

KIC 006880517

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})
006880517-01	OBS	3305.01	65.649234	174.790205	1026.9	7.377	15.5	15.7	0.82	5436	2.72	5.49
006880517-02	OBS	No	355.111730	140.668616	1178.8	3.598	7.2	7.9	0.82	5436	3.50	0.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006880517-01	OBS	PC	0.97	0	0	0	0	NO_COMMENT
006880517-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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 006880517-01

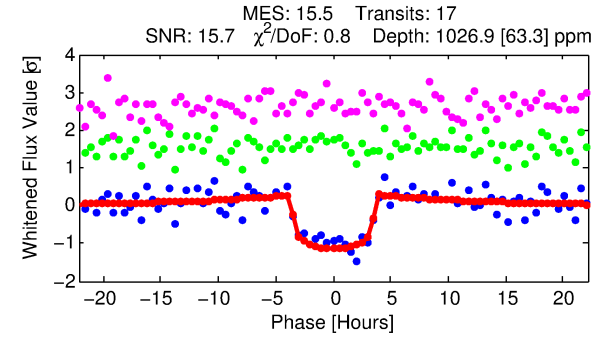
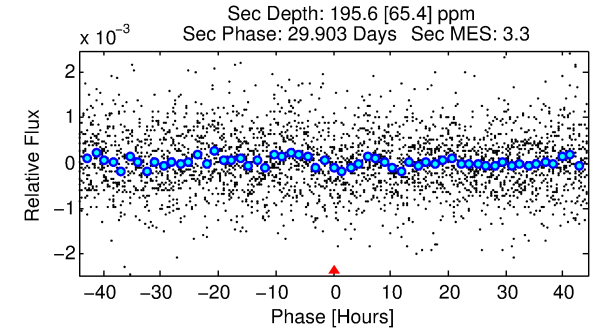
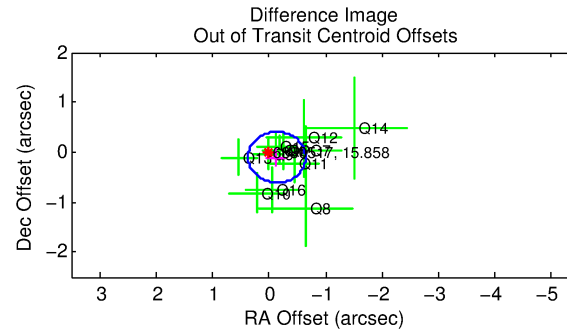
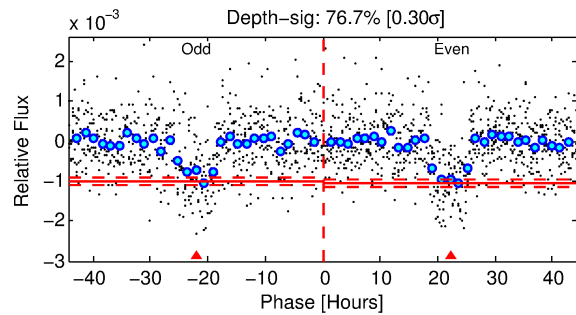
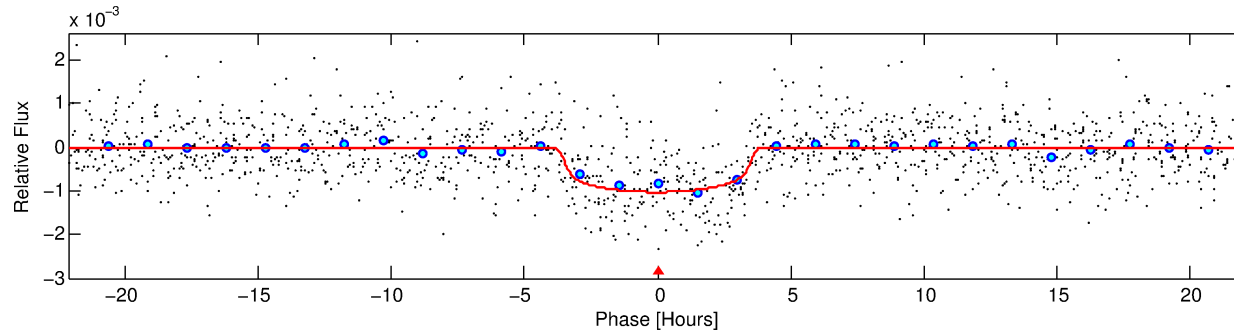
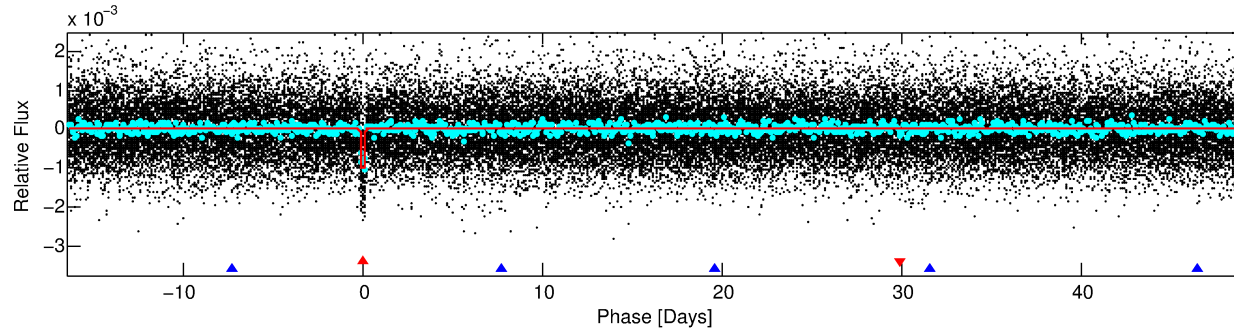
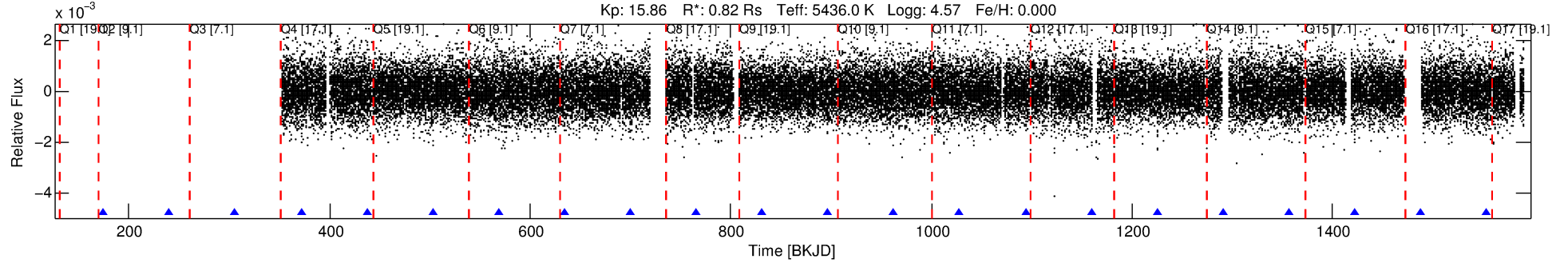
No Significant Match Found

DV One-Page Summary

KIC: 6880517 Candidate: 1 of 2 Period: 65.649 d

KOI: K03305.01 Corr: 0.993

Kp: 15.86 R*: 0.82 Rs Teff: 5436.0 K Logg: 4.57 Fe/H: 0.000



DV Fit Results:

Period = 65.64923 [0.00071] d
Epoch = 174.7902 [0.0090] BKJD
Rp/R* = 0.0304 [0.0119]
a/R* = 56.99 [86.18]
b = 0.60 [1.64]
Seff = 5.49 [1.57]
Teq = 390 [28] K
Rp = 2.72 [1.20] Re
a = 0.3093 [0.0534] AU
Ag = 1391.49 [1231.98] [1.13σ]
Teffp = 3685 [793] K [4.15σ]

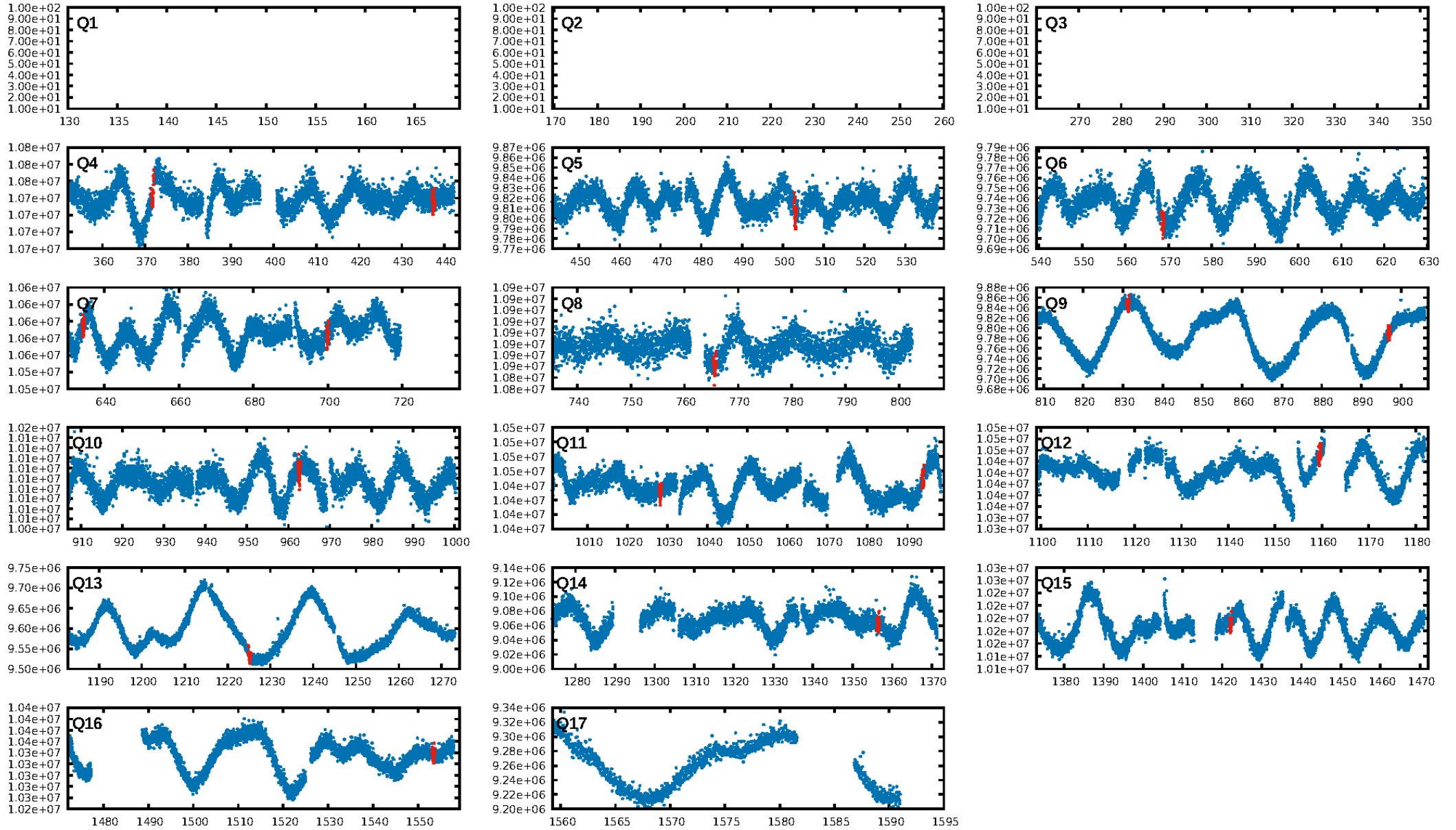
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [846.41σ]
ModelChiSquare2-sig: 62.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.60e-51
RollingBand-fgt: 1.00 [17/17]
GhostDiagnostic-chr: 3.7
Centroid-sig: 2.4%
Centroid-so: 0.863 arcsec [1.50σ]
OotOffset-rm: 0.169 arcsec [0.99σ]
KicOffset-rm: 0.146 arcsec [0.87σ]
OotOffset-st: 2/3/4/3 [12]
KicOffset-st: 2/3/4/3 [12]
DiffImageQuality-fgm: 0.83 [10/12]
DiffImageOverlap-fno: 1.00 [12/12]

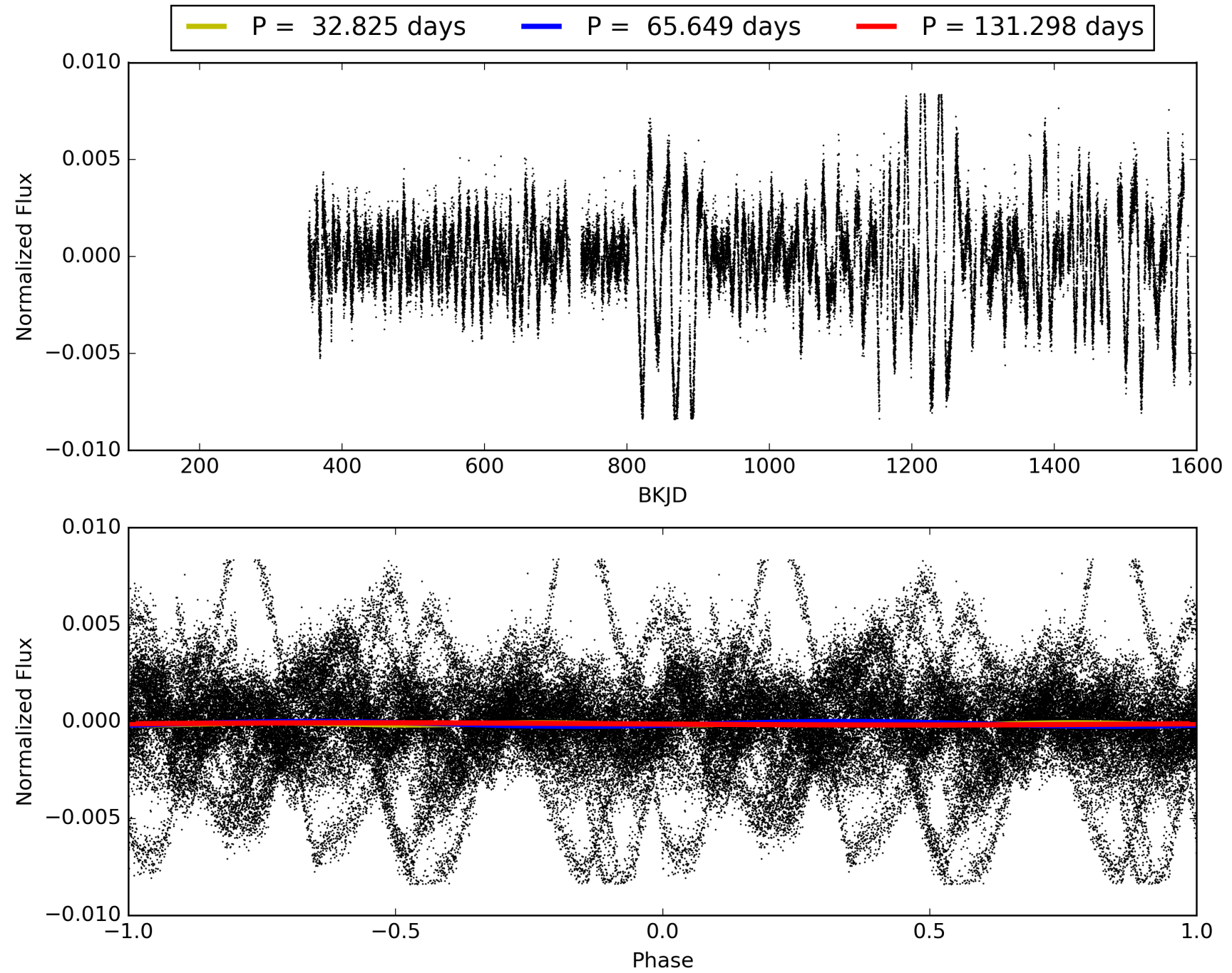
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:21:50 Z

