

KIC 007183745

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})
007183745-01	OBS	2521.01	28.474957	154.573005	783.5	5.073	18.9	20.6	0.83	4996	2.88	13.53
007183745-02	OBS	2521.02	4.866312	134.360890	362.3	1.987	13.5	15.3	0.83	4996	1.93	142.62
007183745-03	OBS	No	281.098432	217.717600	536.1	19.569	7.6	7.7	0.83	4996	2.06	0.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007183745-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
007183745-02	OBS	PC	0.94	0	0	0	0	CENT_KIC_POS
007183745-03	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—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.

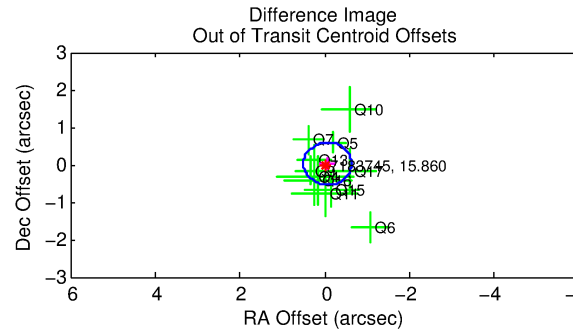
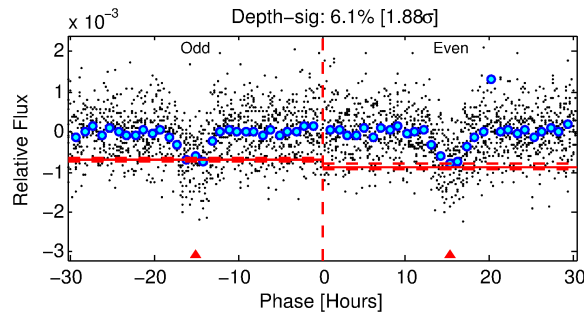
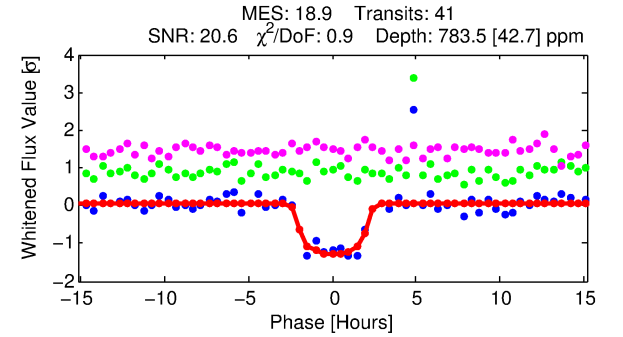
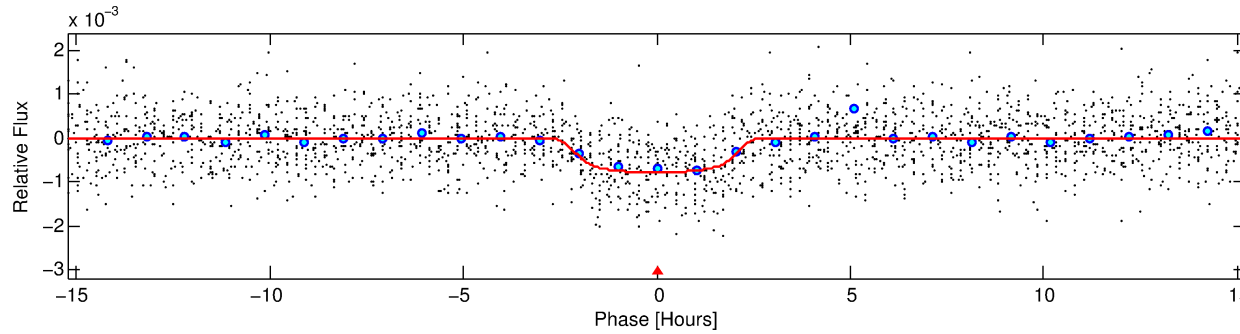
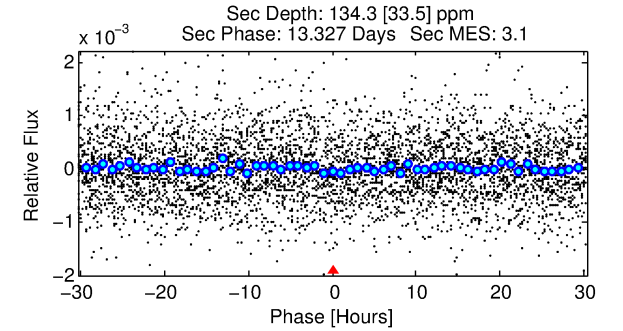
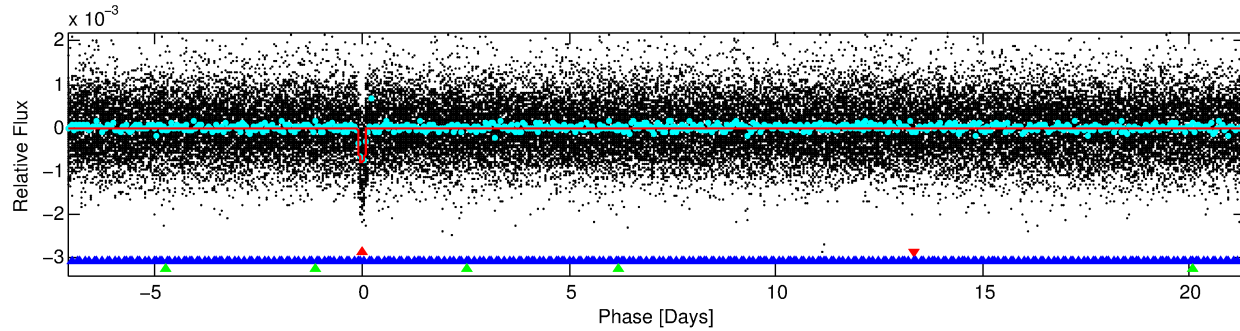
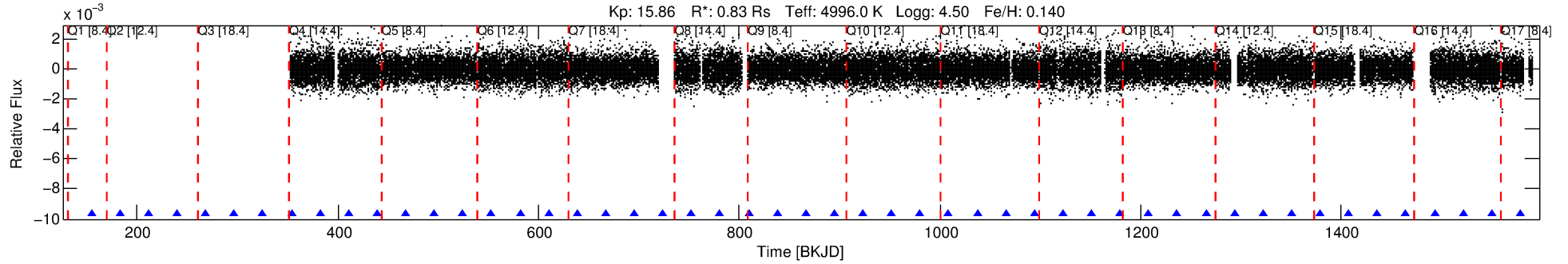
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007183745-01

No Significant Match Found

DV One-Page Summary

KIC: 7183745 Candidate: 1 of 3 Period: 28.475 d
KOI: K02521.01 Corr: 0.971



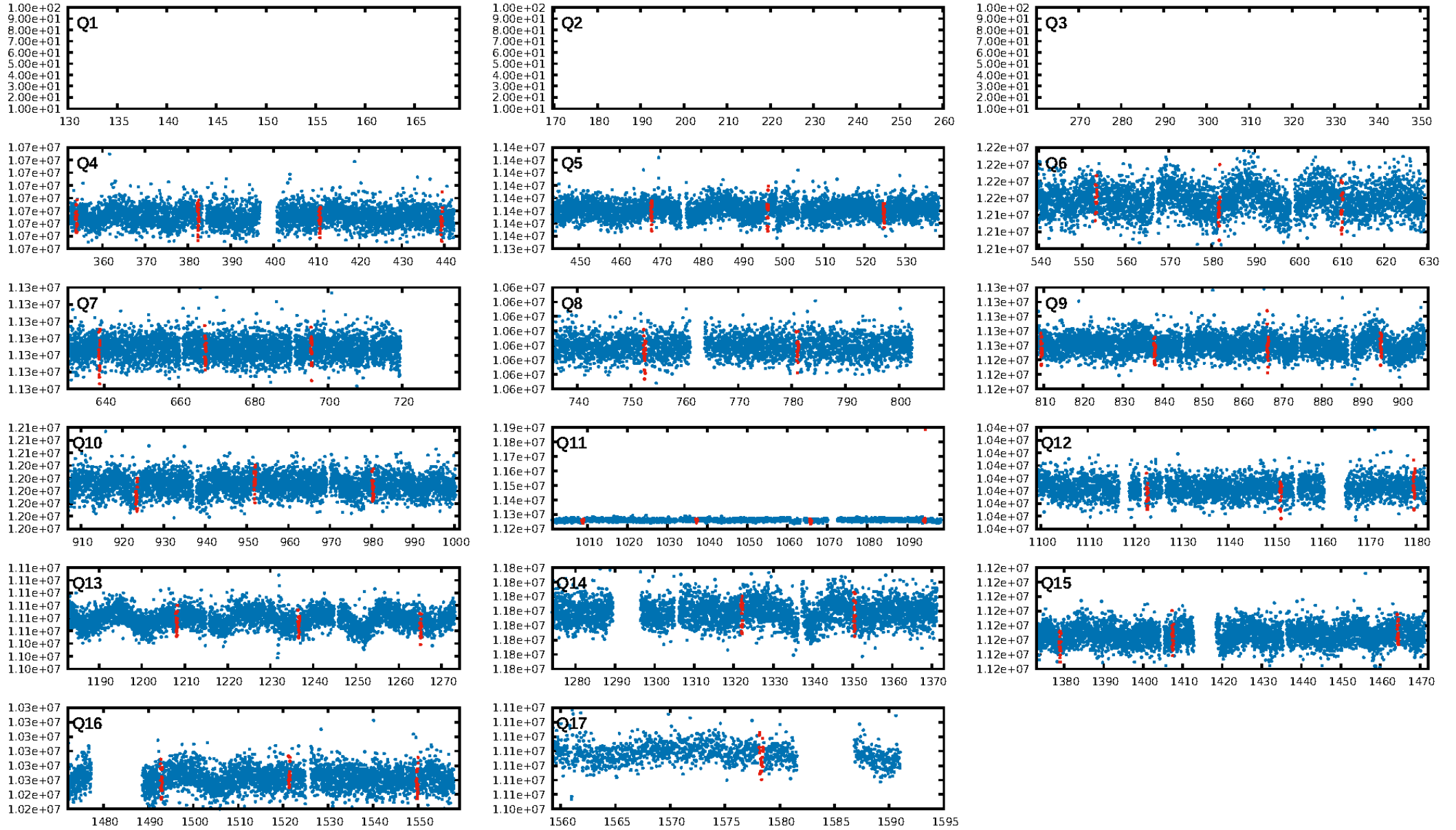
DV Fit Results:

Period = 28.47496 [0.00023] d
Epoch = 154.5730 [0.0070] BKJD
Rp/R* = 0.0318 [0.0027]
a/R* = 20.74 [6.03]
b = 0.91 [0.06]
Seff = 13.53 [1.99]
Teff = 489 [18] K
Rp = 2.88 [0.32] Re
a = 0.1688 [0.0132] AU
Ag = 253.57 [83.26] [3.03σ]
Teffp = 3017 [232] K [10.86σ]

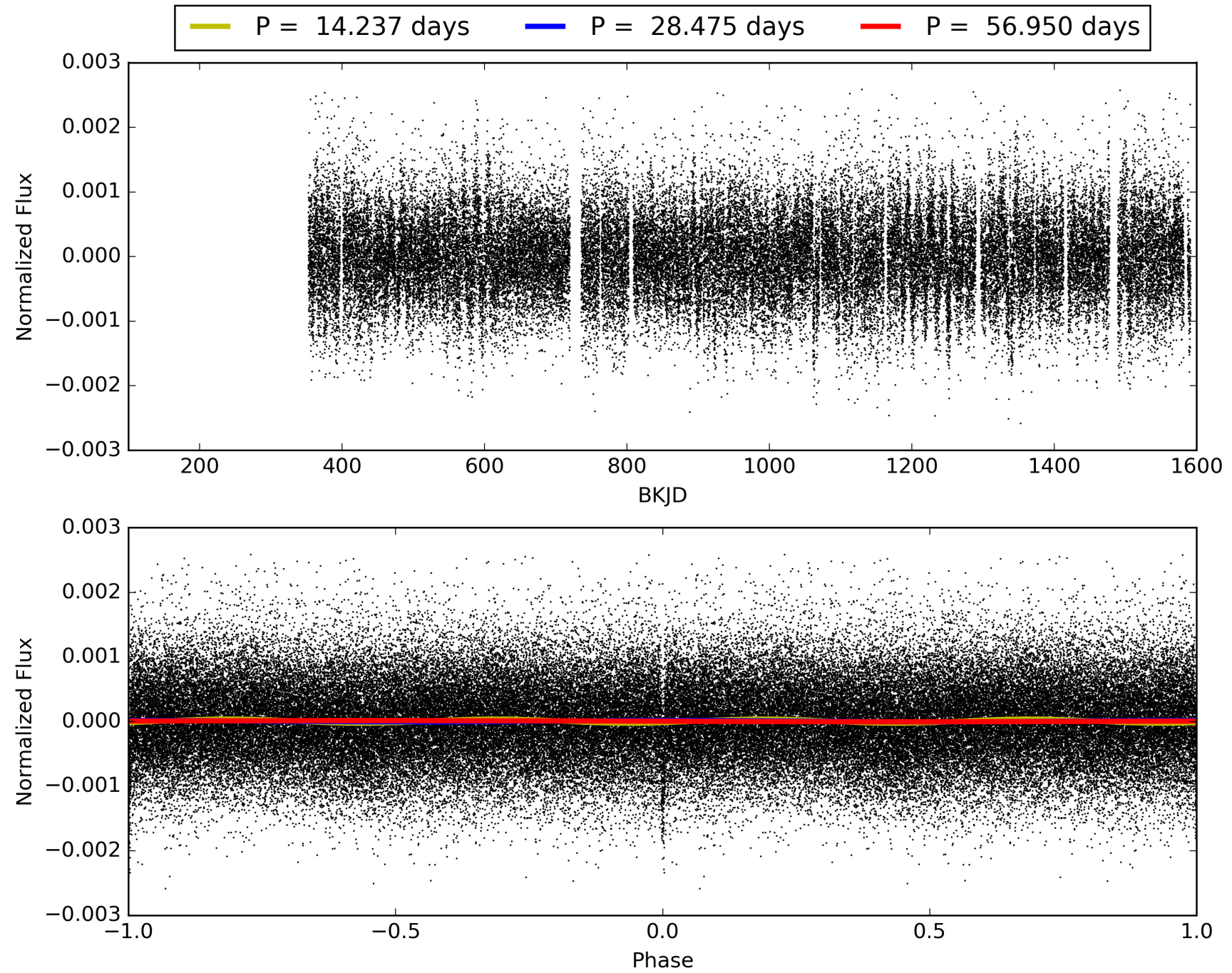
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [104.00σ]
LongPeriod-sig: 100.0% [299.91σ]
ModelChiSquare2-sig: 12.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.59e-78
RollingBand-fgt: 1.00 [40/40]
GhostDiagnostic-chr: 7.38
Centroid-sig: 17.6%
Centroid-so: 0.318 arcsec [0.52σ]
OotOffset-rm: 0.069 arcsec [0.37σ]
OotOffset-st: 2/3/2/4 [11]
KicOffset-rm: 0.280 arcsec [1.18σ]
KicOffset-st: 2/3/2/4 [11]
DiffImageQuality-fgm: 1.00 [11/11]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 007183745-01, PDC Light Curves

