

KIC 003217554

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})
003217554-01	OBS	No	0.722301	131.656622	285.5	2.855	13.2	11.8	3.46	7823	6.81	97981.90
003217554-02	OBS	No	0.722294	132.027578	328.3	2.773	12.2	13.6	3.46	7823	7.30	97983.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003217554-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003217554-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

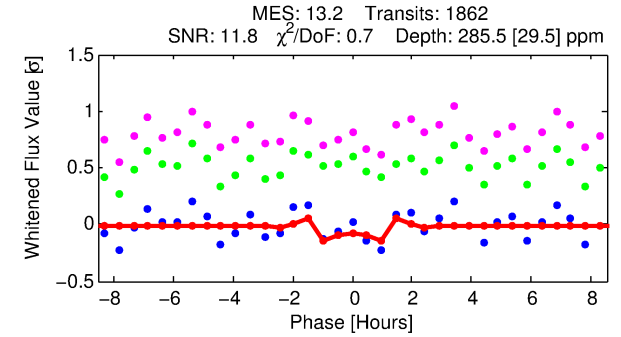
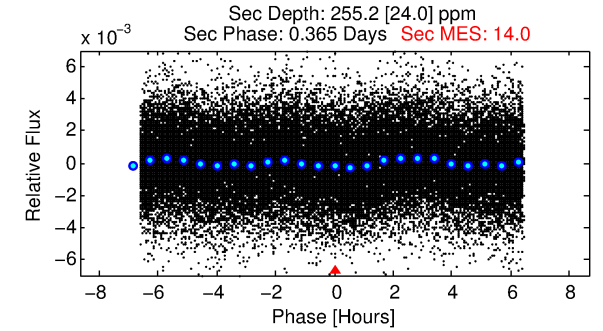
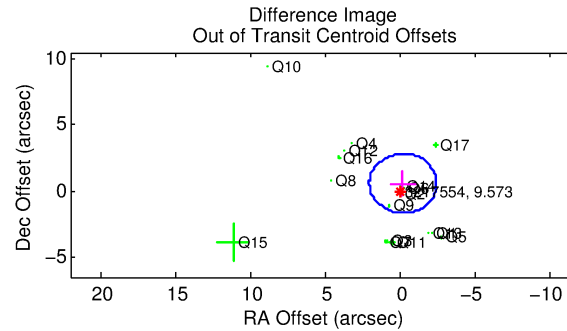
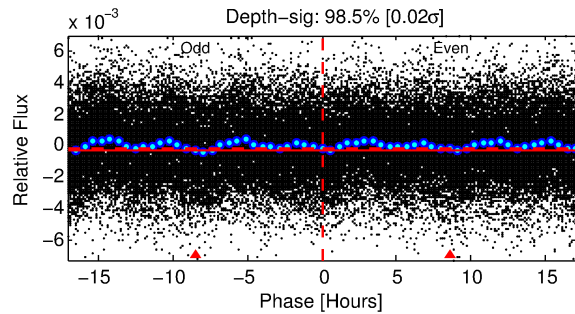
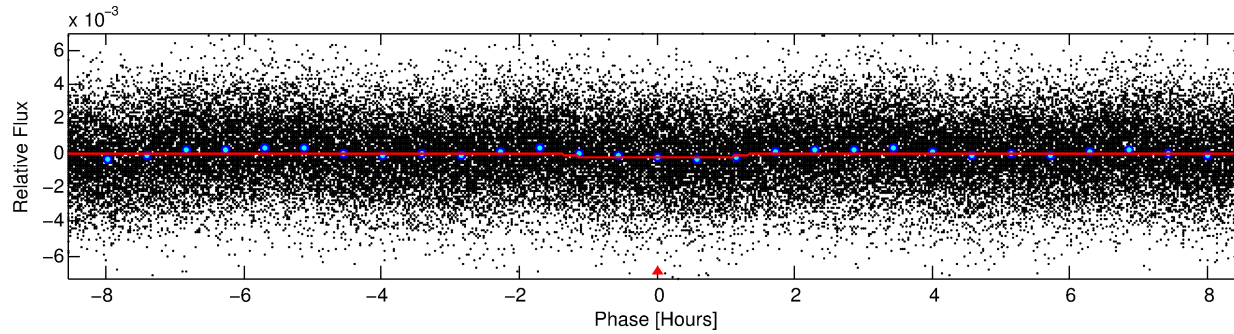
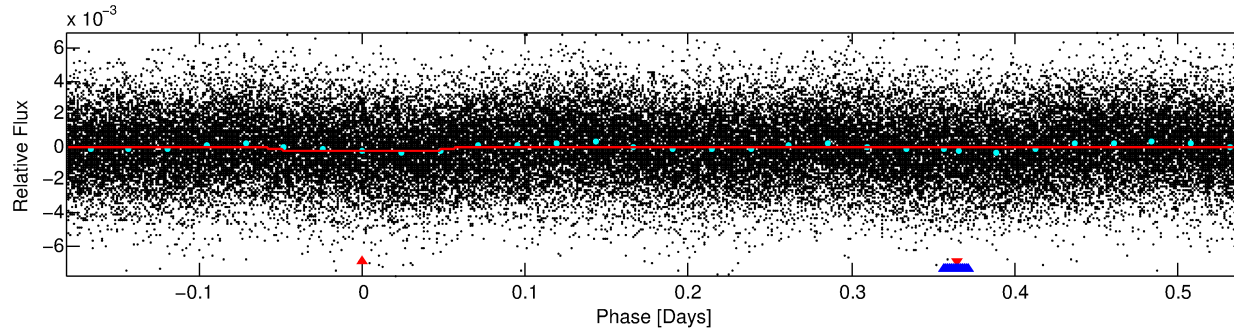
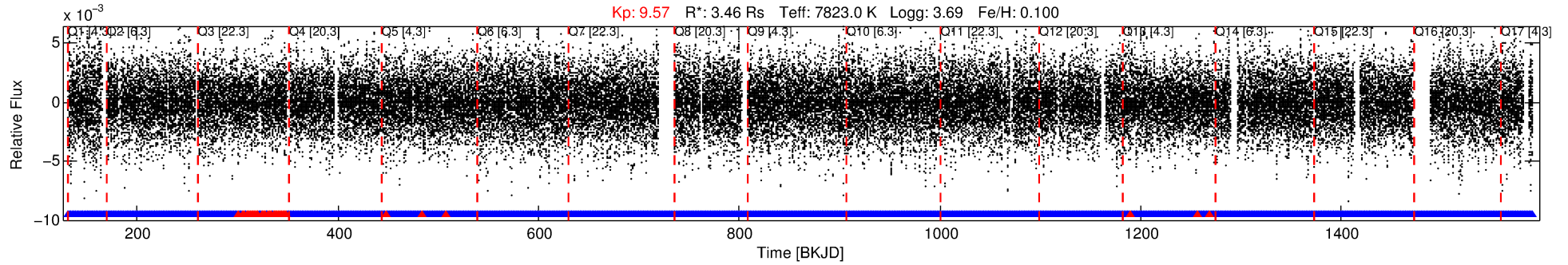
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003217554-01

No Significant Match Found

DV One-Page Summary

KIC: 3217554 Candidate: 1 of 2 Period: 0.722 d



DV Fit Results:

Period = 0.72230 [0.00001] d
Epoch = 131.6566 [0.0011] BKJD
Rp/R* = 0.0180 [0.0019]
a/R* = 1.32 [0.28]
b = 0.90 [0.11]
Seff = 97981.90 [42281.90]
Teff = 4511 [487] K
Rp = 6.81 [2.24] Re
a = 0.0202 [0.0056] AU
Ag = 1.24 [0.60] [0.40 σ]
Teffp = 7360 [467] K [4.22 σ]

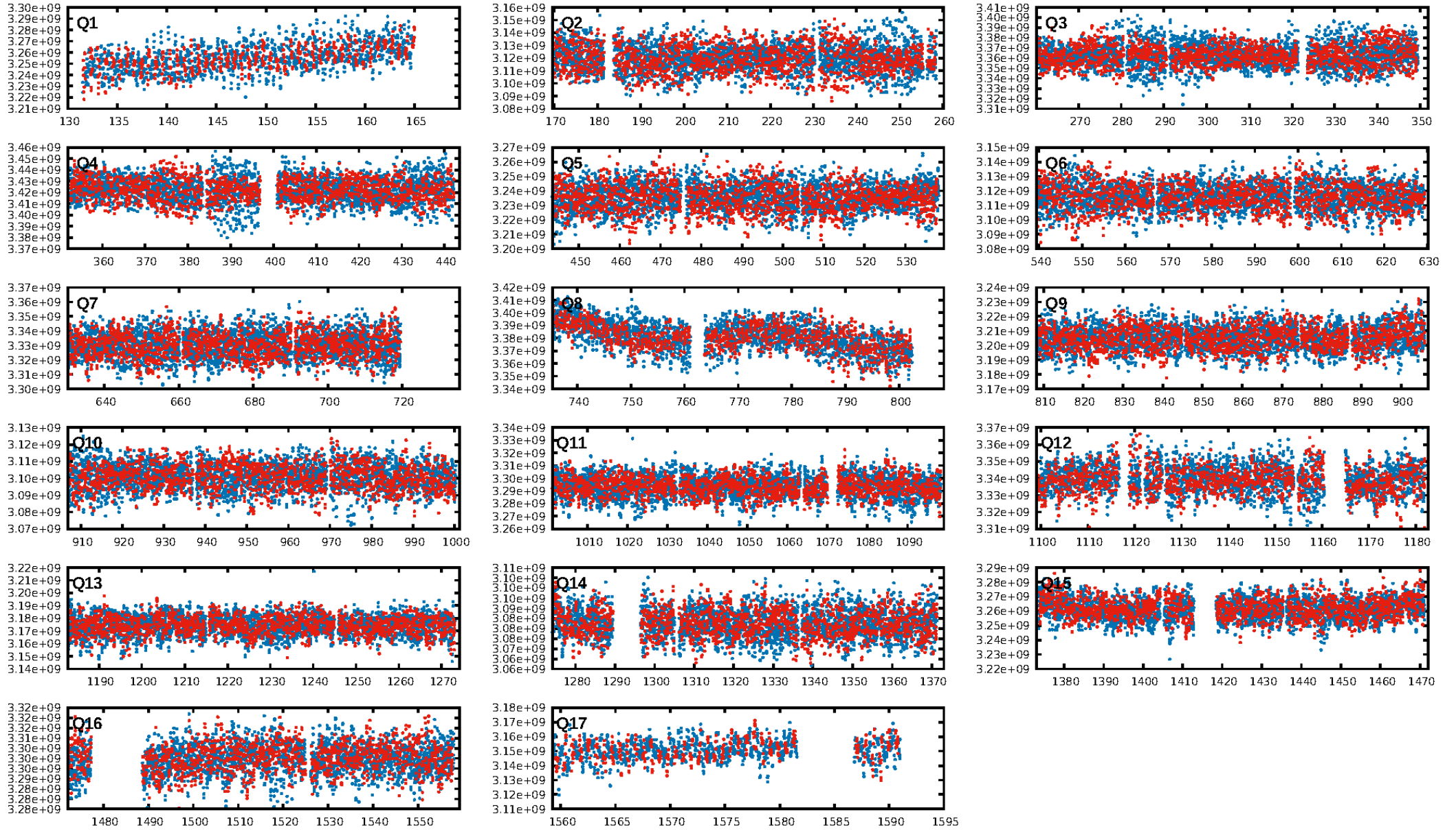
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.97 [1732/1778]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 0.692 arcsec [5.96 σ]
OotOffset-rm: 0.624 arcsec [0.83 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 2.189 arcsec [2.33 σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 0.00 [0/17]

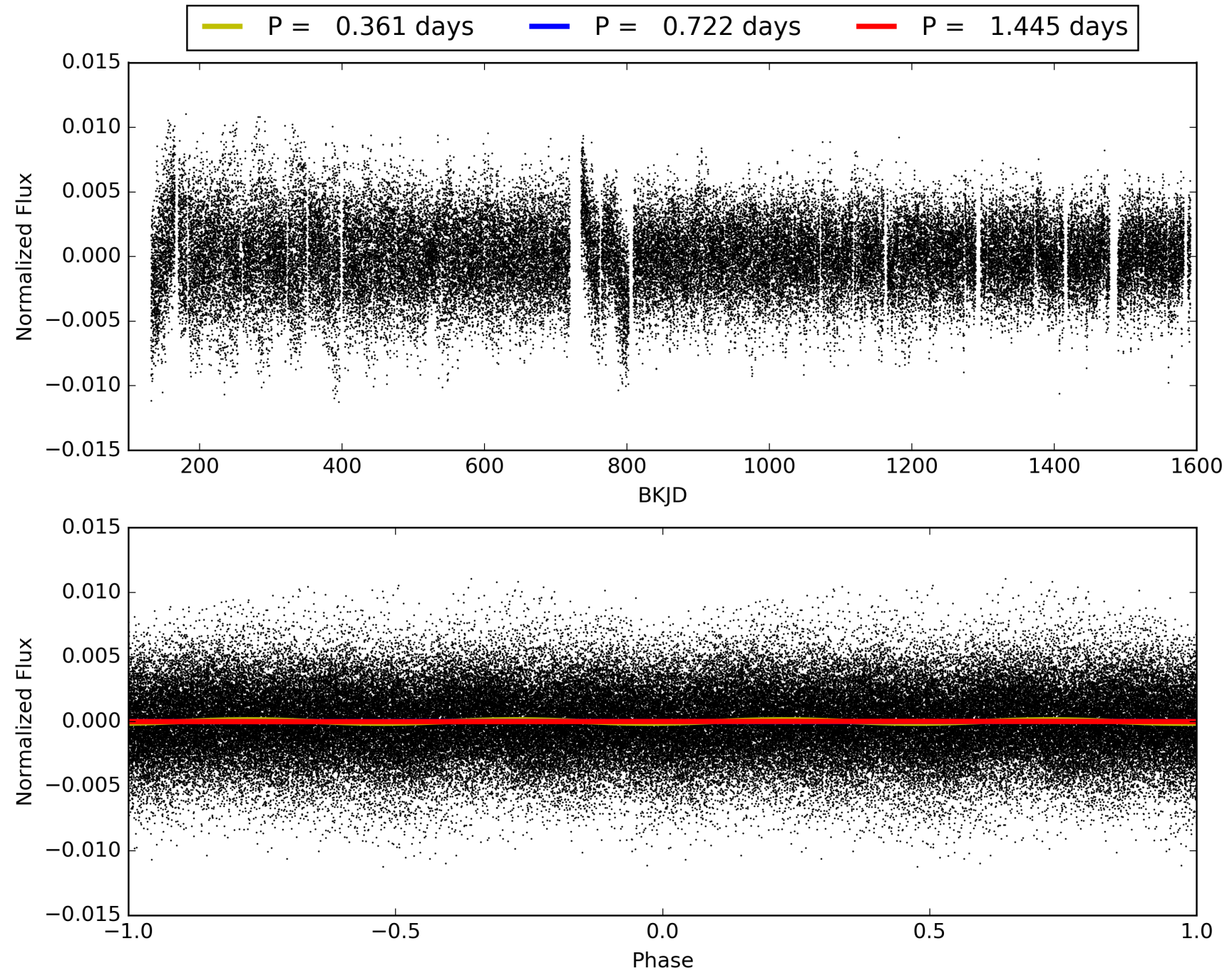
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 11:50:39 Z

