

KIC 007800285

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})
007800285-01	OBS	5427.01	1.065999	131.736877	5043.2	1.297	213.5	295.4	1.06	5934	9.71	3270.17
007800285-02	OBS	No	1.065998	132.271303	5364.4	1.335	306.7	343.2	1.06	5934	10.08	3270.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007800285-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—CENT_UNRESOLVED_OFFSET
007800285-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_UNRESOLVED_OFFSET

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.

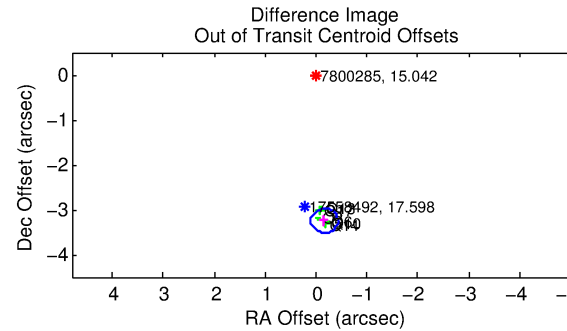
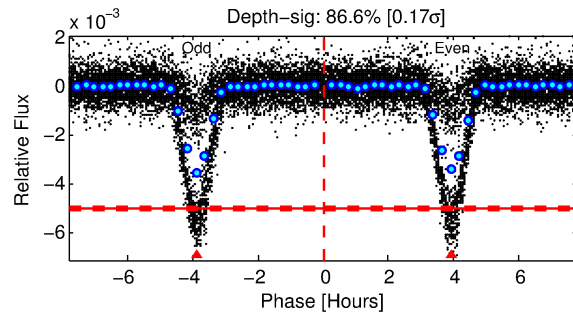
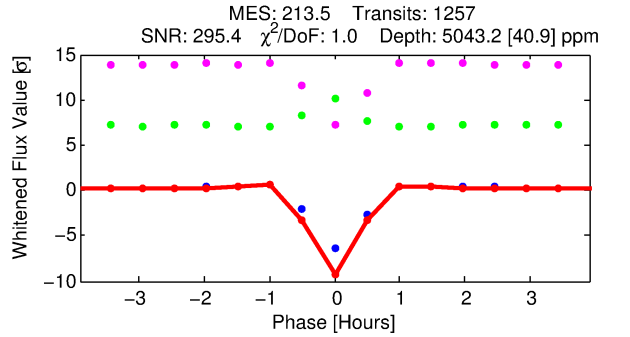
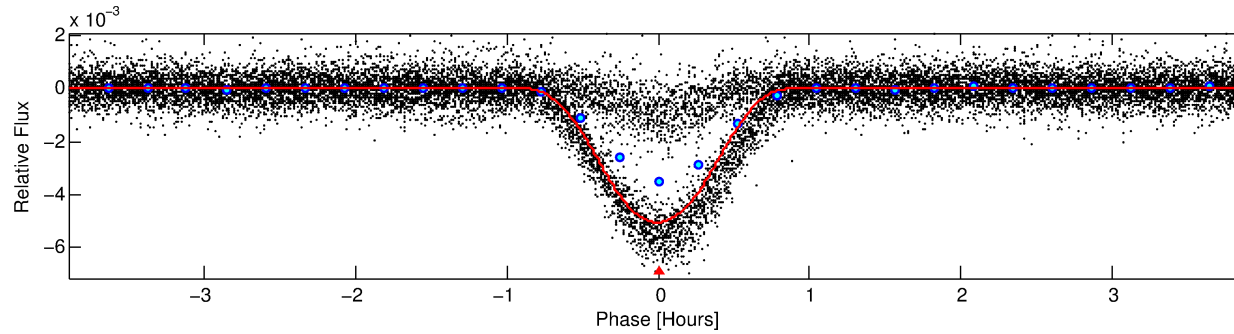
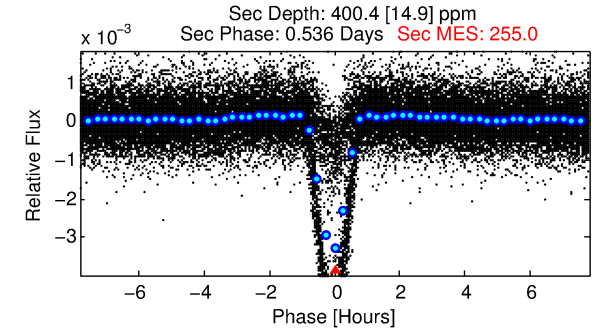
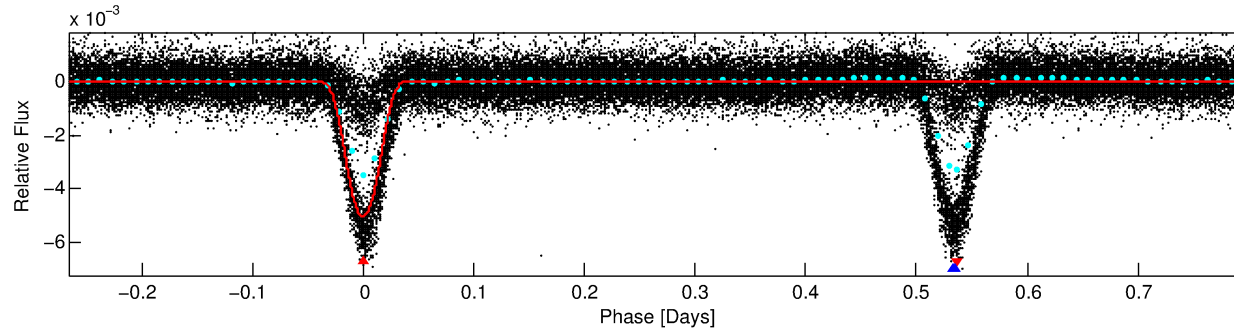
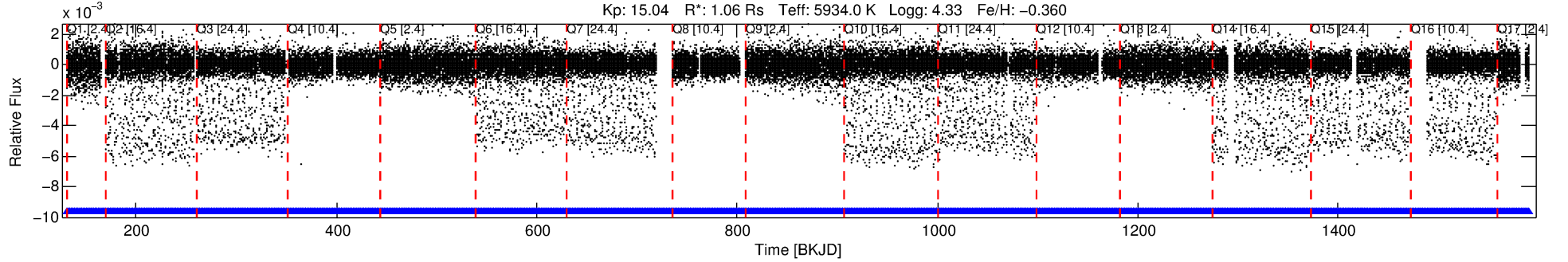
Ephemeris Match Information For 007800285-01

No Significant Match Found

DV One-Page Summary

KIC: 7800285 Candidate: 1 of 2 Period: 1.066 d
KOI: K05427 Corr: No Ephemeris Match

Kp: 15.04 R*: 1.06 Rs Teff: 5934.0 K Logg: 4.33 Fe/H: -0.360



DV Fit Results:

Period = 1.06600 [0.00000] d
Epoch = 131.7369 [0.0001] BKJD
Rp/R* = 0.0836 [0.0035]
a/R* = 3.64 [0.10]
b = 0.93 [0.01]
Seff = 3270.17 [1190.49]
Teq = 1928 [175] K
Rp = 9.71 [2.85] Re
a = 0.0196 [0.0047] AU
Ag = 0.90 [0.32] [-0.32σ]
Teffp = 2902 [110] K [4.70σ]

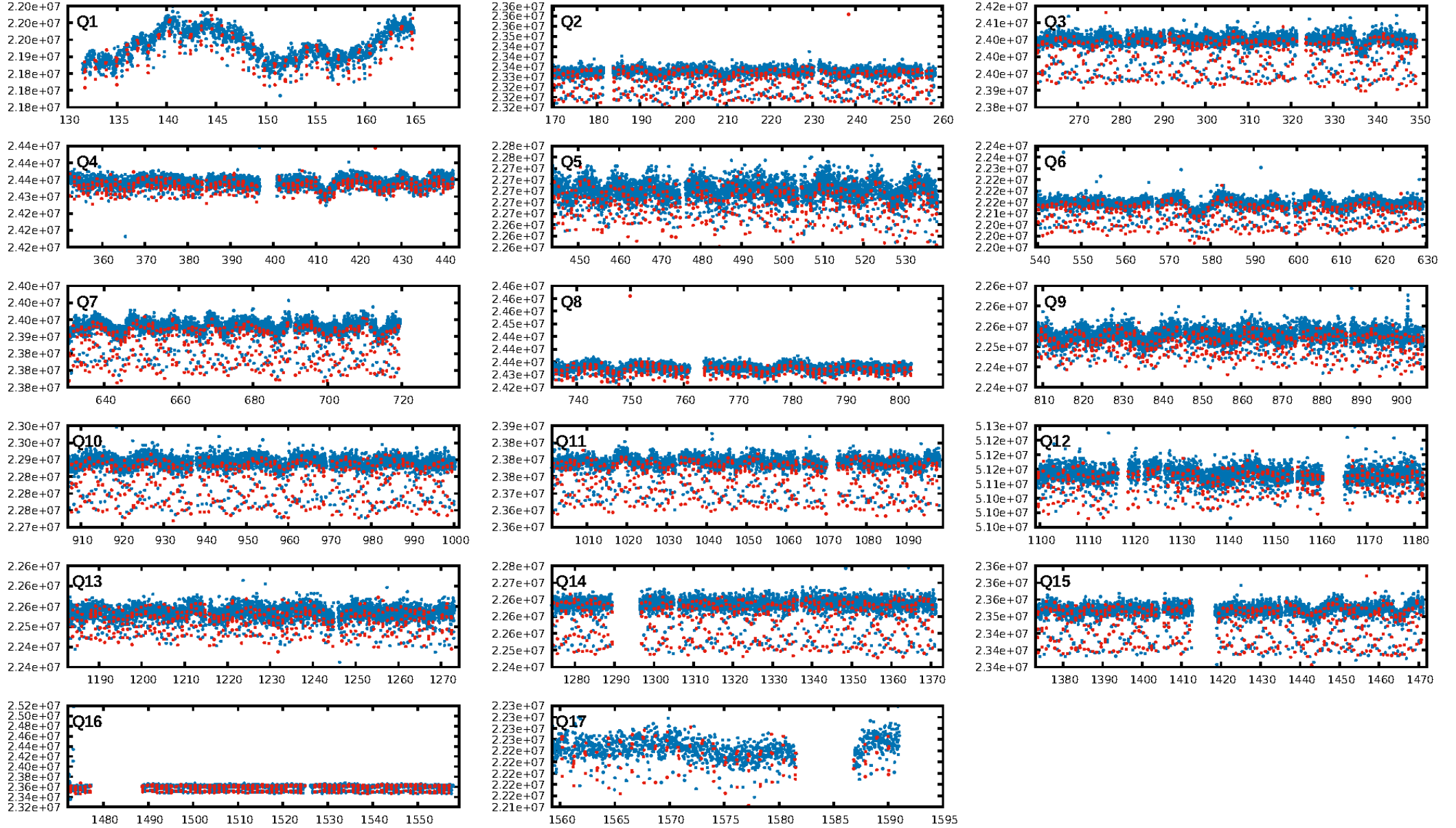
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1200/1200]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 3.271 arcsec [97.55σ]
OotOffset-rm: 3.253 arcsec [36.52σ]
KicOffset-rm: 4.390 arcsec [11.69σ]
OotOffset-st: 4/0/0/2 [6]
KicOffset-st: 4/3/0/3 [10]
DiffImageQuality-fgm: 0.80 [8/10]
DiffImageOverlap-fno: 1.00 [17/17]

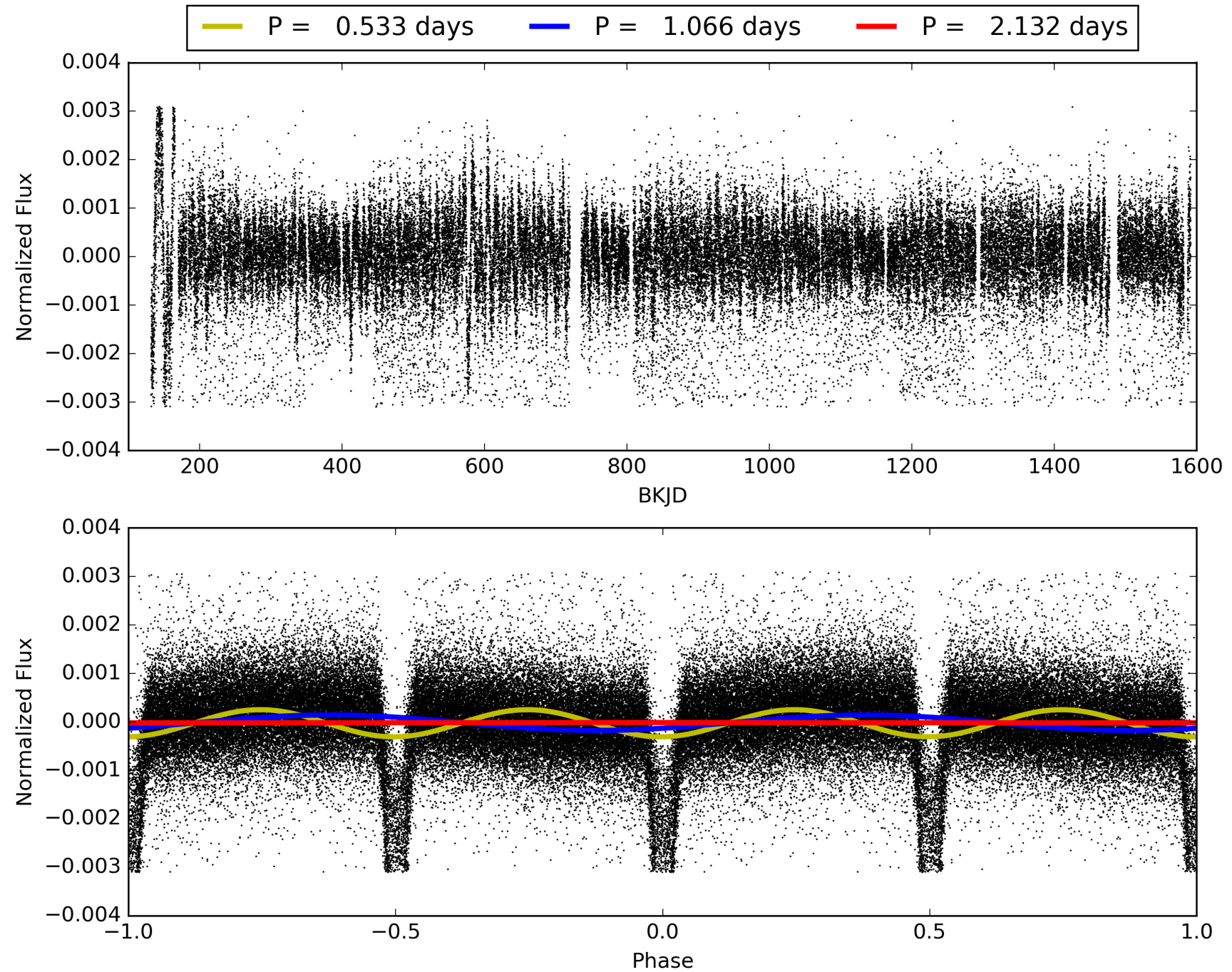
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 18:14:42 Z

