

KIC 008327990

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})
008327990-01	OBS	No	1.774611	131.701166	118.3	7.516	7.6	8.2	0.71	4714	0.75	321.07
008327990-02	OBS	No	179.448199	295.141124	1015.1	7.883	9.7	6.2	0.71	4714	2.37	0.68
008327990-03	OBS	No	101.493413	178.627298	1582.1	4.739	8.0	7.8	0.71	4714	2.84	1.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008327990-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
008327990-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET
008327990-03	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET

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

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

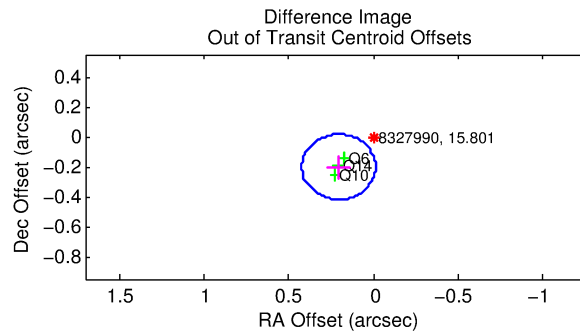
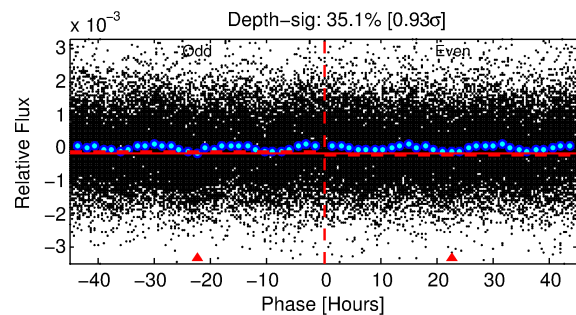
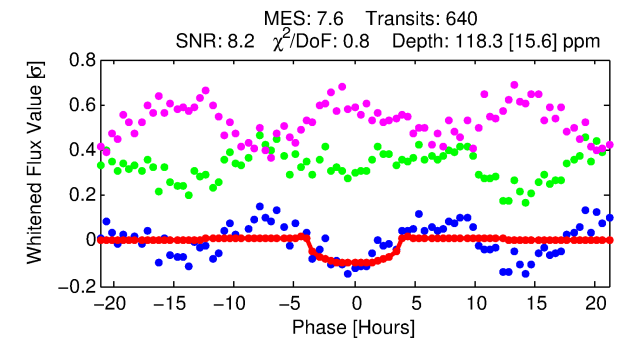
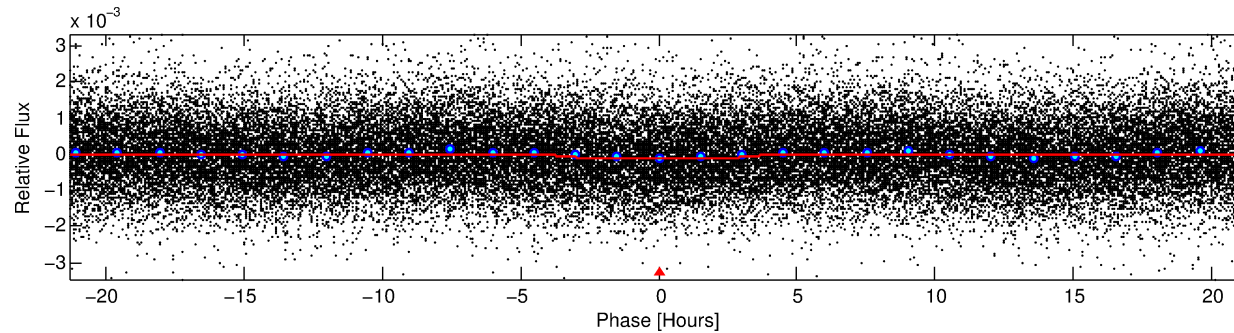
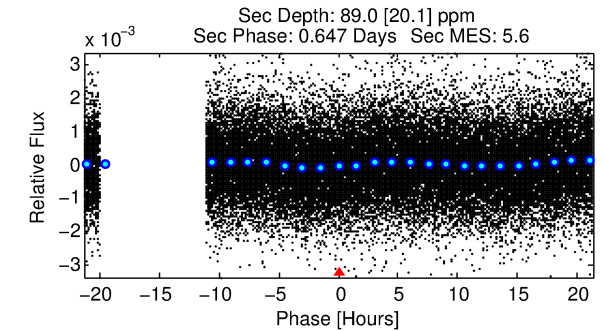
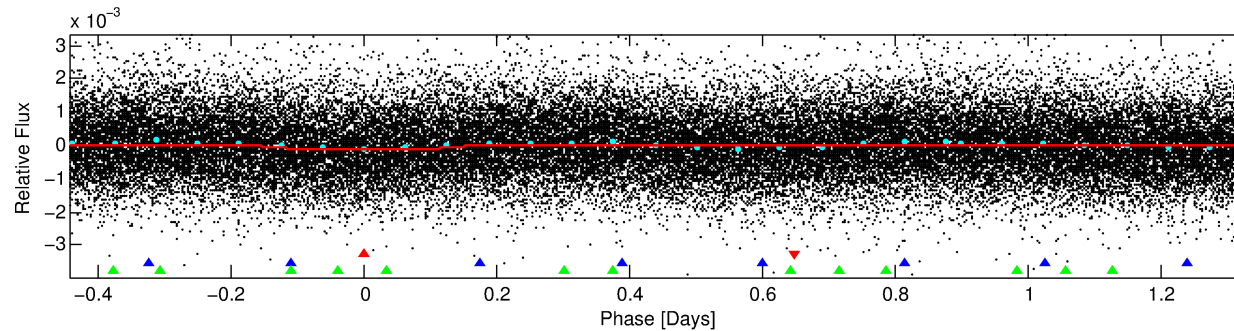
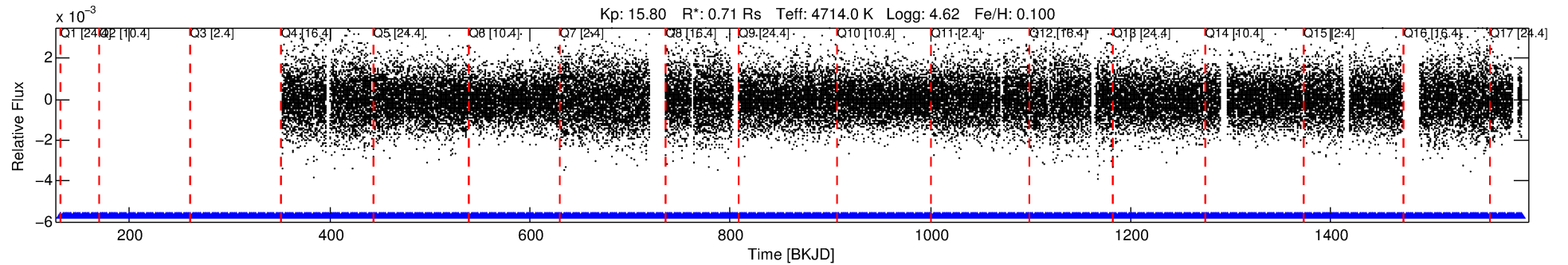
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008327990-01

No Significant Match Found

DV One-Page Summary

KIC: 8327990 Candidate: 1 of 3 Period: 1.775 d



DV Fit Results:

Period = 1.77461 [0.00003] d
Epoch = 131.7012 [0.0090] BKJD
Rp/R* = 0.0097 [0.0098]
a/R* = 1.85 [4.03]
b = 0.31 [9.09]
Seff = 321.07 [56.57]
Teq = 1079 [48] K
Rp = 0.75 [0.76] Re
a = 0.0262 [0.0020] AU
Ag = 60.14 [122.24] [0.48σ]
Teff = 4647 [2364] K [1.51σ]

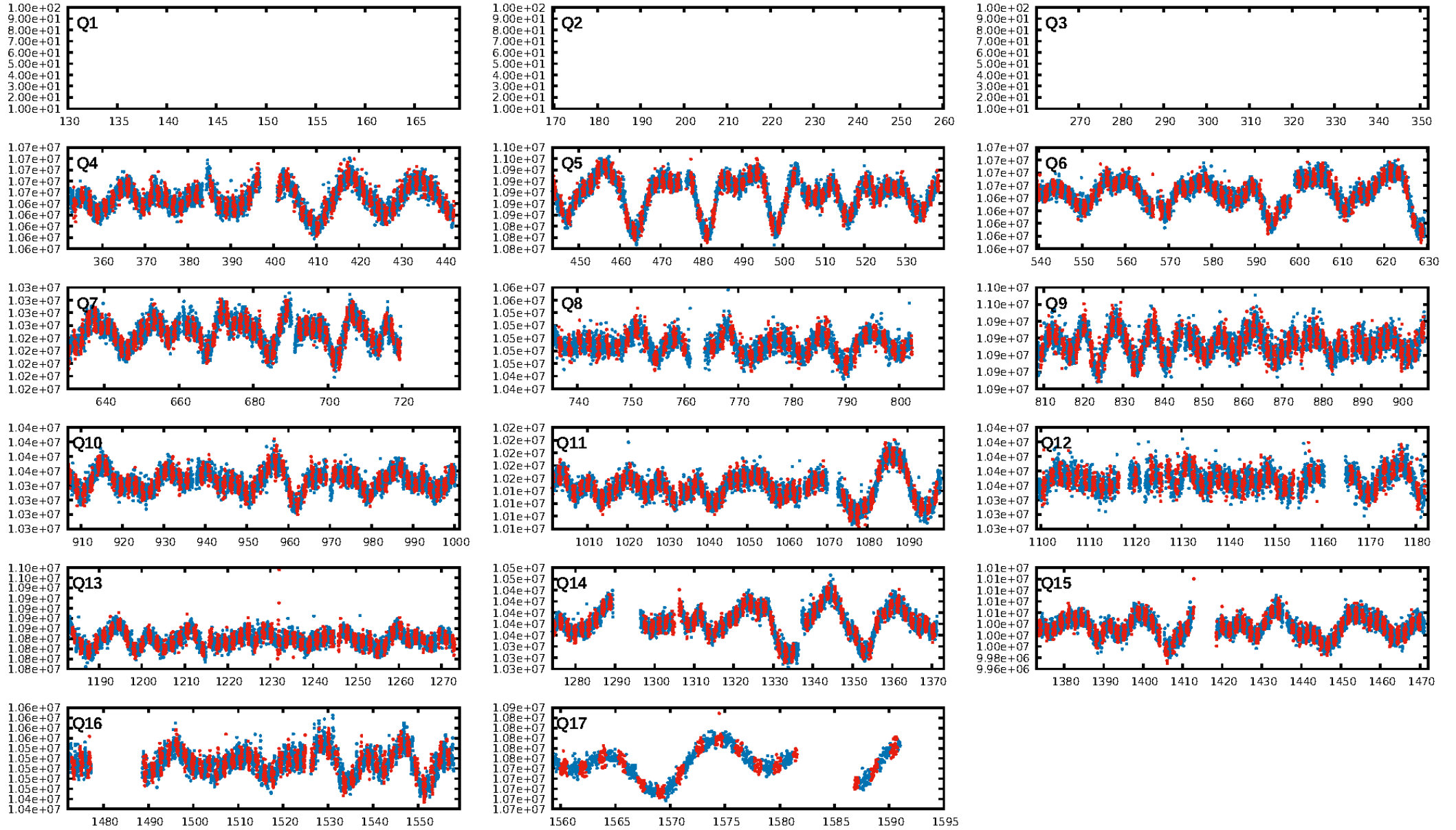
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [269.34σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.25e-13
RollingBand-fgt: 1.00 [624/624]
GhostDiagnostic-chr: 3.786
Centroid-sig: 2.0%
Centroid-so: 0.808 arcsec [0.52σ]
OotOffset-rm: 0.288 arcsec [3.97σ]
KicOffset-rm: 8.846 arcsec [121.01σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [14/14]

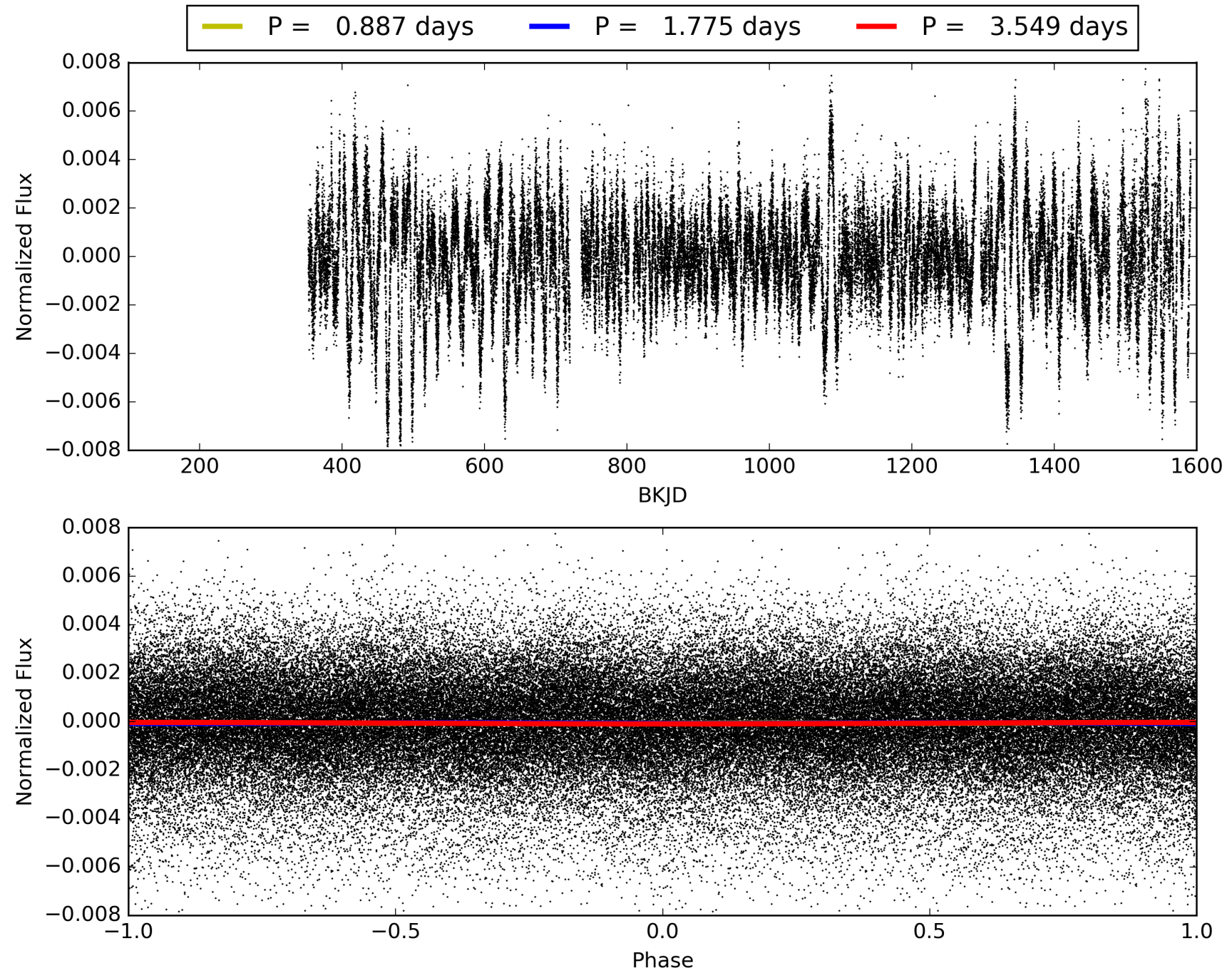
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:52:02 Z

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

TCE 008327990-01, PDC Light Curves

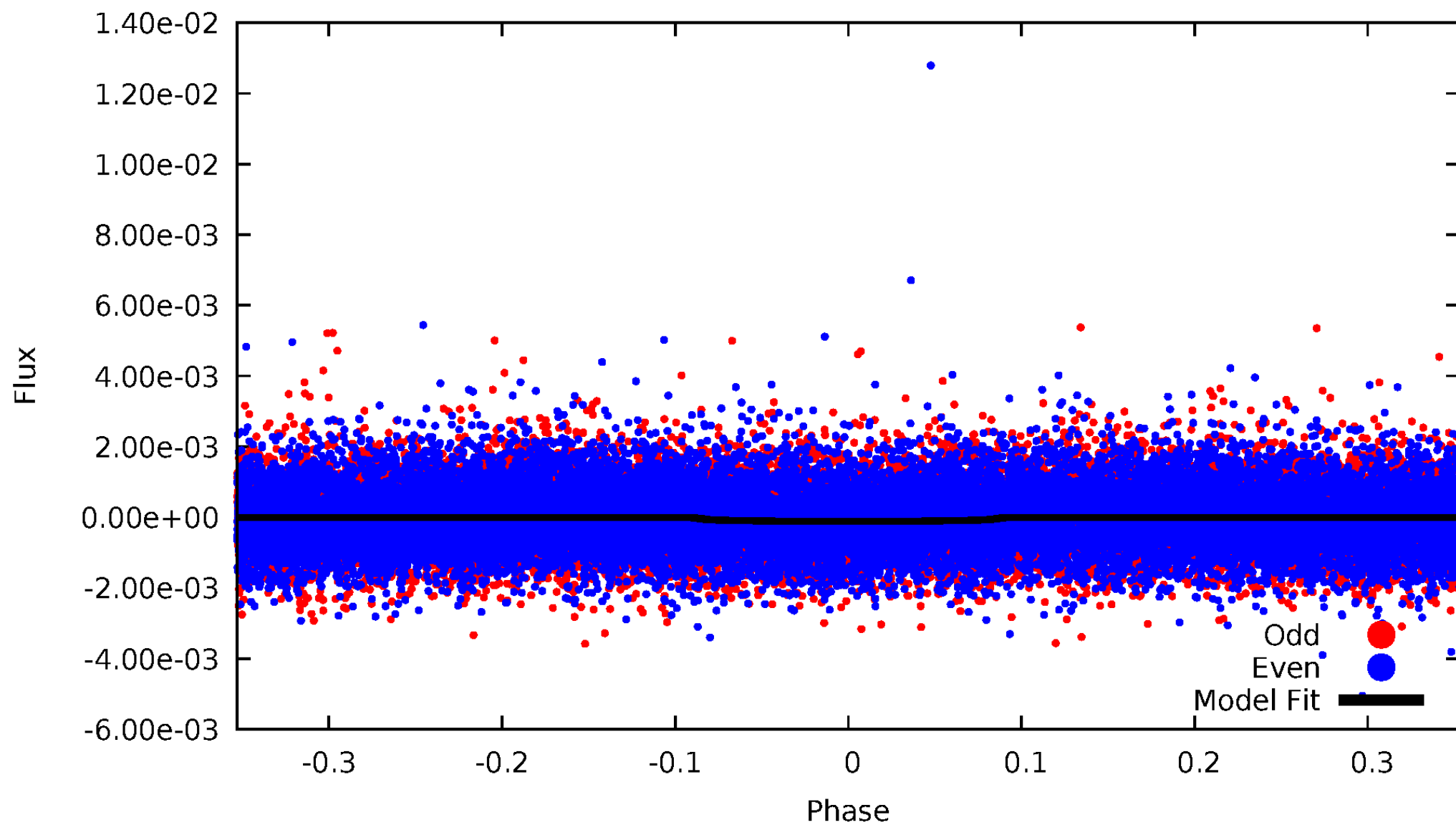


TCE 008327990-01



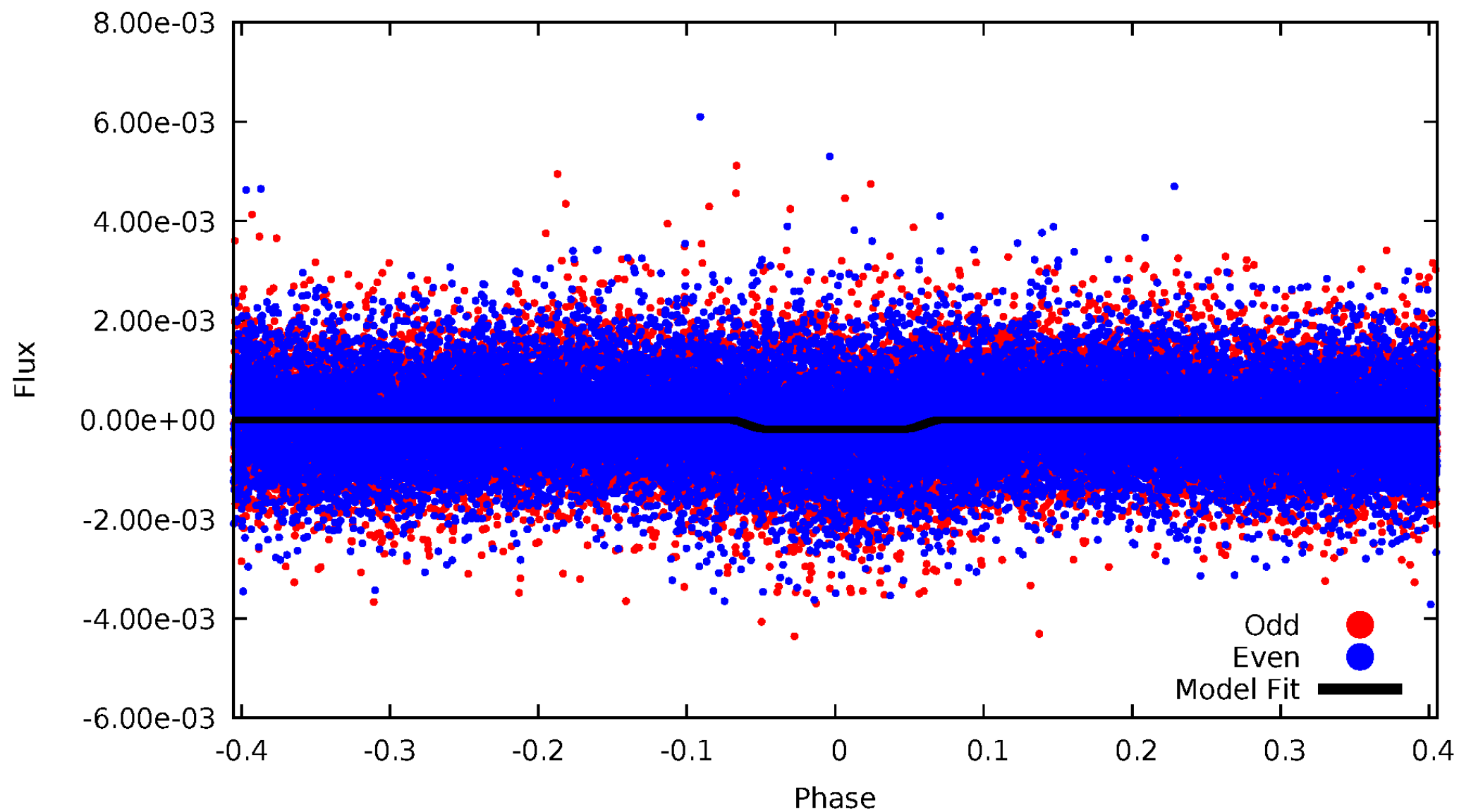
DV Odd/Even

TCE 008327990-01

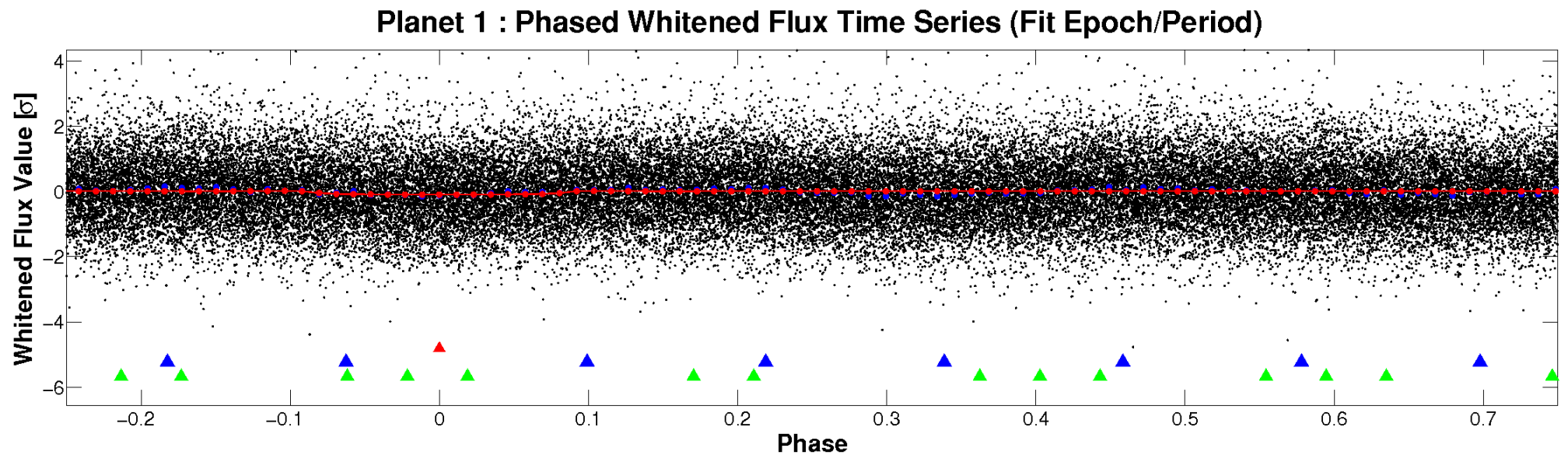
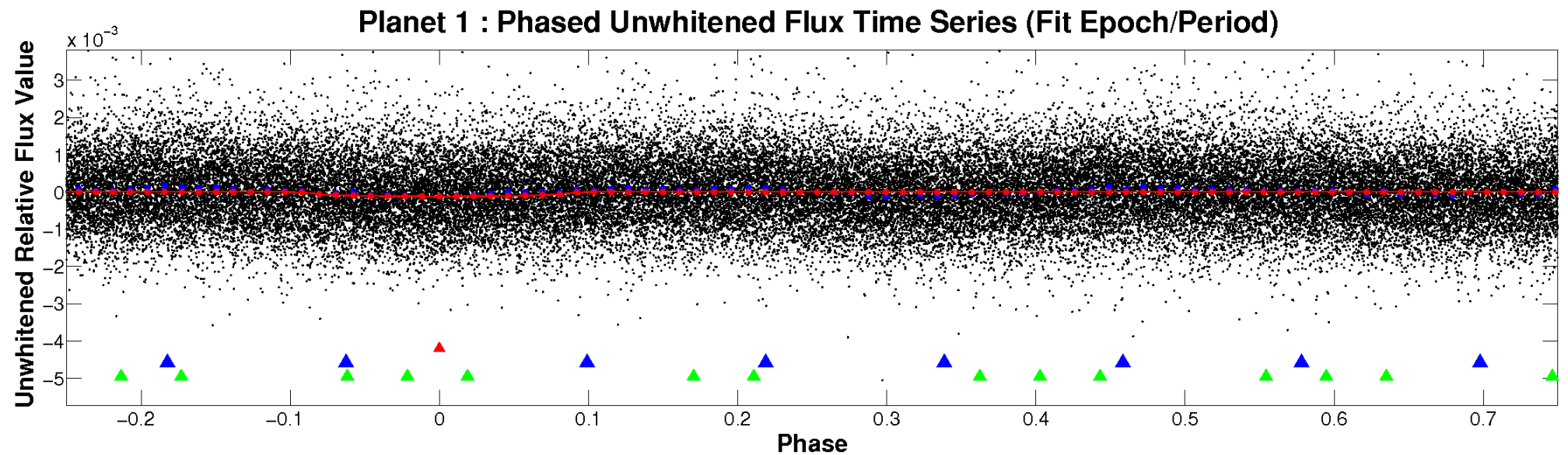


