

KIC 007889617

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})
007889617-01	OBS	No	1.901181	132.409613	10.0	3.841	11.2	2.0	1.27	6853	0.41	3025.01
007889617-02	OBS	No	1.898143	132.089945	294.2	4.500	9.3	-1.0	1.27	6853	2.21	3031.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007889617-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
007889617-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS

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

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

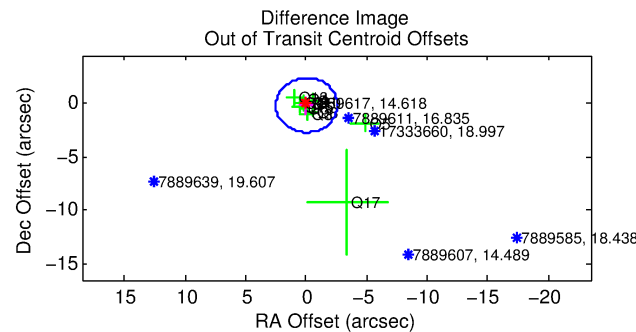
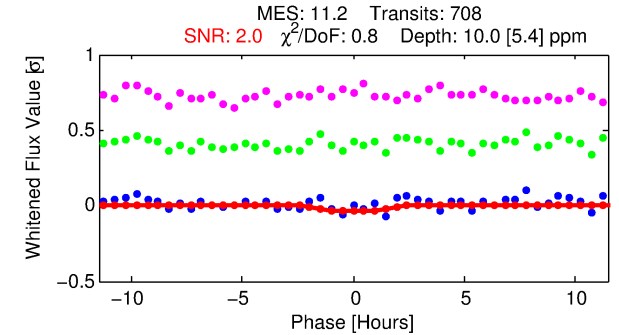
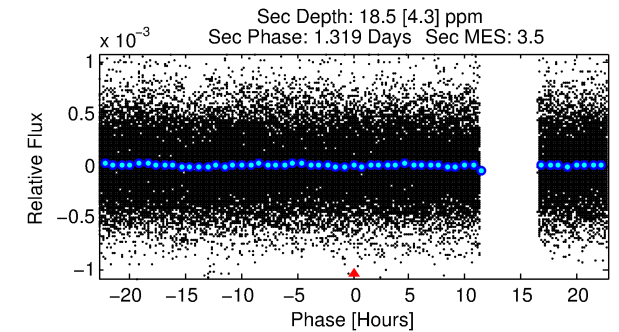
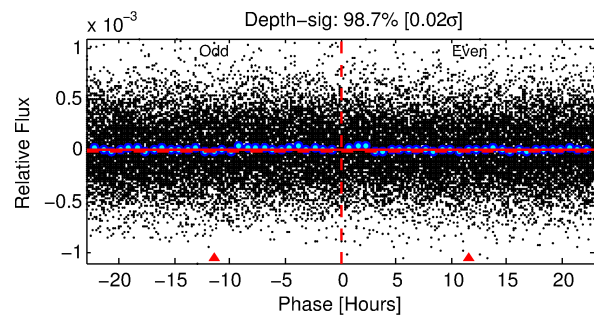
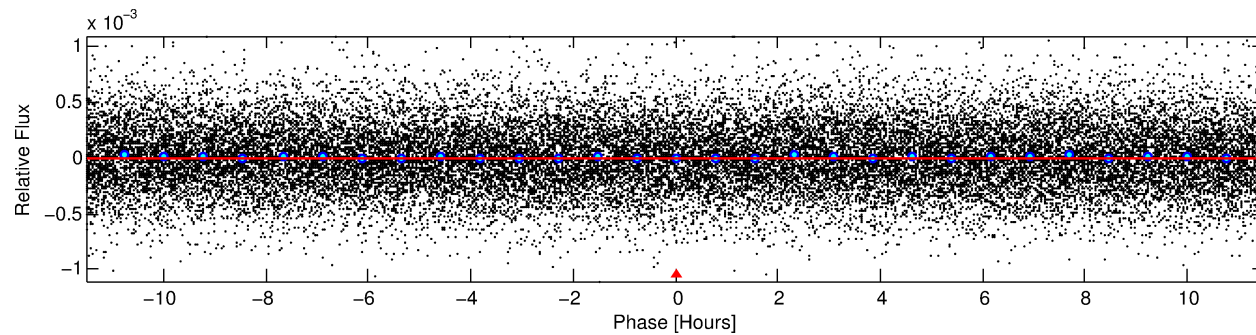
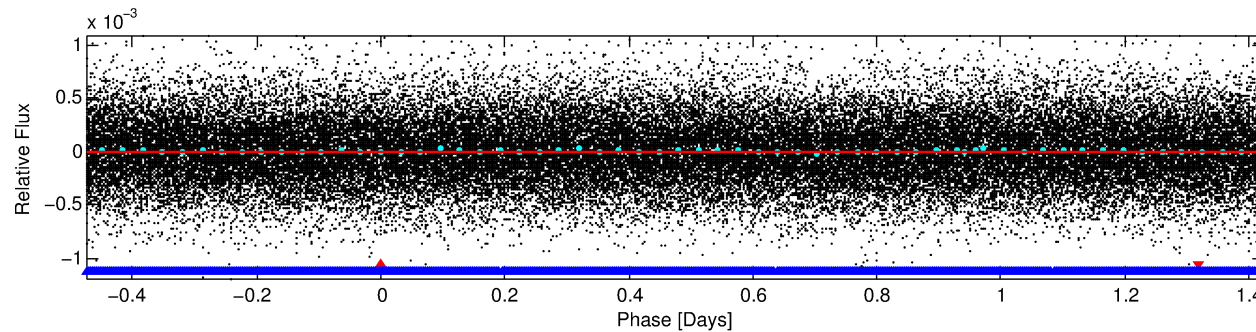
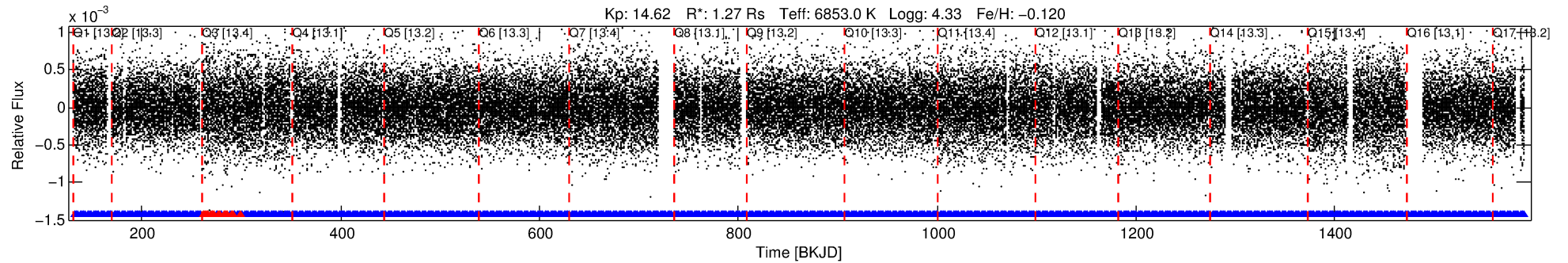
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007889617-01

No Significant Match Found

DV One-Page Summary

KIC: 7889617 Candidate: 1 of 2 Period: 1.901 d



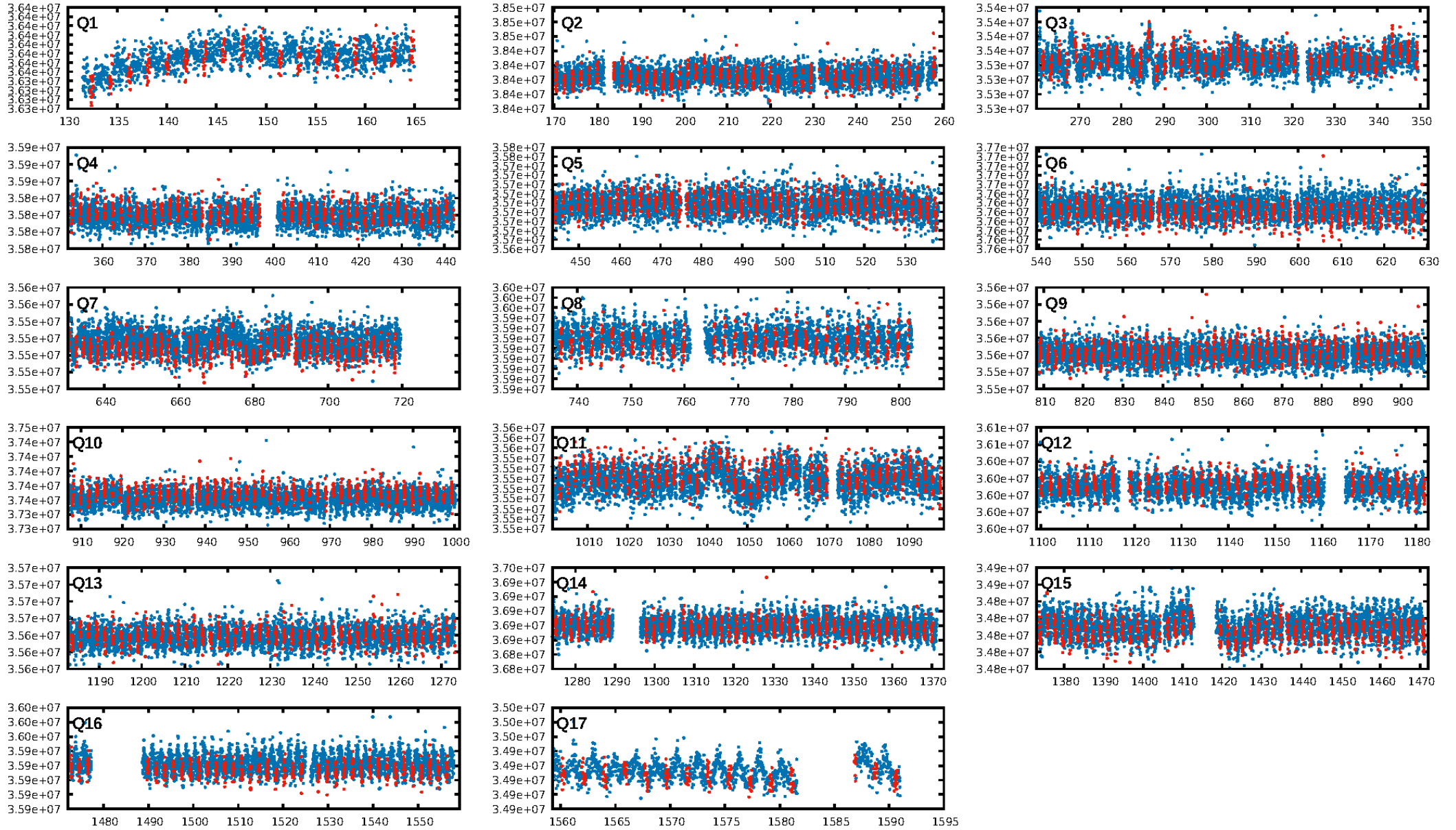
DV Fit Results:

Period = 1.90118 [0.00009] d
Epoch = 132.4096 [0.0232] BKJD
Rp/R* = 0.0029 [0.0041]
a/R* = 3.65 [25.79]
b = 0.32 [21.48]
Seff = 3025.01 [1169.80]
Teff = 1891 [183] K
Rp = 0.41 [0.58] Re
a = 0.0326 [0.0082] AU
Ag = 64.27 [179.97] [0.35σ]
Teffp = 8279 [5757] K [1.11σ]

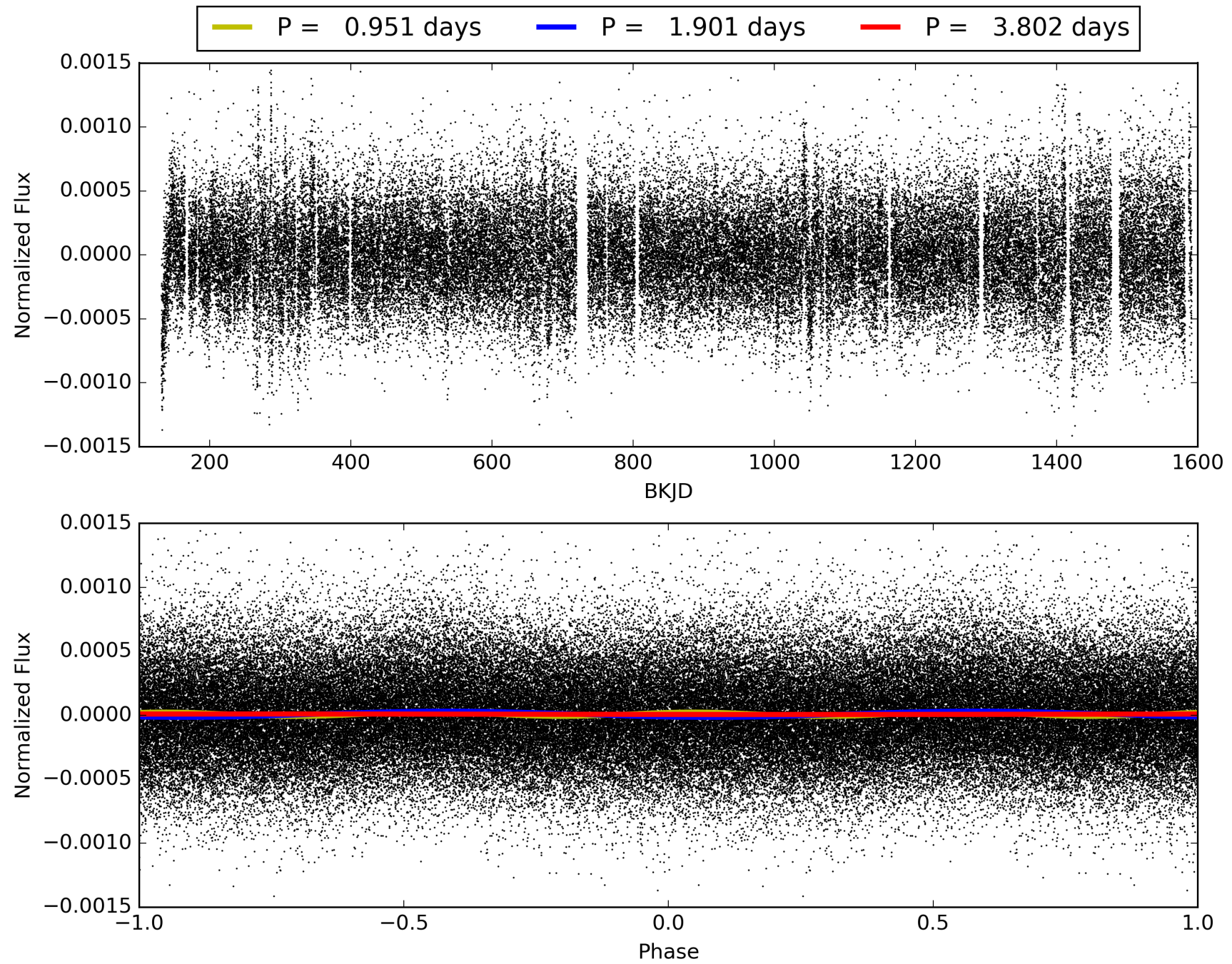
DV Diagnostic Results:

ShortPeriod-sig: 1.0% [0.01σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.57e-26
RollingBand-fgt: 0.98 [660/675]
GhostDiagnostic-chr: 2.273
Centroid-sig: N/A
Centroid-so: 2.428 arcsec [0.43σ]
OotOffset-rm: 0.162 arcsec [0.19σ]
KicOffset-rm: 0.183 arcsec [0.19σ]
OotOffset-st: 2/3/2/4 [11]
KicOffset-st: 2/3/2/4 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 0.29 [5/17]