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

TCE 007800285-01, PDC Light Curves

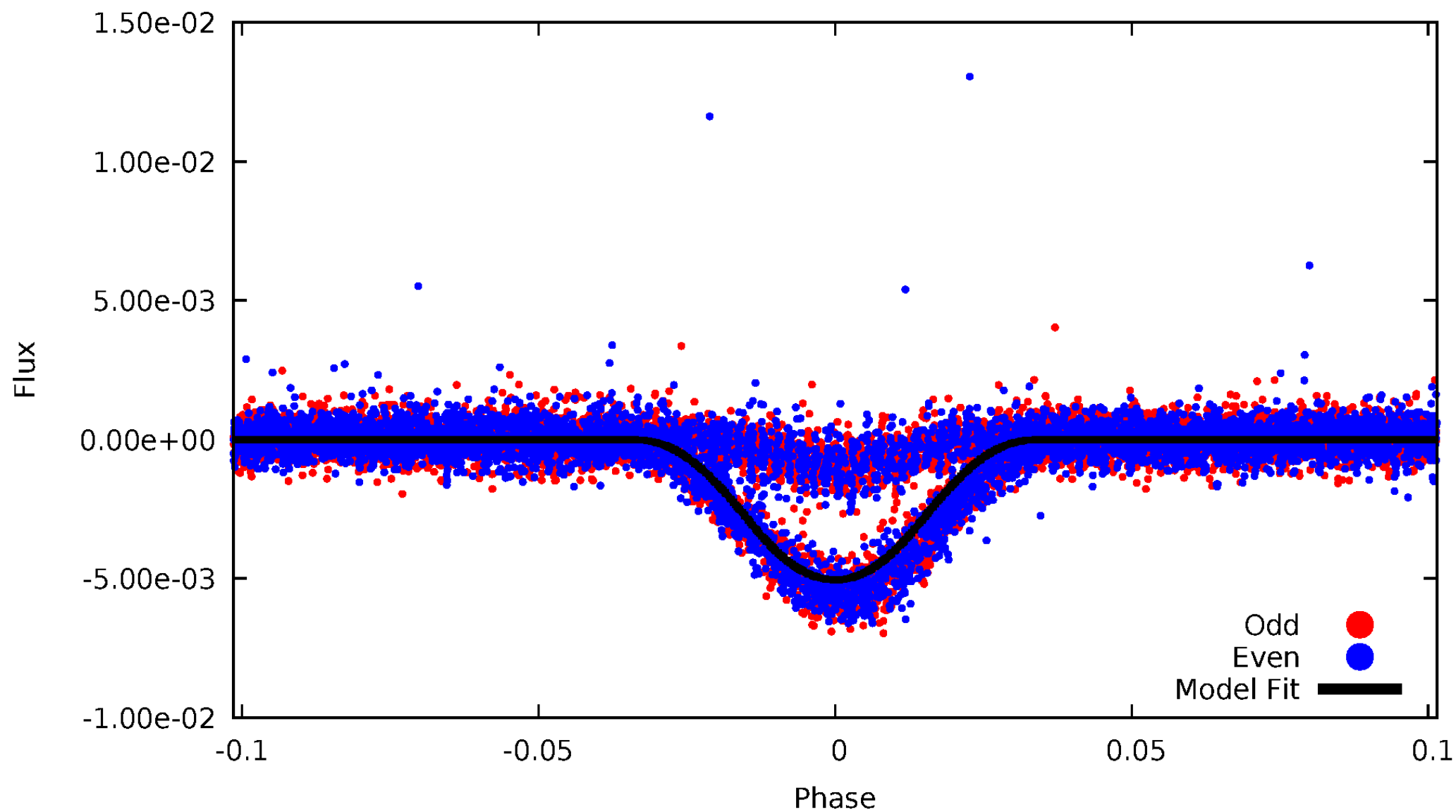


TCE 007800285-01



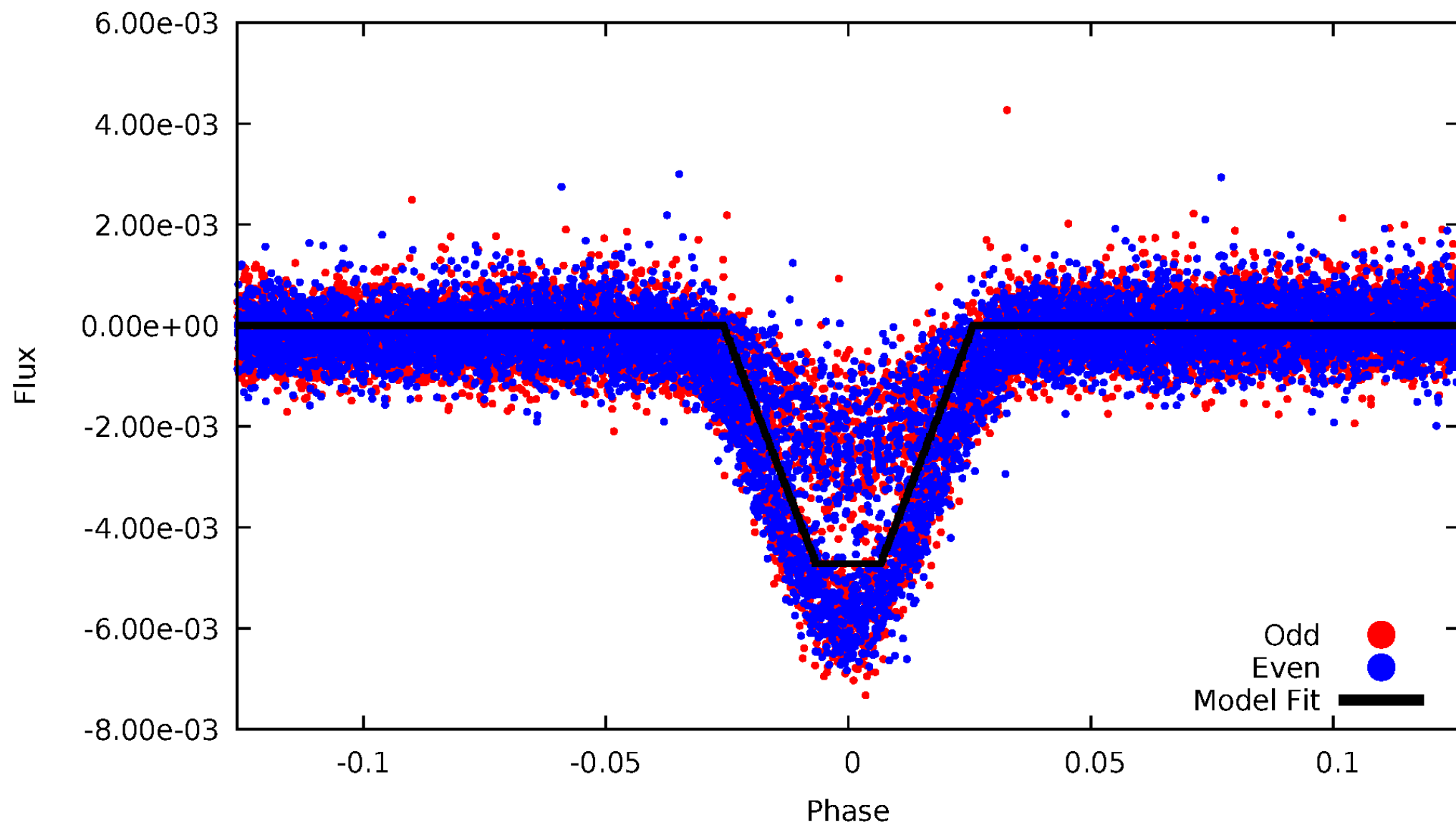
DV Odd/Even

TCE 007800285-01



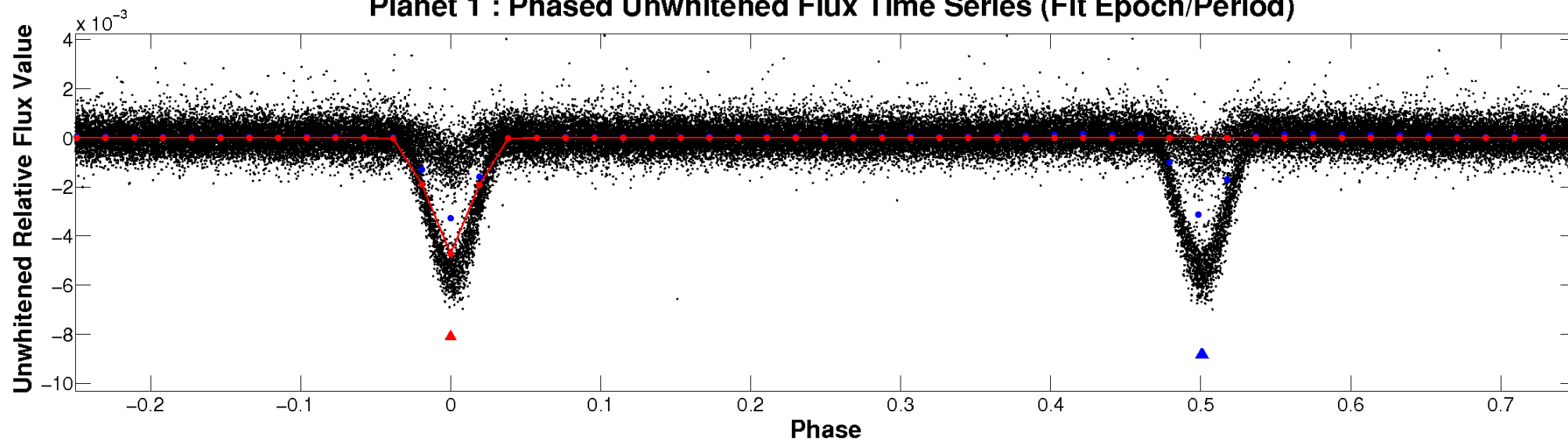
ALT Odd/Even

TCE 007800285-01

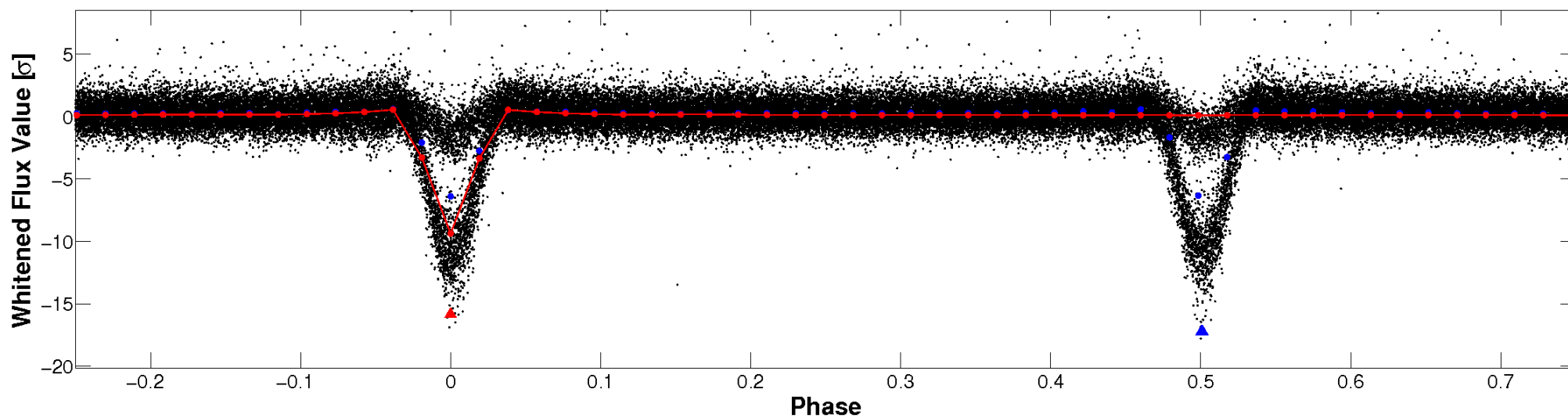


Non-Whitened Vs. Whitened Light Curve

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

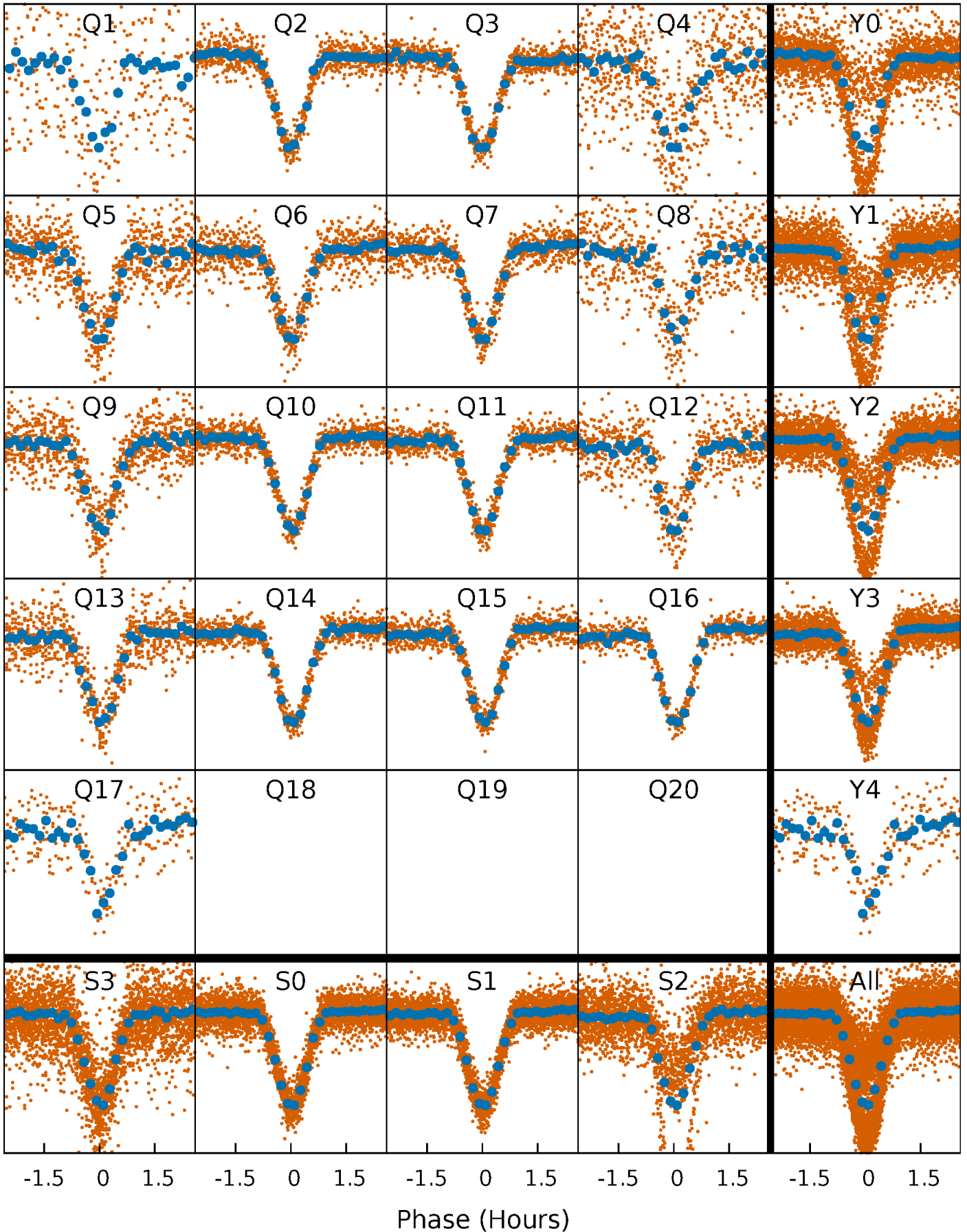


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



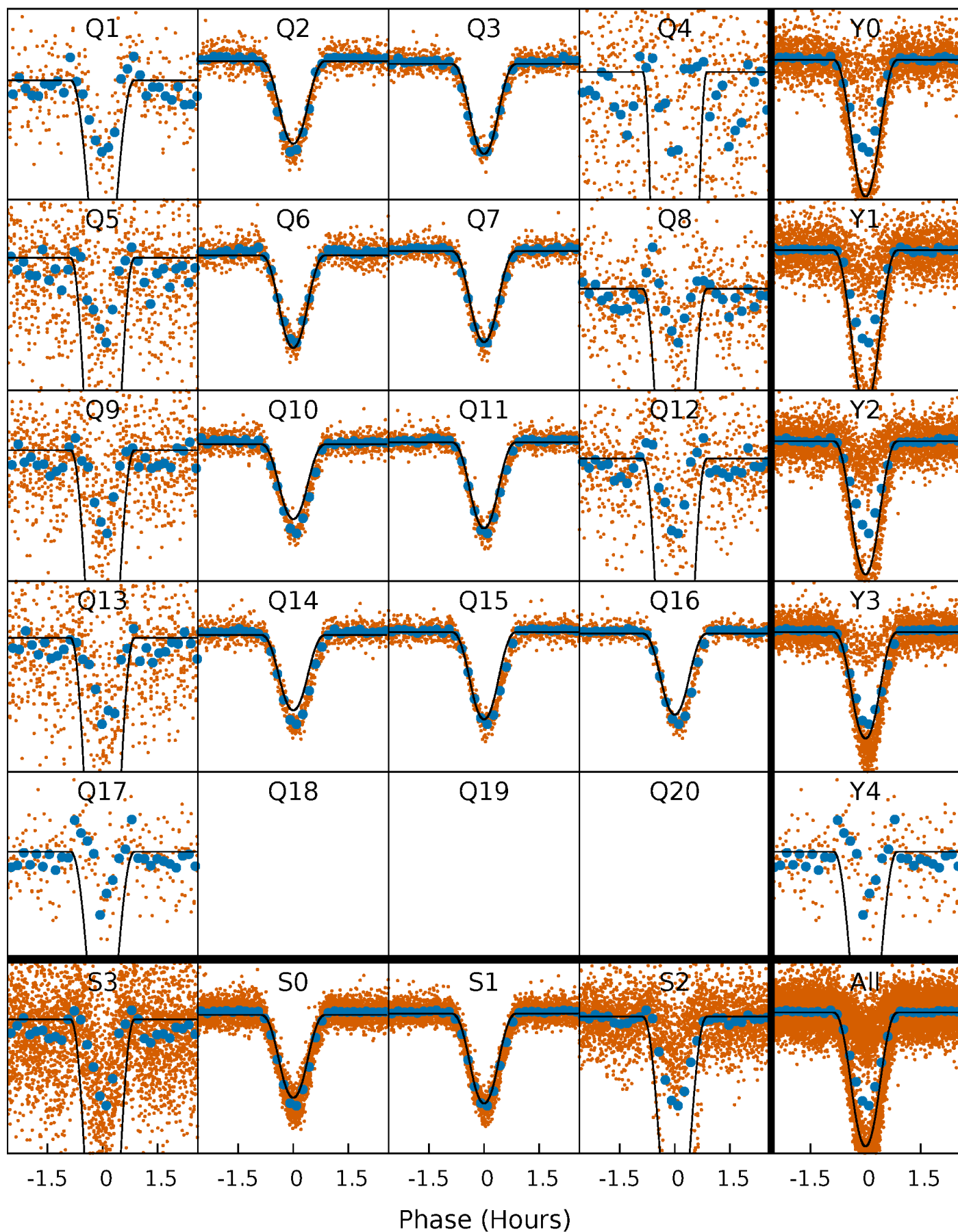
PDC Quarter-Phased Transit Curves

TCE 007800285-01 P= 1.065999 Days $T_0=131.736877$ (BKJD)



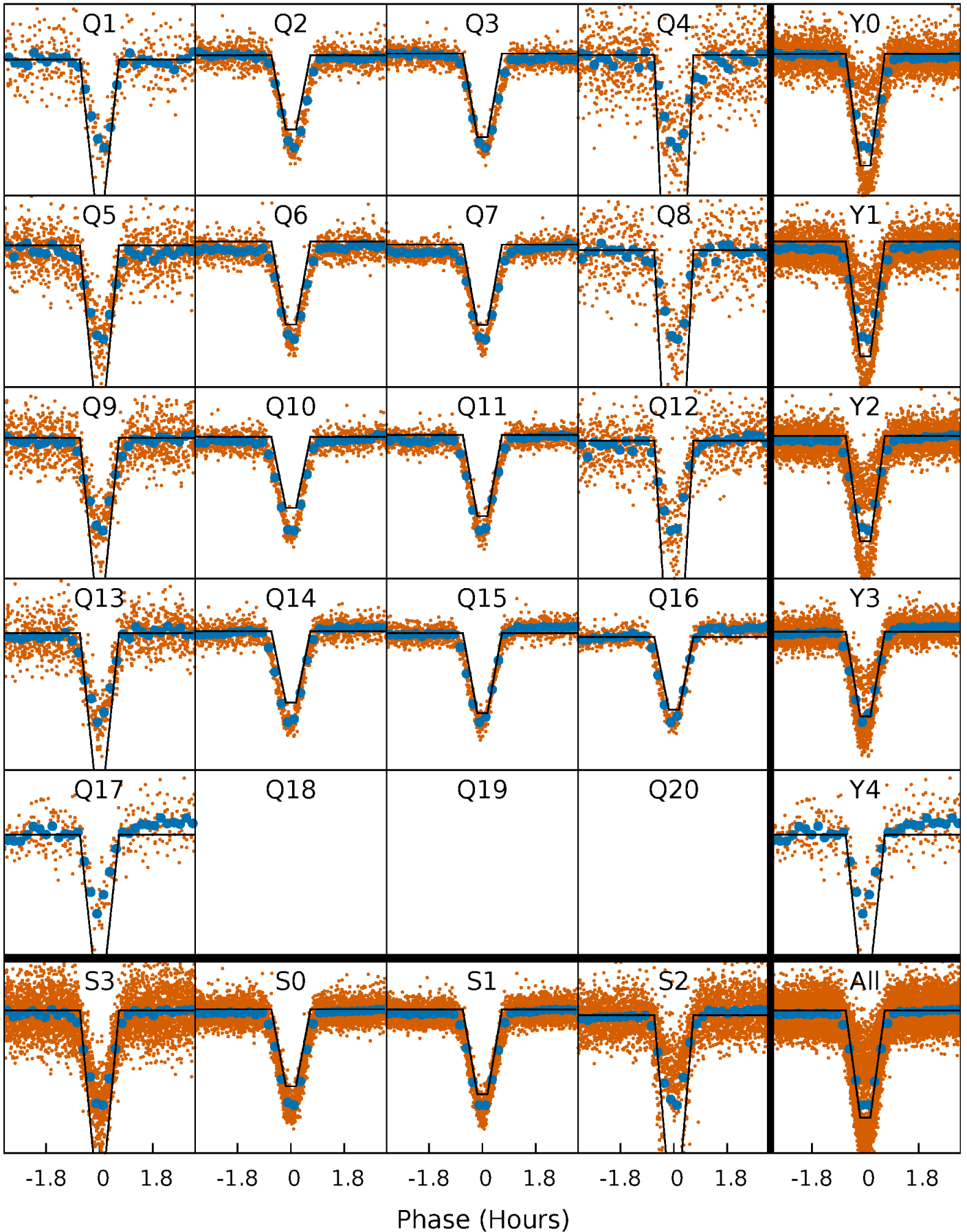
DV Quarter-Phased Transit Curves

TCE 007800285-01 P= 1.065999 Days $T_0=131.736877$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

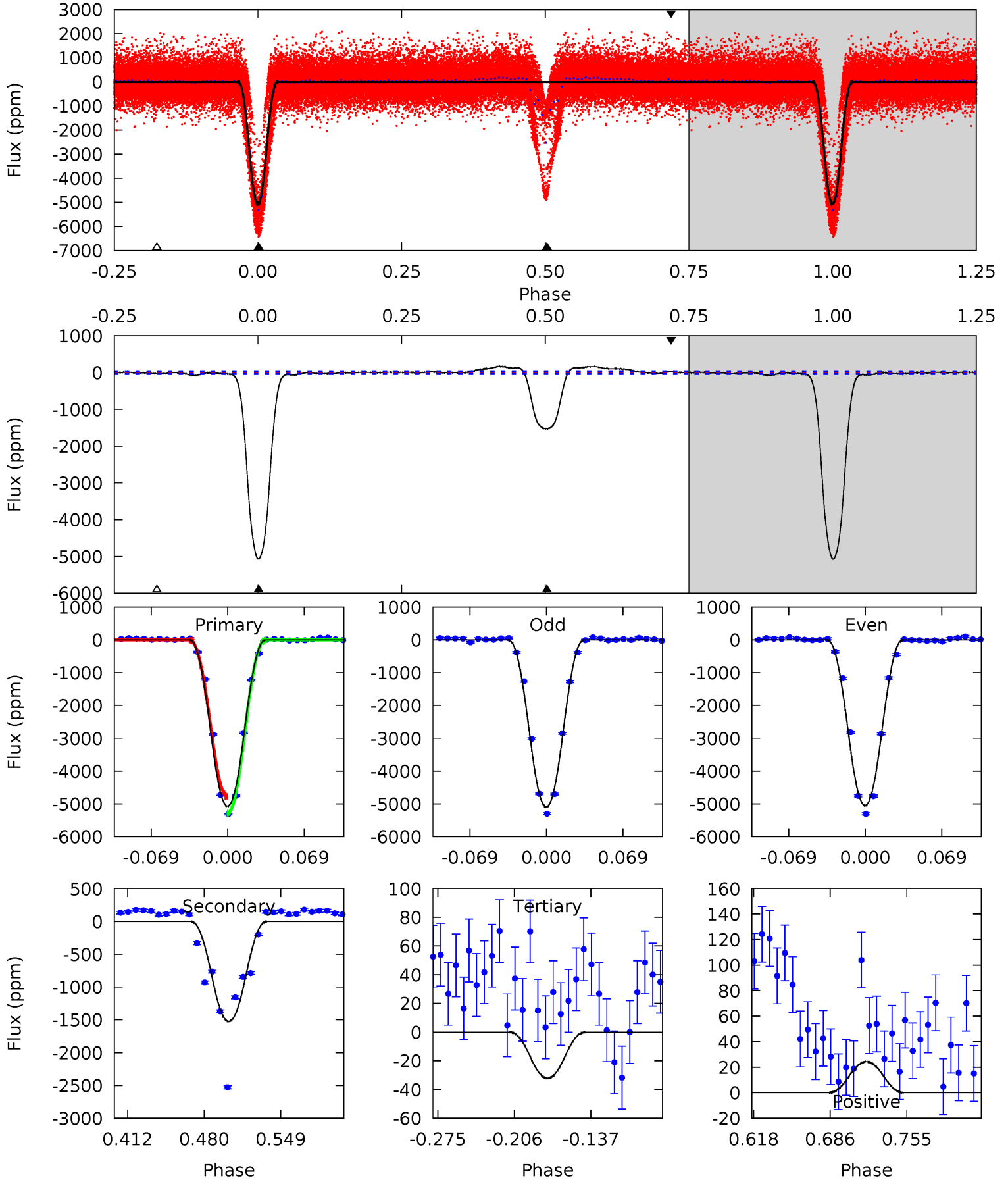
TCE 007800285-01 P= 1.066005 Days $T_0=131.733027$ (BKJD)