ALT Odd/Even

TCE 008327990-01

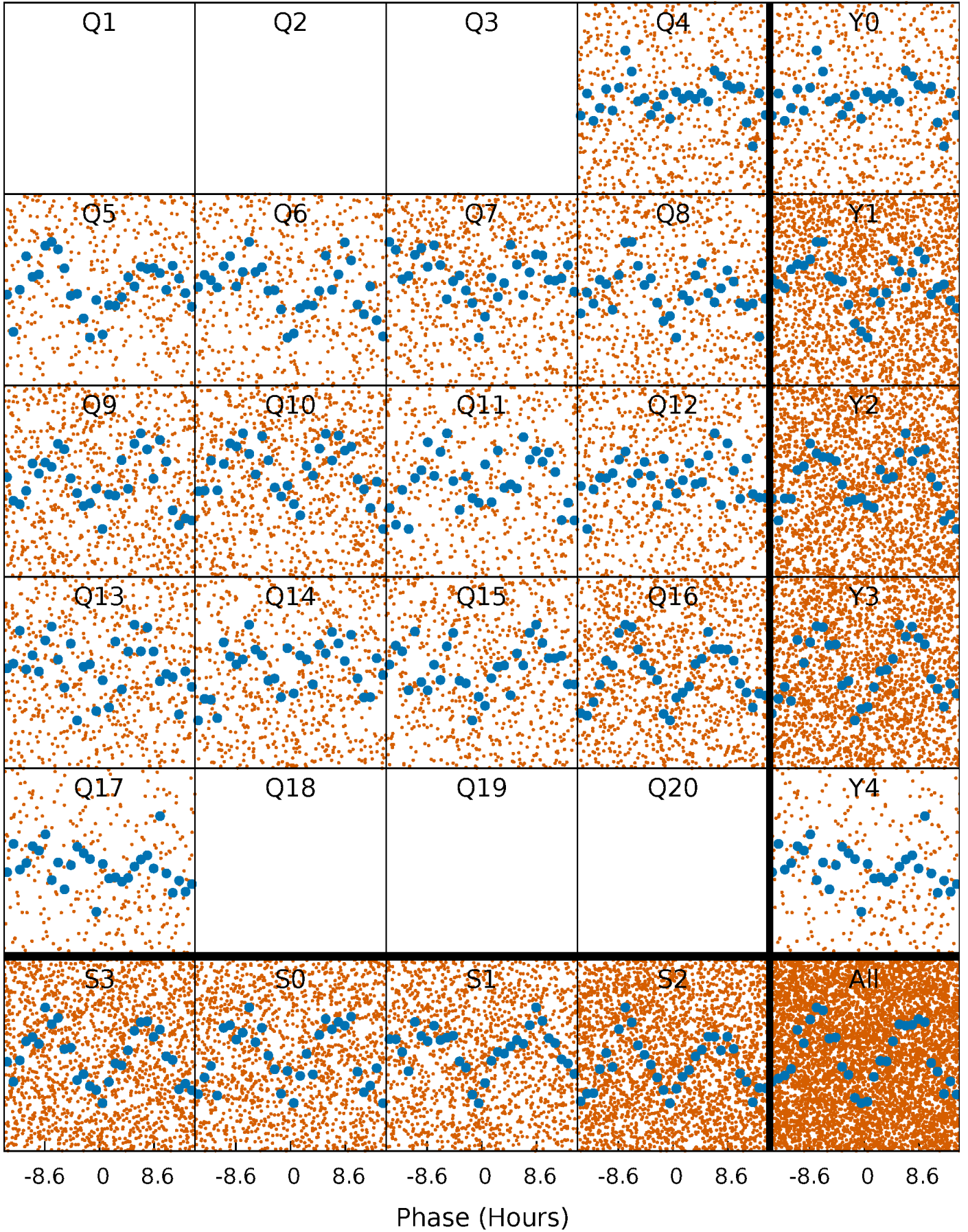


Non-Whitened Vs. Whitened Light Curve



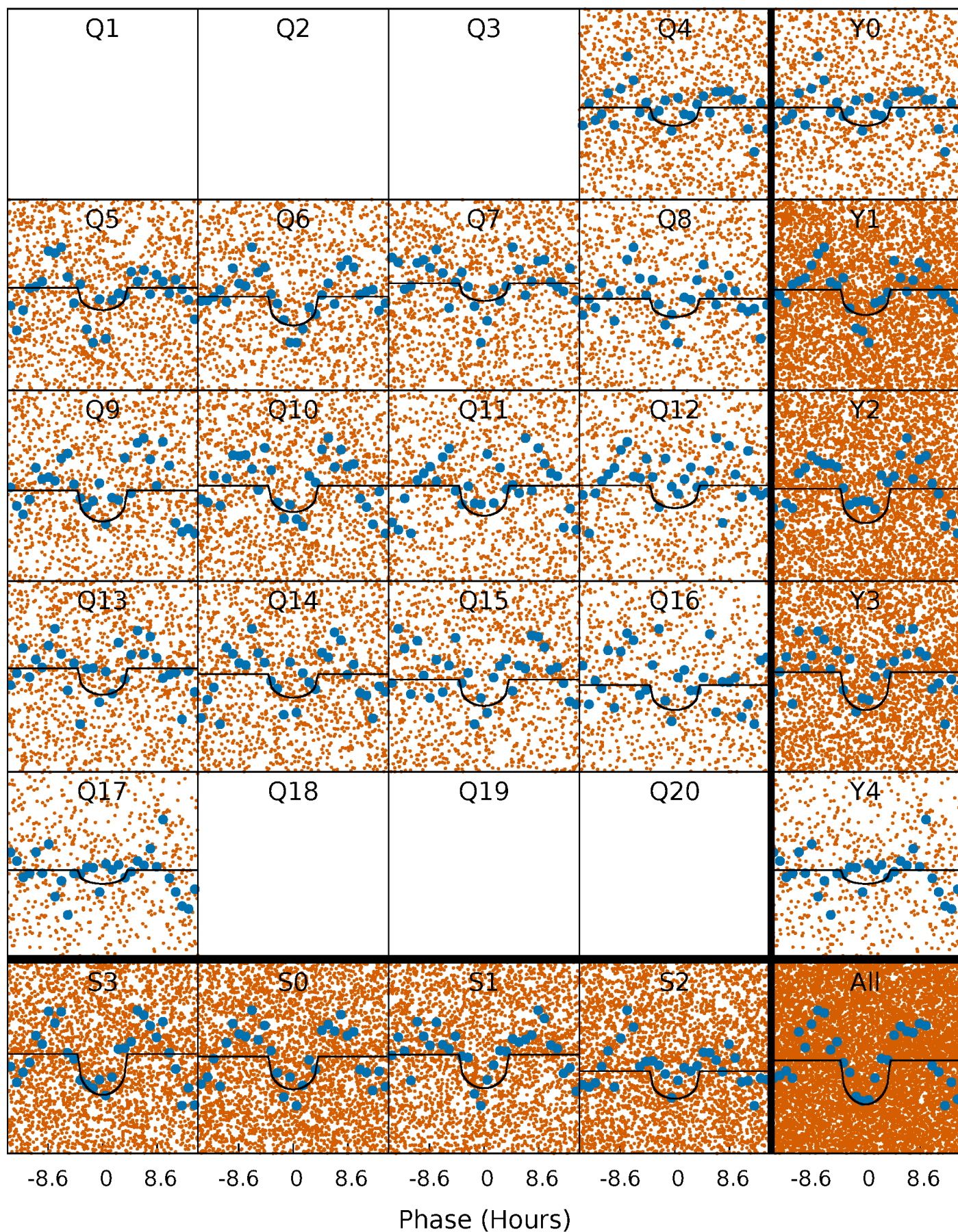
PDC Quarter-Phased Transit Curves

TCE 008327990-01 P= 1.774611 Days $T_0=131.701166$ (BKJD)



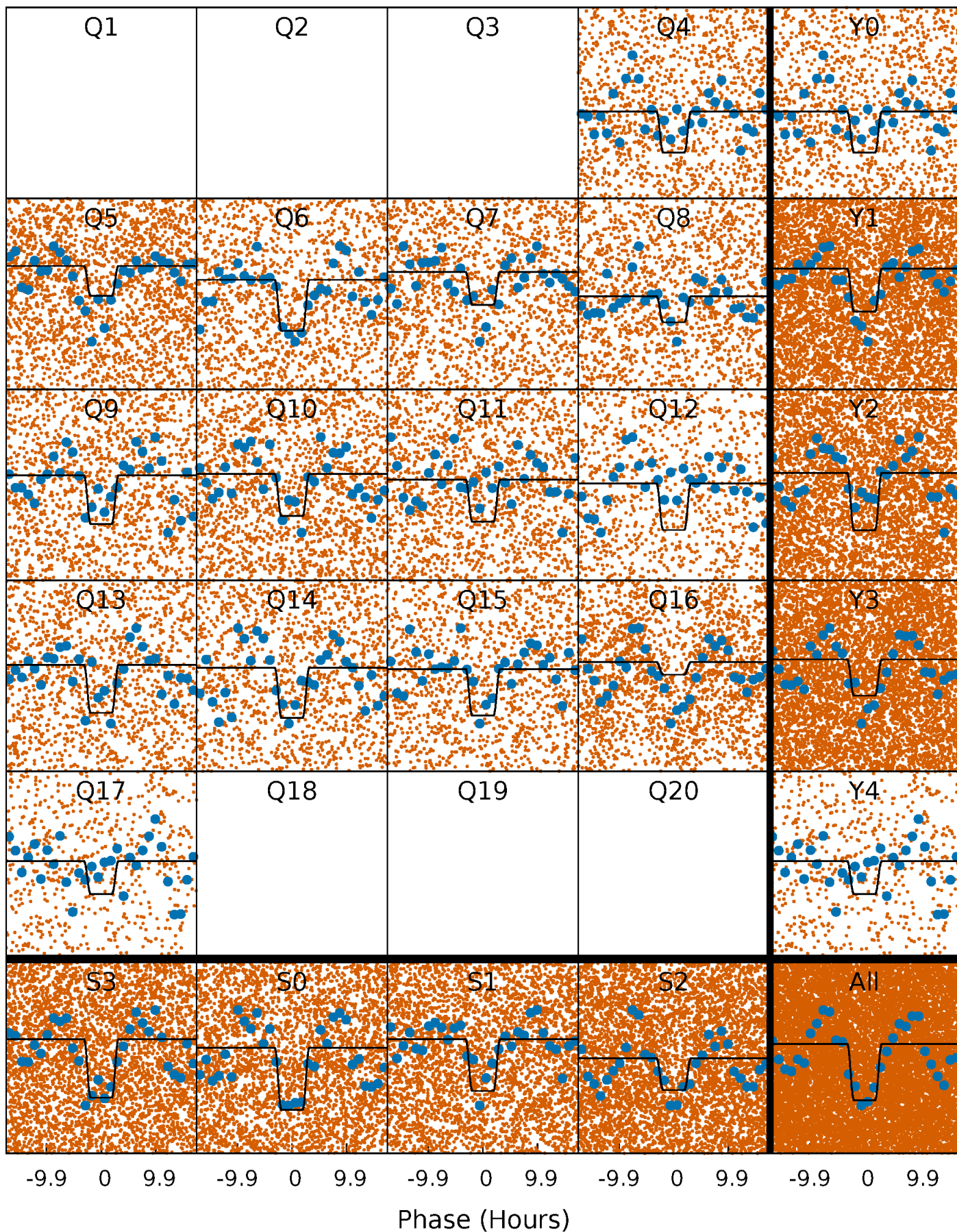
DV Quarter-Phased Transit Curves

TCE 008327990-01 P= 1.774611 Days $T_0=131.701166$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

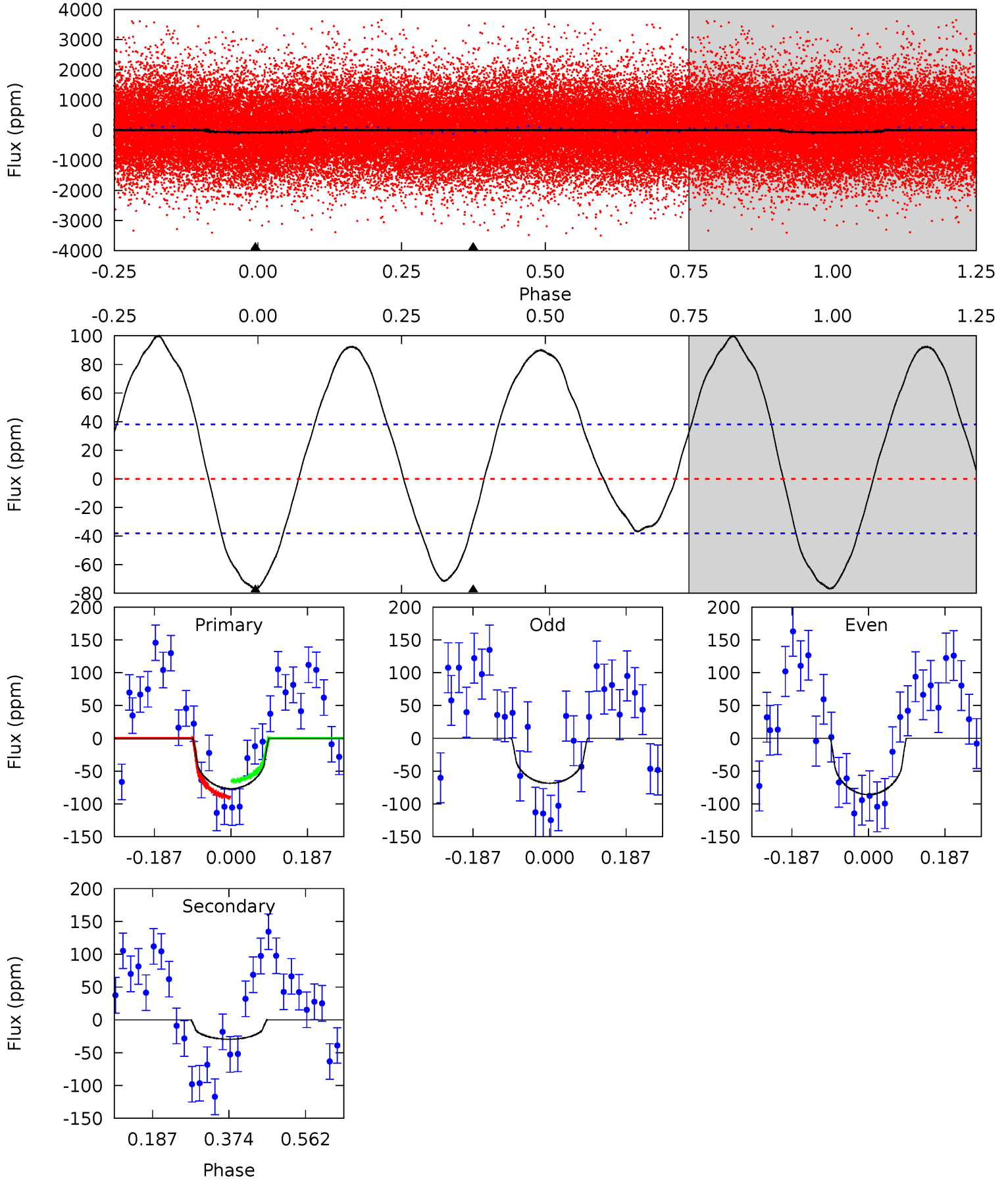
TCE 008327990-01 P= 1.774555 Days $T_0=131.713598$ (BKJD)



DV Model-Shift Uniqueness Test

008327990-01, P = 1.774611 Days, E = 131.701166 Days

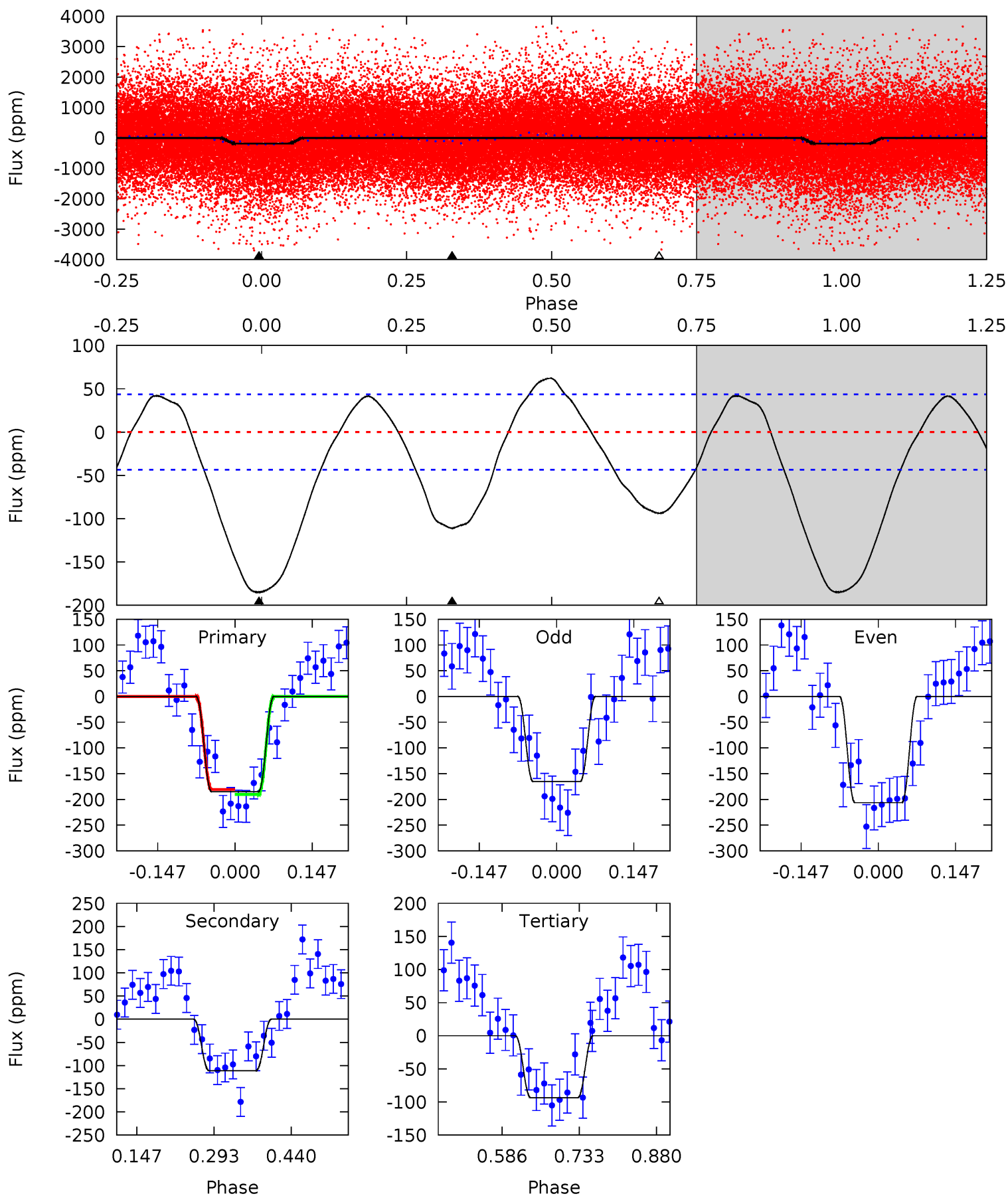
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.94	3.44	0	0	4.43	1.32	4.64	8.94	8.94	3.44	3.44	1.01	0.88	0.57	1.42



Alt Model-Shift Uniqueness Test

008327990-01, P = 1.774555 Days, E = 131.713598 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.1	11.4	9.66	0	4.48	1.45	5.36	9.40	19.1	1.79	11.4	2.12	1.22	0.25	0.50



Stellar Parameters For KIC 008327990

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4714^{+169}_{-169}	$4.623^{+0.024}_{-0.052}$	$0.100^{+0.250}_{-0.300}$	$0.707^{+0.068}_{-0.047}$	$0.779^{+0.046}_{-0.076}$	$3.111^{+0.400}_{-0.626}$
	+4%/-4%	+1%/-1%	+250%/-300%	+10%/-7%	+6%/-10%	+13%/-20%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008327990-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-30 ± 9	$0.91^{+0.69}_{-0.54}$	1518^{+63}_{-61}	3559^{+1369}_{-630}	13^{+62}_{-9}
Alt.	-111 ± 10	$1.20^{+0.71}_{-0.67}$	1516^{+68}_{-56}	4067^{+1778}_{-597}	29^{+122}_{-18}

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

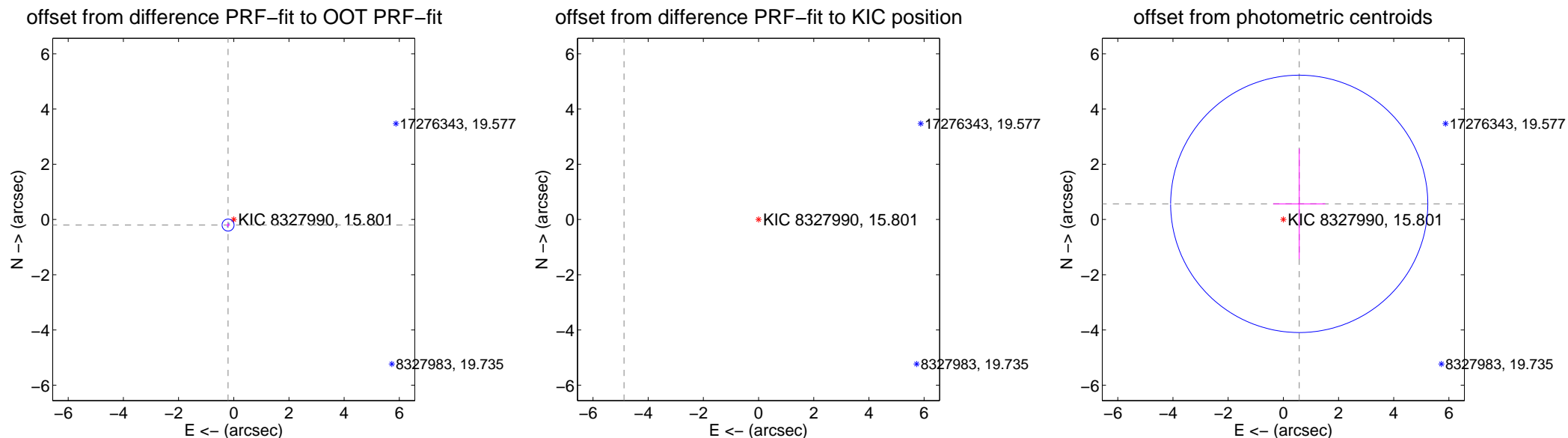
DV Centroid Data

Supplemental centroid analysis for 008327990-01. Kepler magnitude: 15.80. Transit SNR 8.17

There are 3 quarters with good PRF difference image offsets

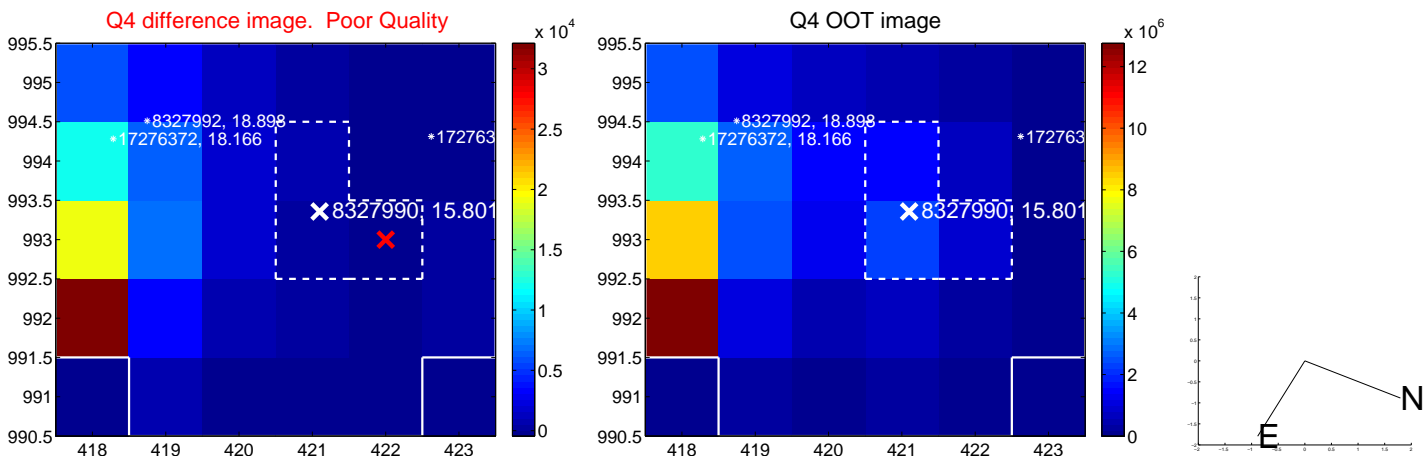
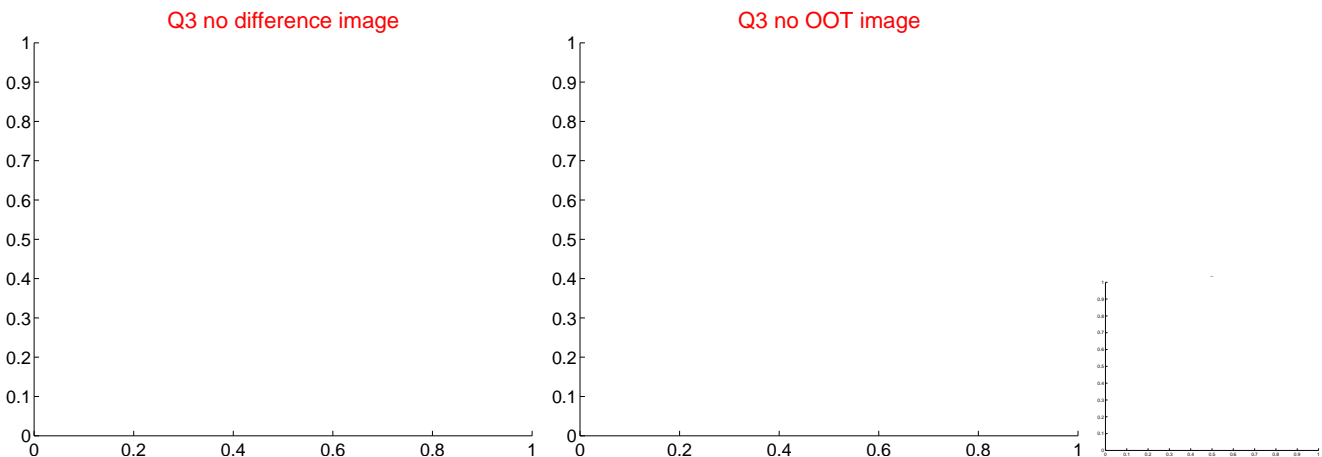
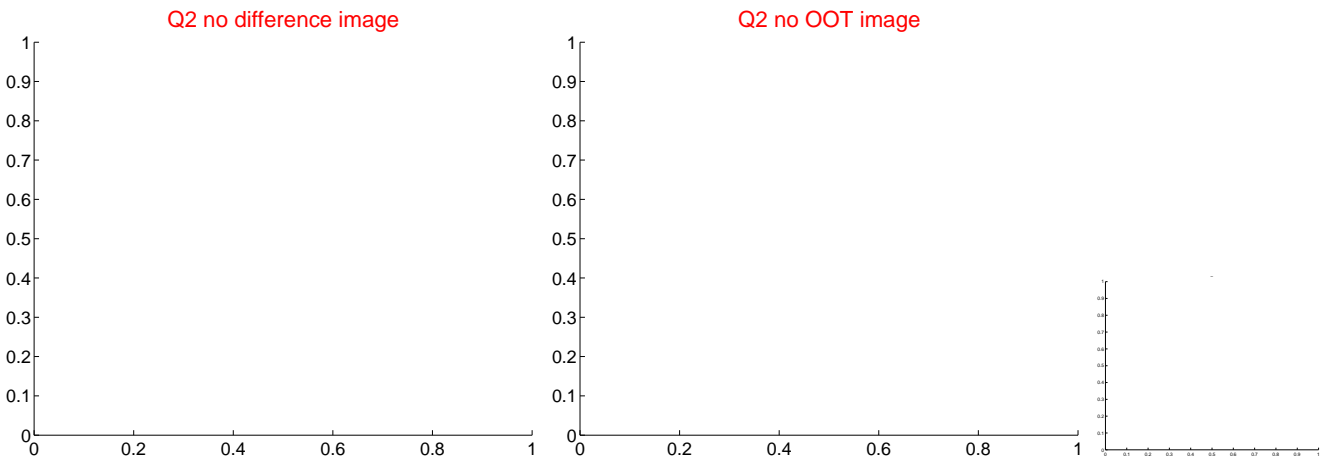
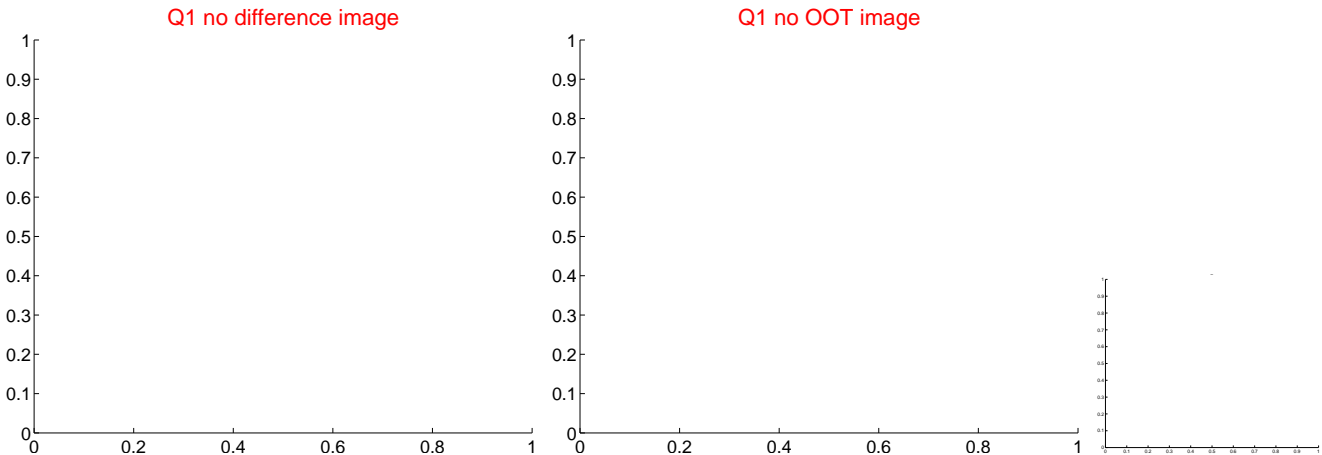
The OOT PRF centroid is offset from the target star catalog position by about 8.55 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.288 ± 0.072	3.97	0.206 ± 0.069	-0.201 ± 0.076
PRF-fit source offset from KIC position	8.846 ± 0.073	121.01	4.876 ± 0.069	-7.381 ± 0.075
photometric centroid source offset	0.81 ± 1.55	0.52	-0.58 ± 0.95	0.57 ± 2.00

