

KIC 007552265

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})
007552265-01	OBS	No	3.256273	133.878967	19.1	15.016	8.5	7.0	2.45	6712	1.28	4561.83
007552265-02	OBS	No	3.256162	132.736216	20.6	7.764	12.8	10.4	2.45	6712	1.30	4562.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007552265-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED
007552265-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—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.

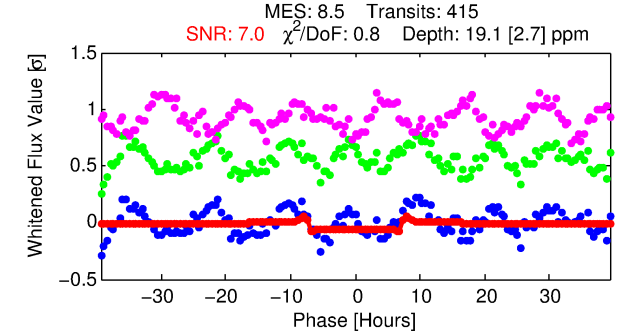
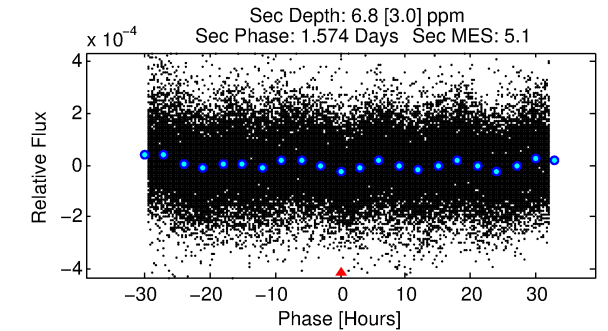
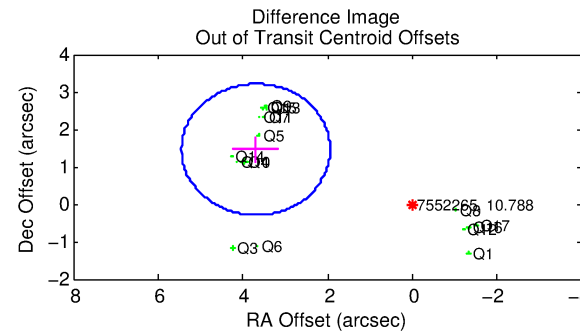
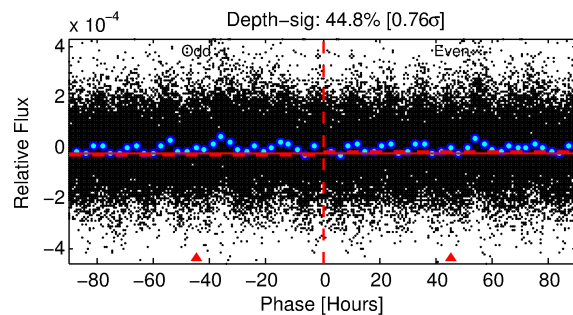
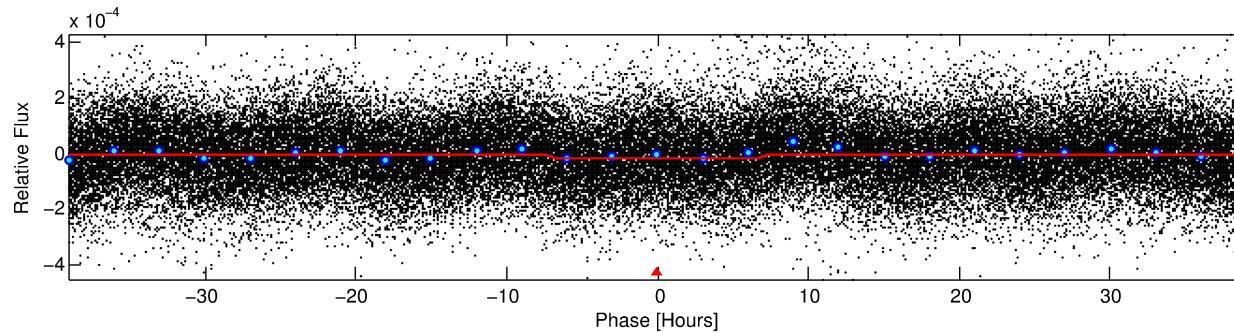
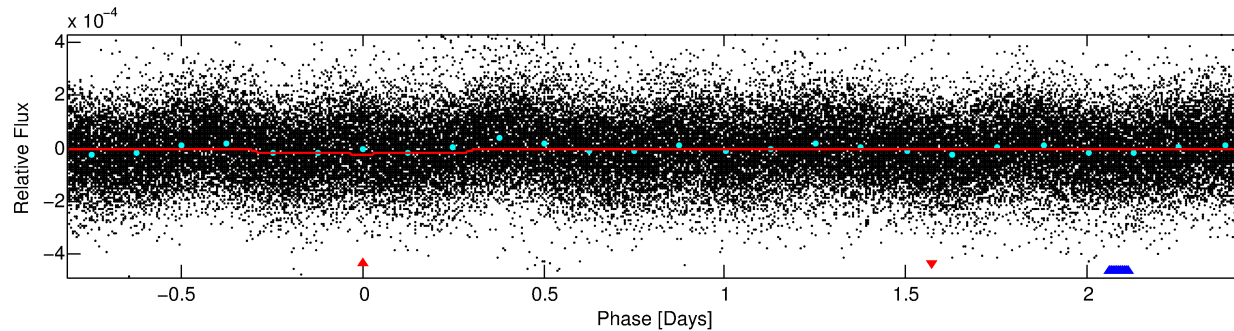
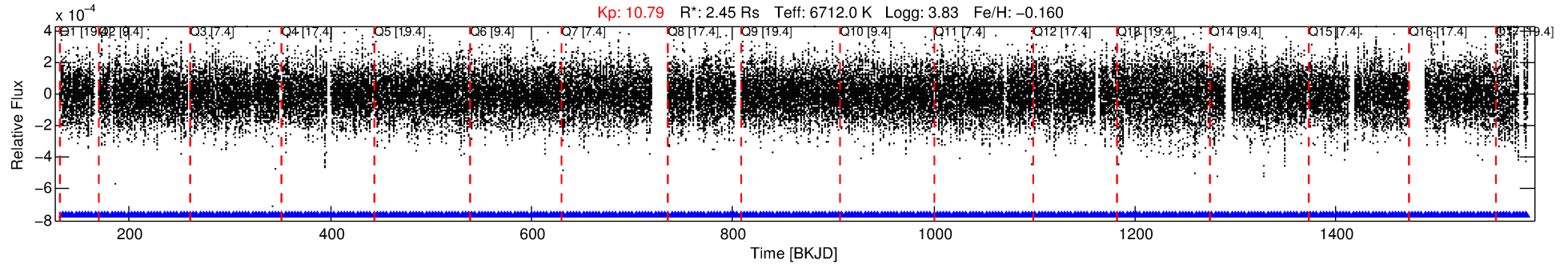
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007552265-01

No Significant Match Found

DV One-Page Summary

KIC: 7552265 Candidate: 1 of 2 Period: 3.256 d



DV Fit Results:

Period = 3.25627 [0.00003] d
Epoch = 133.8790 [0.0057] BKJD
Rp/R* = 0.0048 [0.0005]
a/R* = 1.16 [0.11]
b = 0.92 [0.06]
Seff = 4561.83 [2360.99]
Teq = 2096 [271] K
Rp = 1.28 [0.46] Re
a = 0.0490 [0.0157] AU
Ag = 5.54 [3.85] [1.18 σ]
Teffp = 4971 [612] K [4.29 σ]

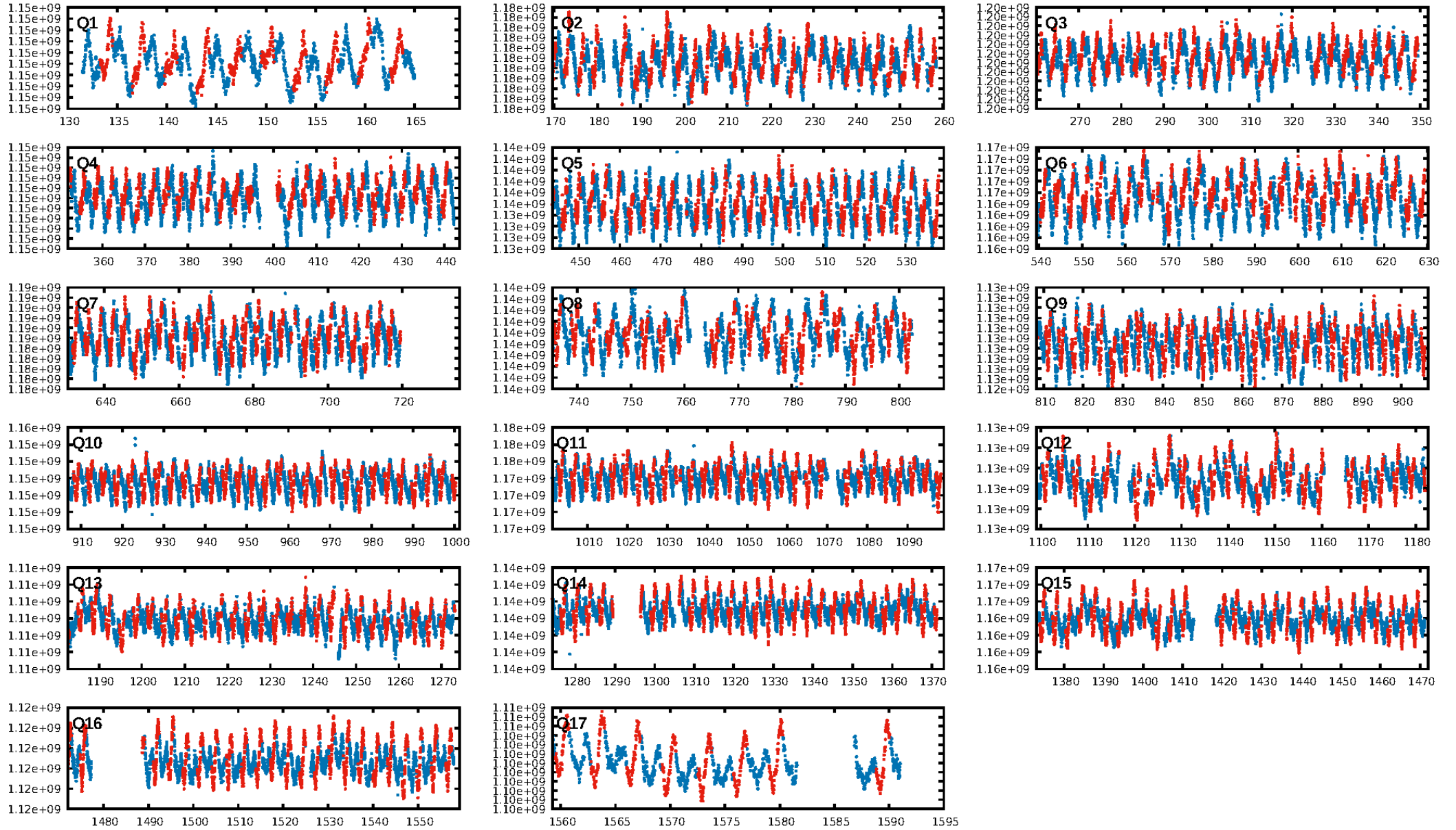
DV Diagnostic Results:

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: 1.00 [397/397]
GhostDiagnostic-chr: 0.7519
Centroid-sig: N/A
Centroid-so: 6.514 arcsec [7.23 σ]
OotOffset-rm: 3.968 arcsec [6.80 σ]
KicOffset-rm: 3.231 arcsec [4.65 σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.62 [10/16]
DiffImageOverlap-fno: 0.00 [0/17]

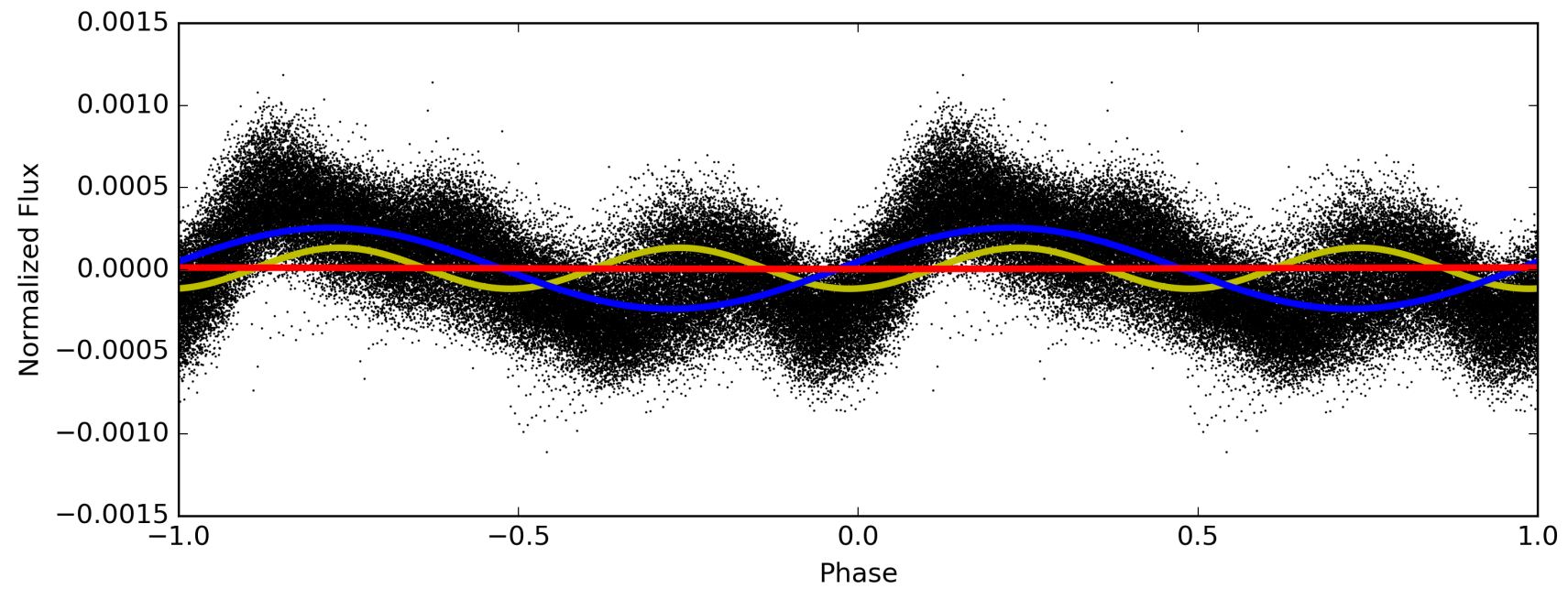
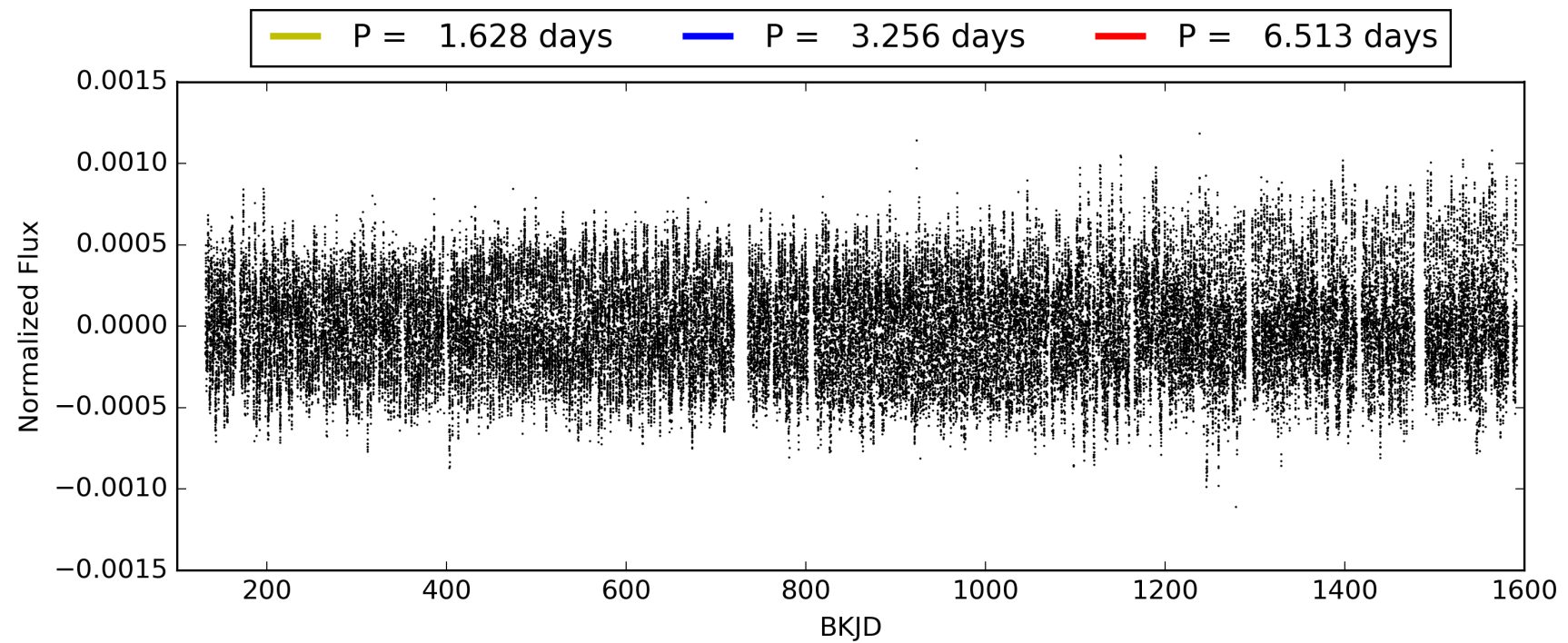
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:25:55 Z