DV Model-Shift Uniqueness Test

007800285-01, P = 1.065999 Days, E = 130.670878 Days

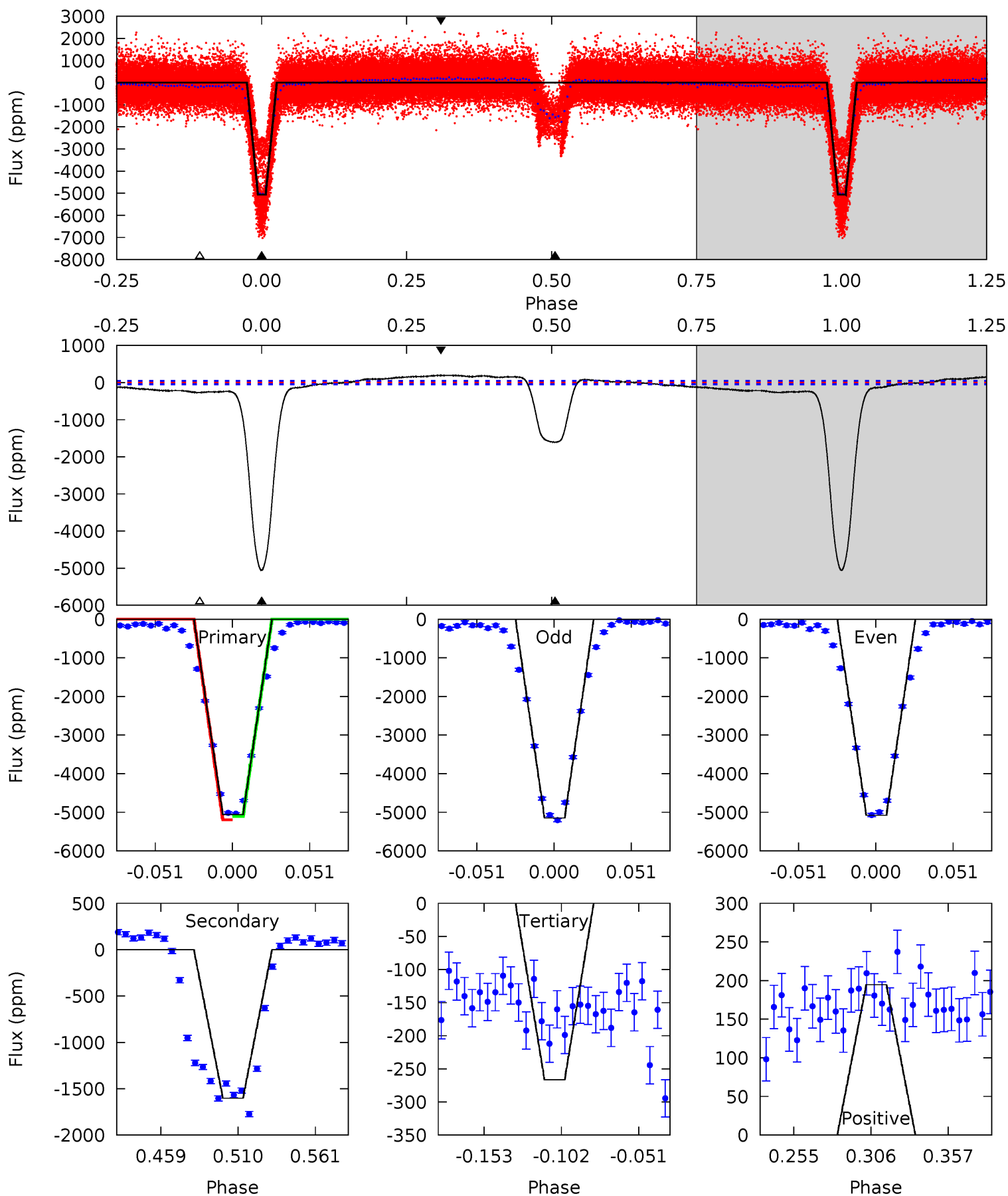
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
635.9	191.5	4.04	3.05	4.64	1.82	6.90	631.8	632.8	187.4	188.4	2.98	0.71	0.03	0



Alt Model-Shift Uniqueness Test

007800285-01, P = 1.066005 Days, E = 130.667022 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
517.5	163.8	27.3	19.9	4.70	1.95	15.0	490.2	497.6	136.6	143.9	3.56	0.84	0.04	4.65



Stellar Parameters For KIC 007800285

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5934^{+160}_{-178}	$4.331^{+0.167}_{-0.185}$	$-0.360^{+0.300}_{-0.300}$	$1.064^{+0.309}_{-0.206}$	$0.885^{+0.130}_{-0.080}$	$1.036^{+0.832}_{-0.503}$
	+3%/-3%	+4%/-4%	+83%/-83%	+29%/-19%	+15%/-9%	+80%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007800285-01 / KOI 5427.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1527 ± 8	$9.80^{+1.53}_{-1.18}$	2699^{+195}_{-170}	4217^{+113}_{-117}	$3.403^{+0.933}_{-0.832}$
Alt.	-1602 ± 10	$8.04^{+1.36}_{-1.02}$	2697^{+201}_{-180}	4612^{+153}_{-145}	$5.309^{+1.523}_{-1.323}$

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

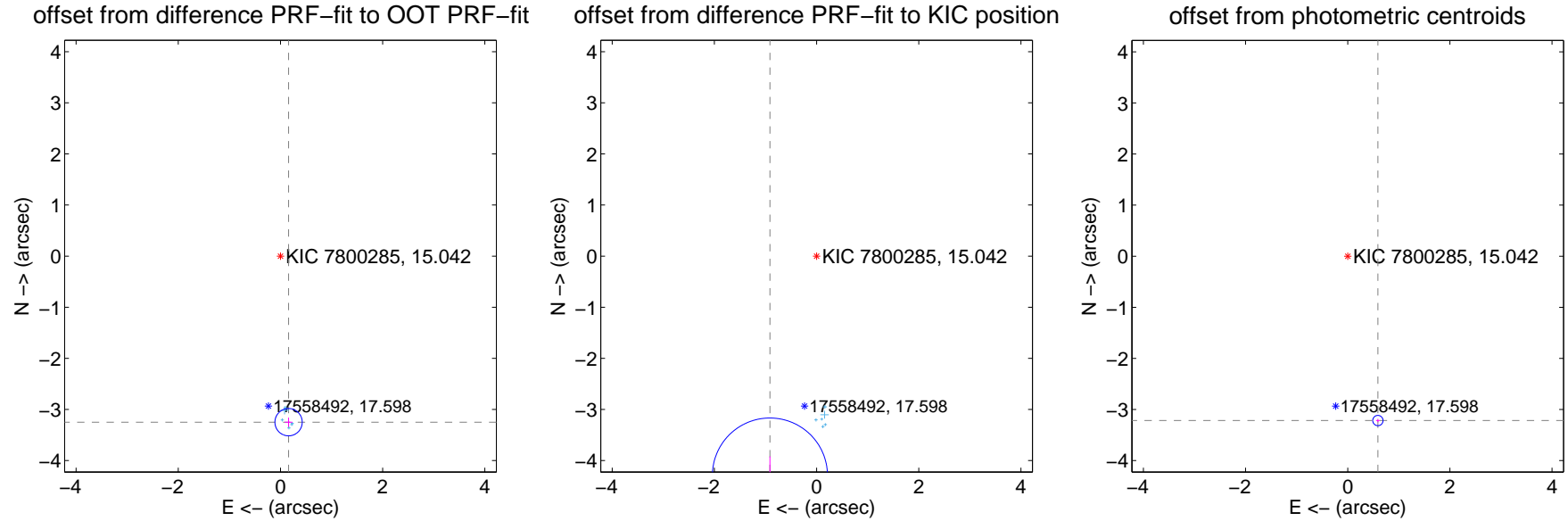
DV Centroid Data

Supplemental centroid analysis for 007800285-01. Kepler magnitude: 15.04. Transit SNR 295.37

There are 8 quarters with good PRF difference image offsets

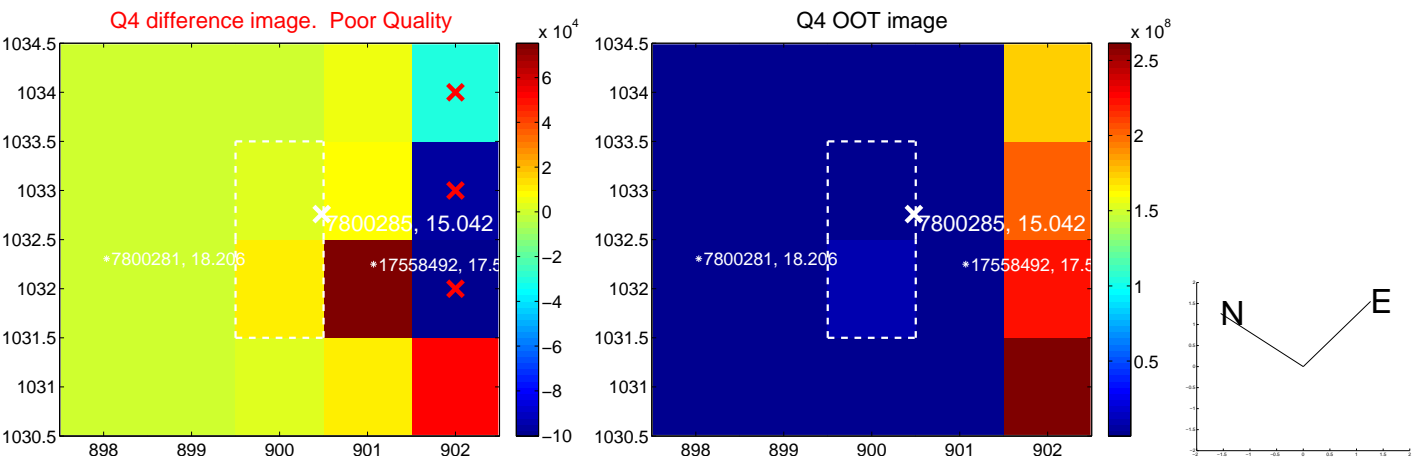
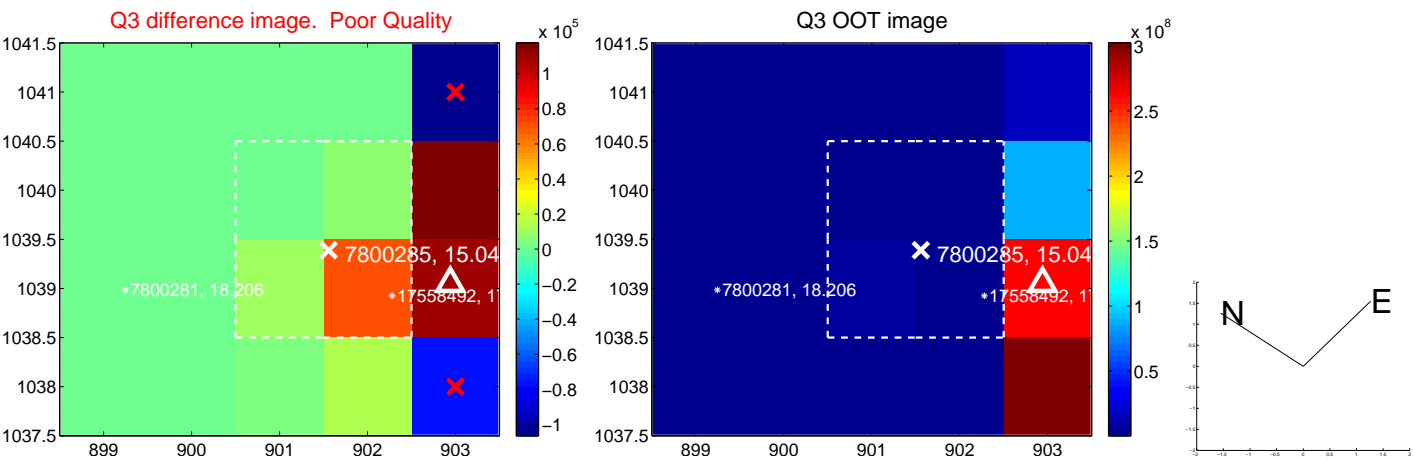
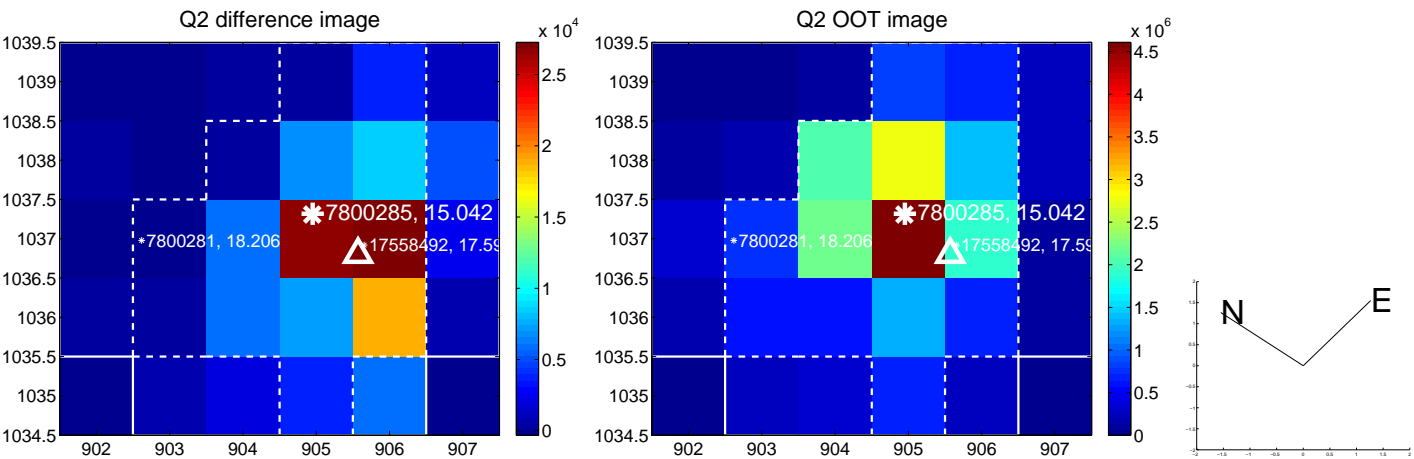
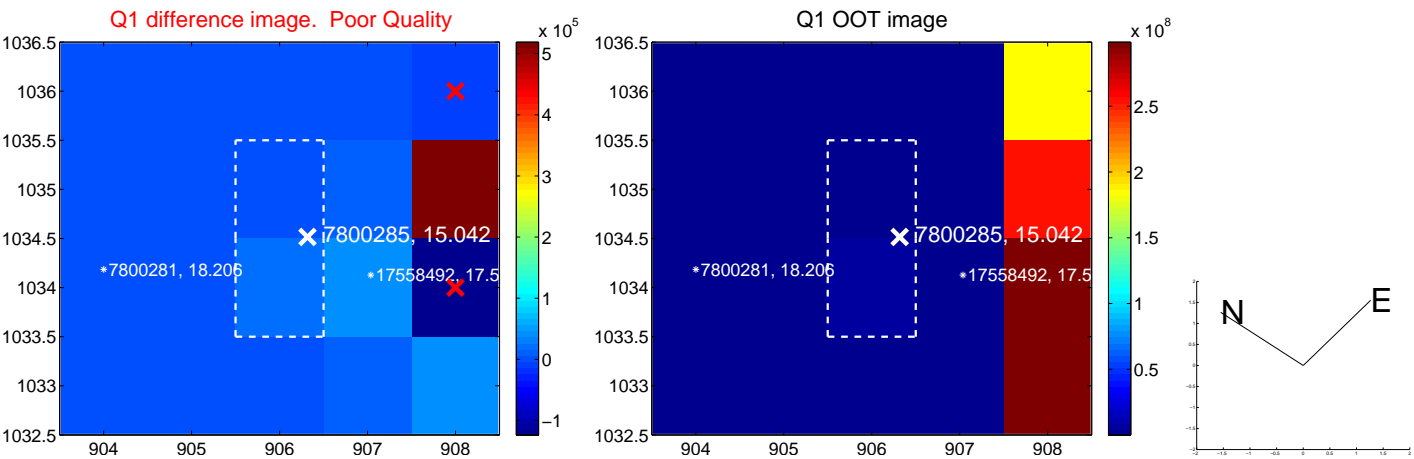
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.253 ± 0.089	36.52	-0.159 ± 0.076	-3.250 ± 0.089
PRF-fit source offset from KIC position	4.390 ± 0.375	11.69	0.913 ± 0.394	-4.294 ± 0.375
photometric centroid source offset	3.27 ± 0.03	97.55	-0.59 ± 0.04	-3.22 ± 0.03