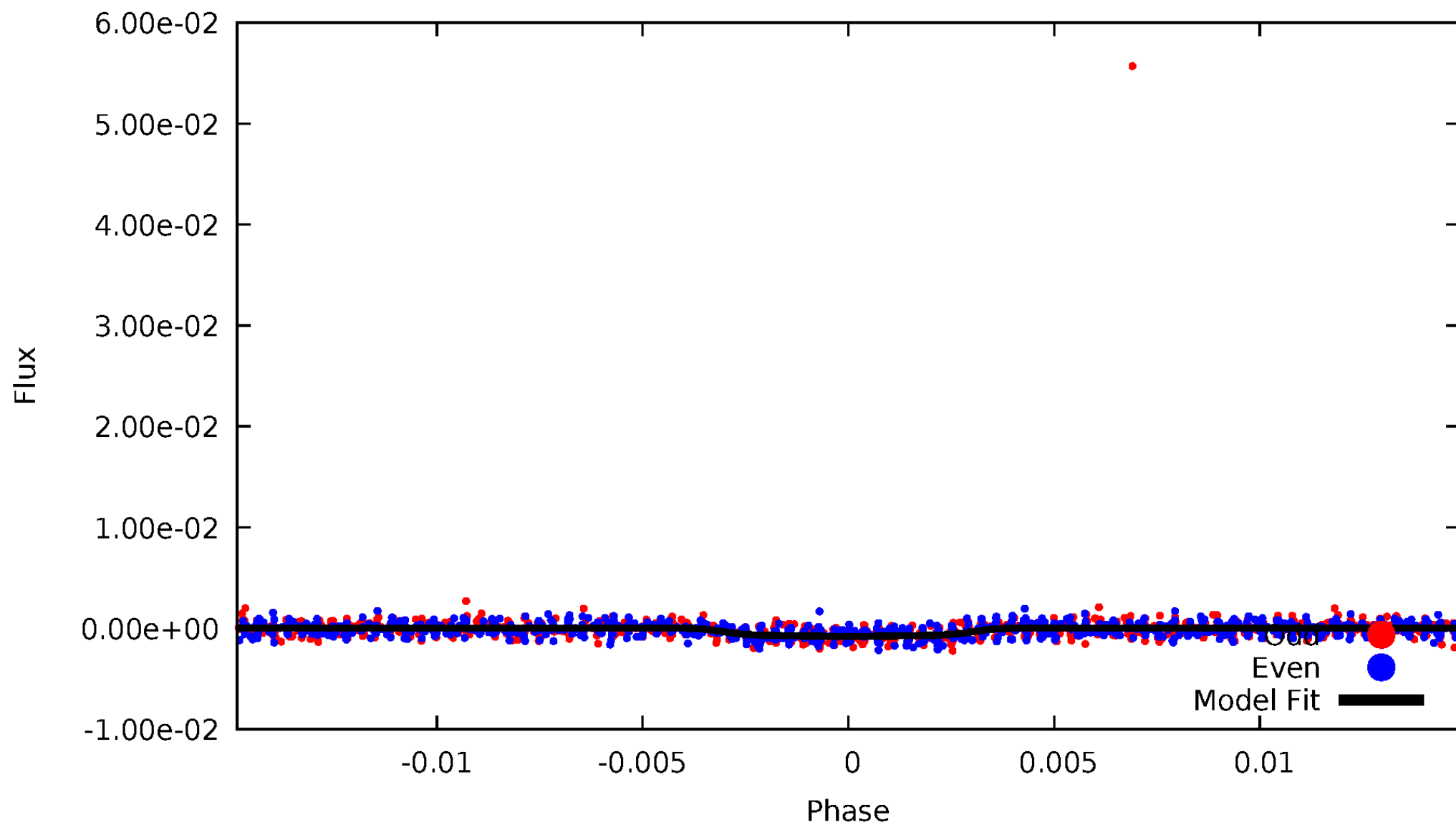


TCE 007183745-01



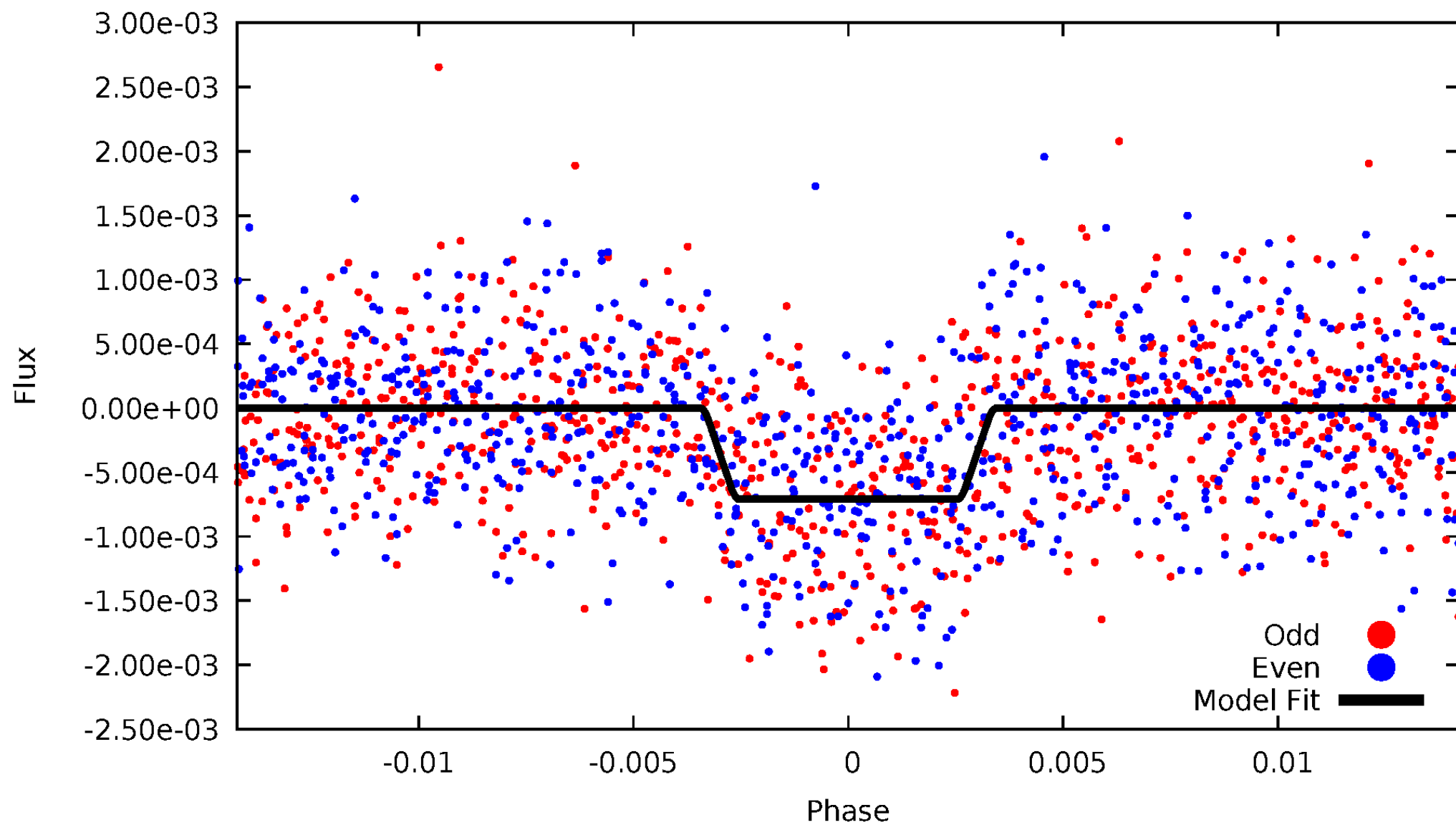
DV Odd/Even

TCE 007183745-01



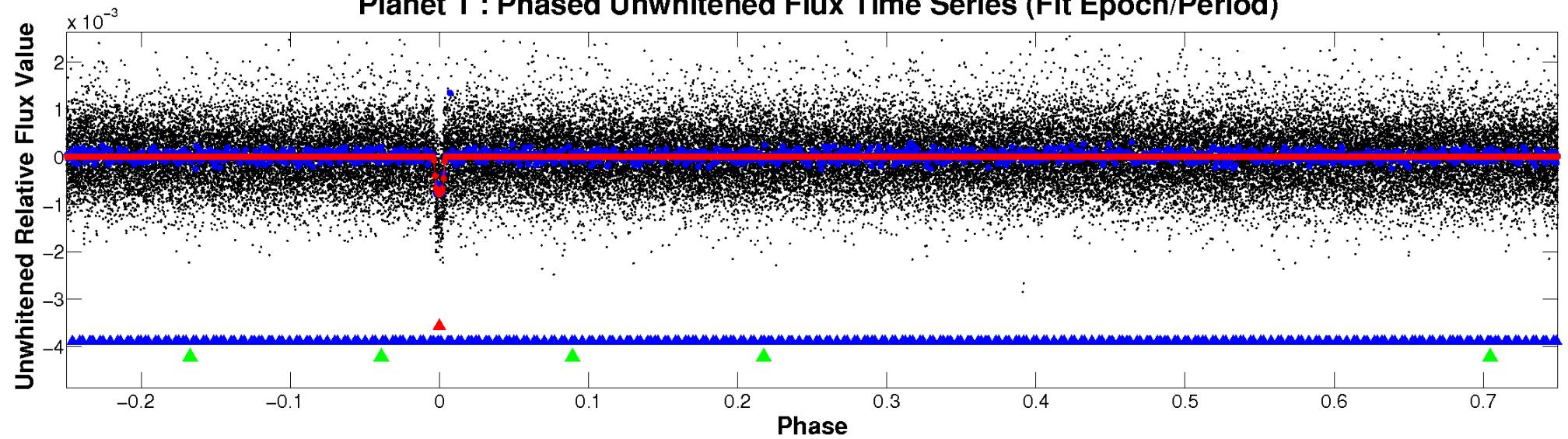
ALT Odd/Even

TCE 007183745-01

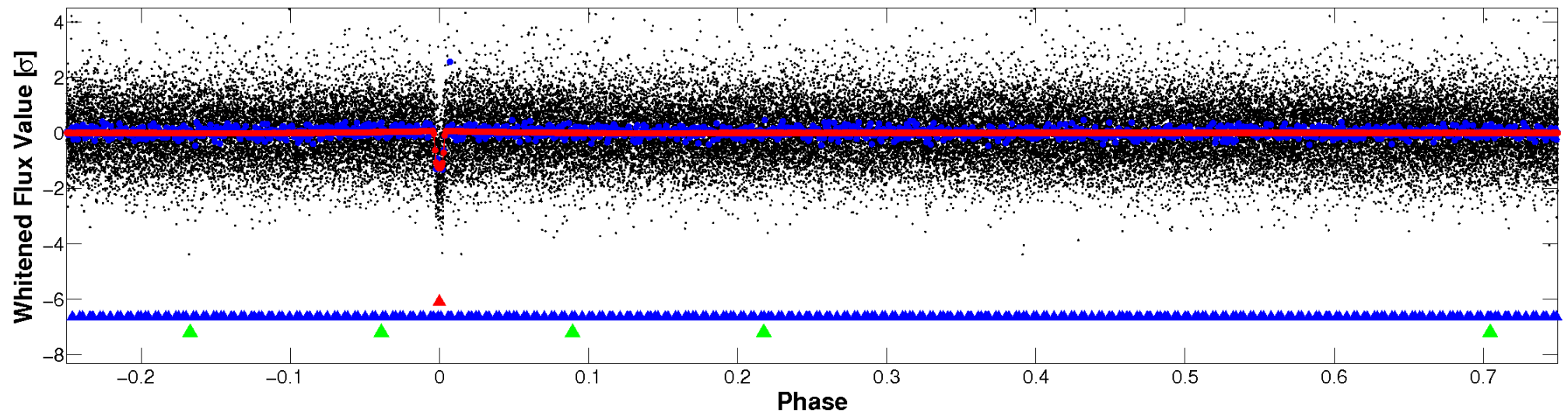


Non-Whitened Vs. Whitened Light Curve

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

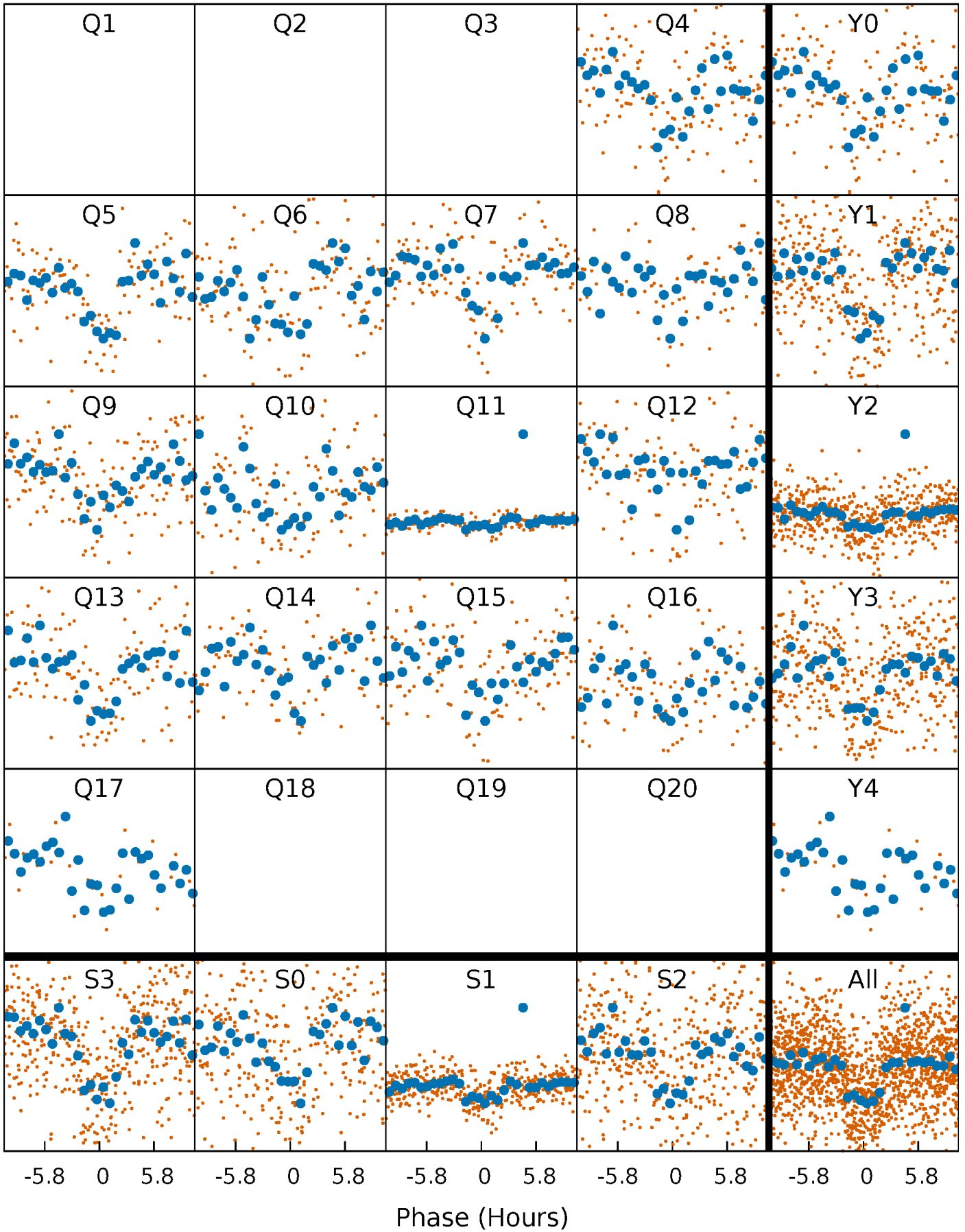


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



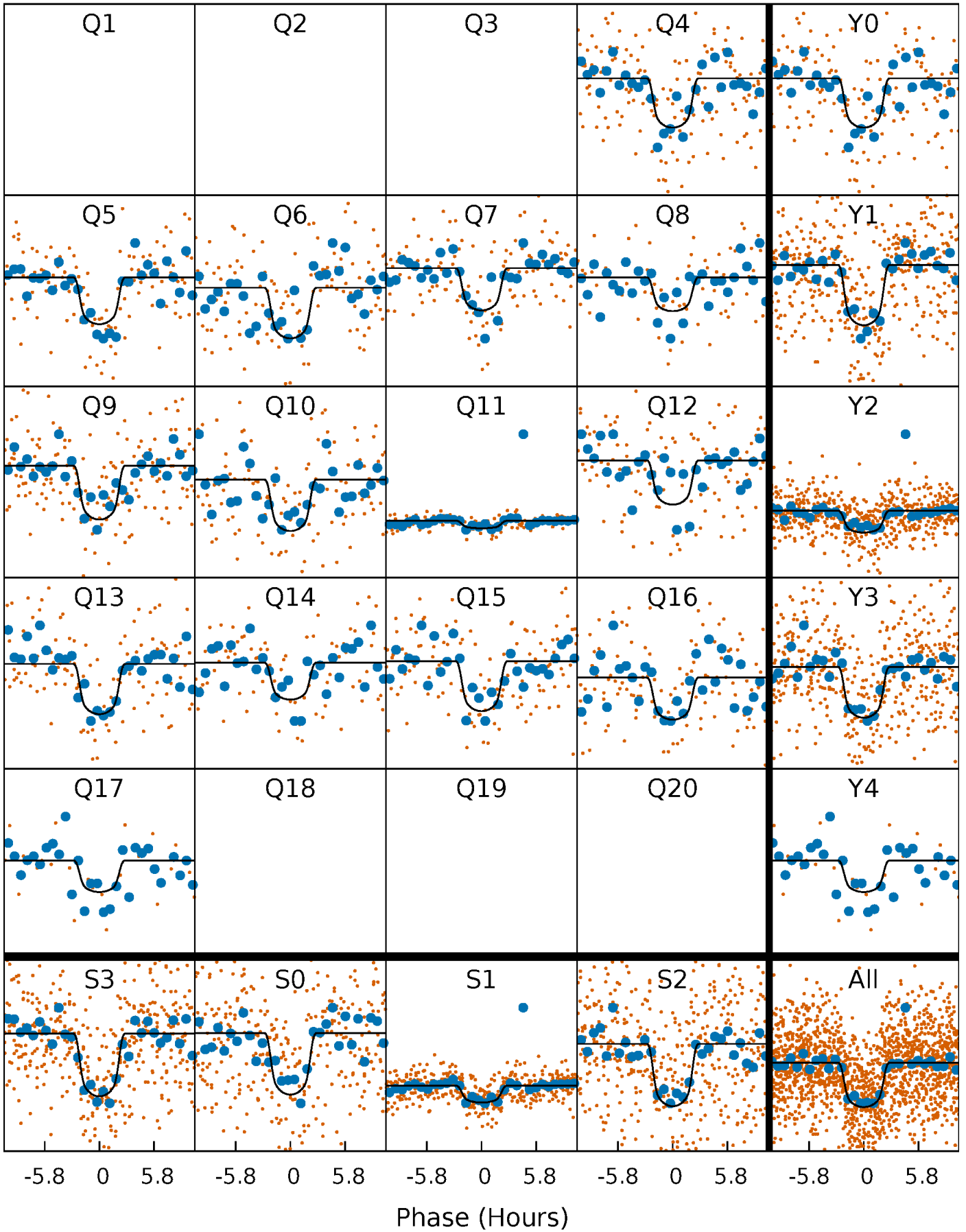
PDC Quarter-Phased Transit Curves

TCE 007183745-01 P= 28.474957 Days $T_0=154.573005$ (BKJD)



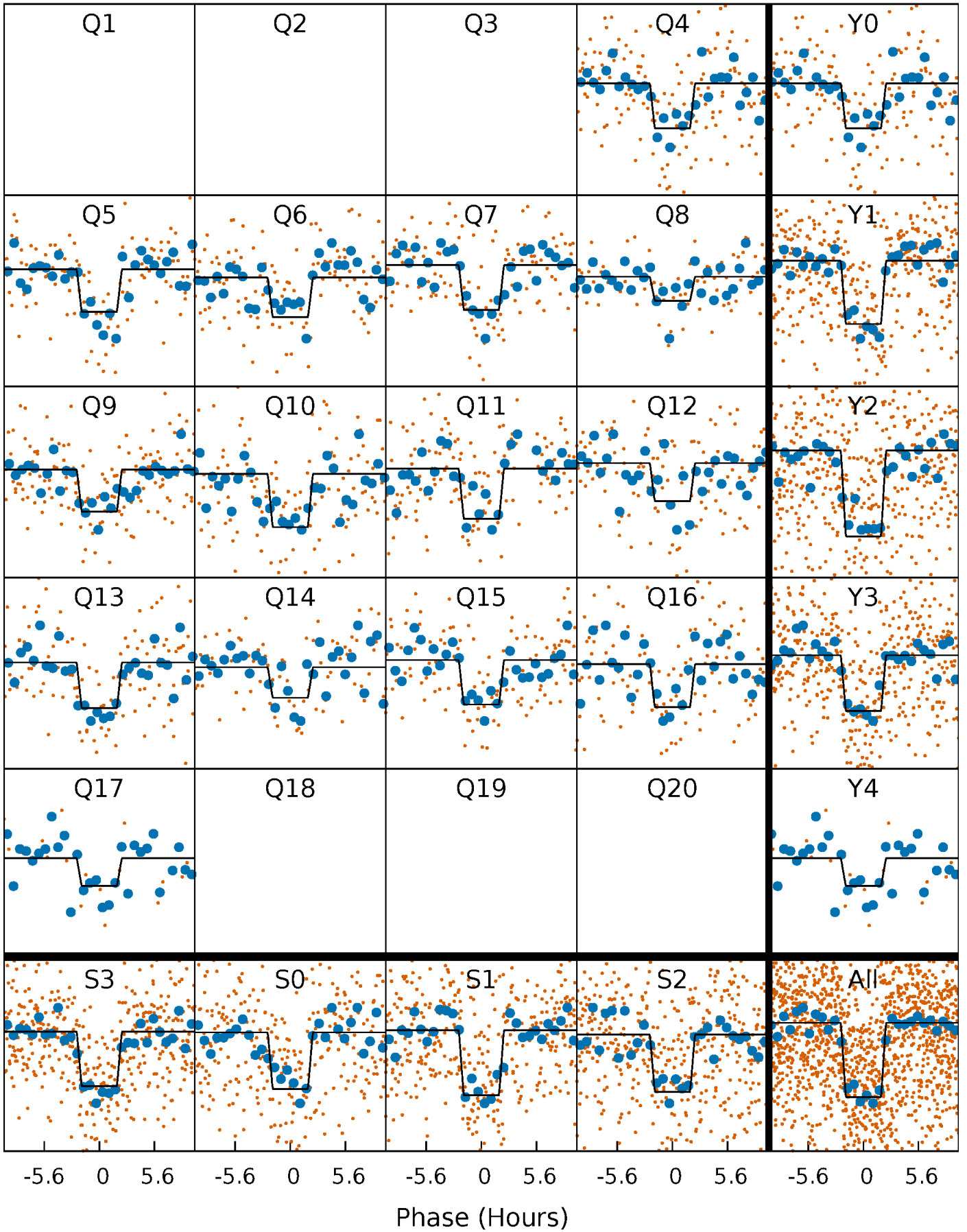
DV Quarter-Phased Transit Curves

TCE 007183745-01 P= 28.474957 Days $T_0=154.573005$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

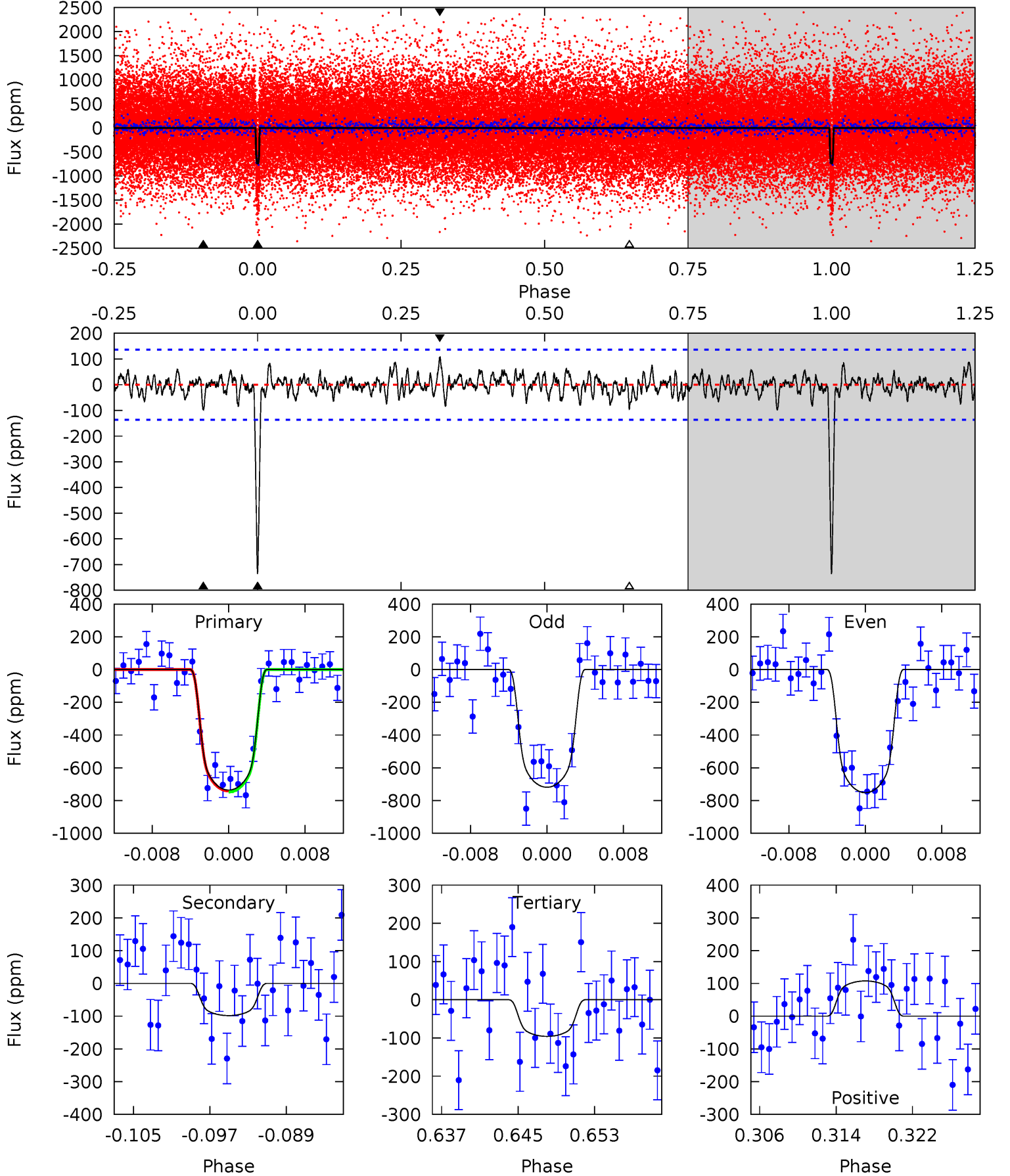
TCE 007183745-01 P= 28.475337 Days $T_0=154.561283$ (BKJD)



DV Model-Shift Uniqueness Test

007183745-01, $P = 28.474957$ Days, $E = 154.573005$ Days

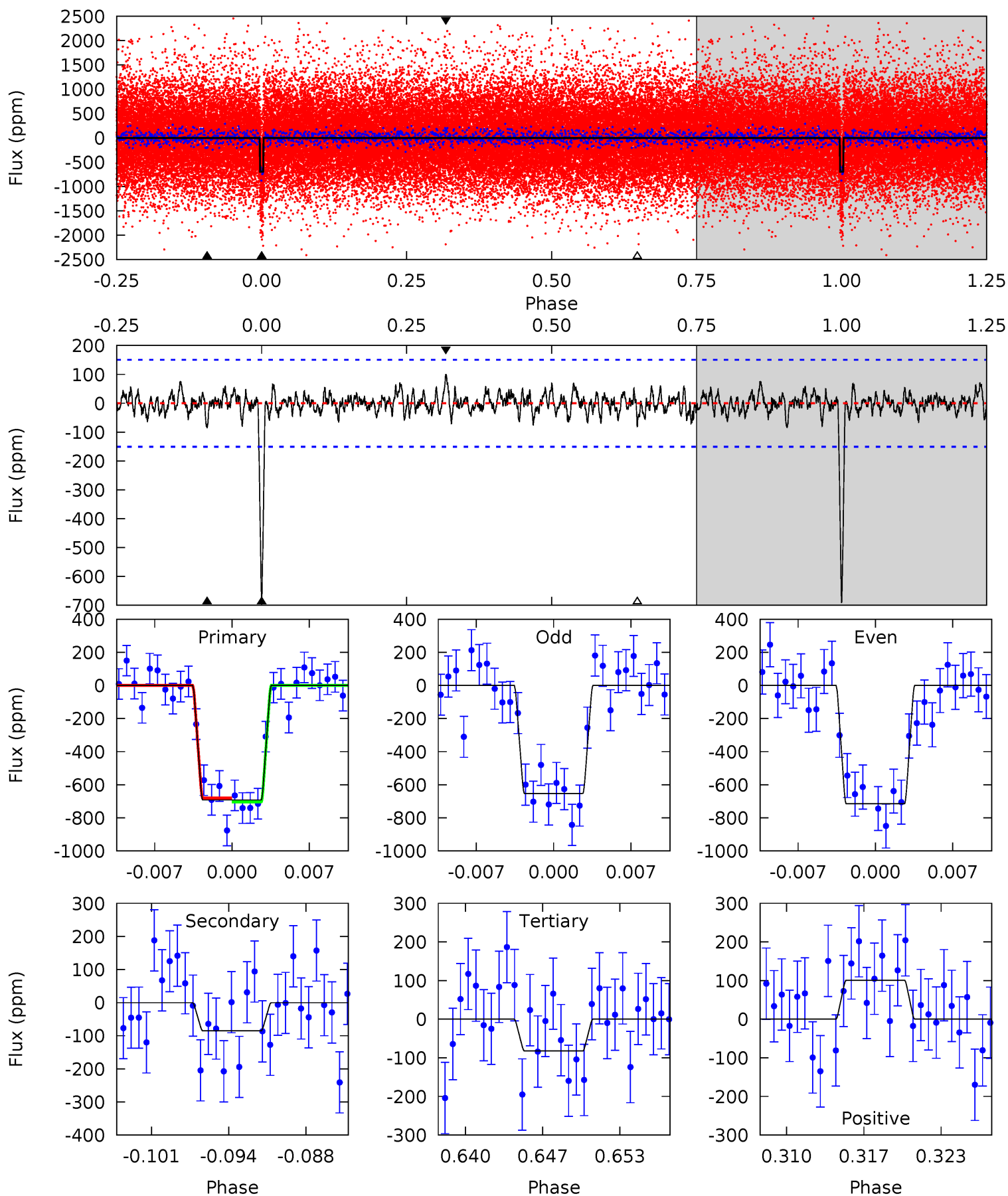
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.3	3.65	3.56	3.99	5.07	2.65	1.13	23.8	23.3	0.09	-0.34	0.61	1.06	0.13	0.12



Alt Model-Shift Uniqueness Test

007183745-01, $P = 28.475337$ Days, $E = 154.561283$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.4	2.87	2.78	3.41	5.10	2.71	0.93	20.7	20.0	0.09	-0.53	1.05	1.01	0.13	0.40



Stellar Parameters For KIC 007183745

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4996^{+82}_{-74}	$4.497^{+0.080}_{-0.025}$	$0.140^{+0.150}_{-0.150}$	$0.831^{+0.032}_{-0.060}$	$0.791^{+0.058}_{-0.025}$	$1.942^{+0.568}_{-0.178}$
	+2%/-1%	+2%/-1%	+107%/-107%	+4%/-7%	+7%/-3%	+29%/-9%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 007183745-01 / KOI 2521.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-98 ± 27	$2.86^{+0.27}_{-0.27}$	679^{+15}_{-16}	3298^{+162}_{-175}	192^{+67}_{-59}
Alt.	-85 ± 30	$2.40^{+0.26}_{-0.25}$	679^{+15}_{-16}	3408^{+195}_{-238}	235^{+101}_{-90}

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

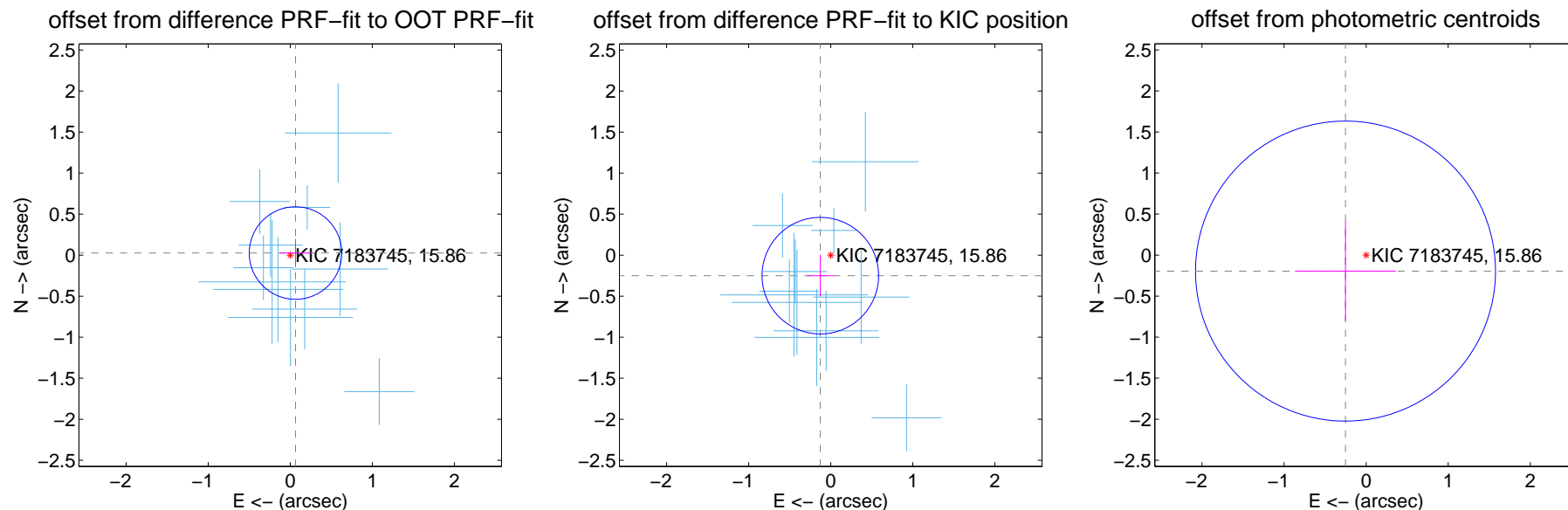
DV Centroid Data

Supplemental centroid analysis for 007183745-01. Kepler magnitude: 15.86. Transit SNR 20.58

There are 11 quarters with good PRF difference image offsets

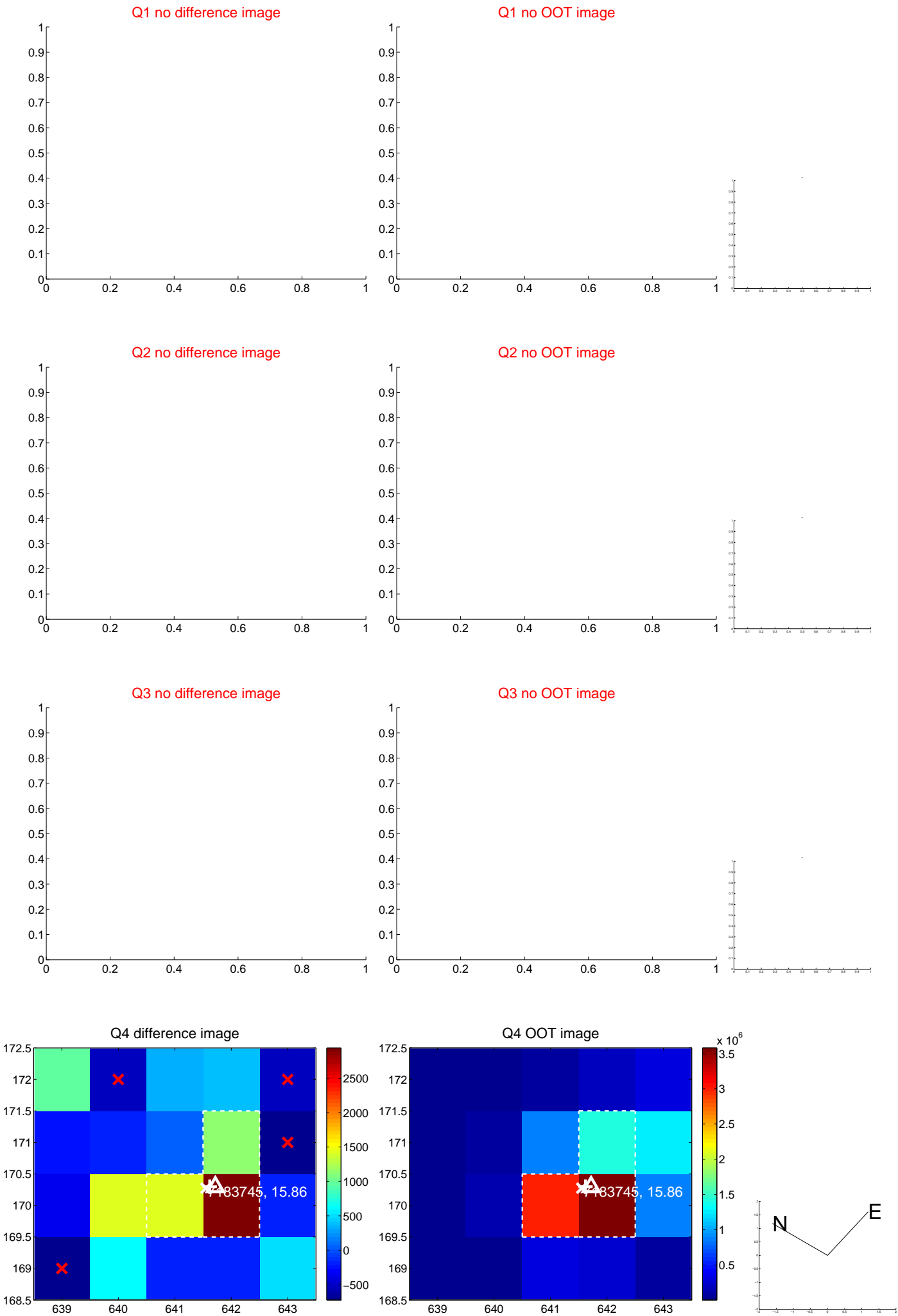
The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.069 ± 0.188	0.37	-0.064 ± 0.191	0.026 ± 0.170
PRF-fit source offset from KIC position	0.280 ± 0.237	1.18	0.127 ± 0.161	-0.250 ± 0.253
photometric centroid source offset	0.32 ± 0.61	0.52	0.25 ± 0.61	-0.20 ± 0.60

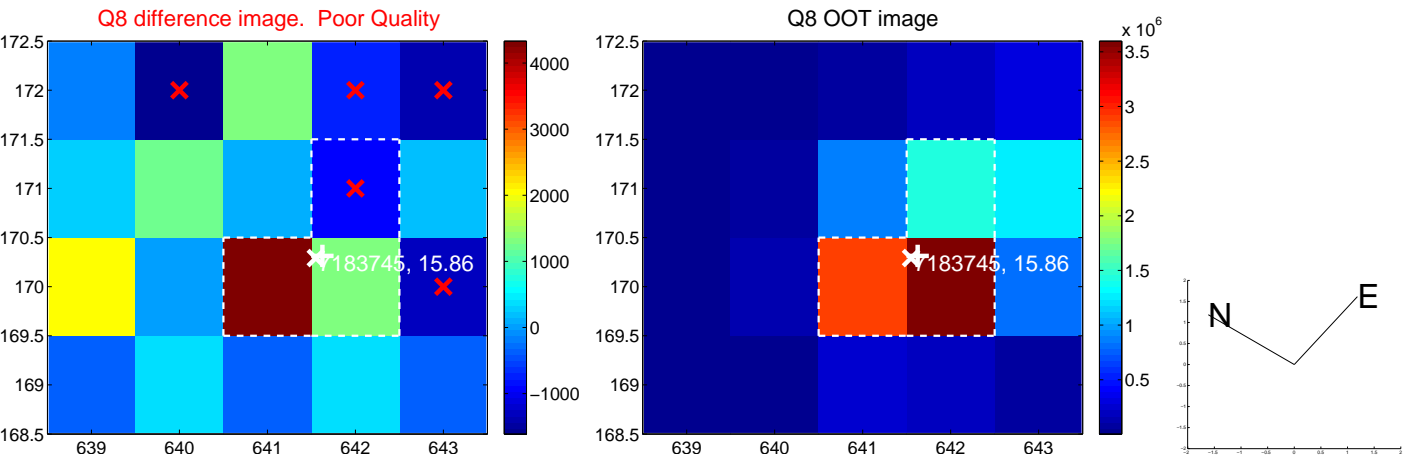
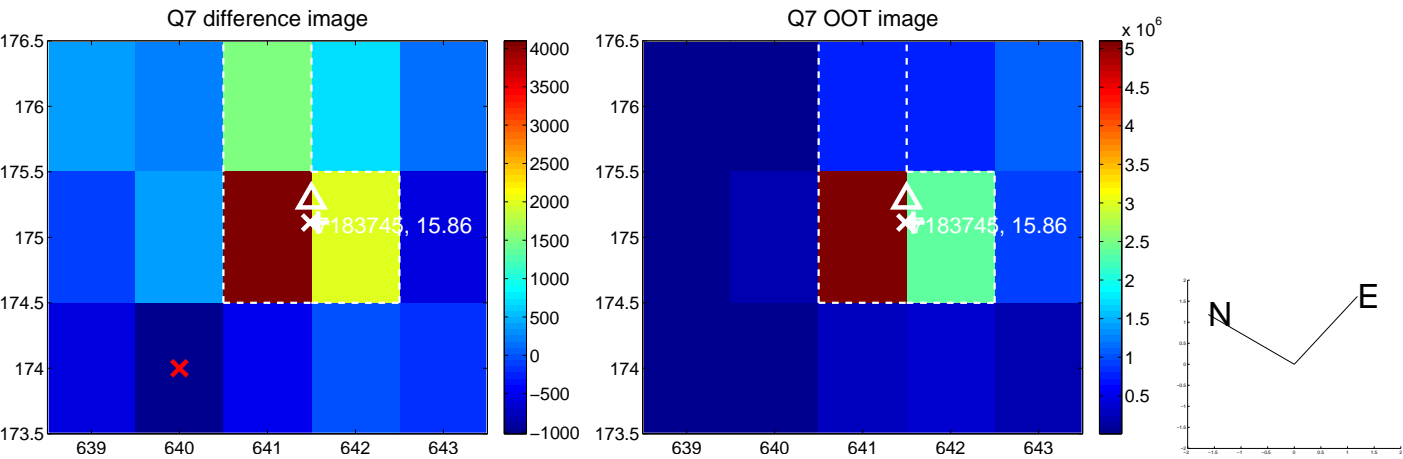
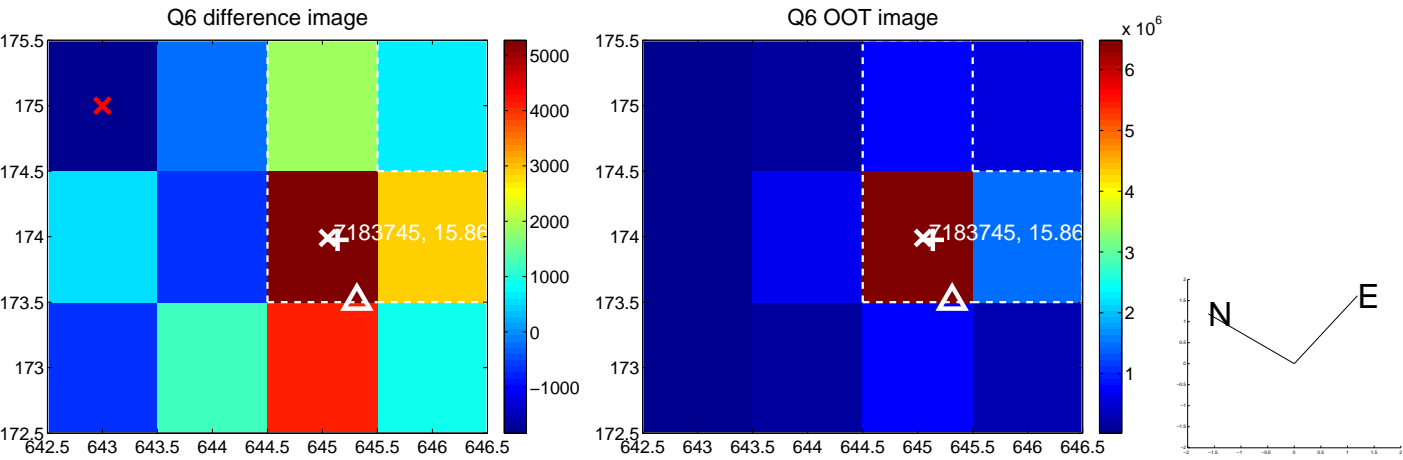
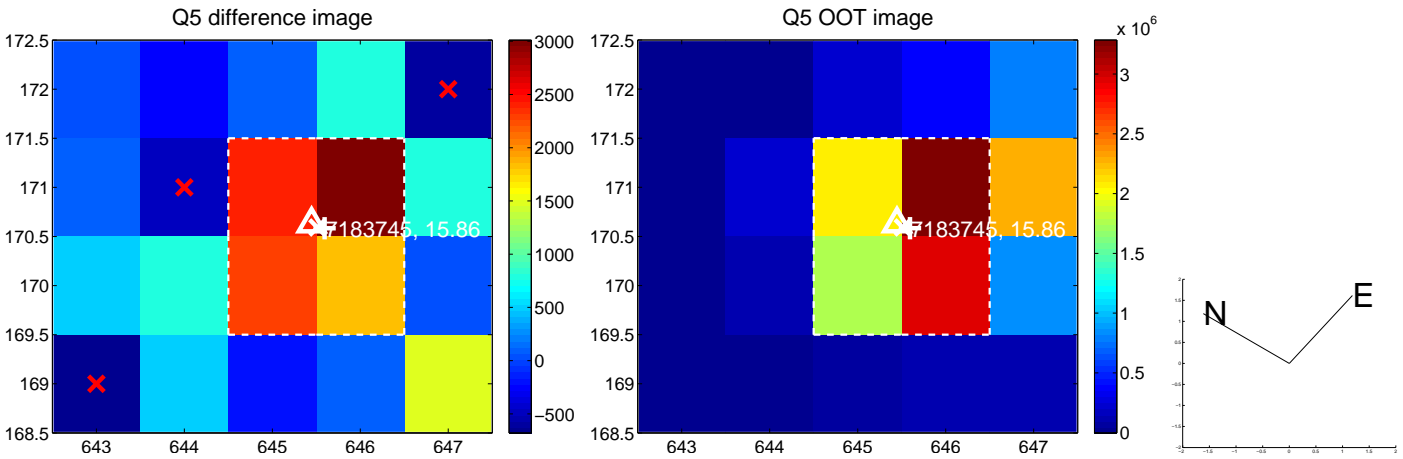


