

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})
006670894-01	OBS	No	2.551845	132.460661	50.0	18.029	9.6	9.8	1.88	7266	1.38	4910.12
006670894-02	OBS	No	55.544984	174.552307	296.6	7.510	12.9	6.5	1.88	7266	3.43	80.79
006670894-03	OBS	No	56.670287	146.490621	623.9	5.356	16.0	13.6	1.88	7266	5.74	78.66
006670894-04	OBS	No	11.381235	140.143288	309.4	3.826	11.2	11.6	1.88	7266	3.76	668.82
006670894-05	OBS	No	47.278774	156.605446	531.2	2.331	9.8	10.5	1.88	7266	5.37	100.16
006670894-06	OBS	No	33.977317	161.813527	437.1	3.226	9.3	10.3	1.88	7266	4.19	155.59
006670894-07	OBS	No	15.241088	144.414923	289.3	2.955	9.5	11.4	1.88	7266	3.60	453.12
006670894-08	OBS	No	46.125163	173.705739	483.3	2.500	8.6	9.3	1.88	7266	4.24	103.51
006670894-09	OBS	No	9.236289	138.873408	250.7	2.594	8.8	9.5	1.88	7266	3.38	883.56
006670894-10	OBS	No	35.972270	166.674102	374.5	3.555	8.4	10.3	1.88	7266	3.88	144.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006670894-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006670894-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006670894-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006670894-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-09	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
006670894-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

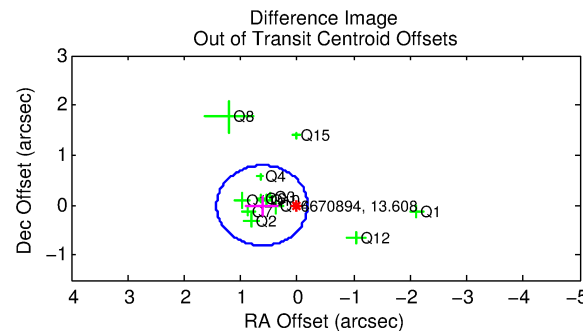
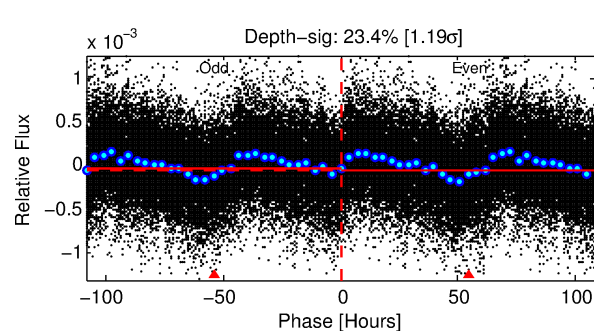
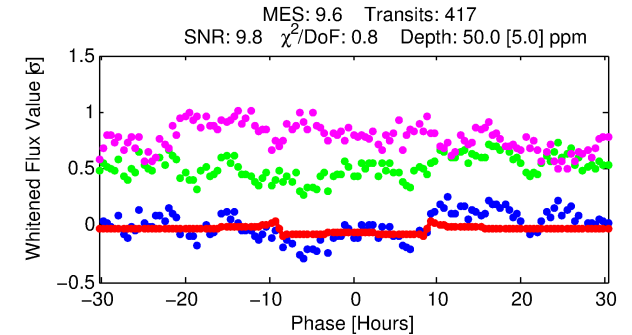
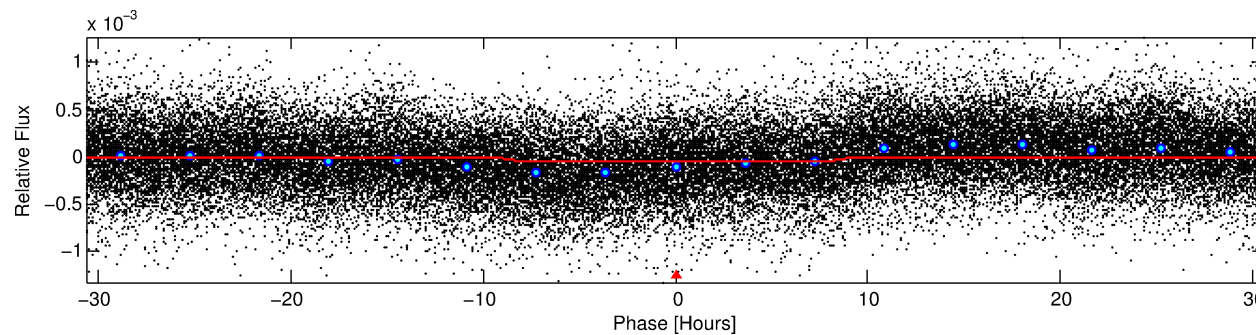
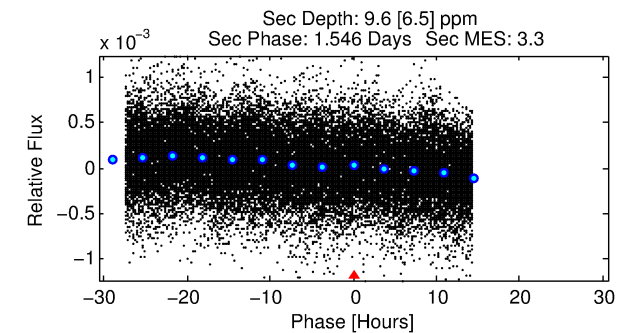
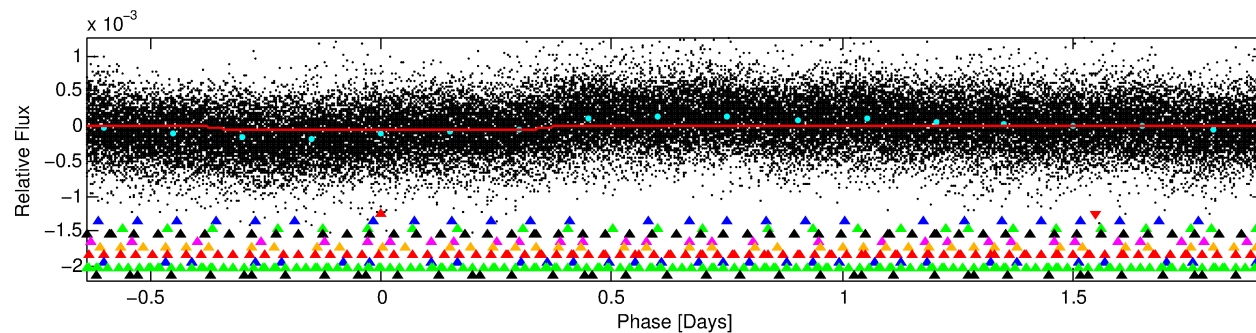
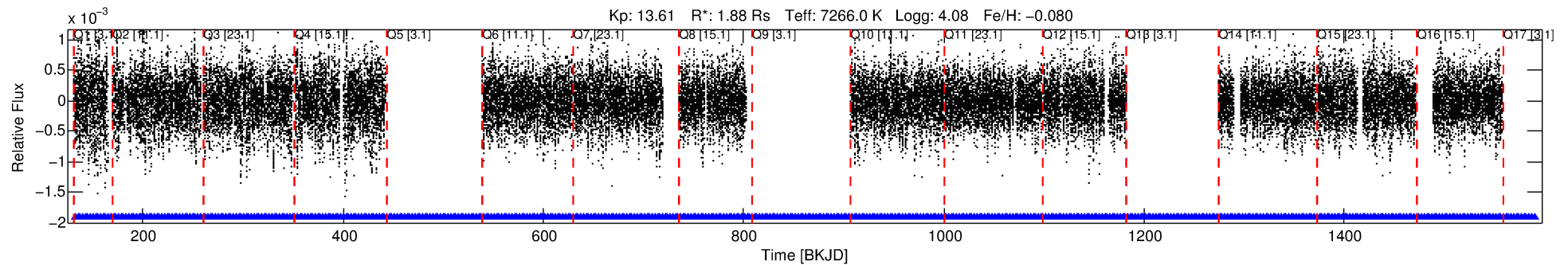
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006670894-01

No Significant Match Found

DV One-Page Summary

KIC: 6670894 Candidate: 1 of 10 Period: 2.552 d



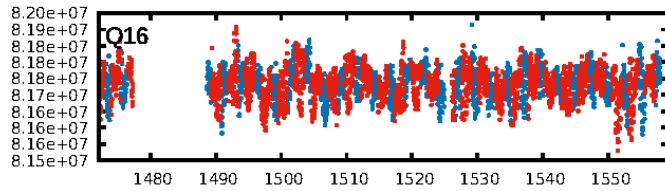
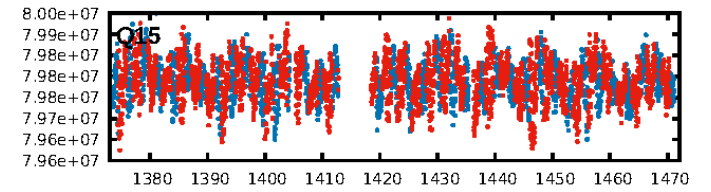
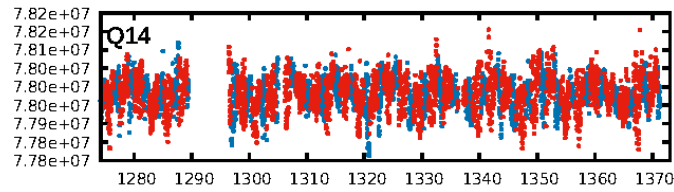
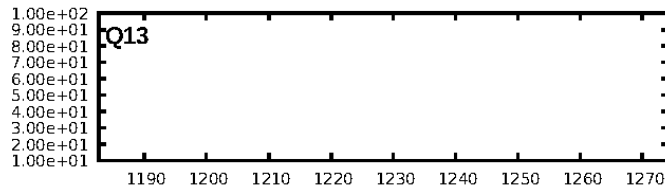
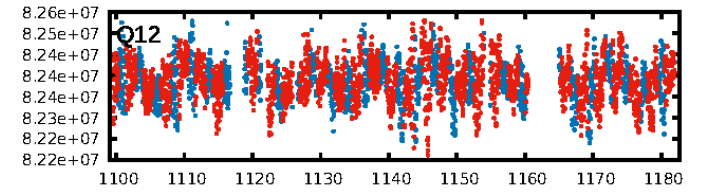
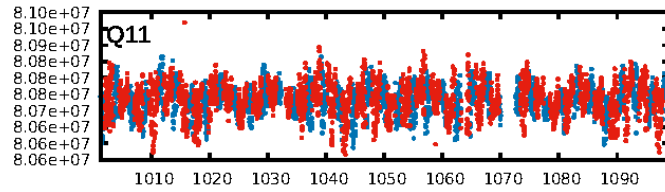
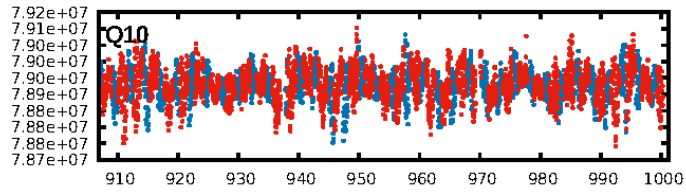
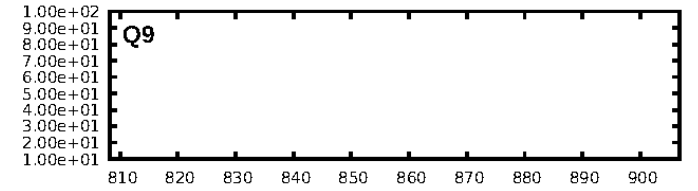
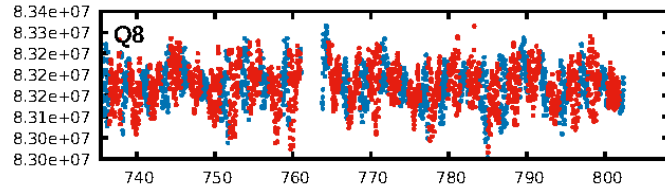
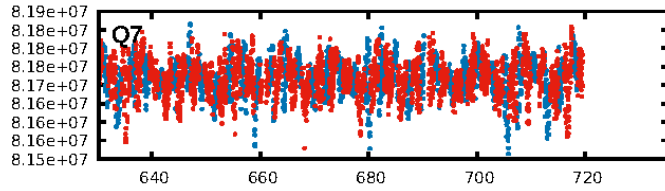
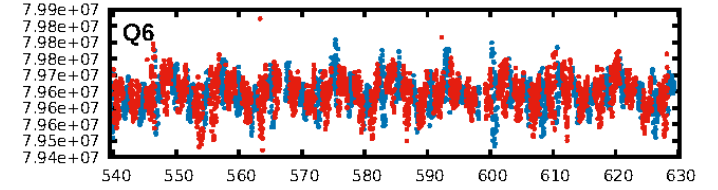
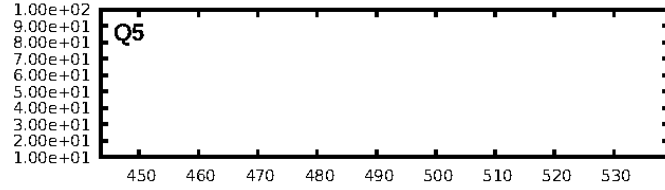
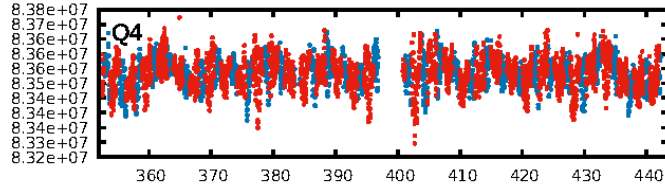
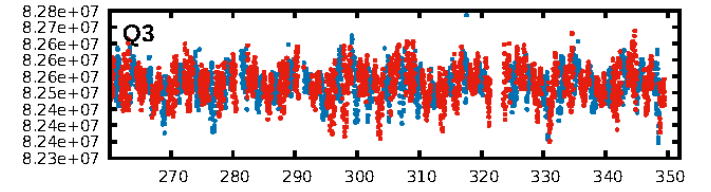
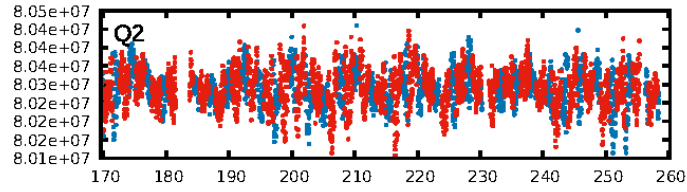
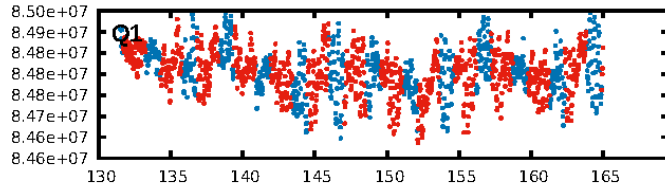
DV Fit Results:

Period = 2.55184 [0.00003] d
Epoch = 132.4607 [0.0055] BKJD
Rp/R* = 0.0068 [0.0024]
a/R* = 1.19 [0.77]
b = 0.54 [2.86]
Seff = 4910.12 [1861.47]
Teq = 2135 [202] K
Rp = 1.38 [0.65] Re
a = 0.0423 [0.0104] AU
Ag = 4.96 [5.10] [0.78σ]
Teffp = 4925 [1219] K [2.26σ]

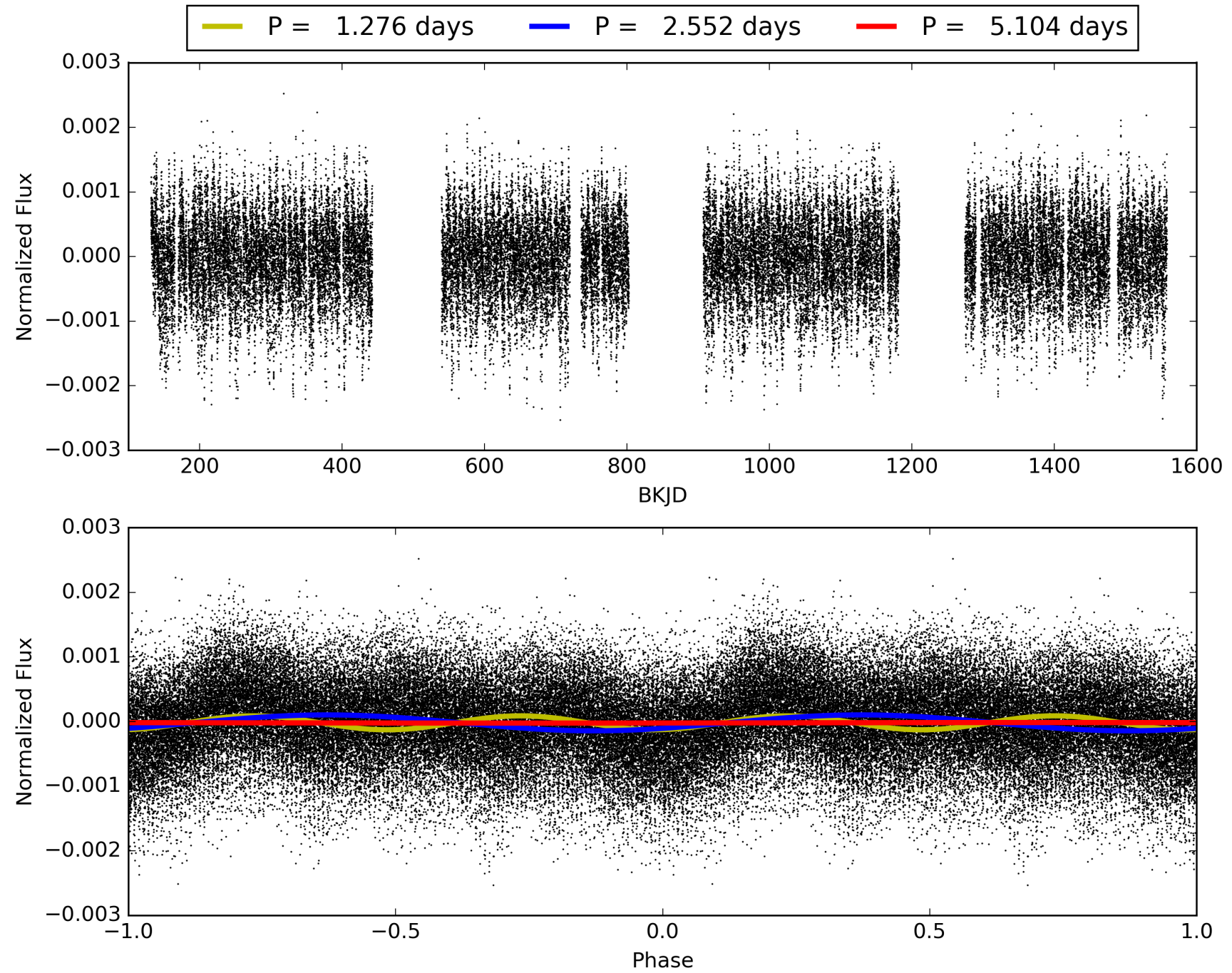
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [8.81σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.07e-15
RollingBand-fgt: 1.00 [404/404]
GhostDiagnostic-chr: 1.796
Centroid-sig: 0.0%
Centroid-so: 1.115 arcsec [2.48σ]
OotOffset-rm: 0.623 arcsec [2.32σ]
KicOffset-rm: 0.605 arcsec [2.19σ]
OotOffset-st: 4/4/3/1 [12]
KicOffset-st: 4/4/3/1 [12]
DiffImageQuality-fgm: 0.92 [11/12]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 006670894-01, PDC Light Curves

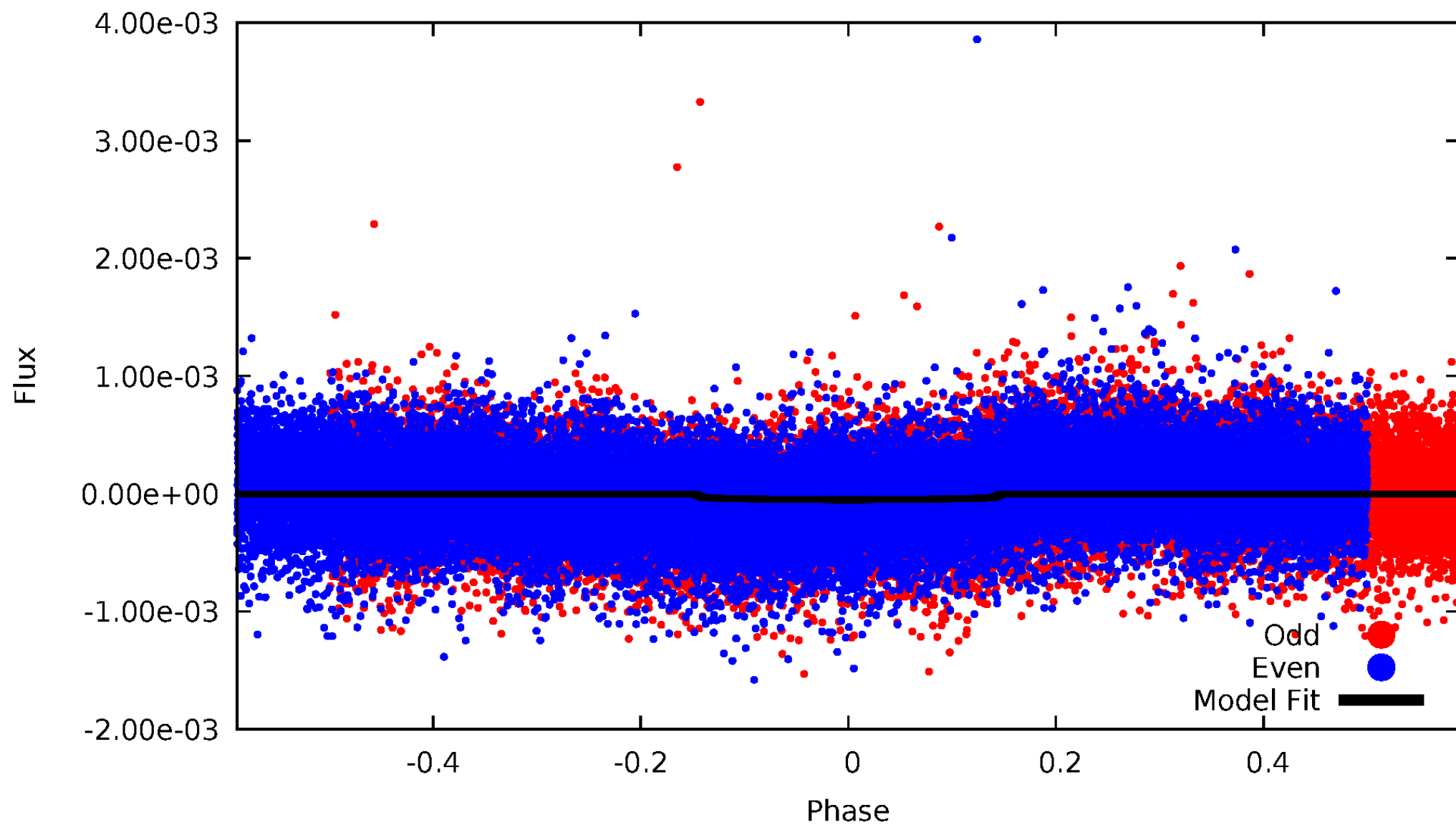


TCE 006670894-01



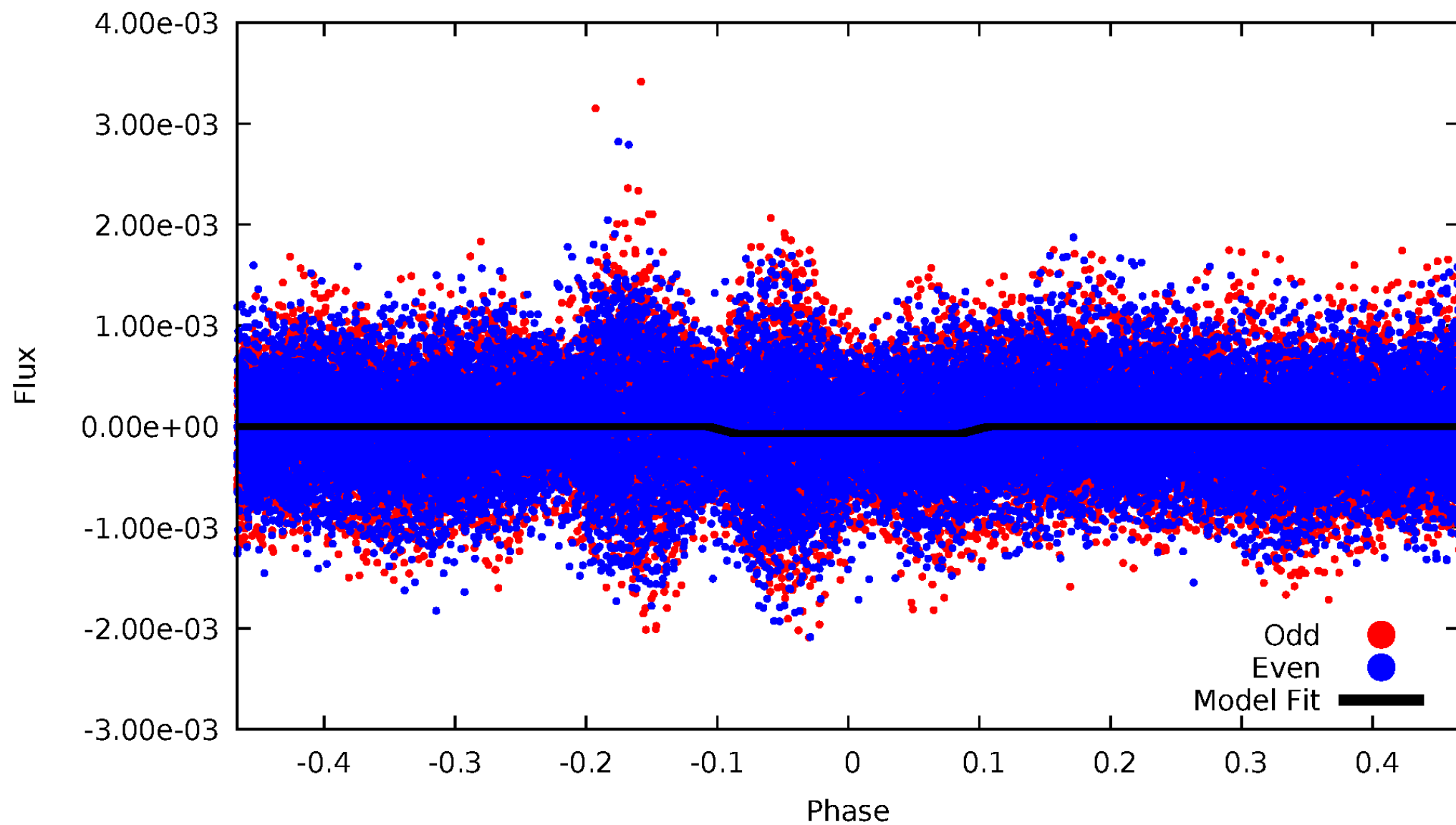
DV Odd/Even

TCE 006670894-01

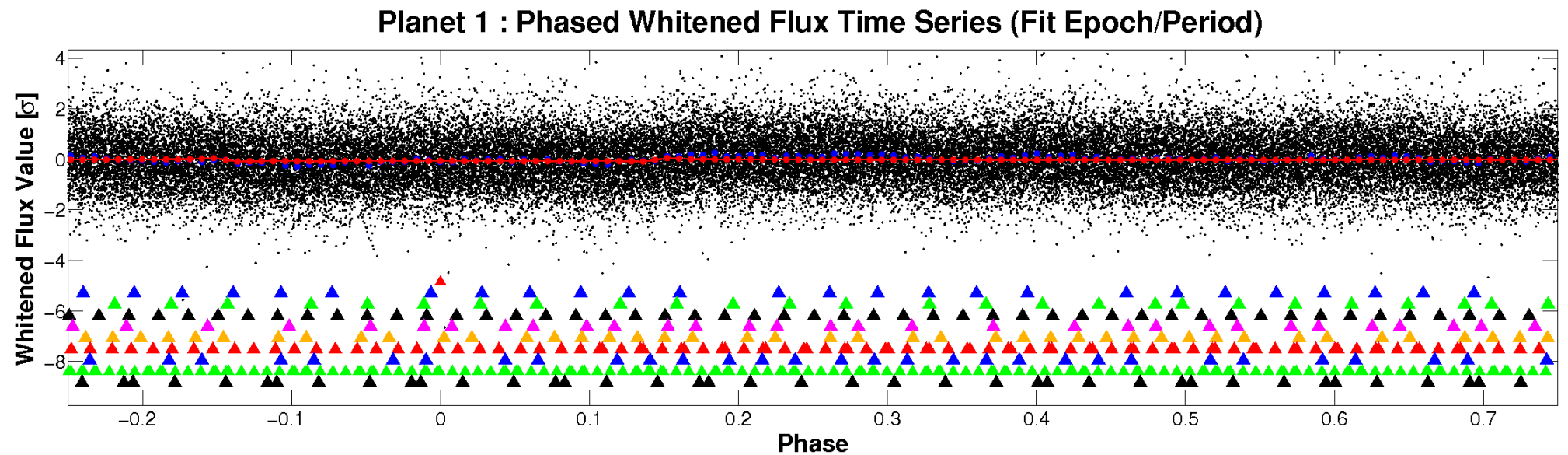
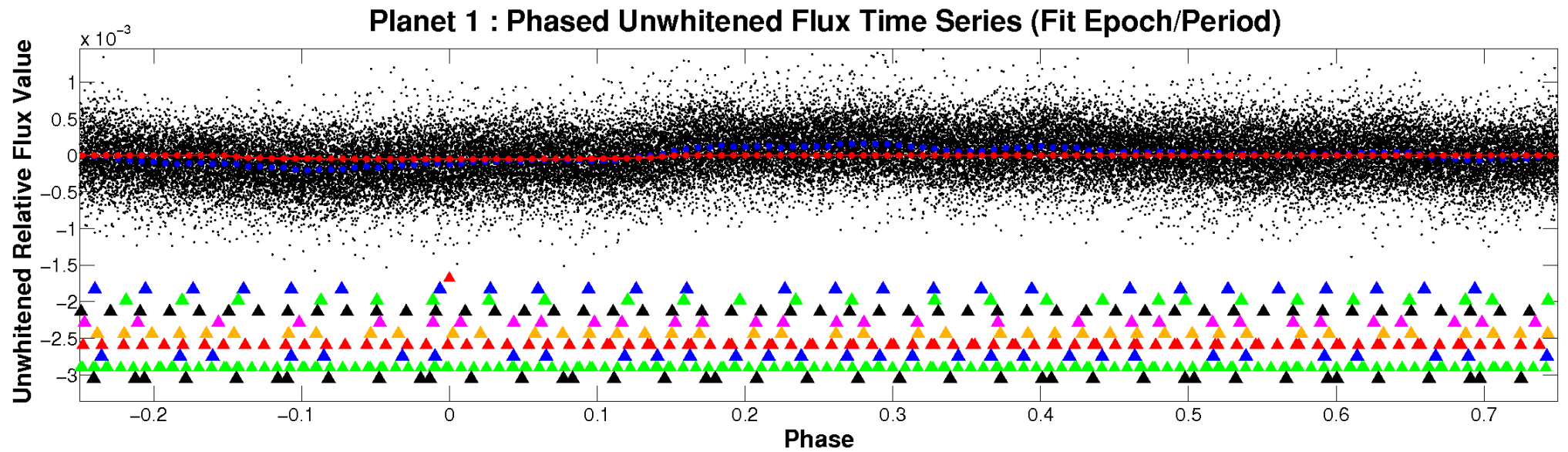


ALT Odd/Even

TCE 006670894-01

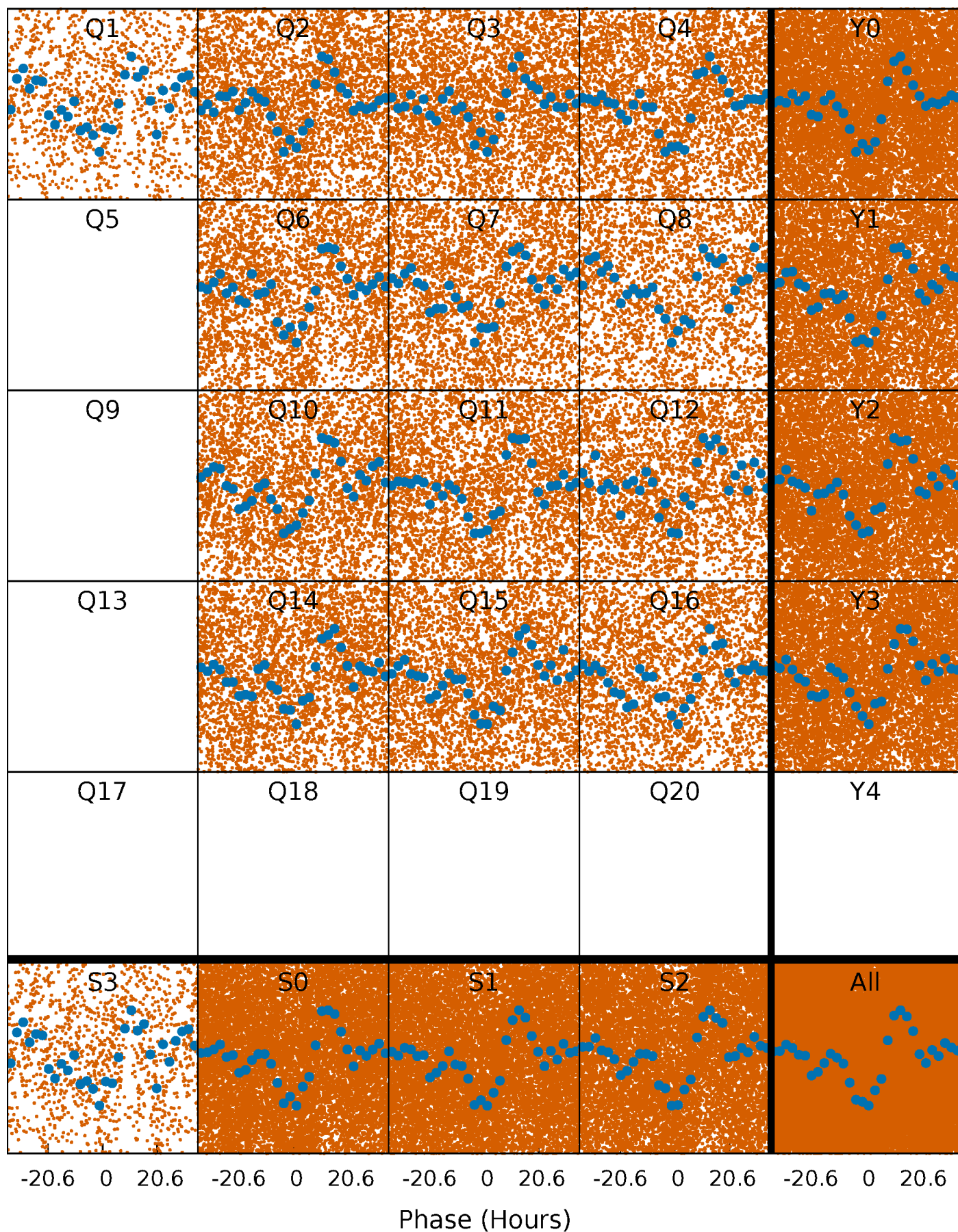


Non-Whitened Vs. Whitened Light Curve



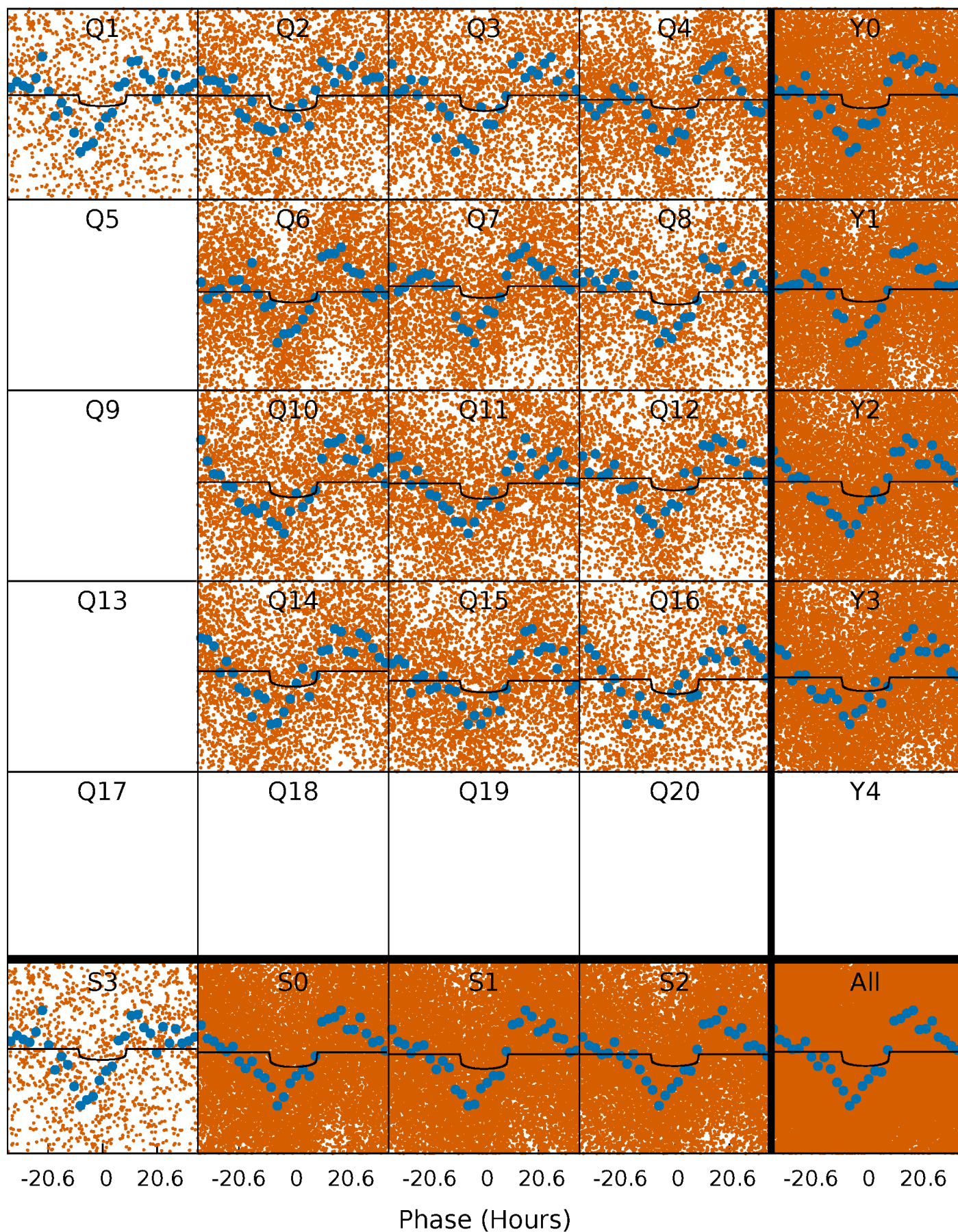
PDC Quarter-Phased Transit Curves

TCE 006670894-01 P= 2.551845 Days $T_0=132.460661$ (BKJD)



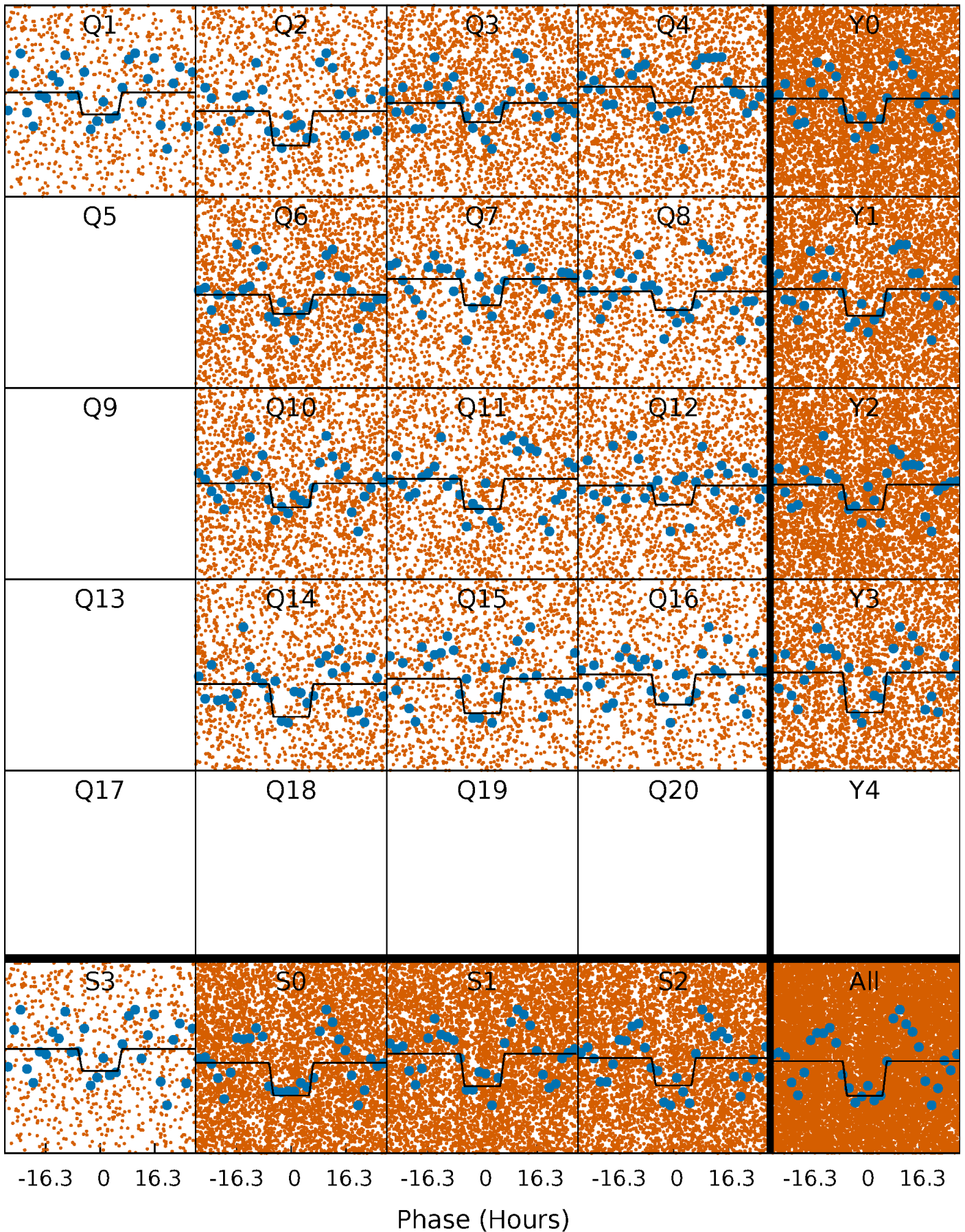
DV Quarter-Phased Transit Curves

TCE 006670894-01 P= 2.551845 Days $T_0=132.460661$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

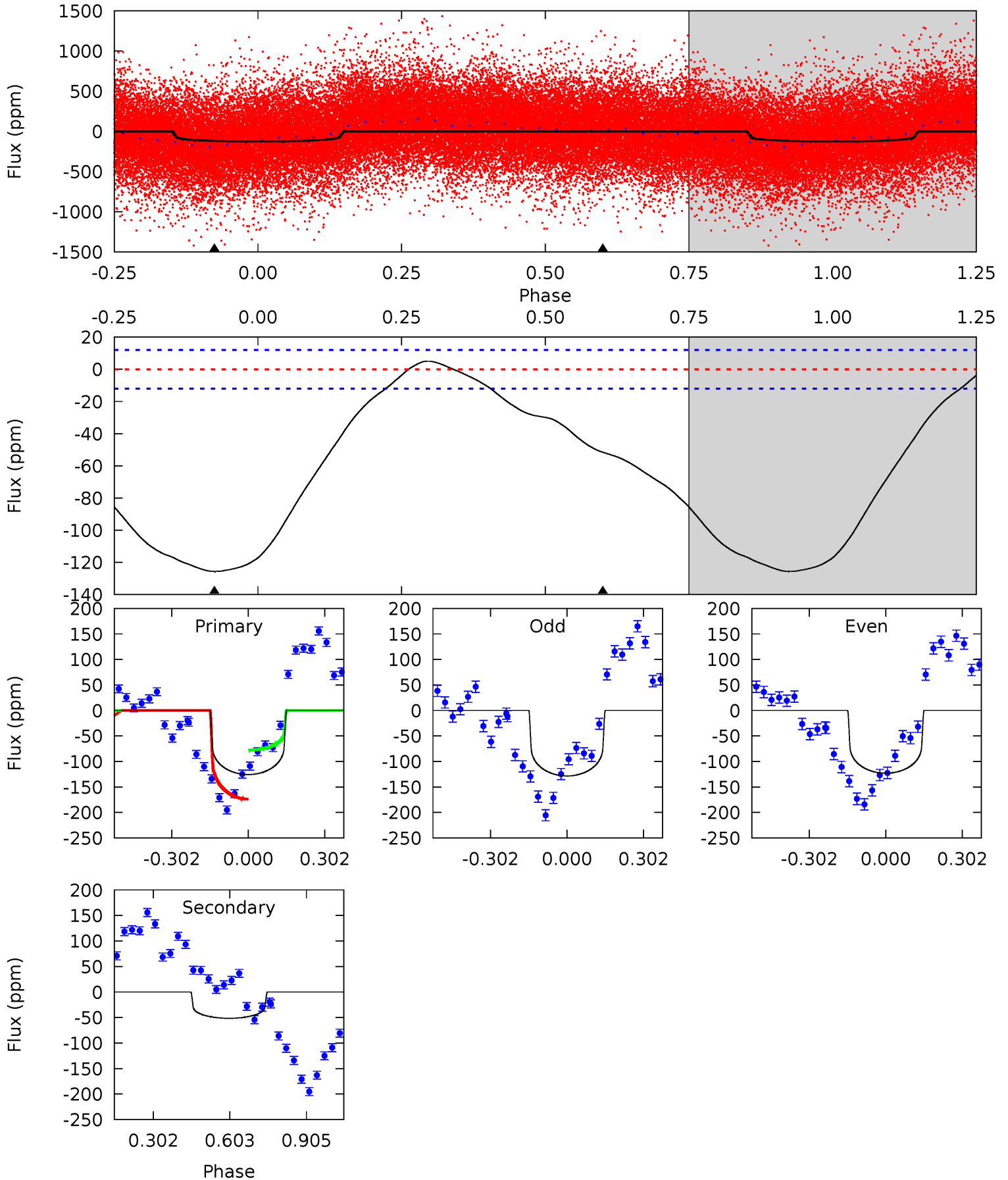
TCE 006670894-01 P= 2.551959 Days $T_0=132.480676$ (BKJD)



DV Model-Shift Uniqueness Test

006670894-01, P = 2.551845 Days, E = 129.908816 Days

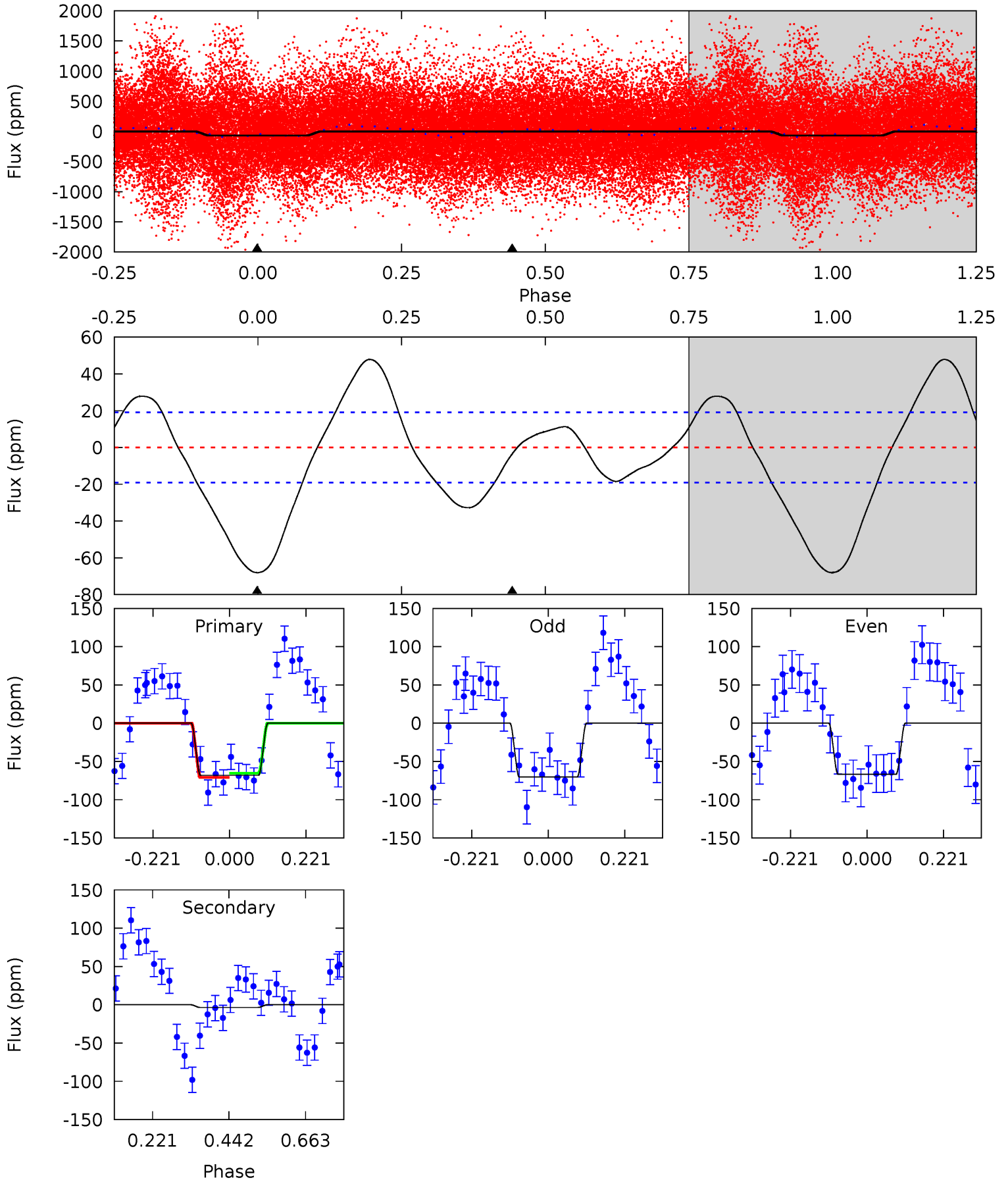
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.1	18.5	0	0	4.33	1.03	2.32	45.1	45.1	18.5	18.5	0.96	1.05	0.04	18.4



Alt Model-Shift Uniqueness Test

006670894-01, P = 2.551959 Days, E = 129.928717 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.7	0.81	0	0	4.40	1.22	2.67	15.7	15.7	0.81	0.81	0.42	0.89	0.41	0.65



Stellar Parameters For KIC 006670894

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7266^{+226}_{-327}	$4.082^{+0.170}_{-0.170}$	$-0.080^{+0.250}_{-0.350}$	$1.876^{+0.585}_{-0.439}$	$1.546^{+0.212}_{-0.259}$	$0.330^{+0.299}_{-0.157}$
	+3%/-5%	+4%/-4%	+312%/-438%	+31%/-23%	+14%/-17%	+91%/-48%
Source	KIC0	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 006670894-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-52 ± 3	$1.36^{+0.53}_{-0.50}$	2962^{+238}_{-202}	7517^{+2549}_{-1212}	27^{+40}_{-13}
Alt.	-4 ± 4	$1.65^{+0.60}_{-0.52}$	2960^{+239}_{-206}	3625^{+972}_{-6980}	$1.259^{+2.710}_{-1.453}$

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 $A_{obs} \gg 1.0$

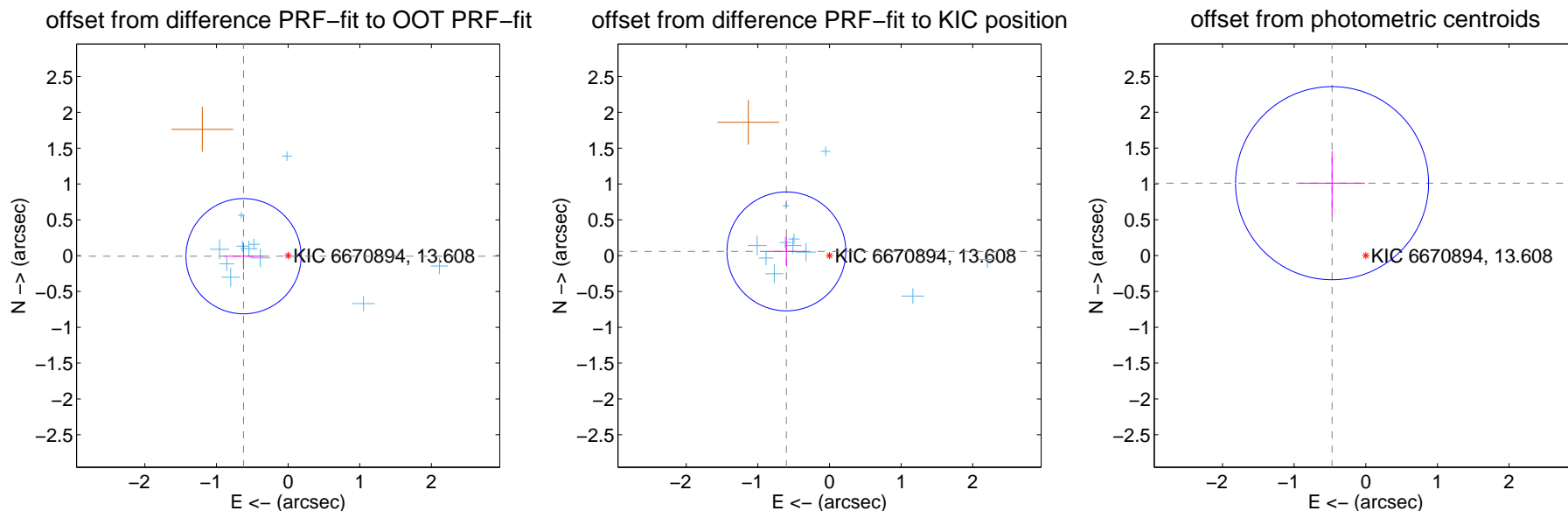
DV Centroid Data

Supplemental centroid analysis for 006670894-01. Kepler magnitude: 13.61. Transit SNR 9.84

There are 11 quarters with good PRF difference image offsets

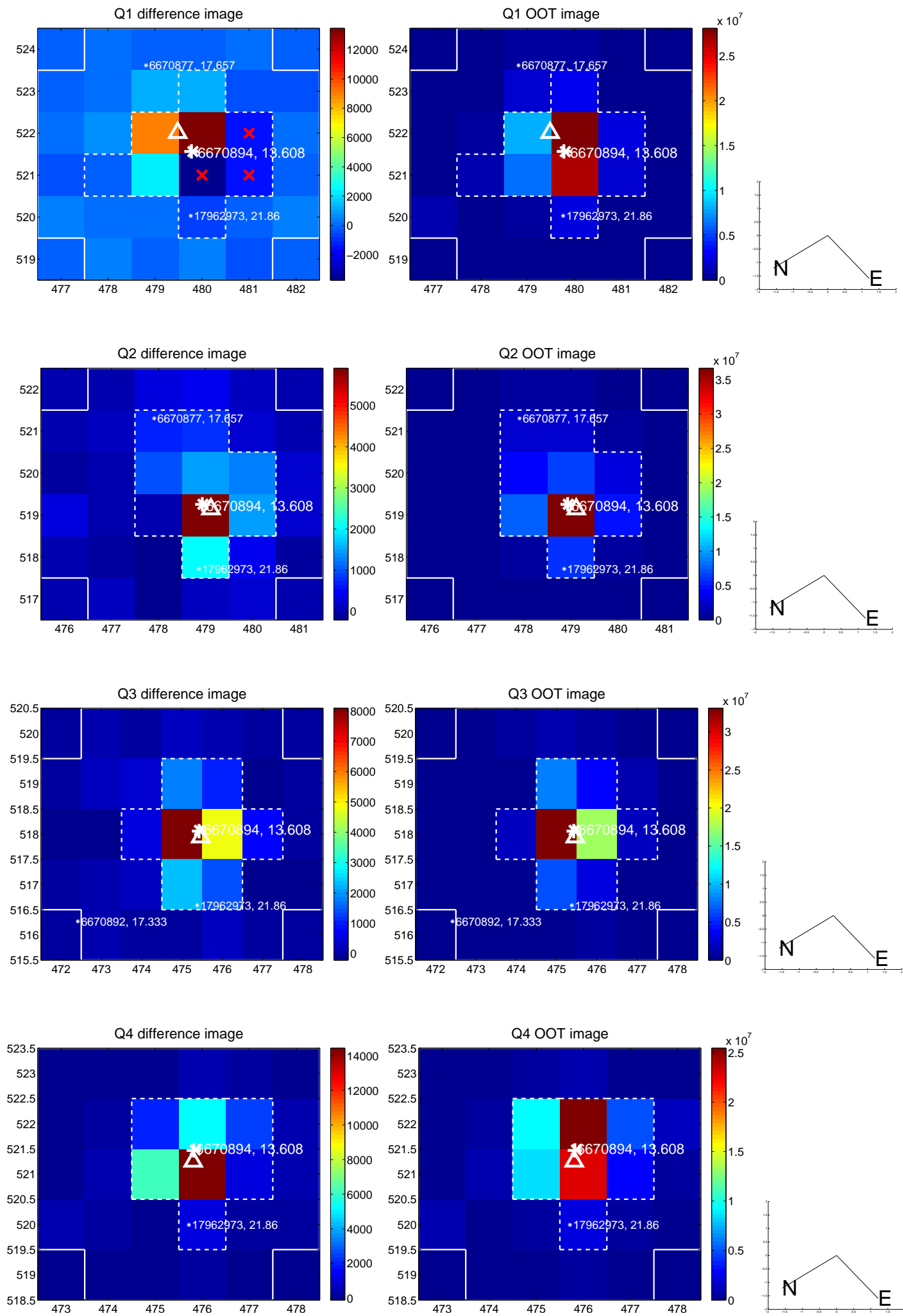
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.623 ± 0.268	2.32	0.623 ± 0.269	-0.008 ± 0.186
PRF-fit source offset from KIC position	0.605 ± 0.277	2.19	0.602 ± 0.271	0.059 ± 0.210
photometric centroid source offset	1.11 ± 0.45	2.48	0.47 ± 0.46	1.01 ± 0.45

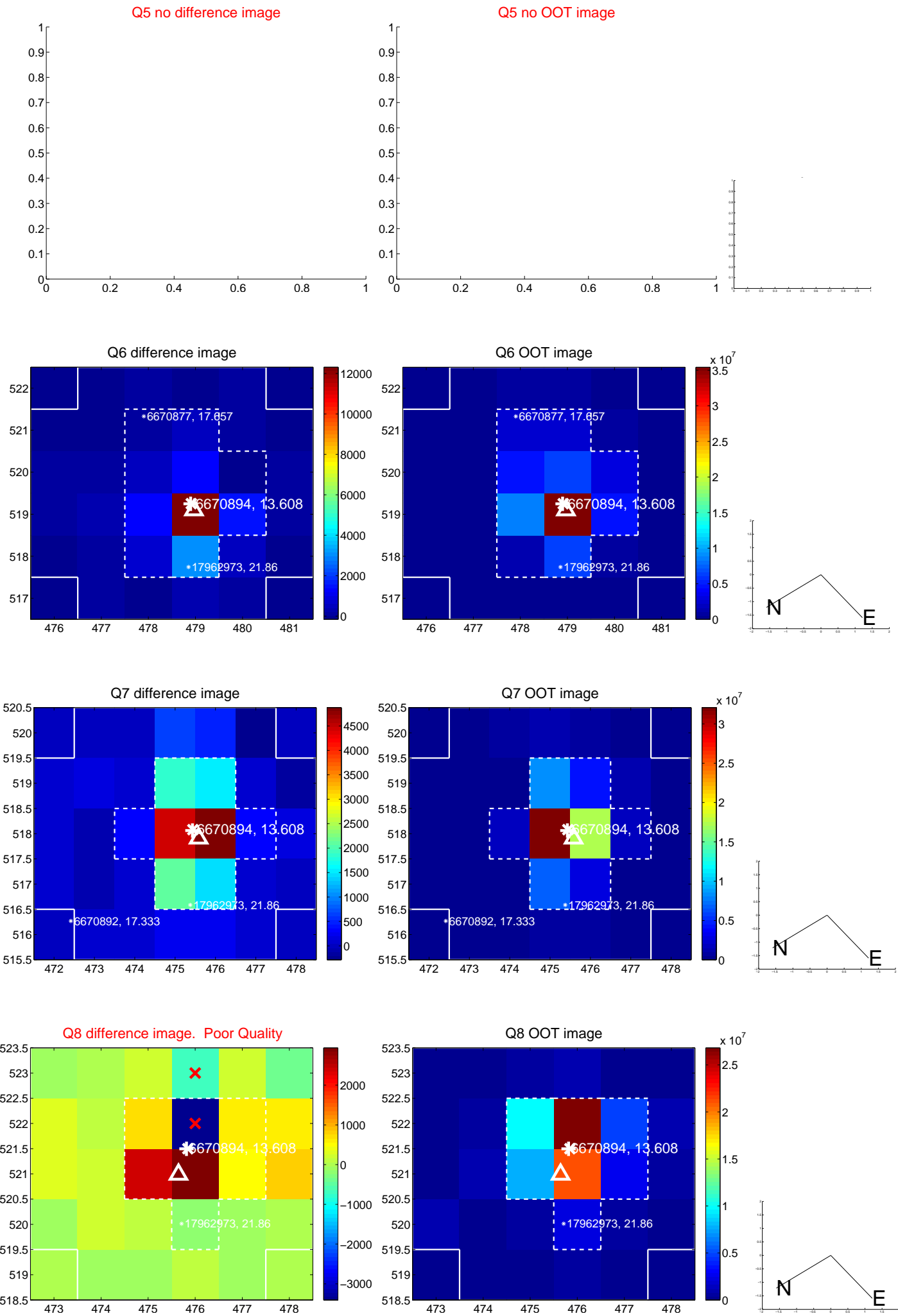


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

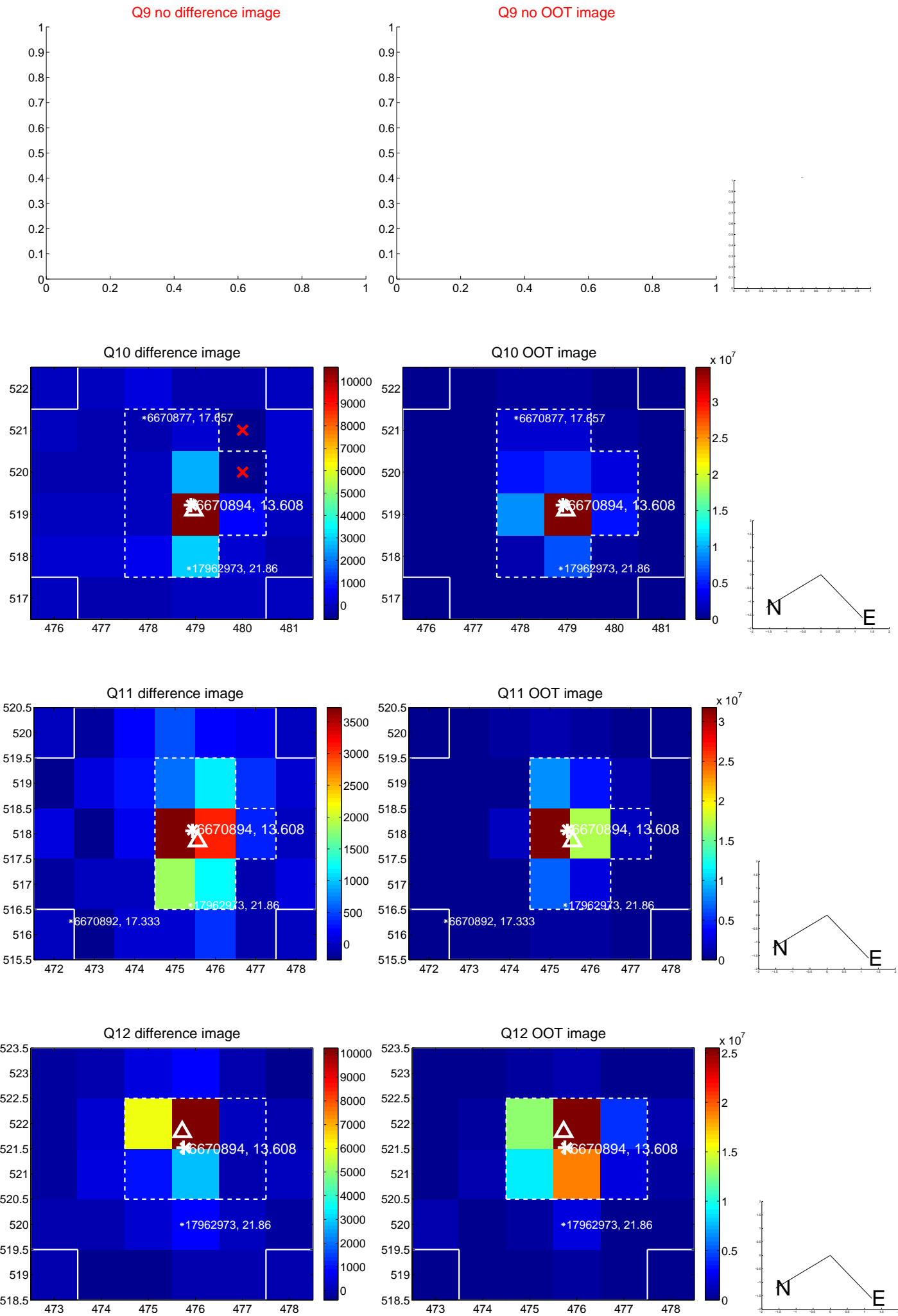
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



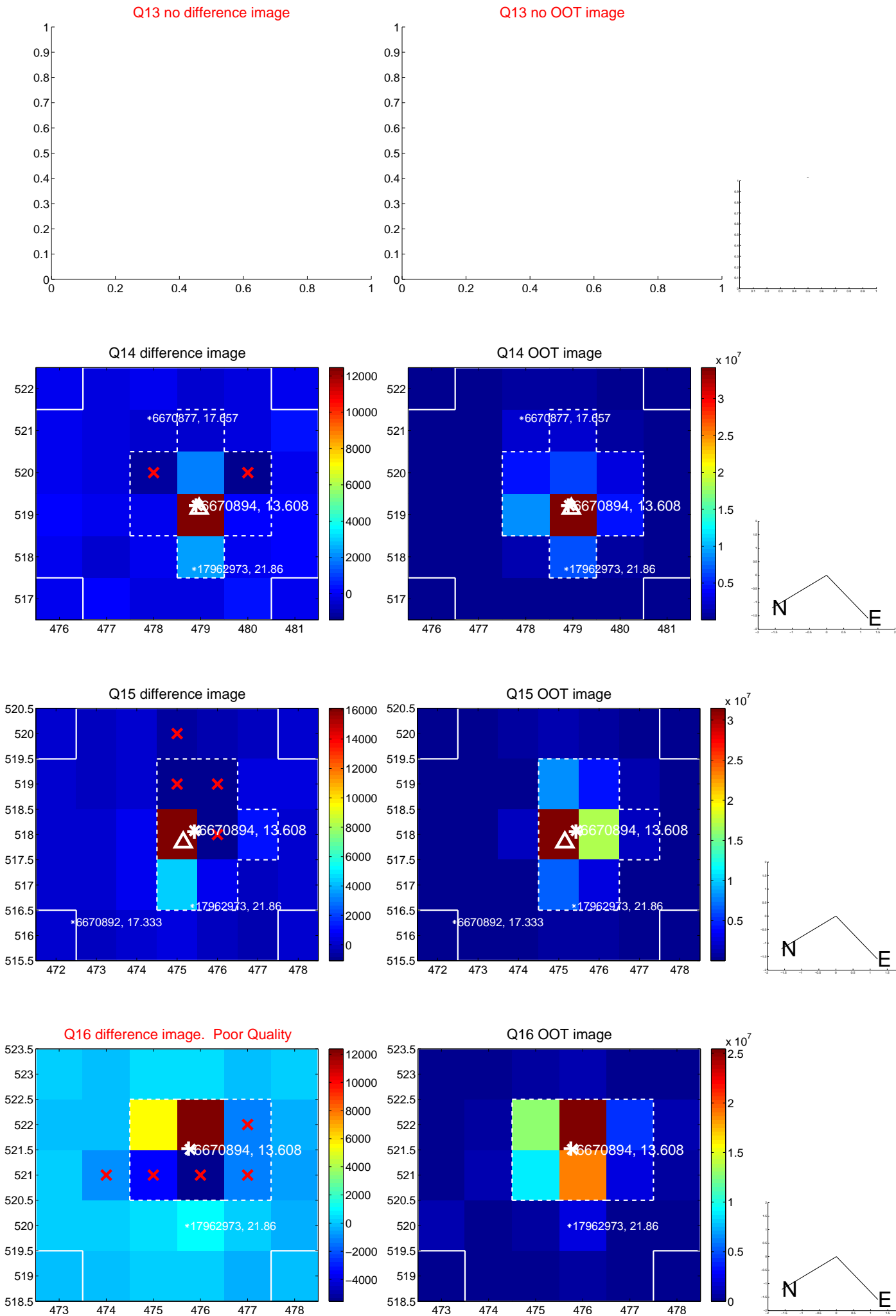
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



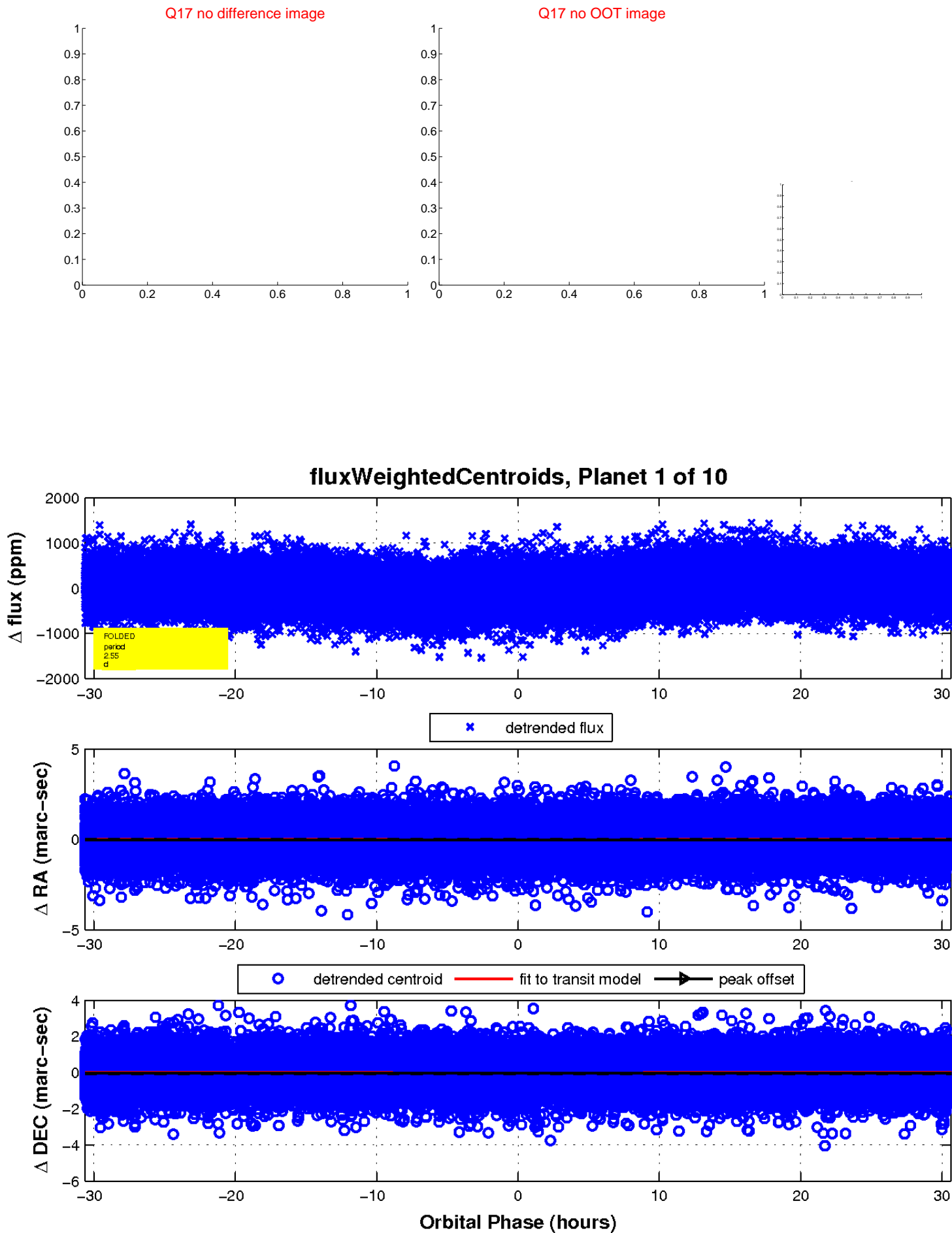
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

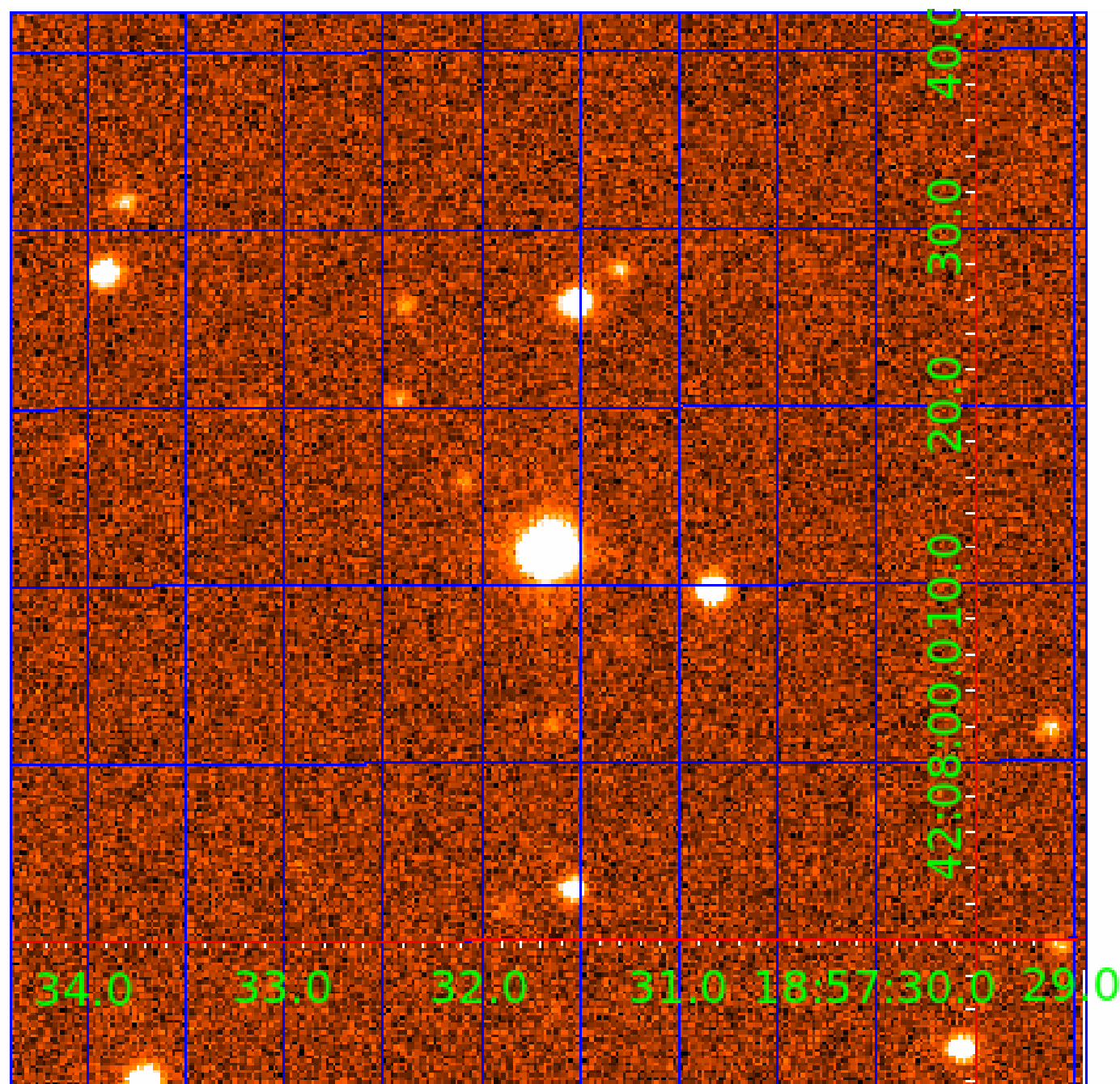


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
006670894-01	OBS	No	2.551845	132.460661	50.0	18.029	9.6	9.8	1.88	7266	1.38	4910.12
006670894-02	OBS	No	55.544984	174.552307	296.6	7.510	12.9	6.5	1.88	7266	3.43	80.79
006670894-03	OBS	No	56.670287	146.490621	623.9	5.356	16.0	13.6	1.88	7266	5.74	78.66
006670894-04	OBS	No	11.381235	140.143288	309.4	3.826	11.2	11.6	1.88	7266	3.76	668.82
006670894-05	OBS	No	47.278774	156.605446	531.2	2.331	9.8	10.5	1.88	7266	5.37	100.16
006670894-06	OBS	No	33.977317	161.813527	437.1	3.226	9.3	10.3	1.88	7266	4.19	155.59
006670894-07	OBS	No	15.241088	144.414923	289.3	2.955	9.5	11.4	1.88	7266	3.60	453.12
006670894-08	OBS	No	46.125163	173.705739	483.3	2.500	8.6	9.3	1.88	7266	4.24	103.51
006670894-09	OBS	No	9.236289	138.873408	250.7	2.594	8.8	9.5	1.88	7266	3.38	883.56
006670894-10	OBS	No	35.972270	166.674102	374.5	3.555	8.4	10.3	1.88	7266	3.88	144.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006670894-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006670894-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006670894-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006670894-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-09	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
006670894-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

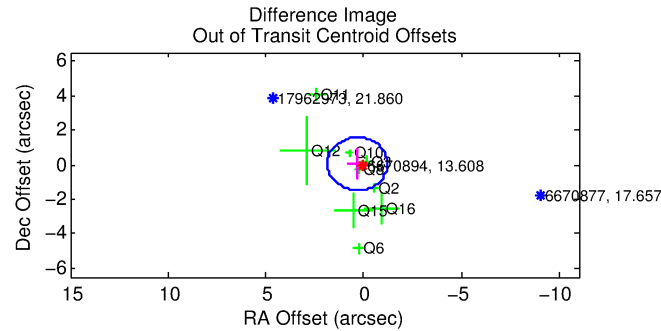
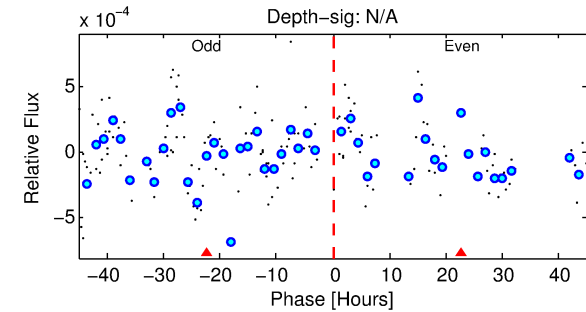
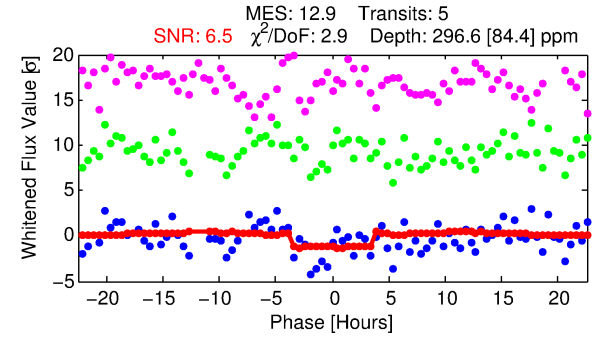
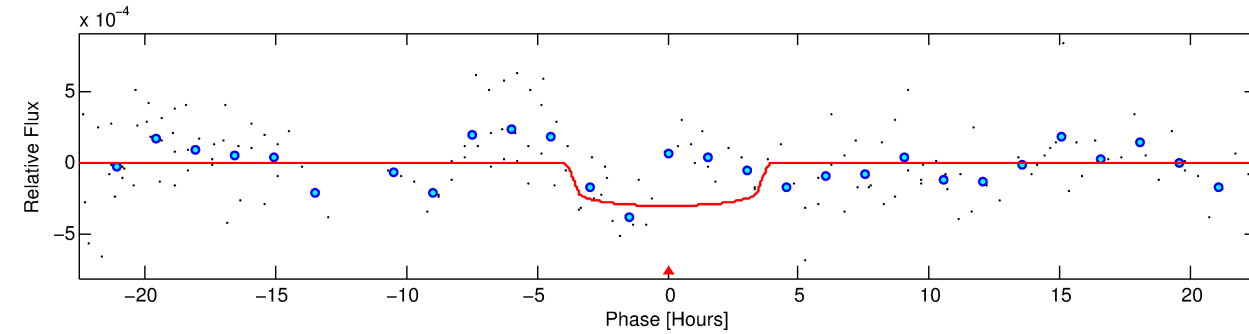
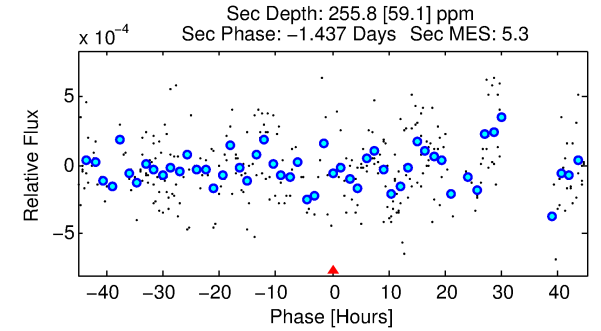
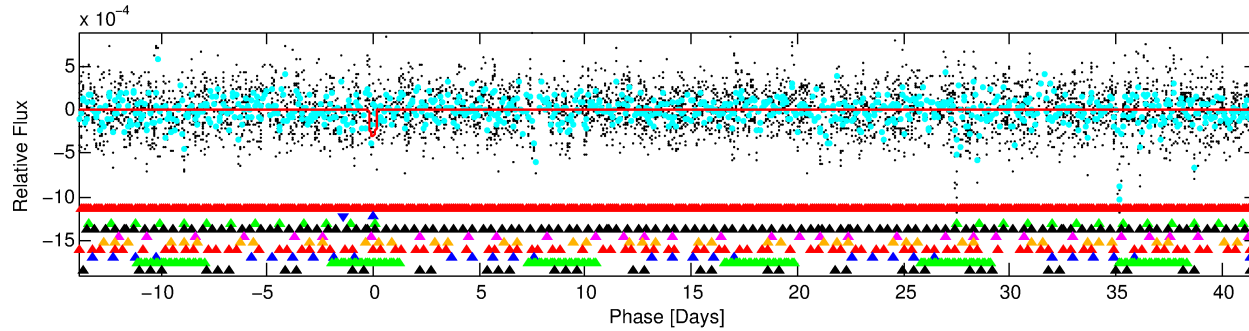
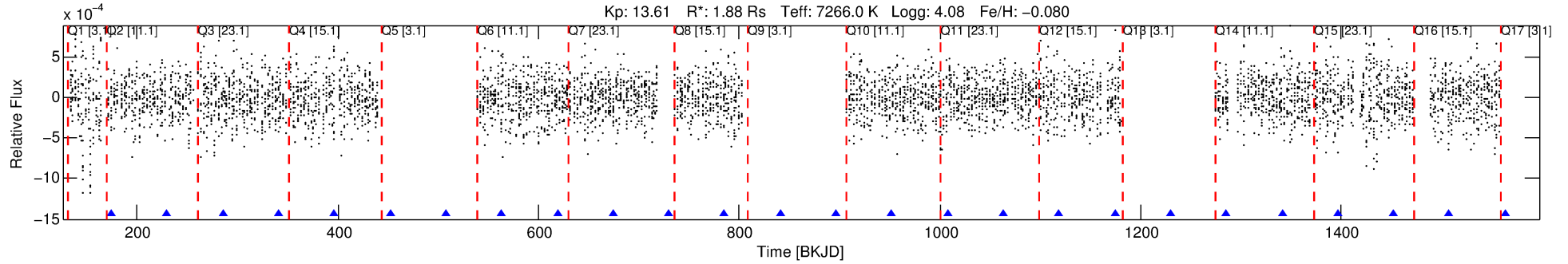
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006670894-02

No Significant Match Found

DV One-Page Summary

KIC: 6670894 Candidate: 2 of 10 Period: 55.545 d



DV Fit Results:

Period = 55.54498 [0.00263] d
Epoch = 174.5523 [0.0295] BKJD
Rp/R* = 0.0168 [0.0167]
a/R* = 43.62 [252.83]
b = 0.66 [4.99]
Seff = 80.79 [30.63]
Teq = 764 [72] K
Rp = 3.43 [3.58] Re
a = 0.3298 [0.0810] AU
Ag = 1298.16 [2632.90] [0.49σ]
Teffp = 7095 [3563] K [1.78σ]

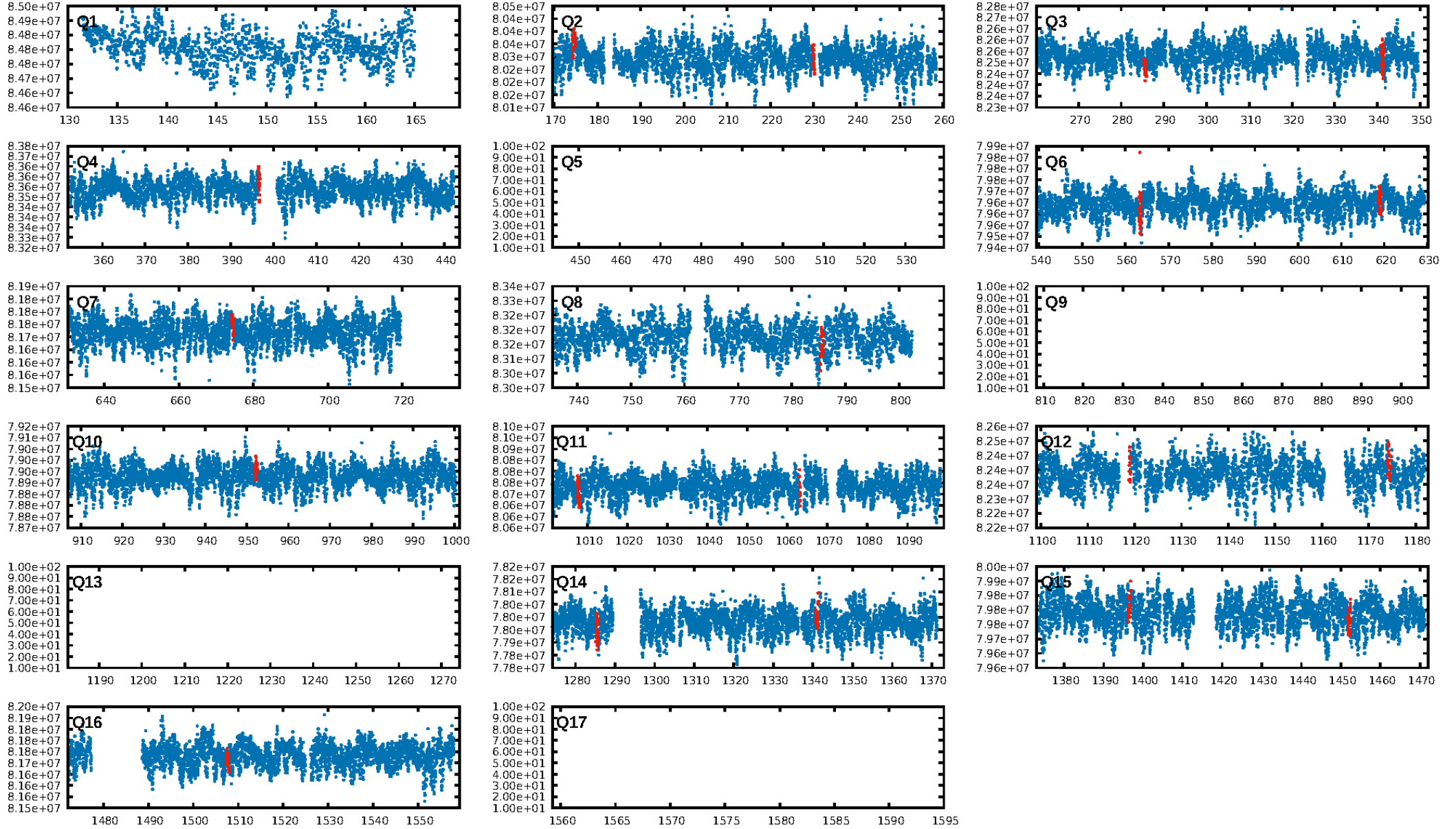
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [25.23σ]
LongPeriod-sig: 99.7% [2.93σ]
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 98.7%
Bootstrap-pfa: 5.55e-28
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -0.7353
Centroid-sig: 35.9%
Centroid-so: 0.418 arcsec [0.76σ]
OotOffset-rm: 0.331 arcsec [0.65σ]
KicOffset-rm: 0.296 arcsec [0.48σ]
OotOffset-st: 3/3/3/0 [9]
KicOffset-st: 3/3/3/0 [9]
DiffImageQuality-fgm: 0.22 [2/9]
DiffImageOverlap-fno: 0.09 [1/11]

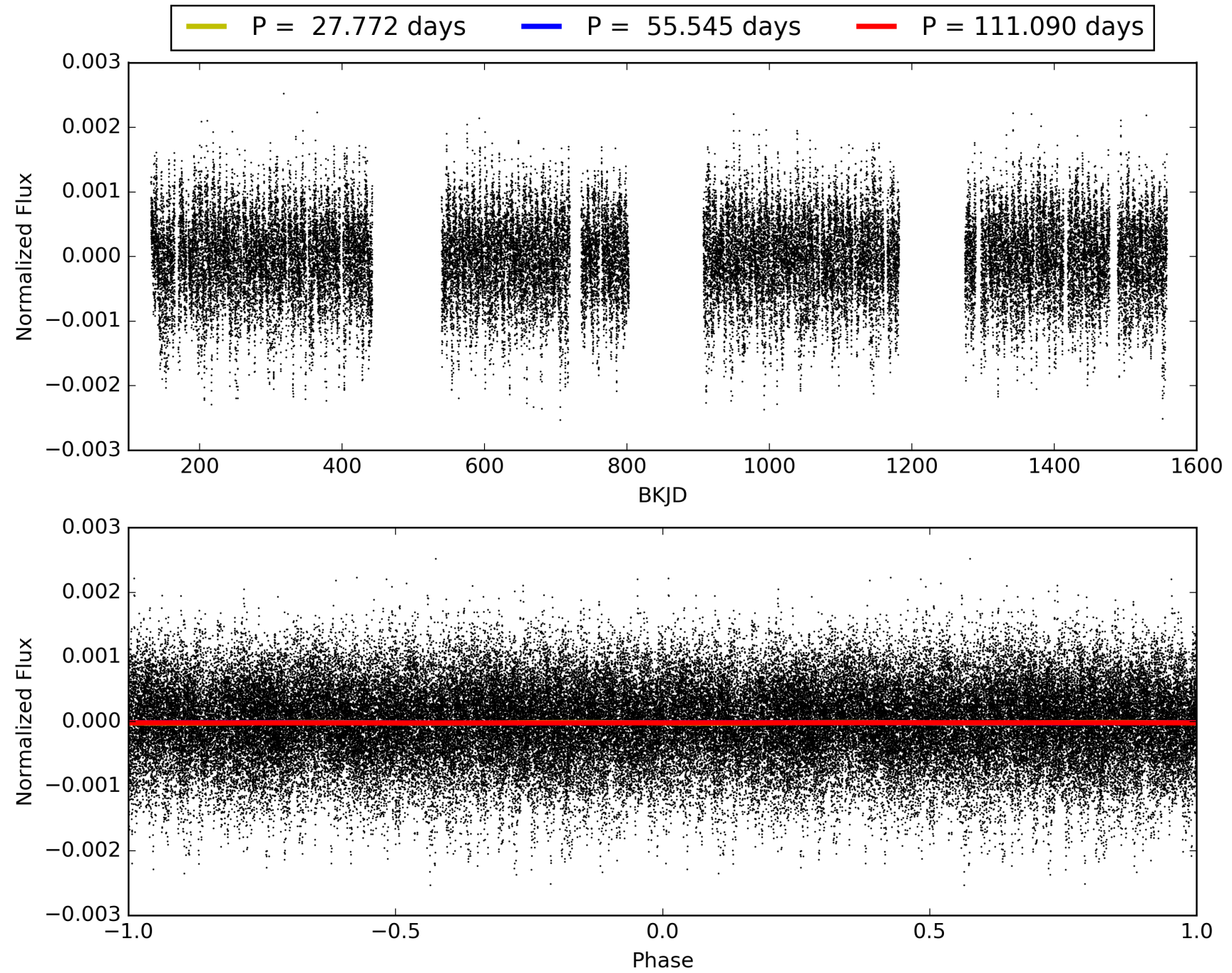
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 04:39:16 Z