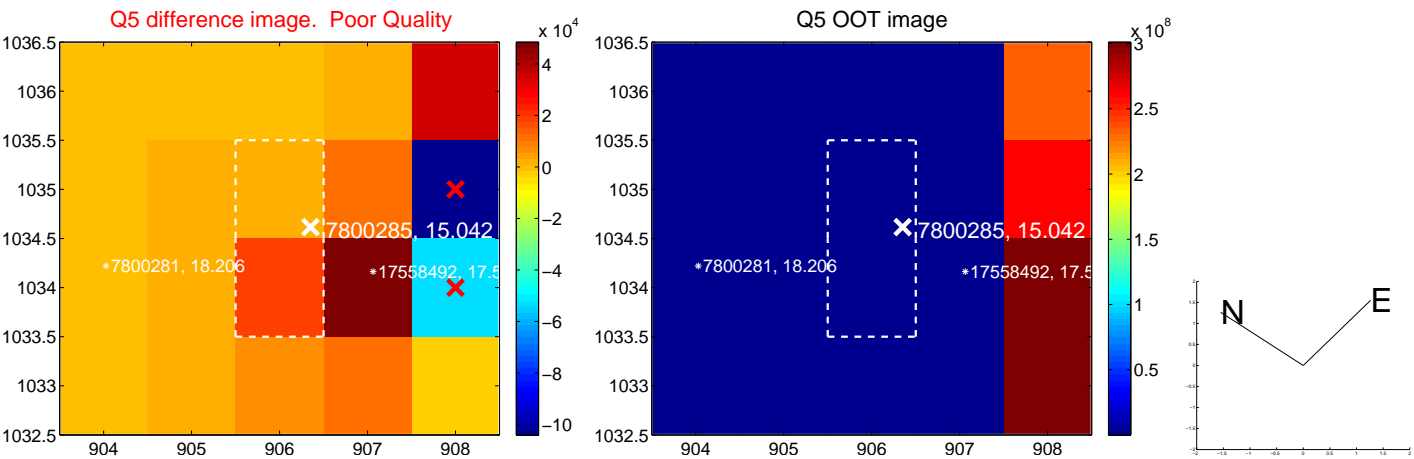


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

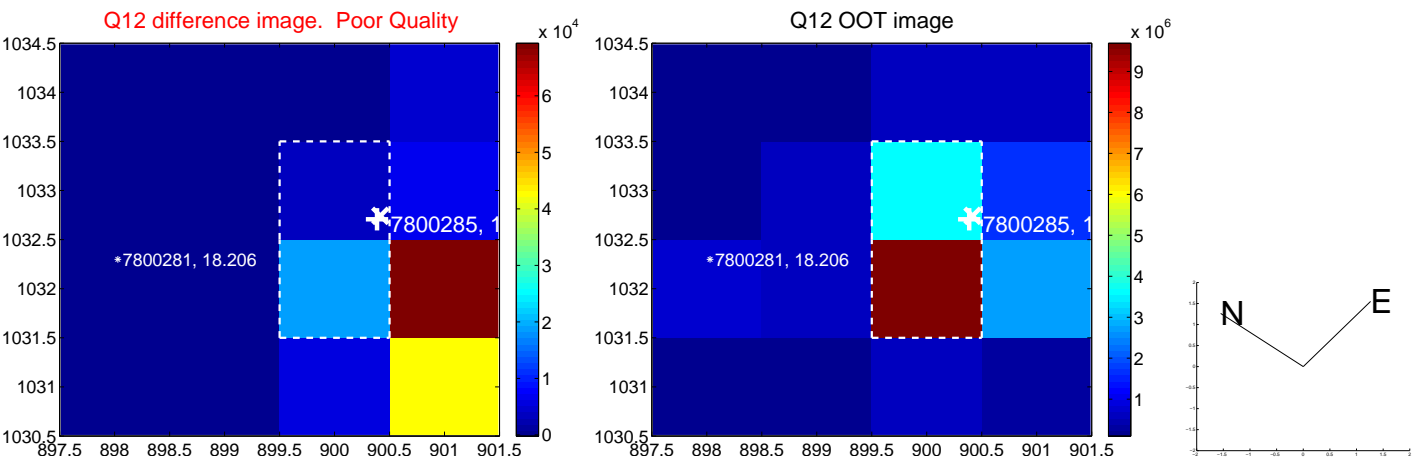
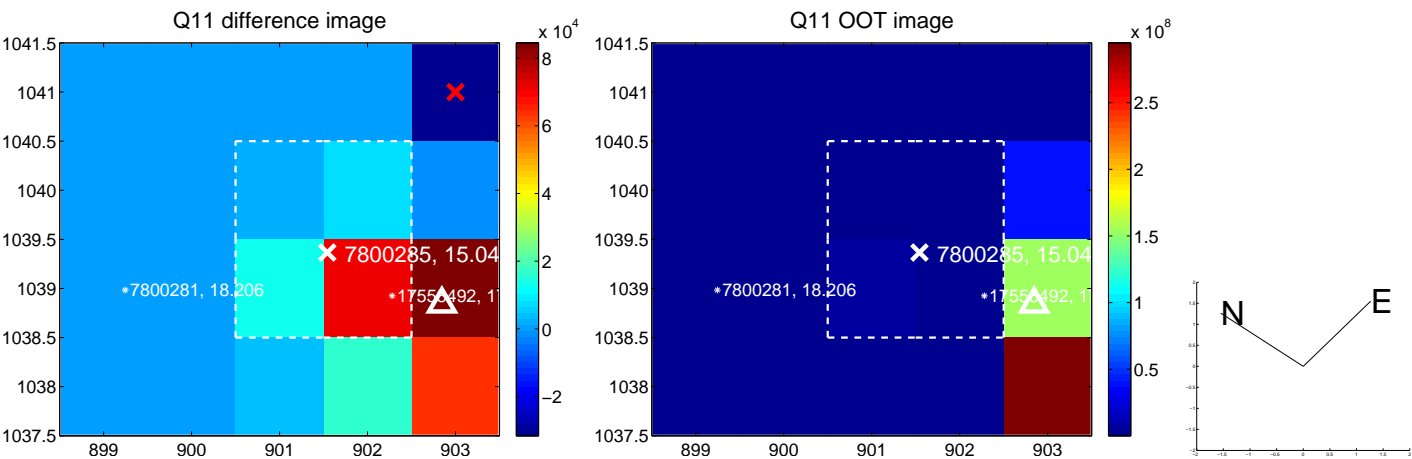
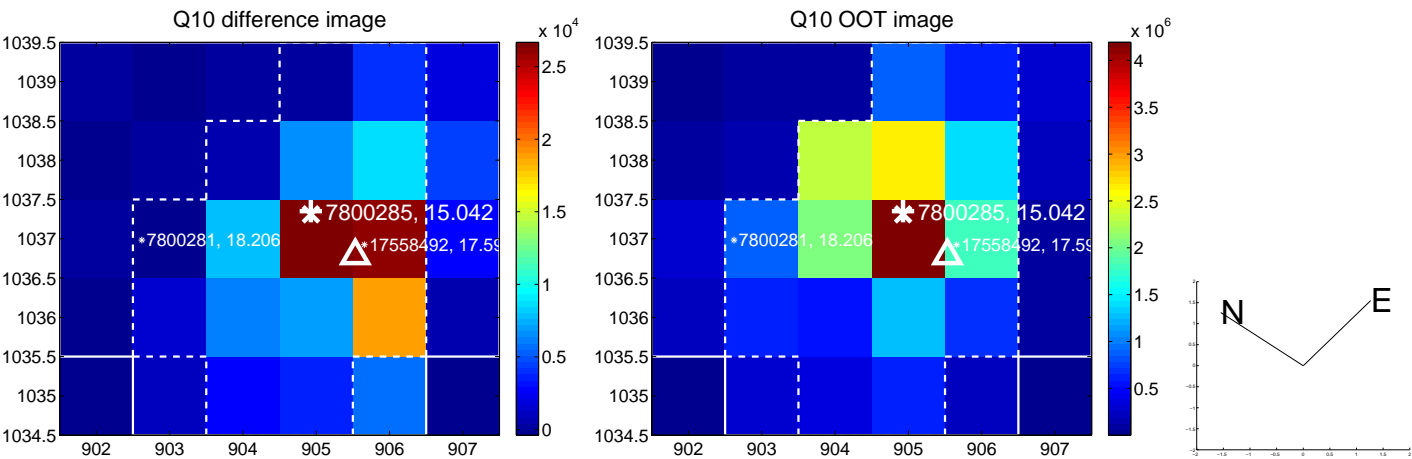
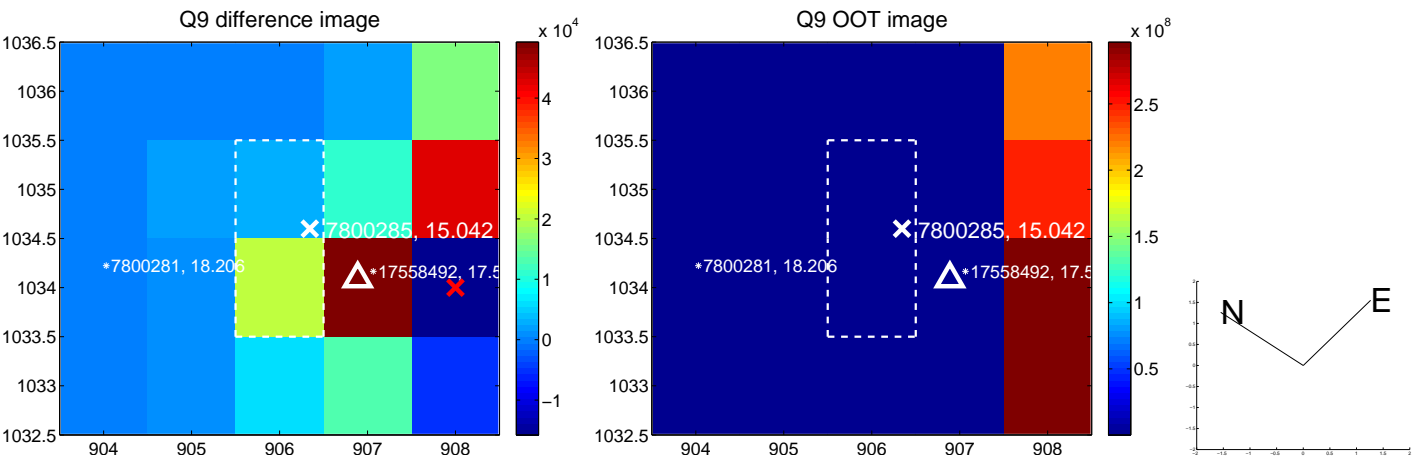
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



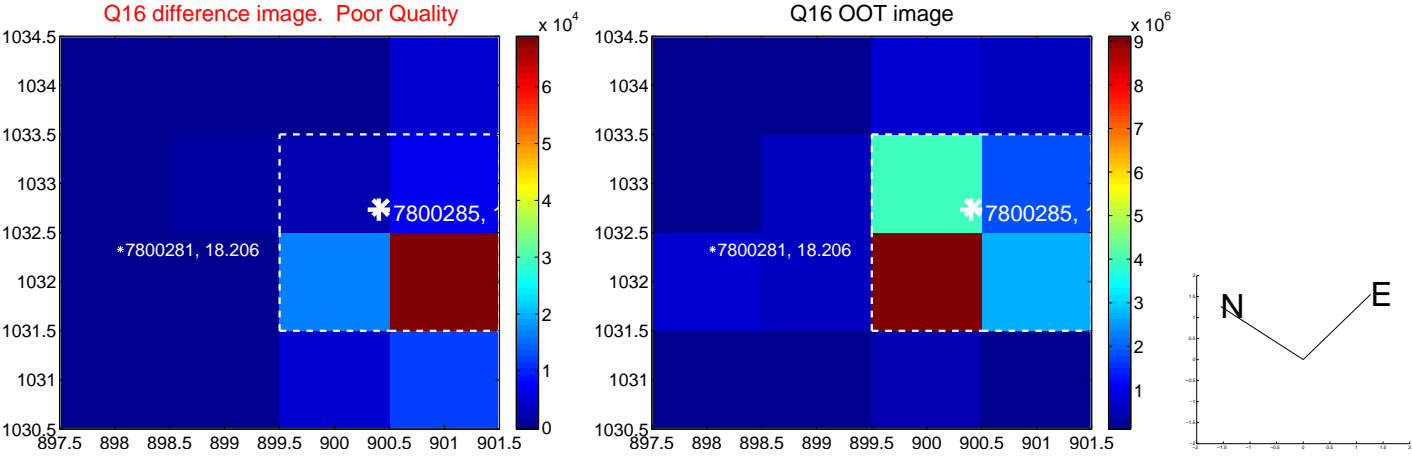
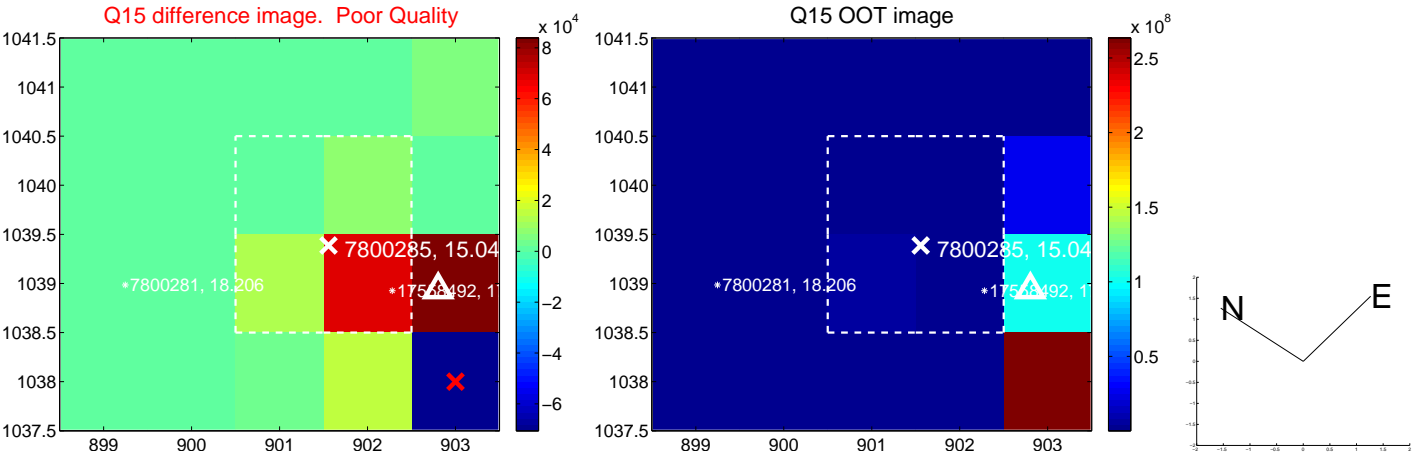
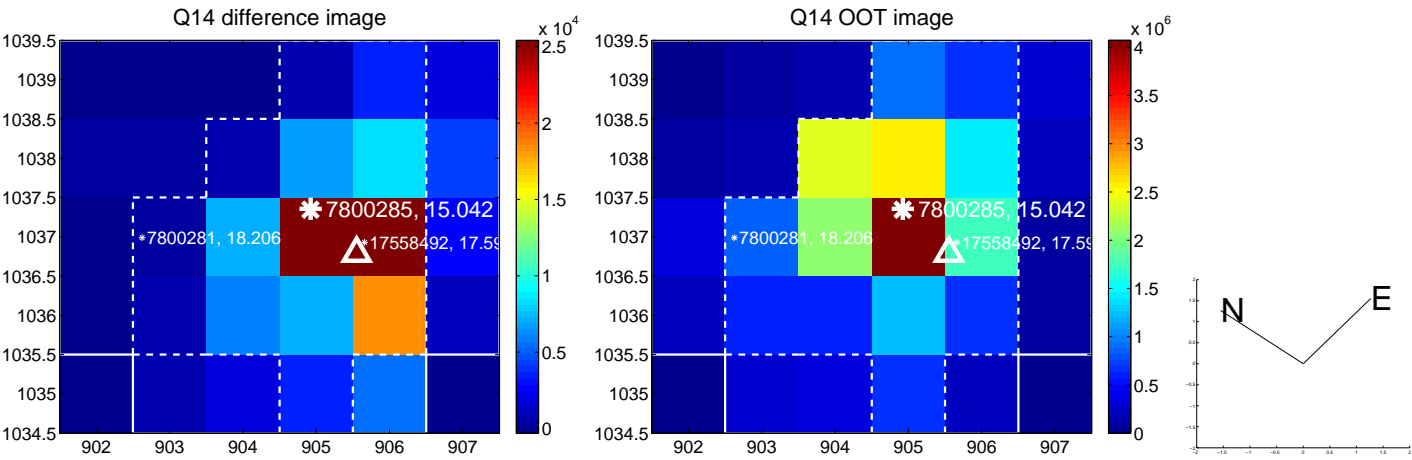
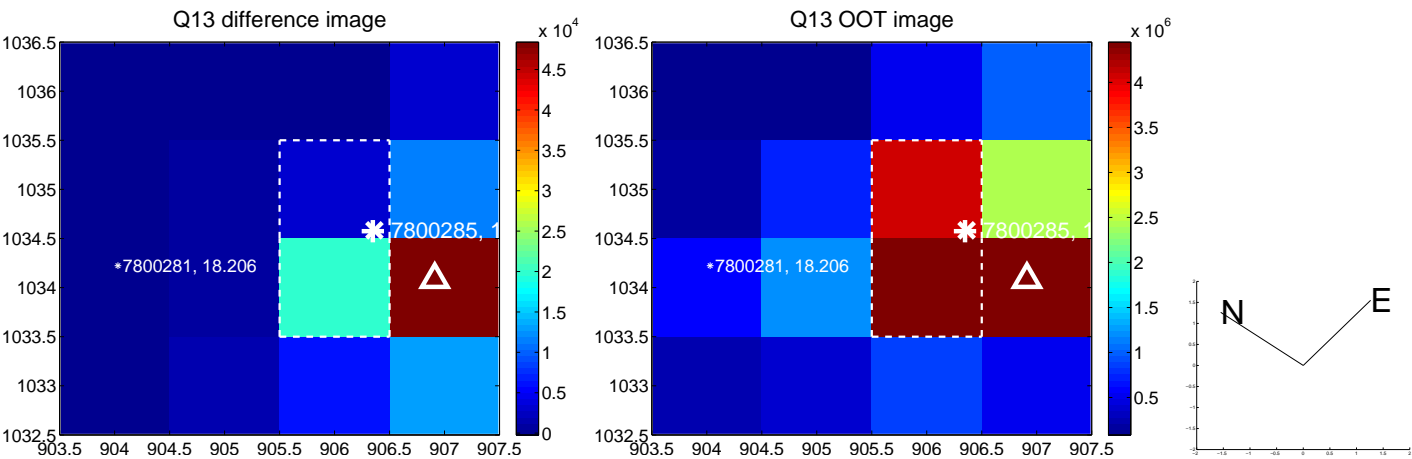
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



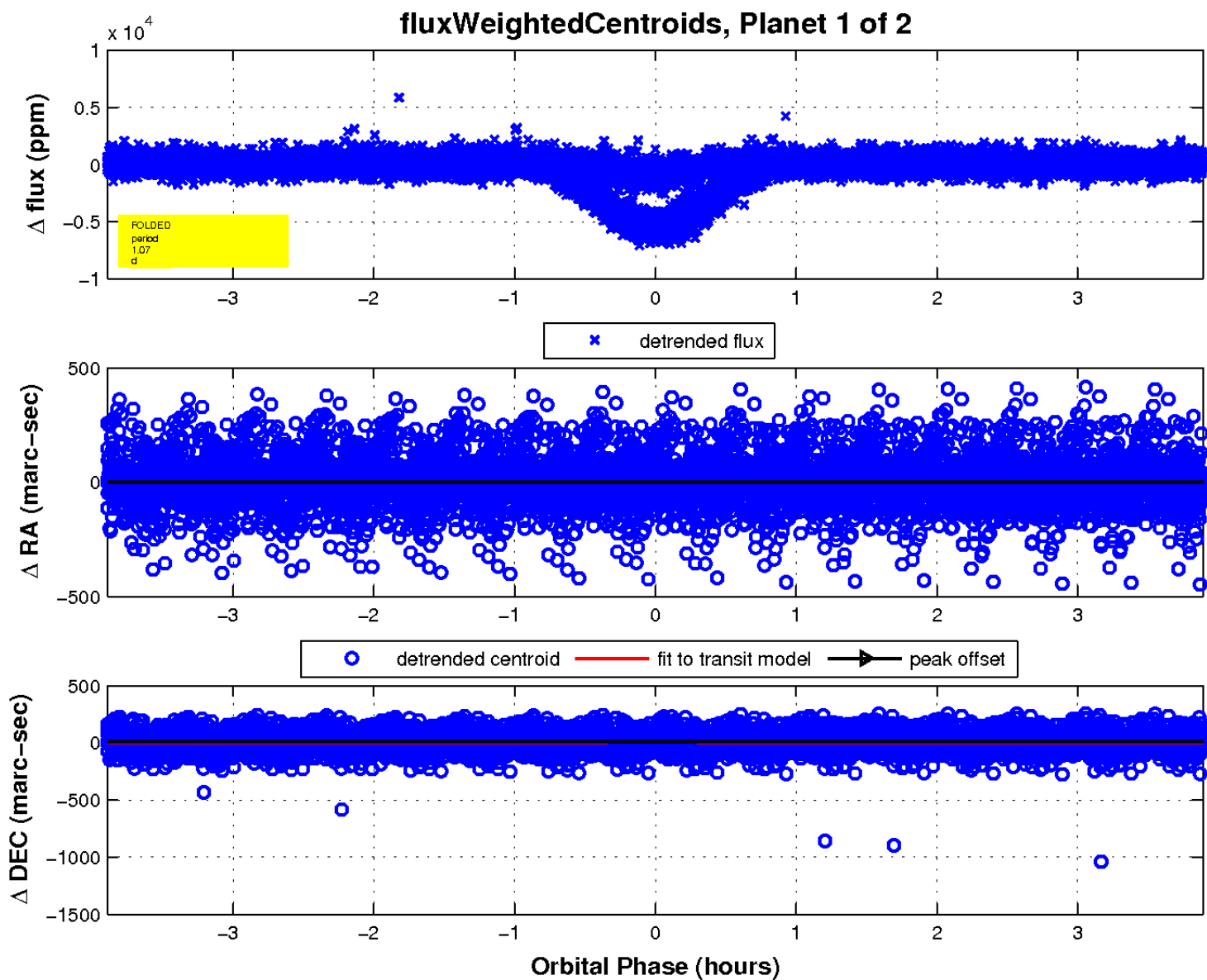
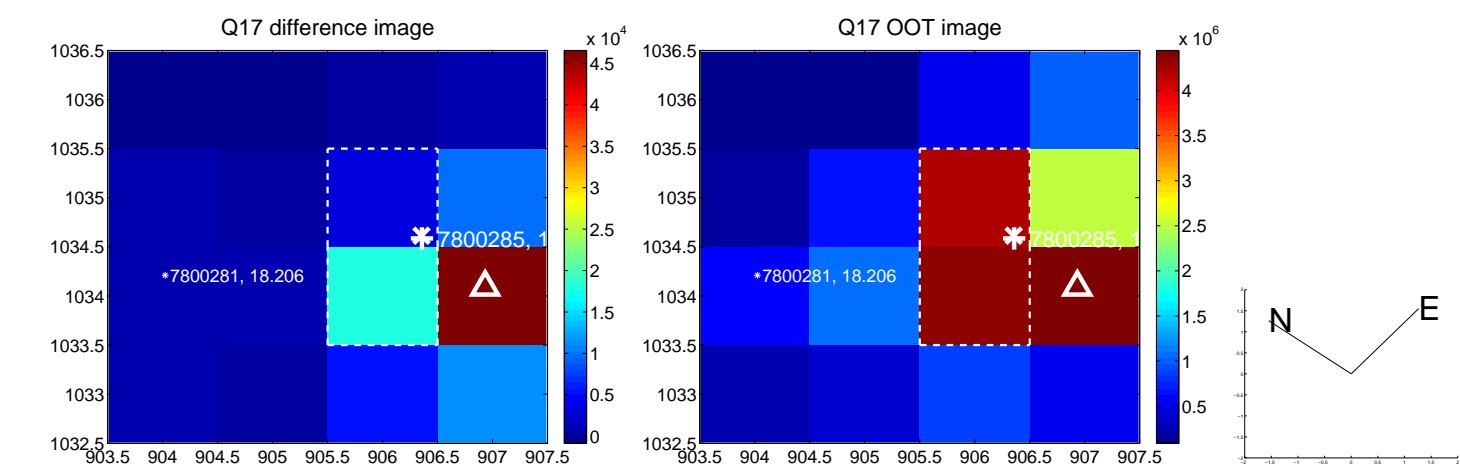
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

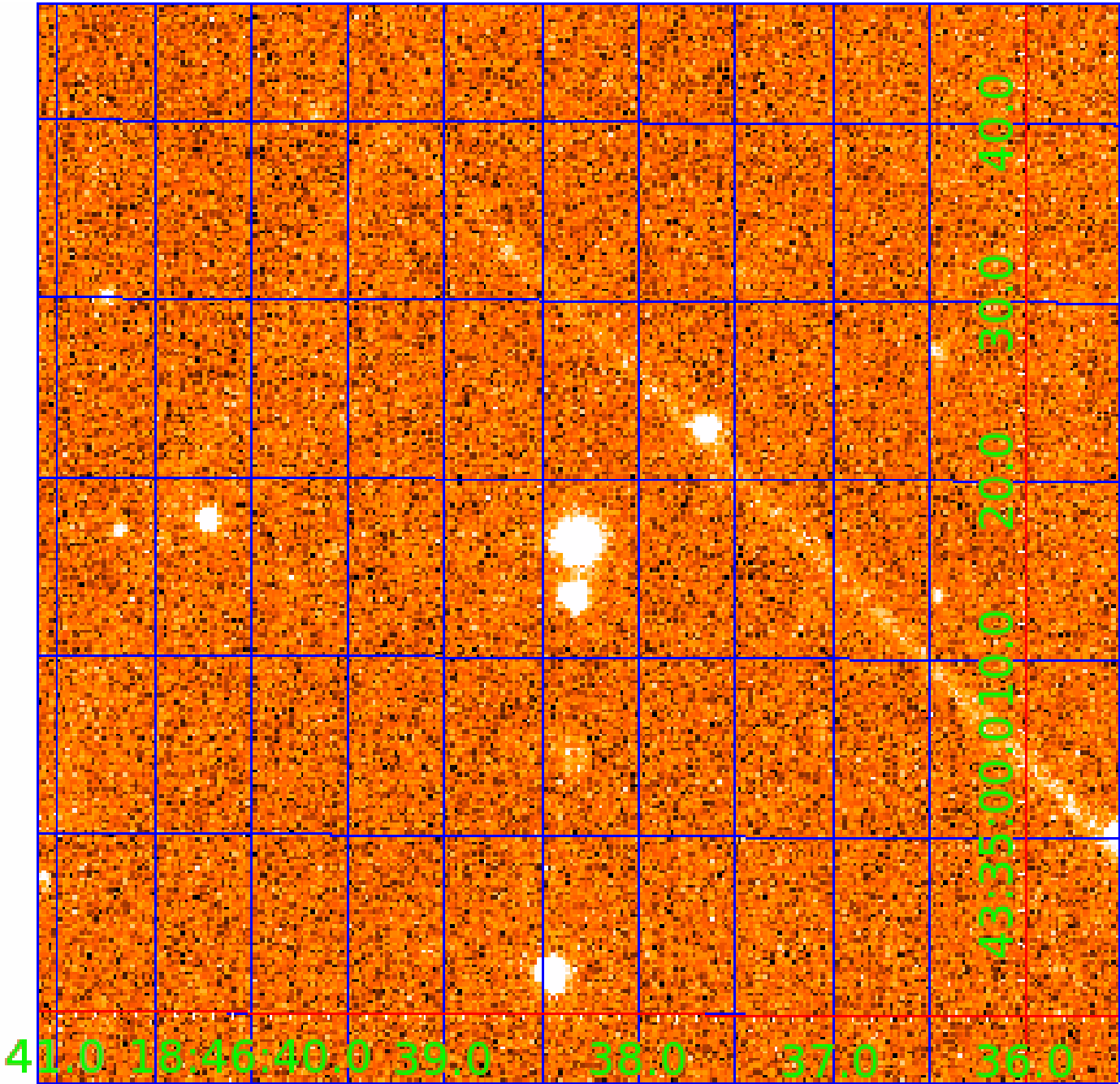


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007800285

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})
007800285-01	OBS	5427.01	1.065999	131.736877	5043.2	1.297	213.5	295.4	1.06	5934	9.71	3270.17
007800285-02	OBS	No	1.065998	132.271303	5364.4	1.335	306.7	343.2	1.06	5934	10.08	3270.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007800285-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—CENT_UNRESOLVED_OFFSET
007800285-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_UNRESOLVED_OFFSET

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.

