

KIC 007810798

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})
007810798-01	OBS	No	0.684958	131.538277	1880.7	2.000	8.0	-1.0	0.58	4946	2.49	1130.58
007810798-02	OBS	No	98.578148	206.616431	2932.8	4.886	8.7	6.7	0.58	4946	3.27	1.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007810798-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS—HALO_GHOST
007810798-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS

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

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

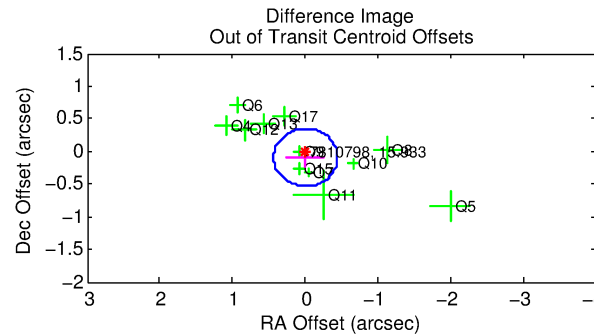
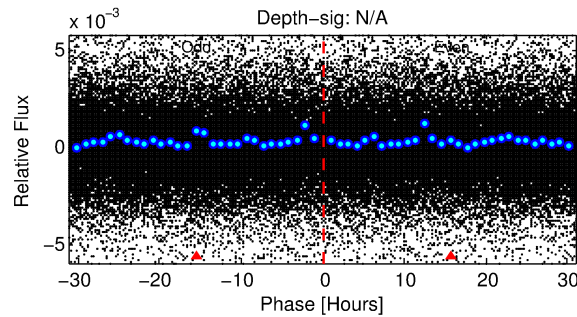
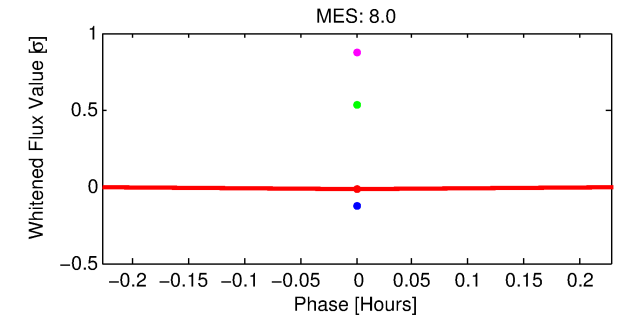
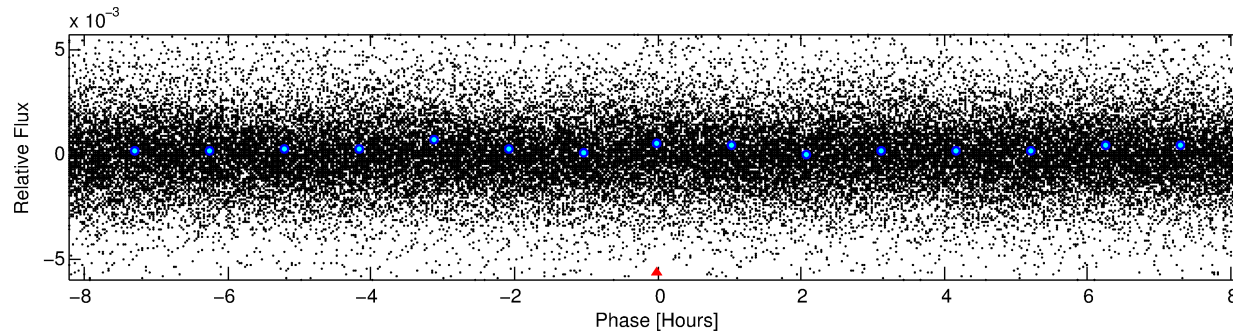
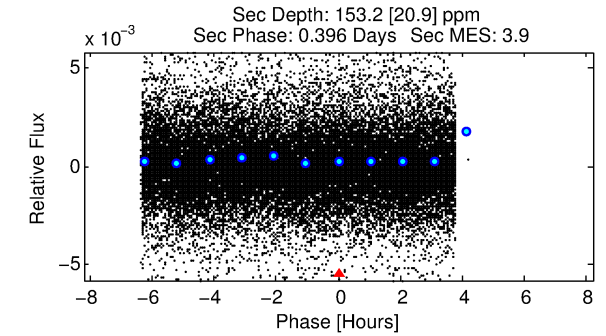
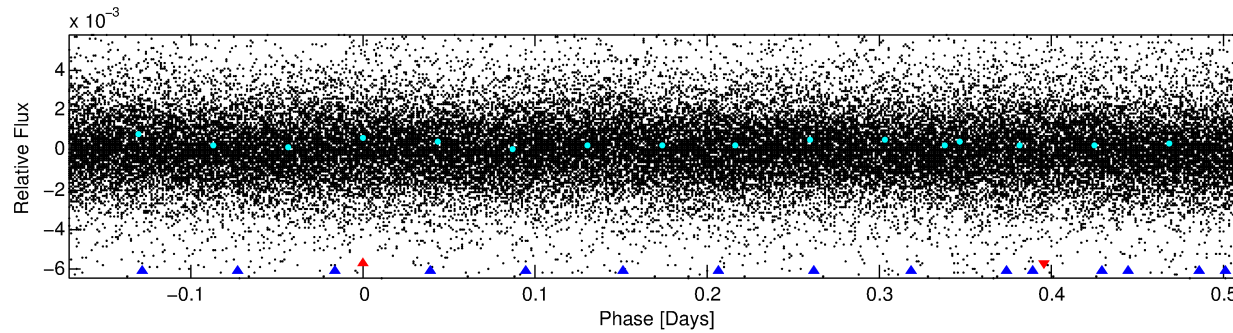
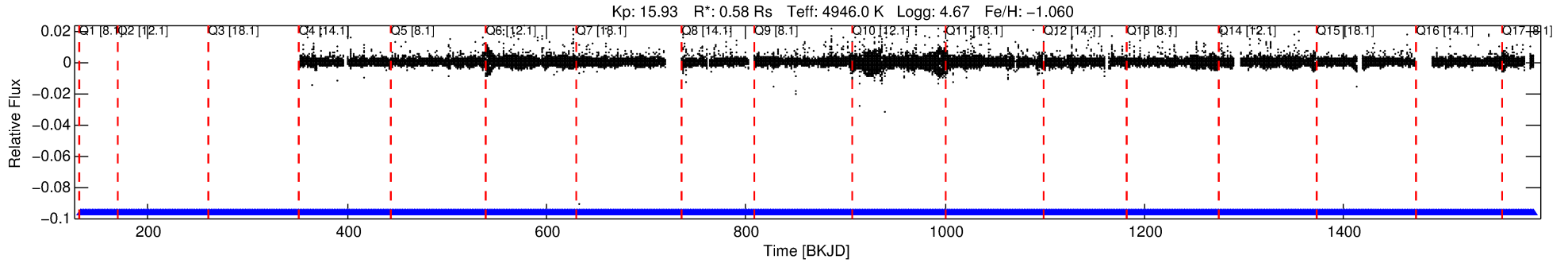
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007810798-01

No Significant Match Found

DV One-Page Summary

KIC: 7810798 Candidate: 1 of 2 Period: 0.685 d



TPS TCE Results:

Period = 0.68496 d
Epoch = 131.5383 BKJD

DV fit results are unavailable

DV Diagnostic Results:

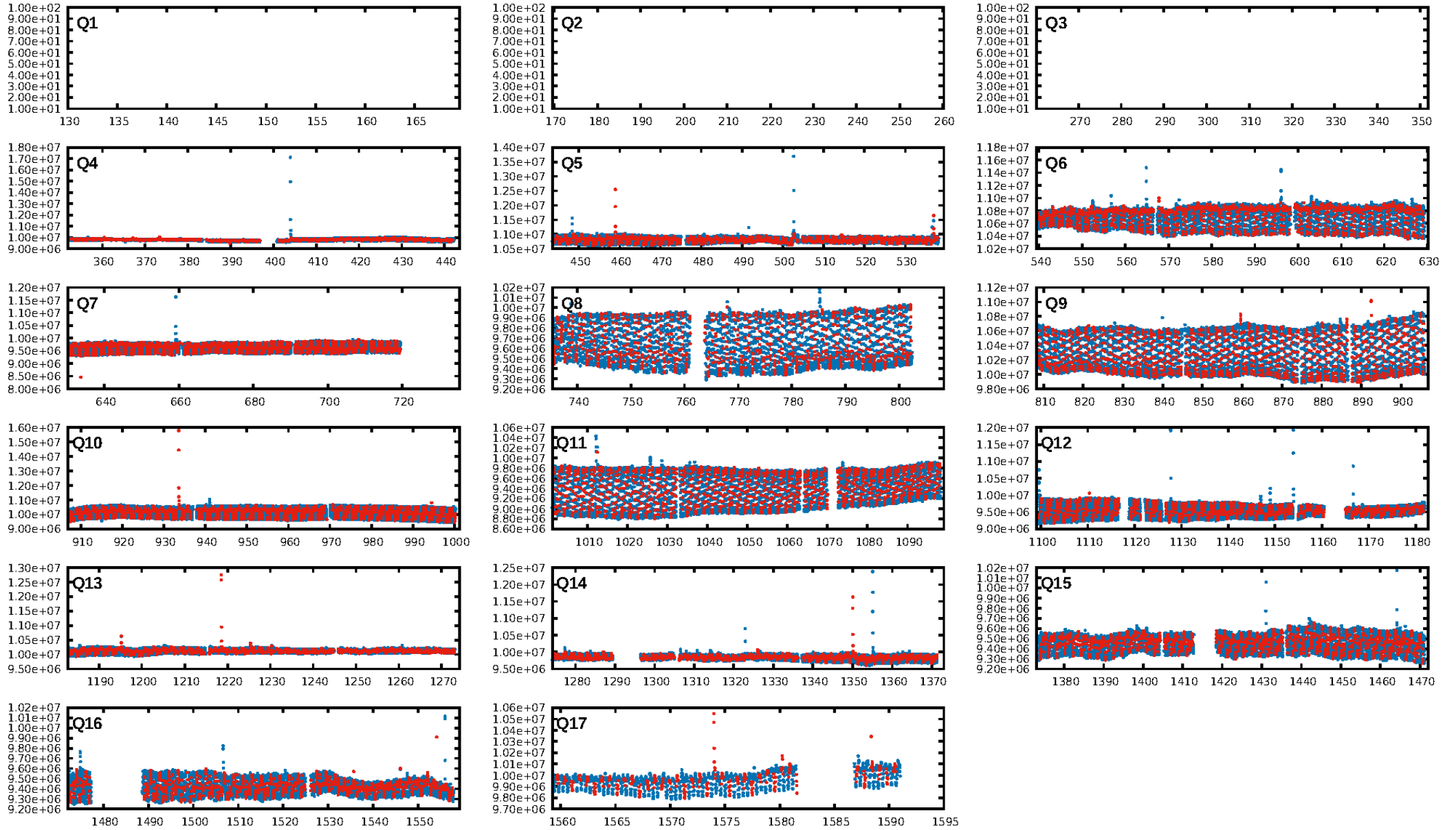
ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [445.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.04e-16
RollingBand-fgt: 1.00 [1625/1625]
GhostDiagnostic-chr: -0.1291

Centroid-sig: 20.4%
Centroid-so: 1.235 arcsec [2.47σ]
OotOffset-rm: 0.091 arcsec [0.62σ]
KicOffset-rm: 0.198 arcsec [1.43σ]
OotOffset-st: 2/3/3/4 [12]
KicOffset-st: 2/3/3/4 [12]
DiffImageQuality-fgm: 0.58 [7/12]
DiffImageOverlap-fno: 1.00 [14/14]

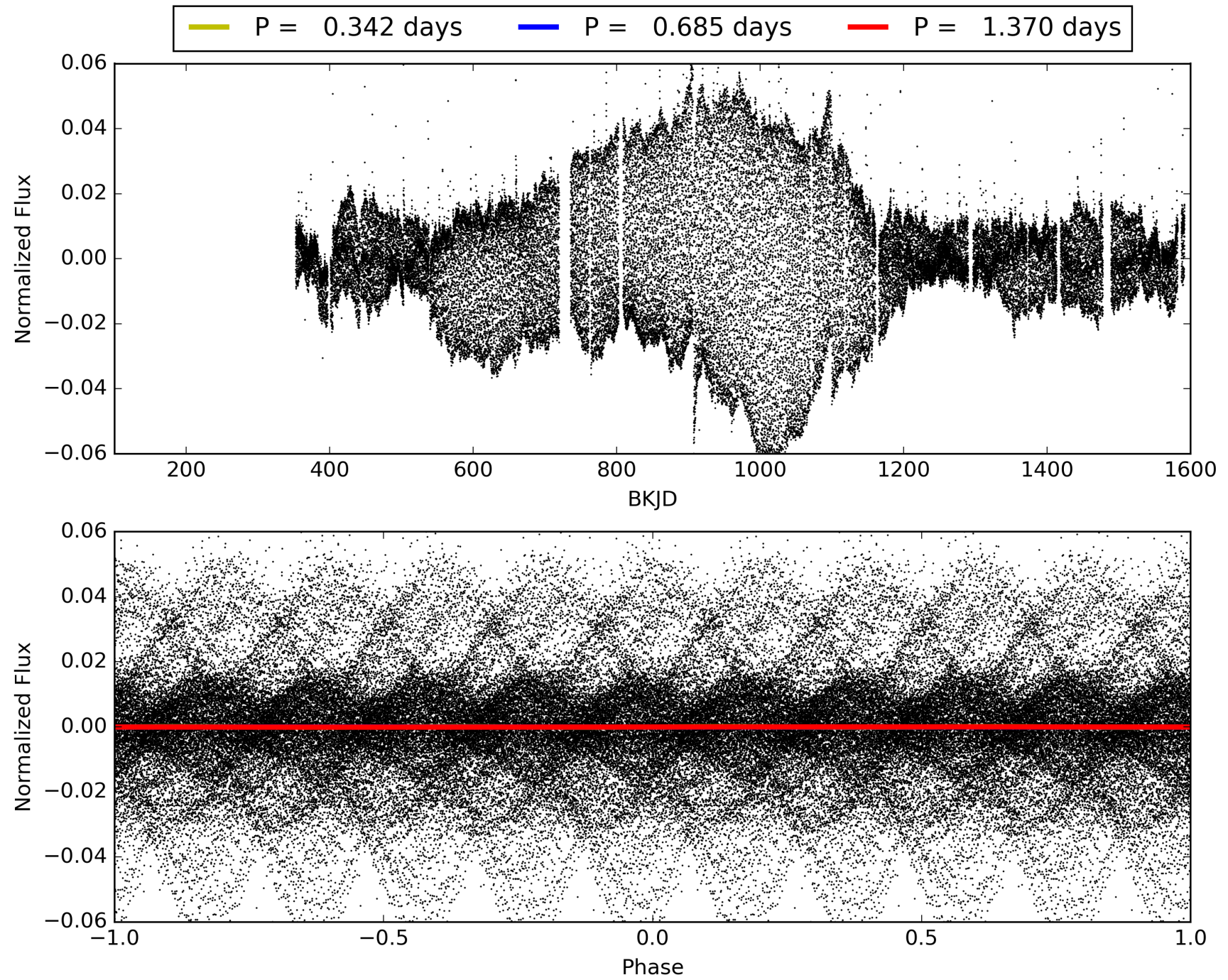
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 04:59:56 Z

