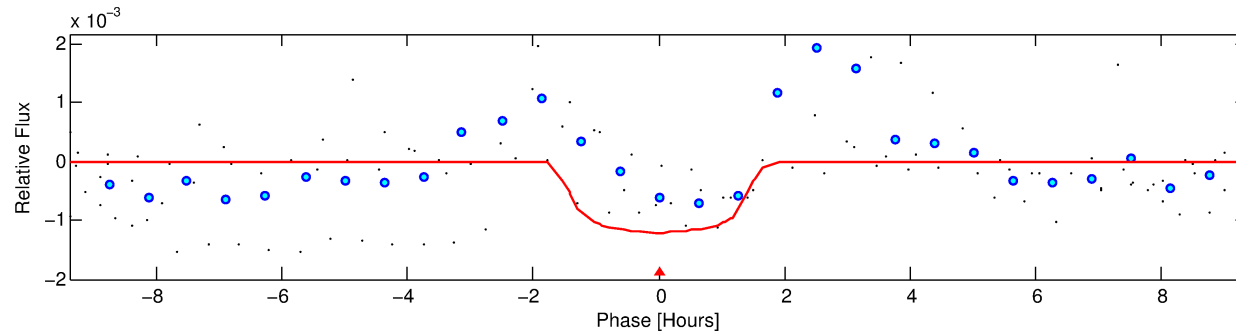
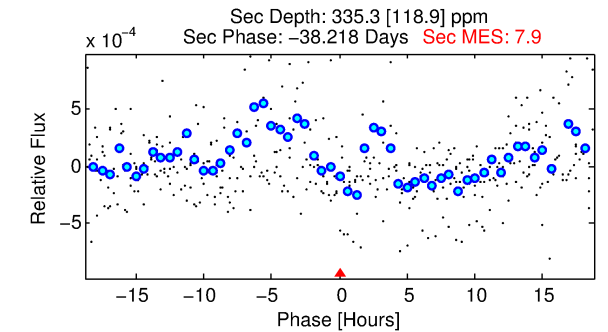
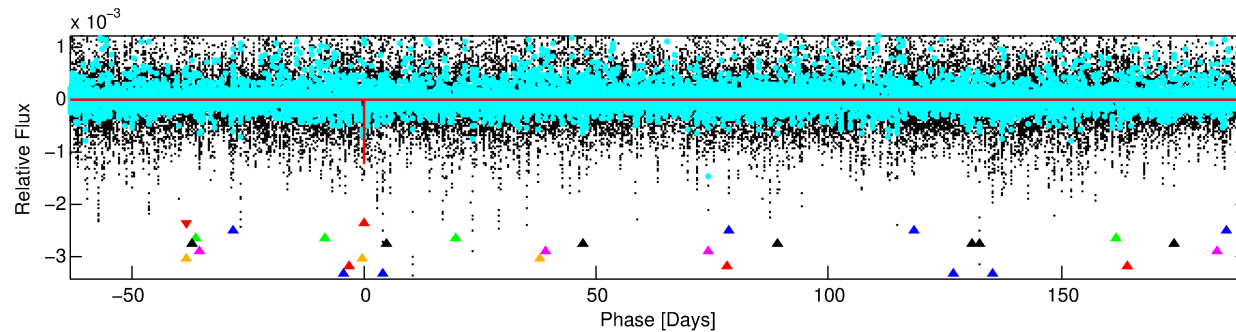
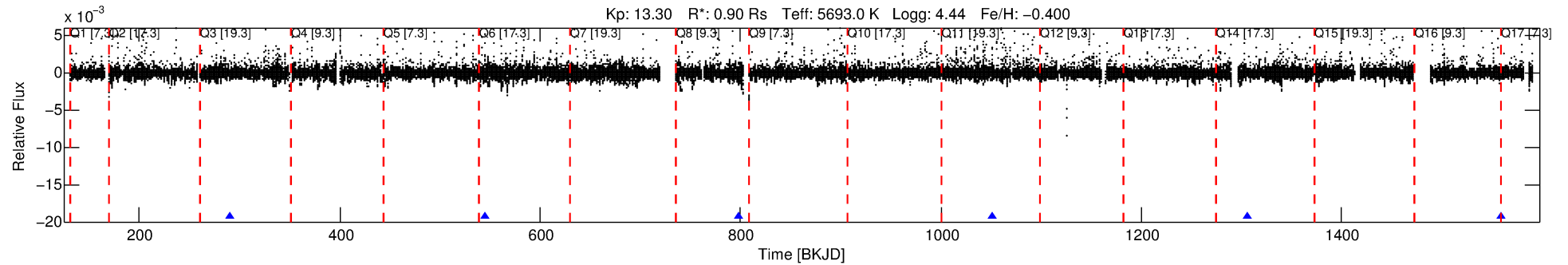
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008414845-01

No Significant Match Found

DV One-Page Summary

KIC: 8414845 Candidate: 1 of 8 Period: 253.608 d



DV Fit Results:

Period = 253.60825 [0.00431] d
Epoch = 290.9118 [0.0096] BKJD
Rp/R* = 0.0333 [0.0502]
a/R* = 516.34 [3520.23]
b = 0.61 [7.06]
Seff = 1.43 [0.46]
Teq = 279 [22] K
Rp = 3.26 [4.99] Re
a = 0.7294 [0.1524] AU
Ag = 9222.40 [28170.34] [0.33 σ]
Teffp = 4225 [3212] K [1.23 σ]

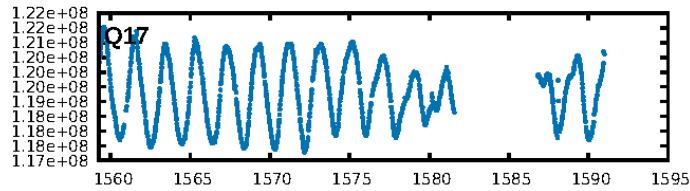
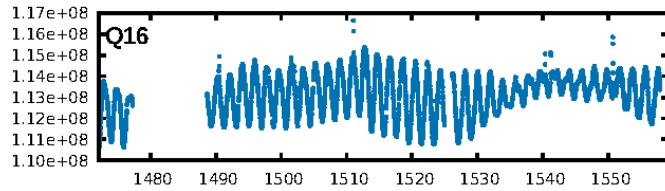
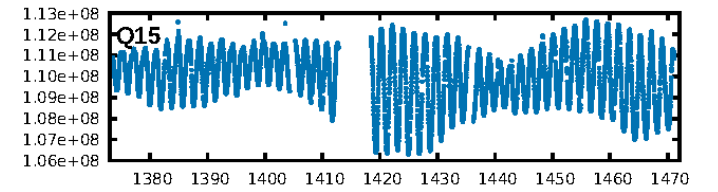
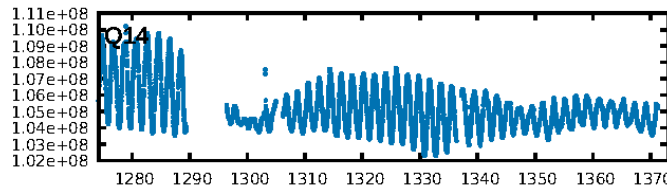
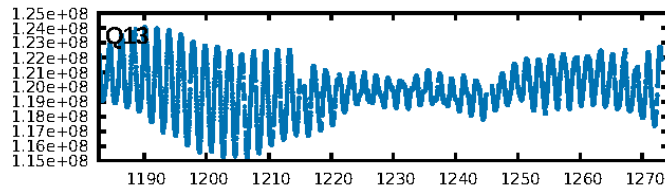
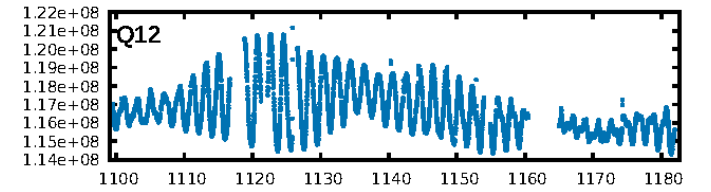
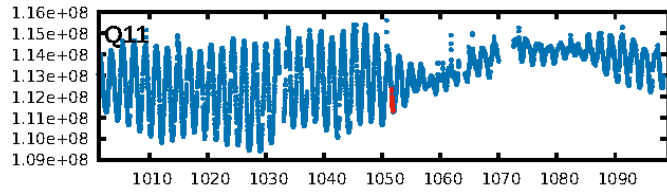
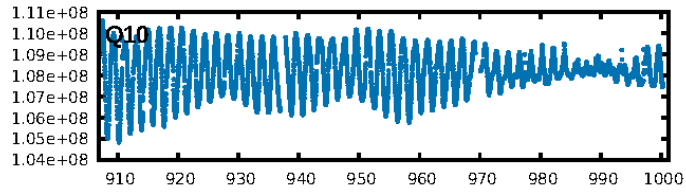
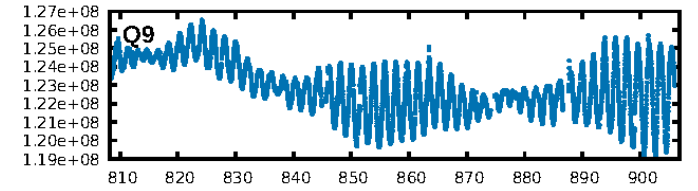
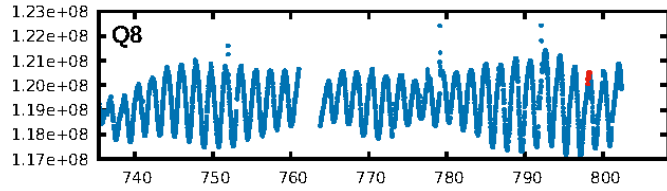
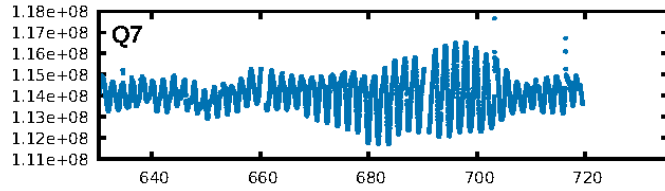
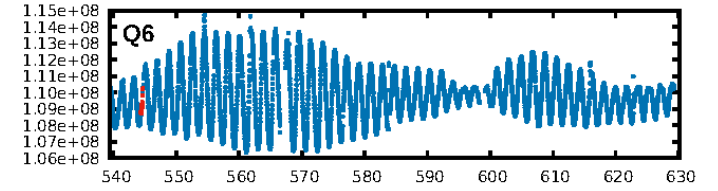
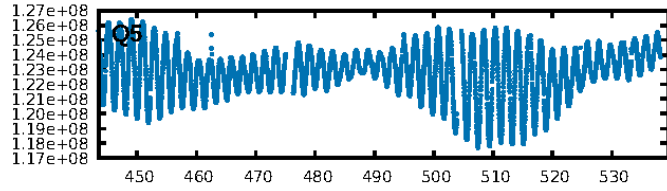
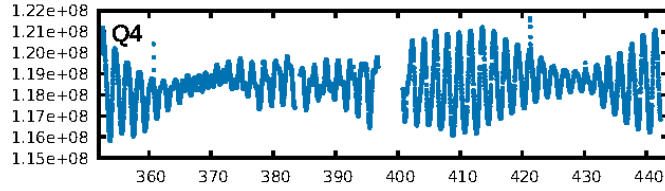
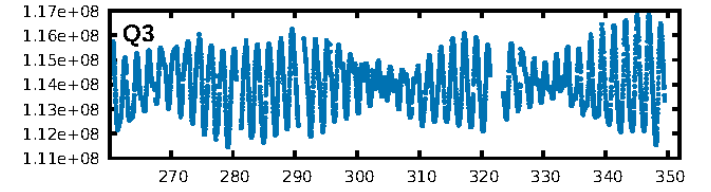
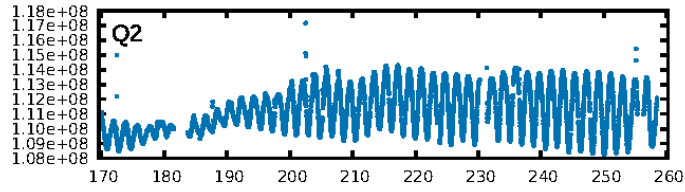
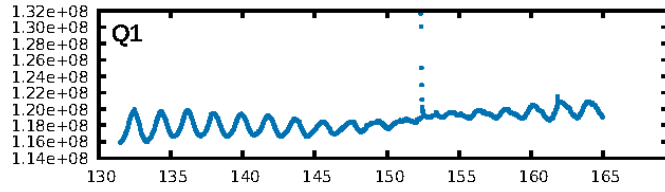
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [251.89 σ]
LongPeriod-sig: 100.0% [51.80 σ]
ModelChiSquare2-sig: 40.4%
ModelChiSquareGof-sig: 98.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -13.65
Centroid-sig: 48.9%
Centroid-so: 0.173 arcsec [0.46 σ]
OotOffset-rm: 0.148 arcsec [1.13 σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-rm: 0.071 arcsec [0.70 σ]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.67 [2/3]

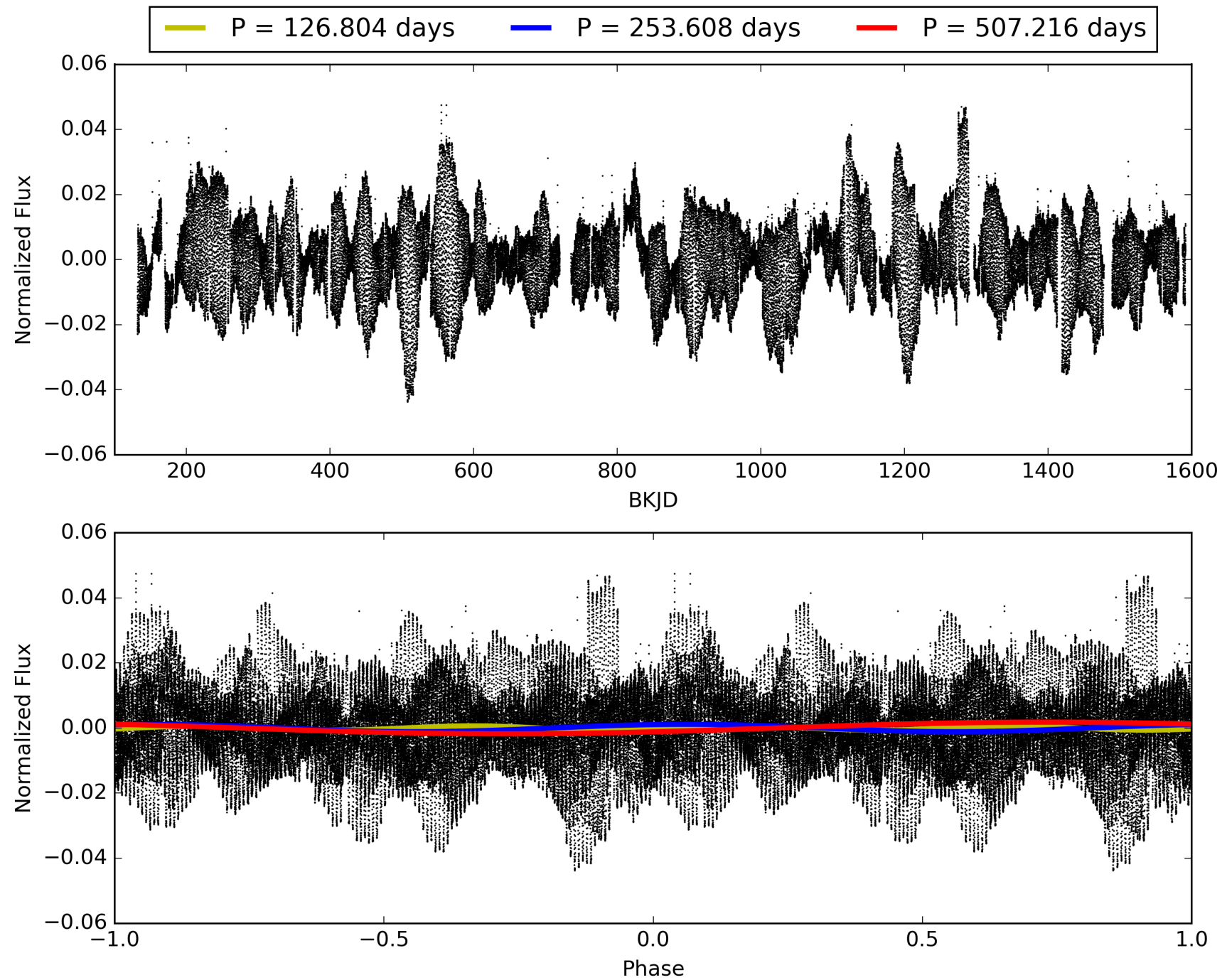
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 08:37:34 Z

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

TCE 008414845-01, PDC Light Curves

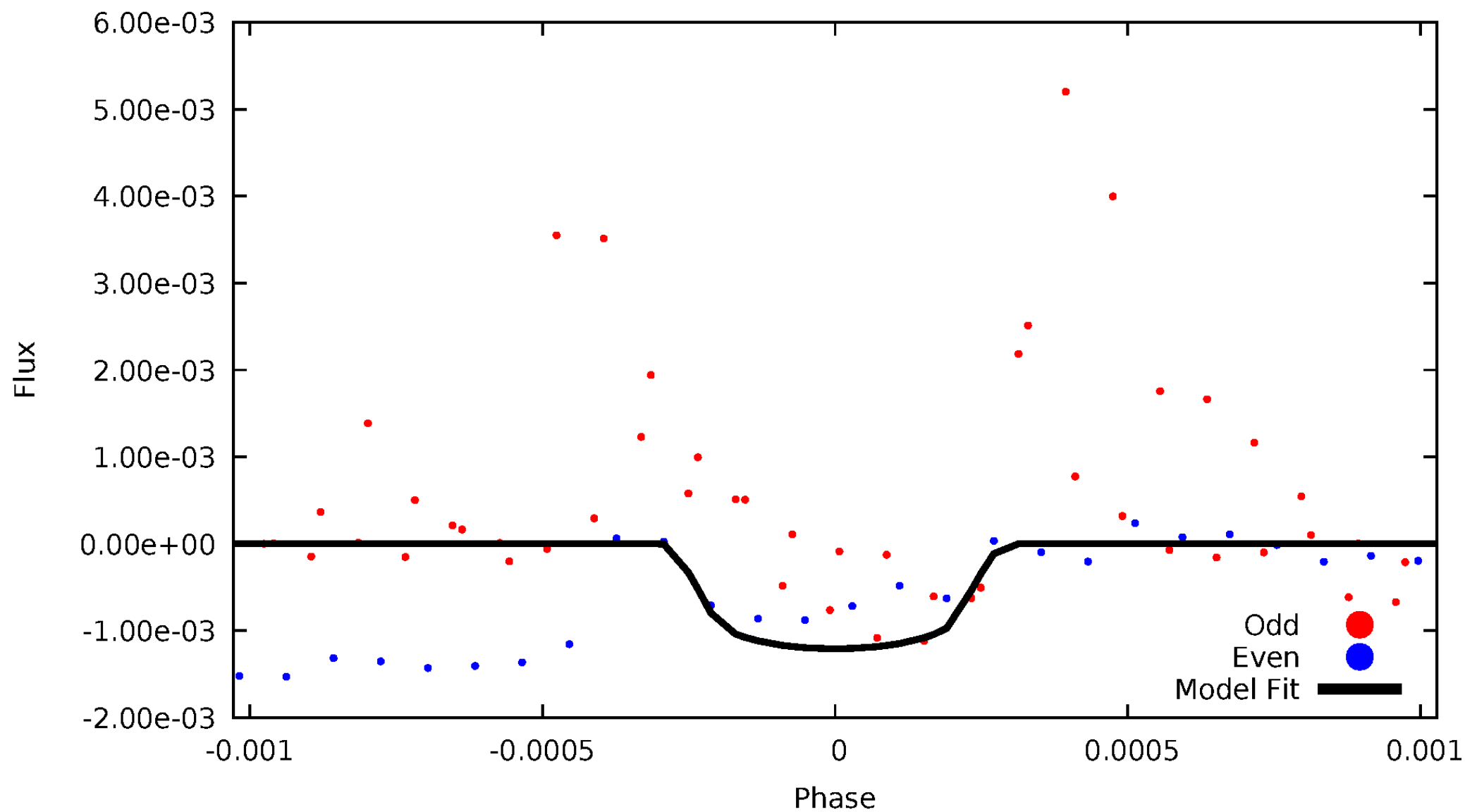


TCE 008414845-01



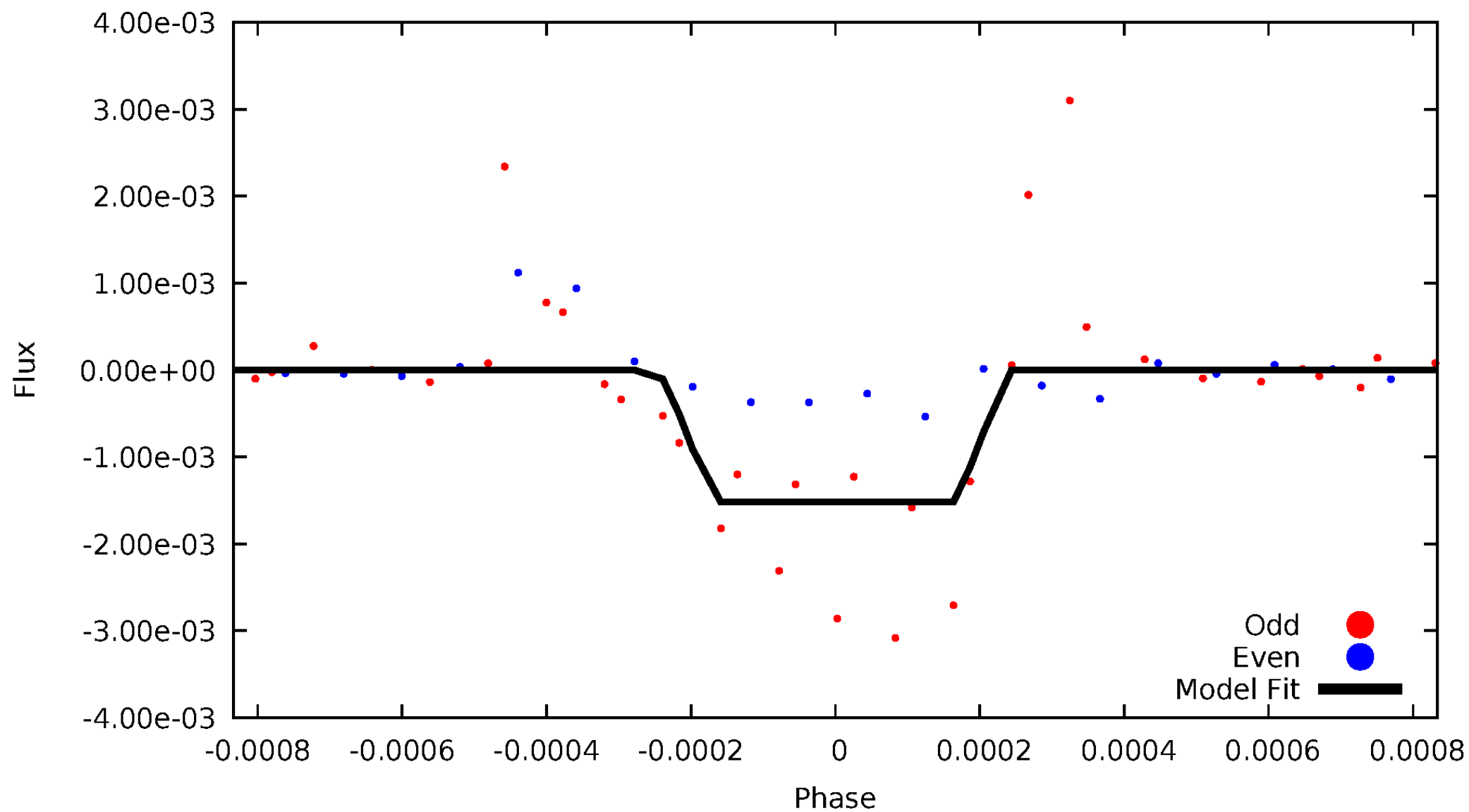
DV Odd/Even

TCE 008414845-01



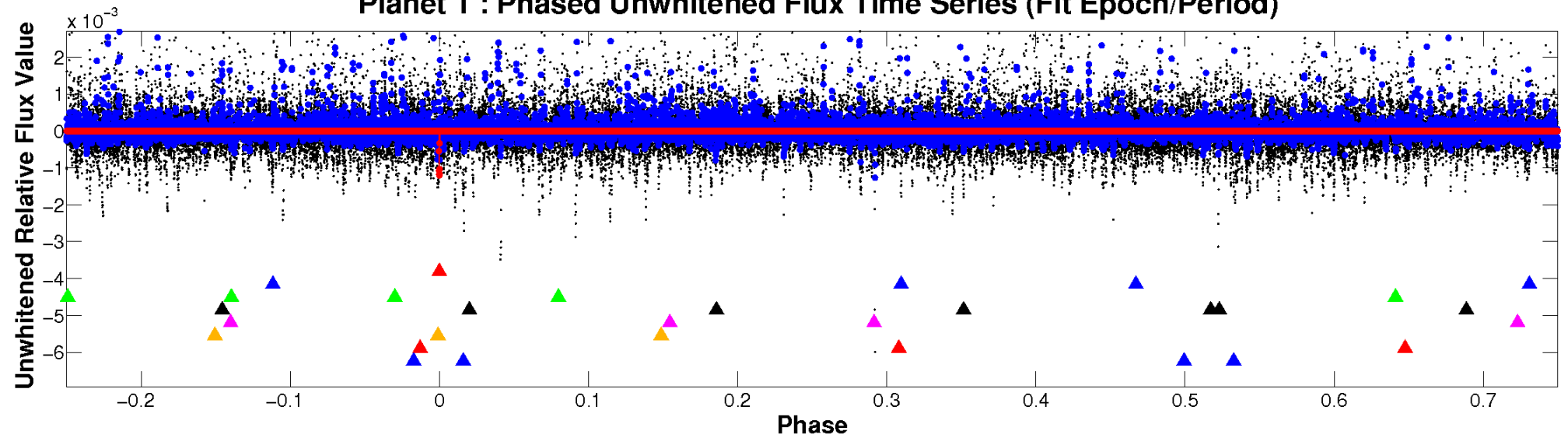
ALT Odd/Even

TCE 008414845-01

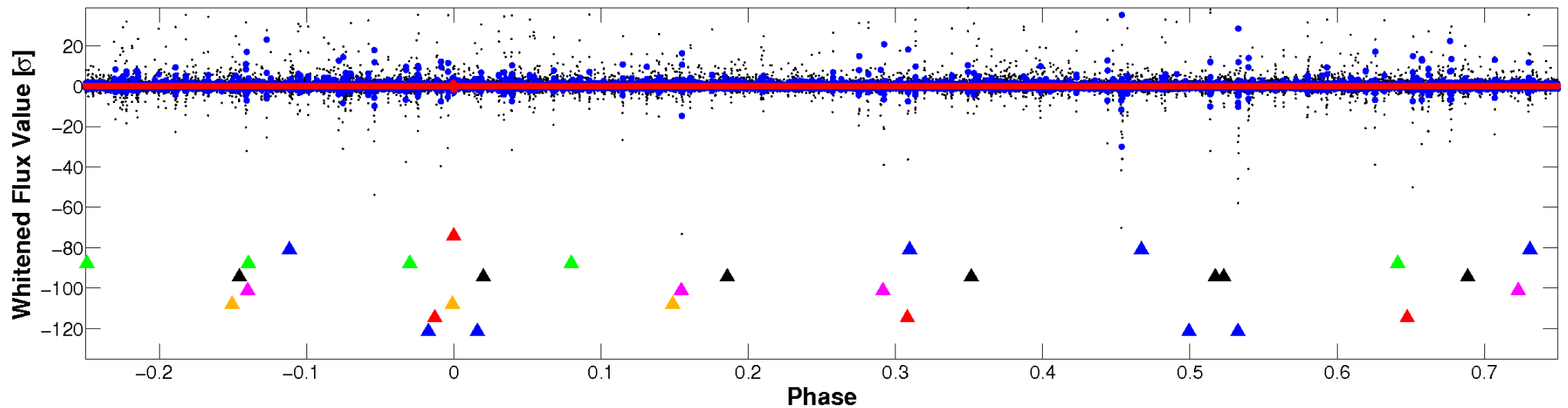


Non-Whitened Vs. Whitened Light Curve

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

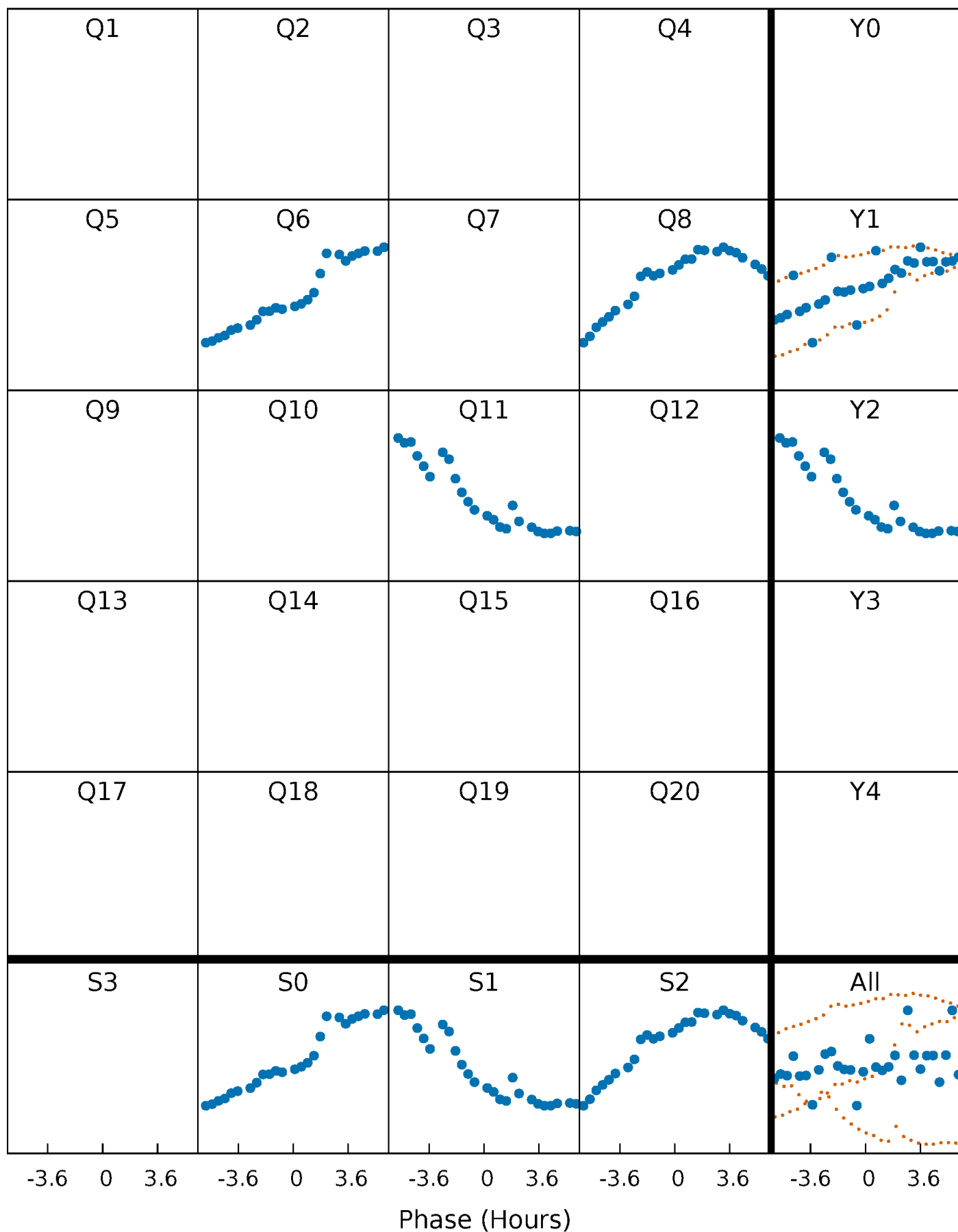


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



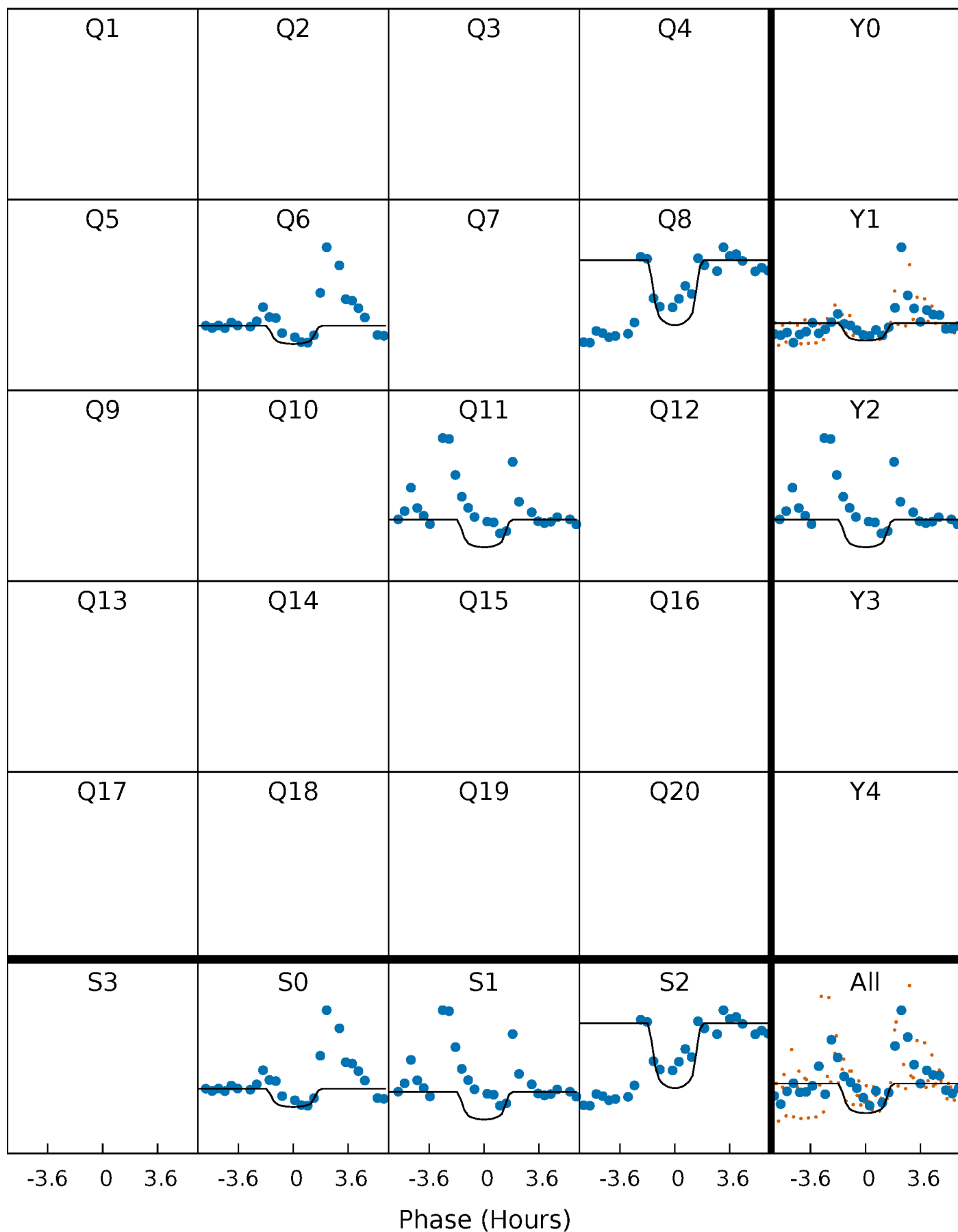
PDC Quarter-Phased Transit Curves

TCE 008414845-01 P=253.608246 Days $T_0=290.911787$ (BKJD)



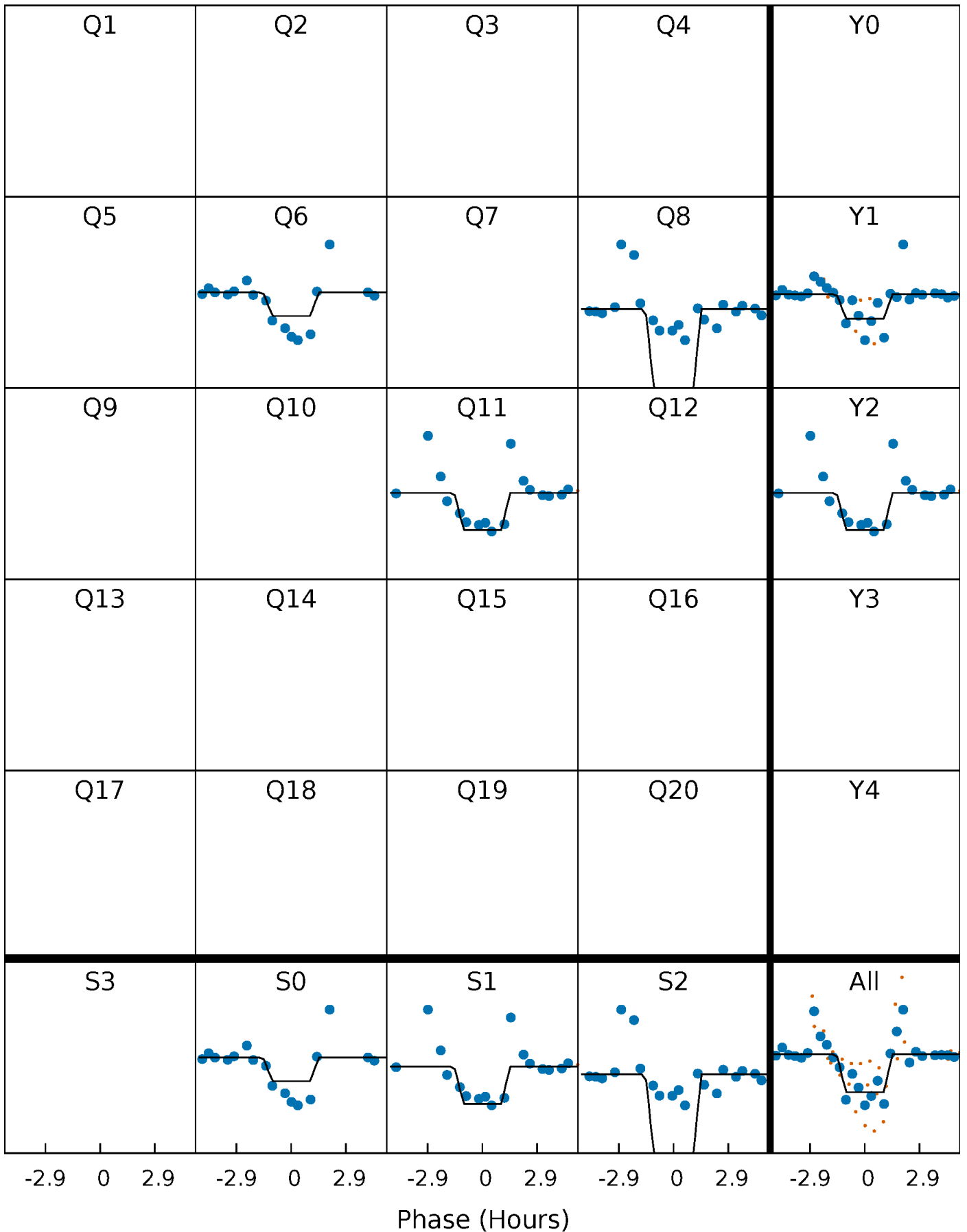
DV Quarter-Phased Transit Curves

TCE 008414845-01 P=253.608246 Days $T_0=290.911787$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

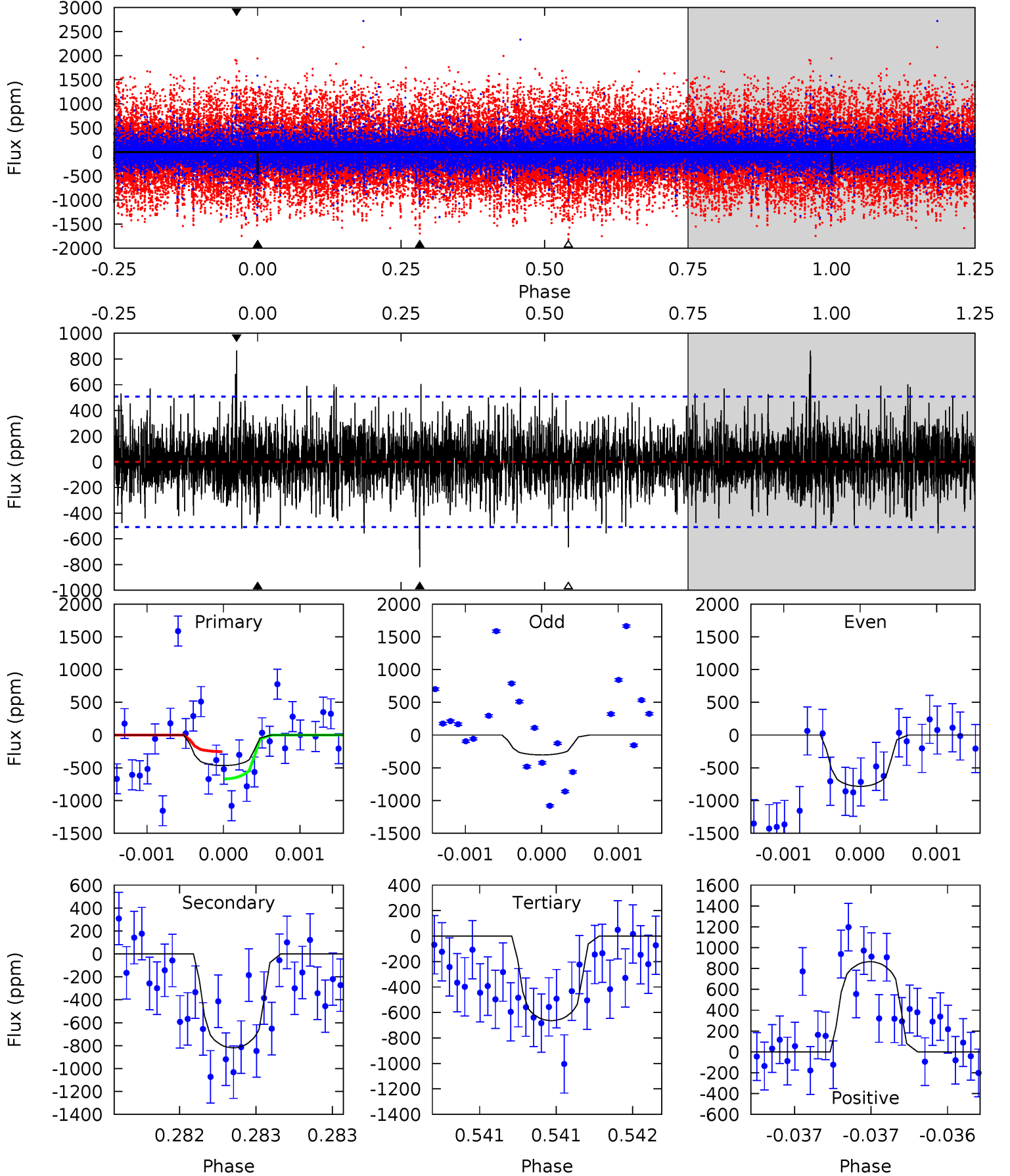
TCE 008414845-01 P=253.607387 Days $T_0=290.930198$ (BKJD)



DV Model-Shift Uniqueness Test

008414845-01, $P = 253.608246$ Days, $E = 37.303541$ Days

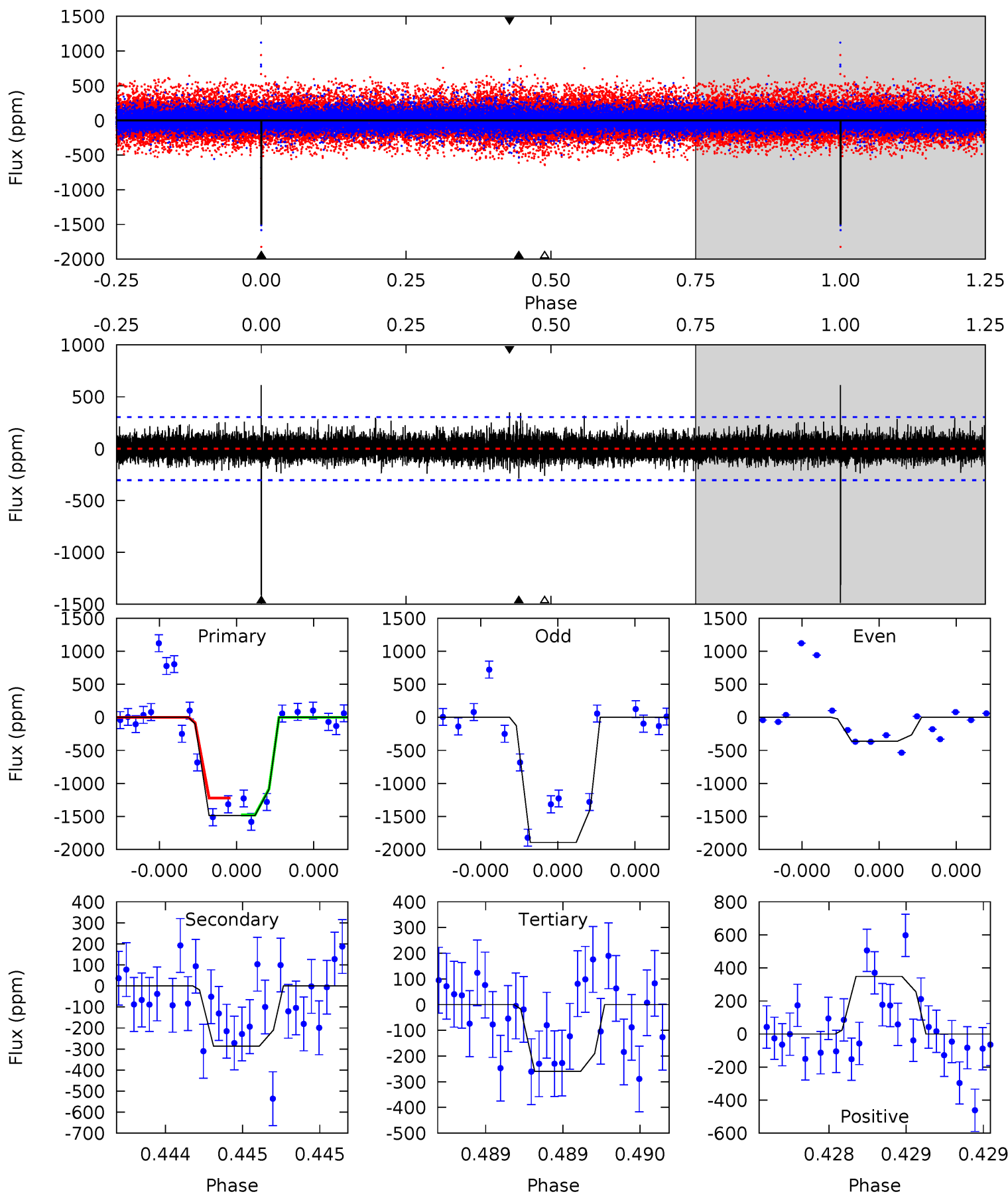
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.11	8.97	7.27	9.48	5.55	3.45	1.69	-2.15	-4.37	1.70	-0.51	2.44	0.74	0.51	2.31



Alt Model-Shift Uniqueness Test

008414845-01, P = 253.607387 Days, E = 37.322811 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.3	5.25	4.77	6.40	5.59	3.51	1.12	22.5	20.9	0.48	-1.15	18.5	1.03	0.29	2.44



Stellar Parameters For KIC 008414845

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5693^{+154}_{-154}	$4.436^{+0.120}_{-0.165}$	$-0.400^{+0.300}_{-0.300}$	$0.899^{+0.224}_{-0.131}$	$0.804^{+0.112}_{-0.056}$	$1.559^{+0.866}_{-0.717}$
	+3%/-3%	+3%/-4%	+75%/-75%	+25%/-15%	+14%/-7%	+56%/-46%
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 008414845-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-819 ± 91	$5.14^{+4.51}_{-3.32}$	392^{+24}_{-21}	4453^{+2911}_{-886}	9241^{+66828}_{-6563}
Alt.	-286 ± 54	$5.41^{+4.45}_{-3.38}$	392^{+24}_{-20}	3616^{+1631}_{-576}	2894^{+18020}_{-2043}

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 $A_{obs} \gg 1.0$

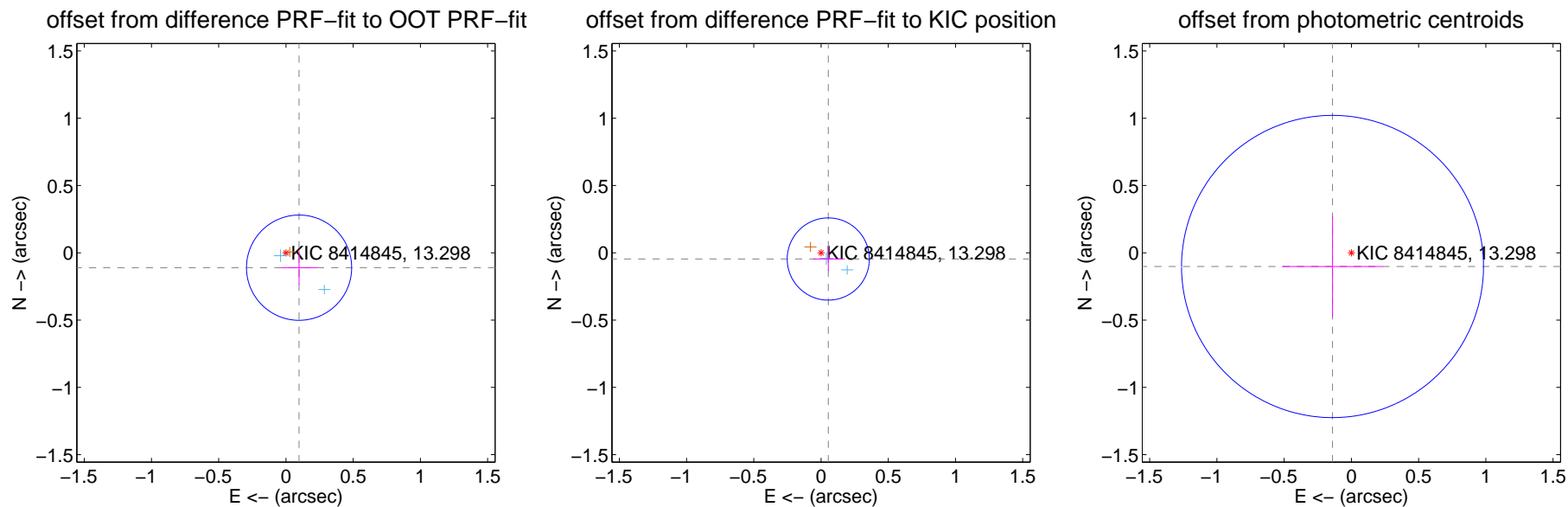
DV Centroid Data

Supplemental centroid analysis for 008414845-01. Kepler magnitude: 13.30. Transit SNR 7.30

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.148 ± 0.130	1.13	-0.098 ± 0.134	-0.111 ± 0.127
PRF-fit source offset from KIC position	0.071 ± 0.102	0.70	-0.054 ± 0.111	-0.046 ± 0.088
photometric centroid source offset	0.17 ± 0.37	0.46	0.14 ± 0.37	-0.10 ± 0.37



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.

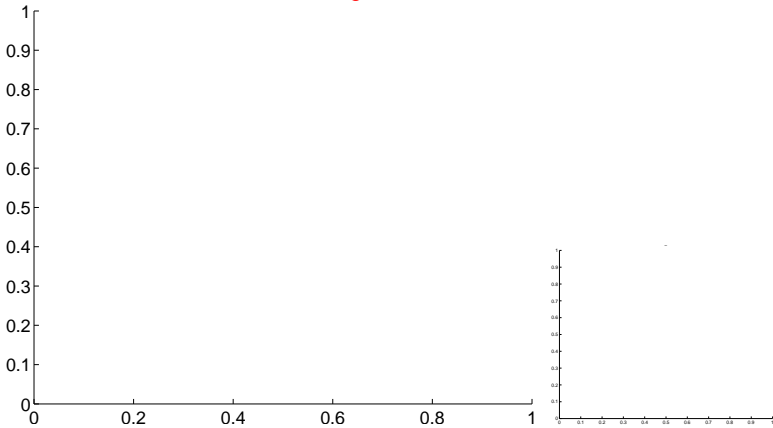


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

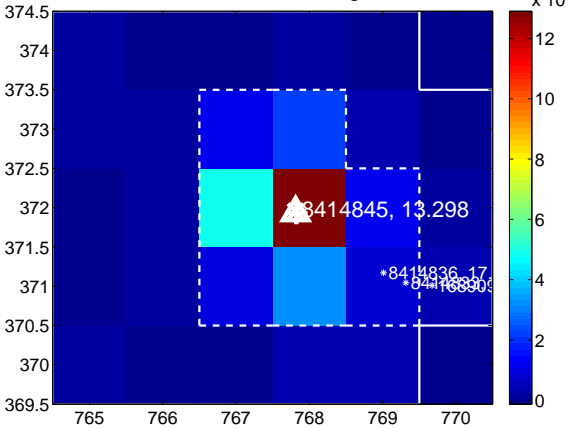
Q5 no difference image



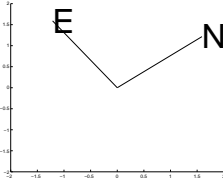
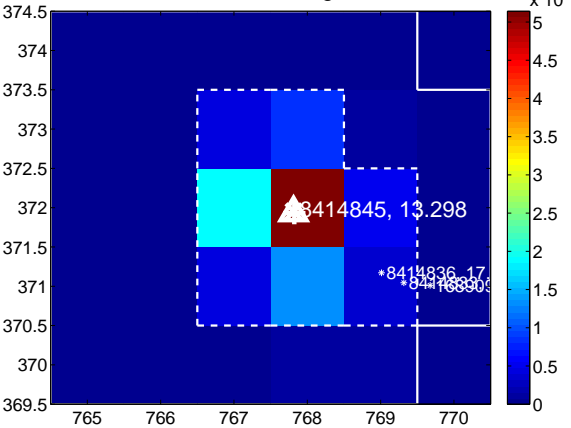
Q5 no OOT image



Q6 difference image



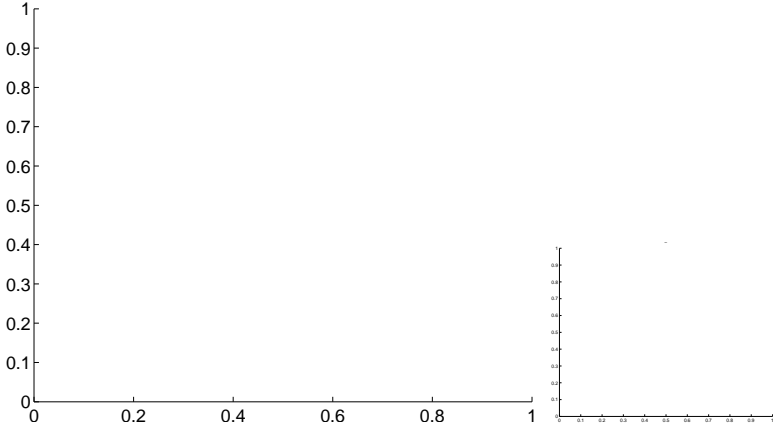
Q6 OOT image



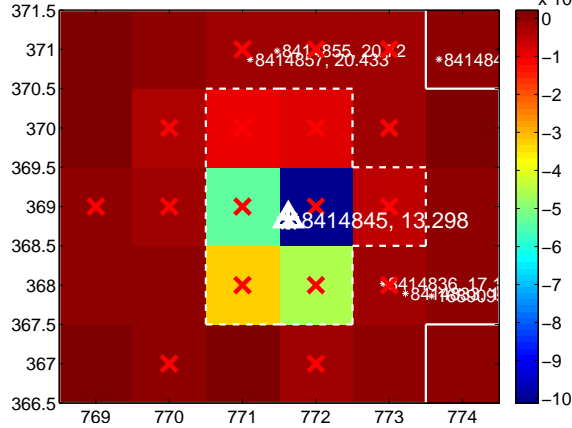
Q7 no difference image



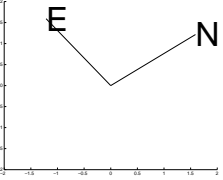
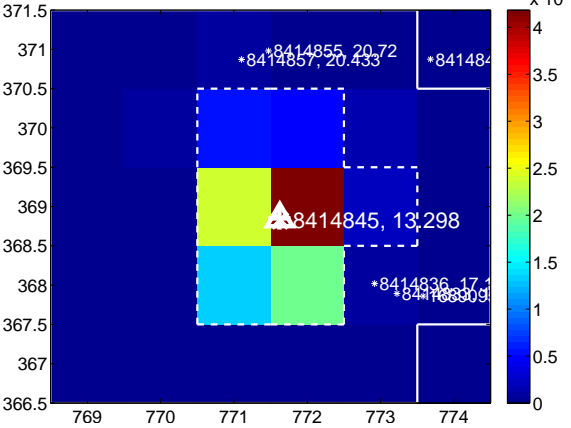
Q7 no OOT image



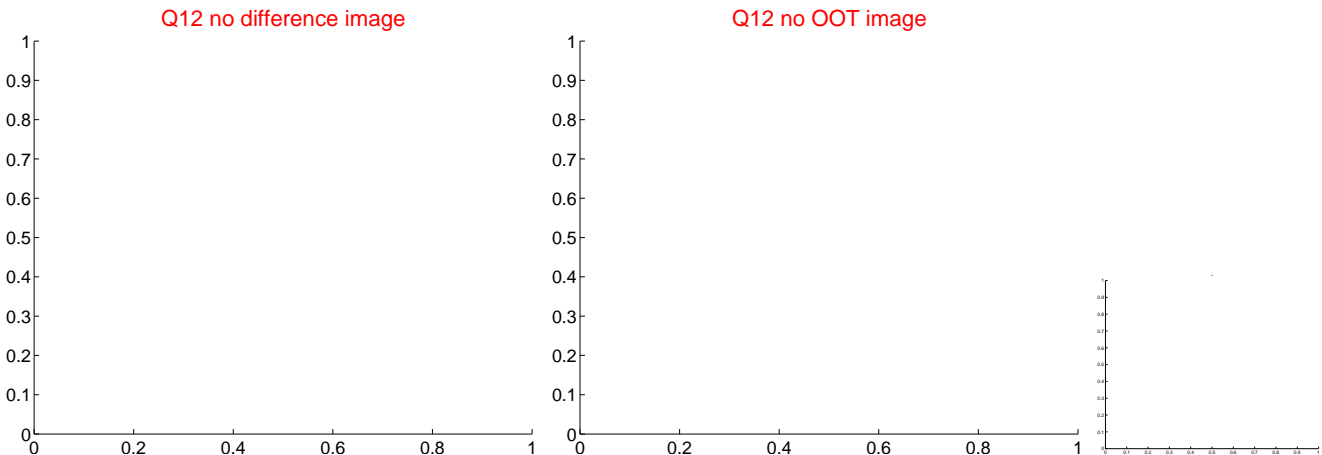
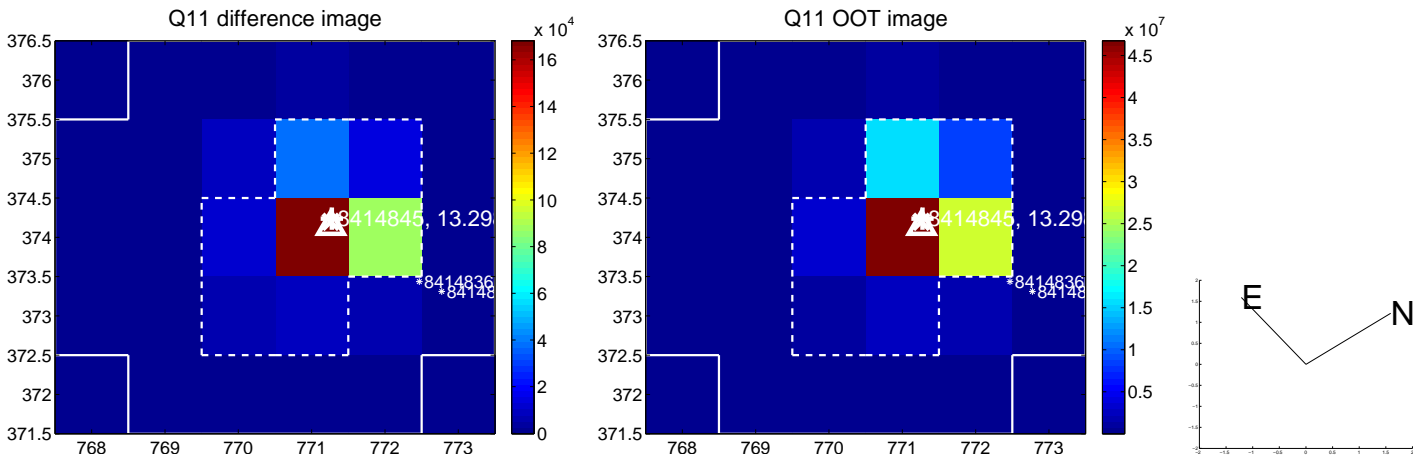
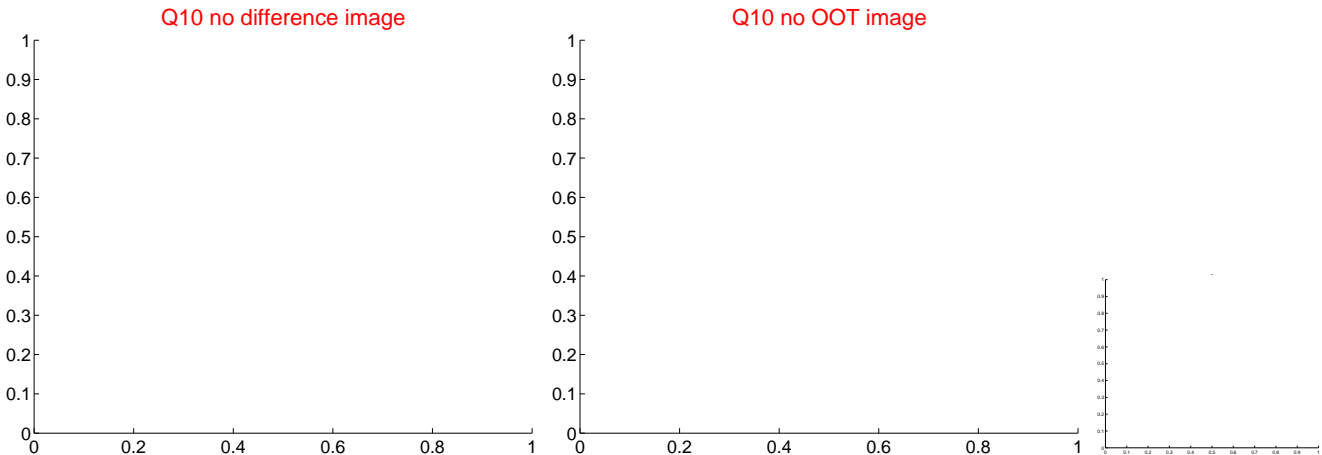
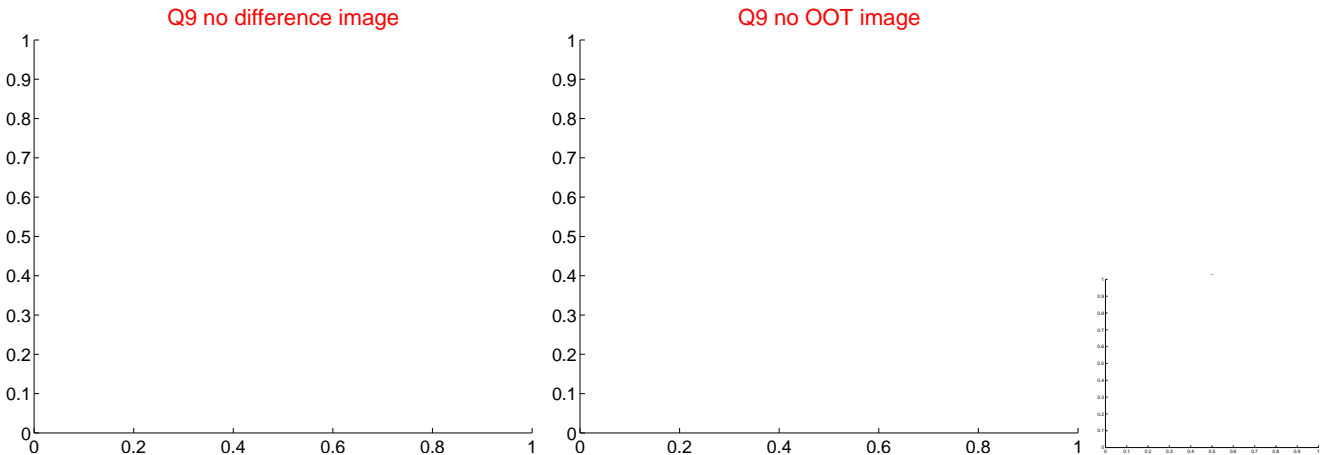
Q8 difference image. Poor Quality