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

TCE 006880517-01, PDC Light Curves

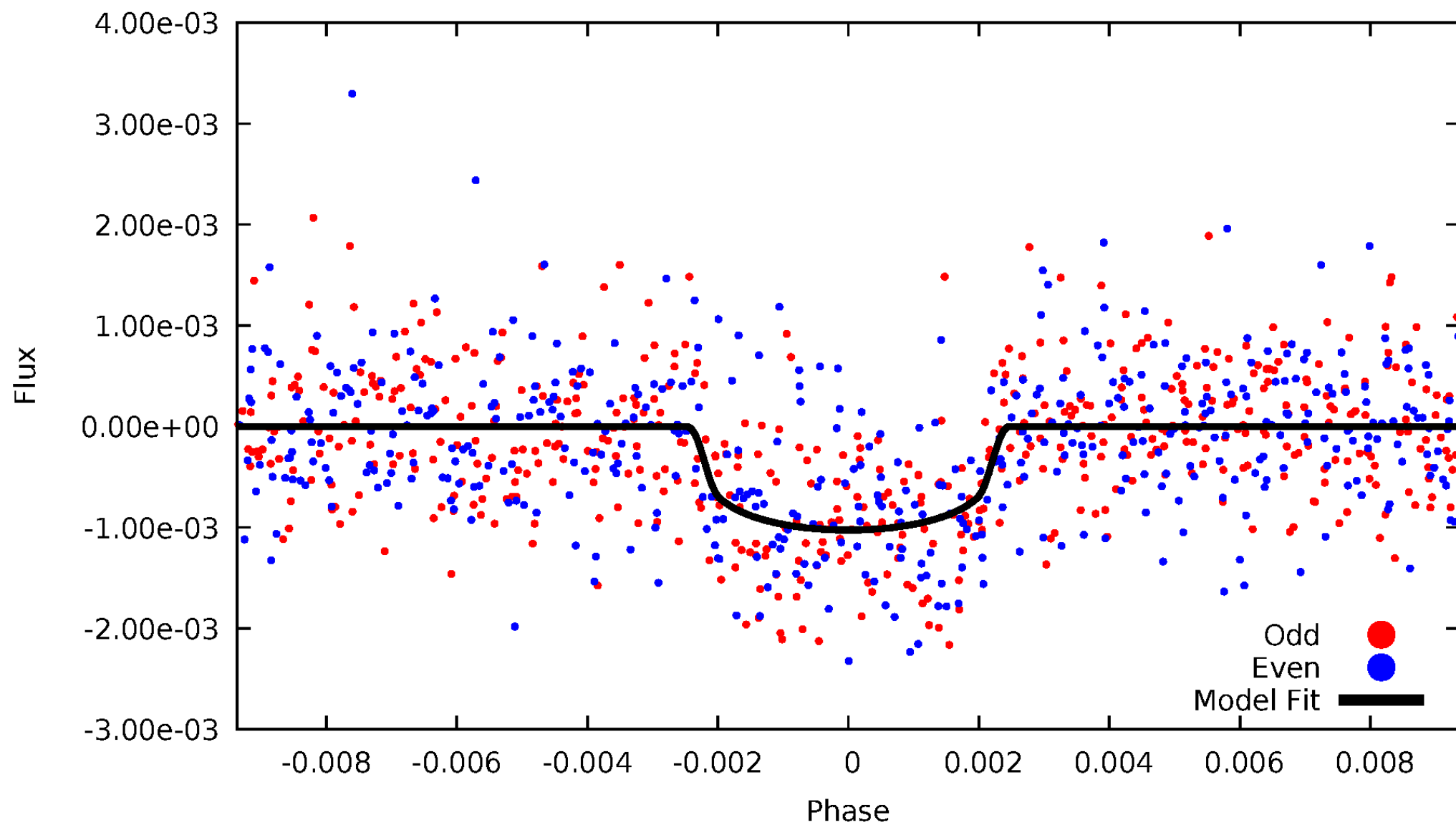


TCE 006880517-01



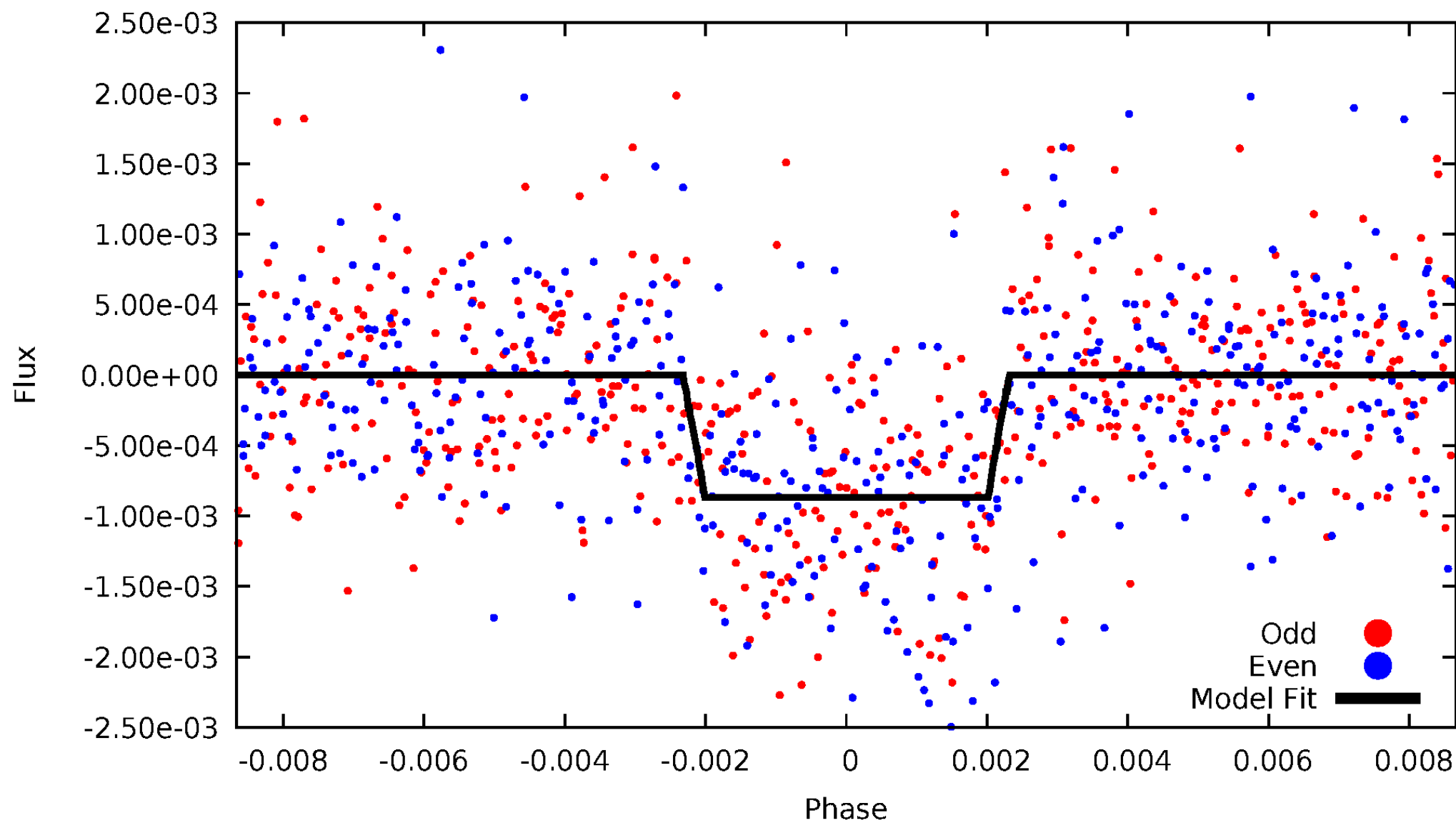
DV Odd/Even

TCE 006880517-01



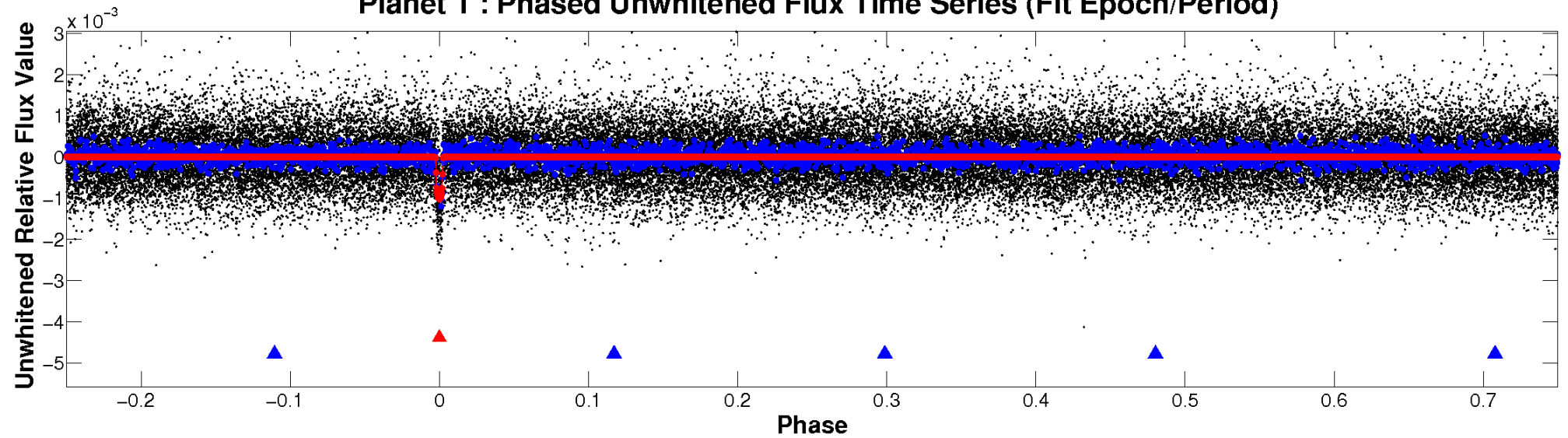
ALT Odd/Even

TCE 006880517-01

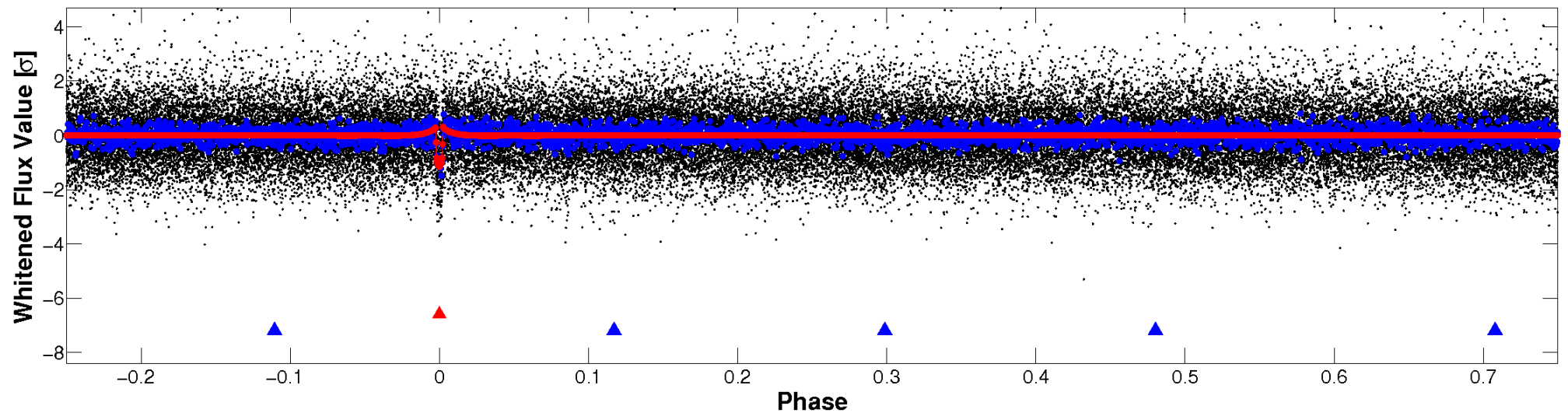


Non-Whitened Vs. Whitened Light Curve

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

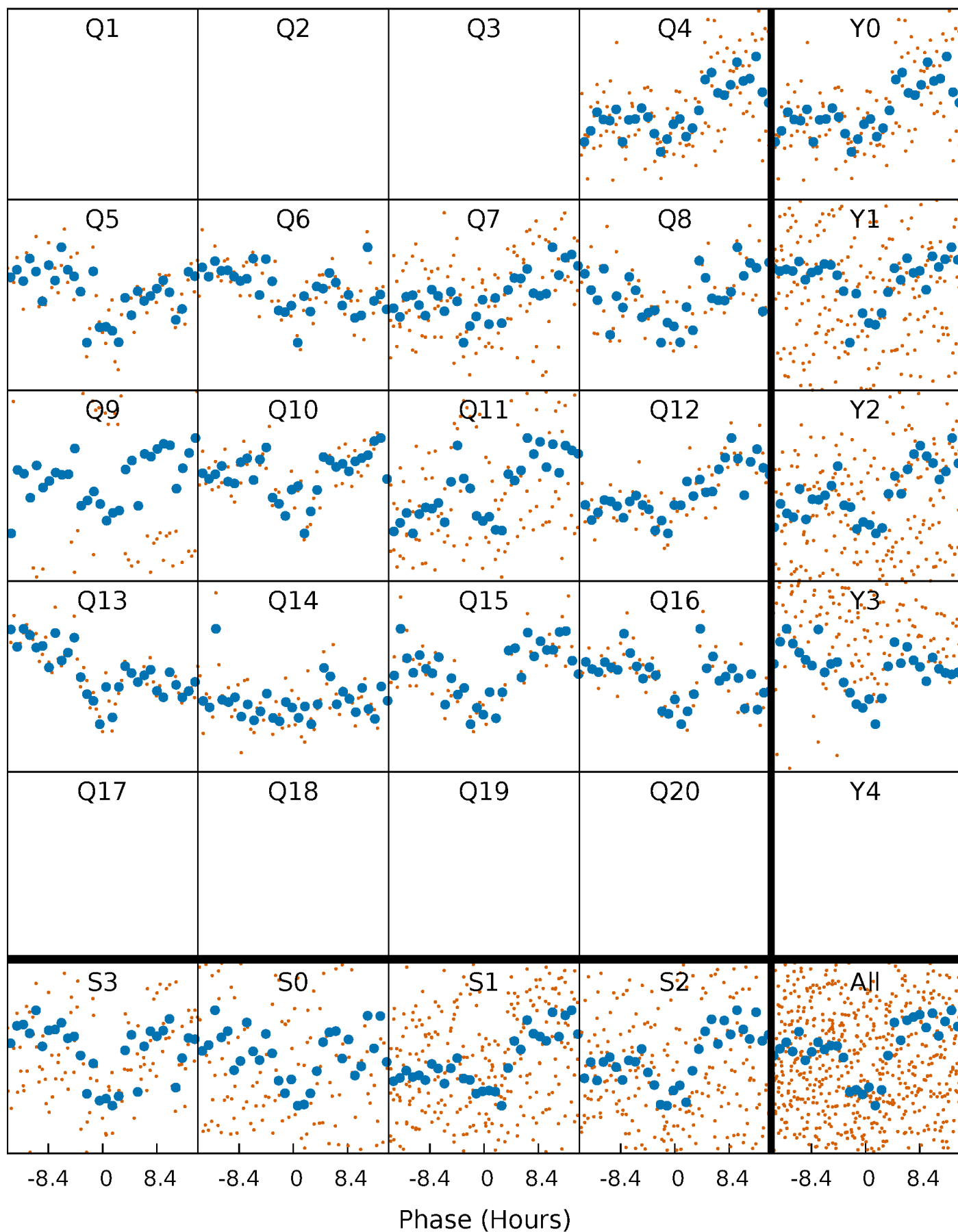


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



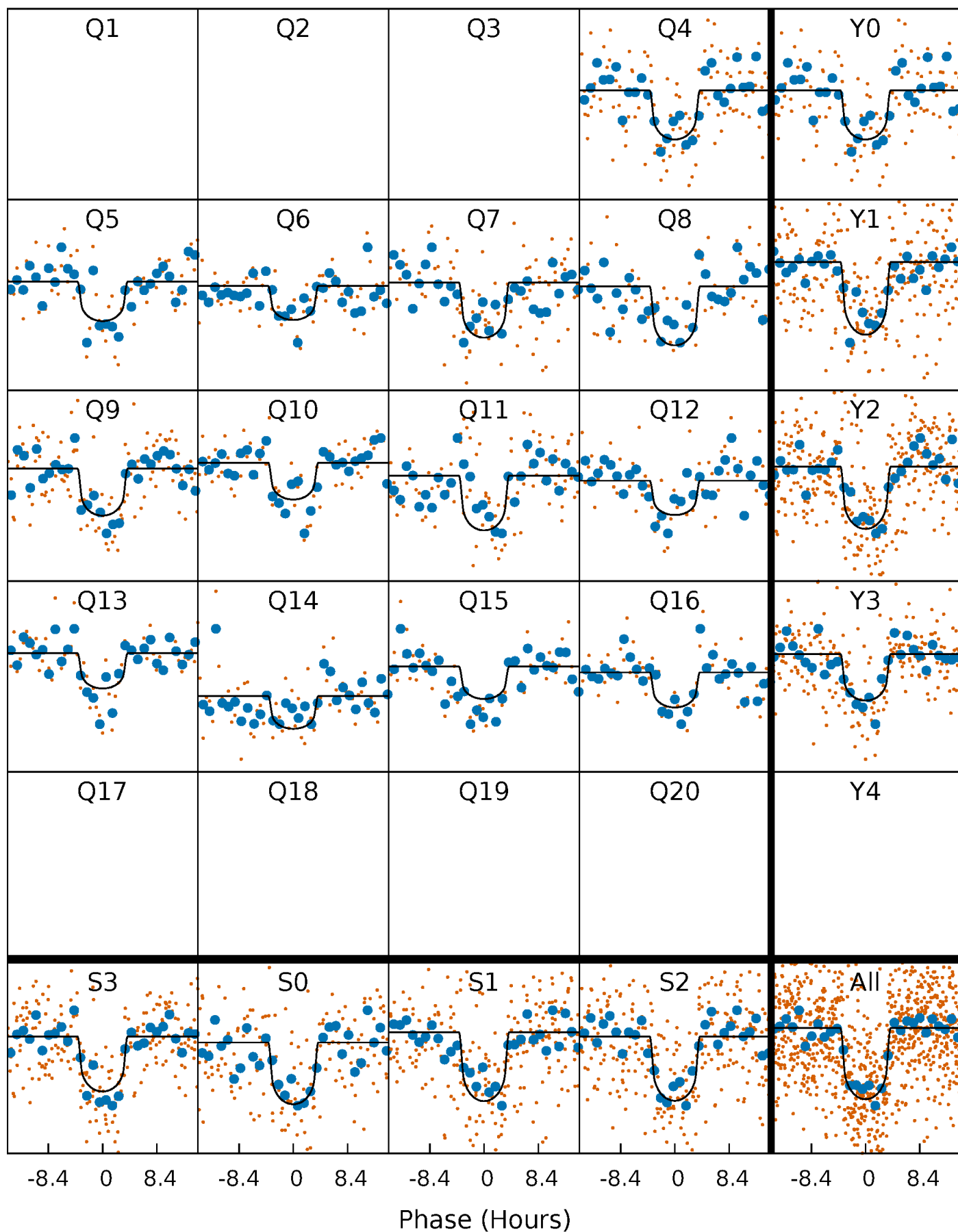
PDC Quarter-Phased Transit Curves

TCE 006880517-01 P= 65.649234 Days $T_0=174.790205$ (BKJD)



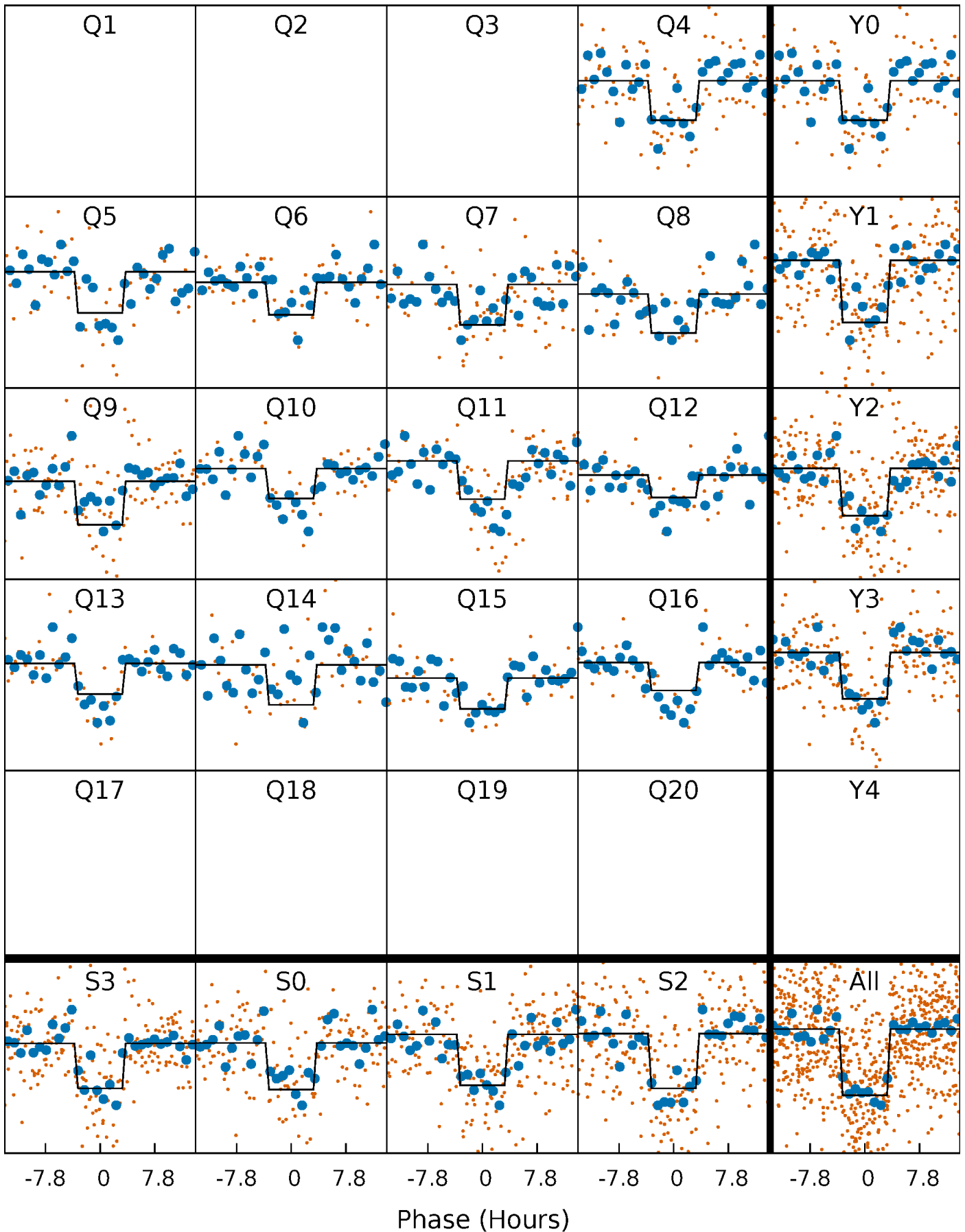
DV Quarter-Phased Transit Curves

TCE 006880517-01 P= 65.649234 Days $T_0=174.790205$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