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

TCE 007810798-01, PDC Light Curves

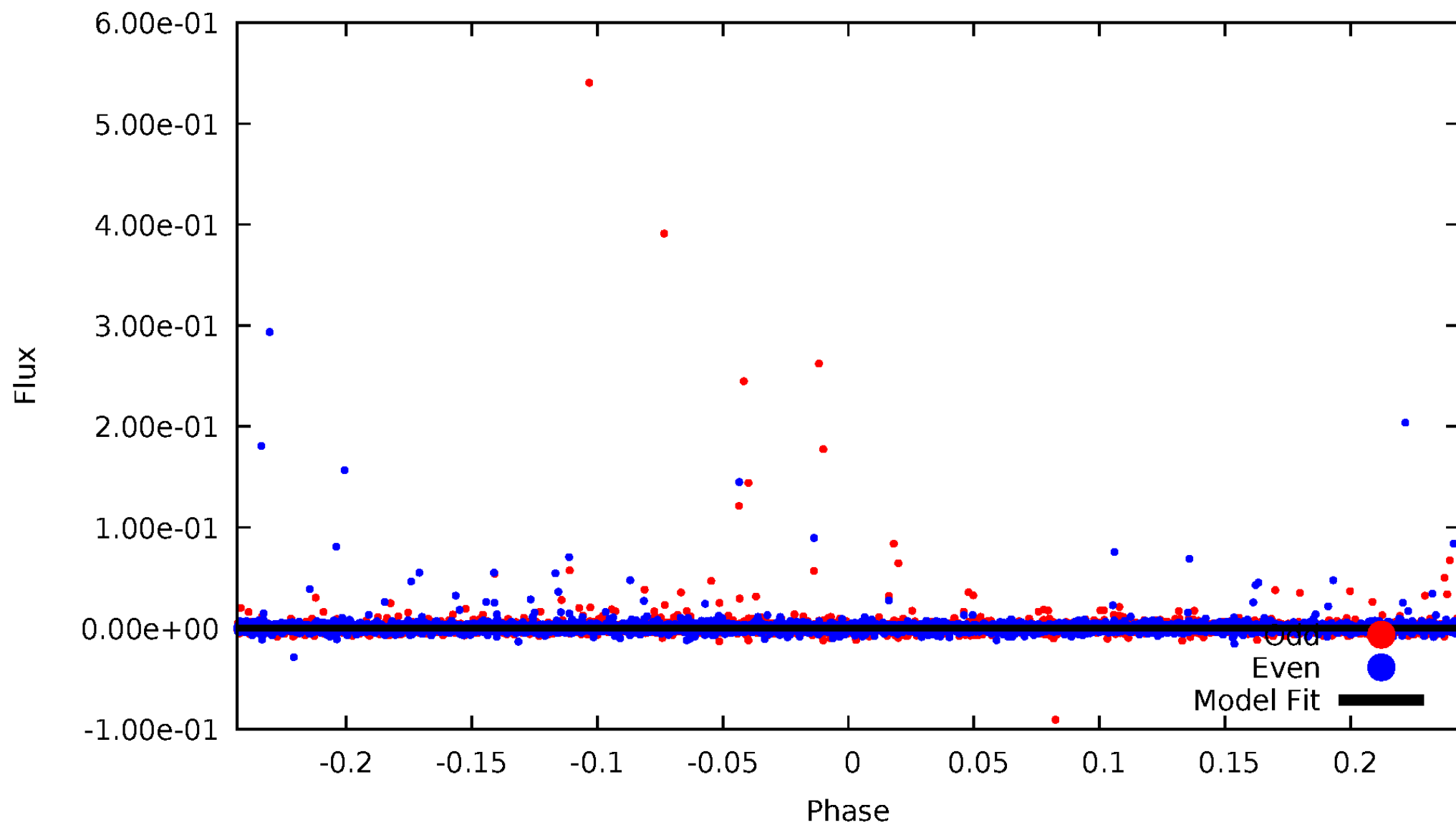


TCE 007810798-01



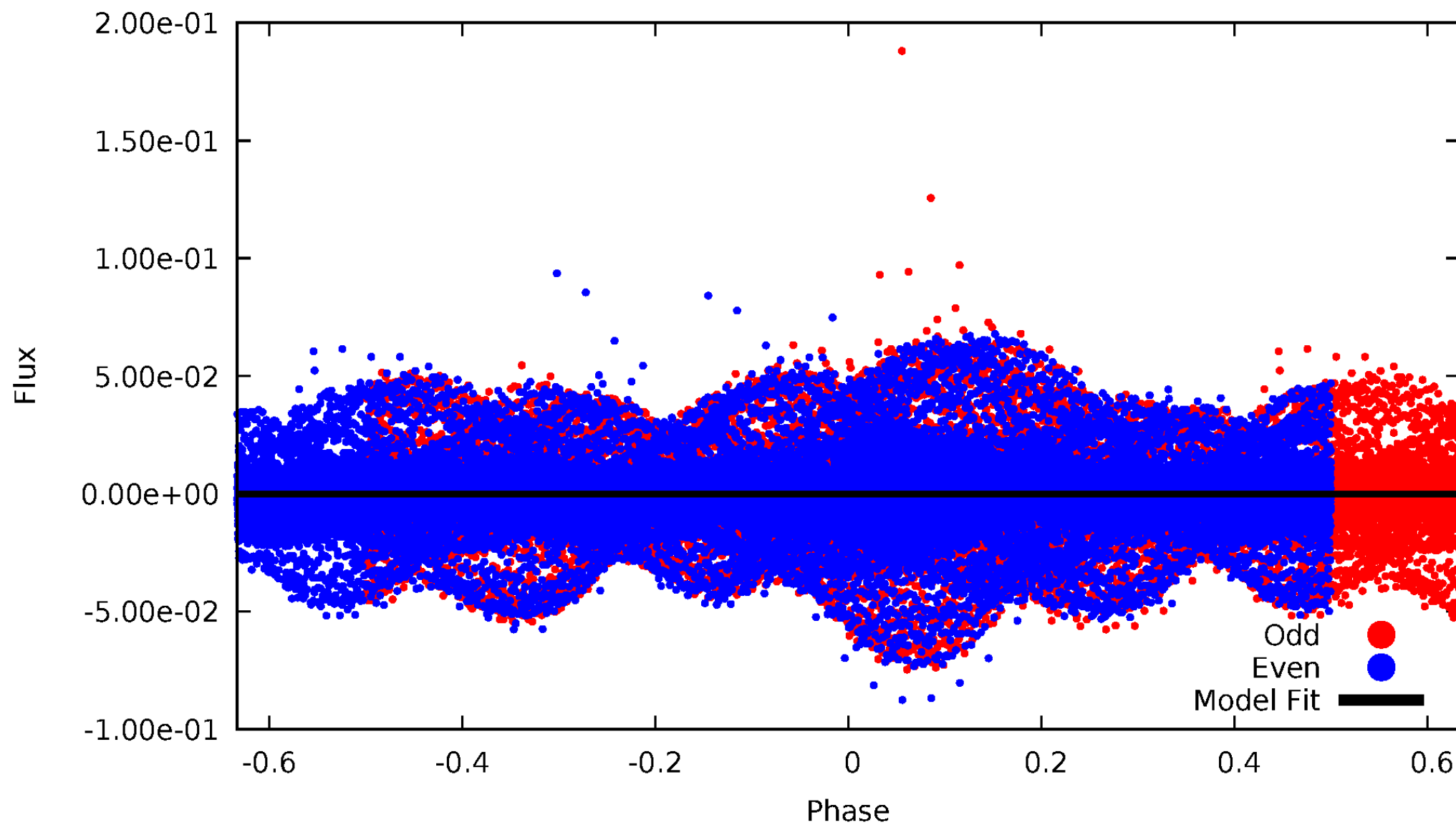
DV Odd/Even

TCE 007810798-01

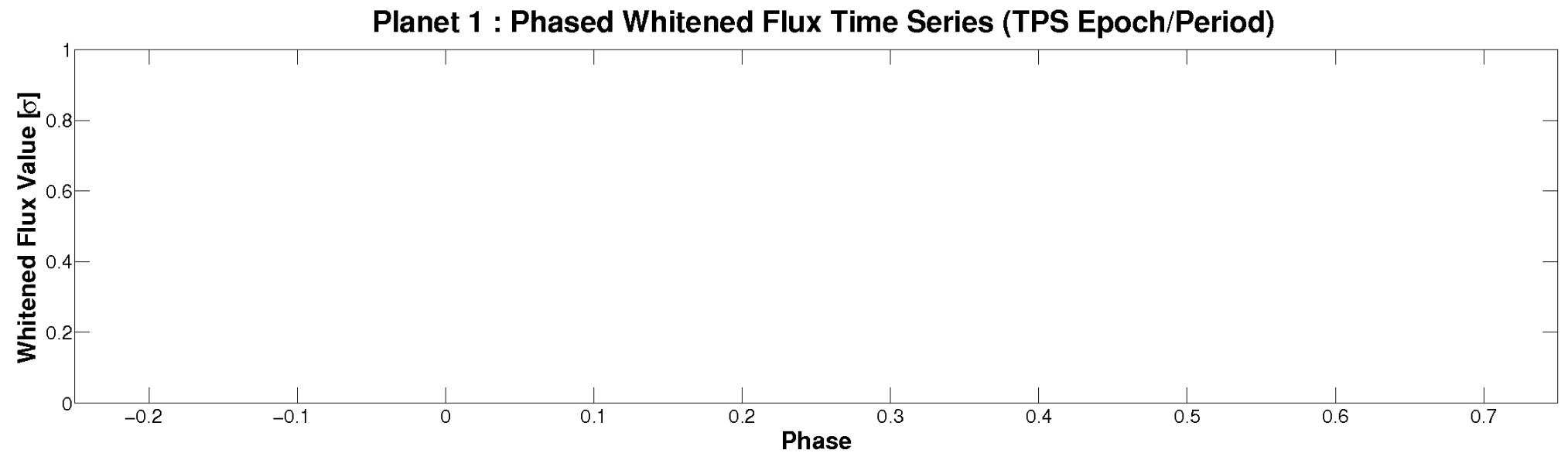
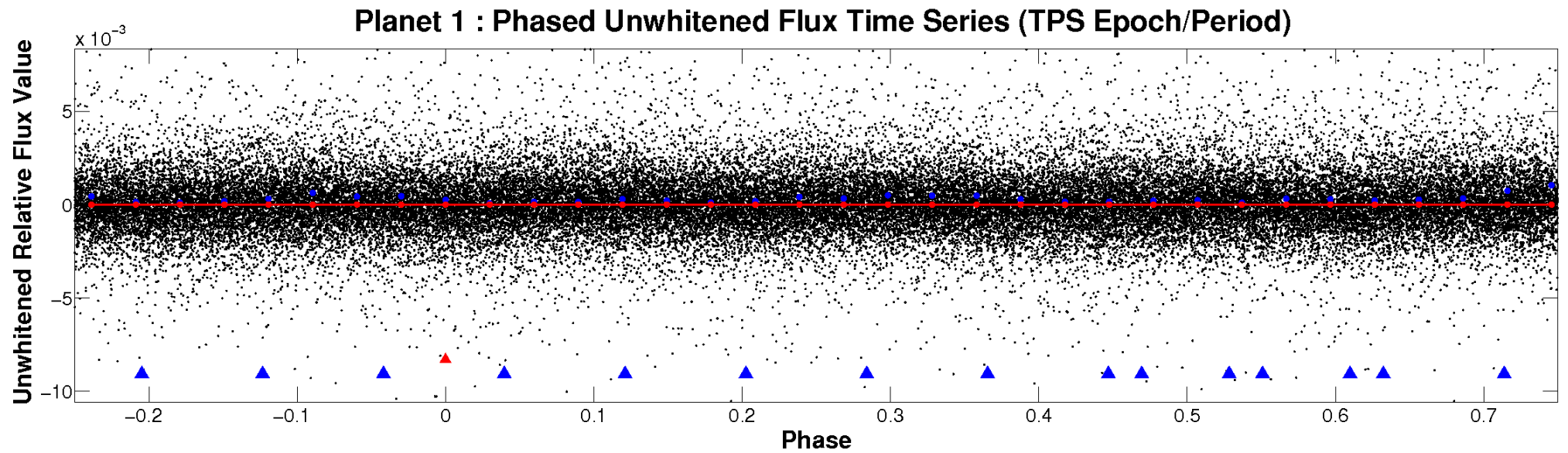


ALT Odd/Even

TCE 007810798-01

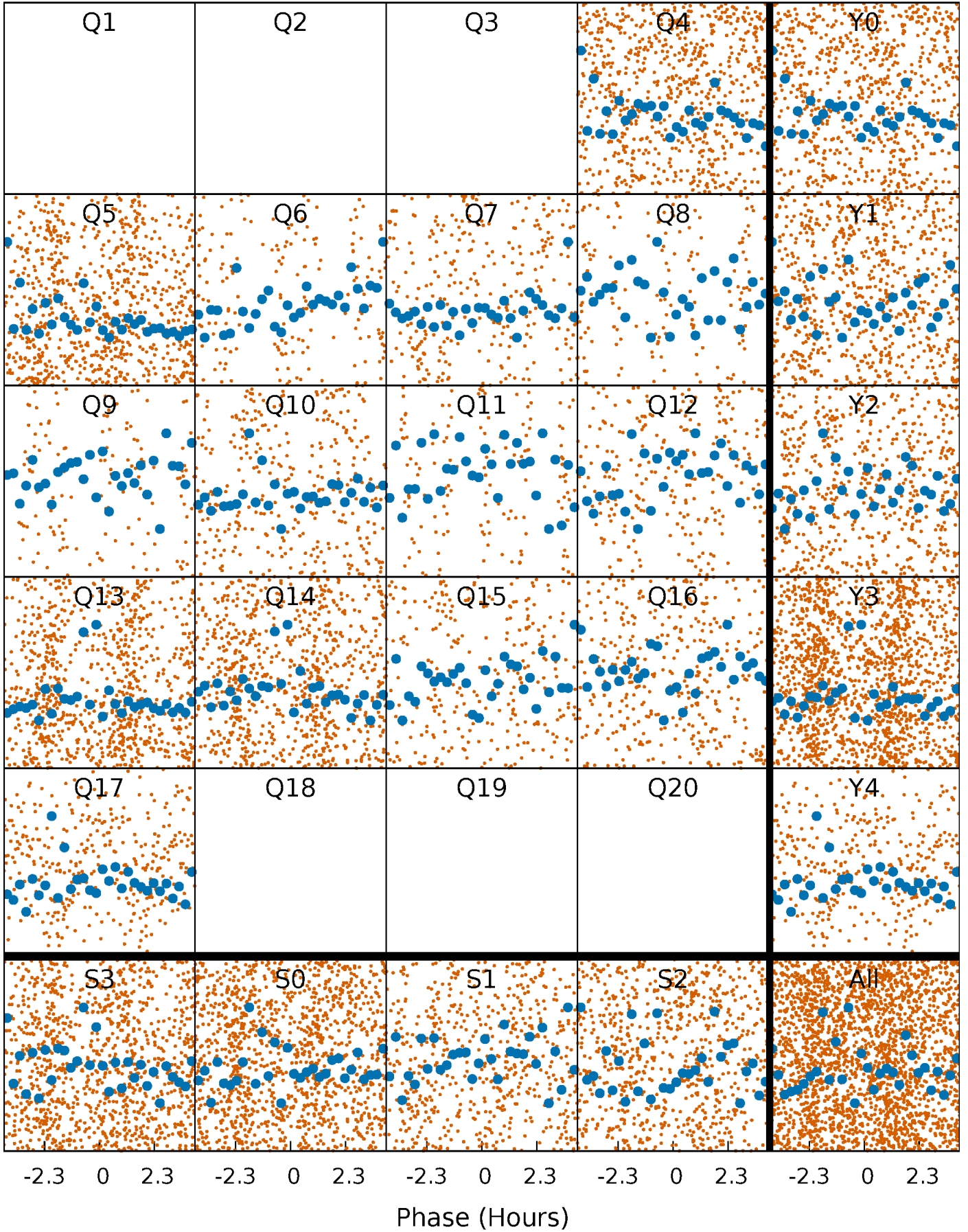


Non-Whitened Vs. Whitened Light Curve



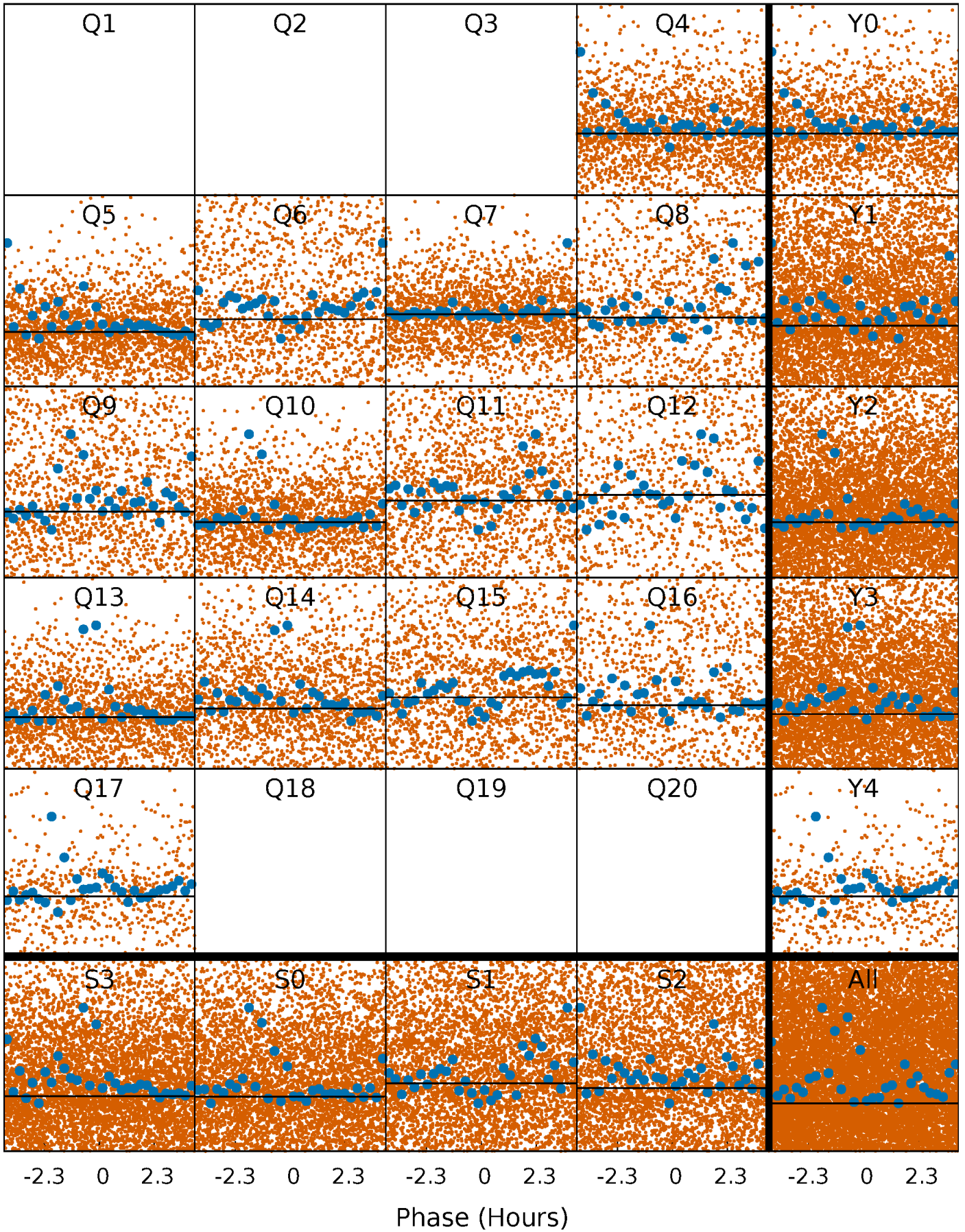
PDC Quarter-Phased Transit Curves

TCE 007810798-01 P= 0.684958 Days $T_0=131.538277$ (BKJD)



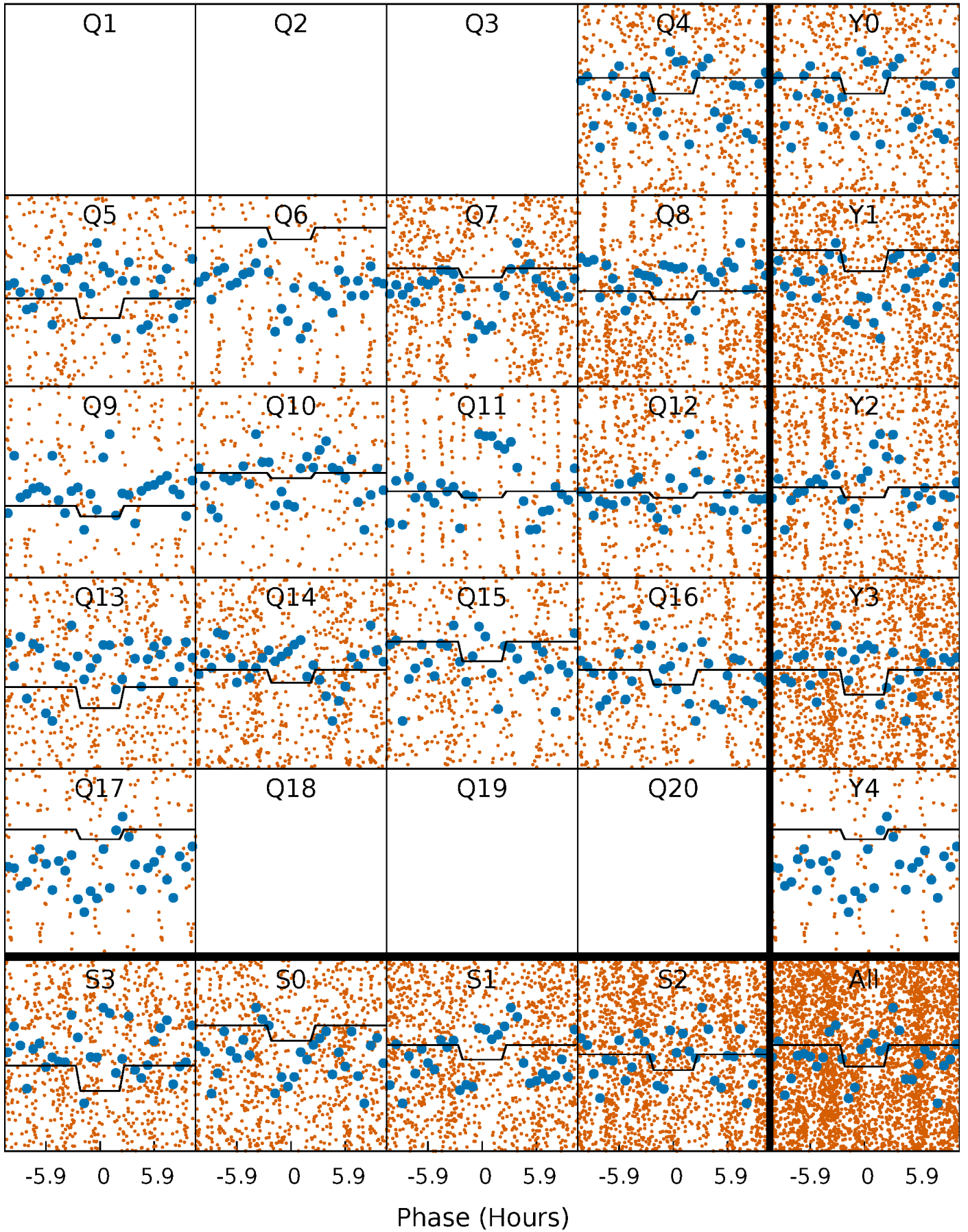
DV Quarter-Phased Transit Curves

TCE 007810798-01 P= 0.684958 Days $T_0=131.538277$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

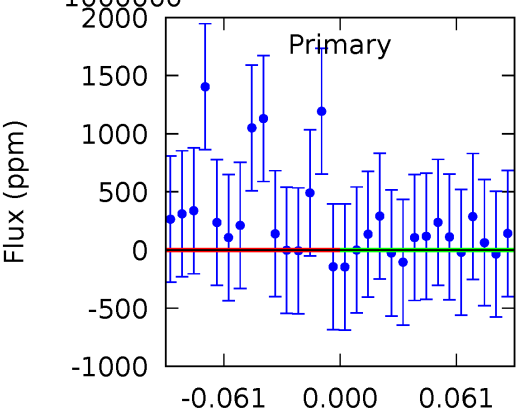
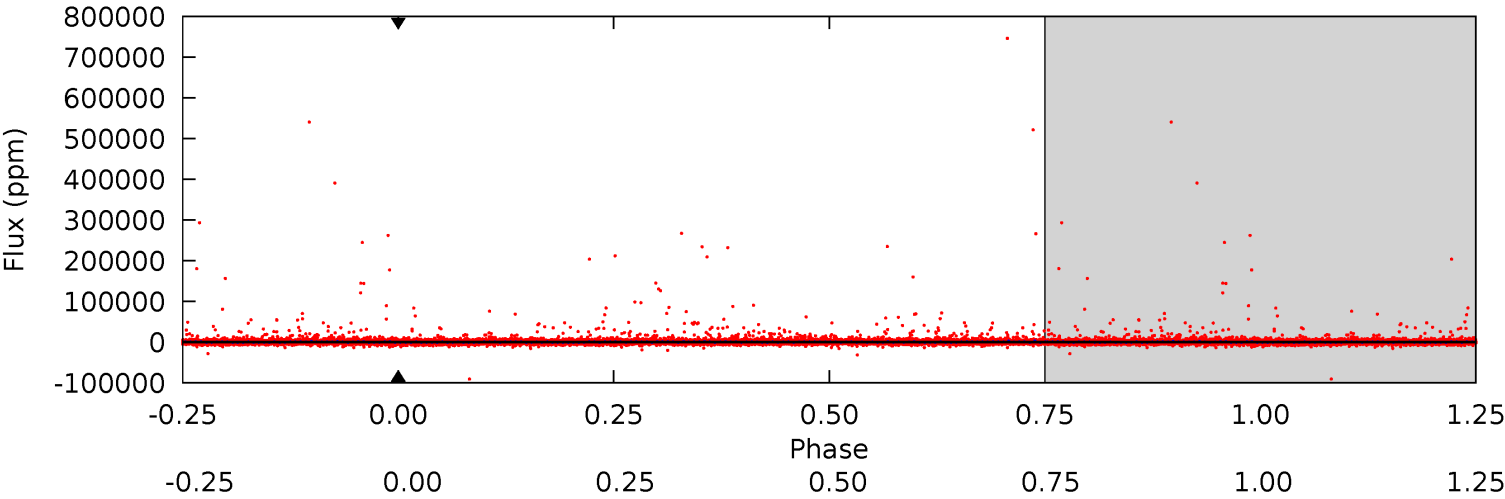
TCE 007810798-01 P= 0.684958 Days $T_0=132.155351$ (BKJD)



