

KIC 007800750

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})
007800750-01	OBS	No	0.580721	131.721552	15.1	3.352	9.7	8.2	1.84	5059	0.77	11584.07
007800750-02	OBS	No	58.770587	180.647091	244.9	3.952	7.7	7.8	1.84	5059	3.35	24.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007800750-01	OBS	FP	0.00	1	0	0	1	LPP_DV—CENT_KIC_POS—EPHEM_MATCH
007800750-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_MEAS

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.

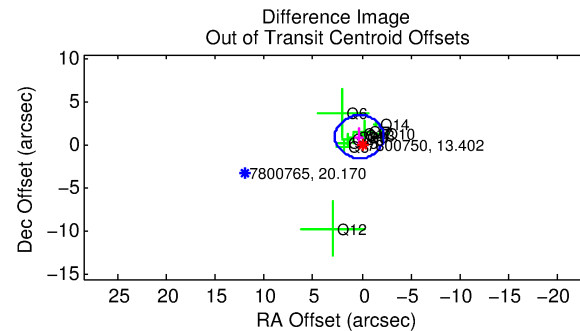
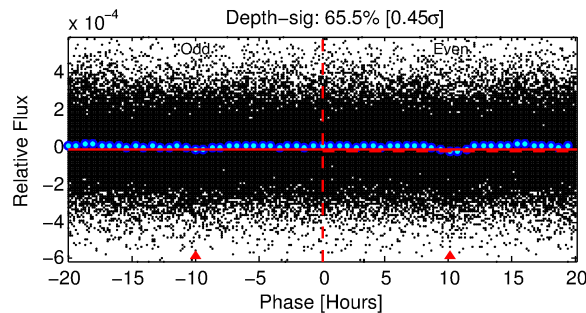
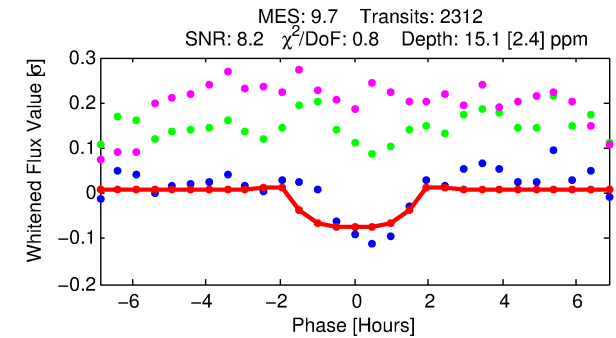
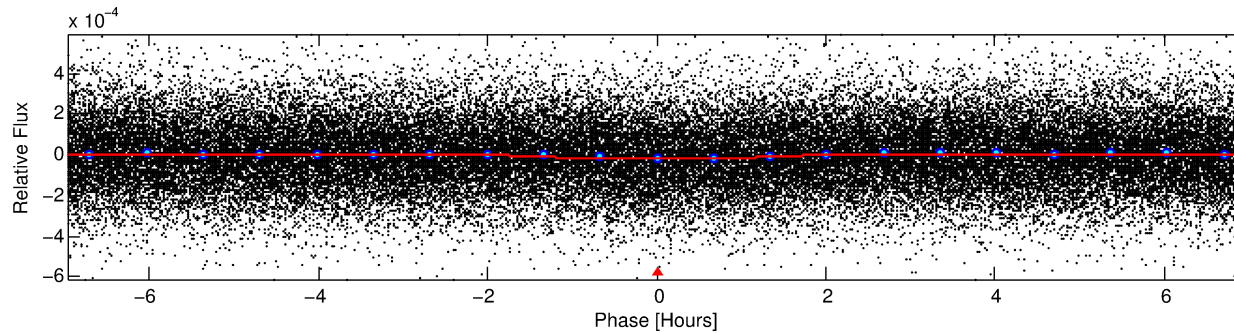
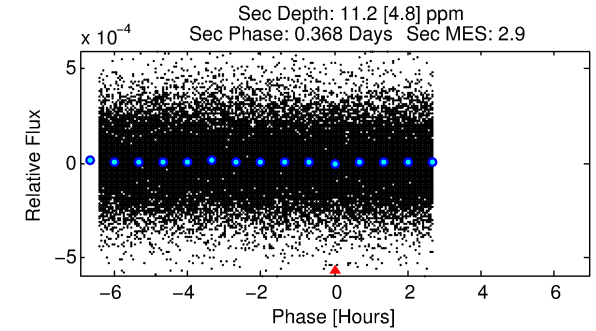
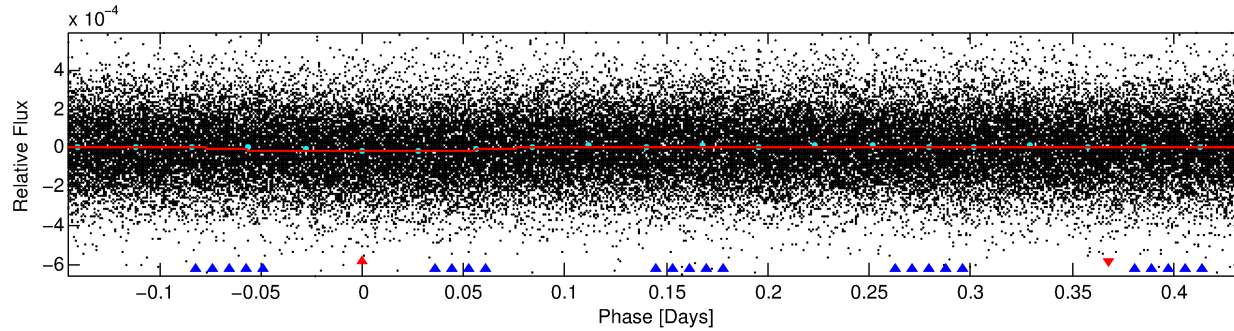
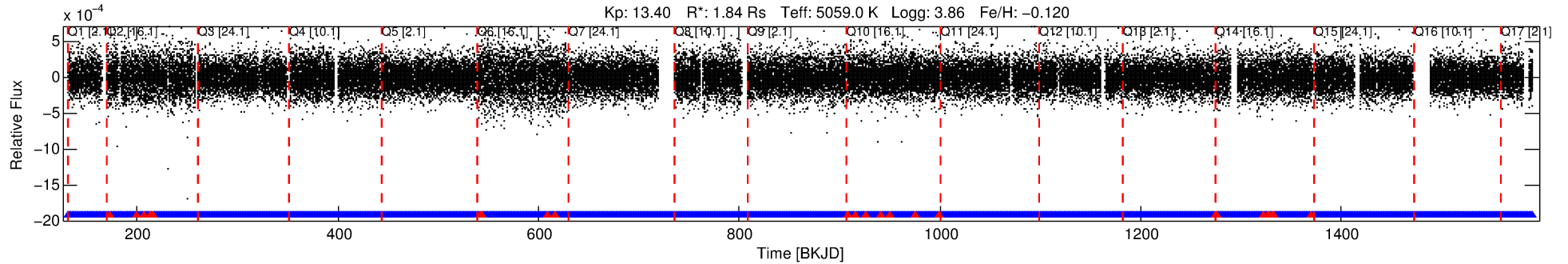
Ephemeris Match Information For 007800750-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007800750-01	7800750	007938870-pri	7938870	1:1	682.7	172	-1	12.29	13.40	23660.00	Col-Anomaly	0	1.08	0.54

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7800750 Candidate: 1 of 2 Period: 0.581 d



DV Fit Results:

Period = 0.58072 [0.00001] d
Epoch = 131.7216 [0.0043] BKJD
Rp/R* = 0.0038 [0.0021]
a/R* = 1.25 [0.89]
b = 0.72 [1.36]
Seff = 11584.07 [14619.84]
Teq = 2645 [835] K
Rp = 0.77 [0.64] Re
a = 0.0131 [0.0095] AU
Ag = 1.79 [3.08] [0.26σ]
Teffp = 4731 [1397] K [1.28σ]

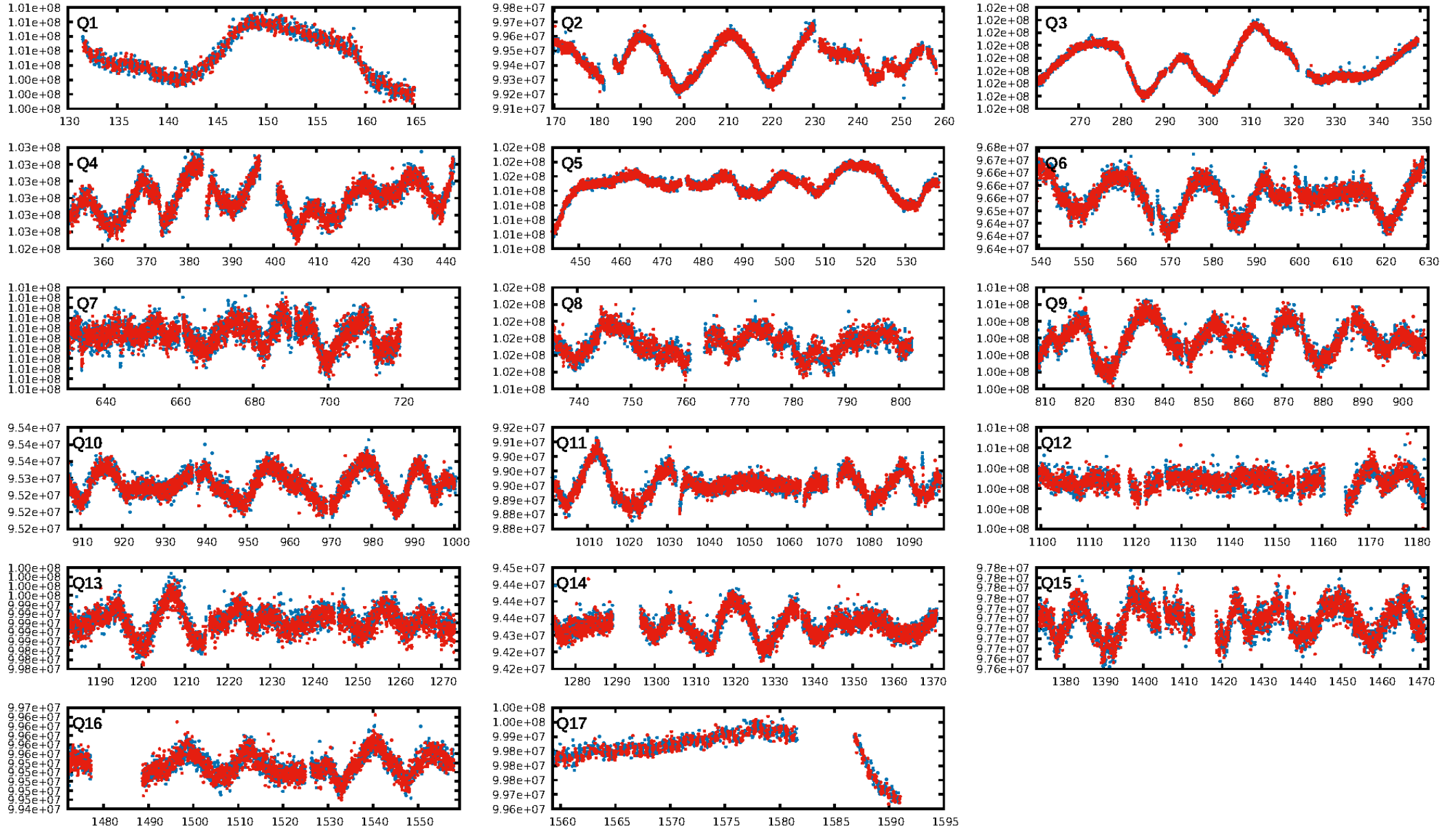
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [269.50σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.28e-17
RollingBand-fgt: 0.99 [2184/2208]
GhostDiagnostic-chr: 3.308
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.004 arcsec [1.21σ]
KicOffset-rm: 0.582 arcsec [0.66σ]
OotOffset-st: 4/3/1/4 [12]
KicOffset-st: 4/3/1/4 [12]
DiffImageQuality-fgm: 0.75 [9/12]
DiffImageOverlap-fno: 1.00 [17/17]

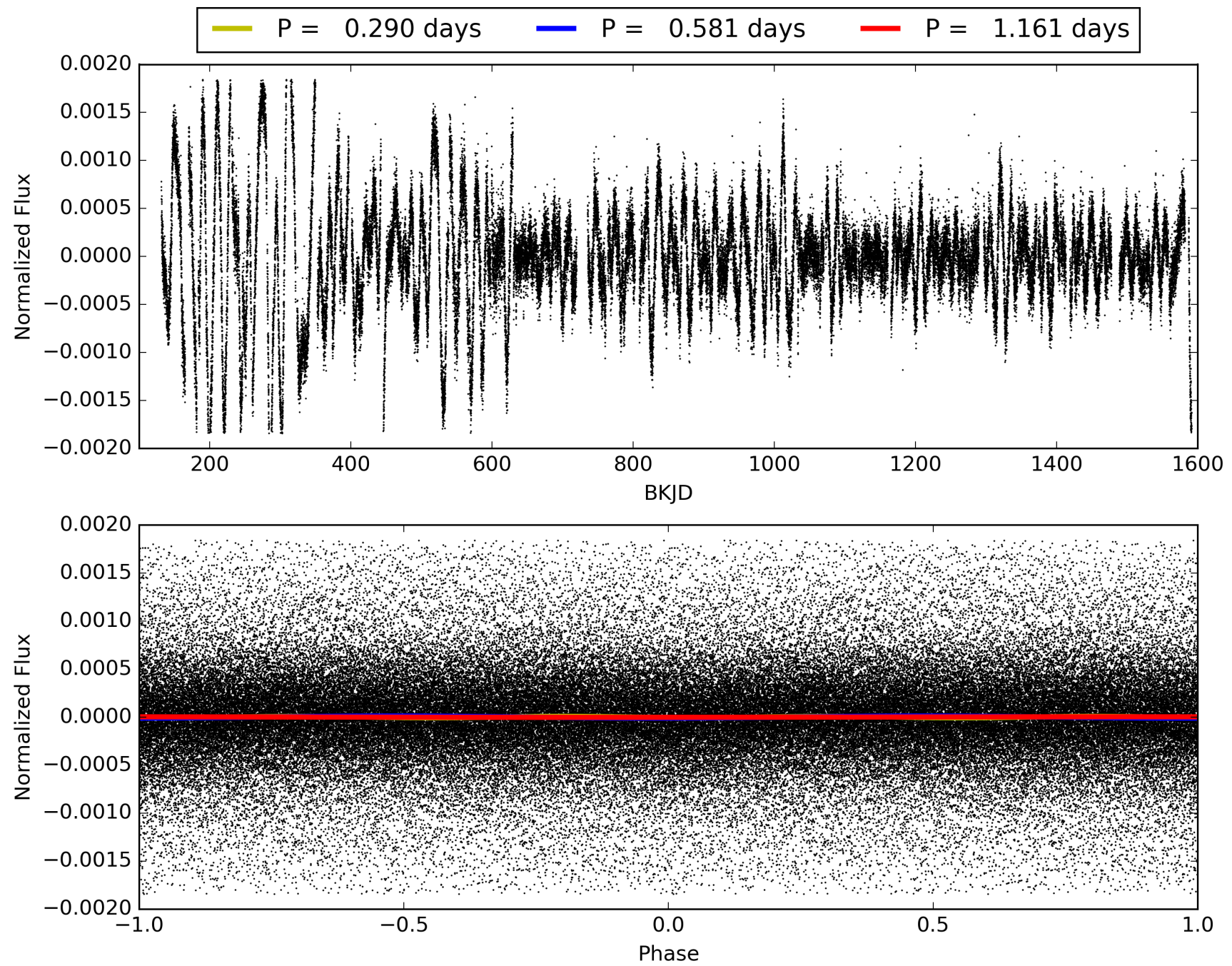
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:31:53 Z

