

KIC 007983756

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})
007983756-01	OBS	3846.01	5.240753	136.554287	519.5	4.948	43.4	47.3	0.92	6192	3.73	322.56
007983756-02	OBS	No	5.240771	134.029617	311.8	5.495	29.6	31.8	0.92	6192	2.39	322.56
007983756-03	OBS	No	314.280506	280.680856	312.0	36.228	8.9	4.6	0.92	6192	1.66	1.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007983756-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—CENT_RESOLVED_OFFSET
007983756-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET
007983756-03	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—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.

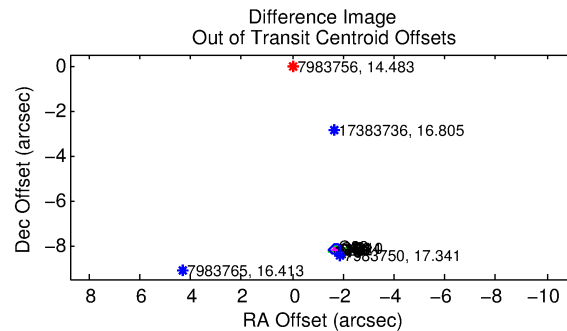
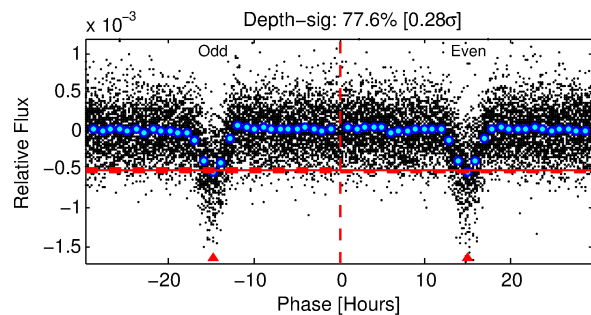
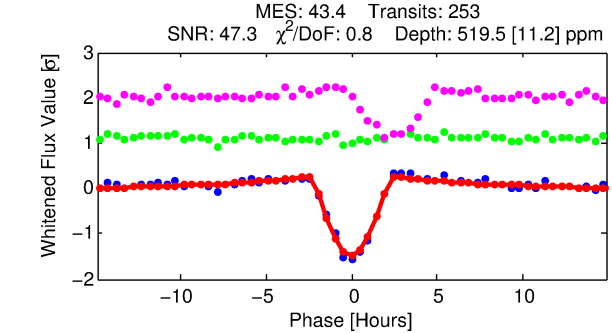
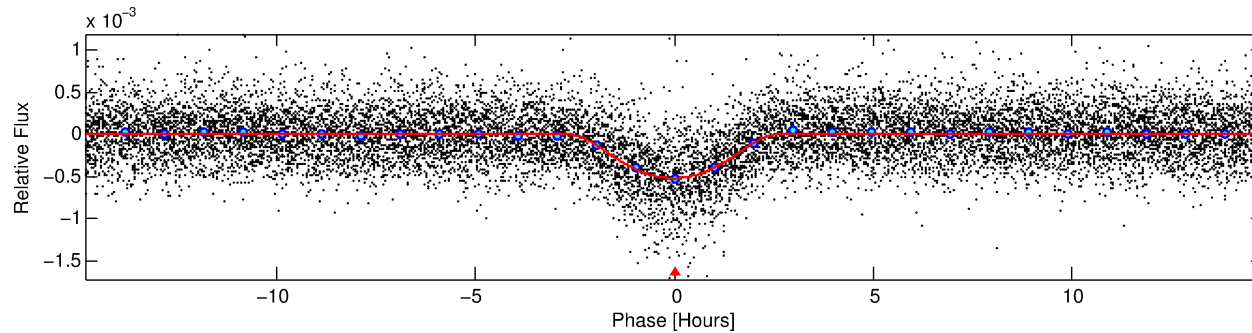
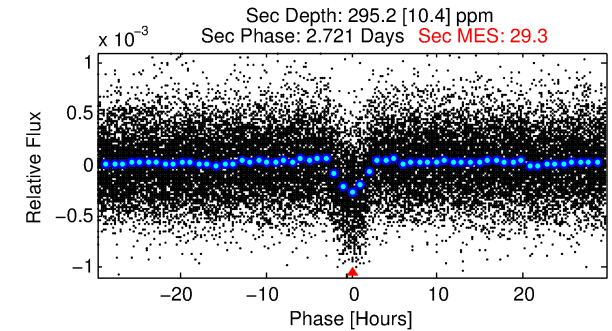
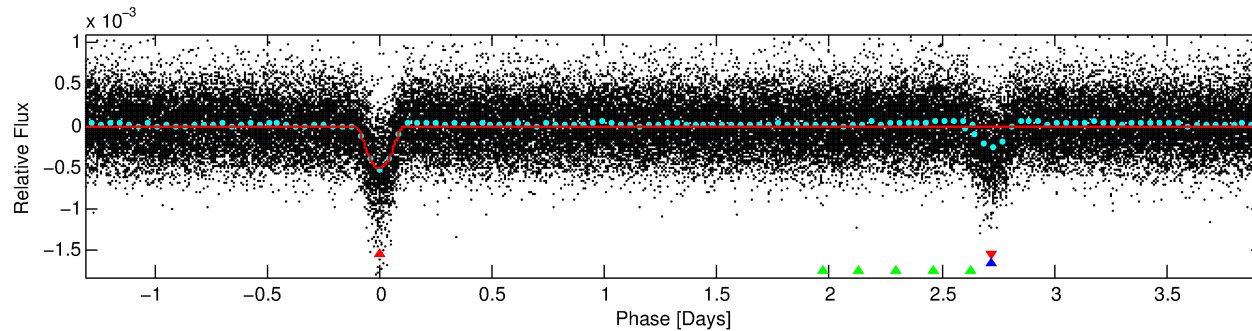
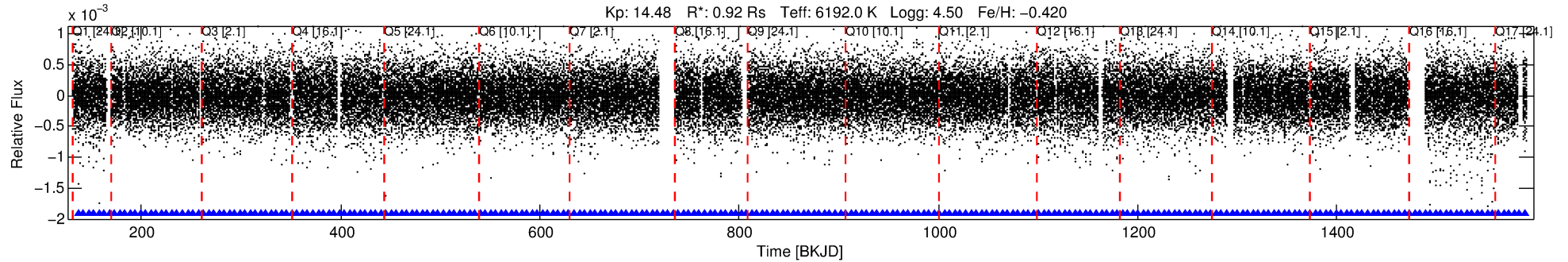
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007983756-01