DV Model-Shift Uniqueness Test

007810798-01, P = 0.684958 Days, E = 131.538277 Days

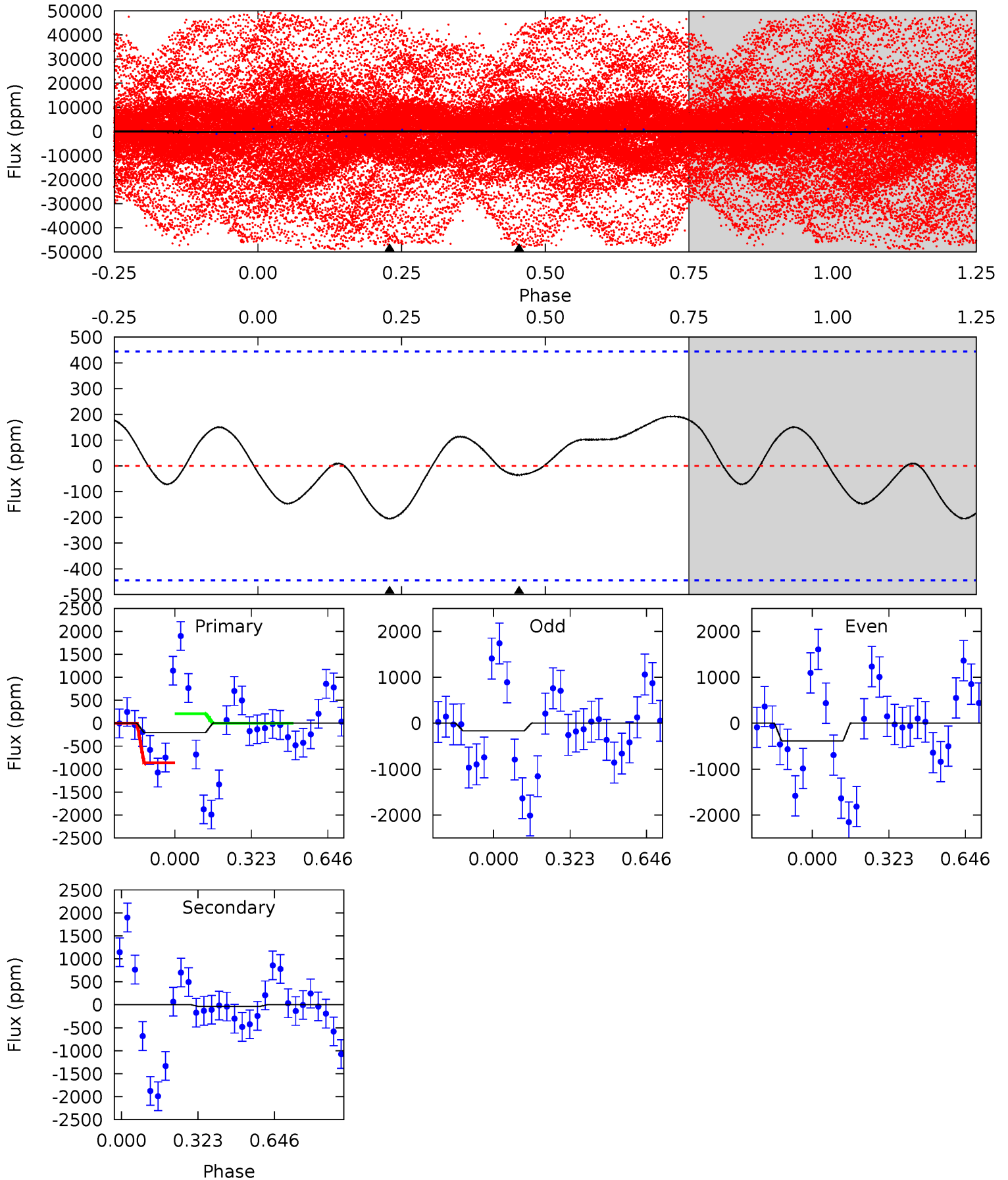
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007810798-01, P = 0.684958 Days, E = 132.155351 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.99	0.34	0	0	4.31	0.99	0.59	1.99	1.99	0.34	0.34	1.11	-0.03	0.48	2.53



Stellar Parameters For KIC 007810798

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4946^{+177}_{-177}	$4.672^{+0.056}_{-0.032}$	$-1.060^{+0.300}_{-0.300}$	$0.584^{+0.041}_{-0.041}$	$0.583^{+0.050}_{-0.025}$	$4.131^{+0.869}_{-0.536}$
	+4%/-4%	+1%/-1%	+28%/-28%	+7%/-7%	+9%/-4%	+21%/-13%
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 007810798-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$5.40^{+5.34}_{-3.55}$	2056^{+83}_{-86}	3304^{+10081}_{-15449}	$2.518^{+602.460}_{-445.563}$
Alt.	-36 ± 103	$4.48^{+4.70}_{-3.16}$	2051^{+84}_{-82}	-2402^{+5417}_{-395}	$0.085^{+1.441}_{-0.476}$

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

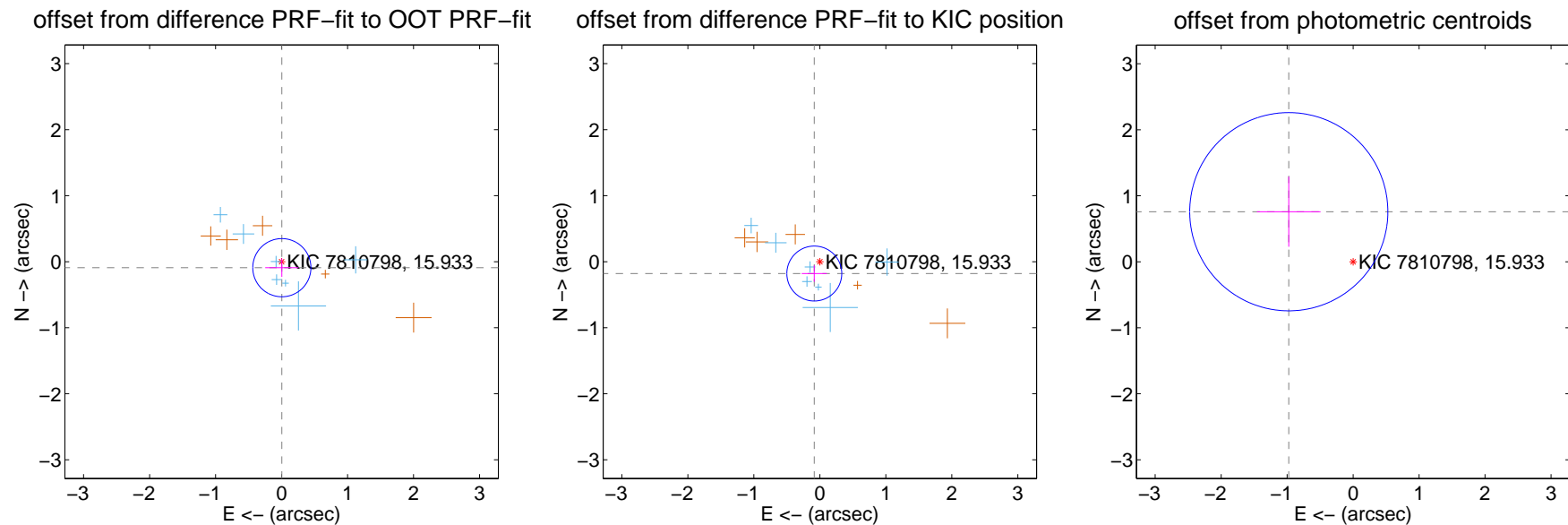
DV Centroid Data

Supplemental centroid analysis for 007810798-01. Kepler magnitude: 15.93. Transit SNR -1.00

There are 7 quarters with good PRF difference image offsets

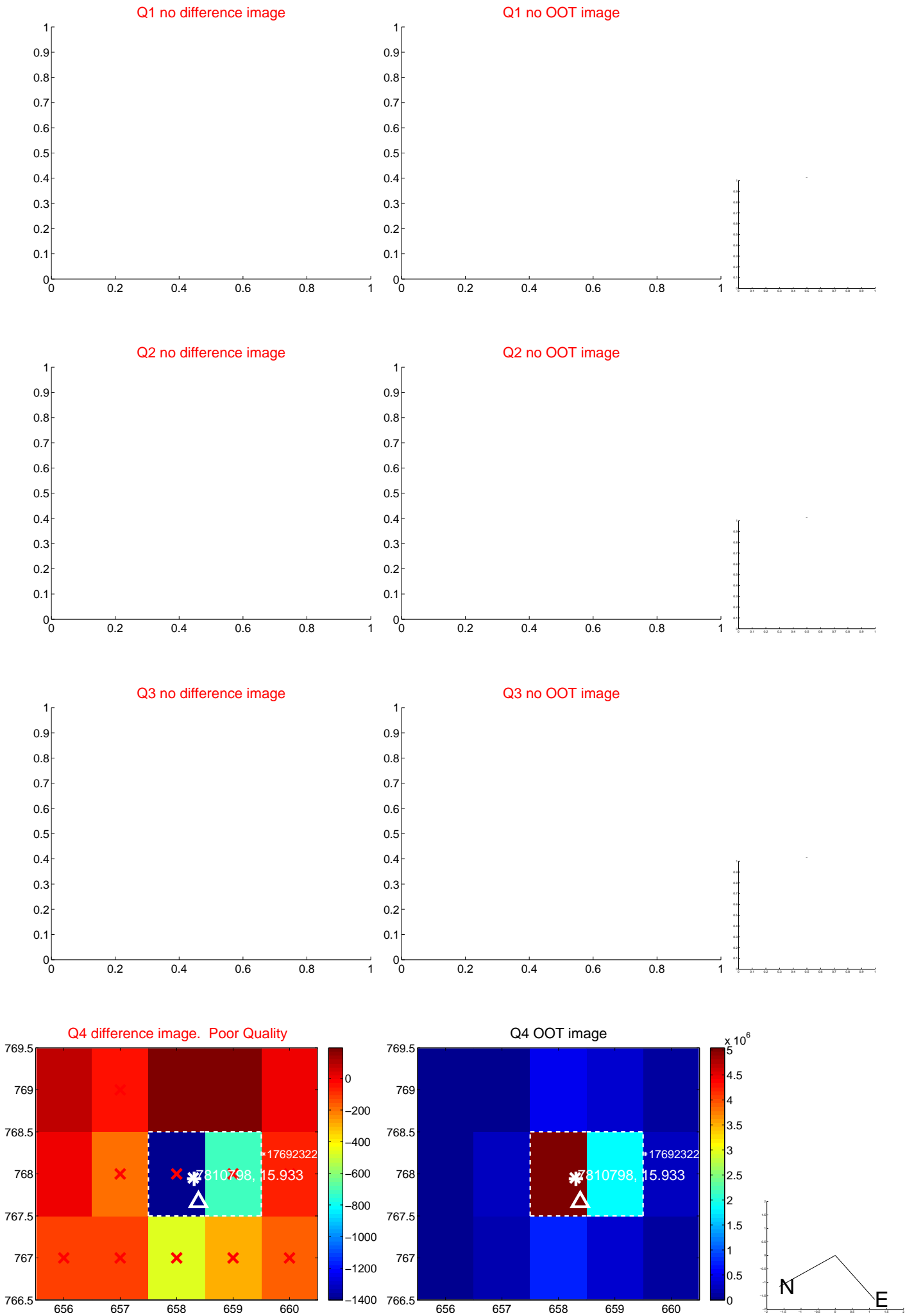
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.091 ± 0.147	0.62	-0.004 ± 0.252	-0.091 ± 0.139
PRF-fit source offset from KIC position	0.198 ± 0.139	1.43	0.084 ± 0.190	-0.179 ± 0.125
photometric centroid source offset	1.24 ± 0.50	2.47	0.98 ± 0.48	0.76 ± 0.53

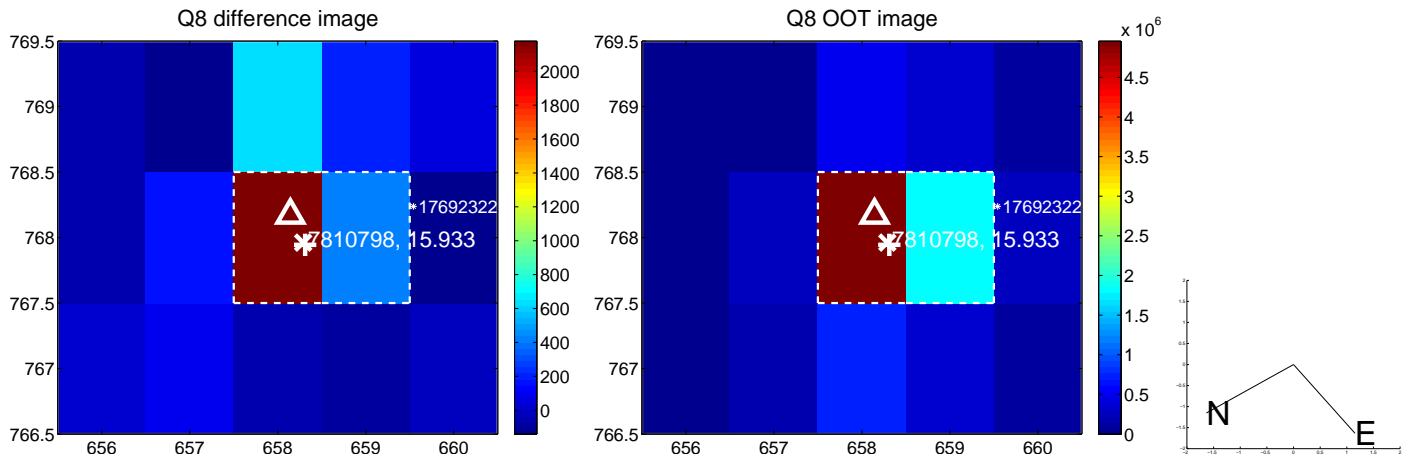
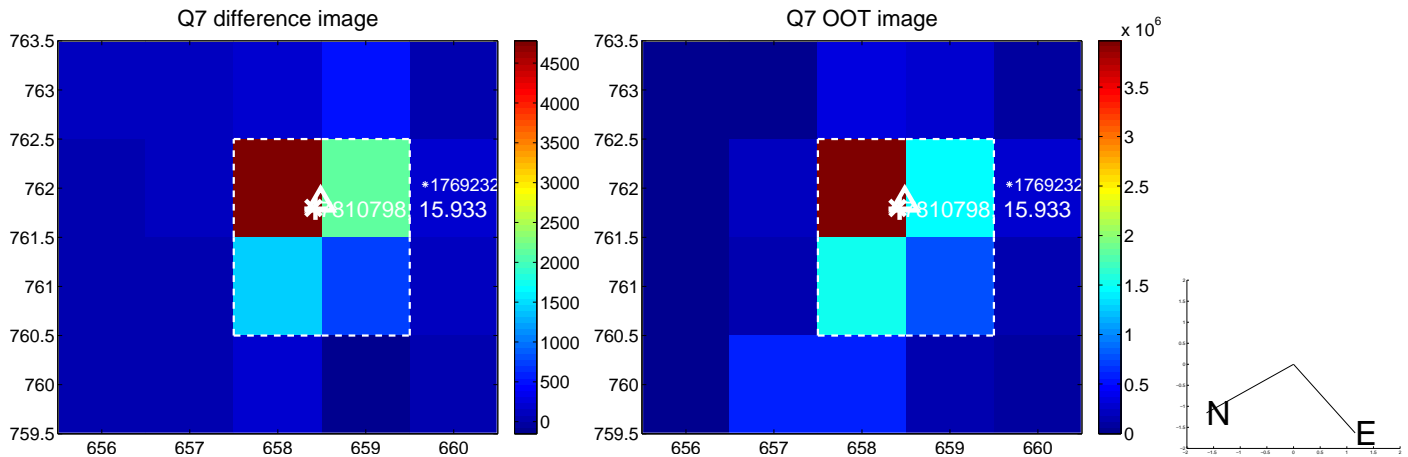
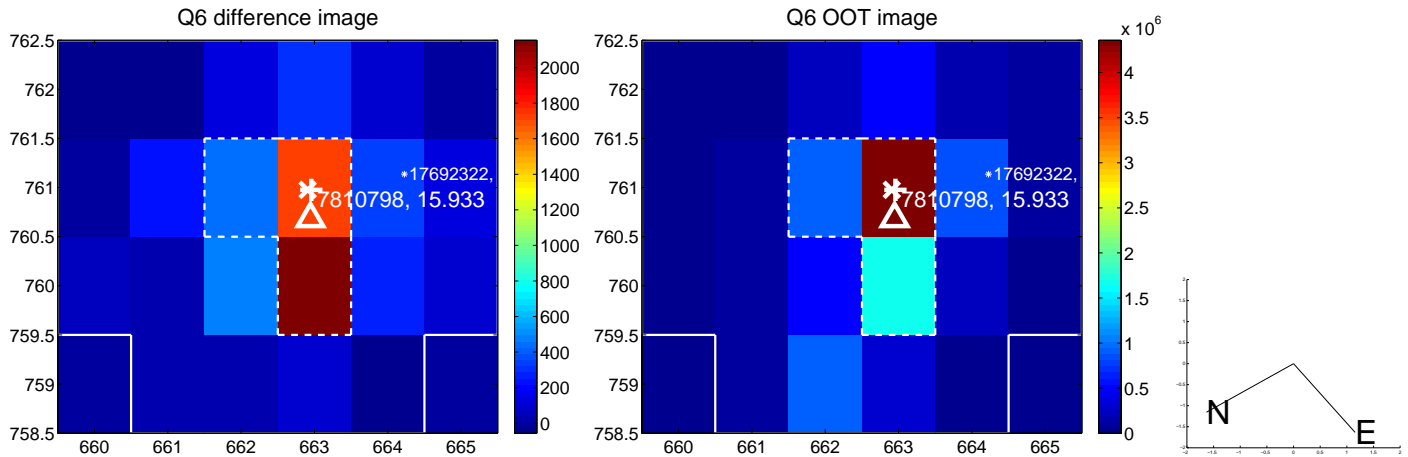
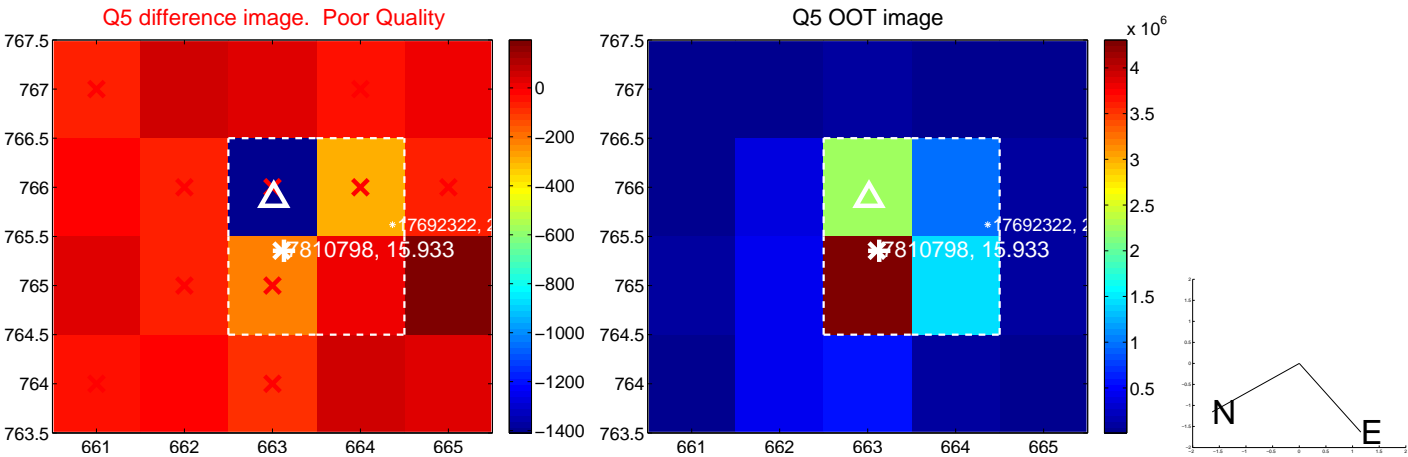