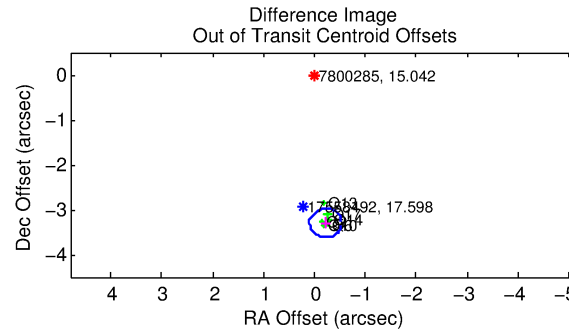
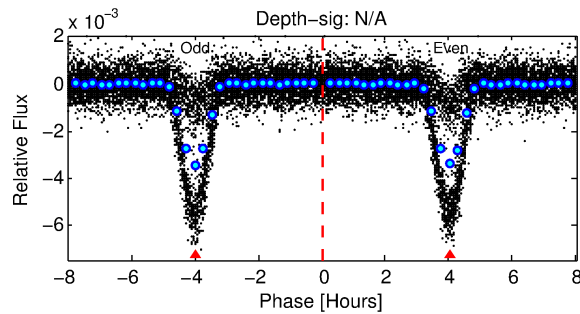
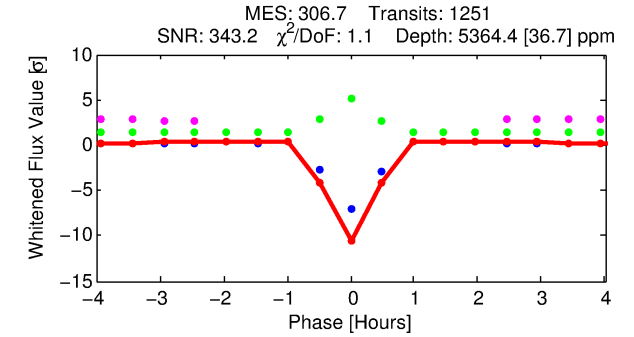
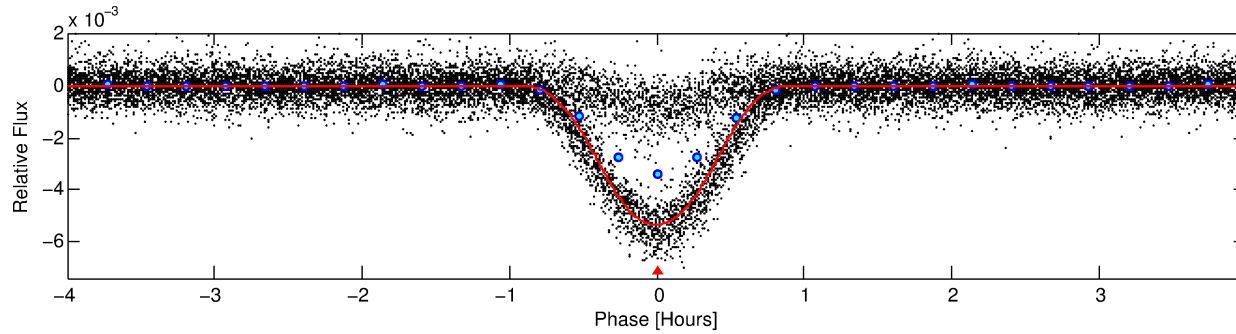
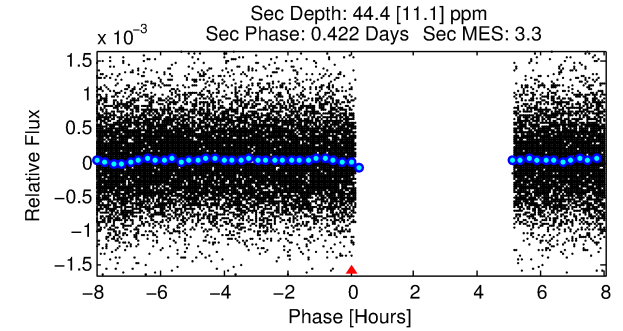
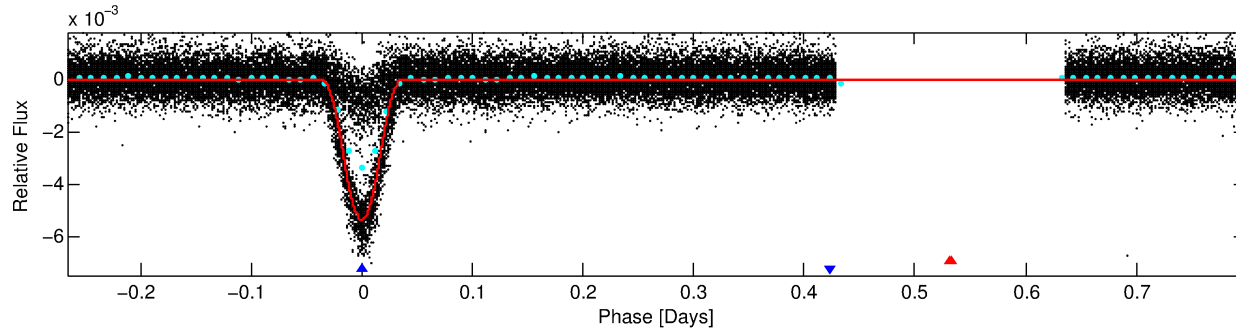
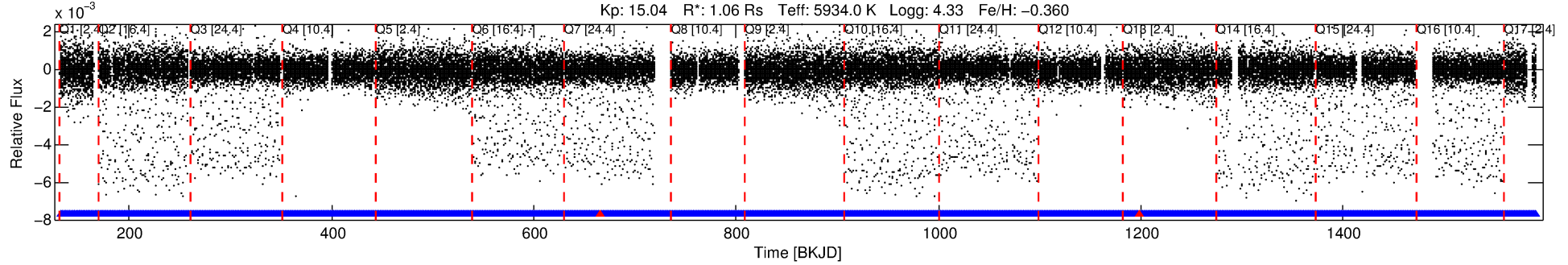
Ephemeris Match Information For 007800285-02

No Significant Match Found

DV One-Page Summary

KIC: 7800285 Candidate: 2 of 2 Period: 1.066 d
KOI: K05427 Corr: No Ephemeris Match

Kp: 15.04 R*: 1.06 Rs Teff: 5934.0 K Logg: 4.33 Fe/H: -0.360



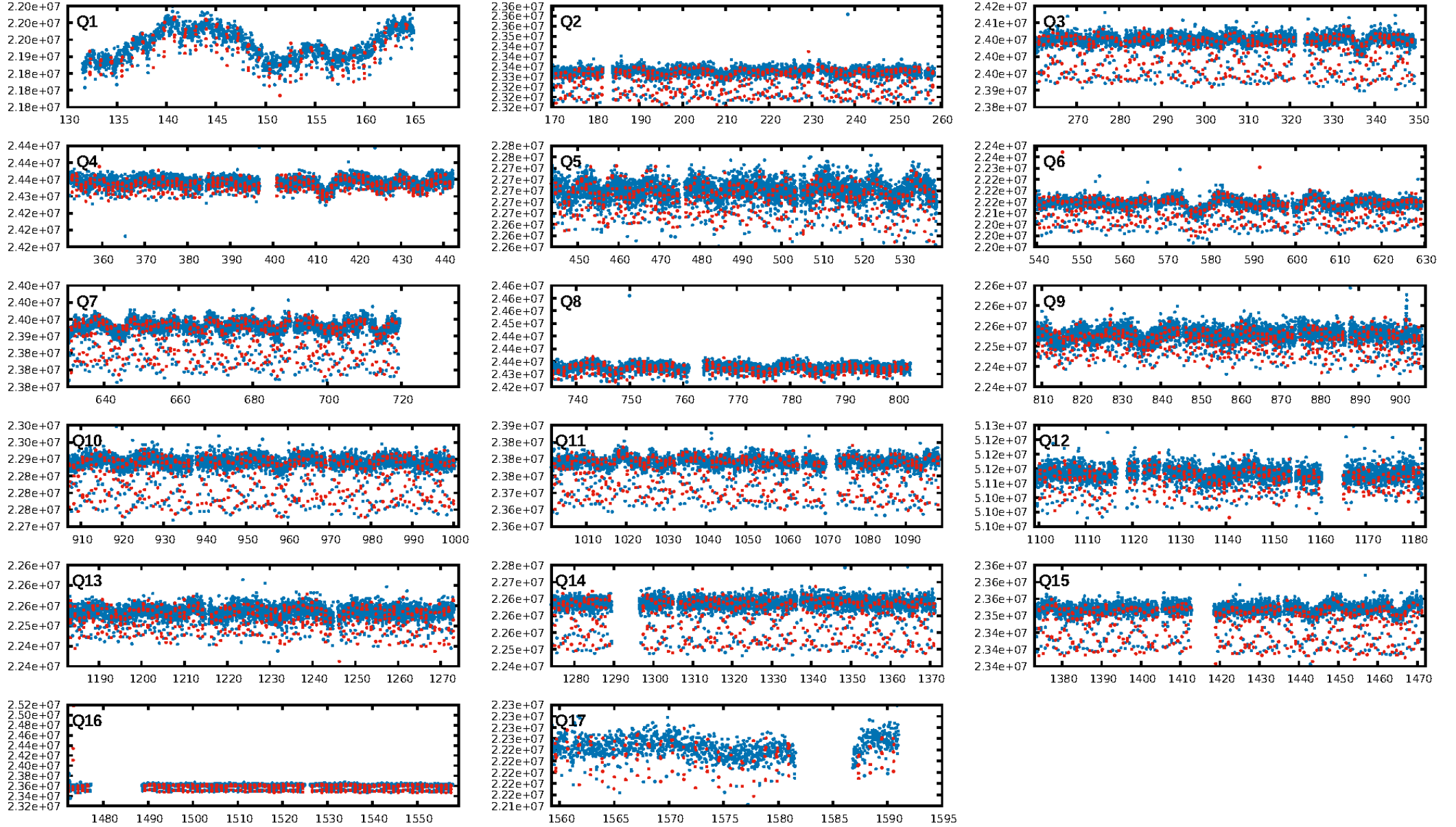
DV Fit Results:

Period = 1.06600 [0.00000] d
Epoch = 132.2713 [0.0000] BKJD
Rp/R* = 0.0868 [0.0037]
a/R* = 3.57 [0.09]
b = 0.93 [0.01]
Seff = 3270.17 [1190.49]
Teq = 1928 [175] K
Rp = 10.08 [2.96] Re
a = 0.0196 [0.0047] AU
Ag = 0.09 [0.04] [-22.71σ]
Teffp = 1643 [119] K [-1.34σ]

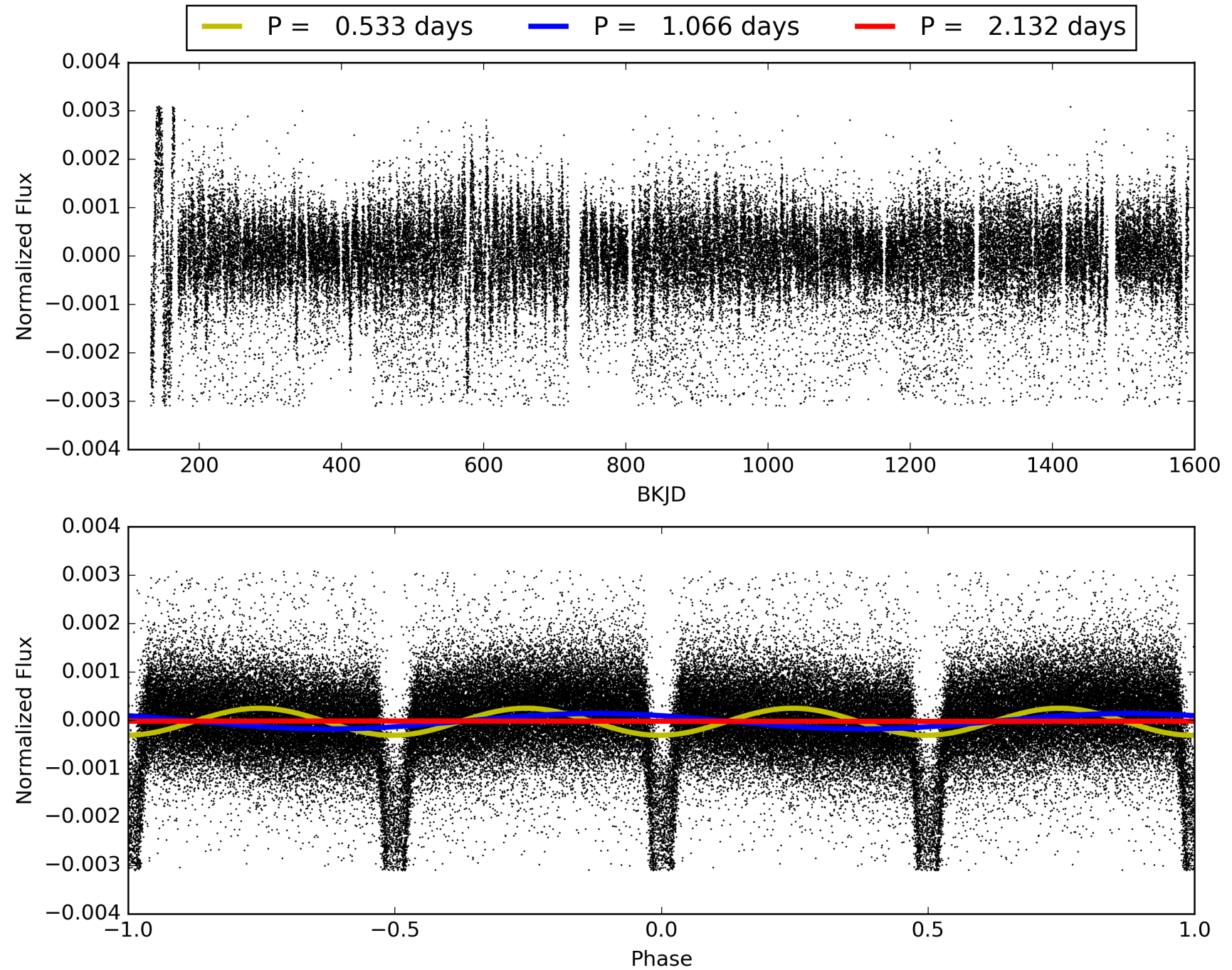
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1193/1195]
GhostDiagnostic-chr: N/A
Centroid-sig: 0.0%
Centroid-so: 3.297 arcsec [105.57σ]
OotOffset-rm: 3.305 arcsec [31.33σ]
KicOffset-rm: 3.276 arcsec [36.85σ]
OotOffset-st: 4/0/0/2 [6]
KicOffset-st: 4/1/0/2 [7]
DiffImageQuality-fgm: 0.86 [6/7]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007800285-02, PDC Light Curves

