

KIC 010743600

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})
010743600-01	OBS	7369.01	0.817009	132.033929	137525.3	2.990	904.5	447.1	1.00	5780	42.31	3416.93
010743600-02	OBS	No	0.816469	131.745369	11006.3	1.500	8.9	-1.0	1.00	5780	10.44	3419.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010743600-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_DV—MOD_ODDEVEN_DV—DEEP_V_SHAPED—SEASONAL_DEPTH_ALT—CENT_KIC_POS
010743600-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQU_ALT—CENT_NOFITS

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

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

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

Ephemeris Match Information For 010743600-01

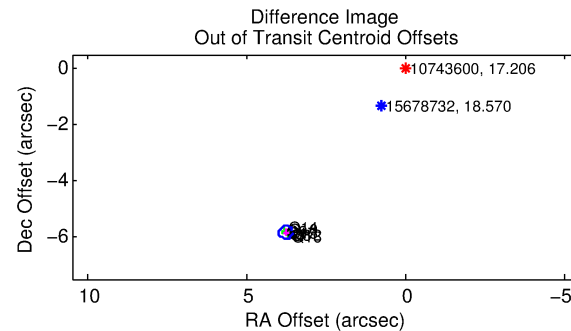
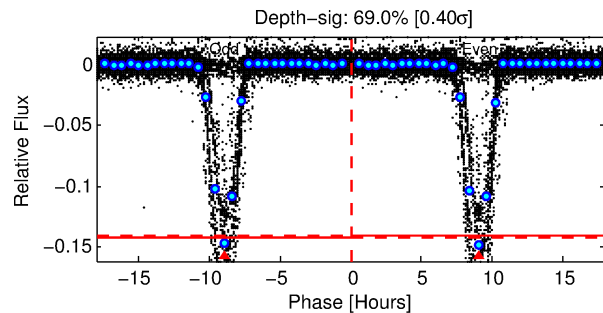
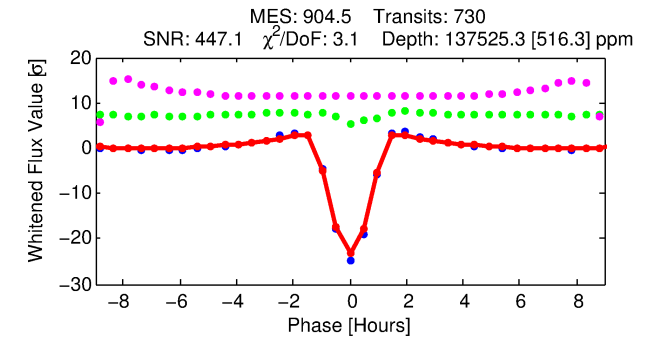
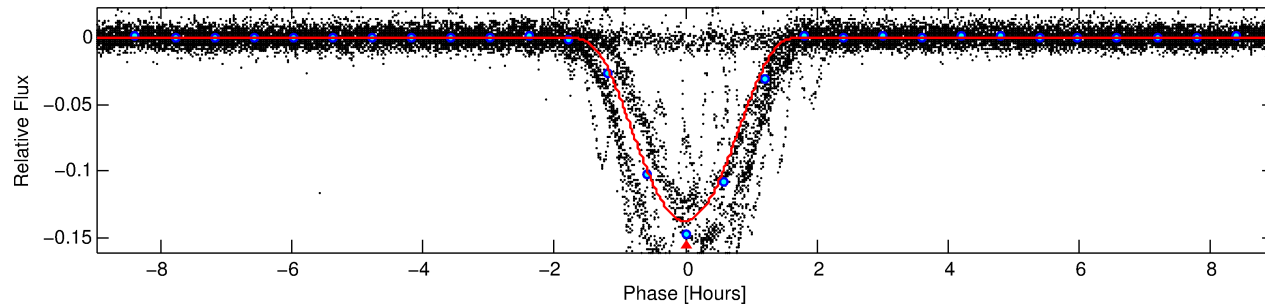
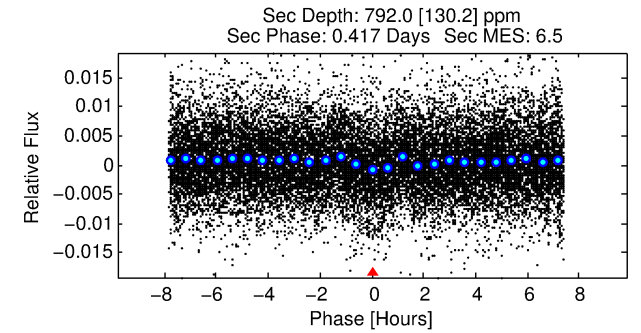
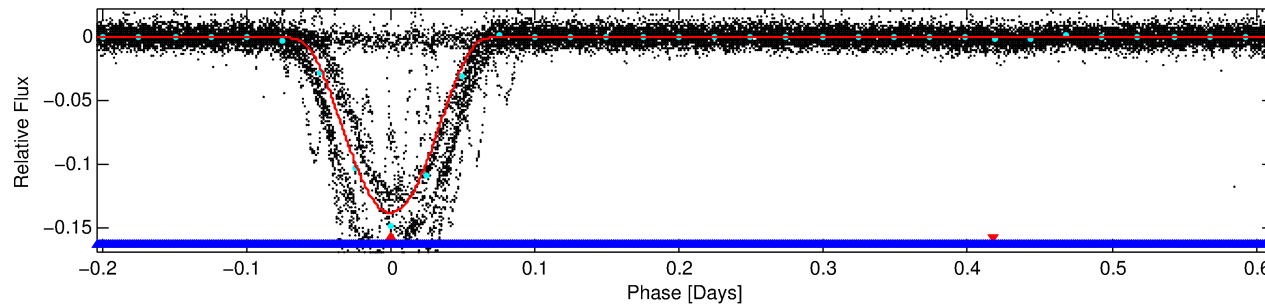
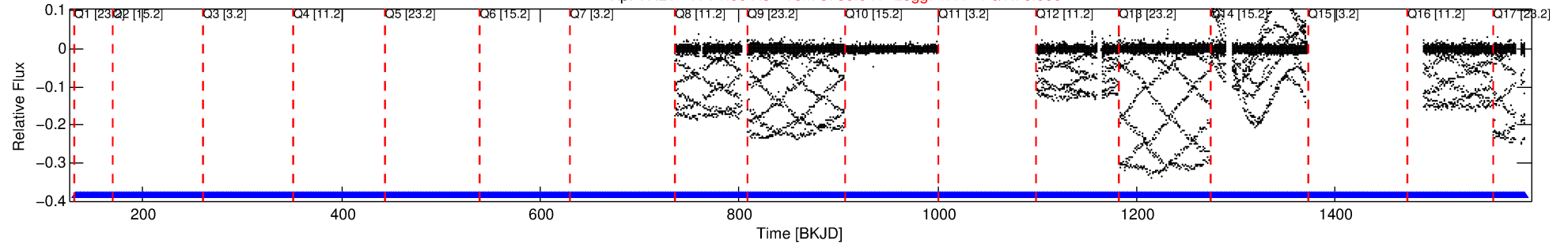
No Significant Match Found

DV One-Page Summary

KIC: 10743600 Candidate: 1 of 2 Period: 0.817 d

KOI: K07369.01 Corr: 0.941

Kp: 17.21 R*: 1.00 Rs Teff: 5780.0 K Logg: 4.44 Fe/H: 0.000



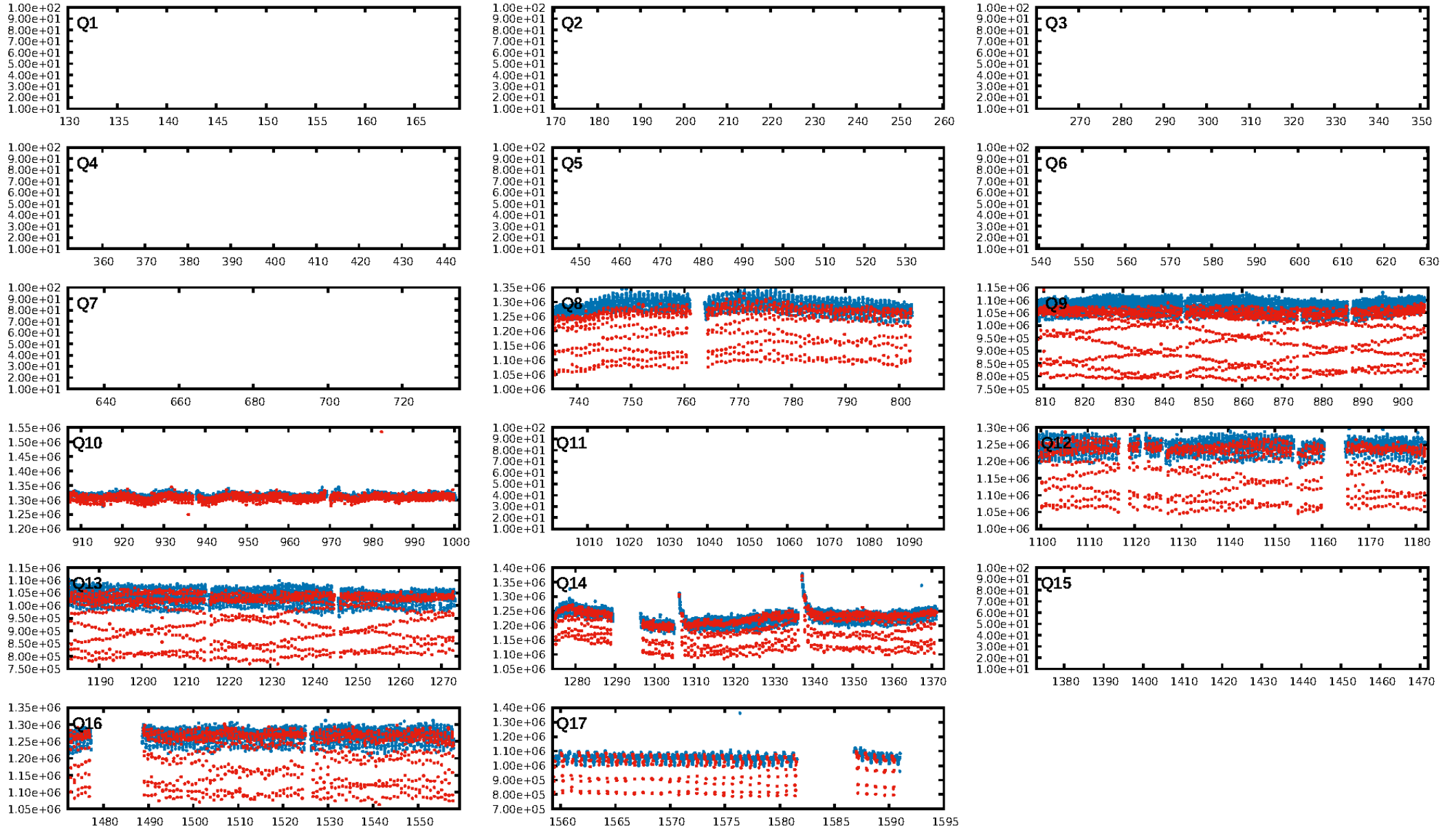
DV Fit Results:

Period = 0.81701 [0.00000] d
Epoch = 132.0339 [0.0001] BKJD
Rp/R* = 0.3878 [0.0080]
a/R* = 2.70 [0.01]
b = 0.70 [0.02]
Seff = 3416.93 [0.00]
Teff = 1950 [0] K
Rp = 42.32 [0.87] Re
a = 0.0171 [0.0000] AU
Ag = 0.07 [0.01] [-76.98 σ]
Teffp = 1557 [66] K [-5.95 σ]

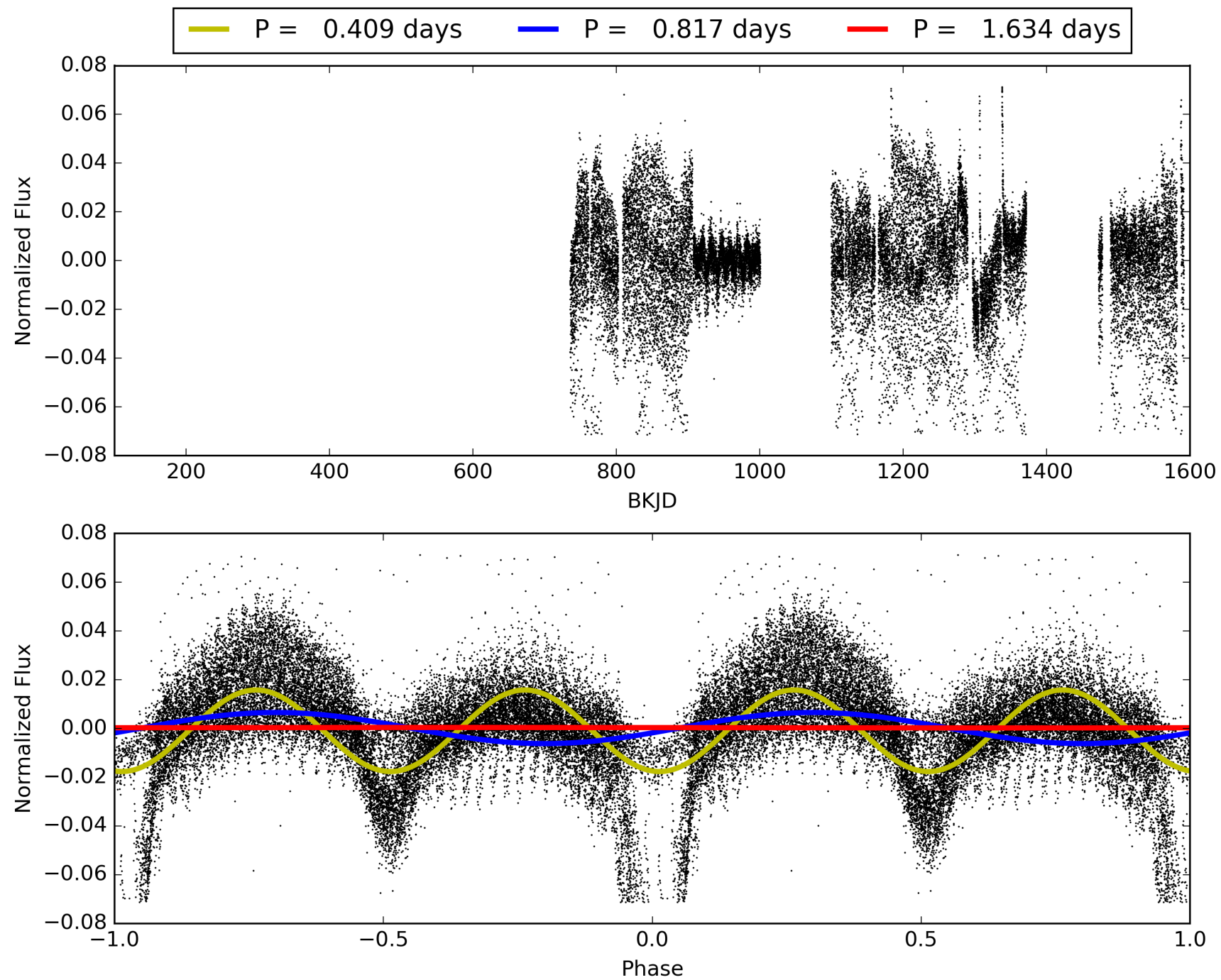
DV Diagnostic Results:

ShortPeriod-sig: 0.3% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [697/697]
GhostDiagnostic-chr: 0.5409
Centroid-sig: N/A
Centroid-so: 2.251 arcsec [911.35 σ]
OotOffset-rm: 6.957 arcsec [90.49 σ]
KicOffset-rm: 1.508 arcsec [22.05 σ]
OotOffset-st: 2/0/3/3 [8]
KicOffset-st: 2/0/3/3 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 0.00 [0/8]