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

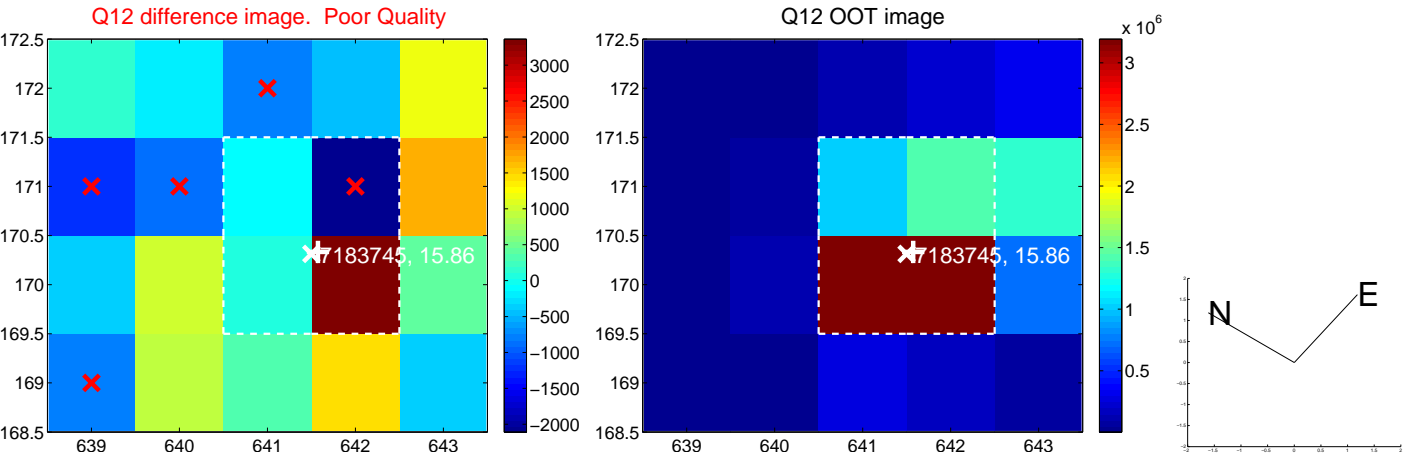
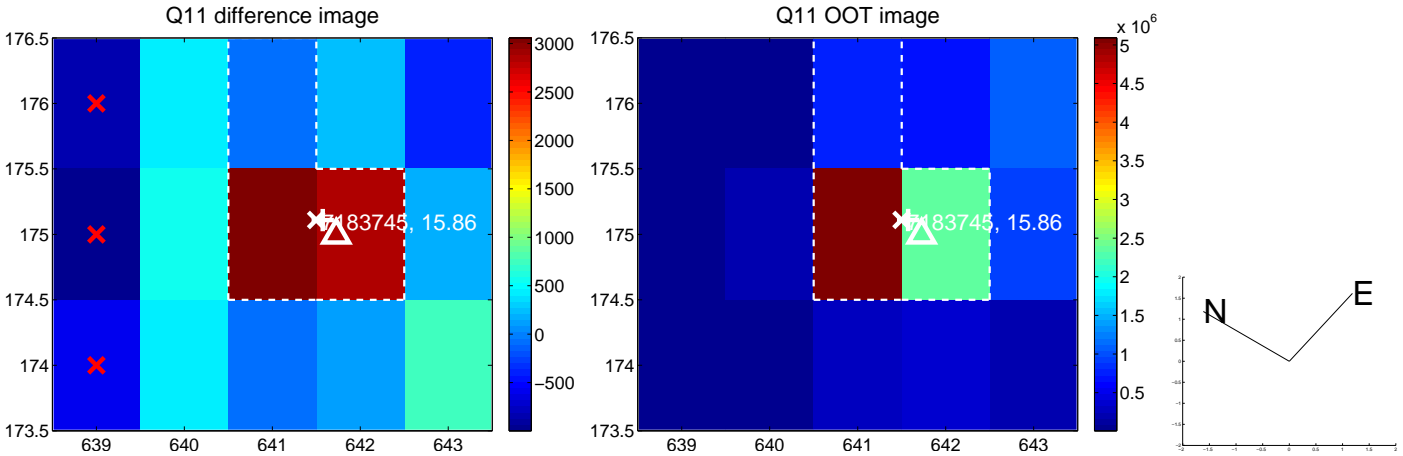
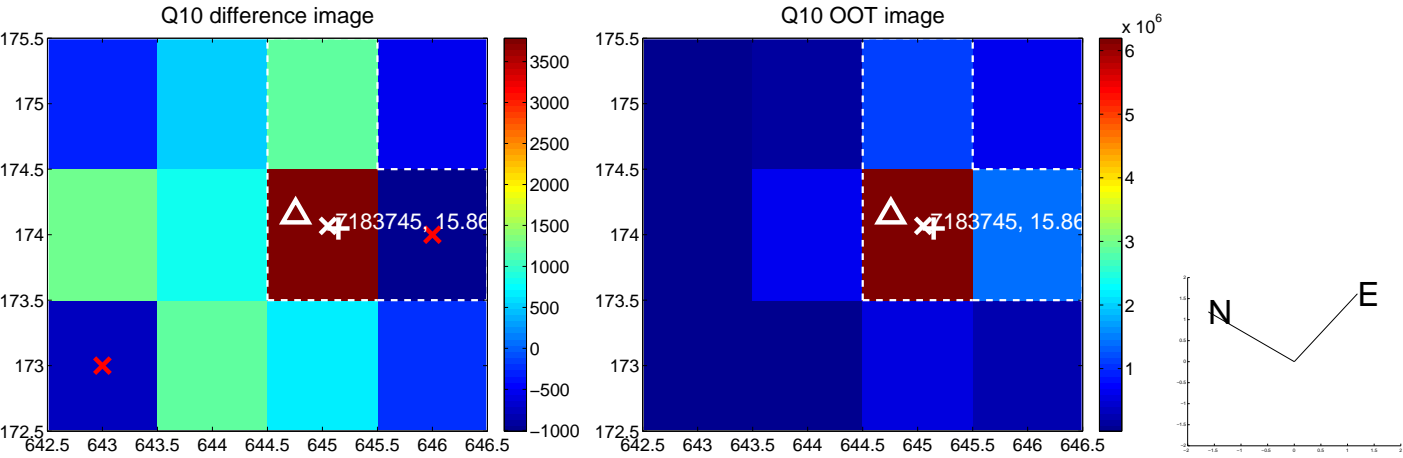
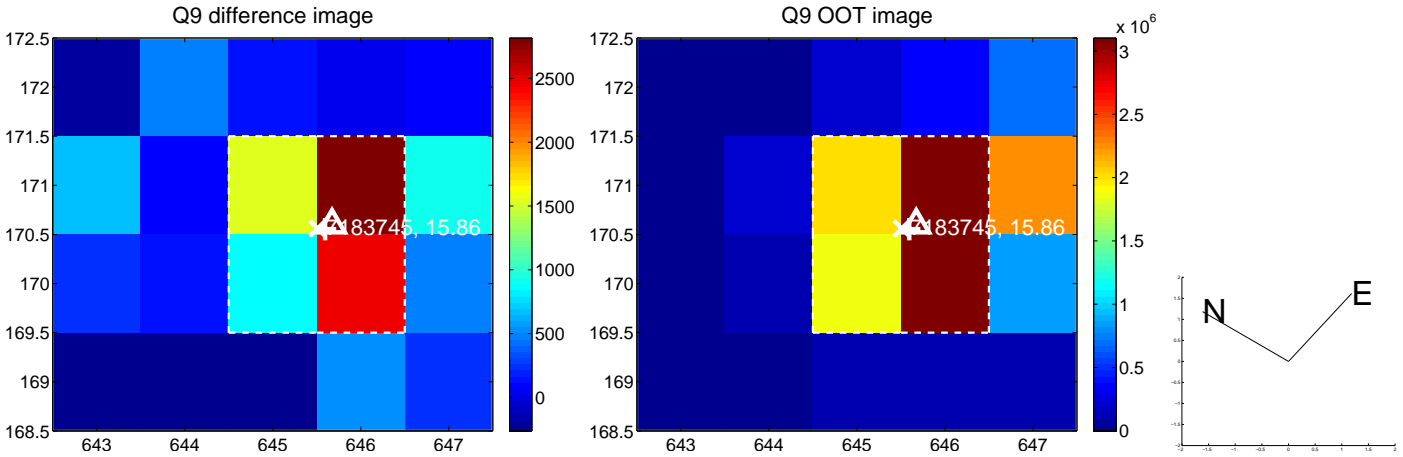
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



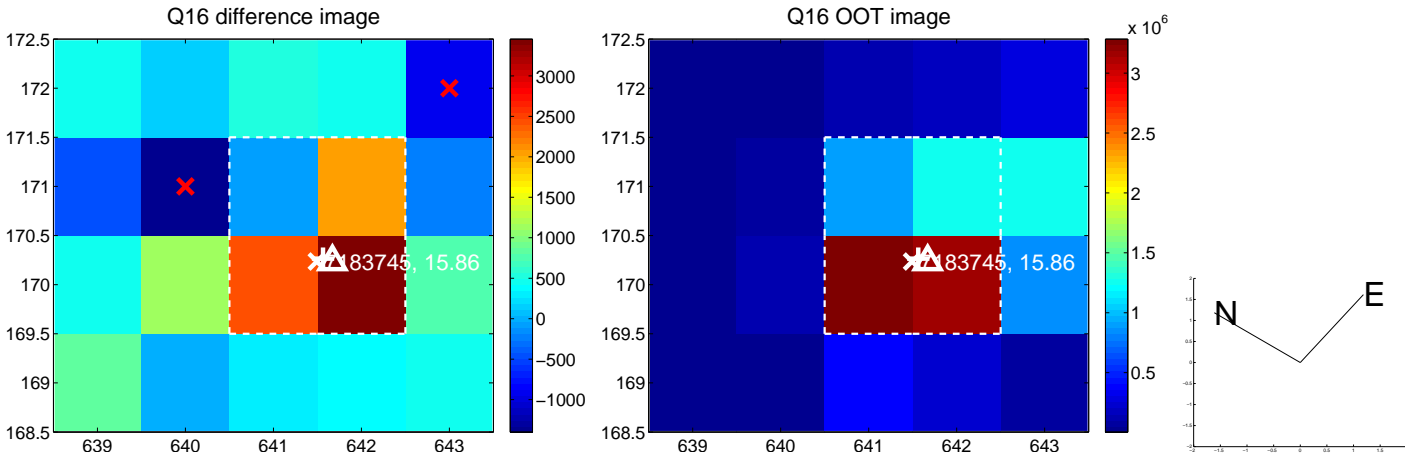
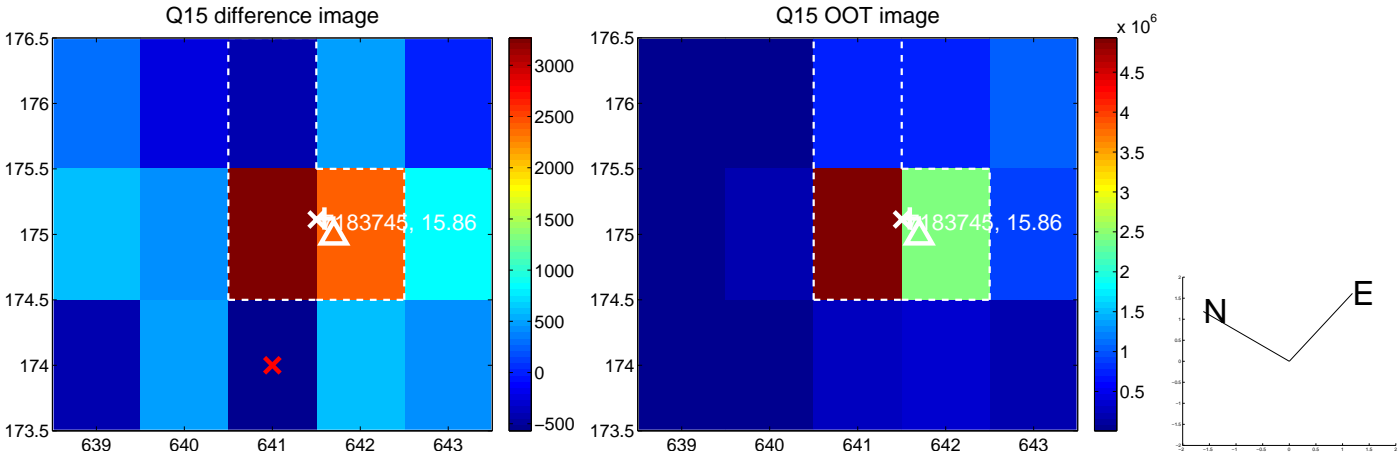
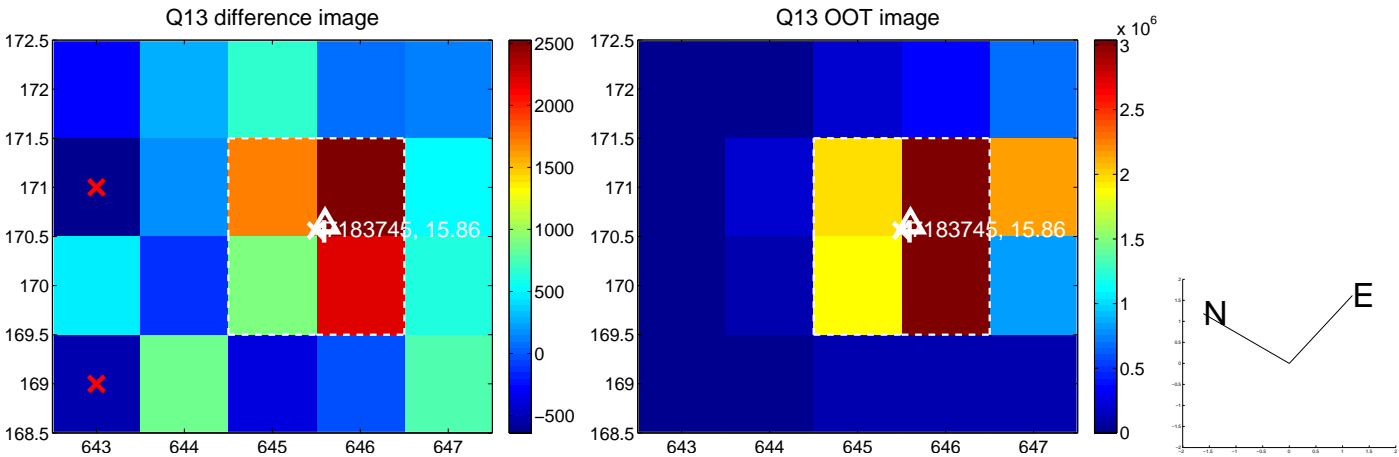
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



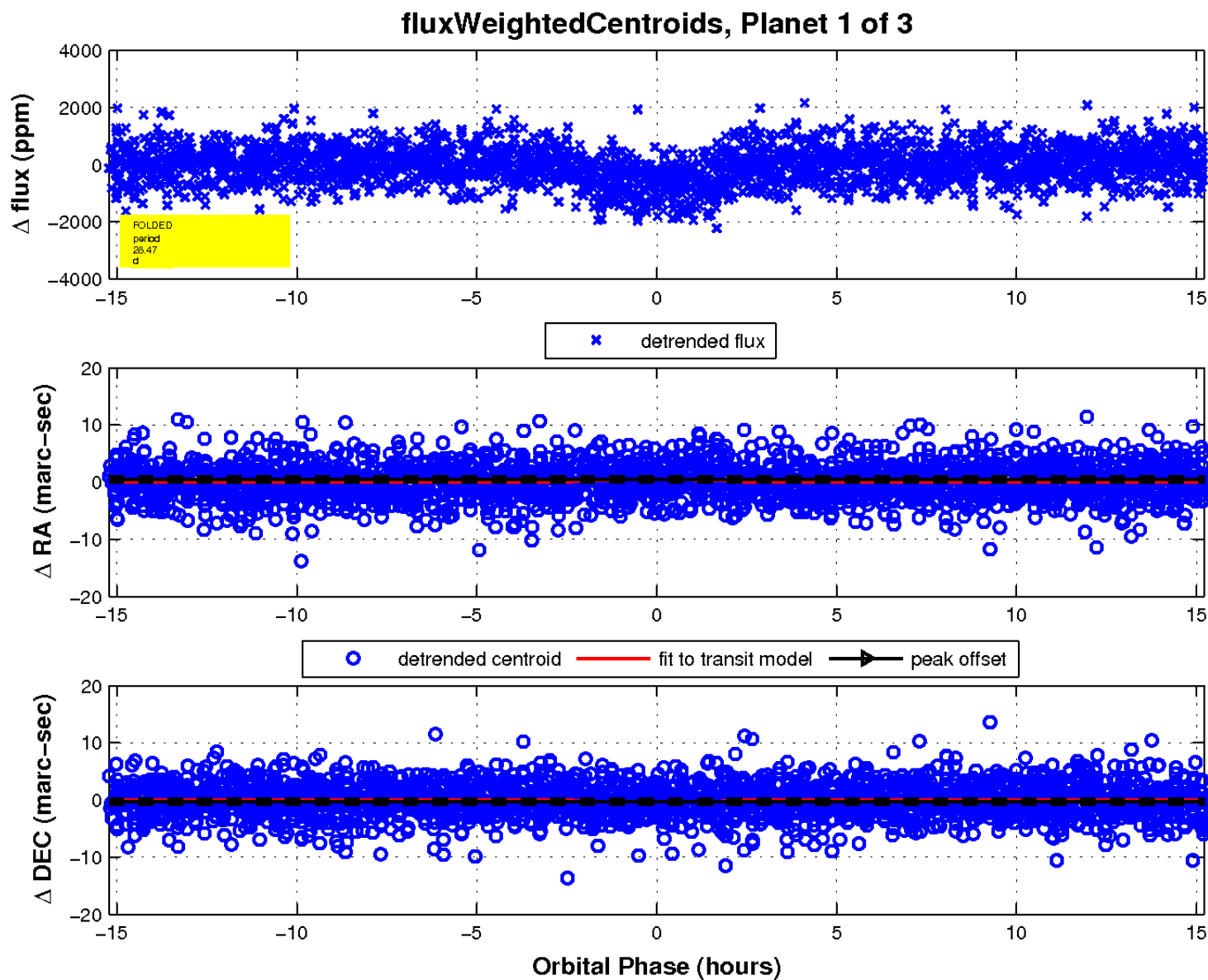
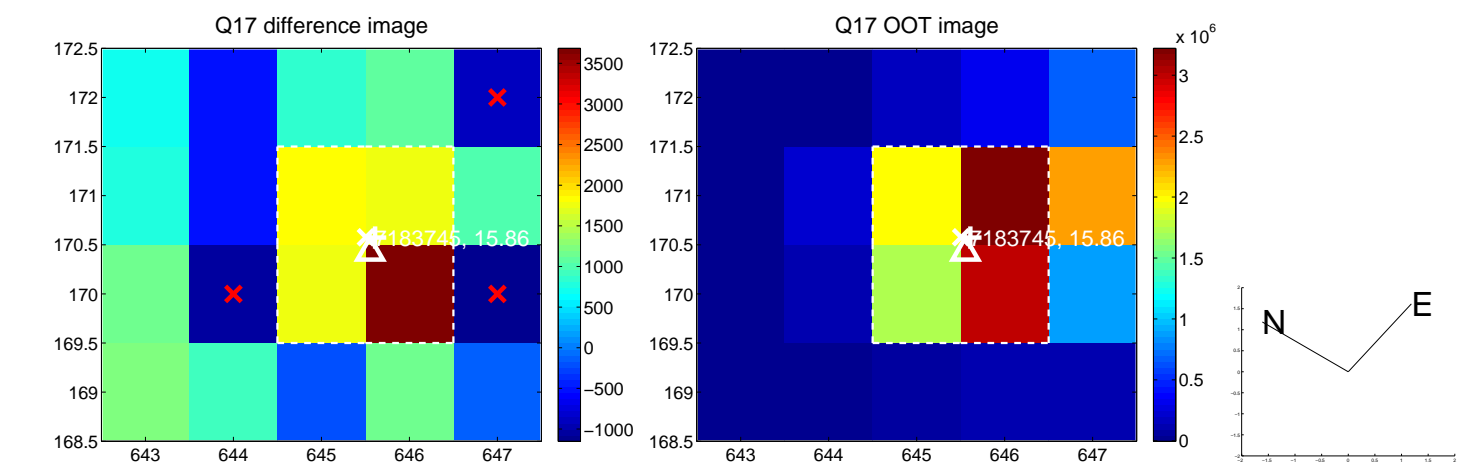
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

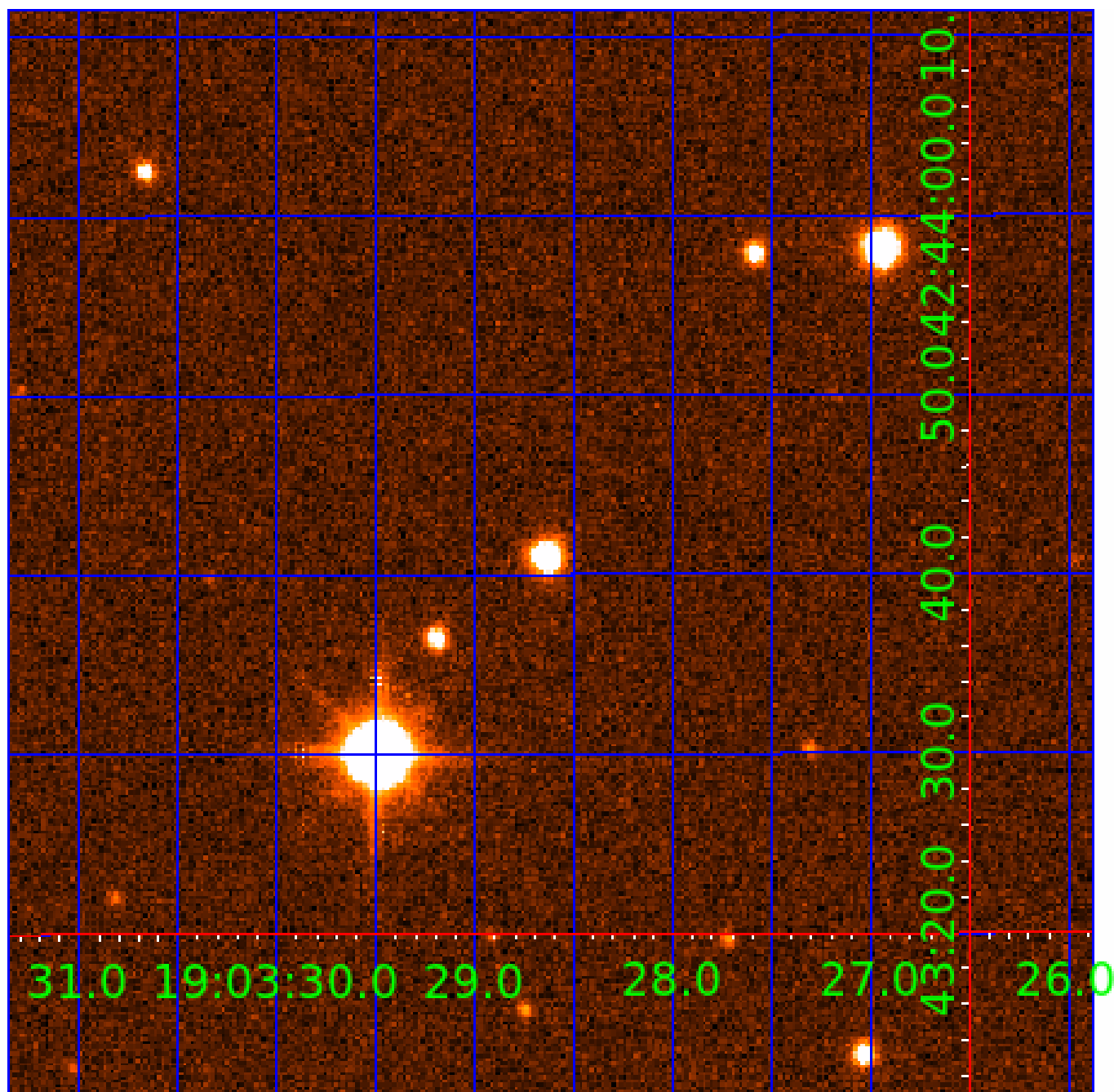


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007183745

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})
007183745-01	OBS	2521.01	28.474957	154.573005	783.5	5.073	18.9	20.6	0.83	4996	2.88	13.53
007183745-02	OBS	2521.02	4.866312	134.360890	362.3	1.987	13.5	15.3	0.83	4996	1.93	142.62
007183745-03	OBS	No	281.098432	217.717600	536.1	19.569	7.6	7.7	0.83	4996	2.06	0.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007183745-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
007183745-02	OBS	PC	0.94	0	0	0	0	CENT_KIC_POS
007183745-03	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—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.