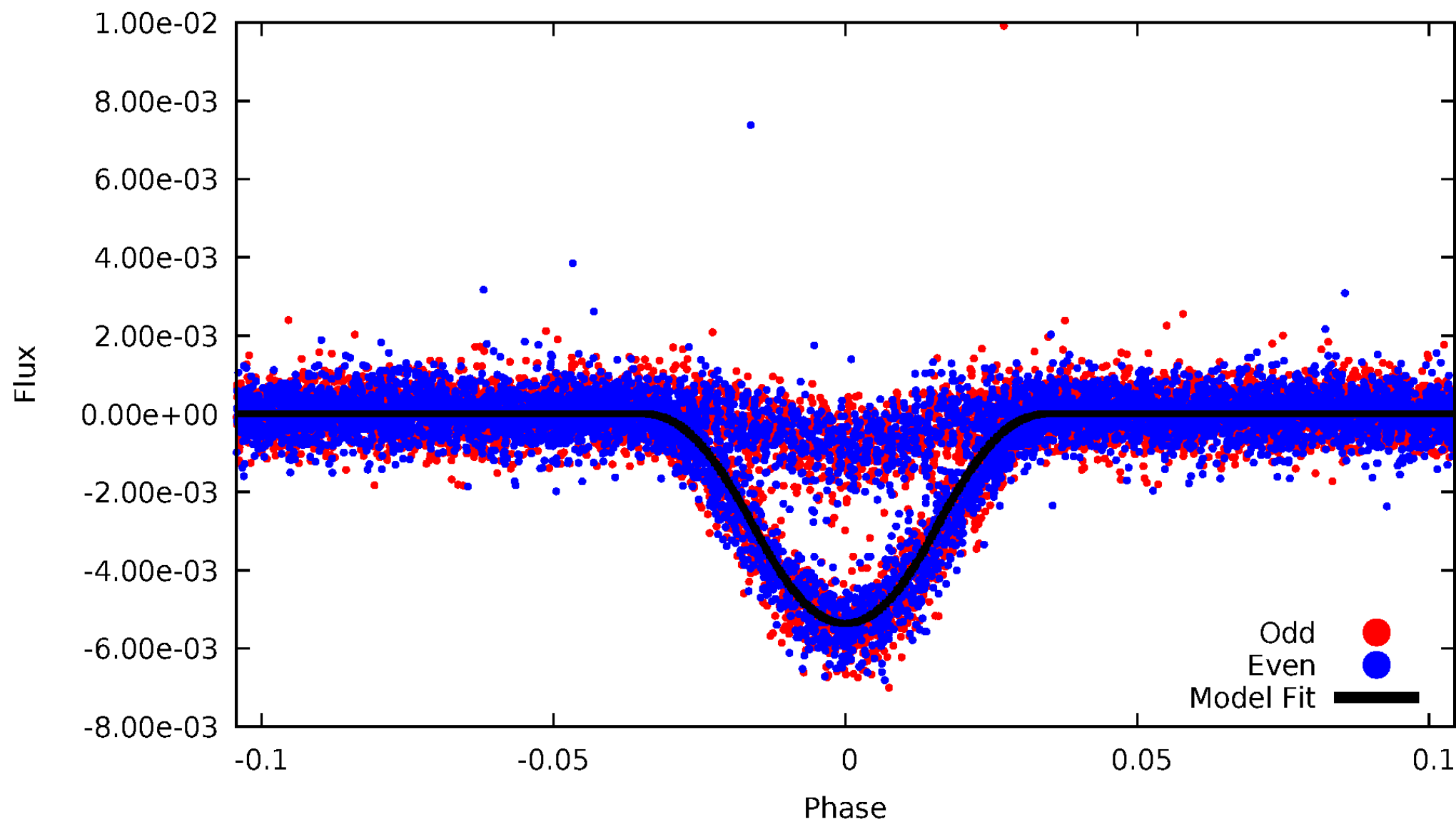


TCE 007800285-02



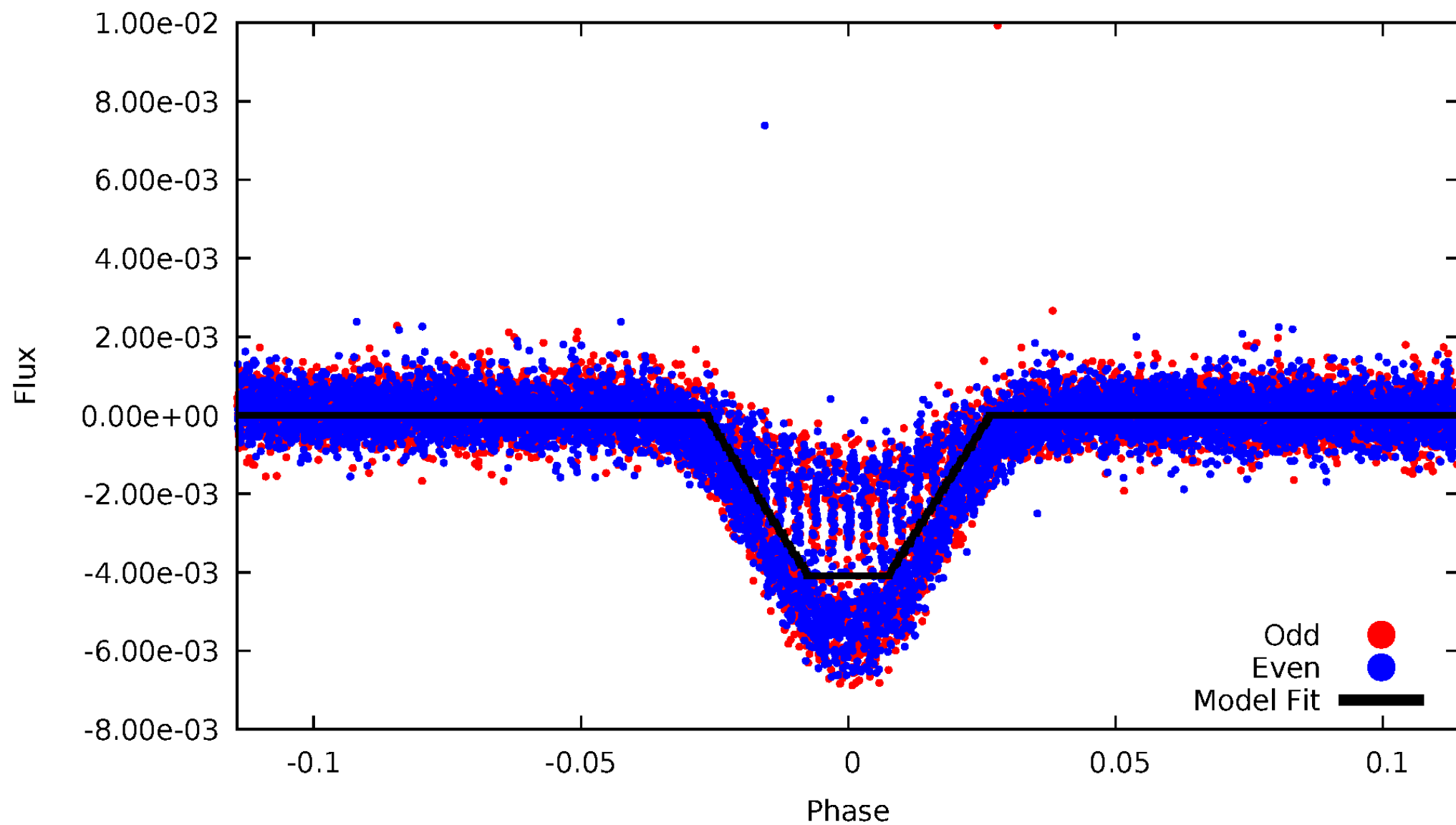
DV Odd/Even

TCE 007800285-02



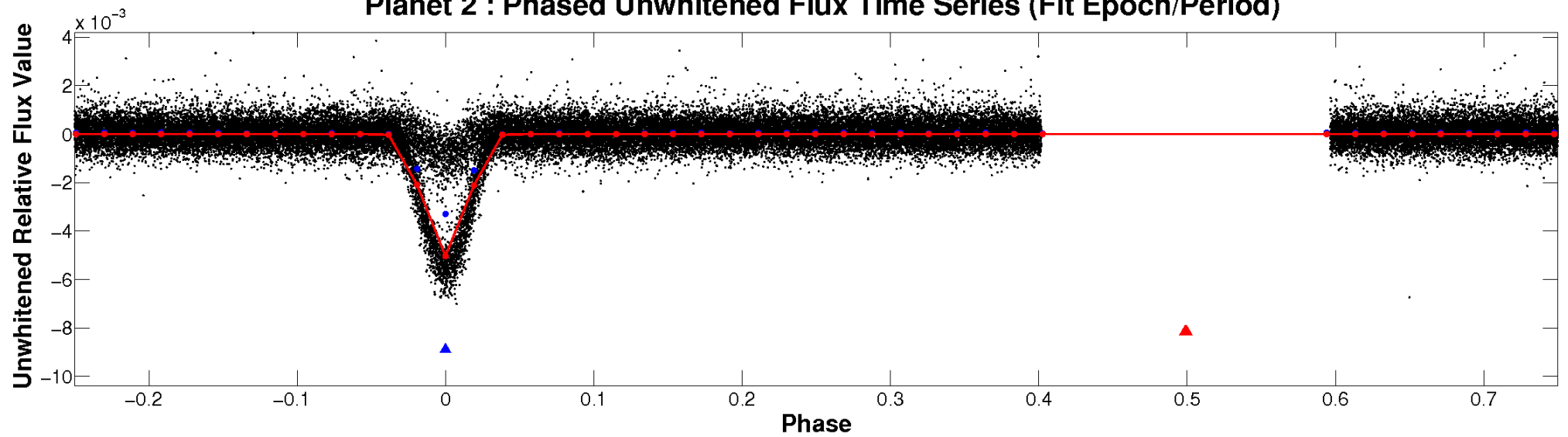
ALT Odd/Even

TCE 007800285-02

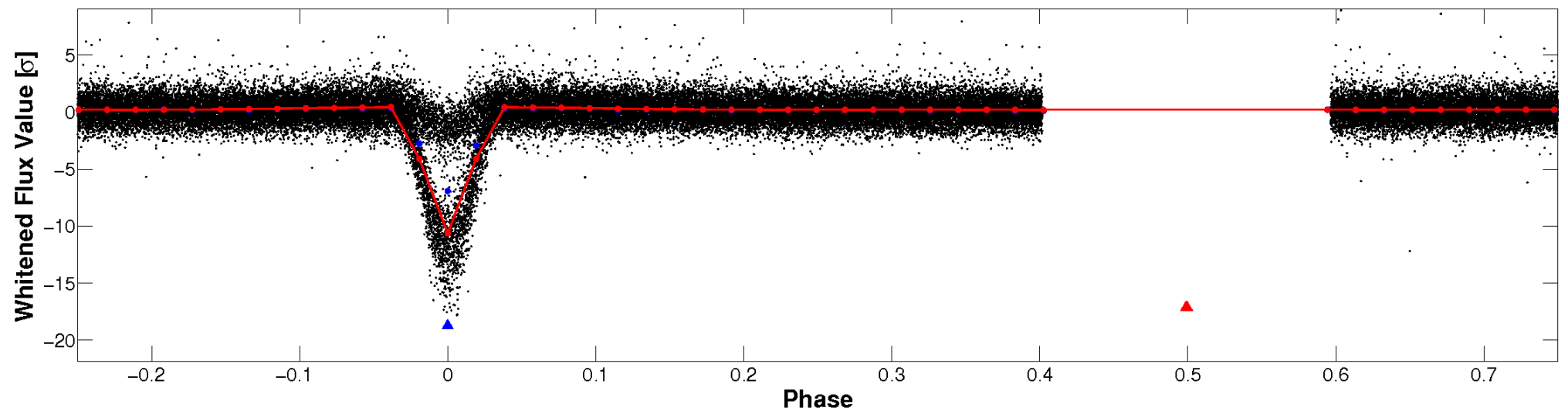


Non-Whitened Vs. Whitened Light Curve

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

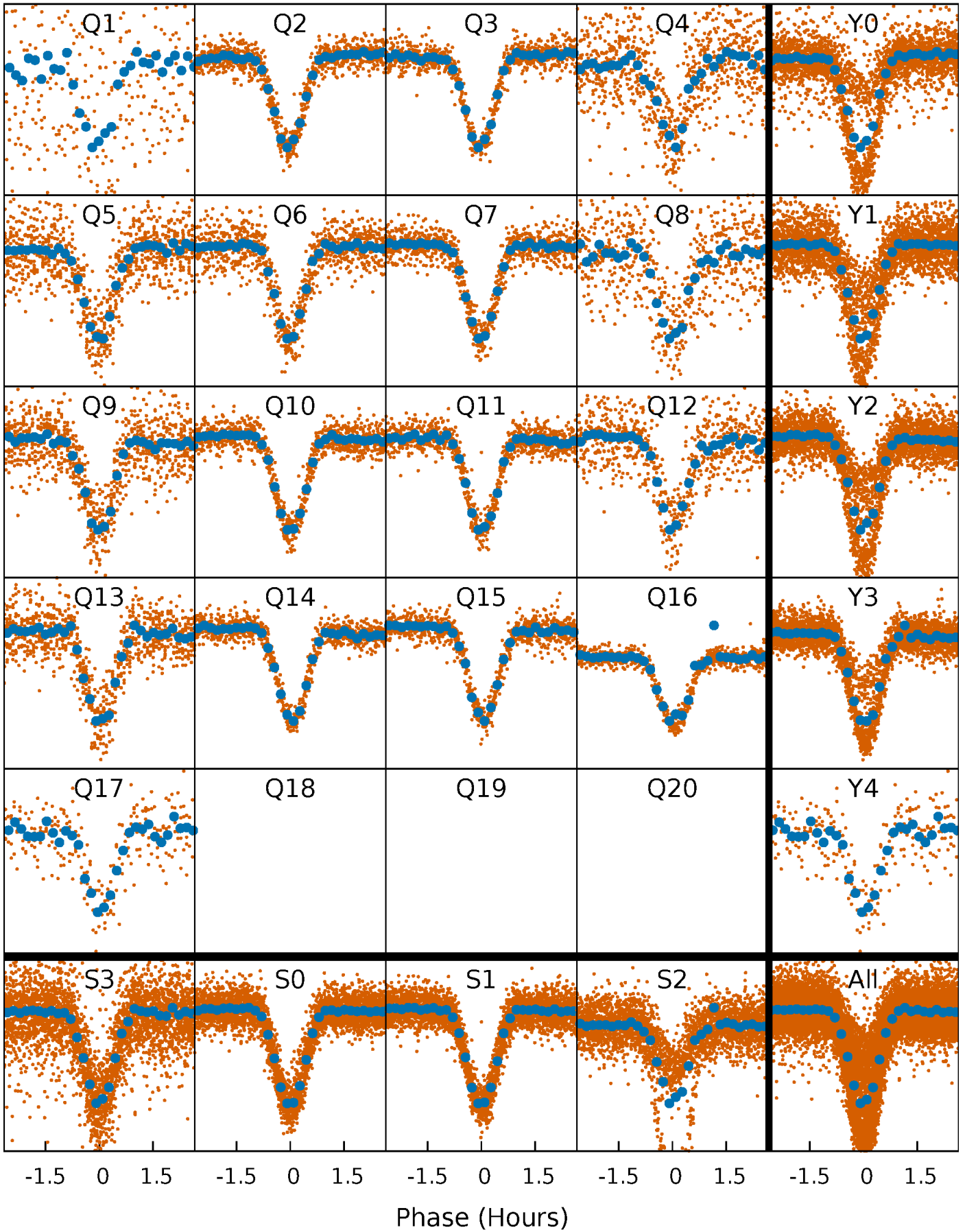


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



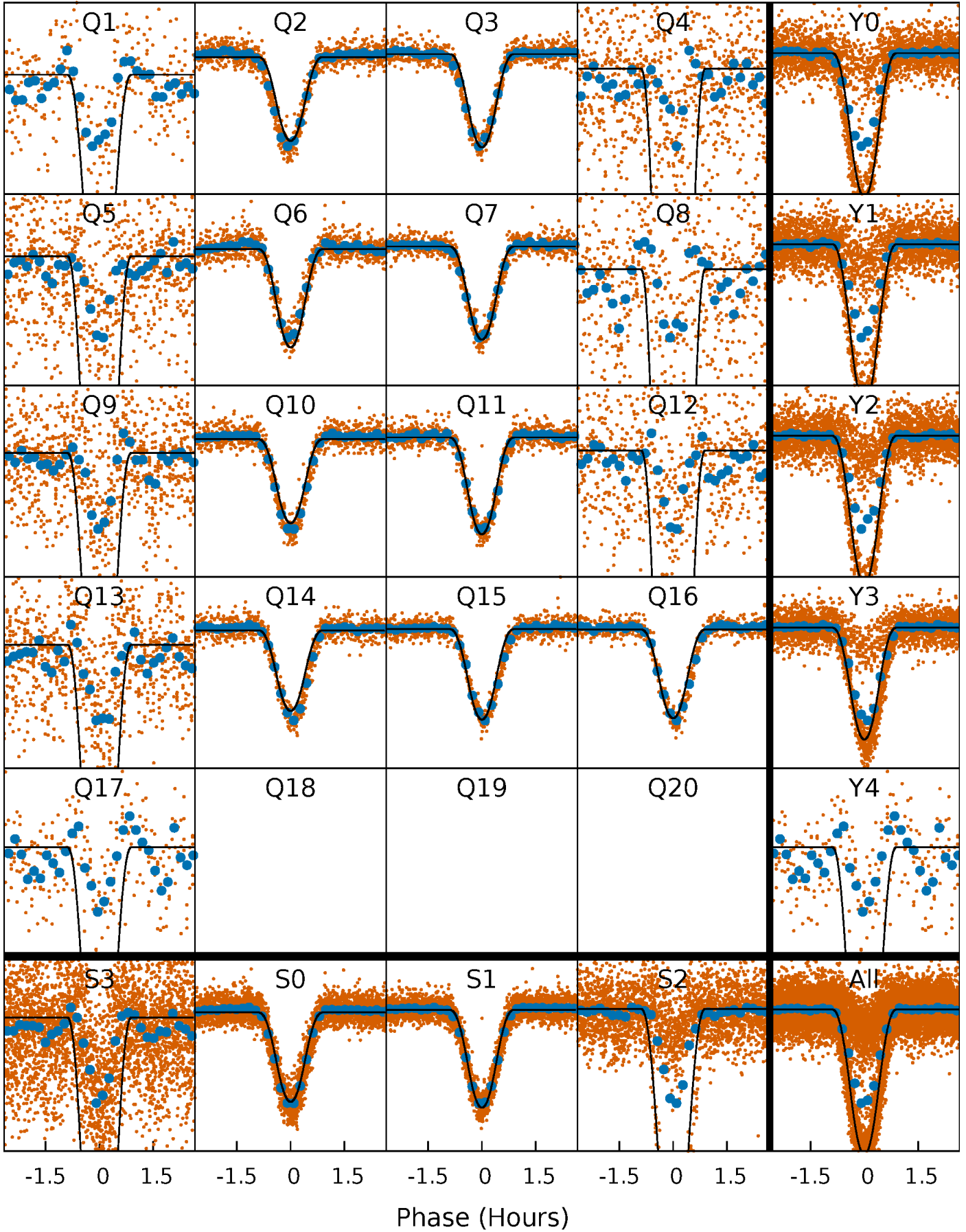
PDC Quarter-Phased Transit Curves

TCE 007800285-02 $P = 1.065998$ Days $T_0 = 132.271303$ (BKJD)



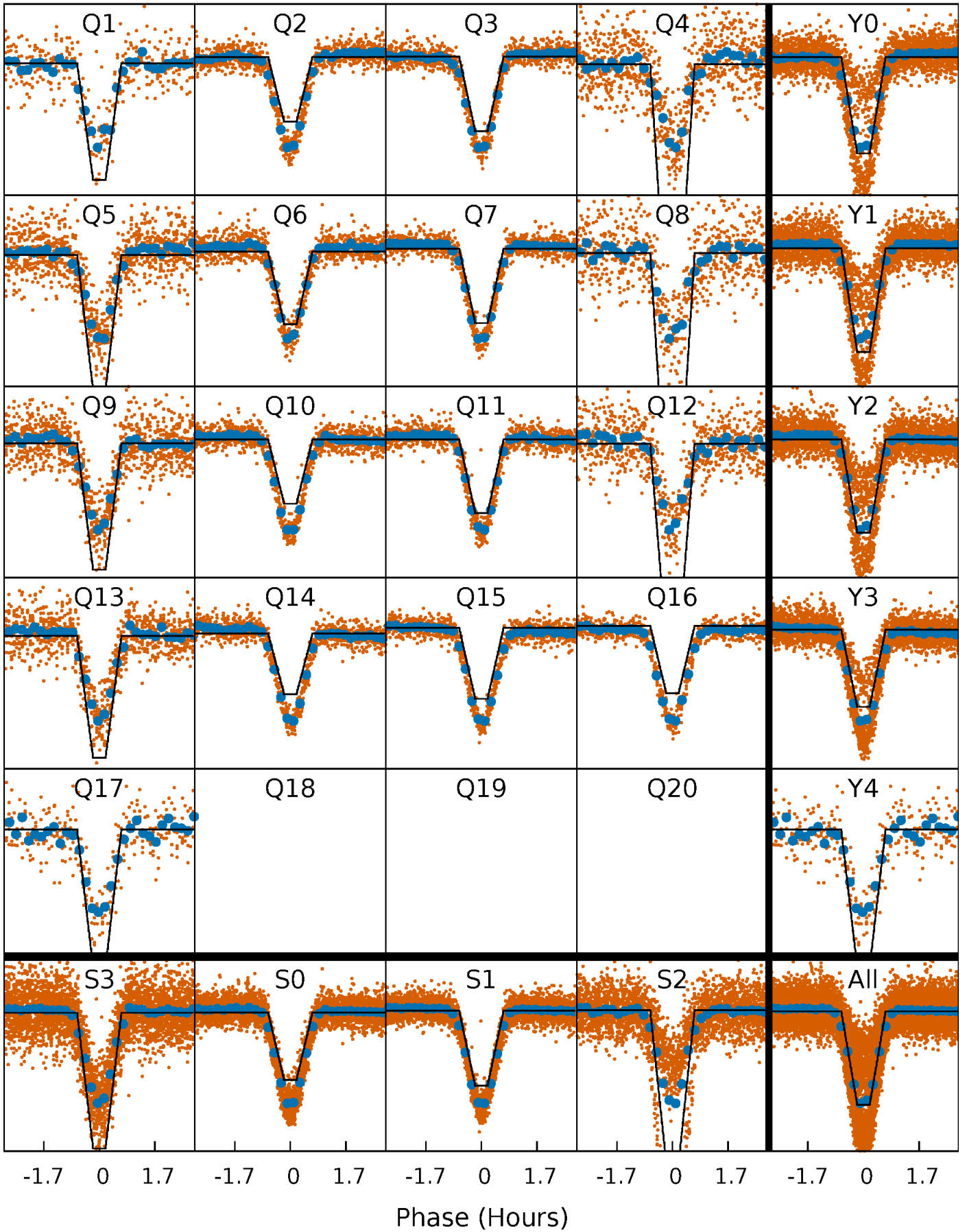
DV Quarter-Phased Transit Curves

TCE 007800285-02 $P = 1.065998$ Days $T_0 = 132.271303$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

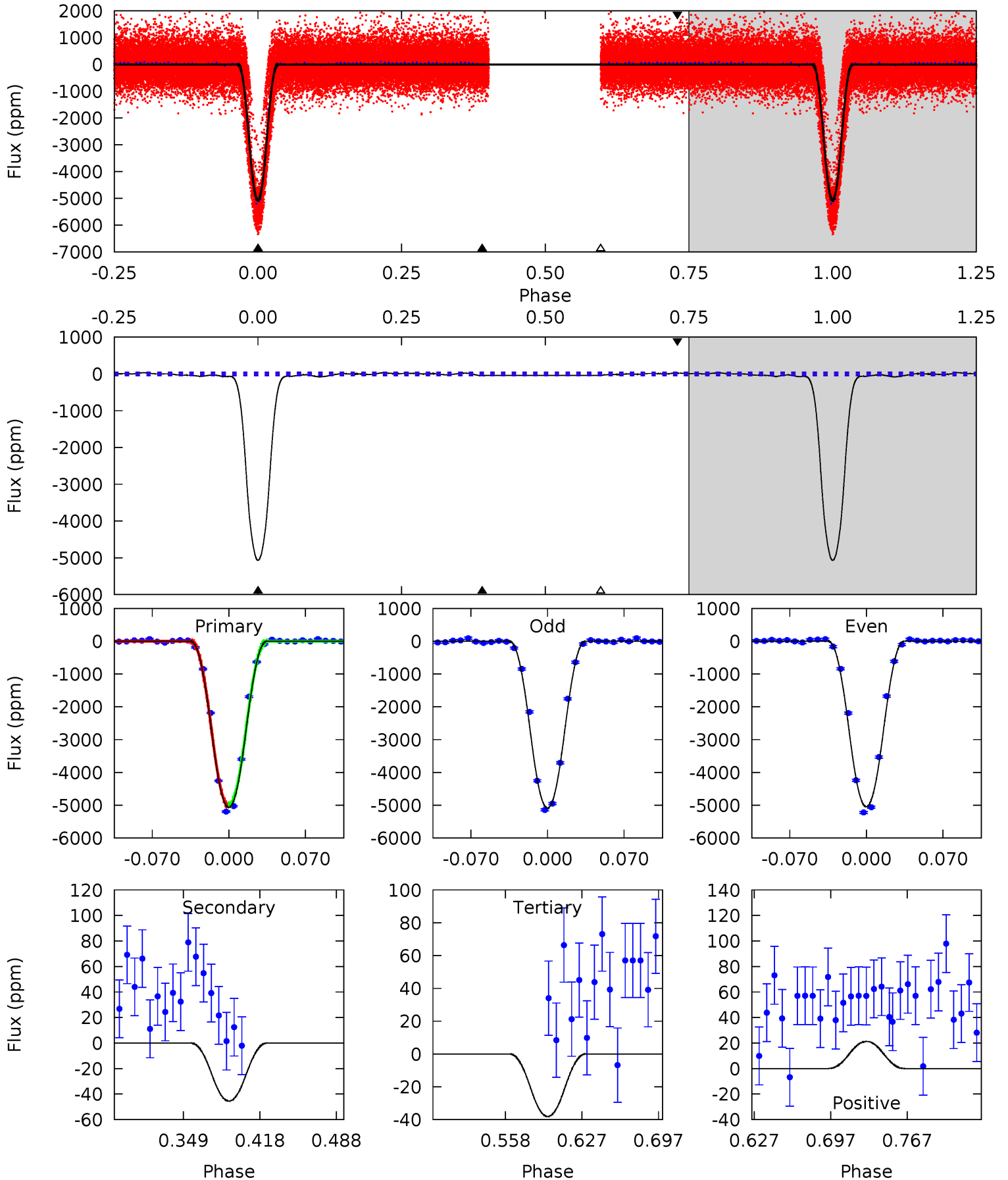
TCE 007800285-02 P= 1.066001 Days $T_0=132.269185$ (BKJD)