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

TCE 006670894-02, PDC Light Curves

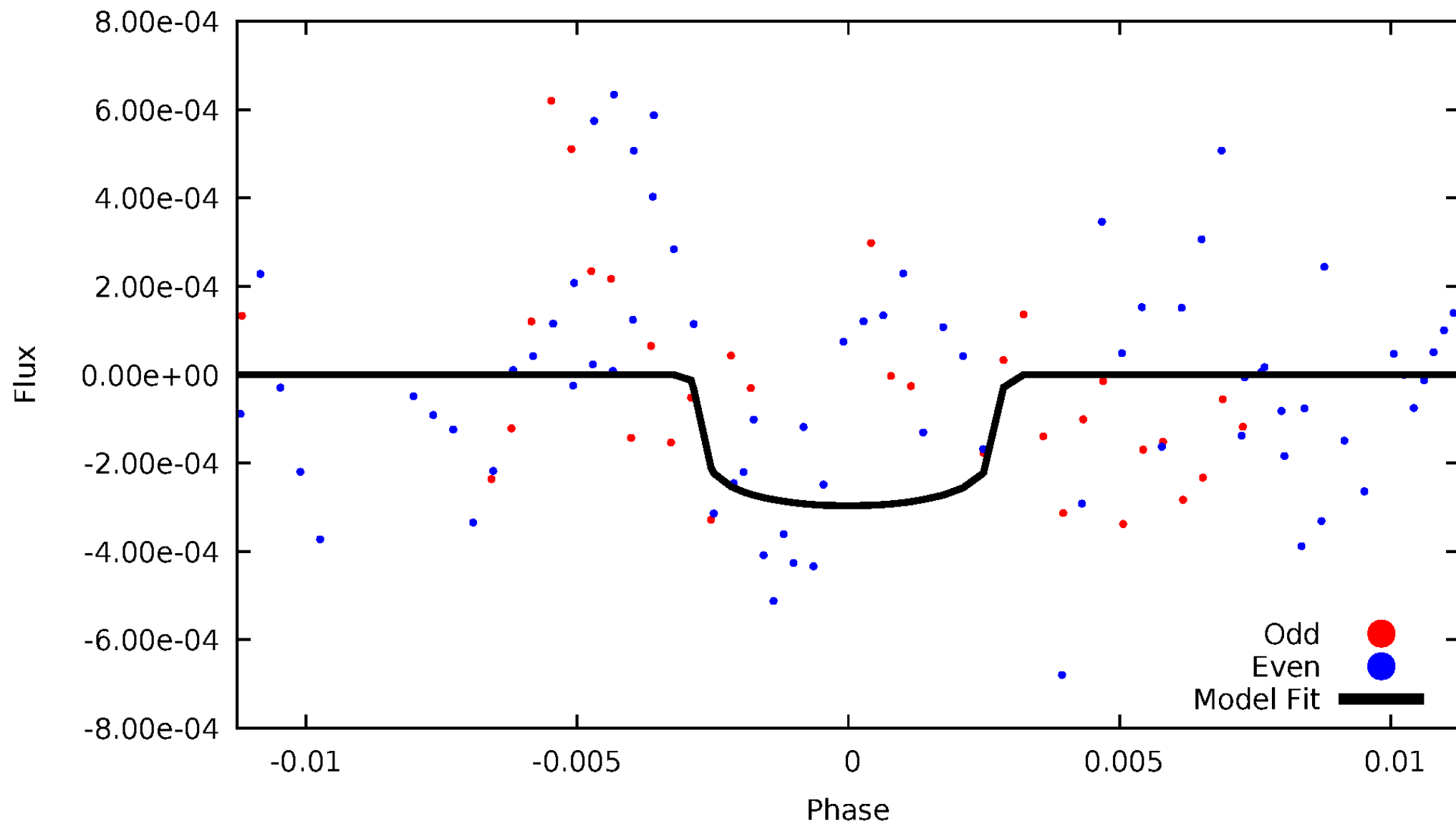


TCE 006670894-02



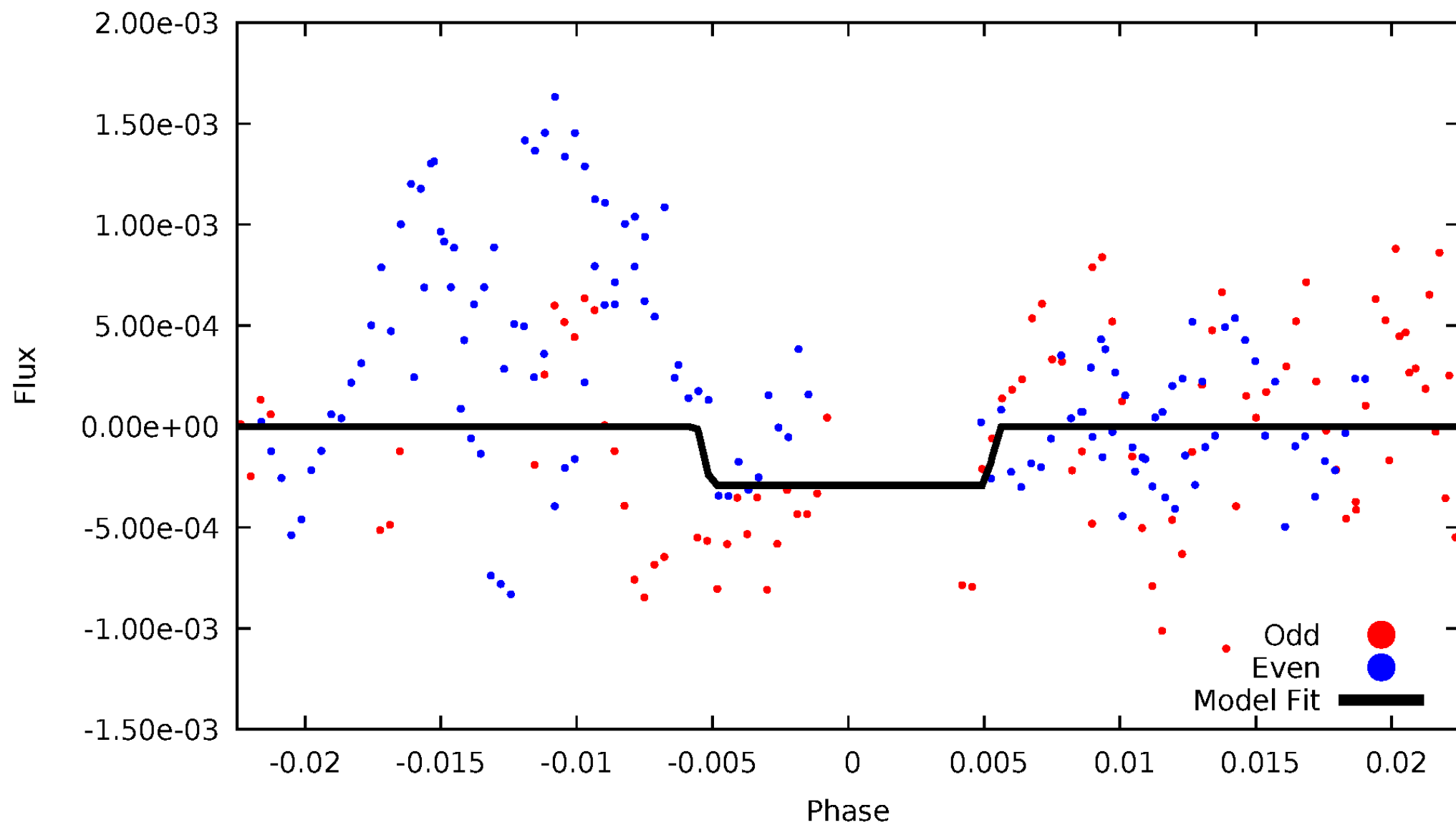
DV Odd/Even

TCE 006670894-02



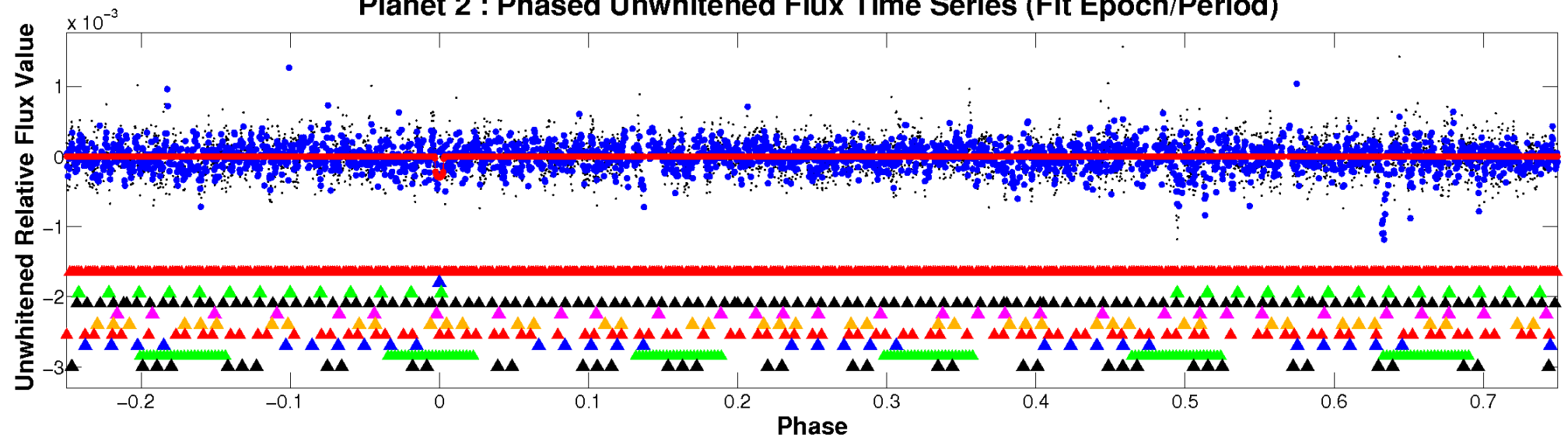
ALT Odd/Even

TCE 006670894-02

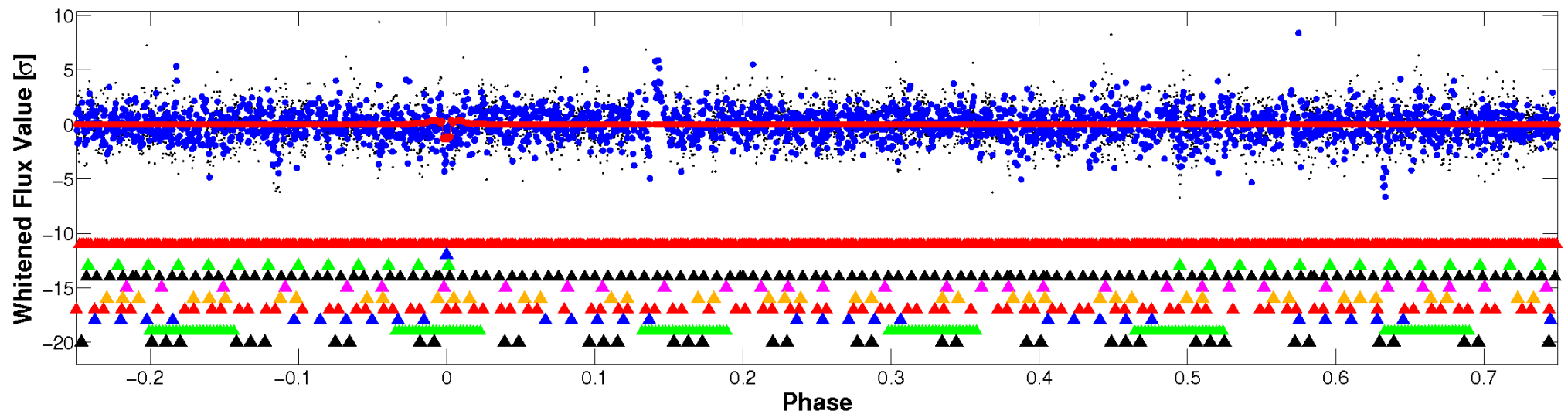


Non-Whitened Vs. Whitened Light Curve

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

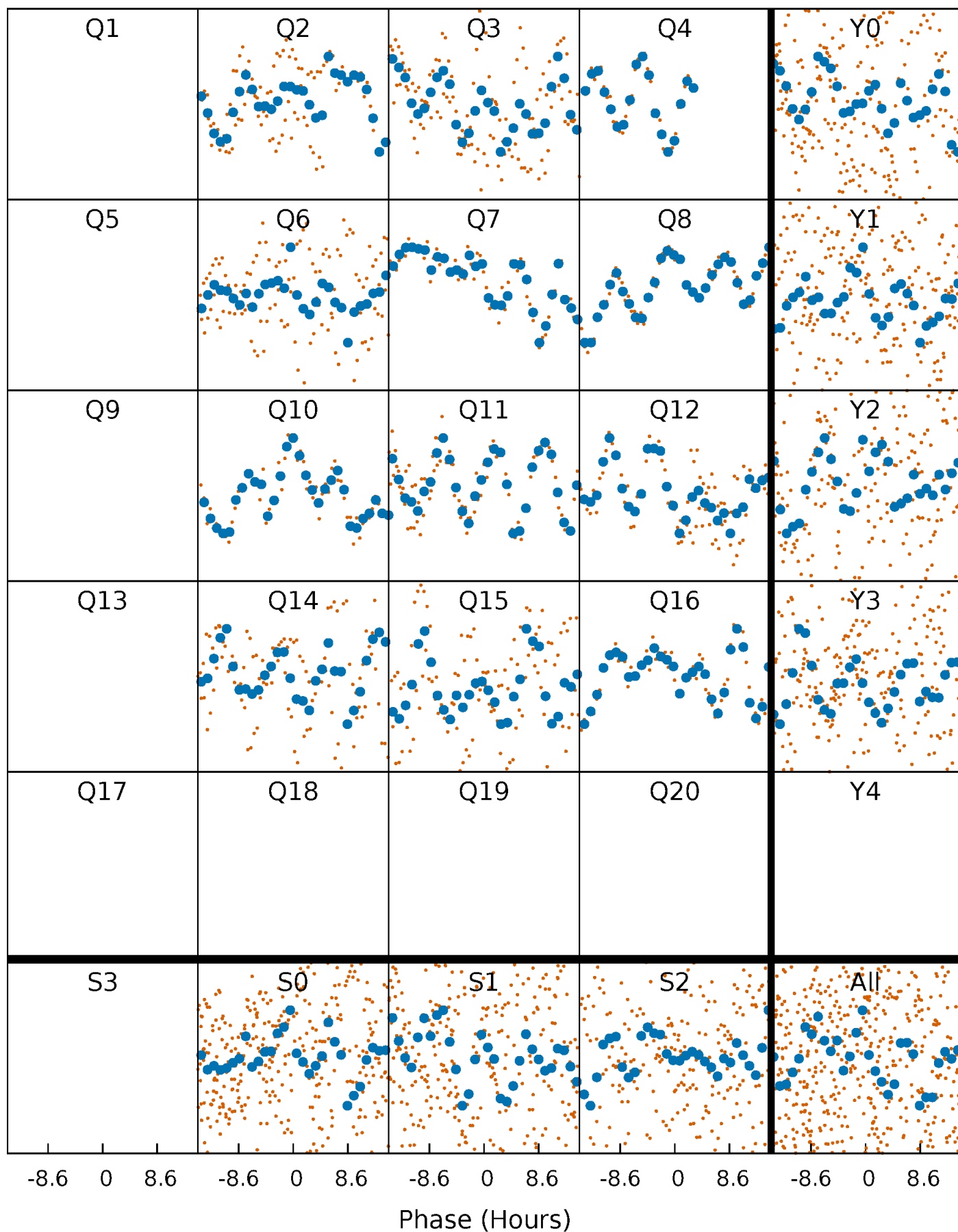


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



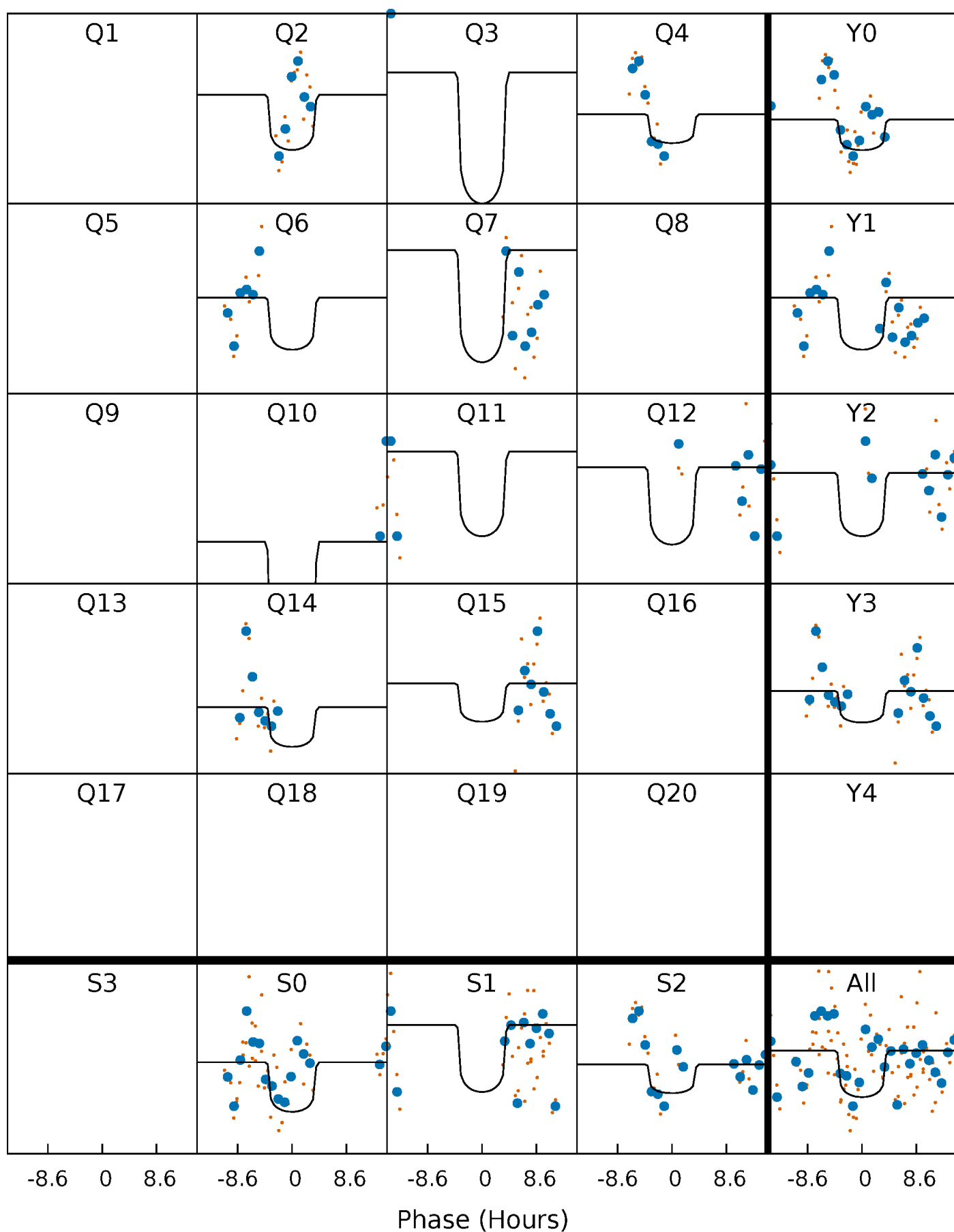
PDC Quarter-Phased Transit Curves

TCE 006670894-02 P= 55.544984 Days $T_0=174.552307$ (BKJD)



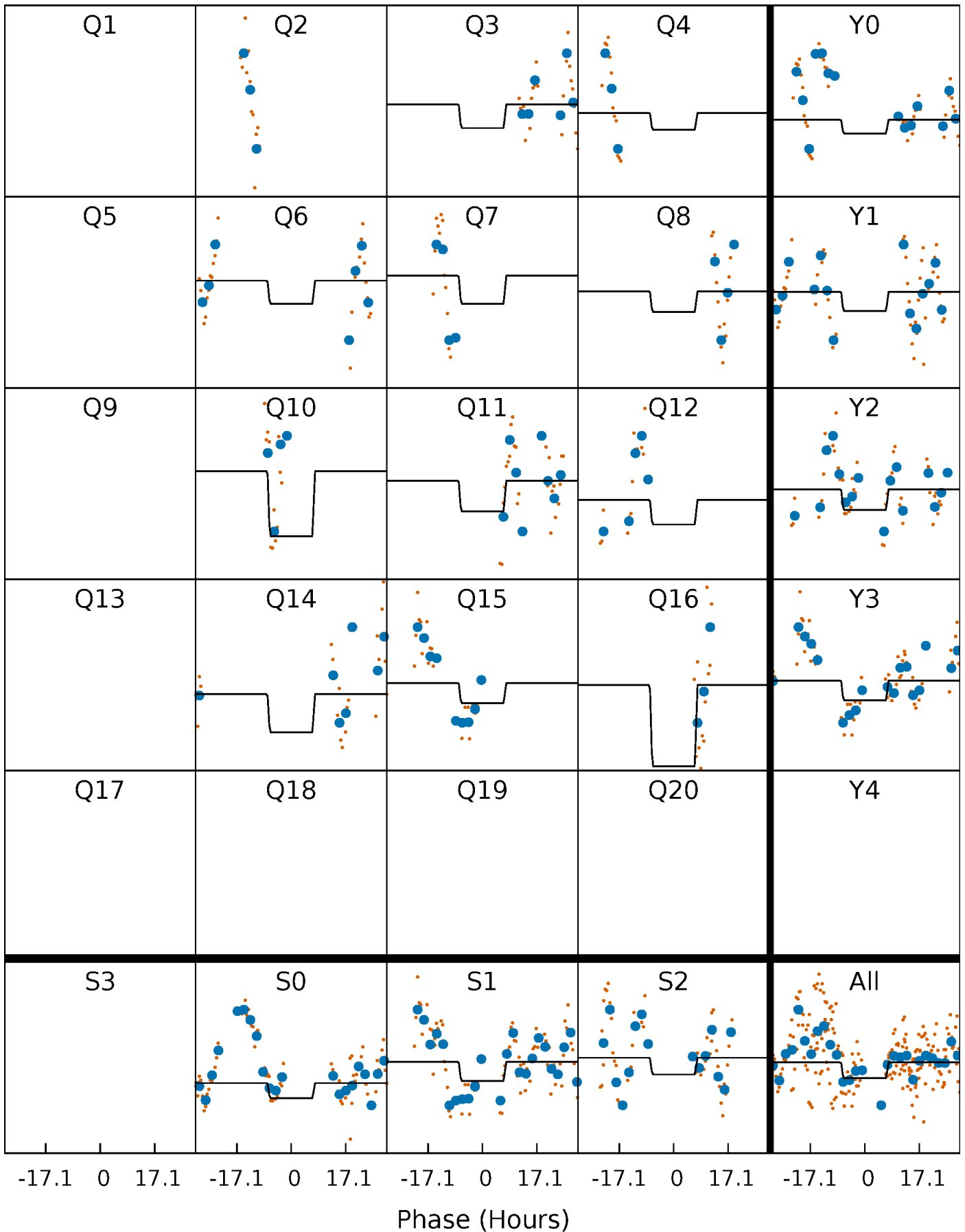
DV Quarter-Phased Transit Curves

TCE 006670894-02 P= 55.544984 Days $T_0=174.552307$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

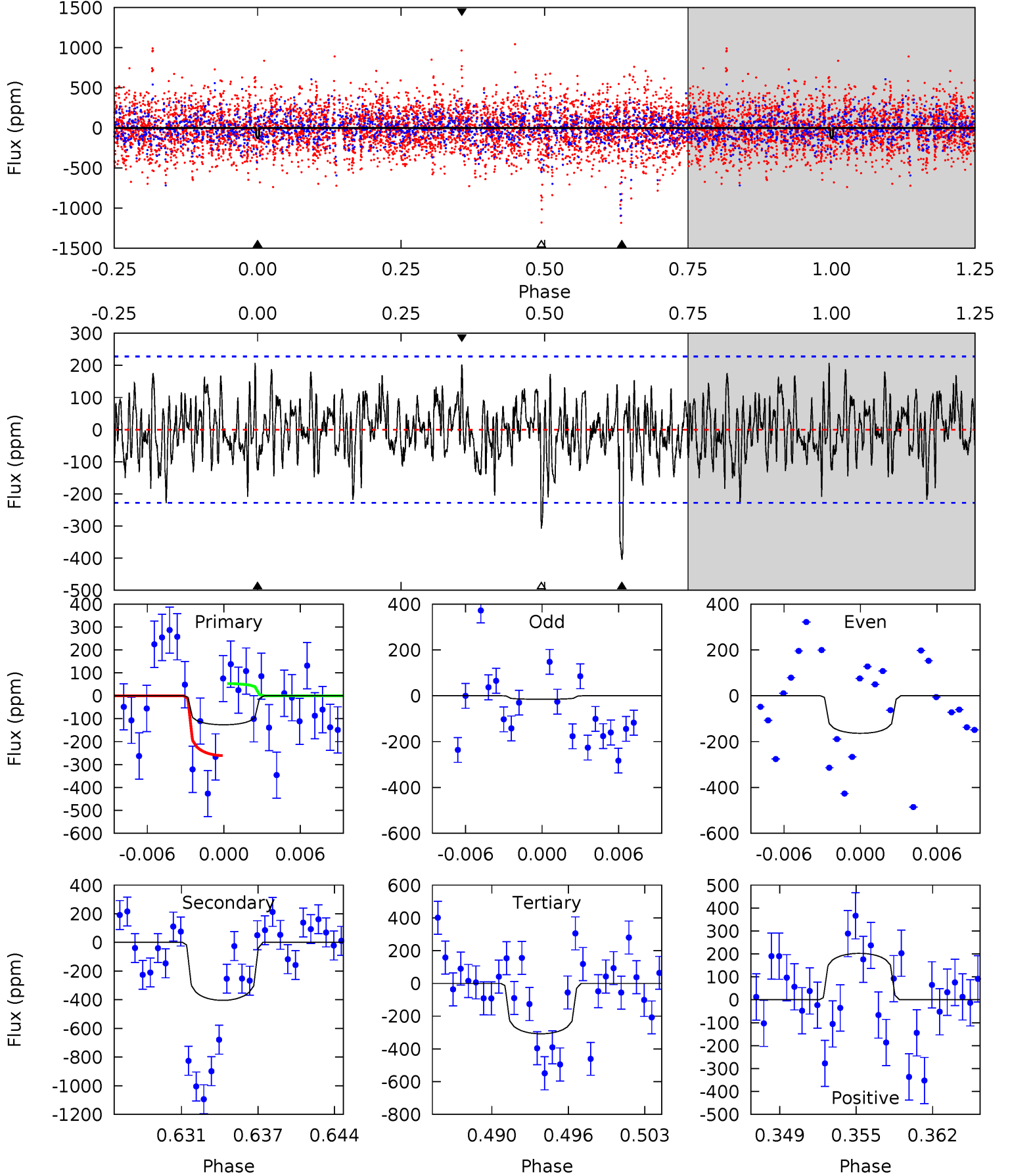
TCE 006670894-02 P= 55.570112 Days $T_0=175.106429$ (BKJD)



DV Model-Shift Uniqueness Test

006670894-02, P = 55.544984 Days, E = 119.007323 Days

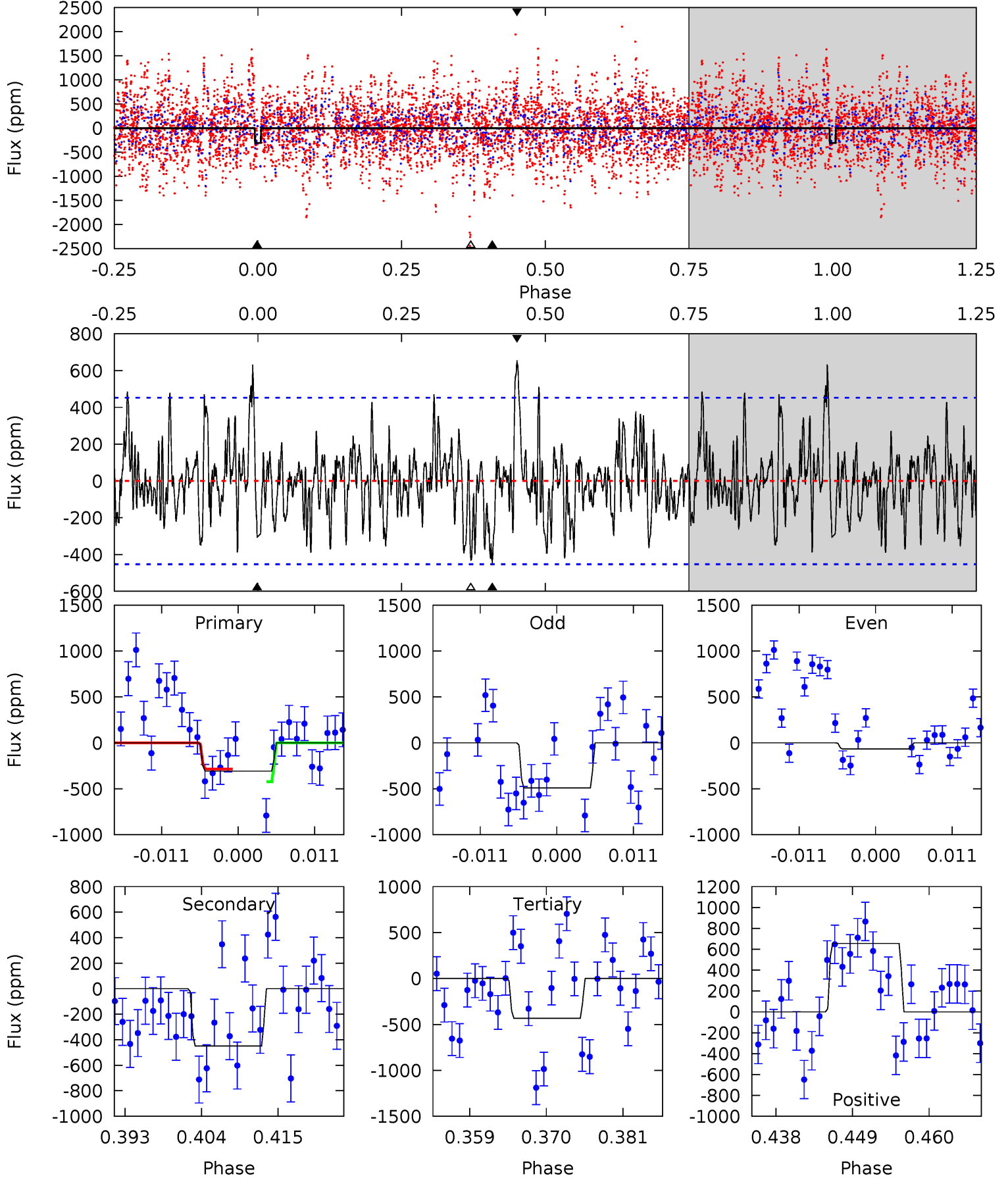
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.85	9.08	6.92	4.55	5.12	2.74	1.65	-4.07	-1.70	2.16	4.53	1.51	1.26	0.34	2.34



Alt Model-Shift Uniqueness Test

006670894-02, P = 55.570112 Days, E = 119.536317 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.40	4.96	4.78	7.25	5.00	2.54	1.79	-1.38	-3.86	0.18	-2.30	2.34	1.04	0.59	0.64



Stellar Parameters For KIC 006670894

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7266^{+226}_{-327}	$4.082^{+0.170}_{-0.170}$	$-0.080^{+0.250}_{-0.350}$	$1.876^{+0.585}_{-0.439}$	$1.546^{+0.212}_{-0.259}$	$0.330^{+0.299}_{-0.157}$
	+3%/-5%	+4%/-4%	+312%/-438%	+31%/-23%	+14%/-17%	+91%/-48%
Source	KIC0	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 006670894-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-404 ± 45	$4.22^{+3.10}_{-2.70}$	1065^{+79}_{-74}	7193^{+7929}_{-1854}	1344^{+8425}_{-903}
Alt.	-448 ± 90	$3.88^{+3.39}_{-2.39}$	1062^{+82}_{-81}	7649^{+8137}_{-2078}	1674^{+9215}_{-1176}

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

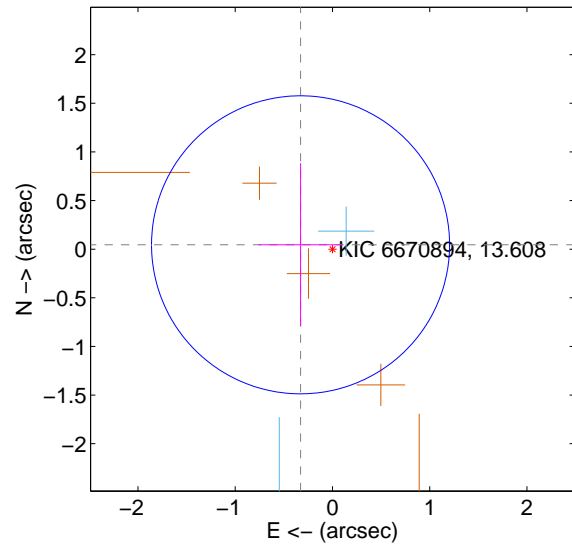
Supplemental centroid analysis for 006670894-02. Kepler magnitude: 13.61. Transit SNR 6.47

There are 2 quarters with good PRF difference image offsets

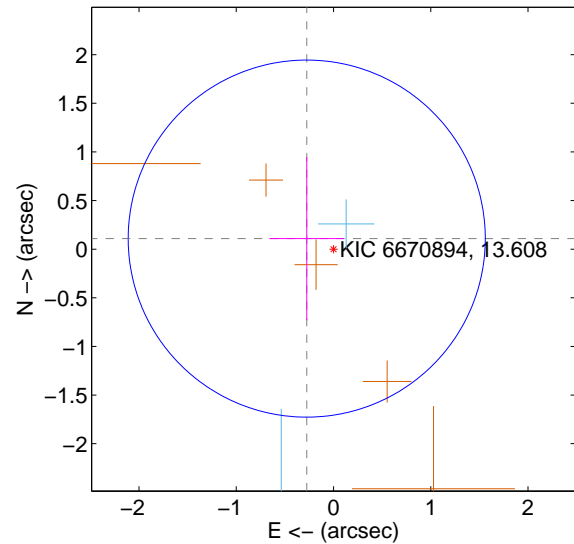
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.331 ± 0.511	0.65	0.328 ± 0.433	0.045 ± 0.839
PRF-fit source offset from KIC position	0.296 ± 0.612	0.48	0.275 ± 0.384	0.109 ± 0.839
photometric centroid source offset	0.42 ± 0.55	0.76	0.40 ± 0.55	0.12 ± 0.55

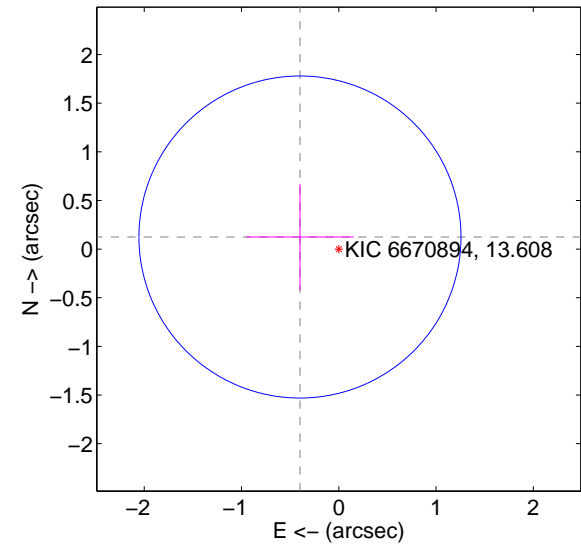
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids



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.

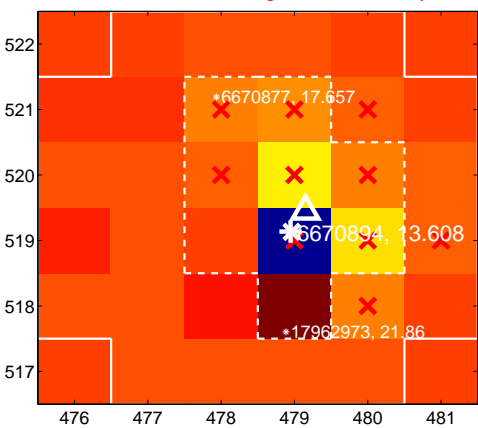
Q1 no difference image



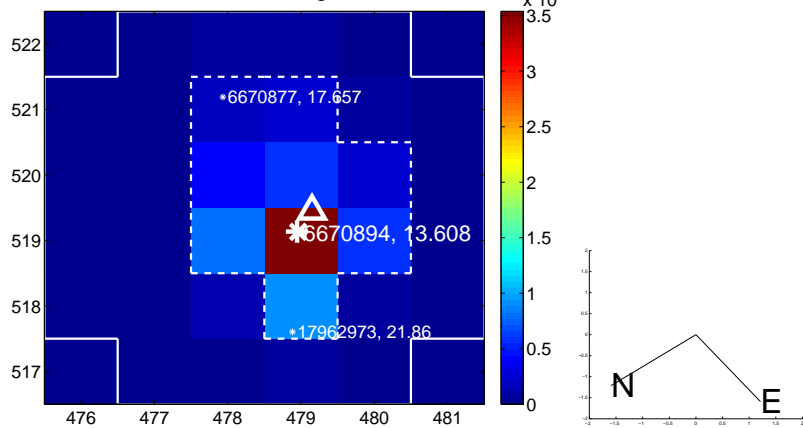
Q1 no OOT image



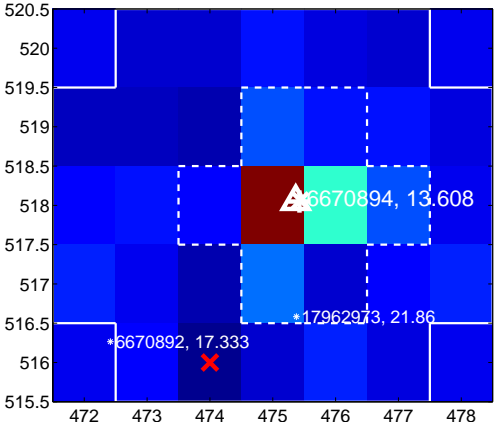
Q2 difference image. Poor Quality



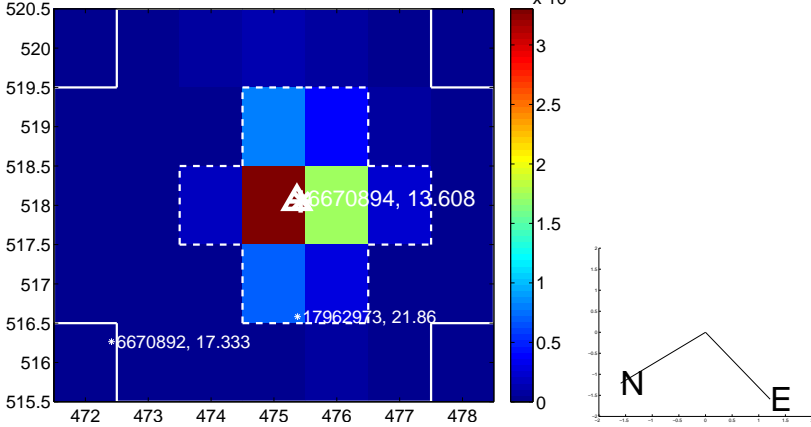
Q2 OOT image



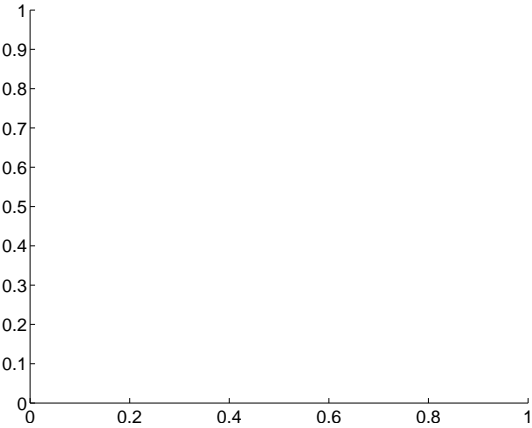
Q3 difference image



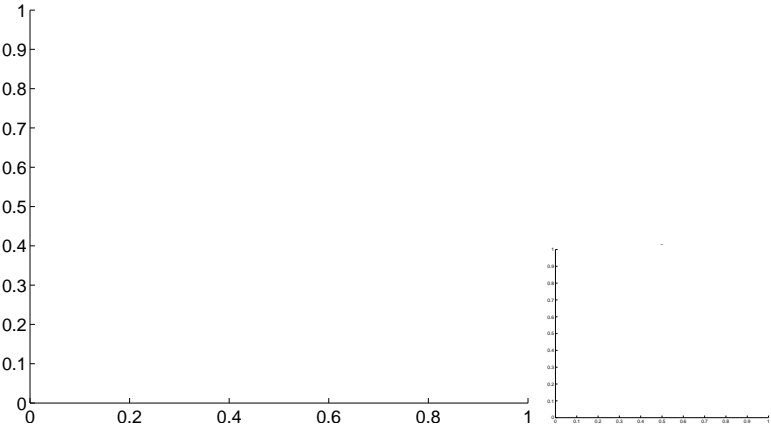
Q3 OOT image



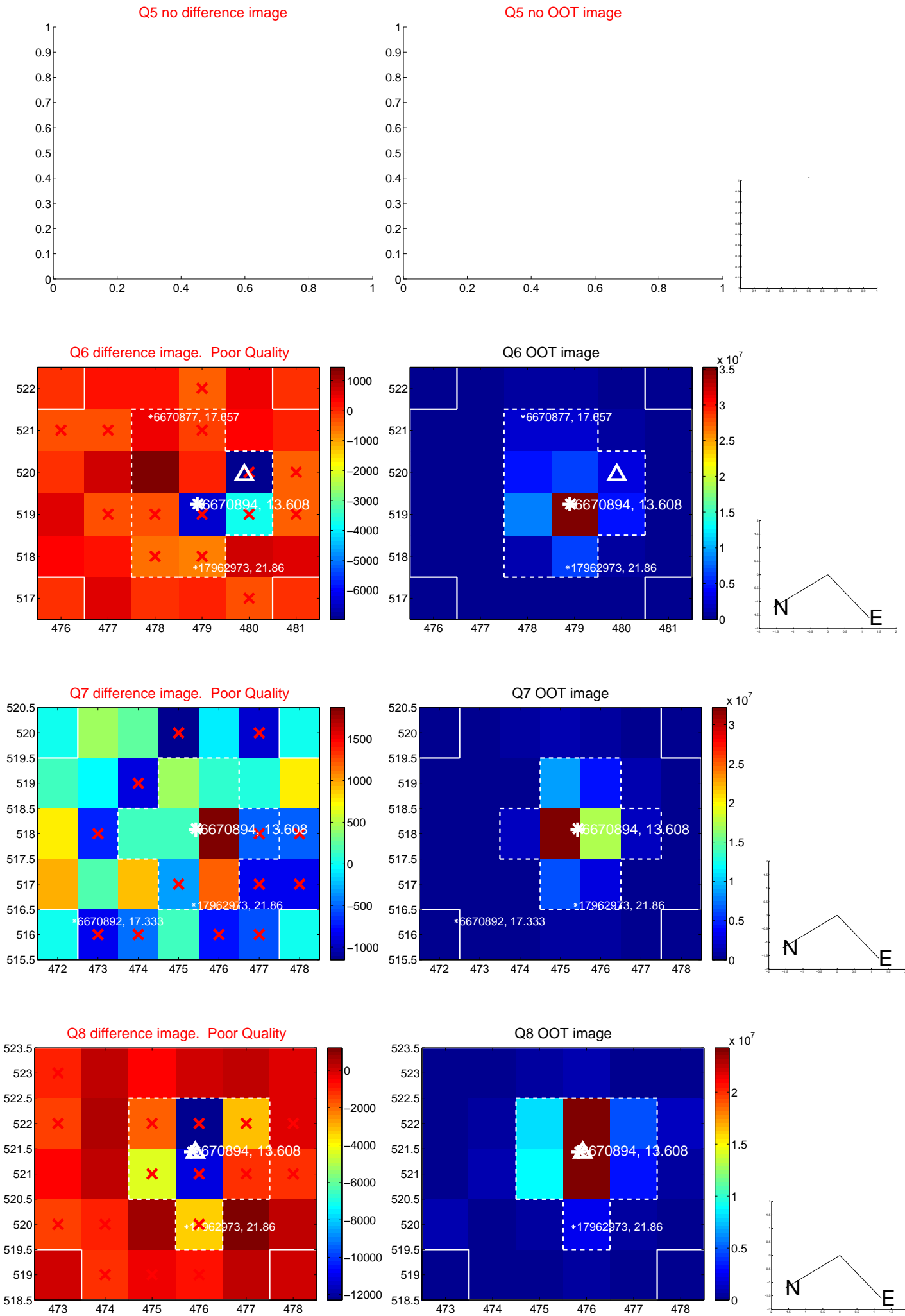
Q4 no difference image



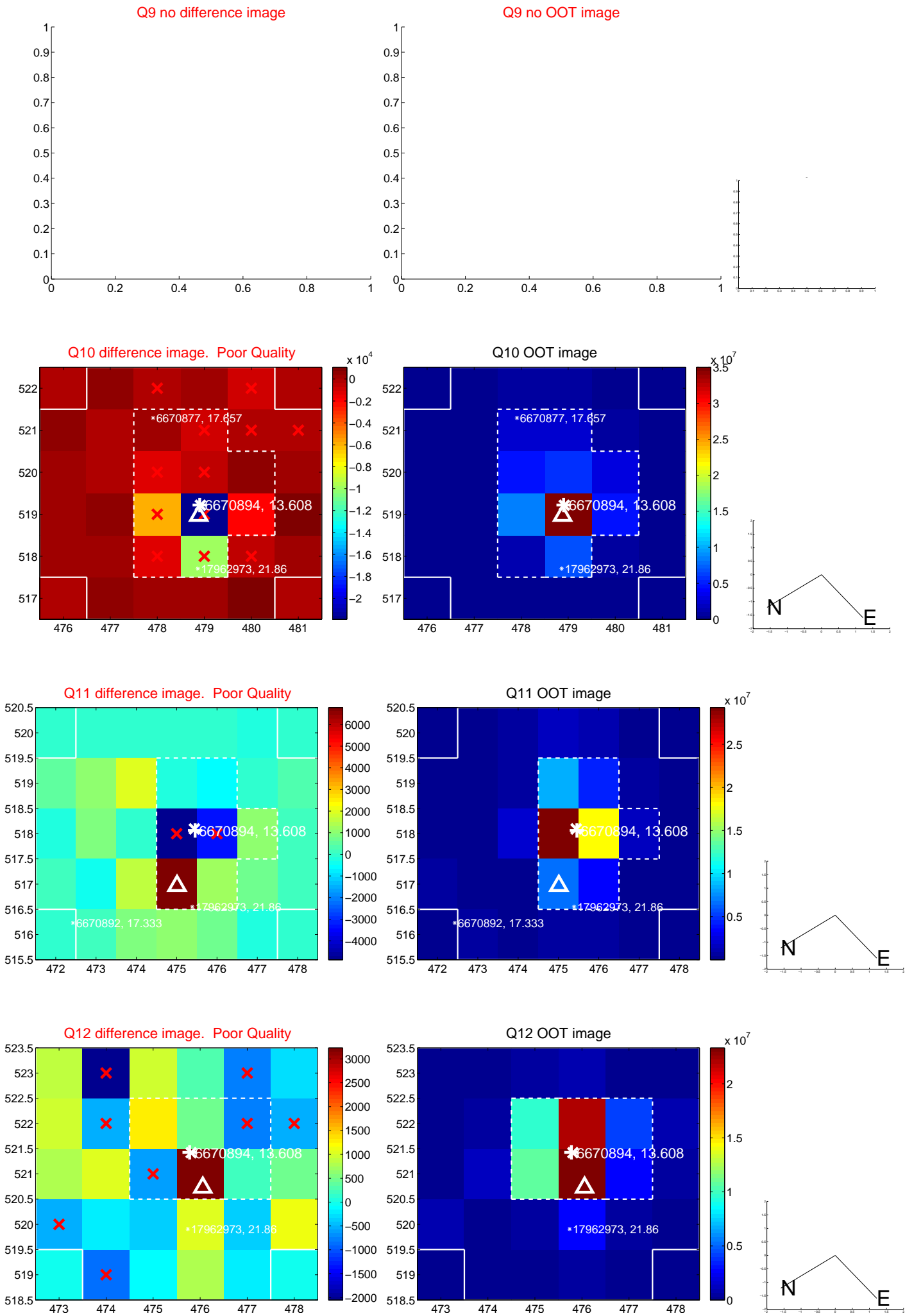
Q4 no OOT image



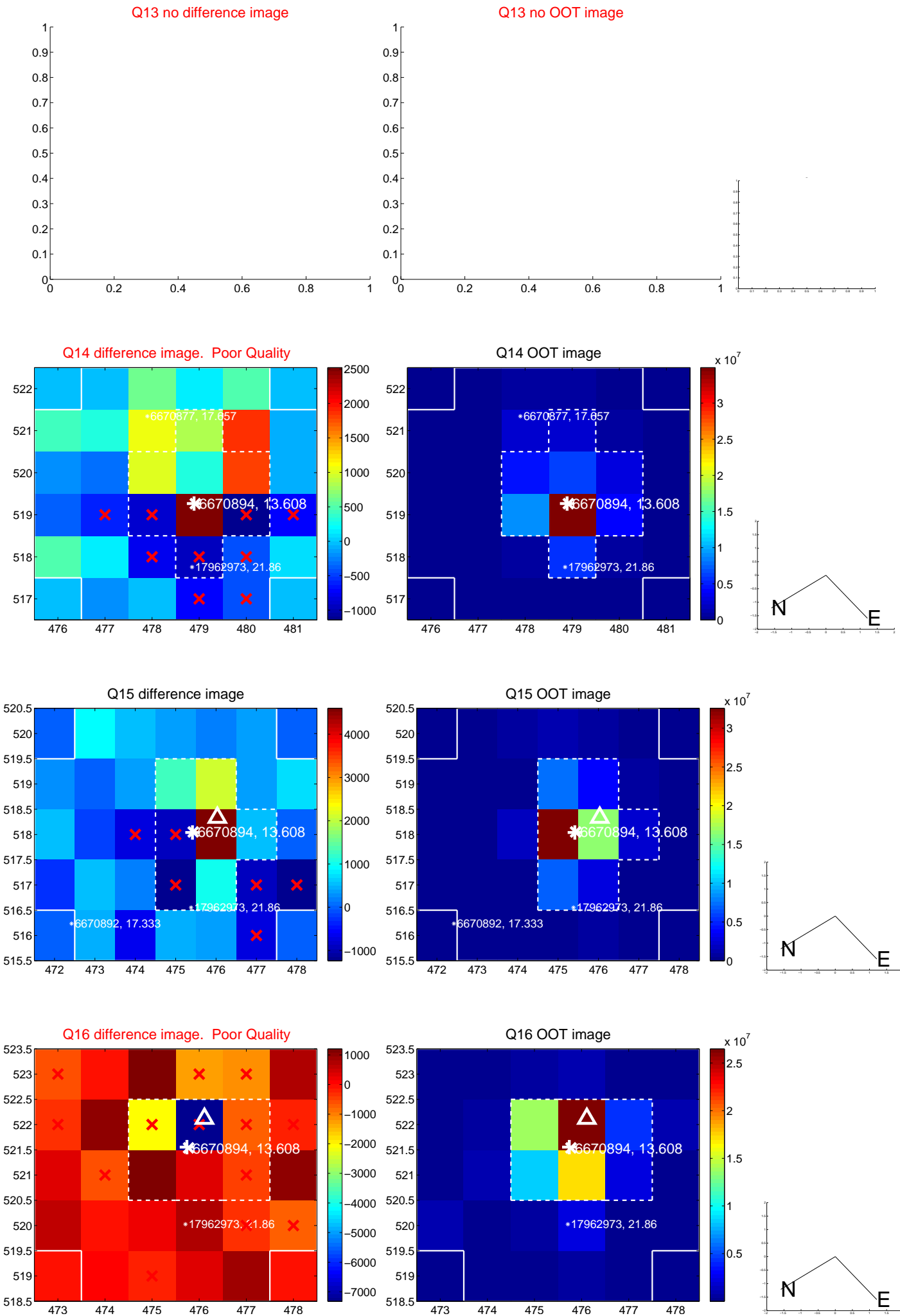
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



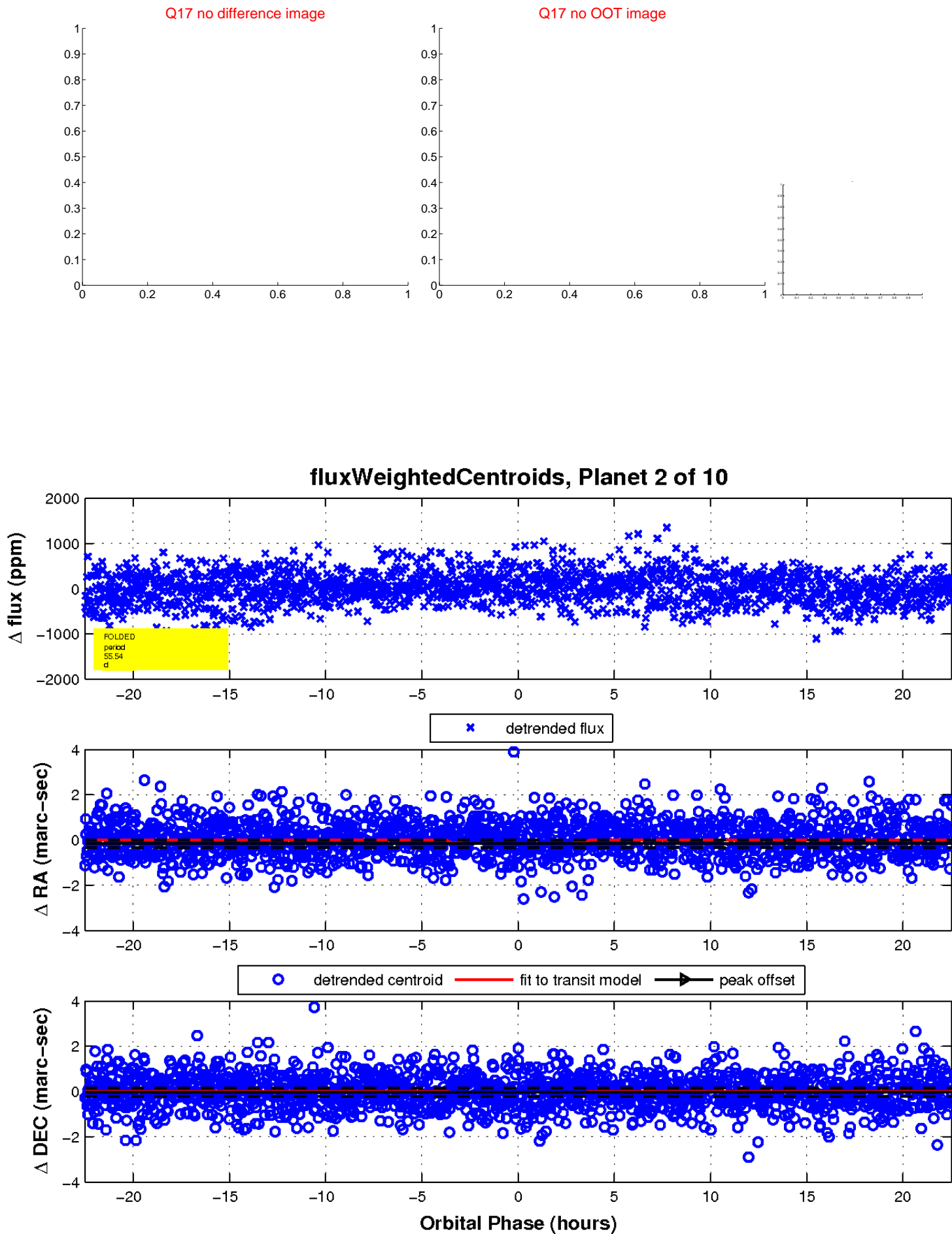
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

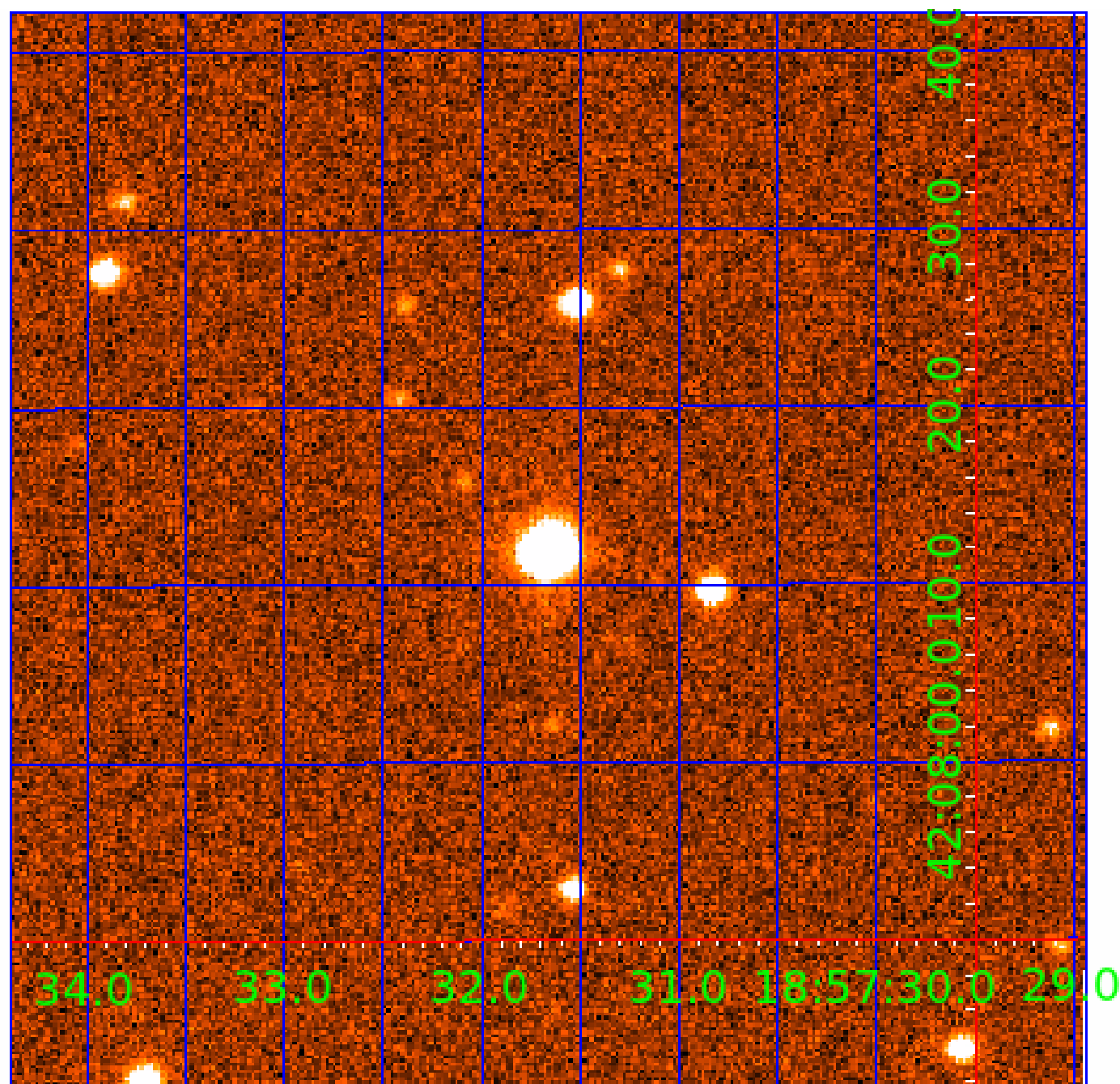


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
006670894-01	OBS	No	2.551845	132.460661	50.0	18.029	9.6	9.8	1.88	7266	1.38	4910.12
006670894-02	OBS	No	55.544984	174.552307	296.6	7.510	12.9	6.5	1.88	7266	3.43	80.79
006670894-03	OBS	No	56.670287	146.490621	623.9	5.356	16.0	13.6	1.88	7266	5.74	78.66
006670894-04	OBS	No	11.381235	140.143288	309.4	3.826	11.2	11.6	1.88	7266	3.76	668.82
006670894-05	OBS	No	47.278774	156.605446	531.2	2.331	9.8	10.5	1.88	7266	5.37	100.16
006670894-06	OBS	No	33.977317	161.813527	437.1	3.226	9.3	10.3	1.88	7266	4.19	155.59
006670894-07	OBS	No	15.241088	144.414923	289.3	2.955	9.5	11.4	1.88	7266	3.60	453.12
006670894-08	OBS	No	46.125163	173.705739	483.3	2.500	8.6	9.3	1.88	7266	4.24	103.51
006670894-09	OBS	No	9.236289	138.873408	250.7	2.594	8.8	9.5	1.88	7266	3.38	883.56
006670894-10	OBS	No	35.972270	166.674102	374.5	3.555	8.4	10.3	1.88	7266	3.88	144.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006670894-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006670894-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006670894-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006670894-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-09	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
006670894-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

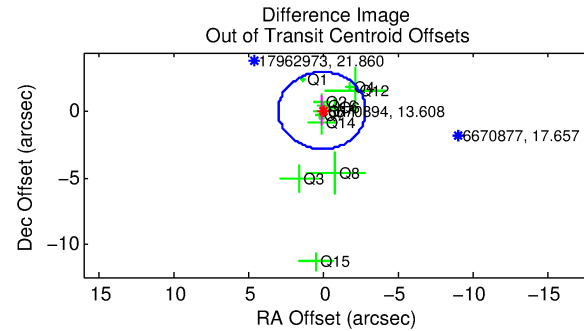
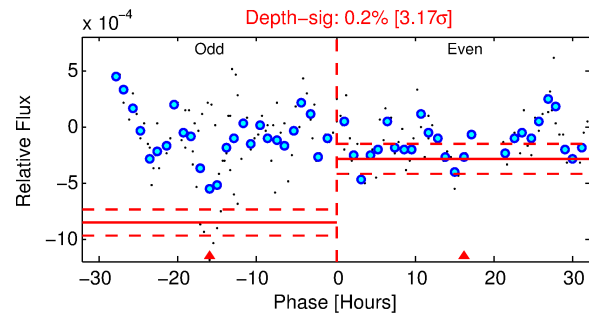
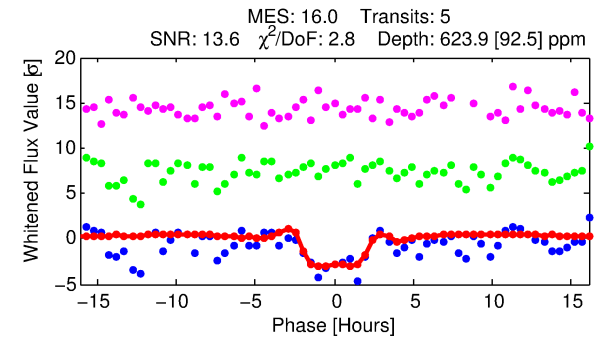
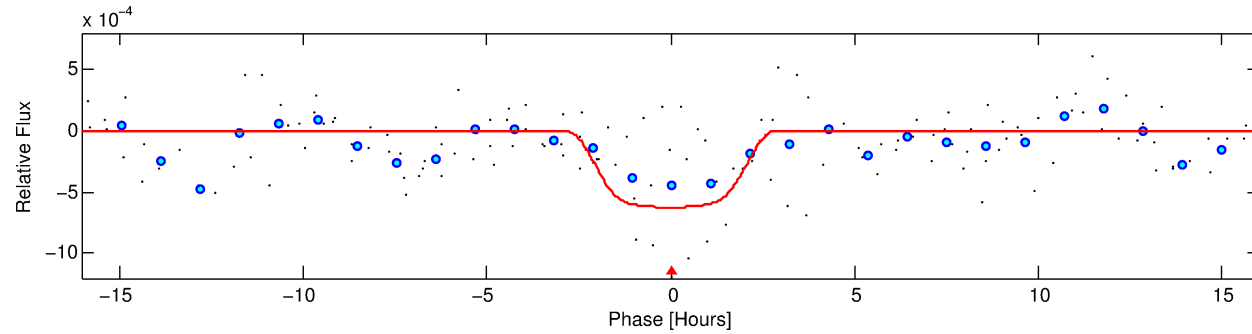
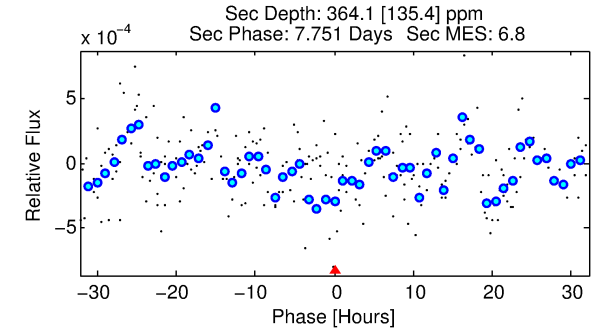
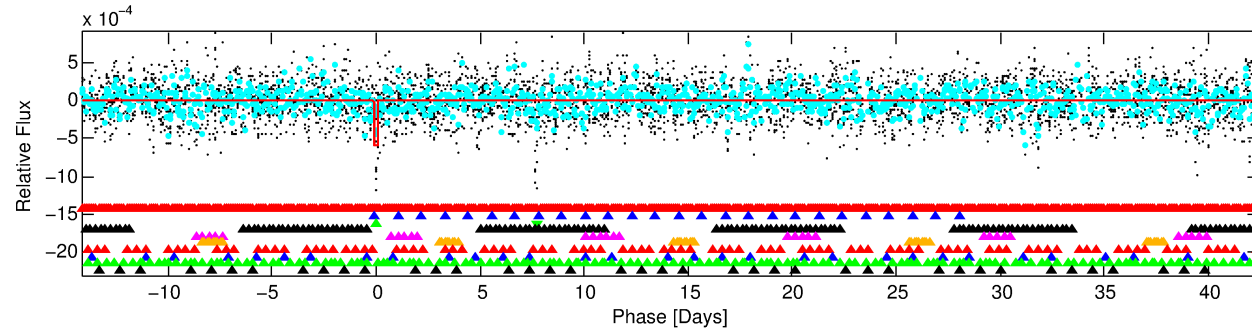
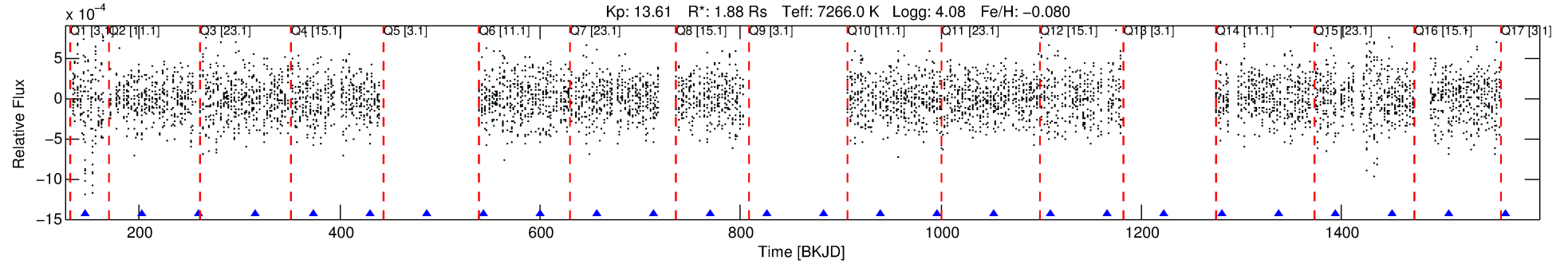
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006670894-03

No Significant Match Found

DV One-Page Summary

KIC: 6670894 Candidate: 3 of 10 Period: 56.670 d



DV Fit Results:

Period = 56.67029 [0.00082] d
Epoch = 146.4906 [0.0098] BKJD
Rp/R* = 0.0281 [0.0027]
a/R* = 31.33 [8.40]
b = 0.95 [0.03]
Seff = 78.66 [29.82]
Teq = 759 [72] K
Rp = 5.74 [1.87] Re
a = 0.3343 [0.0820] AU
Ag = 678.41 [363.22] [1.87sigma]
Teffp = 5992 [683] K [7.62sigma]

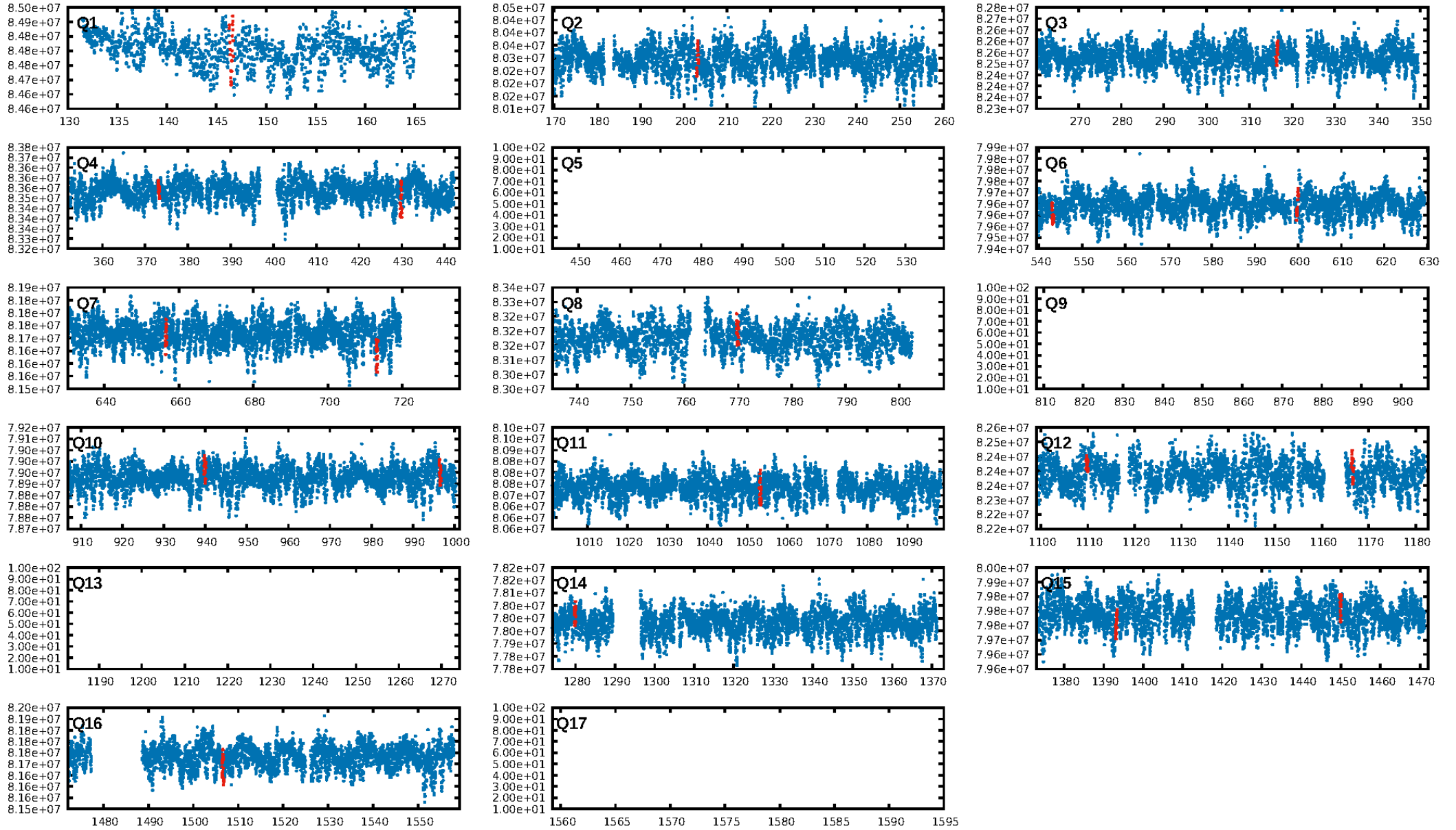
DV Diagnostic Results:

ShortPeriod-sig: 99.7% [2.93sigma]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 39.6%
Bootstrap-pfa: 1.05e-20
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 2.857
Centroid-sig: 82.6%
Centroid-so: 0.042 arcsec [0.13sigma]
OotOffset-rm: 0.105 arcsec [0.11sigma]
KicOffset-rm: 0.048 arcsec [0.04sigma]
OotOffset-st: 3/4/4/1 [12]
KicOffset-st: 3/4/4/1 [12]
DiffImageQuality-fgm: 0.33 [4/12]
DiffImageOverlap-fno: 0.46 [6/13]

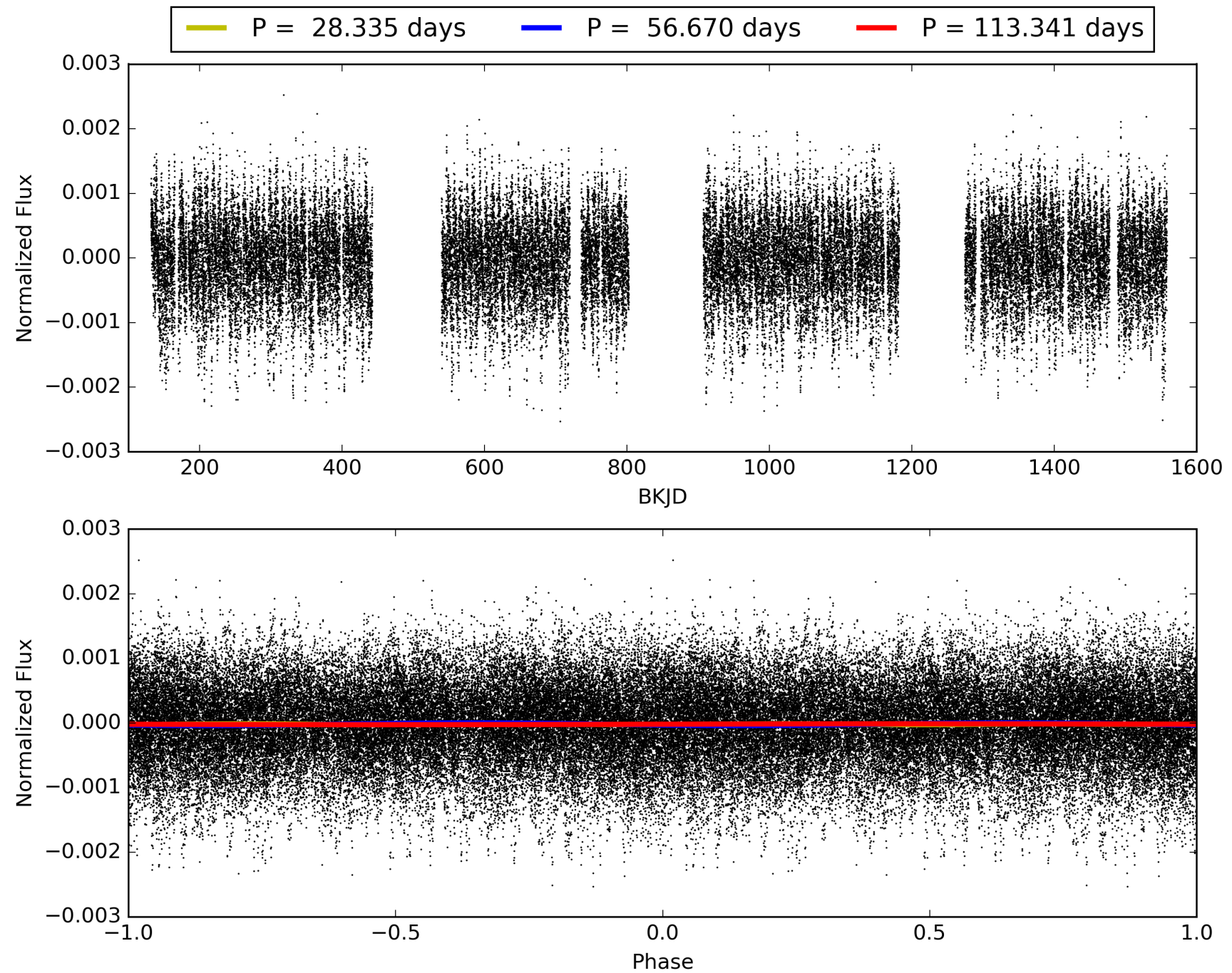
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 04:39:19 Z

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

TCE 006670894-03, PDC Light Curves

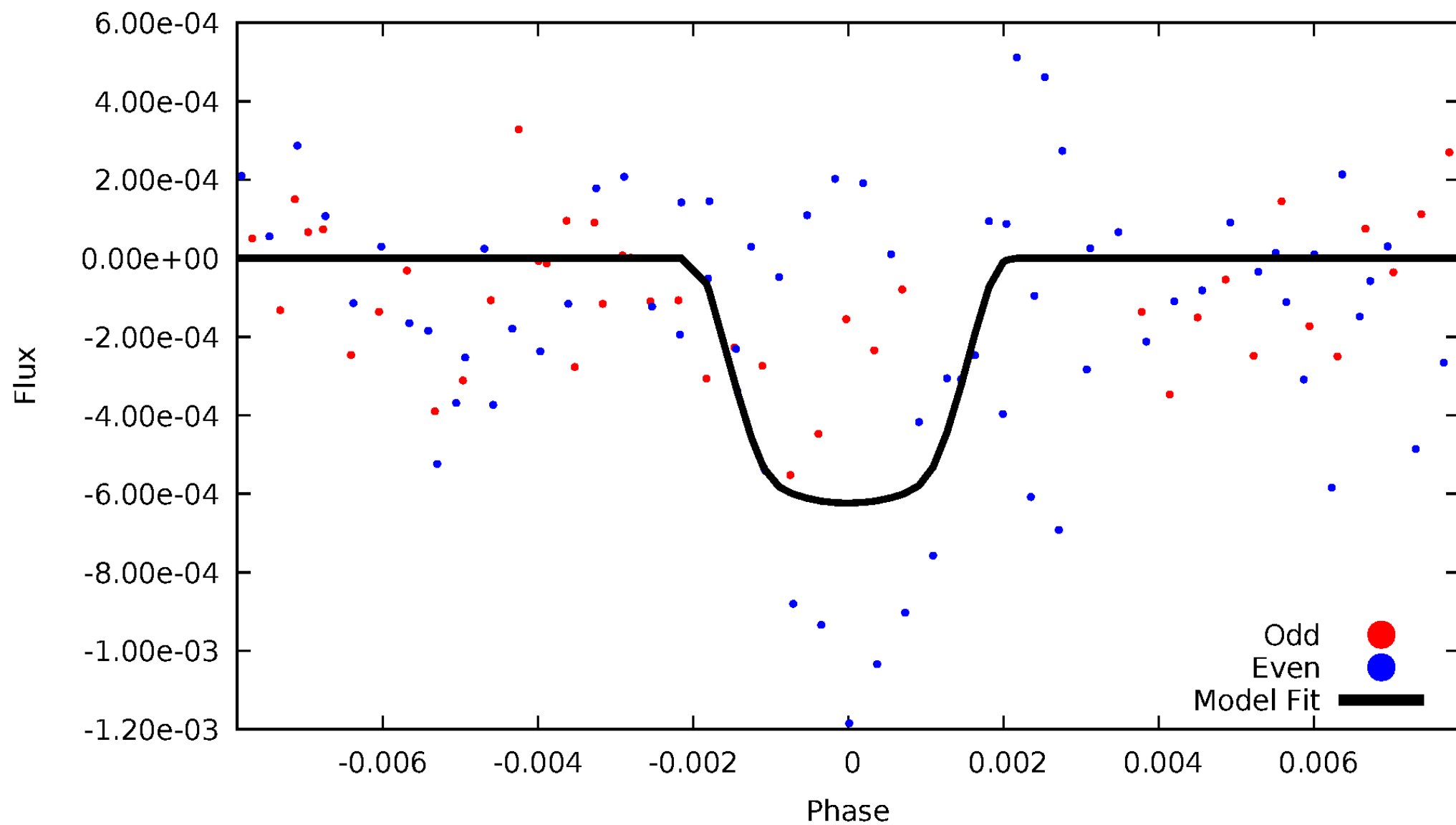


TCE 006670894-03



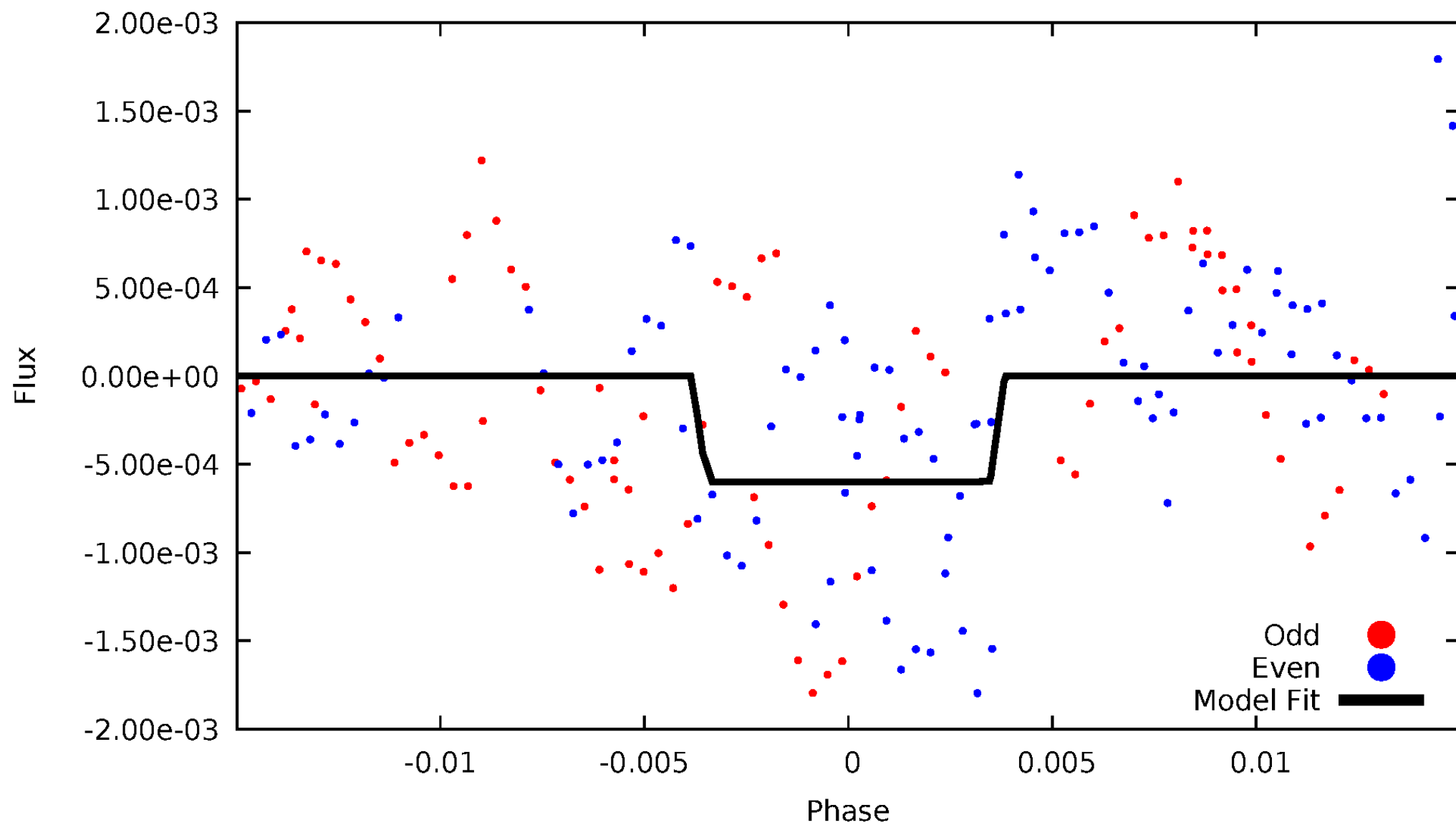
DV Odd/Even

TCE 006670894-03



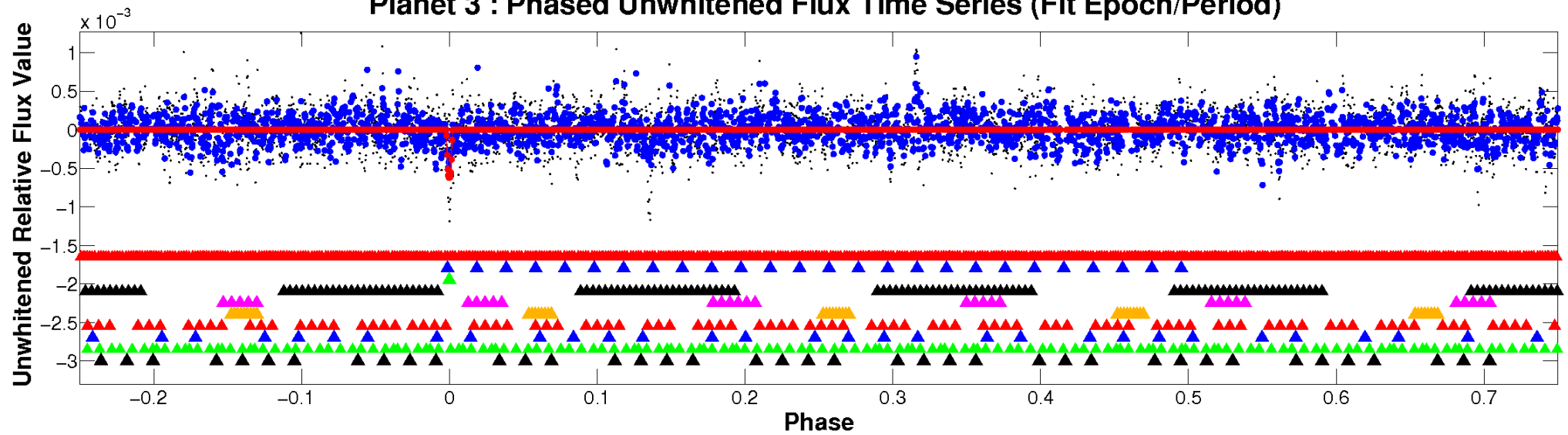
ALT Odd/Even

TCE 006670894-03

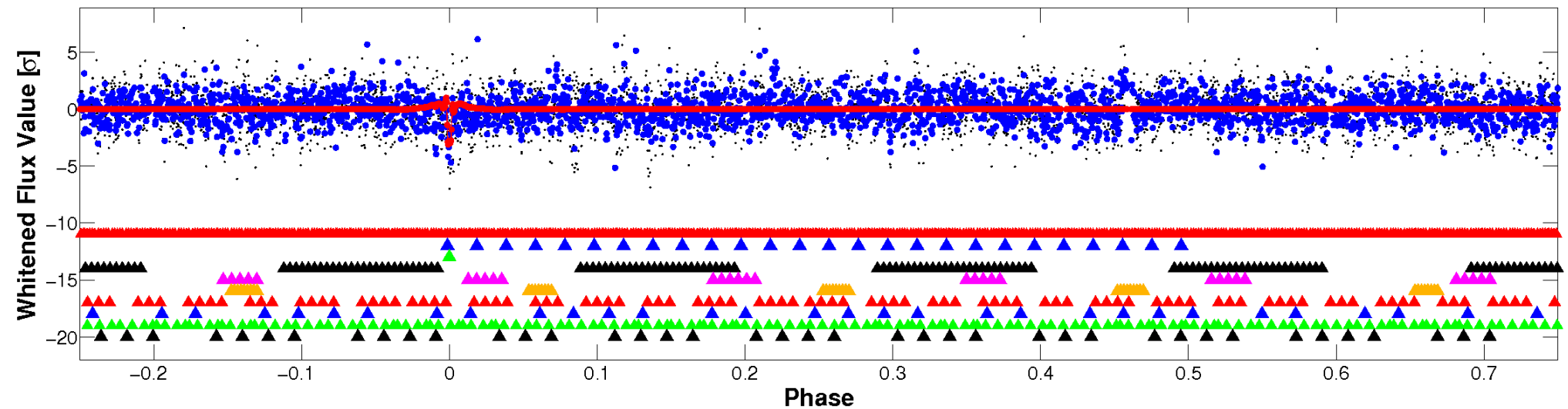


Non-Whitened Vs. Whitened Light Curve

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

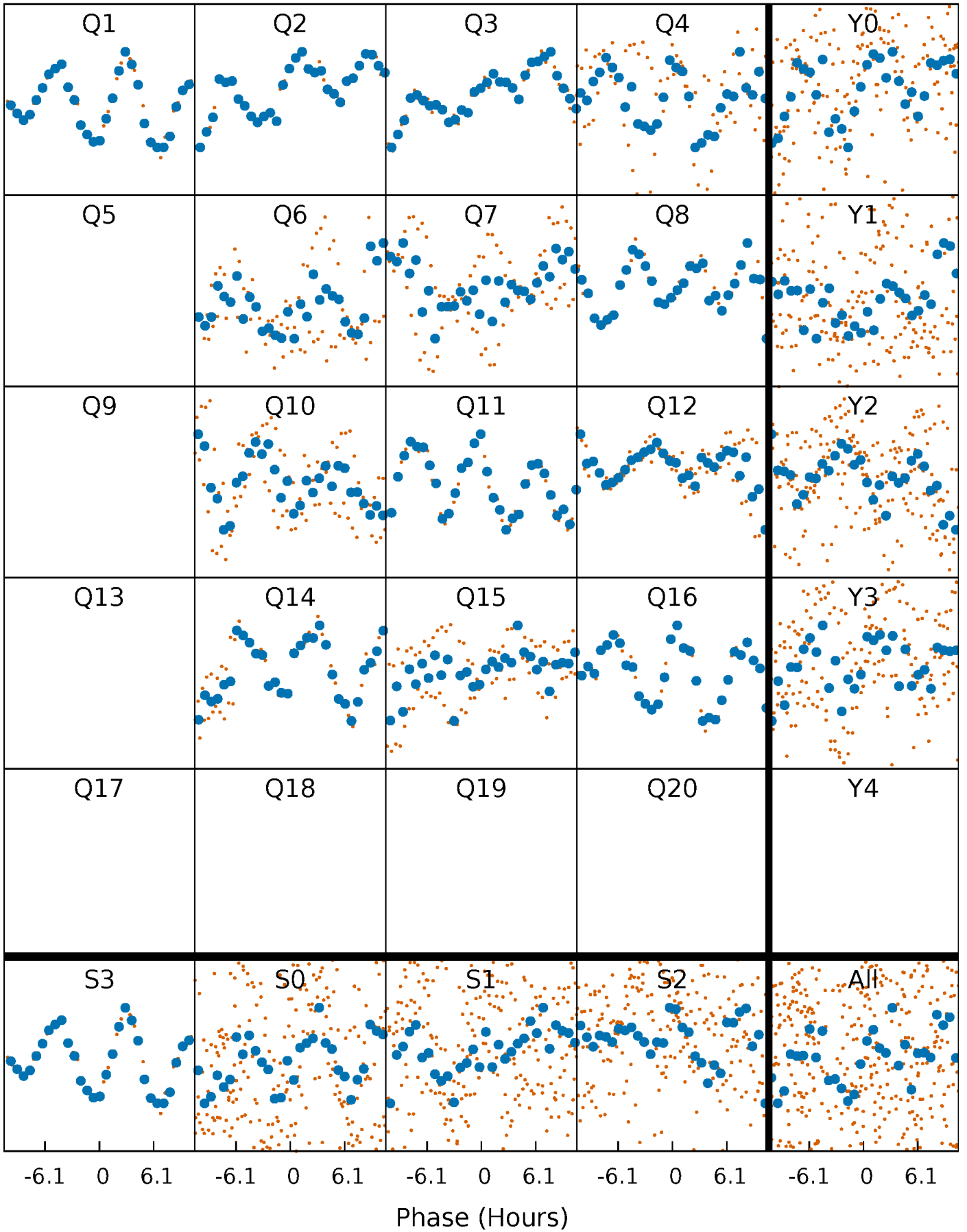


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



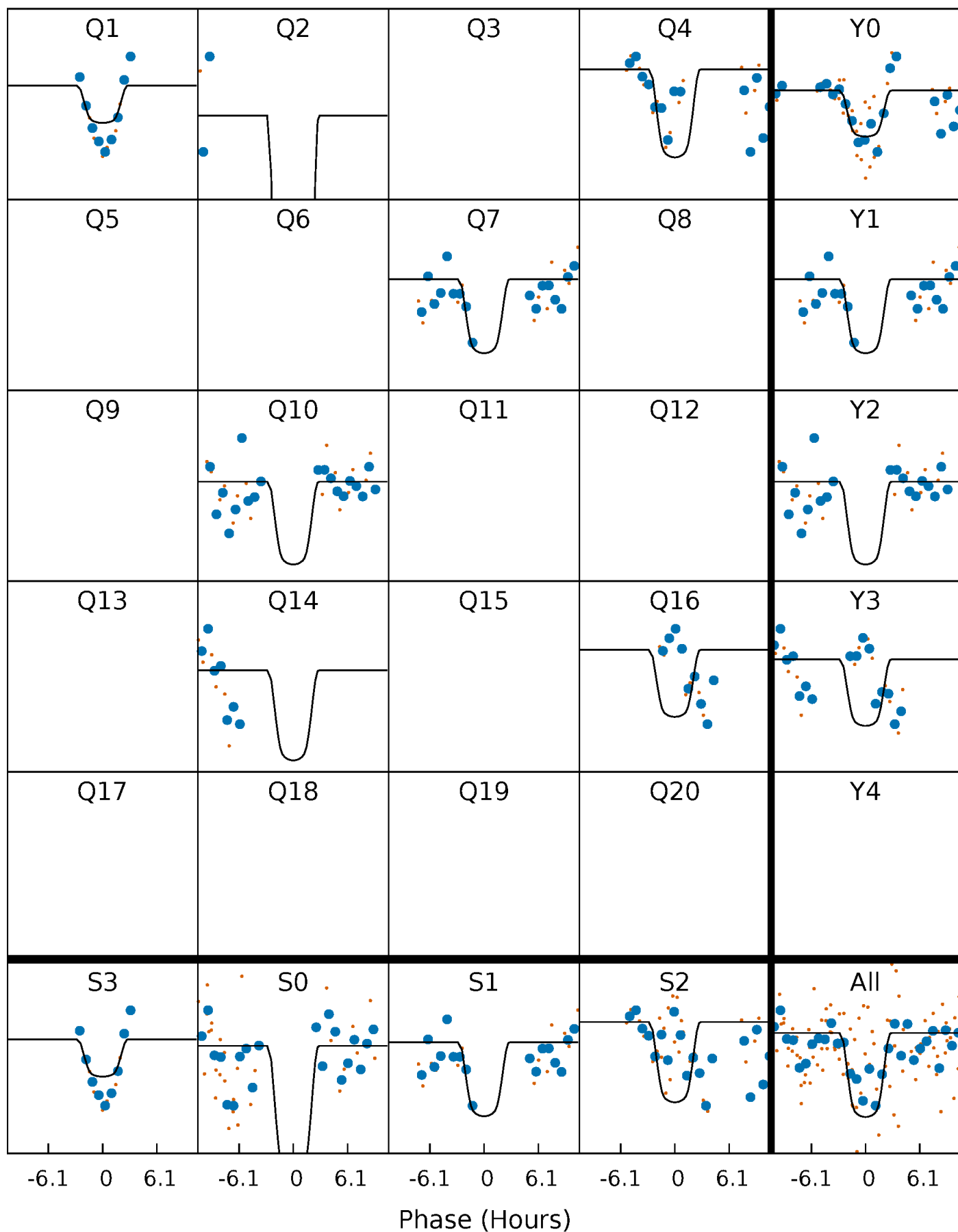
PDC Quarter-Phased Transit Curves

TCE 006670894-03 P= 56.670287 Days $T_0=146.490621$ (BKJD)