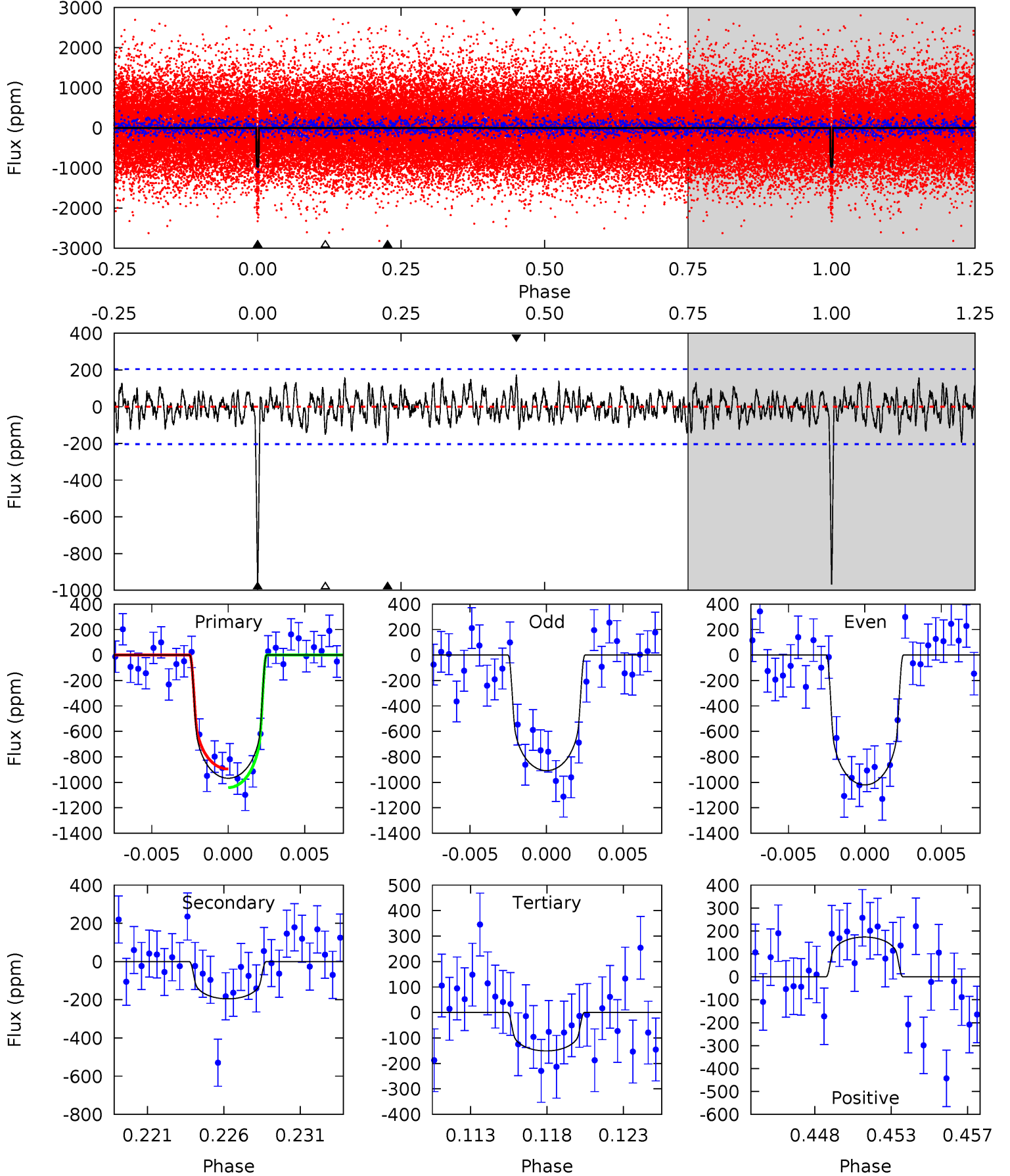
TCE 006880517-01 P= 65.648496 Days $T_0=174.796733$ (BKJD)



DV Model-Shift Uniqueness Test

006880517-01, P = 65.649234 Days, E = 174.790205 Days

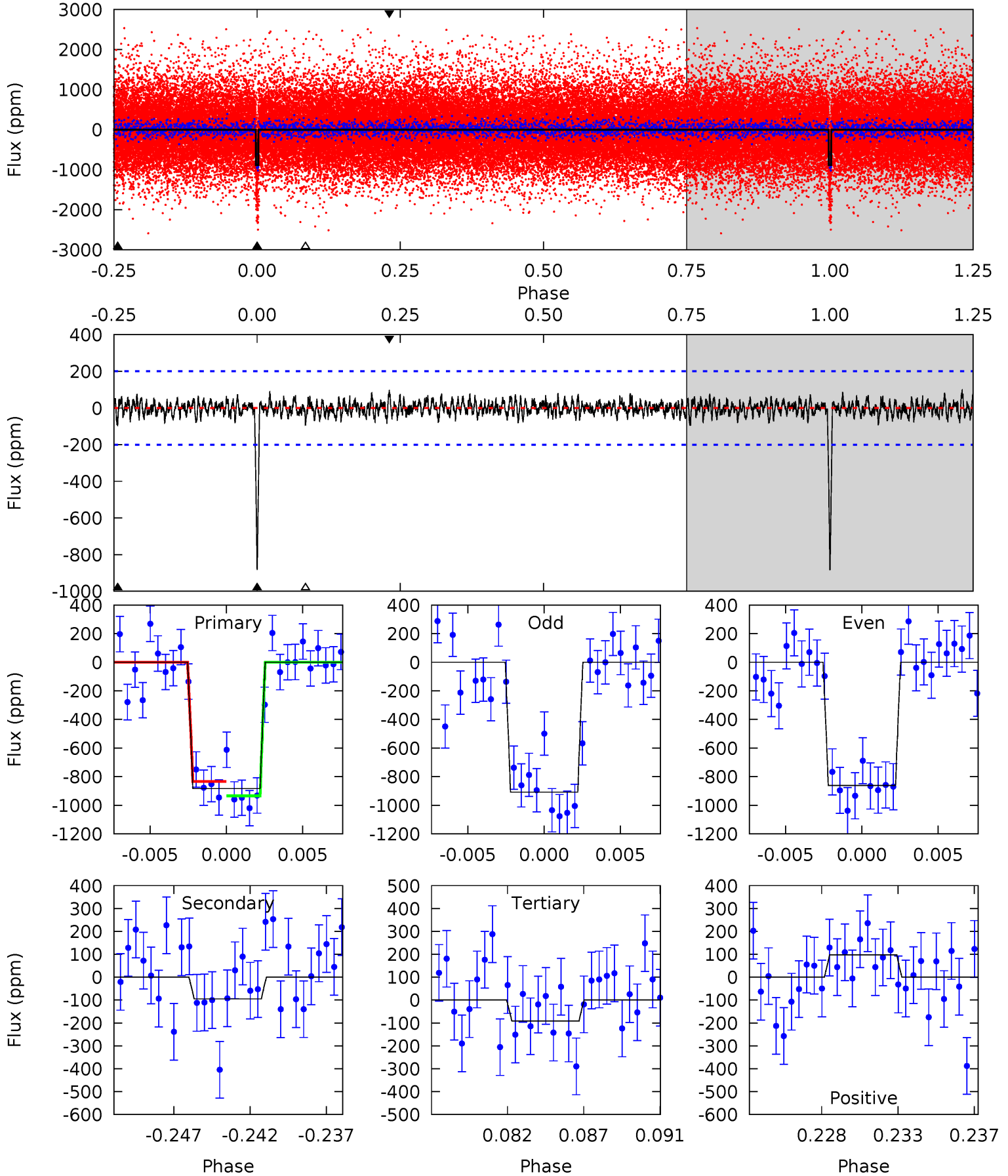
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.4	4.93	3.81	4.38	5.16	2.81	1.41	20.6	20.1	1.12	0.55	1.42	1.00	0.15	1.85



Alt Model-Shift Uniqueness Test

006880517-01, $P = 65.648496$ Days, $E = 174.796733$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.8	2.44	2.36	2.51	5.17	2.84	0.77	20.4	20.3	0.09	-0.07	0.61	0.91	0.10	1.31



Stellar Parameters For KIC 006880517

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5436^{+187}_{-187}	$4.573^{+0.034}_{-0.136}$	$0.000^{+0.250}_{-0.300}$	$0.819^{+0.169}_{-0.073}$	$0.919^{+0.072}_{-0.108}$	$2.355^{+0.426}_{-0.923}$
	+3%/-3%	+1%/-3%	+inf%/-inf%	+21%/-9%	+8%/-12%	+18%/-39%
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 006880517-01 / KOI 3305.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-195 ± 40	$2.83^{+1.20}_{-1.07}$	555^{+31}_{-24}	3966^{+785}_{-450}	1239^{+2068}_{-643}
Alt.	-95 ± 39	$2.66^{+1.12}_{-1.12}$	557^{+31}_{-24}	3585^{+796}_{-426}	667^{+1340}_{-375}

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 $A_{obs} \gg 1.0$

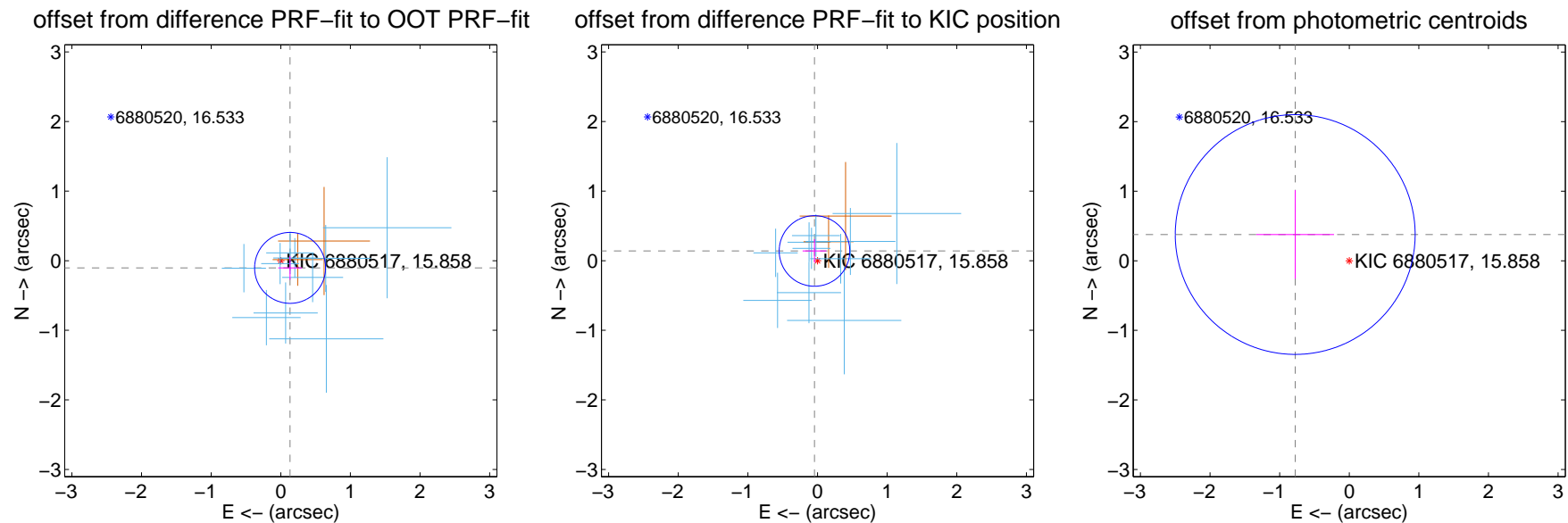
DV Centroid Data

Supplemental centroid analysis for 006880517-01. Kepler magnitude: 15.86. Transit SNR 15.67

There are 10 quarters with good PRF difference image offsets

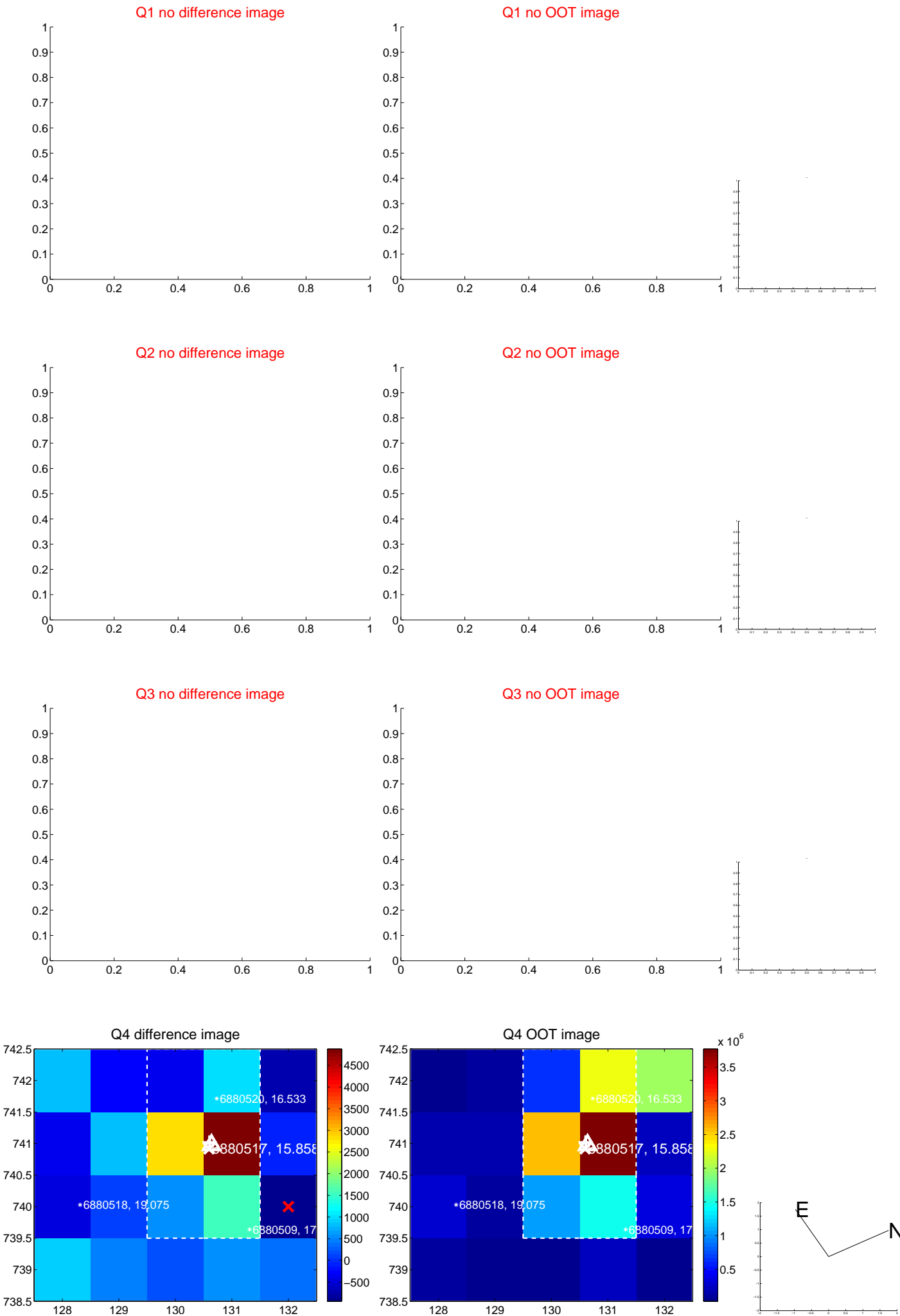
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.169 ± 0.170	0.99	-0.134 ± 0.170	-0.103 ± 0.169
PRF-fit source offset from KIC position	0.146 ± 0.169	0.87	0.043 ± 0.170	0.140 ± 0.169
photometric centroid source offset	0.86 ± 0.57	1.50	0.78 ± 0.56	0.38 ± 0.64

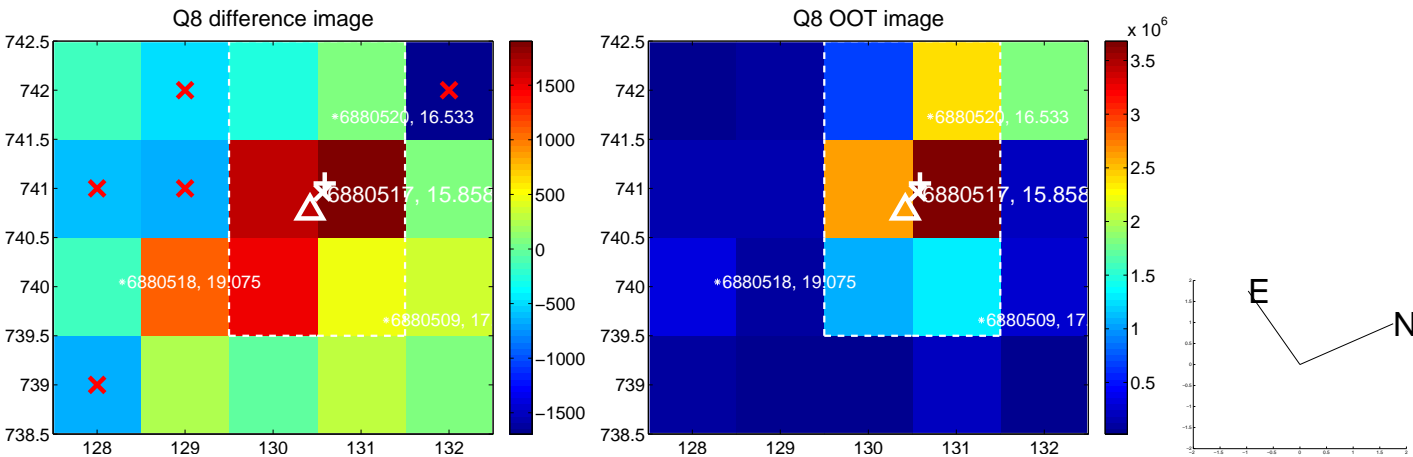
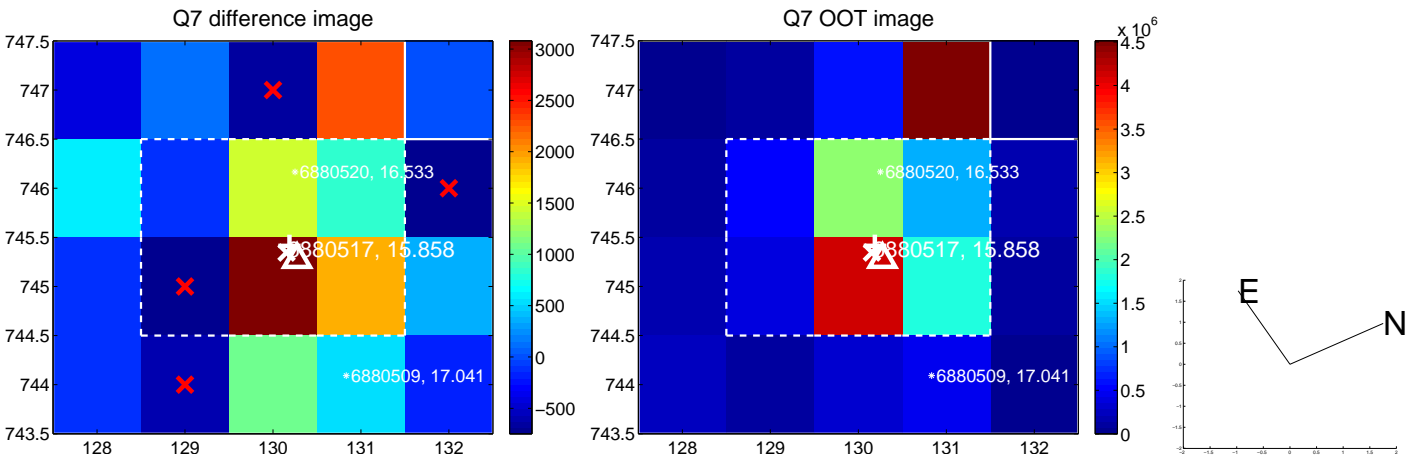
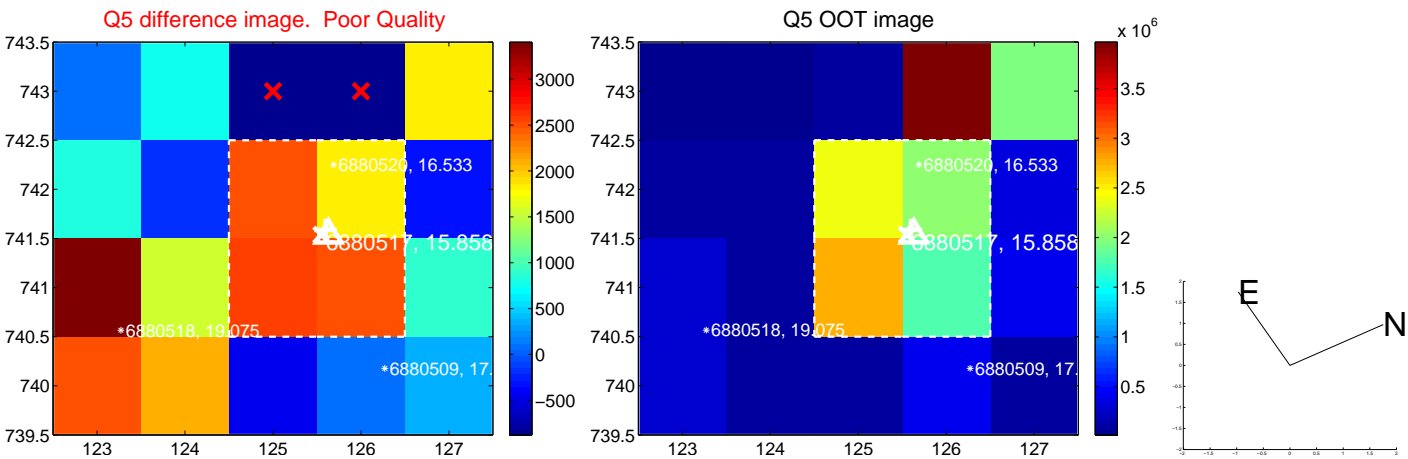