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

TCE 007552265-01, PDC Light Curves

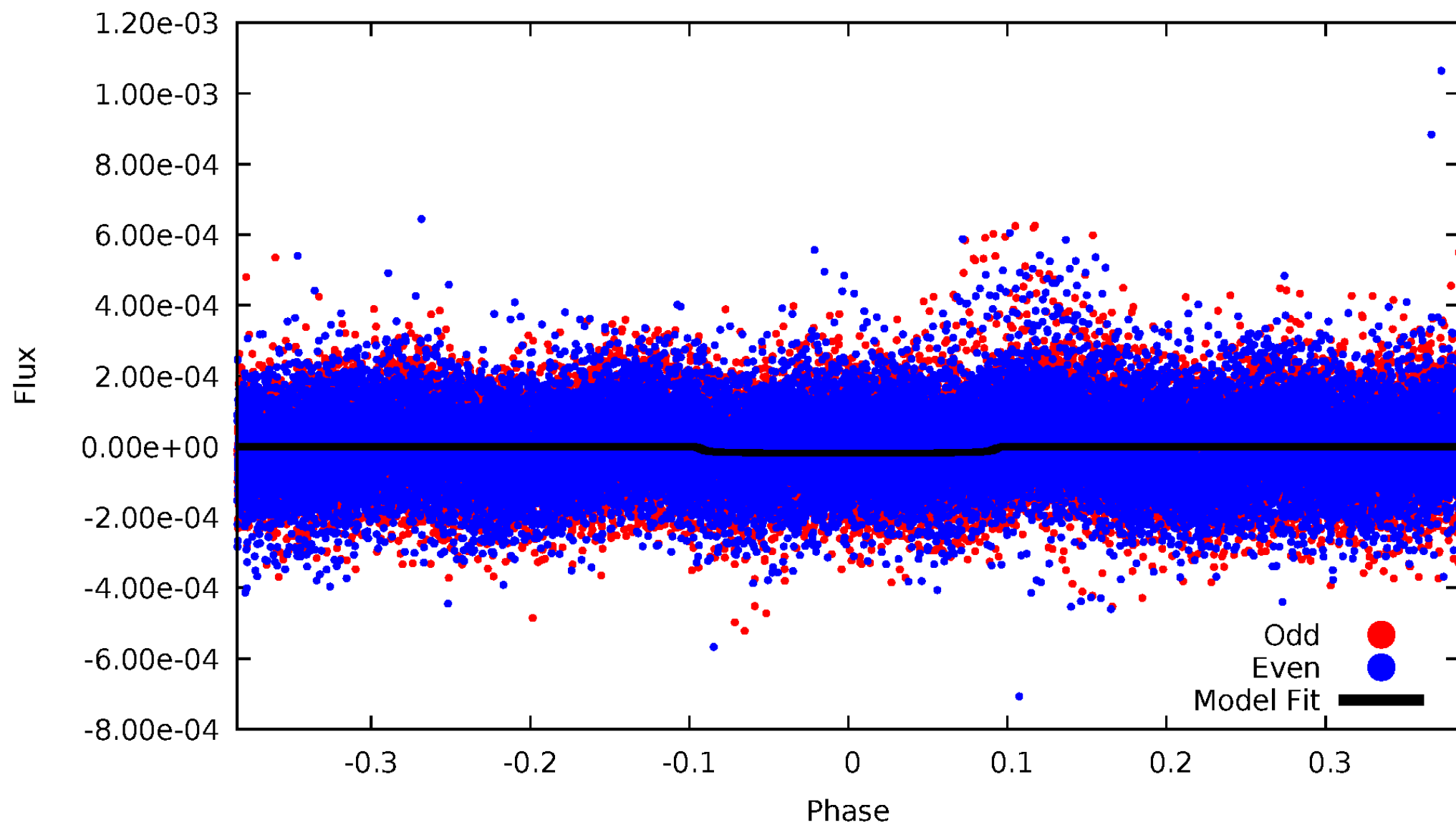


TCE 007552265-01



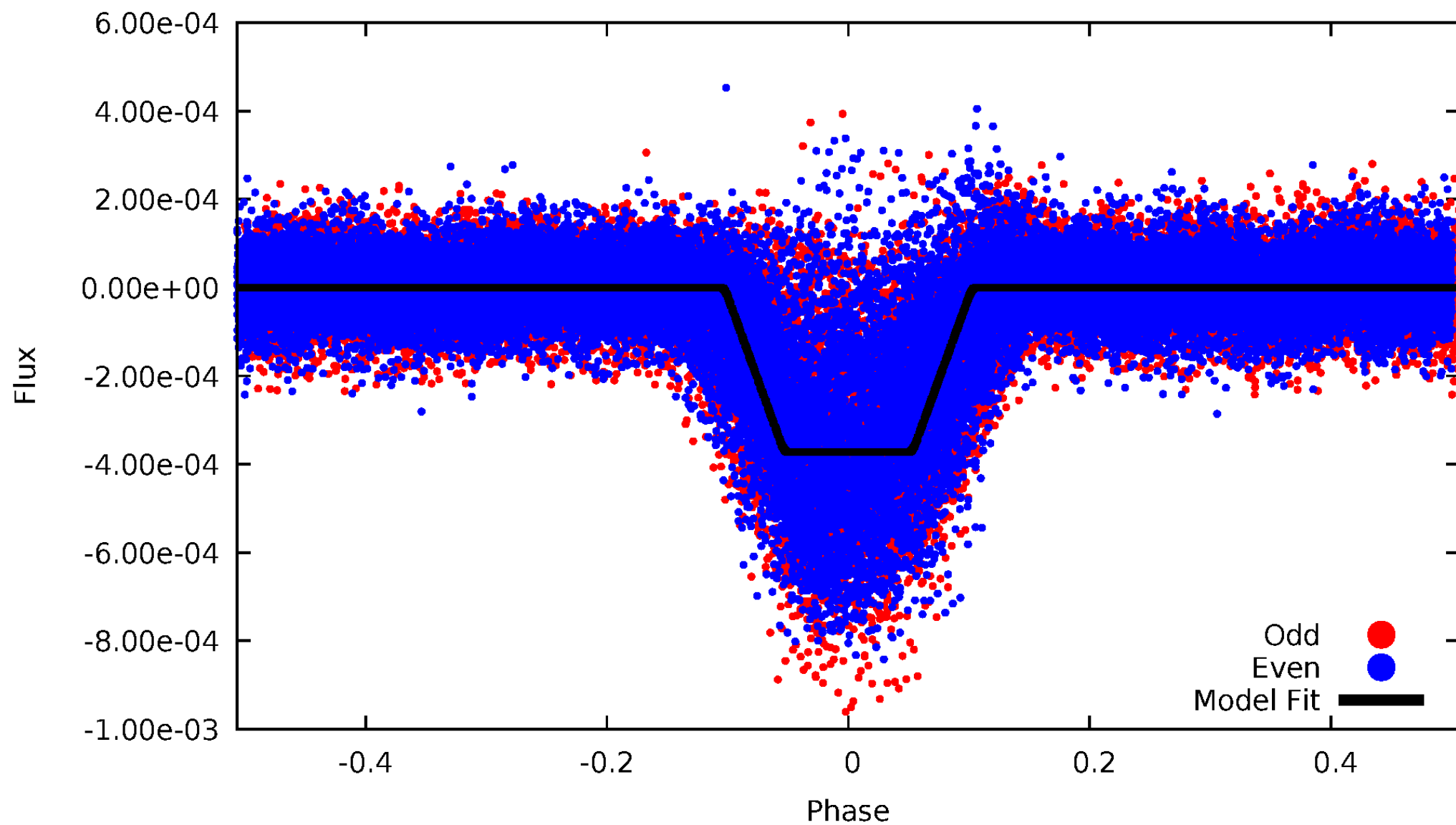
DV Odd/Even

TCE 007552265-01

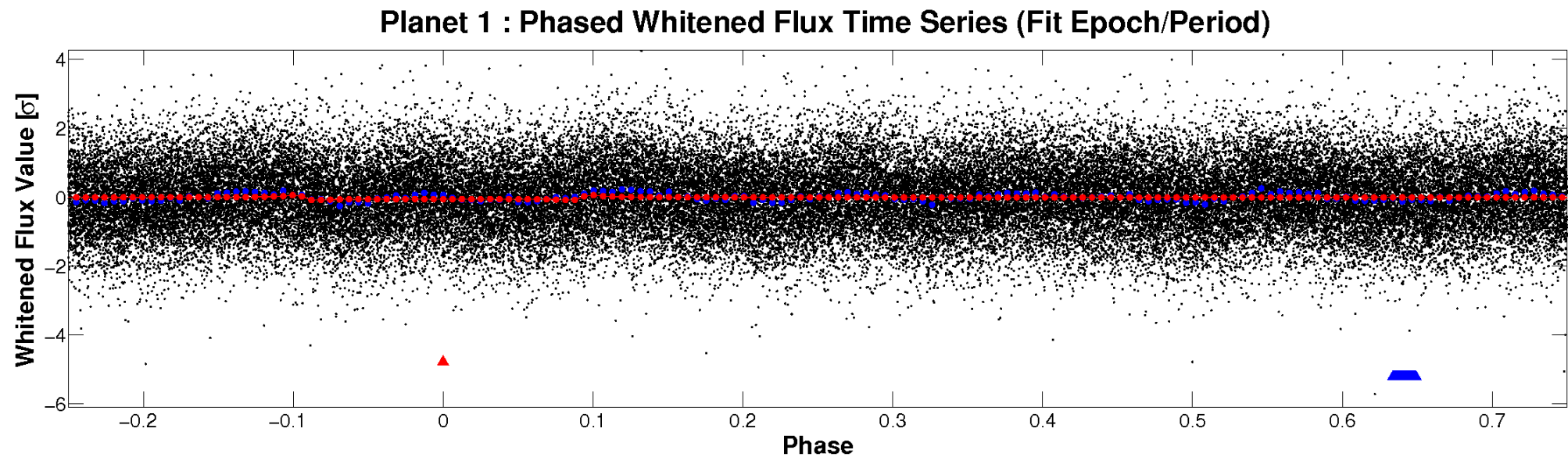
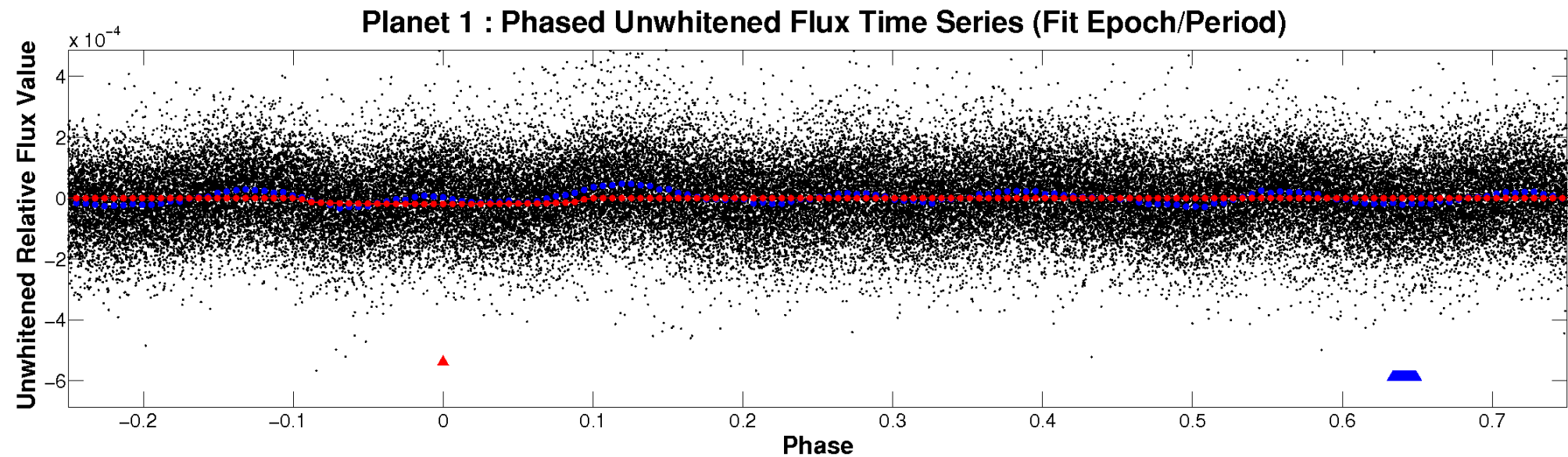


ALT Odd/Even

TCE 007552265-01

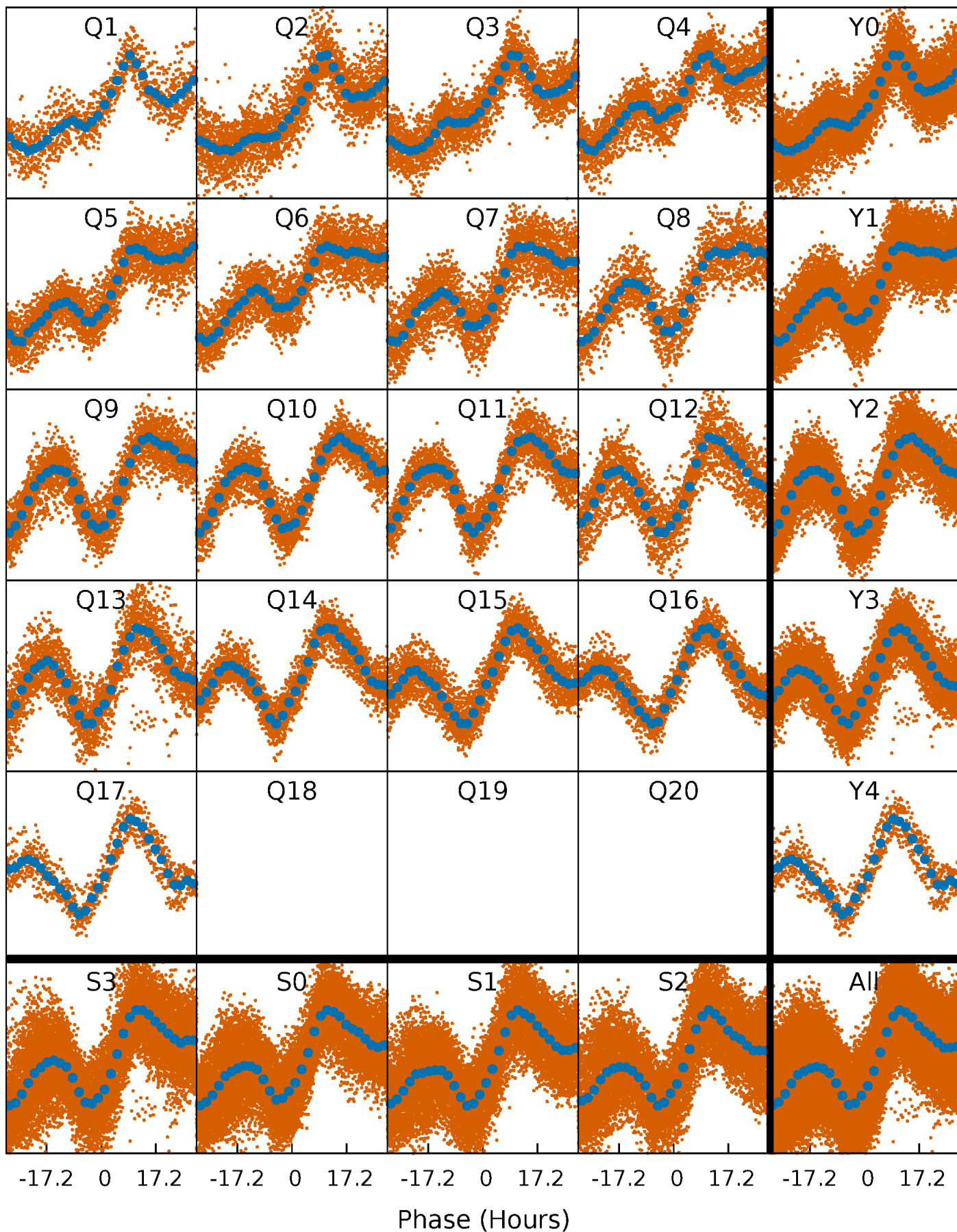


Non-Whitened Vs. Whitened Light Curve



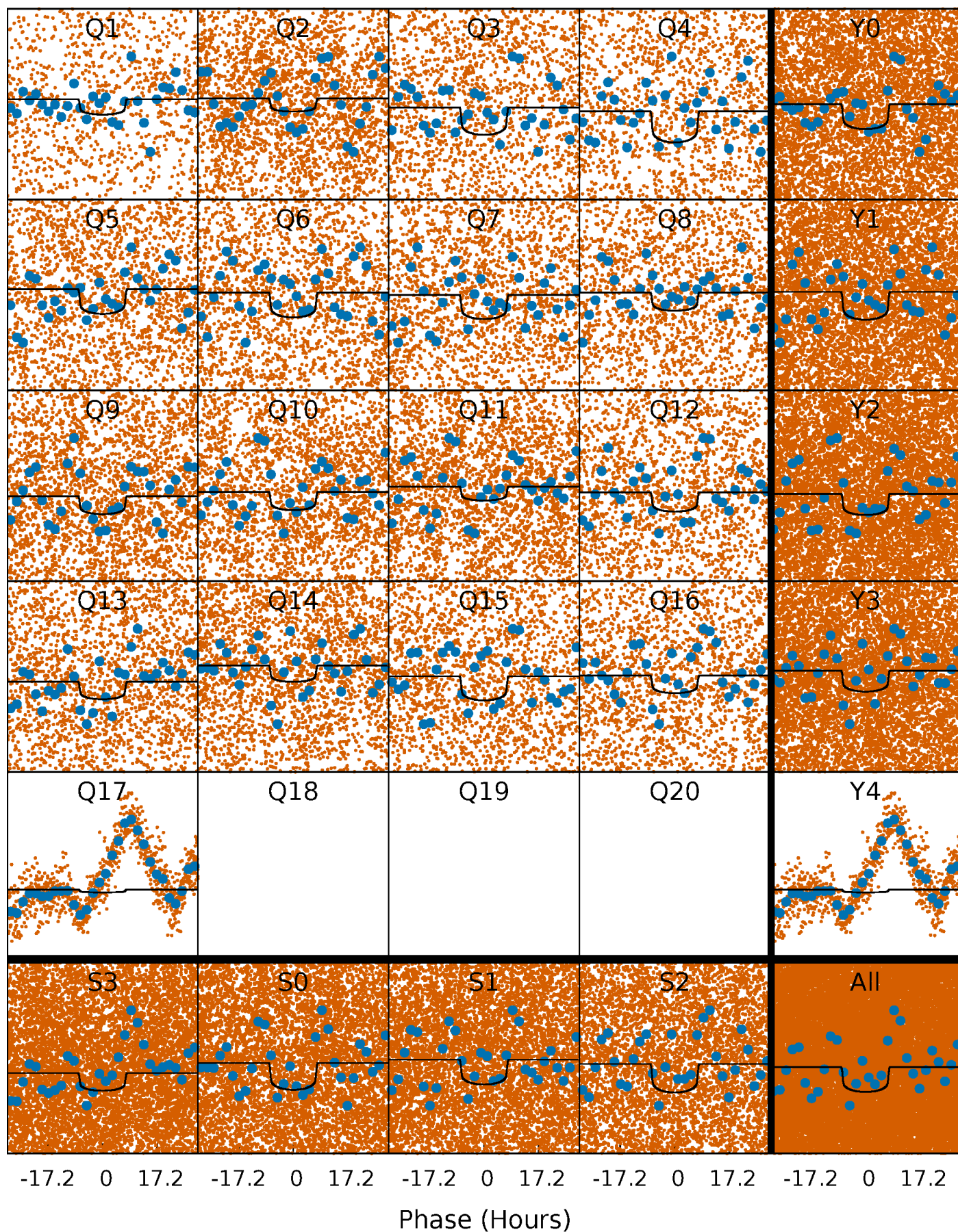
PDC Quarter-Phased Transit Curves

TCE 007552265-01 P= 3.256273 Days $T_0=133.878967$ (BKJD)