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

TCE 007800750-01, PDC Light Curves

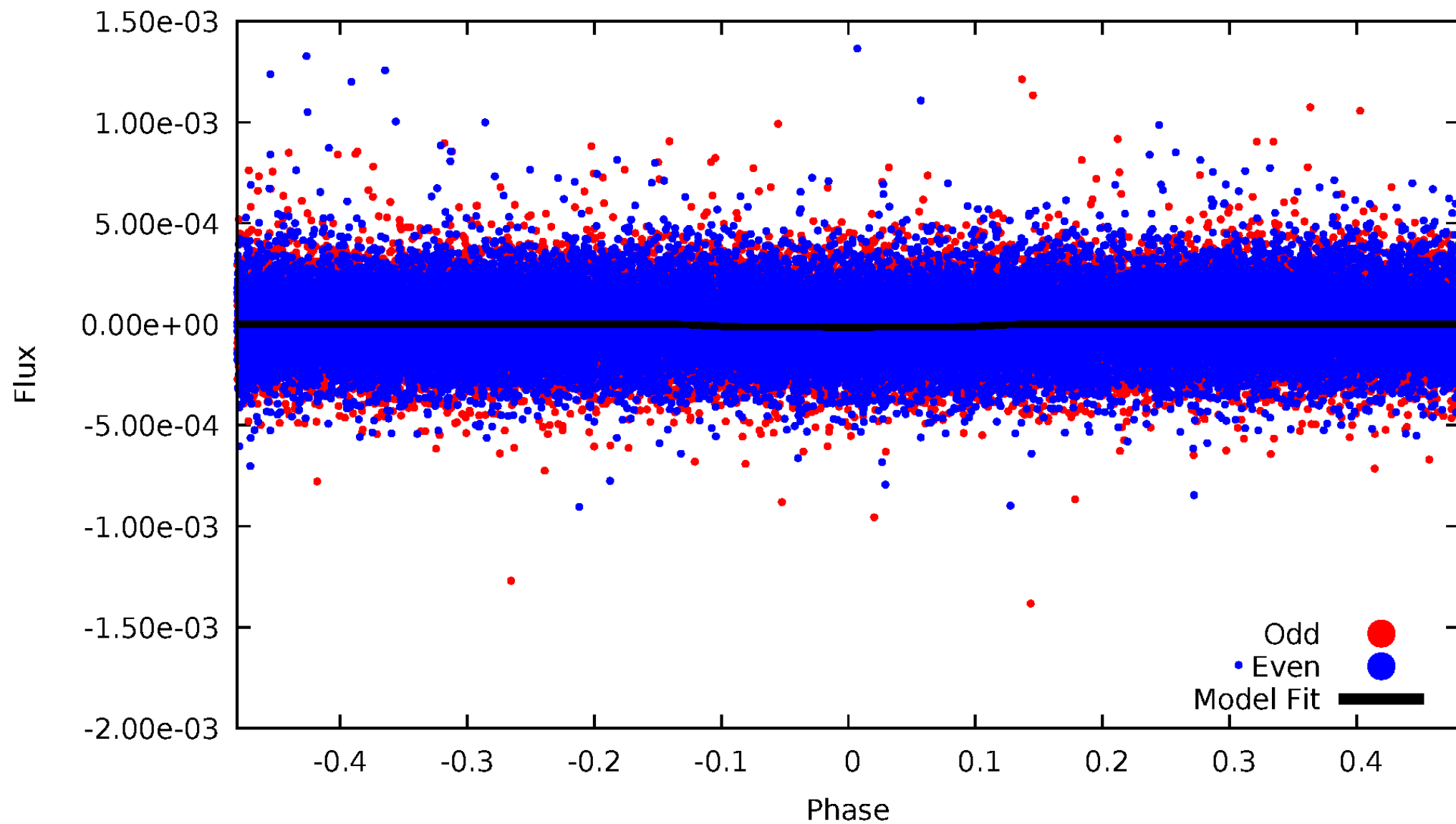


TCE 007800750-01



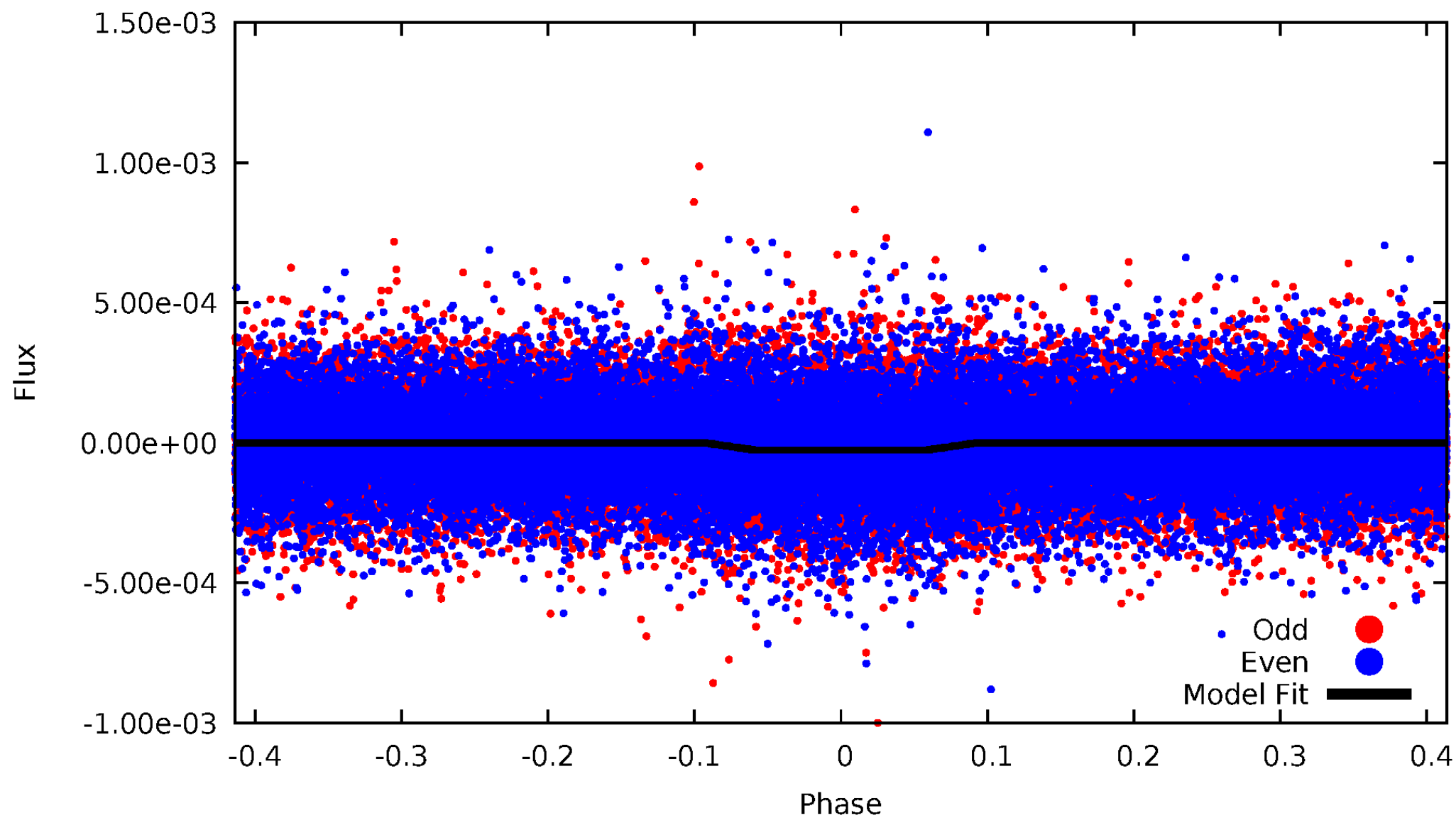
DV Odd/Even

TCE 007800750-01



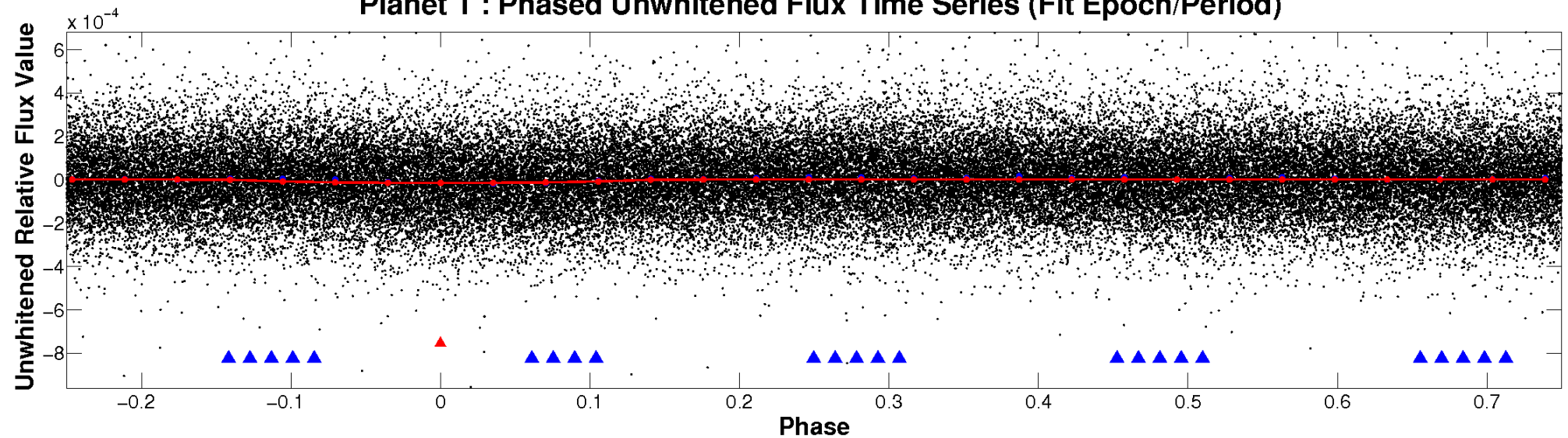
ALT Odd/Even

TCE 007800750-01

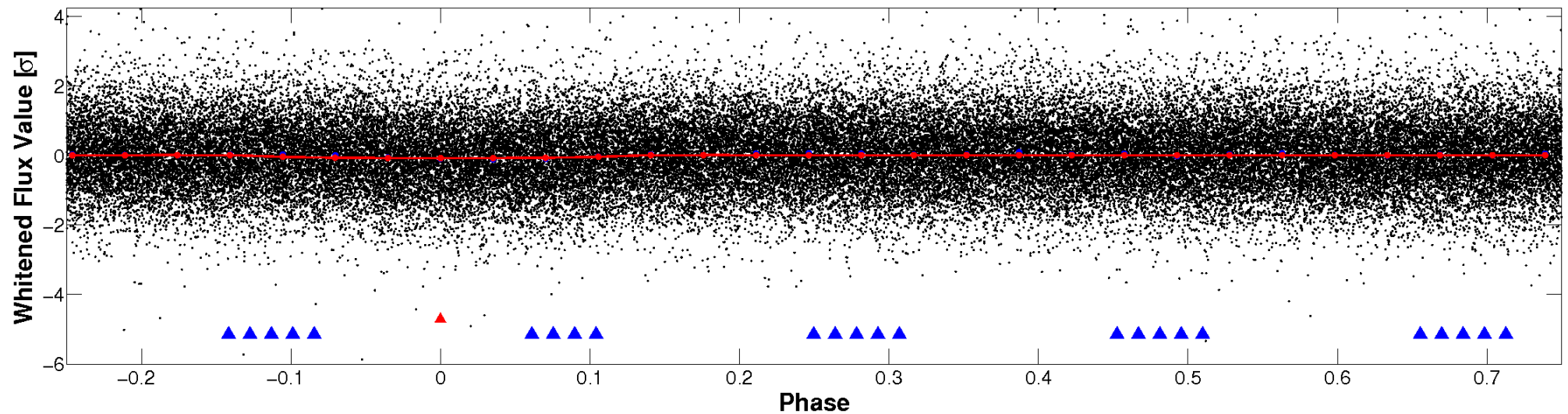


Non-Whitened Vs. Whitened Light Curve

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

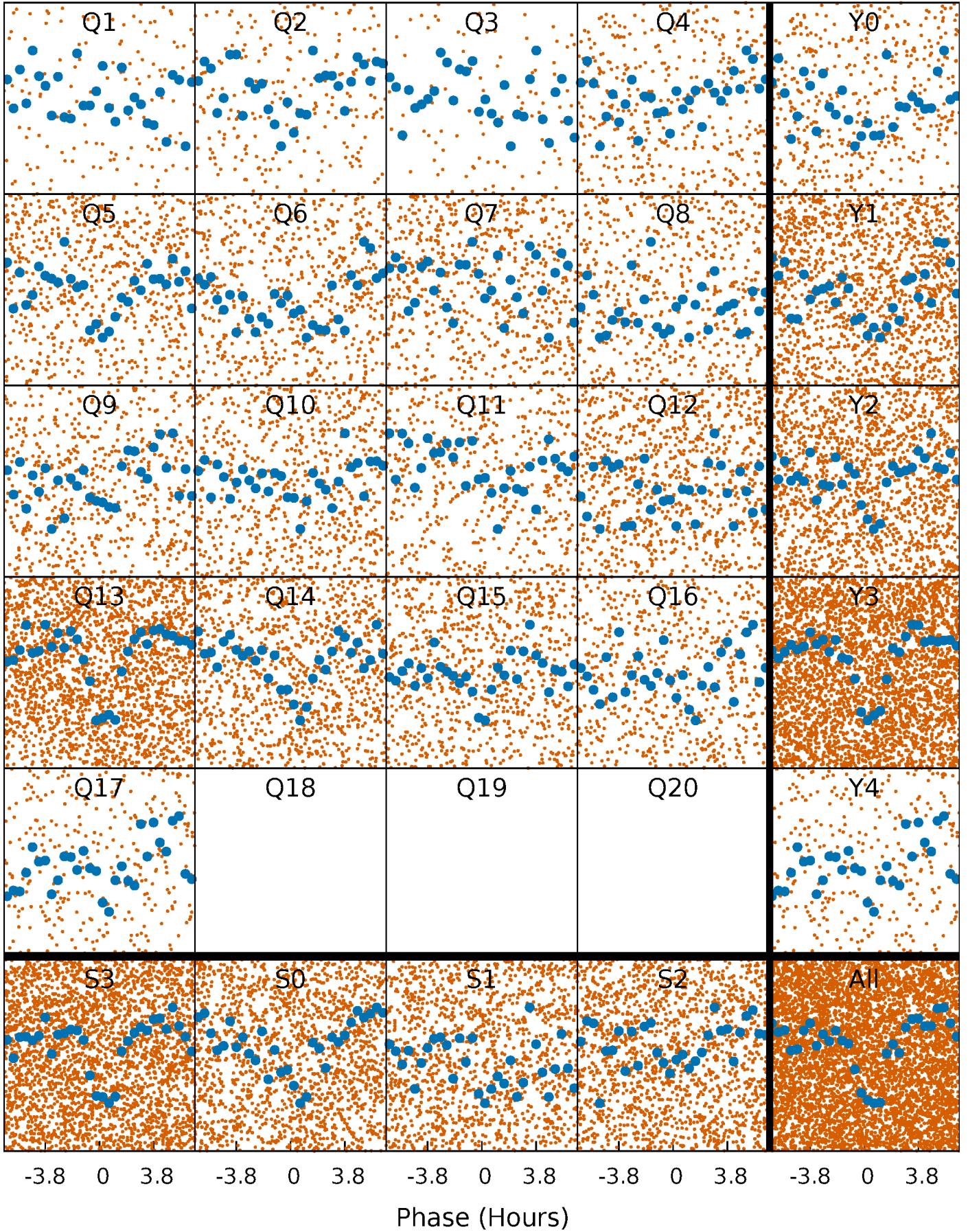


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



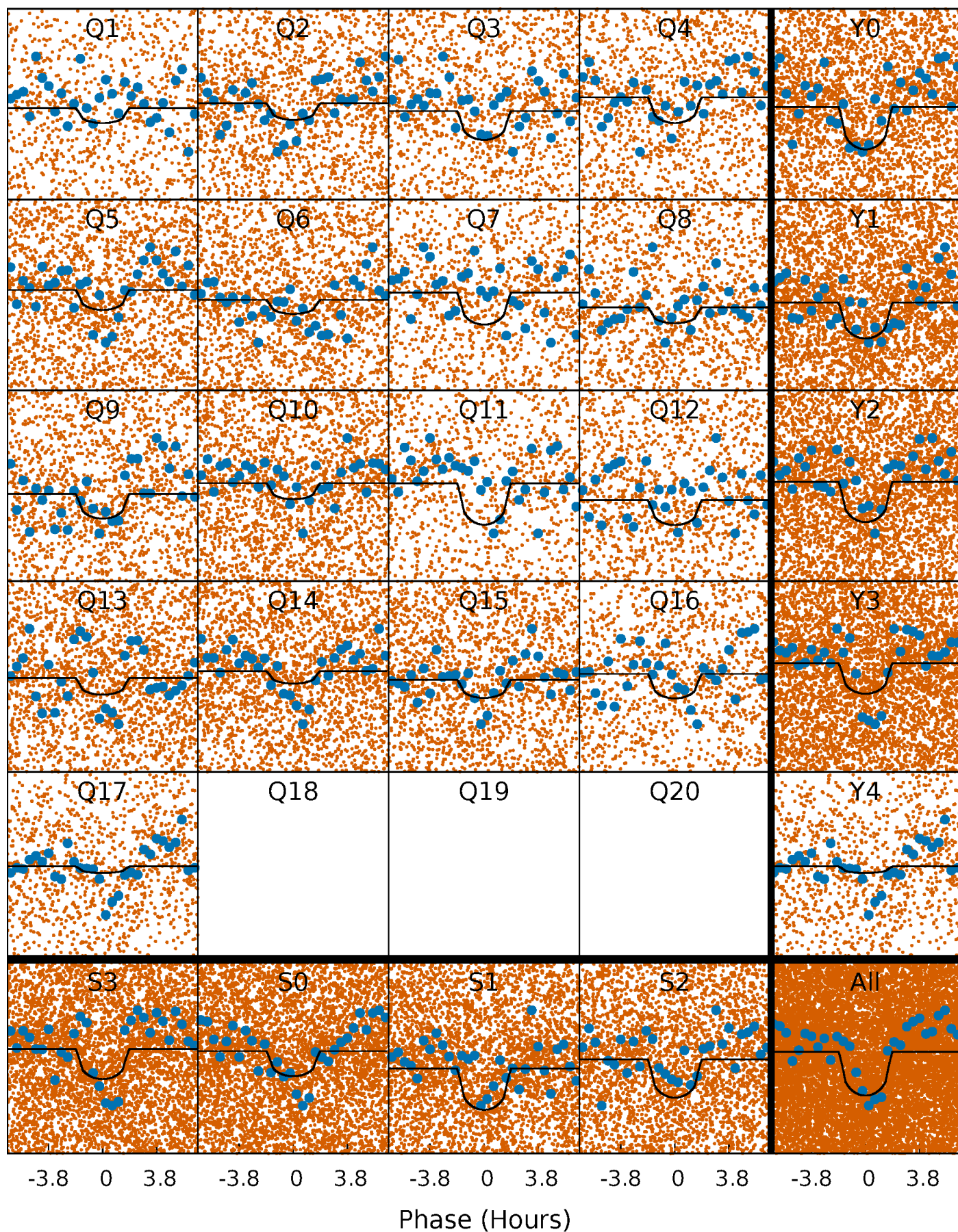
PDC Quarter-Phased Transit Curves

TCE 007800750-01 P= 0.580721 Days $T_0=131.721552$ (BKJD)