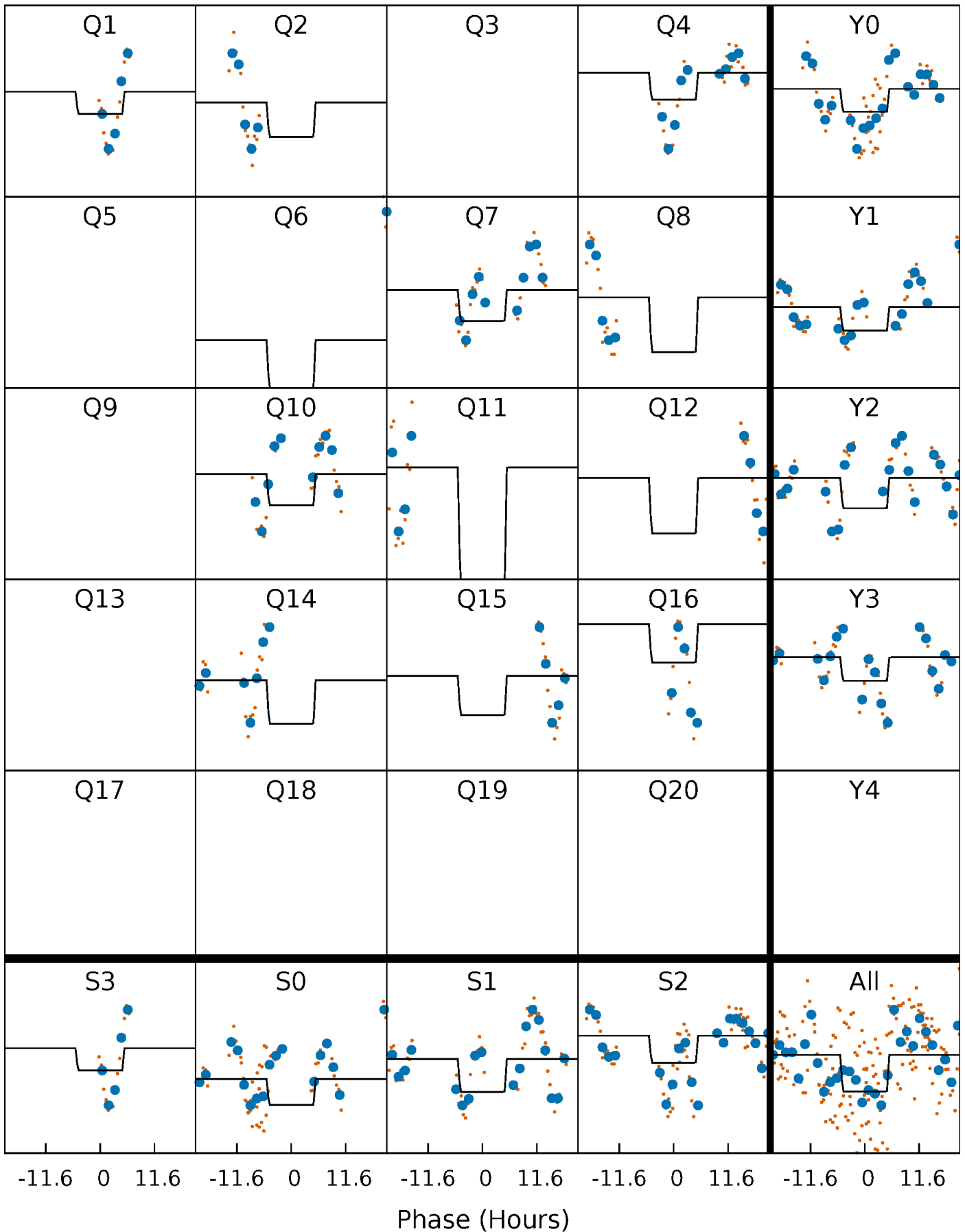
DV Quarter-Phased Transit Curves

TCE 006670894-03 $P = 56.670287$ Days $T_0 = 146.490621$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

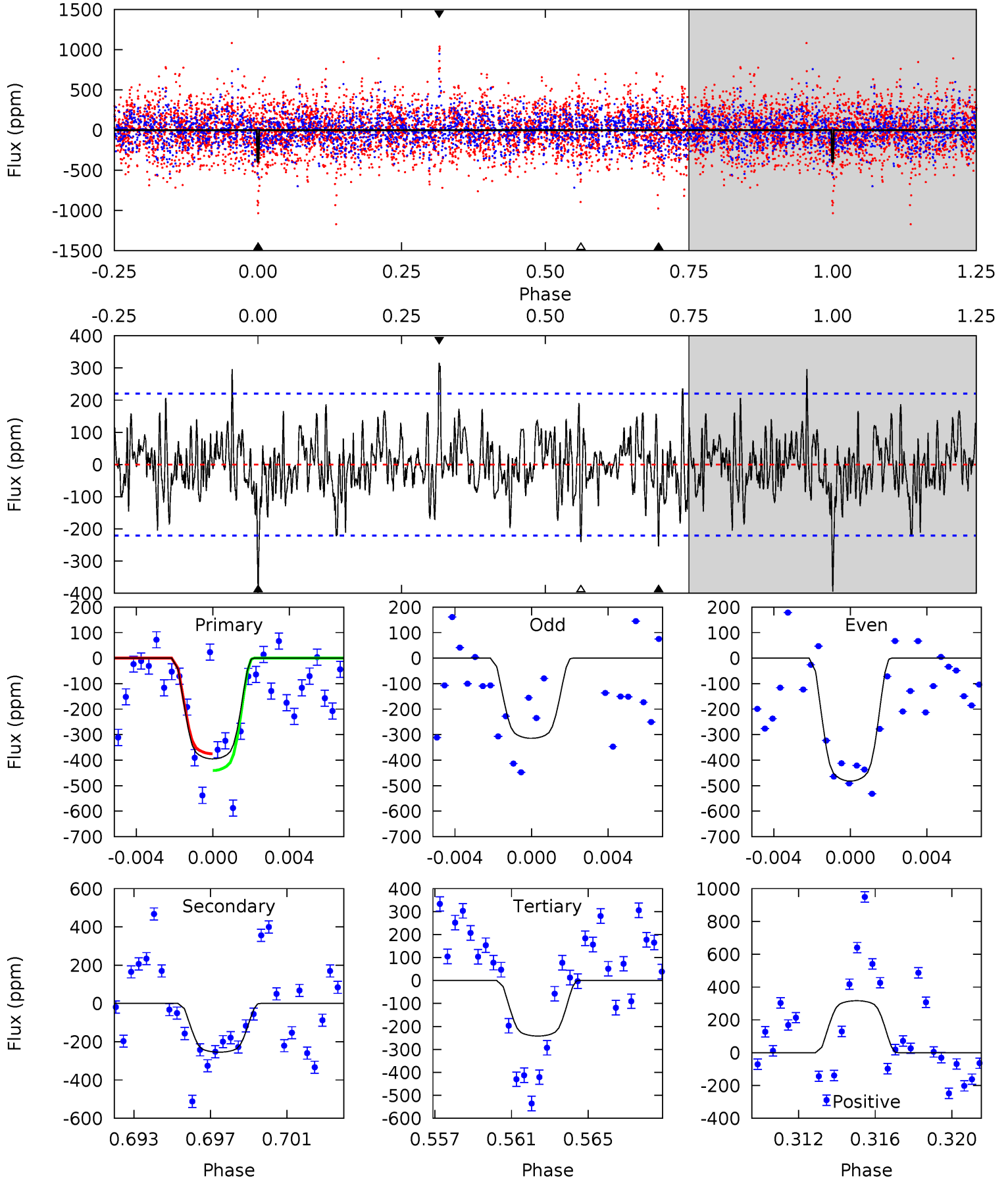
TCE 006670894-03 P= 56.673947 Days $T_0=146.377066$ (BKJD)



DV Model-Shift Uniqueness Test

006670894-03, P = 56.670287 Days, E = 89.820334 Days

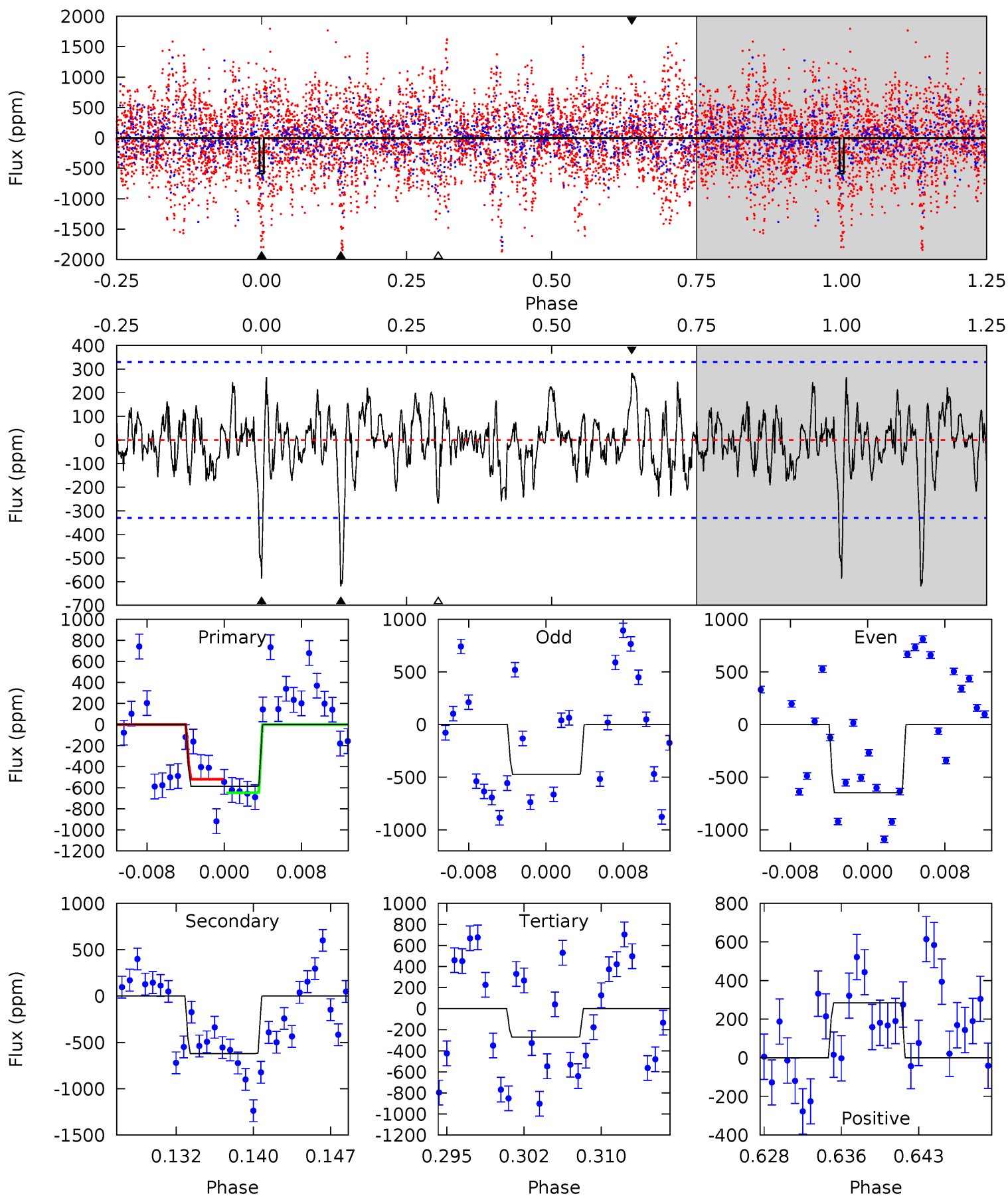
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.29	5.98	5.69	7.45	5.20	2.88	1.79	3.60	1.84	0.30	-1.46	1.69	1.03	0.45	0.78



Alt Model-Shift Uniqueness Test

006670894-03, P = 56.673947 Days, E = 89.703119 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.03	9.54	4.14	4.37	5.07	2.66	1.47	4.89	4.66	5.39	5.17	1.27	0.79	0.31	0.98



Stellar Parameters For KIC 006670894

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7266^{+226}_{-327}	$4.082^{+0.170}_{-0.170}$	$-0.080^{+0.250}_{-0.350}$	$1.876^{+0.585}_{-0.439}$	$1.546^{+0.212}_{-0.259}$	$0.330^{+0.299}_{-0.157}$
	+3%/-5%	+4%/-4%	+312%/-438%	+31%/-23%	+14%/-17%	+91%/-48%
Source	KIC0	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 006670894-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-254 ± 42	$5.70^{+1.11}_{-0.91}$	1056^{+86}_{-77}	5428^{+399}_{-342}	472^{+202}_{-157}
Alt.	-620 ± 65	$5.01^{+1.02}_{-0.82}$	1064^{+76}_{-81}	7272^{+633}_{-519}	1471^{+639}_{-434}

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 $A_{obs} \gg 1.0$

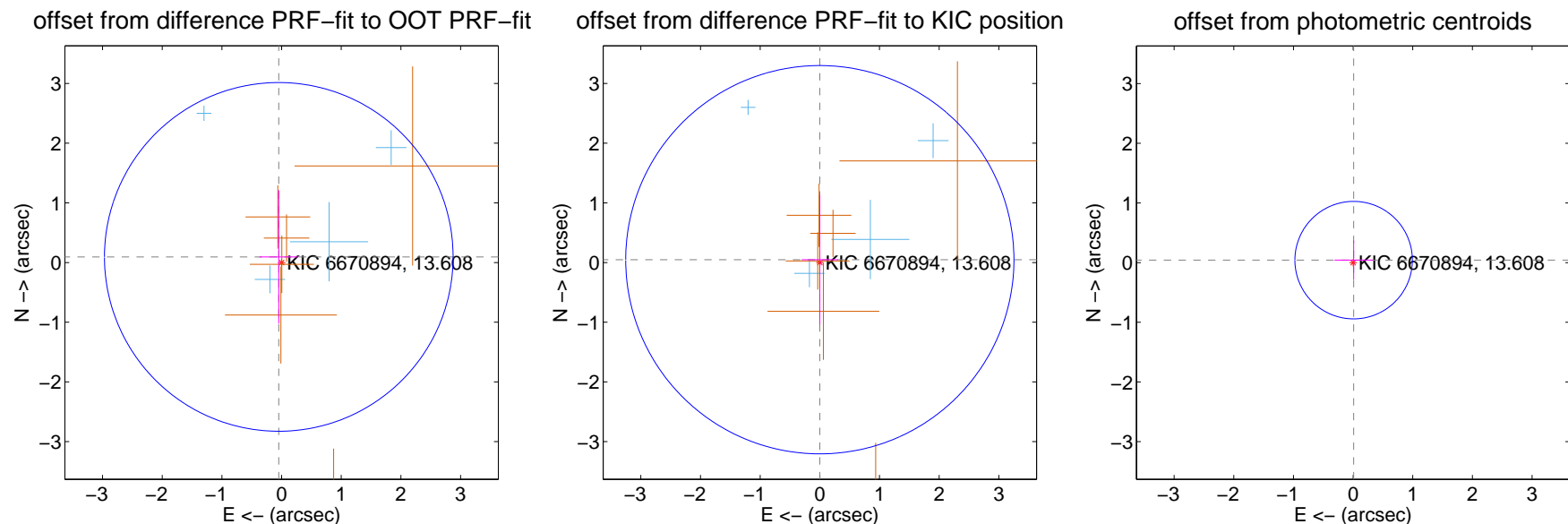
DV Centroid Data

Supplemental centroid analysis for 006670894-03. Kepler magnitude: 13.61. Transit SNR 13.57

There are 4 quarters with good PRF difference image offsets

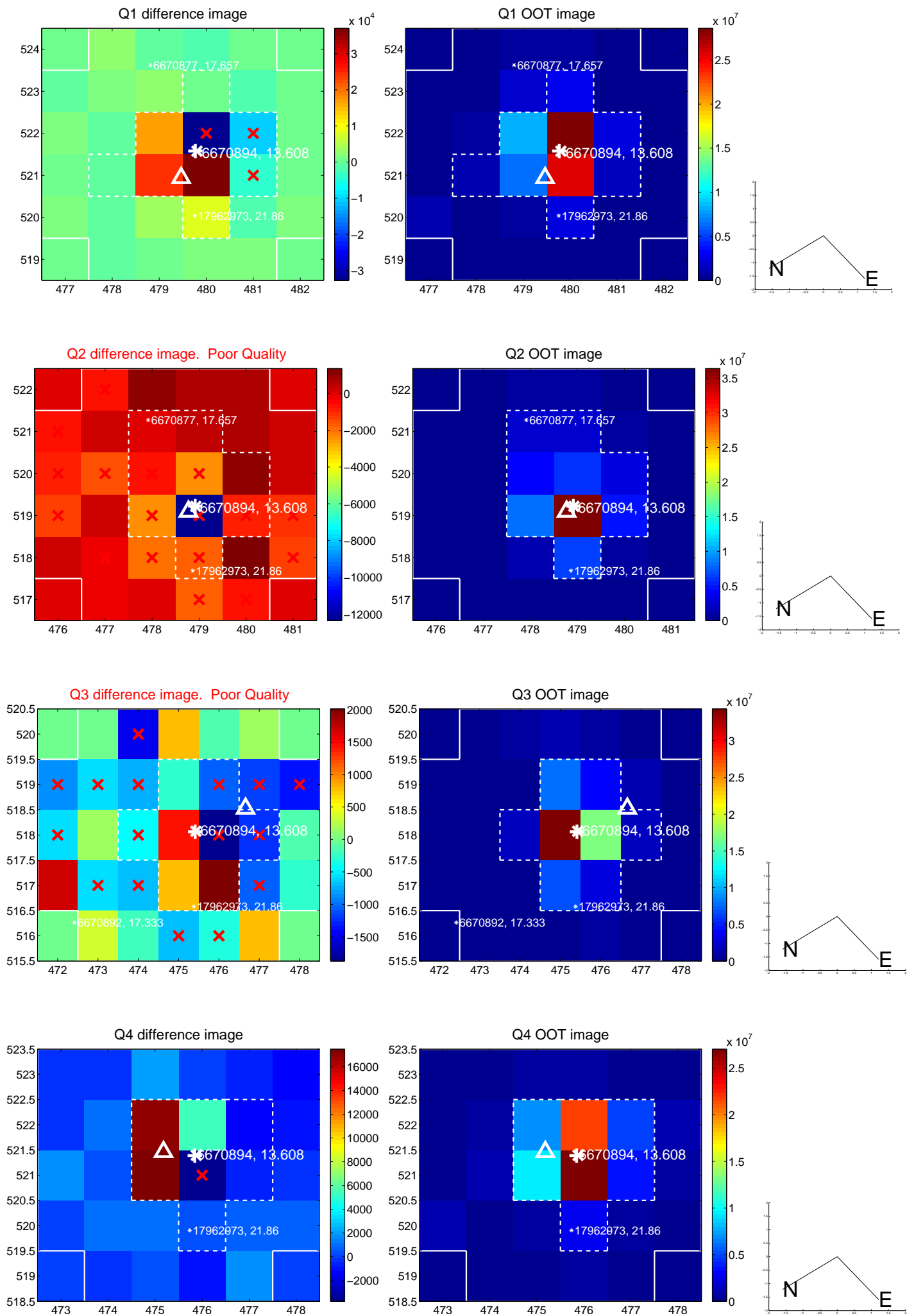
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.105 ± 0.973	0.11	0.047 ± 0.324	0.094 ± 1.118
PRF-fit source offset from KIC position	0.048 ± 1.084	0.04	0.000 ± 0.305	0.048 ± 1.084
photometric centroid source offset	0.04 ± 0.33	0.13	-0.01 ± 0.32	0.04 ± 0.33

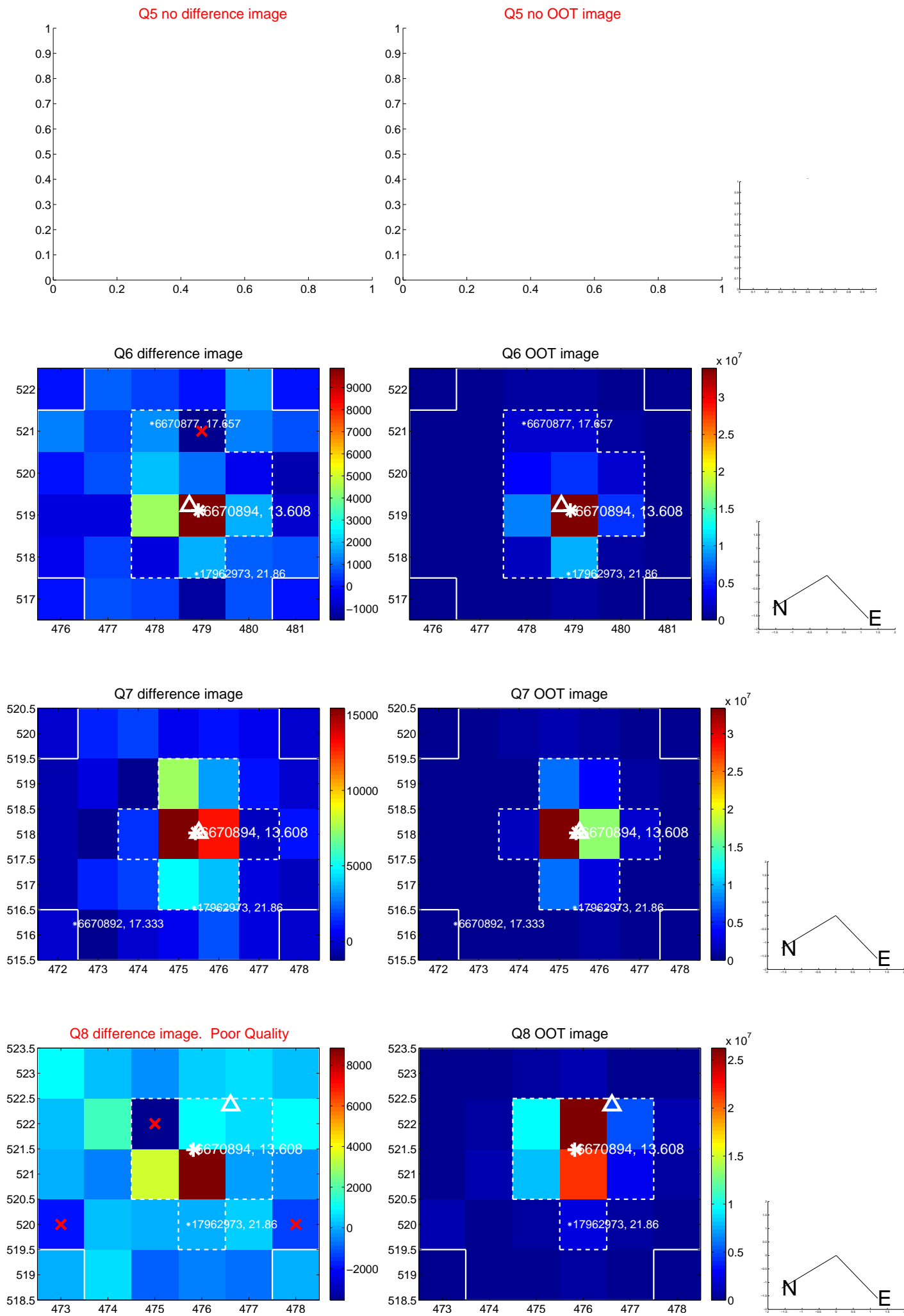


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

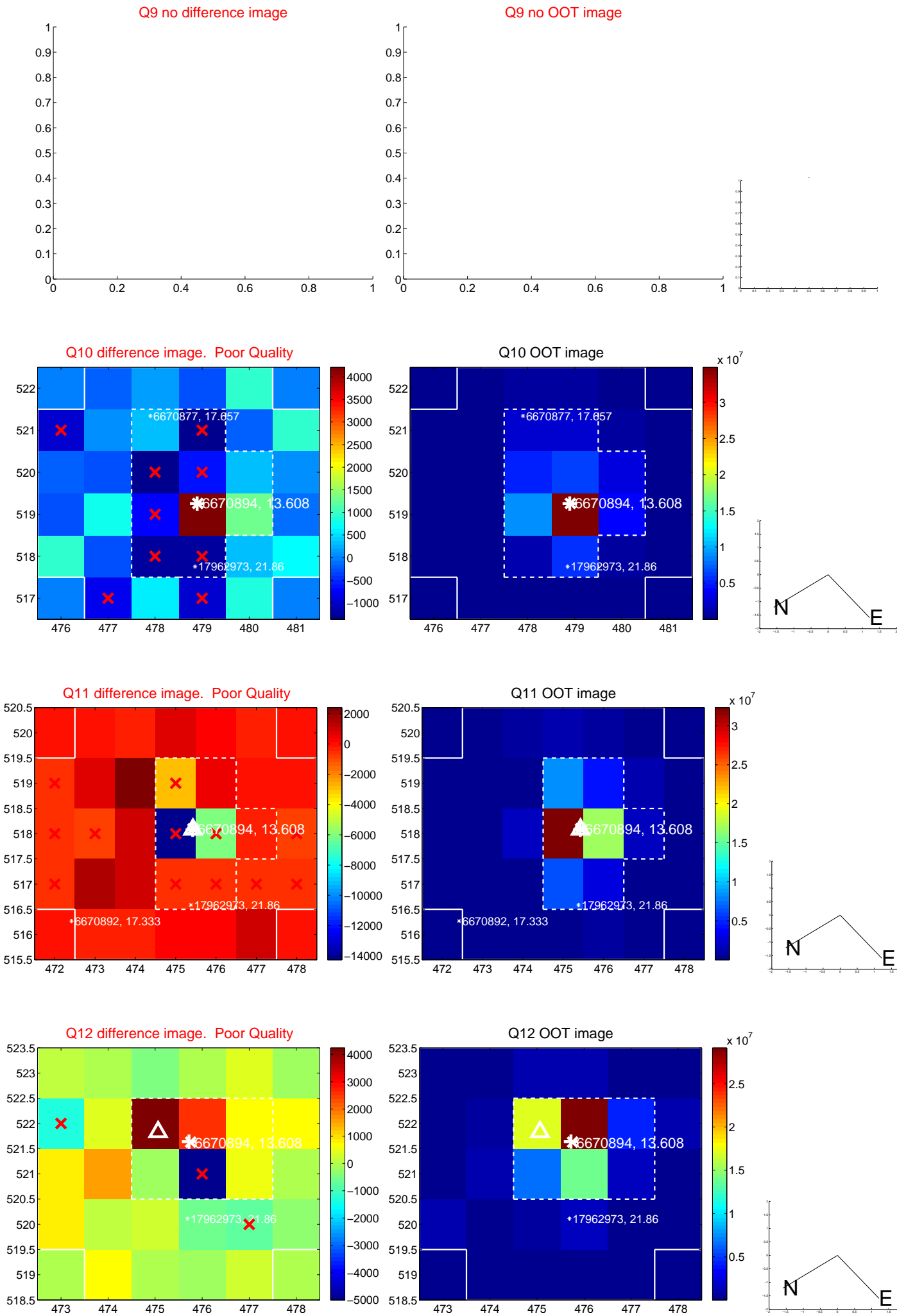
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



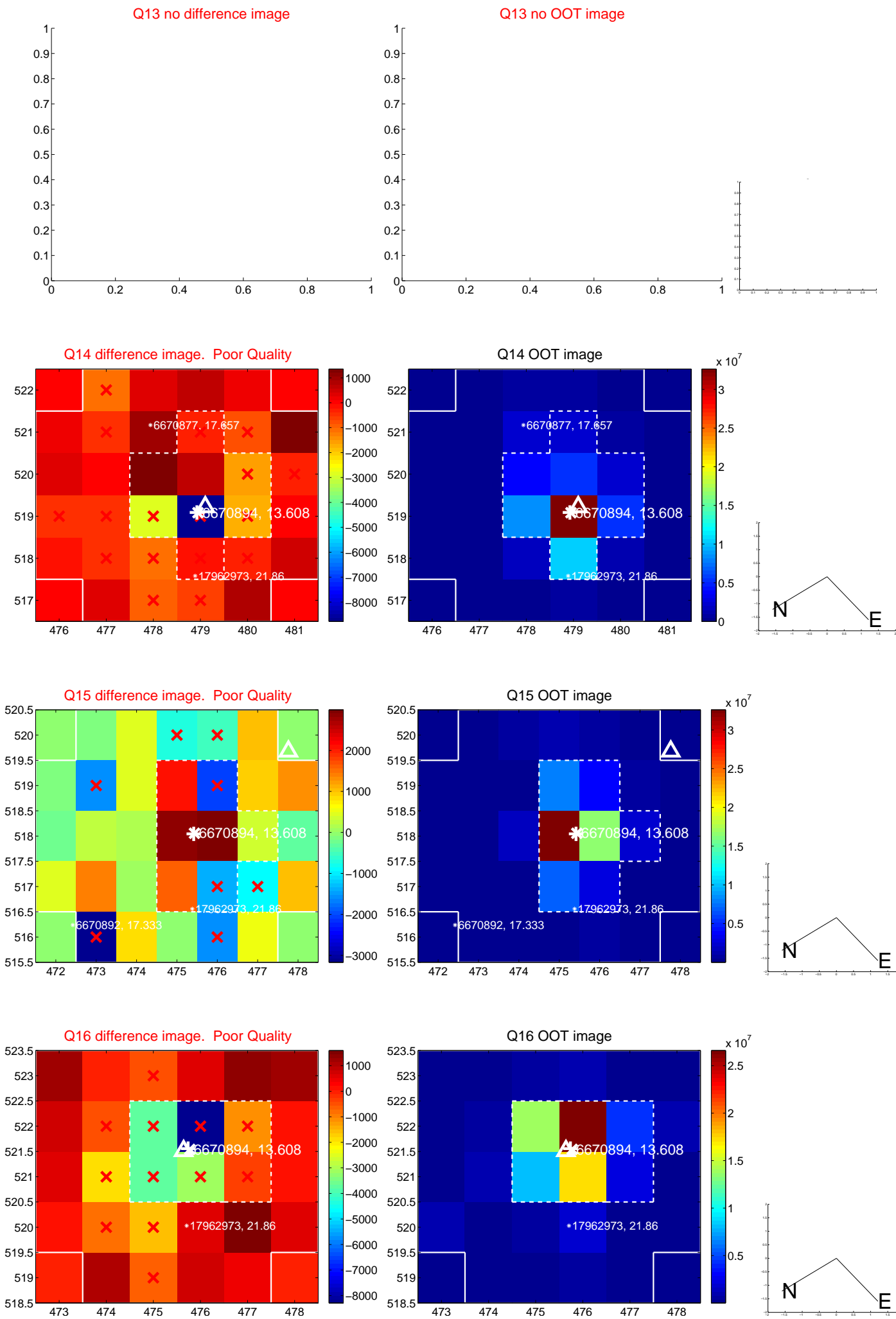
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



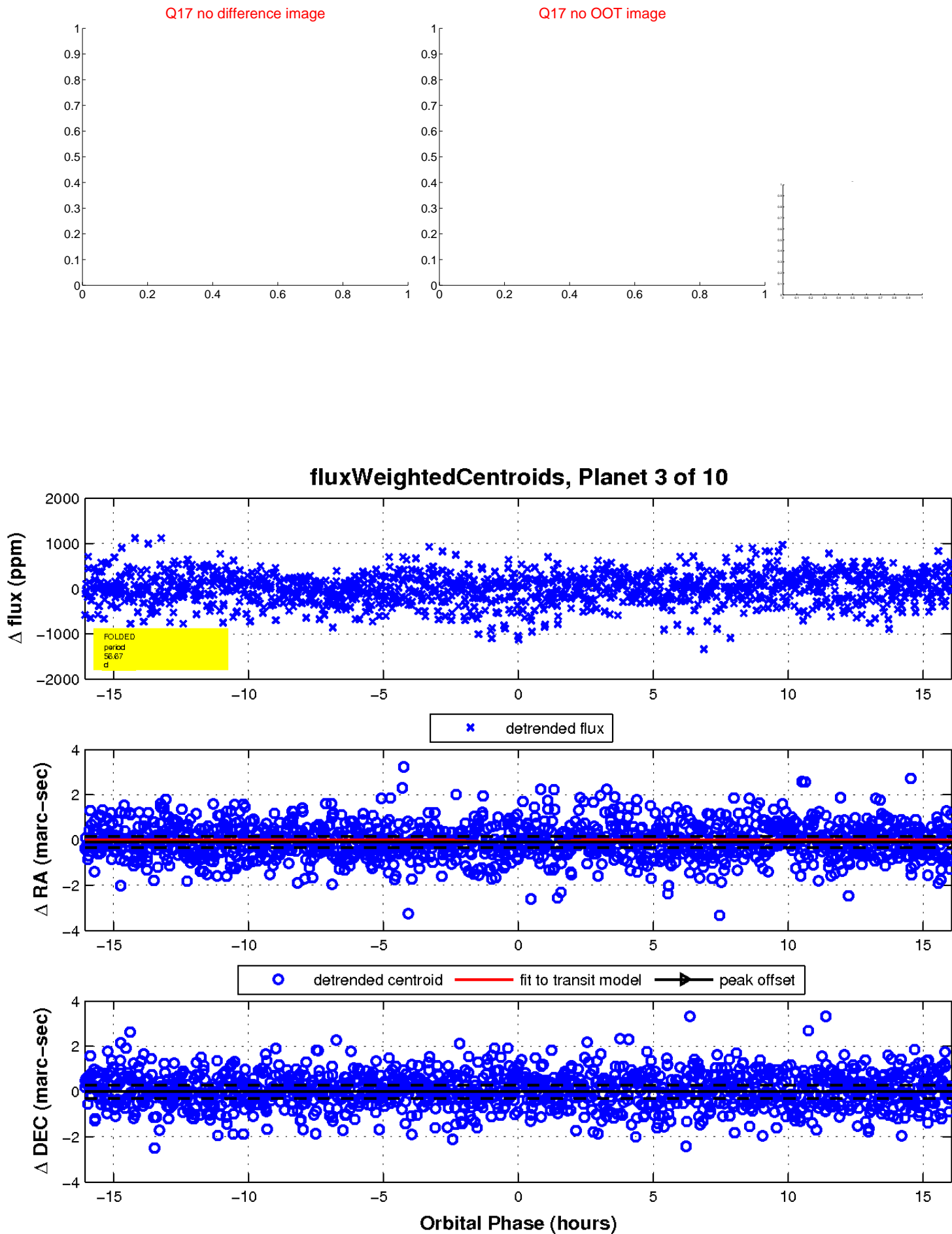
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

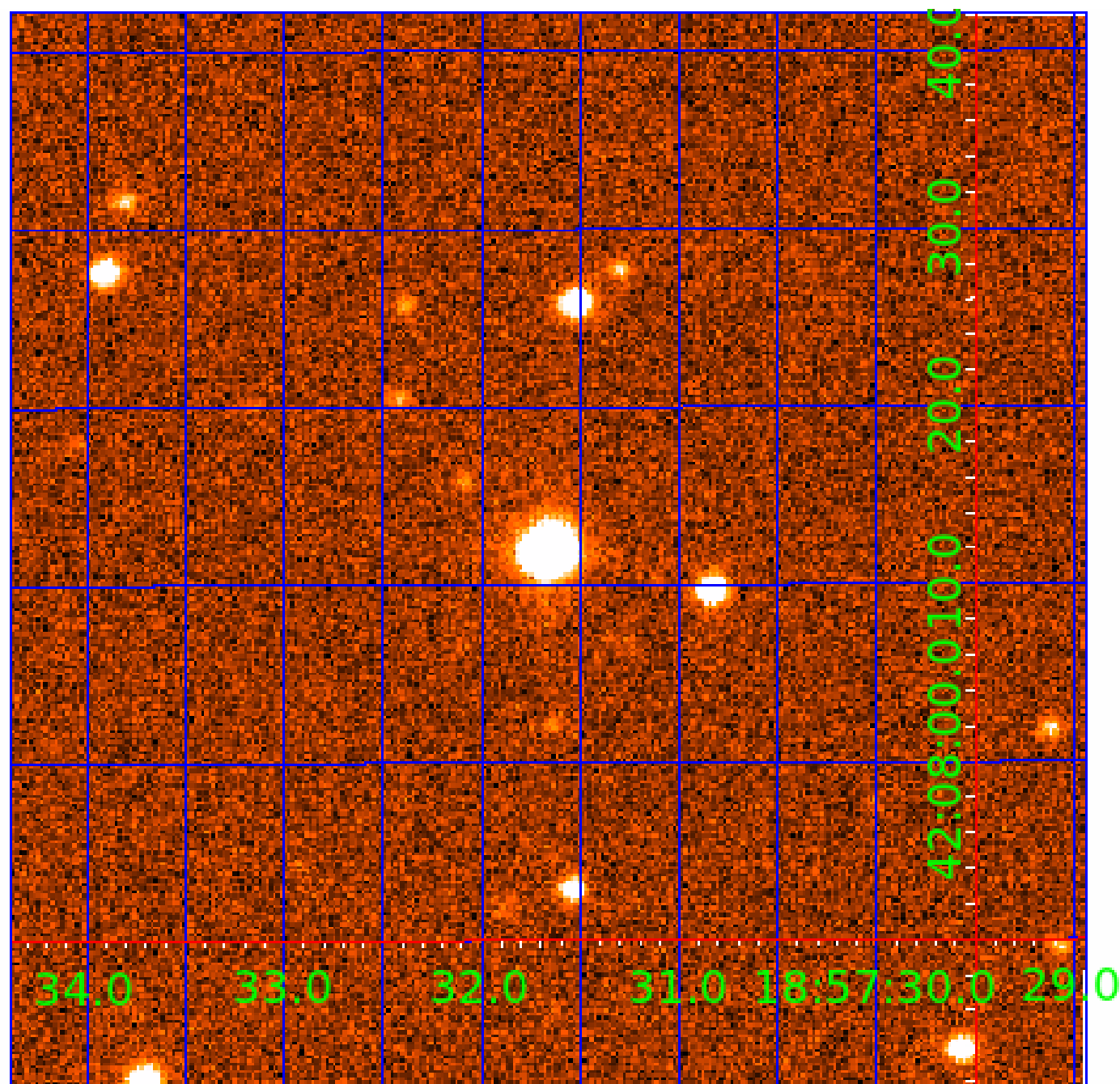


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
006670894-01	OBS	No	2.551845	132.460661	50.0	18.029	9.6	9.8	1.88	7266	1.38	4910.12
006670894-02	OBS	No	55.544984	174.552307	296.6	7.510	12.9	6.5	1.88	7266	3.43	80.79
006670894-03	OBS	No	56.670287	146.490621	623.9	5.356	16.0	13.6	1.88	7266	5.74	78.66
006670894-04	OBS	No	11.381235	140.143288	309.4	3.826	11.2	11.6	1.88	7266	3.76	668.82
006670894-05	OBS	No	47.278774	156.605446	531.2	2.331	9.8	10.5	1.88	7266	5.37	100.16
006670894-06	OBS	No	33.977317	161.813527	437.1	3.226	9.3	10.3	1.88	7266	4.19	155.59
006670894-07	OBS	No	15.241088	144.414923	289.3	2.955	9.5	11.4	1.88	7266	3.60	453.12
006670894-08	OBS	No	46.125163	173.705739	483.3	2.500	8.6	9.3	1.88	7266	4.24	103.51
006670894-09	OBS	No	9.236289	138.873408	250.7	2.594	8.8	9.5	1.88	7266	3.38	883.56
006670894-10	OBS	No	35.972270	166.674102	374.5	3.555	8.4	10.3	1.88	7266	3.88	144.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006670894-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006670894-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006670894-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006670894-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-09	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
006670894-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

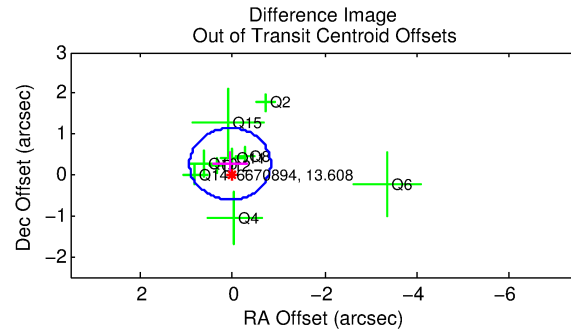
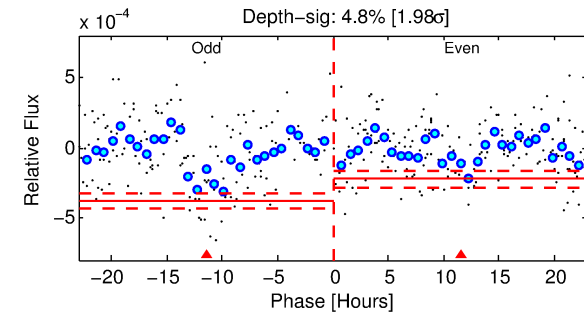
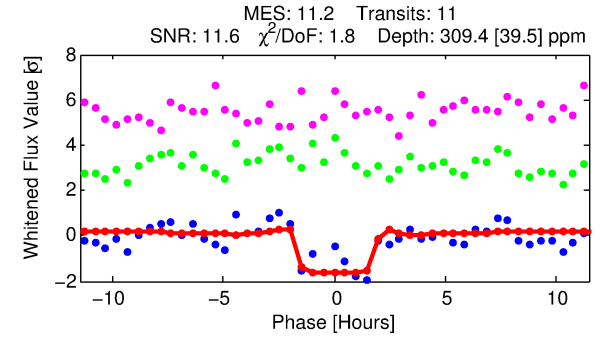
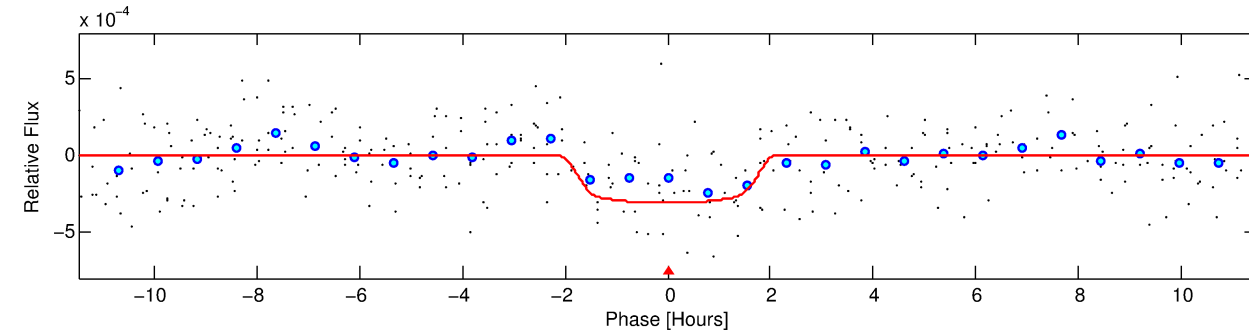
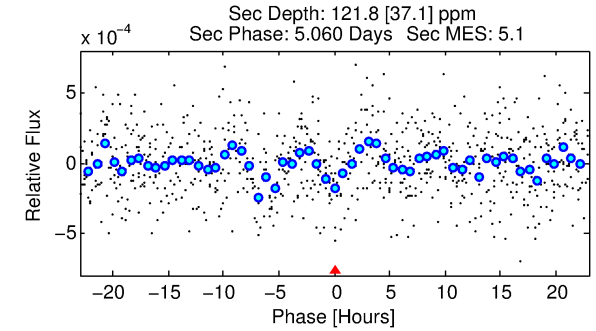
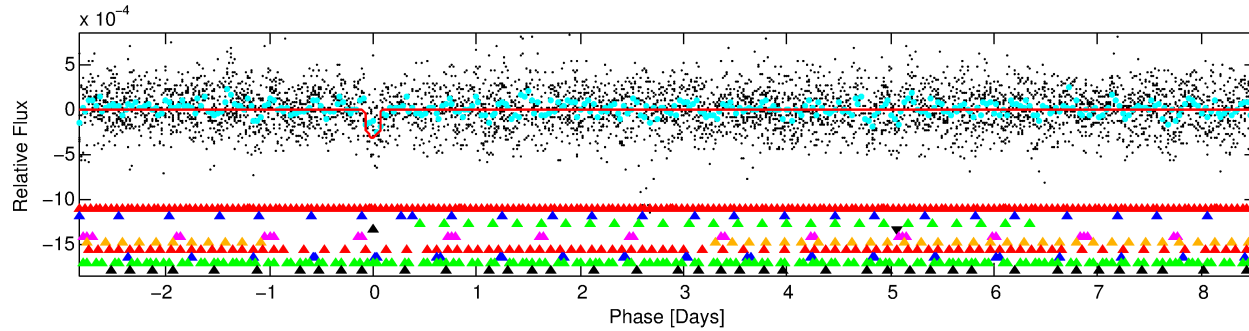
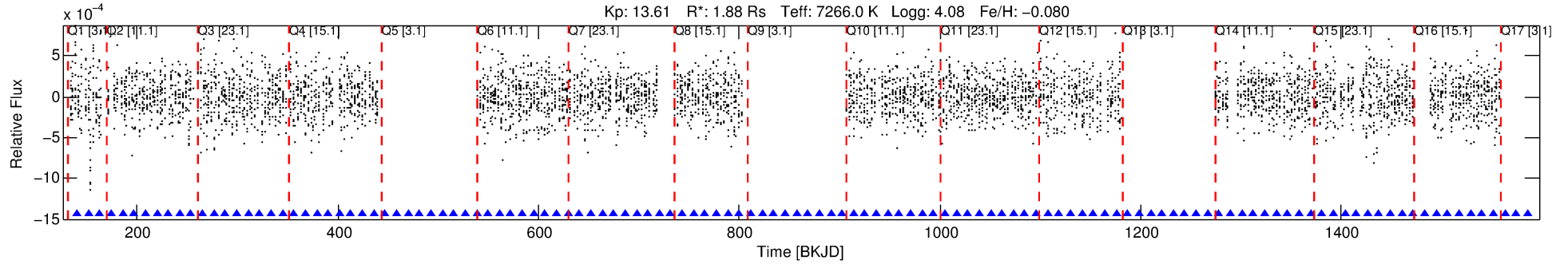
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006670894-04

No Significant Match Found

DV One-Page Summary

KIC: 6670894 Candidate: 4 of 10 Period: 11.381 d



DV Fit Results:

Period = 11.38123 [0.00012] d
Epoch = 140.1433 [0.0070] BKJD
Rp/R* = 0.0183 [0.0071]
a/R* = 12.00 [28.15]
b = 0.87 [0.65]
Seff = 668.82 [253.56]
Teq = 1297 [123] K
Rp = 3.76 [1.86] Re
a = 0.1146 [0.0281] AU
Ag = 62.41 [55.81] [1.10σ]
Teffp = 5635 [1196] K [3.61σ]

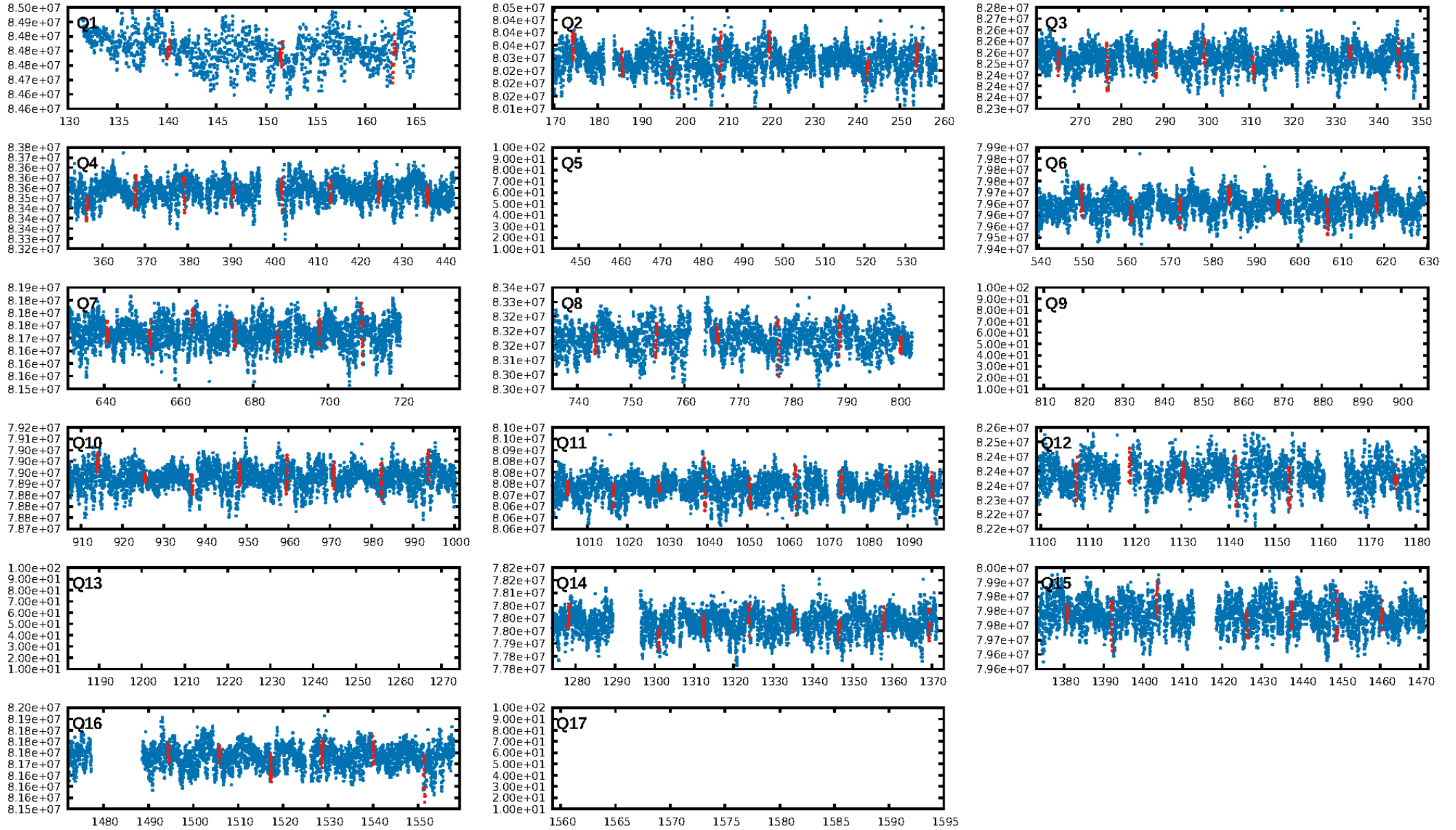
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [11.14σ]
LongPeriod-sig: 100.0% [19.16σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 65.1%
Bootstrap-pfa: 2.28e-11
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: -1.541
Centroid-sig: 9.4%
Centroid-so: 0.319 arcsec [0.99σ]
OotOffset-rm: 0.271 arcsec [0.93σ]
KicOffset-rm: 0.349 arcsec [1.38σ]
OotOffset-st: 4/2/3/0 [9]
KicOffset-st: 4/2/3/0 [9]
DiffImageQuality-fgm: 0.56 [5/9]
DiffImageOverlap-fno: 1.00 [13/13]

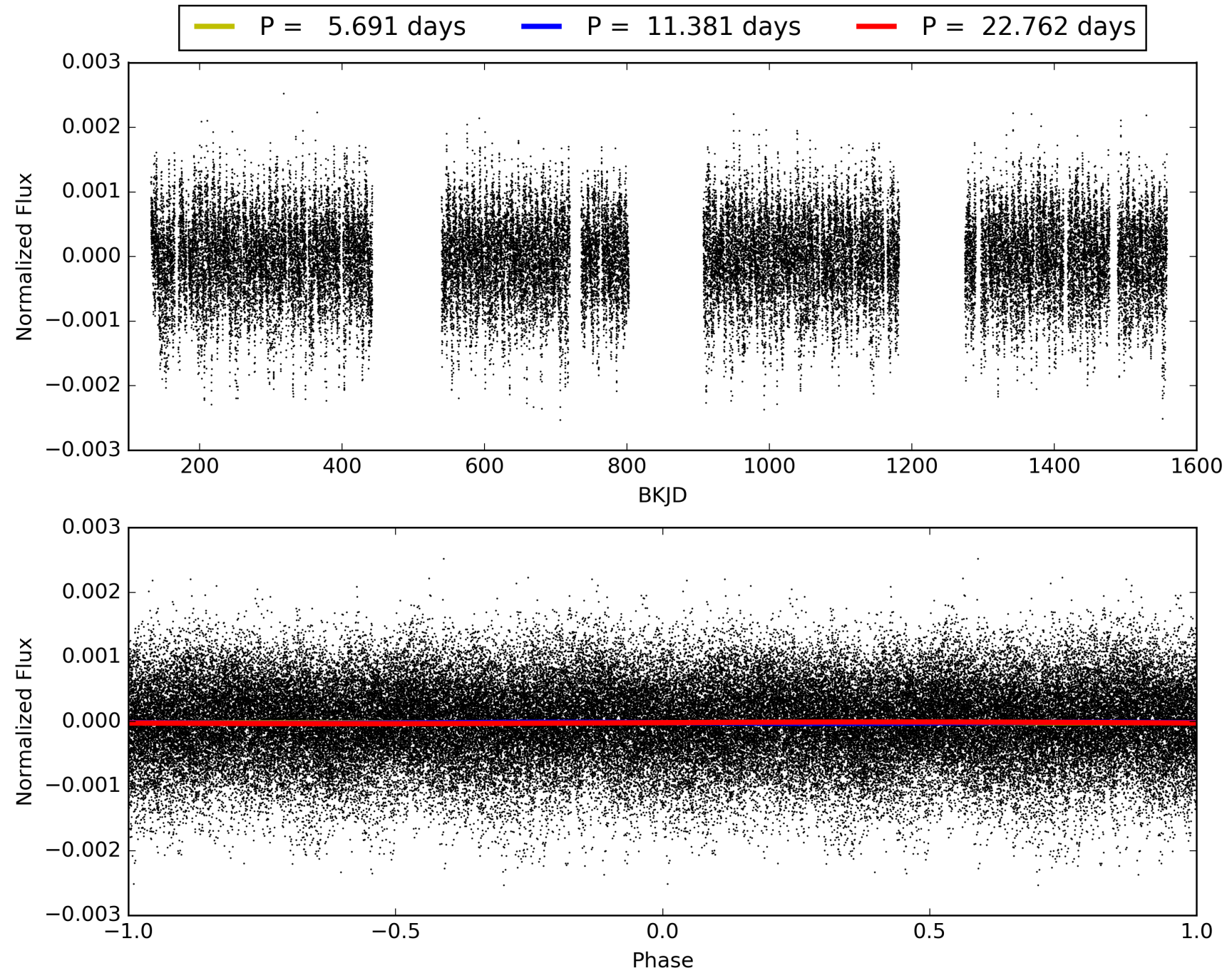
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 04:39:22 Z

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

TCE 006670894-04, PDC Light Curves

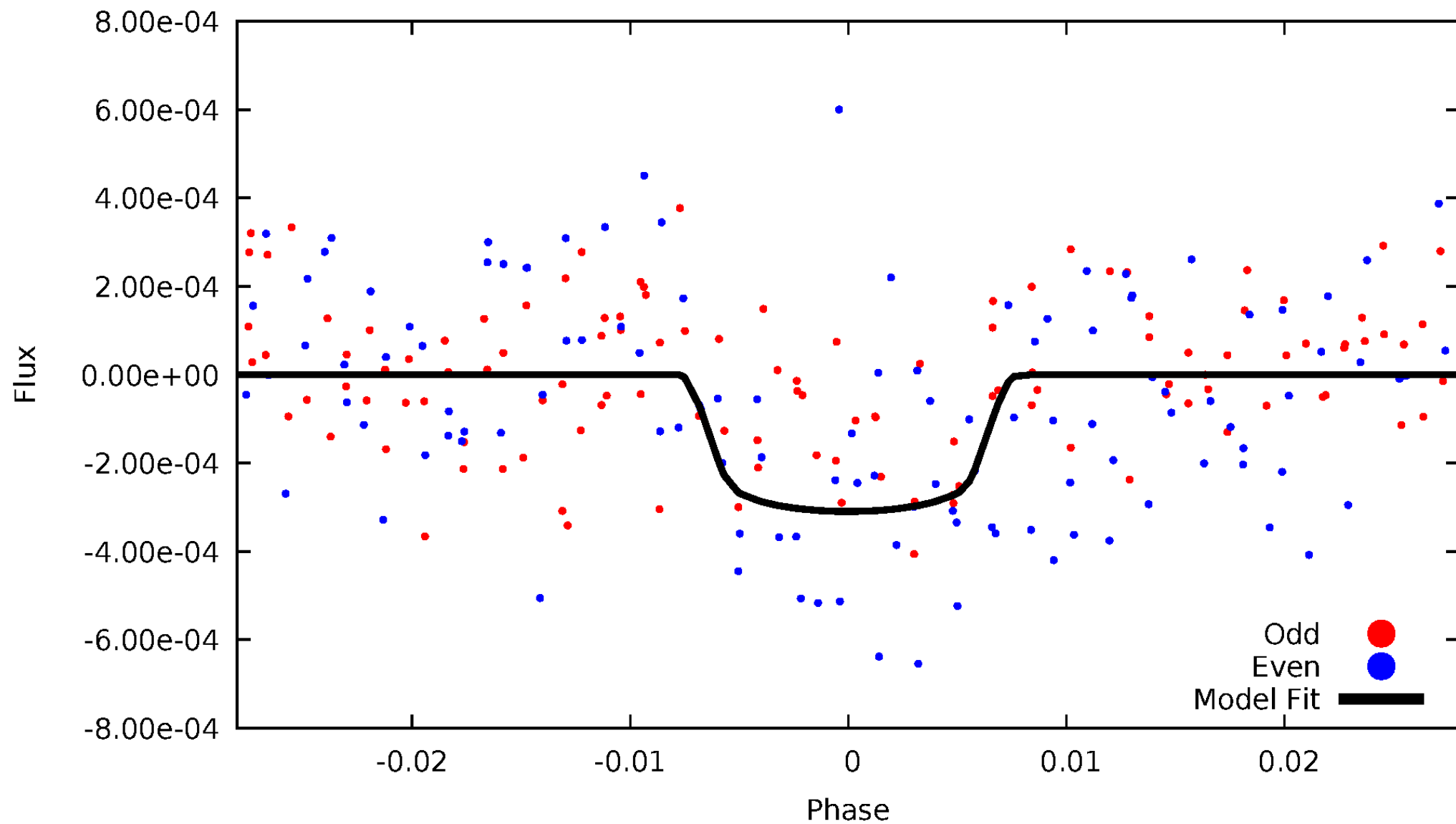


TCE 006670894-04



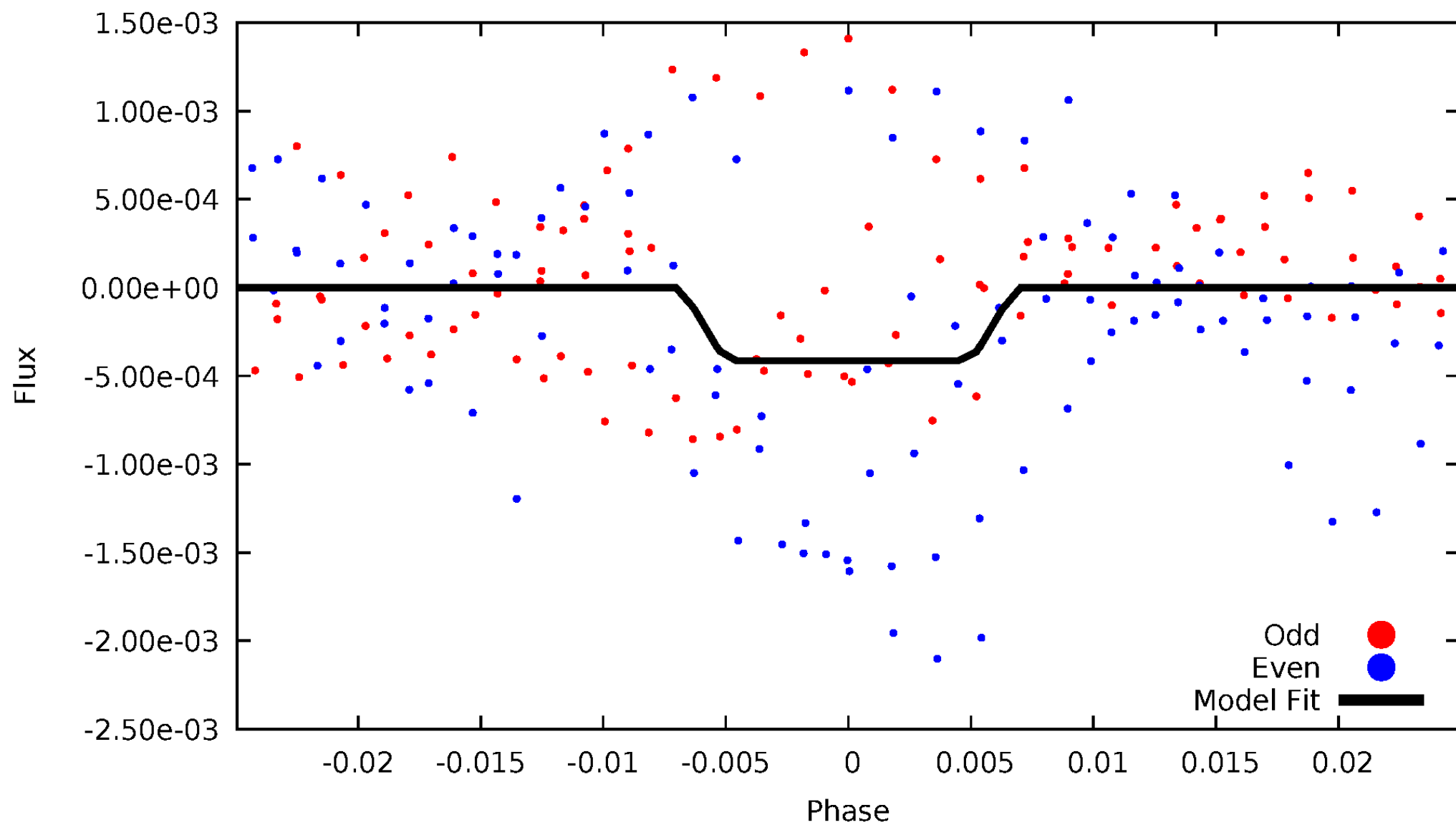
DV Odd/Even

TCE 006670894-04



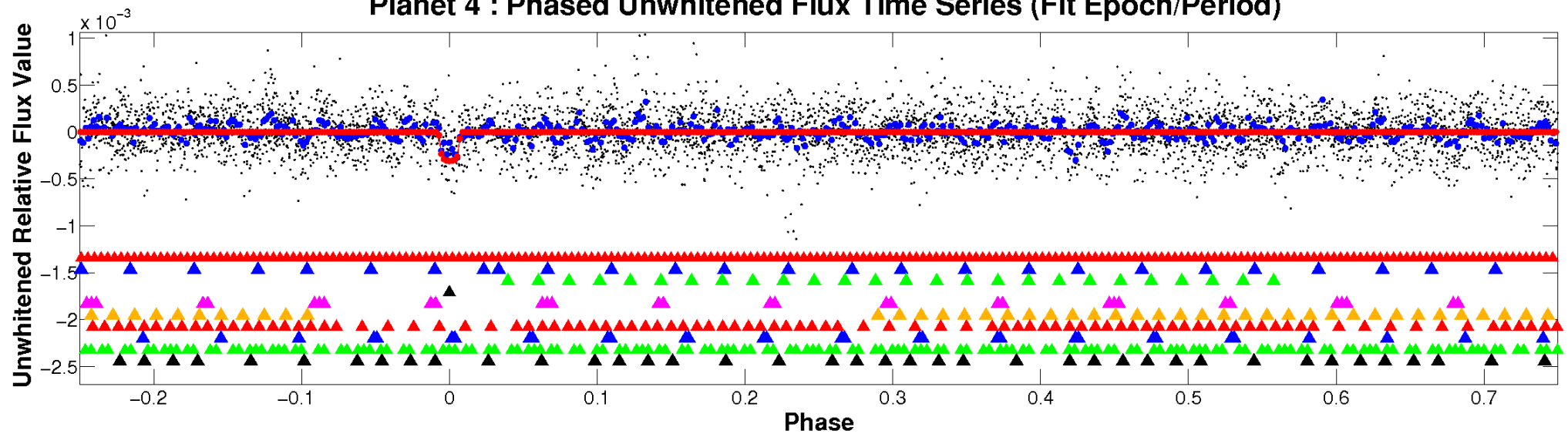
ALT Odd/Even

TCE 006670894-04

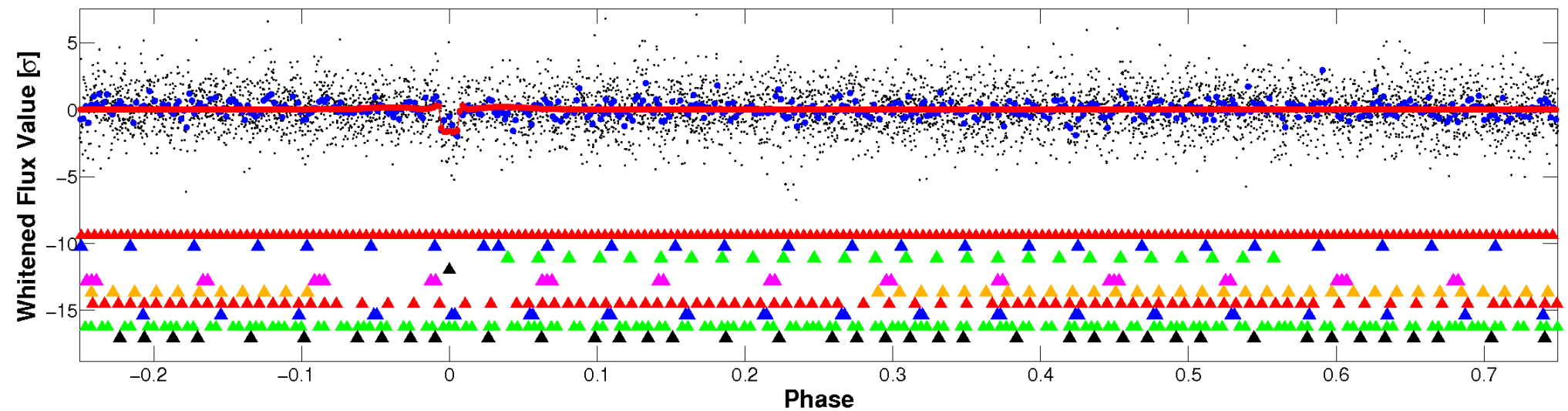


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

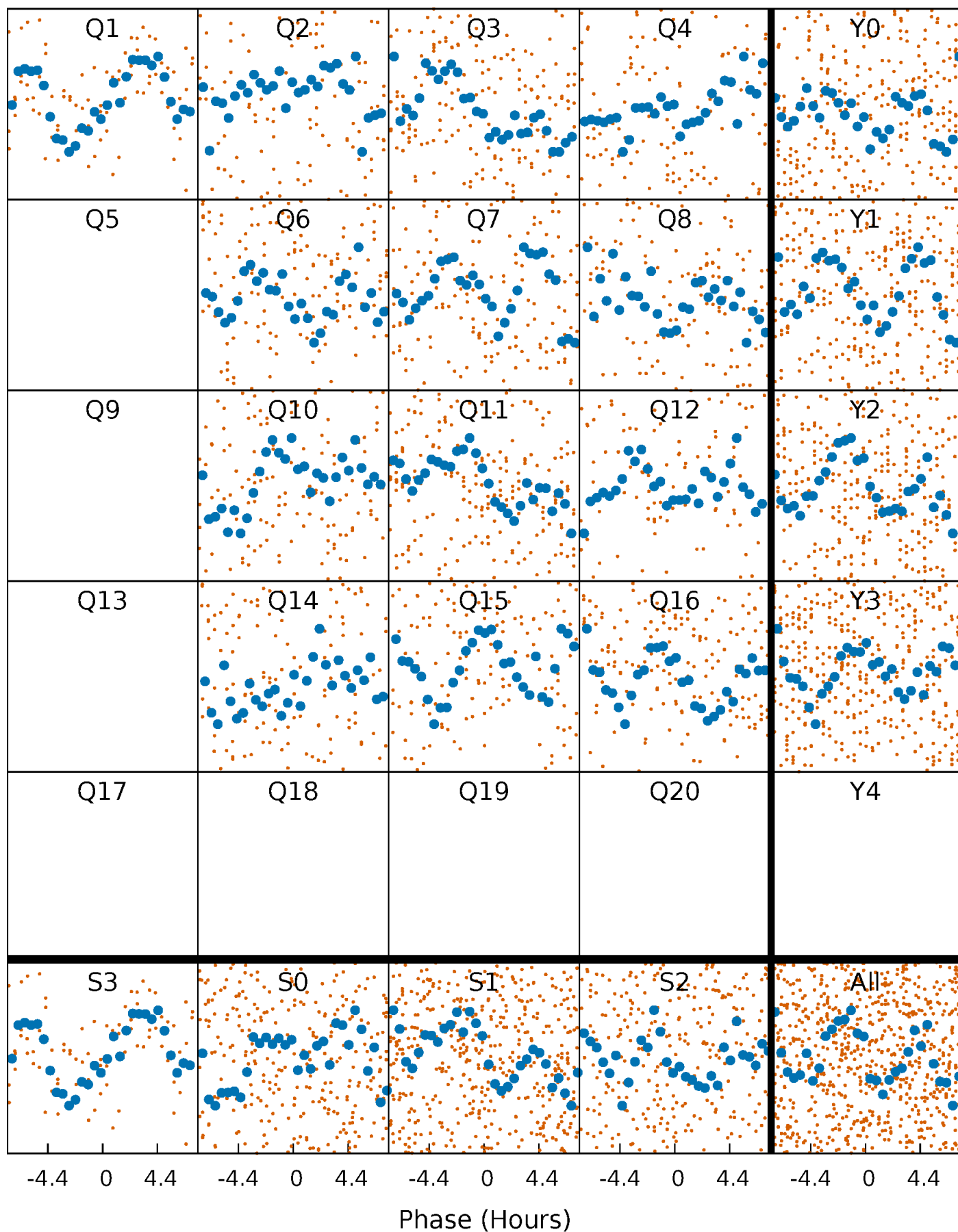


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



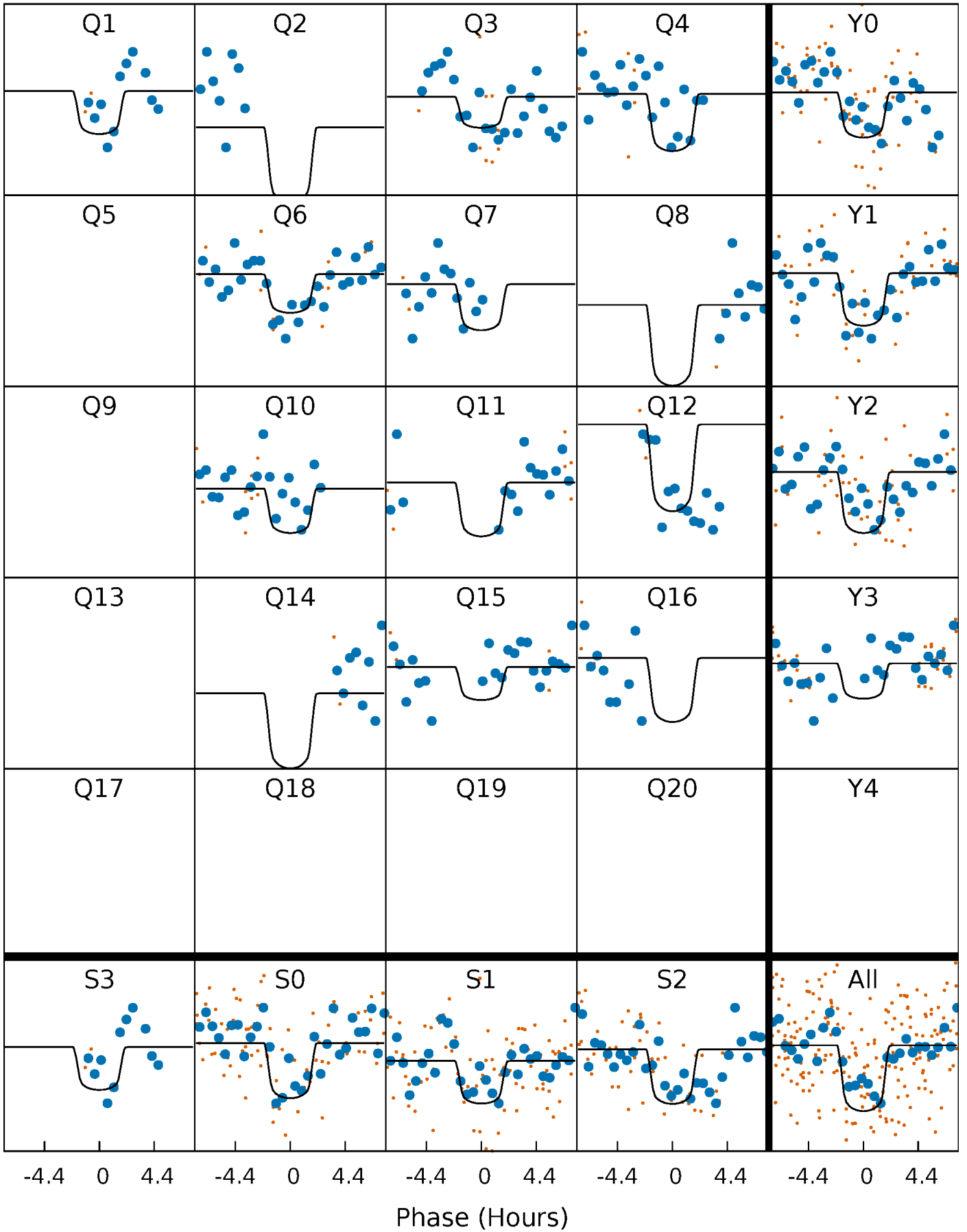
PDC Quarter-Phased Transit Curves

TCE 006670894-04 P= 11.381235 Days $T_0=140.143288$ (BKJD)



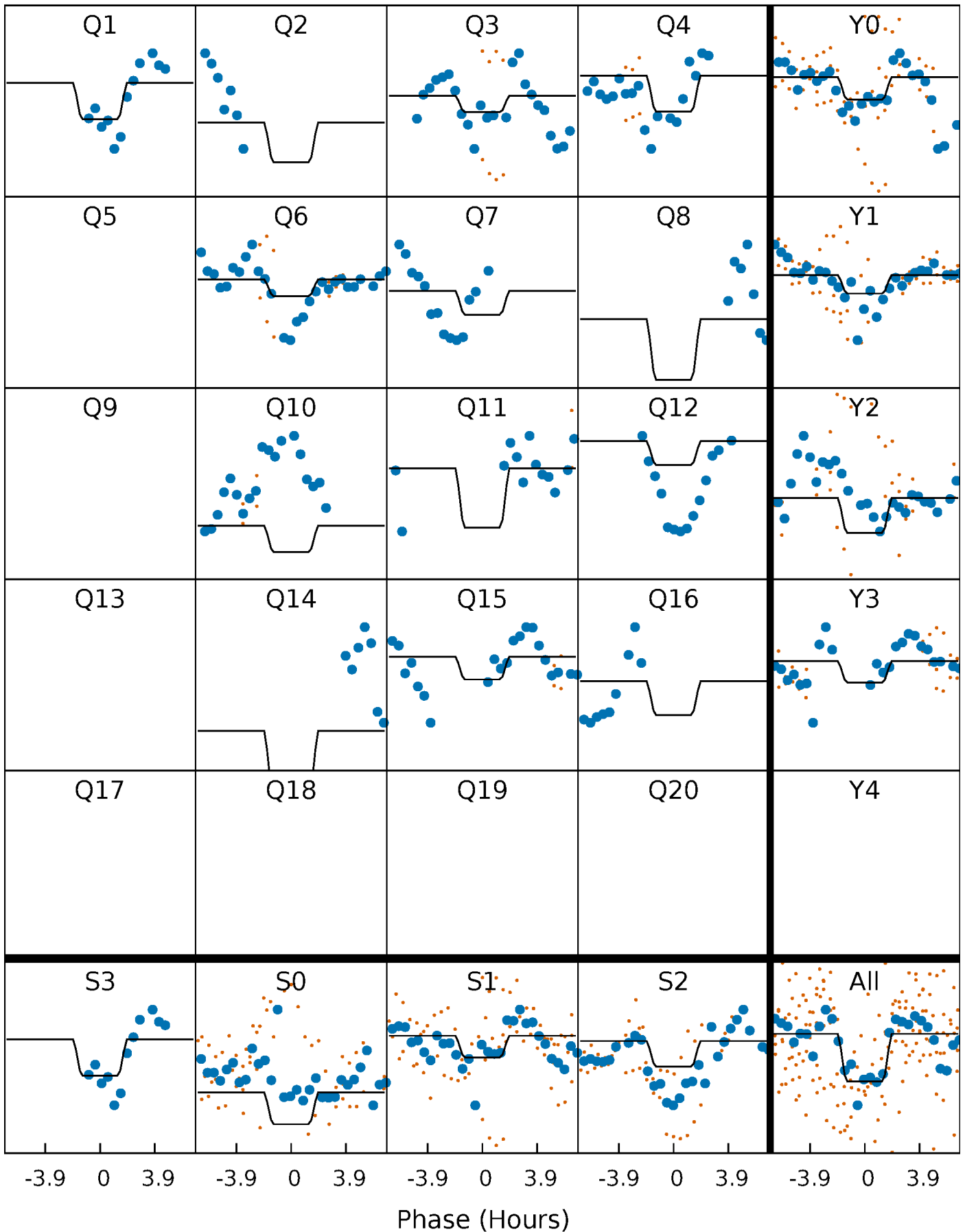
DV Quarter-Phased Transit Curves

TCE 006670894-04 P= 11.381235 Days $T_0=140.143288$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

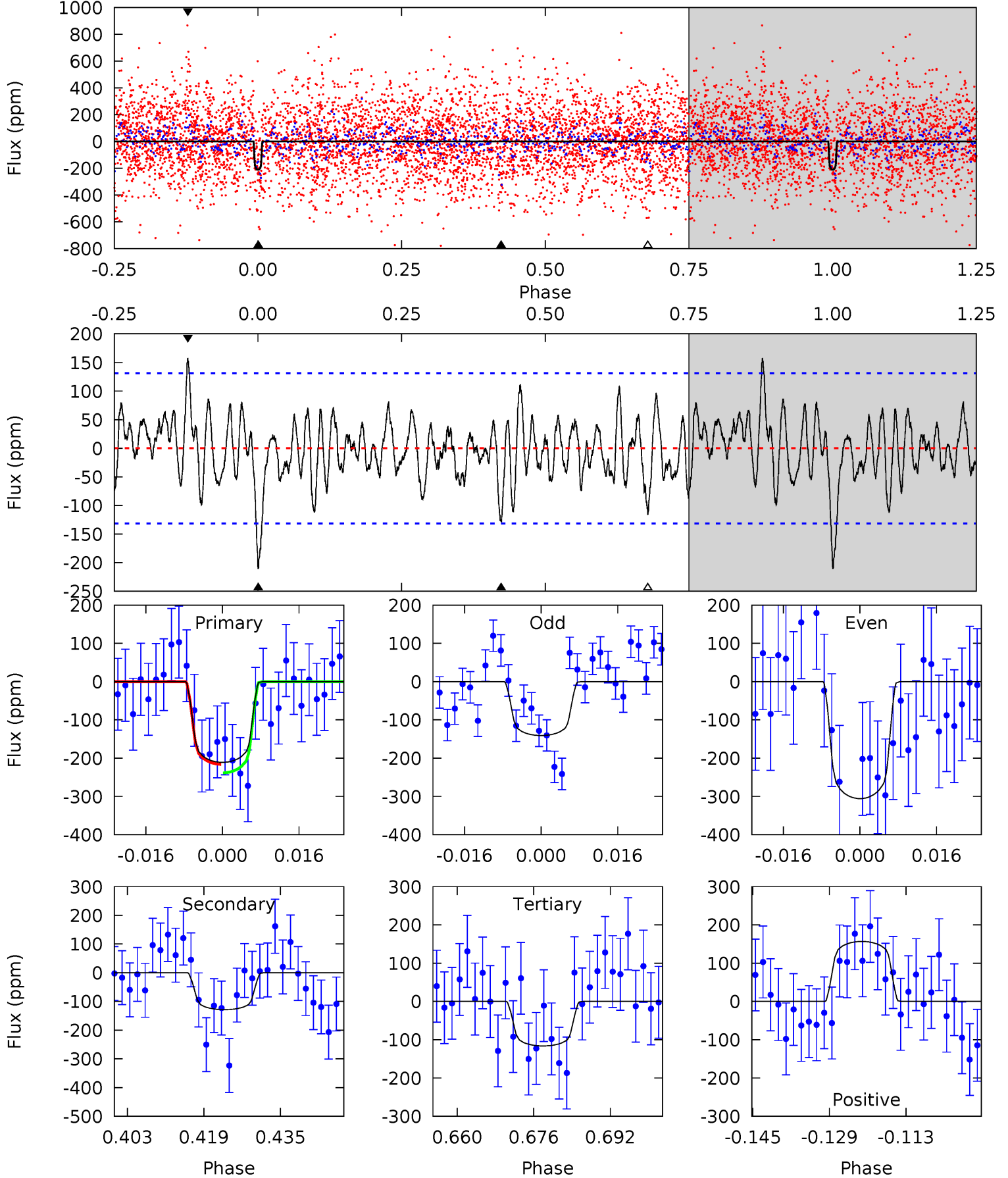
TCE 006670894-04 P= 11.381214 Days $T_0=140.138642$ (BKJD)



DV Model-Shift Uniqueness Test

006670894-04, P = 11.381235 Days, E = 128.762053 Days

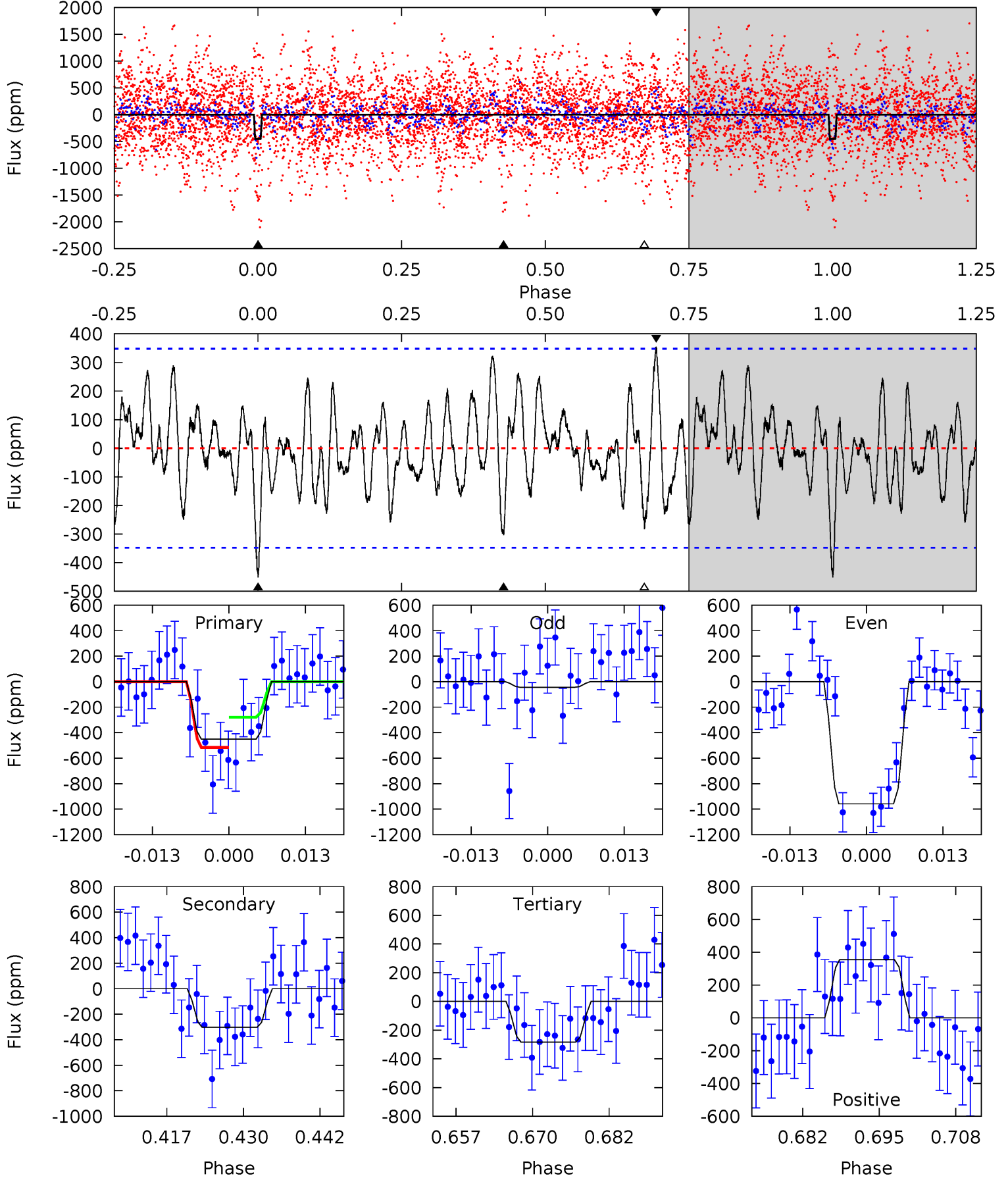
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.92	4.83	4.36	5.89	4.93	2.41	1.67	3.55	2.03	0.46	-1.06	3.06	1.18	0.43	0.41



Alt Model-Shift Uniqueness Test

006670894-04, P = 11.381214 Days, E = 128.757428 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.46	4.34	4.05	5.08	4.98	2.49	1.68	2.41	1.38	0.29	-0.74	6.47	0.75	0.44	0



Stellar Parameters For KIC 006670894

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7266^{+226}_{-327}	$4.082^{+0.170}_{-0.170}$	$-0.080^{+0.250}_{-0.350}$	$1.876^{+0.585}_{-0.439}$	$1.546^{+0.212}_{-0.259}$	$0.330^{+0.299}_{-0.157}$
	+3%/-5%	+4%/-4%	+312%/-438%	+31%/-23%	+14%/-17%	+91%/-48%
Source	KIC0	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 006670894-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-129 ± 27	$3.74^{+1.62}_{-1.58}$	1805^{+159}_{-135}	5622^{+1781}_{-859}	63^{+125}_{-33}
Alt.	-303 ± 70	$4.18^{+1.72}_{-1.57}$	1811^{+131}_{-140}	6631^{+2007}_{-1040}	127^{+197}_{-65}

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

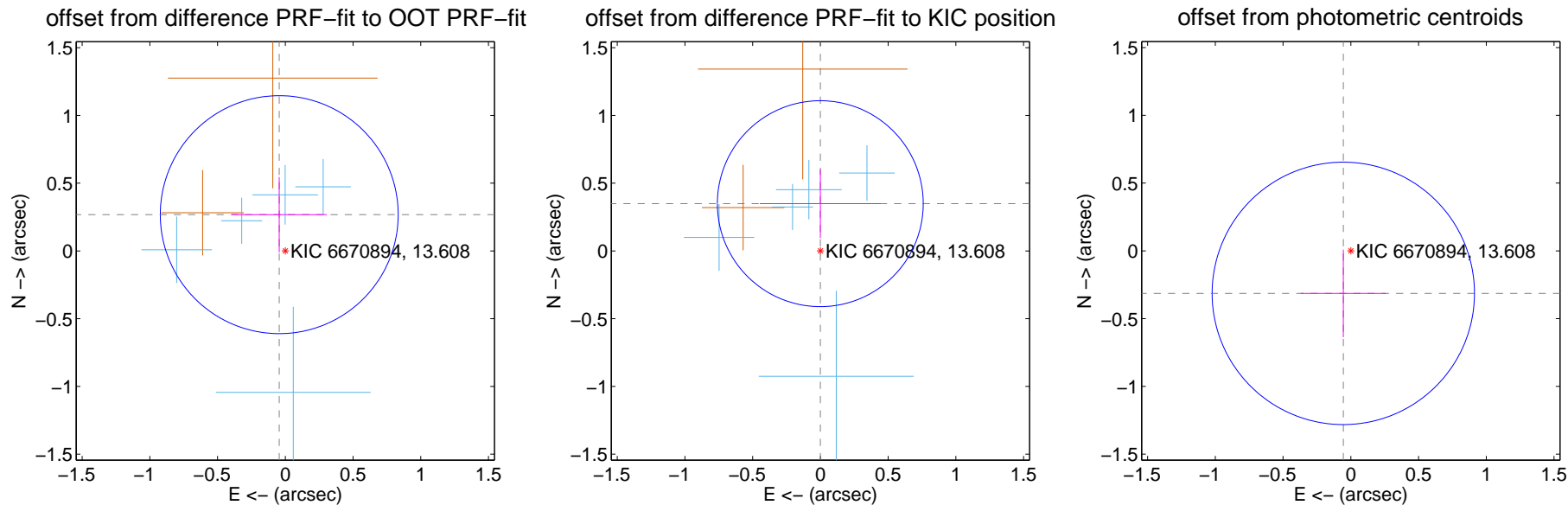
DV Centroid Data

Supplemental centroid analysis for 006670894-04. Kepler magnitude: 13.61. Transit SNR 11.61