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

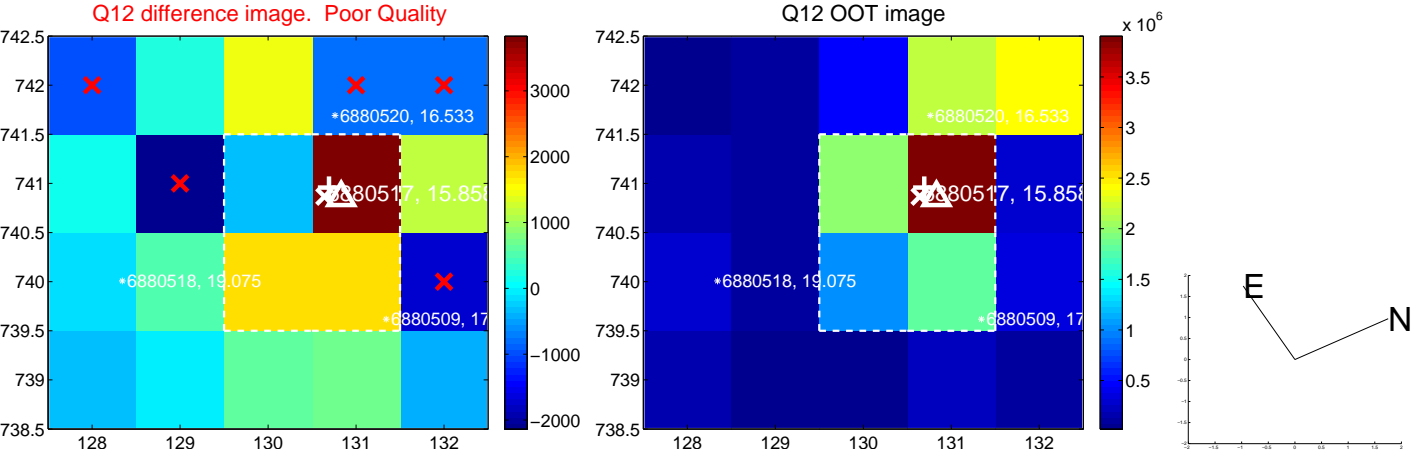
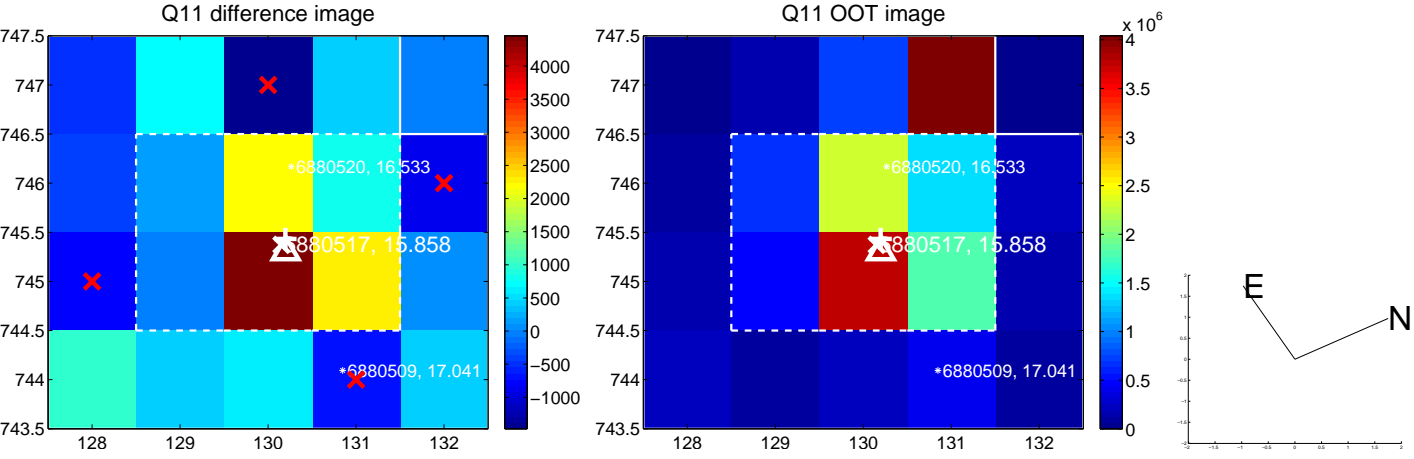
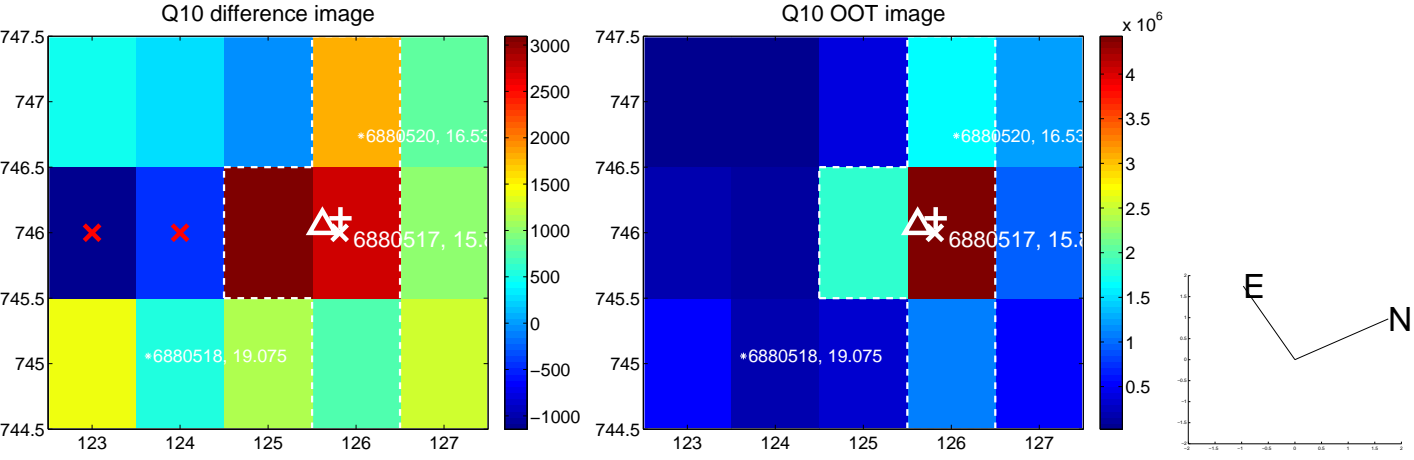
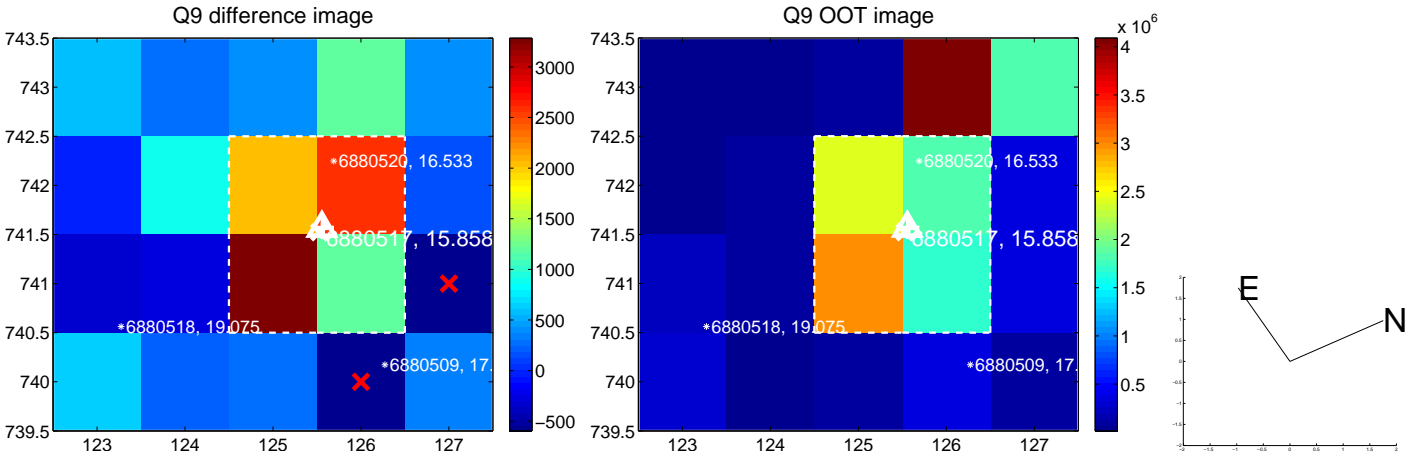
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



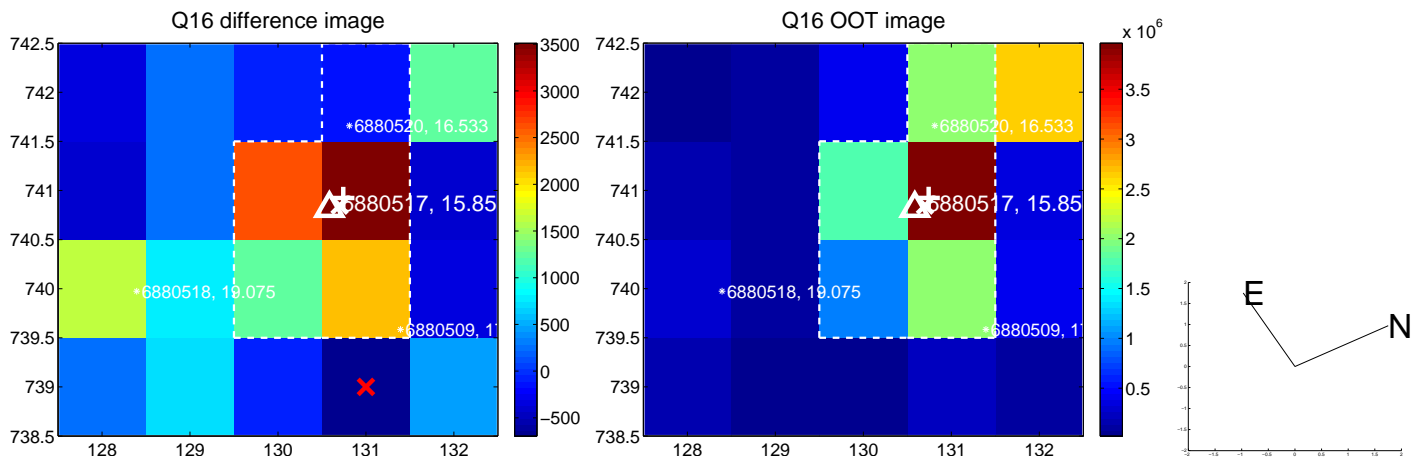
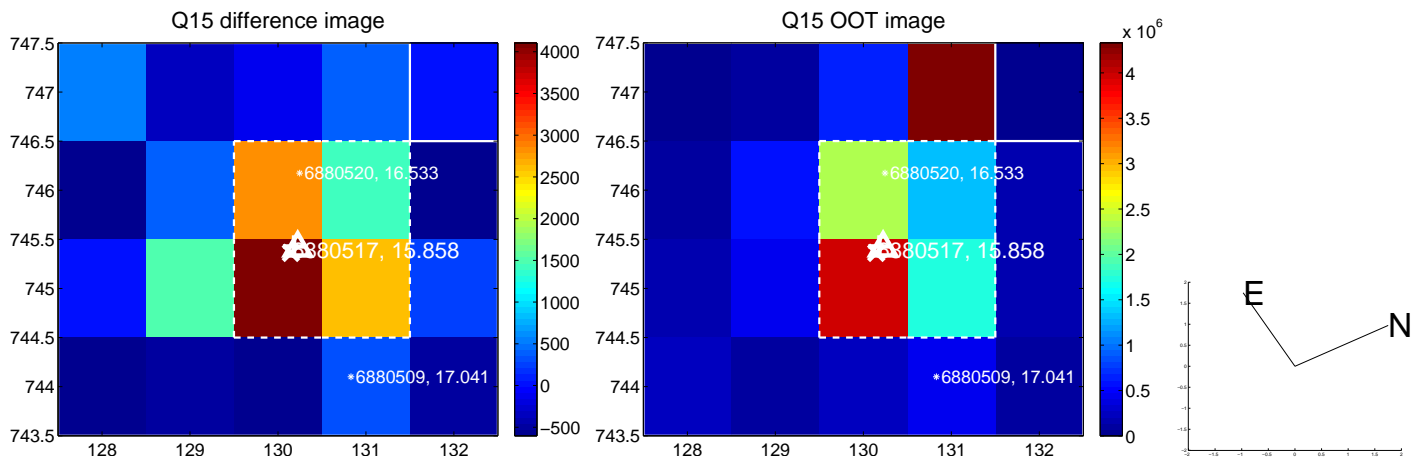
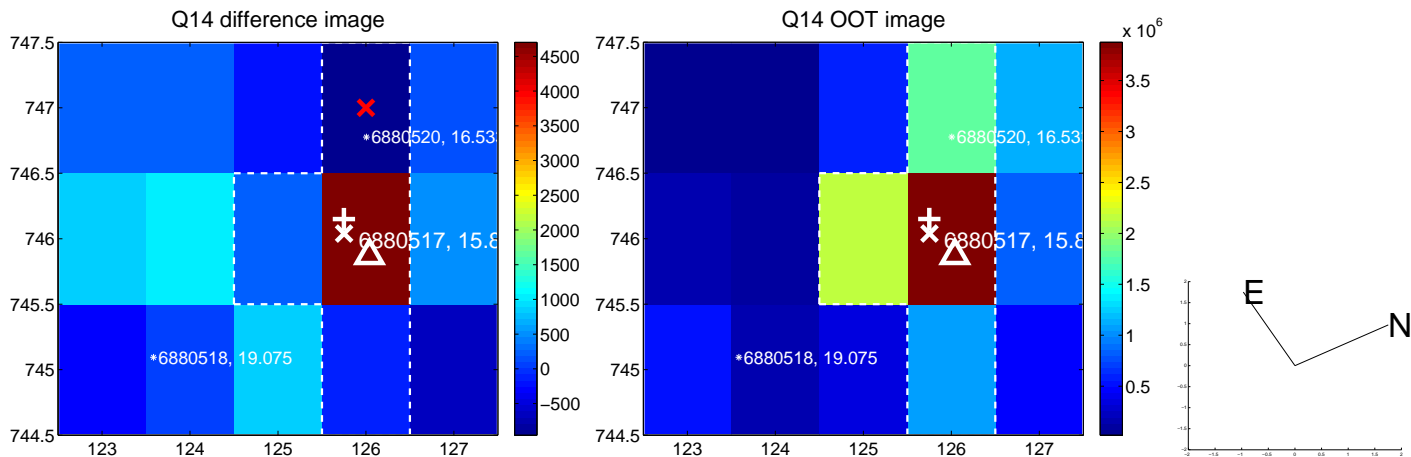
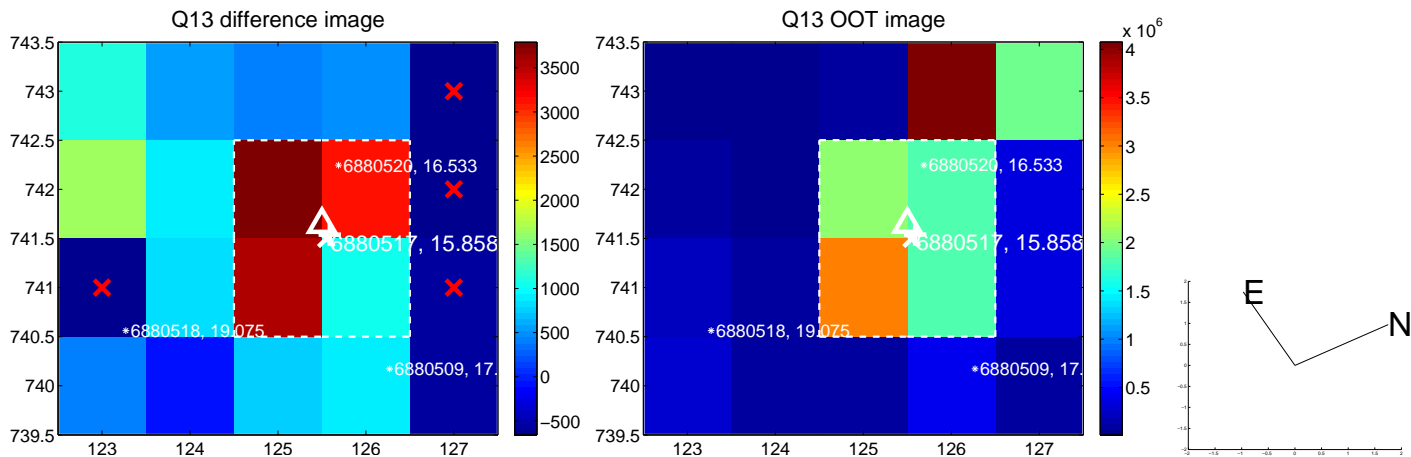
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