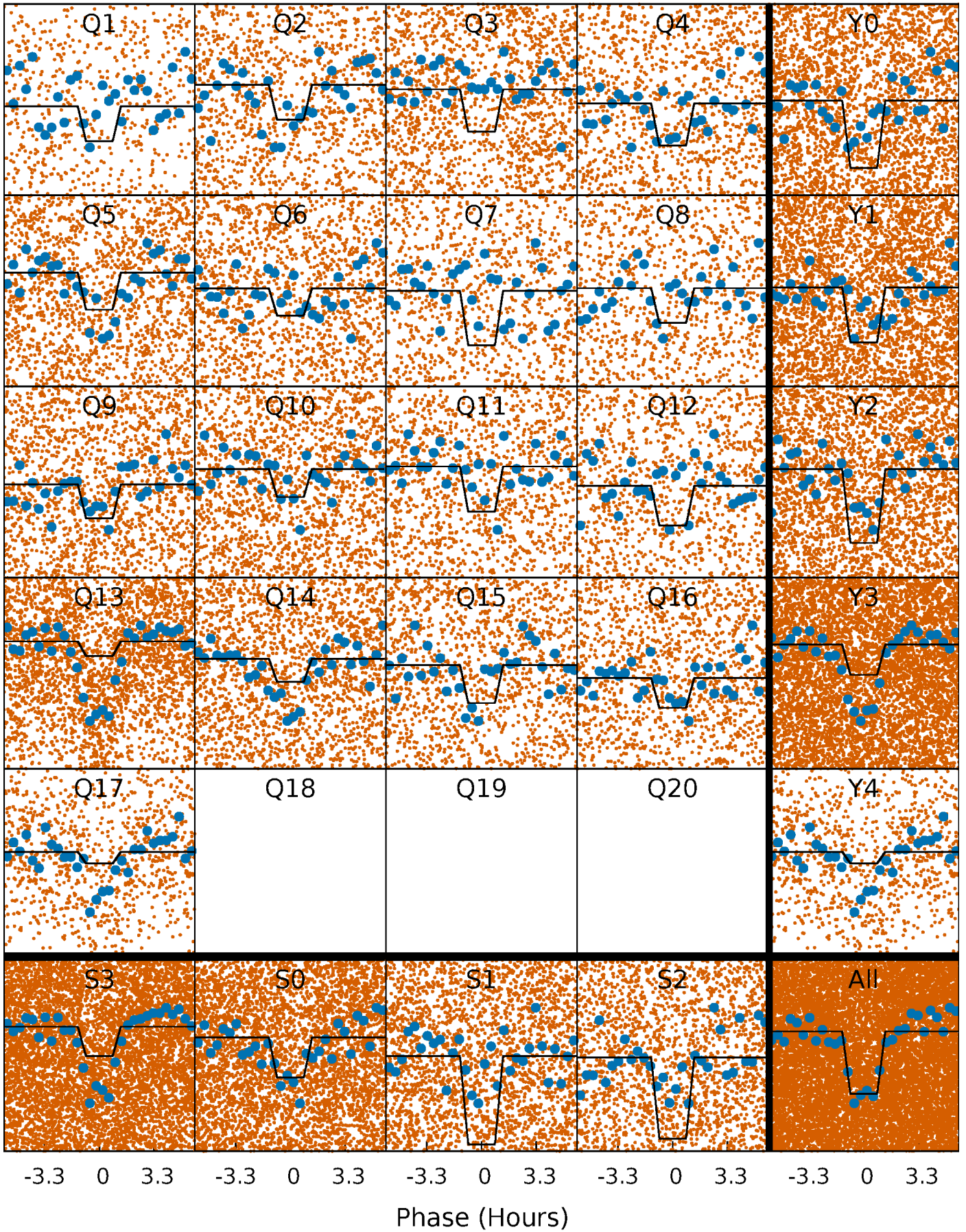
DV Quarter-Phased Transit Curves

TCE 007800750-01 P= 0.580721 Days $T_0=131.721552$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

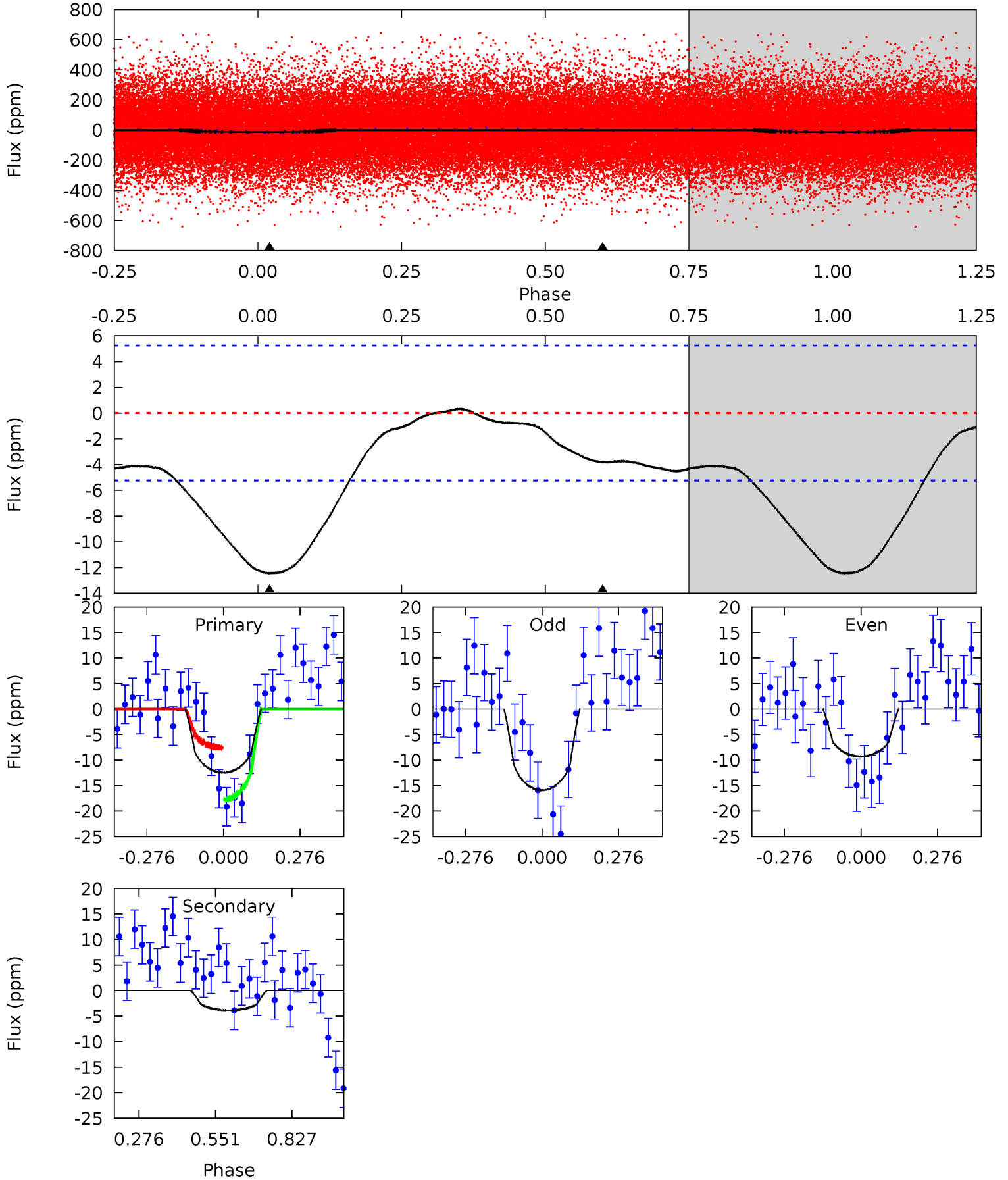
TCE 007800750-01 P= 0.580734 Days $T_0=131.717637$ (BKJD)



DV Model-Shift Uniqueness Test

007800750-01, P = 0.580721 Days, E = 131.140831 Days

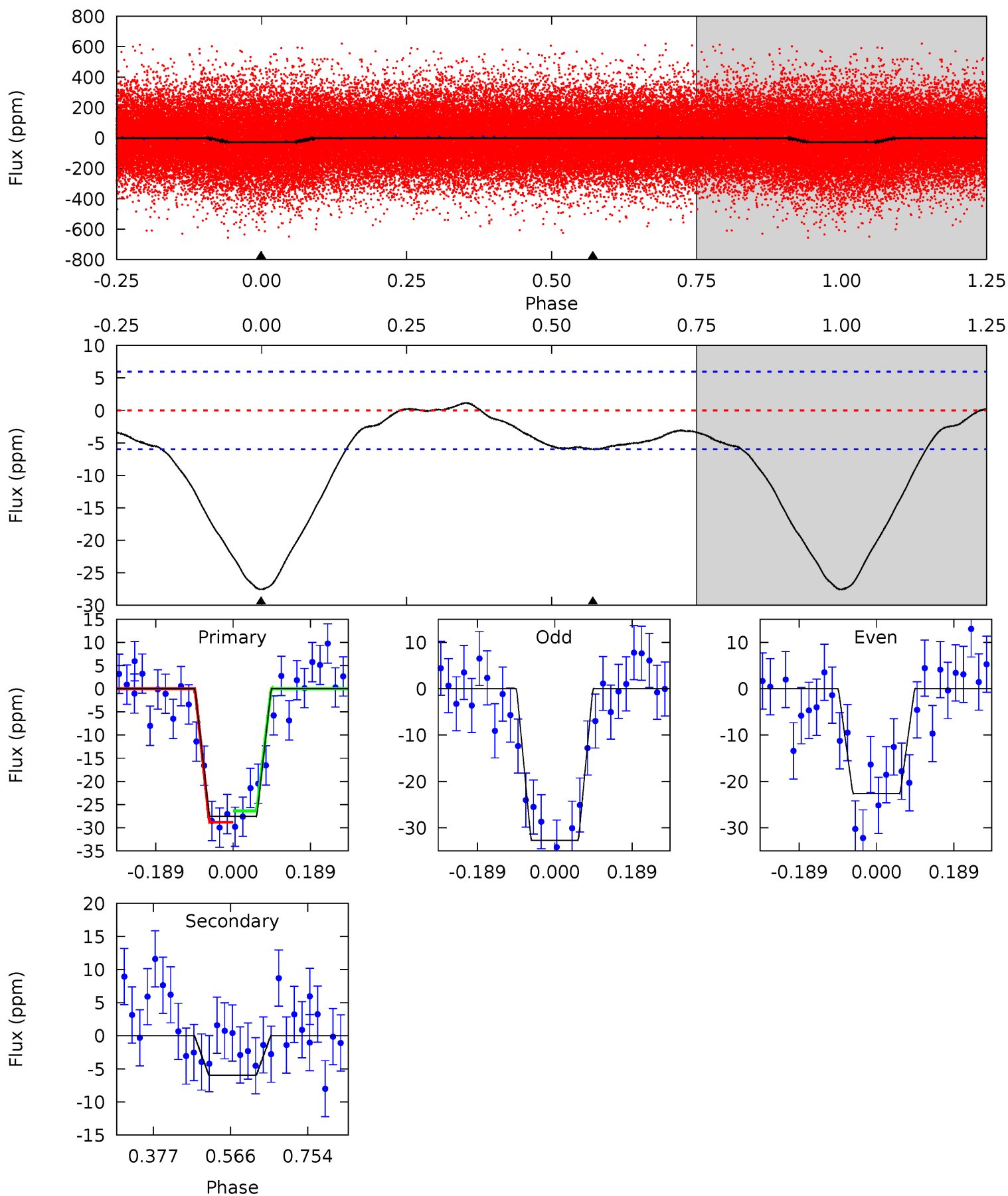
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	3.18	0	0	4.35	1.09	0.29	10.3	10.3	3.18	3.18	2.75	0.92	0.03	4.30



Alt Model-Shift Uniqueness Test

007800750-01, P = 0.580734 Days, E = 131.136903 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.4	4.43	0	0	4.43	1.31	1.48	20.4	20.4	4.43	4.43	3.73	1.11	0.04	0.90



Stellar Parameters For KIC 007800750

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5059^{+136}_{-151}	$3.858^{+0.772}_{-0.309}$	$-0.120^{+0.300}_{-0.250}$	$1.845^{+0.945}_{-1.155}$	$0.895^{+0.149}_{-0.149}$	$0.201^{+2.416}_{-0.127}$
	+3%/-3%	+20%/-8%	+250%/-208%	+51%/-63%	+17%/-17%	+1203%/-63%
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 007800750-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-4 ± 1	$0.71^{+0.55}_{-0.39}$	3618^{+521}_{-686}	3446^{+1383}_{-6407}	$0.700^{+2.810}_{-0.491}$
Alt.	-6 ± 1	$0.95^{+0.62}_{-0.44}$	3669^{+539}_{-652}	3350^{+1062}_{-6271}	$0.594^{+1.528}_{-0.371}$

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 $A_{obs} \gg 1.0$

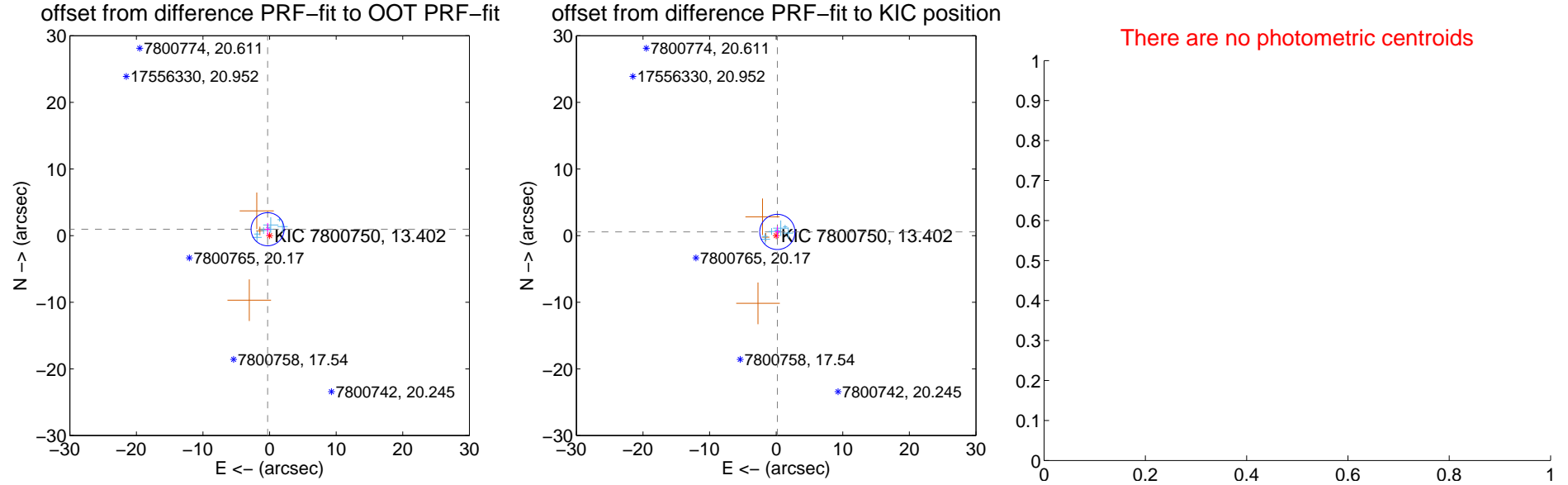
DV Centroid Data

Supplemental centroid analysis for 007800750-01. Kepler magnitude: 13.40. Transit SNR 8.17

There are 9 quarters with good PRF difference image offsets

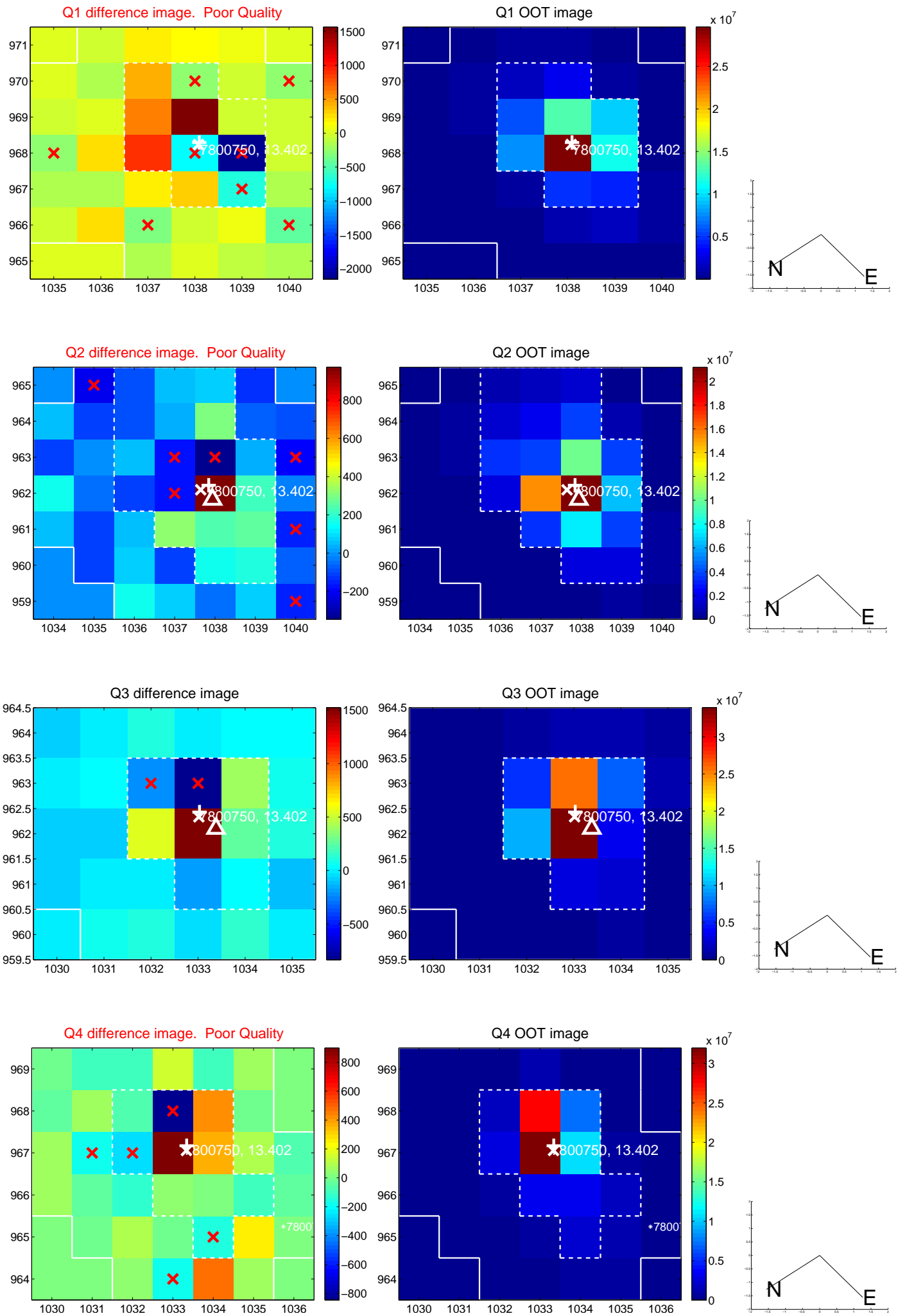
The direct PRF centroid is offset from the target star catalog position by about 0.56 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.004 ± 0.828	1.21	0.296 ± 0.406	0.960 ± 0.936
PRF-fit source offset from KIC position	0.582 ± 0.880	0.66	-0.173 ± 0.400	0.556 ± 0.858
photometric centroid source offset	—	—	—	—