There are 5 quarters with good PRF difference image offsets

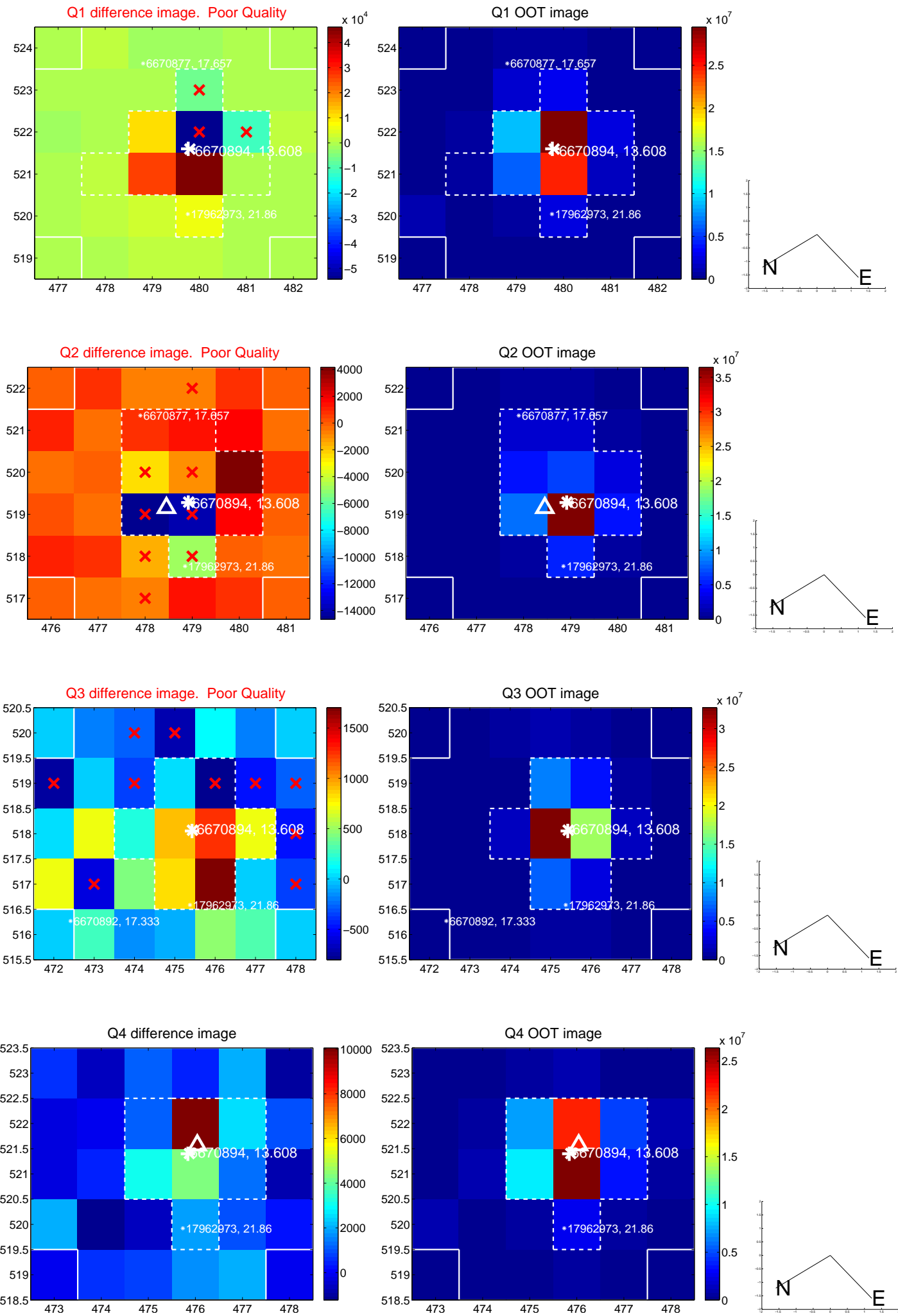
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.271 ± 0.293	0.93	0.045 ± 0.351	0.268 ± 0.278
PRF-fit source offset from KIC position	0.349 ± 0.253	1.38	0.001 ± 0.446	0.349 ± 0.253
photometric centroid source offset	0.32 ± 0.32	0.99	0.06 ± 0.31	-0.31 ± 0.32

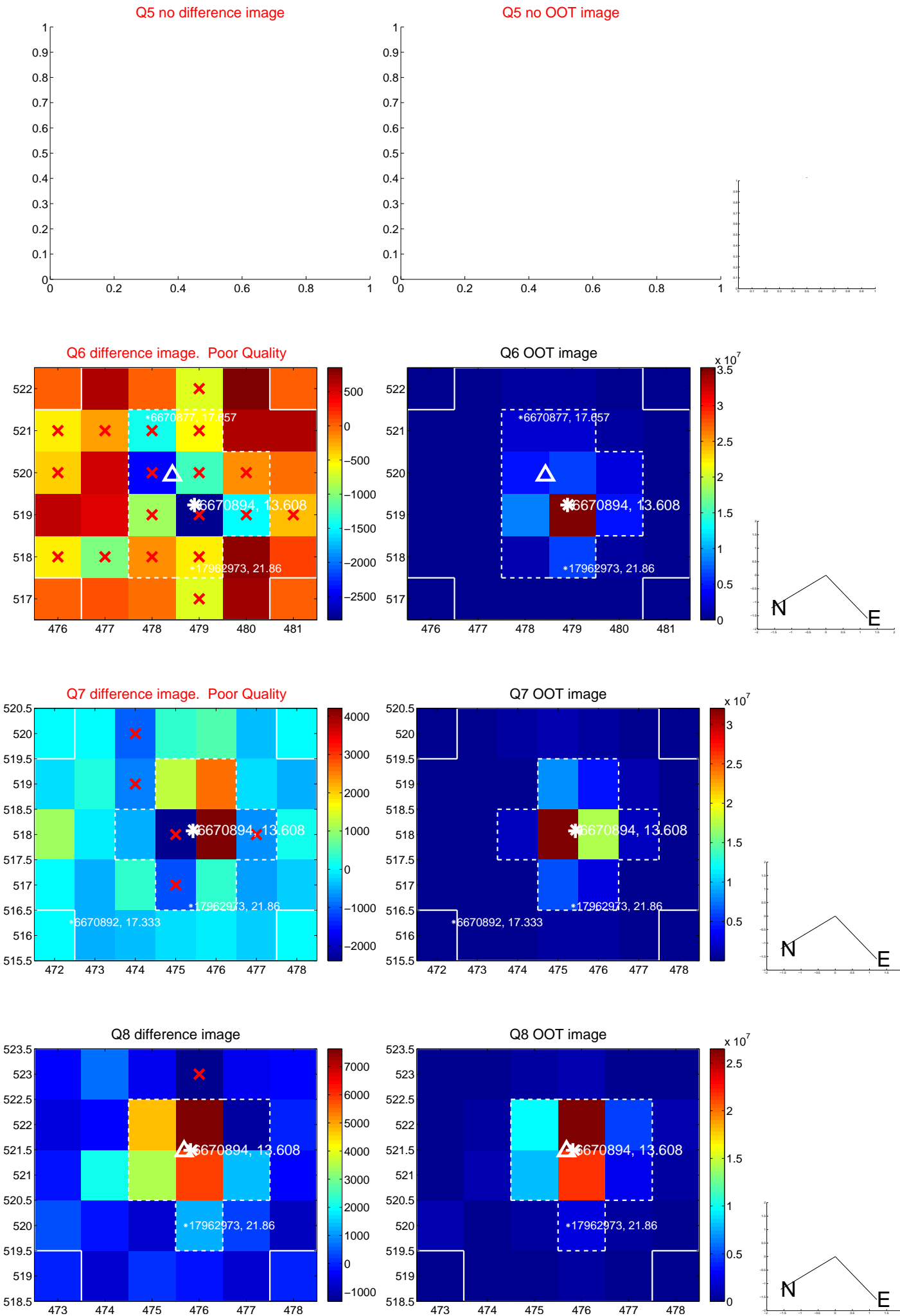


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

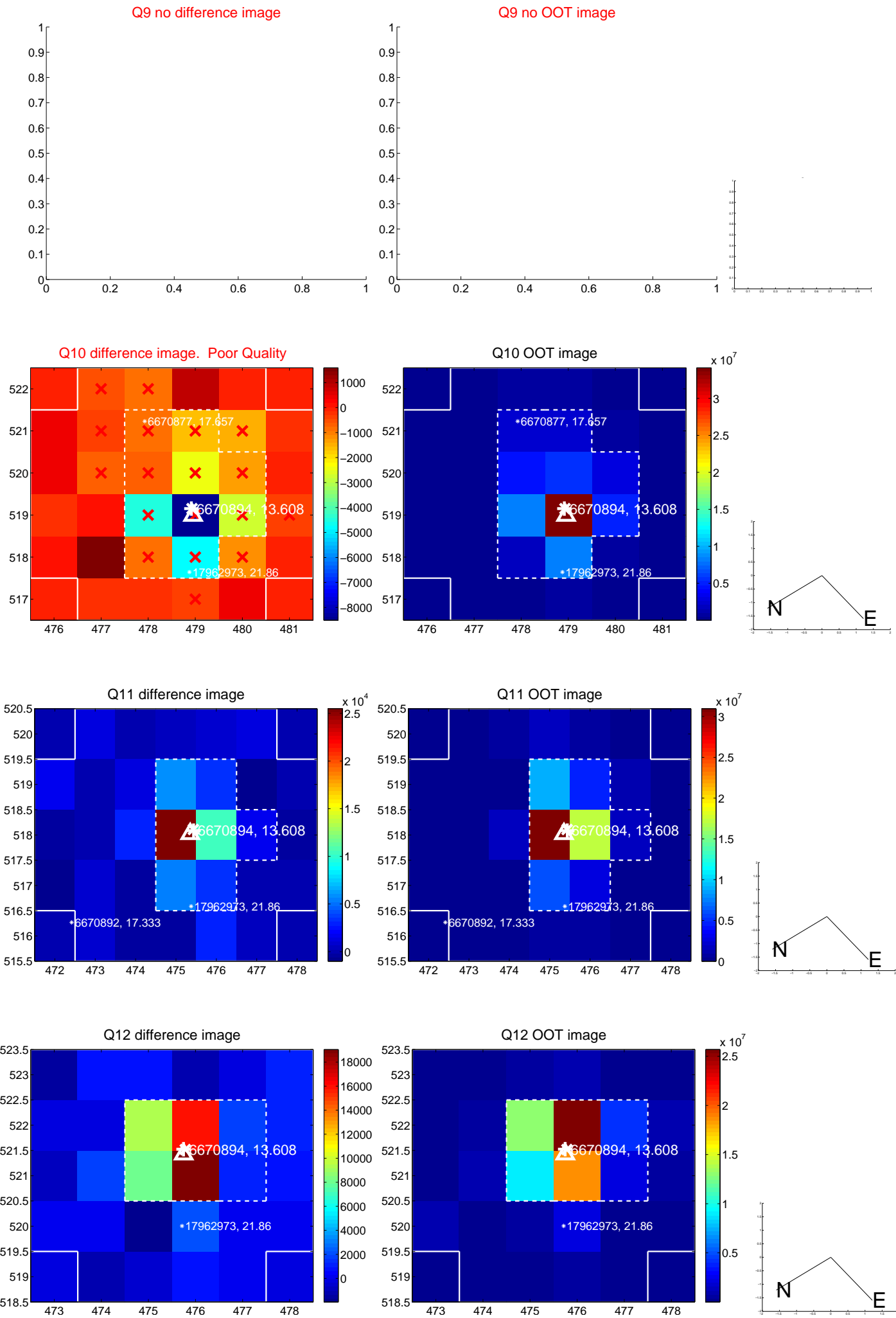
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



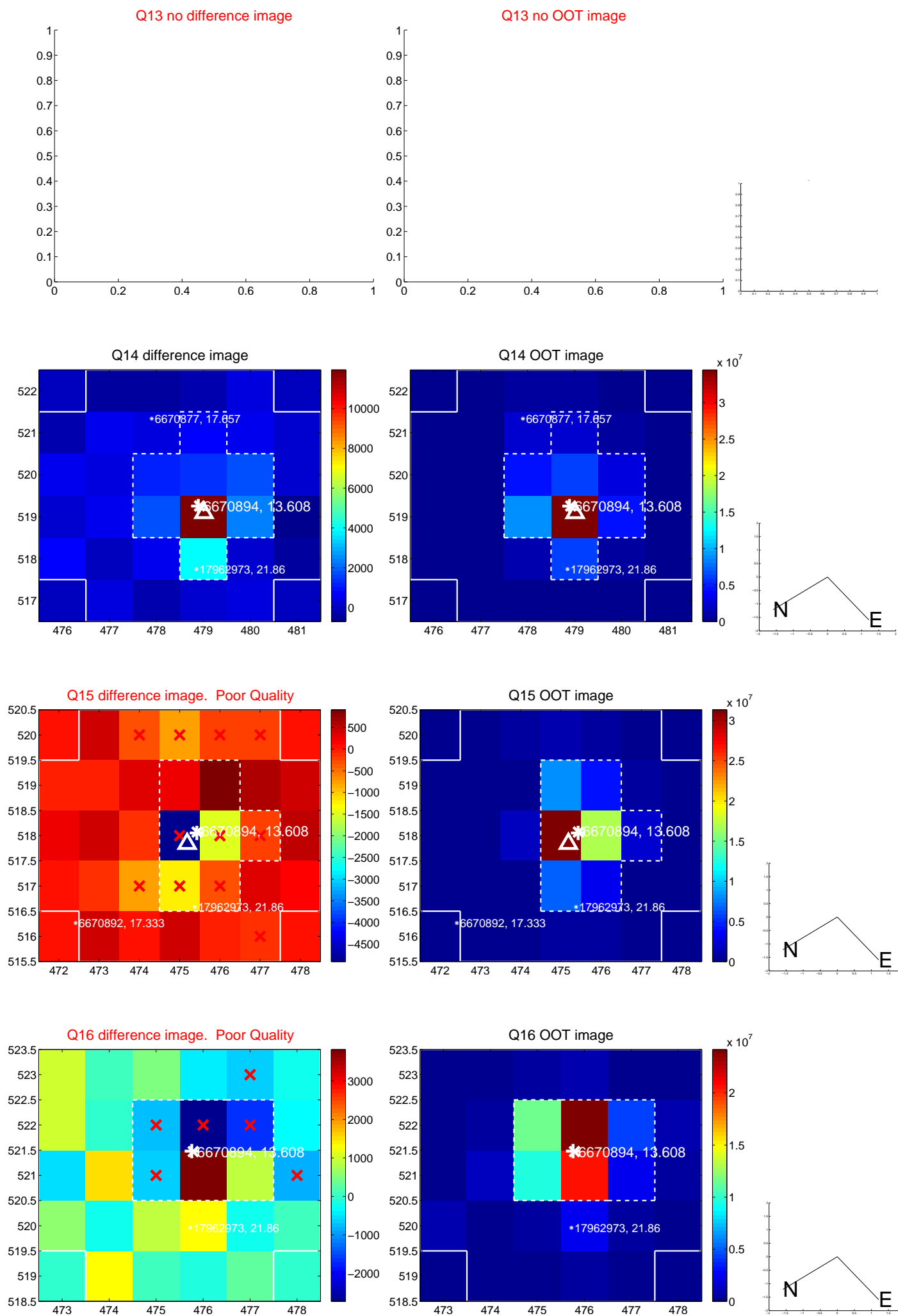
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



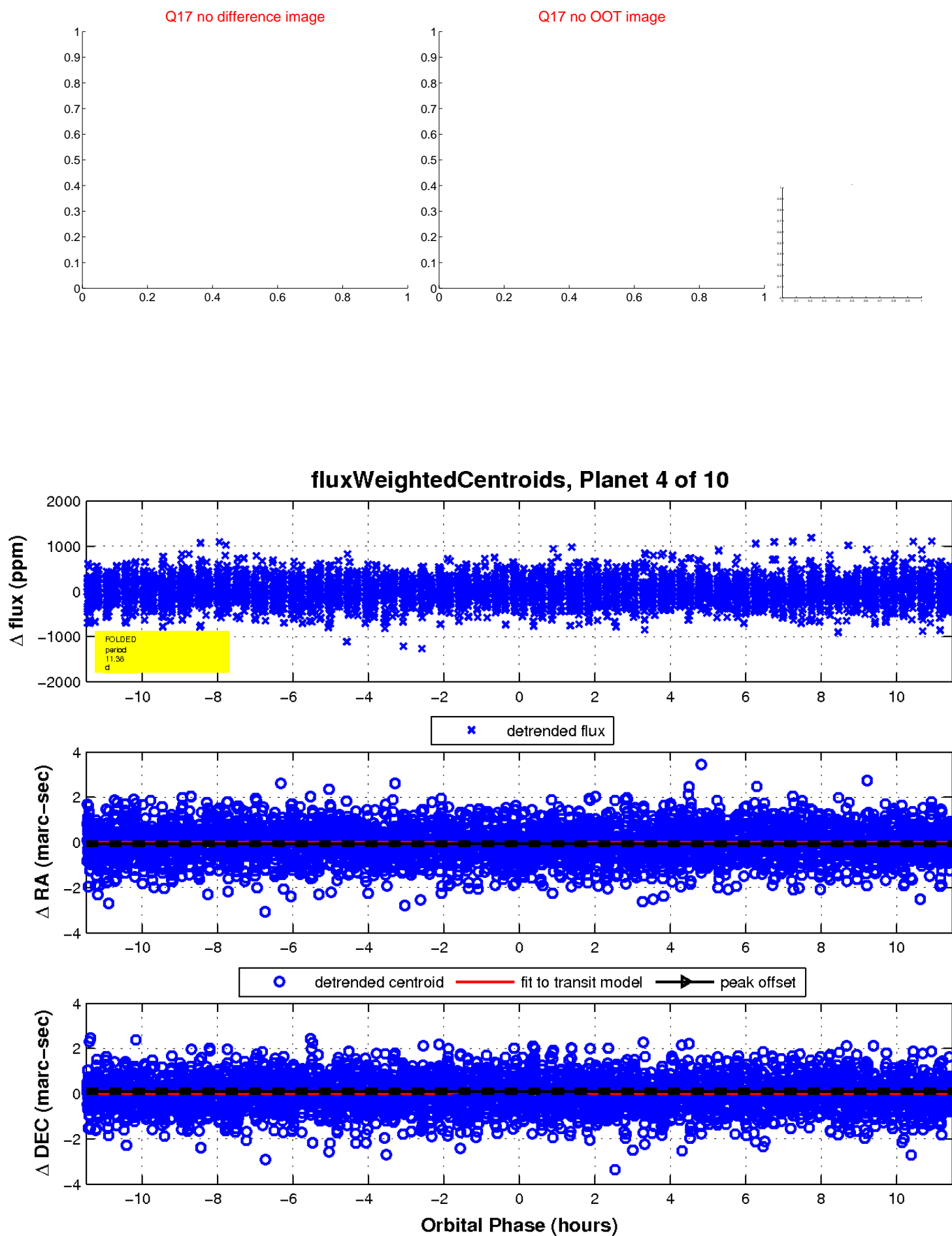
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

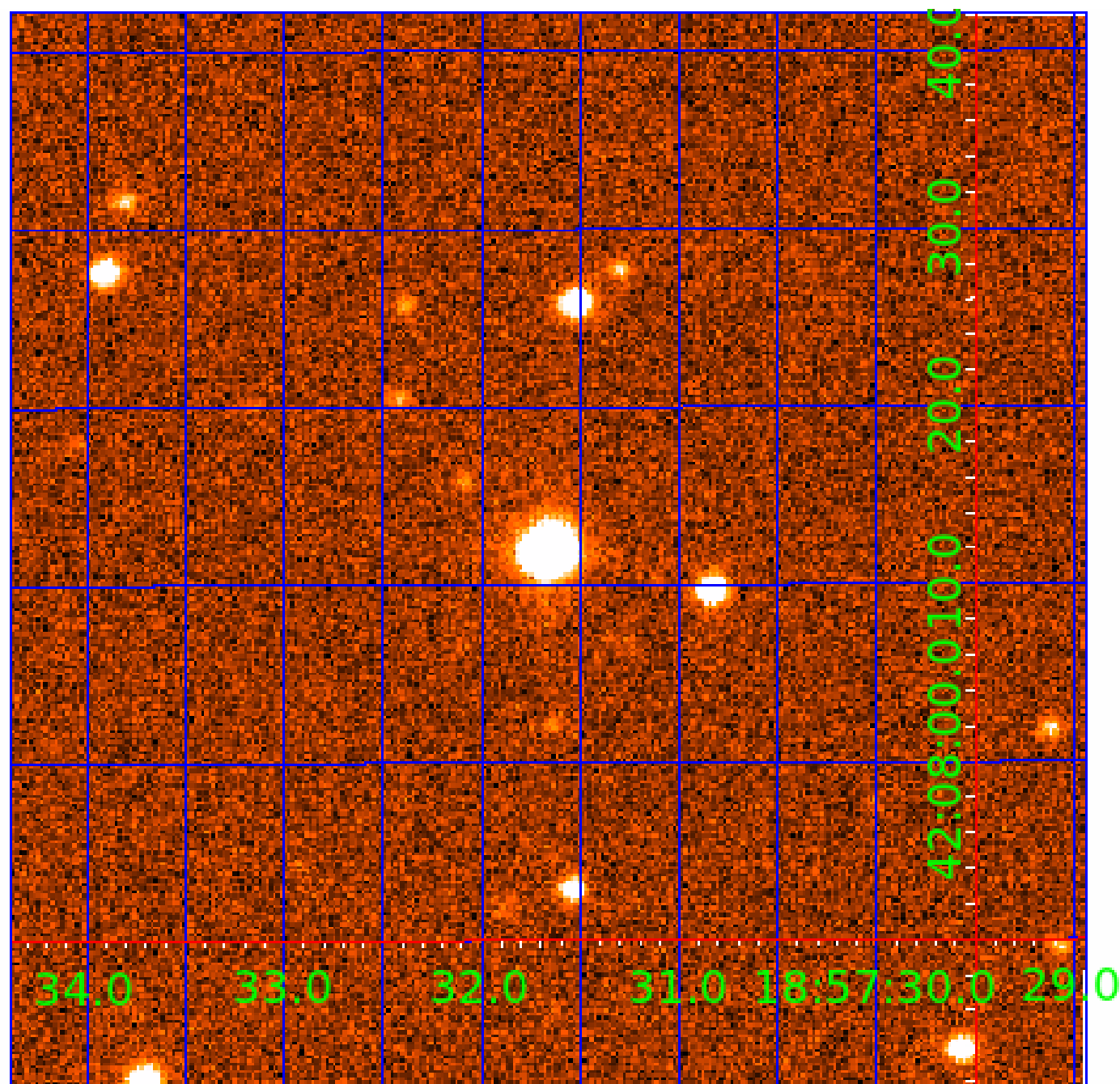


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
006670894-01	OBS	No	2.551845	132.460661	50.0	18.029	9.6	9.8	1.88	7266	1.38	4910.12
006670894-02	OBS	No	55.544984	174.552307	296.6	7.510	12.9	6.5	1.88	7266	3.43	80.79
006670894-03	OBS	No	56.670287	146.490621	623.9	5.356	16.0	13.6	1.88	7266	5.74	78.66
006670894-04	OBS	No	11.381235	140.143288	309.4	3.826	11.2	11.6	1.88	7266	3.76	668.82
006670894-05	OBS	No	47.278774	156.605446	531.2	2.331	9.8	10.5	1.88	7266	5.37	100.16
006670894-06	OBS	No	33.977317	161.813527	437.1	3.226	9.3	10.3	1.88	7266	4.19	155.59
006670894-07	OBS	No	15.241088	144.414923	289.3	2.955	9.5	11.4	1.88	7266	3.60	453.12
006670894-08	OBS	No	46.125163	173.705739	483.3	2.500	8.6	9.3	1.88	7266	4.24	103.51
006670894-09	OBS	No	9.236289	138.873408	250.7	2.594	8.8	9.5	1.88	7266	3.38	883.56
006670894-10	OBS	No	35.972270	166.674102	374.5	3.555	8.4	10.3	1.88	7266	3.88	144.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006670894-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006670894-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006670894-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006670894-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-09	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
006670894-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

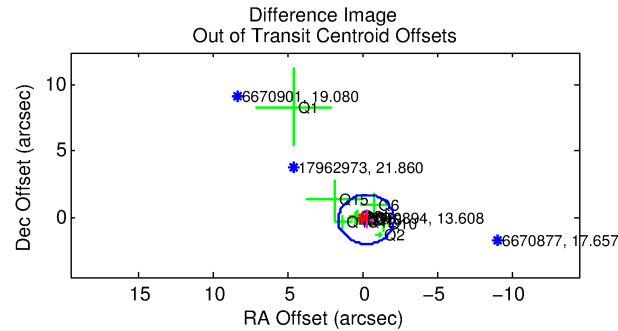
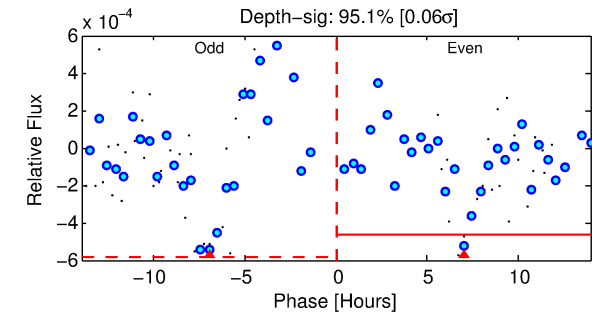
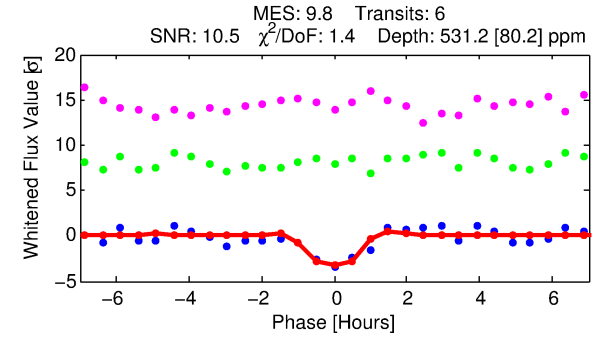
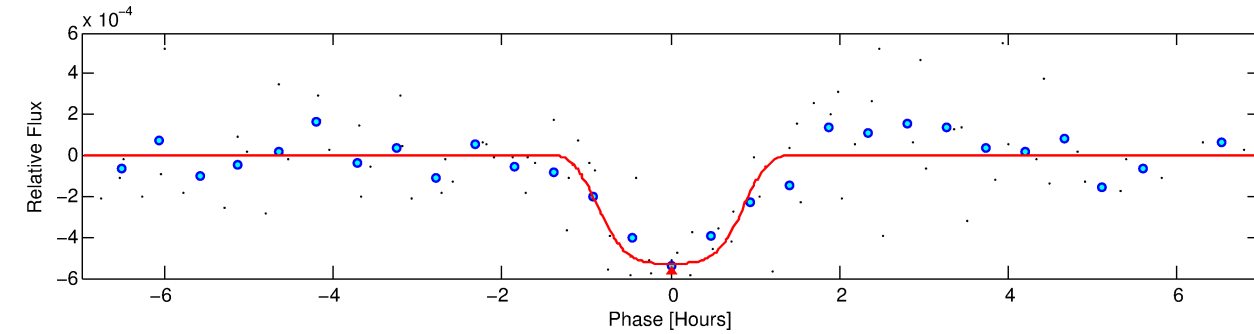
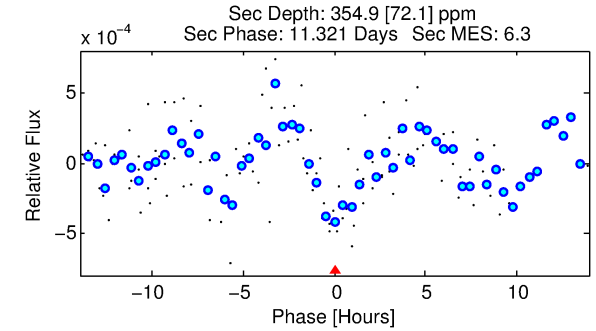
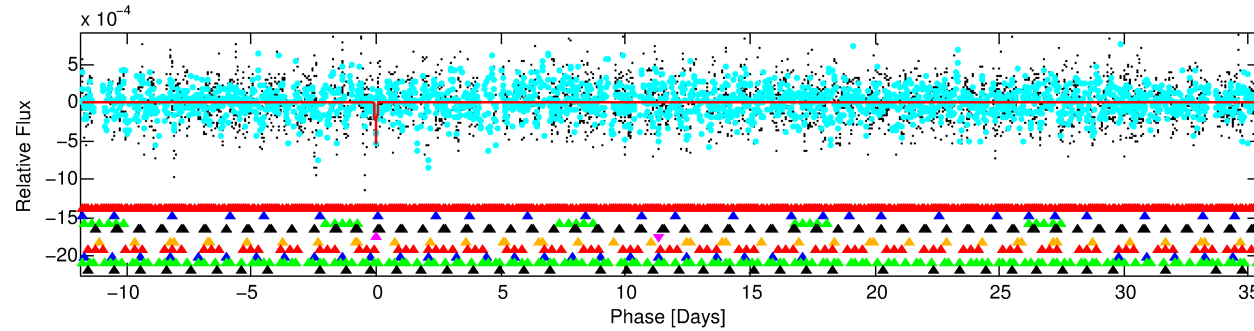
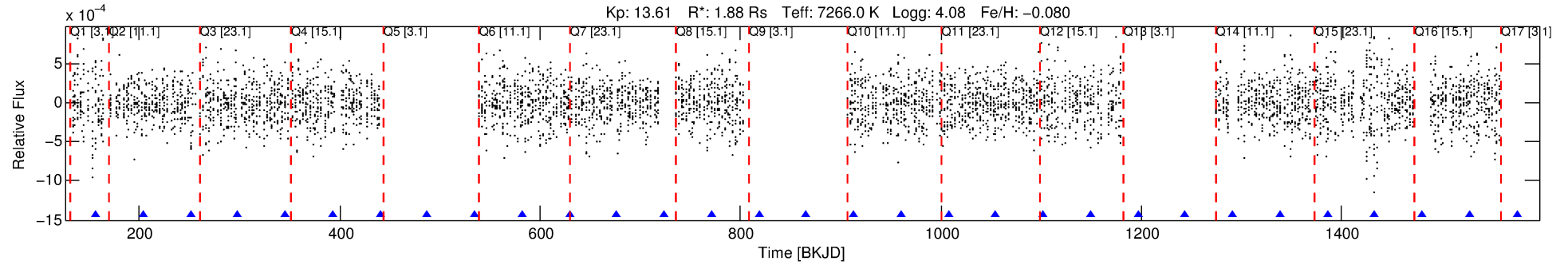
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006670894-05

No Significant Match Found

DV One-Page Summary

KIC: 6670894 Candidate: 5 of 10 Period: 47.279 d



DV Fit Results:

Period = 47.27877 [0.00034] d
Epoch = 156.6054 [0.0045] BKJD
Rp/R* = 0.0262 [0.0032]
a/R* = 56.44 [24.92]
b = 0.96 [0.04]
Seff = 100.16 [37.97]
Teq = 807 [76] K
Rp = 5.37 [1.80] Re
a = 0.2962 [0.0727] AU
Ag = 593.43 [273.97] [2.16σ]
Teffp = 6156 [564] K [9.40σ]

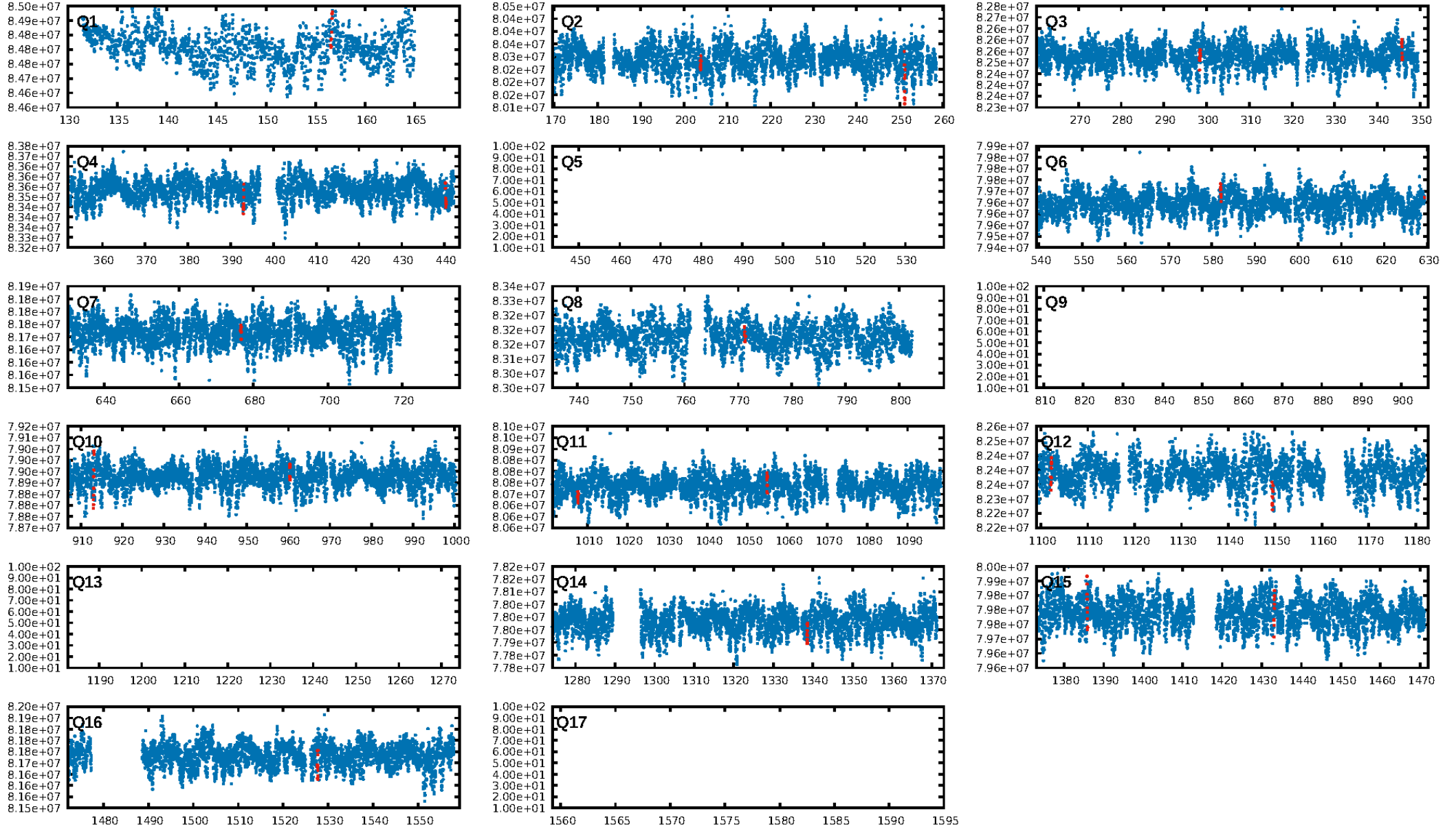
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [8.10σ]
LongPeriod-sig: 100.0% [25.23σ]
ModelChiSquare2-sig: 25.4%
ModelChiSquareGof-sig: 99.2%
Bootstrap-pfa: 4.63e-10
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.4461
Centroid-sig: 82.0%
Centroid-so: 0.375 arcsec [0.70σ]
OotOffset-rm: 0.314 arcsec [0.50σ]
KicOffset-rm: 0.373 arcsec [0.77σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 0.46 [6/13]
DiffImageOverlap-fno: 0.77 [10/13]

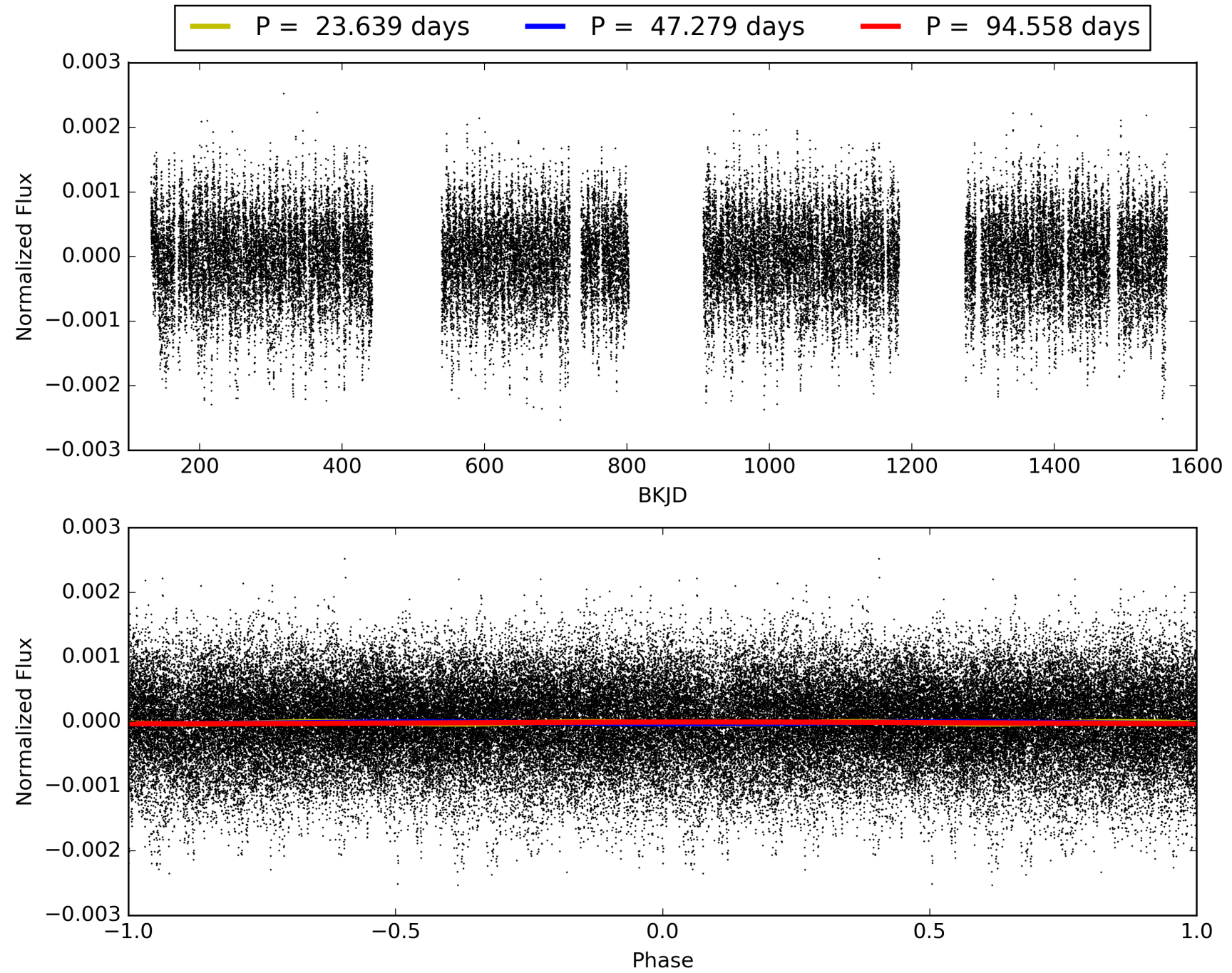
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 04:39:25 Z

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

TCE 006670894-05, PDC Light Curves

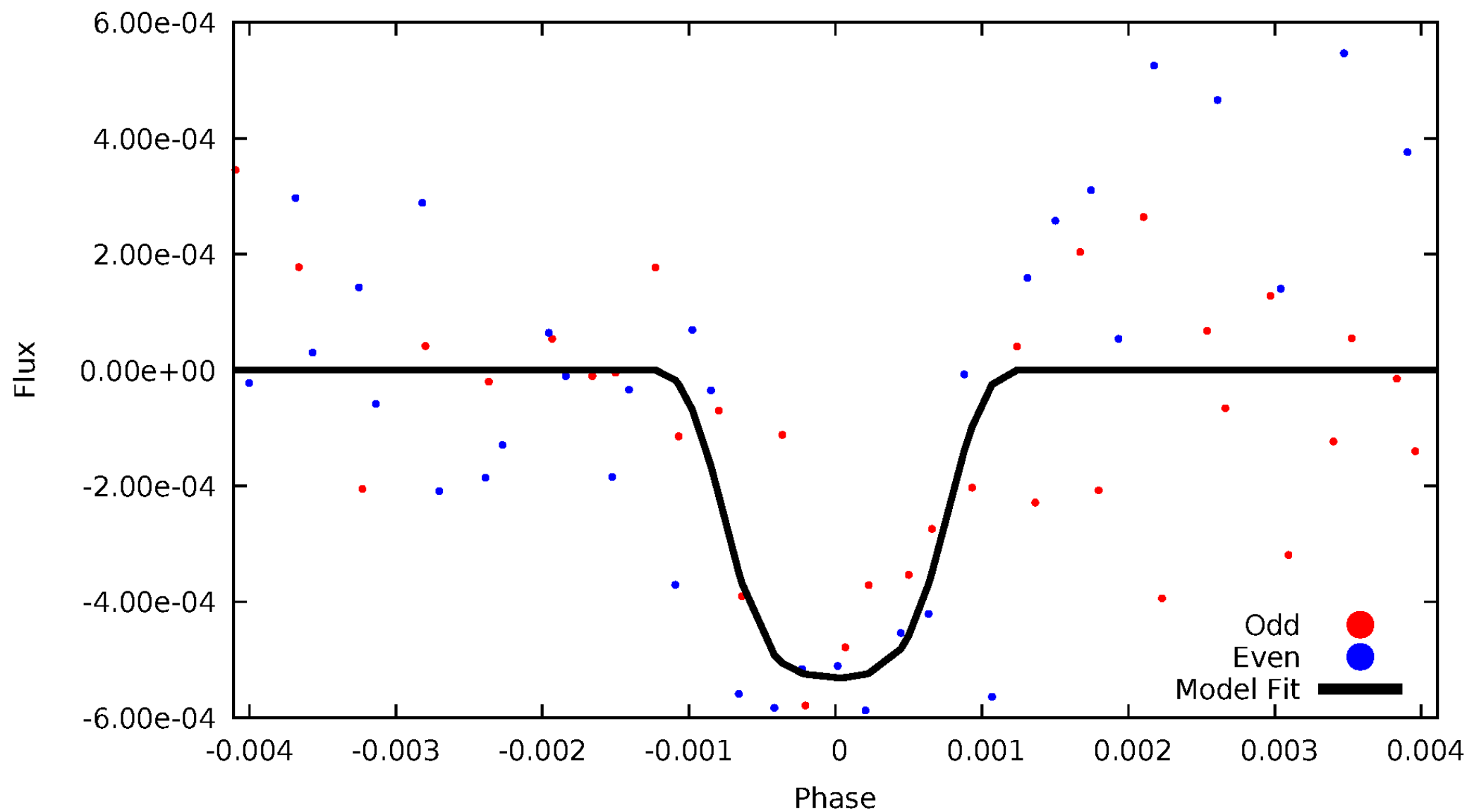


TCE 006670894-05



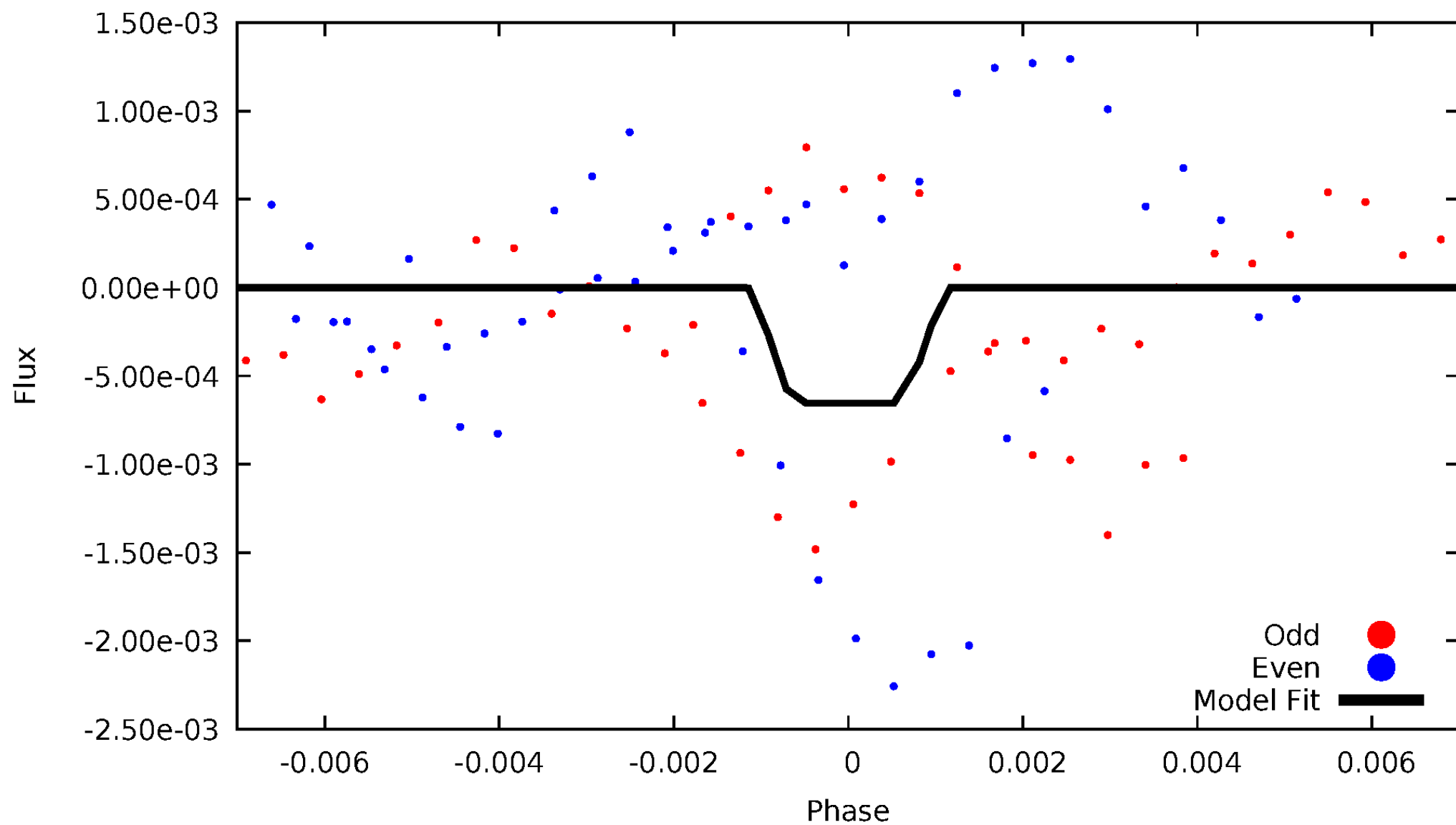
DV Odd/Even

TCE 006670894-05



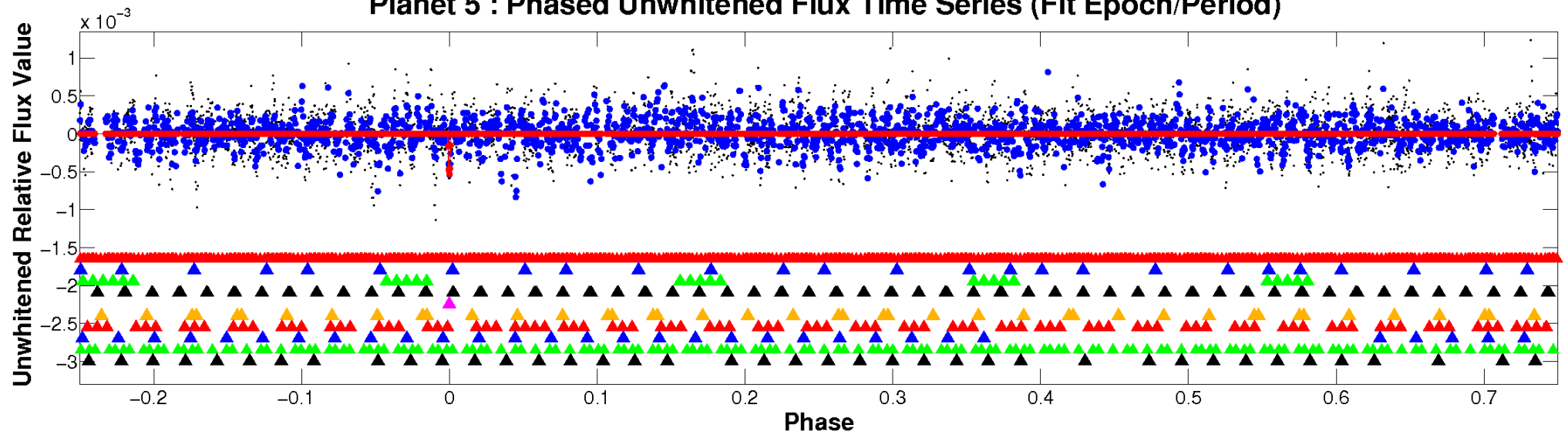
ALT Odd/Even

TCE 006670894-05

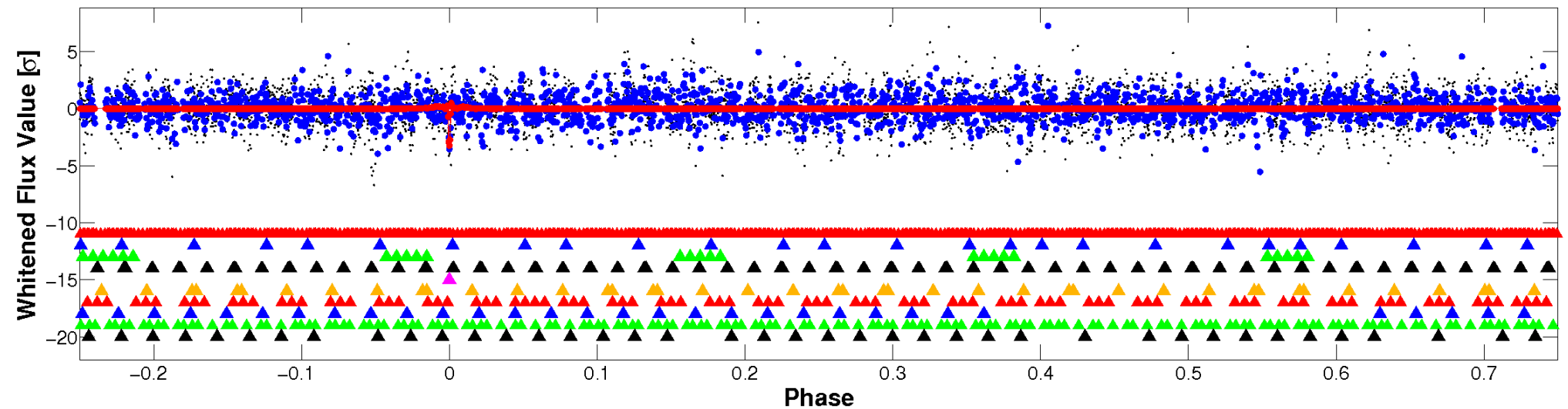


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

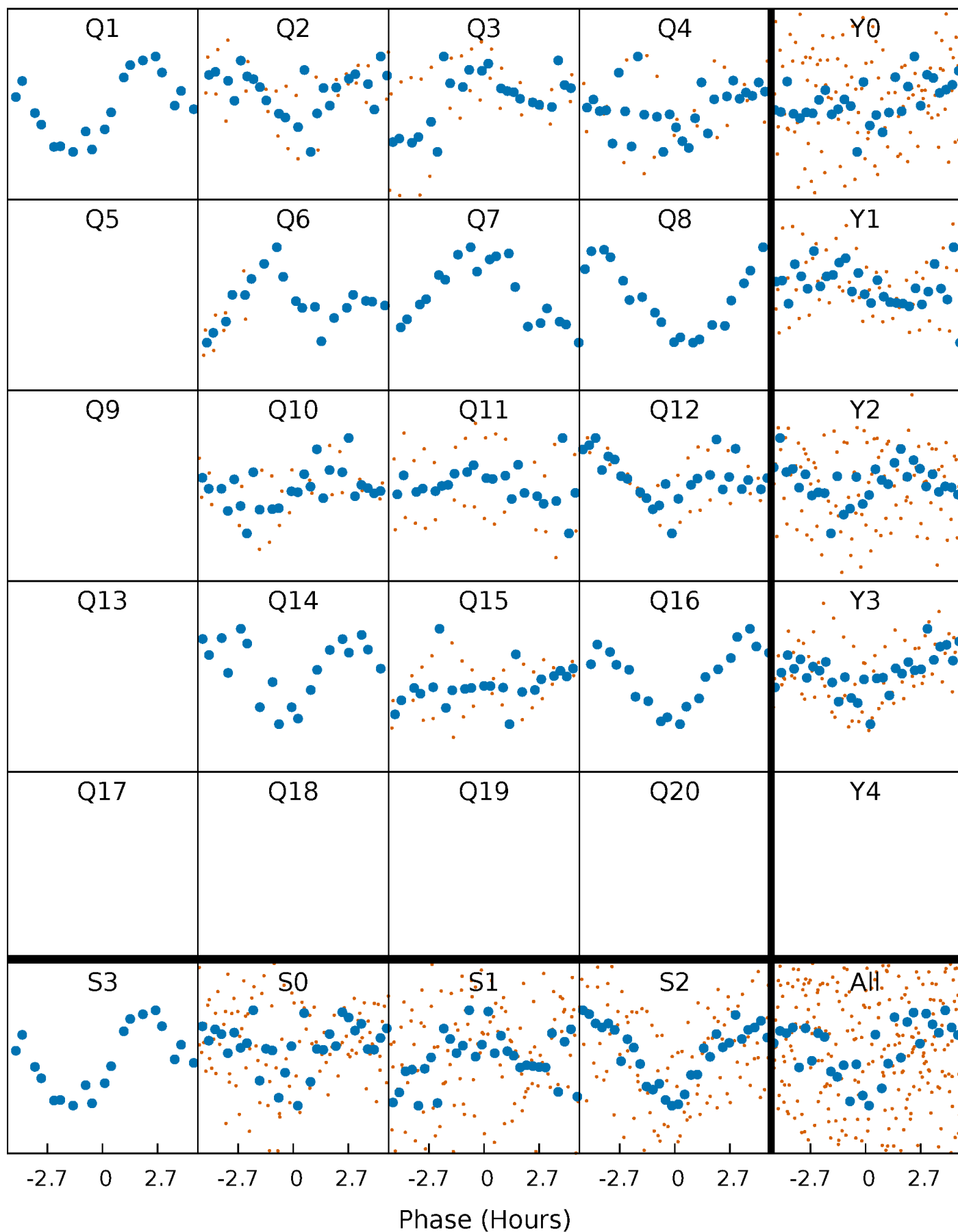


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



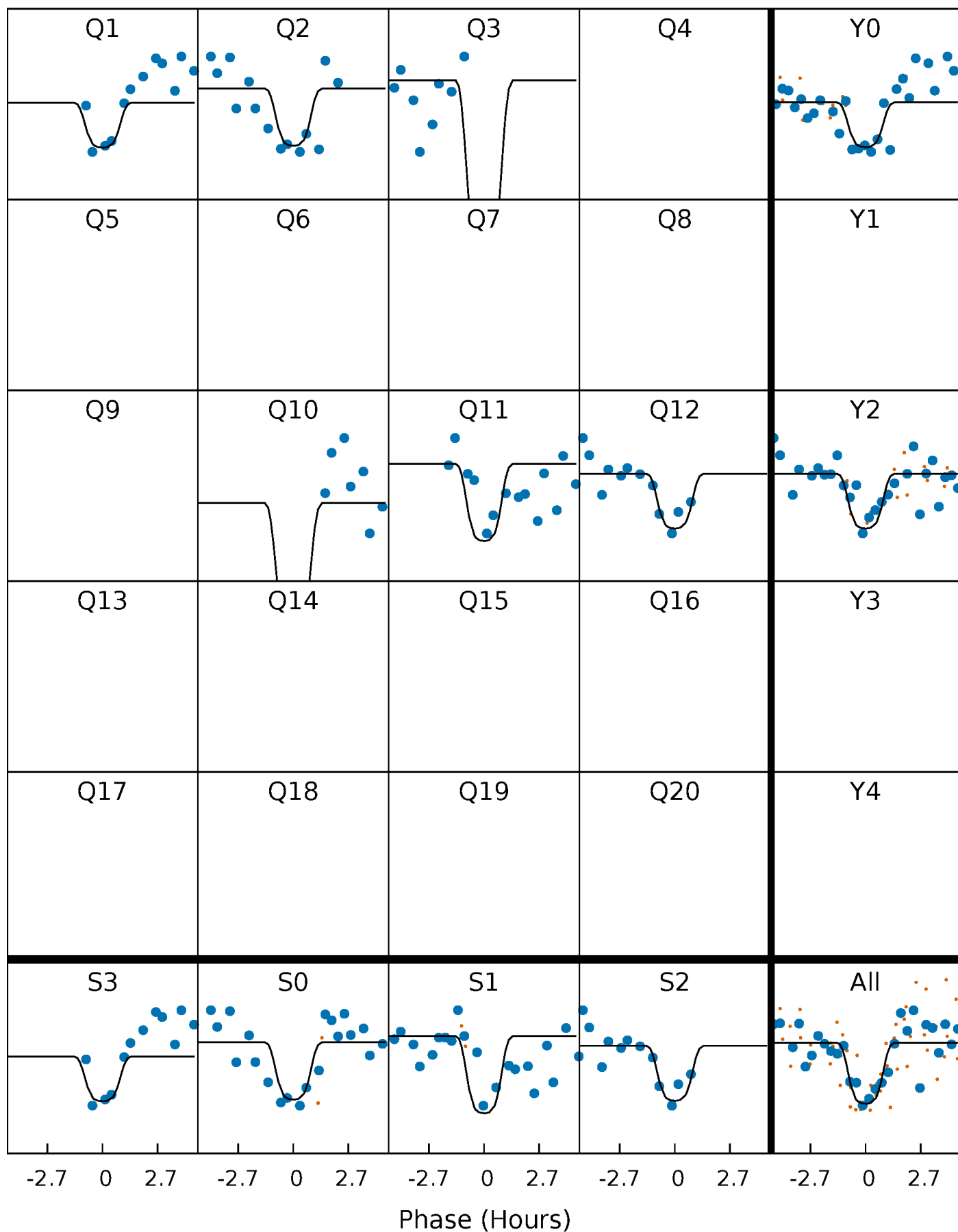
PDC Quarter-Phased Transit Curves

TCE 006670894-05 $P = 47.278774$ Days $T_0 = 156.605446$ (BKJD)



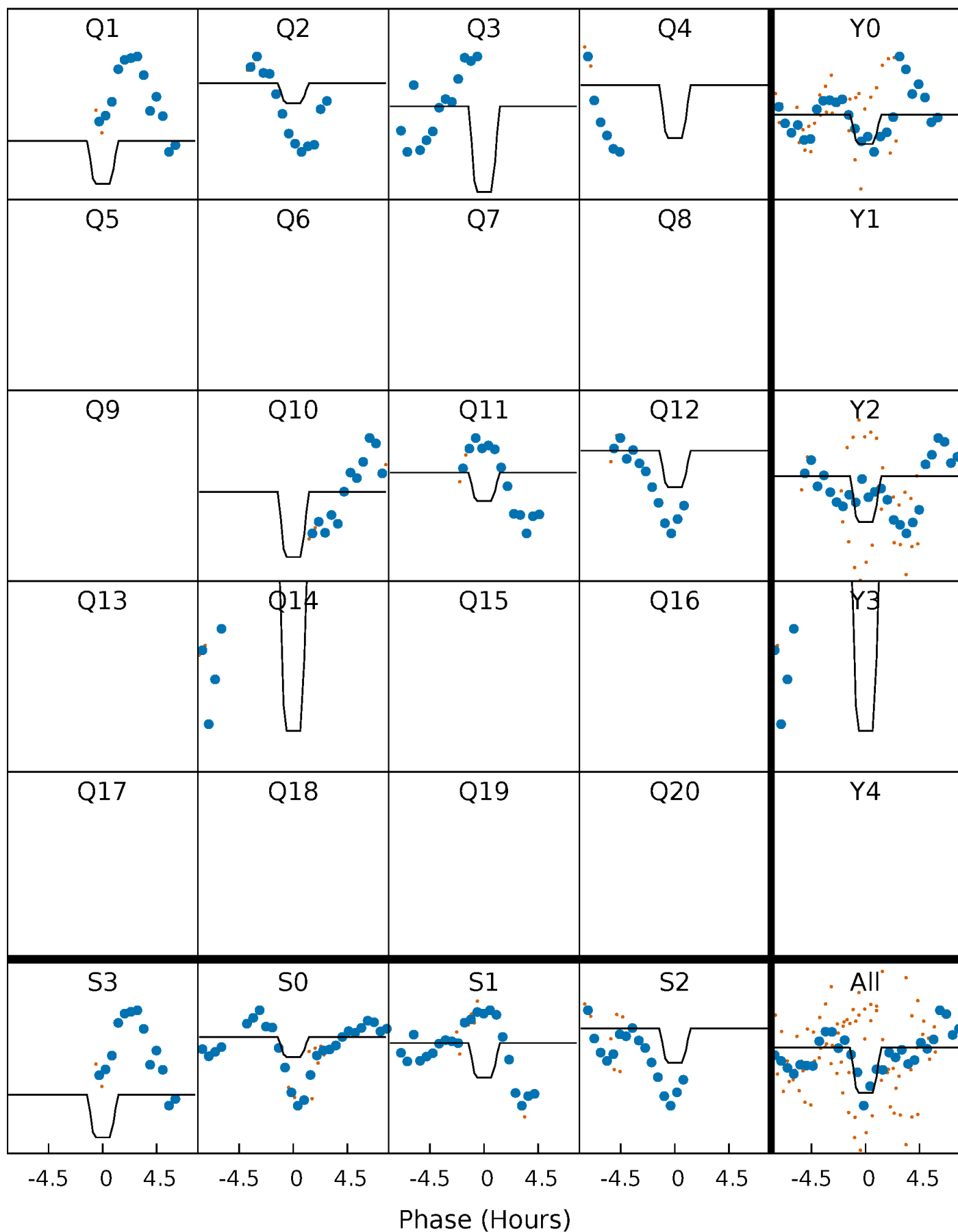
DV Quarter-Phased Transit Curves

TCE 006670894-05 P= 47.278774 Days $T_0=156.605446$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

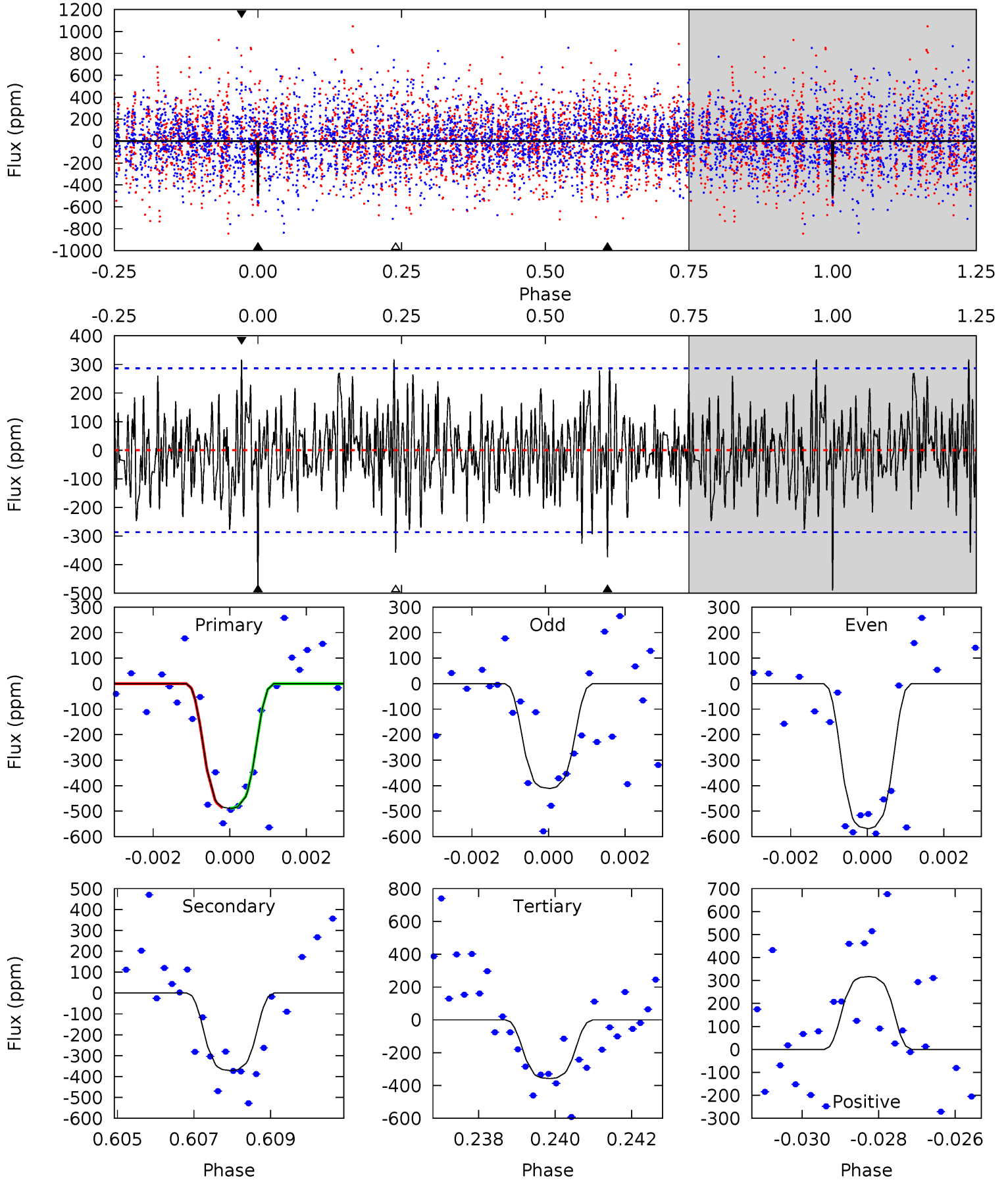
TCE 006670894-05 $P = 47.279982$ Days $T_0 = 156.588129$ (BKJD)



DV Model-Shift Uniqueness Test

006670894-05, P = 47.278774 Days, E = 109.326672 Days

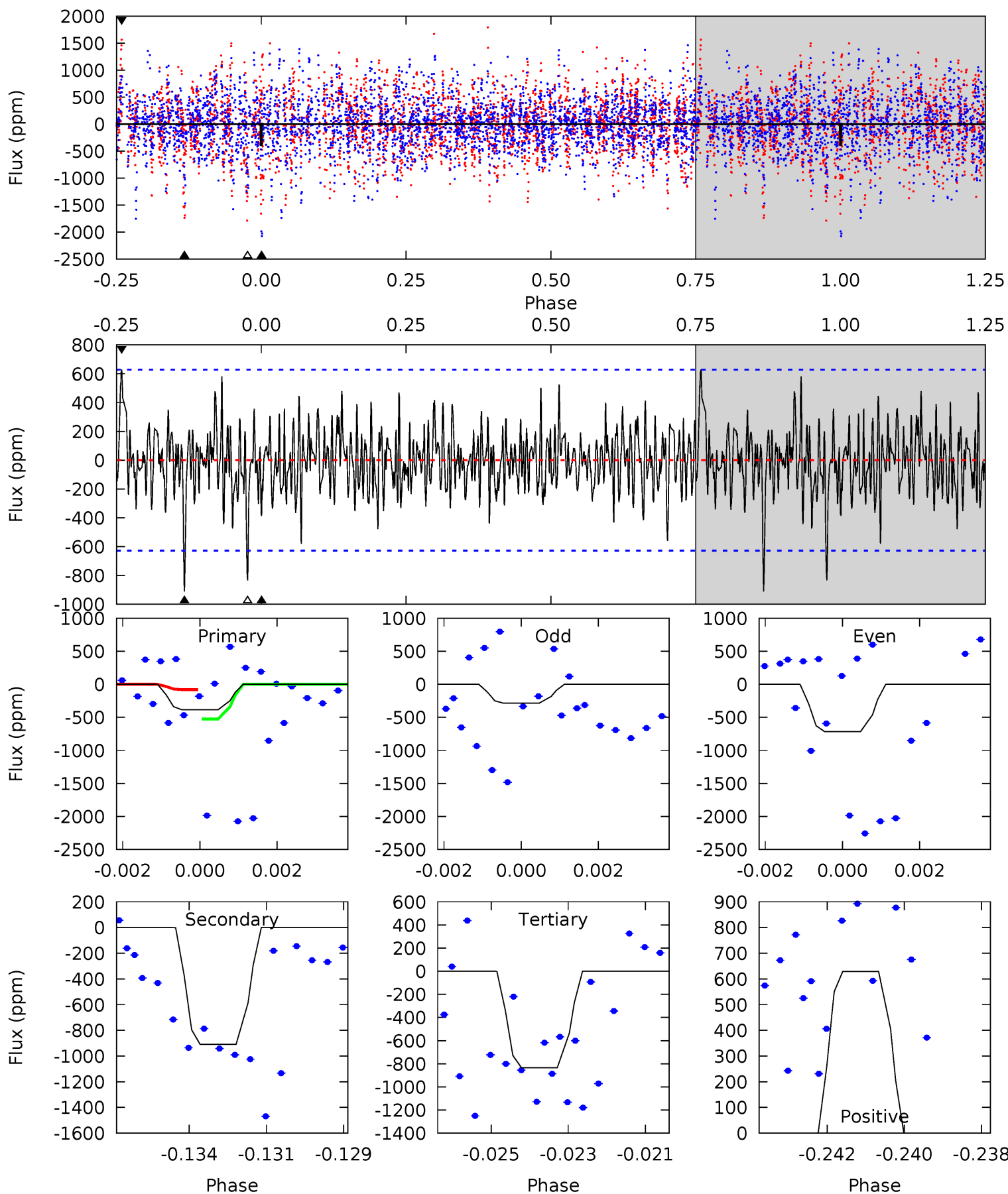
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.09	6.89	6.64	5.88	5.31	3.07	1.91	2.45	3.20	0.26	1.01	1.45	0.98	0.39	0.02



Alt Model-Shift Uniqueness Test

006670894-05, P = 47.279982 Days, E = 109.308147 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.27	7.70	7.05	5.32	5.32	3.08	1.56	-3.78	-2.05	0.65	2.38	1.86	-0.89	0.41	1.84



Stellar Parameters For KIC 006670894

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7266^{+226}_{-327}	$4.082^{+0.170}_{-0.170}$	$-0.080^{+0.250}_{-0.350}$	$1.876^{+0.585}_{-0.439}$	$1.546^{+0.212}_{-0.259}$	$0.330^{+0.299}_{-0.157}$
	+3%/-5%	+4%/-4%	+312%/-438%	+31%/-23%	+14%/-17%	+91%/-48%
Source	KIC0	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 006670894-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-371 ± 54	$5.36^{+1.05}_{-0.96}$	1123^{+86}_{-85}	6131^{+529}_{-446}	622^{+319}_{-207}
Alt.	-910 ± 118	$5.23^{+1.09}_{-0.90}$	1124^{+90}_{-81}	7953^{+847}_{-705}	1571^{+773}_{-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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

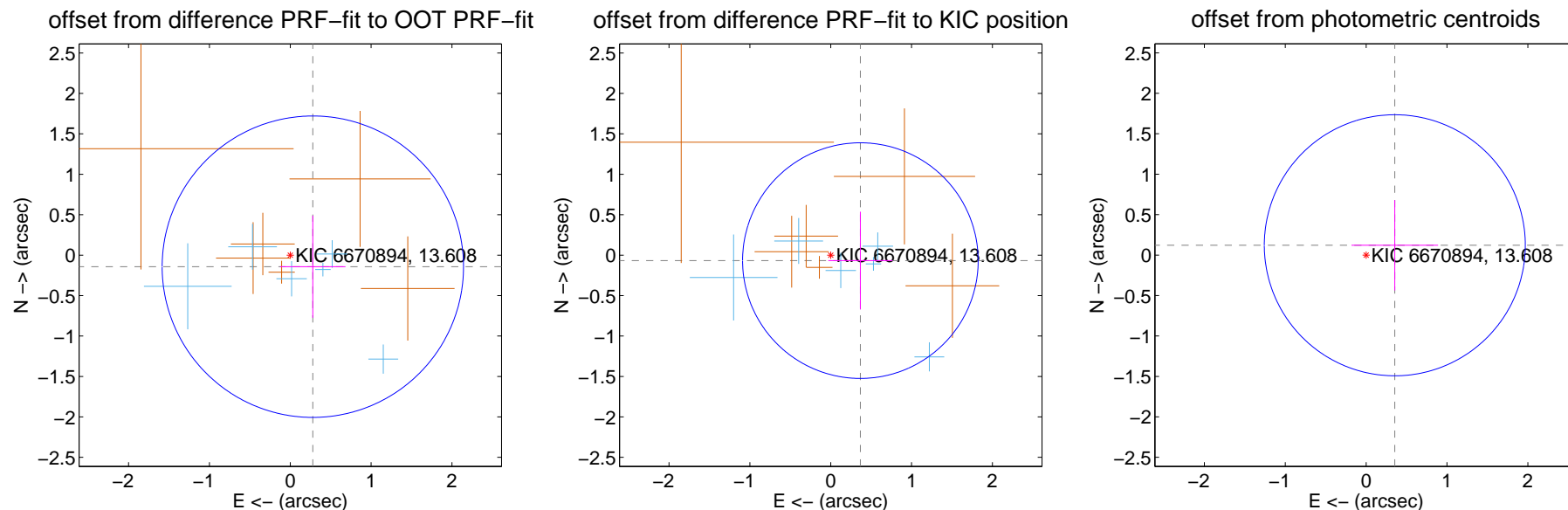
DV Centroid Data

Supplemental centroid analysis for 006670894-05. Kepler magnitude: 13.61. Transit SNR 10.55

There are 6 quarters with good PRF difference image offsets

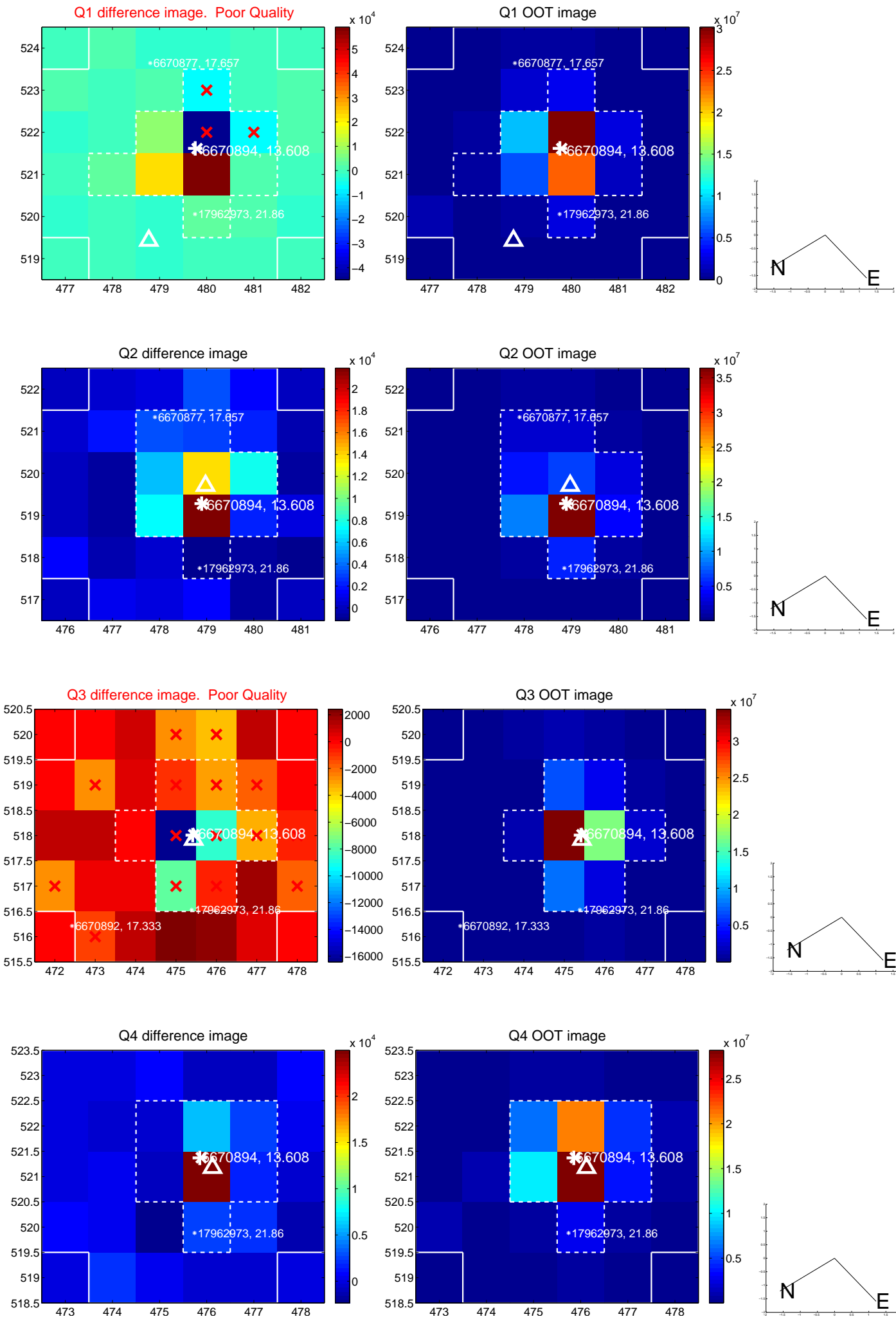
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.314 ± 0.621	0.50	-0.279 ± 0.404	-0.143 ± 0.632
PRF-fit source offset from KIC position	0.373 ± 0.486	0.77	-0.367 ± 0.397	-0.067 ± 0.604
photometric centroid source offset	0.37 ± 0.54	0.70	-0.35 ± 0.54	0.12 ± 0.56

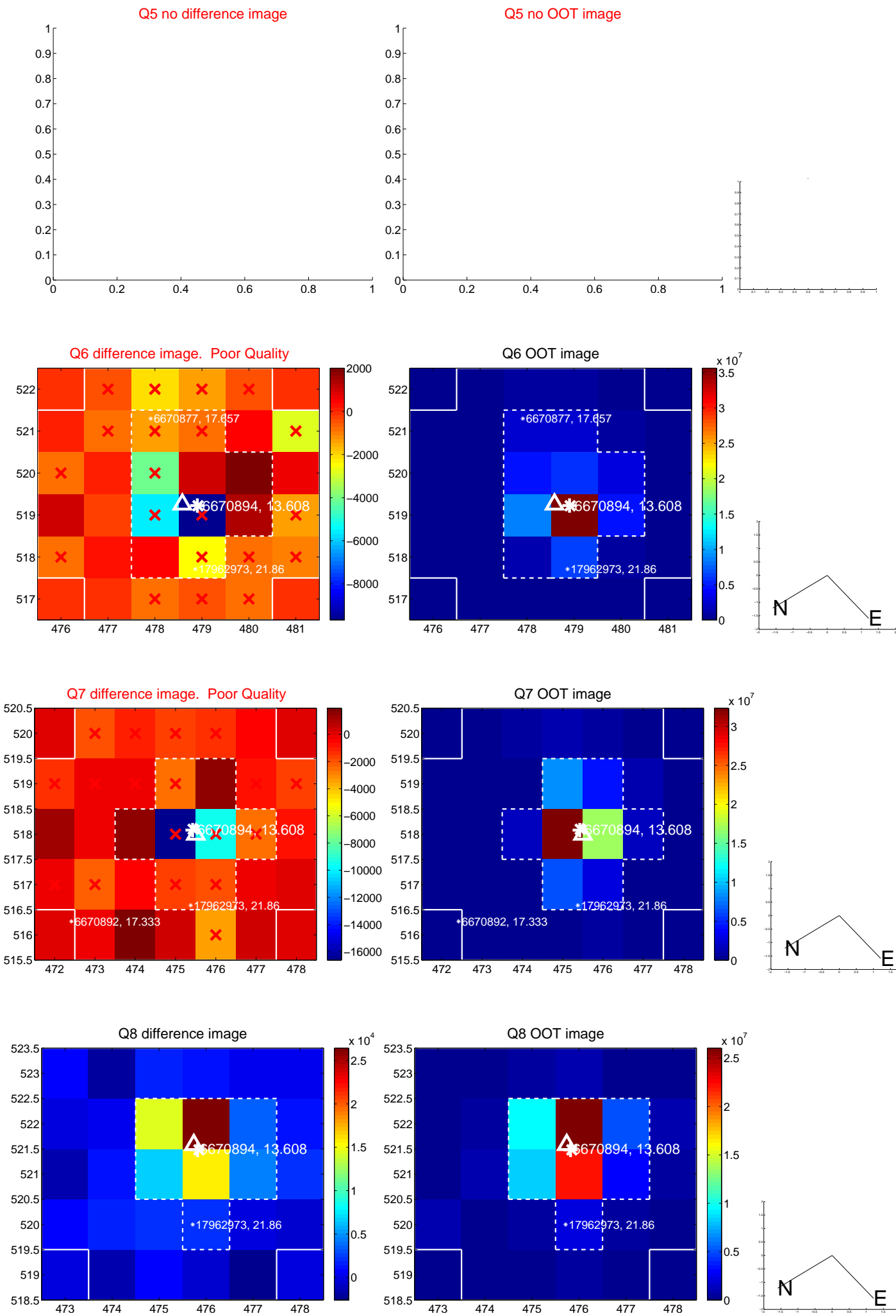


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

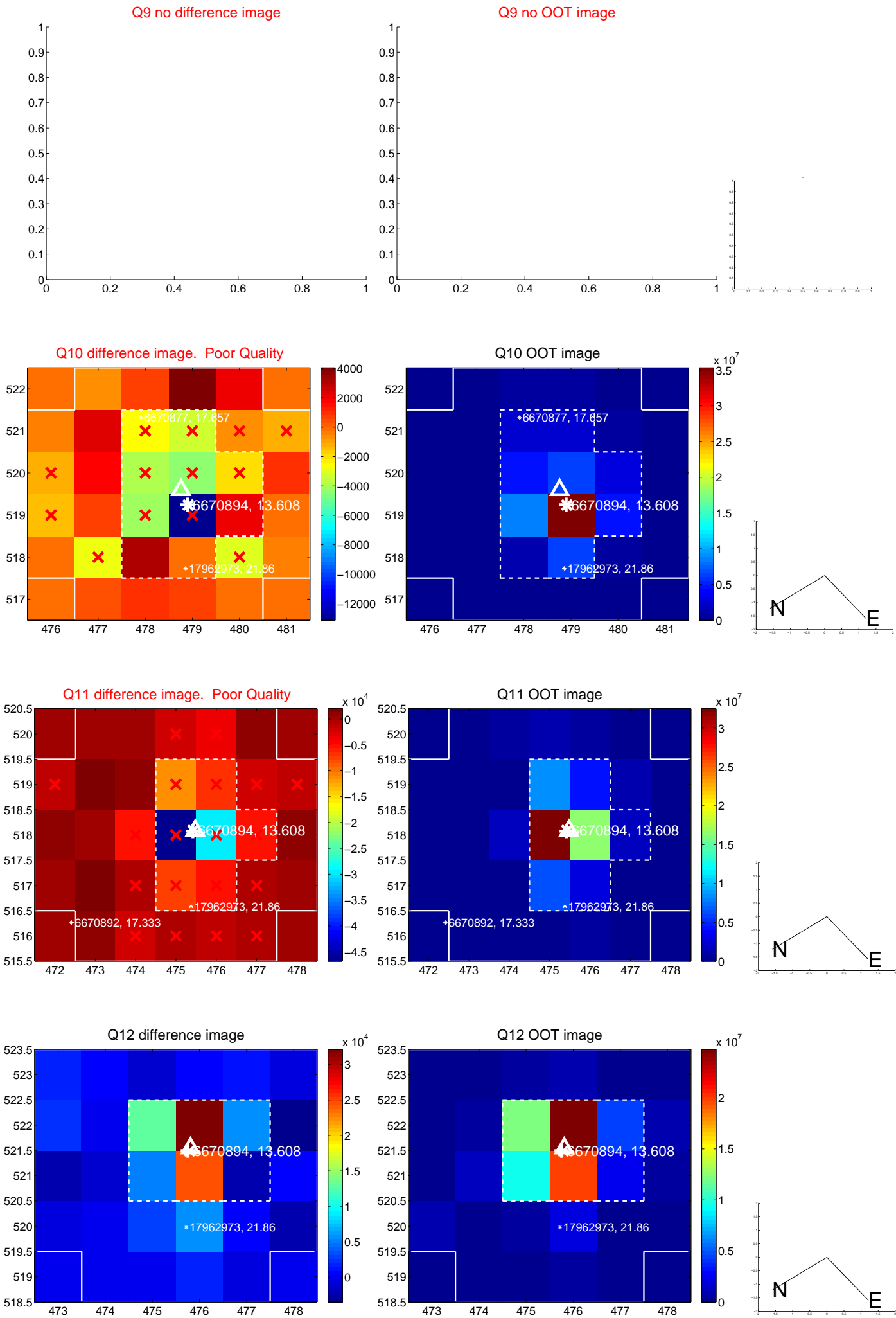
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



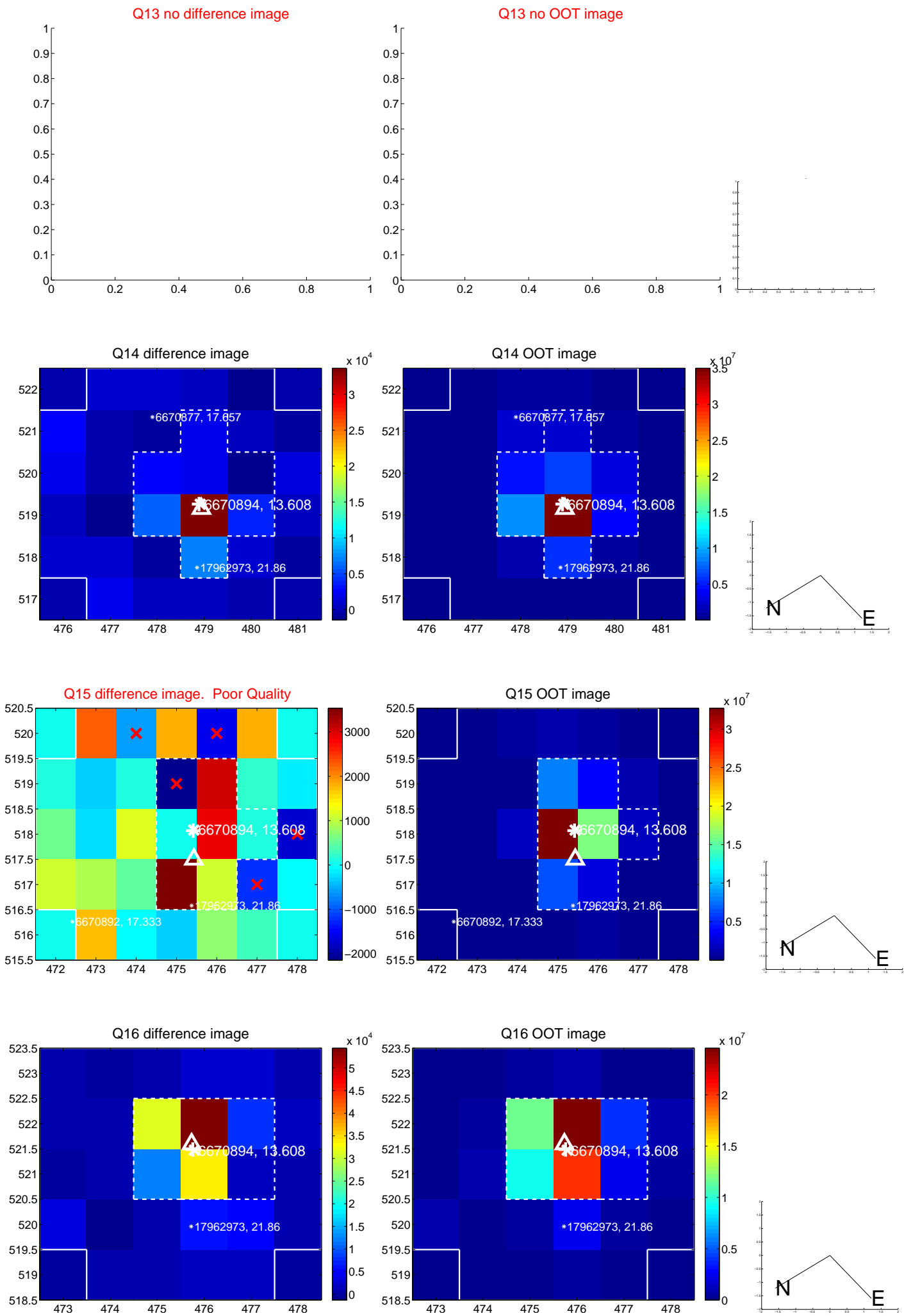
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



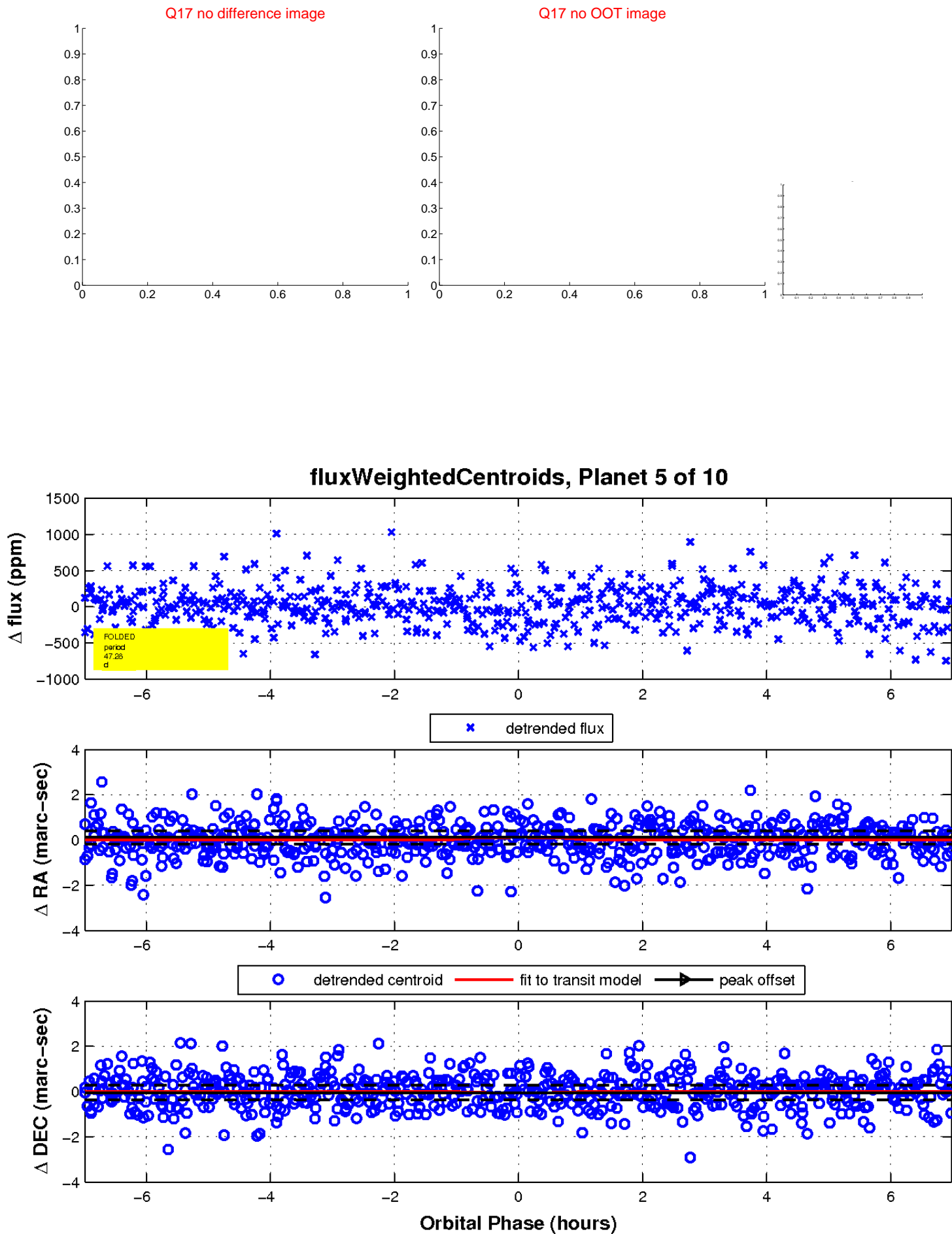
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