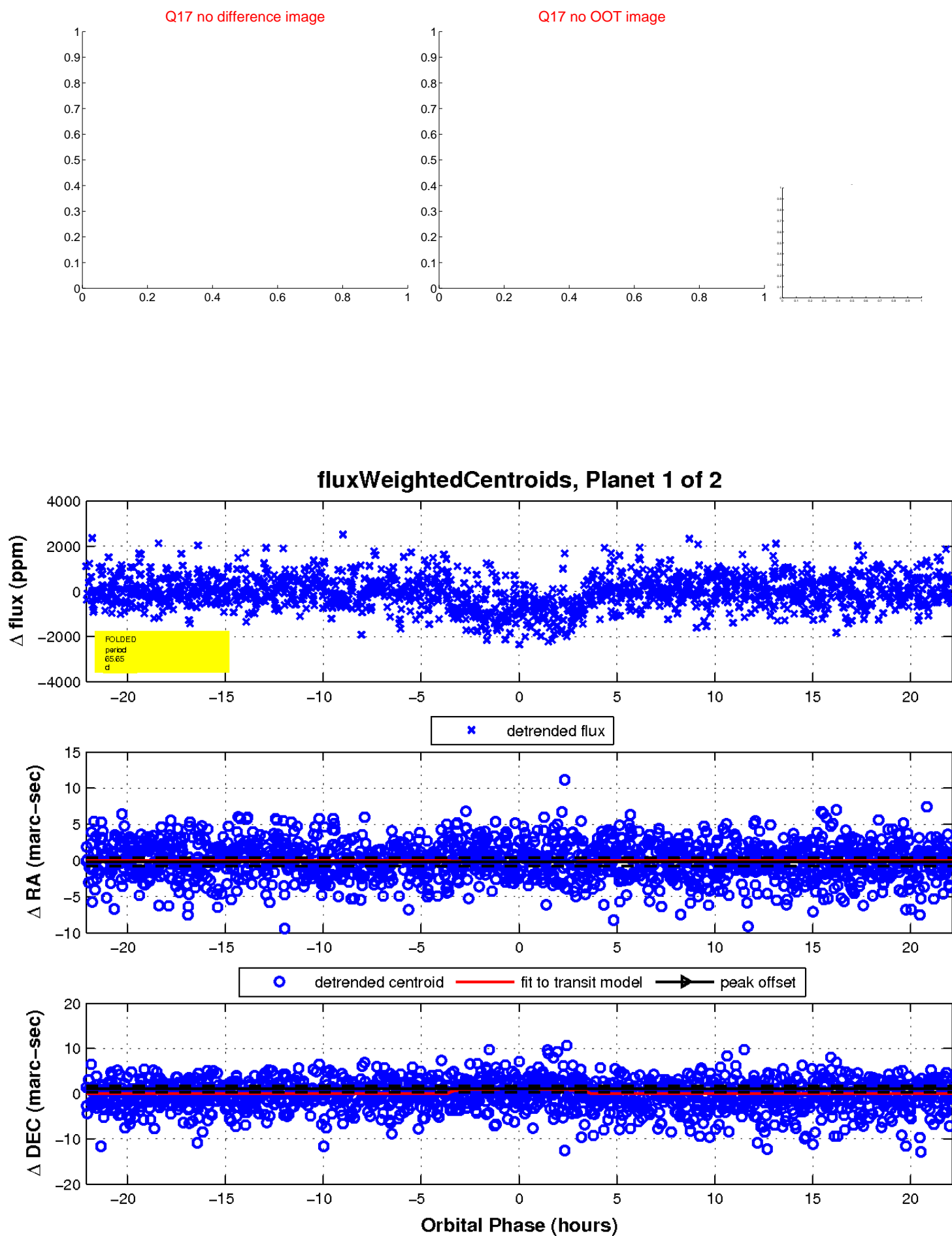
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



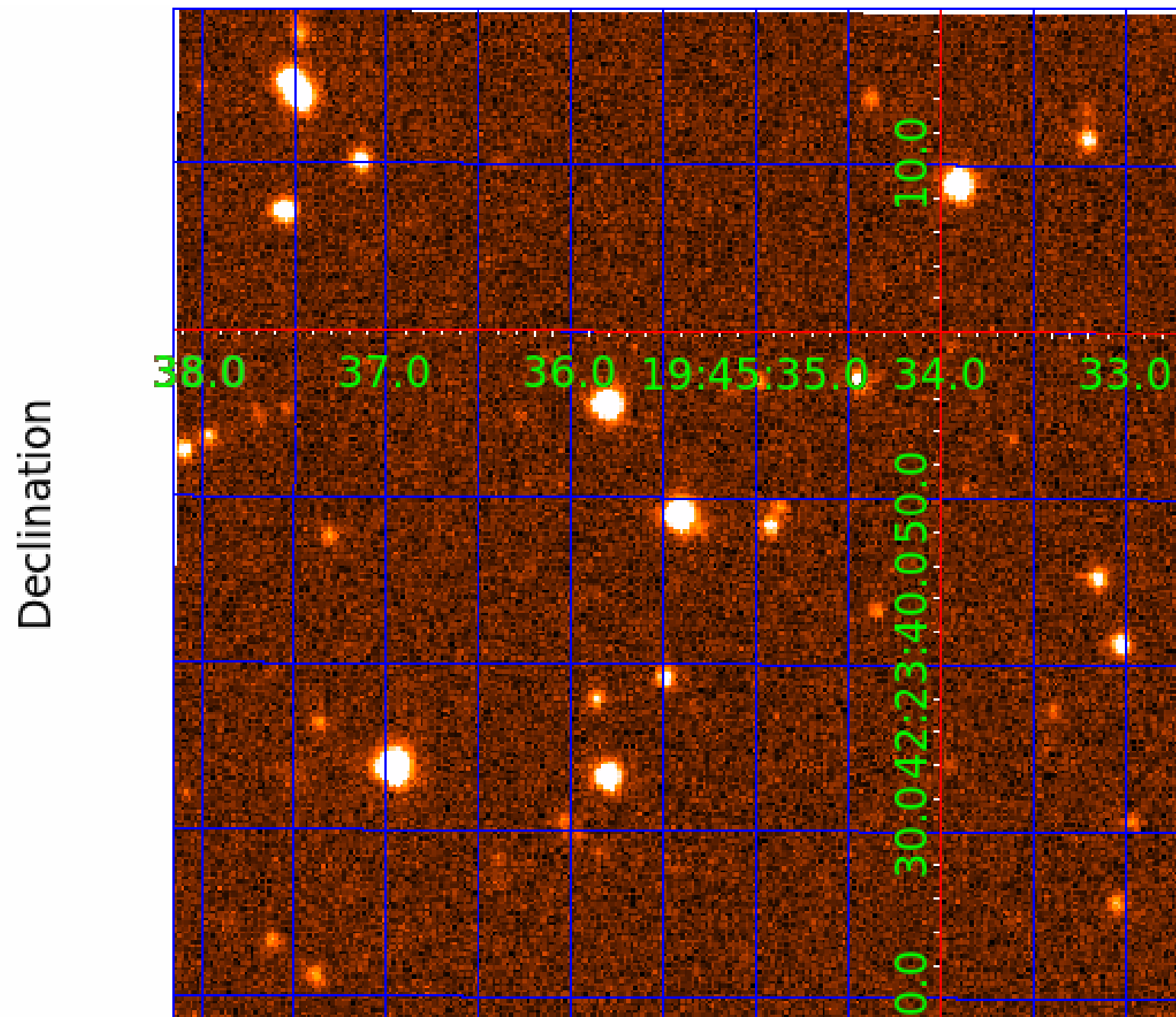
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 006880517

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})
006880517-01	OBS	3305.01	65.649234	174.790205	1026.9	7.377	15.5	15.7	0.82	5436	2.72	5.49
006880517-02	OBS	No	355.111730	140.668616	1178.8	3.598	7.2	7.9	0.82	5436	3.50	0.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006880517-01	OBS	PC	0.97	0	0	0	0	NO_COMMENT
006880517-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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.

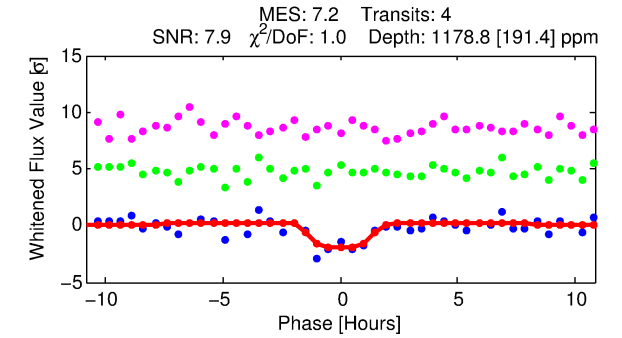
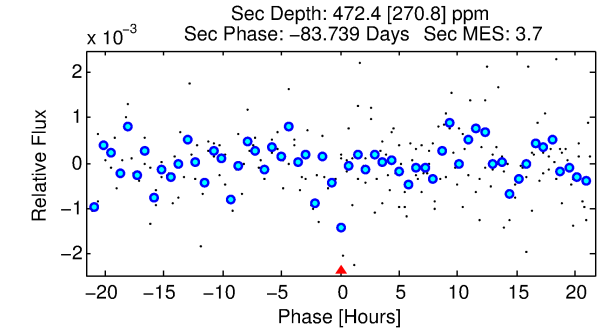
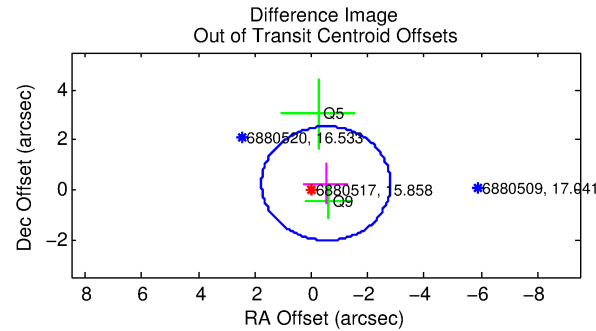
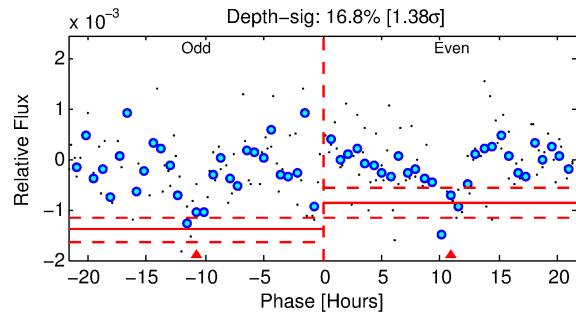
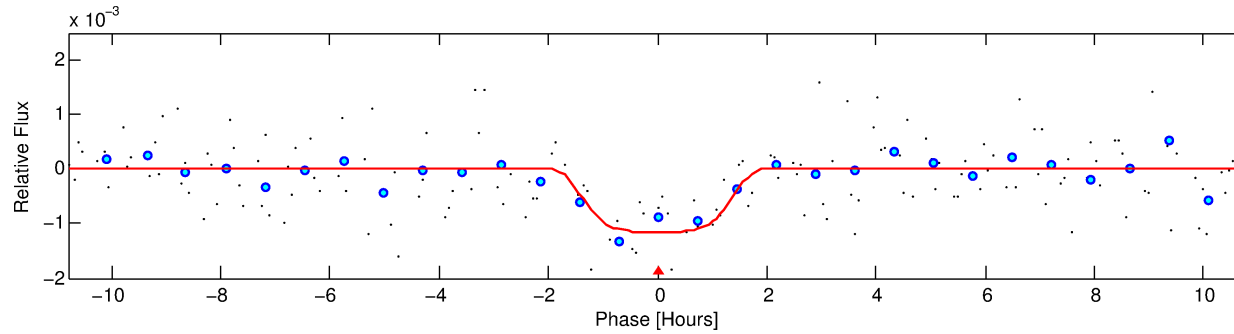
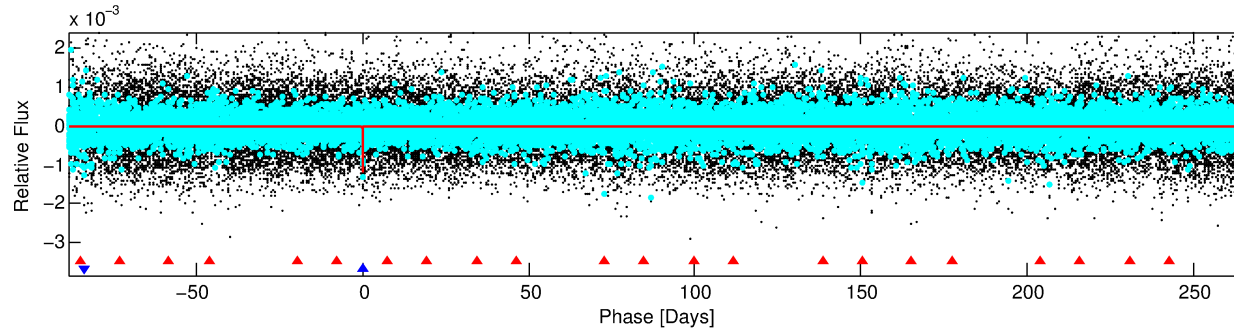
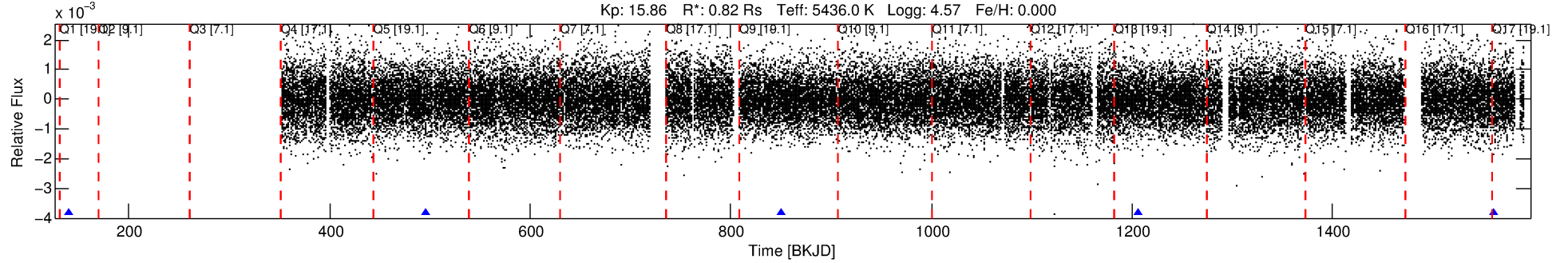
Ephemeris Match Information For 006880517-02

No Significant Match Found

DV One-Page Summary

KIC: 6880517 Candidate: 2 of 2 Period: 355.112 d
KOI: K03305 Corr: No Ephemeris Match

Kp: 15.86 R*: 0.82 Rs Teff: 5436.0 K Logg: 4.57 Fe/H: 0.000



DV Fit Results:

Period = 355.11173 [0.00525] d
Epoch = 140.6686 [0.0153] BKJD
Rp/R* = 0.0391 [0.0083]
a/R* = 355.64 [264.72]
b = 0.93 [0.12]
Seff = 0.58 [0.16]
Teq = 222 [16] K
Rp = 3.50 [1.04] Re
a = 0.9531 [0.1646] AU
Ag = 19318.40 [14618.39] [1.32σ]
Teffp = 4052 [737] K [5.20σ]

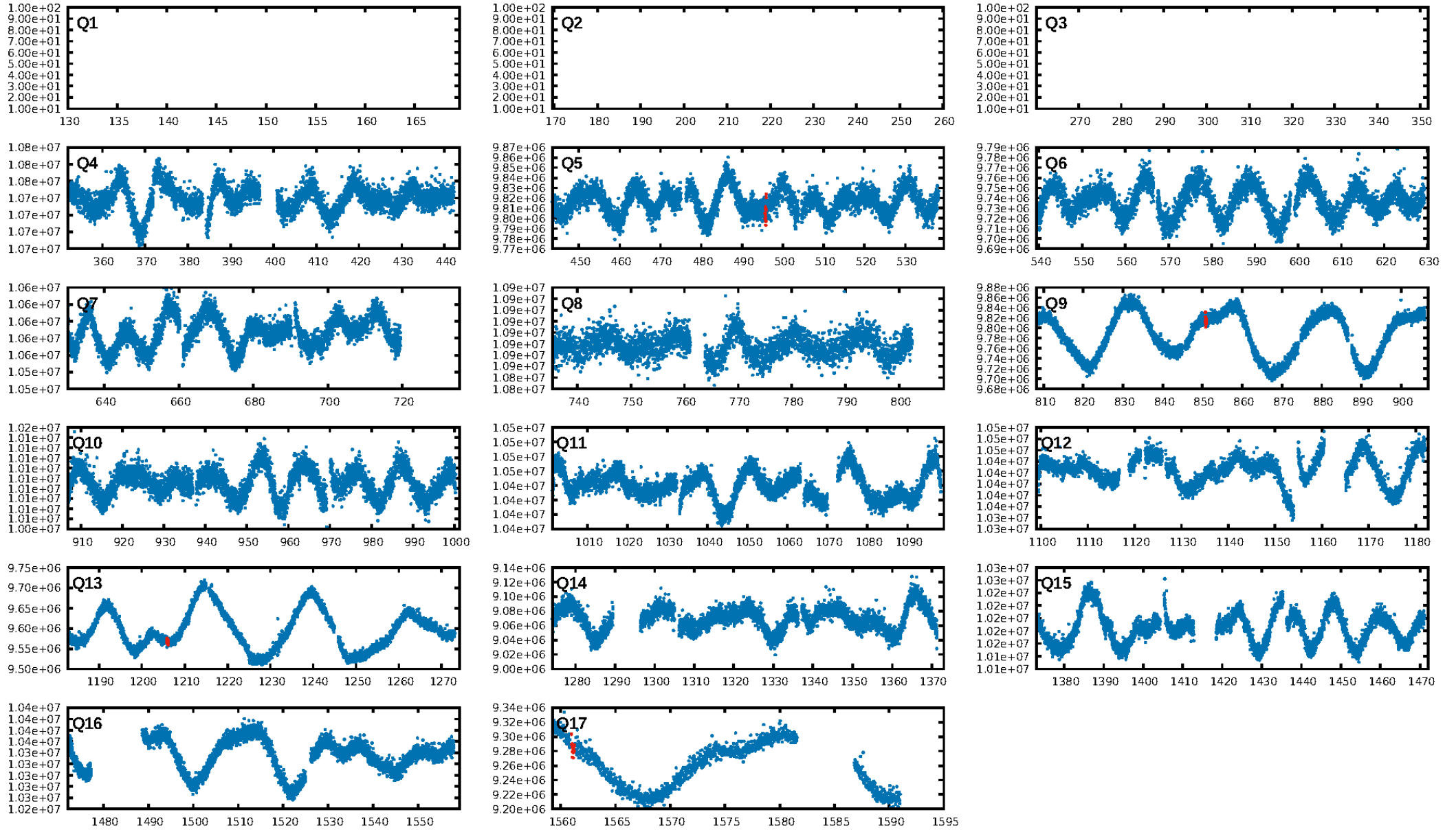
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [846.41σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 19.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.26e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.992
Centroid-sig: 27.6%
Centroid-so: 0.947 arcsec [0.67σ]
OotOffset-rm: 0.573 arcsec [0.75σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-rm: 0.614 arcsec [0.51σ]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