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

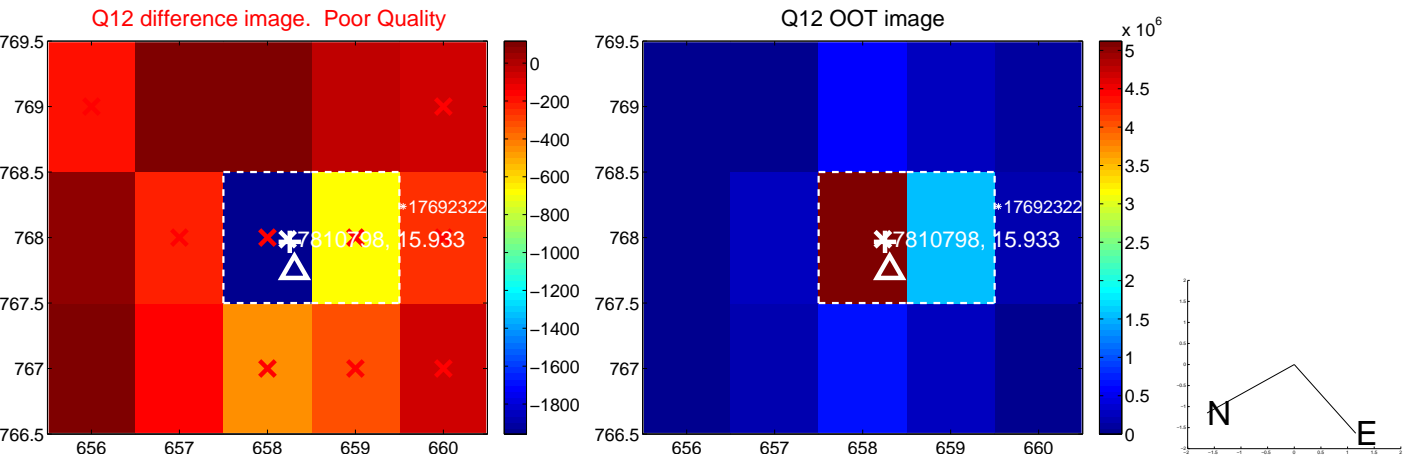
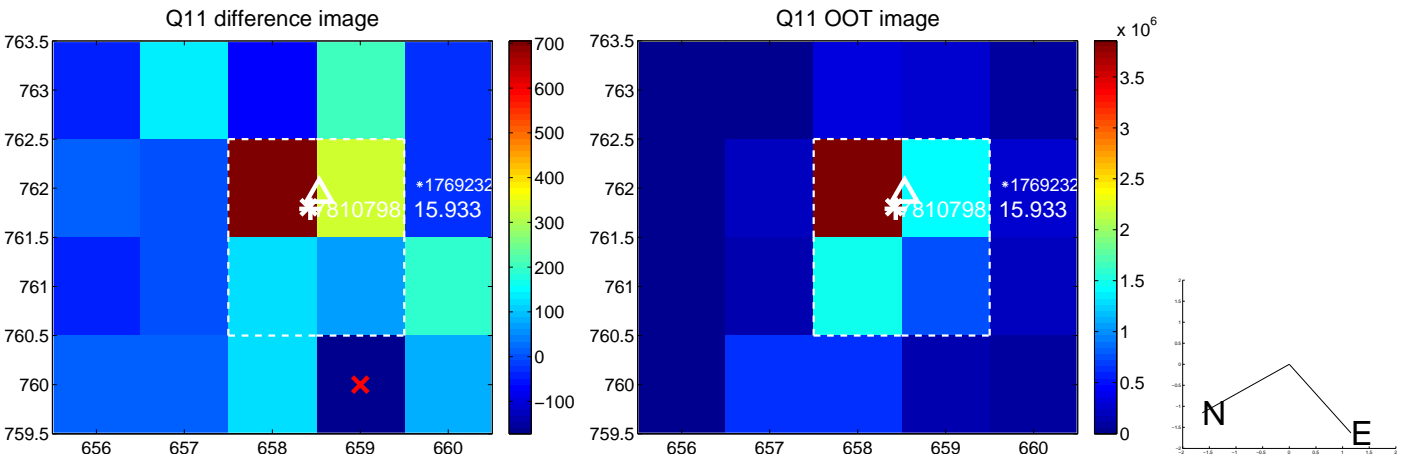
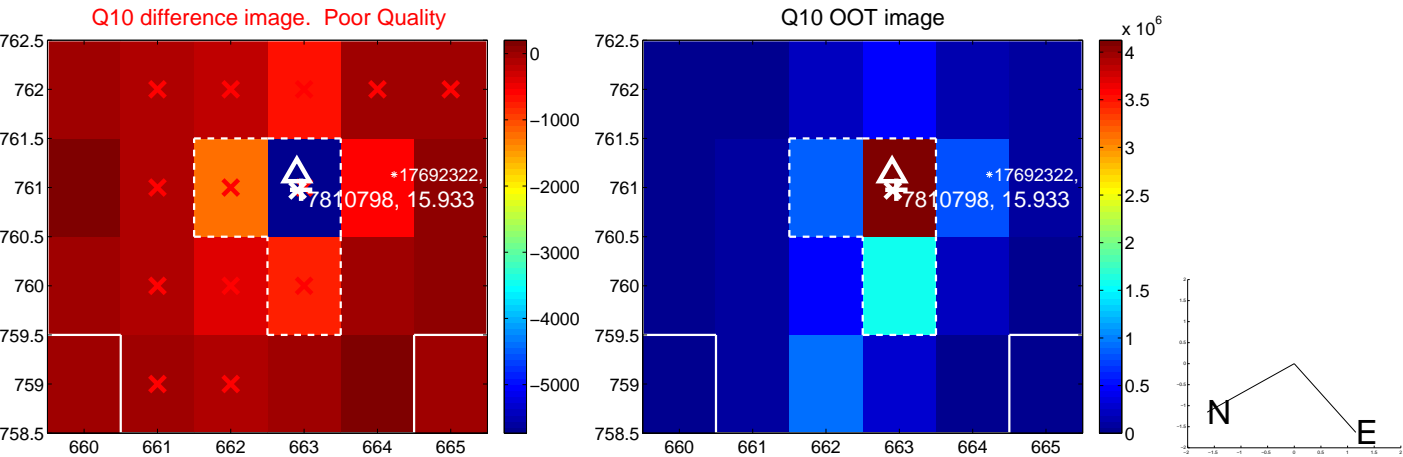
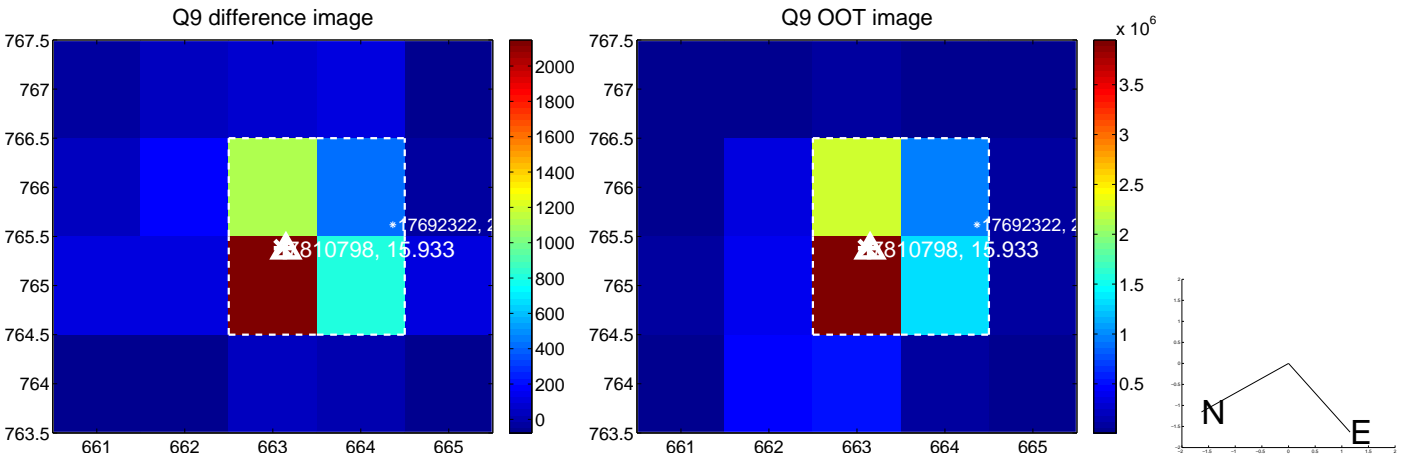
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



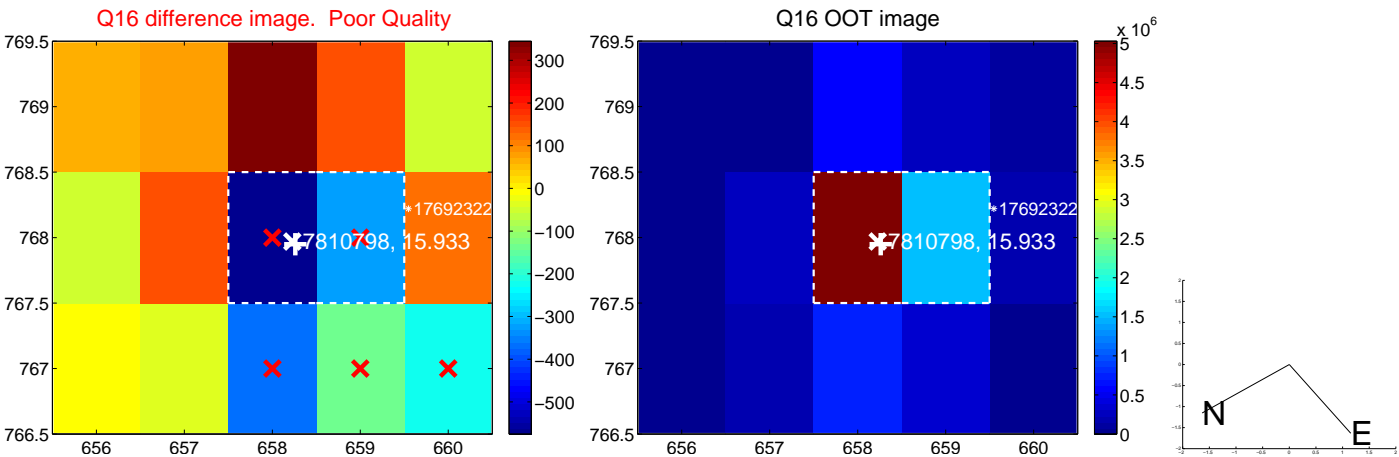
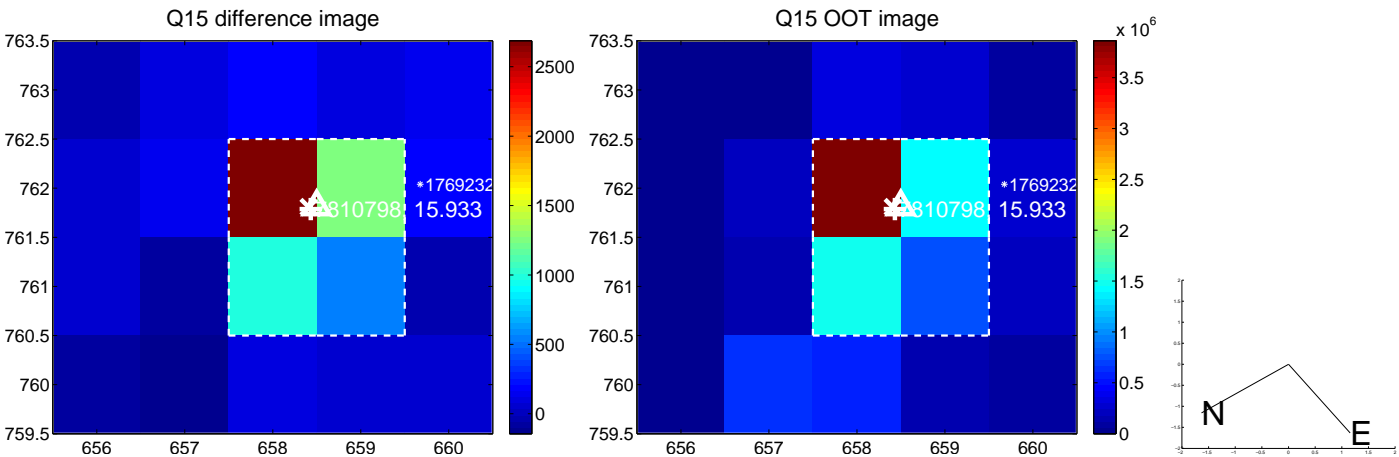
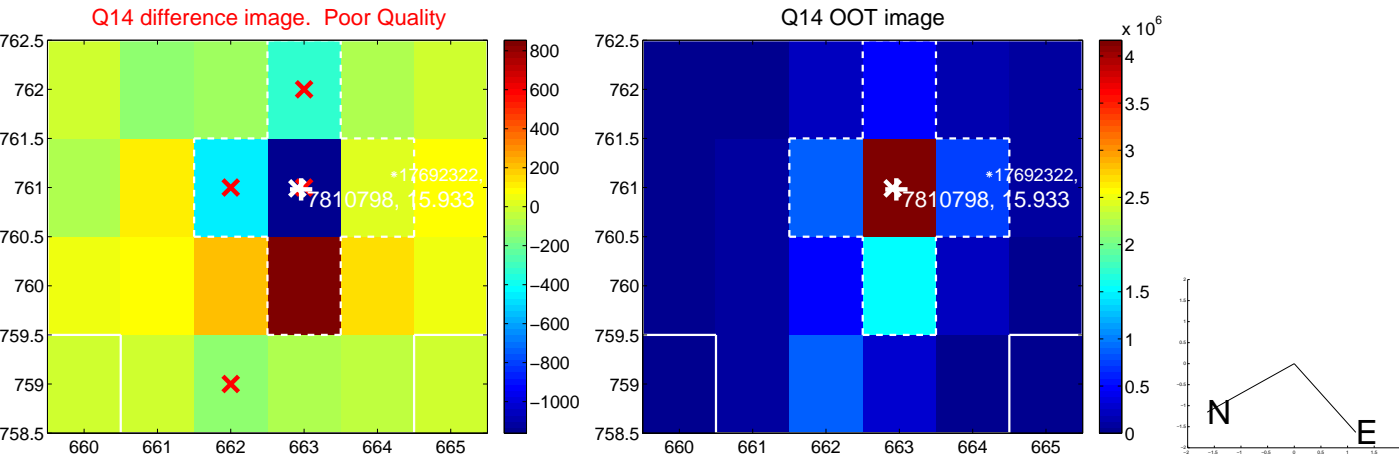
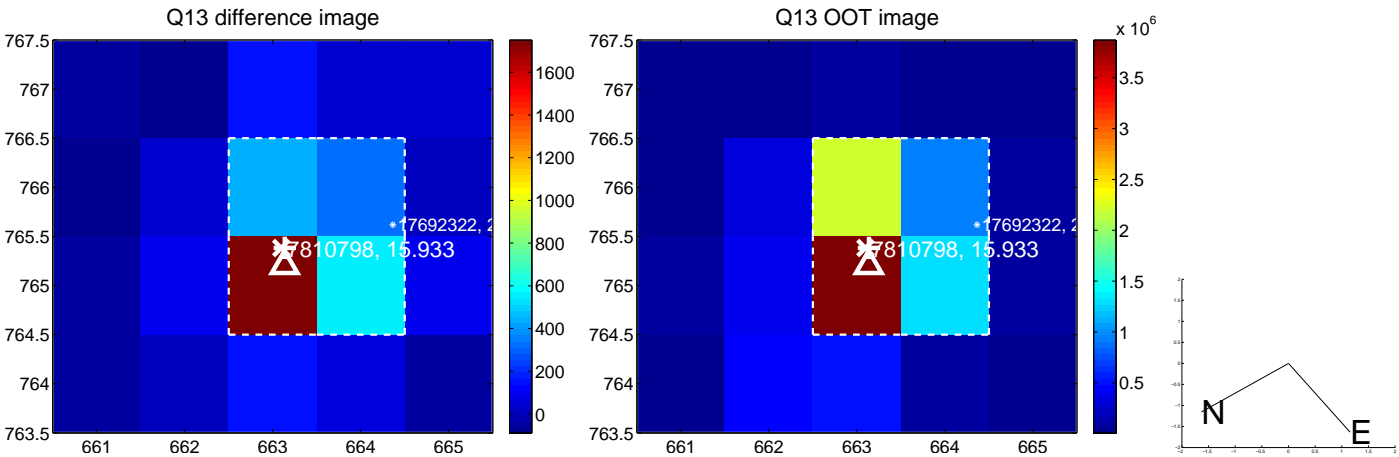
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