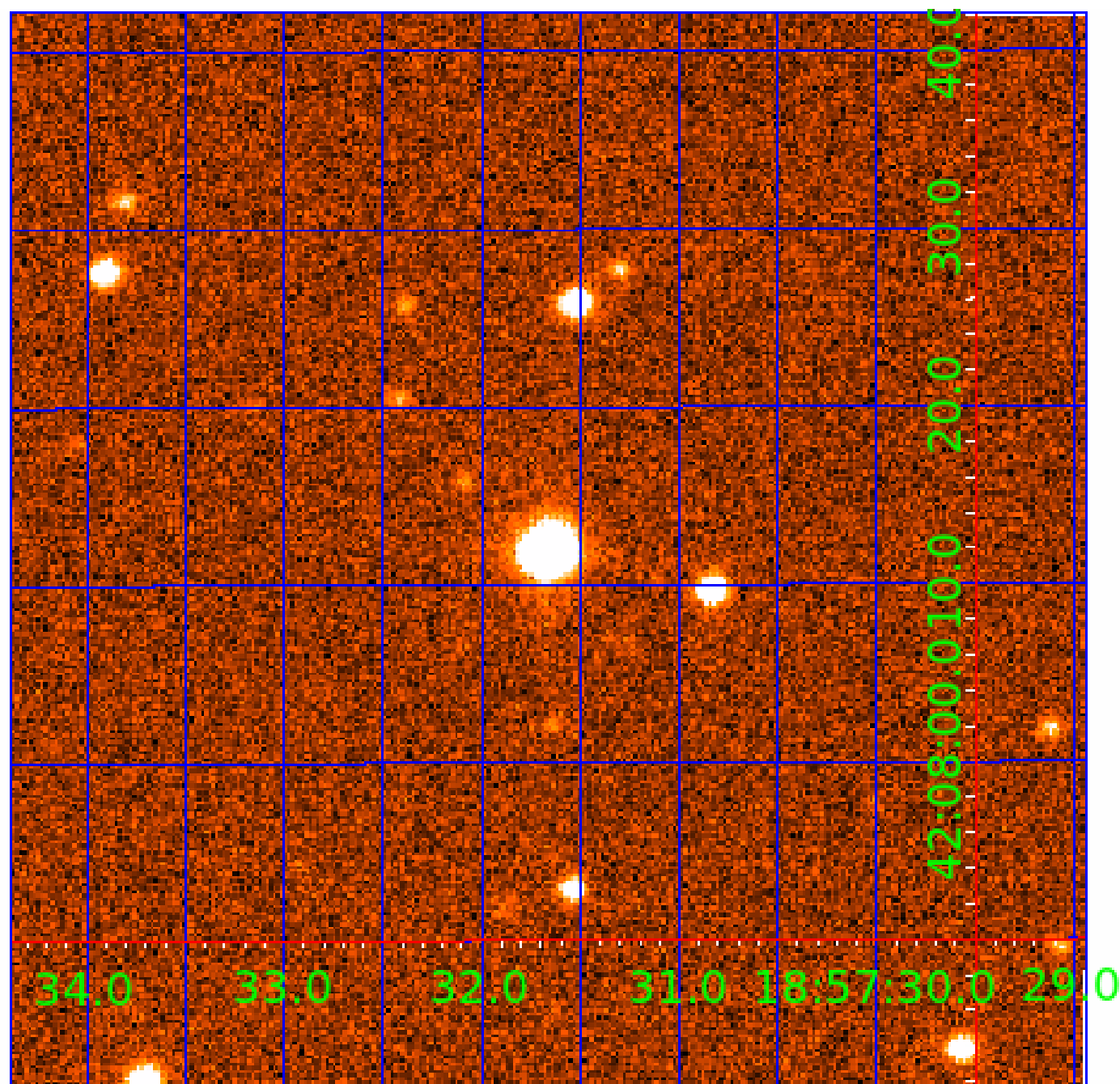


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
006670894-01	OBS	No	2.551845	132.460661	50.0	18.029	9.6	9.8	1.88	7266	1.38	4910.12
006670894-02	OBS	No	55.544984	174.552307	296.6	7.510	12.9	6.5	1.88	7266	3.43	80.79
006670894-03	OBS	No	56.670287	146.490621	623.9	5.356	16.0	13.6	1.88	7266	5.74	78.66
006670894-04	OBS	No	11.381235	140.143288	309.4	3.826	11.2	11.6	1.88	7266	3.76	668.82
006670894-05	OBS	No	47.278774	156.605446	531.2	2.331	9.8	10.5	1.88	7266	5.37	100.16
006670894-06	OBS	No	33.977317	161.813527	437.1	3.226	9.3	10.3	1.88	7266	4.19	155.59
006670894-07	OBS	No	15.241088	144.414923	289.3	2.955	9.5	11.4	1.88	7266	3.60	453.12
006670894-08	OBS	No	46.125163	173.705739	483.3	2.500	8.6	9.3	1.88	7266	4.24	103.51
006670894-09	OBS	No	9.236289	138.873408	250.7	2.594	8.8	9.5	1.88	7266	3.38	883.56
006670894-10	OBS	No	35.972270	166.674102	374.5	3.555	8.4	10.3	1.88	7266	3.88	144.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006670894-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006670894-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006670894-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006670894-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-09	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
006670894-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

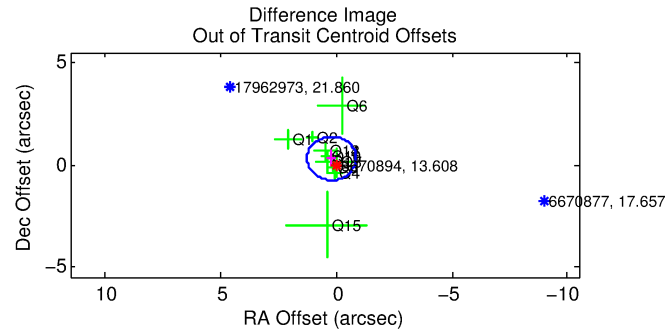
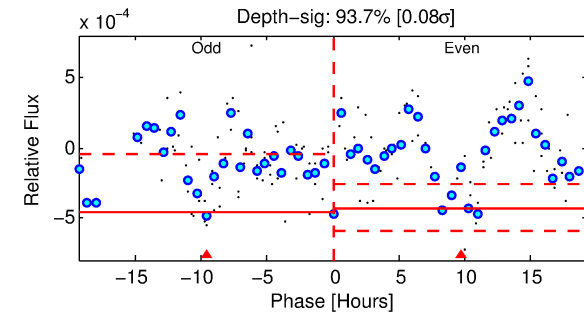
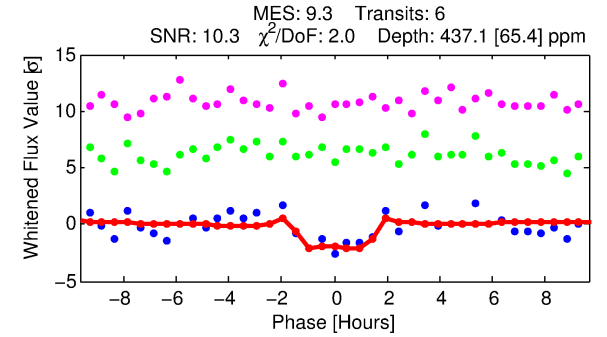
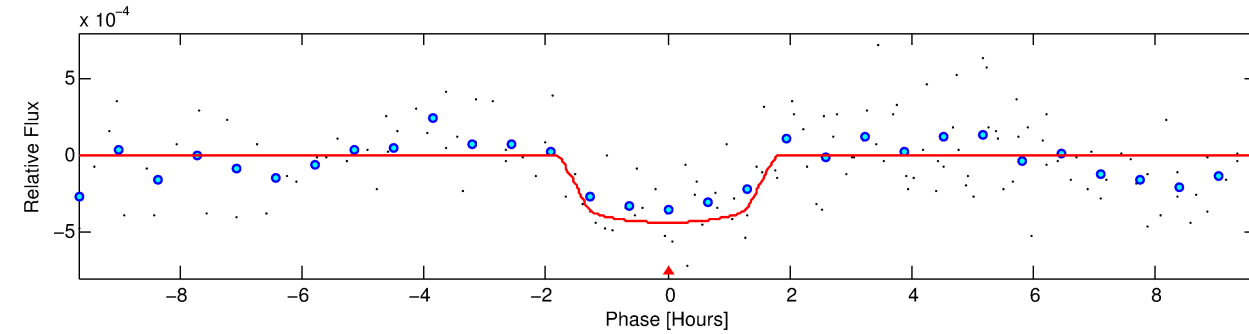
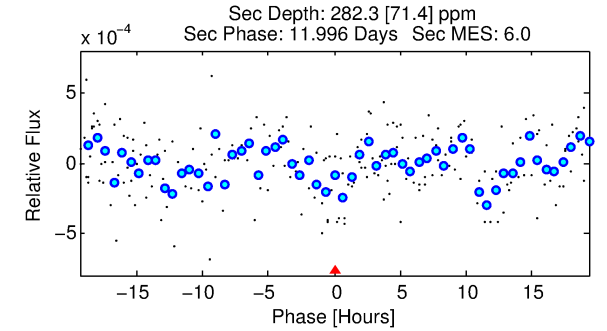
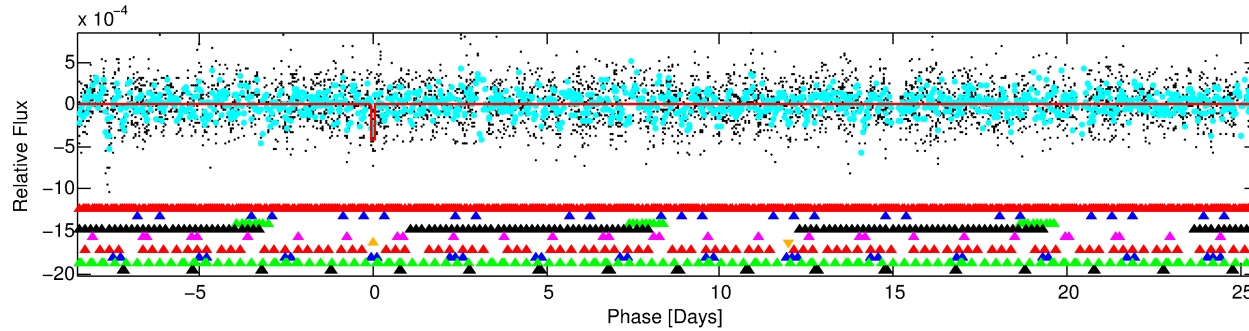
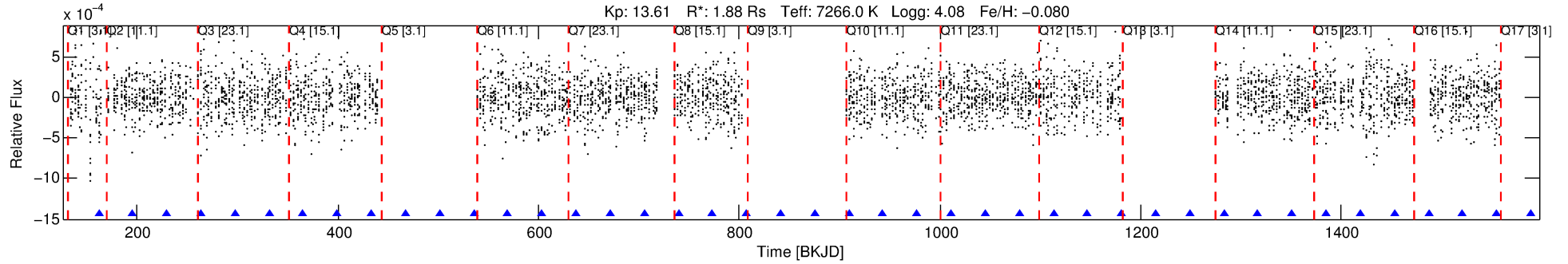
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006670894-06

No Significant Match Found

DV One-Page Summary

KIC: 6670894 Candidate: 6 of 10 Period: 33.977 d



DV Fit Results:

Period = 33.97732 [0.00028] d
Epoch = 161.8135 [0.0068] BKJD
Rp/R* = 0.0205 [0.0188]
a/R* = 61.08 [338.65]
b = 0.68 [4.37]
Seff = 155.59 [58.99]
Teff = 901 [85] K
Rp = 4.19 [4.06] Re
a = 0.2377 [0.0583] AU
Ag = 500.06 [940.80] [0.53σ]
Teffp = 6584 [3062] K [1.86σ]

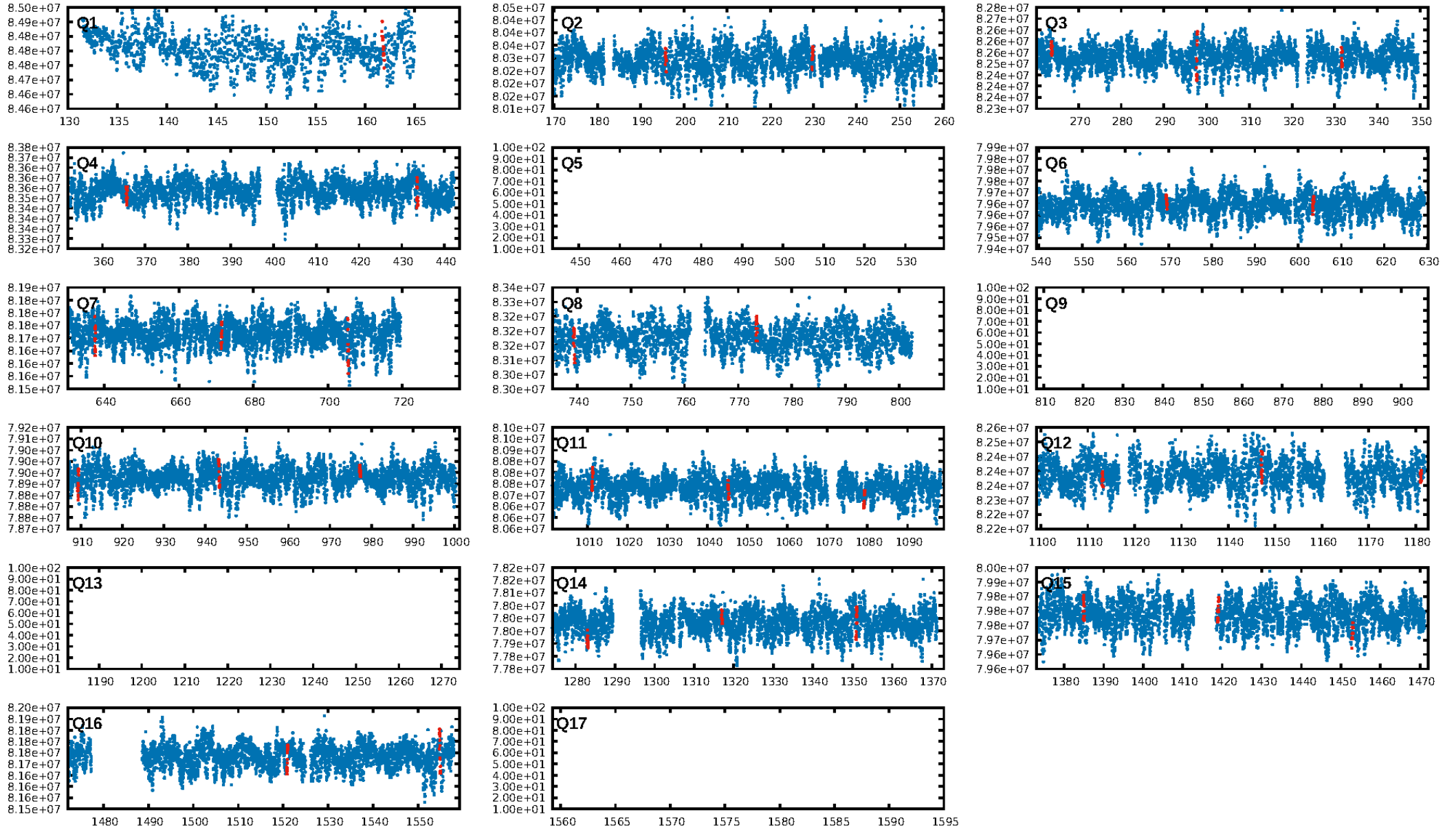
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [102.79σ]
LongPeriod-sig: 100.0% [9.97σ]
ModelChiSquare2-sig: 3.2%
ModelChiSquareGof-sig: 62.7%
Bootstrap-pfa: 9.41e-09
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 17.67
Centroid-sig: 92.8%
Centroid-so: 0.263 arcsec [0.67σ]
OotOffset-rm: 0.366 arcsec [1.04σ]
KicOffset-rm: 0.422 arcsec [1.10σ]
OotOffset-st: 4/4/3/1 [12]
KicOffset-st: 4/4/3/1 [12]
DiffImageQuality-fgm: 0.33 [4/12]
DiffImageOverlap-fno: 0.85 [11/13]

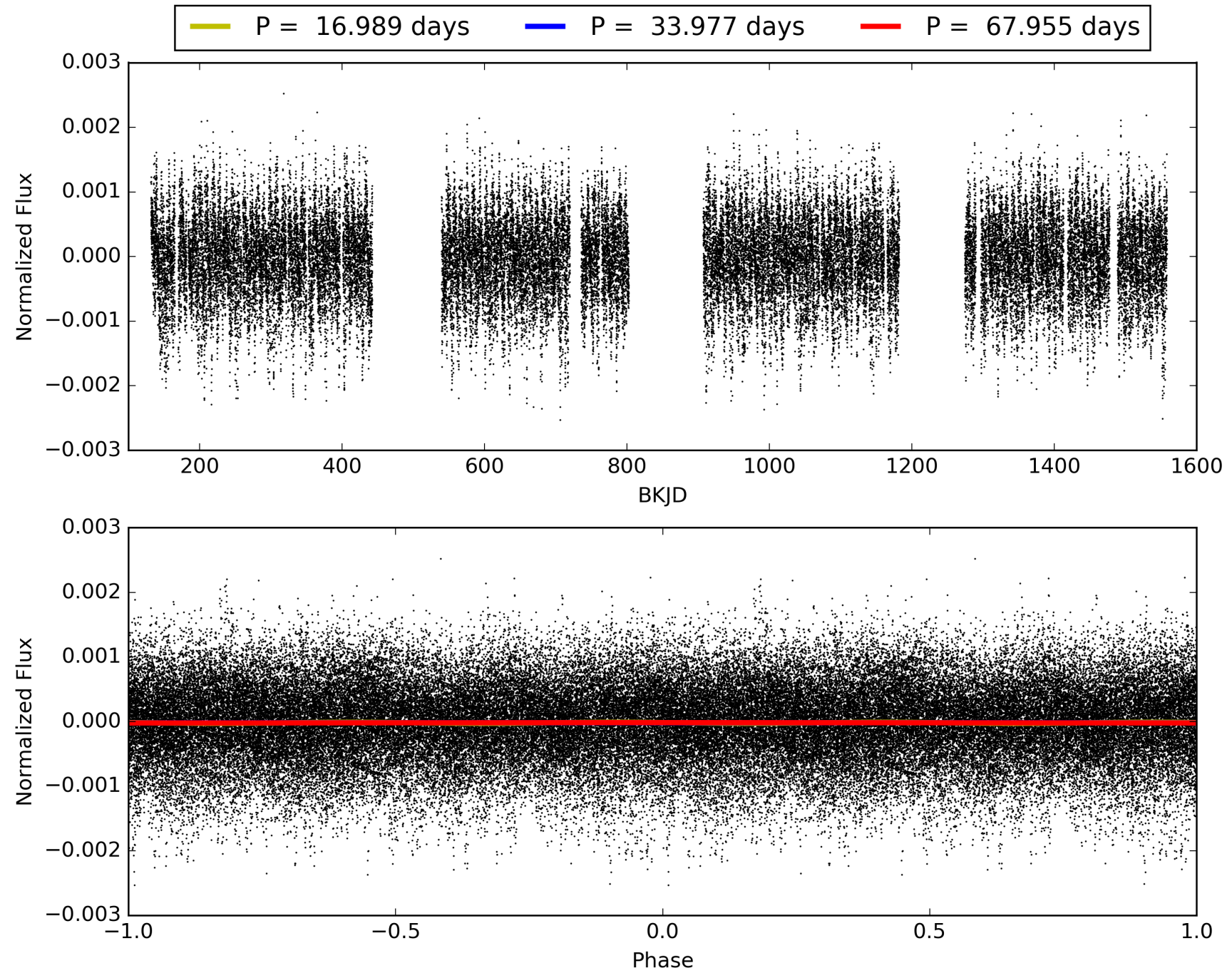
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 04:39:29 Z

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

TCE 006670894-06, PDC Light Curves

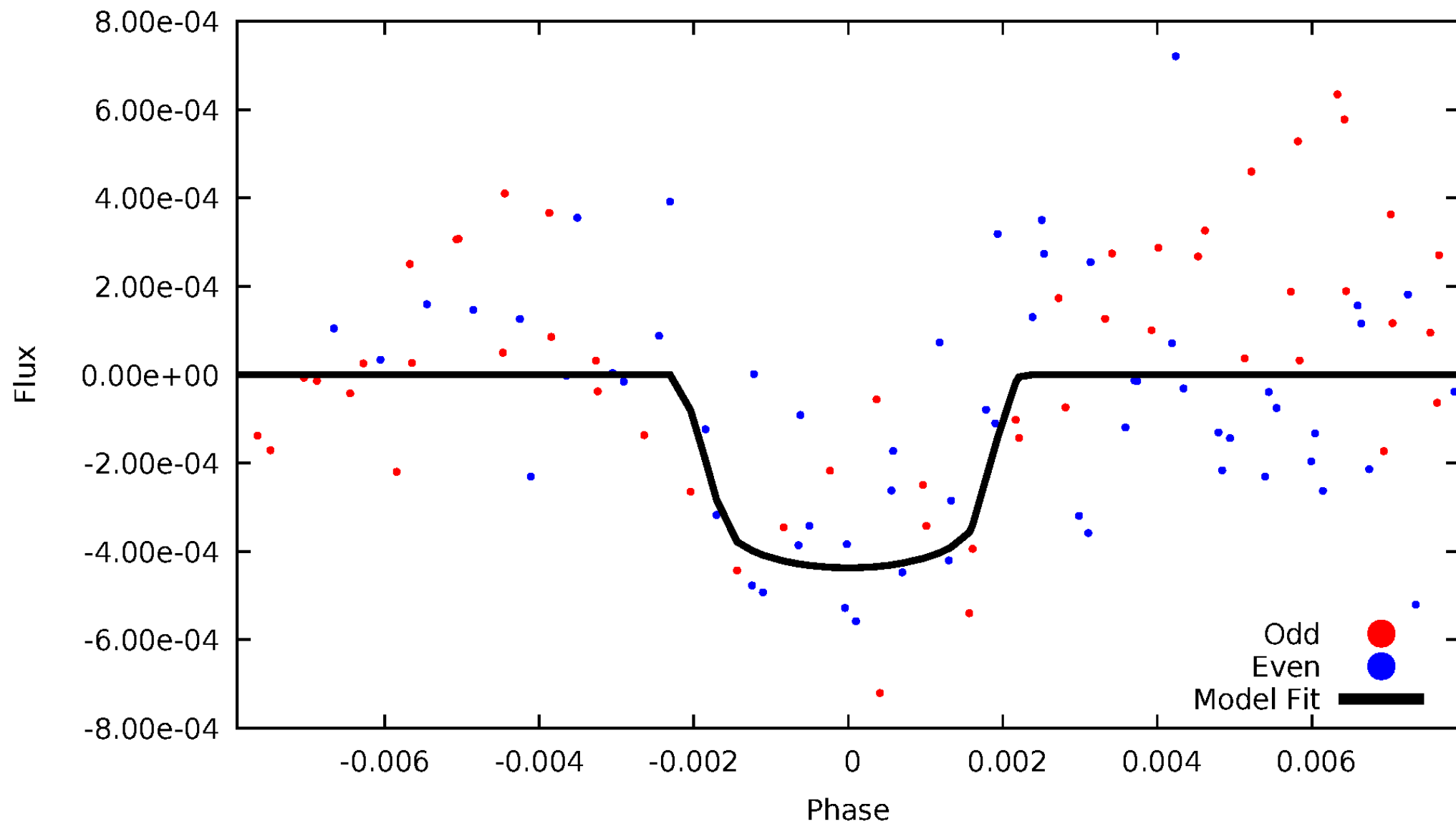


TCE 006670894-06



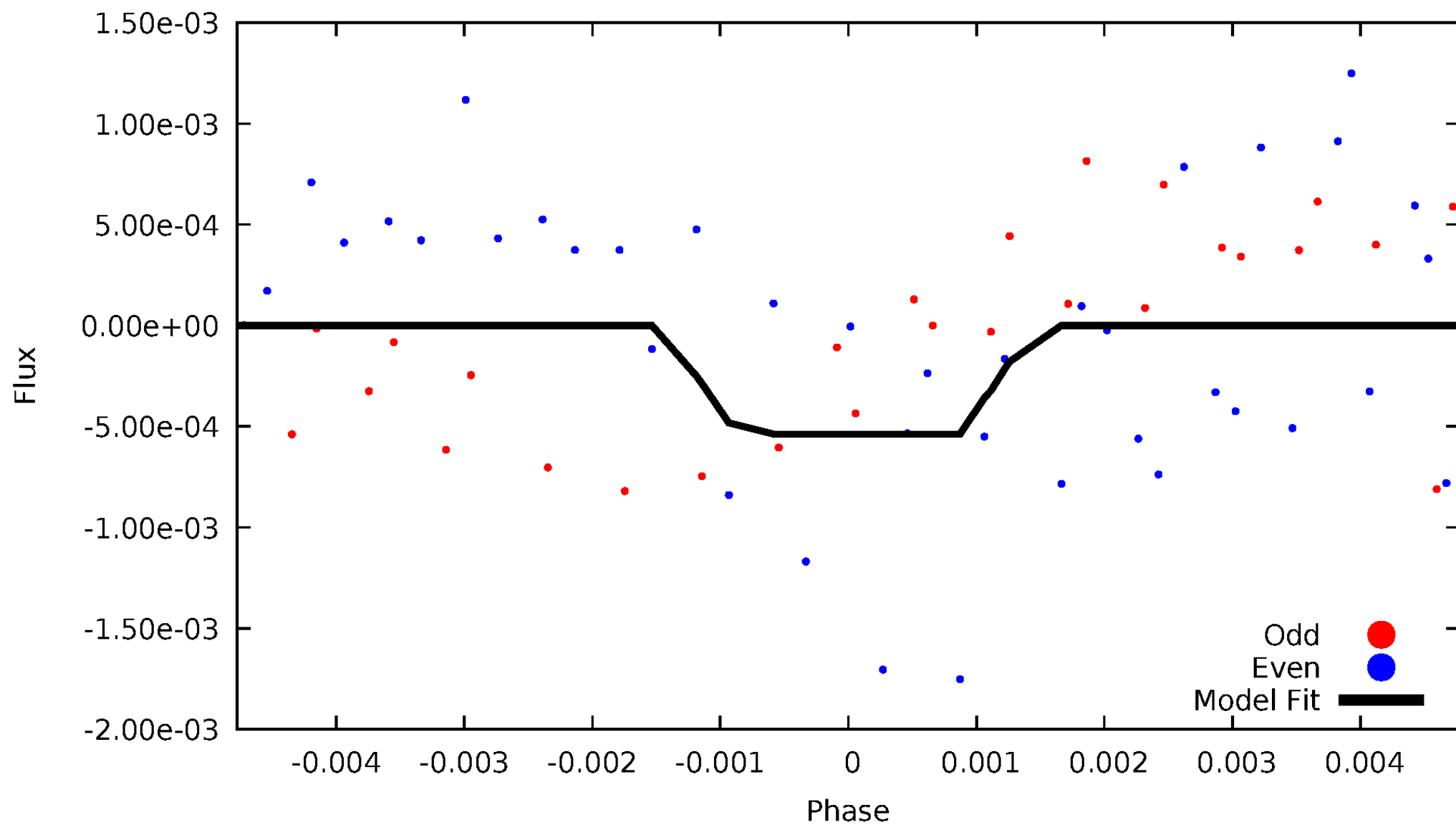
DV Odd/Even

TCE 006670894-06



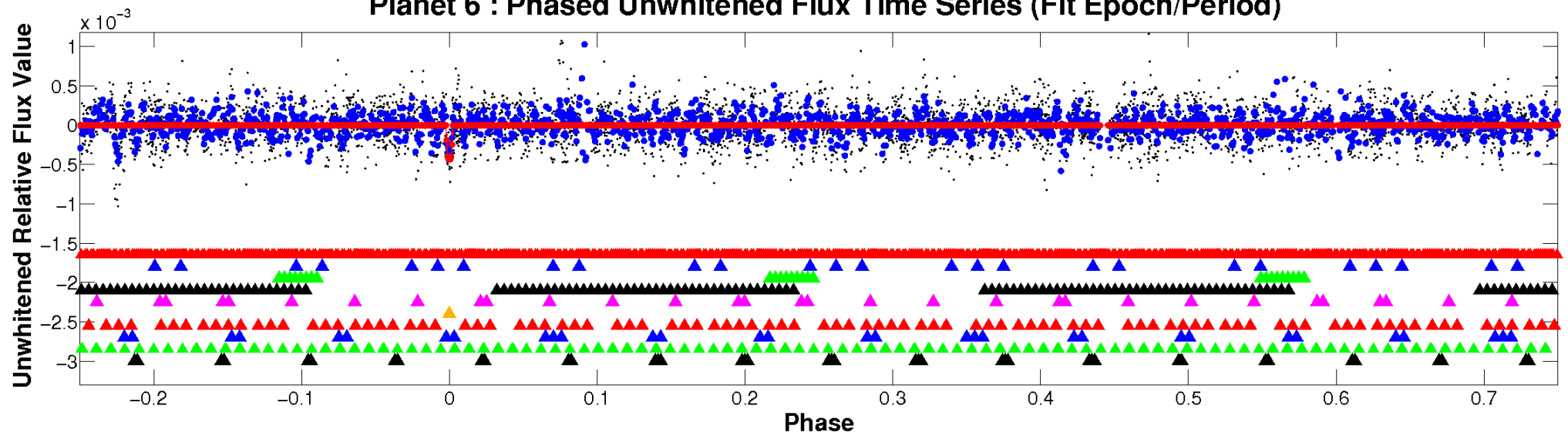
ALT Odd/Even

TCE 006670894-06

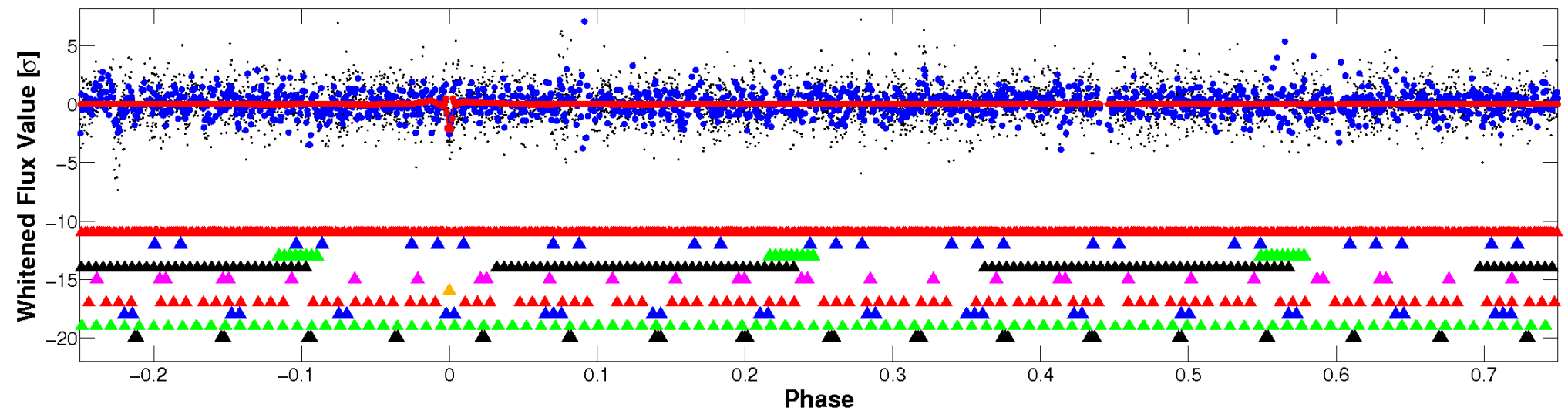


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

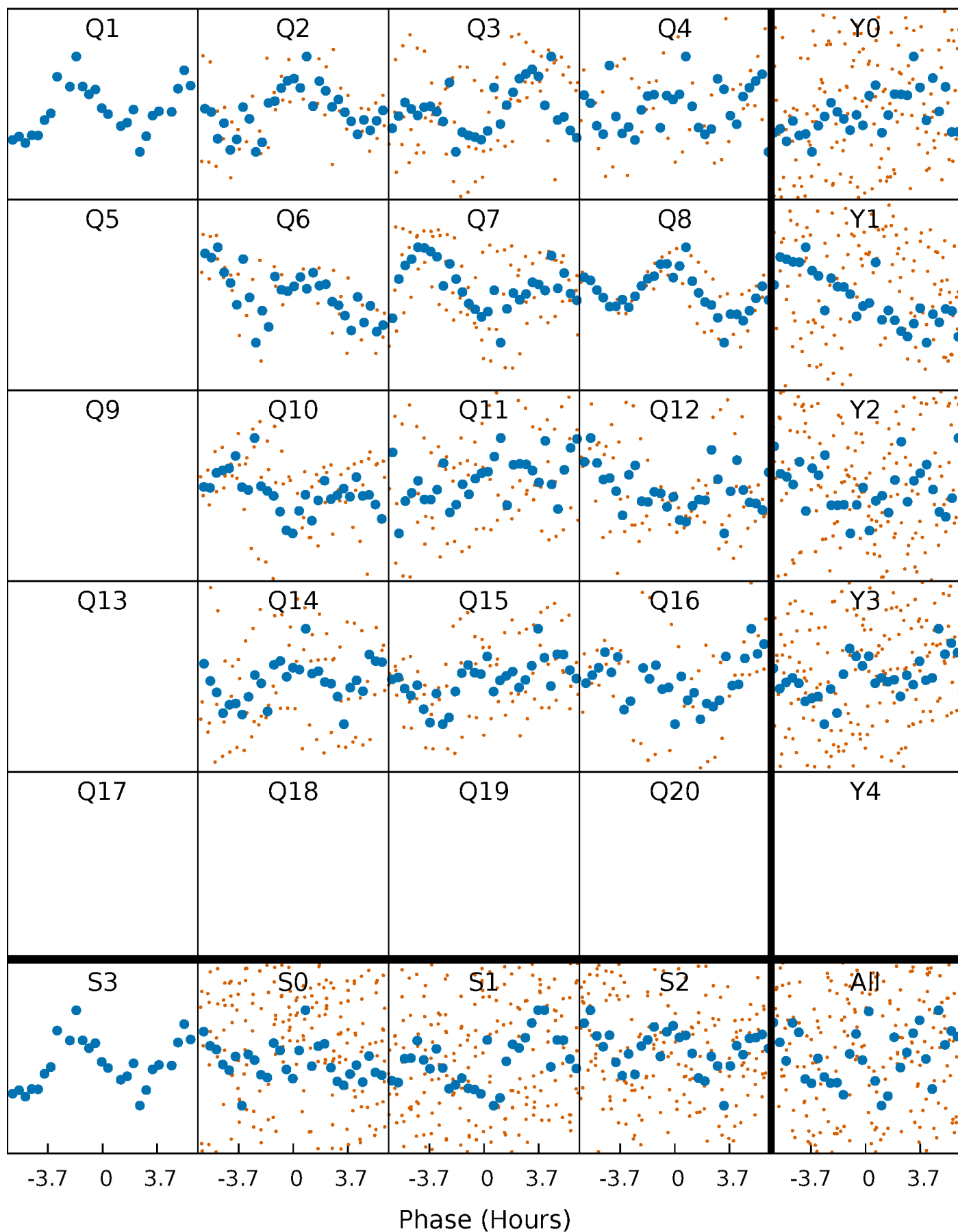


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



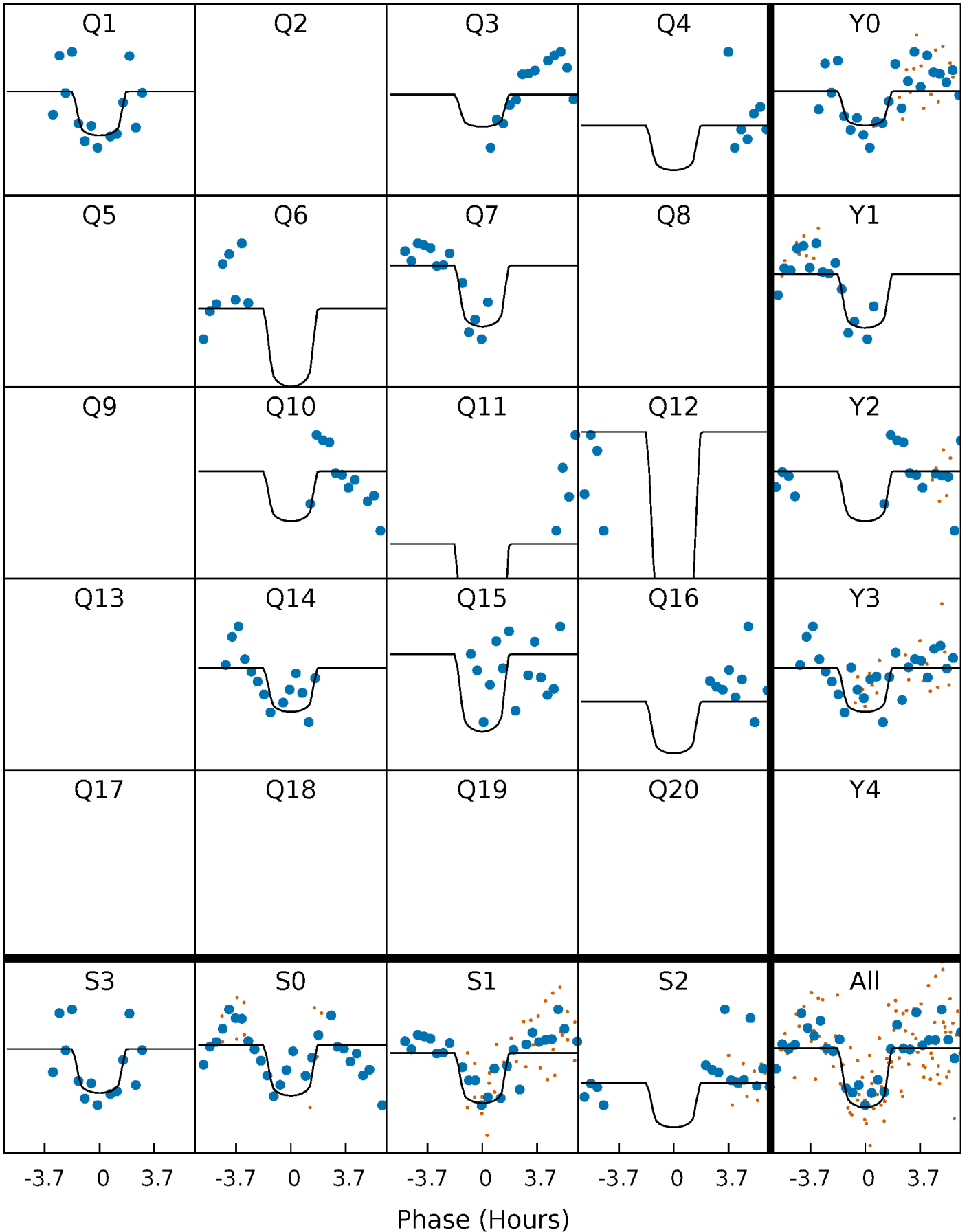
PDC Quarter-Phased Transit Curves

TCE 006670894-06 P= 33.977317 Days $T_0=161.813527$ (BKJD)



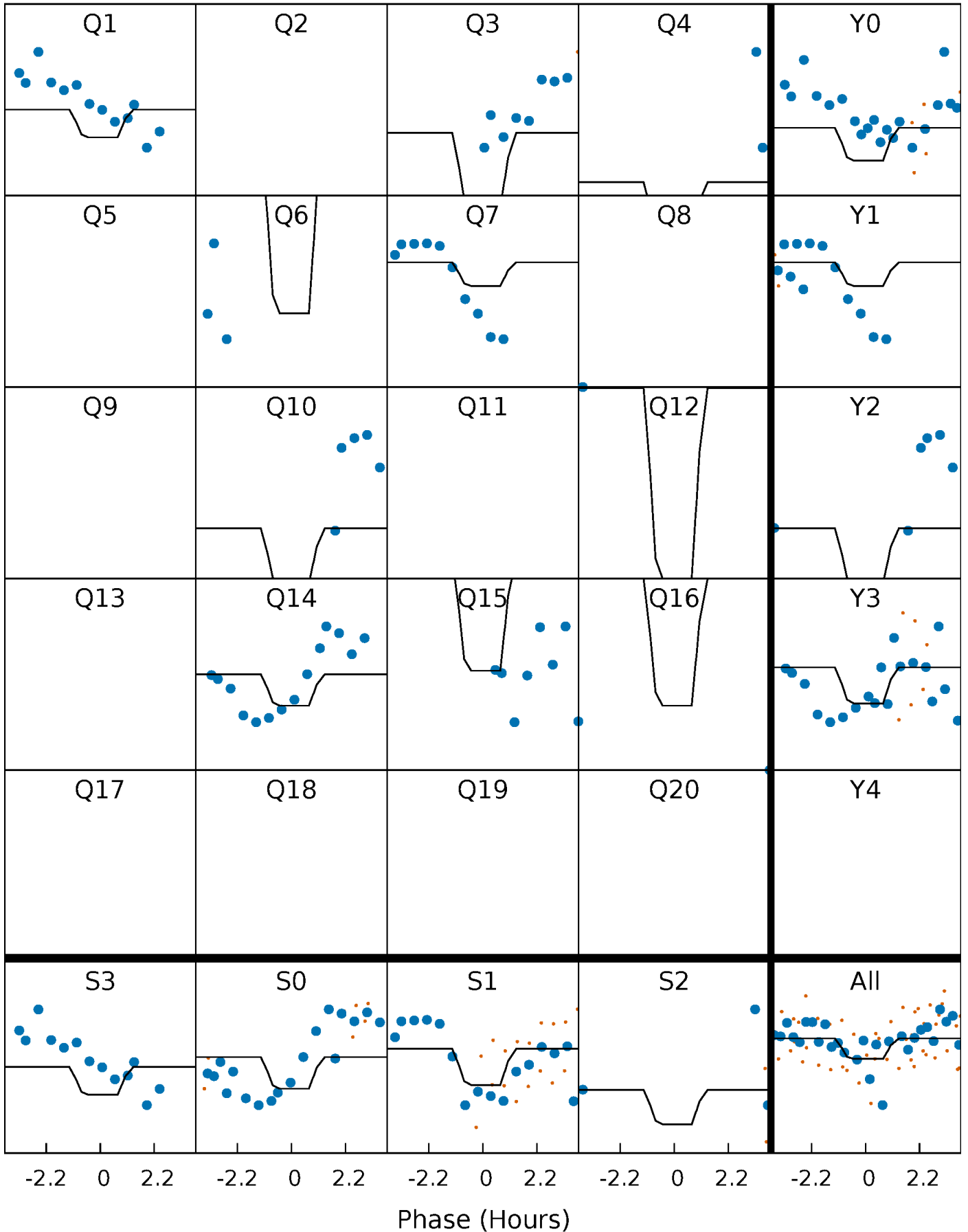
DV Quarter-Phased Transit Curves

TCE 006670894-06 P= 33.977317 Days $T_0=161.813527$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

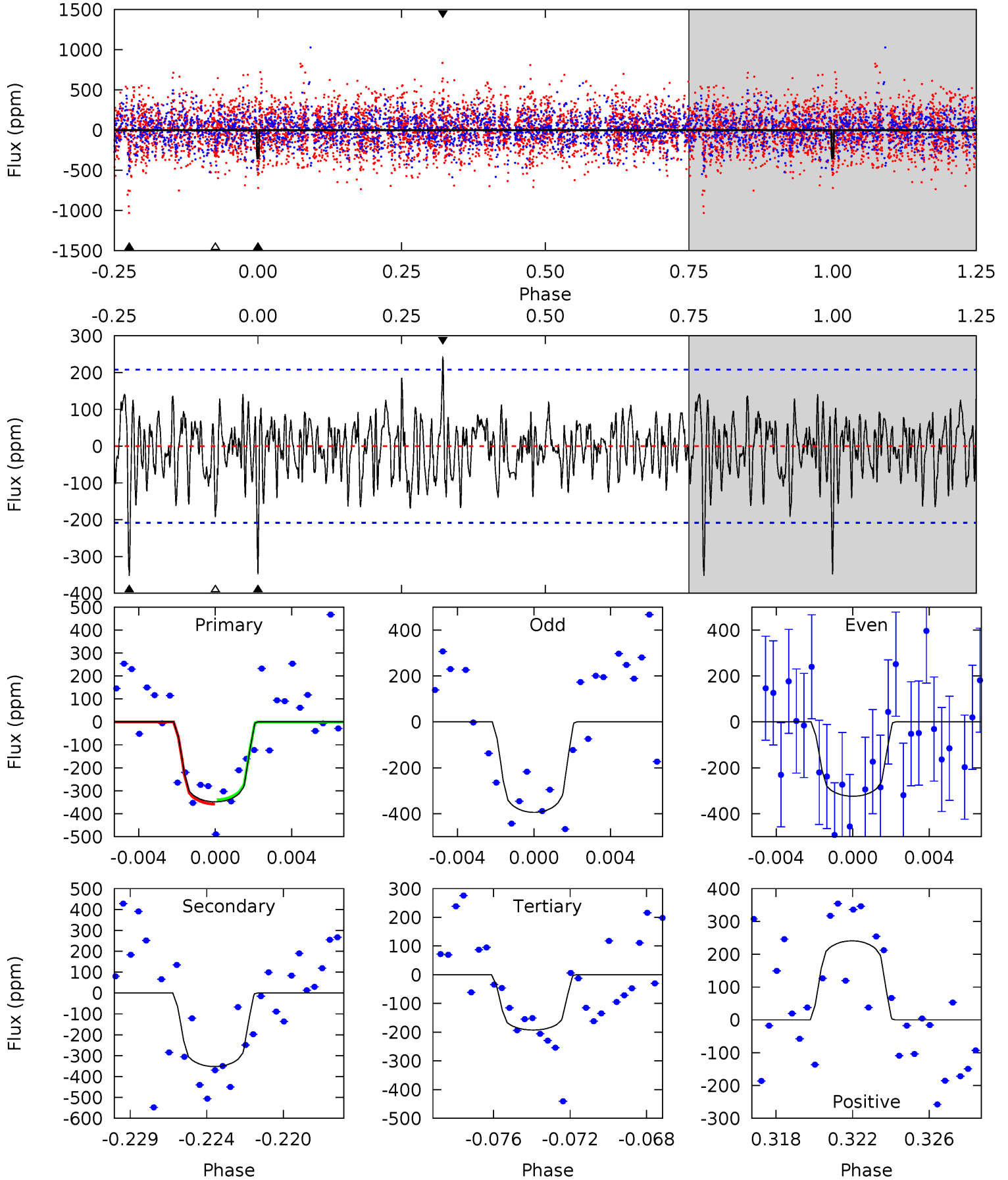
TCE 006670894-06 P= 33.975200 Days $T_0=161.836721$ (BKJD)



DV Model-Shift Uniqueness Test

006670894-06, P = 33.977317 Days, E = 127.836210 Days

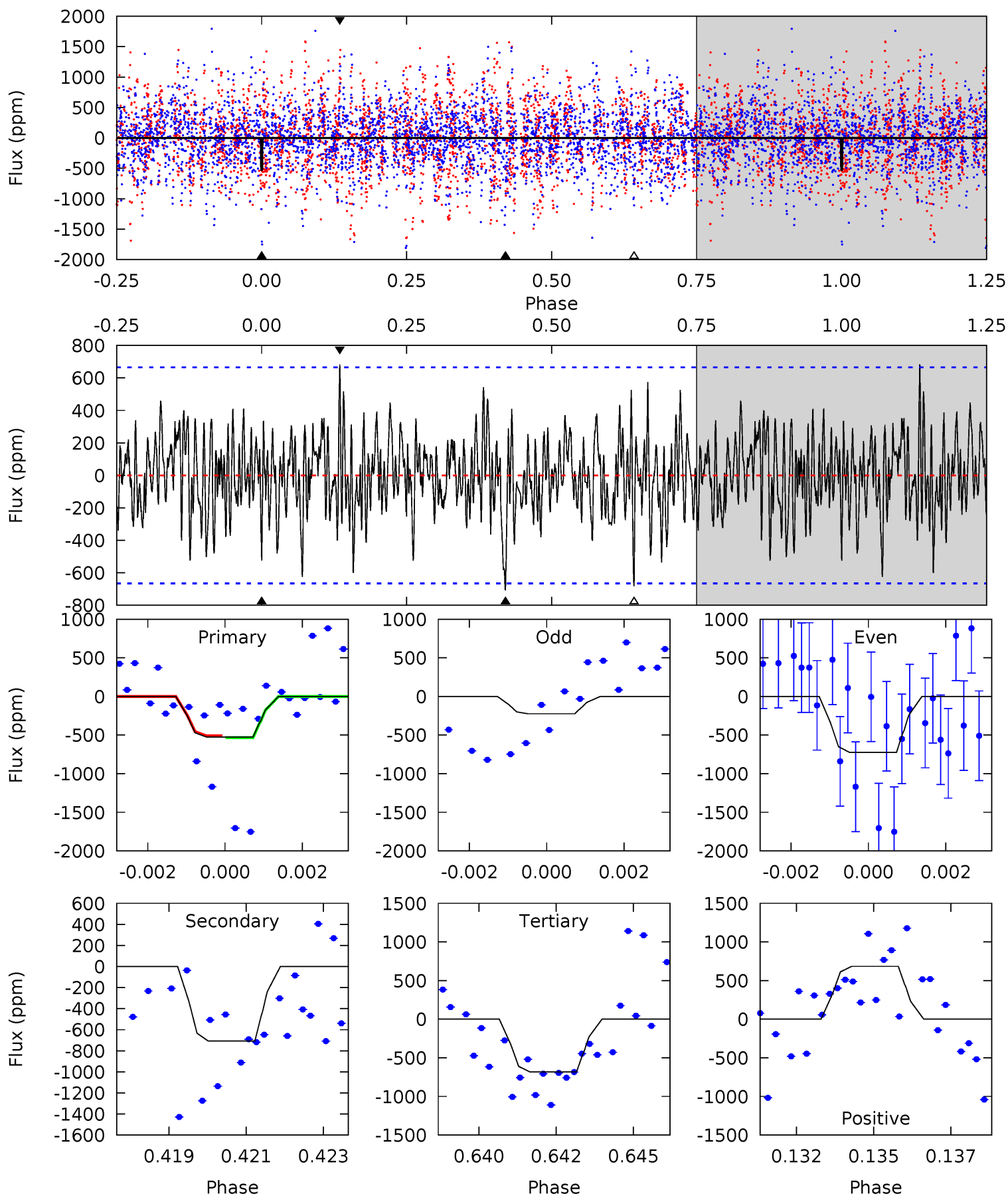
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.68	8.78	4.80	6.00	5.19	2.86	1.61	3.88	2.68	3.98	2.78	0.84	0.92	0.41	0.23



Alt Model-Shift Uniqueness Test

006670894-06, P = 33.975200 Days, E = 127.861521 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.17	5.62	5.42	5.44	5.29	3.03	1.57	-1.25	-1.27	0.20	0.18	1.94	1.27	0.49	0.09



Stellar Parameters For KIC 006670894

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7266^{+226}_{-327}	$4.082^{+0.170}_{-0.170}$	$-0.080^{+0.250}_{-0.350}$	$1.876^{+0.585}_{-0.439}$	$1.546^{+0.212}_{-0.259}$	$0.330^{+0.299}_{-0.157}$
	+3%/-5%	+4%/-4%	+312%/-438%	+31%/-23%	+14%/-17%	+91%/-48%
Source	KIC0	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 006670894-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-352 ± 40	$5.12^{+3.85}_{-3.15}$	1263^{+101}_{-95}	6191^{+5198}_{-1343}	410^{+2514}_{-274}
Alt.	-707 ± 126	$5.00^{+3.88}_{-3.10}$	1251^{+98}_{-94}	7570^{+8100}_{-1985}	858^{+5054}_{-589}

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 $A_{obs} \gg 1.0$

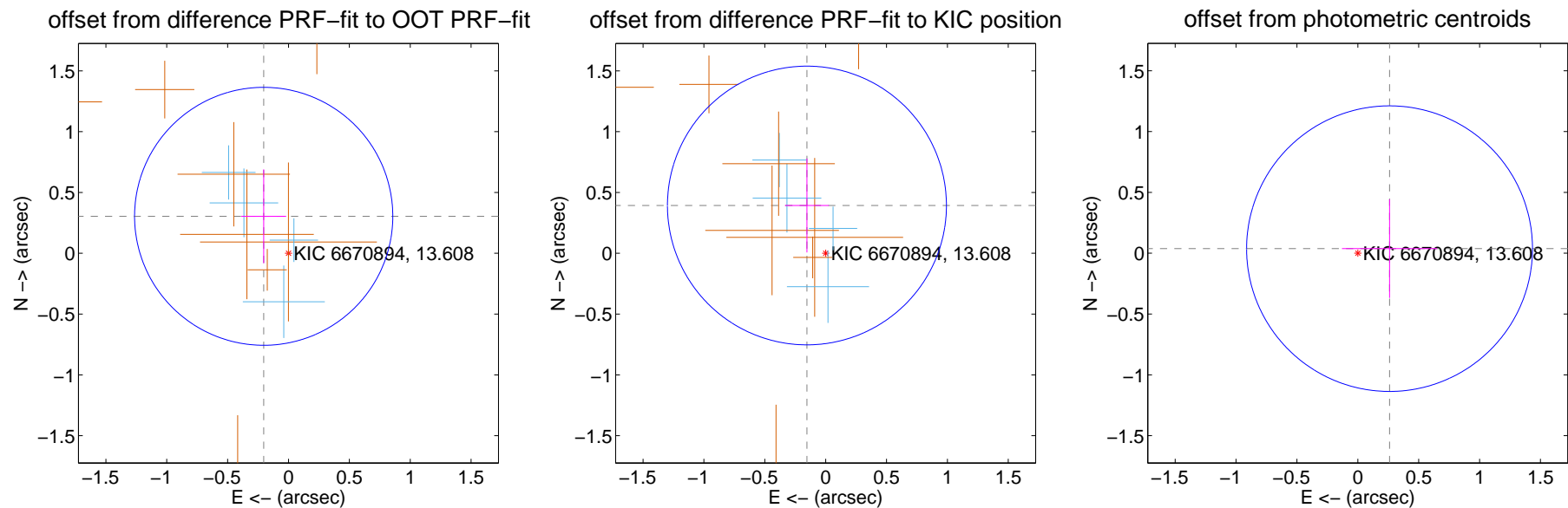
DV Centroid Data

Supplemental centroid analysis for 006670894-06. Kepler magnitude: 13.61. Transit SNR 10.29

There are 4 quarters with good PRF difference image offsets

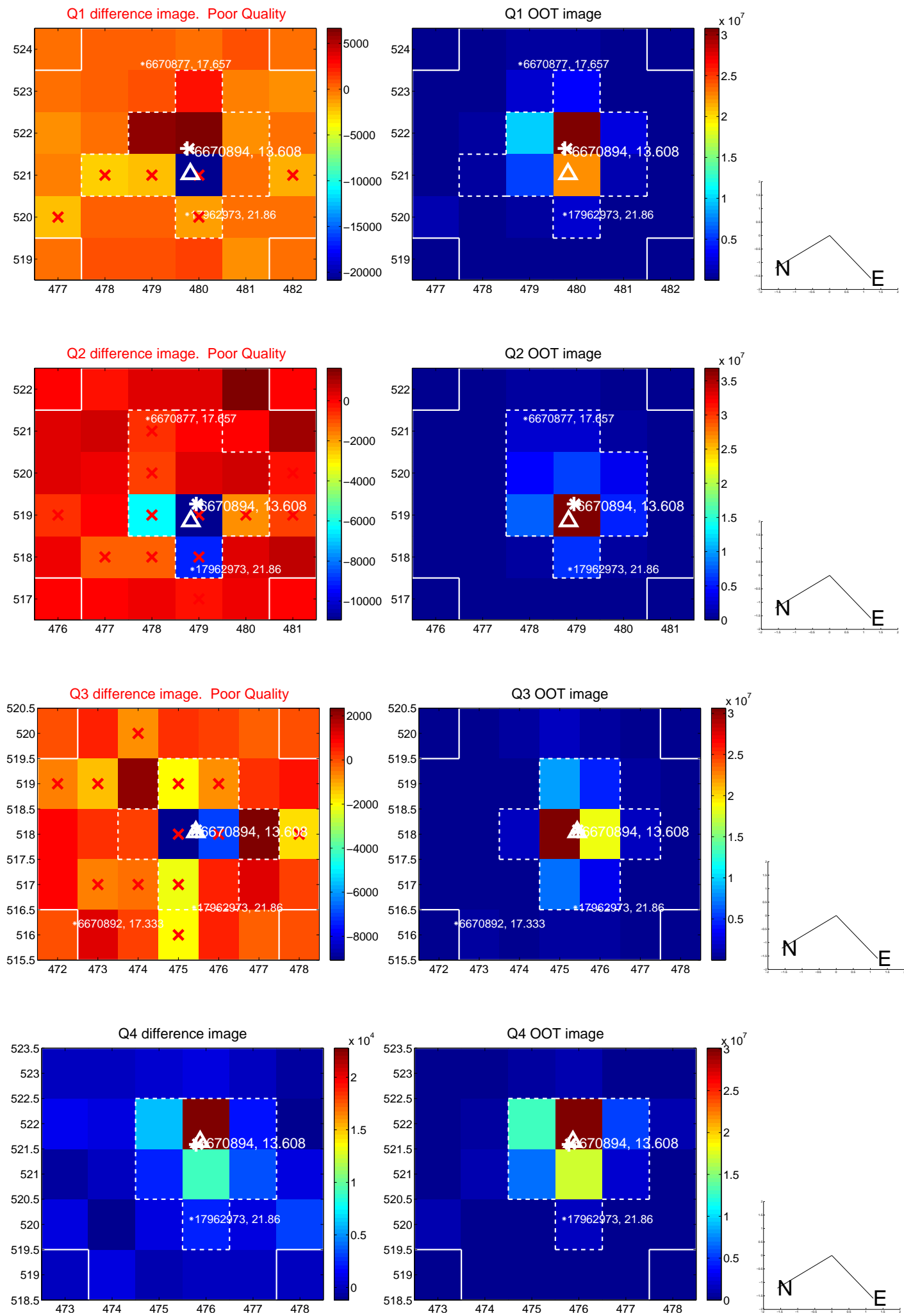
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.366 ± 0.353	1.04	0.204 ± 0.184	0.304 ± 0.386
PRF-fit source offset from KIC position	0.422 ± 0.382	1.10	0.154 ± 0.180	0.393 ± 0.386
photometric centroid source offset	0.26 ± 0.39	0.67	-0.26 ± 0.39	0.04 ± 0.41

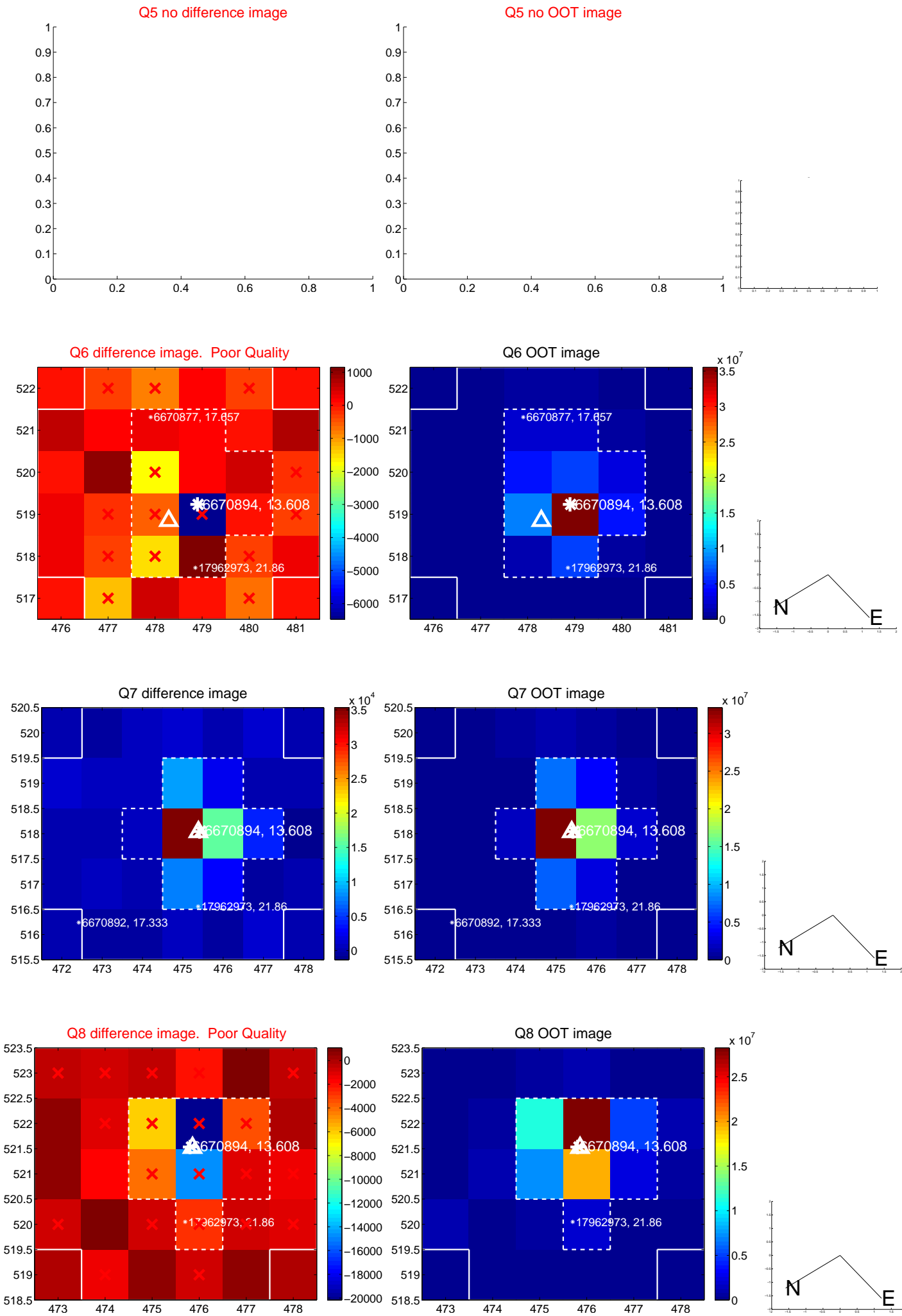


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

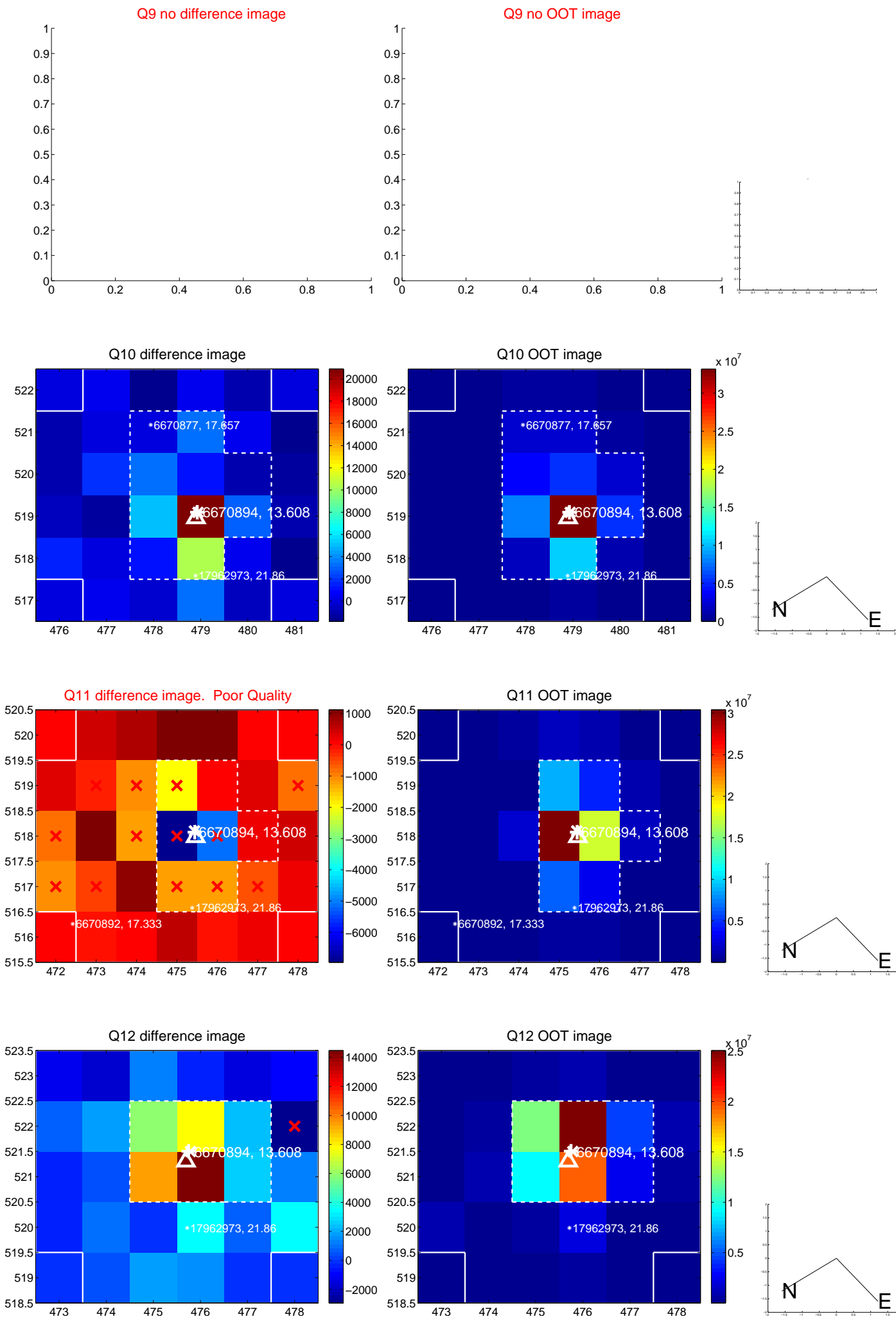
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



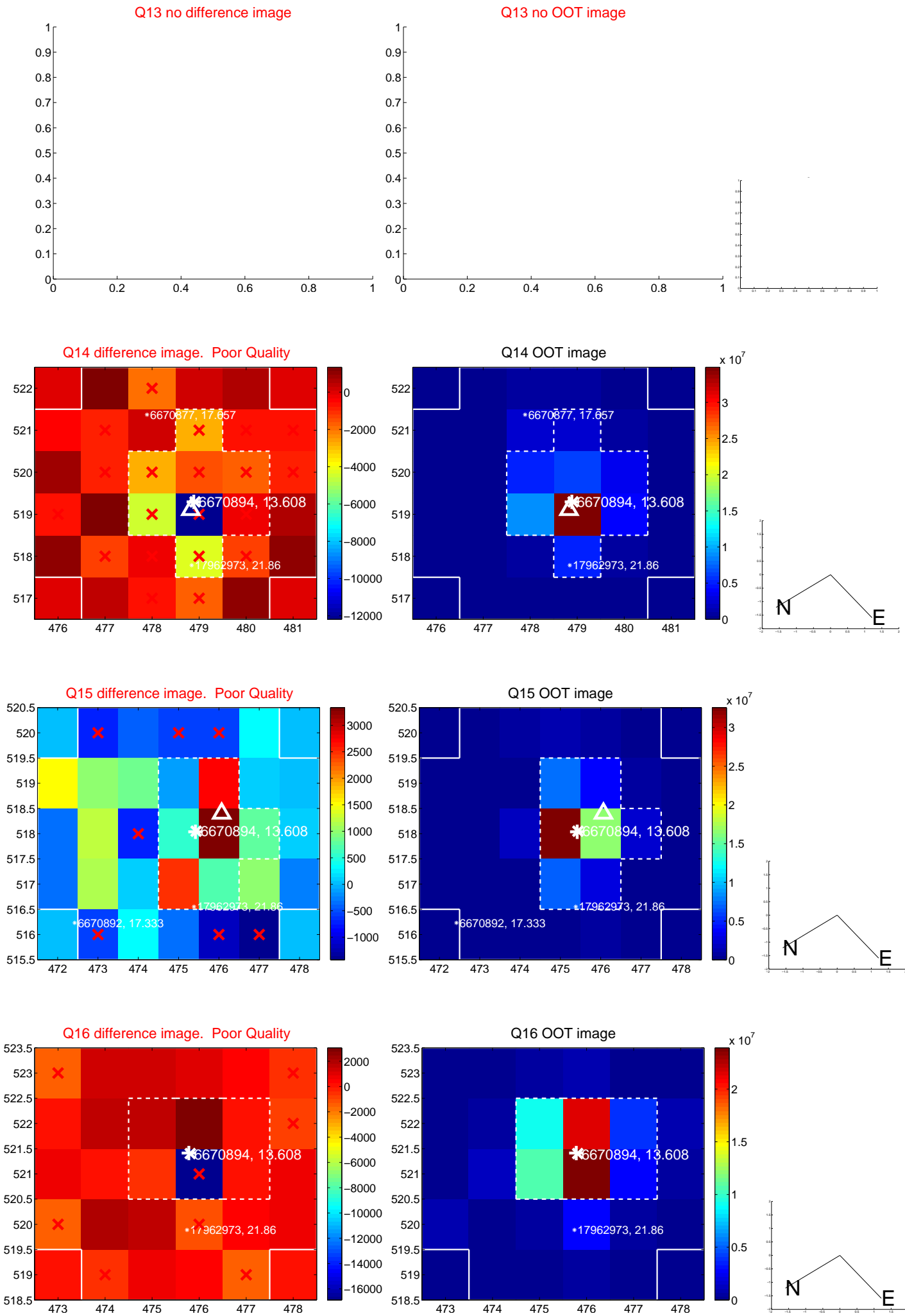
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



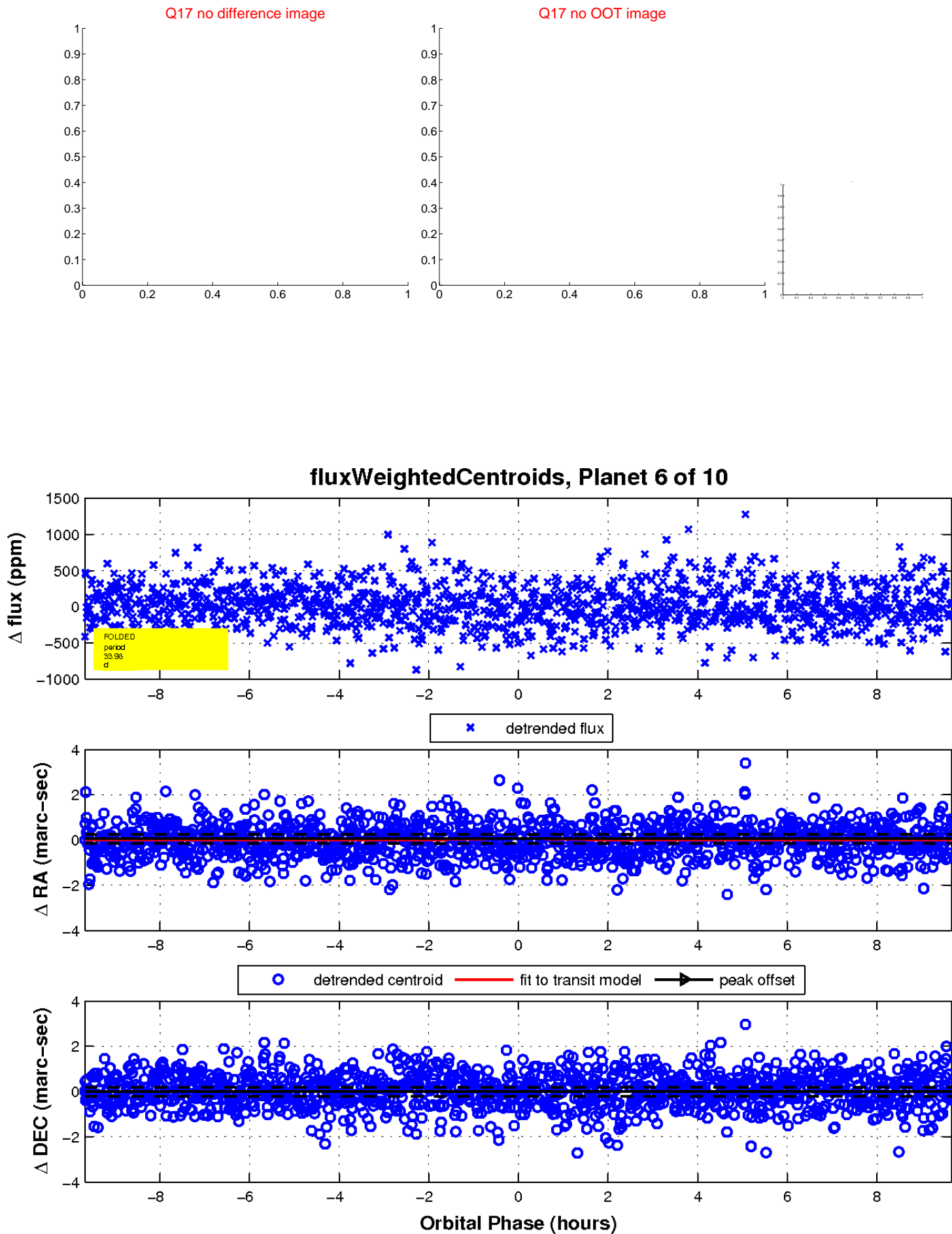
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

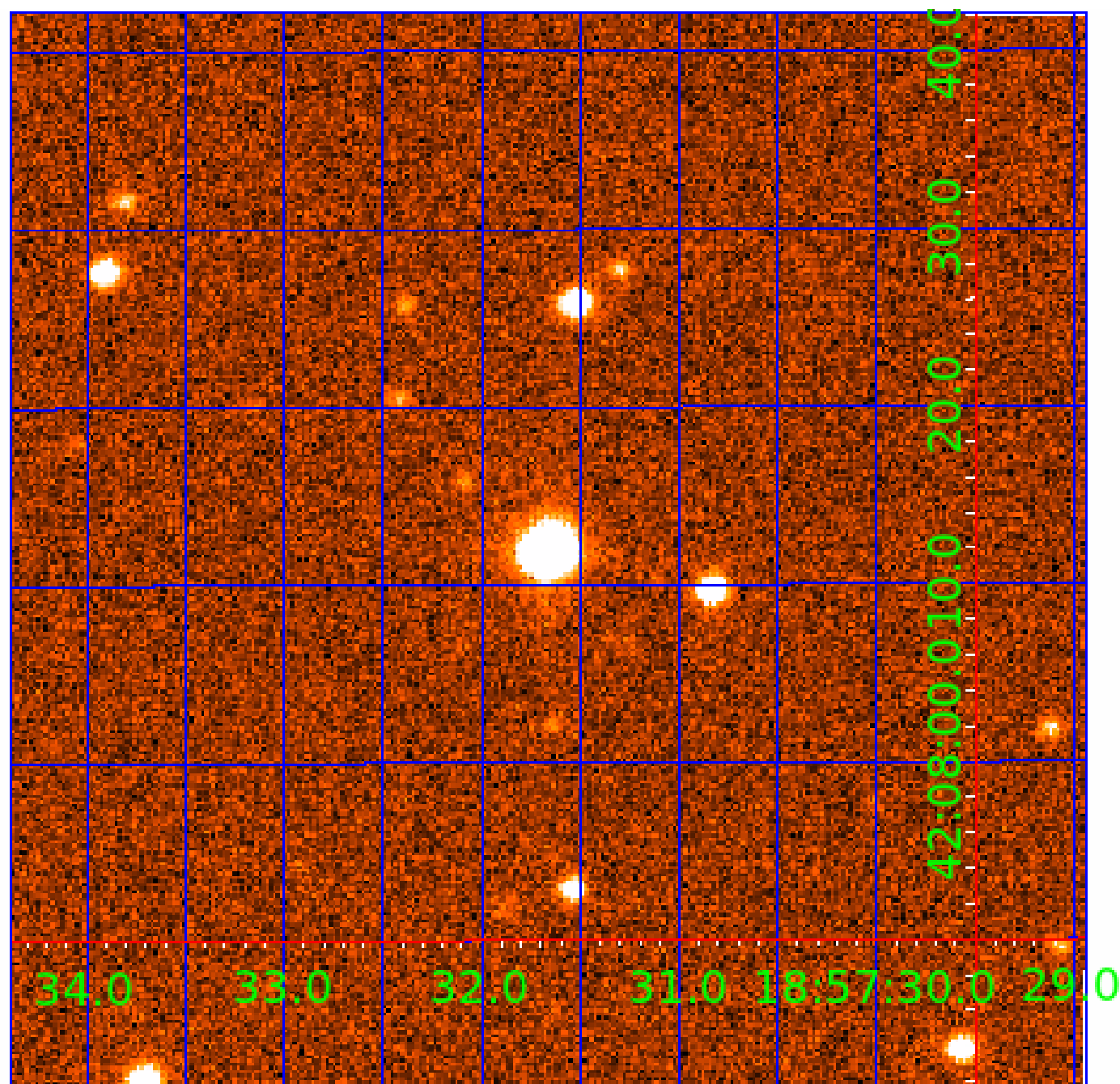


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
006670894-01	OBS	No	2.551845	132.460661	50.0	18.029	9.6	9.8	1.88	7266	1.38	4910.12
006670894-02	OBS	No	55.544984	174.552307	296.6	7.510	12.9	6.5	1.88	7266	3.43	80.79
006670894-03	OBS	No	56.670287	146.490621	623.9	5.356	16.0	13.6	1.88	7266	5.74	78.66
006670894-04	OBS	No	11.381235	140.143288	309.4	3.826	11.2	11.6	1.88	7266	3.76	668.82
006670894-05	OBS	No	47.278774	156.605446	531.2	2.331	9.8	10.5	1.88	7266	5.37	100.16
006670894-06	OBS	No	33.977317	161.813527	437.1	3.226	9.3	10.3	1.88	7266	4.19	155.59
006670894-07	OBS	No	15.241088	144.414923	289.3	2.955	9.5	11.4	1.88	7266	3.60	453.12
006670894-08	OBS	No	46.125163	173.705739	483.3	2.500	8.6	9.3	1.88	7266	4.24	103.51
006670894-09	OBS	No	9.236289	138.873408	250.7	2.594	8.8	9.5	1.88	7266	3.38	883.56
006670894-10	OBS	No	35.972270	166.674102	374.5	3.555	8.4	10.3	1.88	7266	3.88	144.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006670894-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006670894-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006670894-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006670894-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-09	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
006670894-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

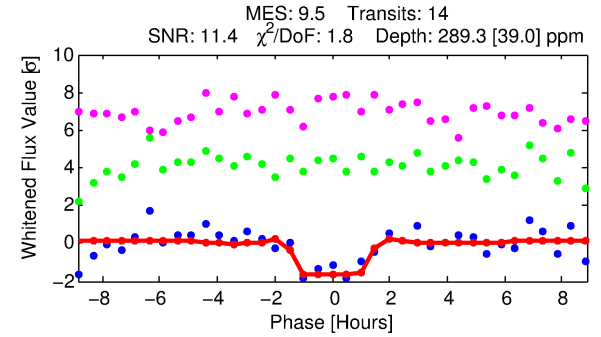
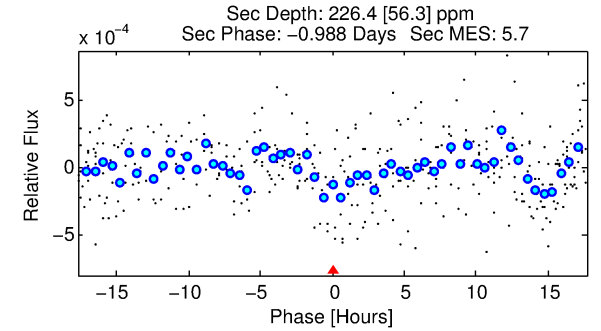
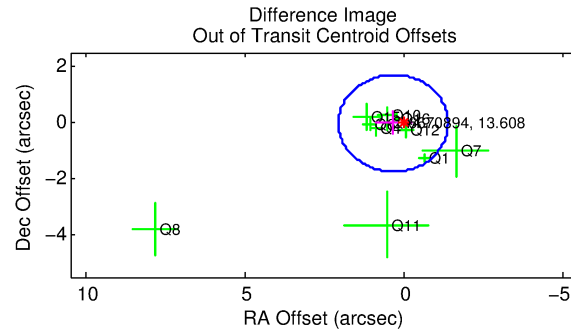
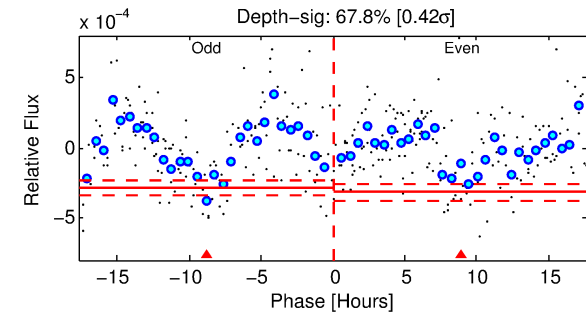
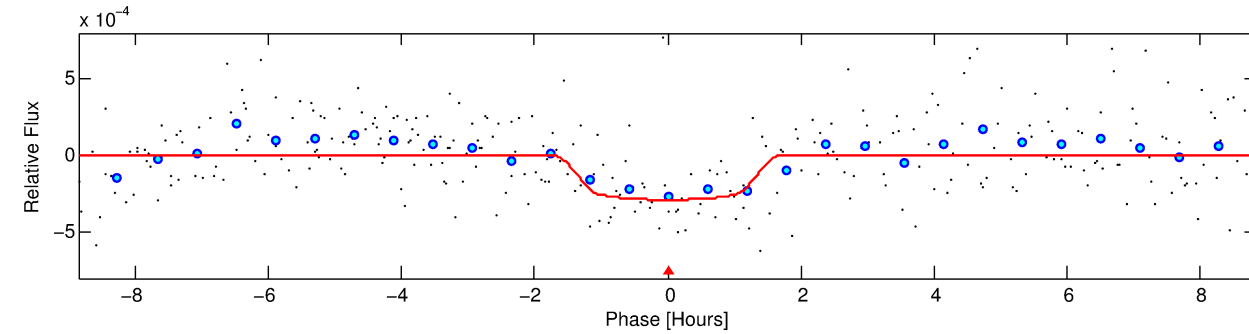
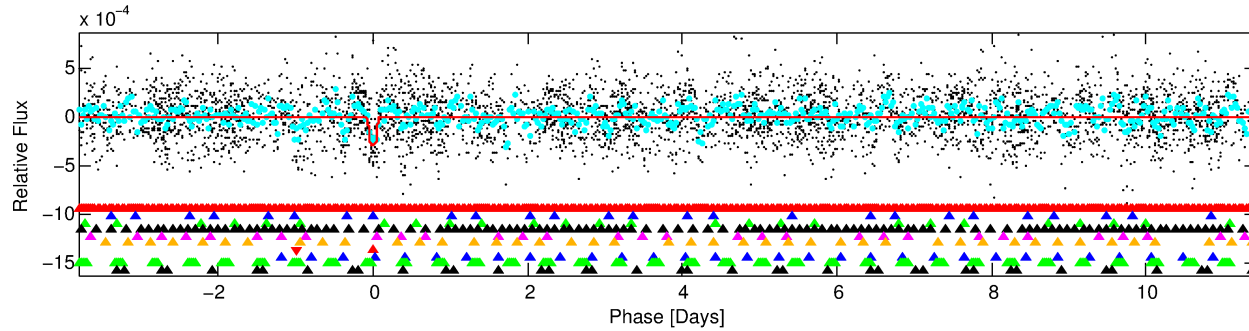
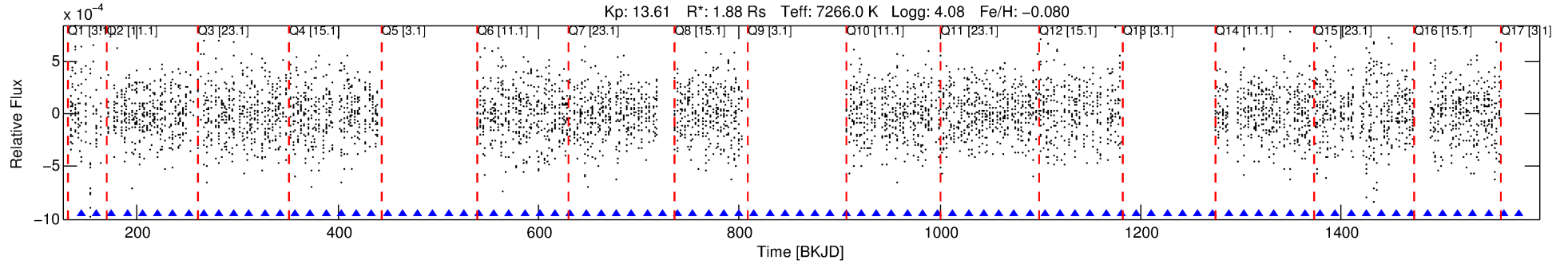
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006670894-07

No Significant Match Found

DV One-Page Summary

KIC: 6670894 Candidate: 7 of 10 Period: 15.241 d



DV Fit Results:

Period = 15.24109 [0.00011] d
Epoch = 144.4149 [0.0063] BKJD
Rp/R* = 0.0176 [0.0093]
a/R* = 21.66 [70.06]
b = 0.86 [1.01]
Seff = 453.12 [171.78]
Teq = 1176 [112] K
Rp = 3.60 [2.20] Re
a = 0.1393 [0.0342] AU
Ag = 186.00 [210.36] [0.88 σ]
Teffp = 6717 [1840] K [3.01 σ]

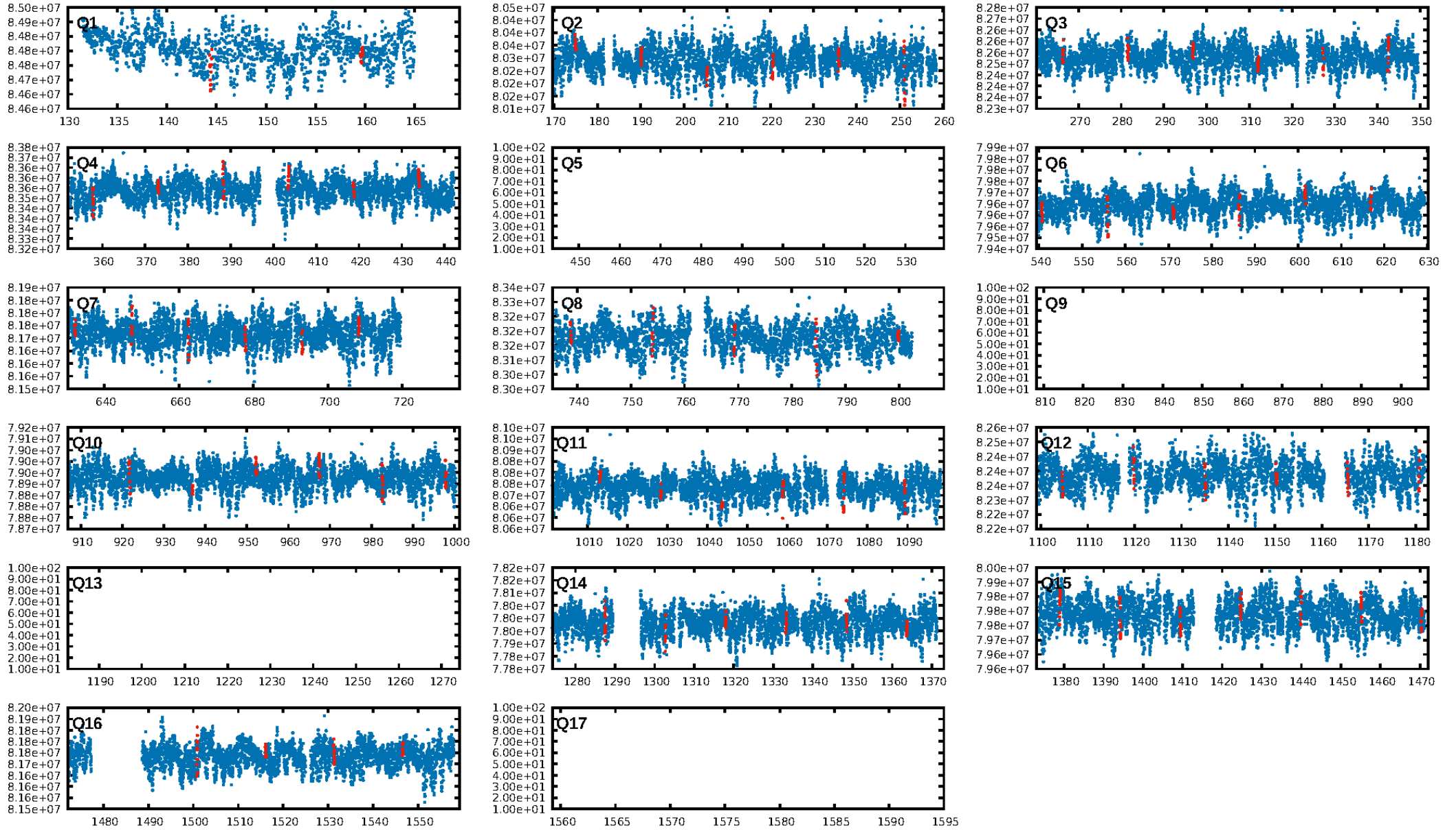
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [19.16 σ]
LongPeriod-sig: 100.0% [102.79 σ]
ModelChiSquare2-sig: 20.2%
ModelChiSquareGof-sig: 94.0%
Bootstrap-pfa: 1.14e-08
RollingBand-fgt: 1.00 [14/14]
GhostDiagnostic-chr: 1.314
Centroid-sig: 68.4%
Centroid-so: 0.198 arcsec [0.46 σ]
OotOffset-rm: 0.342 arcsec [0.59 σ]
KicOffset-rm: 0.268 arcsec [0.42 σ]
OotOffset-st: 3/3/4/1 [11]
KicOffset-st: 3/3/4/1 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 0.62 [8/13]