TCE 010743600-01, PDC Light Curves

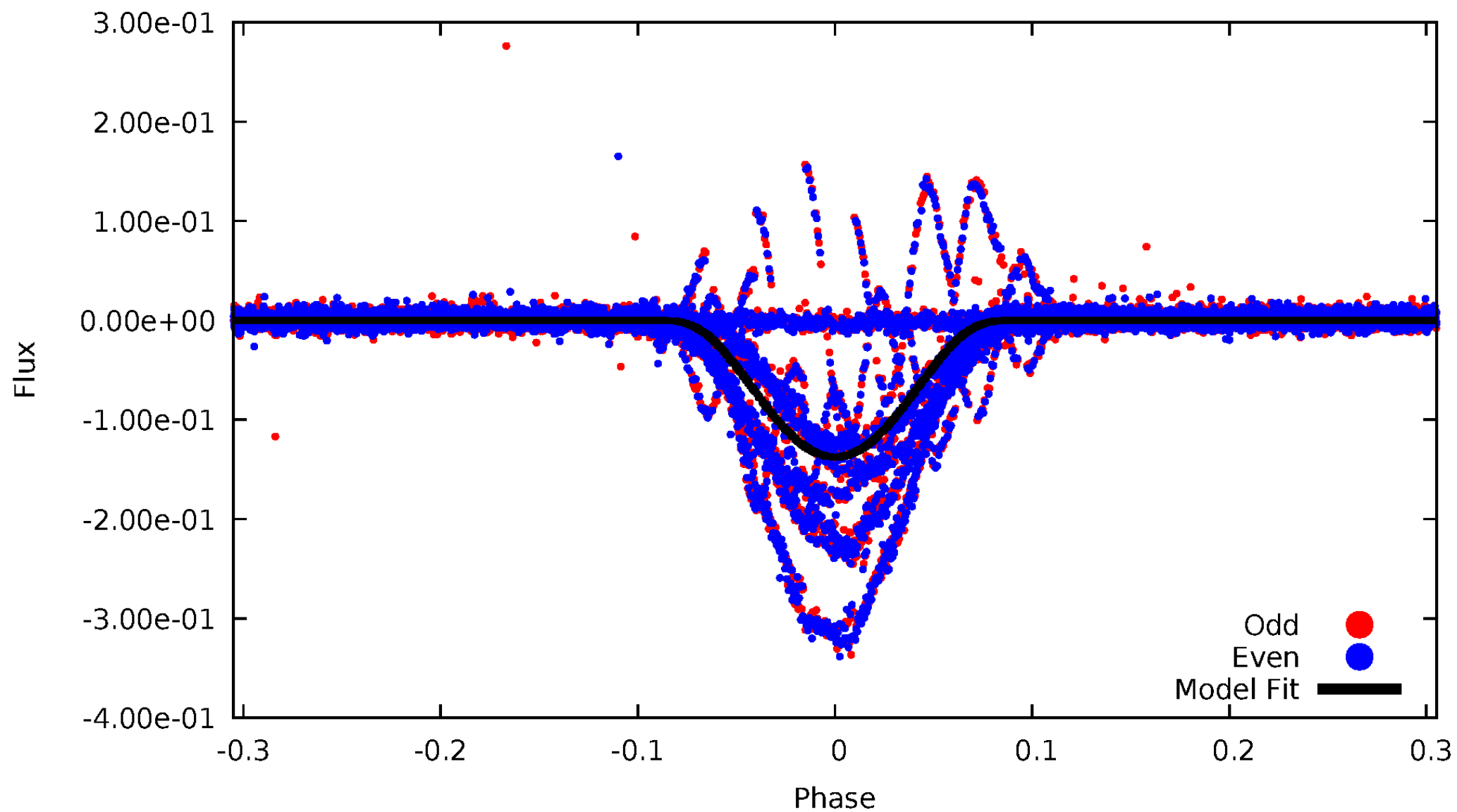


TCE 010743600-01



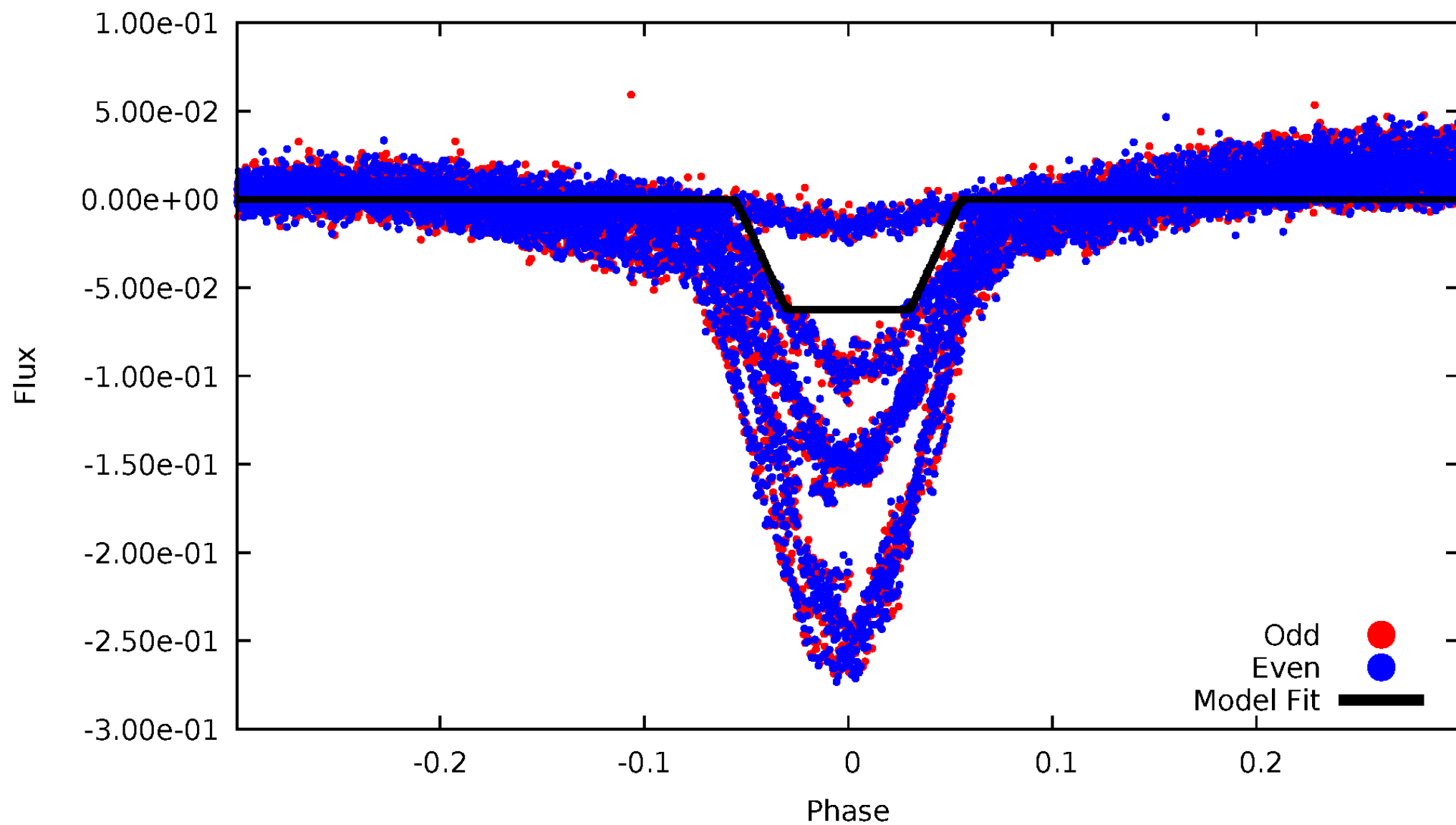
DV Odd/Even

TCE 010743600-01



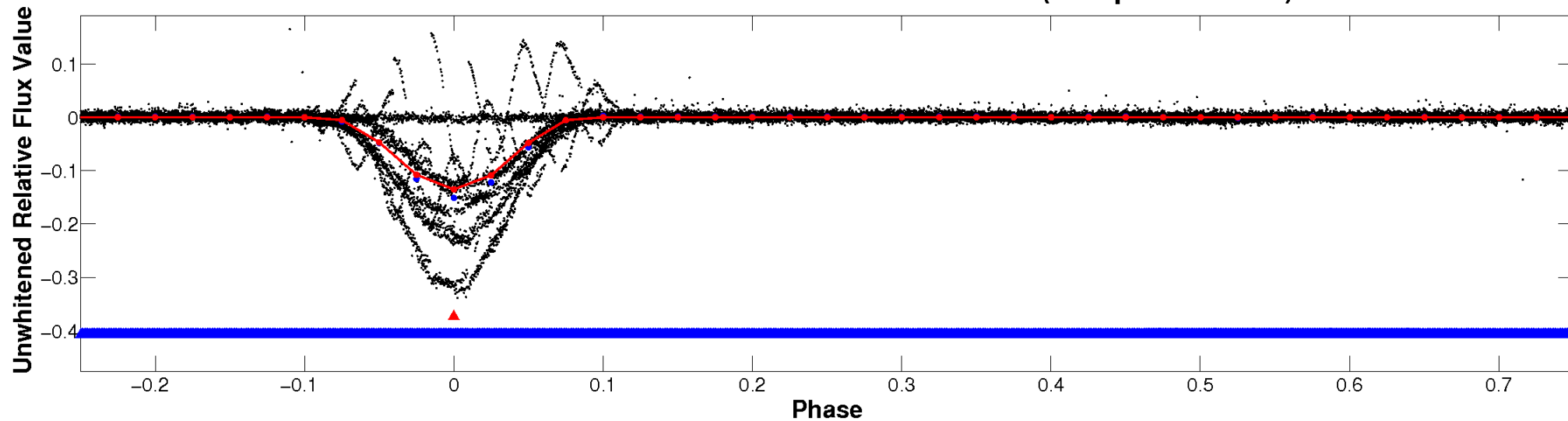
ALT Odd/Even

TCE 010743600-01

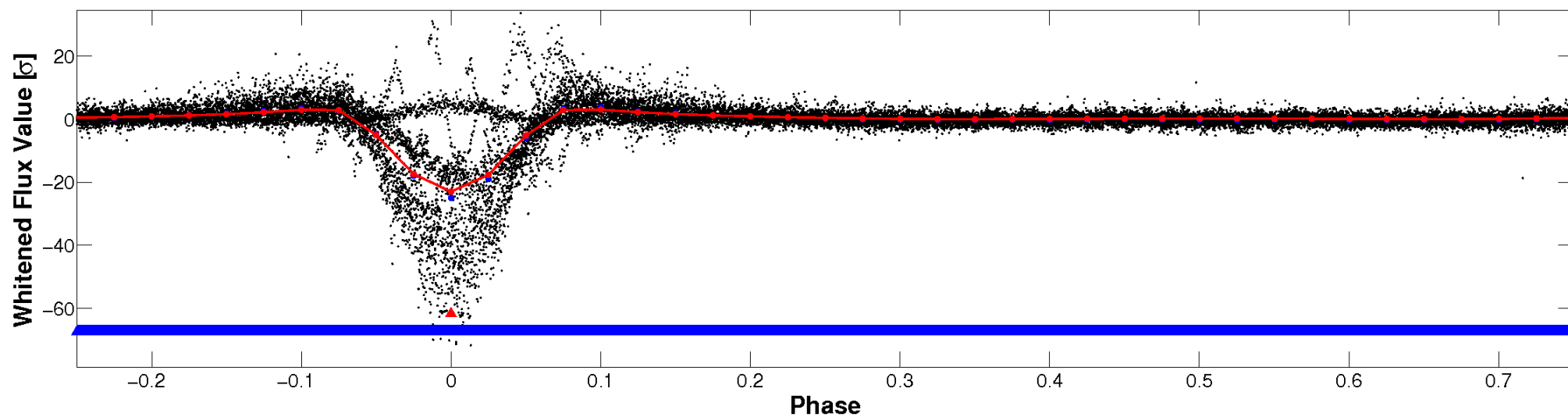


Non-Whitened Vs. Whitened Light Curve

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

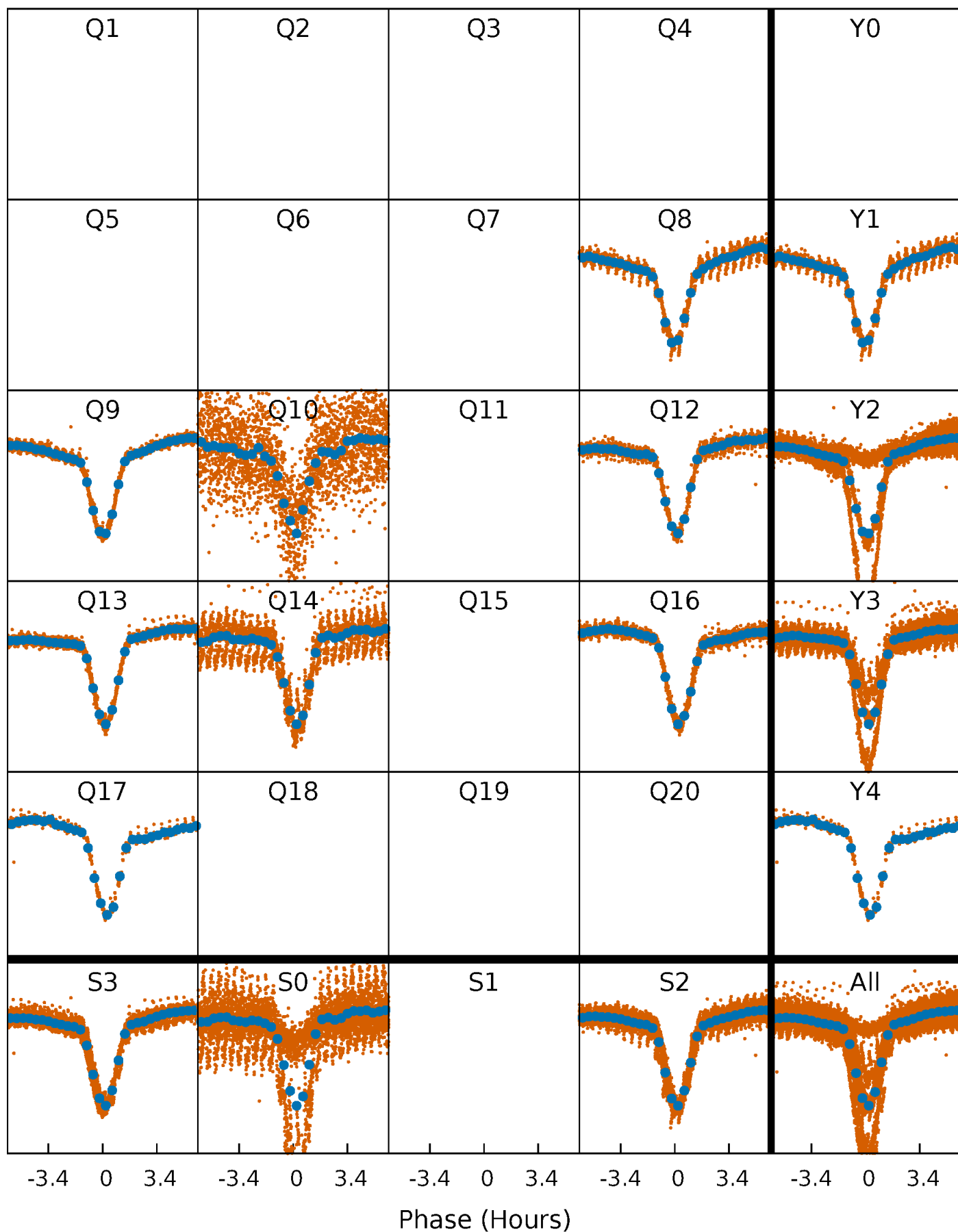


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



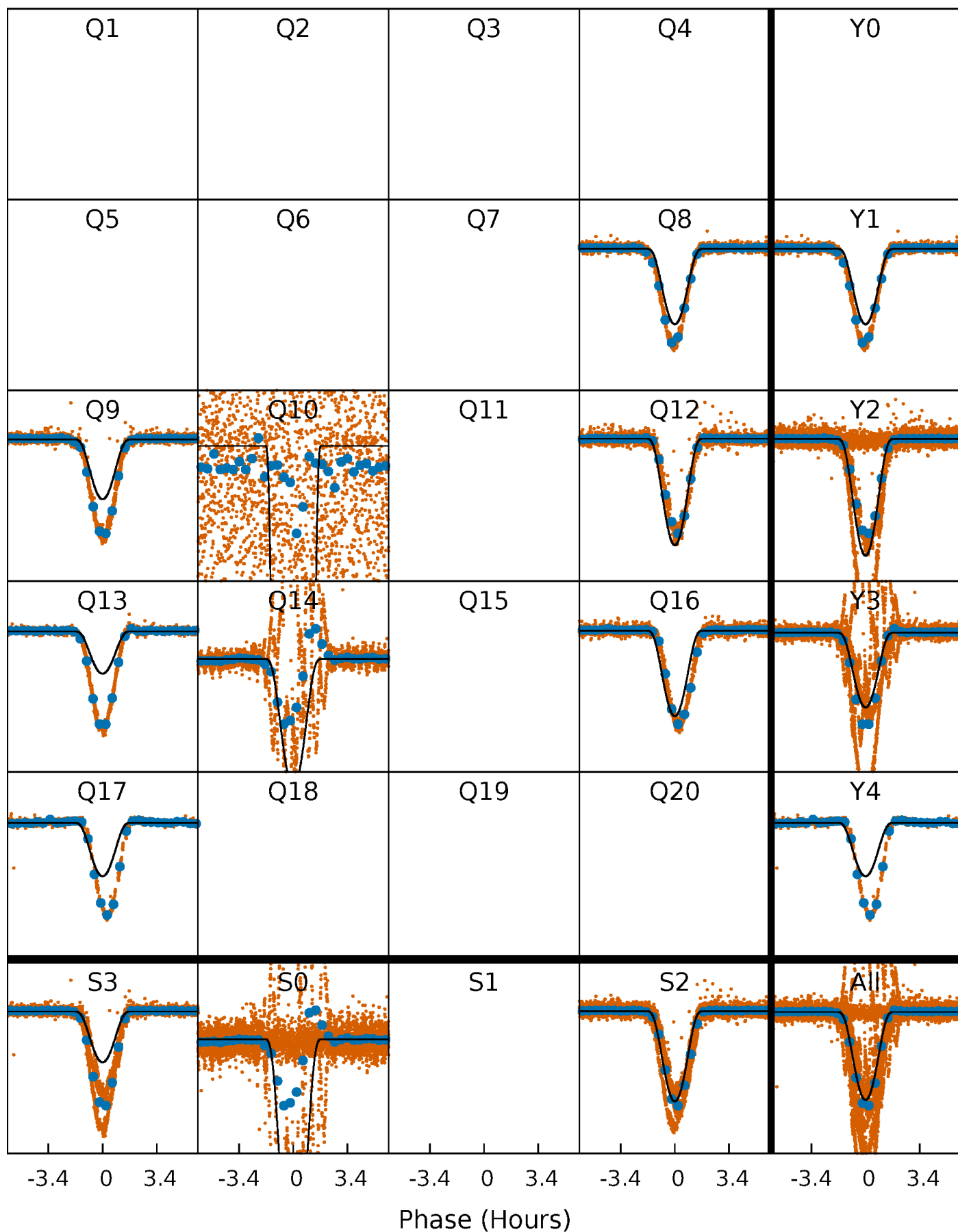
PDC Quarter-Phased Transit Curves

TCE 010743600-01 P= 0.817009 Days $T_0=132.033929$ (BKJD)



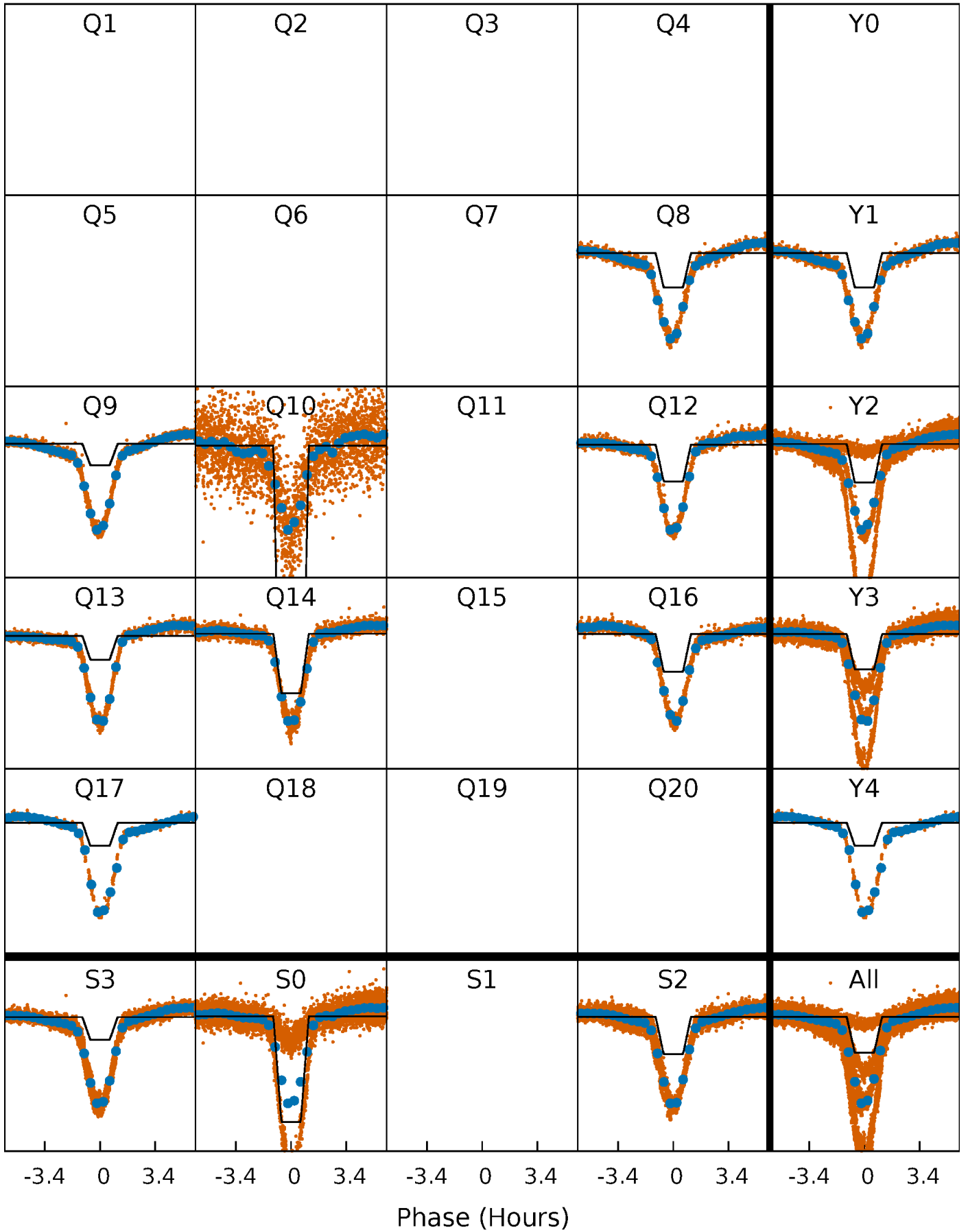
DV Quarter-Phased Transit Curves

TCE 010743600-01 P= 0.817009 Days $T_0=132.033929$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