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

TCE 003217554-01, PDC Light Curves

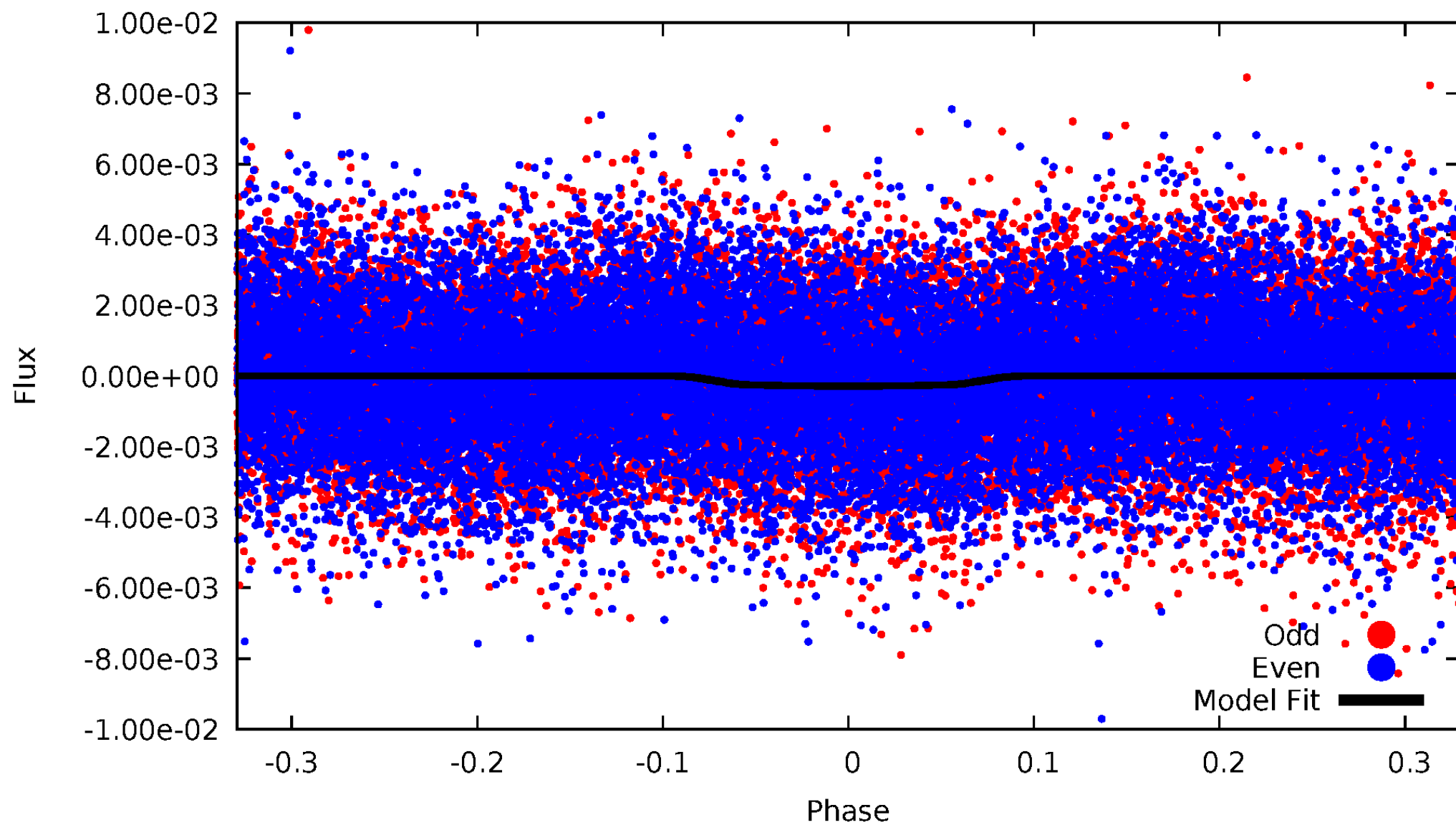


TCE 003217554-01



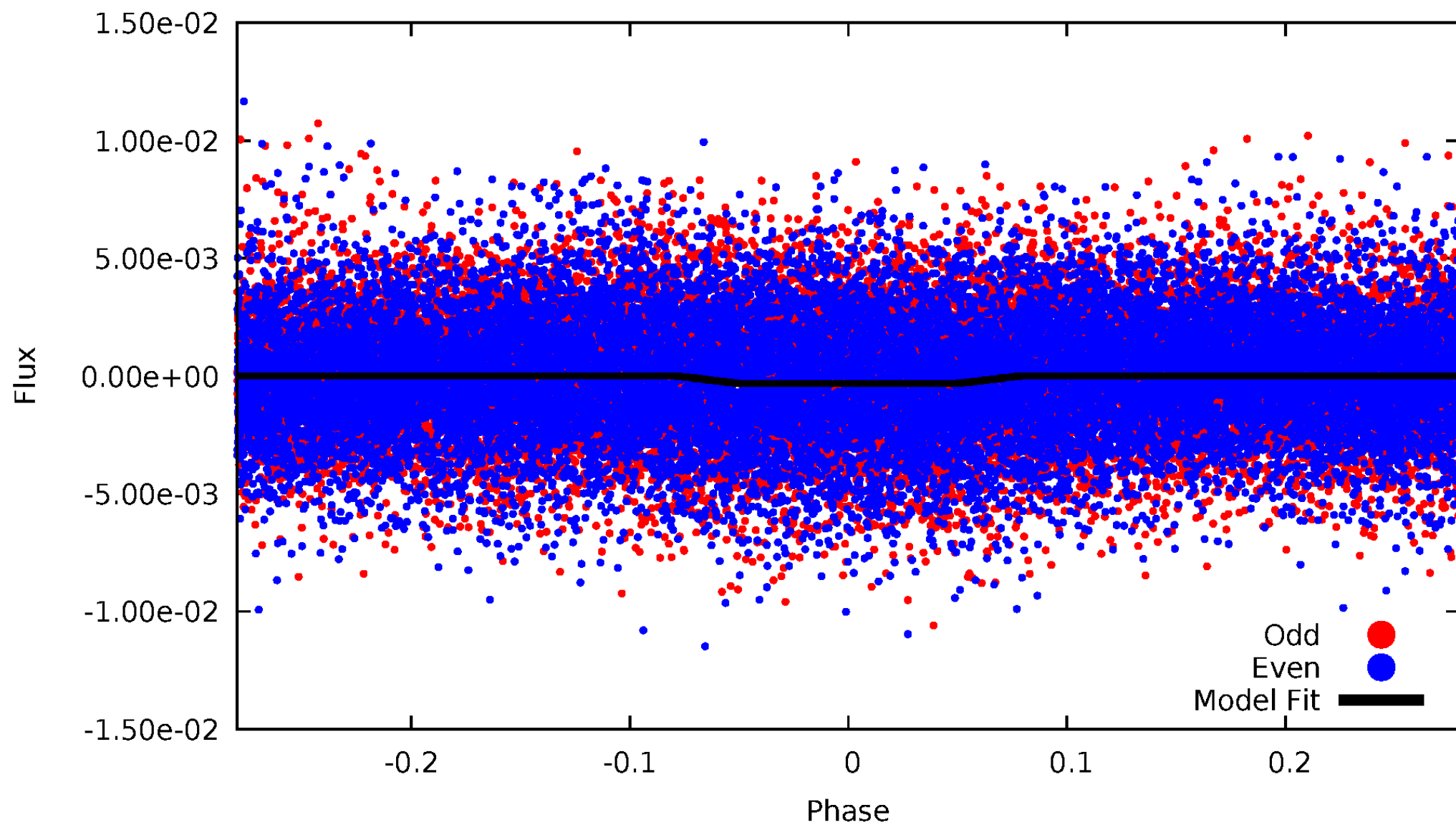
DV Odd/Even

TCE 003217554-01

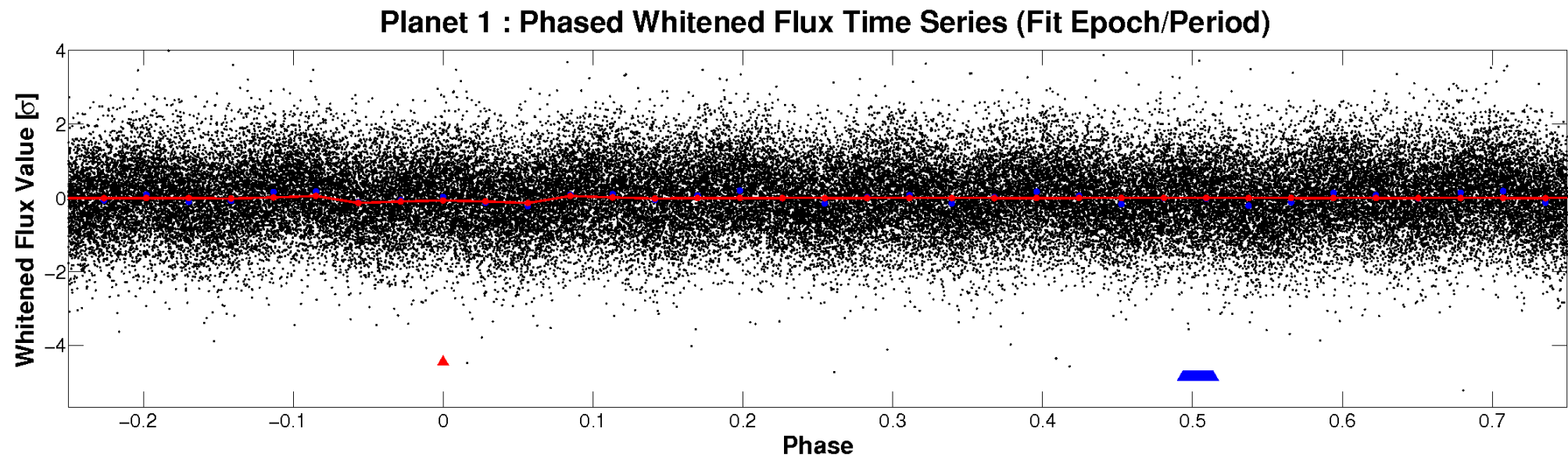
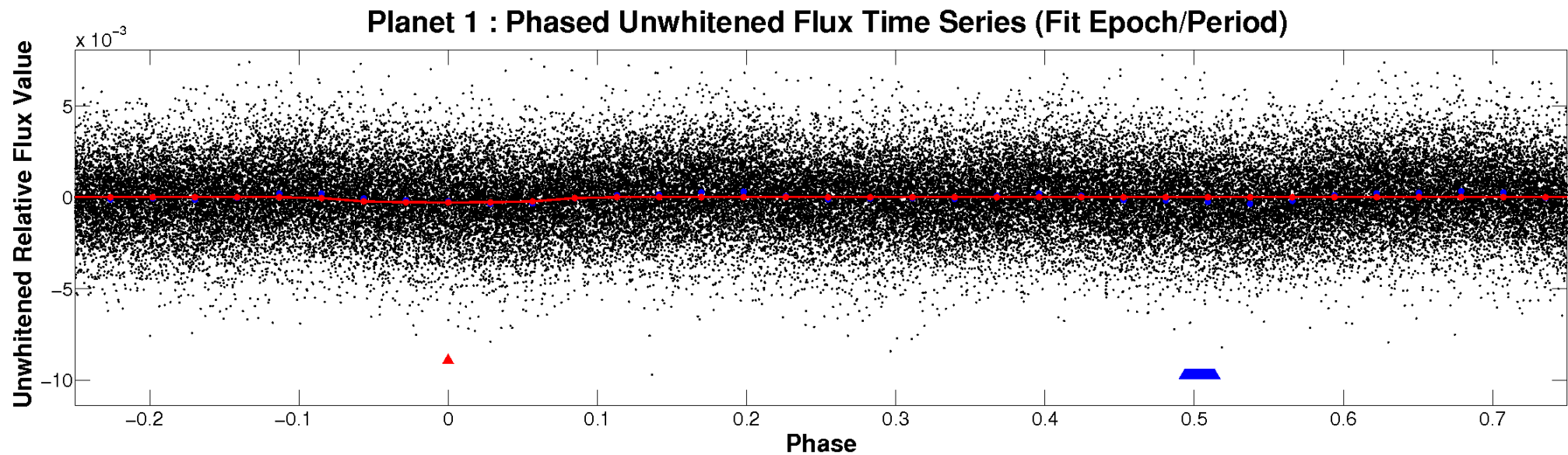


ALT Odd/Even

TCE 003217554-01

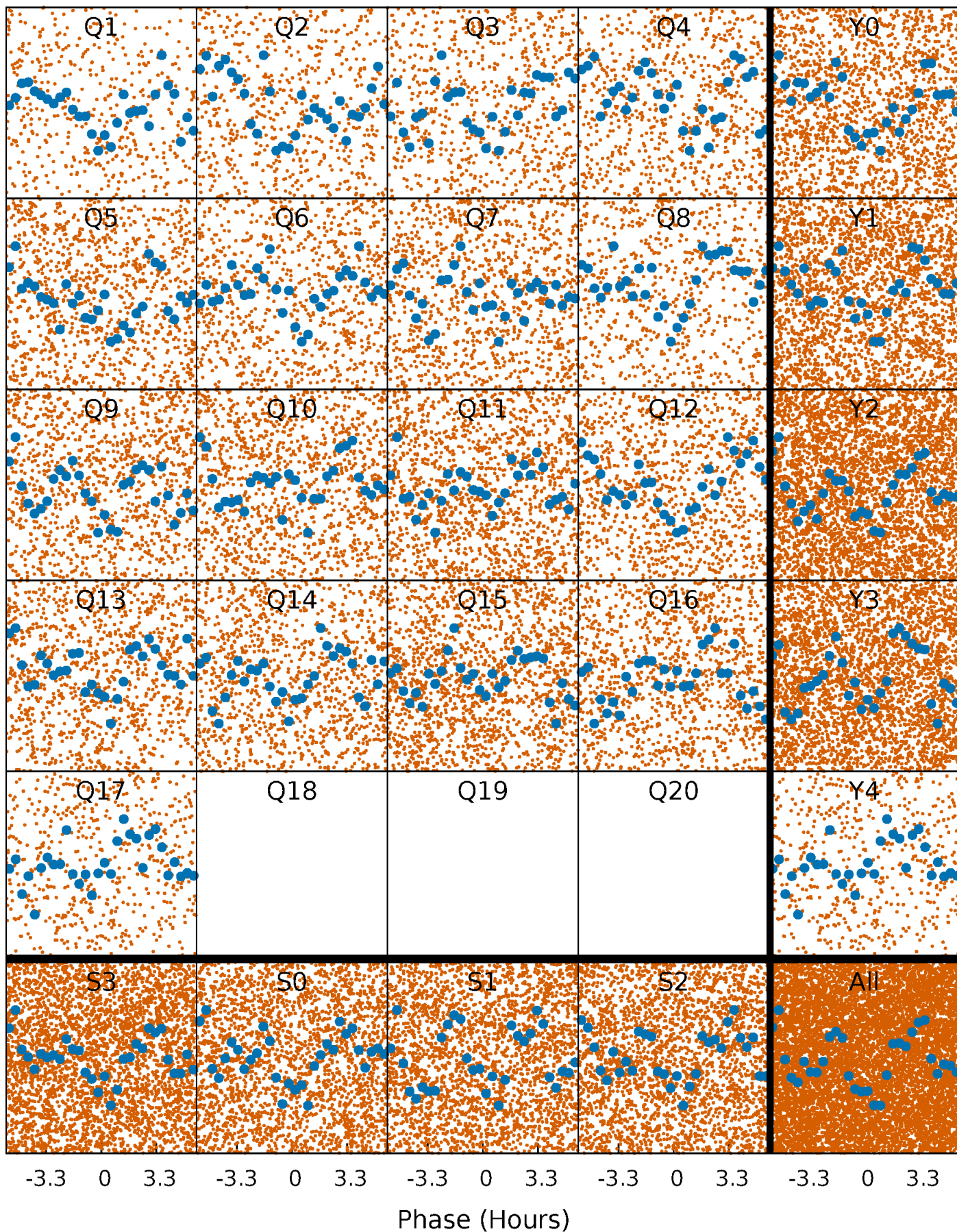


Non-Whitened Vs. Whitened Light Curve



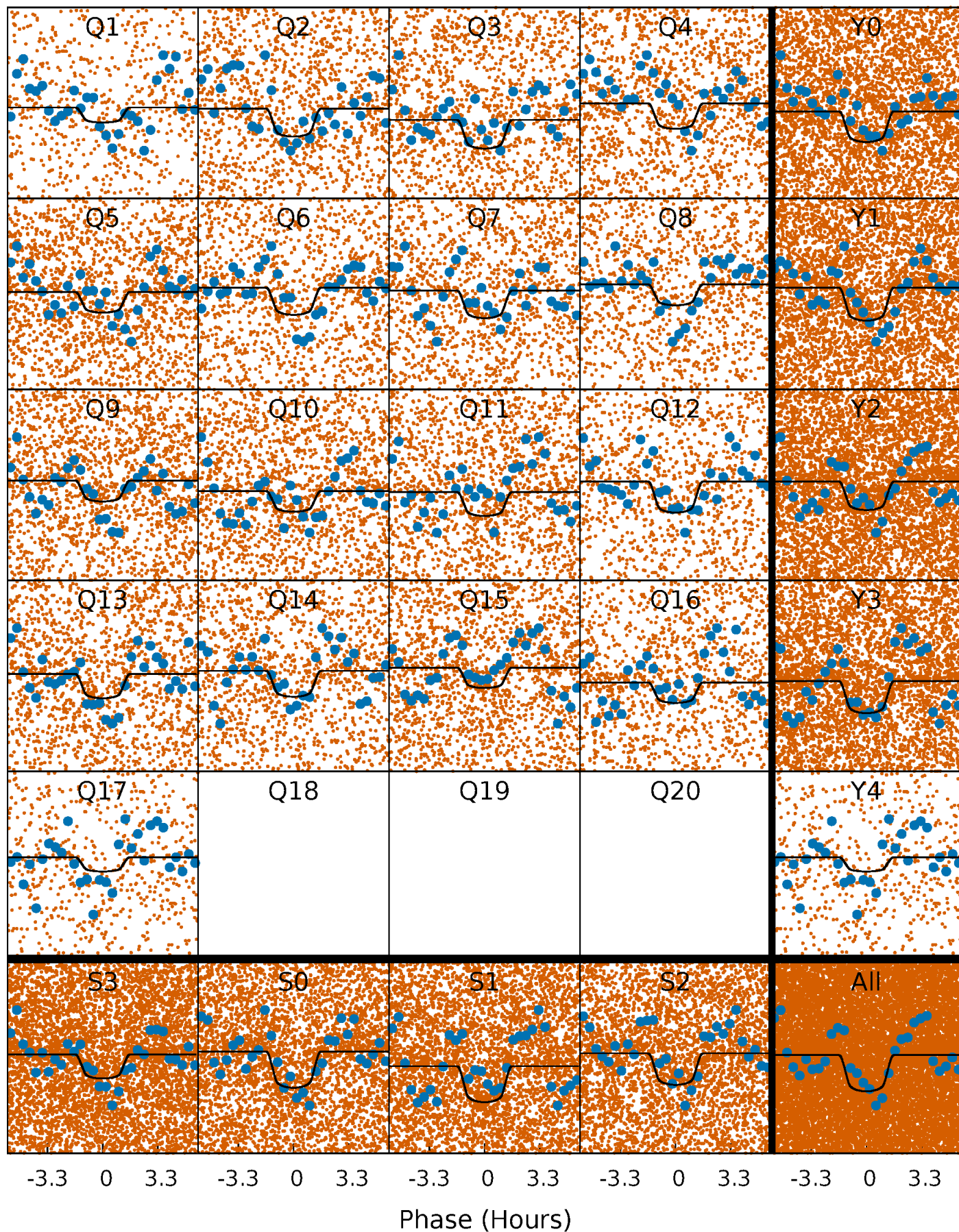
PDC Quarter-Phased Transit Curves

TCE 003217554-01 P= 0.722301 Days $T_0=131.656622$ (BKJD)



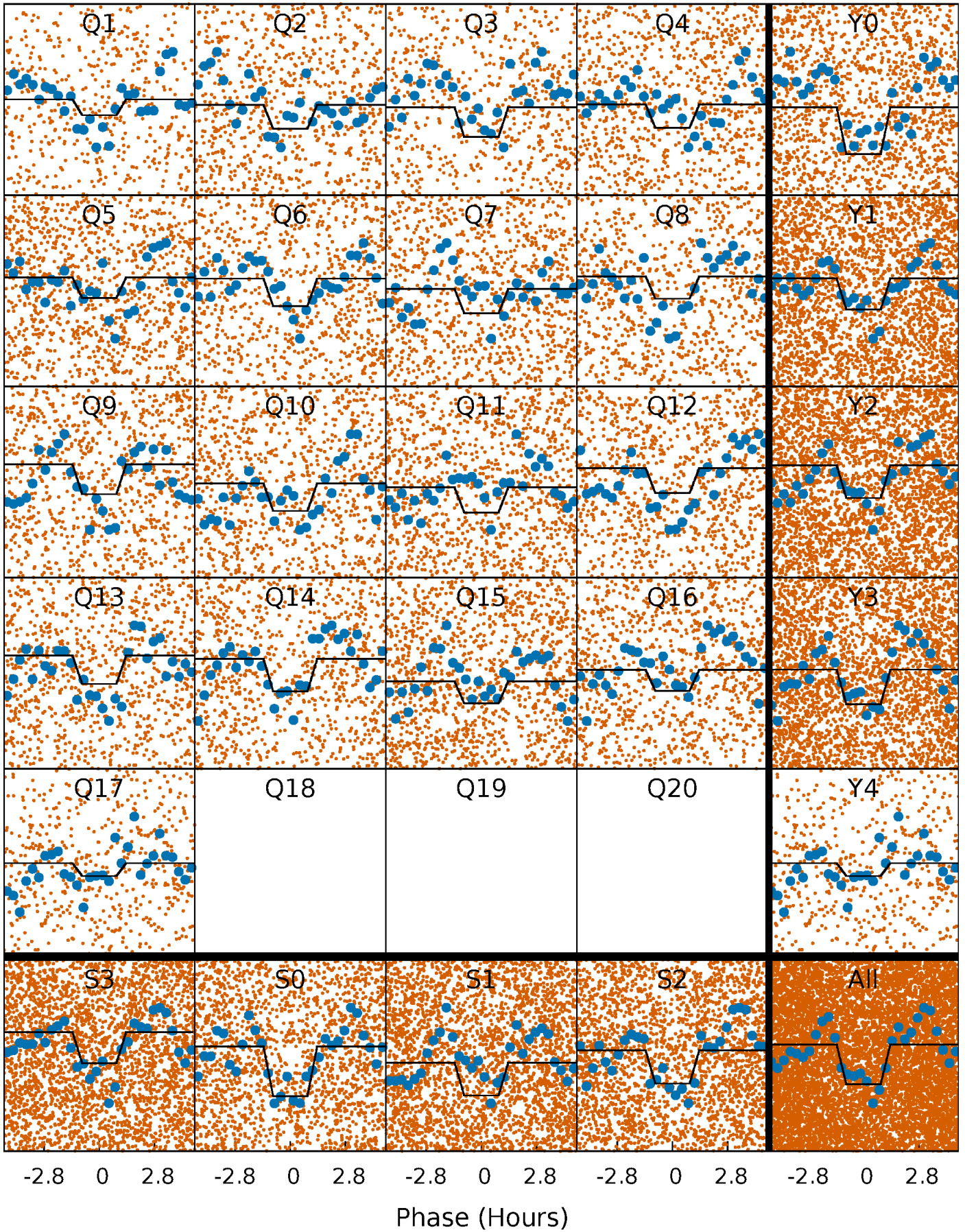
DV Quarter-Phased Transit Curves

TCE 003217554-01 P= 0.722301 Days $T_0=131.656622$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