No Significant Match Found

DV One-Page Summary

KIC: 7983756 Candidate: 1 of 3 Period: 5.241 d
KOI: K03846.01 Corr: 0.973



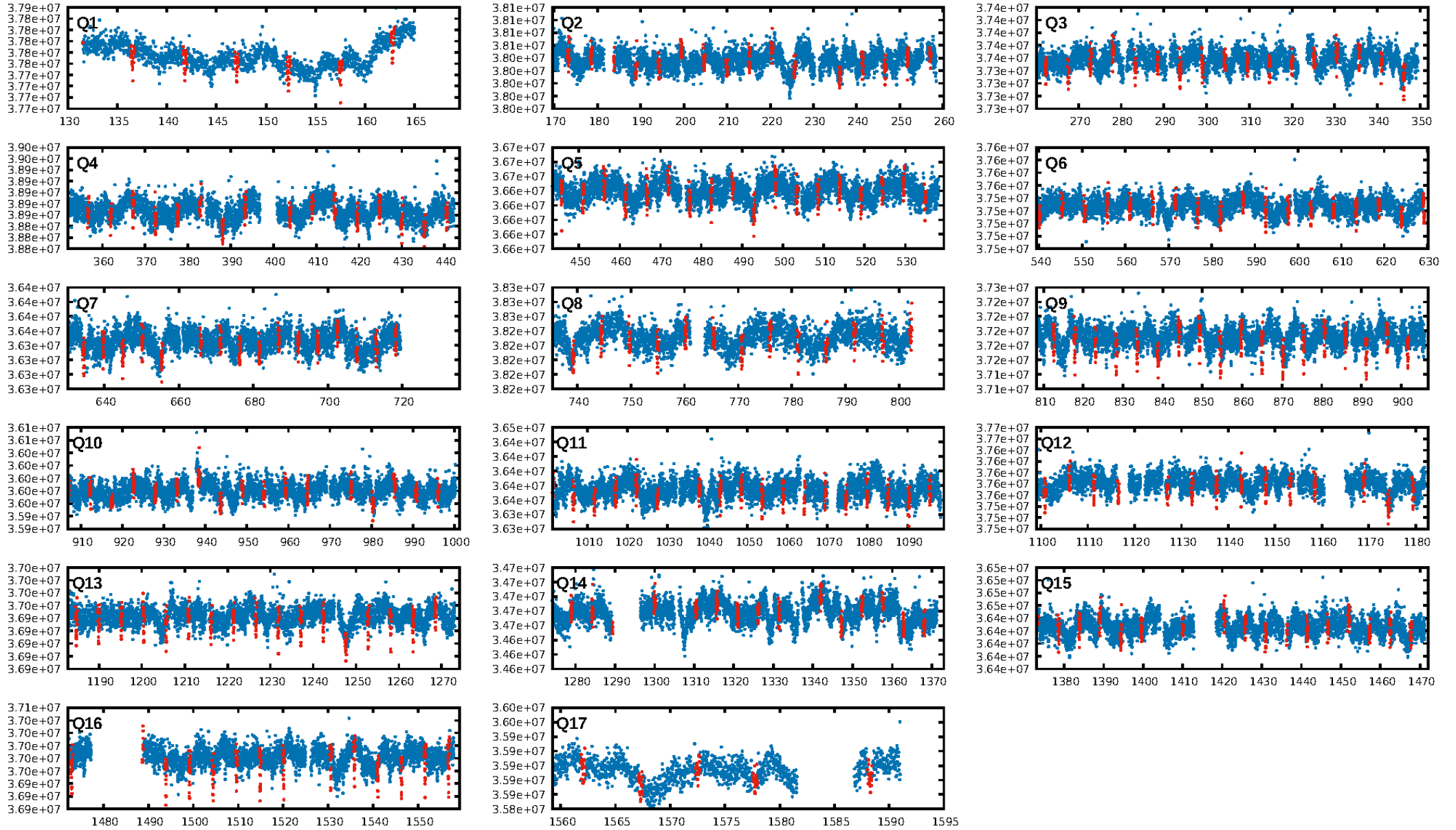
DV Fit Results:

Period = 5.24075 [0.00001] d
Epoch = 136.5543 [0.0021] BKJD
Rp/R* = 0.0372 [0.0185]
a/R* = 2.58 [0.31]
b = 0.99 [0.03]
Seff = 322.56 [128.99]
Teq = 1081 [108] K
Rp = 3.72 [2.16] Re
a = 0.0586 [0.0150] AU
Ag = 40.19 [42.71] [0.92σ]
Teffp = 4207 [1054] K [2.95σ]

