

KIC 008320954

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})
008320954-01	OBS	No	0.600649	131.715897	4.8	4.210	8.1	4.9	2.41	7046	0.57	53460.62
008320954-02	OBS	No	23.401813	151.923026	120.7	0.942	11.5	8.0	2.41	7046	3.20	404.76
008320954-03	OBS	No	45.340980	148.243125	217.2	1.003	11.4	10.6	2.41	7046	3.61	167.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008320954-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED
008320954-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
008320954-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_SATURATED

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

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

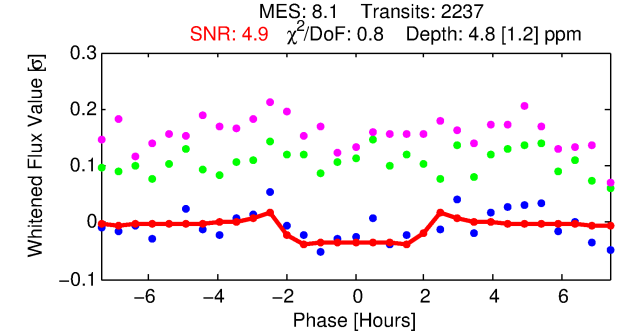
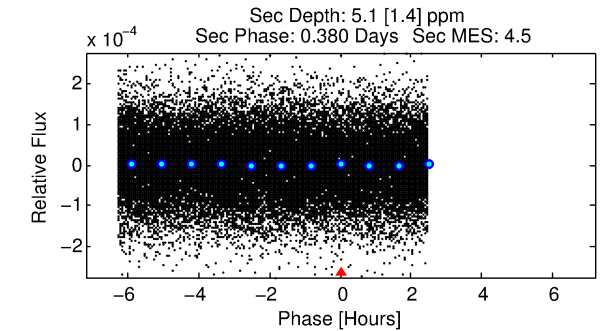
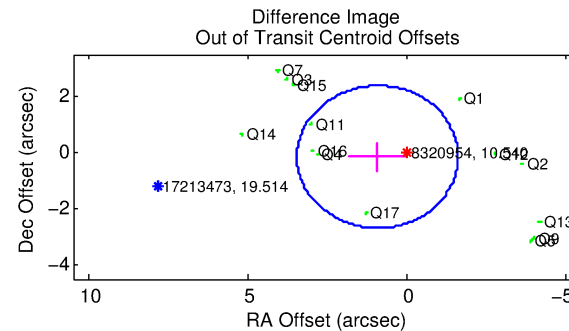
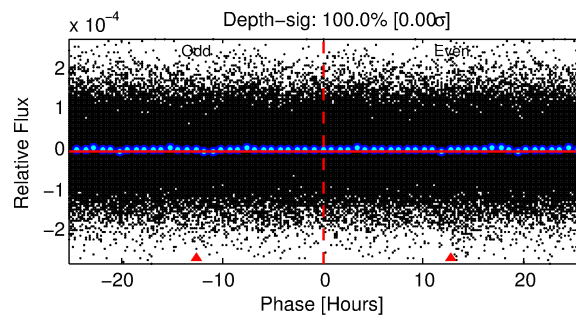
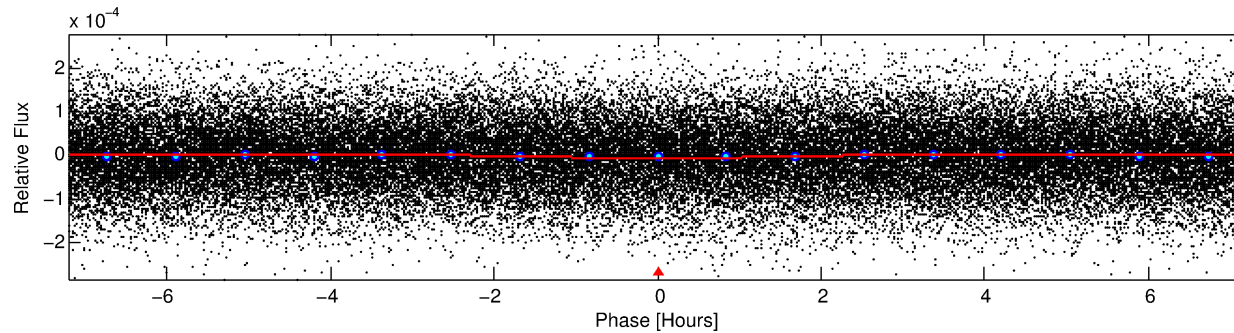
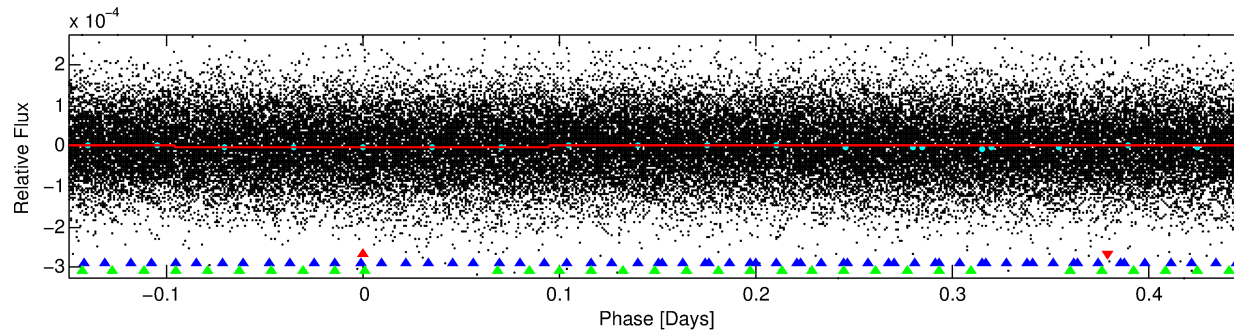
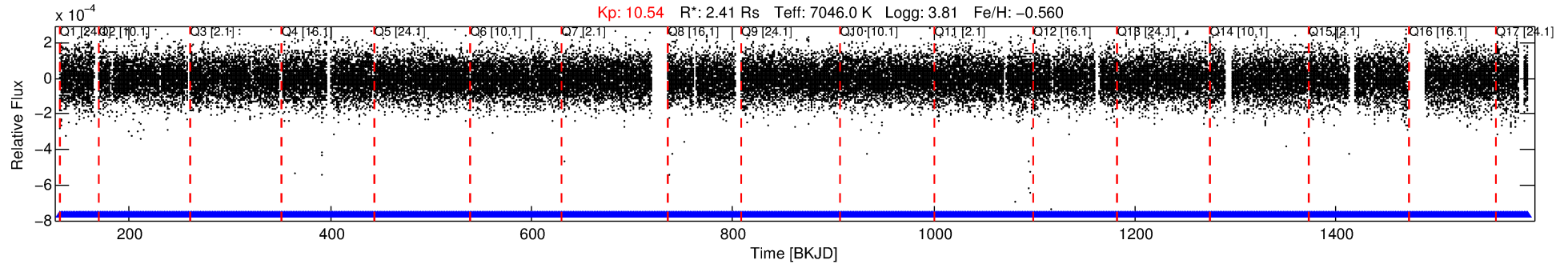
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008320954-01

No Significant Match Found

DV One-Page Summary

KIC: 8320954 Candidate: 1 of 3 Period: 0.601 d



DV Fit Results:

Period = 0.60065 [0.00002] d
Epoch = 131.7159 [0.0050] BKJD
Rp/R* = 0.0022 [0.0007]
a/R* = 1.14 [0.47]
b = 0.70 [1.30]
Seff = 53460.62 [28339.70]
Teq = 3877 [514] K
Rp = 0.57 [0.26] Re
a = 0.0155 [0.0050] AU
Ag = 2.08 [1.79] [0.60 σ]
Teffp = 7201 [1260] K [2.44 σ]

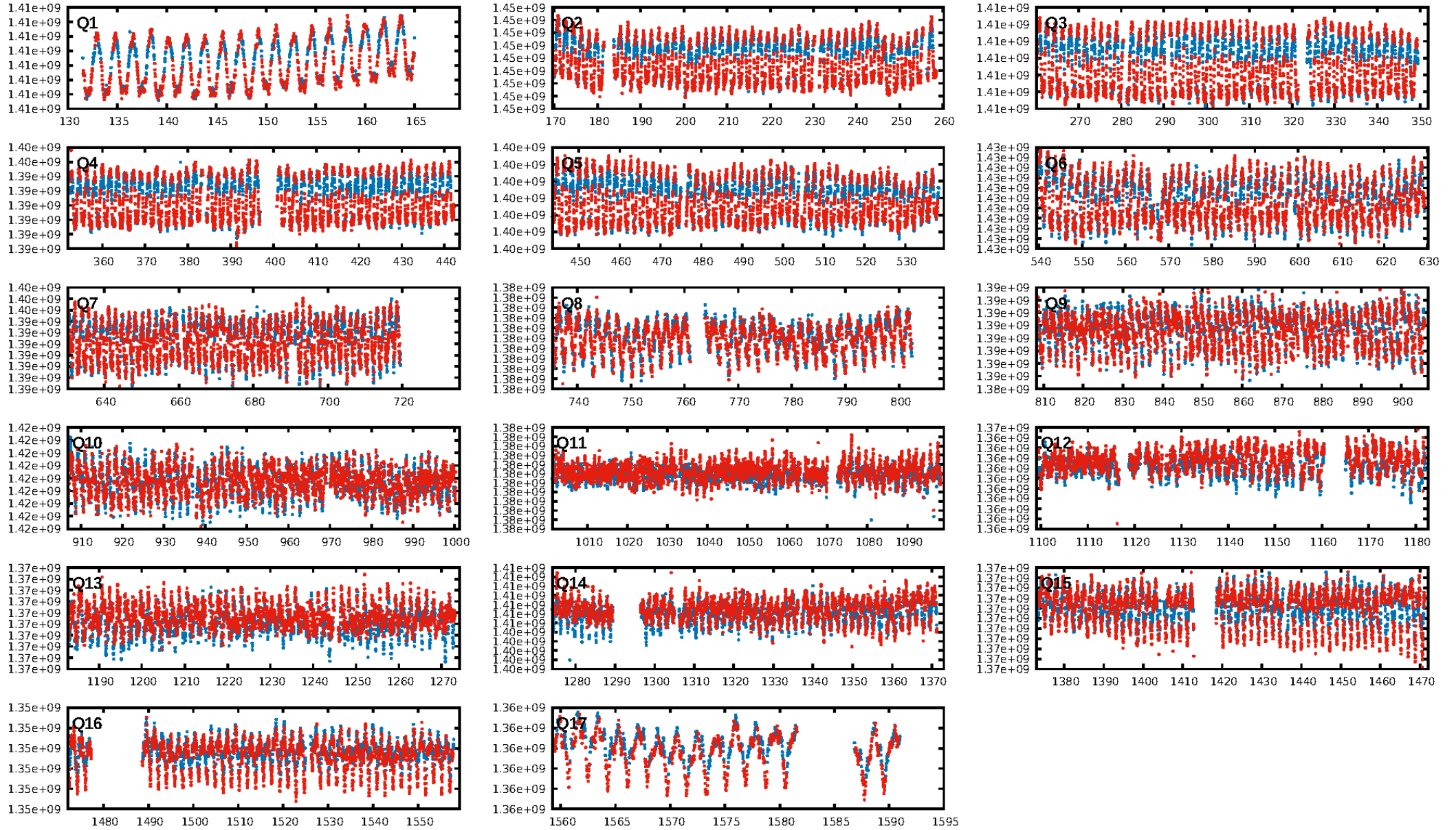
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [126.85 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.11e-09
RollingBand-fgt: 1.00 [2137/2137]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.941 arcsec [1.11 σ]
KicOffset-rm: 0.998 arcsec [1.02 σ]
OotOffset-st: 2/4/3/5 [14]
KicOffset-st: 2/4/3/5 [14]
DiffImageQuality-fgm: 0.36 [5/14]
DiffImageOverlap-fno: 1.00 [17/17]

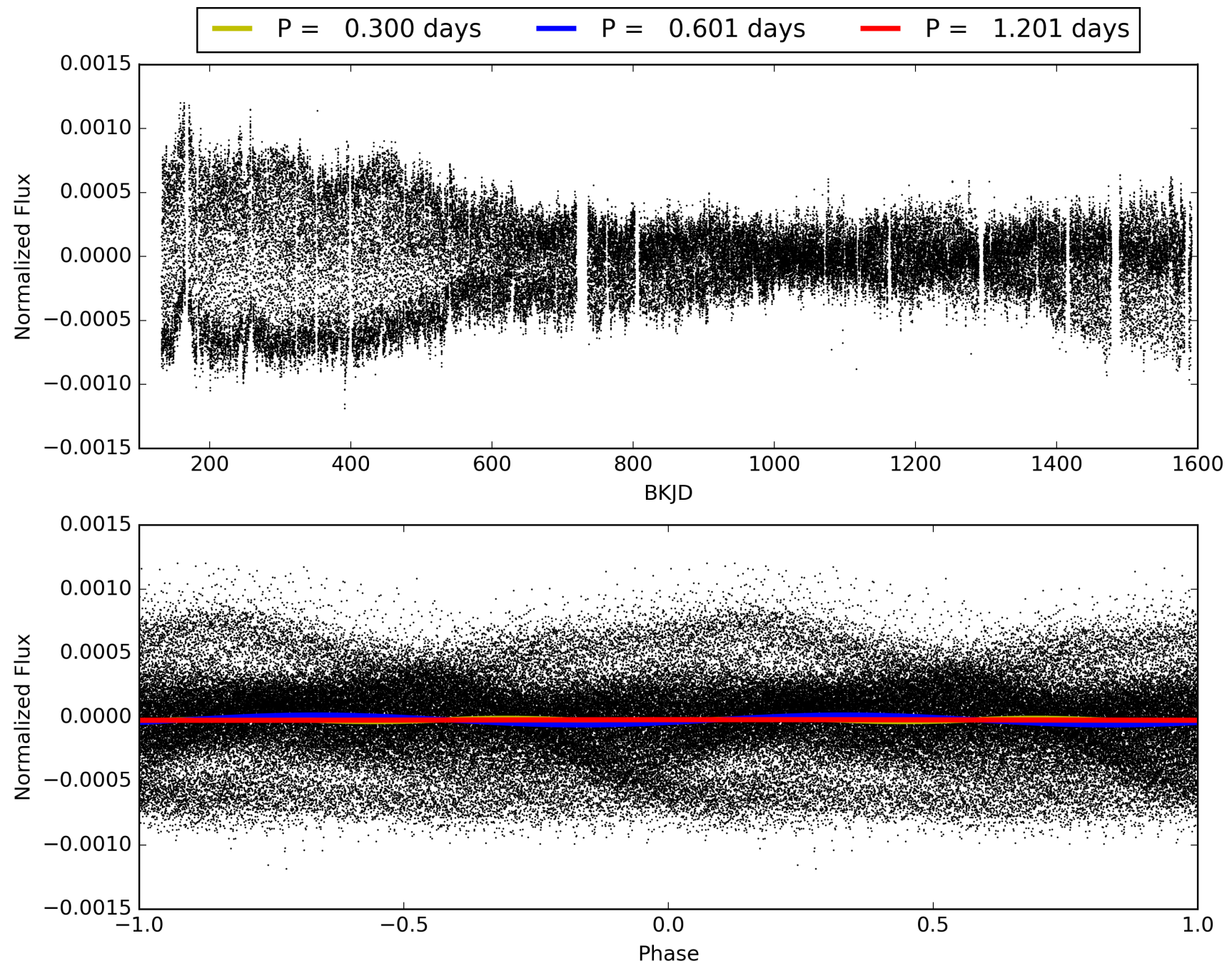
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:59:49 Z