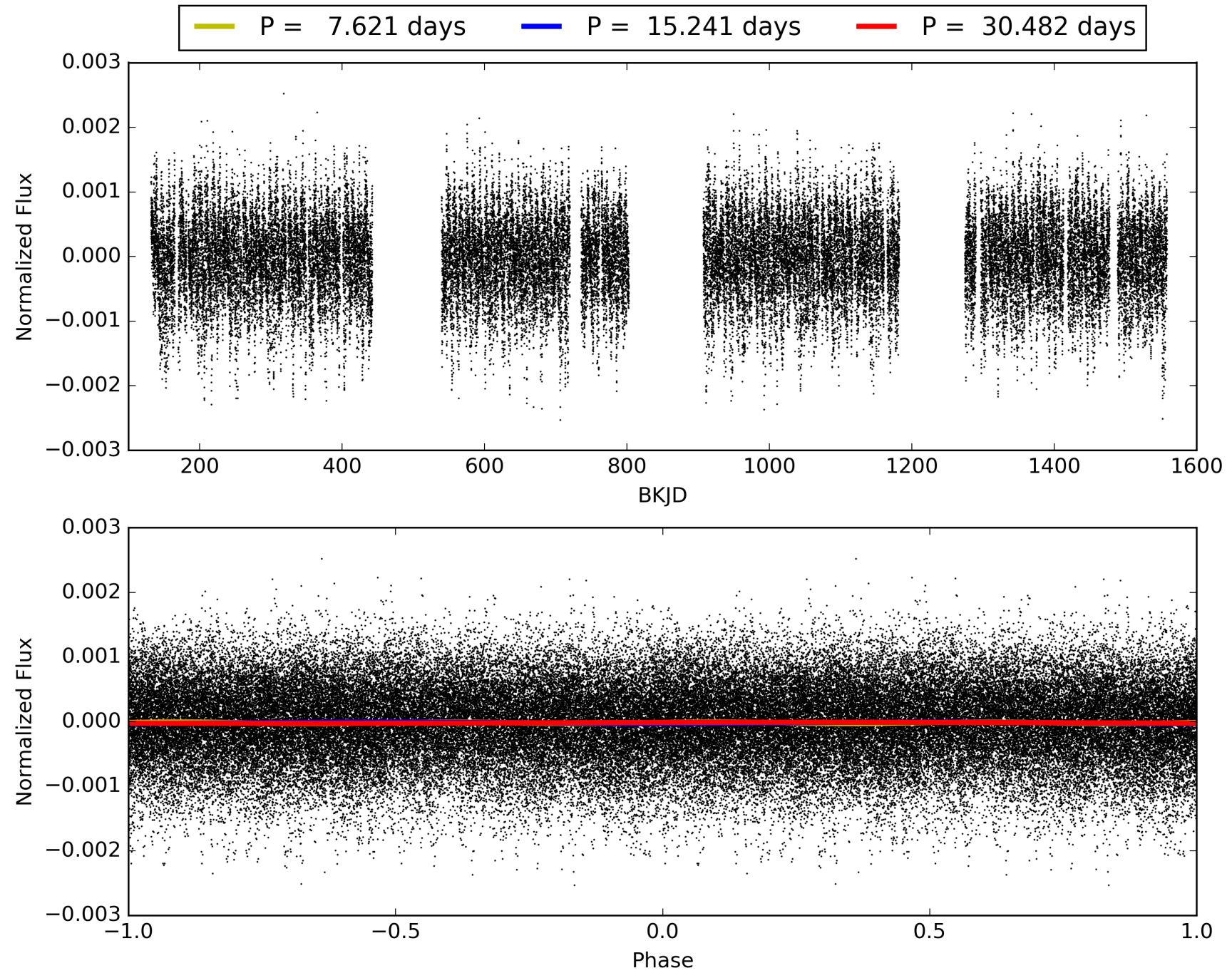
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 04:39:32 Z

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

TCE 006670894-07, PDC Light Curves

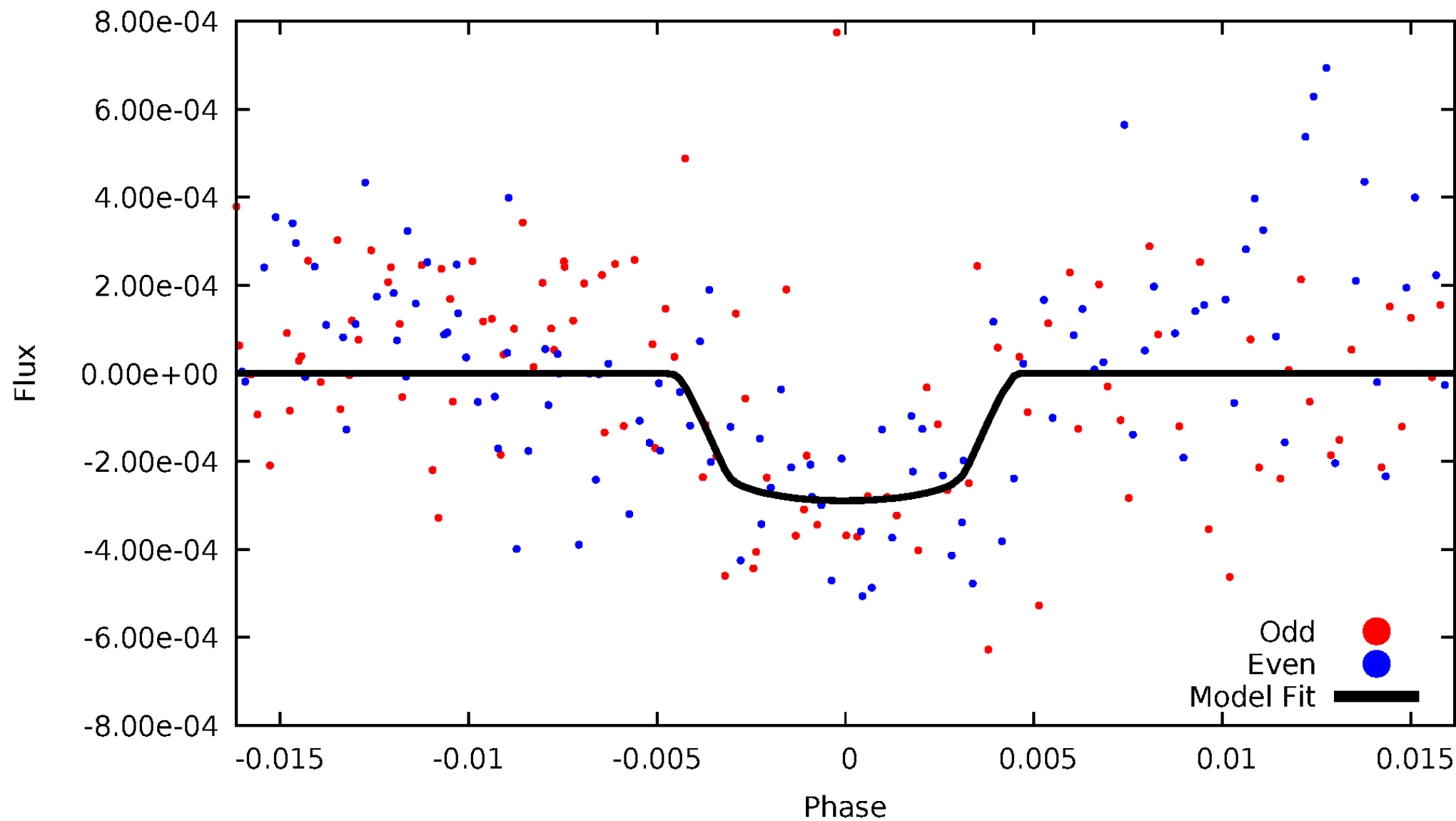


TCE 006670894-07



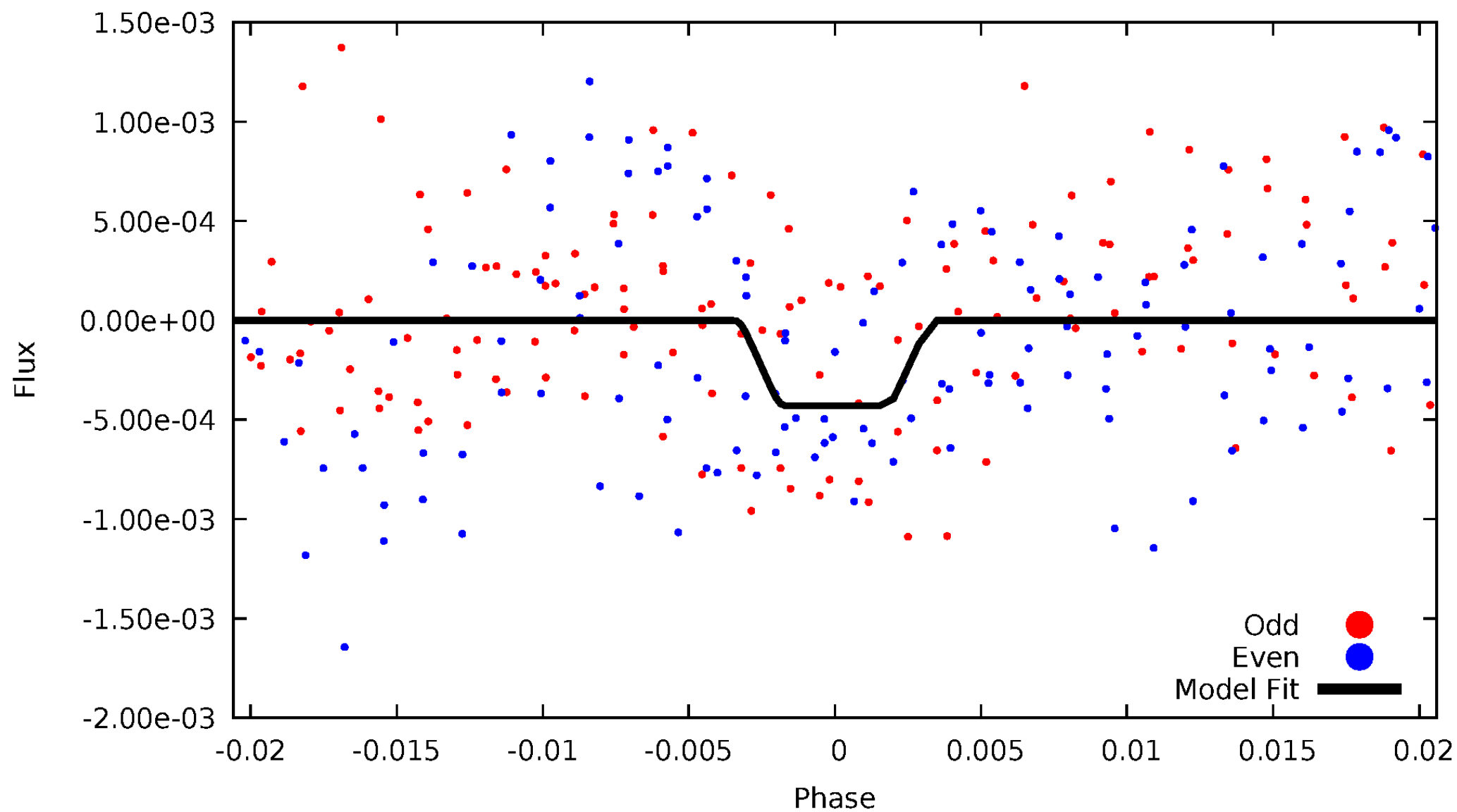
DV Odd/Even

TCE 006670894-07



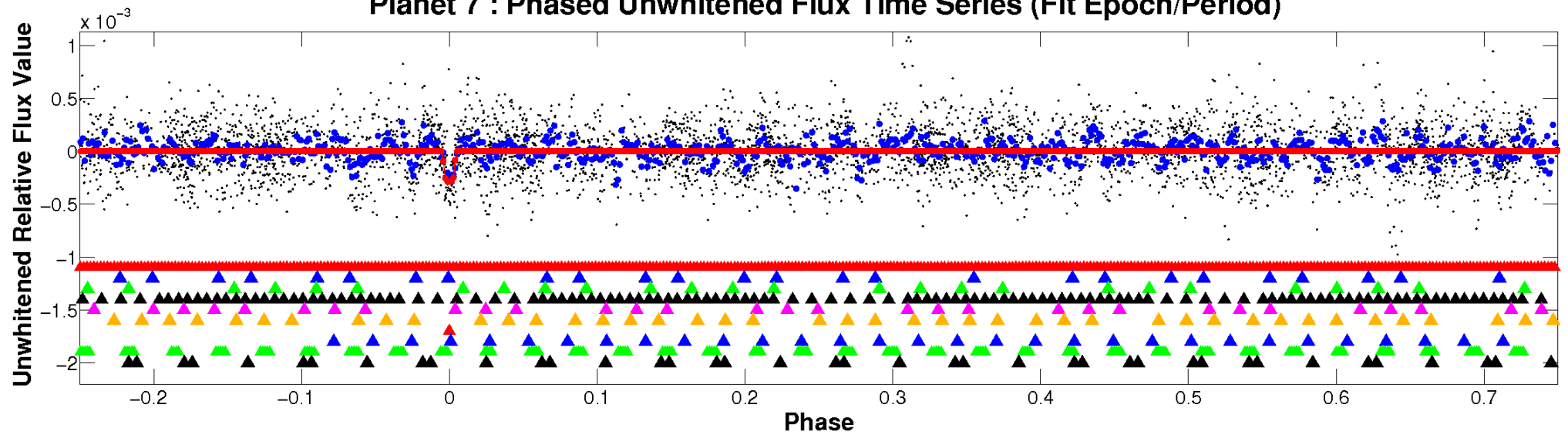
ALT Odd/Even

TCE 006670894-07

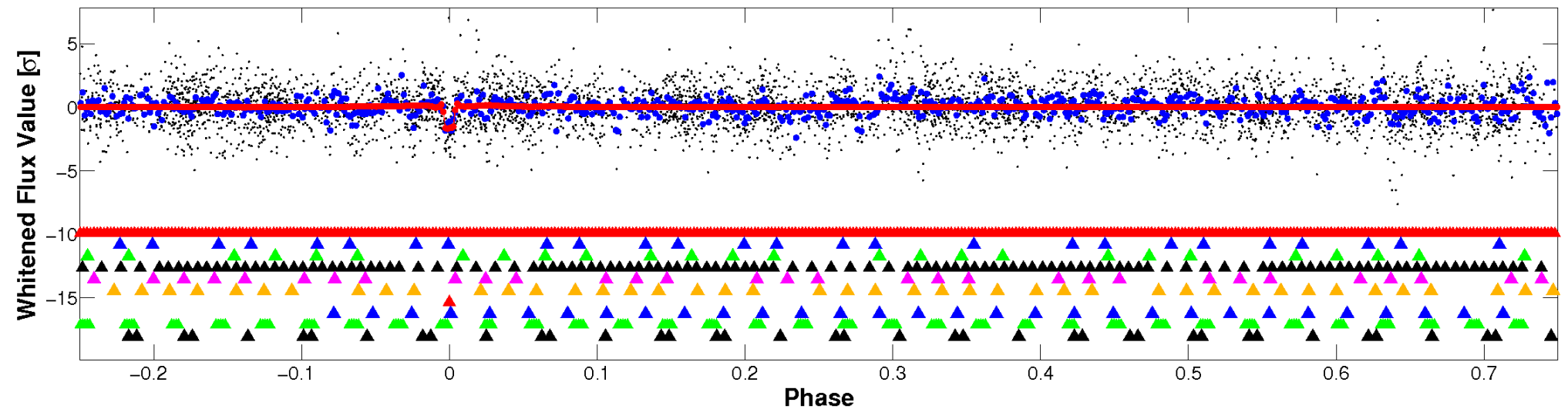


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

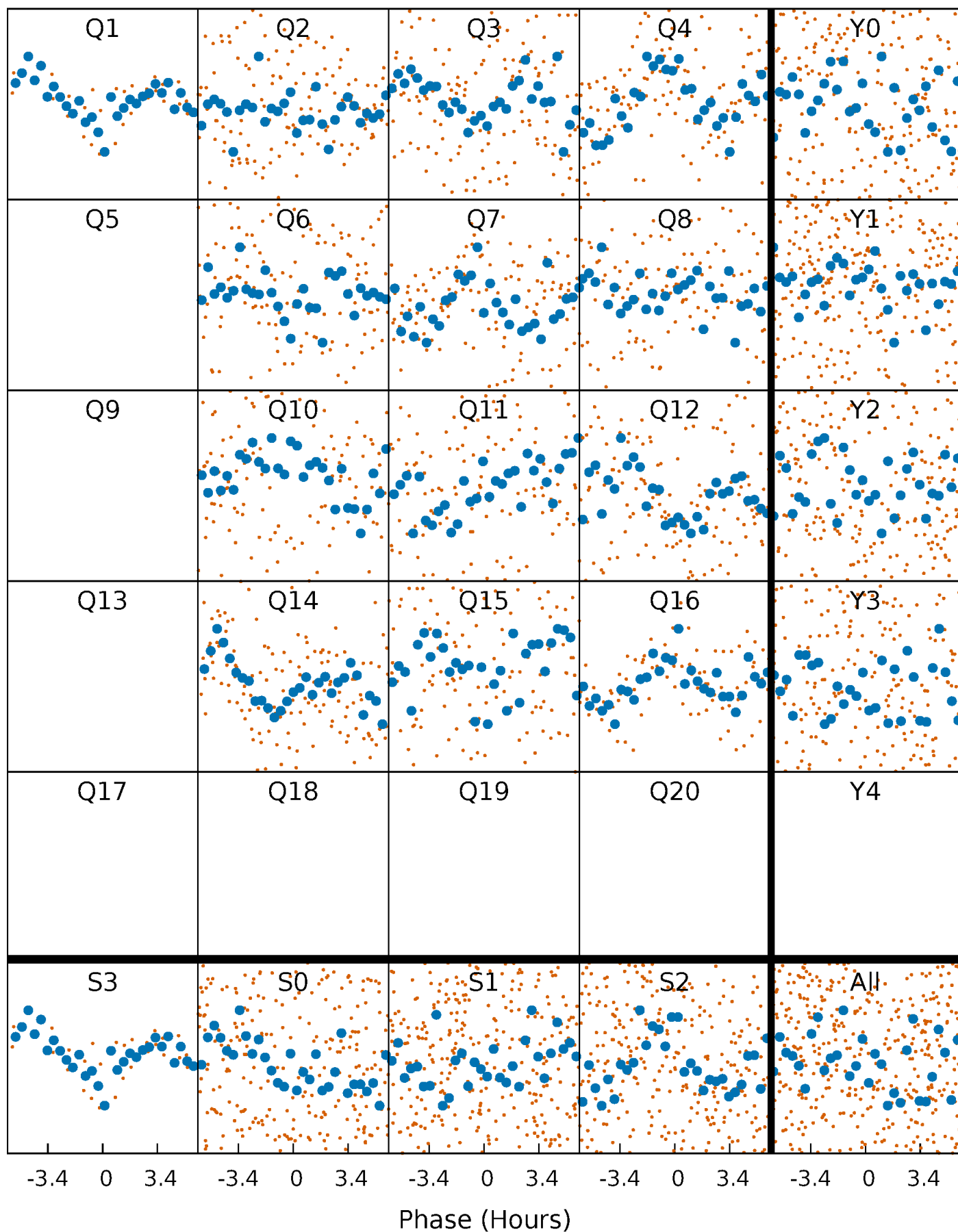


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



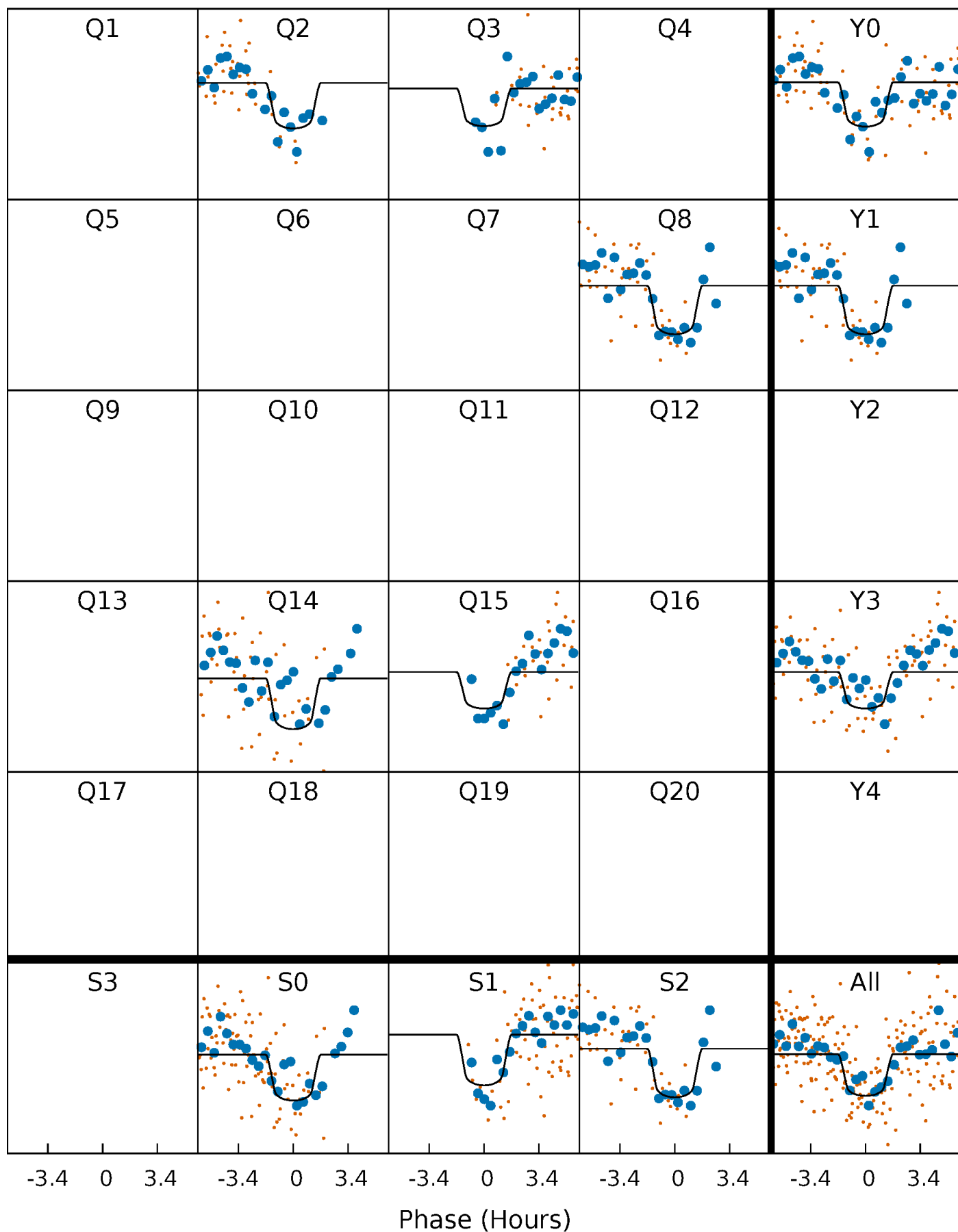
PDC Quarter-Phased Transit Curves

TCE 006670894-07 P= 15.241088 Days $T_0=144.414922$ (BKJD)



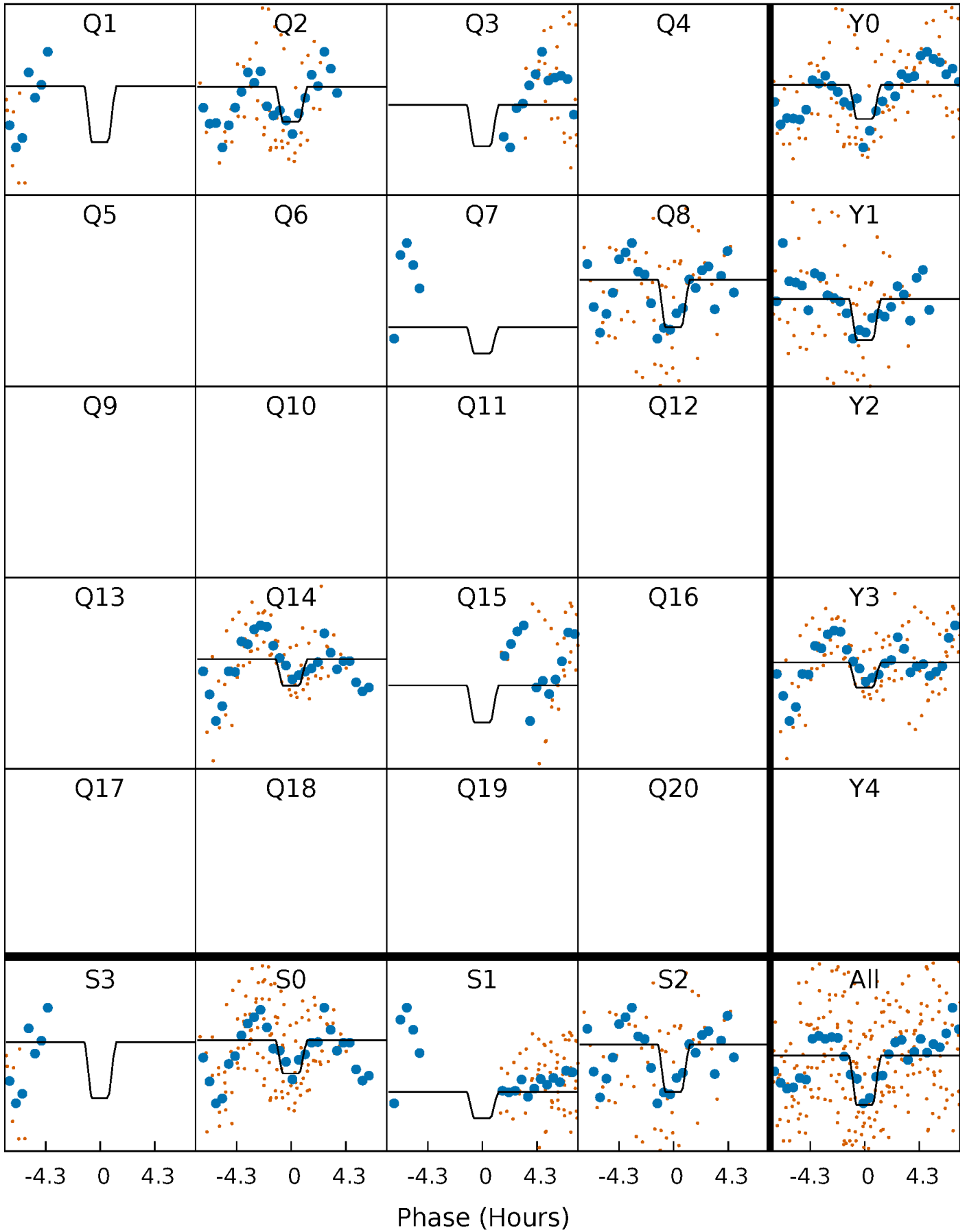
DV Quarter-Phased Transit Curves

TCE 006670894-07 P= 15.241088 Days $T_0=144.414922$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

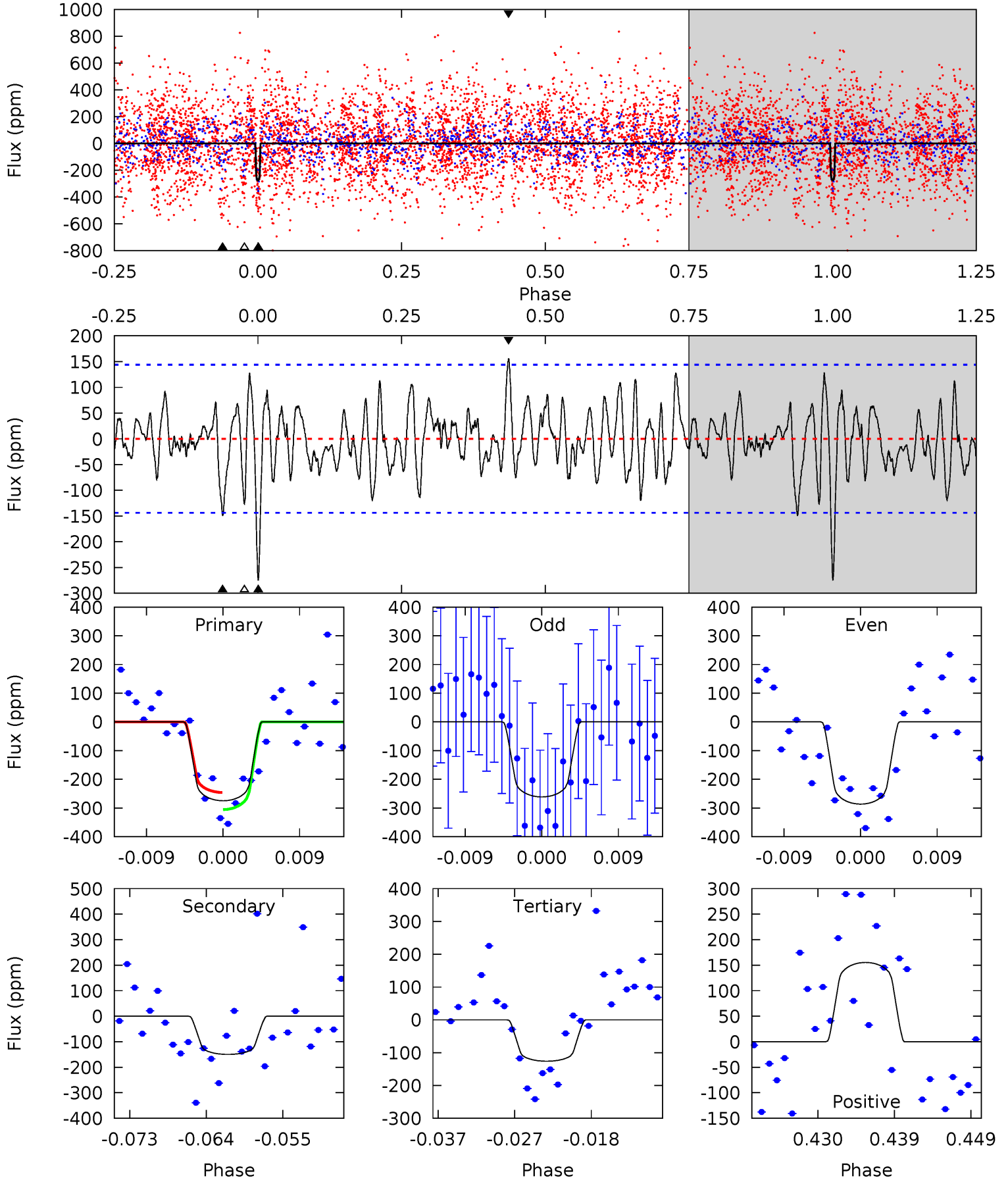
TCE 006670894-07 $P = 15.240912$ Days $T_0 = 144.326428$ (BKJD)



DV Model-Shift Uniqueness Test

006670894-07, P = 15.241088 Days, E = 129.173834 Days

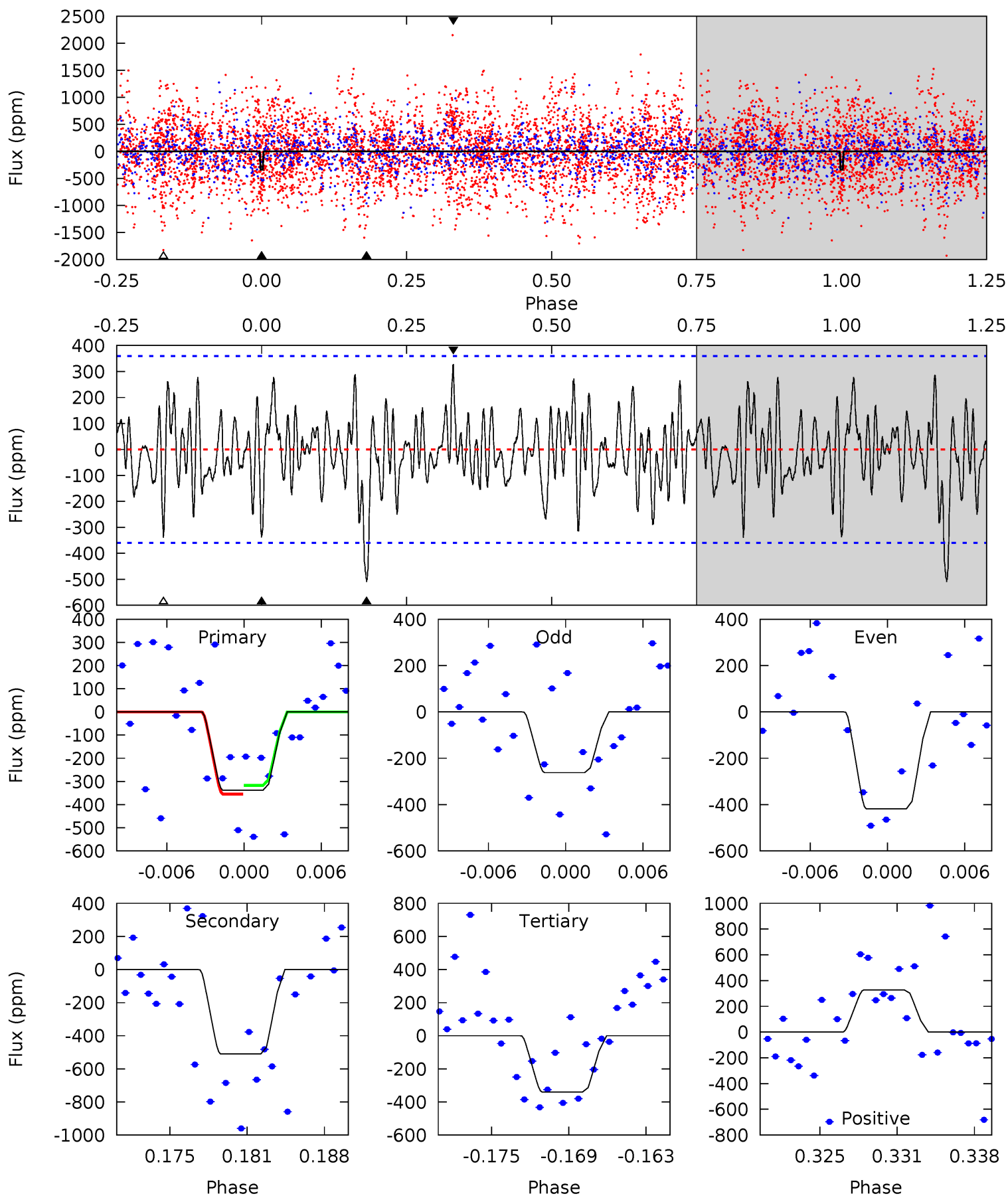
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.64	5.25	4.42	5.45	5.04	2.61	1.76	5.22	4.19	0.83	-0.20	0.43	0.87	0.36	1.04



Alt Model-Shift Uniqueness Test

006670894-07, P = 15.240912 Days, E = 129.085516 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.81	7.26	4.85	4.67	5.12	2.73	1.70	-0.03	0.15	2.41	2.59	1.12	1.08	0.39	0.26



Stellar Parameters For KIC 006670894

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7266^{+226}_{-327}	$4.082^{+0.170}_{-0.170}$	$-0.080^{+0.250}_{-0.350}$	$1.876^{+0.585}_{-0.439}$	$1.546^{+0.212}_{-0.259}$	$0.330^{+0.299}_{-0.157}$
	+3%/-5%	+4%/-4%	+312%/-438%	+31%/-23%	+14%/-17%	+91%/-48%
Source	KIC0	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 006670894-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-150 ± 29	$3.72^{+1.98}_{-1.80}$	1641^{+124}_{-117}	5837^{+2524}_{-1015}	113^{+293}_{-66}
Alt.	-510 ± 70	$4.18^{+2.04}_{-1.98}$	1640^{+127}_{-115}	7679^{+4057}_{-1501}	309^{+793}_{-171}

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 $A_{obs} \gg 1.0$

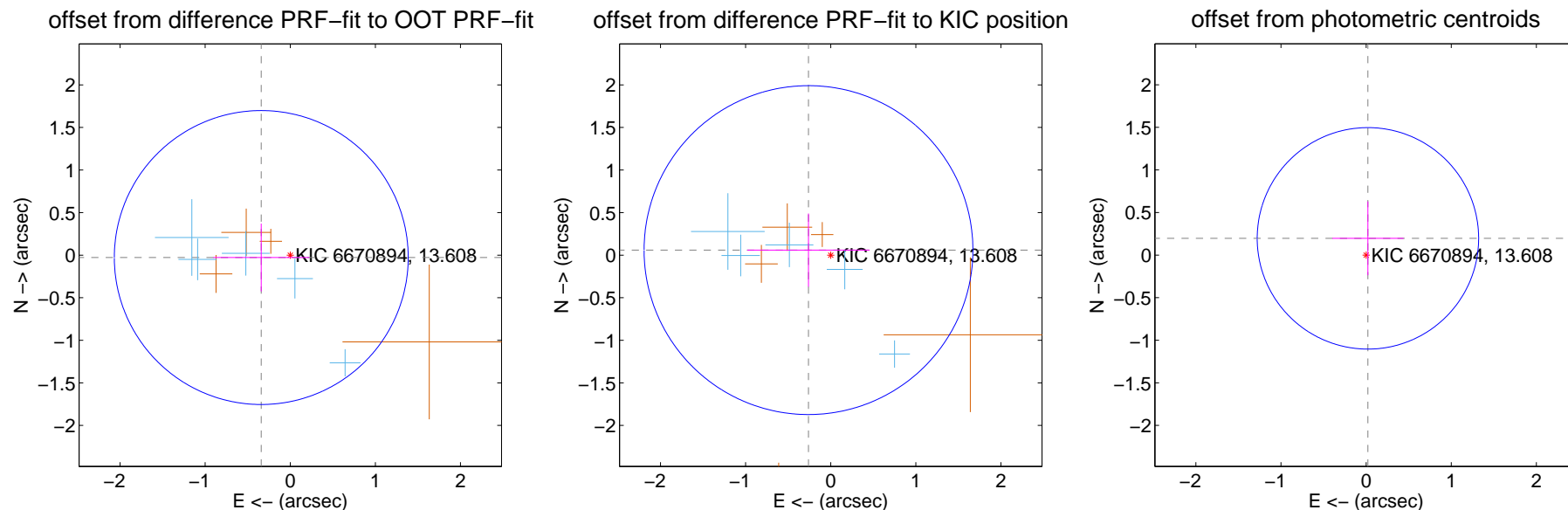
DV Centroid Data

Supplemental centroid analysis for 006670894-07. Kepler magnitude: 13.61. Transit SNR 11.40

There are 5 quarters with good PRF difference image offsets

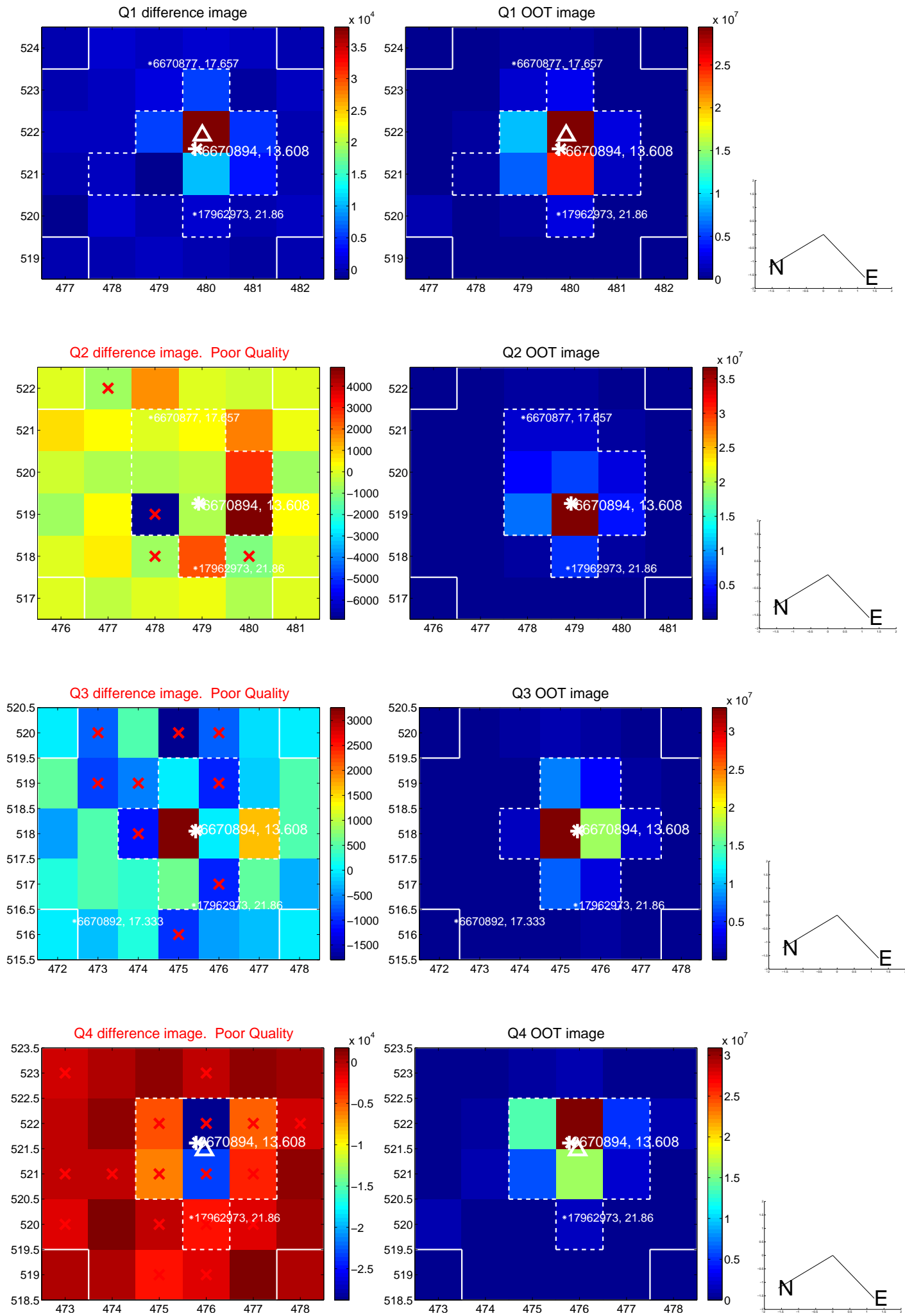
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.342 ± 0.575	0.59	0.341 ± 0.564	-0.028 ± 0.398
PRF-fit source offset from KIC position	0.268 ± 0.644	0.42	0.261 ± 0.718	0.059 ± 0.430
photometric centroid source offset	0.20 ± 0.43	0.46	-0.02 ± 0.42	0.20 ± 0.43

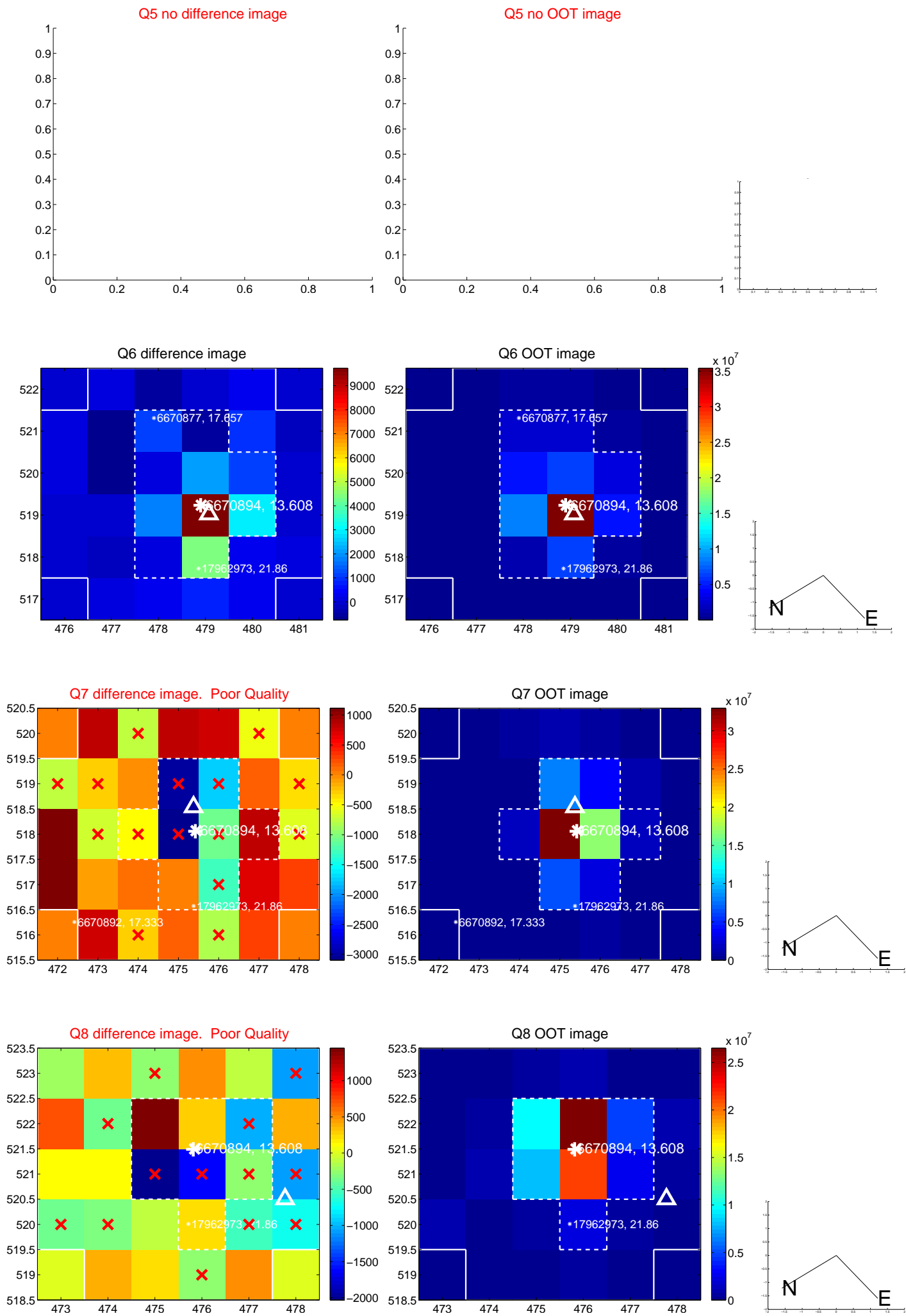


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

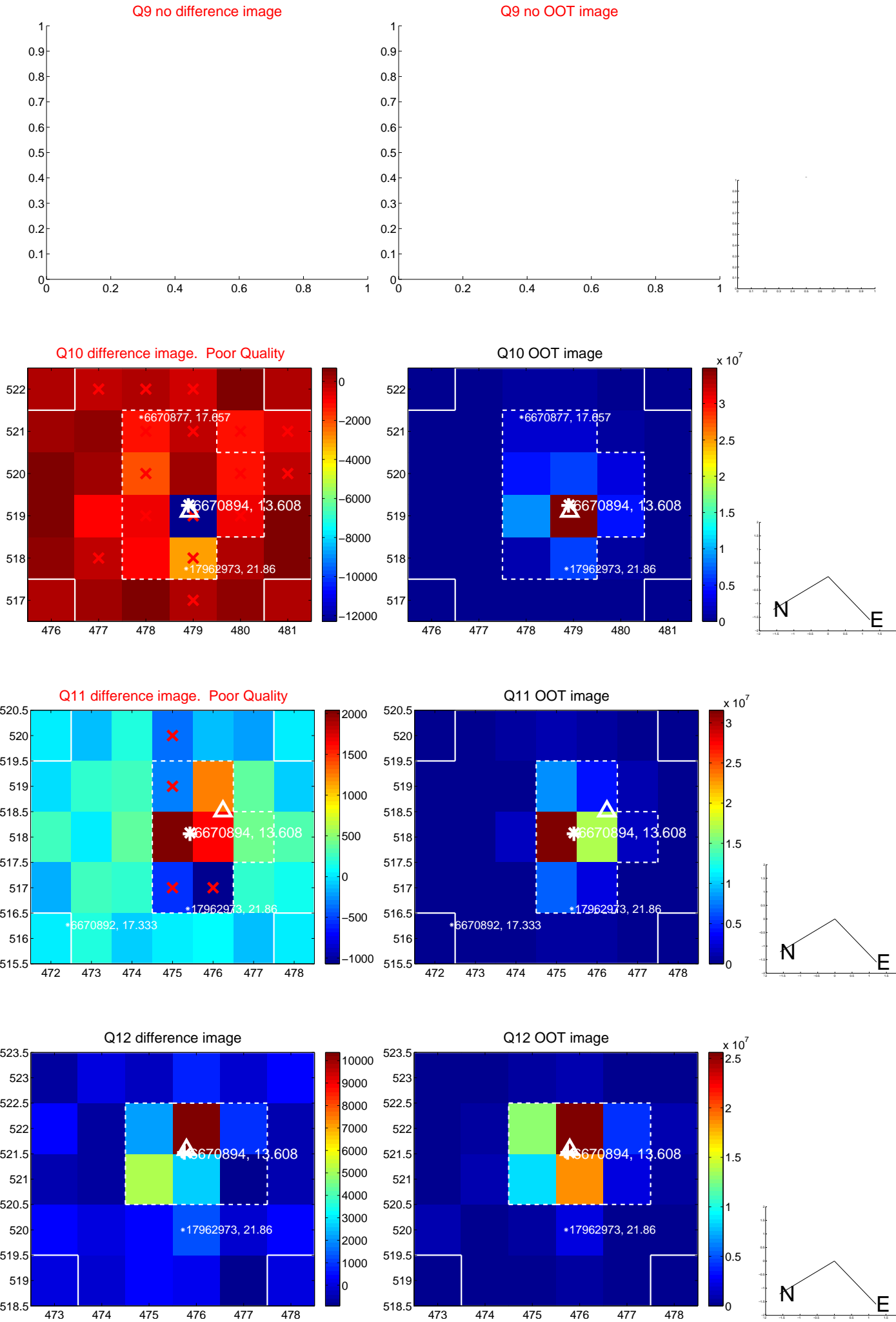
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



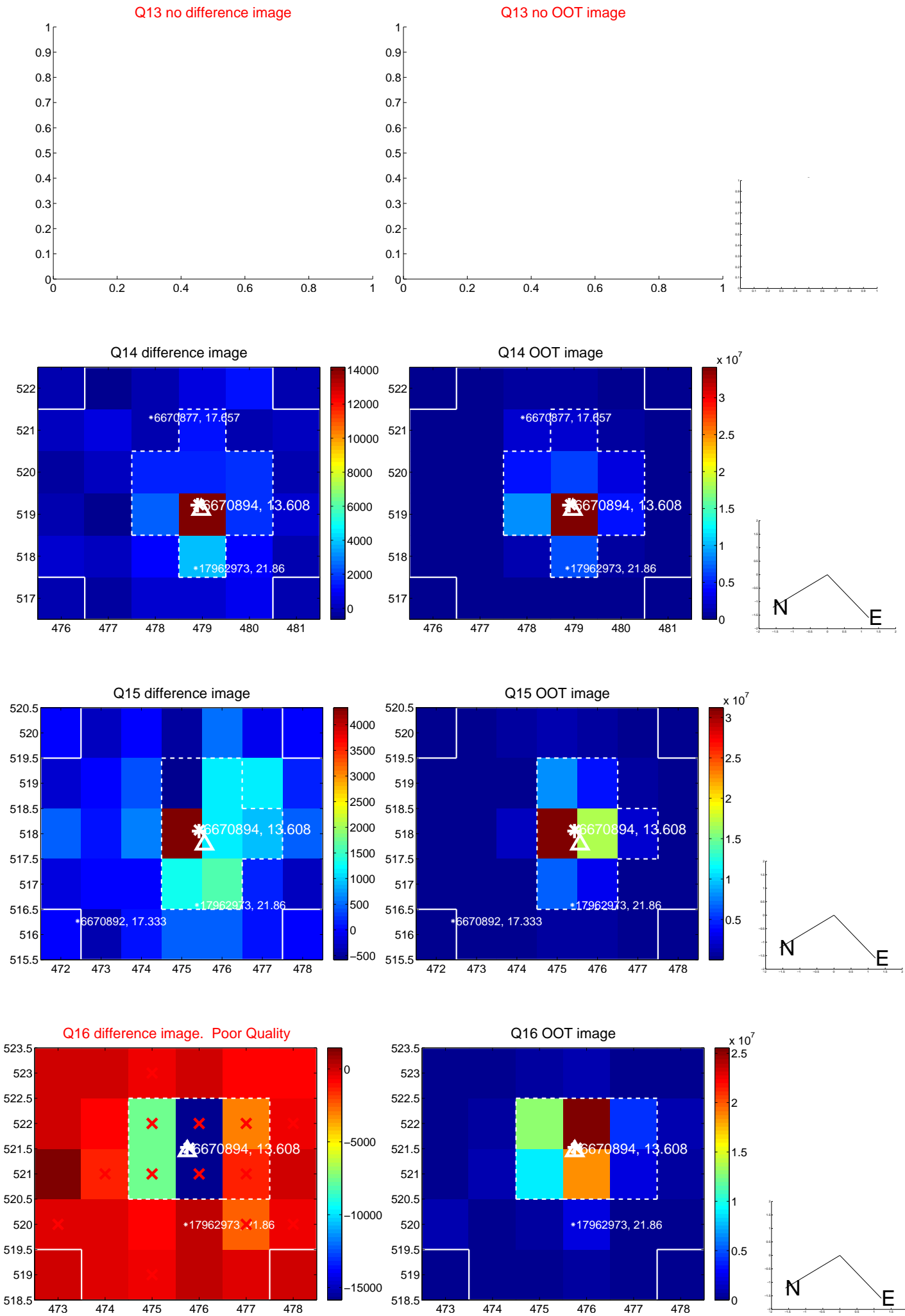
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



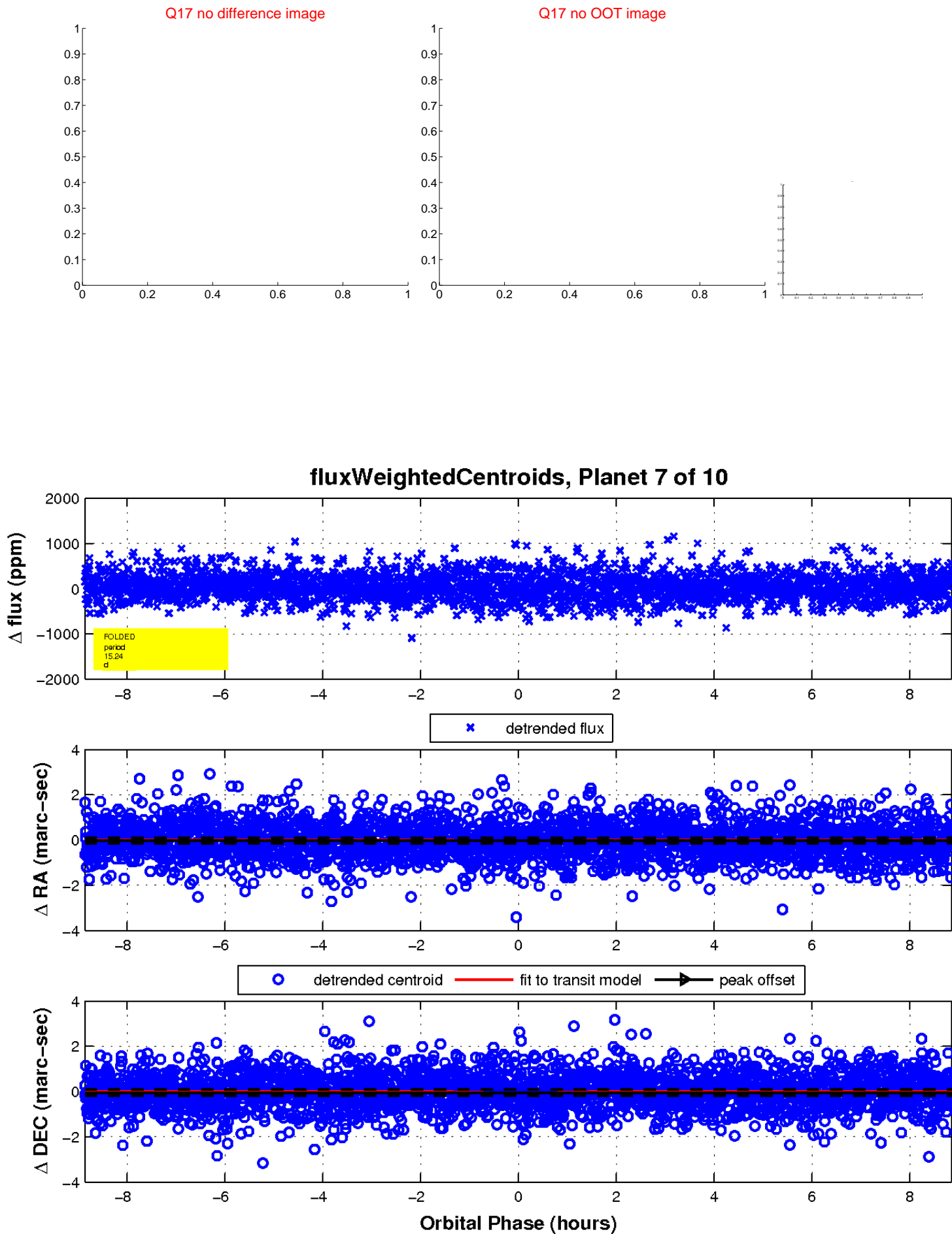
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

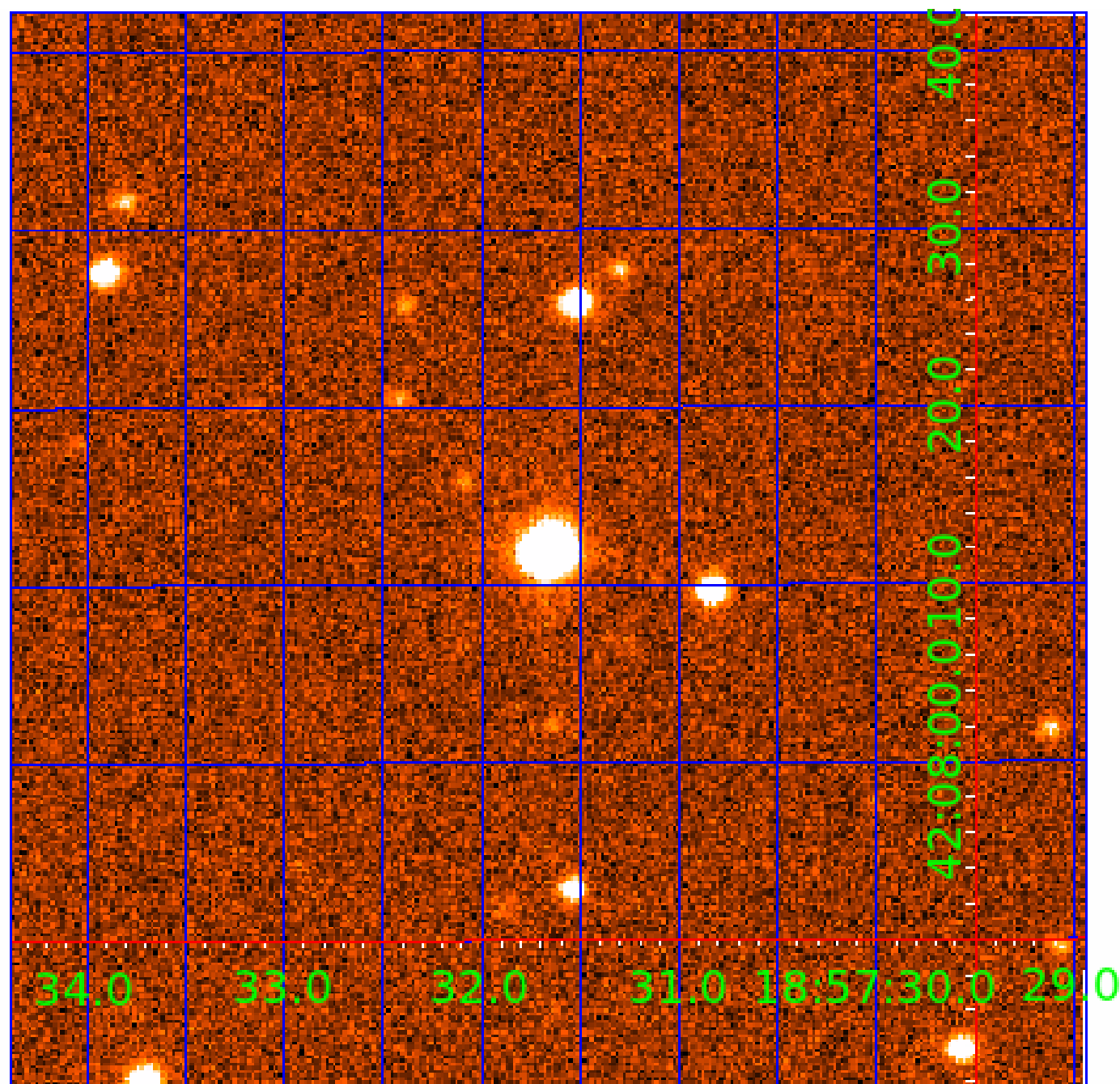


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
006670894-01	OBS	No	2.551845	132.460661	50.0	18.029	9.6	9.8	1.88	7266	1.38	4910.12
006670894-02	OBS	No	55.544984	174.552307	296.6	7.510	12.9	6.5	1.88	7266	3.43	80.79
006670894-03	OBS	No	56.670287	146.490621	623.9	5.356	16.0	13.6	1.88	7266	5.74	78.66
006670894-04	OBS	No	11.381235	140.143288	309.4	3.826	11.2	11.6	1.88	7266	3.76	668.82
006670894-05	OBS	No	47.278774	156.605446	531.2	2.331	9.8	10.5	1.88	7266	5.37	100.16
006670894-06	OBS	No	33.977317	161.813527	437.1	3.226	9.3	10.3	1.88	7266	4.19	155.59
006670894-07	OBS	No	15.241088	144.414923	289.3	2.955	9.5	11.4	1.88	7266	3.60	453.12
006670894-08	OBS	No	46.125163	173.705739	483.3	2.500	8.6	9.3	1.88	7266	4.24	103.51
006670894-09	OBS	No	9.236289	138.873408	250.7	2.594	8.8	9.5	1.88	7266	3.38	883.56
006670894-10	OBS	No	35.972270	166.674102	374.5	3.555	8.4	10.3	1.88	7266	3.88	144.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006670894-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006670894-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006670894-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006670894-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-09	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
006670894-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

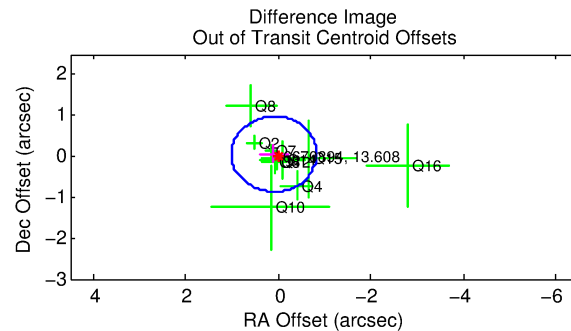
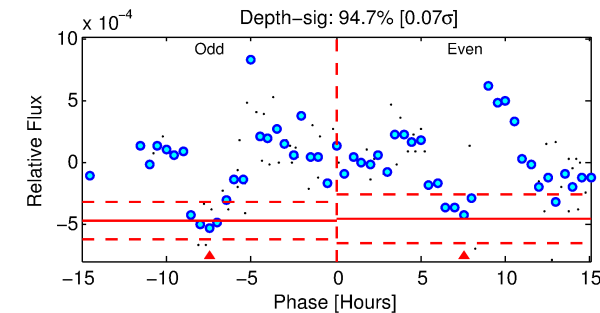
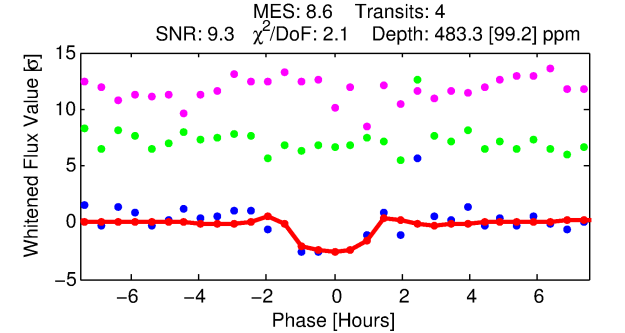
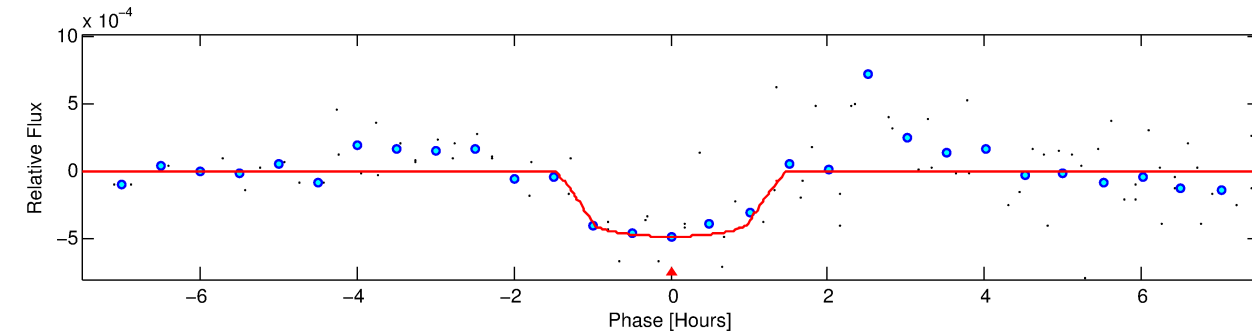
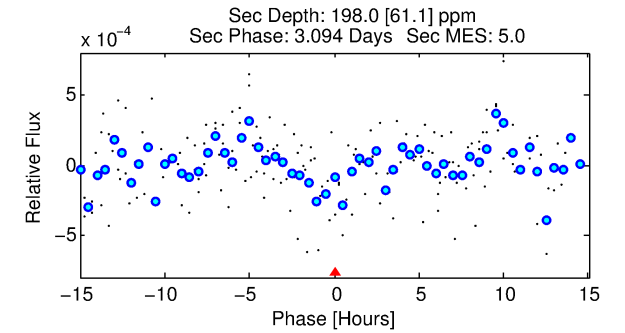
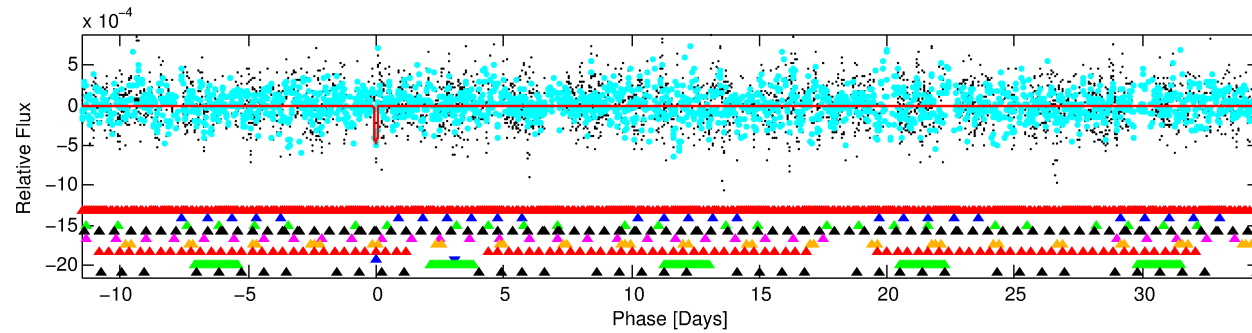
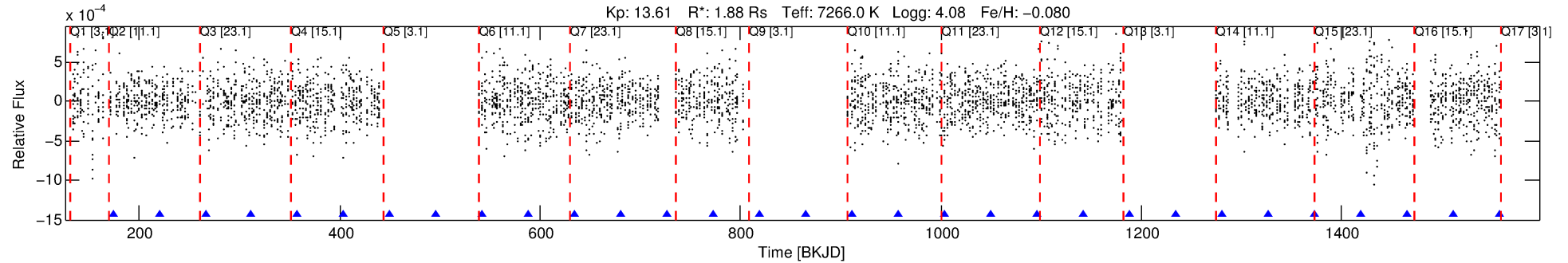
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006670894-08

No Significant Match Found

DV One-Page Summary

KIC: 6670894 Candidate: 8 of 10 Period: 46.125 d



DV Fit Results:

Period = 46.12516 [0.00085] d
Epoch = 173.7057 [0.0134] BKJD
Rp/R* = 0.0207 [0.0614]
a/R* = 132.91 [2347.08]
b = 0.39 [38.43]
Seff = 103.51 [39.24]
Teq = 813 [77] K
Rp = 4.24 [12.65] Re
a = 0.2914 [0.0715] AU
Ag = 514.19 [3059.01] [0.17σ]
Teffp = 5988 [8896] K [0.58σ]

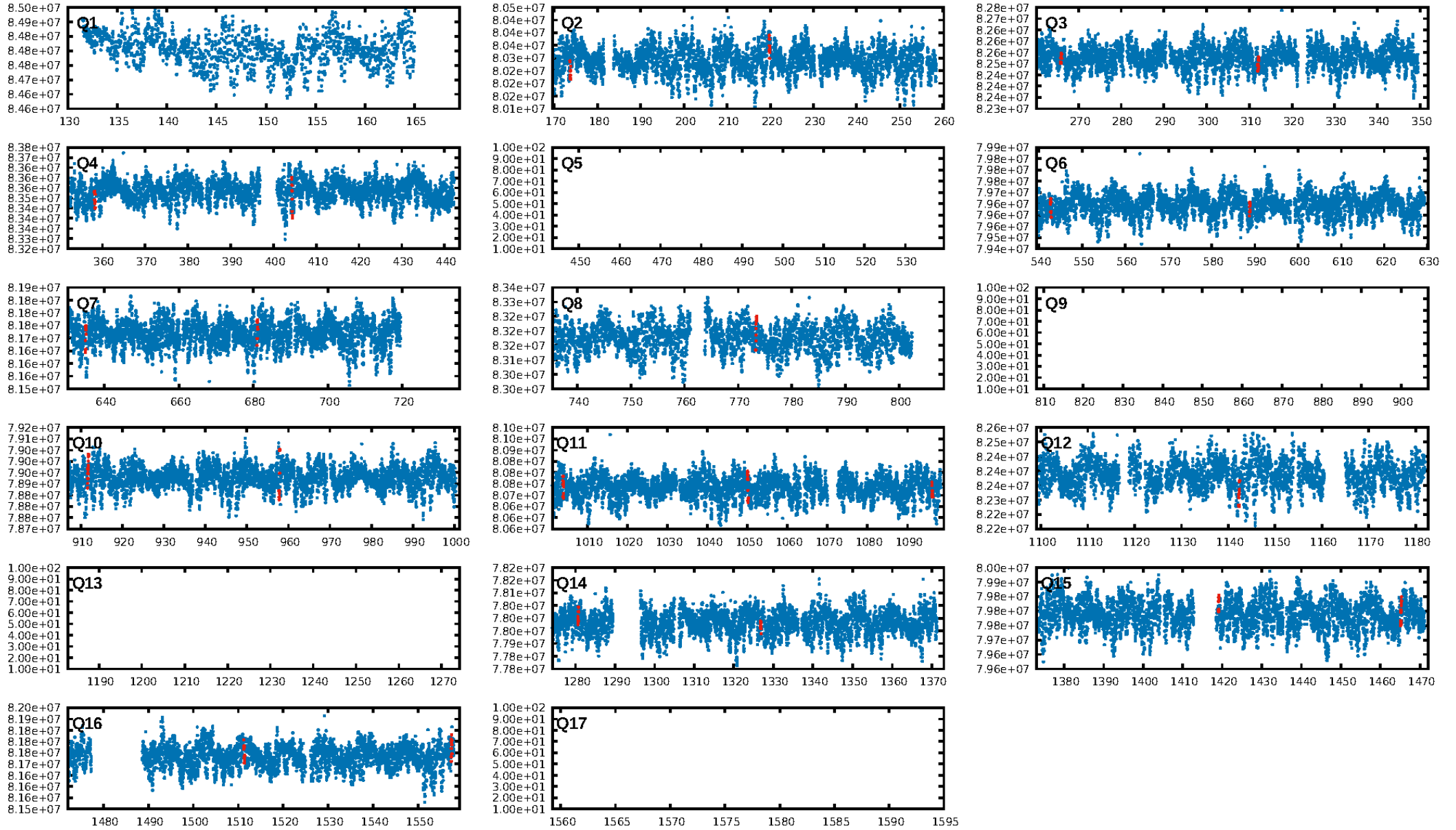
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [56.07σ]
LongPeriod-sig: 100.0% [8.10σ]
ModelChiSquare2-sig: 71.8%
ModelChiSquareGof-sig: 79.1%
Bootstrap-pfa: 2.82e-07
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -837.4
Centroid-sig: 16.2%
Centroid-so: 0.699 arcsec [1.46σ]
OotOffset-rm: 0.111 arcsec [0.36σ]
OotOffset-st: 4/2/4/0 [10]
KicOffset-rm: 0.161 arcsec [0.50σ]
KicOffset-st: 4/2/4/0 [10]
DiffImageQuality-fgm: 0.40 [4/10]
DiffImageOverlap-fno: 0.58 [7/12]

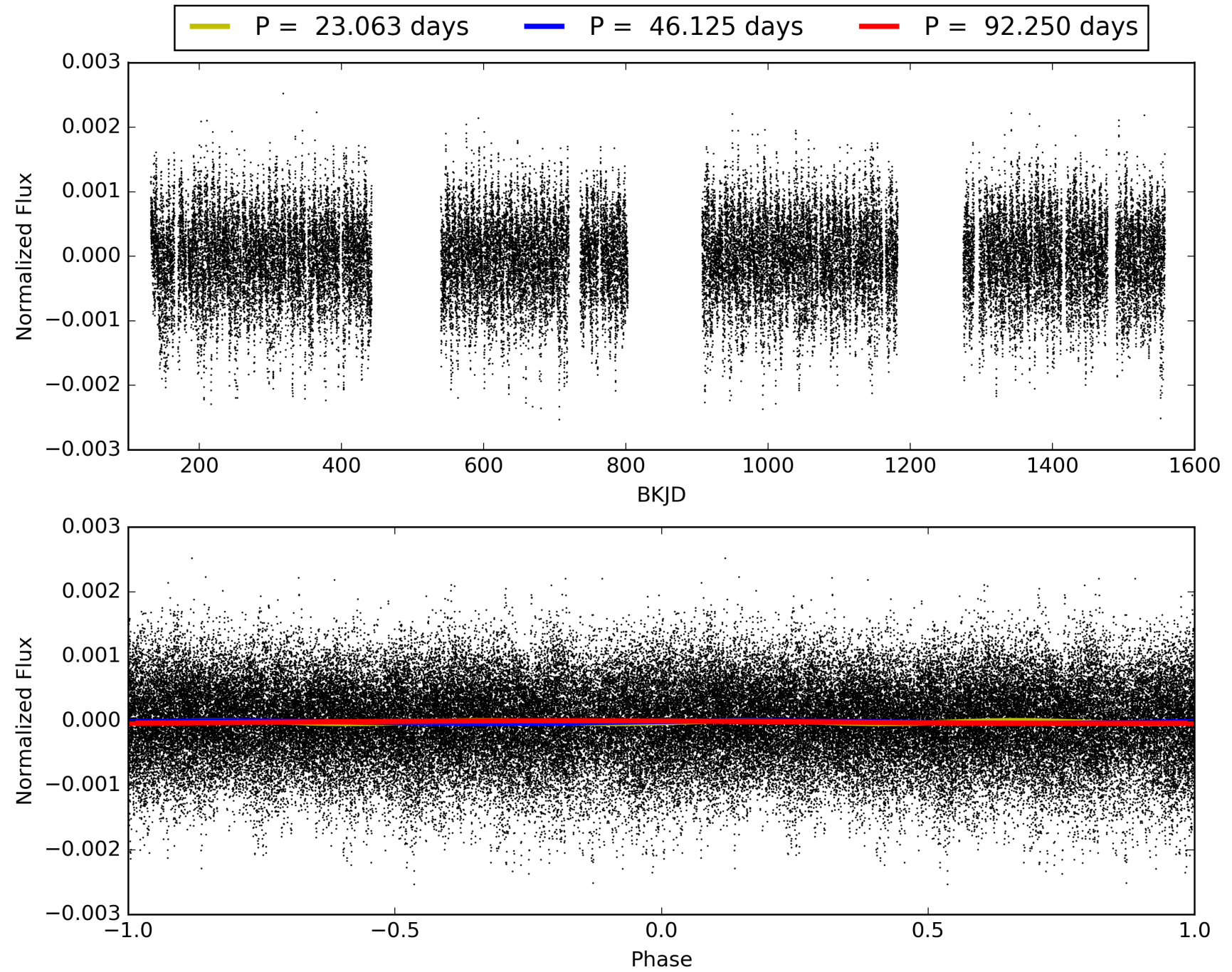
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 04:39:35 Z

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

TCE 006670894-08, PDC Light Curves

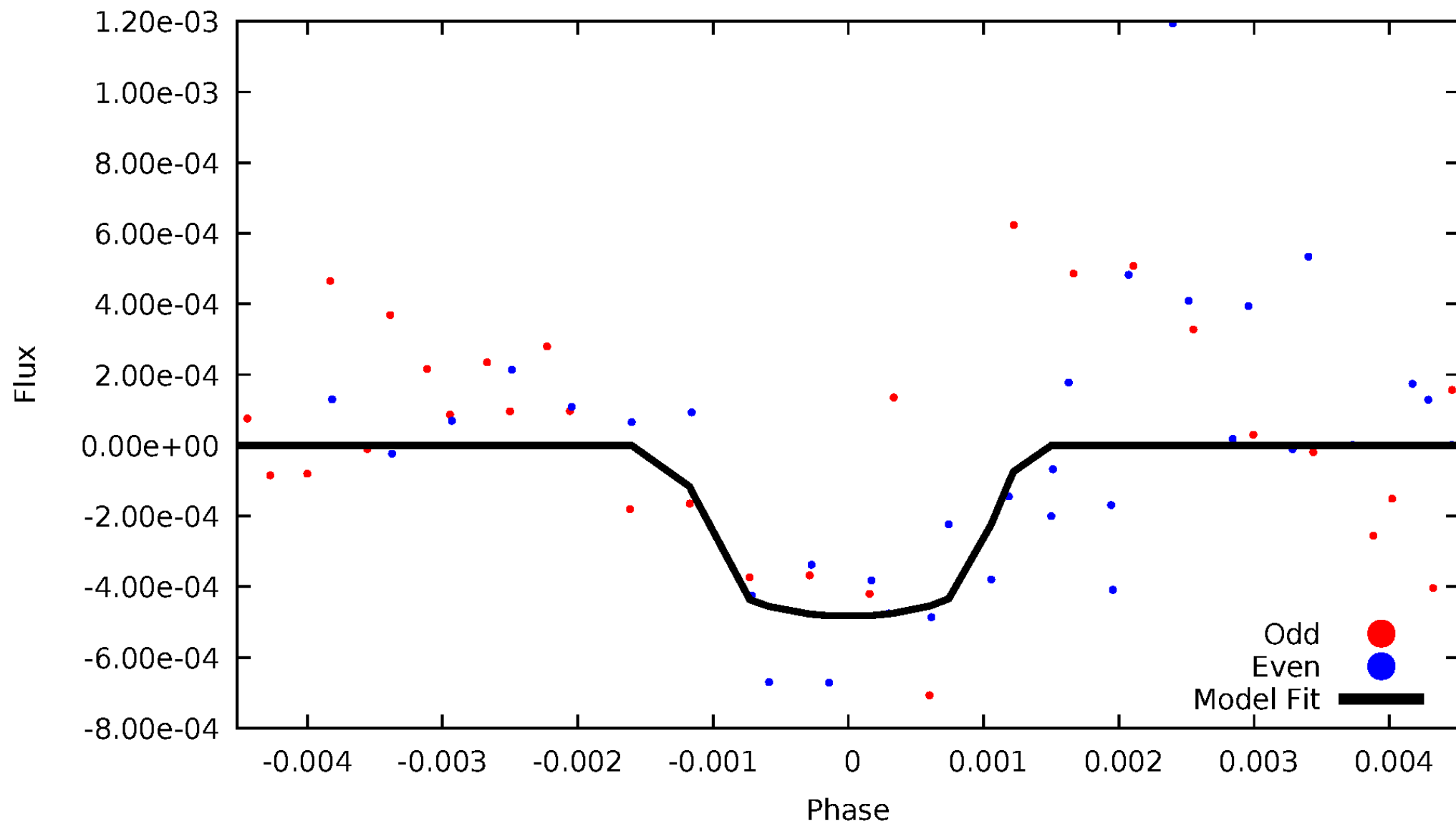


TCE 006670894-08



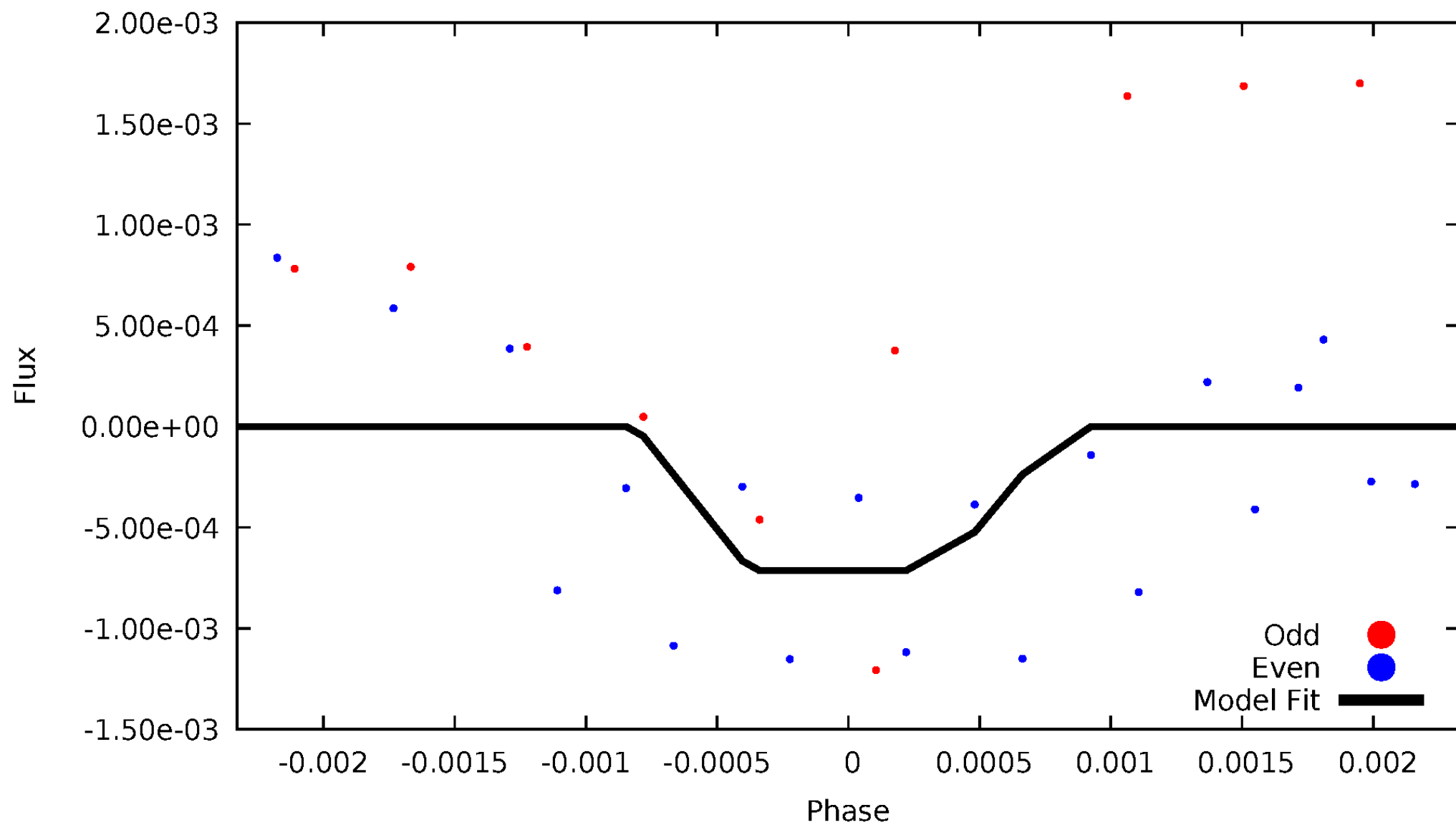
DV Odd/Even

TCE 006670894-08



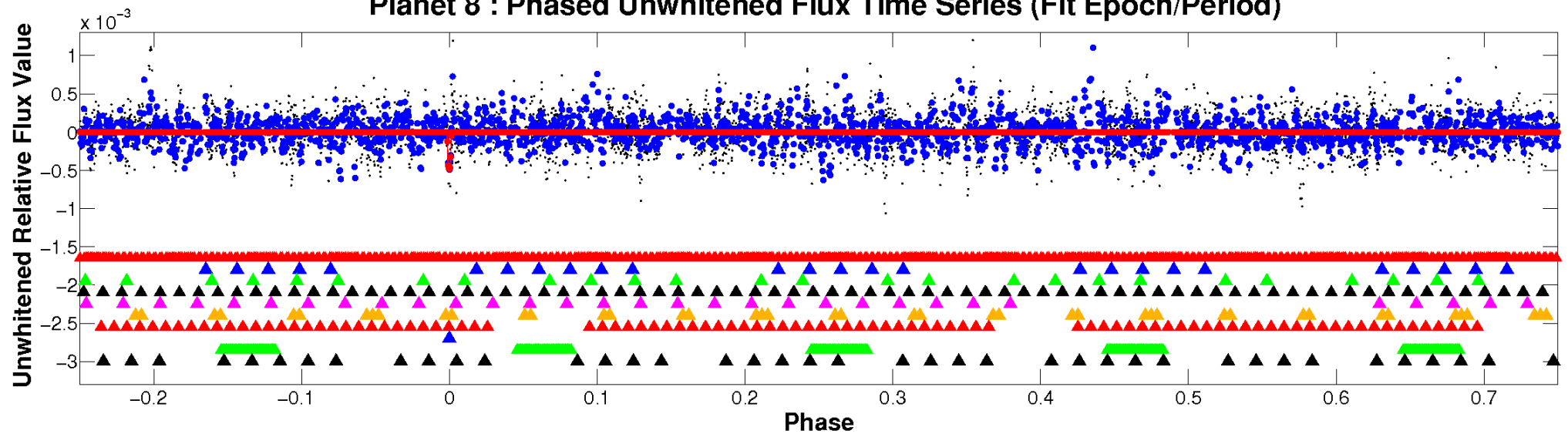
ALT Odd/Even

TCE 006670894-08

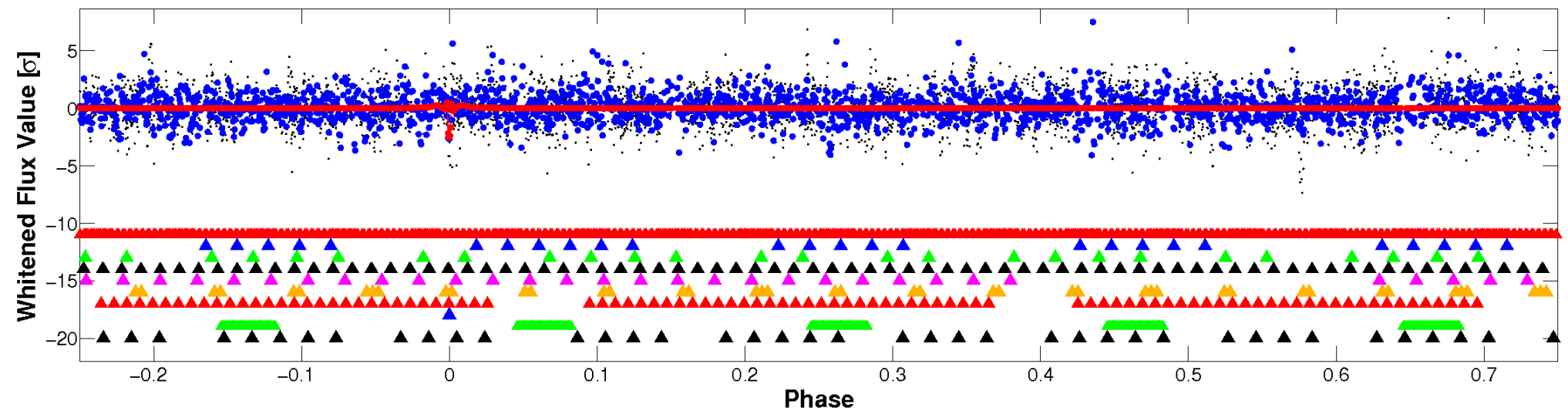


Non-Whitened Vs. Whitened Light Curve

Planet 8 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

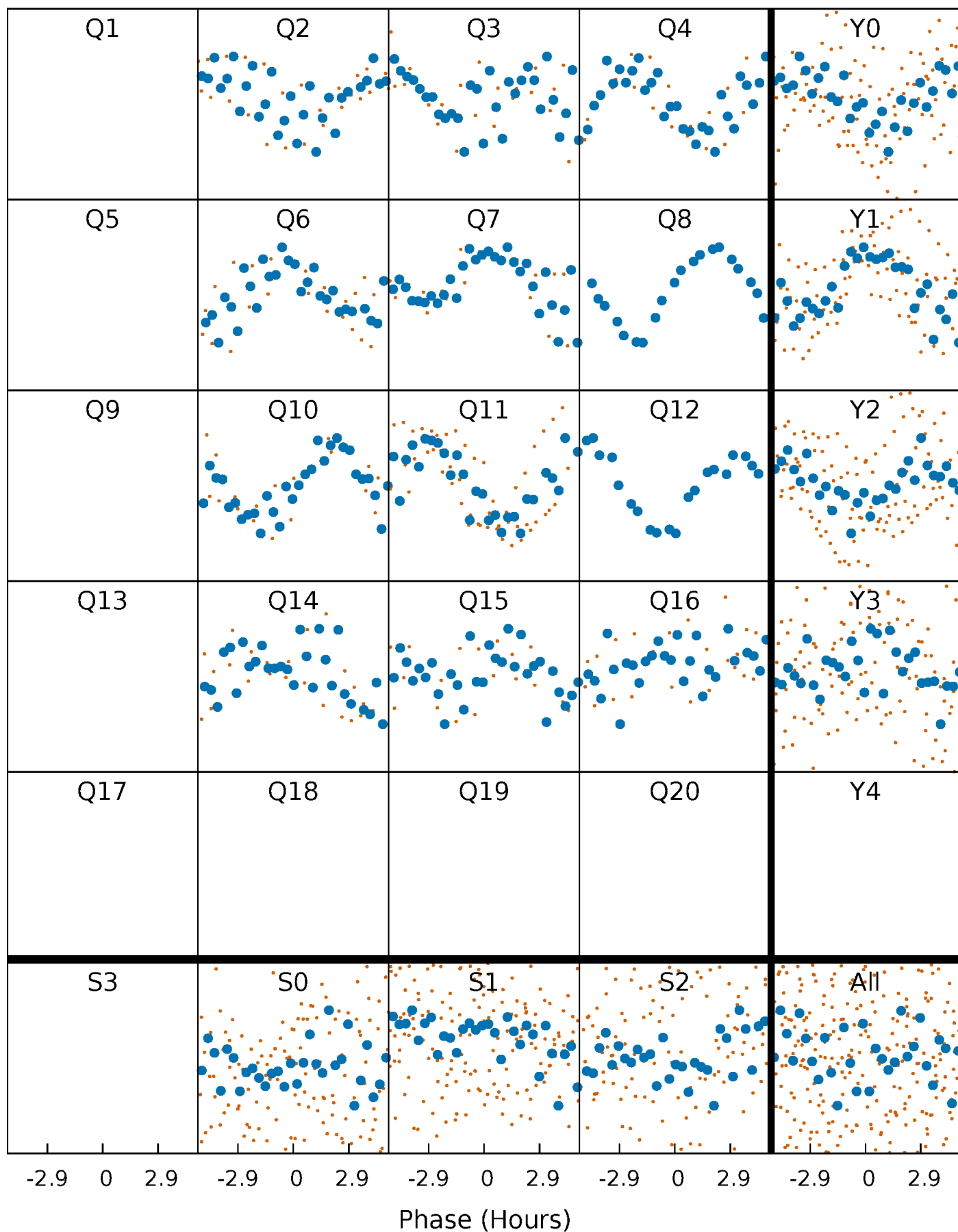


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



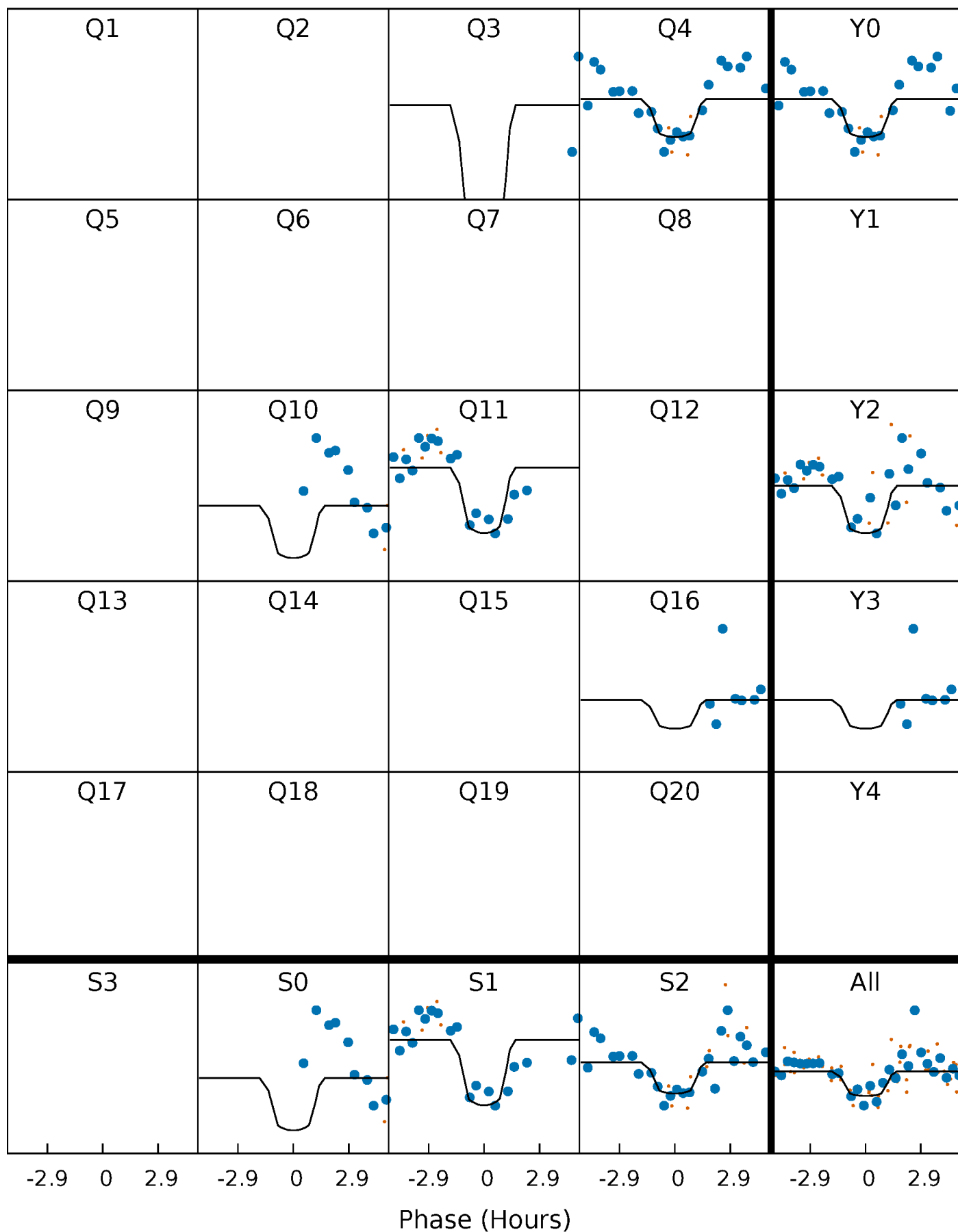
PDC Quarter-Phased Transit Curves

TCE 006670894-08 P= 46.125163 Days $T_0=173.705739$ (BKJD)