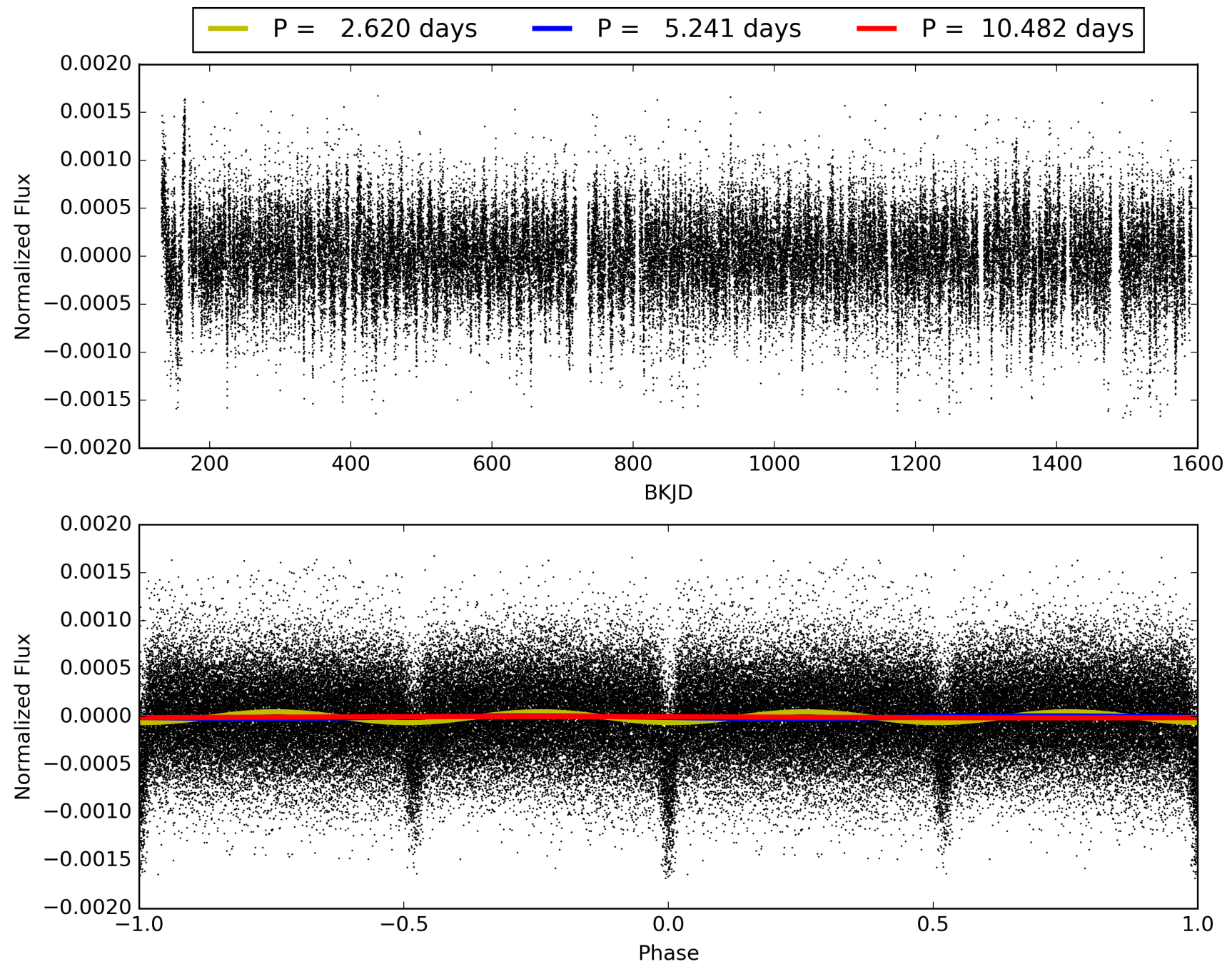
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [242/242]
GhostDiagnostic-chr: -0.424
Centroid-sig: N/A
Centroid-so: 66.859 arcsec [264.07σ]
OotOffset-rm: 8.342 arcsec [118.29σ]
KicOffset-rm: 8.601 arcsec [125.89σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007983756-01, PDC Light Curves

