

KIC 008717742

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})
008717742-01	OBS	No	1.293481	132.477616	77.2	6.093	7.8	8.9	2.98	6765	5.27	22801.17
008717742-02	OBS	No	254.367627	303.371488	535.5	8.290	14.6	2.6	2.98	6765	7.29	19.94
008717742-03	OBS	No	171.359166	253.203281	1177.3	3.113	13.2	7.9	2.98	6765	15.46	33.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008717742-01	OBS	FP	0.00	1	0	0	0	LPP_DV
008717742-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
008717742-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

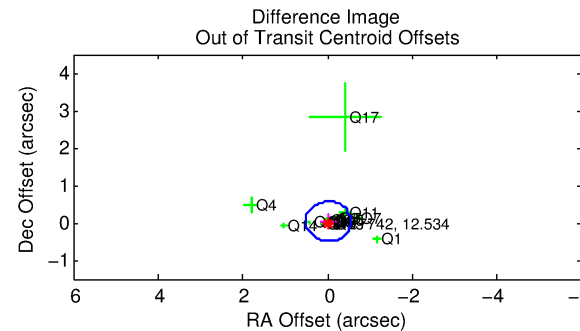
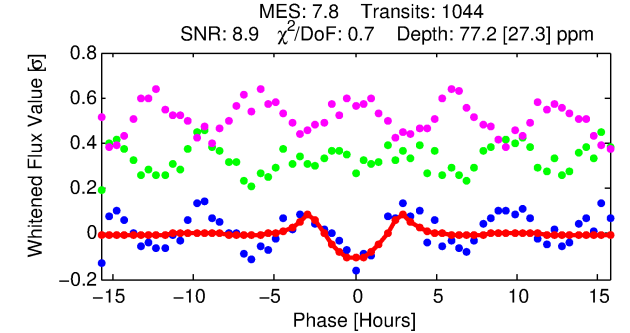
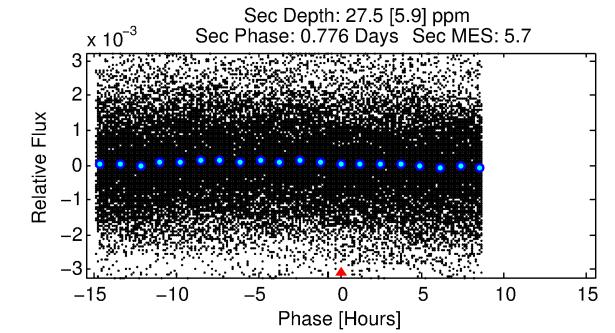
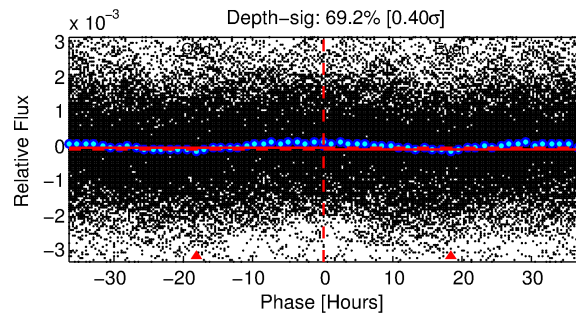
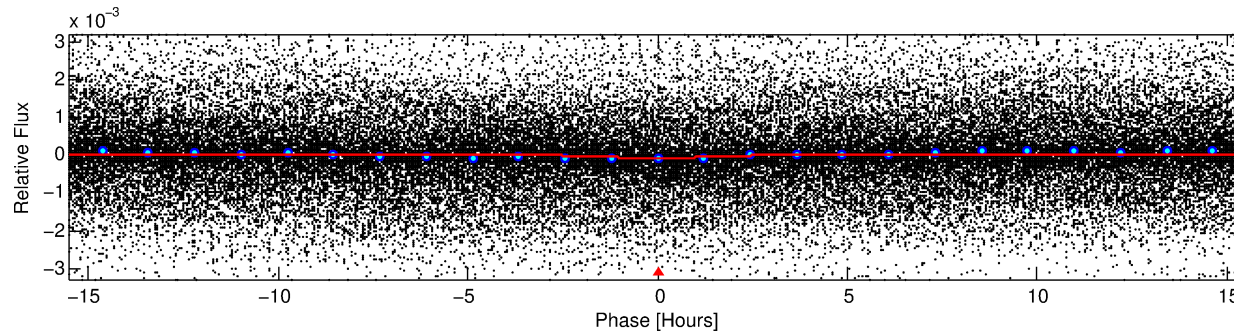
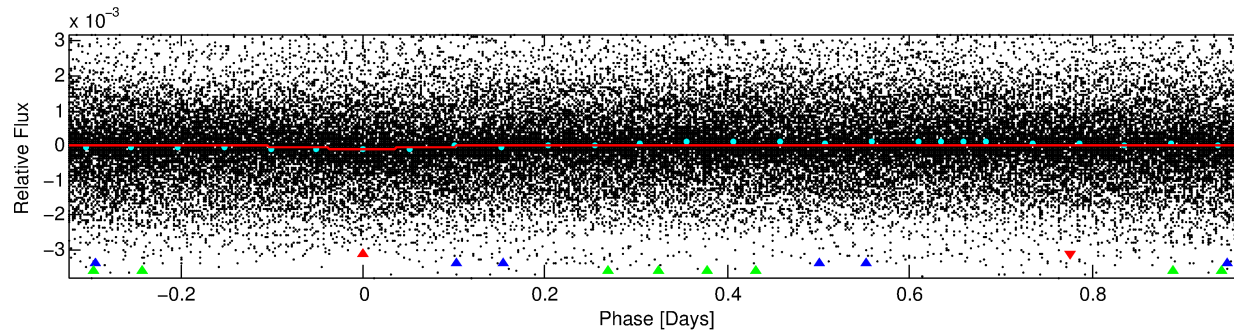
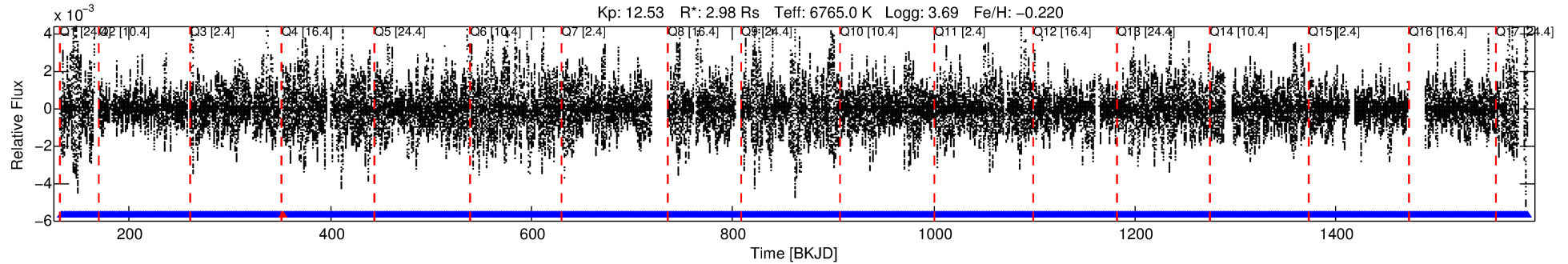
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008717742-01

No Significant Match Found

DV One-Page Summary

KIC: 8717742 Candidate: 1 of 3 Period: 1.293 d



DV Fit Results:

Period = 1.29348 [0.00001] d
Epoch = 132.4776 [0.0048] BKJD
Rp/R* = 0.0162 [0.0143]
a/R* = 1.05 [0.01]
b = 1.00 [0.02]
Seff = 22801.17 [12106.32]
Teq = 3133 [416] K
Rp = 5.27 [5.02] Re
a = 0.0271 [0.0088] AU
Ag = 0.40 [0.74] [-0.81 σ]
Teffp = 3850 [1720] K [0.41 σ]

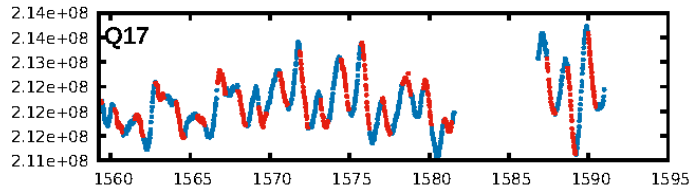
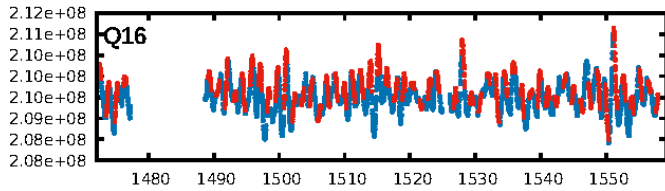
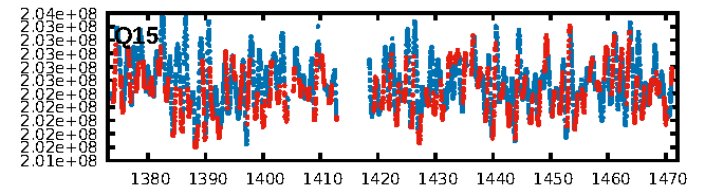
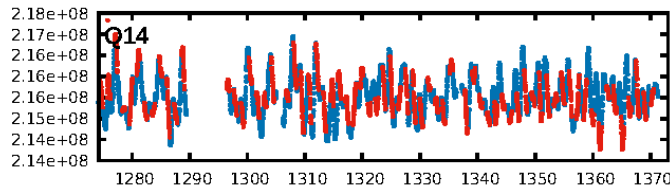
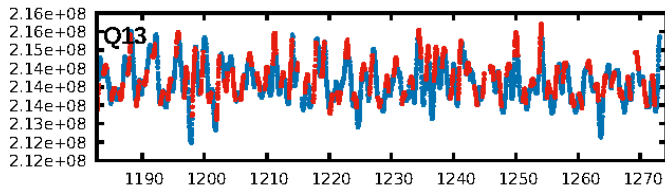
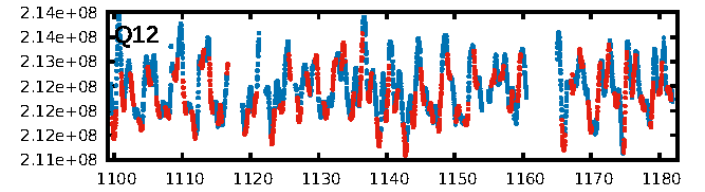
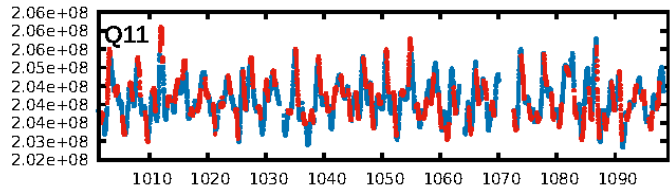
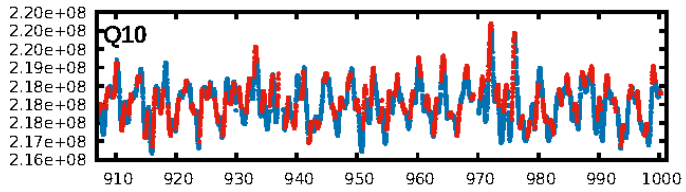
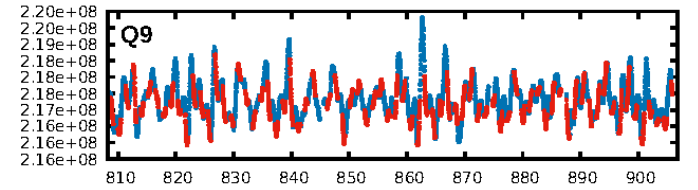
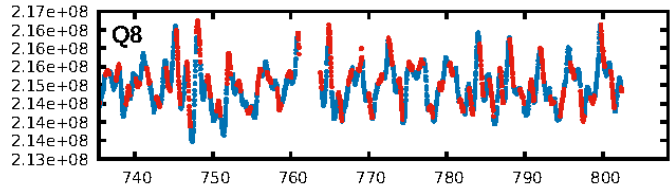
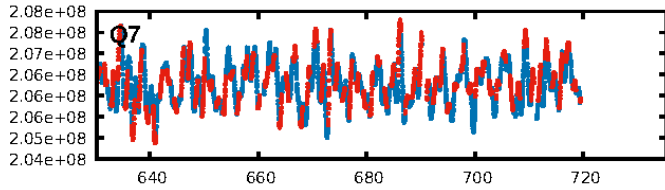
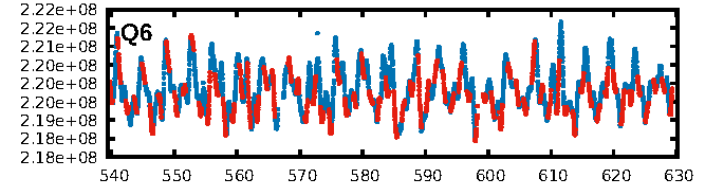
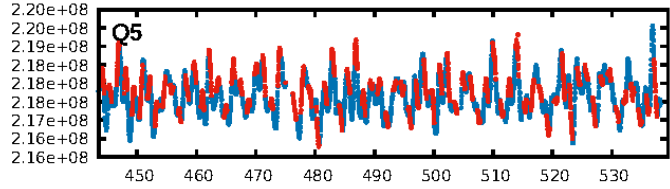
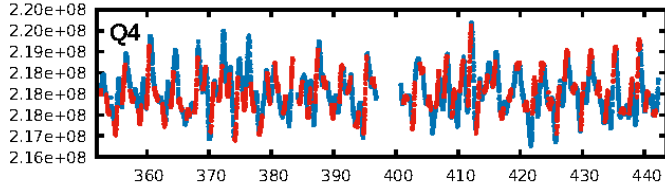
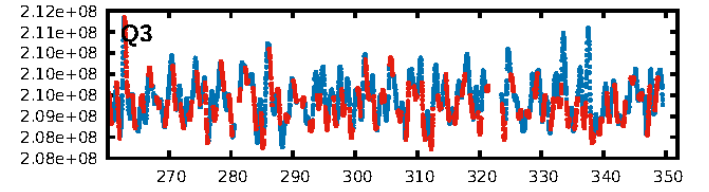
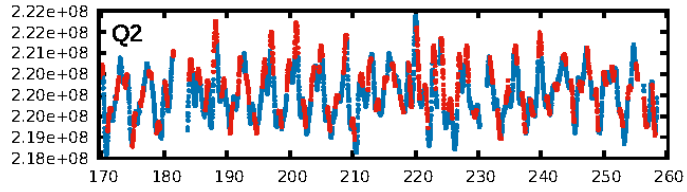
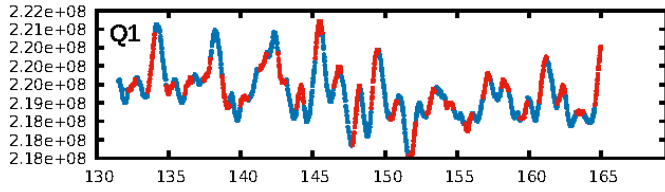
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [596.54 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.57e-14
RollingBand-fgt: 1.00 [996/997]
GhostDiagnostic-chr: 0.9263
Centroid-sig: 21.8%
Centroid-so: 0.273 arcsec [0.77 σ]
OotOffset-rm: 0.040 arcsec [0.23 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.036 arcsec [0.23 σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.41 [7/17]
DiffImageOverlap-fno: 1.00 [17/17]

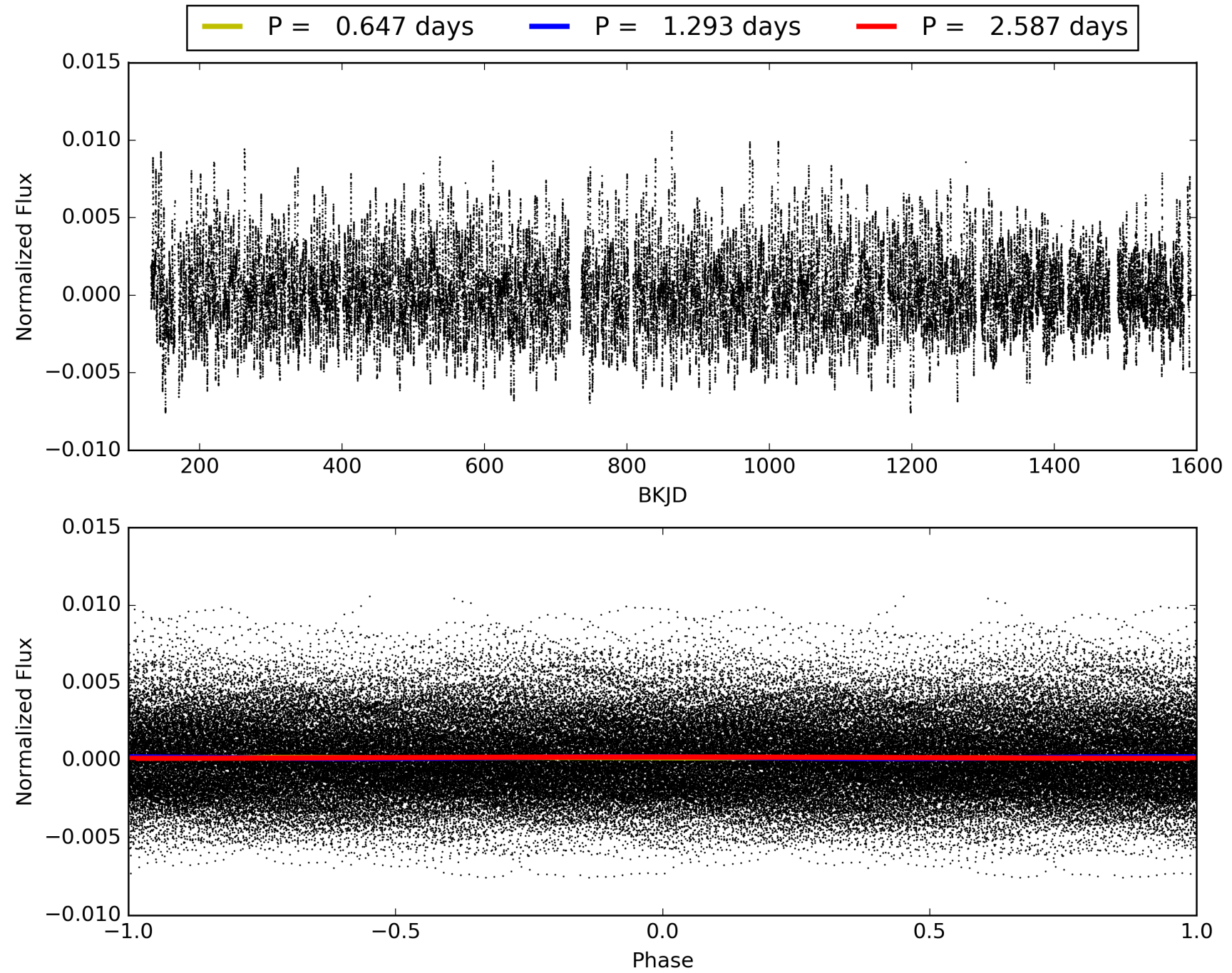
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008717742-01, PDC Light Curves

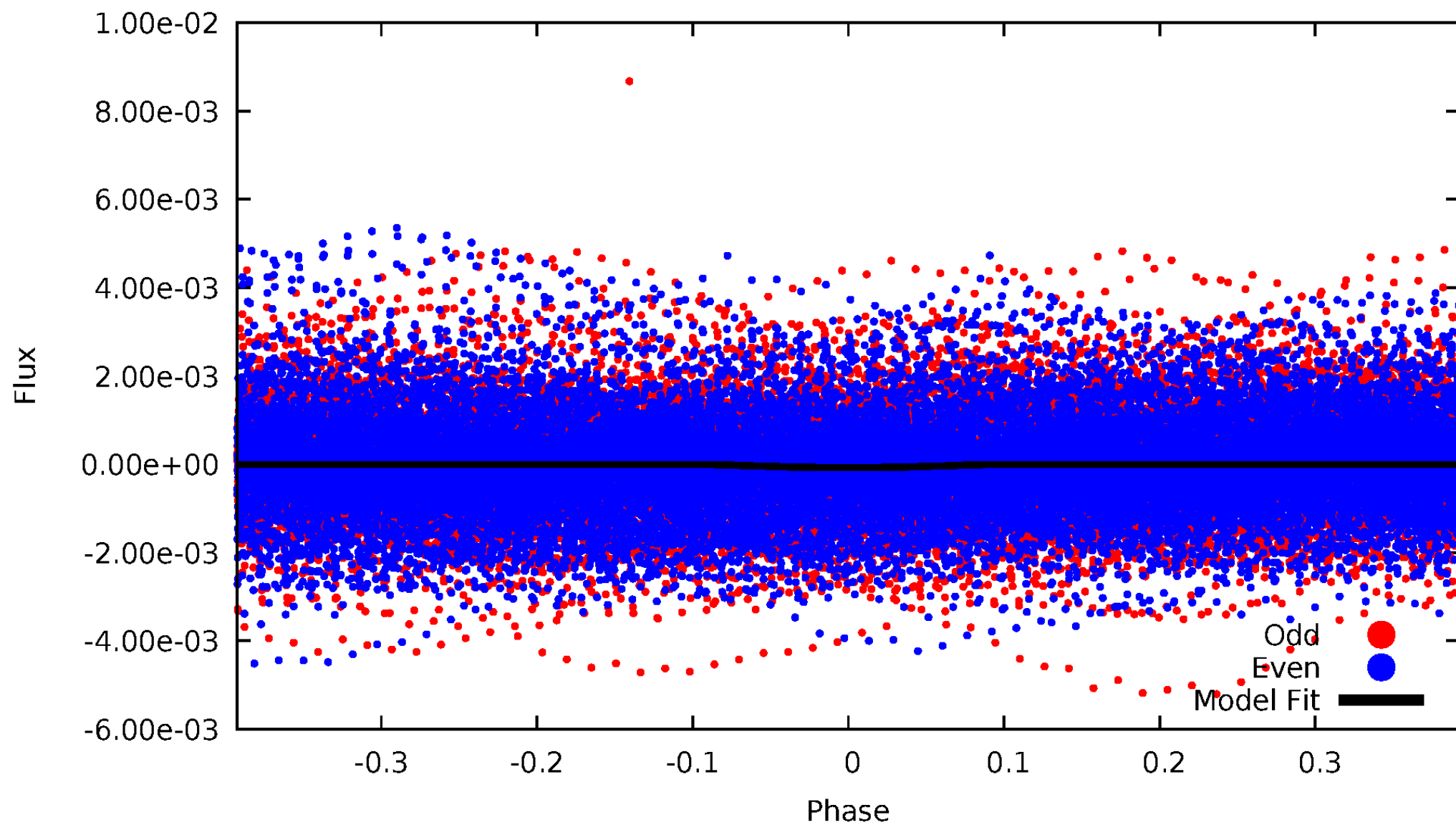


TCE 008717742-01



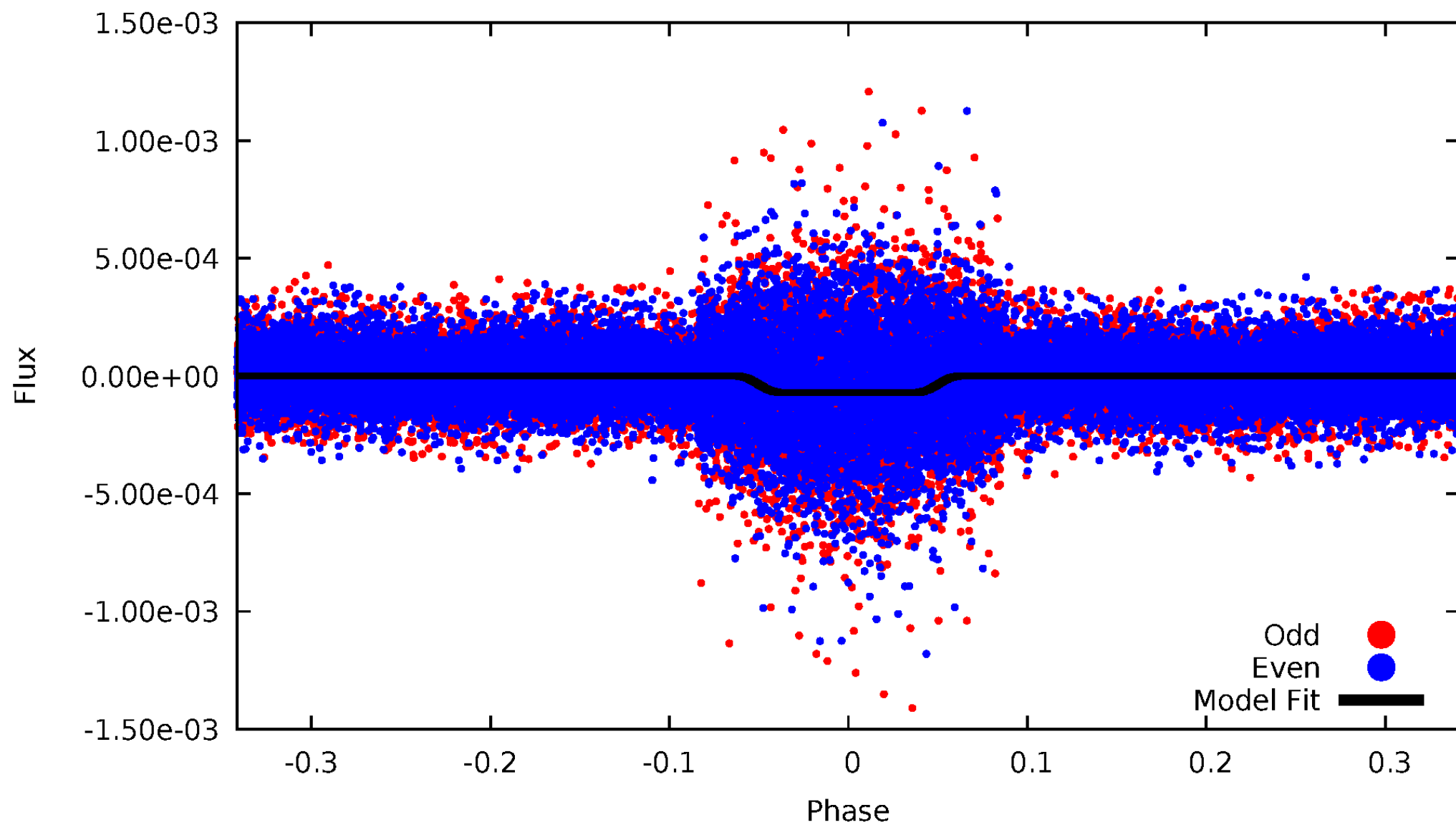
DV Odd/Even

TCE 008717742-01

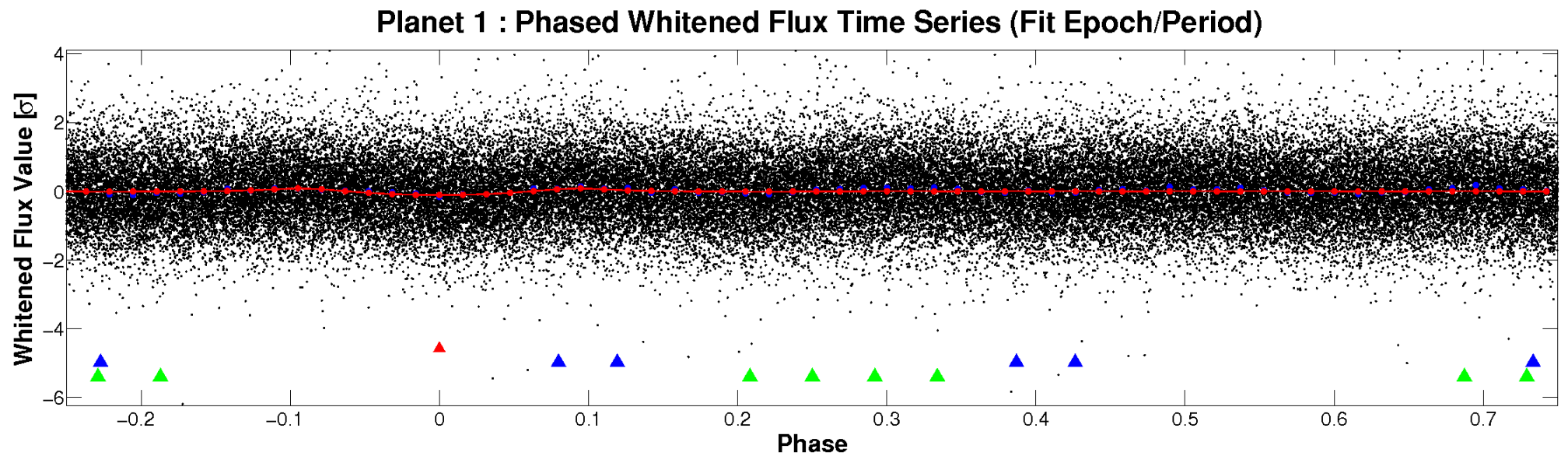
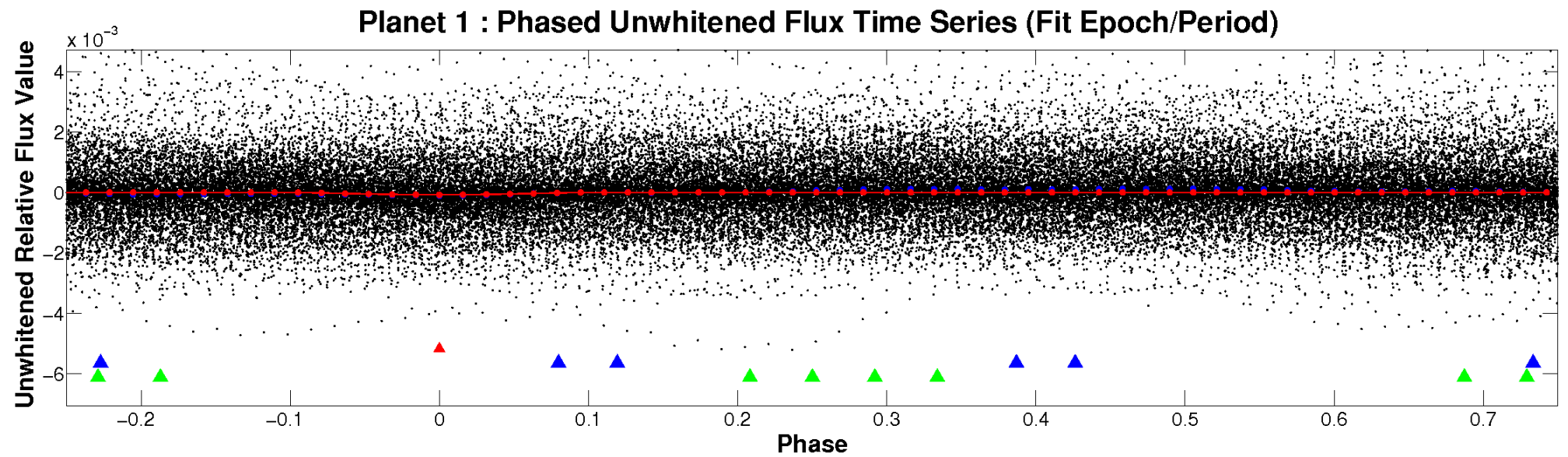