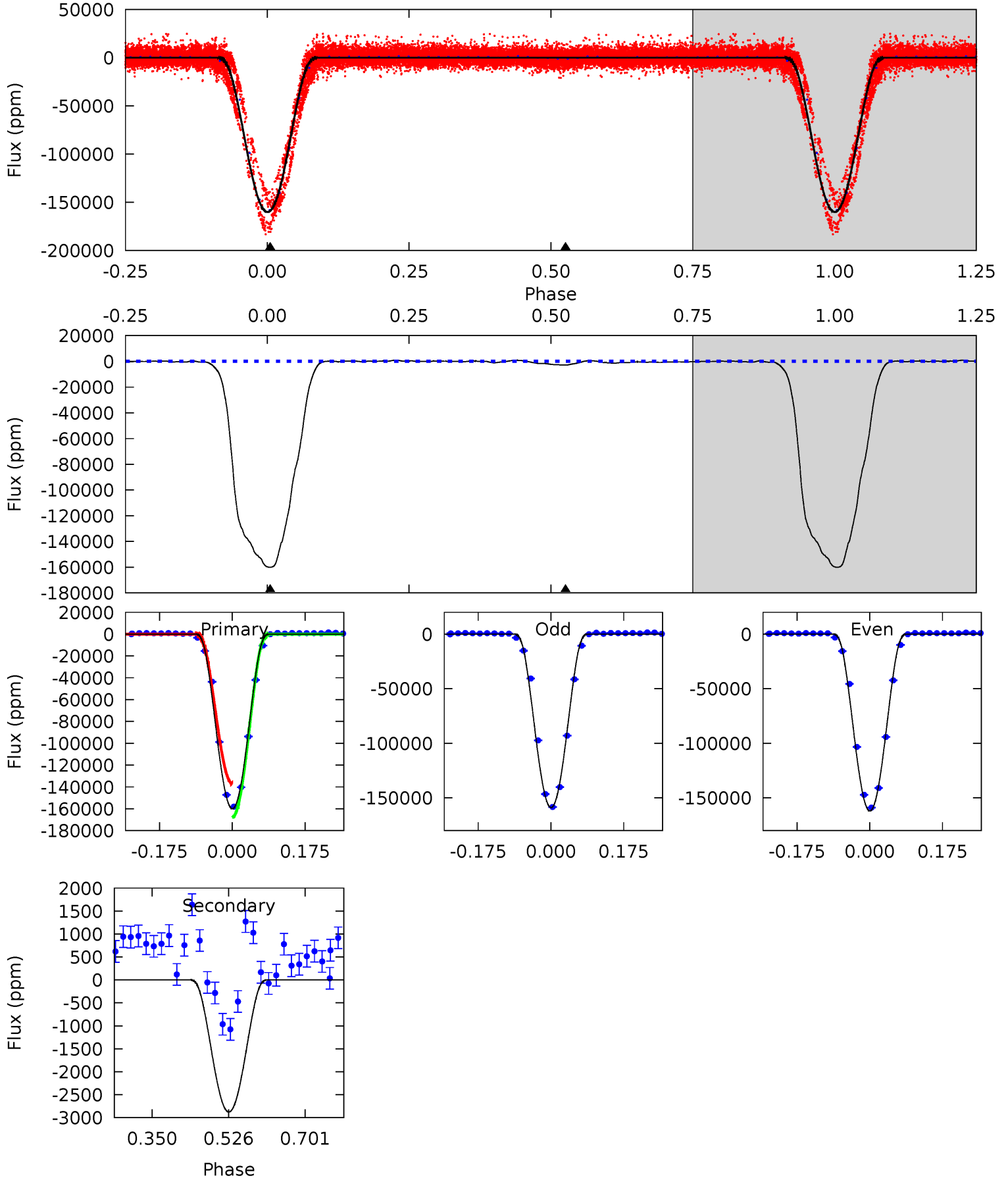
TCE 010743600-01 P= 0.817014 Days $T_0=132.034028$ (BKJD)



DV Model-Shift Uniqueness Test

010743600-01, P = 0.817009 Days, E = 132.033929 Days

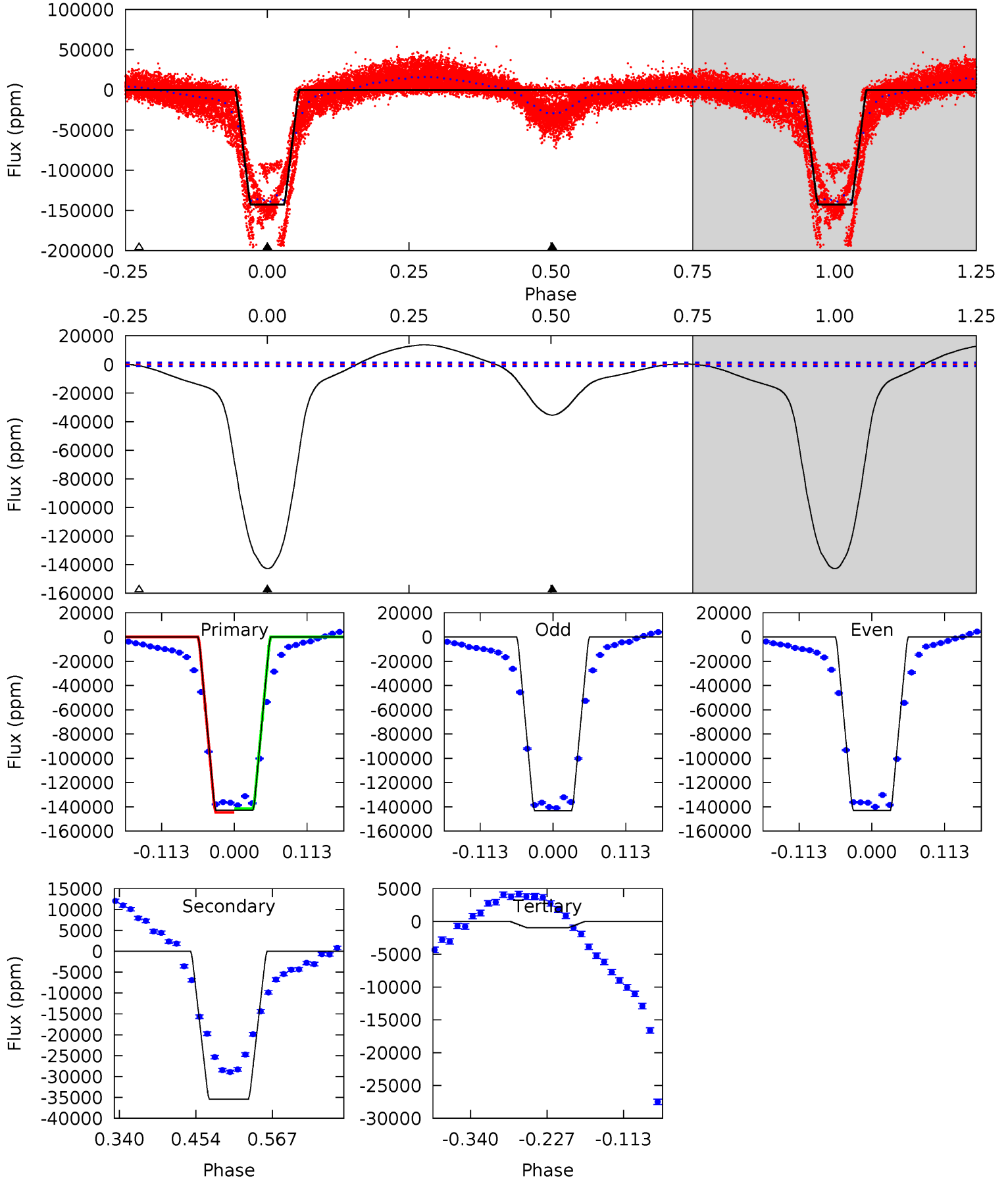
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1424	25.6	0	0	4.45	1.36	2.63	1424	1424	25.6	25.6	13.9	1.01	0.01	0



Alt Model-Shift Uniqueness Test

010743600-01, P = 0.817014 Days, E = 132.034028 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
518.2	128.6	3.54	0	4.54	1.58	28.1	514.6	518.2	125.0	128.6	0.34	1.03	0.09	0



Stellar Parameters For KIC 010743600

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 010743600-01 / KOI 7369.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2877 ± 112	$42.50^{+3.14}_{-3.12}$	2736^{+129}_{-135}	-2310^{+556}_{-188}	$0.255^{+0.041}_{-0.030}$
Alt.	-35425 ± 276	$27.36^{+1.94}_{-2.16}$	2718^{+127}_{-120}	5085^{+159}_{-172}	$7.941^{+1.271}_{-0.992}$

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 $A_{obs} \gg 1.0$

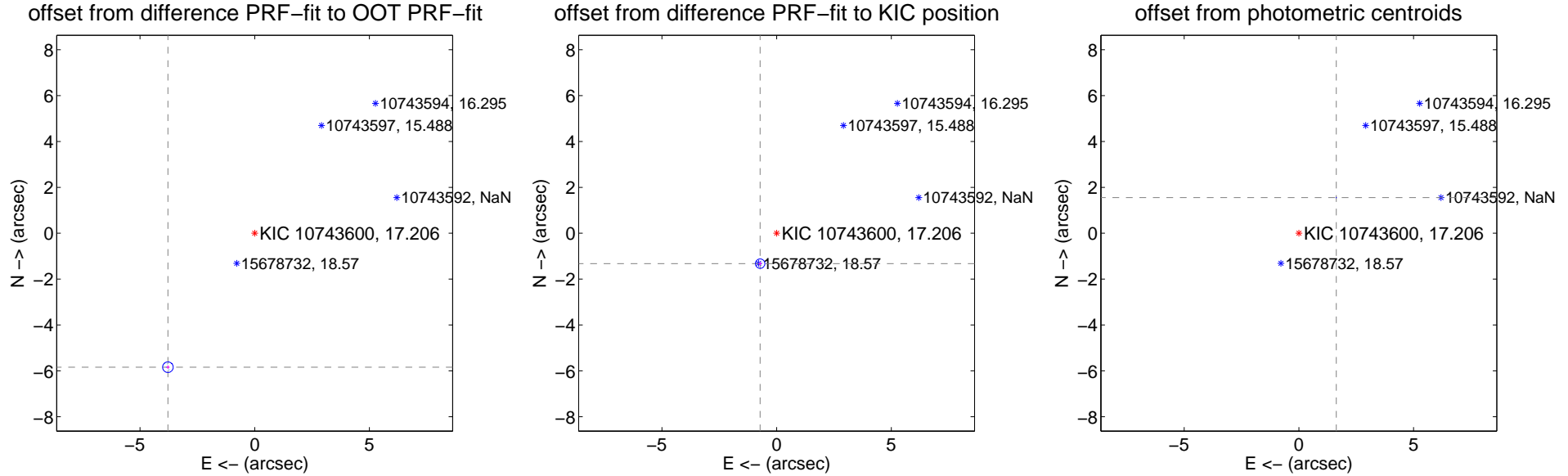
DV Centroid Data

Supplemental centroid analysis for 010743600-01. Kepler magnitude: 17.21. Transit SNR 447.12

There are 8 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 5.52 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.957 ± 0.077	90.49	3.783 ± 0.070	-5.839 ± 0.079
PRF-fit source offset from KIC position	1.508 ± 0.068	22.05	0.719 ± 0.068	-1.325 ± 0.069
photometric centroid source offset	2.25 ± 0.00	911.34	-1.63 ± 0.00	1.55 ± 0.00

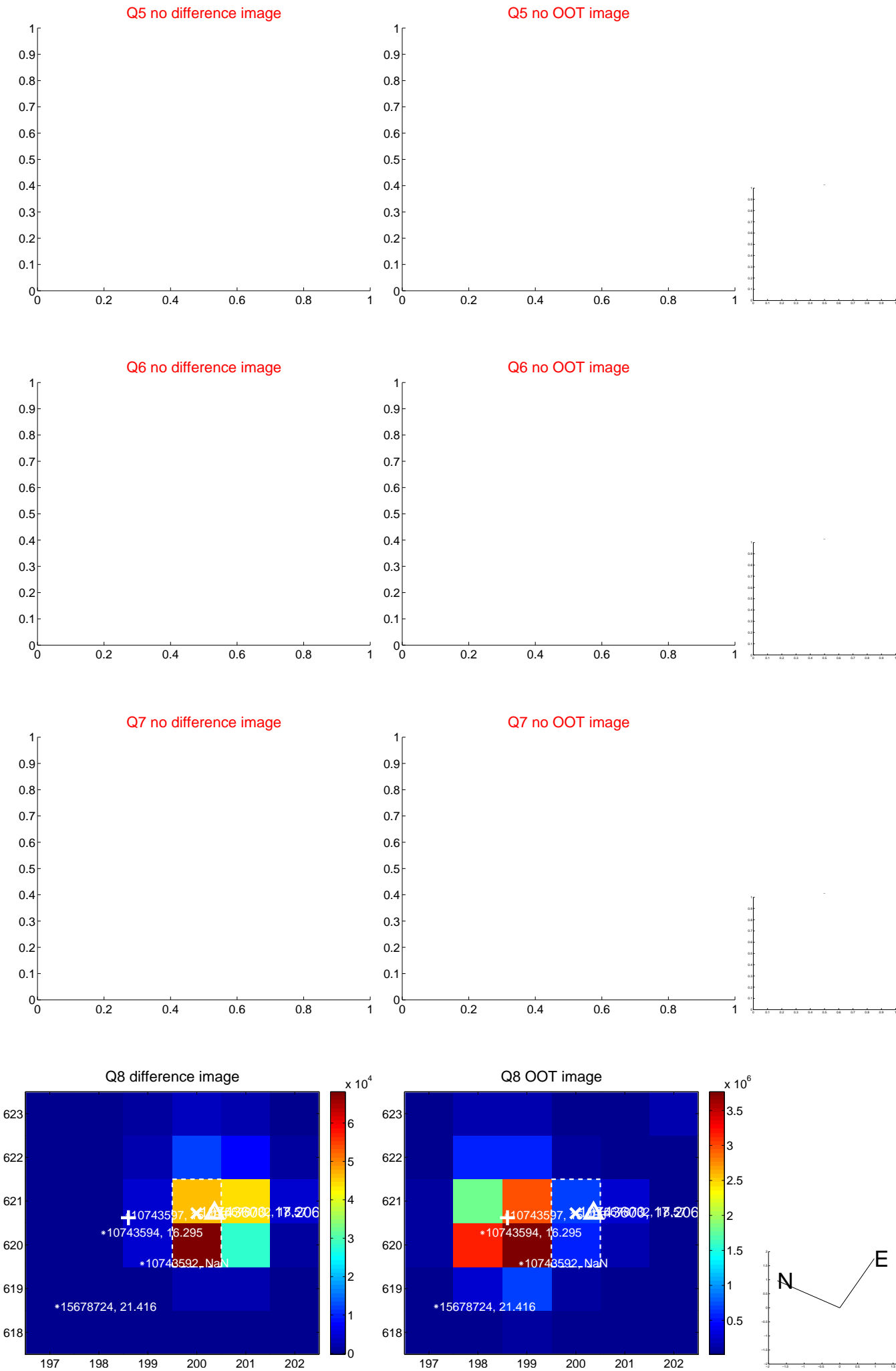


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

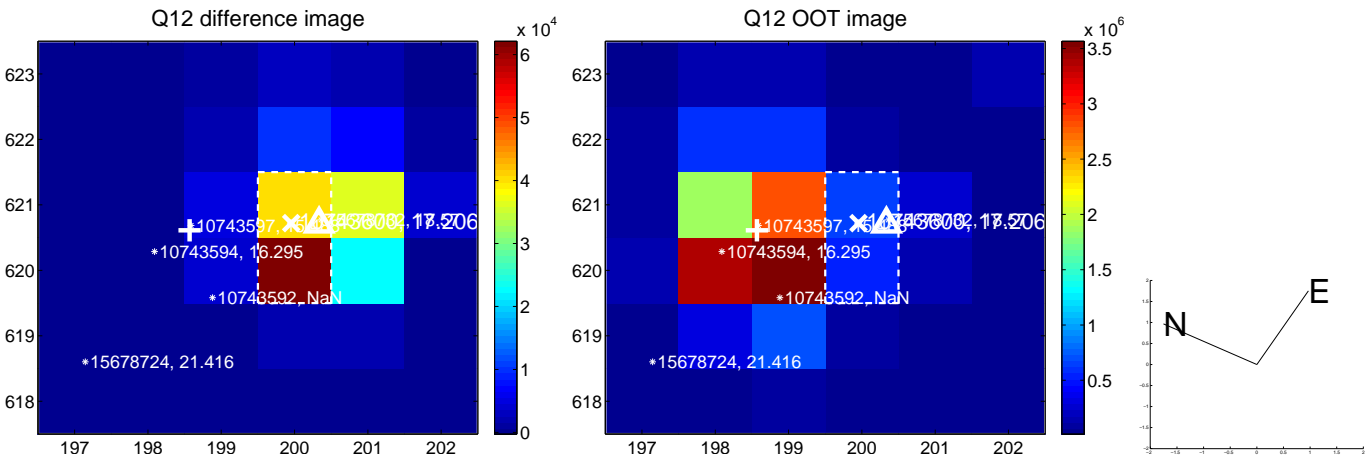
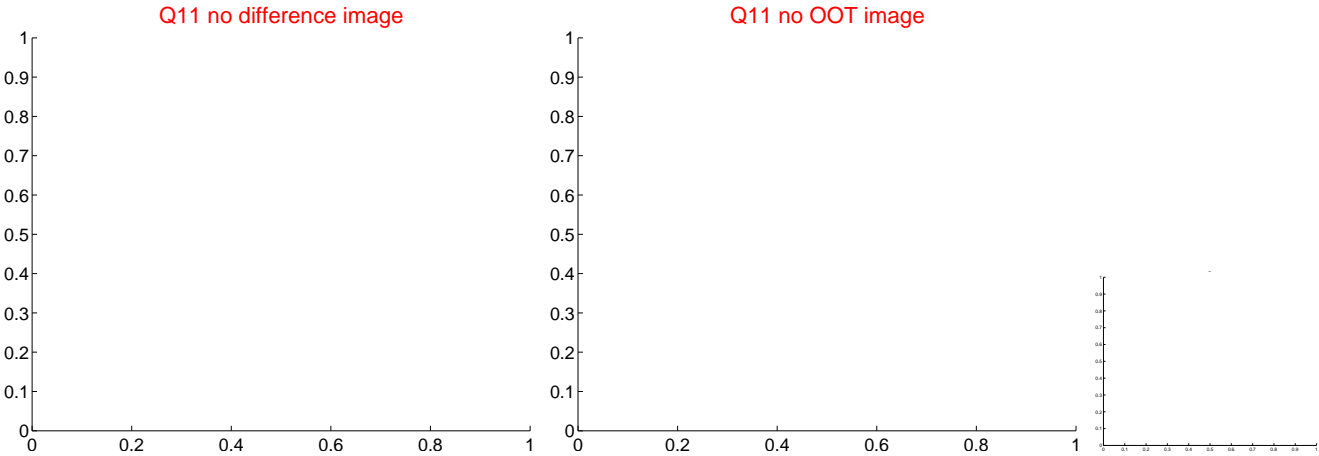
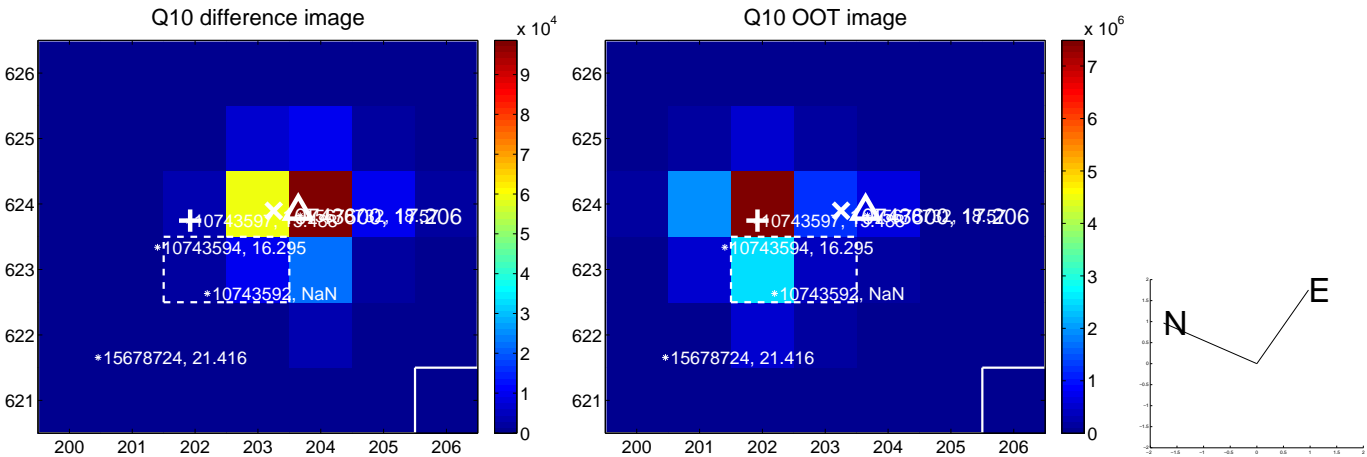
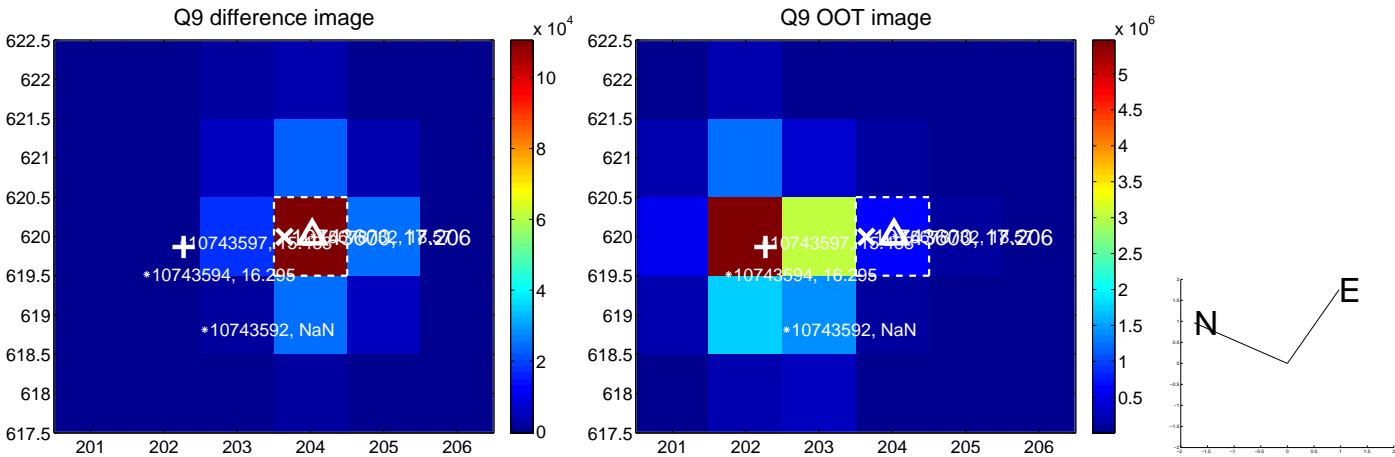
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