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

TCE 008320954-01, PDC Light Curves

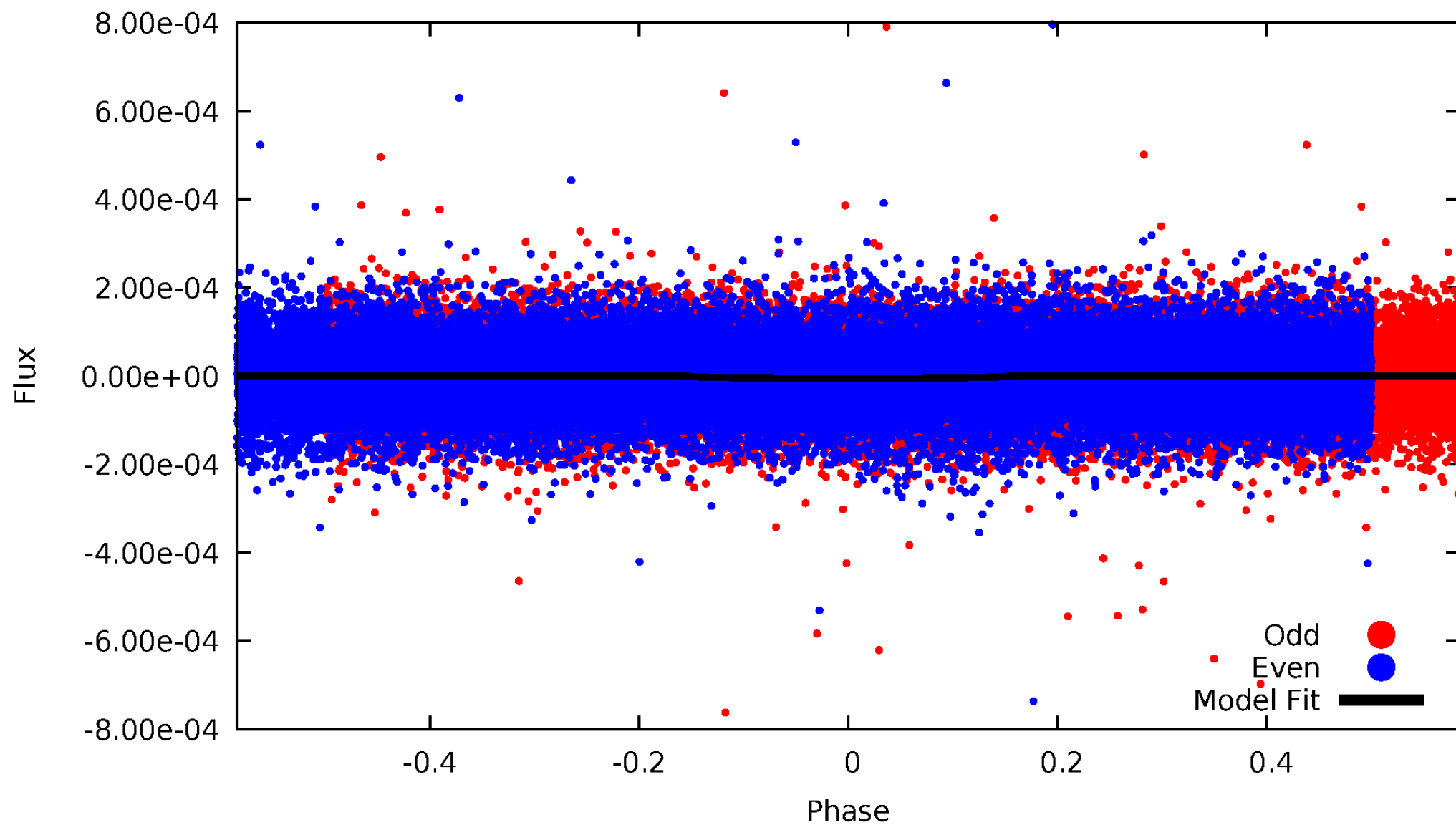


TCE 008320954-01



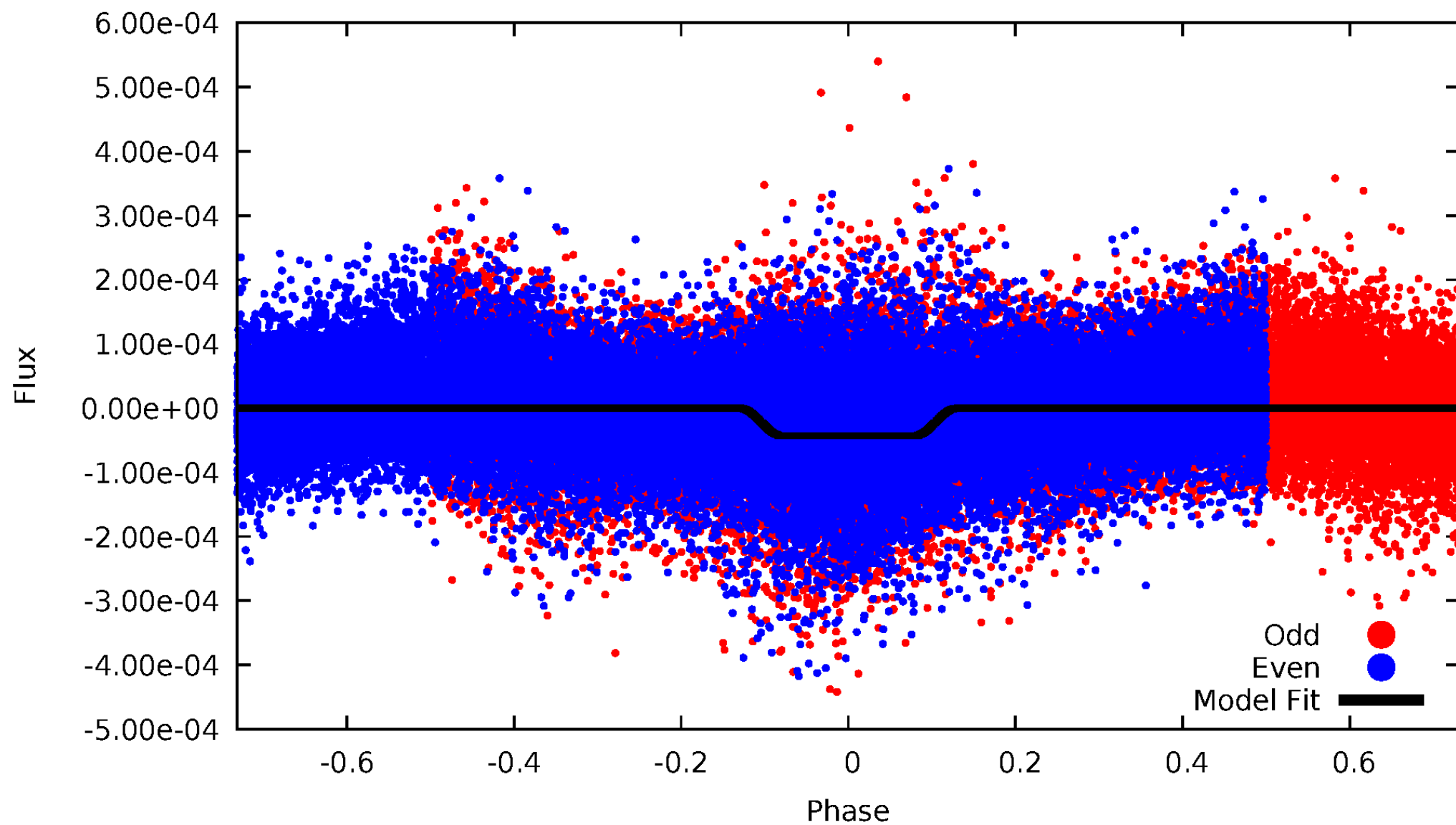
DV Odd/Even

TCE 008320954-01



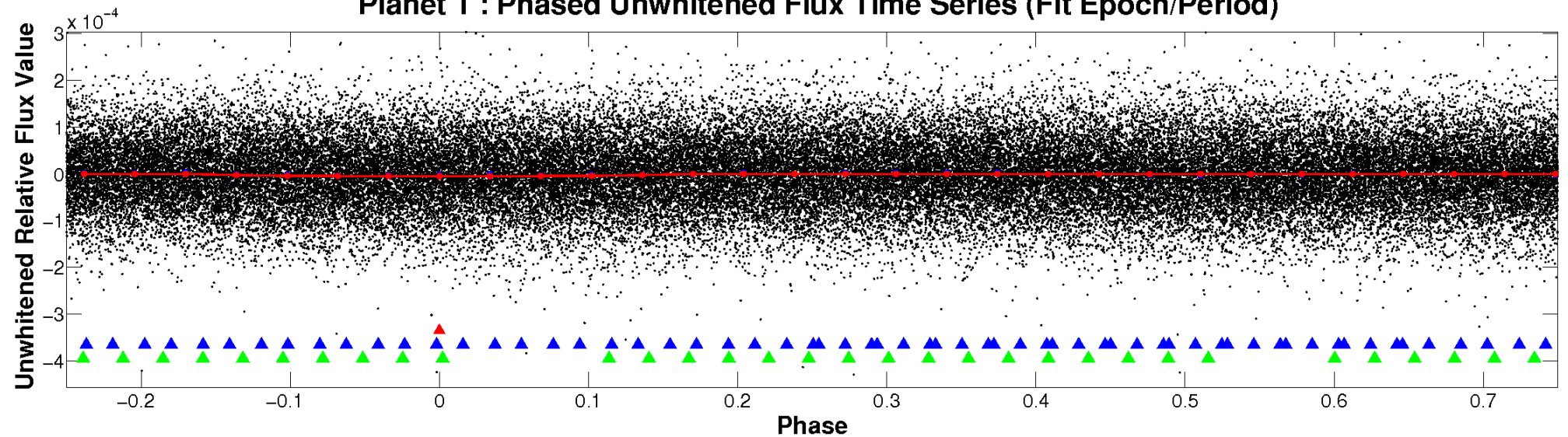
ALT Odd/Even

TCE 008320954-01

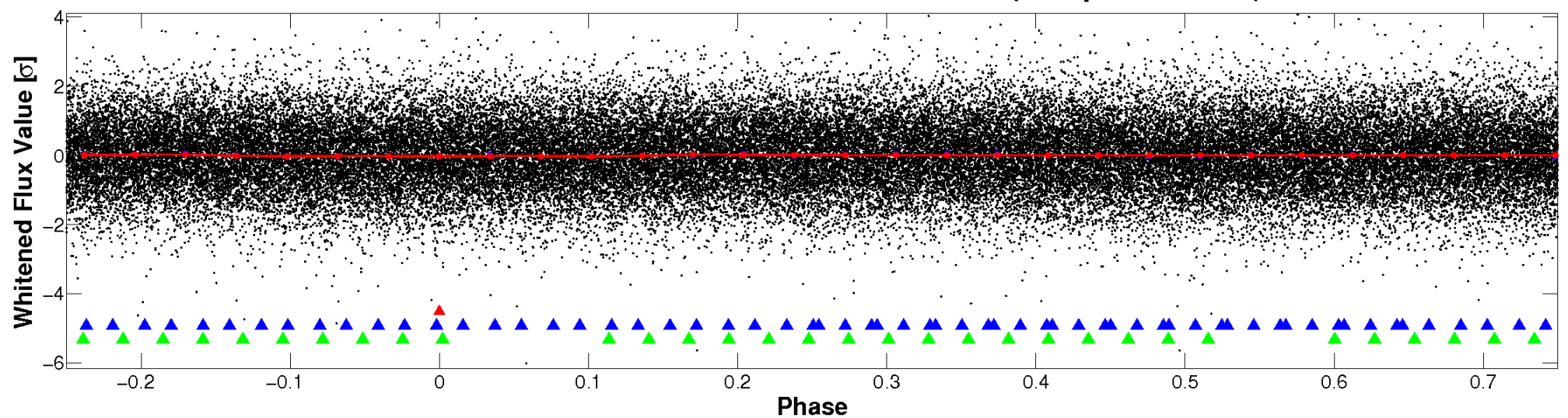


Non-Whitened Vs. Whitened Light Curve

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

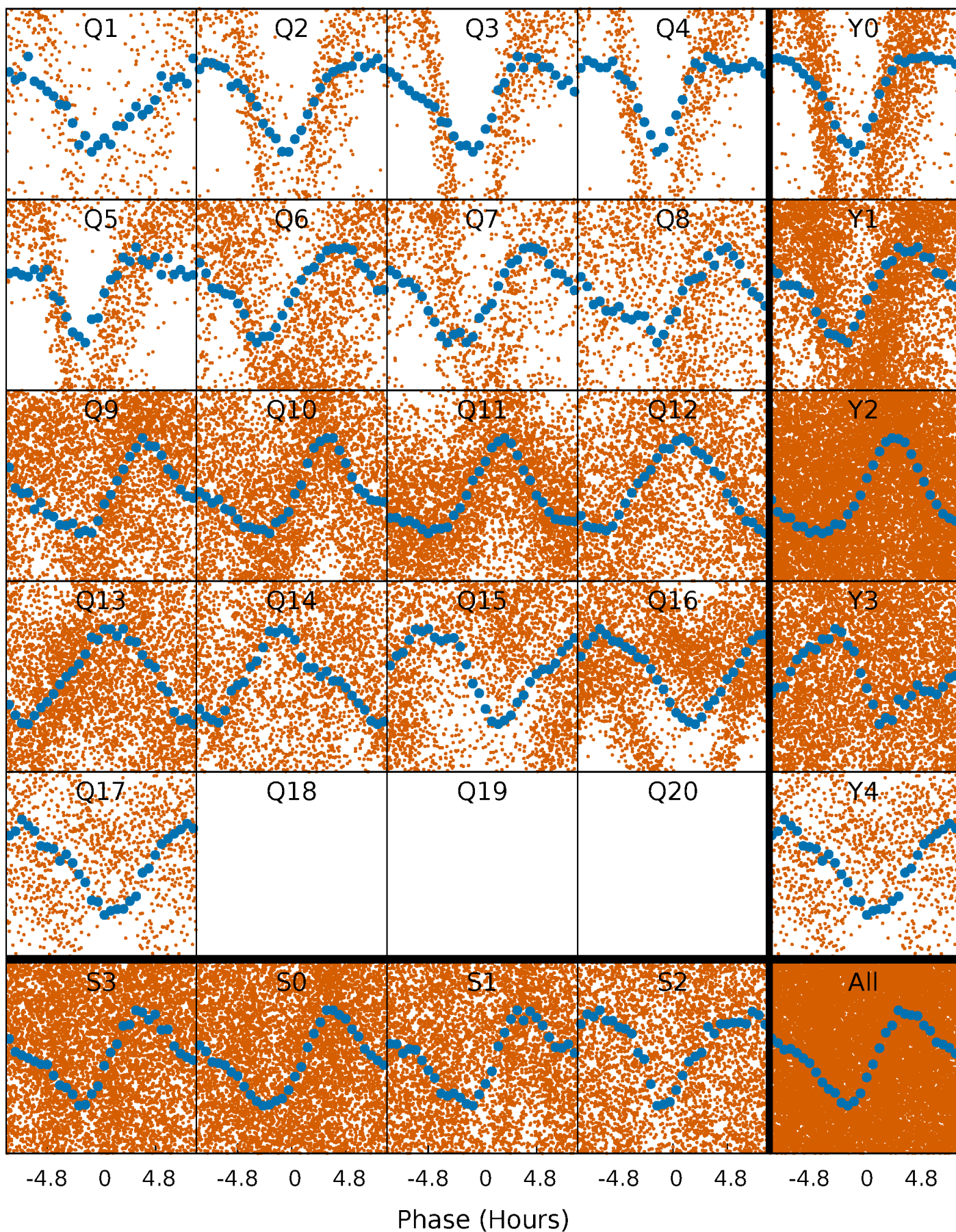


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



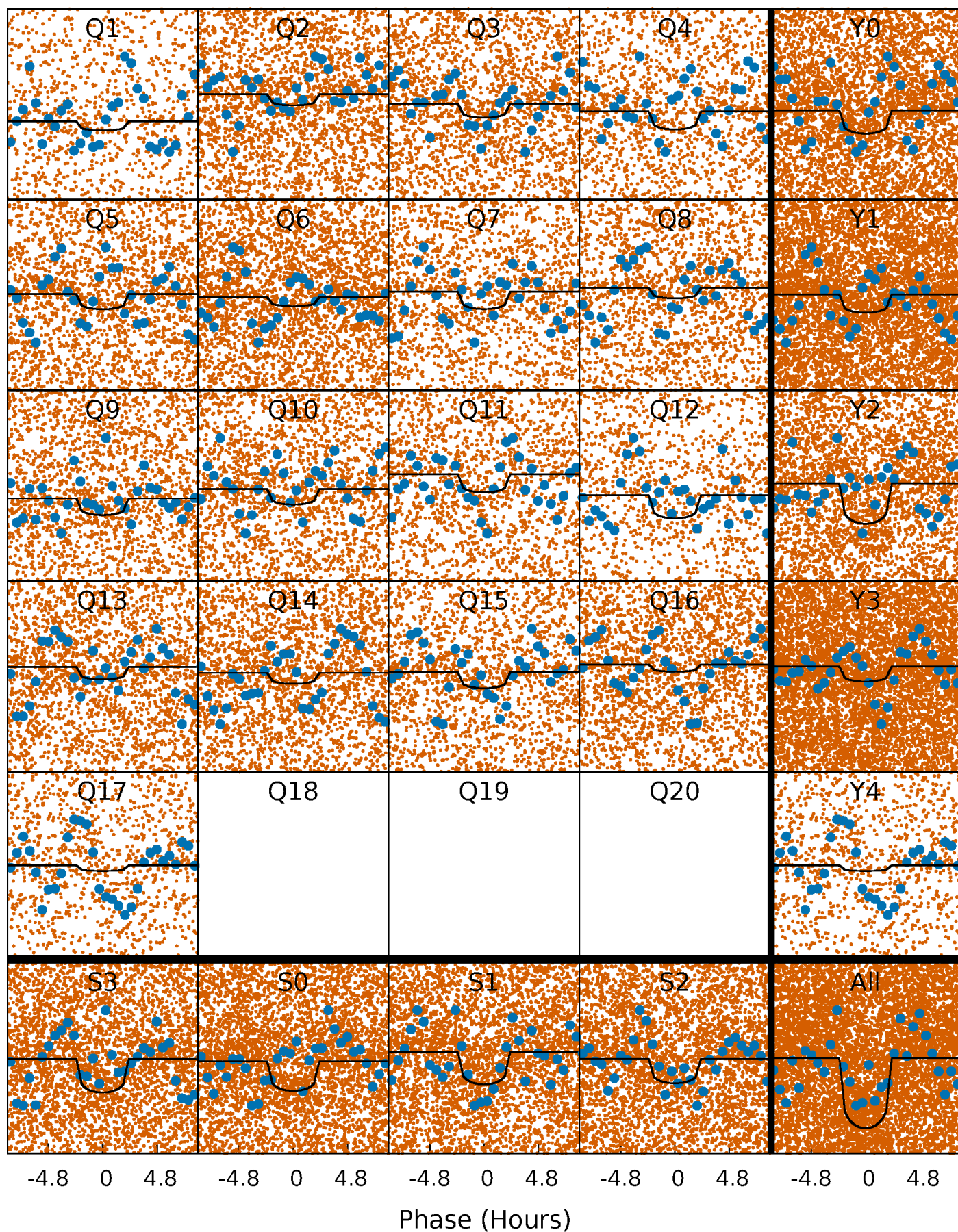
PDC Quarter-Phased Transit Curves

TCE 008320954-01 P= 0.600649 Days $T_0=131.715897$ (BKJD)



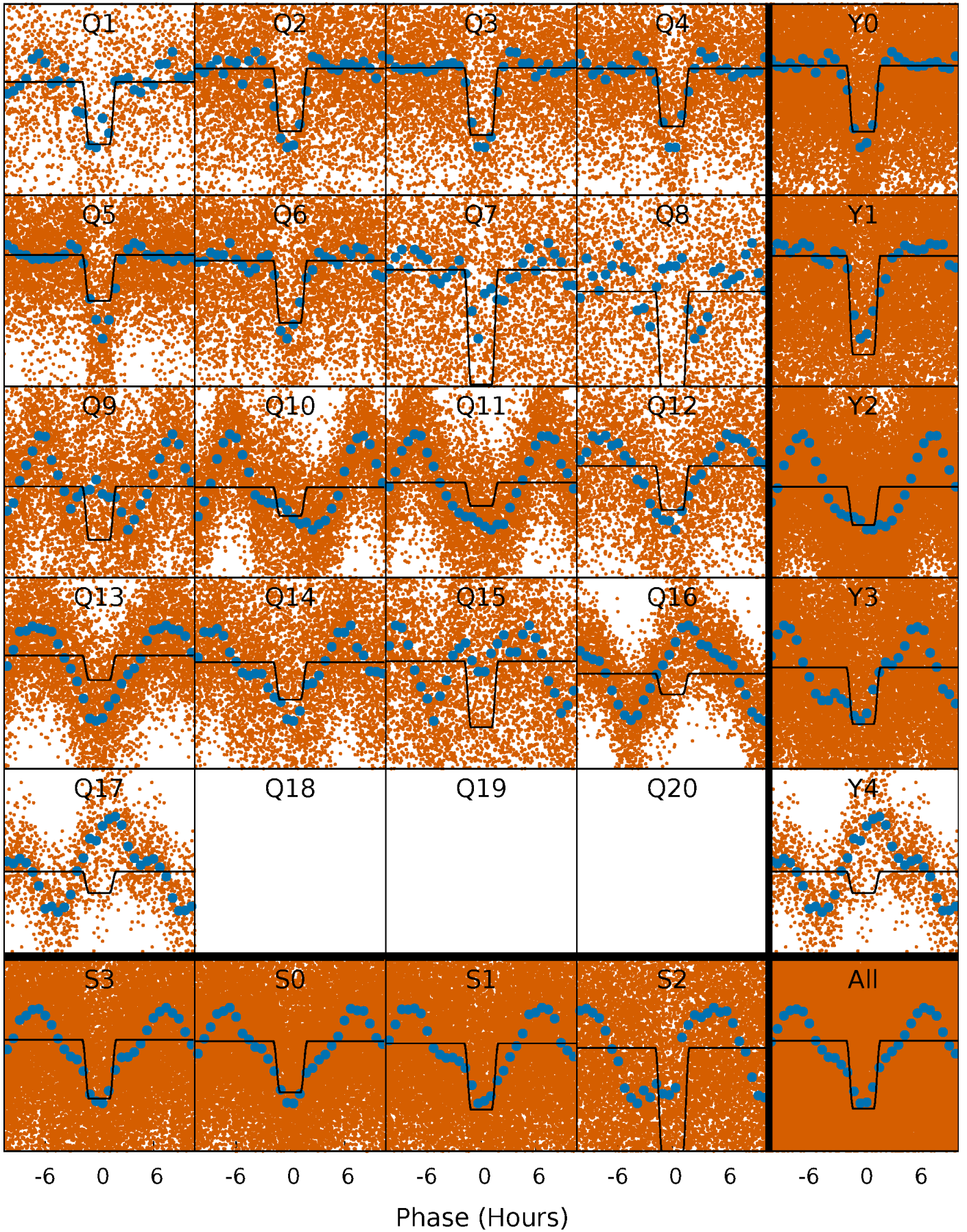
DV Quarter-Phased Transit Curves

TCE 008320954-01 P= 0.600649 Days $T_0=131.715897$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

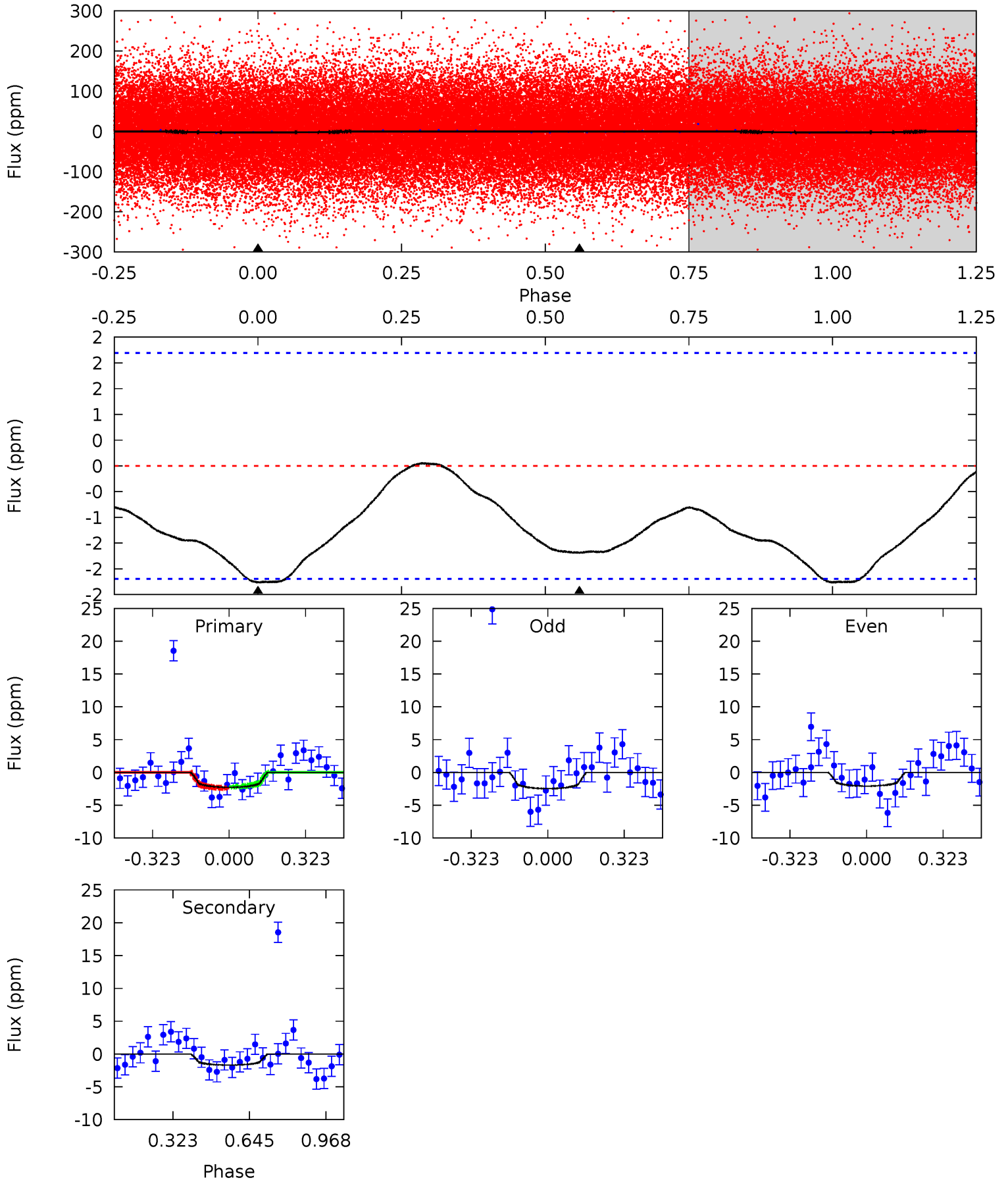
TCE 008320954-01 P= 0.600496 Days $T_0=131.724680$ (BKJD)



DV Model-Shift Uniqueness Test

008320954-01, P = 0.600649 Days, E = 131.115248 Days

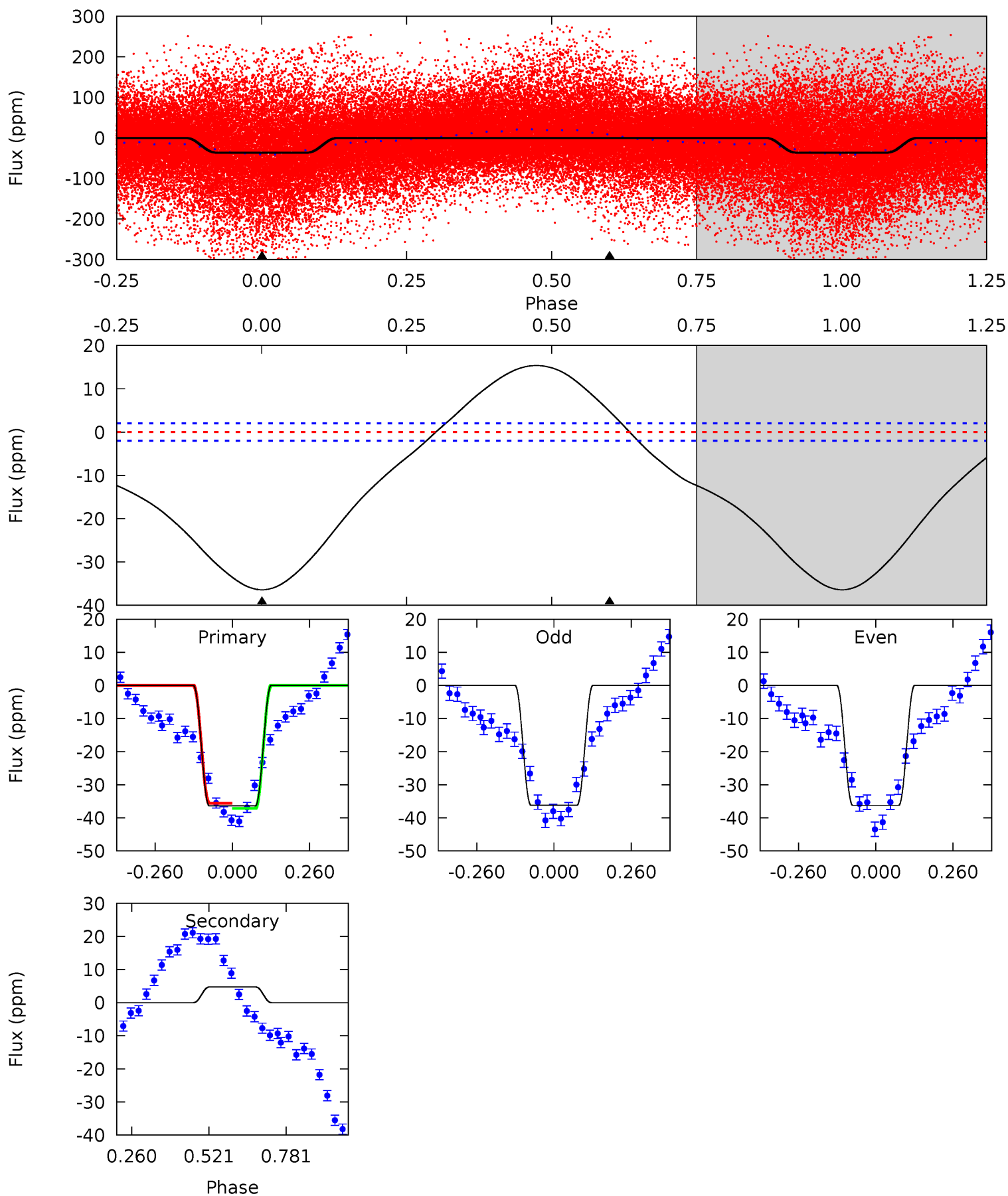
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.47	3.32	0	0	4.31	0.99	0.19	4.47	4.47	3.32	3.32	0.39	1.33	0.02	0.21



Alt Model-Shift Uniqueness Test

008320954-01, P = 0.600496 Days, E = 131.124184 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
79.6	-10.4	0	0	4.36	1.13	7.68	79.6	79.6	-10.4	-10.4	0.04	1.07	0.30	1.59



Stellar Parameters For KIC 008320954

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7046^{+183}_{-224}	$3.811^{+0.300}_{-0.100}$	$-0.560^{+0.300}_{-0.250}$	$2.406^{+0.446}_{-0.829}$	$1.364^{+0.207}_{-0.253}$	$0.138^{+0.277}_{-0.042}$
	+3%/-3%	+8%/-3%	+54%/-45%	+19%/-34%	+15%/-19%	+201%/-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 008320954-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2 ± 1	$0.54^{+0.20}_{-0.18}$	5318^{+331}_{-480}	4806^{+1450}_{-1273}	$0.728^{+1.086}_{-0.347}$
Alt.	5 ± 0	$1.68^{+0.29}_{-0.32}$	5333^{+345}_{-448}	-5069^{+240}_{-221}	$-0.226^{+0.064}_{-0.115}$

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 $A_{obs} \gg 1.0$

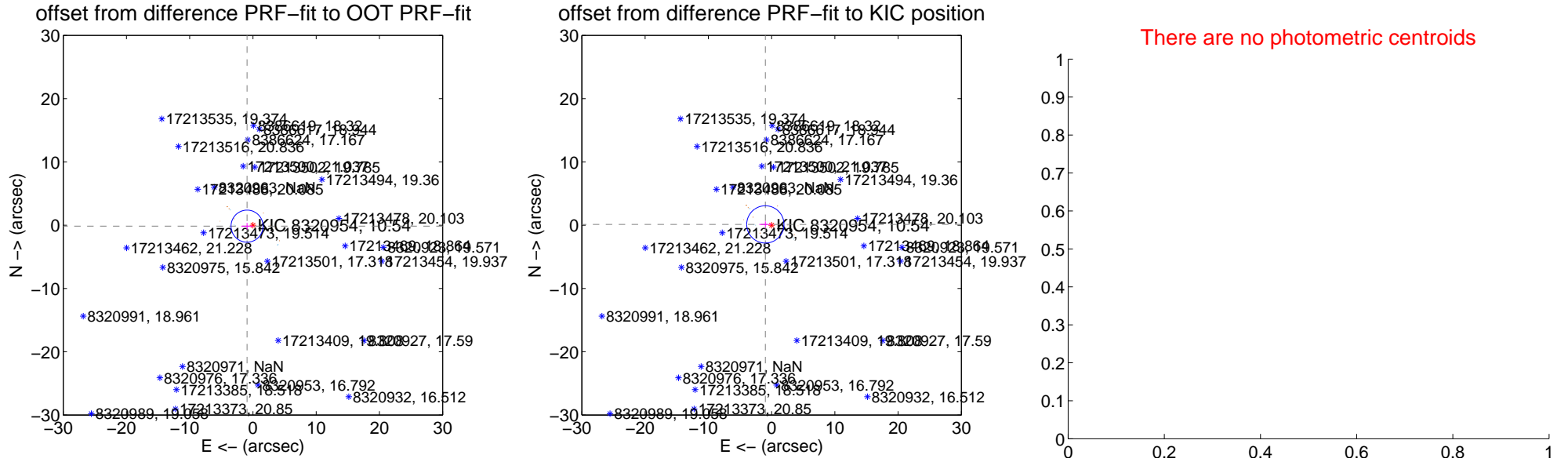
DV Centroid Data

Supplemental centroid analysis for 008320954-01. **Kepler magnitude: 10.54.** Transit SNR 4.94

There are 5 quarters with good PRF difference image offsets

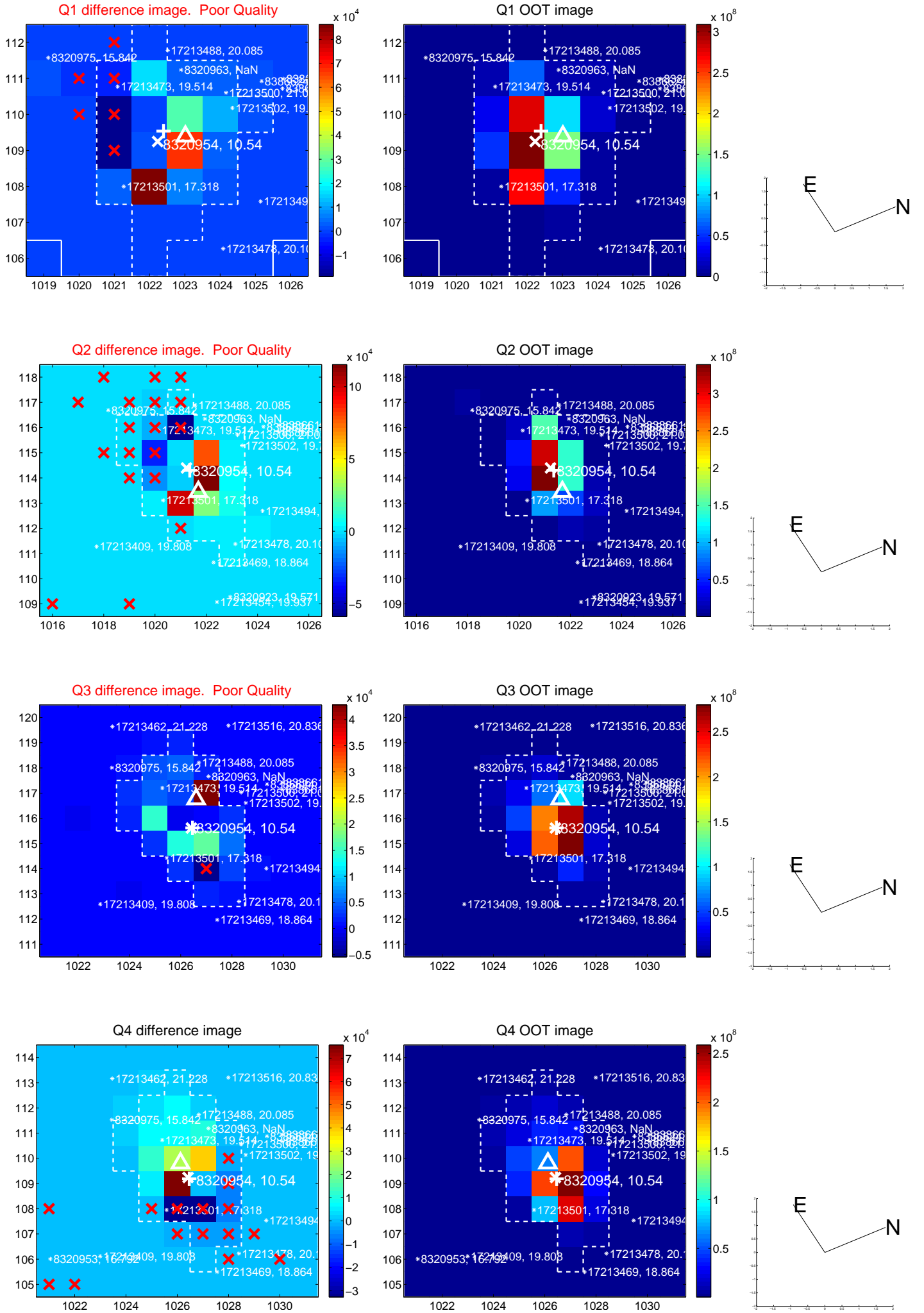
The direct PRF centroid is offset from the target star catalog position by about 1.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.941 ± 0.845	1.11	0.929 ± 0.907	-0.152 ± 0.516
PRF-fit source offset from KIC position	0.998 ± 0.982	1.02	0.990 ± 0.953	0.124 ± 0.478
photometric centroid source offset	—	—	—	—