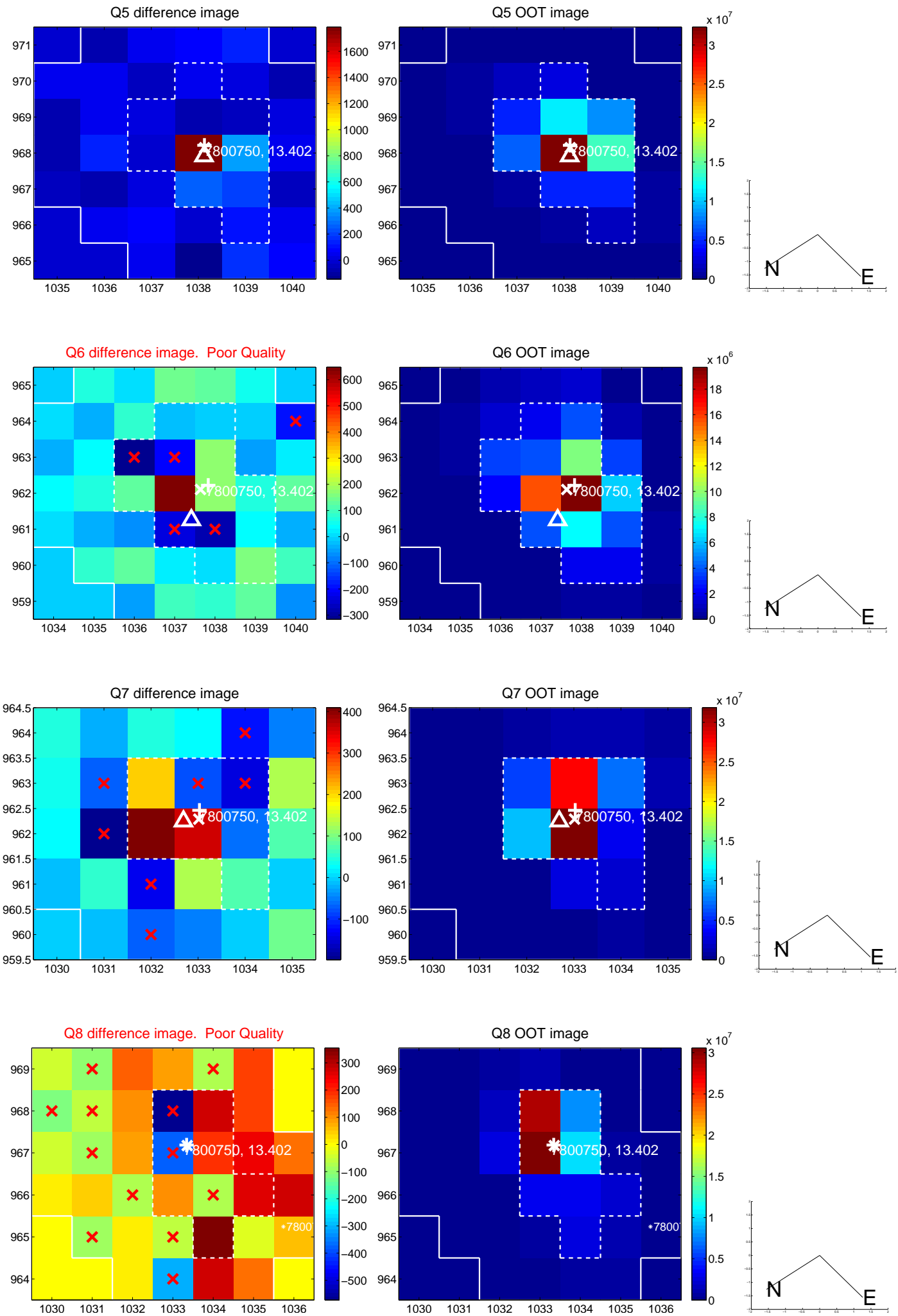


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

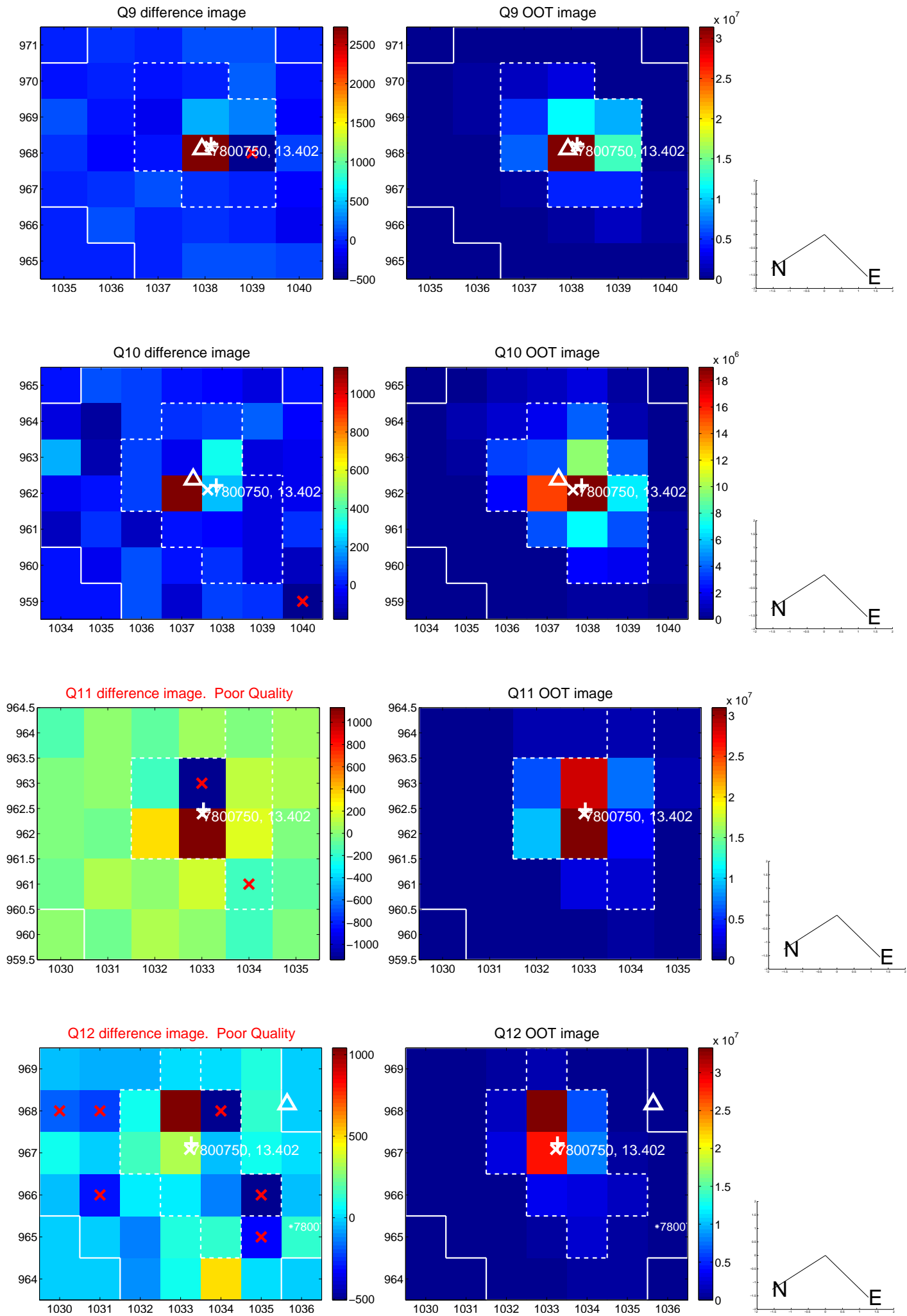
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



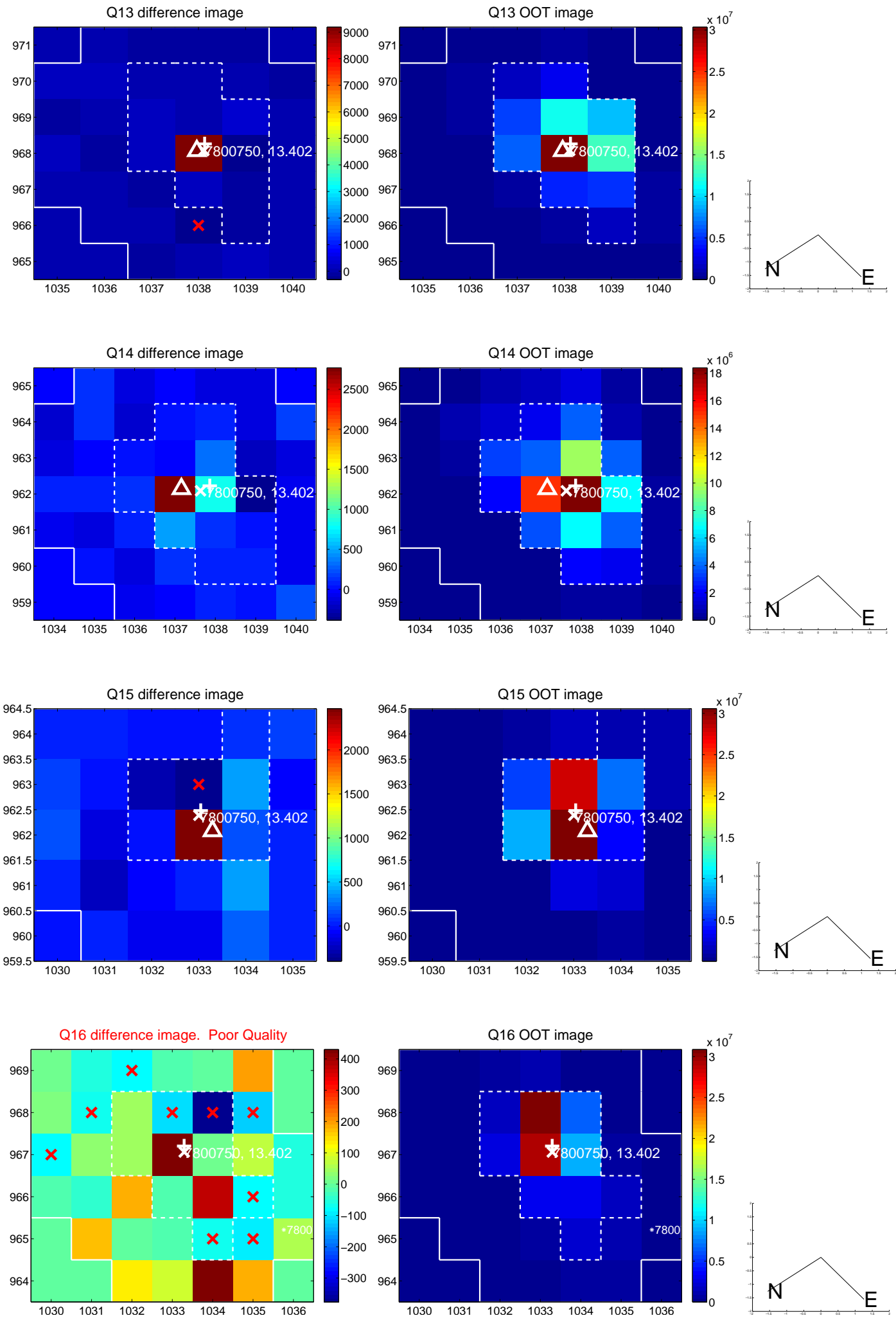
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



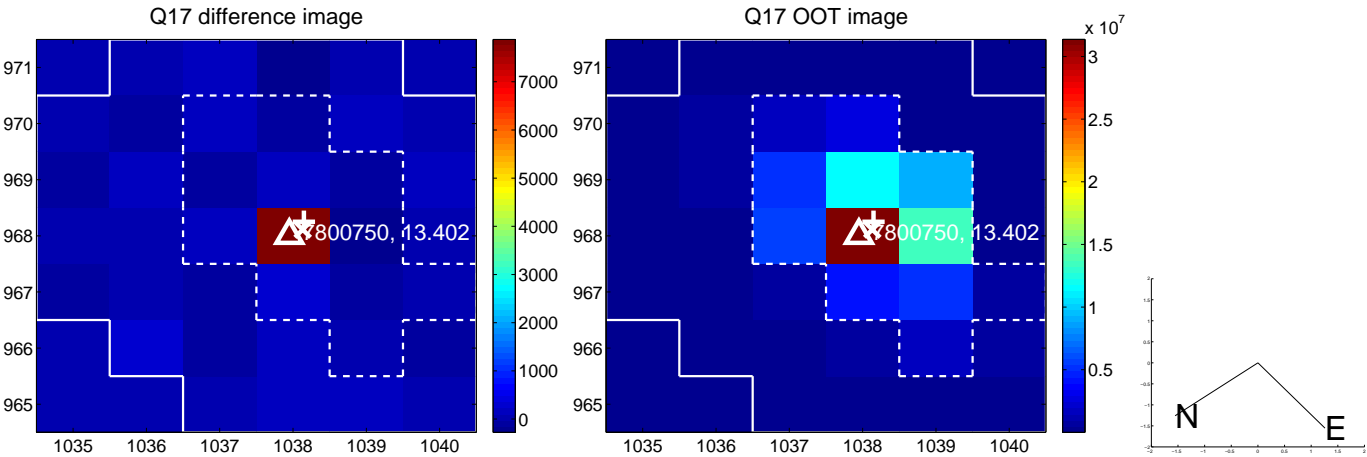
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



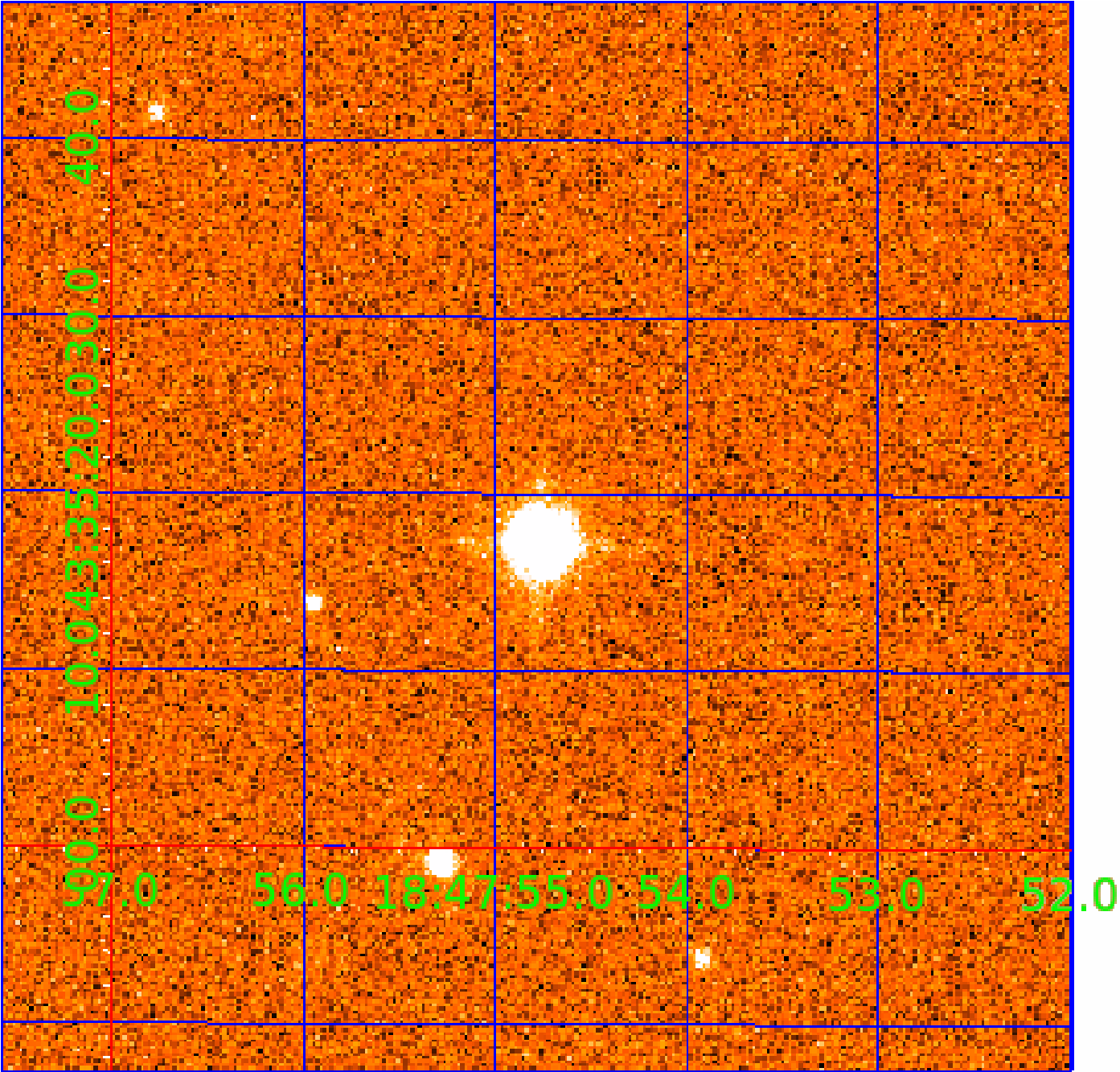
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 007800750