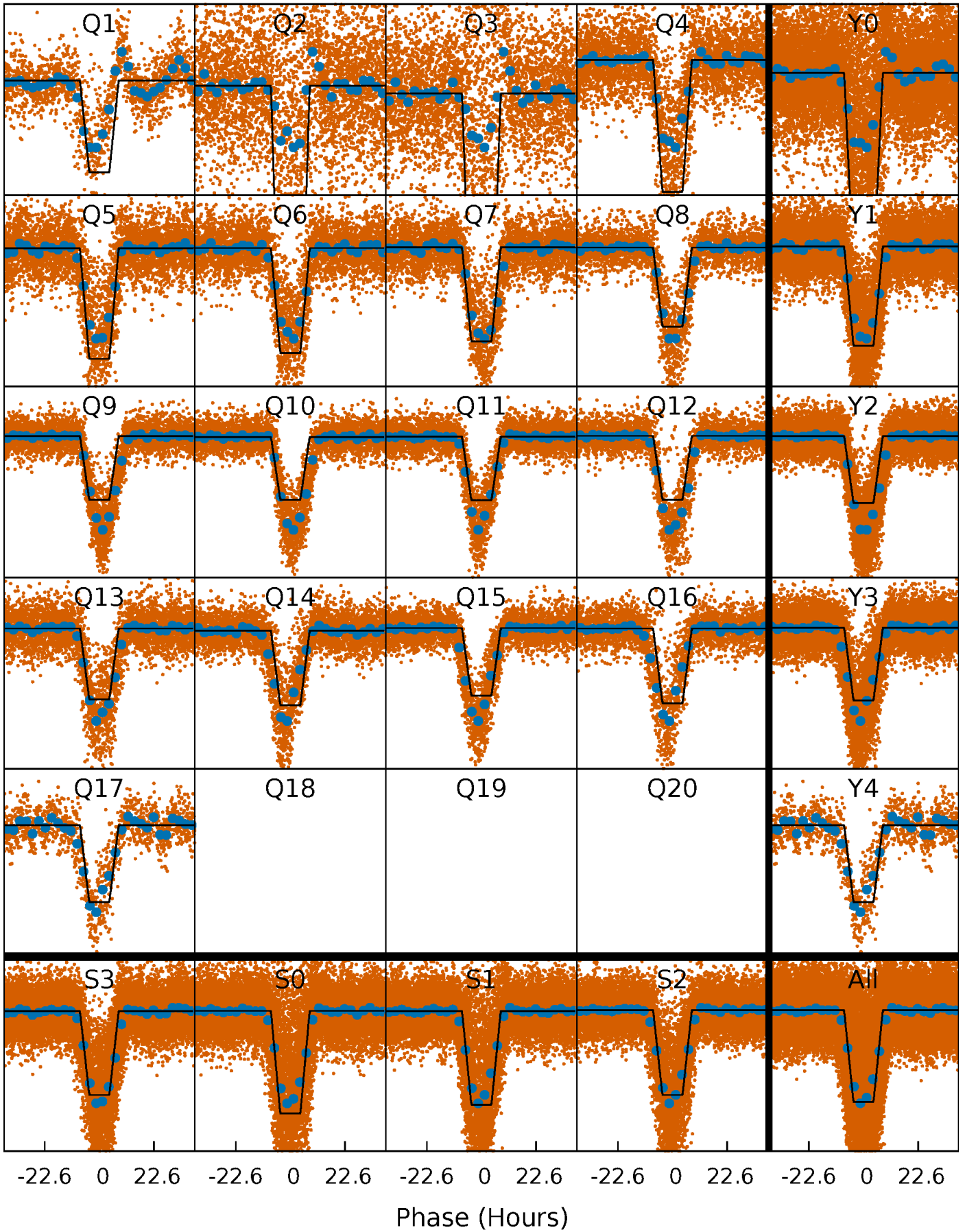
DV Quarter-Phased Transit Curves

TCE 007552265-01 P= 3.256273 Days $T_0=133.878967$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

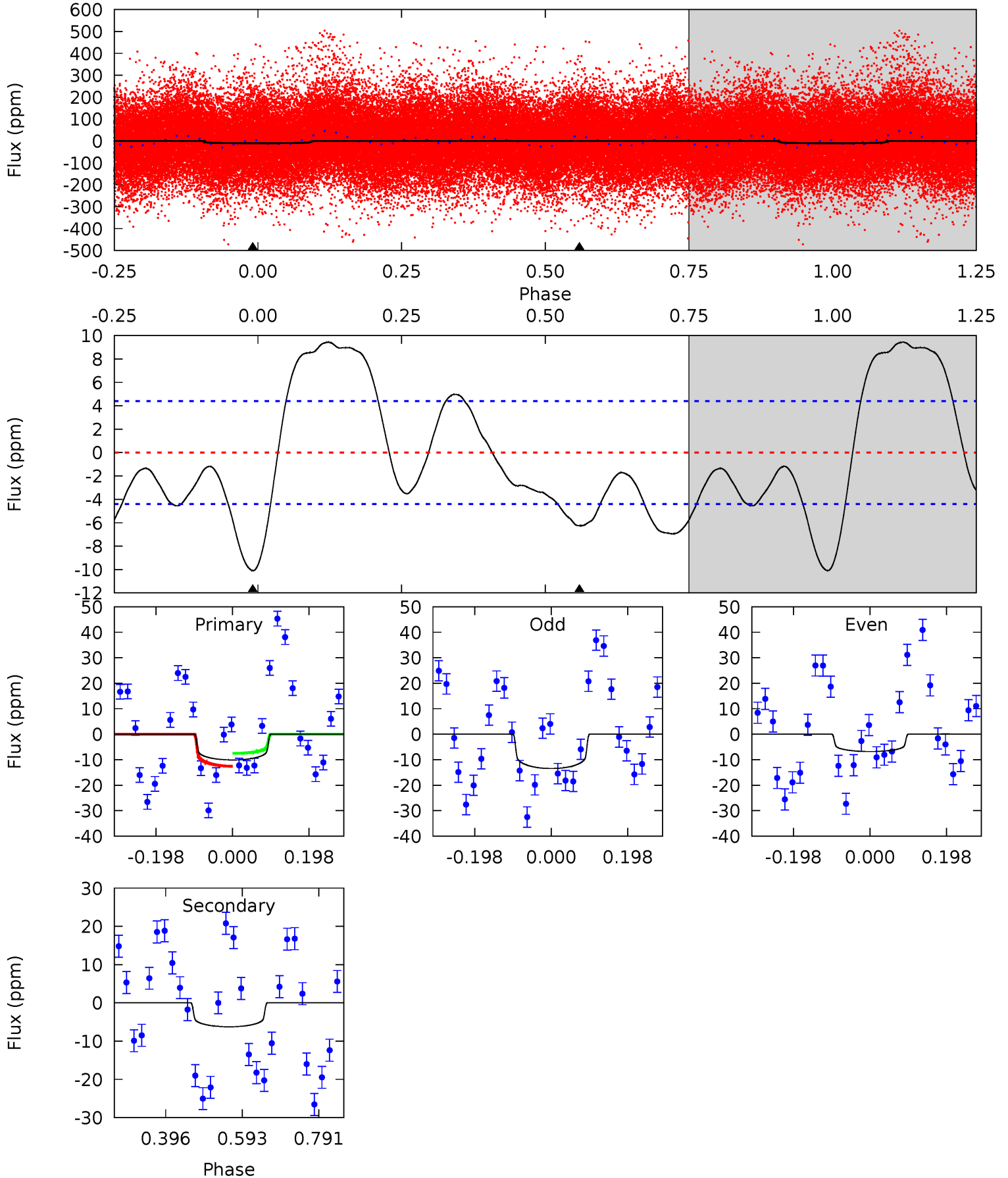
TCE 007552265-01 P= 3.255904 Days $T_0=133.892129$ (BKJD)



DV Model-Shift Uniqueness Test

007552265-01, P = 3.256273 Days, E = 130.622694 Days

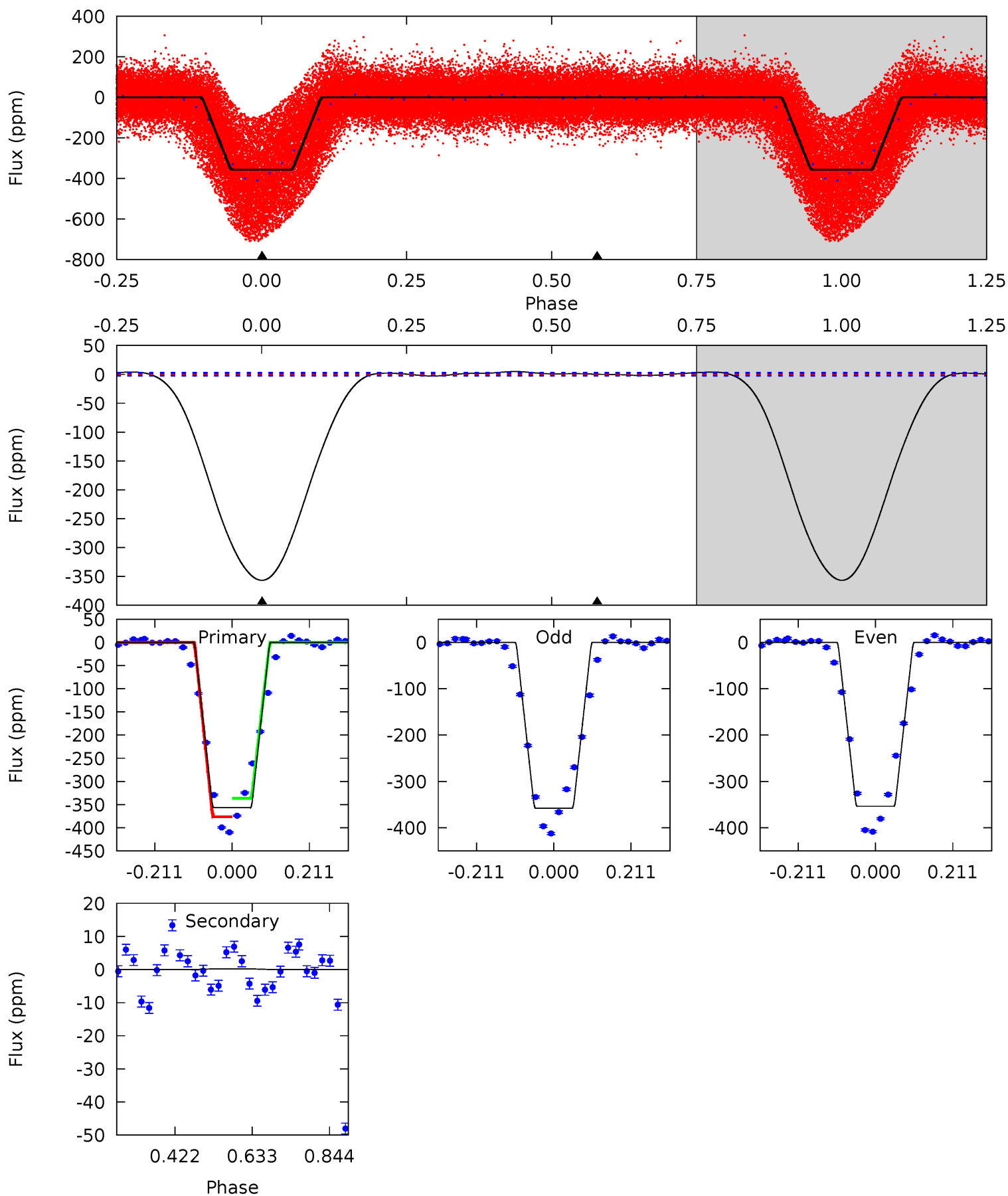
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	6.27	0	0	4.42	1.29	3.60	10.1	10.1	6.27	6.27	3.34	0.81	0.48	2.54



Alt Model-Shift Uniqueness Test

007552265-01, P = 3.255904 Days, E = 130.636225 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
622.8	-0.34	0	0	4.41	1.25	2.97	622.8	622.8	-0.34	-0.34	3.56	0.96	0.01	0



Stellar Parameters For KIC 007552265

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6712^{+150}_{-200}	$3.828^{+0.292}_{-0.097}$	$-0.160^{+0.300}_{-0.250}$	$2.453^{+0.455}_{-0.845}$	$1.478^{+0.224}_{-0.274}$	$0.141^{+0.290}_{-0.044}$
	+2%/-3%	+8%/-3%	+188%/-156%	+19%/-34%	+15%/-19%	+206%/-31%
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 007552265-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-6 ± 1	$1.23^{+0.20}_{-0.25}$	2874^{+178}_{-252}	4855^{+313}_{-275}	$5.415^{+2.994}_{-1.614}$
Alt.	0 ± 1	$5.14^{+0.54}_{-0.96}$	2887^{+164}_{-244}	-3032^{+149}_{-104}	$-0.009^{+0.028}_{-0.032}$

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

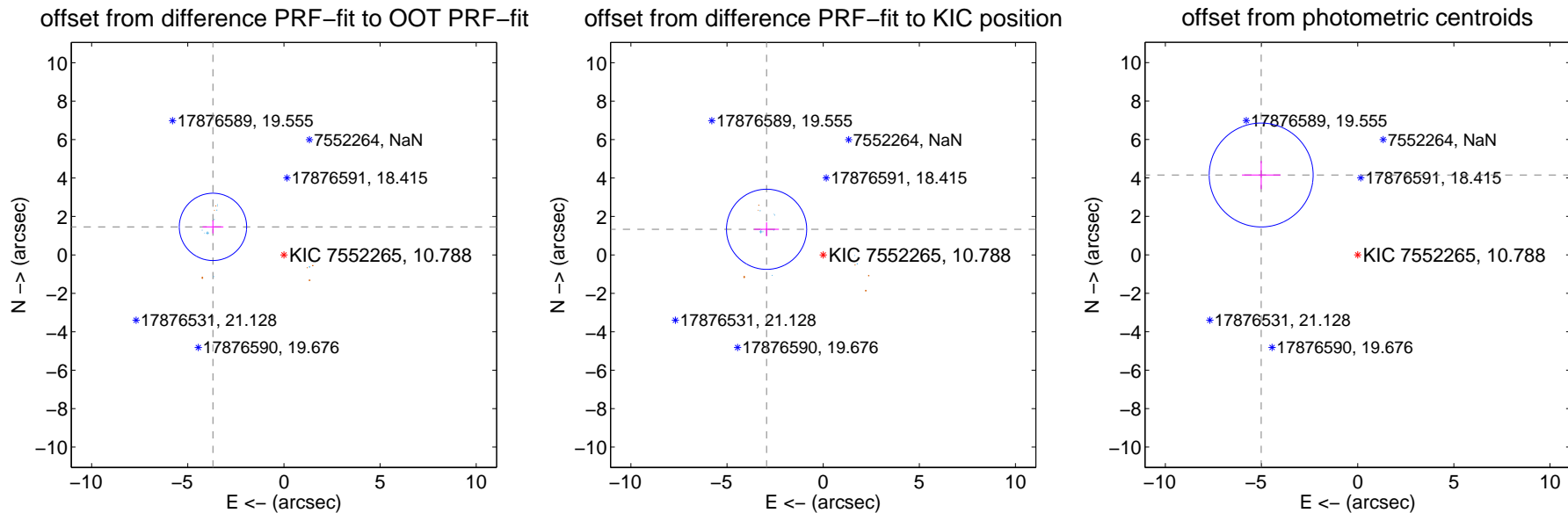
DV Centroid Data

Supplemental centroid analysis for 007552265-01. **Kepler magnitude: 10.79.** Transit SNR 7.04

There are 10 quarters with good PRF difference image offsets

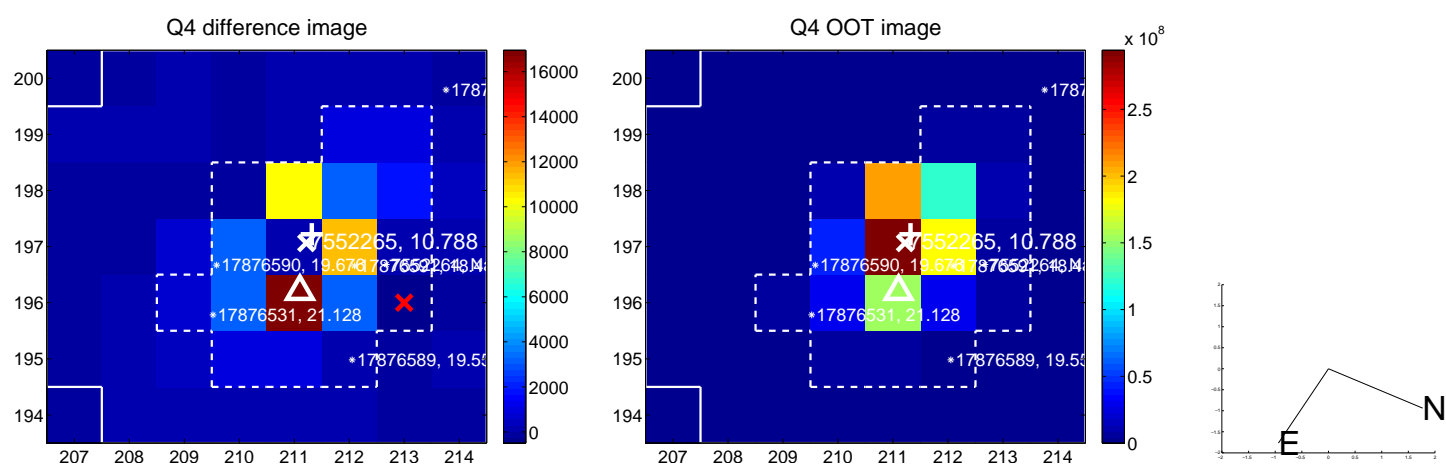
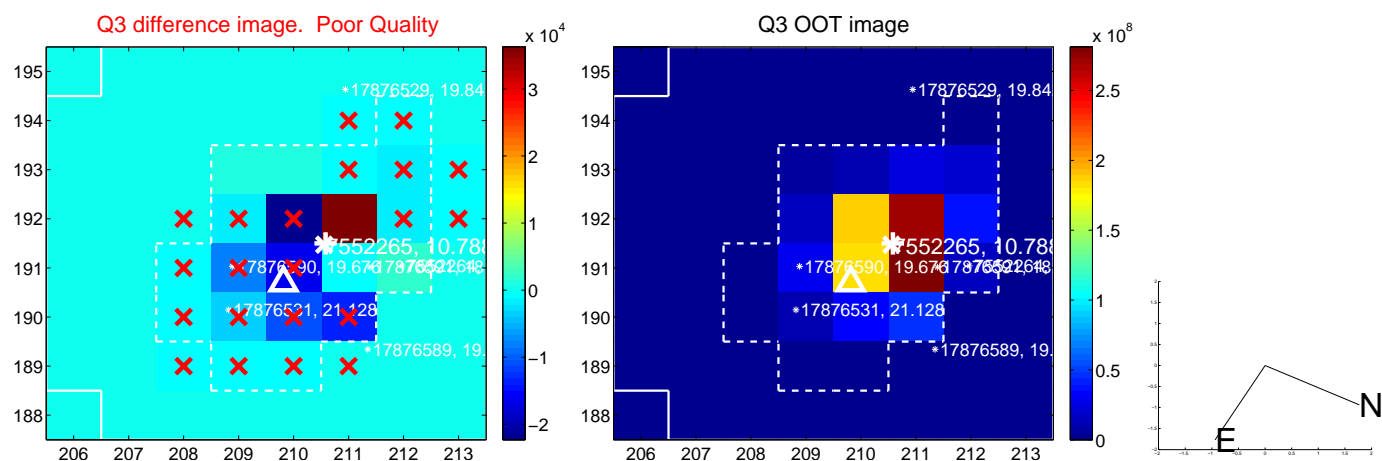
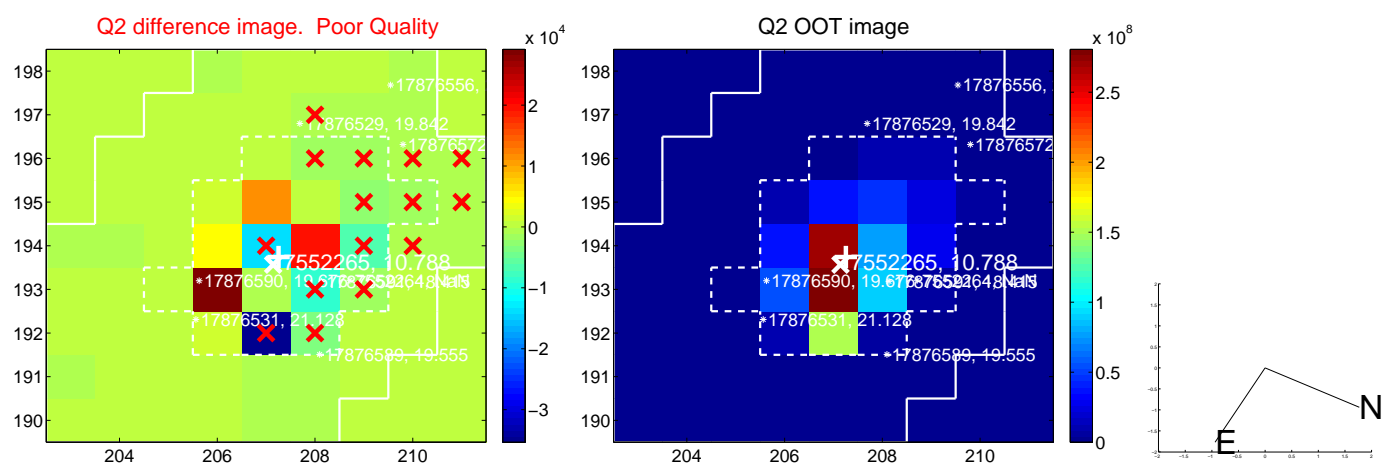
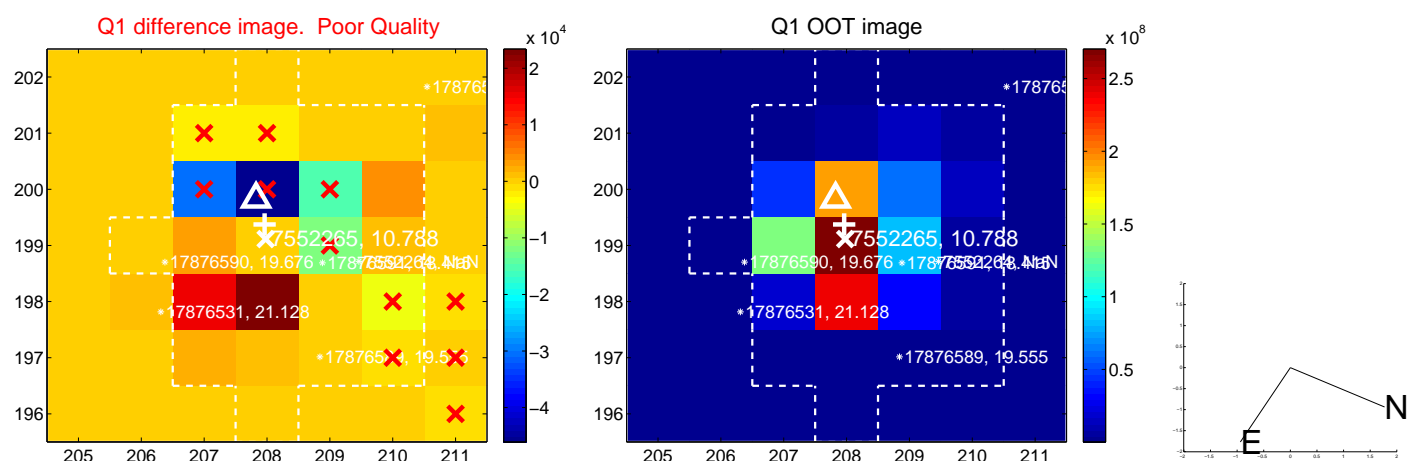
The direct PRF centroid is offset from the target star catalog position by about 1.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.968 ± 0.584	6.80	3.691 ± 0.543	1.458 ± 0.339
PRF-fit source offset from KIC position	3.231 ± 0.695	4.65	2.943 ± 0.642	1.333 ± 0.360
photometric centroid source offset	6.51 ± 0.90	7.23	5.02 ± 1.00	4.15 ± 0.73