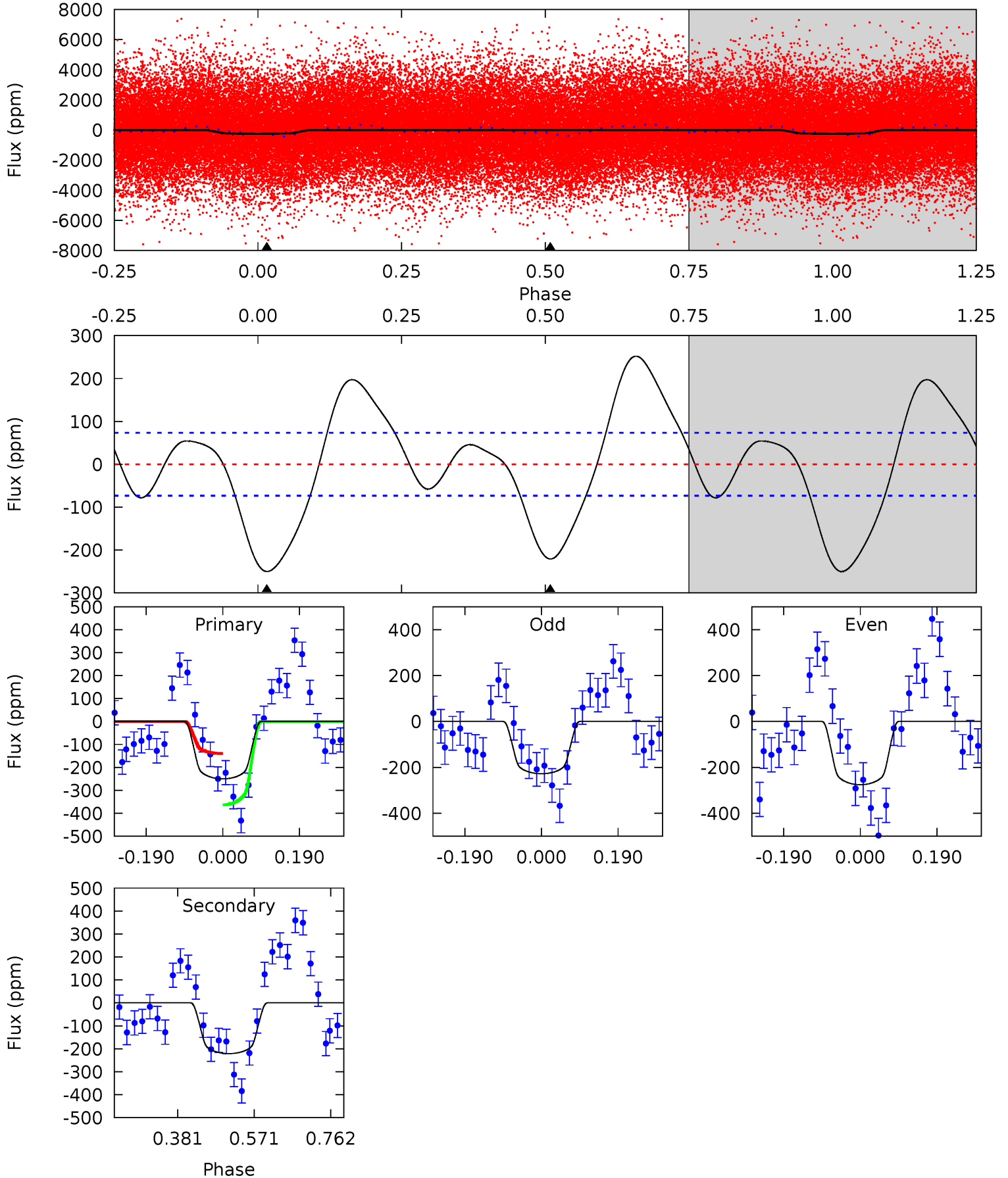
TCE 003217554-01 P= 0.722297 Days $T_0=131.668603$ (BKJD)



DV Model-Shift Uniqueness Test

003217554-01, P = 0.722301 Days, E = 130.934321 Days

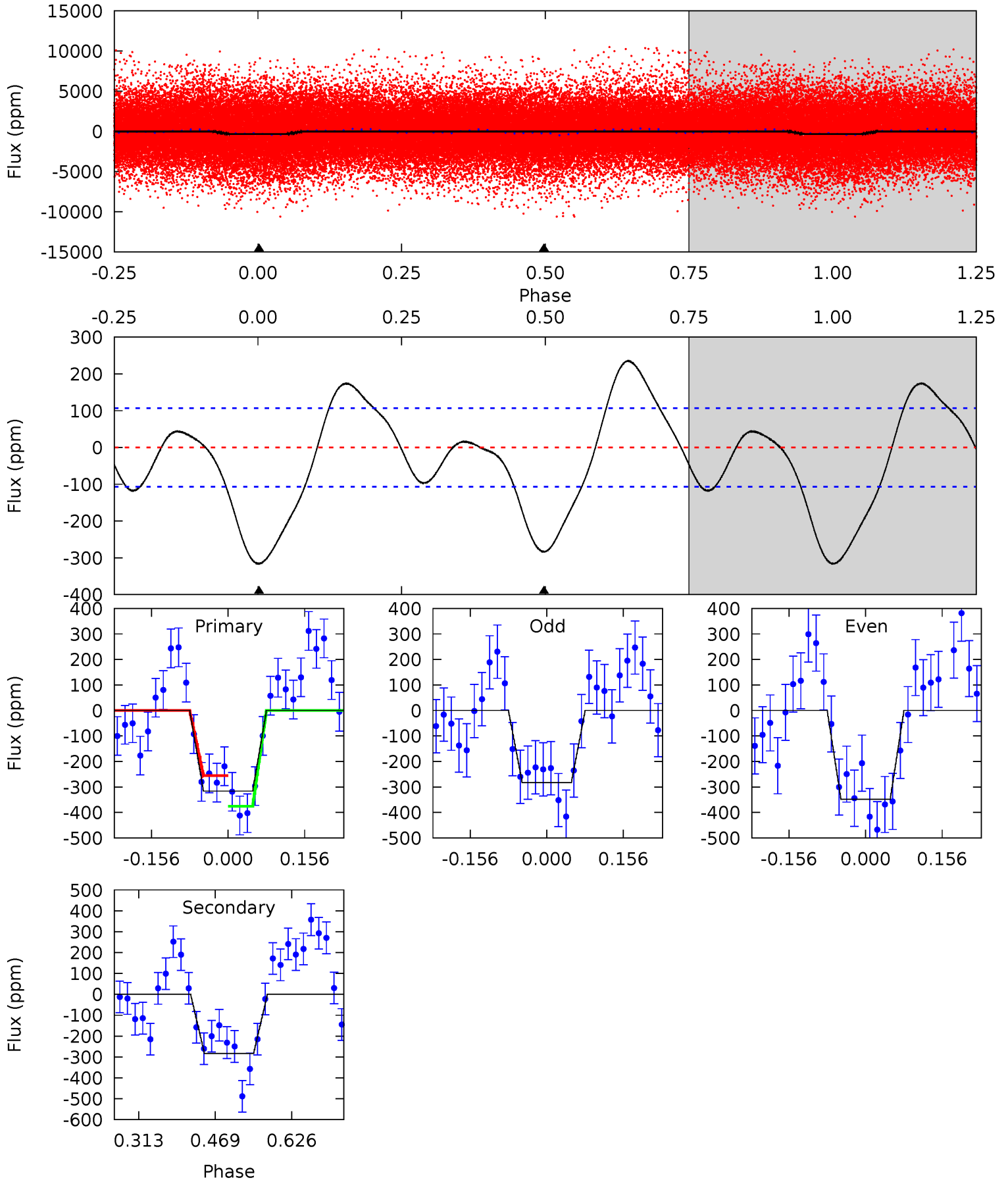
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	13.3	0	0	4.43	1.31	4.54	15.1	15.1	13.3	13.3	1.45	1.00	0.50	6.76



Alt Model-Shift Uniqueness Test

003217554-01, P = 0.722297 Days, E = 130.946306 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	11.8	0	0	4.47	1.42	4.04	13.2	13.2	11.8	11.8	1.38	1.09	0.43	2.50



Stellar Parameters For KIC 003217554

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7823^{+115}_{-193}	$3.686^{+0.238}_{-0.102}$	$0.100^{+0.150}_{-0.200}$	$3.456^{+0.661}_{-1.075}$	$2.114^{+0.274}_{-0.224}$	$0.072^{+0.112}_{-0.024}$
	+1%/-2%	+6%/-3%	+150%/-200%	+19%/-31%	+13%/-11%	+156%/-33%
Source	SPE4	SPE4	SPE4	DSEP		

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

Secondary Eclipse Parameters for KIC 003217554-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-221 ± 17	$6.65^{+1.07}_{-1.11}$	6197^{+352}_{-444}	6429^{+542}_{-527}	$1.145^{+0.492}_{-0.300}$
Alt.	-283 ± 24	$6.56^{+1.07}_{-1.13}$	6201^{+354}_{-427}	7060^{+630}_{-569}	$1.519^{+0.637}_{-0.426}$

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

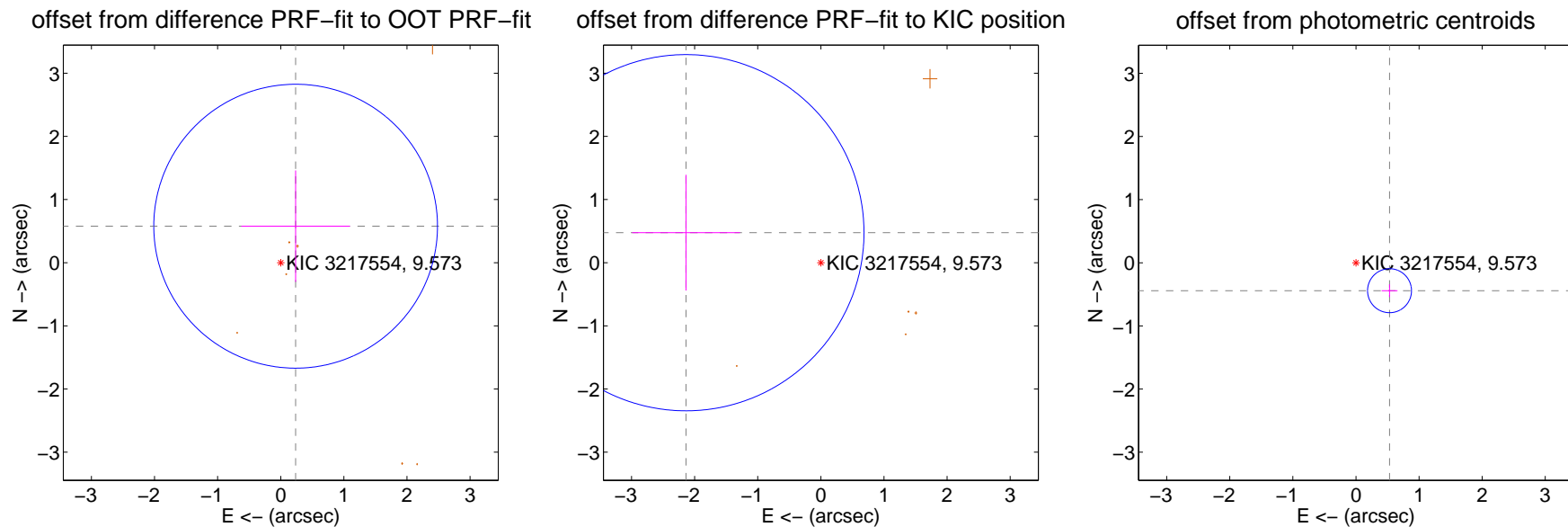
DV Centroid Data

Supplemental centroid analysis for 003217554-01. **Kepler magnitude: 9.57.** Transit SNR 11.84

There are 0 quarters with good PRF difference image offsets

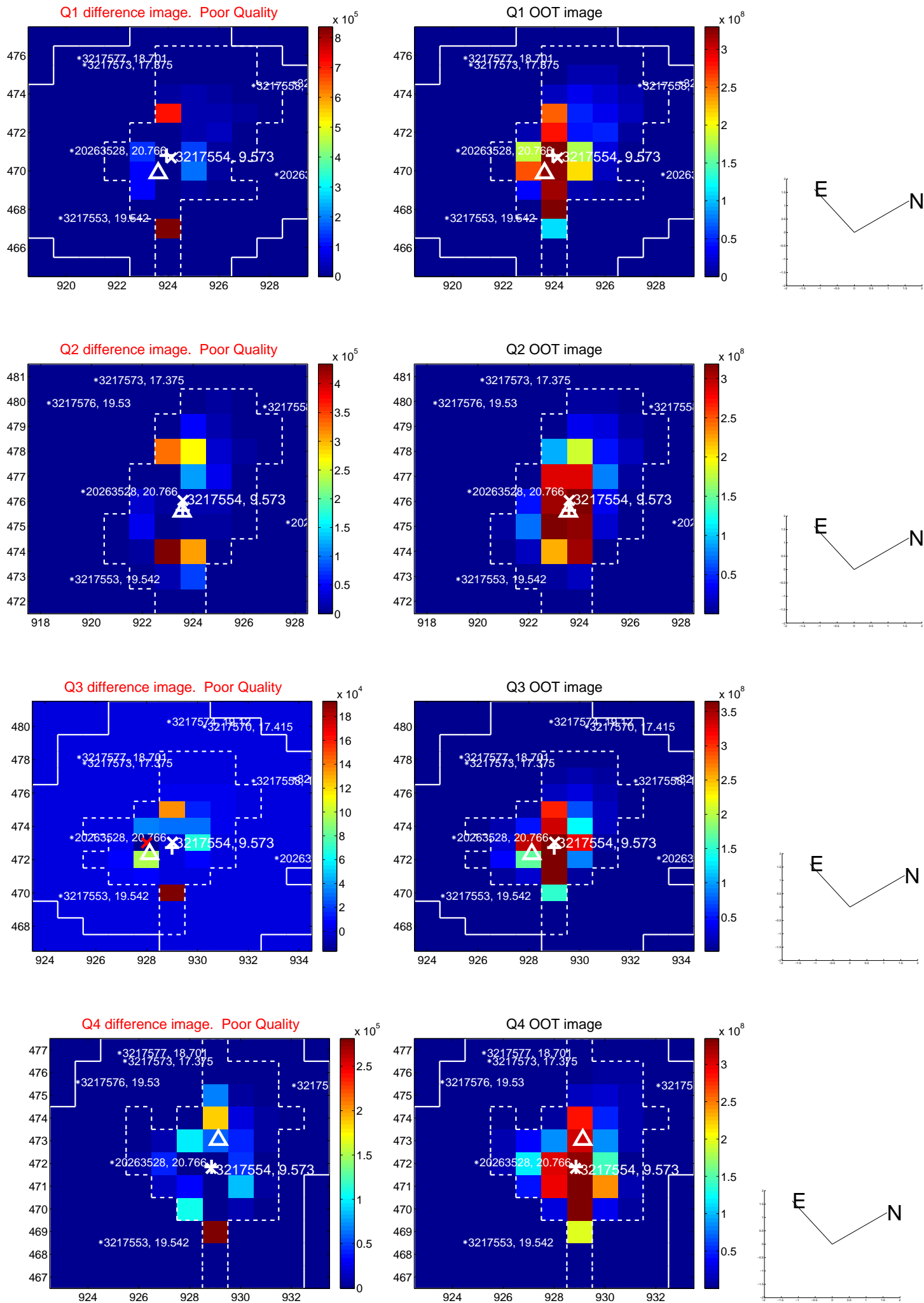
The direct PRF centroid is offset from the target star catalog position by about 0.86 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.624 ± 0.749	0.83	-0.236 ± 0.859	0.578 ± 0.882
PRF-fit source offset from KIC position	2.189 ± 0.940	2.33	2.137 ± 0.854	0.475 ± 0.917
photometric centroid source offset	0.69 ± 0.12	5.96	-0.53 ± 0.13	-0.44 ± 0.10