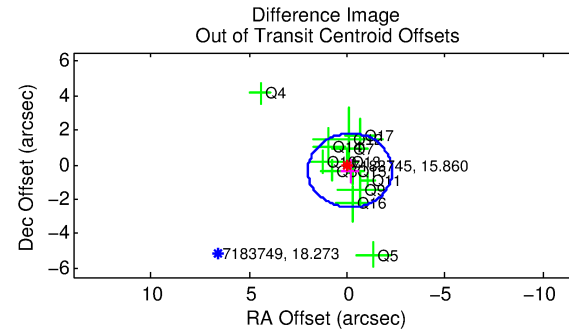
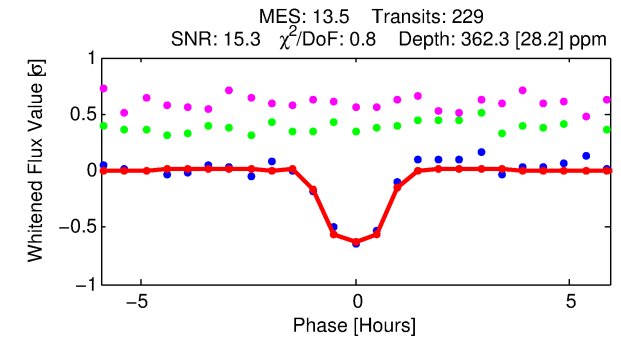
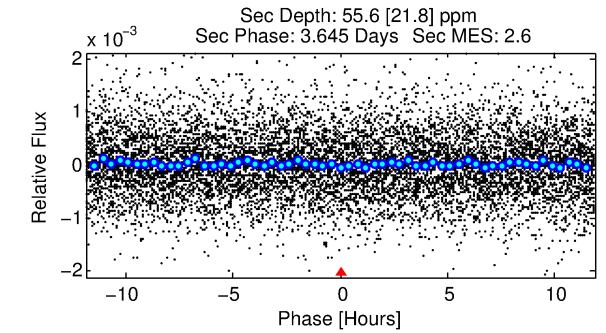
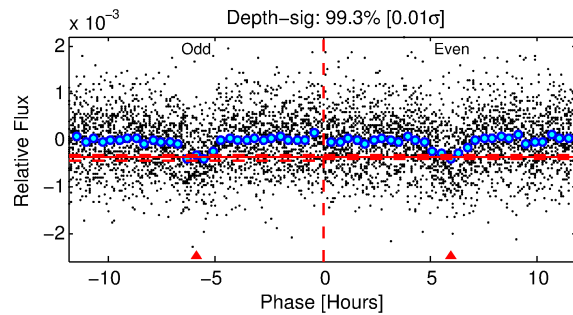
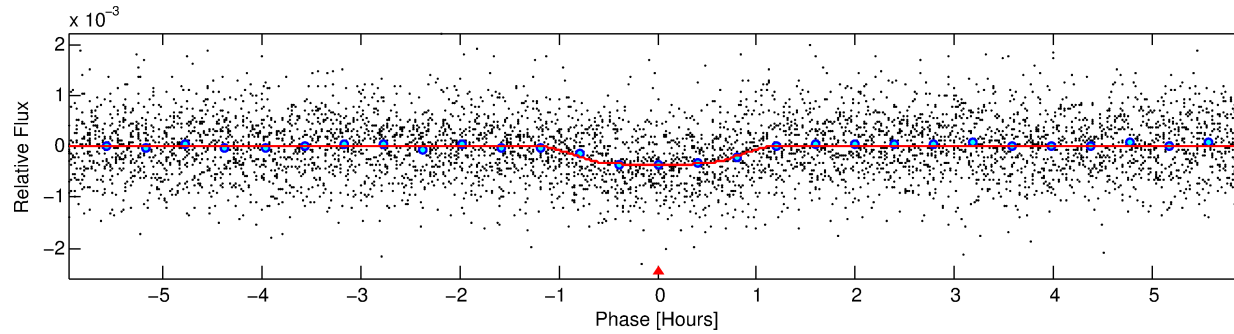
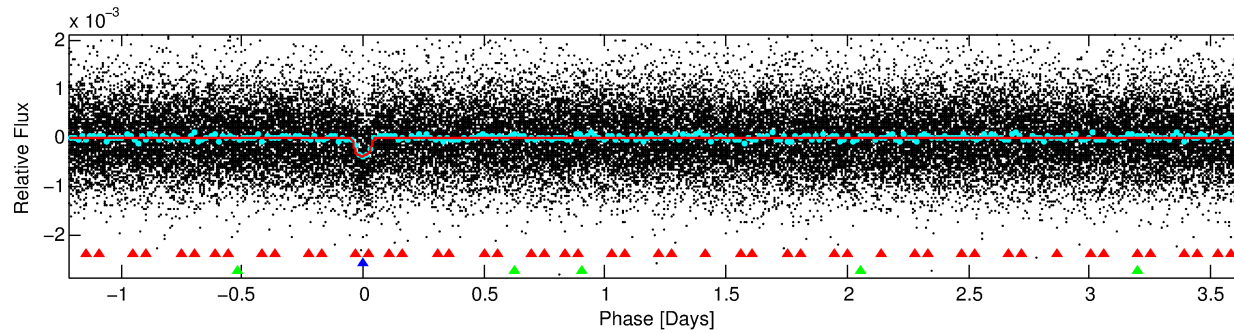
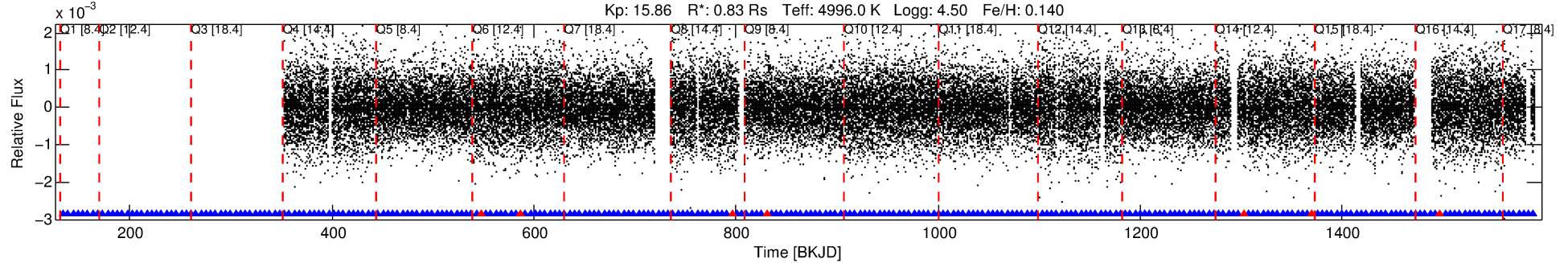
Ephemeris Match Information For 007183745-02

No Significant Match Found

DV One-Page Summary

KIC: 7183745 Candidate: 2 of 3 Period: 4.866 d
KOI: K02521.02 Corr: 0.934

Kp: 15.86 R*: 0.83 Rs Teff: 4996.0 K Logg: 4.50 Fe/H: 0.140



DV Fit Results:

Period = 4.86631 [0.00002] d
Epoch = 134.3609 [0.0029] BKJD
Rp/R* = 0.0213 [0.0111]
a/R* = 9.15 [18.31]
b = 0.90 [0.45]
Seff = 142.62 [21.01]
Teq = 881 [32] K
Rp = 1.93 [1.02] Re
a = 0.0520 [0.0041] AU
Ag = 22.17 [24.88] [0.85σ]
Teffp = 2956 [825] K [2.51σ]

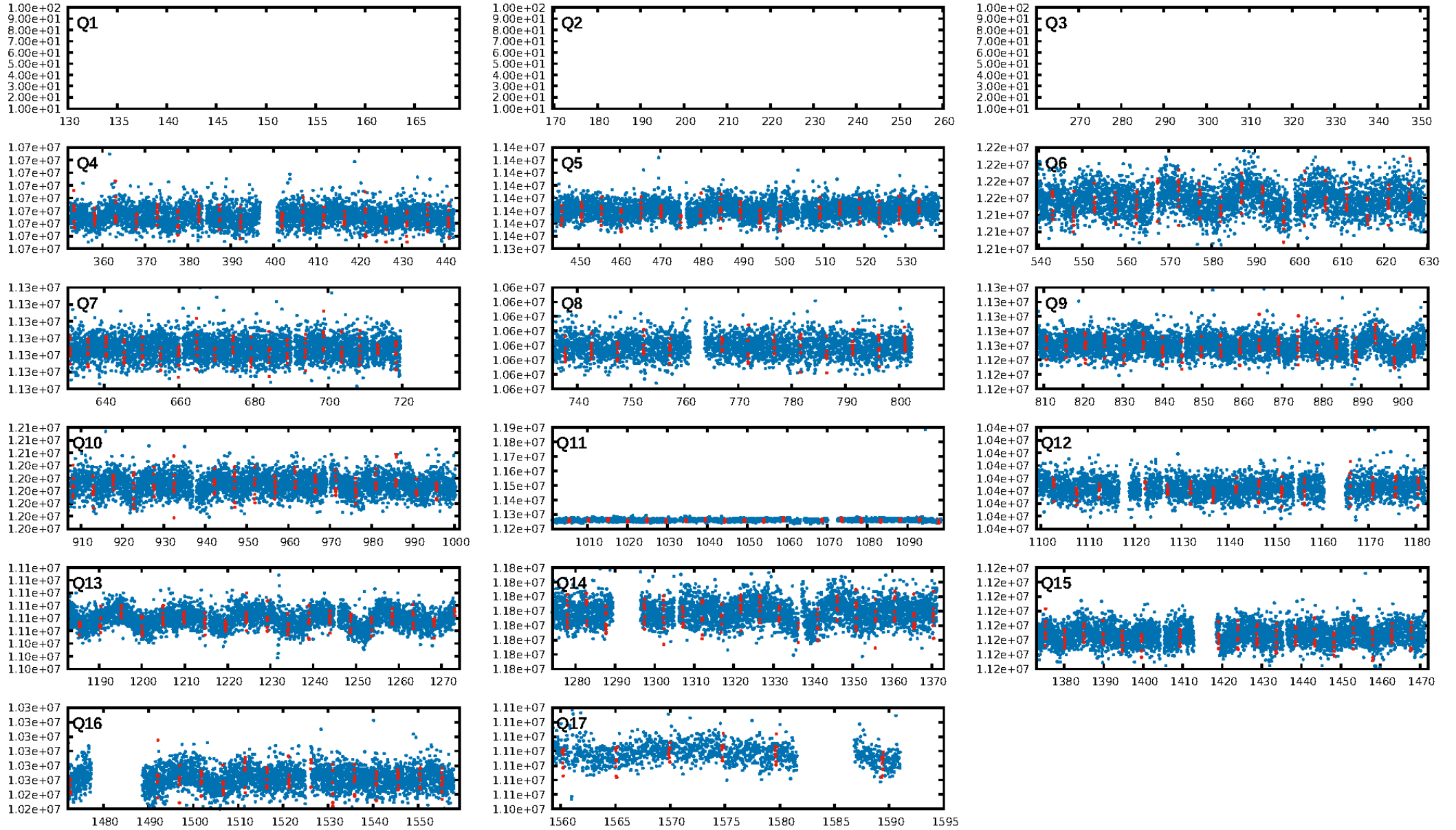
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [104.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.11e-41
RollingBand-fgt: 0.97 [216/223]
GhostDiagnostic-chr: 2.535
Centroid-sig: 1.0%
Centroid-so: 1.312 arcsec [1.61σ]
OotOffset-rm: 0.370 arcsec [0.52σ]
KicOffset-rm: 0.635 arcsec [1.17σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [14/14]

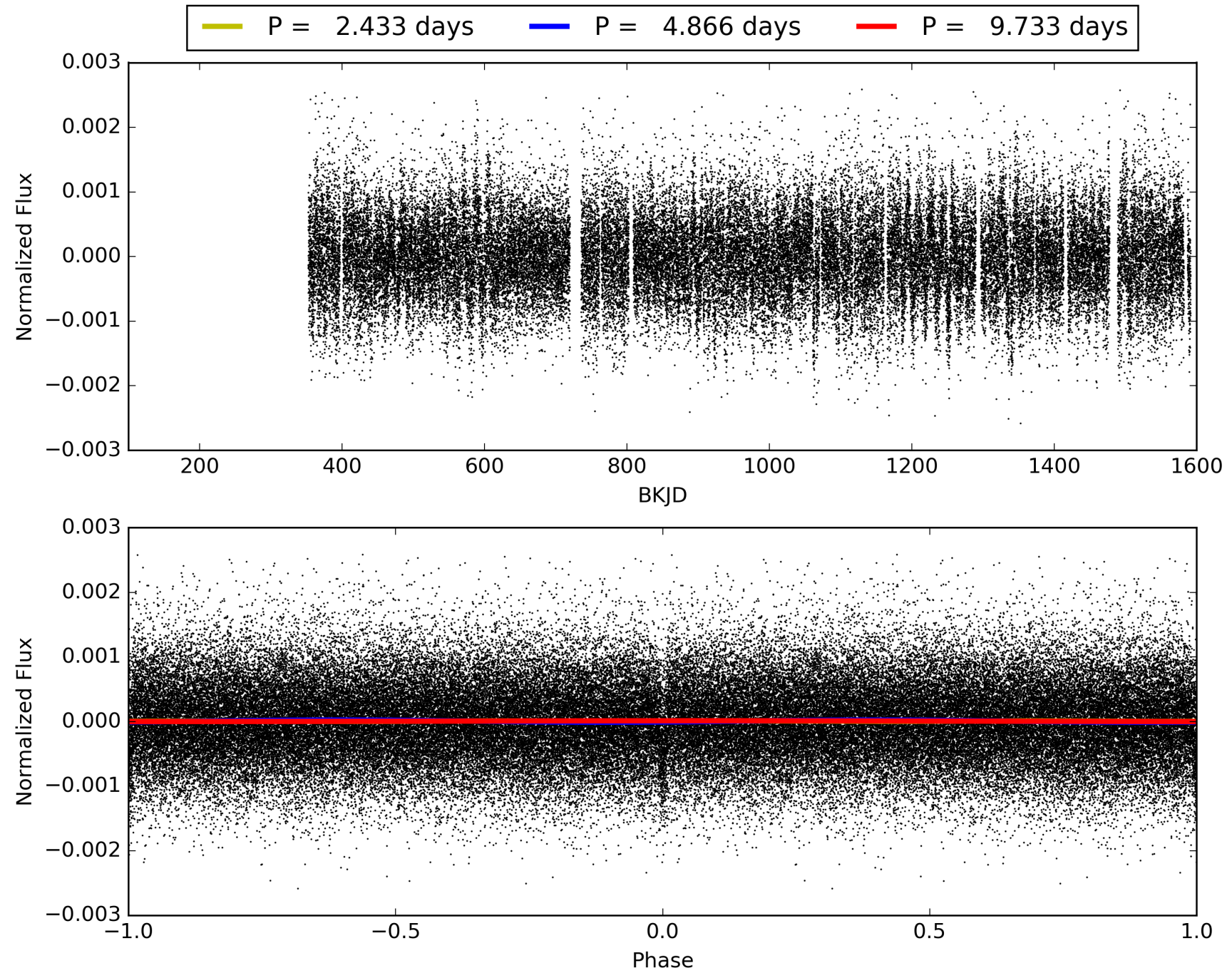
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:58:24 Z

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

TCE 007183745-02, PDC Light Curves

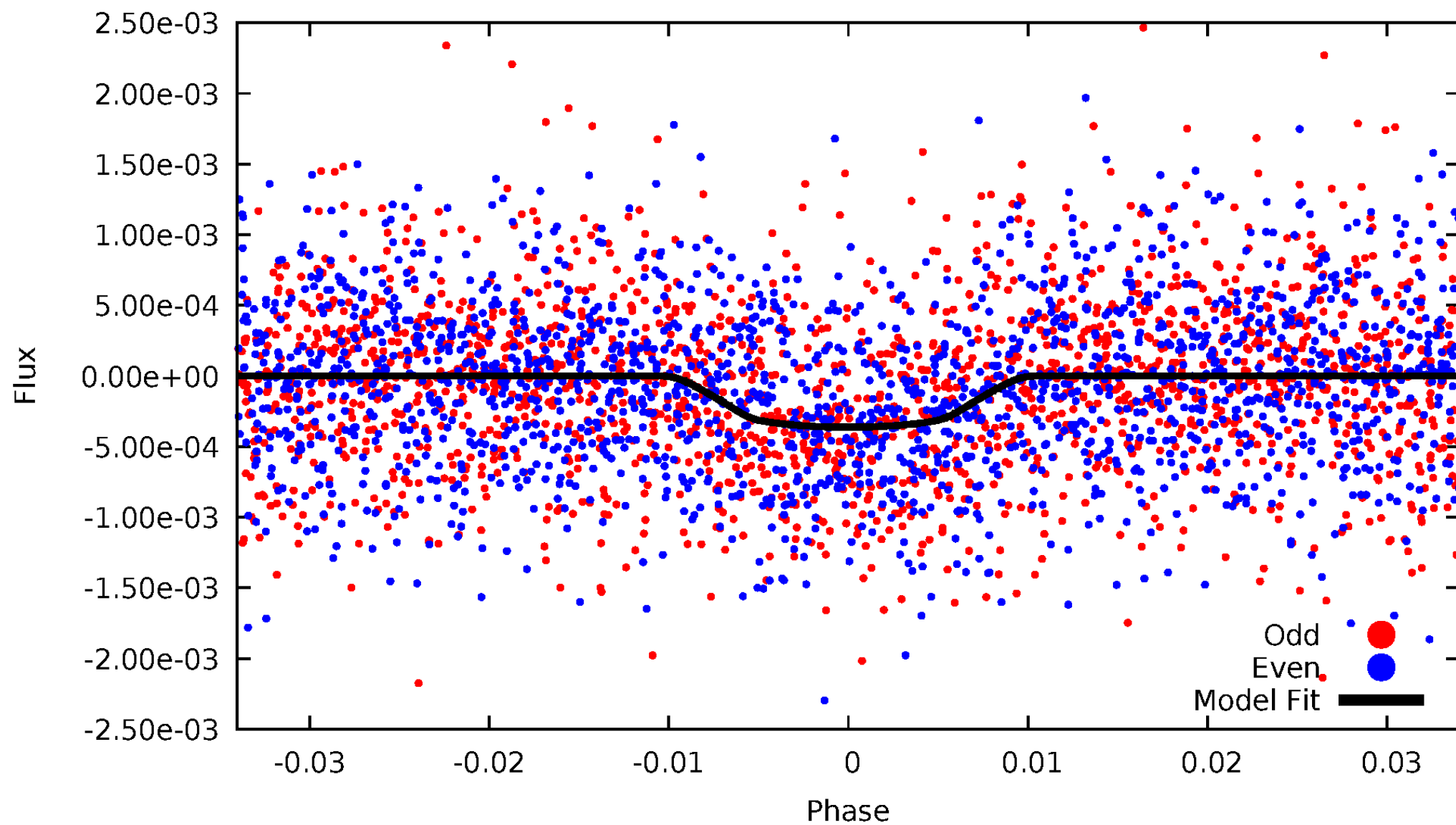


TCE 007183745-02



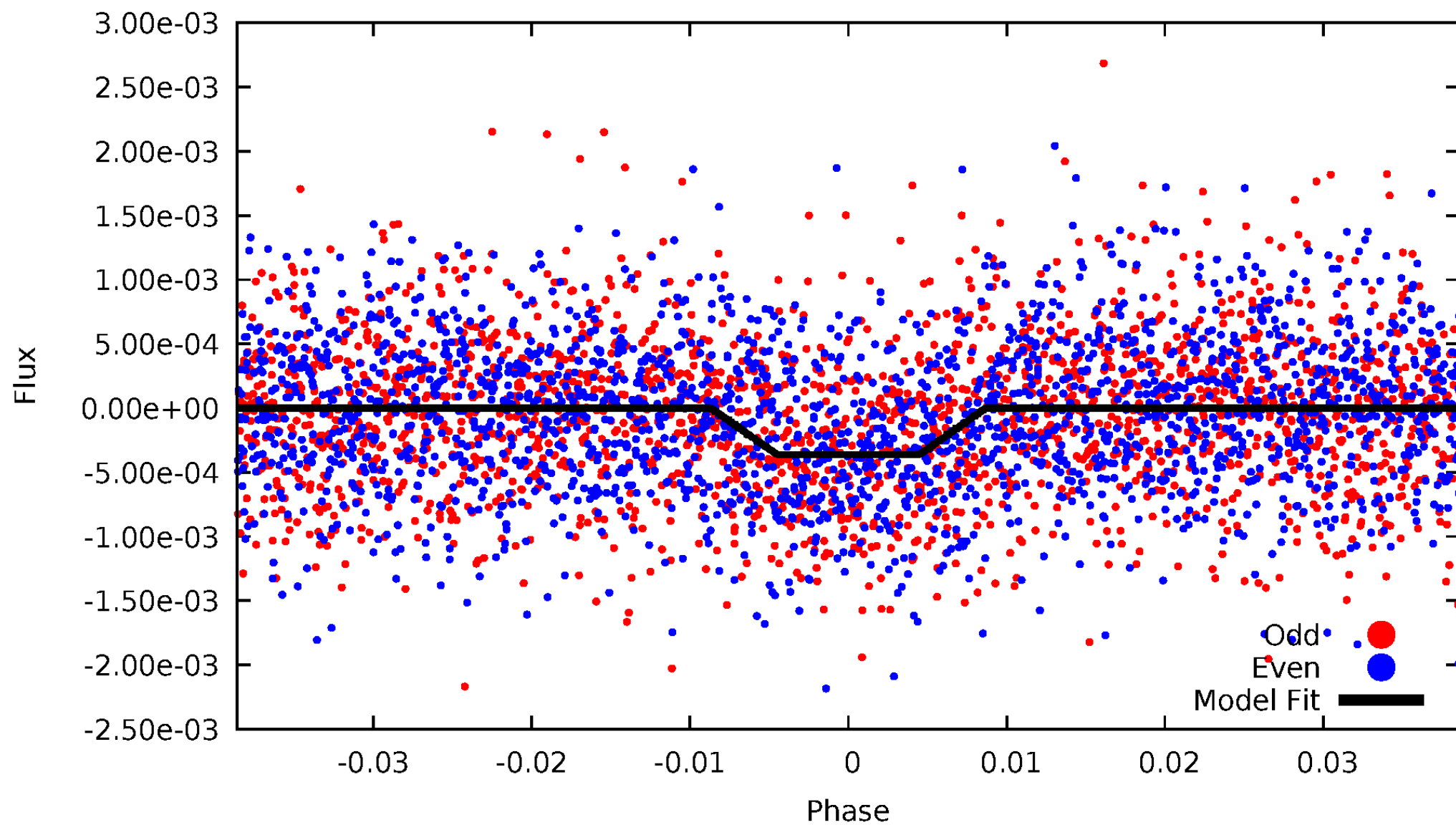
DV Odd/Even

TCE 007183745-02



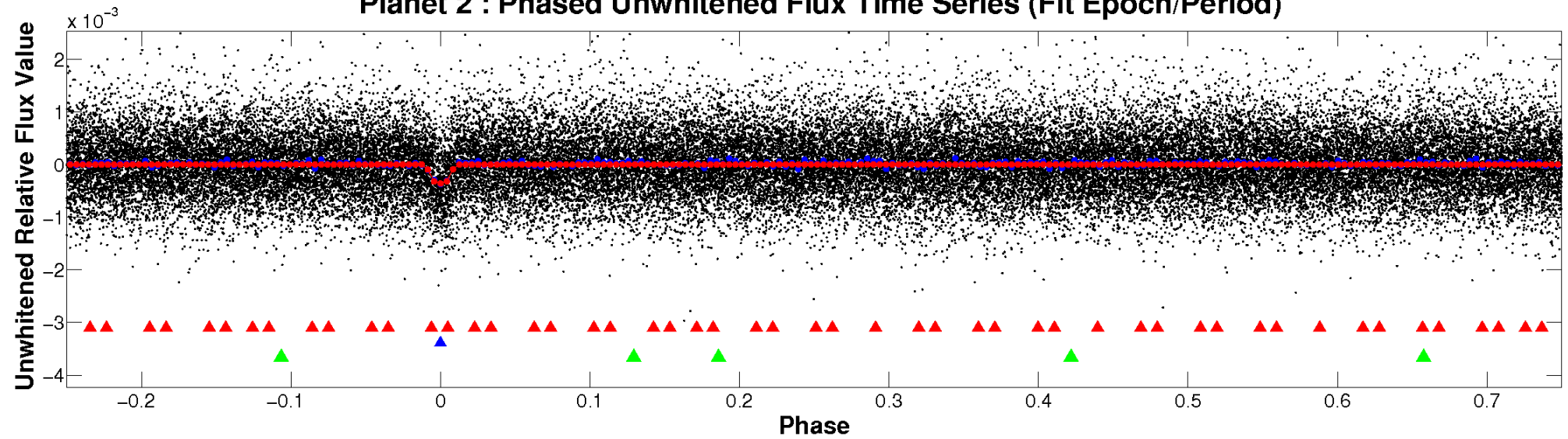
ALT Odd/Even

TCE 007183745-02

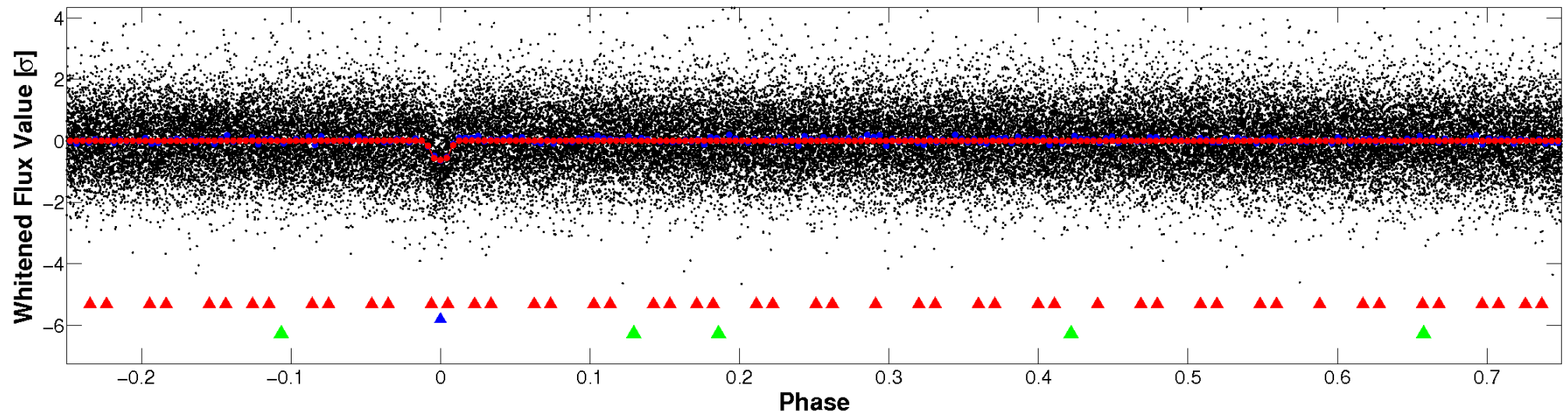


Non-Whitened Vs. Whitened Light Curve

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

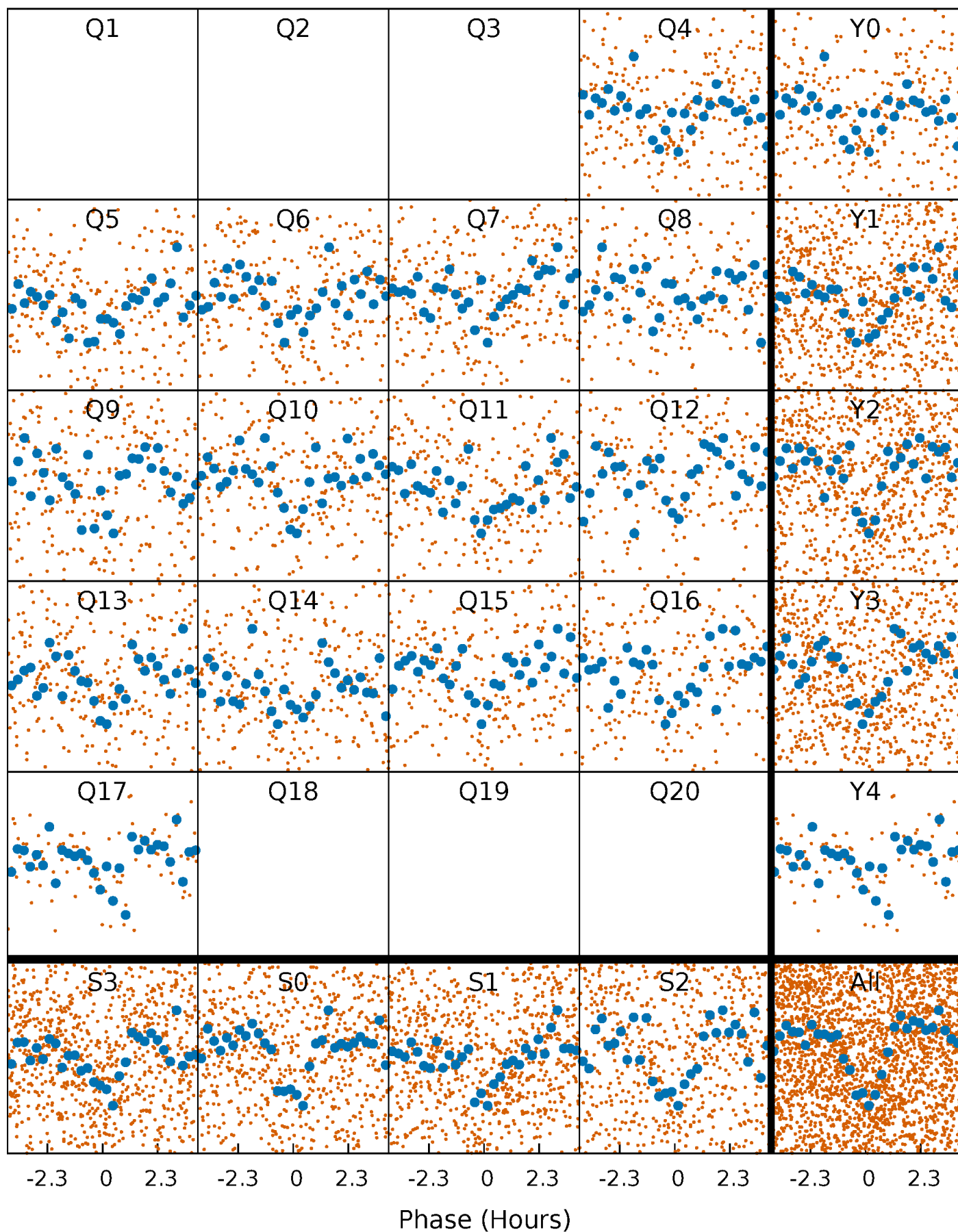


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



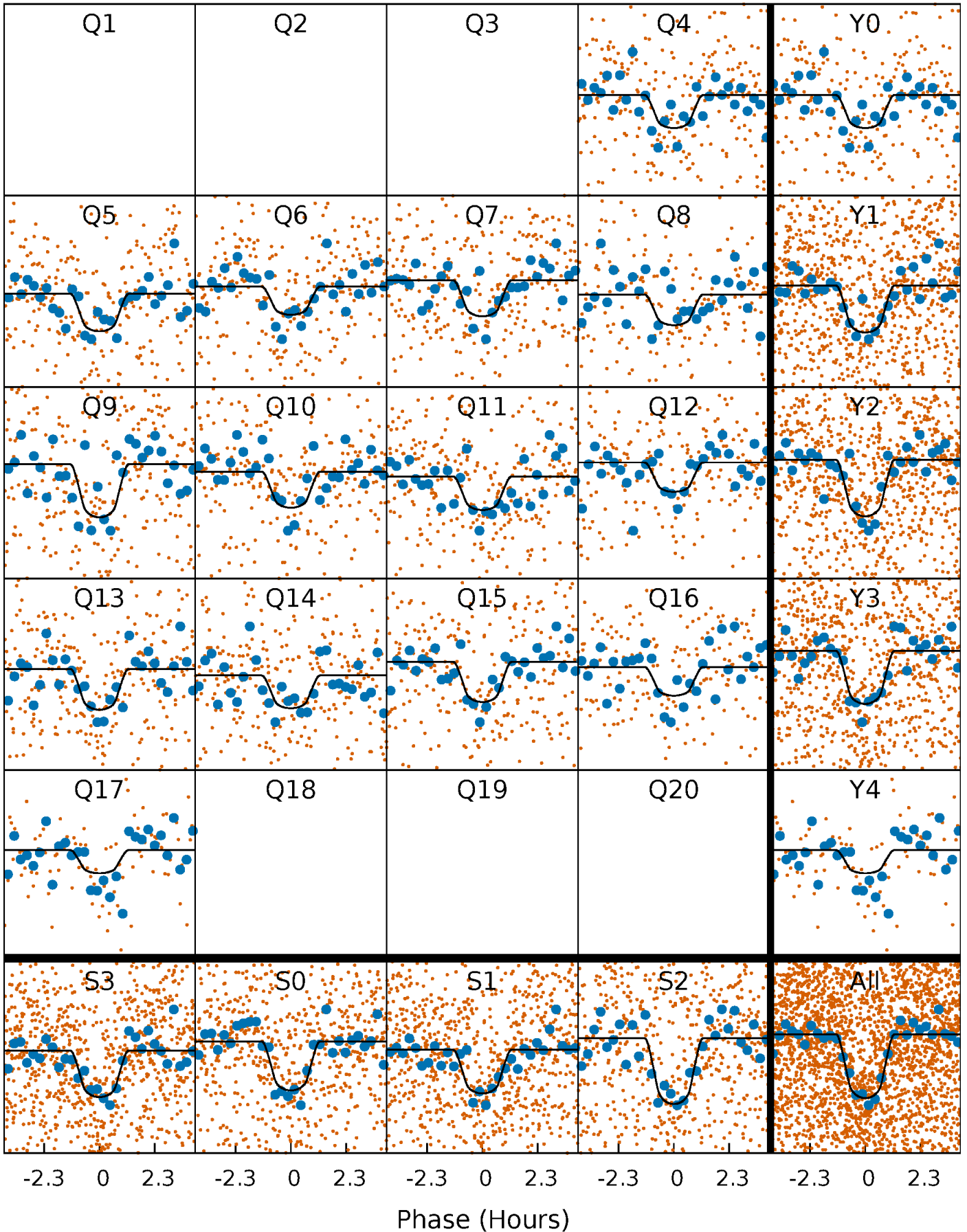
PDC Quarter-Phased Transit Curves

TCE 007183745-02 P= 4.866312 Days $T_0=134.360890$ (BKJD)