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})
007800750-01	OBS	No	0.580721	131.721552	15.1	3.352	9.7	8.2	1.84	5059	0.77	11584.07
007800750-02	OBS	No	58.770587	180.647091	244.9	3.952	7.7	7.8	1.84	5059	3.35	24.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007800750-01	OBS	FP	0.00	1	0	0	1	LPP_DV—CENT_KIC_POS—EPHEM_MATCH
007800750-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_MEAS

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

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

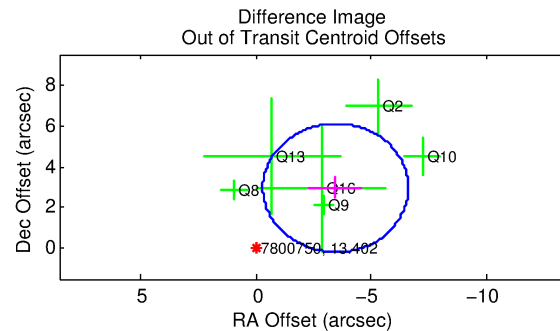
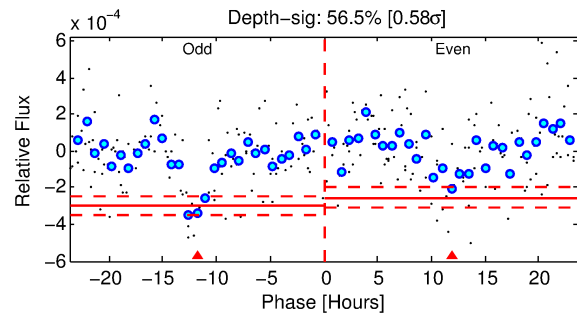
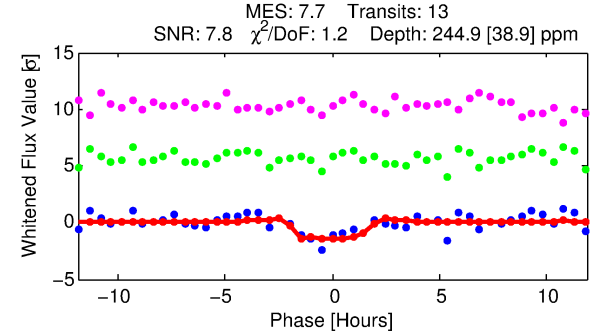
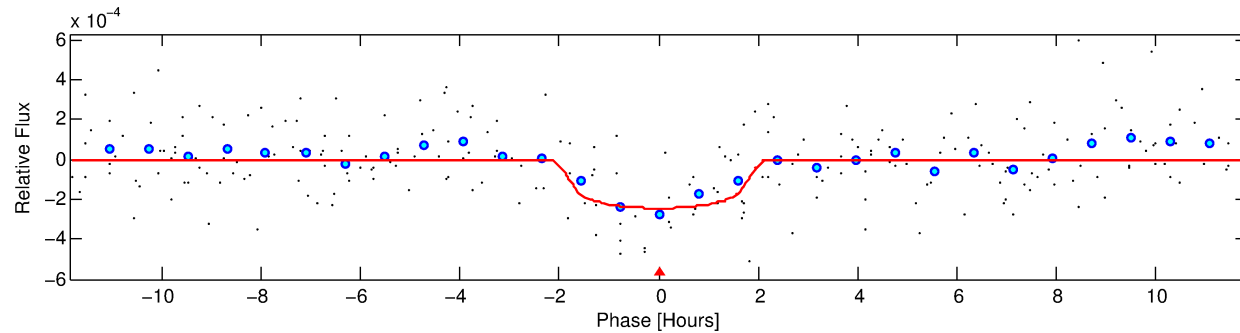
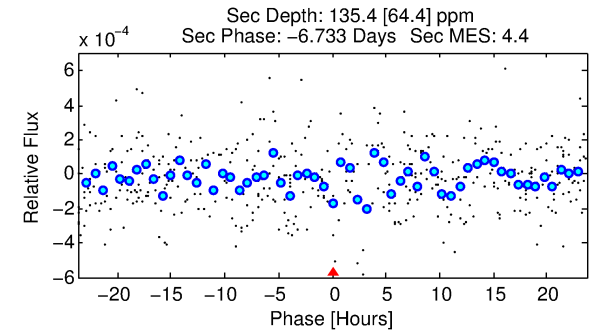
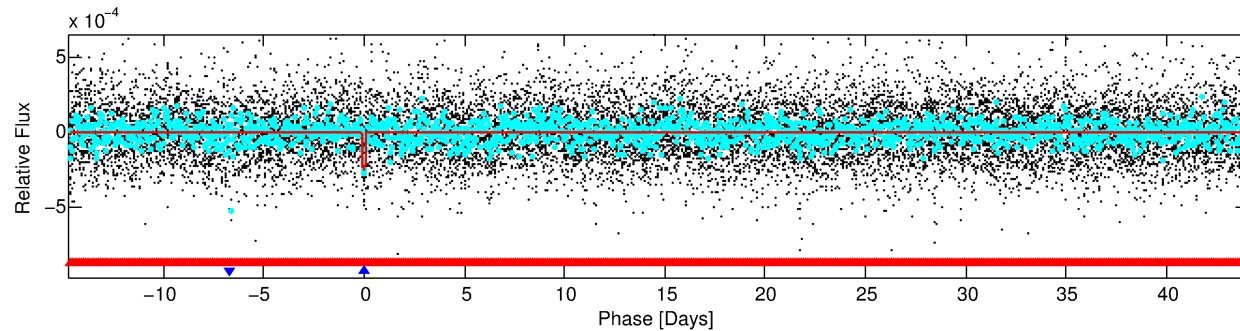
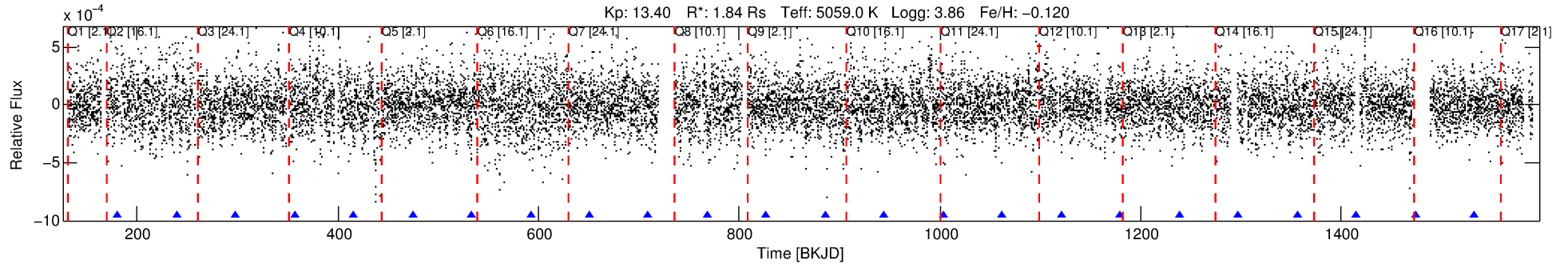
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007800750-02

No Significant Match Found

DV One-Page Summary

KIC: 7800750 Candidate: 2 of 2 Period: 58.771 d



DV Fit Results:

Period = 58.77059 [0.00093] d
Epoch = 180.6471 [0.0122] BKJD
Rp/R* = 0.0166 [0.0183]
a/R* = 62.96 [273.51]
b = 0.85 [1.43]
Seff = 24.56 [31.00]
Teq = 568 [179] K
Rp = 3.35 [4.24] Re
a = 0.2852 [0.2067] AU
Ag = 541.02 [1396.01] [0.39σ]
Teffp = 4233 [2388] K [1.53σ]

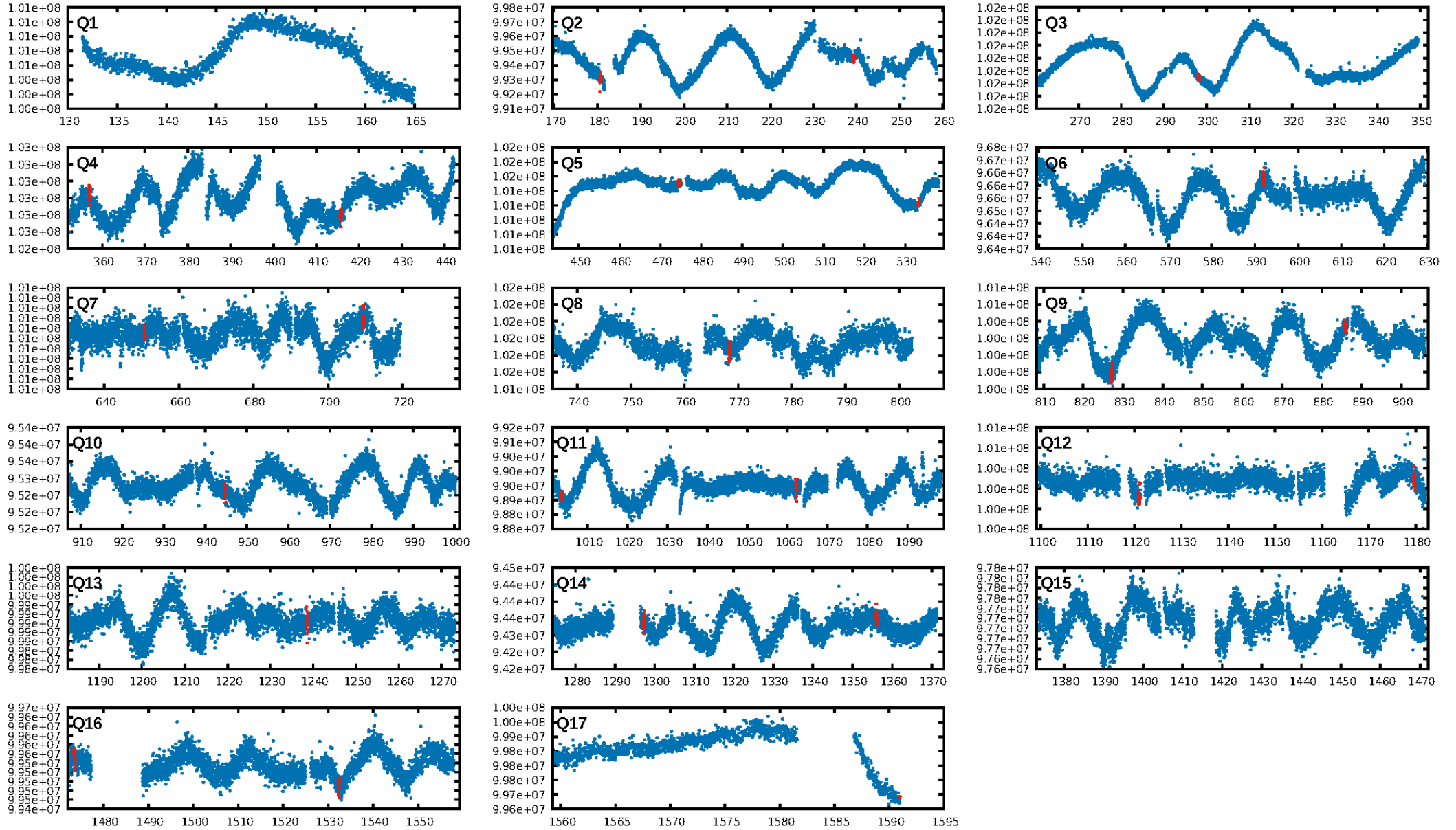
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [269.50σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 12.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.66e-09
RollingBand-fgt: 1.00 [13/13]
GhostDiagnostic-chr: 0.2772
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 4.546 arcsec [4.34σ]
KicOffset-rm: 4.826 arcsec [4.14σ]
OotOffset-st: 2/0/2/2 [6]
KicOffset-st: 2/0/2/2 [6]
DiffImageQuality-fgm: 0.17 [1/6]
DiffImageOverlap-fno: 0.00 [0/14]

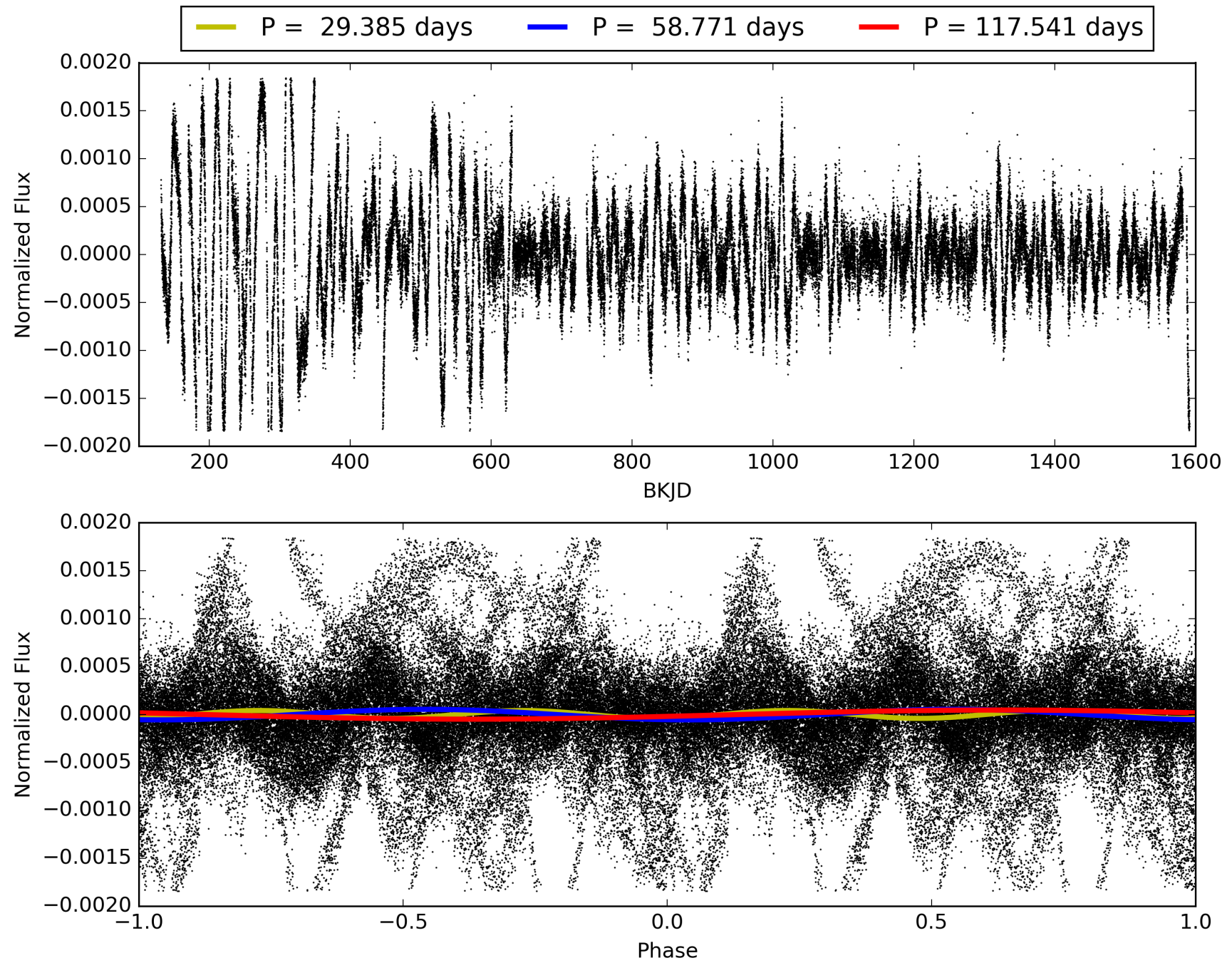
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 10:32:03 Z