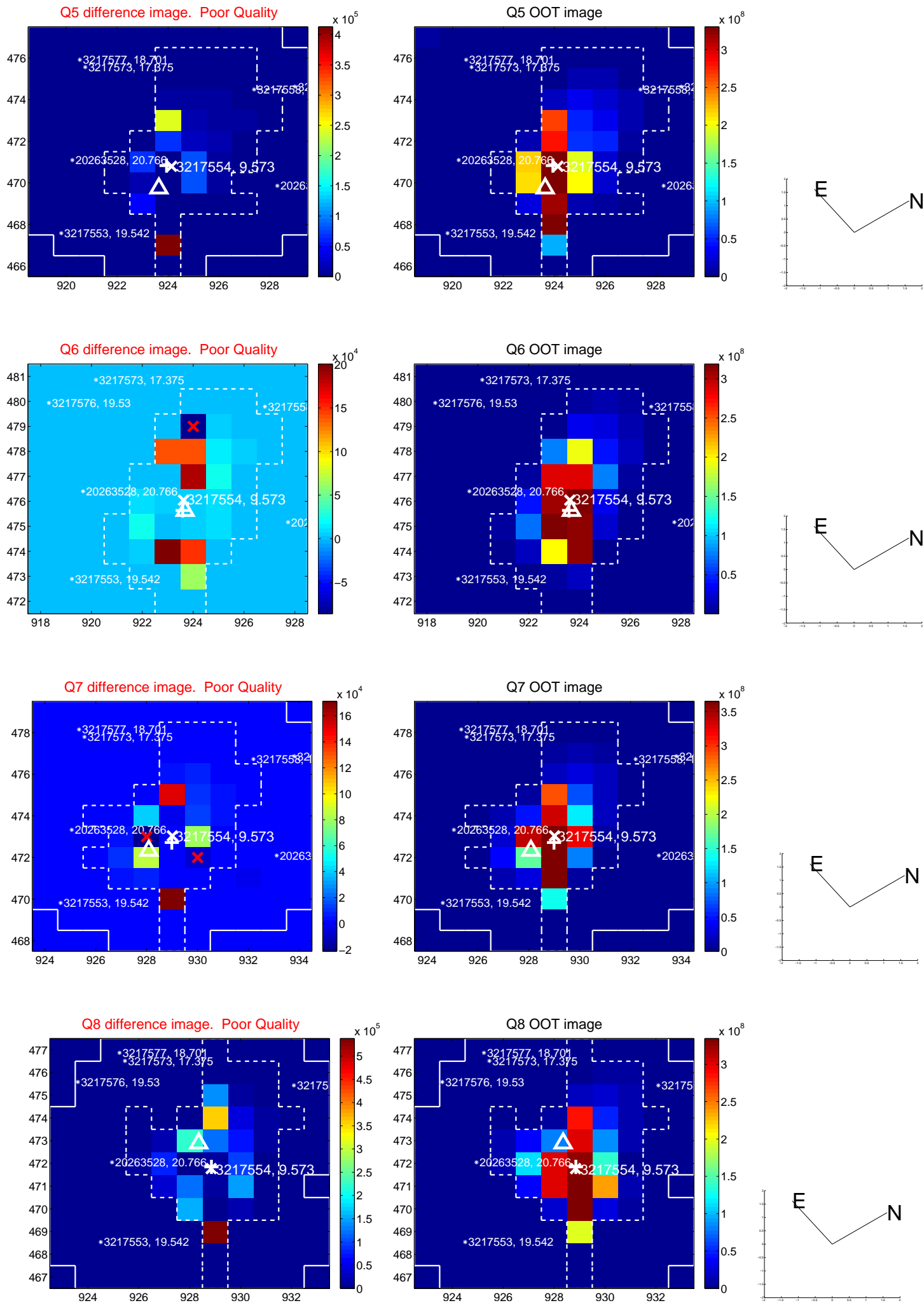


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

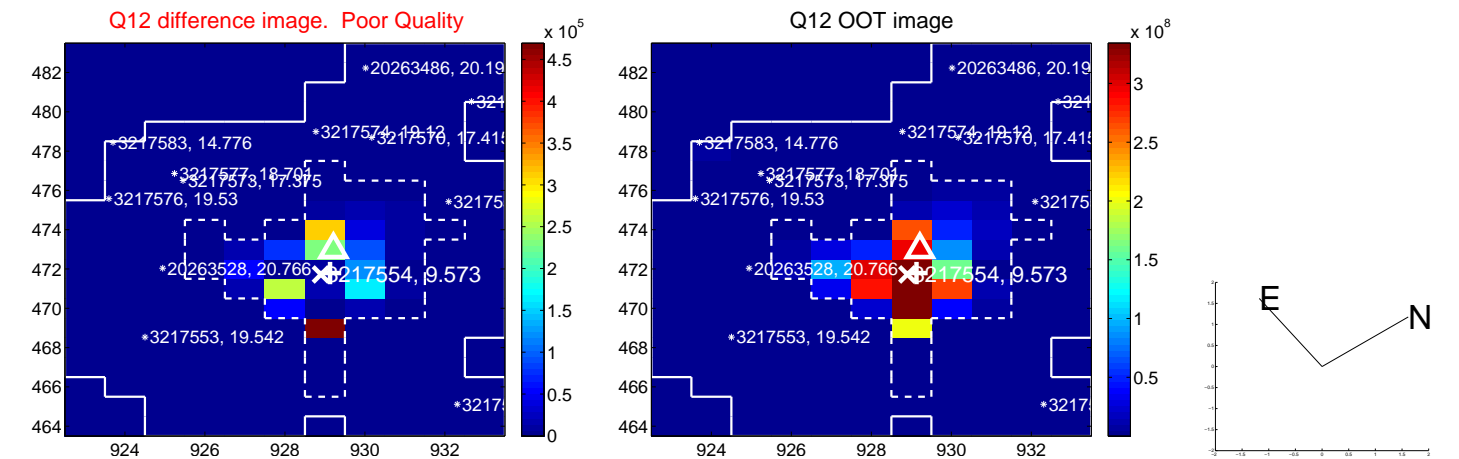
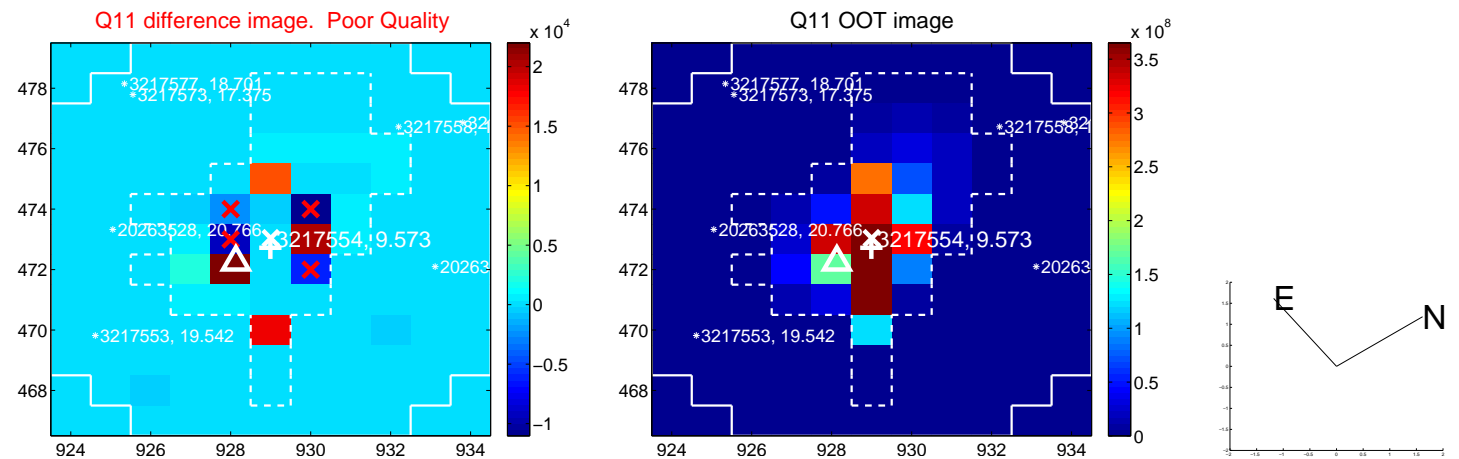
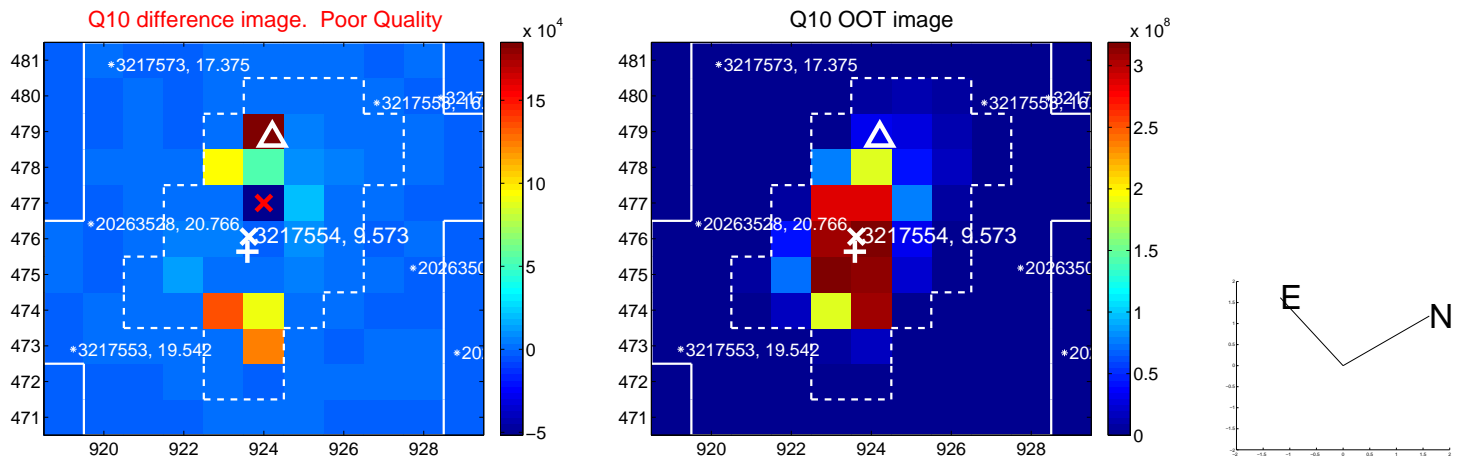
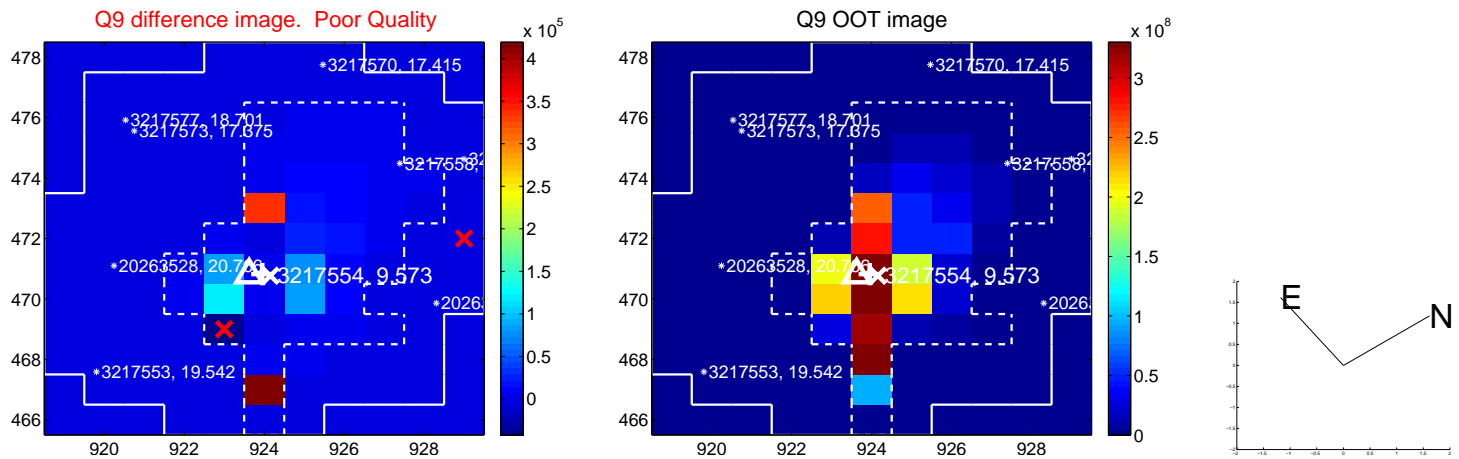
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



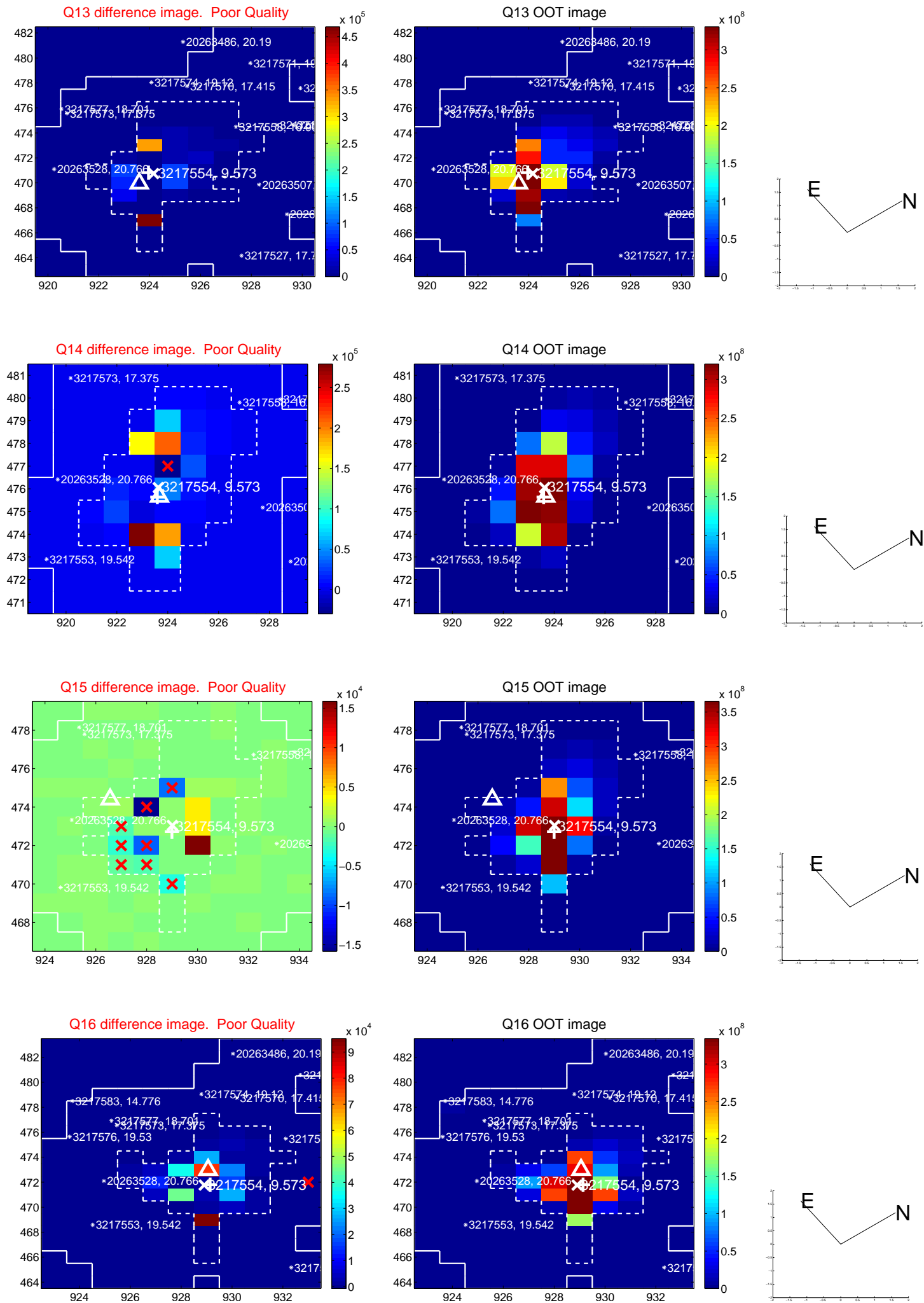
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



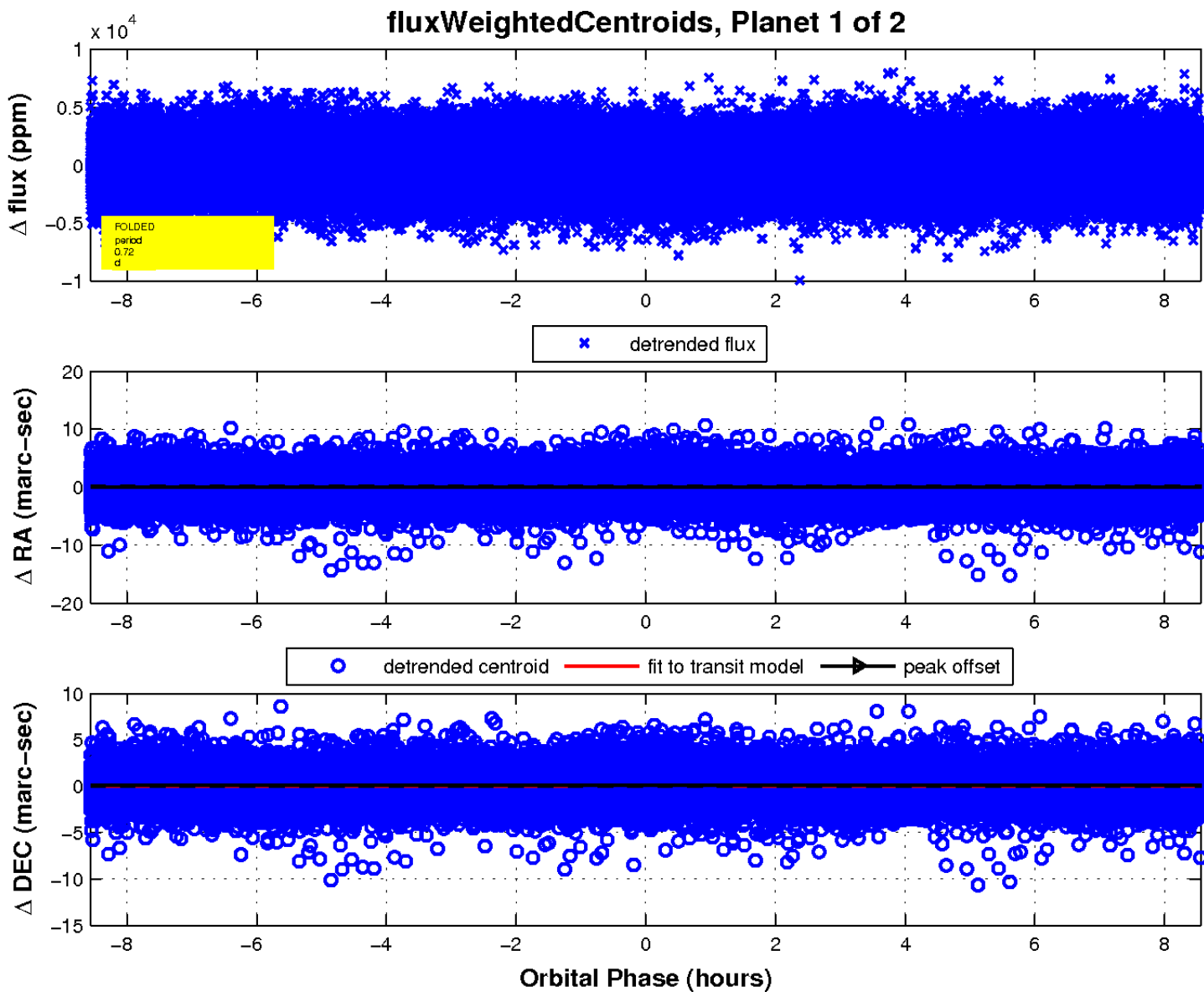
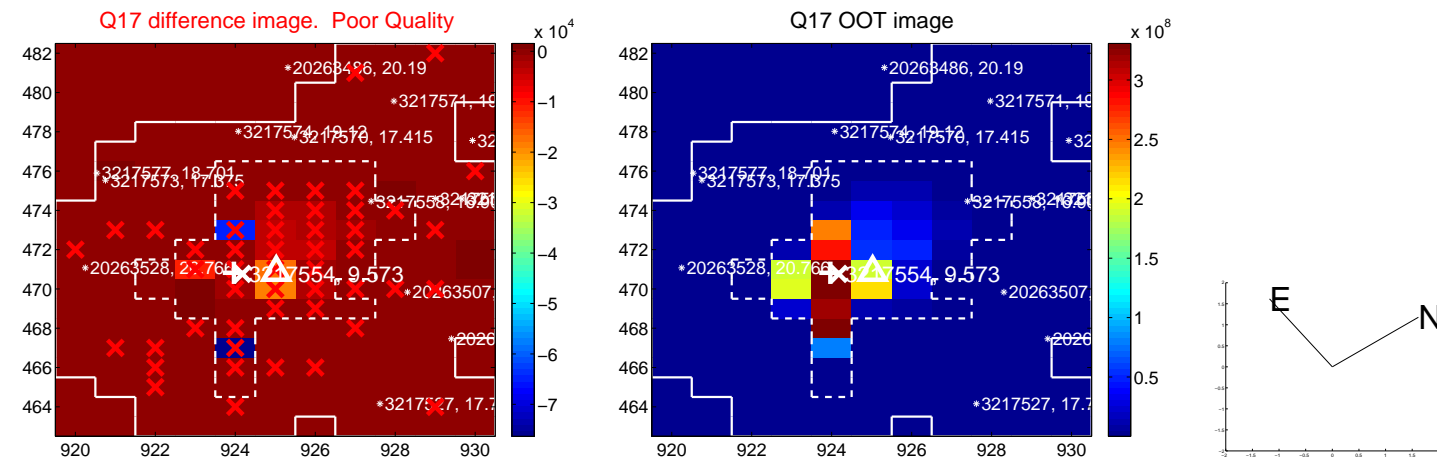
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