ALT Odd/Even

TCE 008717742-01

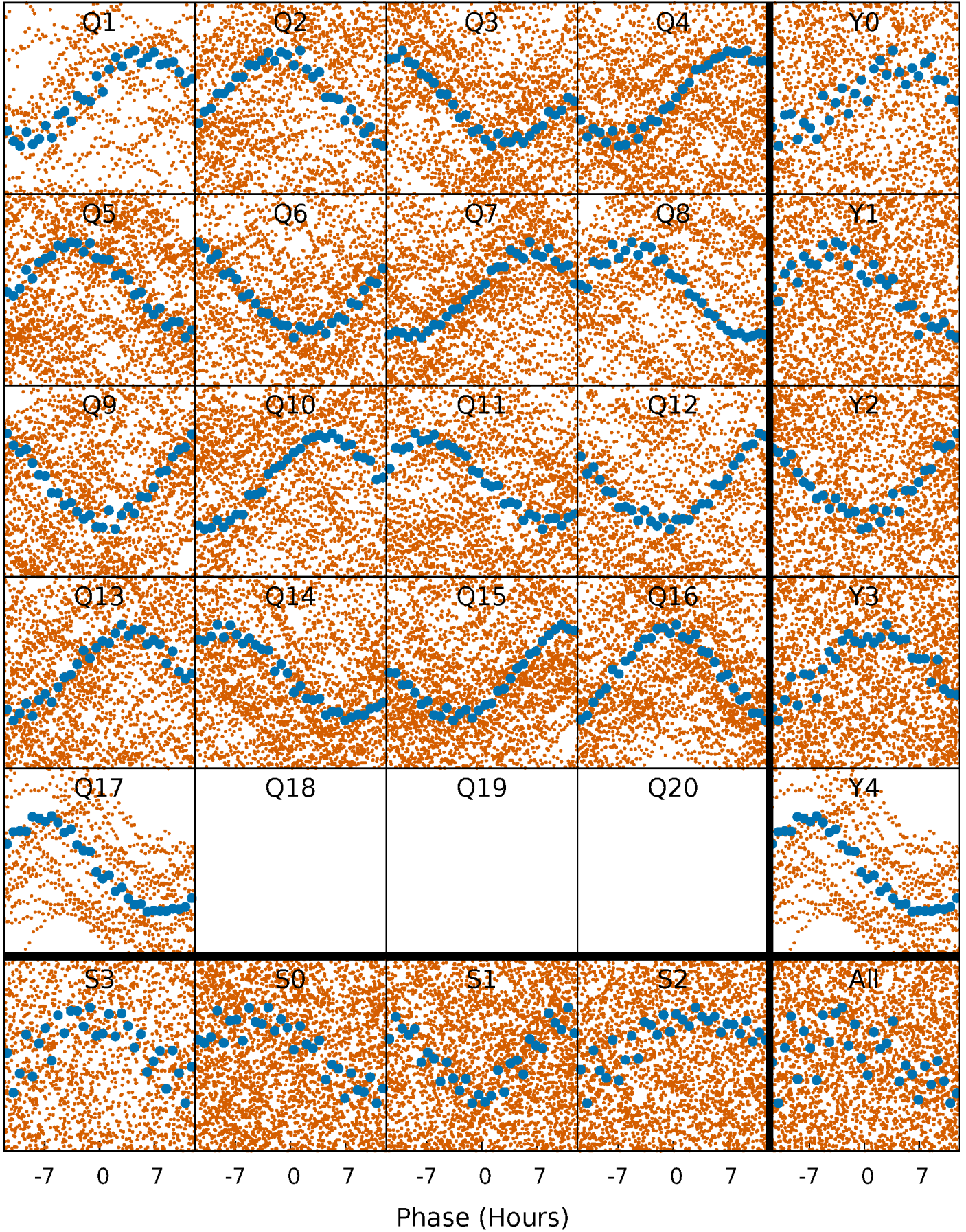


Non-Whitened Vs. Whitened Light Curve



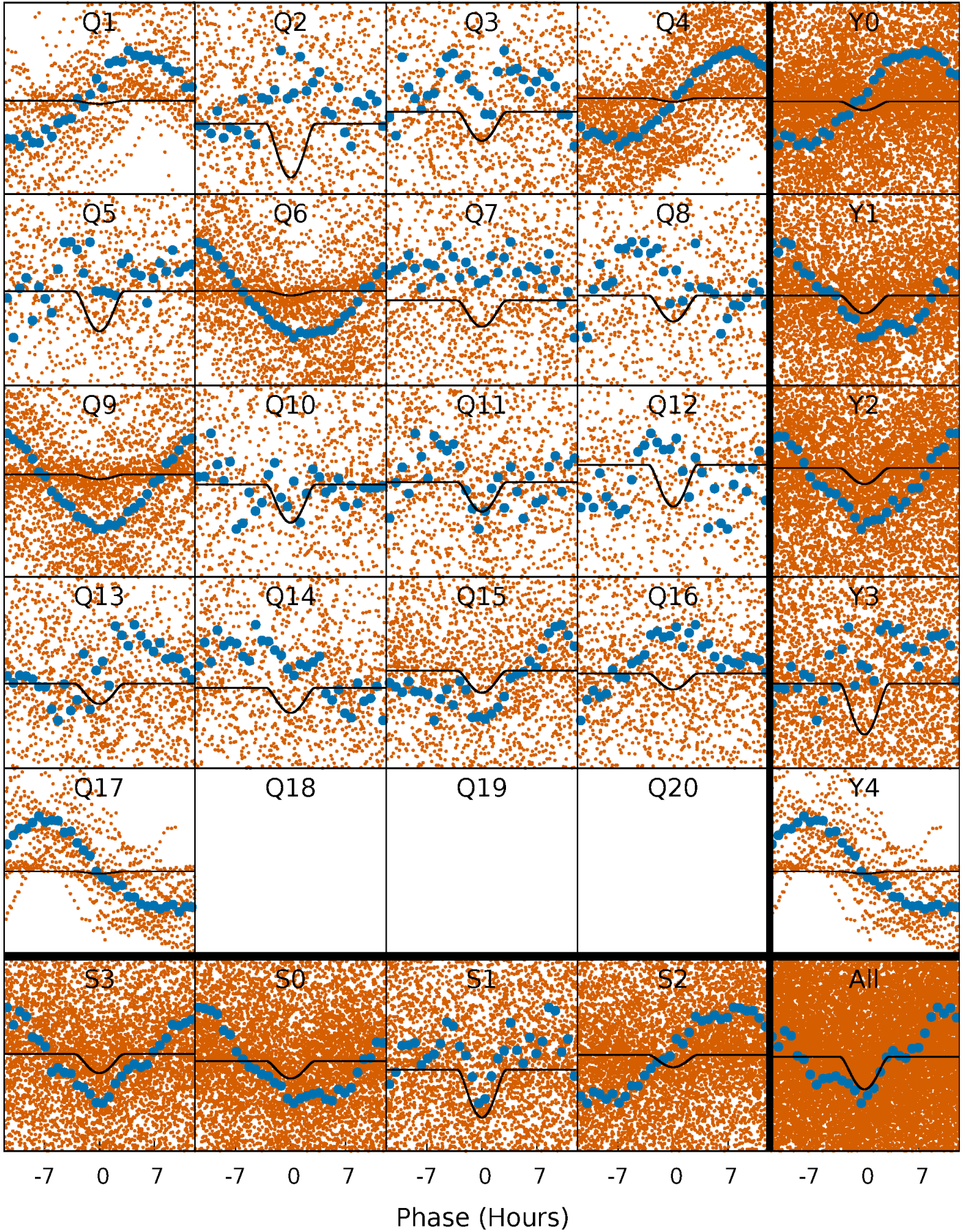
PDC Quarter-Phased Transit Curves

TCE 008717742-01 P= 1.293481 Days $T_0=132.477616$ (BKJD)



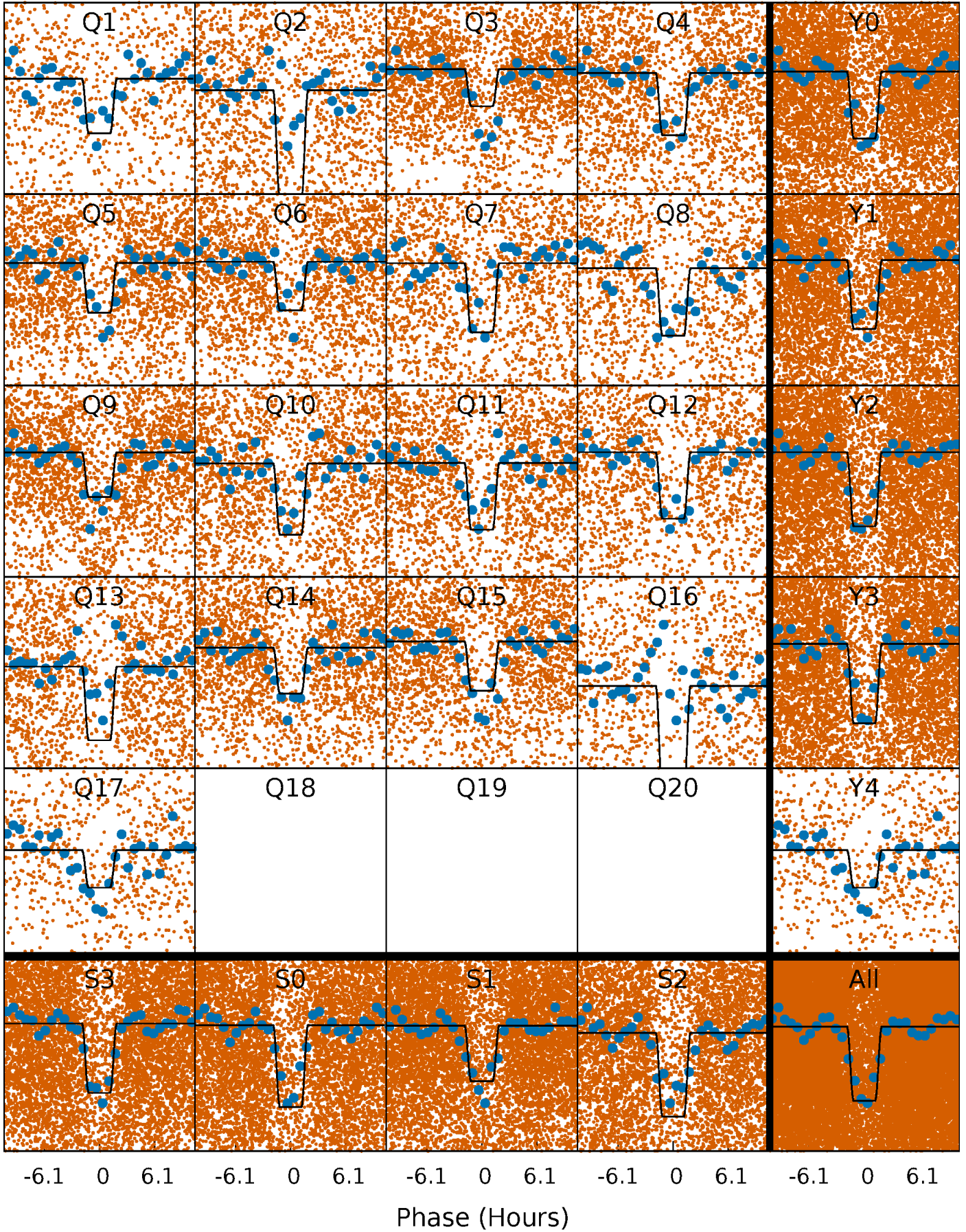
DV Quarter-Phased Transit Curves

TCE 008717742-01 P= 1.293481 Days $T_0=132.477616$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

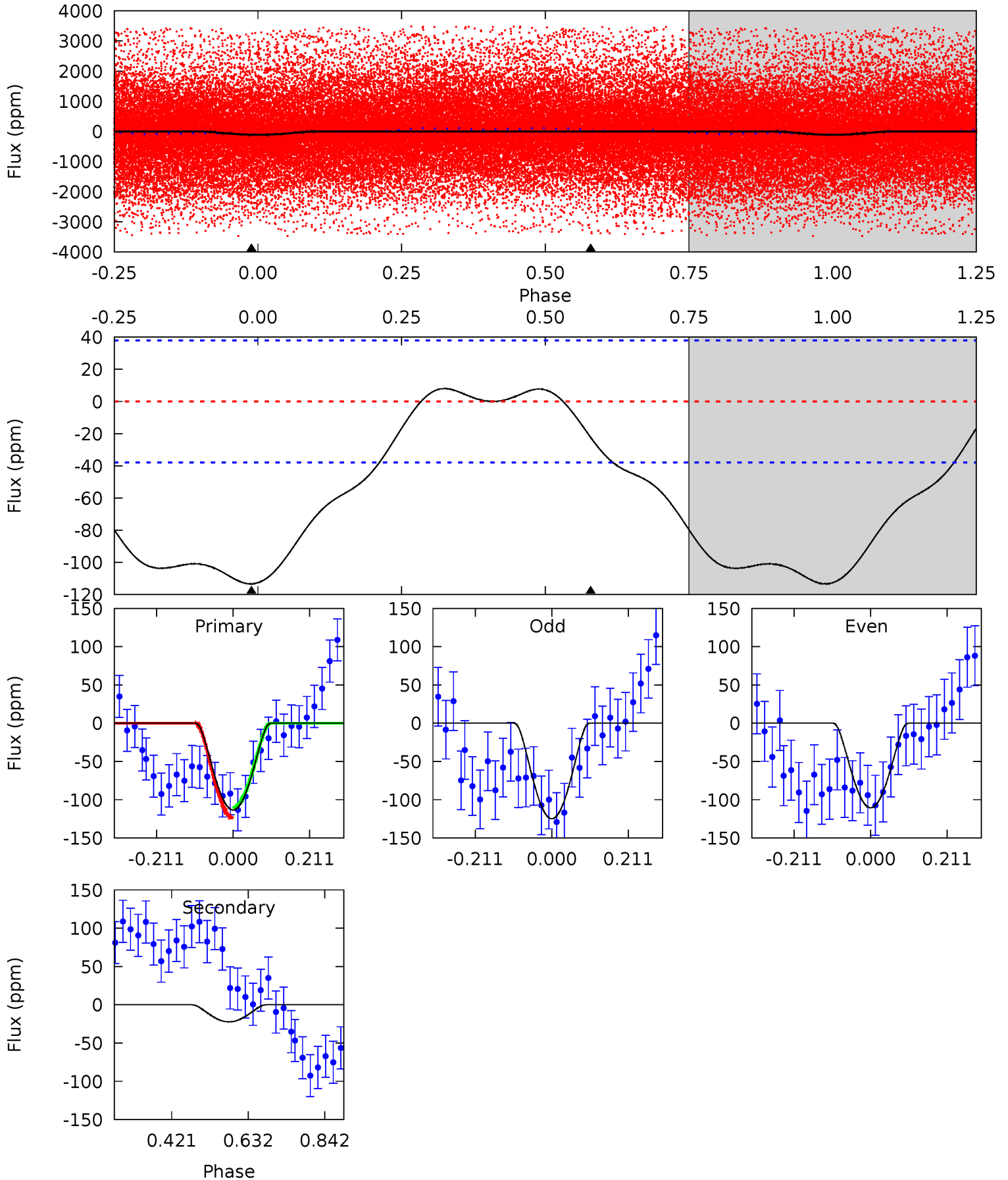
TCE 008717742-01 P= 1.293503 Days $T_0=132.471025$ (BKJD)



DV Model-Shift Uniqueness Test

008717742-01, P = 1.293481 Days, E = 131.184135 Days

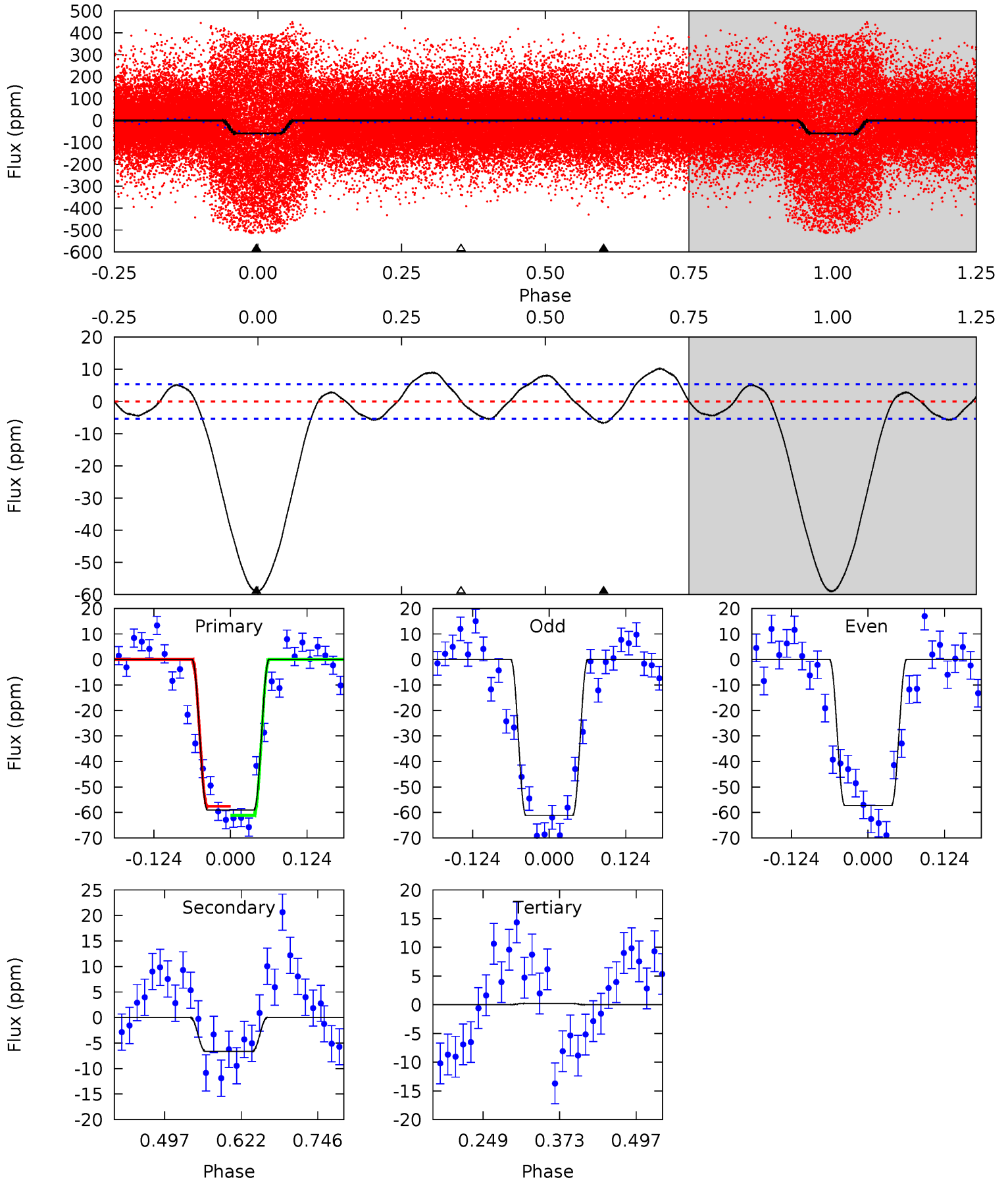
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	2.59	0	0	4.41	1.25	1.91	13.2	13.2	2.59	2.59	0.84	0.77	0.07	0.77



Alt Model-Shift Uniqueness Test

008717742-01, P = 1.293503 Days, E = 131.177522 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.8	5.61	-0.19	0	4.52	1.54	3.65	50.0	49.8	5.79	5.61	1.64	1.11	0.15	1.51



Stellar Parameters For KIC 008717742

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6765^{+200}_{-240}	$3.687^{+0.296}_{-0.074}$	$-0.220^{+0.300}_{-0.250}$	$2.982^{+0.451}_{-1.052}$	$1.577^{+0.249}_{-0.304}$	$0.084^{+0.160}_{-0.025}$
	+3%/-4%	+8%/-2%	+136%/-114%	+15%/-35%	+16%/-19%	+191%/-30%
Source	PHO1	FLK73	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 008717742-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-22 ± 9	$5.42^{+4.22}_{-3.29}$	4258^{+269}_{-361}	-2428^{+7608}_{-1248}	$0.287^{+1.558}_{-0.204}$
Alt.	-7 ± 1	$3.88^{+4.47}_{-2.64}$	4267^{+262}_{-363}	-3264^{+8287}_{-542}	$0.169^{+1.533}_{-0.130}$

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

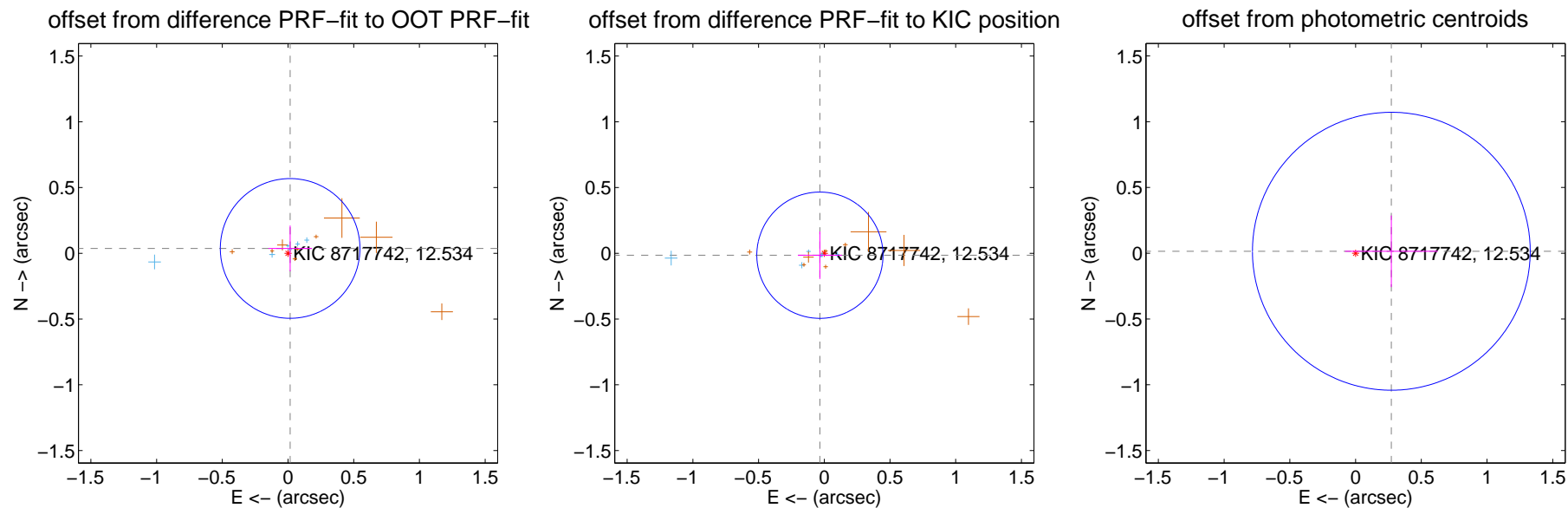
DV Centroid Data

Supplemental centroid analysis for 008717742-01. Kepler magnitude: 12.53. Transit SNR 8.95

There are 7 quarters with good PRF difference image offsets

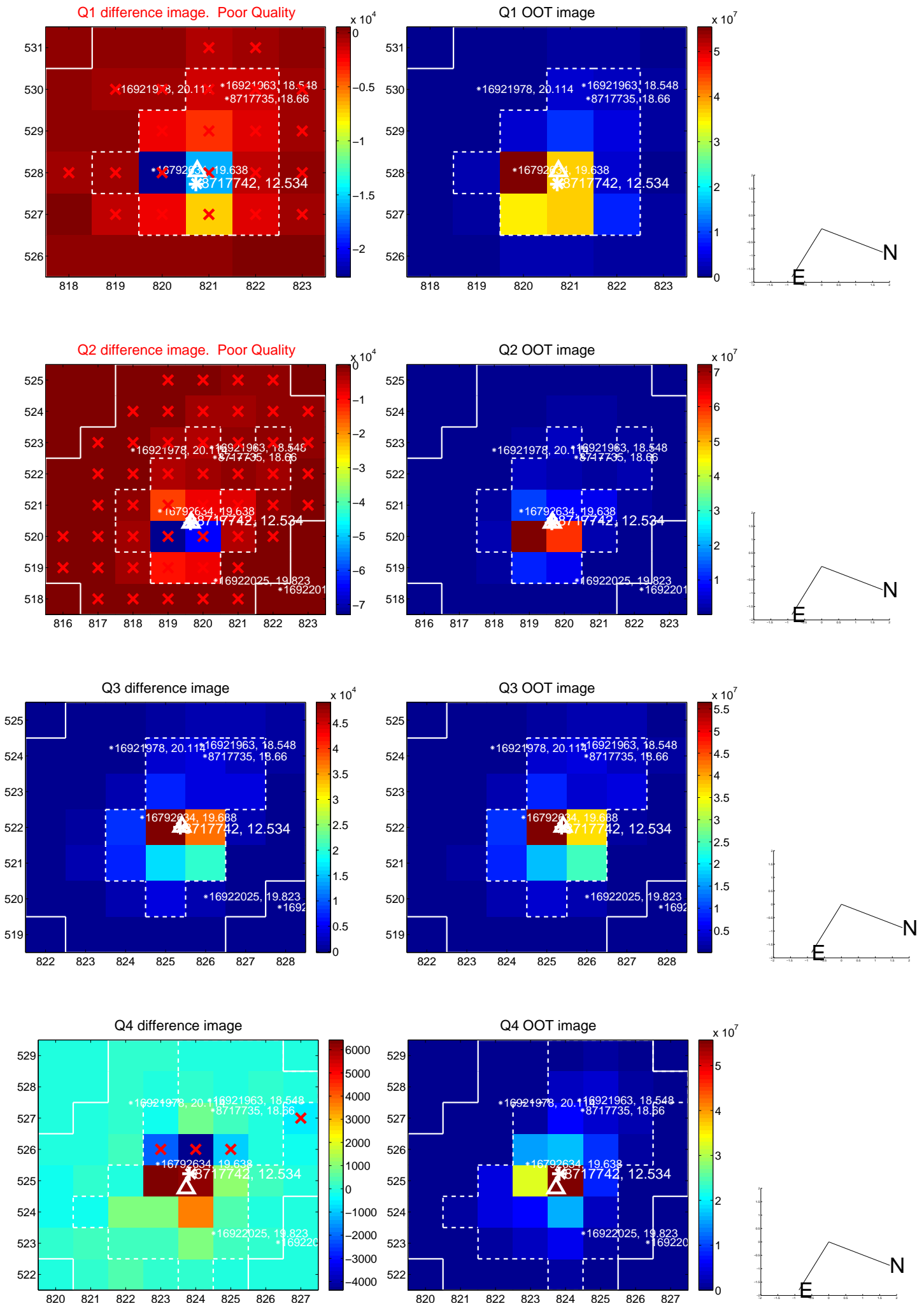
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.040 ± 0.177	0.23	-0.016 ± 0.165	0.037 ± 0.174
PRF-fit source offset from KIC position	0.036 ± 0.160	0.23	0.033 ± 0.167	-0.015 ± 0.180
photometric centroid source offset	0.27 ± 0.35	0.77	-0.27 ± 0.35	0.01 ± 0.27