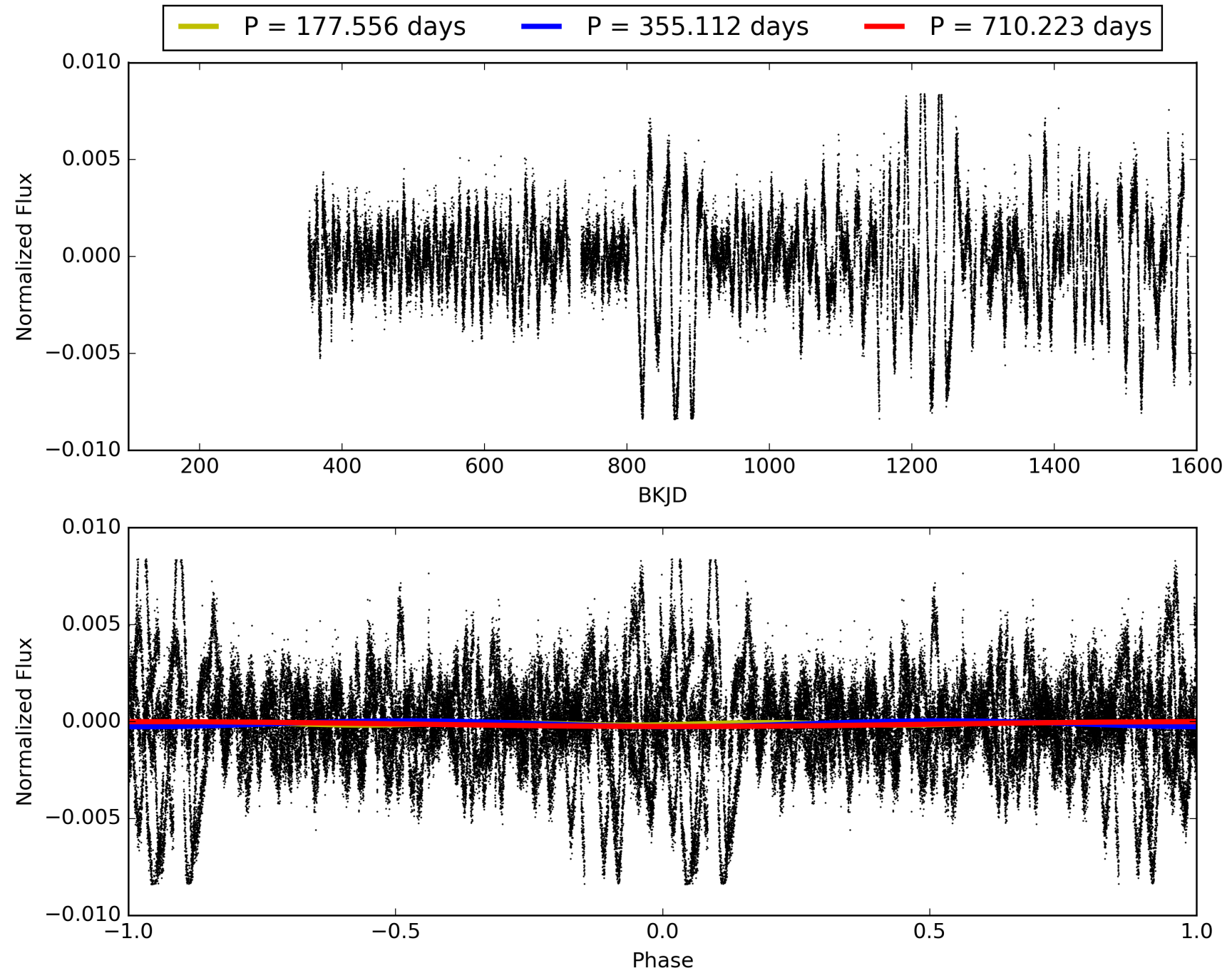
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:22:07 Z