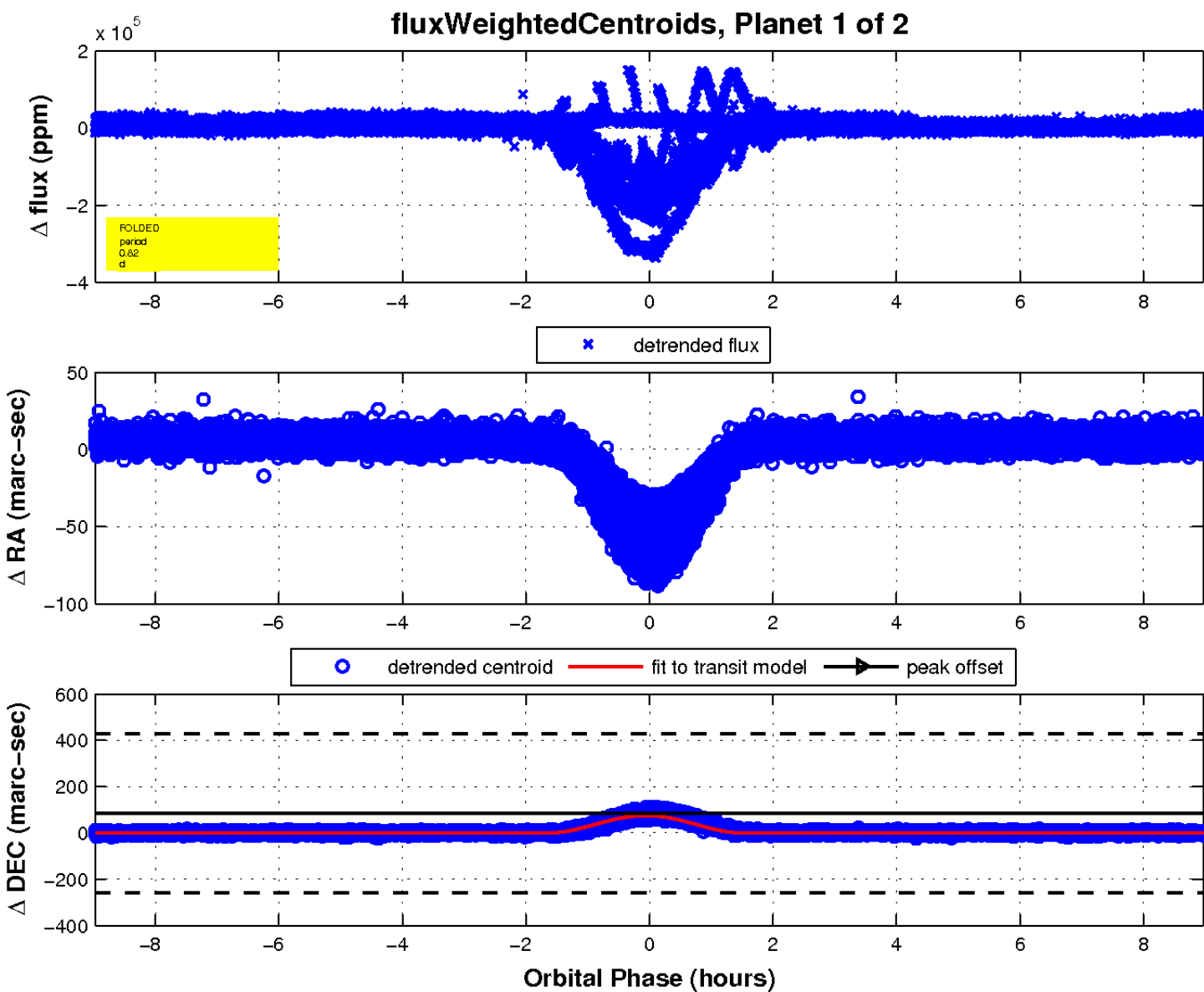
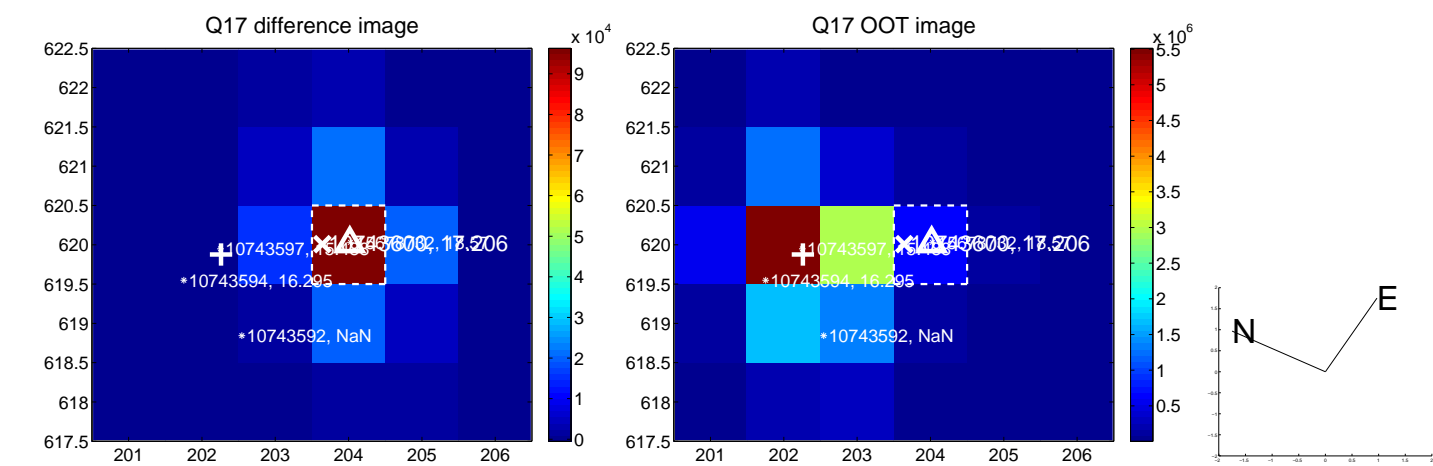
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

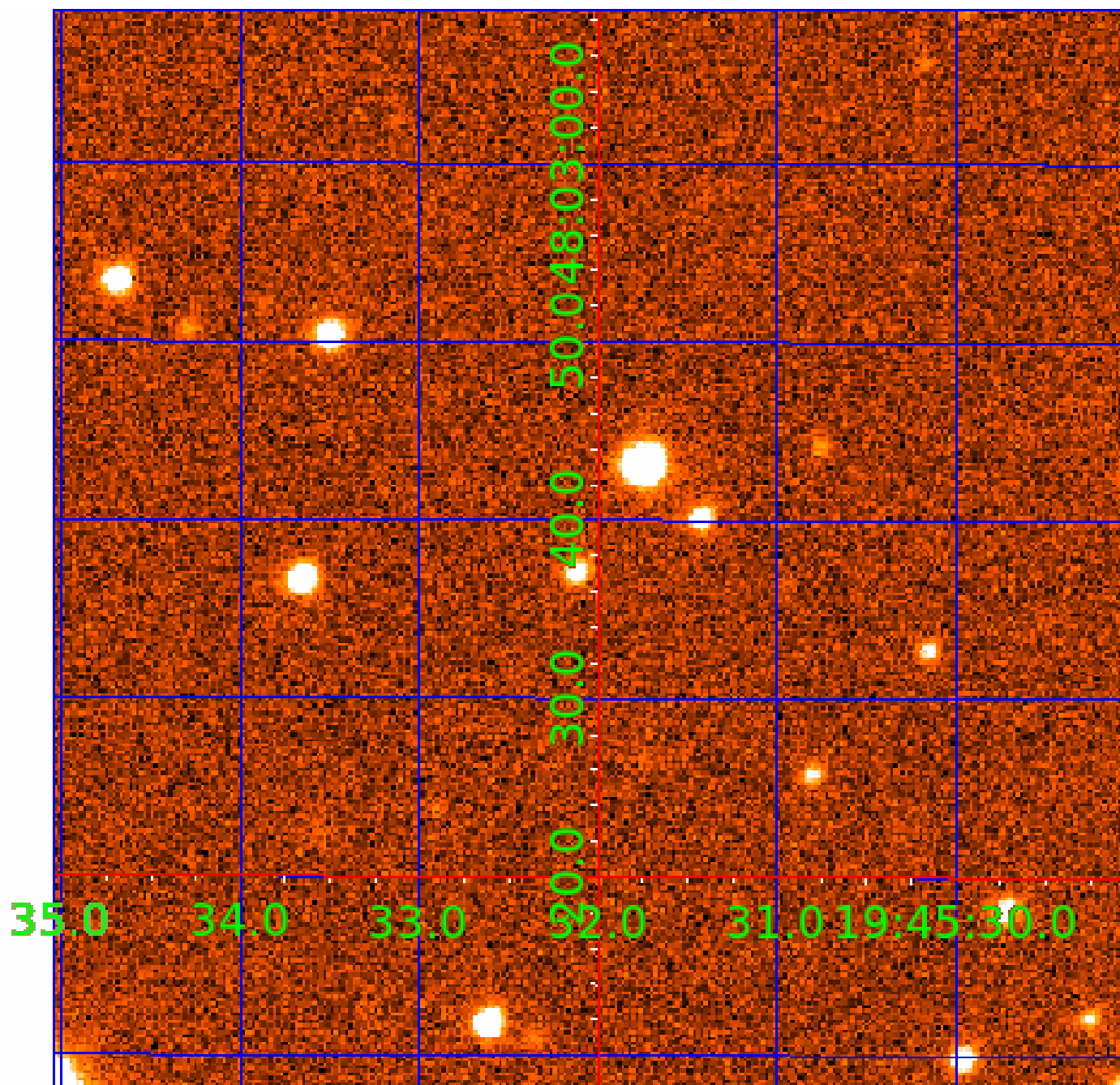


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010743600

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})
010743600-01	OBS	7369.01	0.817009	132.033929	137525.3	2.990	904.5	447.1	1.00	5780	42.31	3416.93
010743600-02	OBS	No	0.816469	131.745369	11006.3	1.500	8.9	-1.0	1.00	5780	10.44	3419.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010743600-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_DV—MOD_ODDEVEN_DV—DEEP_V_SHAPED—SEASONAL_DEPTH_ALT—CENT_KIC_POS
010743600-02	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_NOFITS

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

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

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

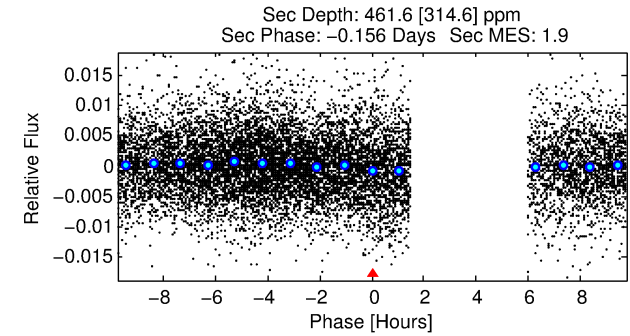
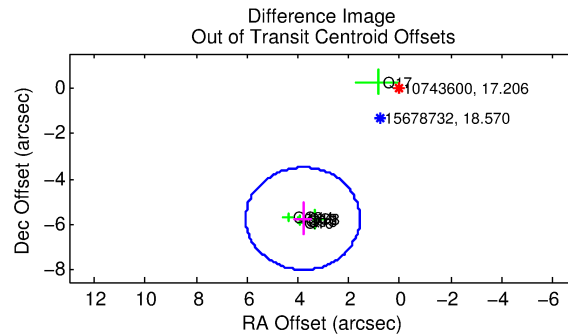
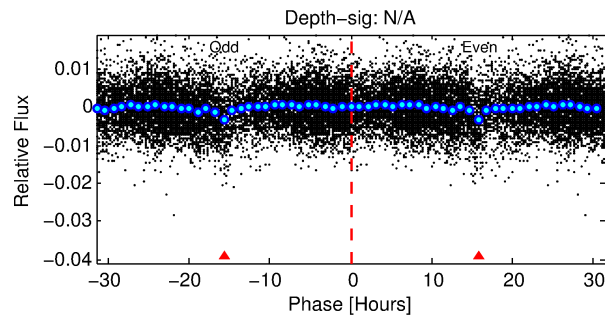
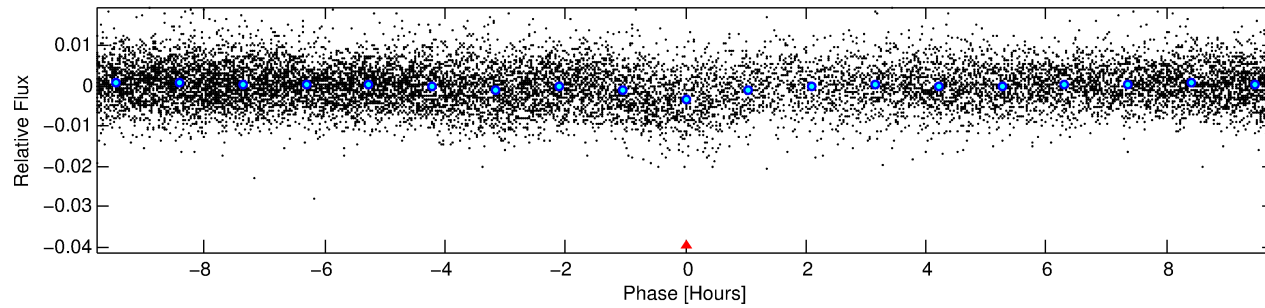
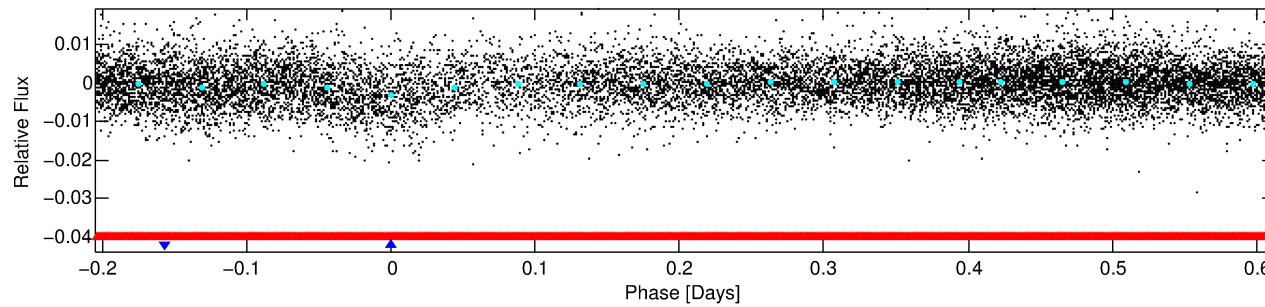
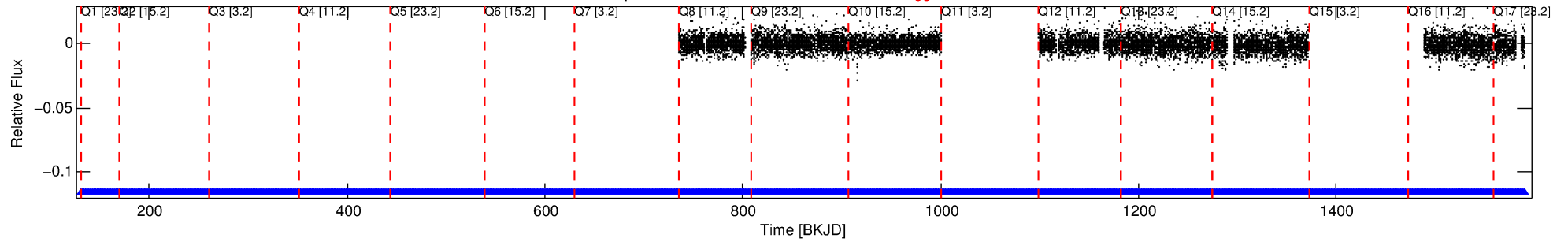
Ephemeris Match Information For 010743600-02

No Significant Match Found

DV One-Page Summary

KIC: 10743600 Candidate: 2 of 2 Period: 0.816 d
KOI: K07369 Corr: No Ephemeris Match

Kp: 17.21 R*: 1.00 Rs Teff: 5780.0 K Logg: 4.44 Fe/H: 0.000



TPS TCE Results:

Period = 0.81647 d
Epoch = 131.7454 BKJD

DV fit results are unavailable

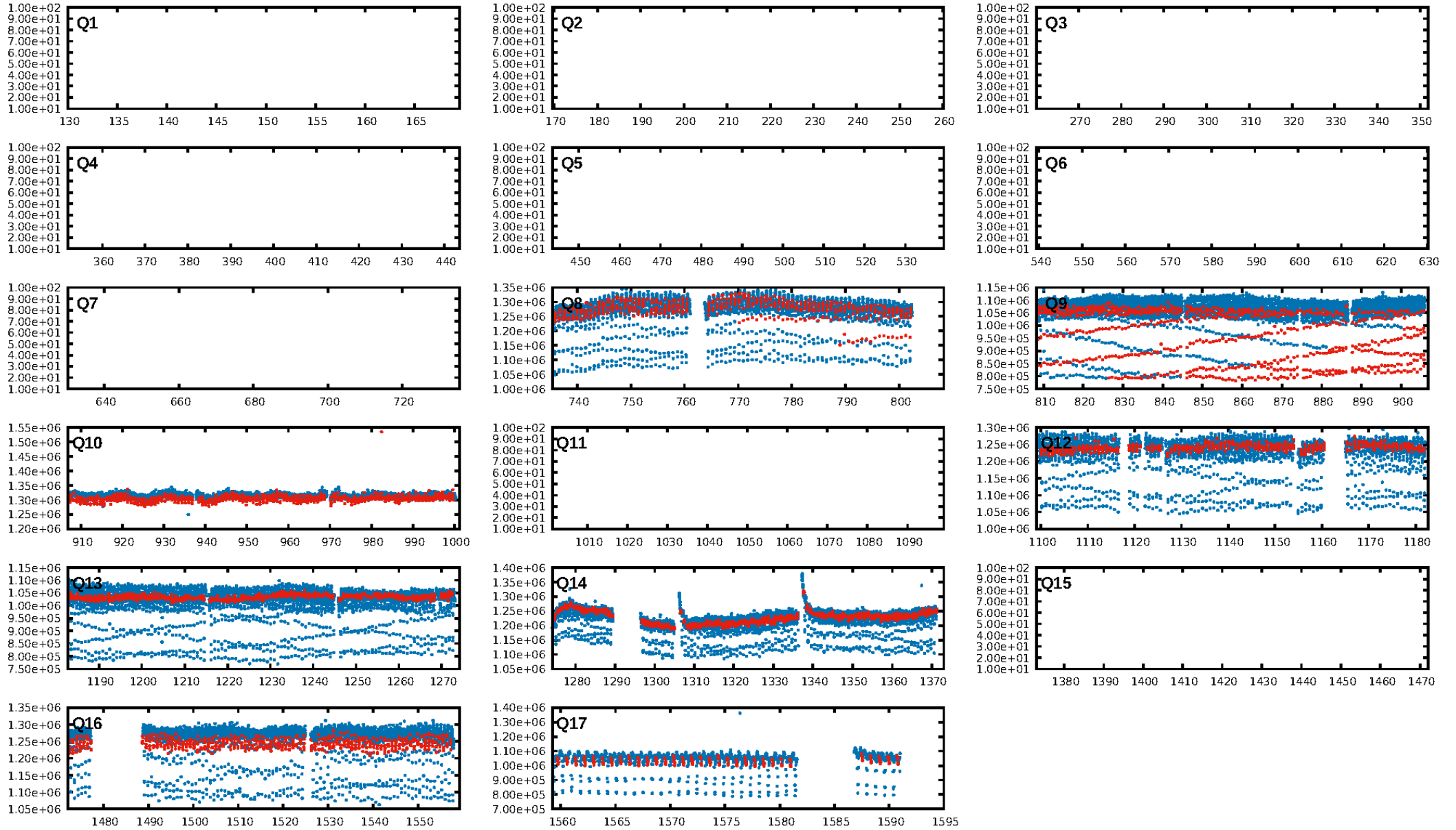
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.3% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [474/474]
GhostDiagnostic-chr: -0.9484
Centroid-sig: N/A
Centroid-so: 2.880 arcsec [268.36σ]
OotOffset-rm: 6.877 arcsec [9.20σ]
KicOffset-rm: 1.498 arcsec [2.07σ]
OotOffset-st: 2/0/3/3 [8]
KicOffset-st: 2/0/3/3 [8]
DiffImageQuality-fgm: 0.62 [5/8]
DiffImageOverlap-fno: 0.00 [0/8]

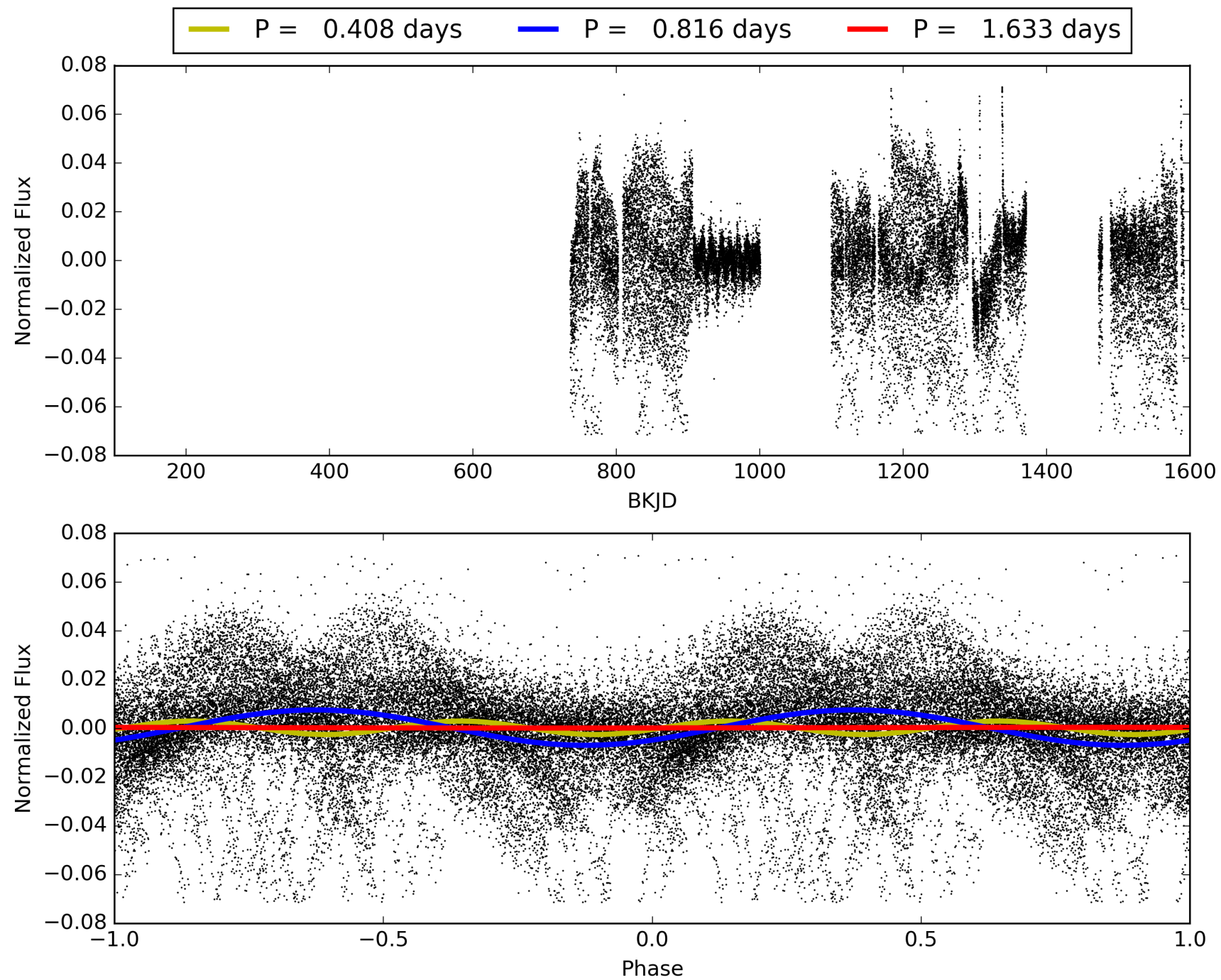
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 07:15:43 Z