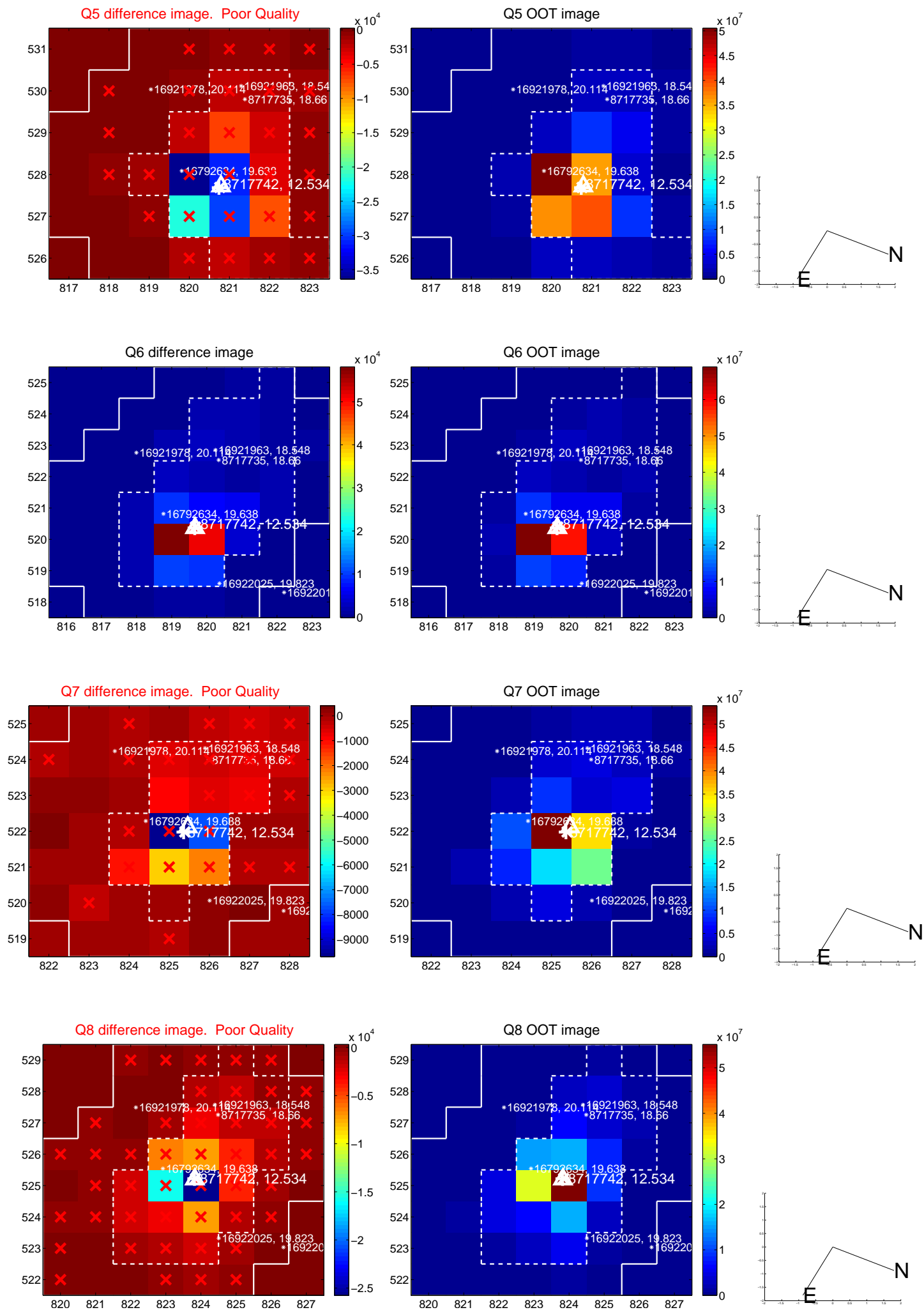


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

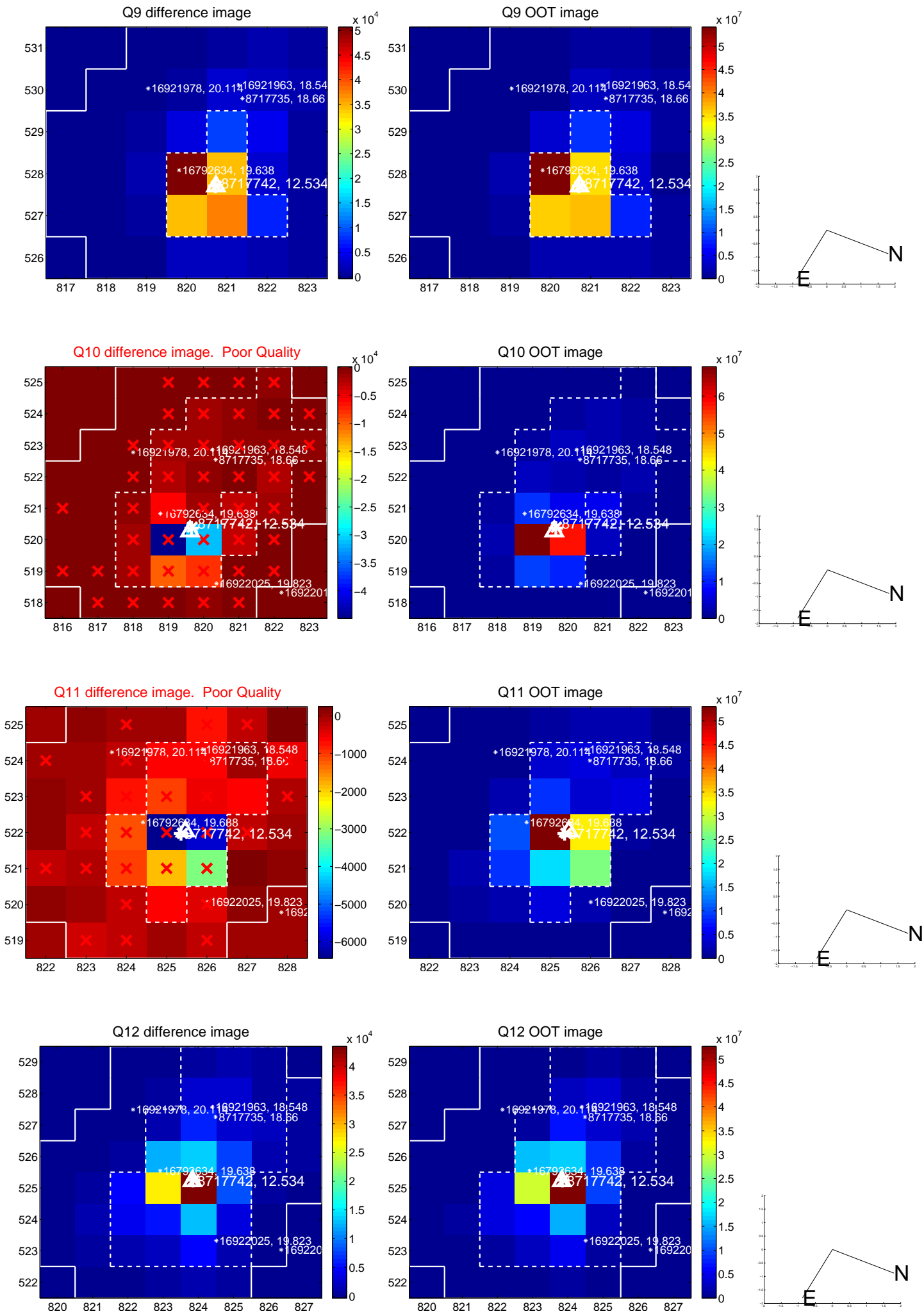
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



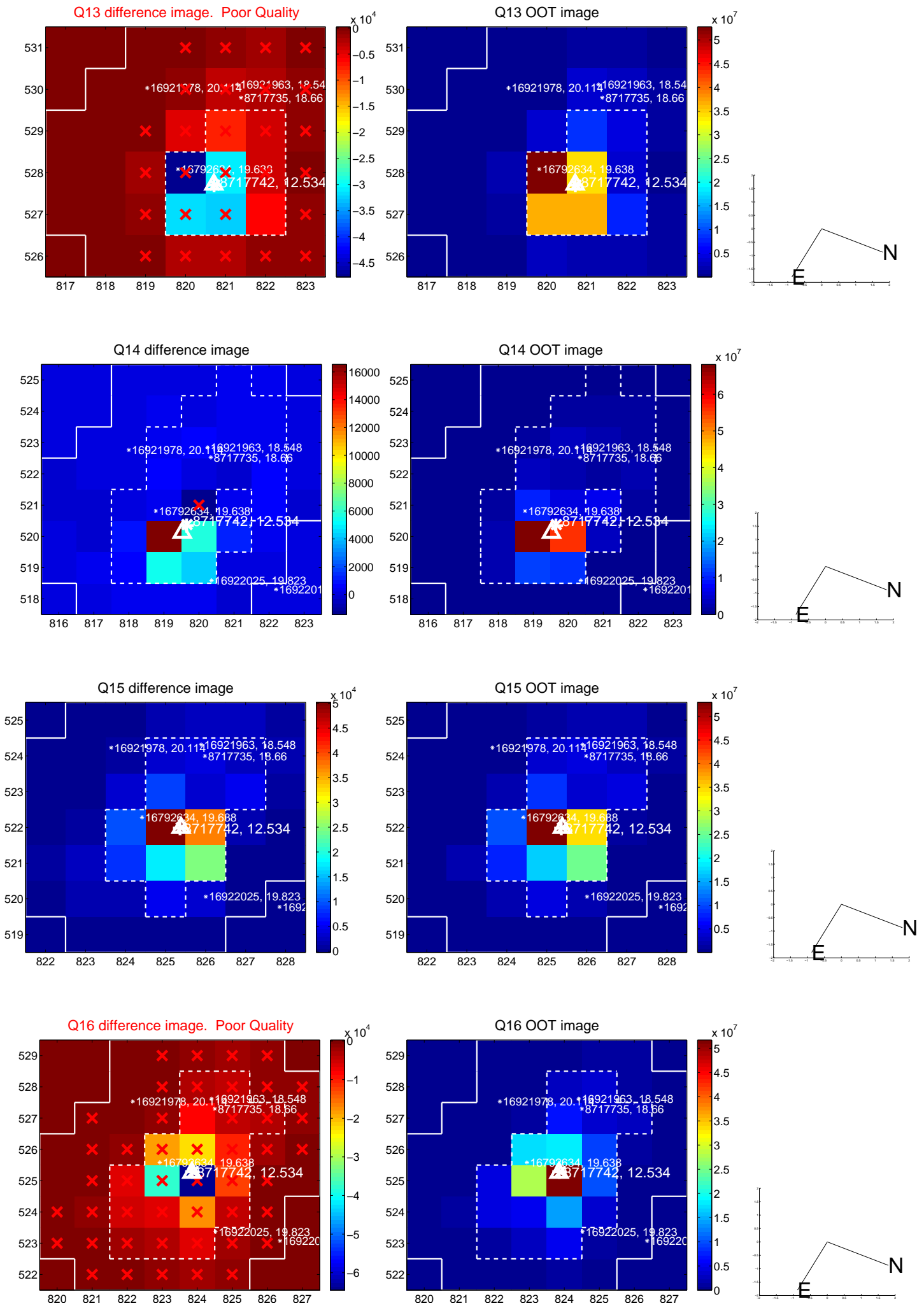
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



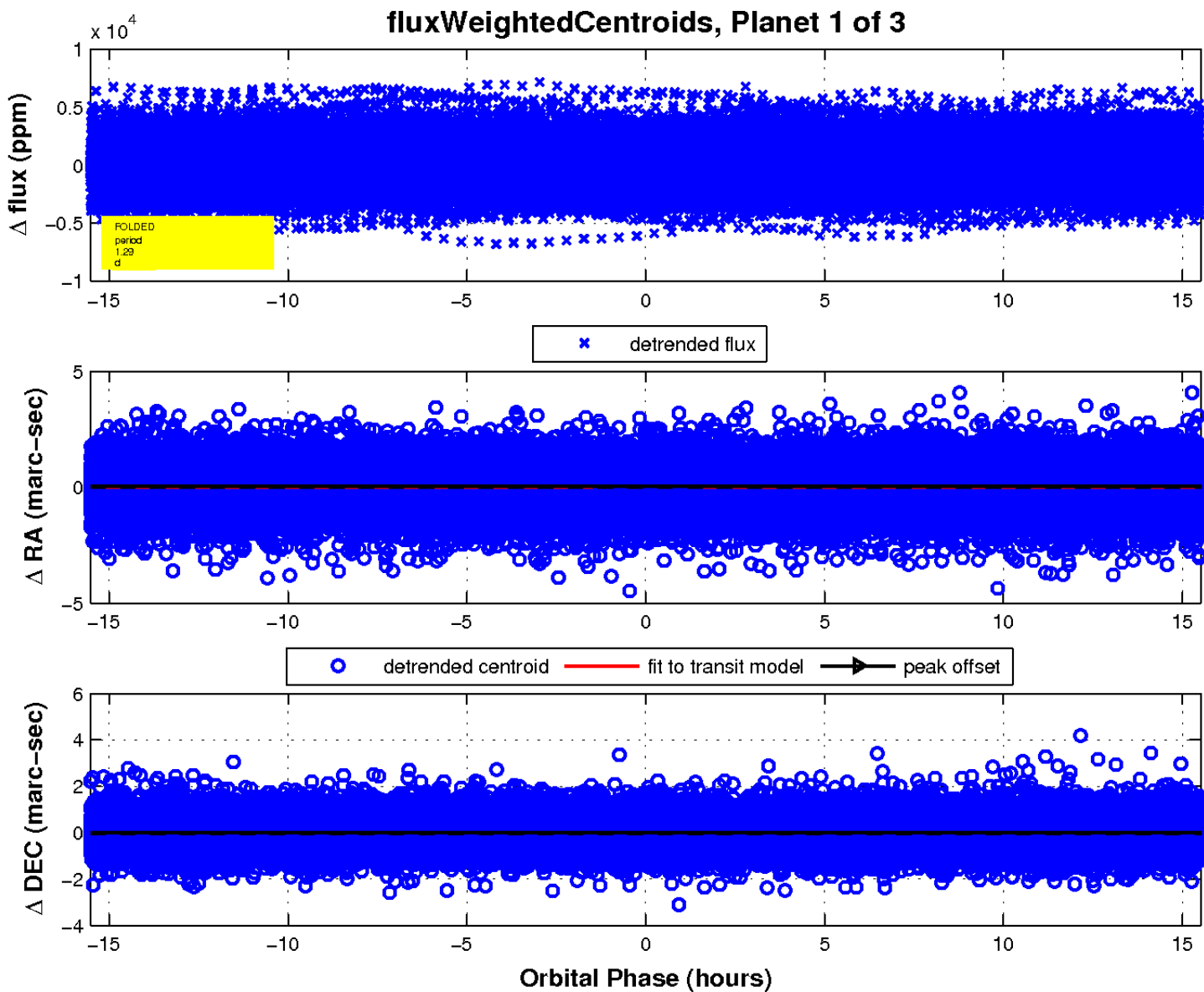
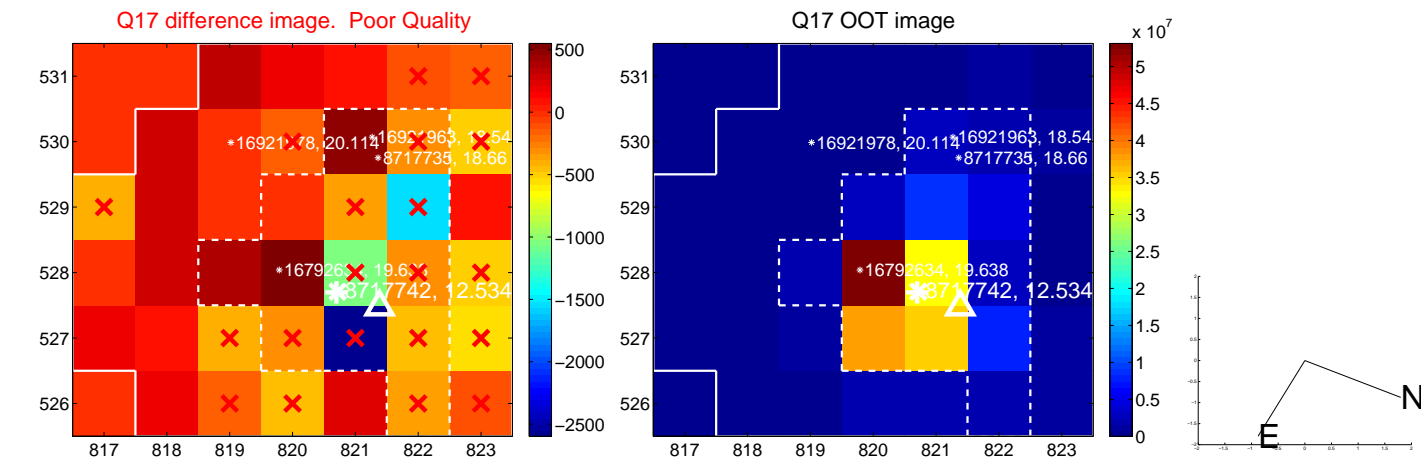
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



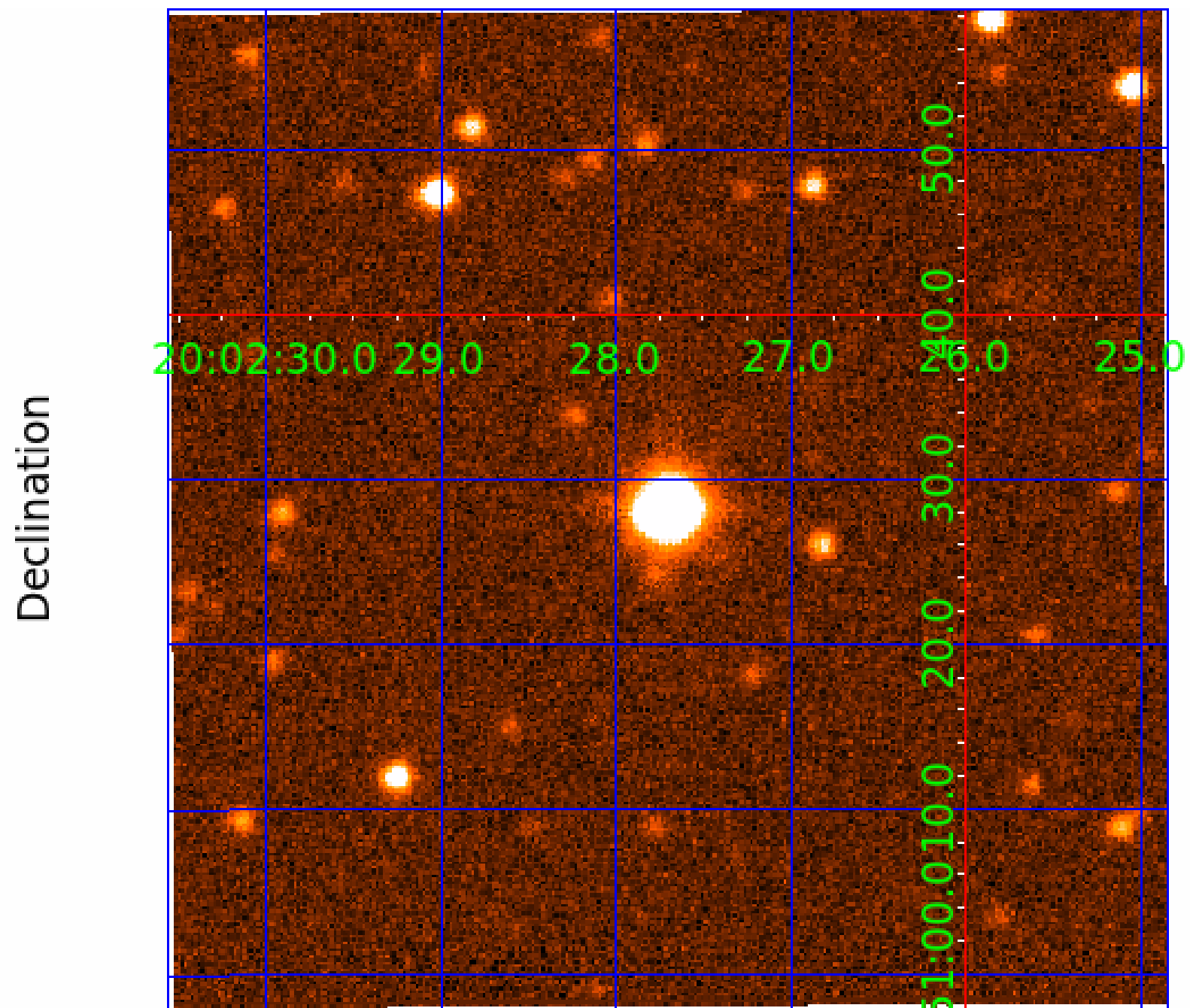
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 008717742

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
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008717742-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

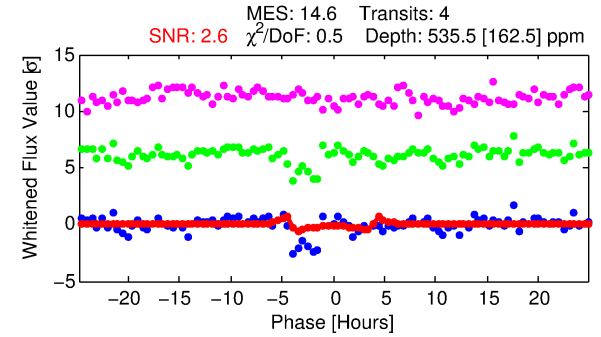
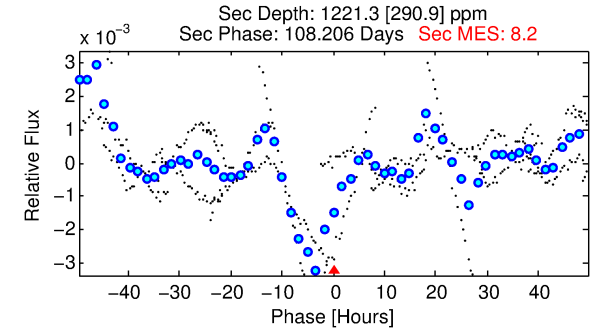
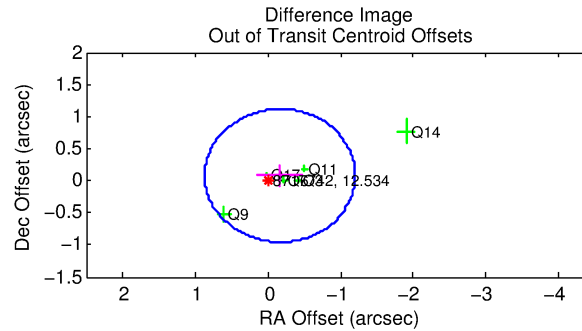
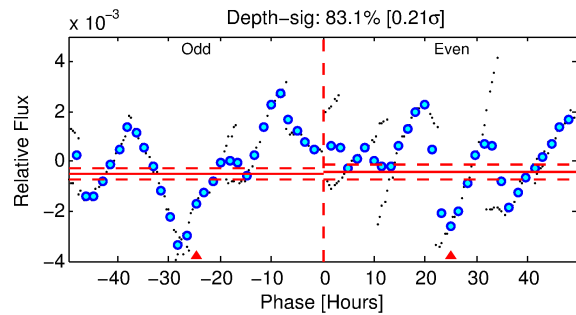
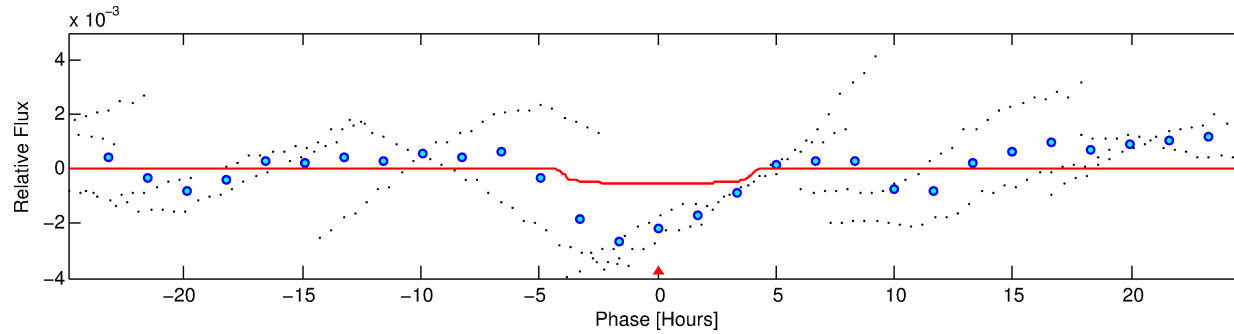
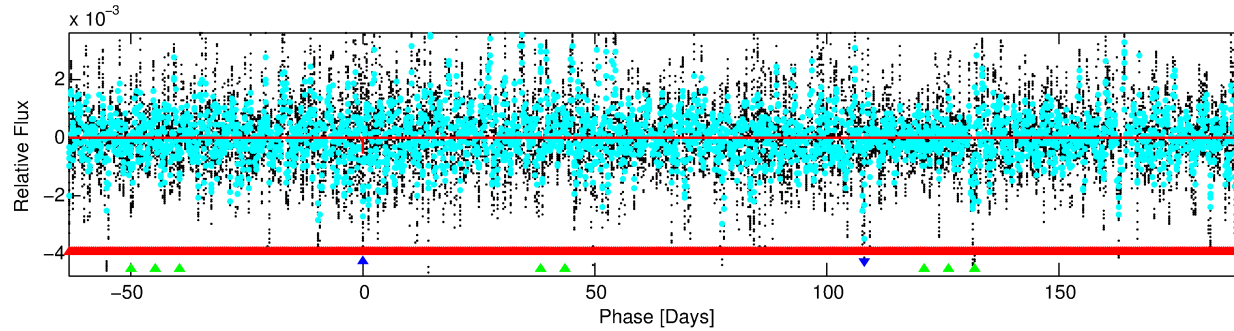
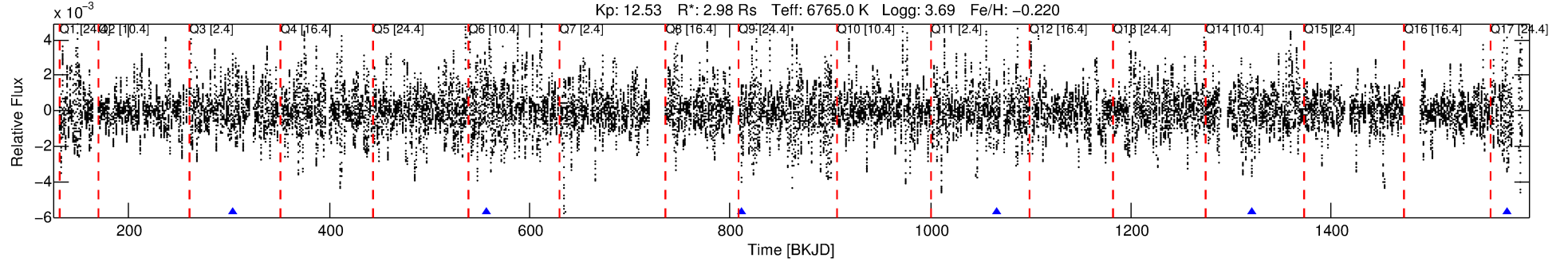
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008717742-02

No Significant Match Found

DV One-Page Summary

KIC: 8717742 Candidate: 2 of 3 Period: 254.368 d



DV Fit Results:

Period = 254.36763 [0.00484] d
Epoch = 303.3715 [0.0140] BKJD
Rp/R* = 0.0224 [0.0104]
a/R* = 188.26 [446.41]
b = 0.63 [2.26]
Seff = 19.94 [10.59]
Teq = 539 [72] K
Rp = 7.29 [4.24] Re
a = 0.9148 [0.2992] AU
Ag = 10595.21 [11478.17] [0.92 σ]
Teffp = 8452 [2040] K [3.88 σ]