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

TCE 006880517-02, PDC Light Curves

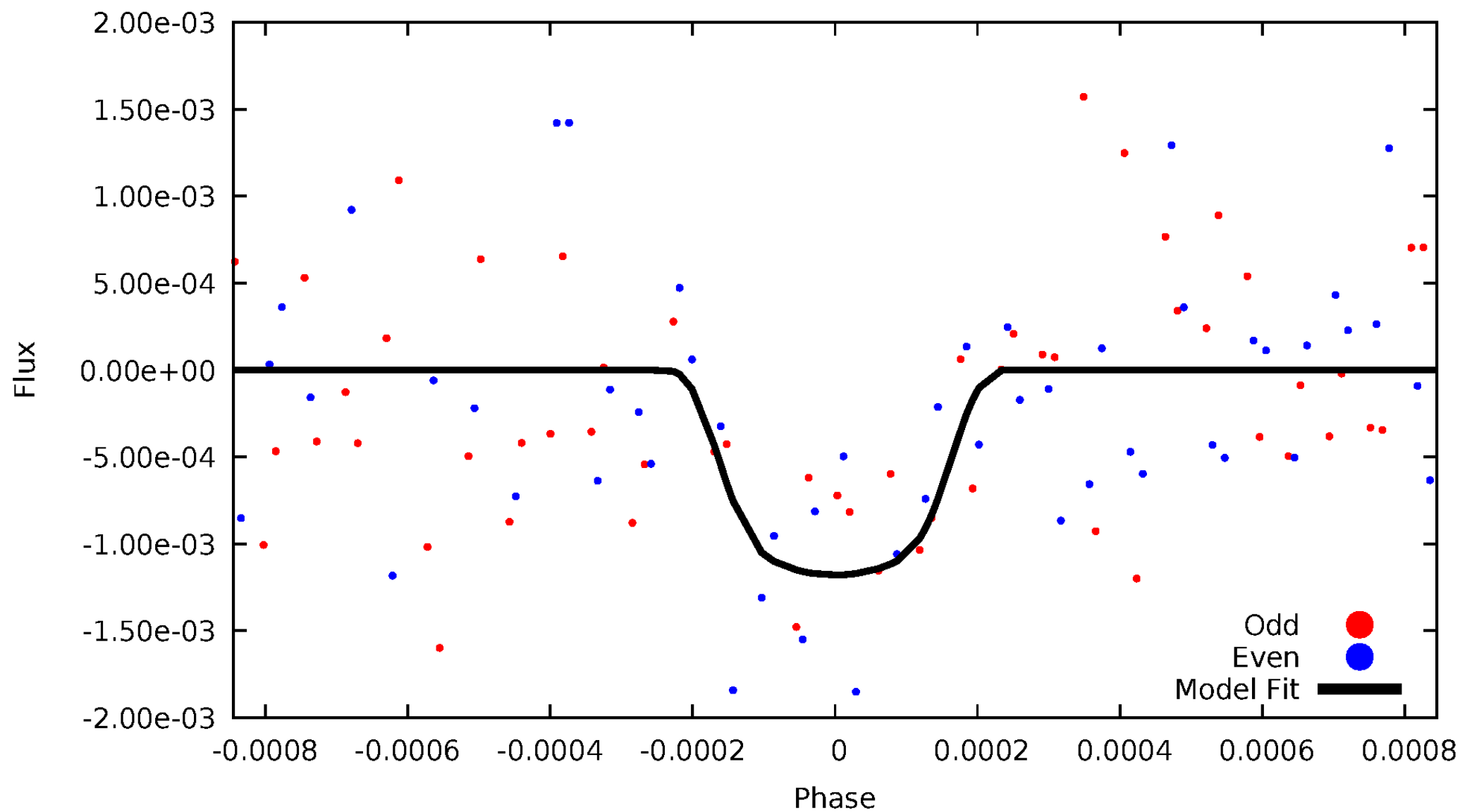


TCE 006880517-02



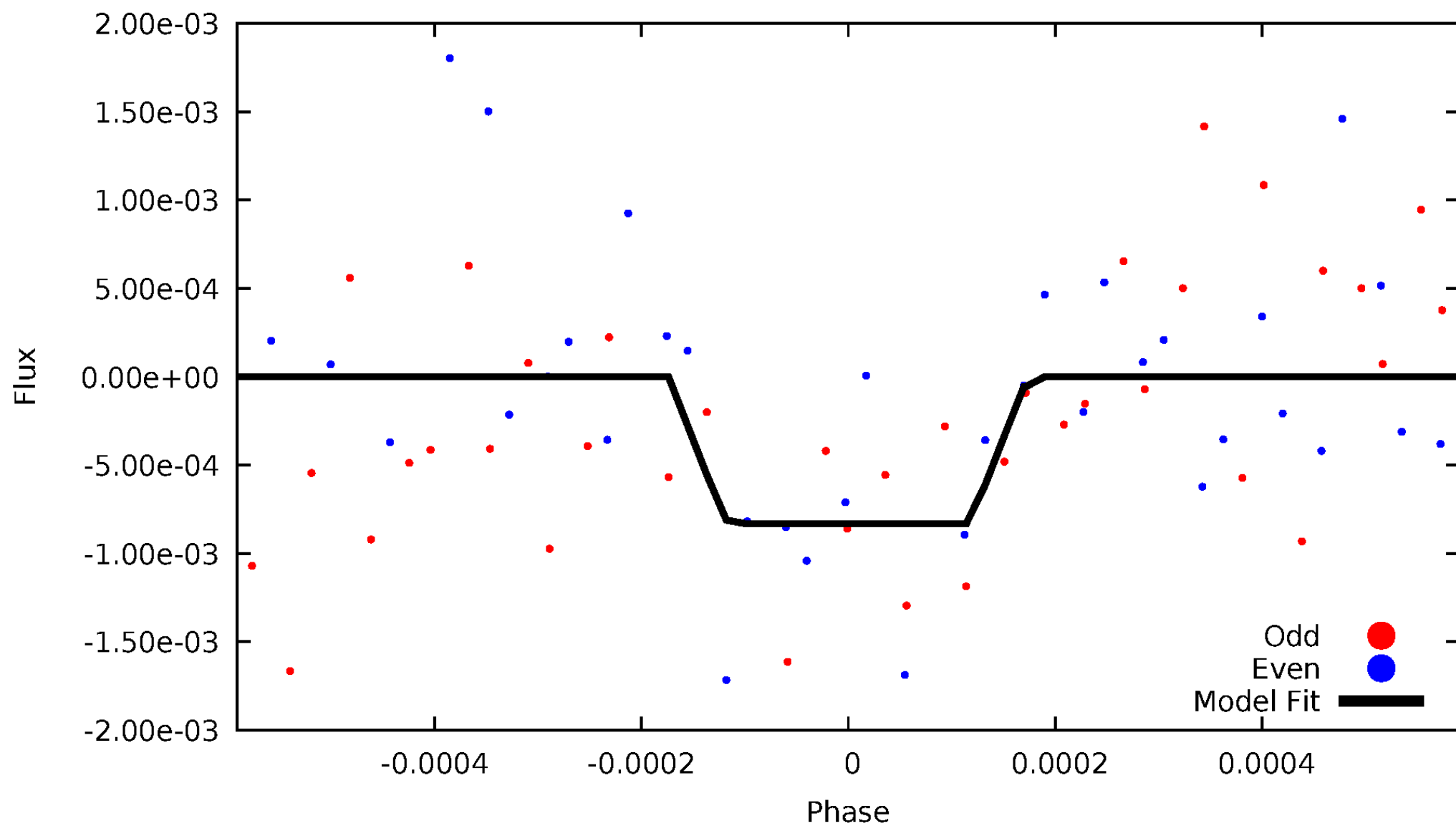
DV Odd/Even

TCE 006880517-02



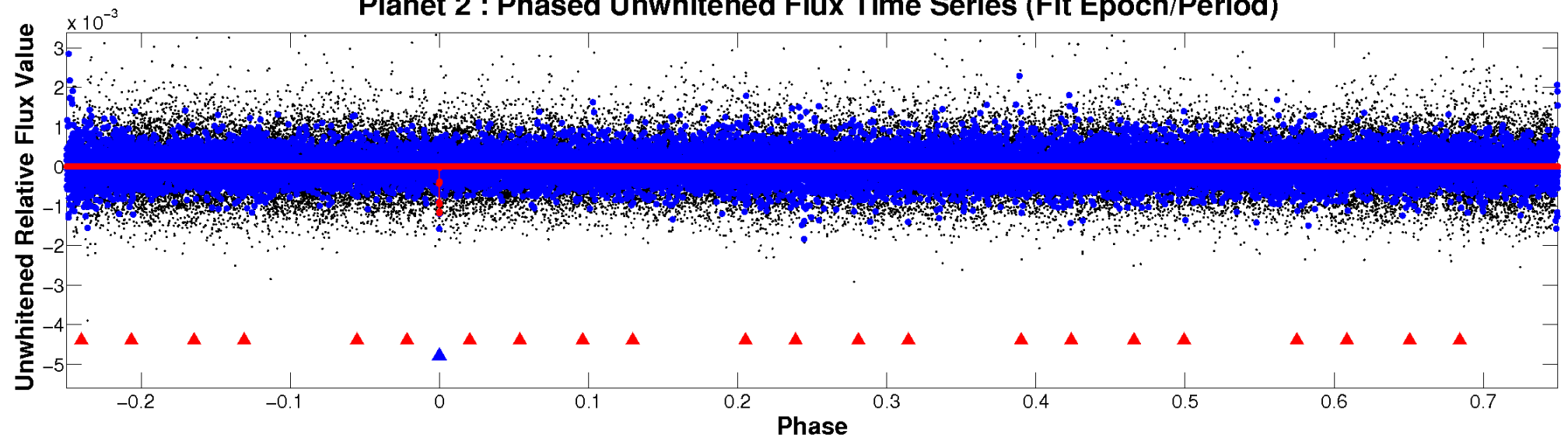
ALT Odd/Even

TCE 006880517-02

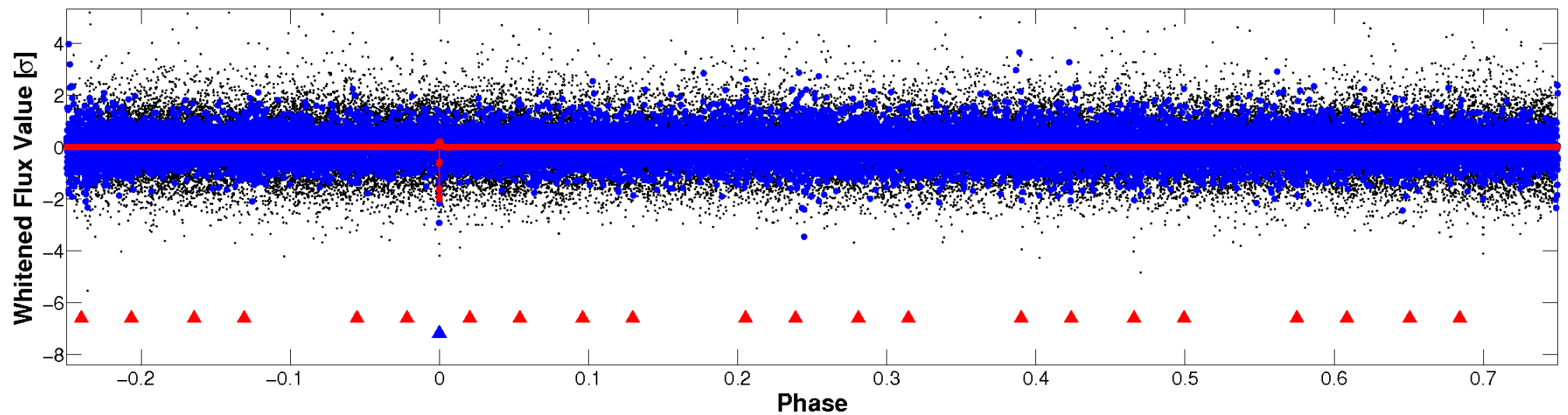


Non-Whitened Vs. Whitened Light Curve

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

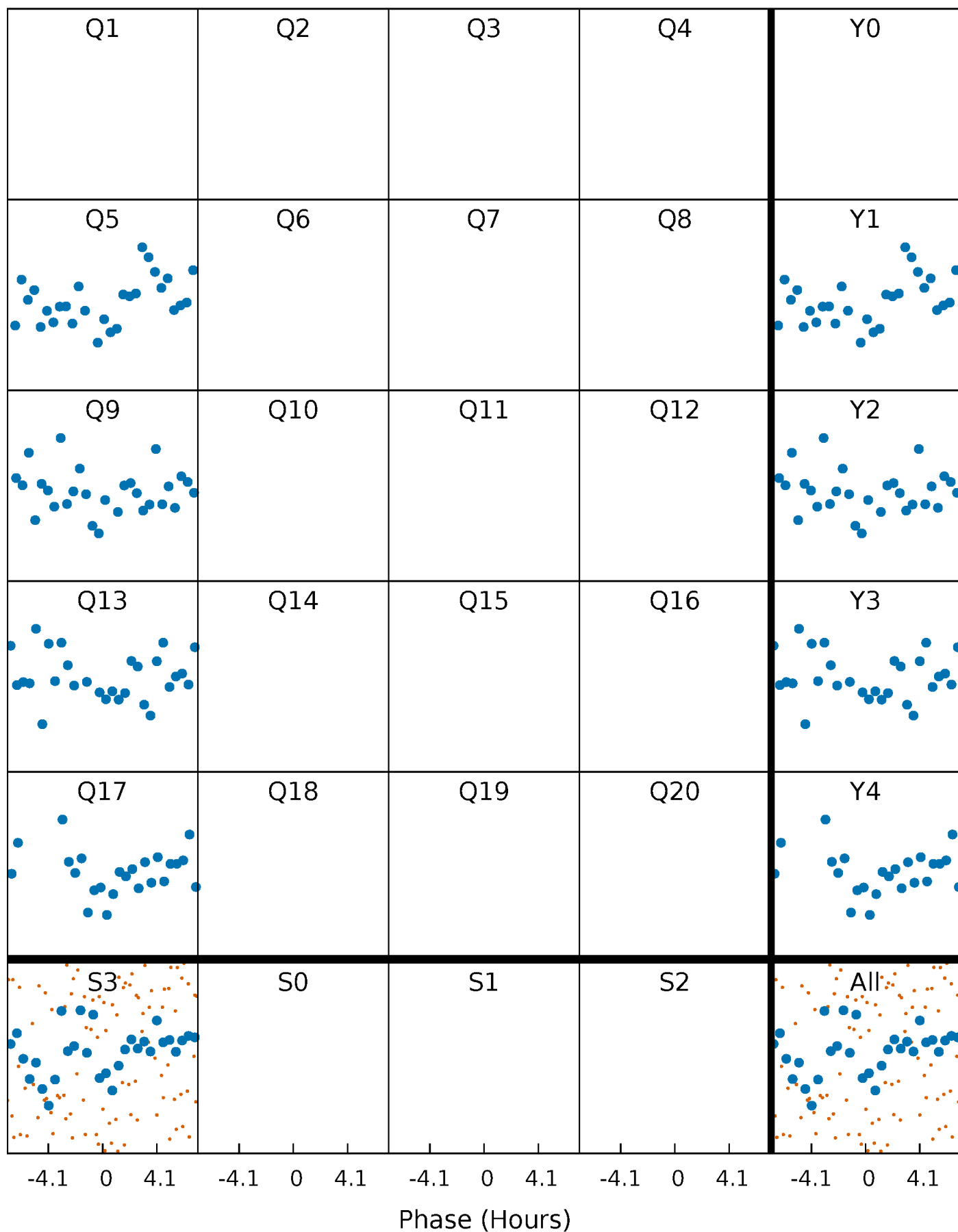


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



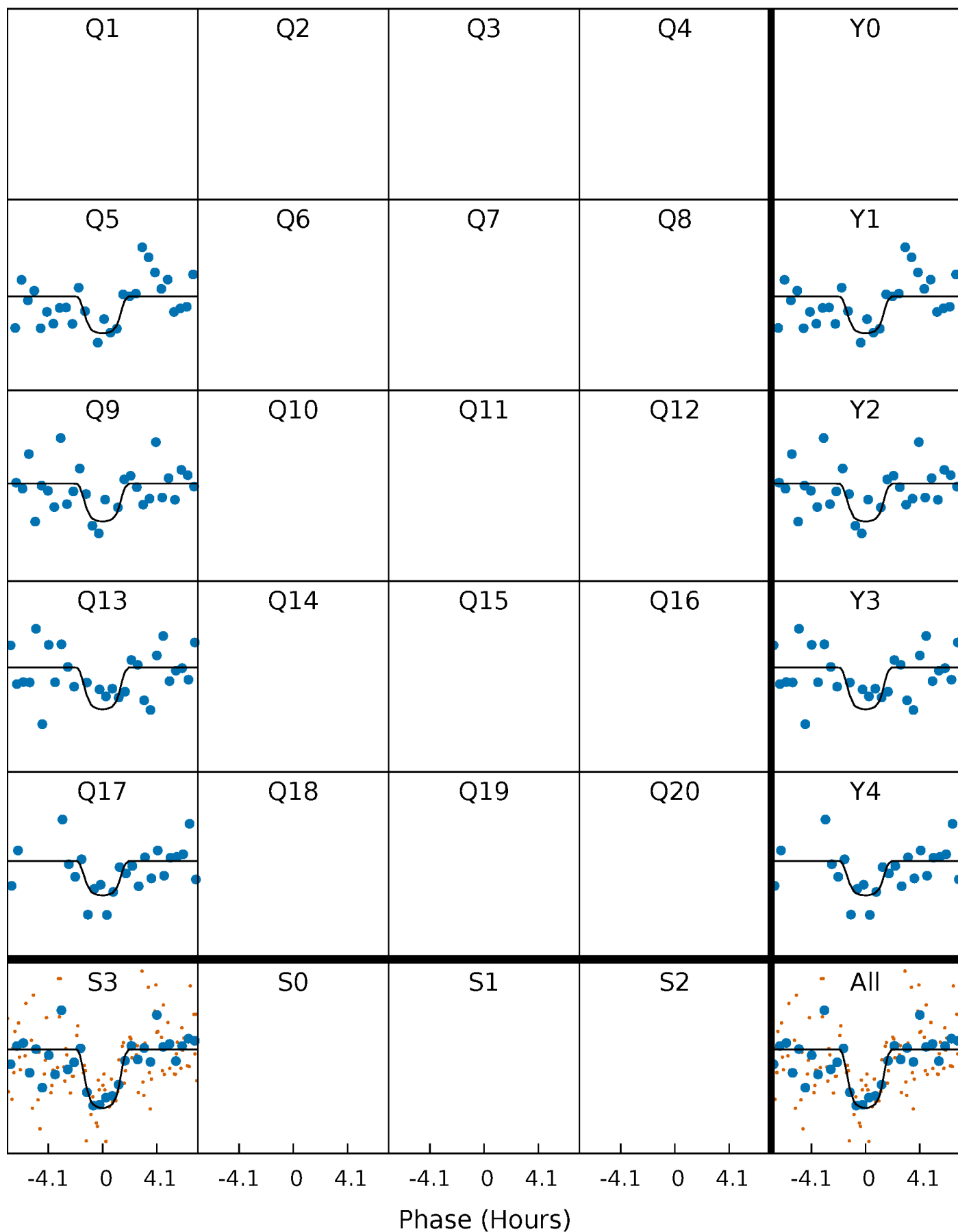
PDC Quarter-Phased Transit Curves

TCE 006880517-02 P=355.111730 Days $T_0=140.668616$ (BKJD)



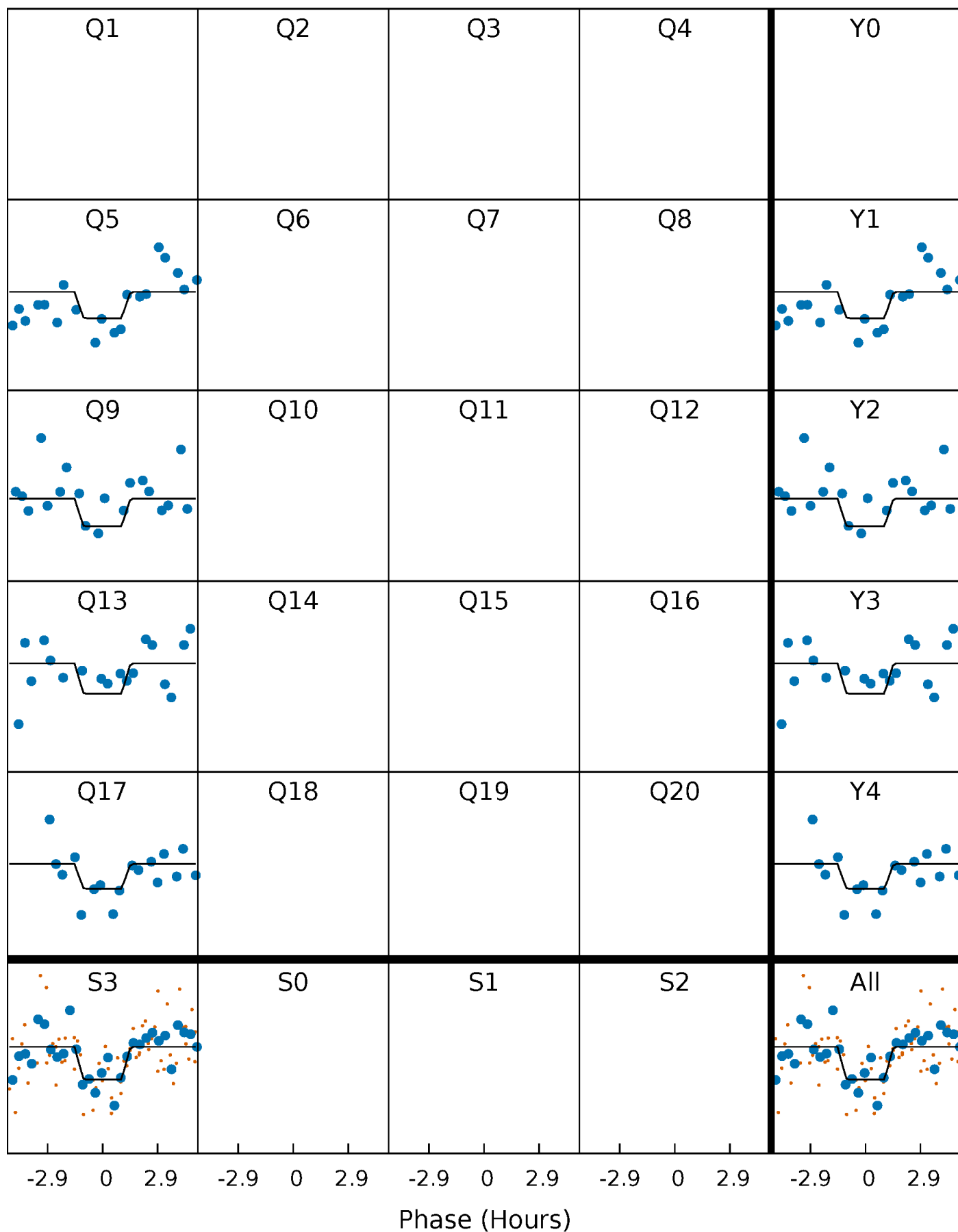
DV Quarter-Phased Transit Curves

TCE 006880517-02 $P=355.111730$ Days $T_0=140.668616$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

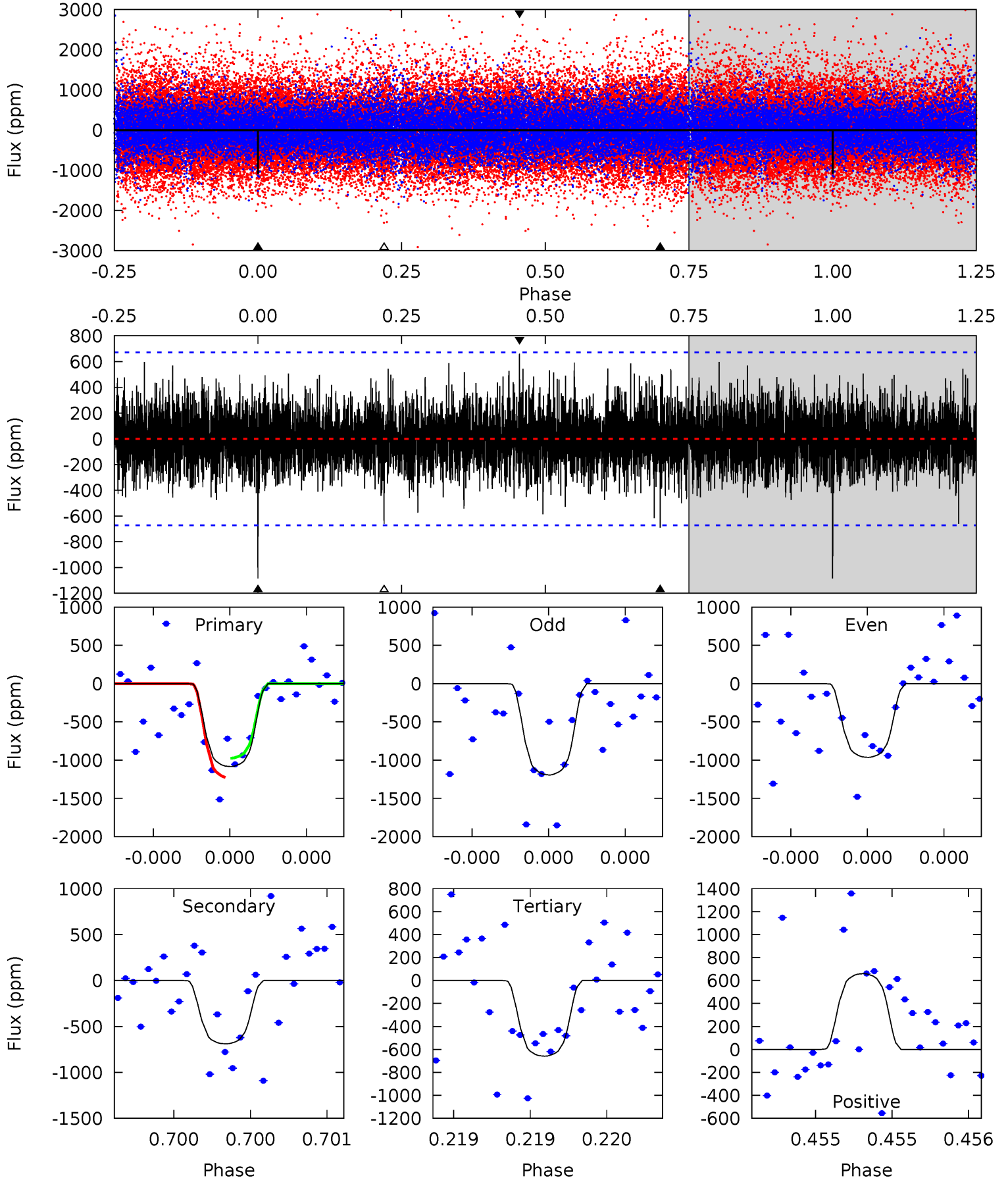
TCE 006880517-02 P=355.108184 Days $T_0=140.673792$ (BKJD)



DV Model-Shift Uniqueness Test

006880517-02, P = 355.111730 Days, E = 140.668616 Days

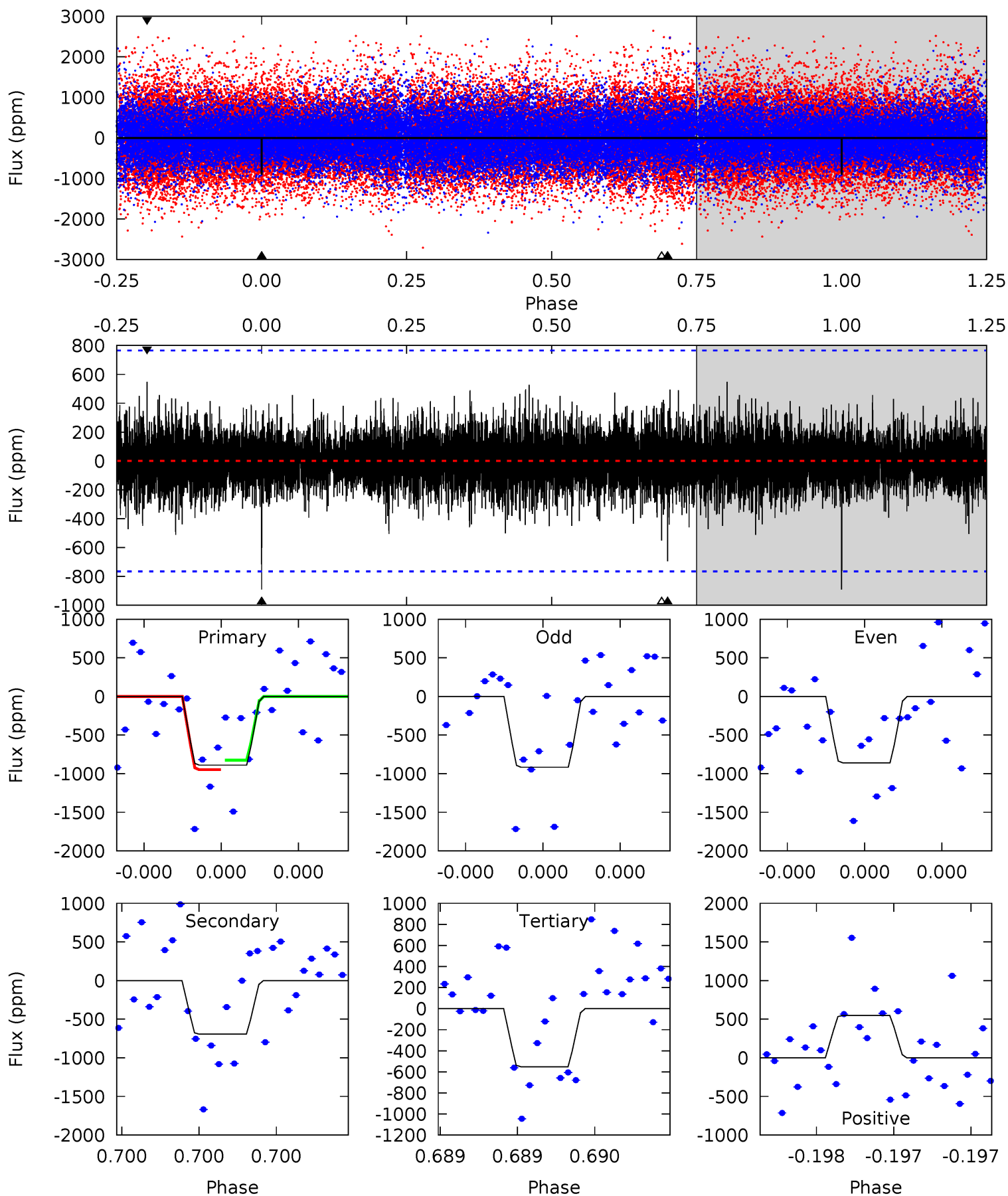
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.01	5.73	5.48	5.49	5.58	3.50	1.36	3.53	3.53	0.25	0.25	0.96	0.97	0.38	1.03



Alt Model-Shift Uniqueness Test

006880517-02, P = 355.108184 Days, E = 140.673792 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.55	5.11	4.06	4.03	5.64	3.58	0.98	2.49	2.52	1.05	1.08	0.21	0.98	0.38	0.46



Stellar Parameters For KIC 006880517

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5436^{+187}_{-187}	$4.573^{+0.034}_{-0.136}$	$0.000^{+0.250}_{-0.300}$	$0.819^{+0.169}_{-0.073}$	$0.919^{+0.072}_{-0.108}$	$2.355^{+0.426}_{-0.923}$
	+3%/-3%	+1%/-3%	+inf%/-inf%	+21%/-9%	+8%/-12%	+18%/-39%
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 006880517-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-690 ± 120	$3.59^{+0.91}_{-0.71}$	317^{+17}_{-15}	4594^{+479}_{-428}	25903^{+14833}_{-9705}
Alt.	-694 ± 136	$2.65^{+0.82}_{-0.81}$	317^{+17}_{-13}	5222^{+937}_{-617}	47757^{+49579}_{-21277}

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

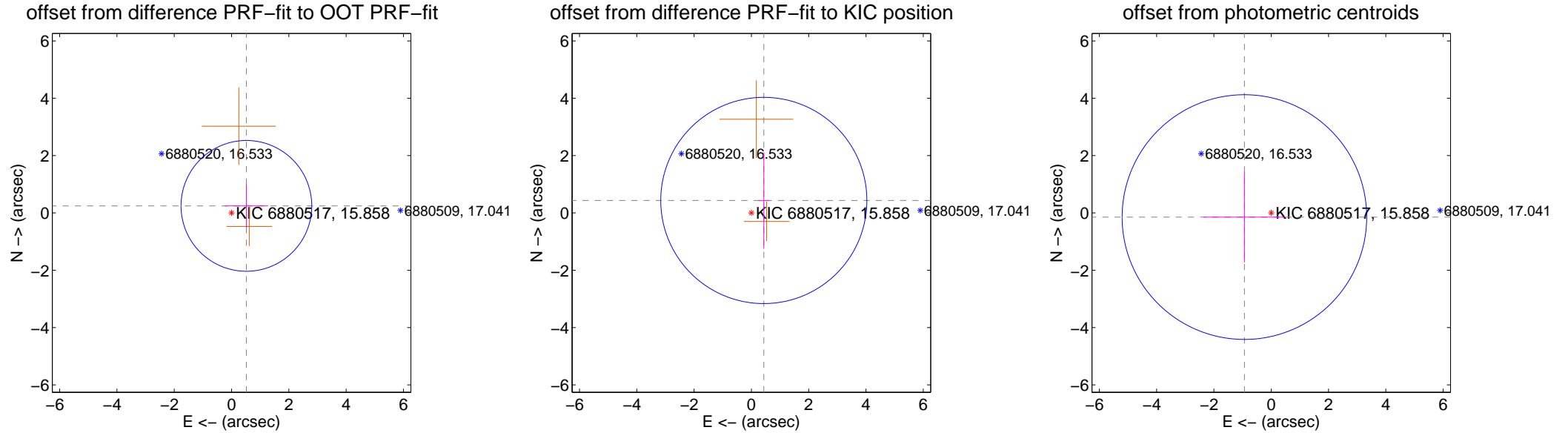
DV Centroid Data

Supplemental centroid analysis for 006880517-02. Kepler magnitude: 15.86. Transit SNR 7.94

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.573 ± 0.761	0.75	-0.518 ± 0.760	0.245 ± 0.761
PRF-fit source offset from KIC position	0.614 ± 1.199	0.51	-0.434 ± 0.198	0.434 ± 1.683
photometric centroid source offset	0.95 ± 1.42	0.67	0.94 ± 1.42	-0.15 ± 1.58