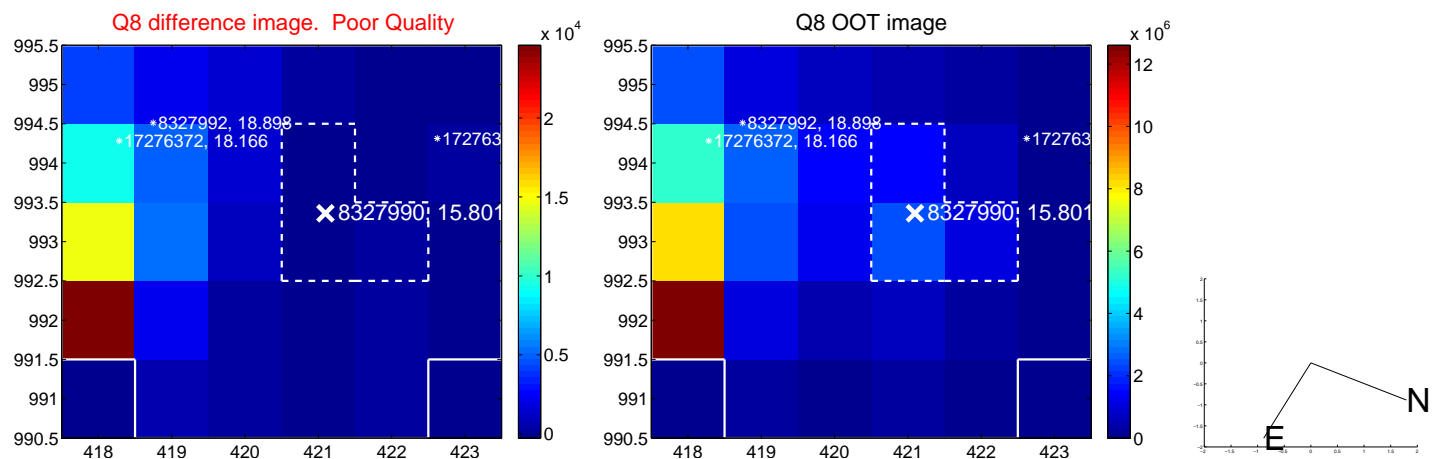
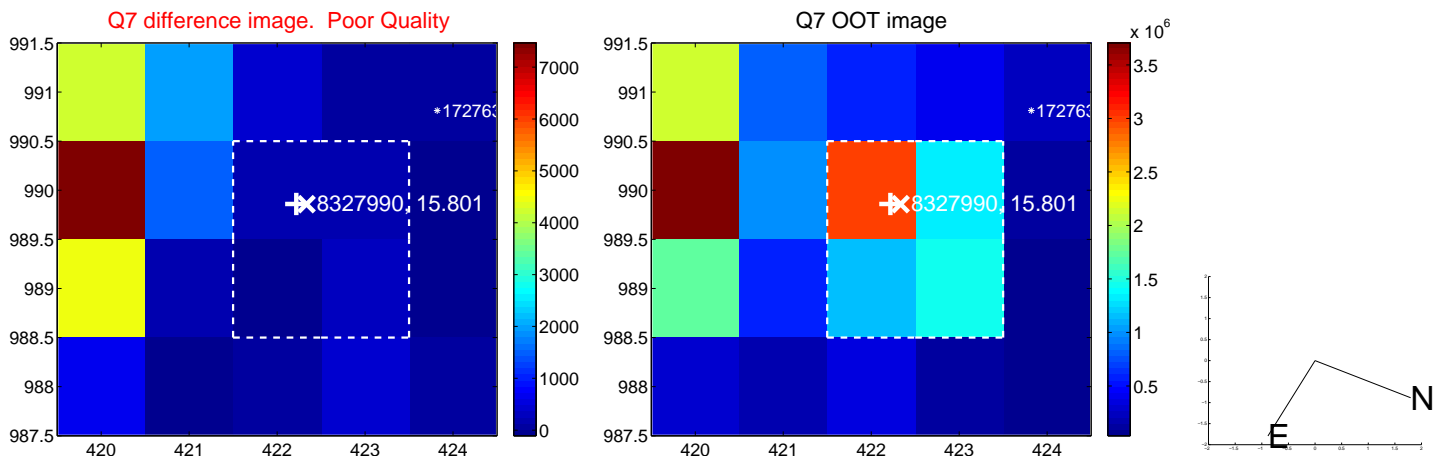
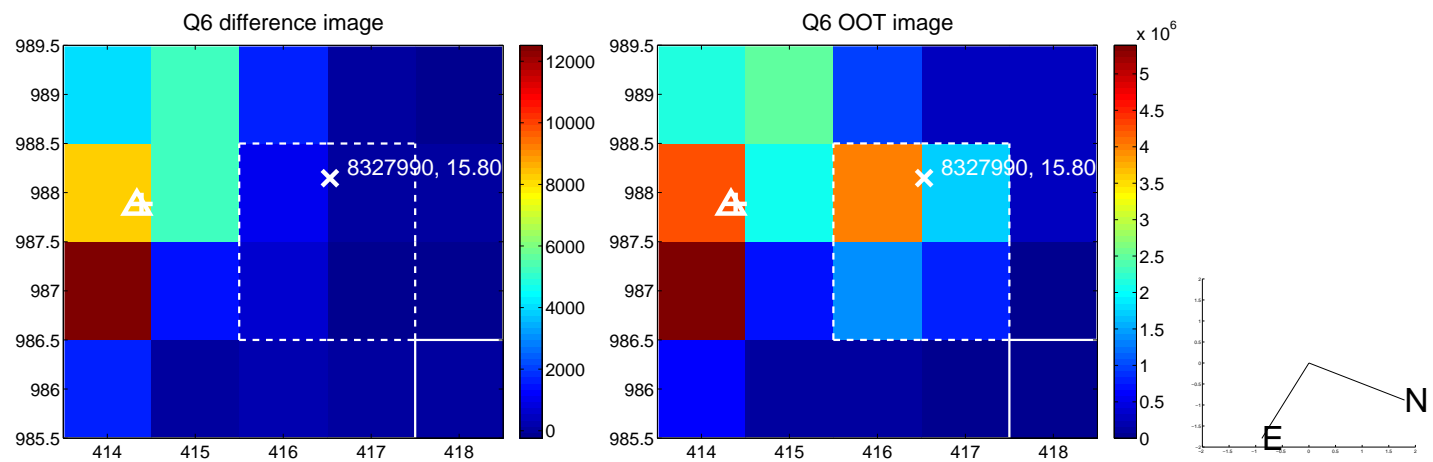
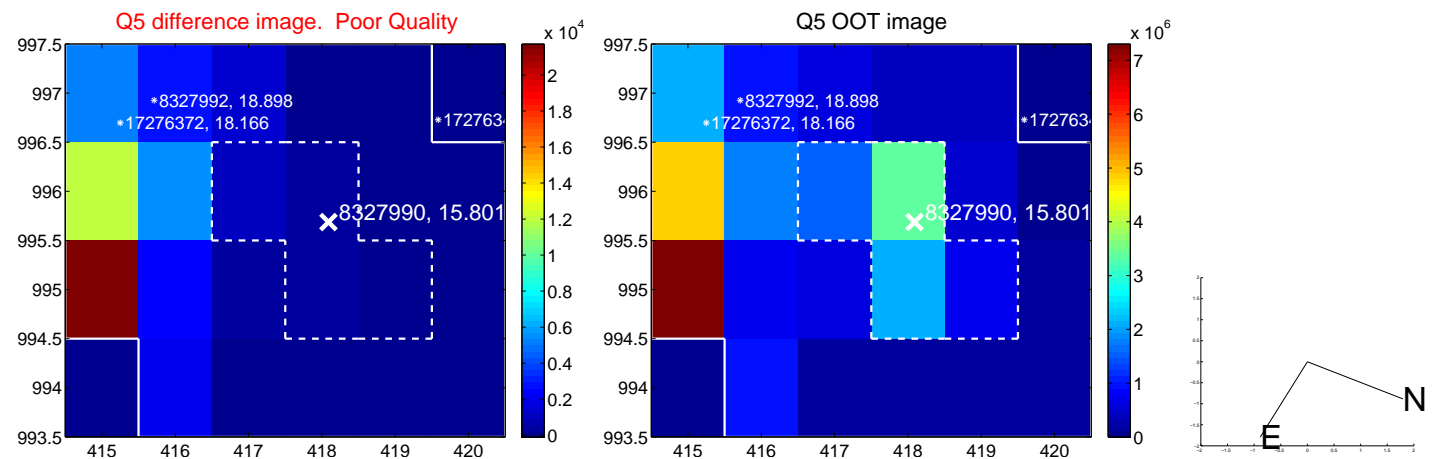


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

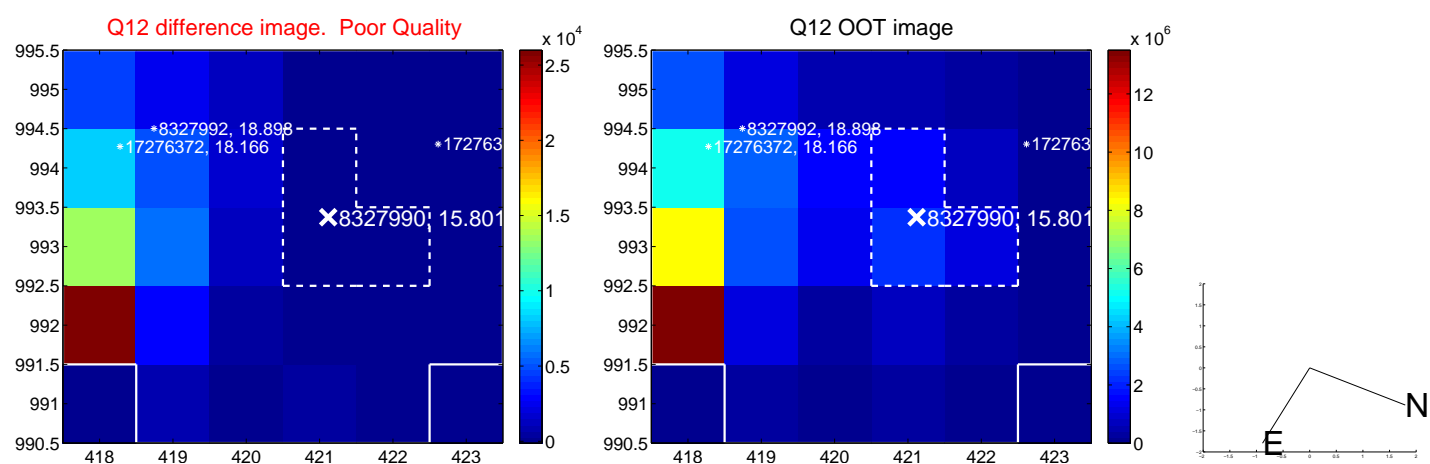
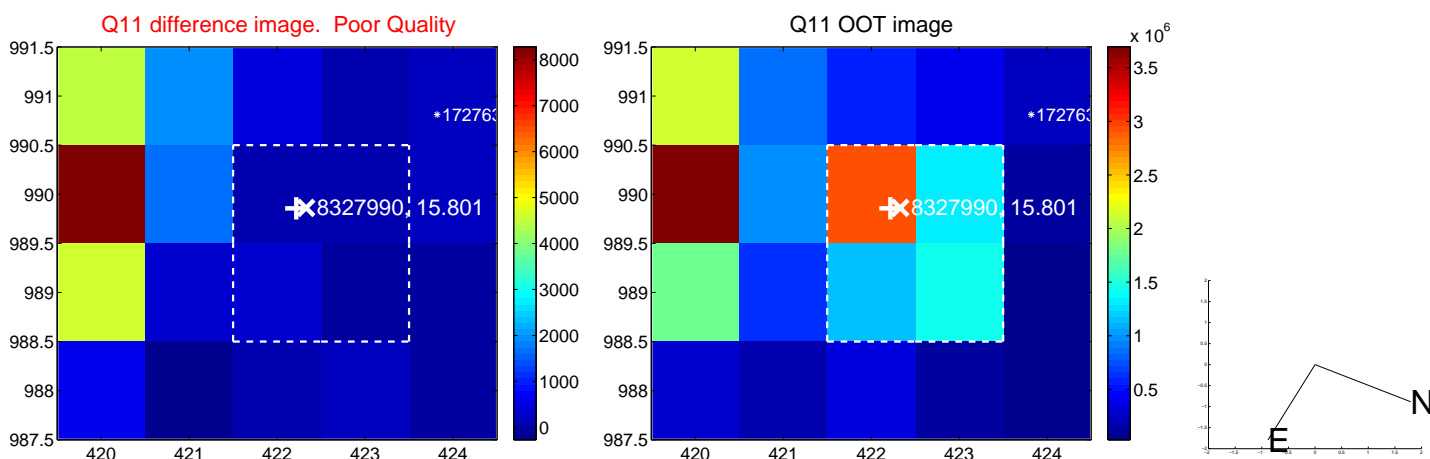
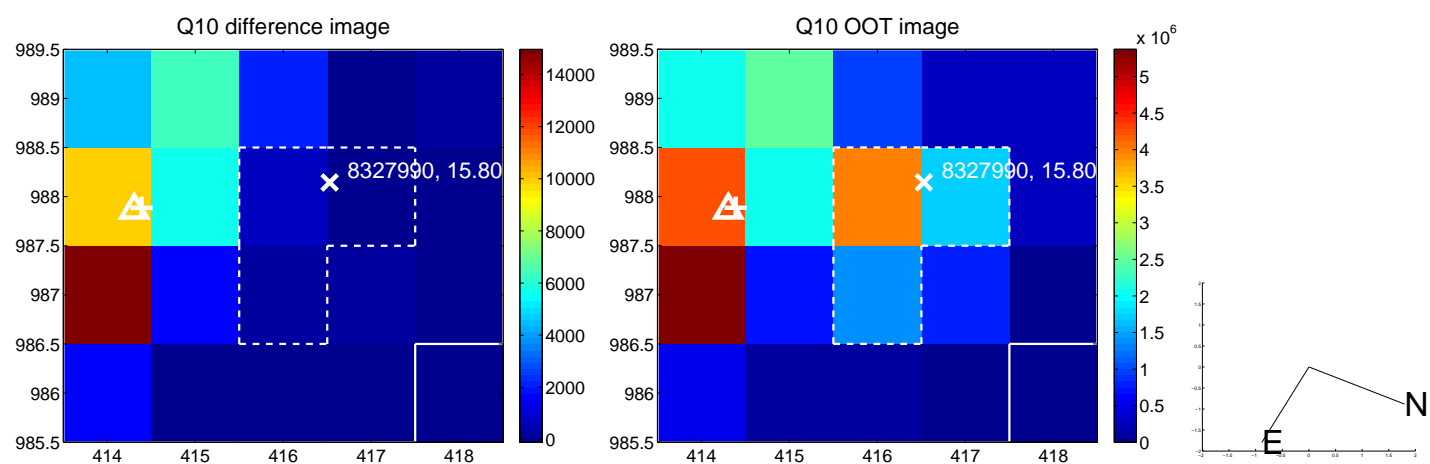
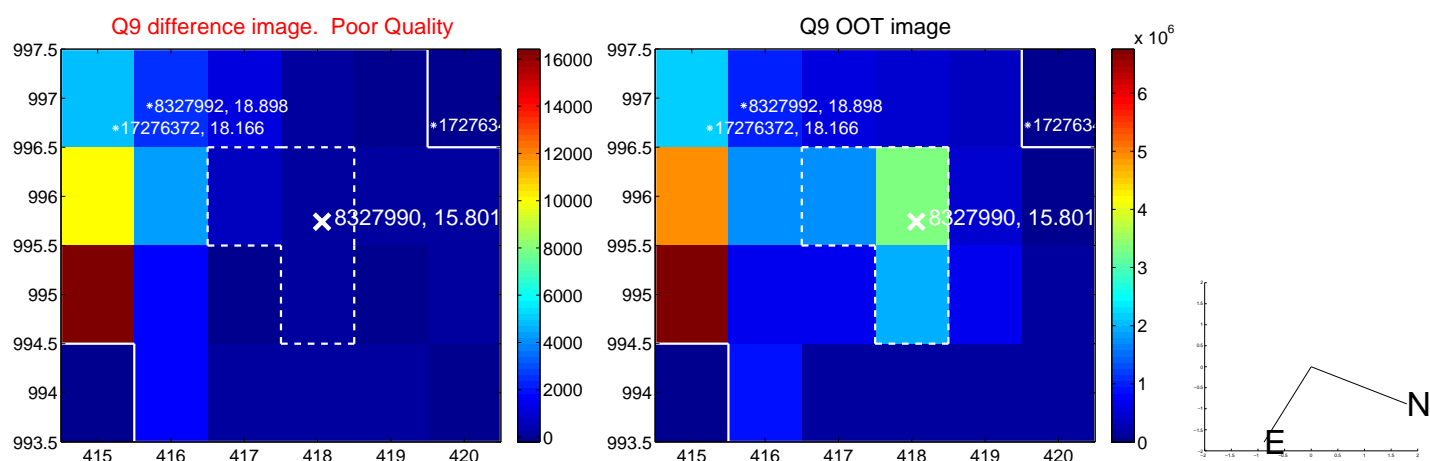
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



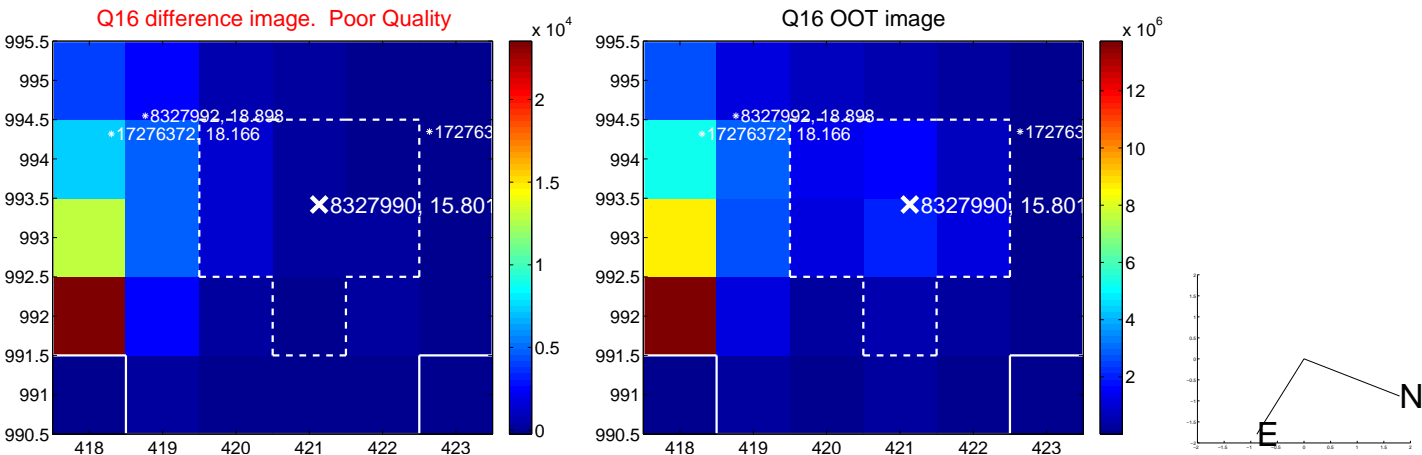
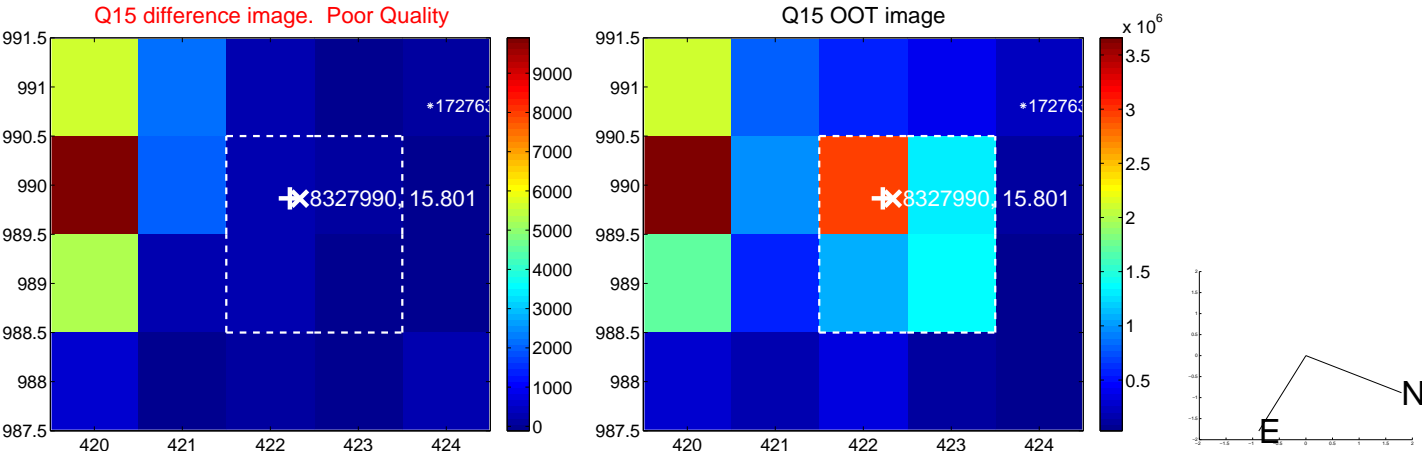
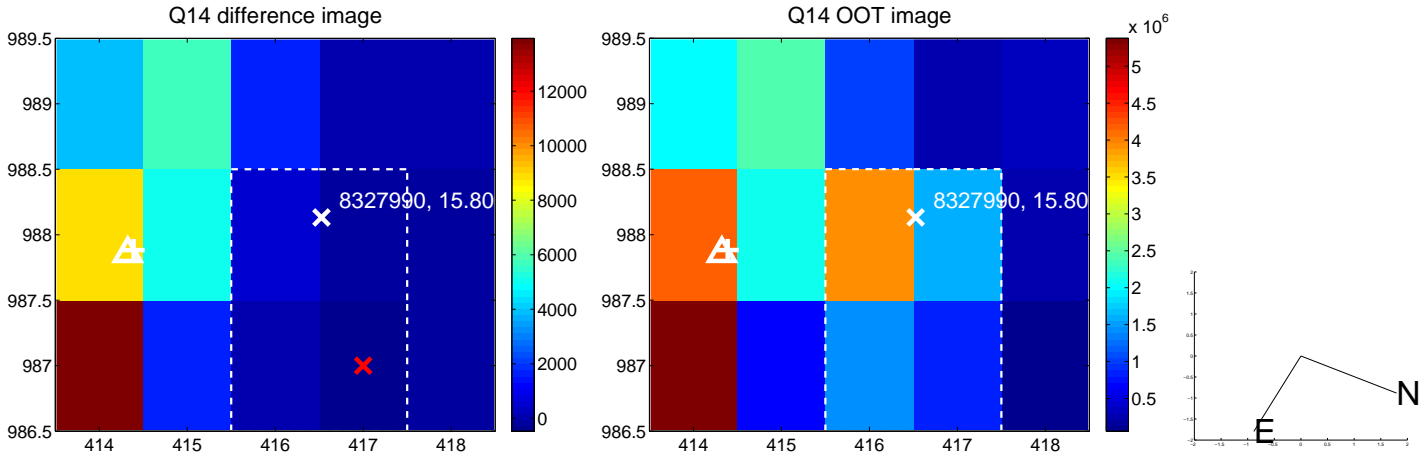
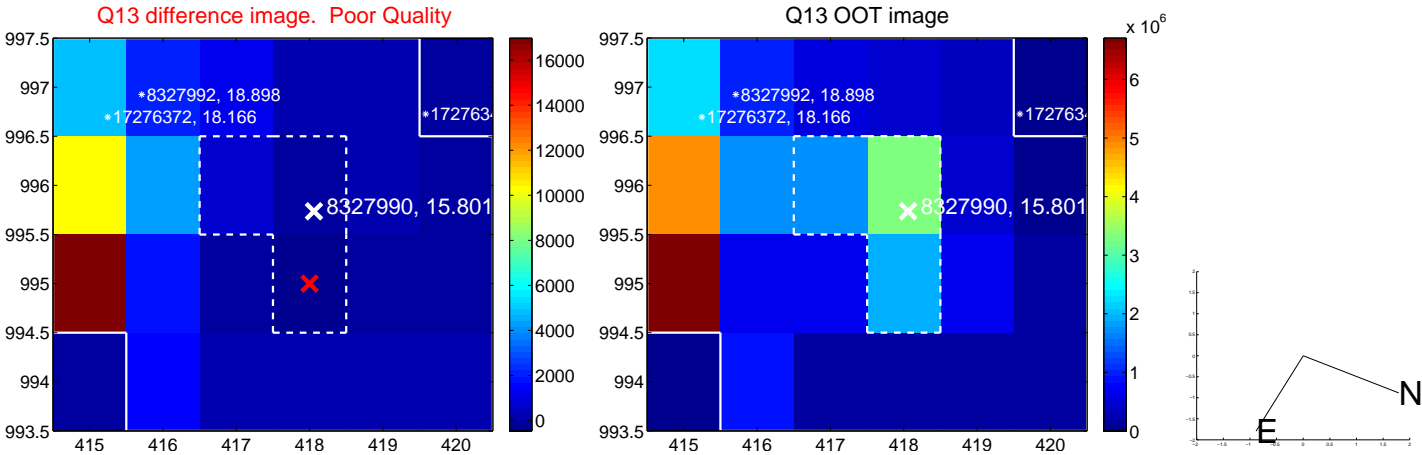
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



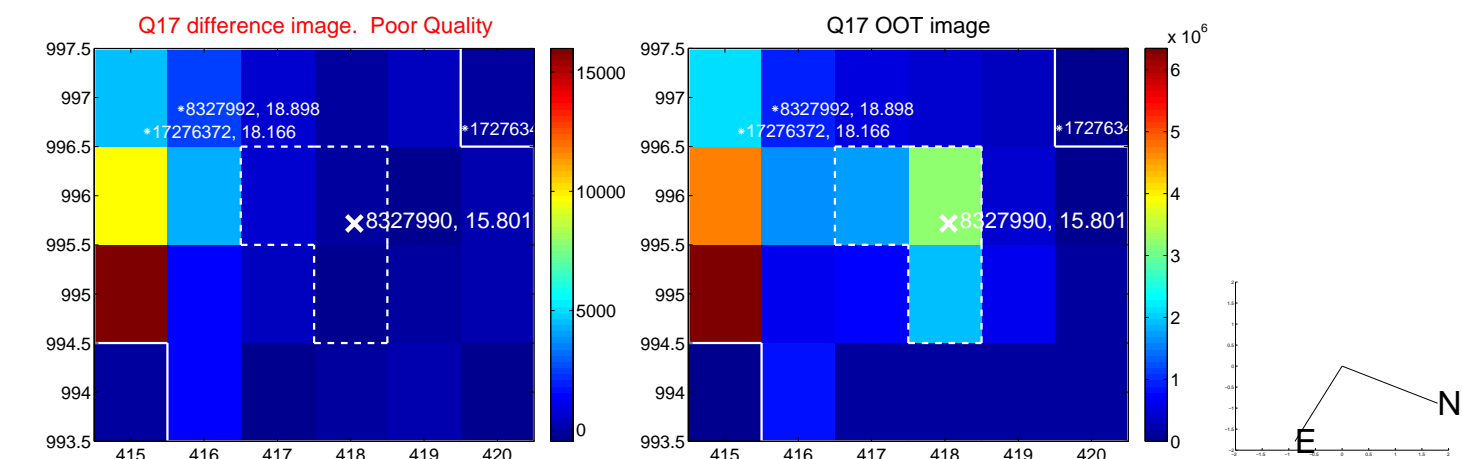
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



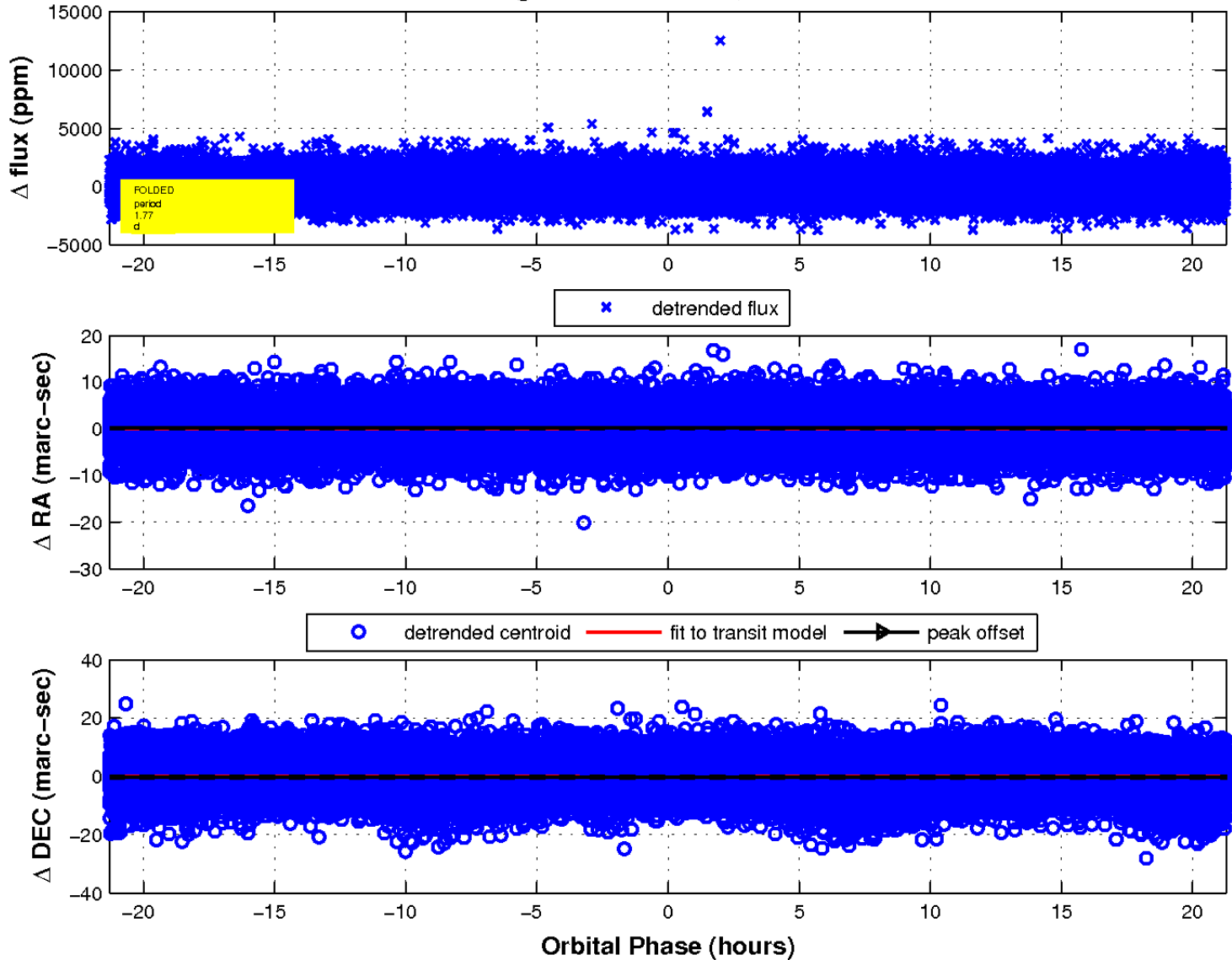
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