TCE 007889617-01, PDC Light Curves

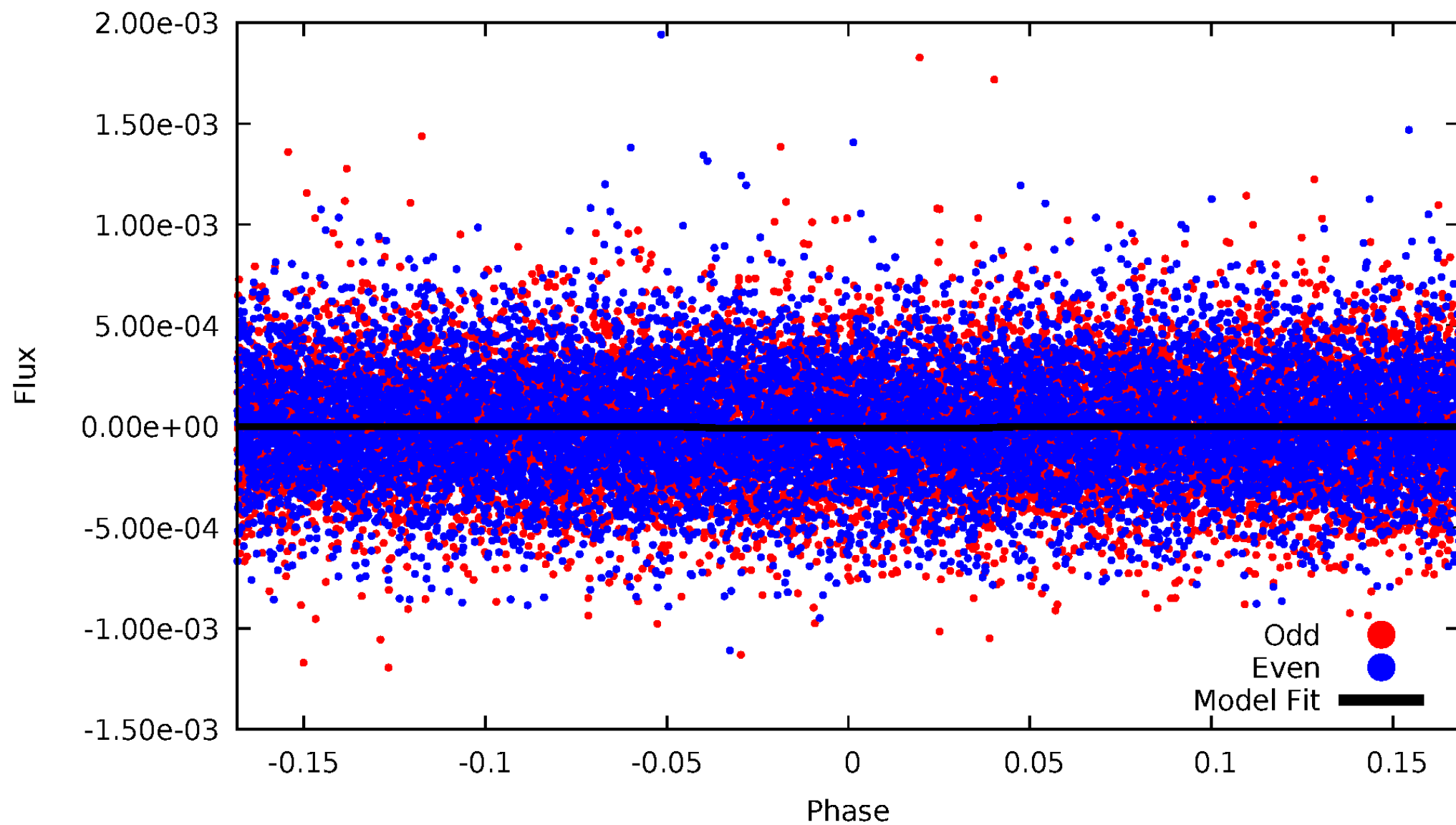


TCE 007889617-01



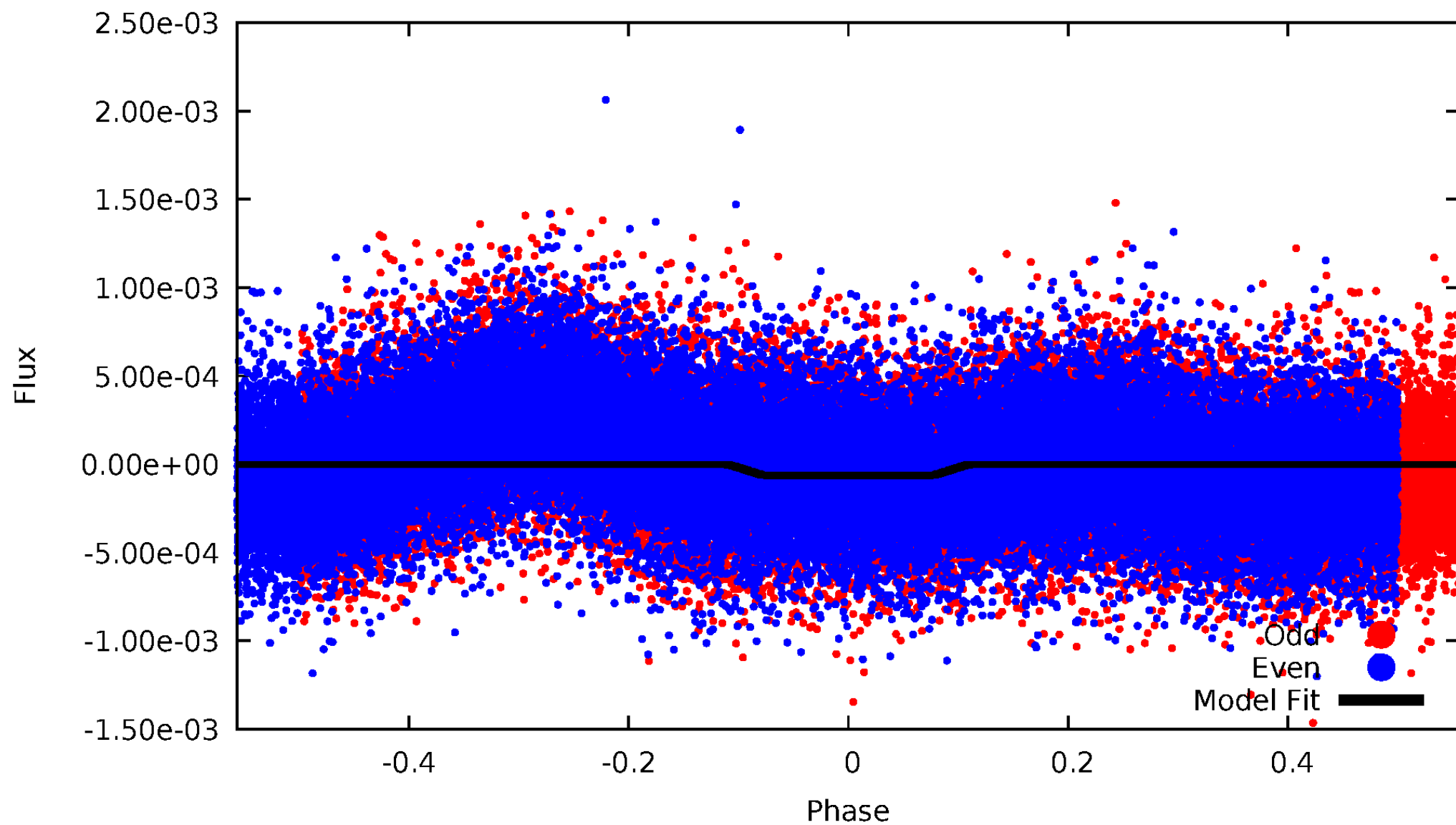
DV Odd/Even

TCE 007889617-01

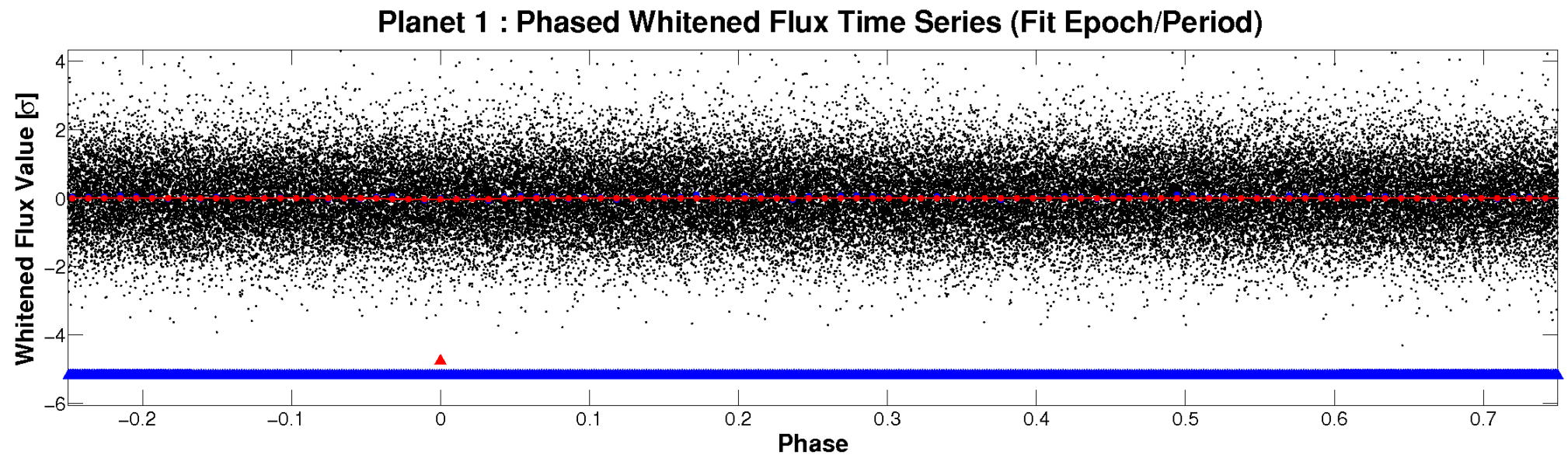
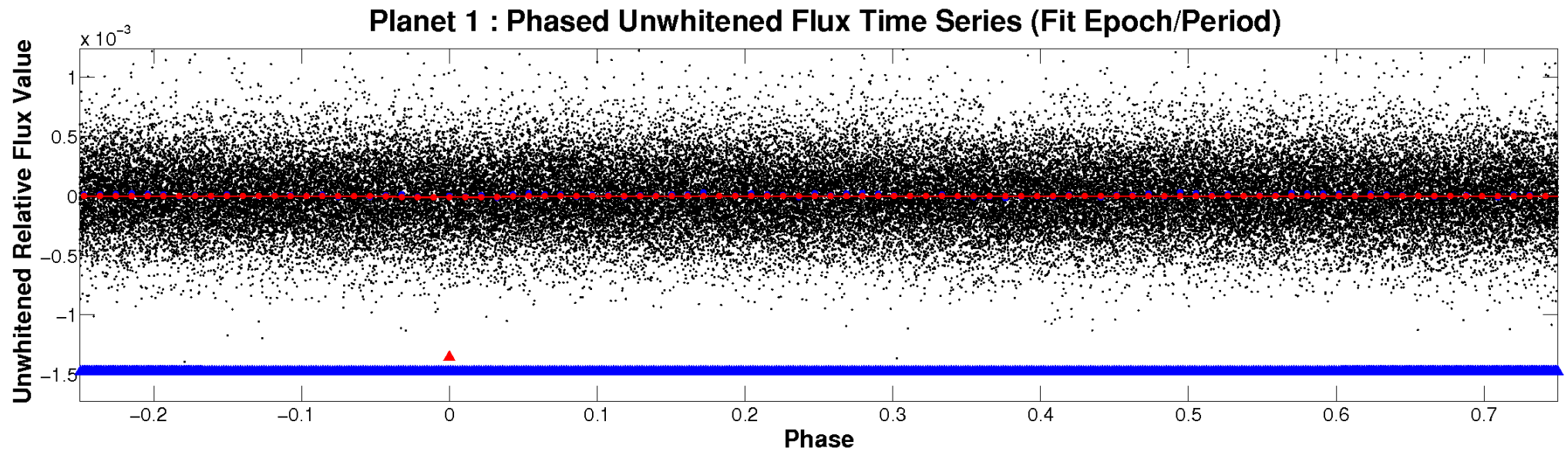


ALT Odd/Even

TCE 007889617-01

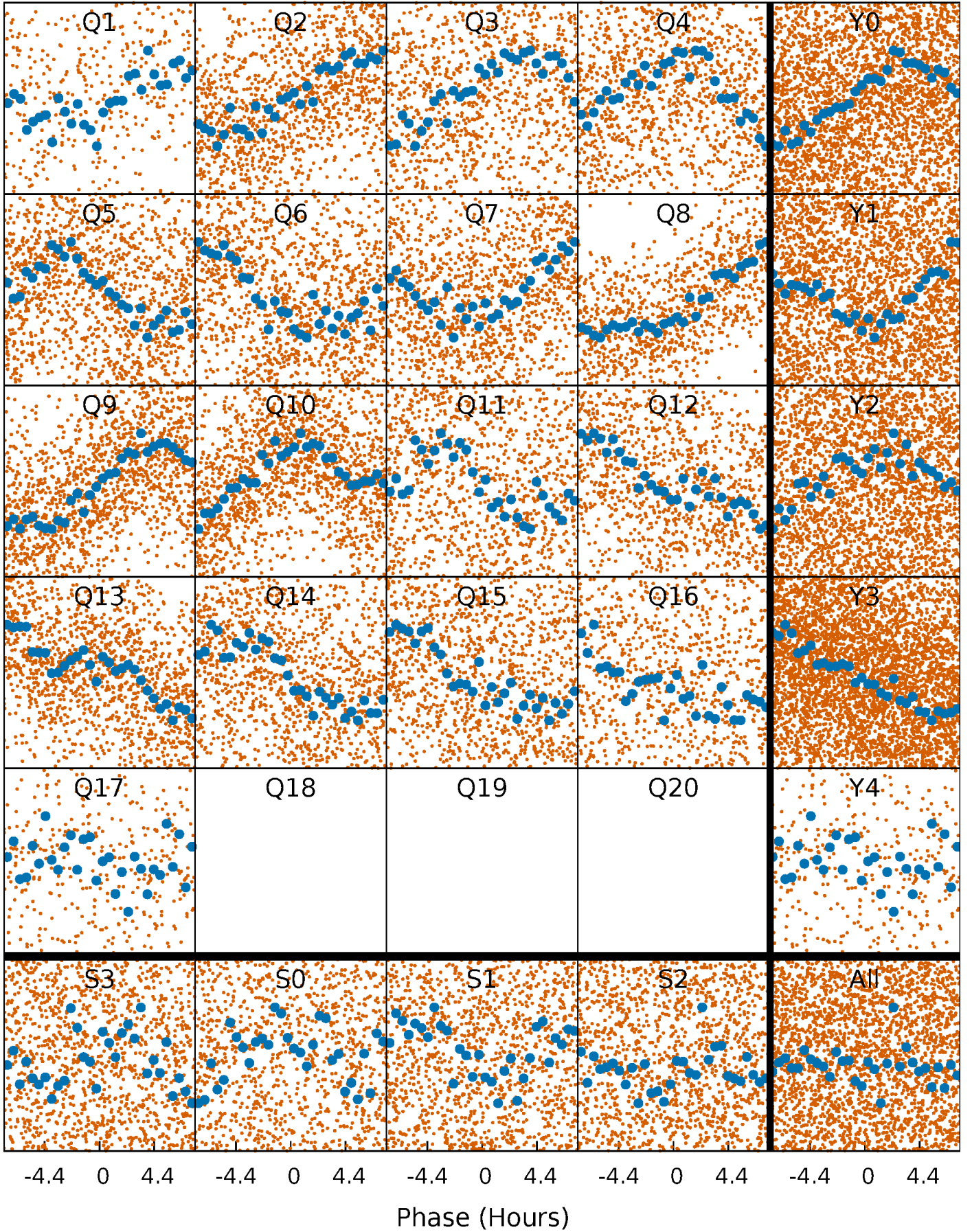


Non-Whitened Vs. Whitened Light Curve



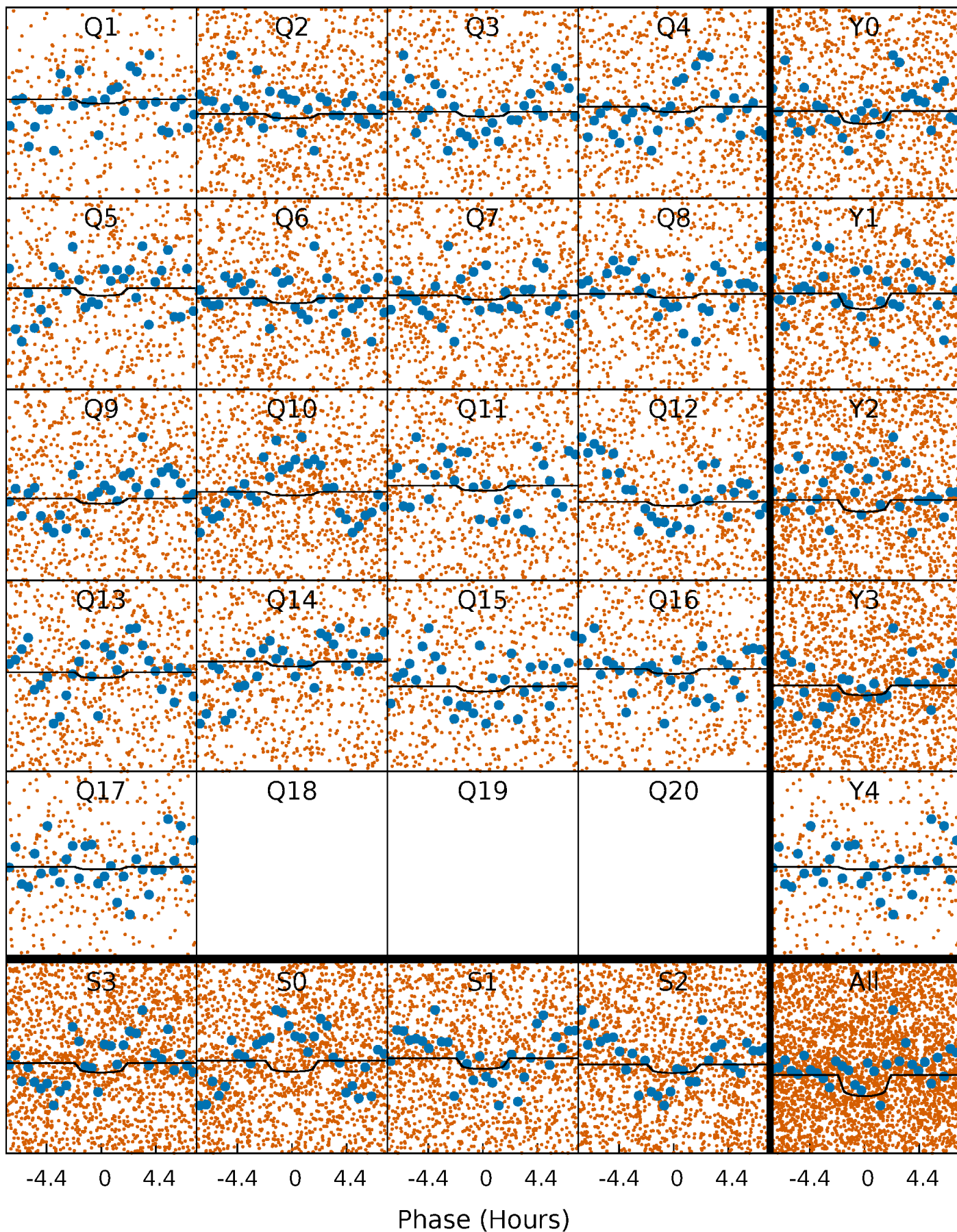
PDC Quarter-Phased Transit Curves

TCE 007889617-01 P= 1.901181 Days $T_0=132.409614$ (BKJD)



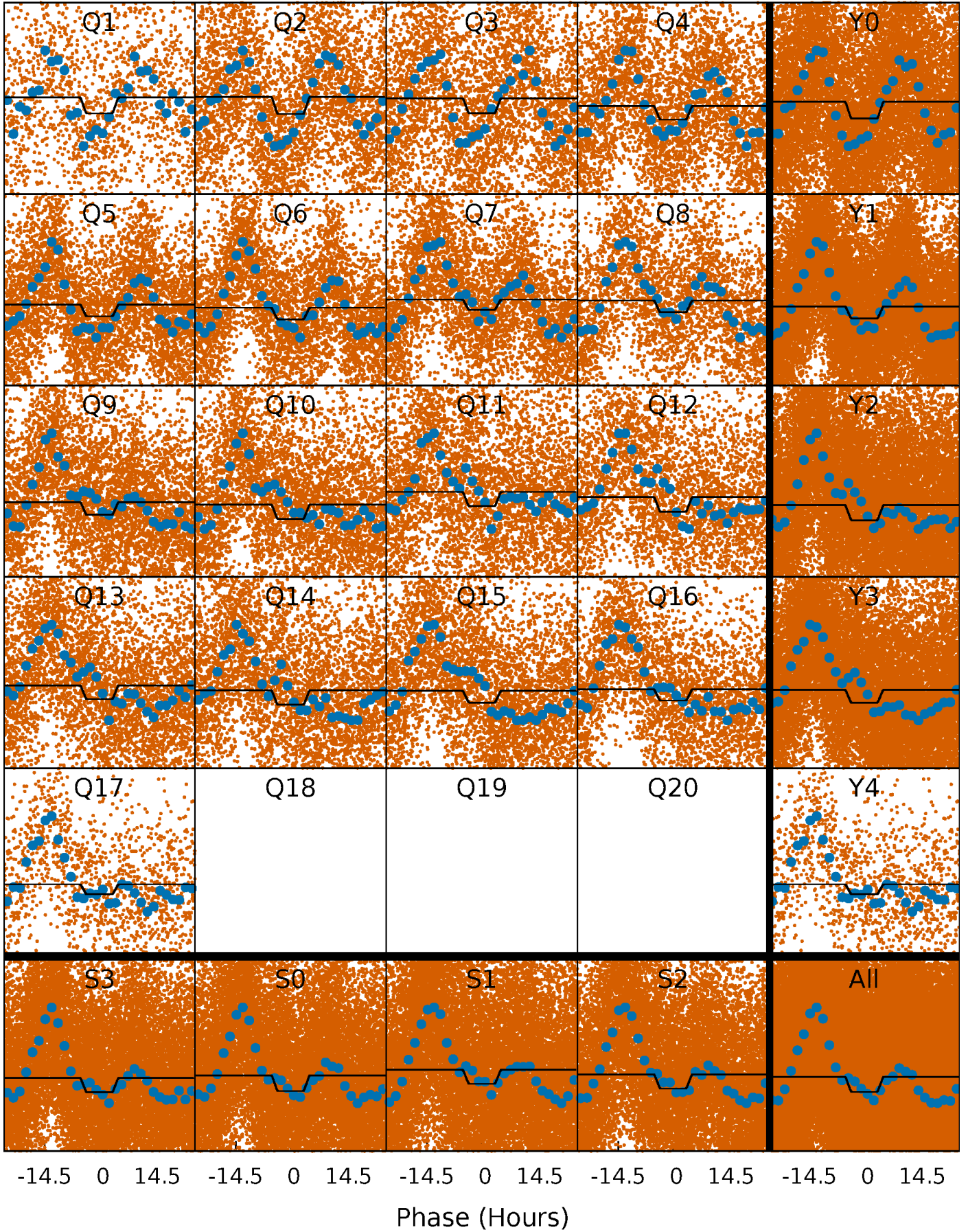
DV Quarter-Phased Transit Curves

TCE 007889617-01 P= 1.901181 Days $T_0=132.409614$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