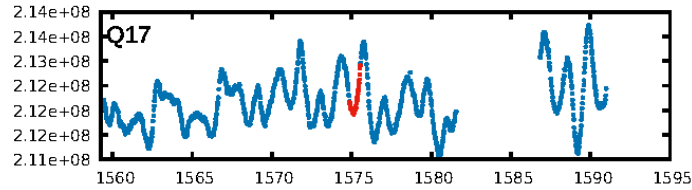
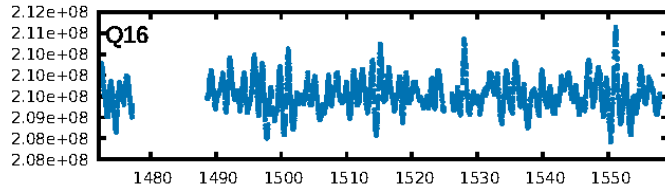
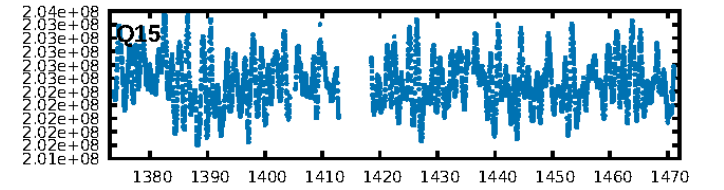
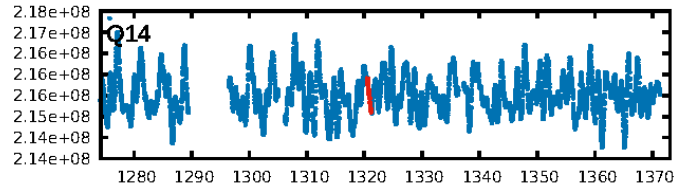
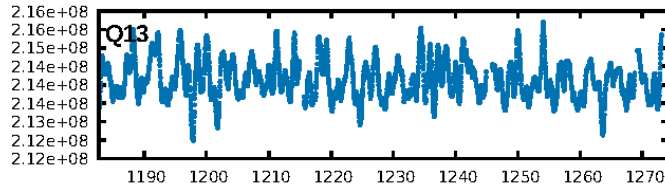
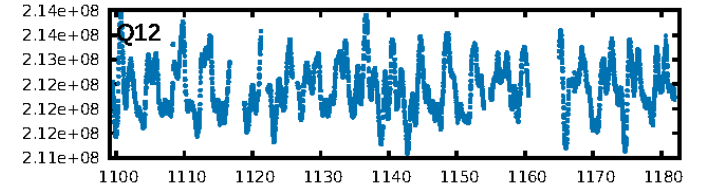
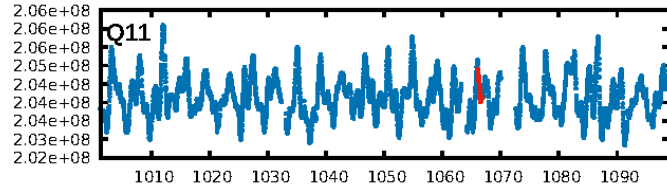
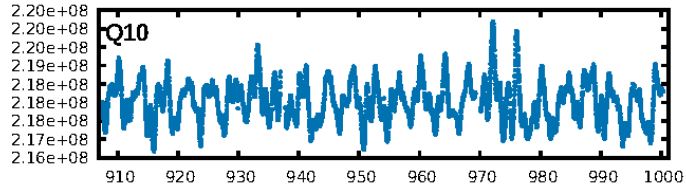
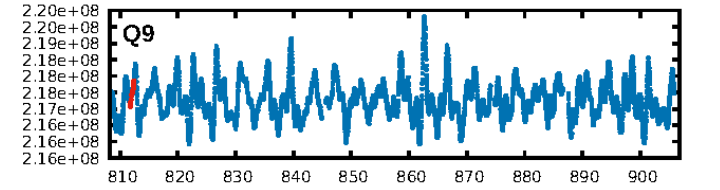
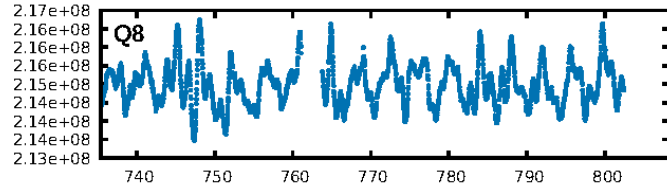
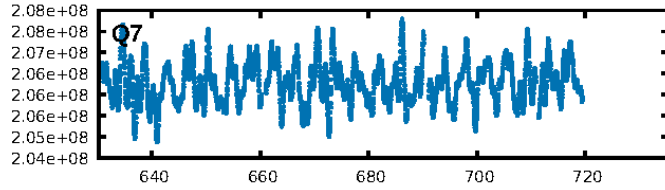
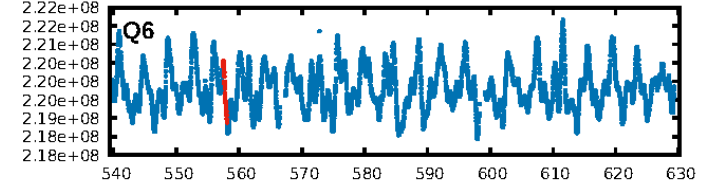
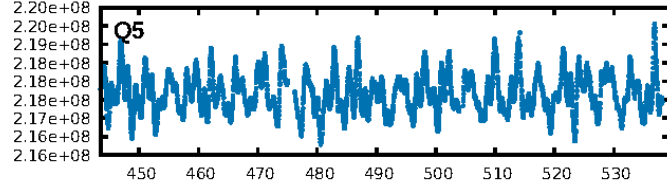
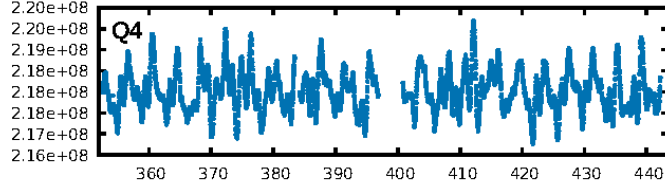
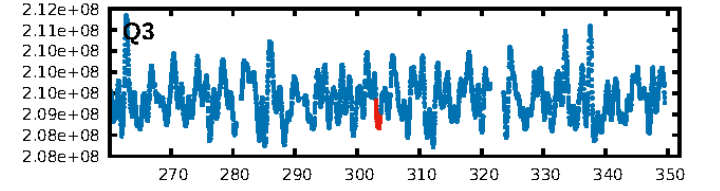
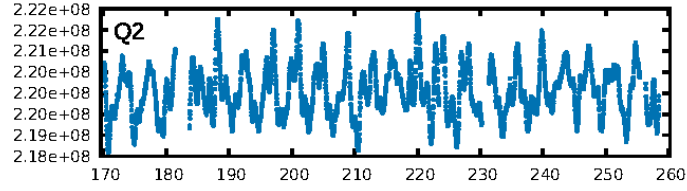
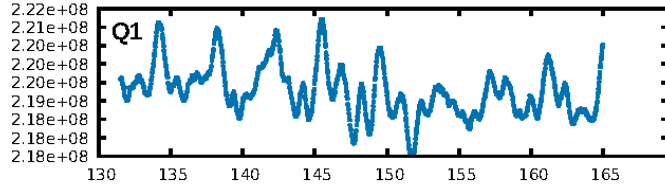
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [224.98 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 70.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.28e-20
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.5237
Centroid-sig: 68.9%
Centroid-so: 0.399 arcsec [0.91 σ]
OotOffset-rm: 0.184 arcsec [0.53 σ]
OotOffset-st: 2/2/0/2 [6]
KicOffset-rm: 0.100 arcsec [0.39 σ]
KicOffset-st: 2/2/0/2 [6]
DiffImageQuality-fgm: 0.83 [5/6]
DiffImageOverlap-fno: 0.00 [0/6]

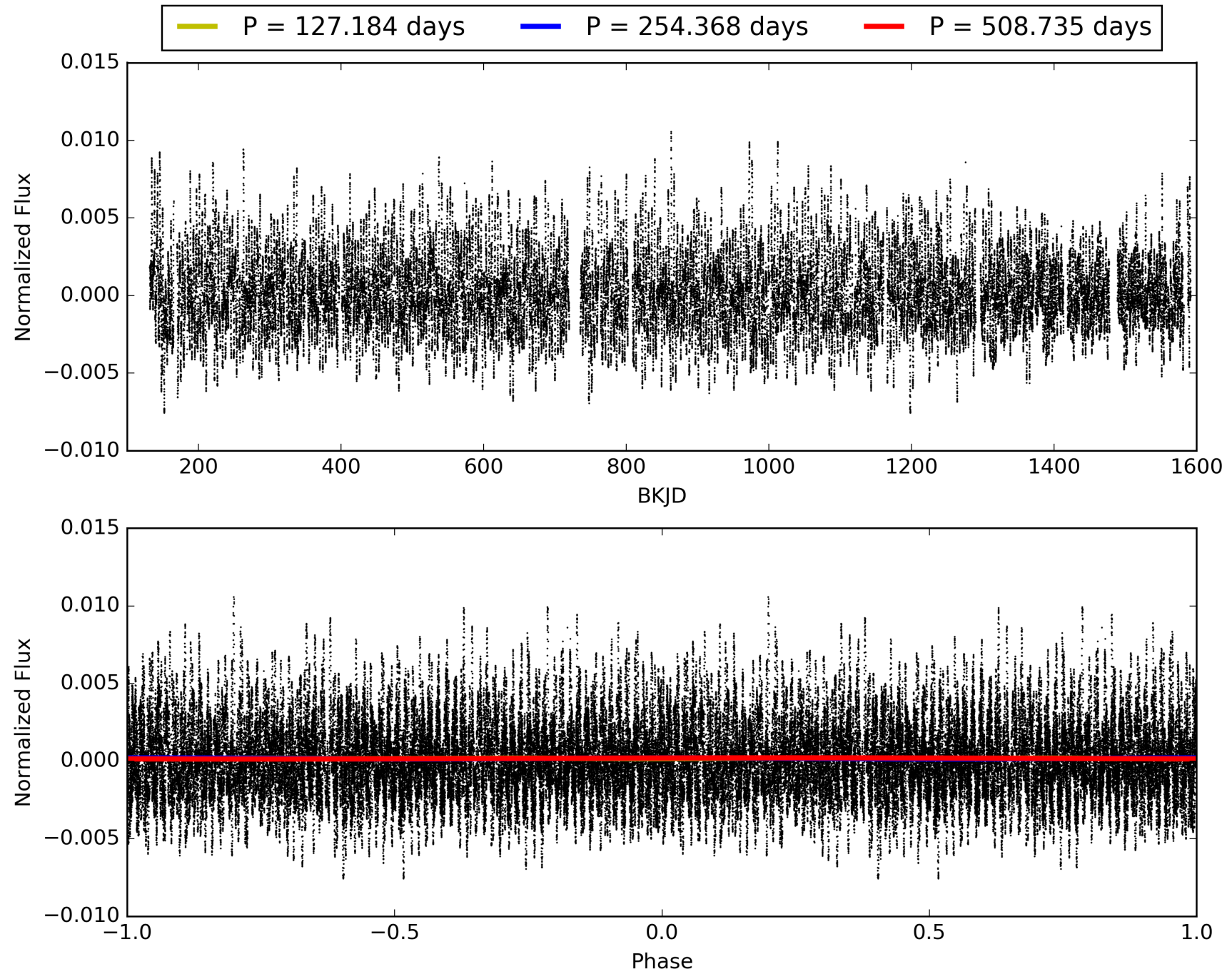
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:12:44 Z

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

TCE 008717742-02, PDC Light Curves

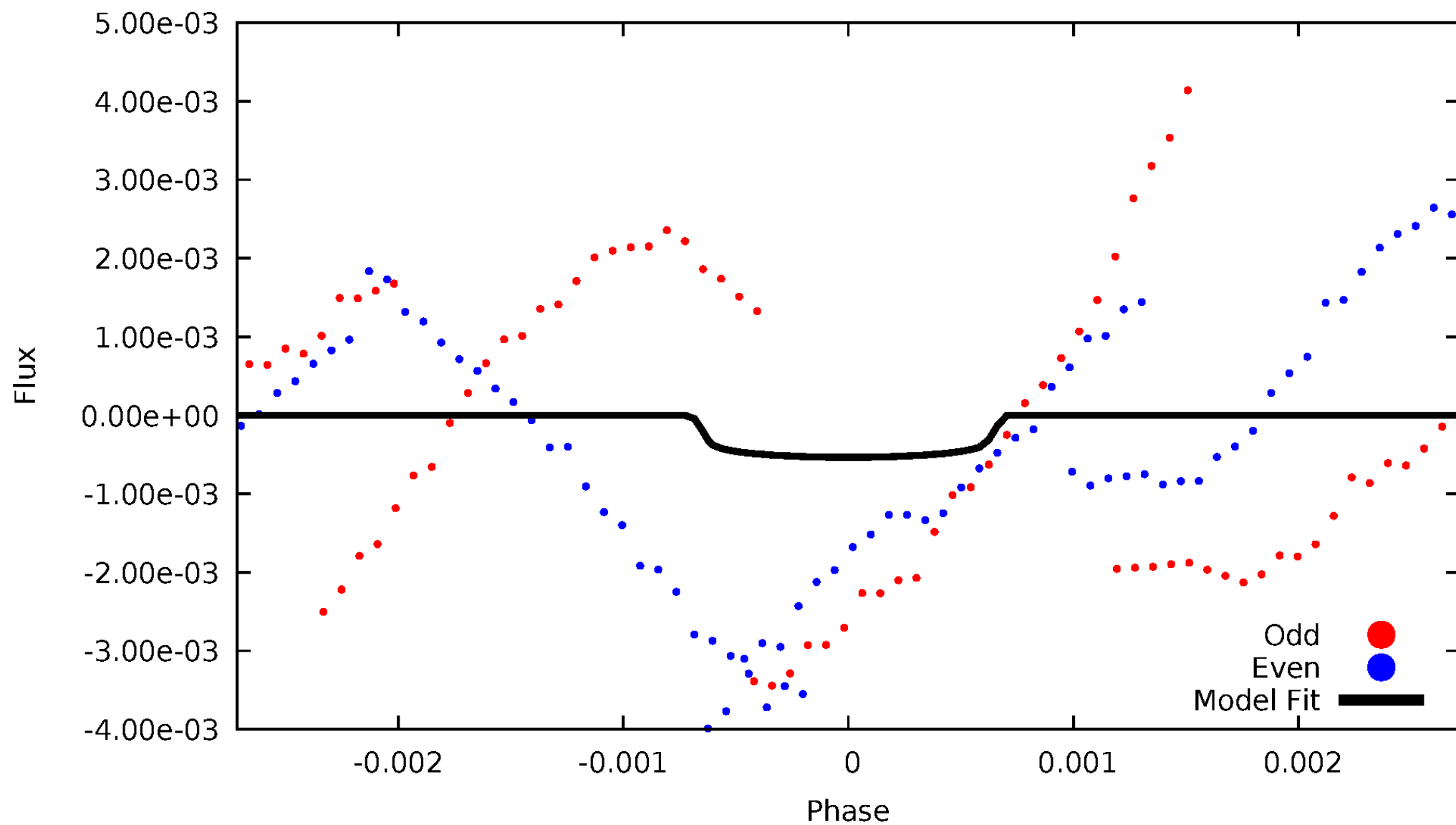


TCE 008717742-02



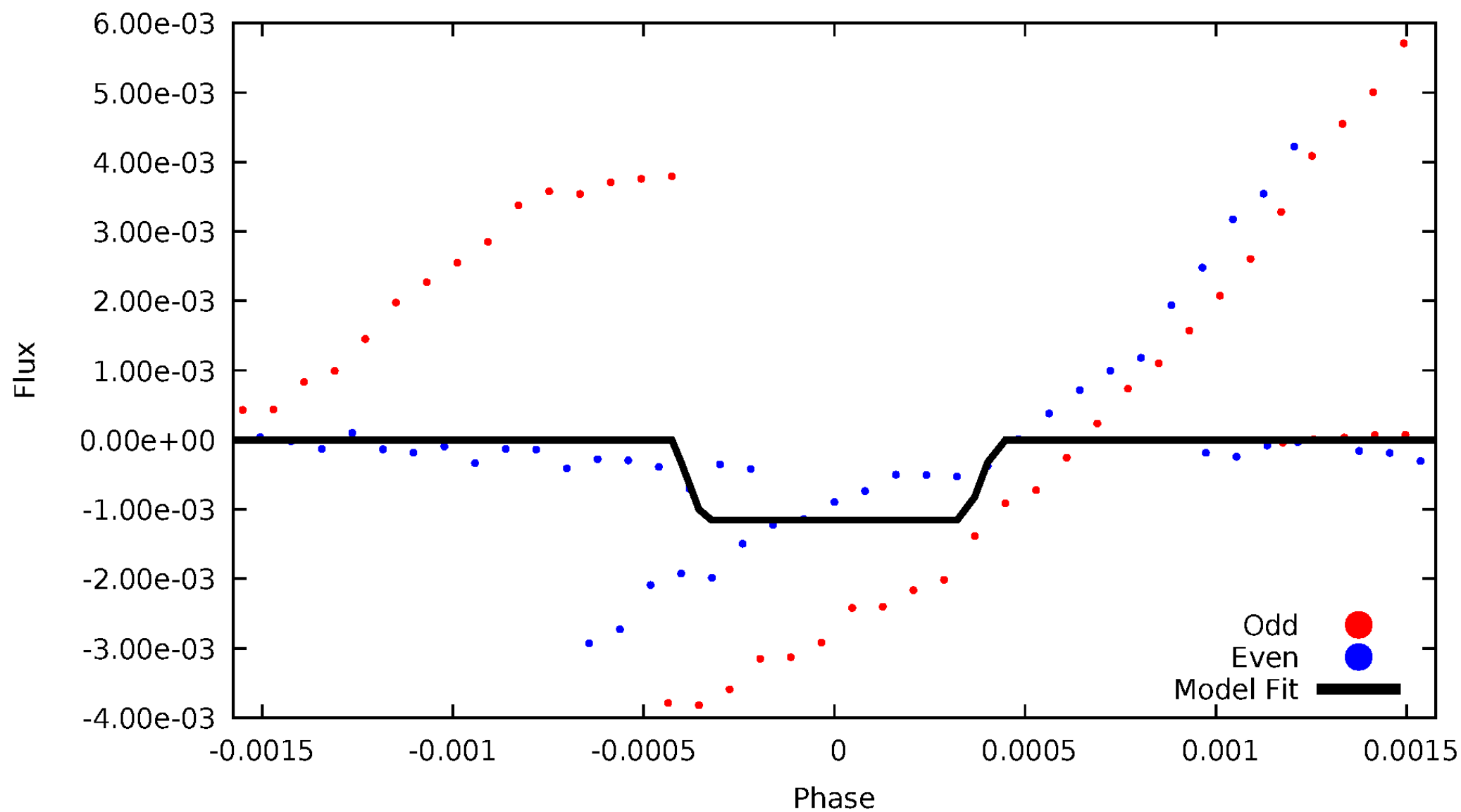
DV Odd/Even

TCE 008717742-02



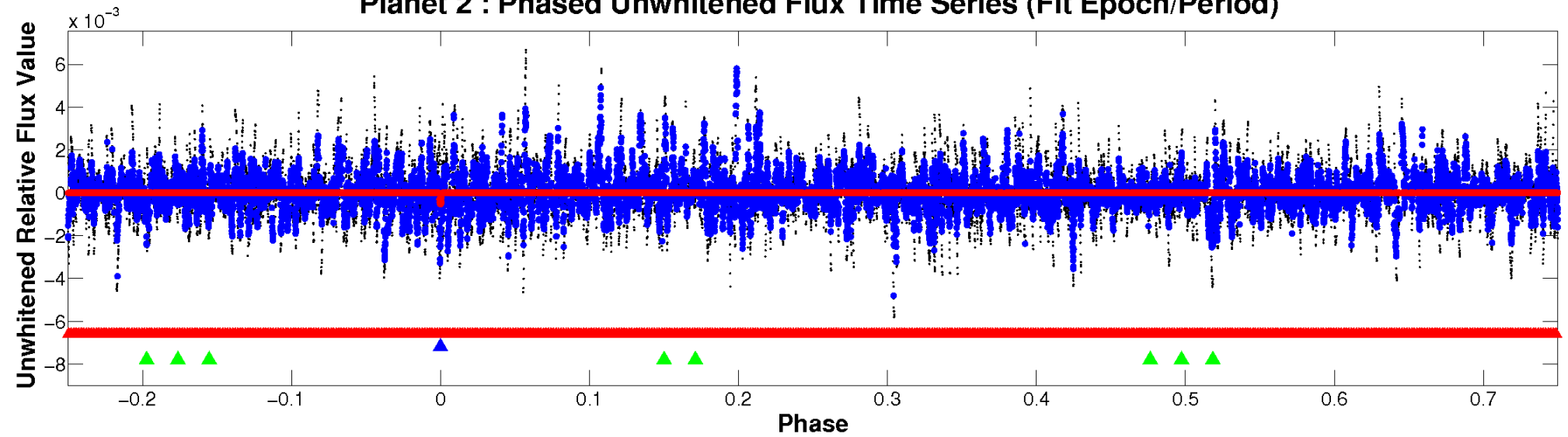
ALT Odd/Even

TCE 008717742-02

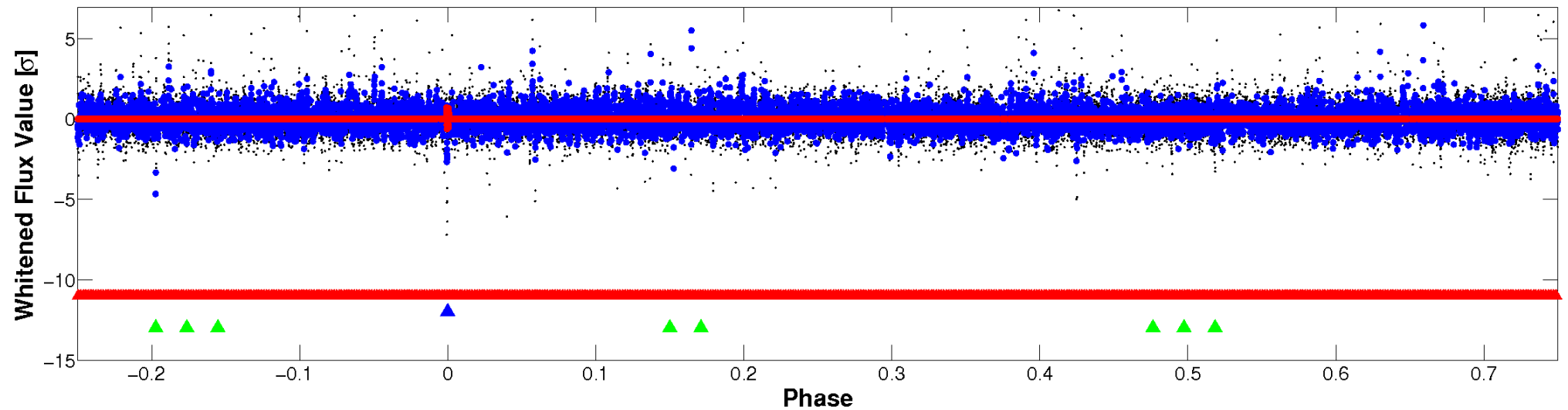


Non-Whitened Vs. Whitened Light Curve

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

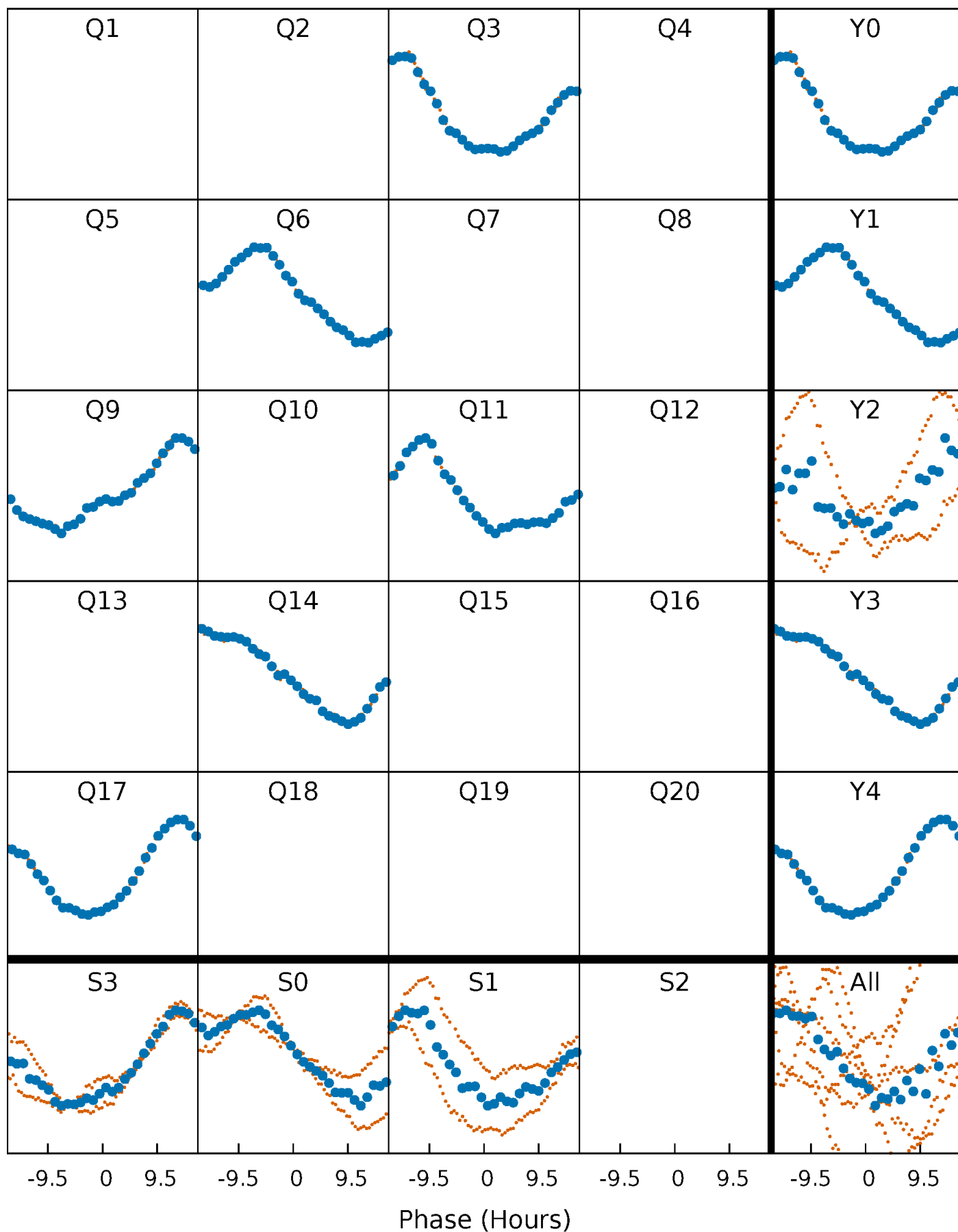


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



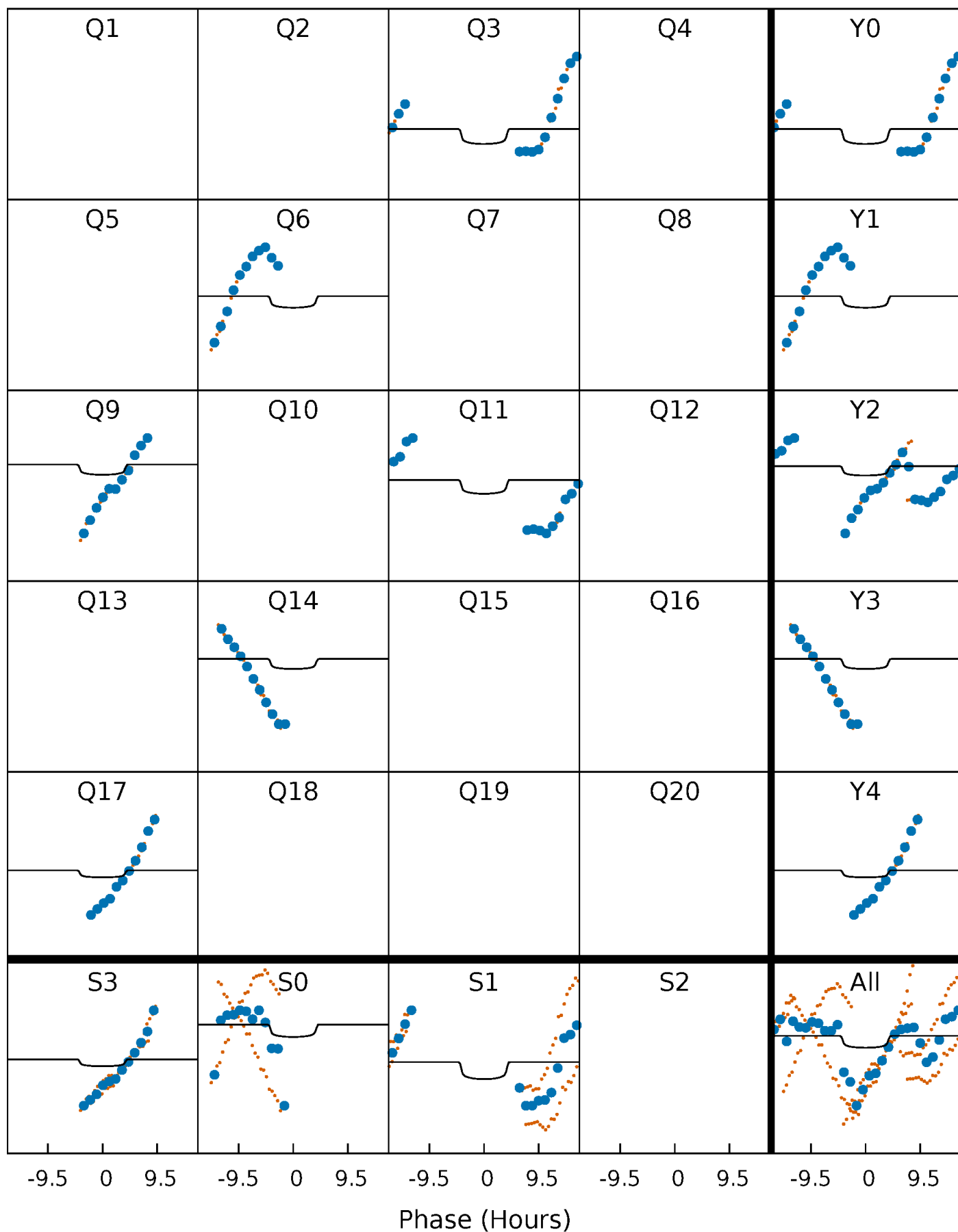
PDC Quarter-Phased Transit Curves

TCE 008717742-02 P=254.367627 Days $T_0=303.371488$ (BKJD)