Q8 OOT image



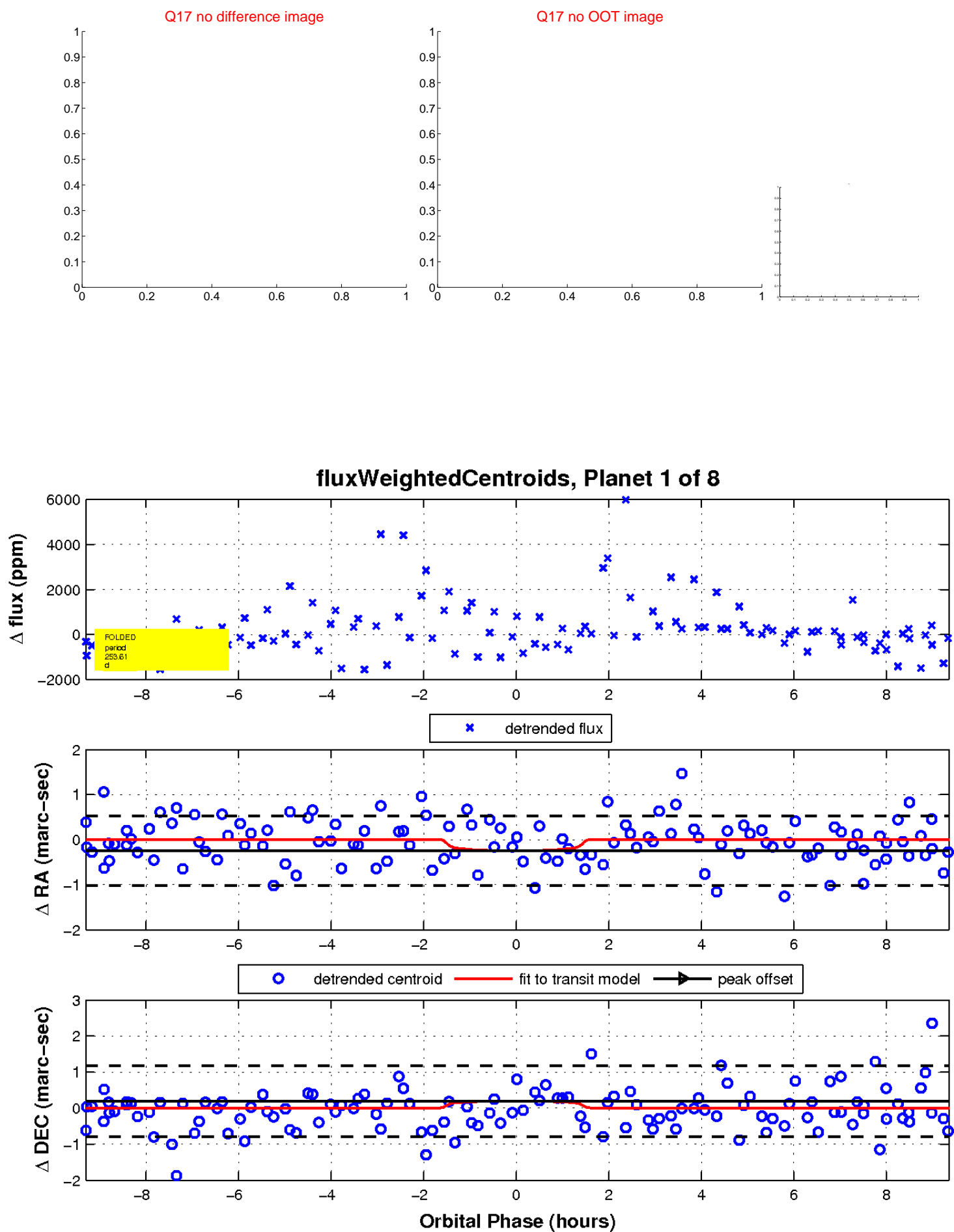
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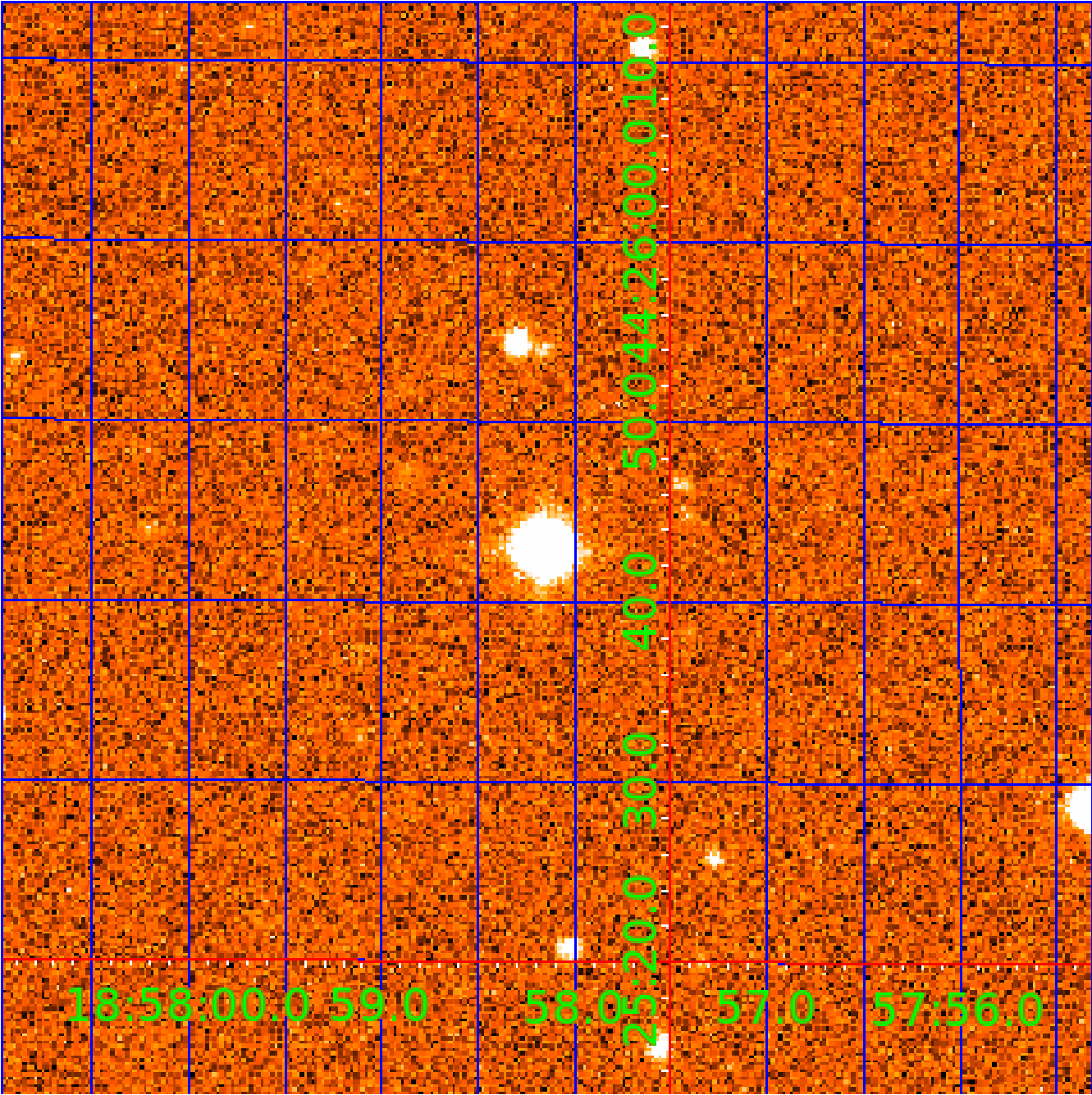


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008414845

Q1-17 DR25 TCE Parameters

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Robovetter Results

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008414845-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008414845-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
008414845-05	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008414845-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
008414845-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

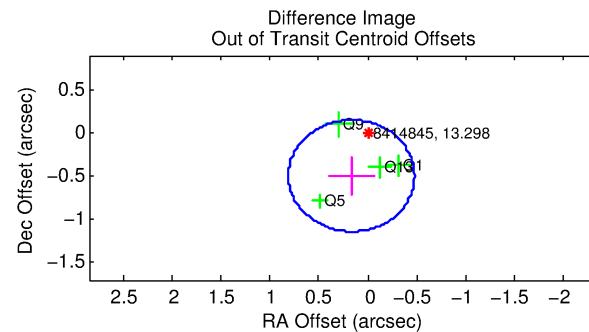
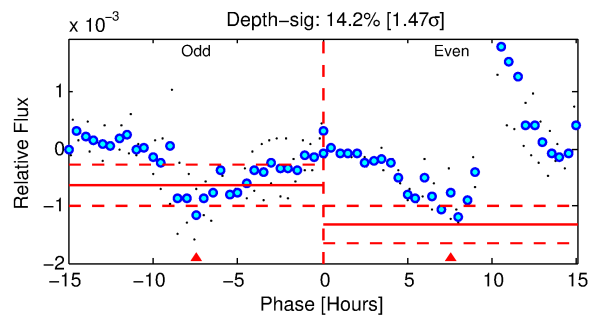
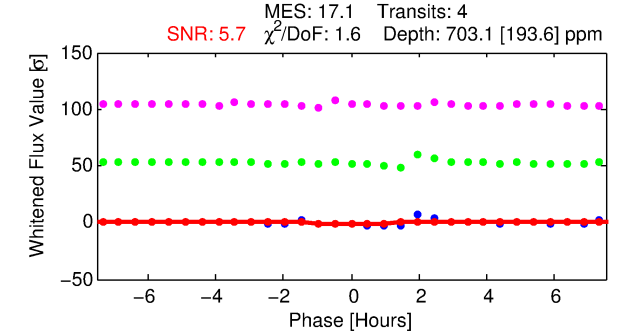
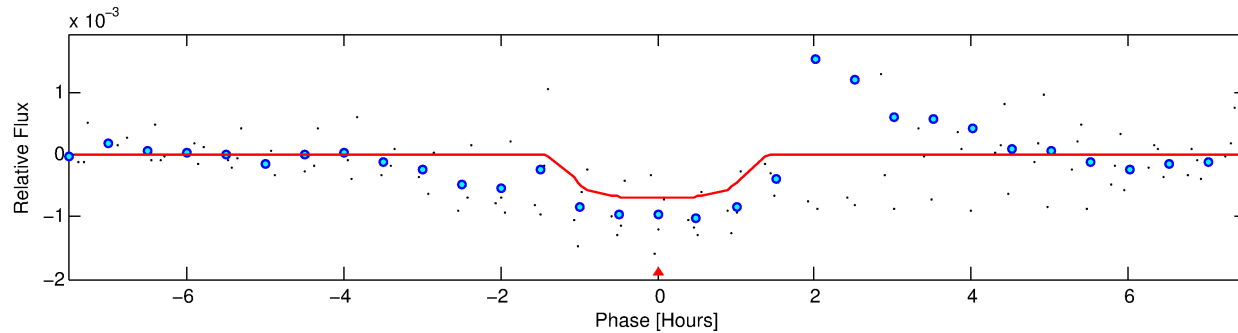
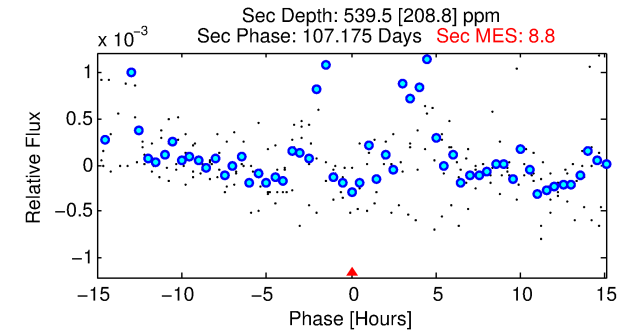
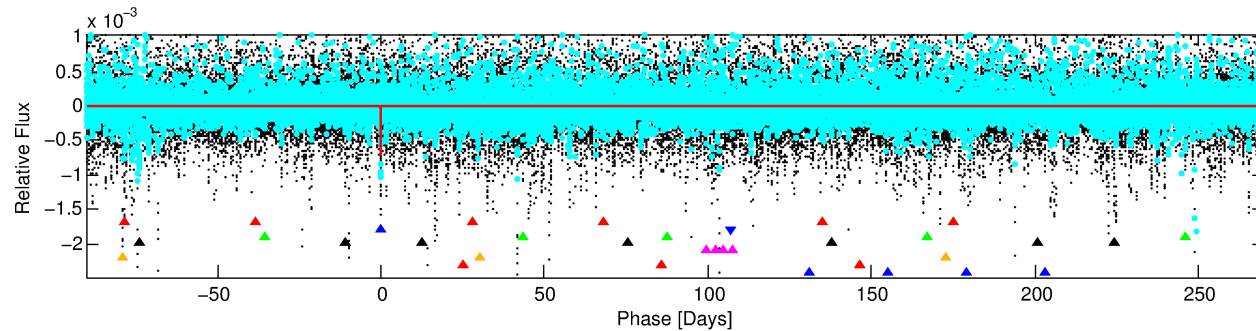
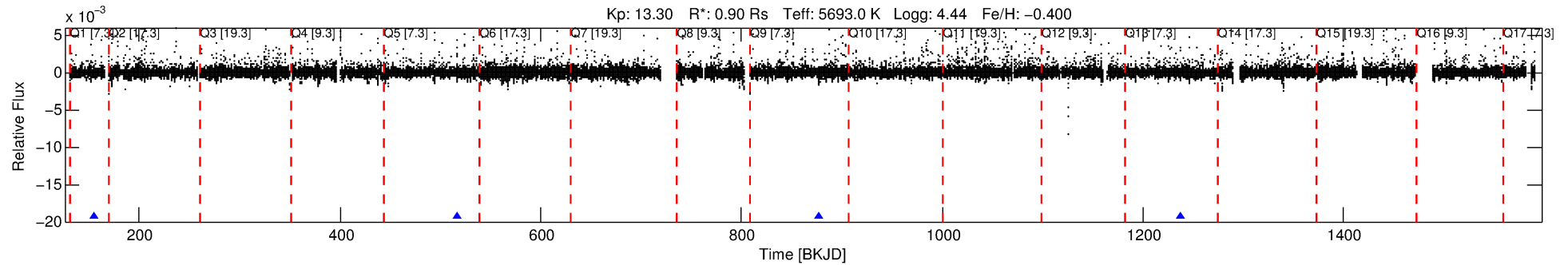
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008414845-02

No Significant Match Found

DV One-Page Summary

KIC: 8414845 Candidate: 2 of 8 Period: 360.451 d



DV Fit Results:

Period = 360.45072 [0.00486] d
Epoch = 155.7649 [0.0098] BKJD
Rp/R* = 0.0271 [0.0271]
a/R* = 694.58 [3068.37]
b = 0.81 [1.92]
Seff = 0.89 [0.29]
Teq = 248 [20] K
Rp = 2.66 [2.74] Re
a = 0.9221 [0.1926] AU
Ag = 35723.80 [73544.16] [0.49σ]
Teffp = 5271 [2687] K [1.87σ]

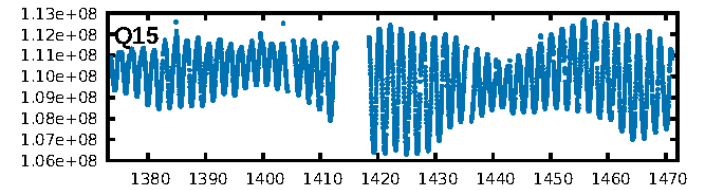
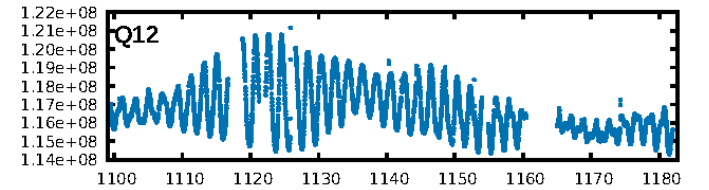
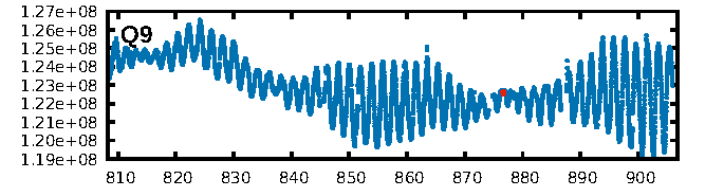
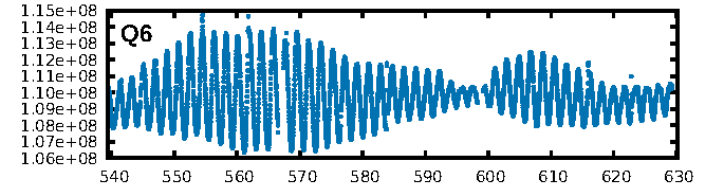
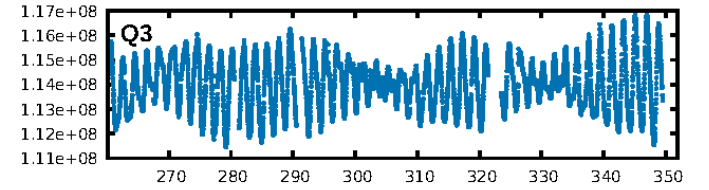
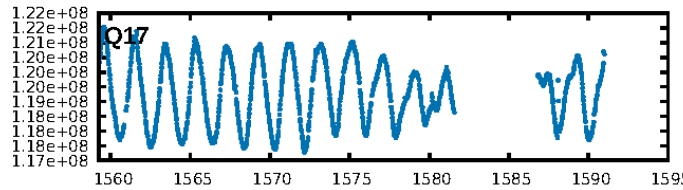
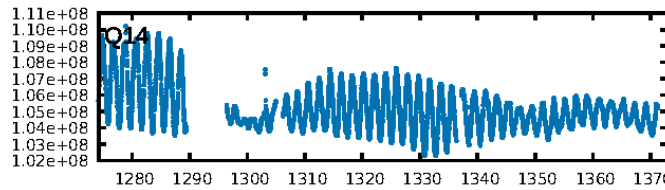
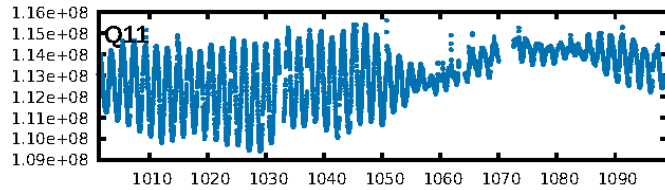
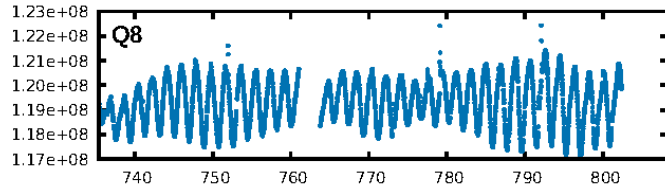
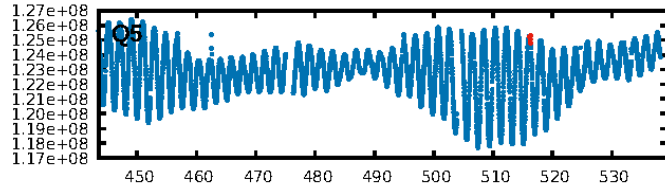
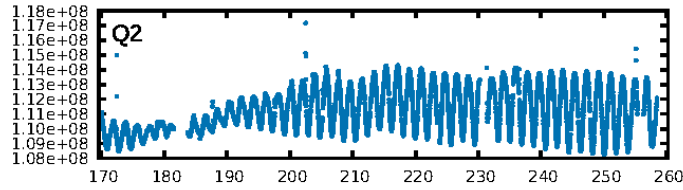
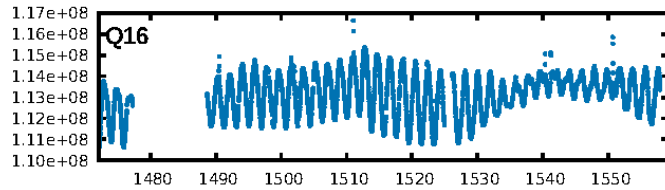
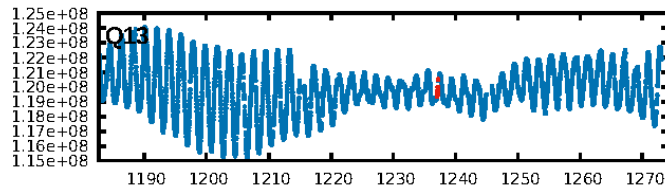
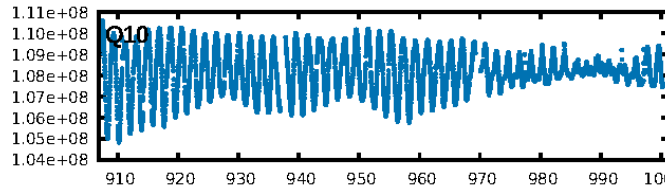
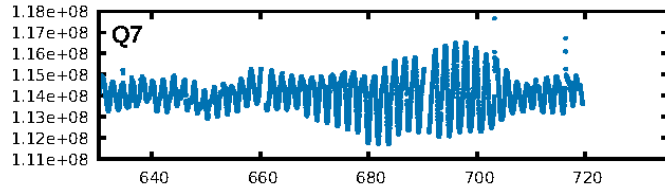
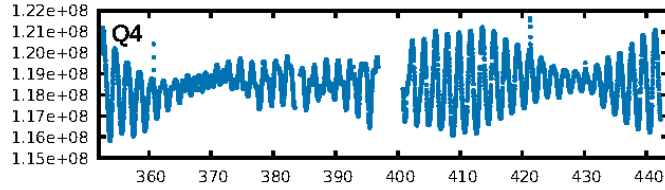
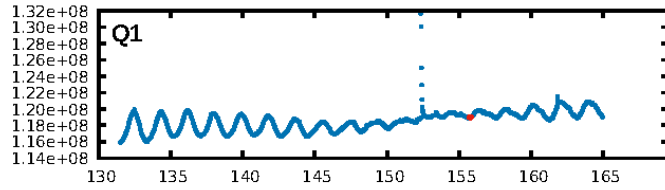
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [148.77σ]
LongPeriod-sig: 93.7% [1.86σ]
ModelChiSquare2-sig: 20.5%
ModelChiSquareGof-sig: 28.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.013
Centroid-sig: 5.6%
Centroid-so: 0.880 arcsec [1.27σ]
OotOffset-rm: 0.523 arcsec [2.43σ]
KicOffset-rm: 0.490 arcsec [2.28σ]
OotOffset-st: 0/0/0/4 [4]
KicOffset-st: 0/0/0/4 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [4/4]

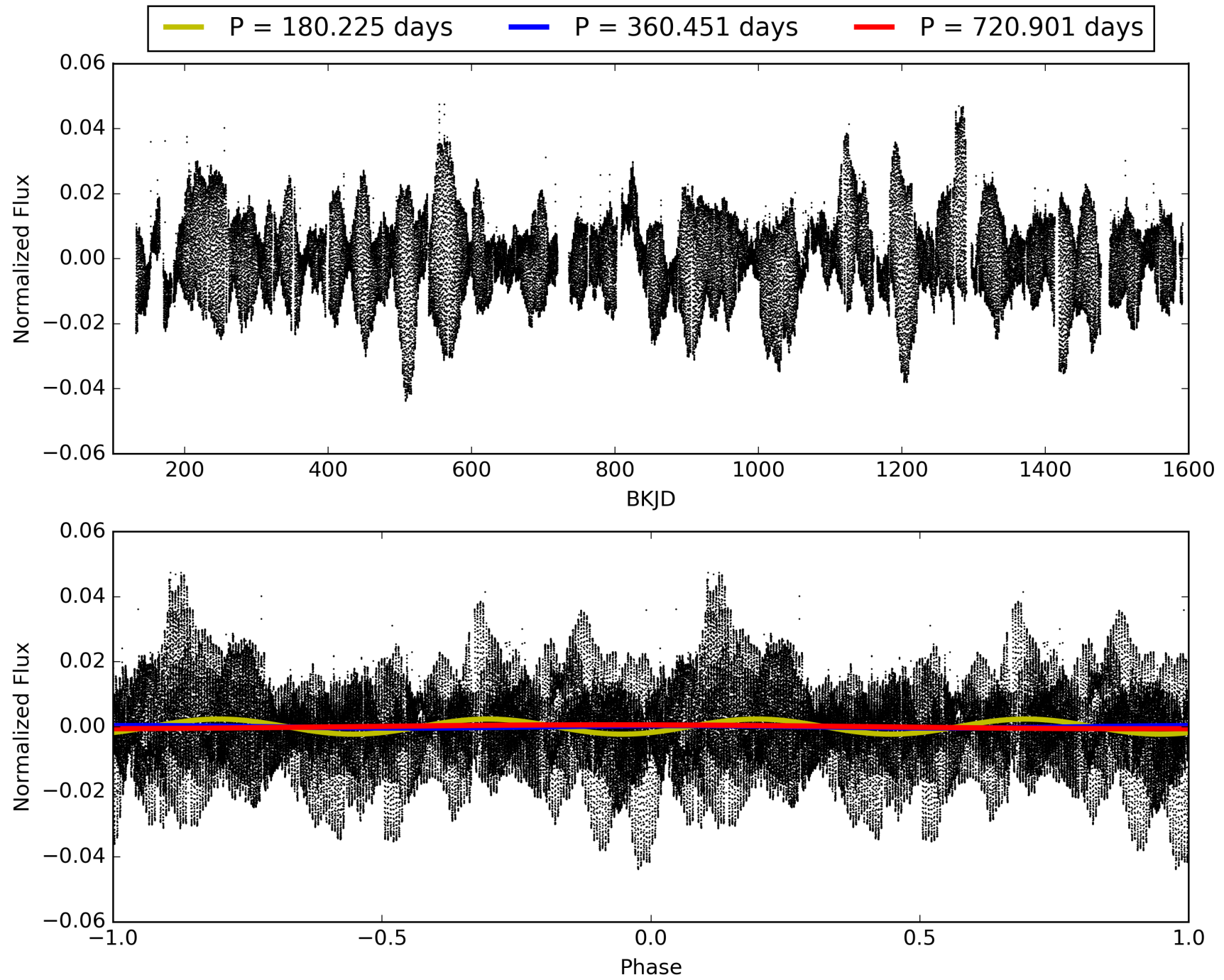
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 08:37:54 Z

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

TCE 008414845-02, PDC Light Curves

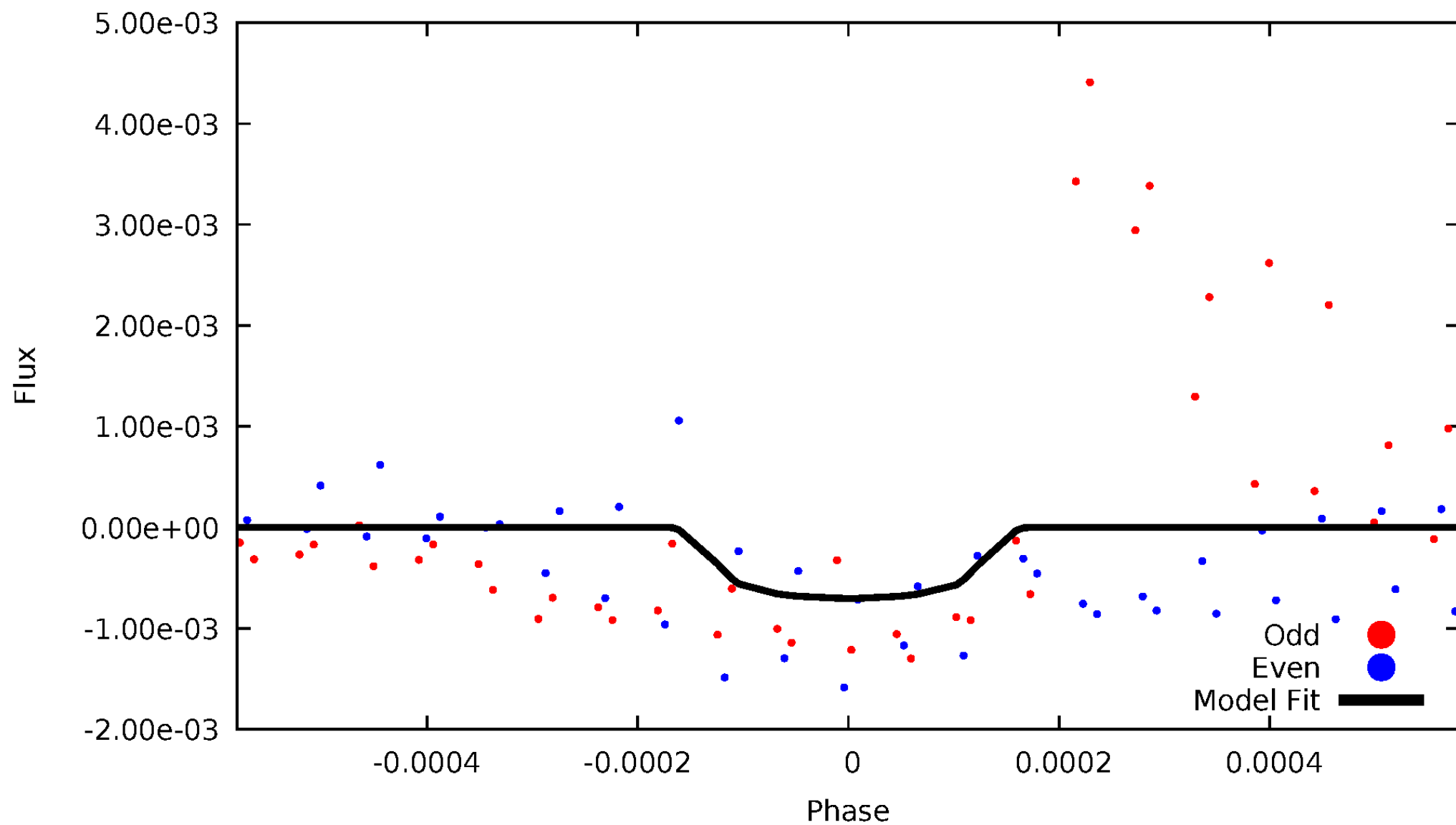


TCE 008414845-02



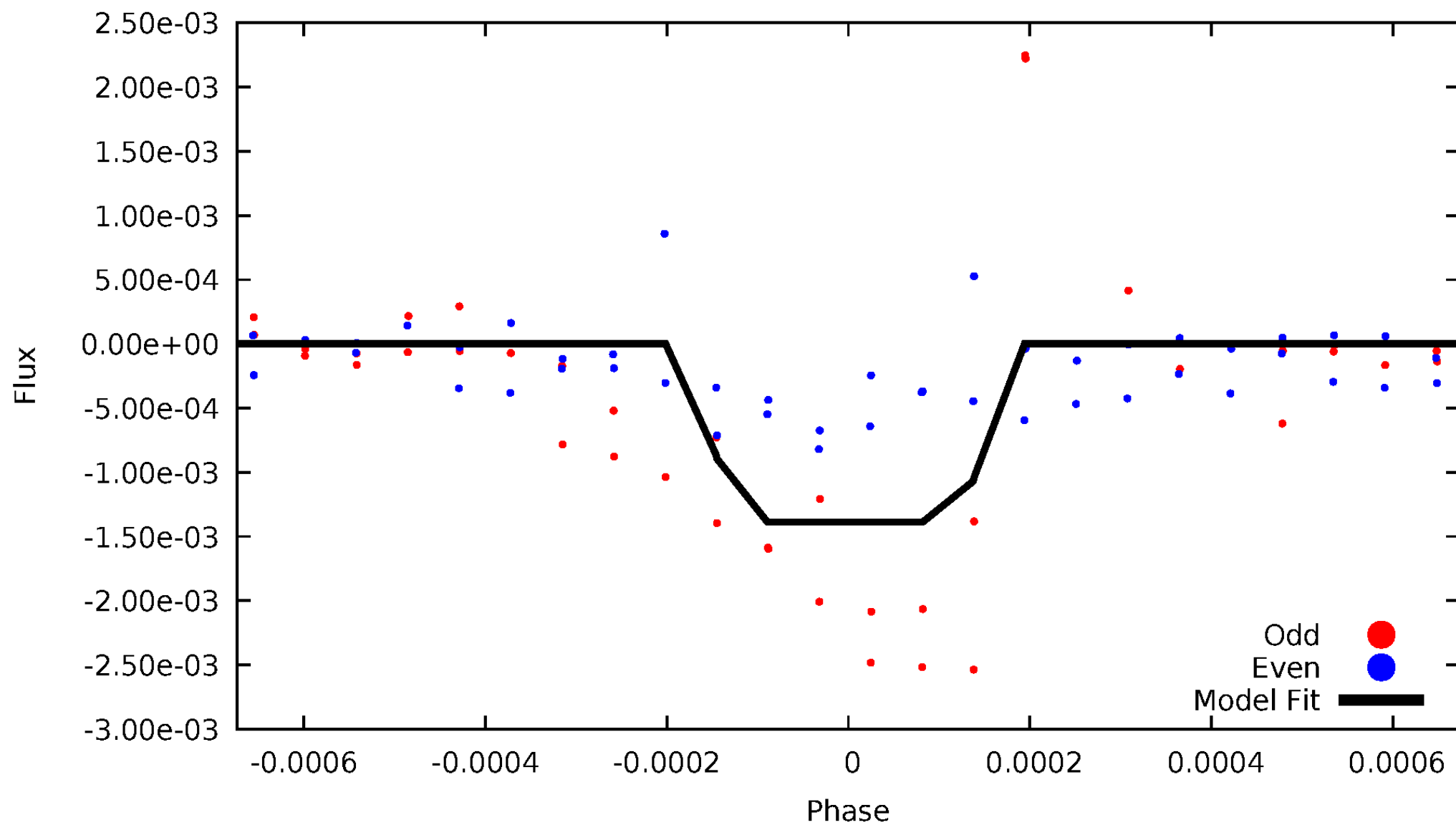
DV Odd/Even

TCE 008414845-02



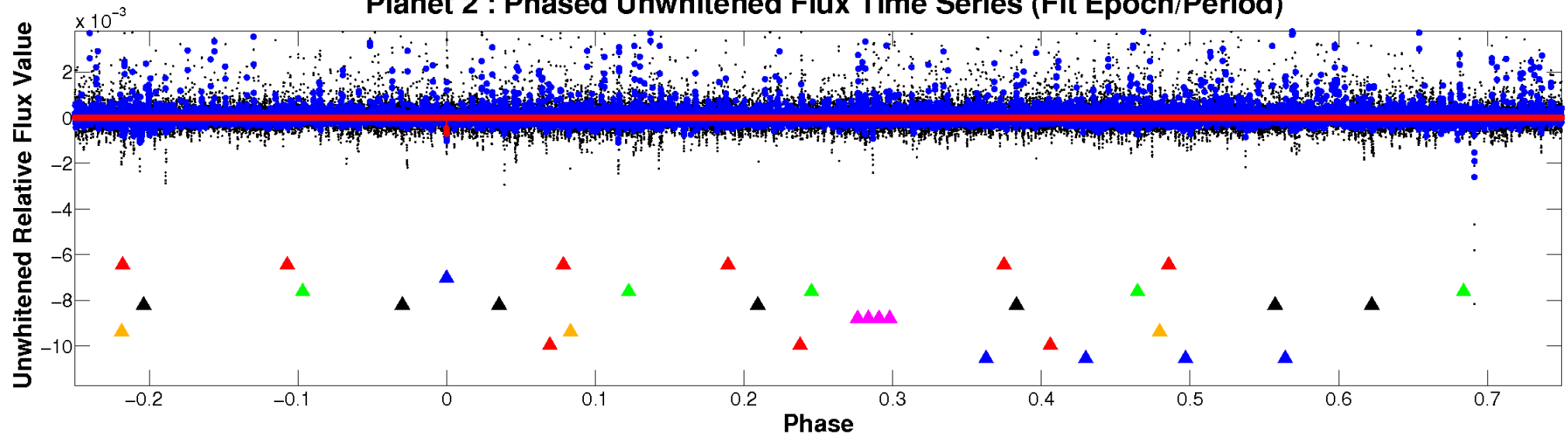
ALT Odd/Even

TCE 008414845-02

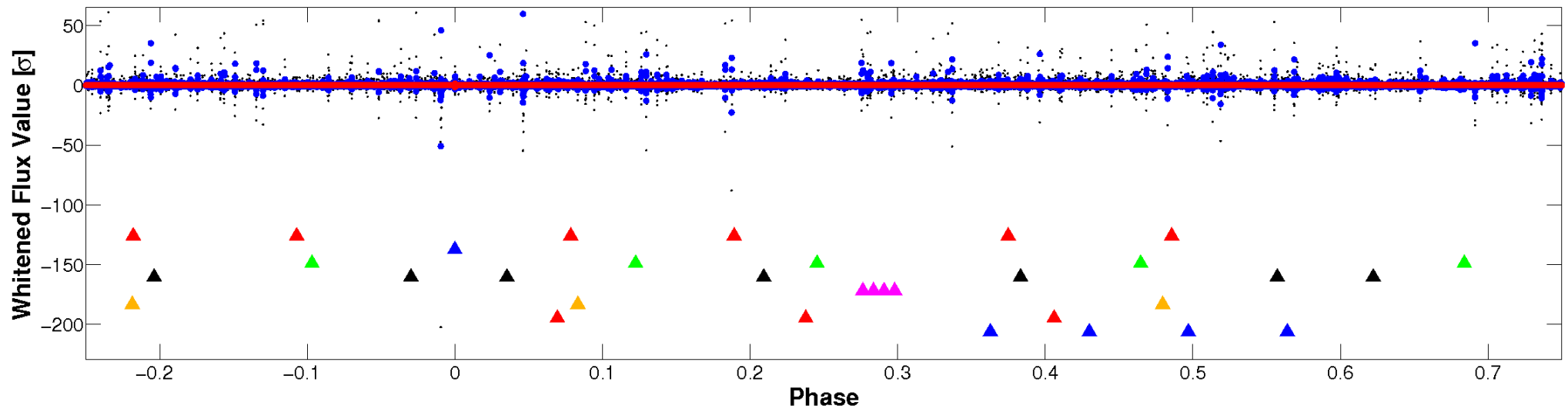


Non-Whitened Vs. Whitened Light Curve

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

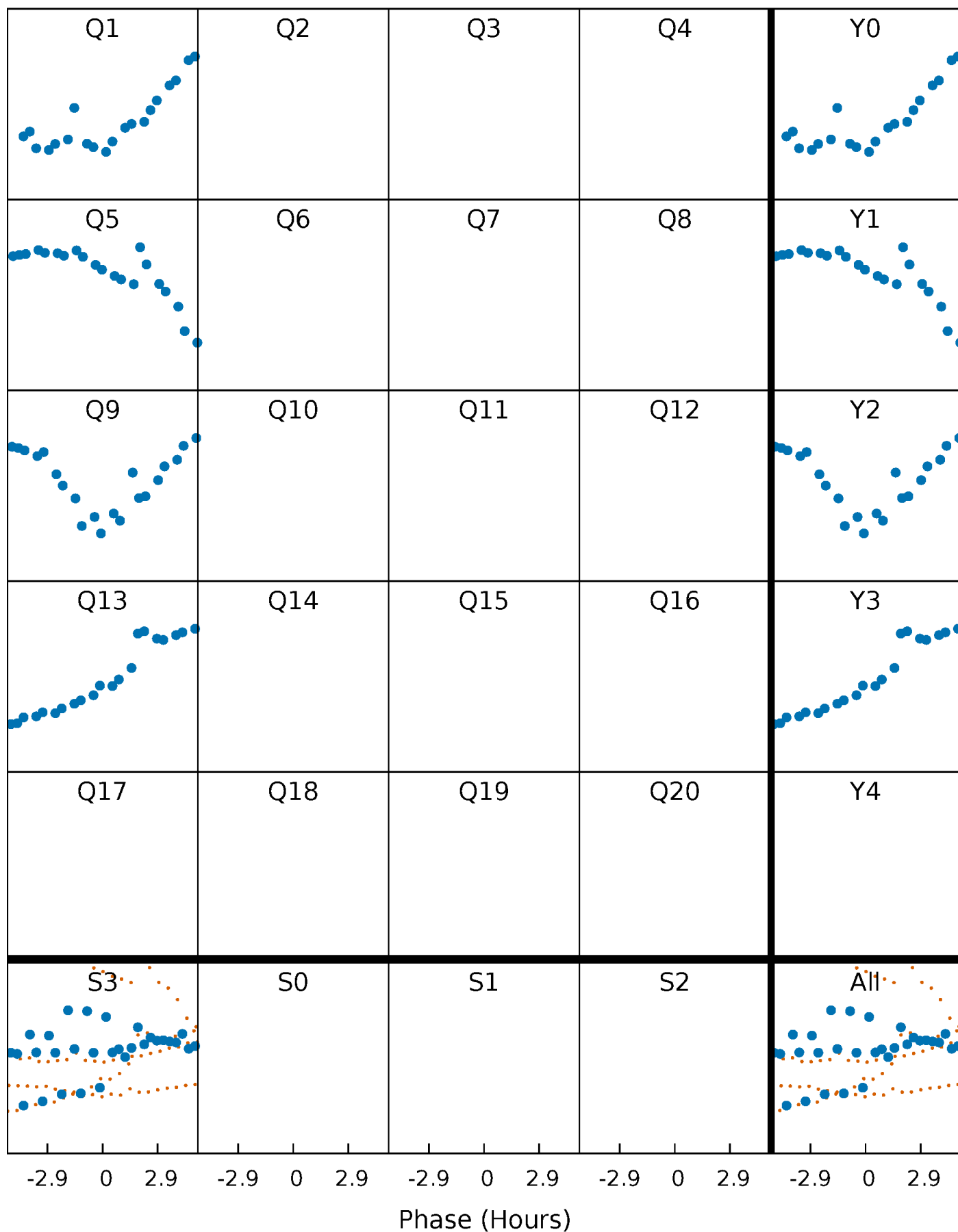


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



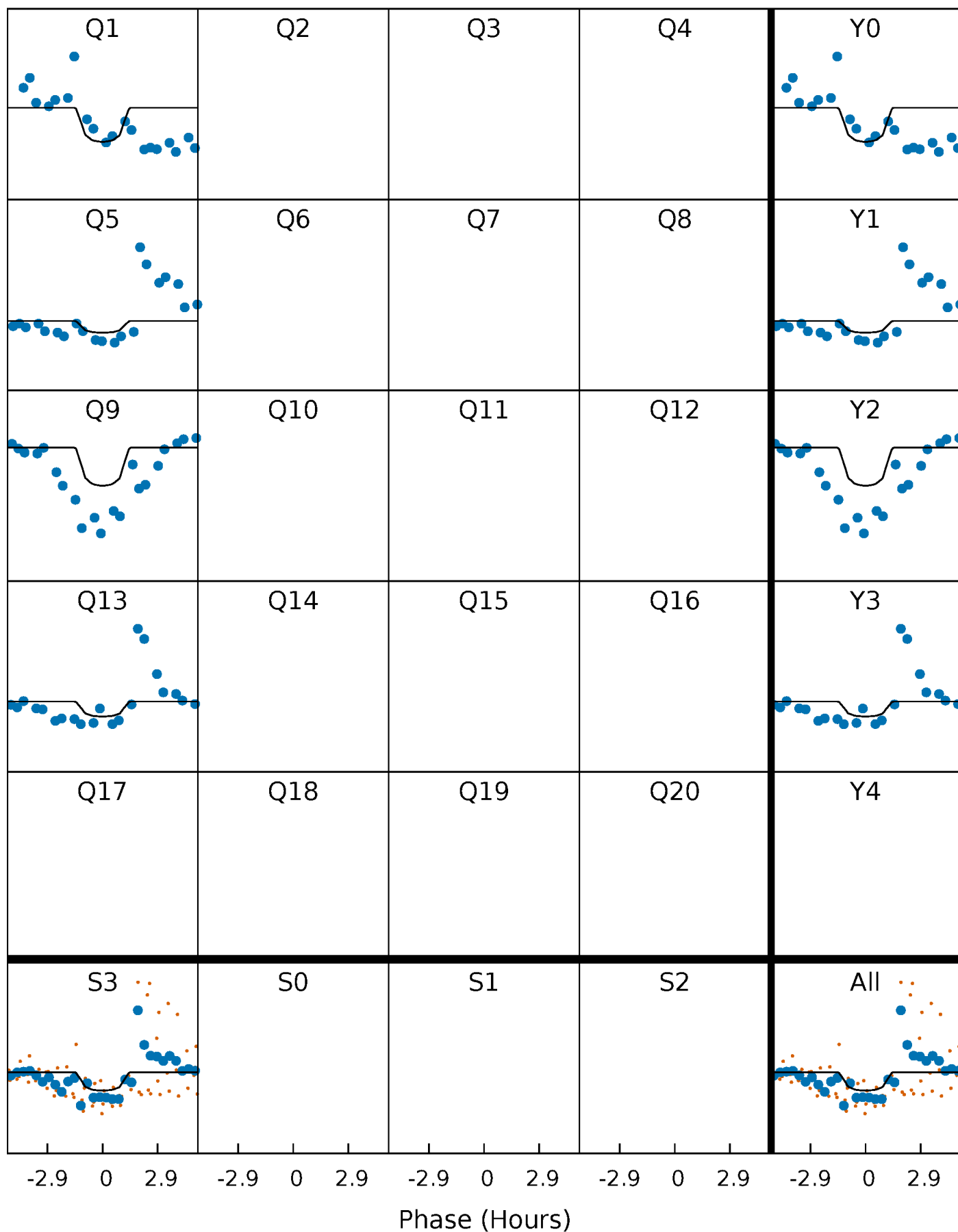
PDC Quarter-Phased Transit Curves

TCE 008414845-02 $P=360.450724$ Days $T_0=155.764876$ (BKJD)



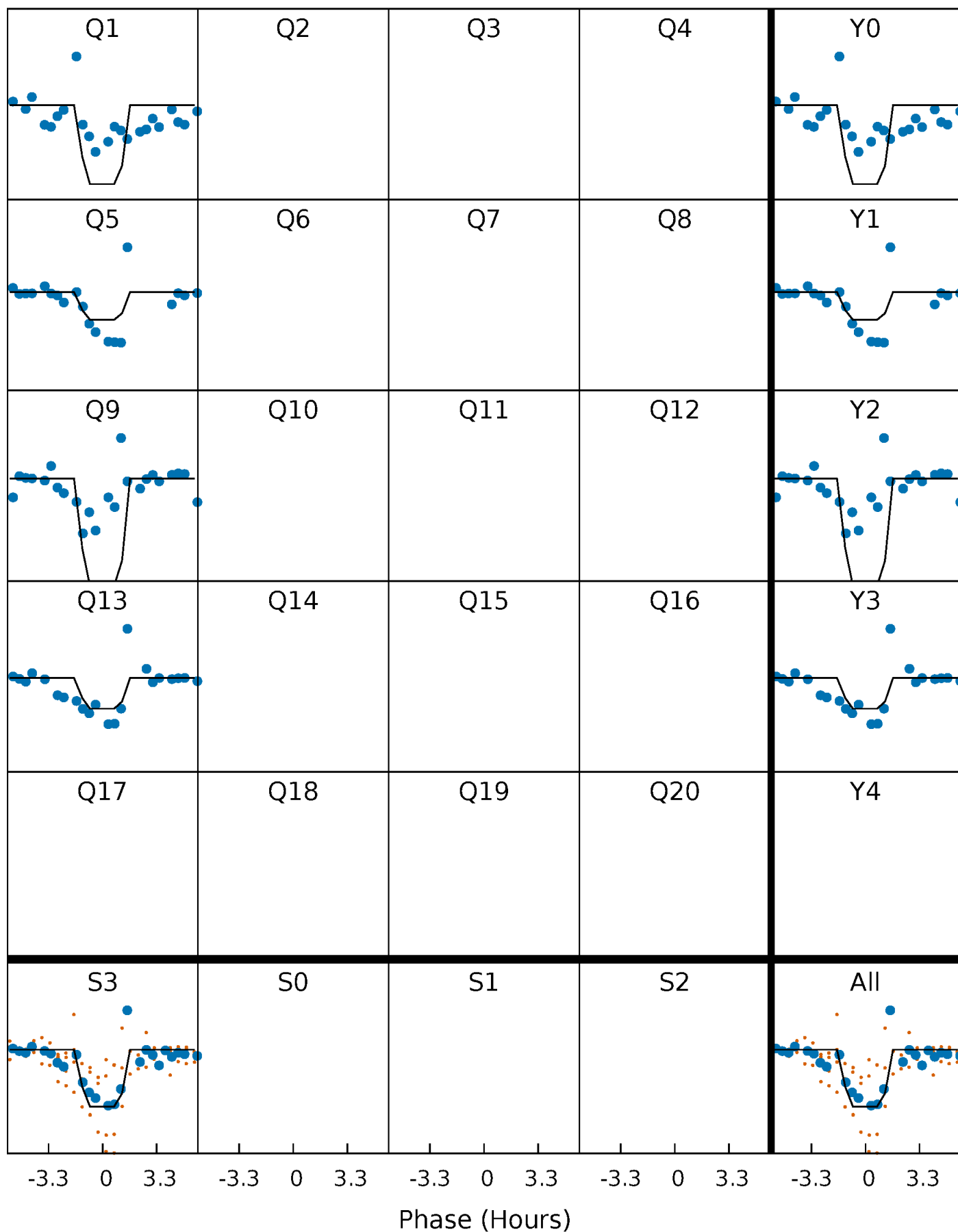
DV Quarter-Phased Transit Curves

TCE 008414845-02 $P=360.450724$ Days $T_0=155.764876$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

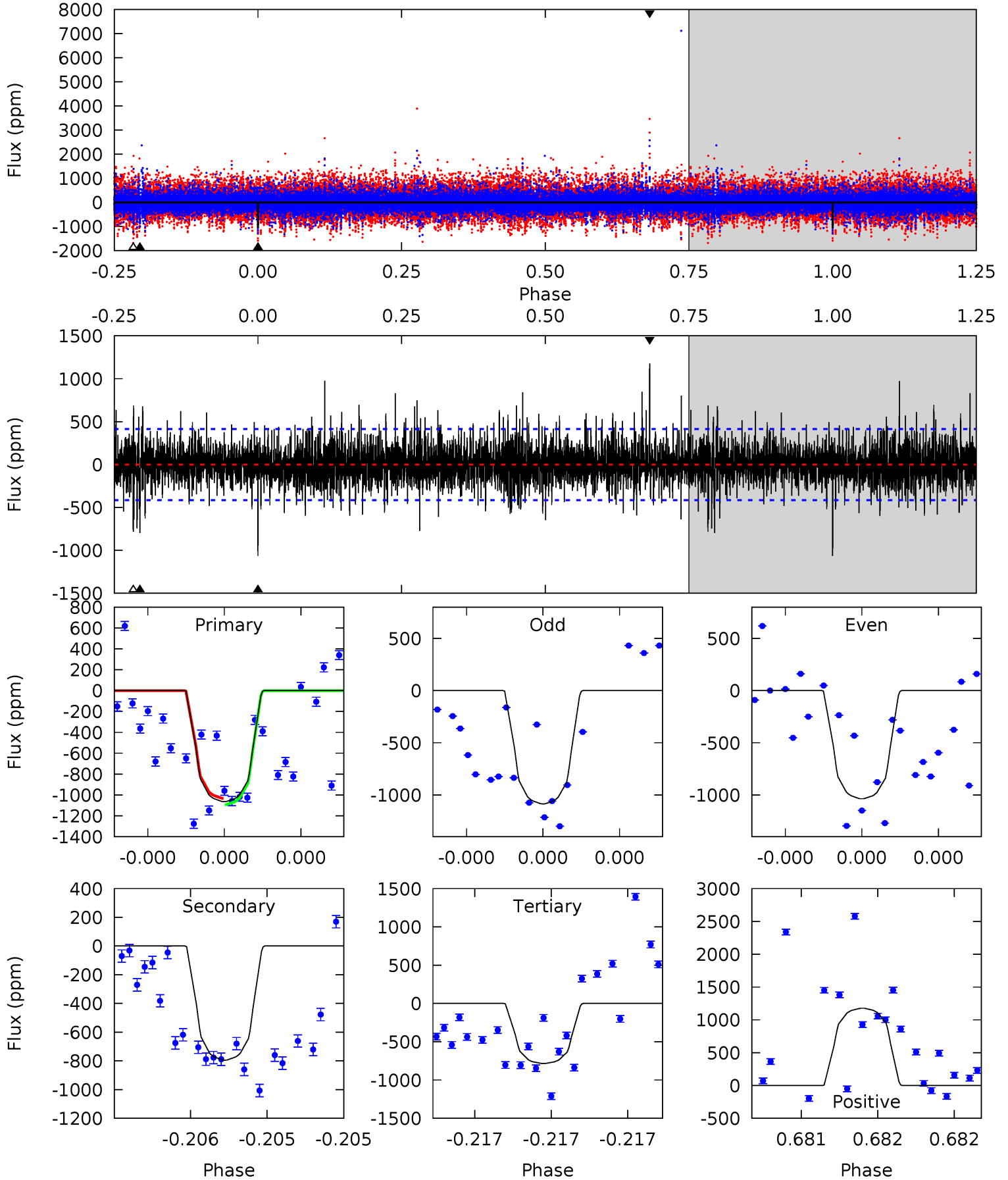
TCE 008414845-02 P=360.448186 Days $T_0=155.779900$ (BKJD)



DV Model-Shift Uniqueness Test

008414845-02, P = 360.450724 Days, E = 155.764876 Days

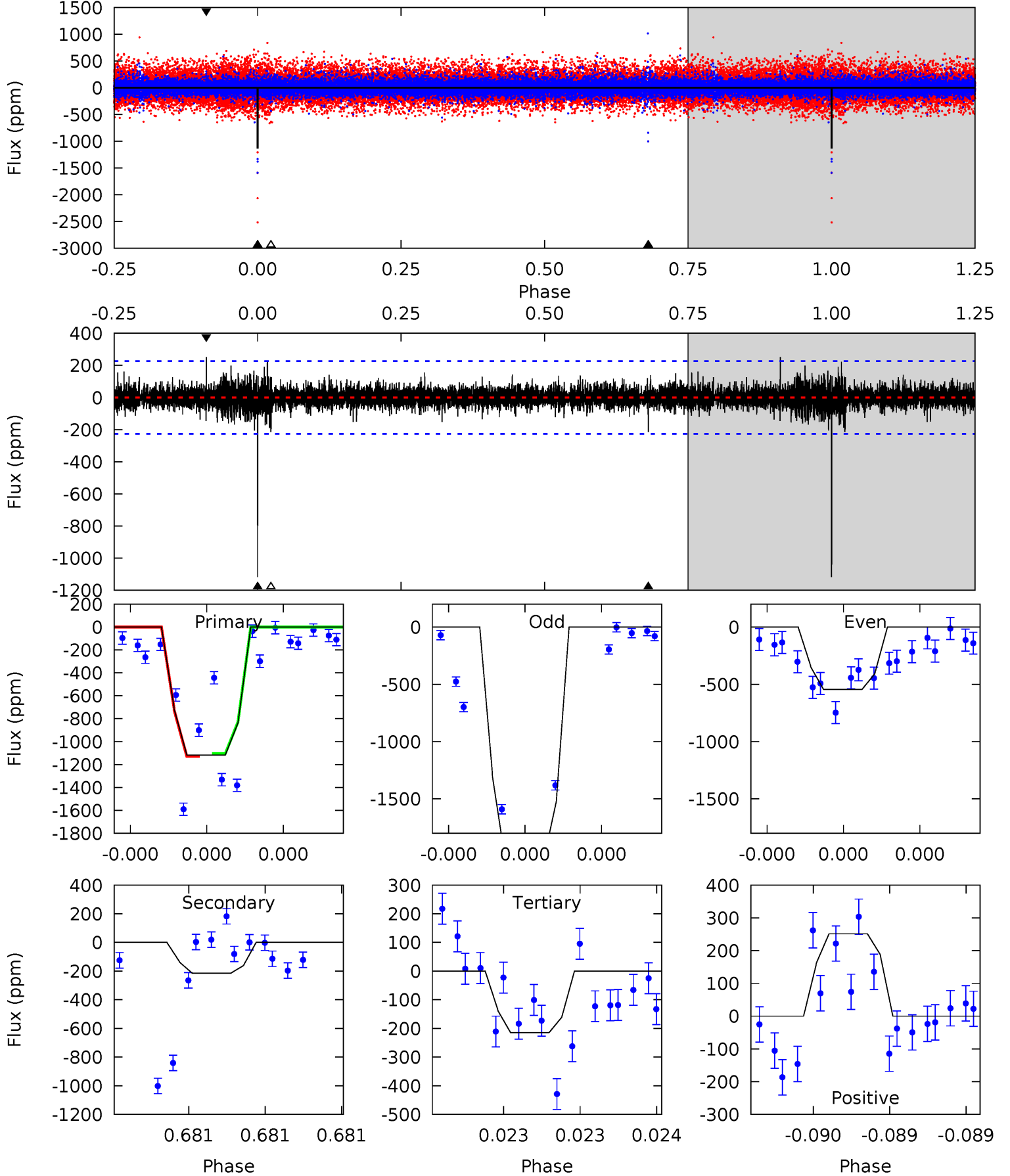
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	10.8	10.7	16.0	5.64	3.59	2.36	3.81	-1.55	0.14	-5.21	0.29	0.98	0.53	0.42



Alt Model-Shift Uniqueness Test

008414845-02, P = 360.448186 Days, E = 155.779900 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.8	5.34	5.34	6.25	5.64	3.58	0.91	22.4	21.5	0.01	-0.90	20.8	1.04	0.18	0.32



Stellar Parameters For KIC 008414845

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5693^{+154}_{-154}	$4.436^{+0.120}_{-0.165}$	$-0.400^{+0.300}_{-0.300}$	$0.899^{+0.224}_{-0.131}$	$0.804^{+0.112}_{-0.056}$	$1.559^{+0.866}_{-0.717}$
	+3%/-3%	+3%/-4%	+75%/-75%	+25%/-15%	+14%/-7%	+56%/-46%
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 008414845-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-795 ± 73	$3.37^{+2.52}_{-1.91}$	347^{+24}_{-17}	5245^{+2984}_{-1054}	$32684^{+147861}_{-22103}$
Alt.	-215 ± 40	$4.21^{+2.58}_{-2.52}$	348^{+23}_{-17}	3757^{+1491}_{-543}	5728^{+27578}_{-3624}