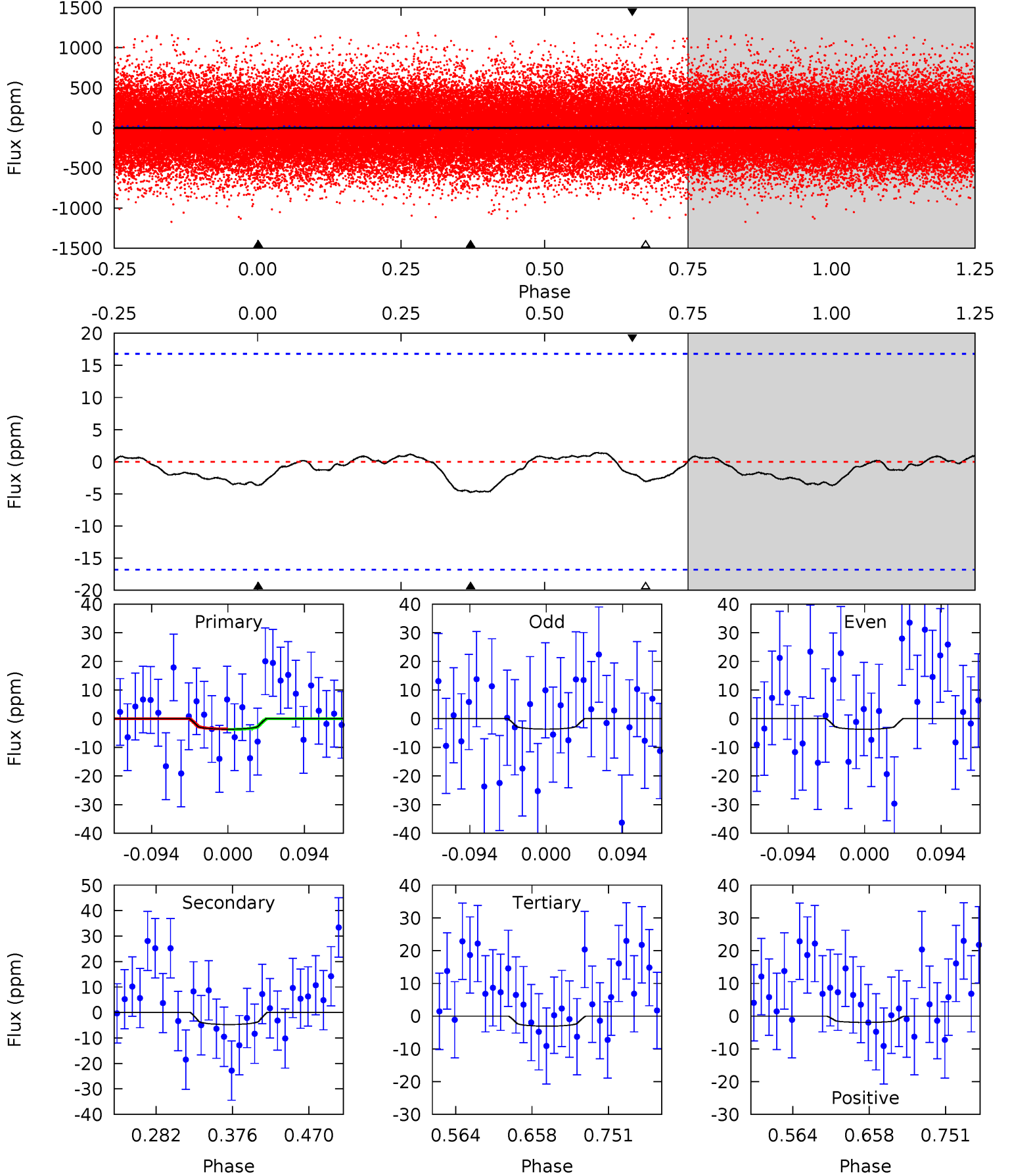
TCE 007889617-01 P= 1.898152 Days $T_0=132.397008$ (BKJD)



DV Model-Shift Uniqueness Test

007889617-01, P = 1.901181 Days, E = 130.508433 Days

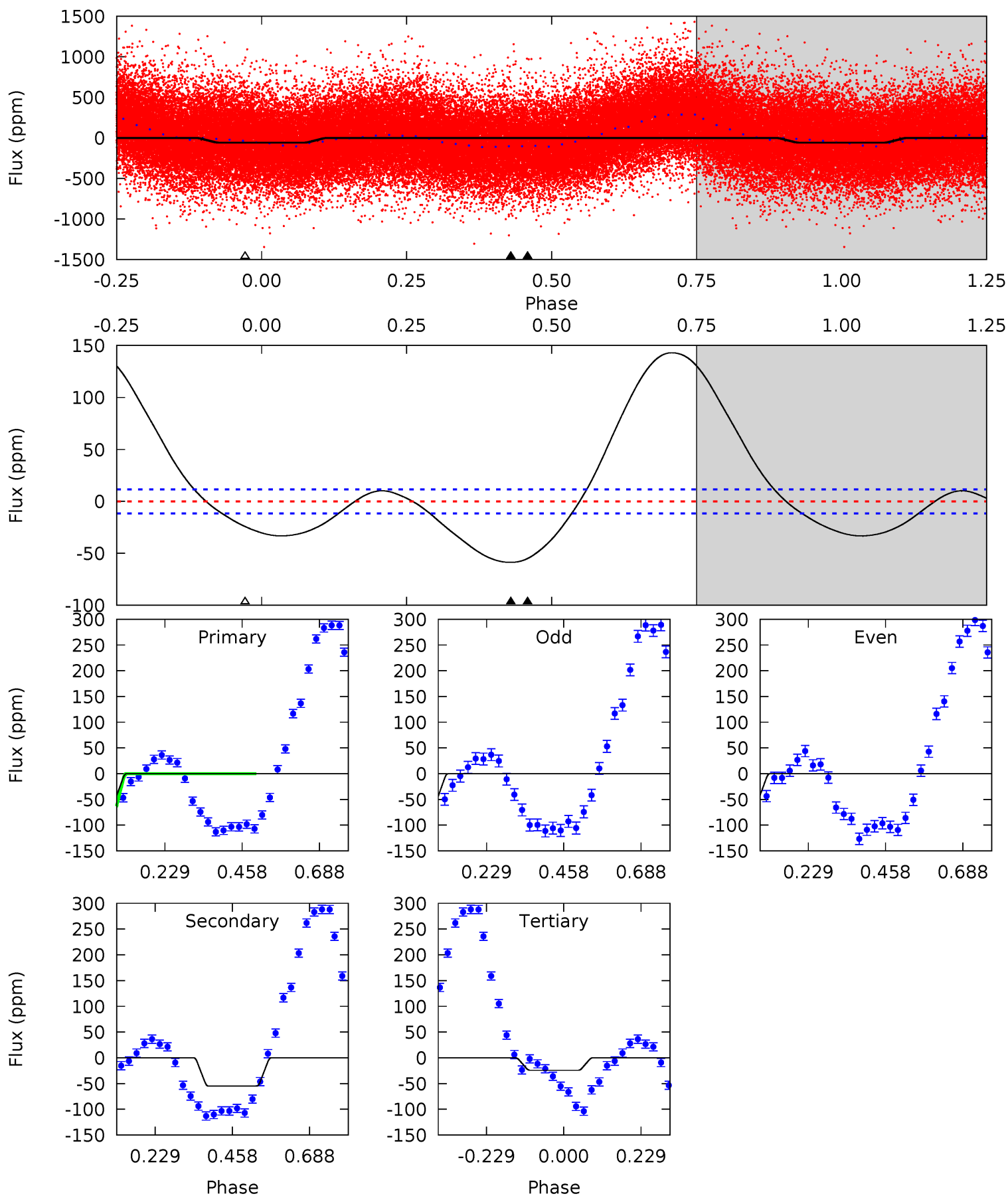
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.00	1.29	0.83	-0.52	4.58	1.68	0.34	0.17	1.52	0.46	1.81	0.01	-0.78	0.23	0.02



Alt Model-Shift Uniqueness Test

007889617-01, P = 1.898152 Days, E = 130.498856 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.4	21.0	9.22	0	4.39	1.20	23.1	13.1	22.4	11.7	21.0	0.36	0.98	0.71	11.3



Stellar Parameters For KIC 007889617

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6853^{+191}_{-262}	$4.333^{+0.062}_{-0.188}$	$-0.120^{+0.250}_{-0.350}$	$1.275^{+0.396}_{-0.170}$	$1.288^{+0.184}_{-0.166}$	$0.875^{+0.243}_{-0.459}$
	+3%/-4%	+1%/-4%	+208%/-292%	+31%/-13%	+14%/-13%	+28%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007889617-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 4	$0.61^{+0.47}_{-0.40}$	2684^{+209}_{-135}	4761^{+3375}_{-1577}	$6.174^{+47.701}_{-5.348}$
Alt.	-55 ± 3	$1.19^{+0.63}_{-0.57}$	2676^{+204}_{-127}	6502^{+2907}_{-1194}	23^{+59}_{-13}

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 $A_{obs} \gg 1.0$

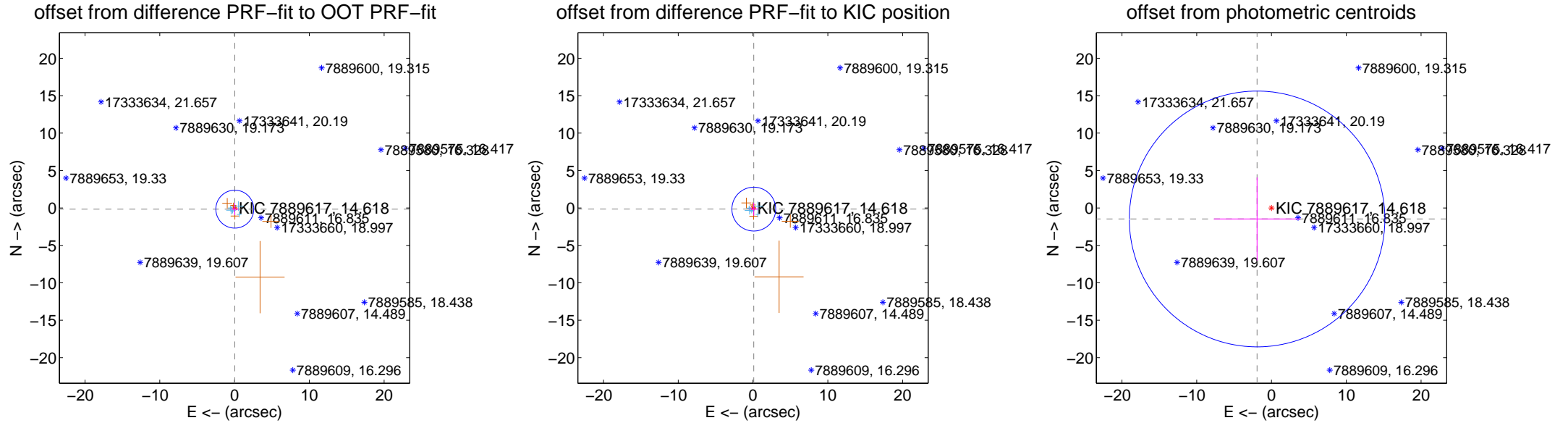
DV Centroid Data

Supplemental centroid analysis for 007889617-01. Kepler magnitude: 14.62. Transit SNR 1.98

There are 5 quarters with good PRF difference image offsets

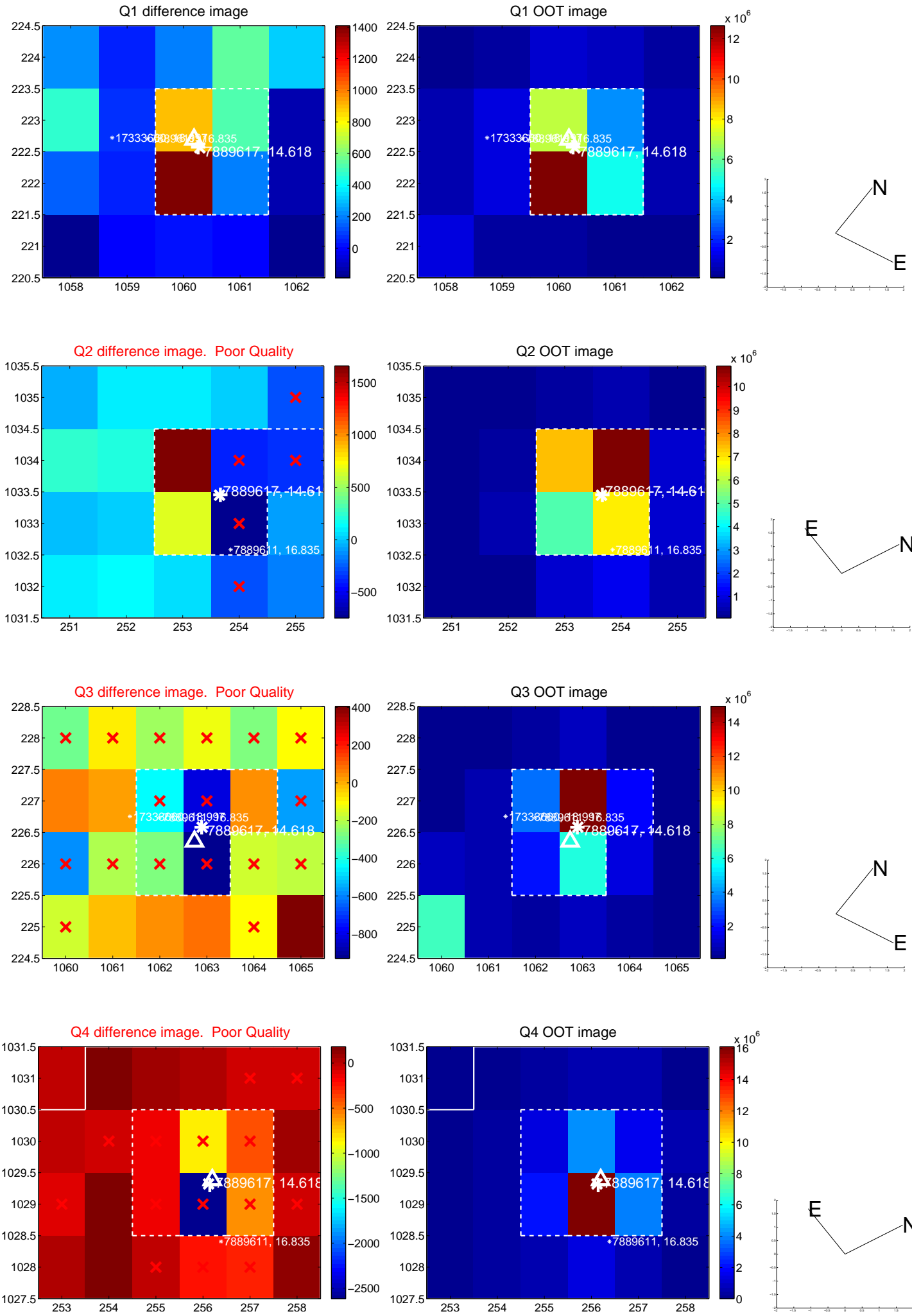
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.162 ± 0.845	0.19	-0.029 ± 0.512	-0.160 ± 0.797
PRF-fit source offset from KIC position	0.183 ± 0.976	0.19	-0.100 ± 0.592	-0.154 ± 0.857
photometric centroid source offset	2.43 ± 5.70	0.43	1.93 ± 5.78	-1.47 ± 5.54