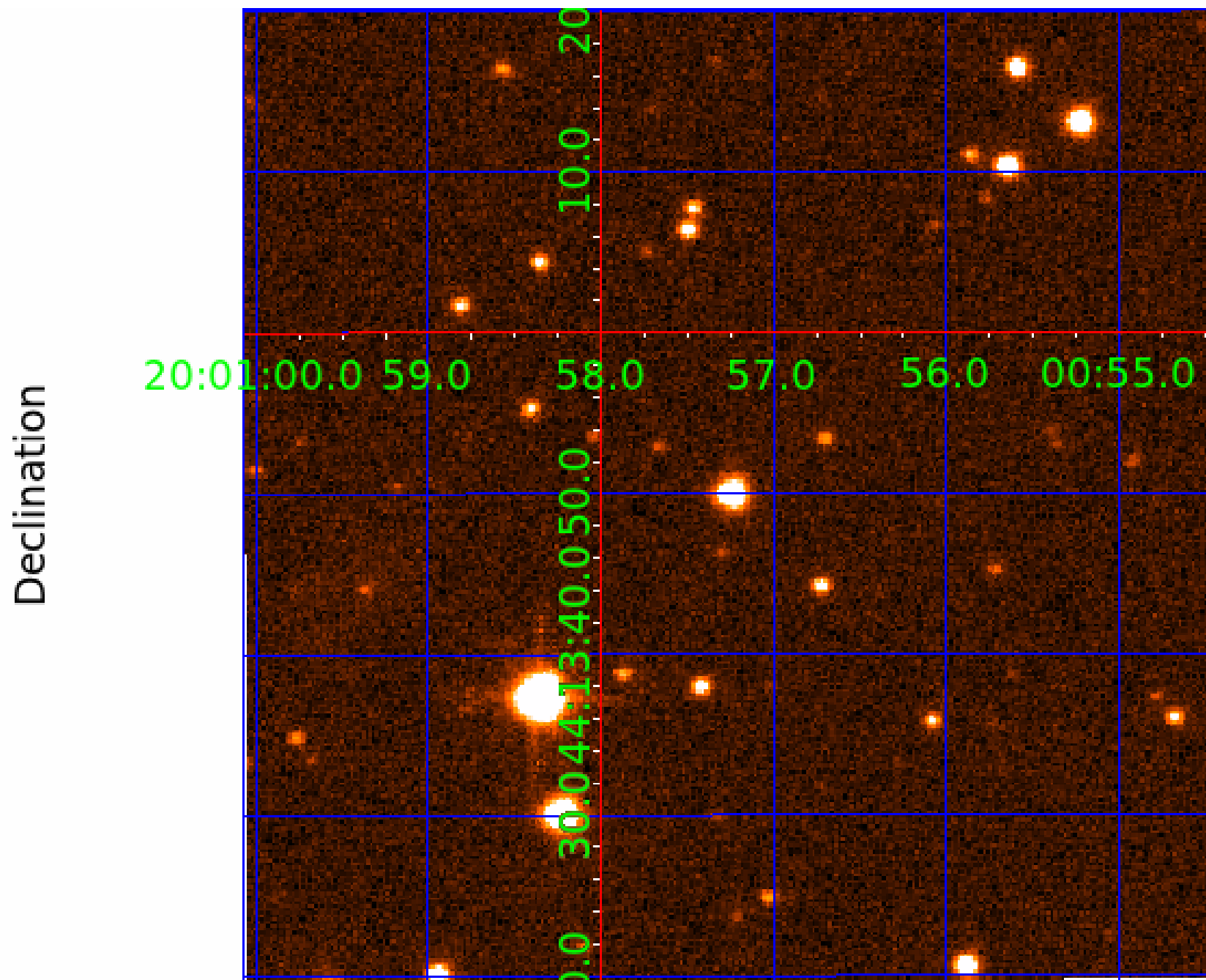
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 3



UKIRT Image



KIC 008327990

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})
008327990-01	OBS	No	1.774611	131.701166	118.3	7.516	7.6	8.2	0.71	4714	0.75	321.07
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008327990-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
008327990-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET
008327990-03	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET

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

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

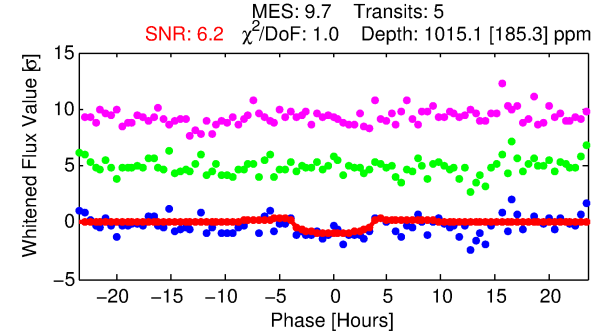
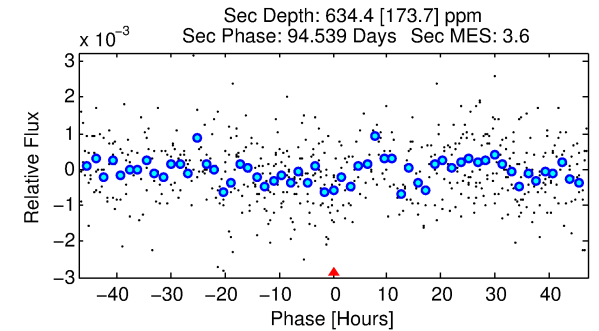
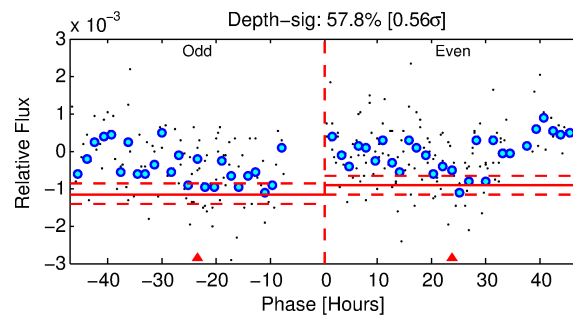
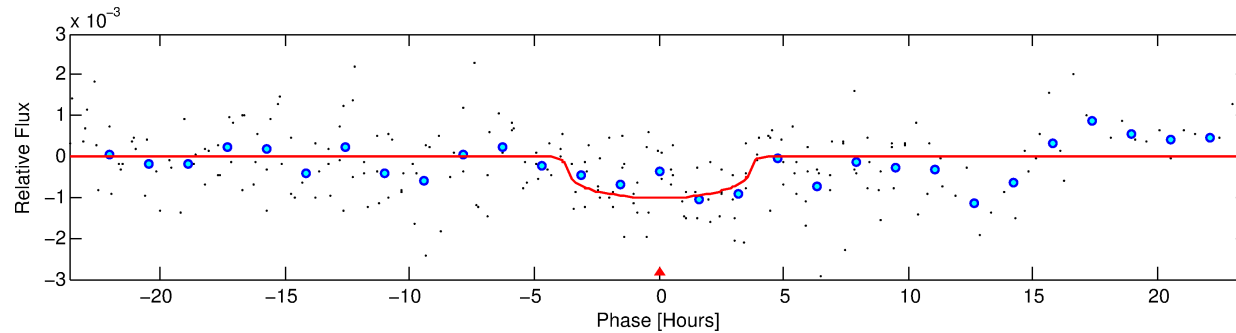
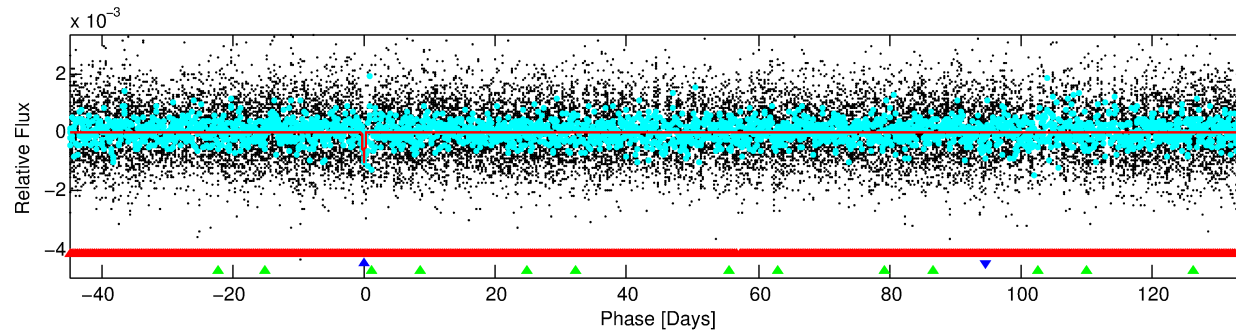
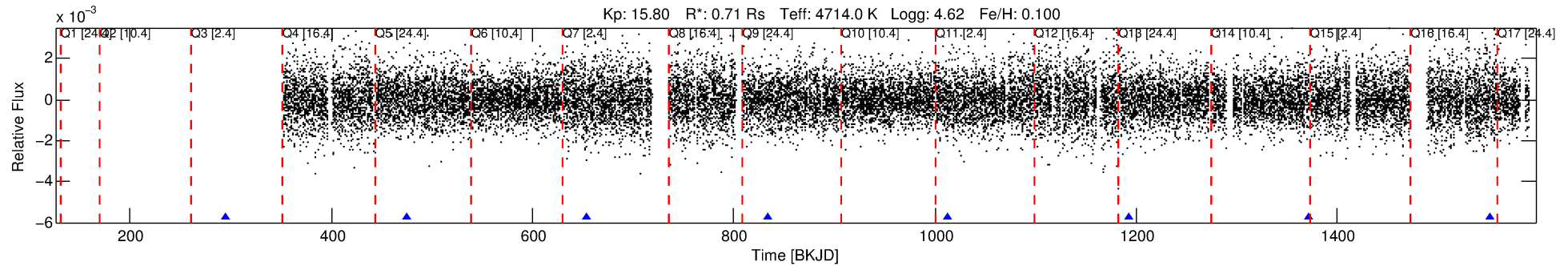
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008327990-02

No Significant Match Found

DV One-Page Summary

KIC: 8327990 Candidate: 2 of 3 Period: 179.448 d



DV Fit Results:

Period = 179.44820 [0.01203] d
Epoch = 295.1411 [0.0412] BKJD
Rp/R* = 0.0307 [0.0284]
a/R* = 136.74 [398.76]
b = 0.67 [2.47]
Seff = 0.68 [0.12]
Teq = 232 [10] K
Rp = 2.37 [2.20] Re
a = 0.5696 [0.0430] AU
Ag = 20157.22 [37754.59] [0.53 σ]
Teffp = 4268 [2001] K [2.02 σ]

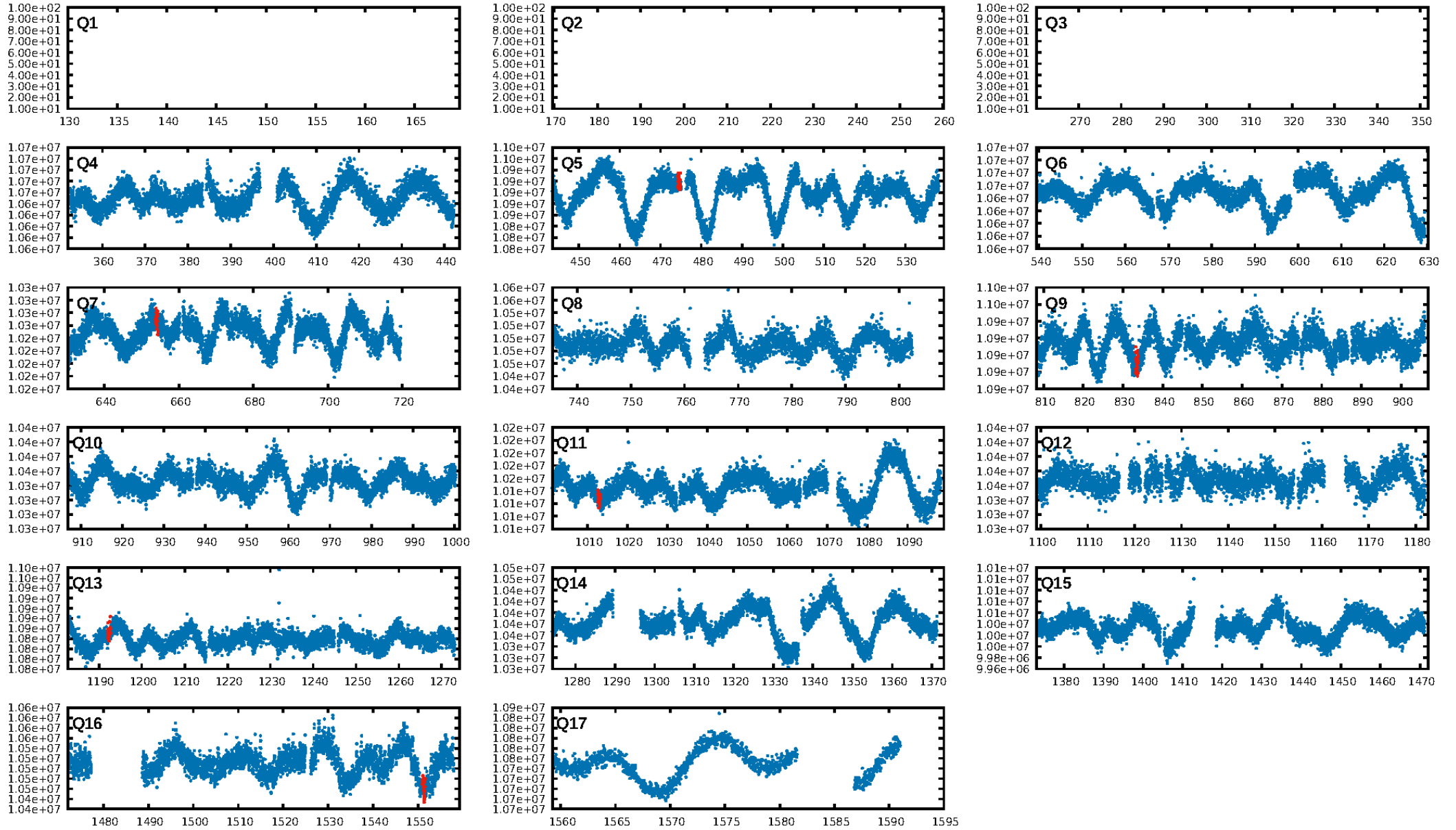
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [203.42 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.78e-18
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 1.079
Centroid-sig: 1.6%
Centroid-so: 2.220 arcsec [0.80 σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 0.25 [1/4]

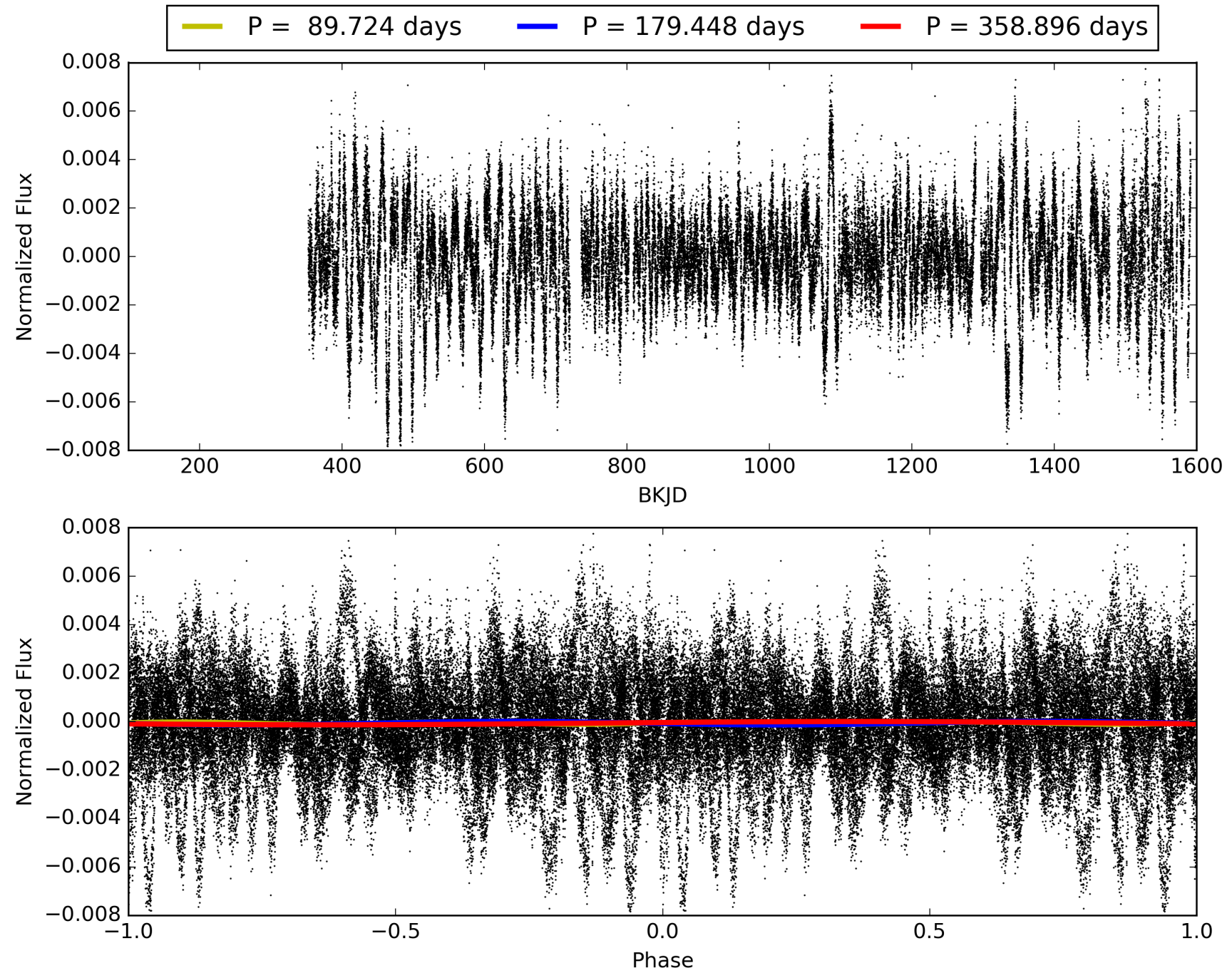
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:52:17 Z