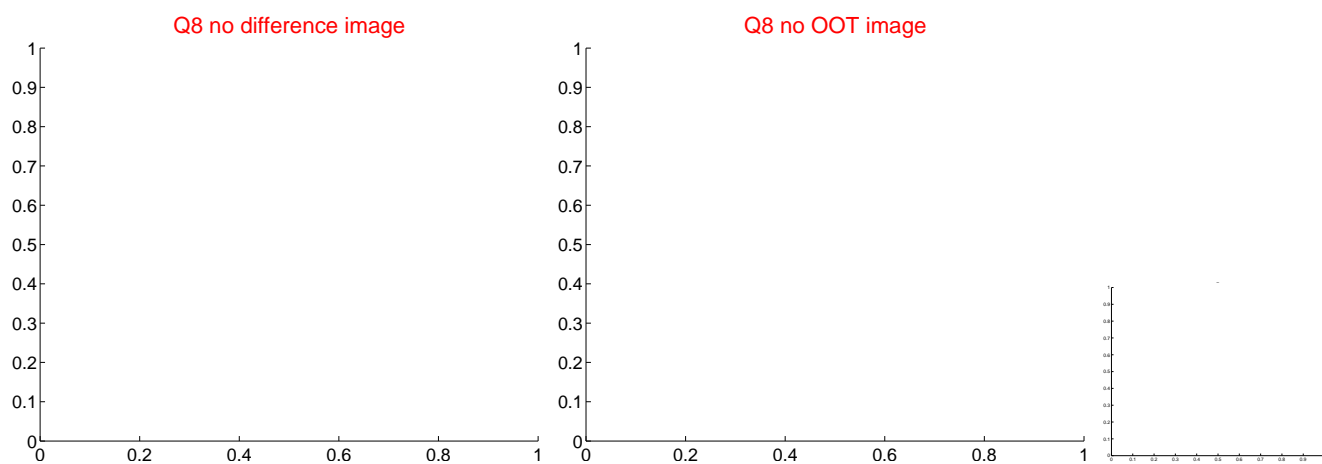
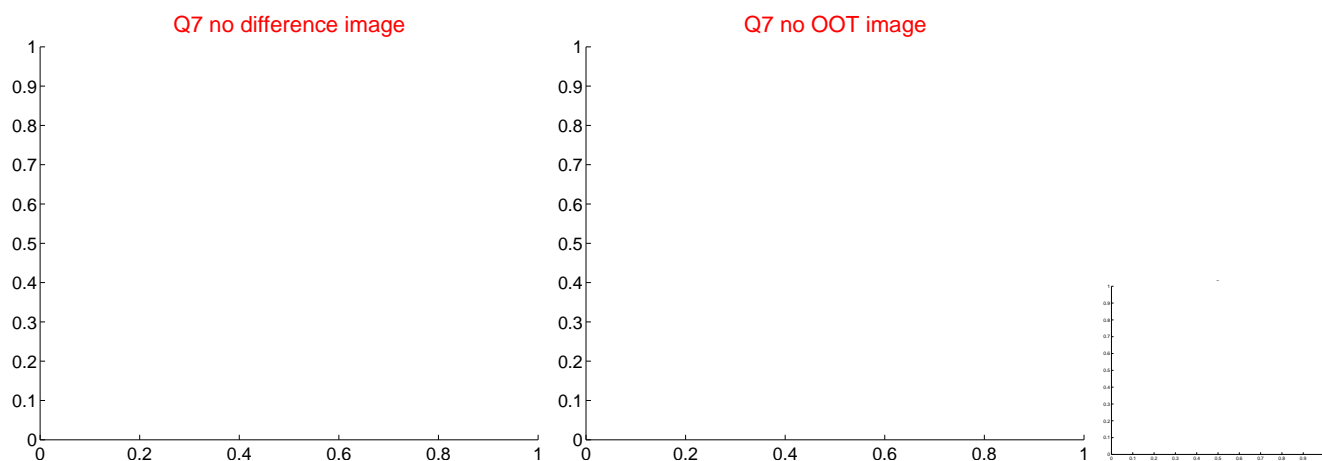
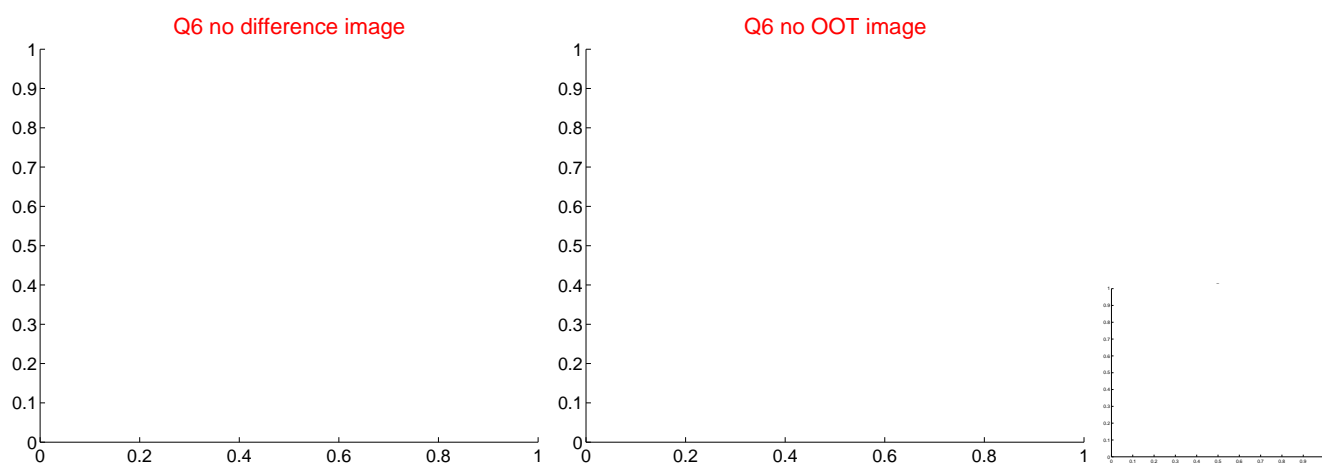
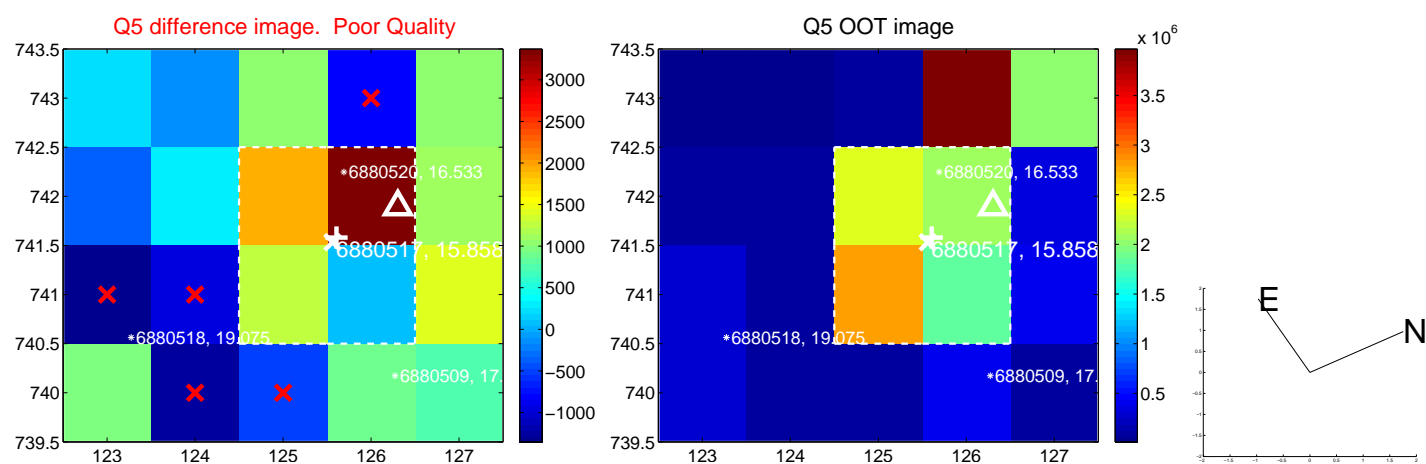


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

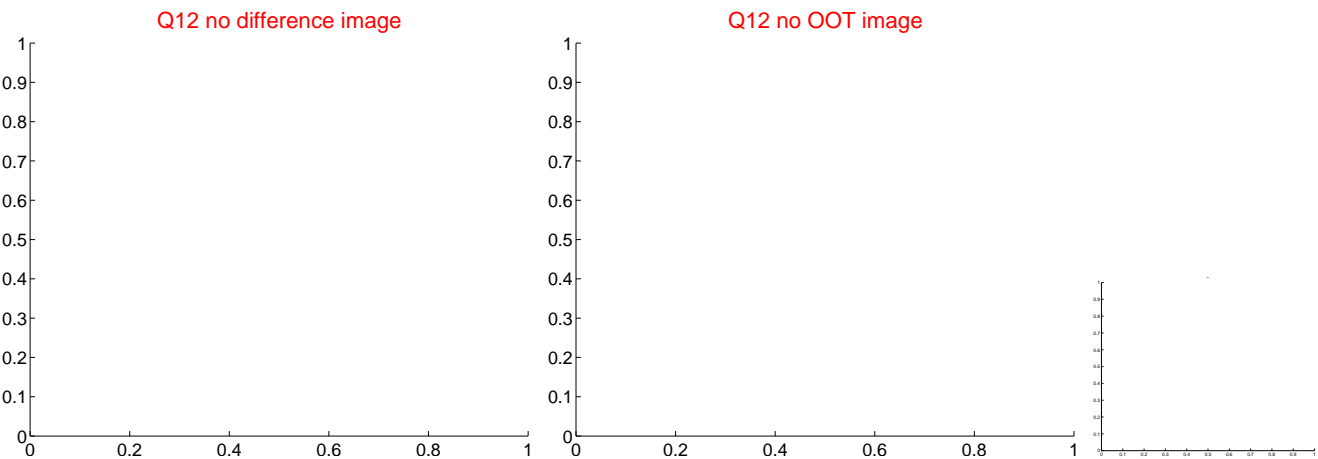
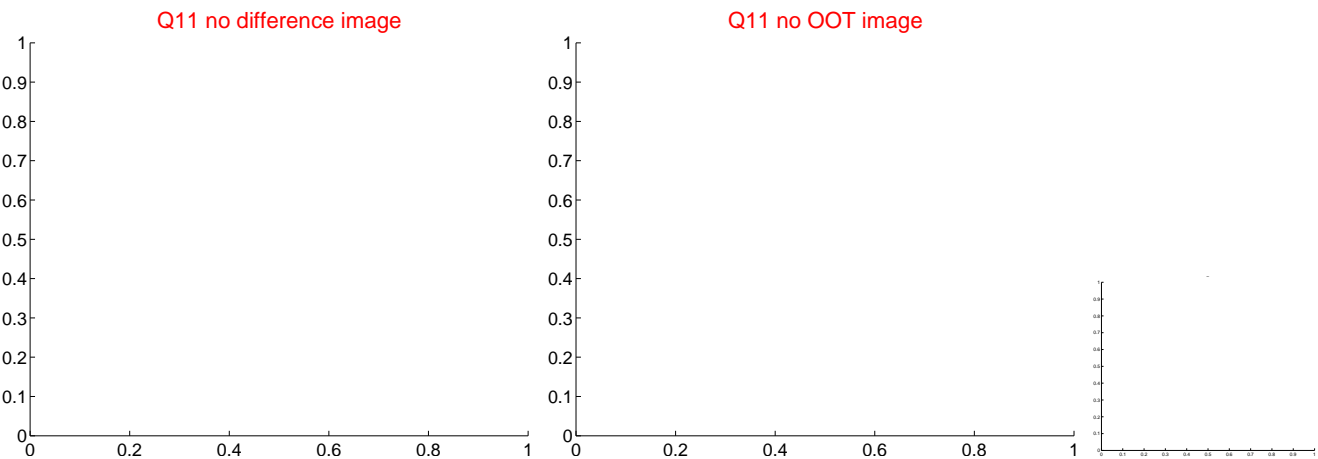
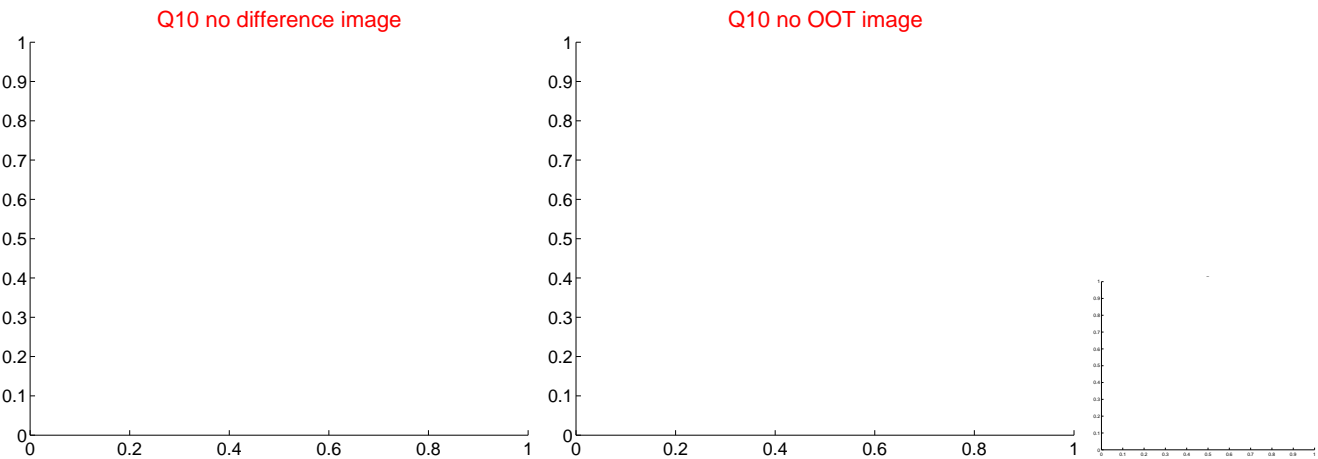
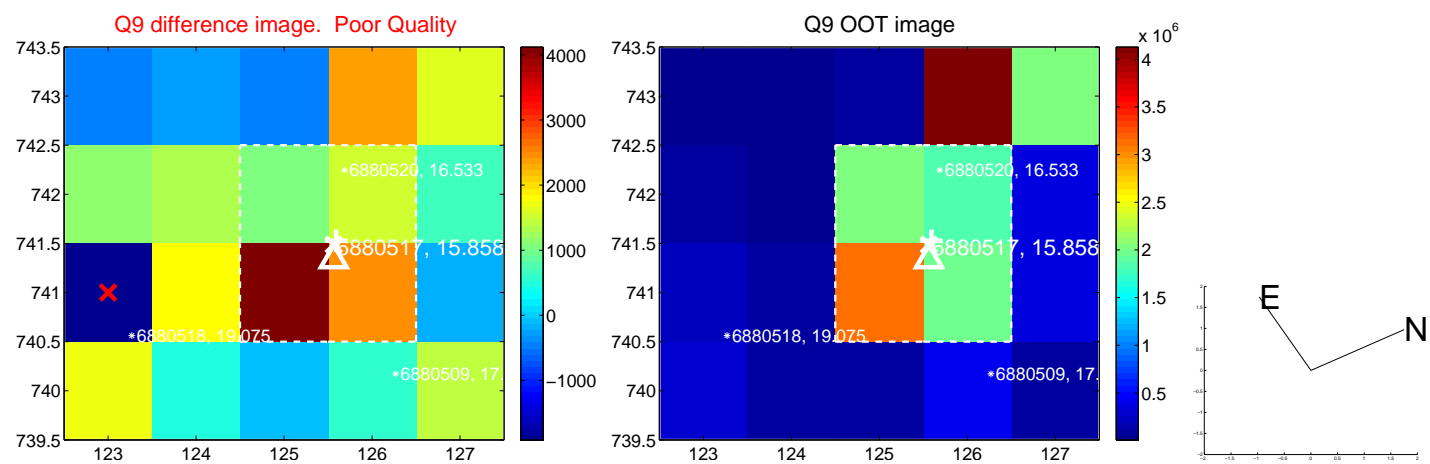
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



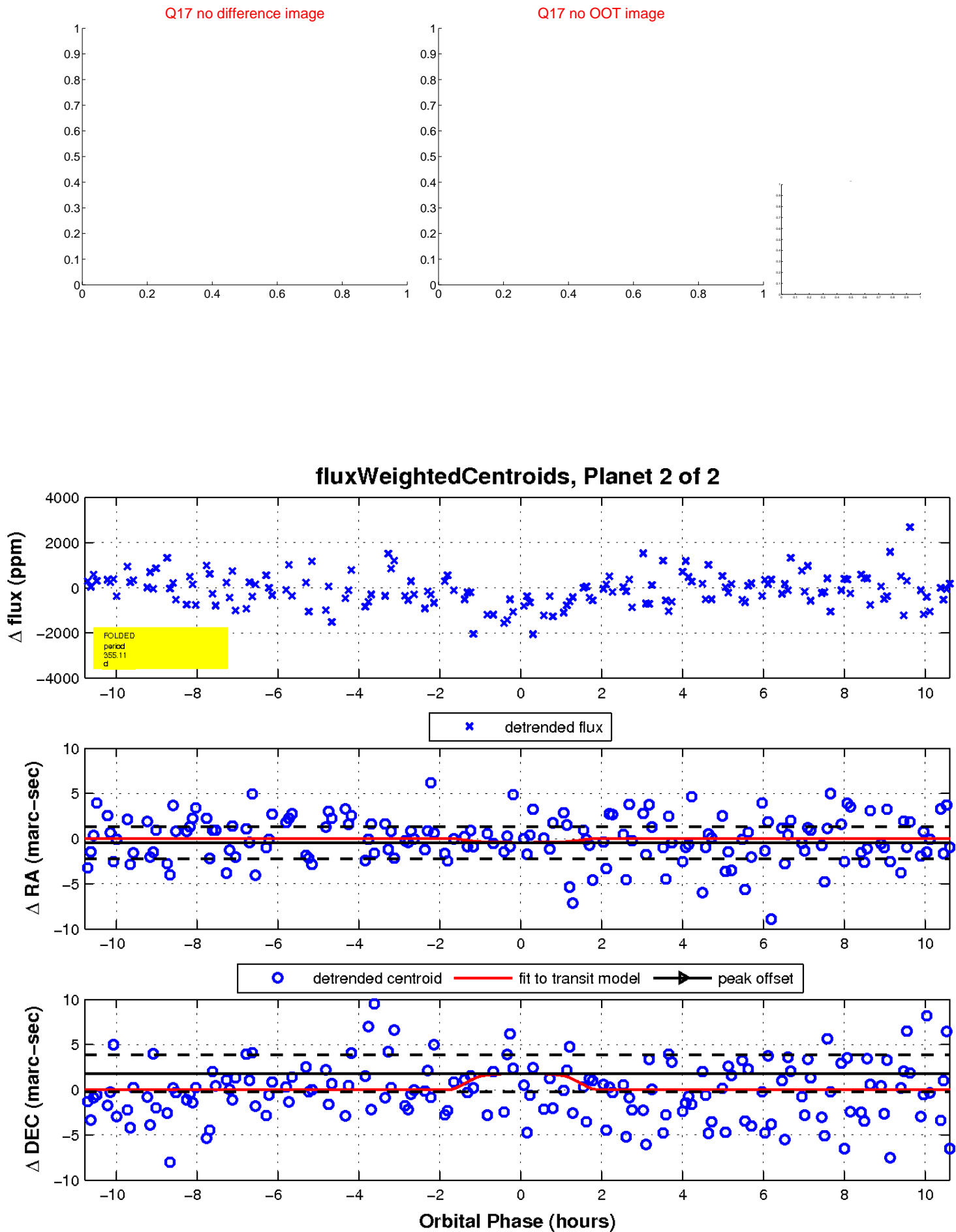
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UKIRT Image

Declination