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

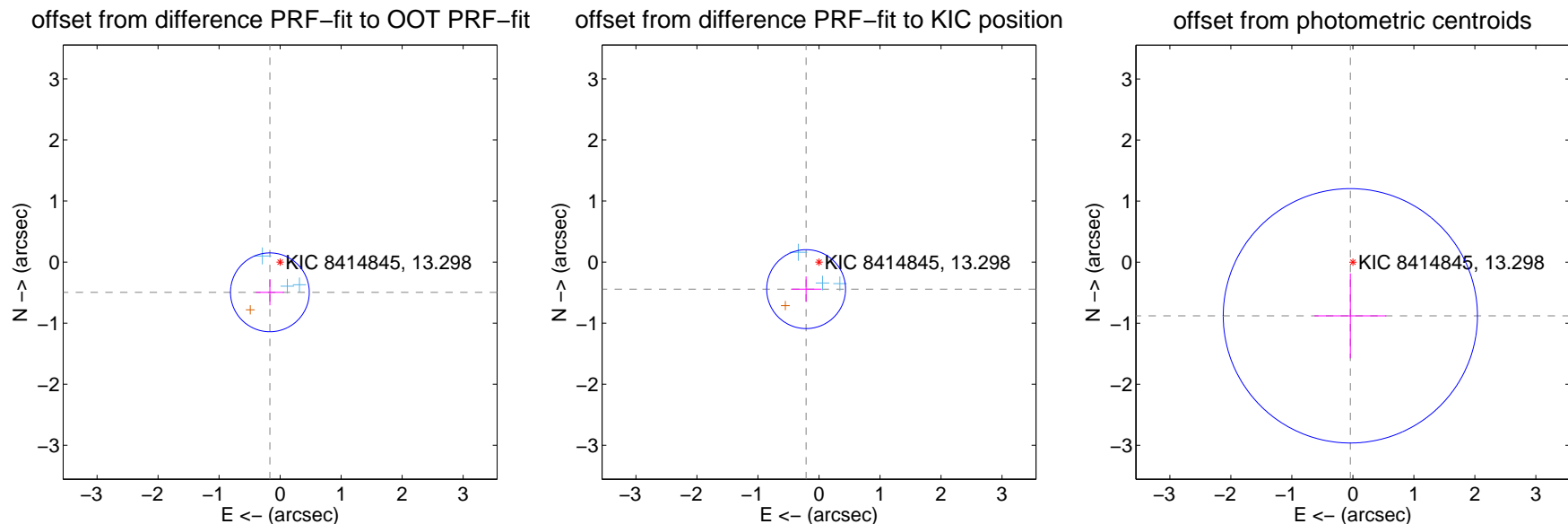
DV Centroid Data

Supplemental centroid analysis for 008414845-02. Kepler magnitude: 13.30. Transit SNR 5.75

There are 3 quarters with good PRF difference image offsets

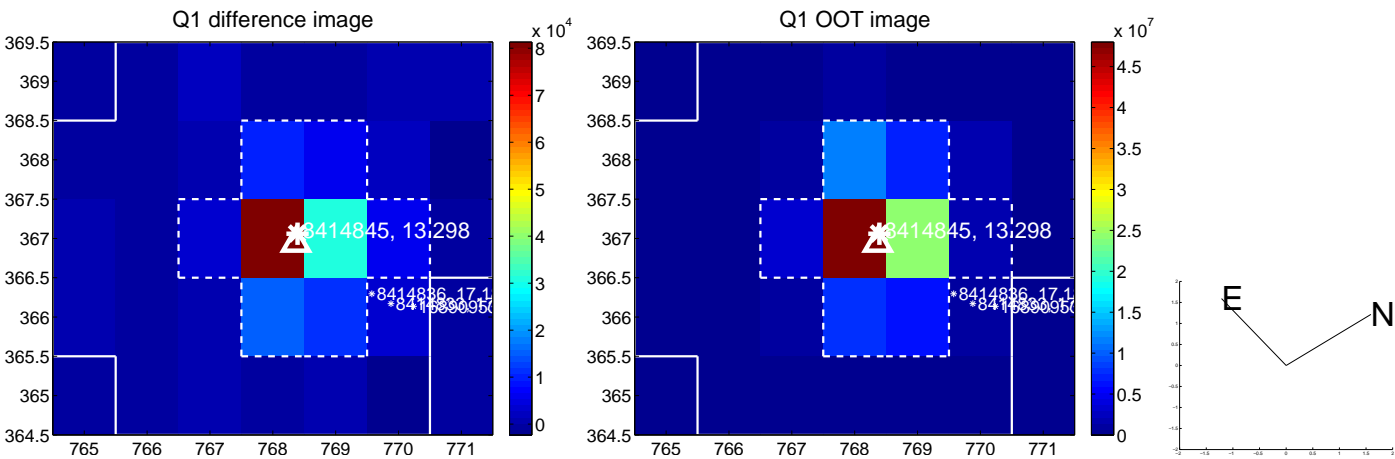
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.523 ± 0.215	2.43	0.168 ± 0.231	-0.495 ± 0.213
PRF-fit source offset from KIC position	0.490 ± 0.215	2.28	0.210 ± 0.247	-0.443 ± 0.207
photometric centroid source offset	0.88 ± 0.69	1.27	0.04 ± 0.59	-0.88 ± 0.69

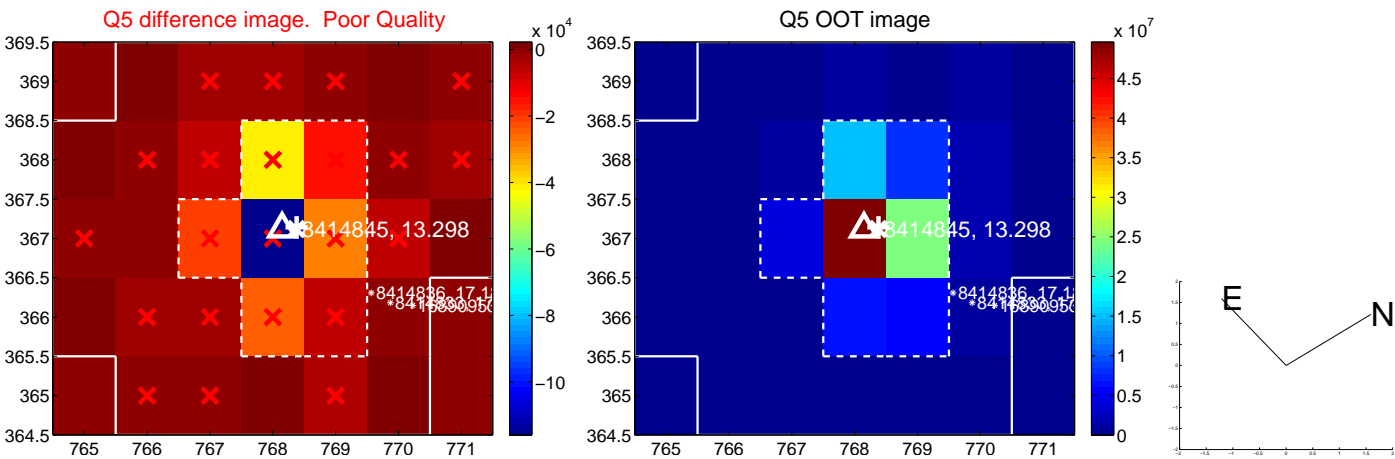


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

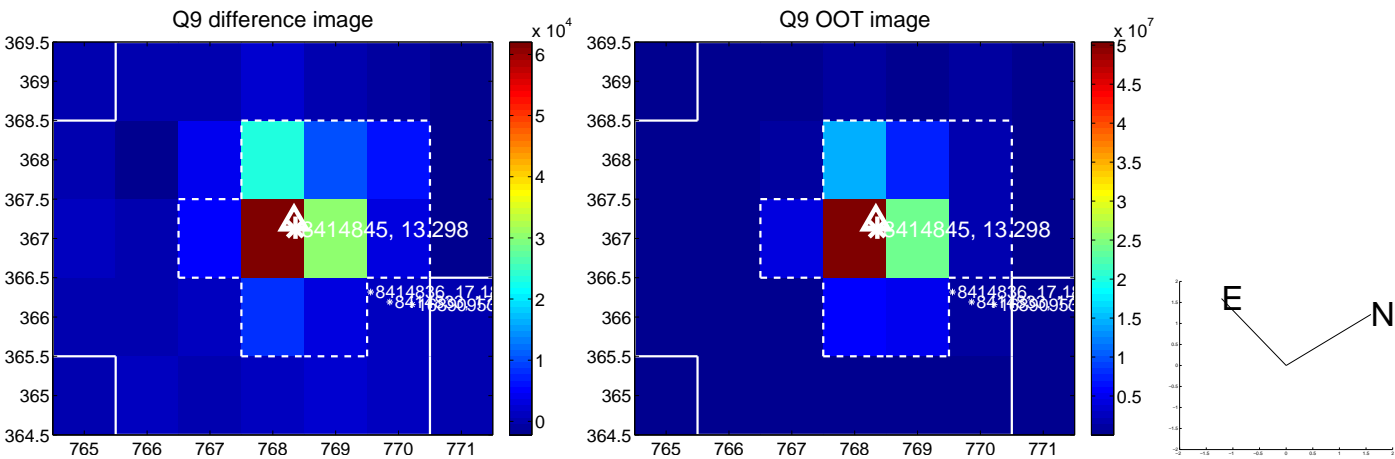
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



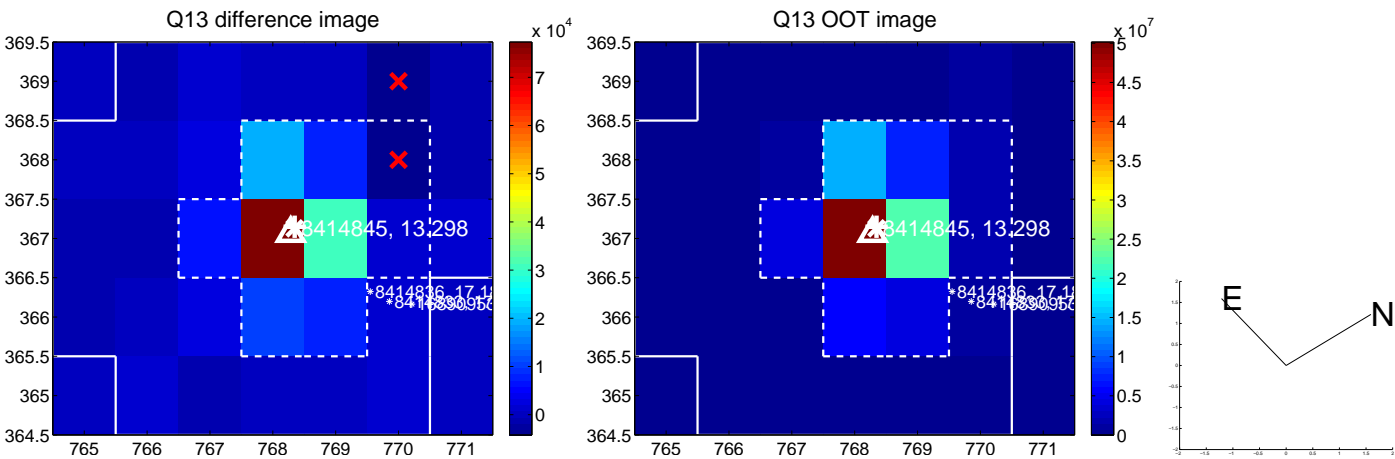
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



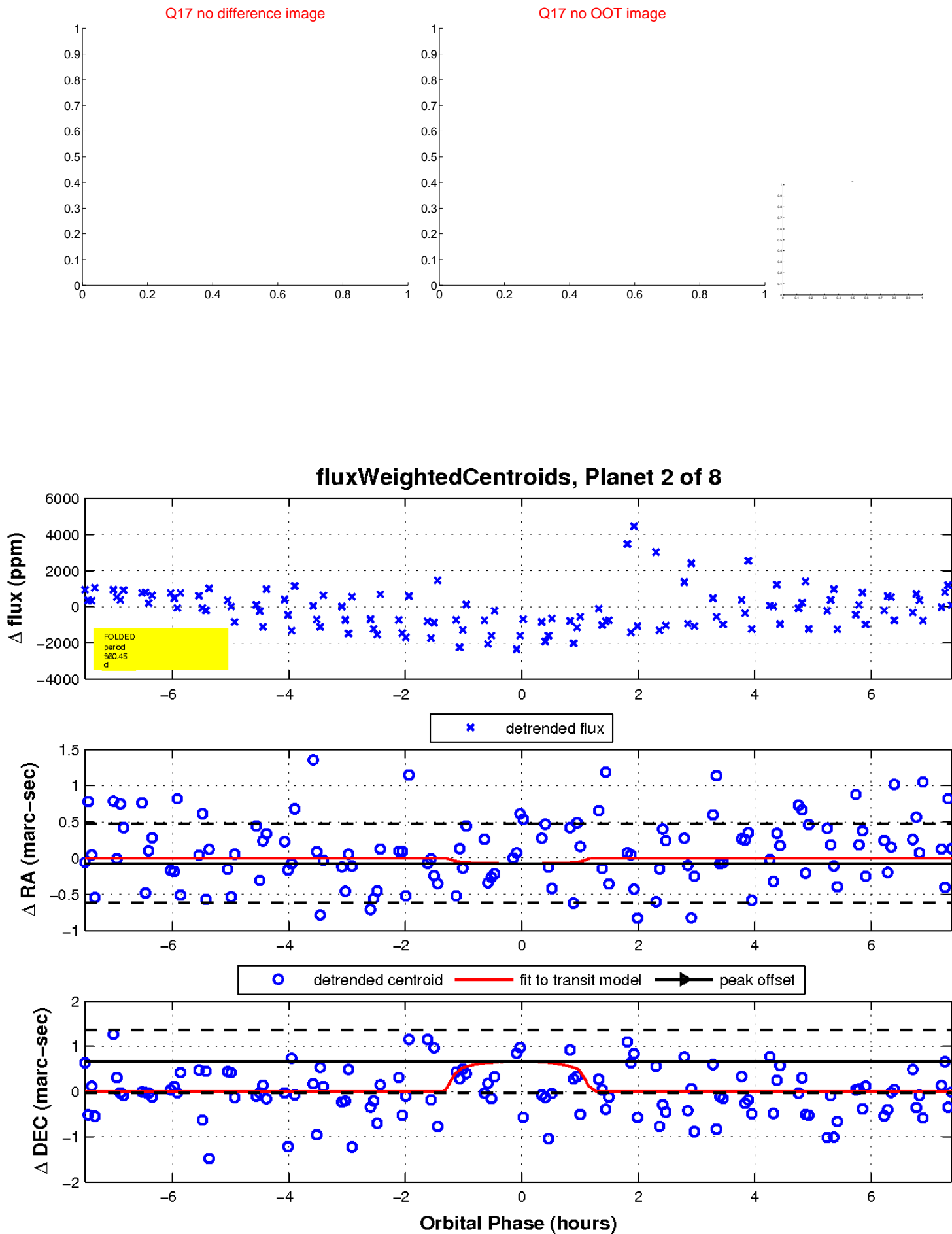
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

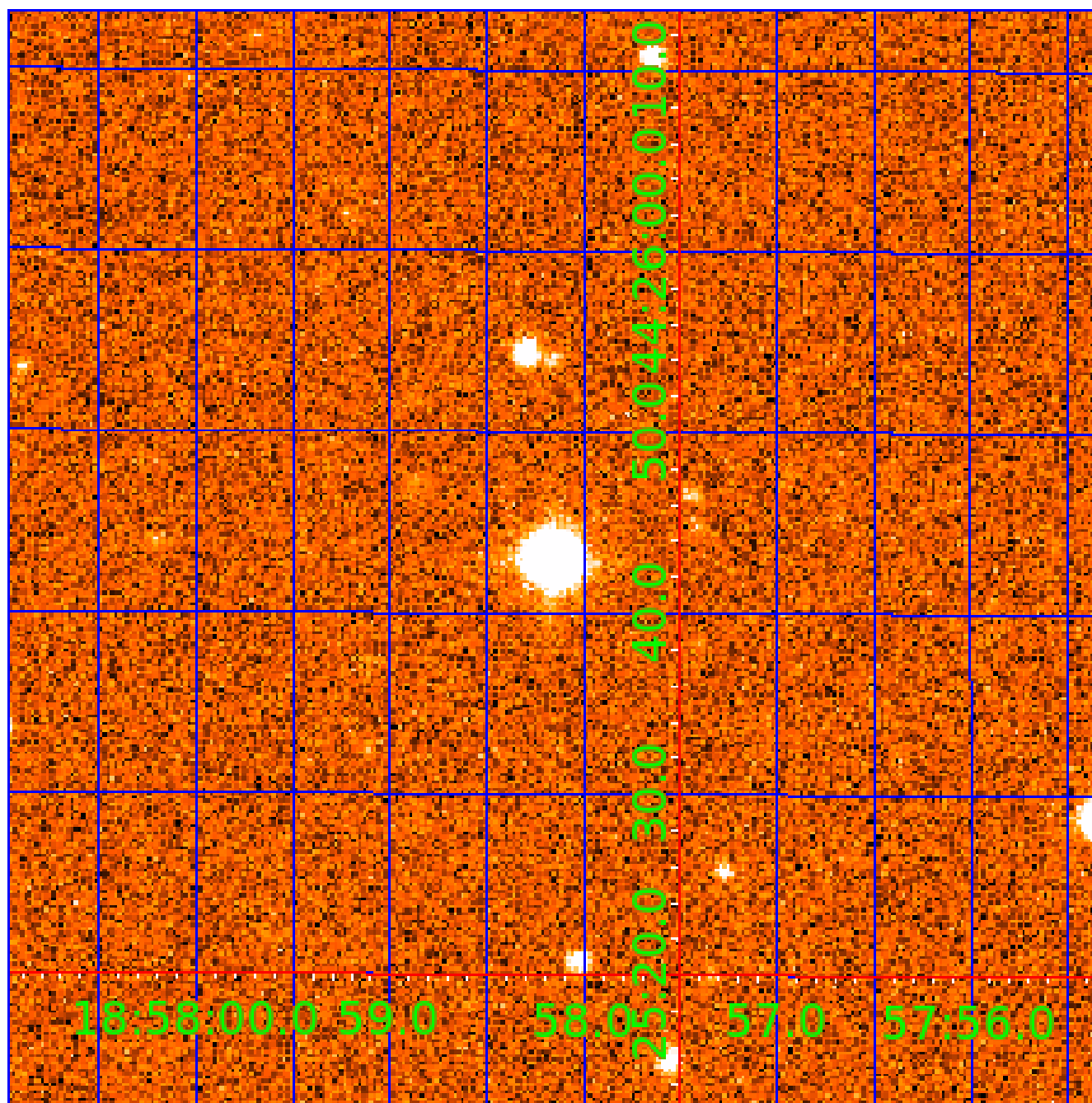


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008414845

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})
008414845-01	OBS	No	253.608246	290.911787	1205.7	3.128	16.2	7.3	0.90	5693	3.26	1.43
008414845-02	OBS	No	360.450724	155.764876	703.1	2.510	17.1	5.7	0.90	5693	2.66	0.90
008414845-03	OBS	No	281.417800	199.915742	316.0	12.500	15.3	-1.0	0.90	5693	1.59	1.24
008414845-04	OBS	No	211.583289	168.484961	1032.0	2.500	14.1	-1.0	0.90	5693	2.87	1.82
008414845-05	OBS	No	363.040200	255.416190	2666.2	33.353	9.8	5.0	0.90	5693	5.69	0.89
008414845-06	OBS	No	469.264636	328.631306	1159.5	3.413	14.6	7.1	0.90	5693	3.04	0.63
008414845-08	OBS	No	384.628192	286.550814	628.3	3.000	13.4	-1.0	0.90	5693	2.24	0.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008414845-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008414845-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
008414845-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008414845-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
008414845-05	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008414845-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
008414845-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

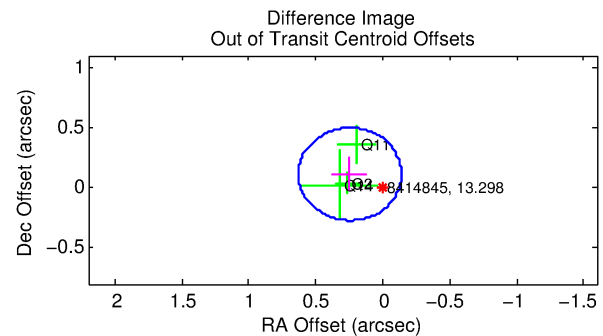
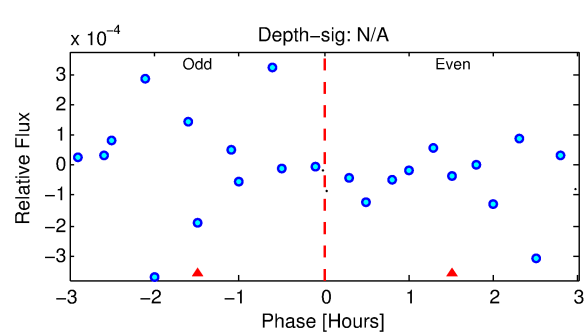
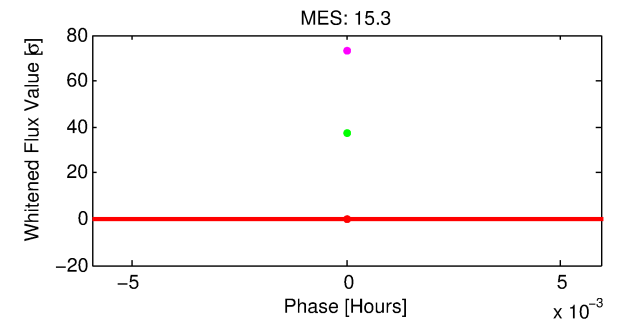
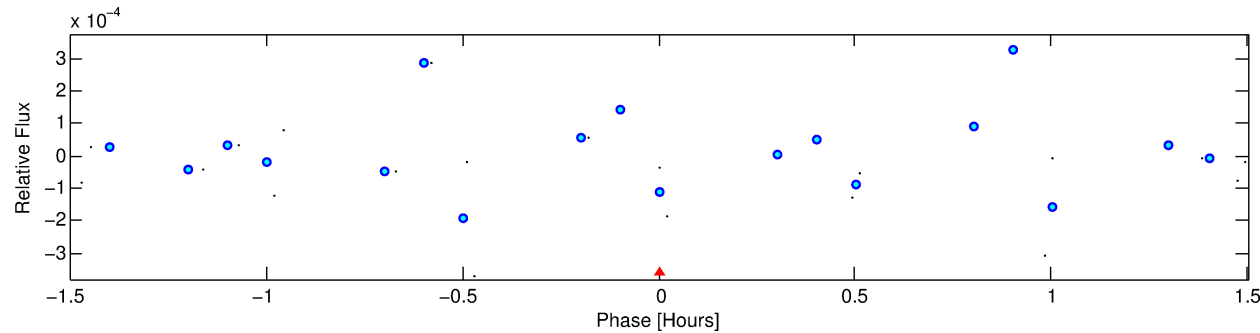
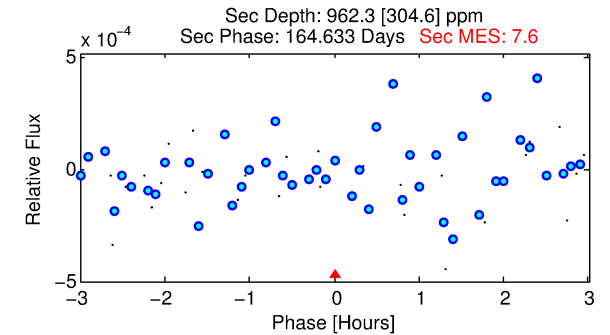
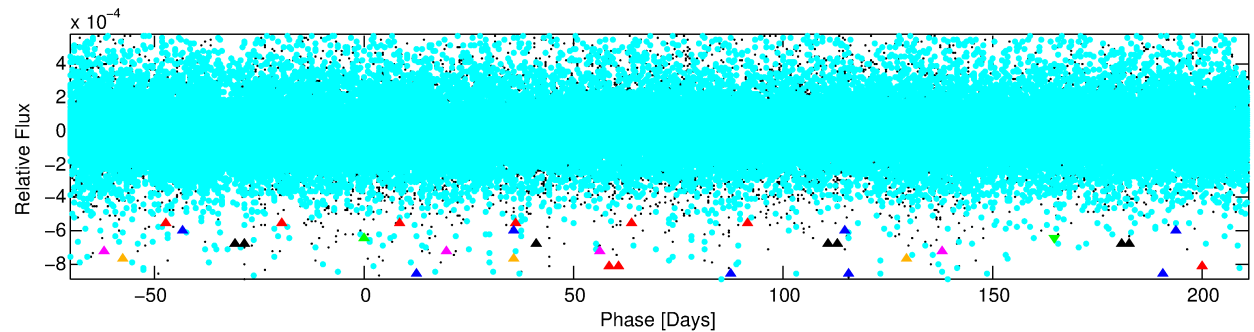
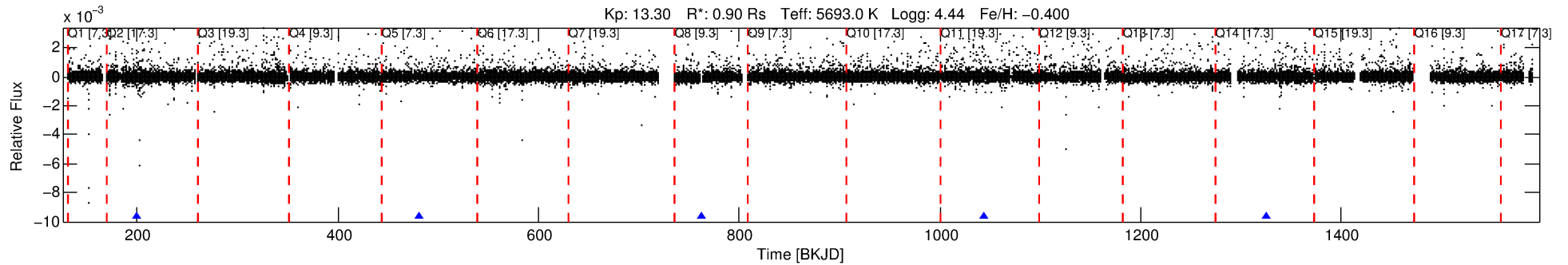
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008414845-03

No Significant Match Found

DV One-Page Summary

KIC: 8414845 Candidate: 3 of 8 Period: 281.418 d



TPS TCE Results:

Period = 281.41780 d
Epoch = 199.9157 BKJD

DV fit results are unavailable

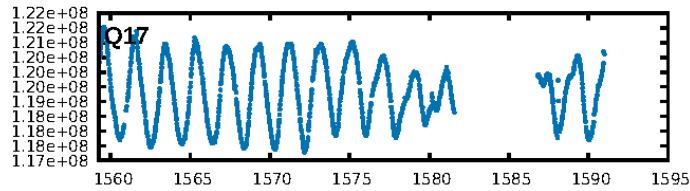
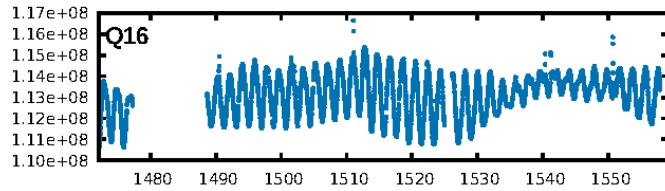
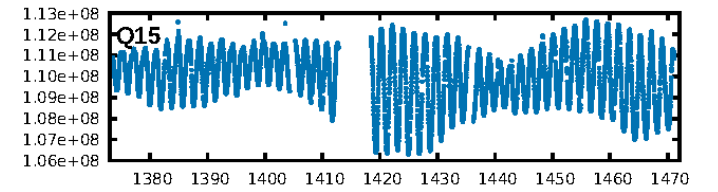
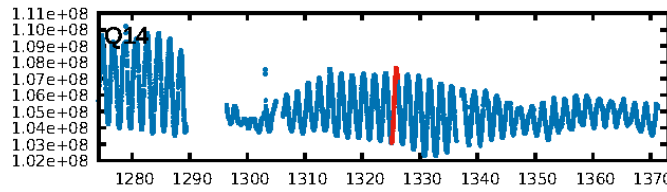
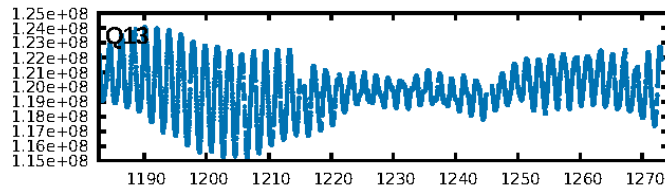
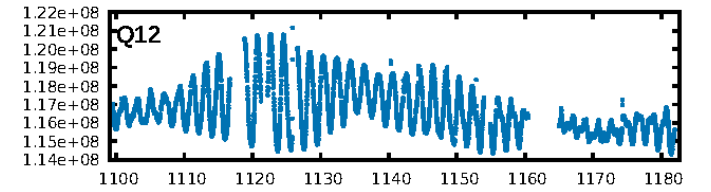
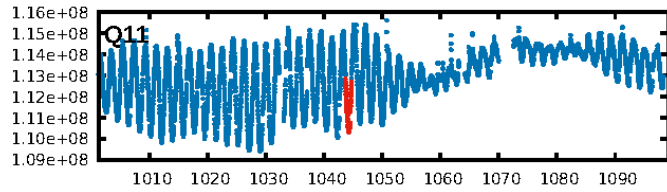
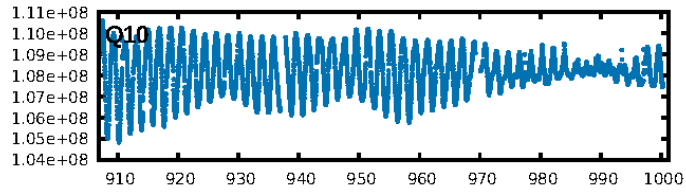
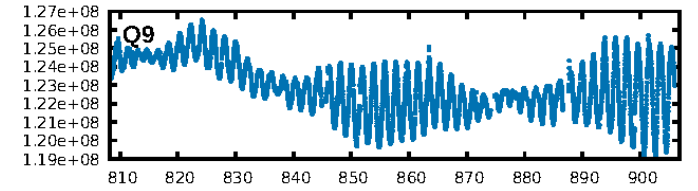
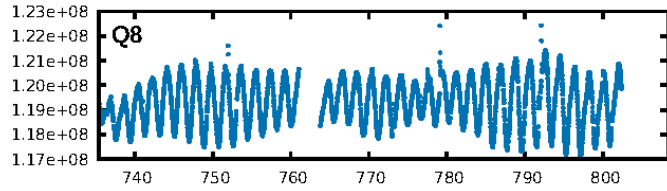
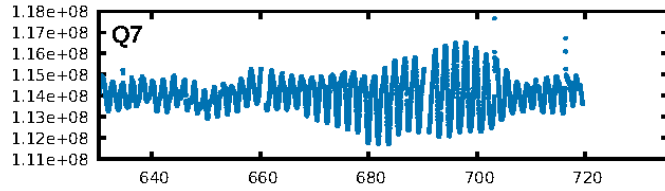
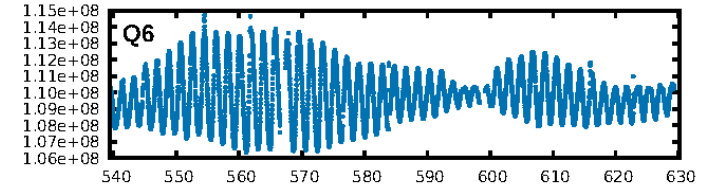
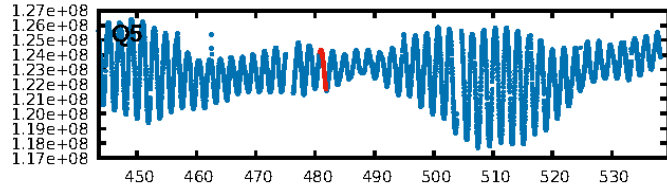
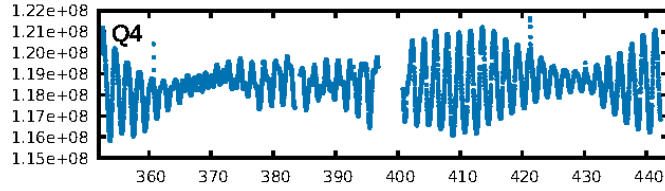
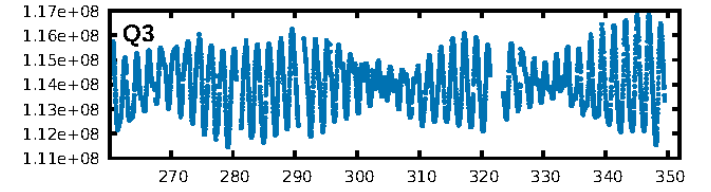
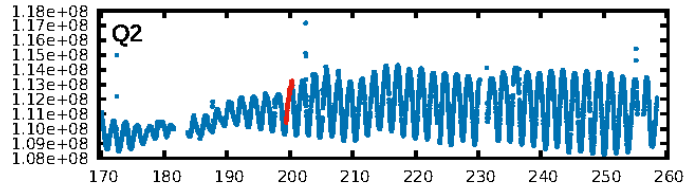
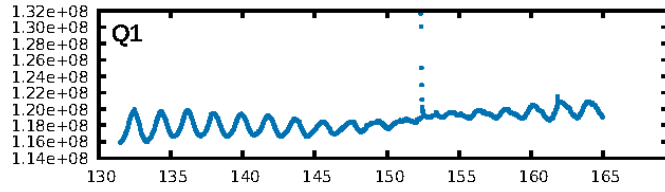
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [51.80 σ]
LongPeriod-sig: 100.0% [148.77 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.271 arcsec [2.11 σ]
KicOffset-rm: 0.287 arcsec [1.73 σ]
OotOffset-st: 2/1/0/0 [3]
KicOffset-st: 2/1/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

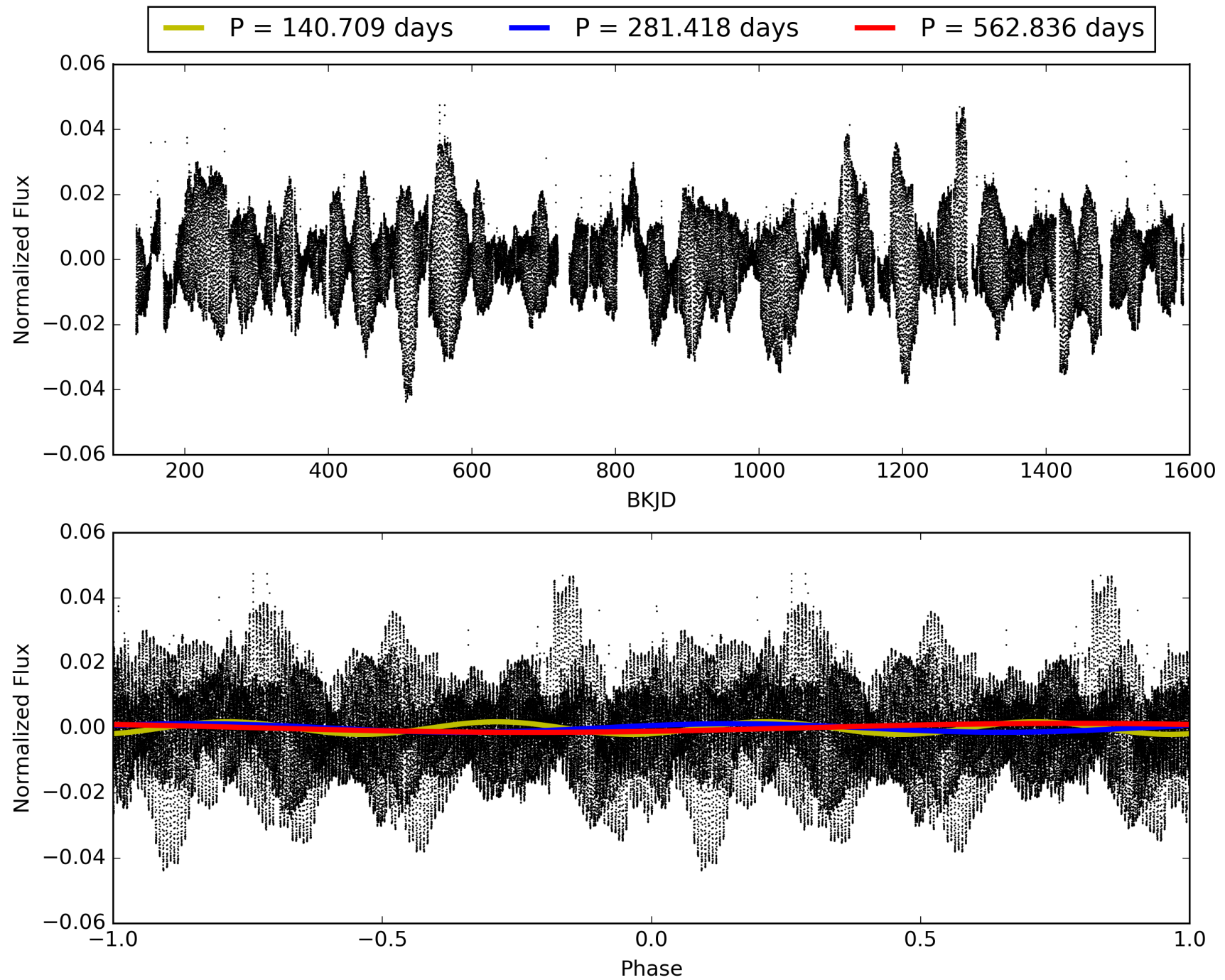
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 08:38:55 Z

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

TCE 008414845-03, PDC Light Curves

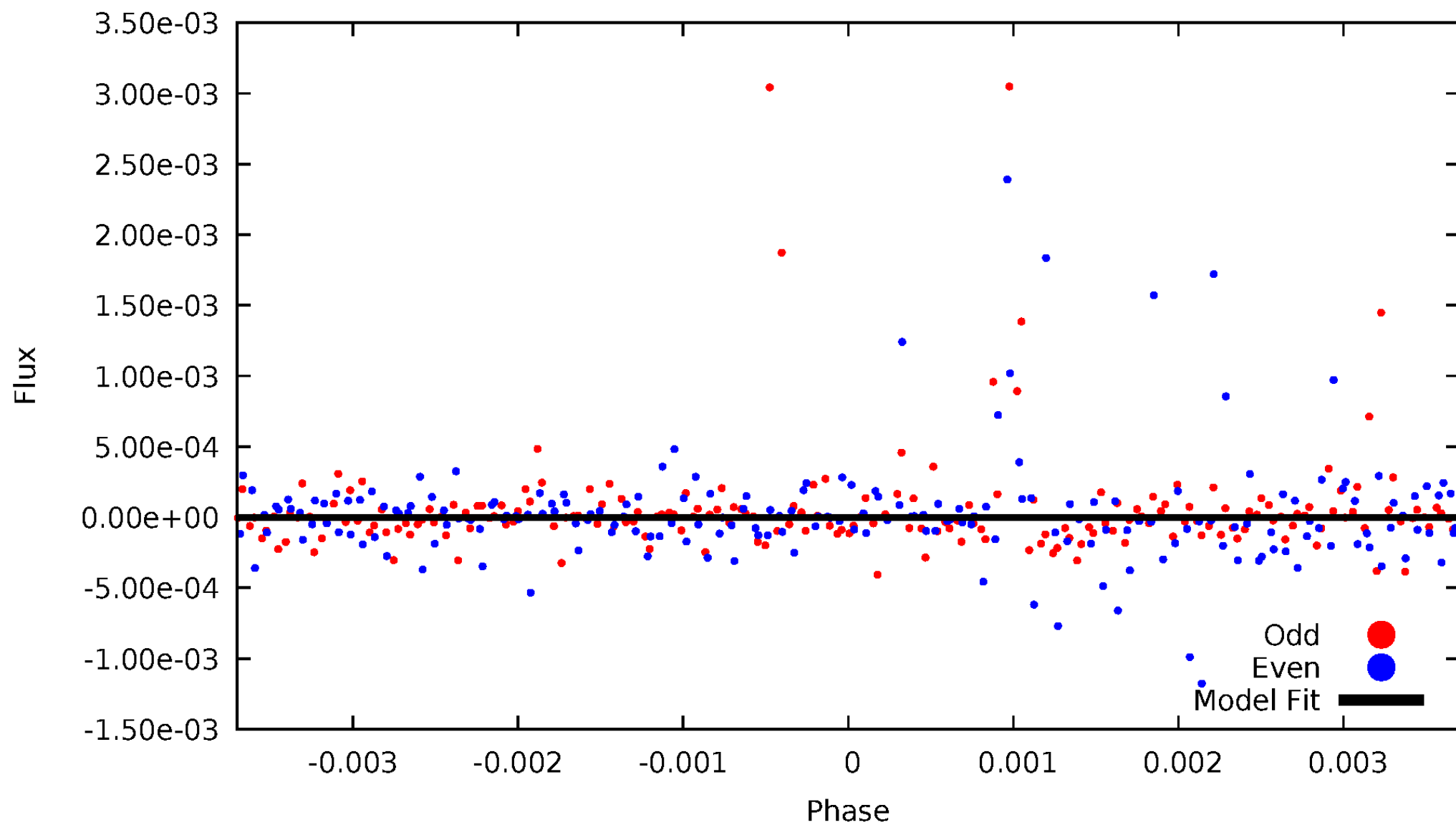


TCE 008414845-03



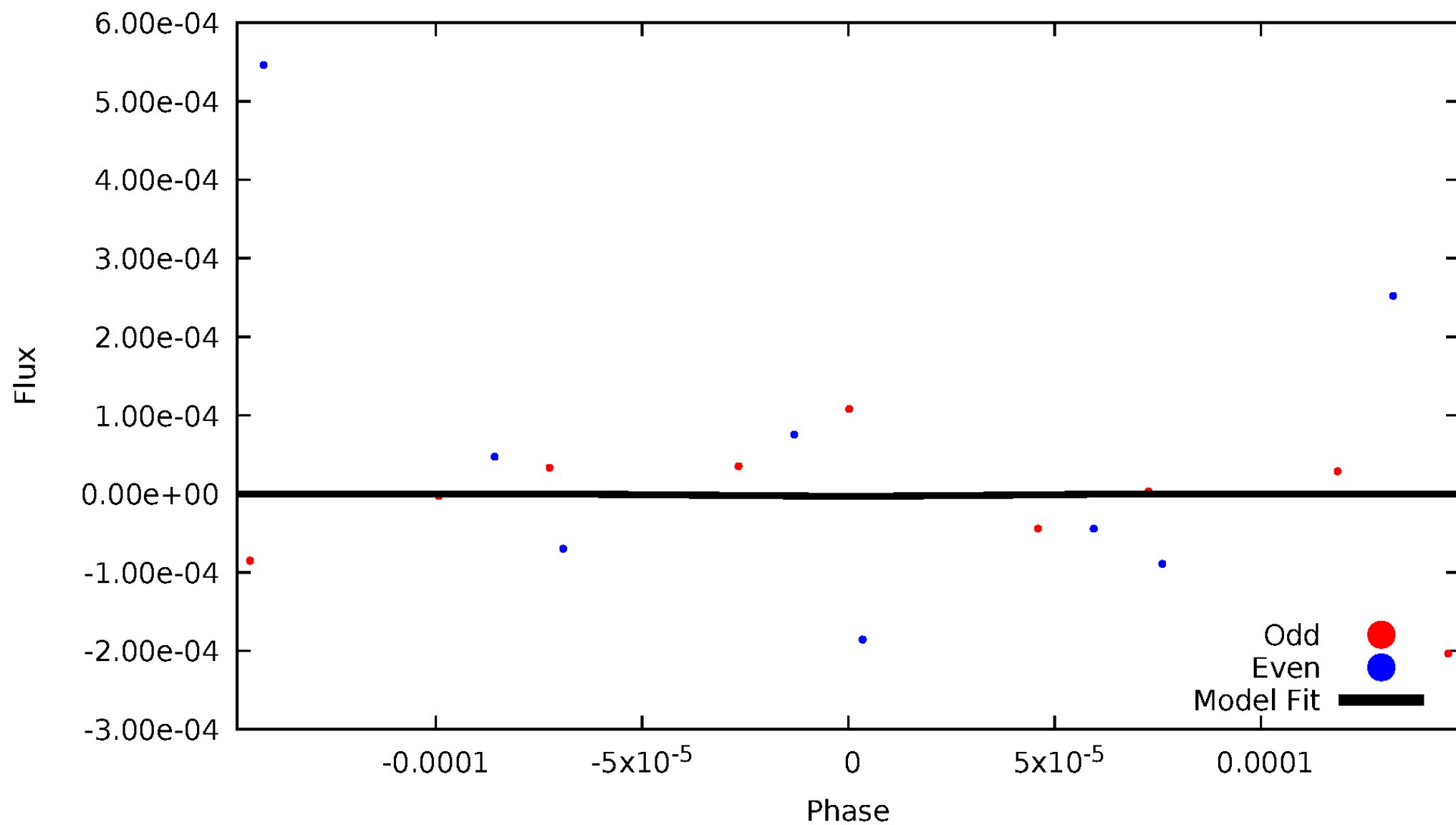
DV Odd/Even

TCE 008414845-03

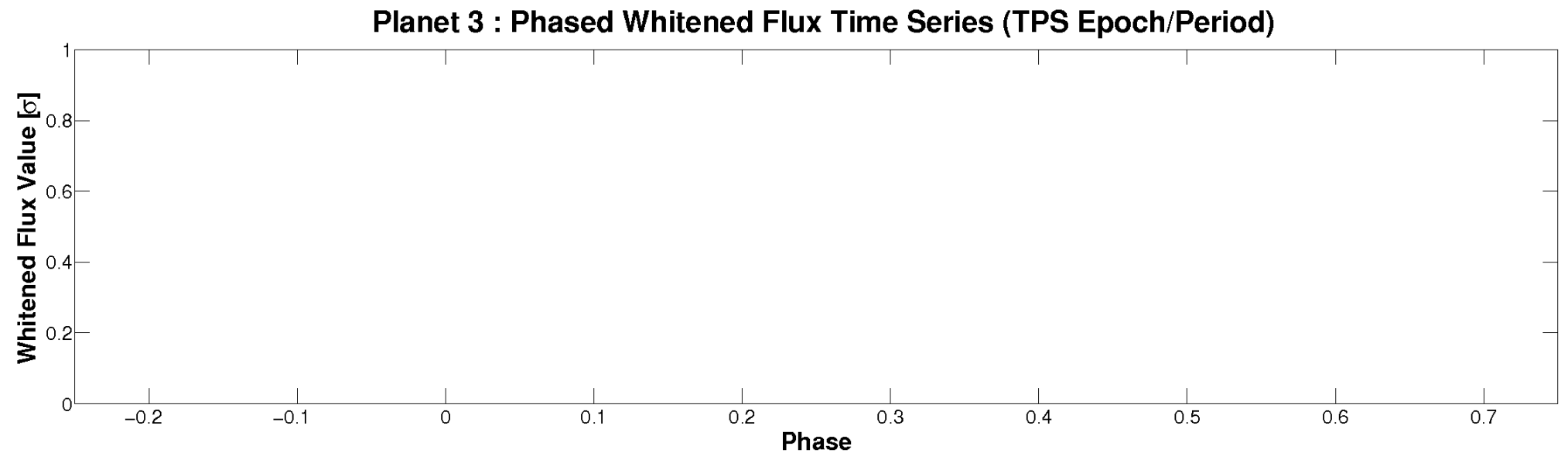
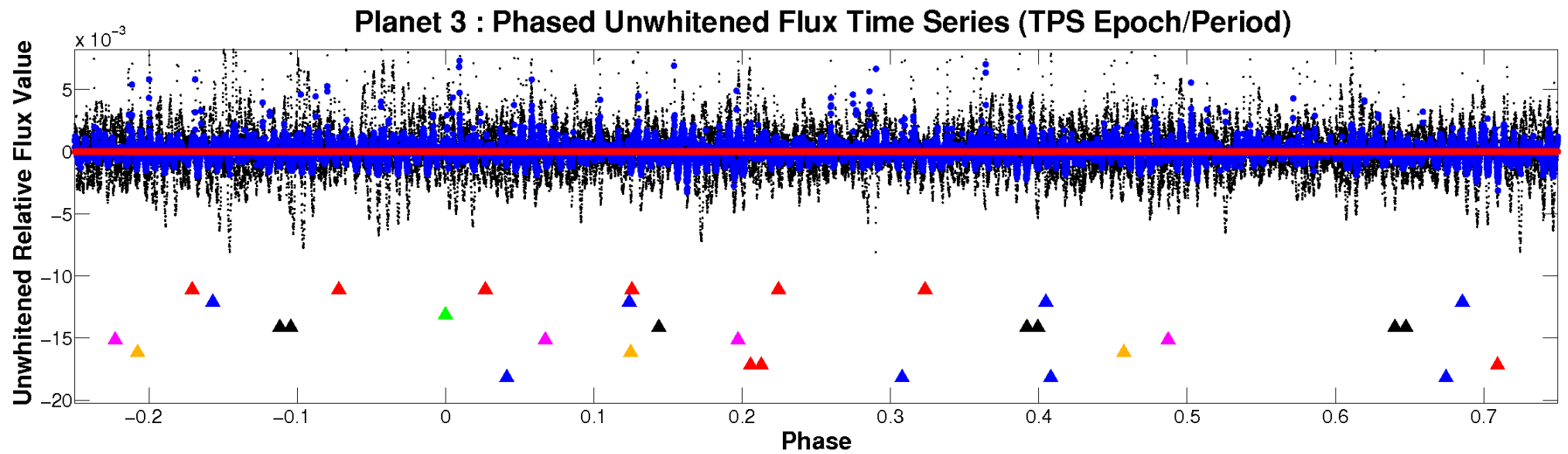


ALT Odd/Even

TCE 008414845-03

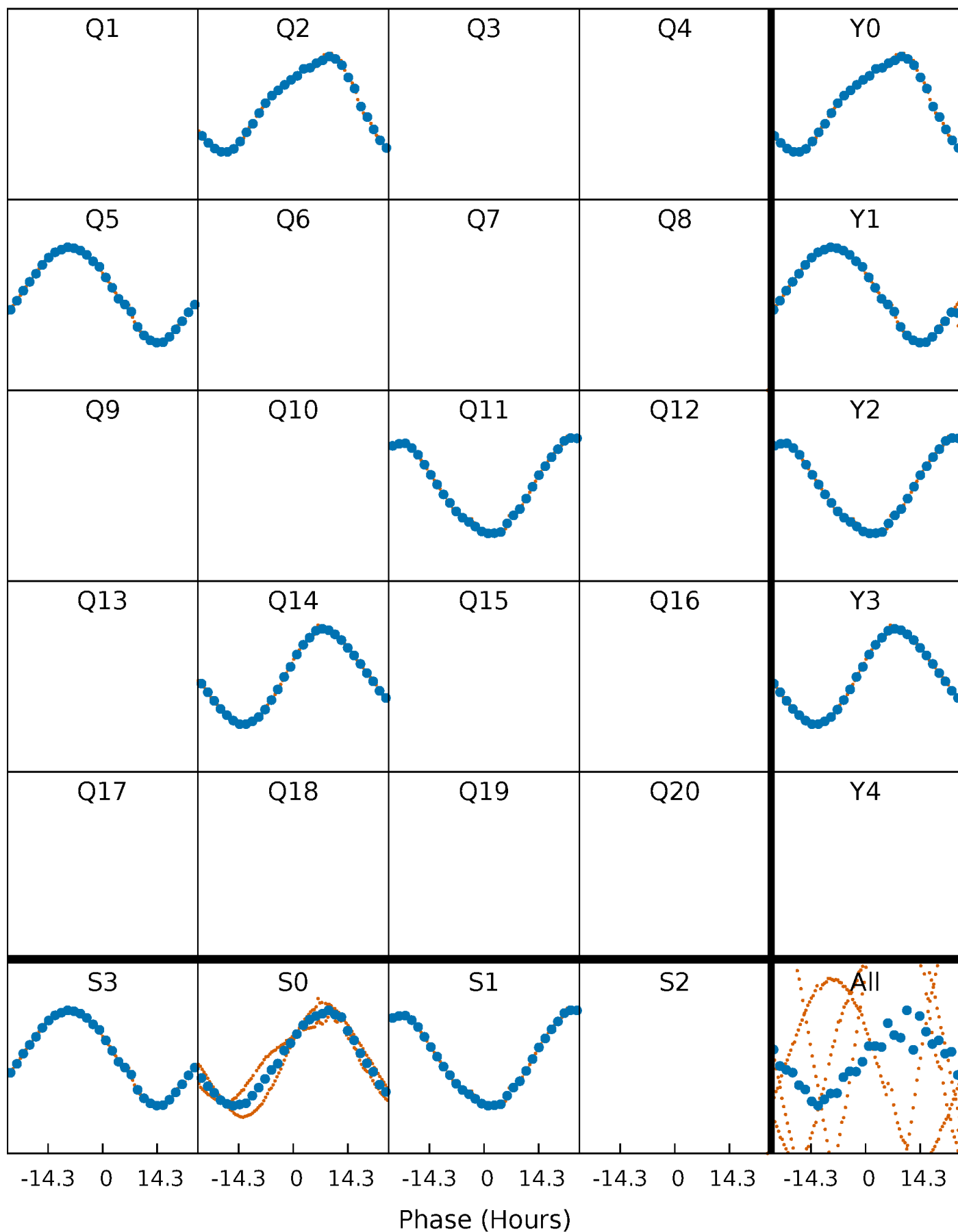


Non-Whitened Vs. Whitened Light Curve



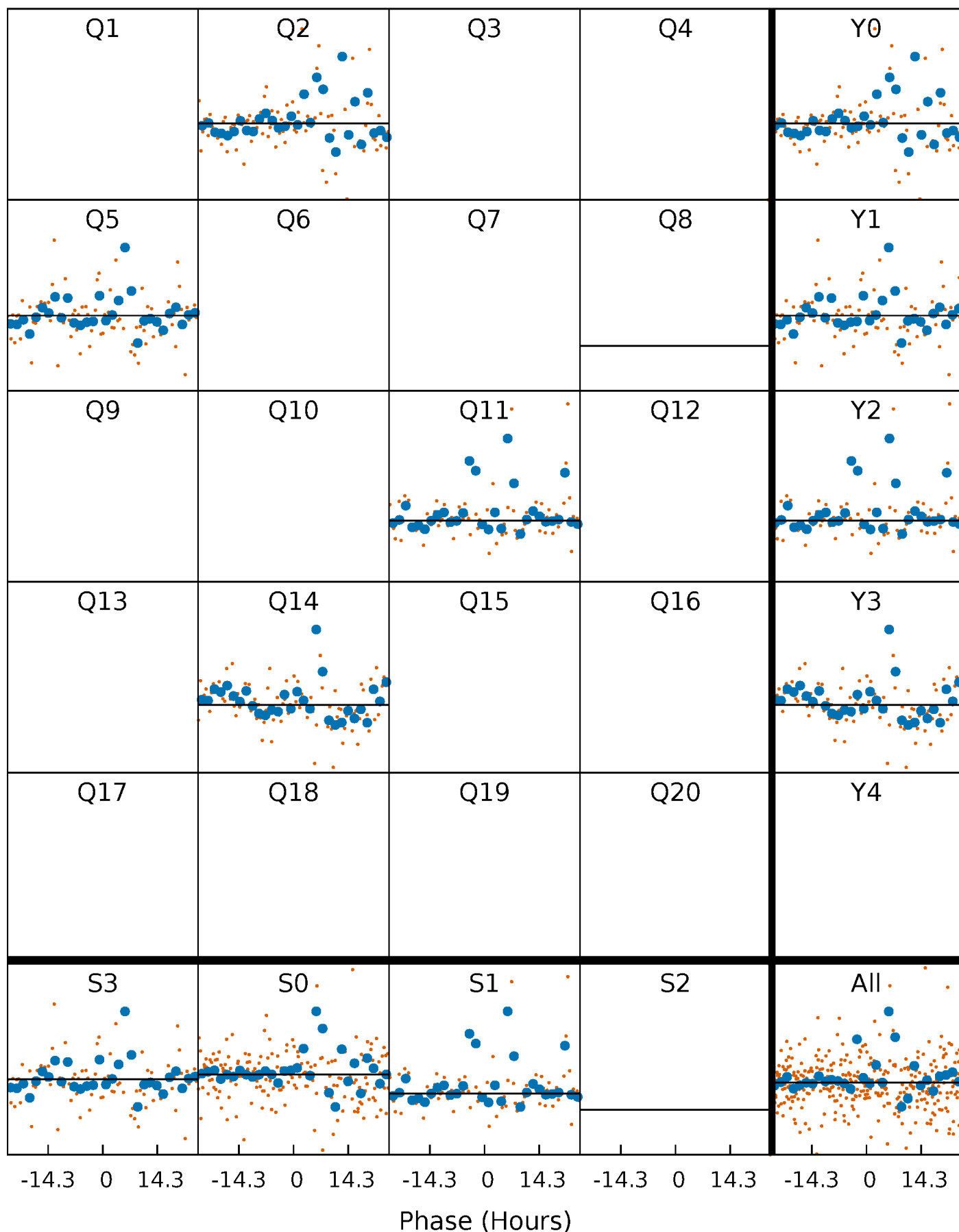
PDC Quarter-Phased Transit Curves

TCE 008414845-03 P=281.417800 Days $T_0=199.915741$ (BKJD)



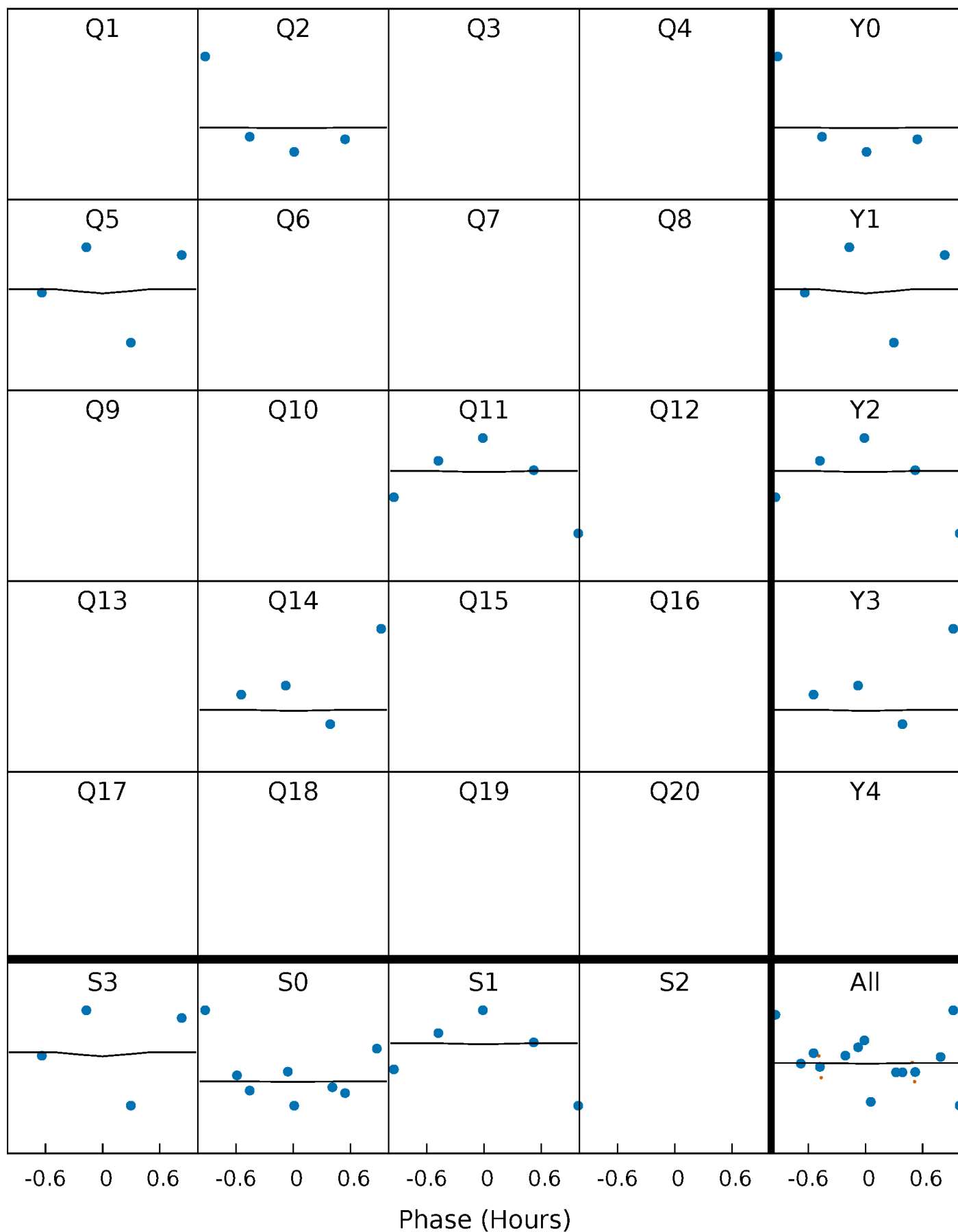
DV Quarter-Phased Transit Curves

TCE 008414845-03 P=281.417800 Days $T_0=199.915741$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

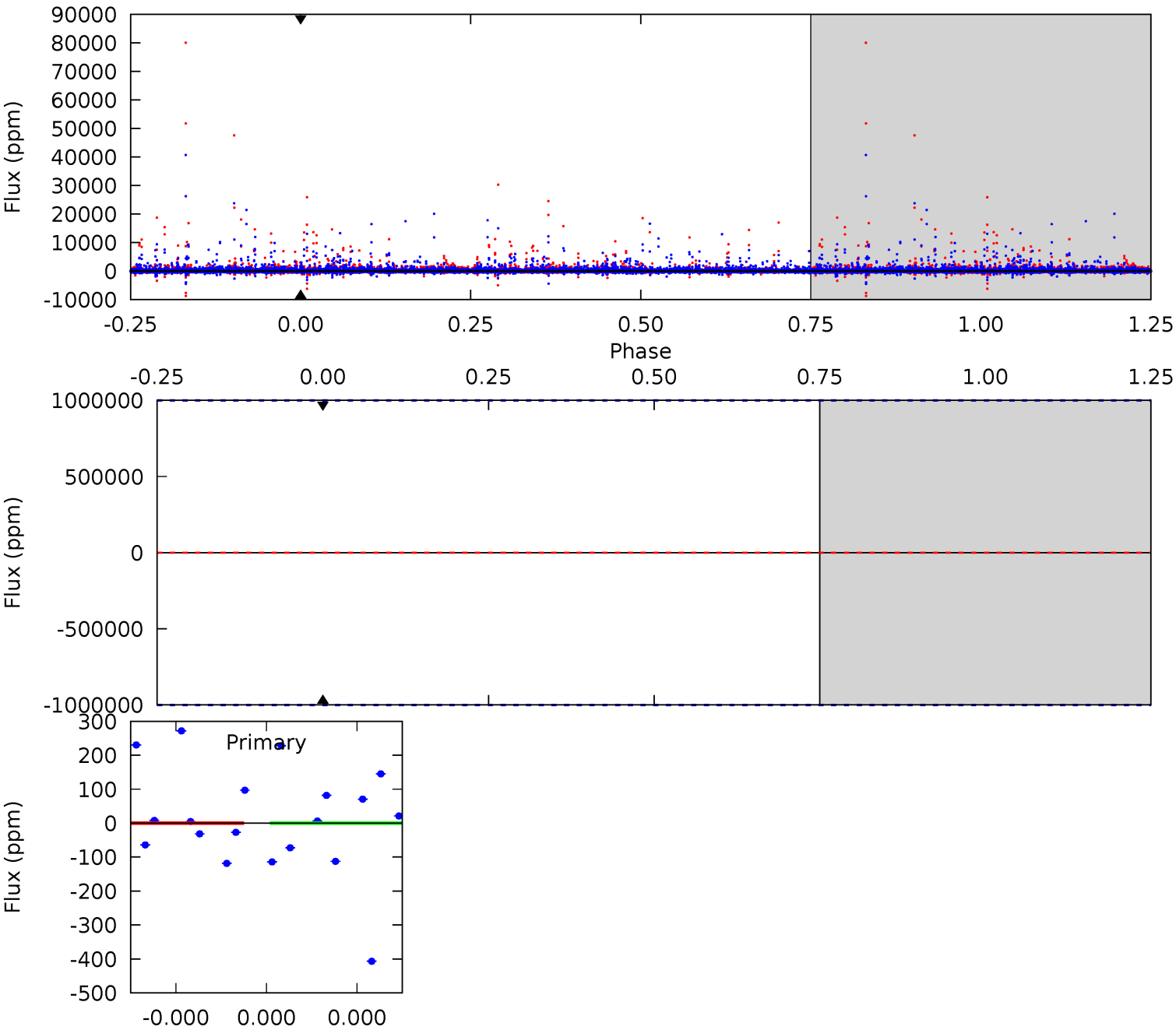
TCE 008414845-03 P=281.417800 Days $T_0=199.209655$ (BKJD)