DV Model-Shift Uniqueness Test

007800285-02, P = 1.065998 Days, E = 131.205305 Days

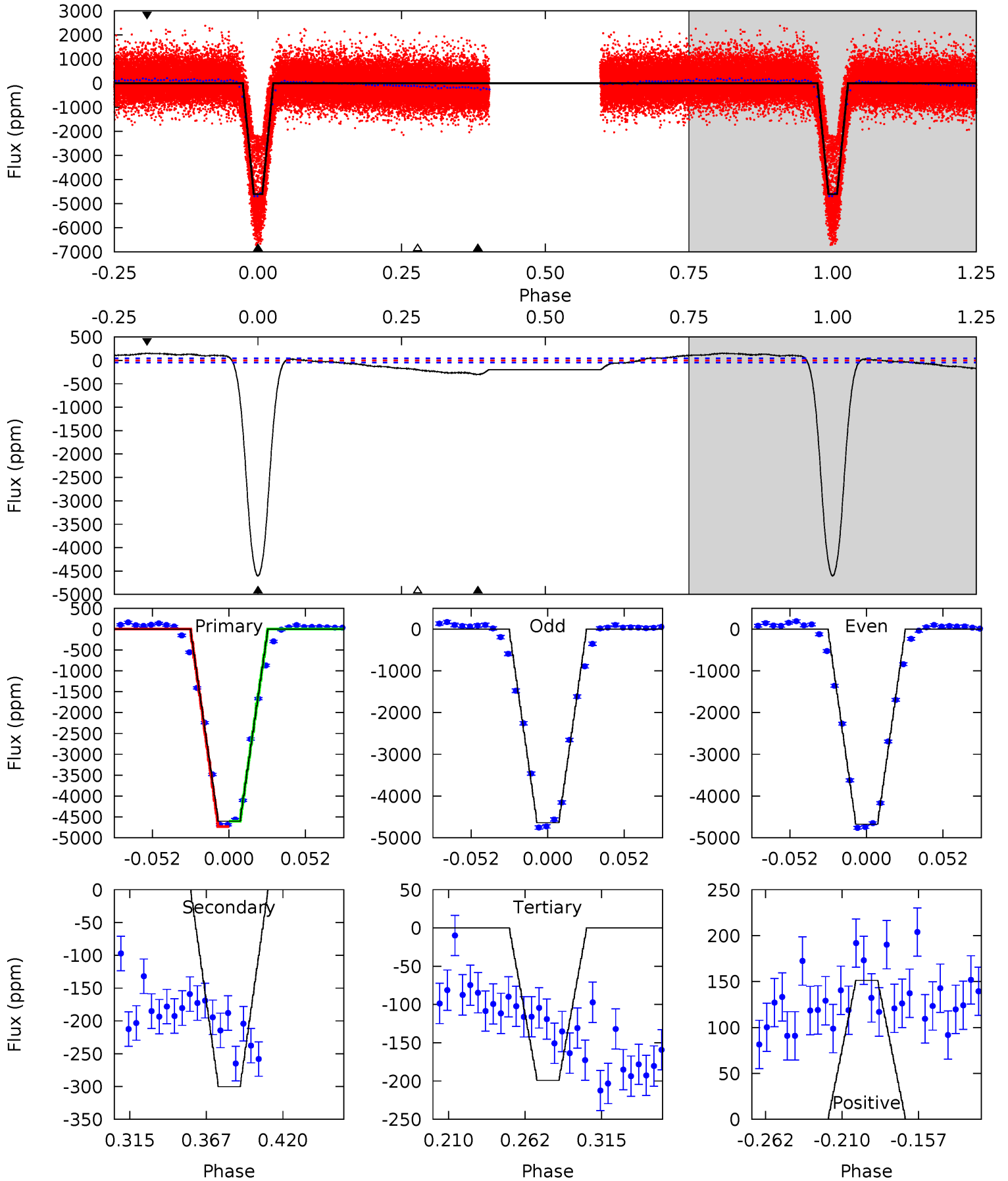
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
639.5	5.73	4.81	2.69	4.64	1.81	3.14	634.7	636.9	0.93	3.05	2.40	0.71	0.01	1.84



Alt Model-Shift Uniqueness Test

007800285-02, P = 1.066001 Days, E = 131.203184 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
484.8	31.6	21.0	15.9	4.70	1.94	12.6	463.8	468.9	10.6	15.7	1.84	0.86	0.03	0



Stellar Parameters For KIC 007800285

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5934^{+160}_{-178}	$4.331^{+0.167}_{-0.185}$	$-0.360^{+0.300}_{-0.300}$	$1.064^{+0.309}_{-0.206}$	$0.885^{+0.130}_{-0.080}$	$1.036^{+0.832}_{-0.503}$
	+3%/-3%	+4%/-4%	+83%/-83%	+29%/-19%	+15%/-9%	+80%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007800285-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-45 ± 8	$10.22^{+1.59}_{-1.23}$	2702^{+205}_{-168}	-2773^{+137}_{-151}	$0.092^{+0.032}_{-0.025}$
Alt.	-300 ± 9	$7.41^{+1.25}_{-0.91}$	2695^{+190}_{-182}	3383^{+113}_{-123}	$1.161^{+0.354}_{-0.303}$

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

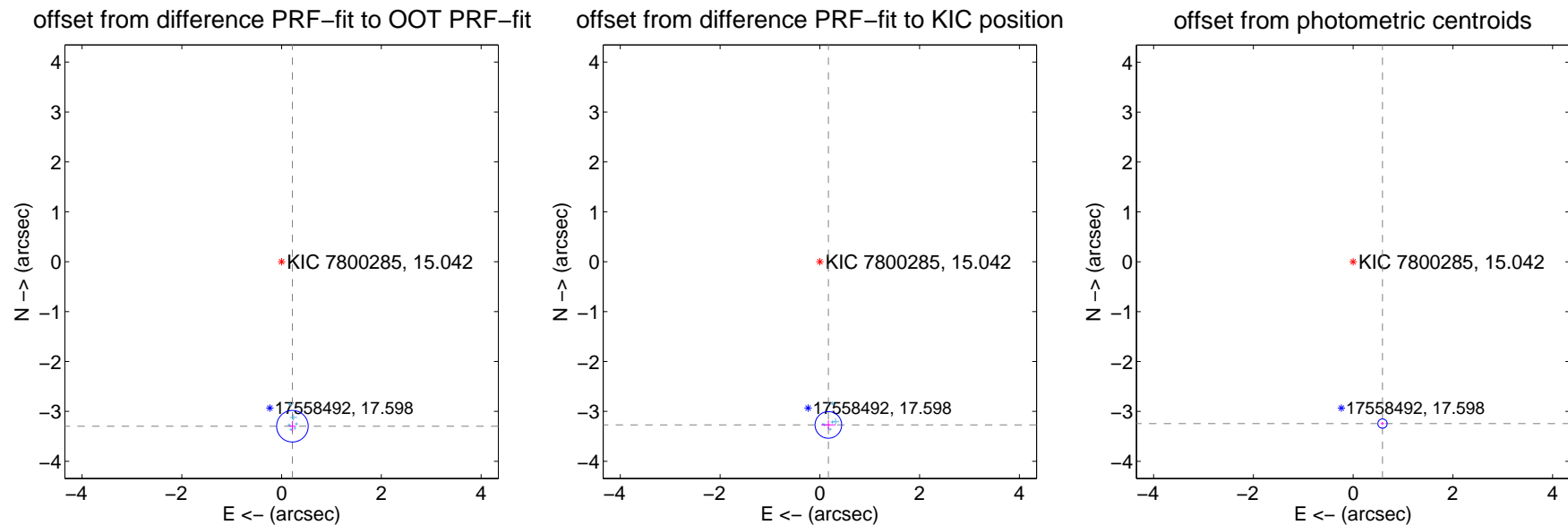
DV Centroid Data

Supplemental centroid analysis for 007800285-02. Kepler magnitude: 15.04. Transit SNR 343.17

There are 6 quarters with good PRF difference image offsets

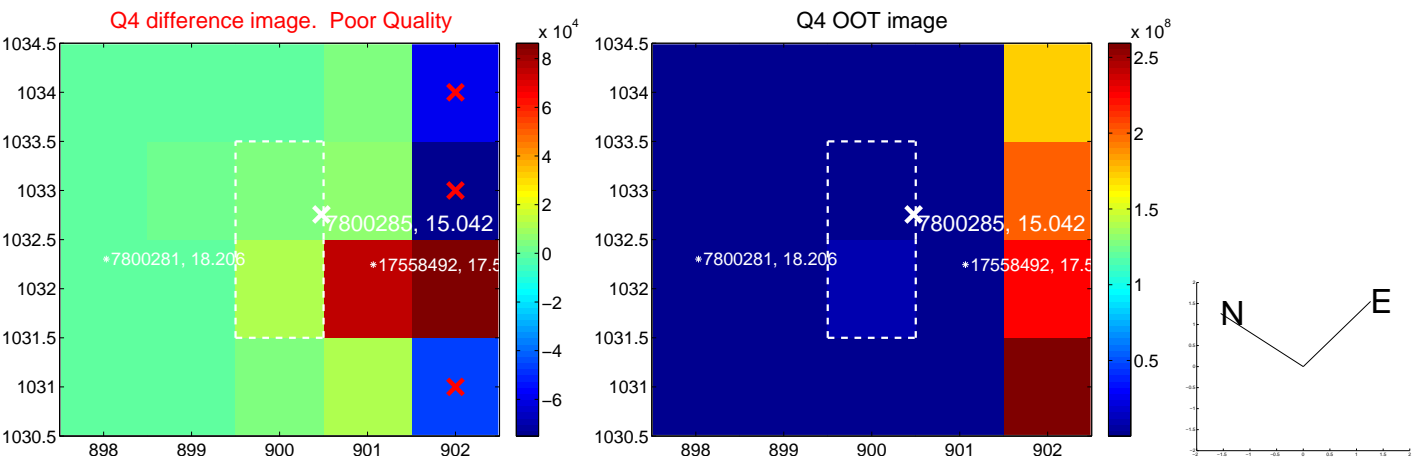
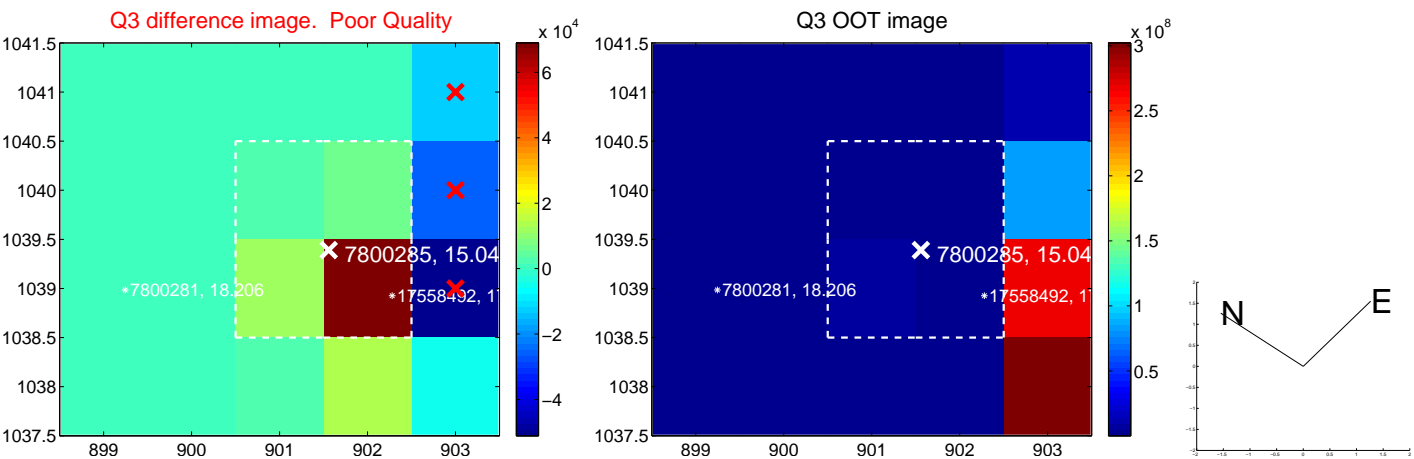
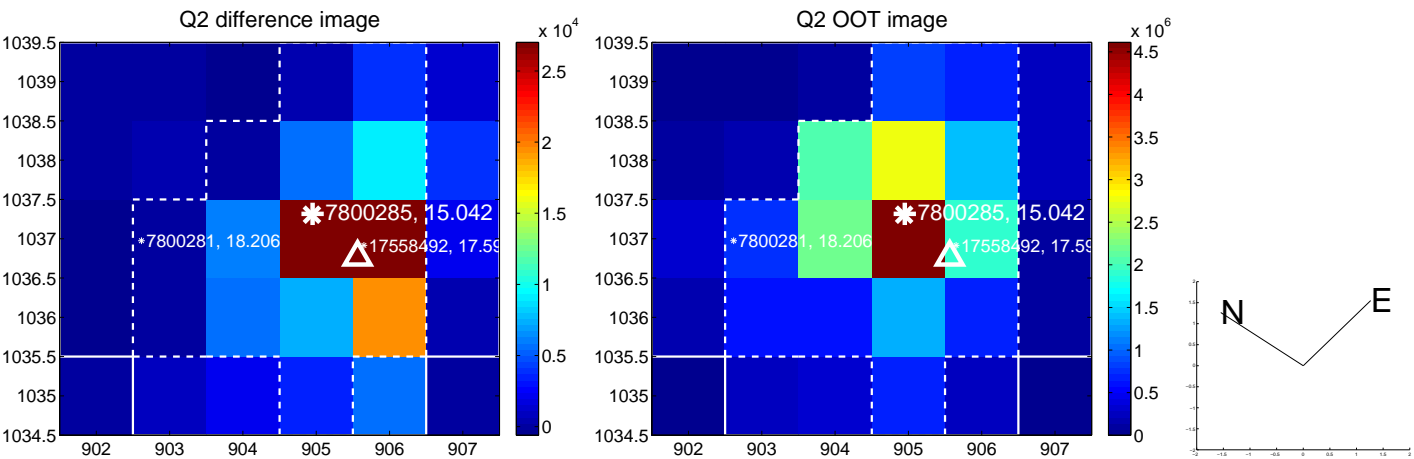
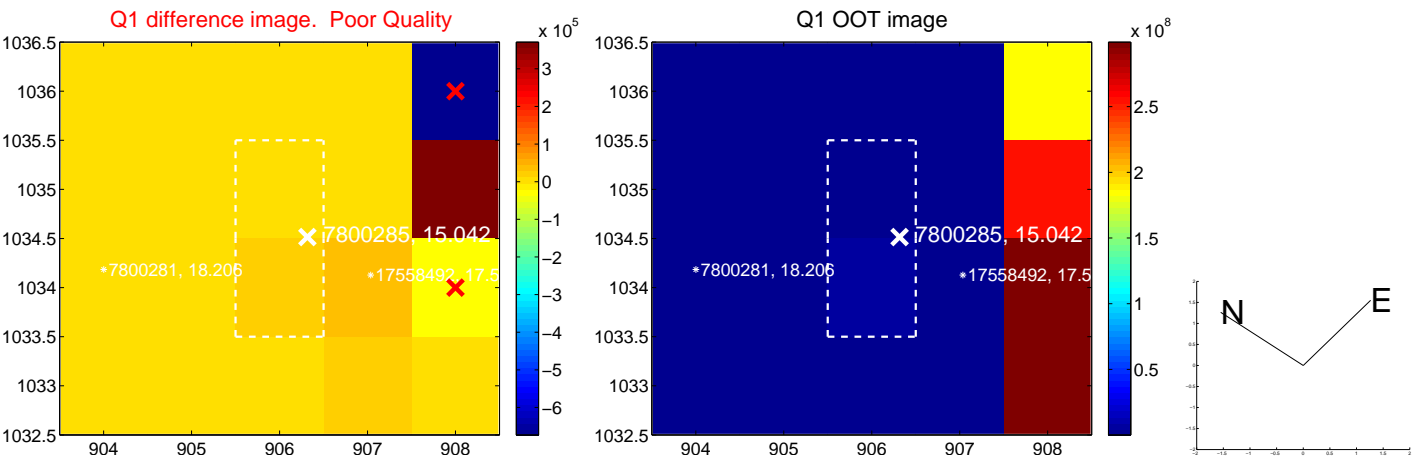
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.305 ± 0.105	31.33	-0.217 ± 0.069	-3.297 ± 0.105
PRF-fit source offset from KIC position	3.276 ± 0.089	36.85	-0.171 ± 0.137	-3.271 ± 0.091
photometric centroid source offset	3.30 ± 0.03	105.57	-0.59 ± 0.03	-3.24 ± 0.03