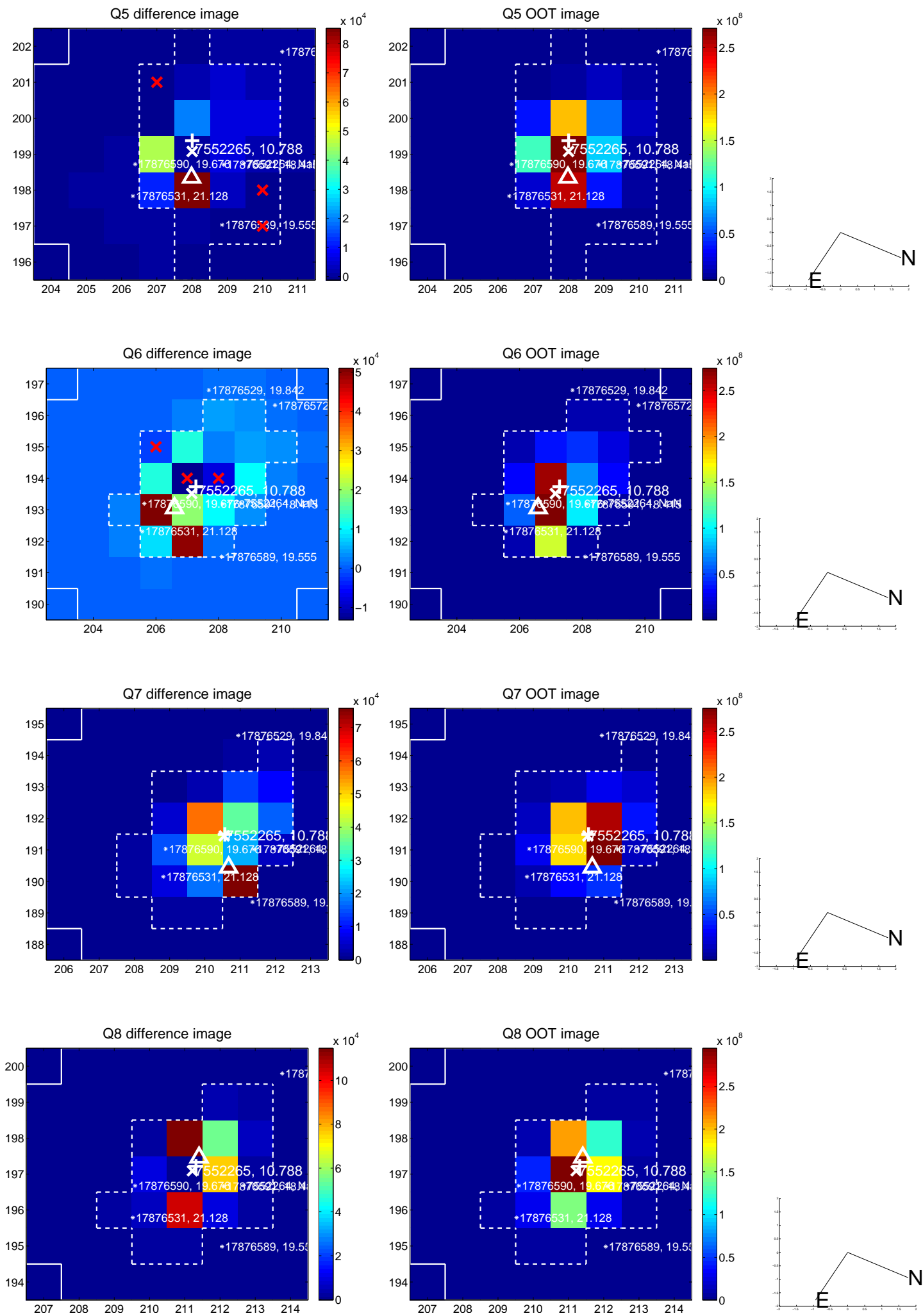


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

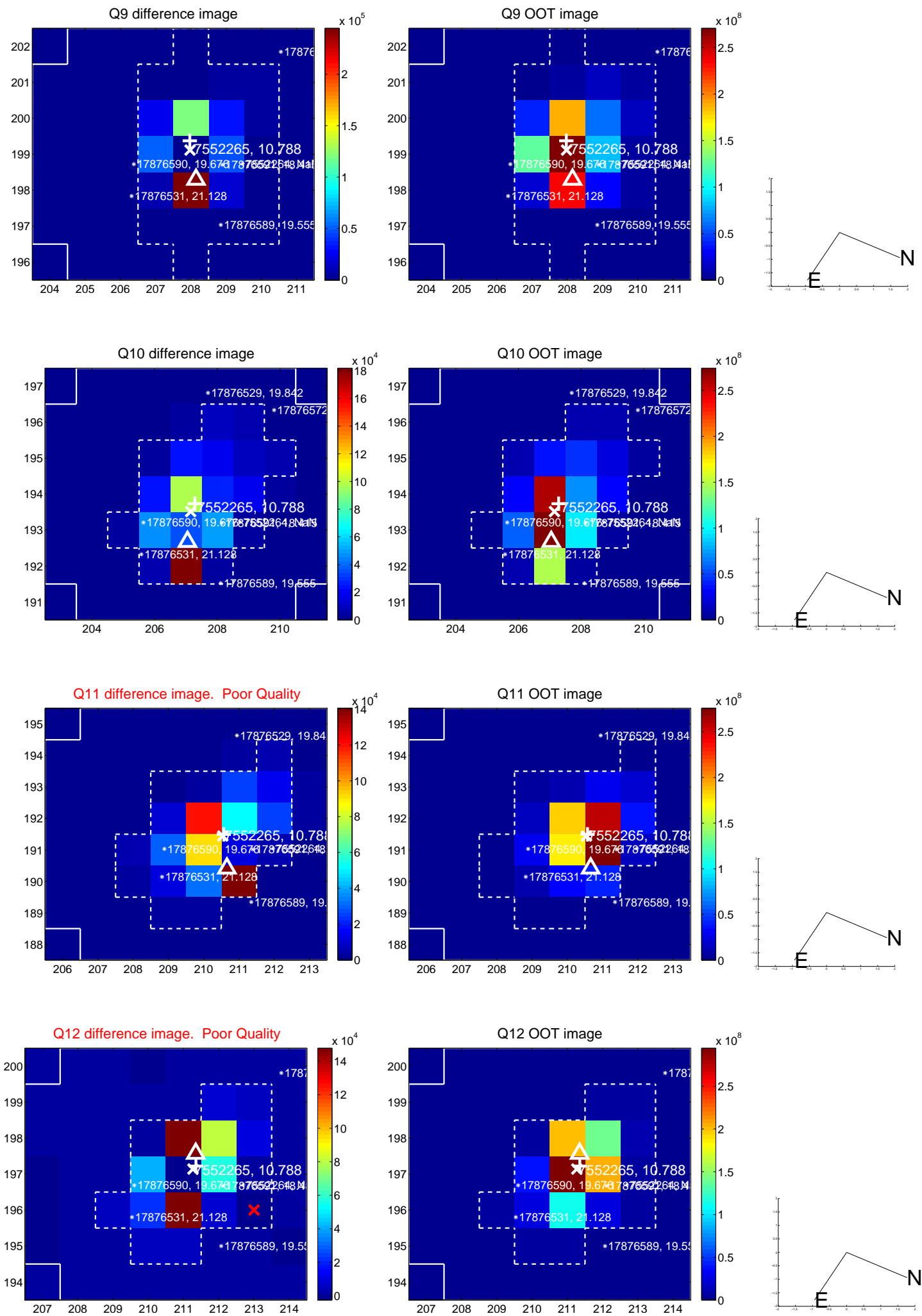
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



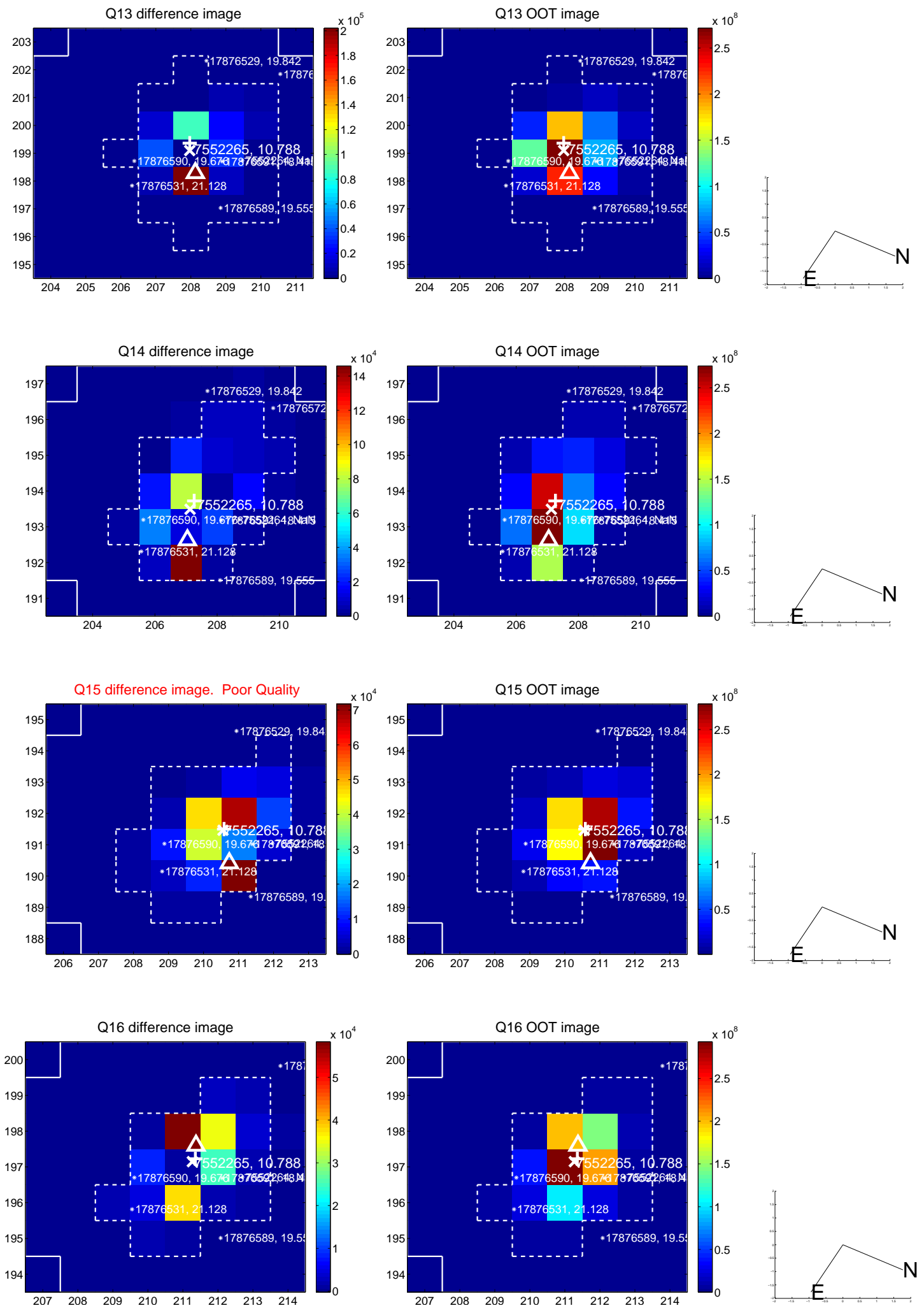
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



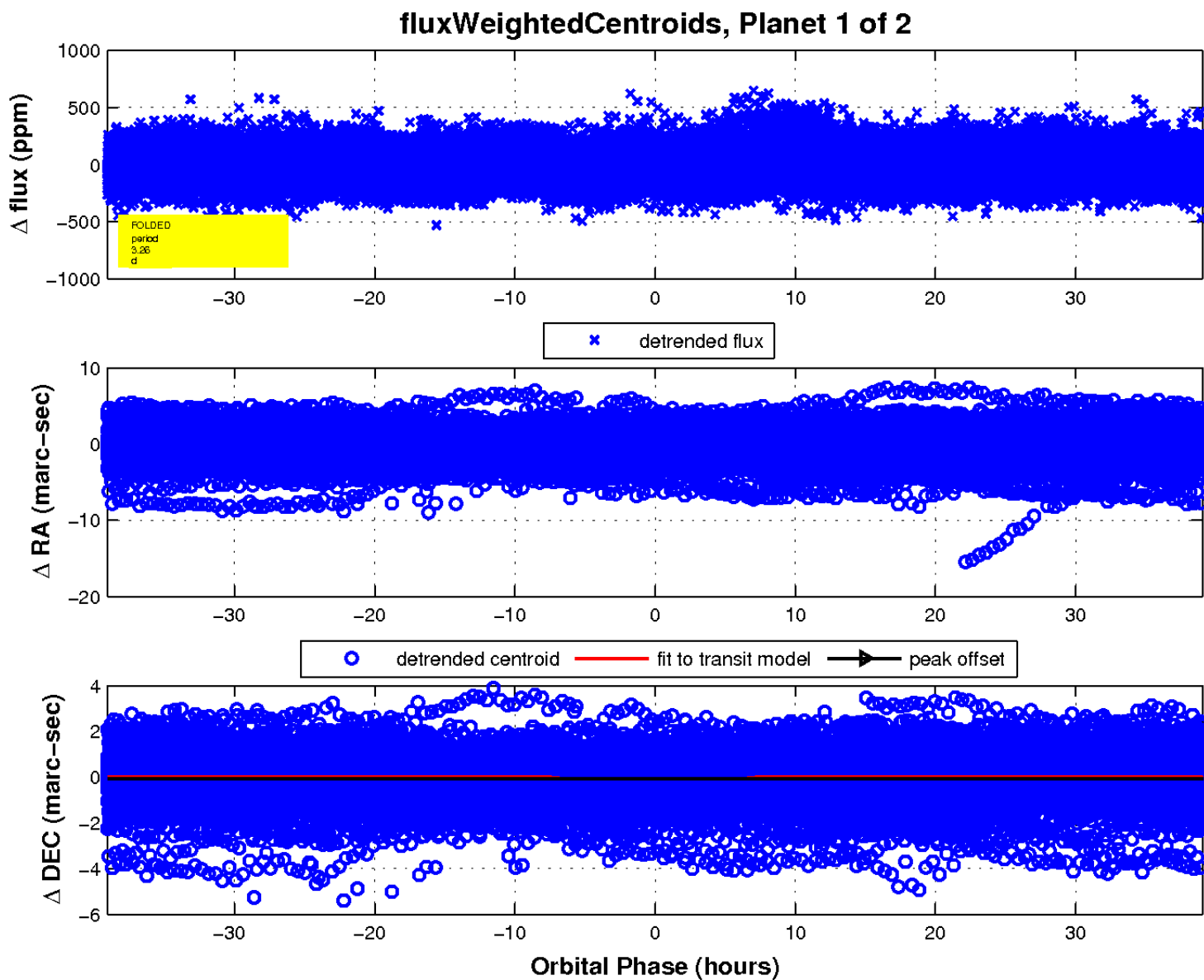
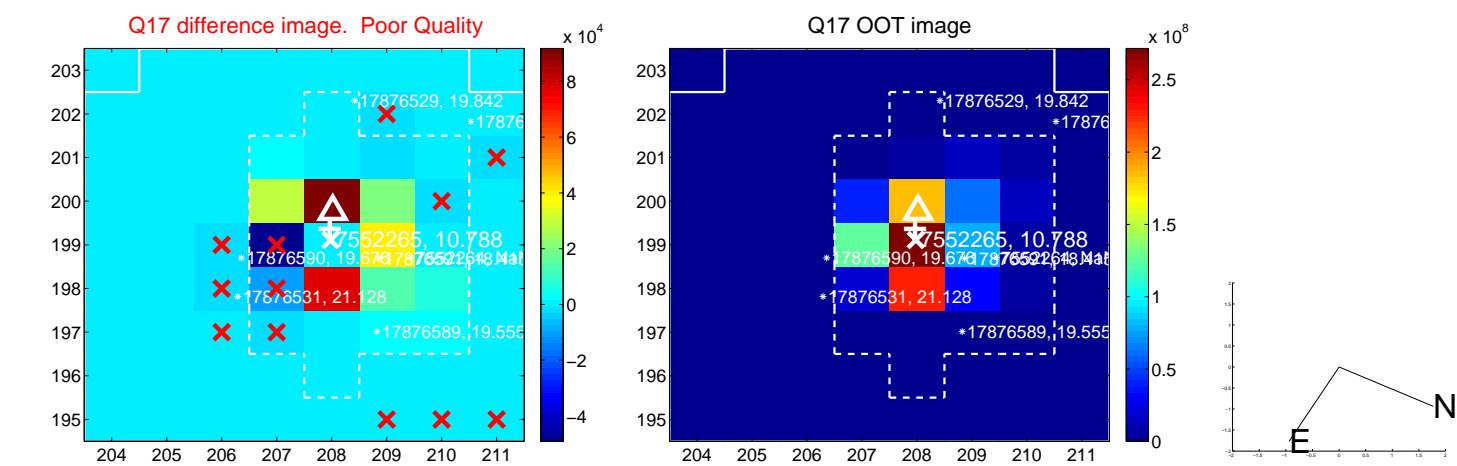
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