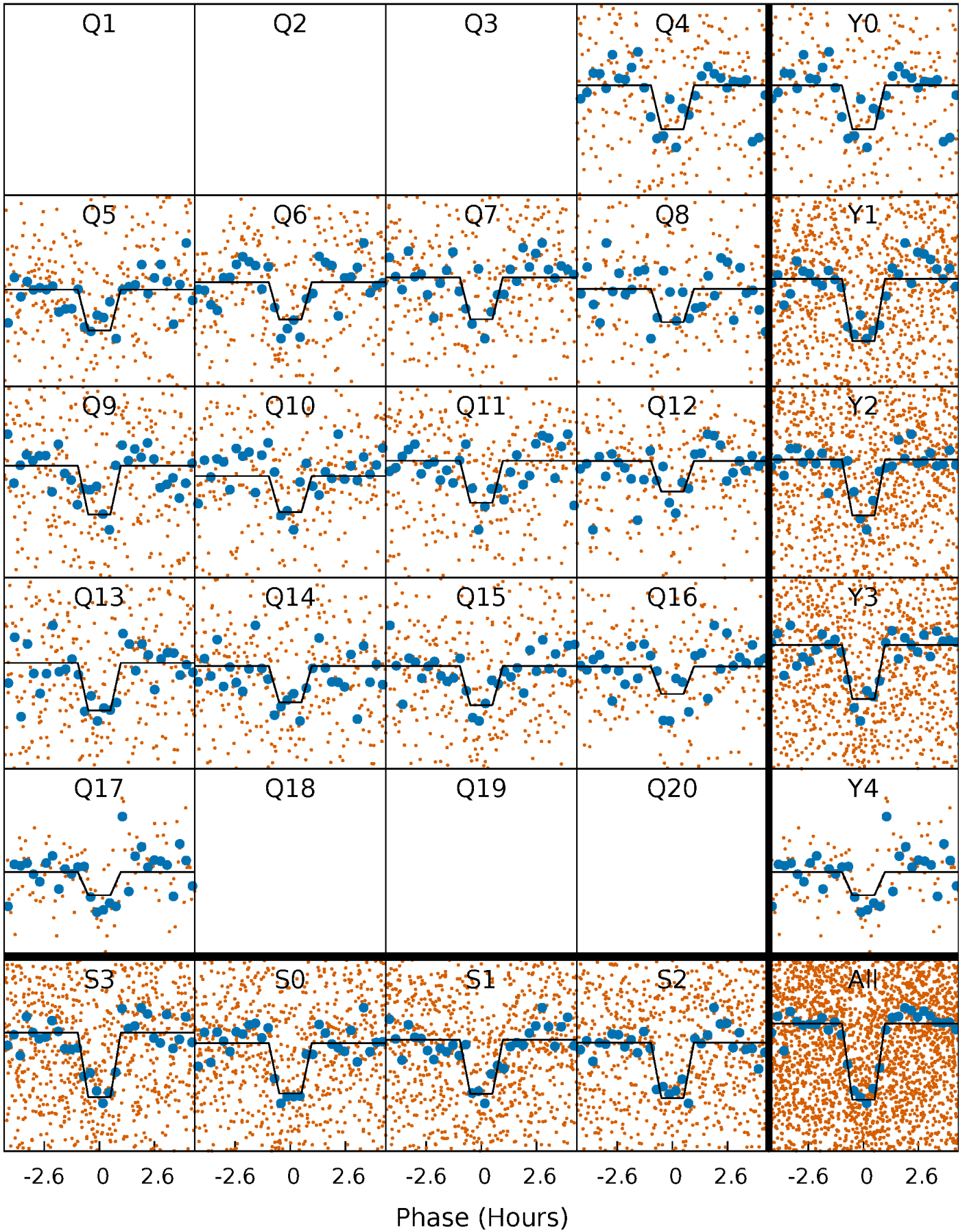
DV Quarter-Phased Transit Curves

TCE 007183745-02 P= 4.866312 Days $T_0=134.360890$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

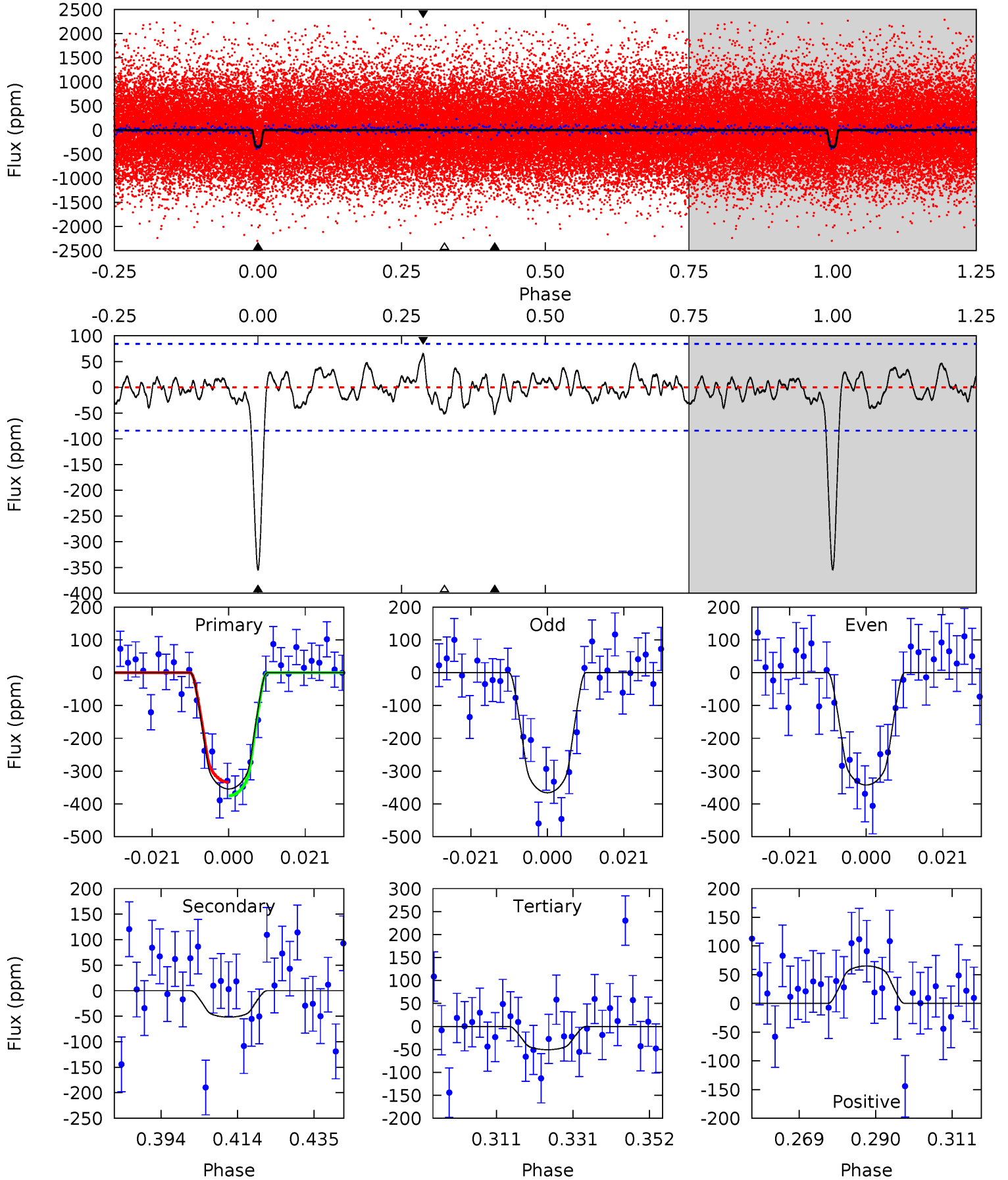
TCE 007183745-02 P= 4.866321 Days $T_0=134.359797$ (BKJD)



DV Model-Shift Uniqueness Test

007183745-02, P = 4.866312 Days, E = 134.360890 Days

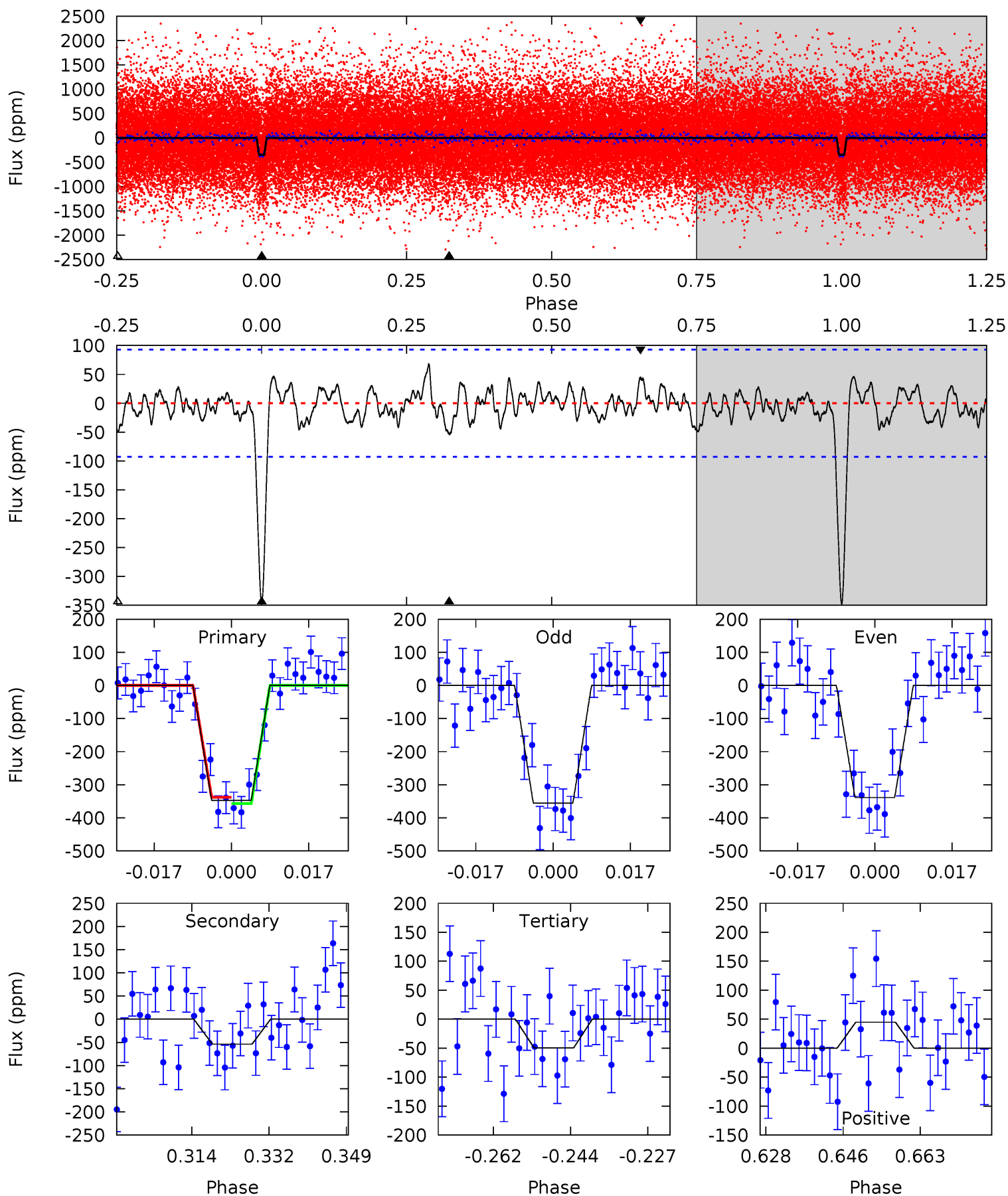
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.6	3.00	2.94	3.79	4.88	2.31	1.18	17.6	16.8	0.06	-0.78	0.69	0.98	0.16	1.21



Alt Model-Shift Uniqueness Test

007183745-02, P = 4.866321 Days, E = 134.359797 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.4	2.85	2.62	2.37	4.92	2.38	1.10	15.8	16.0	0.23	0.48	0.44	1.00	0.16	0.50



Stellar Parameters For KIC 007183745

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4996^{+82}_{-74}	$4.497^{+0.080}_{-0.025}$	$0.140^{+0.150}_{-0.150}$	$0.831^{+0.032}_{-0.060}$	$0.791^{+0.058}_{-0.025}$	$1.942^{+0.568}_{-0.178}$
	+2%/-1%	+2%/-1%	+107%/-107%	+4%/-7%	+7%/-3%	+29%/-9%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 007183745-02 / KOI 2521.02

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-52 ± 17	$2.00^{+0.93}_{-1.03}$	1223^{+27}_{-29}	3334^{+970}_{-430}	20^{+68}_{-12}
Alt.	-54 ± 19	$1.78^{+0.90}_{-0.89}$	1224^{+27}_{-30}	3438^{+1021}_{-425}	24^{+81}_{-14}

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 $A_{obs} \gg 1.0$

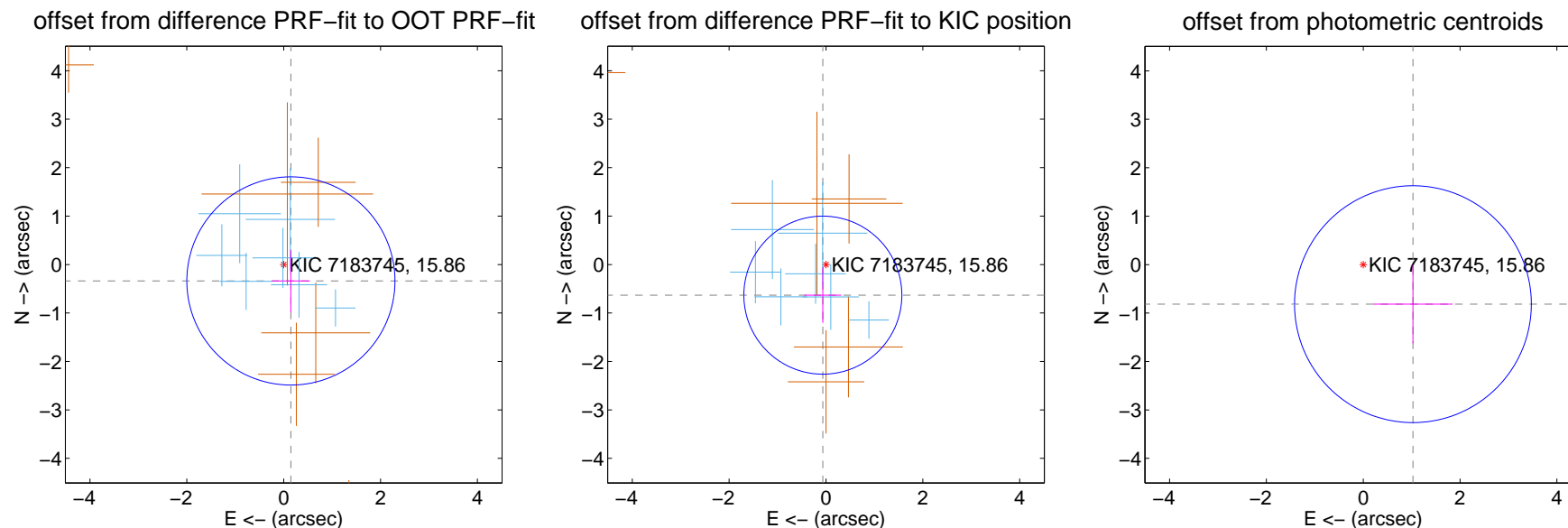
DV Centroid Data

Supplemental centroid analysis for 007183745-02. Kepler magnitude: 15.86. Transit SNR 15.25

There are 7 quarters with good PRF difference image offsets

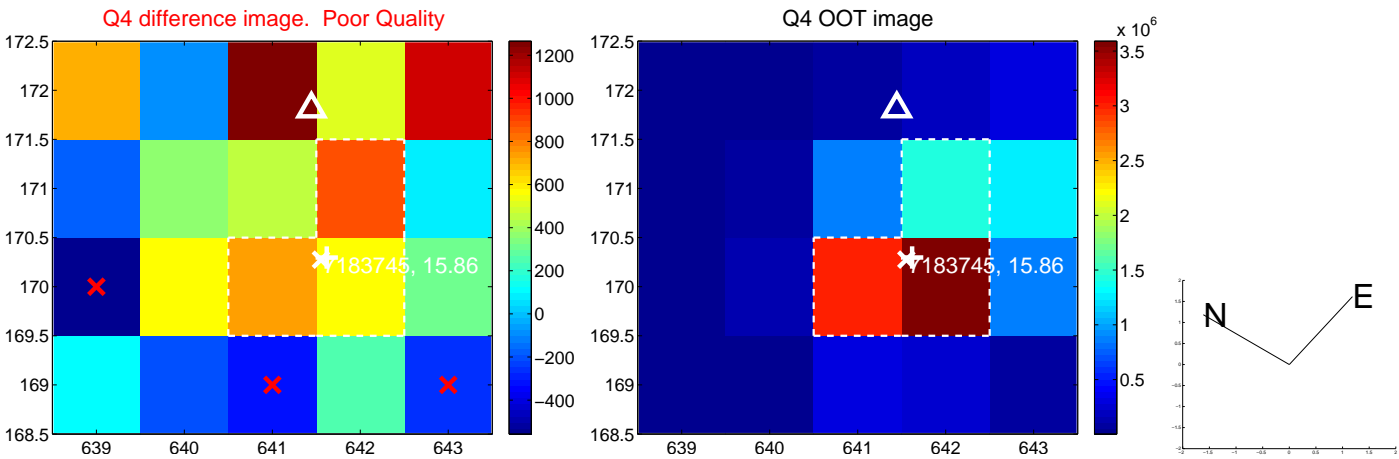
The direct PRF centroid is offset from the target star catalog position by about 0.42 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.370 ± 0.716	0.52	-0.149 ± 0.393	-0.339 ± 0.648
PRF-fit source offset from KIC position	0.635 ± 0.544	1.17	0.065 ± 0.383	-0.632 ± 0.572
photometric centroid source offset	1.31 ± 0.82	1.61	-1.03 ± 0.82	-0.82 ± 0.81

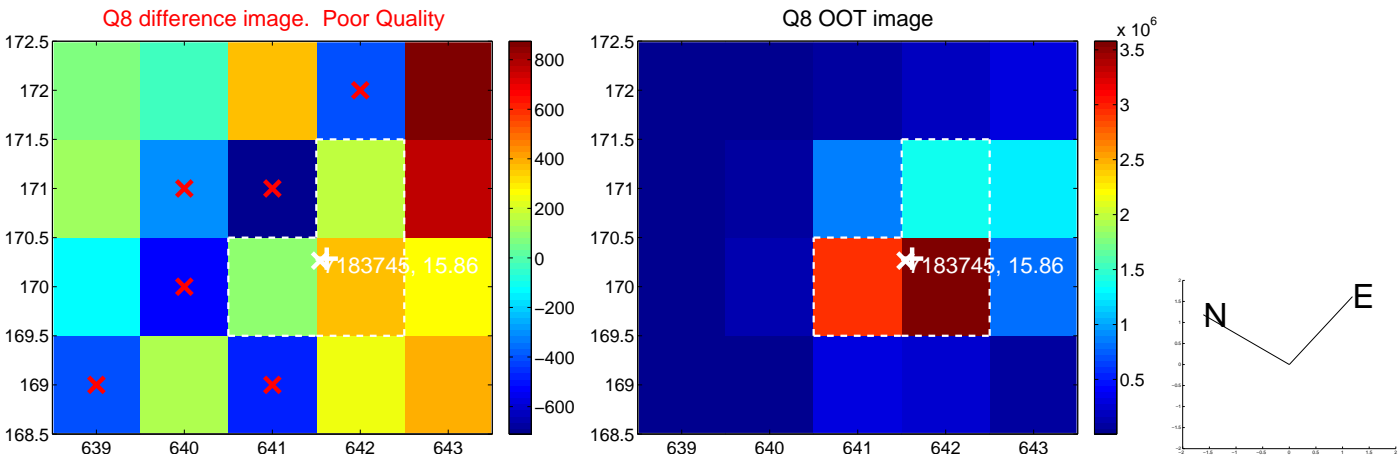
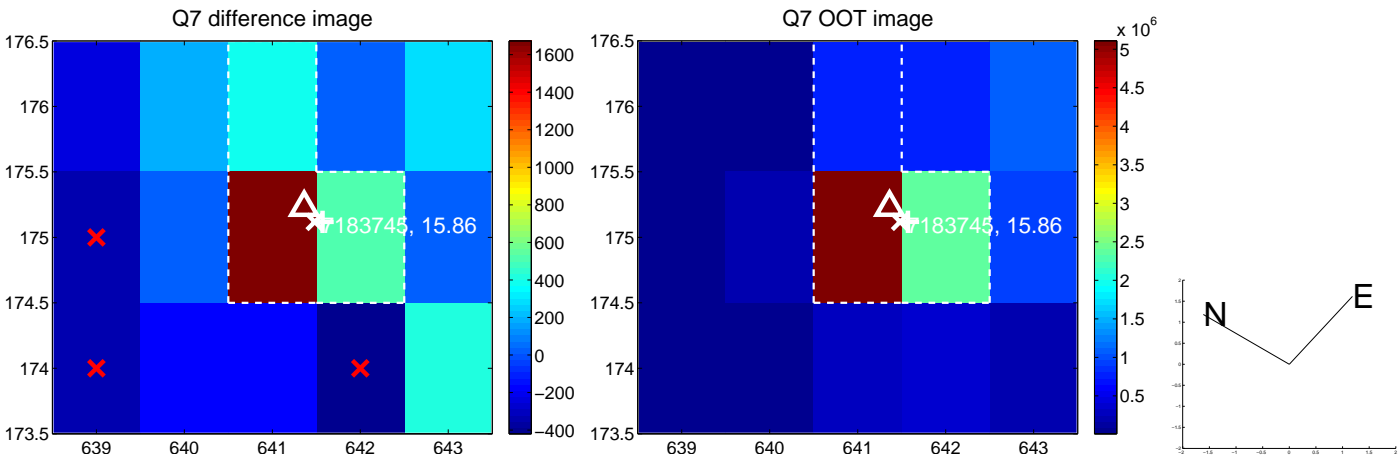
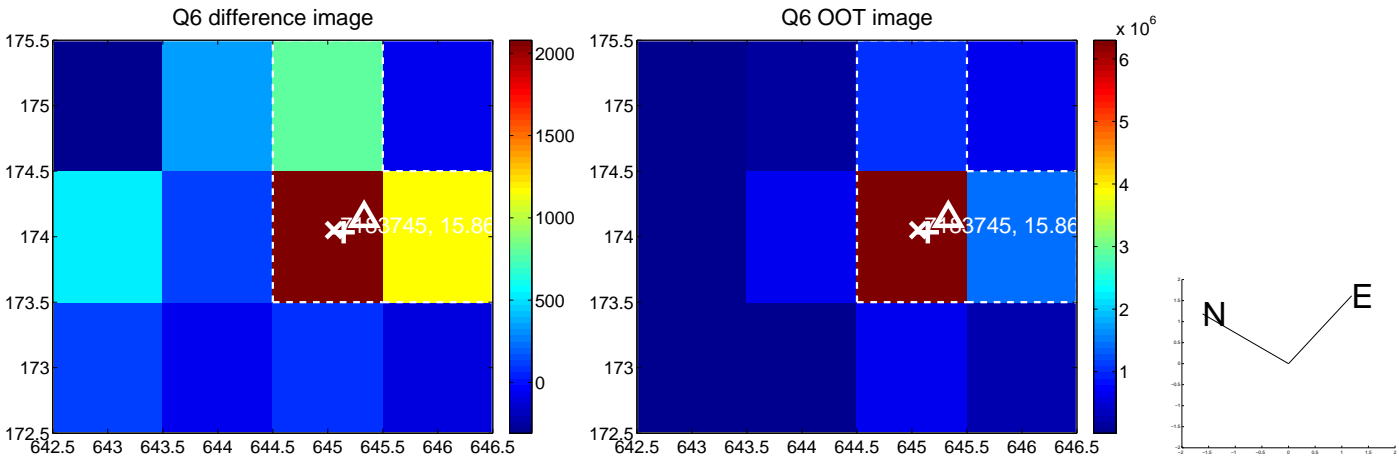
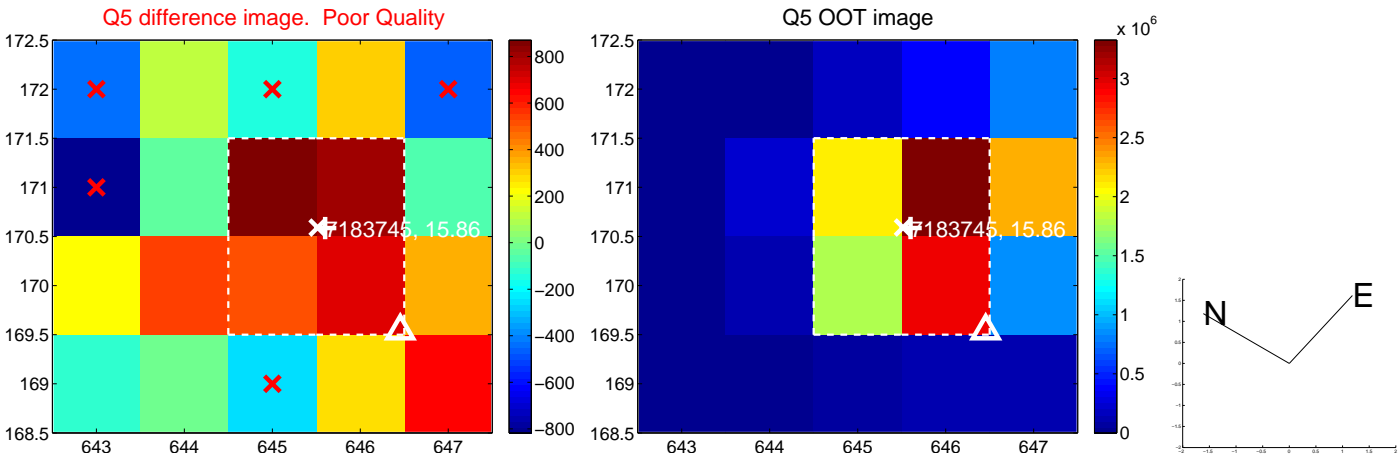