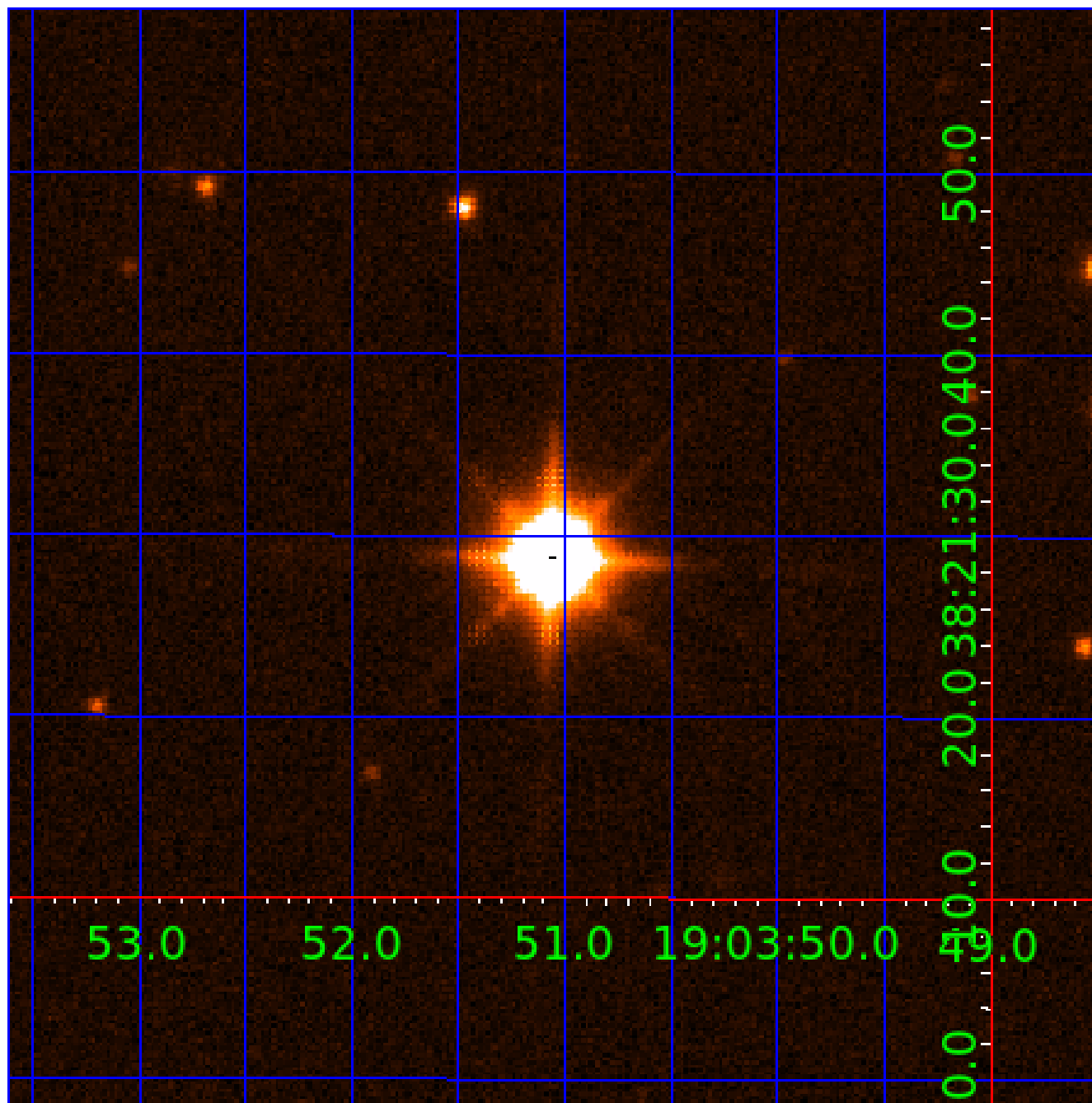


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003217554

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})
003217554-01	OBS	No	0.722301	131.656622	285.5	2.855	13.2	11.8	3.46	7823	6.81	97981.90
003217554-02	OBS	No	0.722294	132.027578	328.3	2.773	12.2	13.6	3.46	7823	7.30	97983.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003217554-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED
003217554-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

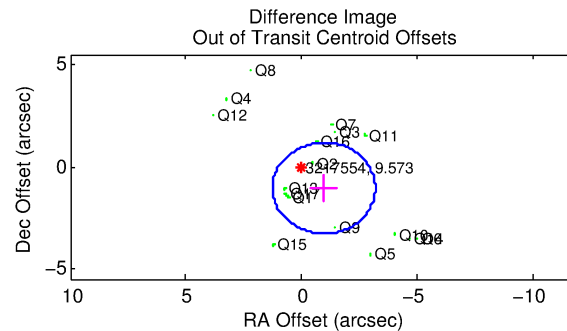
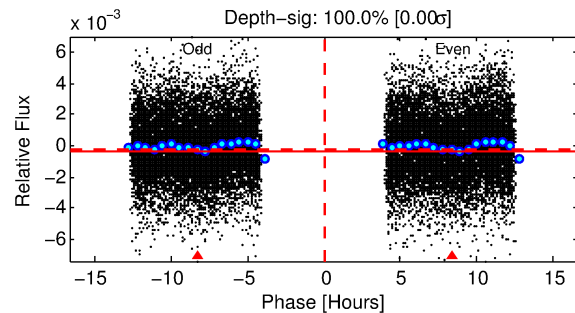
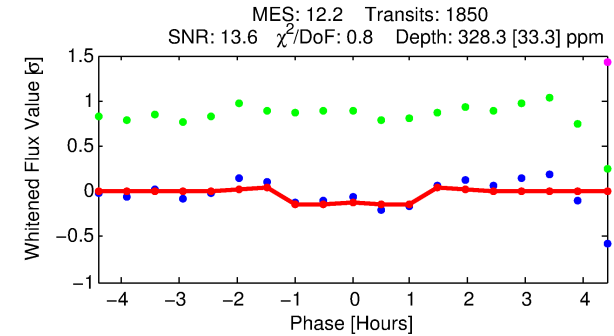
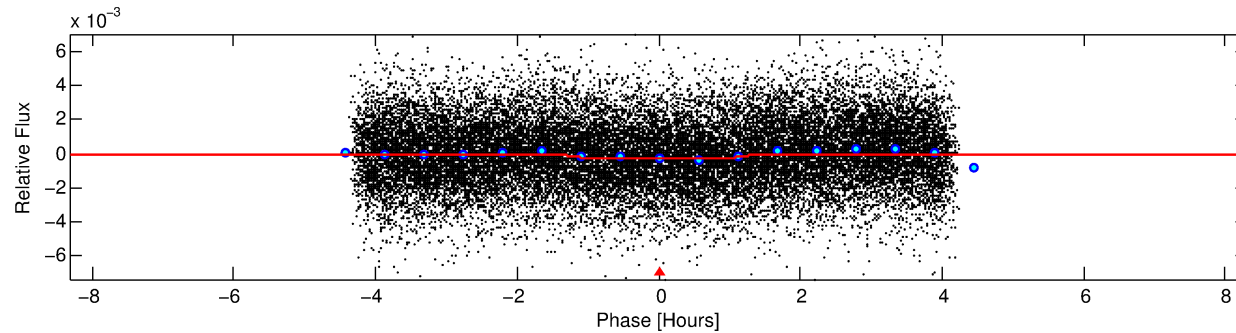
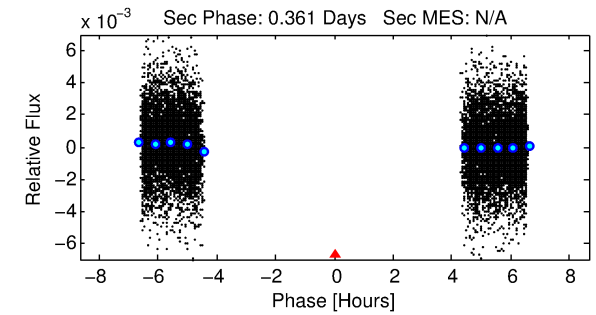
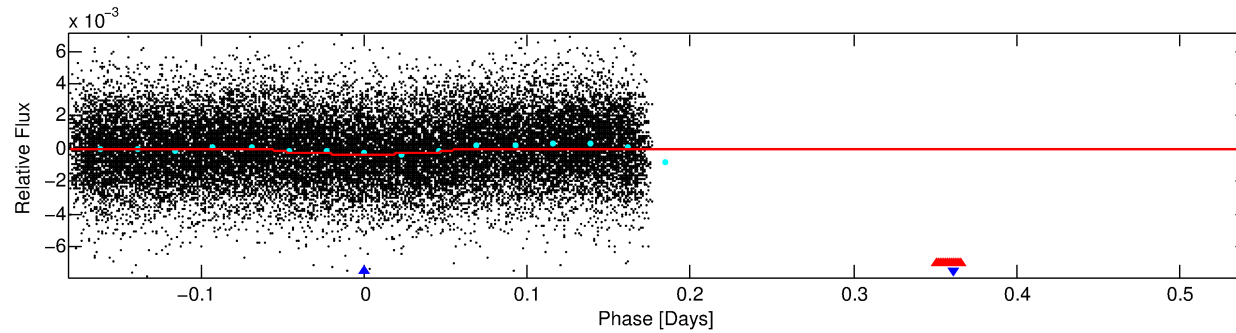
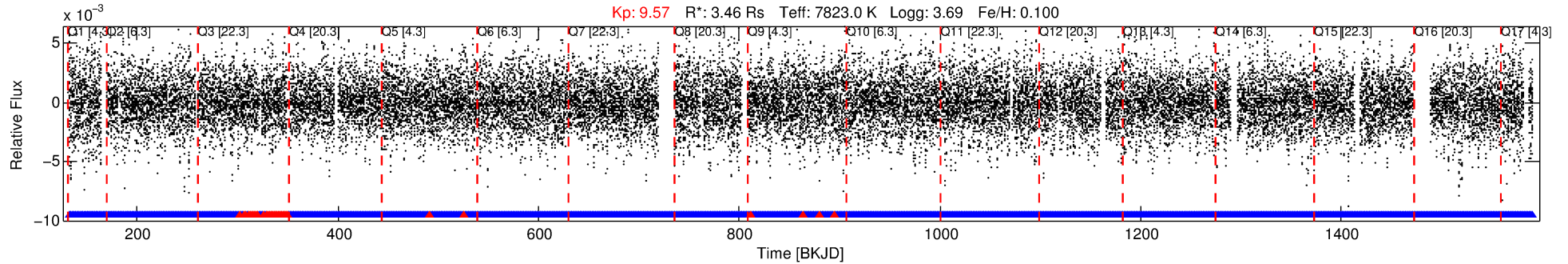
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003217554-02

No Significant Match Found

DV One-Page Summary

KIC: 3217554 Candidate: 2 of 2 Period: 0.722 d



DV Fit Results:

Period = 0.72229 [0.00001] d
Epoch = 132.0276 [0.0014] BKJD
 R_p/R^* = 0.0194 [0.0023]
 a/R^* = 1.34 [0.35]
 b = 0.90 [0.13]
 S_{eff} = 97983.18 [42282.45]
 T_{eq} = 4511 [487] K
 R_p = 7.30 [2.43] R_{e}
 a = 0.0202 [0.0056] AU

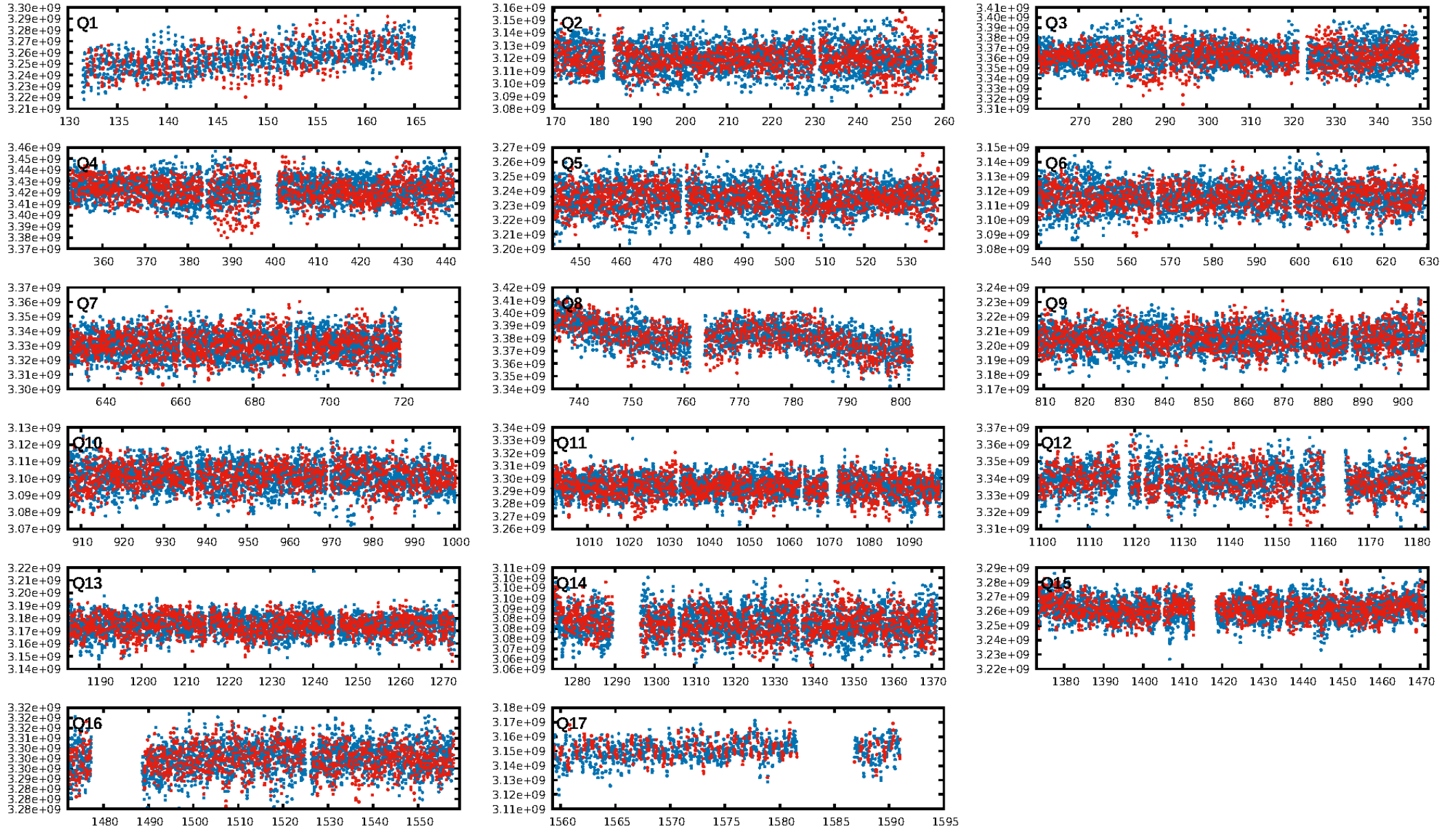
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.97 [1722/1767]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 0.681 arcsec [6.68σ]
OotOffset-rm: 1.424 arcsec [1.92σ]
KicOffset-rm: 3.016 arcsec [3.21σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 0.71 [12/17]

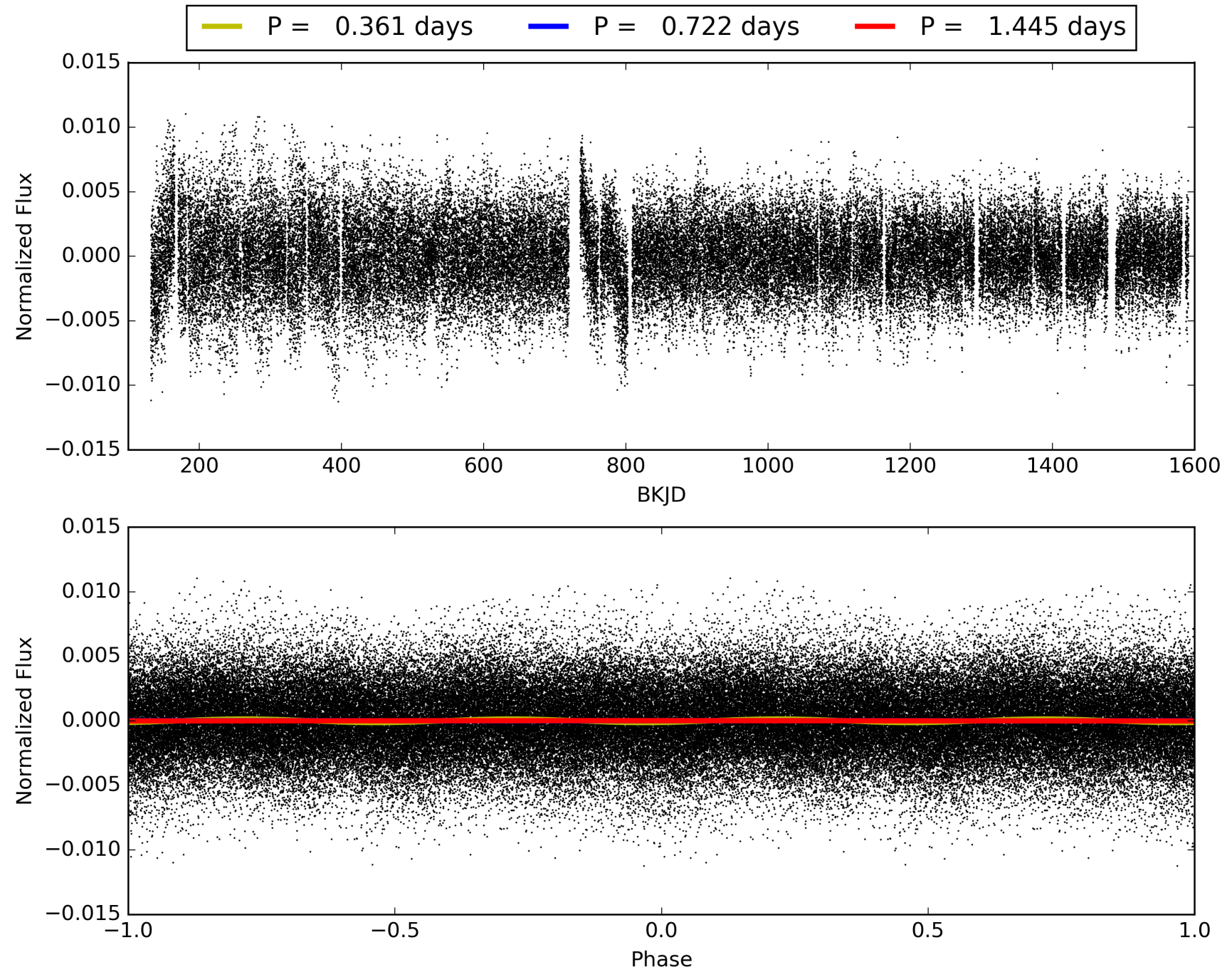
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 11:50:51 Z