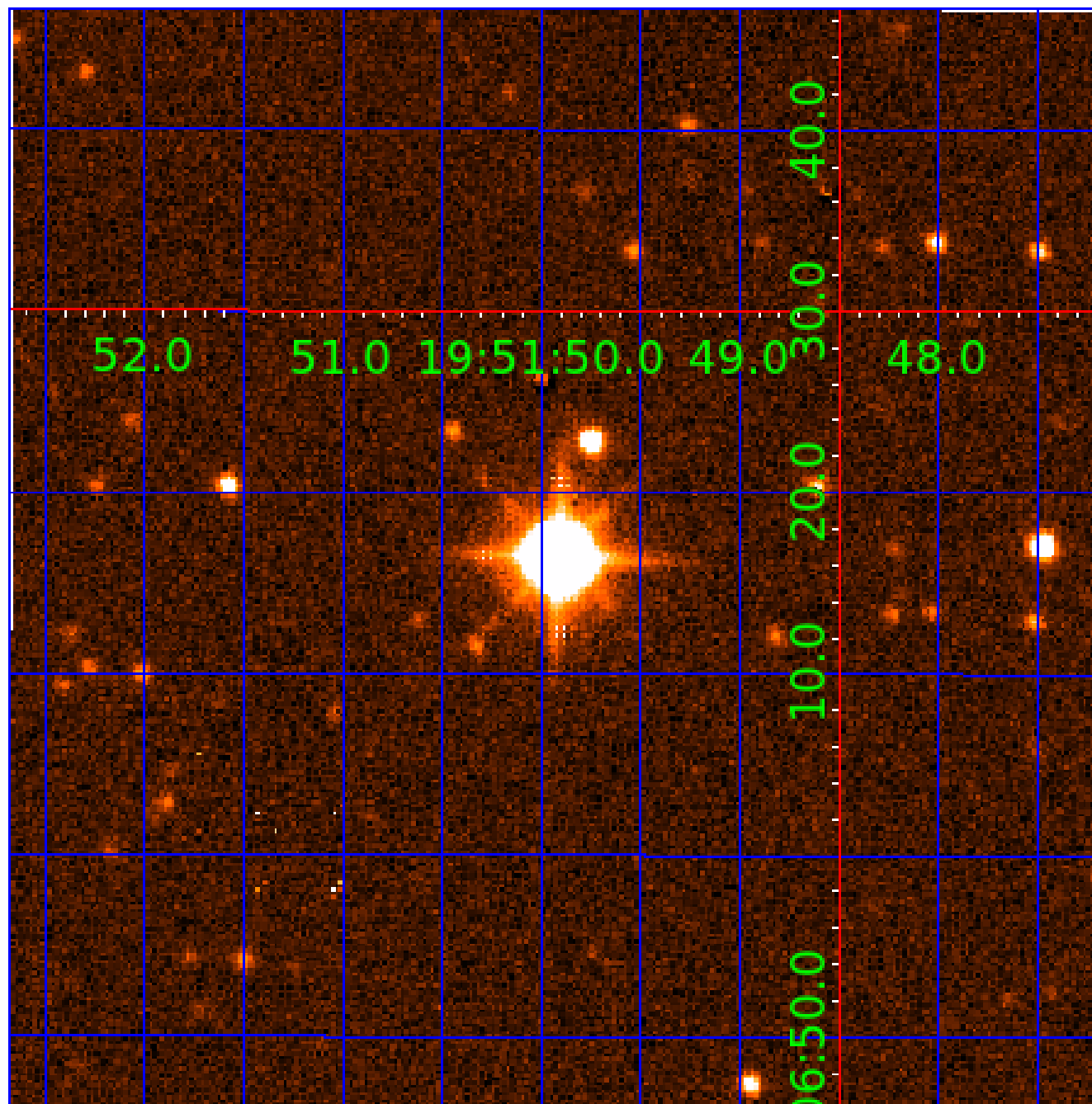


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007552265

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})
007552265-01	OBS	No	3.256273	133.878967	19.1	15.016	8.5	7.0	2.45	6712	1.28	4561.83
007552265-02	OBS	No	3.256162	132.736216	20.6	7.764	12.8	10.4	2.45	6712	1.30	4562.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007552265-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED
007552265-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—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.

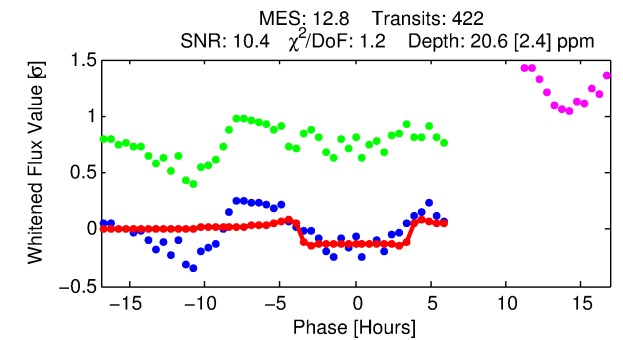
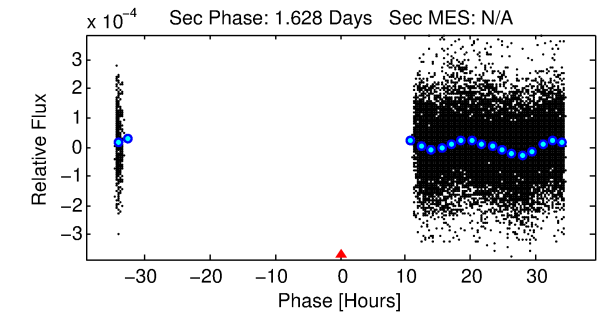
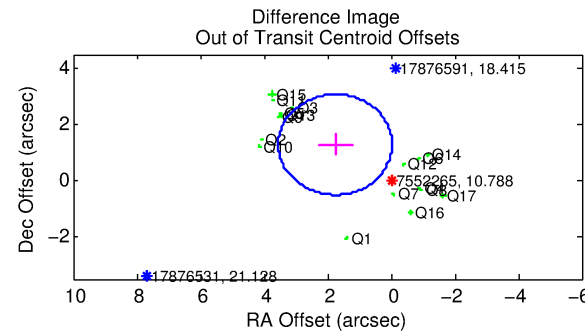
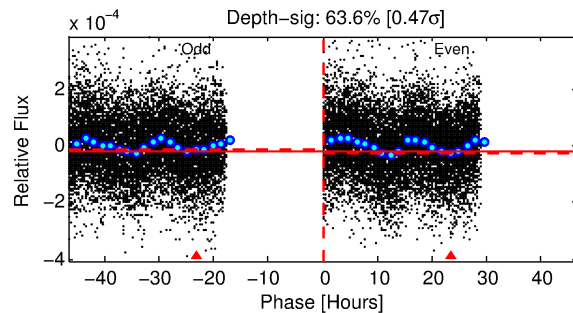
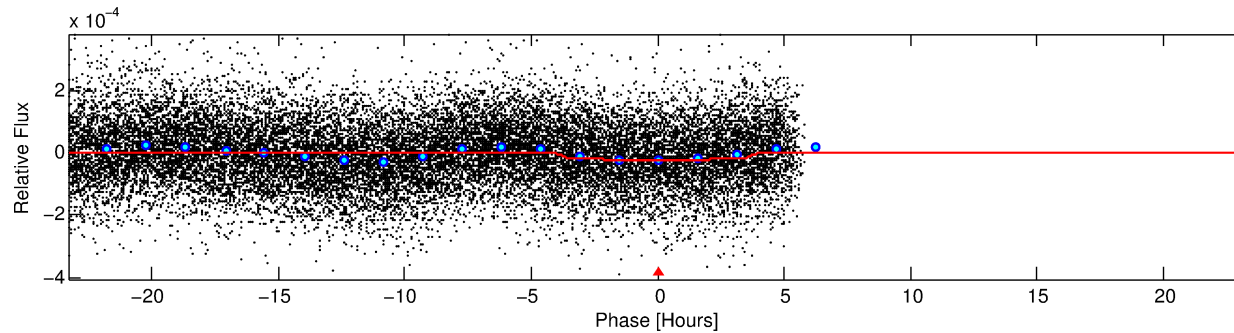
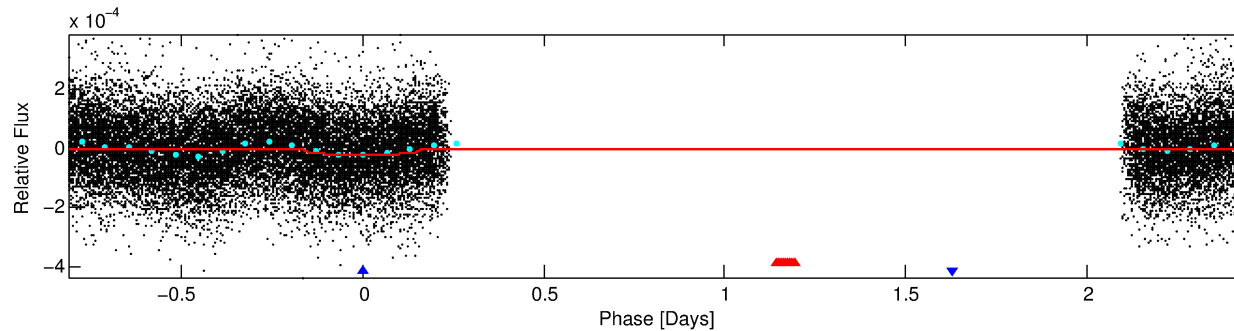
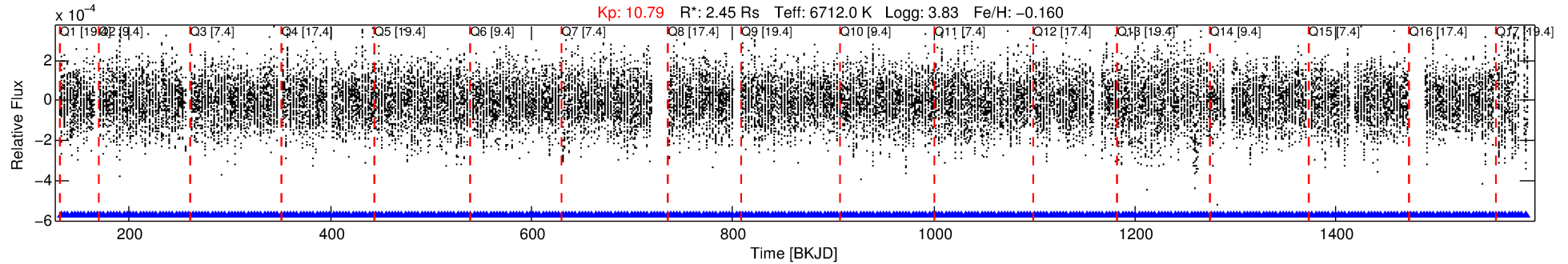
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007552265-02

No Significant Match Found

DV One-Page Summary

KIC: 7552265 Candidate: 2 of 2 Period: 3.256 d



DV Fit Results:

Period = 3.25616 [0.00003] d
Epoch = 132.7362 [0.0046] BKJD
Rp/R* = 0.0049 [0.0007]
a/R* = 1.68 [0.89]
b = 0.91 [0.16]
Seff = 4562.04 [2361.10]
Teq = 2096 [271] K
Rp = 1.30 [0.49] Re
a = 0.0490 [0.0157] AU

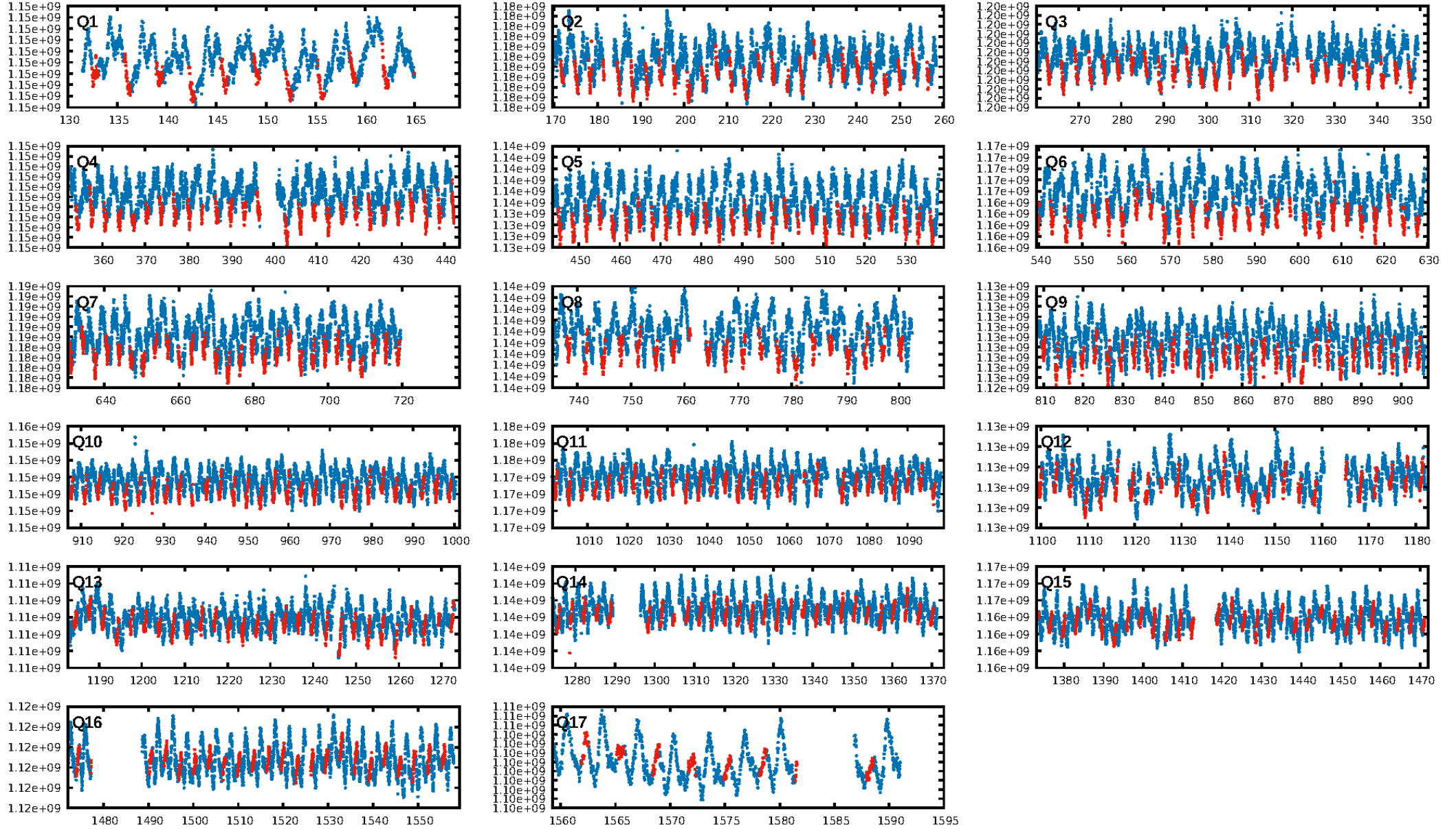
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [404/404]
GhostDiagnostic-chr: 0.6293
Centroid-sig: N/A
Centroid-so: 2.949 arcsec [4.15 σ]
OotOffset-rm: 2.179 arcsec [3.66 σ]
KicOffset-rm: 1.610 arcsec [2.64 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.59 [10/17]
DiffImageOverlap-fno: 1.00 [17/17]

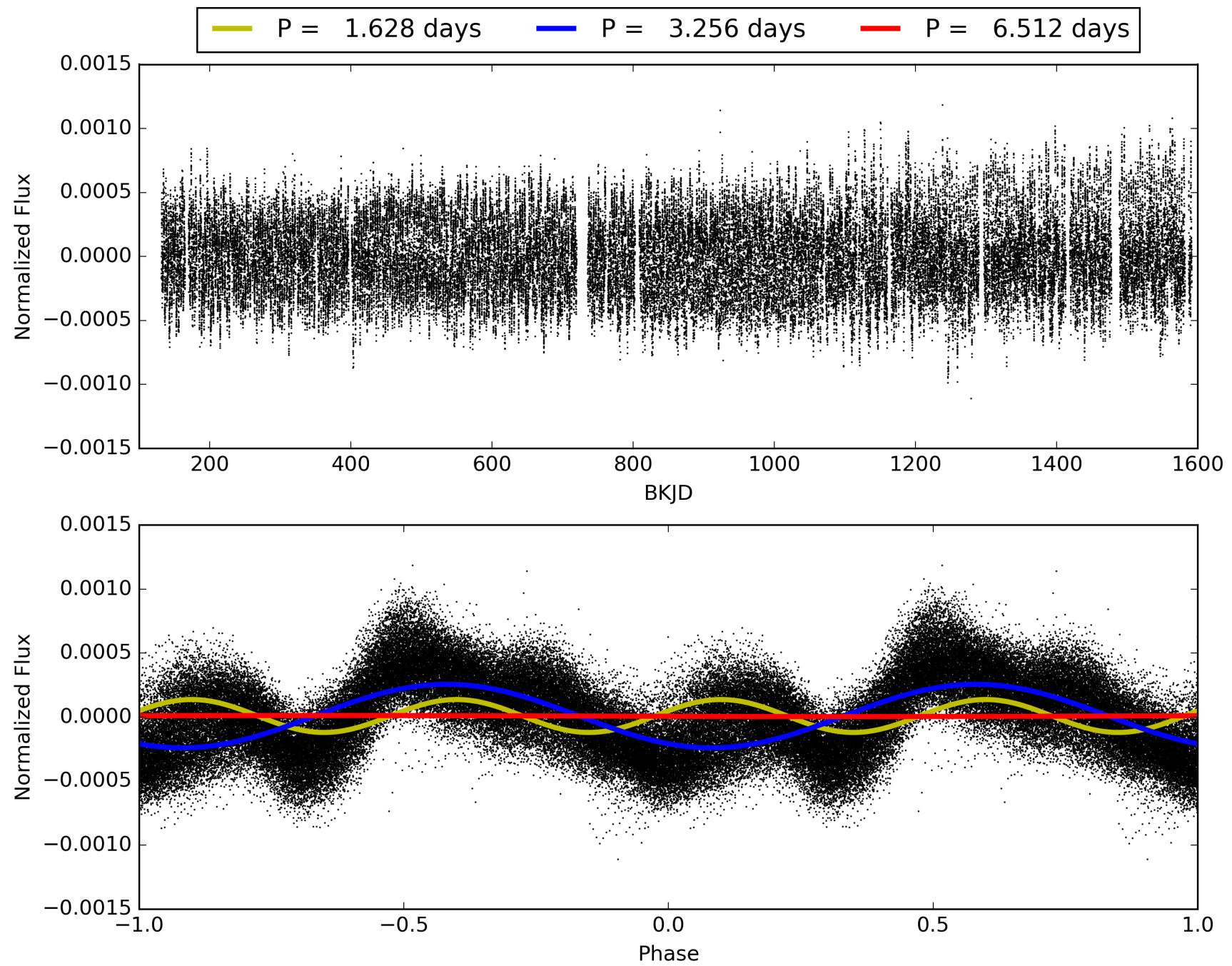
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 02:26:10 Z