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

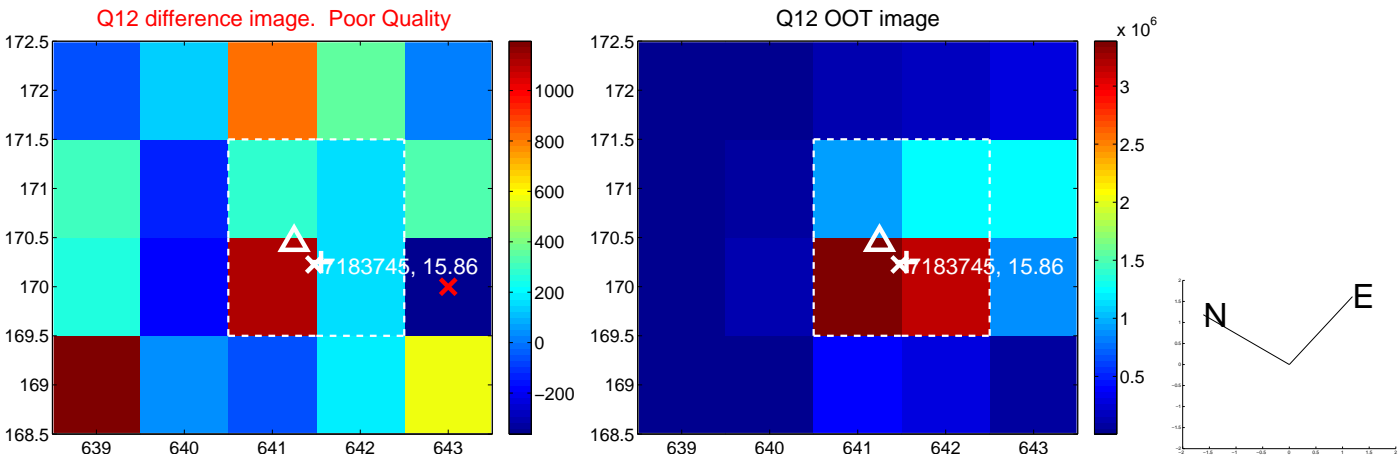
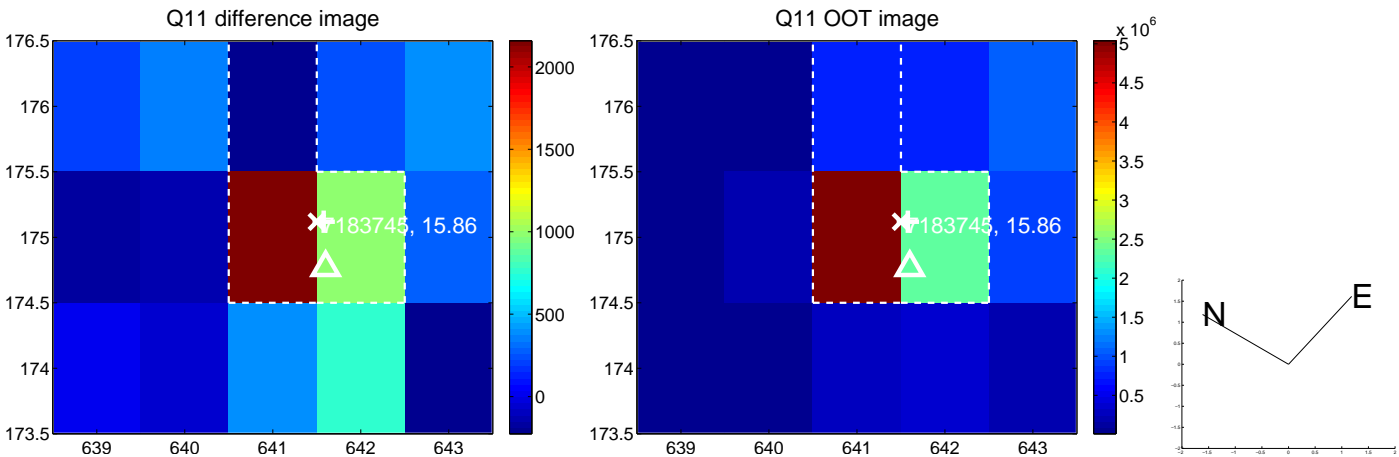
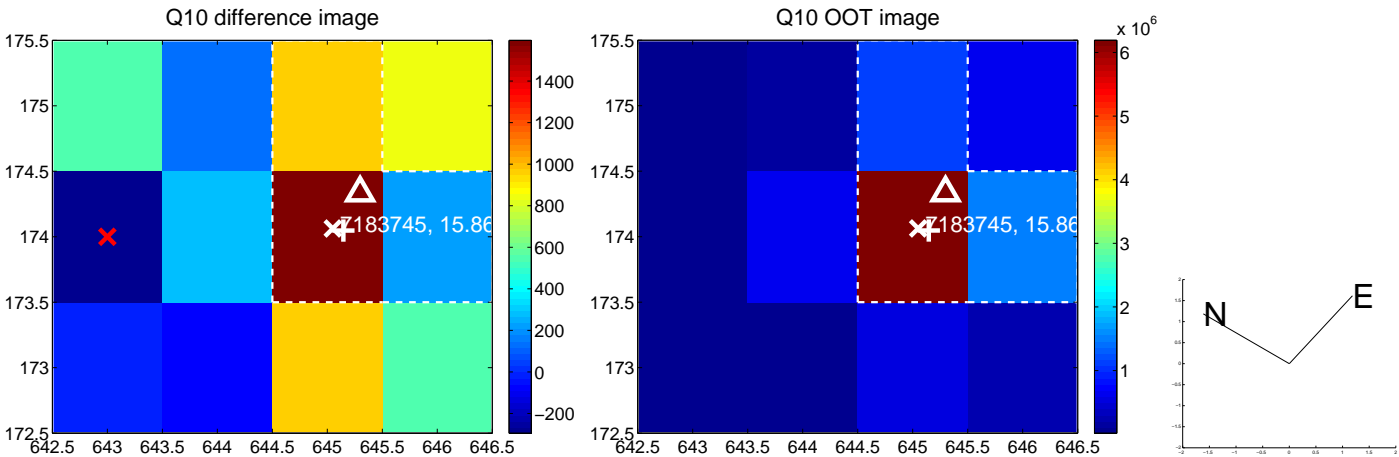
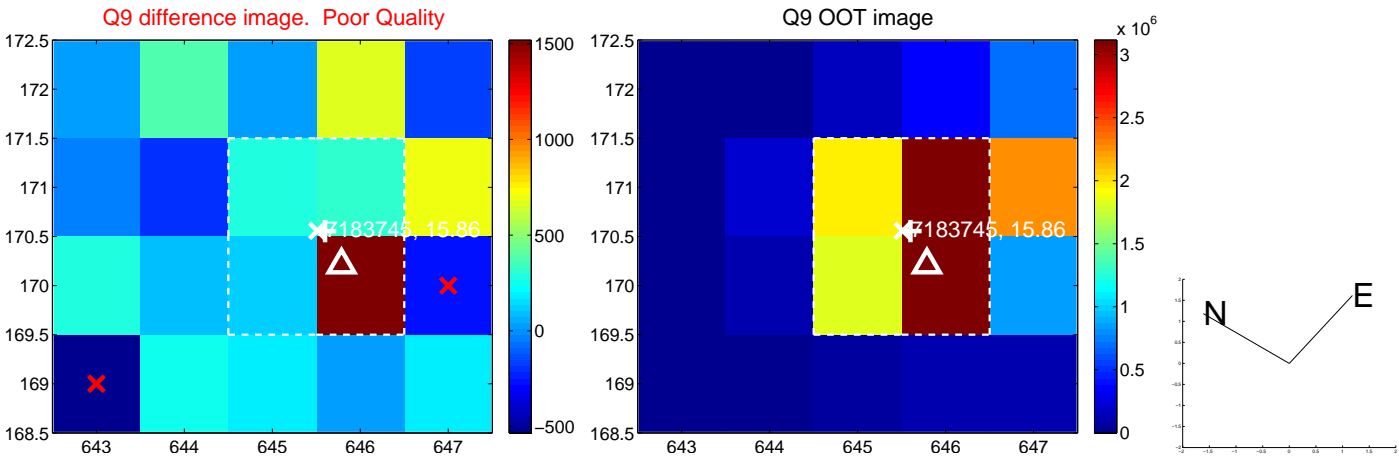
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



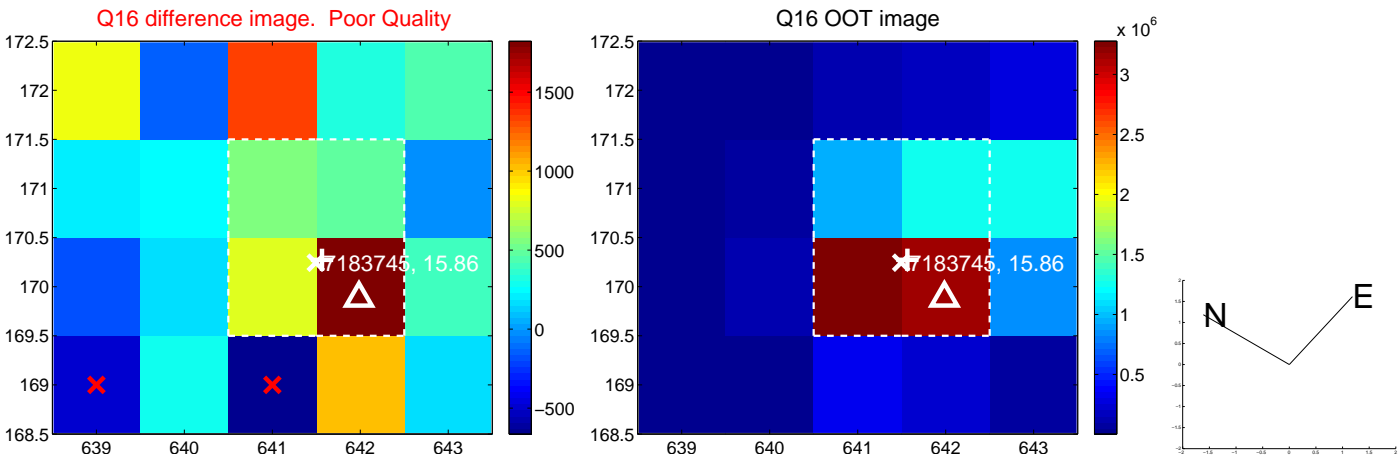
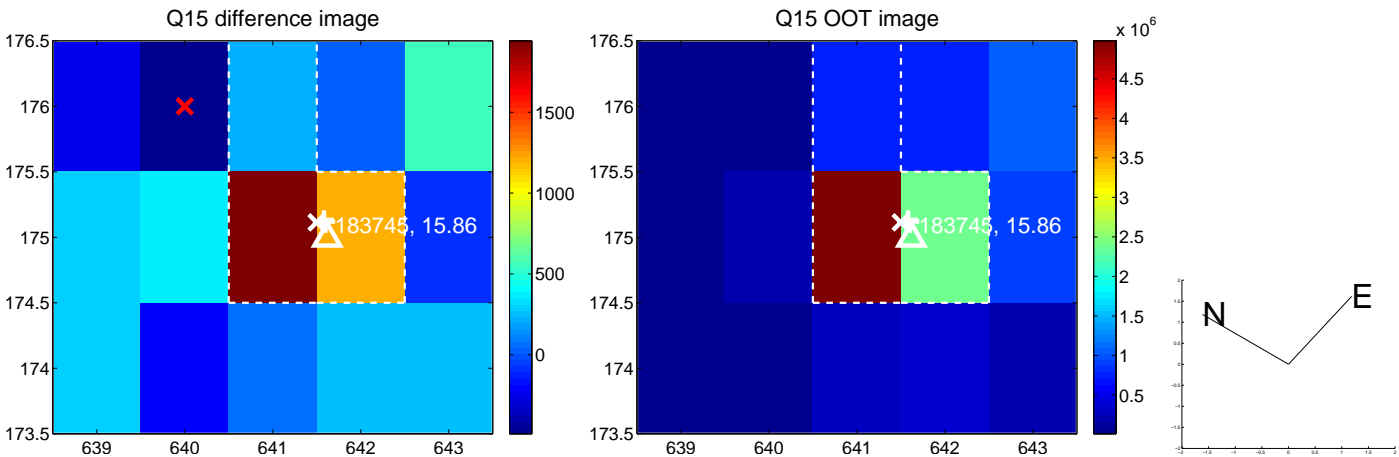
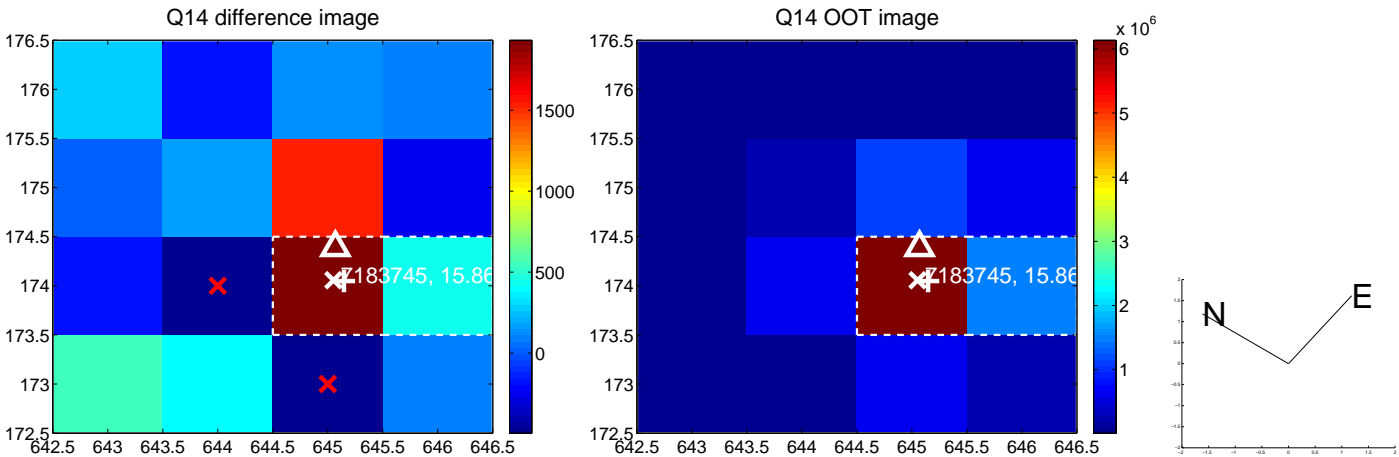
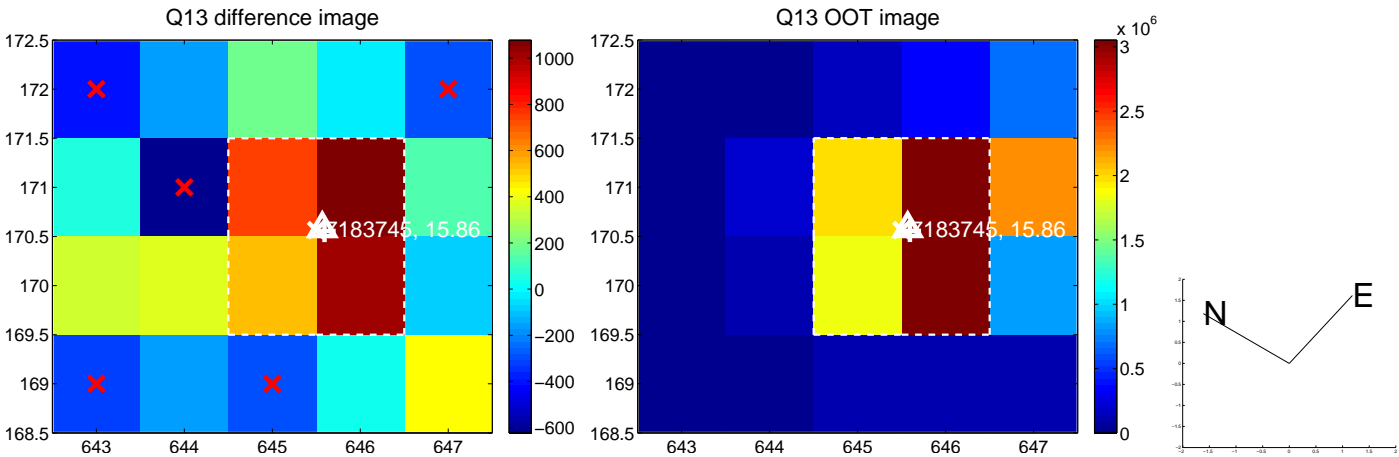
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



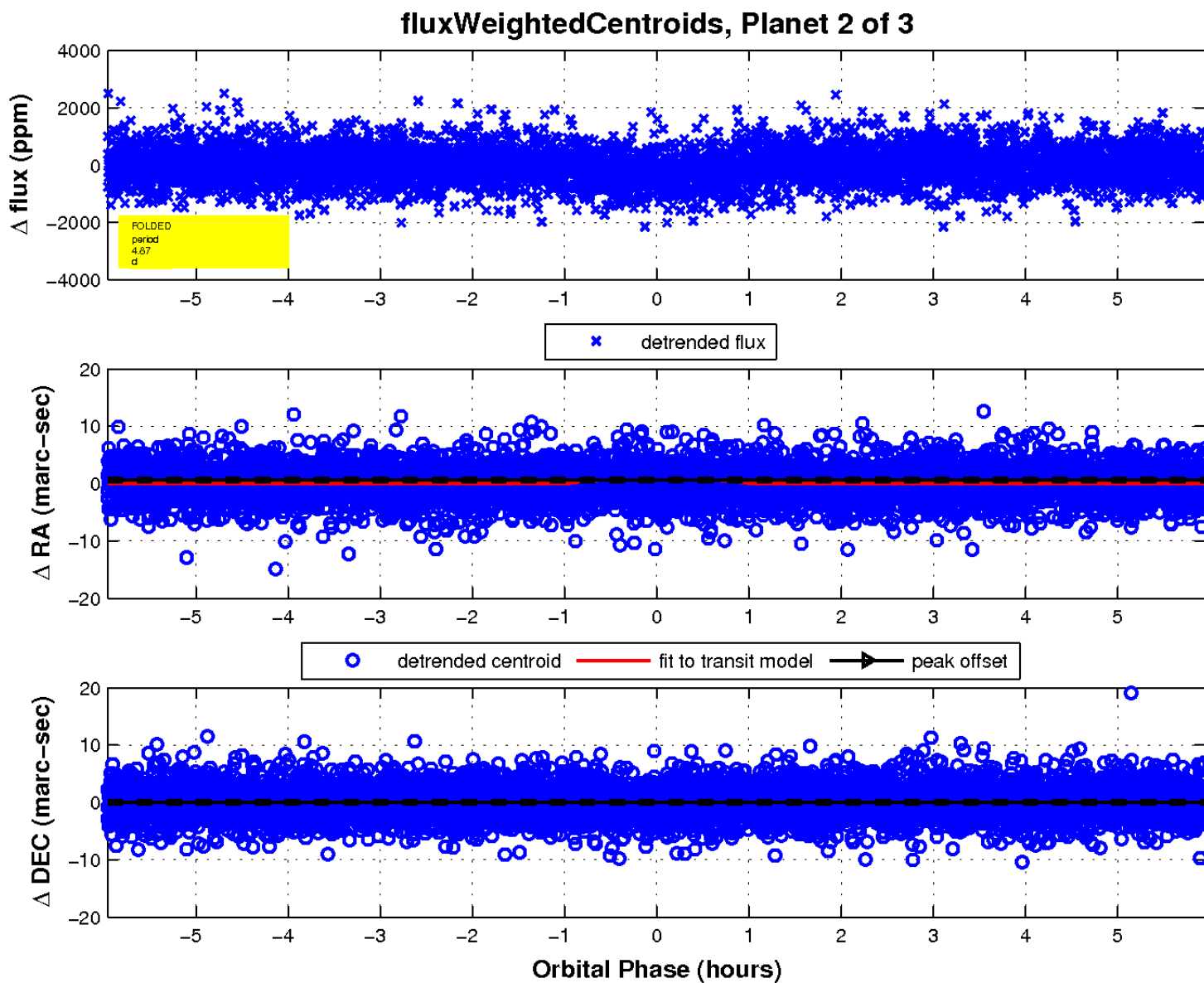
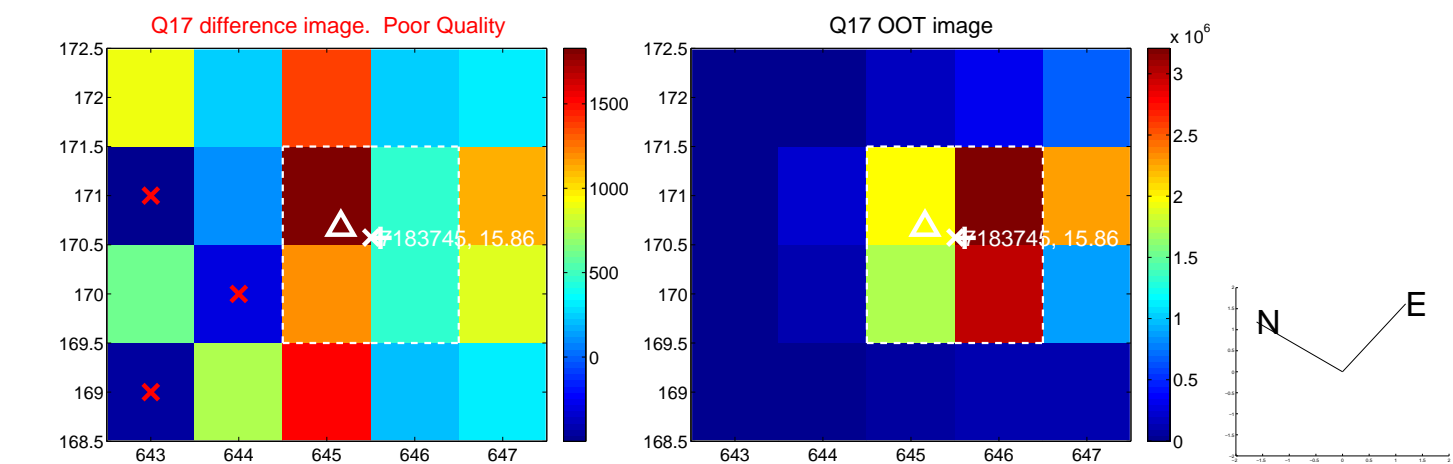
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

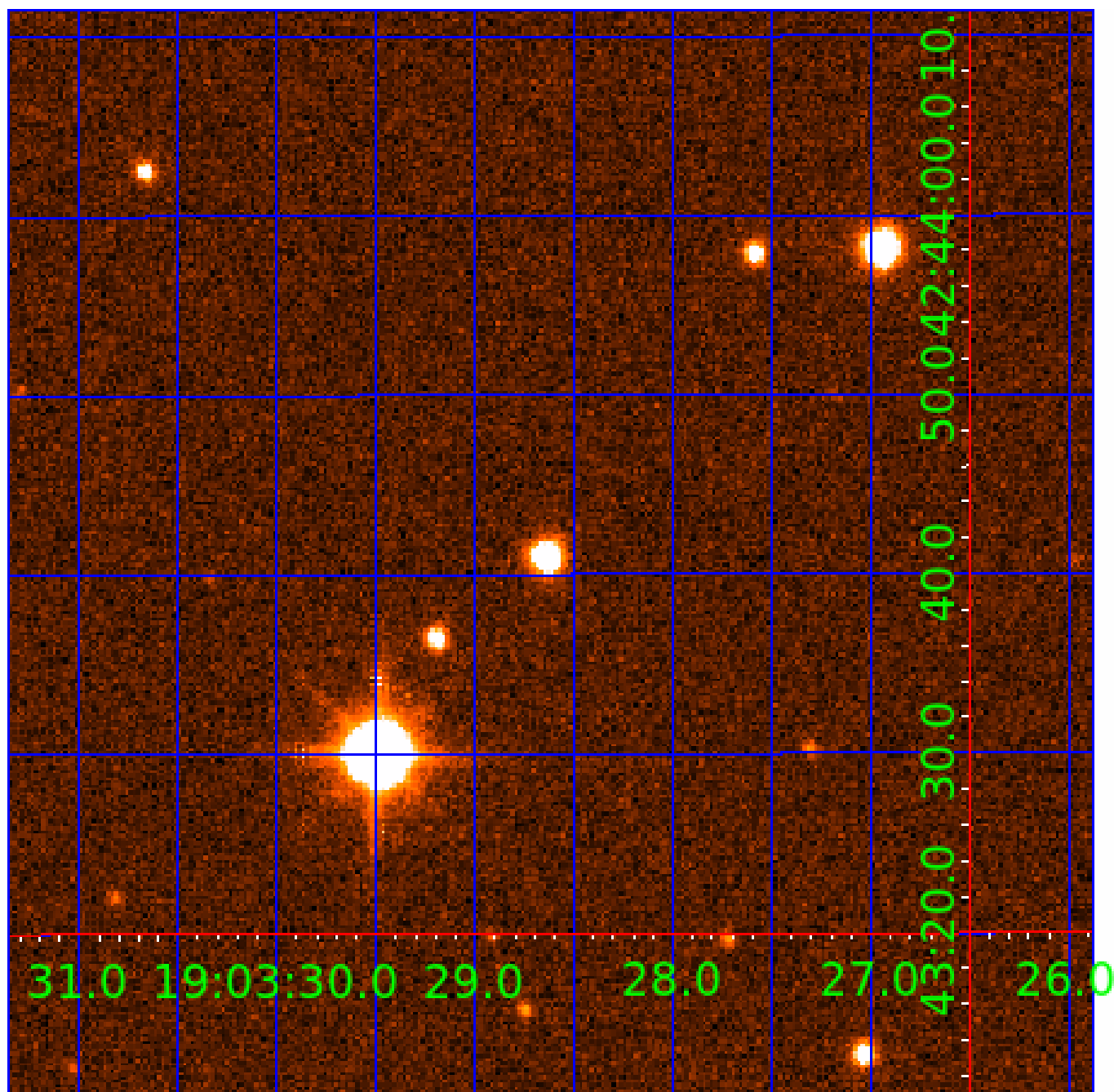


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007183745

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})
007183745-01	OBS	2521.01	28.474957	154.573005	783.5	5.073	18.9	20.6	0.83	4996	2.88	13.53
007183745-02	OBS	2521.02	4.866312	134.360890	362.3	1.987	13.5	15.3	0.83	4996	1.93	142.62
007183745-03	OBS	No	281.098432	217.717600	536.1	19.569	7.6	7.7	0.83	4996	2.06	0.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007183745-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS
007183745-02	OBS	PC	0.94	0	0	0	0	CENT_KIC_POS
007183745-03	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—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 007183745-03

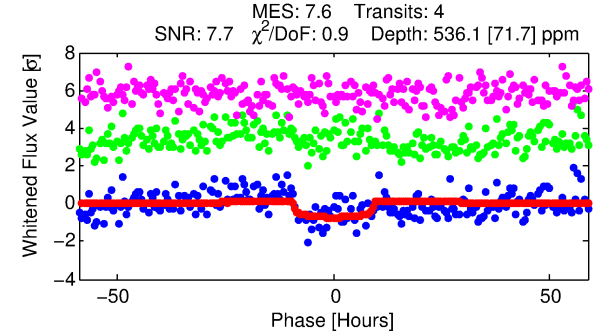
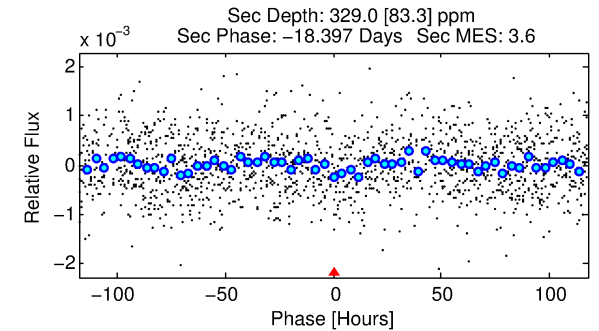
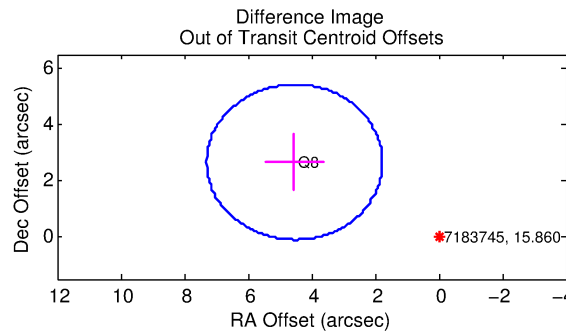
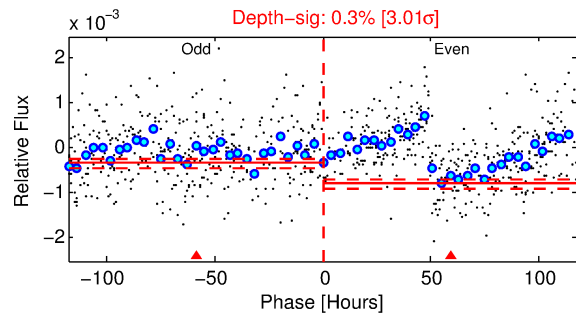
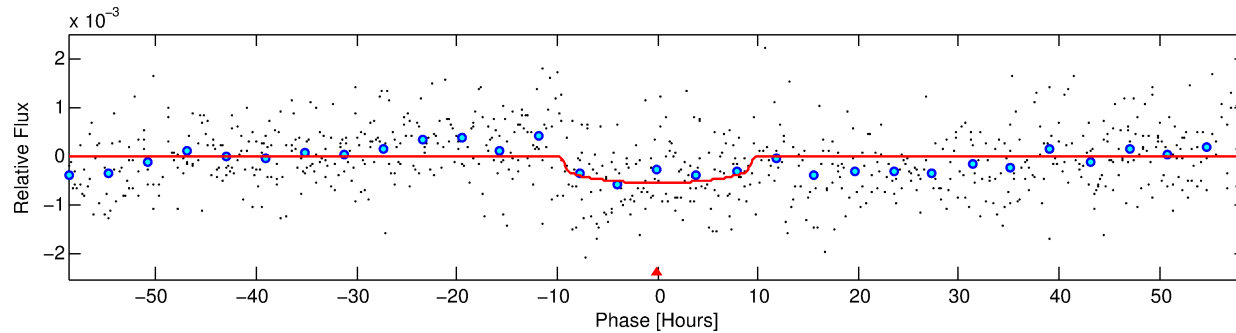
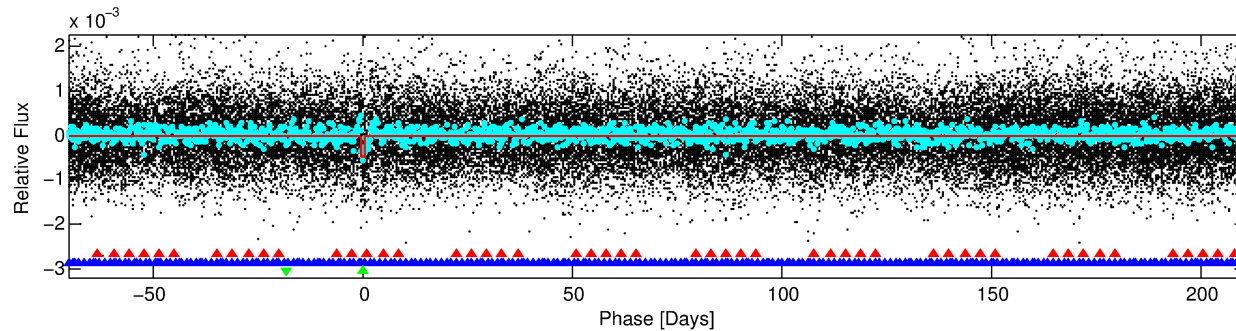
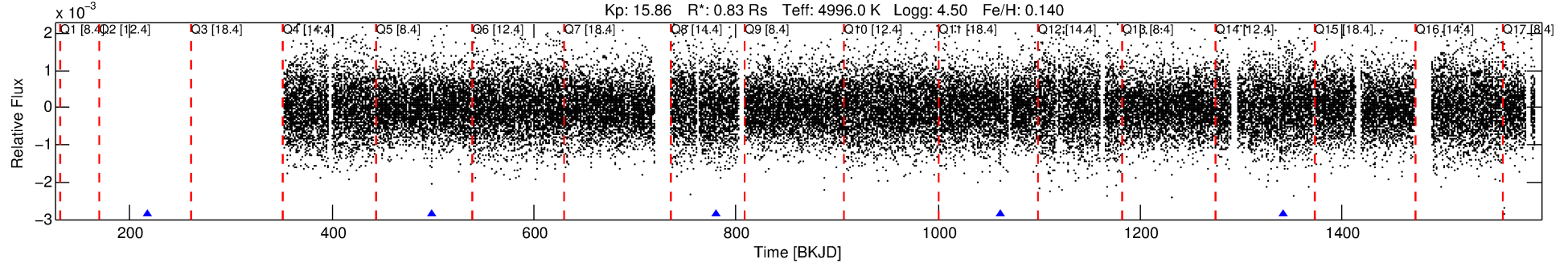
No Significant Match Found