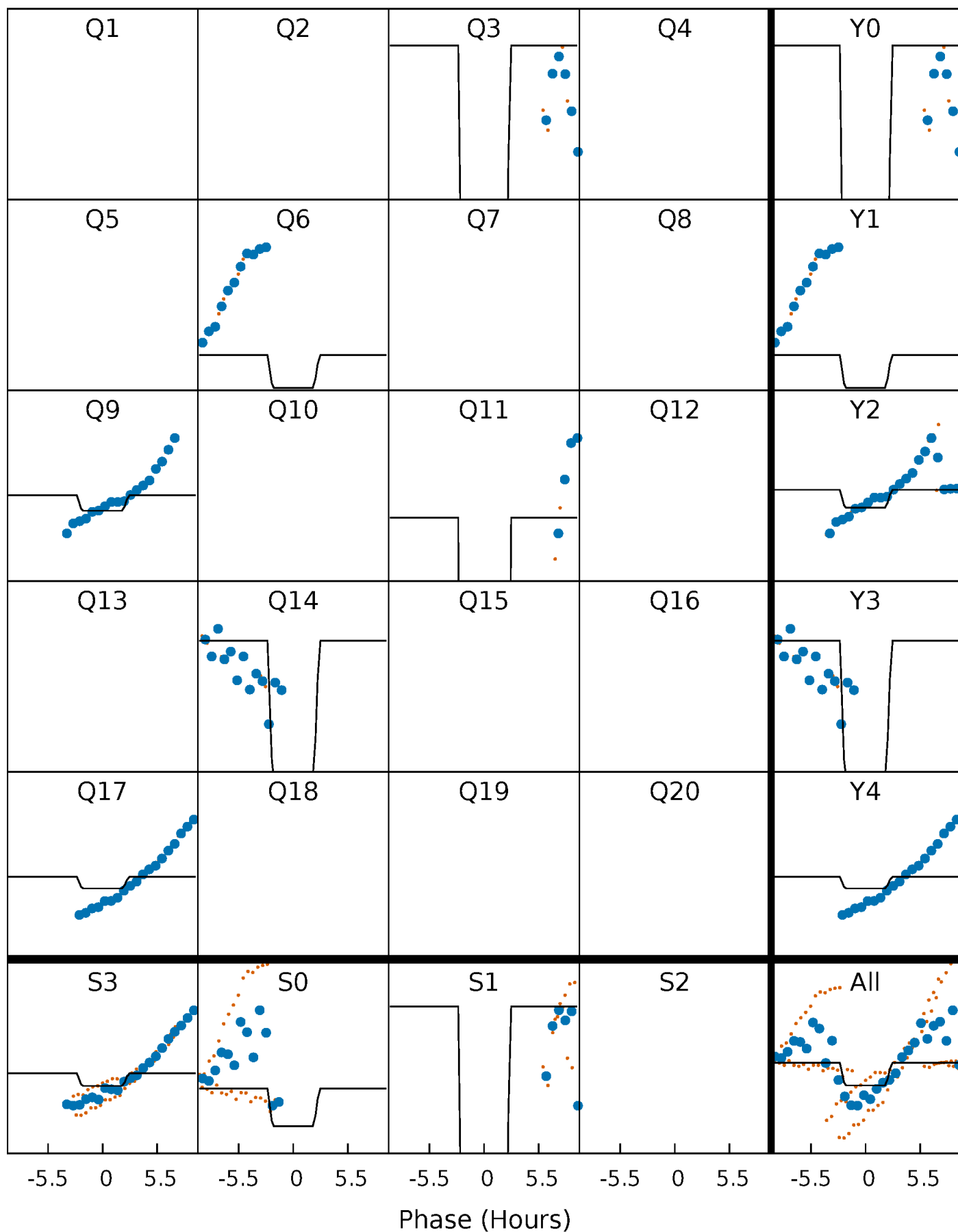
DV Quarter-Phased Transit Curves

TCE 008717742-02 P=254.367627 Days $T_0=303.371488$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

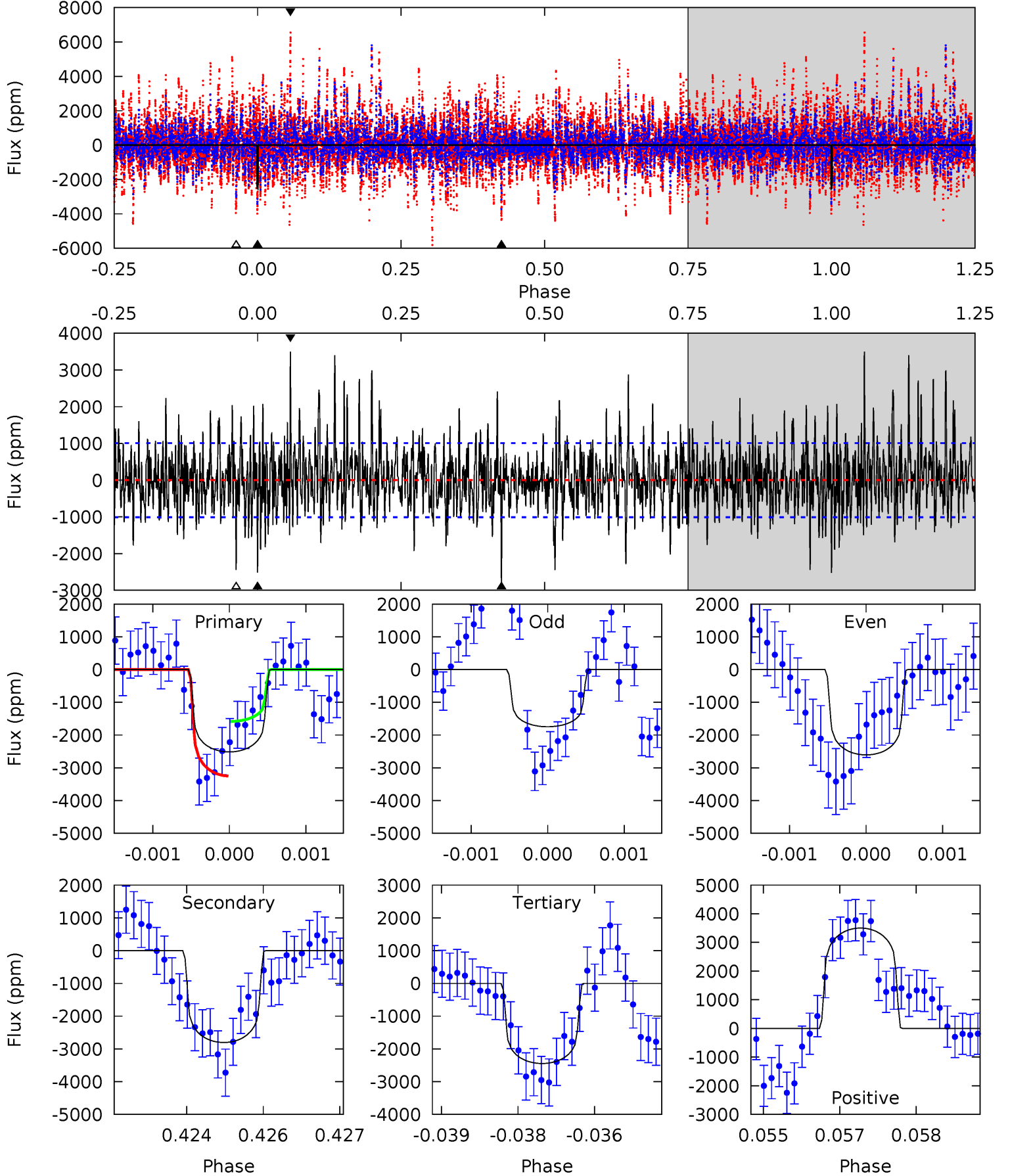
TCE 008717742-02 P=254.367296 Days $T_0=303.377108$ (BKJD)



DV Model-Shift Uniqueness Test

008717742-02, P = 254.367627 Days, E = 49.003861 Days

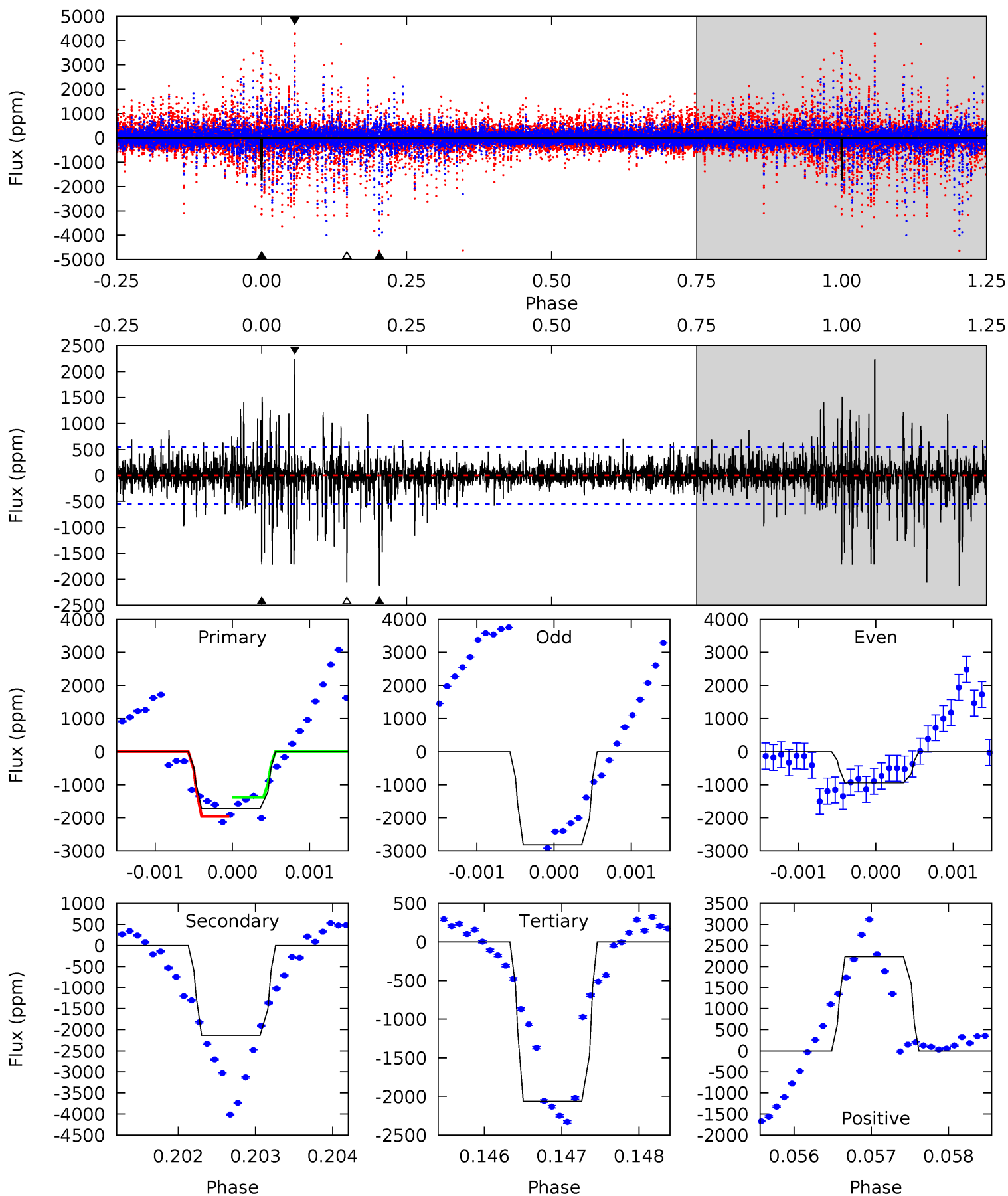
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	15.0	13.1	18.8	5.40	3.20	3.88	0.37	-5.28	1.92	-3.73	2.34	0.70	0.56	4.44



Alt Model-Shift Uniqueness Test

008717742-02, P = 254.367296 Days, E = 49.009812 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.0	21.2	20.5	22.2	5.49	3.35	2.53	-3.45	-5.14	0.68	-1.00	8.74	1.38	0.51	2.94



Stellar Parameters For KIC 008717742

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6765^{+200}_{-240}	$3.687^{+0.296}_{-0.074}$	$-0.220^{+0.300}_{-0.250}$	$2.982^{+0.451}_{-1.052}$	$1.577^{+0.249}_{-0.304}$	$0.084^{+0.160}_{-0.025}$
	+3%/-4%	+8%/-2%	+136%/-114%	+15%/-35%	+16%/-19%	+191%/-30%
Source	PHO1	FLK73	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 008717742-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2805 ± 187	$6.56^{+3.73}_{-3.08}$	732^{+43}_{-62}	12124^{+10671}_{-3070}	30282^{+75850}_{-17897}
Alt.	-2132 ± 101	$10.39^{+3.51}_{-3.42}$	733^{+42}_{-61}	8064^{+2103}_{-1230}	9203^{+10581}_{-3941}

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

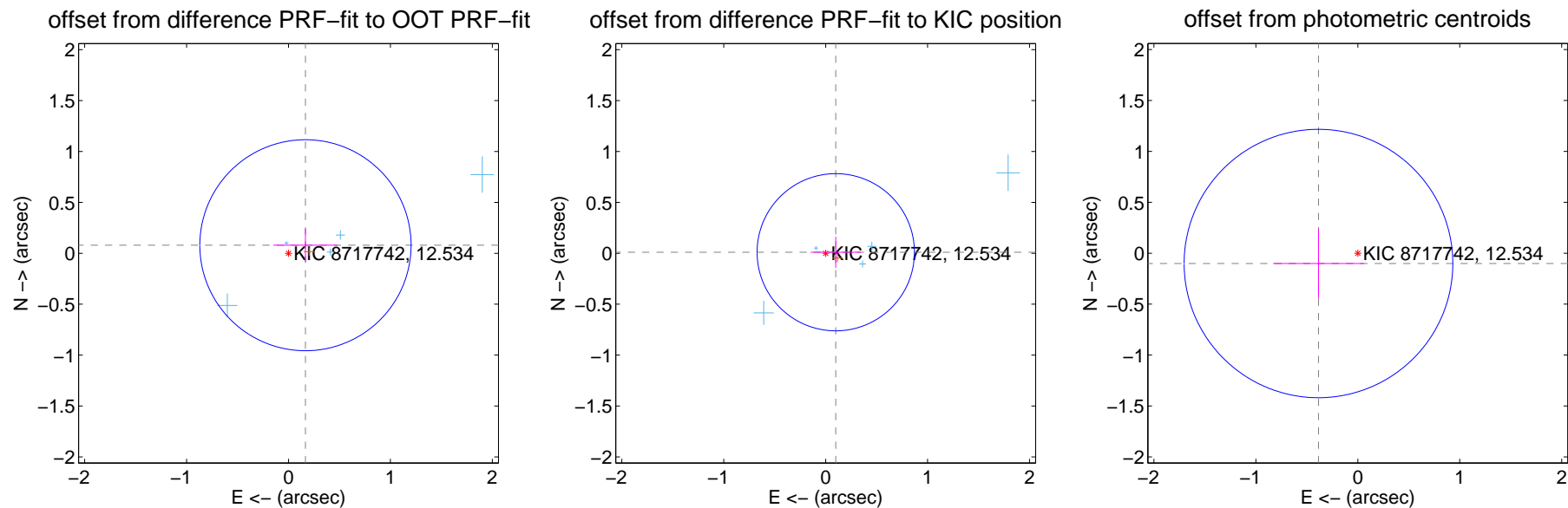
DV Centroid Data

Supplemental centroid analysis for 008717742-02. Kepler magnitude: 12.53. Transit SNR 2.61

There are 5 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	0.184 ± 0.345	0.53	-0.166 ± 0.315	0.079 ± 0.162
PRF-fit source offset from KIC position	0.100 ± 0.257	0.39	-0.099 ± 0.246	0.010 ± 0.153
photometric centroid source offset	0.40 ± 0.44	0.91	0.39 ± 0.45	-0.10 ± 0.34



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



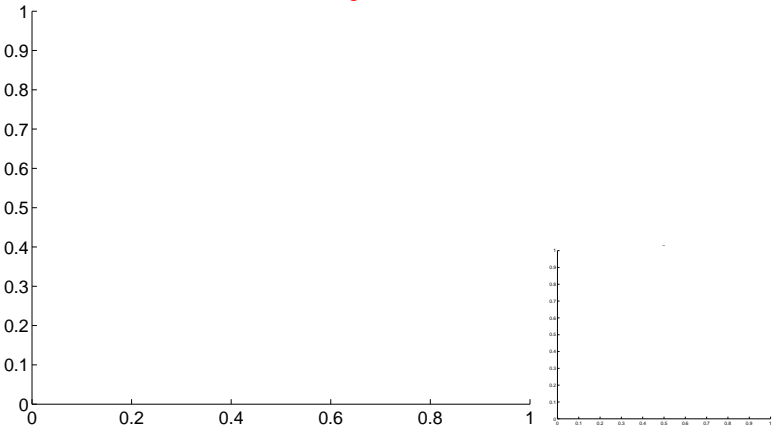
Q1 no OOT image



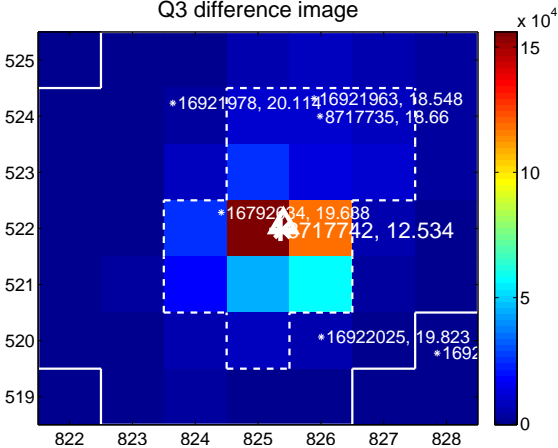
Q2 no difference image



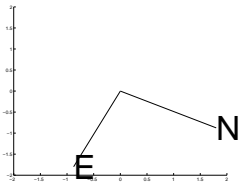
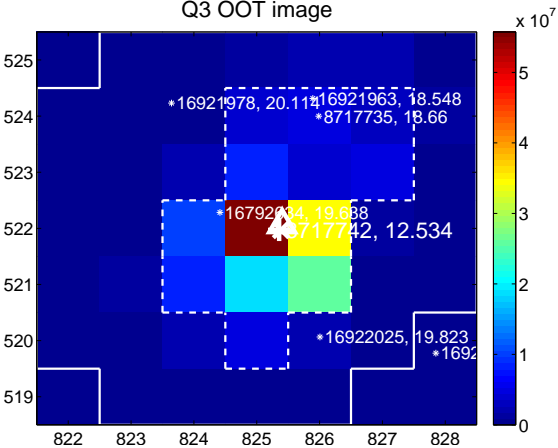
Q2 no OOT image