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

TCE 007552265-02, PDC Light Curves

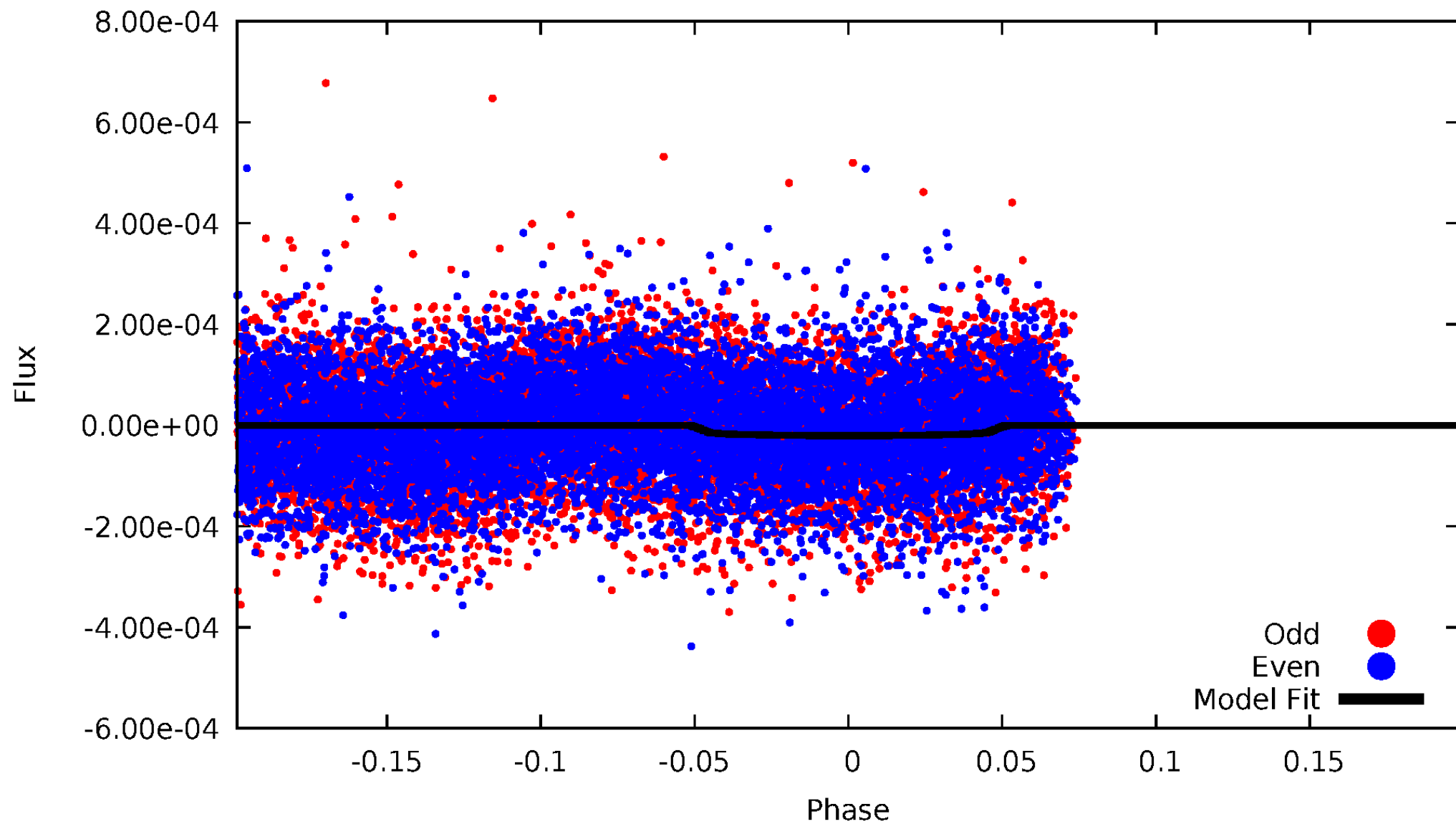


TCE 007552265-02



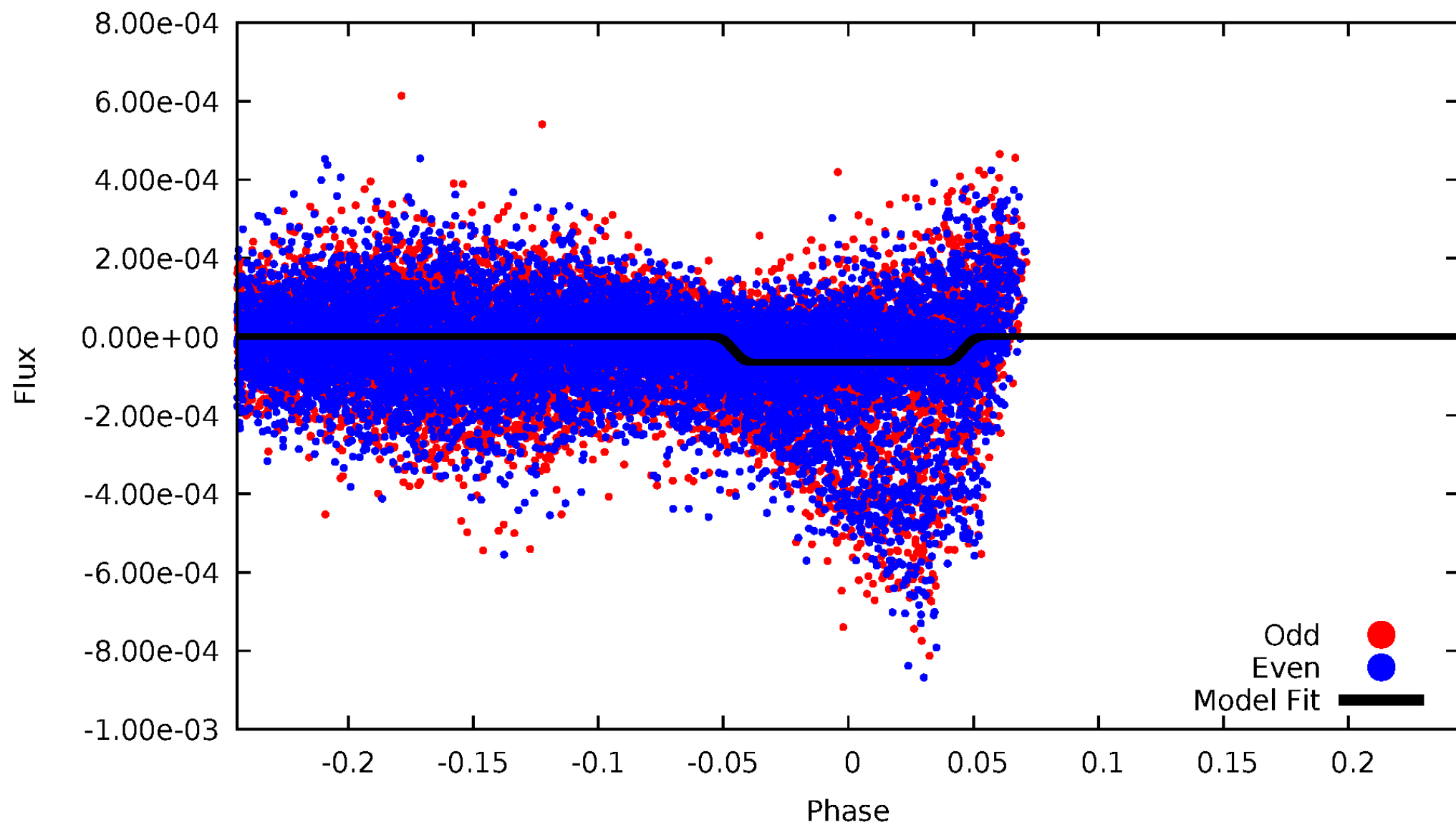
DV Odd/Even

TCE 007552265-02



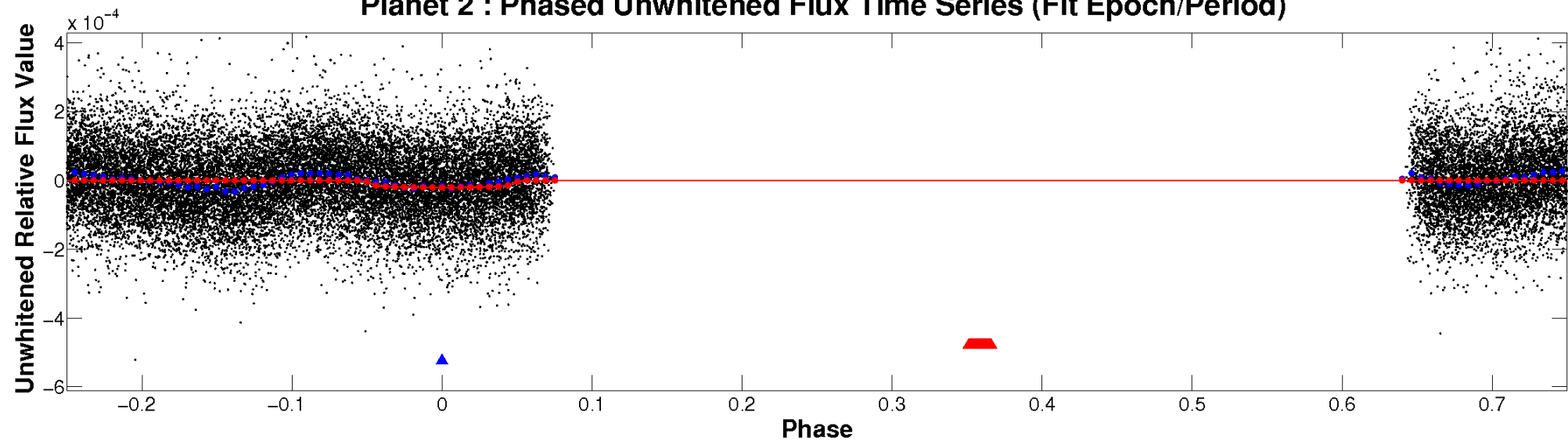
ALT Odd/Even

TCE 007552265-02

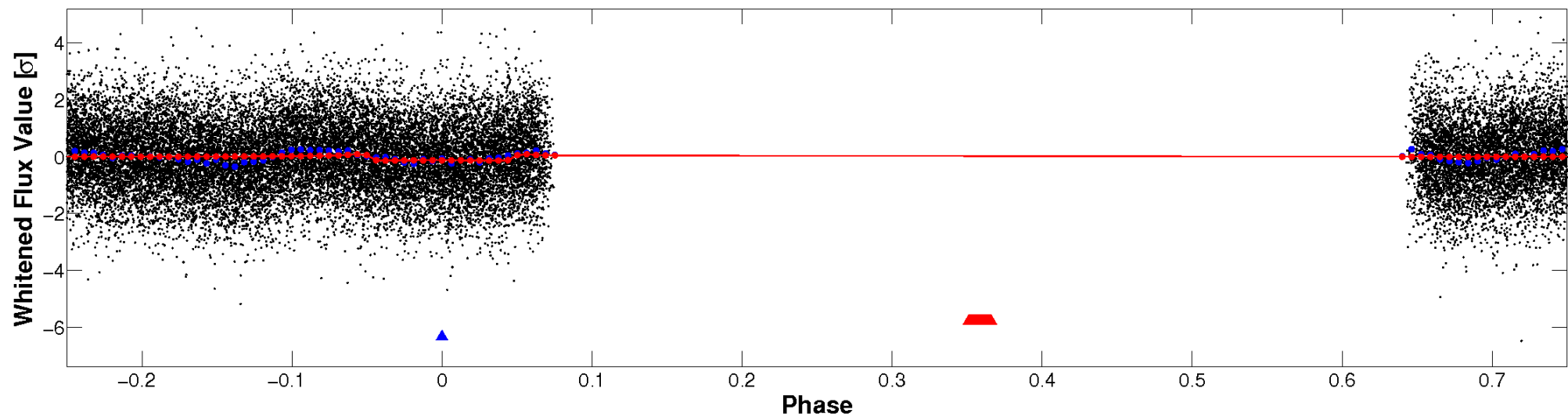


Non-Whitened Vs. Whitened Light Curve

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

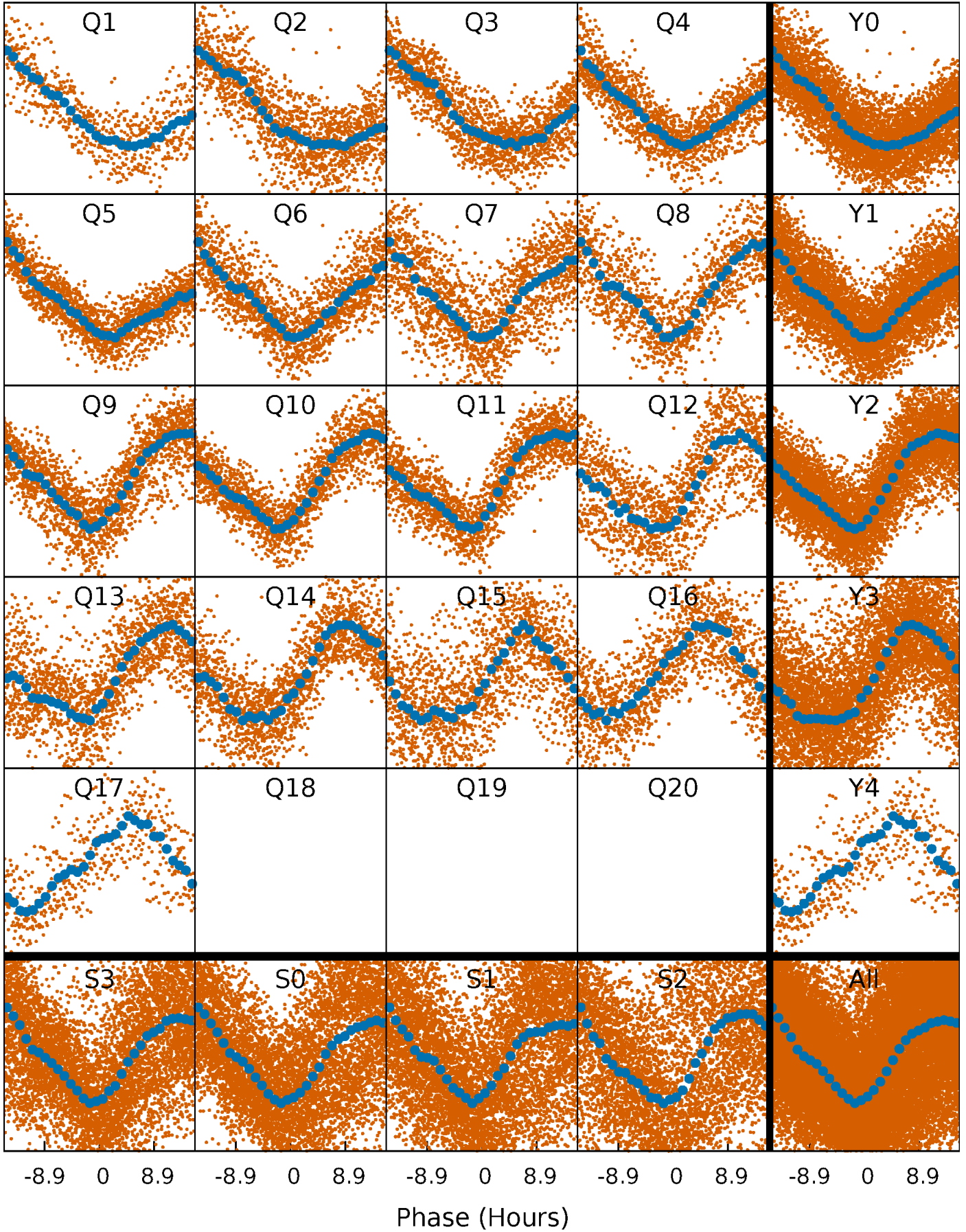


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



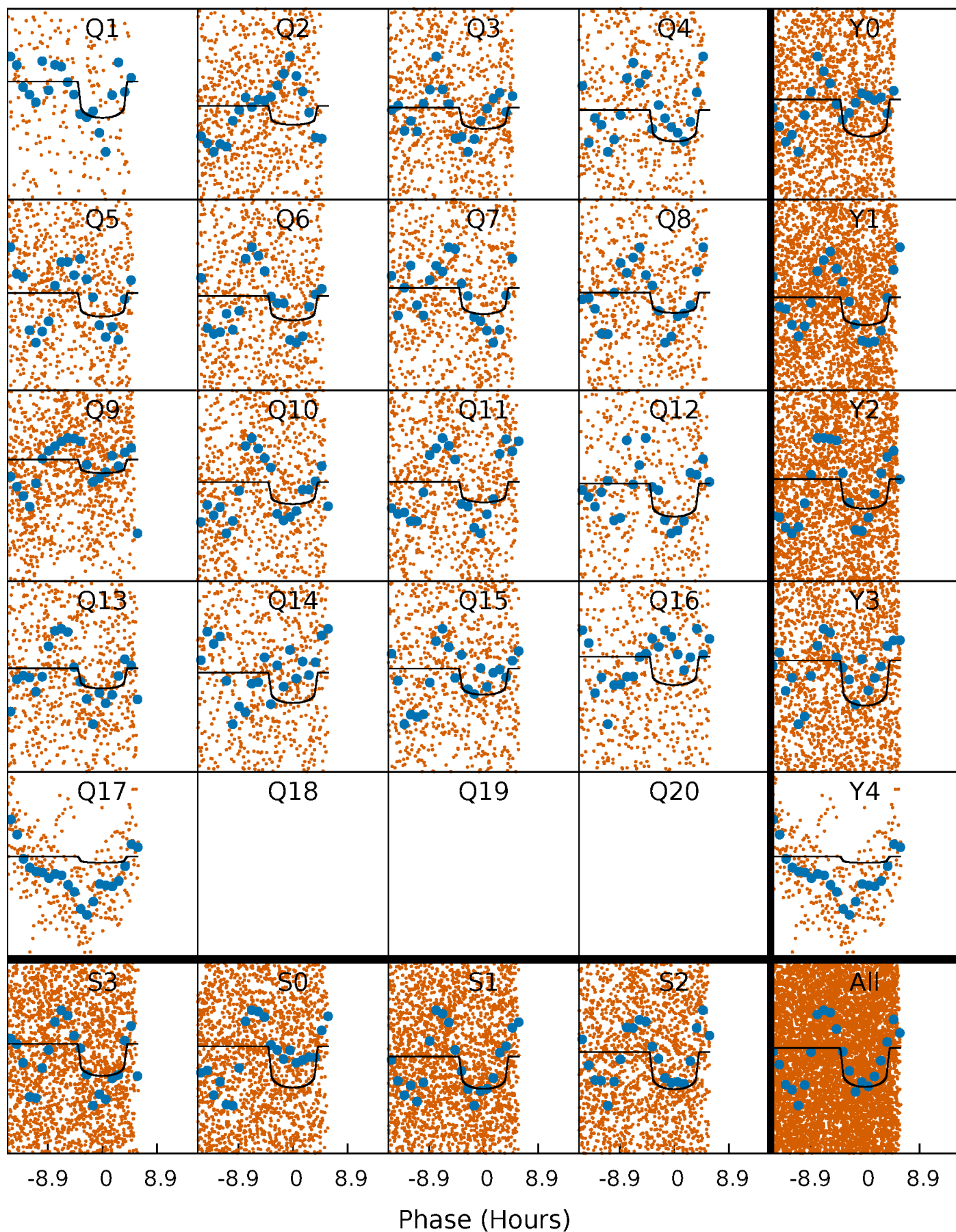
PDC Quarter-Phased Transit Curves

TCE 007552265-02 P= 3.256162 Days $T_0=132.736216$ (BKJD)