DV One-Page Summary

KIC: 7183745 Candidate: 3 of 3 Period: 281.098 d

KOI: K02521 Corr: No Ephemeris Match

Kp: 15.86 R*: 0.83 Rs Teff: 4996.0 K Logg: 4.50 Fe/H: 0.140



DV Fit Results:

Period = 281.09843 [0.01775] d
Epoch = 217.7176 [0.0484] BKJD
Rp/R* = 0.0227 [0.0101]
a/R* = 81.10 [124.20]
b = 0.71 [1.10]
Seff = 0.64 [0.09]
Teq = 228 [8] K
Rp = 2.06 [0.92] Re
a = 0.7768 [0.0606] AU
Ag = 25816.30 [24056.52] [1.07σ]
Teffp = 4468 [1033] K [4.10σ]

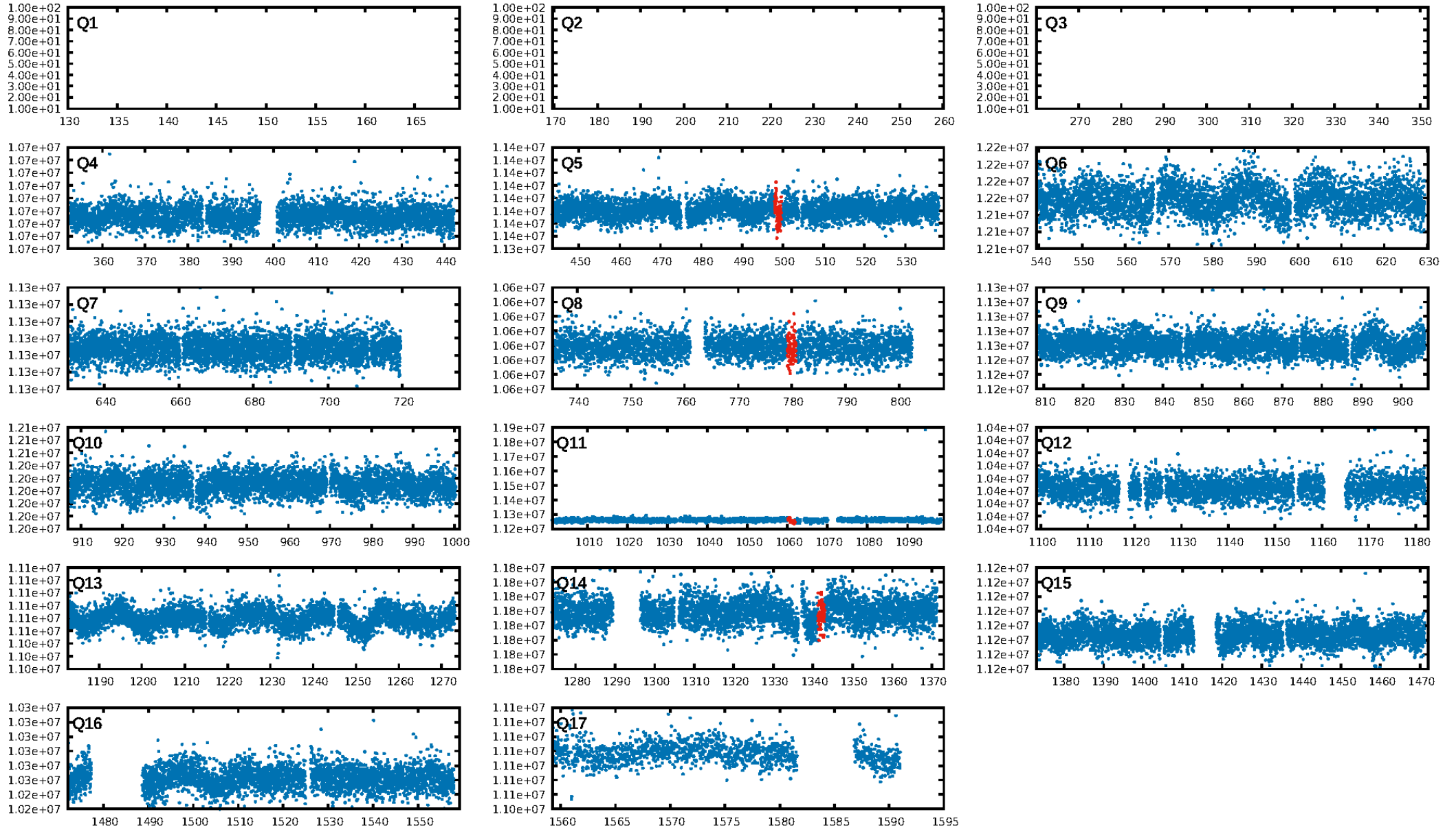
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [299.91σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.56e-14
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.7339
Centroid-sig: 3.8%
Centroid-so: 2.824 arcsec [1.75σ]
OotOffset-rm: 5.256 arcsec [5.71σ]
KicOffset-rm: 5.380 arcsec [5.86σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 0.25 [1/4]

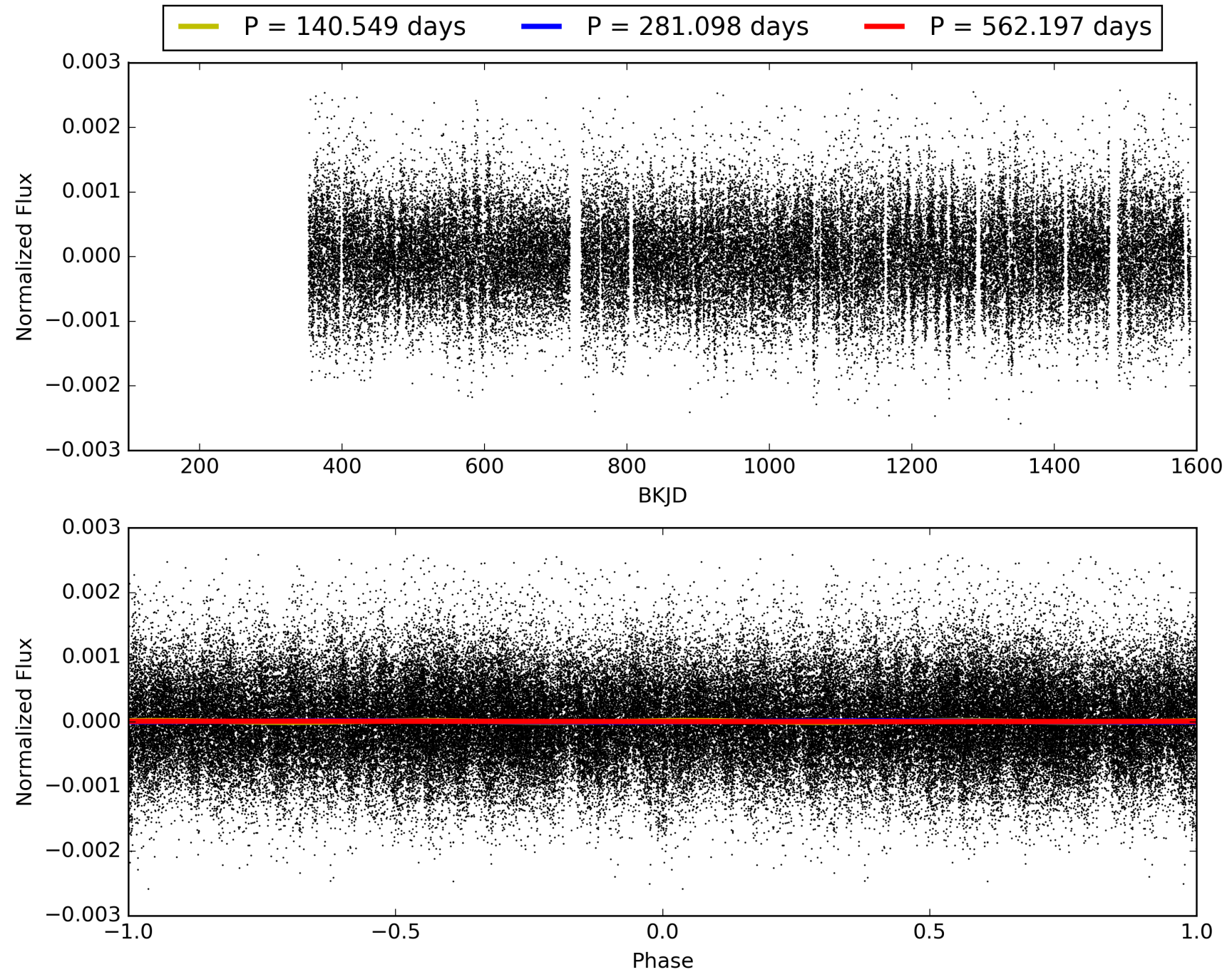
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 05:58:32 Z

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

TCE 007183745-03, PDC Light Curves

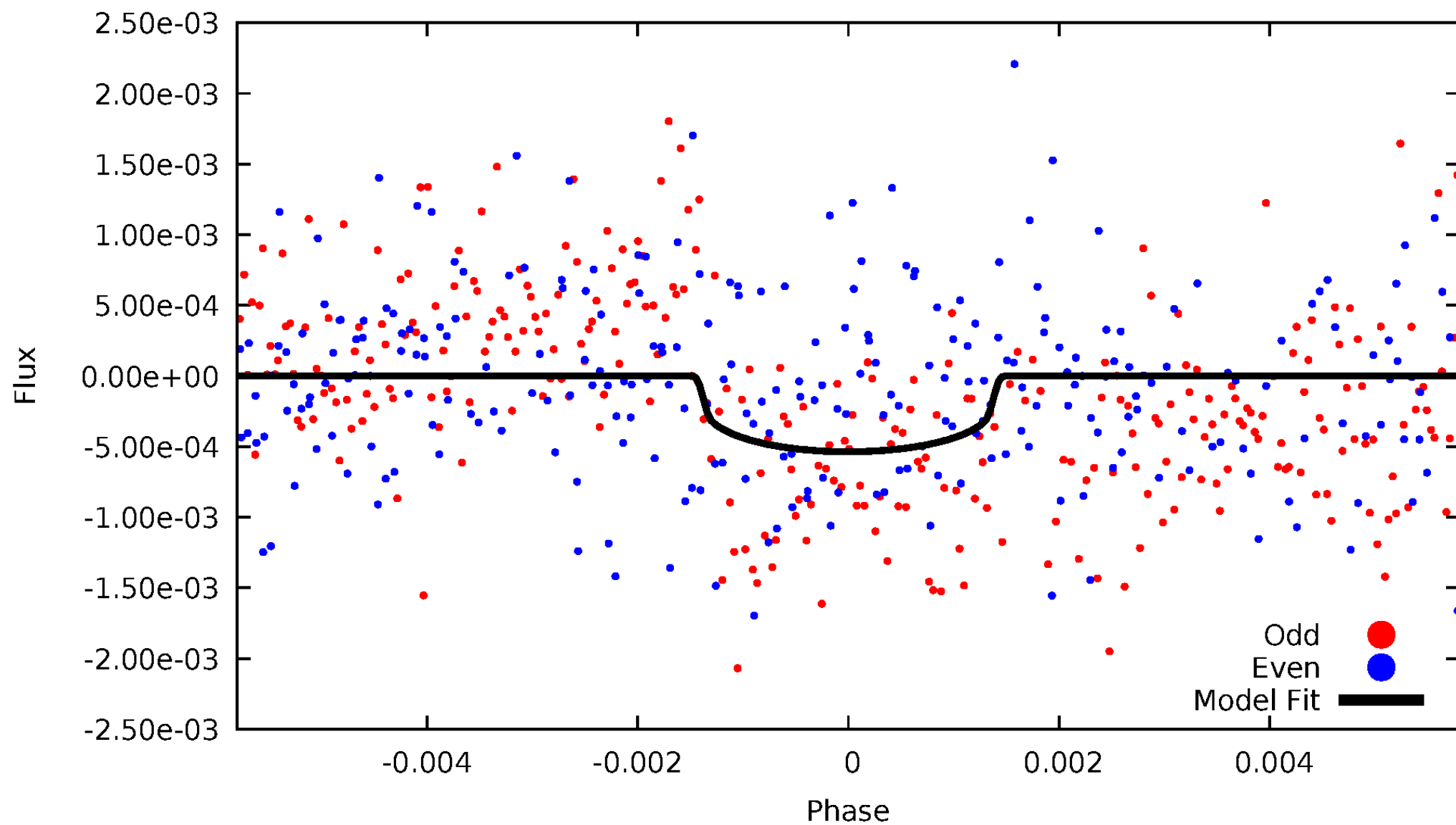


TCE 007183745-03



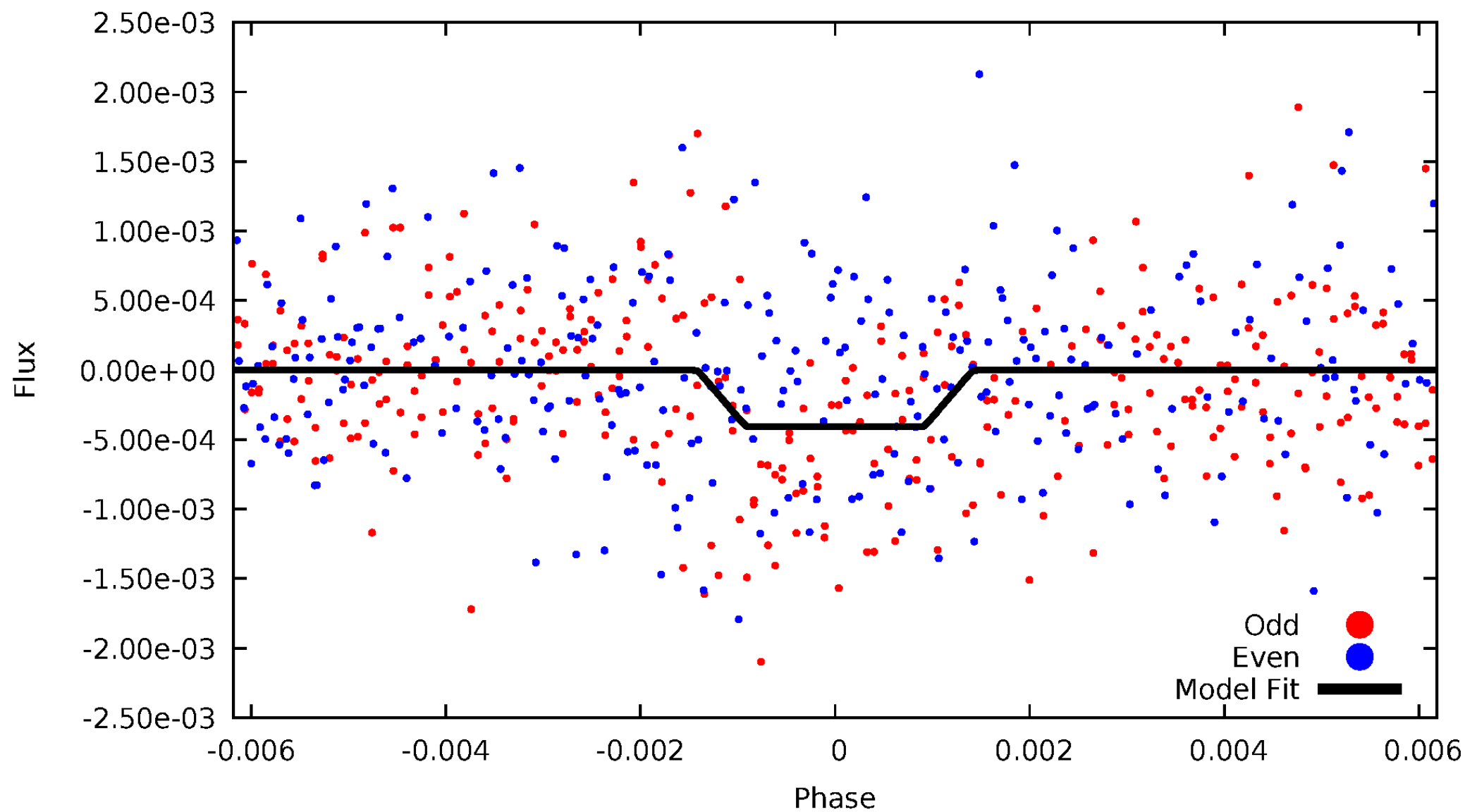
DV Odd/Even

TCE 007183745-03



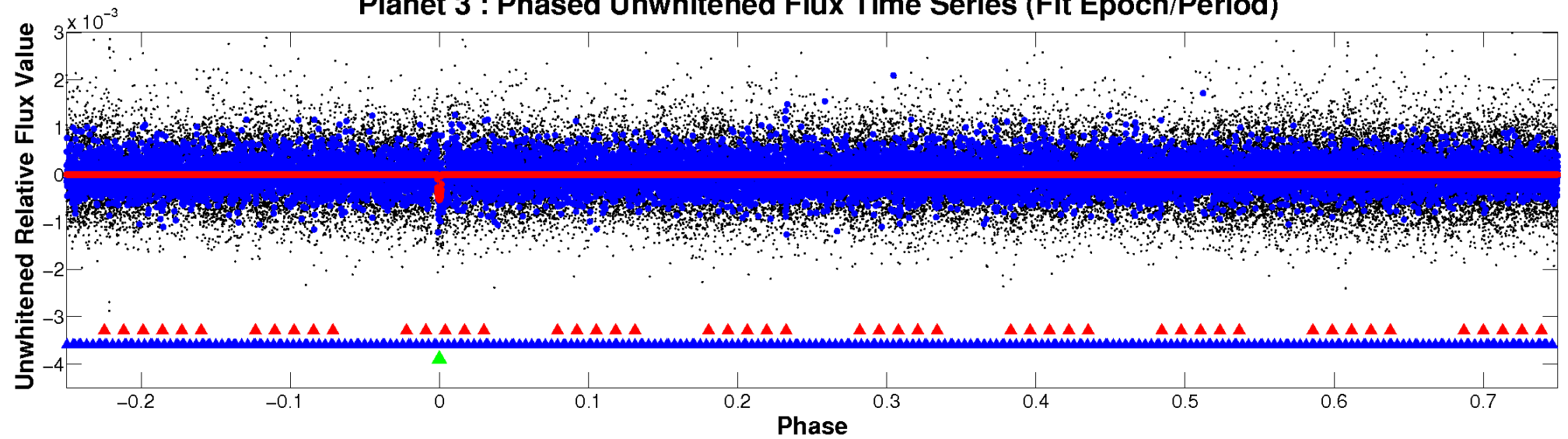
ALT Odd/Even

TCE 007183745-03

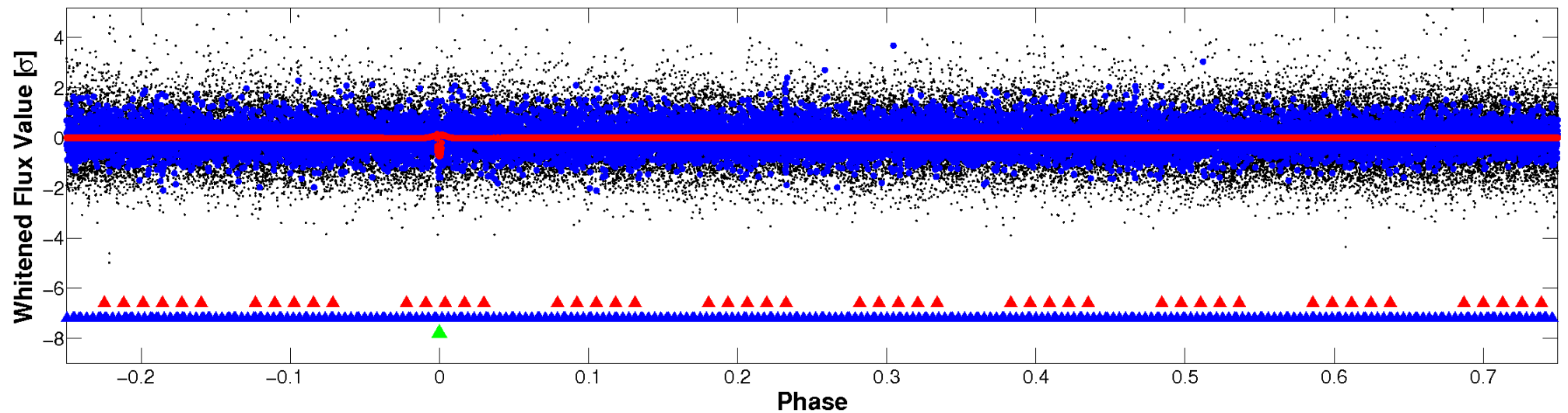


Non-Whitened Vs. Whitened Light Curve

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

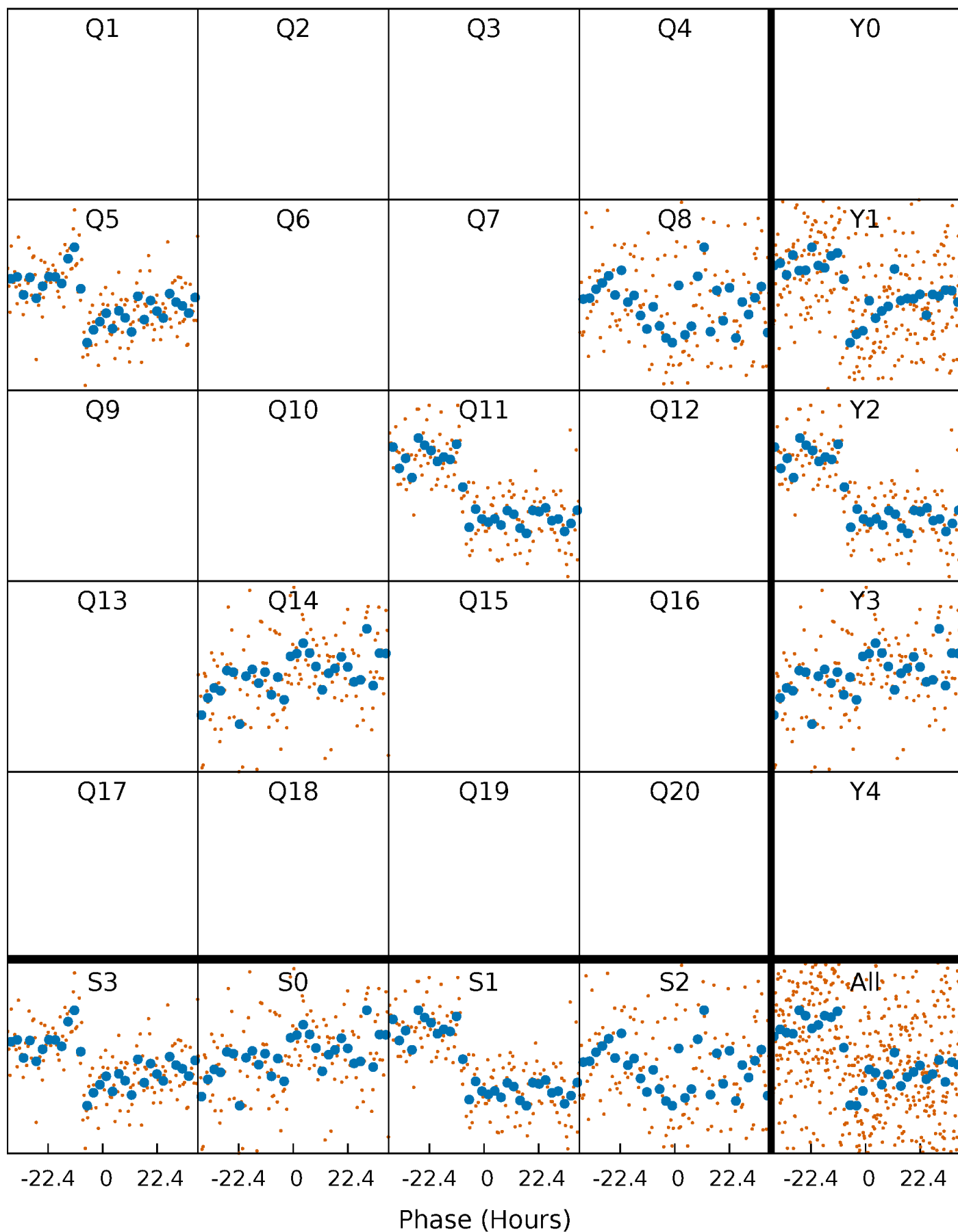


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



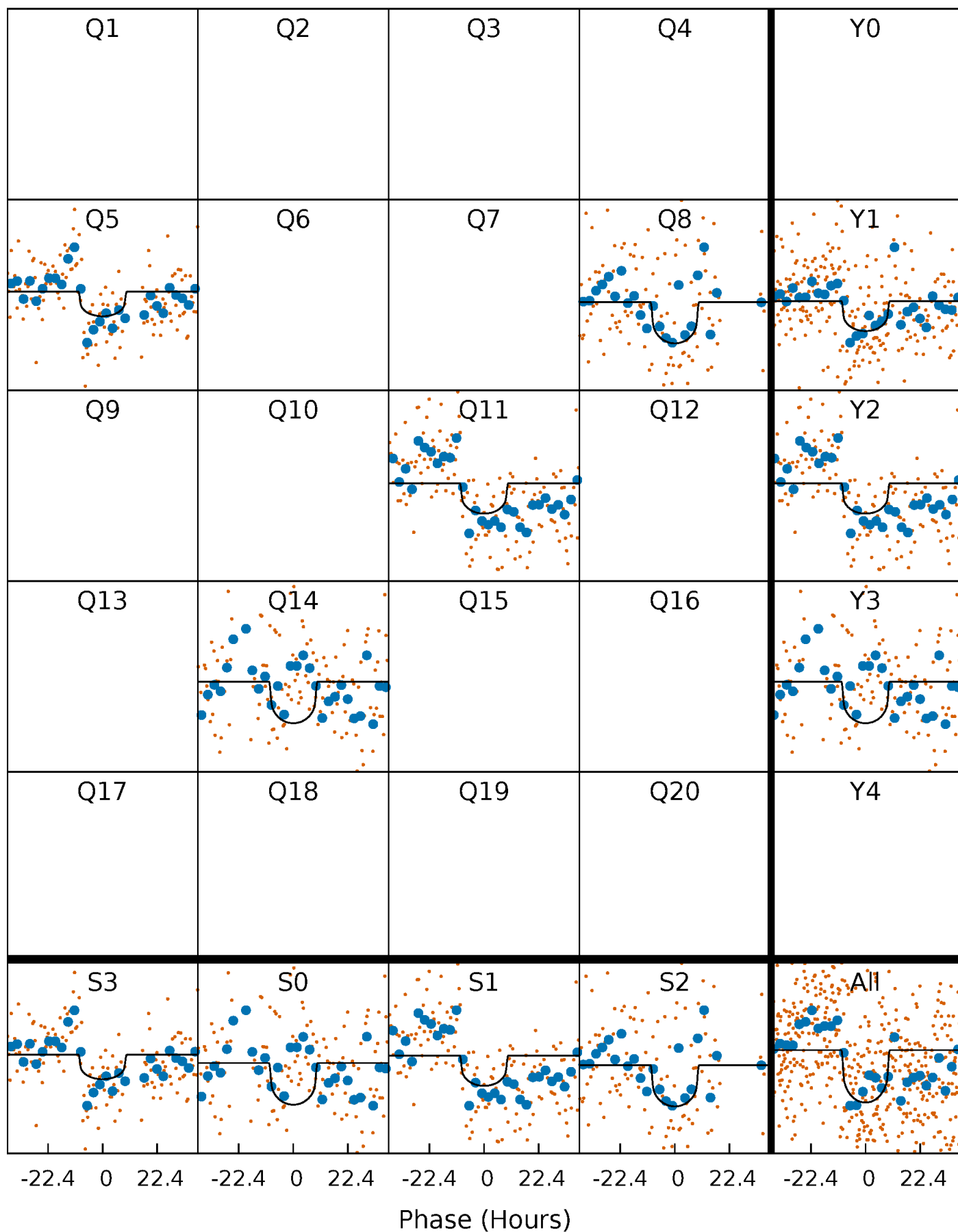
PDC Quarter-Phased Transit Curves

TCE 007183745-03 P=281.098433 Days $T_0=217.717600$ (BKJD)