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

TCE 010743600-02, PDC Light Curves

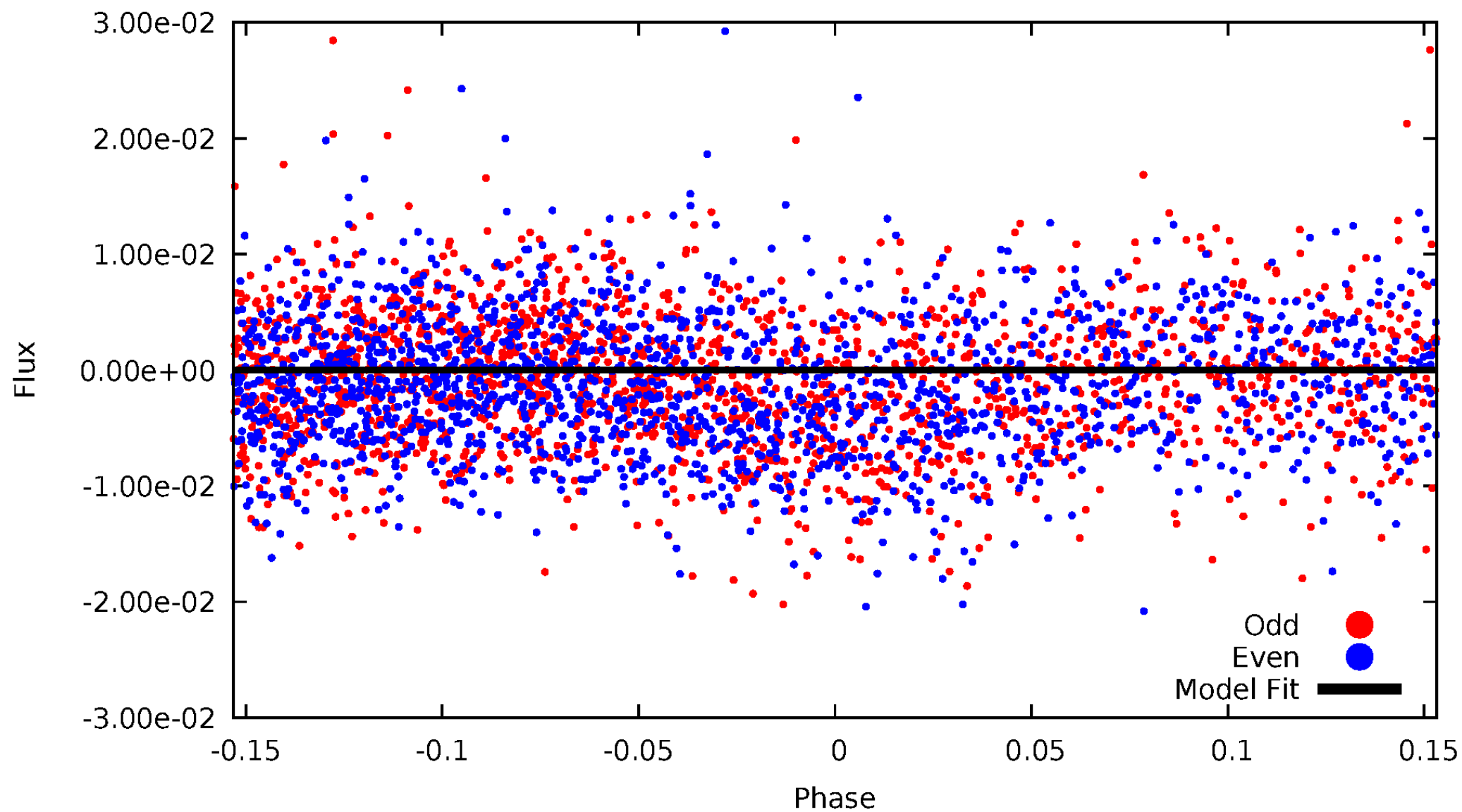


TCE 010743600-02



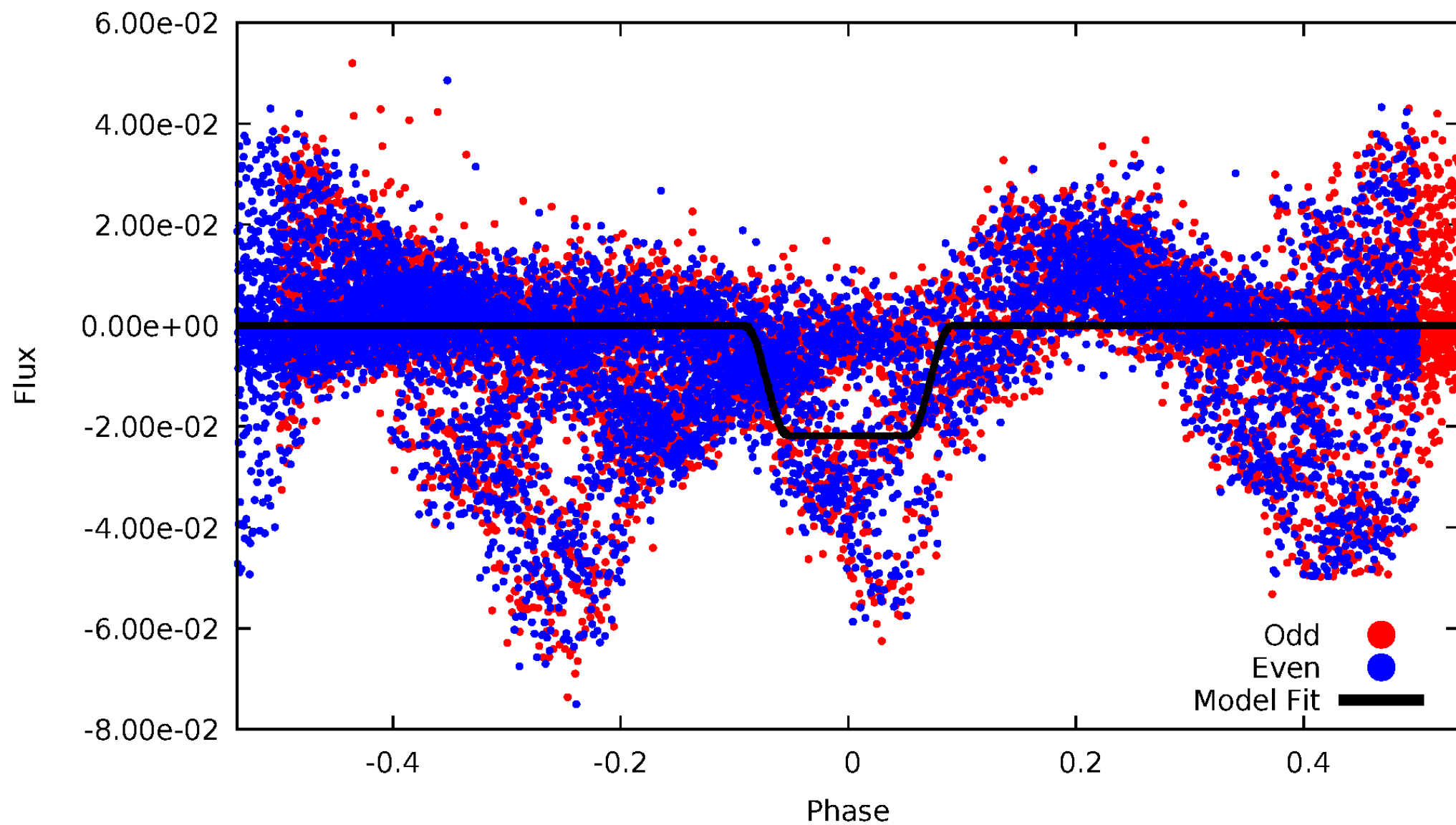
DV Odd/Even

TCE 010743600-02



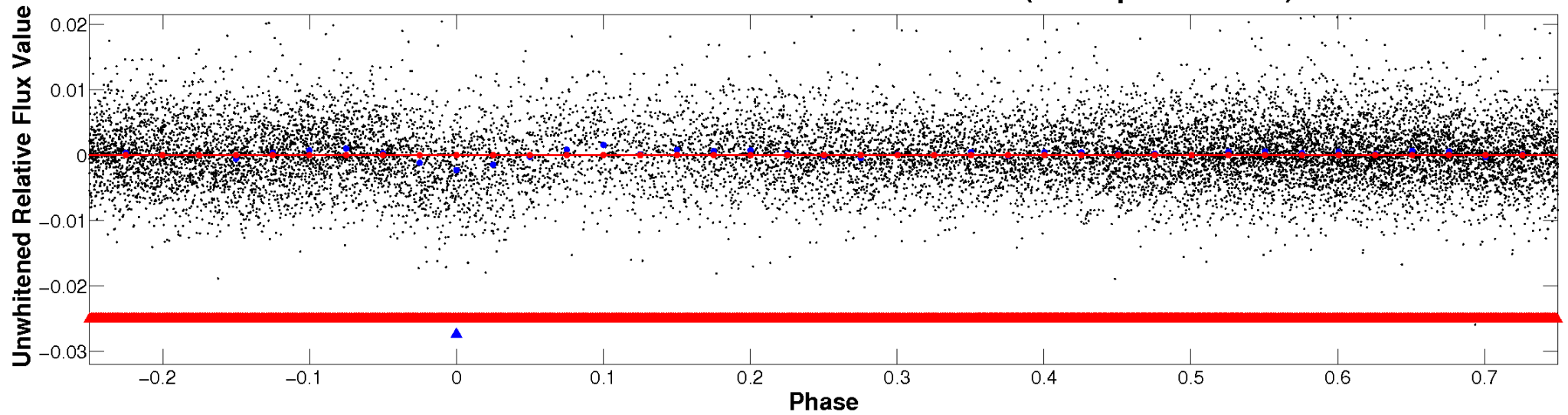
ALT Odd/Even

TCE 010743600-02

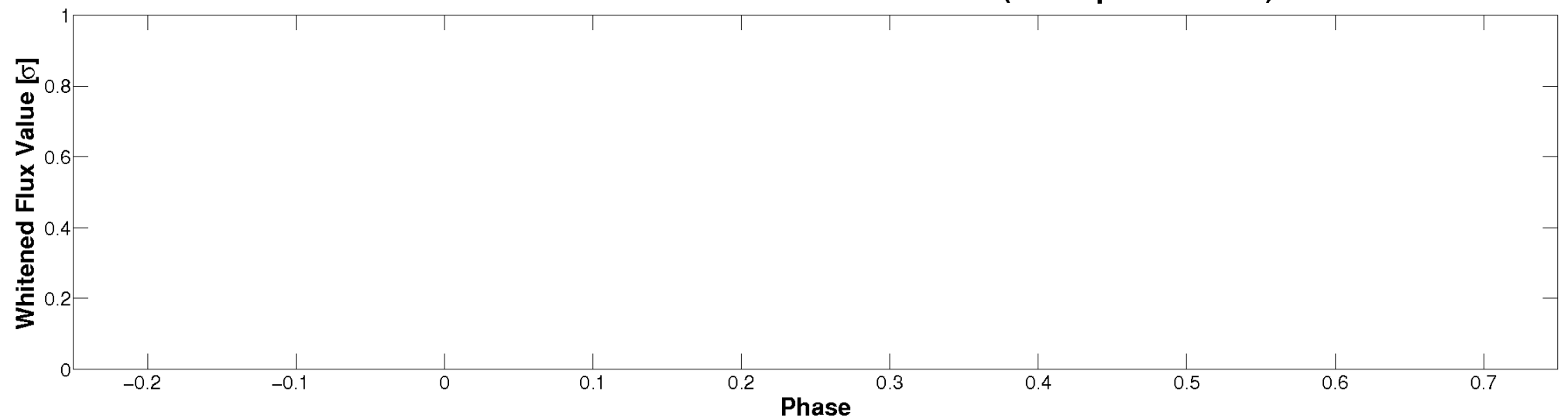


Non-Whitened Vs. Whitened Light Curve

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

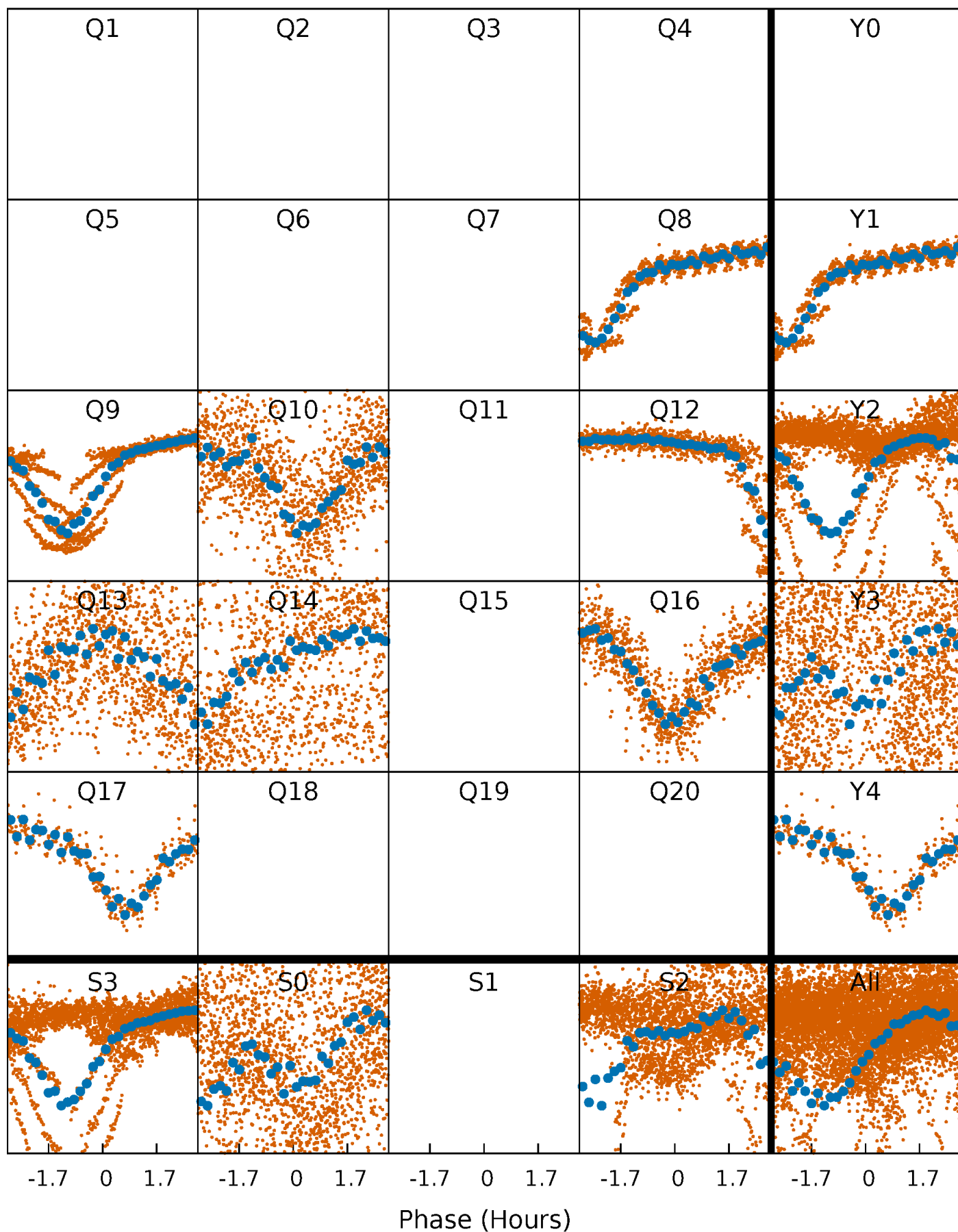


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



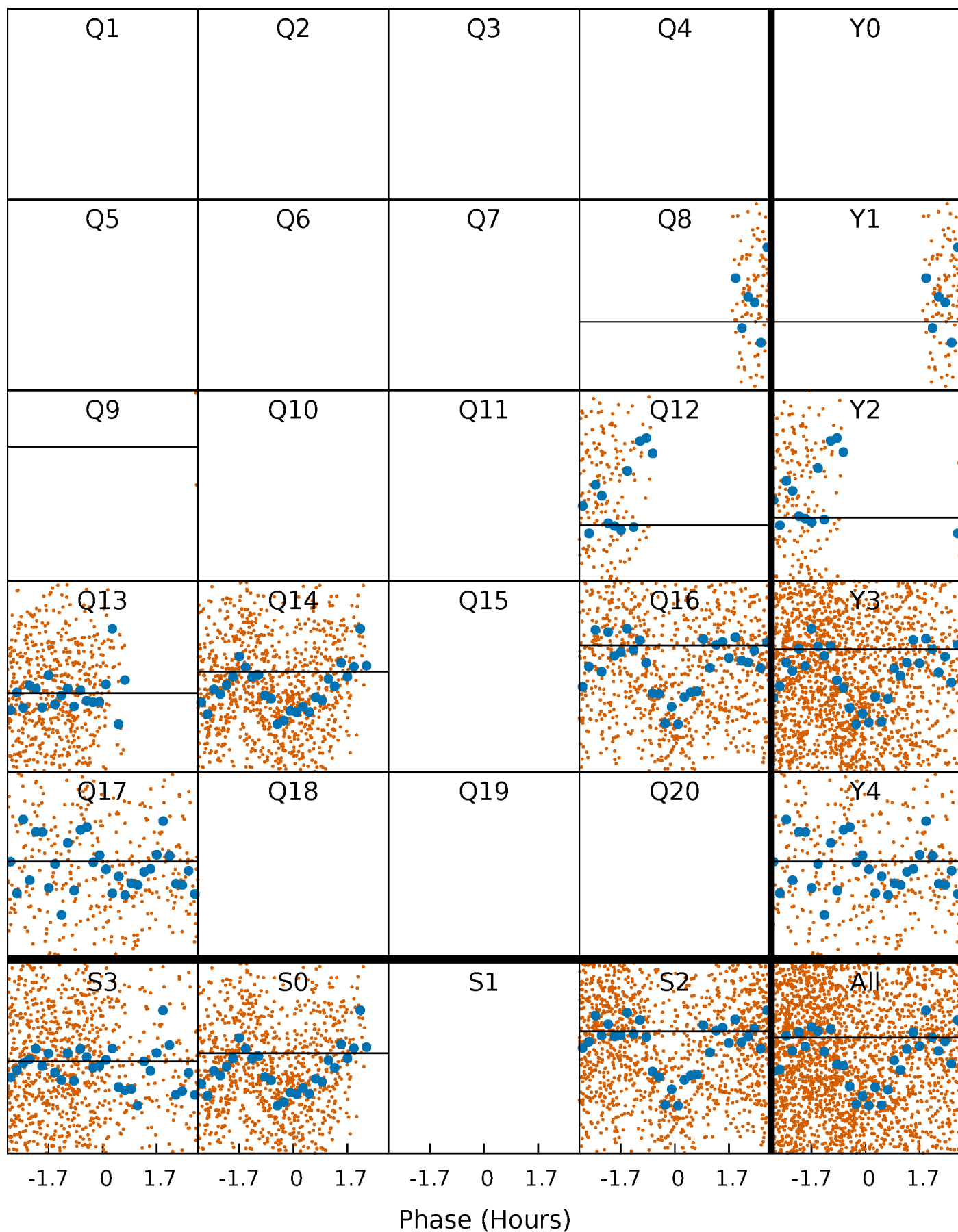
PDC Quarter-Phased Transit Curves

TCE 010743600-02 $P = 0.816469$ Days $T_0 = 131.745369$ (BKJD)



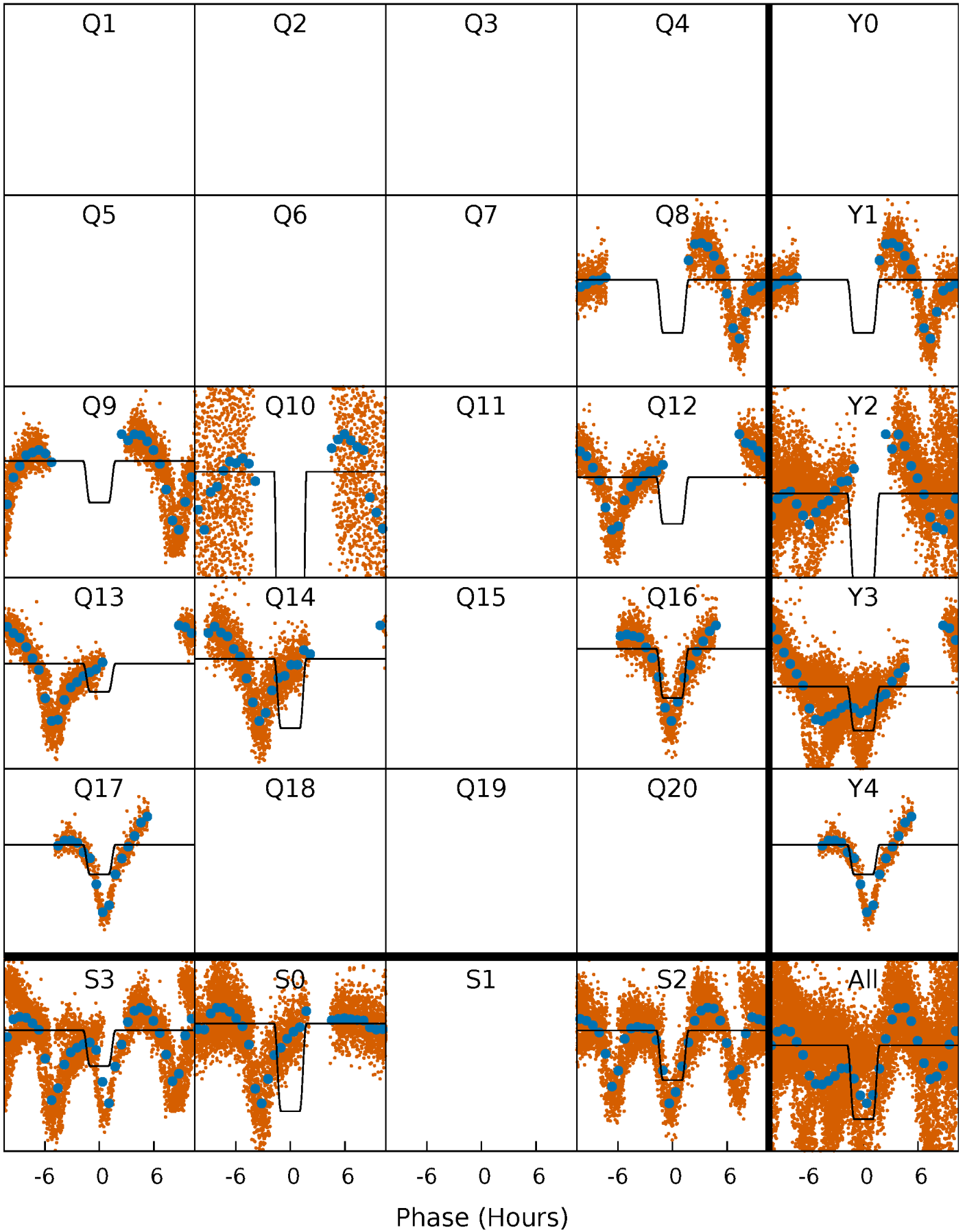
DV Quarter-Phased Transit Curves

TCE 010743600-02 P= 0.816469 Days $T_0=131.745369$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

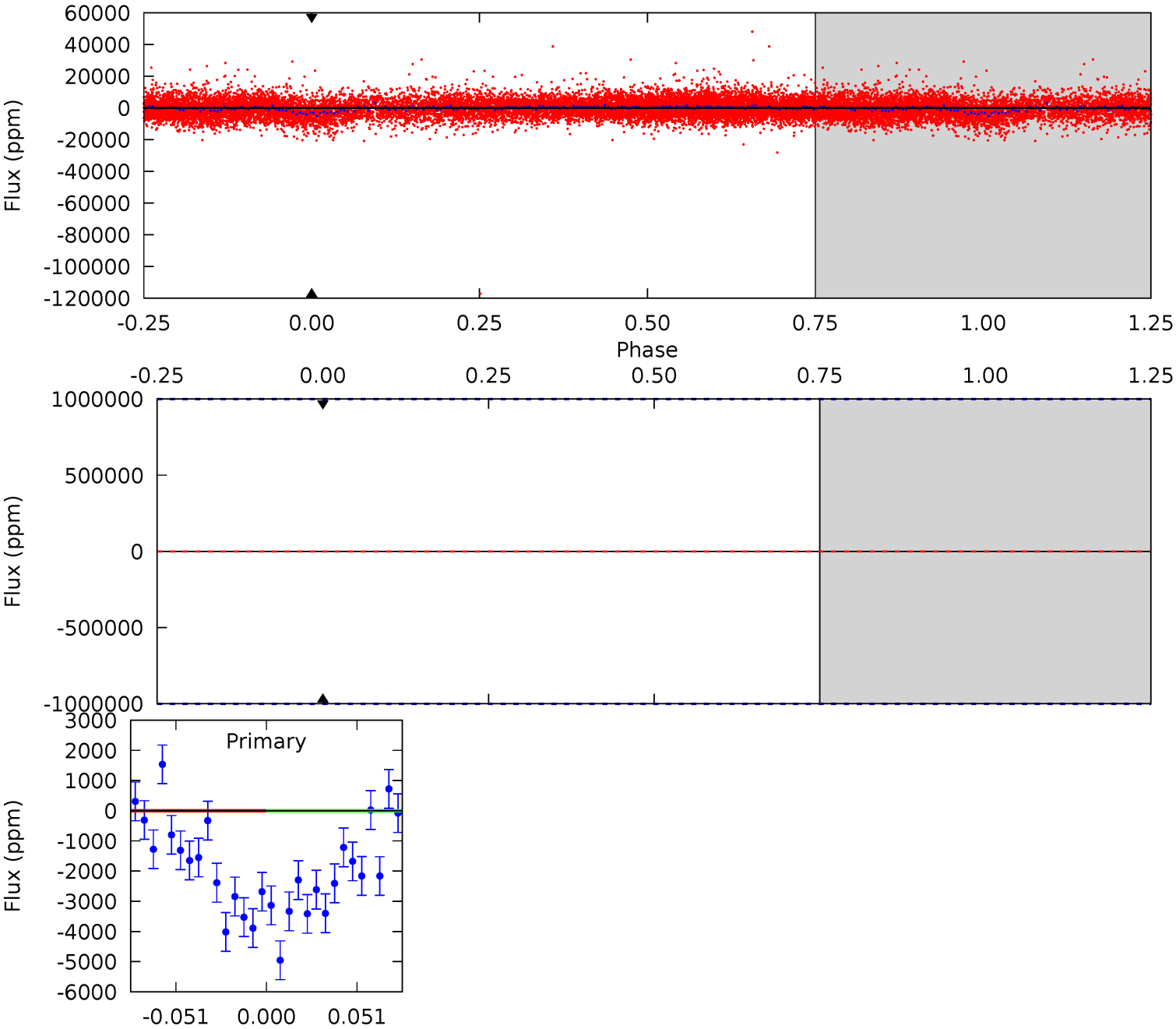
TCE 010743600-02 $P = 0.816469$ Days $T_0 = 131.752850$ (BKJD)



DV Model-Shift Uniqueness Test

010743600-02, P = 0.816469 Days, E = 131.745369 Days

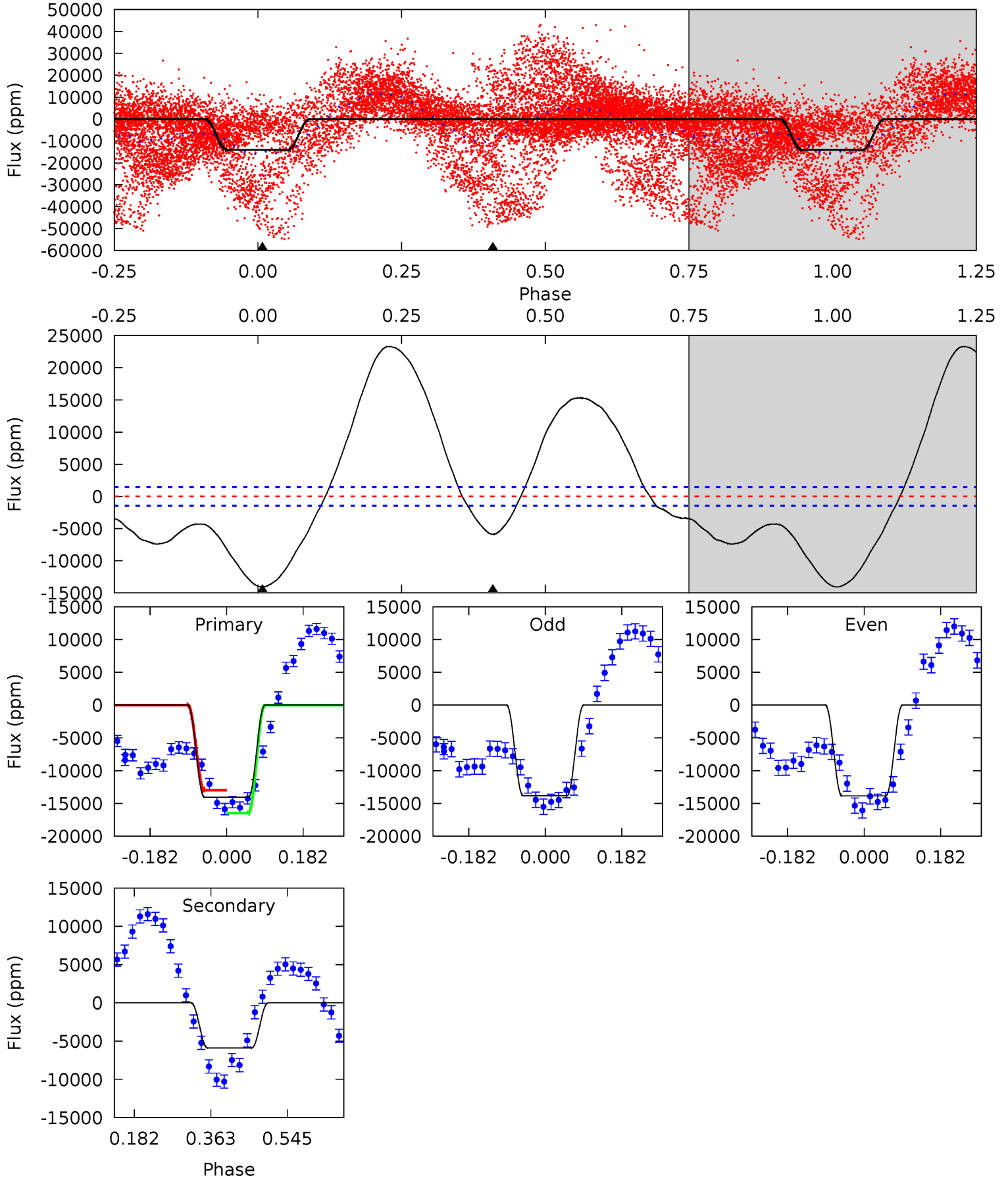
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010743600-02, P = 0.816469 Days, E = 131.752850 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.2	18.1	0	0	4.44	1.34	26.9	43.2	43.2	18.1	18.1	0.05	1.70	0.62	5.80



Stellar Parameters For KIC 010743600

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

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

Secondary Eclipse Parameters for KIC 010743600-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$12.30^{+10.79}_{-7.68}$	2724^{+127}_{-124}	4428^{+9200}_{-16317}	$4.039^{+178.121}_{-147.701}$
Alt.	-5884 ± 325	$17.05^{+11.03}_{-9.52}$	2721^{+138}_{-115}	4221^{+1782}_{-806}	$3.292^{+13.136}_{-2.087}$