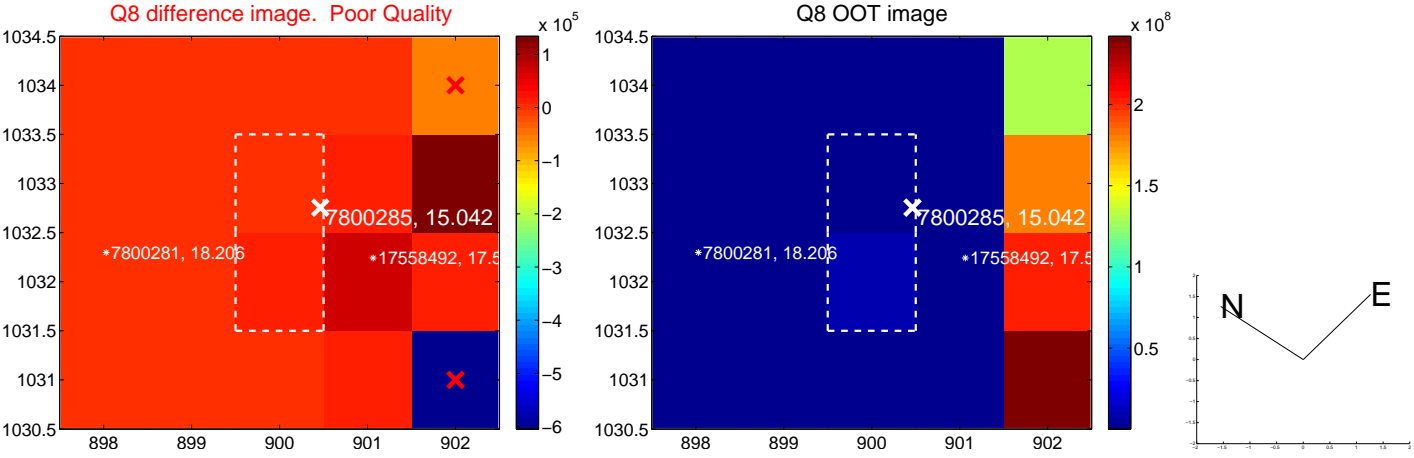
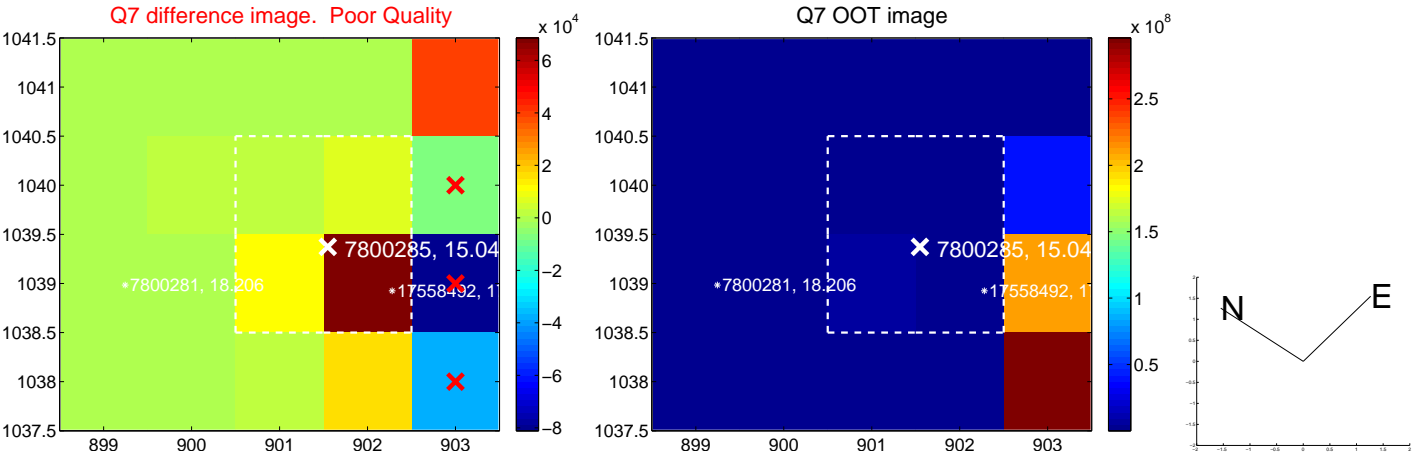
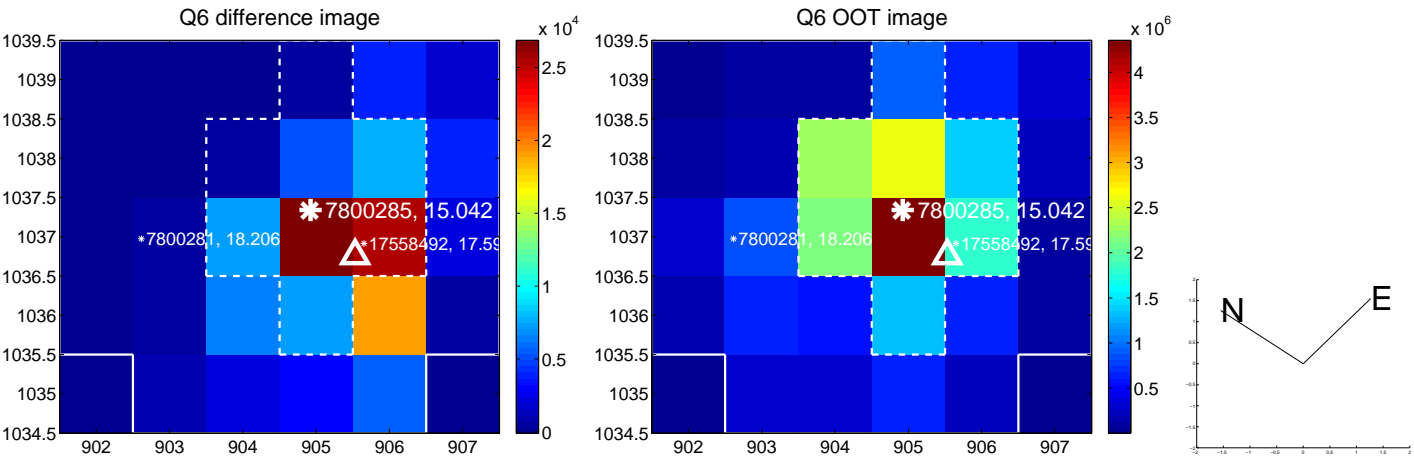
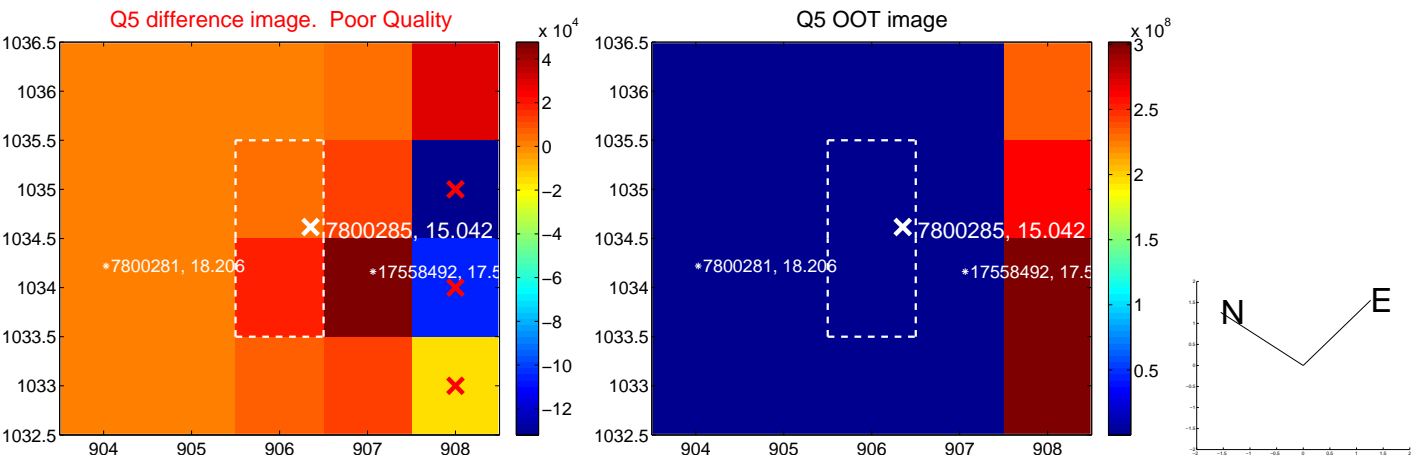


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

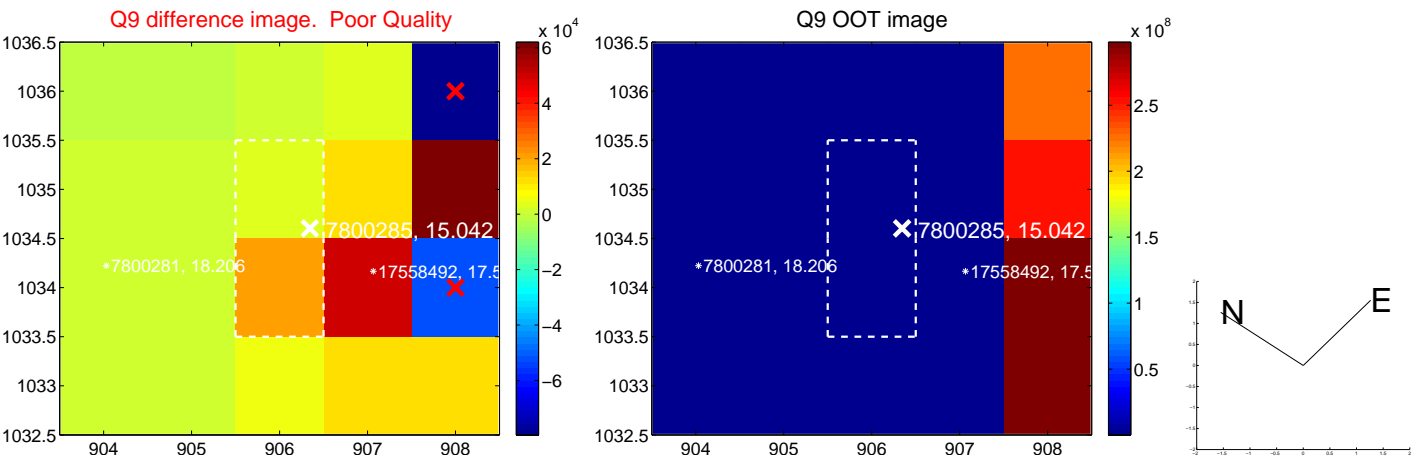
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



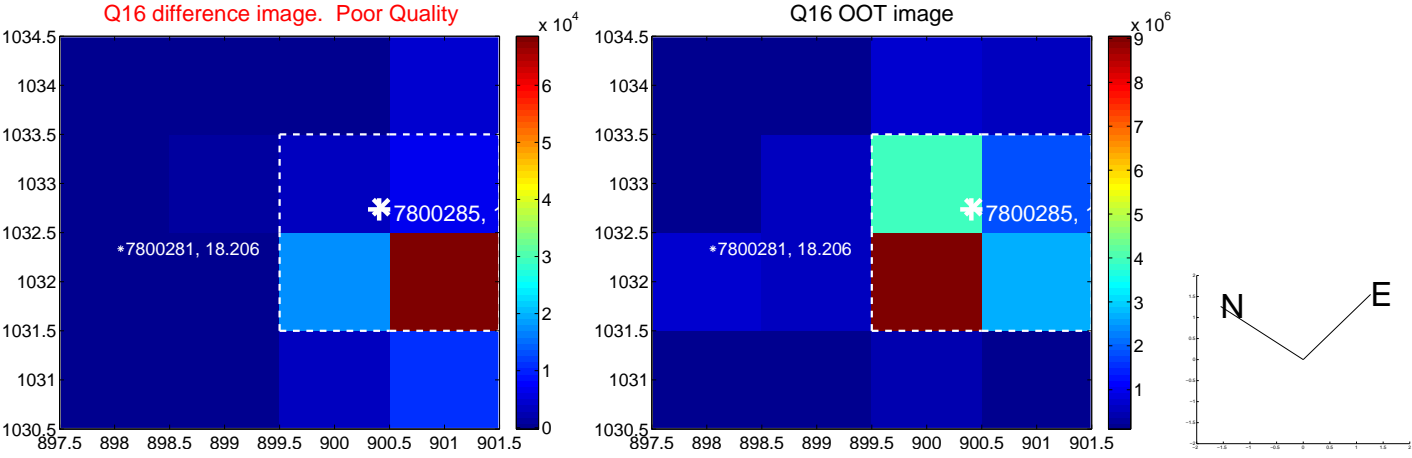
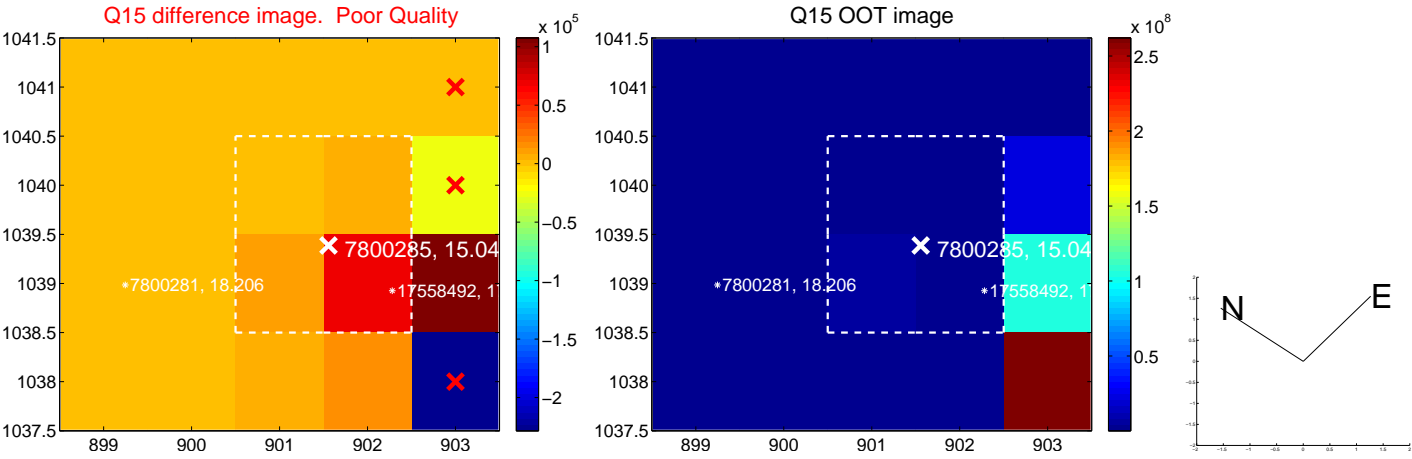
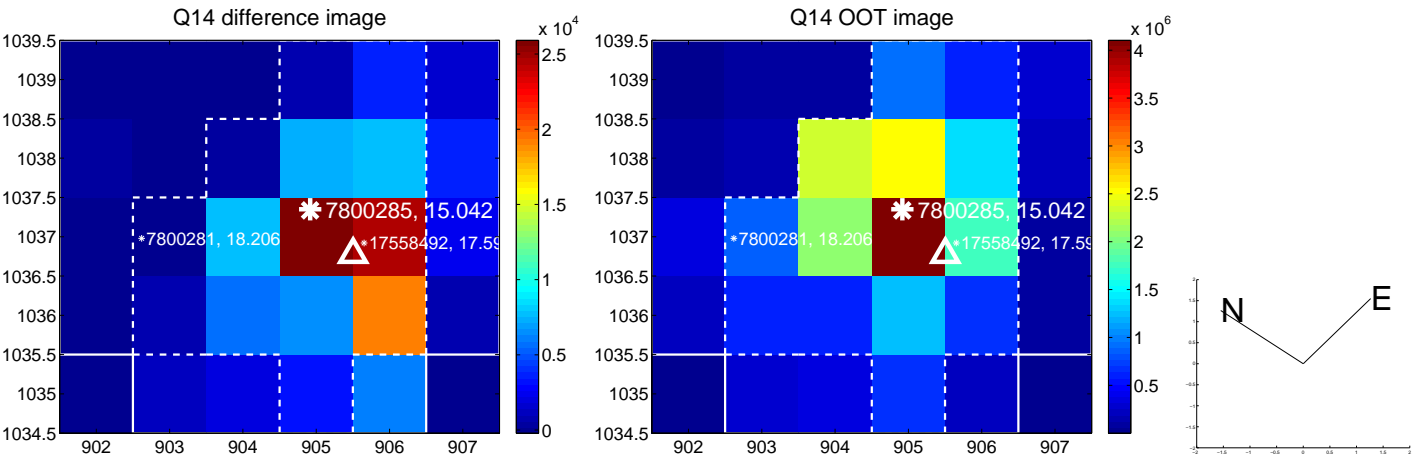
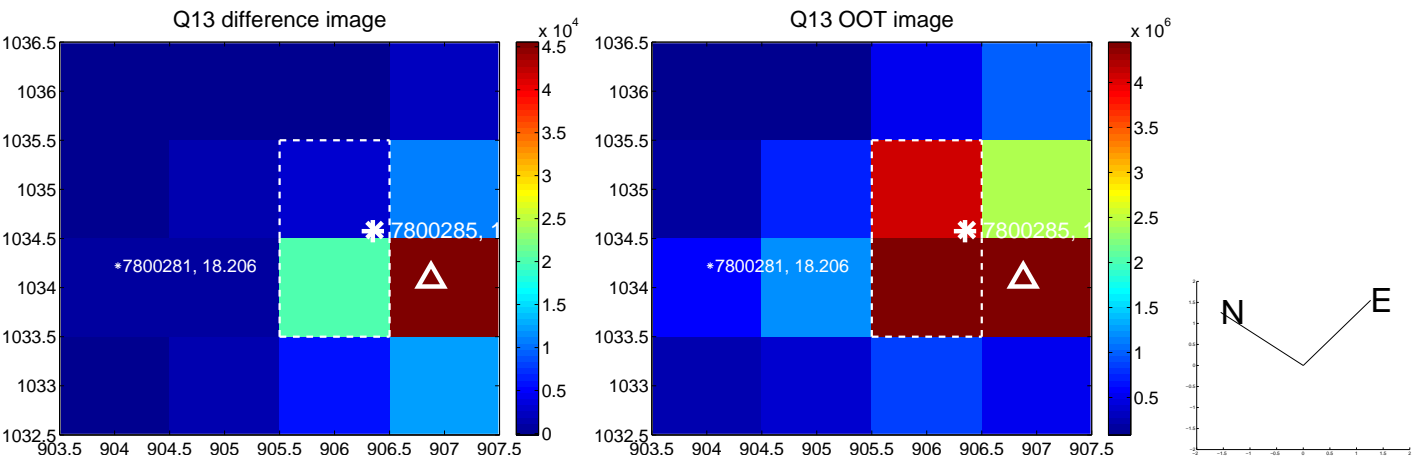
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



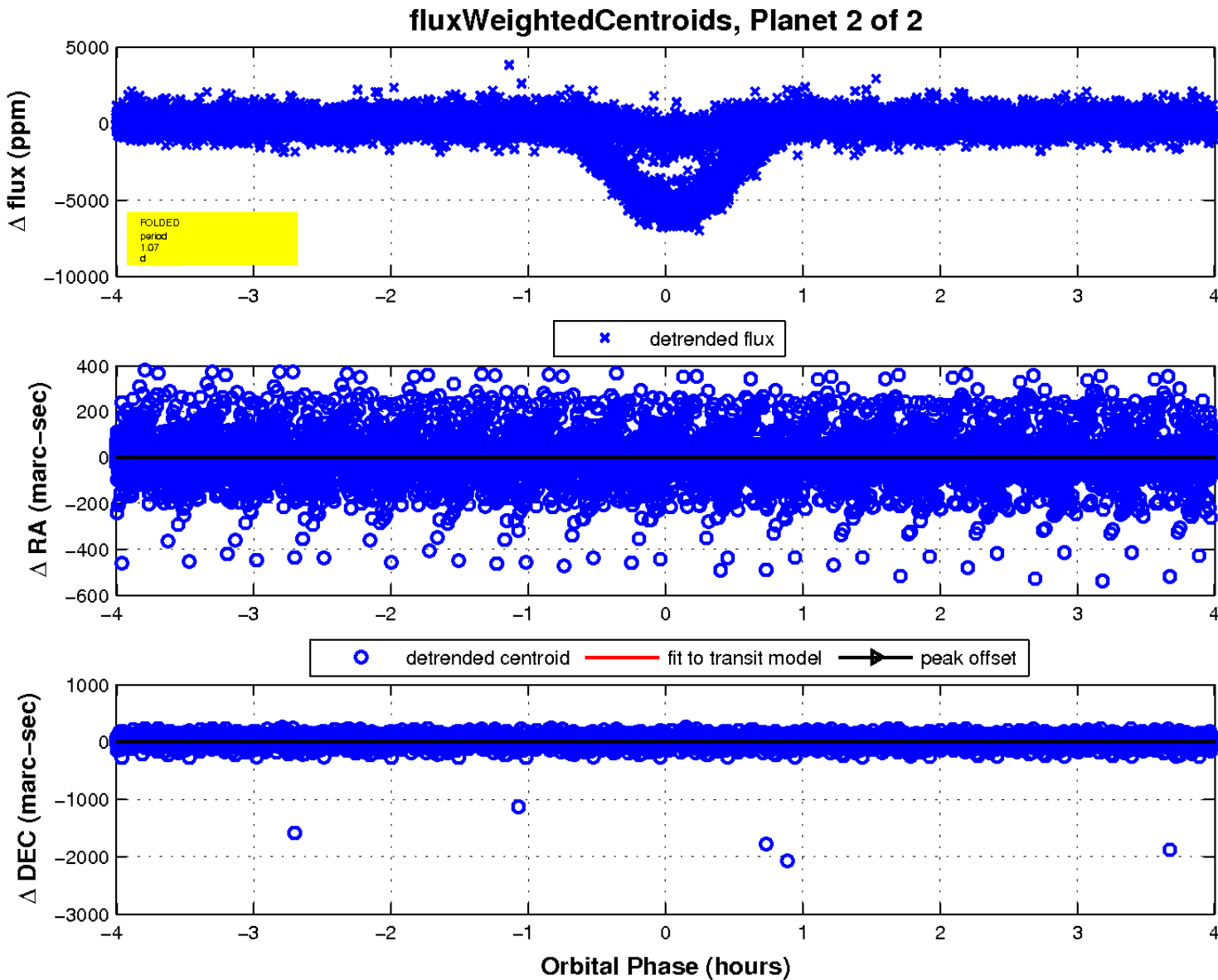
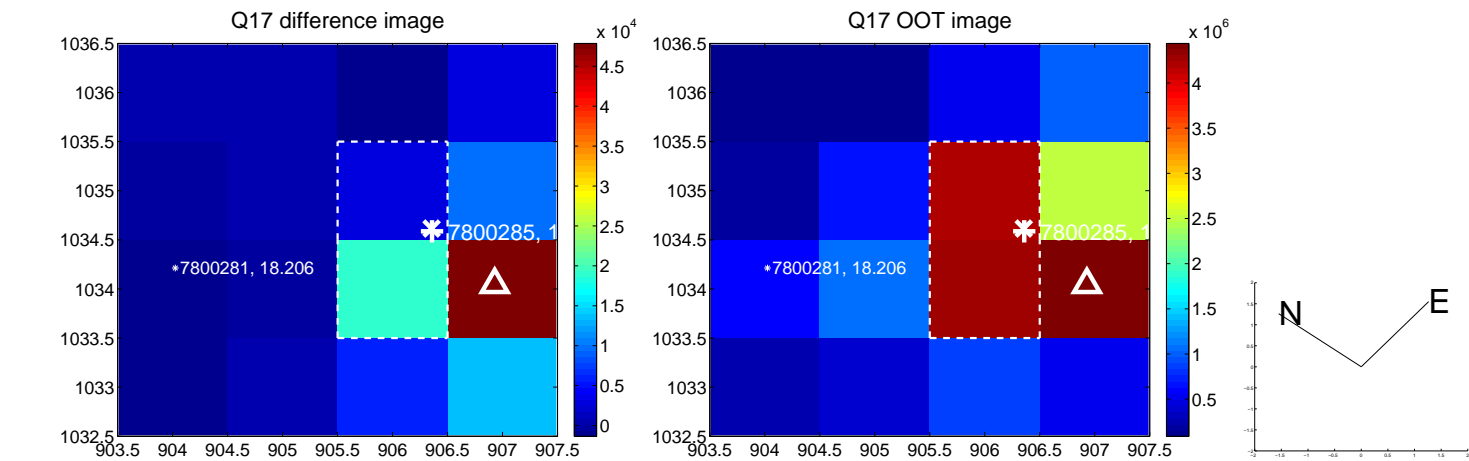
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