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

TCE 003217554-02, PDC Light Curves

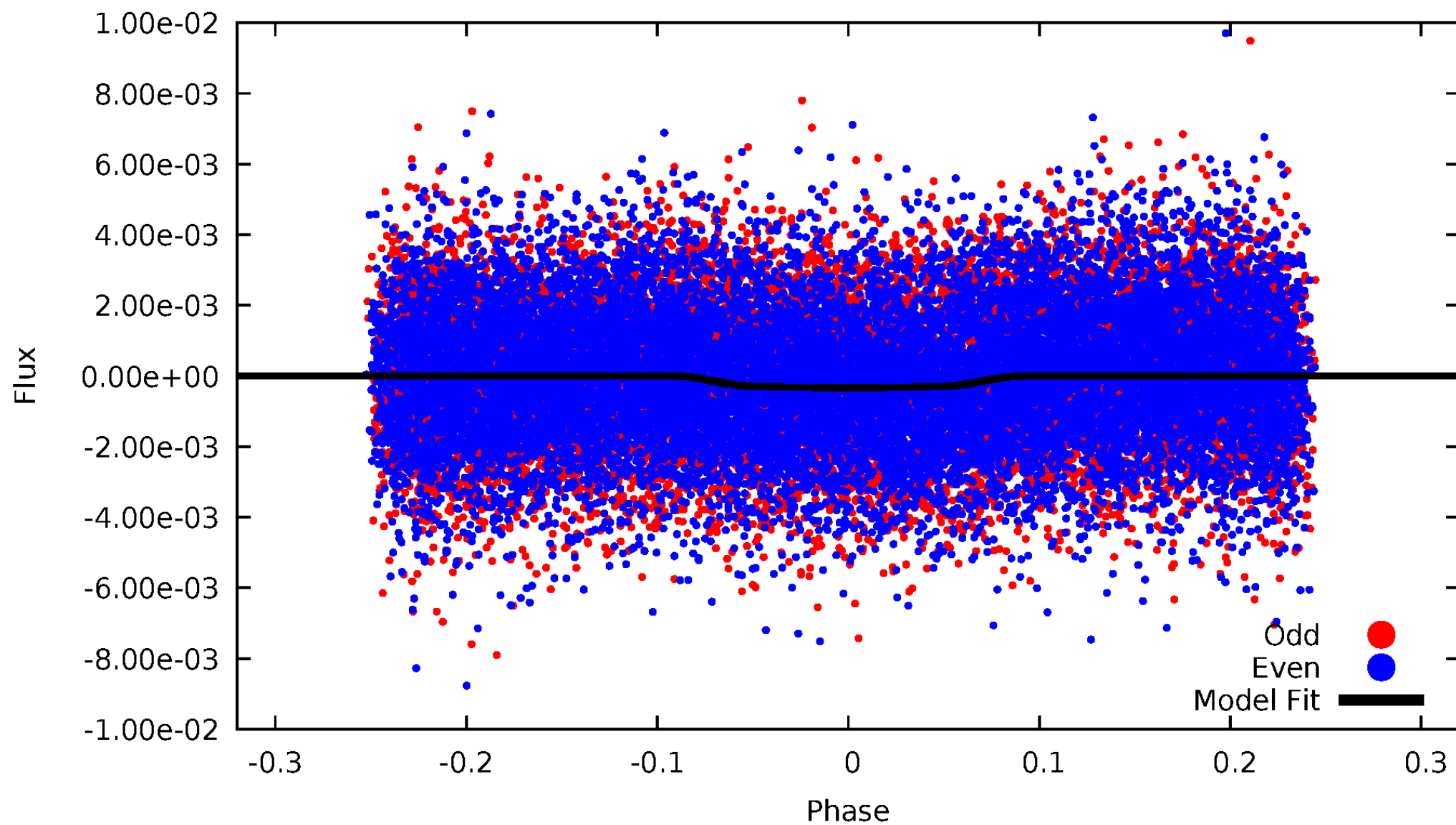


TCE 003217554-02



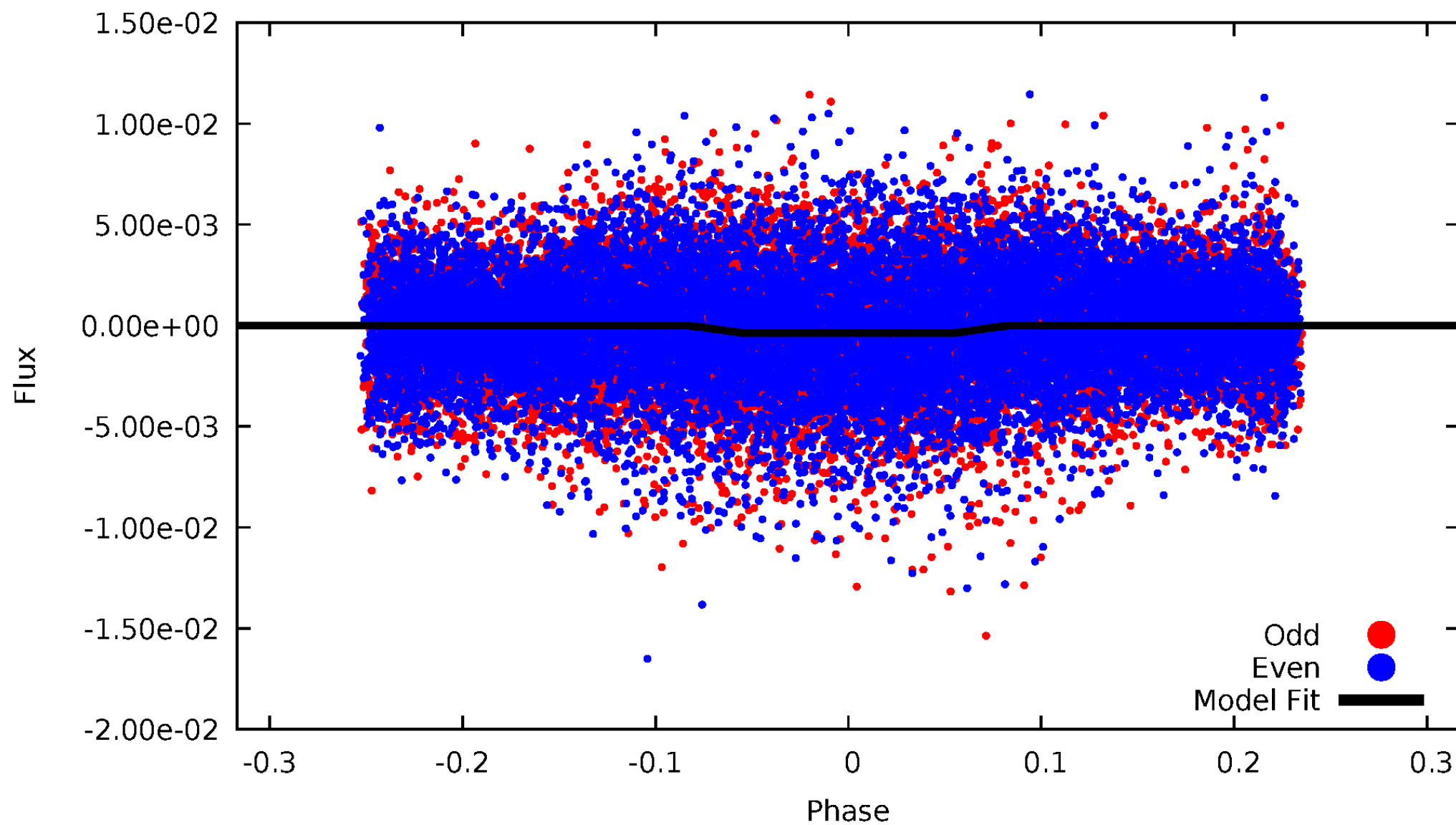
DV Odd/Even

TCE 003217554-02



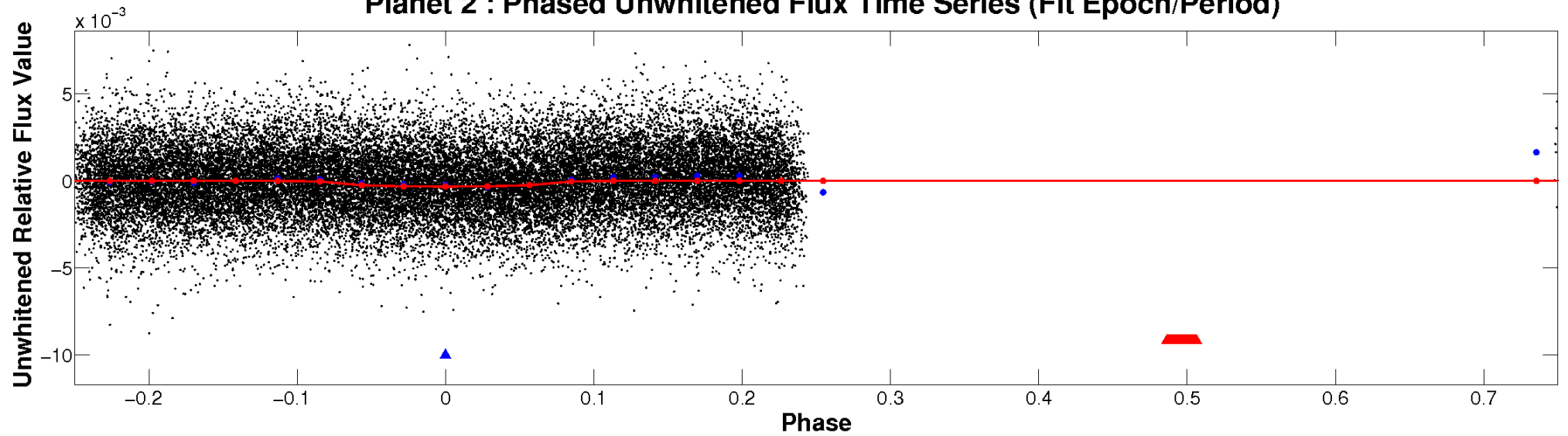
ALT Odd/Even

TCE 003217554-02

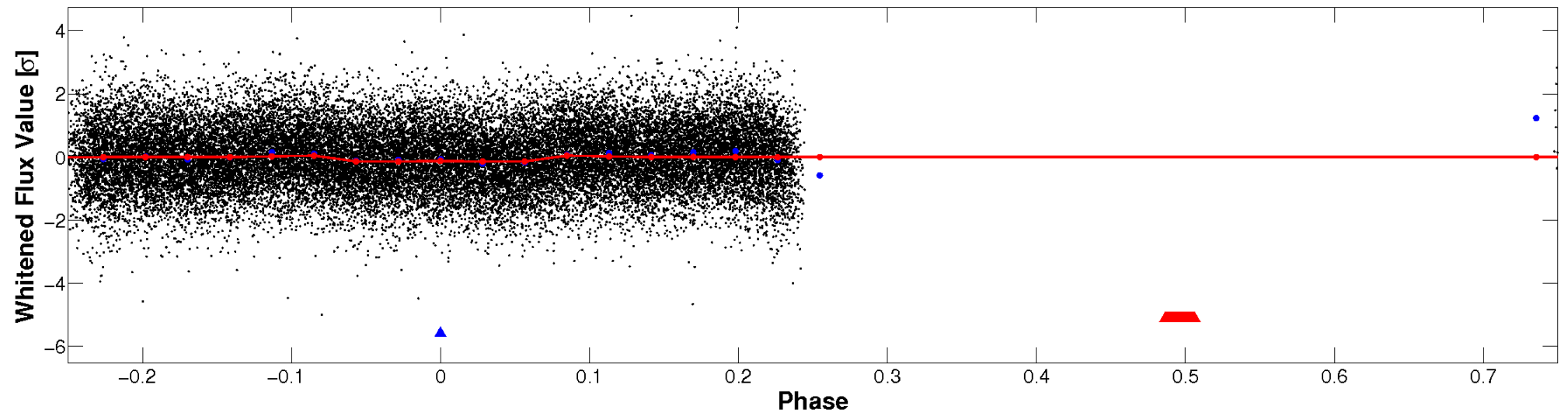


Non-Whitened Vs. Whitened Light Curve

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

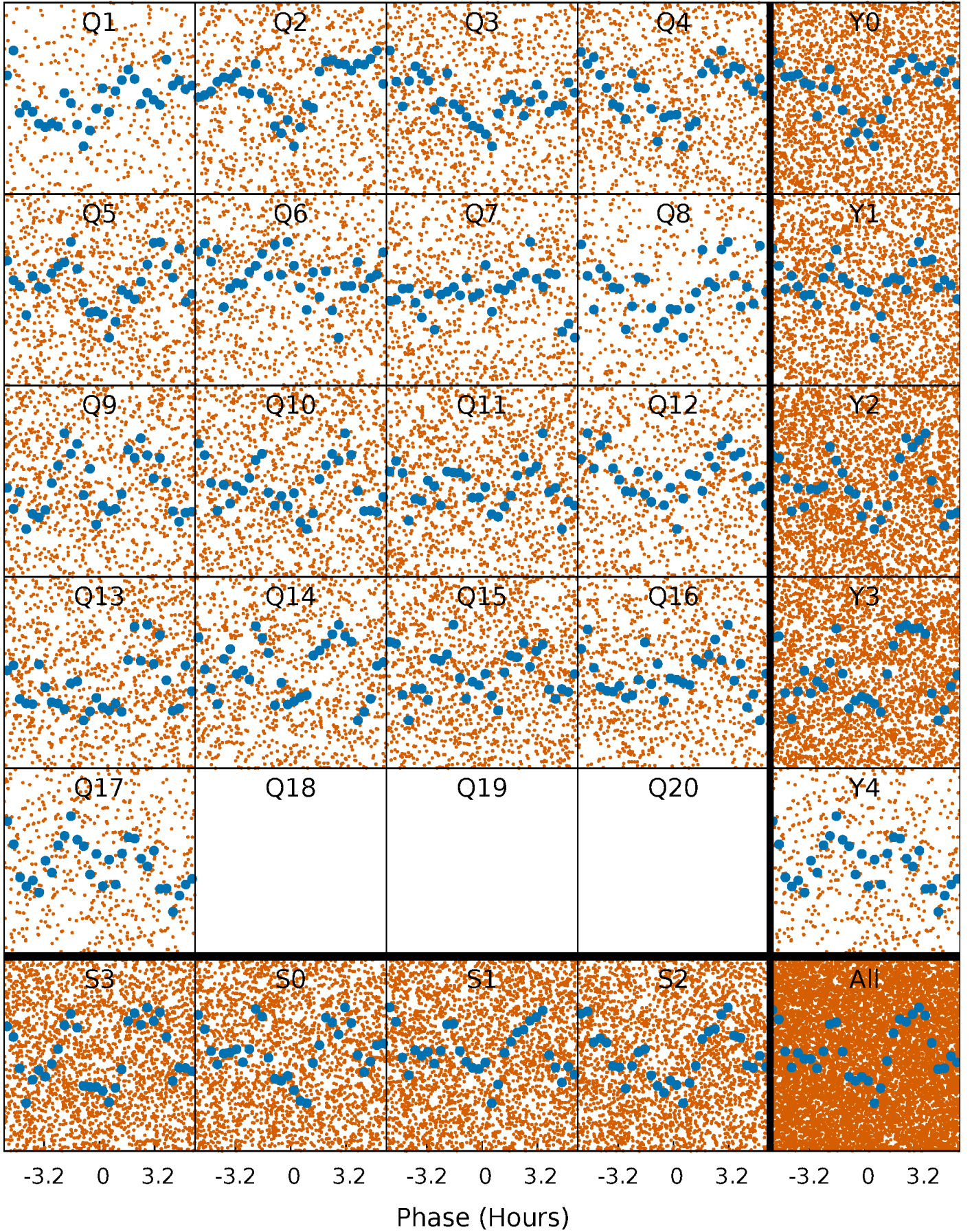


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



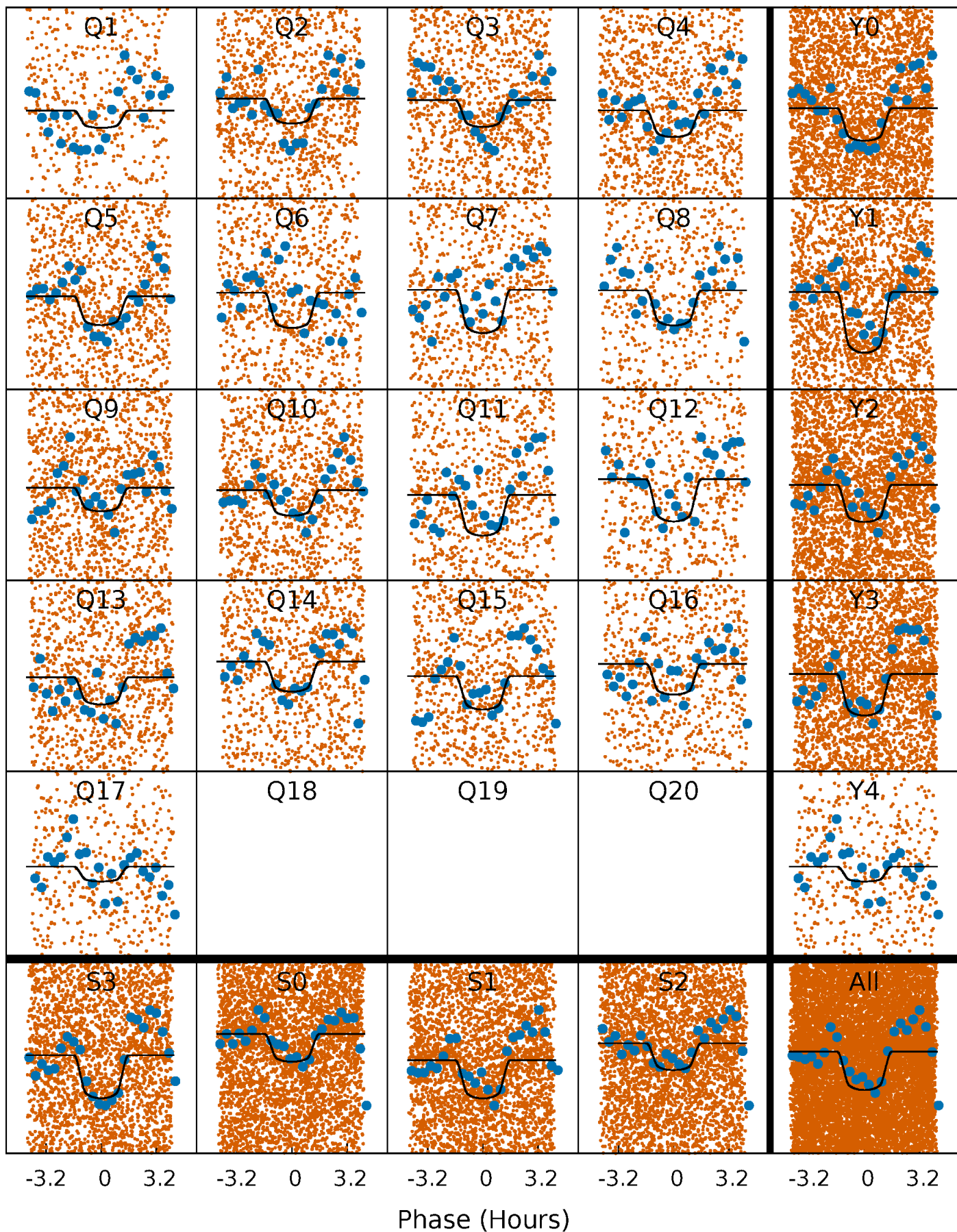
PDC Quarter-Phased Transit Curves

TCE 003217554-02 P= 0.722294 Days $T_0=132.027578$ (BKJD)