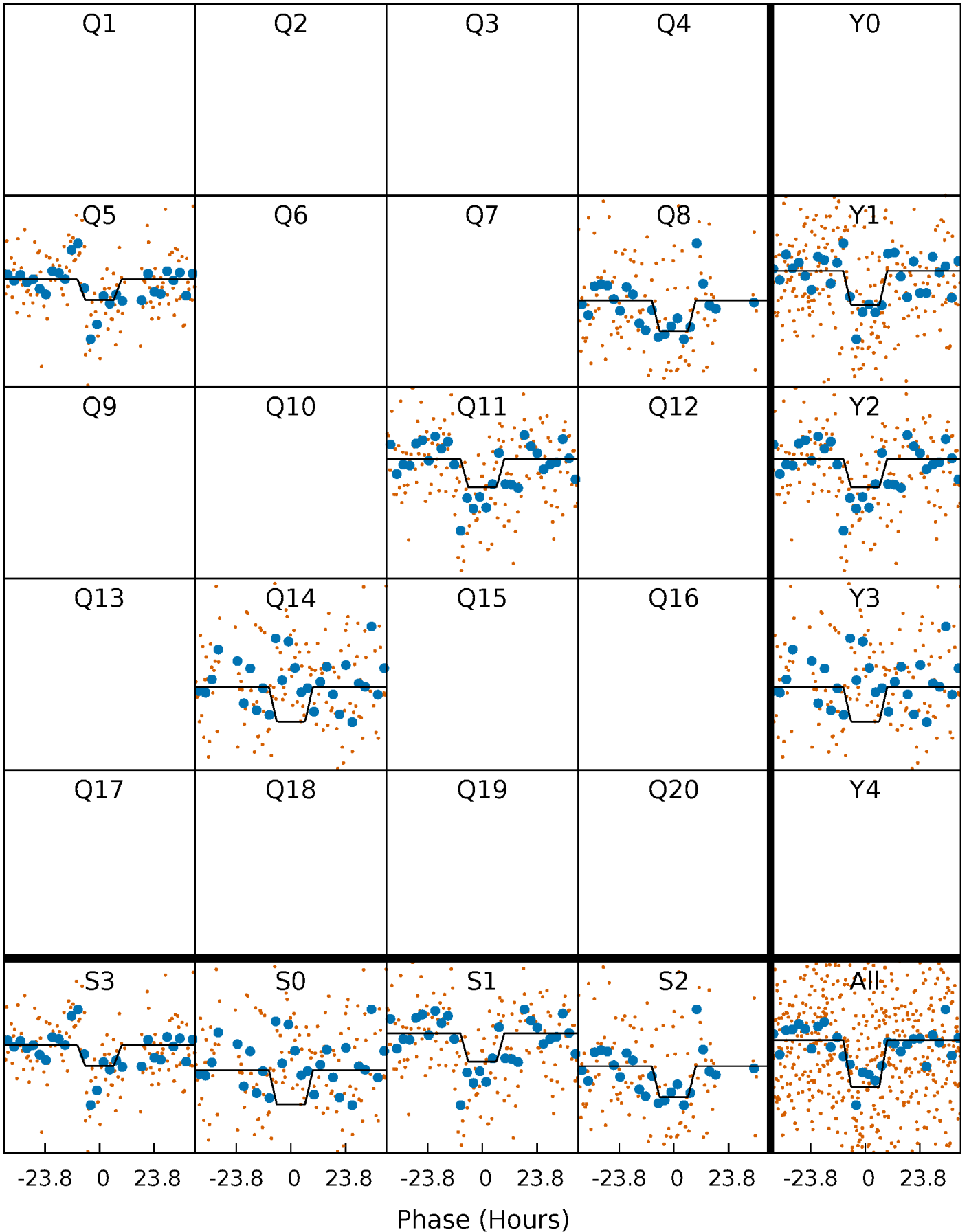
DV Quarter-Phased Transit Curves

TCE 007183745-03 $P=281.098433$ Days $T_0=217.717600$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

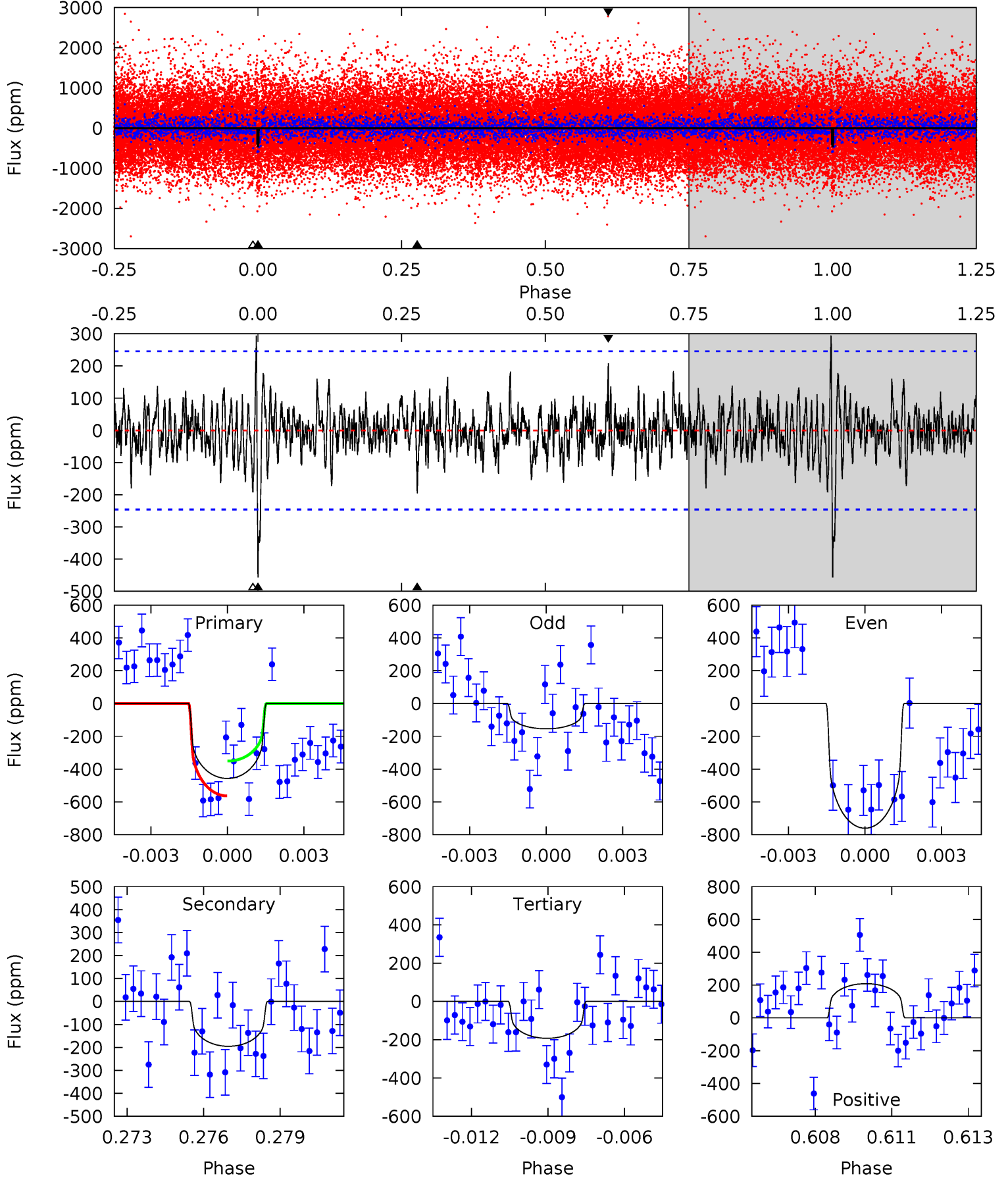
TCE 007183745-03 $P=281.206653$ Days $T_0=217.527856$ (BKJD)



DV Model-Shift Uniqueness Test

007183745-03, P = 281.098433 Days, E = 217.717600 Days

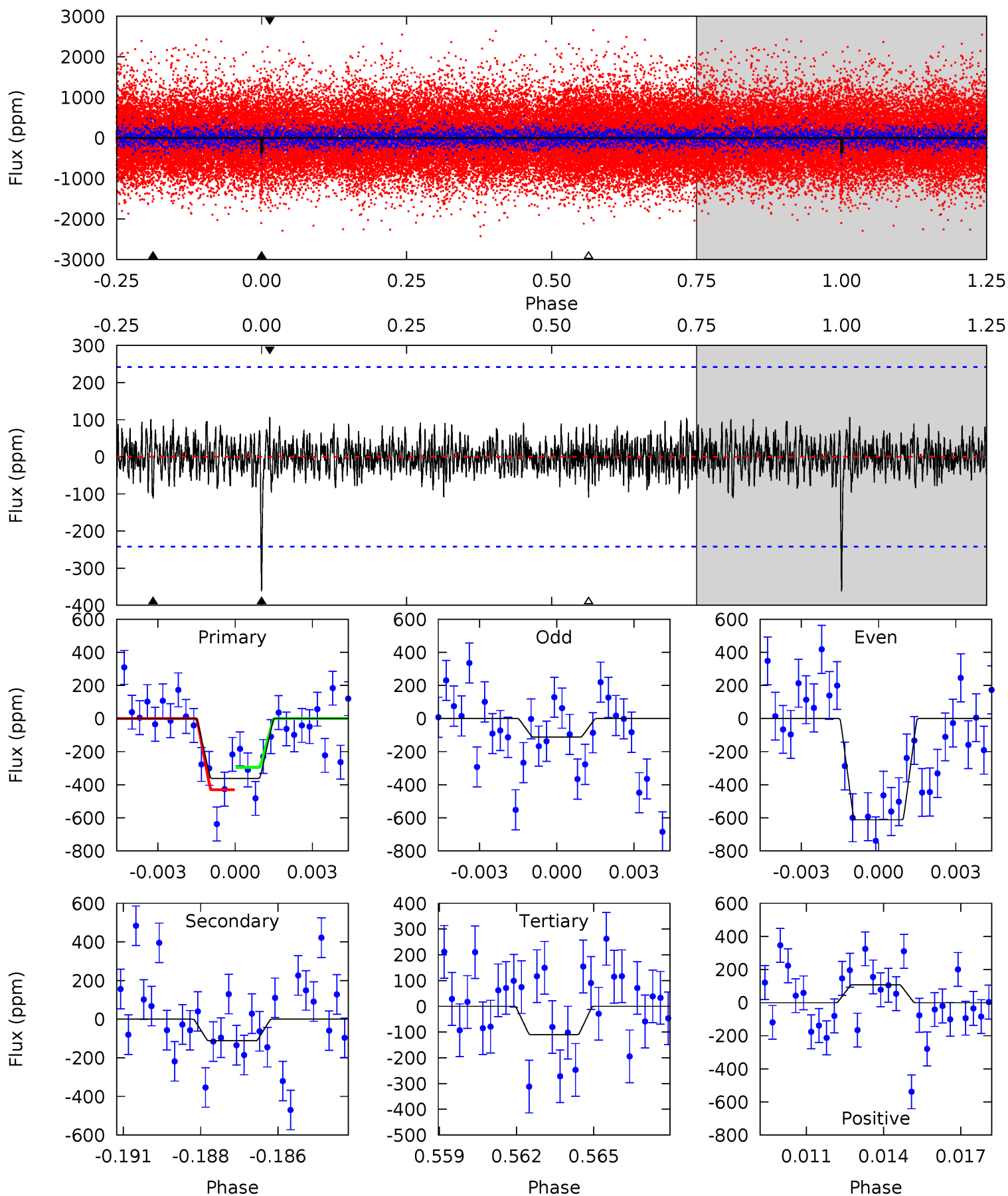
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.78	4.18	4.12	4.46	5.26	2.98	1.27	5.66	5.32	0.06	-0.28	6.51	0.84	0.39	2.28



Alt Model-Shift Uniqueness Test

007183745-03, P = 281.206653 Days, E = 217.527856 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.86	2.42	2.39	2.34	5.26	2.98	0.75	5.47	5.53	0.03	0.09	5.48	0.72	0.23	1.47



Stellar Parameters For KIC 007183745

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4996^{+82}_{-74}	$4.497^{+0.080}_{-0.025}$	$0.140^{+0.150}_{-0.150}$	$0.831^{+0.032}_{-0.060}$	$0.791^{+0.058}_{-0.025}$	$1.942^{+0.568}_{-0.178}$
	+2%/-1%	+2%/-1%	+107%/-107%	+4%/-7%	+7%/-3%	+29%/-9%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 007183745-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-195 ± 47	$2.03^{+0.88}_{-0.84}$	317^{+6}_{-9}	4138^{+949}_{-520}	15544^{+31530}_{-8179}
Alt.	-111 ± 46	$1.87^{+0.89}_{-0.90}$	316^{+7}_{-8}	3832^{+1155}_{-523}	10547^{+31012}_{-6383}

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

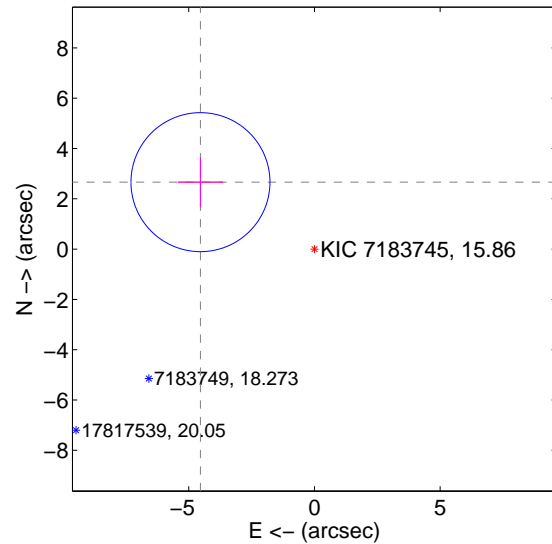
Supplemental centroid analysis for 007183745-03. Kepler magnitude: 15.86. Transit SNR 7.69

There are 0 quarters with good PRF difference image offsets

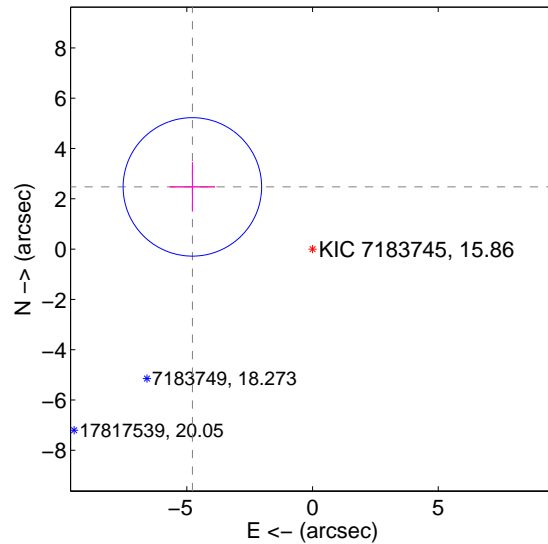
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.256 ± 0.921	5.71	4.532 ± 0.902	2.662 ± 0.975
PRF-fit source offset from KIC position	5.380 ± 0.918	5.86	4.778 ± 0.902	2.474 ± 0.975
photometric centroid source offset	2.82 ± 1.62	1.75	-0.04 ± 1.82	-2.82 ± 1.62

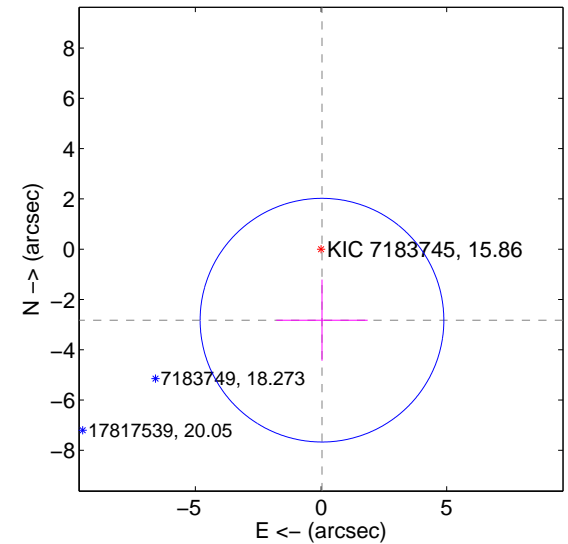
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

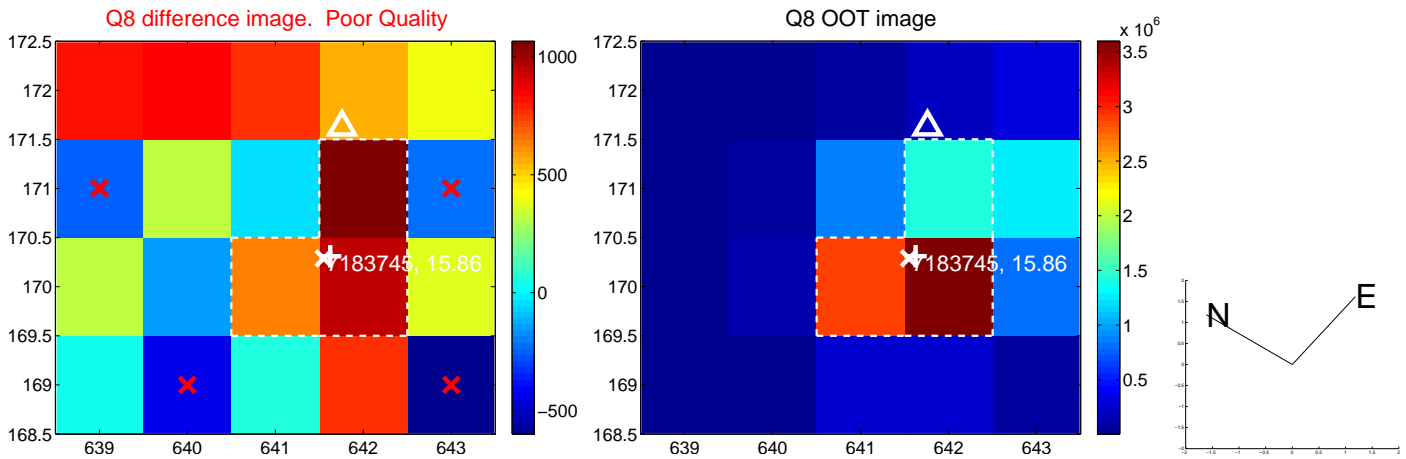
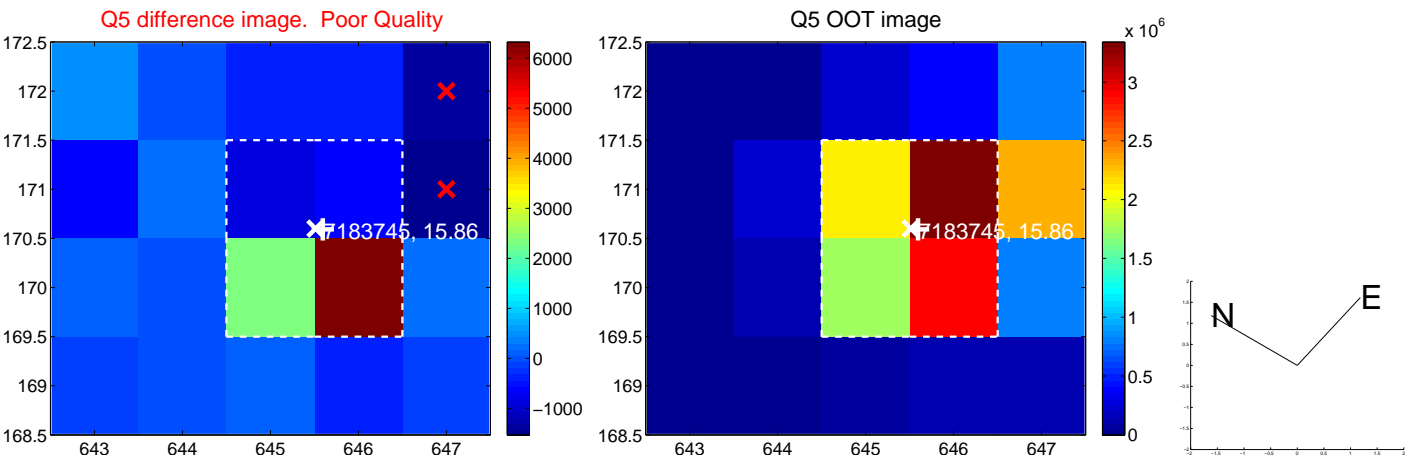


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

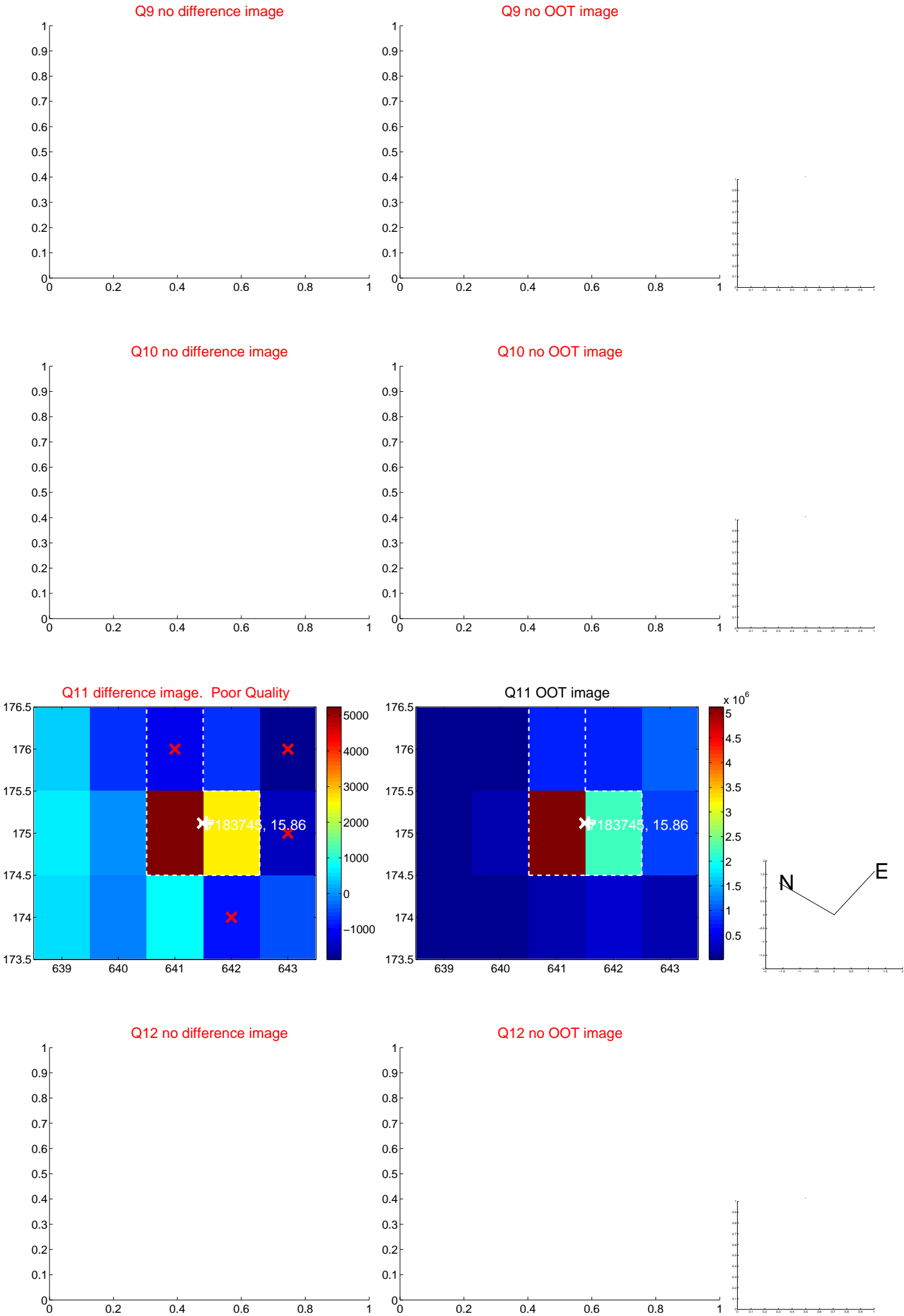
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



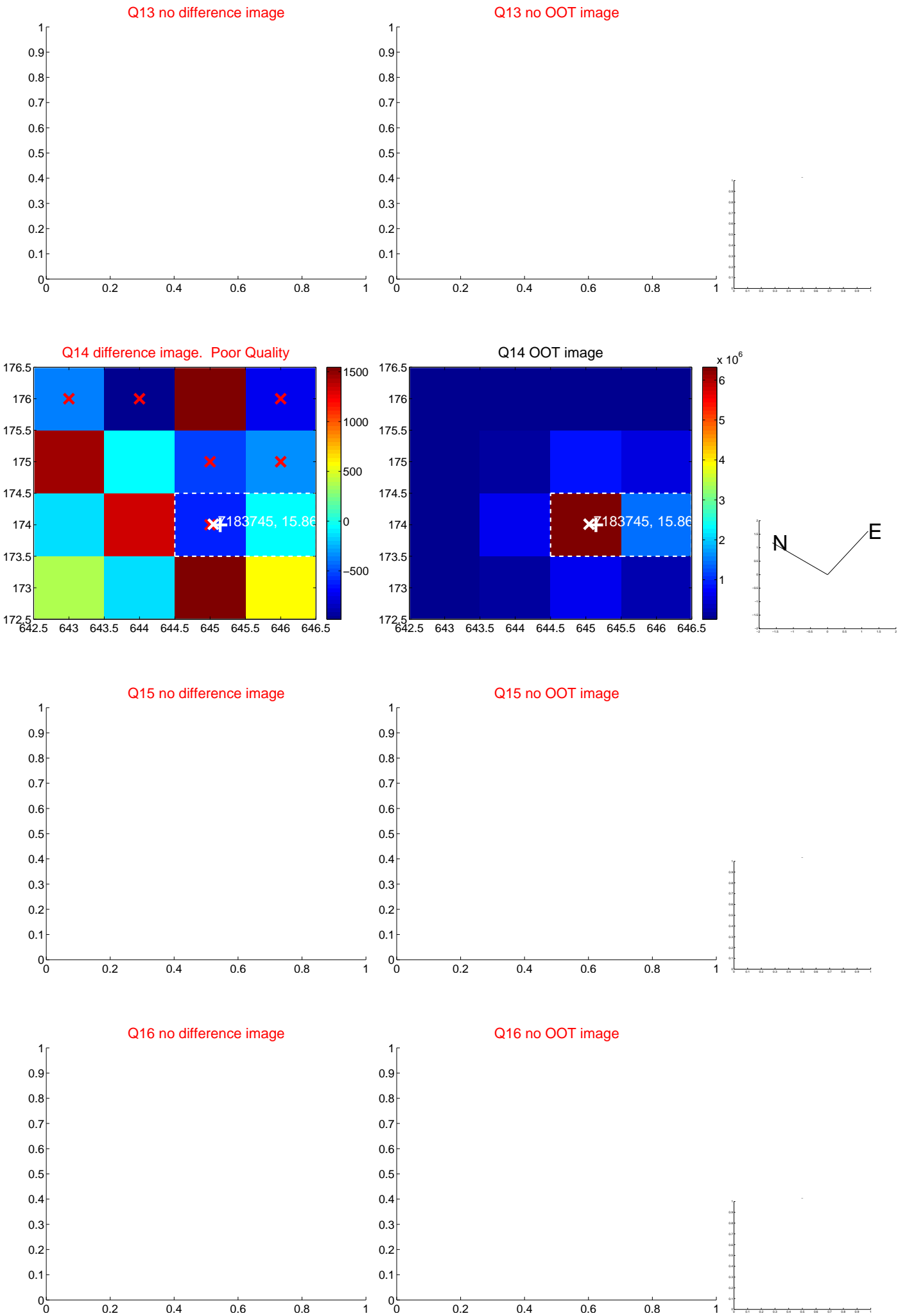
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



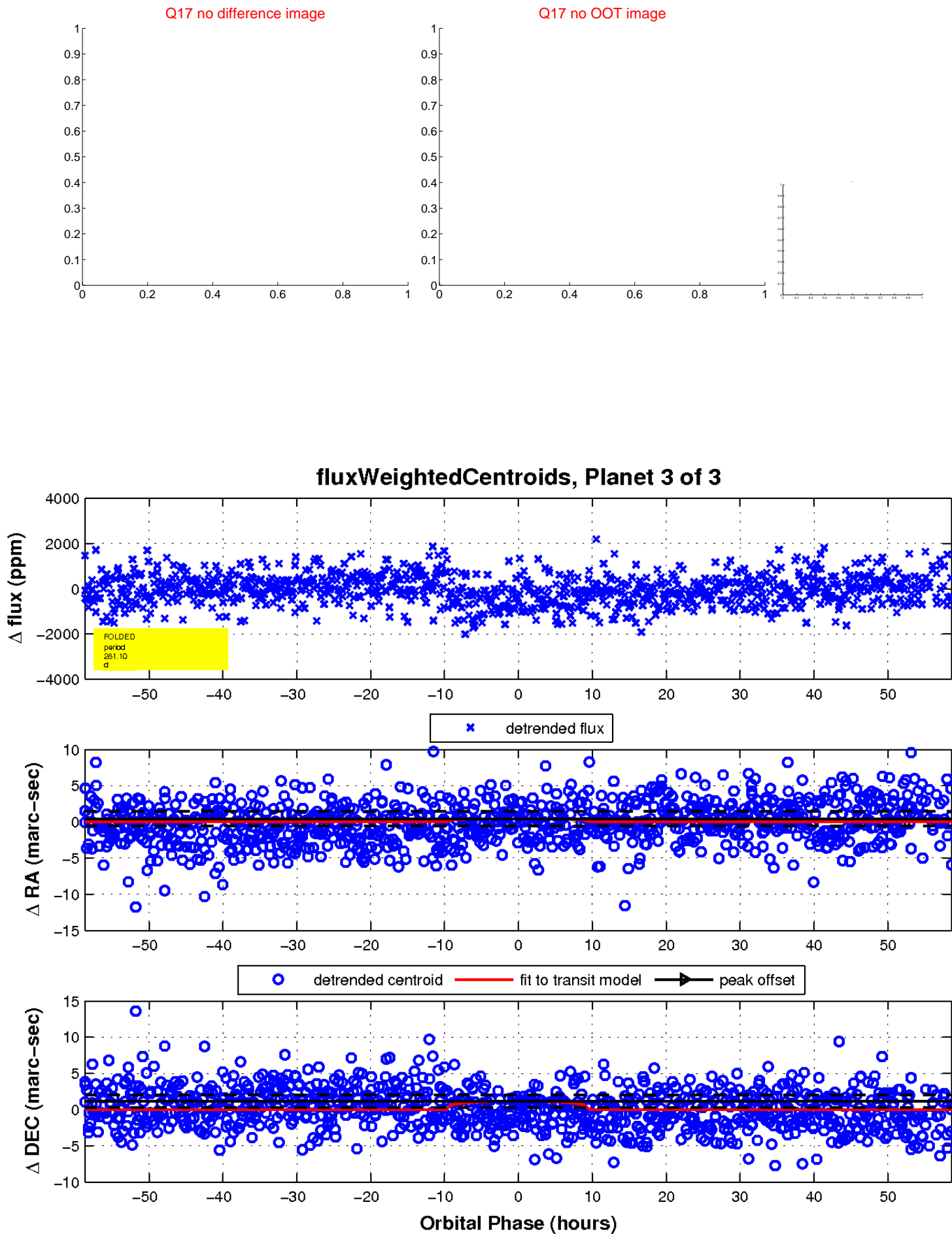
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image

Declination