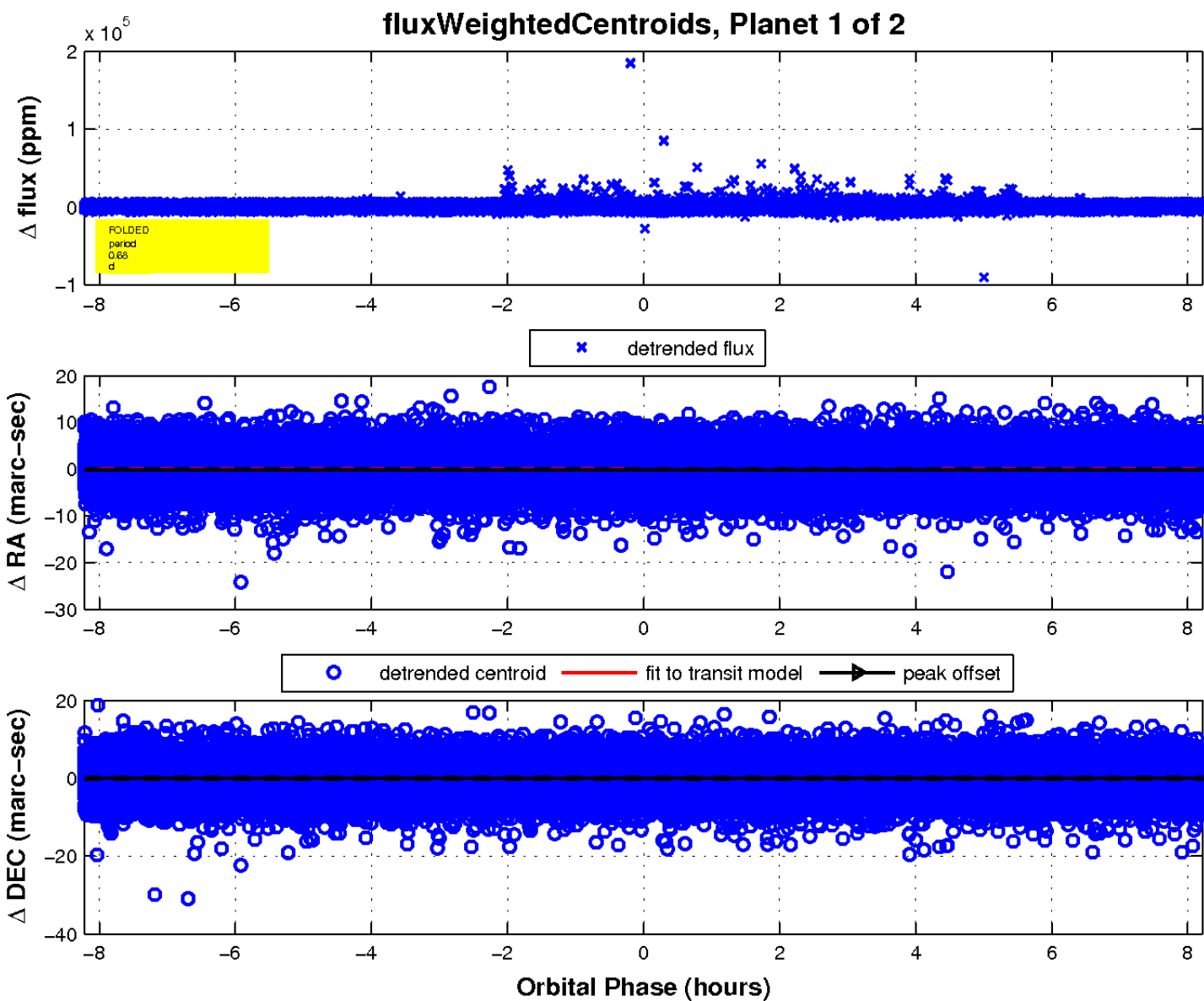
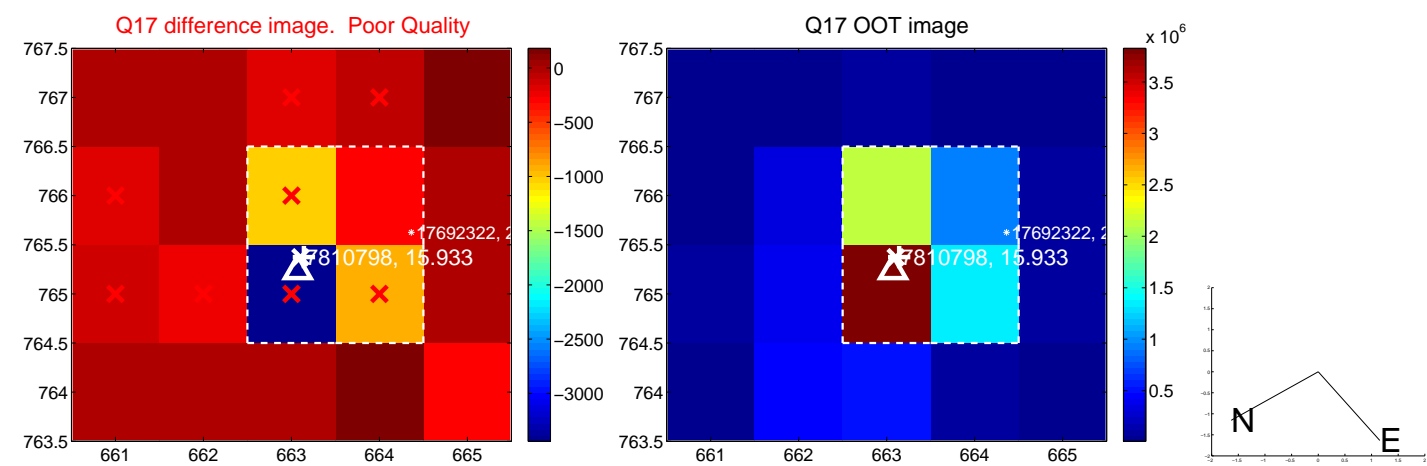
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

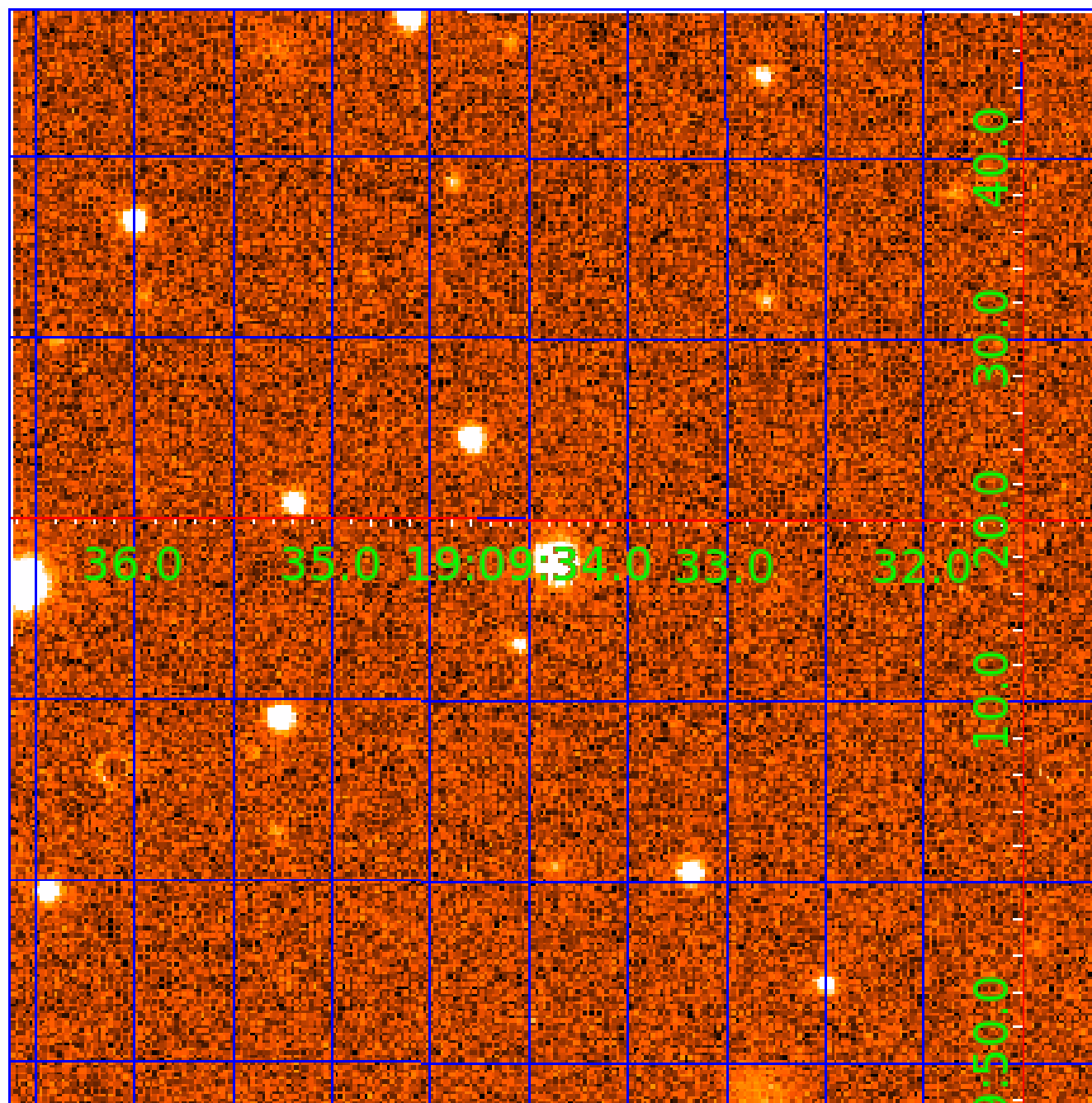


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007810798

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})
007810798-01	OBS	No	0.684958	131.538277	1880.7	2.000	8.0	-1.0	0.58	4946	2.49	1130.58
007810798-02	OBS	No	98.578148	206.616431	2932.8	4.886	8.7	6.7	0.58	4946	3.27	1.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007810798-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS—HALO_GHOST
007810798-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS

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

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

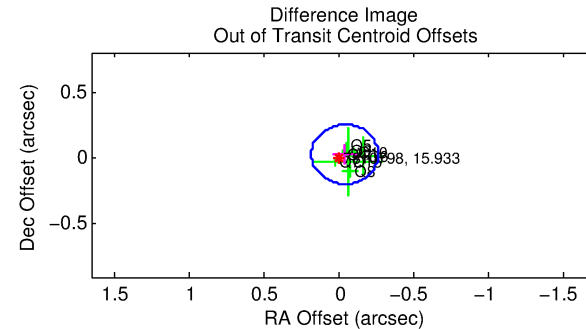
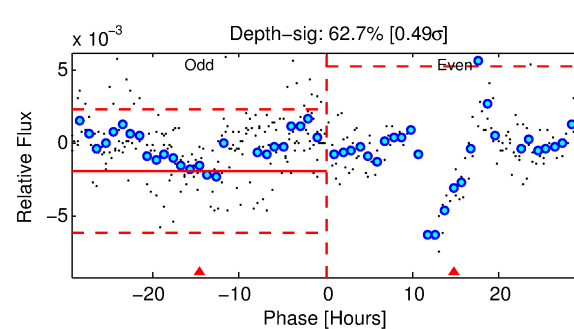
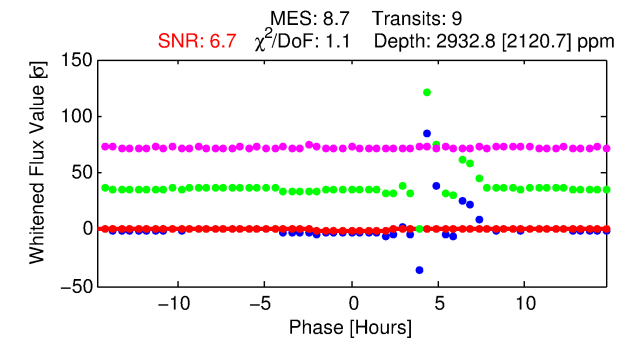
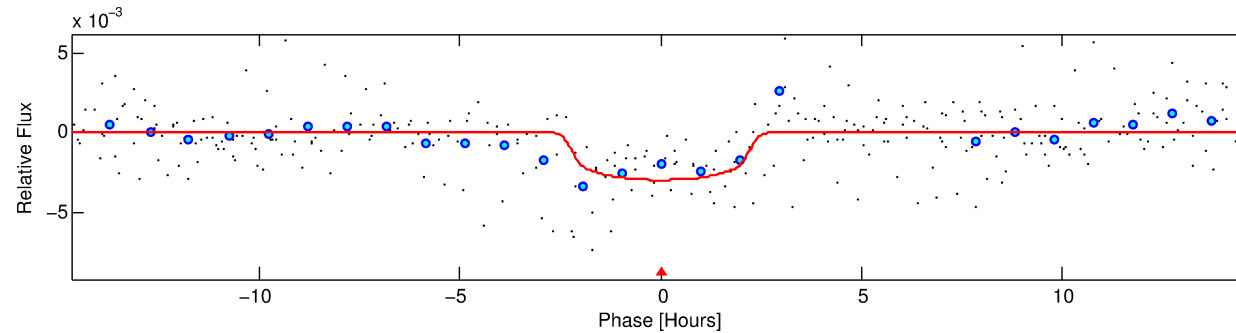
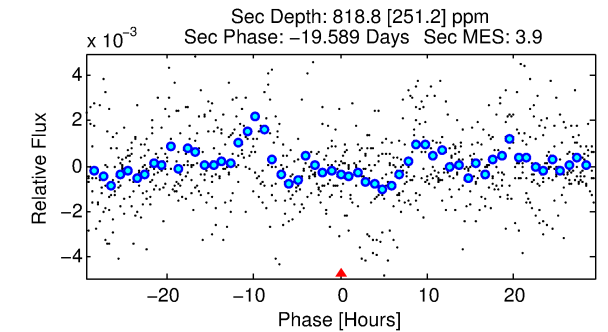
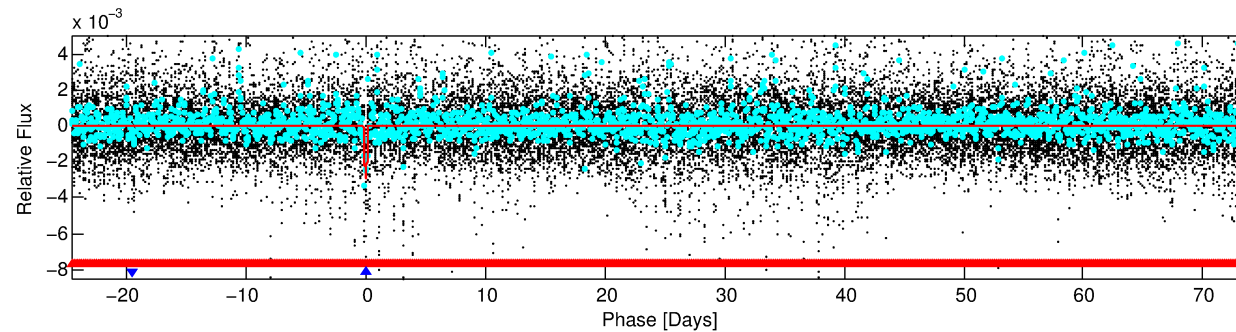
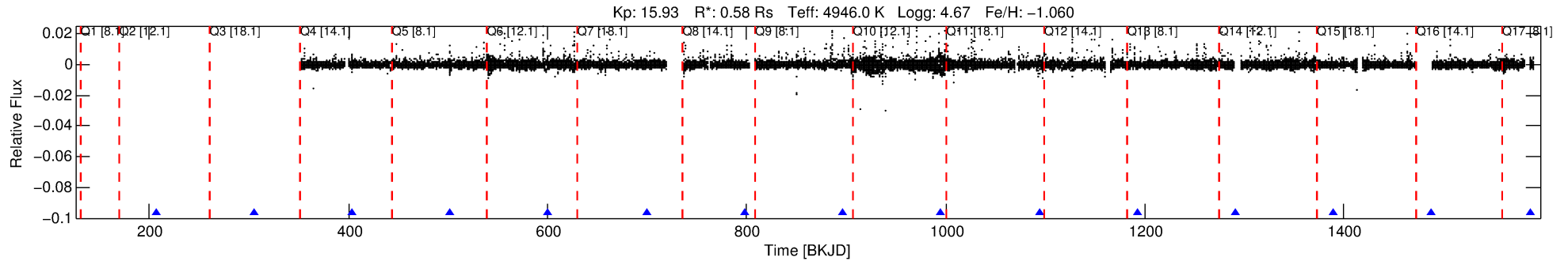
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007810798-02

No Significant Match Found

DV One-Page Summary

KIC: 7810798 Candidate: 2 of 2 Period: 98.578 d



DV Fit Results:

Period = 98.57815 [0.00522] d
Epoch = 206.6164 [0.0410] BKJD
Rp/R* = 0.0513 [0.1745]
a/R* = 134.03 [1764.41]
b = 0.59 [14.64]
Seff = 1.50 [0.26]
Teq = 282 [12] K
Rp = 3.27 [11.12] Re
a = 0.3493 [0.0222] AU
Ag = 5133.17 [34928.25] [0.15σ]
Teffp = 3692 [6282] K [0.54σ]

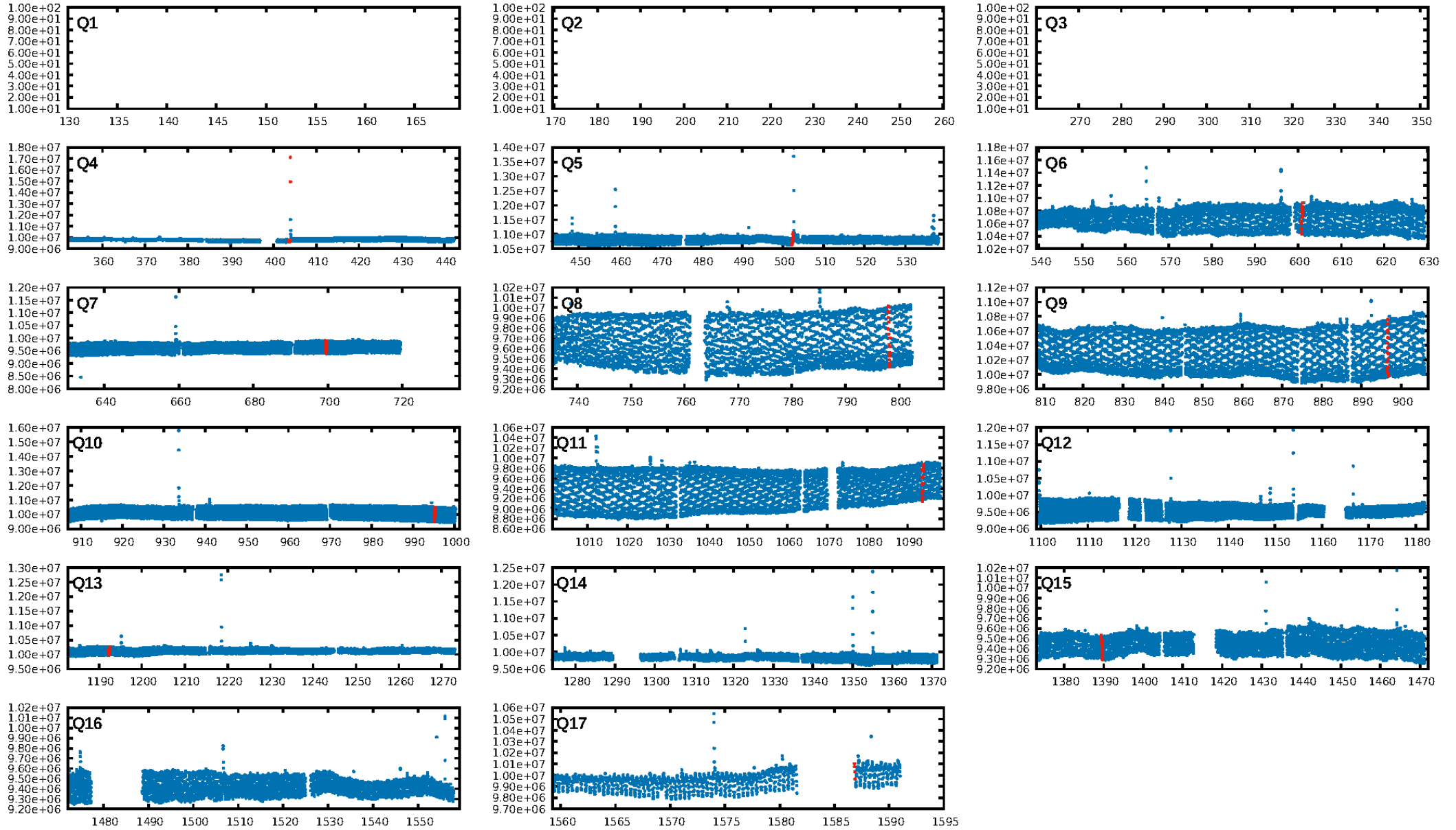
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [445.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.33e-12
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: 5.979
Centroid-sig: 4.2%
Centroid-so: 1.082 arcsec [2.86σ]
OotOffset-rm: 0.053 arcsec [0.70σ]
KicOffset-rm: 0.024 arcsec [0.32σ]
OotOffset-st: 2/2/2/2 [8]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-fgm: 0.62 [5/8]
DiffImageOverlap-fno: 0.00 [0/8]