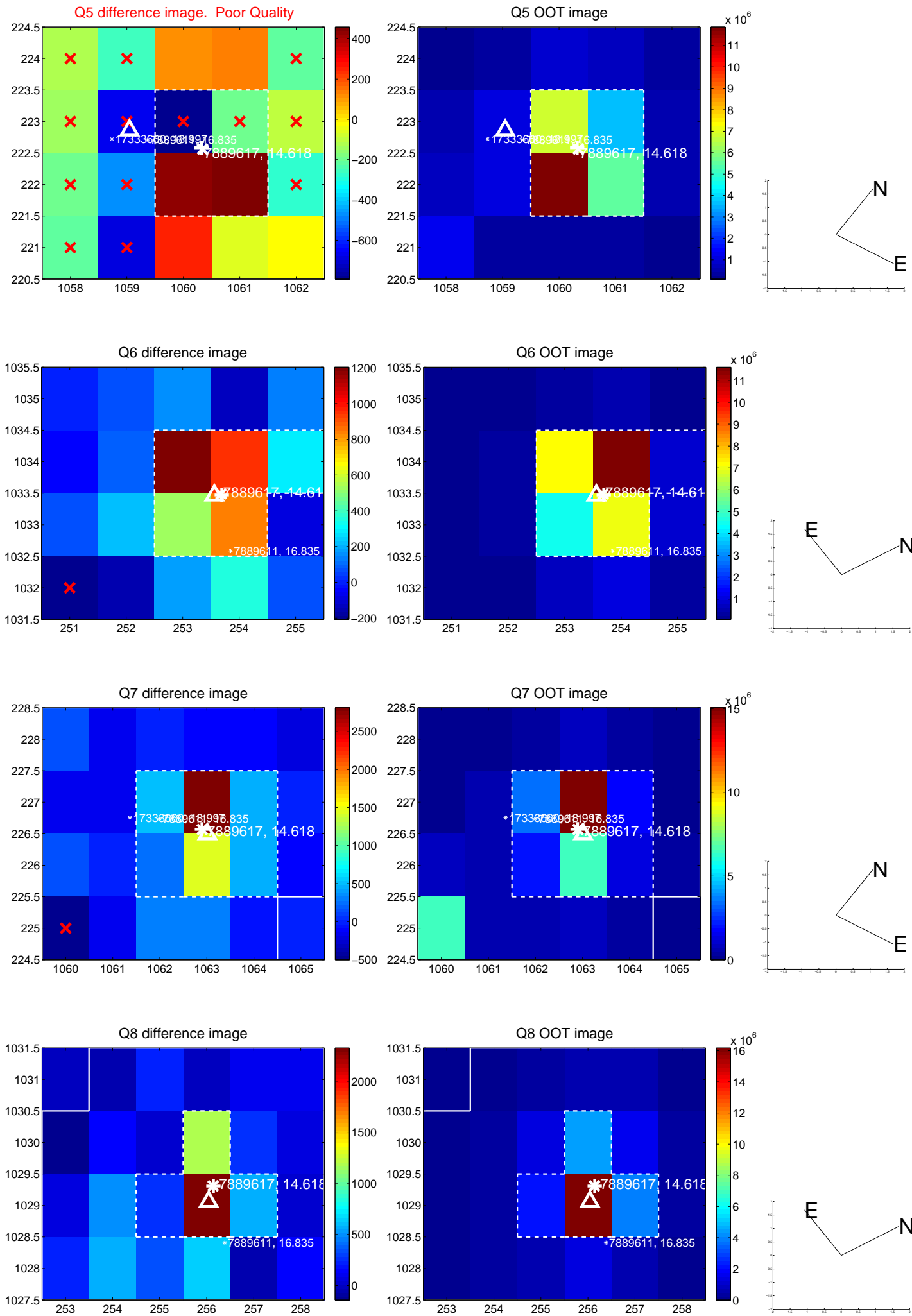


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

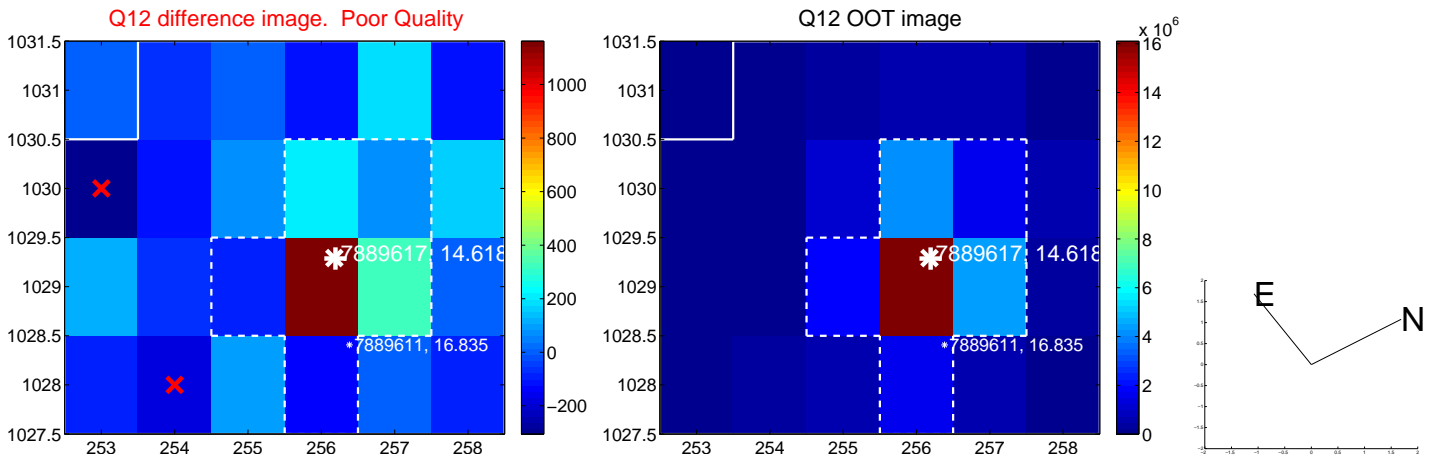
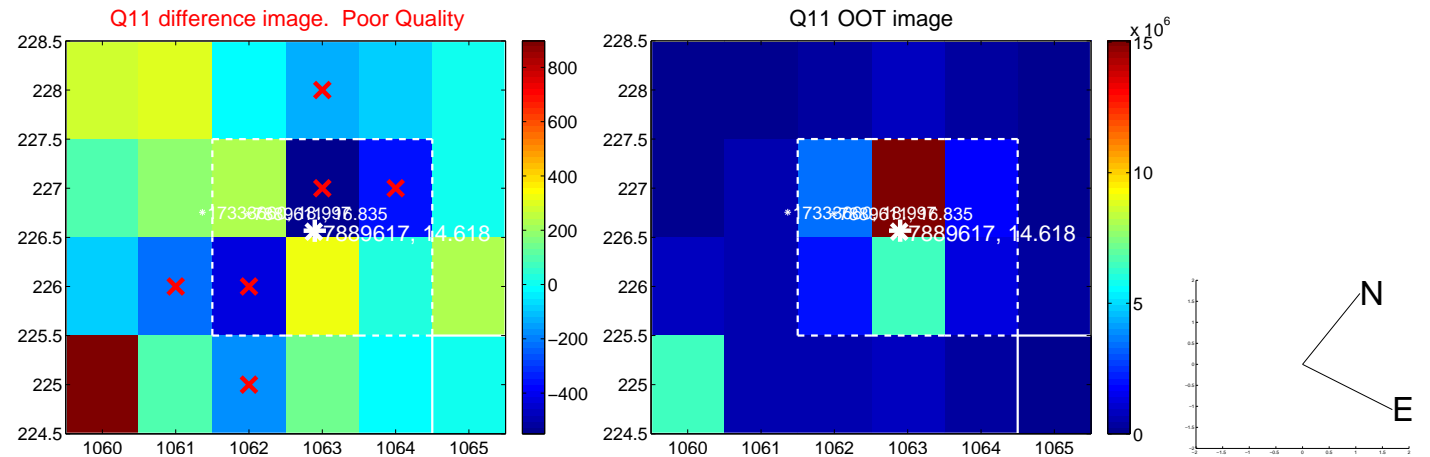
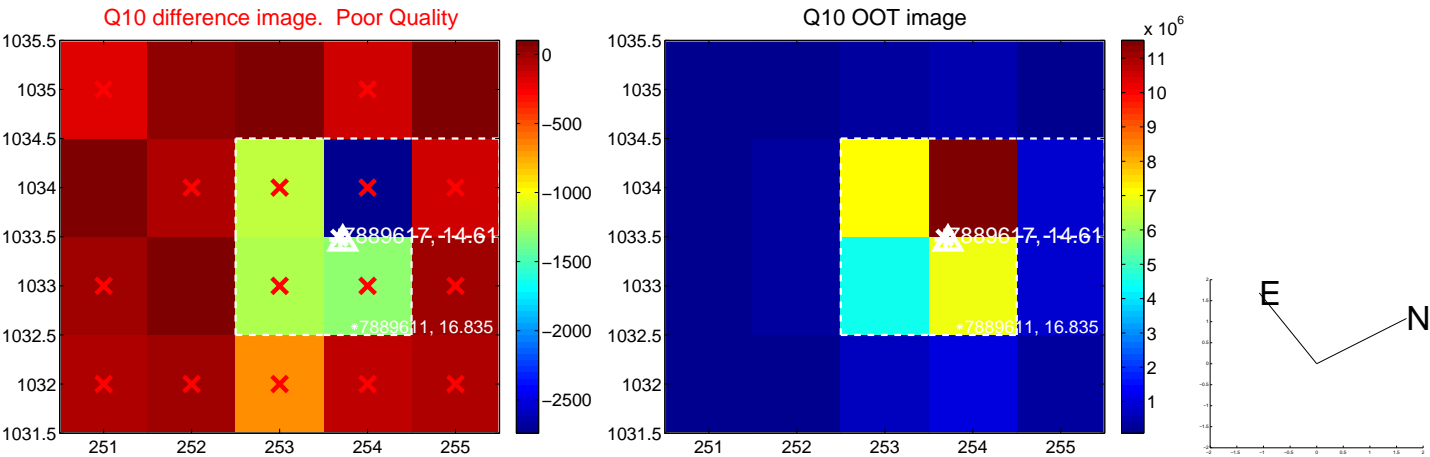
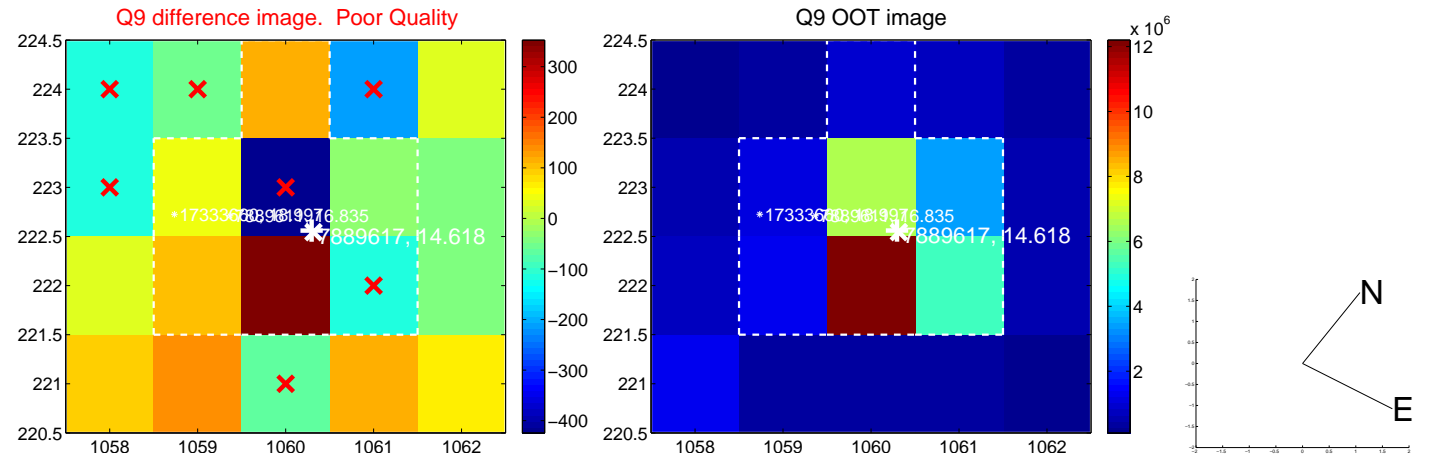
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



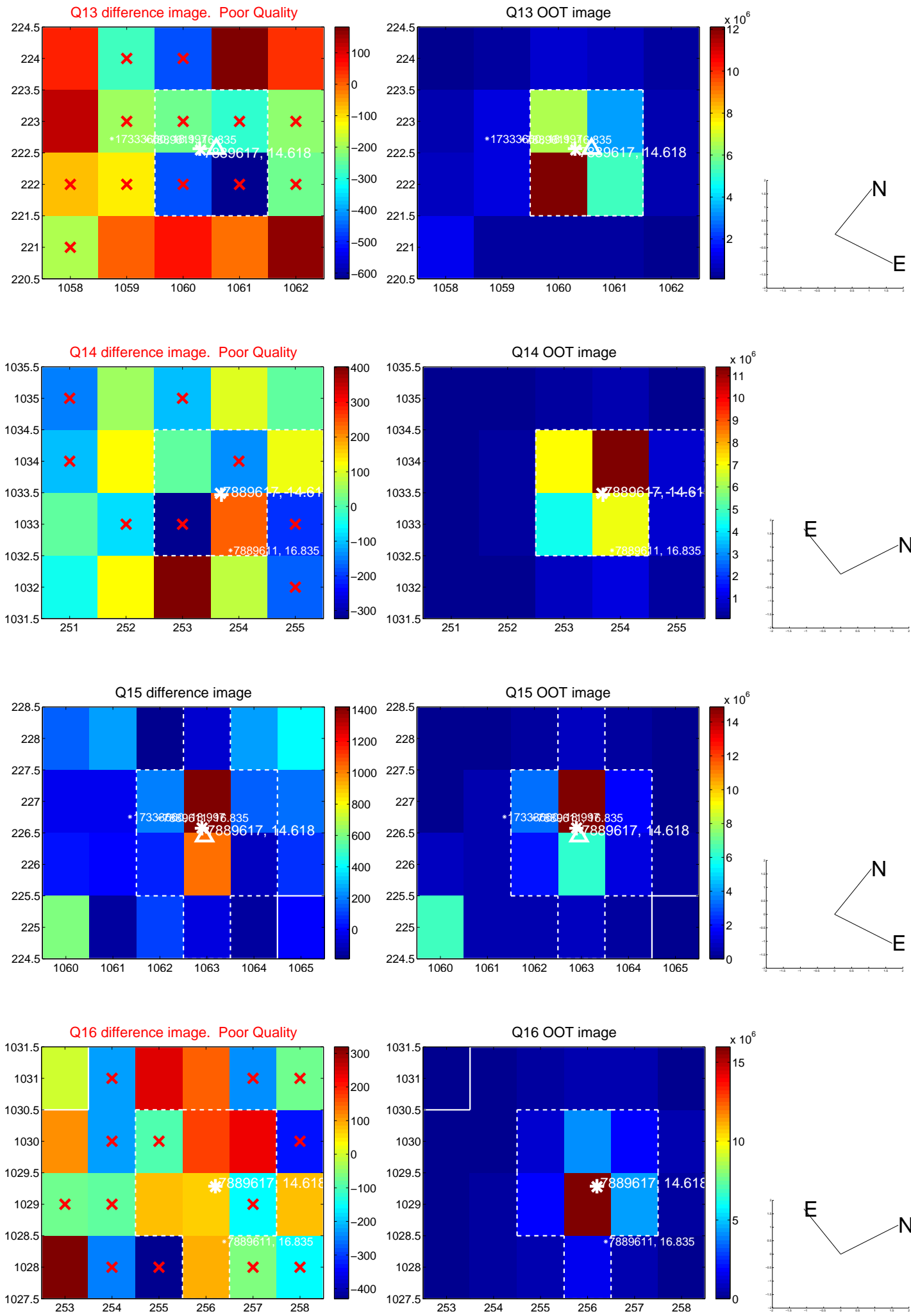
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

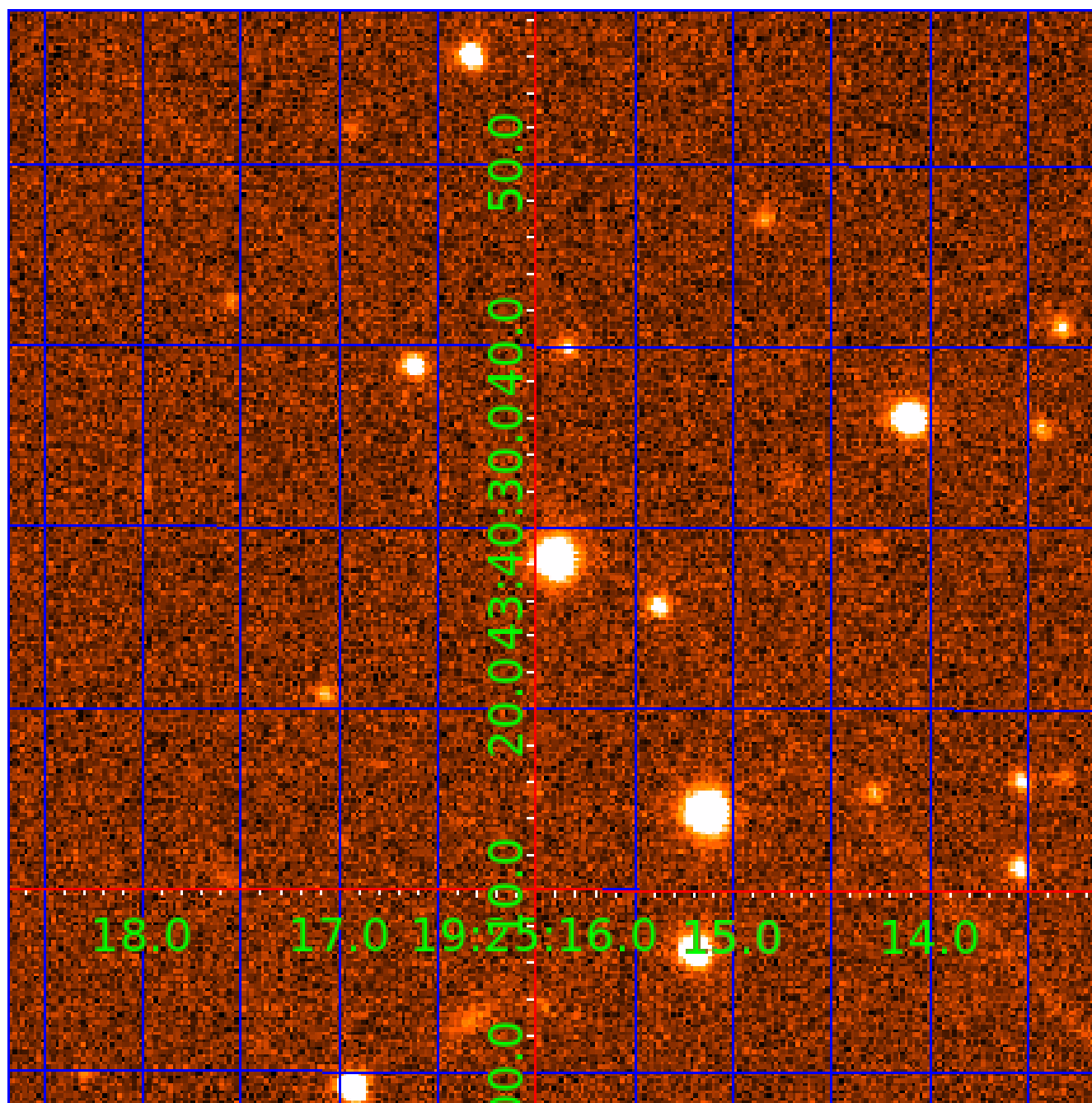


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007889617

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})
007889617-01	OBS	No	1.901181	132.409613	10.0	3.841	11.2	2.0	1.27	6853	0.41	3025.01
007889617-02	OBS	No	1.898143	132.089945	294.2	4.500	9.3	-1.0	1.27	6853	2.21	3031.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007889617-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
007889617-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS

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

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

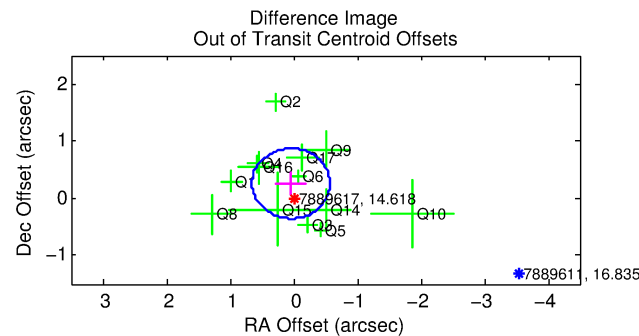
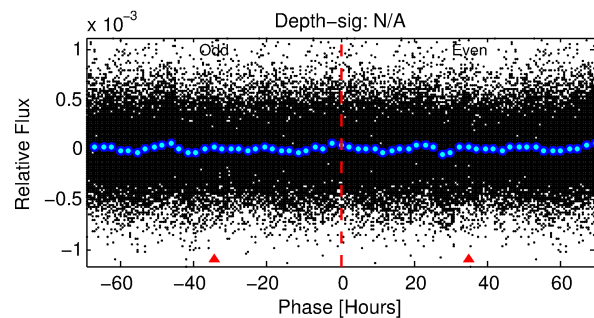
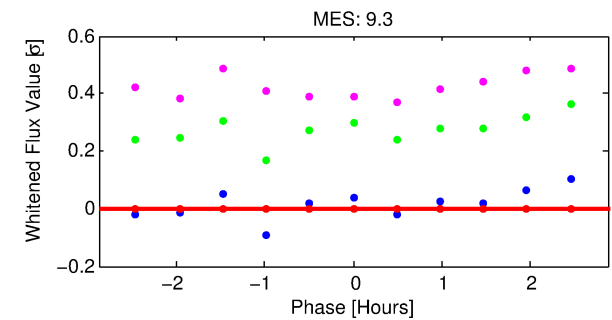
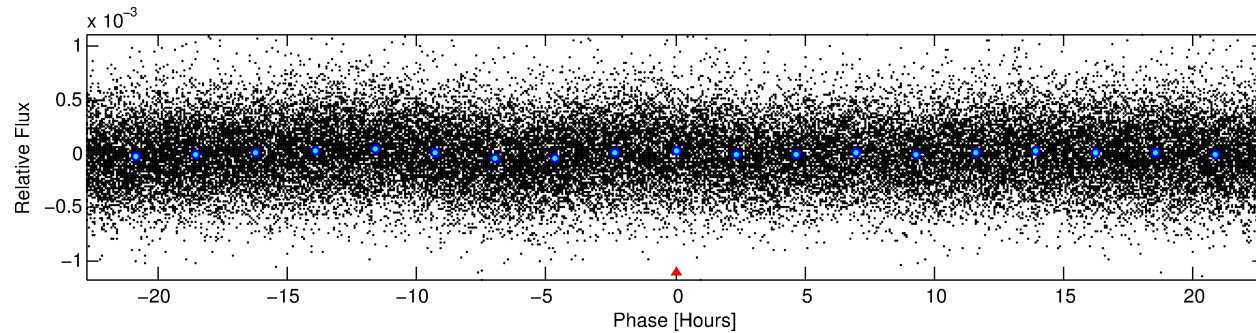
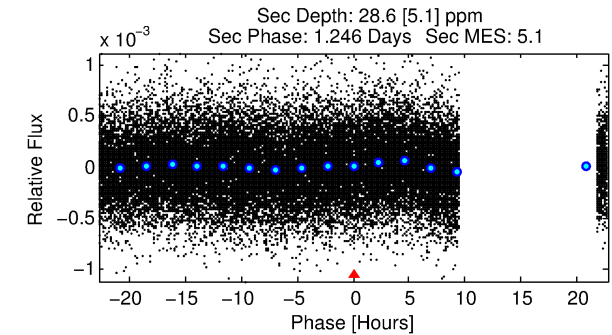
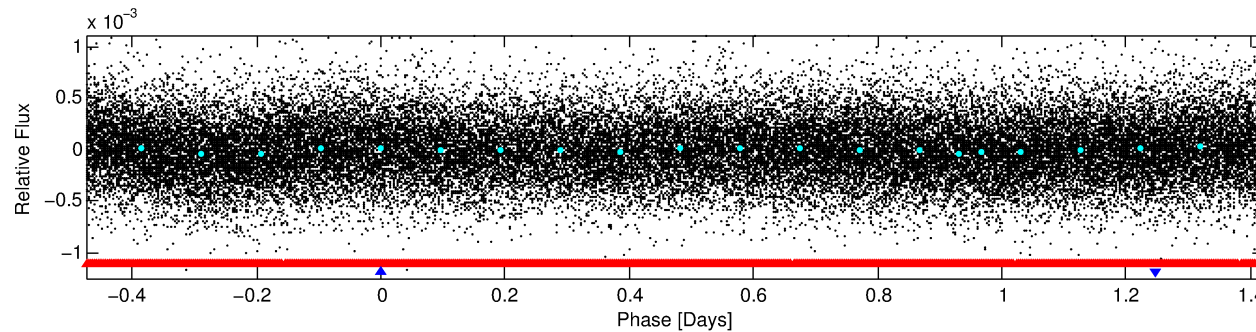
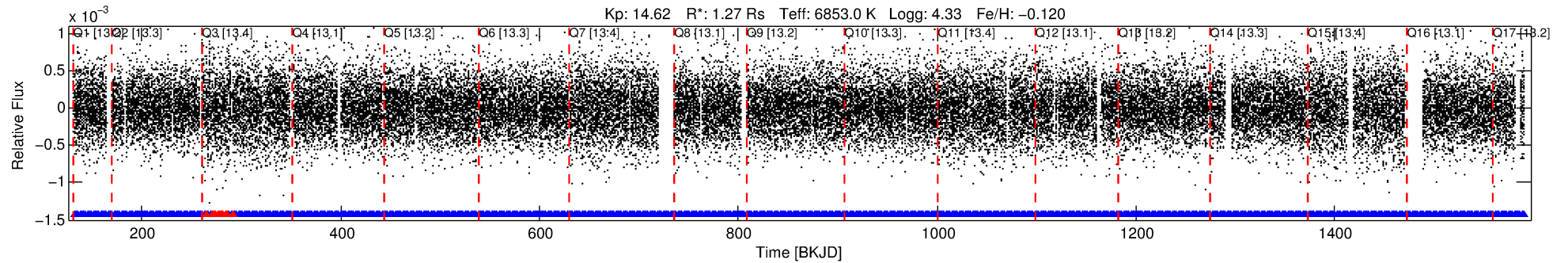
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007889617-02

No Significant Match Found

DV One-Page Summary

KIC: 7889617 Candidate: 2 of 2 Period: 1.898 d



TPS TCE Results:

Period = 1.89814 d
Epoch = 132.0899 BKJD

DV fit results are unavailable

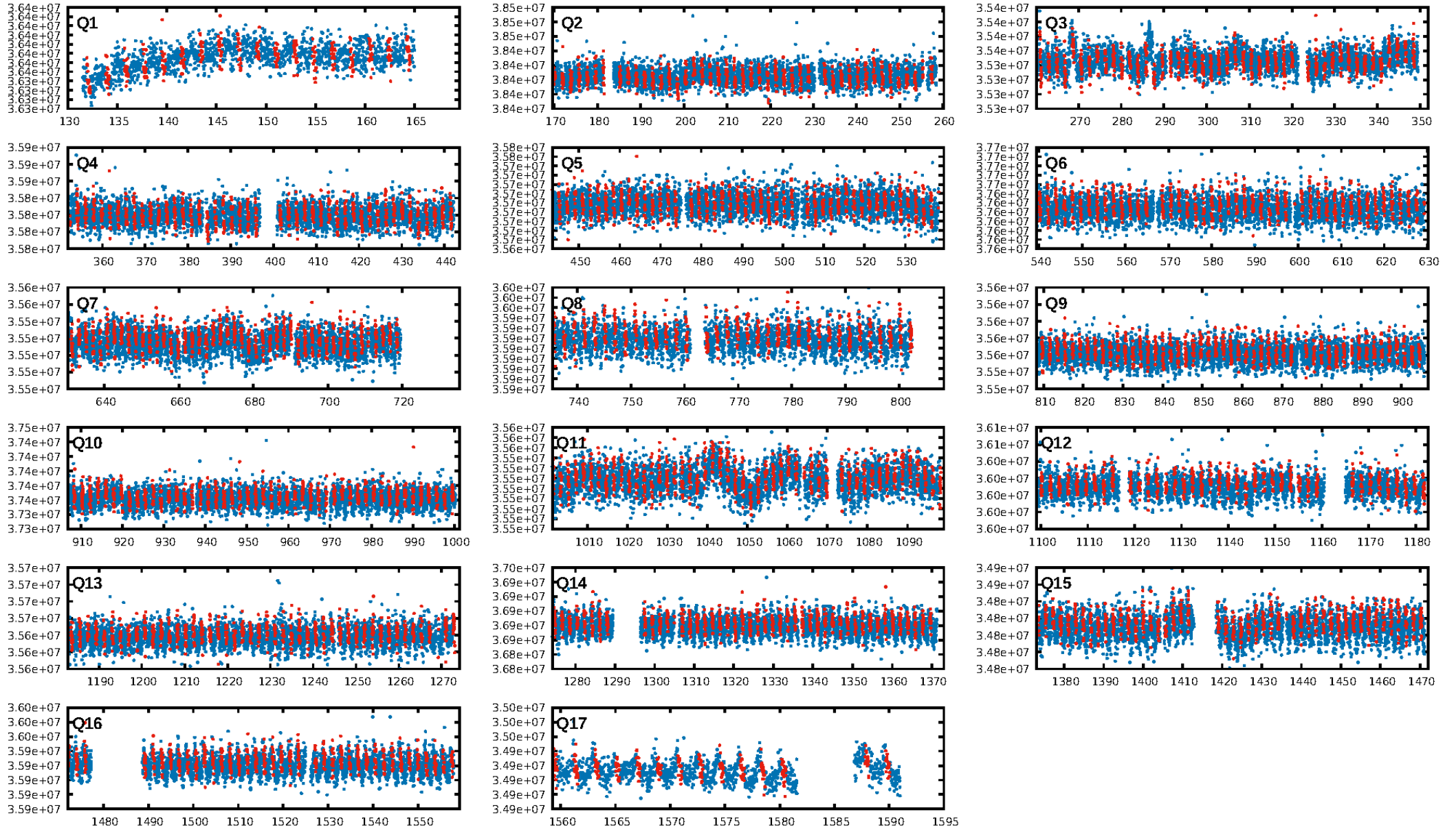
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 1.0% [0.01 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 2.22e-19
RollingBand-fgt: 0.98 [669/680]
GhostDiagnostic-chr: 1.077
Centroid-sig: N/A
Centroid-so: 2.309 arcsec [3.04 σ]
OotOffset-rm: 0.261 arcsec [1.28 σ]
KicOffset-rm: 0.268 arcsec [1.49 σ]
OotOffset-st: 4/2/3/4 [13]
KicOffset-st: 4/2/3/4 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 0.06 [1/17]

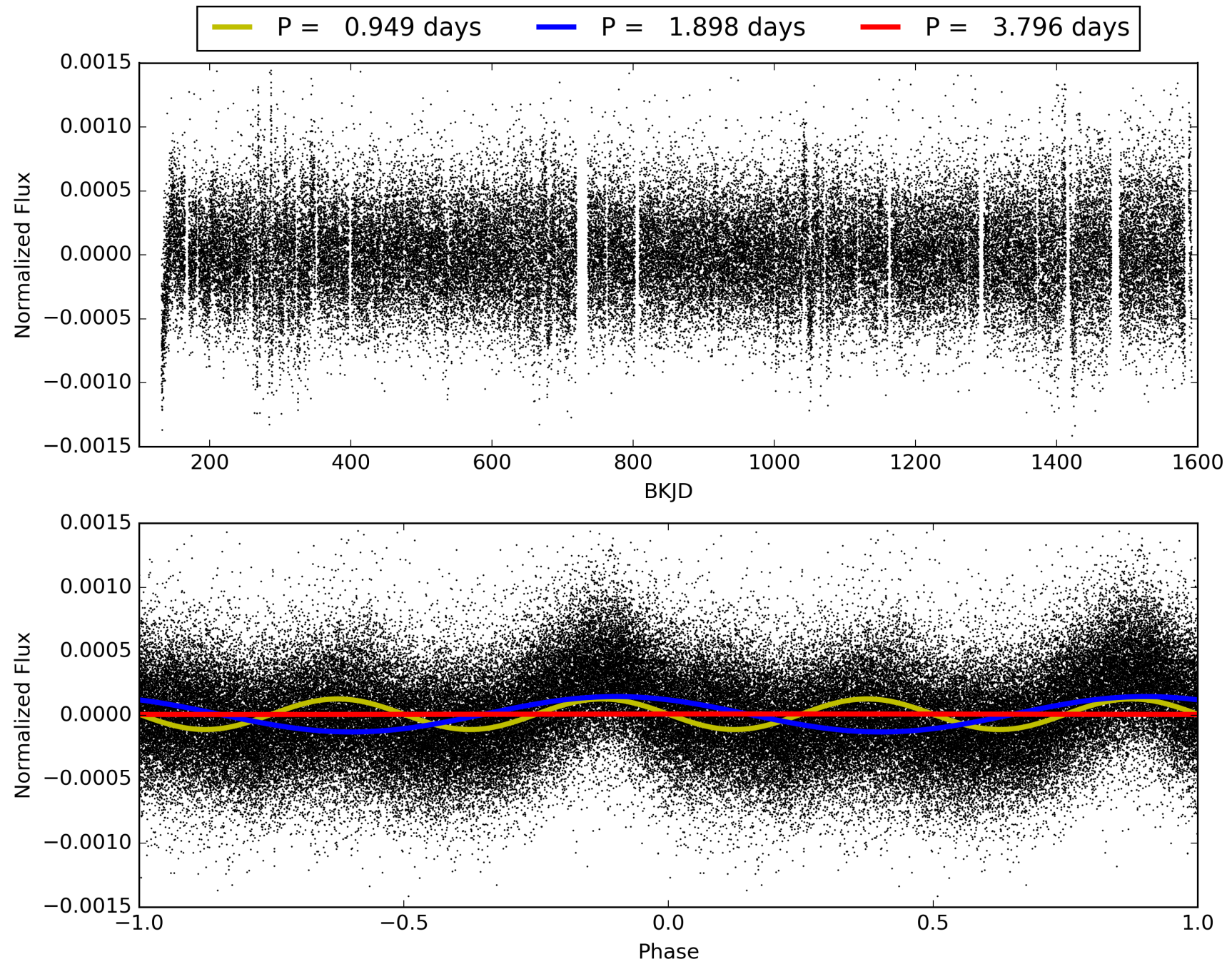
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:37:31 Z