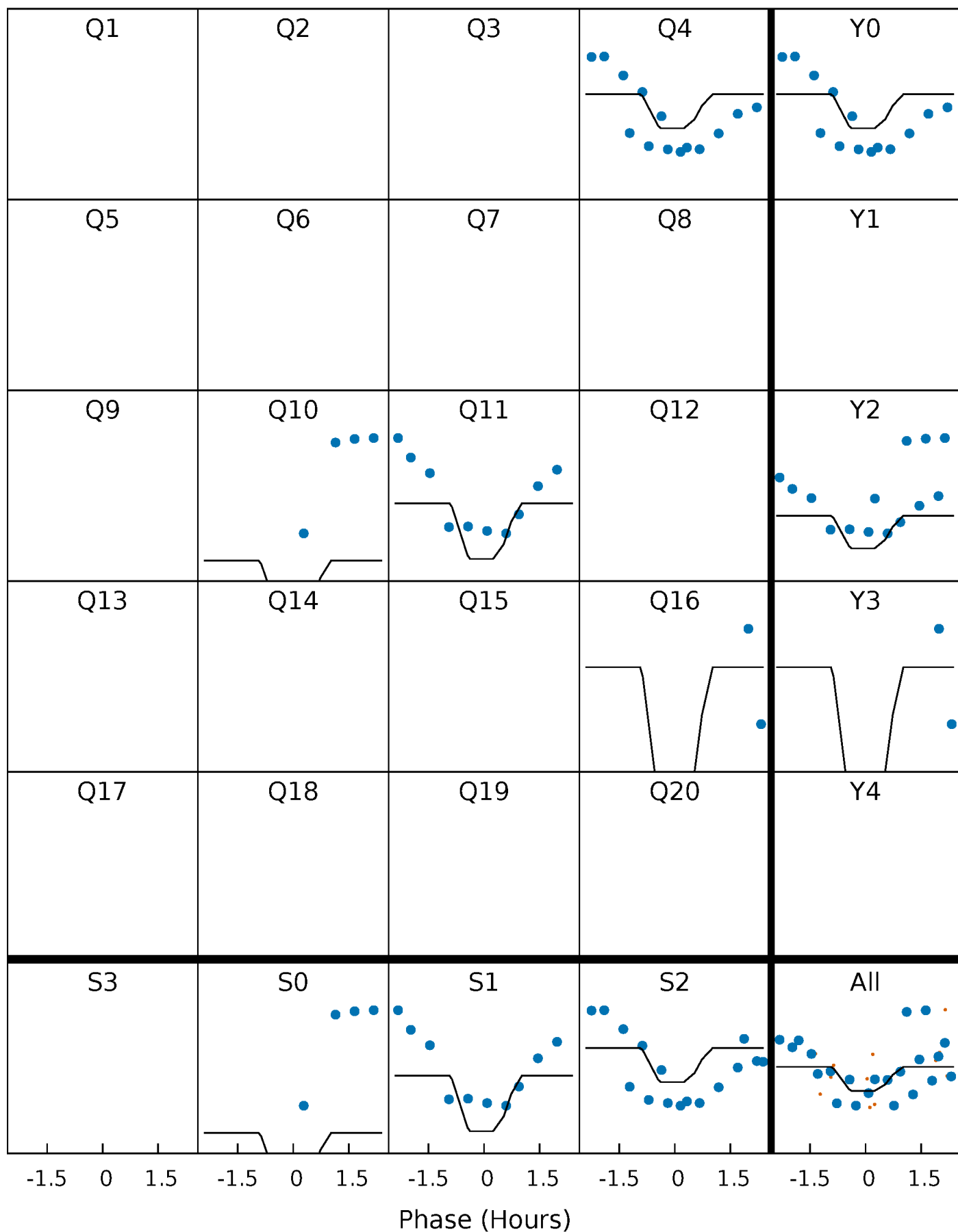
DV Quarter-Phased Transit Curves

TCE 006670894-08 P= 46.125163 Days $T_0=173.705739$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

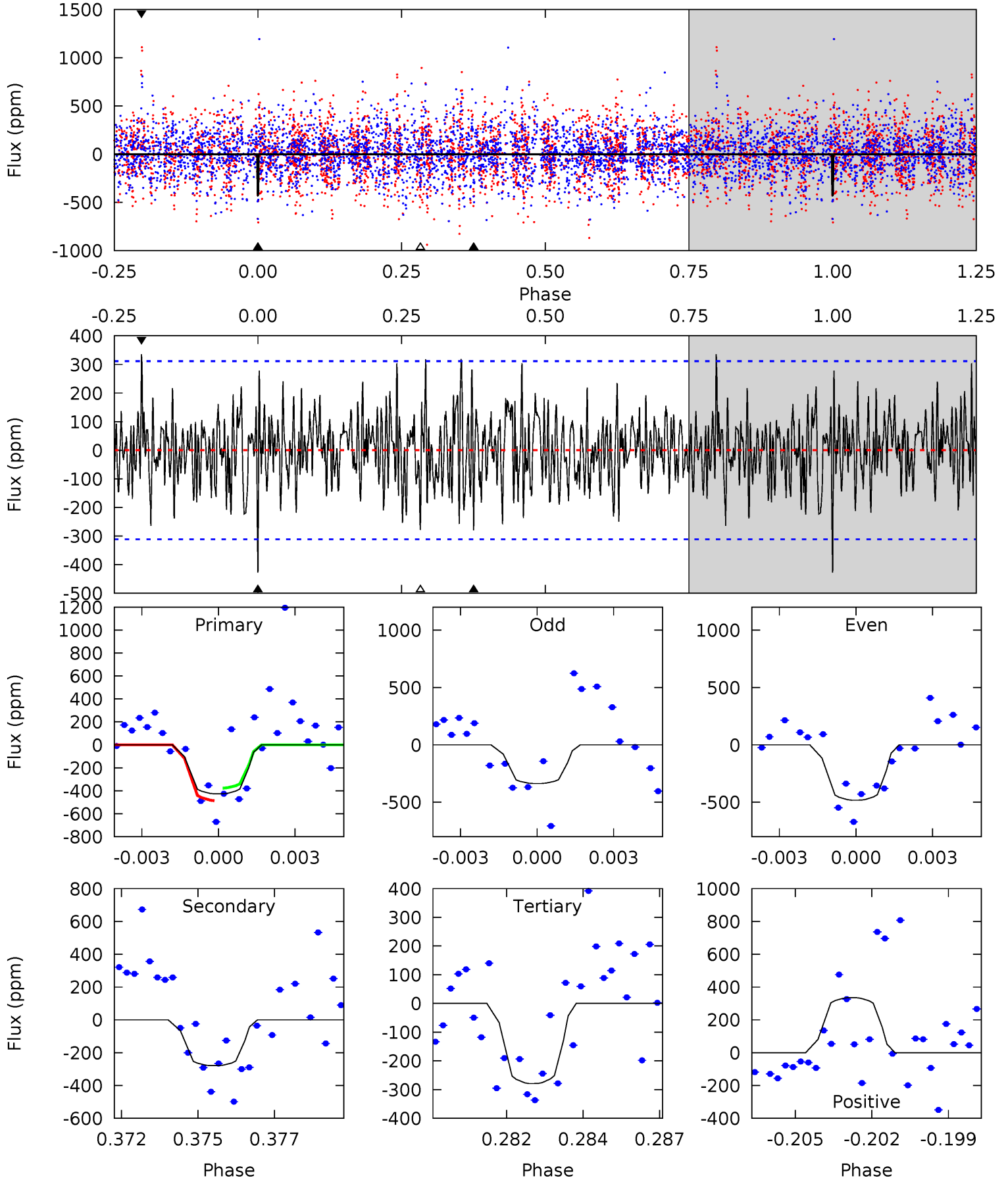
TCE 006670894-08 P= 46.123874 Days $T_0=173.735028$ (BKJD)



DV Model-Shift Uniqueness Test

006670894-08, P = 46.125163 Days, E = 127.580576 Days

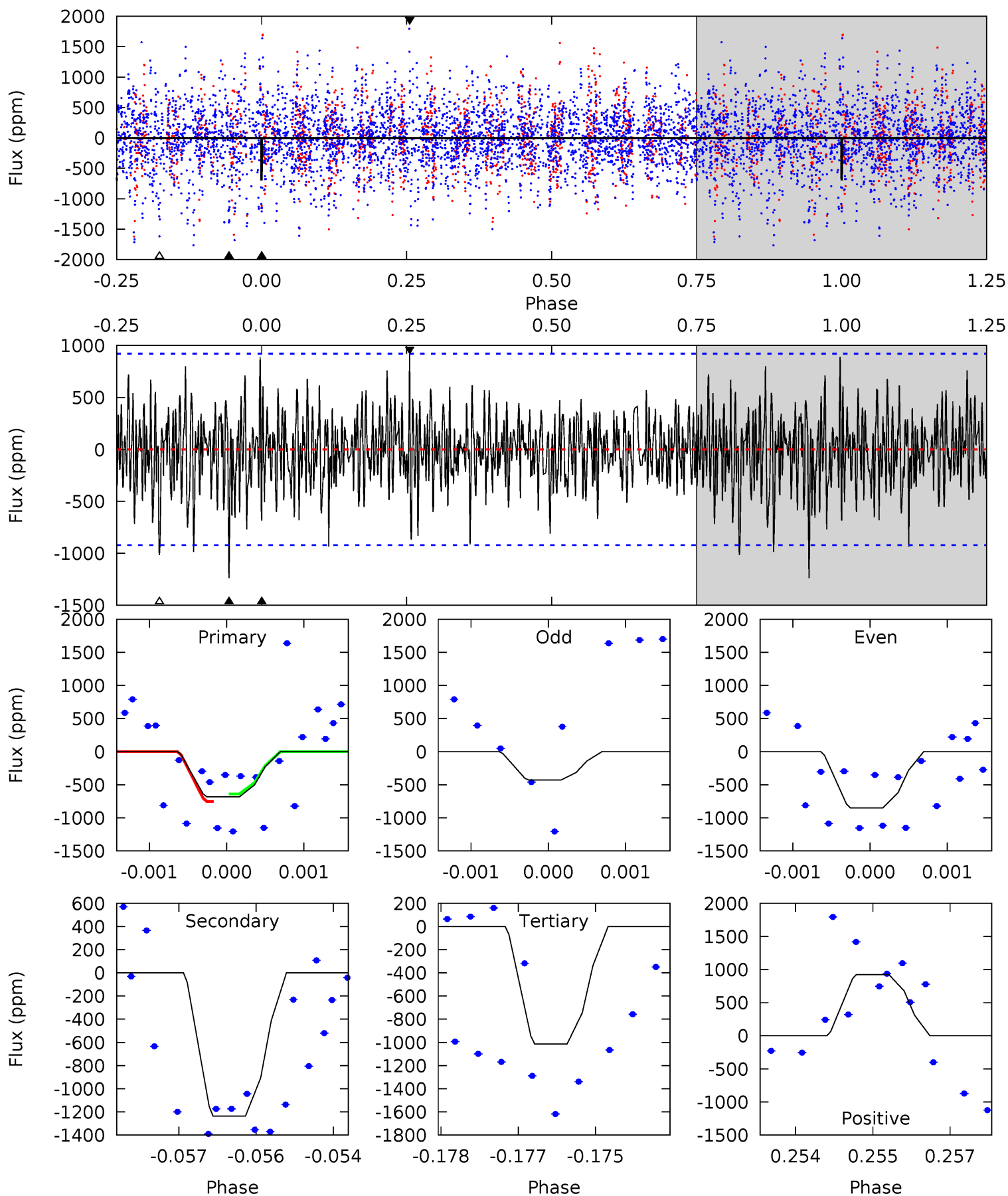
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.24	4.73	4.73	5.68	5.27	3.00	1.68	2.51	1.56	0.00	-0.95	1.20	0.67	0.44	0.91



Alt Model-Shift Uniqueness Test

006670894-08, P = 46.123874 Days, E = 127.611154 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.01	7.25	5.94	5.42	5.40	3.21	1.60	-1.93	-1.41	1.30	1.83	1.20	1.03	0.43	0.33



Stellar Parameters For KIC 006670894

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7266^{+226}_{-327}	$4.082^{+0.170}_{-0.170}$	$-0.080^{+0.250}_{-0.350}$	$1.876^{+0.585}_{-0.439}$	$1.546^{+0.212}_{-0.259}$	$0.330^{+0.299}_{-0.157}$
	+3%/-5%	+4%/-4%	+312%/-438%	+31%/-23%	+14%/-17%	+91%/-48%
Source	KIC0	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 006670894-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-279 ± 59	$9.70^{+10.36}_{-6.34}$	1129^{+91}_{-83}	4369^{+2713}_{-909}	131^{+913}_{-100}
Alt.	-1236 ± 171	$10.81^{+11.00}_{-7.54}$	1128^{+85}_{-85}	5839^{+5946}_{-1504}	486^{+4438}_{-367}

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 $A_{obs} \gg 1.0$

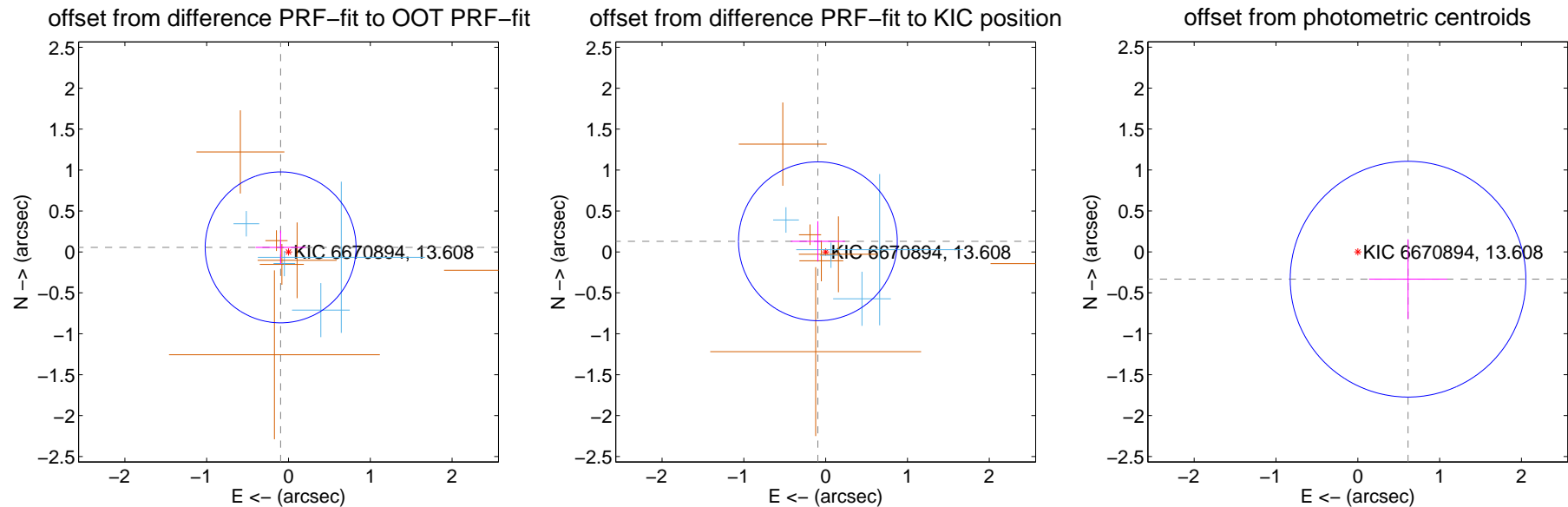
DV Centroid Data

Supplemental centroid analysis for 006670894-08. Kepler magnitude: 13.61. Transit SNR 9.29

There are 4 quarters with good PRF difference image offsets

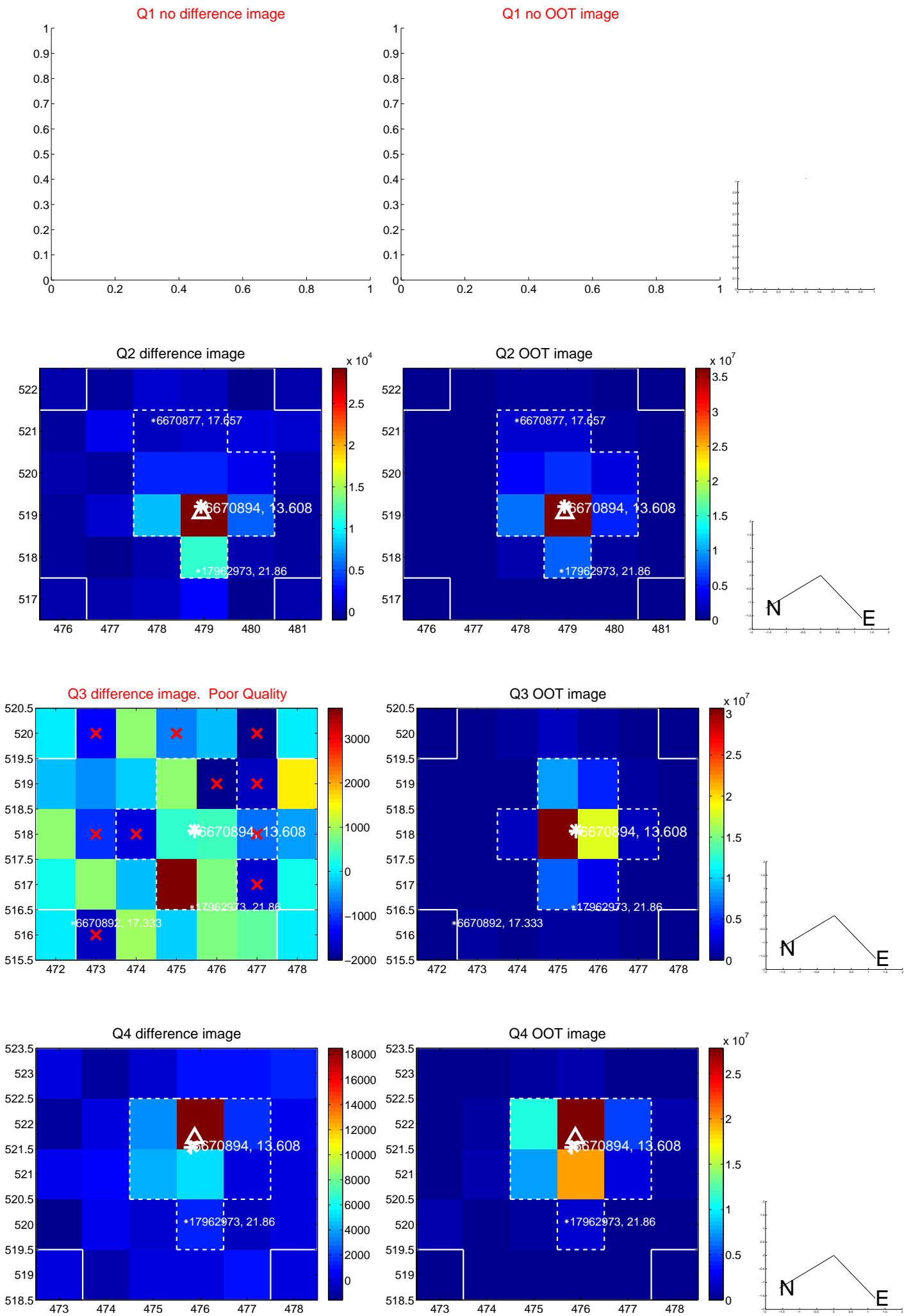
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.111 ± 0.307	0.36	0.096 ± 0.305	0.056 ± 0.205
PRF-fit source offset from KIC position	0.161 ± 0.323	0.50	0.095 ± 0.331	0.130 ± 0.245
photometric centroid source offset	0.70 ± 0.48	1.46	-0.61 ± 0.48	-0.33 ± 0.49

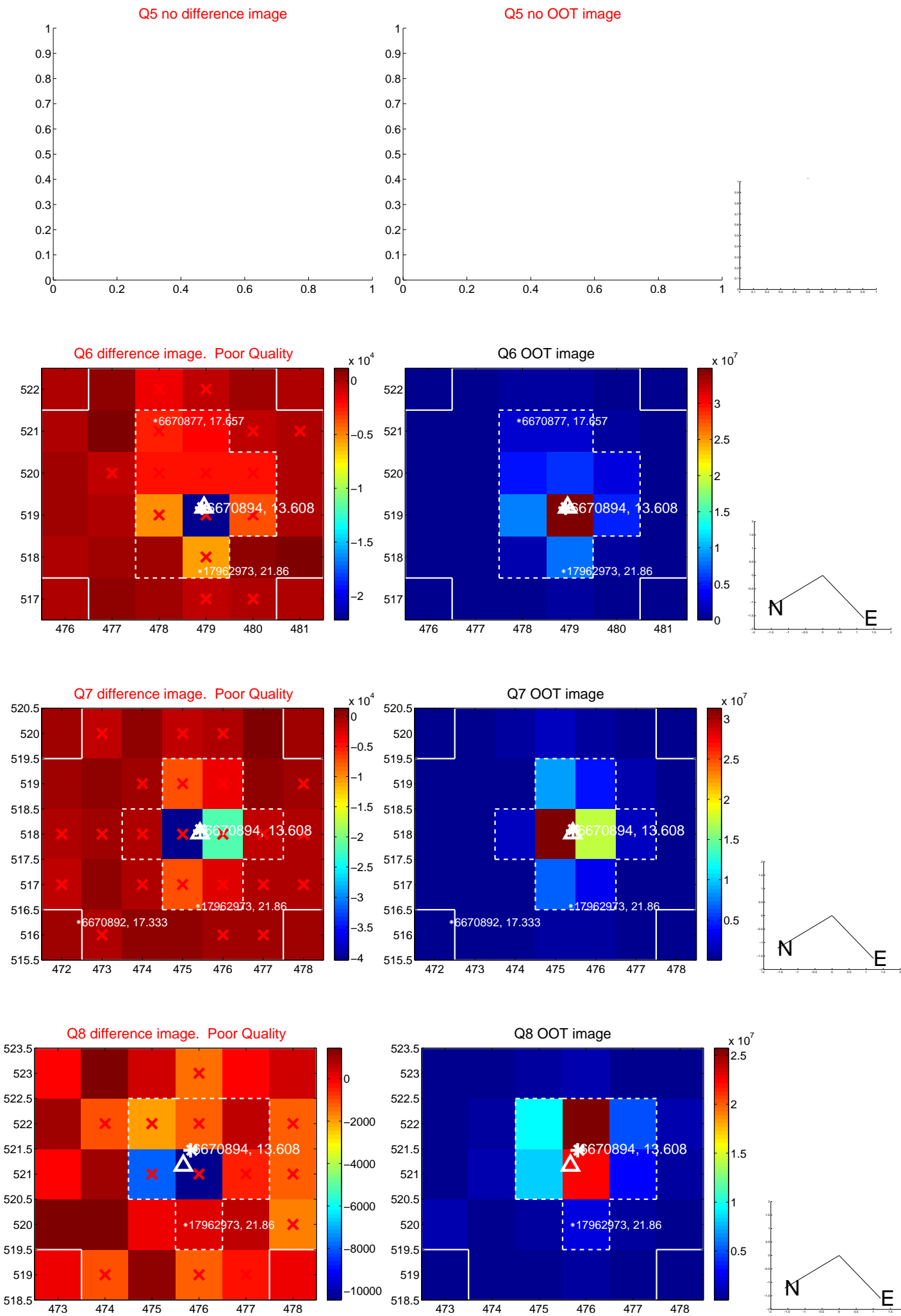


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

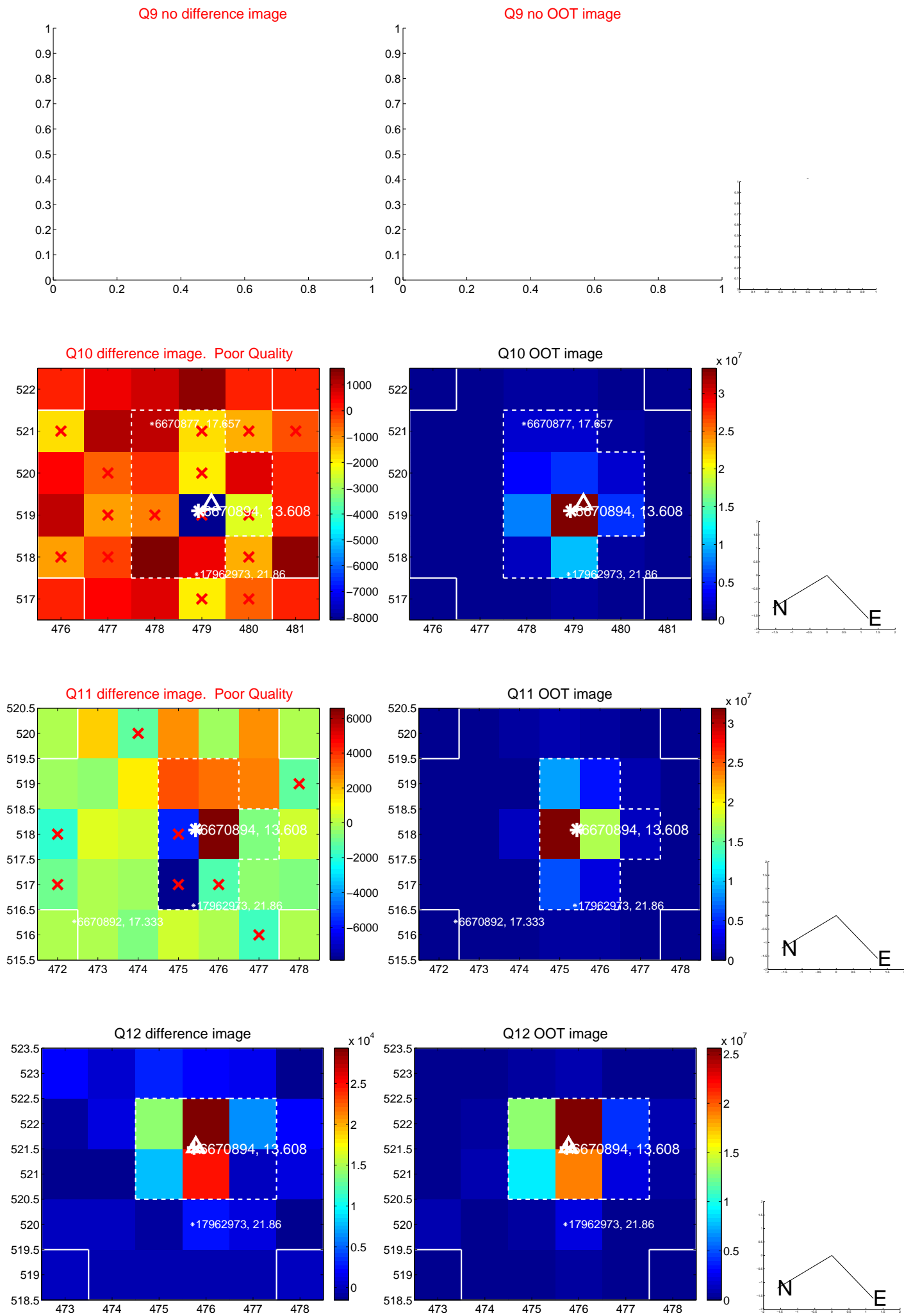
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



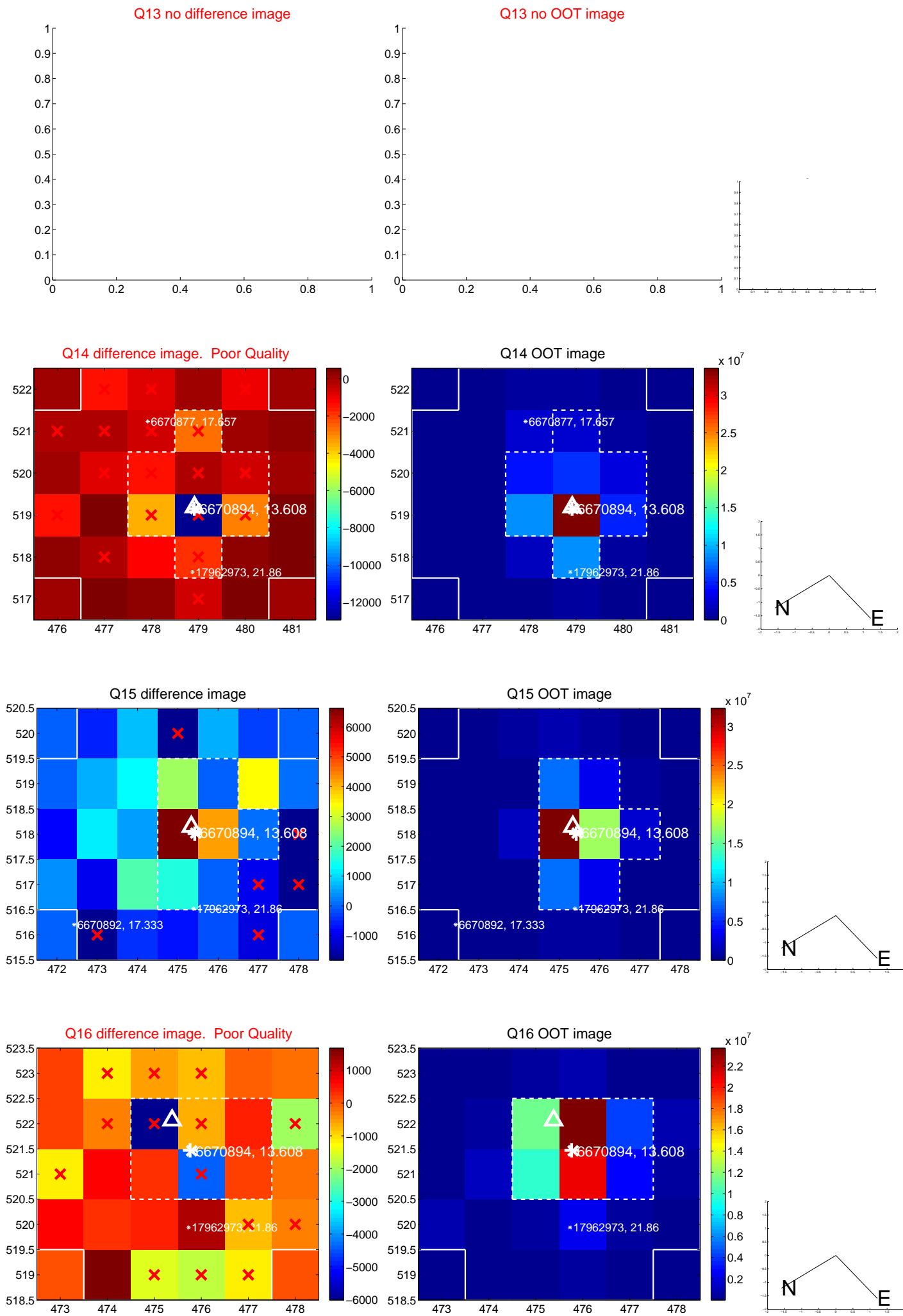
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



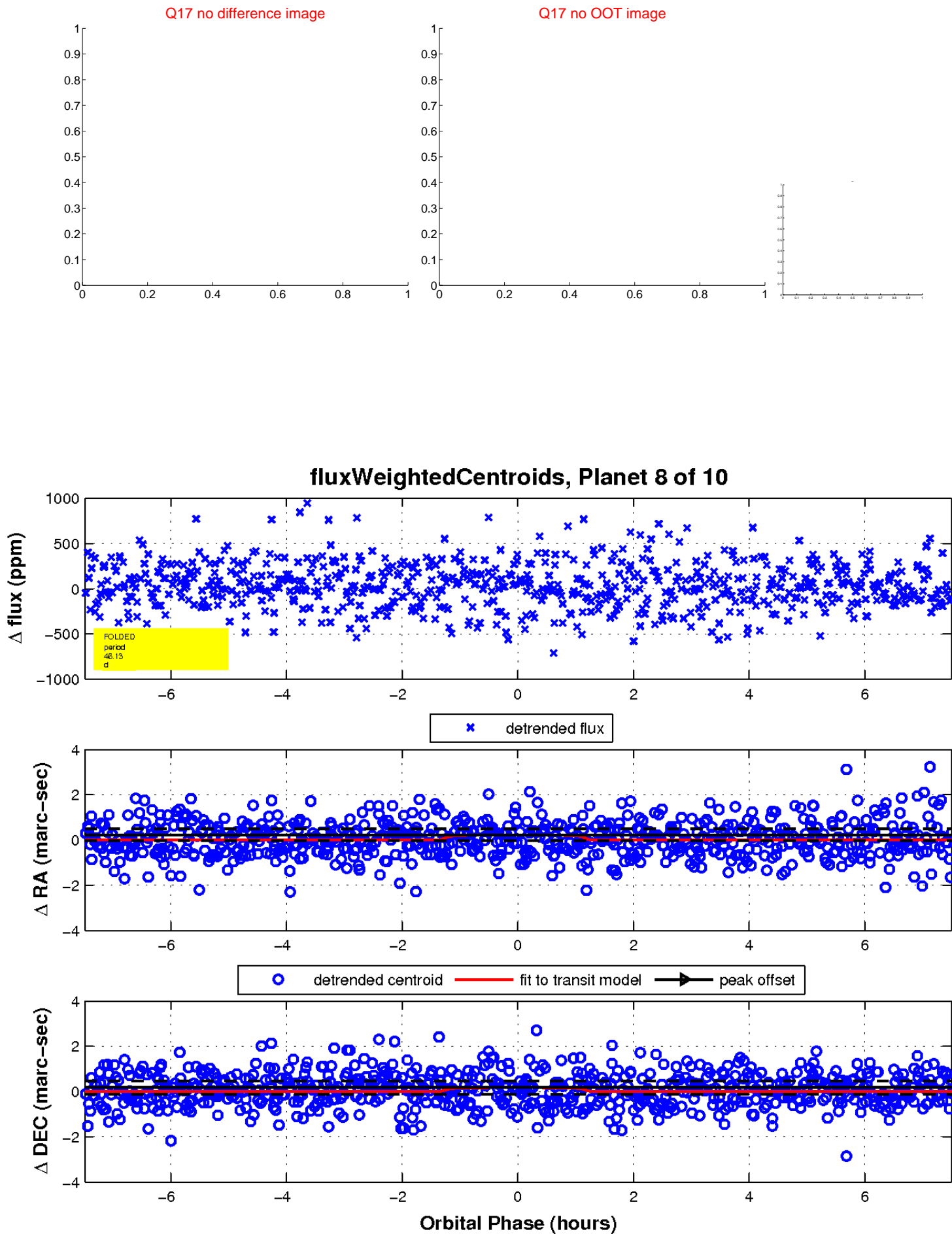
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

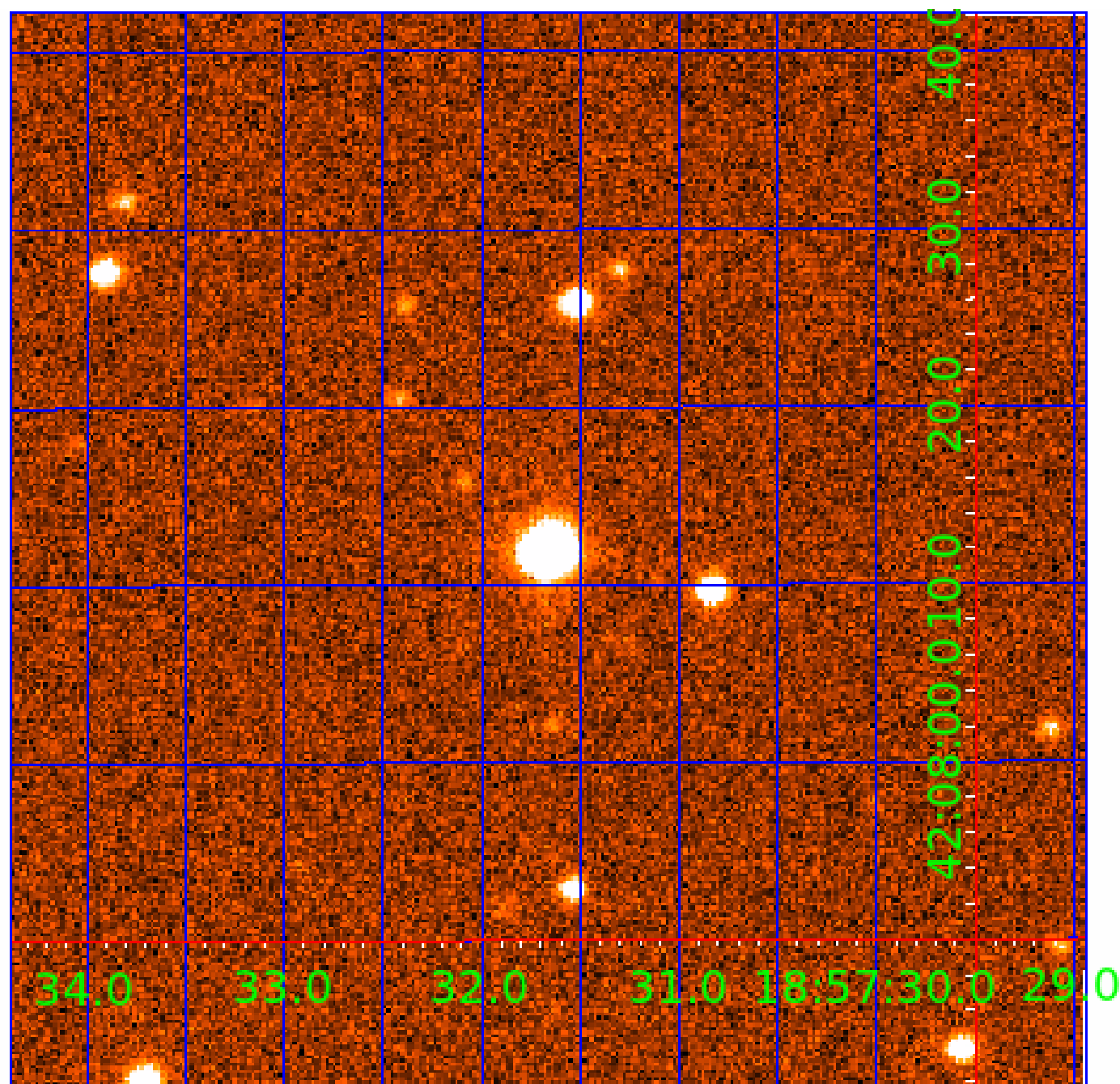


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
006670894-01	OBS	No	2.551845	132.460661	50.0	18.029	9.6	9.8	1.88	7266	1.38	4910.12
006670894-02	OBS	No	55.544984	174.552307	296.6	7.510	12.9	6.5	1.88	7266	3.43	80.79
006670894-03	OBS	No	56.670287	146.490621	623.9	5.356	16.0	13.6	1.88	7266	5.74	78.66
006670894-04	OBS	No	11.381235	140.143288	309.4	3.826	11.2	11.6	1.88	7266	3.76	668.82
006670894-05	OBS	No	47.278774	156.605446	531.2	2.331	9.8	10.5	1.88	7266	5.37	100.16
006670894-06	OBS	No	33.977317	161.813527	437.1	3.226	9.3	10.3	1.88	7266	4.19	155.59
006670894-07	OBS	No	15.241088	144.414923	289.3	2.955	9.5	11.4	1.88	7266	3.60	453.12
006670894-08	OBS	No	46.125163	173.705739	483.3	2.500	8.6	9.3	1.88	7266	4.24	103.51
006670894-09	OBS	No	9.236289	138.873408	250.7	2.594	8.8	9.5	1.88	7266	3.38	883.56
006670894-10	OBS	No	35.972270	166.674102	374.5	3.555	8.4	10.3	1.88	7266	3.88	144.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006670894-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006670894-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006670894-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006670894-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-09	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
006670894-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

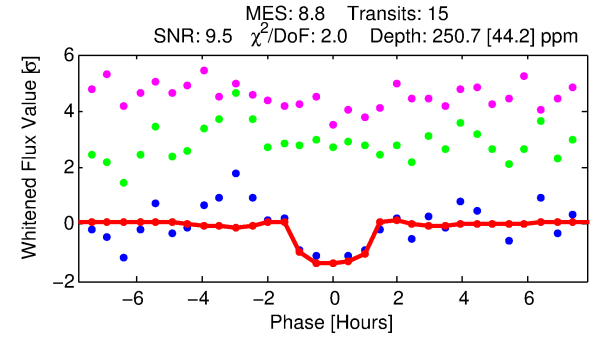
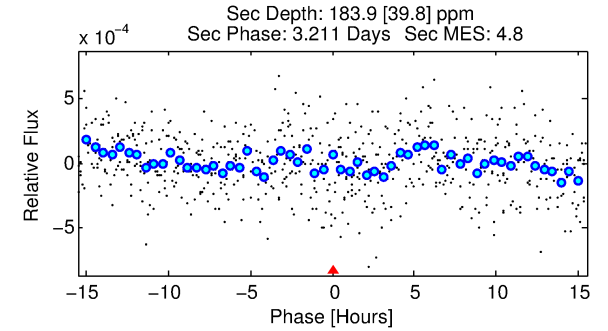
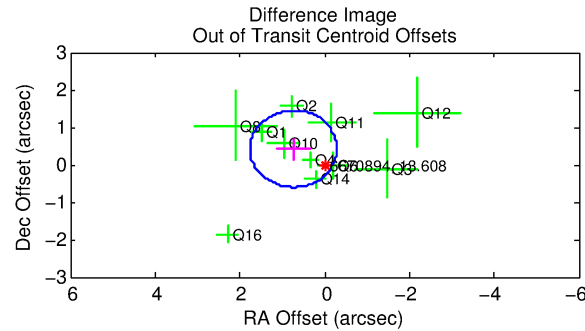
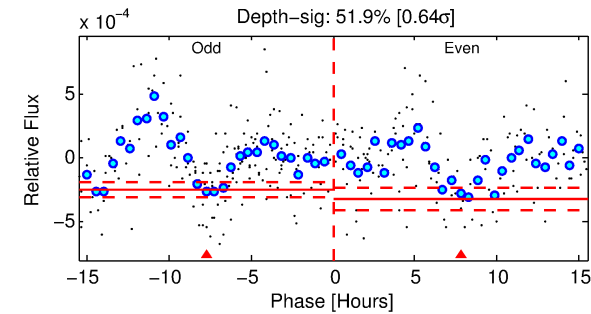
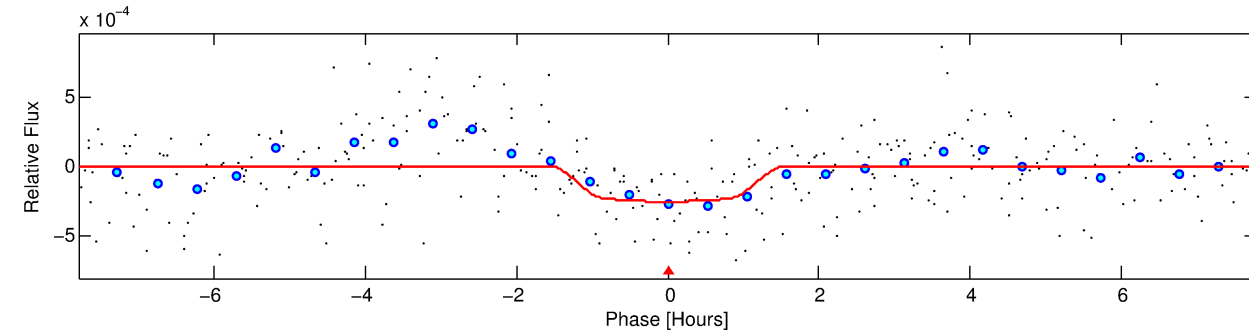
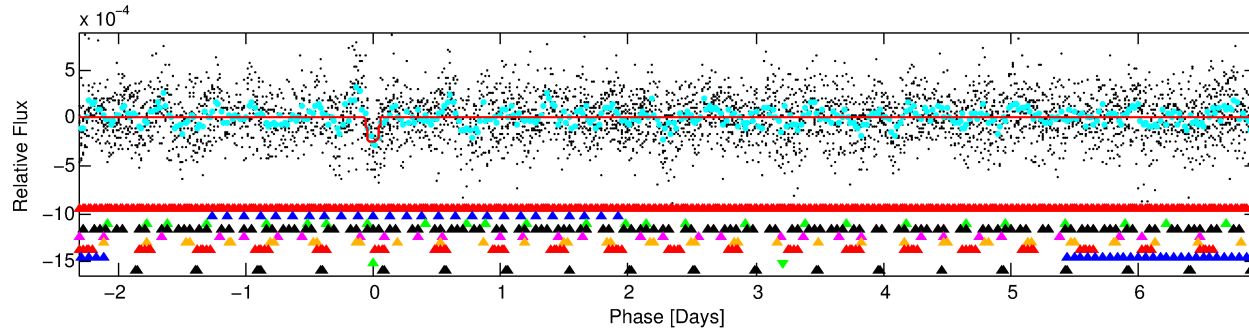
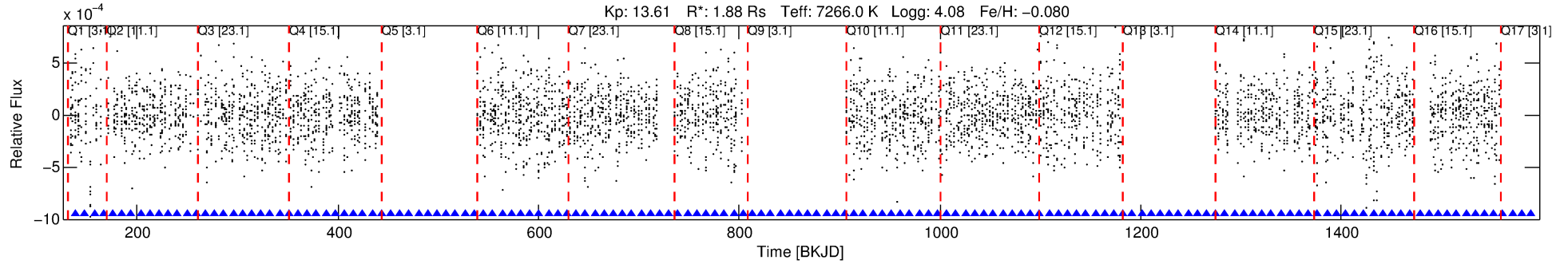
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006670894-09

No Significant Match Found

DV One-Page Summary

KIC: 6670894 Candidate: 9 of 10 Period: 9.236 d



DV Fit Results:

Period = 9.23629 [0.00009] d
Epoch = 138.8734 [0.0068] BKJD
Rp/R* = 0.0165 [0.0189]
a/R* = 14.45 [102.79]
b = 0.87 [2.07]
Seff = 883.56 [334.96]
Teq = 1390 [132] K
Rp = 3.37 [4.00] Re
a = 0.0997 [0.0245] AU
Ag = 88.38 [205.22] [0.43 σ]
Teffp = 6590 [3798] K [1.37 σ]

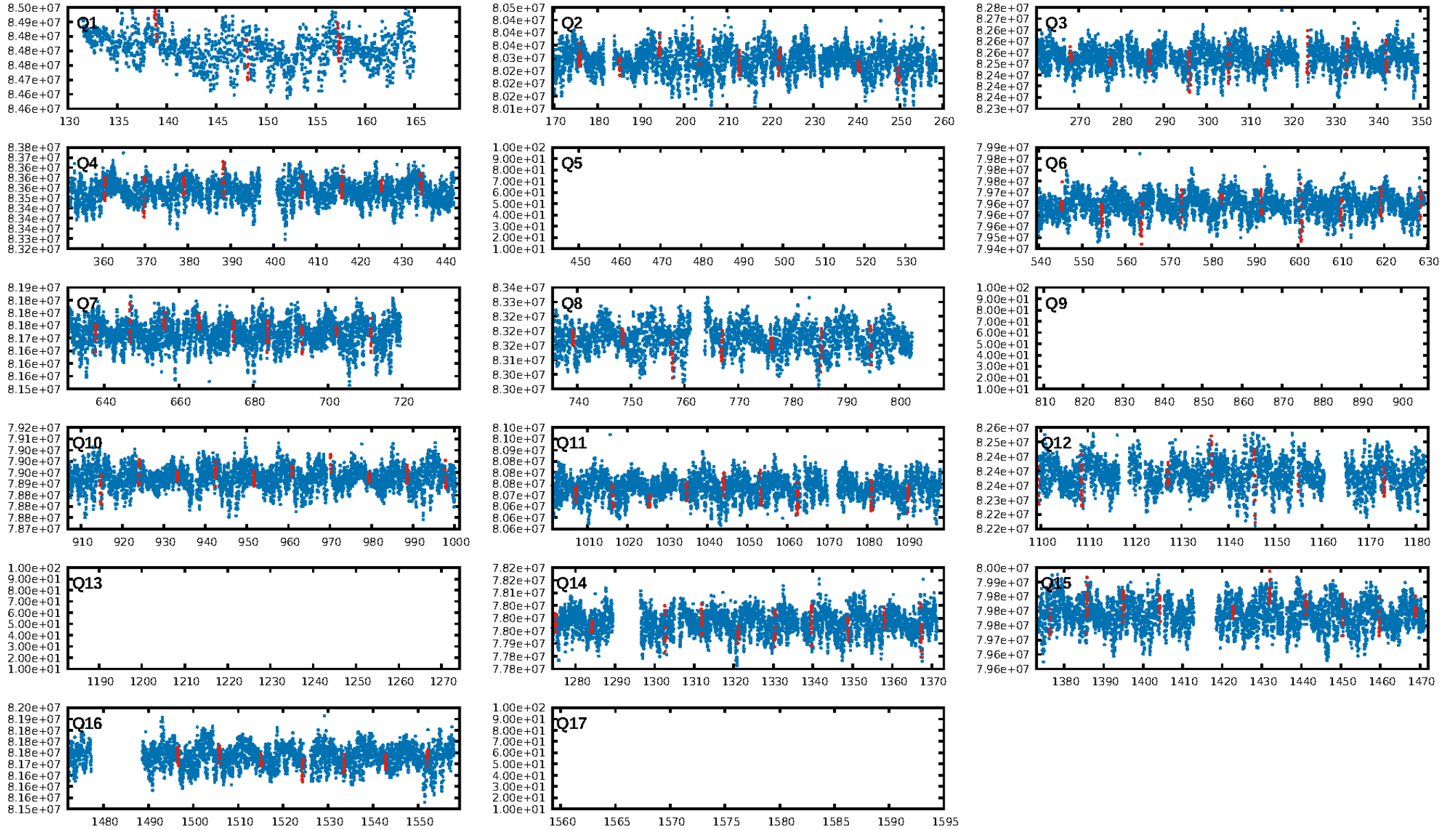
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [8.81 σ]
LongPeriod-sig: 100.0% [11.14 σ]
ModelChiSquare2-sig: 1.3%
ModelChiSquareGof-sig: 85.6%
Bootstrap-pfa: 1.75e-09
RollingBand-fgt: 1.00 [14/14]
GhostDiagnostic-chr: -0.19
Centroid-sig: 0.2%
Centroid-so: 0.969 arcsec [2.24 σ]
OotOffset-rm: 0.850 arcsec [2.49 σ]
KicOffset-rm: 0.854 arcsec [2.53 σ]
OotOffset-st: 4/2/4/1 [11]
KicOffset-st: 4/2/4/1 [11]
DiffImageQuality-fgm: 0.82 [9/11]
DiffImageOverlap-fno: 1.00 [13/13]

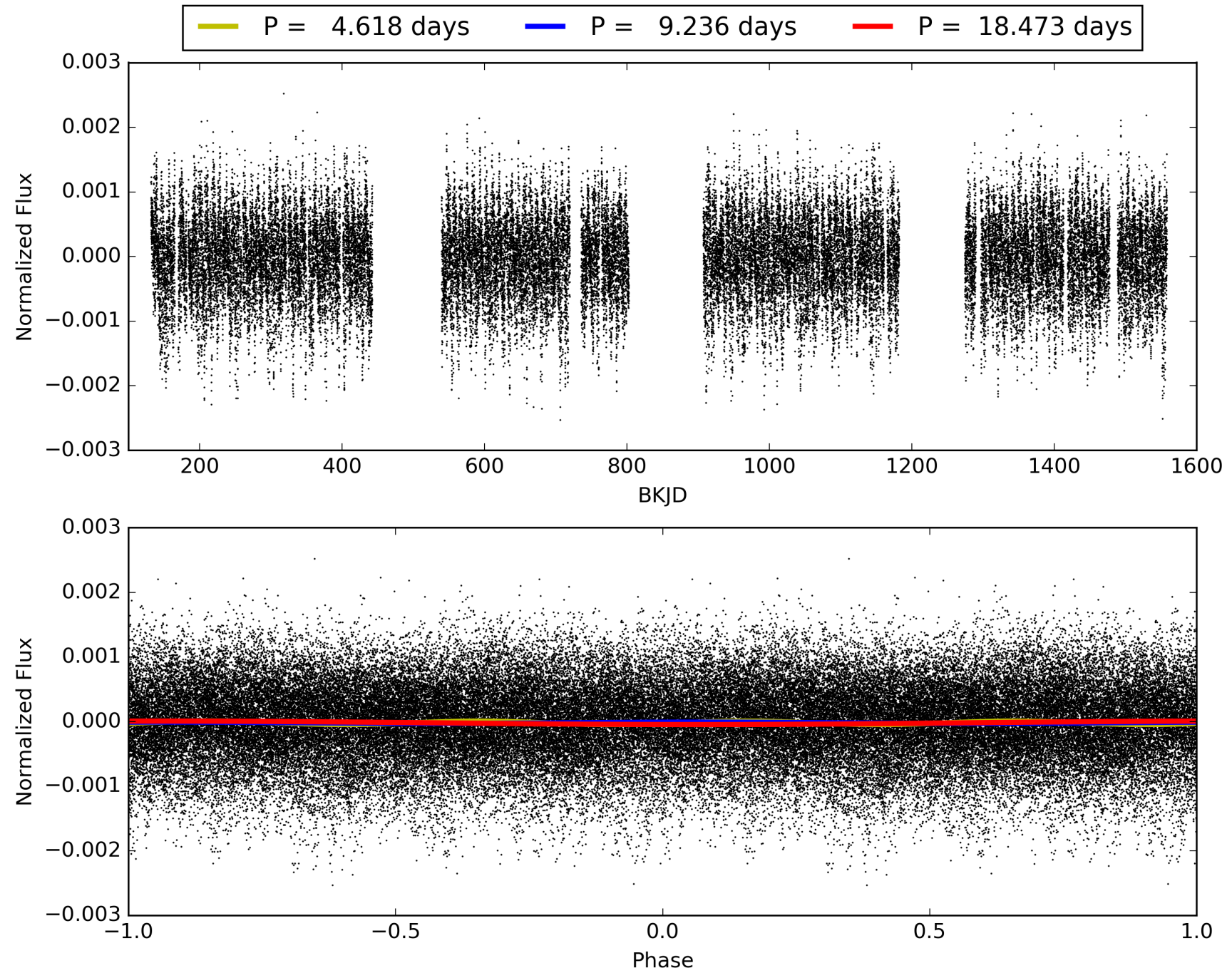
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 04:39:38 Z

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

TCE 006670894-09, PDC Light Curves

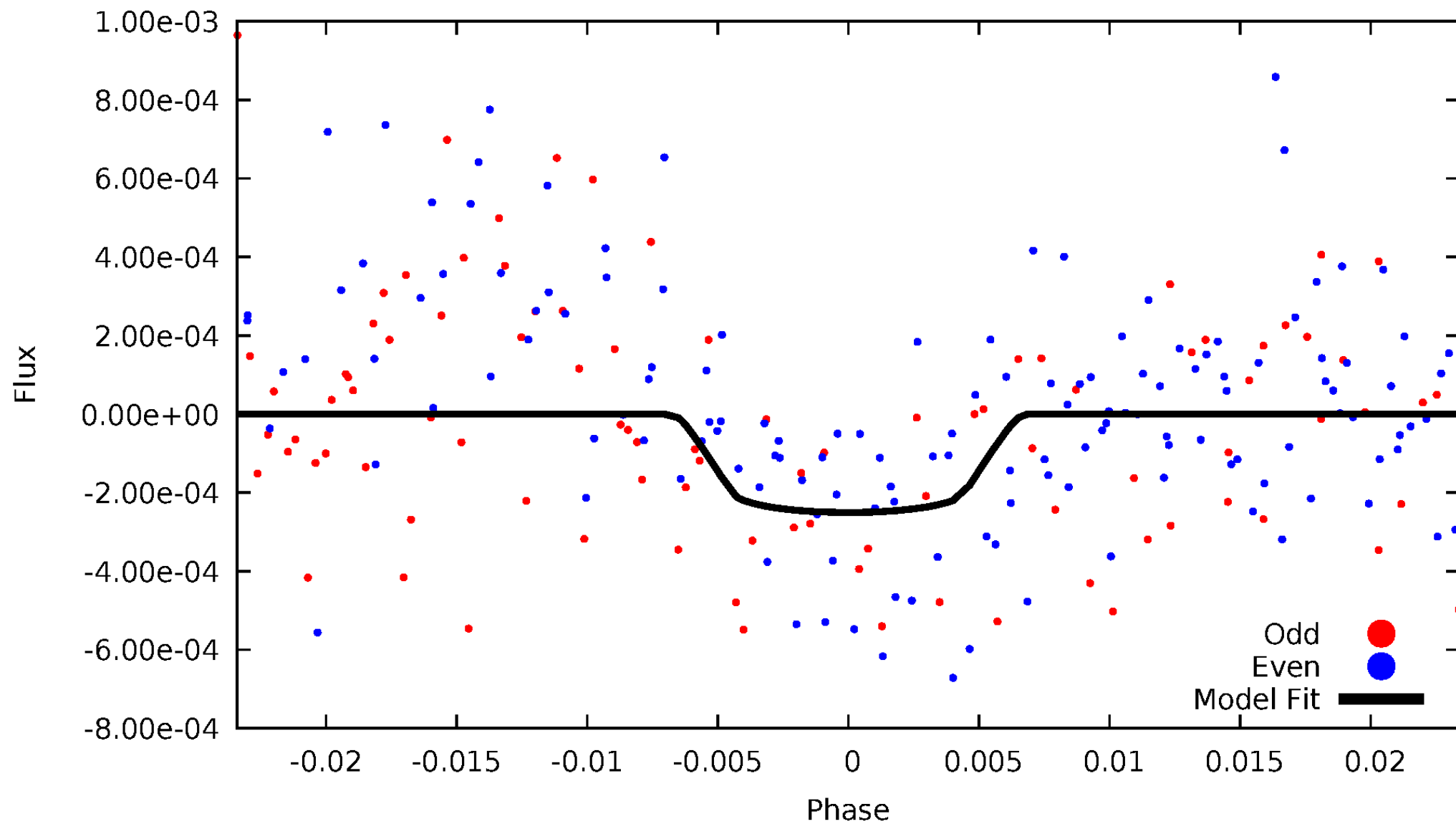


TCE 006670894-09



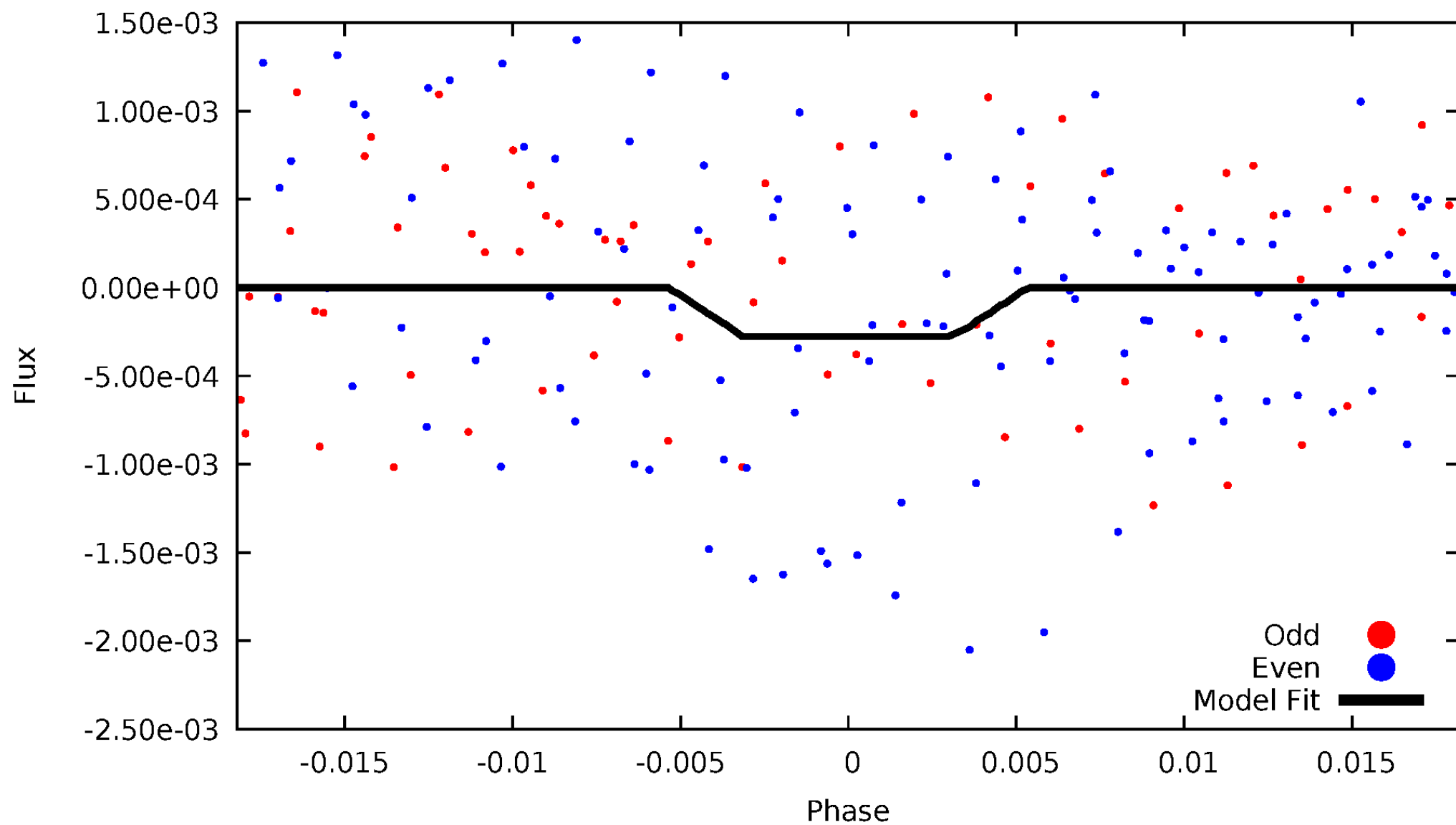
DV Odd/Even

TCE 006670894-09



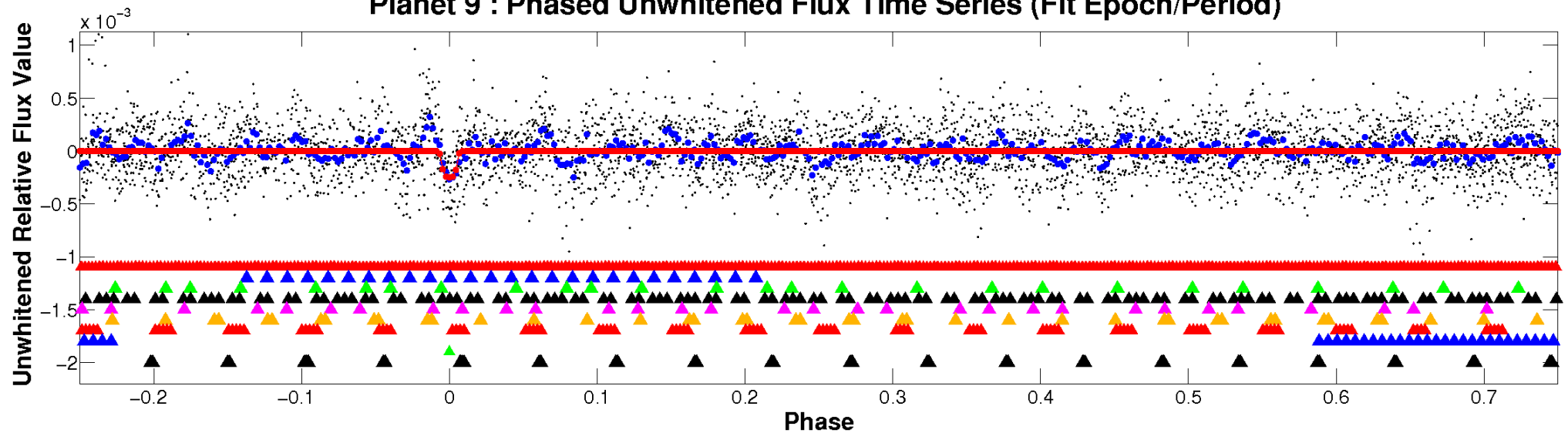
ALT Odd/Even

TCE 006670894-09

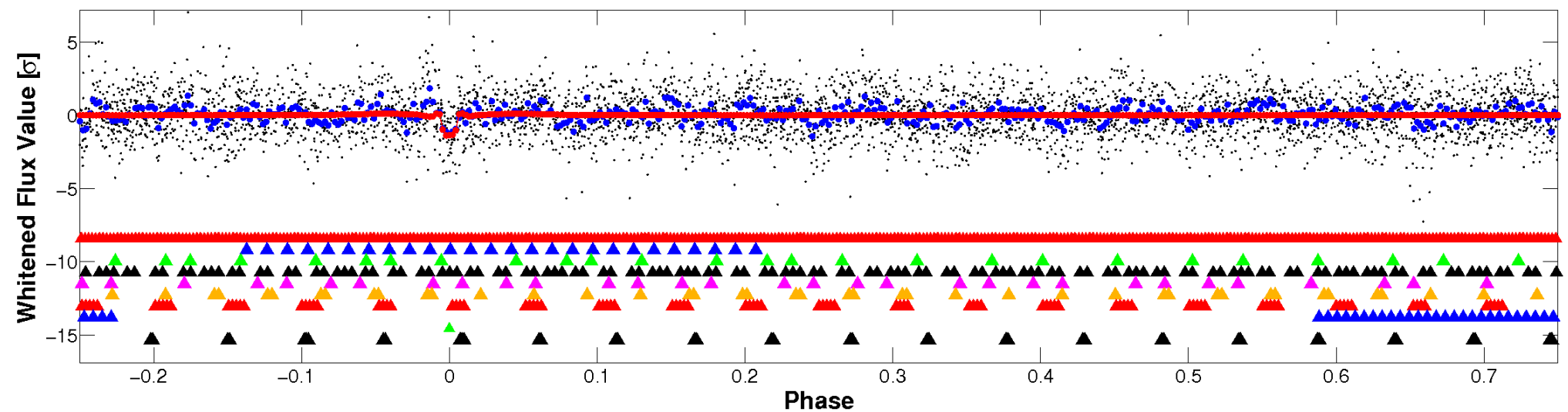


Non-Whitened Vs. Whitened Light Curve

Planet 9 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

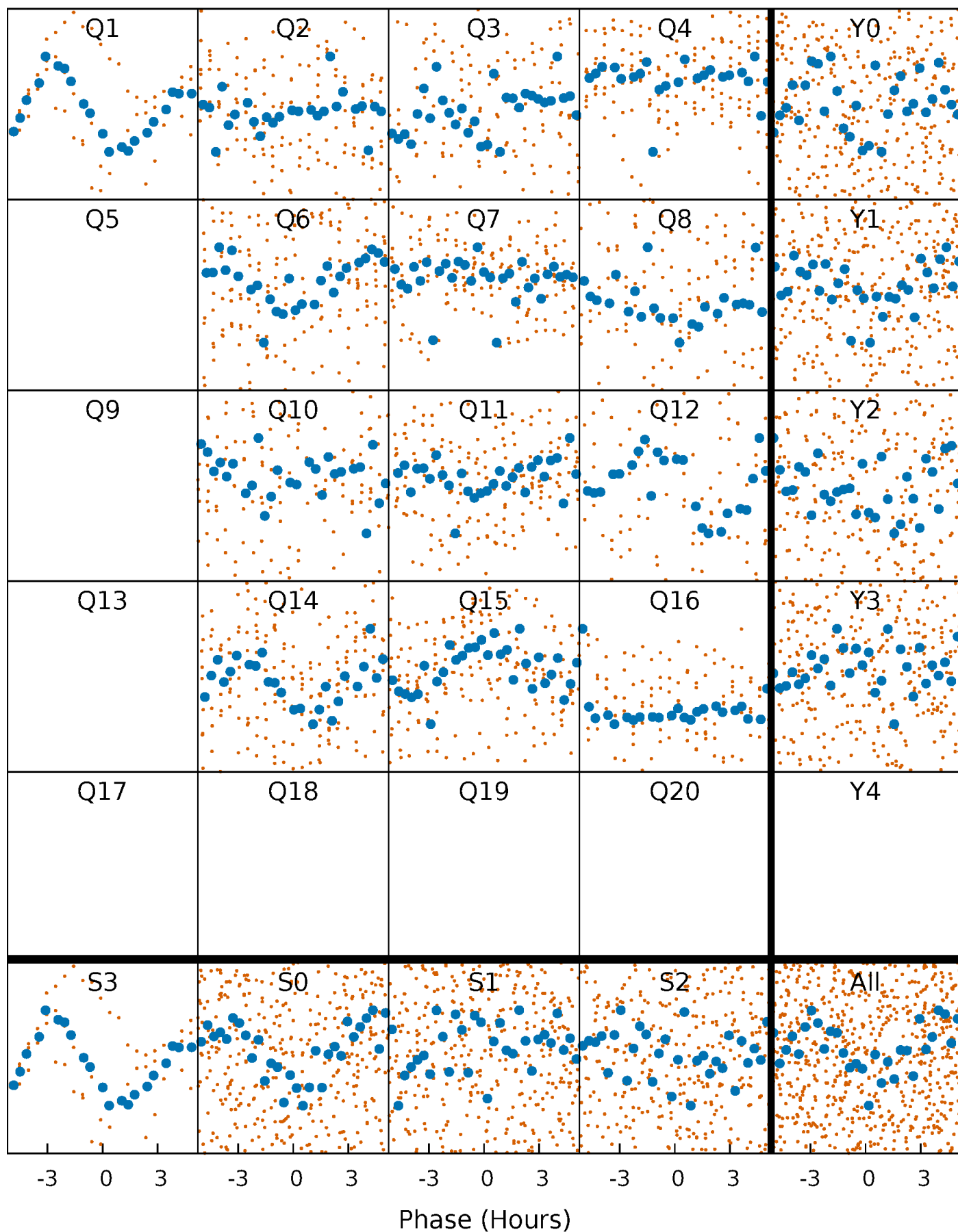


Planet 9 : Phased Whitened Flux Time Series (Fit Epoch/Period)



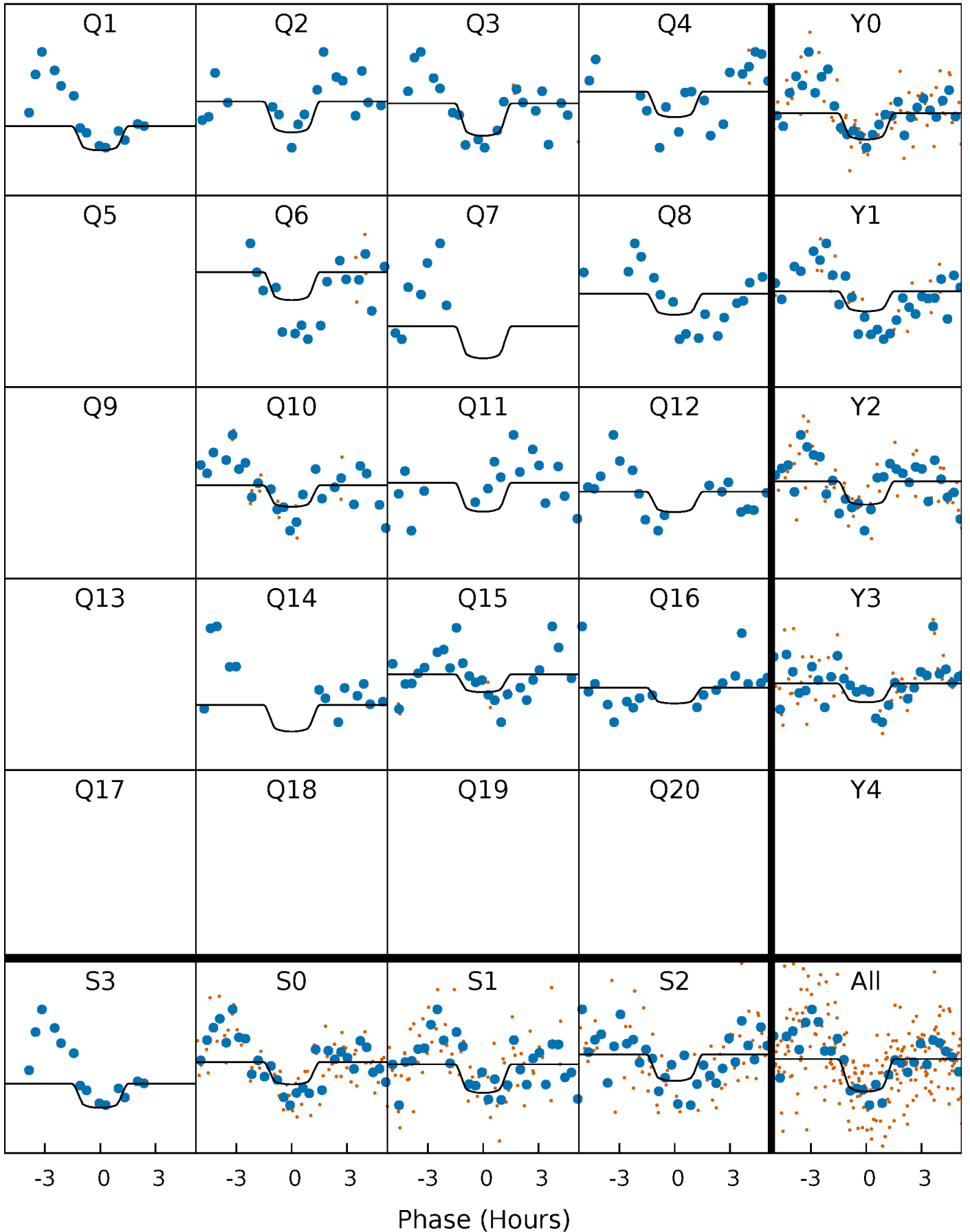
PDC Quarter-Phased Transit Curves

TCE 006670894-09 P= 9.236289 Days $T_0=138.873408$ (BKJD)



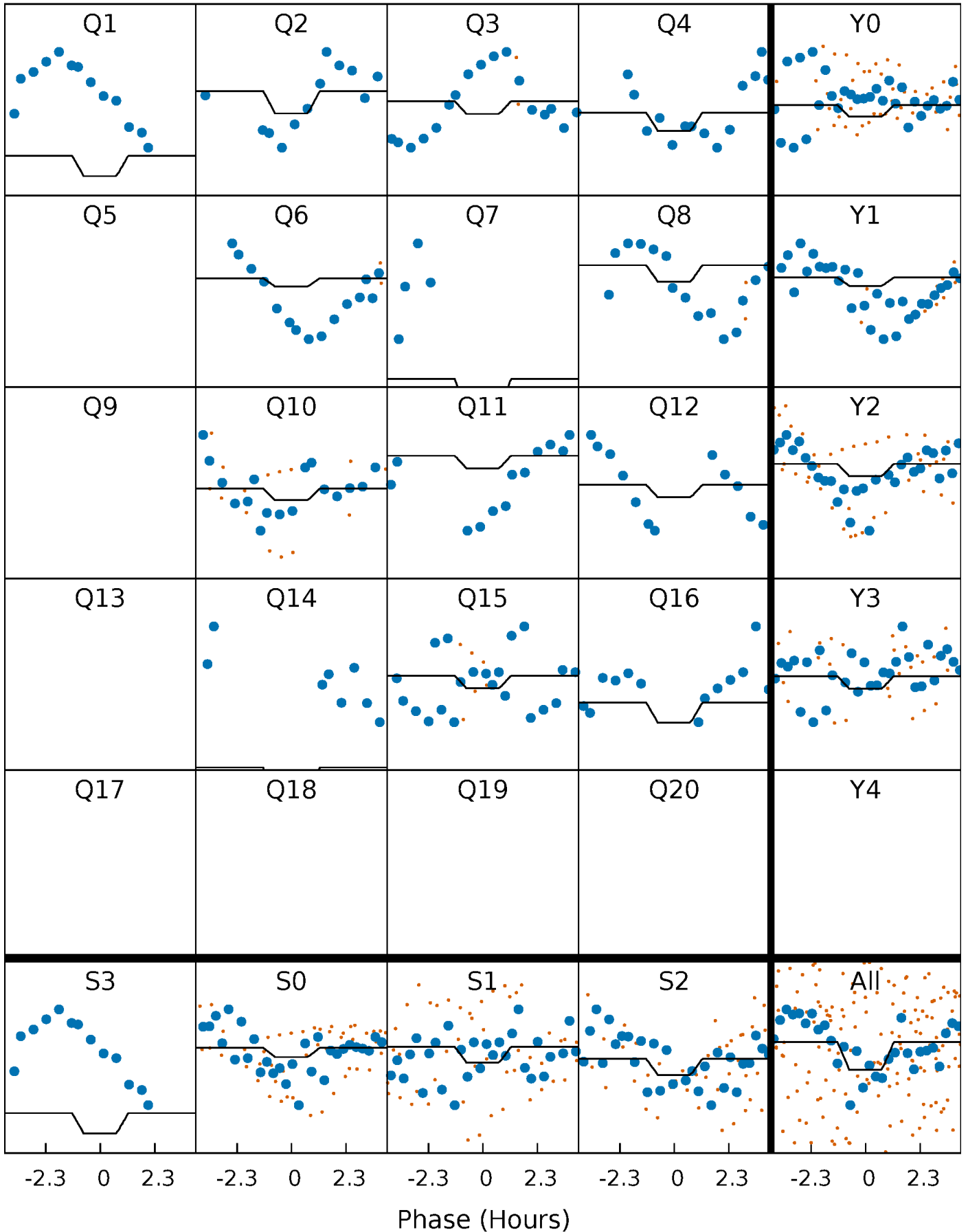
DV Quarter-Phased Transit Curves

TCE 006670894-09 P= 9.236289 Days $T_0=138.873408$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

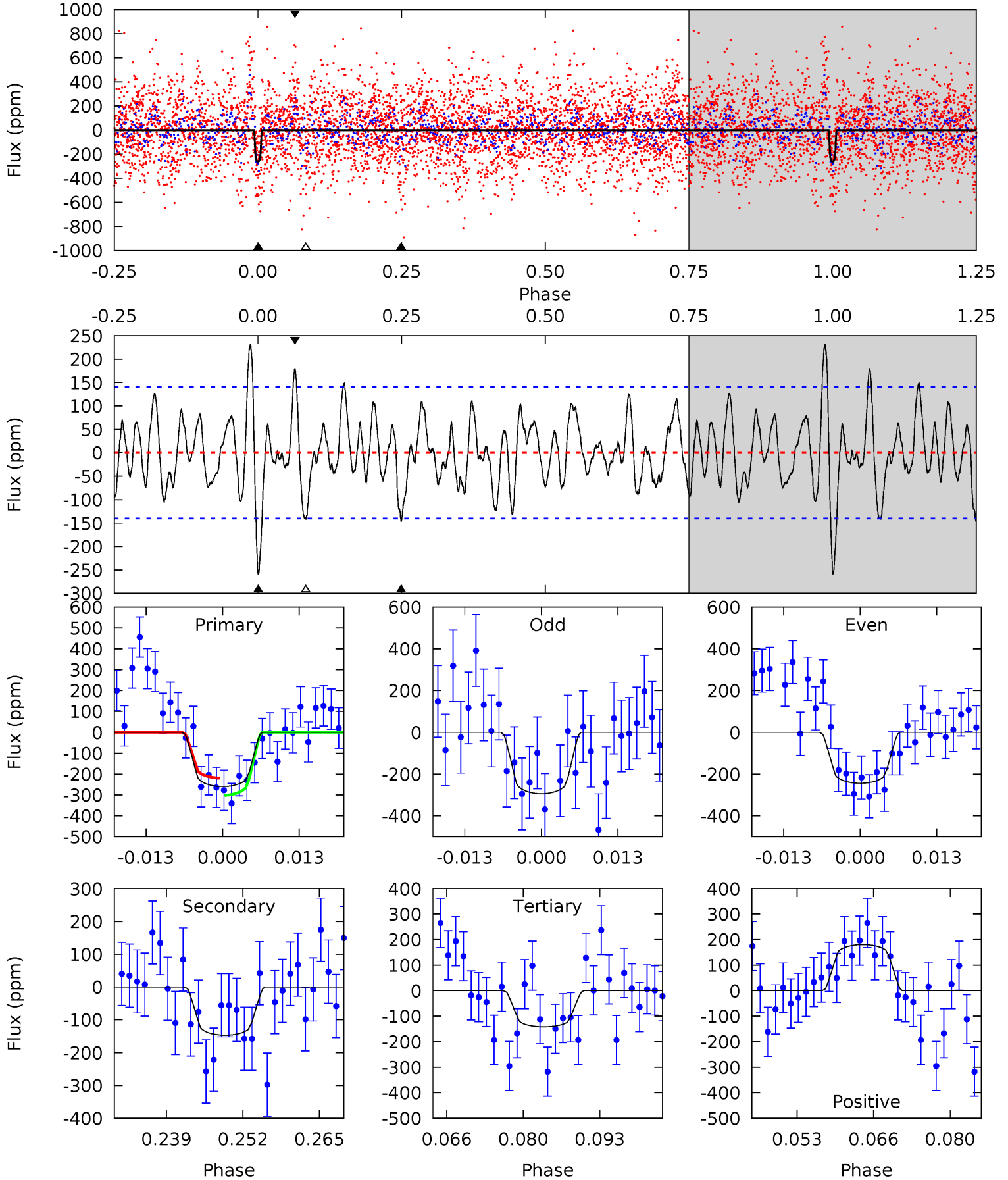
TCE 006670894-09 $P = 9.236295$ Days $T_0 = 138.882662$ (BKJD)



DV Model-Shift Uniqueness Test

006670894-09, P = 9.236289 Days, E = 129.637119 Days

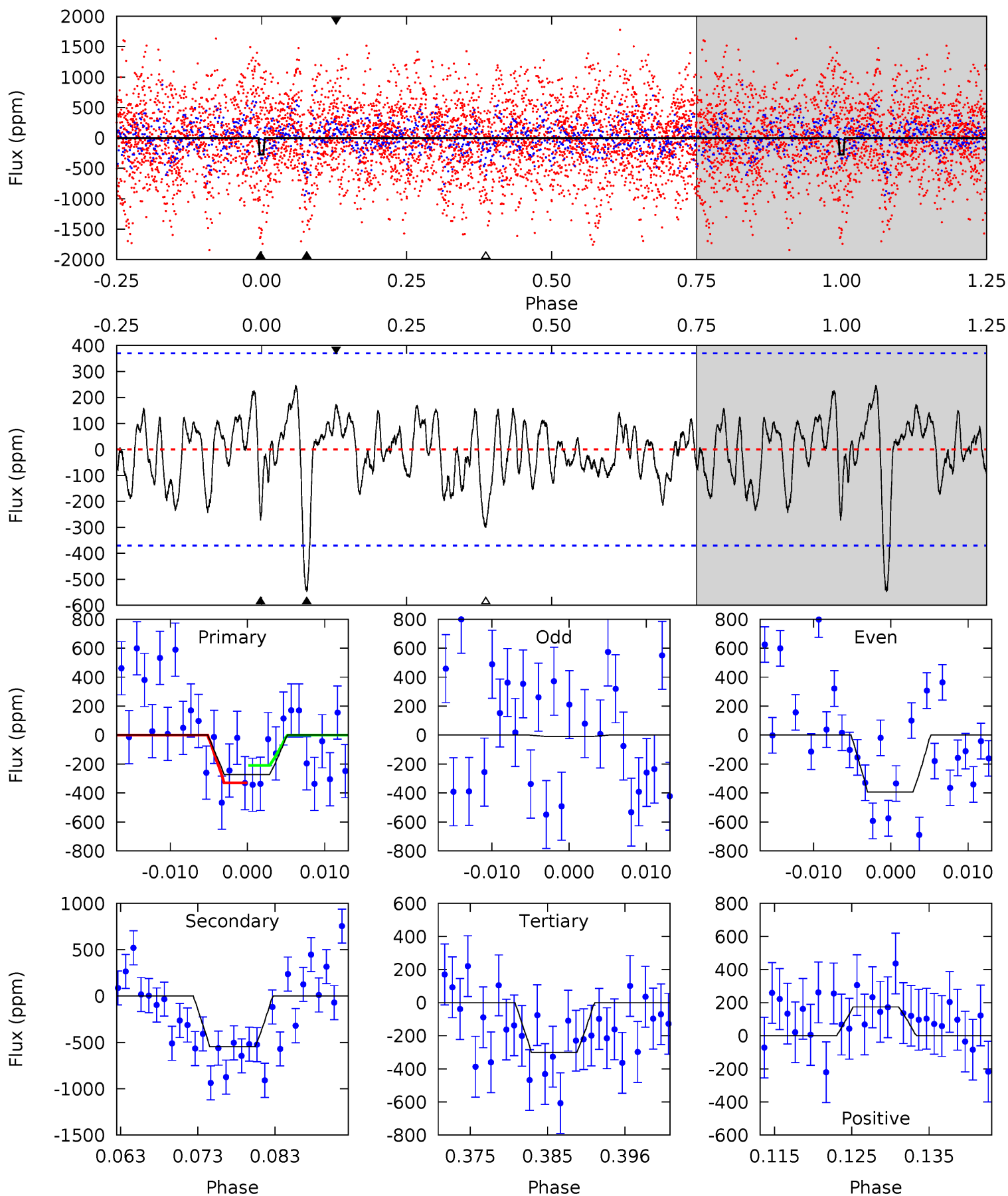
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.21	5.21	5.02	6.40	4.97	2.48	2.13	4.19	2.81	0.19	-1.19	0.85	1.01	0.47	1.46



Alt Model-Shift Uniqueness Test

006670894-09, P = 9.236295 Days, E = 129.646367 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.70	7.42	4.08	2.35	5.02	2.56	1.34	-0.38	1.34	3.34	5.07	2.38	1.17	0.31	0.82



Stellar Parameters For KIC 006670894

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7266^{+226}_{-327}	$4.082^{+0.170}_{-0.170}$	$-0.080^{+0.250}_{-0.350}$	$1.876^{+0.585}_{-0.439}$	$1.546^{+0.212}_{-0.259}$	$0.330^{+0.299}_{-0.157}$
	+3%/-5%	+4%/-4%	+312%/-438%	+31%/-23%	+14%/-17%	+91%/-48%
Source	KIC0	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 006670894-09 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-147 ± 28	$4.33^{+3.77}_{-2.67}$	1936^{+143}_{-144}	5422^{+3714}_{-1245}	42^{+236}_{-31}
Alt.	-548 ± 74	$4.37^{+3.70}_{-2.75}$	1938^{+152}_{-136}	7592^{+8385}_{-2020}	156^{+963}_{-111}

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 $A_{obs} \gg 1.0$

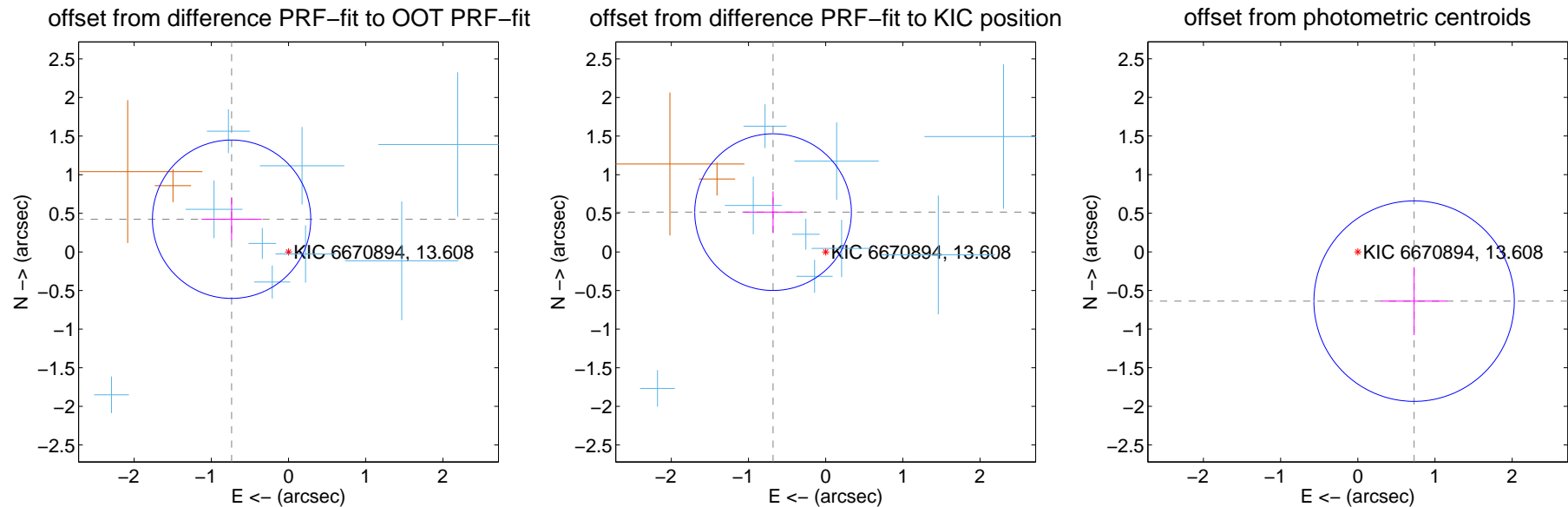
DV Centroid Data

Supplemental centroid analysis for 006670894-09. Kepler magnitude: 13.61. Transit SNR 9.52