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

TCE 008327990-02, PDC Light Curves

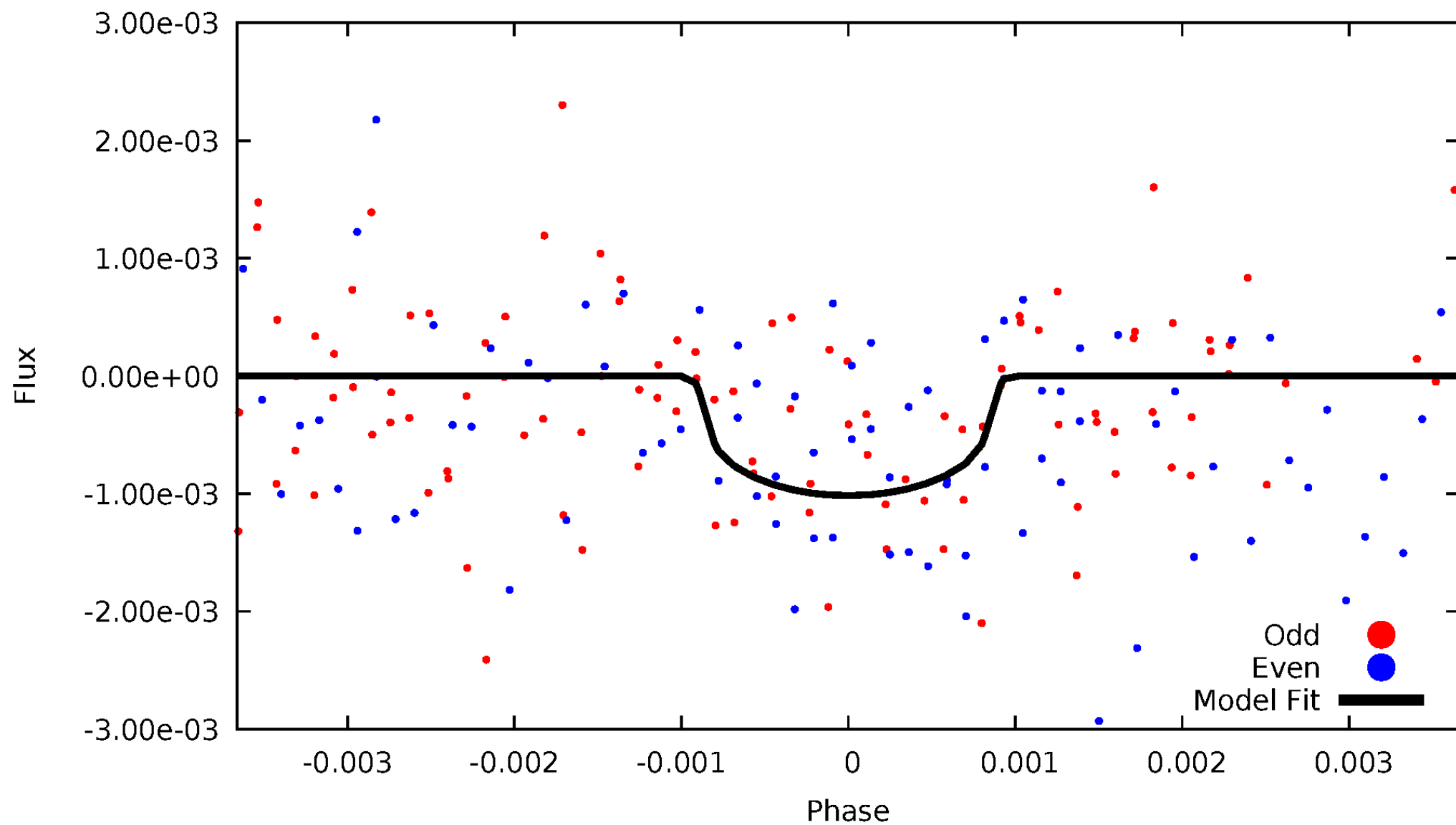


TCE 008327990-02



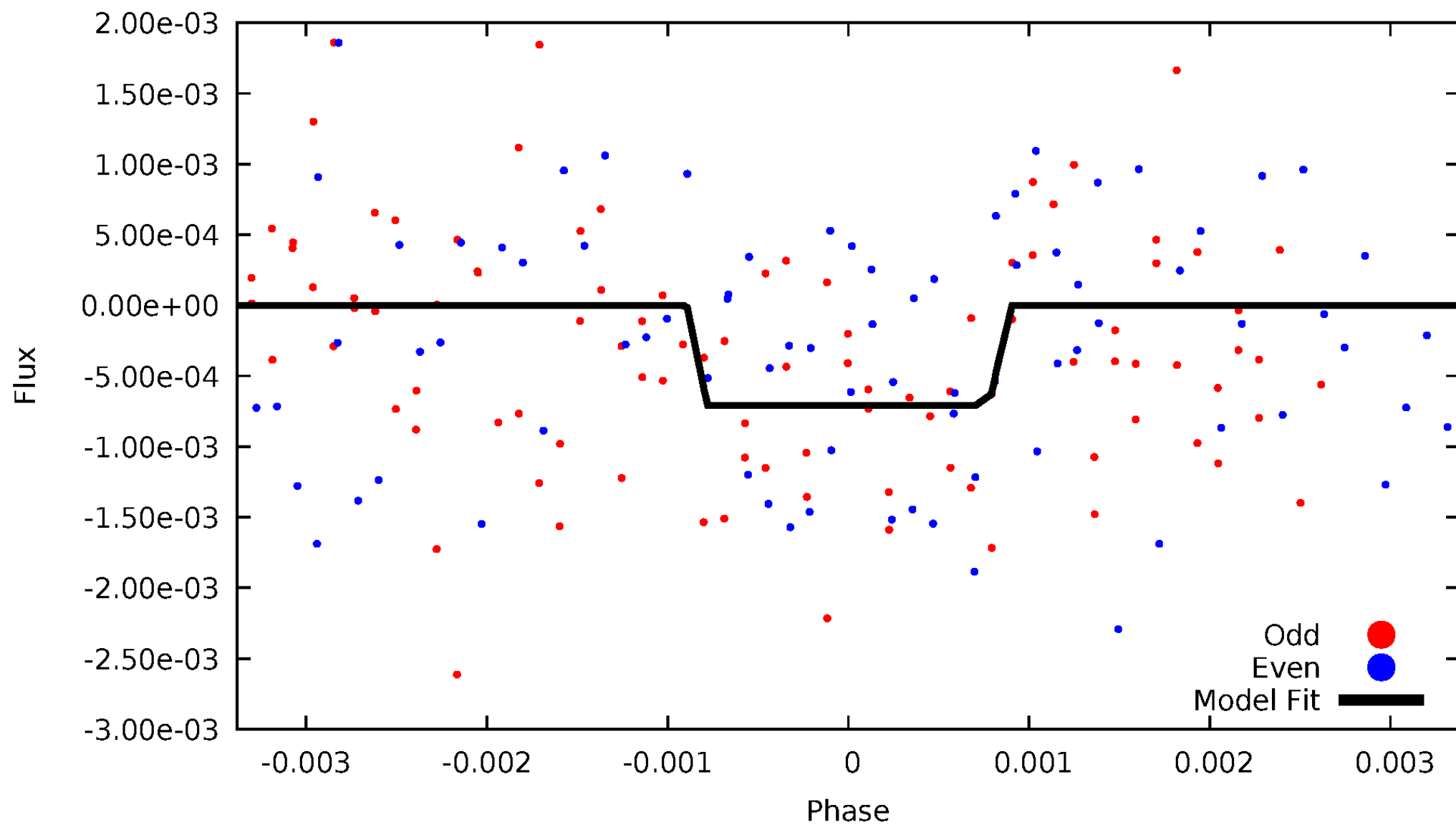
DV Odd/Even

TCE 008327990-02



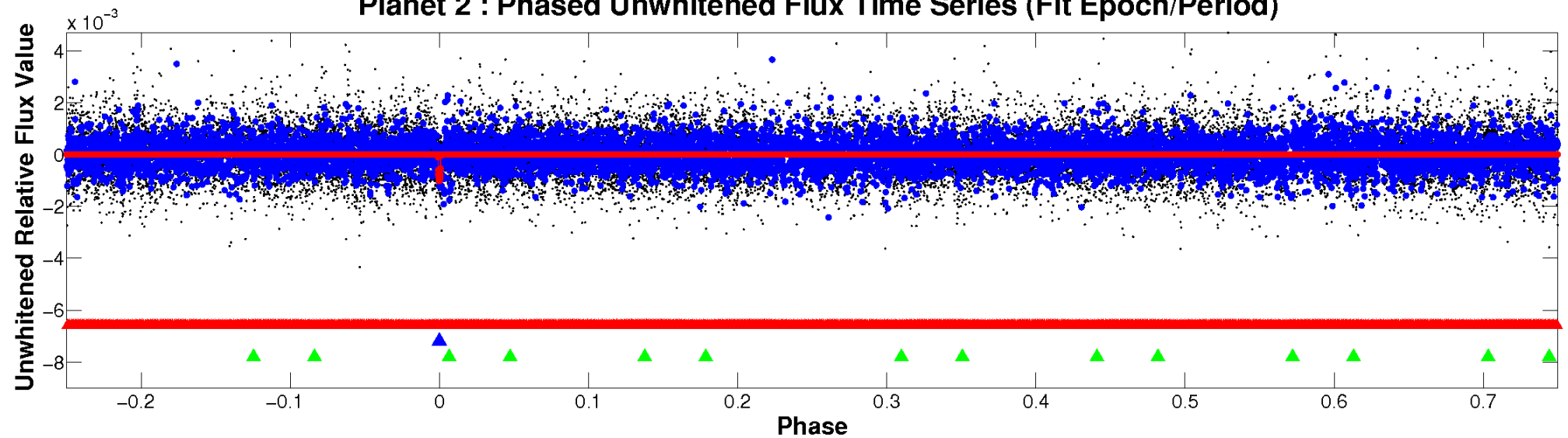
ALT Odd/Even

TCE 008327990-02

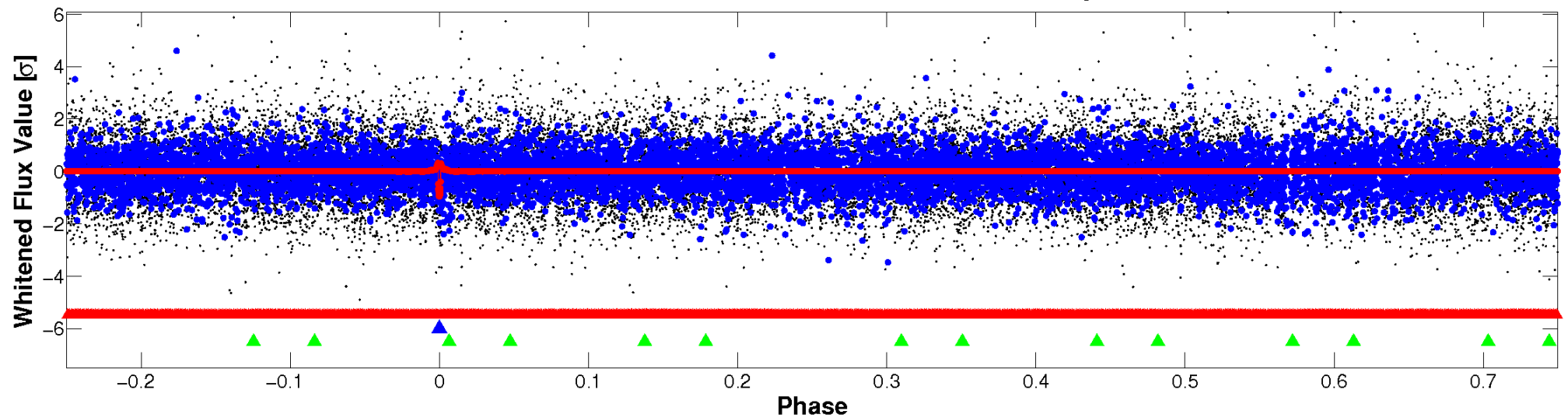


Non-Whitened Vs. Whitened Light Curve

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

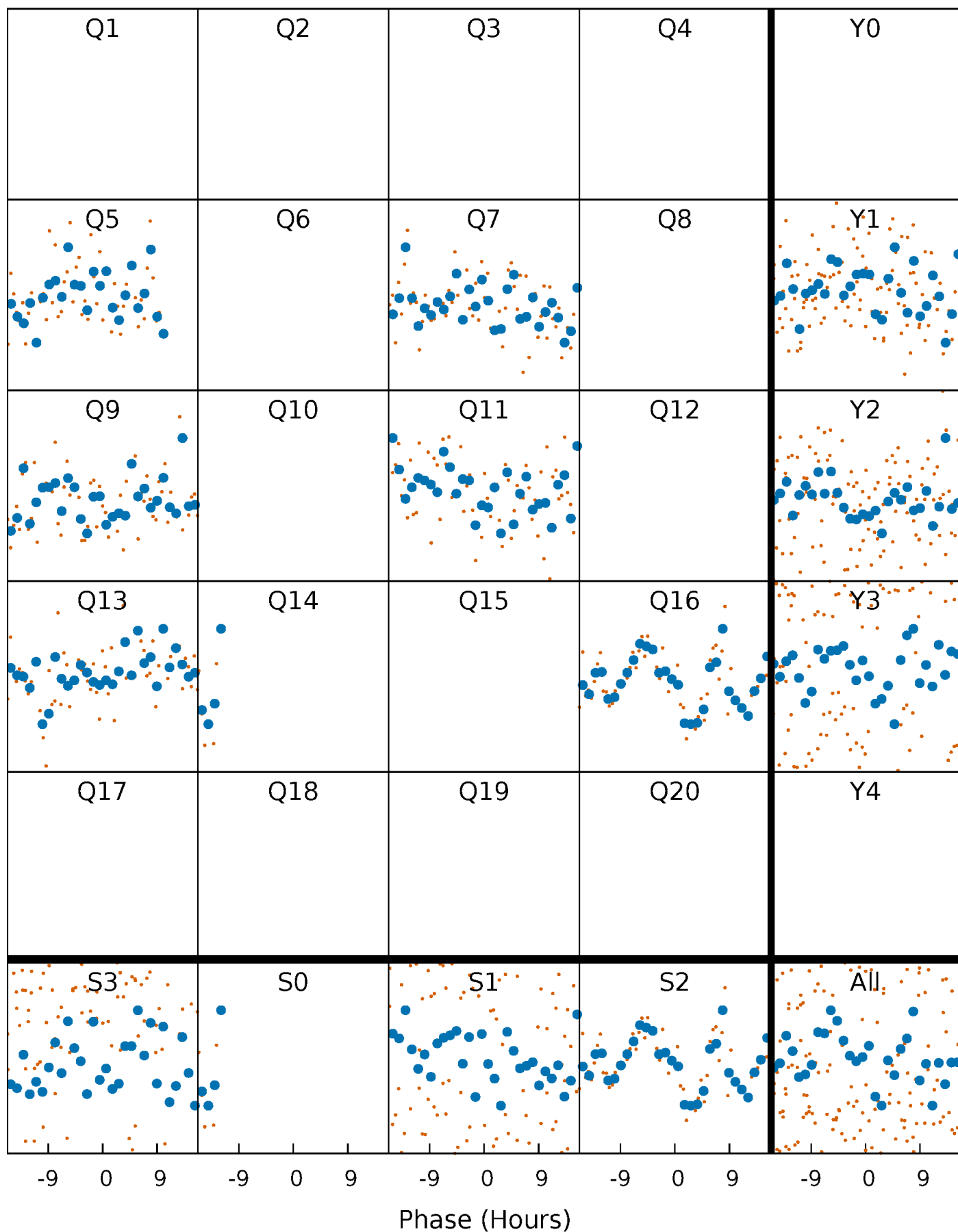


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



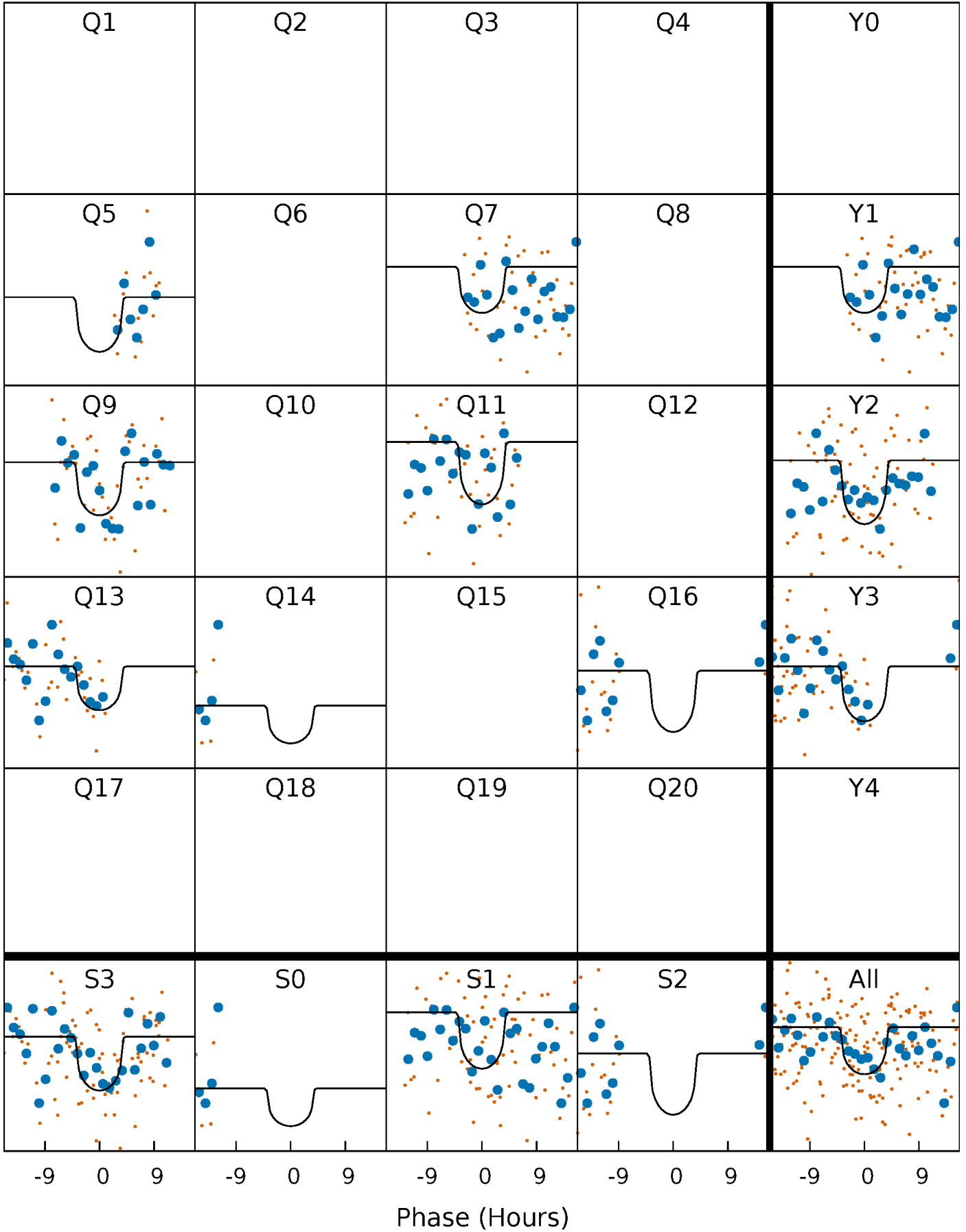
PDC Quarter-Phased Transit Curves

TCE 008327990-02 P=179.448199 Days $T_0=295.141124$ (BKJD)



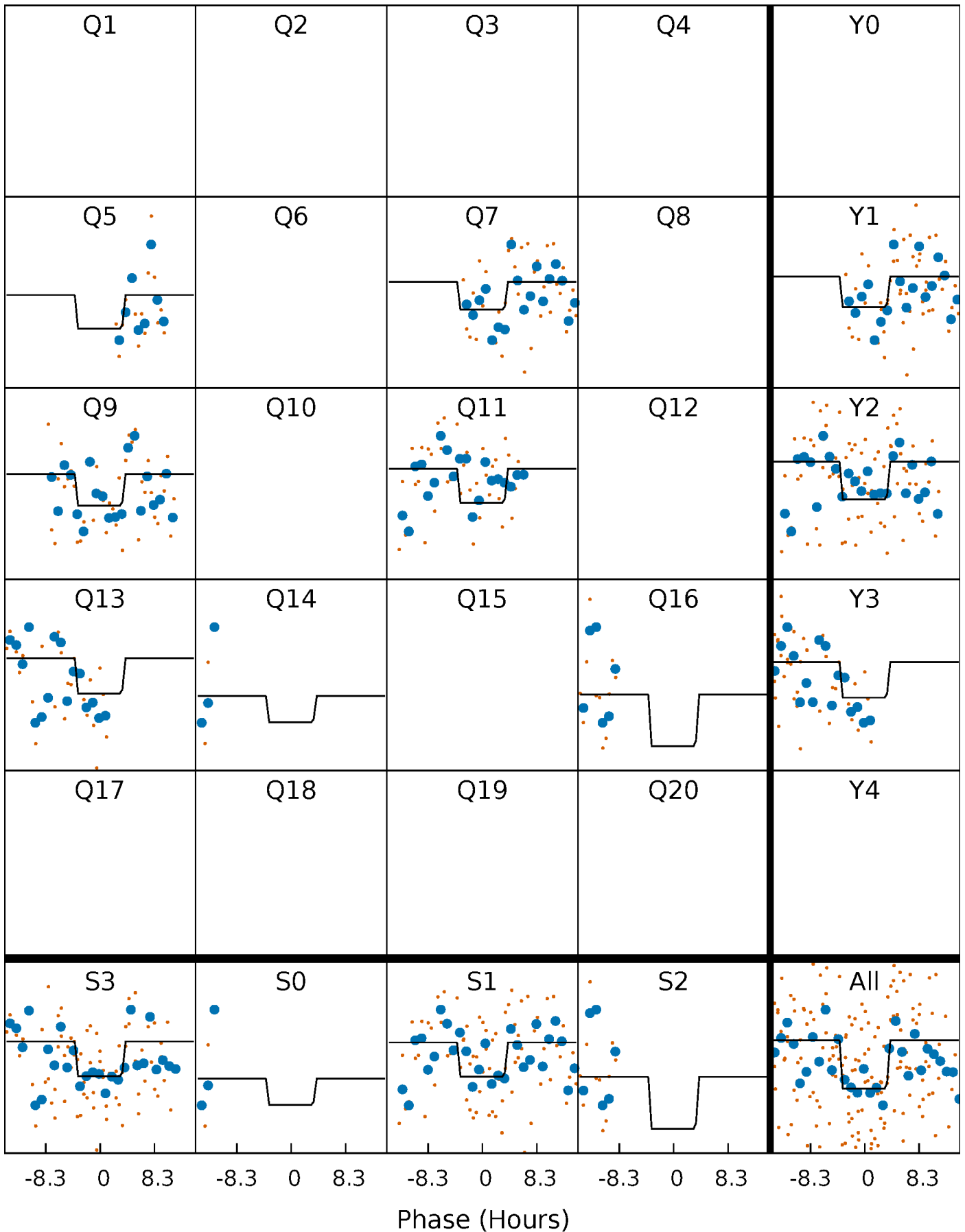
DV Quarter-Phased Transit Curves

TCE 008327990-02 $P=179.448199$ Days $T_0=295.141124$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

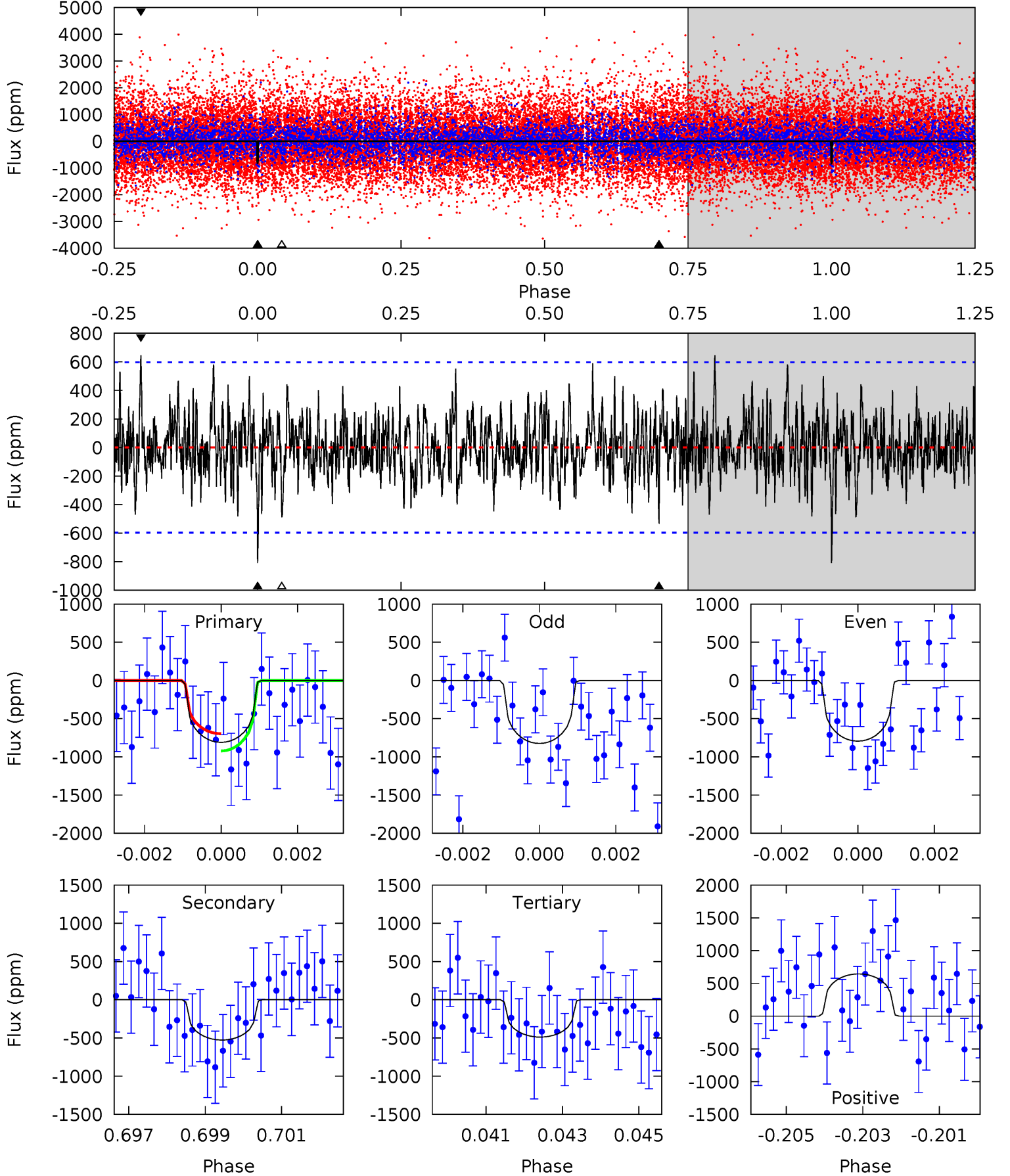
TCE 008327990-02 $P=179.447524$ Days $T_0=295.143911$ (BKJD)



DV Model-Shift Uniqueness Test

008327990-02, $P = 179.448199$ Days, $E = 295.141124$ Days

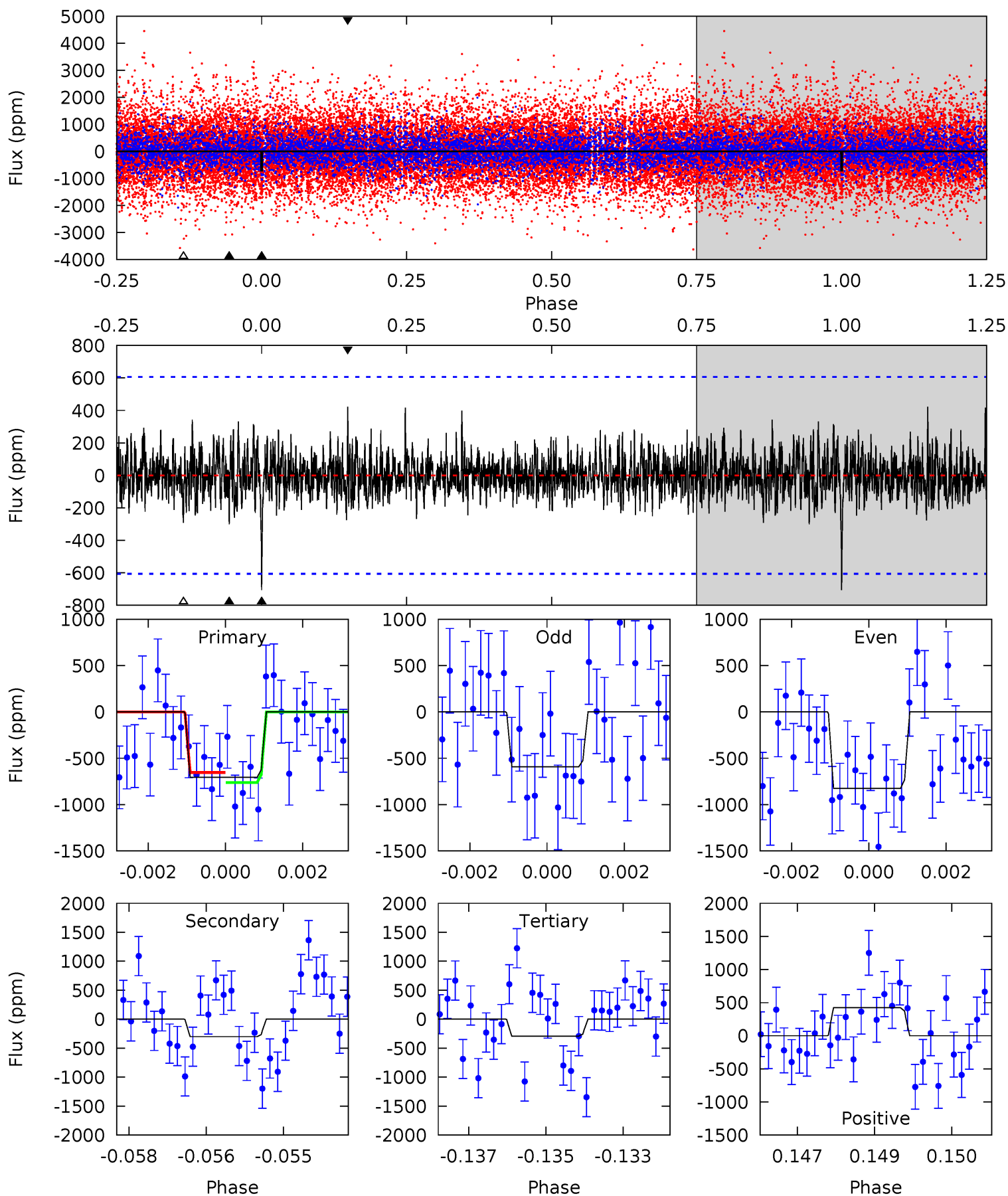
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.23	4.71	4.37	5.76	5.33	3.10	1.55	2.87	1.47	0.34	-1.05	0.13	1.01	0.44	1.01



Alt Model-Shift Uniqueness Test

008327990-02, P = 179.447524 Days, E = 295.143911 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.24	2.65	2.58	3.73	5.36	3.14	0.86	3.66	2.51	0.08	-1.08	1.05	0.87	0.37	0.48



Stellar Parameters For KIC 008327990

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4714^{+169}_{-169}	$4.623^{+0.024}_{-0.052}$	$0.100^{+0.250}_{-0.300}$	$0.707^{+0.068}_{-0.047}$	$0.779^{+0.046}_{-0.076}$	$3.111^{+0.400}_{-0.626}$
	+4%/-4%	+1%/-1%	+250%/-300%	+10%/-7%	+6%/-10%	+13%/-20%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008327990-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-527 ± 112	$2.76^{+2.07}_{-1.74}$	327^{+13}_{-13}	4026^{+2098}_{-692}	12639^{+80465}_{-8643}
Alt.	-300 ± 113	$2.49^{+2.08}_{-1.53}$	326^{+13}_{-13}	3726^{+1863}_{-678}	8196^{+50808}_{-6014}

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

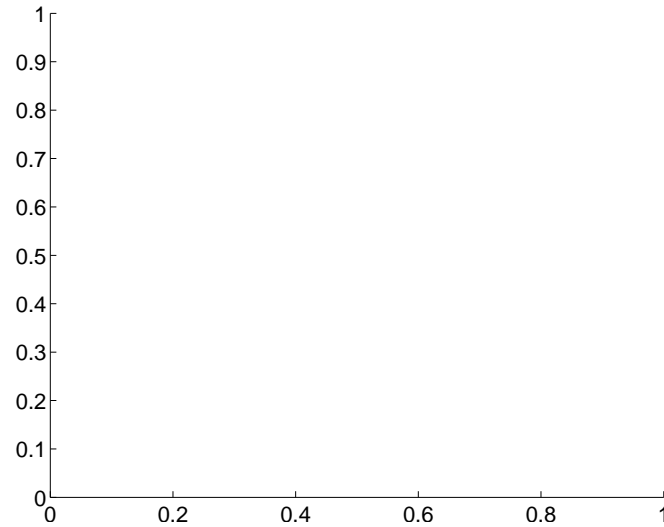
Supplemental centroid analysis for 008327990-02. Kepler magnitude: 15.80. Transit SNR 6.20

There are 0 quarters with good PRF difference image offsets

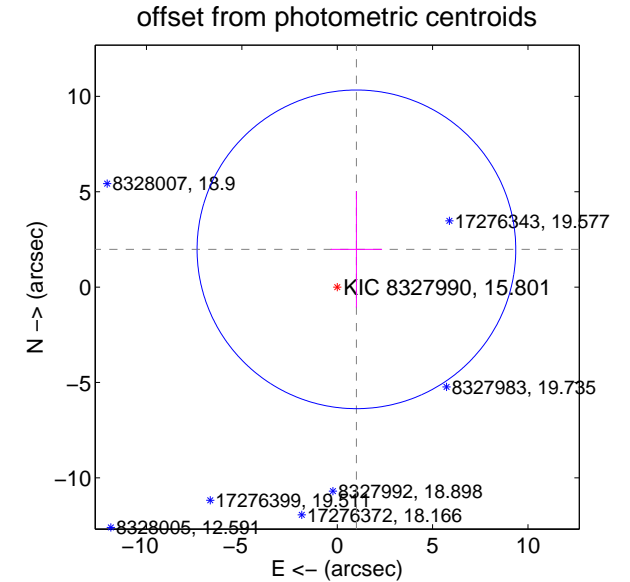
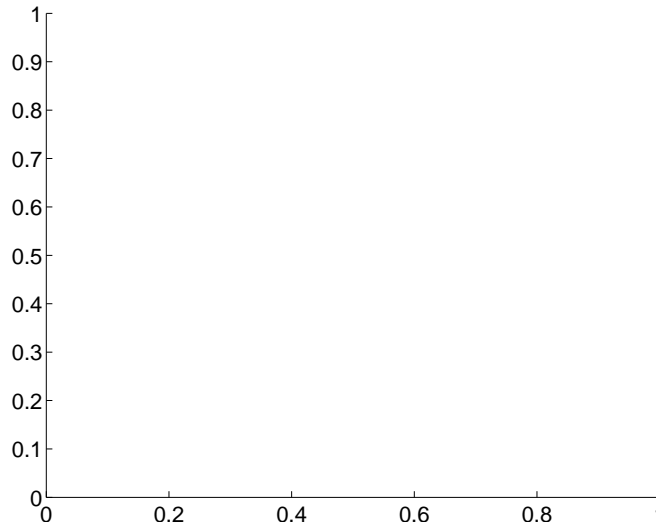
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	2.22 ± 2.78	0.80	-1.01 ± 1.34	1.98 ± 3.05

There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC



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.

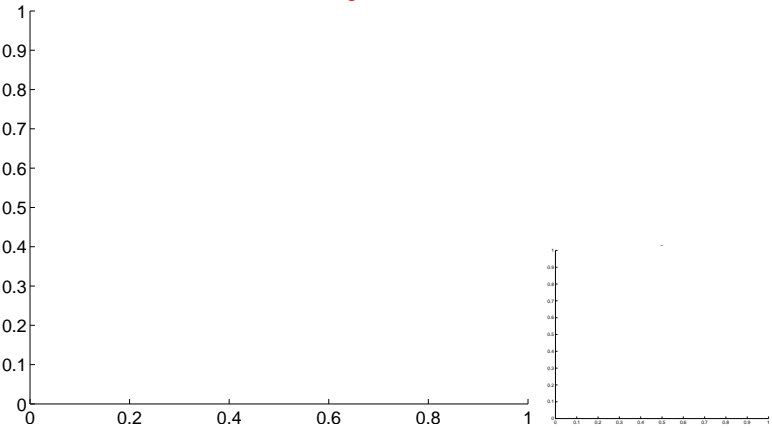


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

Q5 no difference image



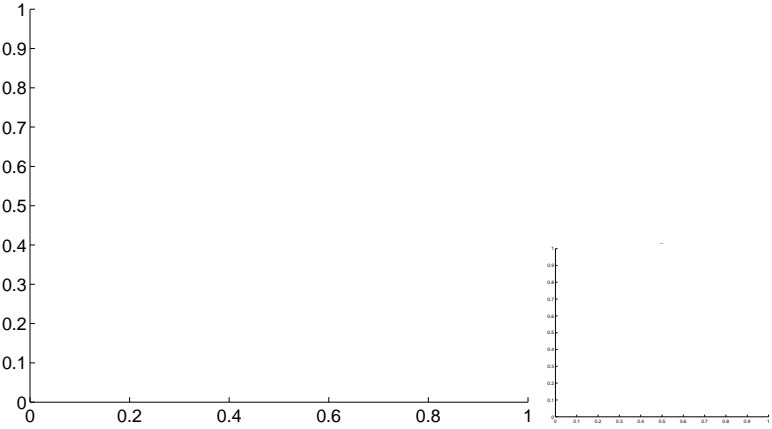
Q5 no OOT image



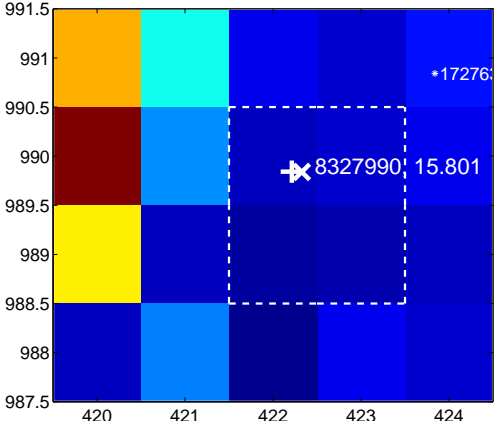
Q6 no difference image



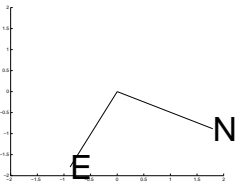
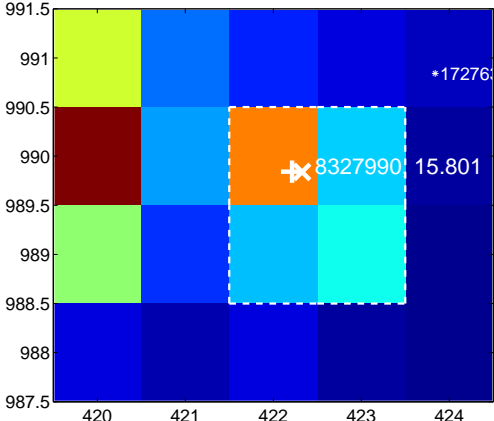
Q6 no OOT image