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

TCE 007889617-02, PDC Light Curves

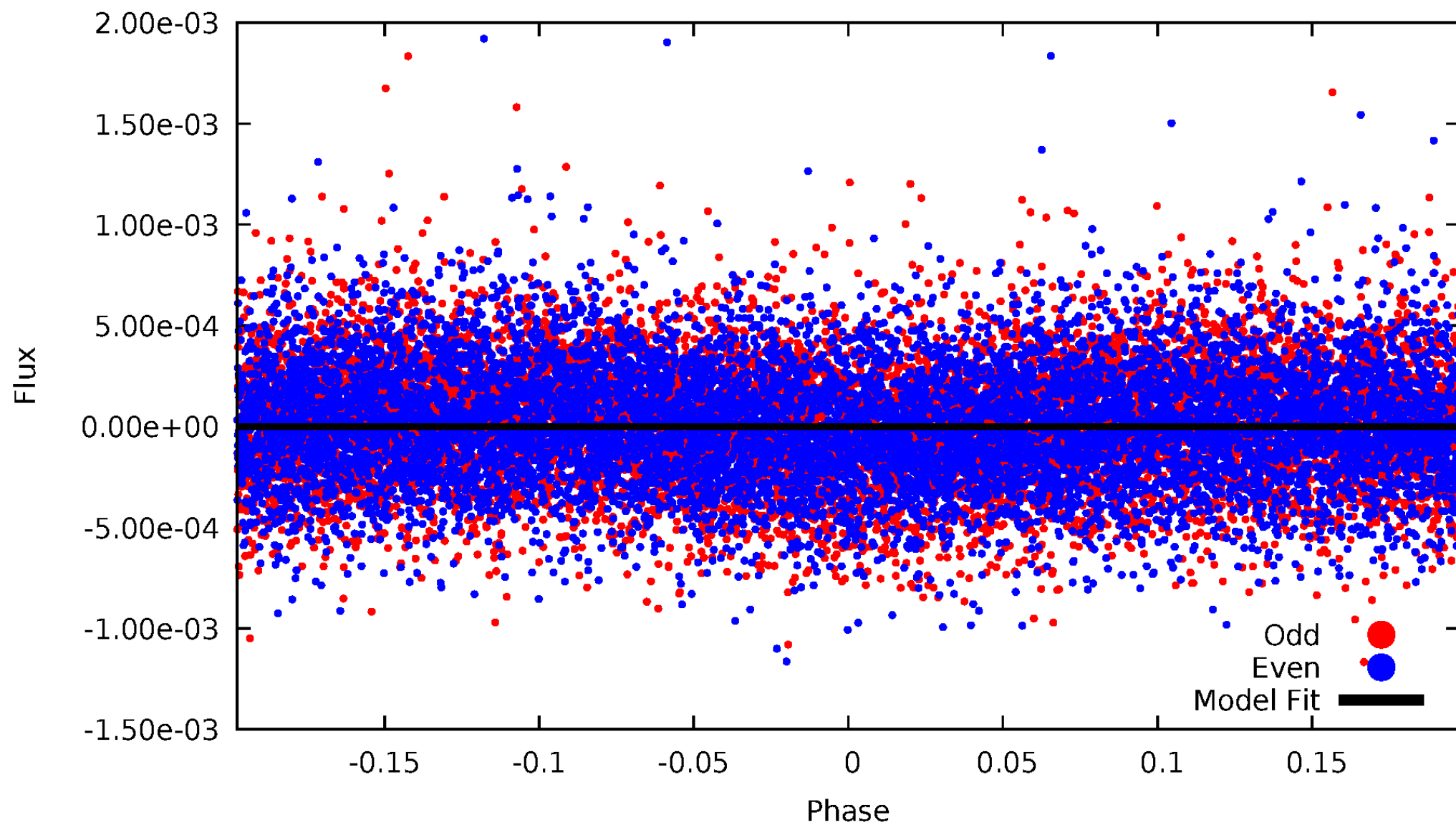


TCE 007889617-02



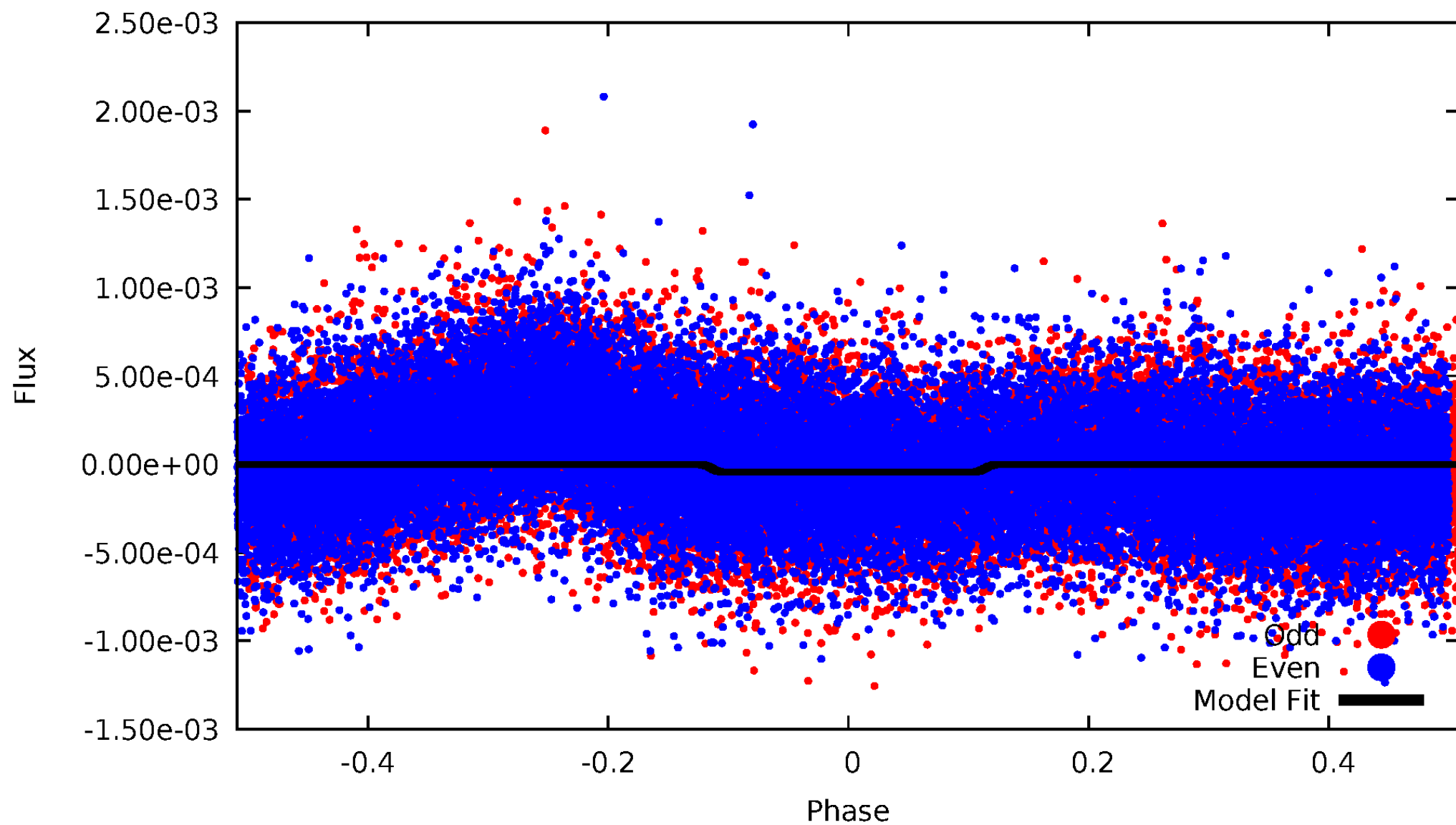
DV Odd/Even

TCE 007889617-02



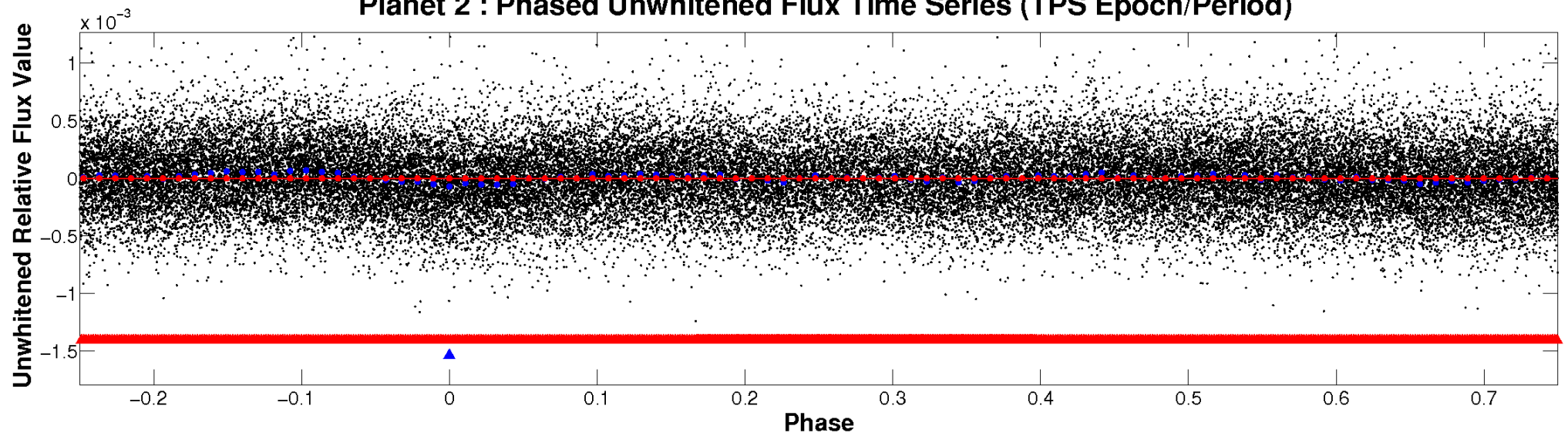
ALT Odd/Even

TCE 007889617-02

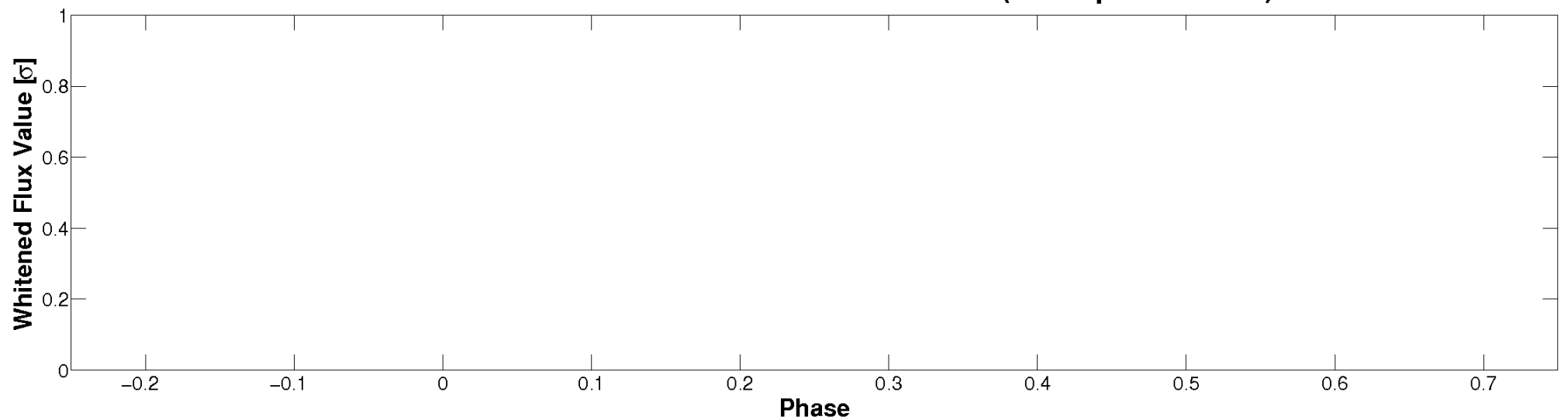


Non-Whitened Vs. Whitened Light Curve

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

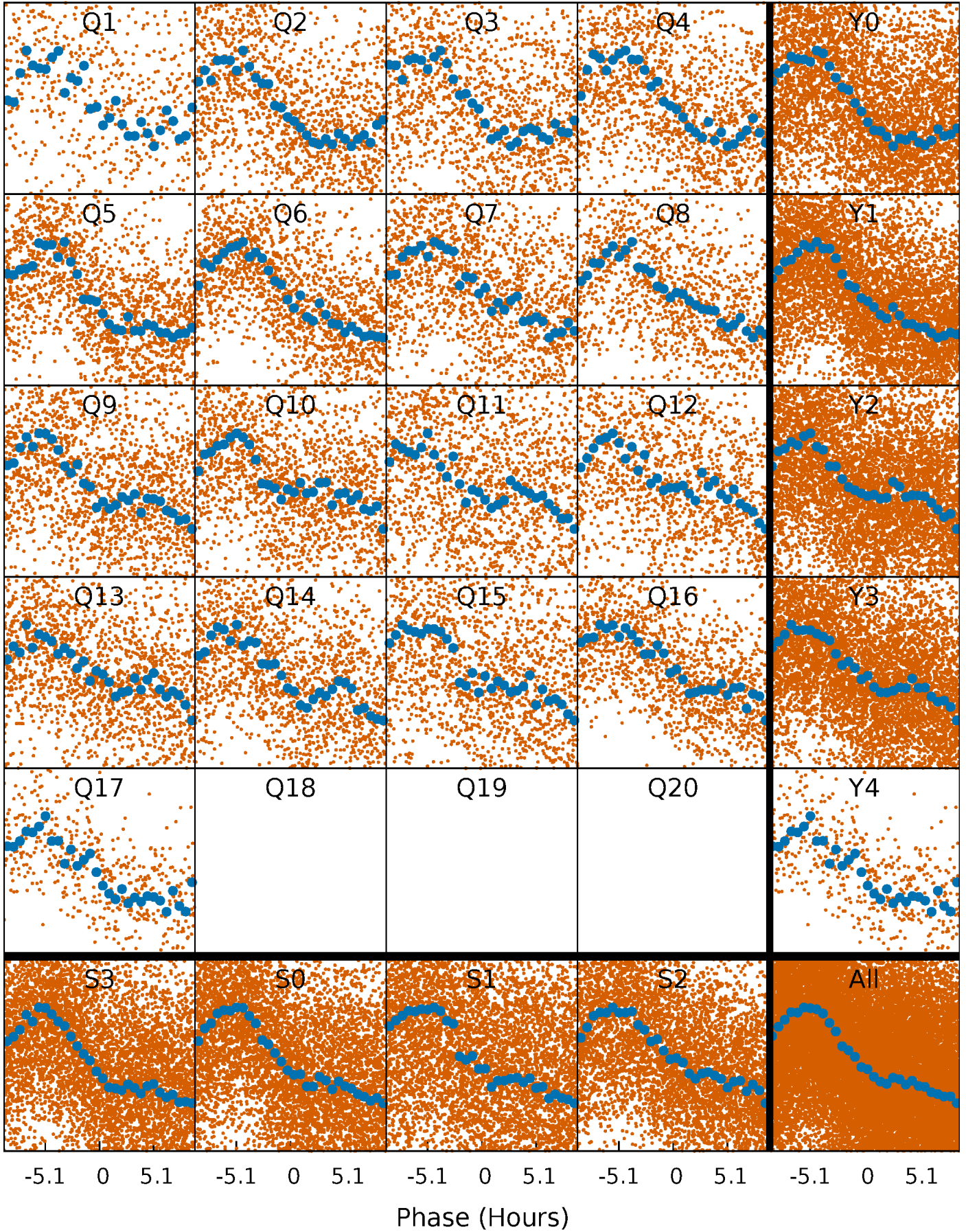


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



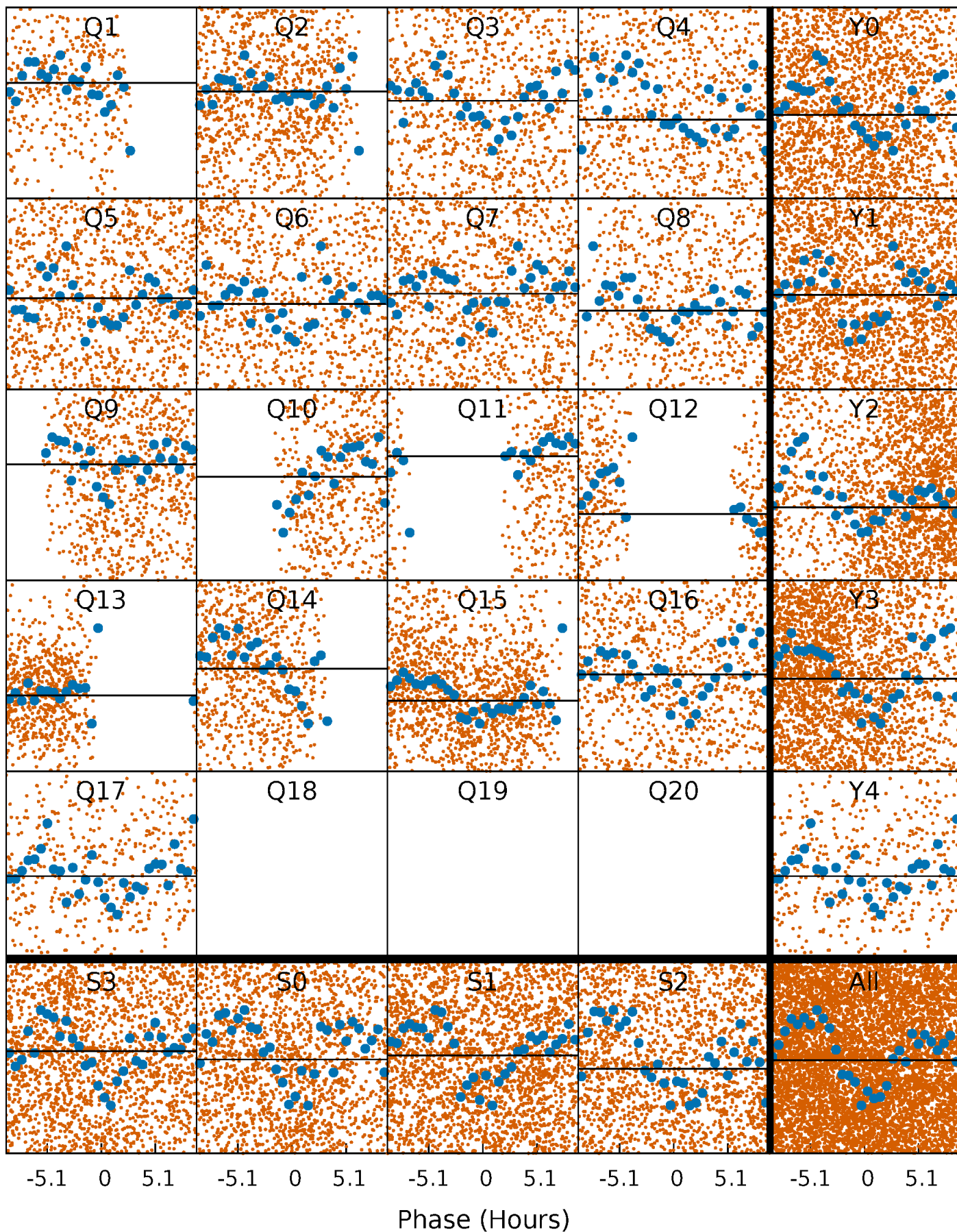
PDC Quarter-Phased Transit Curves

TCE 007889617-02 P= 1.898143 Days $T_0=132.089945$ (BKJD)



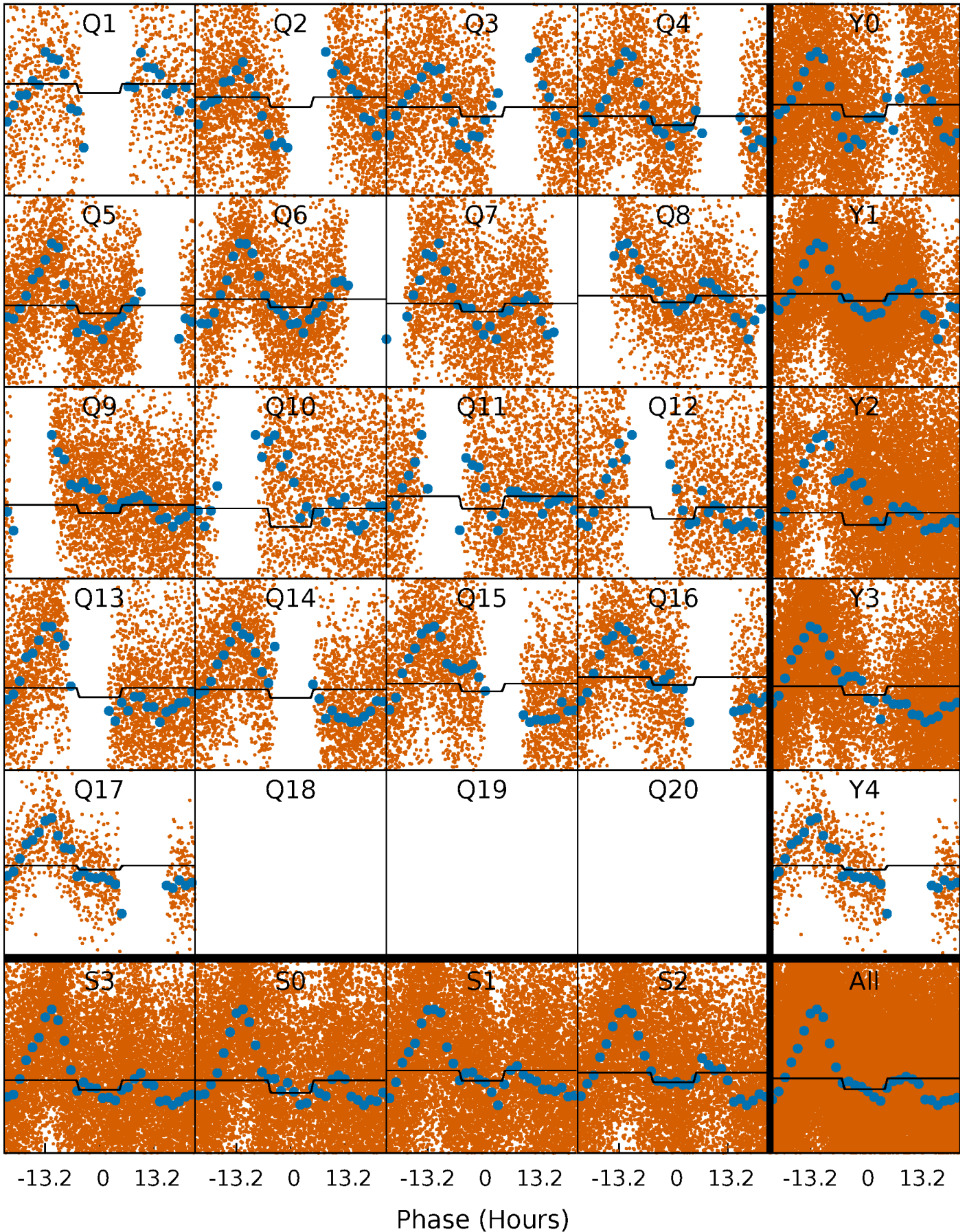
DV Quarter-Phased Transit Curves

TCE 007889617-02 P= 1.898143 Days $T_0=132.089945$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