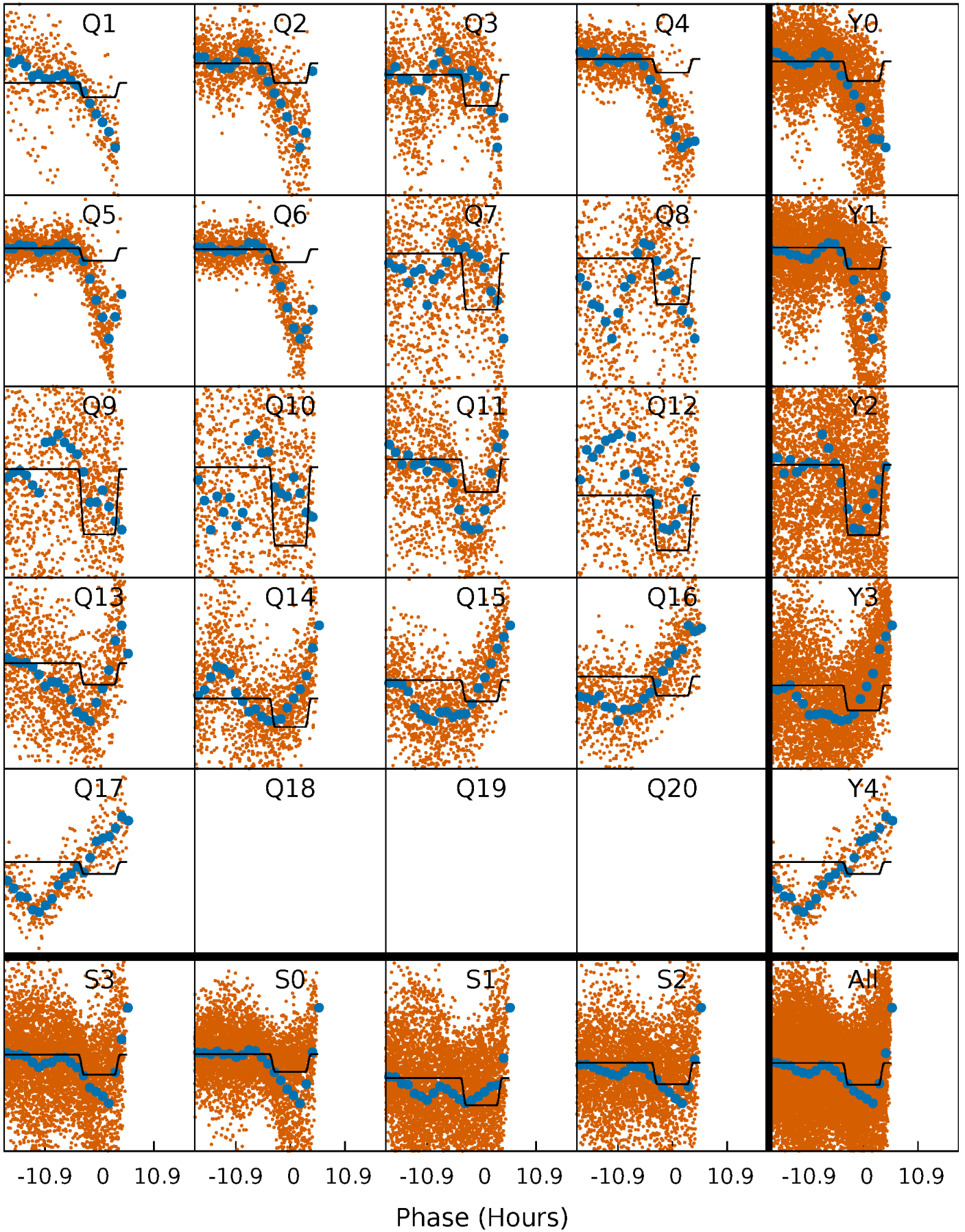
DV Quarter-Phased Transit Curves

TCE 007552265-02 P= 3.256162 Days $T_0=132.736216$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

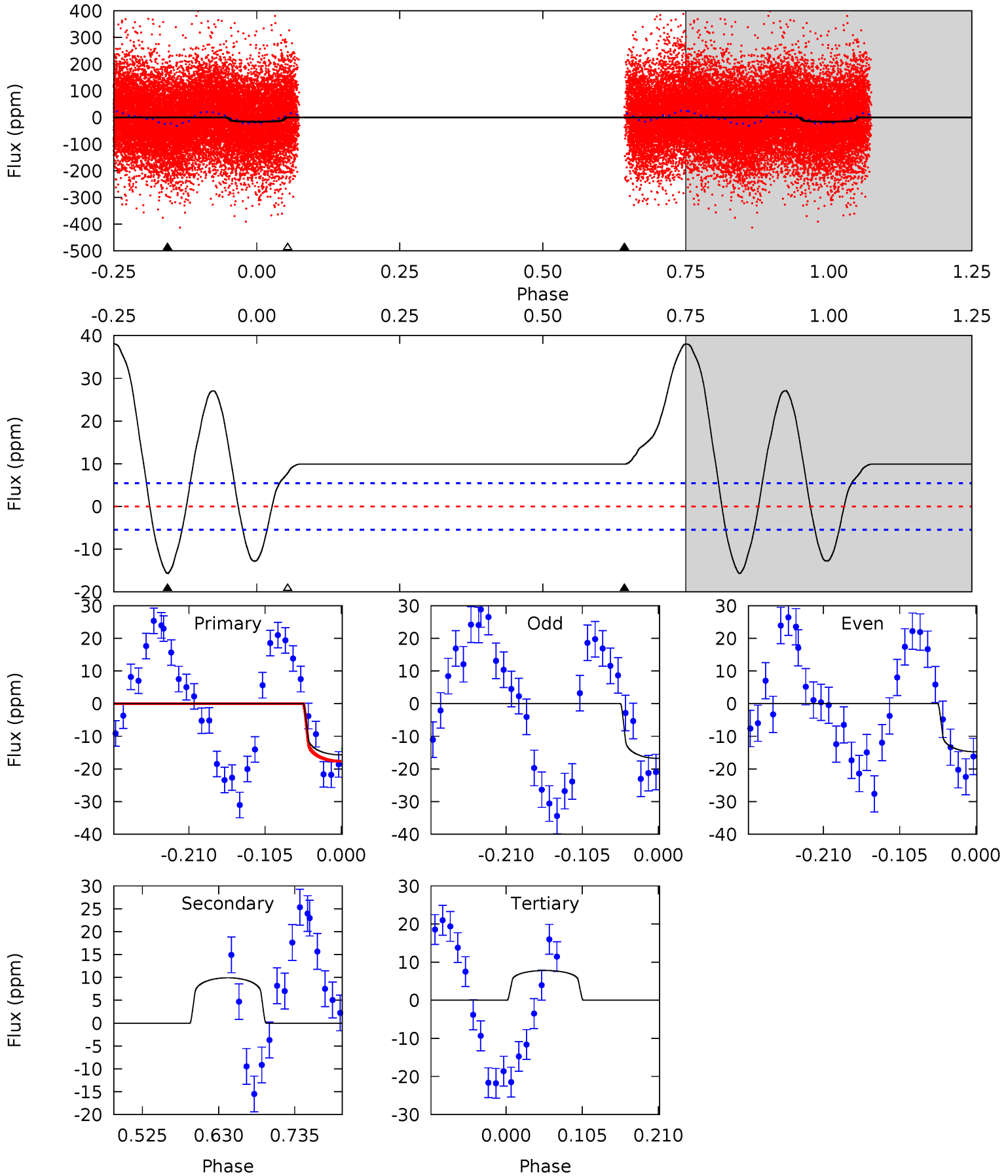
TCE 007552265-02 $P = 3.256109$ Days $T_0 = 132.770248$ (BKJD)



DV Model-Shift Uniqueness Test

007552265-02, P = 3.256162 Days, E = 129.480054 Days

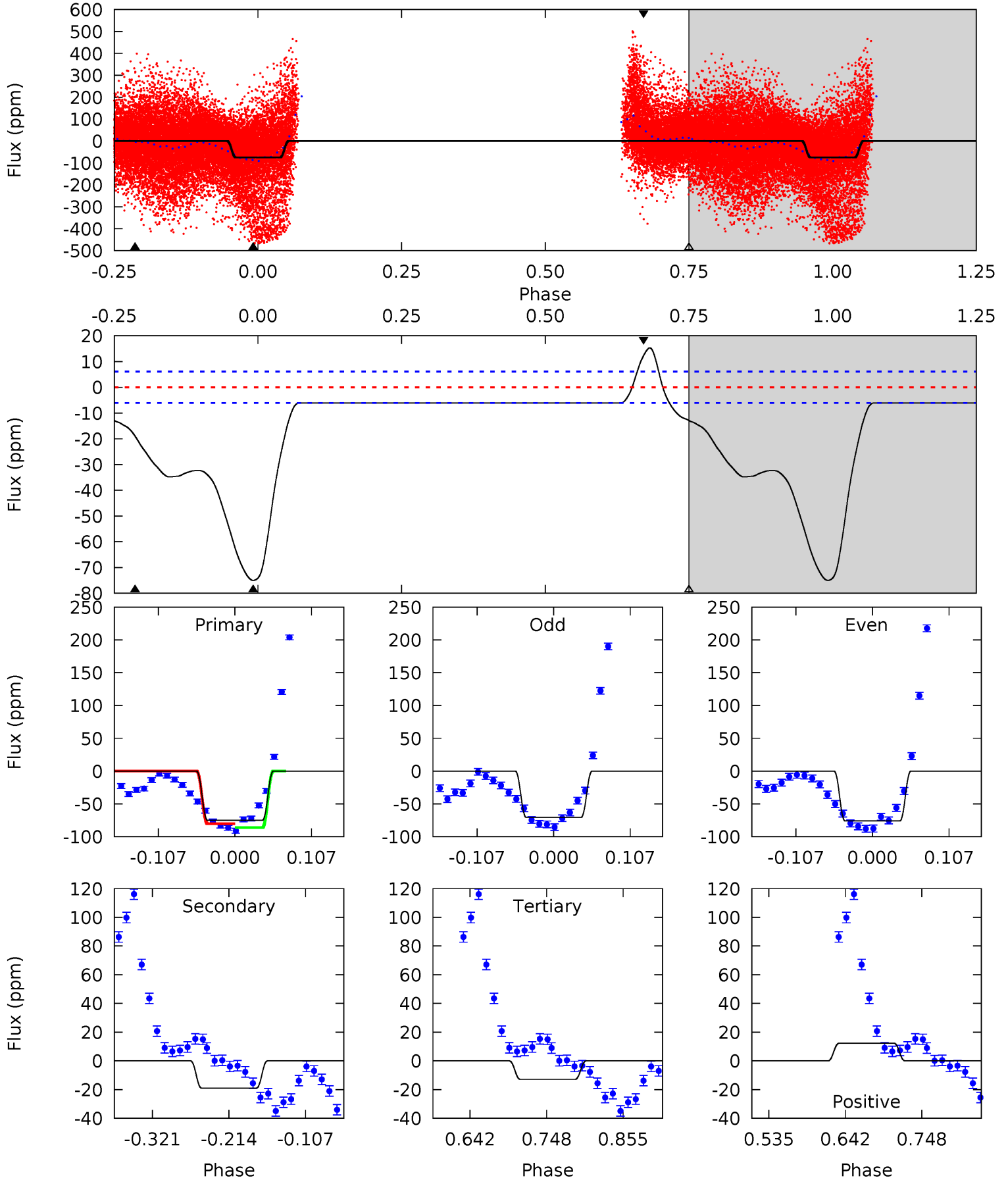
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	-8.28	-6.52	0	4.55	1.62	6.95	19.6	13.1	-1.76	-8.28	0.85	1.01	0.71	1.58



Alt Model-Shift Uniqueness Test

007552265-02, P = 3.256109 Days, E = 129.514139 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.1	14.2	9.63	9.20	4.55	1.61	7.18	46.4	46.9	4.55	4.98	1.95	2.37	0.17	1.78



Stellar Parameters For KIC 007552265

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6712^{+150}_{-200}	$3.828^{+0.292}_{-0.097}$	$-0.160^{+0.300}_{-0.250}$	$2.453^{+0.455}_{-0.845}$	$1.478^{+0.224}_{-0.274}$	$0.141^{+0.290}_{-0.044}$
	+2%/-3%	+8%/-3%	+188%/-156%	+19%/-34%	+15%/-19%	+206%/-31%
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 007552265-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	10 ± 1	$1.24^{+0.28}_{-0.29}$	2869^{+167}_{-265}	-5440^{+374}_{-468}	$-8.544^{+2.986}_{-5.620}$
Alt.	-19 ± 1	$2.09^{+0.35}_{-0.41}$	2874^{+174}_{-254}	4914^{+273}_{-211}	$5.772^{+2.778}_{-1.488}$

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

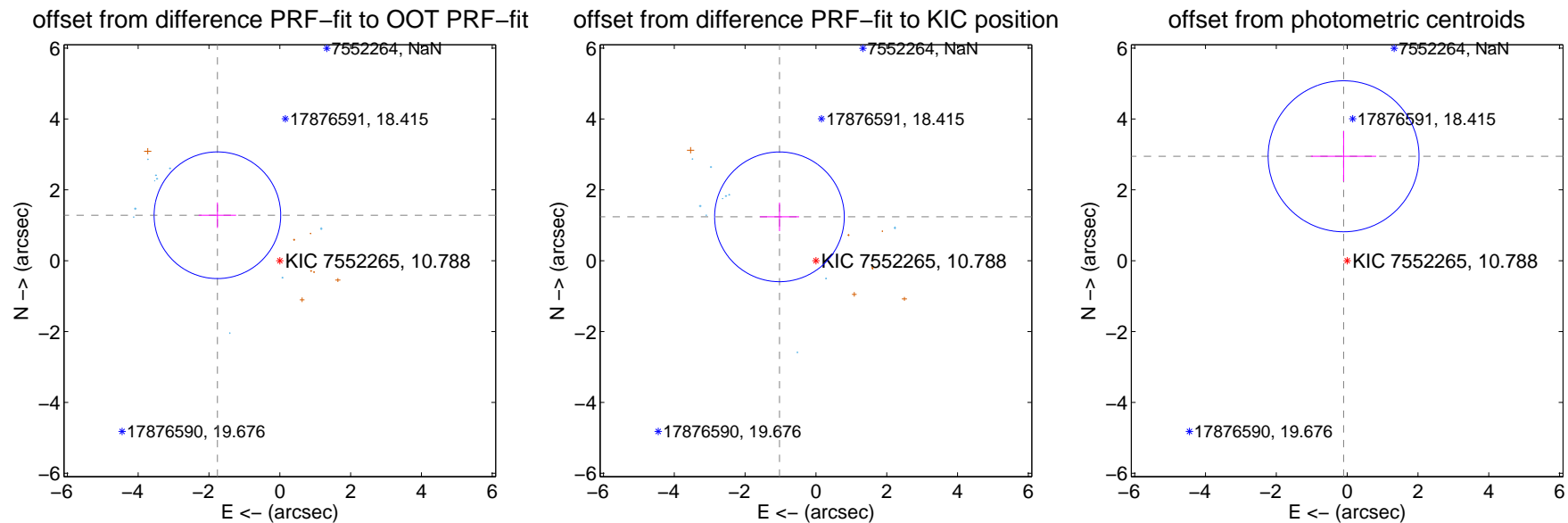
DV Centroid Data

Supplemental centroid analysis for 007552265-02. **Kepler magnitude: 10.79**. Transit SNR 10.38