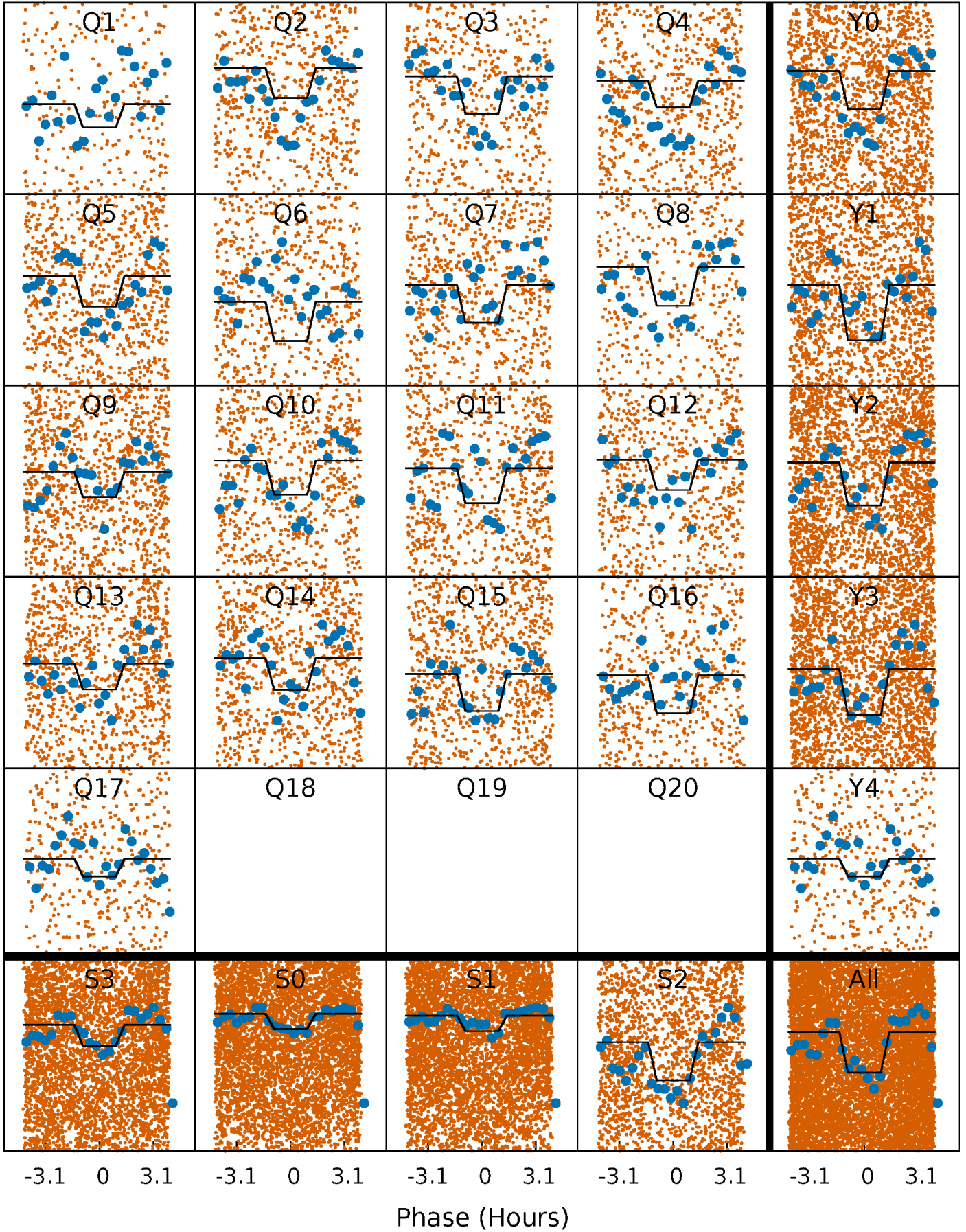
DV Quarter-Phased Transit Curves

TCE 003217554-02 P= 0.722294 Days $T_0=132.027578$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

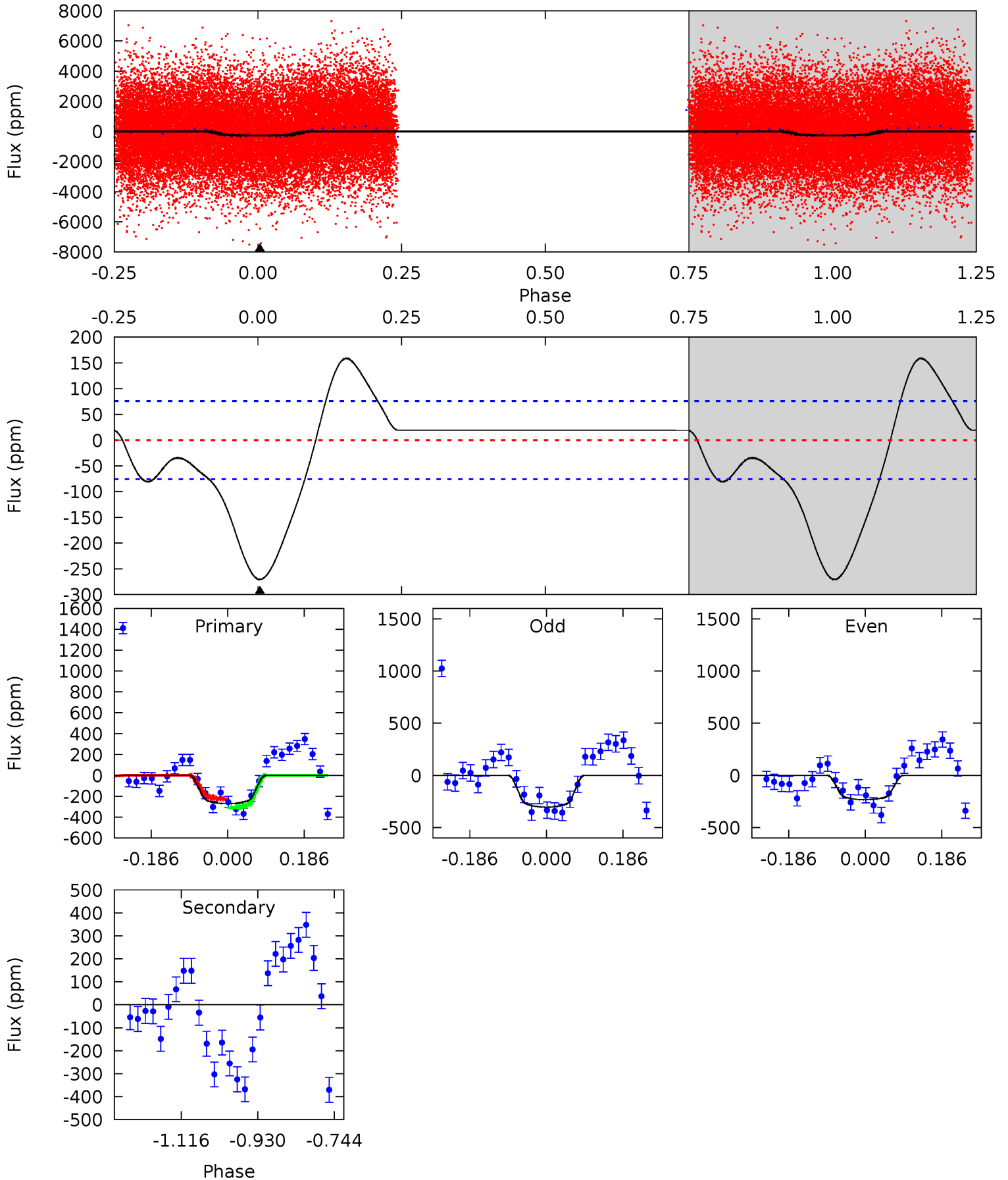
TCE 003217554-02 $P = 0.722297$ Days $T_0 = 132.028151$ (BKJD)



DV Model-Shift Uniqueness Test

003217554-02, P = 0.722294 Days, E = 131.305284 Days

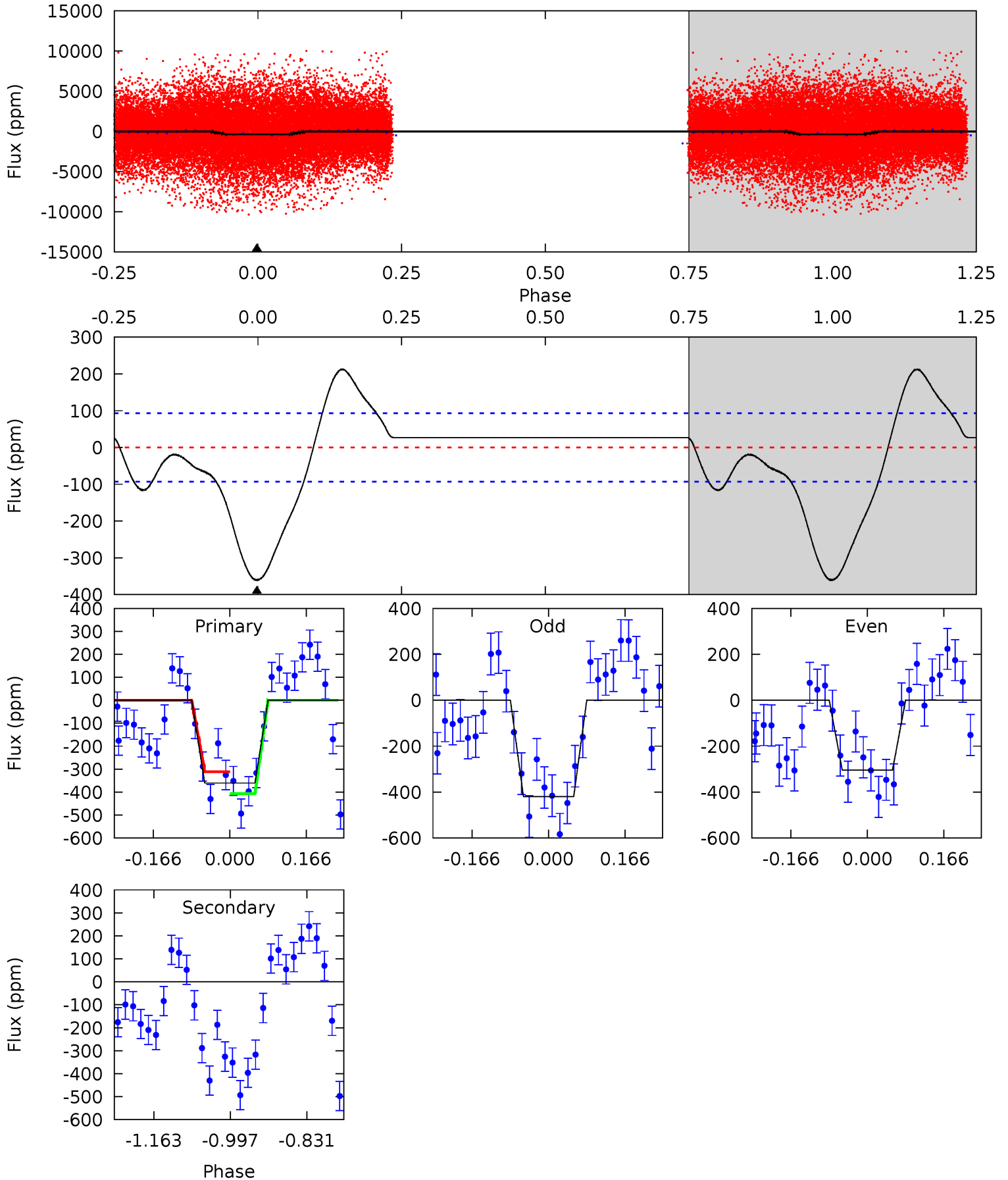
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.9	0	0	0	4.43	1.32	3.77	15.9	15.9	0	0	2.11	0.96	0.37	2.57



Alt Model-Shift Uniqueness Test

003217554-02, P = 0.722297 Days, E = 131.305854 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	0	0	0	4.46	1.38	4.74	17.3	17.3	0	0	2.78	1.12	0.37	1.62



Stellar Parameters For KIC 003217554

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7823^{+115}_{-193}	$3.686^{+0.238}_{-0.102}$	$0.100^{+0.150}_{-0.200}$	$3.456^{+0.661}_{-1.075}$	$2.114^{+0.274}_{-0.224}$	$0.072^{+0.112}_{-0.024}$
	+1%/-2%	+6%/-3%	+150%/-200%	+19%/-31%	+13%/-11%	+156%/-33%
Source	SPE4	SPE4	SPE4	DSEP		

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

Secondary Eclipse Parameters for KIC 003217554-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 17	$7.13^{+1.26}_{-1.20}$	6220^{+355}_{-439}	-5063^{+467}_{-342}	$-0.003^{+0.082}_{-0.074}$
Alt.	0 ± 21	$7.07^{+1.31}_{-1.41}$	6234^{+352}_{-539}	-5049^{+566}_{-378}	$0.008^{+0.099}_{-0.105}$

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

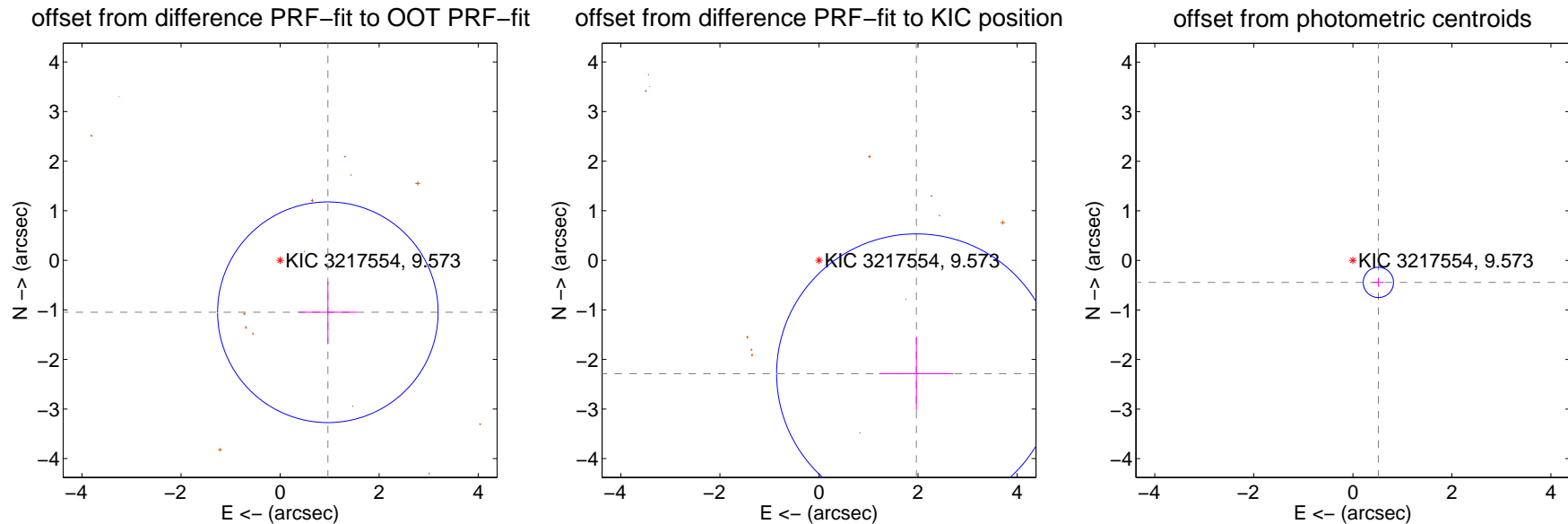
DV Centroid Data

Supplemental centroid analysis for 003217554-02. **Kepler magnitude: 9.57.** Transit SNR 13.59

There are 0 quarters with good PRF difference image offsets

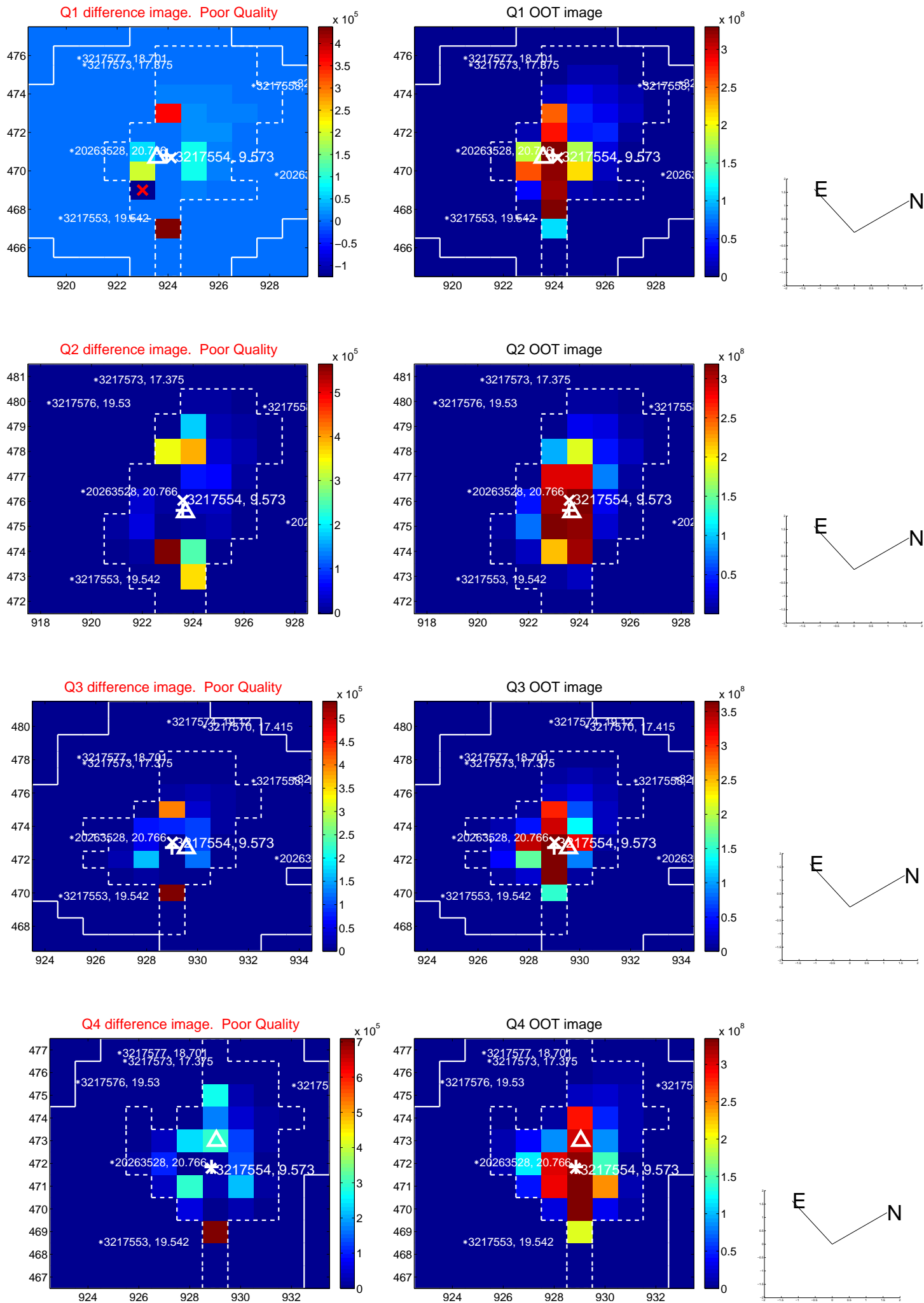
The direct PRF centroid is offset from the target star catalog position by about 0.86 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.424 ± 0.742	1.92	-0.964 ± 0.583	-1.048 ± 0.623
PRF-fit source offset from KIC position	3.016 ± 0.940	3.21	-1.965 ± 0.752	-2.288 ± 0.739
photometric centroid source offset	0.68 ± 0.10	6.68	-0.52 ± 0.11	-0.44 ± 0.09