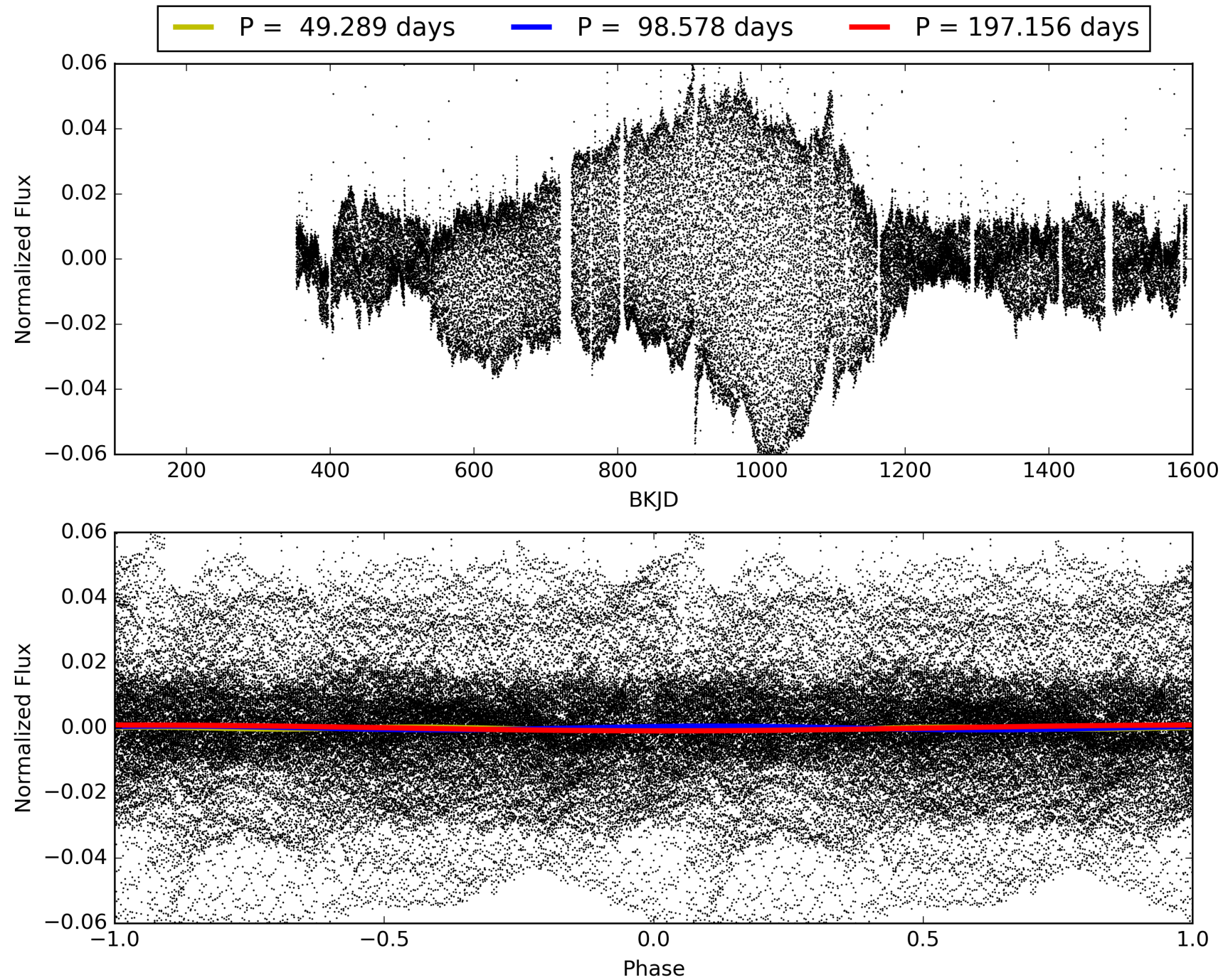
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:00:07 Z

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

TCE 007810798-02, PDC Light Curves

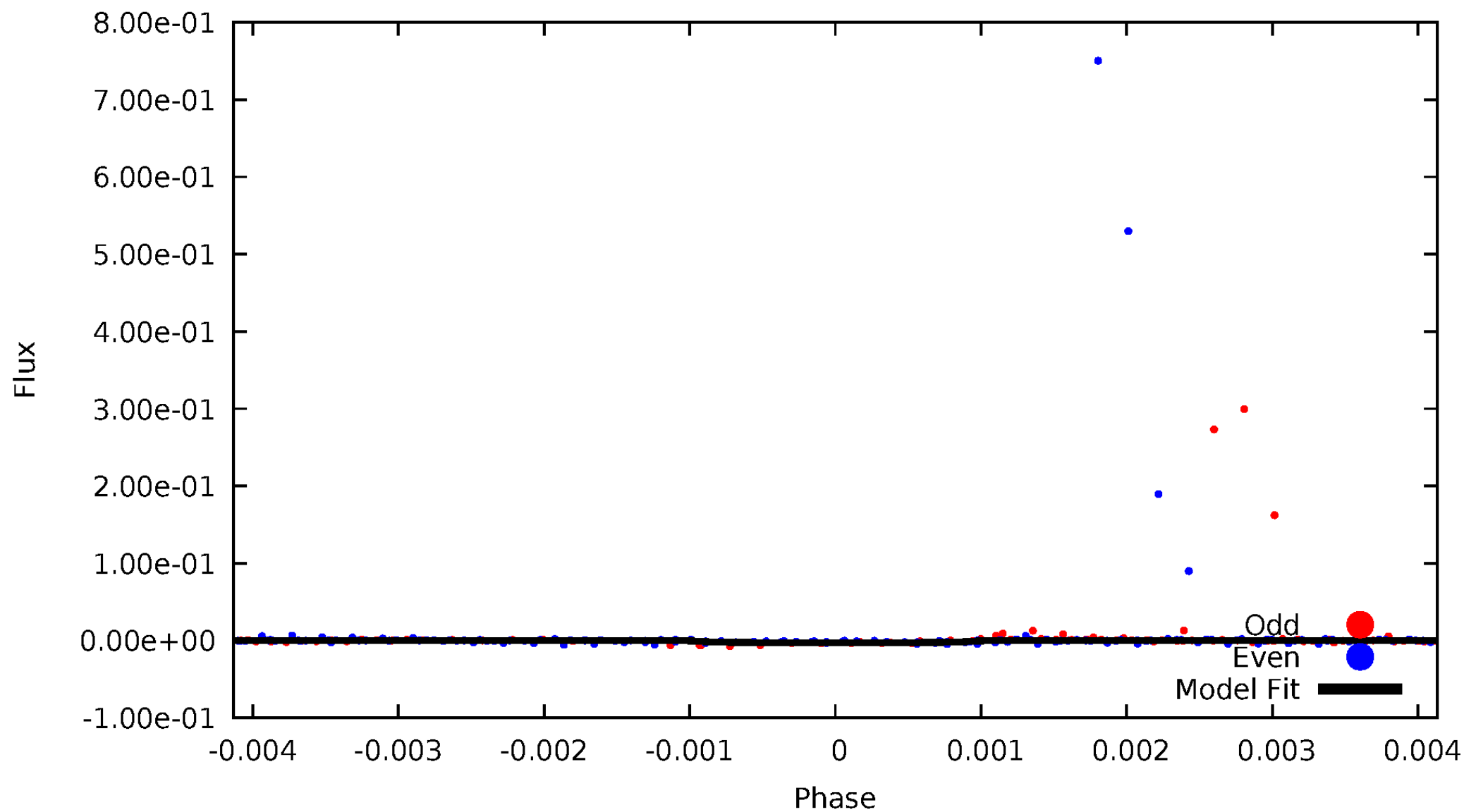


TCE 007810798-02



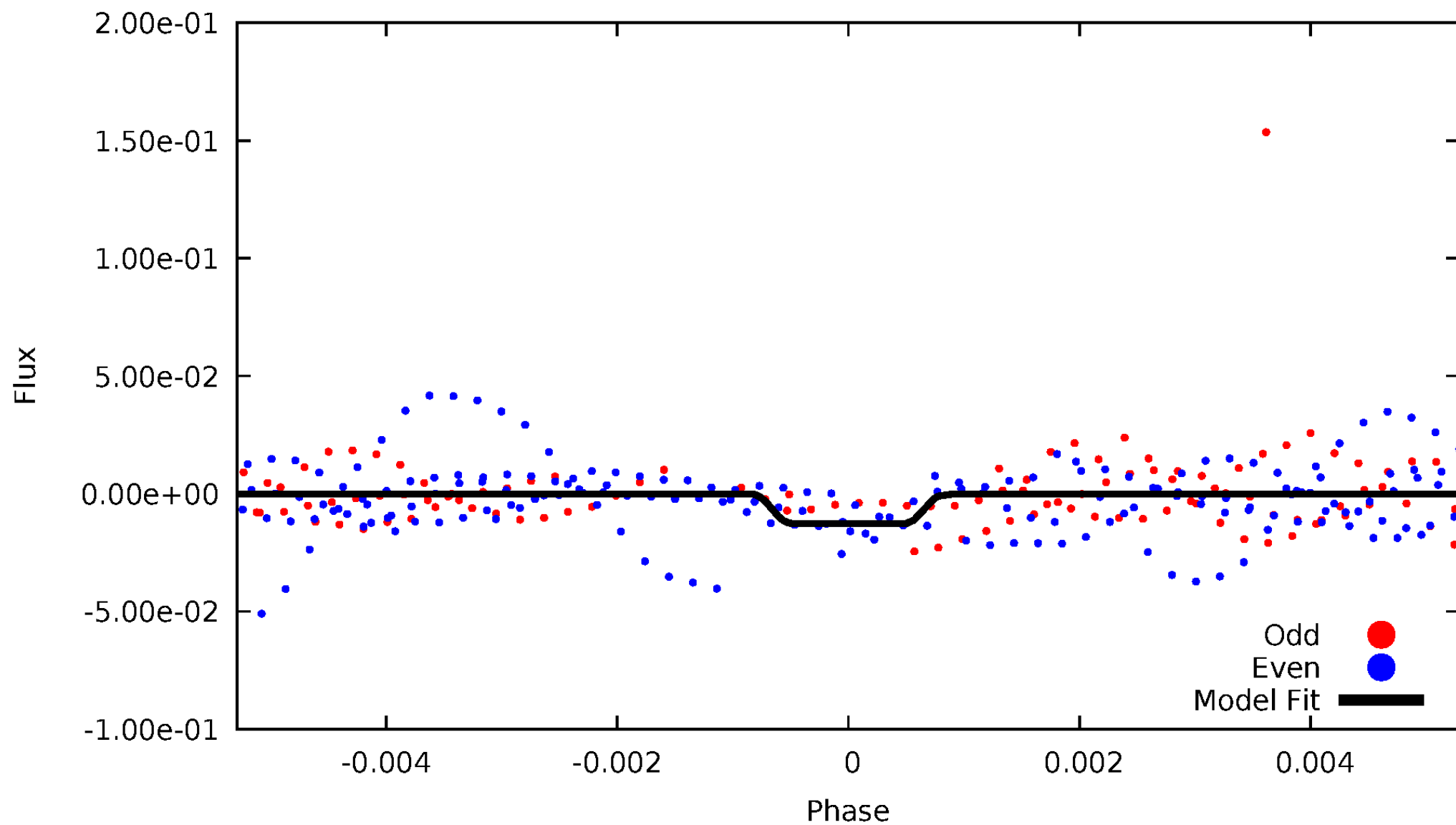
DV Odd/Even

TCE 007810798-02



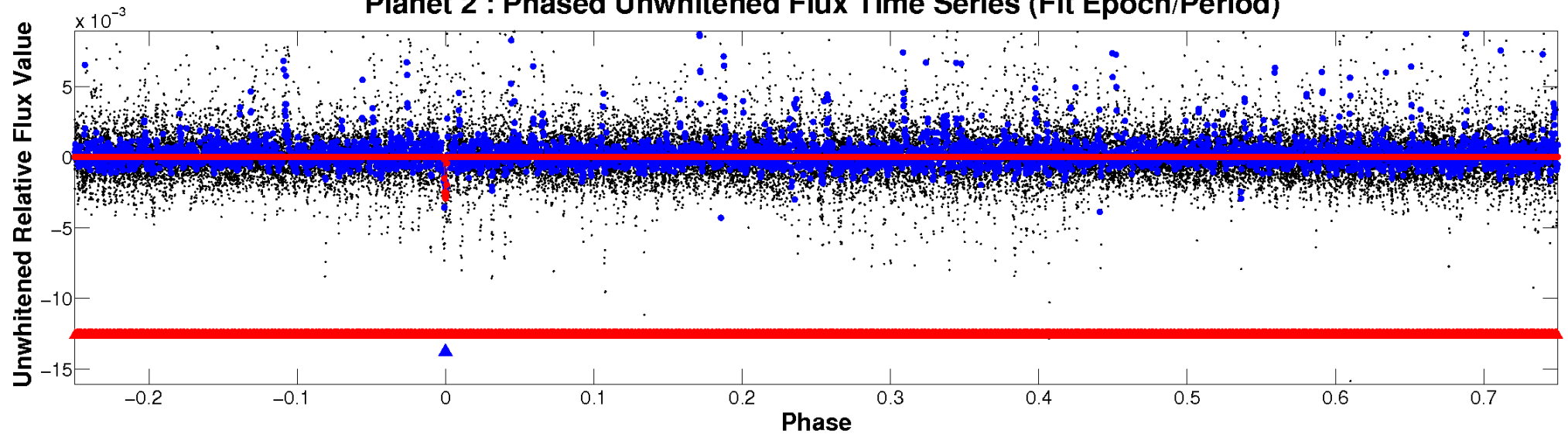
ALT Odd/Even

TCE 007810798-02

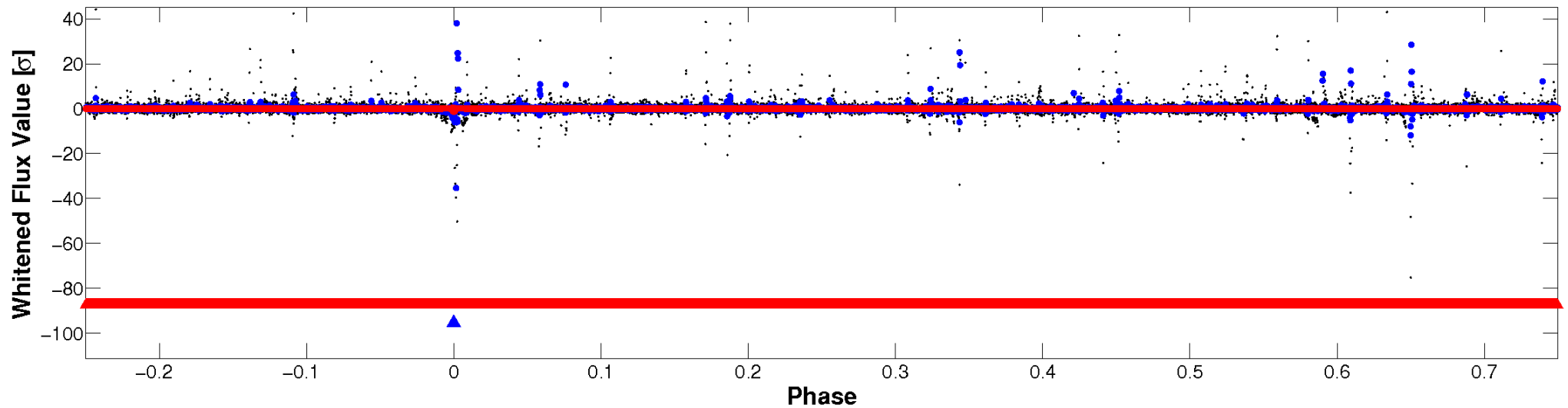


Non-Whitened Vs. Whitened Light Curve

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

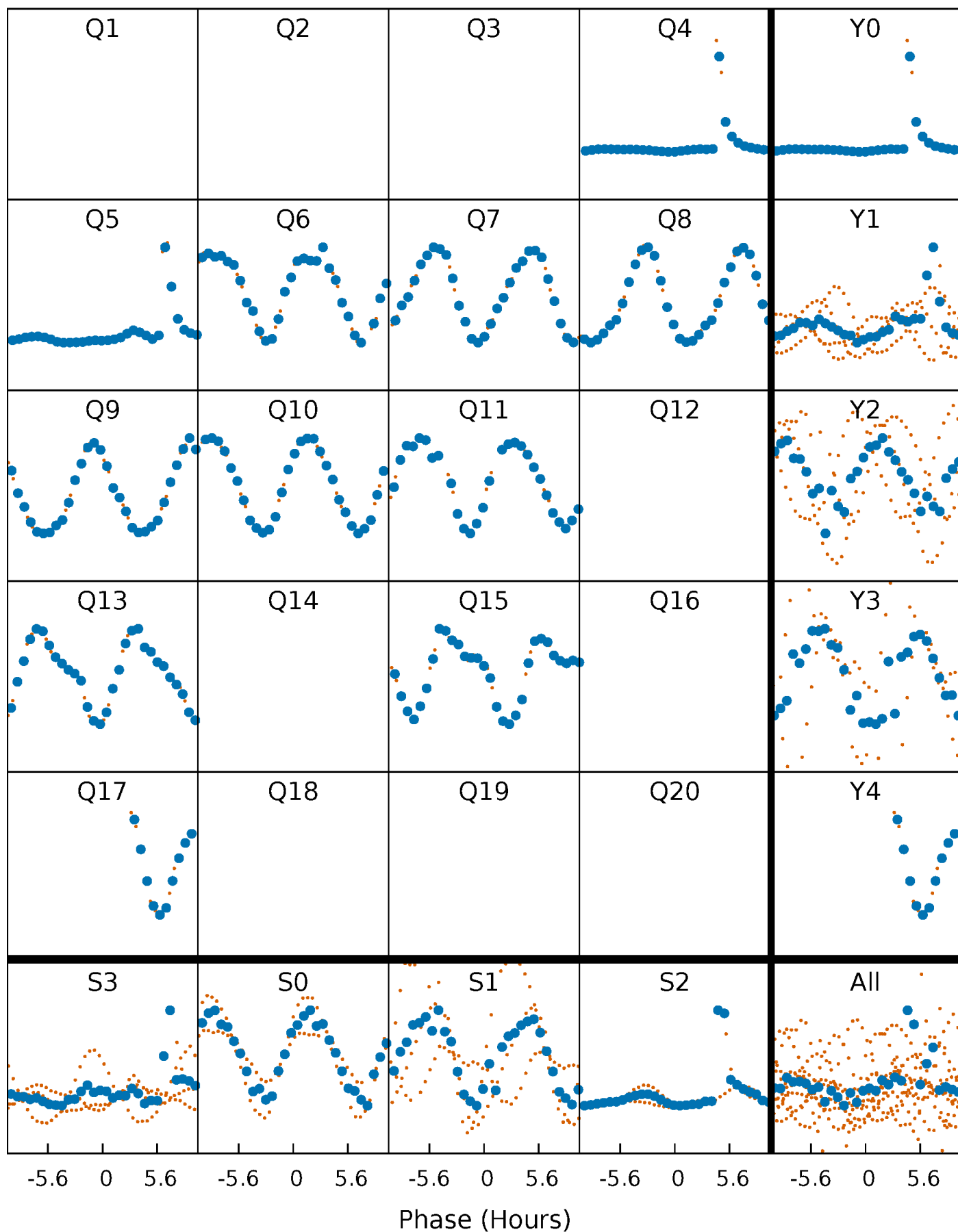


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



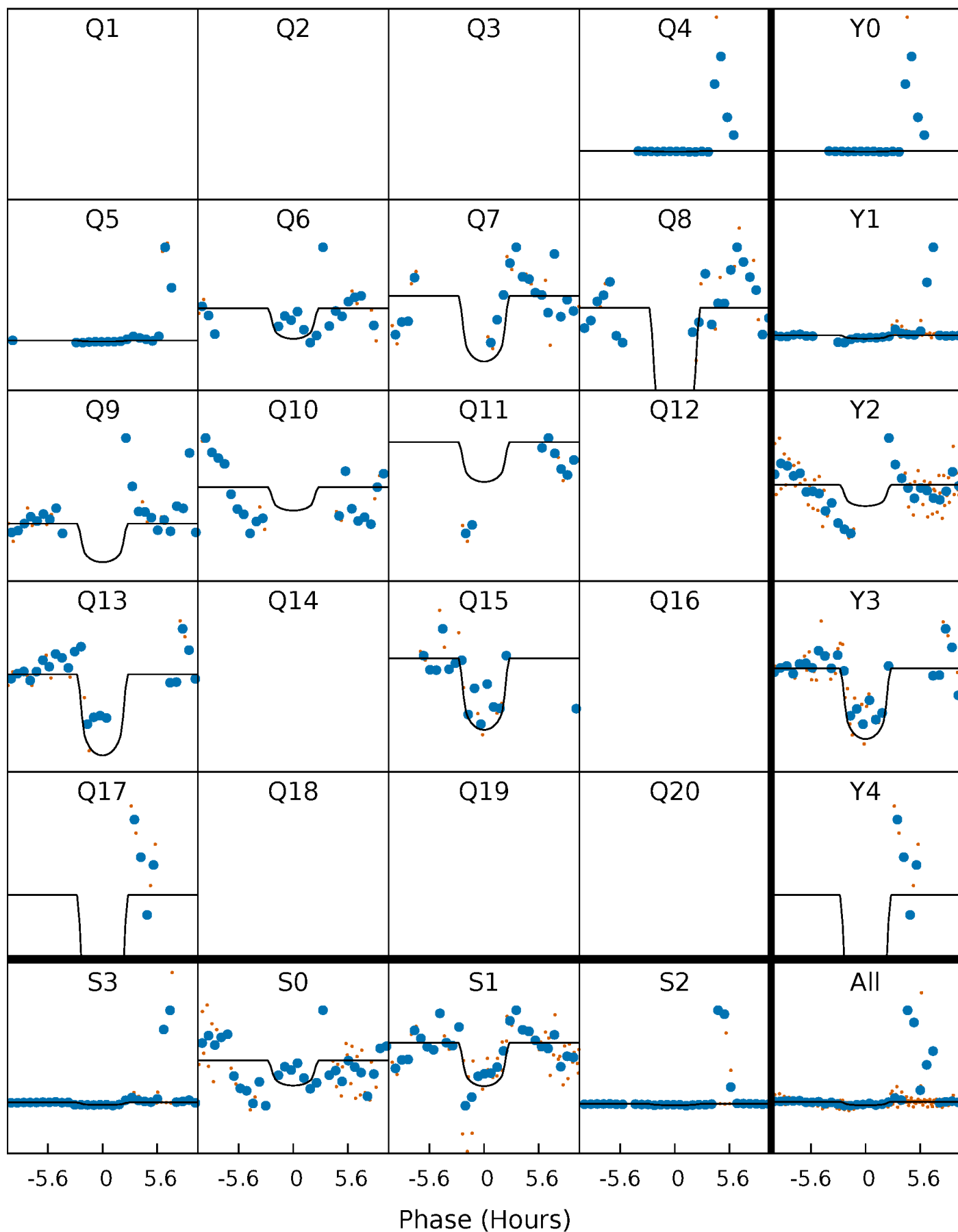
PDC Quarter-Phased Transit Curves

TCE 007810798-02 P= 98.578148 Days $T_0=206.616431$ (BKJD)