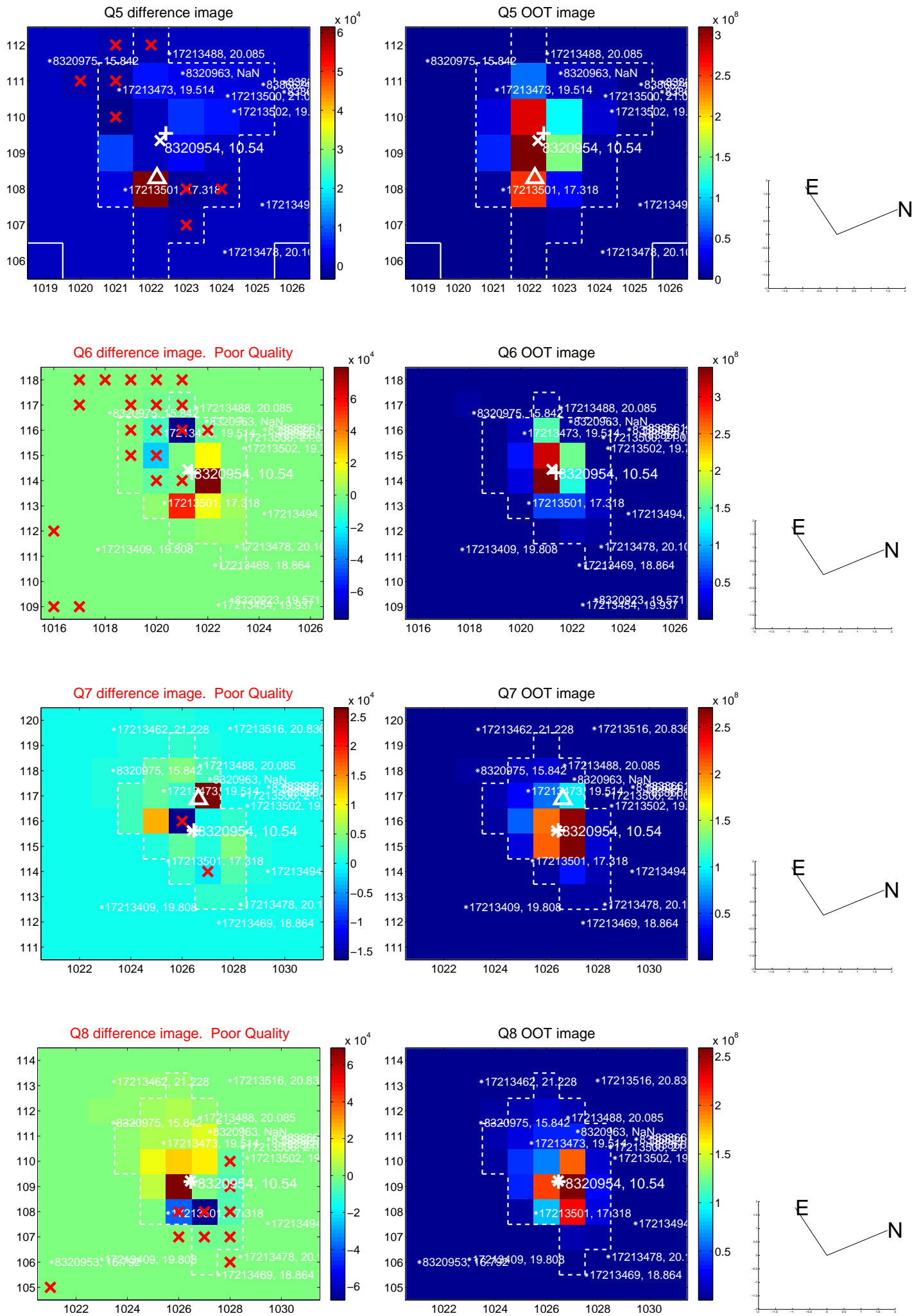


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

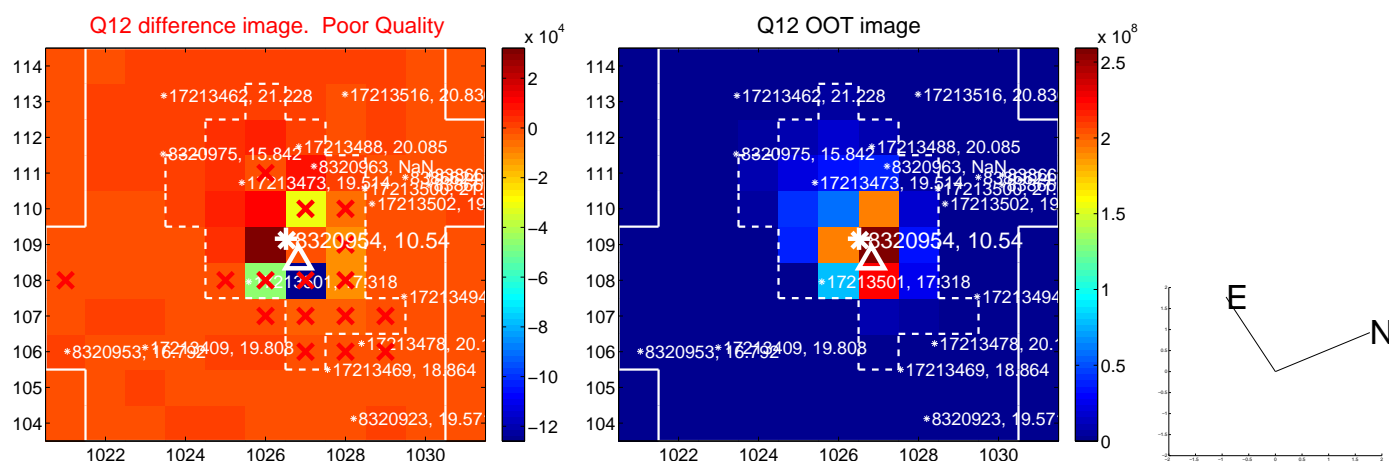
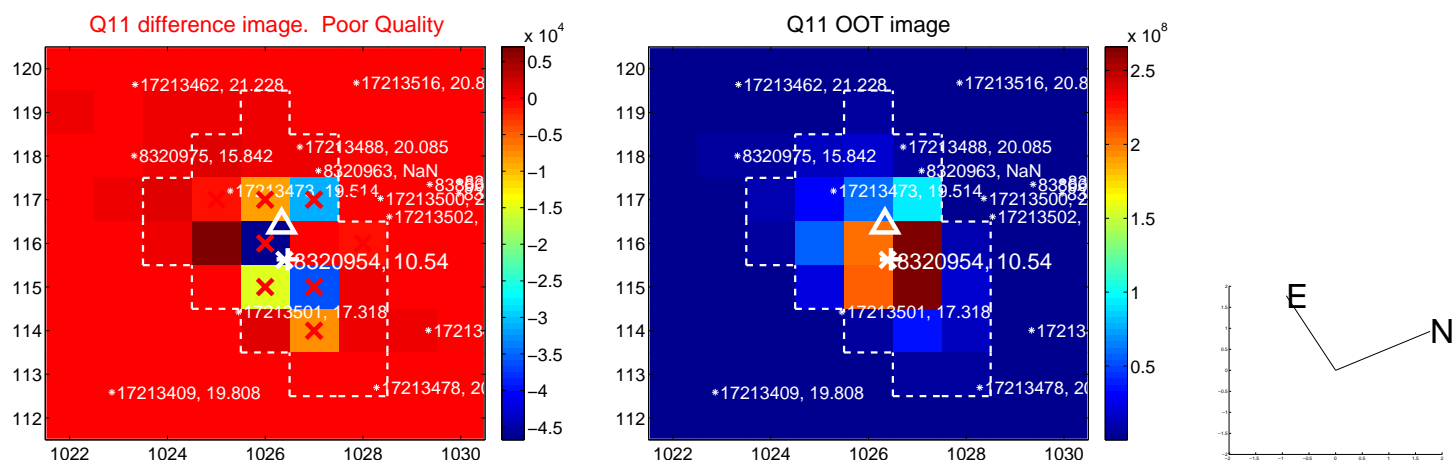
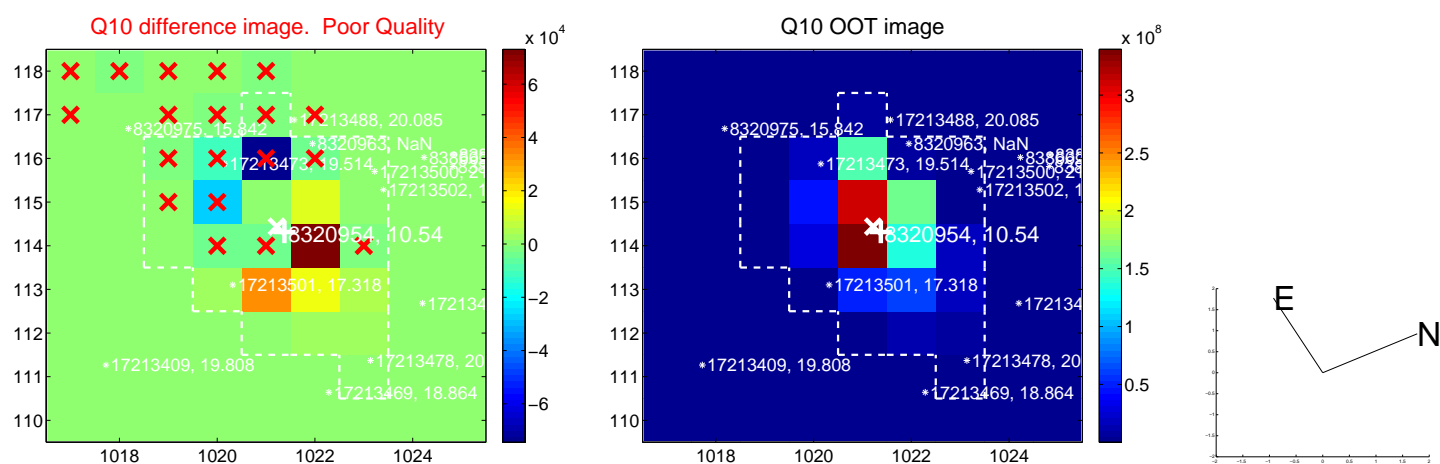
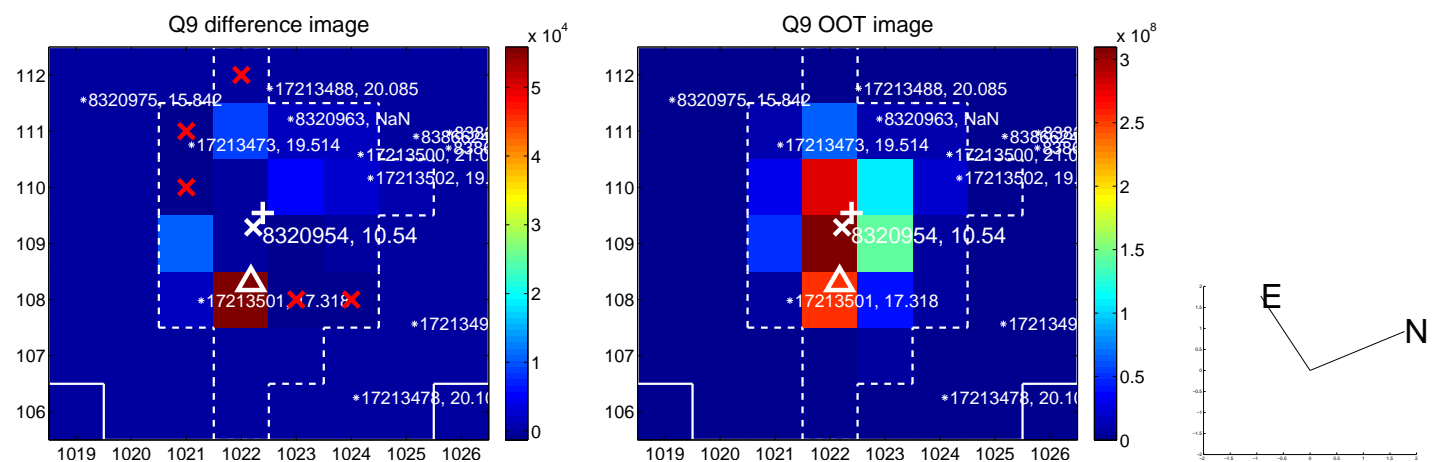
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



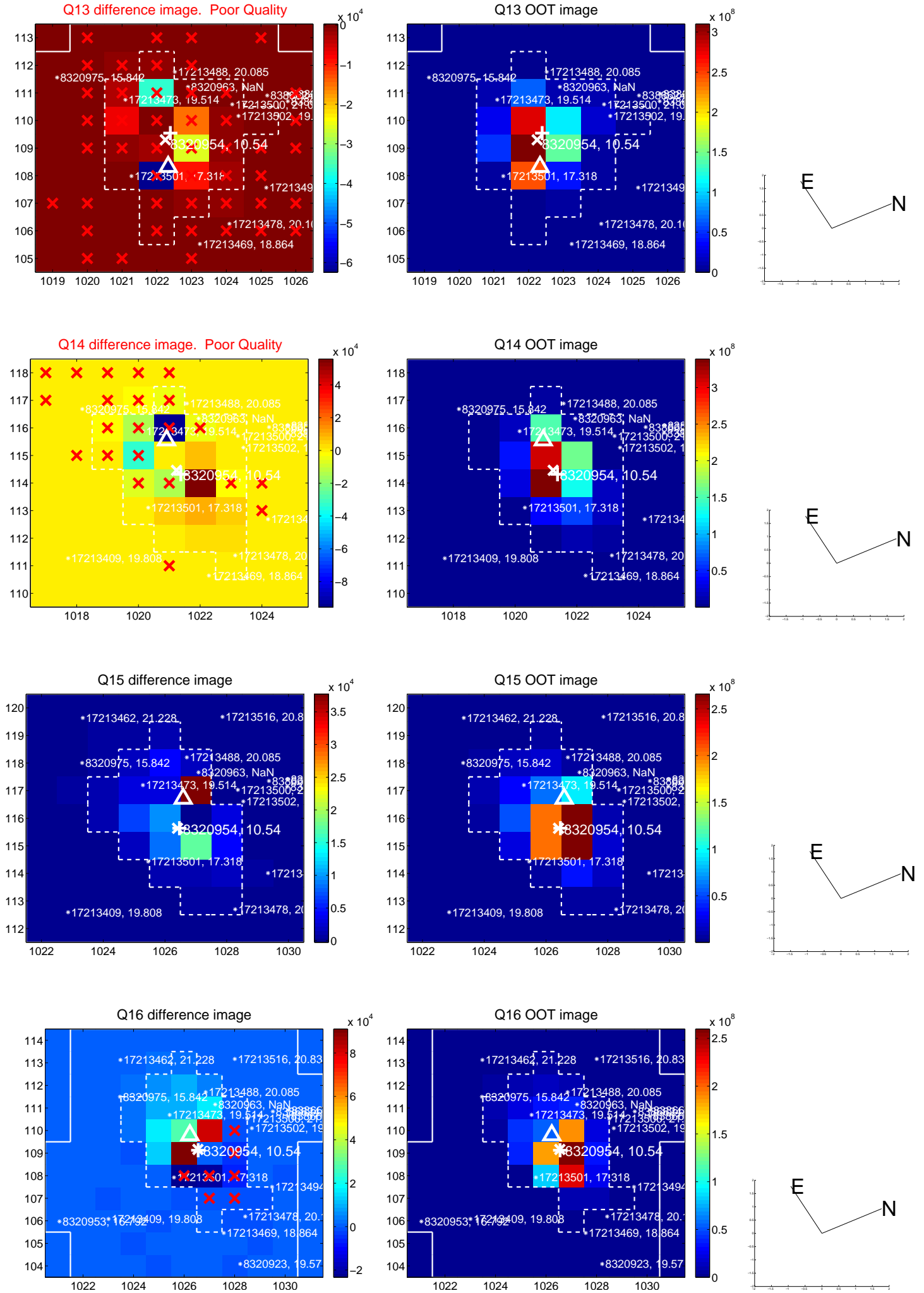
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



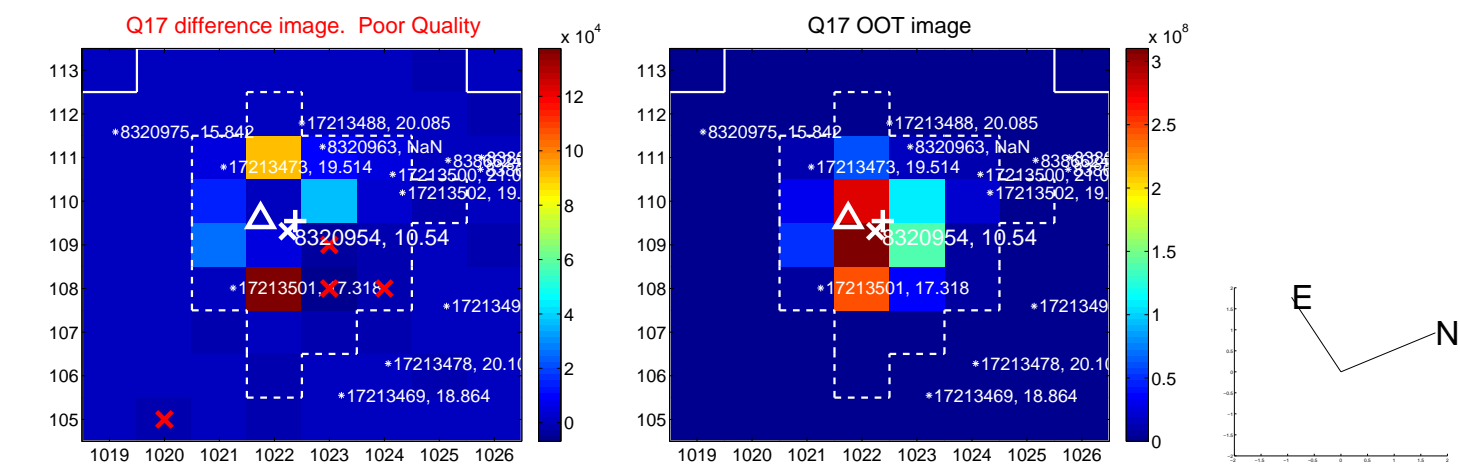
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



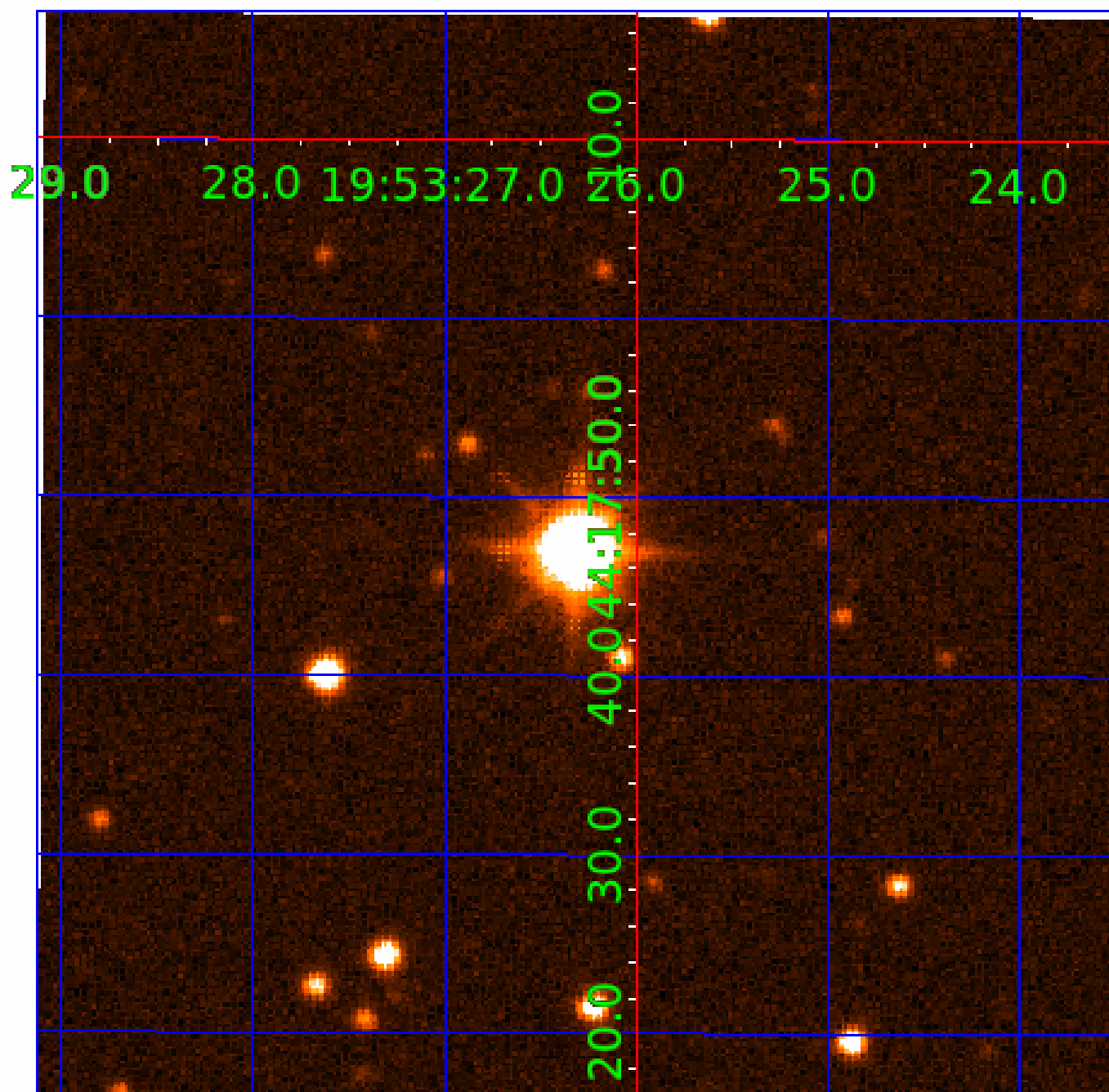
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 008320954

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})
008320954-01	OBS	No	0.600649	131.715897	4.8	4.210	8.1	4.9	2.41	7046	0.57	53460.62
008320954-02	OBS	No	23.401813	151.923026	120.7	0.942	11.5	8.0	2.41	7046	3.20	404.76
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008320954-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED
008320954-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
008320954-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_SATURATED