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

TCE 007800750-02, PDC Light Curves

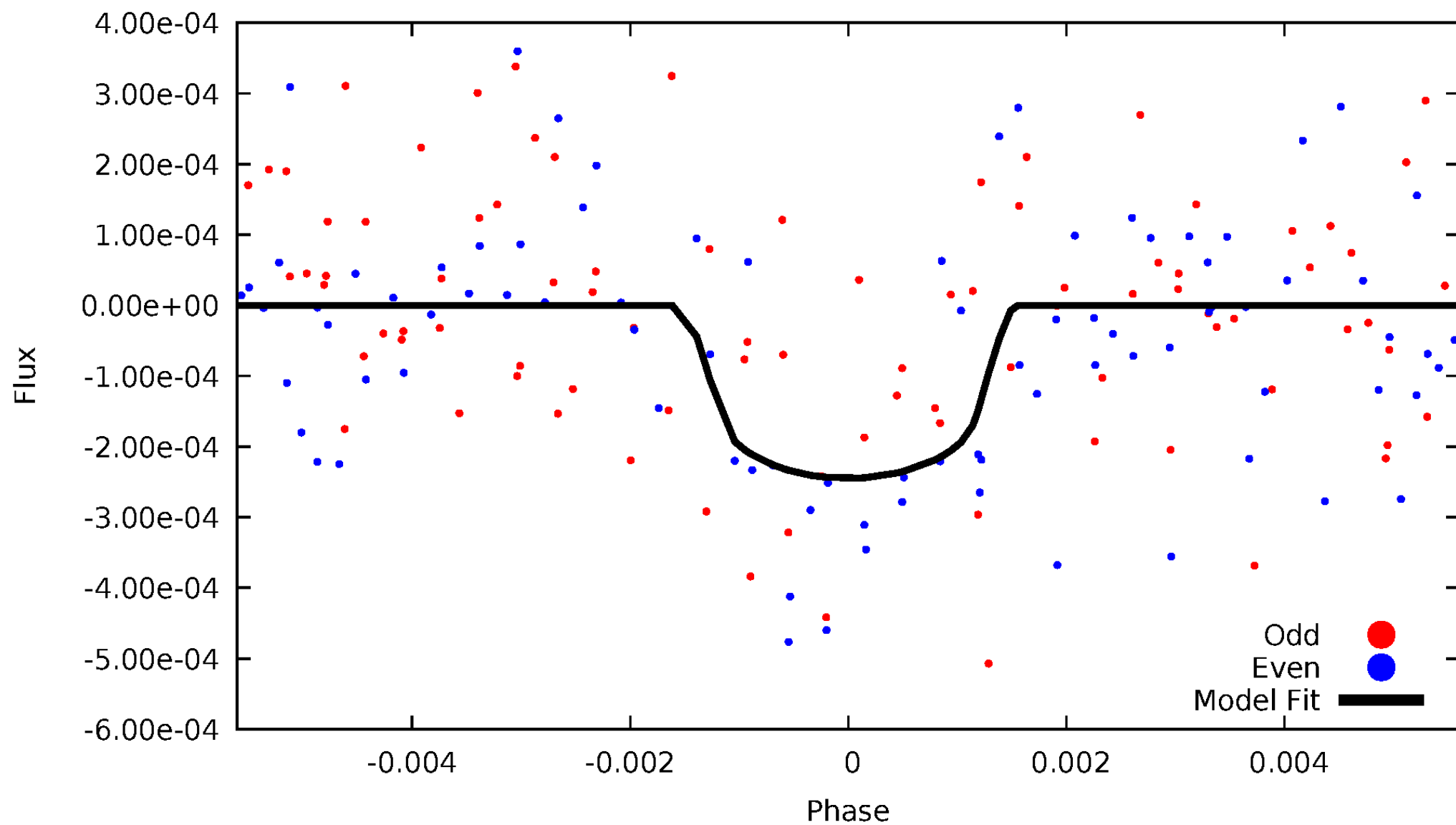


TCE 007800750-02



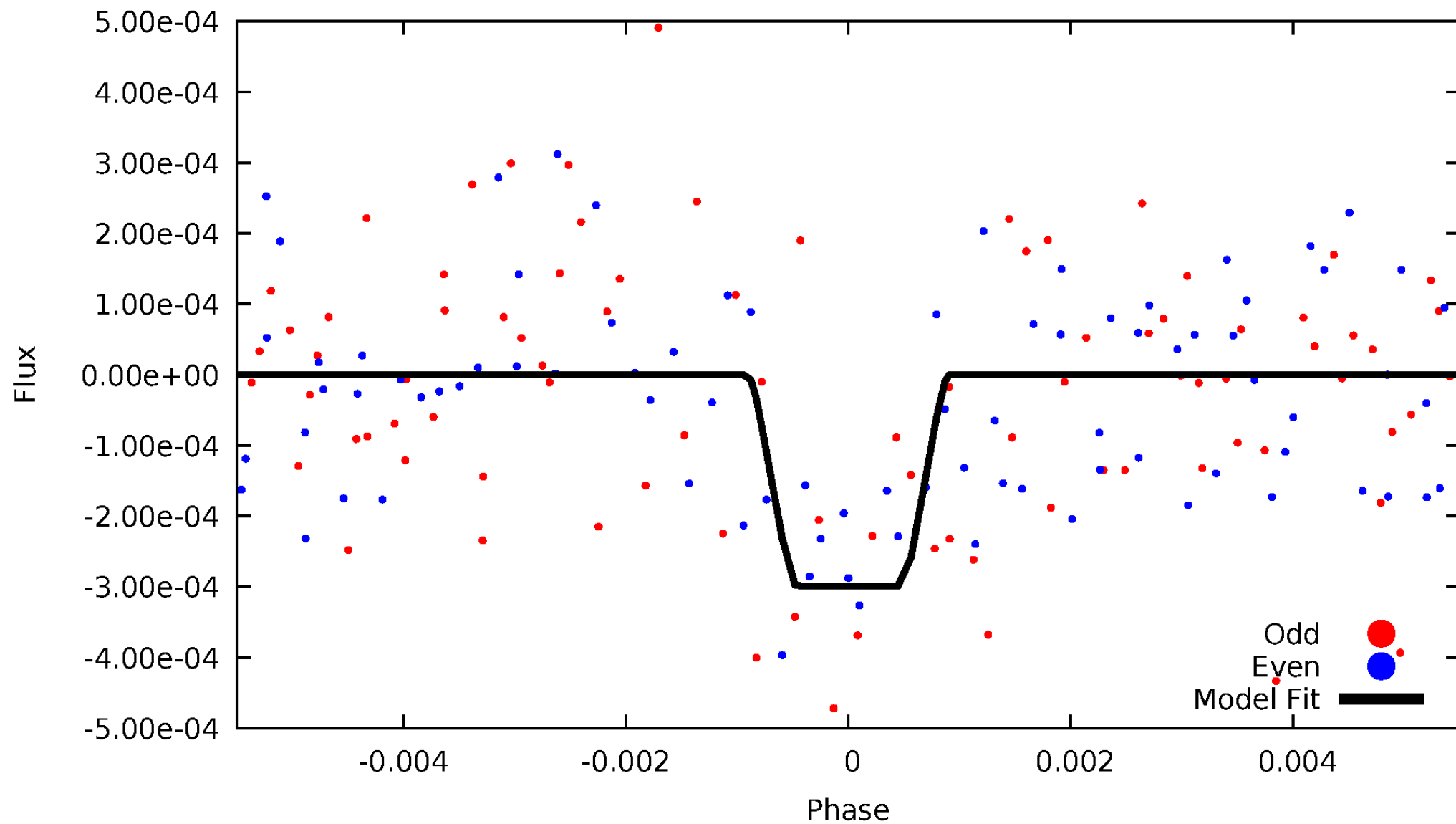
DV Odd/Even

TCE 007800750-02



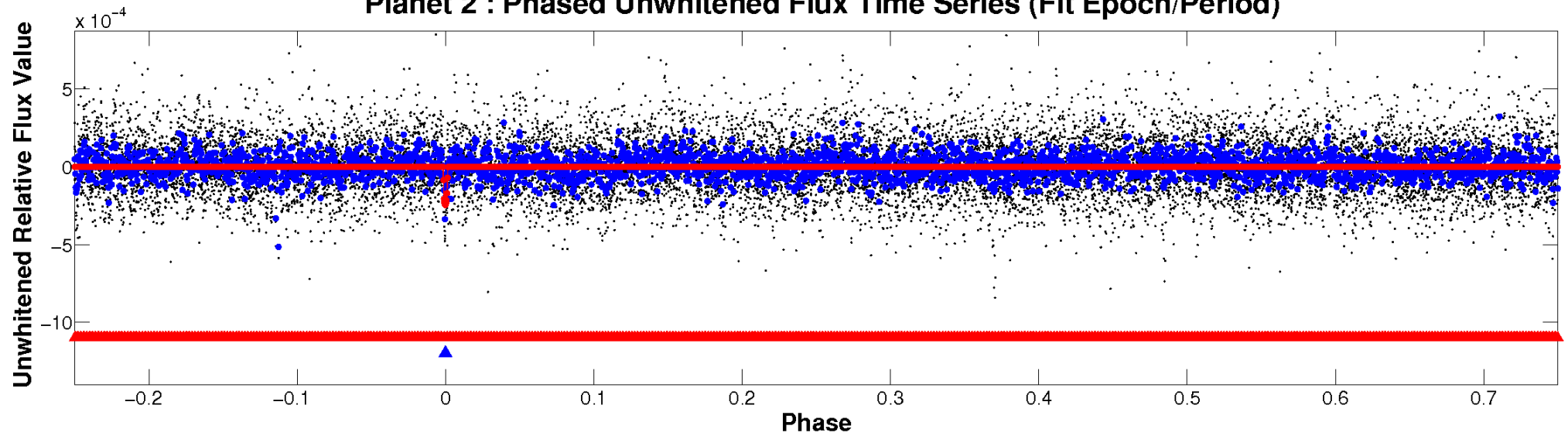
ALT Odd/Even

TCE 007800750-02

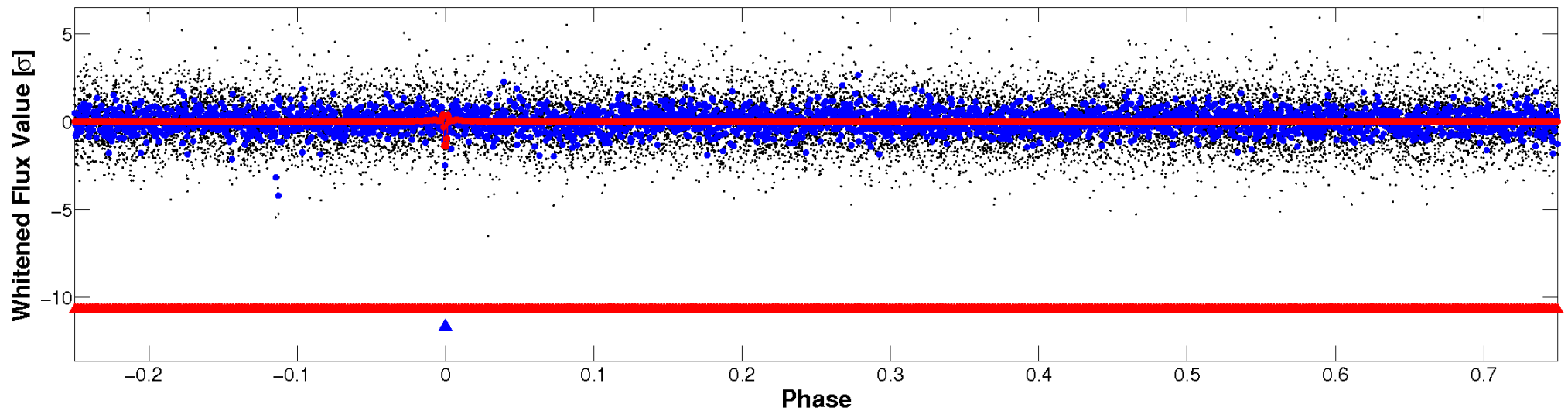


Non-Whitened Vs. Whitened Light Curve

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

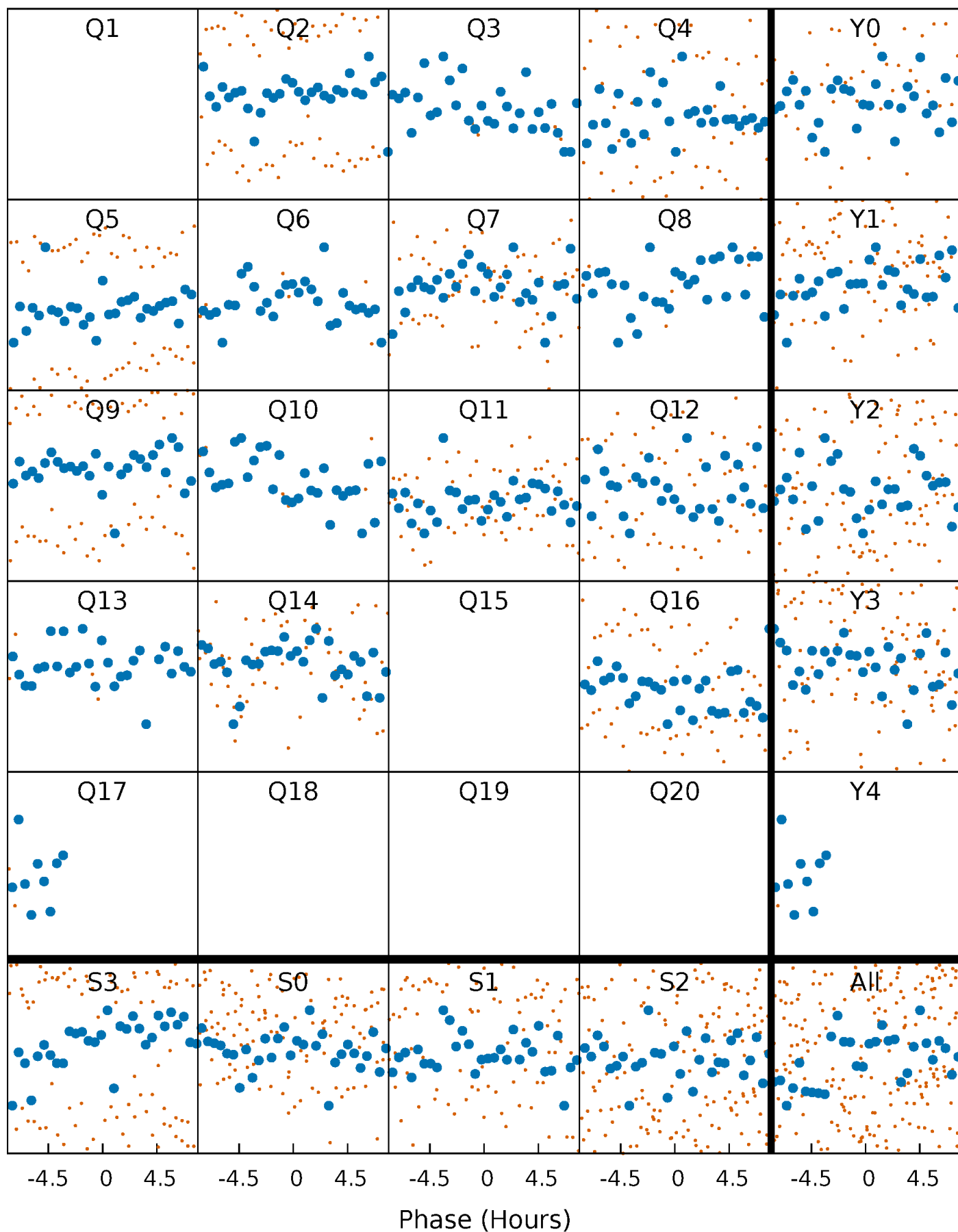


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



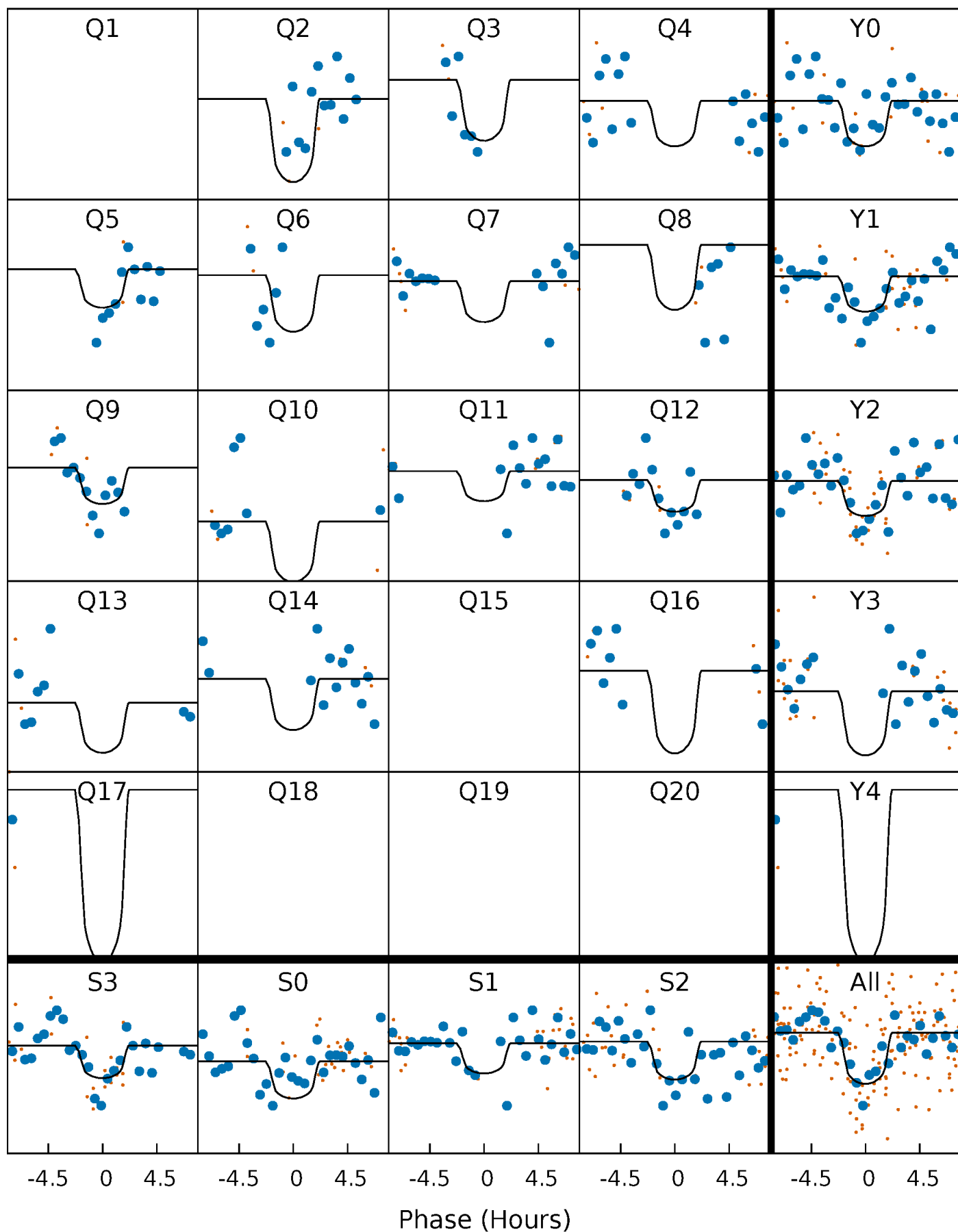
PDC Quarter-Phased Transit Curves

TCE 007800750-02 P= 58.770587 Days $T_0=180.647091$ (BKJD)