Q7 difference image. Poor Quality



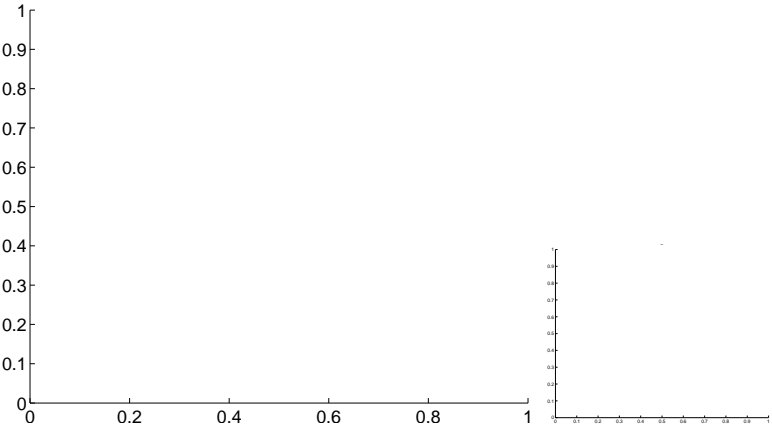
Q7 OOT image



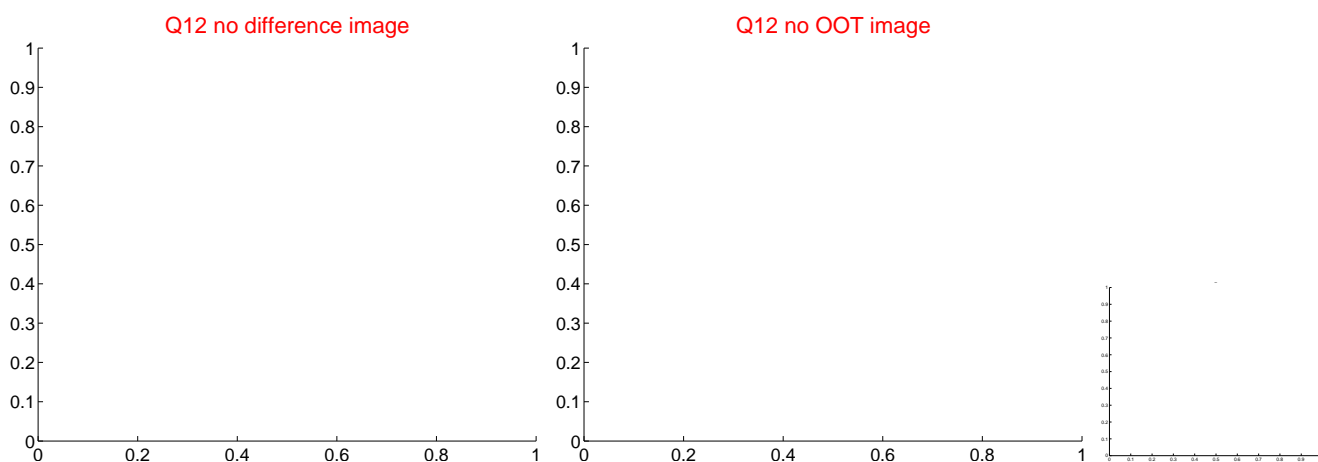
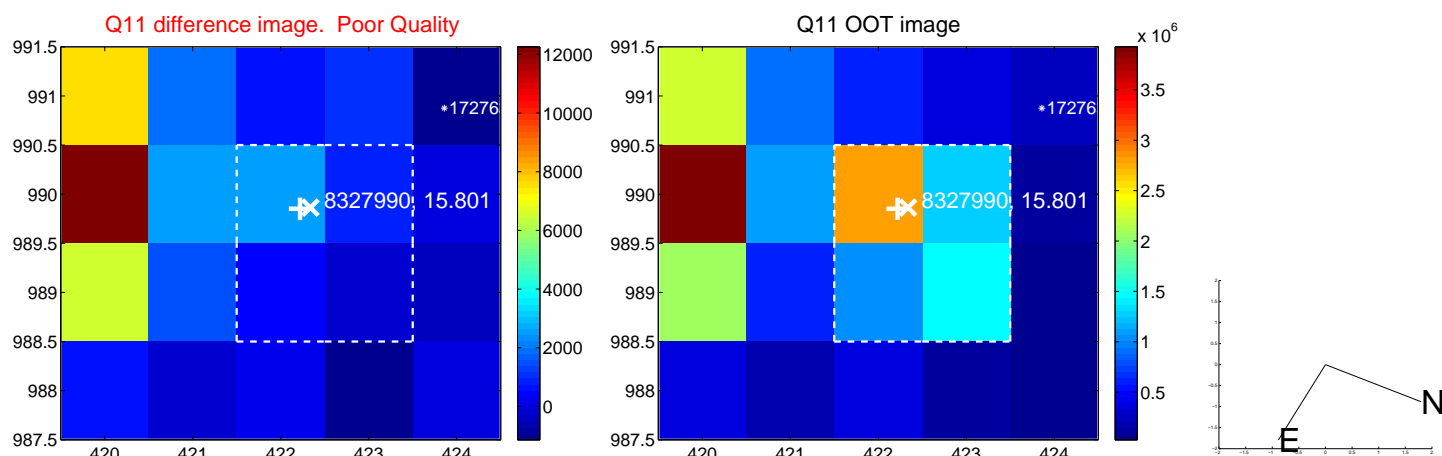
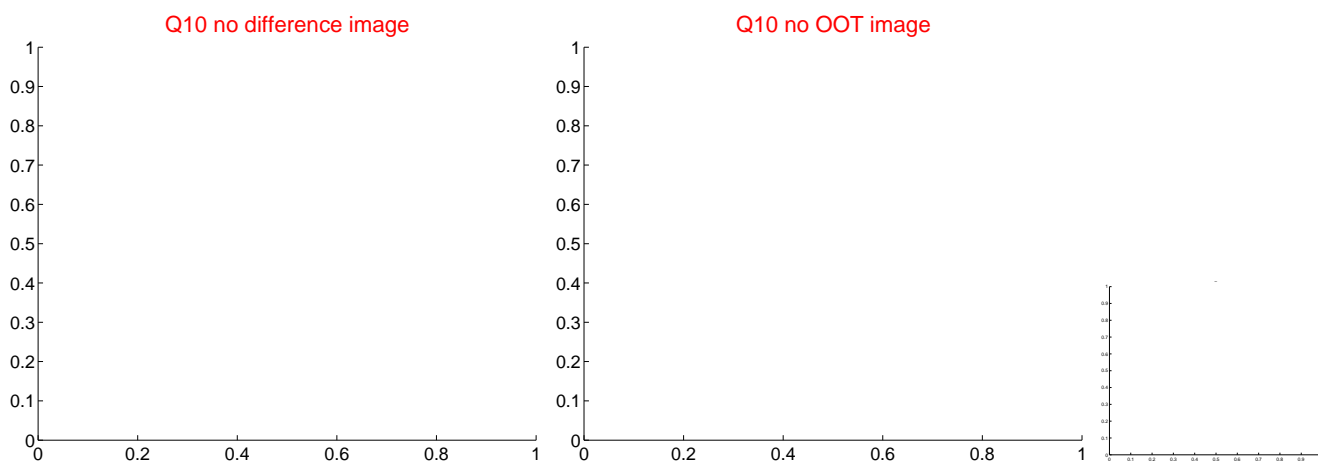
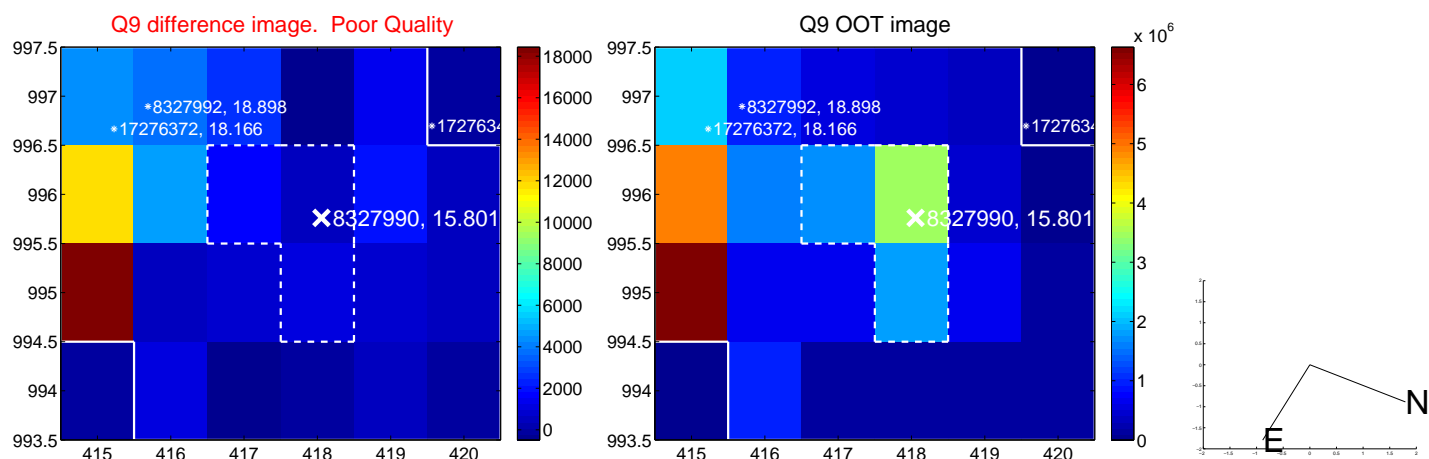
Q8 no difference image



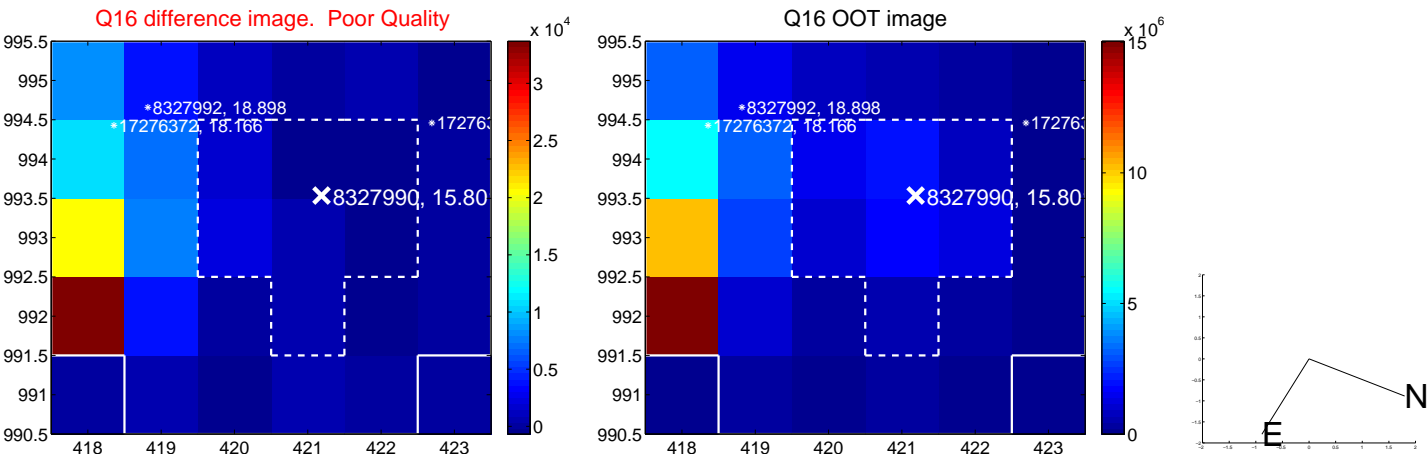
Q8 no OOT image



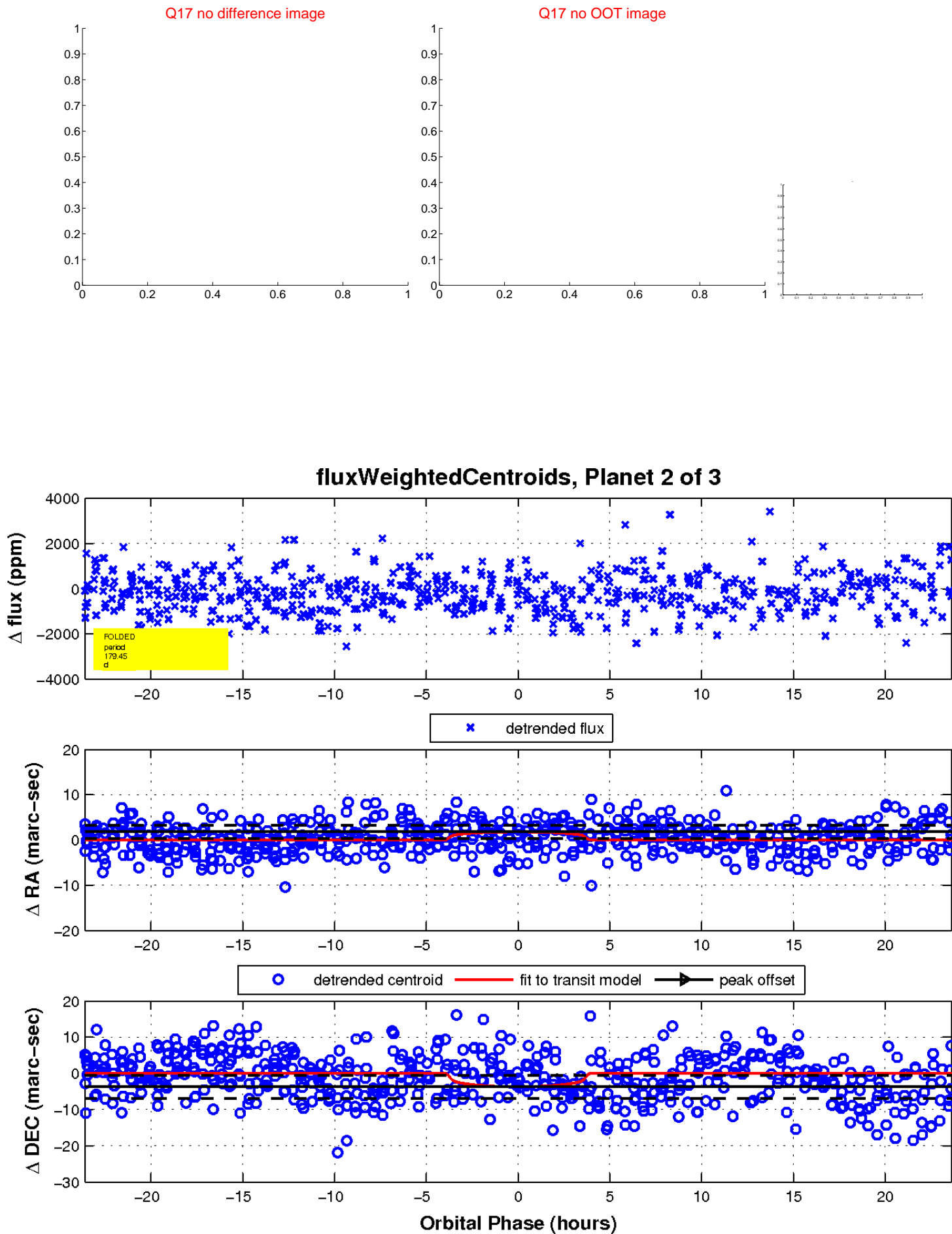
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



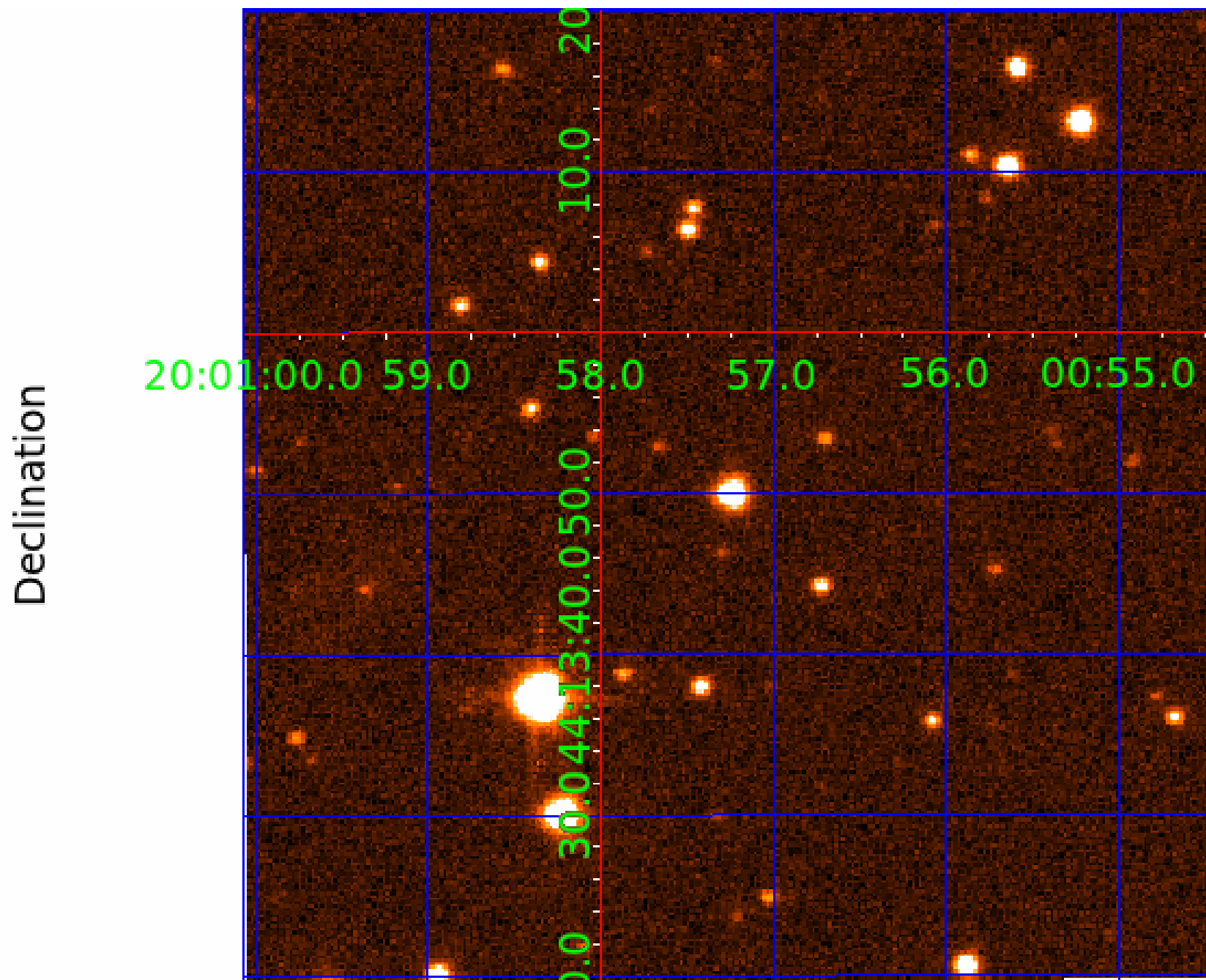
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image



KIC 008327990

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})
008327990-01	OBS	No	1.774611	131.701166	118.3	7.516	7.6	8.2	0.71	4714	0.75	321.07
008327990-02	OBS	No	179.448199	295.141124	1015.1	7.883	9.7	6.2	0.71	4714	2.37	0.68
008327990-03	OBS	No	101.493413	178.627298	1582.1	4.739	8.0	7.8	0.71	4714	2.84	1.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008327990-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET
008327990-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_RESOLVED_OFFSET
008327990-03	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_RESOLVED_OFFSET

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

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

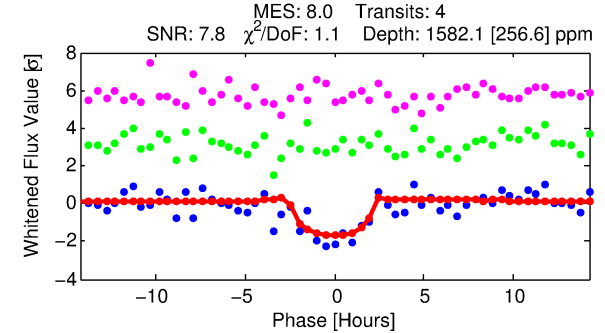
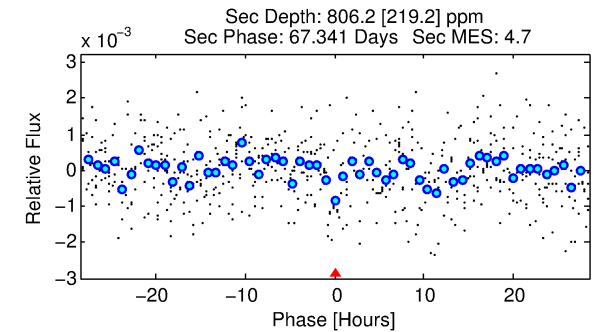
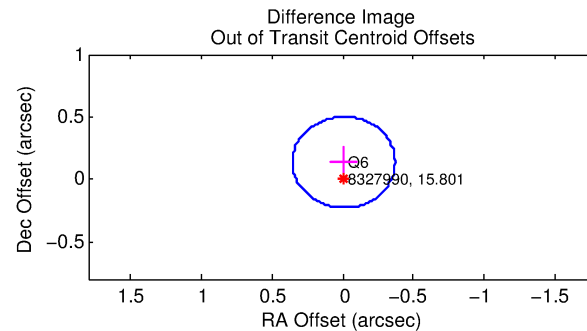
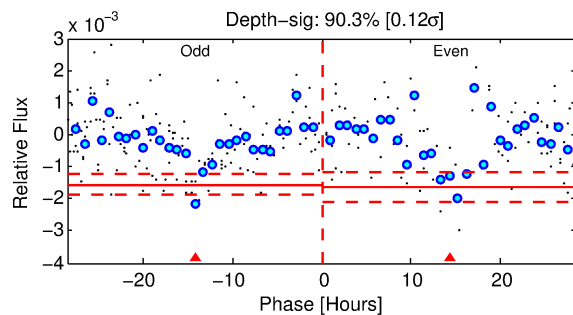
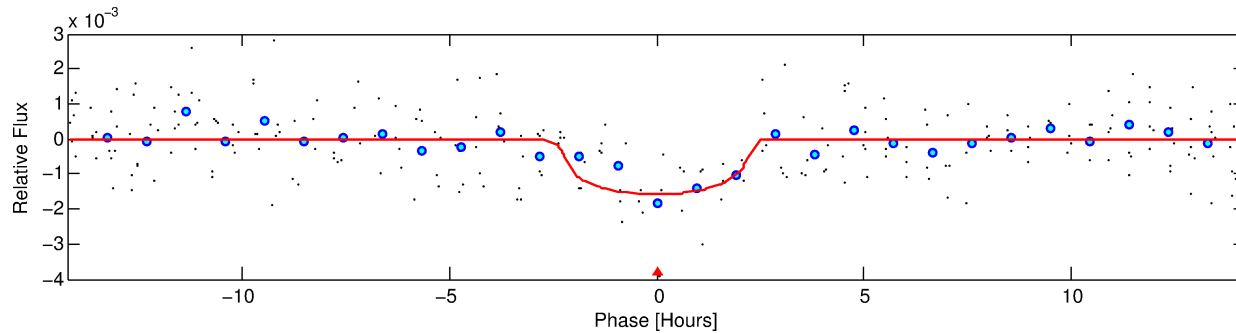
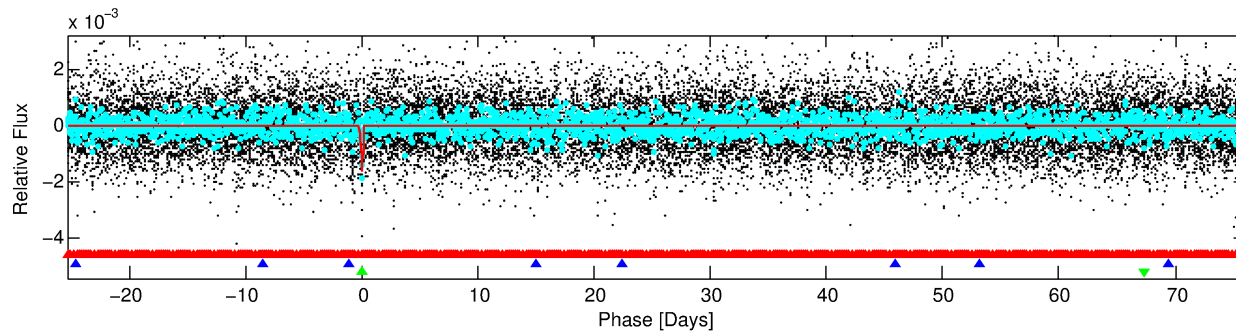
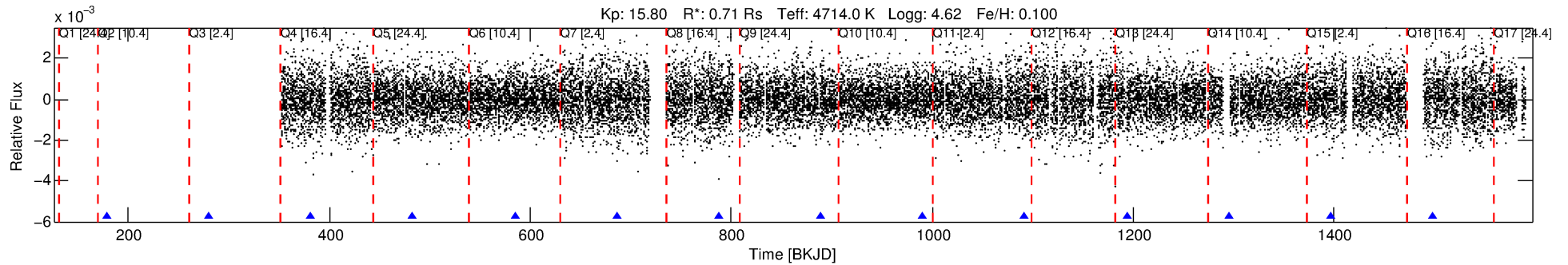
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008327990-03

No Significant Match Found

DV One-Page Summary

KIC: 8327990 Candidate: 3 of 3 Period: 101.493 d



DV Fit Results:

Period = 101.49341 [0.00259] d
Epoch = 178.6273 [0.0227] BKJD
Rp/R* = 0.0368 [0.0746]
a/R* = 146.31 [914.03]
b = 0.52 [8.84]
Seff = 1.46 [0.26]
Teq = 280 [12] K
Rp = 2.84 [5.76] Re
a = 0.3896 [0.0294] AU
Ag = 8355.45 [33988.75] [0.25σ]
Teff = 4141 [4213] K [0.92σ]

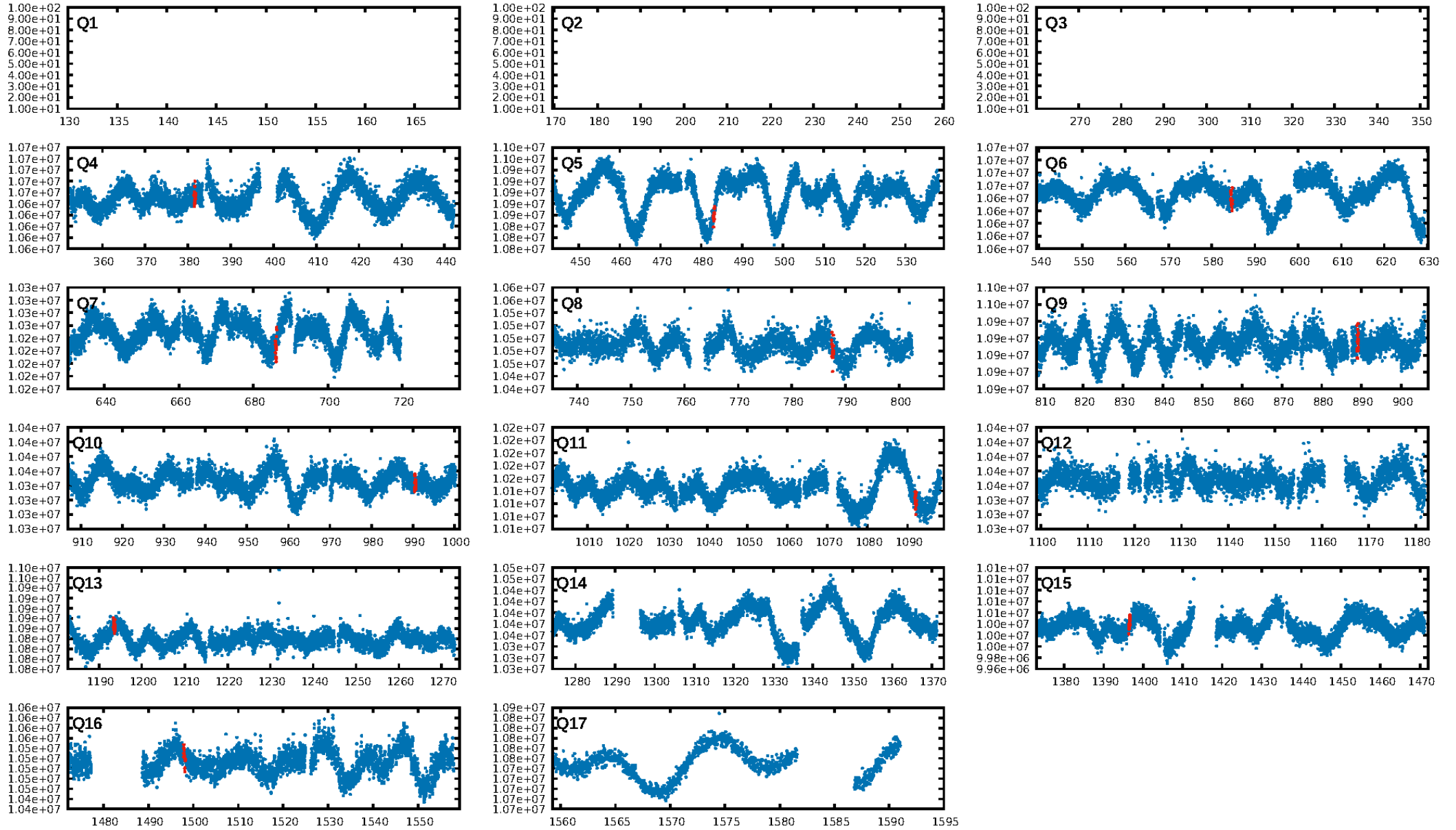
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [269.34σ]
LongPeriod-sig: 100.0% [203.42σ]
ModelChiSquare2-sig: 43.2%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 1.38e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.5757
Centroid-sig: 84.6%
Centroid-so: 2.160 arcsec [1.54σ]
OotOffset-rm: 0.135 arcsec [1.11σ]
KicOffset-rm: 8.475 arcsec [73.92σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 0.25 [2/8]