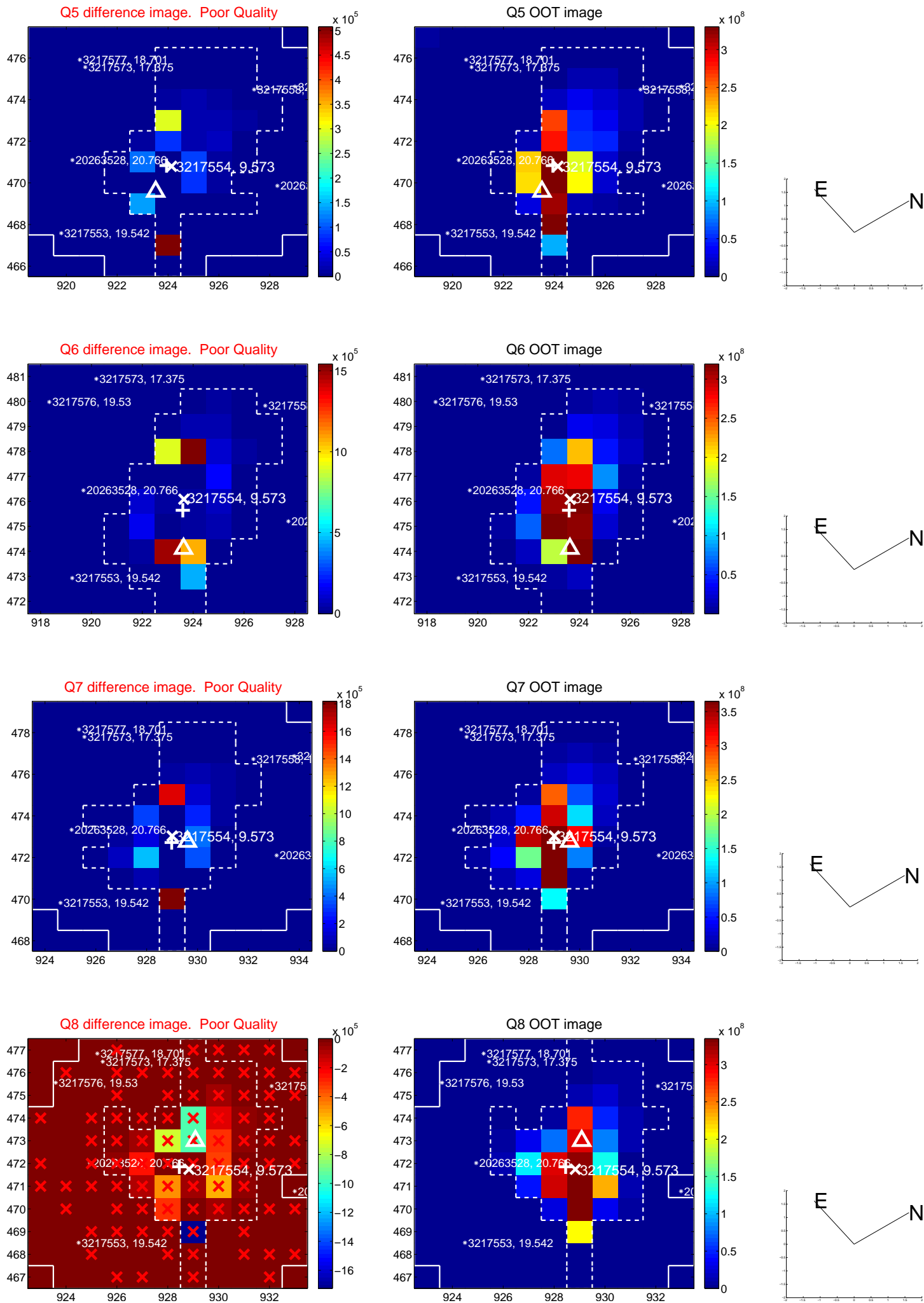


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

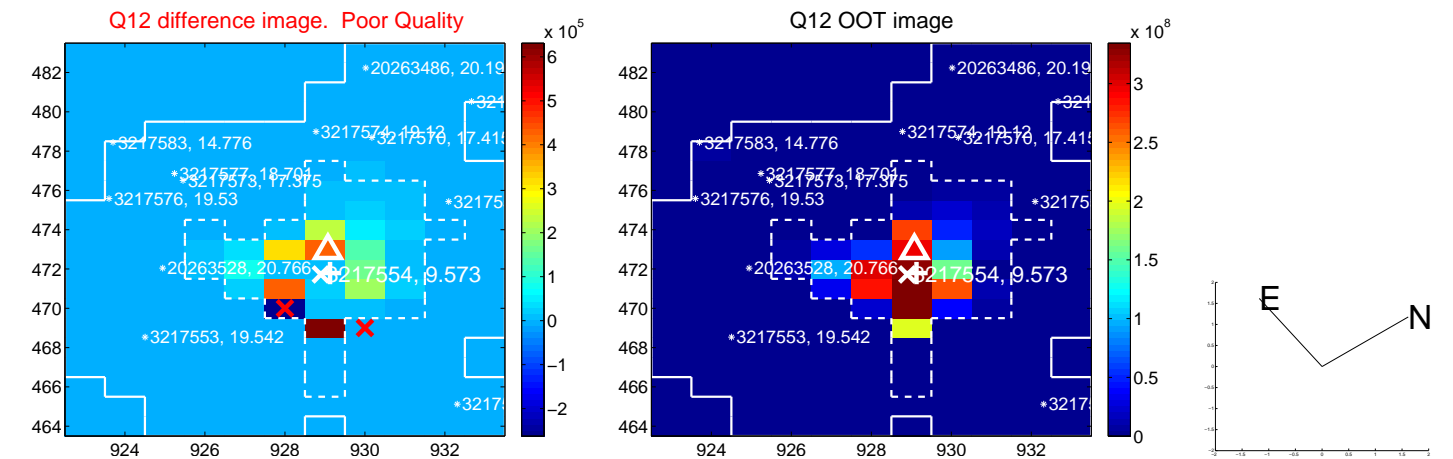
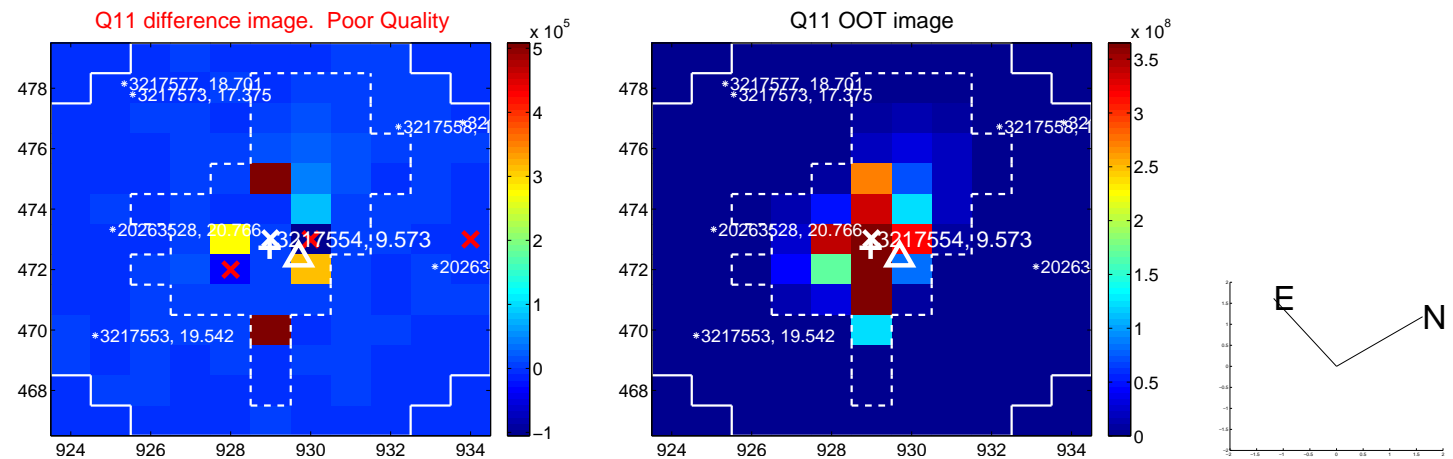
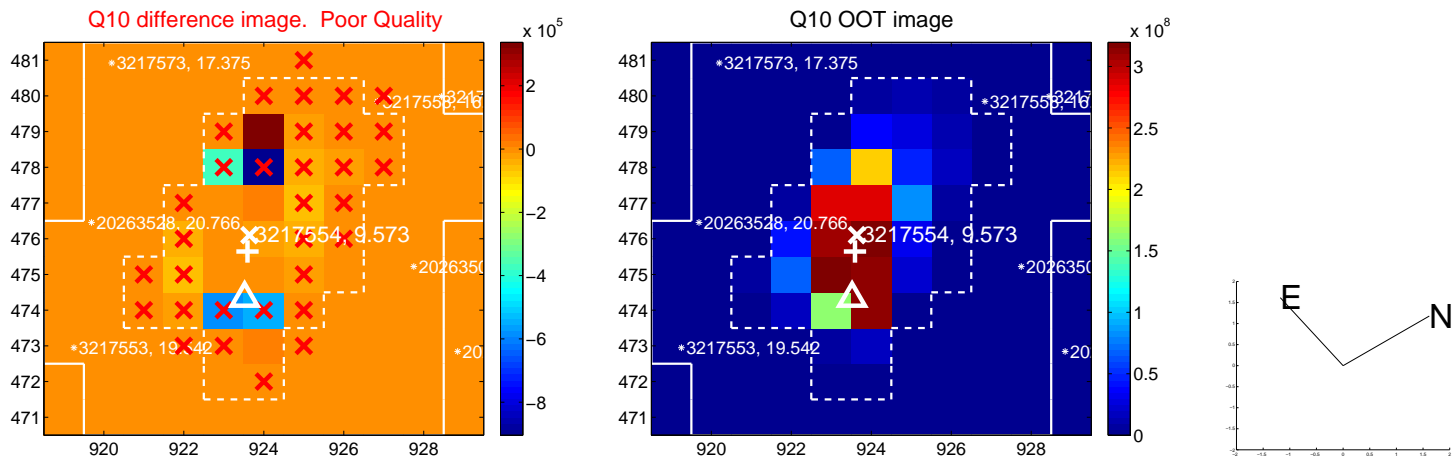
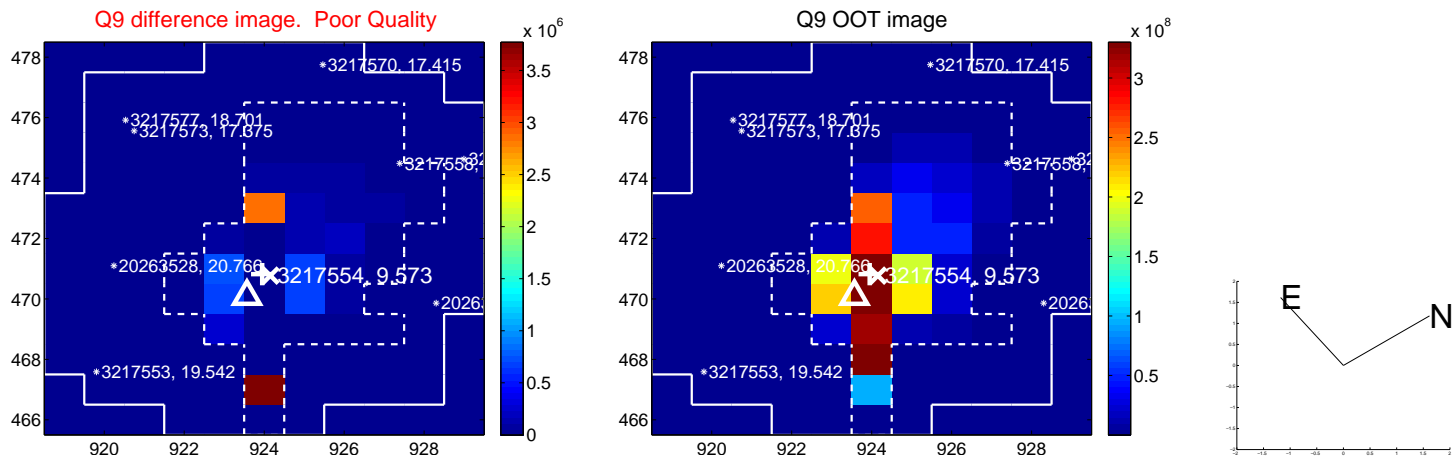
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



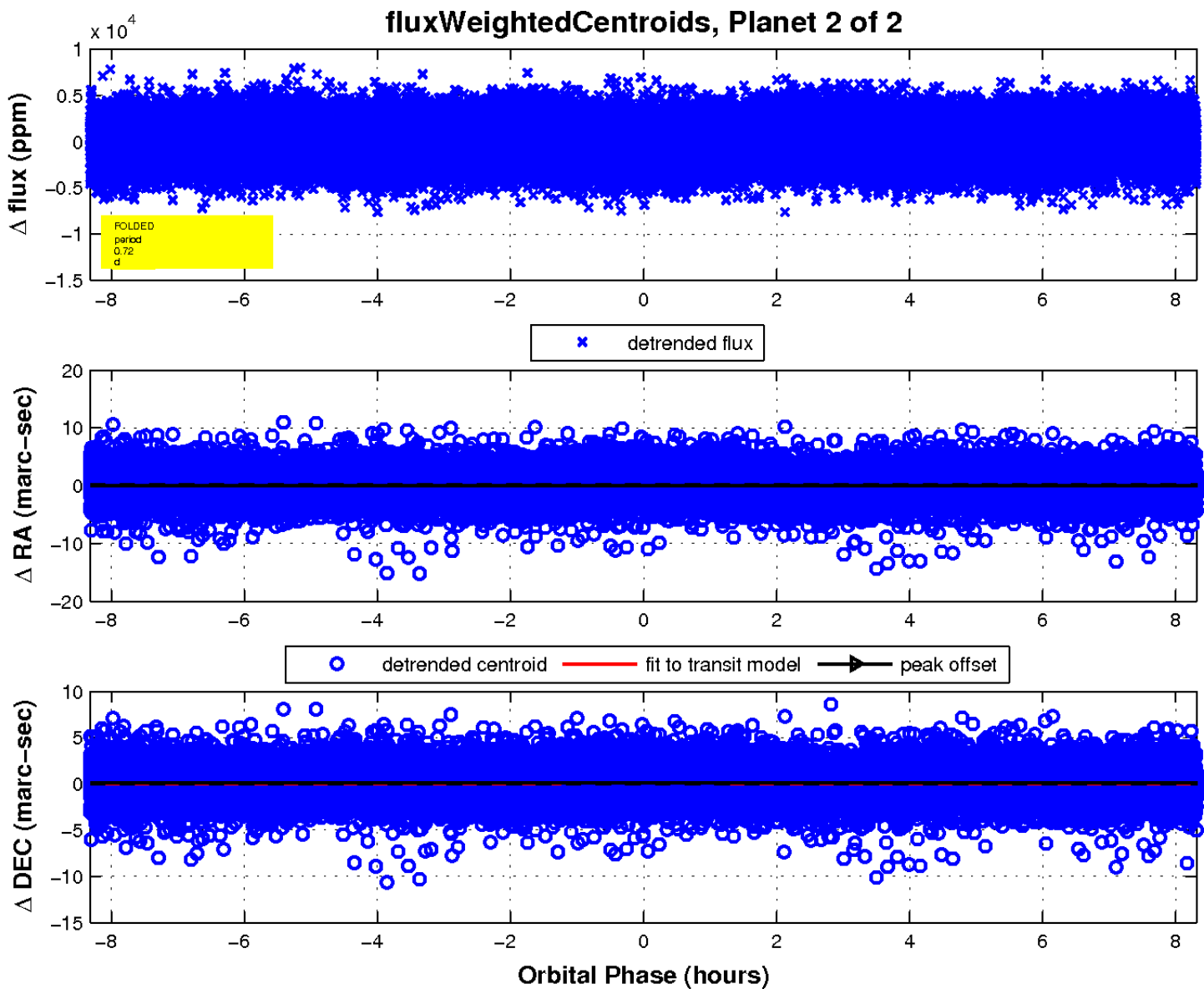
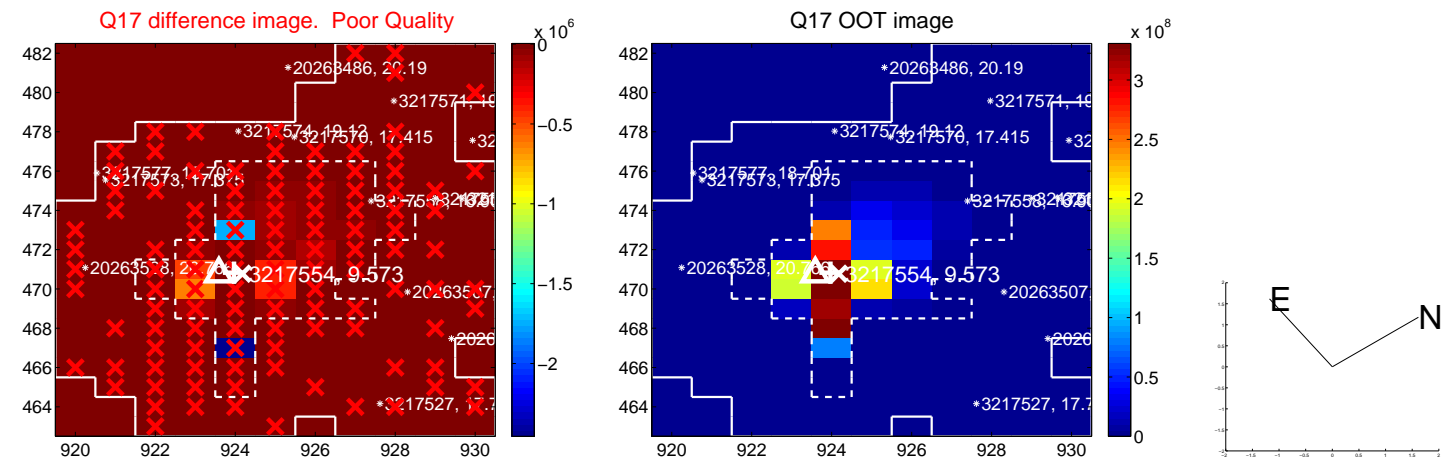
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