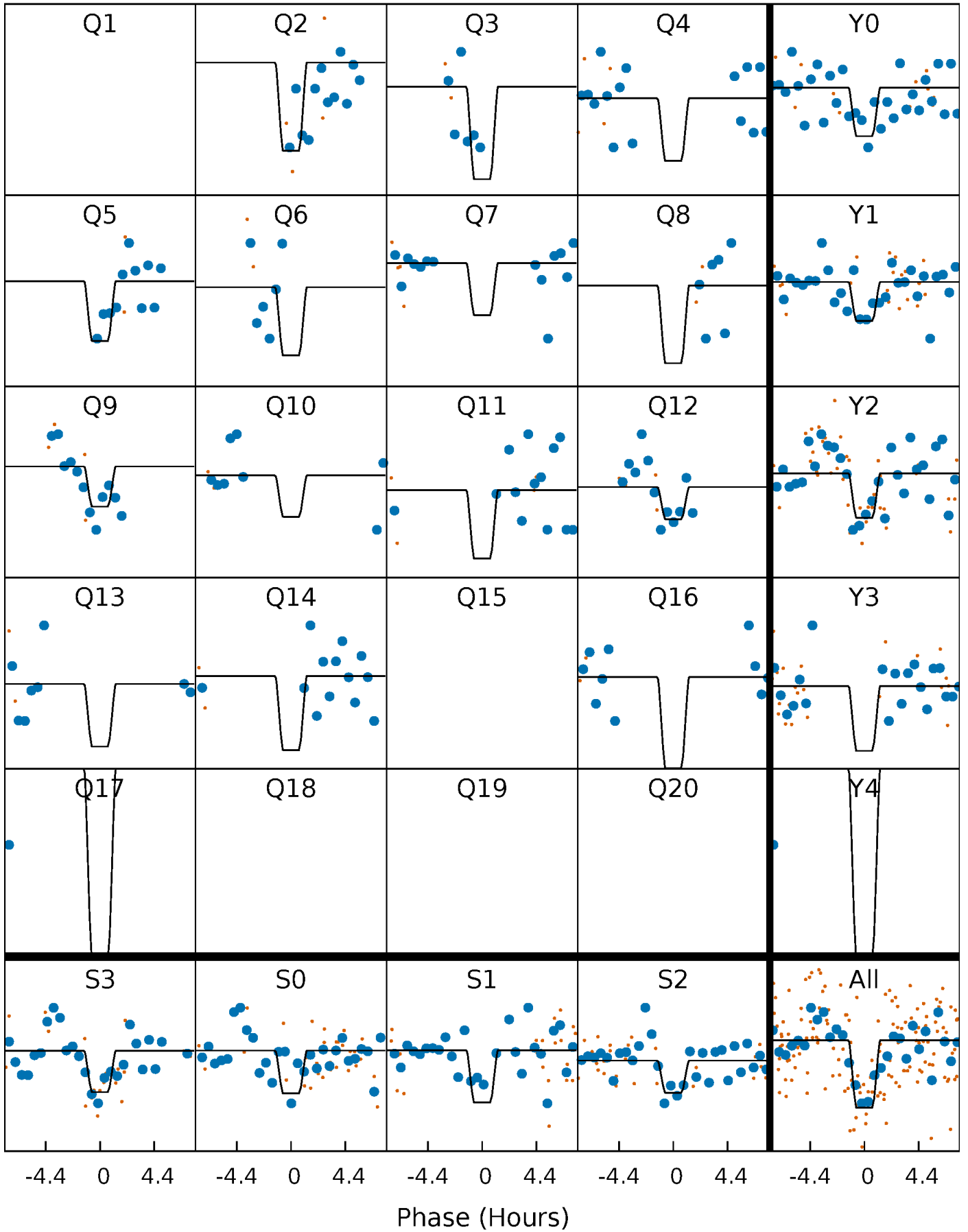
DV Quarter-Phased Transit Curves

TCE 007800750-02 P= 58.770587 Days $T_0=180.647091$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

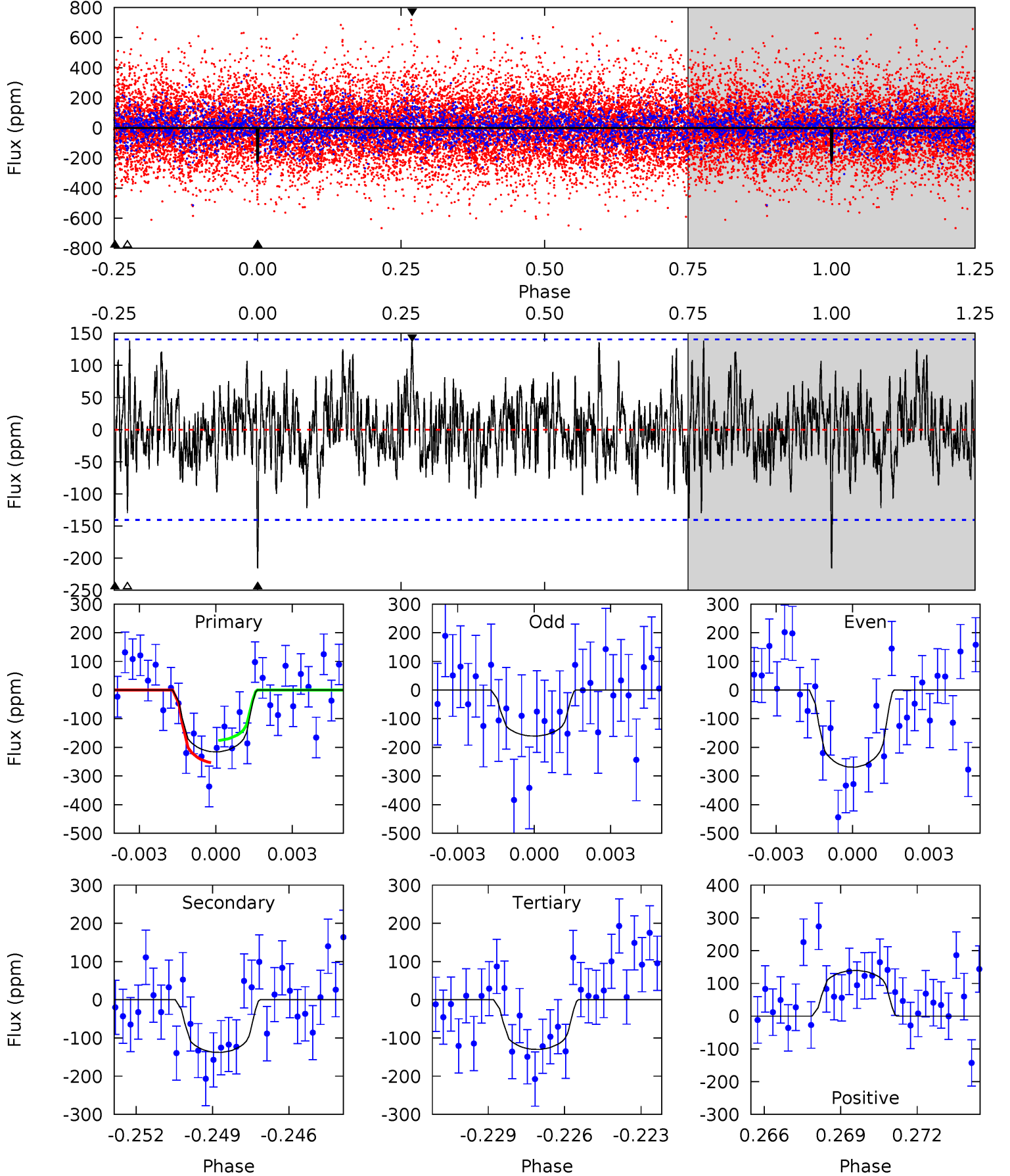
TCE 007800750-02 P= 58.772129 Days $T_0=180.626052$ (BKJD)



DV Model-Shift Uniqueness Test

007800750-02, $P = 58.770587$ Days, $E = 121.876504$ Days

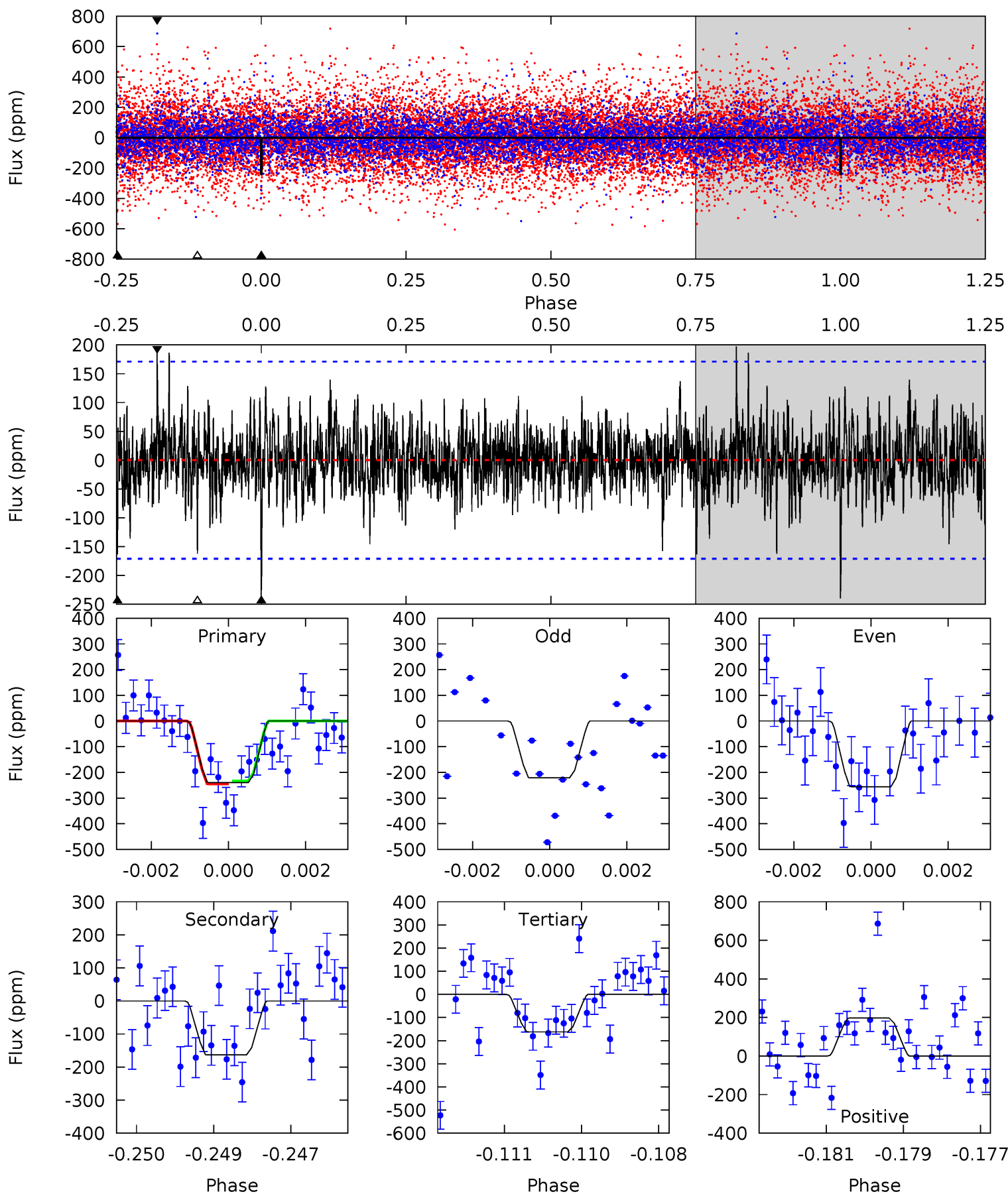
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.08	5.16	4.87	5.21	5.26	2.98	1.56	3.22	2.87	0.29	-0.06	2.04	0.93	0.39	1.45



Alt Model-Shift Uniqueness Test

007800750-02, P = 58.772129 Days, E = 121.853923 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.51	5.11	5.08	6.17	5.35	3.13	1.28	2.43	1.34	0.03	-1.06	0.54	0.77	0.45	0.19



Stellar Parameters For KIC 007800750

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5059^{+136}_{-151}	$3.858^{+0.772}_{-0.309}$	$-0.120^{+0.300}_{-0.250}$	$1.845^{+0.945}_{-1.155}$	$0.895^{+0.149}_{-0.149}$	$0.201^{+2.416}_{-0.127}$
	+3%/-3%	+20%/-8%	+250%/-208%	+51%/-63%	+17%/-17%	+1203%/-63%
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 007800750-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-138 ± 27	$3.60^{+3.84}_{-2.31}$	780^{+122}_{-141}	4074^{+2105}_{-766}	477^{+3015}_{-363}
Alt.	-163 ± 32	$3.83^{+3.72}_{-2.50}$	786^{+113}_{-130}	4183^{+2209}_{-756}	473^{+3477}_{-347}

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

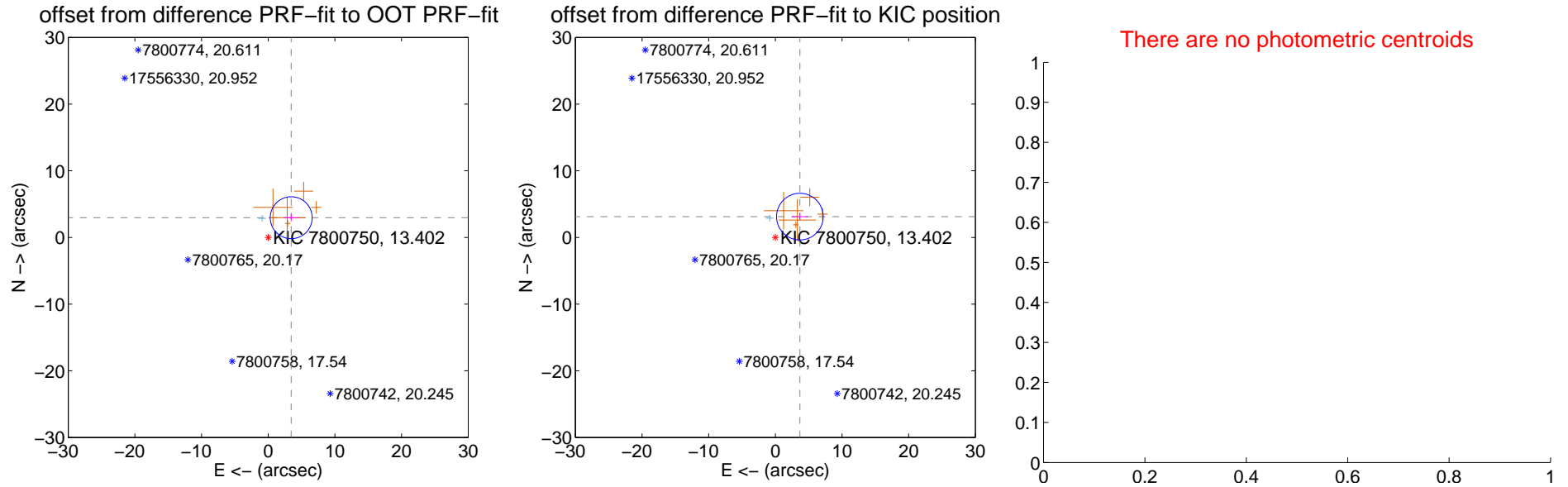
DV Centroid Data

Supplemental centroid analysis for 007800750-02. Kepler magnitude: 13.40. Transit SNR 7.77

There are 1 quarters with good PRF difference image offsets

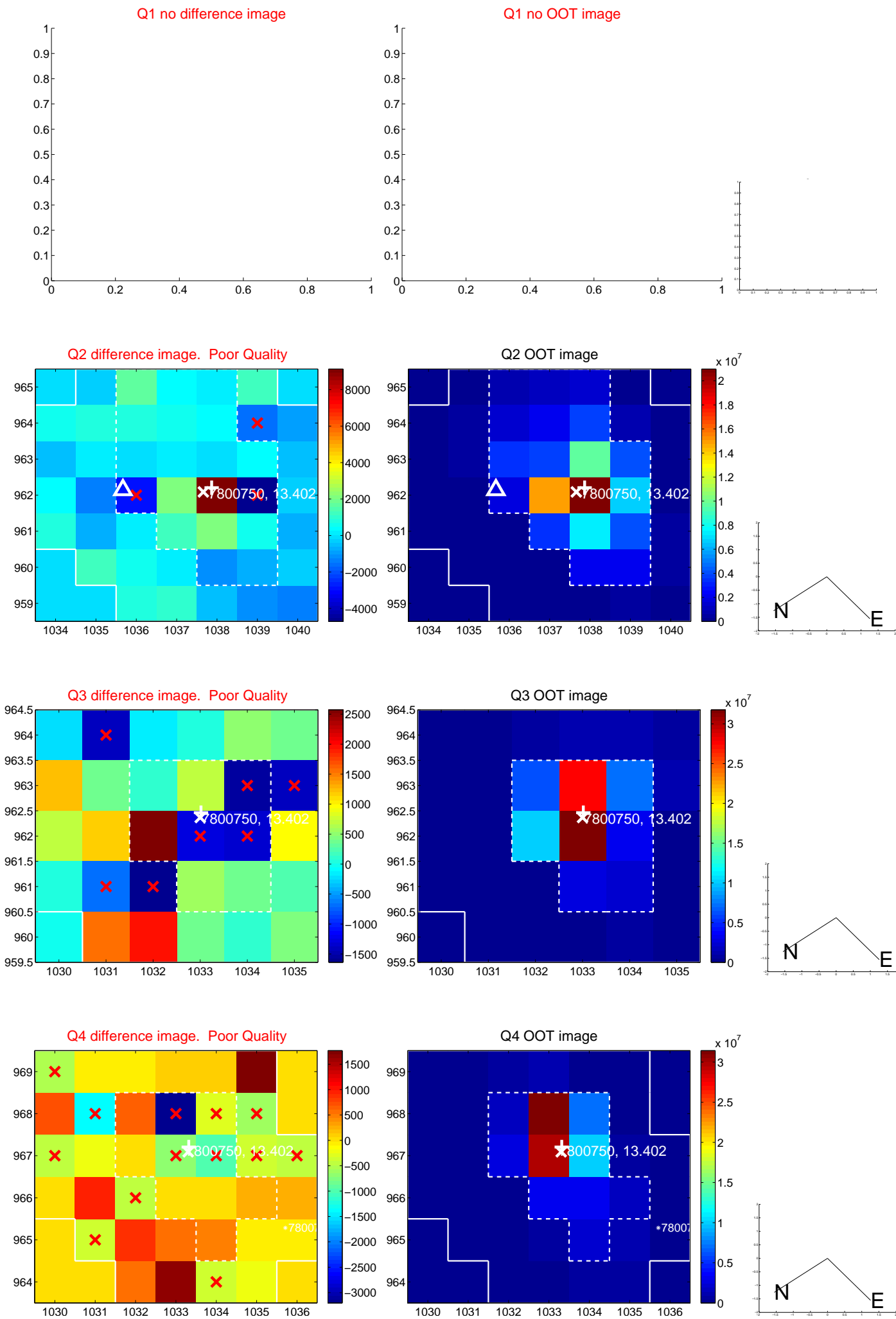
The direct PRF centroid is offset from the target star catalog position by about 0.57 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.546 \pm 1.048	4.34	-3.449 \pm 1.136	2.960 \pm 0.506
PRF-fit source offset from KIC position	4.826 \pm 1.166	4.14	-3.680 \pm 1.223	3.122 \pm 0.540
photometric centroid source offset	—	—	—	—