Q3 difference image



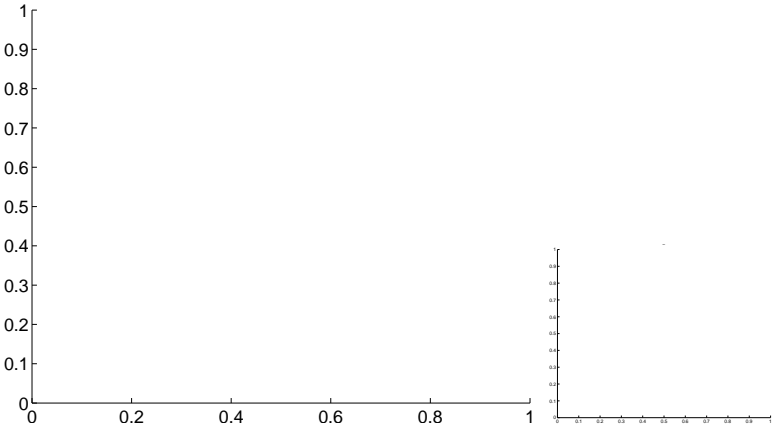
Q3 OOT image



Q4 no difference image



Q4 no OOT image



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

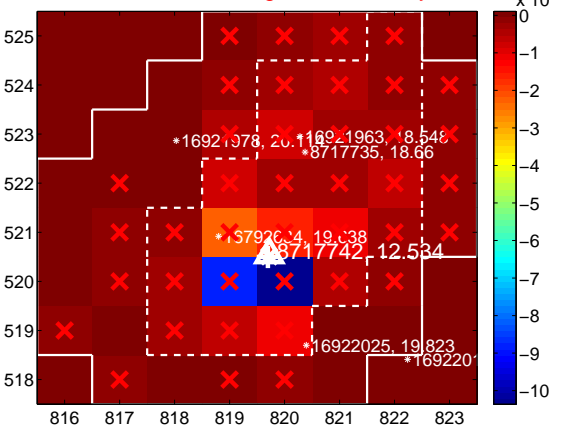
Q5 no difference image



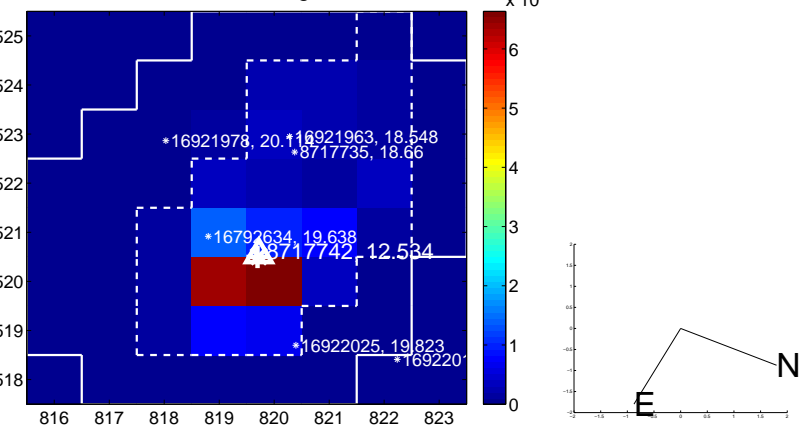
Q5 no OOT image



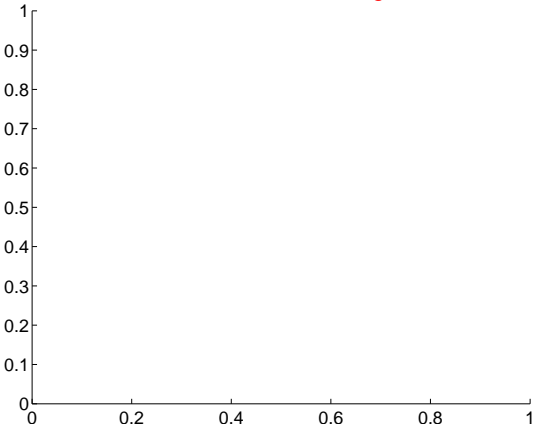
Q6 difference image. Poor Quality



Q6 OOT image



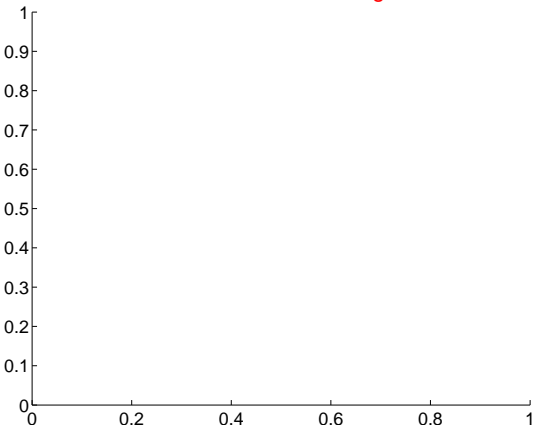
Q7 no difference image



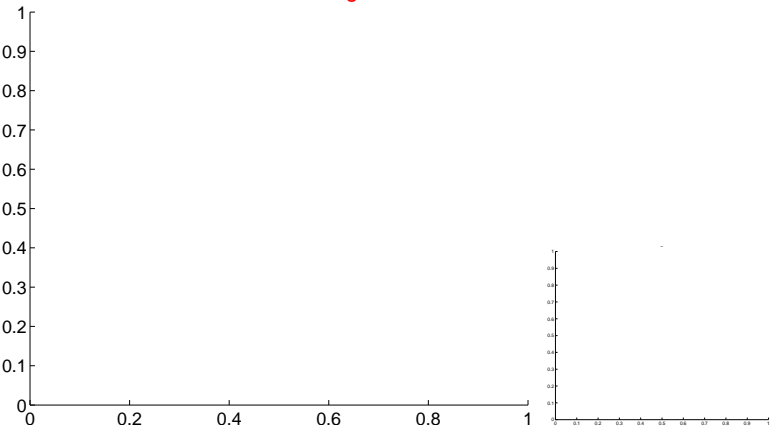
Q7 no OOT image



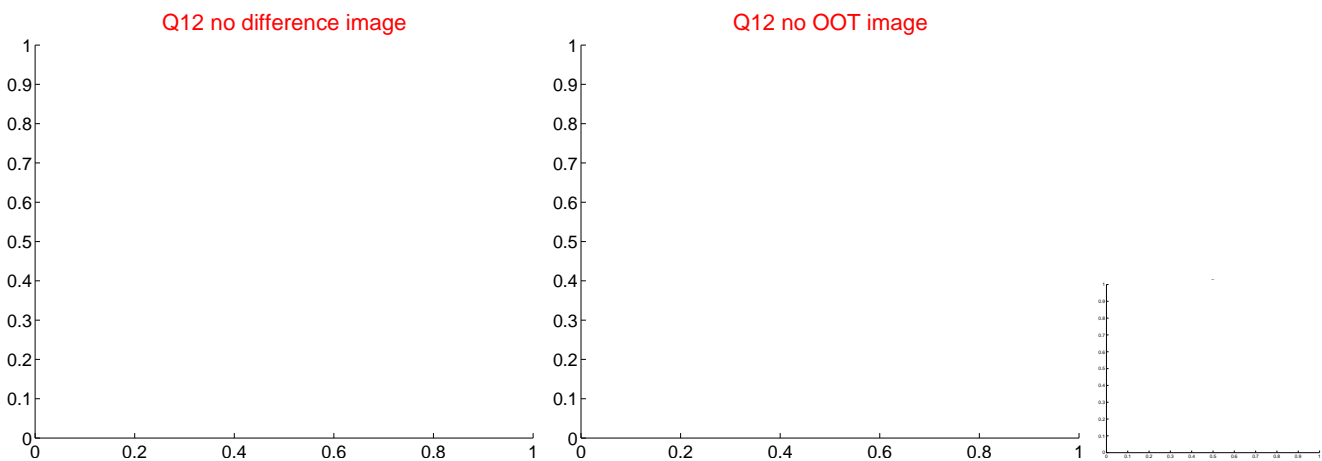
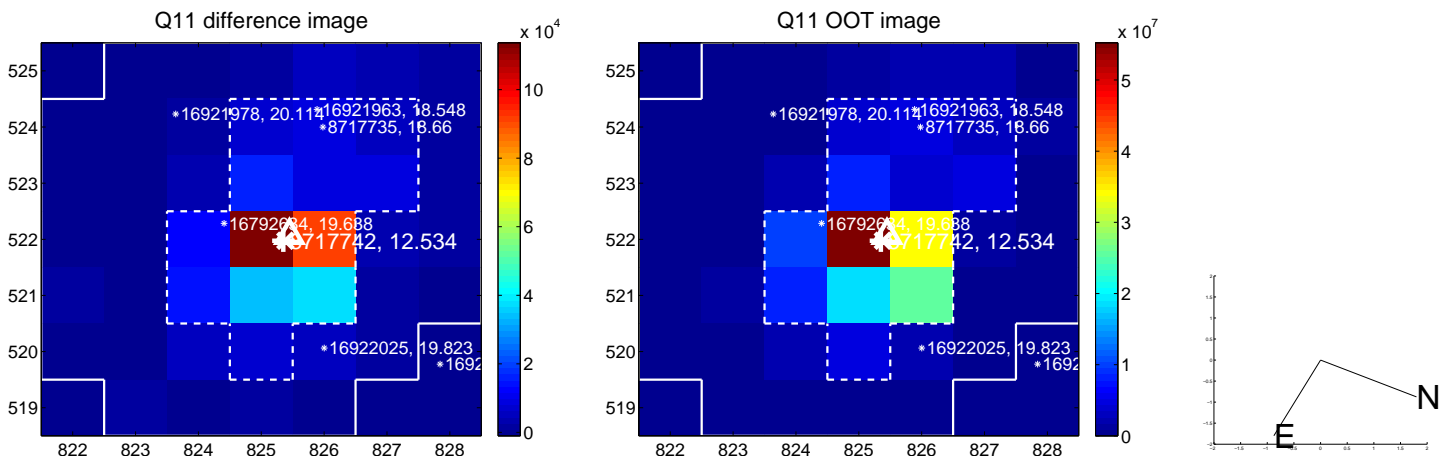
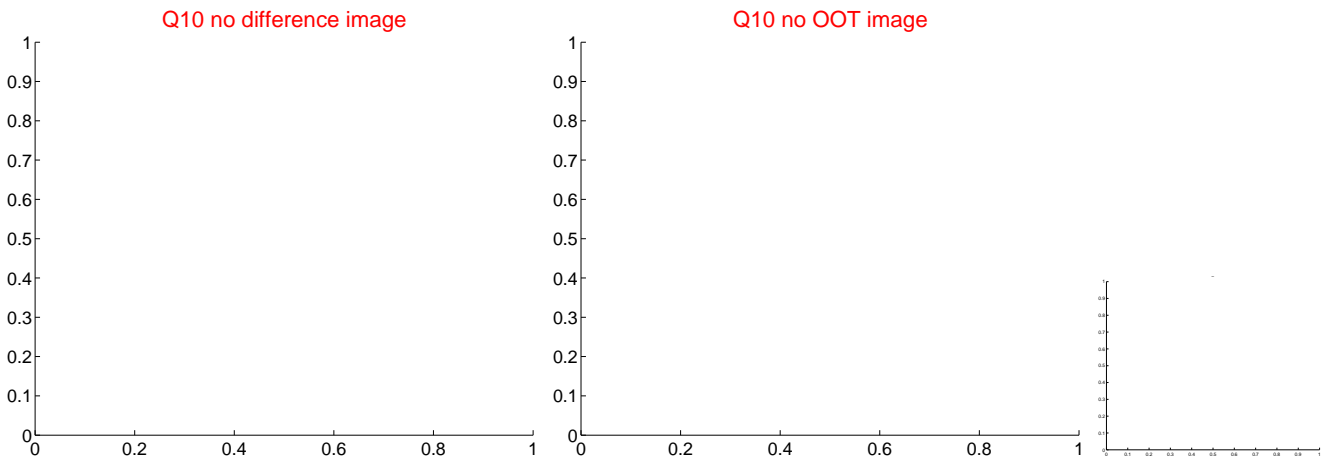
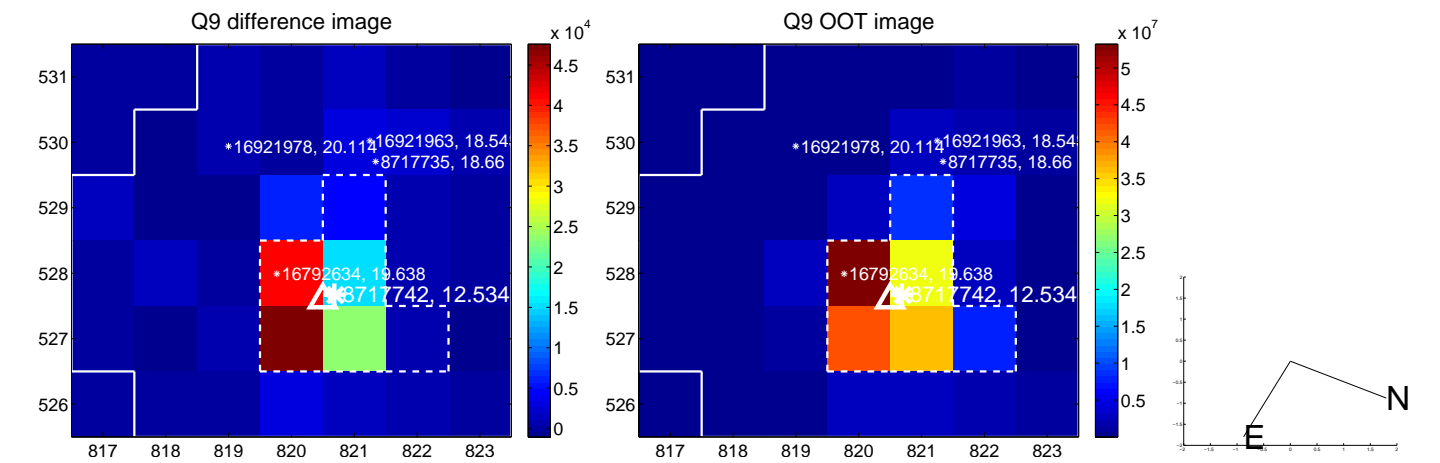
Q8 no difference image



Q8 no OOT image



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



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

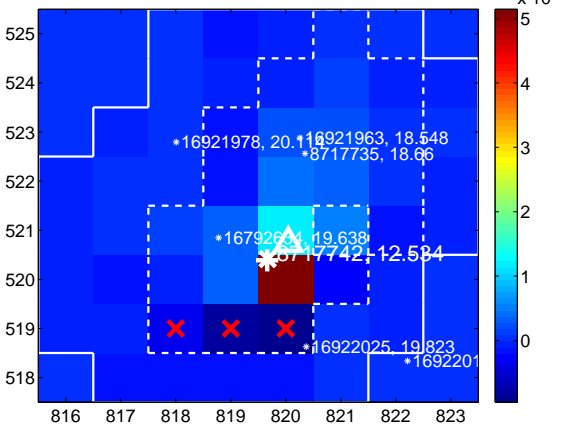
Q13 no difference image



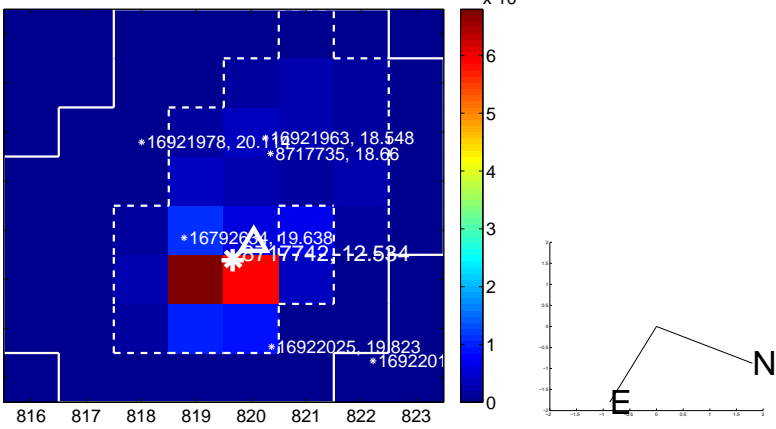
Q13 no OOT image



Q14 difference image



Q14 OOT image



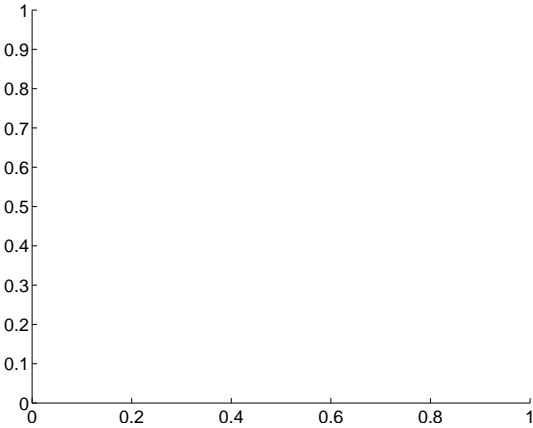
Q15 no difference image



Q15 no OOT image



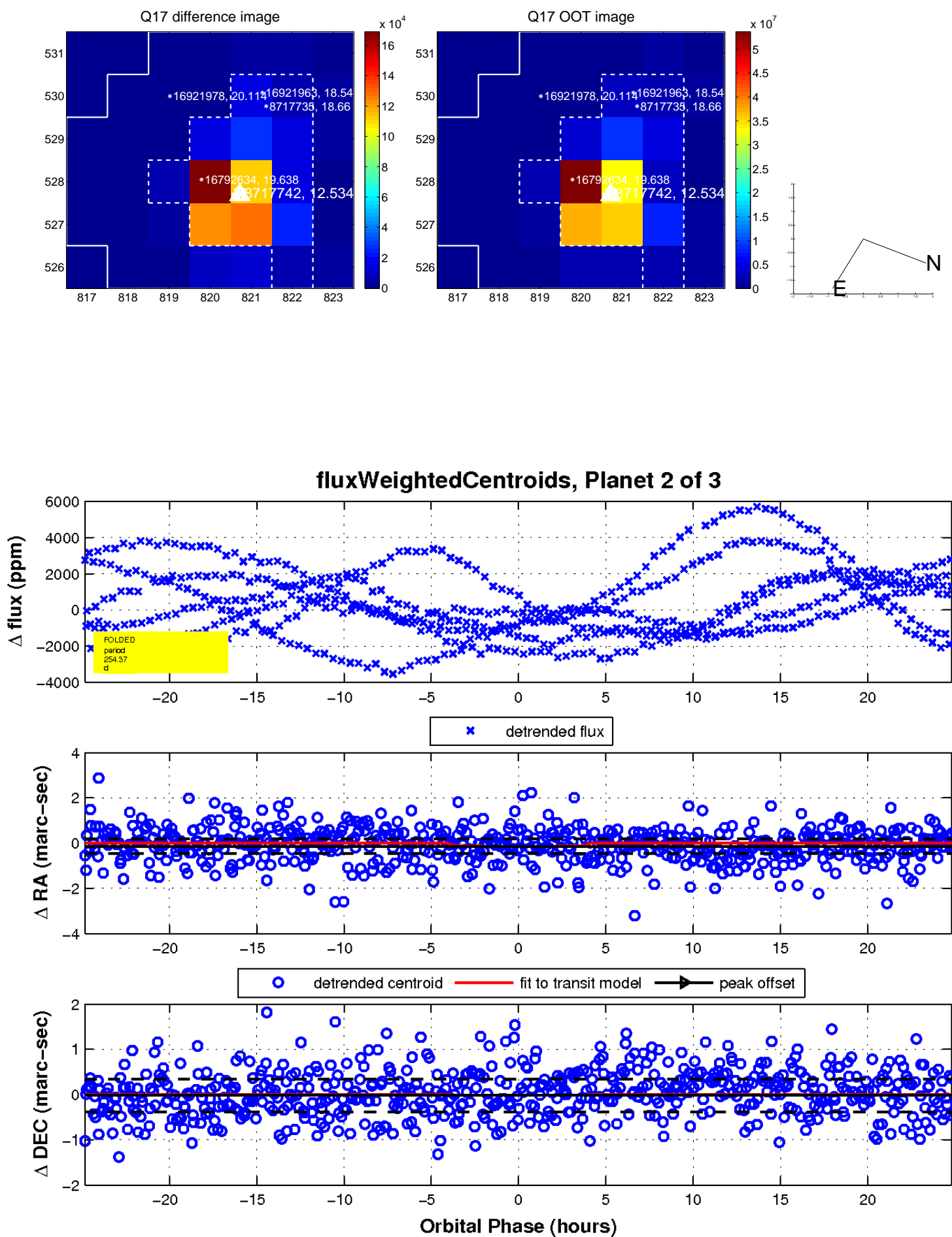
Q16 no difference image



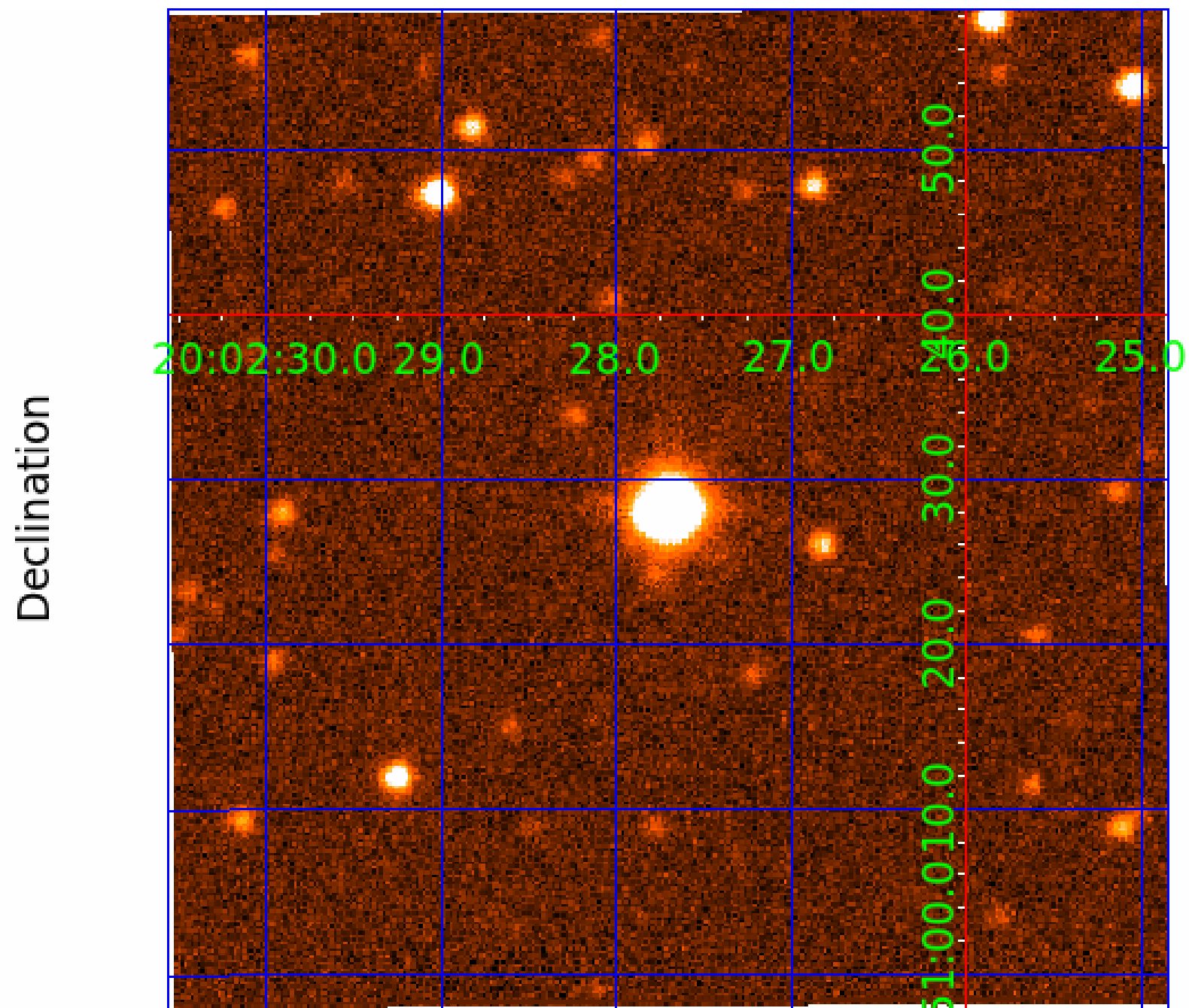
Q16 no OOT image



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



UKIRT Image



KIC 008717742

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})
008717742-01	OBS	No	1.293481	132.477616	77.2	6.093	7.8	8.9	2.98	6765	5.27	22801.17
008717742-02	OBS	No	254.367627	303.371488	535.5	8.290	14.6	2.6	2.98	6765	7.29	19.94
008717742-03	OBS	No	171.359166	253.203281	1177.3	3.113	13.2	7.9	2.98	6765	15.46	33.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008717742-01	OBS	FP	0.00	1	0	0	0	LPP_DV
008717742-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS
008717742-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT— INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

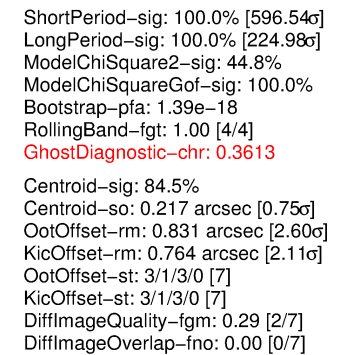
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

Ephemeris Match Information For 008717742-03

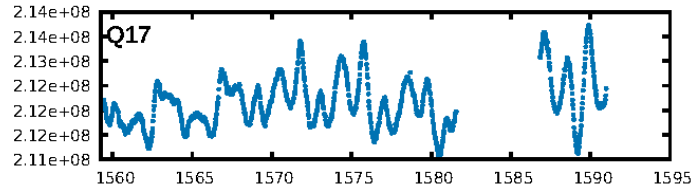
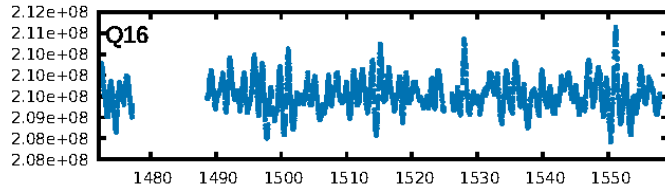
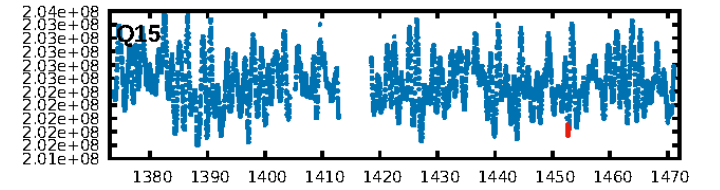
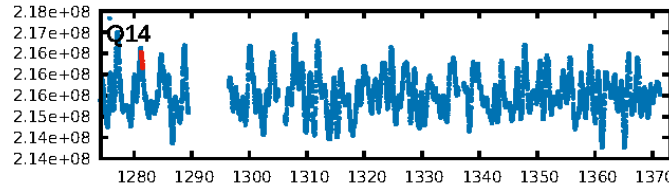
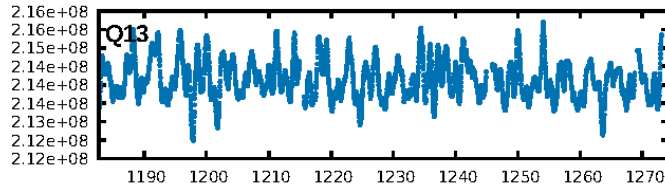
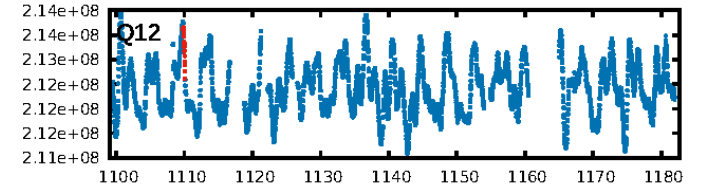
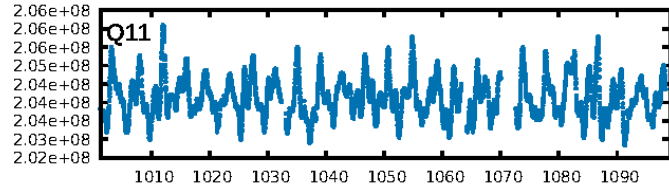
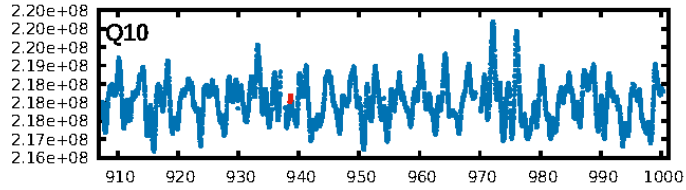
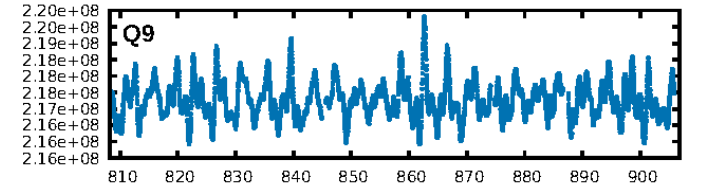
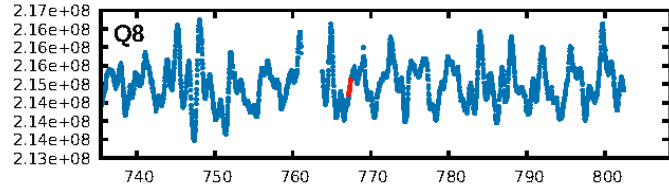
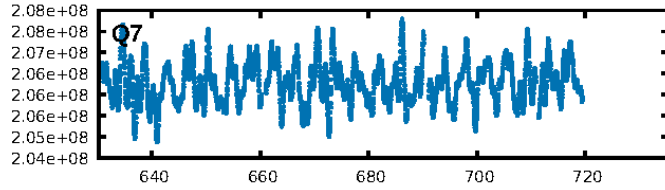
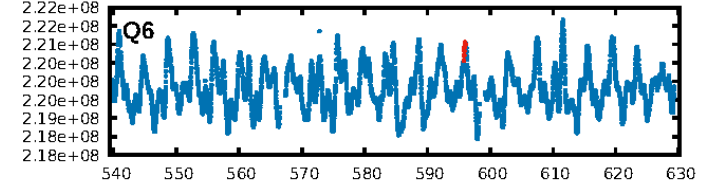
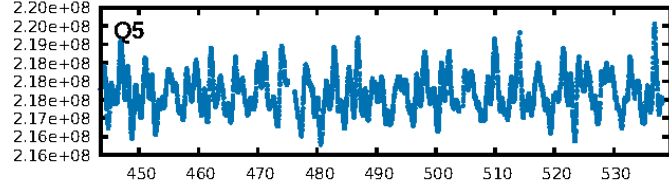
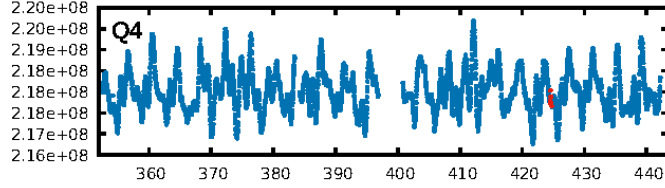
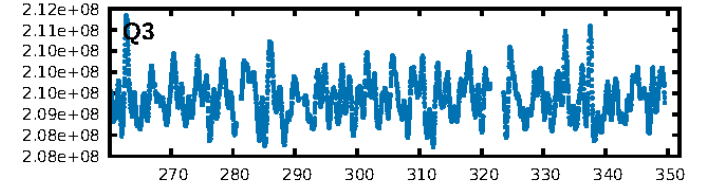
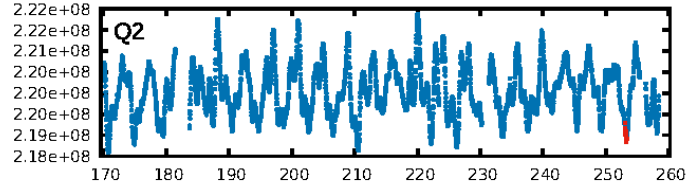
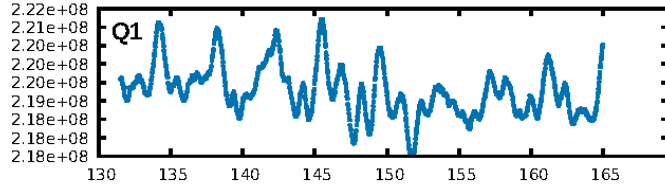
No Significant Match Found

KIC: 8717742 Candidate: 3 of 3 Period: 171.359 d

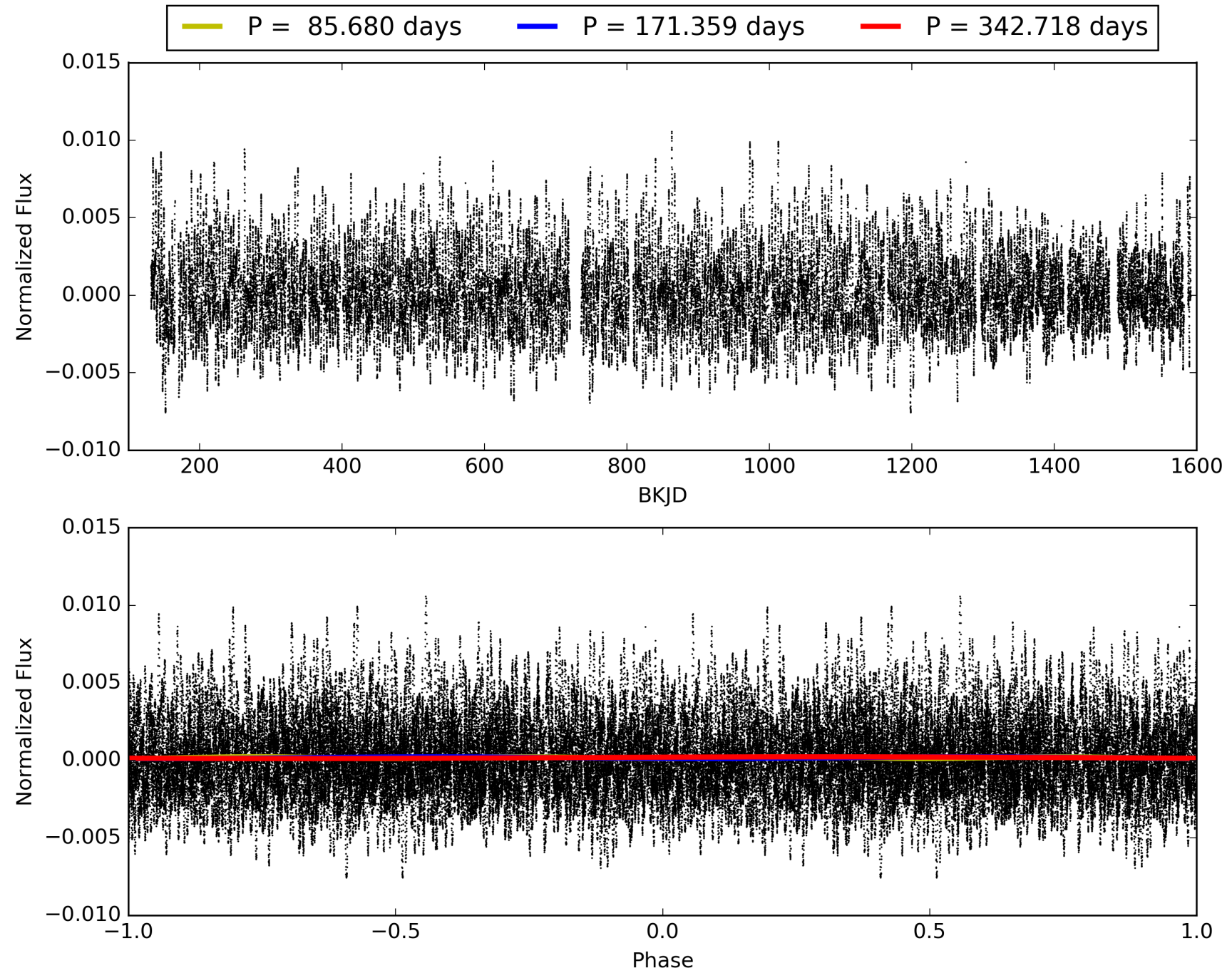


This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 008717742-03, PDC Light Curves