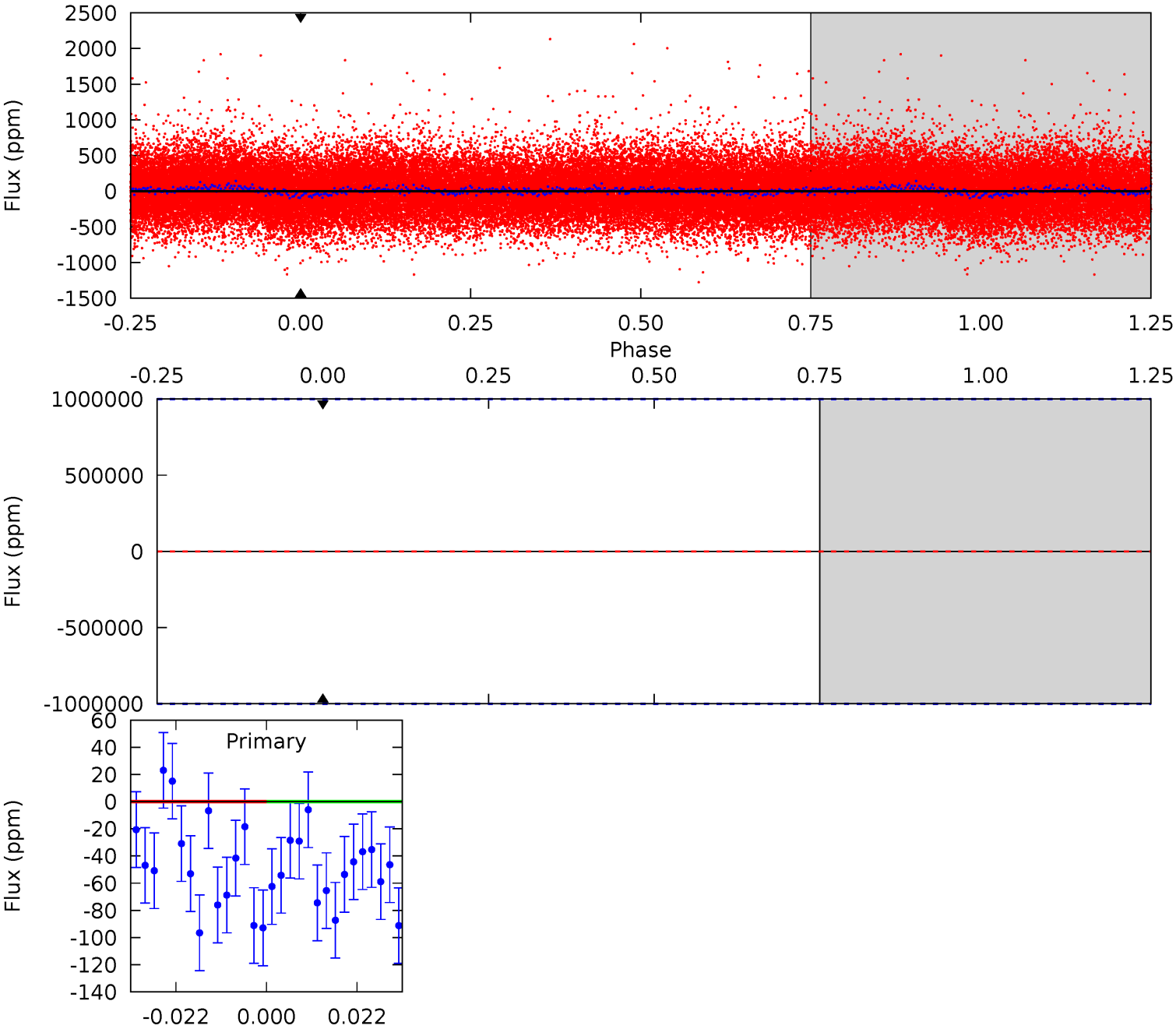
TCE 007889617-02 P= 1.898143 Days $T_0=132.365073$ (BKJD)



DV Model-Shift Uniqueness Test

007889617-02, P = 1.898143 Days, E = 130.191802 Days

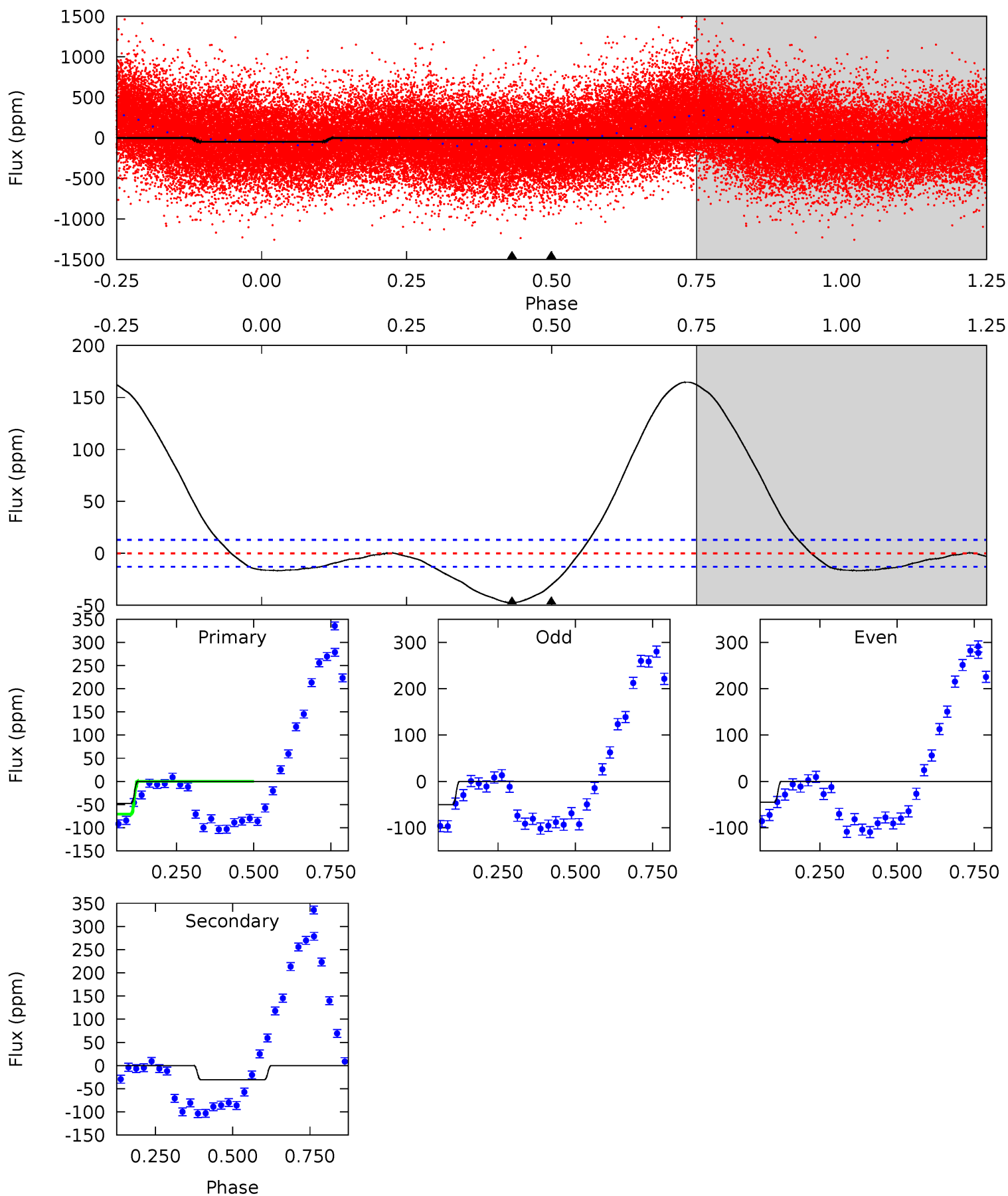
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007889617-02, P = 1.898143 Days, E = 130.466930 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	10.3	0	0	4.37	1.15	20.6	16.0	16.0	10.3	10.3	0.86	0.98	0.78	7.58



Stellar Parameters For KIC 007889617

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6853^{+191}_{-262}	$4.333^{+0.062}_{-0.188}$	$-0.120^{+0.250}_{-0.350}$	$1.275^{+0.396}_{-0.170}$	$1.288^{+0.184}_{-0.166}$	$0.875^{+0.243}_{-0.459}$
	+3%/-4%	+1%/-4%	+208%/-292%	+31%/-13%	+14%/-13%	+28%/-52%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007889617-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$11.20^{+12.40}_{-7.91}$	2691^{+192}_{-145}	5543^{+26319}_{-31554}	13^{+875}_{-659}
Alt.	-30 ± 3	$9.82^{+11.71}_{-7.01}$	2697^{+207}_{-150}	-2562^{+6369}_{-319}	$0.184^{+1.962}_{-0.146}$

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 $A_{obs} \gg 1.0$

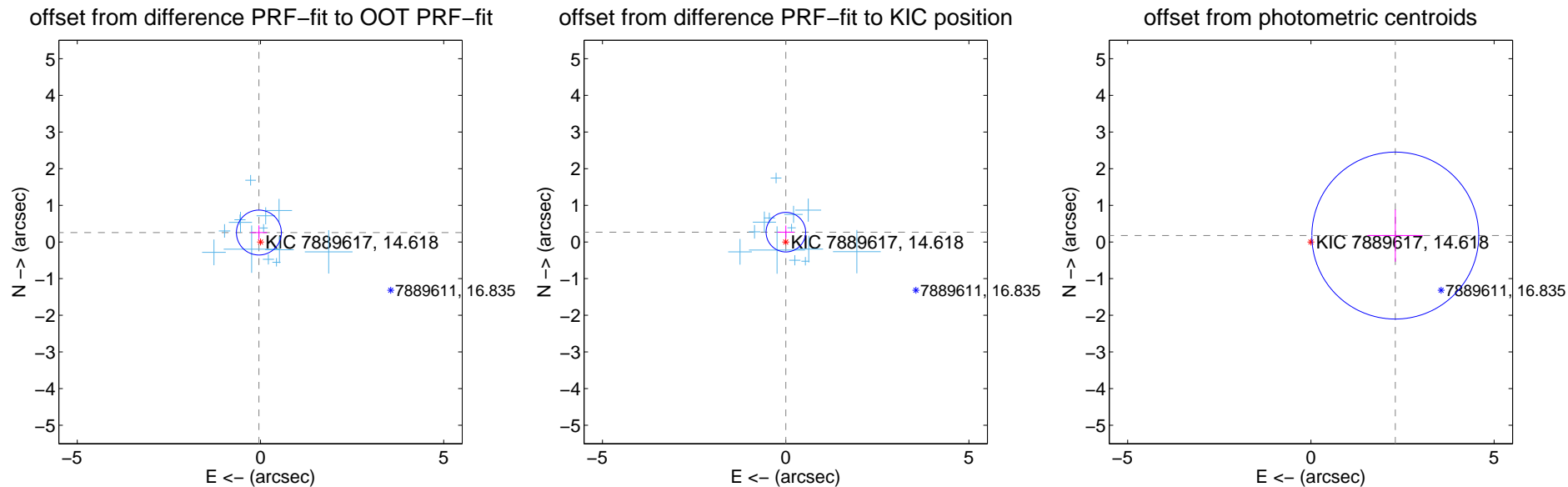
DV Centroid Data

Supplemental centroid analysis for 007889617-02. Kepler magnitude: 14.62. Transit SNR -1.00

There are 13 quarters with good PRF difference image offsets

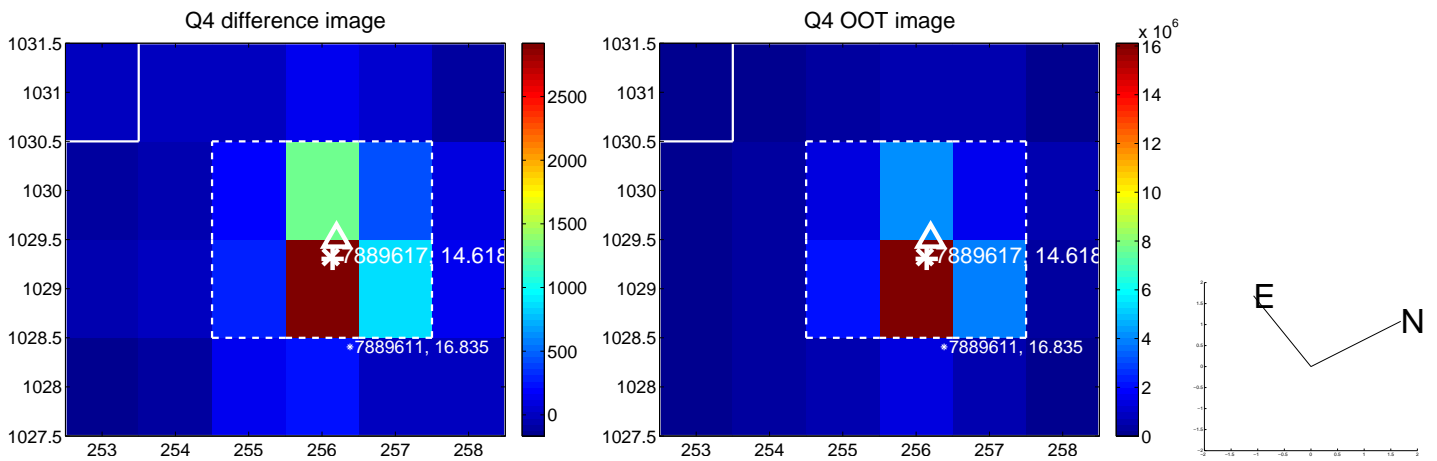
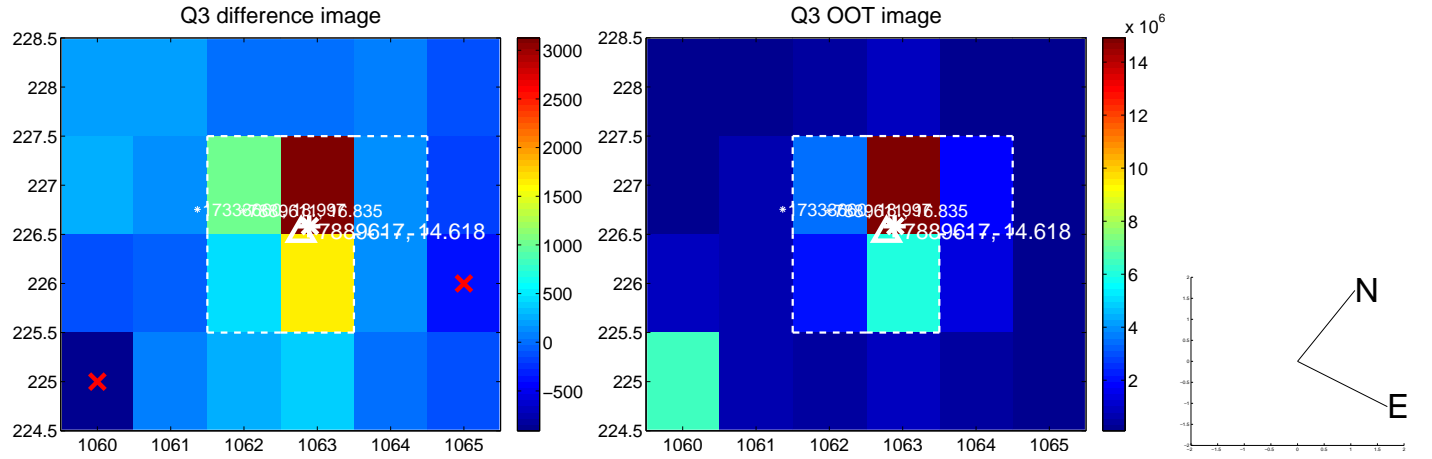
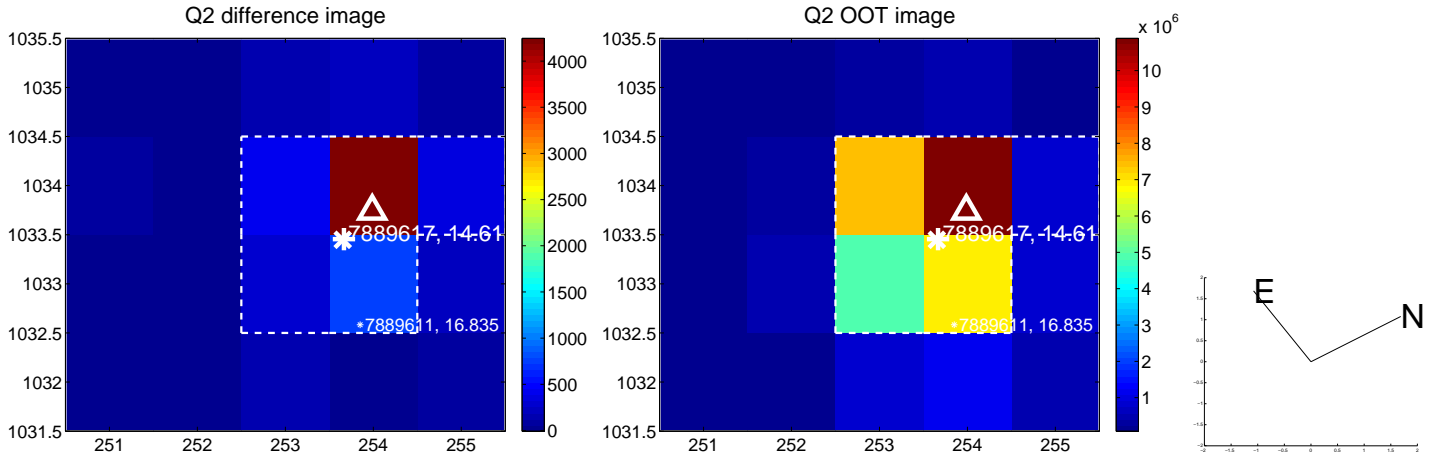
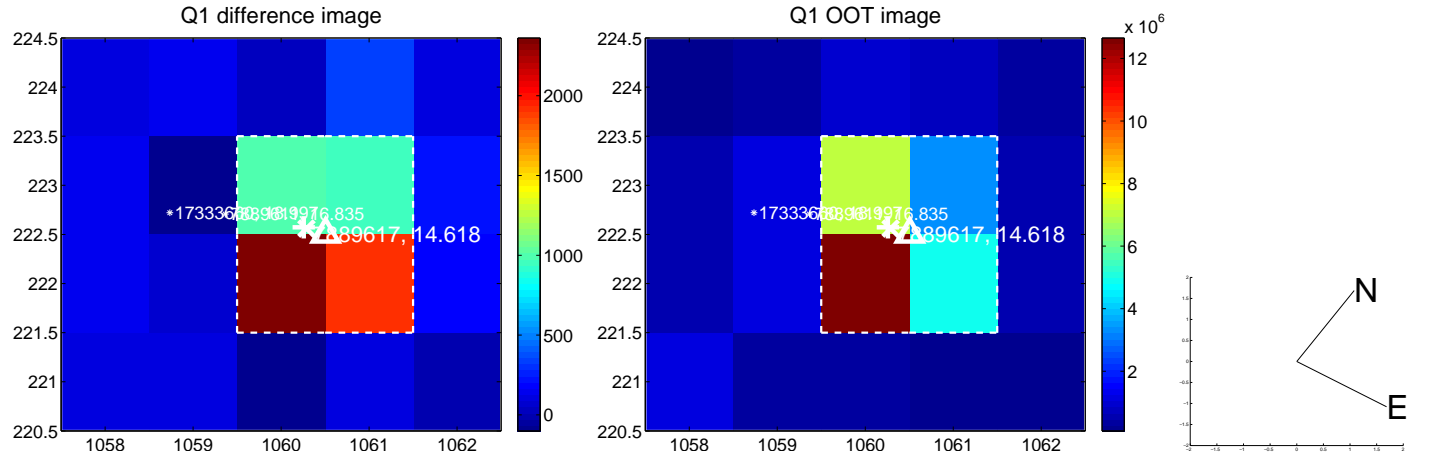
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.261 ± 0.204	1.28	0.043 ± 0.225	0.257 ± 0.194
PRF-fit source offset from KIC position	0.268 ± 0.180	1.49	-0.005 ± 0.231	0.268 ± 0.181
photometric centroid source offset	2.31 ± 0.76	3.04	-2.30 ± 0.76	0.17 ± 0.71