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

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

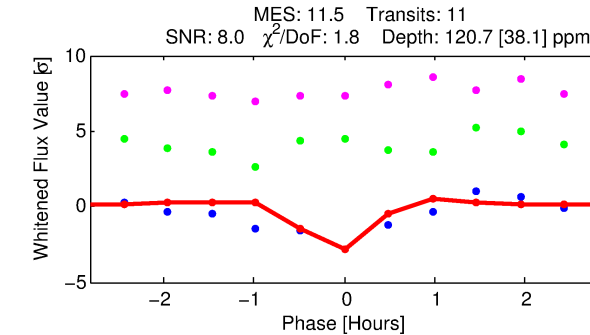
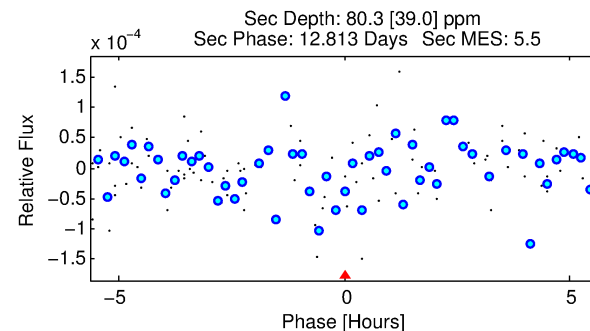
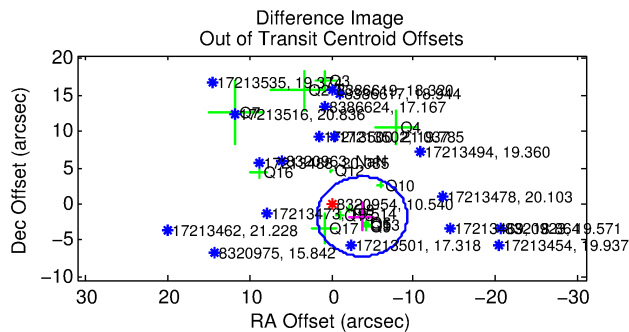
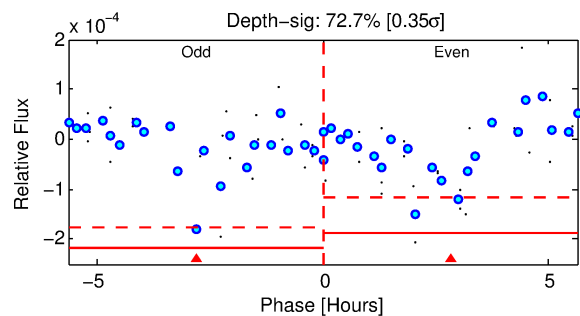
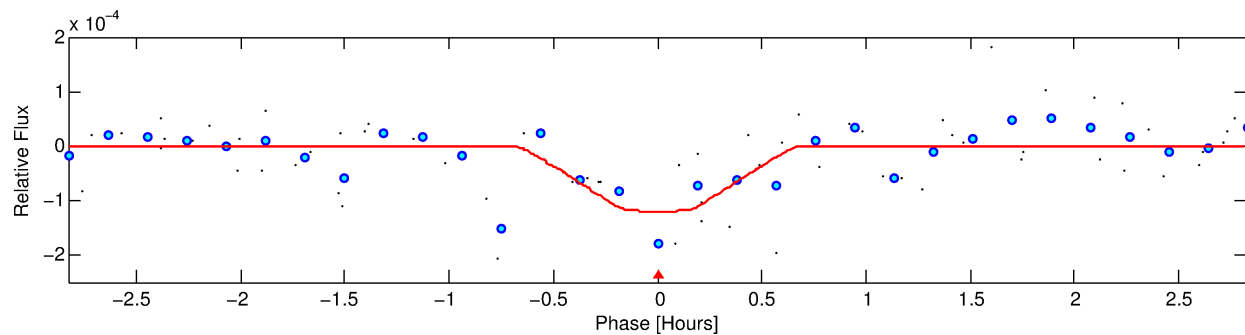
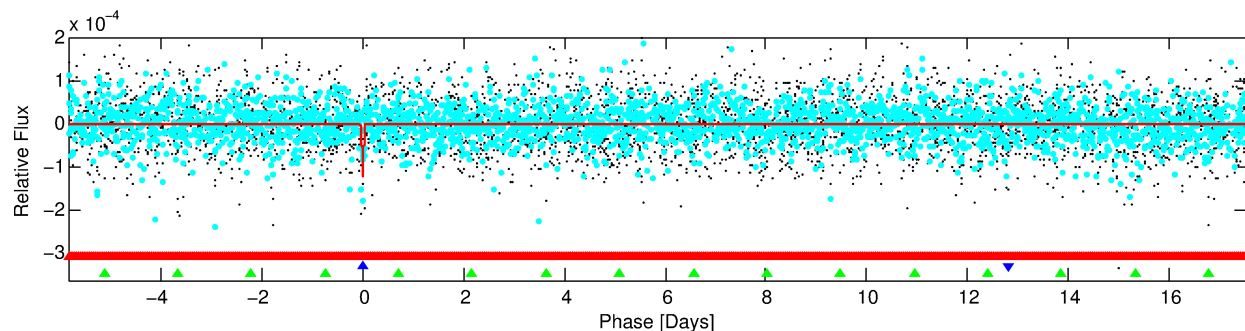
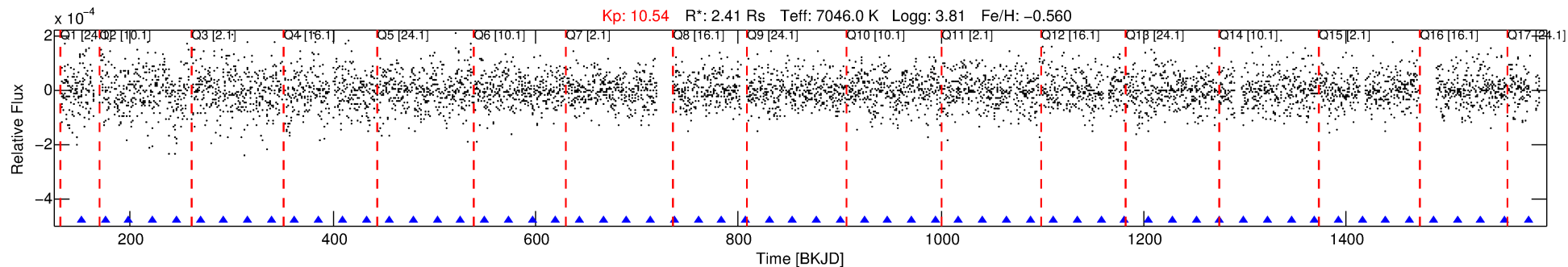
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008320954-02

No Significant Match Found

DV One-Page Summary

KIC: 8320954 Candidate: 2 of 3 Period: 23.402 d



DV Fit Results:

Period = 23.40181 [0.00014] d
Epoch = 151.9230 [0.0052] BKJD
Rp/R* = 0.0122 [0.0113]
a/R* = 73.06 [404.34]
b = 0.94 [0.75]
Seff = 404.76 [214.56]
Teq = 1144 [152] K
Rp = 3.20 [3.17] Re
a = 0.1777 [0.0578] AU
Ag = 136.26 [270.82] [0.50 σ]
Teff = 6042 [2906] K [1.68 σ]

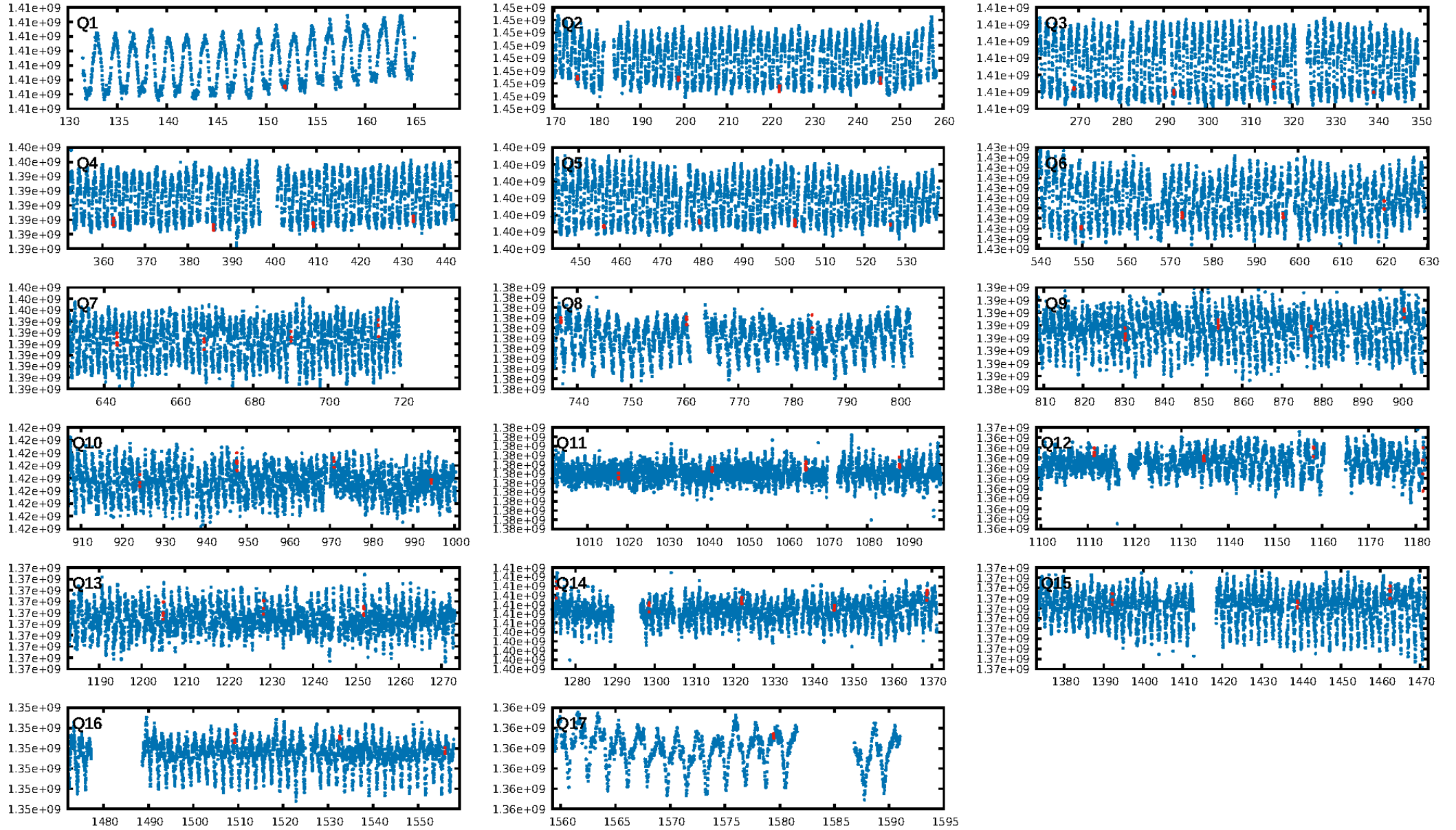
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [126.85 σ]
LongPeriod-sig: 100.0% [382.59 σ]
ModelChiSquare2-sig: 2.5%
ModelChiSquareGof-sig: 84.6%
Bootstrap-pfa: 6.51e-19
RollingBand-fgt: 1.00 [11/11]
GhostDiagnostic-chr: -0.02119
Centroid-sig: 6.0%
Centroid-so: 0.946 arcsec [1.39 σ]
OotOffset-rm: 4.095 arcsec [2.24 σ]
KicOffset-rm: 3.965 arcsec [2.44 σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.29 [4/14]
DiffImageOverlap-fno: 0.00 [0/17]

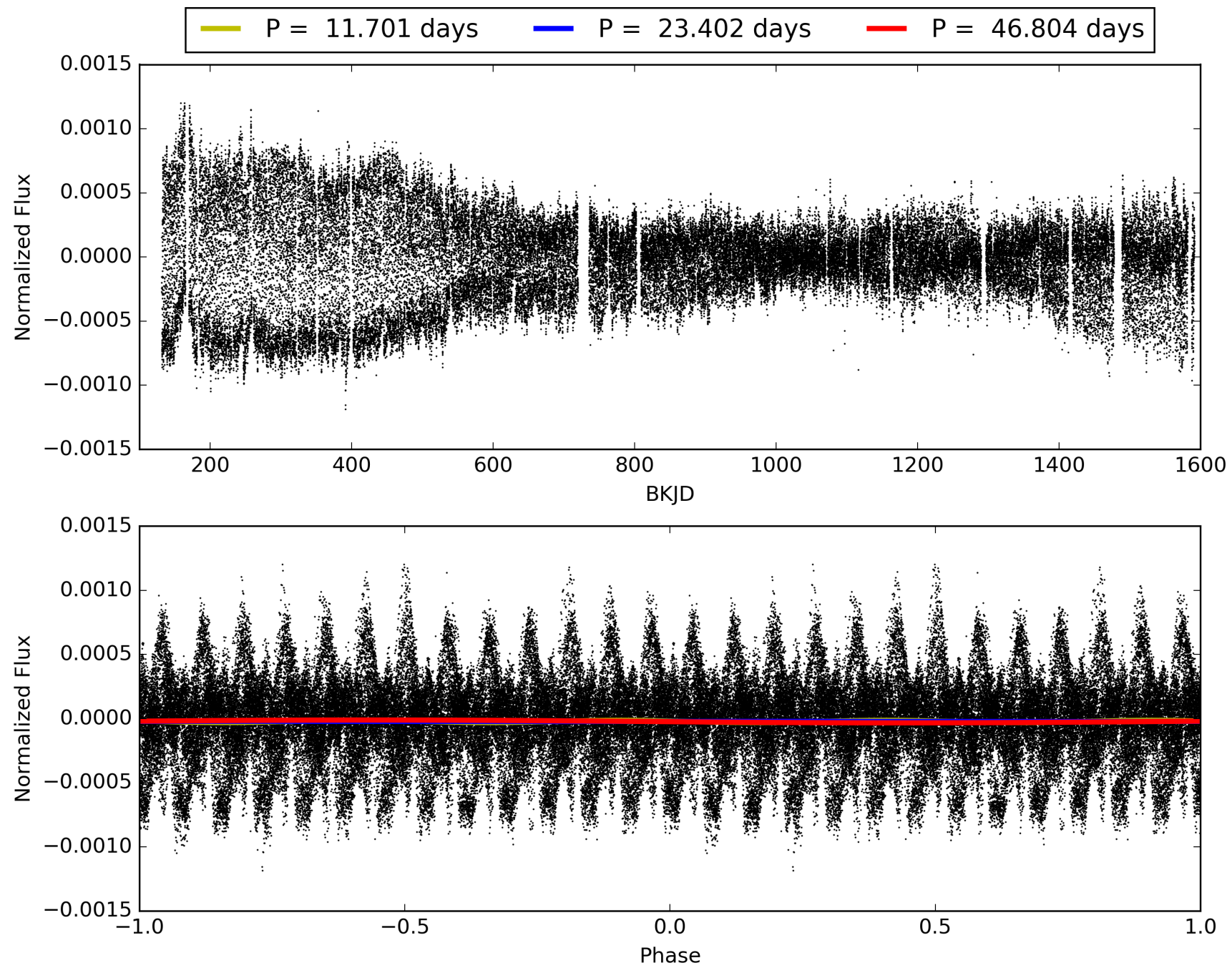
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 10:00:03 Z