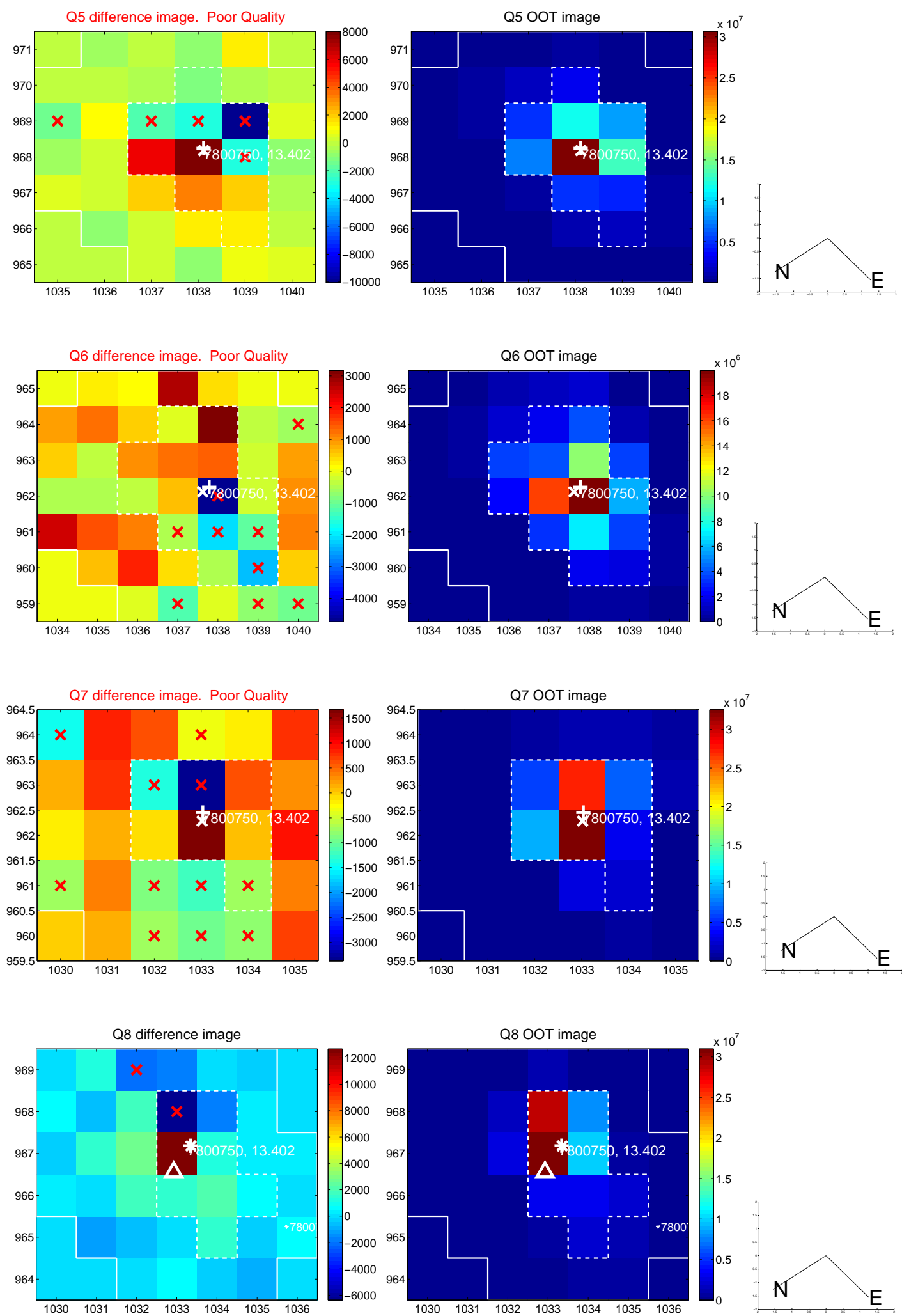


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

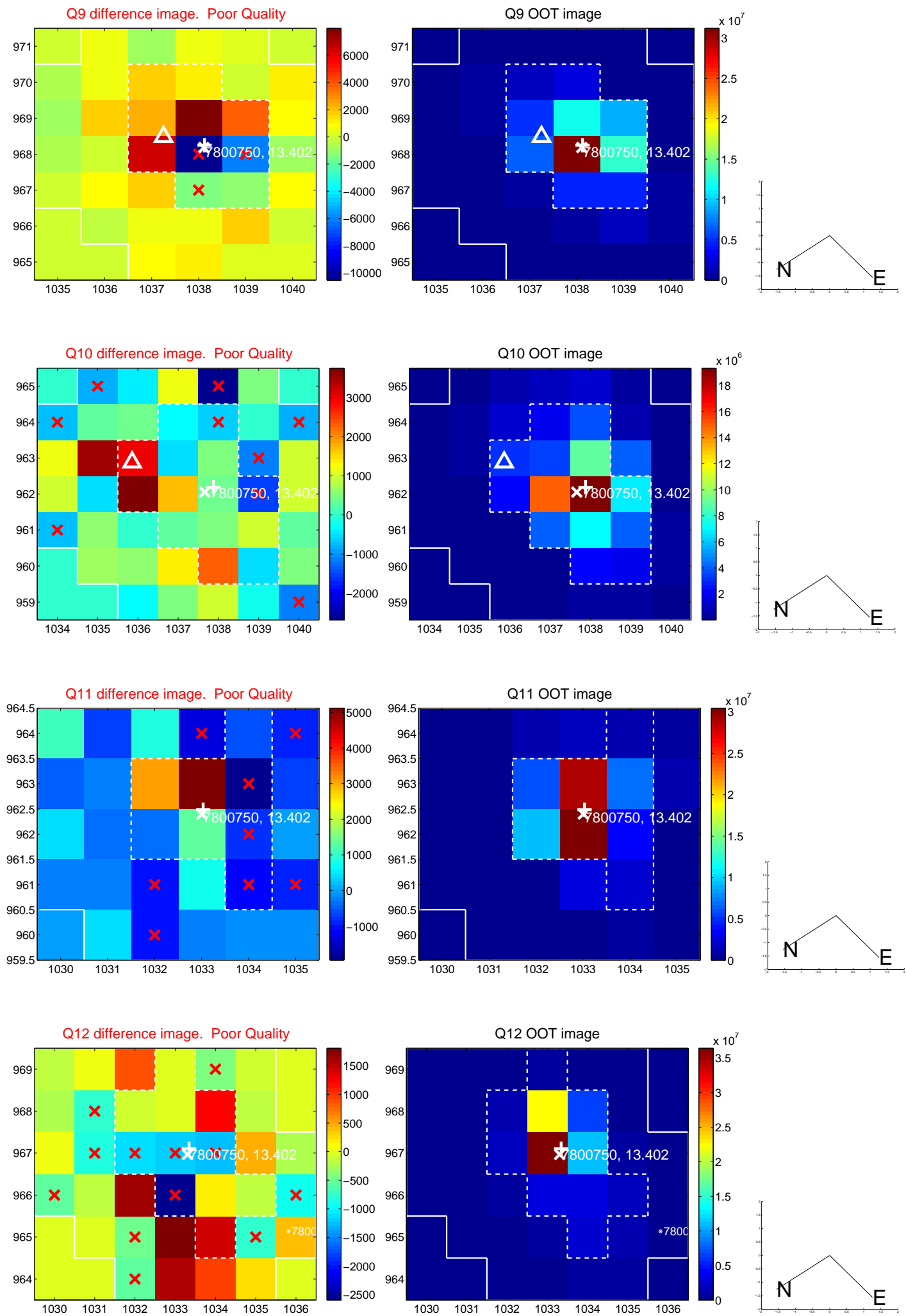
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



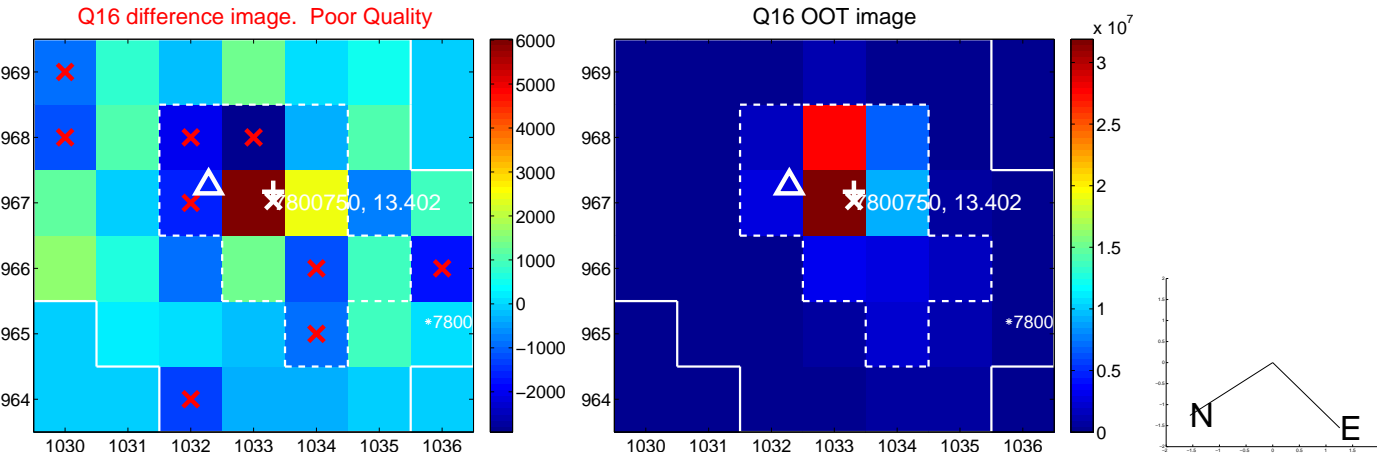
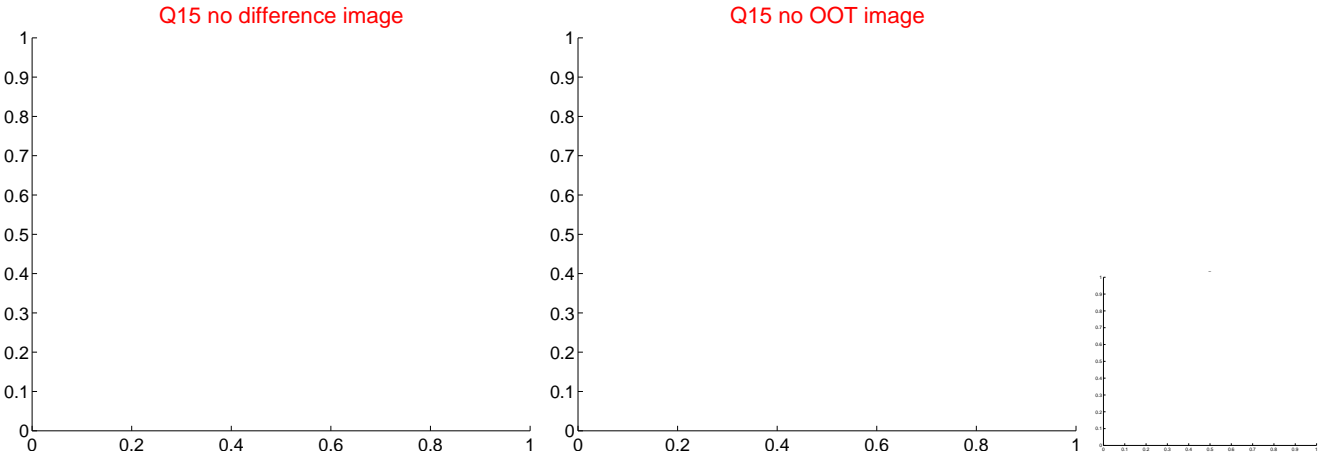
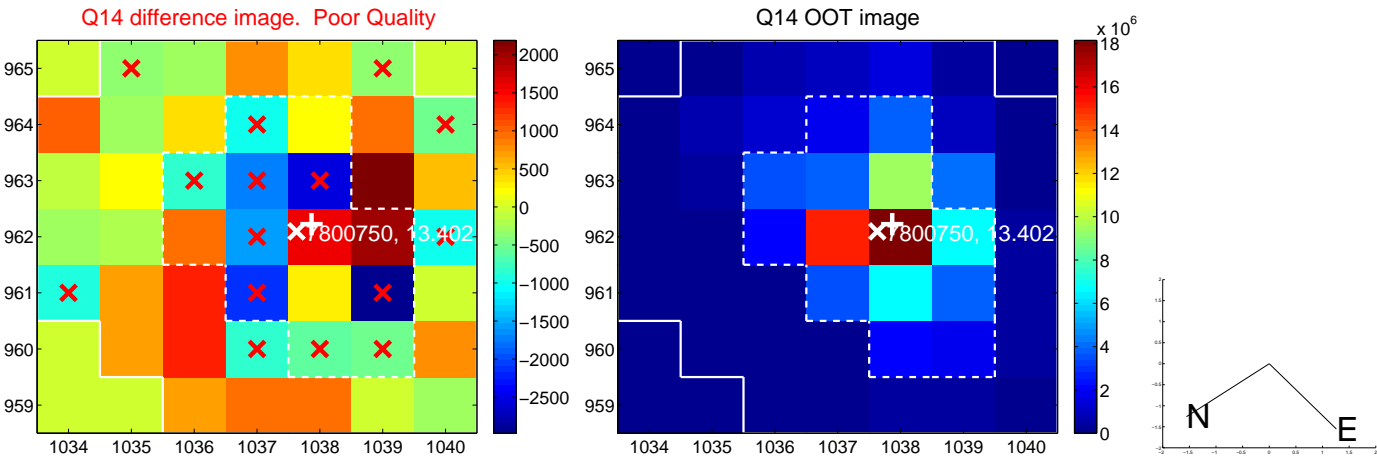
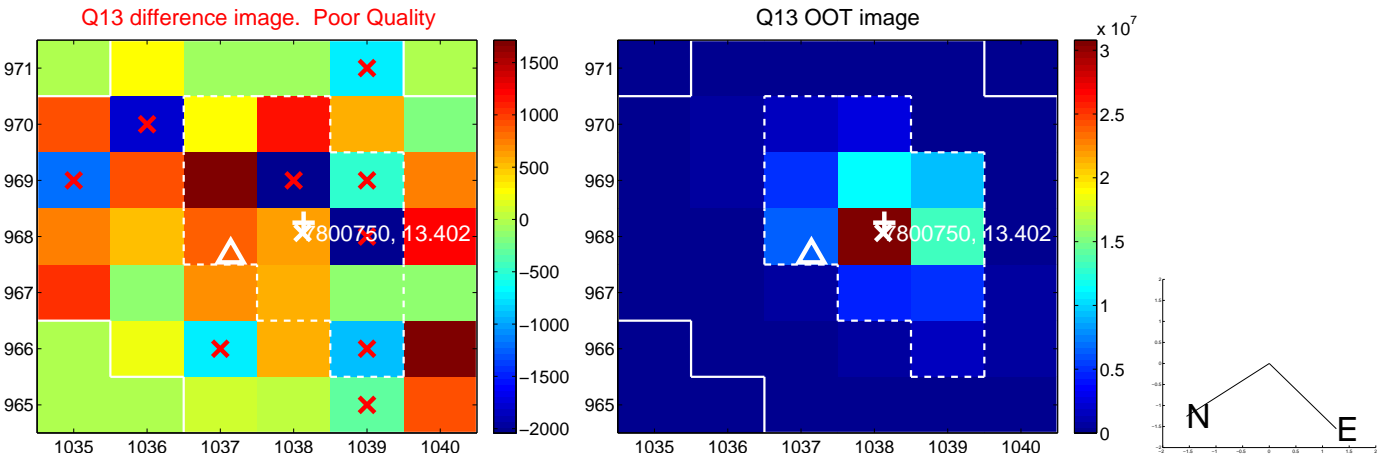
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



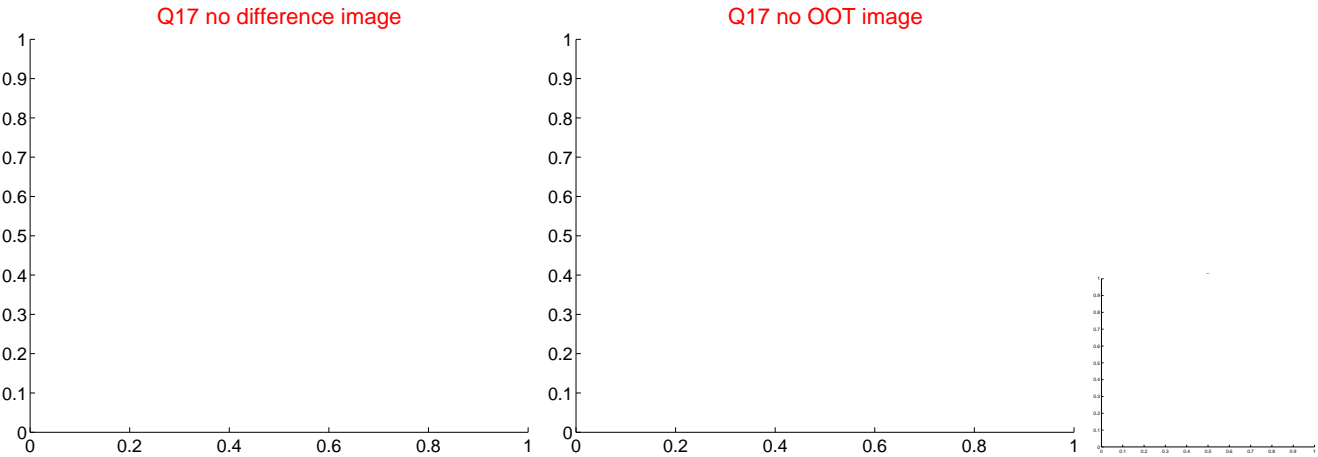
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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folded centroid time series figure for this object.

UKIRT Image