DV Model-Shift Uniqueness Test

008414845-03, P = 281.417800 Days, E = 199.915741 Days

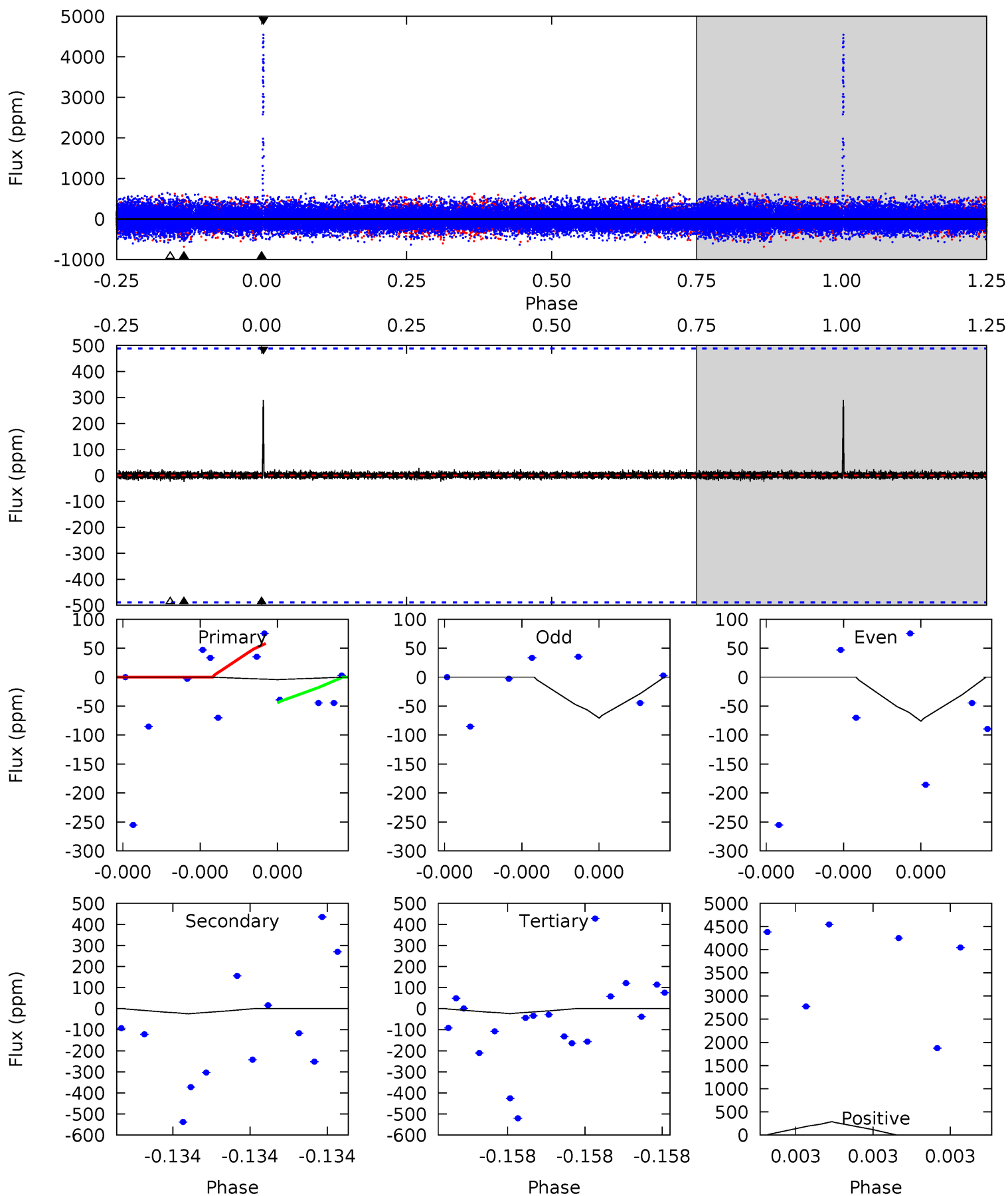
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008414845-03, P = 281.417800 Days, E = 199.209655 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.05	0.30	0.29	3.49	5.87	3.93	0.09	-0.24	-3.44	0.01	-3.19	0.02	-4.29	0.92	0.07



Stellar Parameters For KIC 008414845

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5693^{+154}_{-154}	$4.436^{+0.120}_{-0.165}$	$-0.400^{+0.300}_{-0.300}$	$0.899^{+0.224}_{-0.131}$	$0.804^{+0.112}_{-0.056}$	$1.559^{+0.866}_{-0.717}$
	+3%/-3%	+3%/-4%	+75%/-75%	+25%/-15%	+14%/-7%	+56%/-46%
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 008414845-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$7.25^{+7.77}_{-4.95}$	377^{+26}_{-20}	4835^{+15892}_{-24293}	$16373^{+1128719}_{-1113055}$
Alt.	-25 ± 83	$6.68^{+6.96}_{-4.88}$	379^{+25}_{-21}	2266^{+1162}_{-4981}	104^{+2070}_{-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 $A_{obs} \gg 1.0$

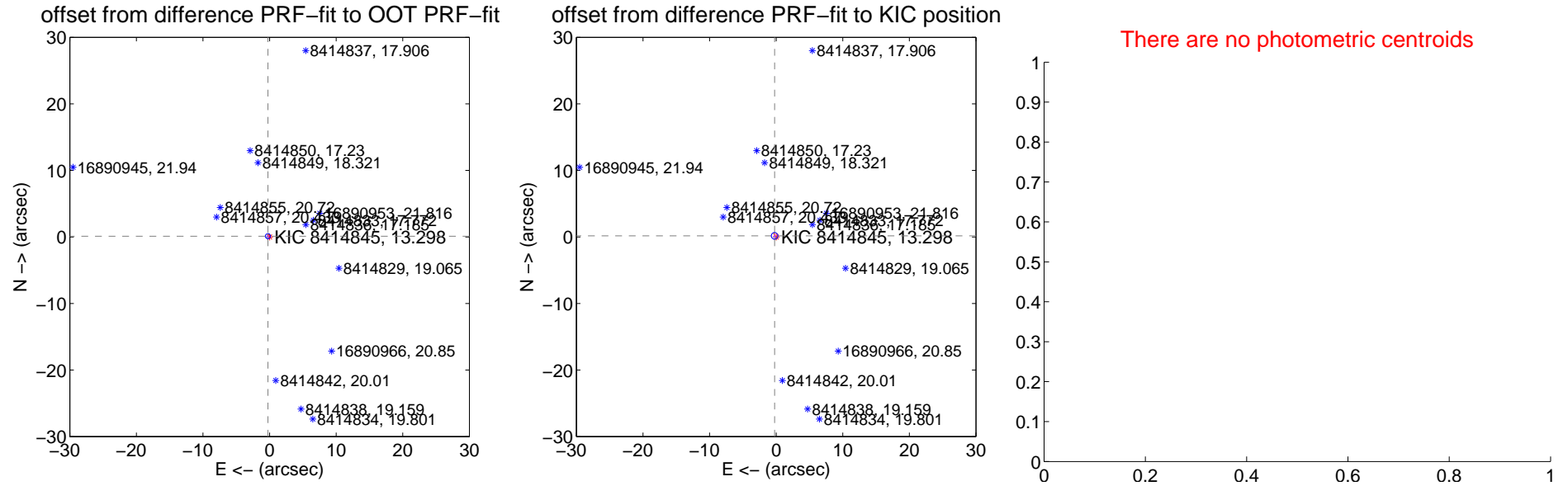
DV Centroid Data

Supplemental centroid analysis for 008414845-03. Kepler magnitude: 13.30. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.271 ± 0.128	2.11	0.246 ± 0.128	0.114 ± 0.131
PRF-fit source offset from KIC position	0.287 ± 0.166	1.73	0.235 ± 0.078	0.165 ± 0.217
photometric centroid source offset	—	—	—	—



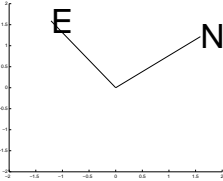
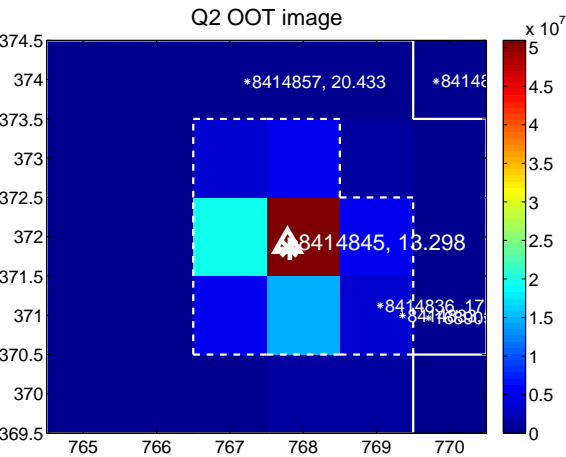
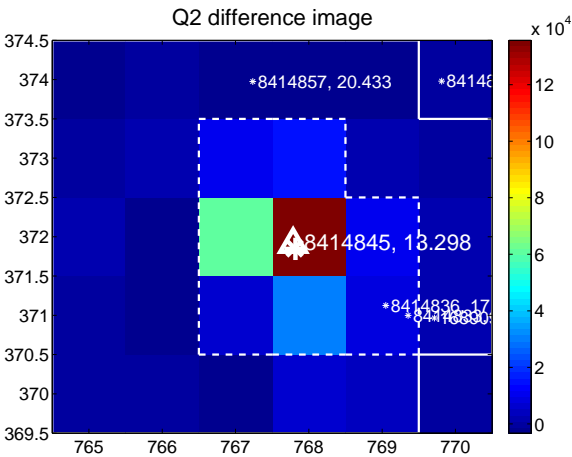
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

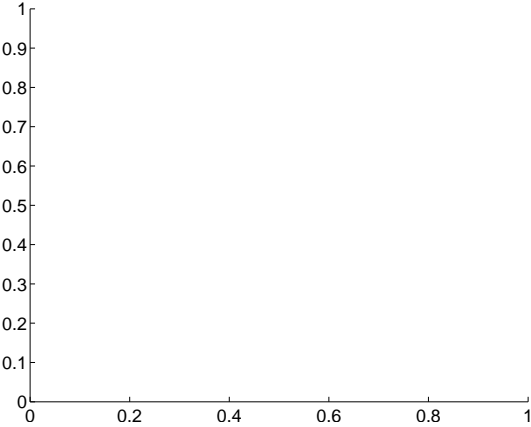
Q1 no difference image



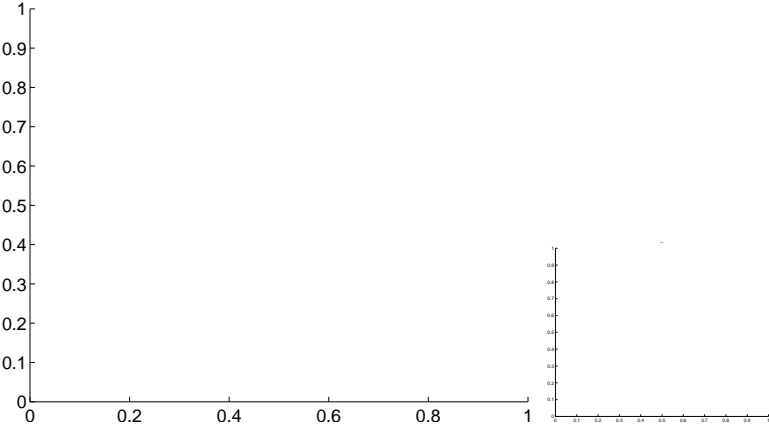
Q1 no OOT image



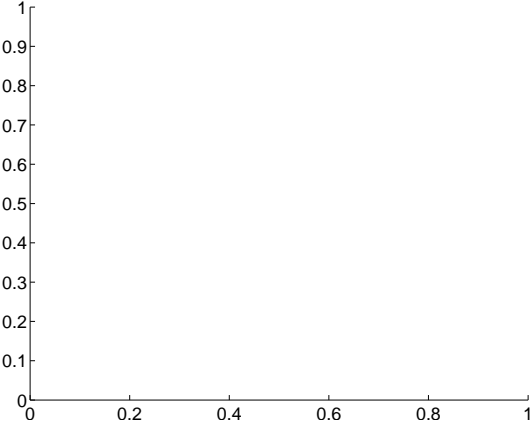
Q3 no difference image



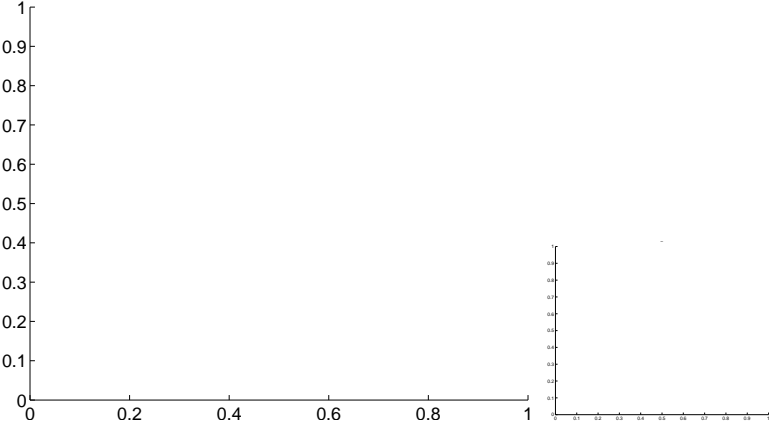
Q3 no OOT image



Q4 no difference image



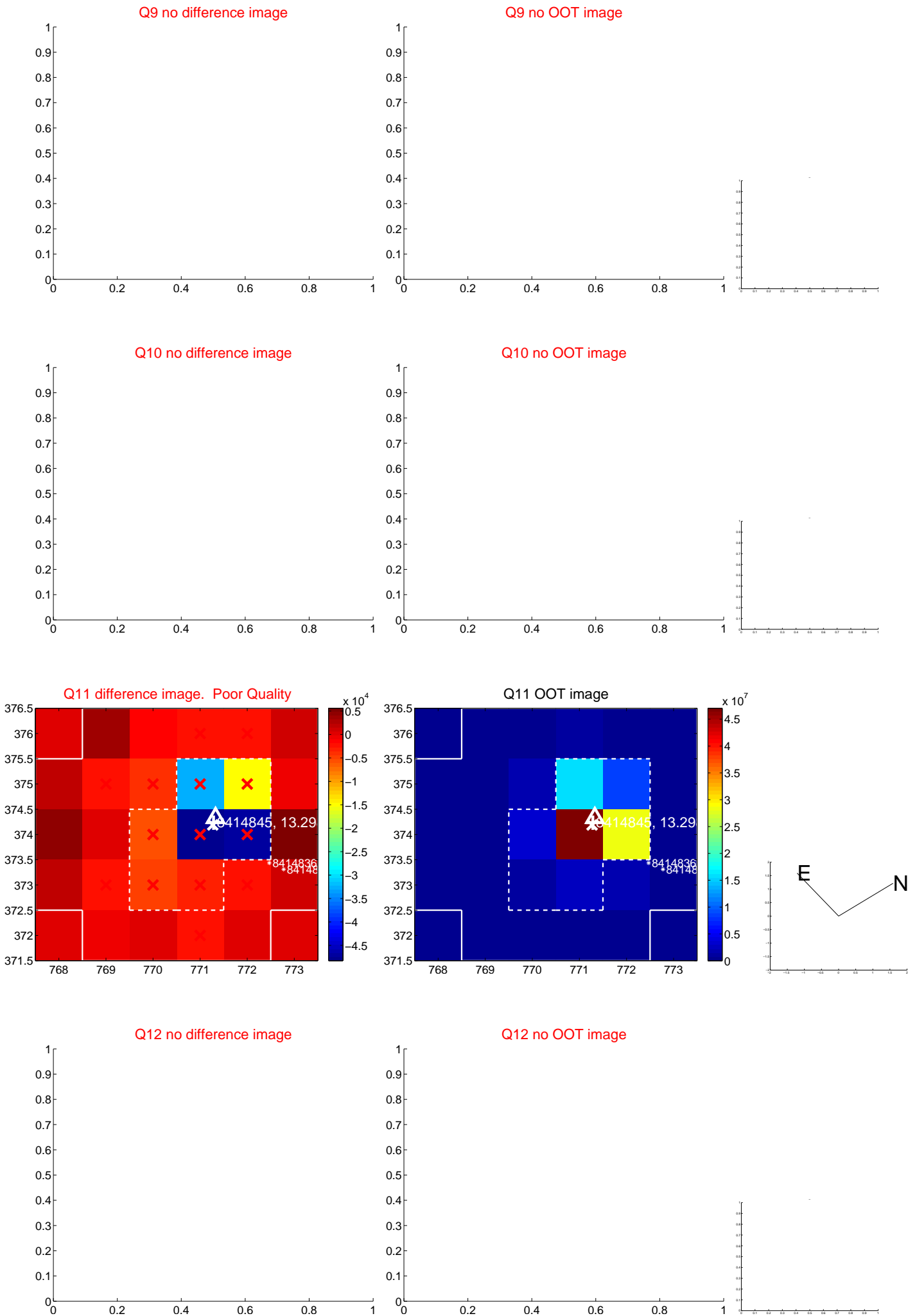
Q4 no OOT image



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.

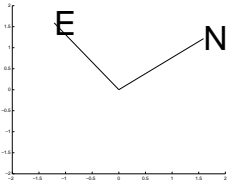
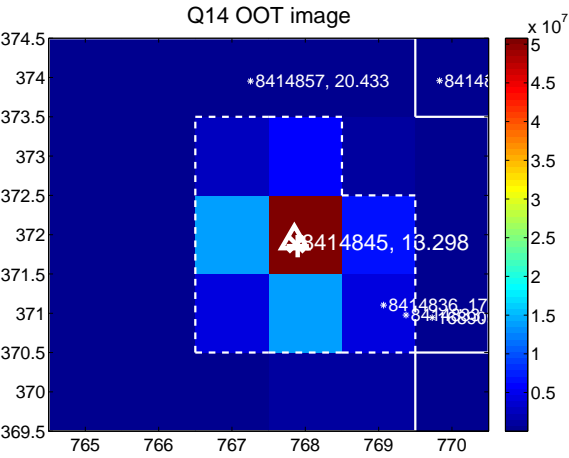
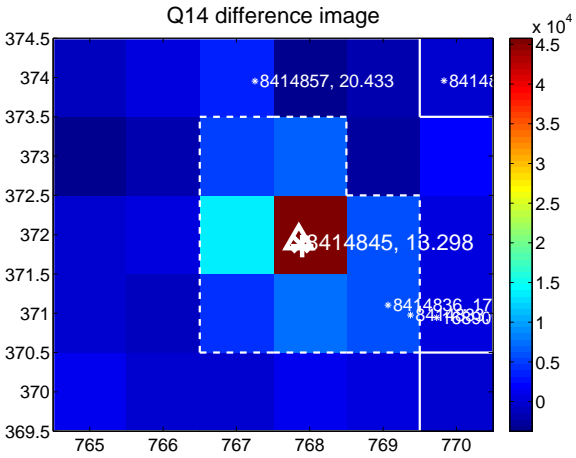


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

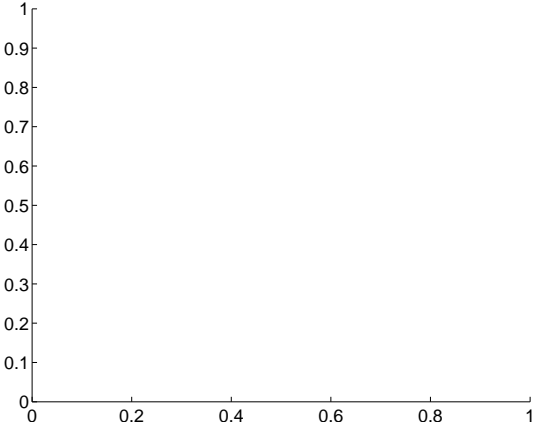
Q13 no difference image



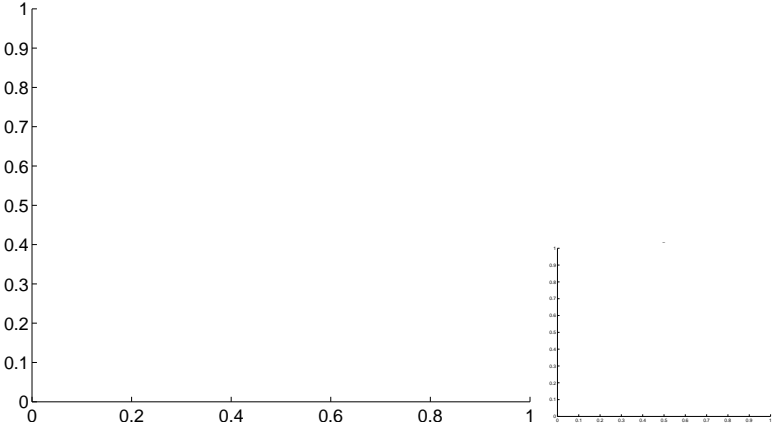
Q13 no OOT image



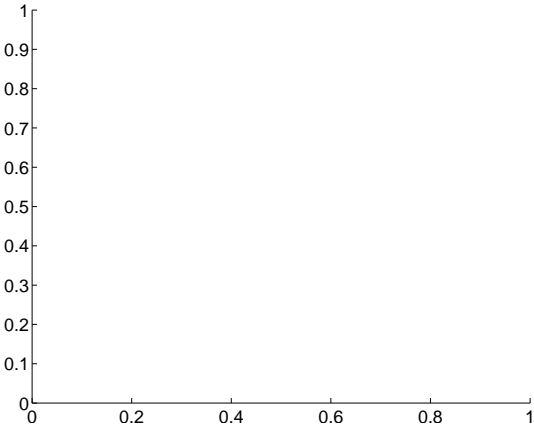
Q15 no difference image



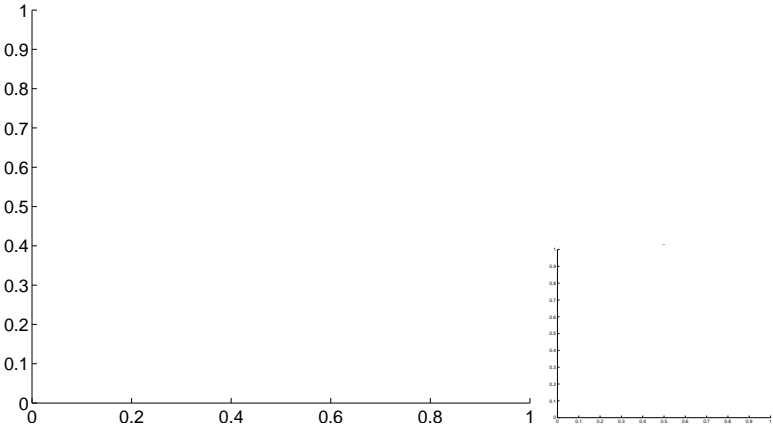
Q15 no OOT image



Q16 no difference image



Q16 no OOT image



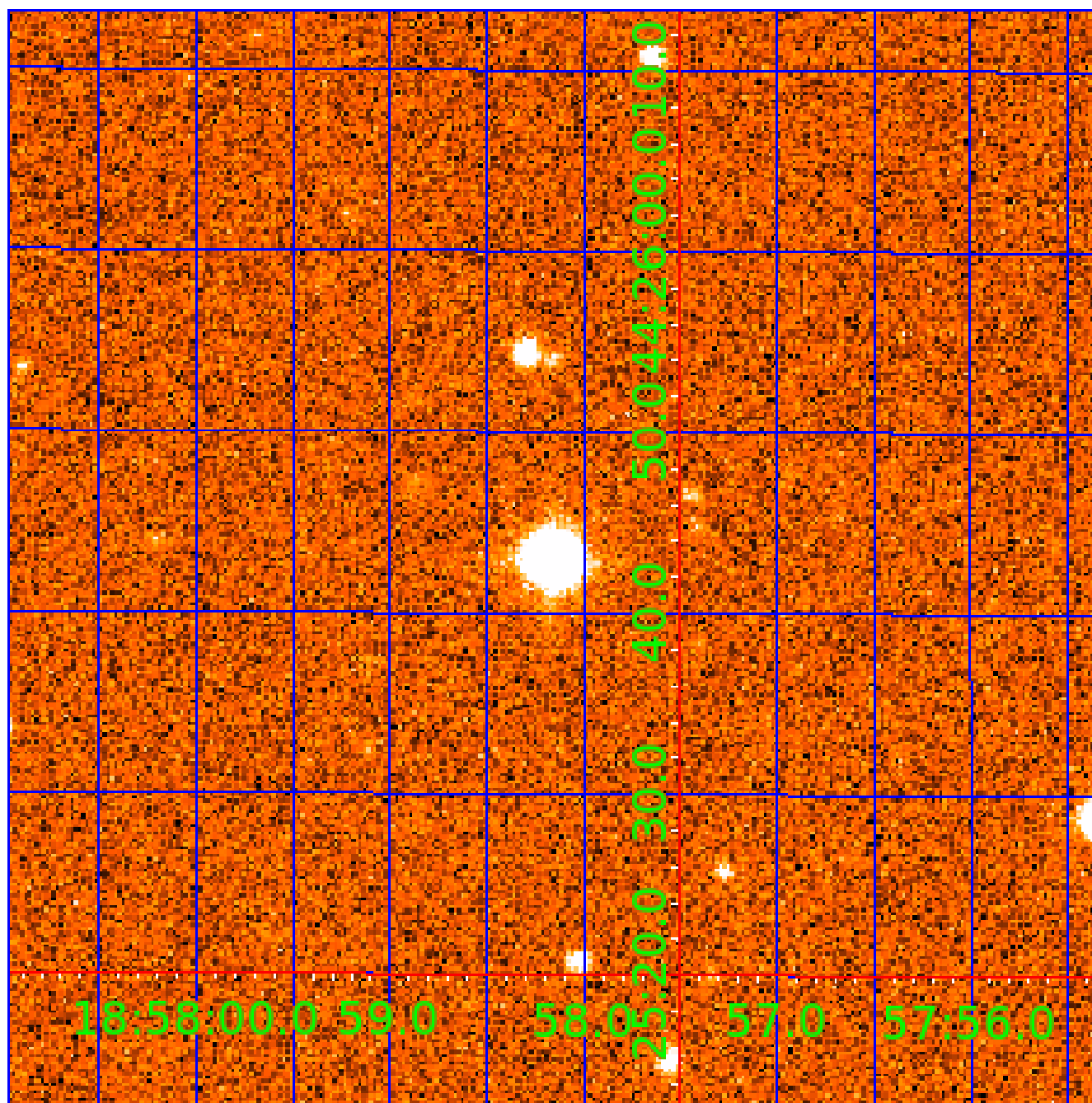
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 008414845

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})
008414845-01	OBS	No	253.608246	290.911787	1205.7	3.128	16.2	7.3	0.90	5693	3.26	1.43
008414845-02	OBS	No	360.450724	155.764876	703.1	2.510	17.1	5.7	0.90	5693	2.66	0.90
008414845-03	OBS	No	281.417800	199.915742	316.0	12.500	15.3	-1.0	0.90	5693	1.59	1.24
008414845-04	OBS	No	211.583289	168.484961	1032.0	2.500	14.1	-1.0	0.90	5693	2.87	1.82
008414845-05	OBS	No	363.040200	255.416190	2666.2	33.353	9.8	5.0	0.90	5693	5.69	0.89
008414845-06	OBS	No	469.264636	328.631306	1159.5	3.413	14.6	7.1	0.90	5693	3.04	0.63
008414845-08	OBS	No	384.628192	286.550814	628.3	3.000	13.4	-1.0	0.90	5693	2.24	0.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008414845-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008414845-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
008414845-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008414845-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
008414845-05	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008414845-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
008414845-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

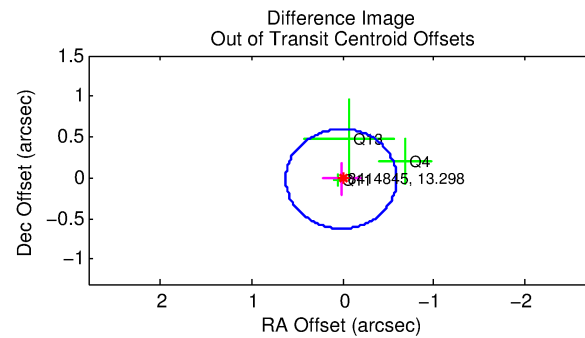
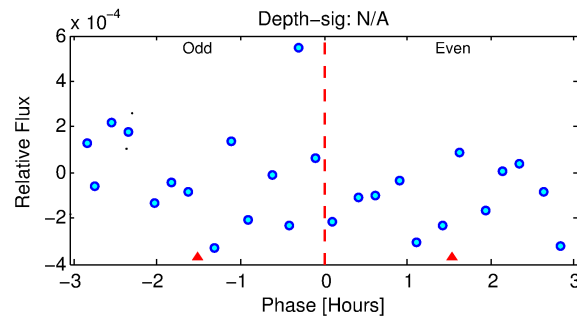
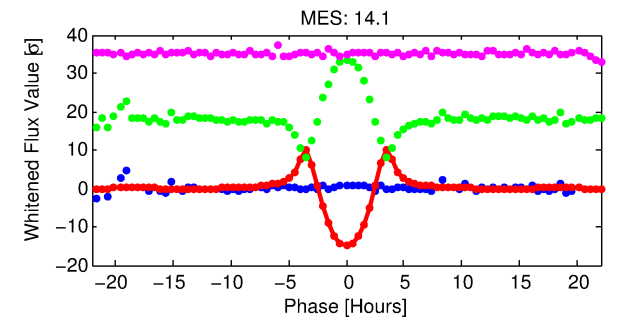
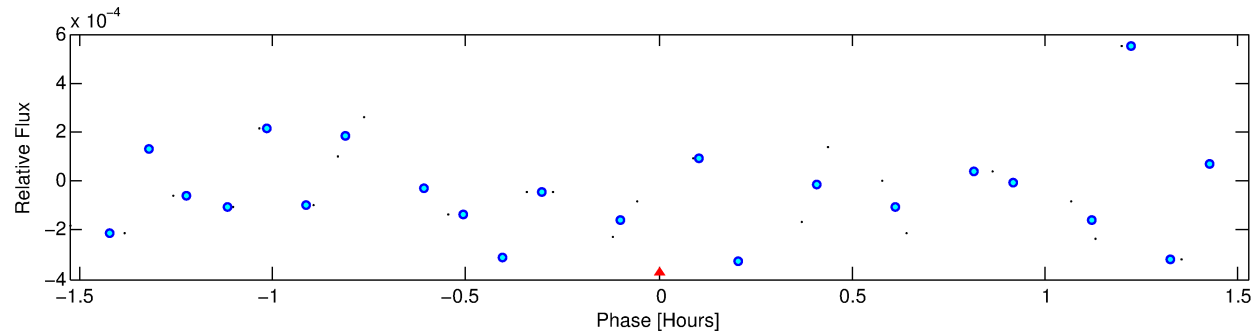
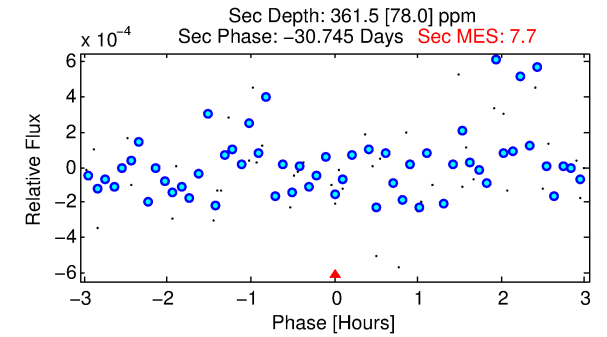
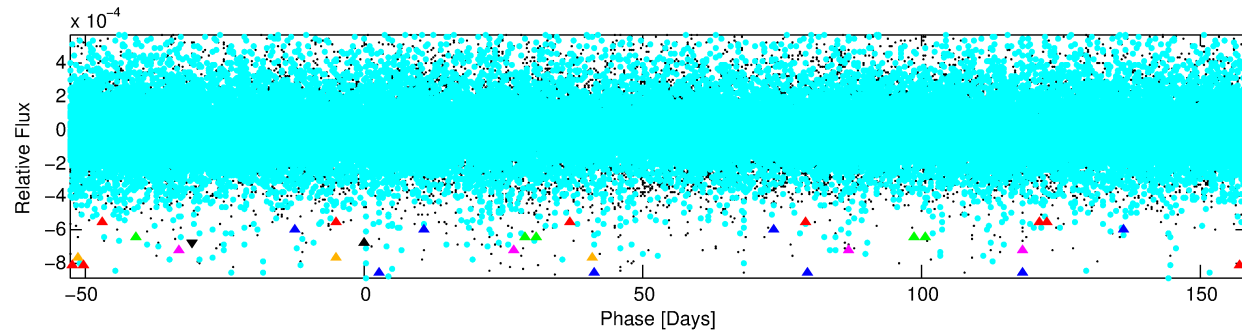
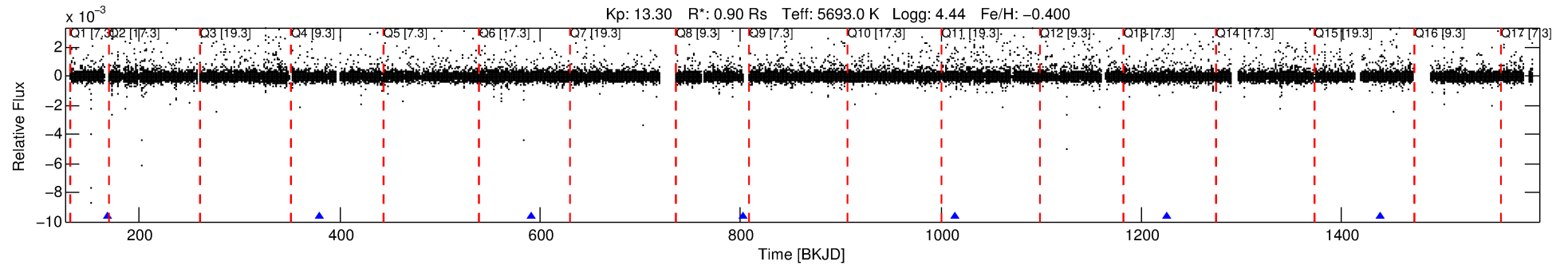
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008414845-04

No Significant Match Found

DV One-Page Summary

KIC: 8414845 Candidate: 4 of 8 Period: 211.583 d



TPS TCE Results:

Period = 211.58329 d
Epoch = 168.4850 BKJD

DV fit results are unavailable

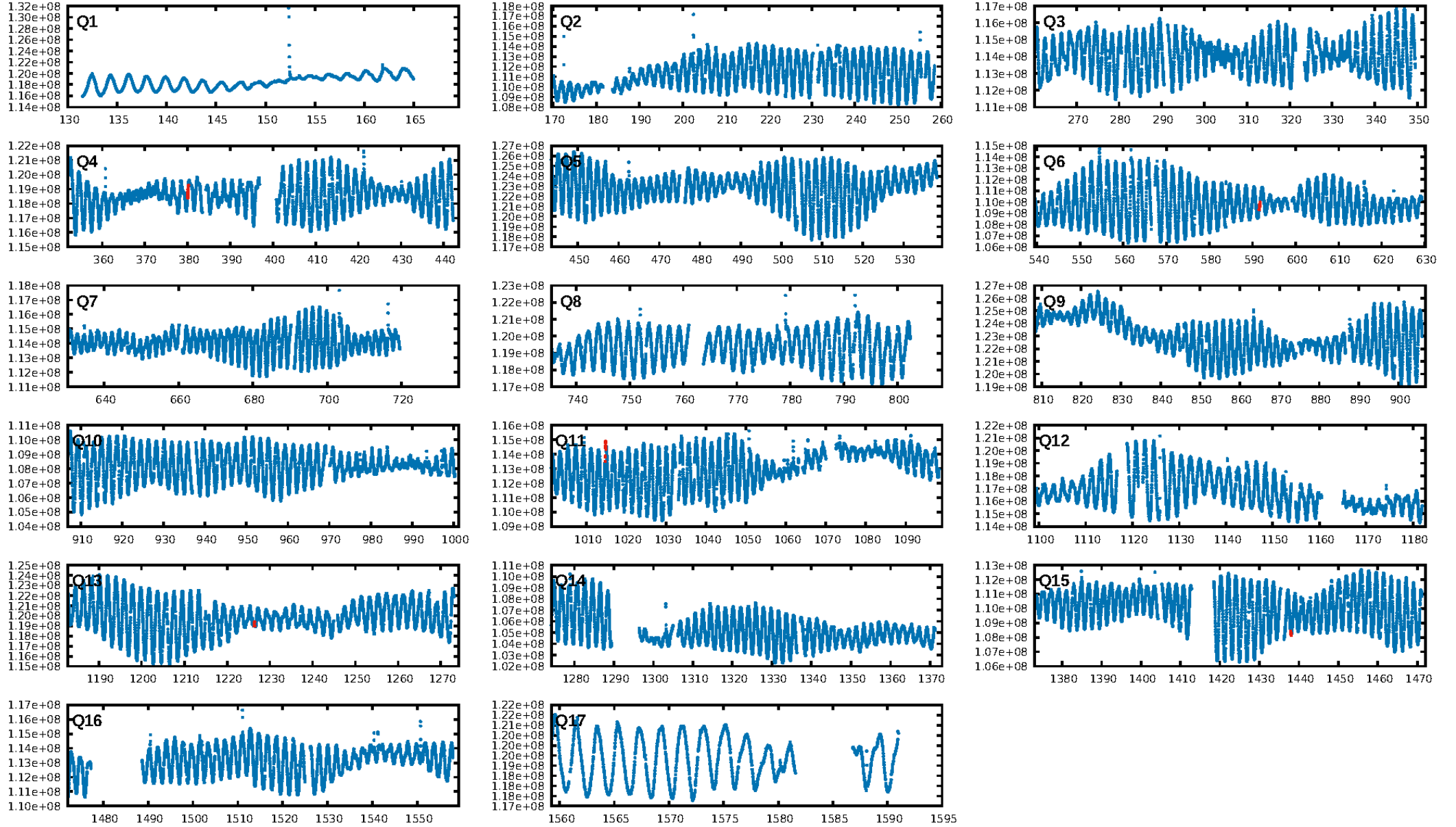
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [251.89σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.019 arcsec [0.09σ]
KicOffset-rm: 0.216 arcsec [1.07σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

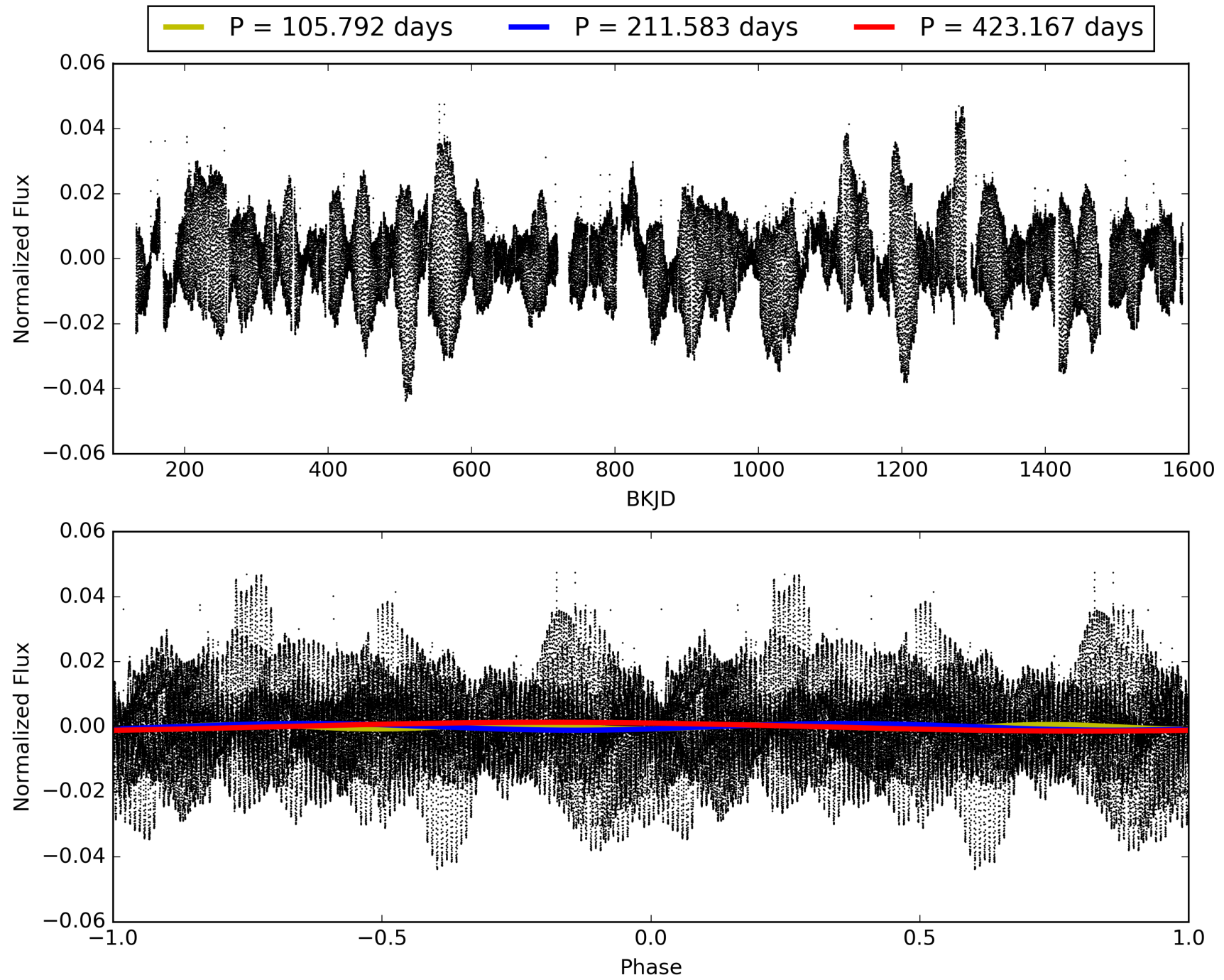
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 08:39:44 Z

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

TCE 008414845-04, PDC Light Curves

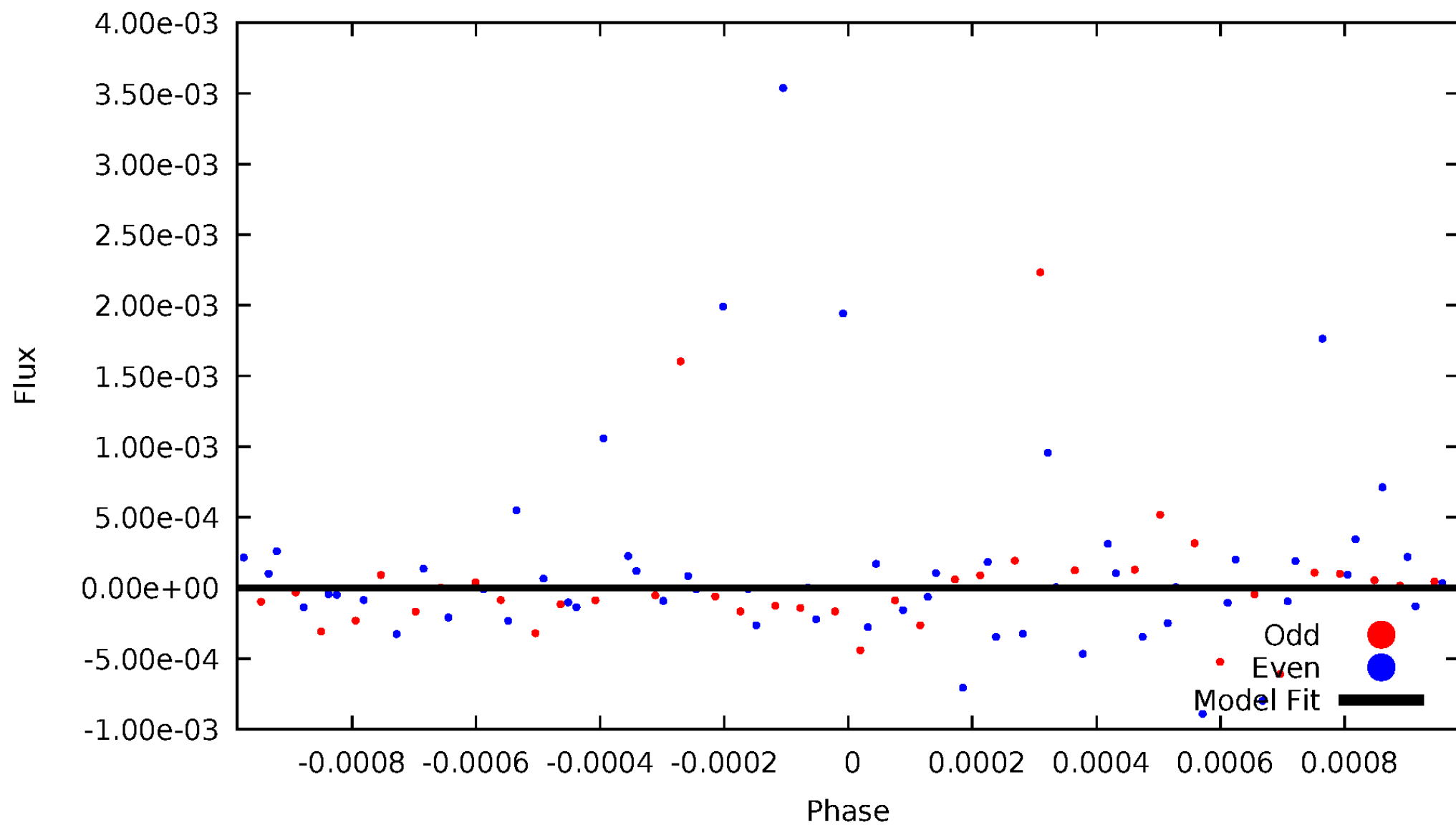


TCE 008414845-04



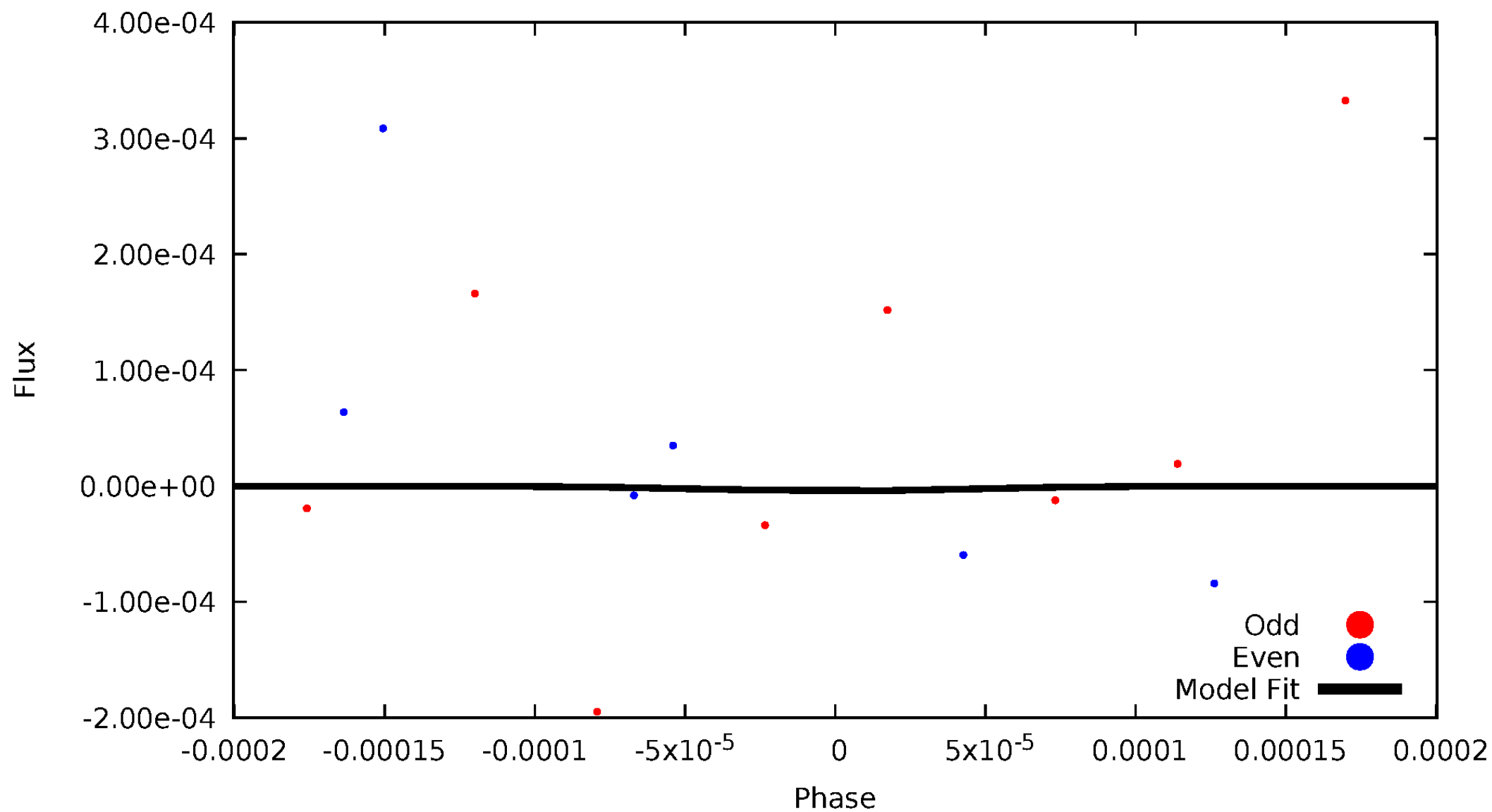
DV Odd/Even

TCE 008414845-04



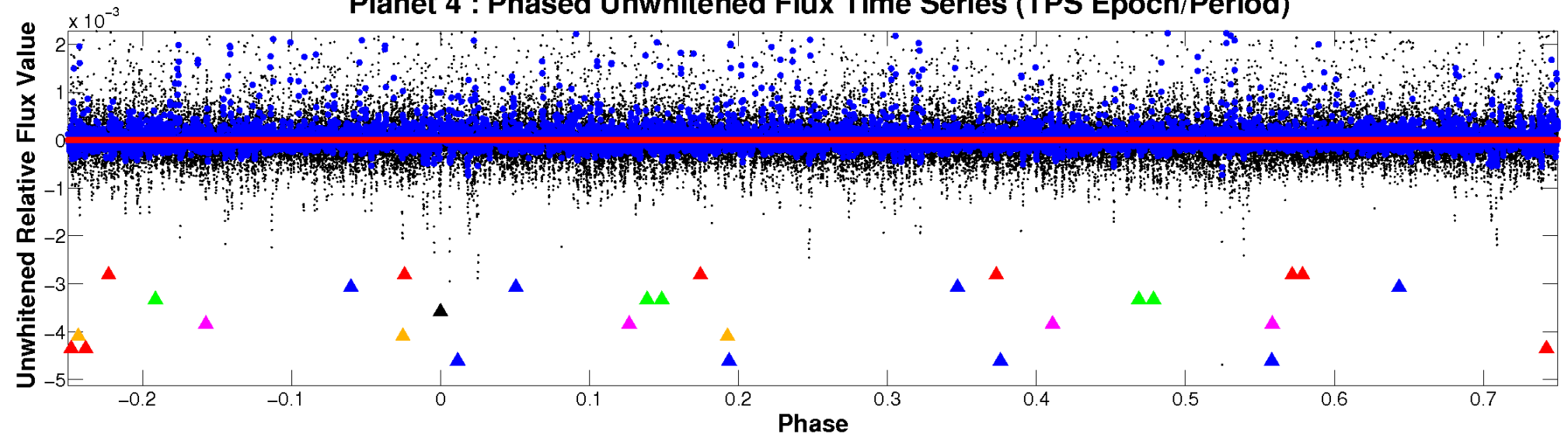
ALT Odd/Even

TCE 008414845-04



Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

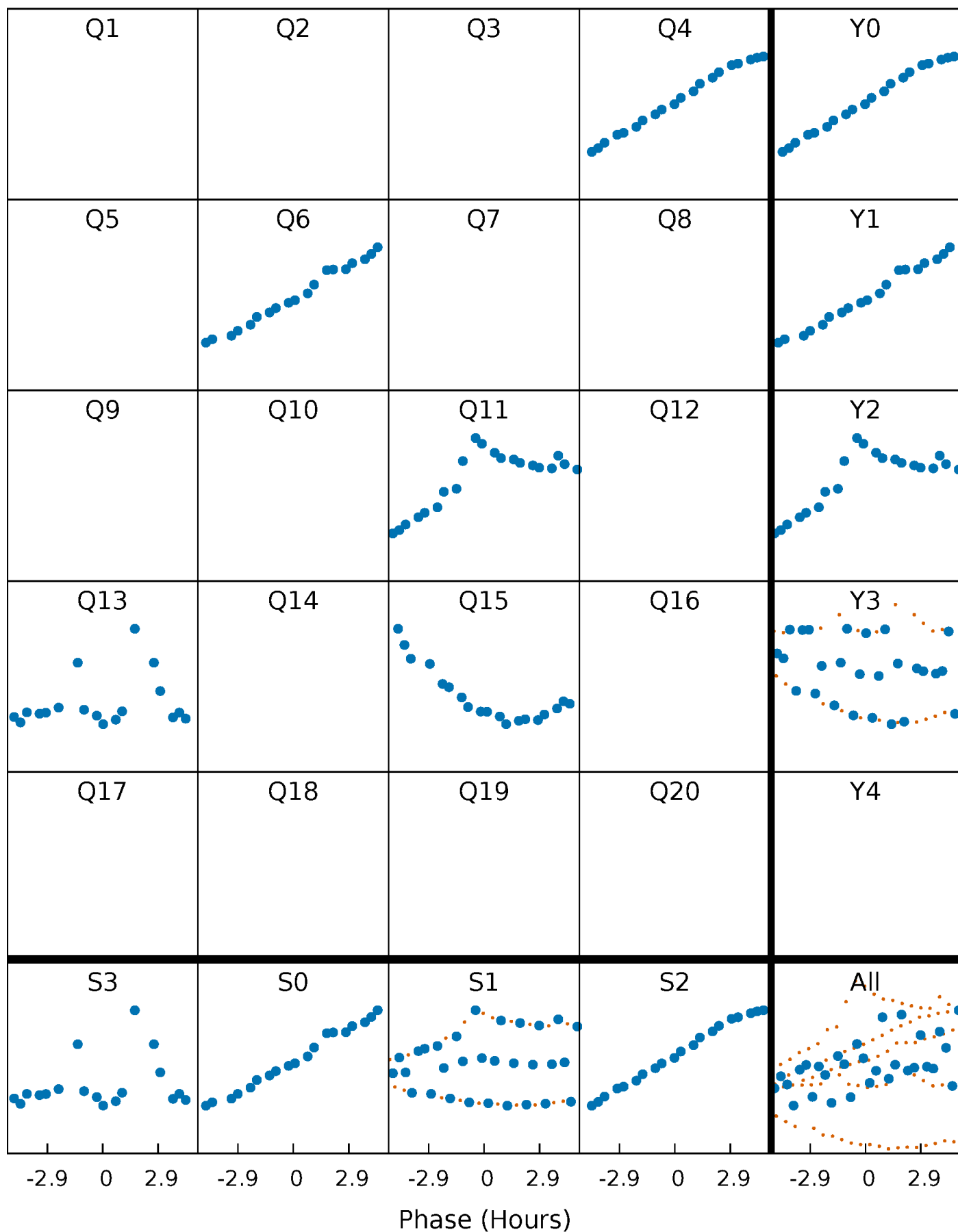


Planet 4 : Phased Whitened Flux Time Series (TPS Epoch/Period)



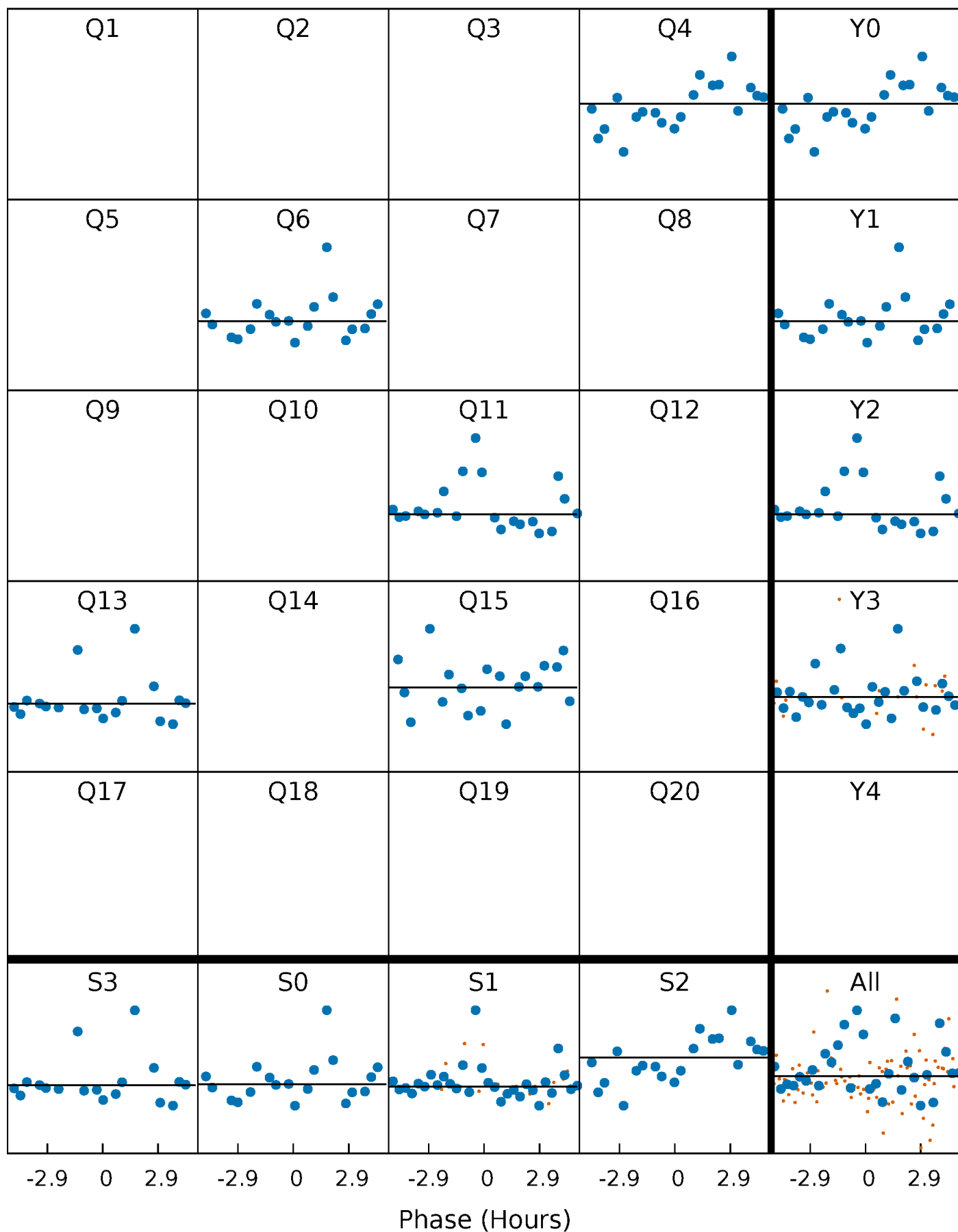
PDC Quarter-Phased Transit Curves

TCE 008414845-04 $P=211.583289$ Days $T_0=168.484961$ (BKJD)