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

TCE 008320954-02, PDC Light Curves

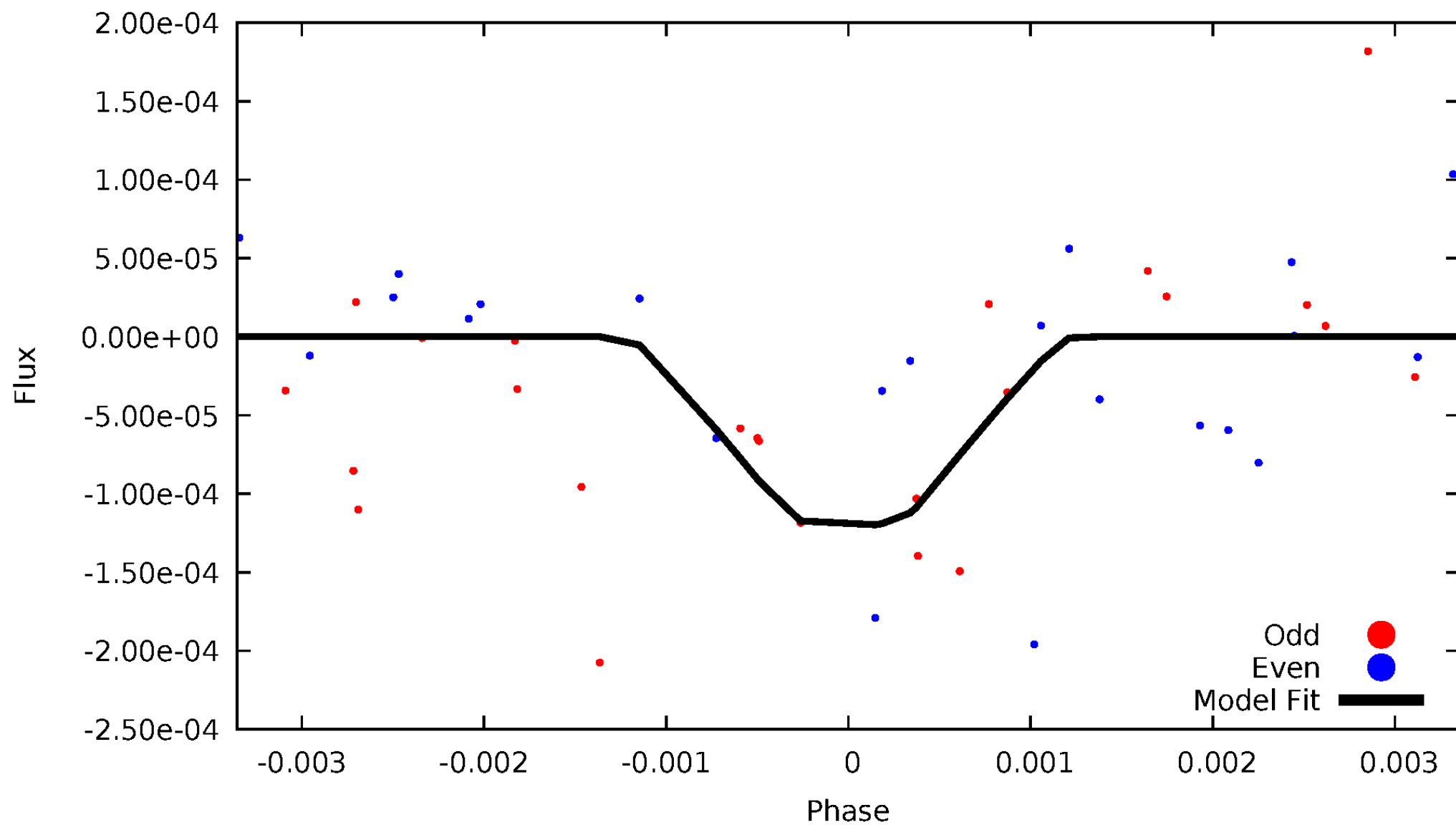


TCE 008320954-02



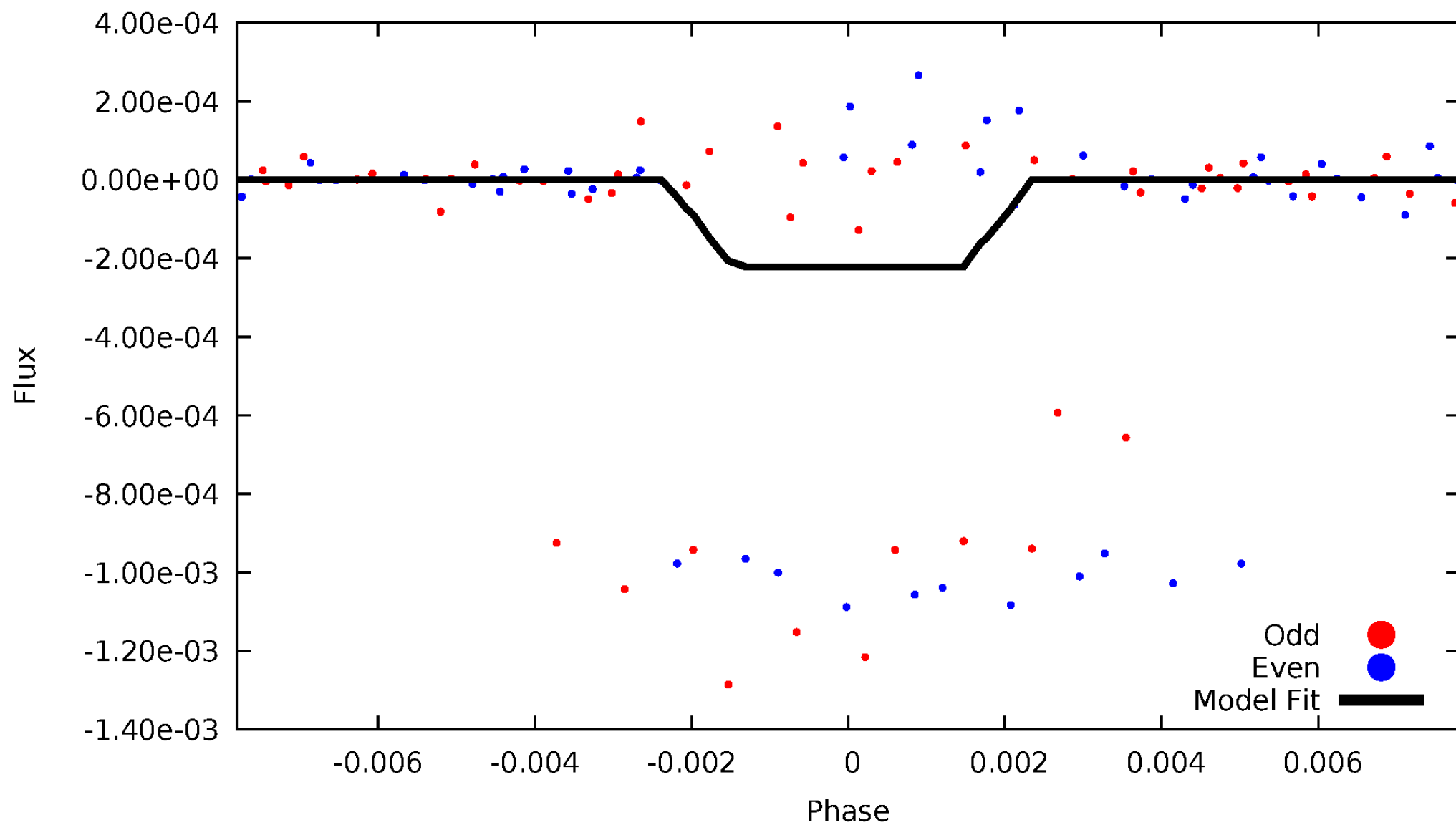
DV Odd/Even

TCE 008320954-02



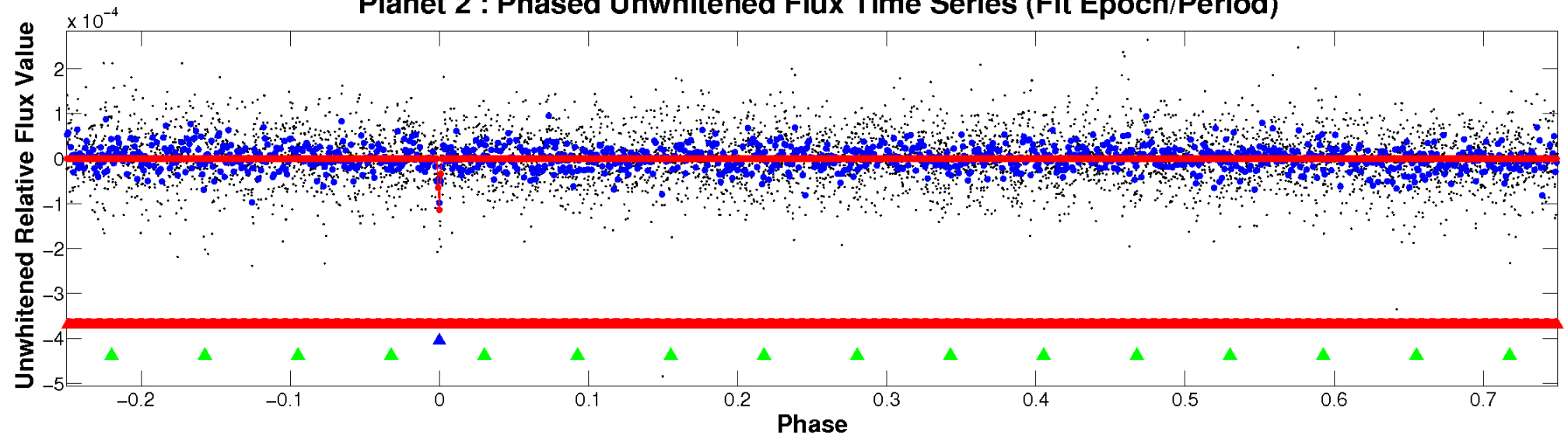
ALT Odd/Even

TCE 008320954-02

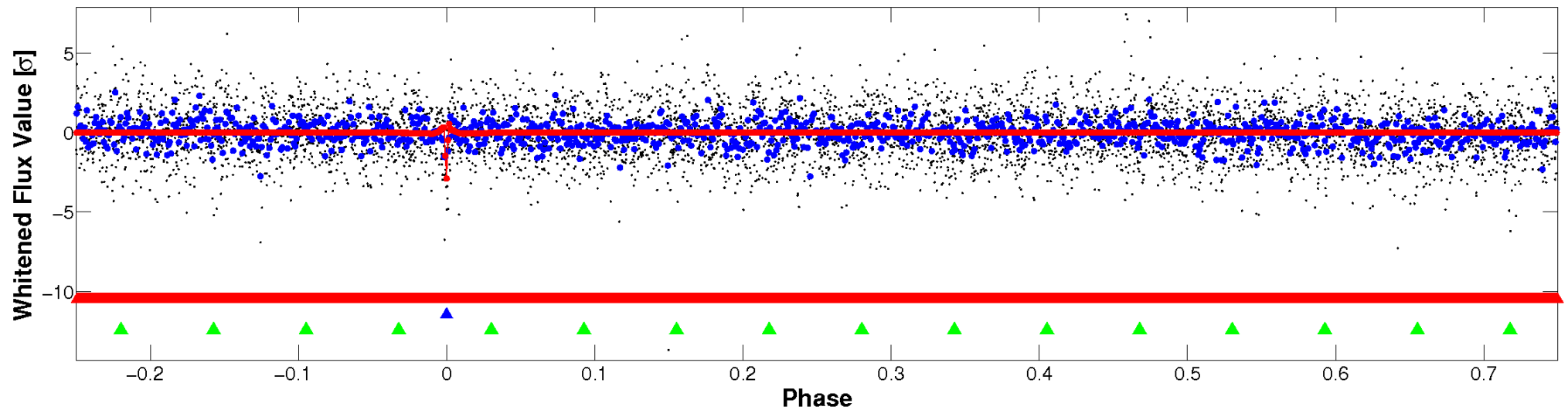


Non-Whitened Vs. Whitened Light Curve

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

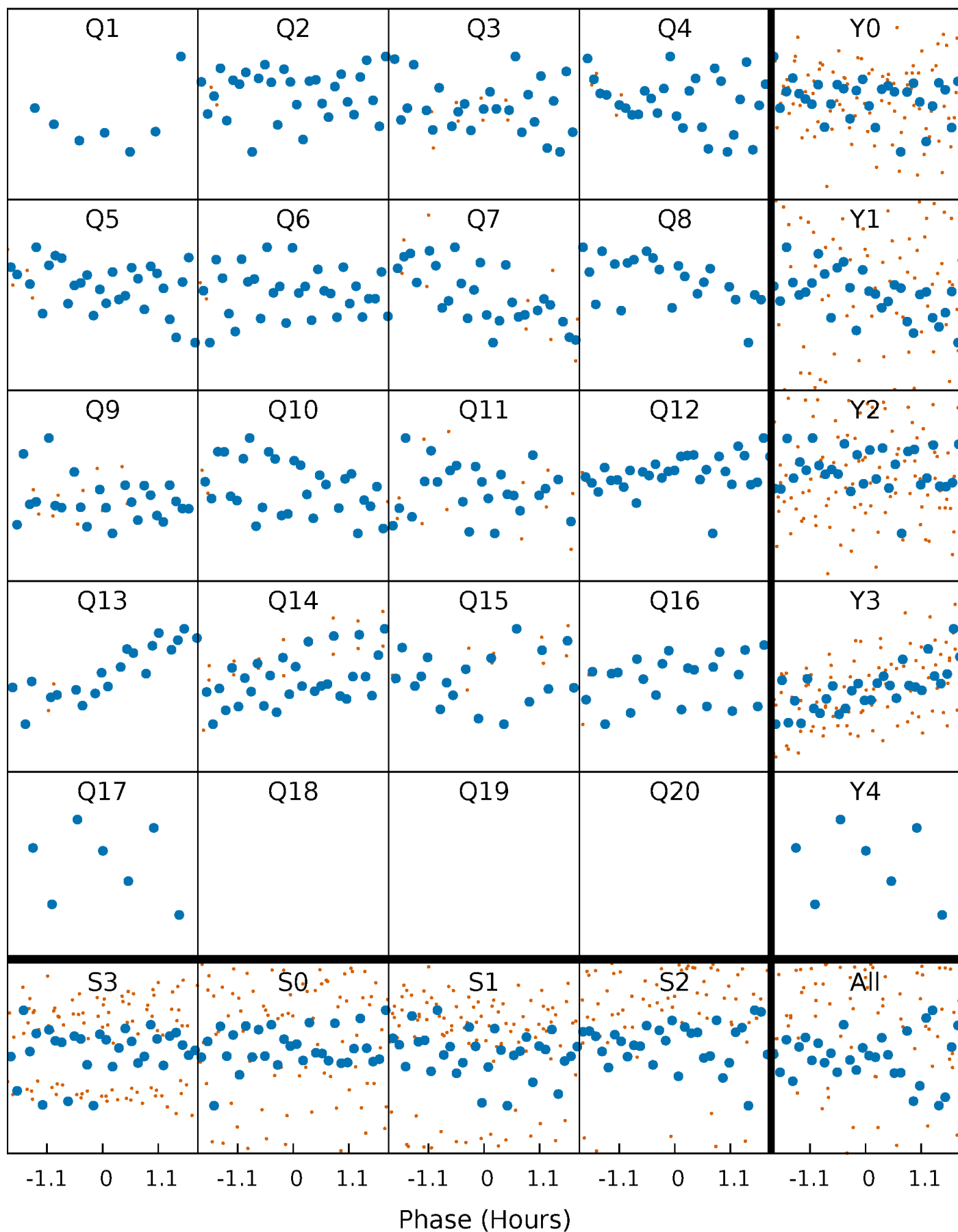


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



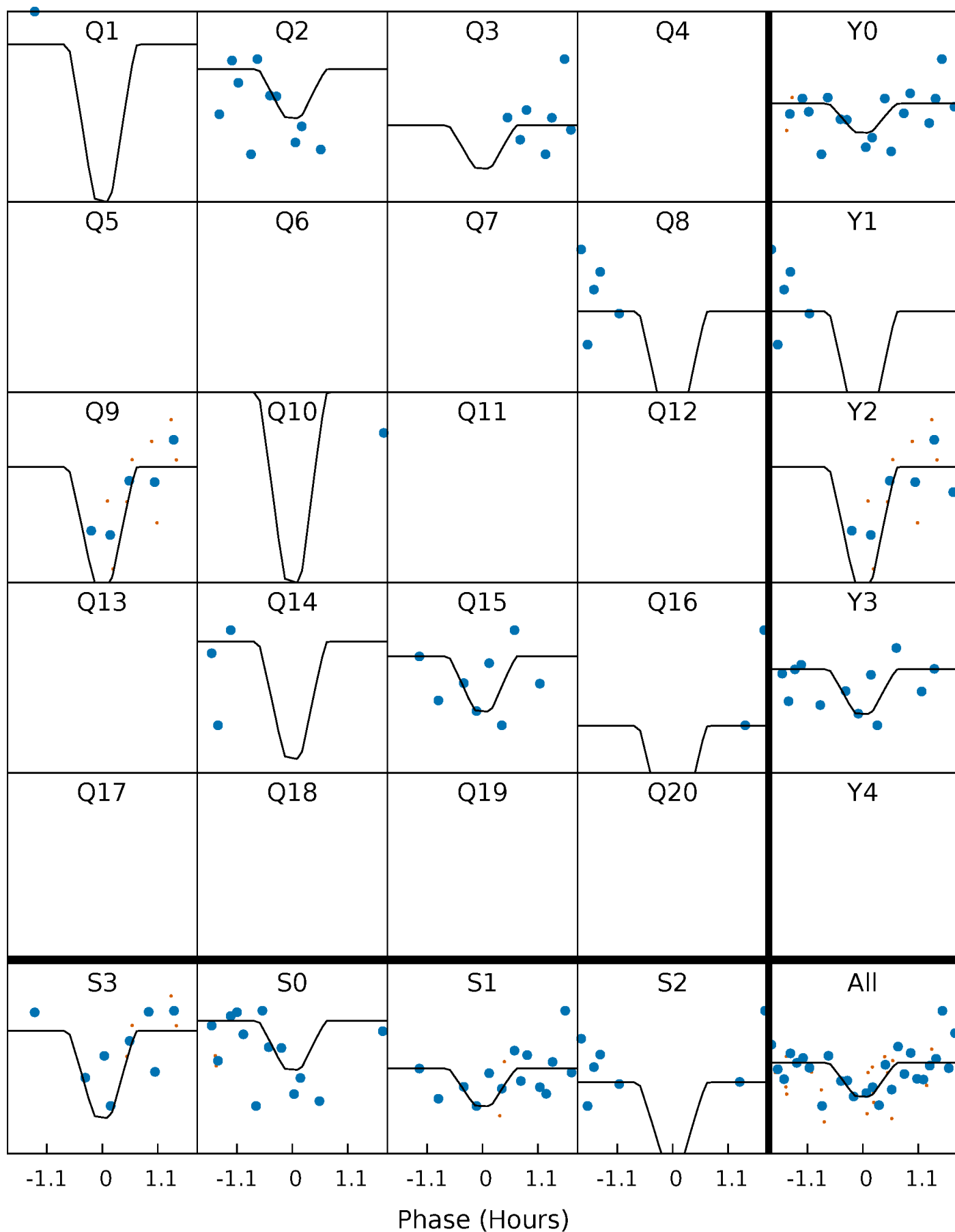
PDC Quarter-Phased Transit Curves

TCE 008320954-02 P= 23.401813 Days $T_0=151.923026$ (BKJD)



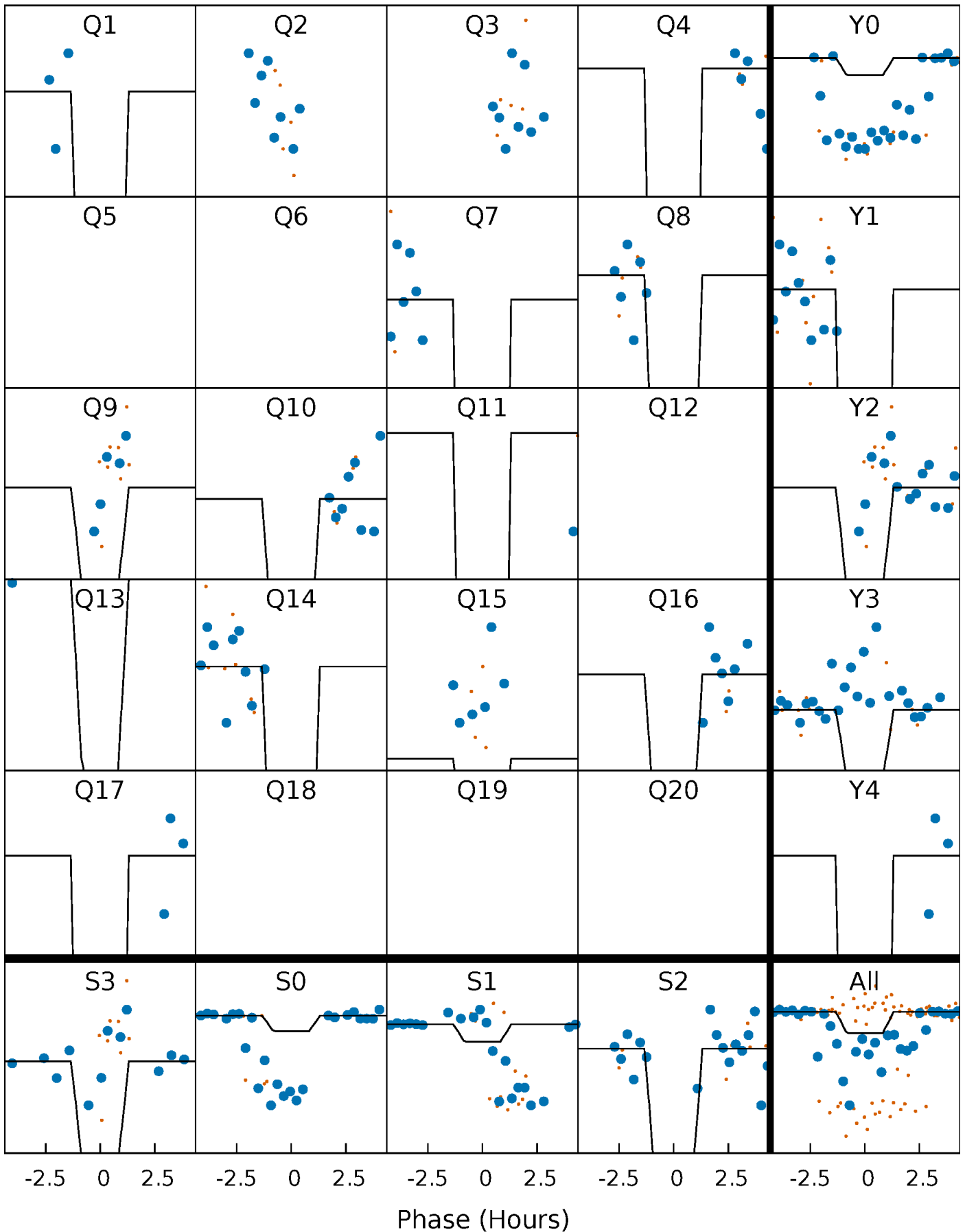
DV Quarter-Phased Transit Curves

TCE 008320954-02 P= 23.401813 Days $T_0=151.923026$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

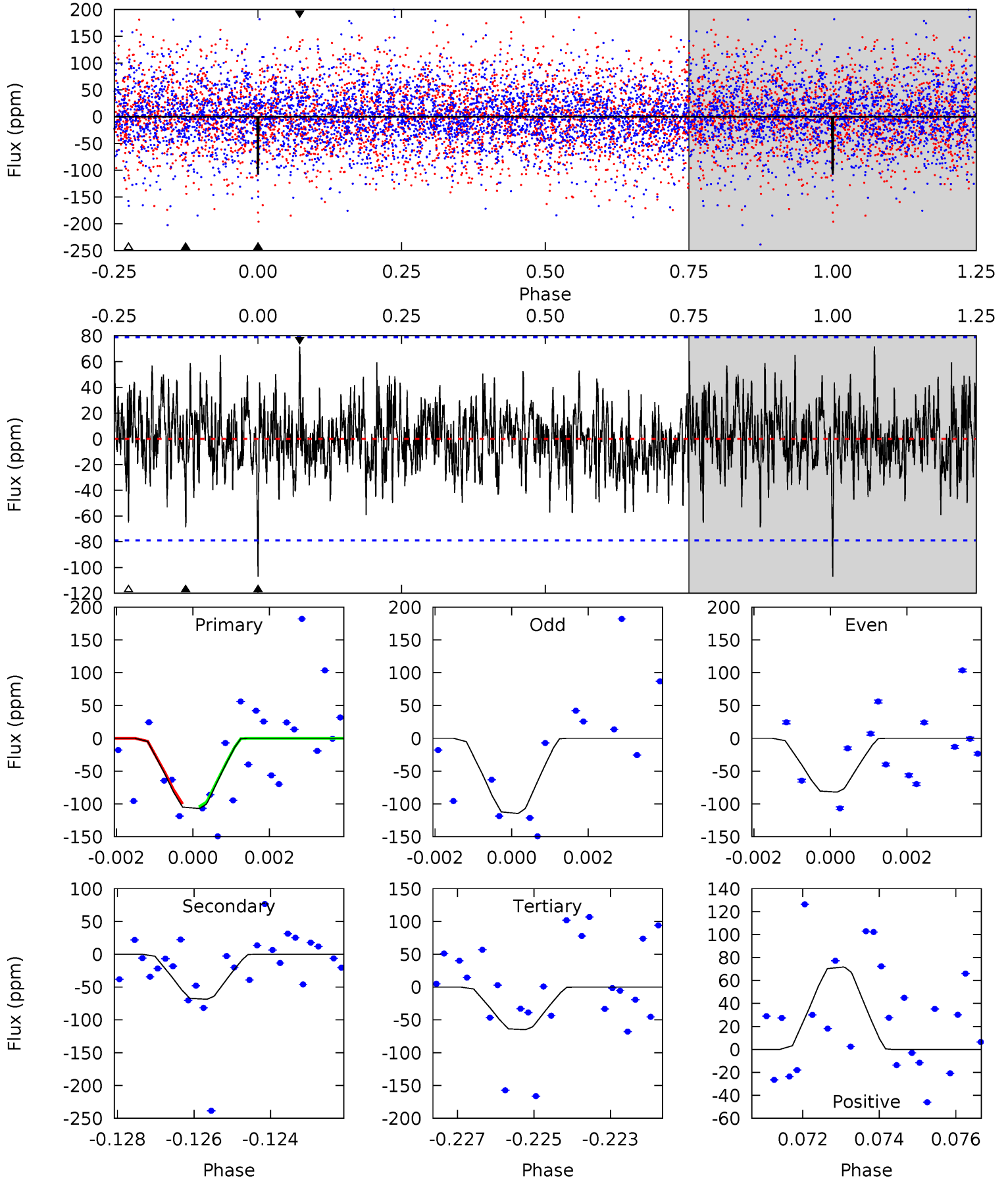
TCE 008320954-02 P= 23.401879 Days $T_0=151.926782$ (BKJD)



DV Model-Shift Uniqueness Test

008320954-02, P = 23.401813 Days, E = 128.521213 Days

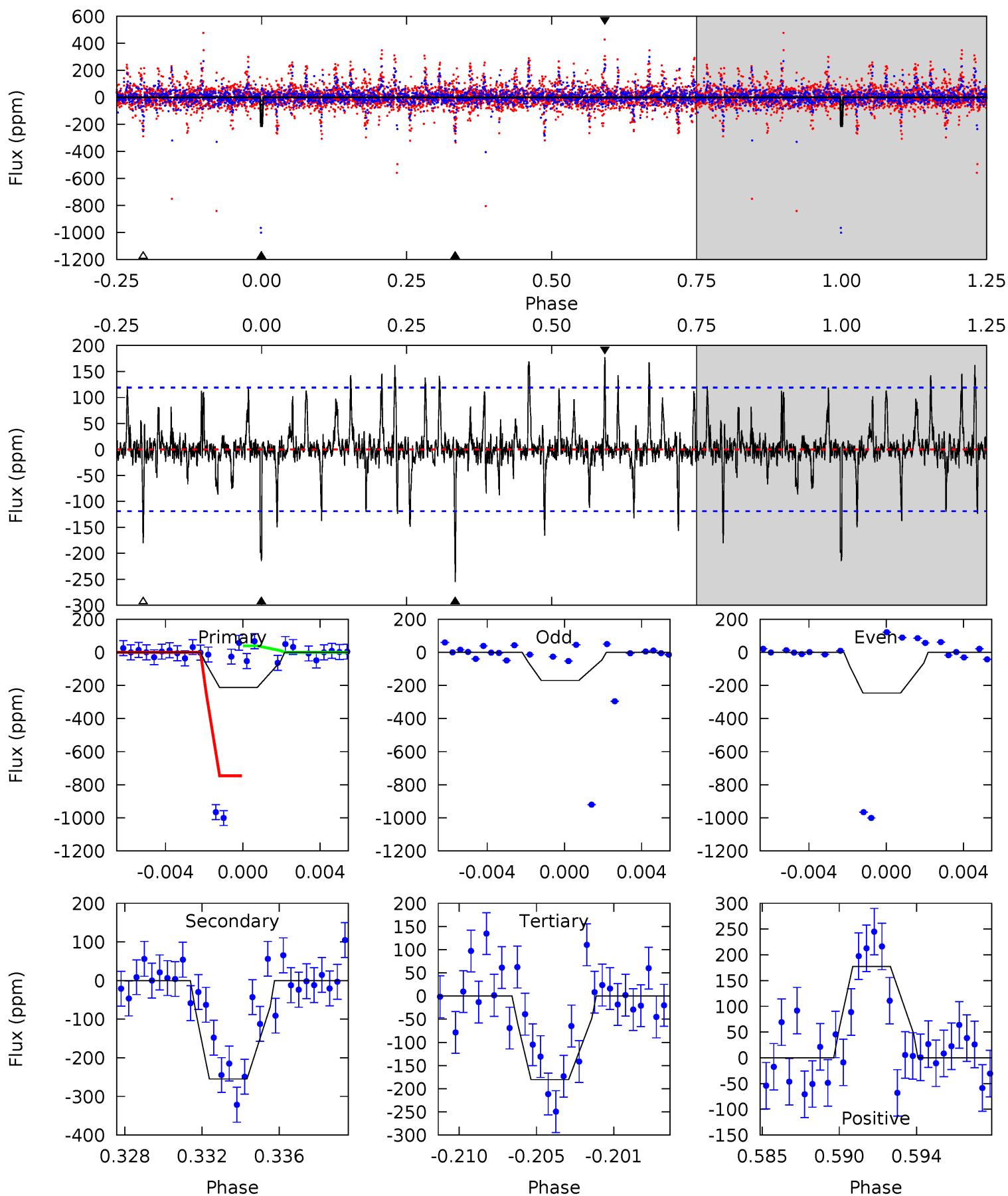
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.24	4.64	4.39	4.85	5.33	3.10	1.36	2.85	2.39	0.25	-0.21	0.98	0.91	0.40	0.11



Alt Model-Shift Uniqueness Test

008320954-02, P = 23.401879 Days, E = 128.524903 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.29	11.1	7.86	7.73	5.18	2.85	1.61	1.42	1.56	3.25	3.39	1.64	4.22	0.41	0



Stellar Parameters For KIC 008320954

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7046^{+183}_{-224}	$3.811^{+0.300}_{-0.100}$	$-0.560^{+0.300}_{-0.250}$	$2.406^{+0.446}_{-0.829}$	$1.364^{+0.207}_{-0.253}$	$0.138^{+0.277}_{-0.042}$
	+3%/-3%	+8%/-3%	+54%/-45%	+19%/-34%	+15%/-19%	+201%/-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 008320954-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-69 ± 15	$3.52^{+2.80}_{-2.12}$	1569^{+104}_{-146}	5352^{+3214}_{-1122}	95^{+494}_{-67}
Alt.	-255 ± 23	$4.01^{+2.91}_{-2.38}$	1566^{+104}_{-133}	6982^{+5934}_{-1600}	283^{+1362}_{-190}

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 $A_{obs} \gg 1.0$

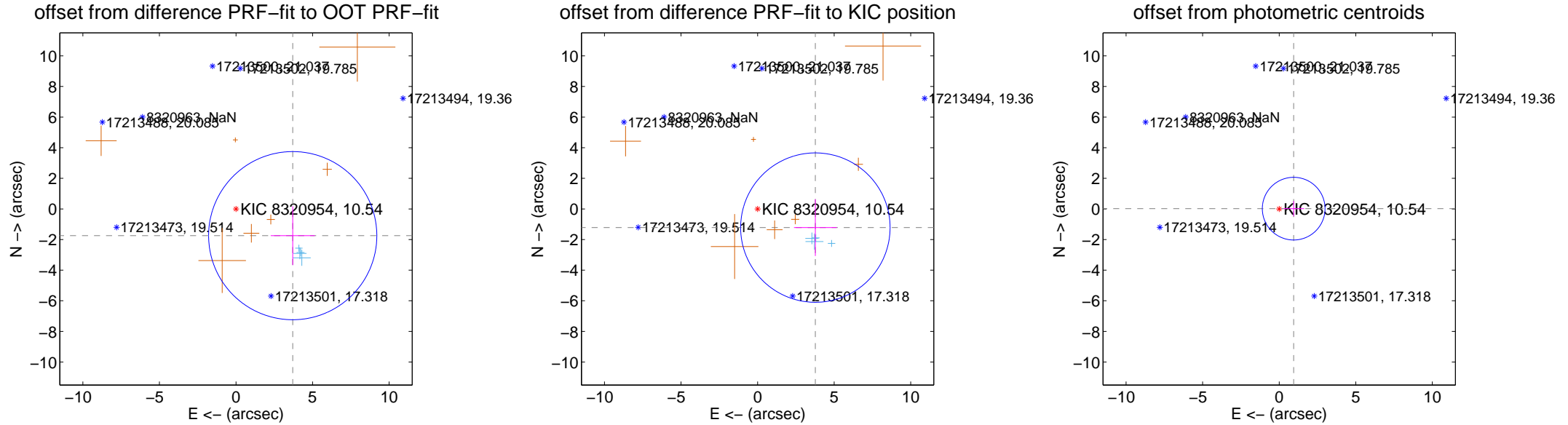
DV Centroid Data

Supplemental centroid analysis for 008320954-02. **Kepler magnitude: 10.54.** Transit SNR 8.01

There are 4 quarters with good PRF difference image offsets

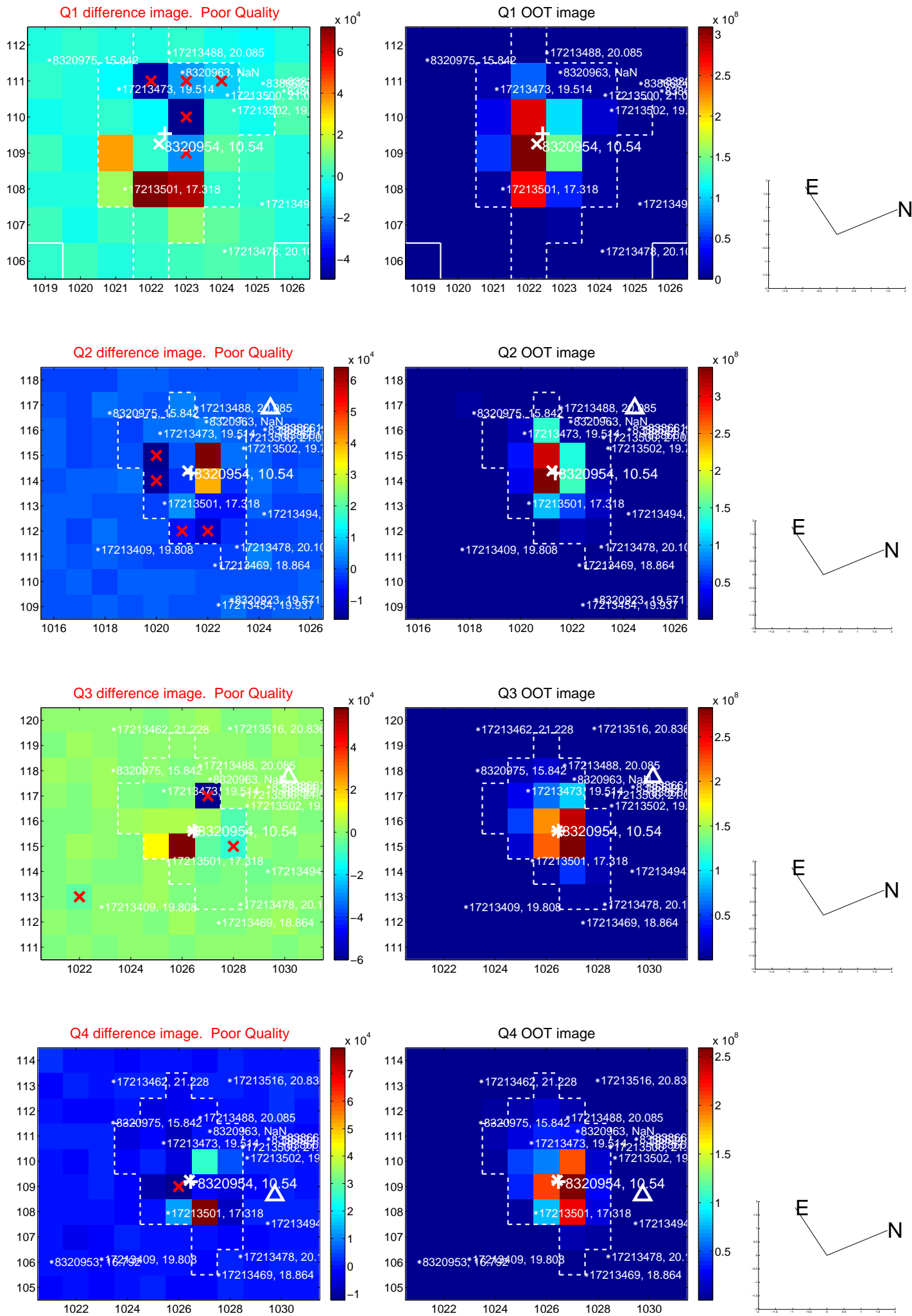
The direct PRF centroid is offset from the target star catalog position by about 1.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.095 ± 1.831	2.24	-3.705 ± 1.436	-1.746 ± 1.923
PRF-fit source offset from KIC position	3.965 ± 1.627	2.44	-3.772 ± 1.395	-1.219 ± 1.854
photometric centroid source offset	0.95 ± 0.68	1.39	-0.95 ± 0.68	0.02 ± 0.50