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 $A_{obs} \gg 1.0$

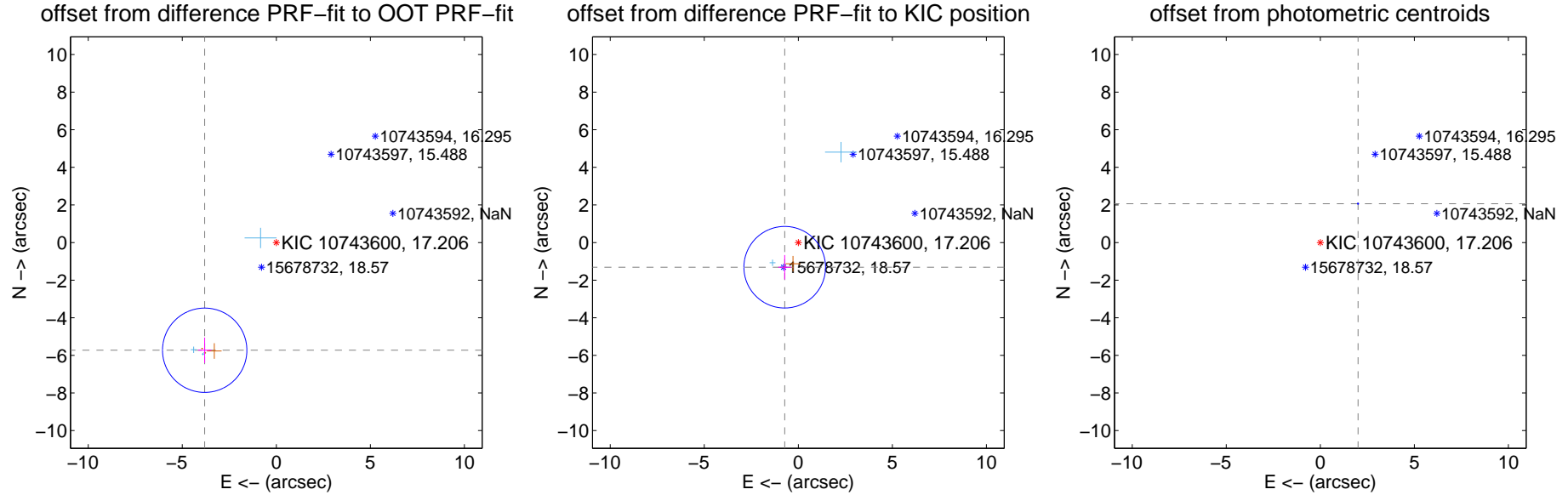
DV Centroid Data

Supplemental centroid analysis for 010743600-02. Kepler magnitude: 17.21. Transit SNR -1.00

There are 5 quarters with good PRF difference image offsets

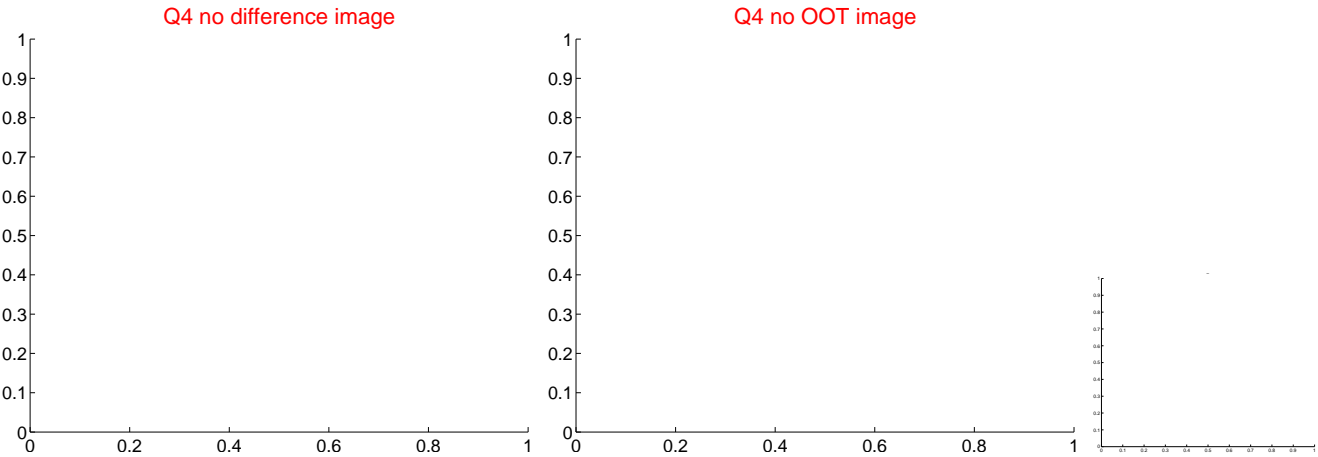
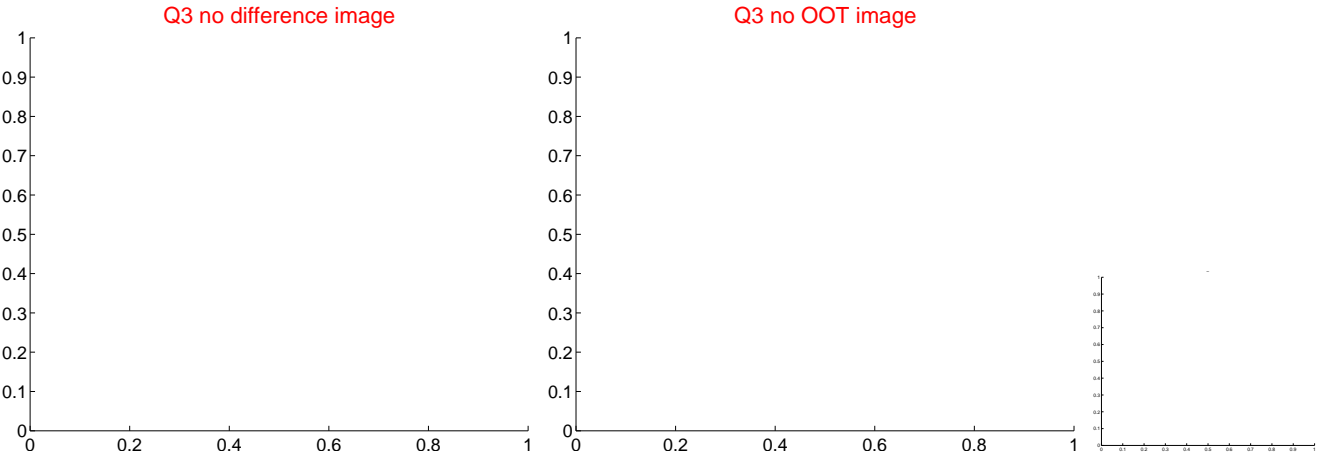
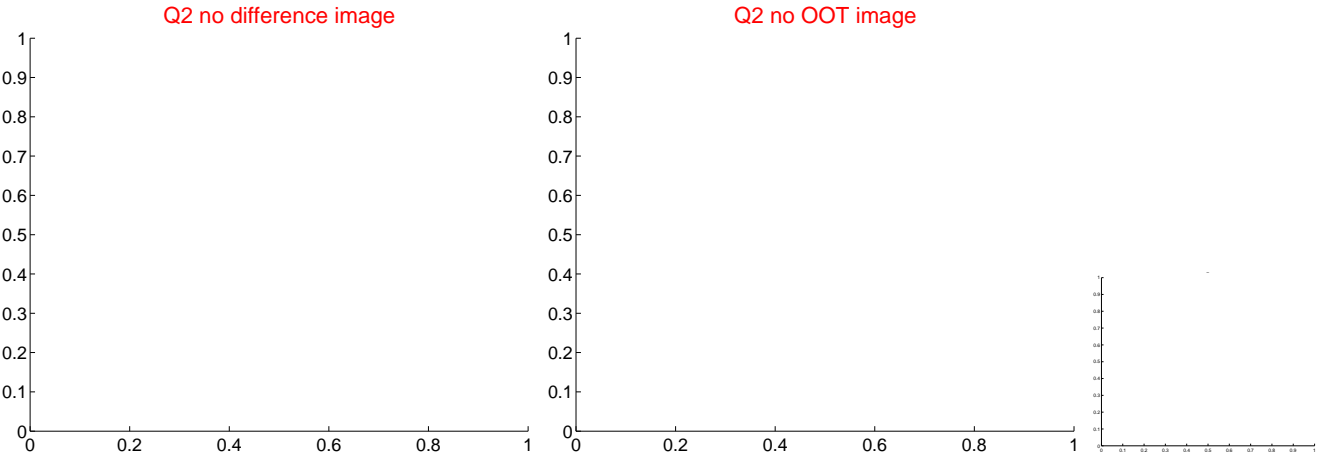
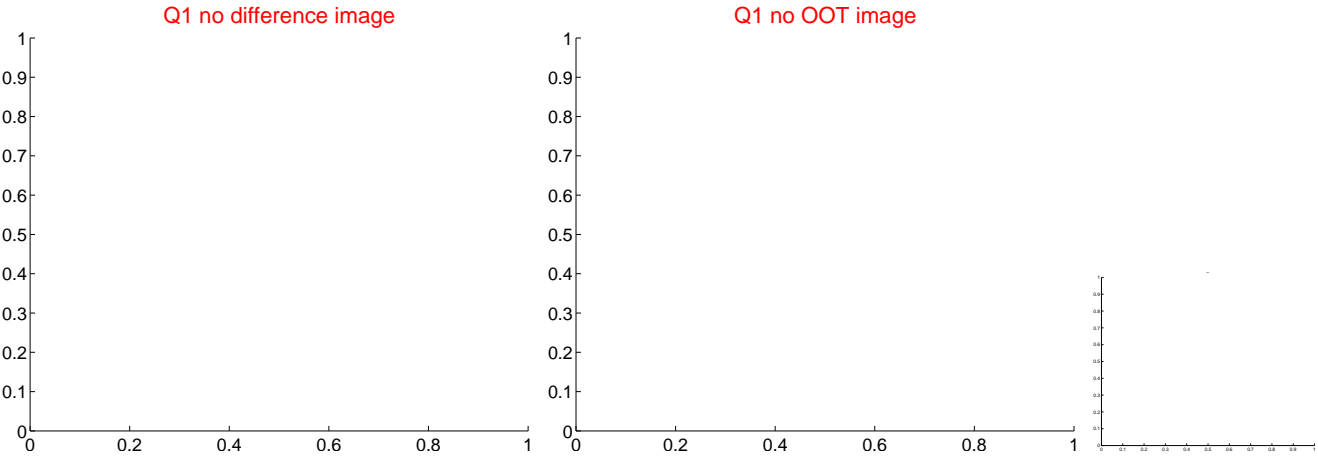
The OOT PRF centroid is offset from the target star catalog position by about 5.52 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.877 ± 0.747	9.20	3.807 ± 0.350	-5.727 ± 0.677
PRF-fit source offset from KIC position	1.498 ± 0.723	2.07	0.723 ± 0.343	-1.312 ± 0.647
photometric centroid source offset	2.88 ± 0.01	268.36	-2.01 ± 0.01	2.07 ± 0.01

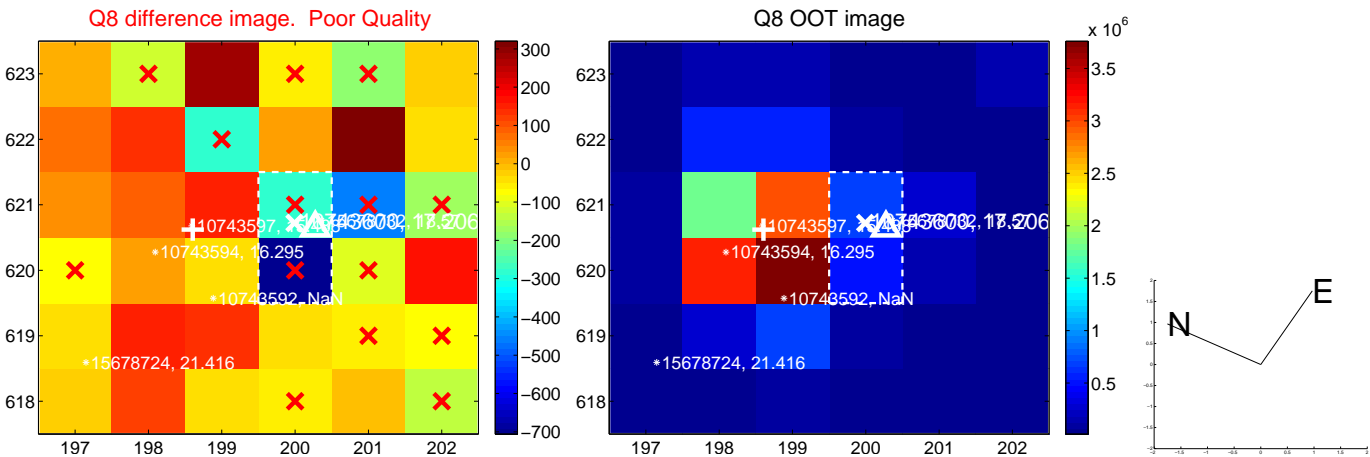
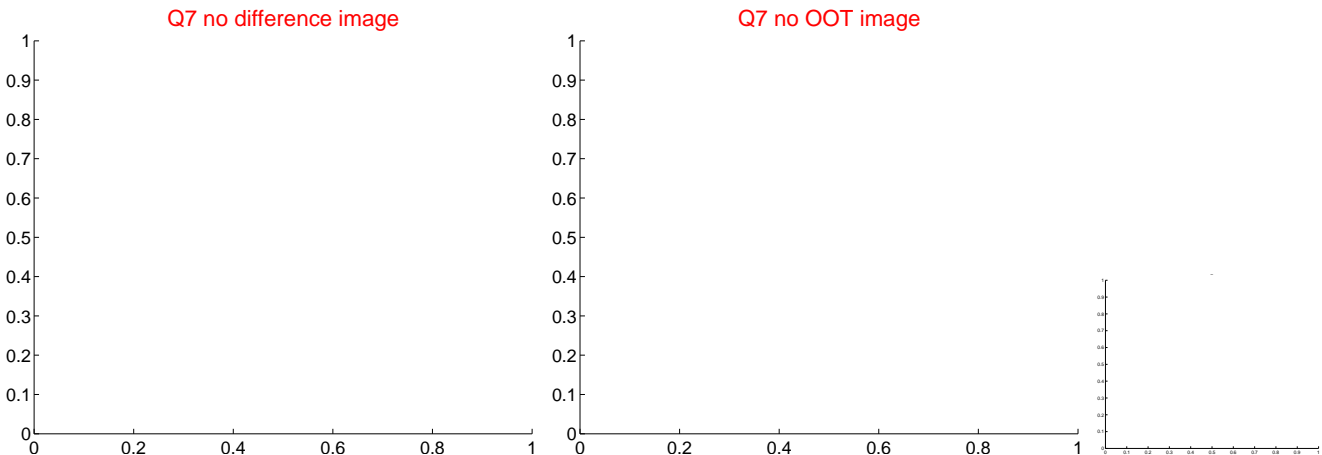
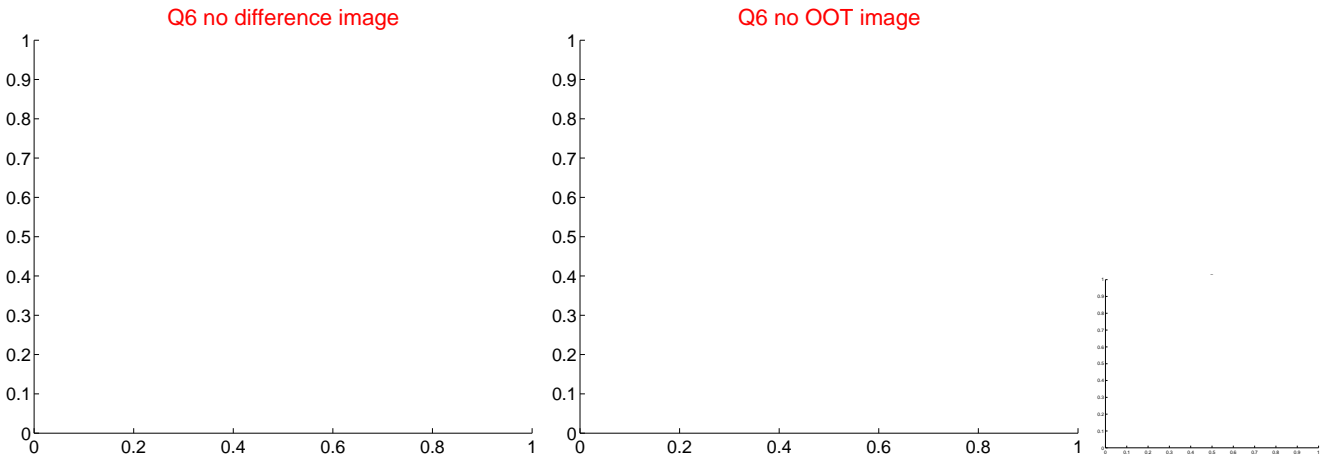
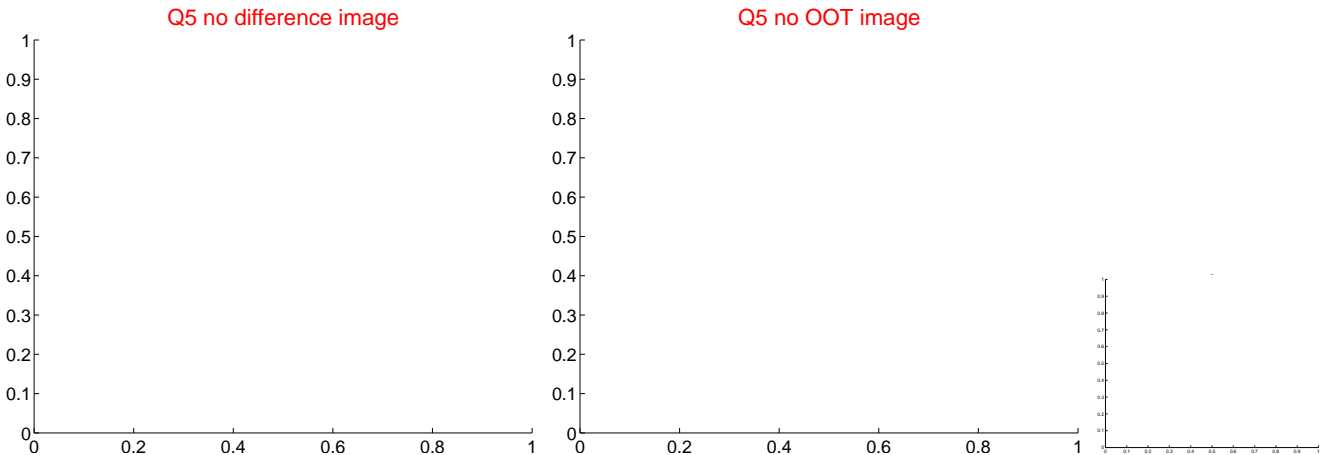