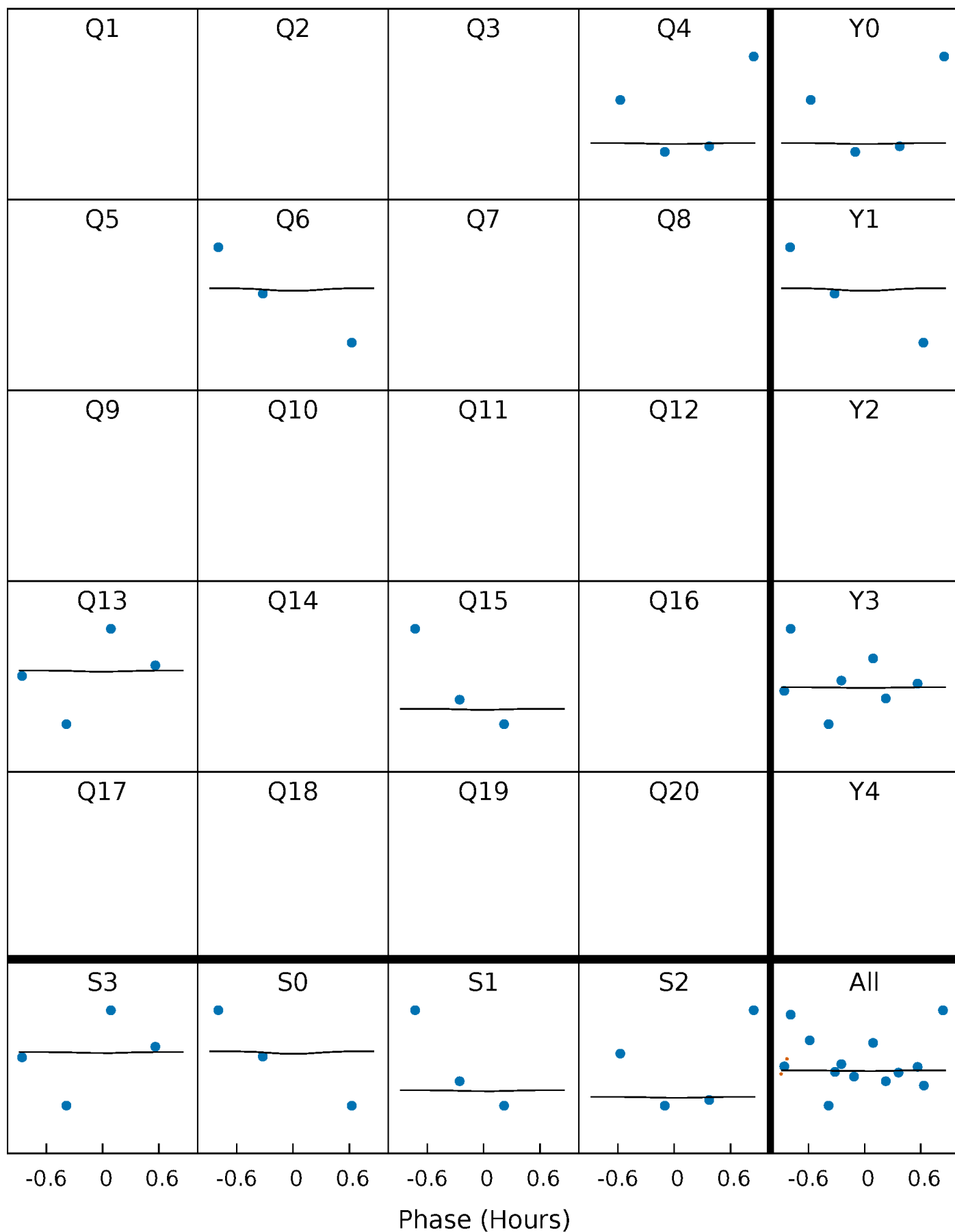
DV Quarter-Phased Transit Curves

TCE 008414845-04 P=211.583289 Days $T_0=168.484961$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

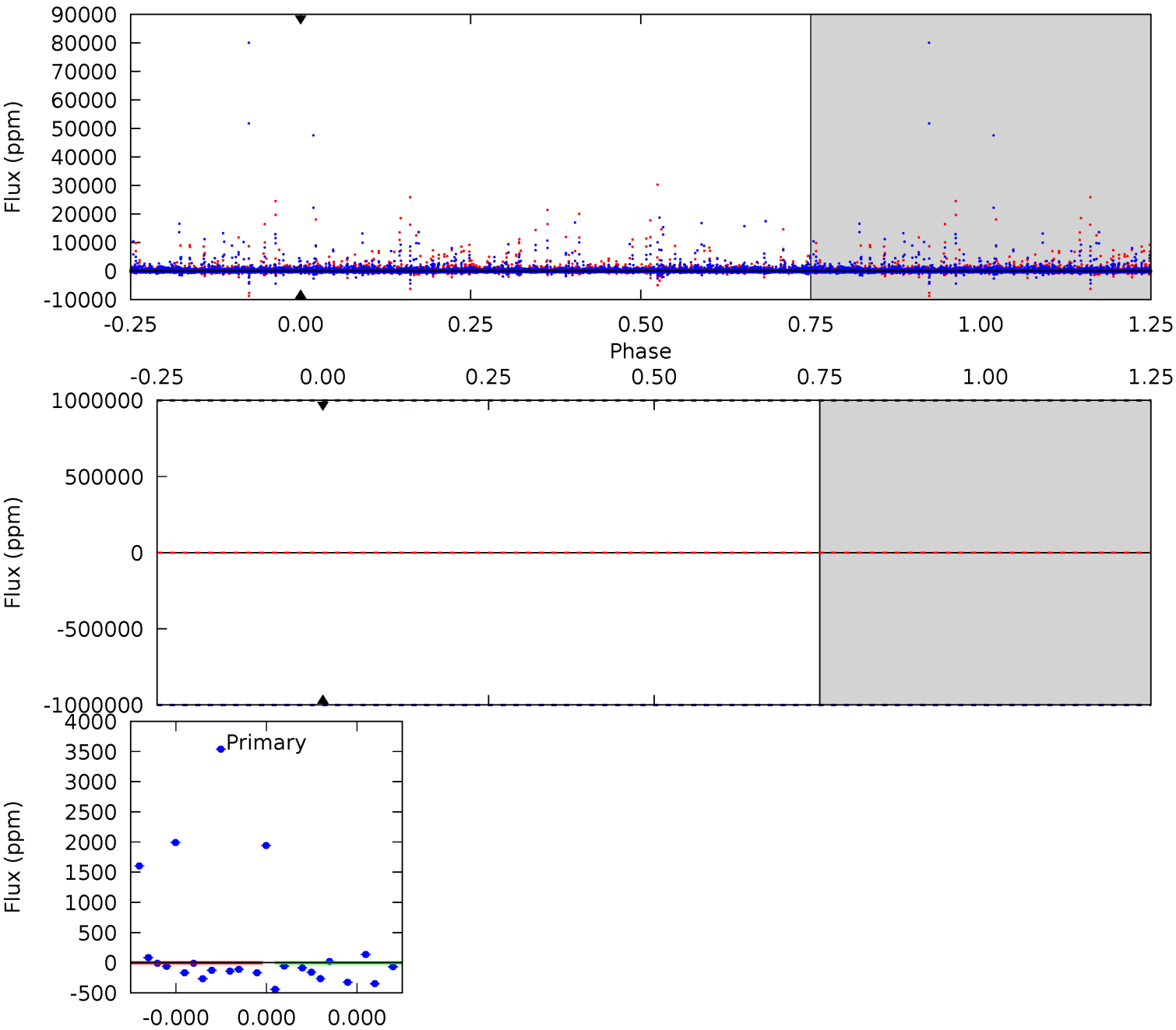
TCE 008414845-04 P=211.583289 Days $T_0=168.321931$ (BKJD)



DV Model-Shift Uniqueness Test

008414845-04, P = 211.583289 Days, E = 168.484961 Days

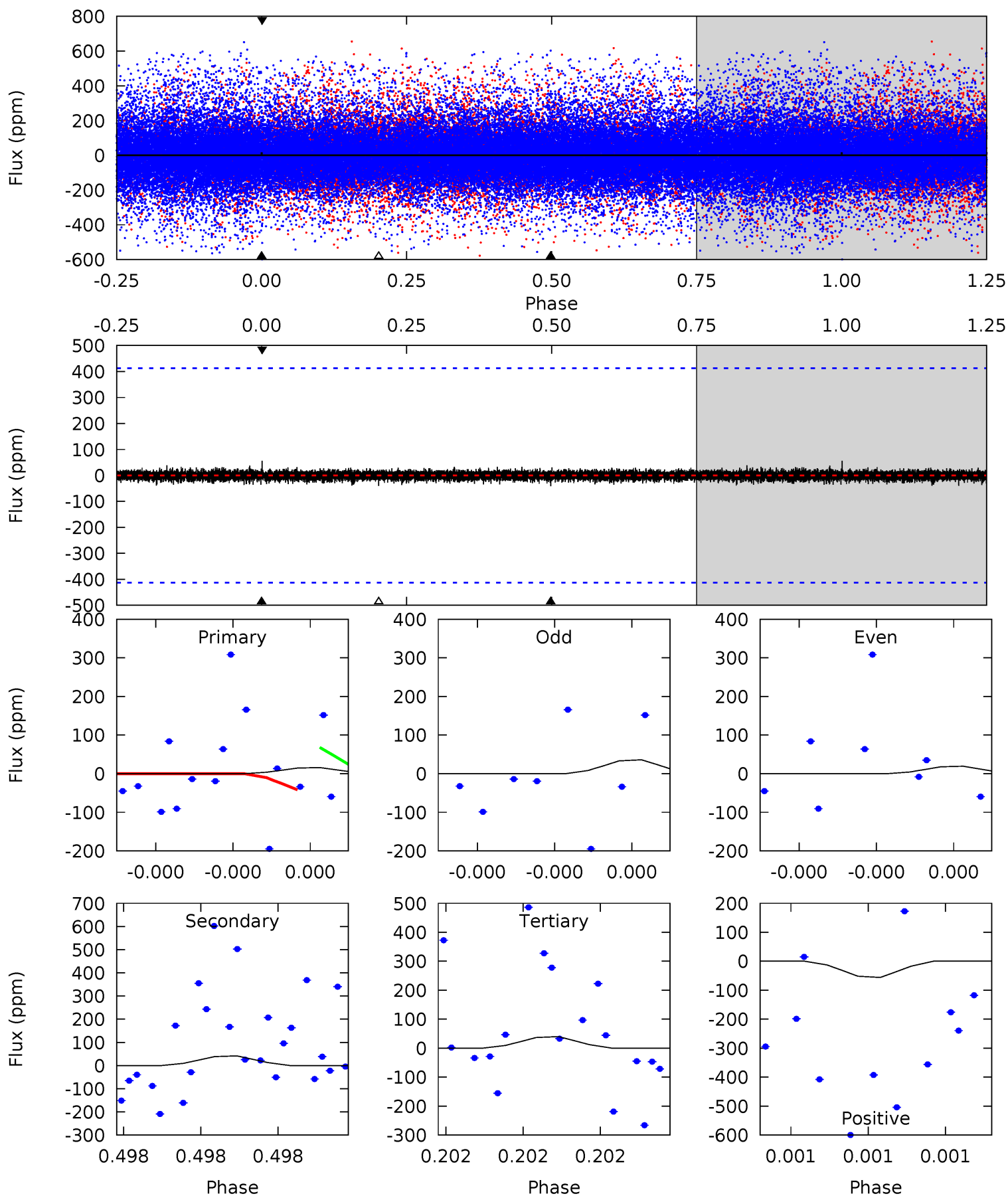
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008414845-04, P = 211.583289 Days, E = 168.321931 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.22	0.58	0.56	0.79	5.79	3.81	0.12	-0.33	-0.57	0.03	-0.20	0.12	-0.41	0.57	0.19



Stellar Parameters For KIC 008414845

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5693^{+154}_{-154}	$4.436^{+0.120}_{-0.165}$	$-0.400^{+0.300}_{-0.300}$	$0.899^{+0.224}_{-0.131}$	$0.804^{+0.112}_{-0.056}$	$1.559^{+0.866}_{-0.717}$
	+3%/-3%	+3%/-4%	+75%/-75%	+25%/-15%	+14%/-7%	+56%/-46%
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 008414845-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$7.91^{+8.29}_{-5.32}$	414^{+27}_{-21}	-3938^{+21898}_{-14165}	$-3998.991^{+667732.192}_{-594176.393}$
Alt.	-42 ± 71	$6.72^{+7.90}_{-4.66}$	416^{+25}_{-21}	2419^{+1019}_{-4818}	120^{+1670}_{-235}

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

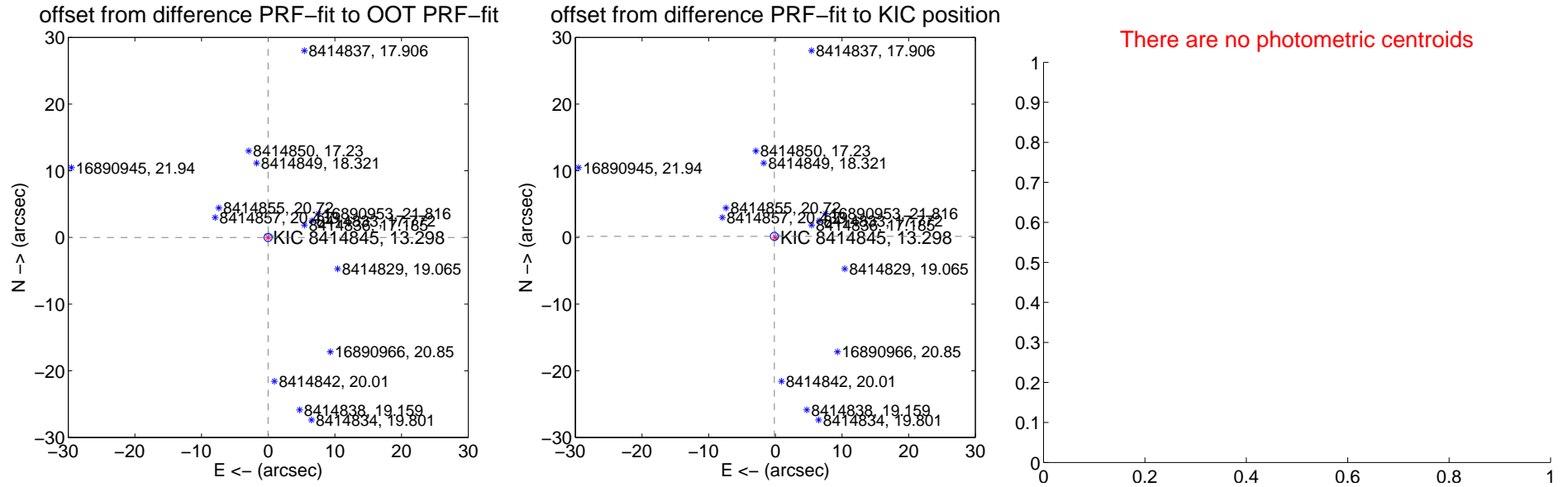
DV Centroid Data

Supplemental centroid analysis for 008414845-04. Kepler magnitude: 13.30. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.019 ± 0.203	0.09	0.016 ± 0.204	-0.011 ± 0.201
PRF-fit source offset from KIC position	0.216 ± 0.203	1.07	0.144 ± 0.204	0.161 ± 0.201
photometric centroid source offset	—	—	—	—



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 no difference image



Q2 no OOT image



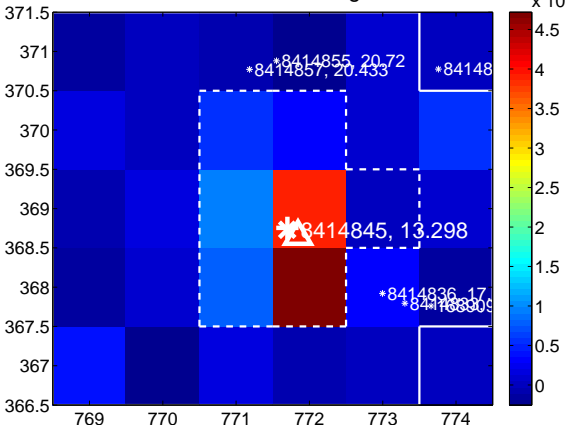
Q3 no difference image



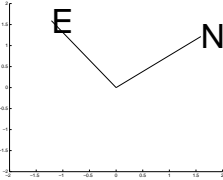
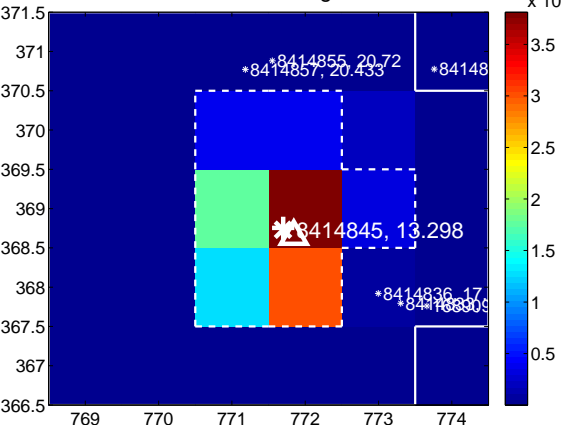
Q3 no OOT image



Q4 difference image



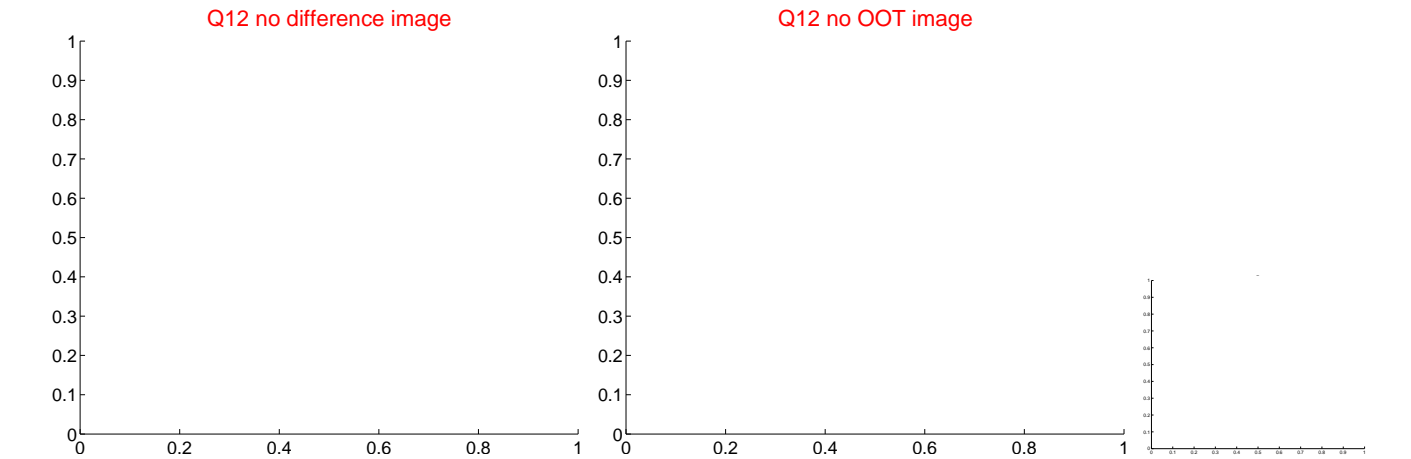
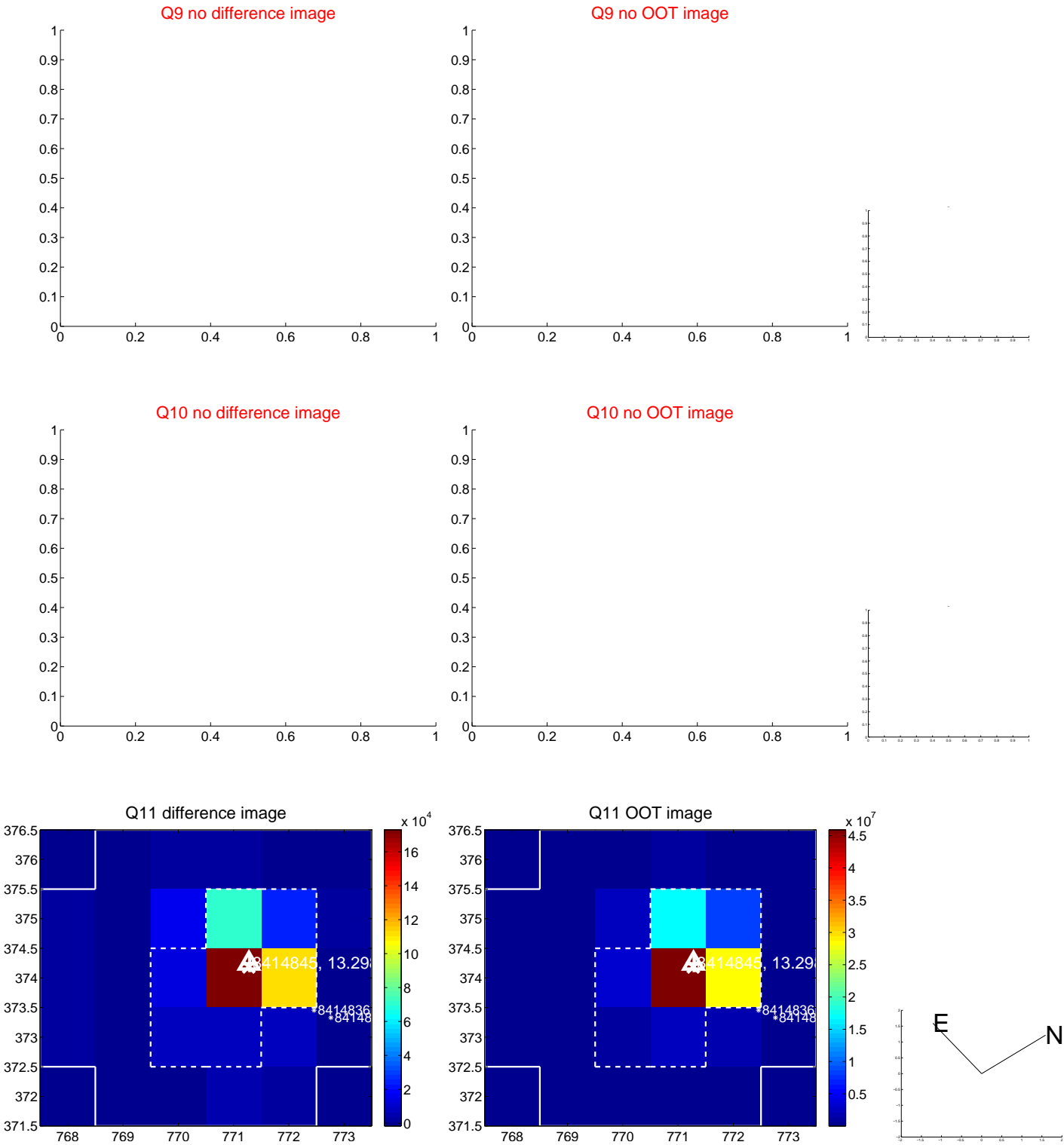
Q4 OOT image



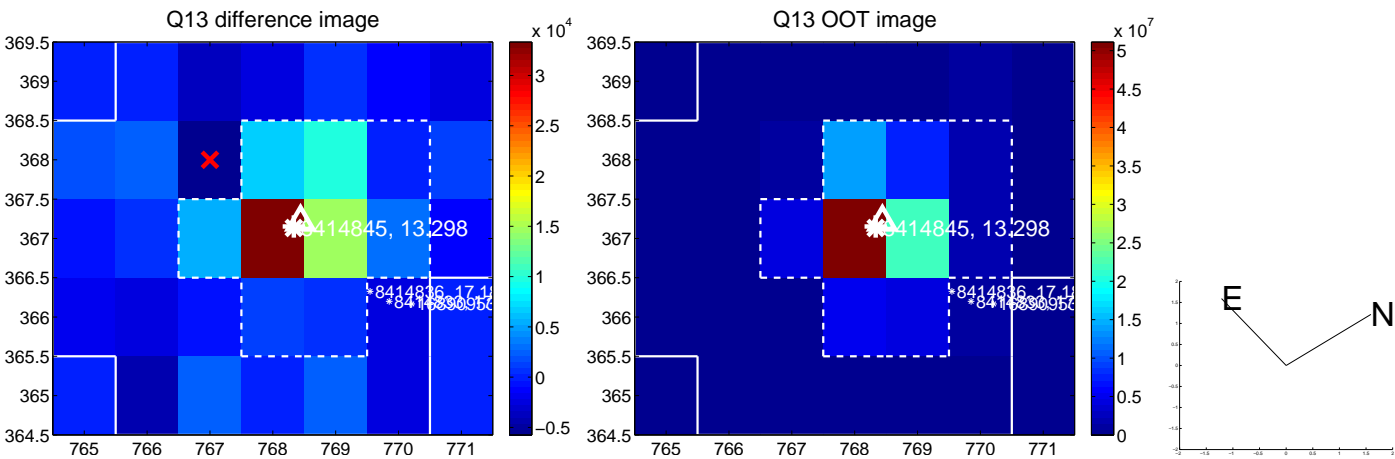
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



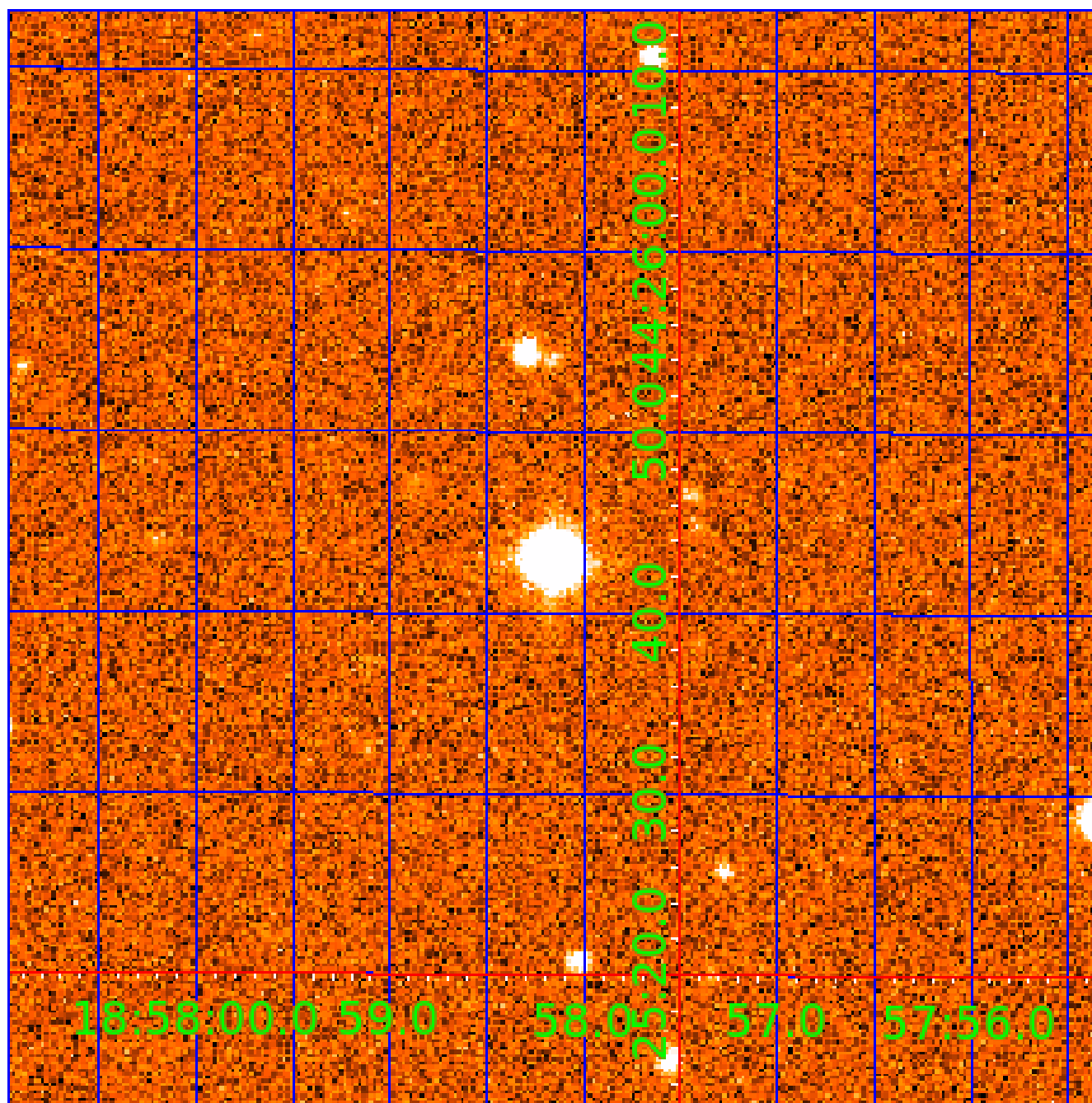
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 008414845

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})
008414845-01	OBS	No	253.608246	290.911787	1205.7	3.128	16.2	7.3	0.90	5693	3.26	1.43
008414845-02	OBS	No	360.450724	155.764876	703.1	2.510	17.1	5.7	0.90	5693	2.66	0.90
008414845-03	OBS	No	281.417800	199.915742	316.0	12.500	15.3	-1.0	0.90	5693	1.59	1.24
008414845-04	OBS	No	211.583289	168.484961	1032.0	2.500	14.1	-1.0	0.90	5693	2.87	1.82
008414845-05	OBS	No	363.040200	255.416190	2666.2	33.353	9.8	5.0	0.90	5693	5.69	0.89
008414845-06	OBS	No	469.264636	328.631306	1159.5	3.413	14.6	7.1	0.90	5693	3.04	0.63
008414845-08	OBS	No	384.628192	286.550814	628.3	3.000	13.4	-1.0	0.90	5693	2.24	0.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008414845-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008414845-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
008414845-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008414845-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
008414845-05	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008414845-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
008414845-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

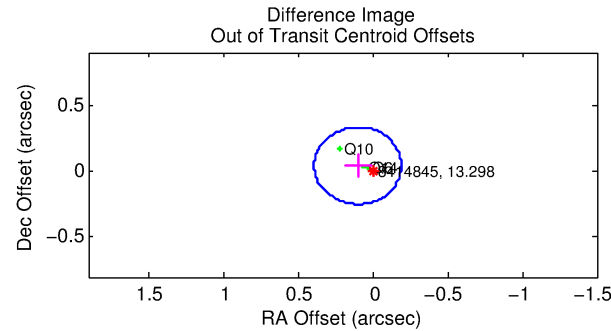
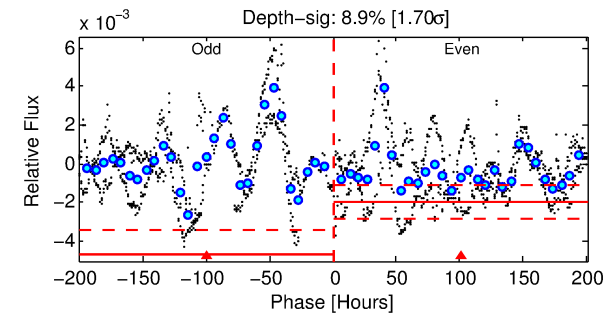
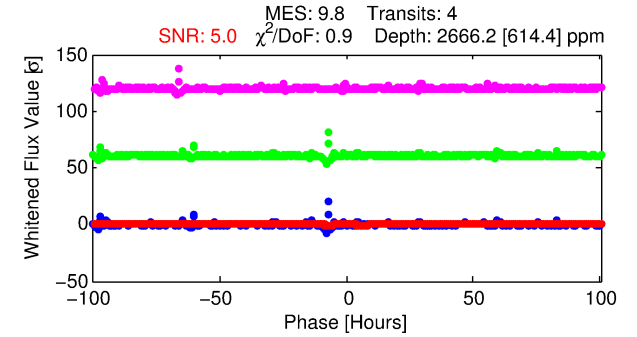
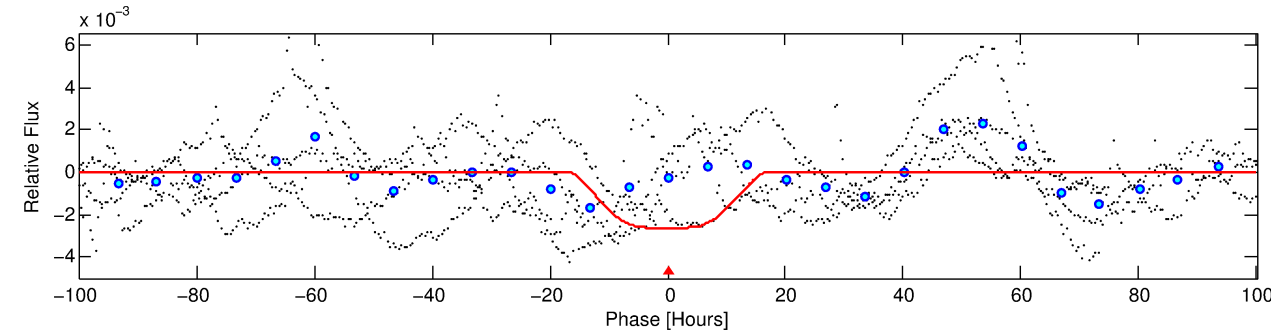
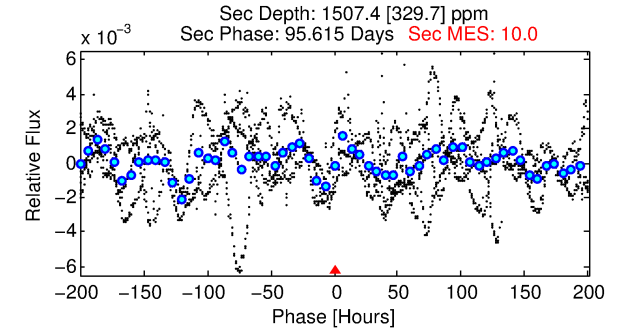
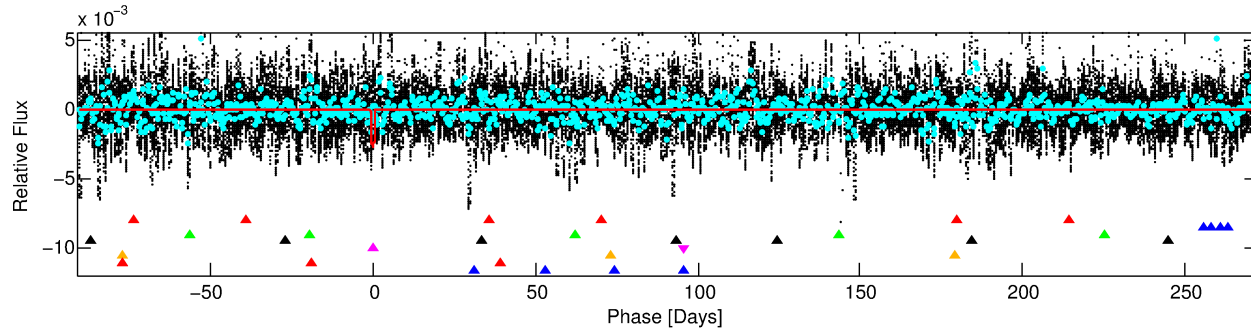
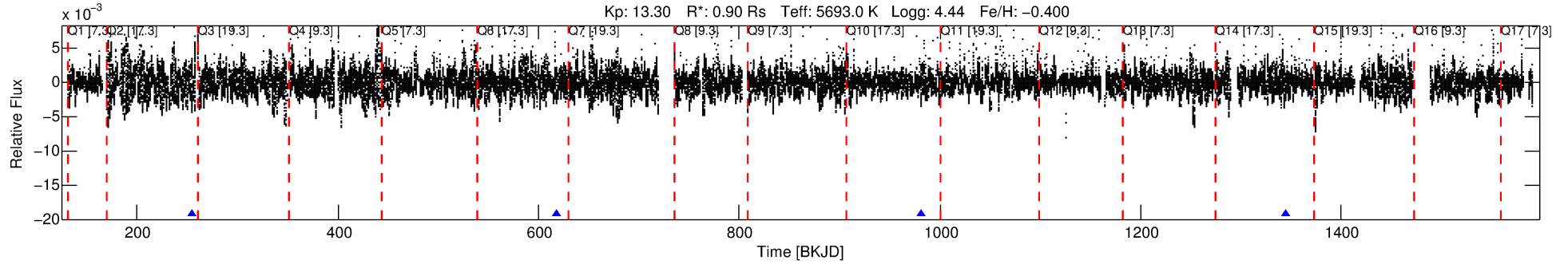
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008414845-05

No Significant Match Found

DV One-Page Summary

KIC: 8414845 Candidate: 5 of 8 Period: 363.040 d



DV Fit Results:

Period = 363.04020 [0.03232] d
Epoch = 255.4162 [0.0668] BKJD
Rp/R* = 0.0580 [0.0069]
a/R* = 42.56 [3.65]
b = 0.93 [0.02]
Seff = 0.89 [0.29]
Teq = 247 [20] K
Rp = 5.69 [1.57] Re
a = 0.9265 [0.1935] AU
Ag = 22003.46 [9766.59] [2.25 σ]
Teffp = 4659 [398] K [11.06 σ]

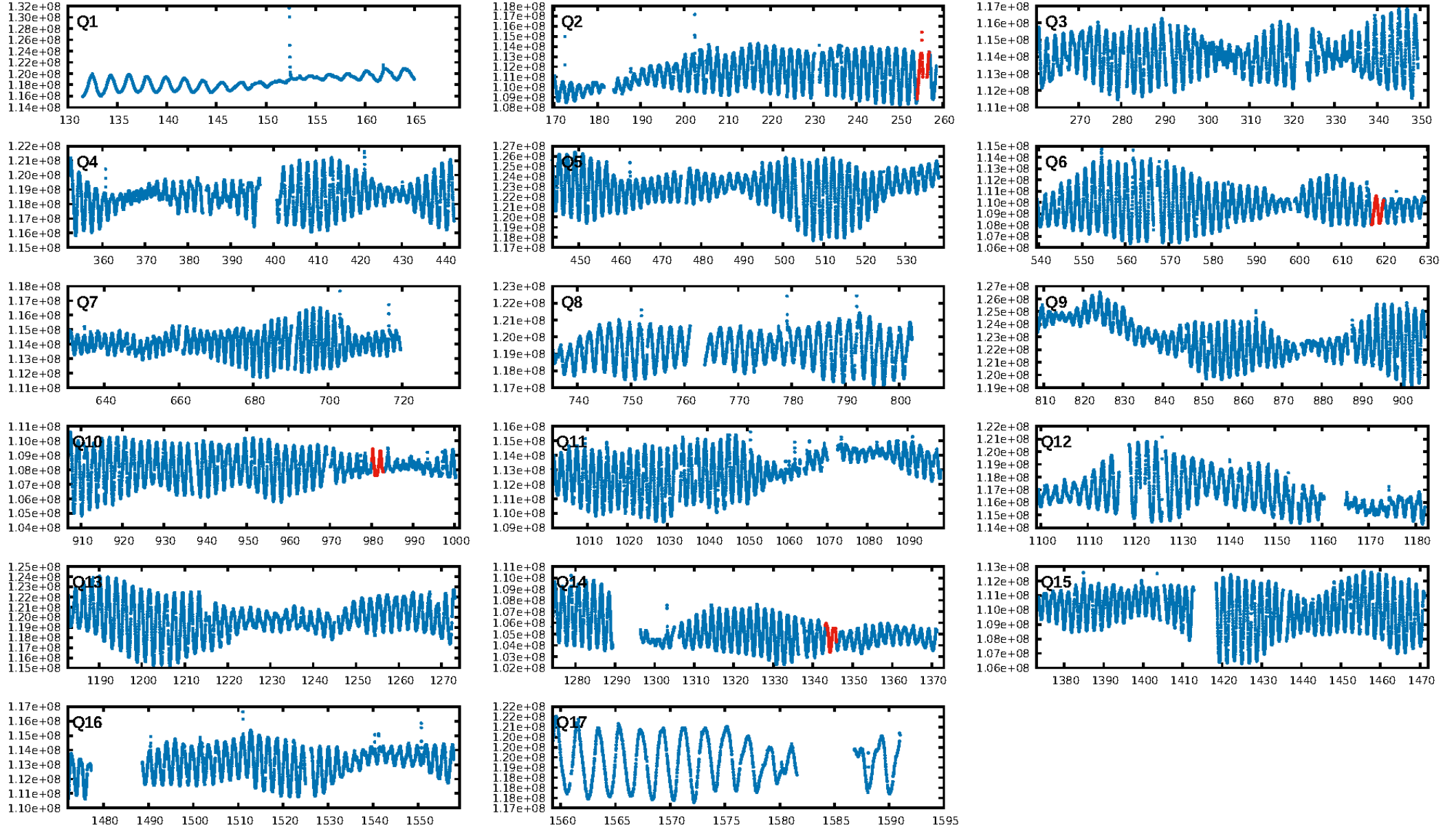
DV Diagnostic Results:

ShortPeriod-sig: 93.7% [1.86 σ]
LongPeriod-sig: 100.0% [15.47 σ]
ModelChiSquare2-sig: 2.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -9.655
Centroid-sig: 9.3%
Centroid-so: 0.060 arcsec [0.49 σ]
OotOffset-rm: 0.108 arcsec [1.11 σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-rm: 0.045 arcsec [0.50 σ]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

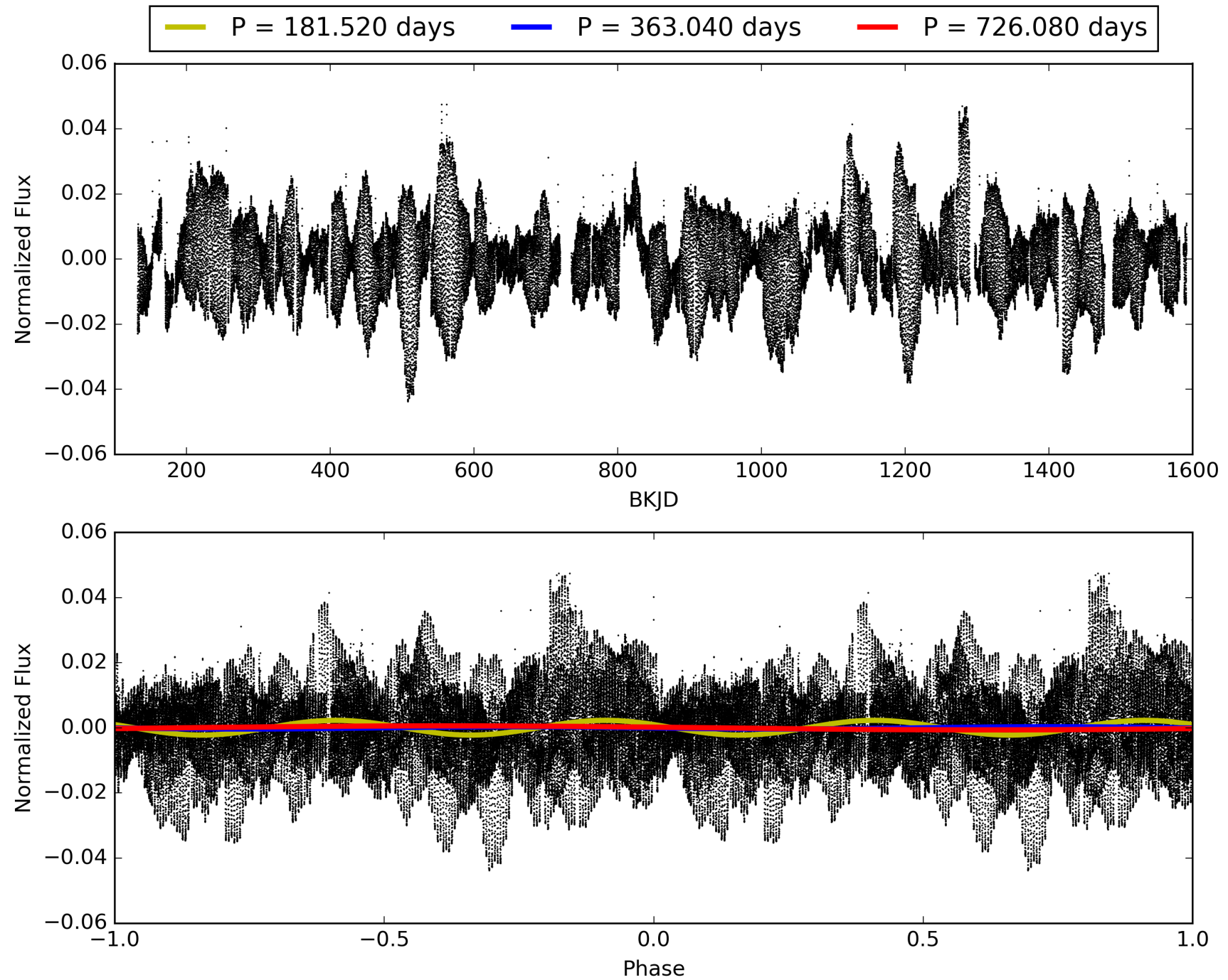
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 08:39:53 Z

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

TCE 008414845-05, PDC Light Curves

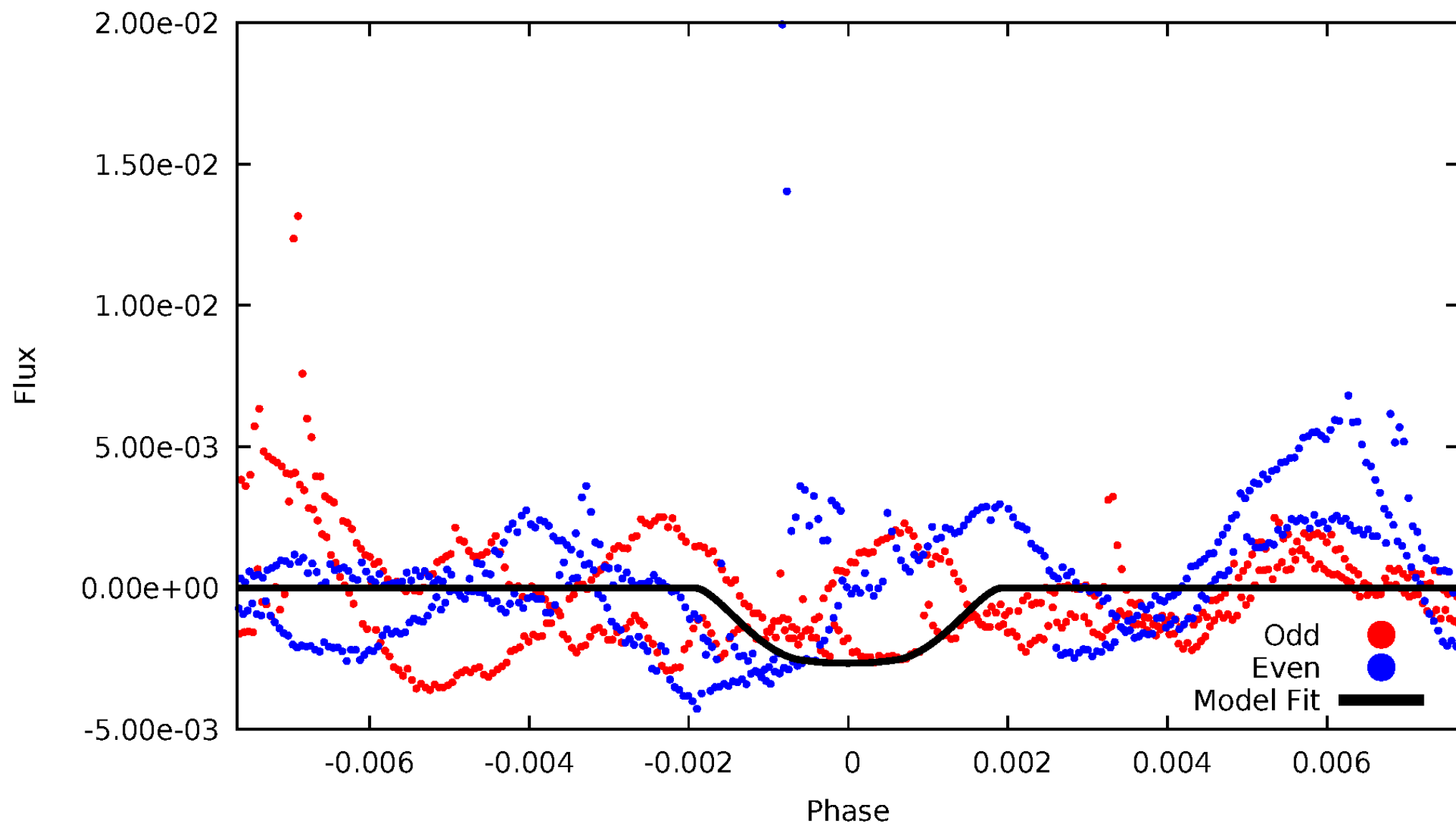


TCE 008414845-05



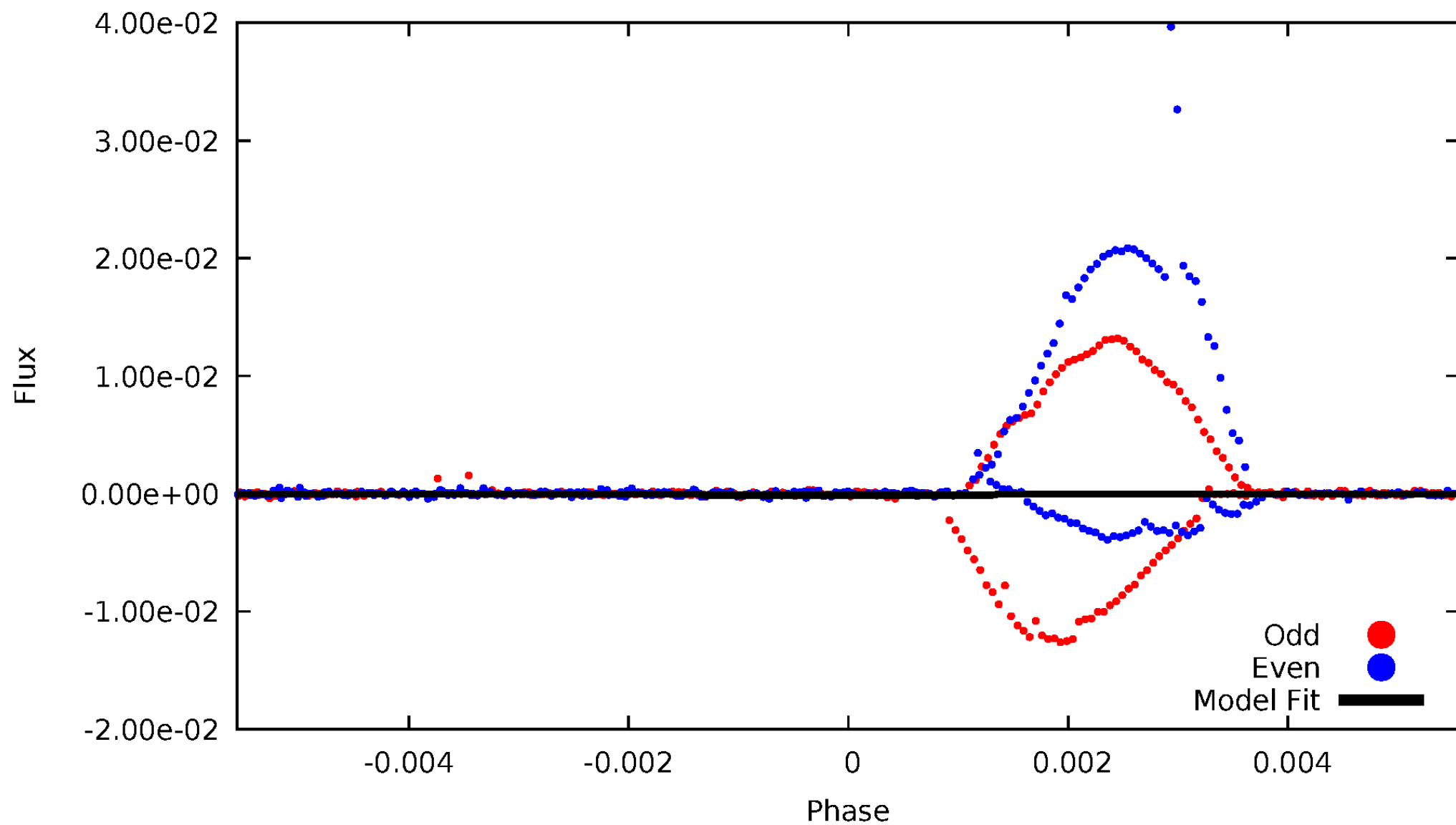
DV Odd/Even

TCE 008414845-05



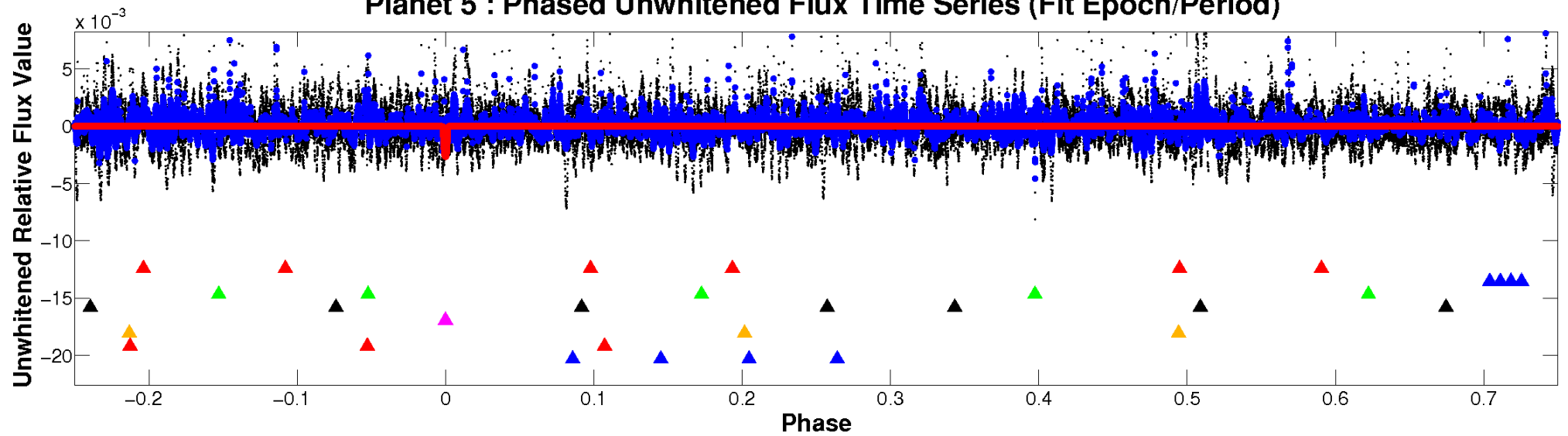
ALT Odd/Even

TCE 008414845-05

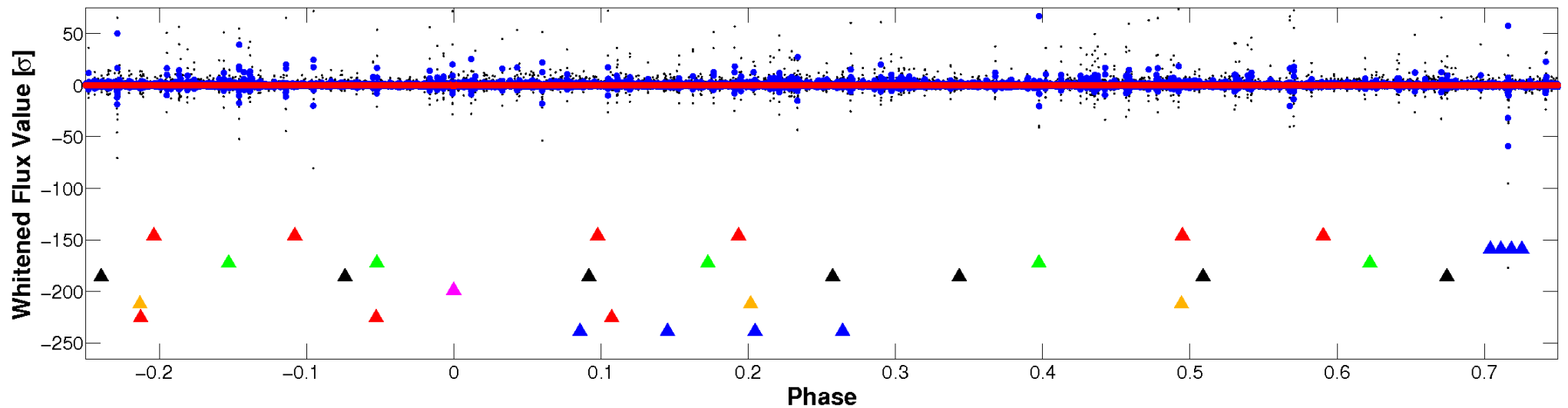


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

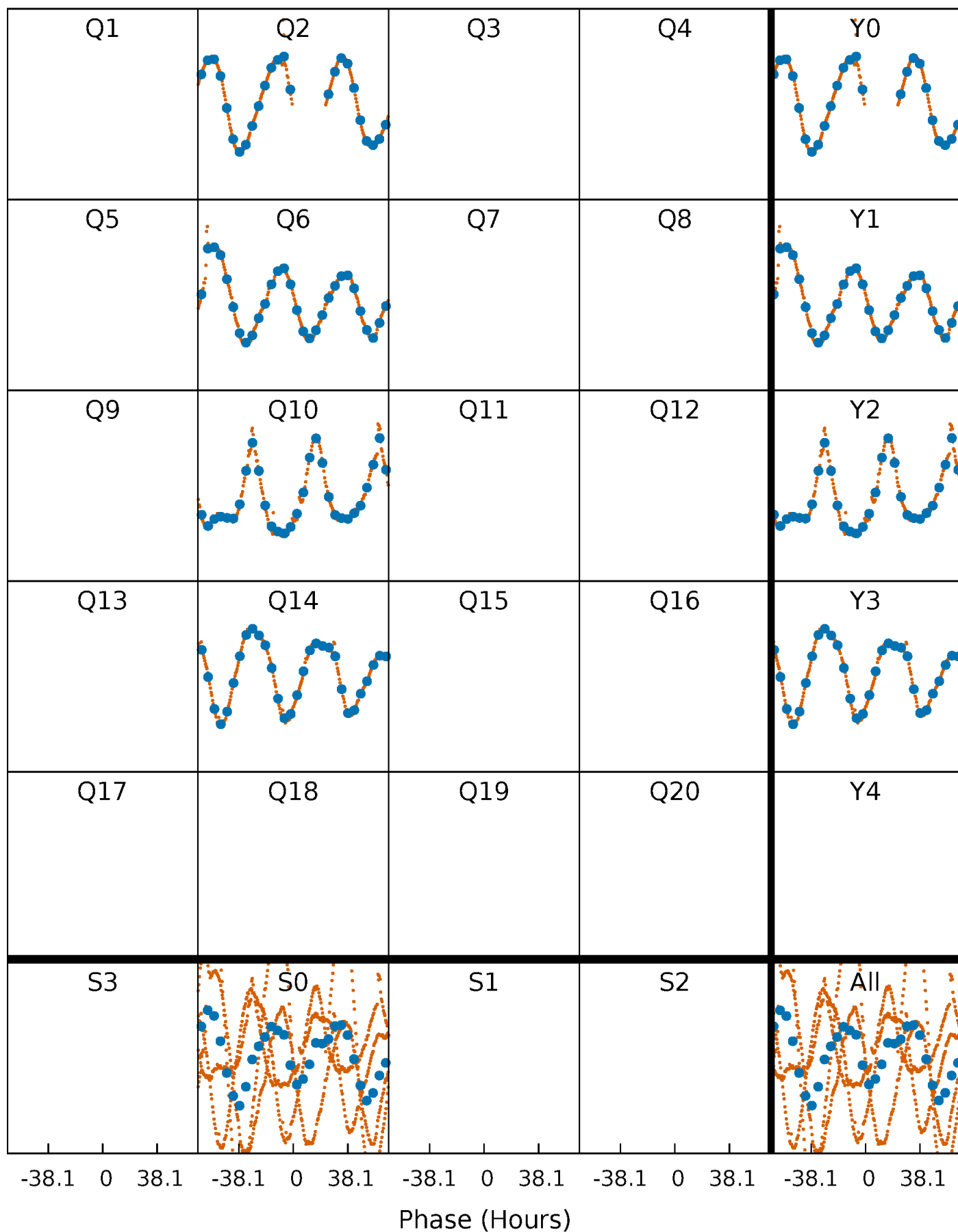


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



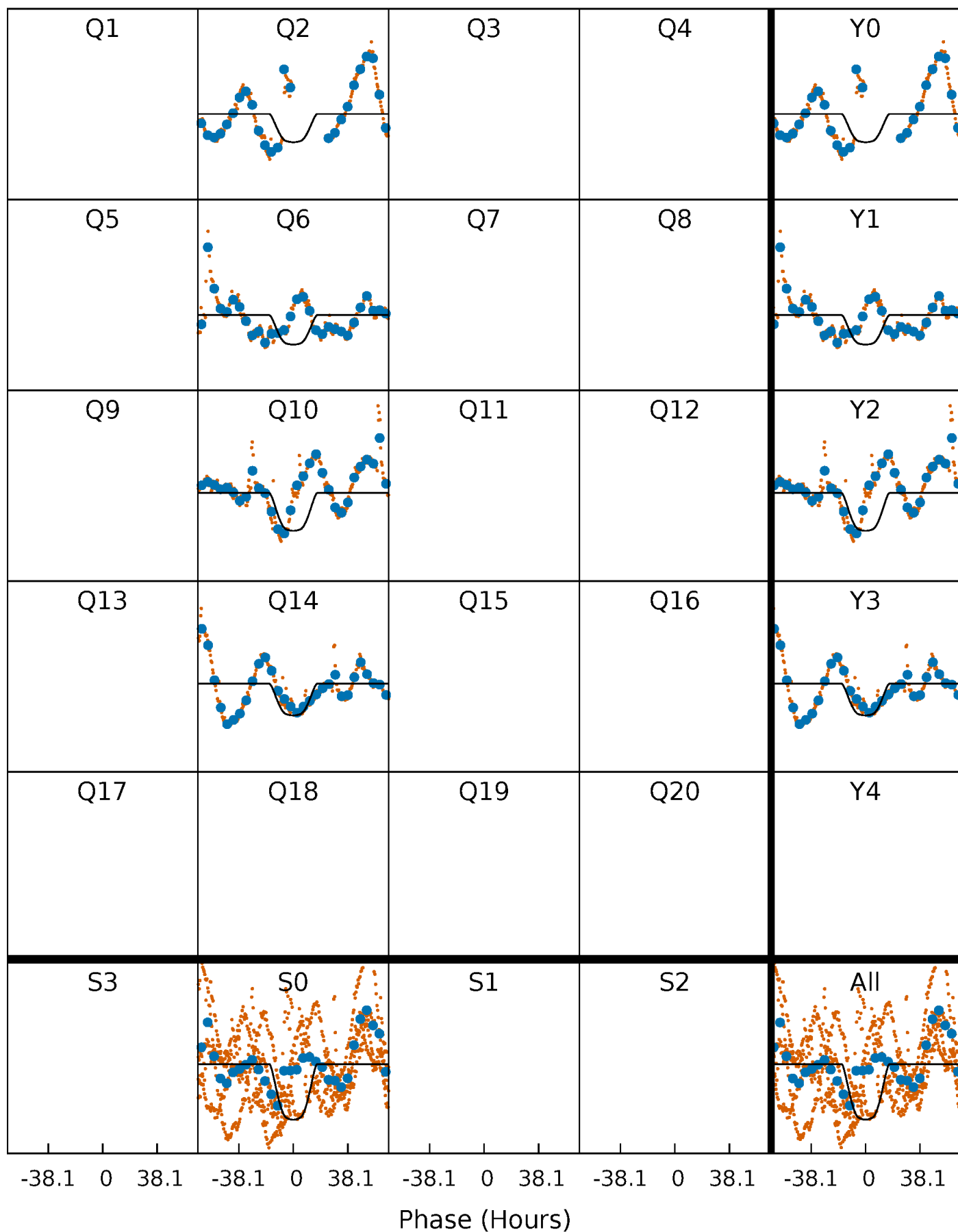
PDC Quarter-Phased Transit Curves

TCE 008414845-05 $P=363.040200$ Days $T_0=255.416190$ (BKJD)