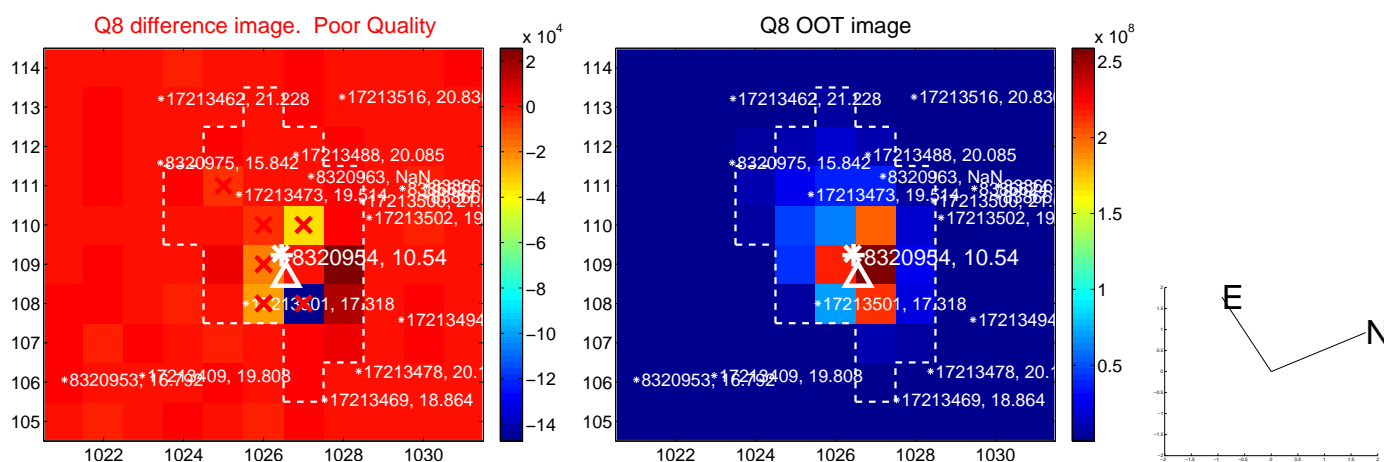
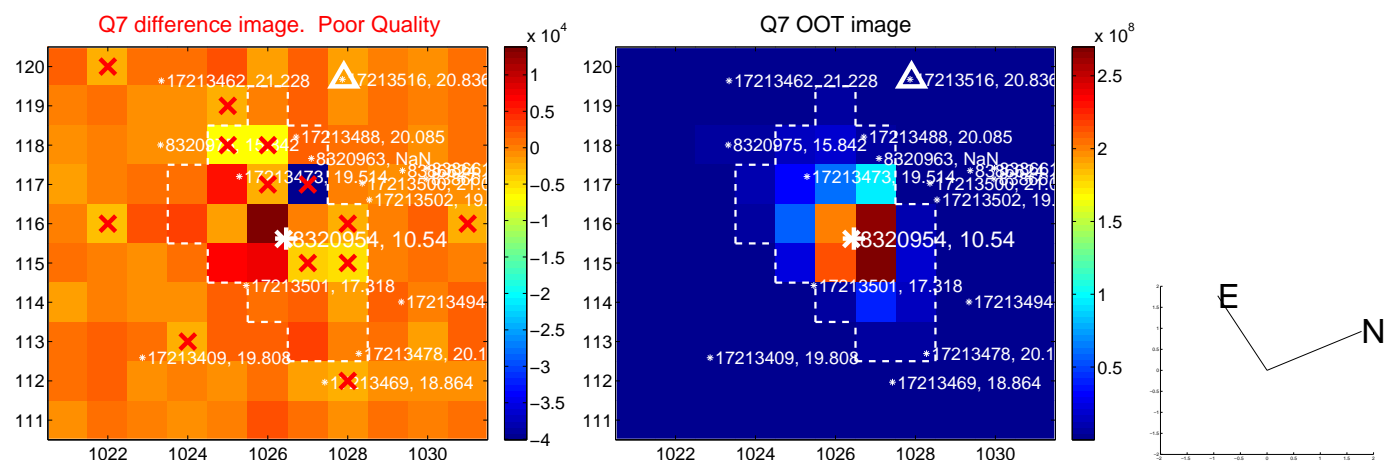
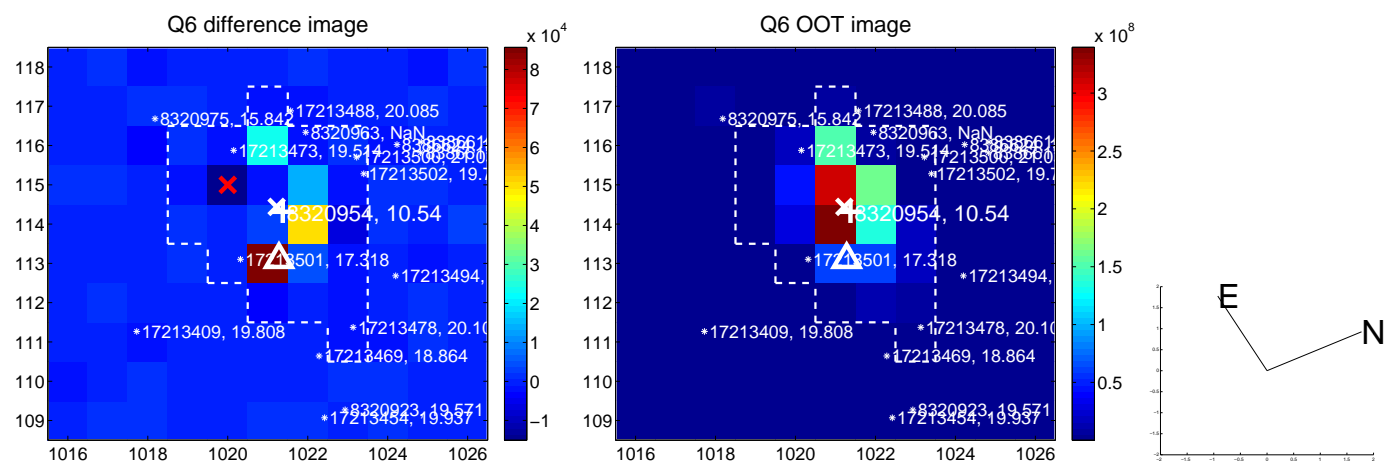
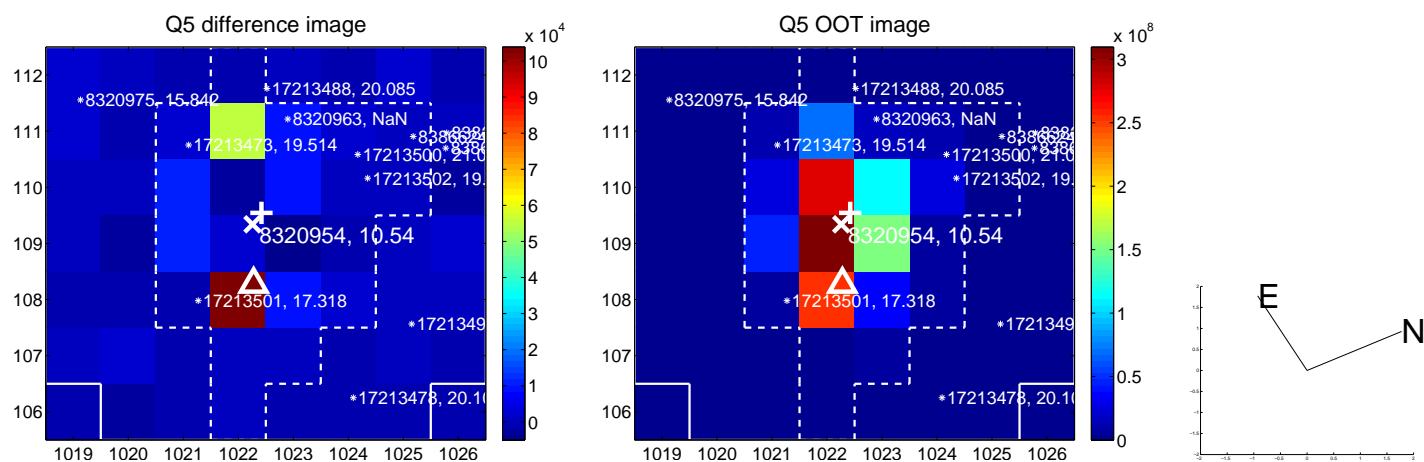


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

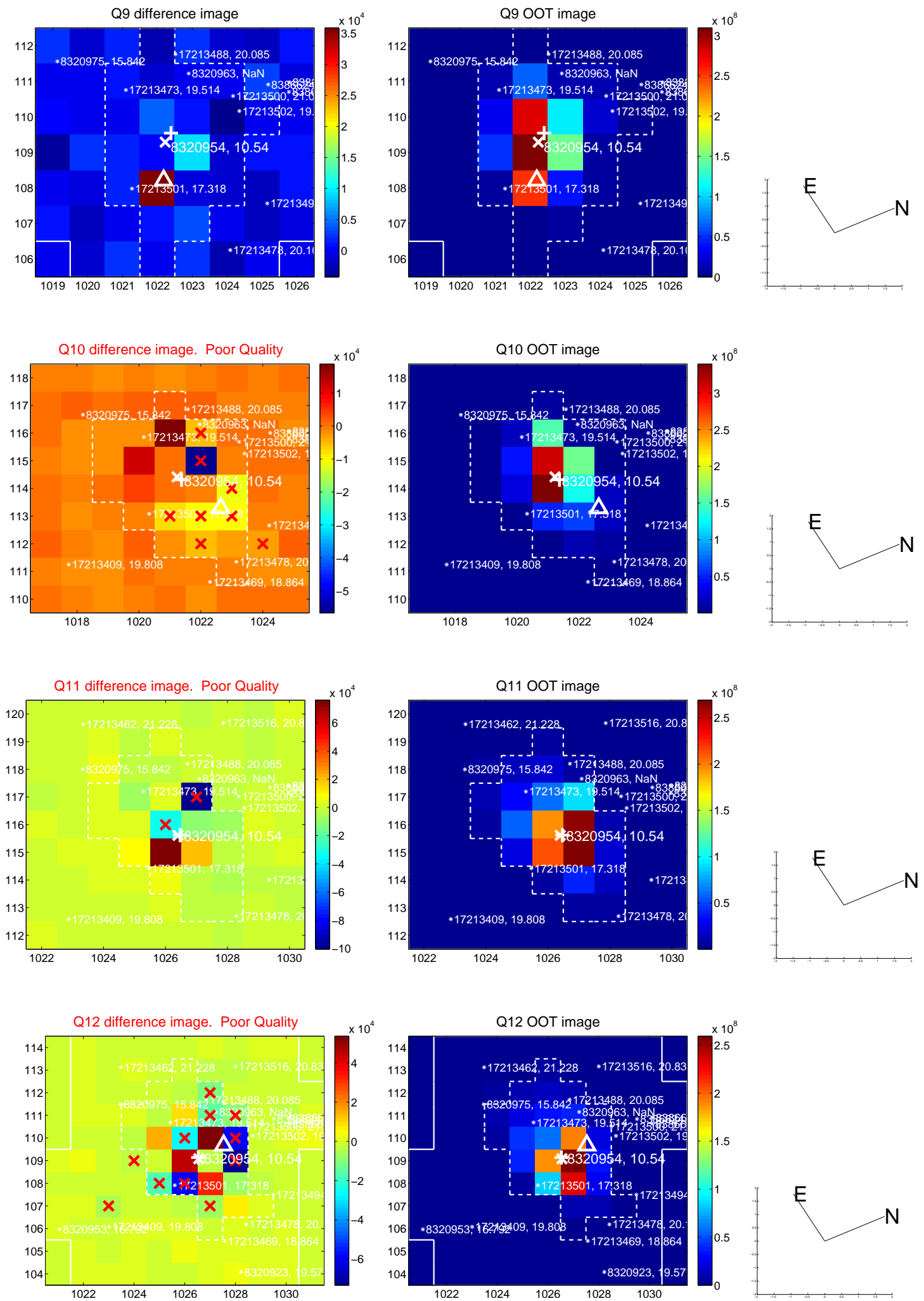
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



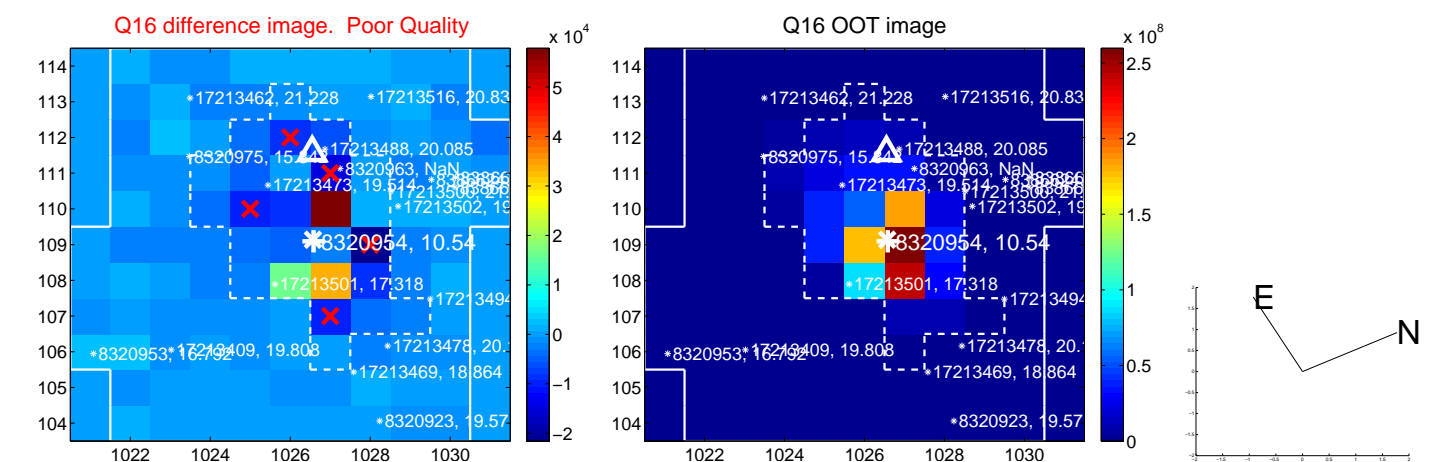
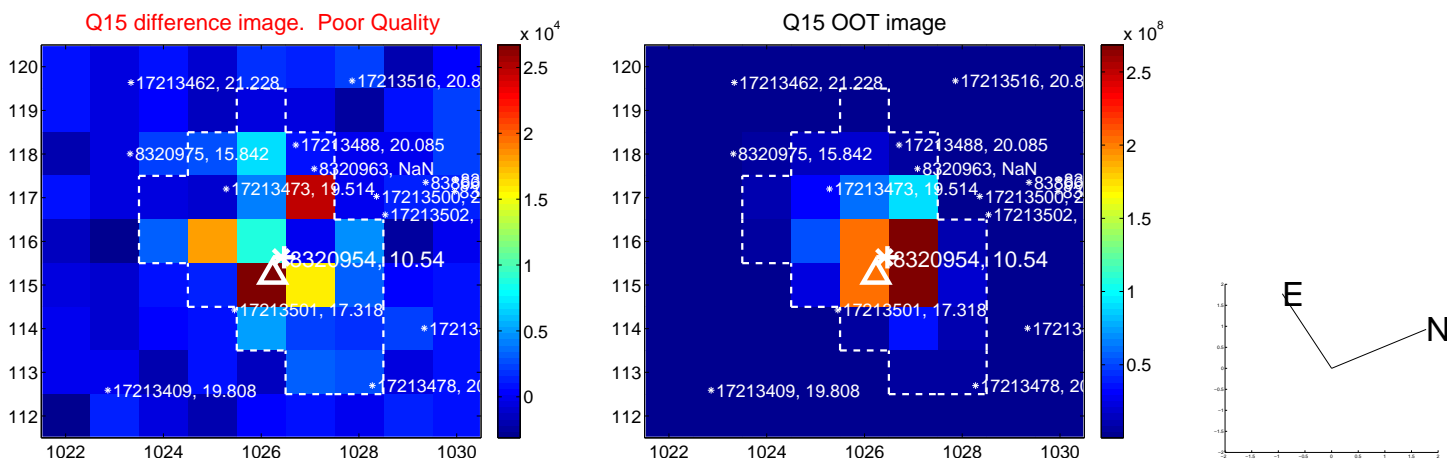
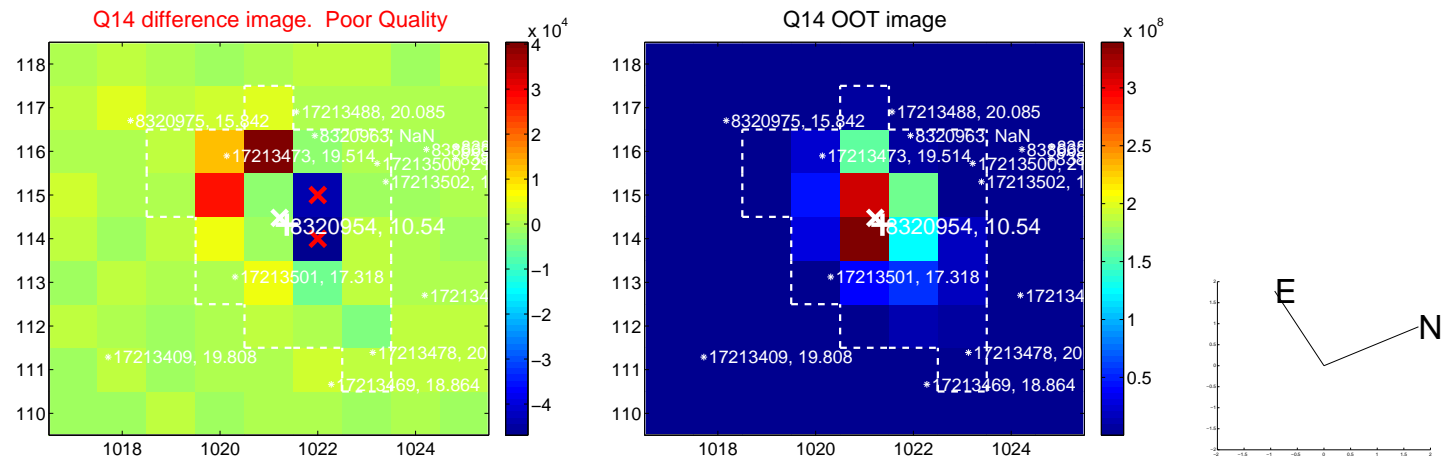
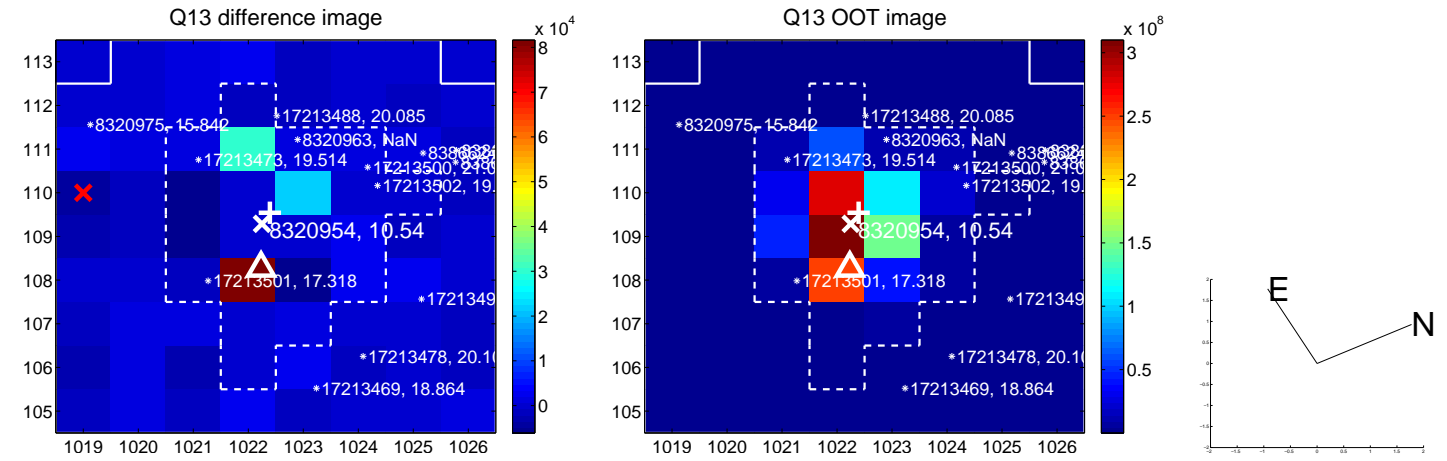
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



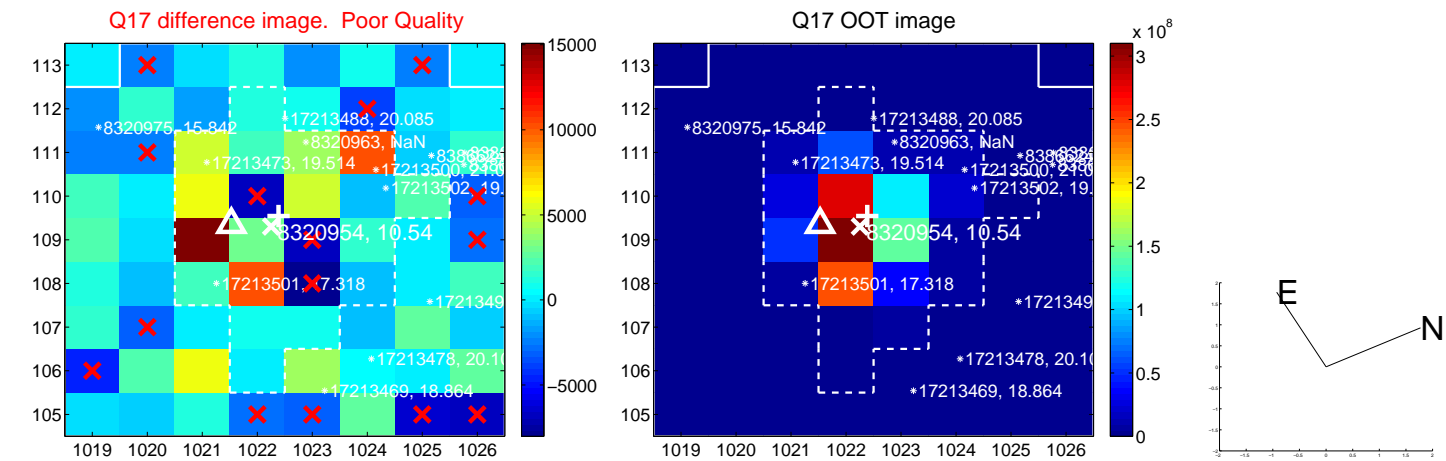
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



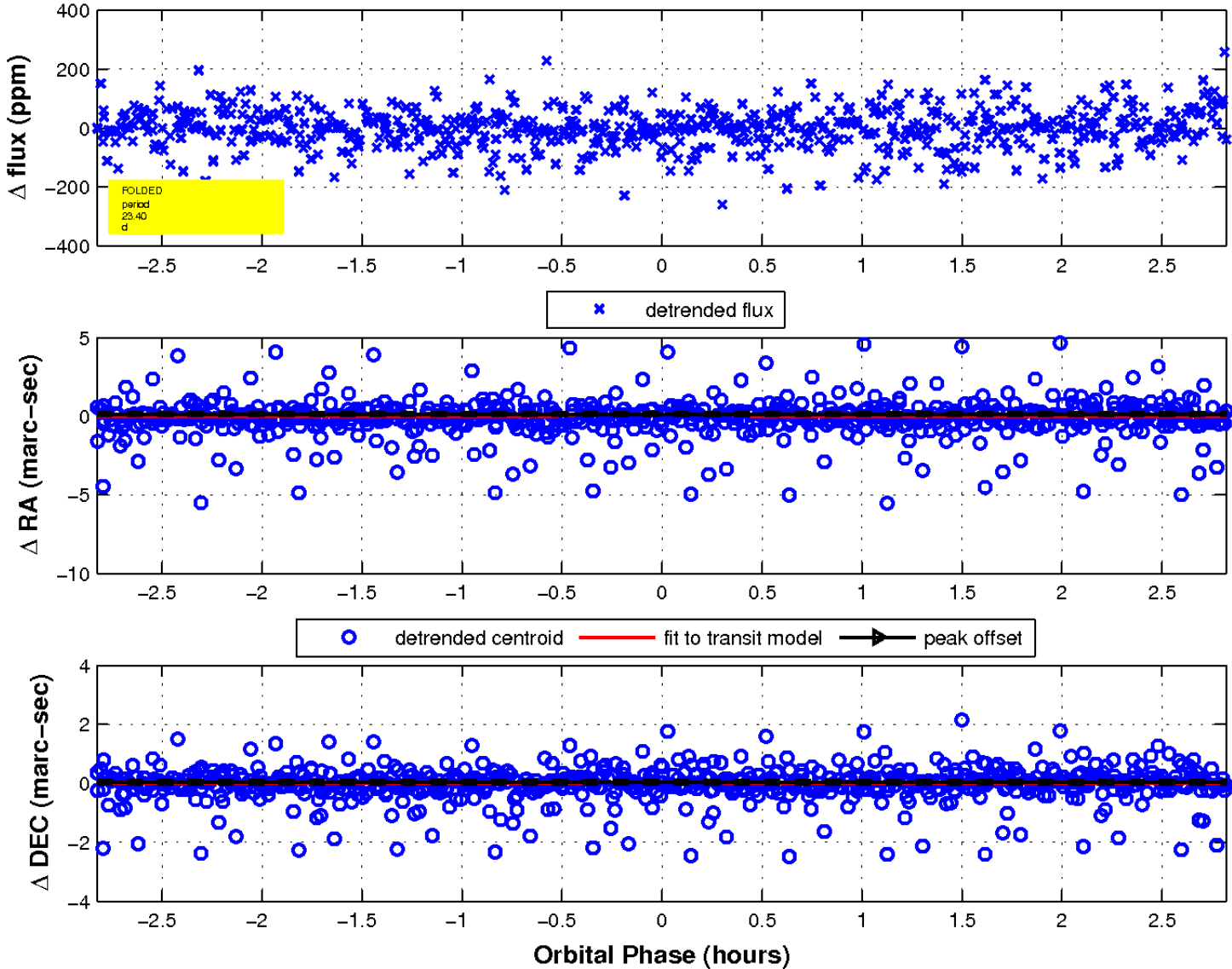
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