There are 10 quarters with good PRF difference image offsets

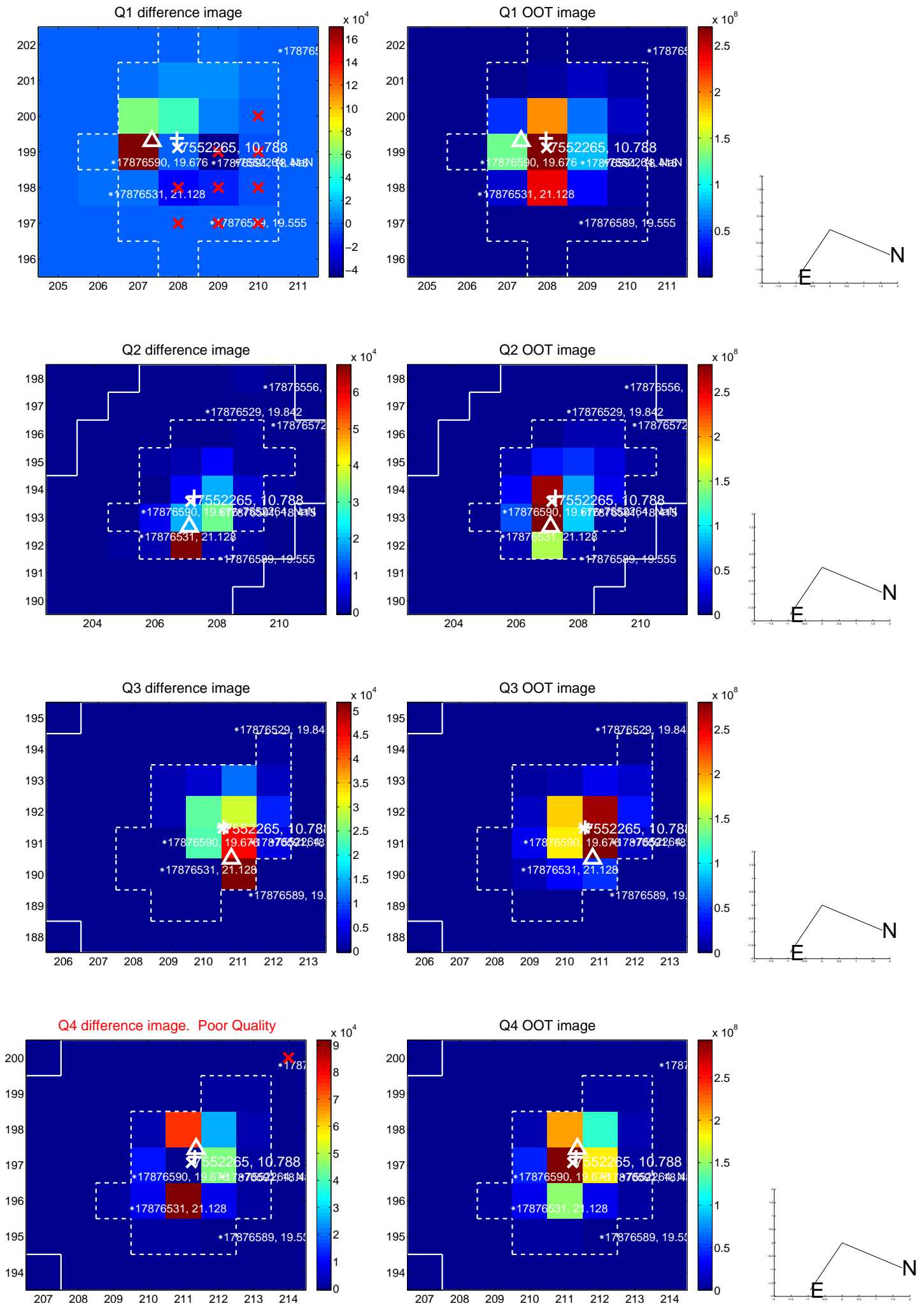
The direct PRF centroid is offset from the target star catalog position by about 1.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.179 ± 0.596	3.66	1.762 ± 0.530	1.283 ± 0.358
PRF-fit source offset from KIC position	1.610 ± 0.610	2.64	1.030 ± 0.554	1.238 ± 0.402
photometric centroid source offset	2.95 ± 0.71	4.15	0.10 ± 0.92	2.95 ± 0.71

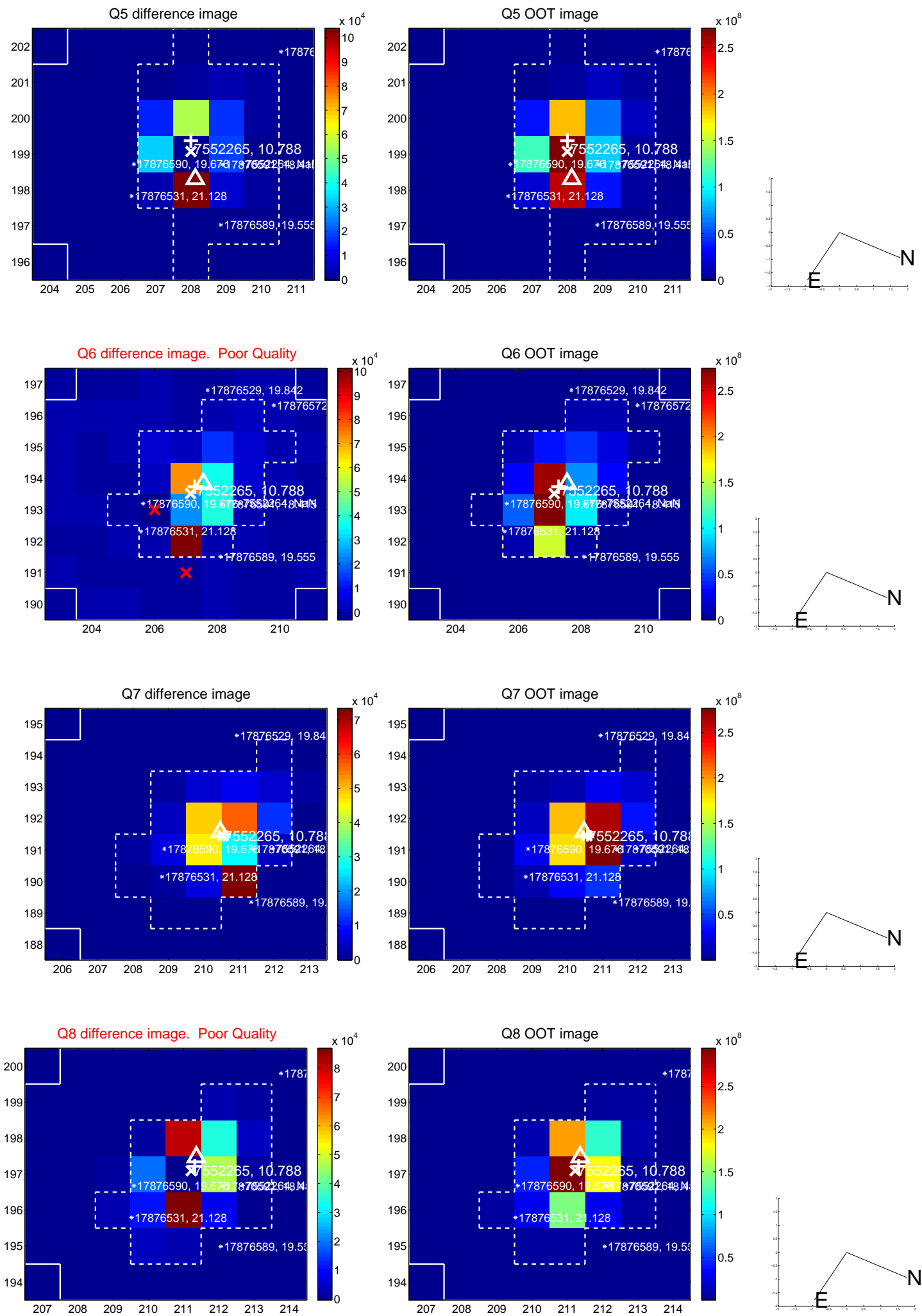


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

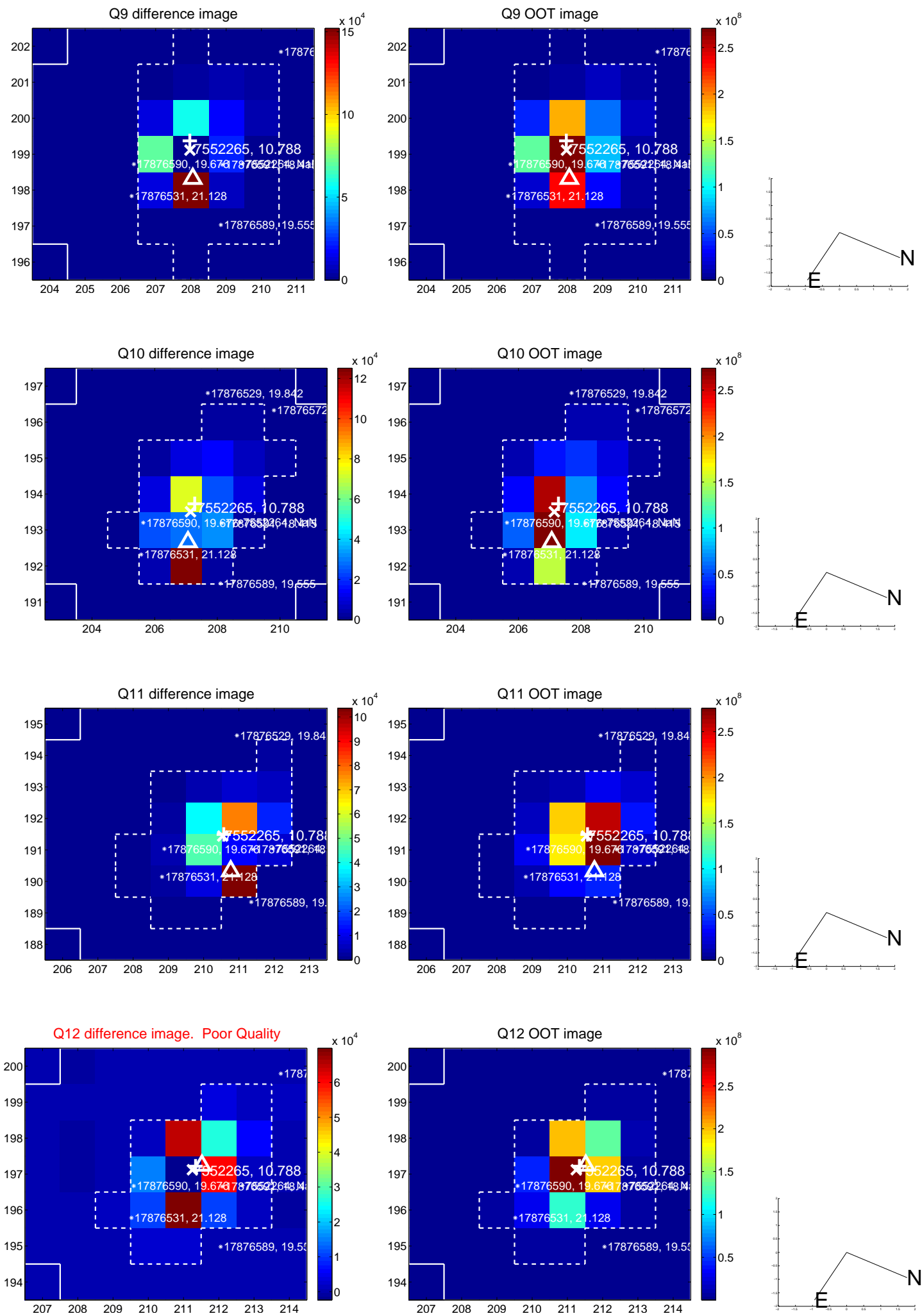
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



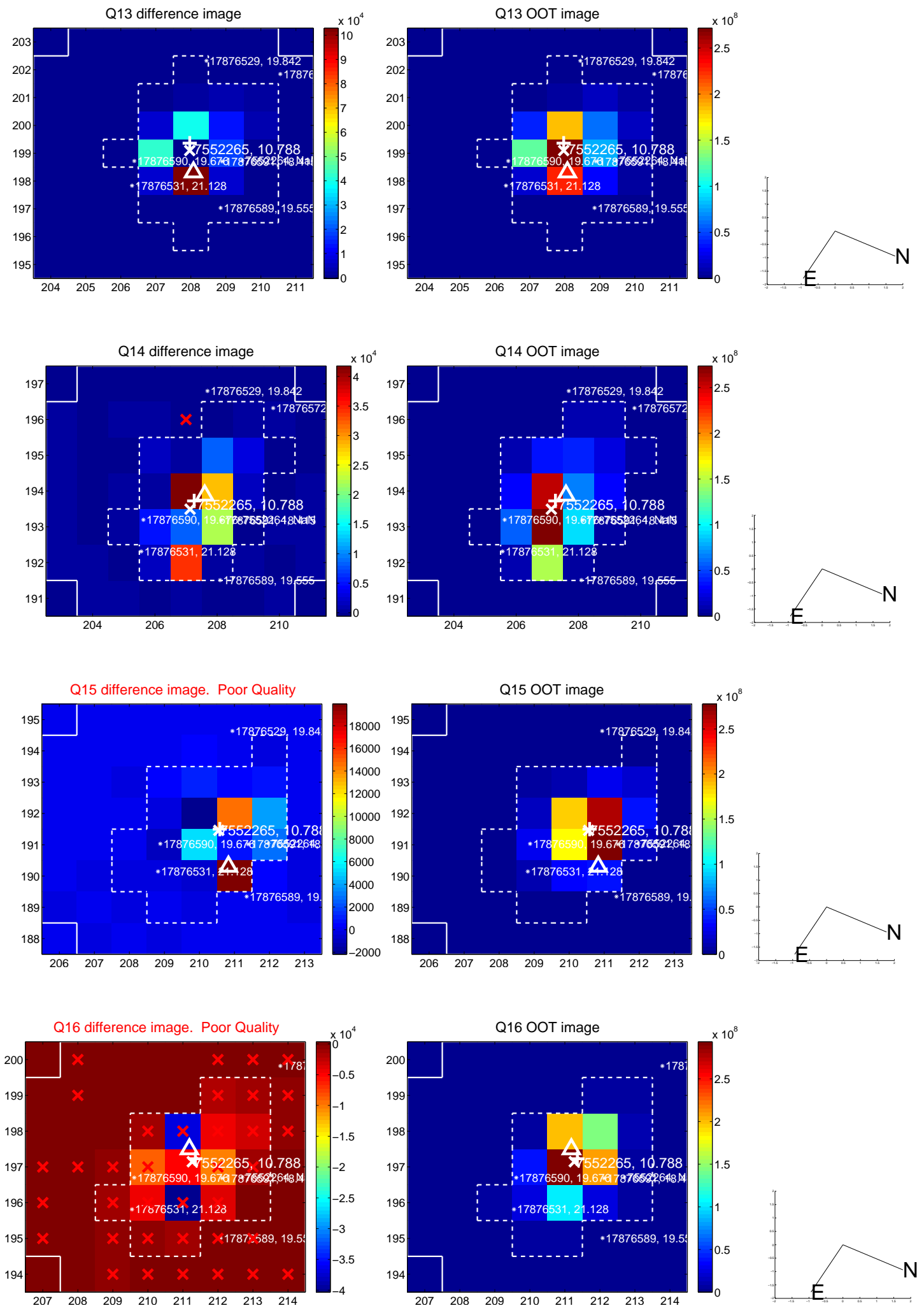
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



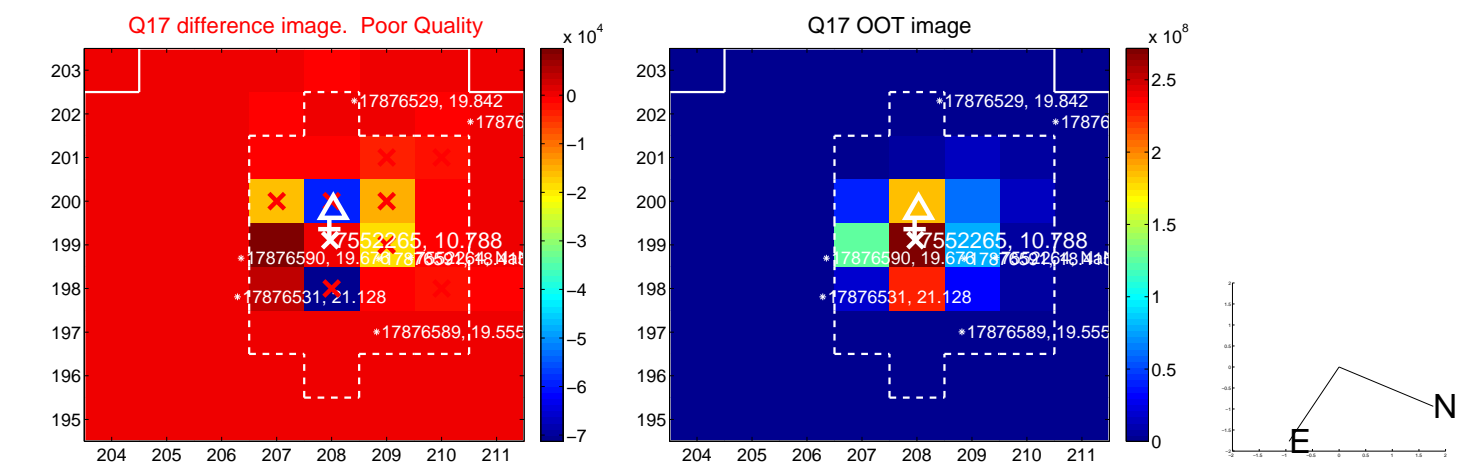
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



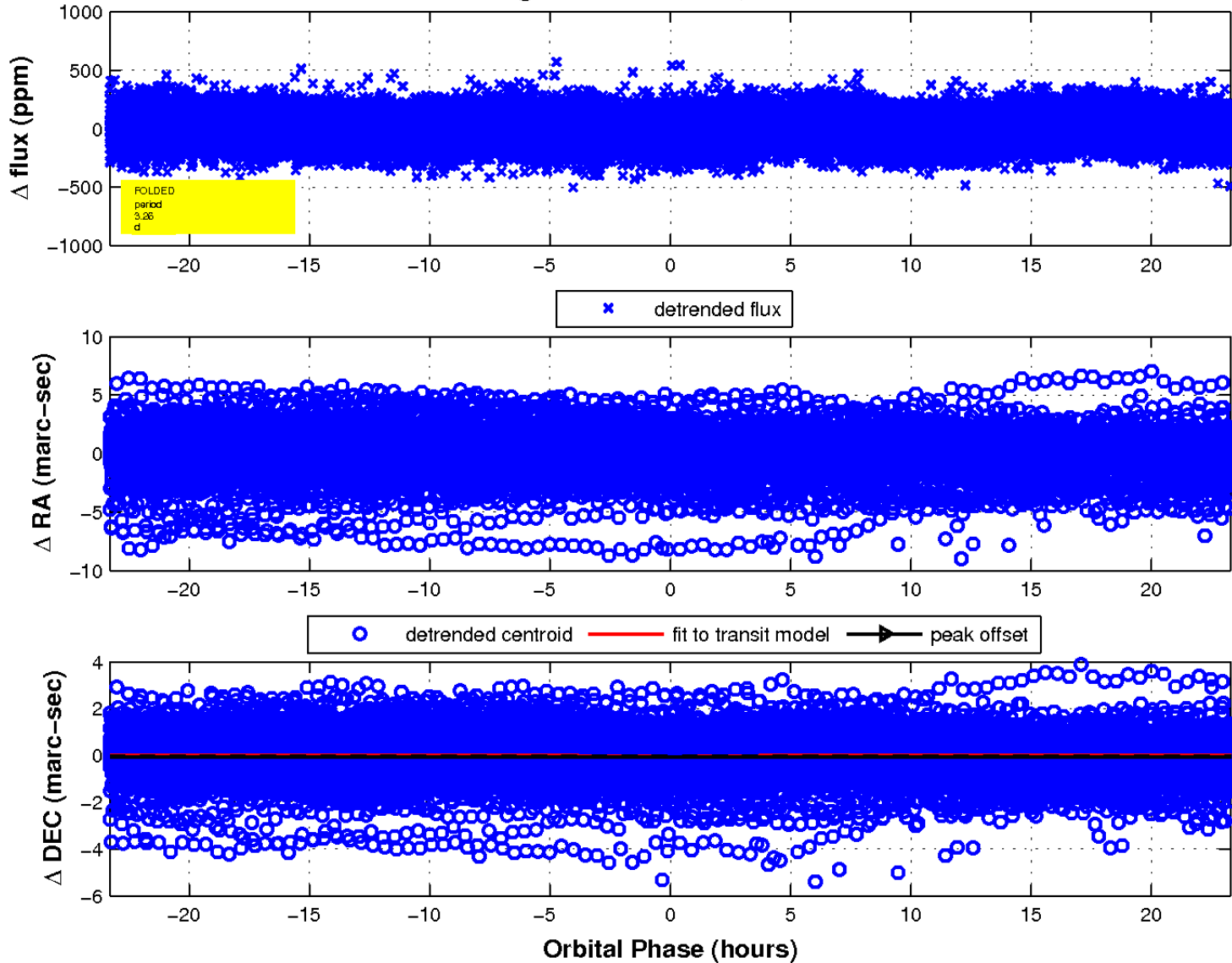
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