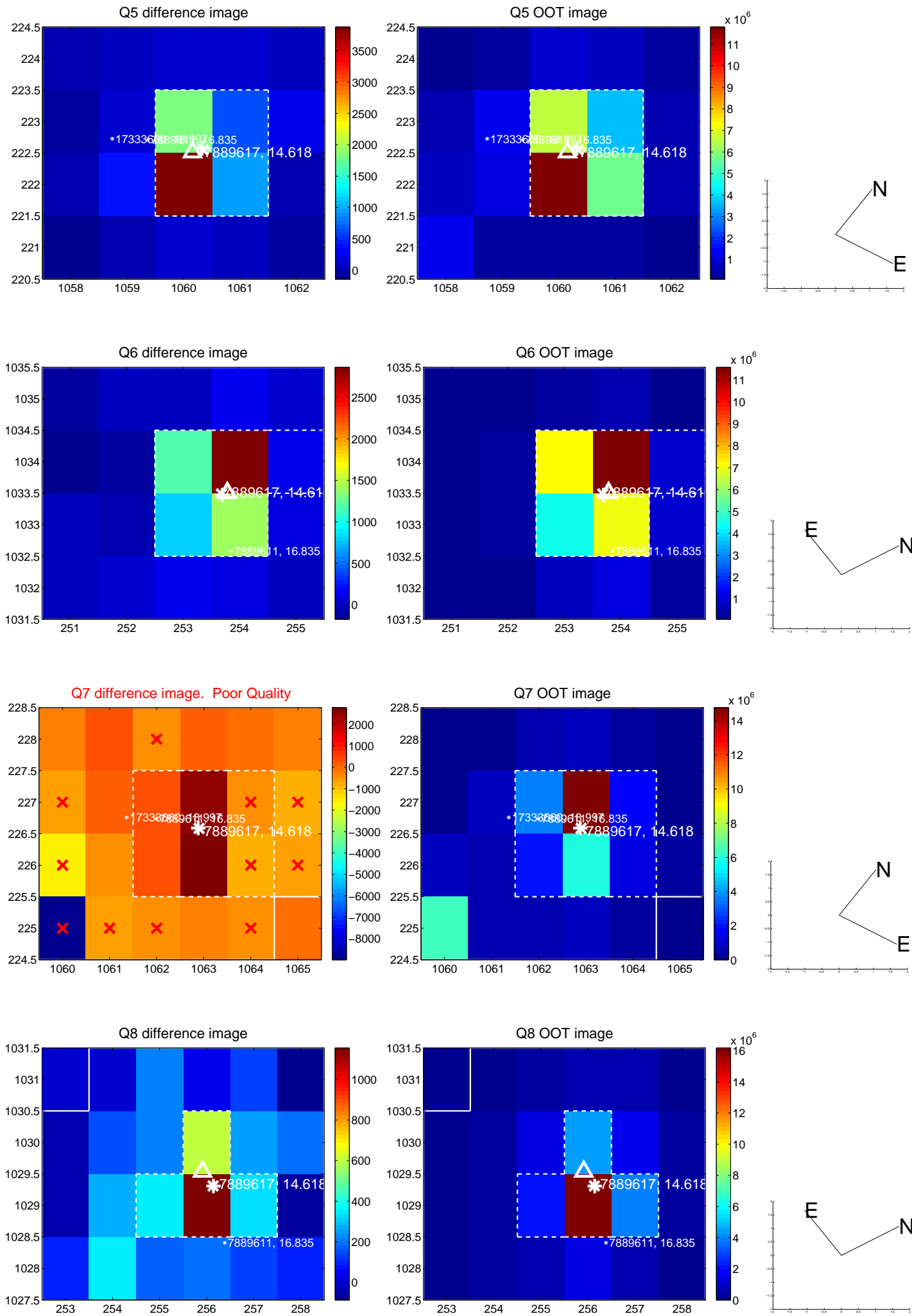


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

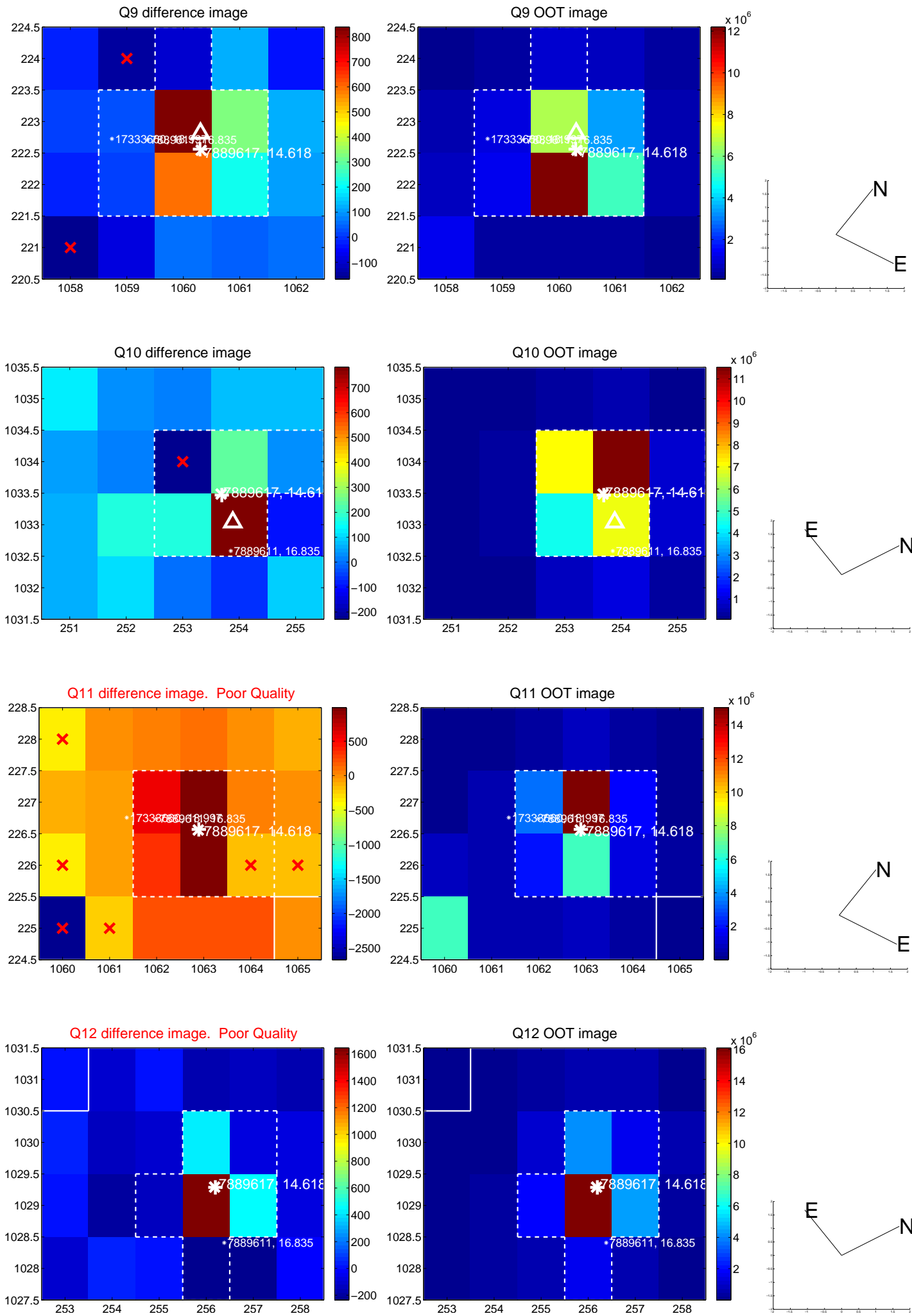
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



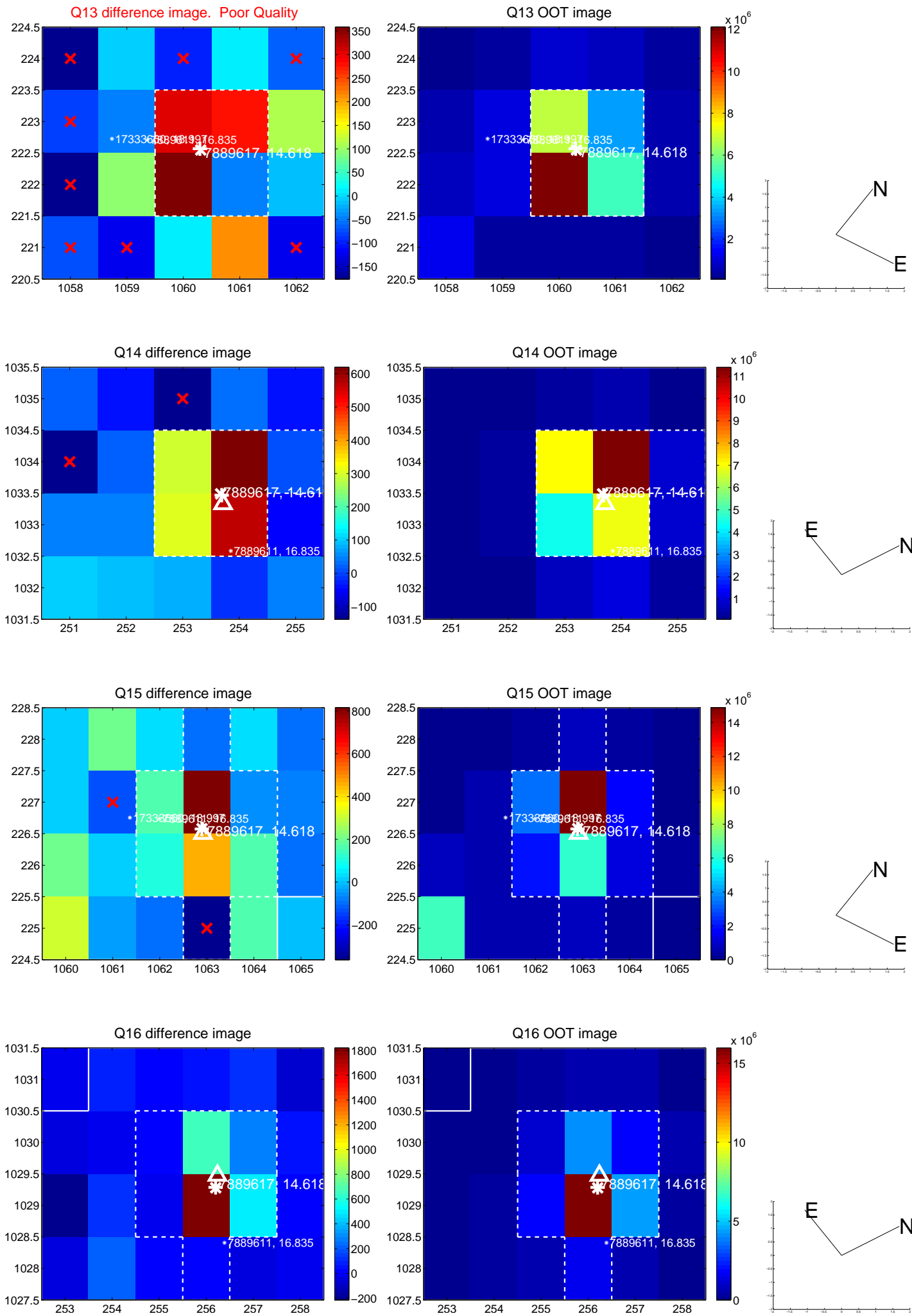
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



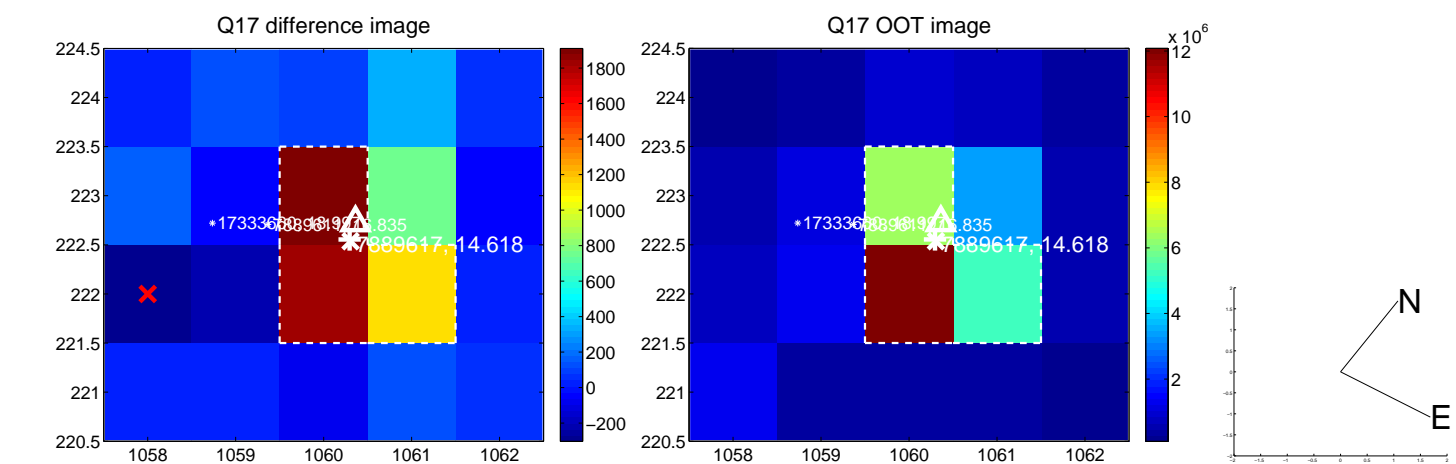
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



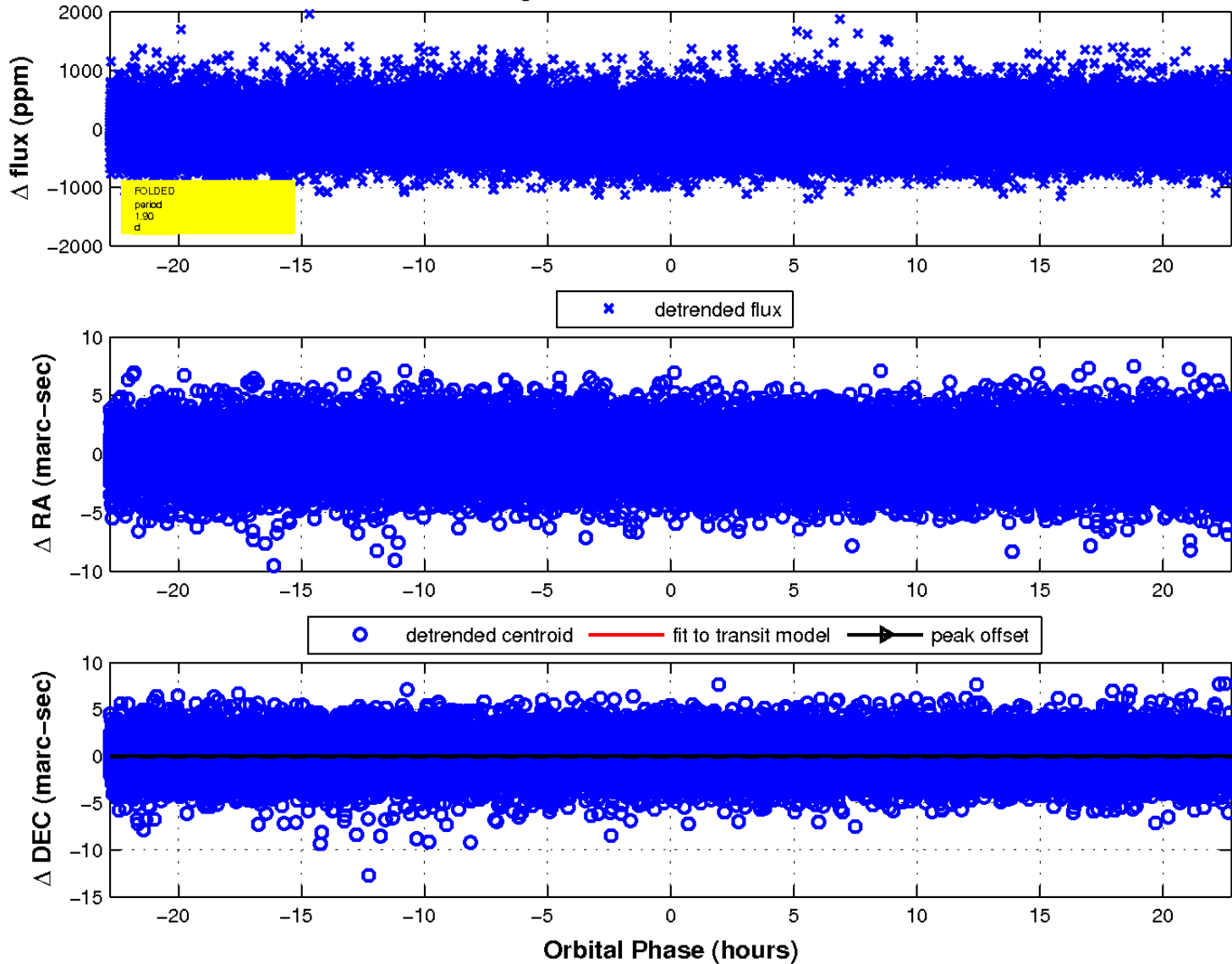
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