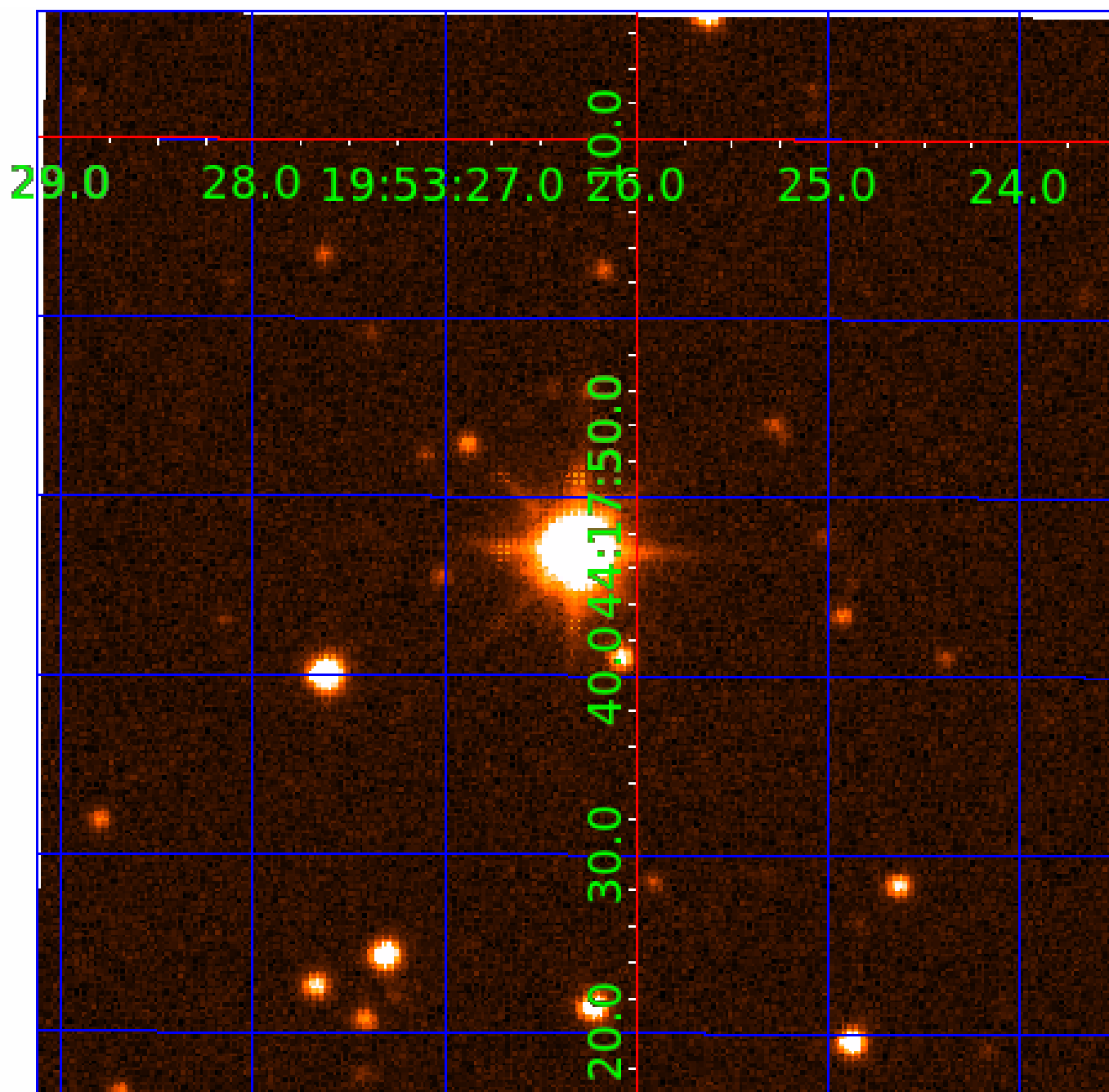


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 008320954

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})
008320954-01	OBS	No	0.600649	131.715897	4.8	4.210	8.1	4.9	2.41	7046	0.57	53460.62
008320954-02	OBS	No	23.401813	151.923026	120.7	0.942	11.5	8.0	2.41	7046	3.20	404.76
008320954-03	OBS	No	45.340980	148.243125	217.2	1.003	11.4	10.6	2.41	7046	3.61	167.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008320954-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_SATURATED
008320954-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
008320954-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—CENT_SATURATED

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

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

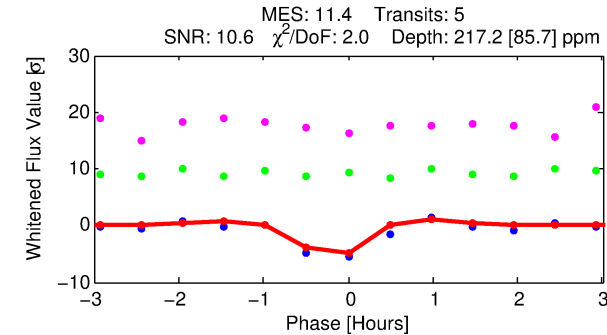
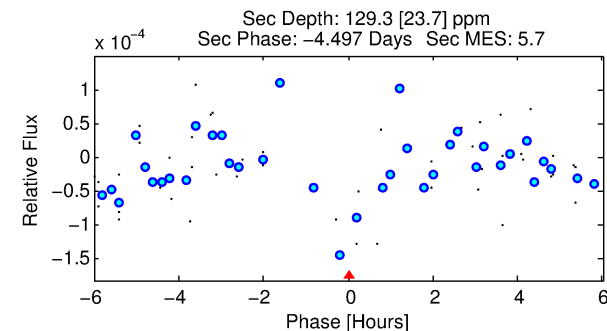
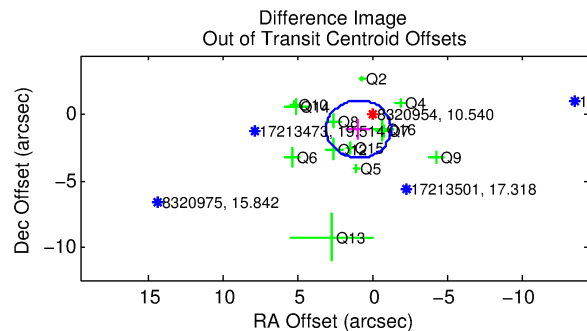
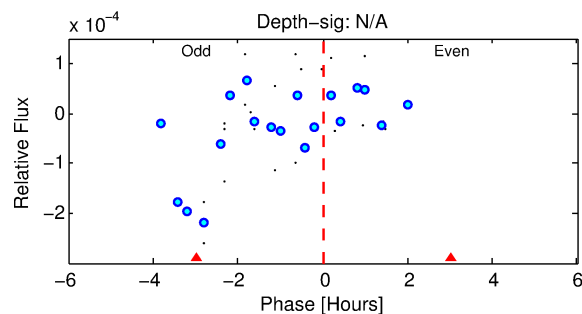
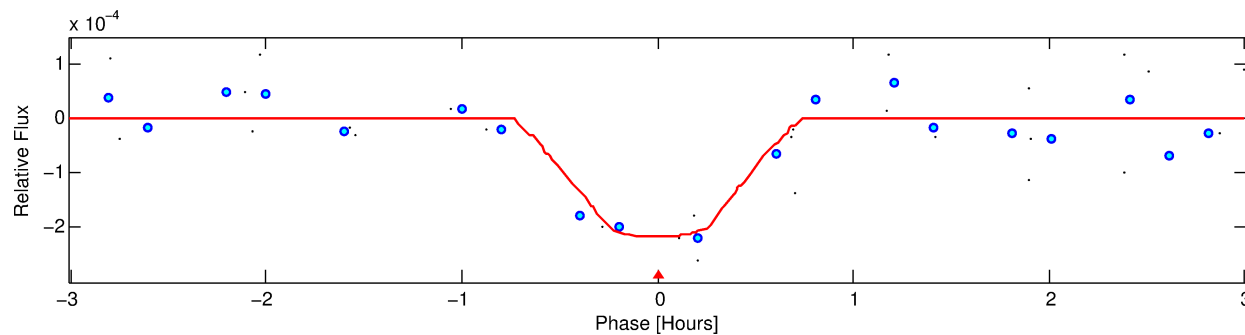
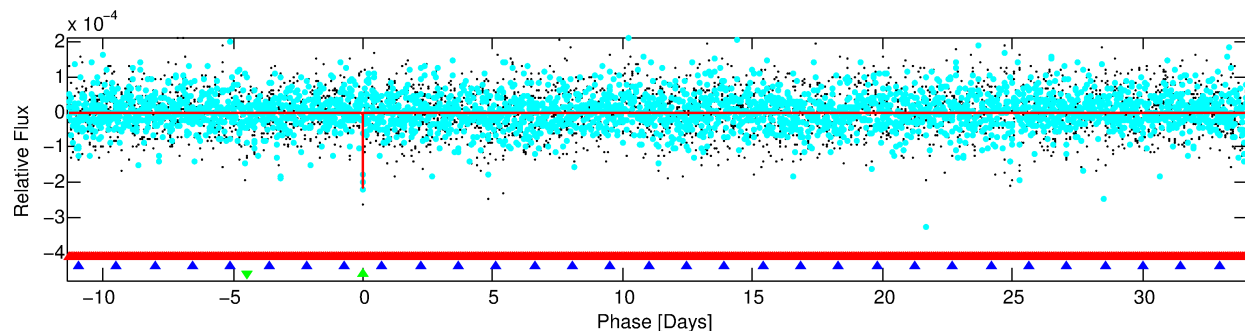
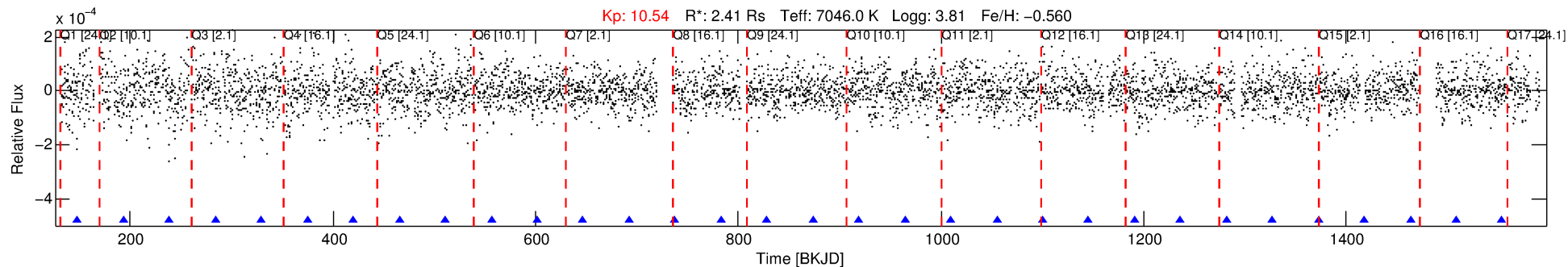
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008320954-03

No Significant Match Found

DV One-Page Summary

KIC: 8320954 Candidate: 3 of 3 Period: 45.341 d



DV Fit Results:

Period = 45.34098 [0.00098] d
Epoch = 148.2431 [0.0073] BKJD
Rp/R* = 0.0138 [0.2694]
a/R* = 349.96 [37468.67]
b = 0.01 [8523.74]
Seff = 167.57 [88.83]
Teq = 917 [122] K
Rp = 3.61 [70.74] Re
a = 0.2762 [0.0898] AU
Ag = 415.95 [16296.10] [0.03σ]
Teffp = 6406 [62737] K [0.09σ]

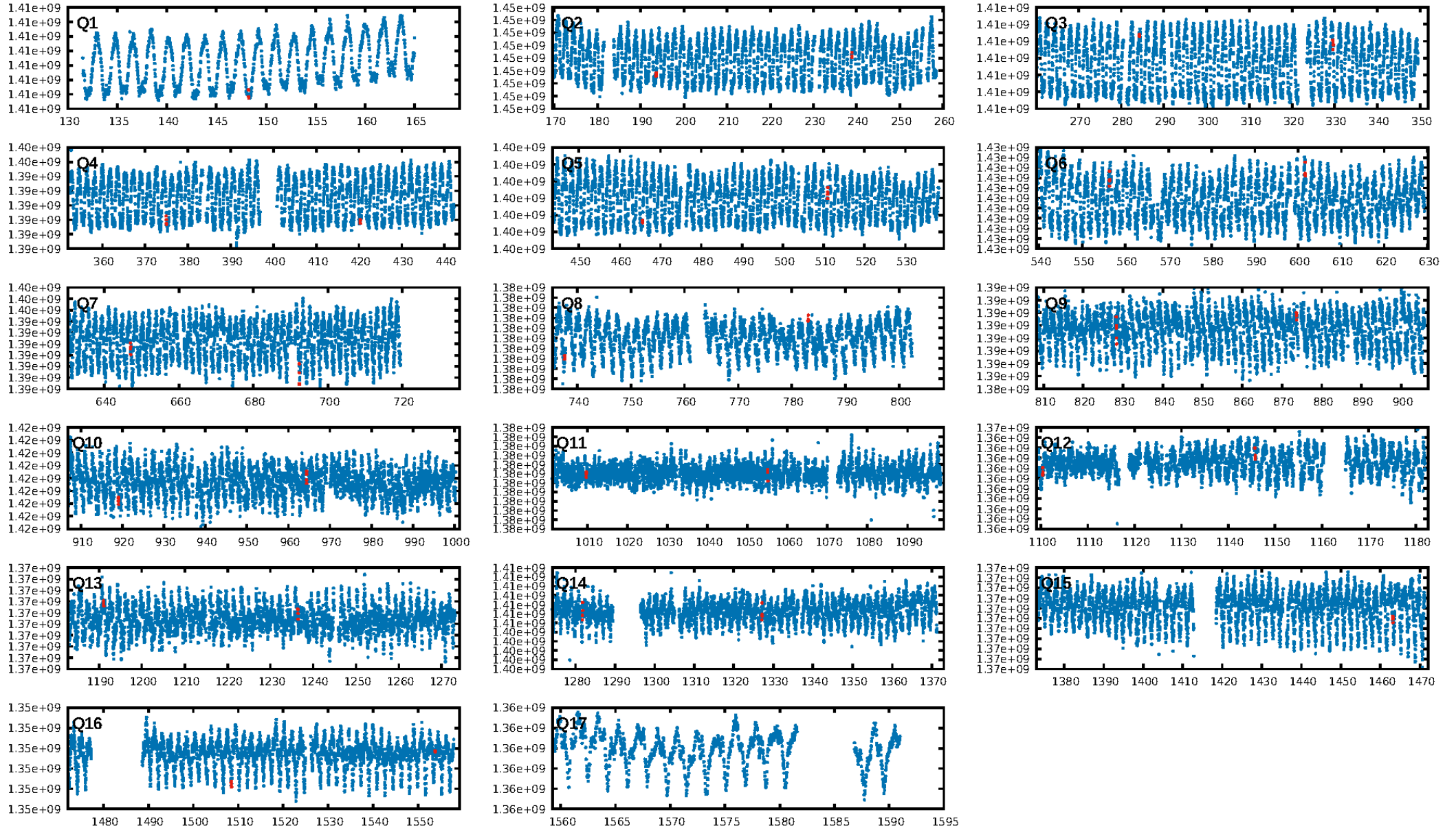
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [382.59σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 53.5%
ModelChiSquareGof-sig: 96.9%
Bootstrap-pfa: 1.41e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -8.194
Centroid-sig: 13.6%
Centroid-so: 0.301 arcsec [0.62σ]
OotOffset-rm: 1.412 arcsec [1.94σ]
OotOffset-st: 4/2/4/3 [13]
KicOffset-rm: 1.092 arcsec [1.36σ]
KicOffset-st: 4/2/4/3 [13]
DiffImageQuality-fgm: 0.23 [3/13]
DiffImageOverlap-fno: 0.00 [0/16]

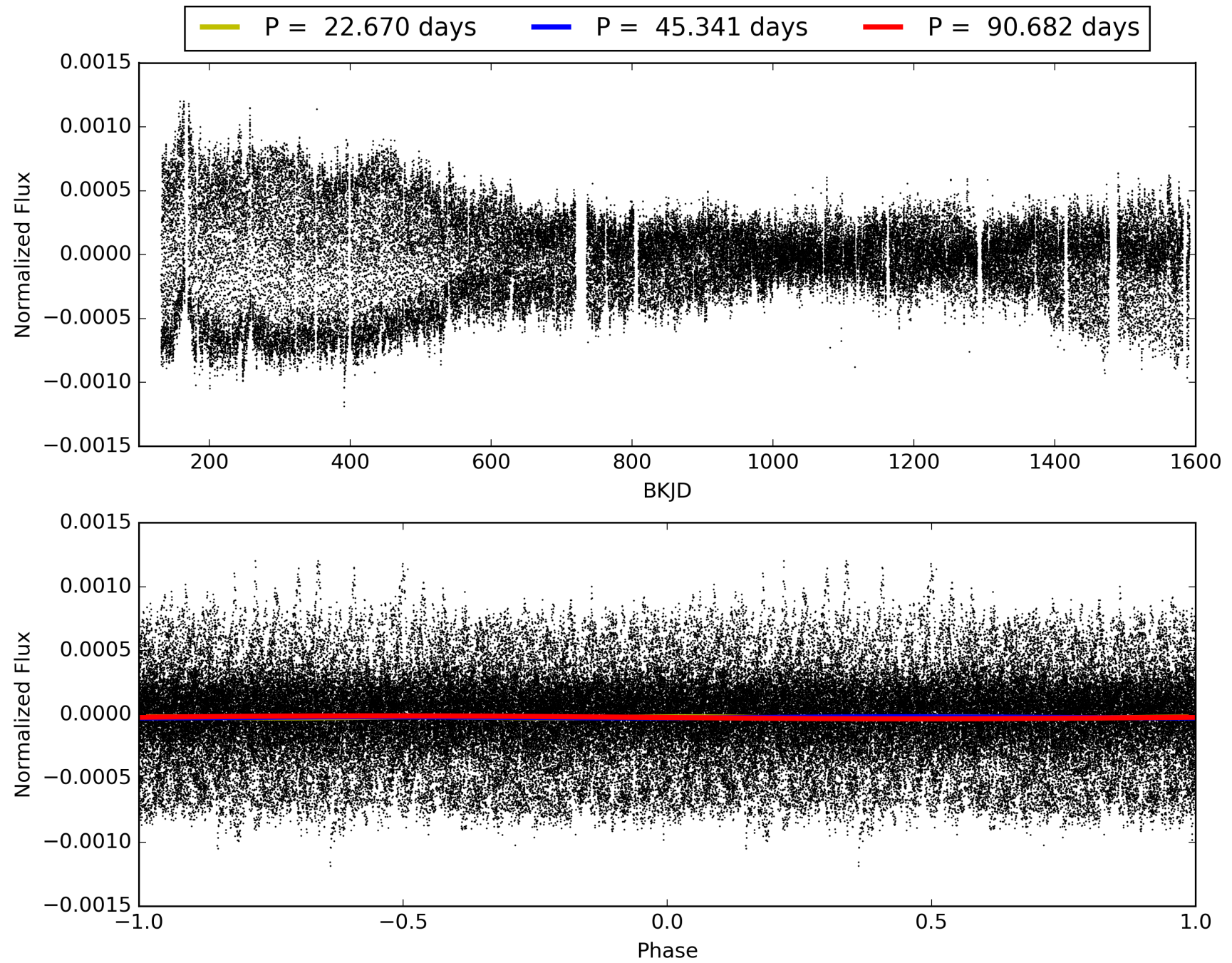
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 10:00:07 Z

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

TCE 008320954-03, PDC Light Curves

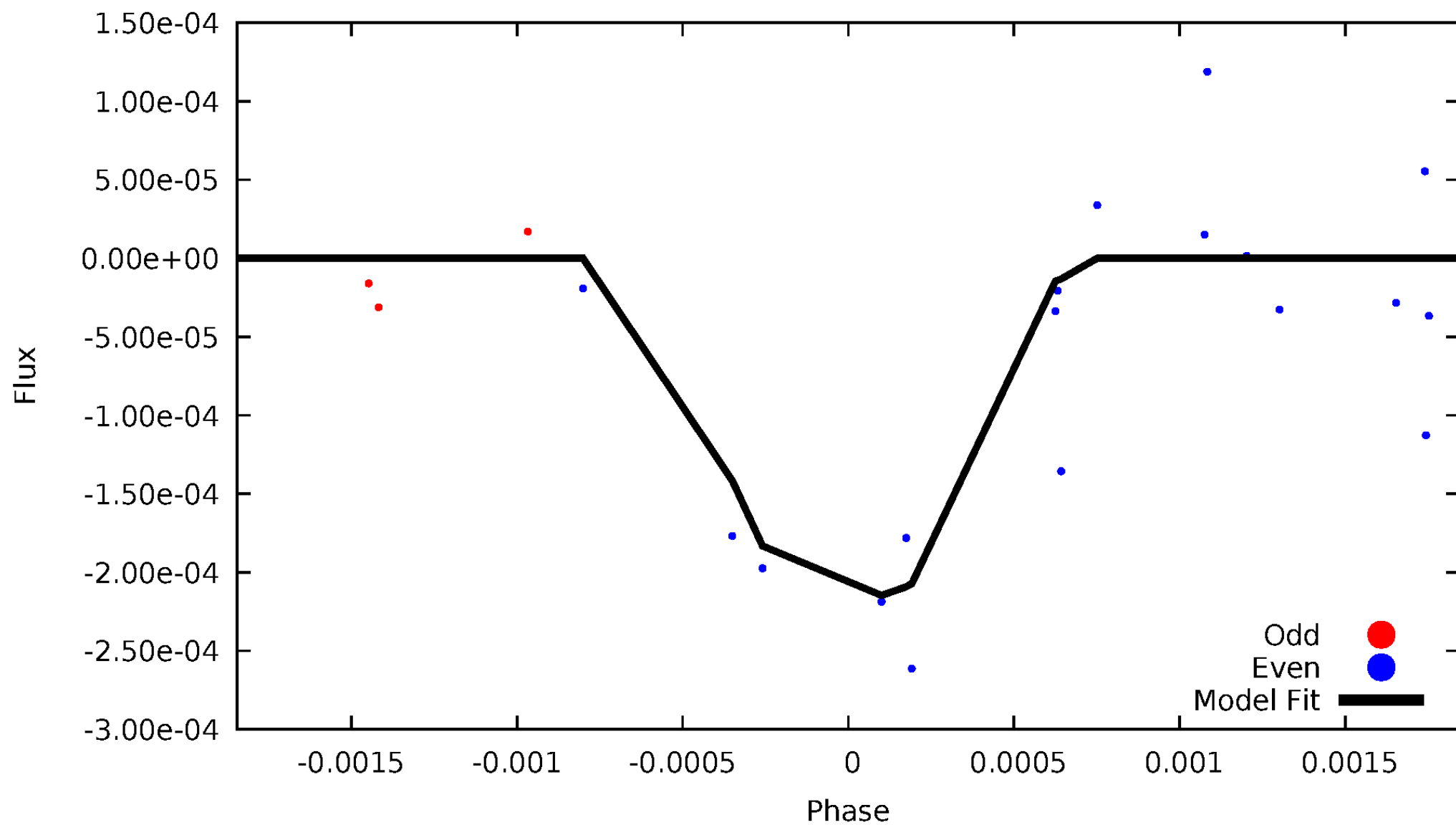


TCE 008320954-03



DV Odd/Even

TCE 008320954-03

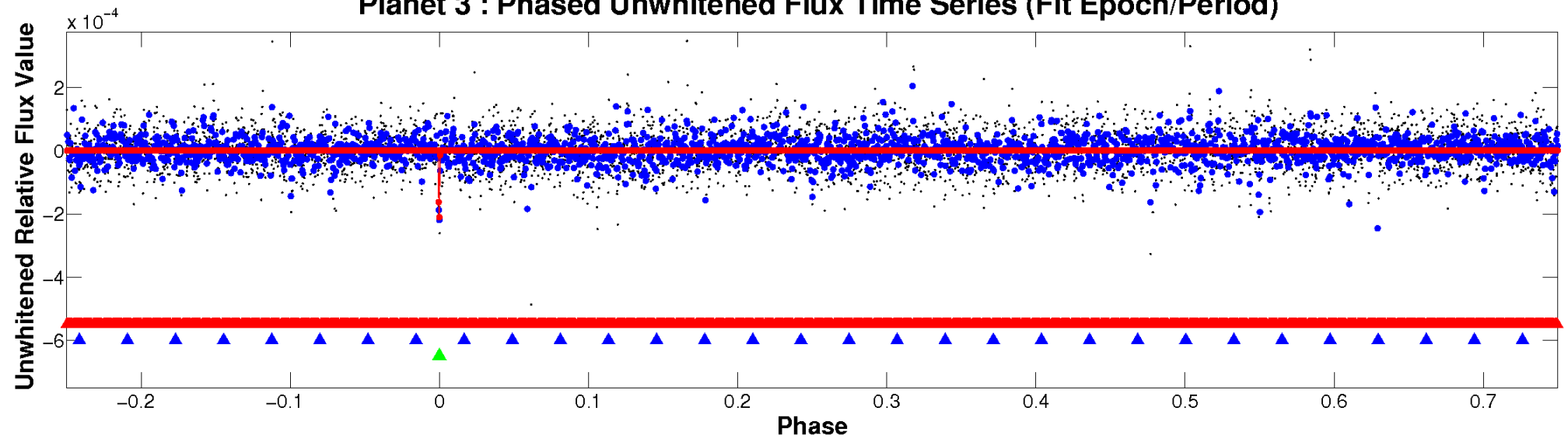


ALT Odd/Even

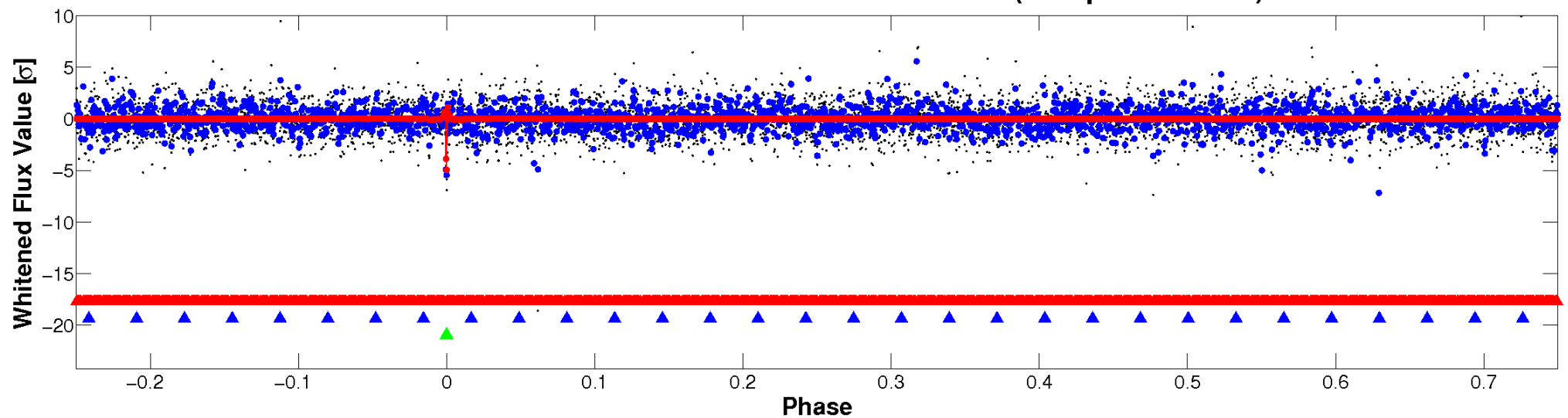
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