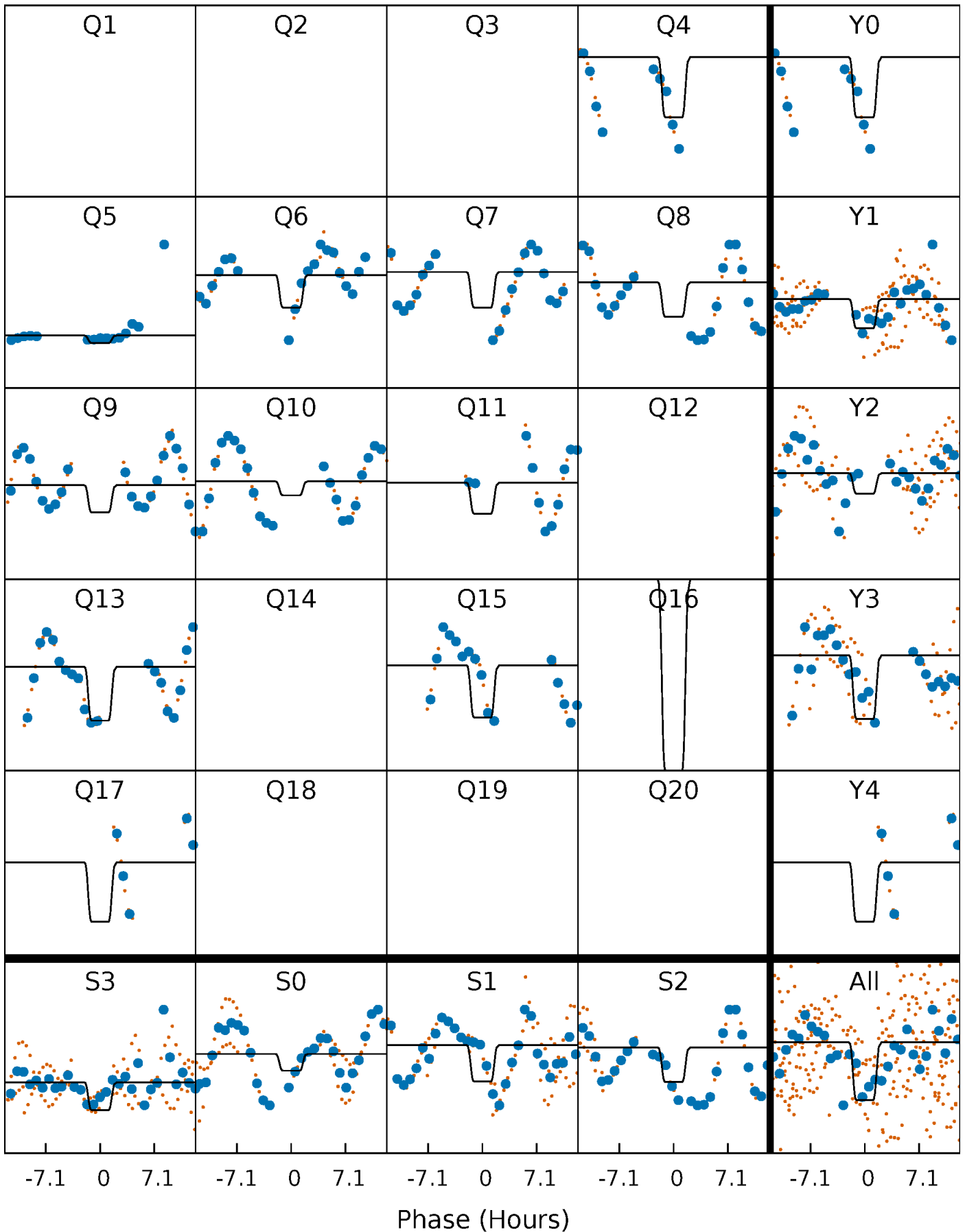
DV Quarter-Phased Transit Curves

TCE 007810798-02 P= 98.578148 Days $T_0=206.616431$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

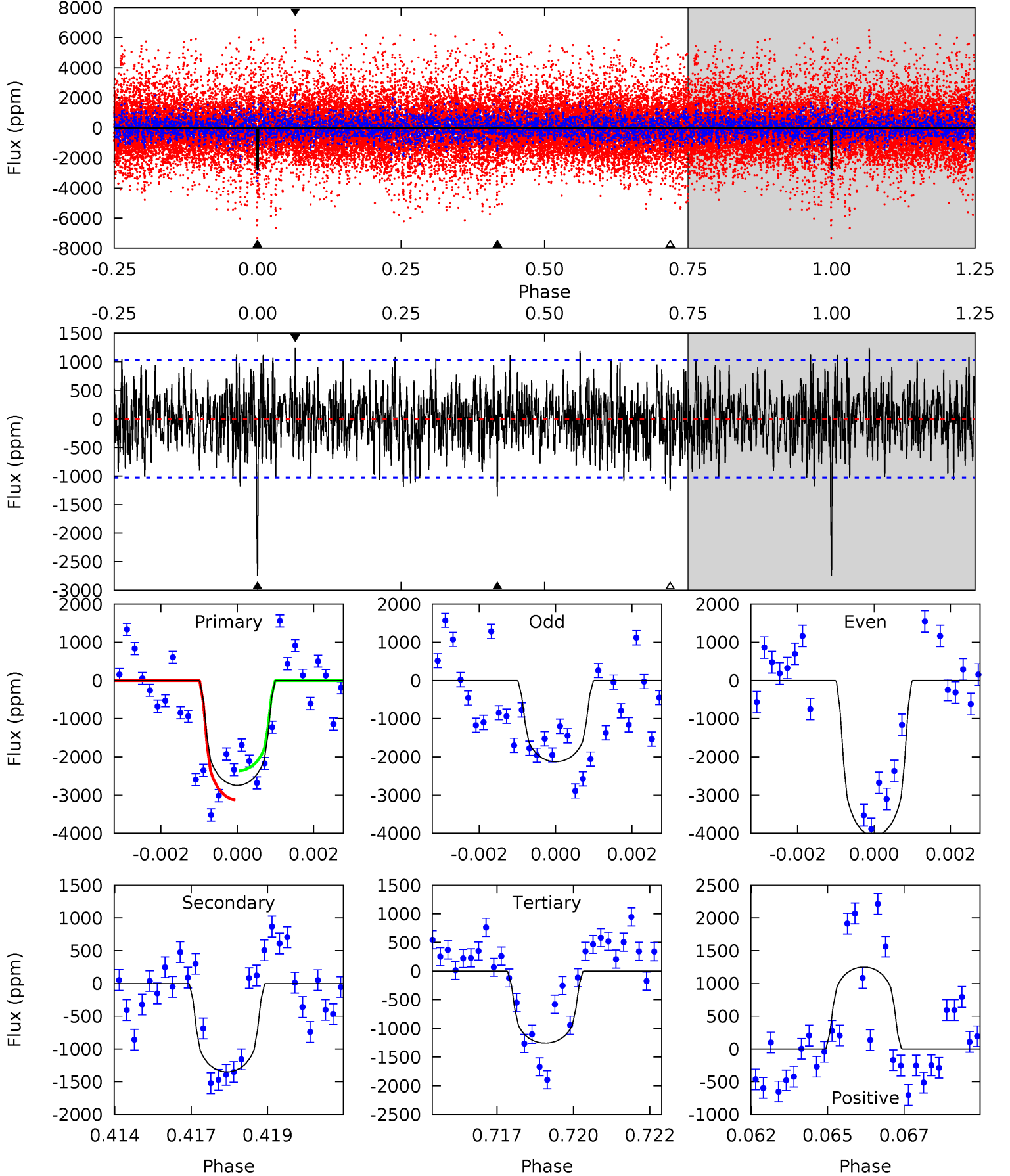
TCE 007810798-02 P= 98.587952 Days $T_0=206.527774$ (BKJD)



DV Model-Shift Uniqueness Test

007810798-02, P = 98.578148 Days, E = 206.616431 Days

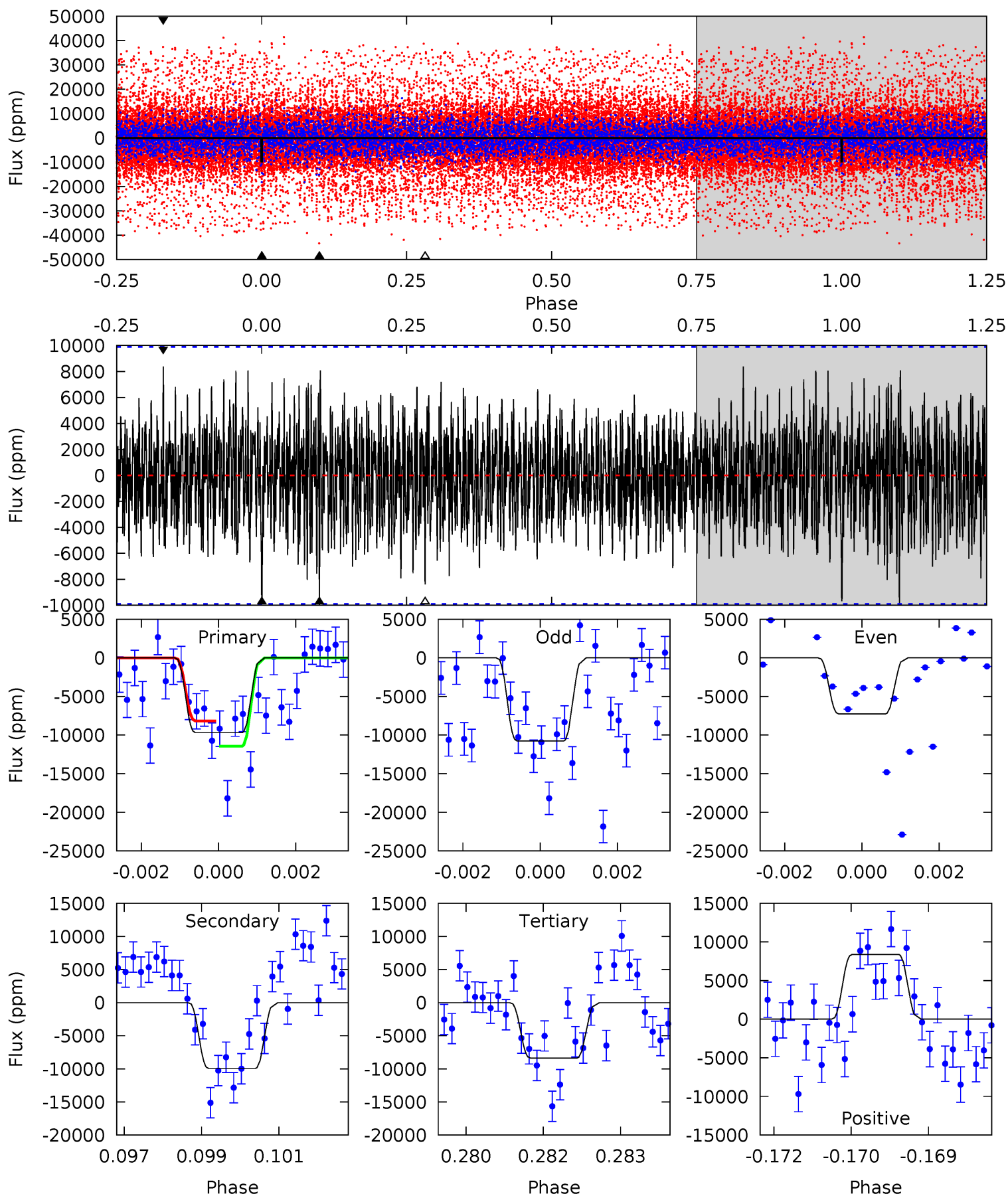
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	6.96	6.48	6.44	5.31	3.06	2.05	7.66	7.71	0.48	0.52	4.70	1.53	0.31	1.97



Alt Model-Shift Uniqueness Test

007810798-02, P = 98.587952 Days, E = 206.527774 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.26	5.40	4.55	4.55	5.37	3.17	1.52	0.71	0.71	0.85	0.85	0.89	0.91	0.46	0.91



Stellar Parameters For KIC 007810798

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4946^{+177}_{-177}	$4.672^{+0.056}_{-0.032}$	$-1.060^{+0.300}_{-0.300}$	$0.584^{+0.041}_{-0.041}$	$0.583^{+0.050}_{-0.025}$	$4.131^{+0.869}_{-0.536}$
	+4%/-4%	+1%/-1%	+28%/-28%	+7%/-7%	+9%/-4%	+21%/-13%
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 007810798-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1350 ± 194	$8.42^{+8.96}_{-5.92}$	391^{+18}_{-15}	3175^{+1568}_{-583}	1296^{+13252}_{-992}
Alt.	-9949 ± 1843	$10.74^{+9.28}_{-7.02}$	392^{+16}_{-15}	4052^{+2297}_{-811}	6152^{+43701}_{-4546}

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

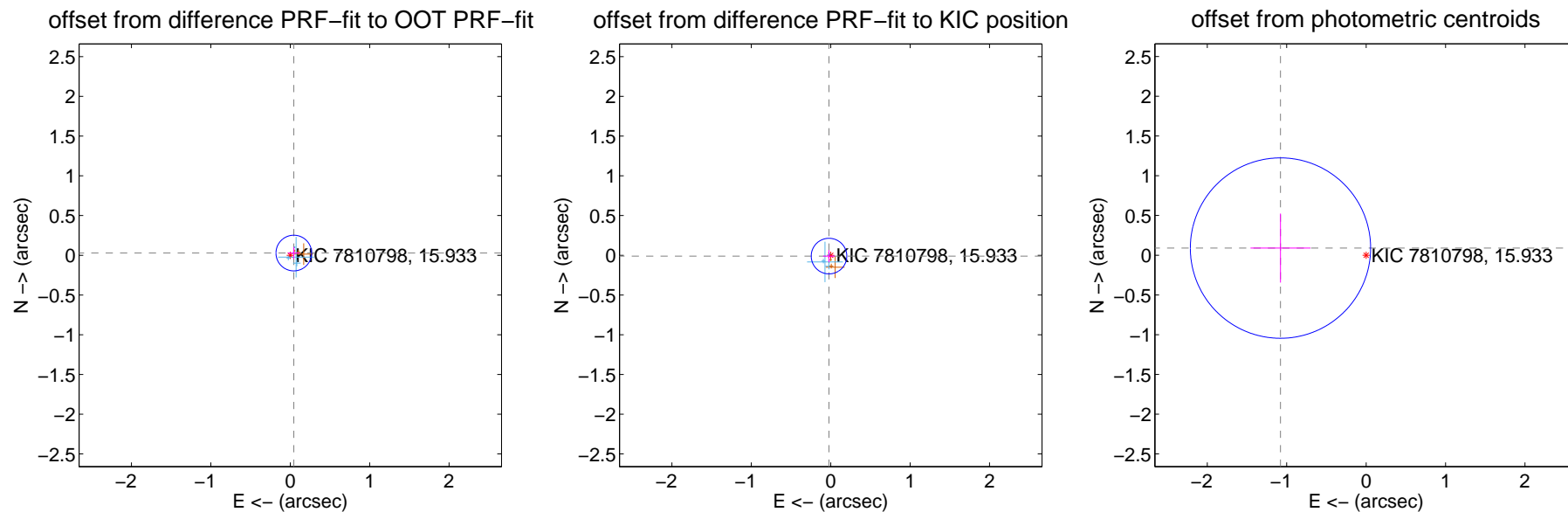
DV Centroid Data

Supplemental centroid analysis for 007810798-02. Kepler magnitude: 15.93. Transit SNR 6.65

There are 5 quarters with good PRF difference image offsets

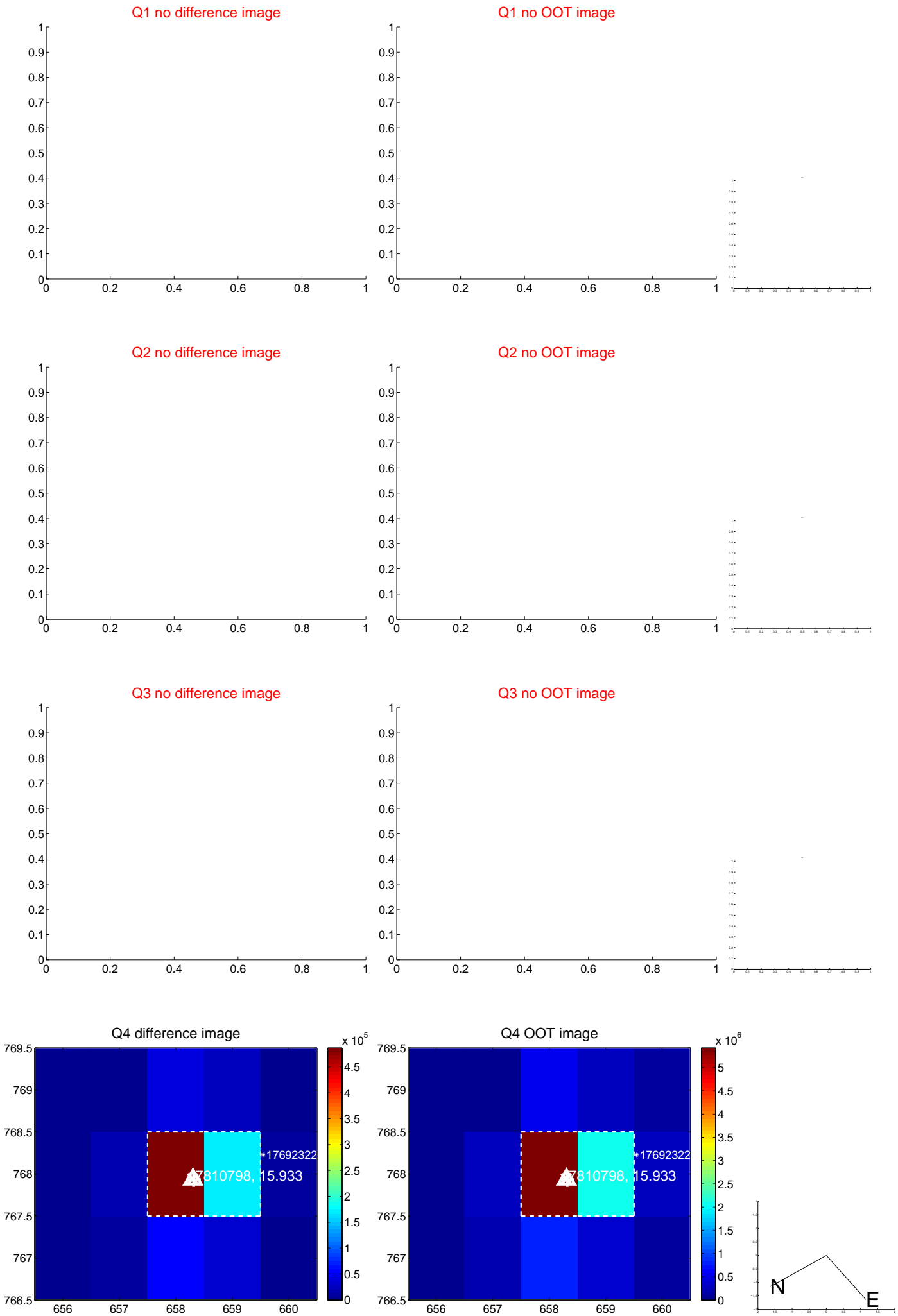
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.053 ± 0.075	0.70	-0.045 ± 0.074	0.028 ± 0.076
PRF-fit source offset from KIC position	0.024 ± 0.075	0.32	0.022 ± 0.074	-0.010 ± 0.076
photometric centroid source offset	1.08 ± 0.38	2.86	1.08 ± 0.38	0.09 ± 0.43