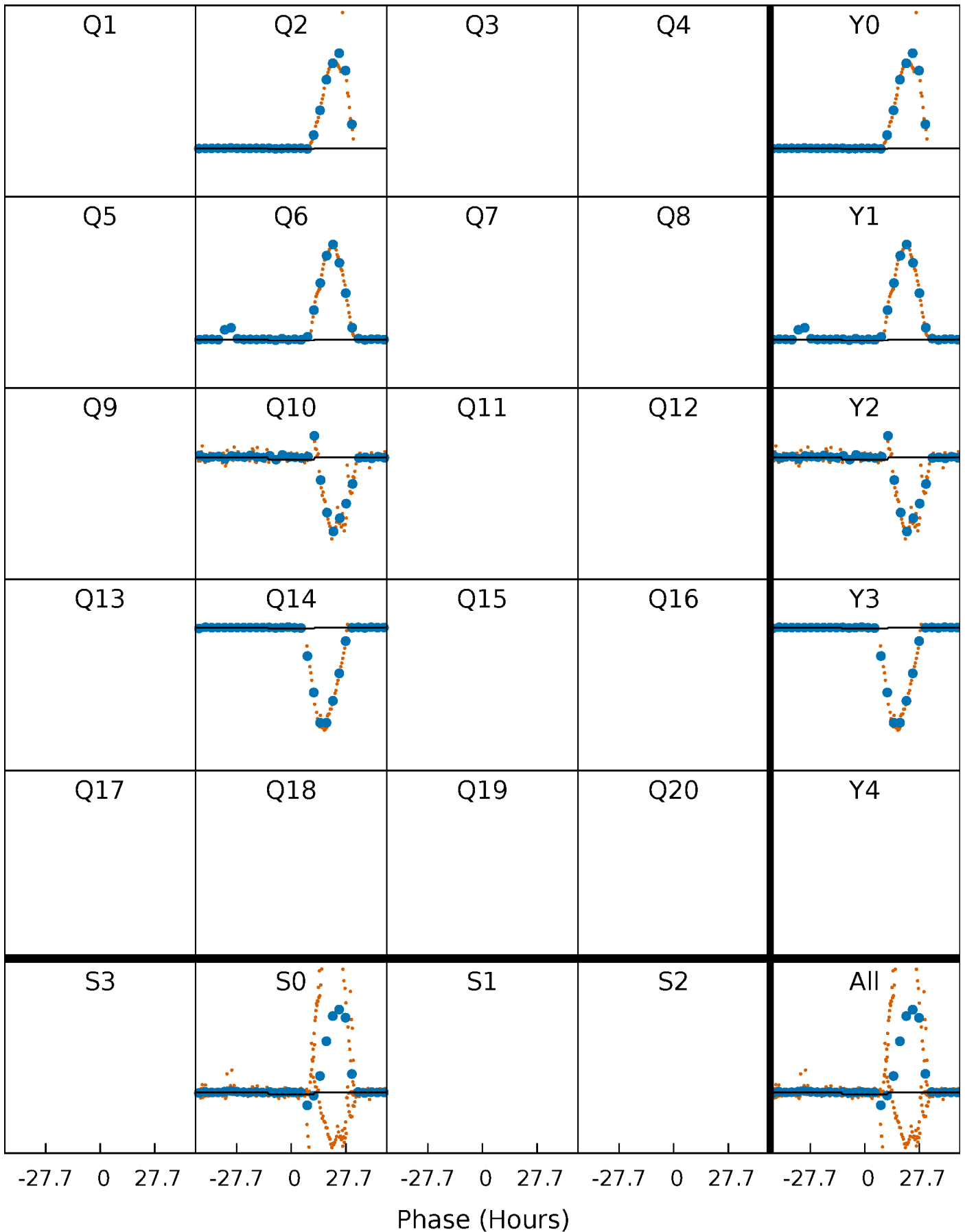
DV Quarter-Phased Transit Curves

TCE 008414845-05 $P=363.040200$ Days $T_0=255.416190$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

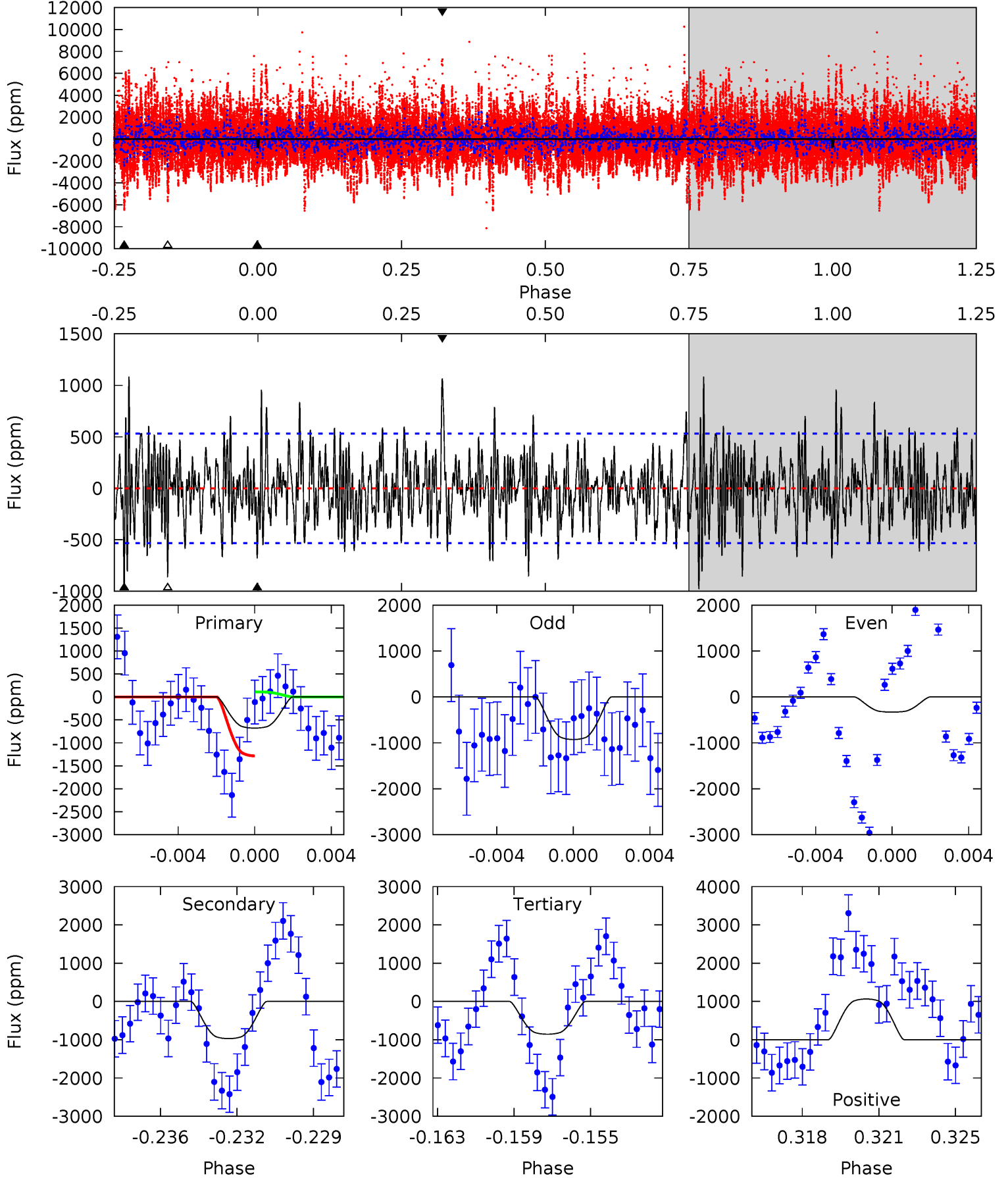
TCE 008414845-05 P=363.220151 Days $T_0=254.049302$ (BKJD)



DV Model-Shift Uniqueness Test

008414845-05, P = 363.040200 Days, E = 255.416190 Days

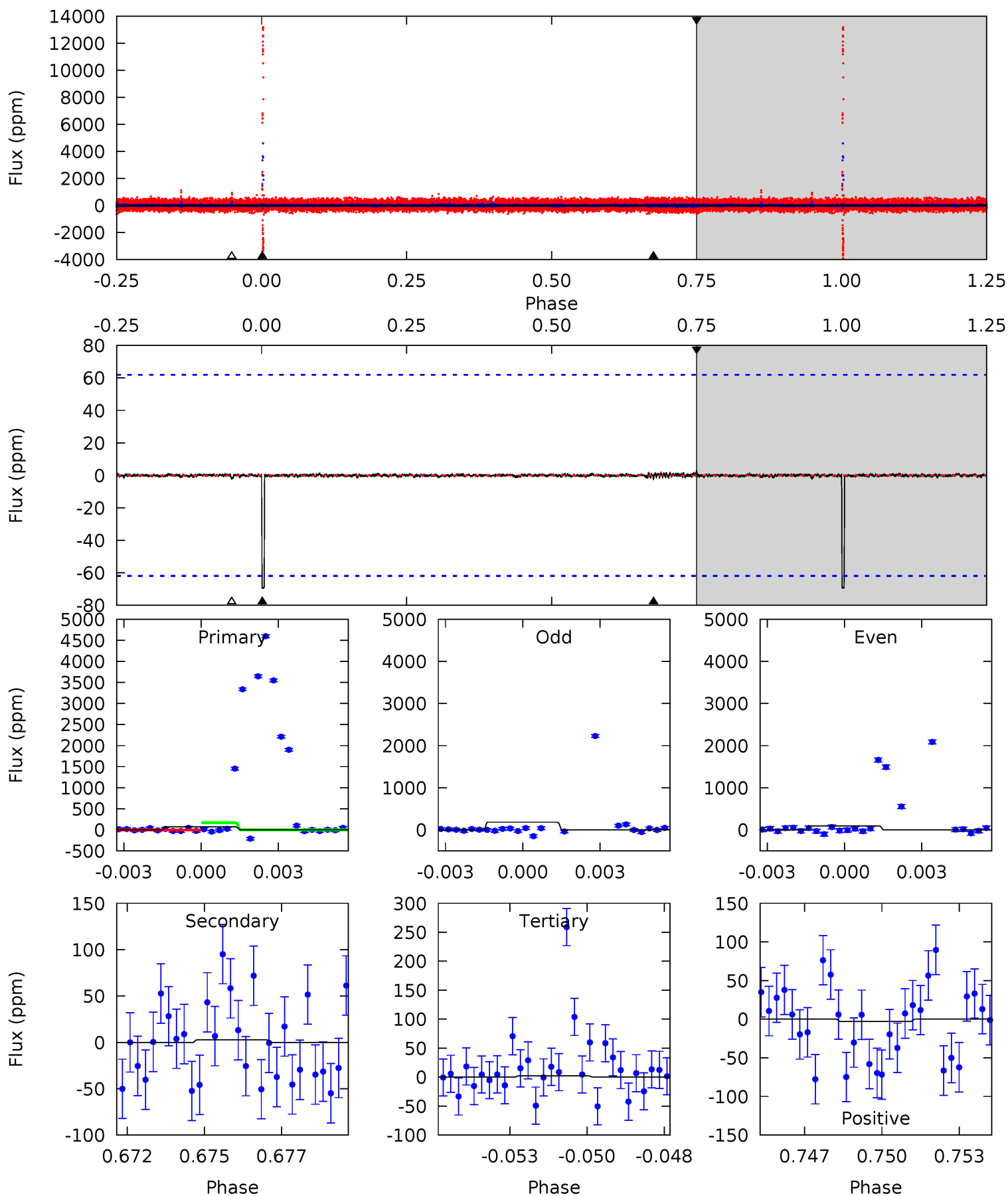
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.64	9.50	8.37	10.4	5.21	2.89	2.67	-1.73	-3.77	1.13	-0.91	2.81	0.42	0.53	5.76



Alt Model-Shift Uniqueness Test

008414845-05, P = 363.220151 Days, E = 254.049302 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.92	0.23	0.17	0.26	5.27	2.99	0.14	5.75	5.66	0.05	-0.03	3.65	-0.92	0.04	7.01



Stellar Parameters For KIC 008414845

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5693^{+154}_{-154}	$4.436^{+0.120}_{-0.165}$	$-0.400^{+0.300}_{-0.300}$	$0.899^{+0.224}_{-0.131}$	$0.804^{+0.112}_{-0.056}$	$1.559^{+0.866}_{-0.717}$
	+3%/-3%	+3%/-4%	+75%/-75%	+25%/-15%	+14%/-7%	+56%/-46%
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 008414845-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-971 ± 102	$5.82^{+1.01}_{-0.87}$	348^{+22}_{-18}	4383^{+272}_{-229}	13872^{+5126}_{-4184}
Alt.	-3 ± 12	$1.18^{+0.70}_{-0.67}$	348^{+22}_{-18}	2596^{+1325}_{-6205}	446^{+6566}_{-4954}

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

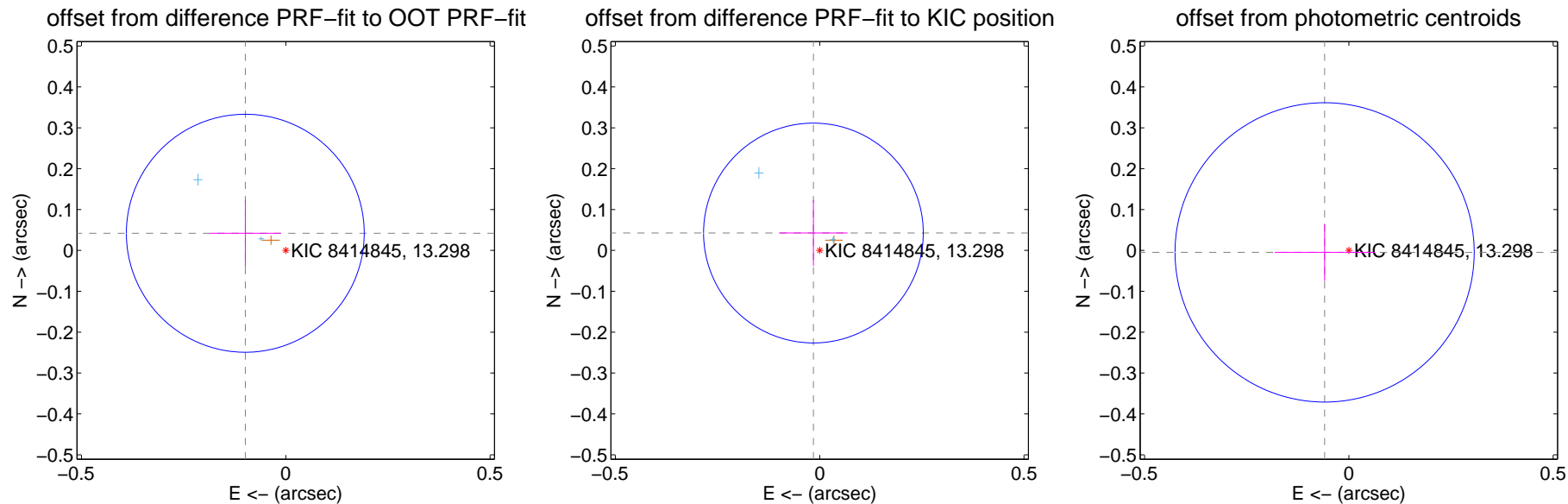
DV Centroid Data

Supplemental centroid analysis for 008414845-05. Kepler magnitude: 13.30. Transit SNR 5.01

There are 2 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.108 ± 0.097	1.11	0.099 ± 0.087	0.042 ± 0.083
PRF-fit source offset from KIC position	0.045 ± 0.090	0.50	0.015 ± 0.084	0.043 ± 0.081
photometric centroid source offset	0.06 ± 0.12	0.49	0.06 ± 0.12	-0.00 ± 0.07



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.

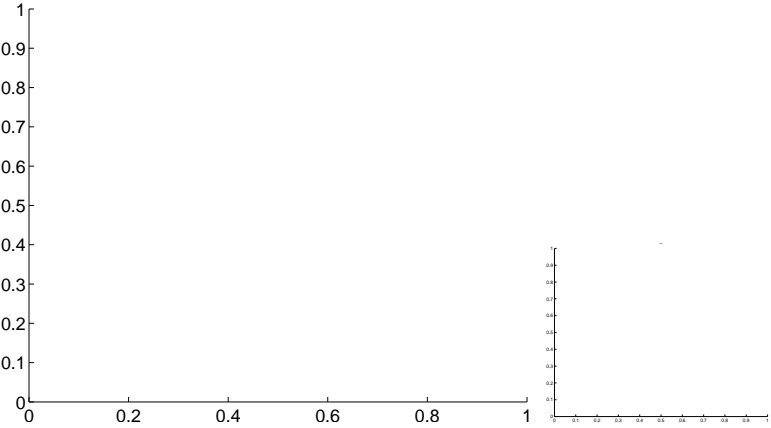


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

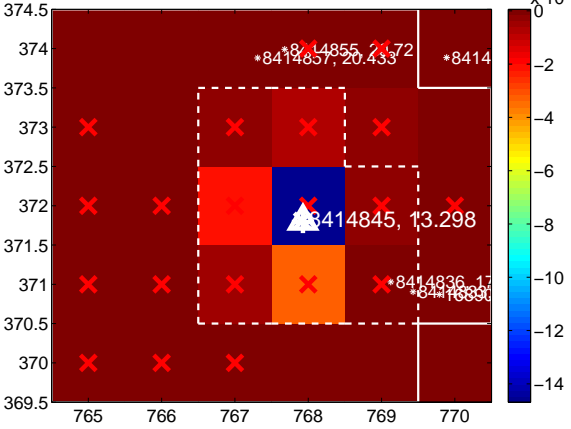
Q5 no difference image



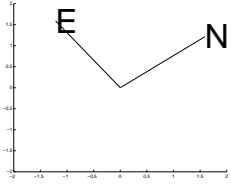
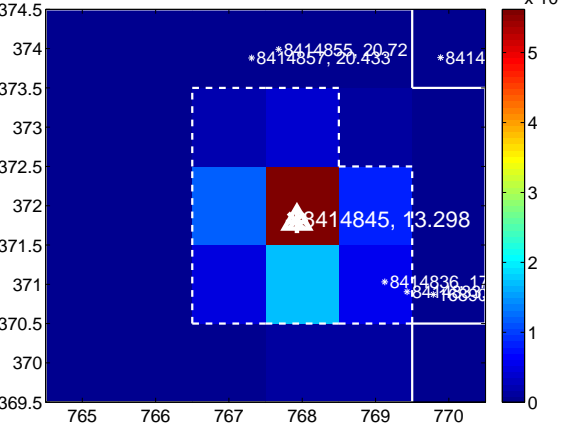
Q5 no OOT image



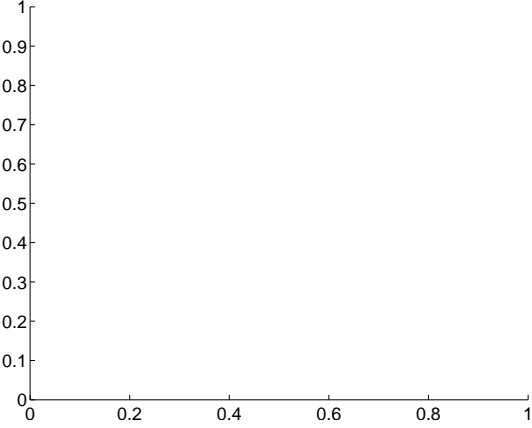
Q6 difference image. Poor Quality



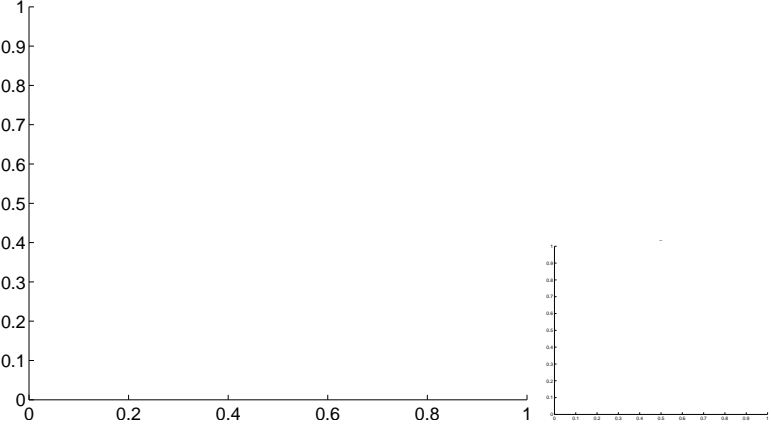
Q6 OOT image



Q7 no difference image



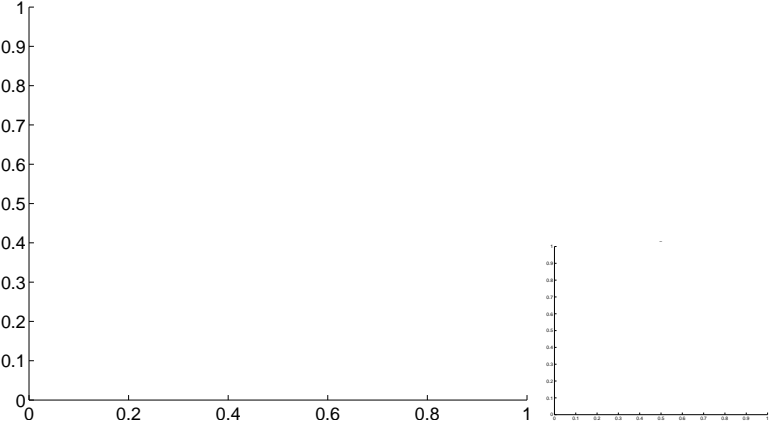
Q7 no OOT image



Q8 no difference image



Q8 no OOT image

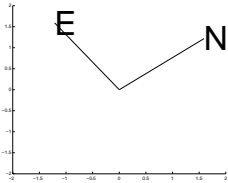
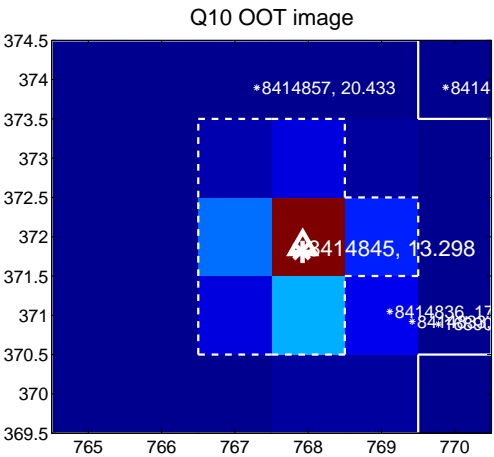
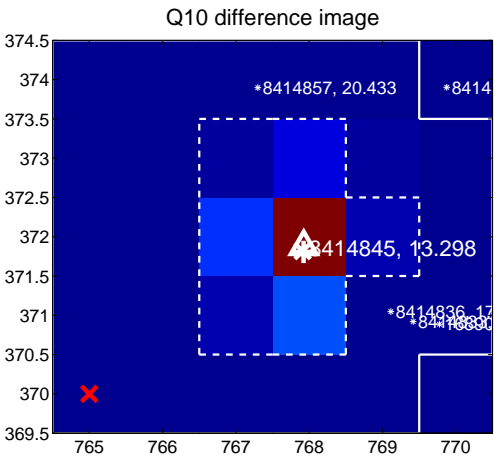
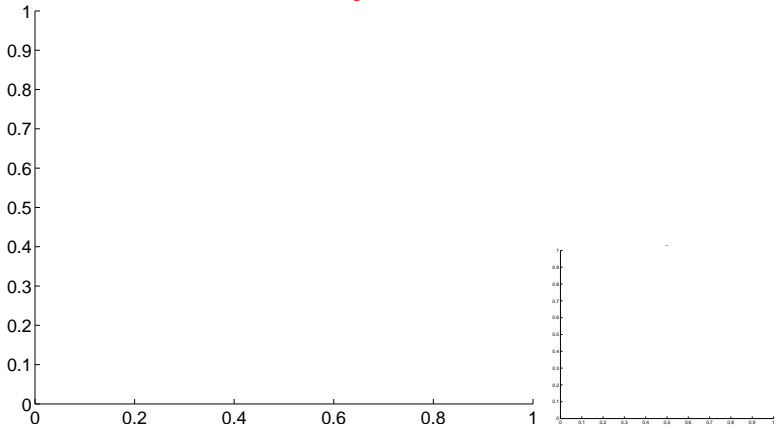


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

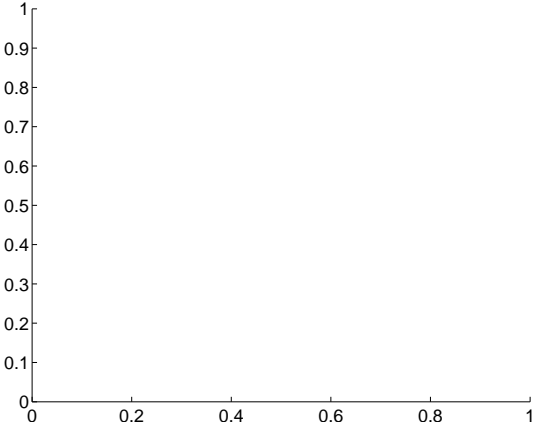
Q9 no difference image



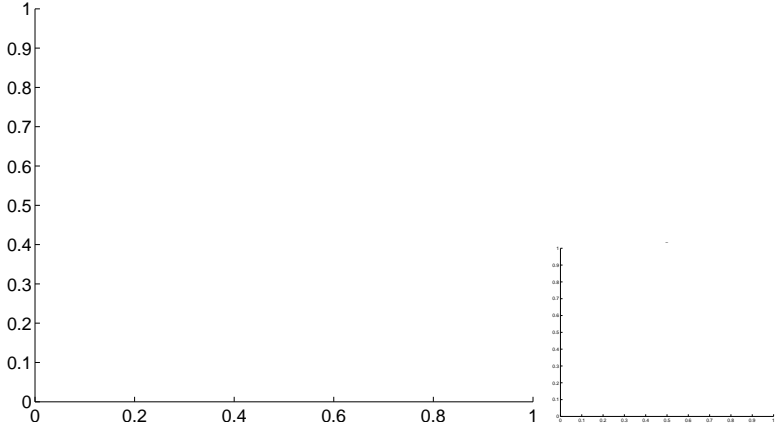
Q9 no OOT image



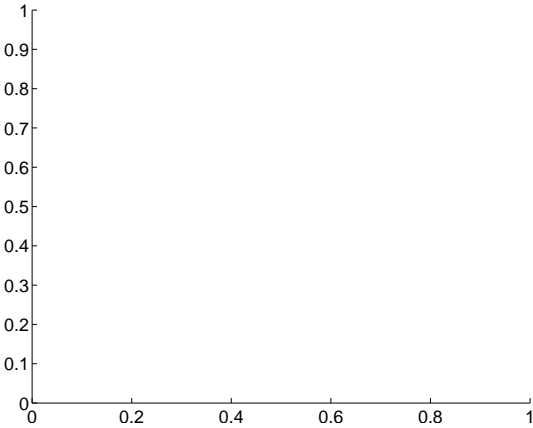
Q11 no difference image



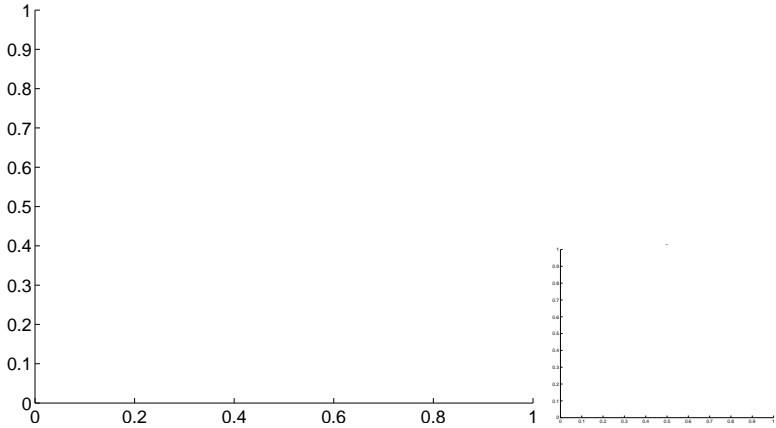
Q11 no OOT image



Q12 no difference image

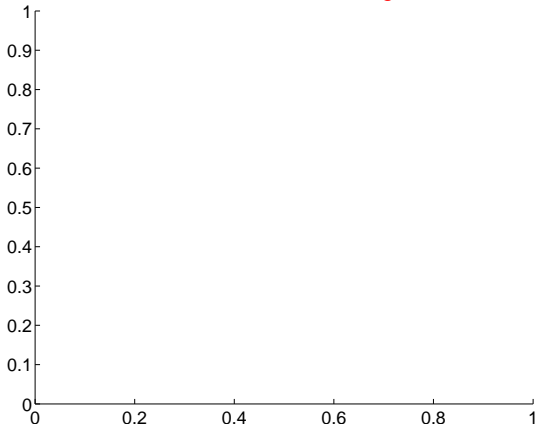


Q12 no OOT image

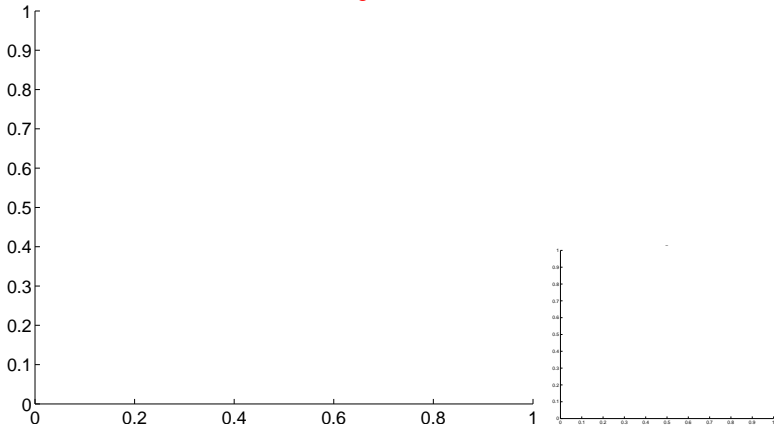


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

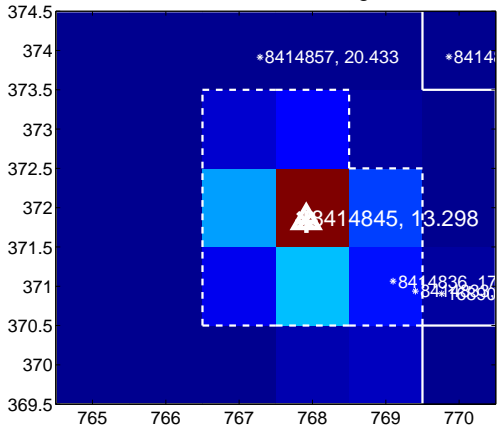
Q13 no difference image



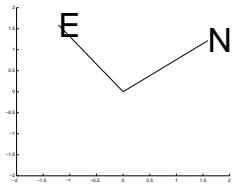
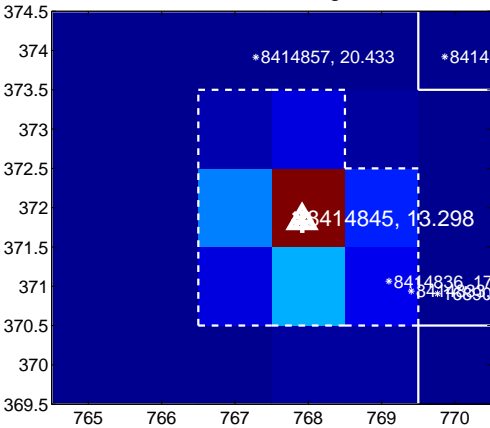
Q13 no OOT image



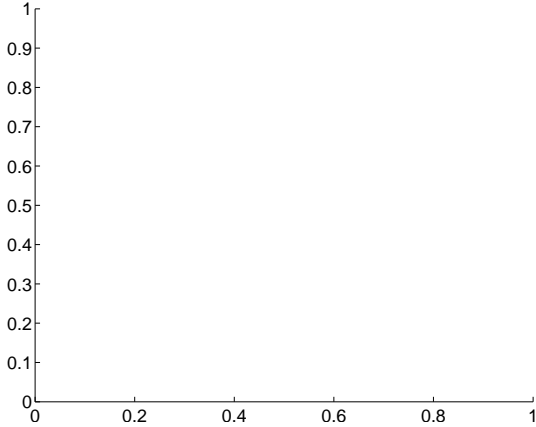
Q14 difference image



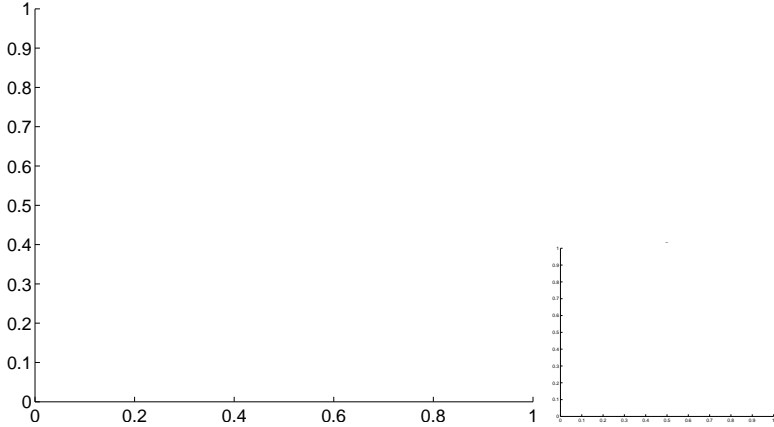
Q14 OOT image



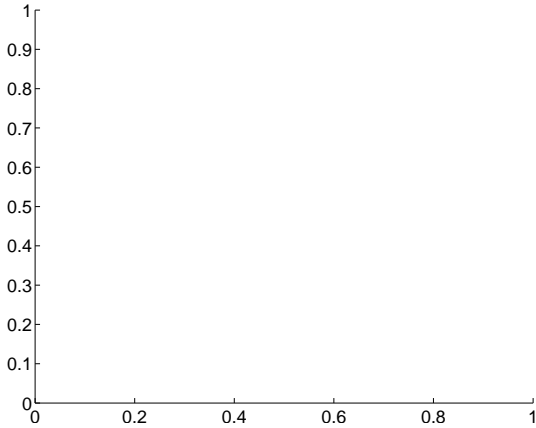
Q15 no difference image



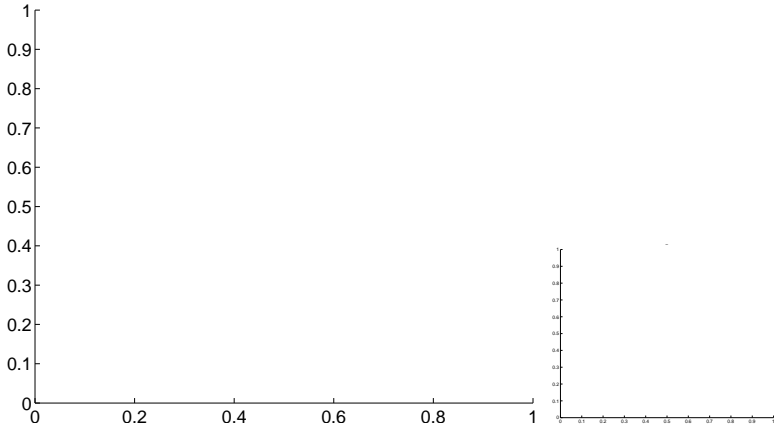
Q15 no OOT image



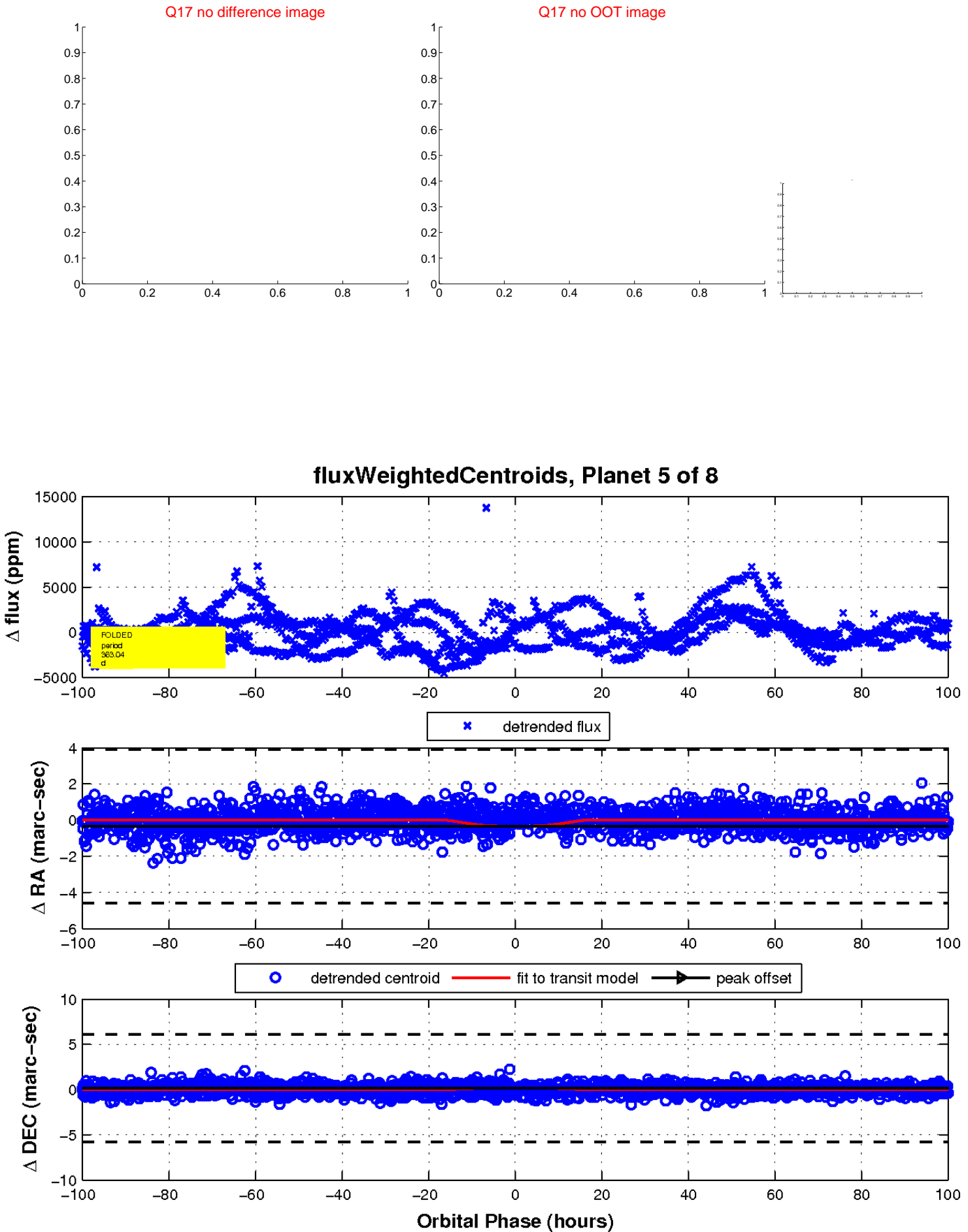
Q16 no difference image



Q16 no OOT image

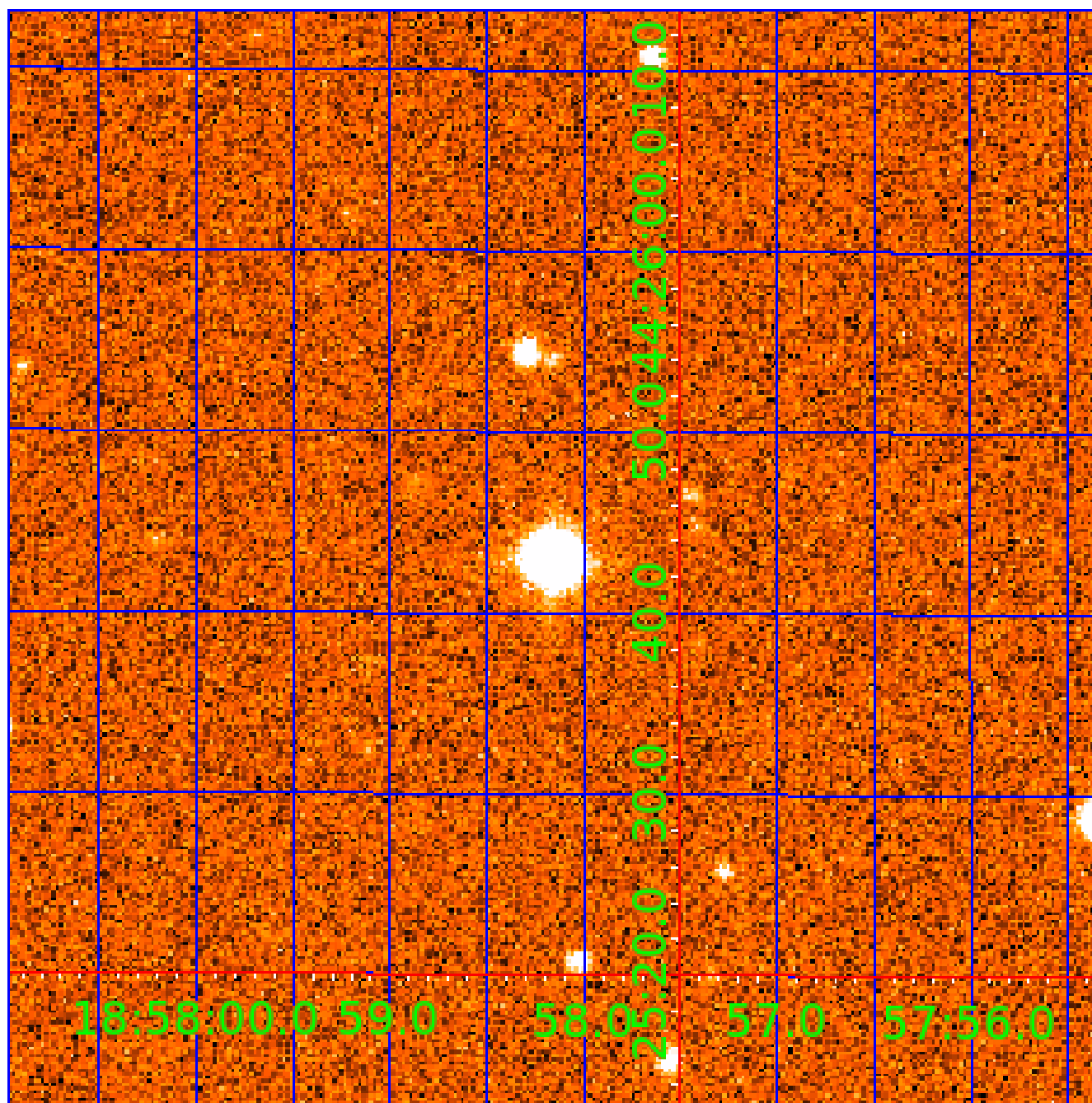


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008414845

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})
008414845-01	OBS	No	253.608246	290.911787	1205.7	3.128	16.2	7.3	0.90	5693	3.26	1.43
008414845-02	OBS	No	360.450724	155.764876	703.1	2.510	17.1	5.7	0.90	5693	2.66	0.90
008414845-03	OBS	No	281.417800	199.915742	316.0	12.500	15.3	-1.0	0.90	5693	1.59	1.24
008414845-04	OBS	No	211.583289	168.484961	1032.0	2.500	14.1	-1.0	0.90	5693	2.87	1.82
008414845-05	OBS	No	363.040200	255.416190	2666.2	33.353	9.8	5.0	0.90	5693	5.69	0.89
008414845-06	OBS	No	469.264636	328.631306	1159.5	3.413	14.6	7.1	0.90	5693	3.04	0.63
008414845-08	OBS	No	384.628192	286.550814	628.3	3.000	13.4	-1.0	0.90	5693	2.24	0.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008414845-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008414845-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
008414845-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008414845-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
008414845-05	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008414845-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
008414845-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

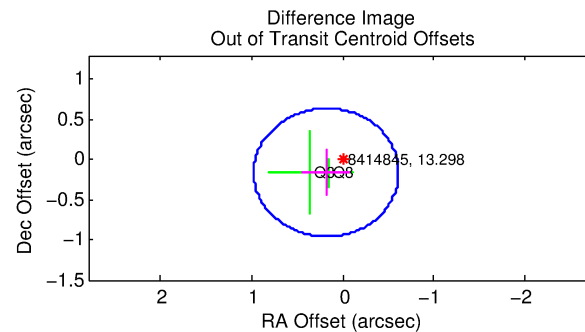
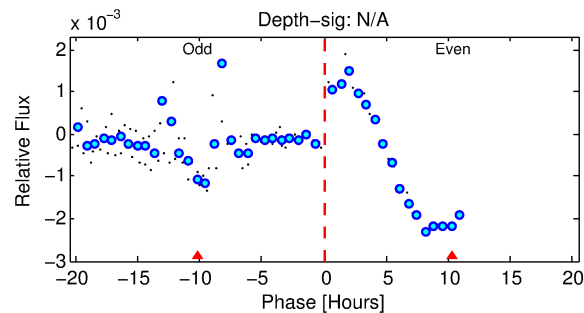
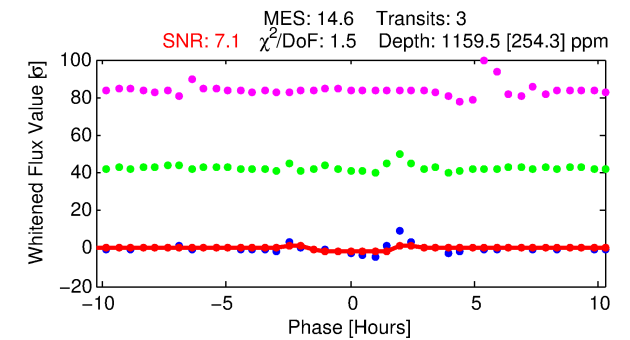
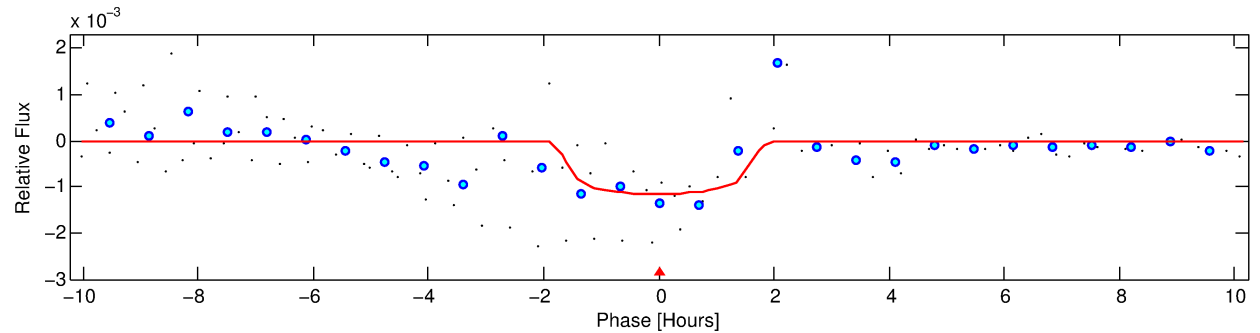
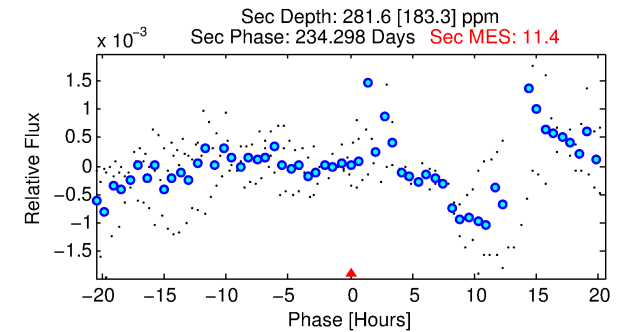
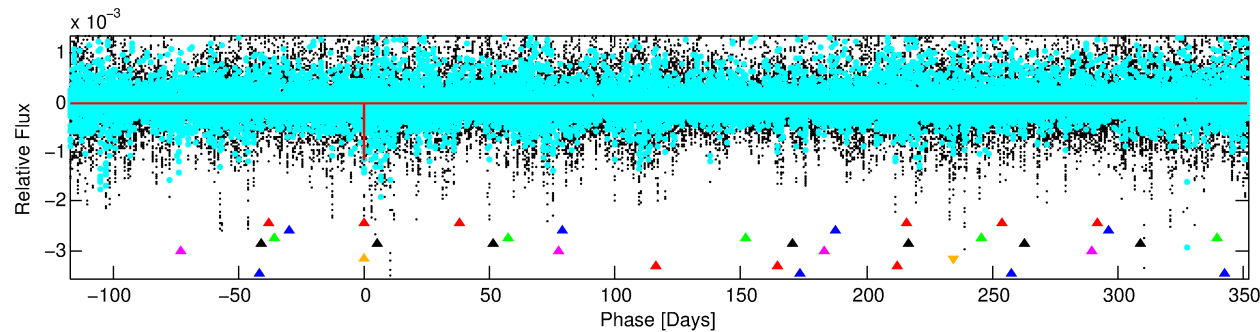
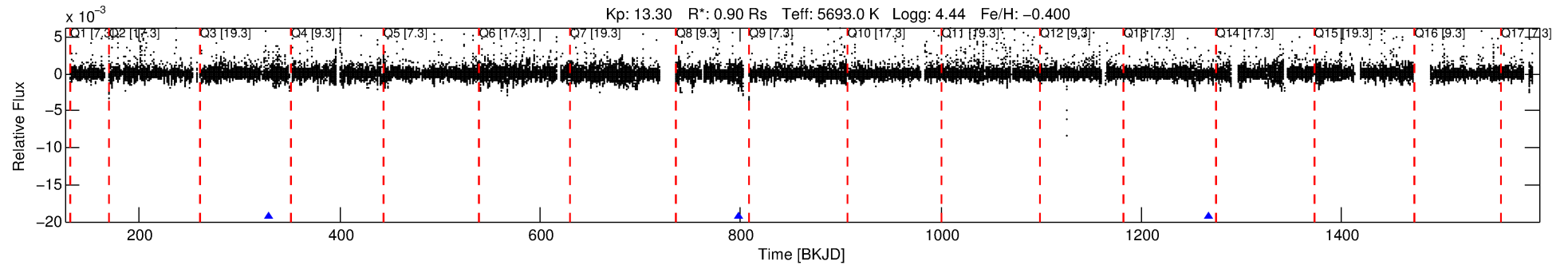
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008414845-06

No Significant Match Found

DV One-Page Summary

KIC: 8414845 Candidate: 6 of 8 Period: 469.265 d



DV Fit Results:

Period = 469.26464 [0.00493] d
Epoch = 328.6313 [0.0058] BKJD
Rp/R* = 0.0310 [0.0665]
a/R* = 1082.81 [10413.27]
b = 0.00 [9461.10]
Seff = 0.63 [0.20]
Teq = 227 [18] K
Rp = 3.04 [6.56] Re
a = 1.0994 [0.2296] AU
Ag = 20254.64 [88075.88] [0.23] σ
Teffp = 4189 [4544] K [0.87] σ

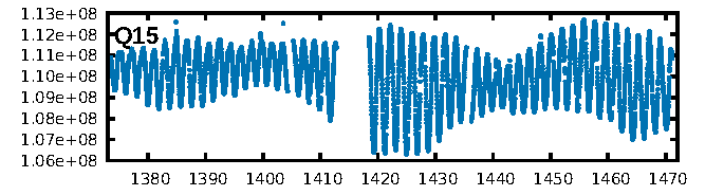
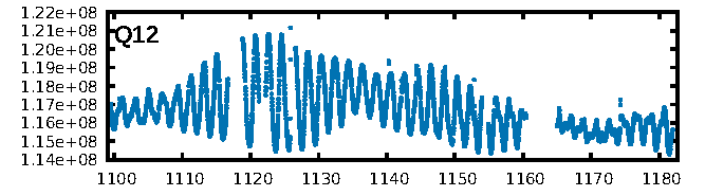
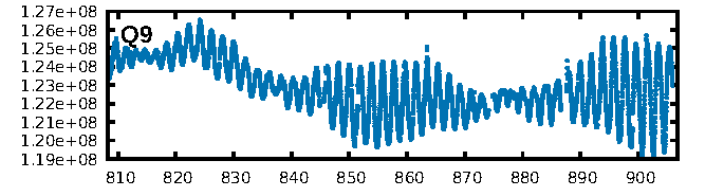
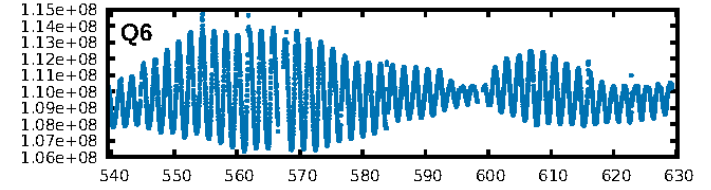
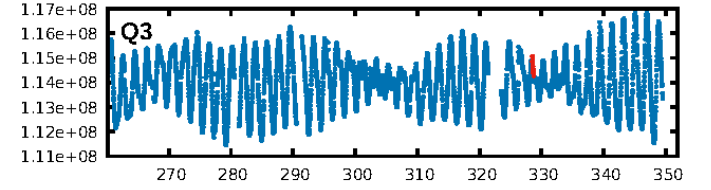
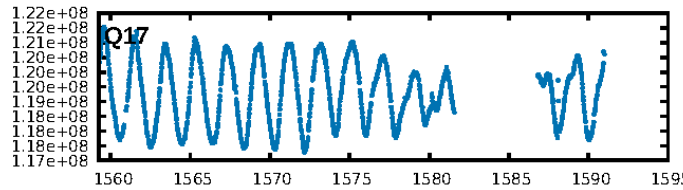
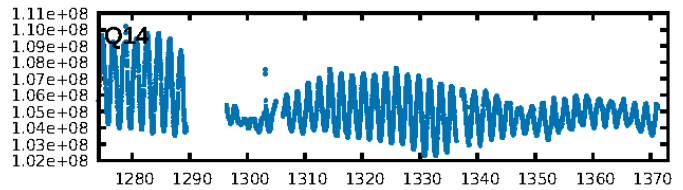
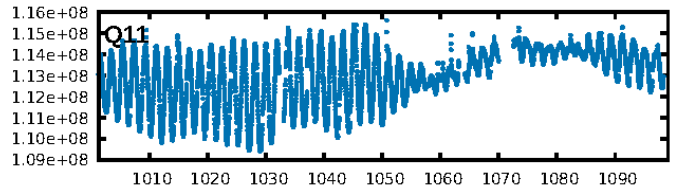
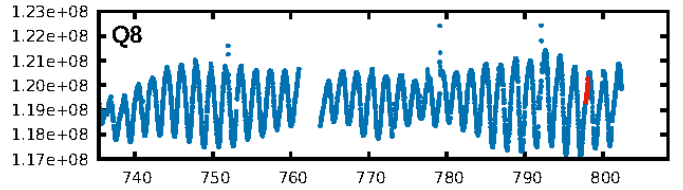
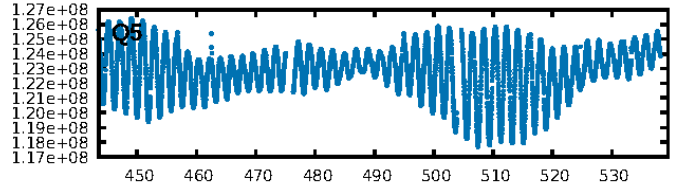
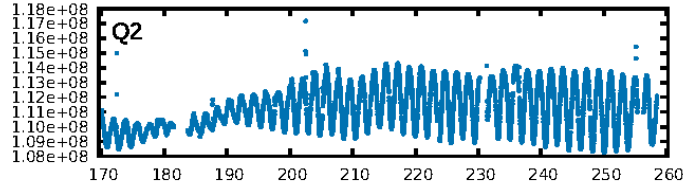
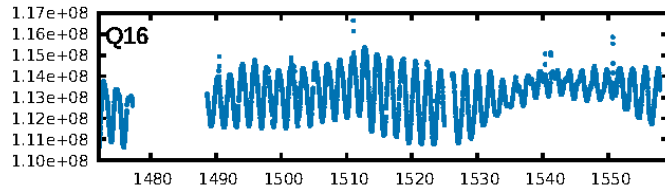
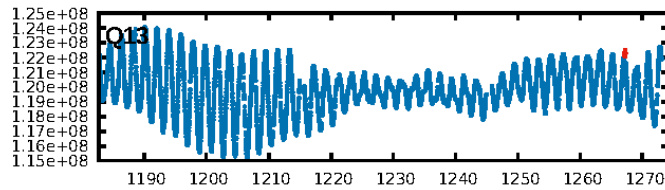
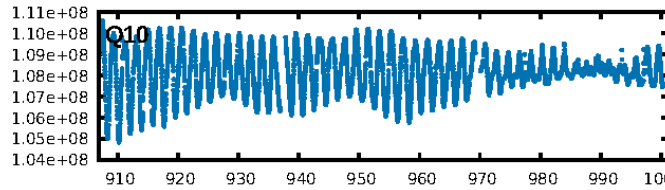
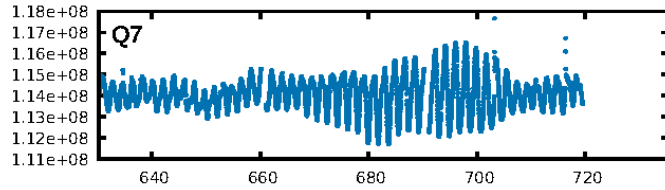
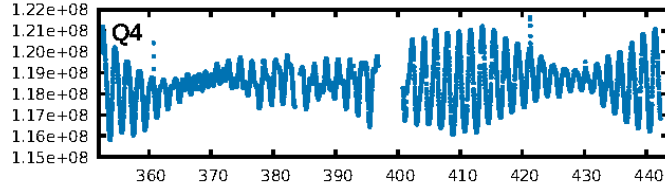
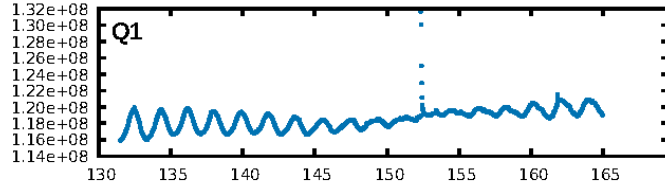
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [88.03] σ
LongPeriod-sig: N/A
ModelChiSquare2-sig: 55.5%
ModelChiSquareGof-sig: 84.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.09566
Centroid-sig: 6.4%
Centroid-so: 0.429 arcsec [1.11] σ
OotOffset-rm: 0.242 arcsec [0.91] σ
OotOffset-st: 0/1/1/0 [2]
KicOffset-rm: 0.305 arcsec [1.17] σ
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.50 [1/2]

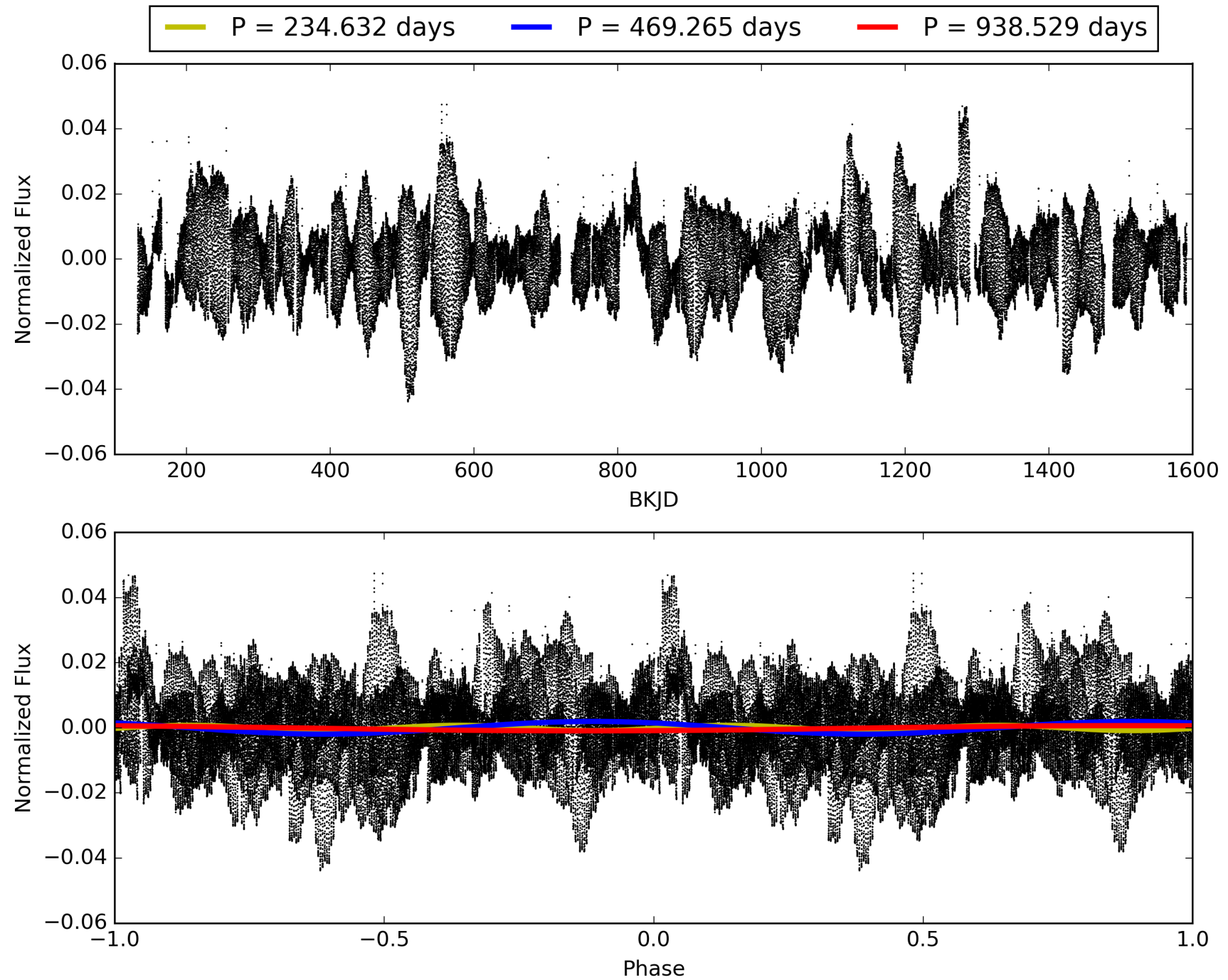
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 08:40:12 Z