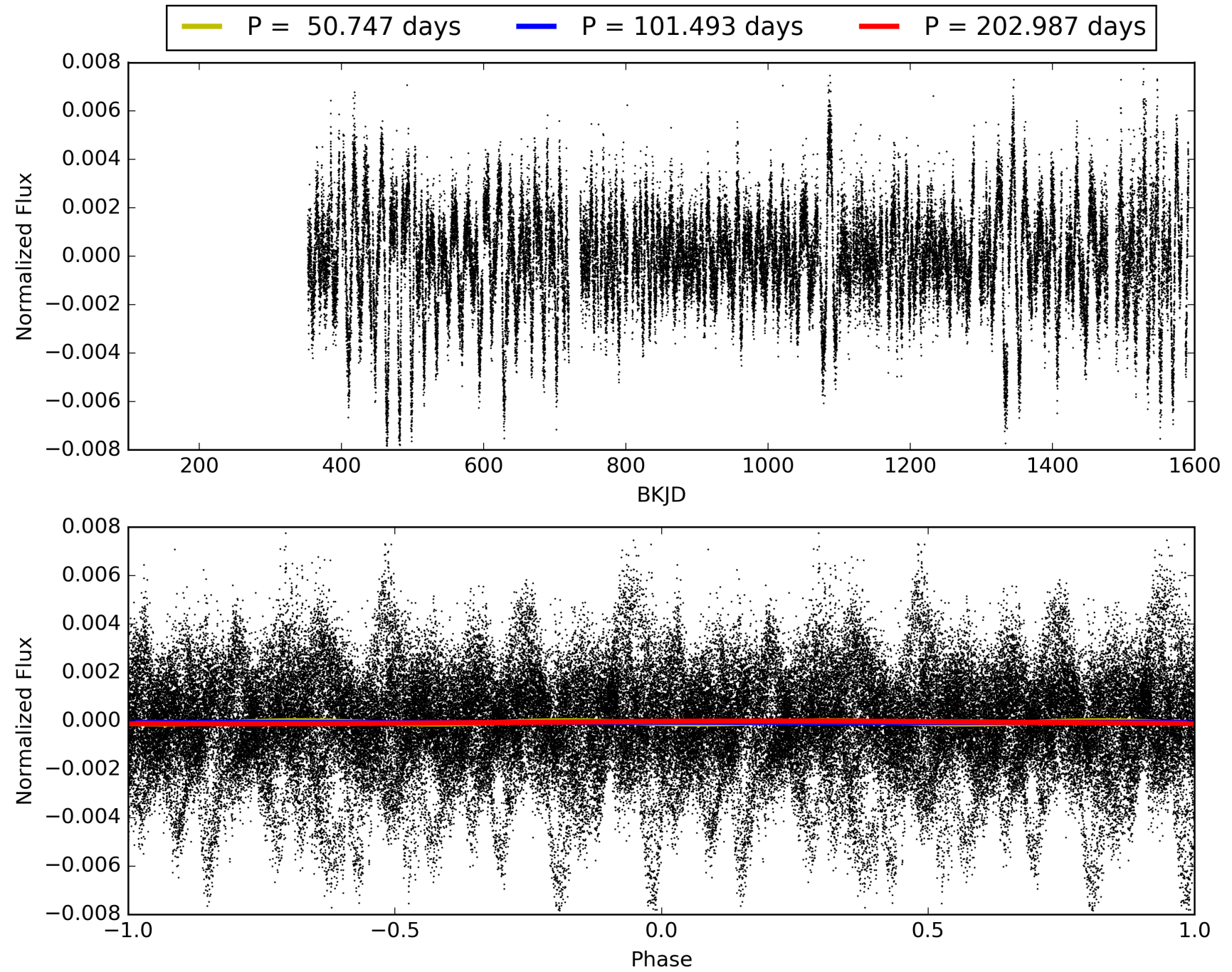
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:52:22 Z

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

TCE 008327990-03, PDC Light Curves

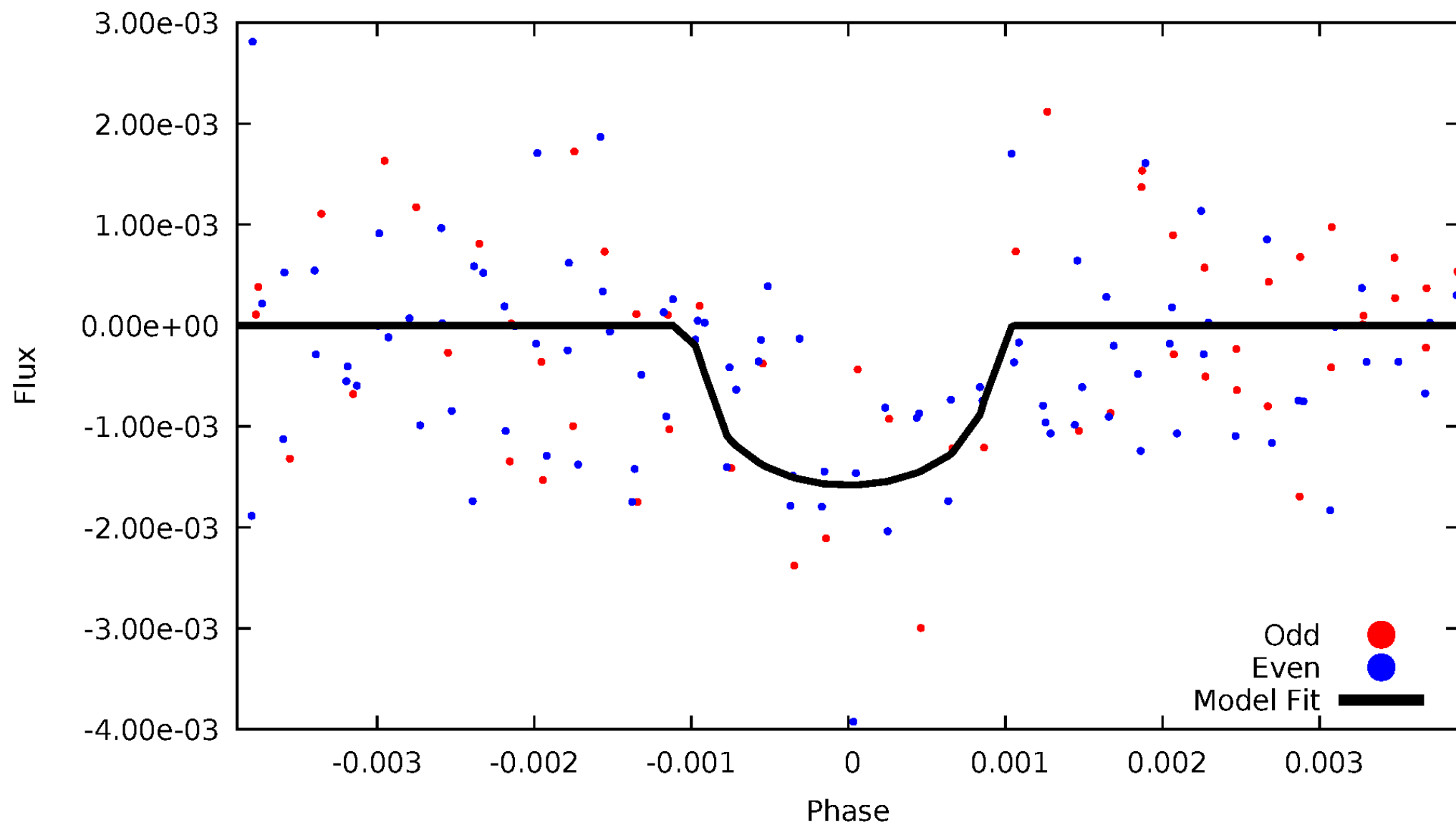


TCE 008327990-03



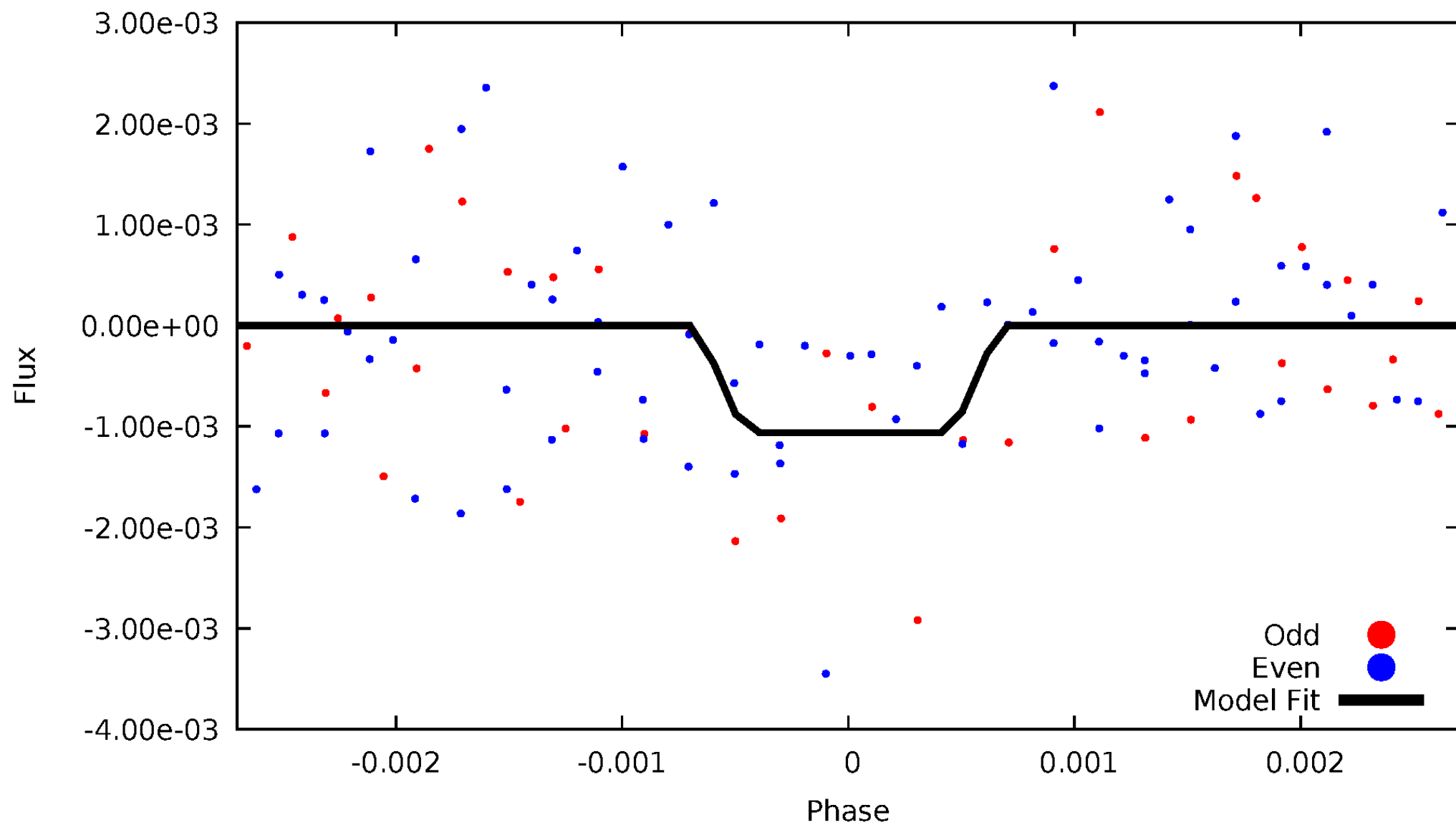
DV Odd/Even

TCE 008327990-03



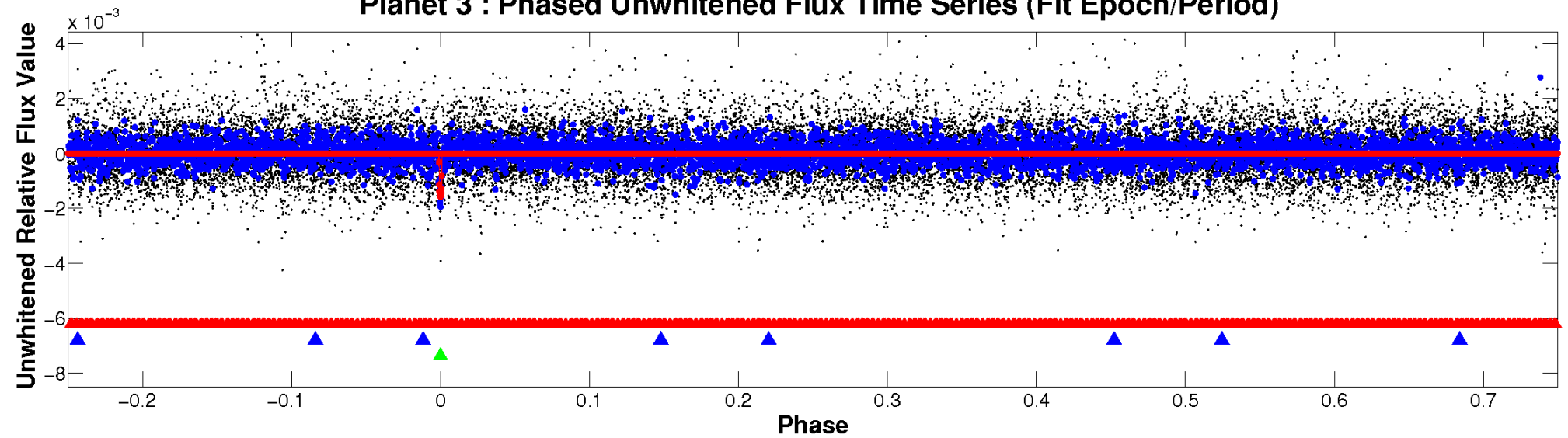
ALT Odd/Even

TCE 008327990-03

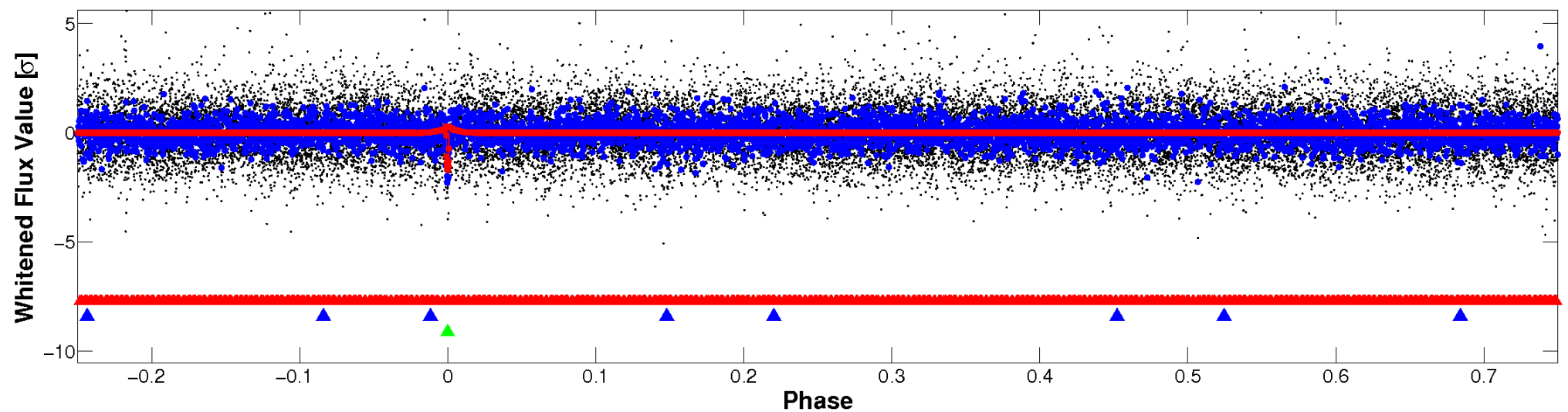


Non-Whitened Vs. Whitened Light Curve

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

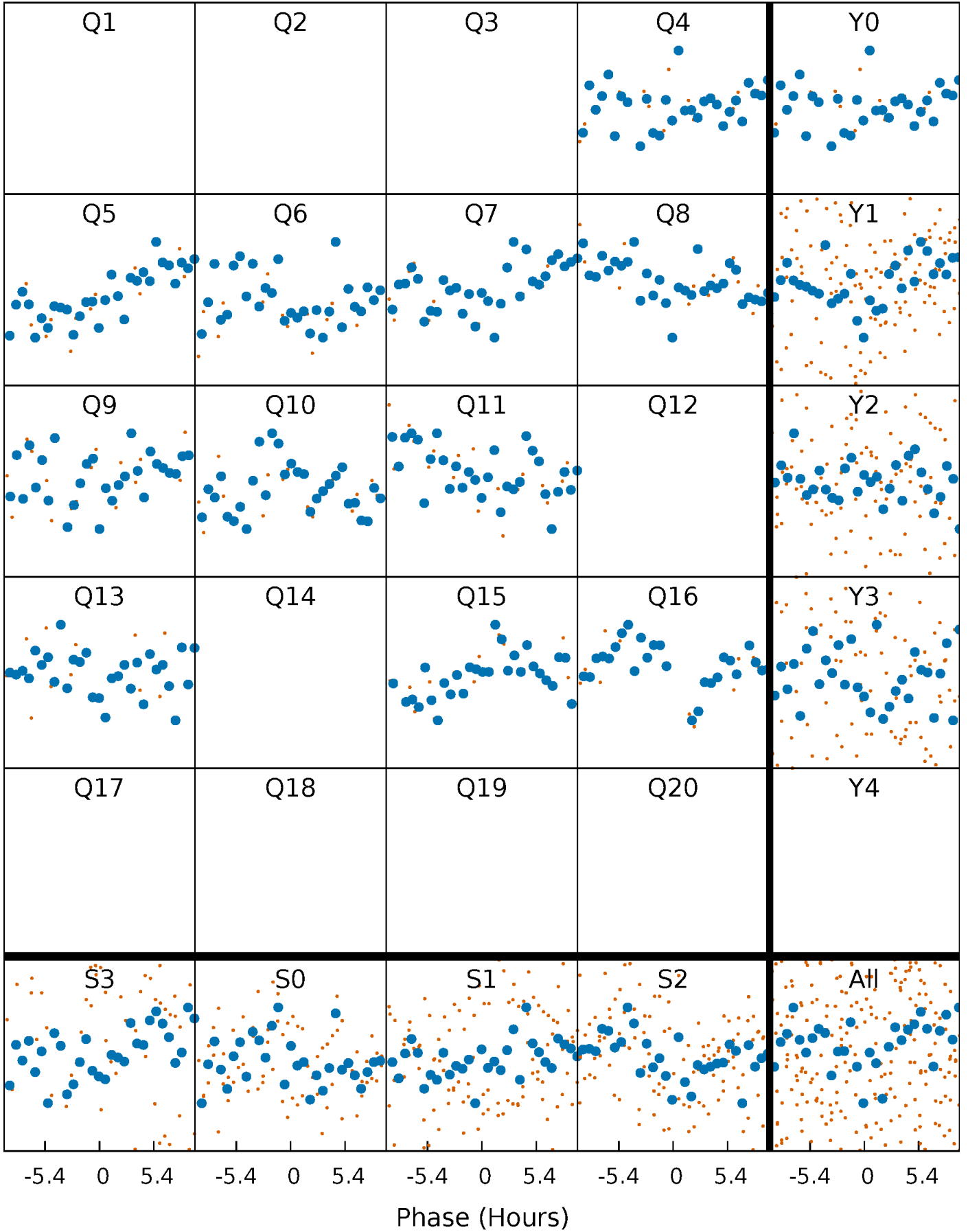


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



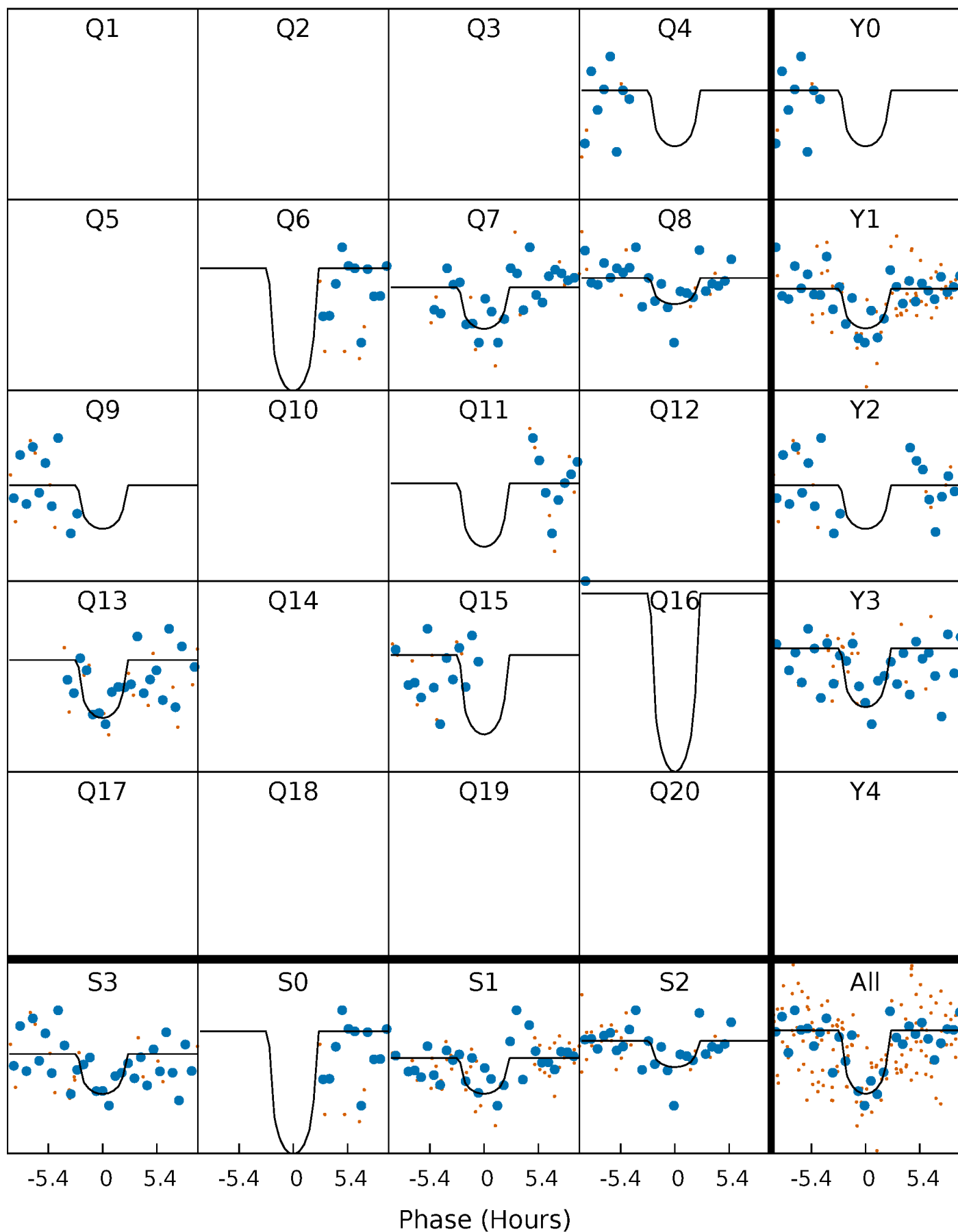
PDC Quarter-Phased Transit Curves

TCE 008327990-03 P=101.493413 Days $T_0=178.627298$ (BKJD)



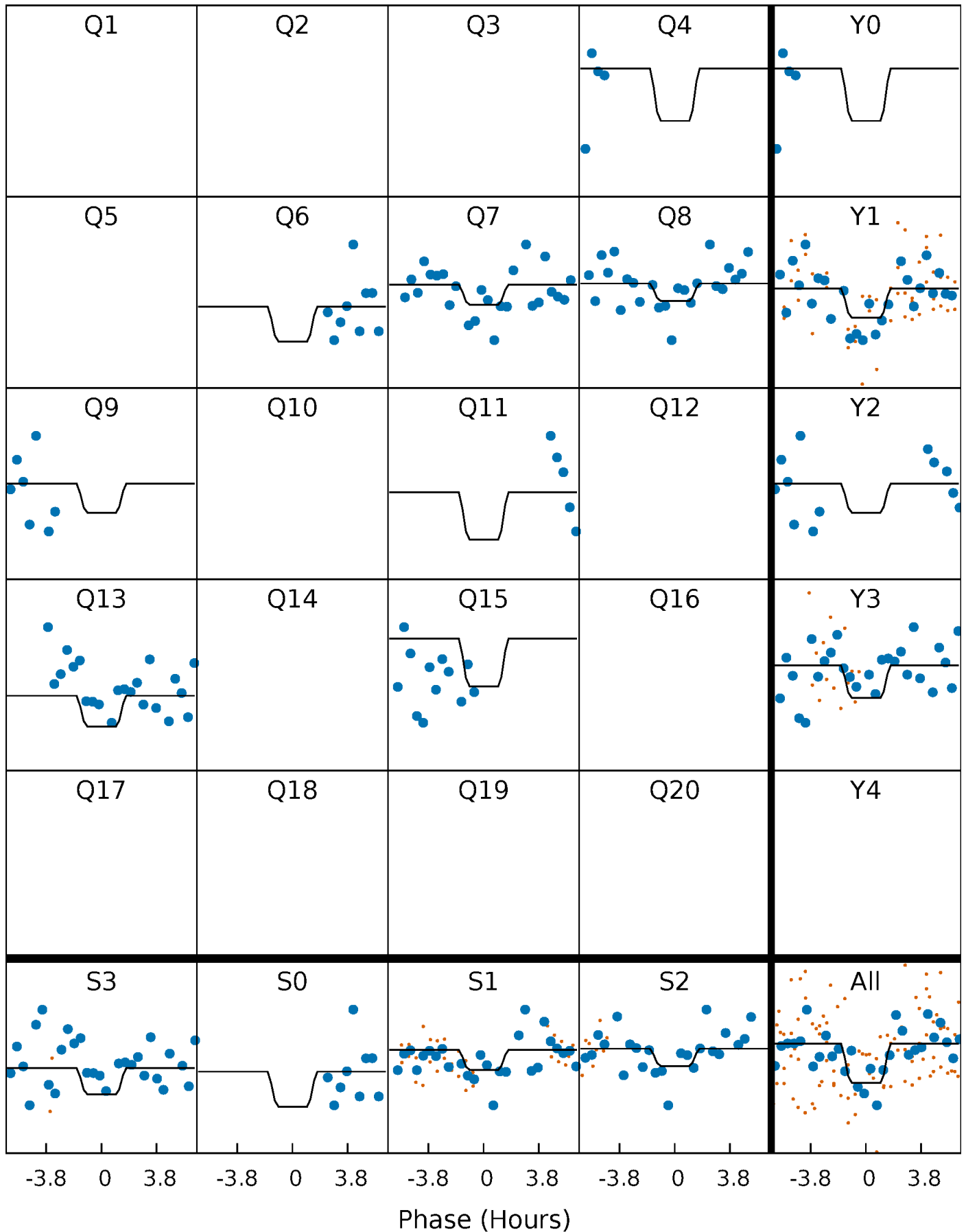
DV Quarter-Phased Transit Curves

TCE 008327990-03 $P=101.493413$ Days $T_0=178.627298$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

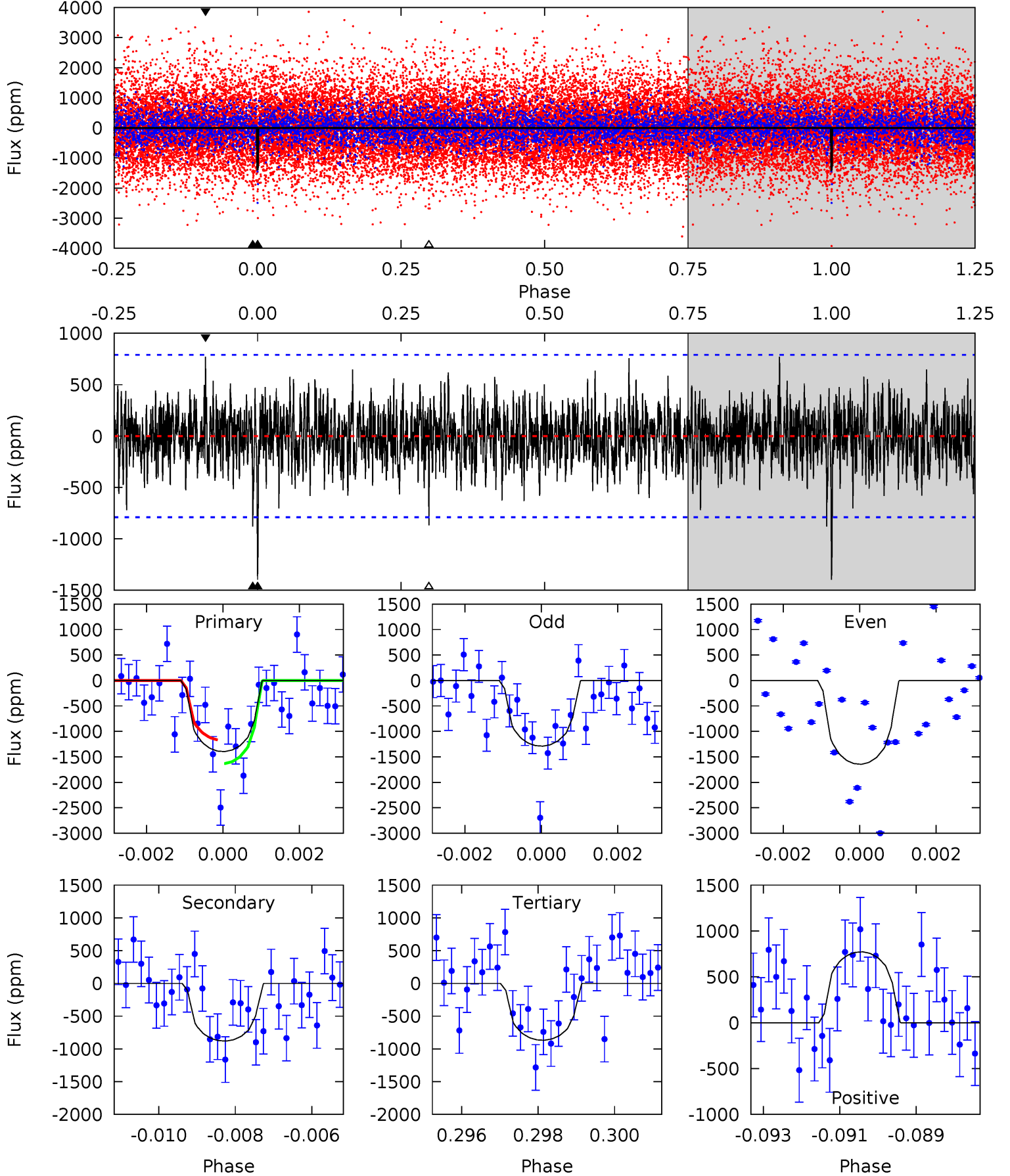
TCE 008327990-03 $P=101.491058$ Days $T_0=178.654844$ (BKJD)