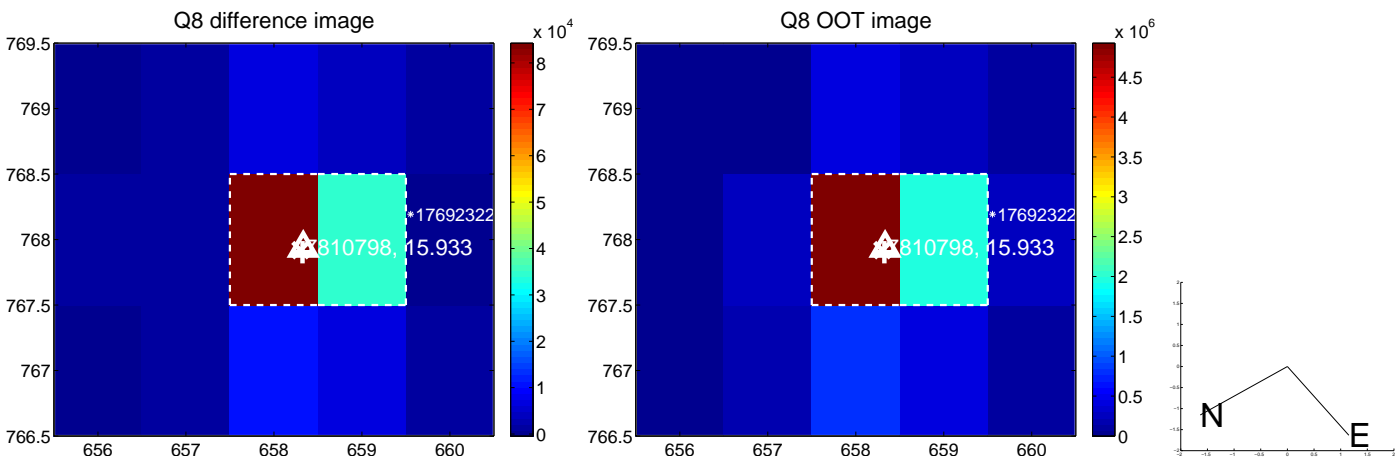
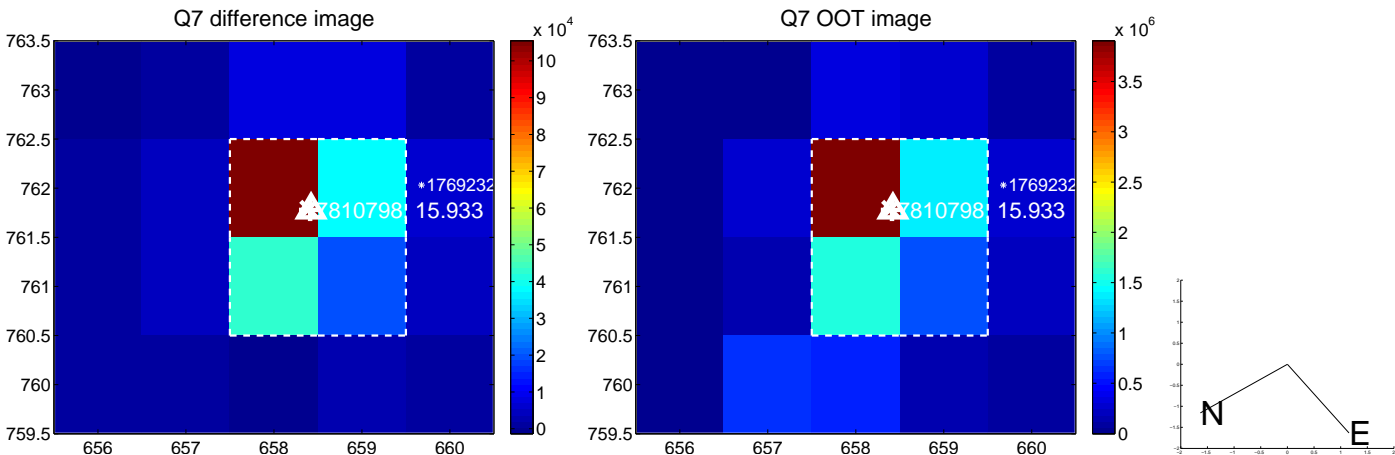
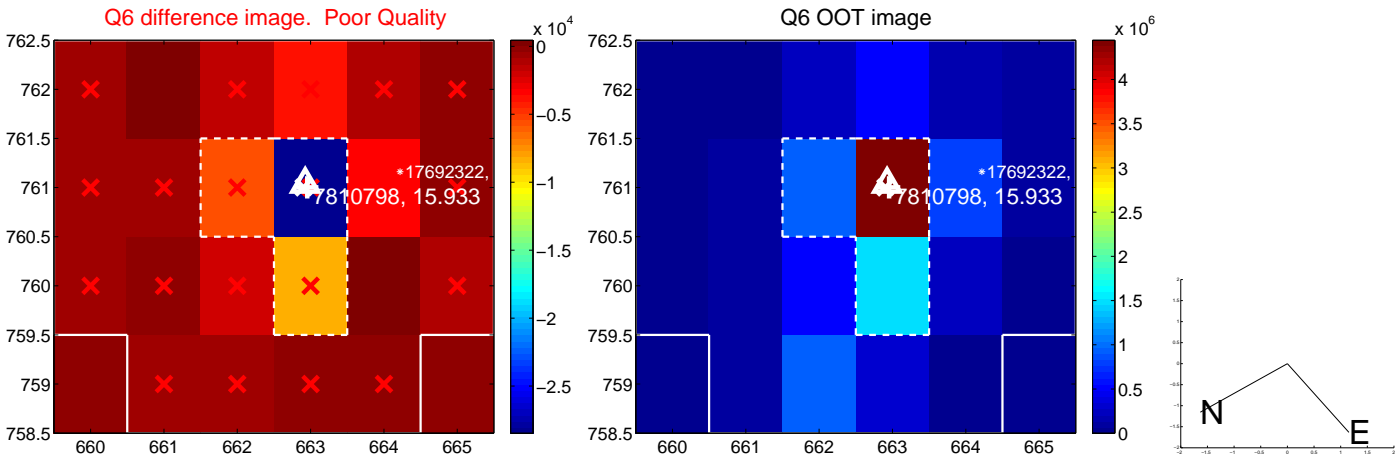
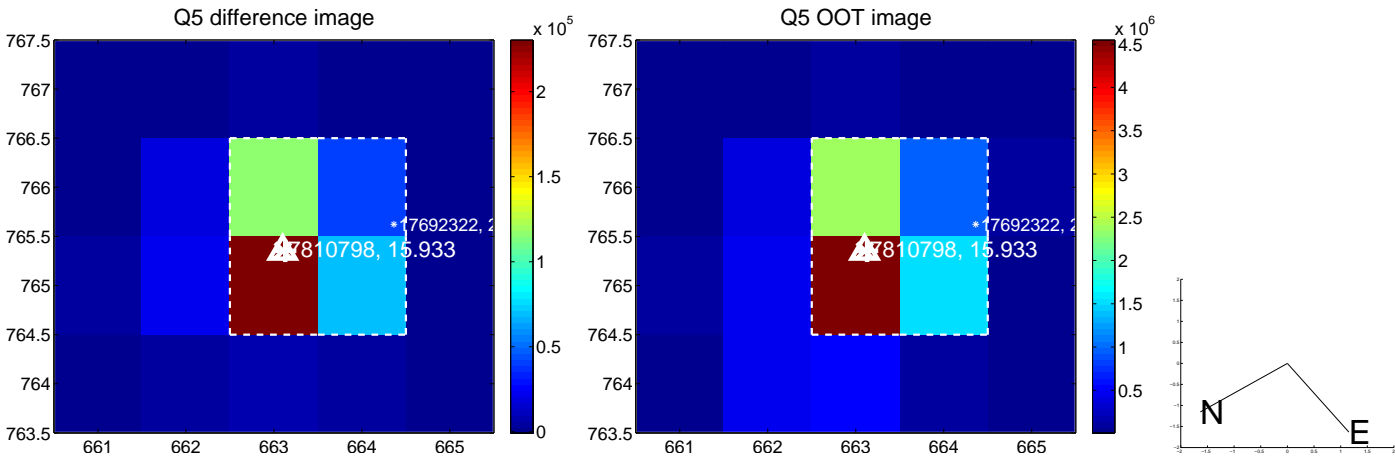


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

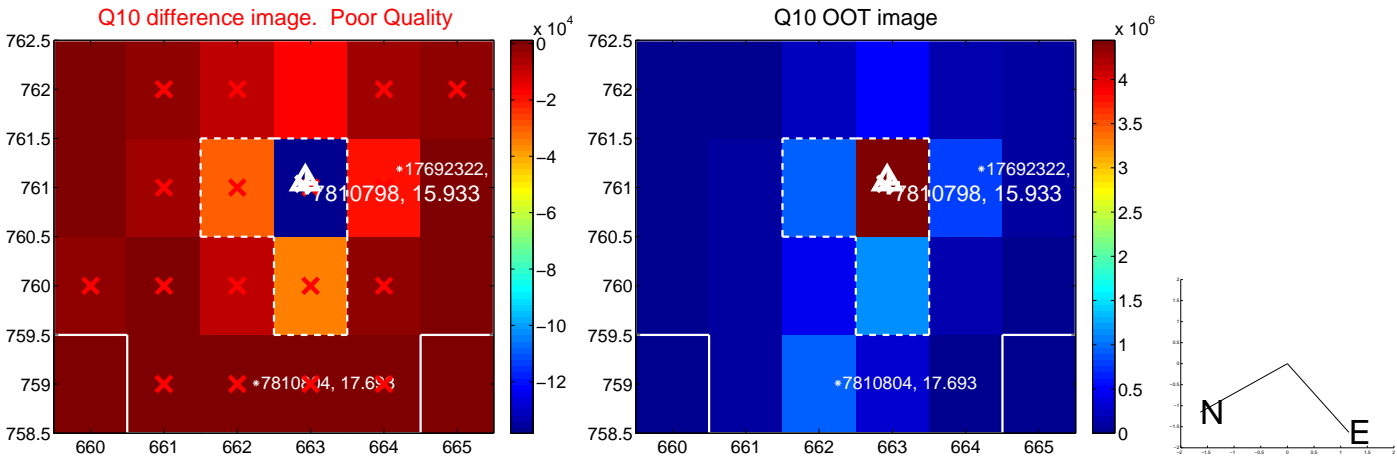
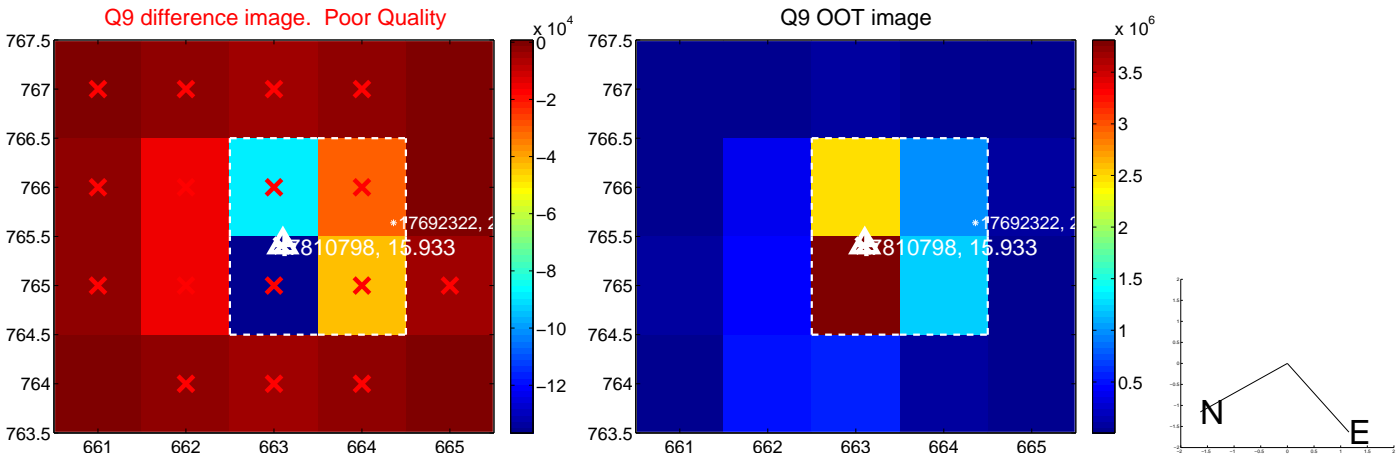
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



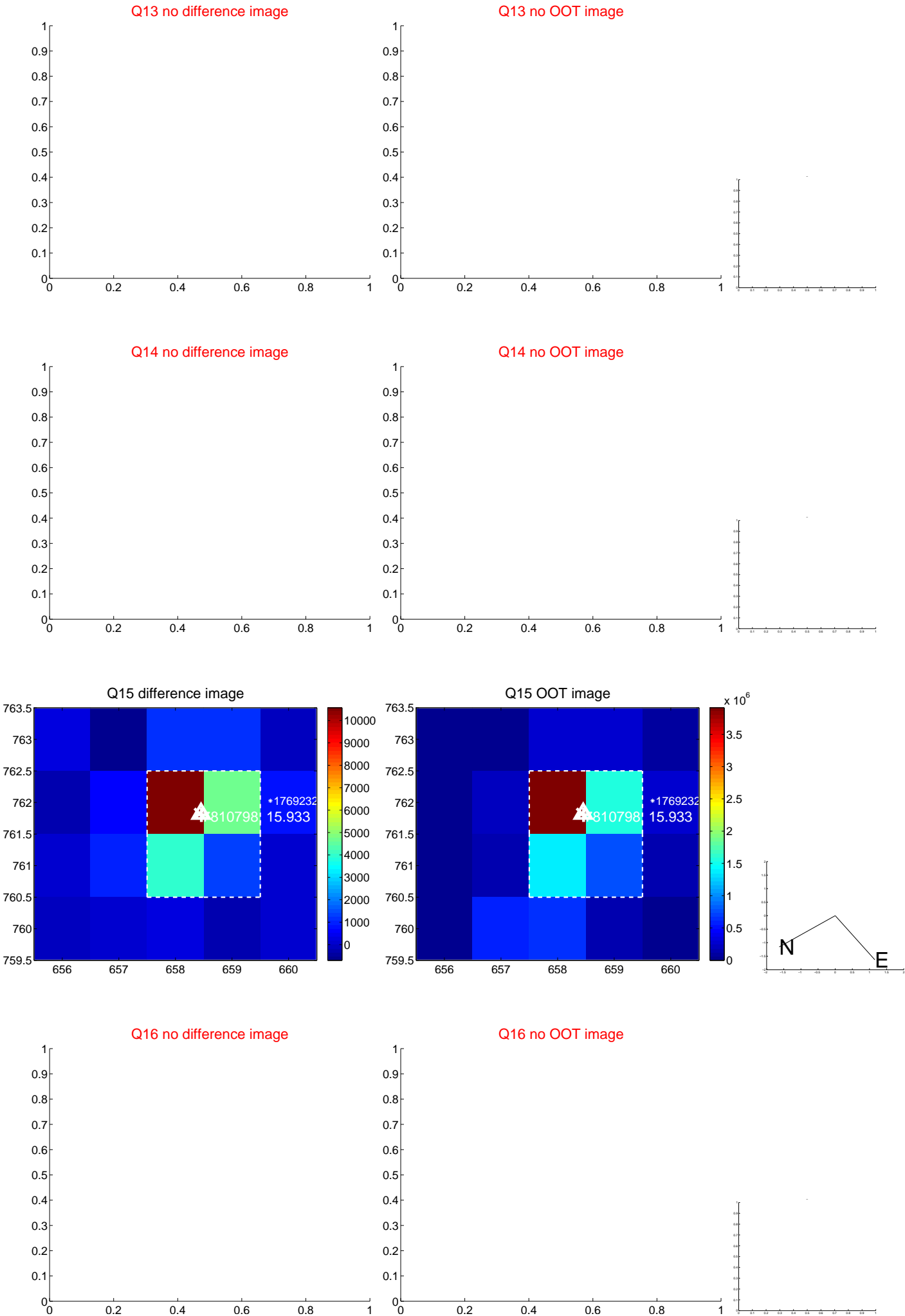
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



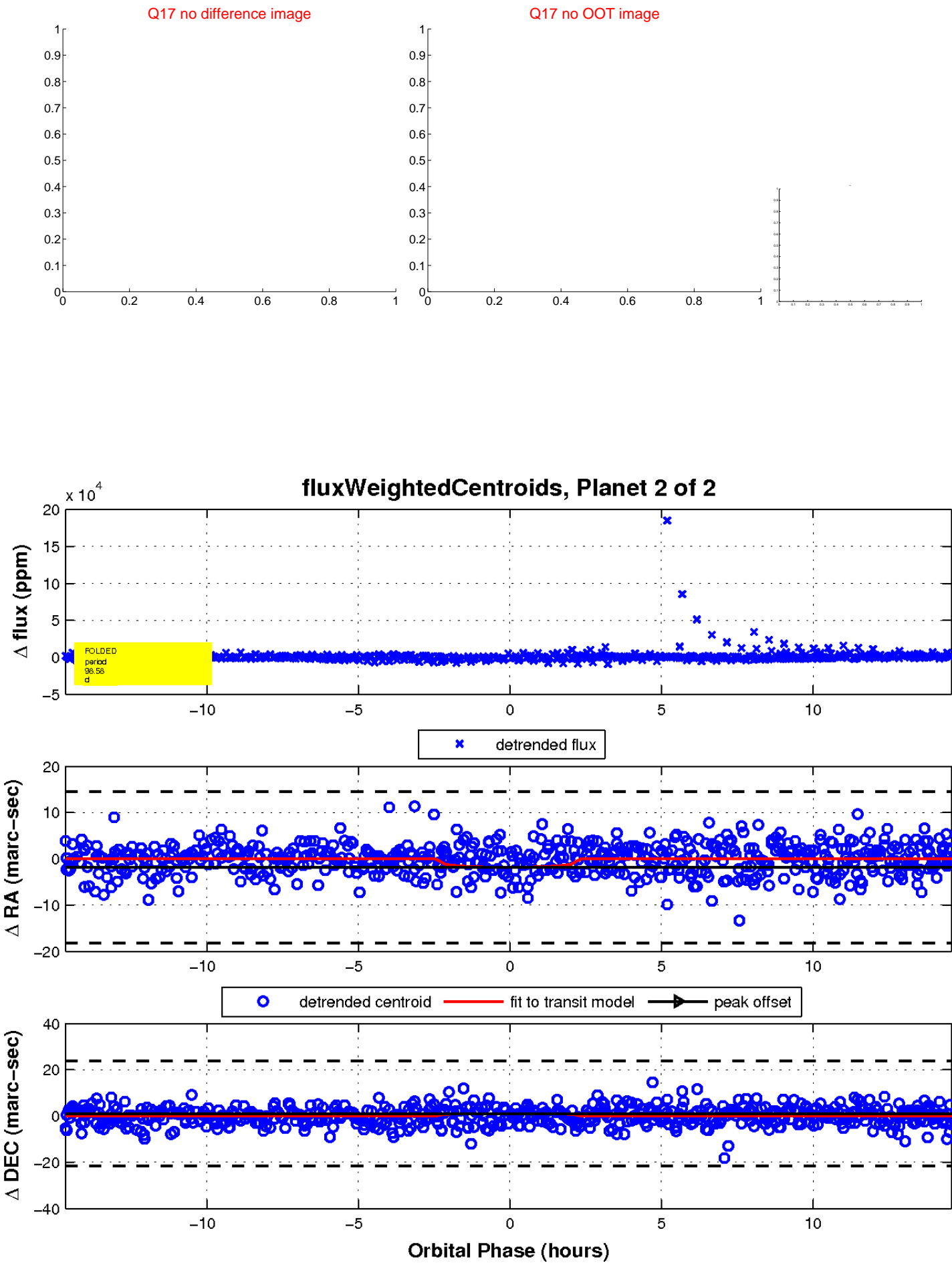
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