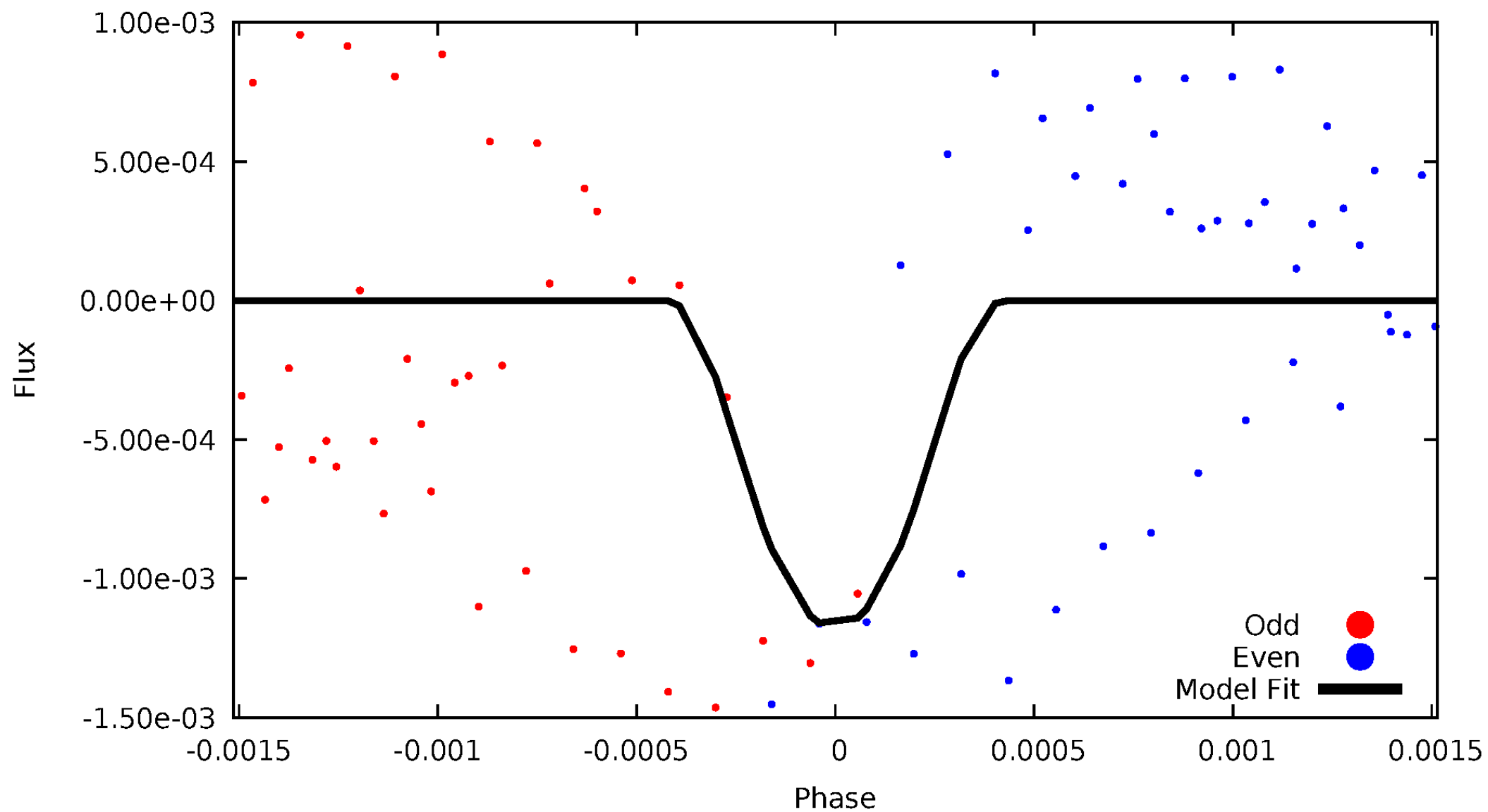


TCE 008717742-03



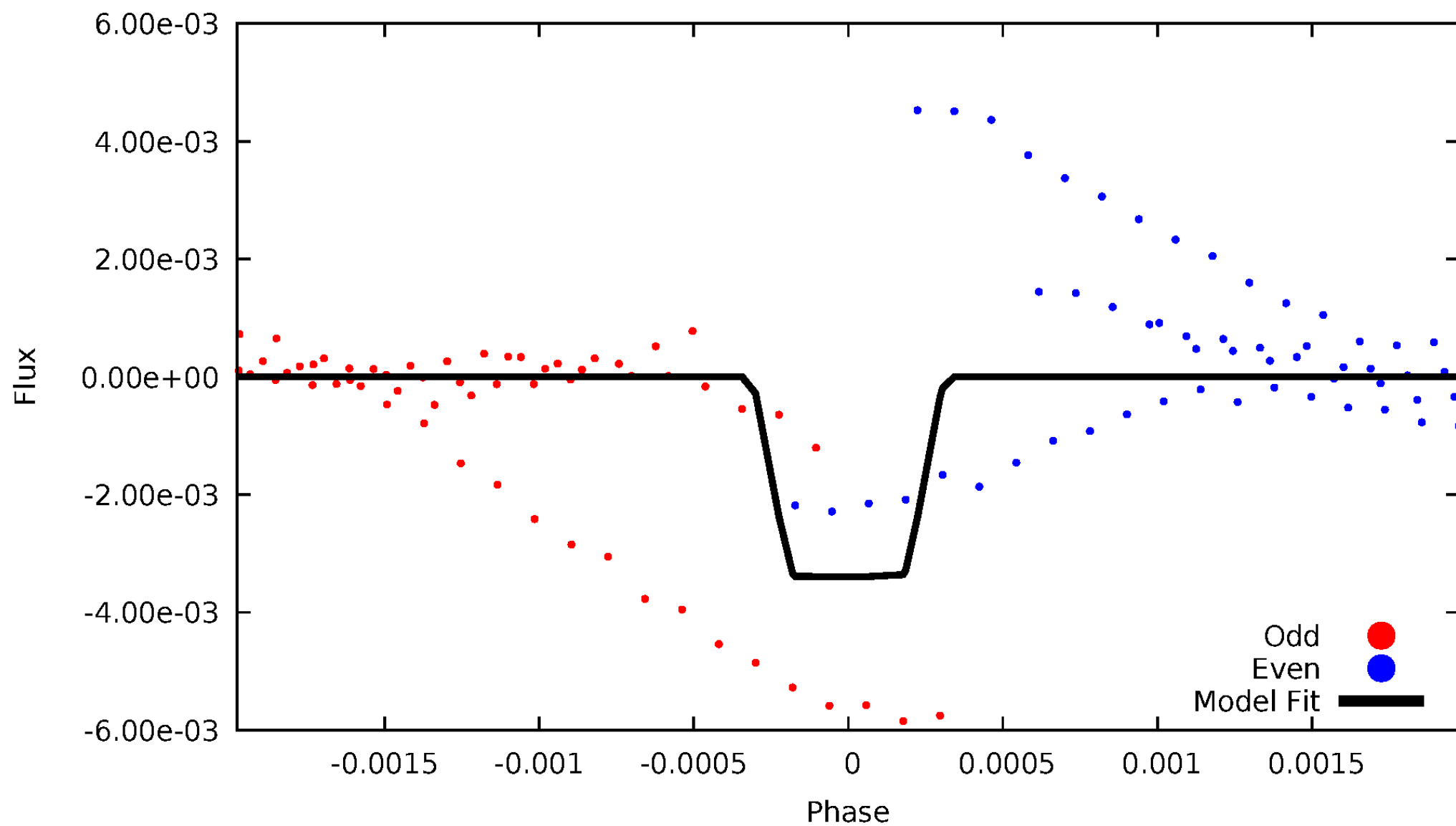
DV Odd/Even

TCE 008717742-03



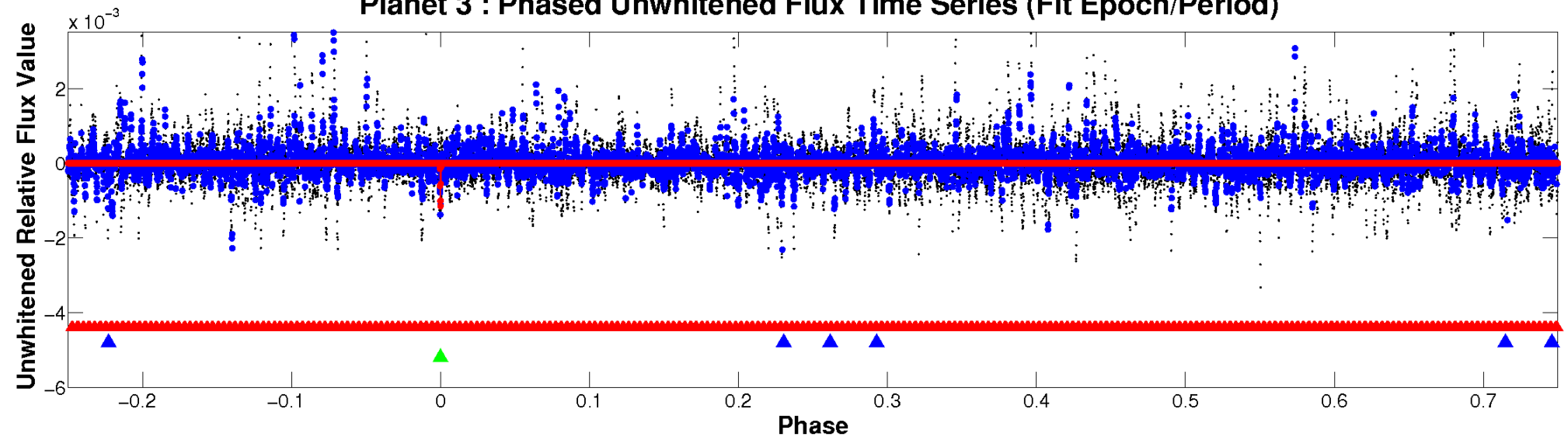
ALT Odd/Even

TCE 008717742-03

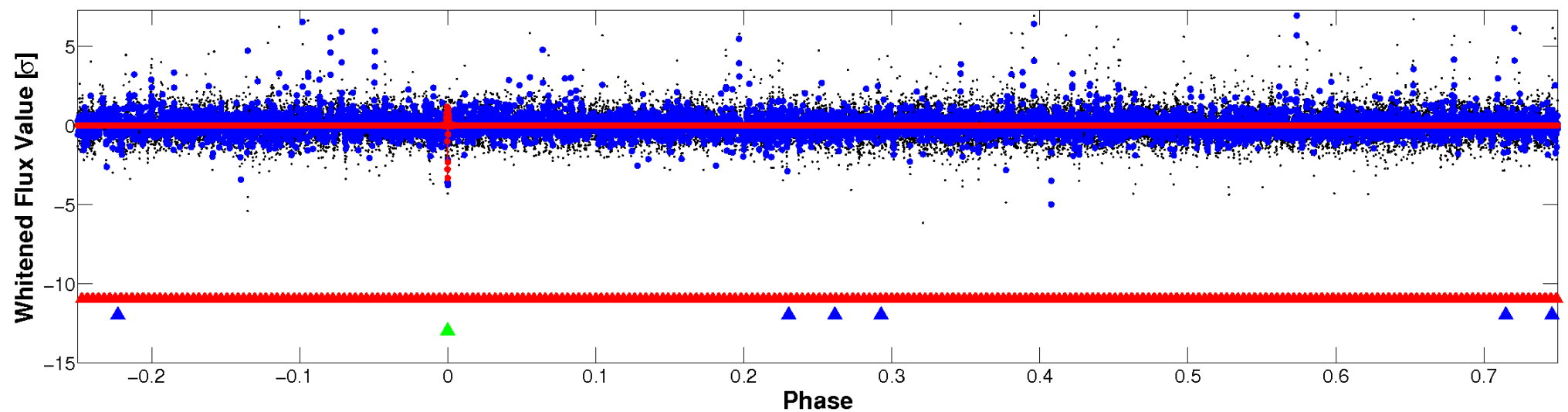


Non-Whitened Vs. Whitened Light Curve

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

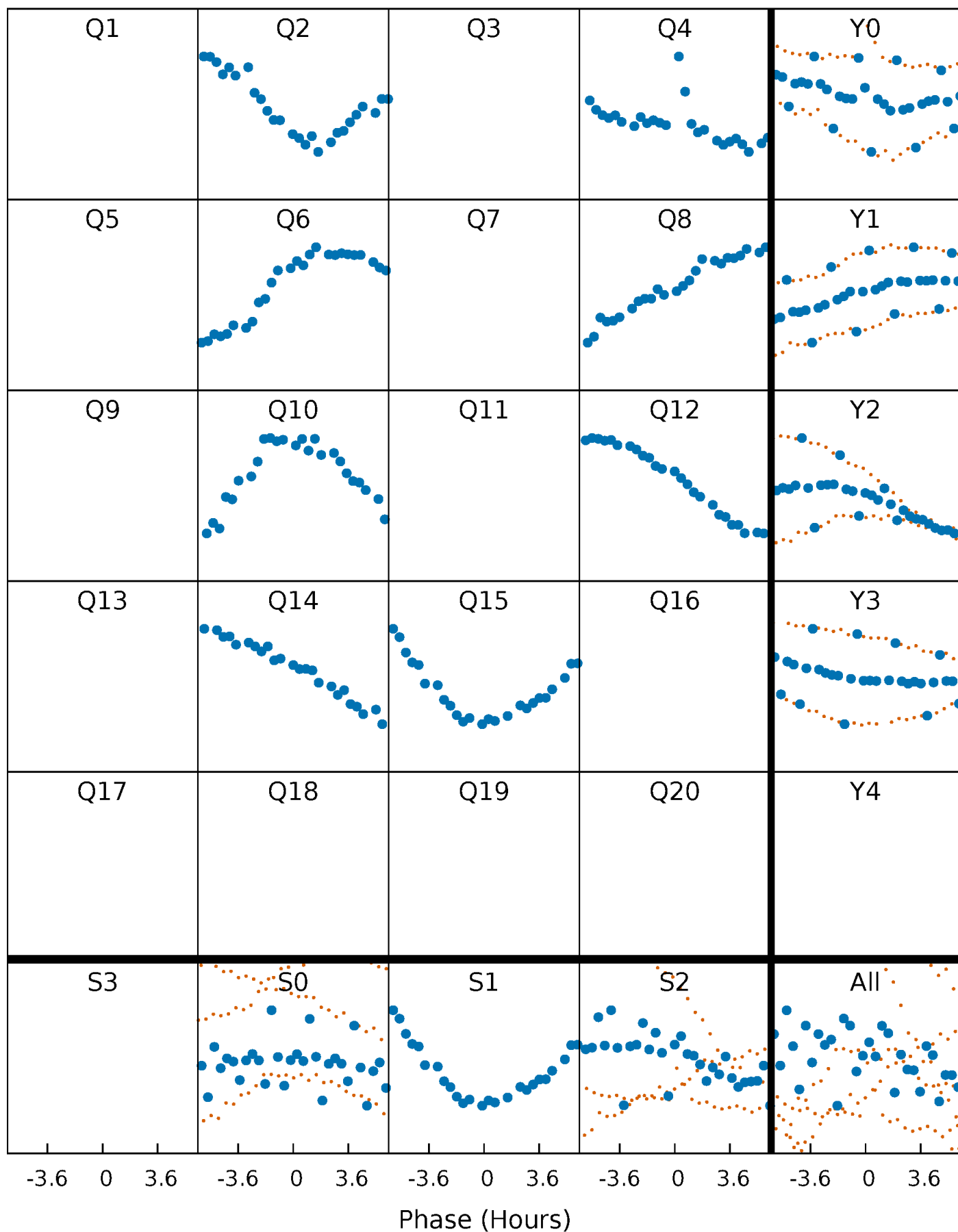


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



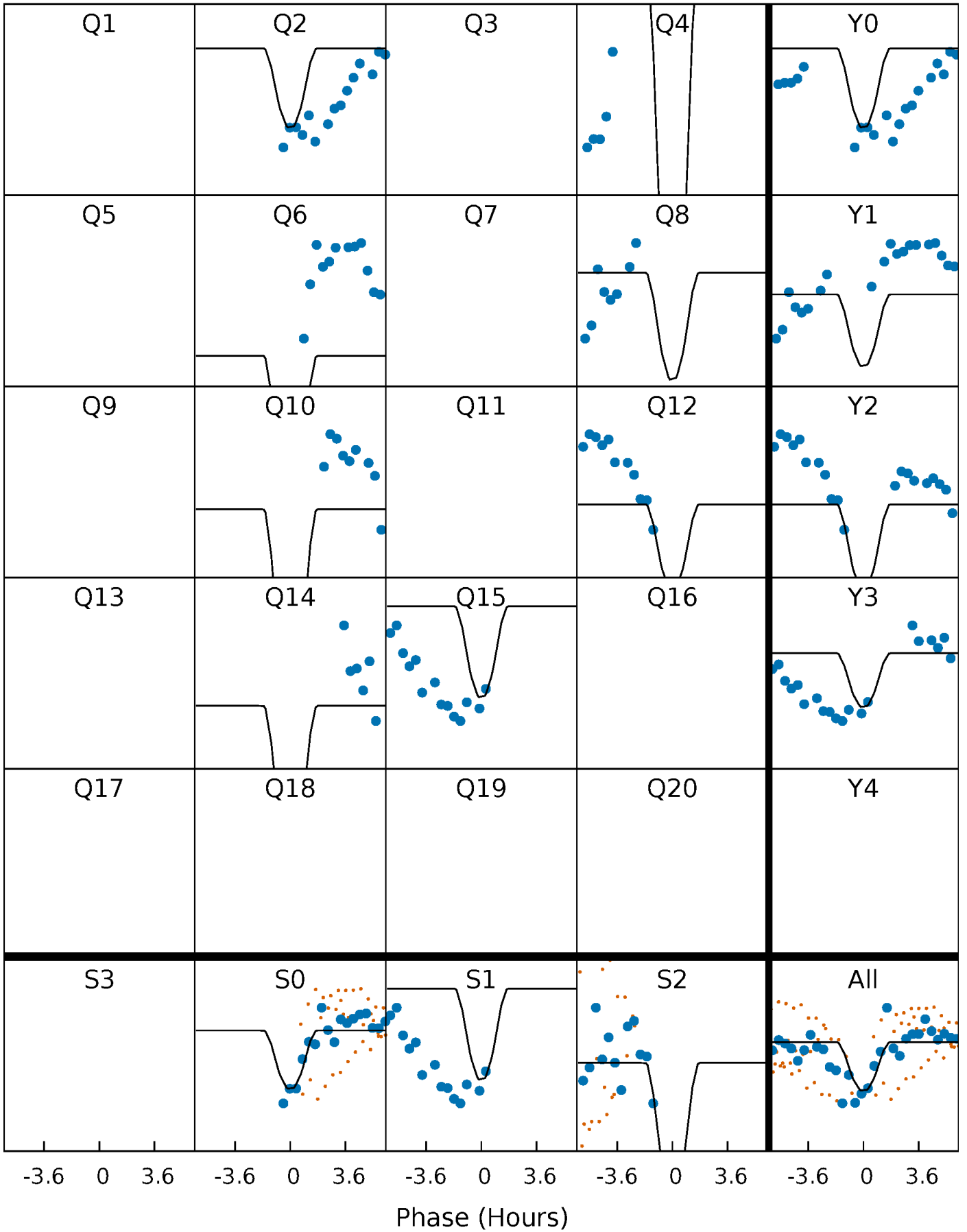
PDC Quarter-Phased Transit Curves

TCE 008717742-03 P=171.359166 Days $T_0=253.203281$ (BKJD)



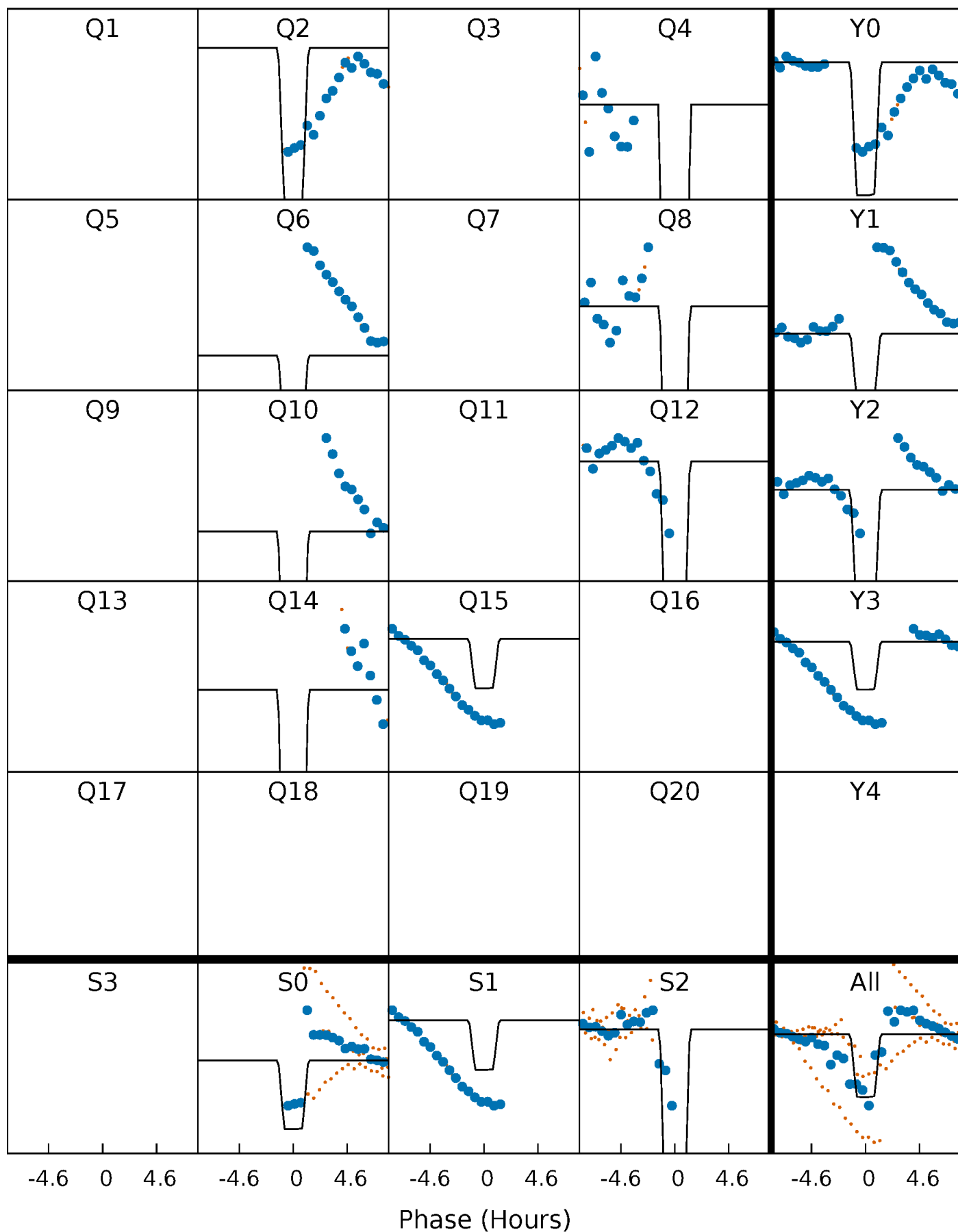
DV Quarter-Phased Transit Curves

TCE 008717742-03 P=171.359166 Days $T_0=253.203281$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

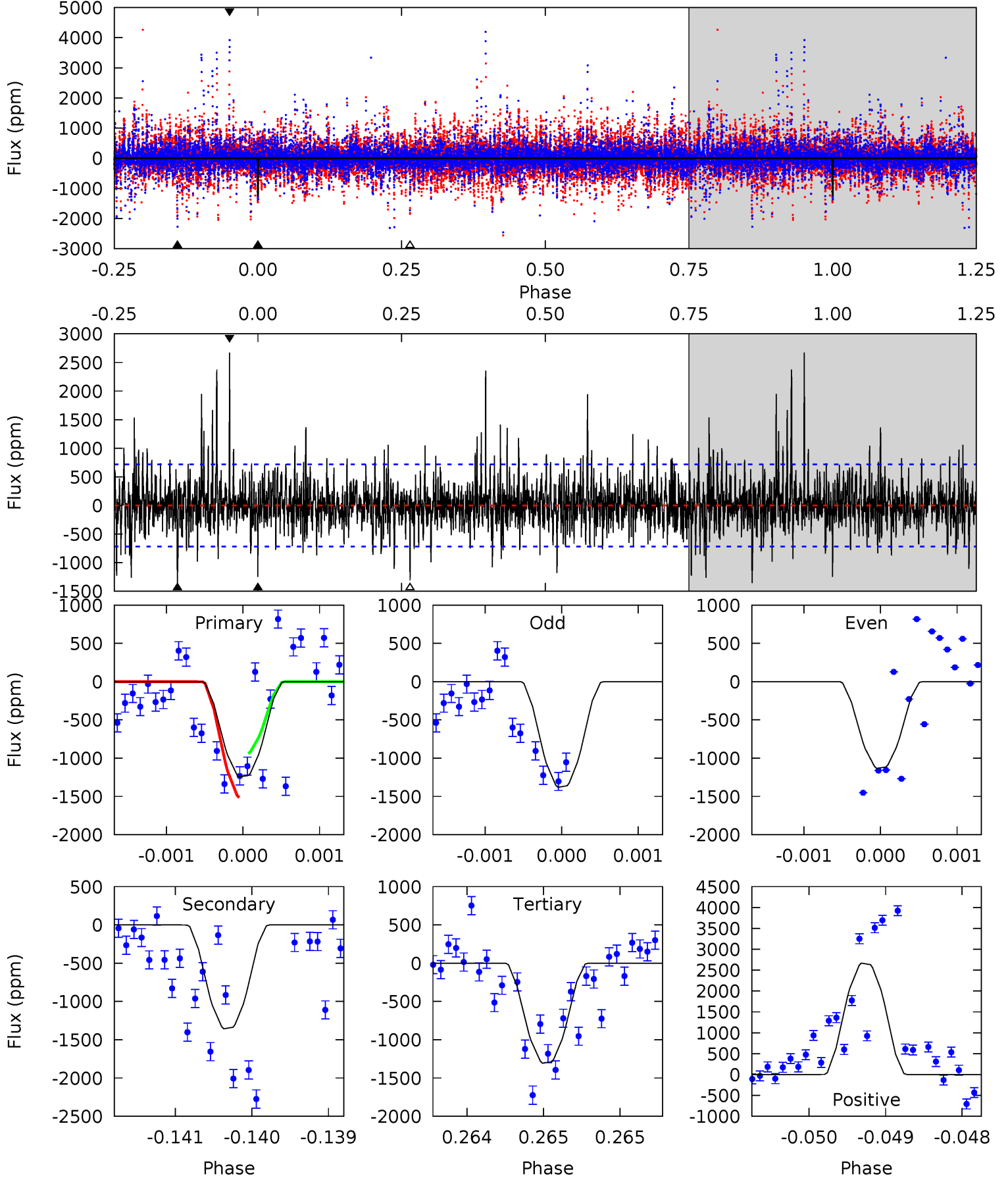
TCE 008717742-03 P=171.352991 Days $T_0=253.205356$ (BKJD)



DV Model-Shift Uniqueness Test

008717742-03, P = 171.359166 Days, E = 81.844115 Days

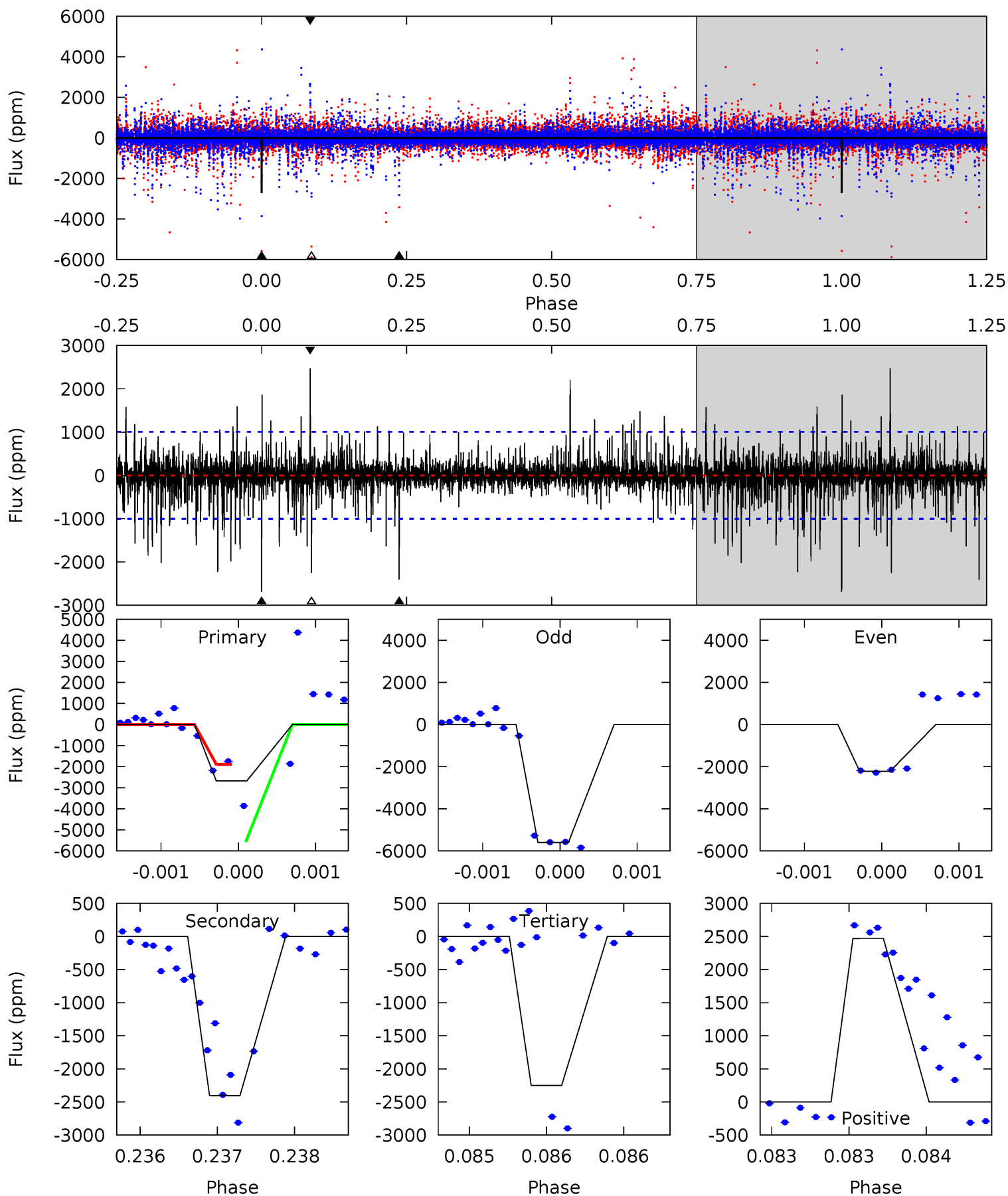
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.52	10.4	10.00	20.4	5.49	3.35	2.28	-0.47	-10.9	0.39	-10.0	0.96	0.73	0.66	2.22