There are 9 quarters with good PRF difference image offsets

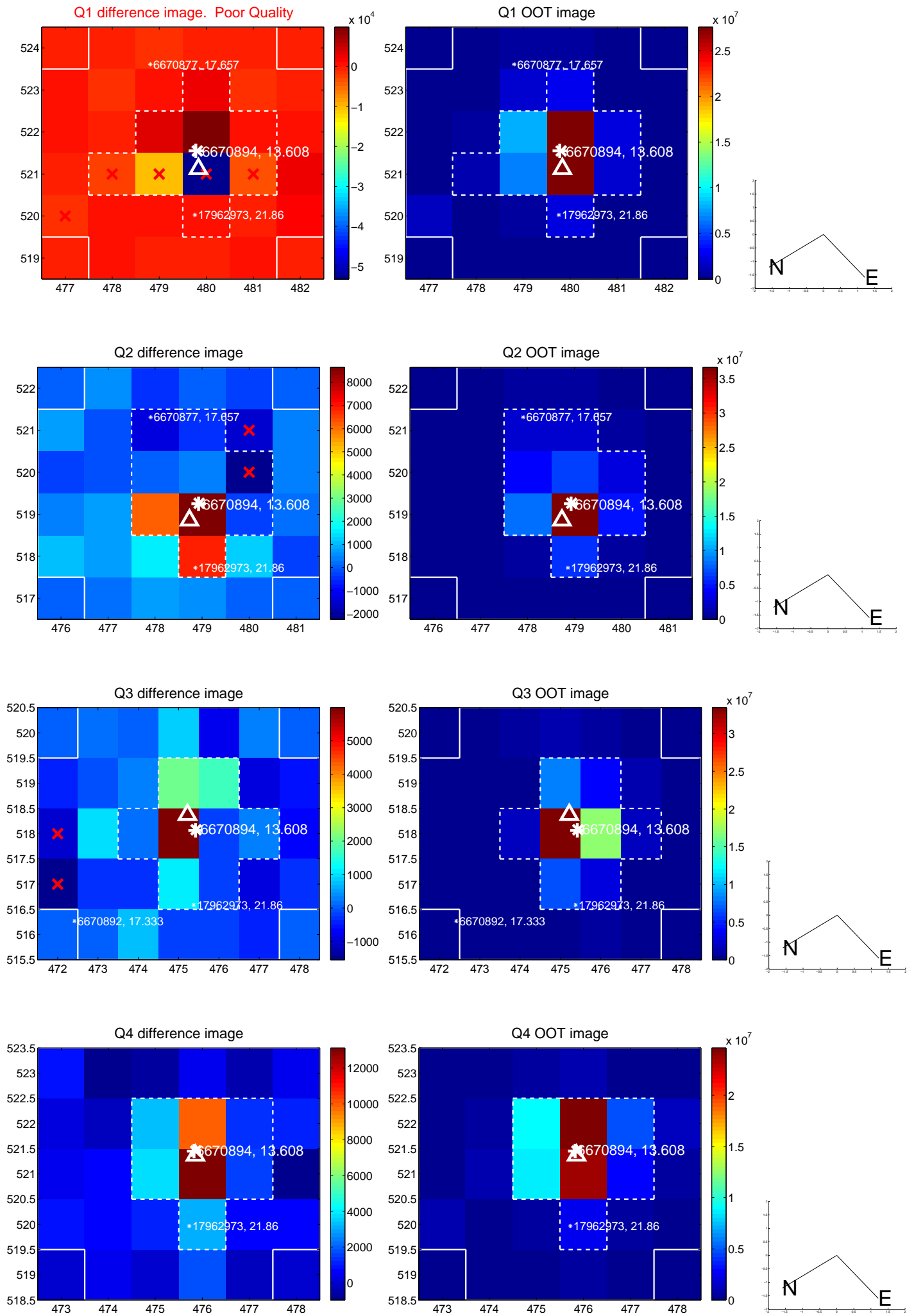
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.850 ± 0.342	2.49	0.737 ± 0.389	0.423 ± 0.275
PRF-fit source offset from KIC position	0.854 ± 0.338	2.53	0.682 ± 0.384	0.515 ± 0.268
photometric centroid source offset	0.97 ± 0.43	2.24	-0.73 ± 0.43	-0.64 ± 0.44

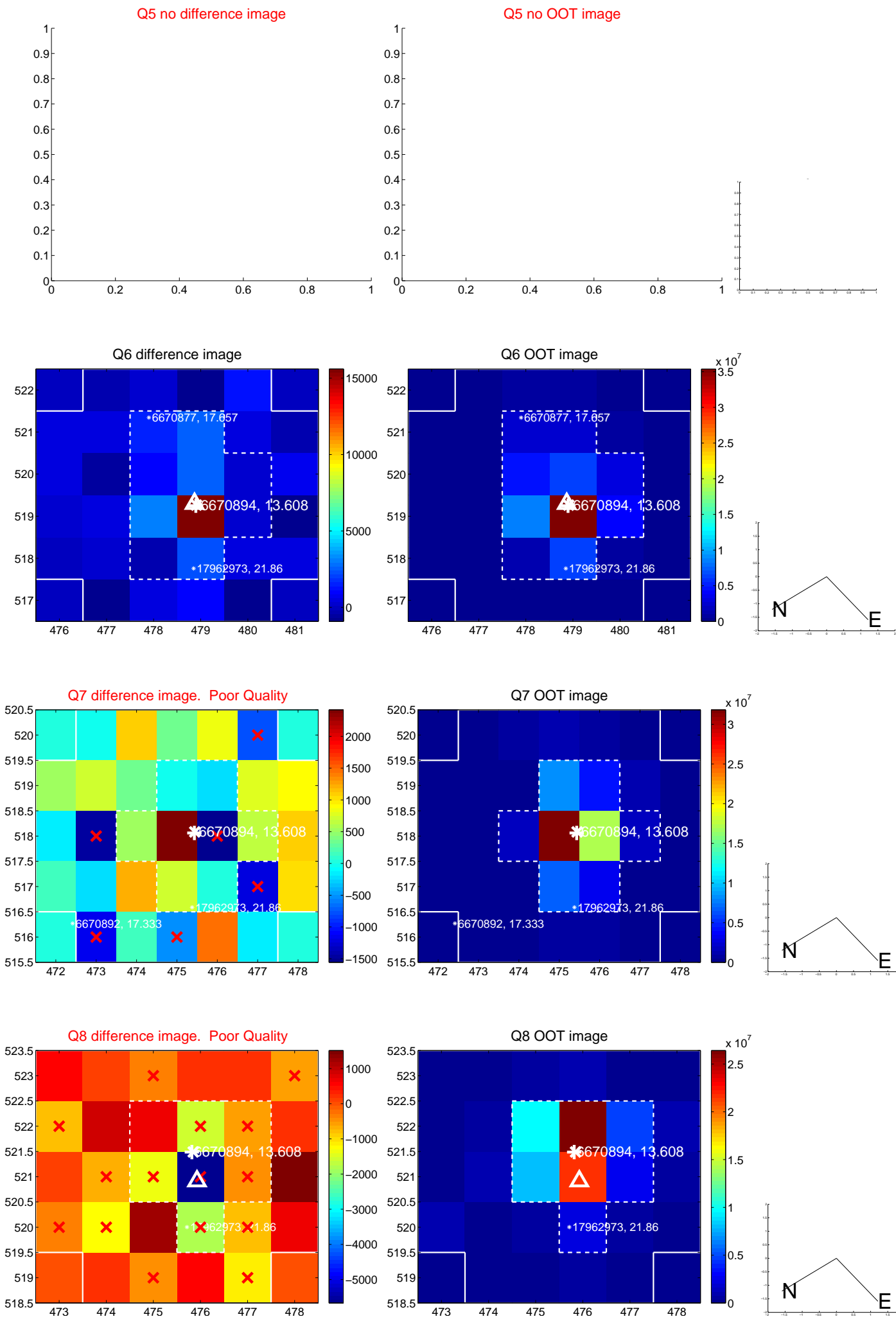


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

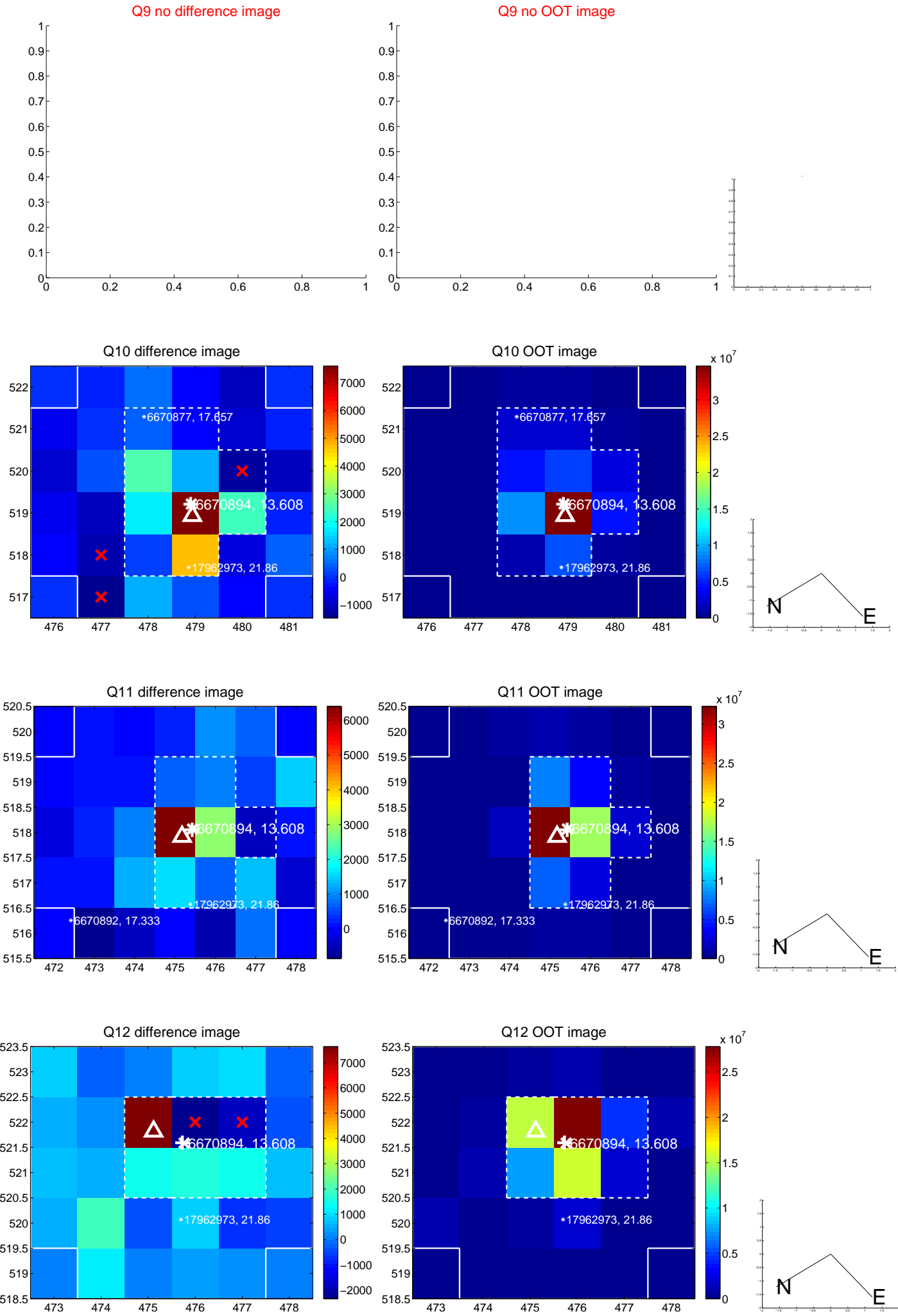
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



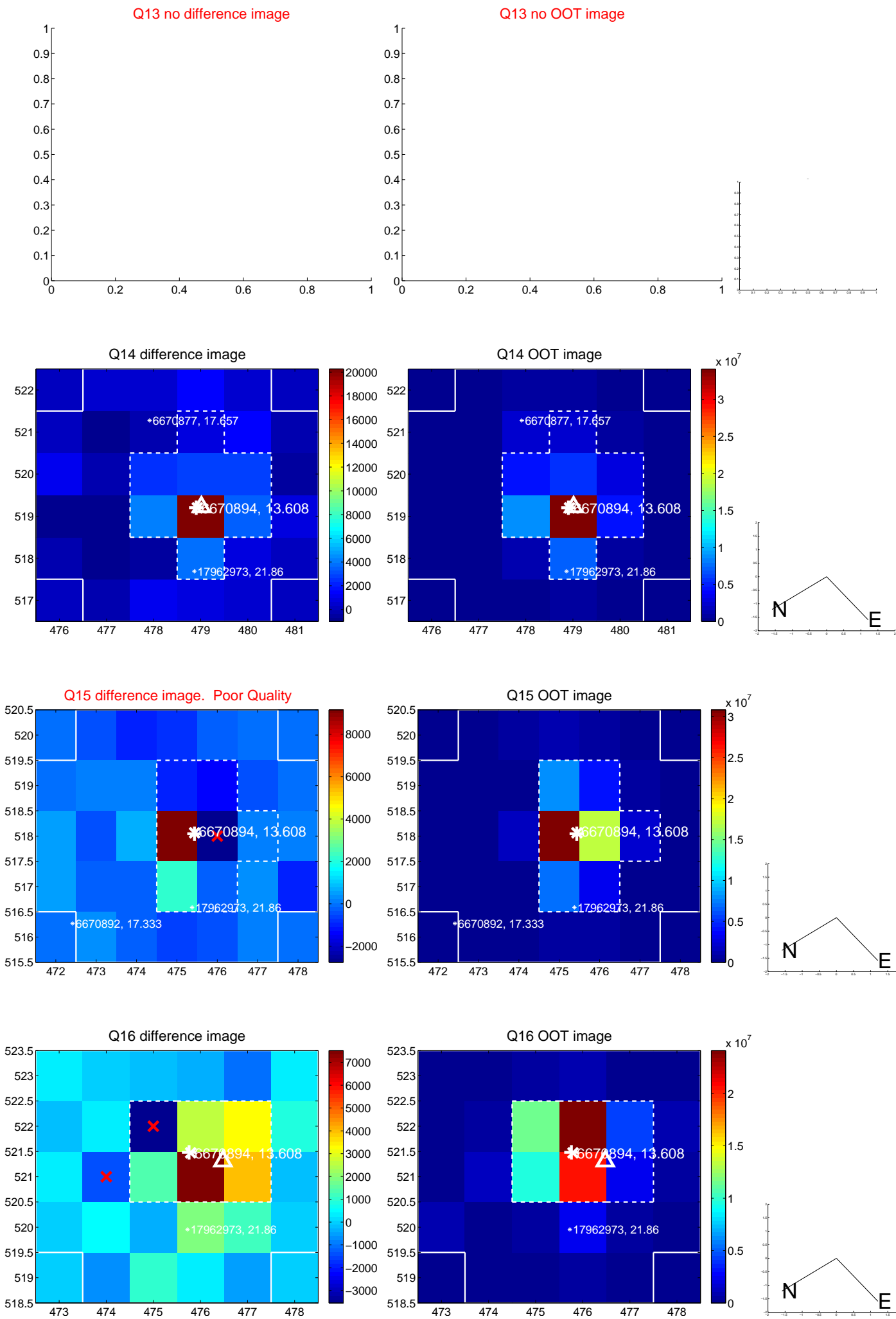
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



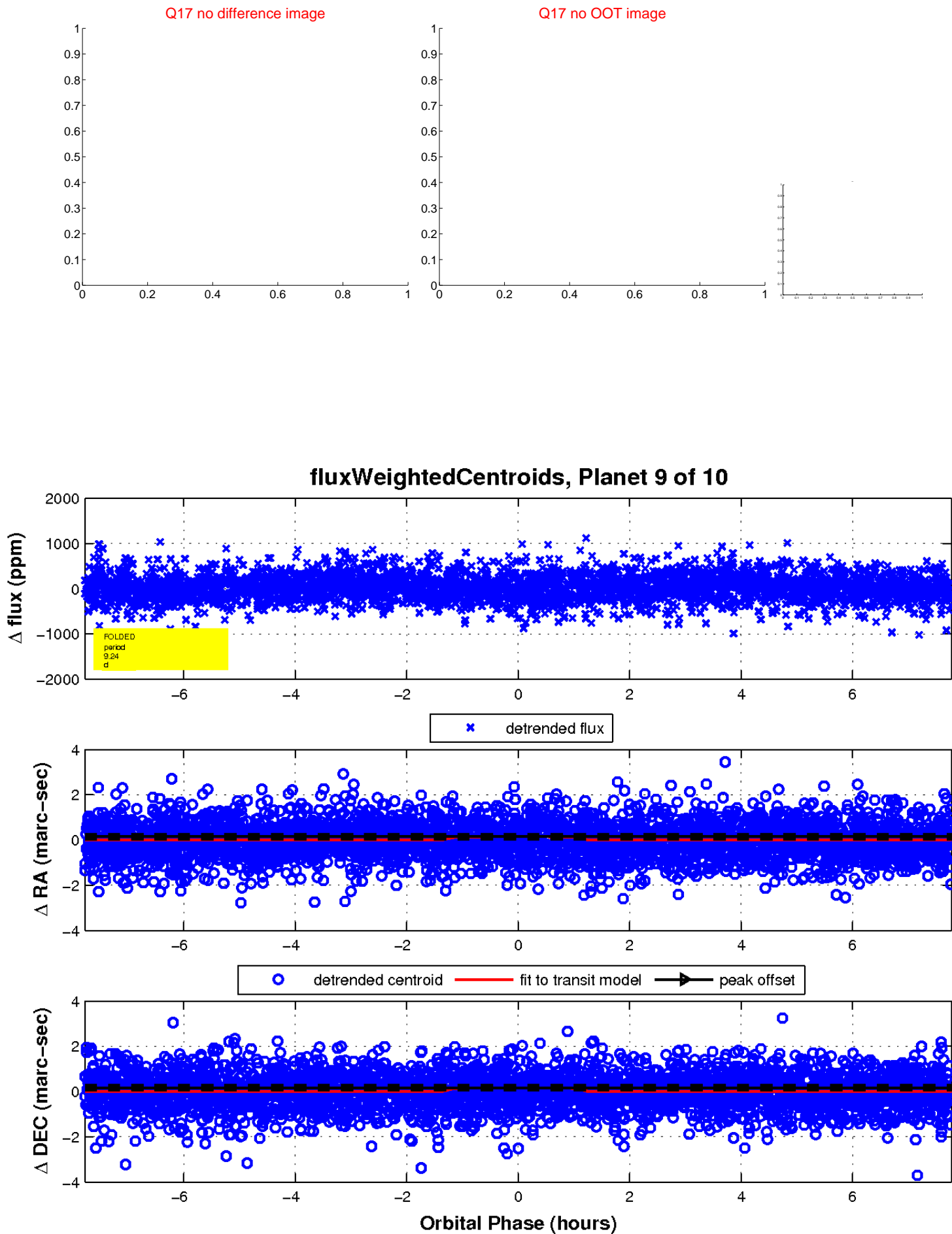
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

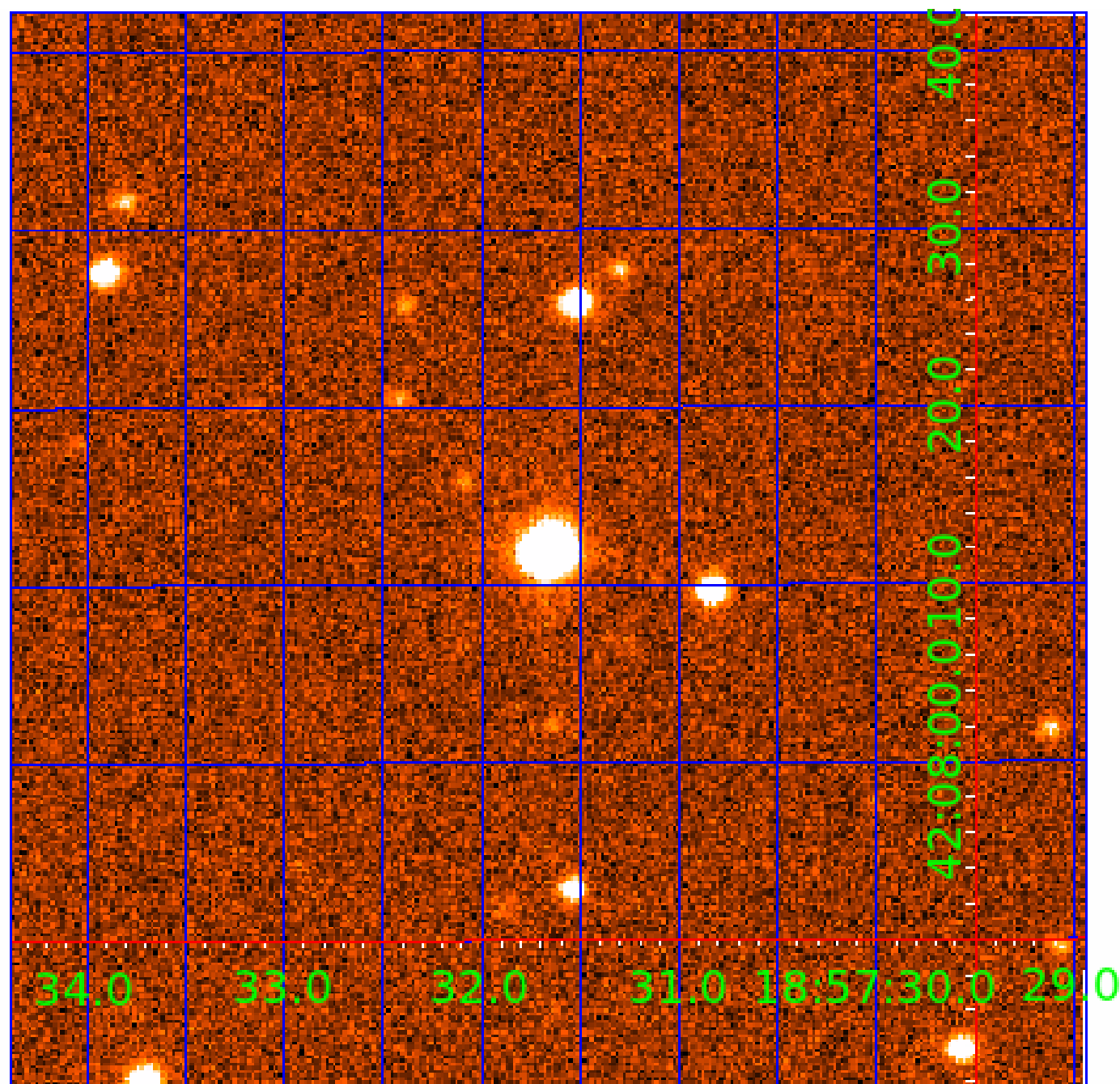


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



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})
006670894-01	OBS	No	2.551845	132.460661	50.0	18.029	9.6	9.8	1.88	7266	1.38	4910.12
006670894-02	OBS	No	55.544984	174.552307	296.6	7.510	12.9	6.5	1.88	7266	3.43	80.79
006670894-03	OBS	No	56.670287	146.490621	623.9	5.356	16.0	13.6	1.88	7266	5.74	78.66
006670894-04	OBS	No	11.381235	140.143288	309.4	3.826	11.2	11.6	1.88	7266	3.76	668.82
006670894-05	OBS	No	47.278774	156.605446	531.2	2.331	9.8	10.5	1.88	7266	5.37	100.16
006670894-06	OBS	No	33.977317	161.813527	437.1	3.226	9.3	10.3	1.88	7266	4.19	155.59
006670894-07	OBS	No	15.241088	144.414923	289.3	2.955	9.5	11.4	1.88	7266	3.60	453.12
006670894-08	OBS	No	46.125163	173.705739	483.3	2.500	8.6	9.3	1.88	7266	4.24	103.51
006670894-09	OBS	No	9.236289	138.873408	250.7	2.594	8.8	9.5	1.88	7266	3.38	883.56
006670894-10	OBS	No	35.972270	166.674102	374.5	3.555	8.4	10.3	1.88	7266	3.88	144.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006670894-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006670894-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
006670894-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT
006670894-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006670894-09	OBS	FP	0.00	1	0	1	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
006670894-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

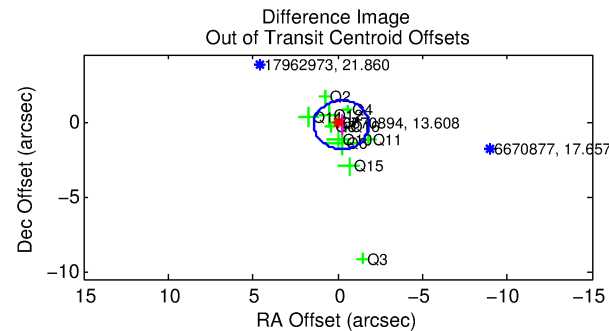
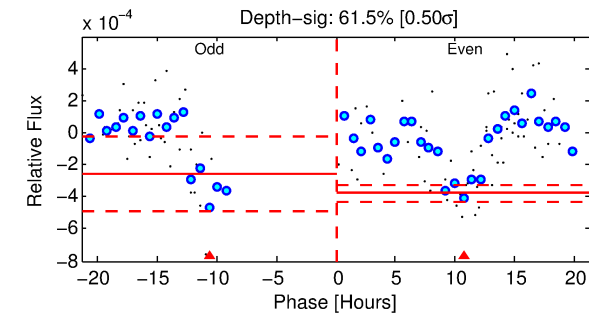
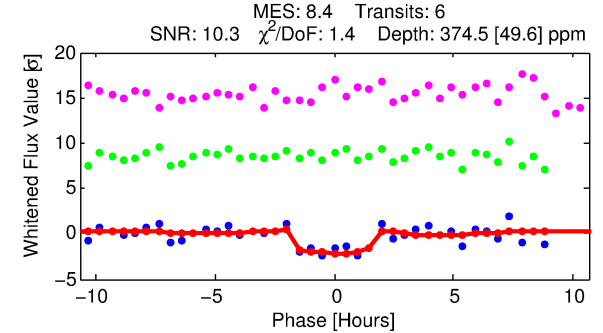
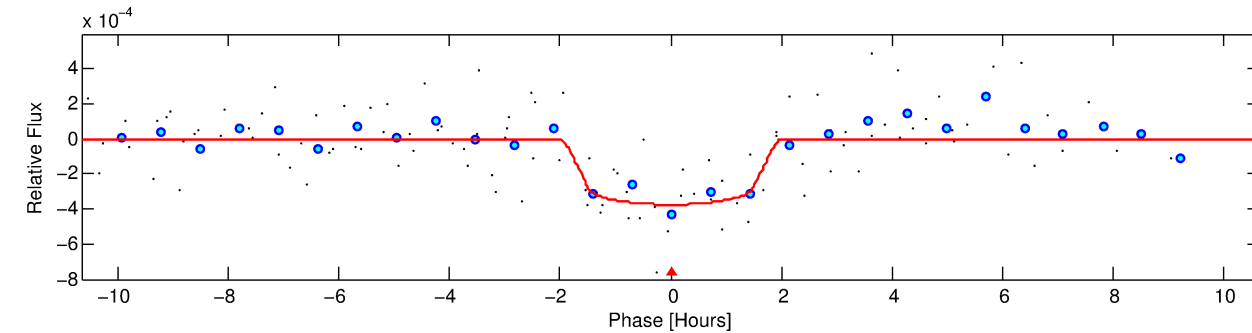
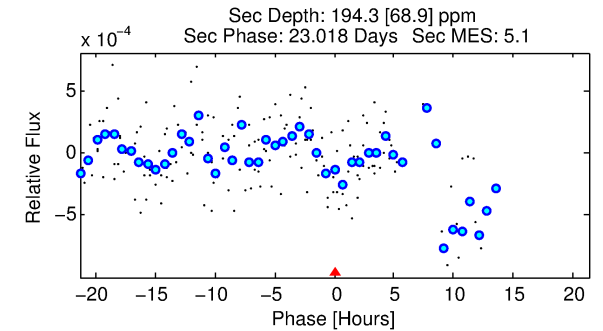
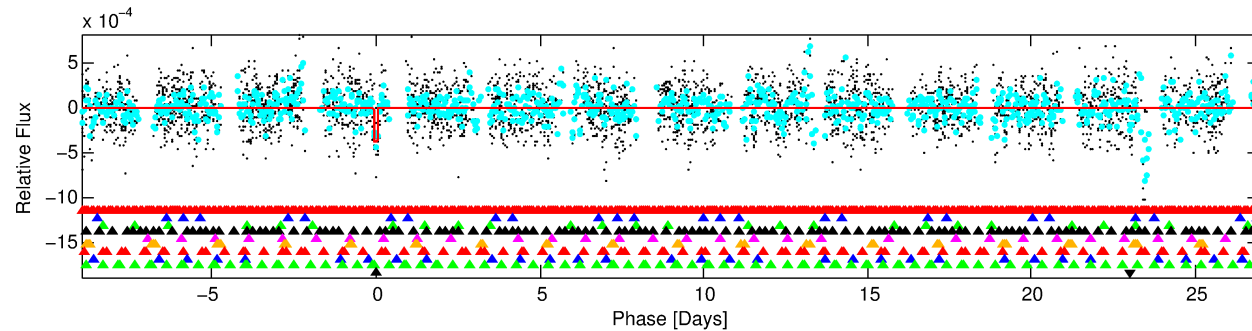
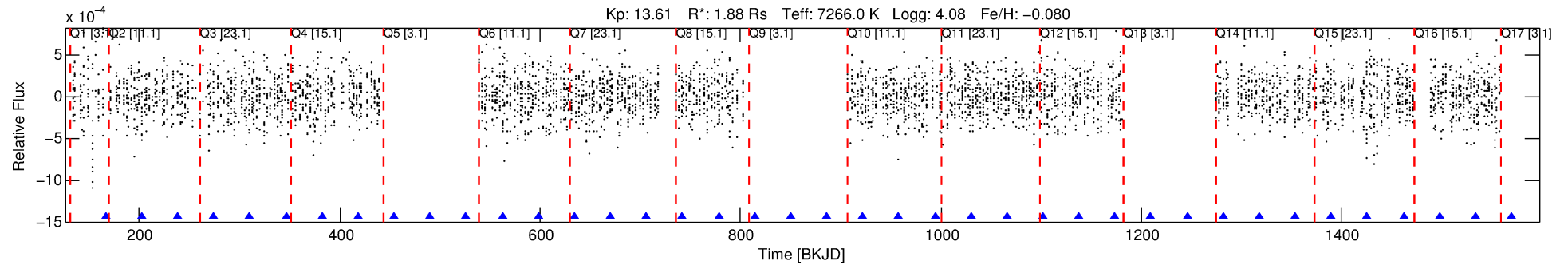
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006670894-10

No Significant Match Found

DV One-Page Summary

KIC: 6670894 Candidate: 10 of 10 Period: 35.972 d



DV Fit Results:

Period = 35.97227 [0.00044] d
Epoch = 166.6741 [0.0069] BKJD
Rp/R* = 0.0190 [0.0193]
a/R* = 57.95 [359.79]
b = 0.69 [4.74]
Seff = 144.19 [54.66]
Teq = 884 [84] K
Rp = 3.88 [4.14] Re
a = 0.2469 [0.0606] AU
Ag = 432.01 [906.09] [0.48σ]
Teffp = 6228 [3236] K [1.65σ]

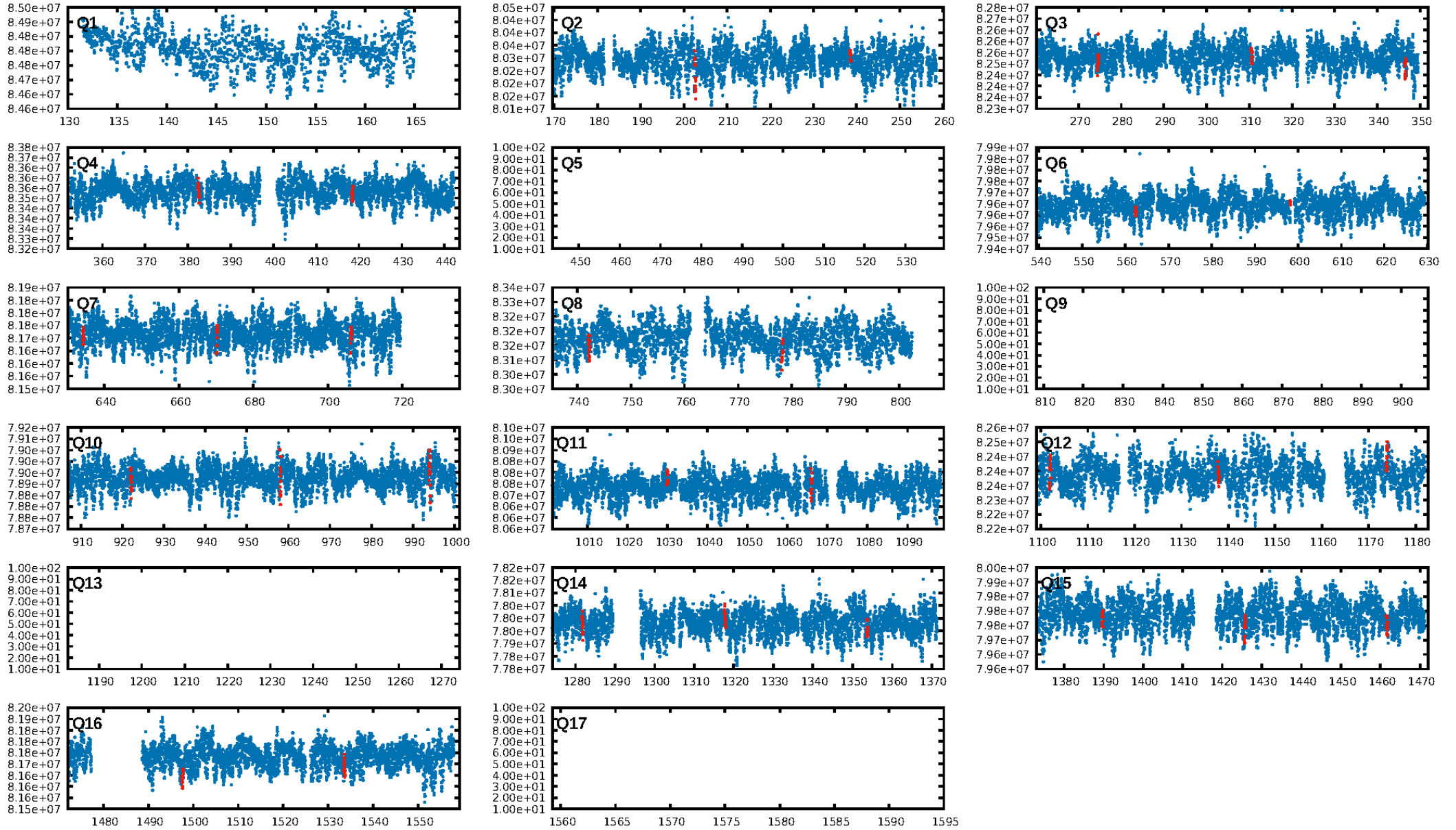
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [9.97σ]
LongPeriod-sig: 100.0% [56.07σ]
ModelChiSquare2-sig: 71.1%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 7.24e-07
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -2.255
Centroid-sig: 92.1%
Centroid-so: 0.023 arcsec [0.05σ]
OotOffset-rm: 0.299 arcsec [0.55σ]
OotOffset-st: 4/4/4/0 [12]
KicOffset-rm: 0.303 arcsec [0.65σ]
KicOffset-st: 4/4/4/0 [12]
DiffImageQuality-fgm: 0.67 [8/12]
DiffImageOverlap-fno: 0.42 [5/12]

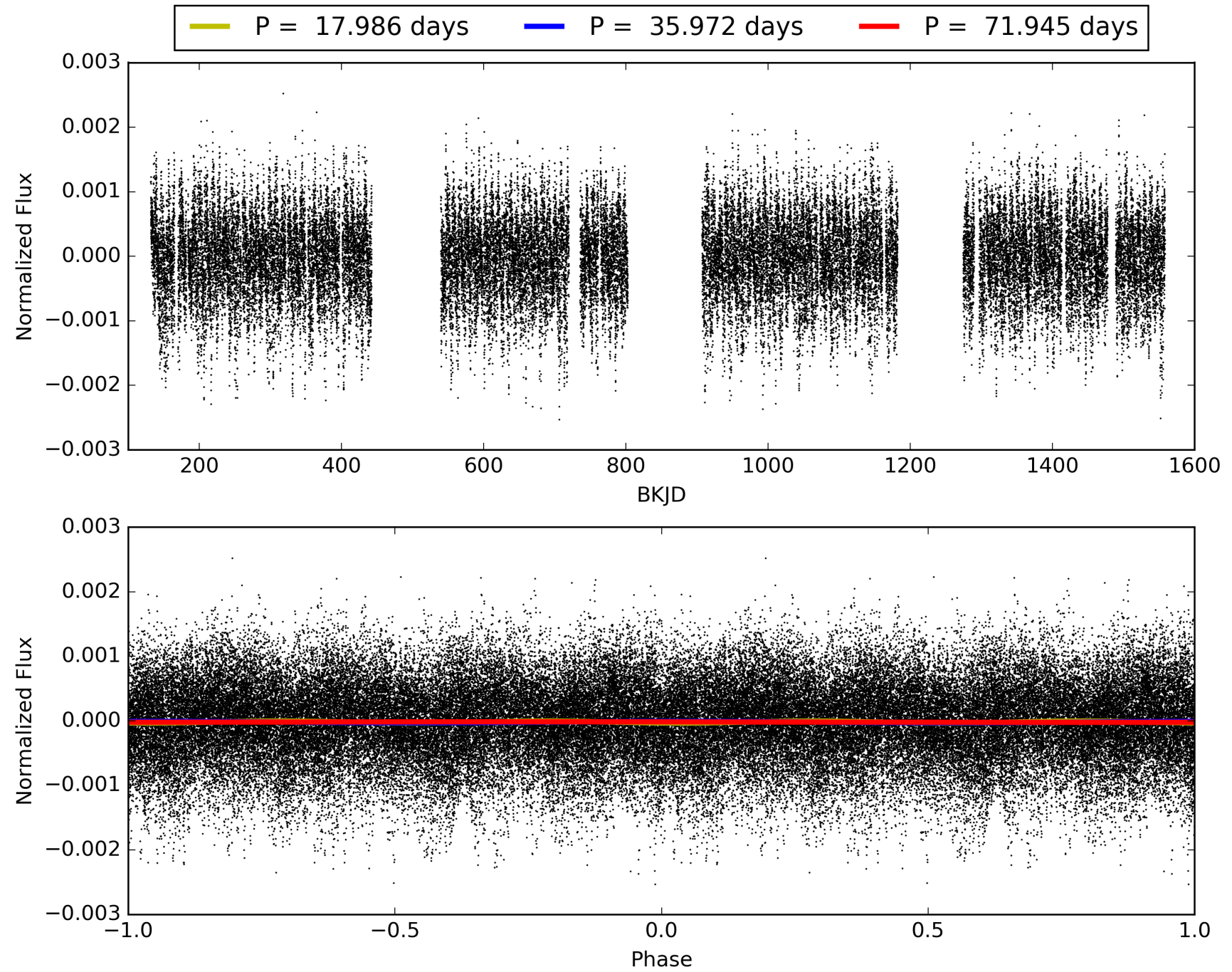
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 04:39:41 Z

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

TCE 006670894-10, PDC Light Curves

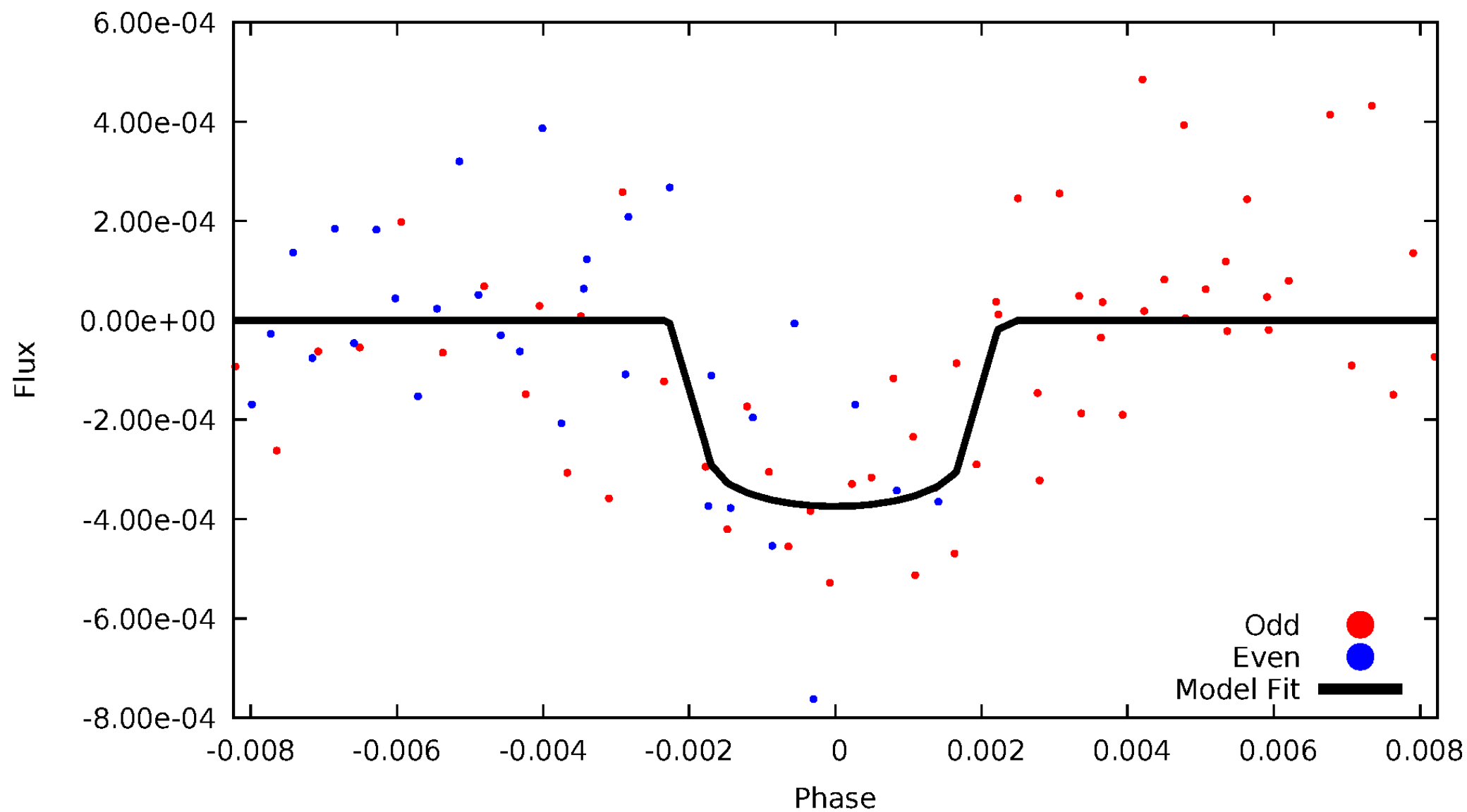


TCE 006670894-10



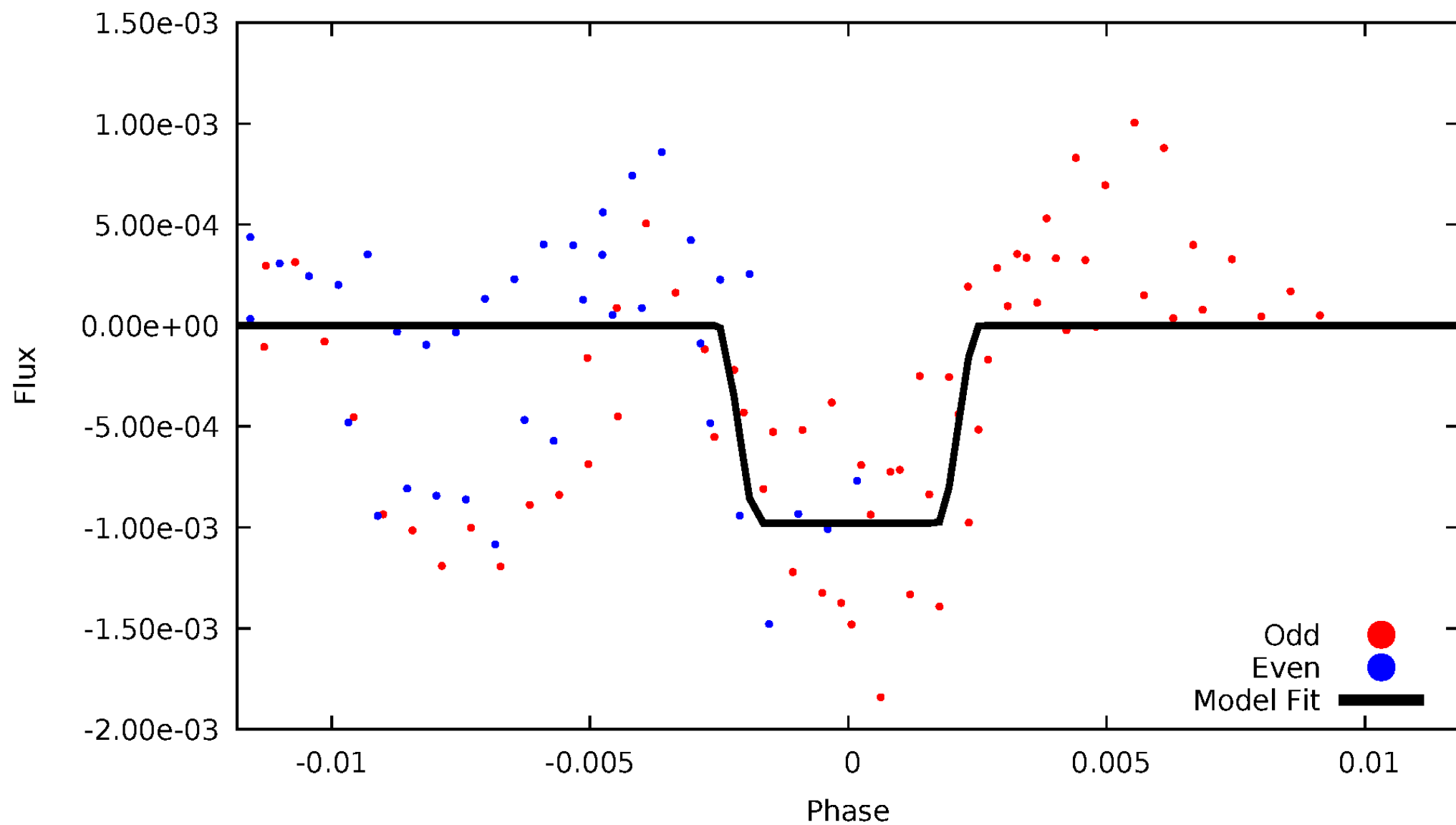
DV Odd/Even

TCE 006670894-10



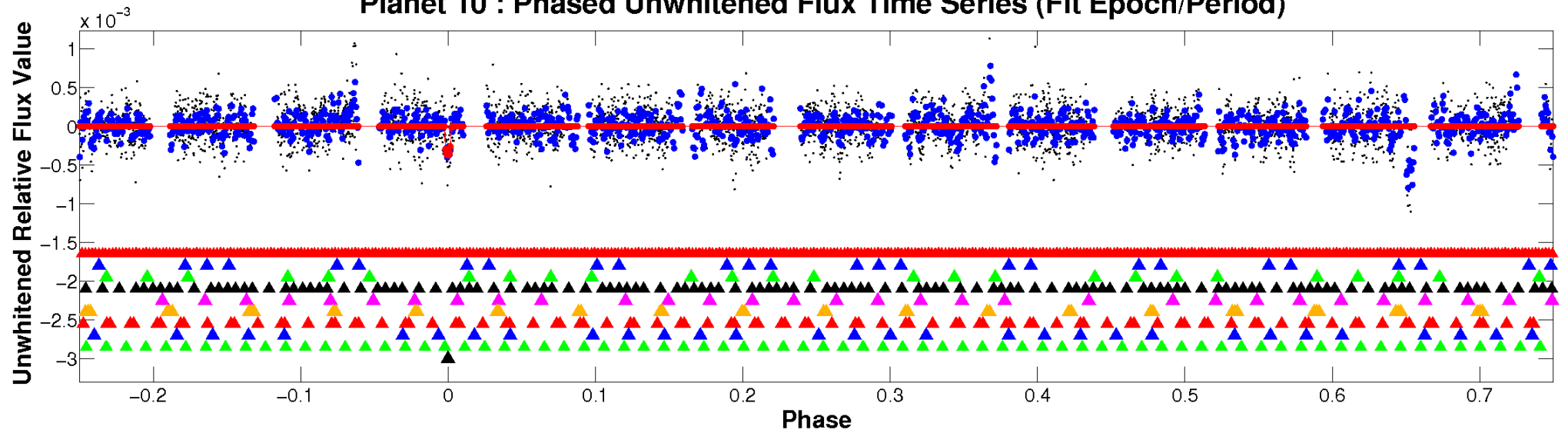
ALT Odd/Even

TCE 006670894-10

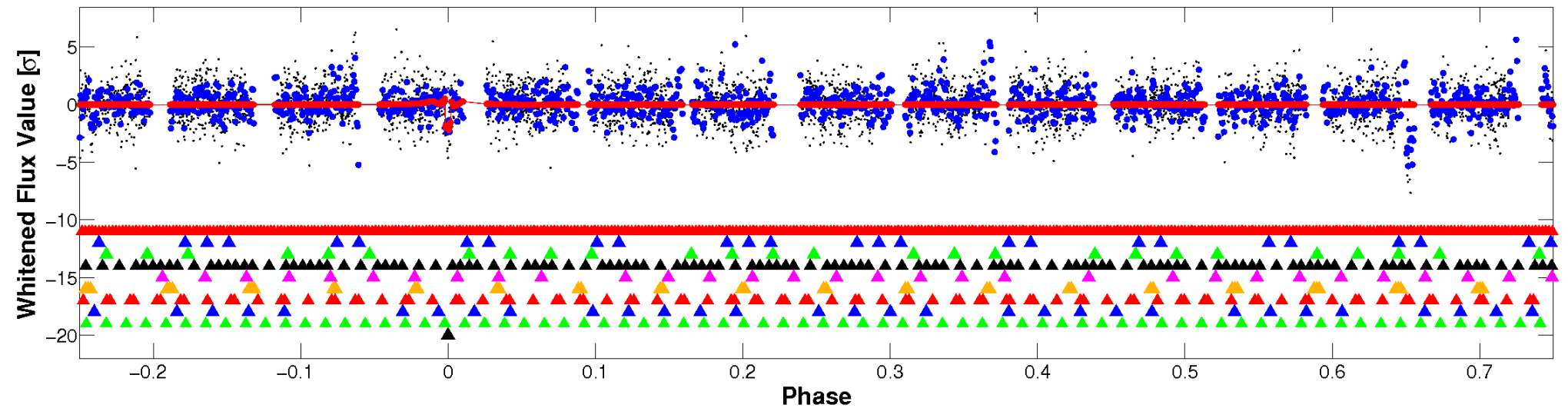


Non-Whitened Vs. Whitened Light Curve

Planet 10 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

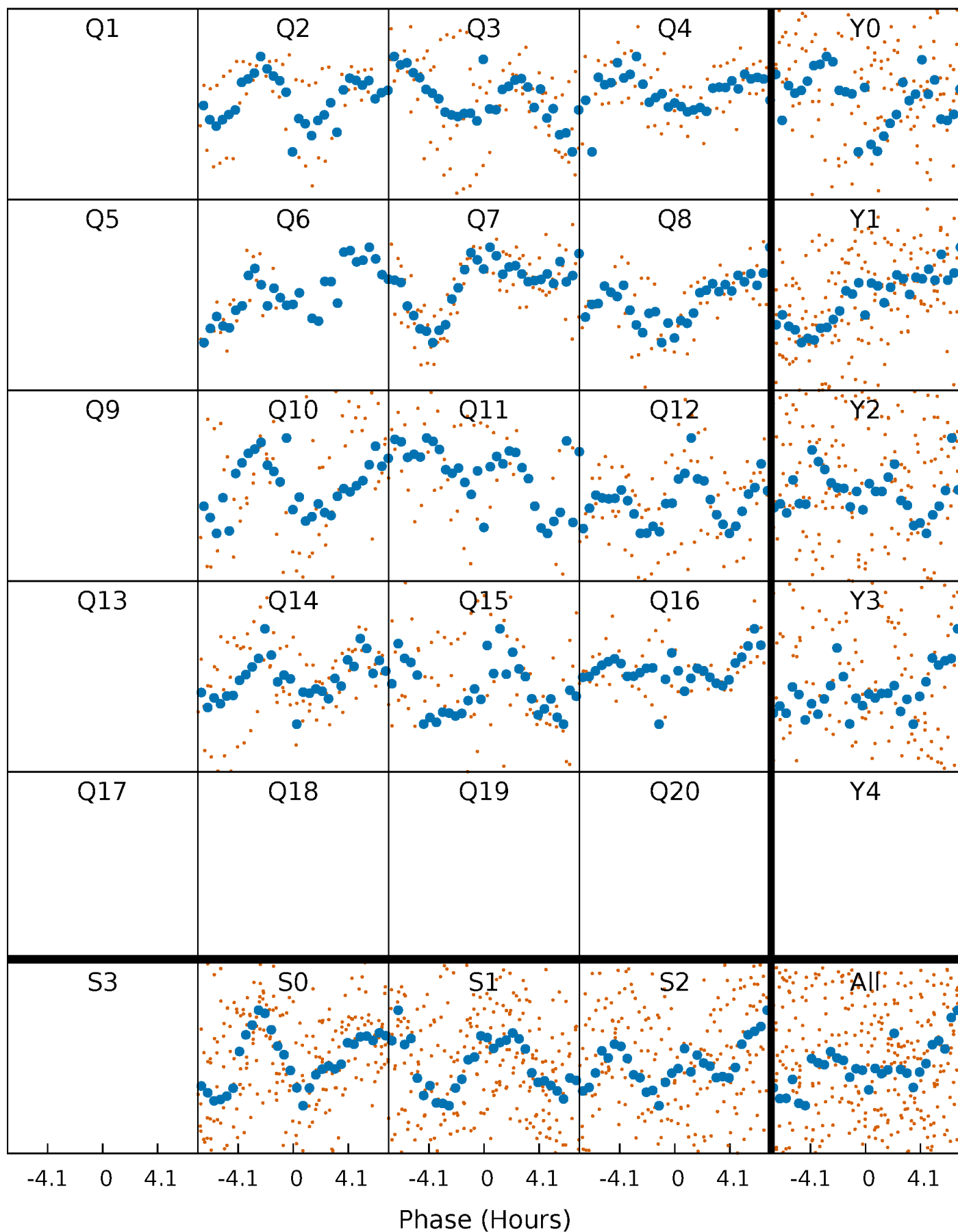


Planet 10 : Phased Whitened Flux Time Series (Fit Epoch/Period)



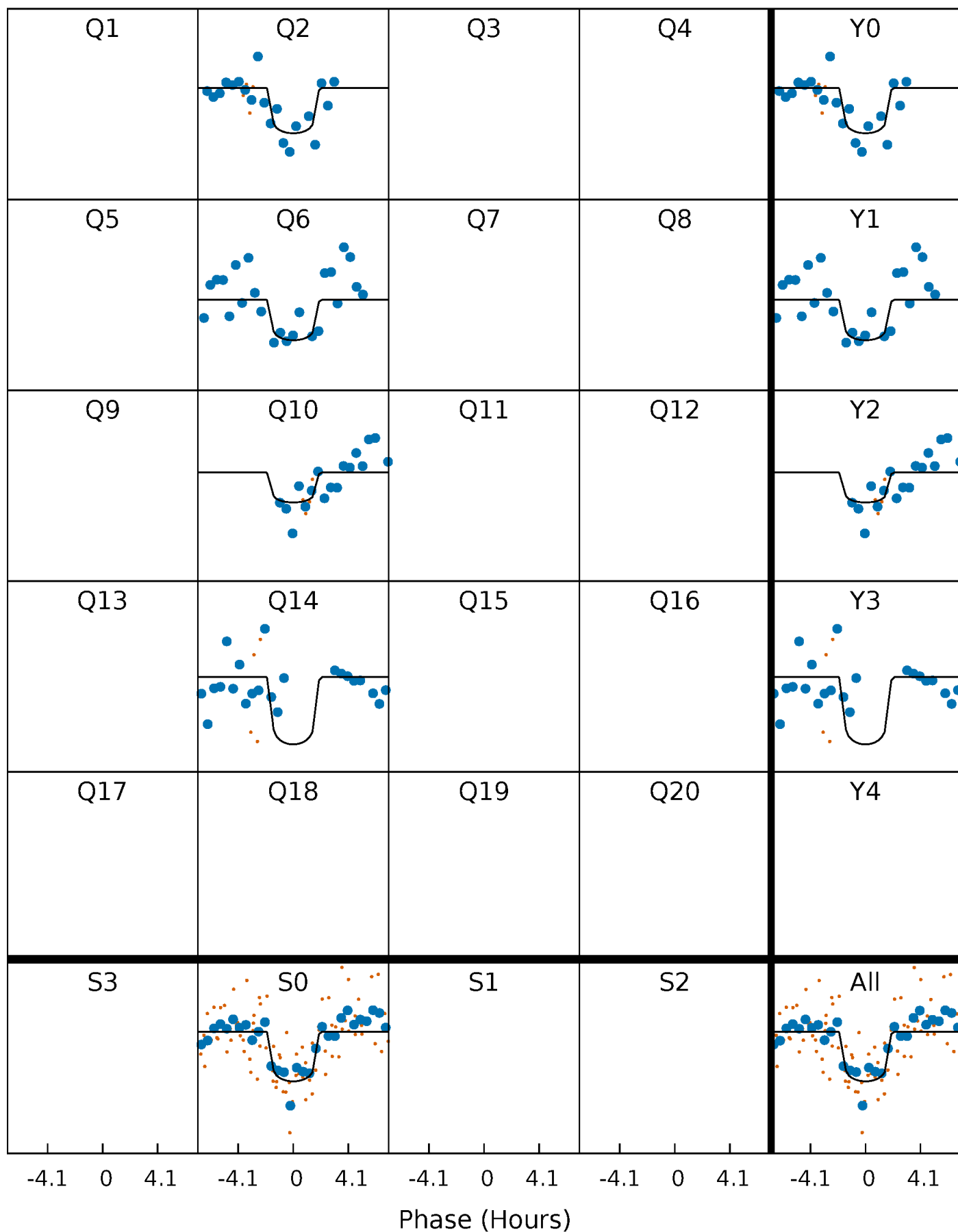
PDC Quarter-Phased Transit Curves

TCE 006670894-10 P= 35.972270 Days $T_0=166.674102$ (BKJD)



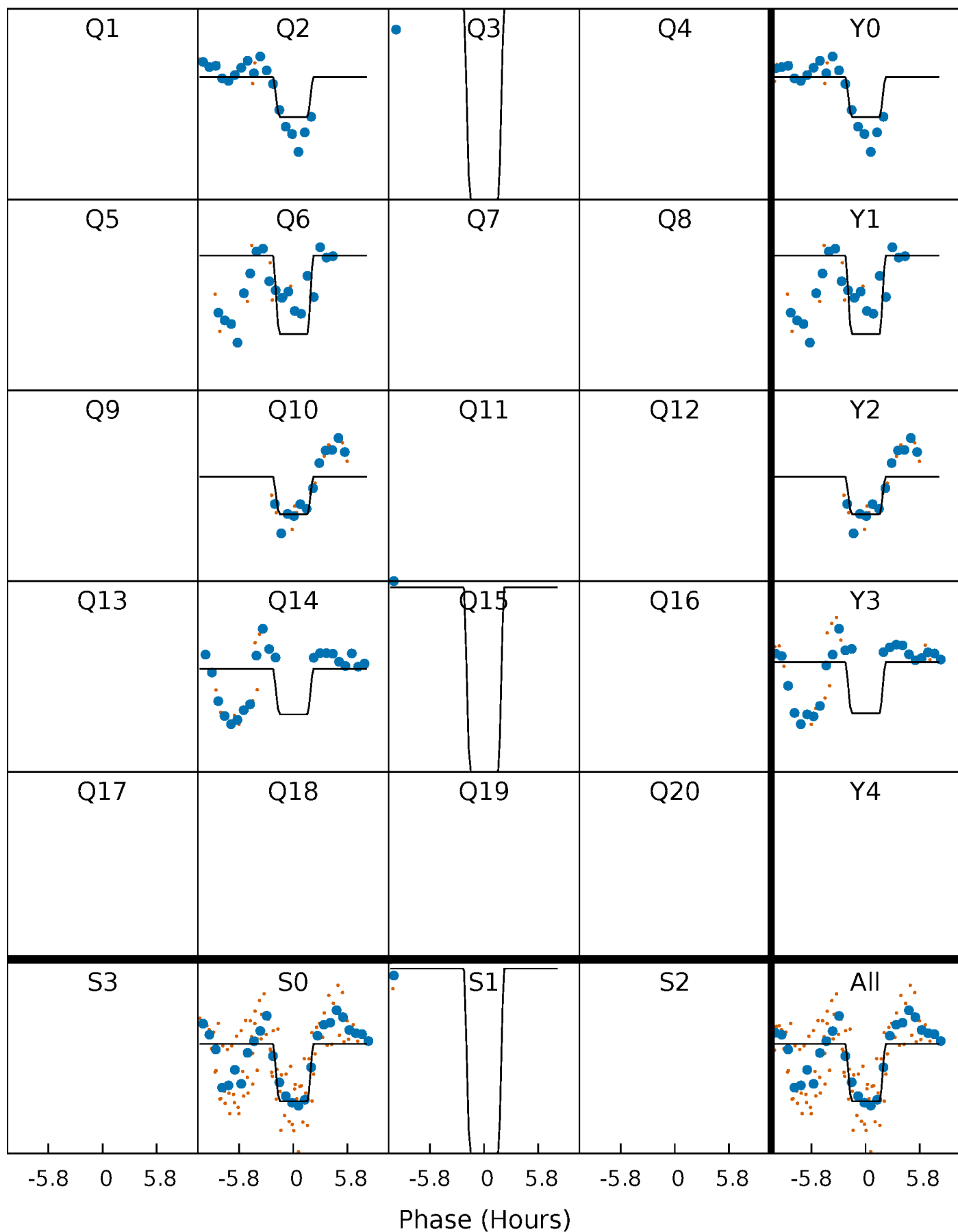
DV Quarter-Phased Transit Curves

TCE 006670894-10 P= 35.972270 Days $T_0=166.674102$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

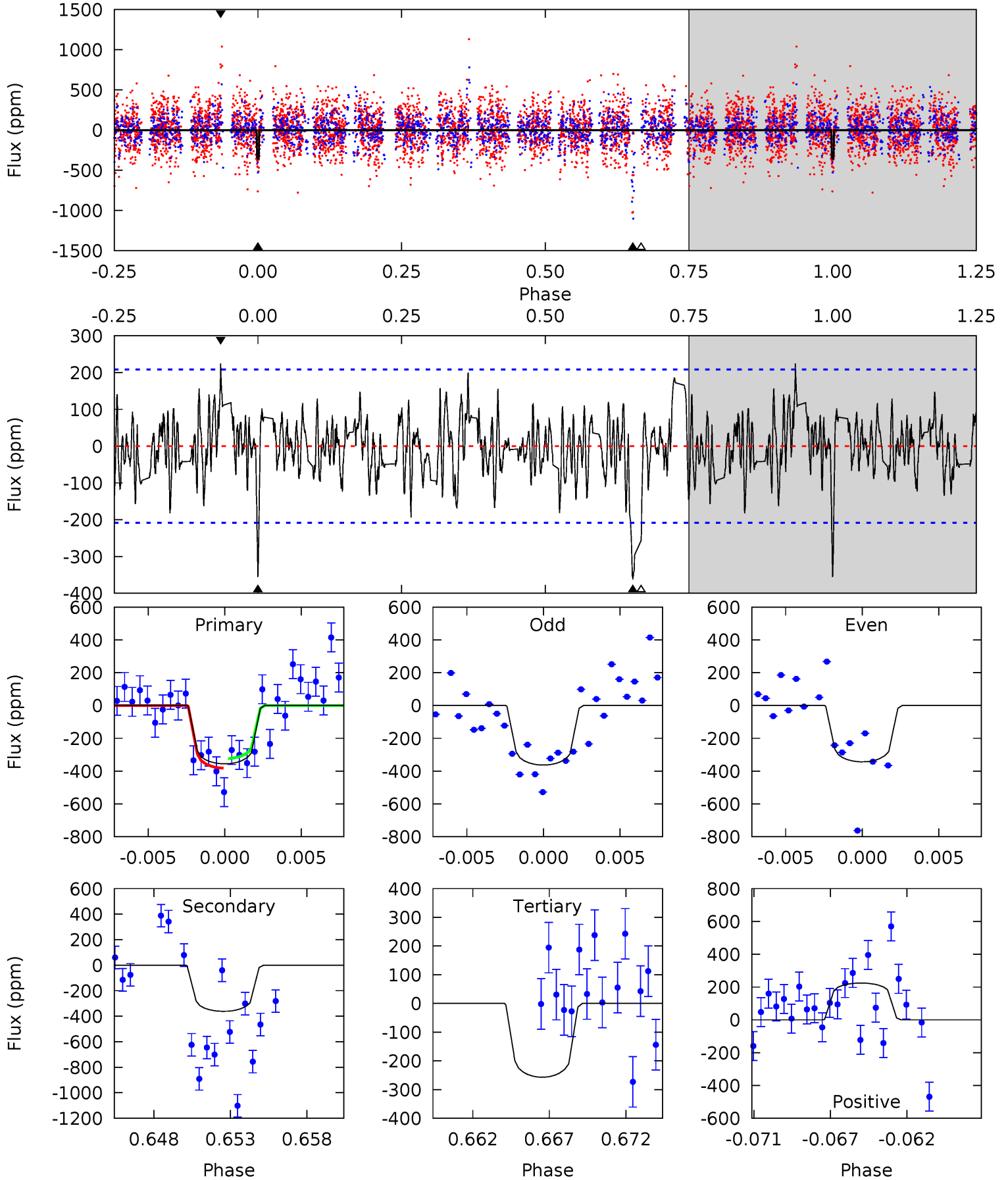
TCE 006670894-10 P= 35.972674 Days $T_0=166.709767$ (BKJD)



DV Model-Shift Uniqueness Test

006670894-10, P = 35.972270 Days, E = 130.701832 Days

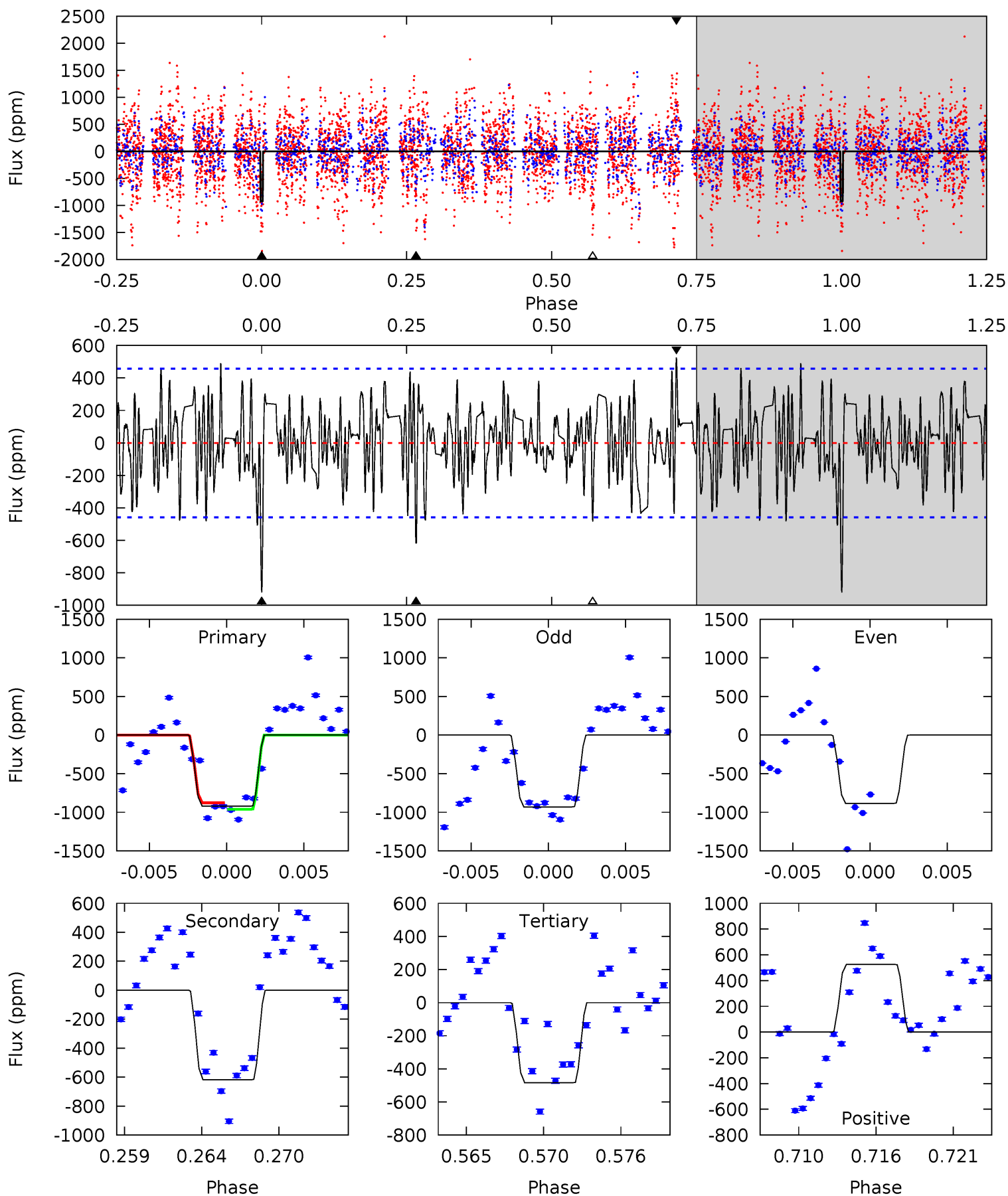
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.82	8.97	6.37	5.57	5.17	2.82	1.66	2.45	3.26	2.60	3.41	0.23	0.91	0.38	0.73



Alt Model-Shift Uniqueness Test

006670894-10, P = 35.972674 Days, E = 130.737093 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	6.96	5.45	5.92	5.15	2.80	2.10	4.91	4.44	1.51	1.05	0.20	0.75	0.36	0.47



Stellar Parameters For KIC 006670894

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7266^{+226}_{-327}	$4.082^{+0.170}_{-0.170}$	$-0.080^{+0.250}_{-0.350}$	$1.876^{+0.585}_{-0.439}$	$1.546^{+0.212}_{-0.259}$	$0.330^{+0.299}_{-0.157}$
	+3%/-5%	+4%/-4%	+312%/-438%	+31%/-23%	+14%/-17%	+91%/-48%
Source	KIC0	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 006670894-10 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-362 ± 40	$4.71^{+3.69}_{-3.02}$	1234^{+102}_{-88}	6445^{+5878}_{-1488}	528^{+3656}_{-355}
Alt.	-619 ± 89	$6.49^{+3.87}_{-3.47}$	1229^{+106}_{-85}	6346^{+3568}_{-1290}	493^{+1777}_{-306}

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 $A_{obs} \gg 1.0$

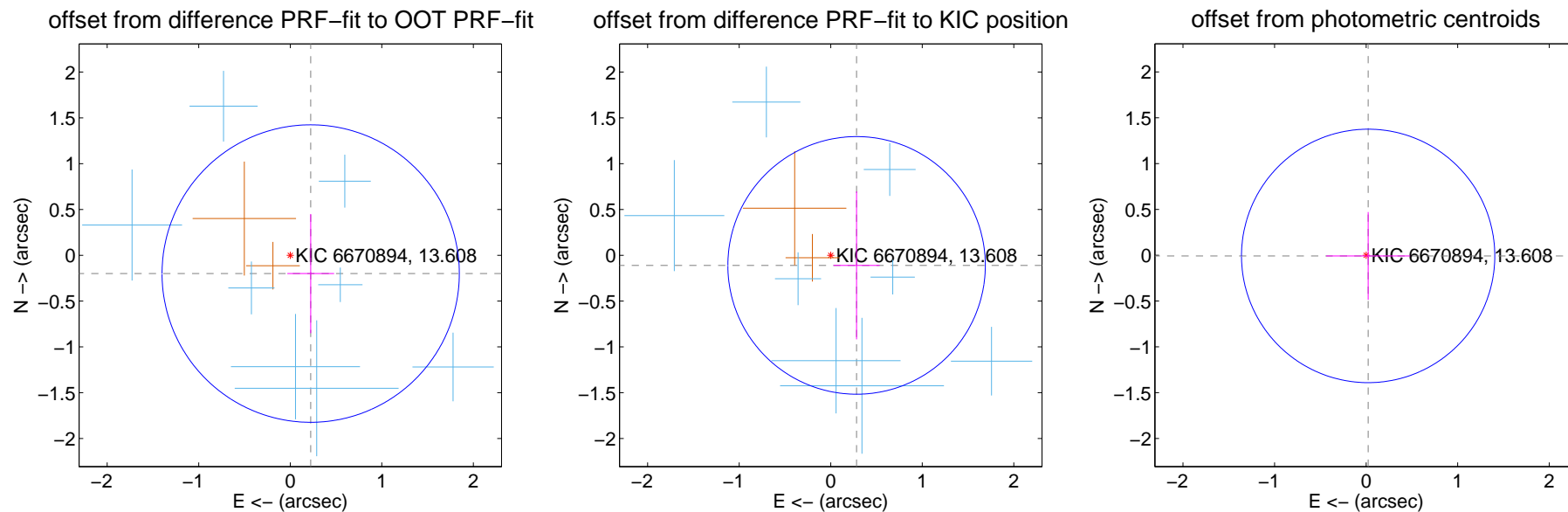
DV Centroid Data

Supplemental centroid analysis for 006670894-10. Kepler magnitude: 13.61. Transit SNR 10.31

There are 8 quarters with good PRF difference image offsets

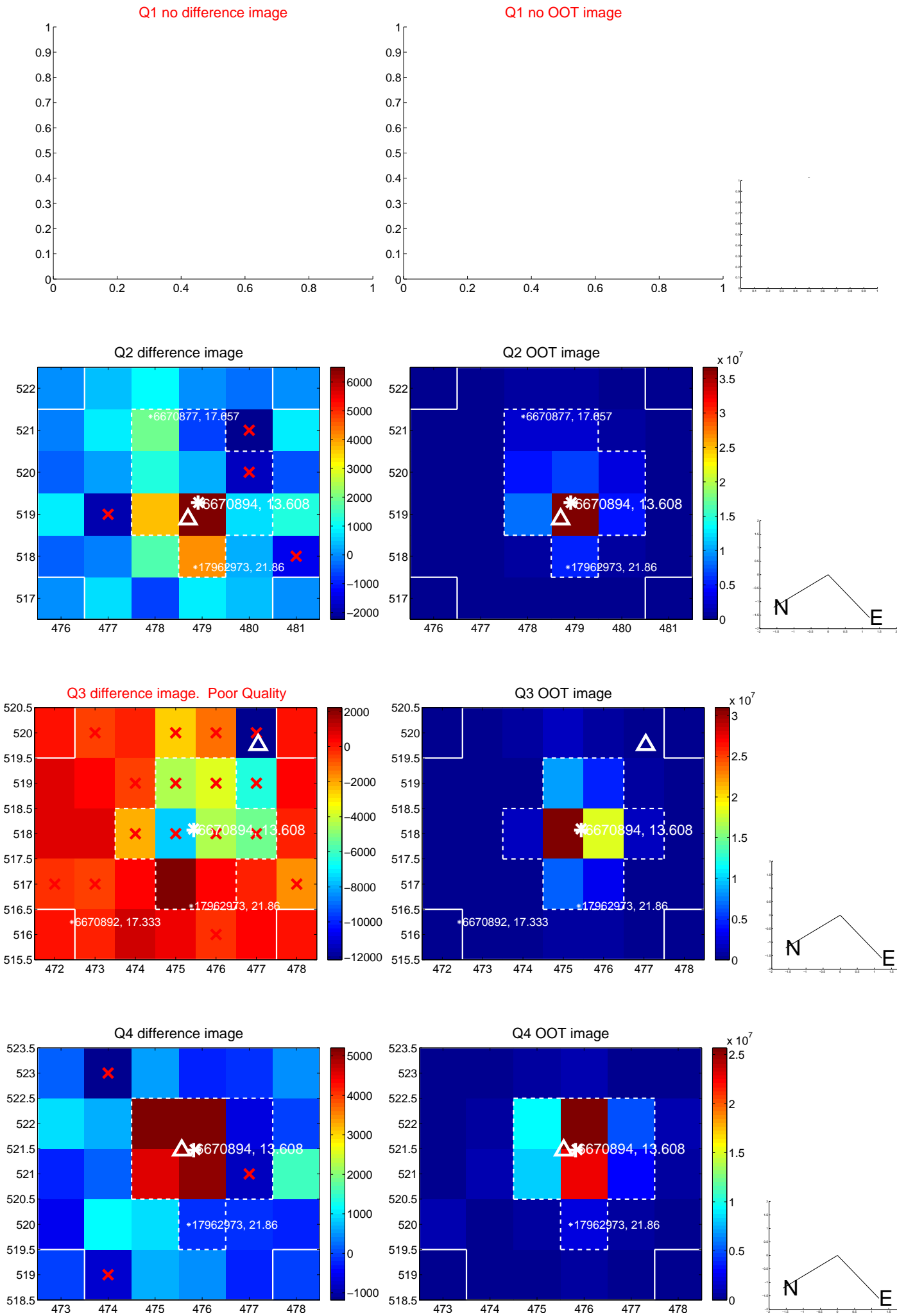
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.299 ± 0.541	0.55	-0.223 ± 0.255	-0.200 ± 0.650
PRF-fit source offset from KIC position	0.303 ± 0.469	0.65	-0.282 ± 0.252	-0.110 ± 0.808
photometric centroid source offset	0.02 ± 0.46	0.05	-0.02 ± 0.46	-0.01 ± 0.48

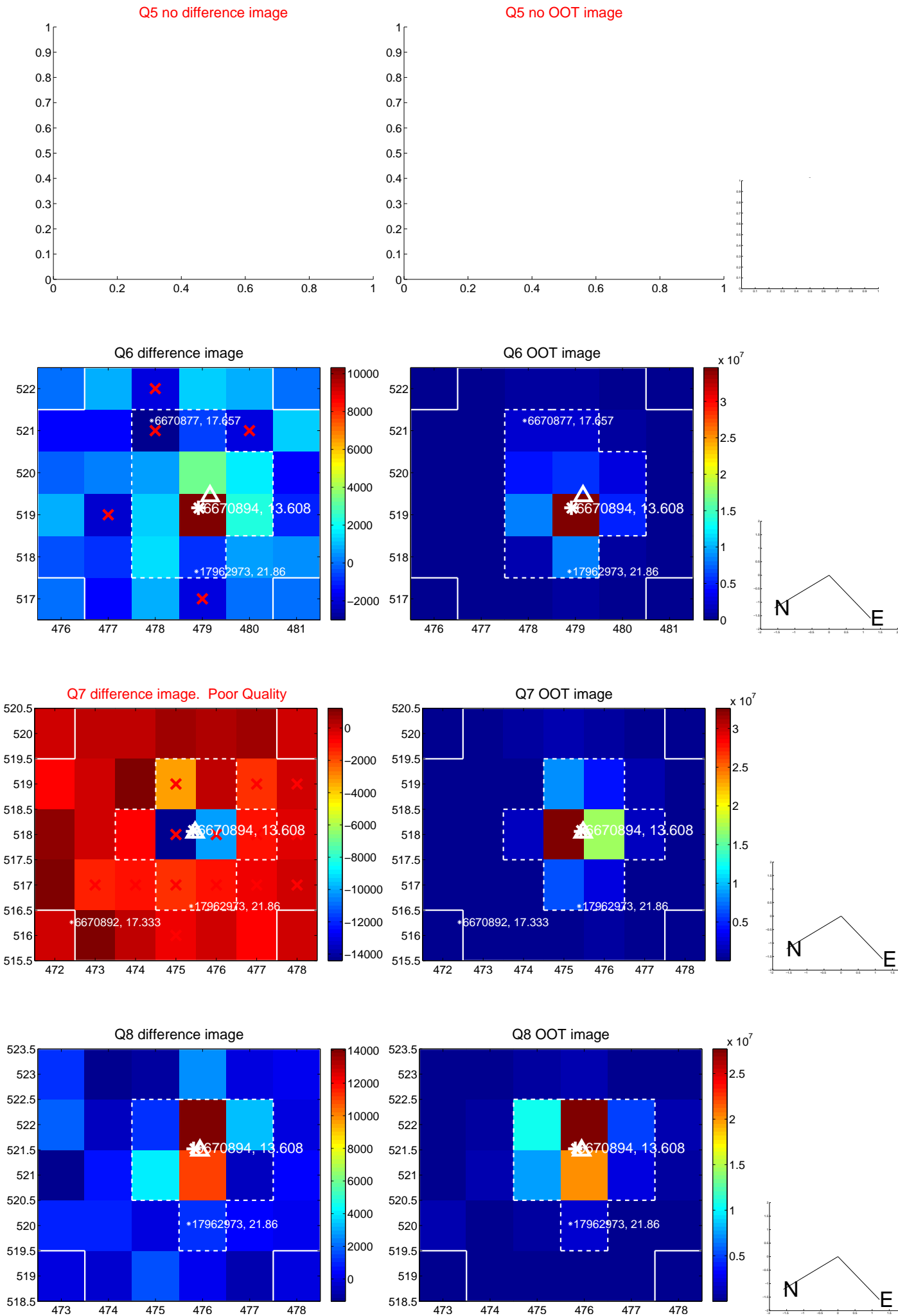


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

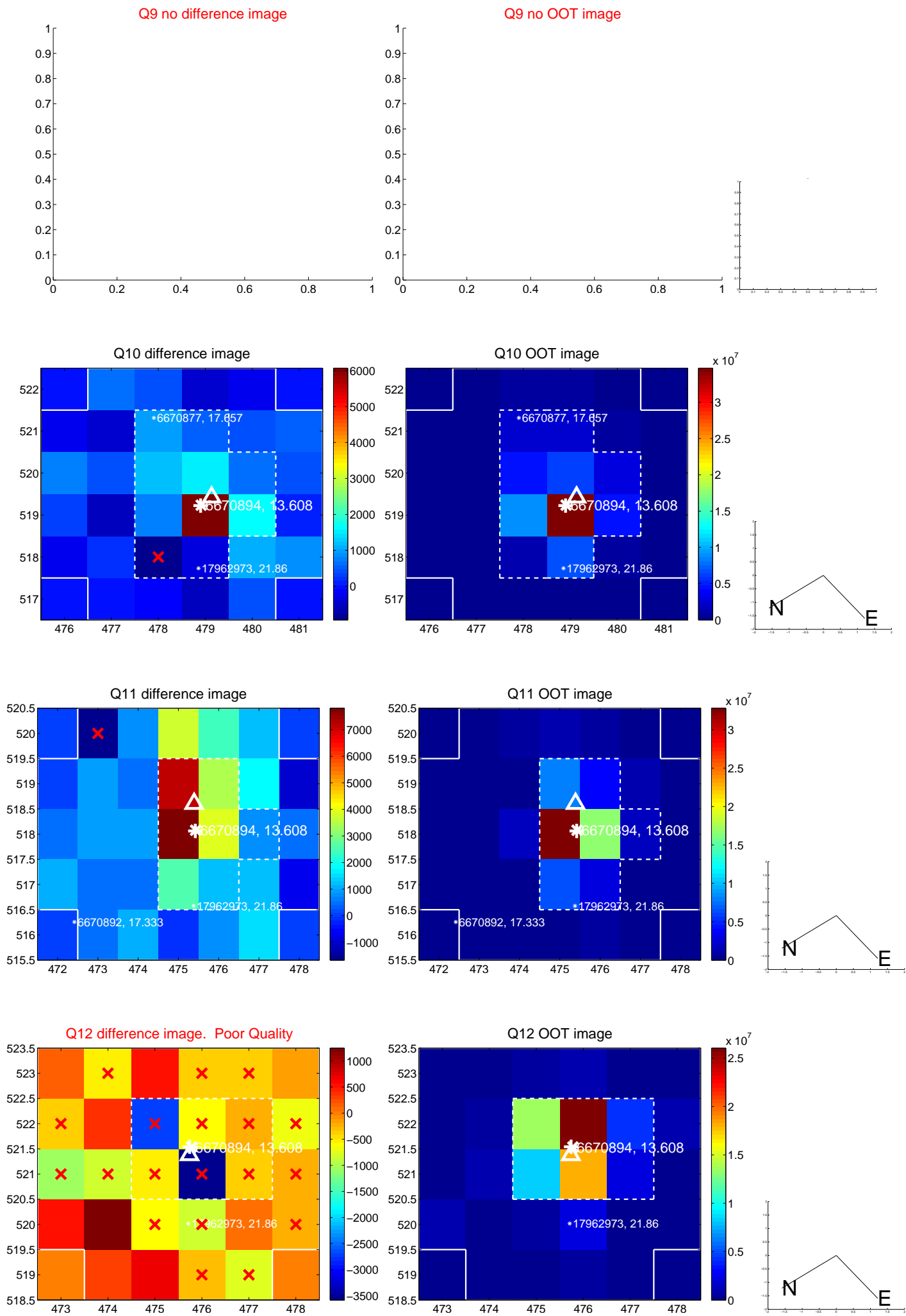
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



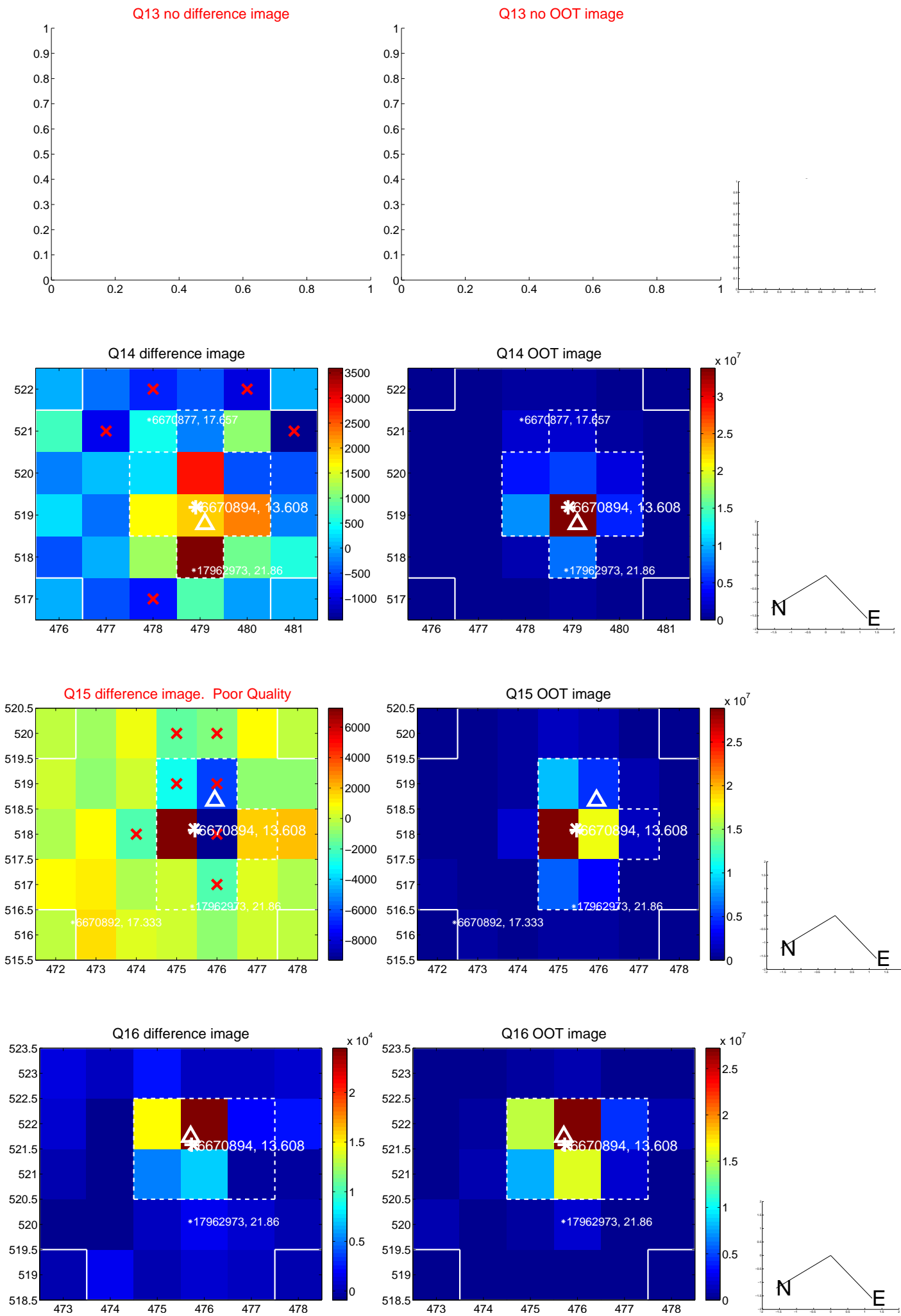
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



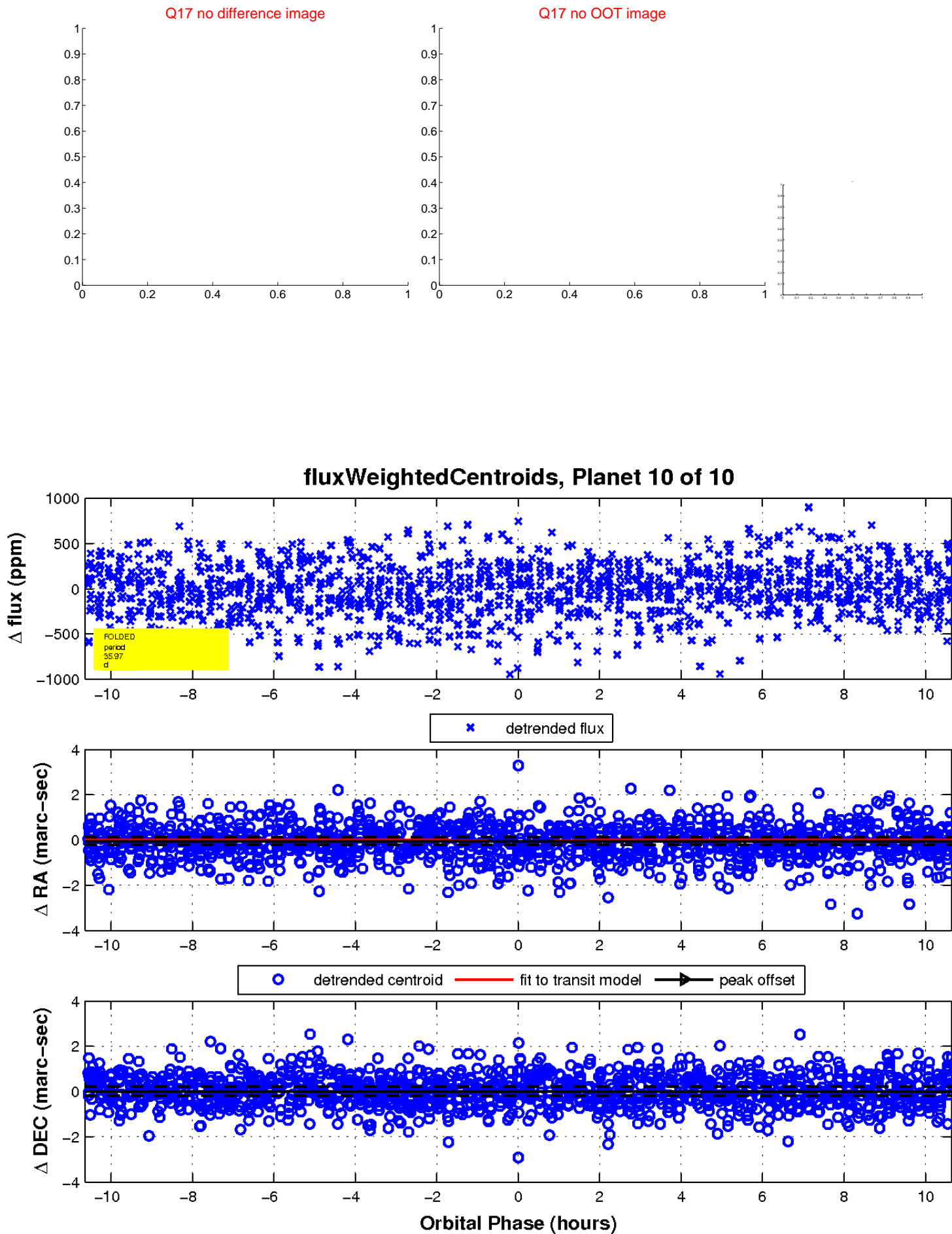
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