DV Model-Shift Uniqueness Test

008327990-03, P = 101.493413 Days, E = 178.627298 Days

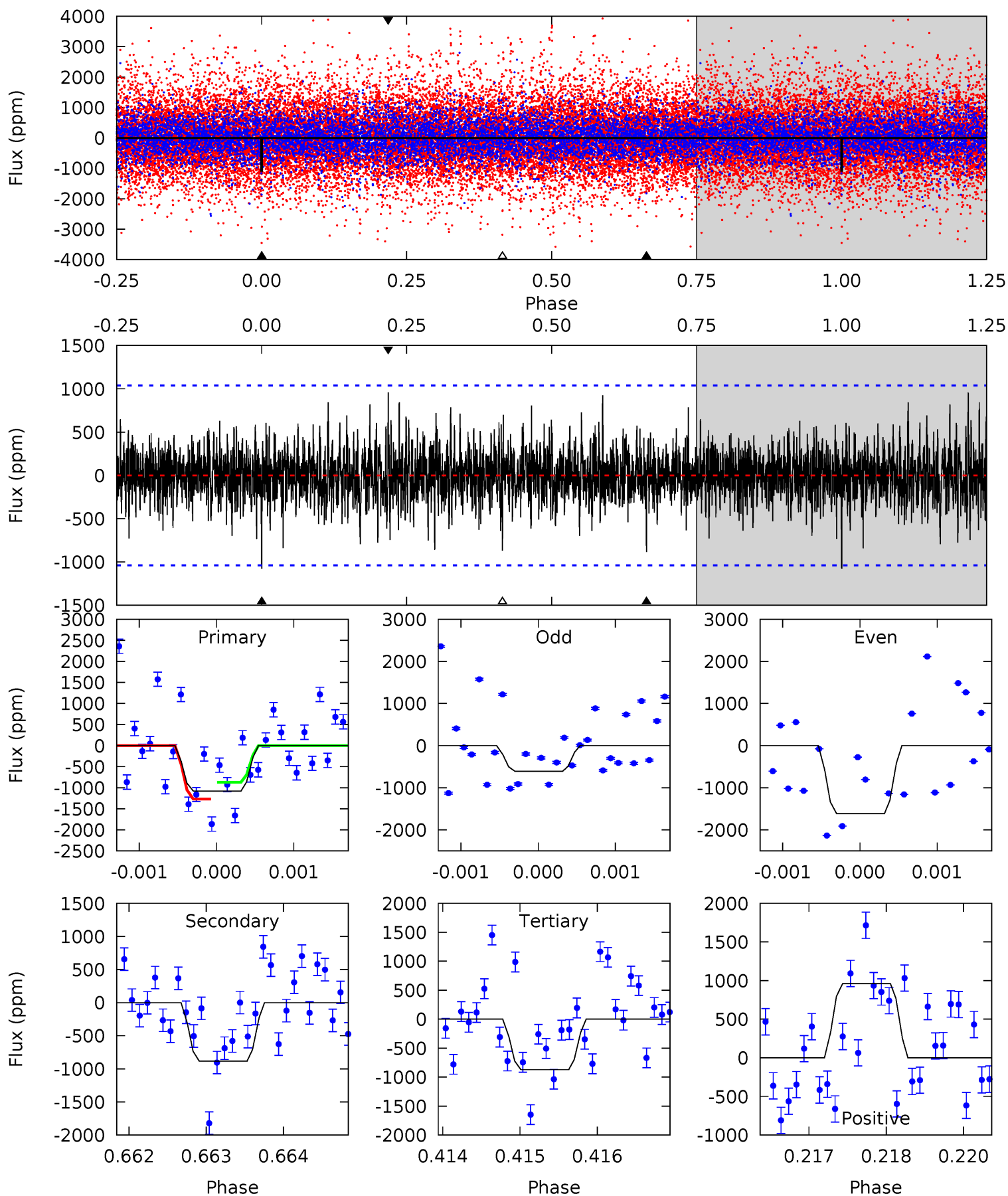
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.41	5.94	5.86	5.21	5.32	3.09	1.43	3.56	4.20	0.08	0.73	1.09	0.82	0.36	1.57



Alt Model-Shift Uniqueness Test

008327990-03, P = 101.491058 Days, E = 178.654844 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.61	4.60	4.53	5.00	5.40	3.22	1.18	1.08	0.62	0.07	-0.39	2.36	0.87	0.47	1.05



Stellar Parameters For KIC 008327990

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4714^{+169}_{-169}	$4.623^{+0.024}_{-0.052}$	$0.100^{+0.250}_{-0.300}$	$0.707^{+0.068}_{-0.047}$	$0.779^{+0.046}_{-0.076}$	$3.111^{+0.400}_{-0.626}$
	+4%/-4%	+1%/-1%	+250%/-300%	+10%/-7%	+6%/-10%	+13%/-20%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008327990-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-880 ± 148	$5.27^{+4.51}_{-3.68}$	394^{+16}_{-15}	3504^{+2121}_{-595}	2591^{+26960}_{-1861}
Alt.	-884 ± 192	$5.11^{+4.75}_{-3.34}$	395^{+14}_{-16}	3548^{+1784}_{-648}	2768^{+22538}_{-2036}

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

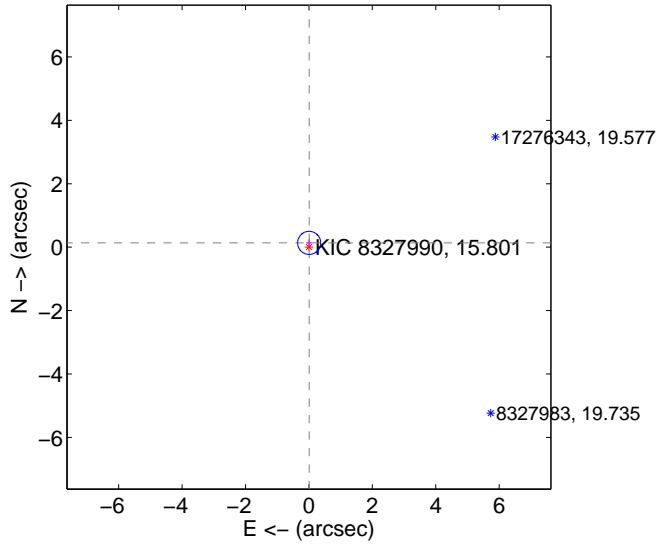
Supplemental centroid analysis for 008327990-03. Kepler magnitude: 15.80. Transit SNR 7.78

There are 1 quarters with good PRF difference image offsets

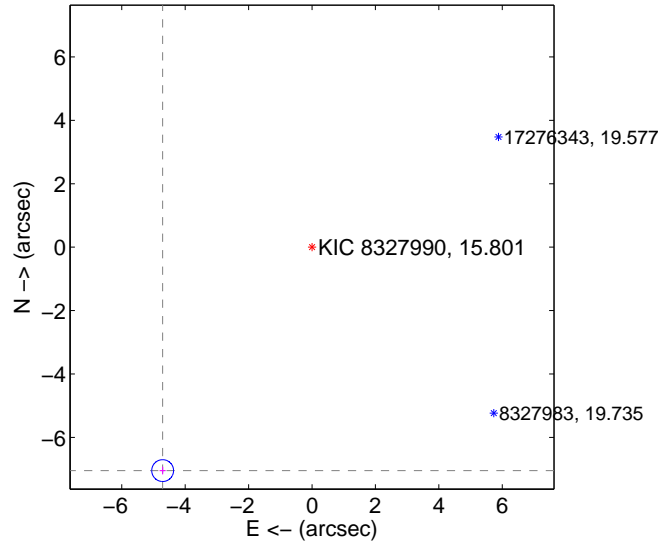
The OOT PRF centroid is offset from the target star catalog position by about 8.59 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.135 ± 0.121	1.11	-0.007 ± 0.098	0.135 ± 0.121
PRF-fit source offset from KIC position	8.475 ± 0.115	73.92	4.710 ± 0.098	-7.046 ± 0.121
photometric centroid source offset	2.16 ± 1.40	1.54	0.63 ± 0.73	-2.07 ± 1.45

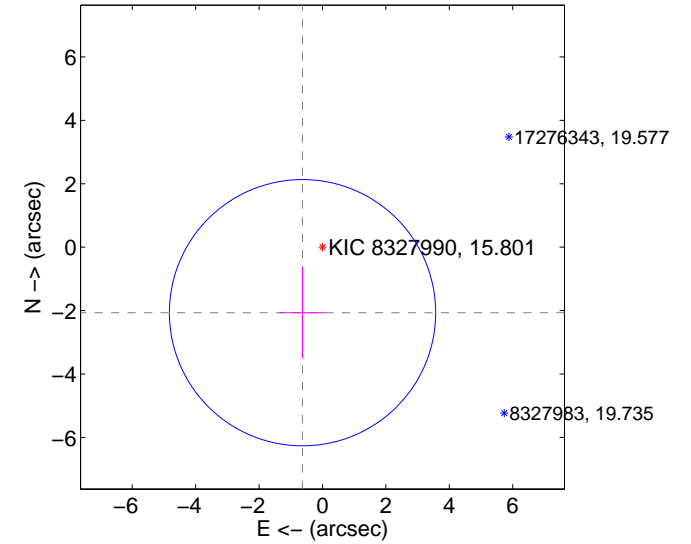
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

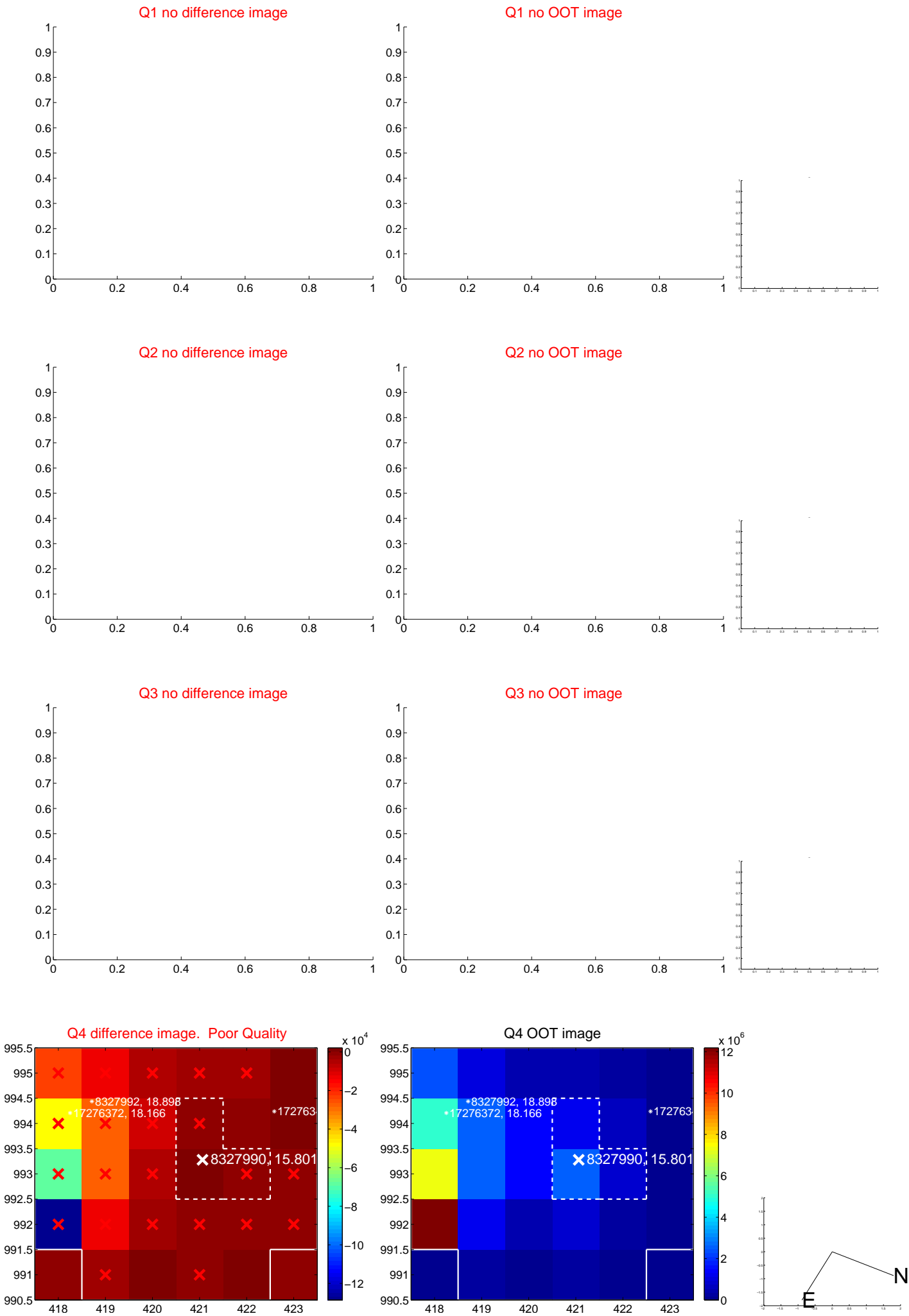


offset from photometric centroids

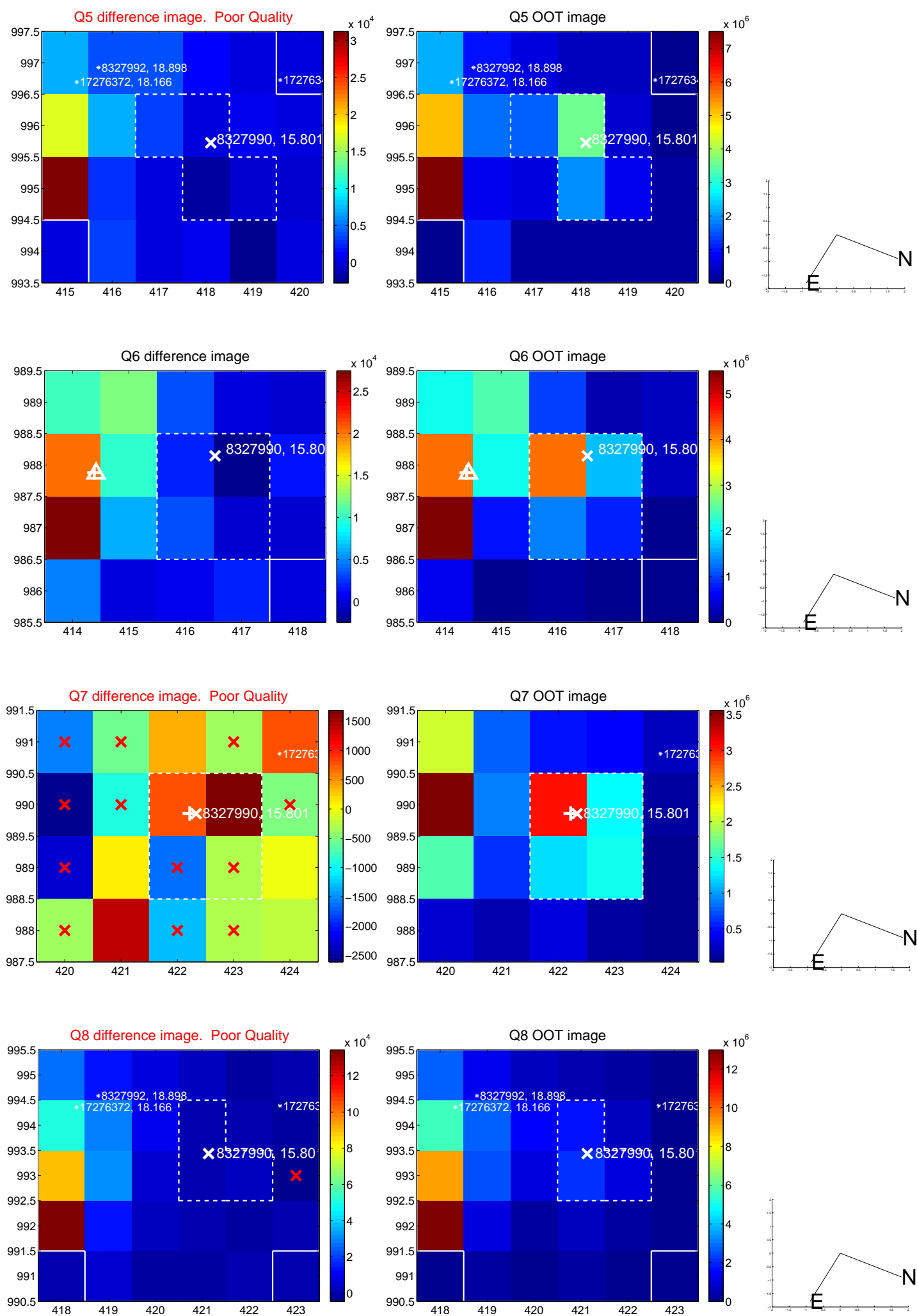


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

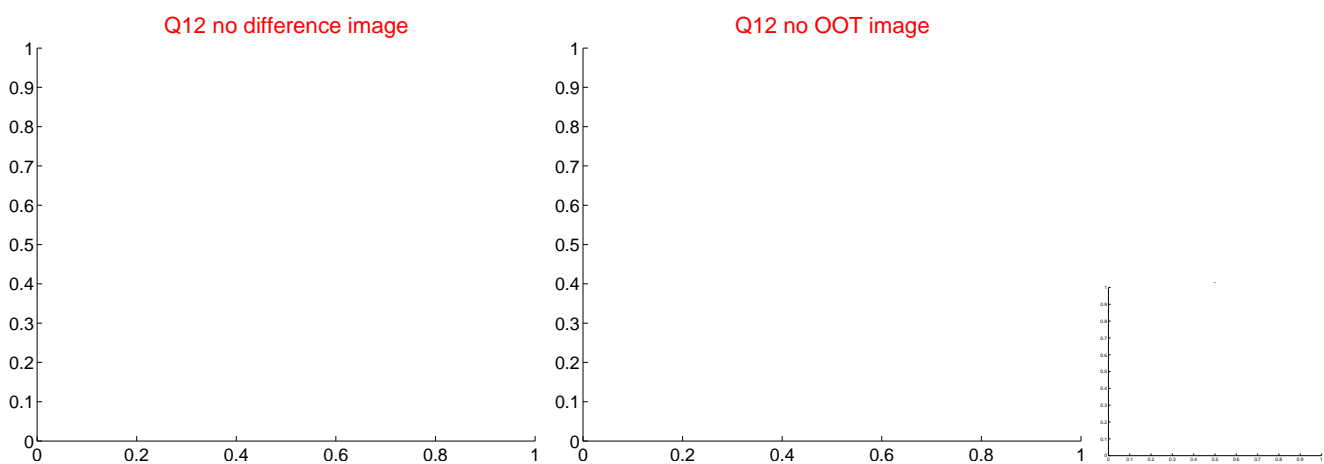
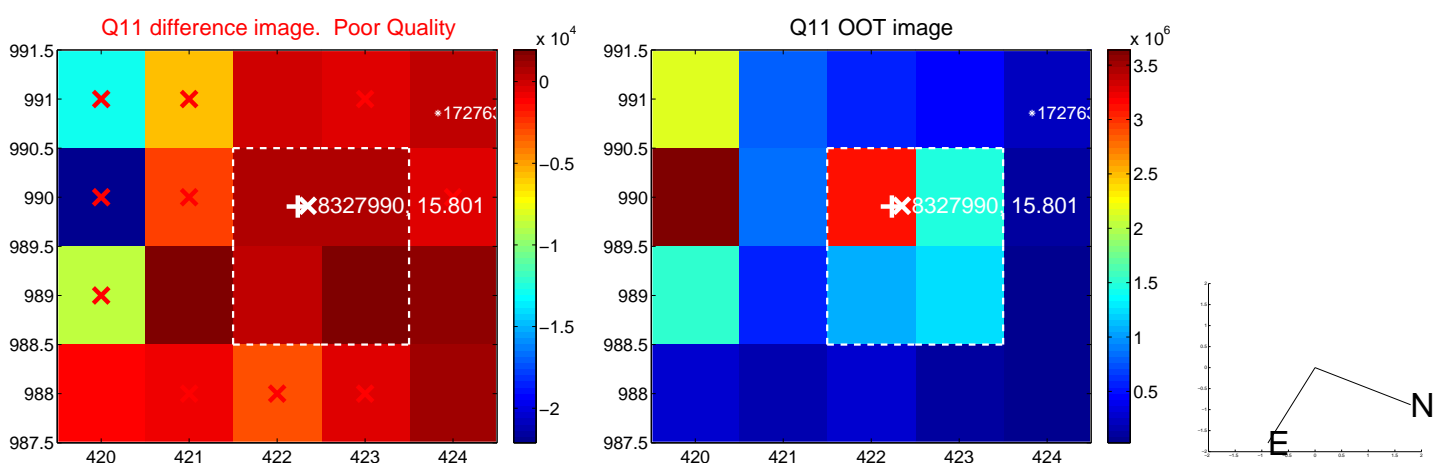
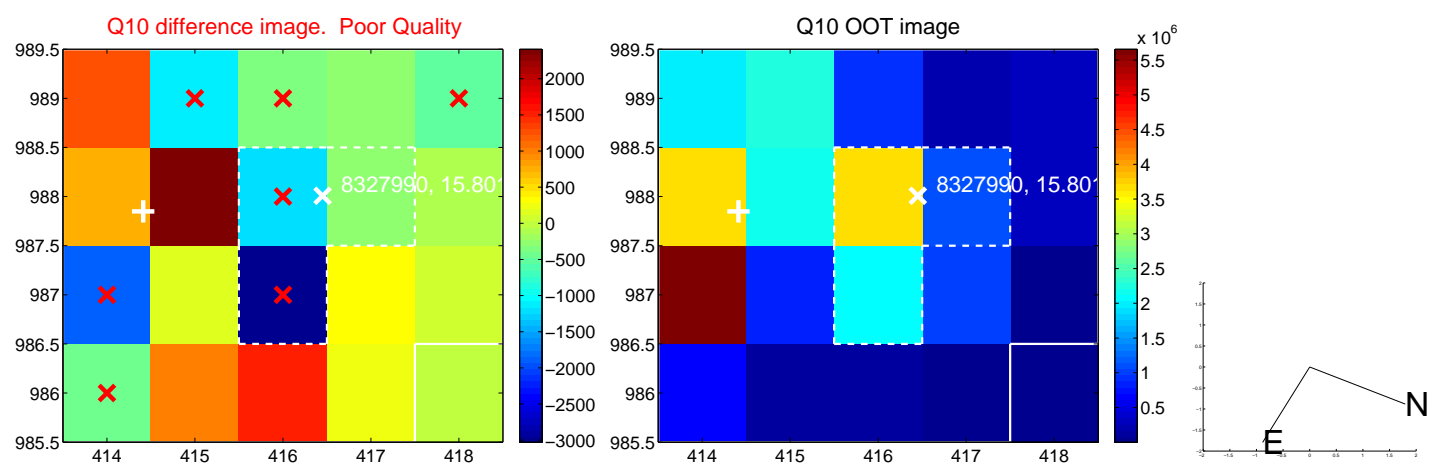
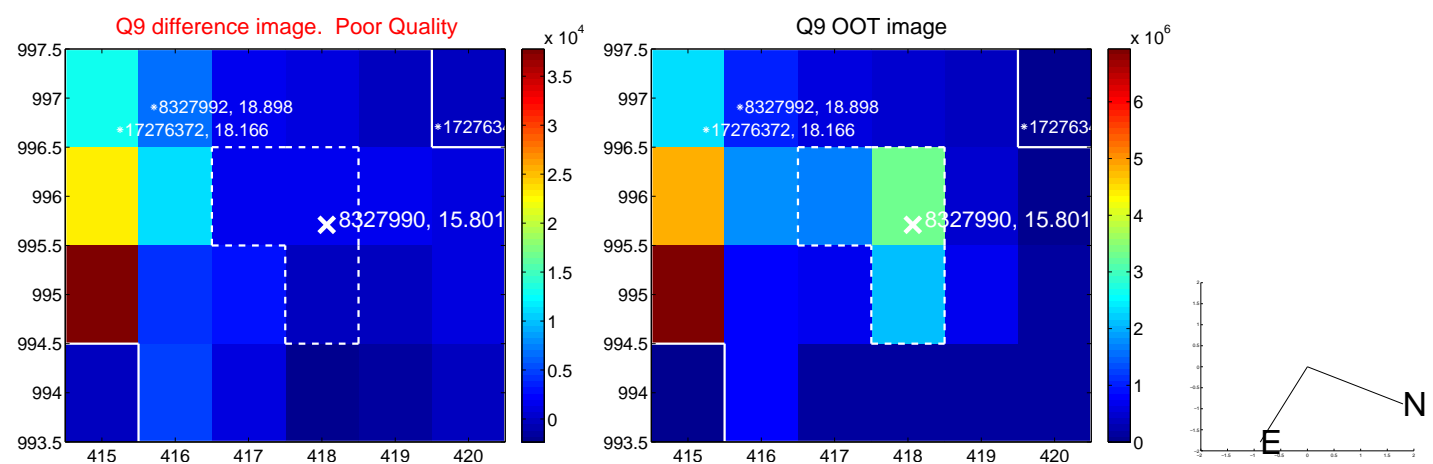
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



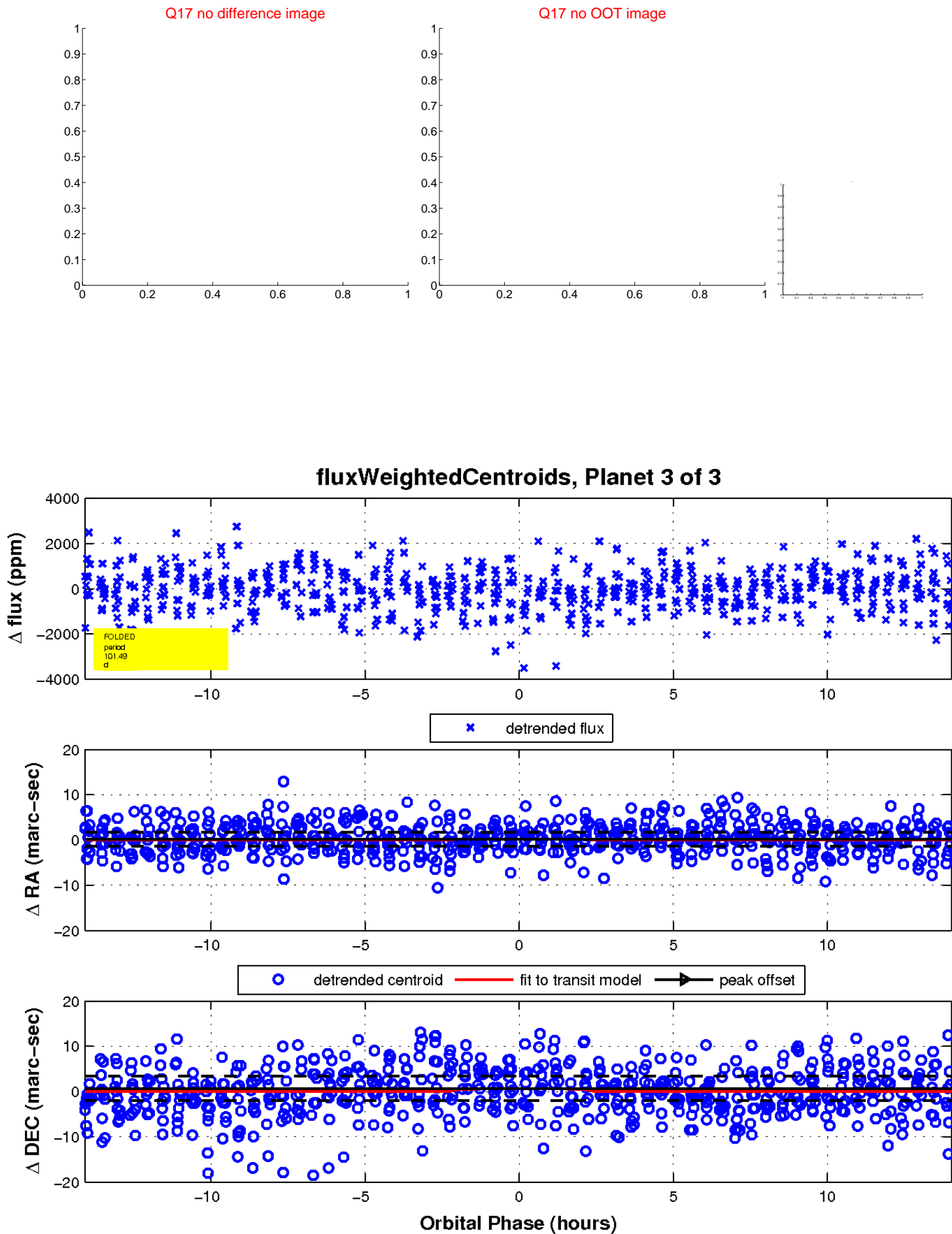
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