Alt Model-Shift Uniqueness Test

008717742-03, P = 171.352991 Days, E = 81.852365 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.8	13.3	12.4	13.6	5.54	3.43	1.38	2.36	1.16	0.84	-0.36	11.0	1.38	0.48	8.49



Stellar Parameters For KIC 008717742

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6765^{+200}_{-240}	$3.687^{+0.296}_{-0.074}$	$-0.220^{+0.300}_{-0.250}$	$2.982^{+0.451}_{-1.052}$	$1.577^{+0.249}_{-0.304}$	$0.084^{+0.160}_{-0.025}$
	+3%/-4%	+8%/-2%	+136%/-114%	+15%/-35%	+16%/-19%	+191%/-30%
Source	PHO1	FLK73	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 008717742-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1357 ± 131	$24.52^{+23.89}_{-16.00}$	832^{+51}_{-69}	4642^{+3215}_{-961}	635^{+4552}_{-468}
Alt.	-2405 ± 181	$27.75^{+25.59}_{-18.59}$	837^{+50}_{-78}	4969^{+3874}_{-1047}	860^{+6734}_{-632}

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

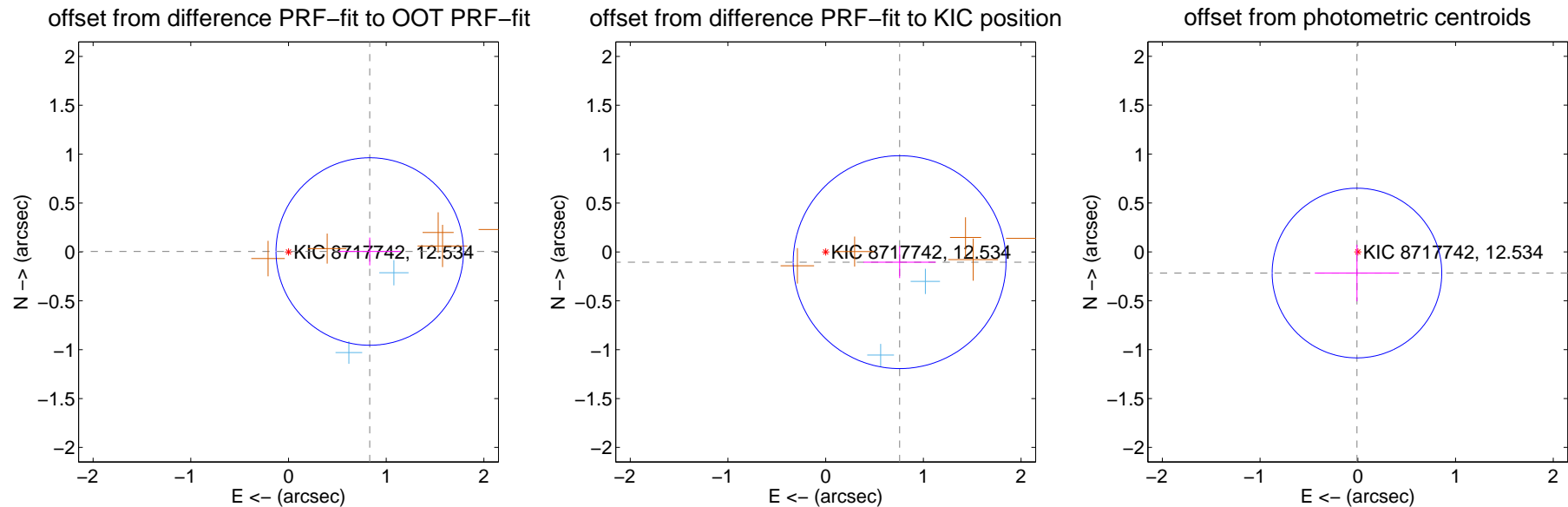
DV Centroid Data

Supplemental centroid analysis for 008717742-03. Kepler magnitude: 12.53. Transit SNR 7.92

There are 2 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.831 ± 0.320	2.60	-0.831 ± 0.320	0.004 ± 0.142
PRF-fit source offset from KIC position	0.764 ± 0.363	2.11	-0.757 ± 0.371	-0.105 ± 0.163
photometric centroid source offset	0.22 ± 0.29	0.75	0.01 ± 0.43	-0.22 ± 0.29



Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

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

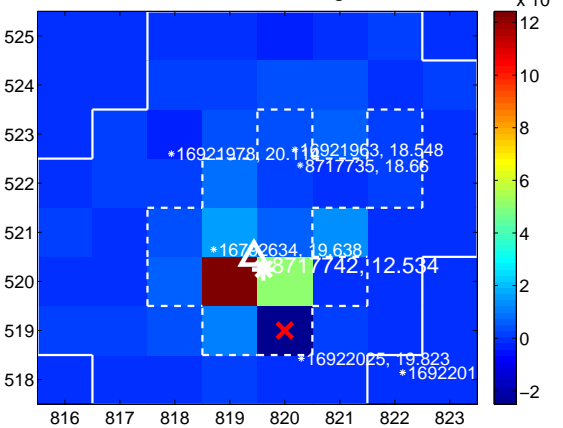
Q1 no difference image



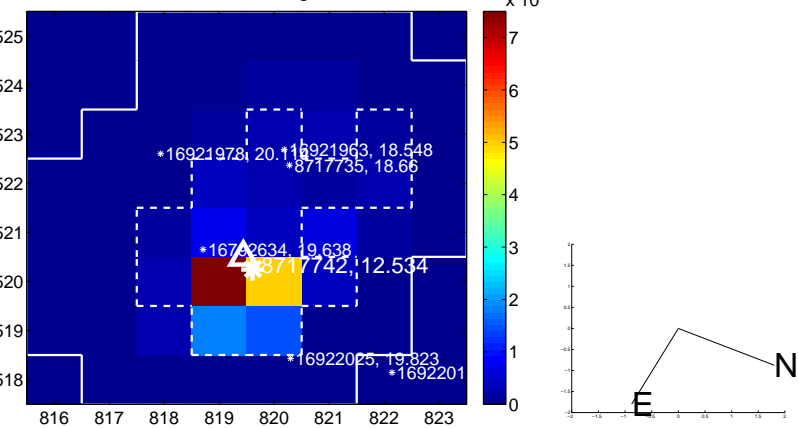
Q1 no OOT image



Q2 difference image



Q2 OOT image



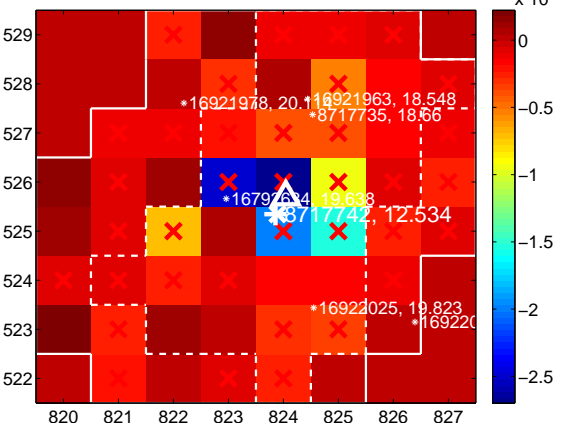
Q3 no difference image



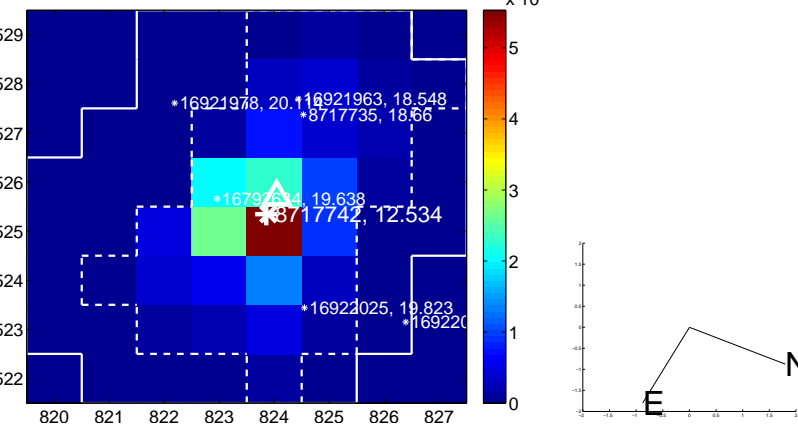
Q3 no OOT image



Q4 difference image. Poor Quality



Q4 OOT image



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

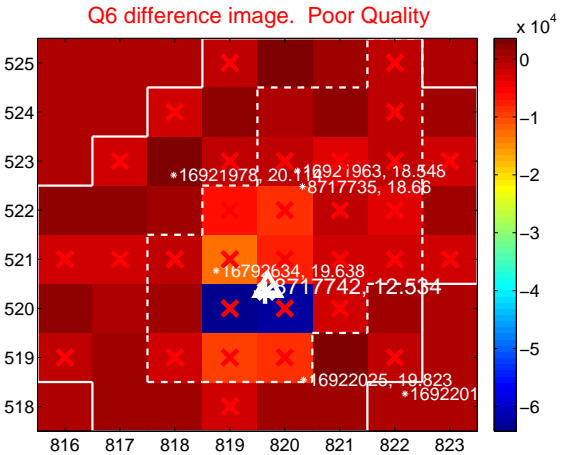
Q5 no difference image



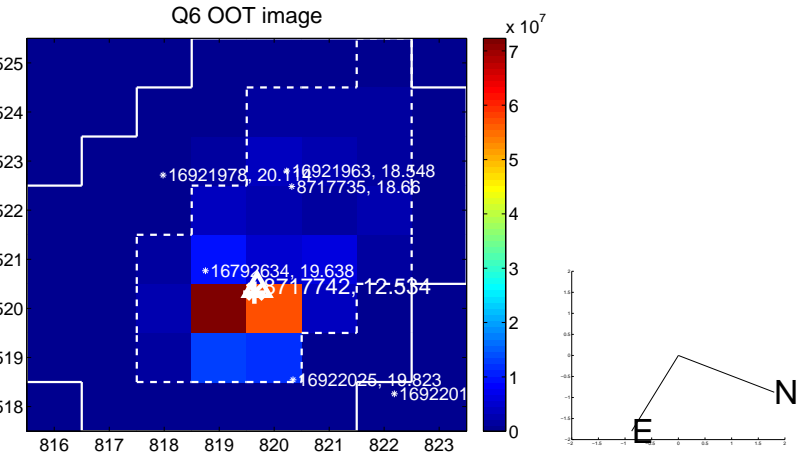
Q5 no OOT image



Q6 difference image. Poor Quality



Q6 OOT image



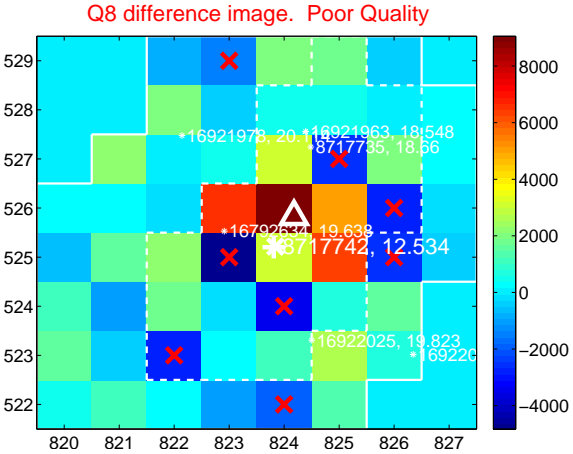
Q7 no difference image



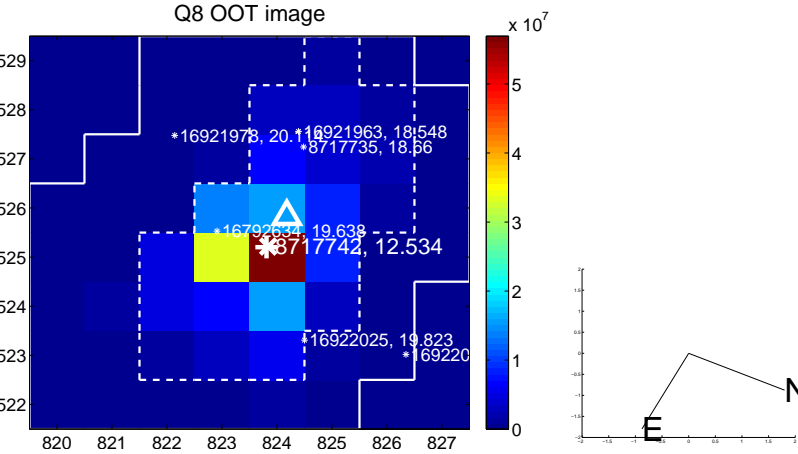
Q7 no OOT image



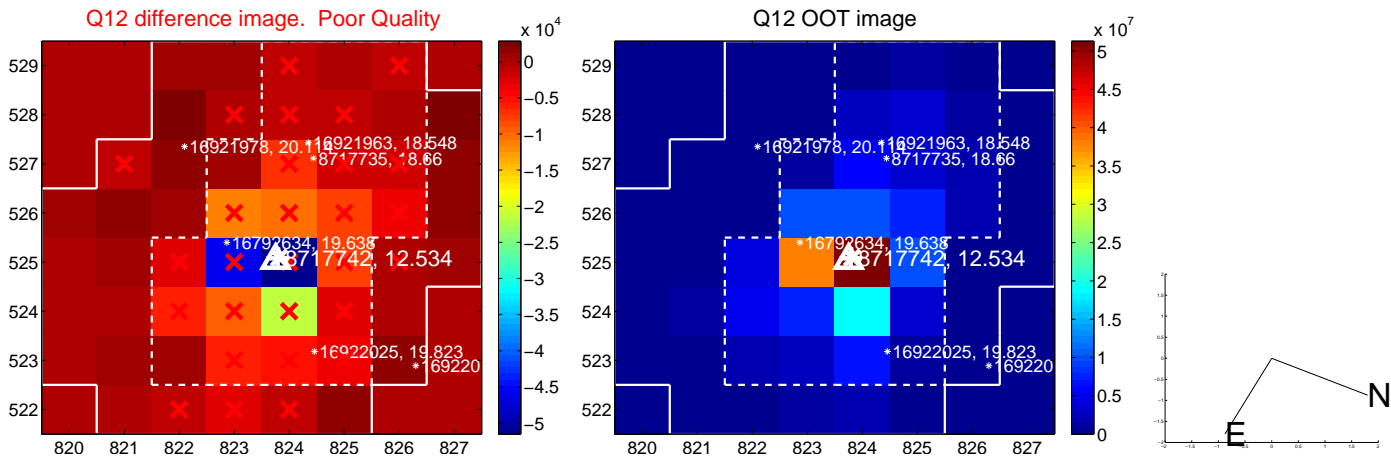
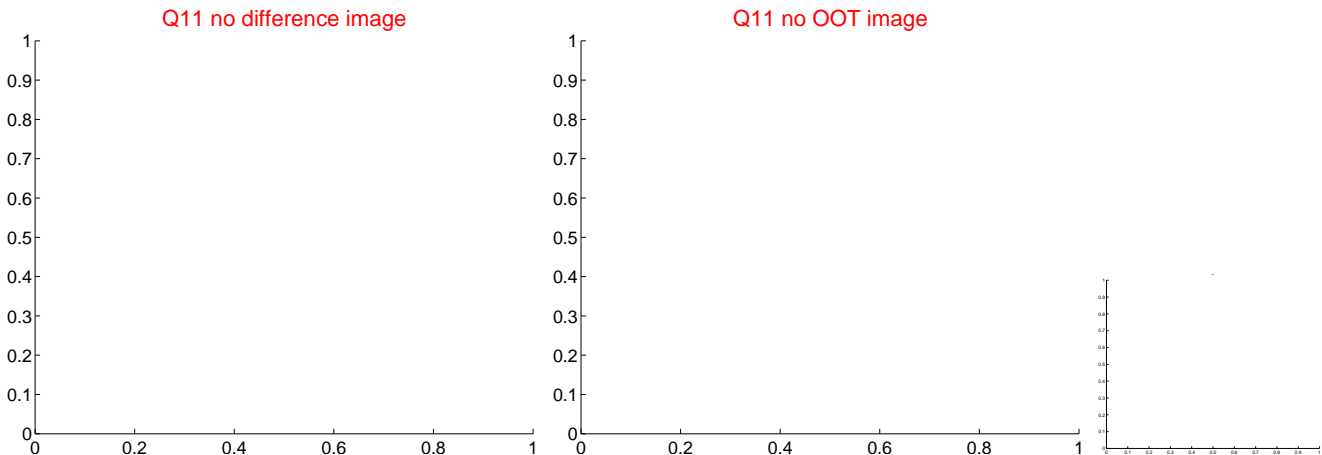
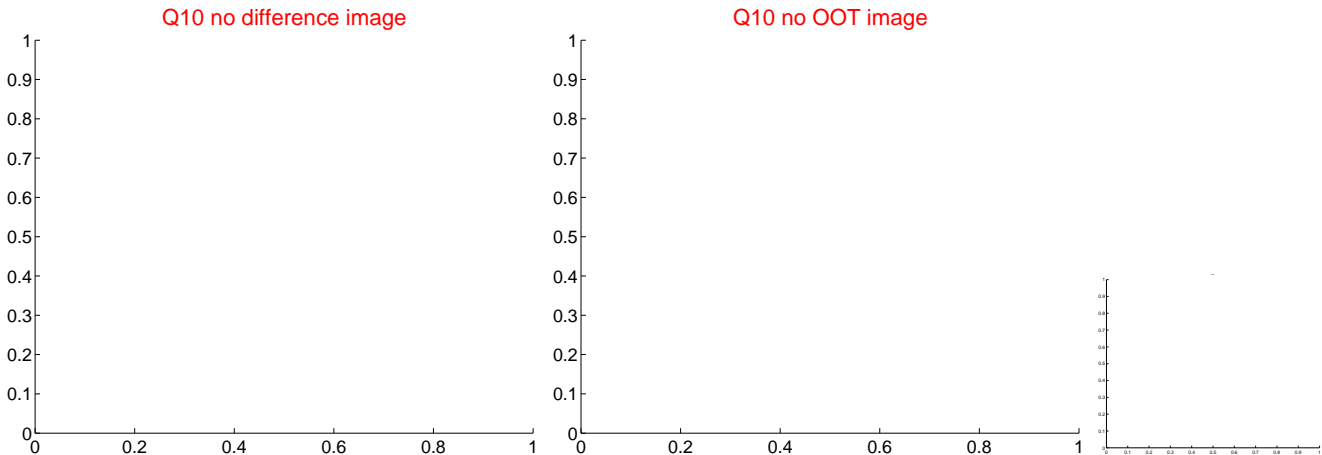
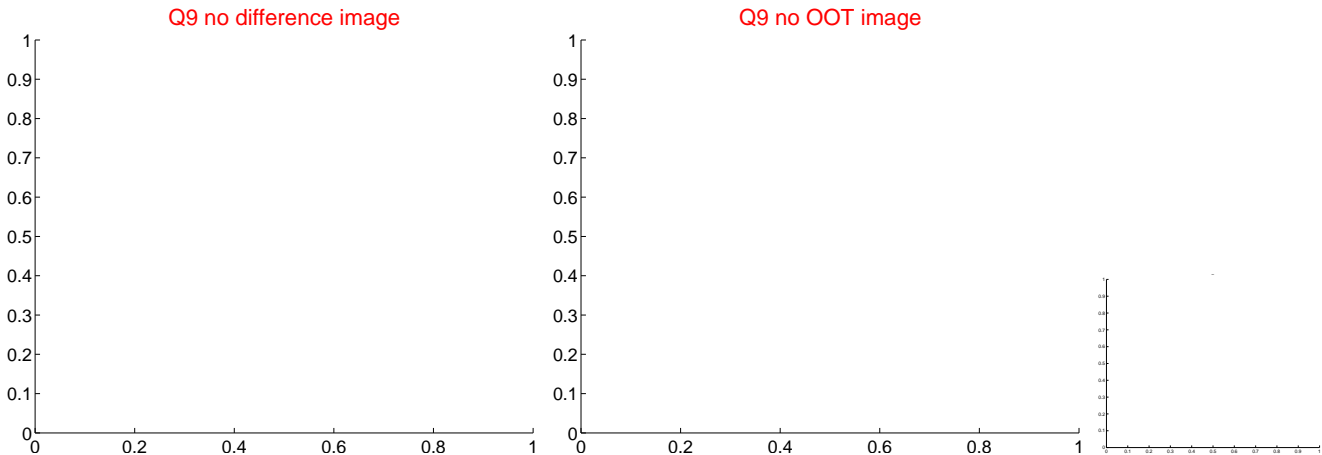
Q8 difference image. Poor Quality



Q8 OOT image

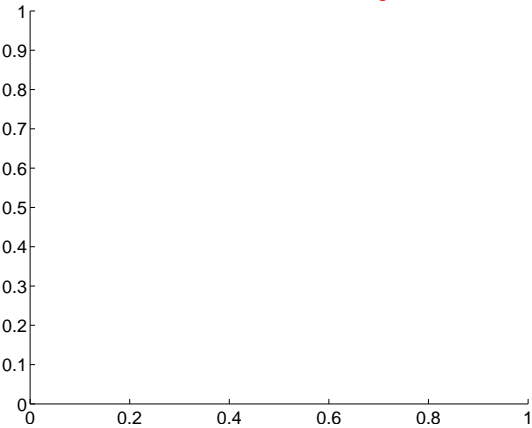


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

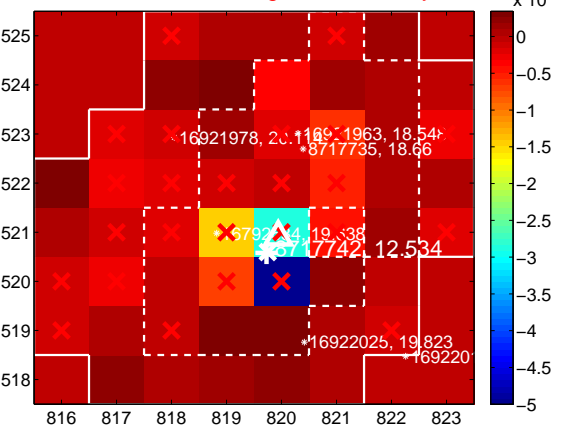
Q13 no difference image



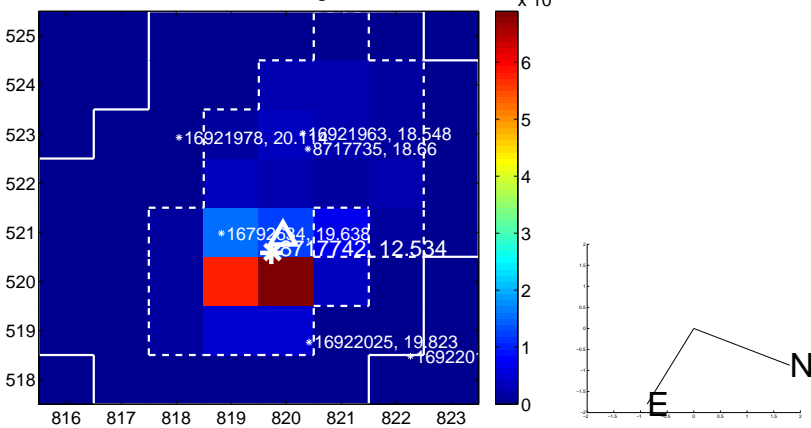
Q13 no OOT image



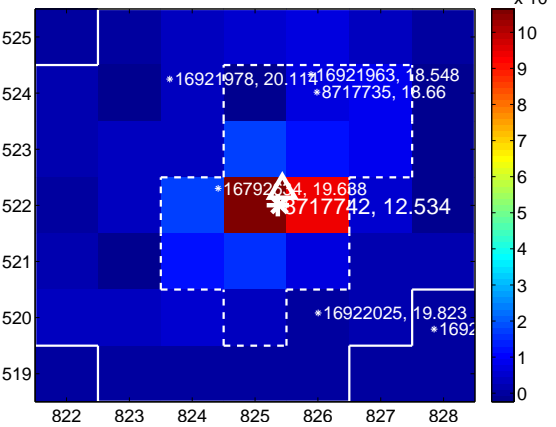
Q14 difference image. Poor Quality



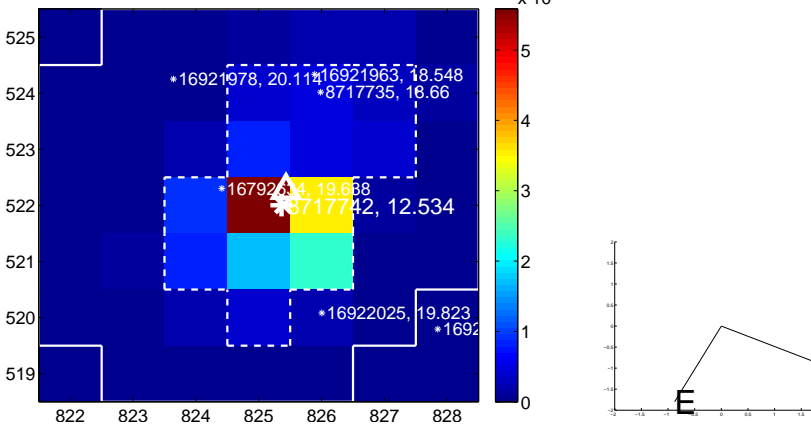
Q14 OOT image



Q15 difference image



Q15 OOT image



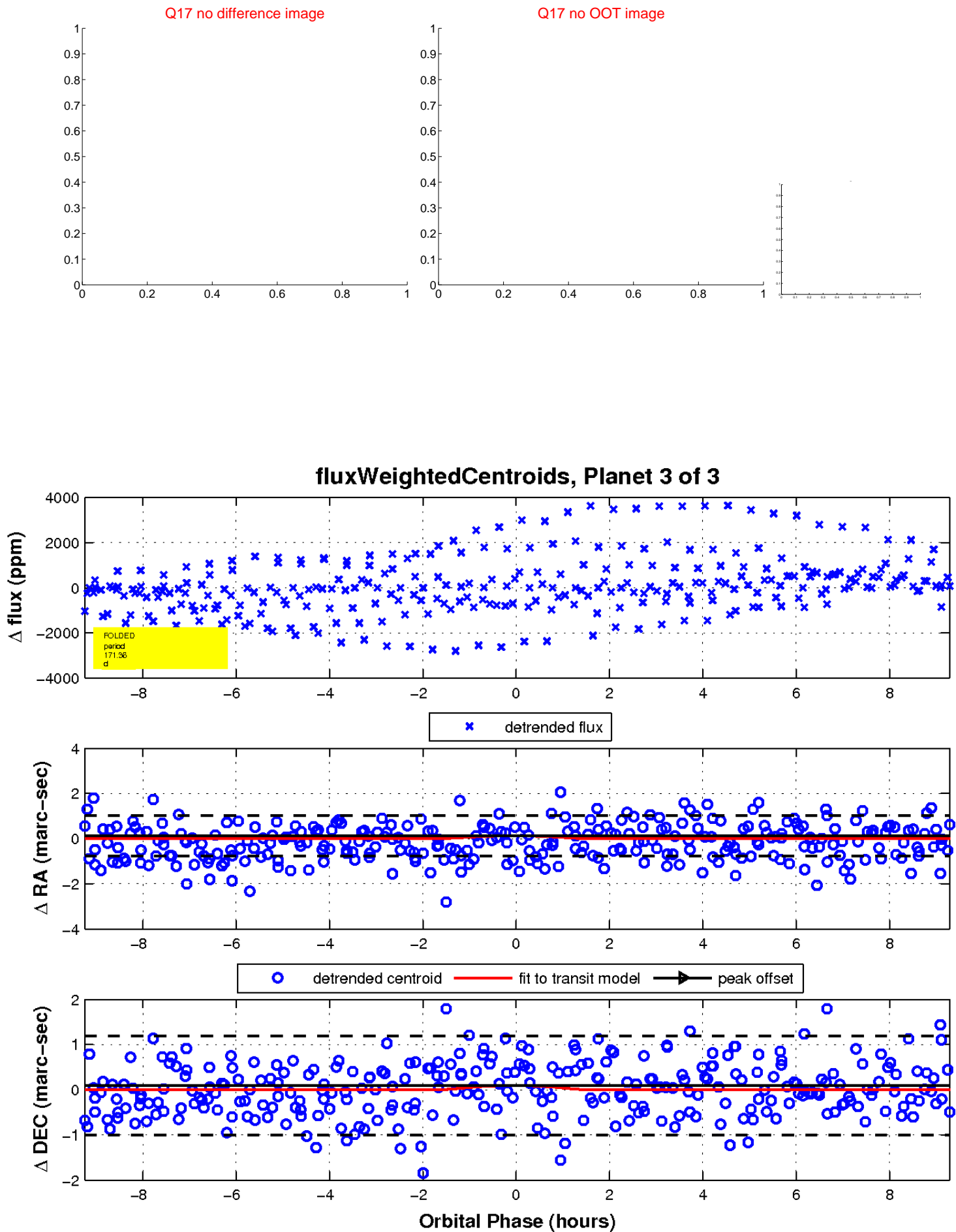
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