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

TCE 008414845-06, PDC Light Curves

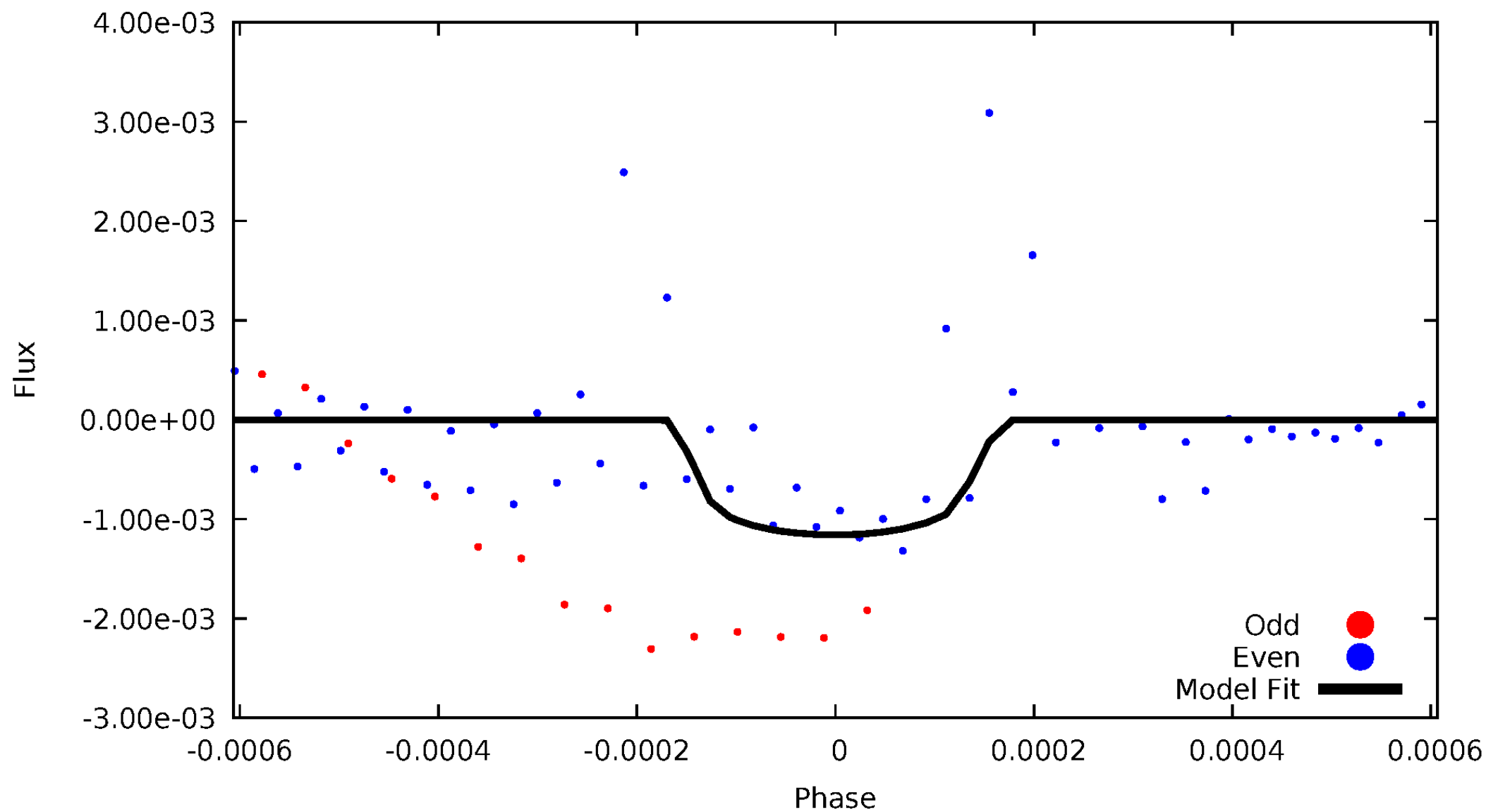


TCE 008414845-06



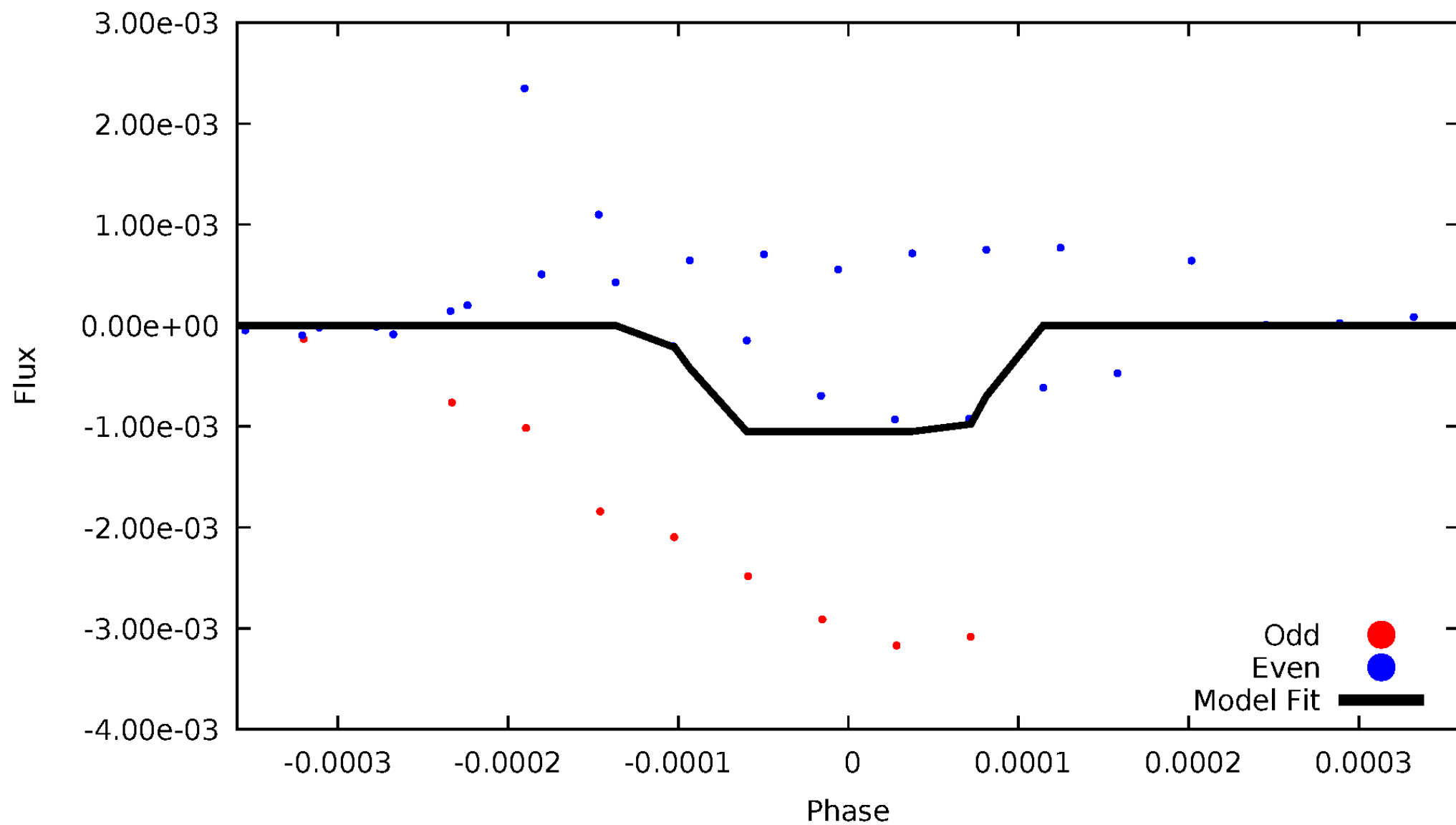
DV Odd/Even

TCE 008414845-06



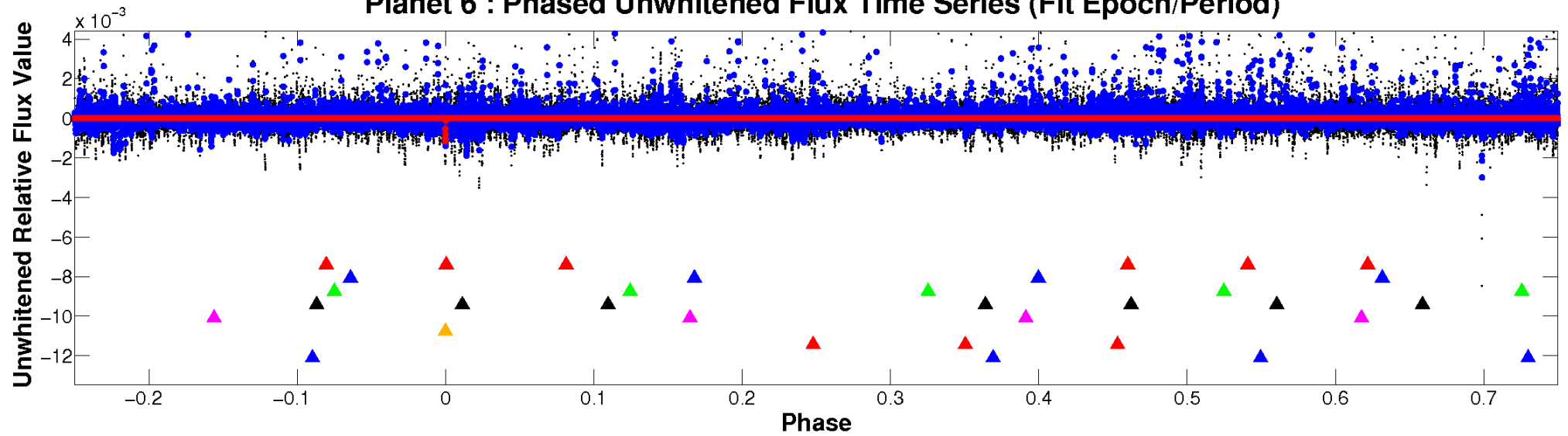
ALT Odd/Even

TCE 008414845-06

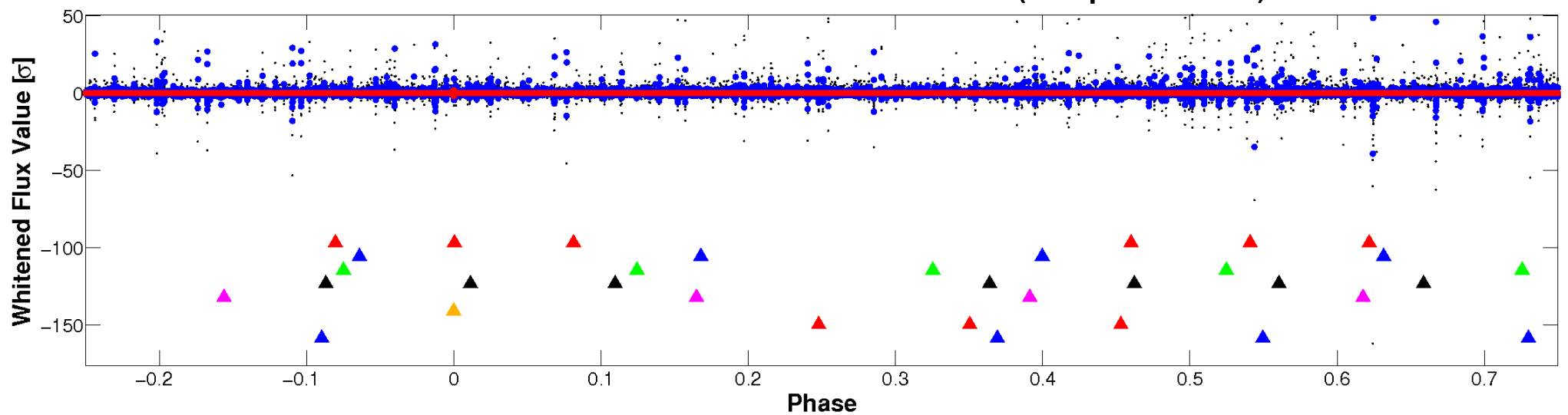


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

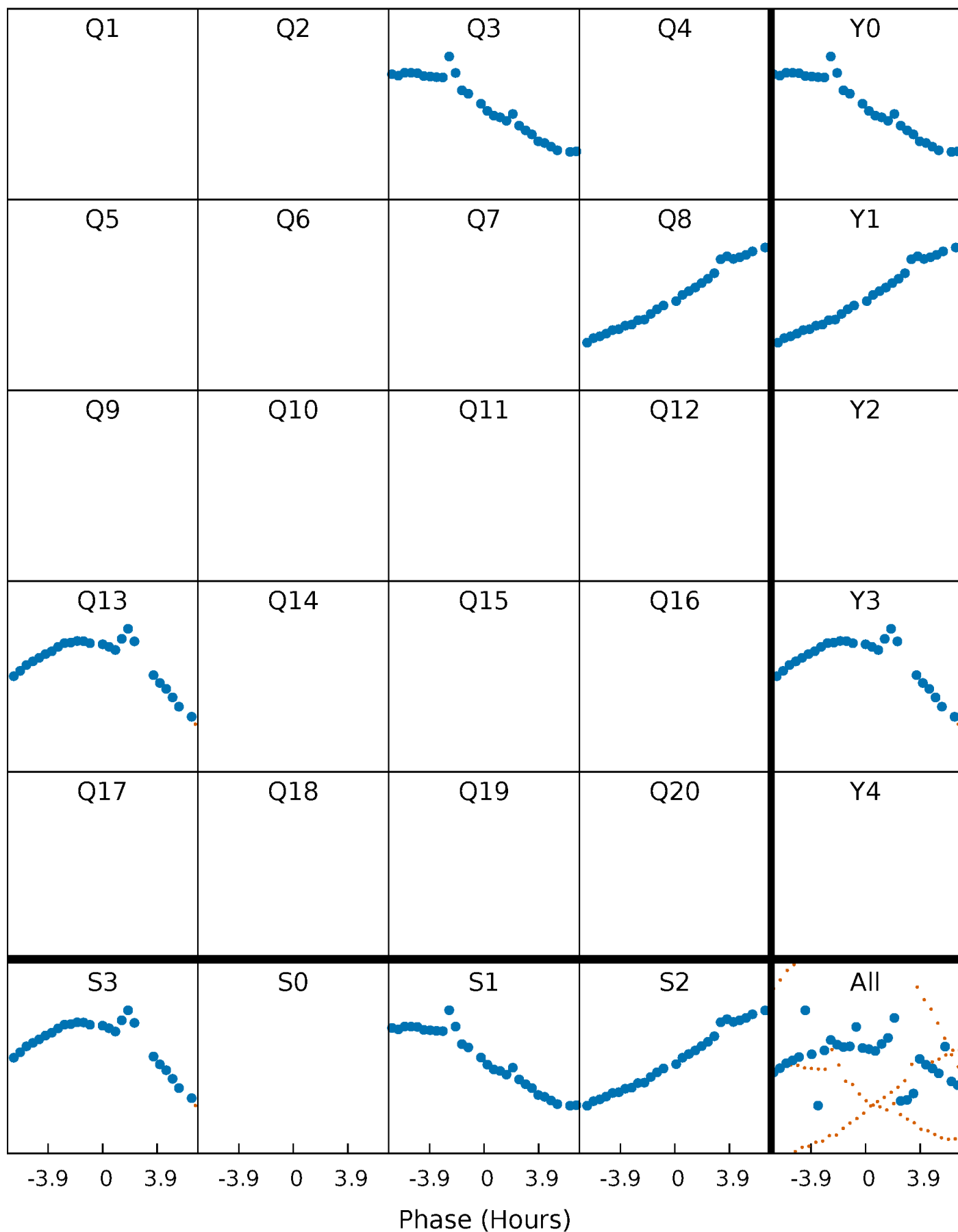


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



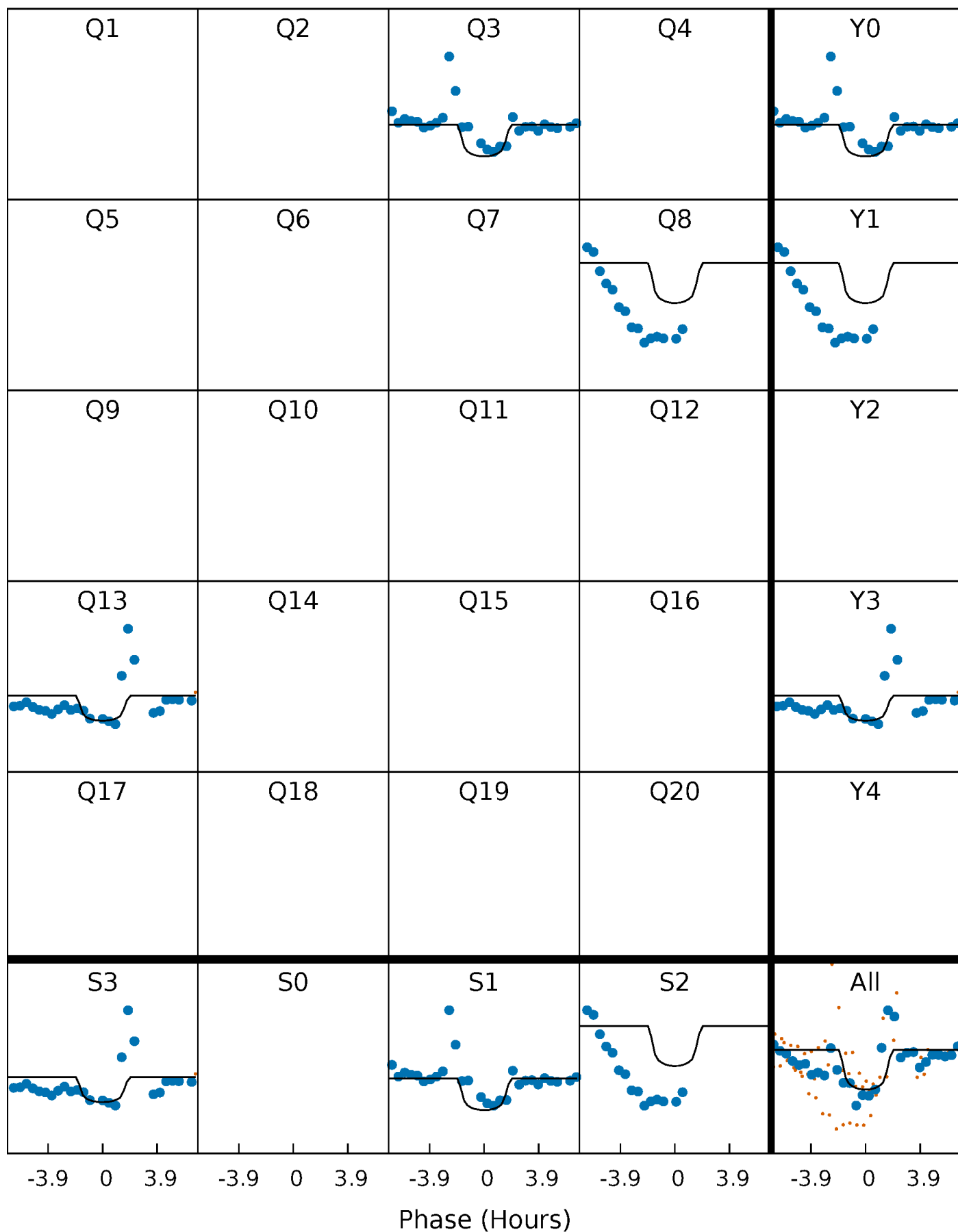
PDC Quarter-Phased Transit Curves

TCE 008414845-06 $P=469.264636$ Days $T_0=328.631306$ (BKJD)



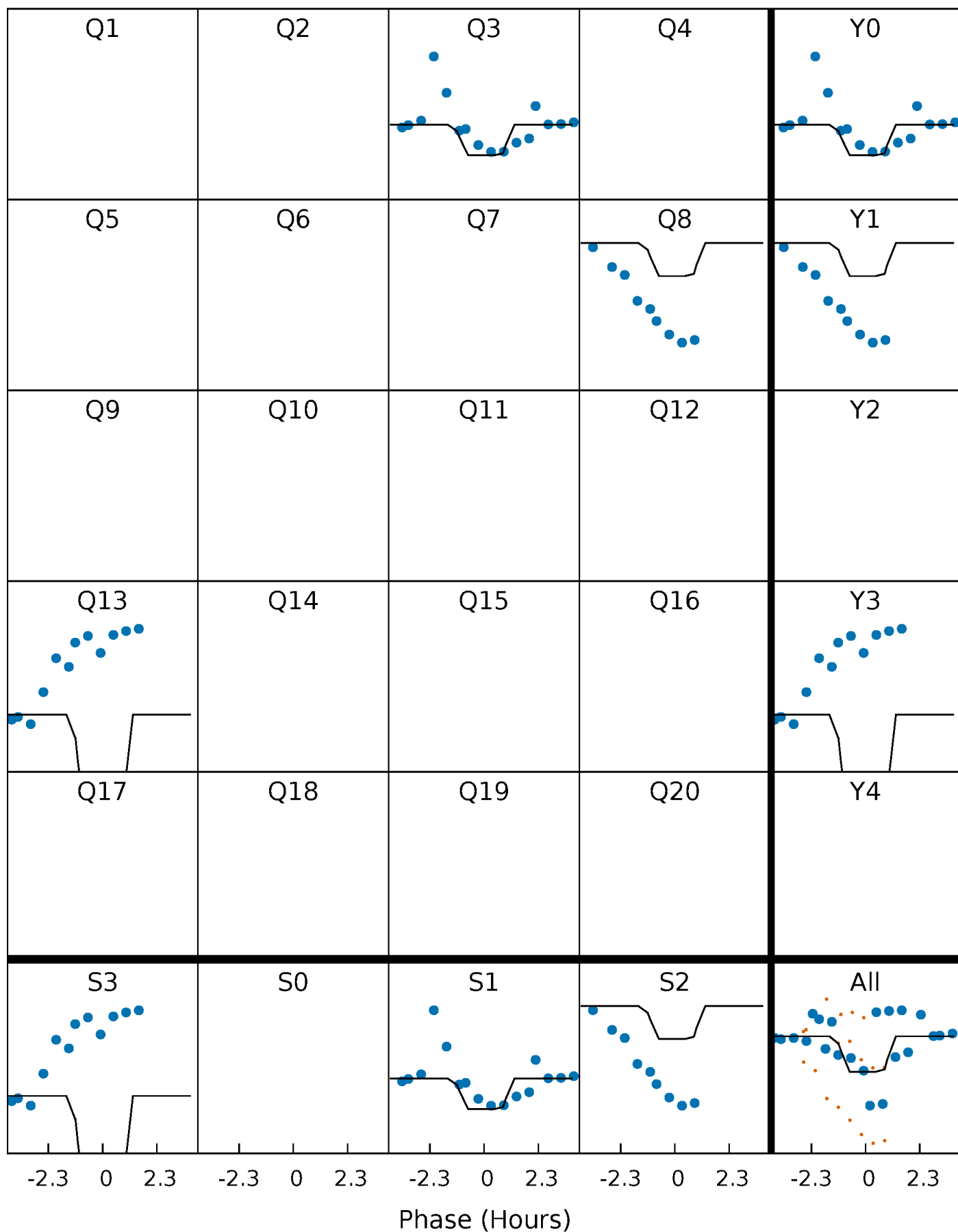
DV Quarter-Phased Transit Curves

TCE 008414845-06 P=469.264636 Days $T_0=328.631306$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

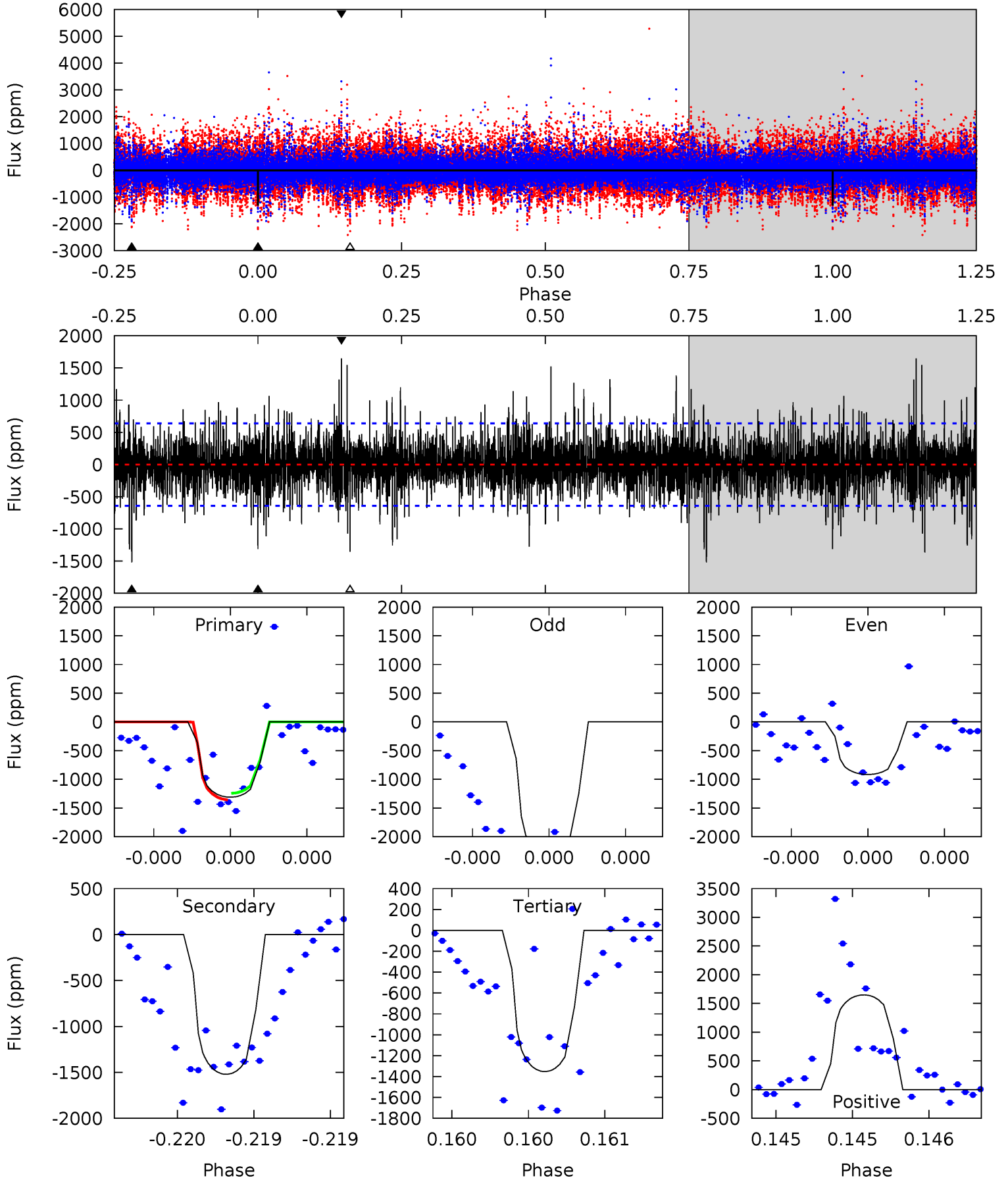
TCE 008414845-06 P=469.256705 Days $T_0=328.620528$ (BKJD)



DV Model-Shift Uniqueness Test

008414845-06, P = 469.264636 Days, E = 328.631306 Days

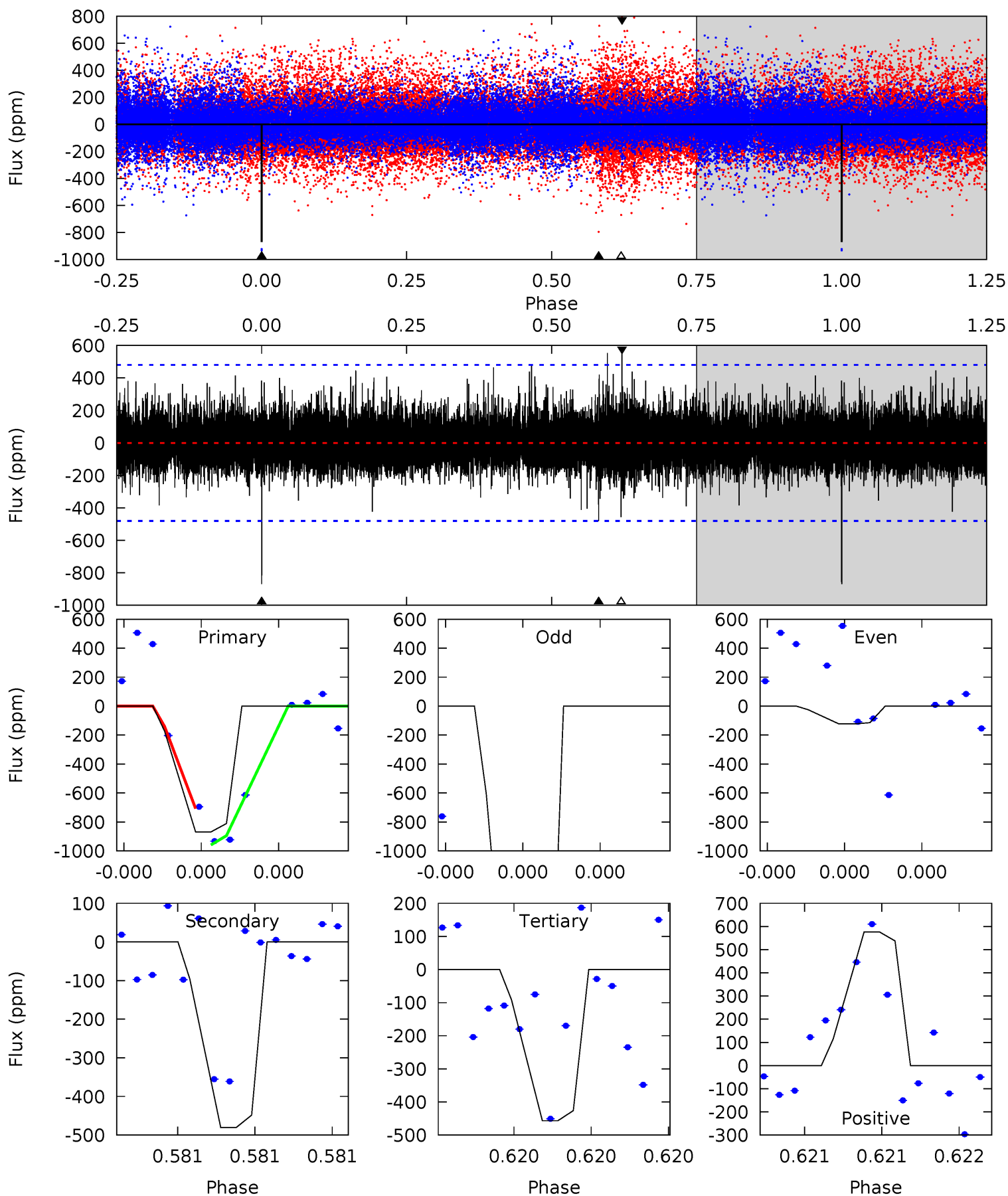
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	13.4	11.9	14.5	5.64	3.58	2.40	-0.36	-2.97	1.48	-1.13	4.39	1.70	0.52	0.50



Alt Model-Shift Uniqueness Test

008414845-06, P = 469.256705 Days, E = 328.620528 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	5.72	5.43	6.86	5.72	3.70	1.01	4.91	3.48	0.28	-1.14	32.6	1.44	0.40	0



Stellar Parameters For KIC 008414845

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5693^{+154}_{-154}	$4.436^{+0.120}_{-0.165}$	$-0.400^{+0.300}_{-0.300}$	$0.899^{+0.224}_{-0.131}$	$0.804^{+0.112}_{-0.056}$	$1.559^{+0.866}_{-0.717}$
	+3%/-3%	+3%/-4%	+75%/-75%	+25%/-15%	+14%/-7%	+56%/-46%
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 008414845-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1521 ± 114	$5.98^{+6.04}_{-4.11}$	319^{+22}_{-17}	4686^{+4075}_{-991}	$28013^{+275617}_{-20734}$
Alt.	-480 ± 84	$5.64^{+6.10}_{-3.70}$	320^{+20}_{-17}	3858^{+2189}_{-781}	9542^{+71514}_{-7302}

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

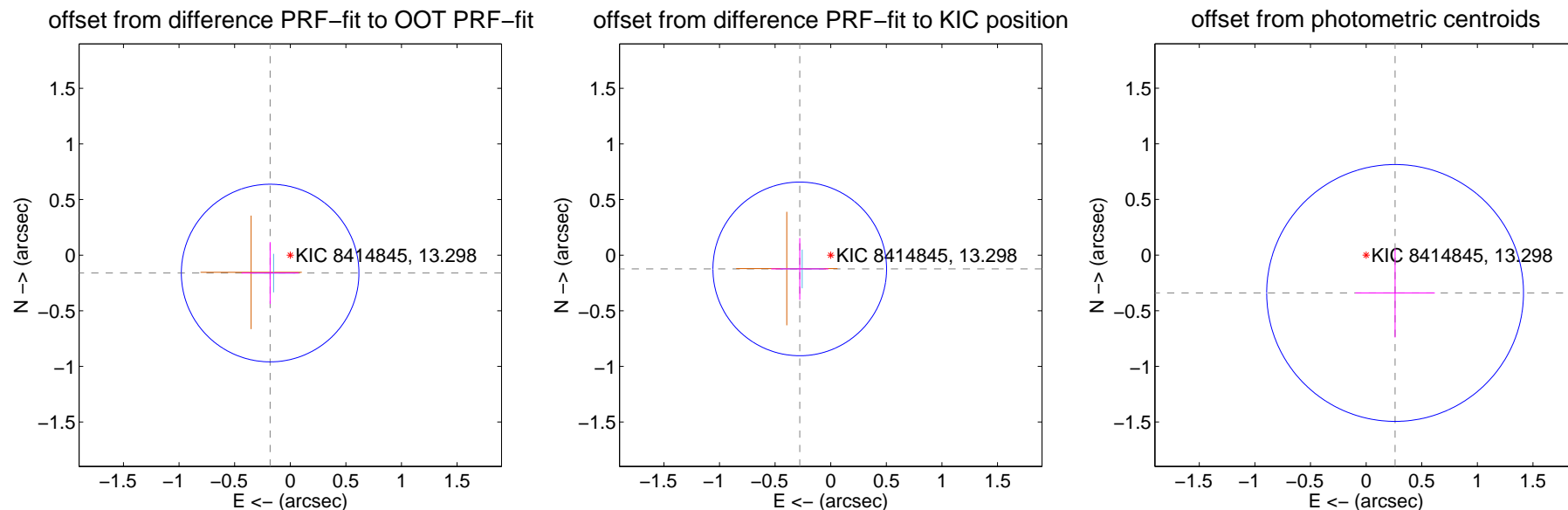
DV Centroid Data

Supplemental centroid analysis for 008414845-06. Kepler magnitude: 13.30. Transit SNR 7.05

There are 1 quarters with good PRF difference image offsets

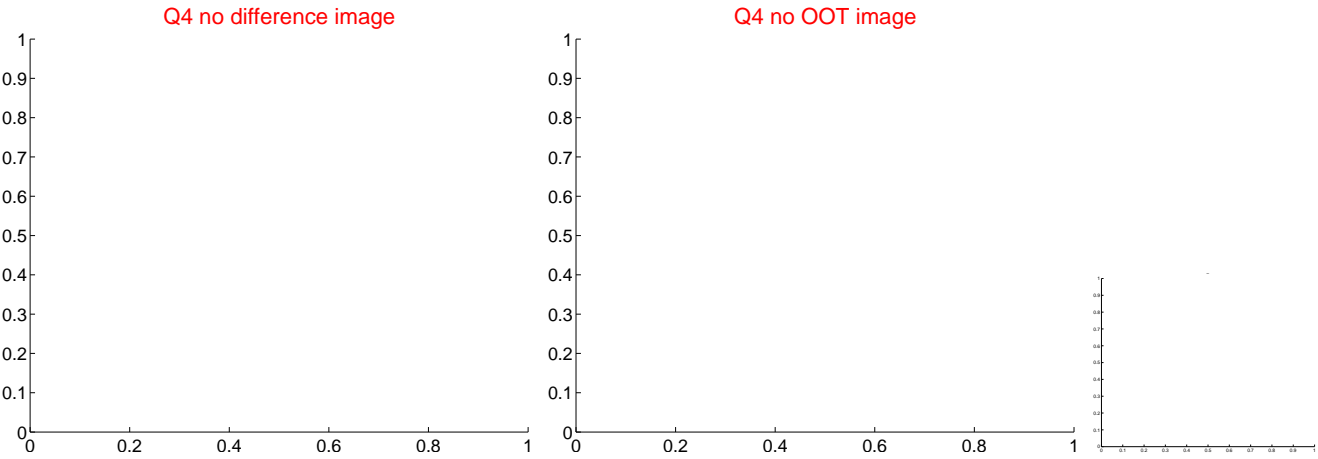
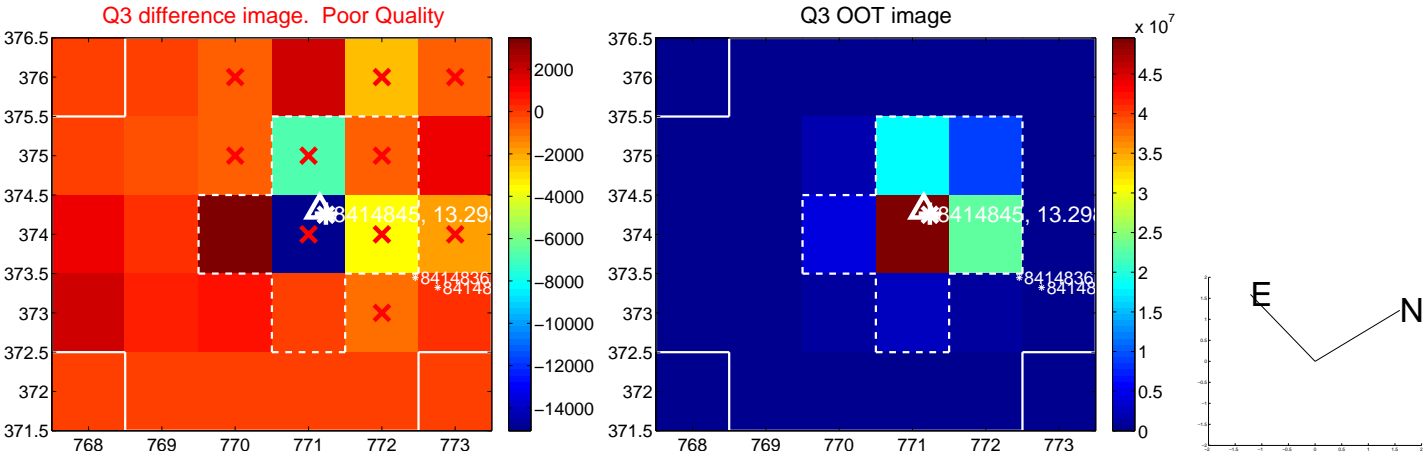
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.242 ± 0.266	0.91	0.181 ± 0.257	-0.161 ± 0.278
PRF-fit source offset from KIC position	0.305 ± 0.260	1.17	0.279 ± 0.257	-0.124 ± 0.278
photometric centroid source offset	0.43 ± 0.38	1.11	-0.26 ± 0.36	-0.34 ± 0.40

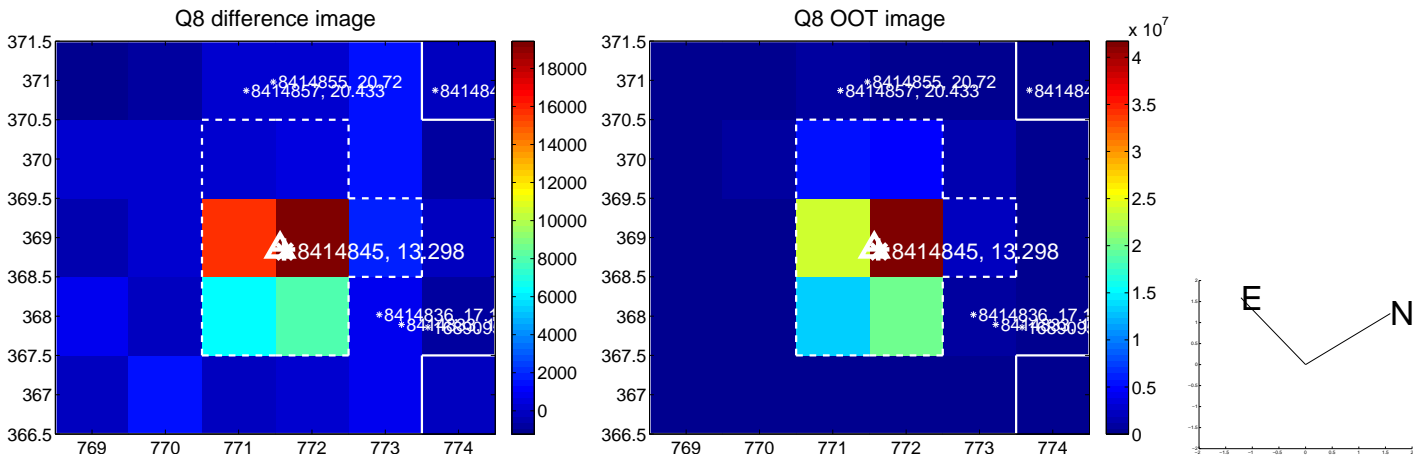
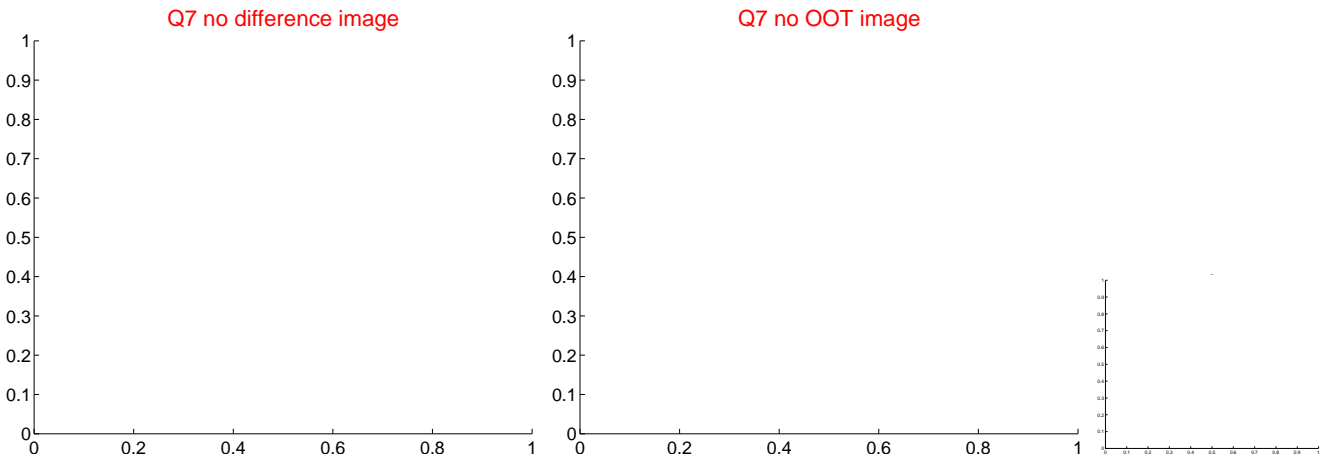
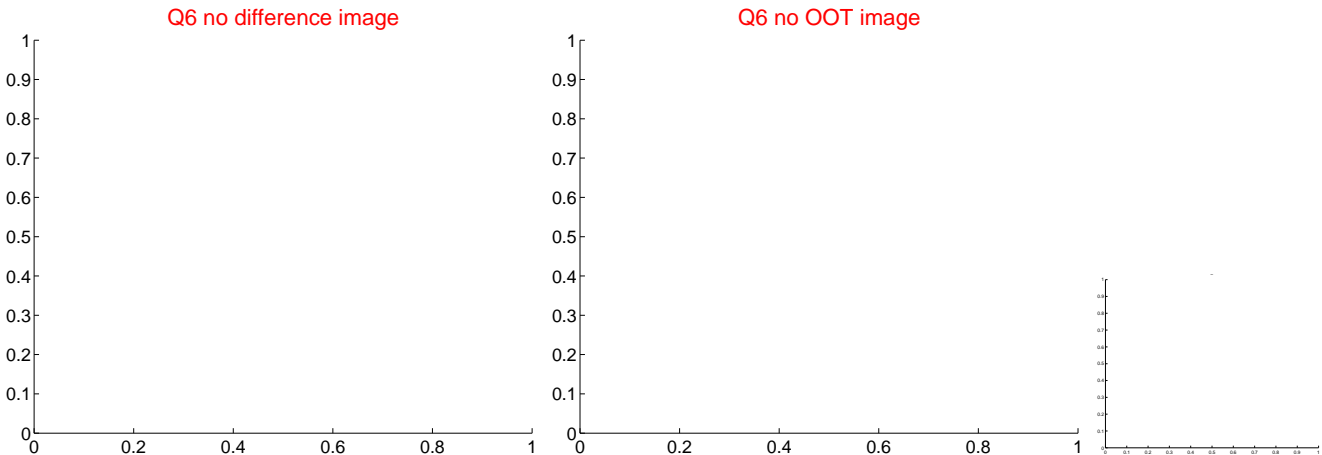
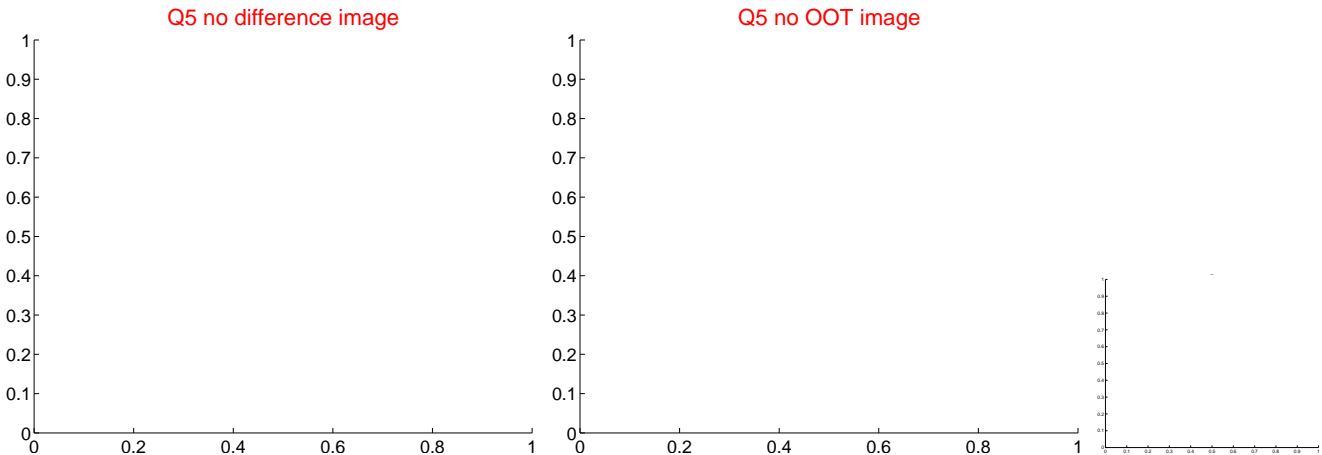


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



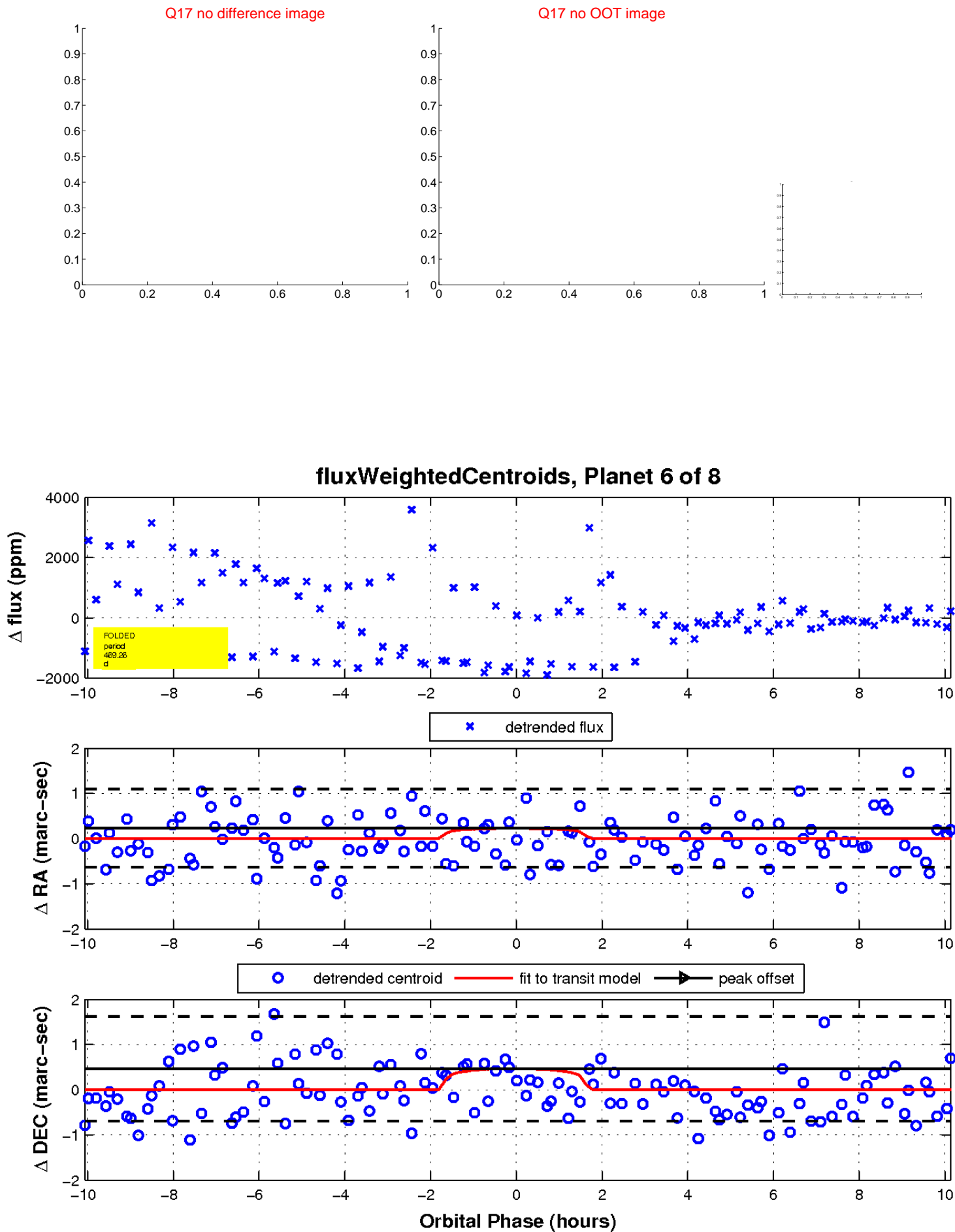
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

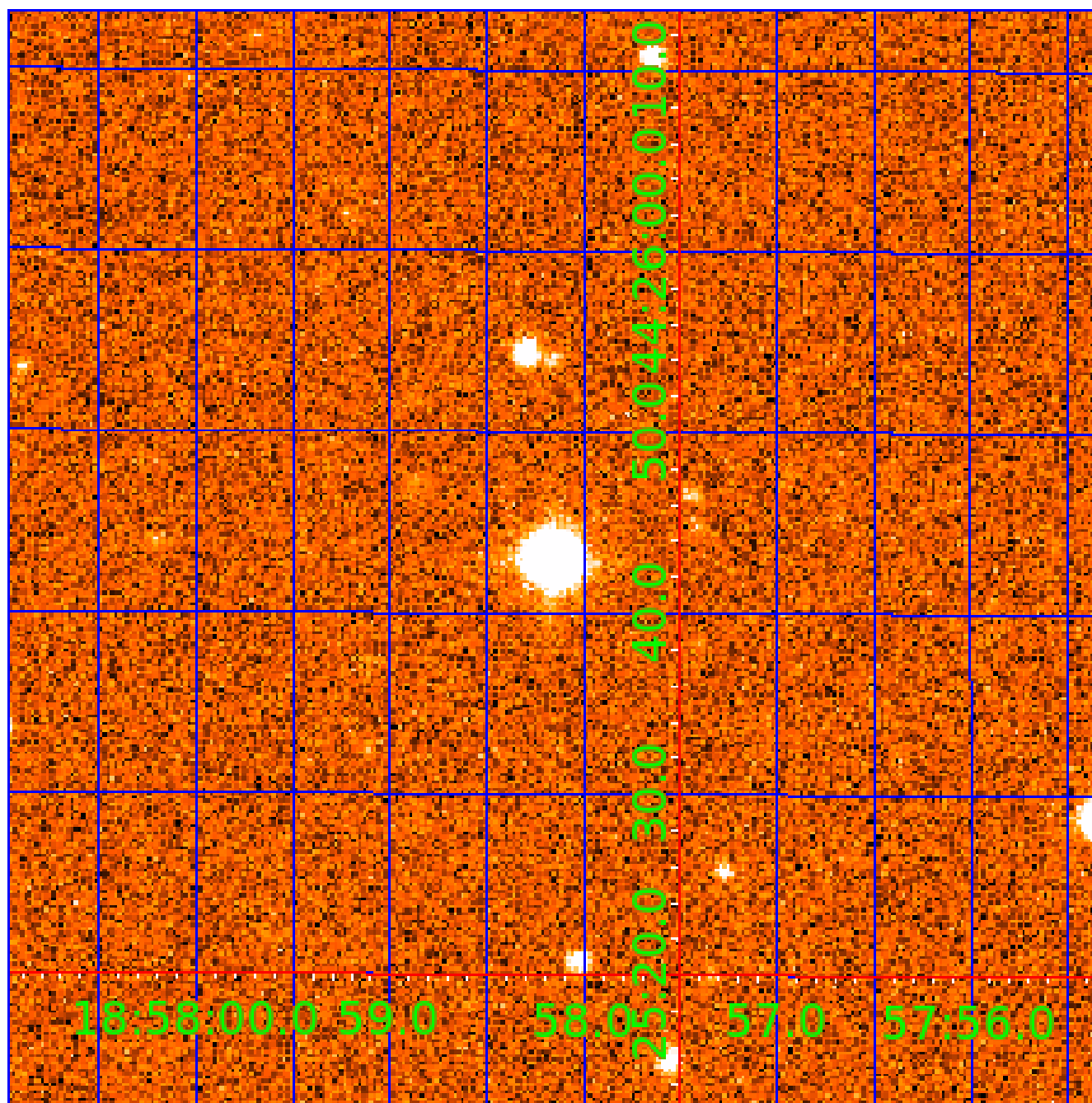


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008414845

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})
008414845-01	OBS	No	253.608246	290.911787	1205.7	3.128	16.2	7.3	0.90	5693	3.26	1.43
008414845-02	OBS	No	360.450724	155.764876	703.1	2.510	17.1	5.7	0.90	5693	2.66	0.90
008414845-03	OBS	No	281.417800	199.915742	316.0	12.500	15.3	-1.0	0.90	5693	1.59	1.24
008414845-04	OBS	No	211.583289	168.484961	1032.0	2.500	14.1	-1.0	0.90	5693	2.87	1.82
008414845-05	OBS	No	363.040200	255.416190	2666.2	33.353	9.8	5.0	0.90	5693	5.69	0.89
008414845-06	OBS	No	469.264636	328.631306	1159.5	3.413	14.6	7.1	0.90	5693	3.04	0.63
008414845-08	OBS	No	384.628192	286.550814	628.3	3.000	13.4	-1.0	0.90	5693	2.24	0.82

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008414845-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008414845-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
008414845-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
008414845-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
008414845-05	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008414845-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
008414845-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

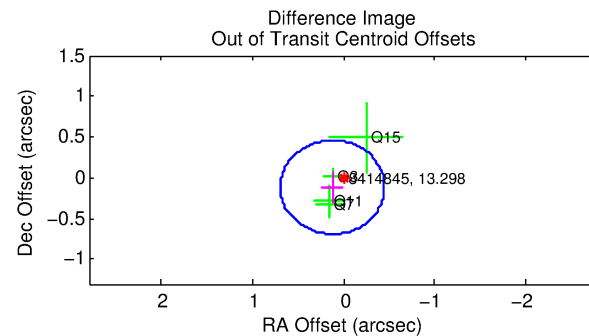
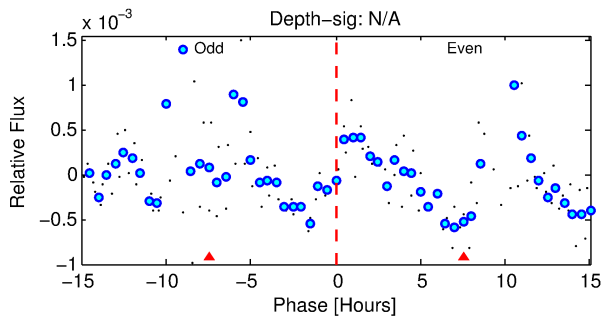
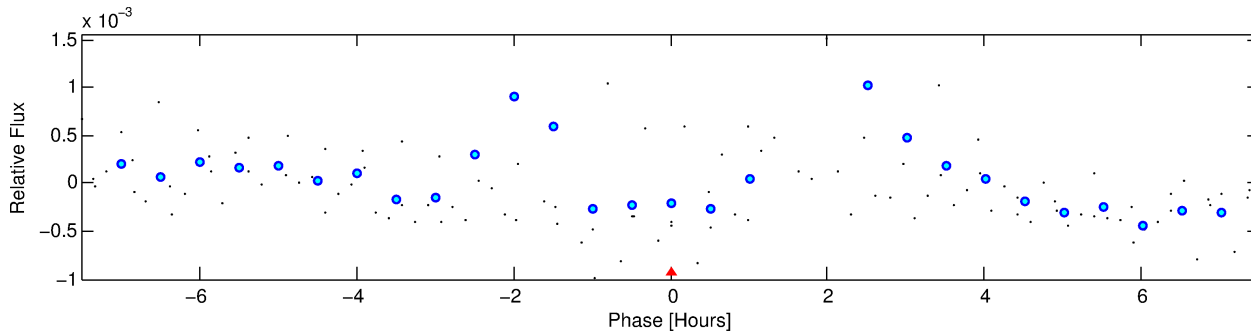
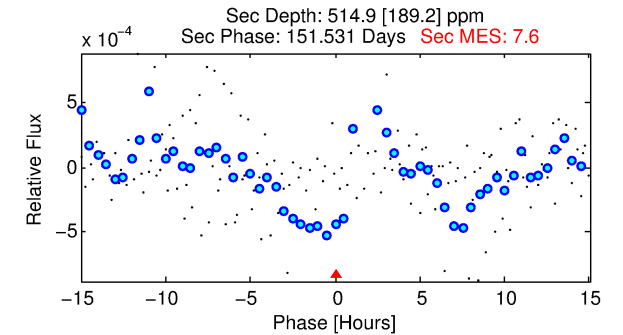
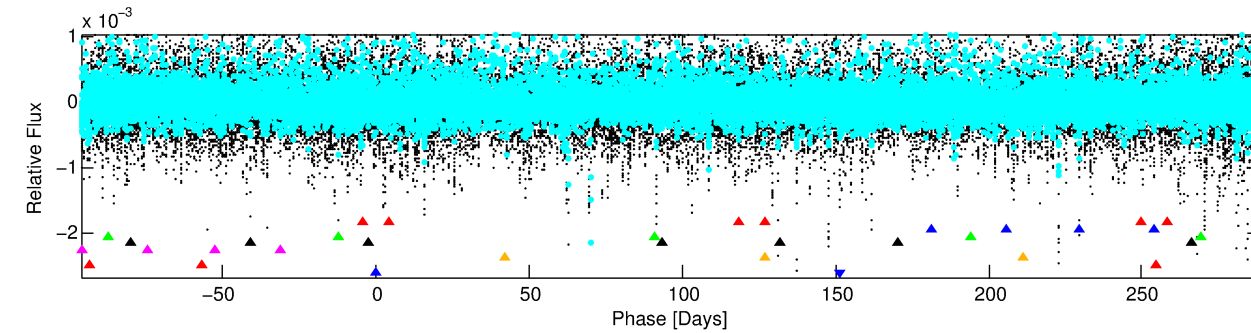
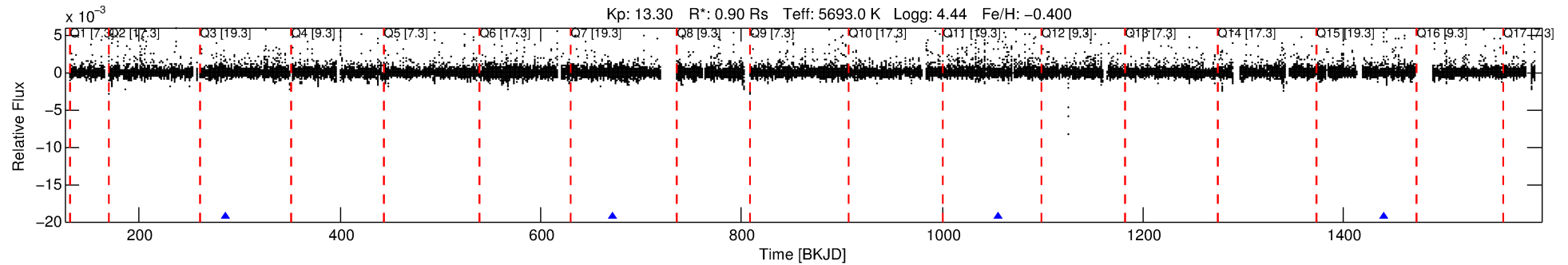
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008414845-08

No Significant Match Found

DV One-Page Summary

KIC: 8414845 Candidate: 8 of 8 Period: 384.628 d



TPS TCE Results:

Period = 384.62819 d
Epoch = 286.5508 BKJD

DV fit results are unavailable

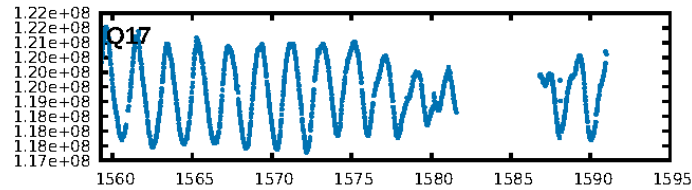
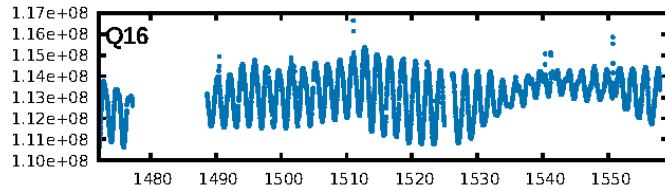
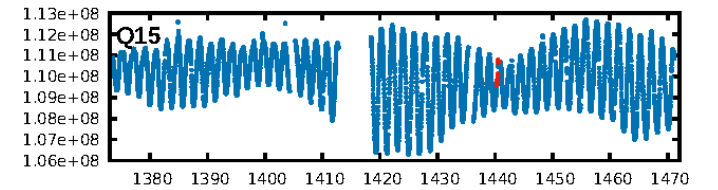
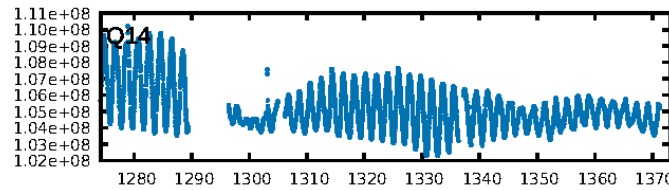
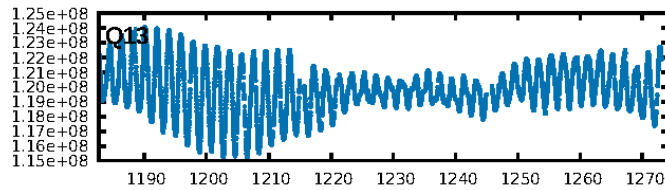
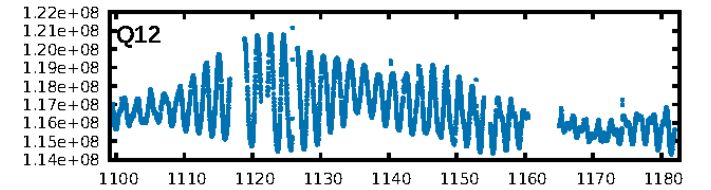
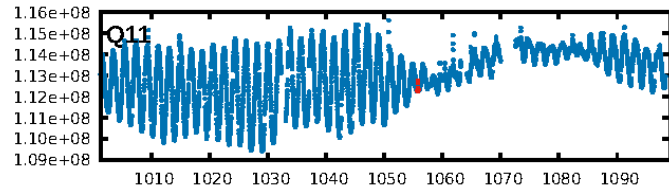
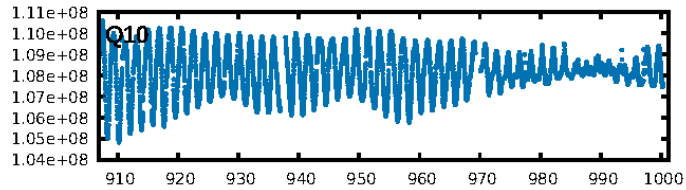
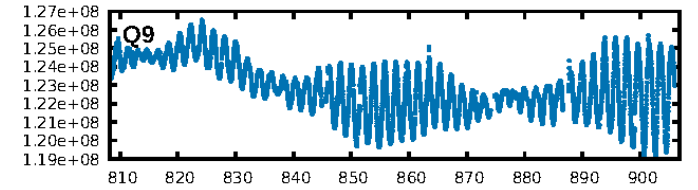
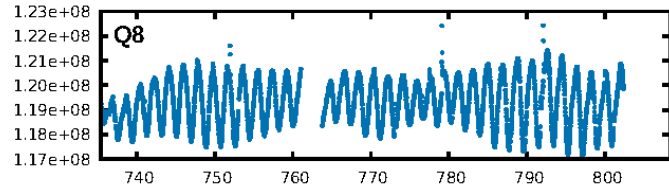
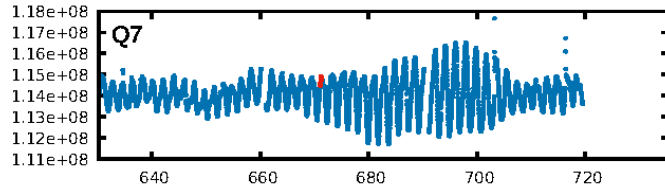
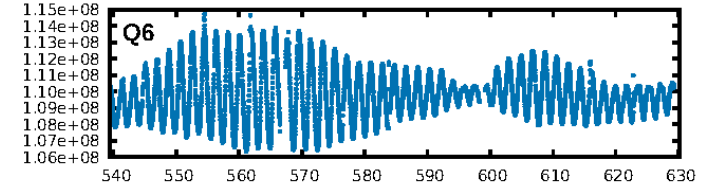
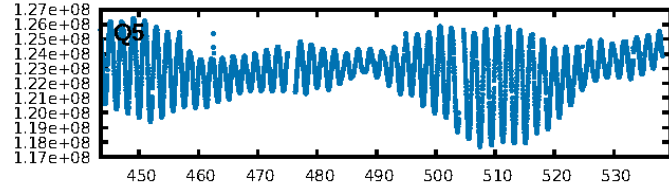
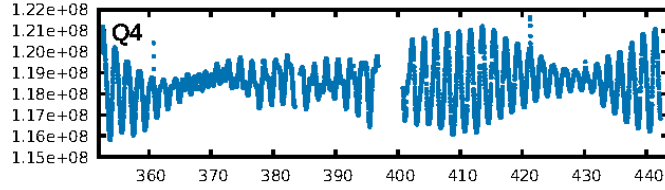
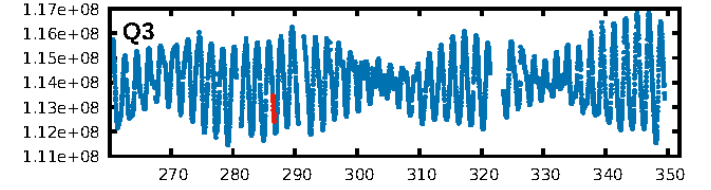
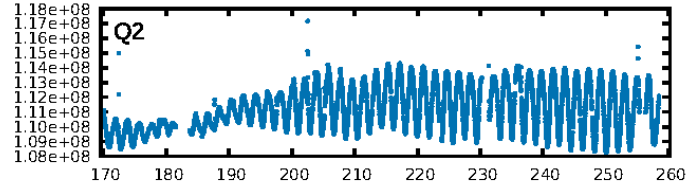
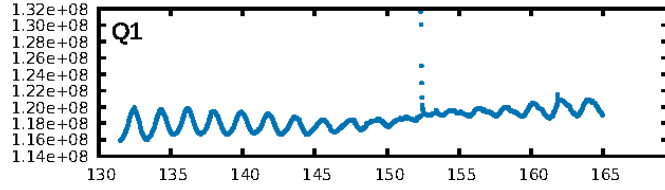
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [15.47 σ]
LongPeriod-sig: 100.0% [67.21 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.3617
Centroid-sig: 6.1%
Centroid-so: 0.587 arcsec [1.11 σ]
OotOffset-rm: 0.167 arcsec [0.87 σ]
KicOffset-rm: 0.204 arcsec [1.52 σ]
OotOffset-st: 0/4/0/0 [4]
KicOffset-st: 0/4/0/0 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [4/4]

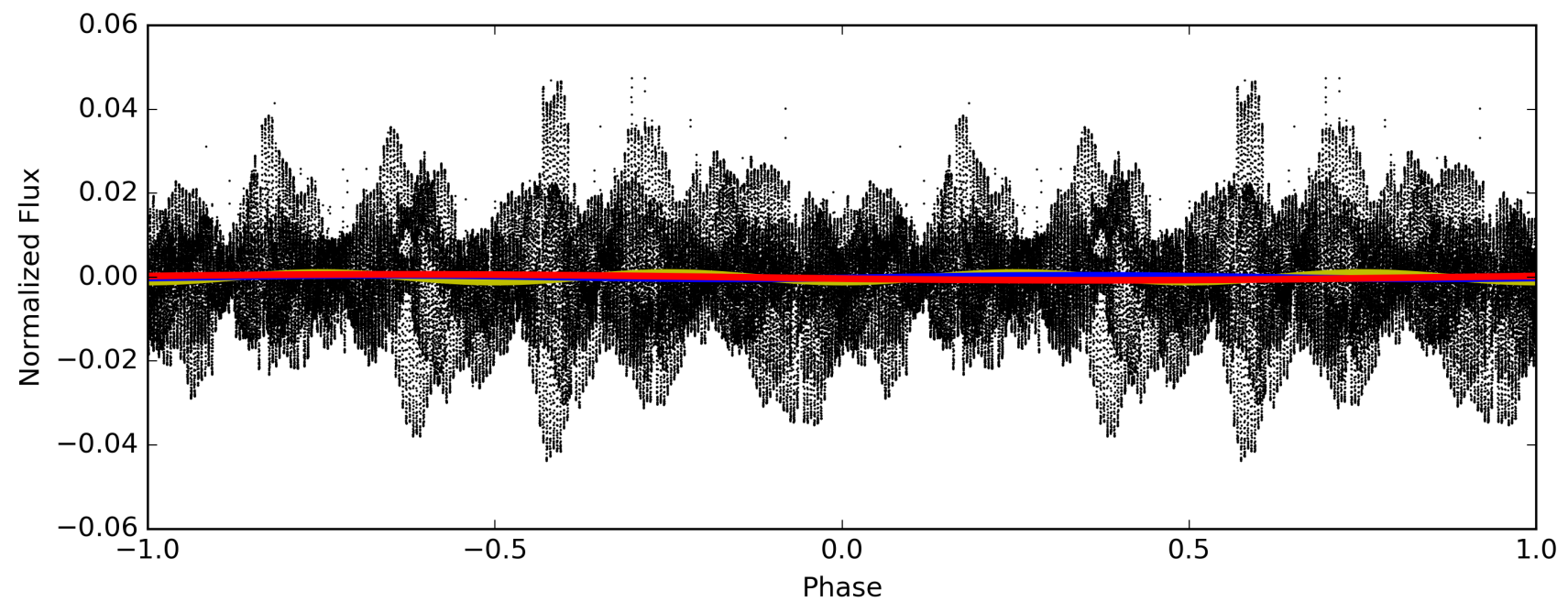
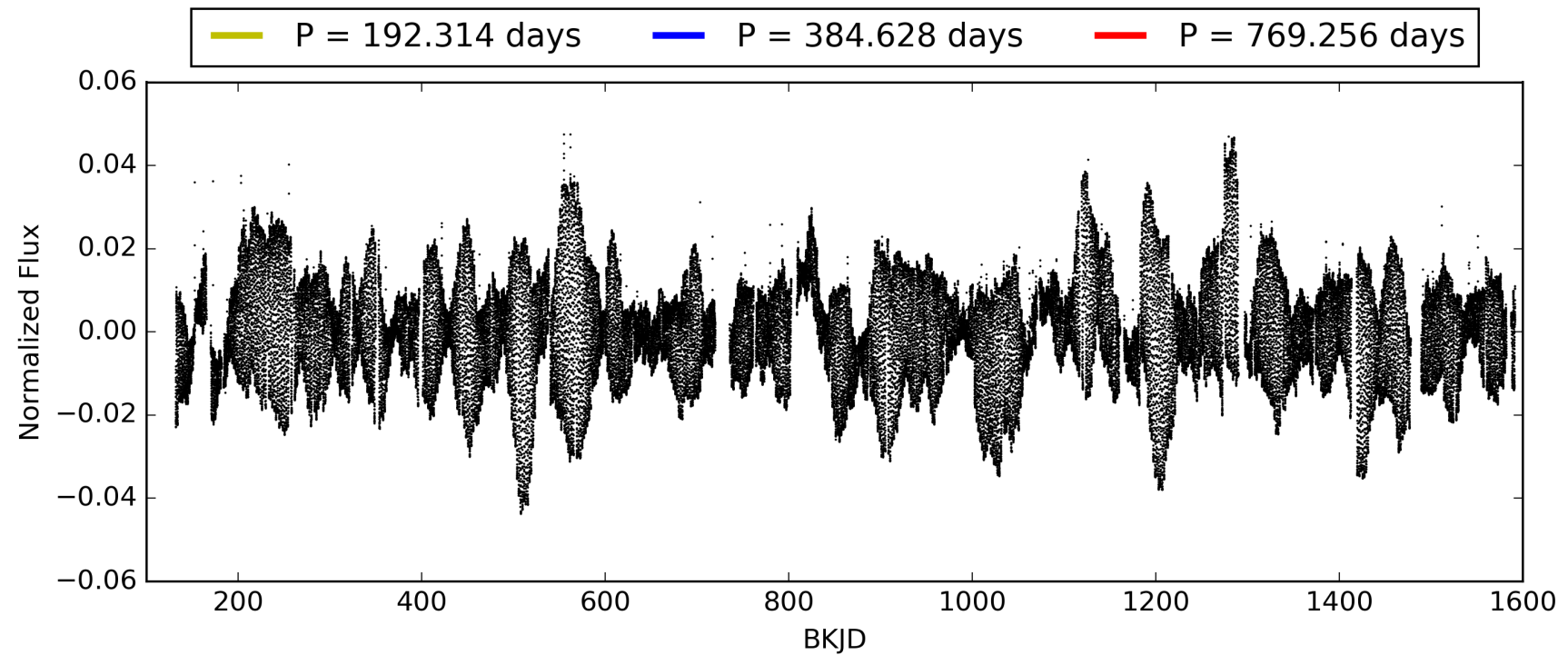
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 08:40:41 Z

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

TCE 008414845-08, PDC Light Curves

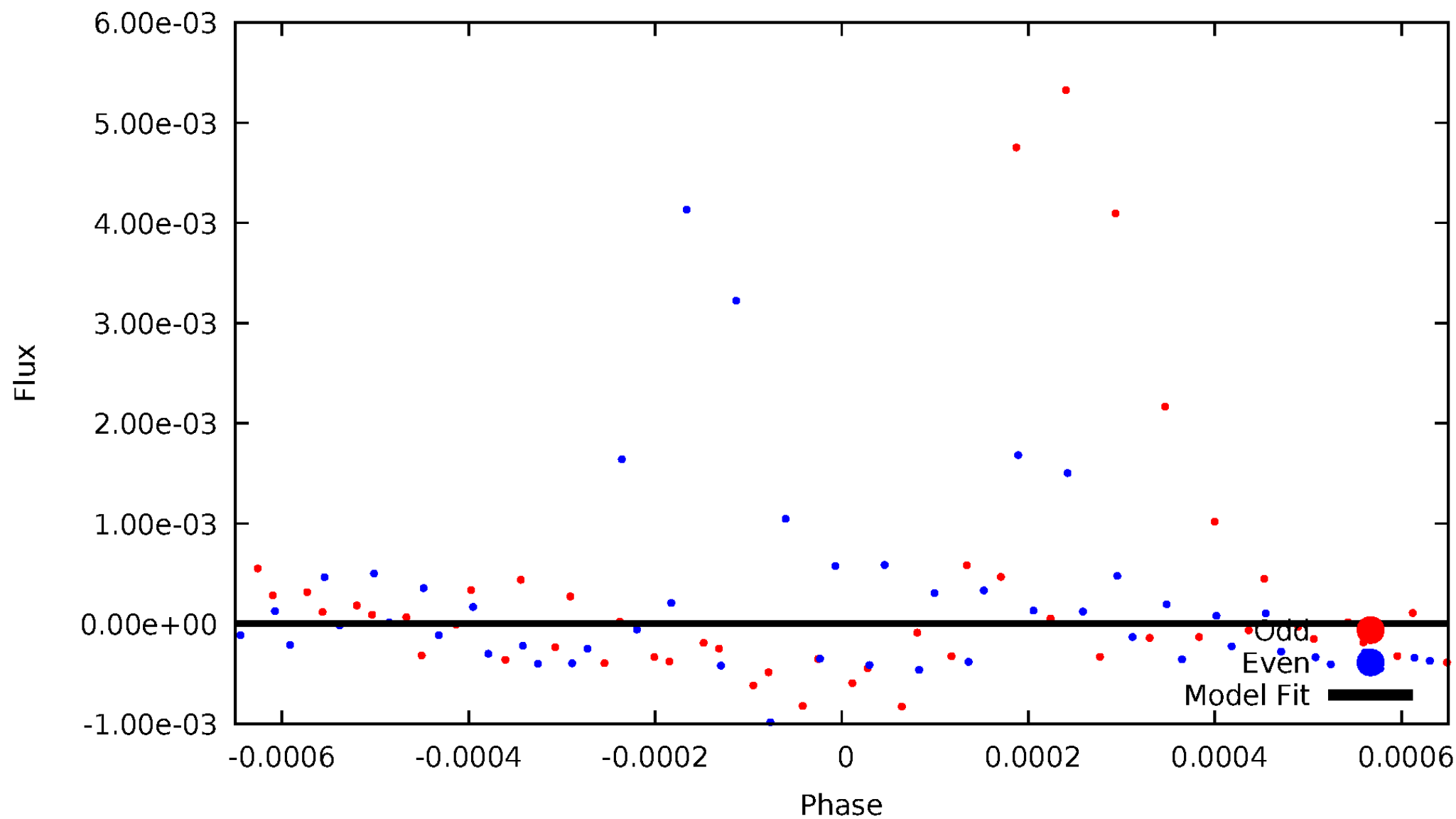


TCE 008414845-08



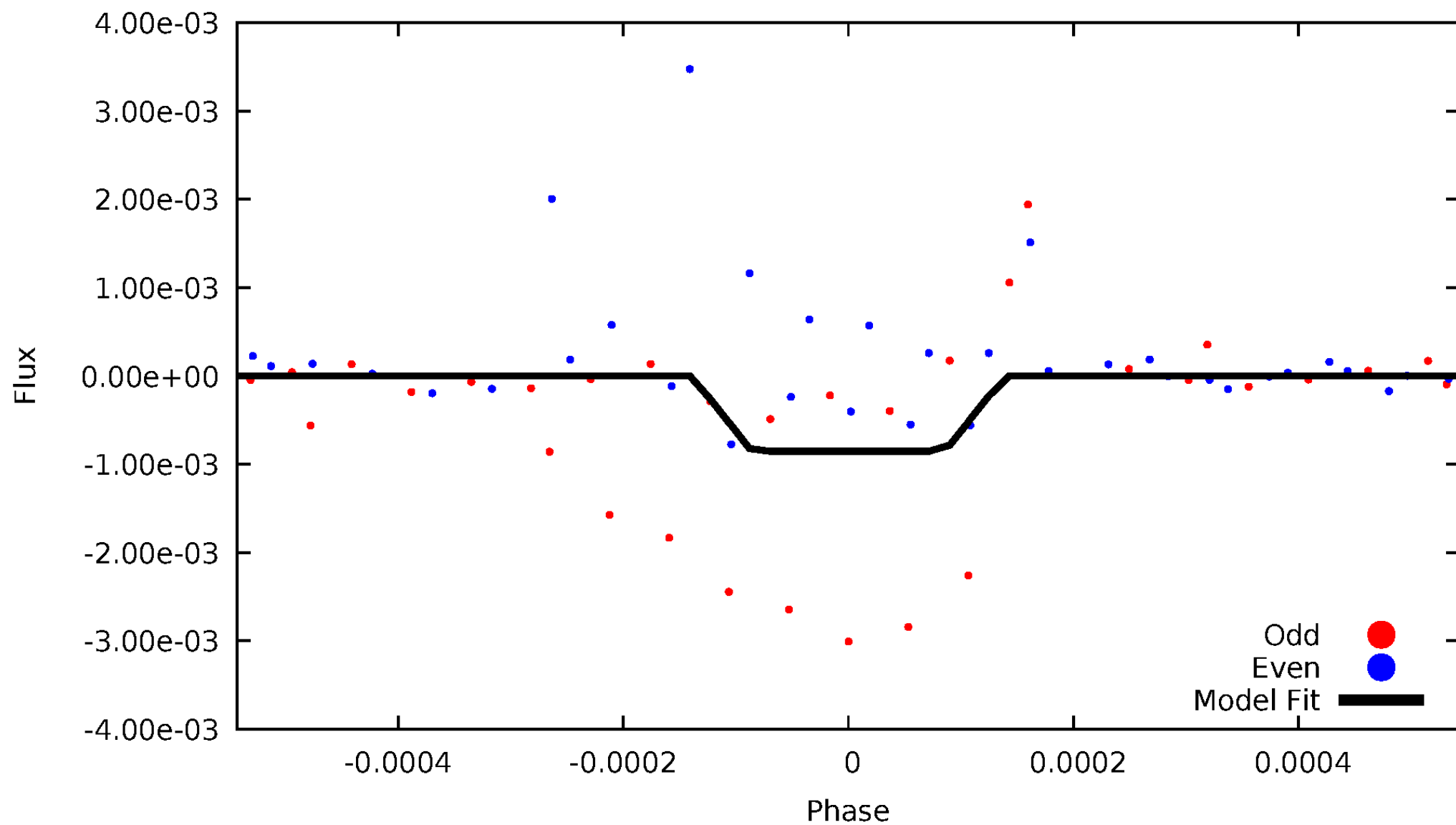
DV Odd/Even

TCE 008414845-08



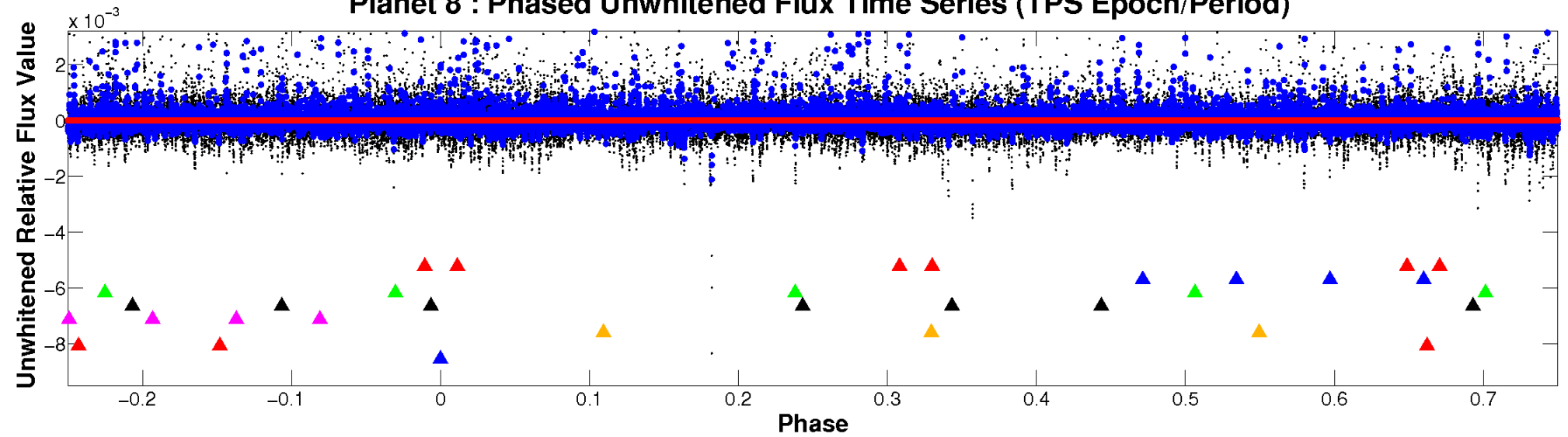
ALT Odd/Even

TCE 008414845-08



Non-Whitened Vs. Whitened Light Curve

Planet 8 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

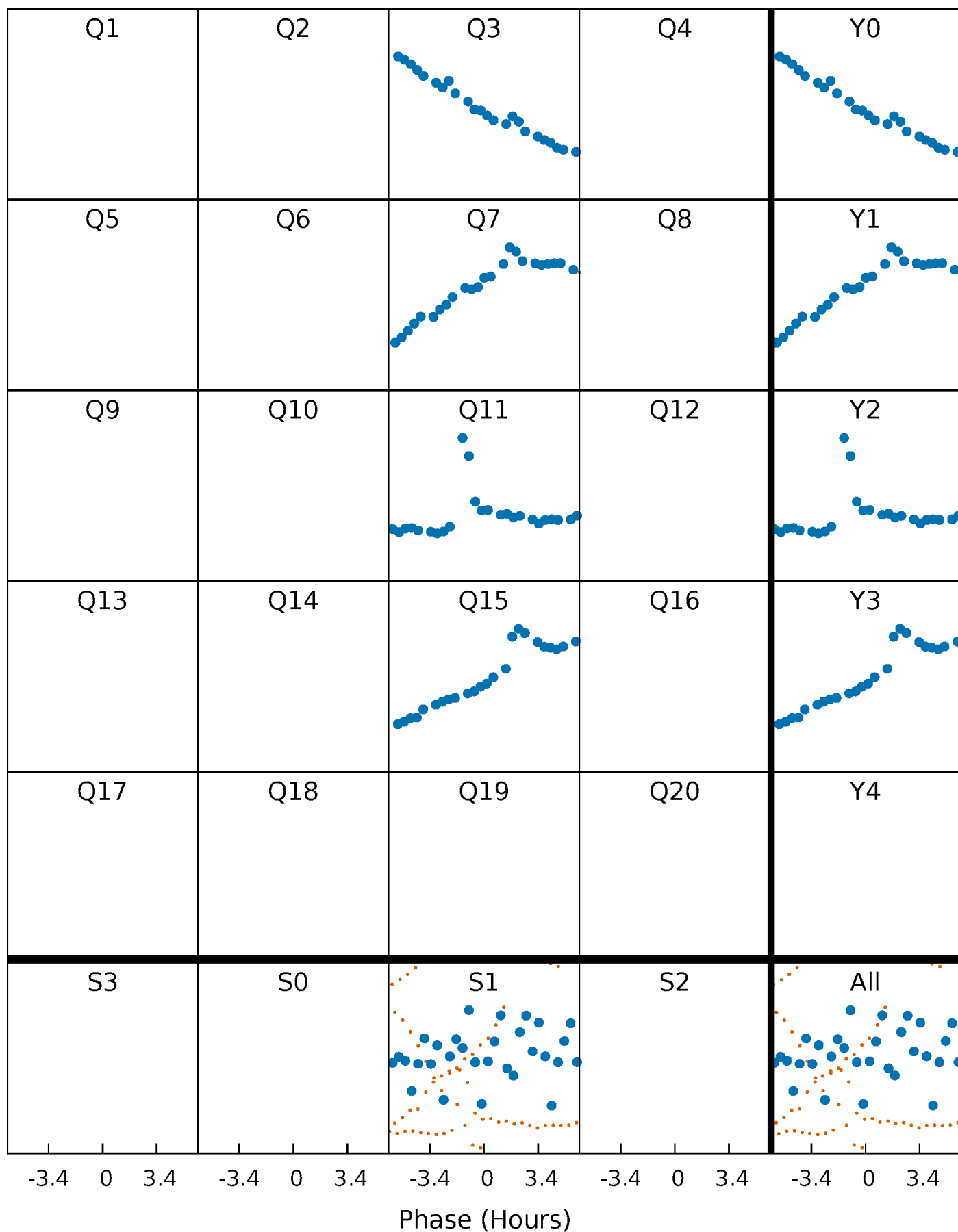


Planet 8 : Phased Whitened Flux Time Series (TPS Epoch/Period)



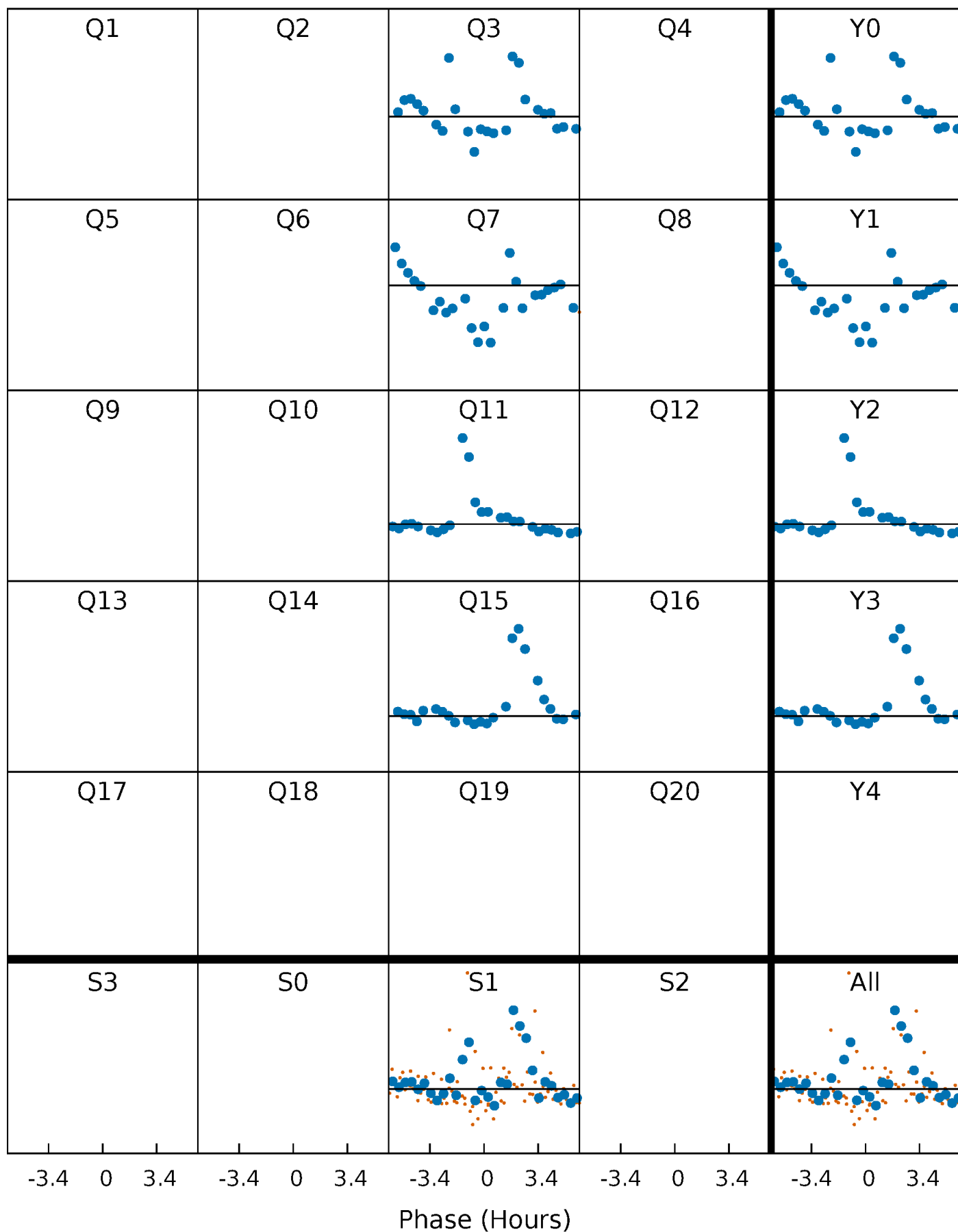
PDC Quarter-Phased Transit Curves

TCE 008414845-08 $P=384.628192$ Days $T_0=286.550814$ (BKJD)



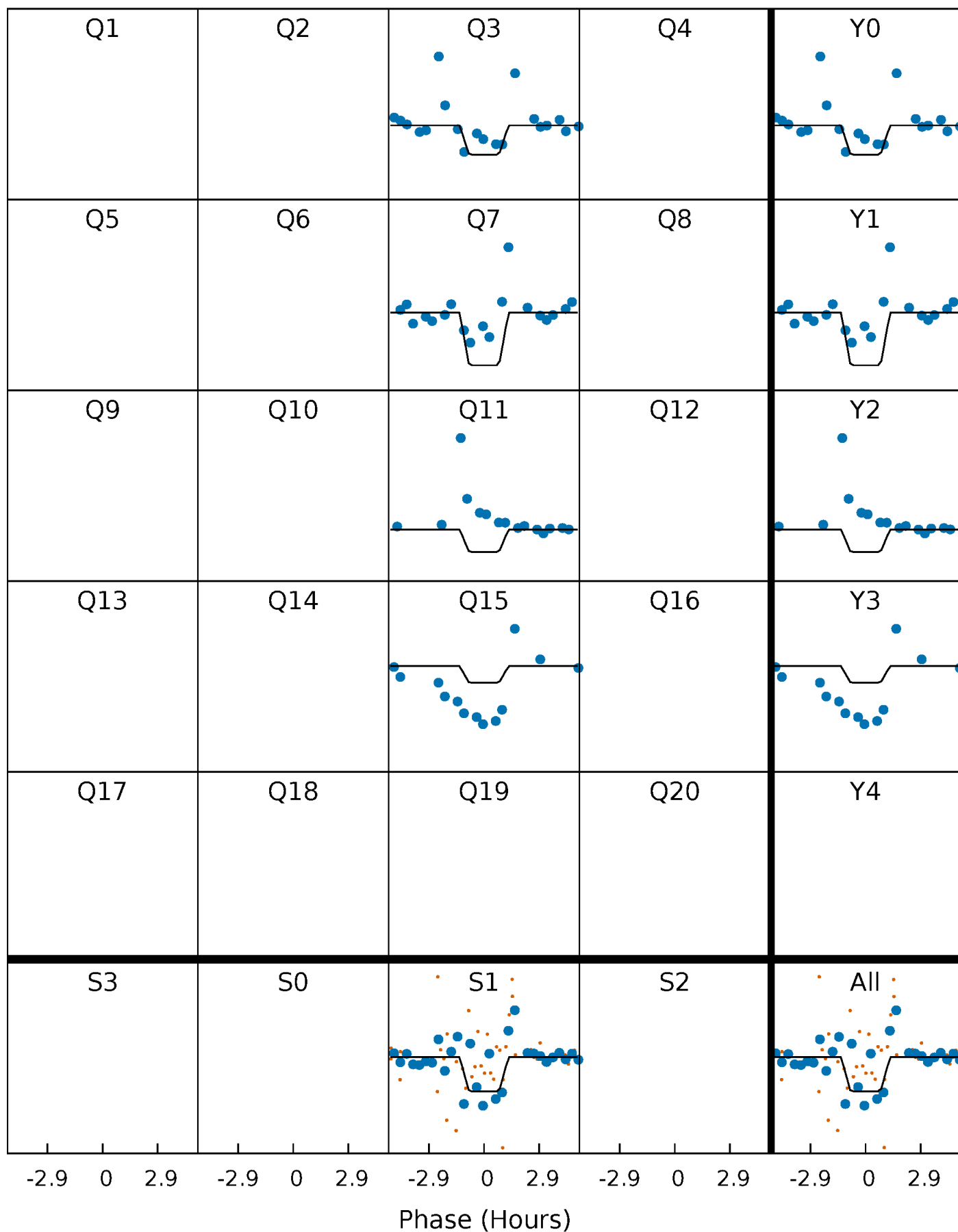
DV Quarter-Phased Transit Curves

TCE 008414845-08 $P=384.628192$ Days $T_0=286.550814$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

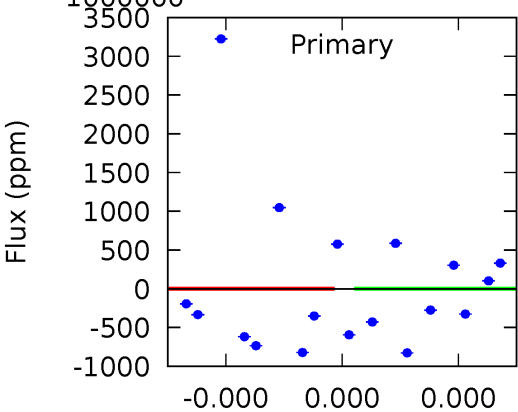
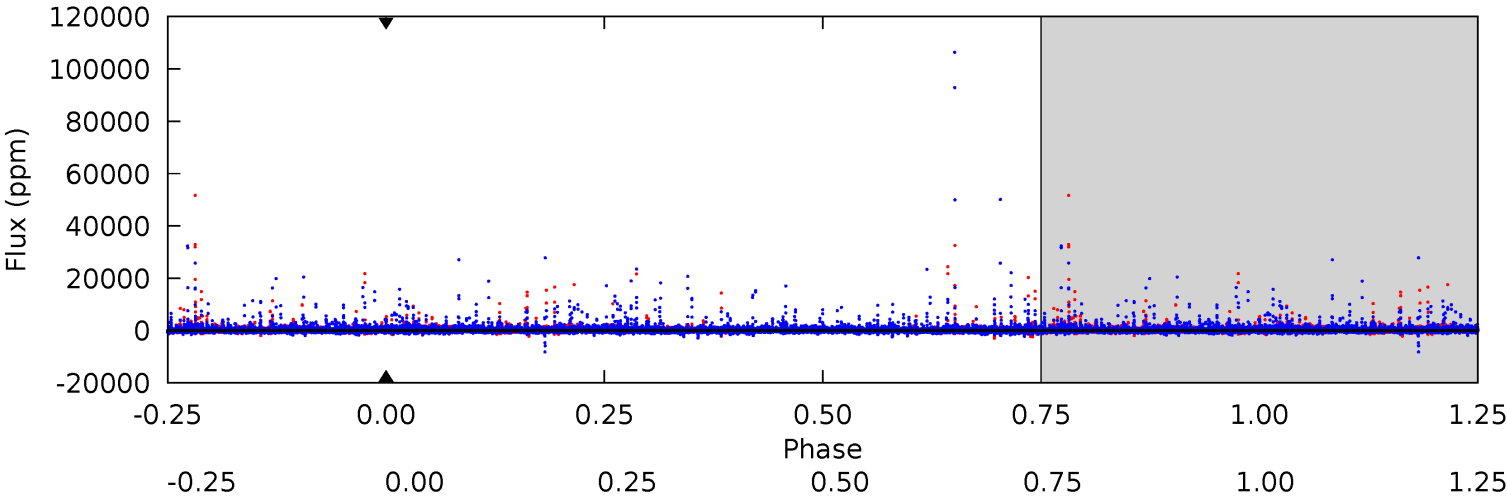
TCE 008414845-08 $P=384.628192$ Days $T_0=286.561444$ (BKJD)



DV Model-Shift Uniqueness Test

008414845-08, P = 384.628192 Days, E = 286.550814 Days

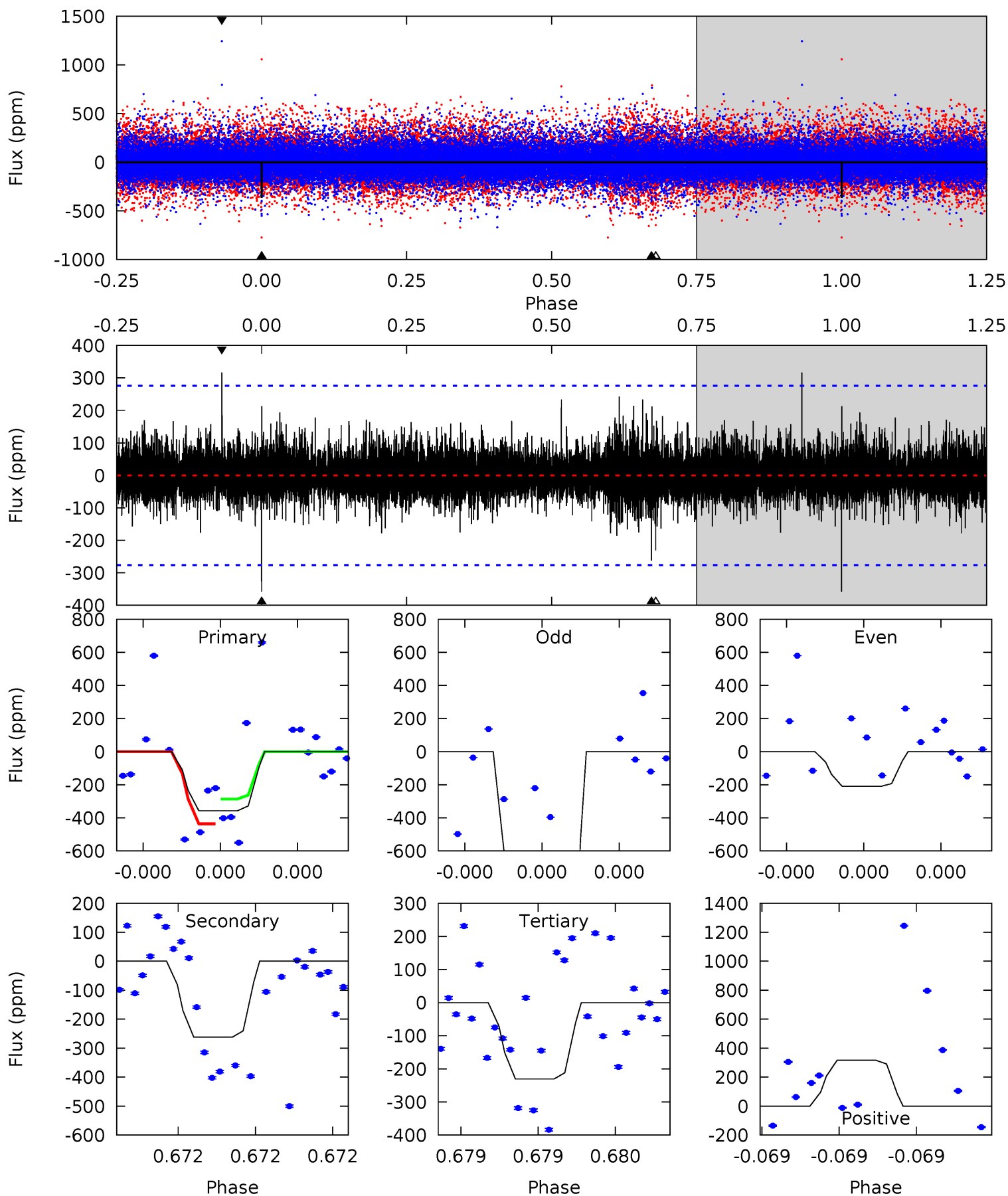
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008414845-08, P = 384.628192 Days, E = 286.561444 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.37	5.40	4.76	6.53	5.69	3.66	0.88	2.61	0.84	0.64	-1.13	20.3	1.98	0.47	1.55



Stellar Parameters For KIC 008414845

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5693^{+154}_{-154}	$4.436^{+0.120}_{-0.165}$	$-0.400^{+0.300}_{-0.300}$	$0.899^{+0.224}_{-0.131}$	$0.804^{+0.112}_{-0.056}$	$1.559^{+0.866}_{-0.717}$
	+3%/-3%	+3%/-4%	+75%/-75%	+25%/-15%	+14%/-7%	+56%/-46%
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 008414845-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$7.34^{+8.56}_{-5.19}$	340^{+24}_{-19}	-4126^{+24003}_{-15542}	$-10324.810^{+1543911.849}_{-1502005.899}$
Alt.	-262 ± 49	$7.49^{+8.28}_{-5.12}$	341^{+23}_{-18}	3223^{+1658}_{-607}	2376^{+23475}_{-1854}

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

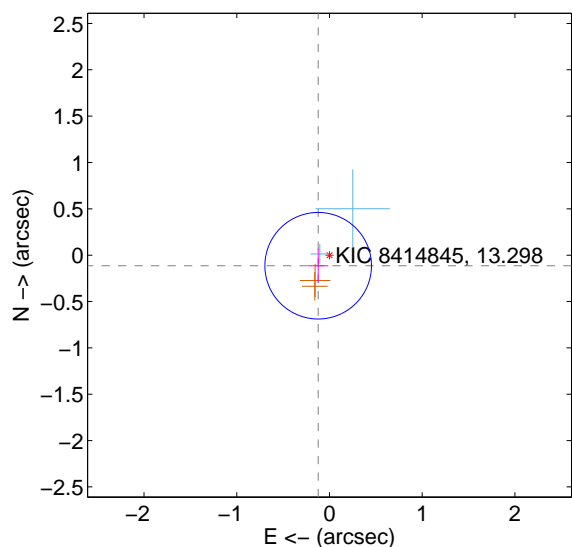
Supplemental centroid analysis for 008414845-08. Kepler magnitude: 13.30. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

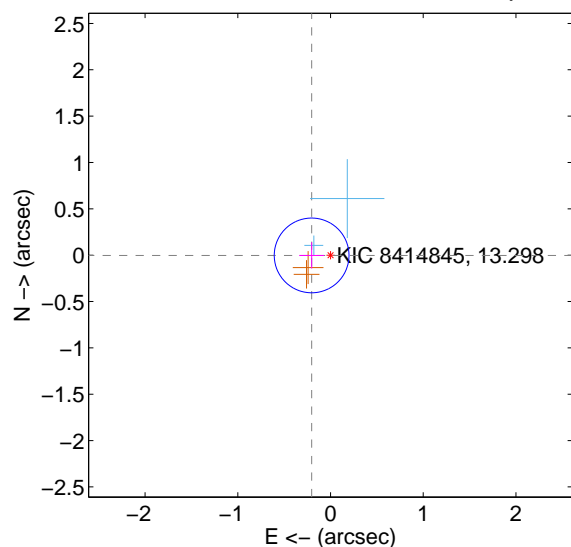
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.167 ± 0.192	0.87	0.122 ± 0.110	-0.114 ± 0.184
PRF-fit source offset from KIC position	0.204 ± 0.134	1.52	0.204 ± 0.134	-0.003 ± 0.141
photometric centroid source offset	0.59 ± 0.53	1.11	-0.07 ± 0.45	-0.58 ± 0.53

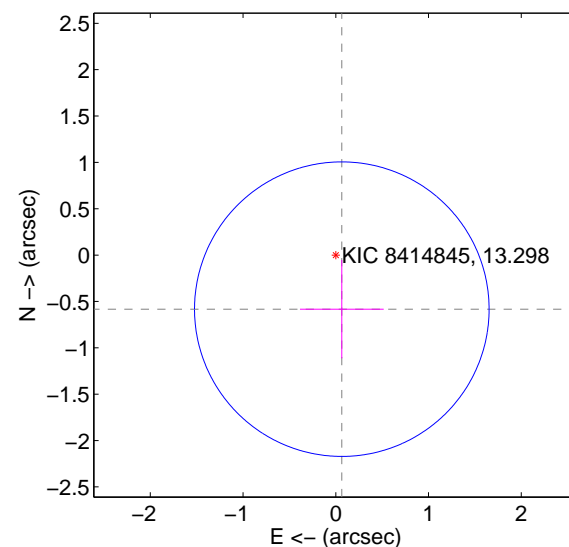
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

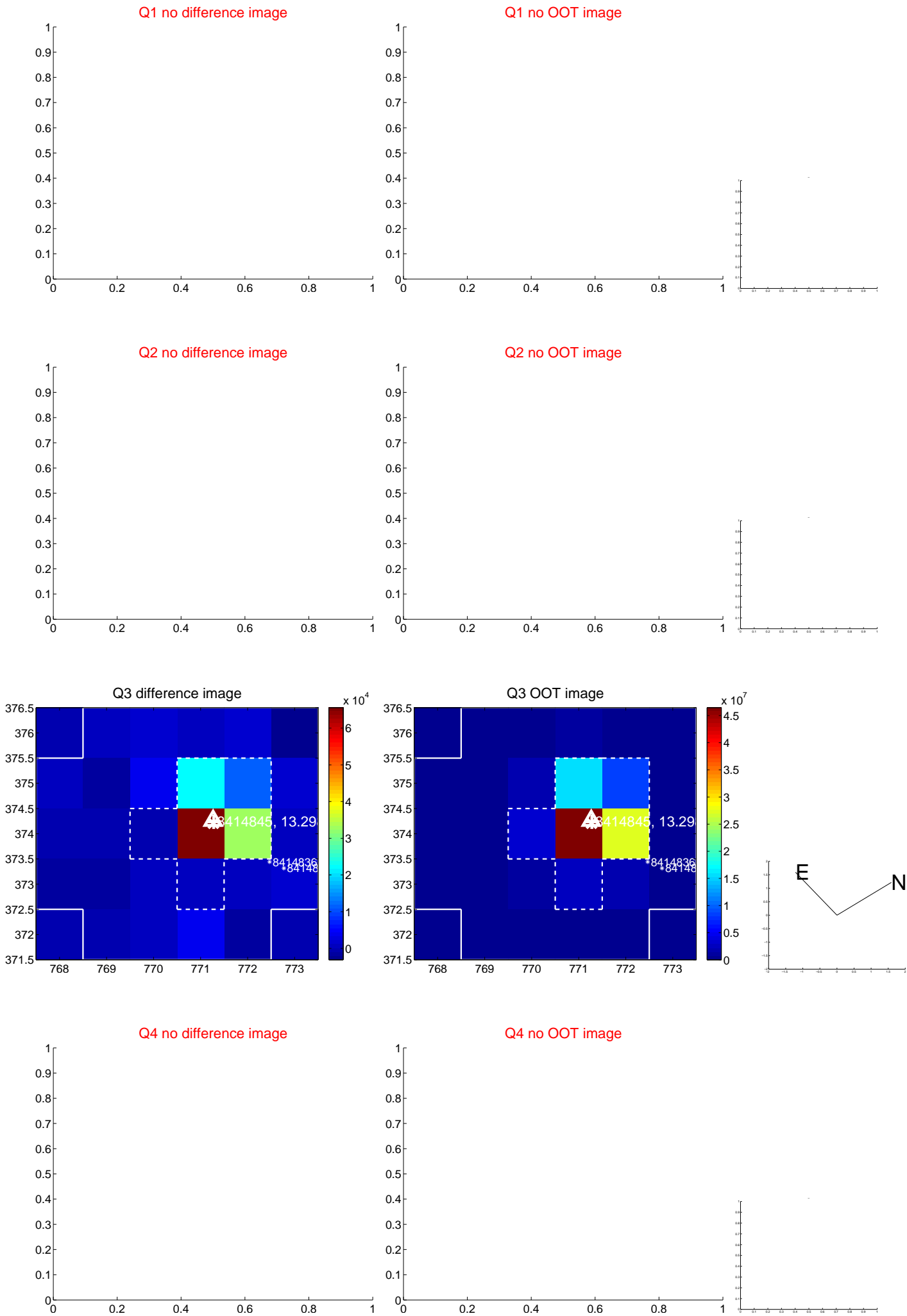


offset from photometric centroids

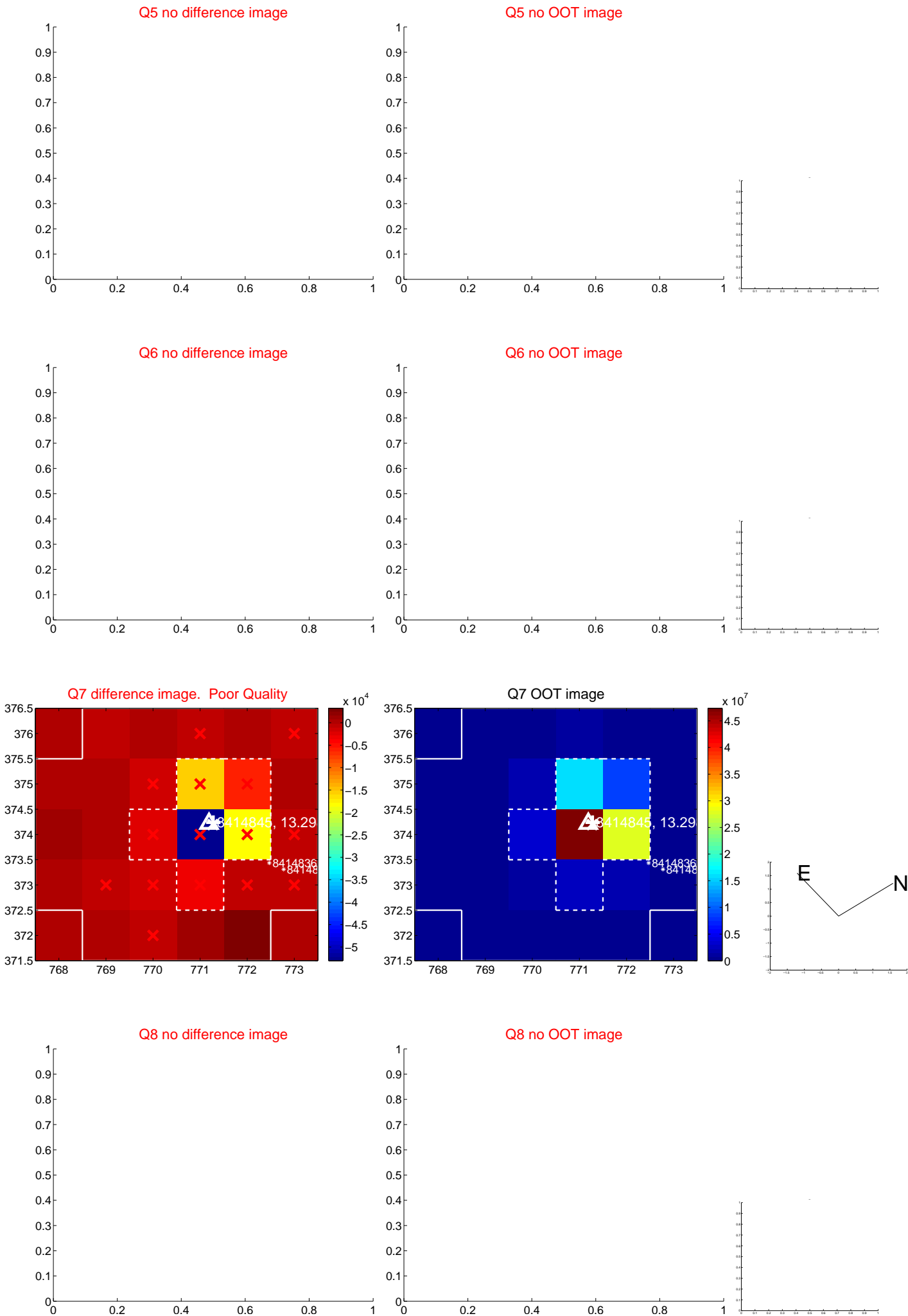


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

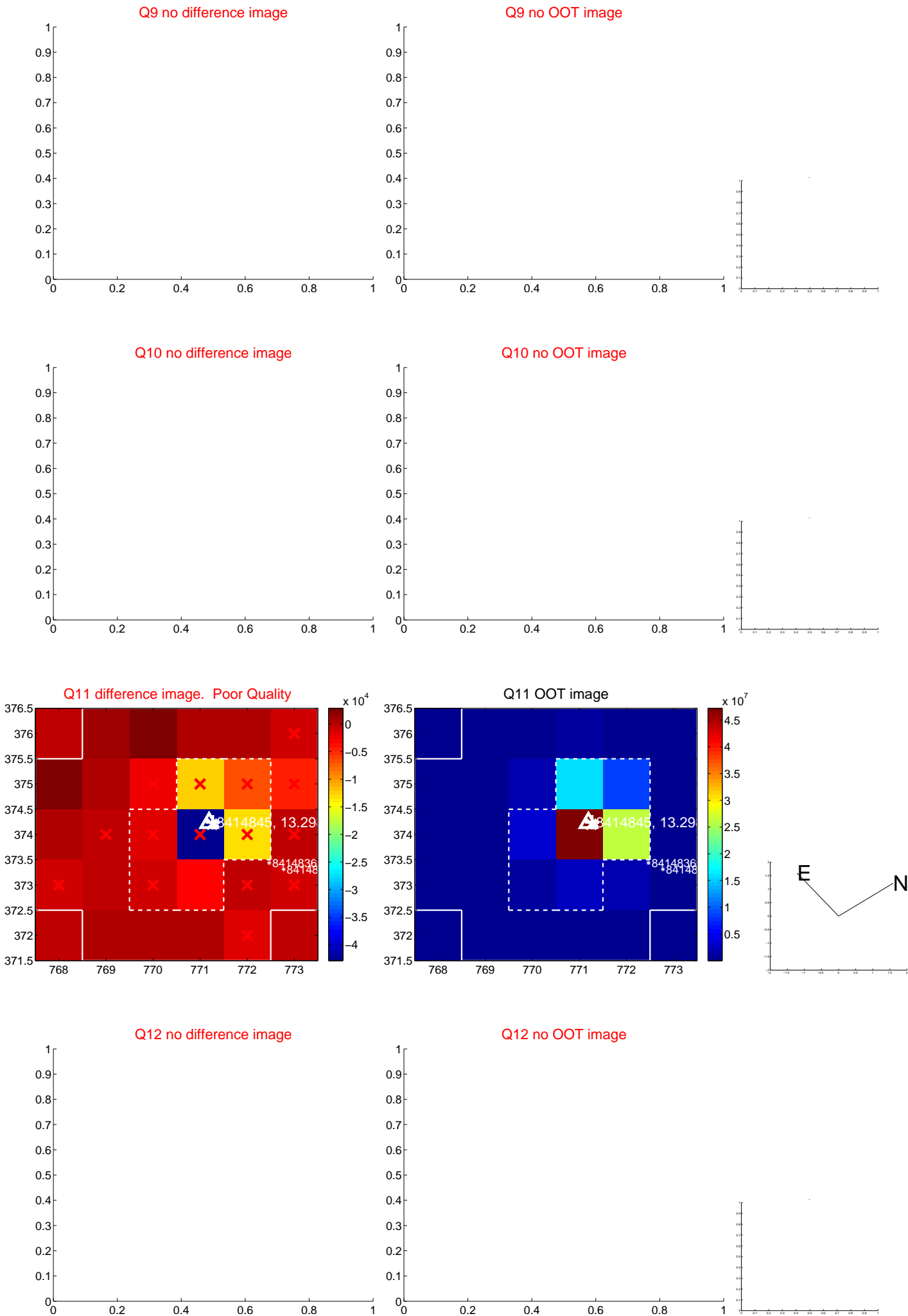
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

Q13 no difference image



Q13 no OOT image



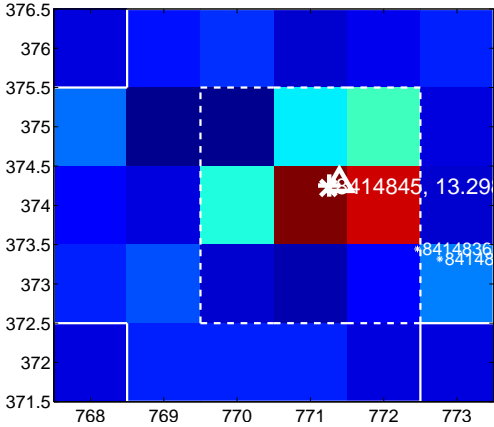
Q14 no difference image



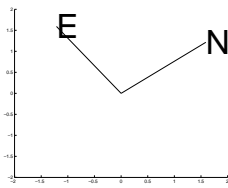
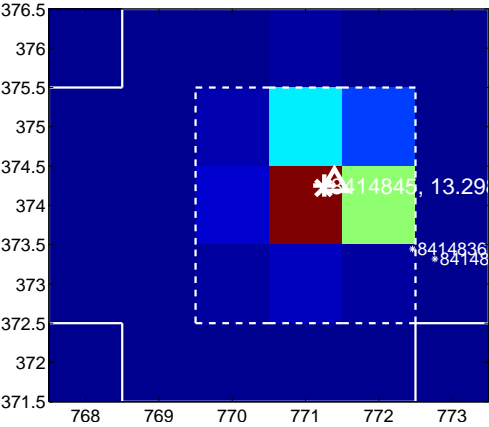
Q14 no OOT image



Q15 difference image



Q15 OOT image



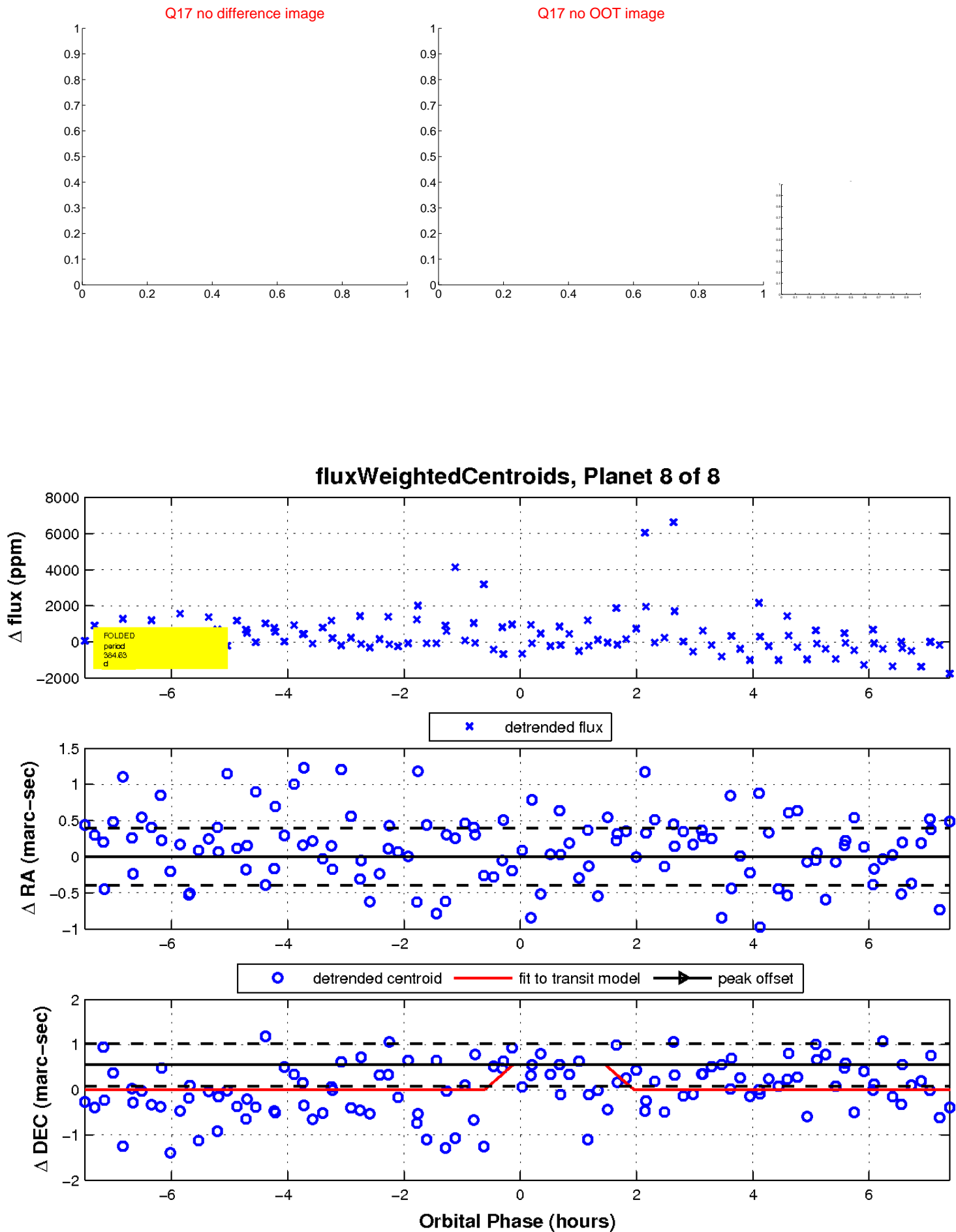
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