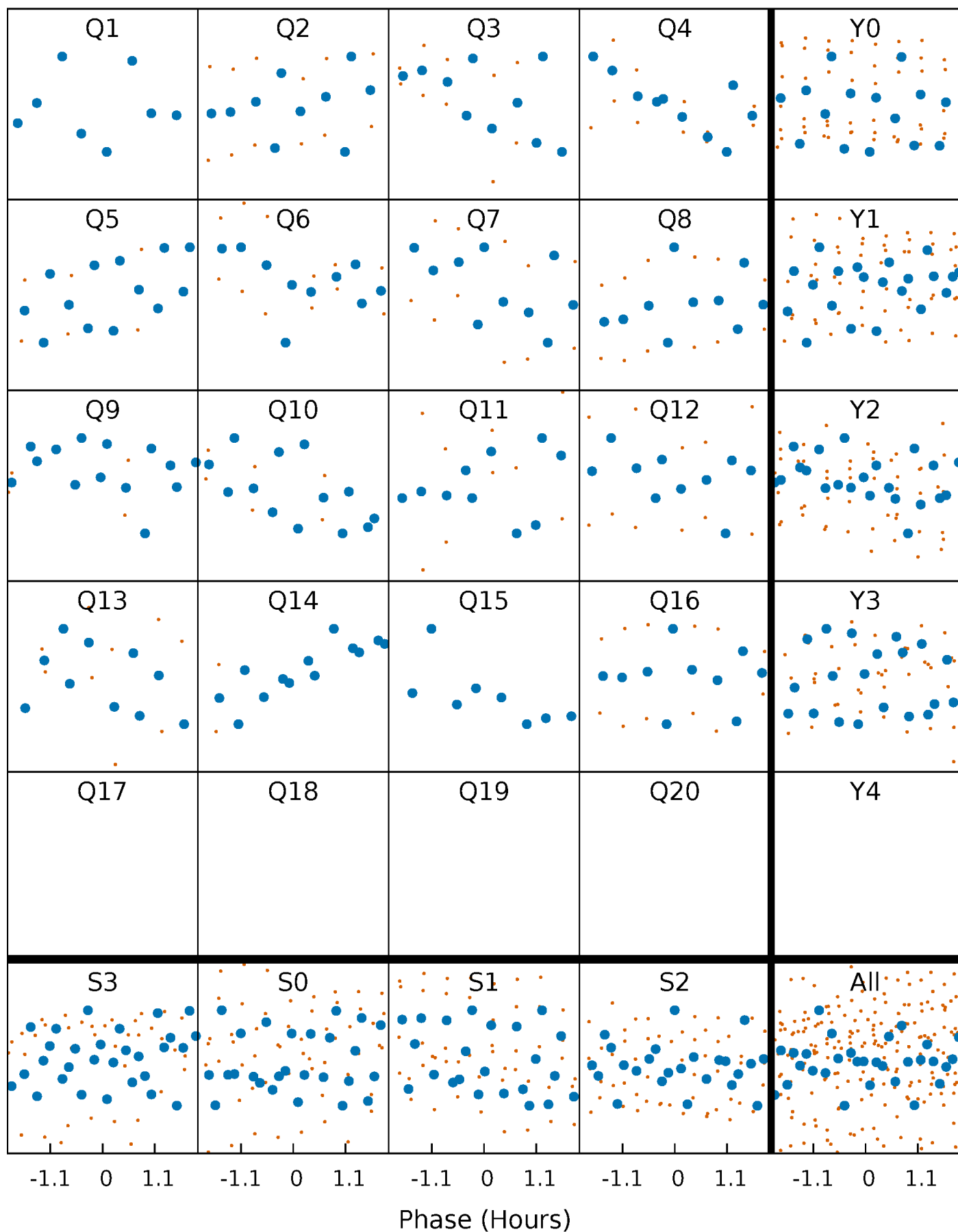


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



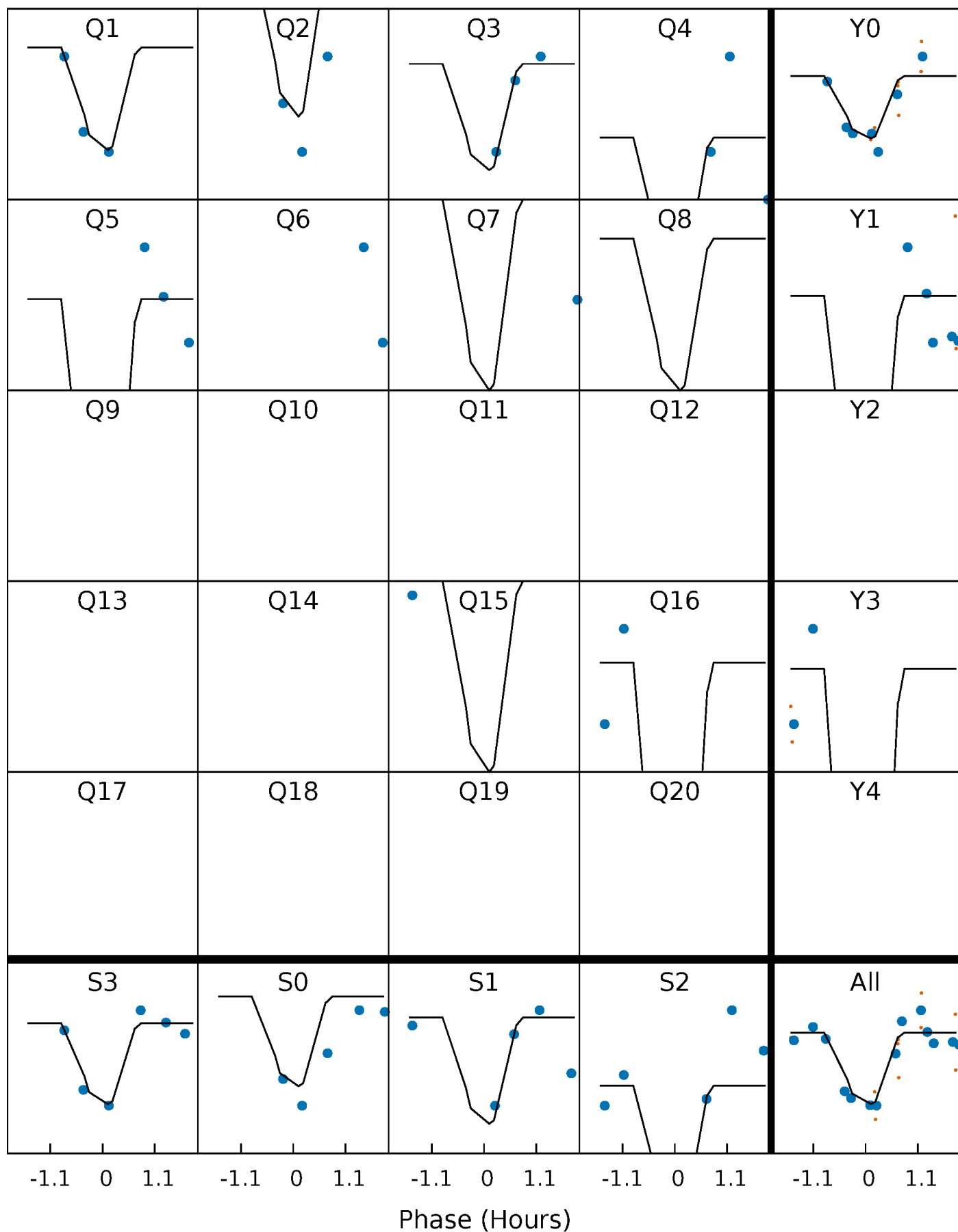
PDC Quarter-Phased Transit Curves

TCE 008320954-03 P= 45.340980 Days $T_0=148.243125$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 008320954-03 P= 45.340980 Days $T_0=148.243125$ (BKJD)

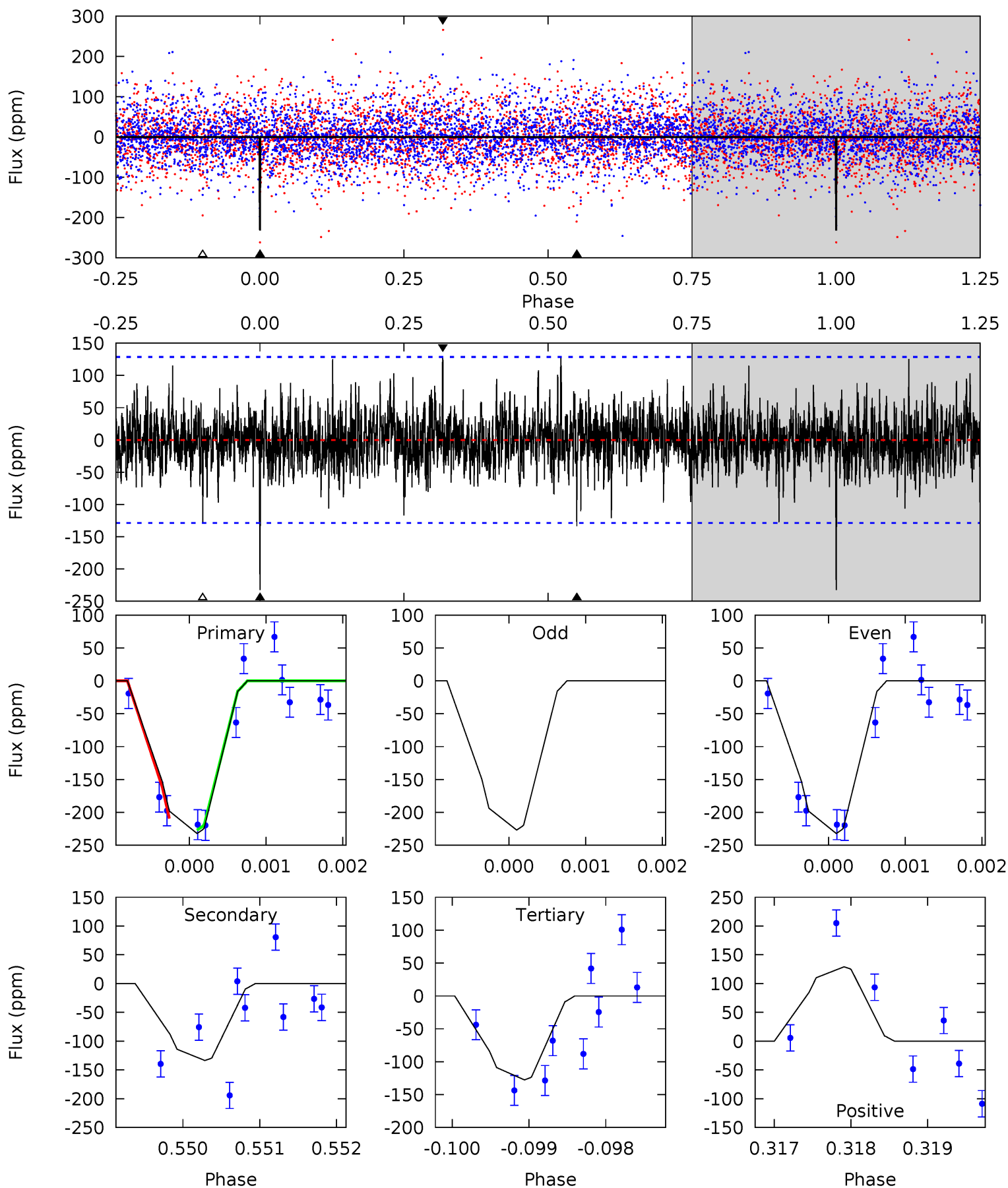


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

008320954-03, P = 45.340980 Days, E = 102.902145 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.84	5.66	5.41	5.47	5.45	3.29	1.31	4.43	4.37	0.25	0.19	0.15	0.96	0.36	0.29



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 008320954

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7046^{+183}_{-224}	$3.811^{+0.300}_{-0.100}$	$-0.560^{+0.300}_{-0.250}$	$2.406^{+0.446}_{-0.829}$	$1.364^{+0.207}_{-0.253}$	$0.138^{+0.277}_{-0.042}$
	+3%/-3%	+8%/-3%	+54%/-45%	+19%/-34%	+15%/-19%	+201%/-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 008320954-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-134 ± 24	$44.00^{+50.10}_{-30.04}$	1261^{+77}_{-111}	2580^{+1079}_{-548}	$2.767^{+26.951}_{-2.115}$
Alt.	N/A	N/A	N/A	N/A	N/A

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

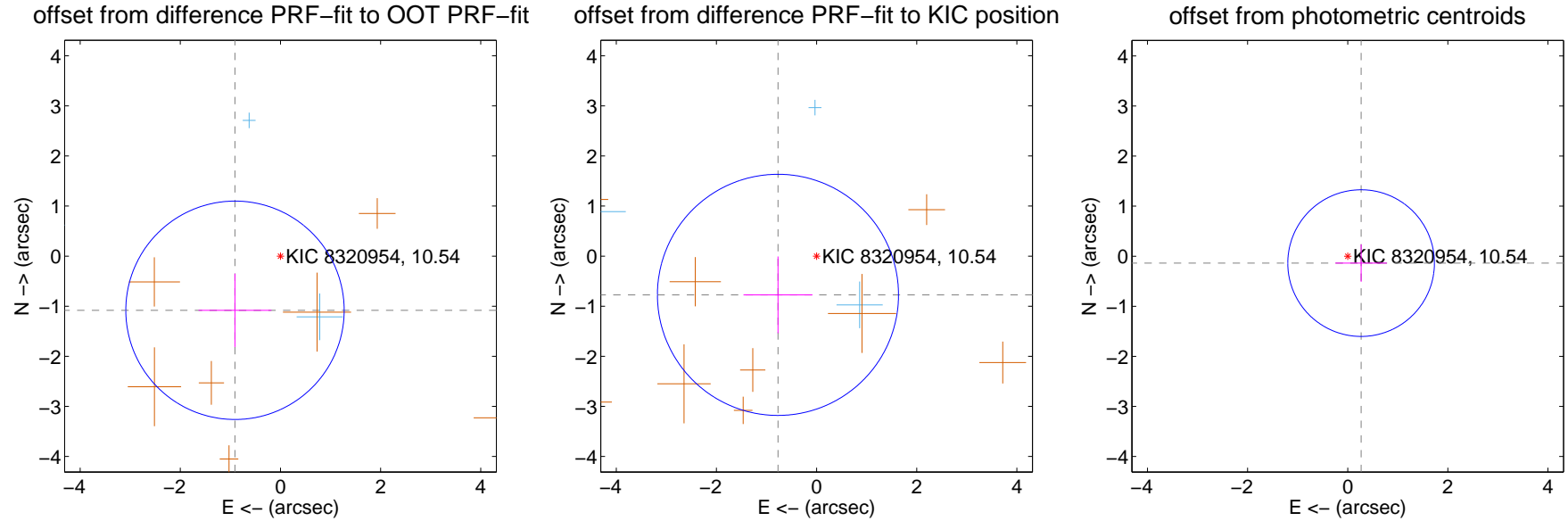
DV Centroid Data

Supplemental centroid analysis for 008320954-03. **Kepler magnitude: 10.54.** Transit SNR 10.55

There are 3 quarters with good PRF difference image offsets

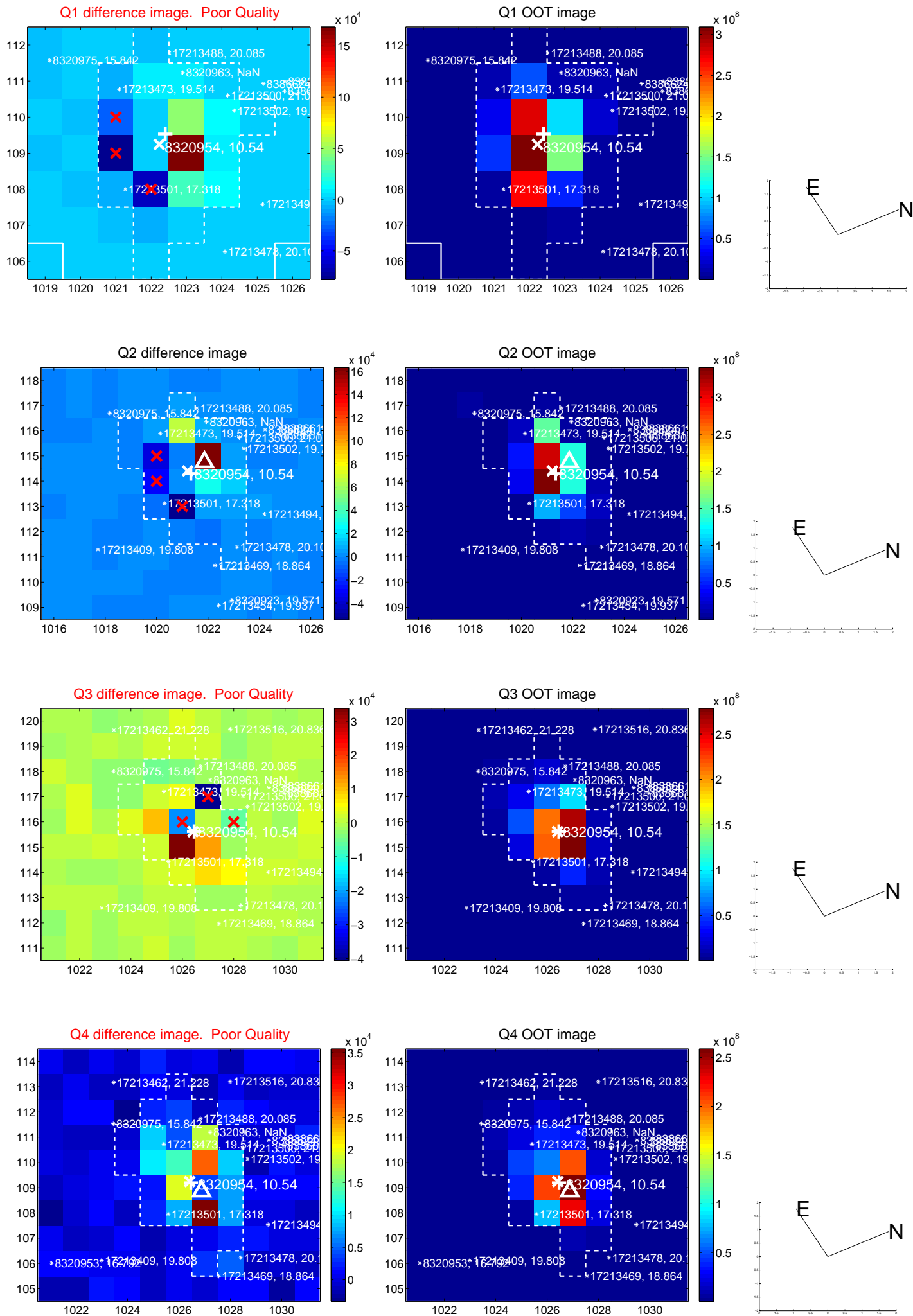
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.412 ± 0.727	1.94	0.908 ± 0.727	-1.081 ± 0.732
PRF-fit source offset from KIC position	1.092 ± 0.802	1.36	0.771 ± 0.689	-0.773 ± 0.766
photometric centroid source offset	0.30 ± 0.49	0.62	-0.27 ± 0.51	-0.14 ± 0.37

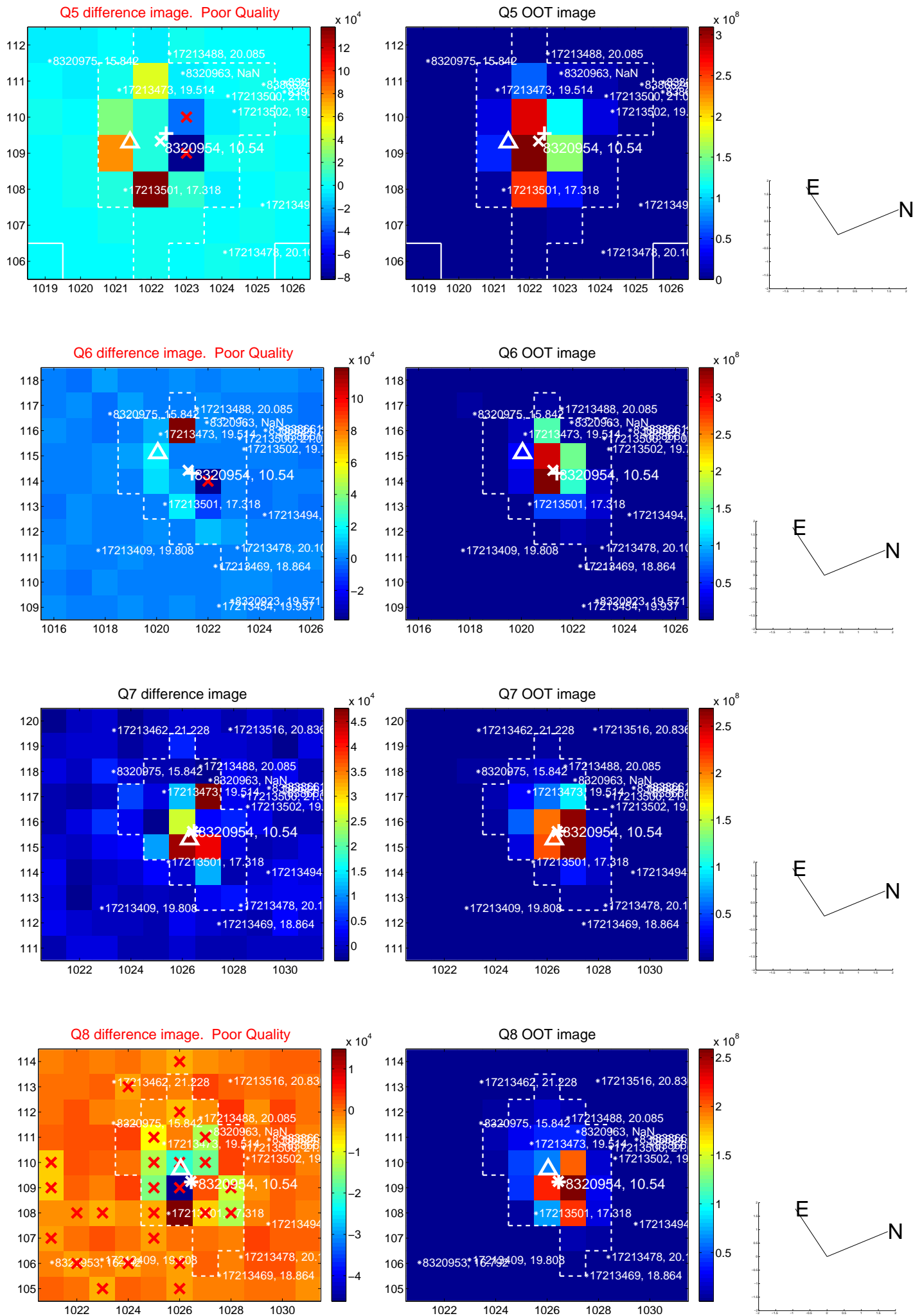


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

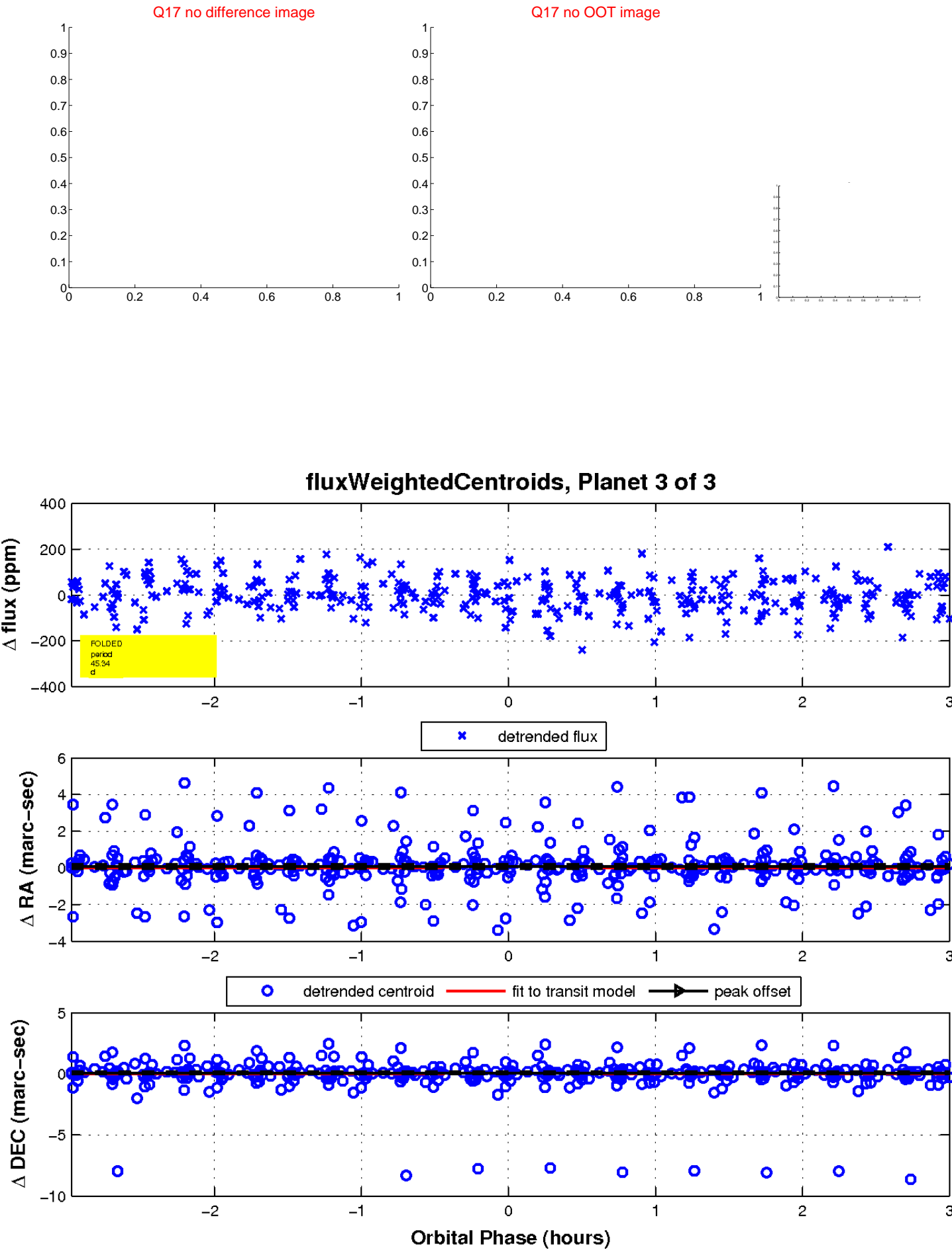
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