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

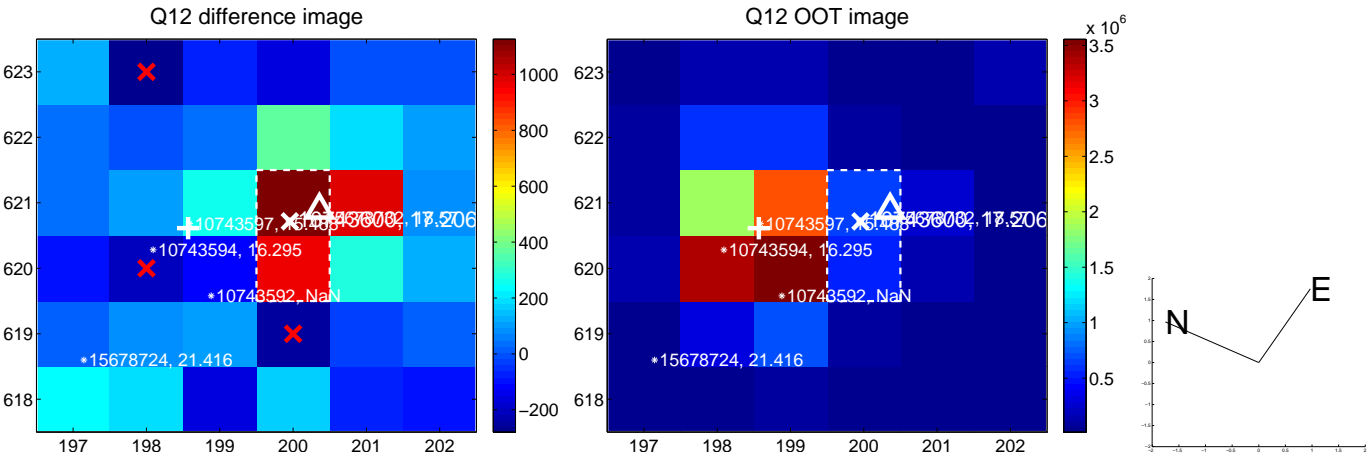
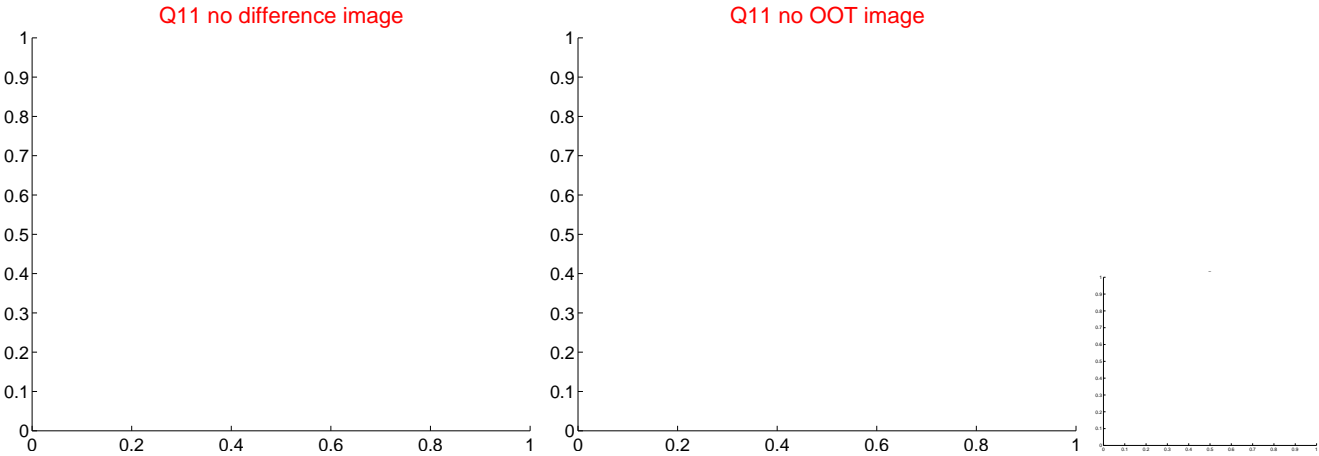
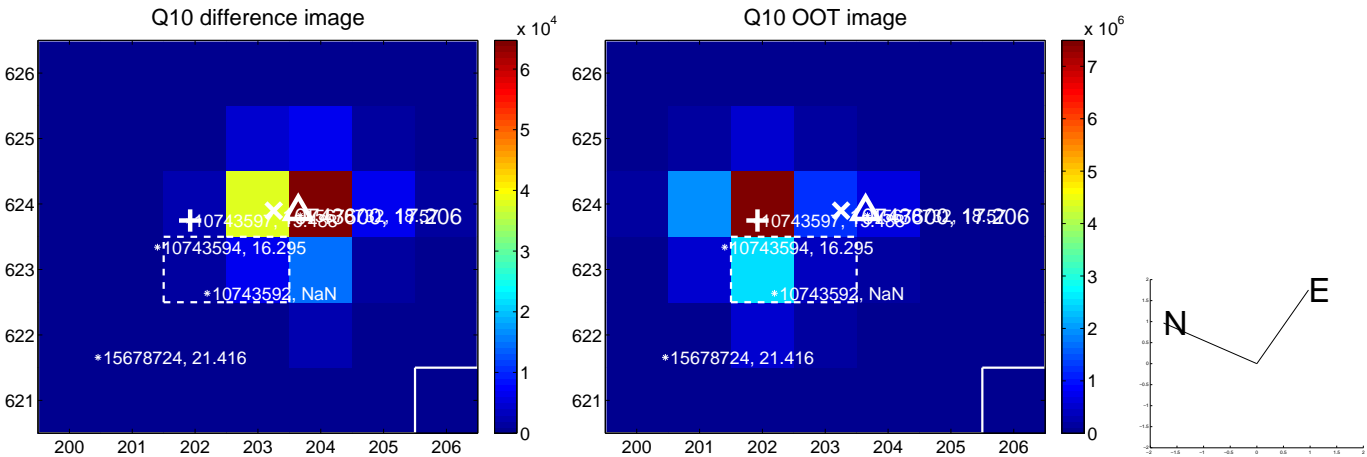
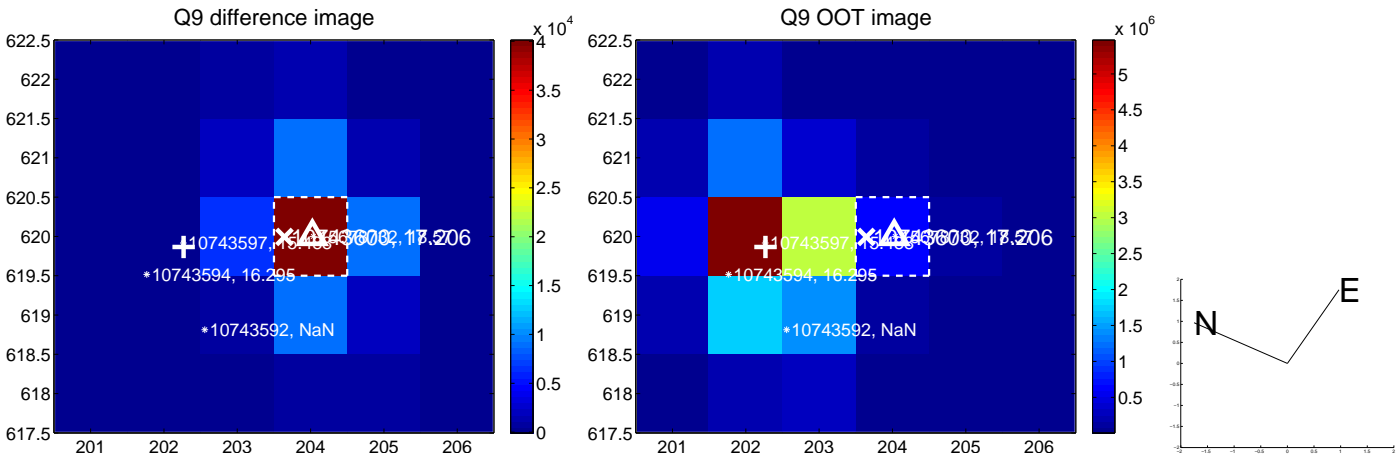
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



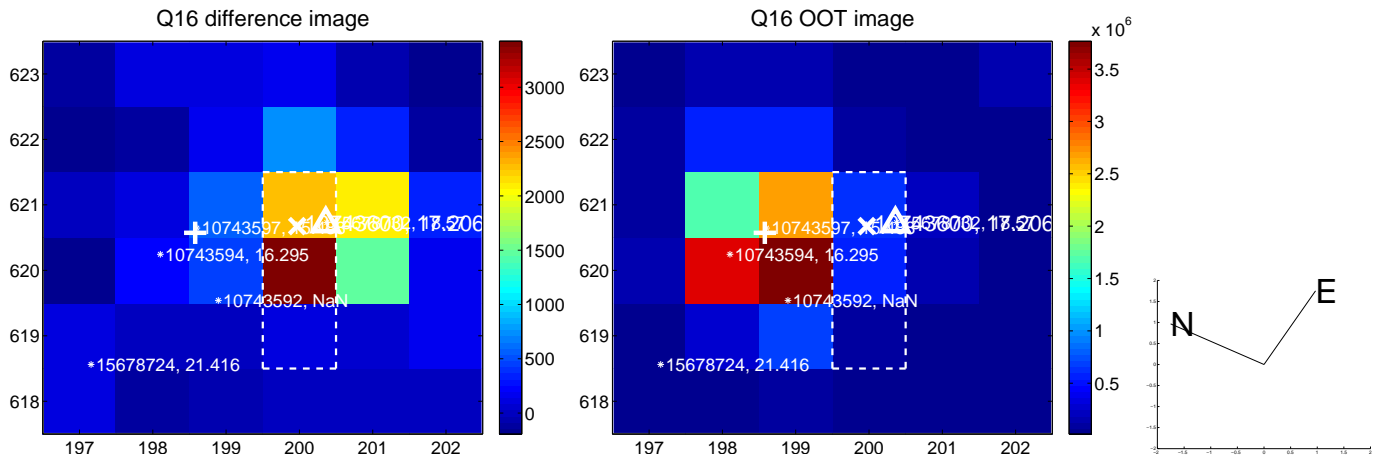
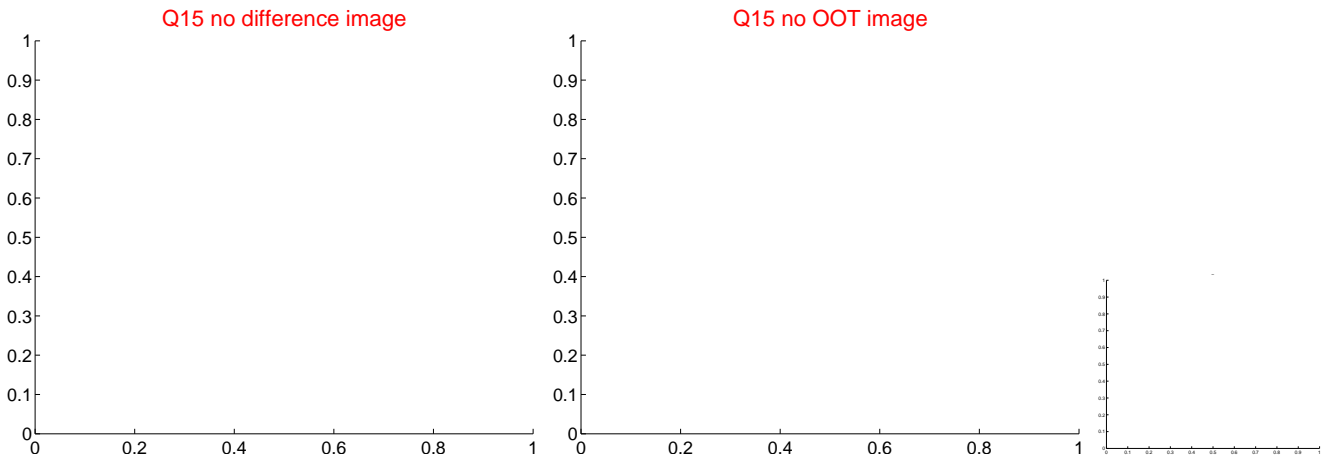
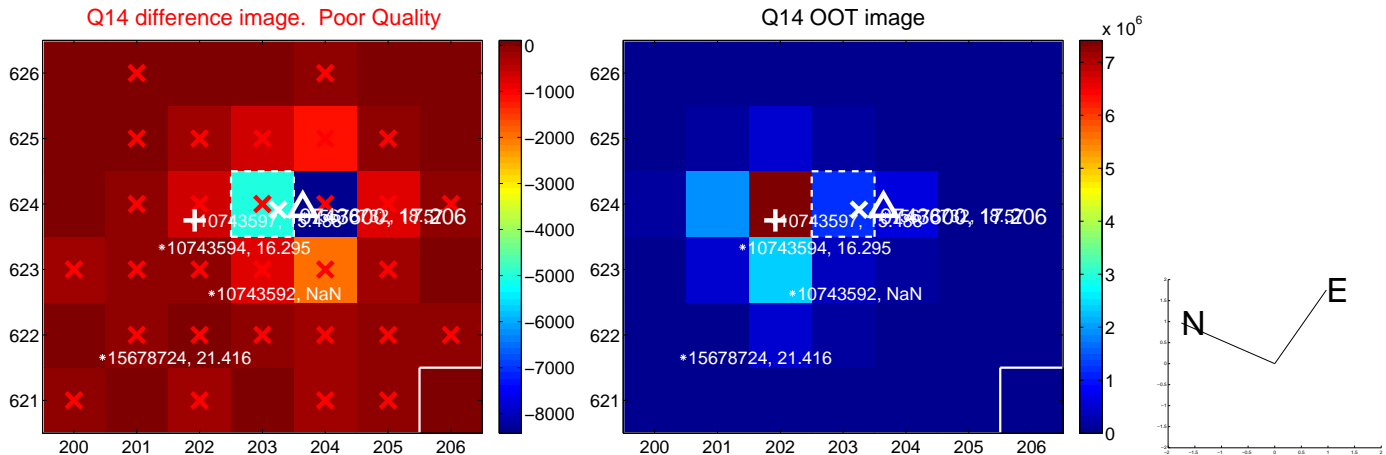
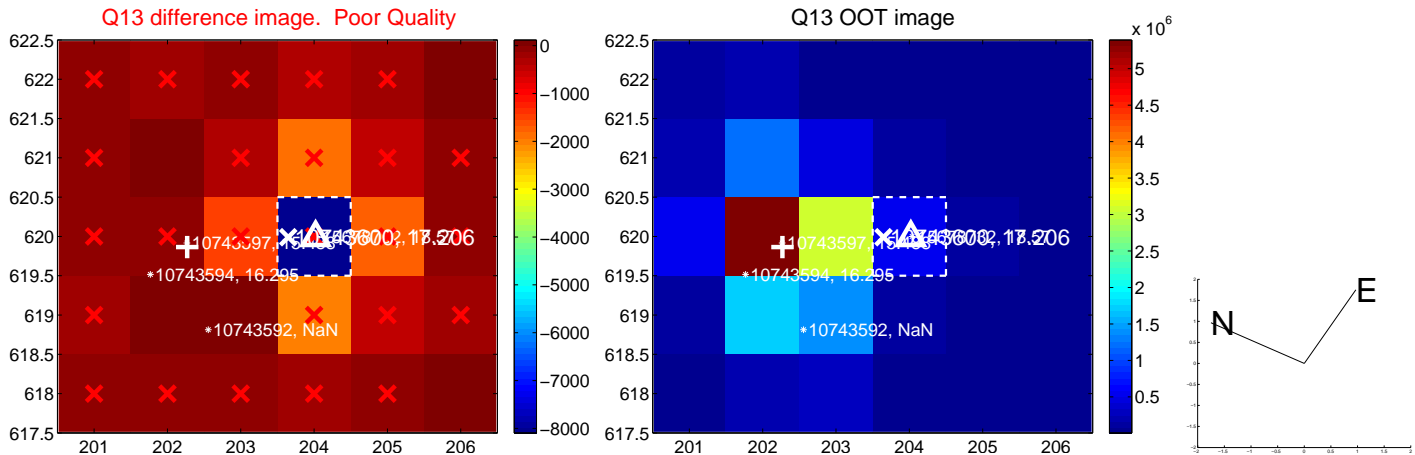
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



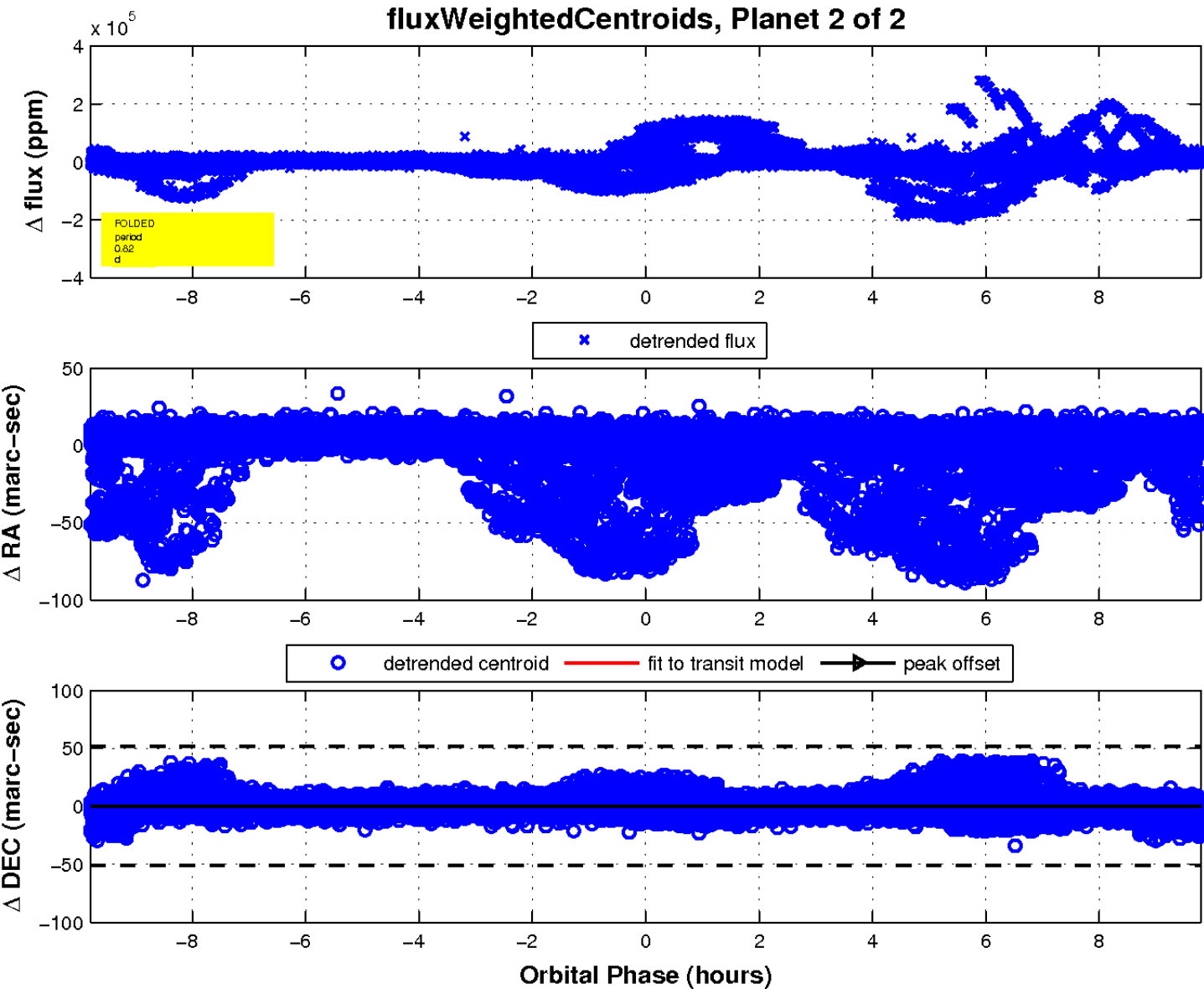
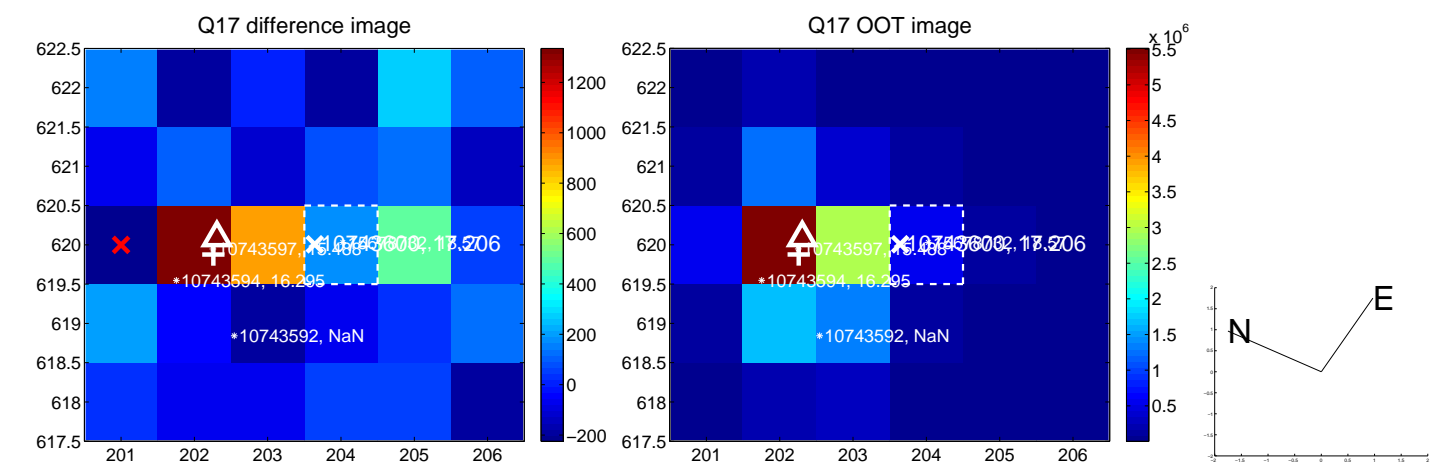
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