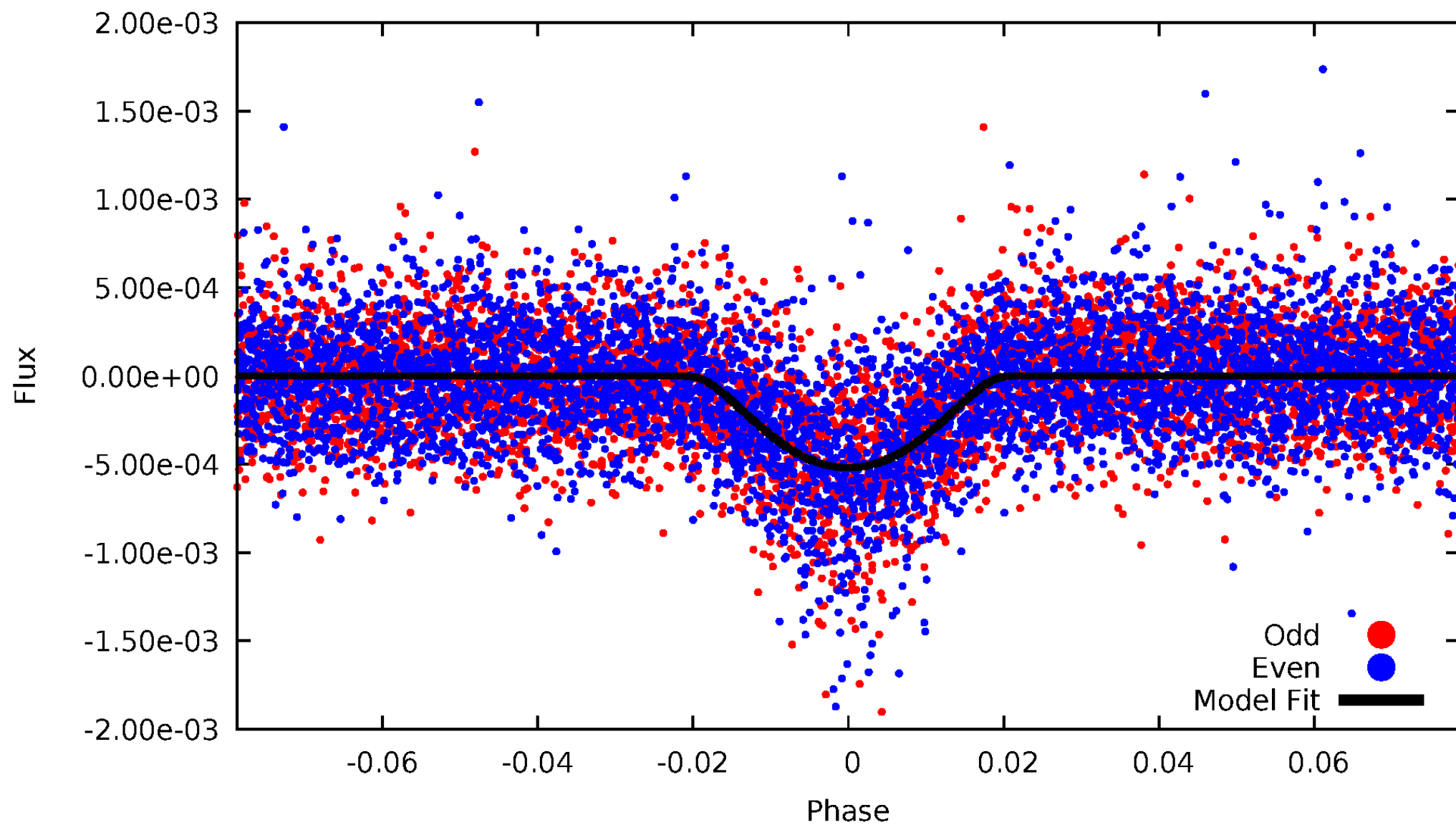


TCE 007983756-01



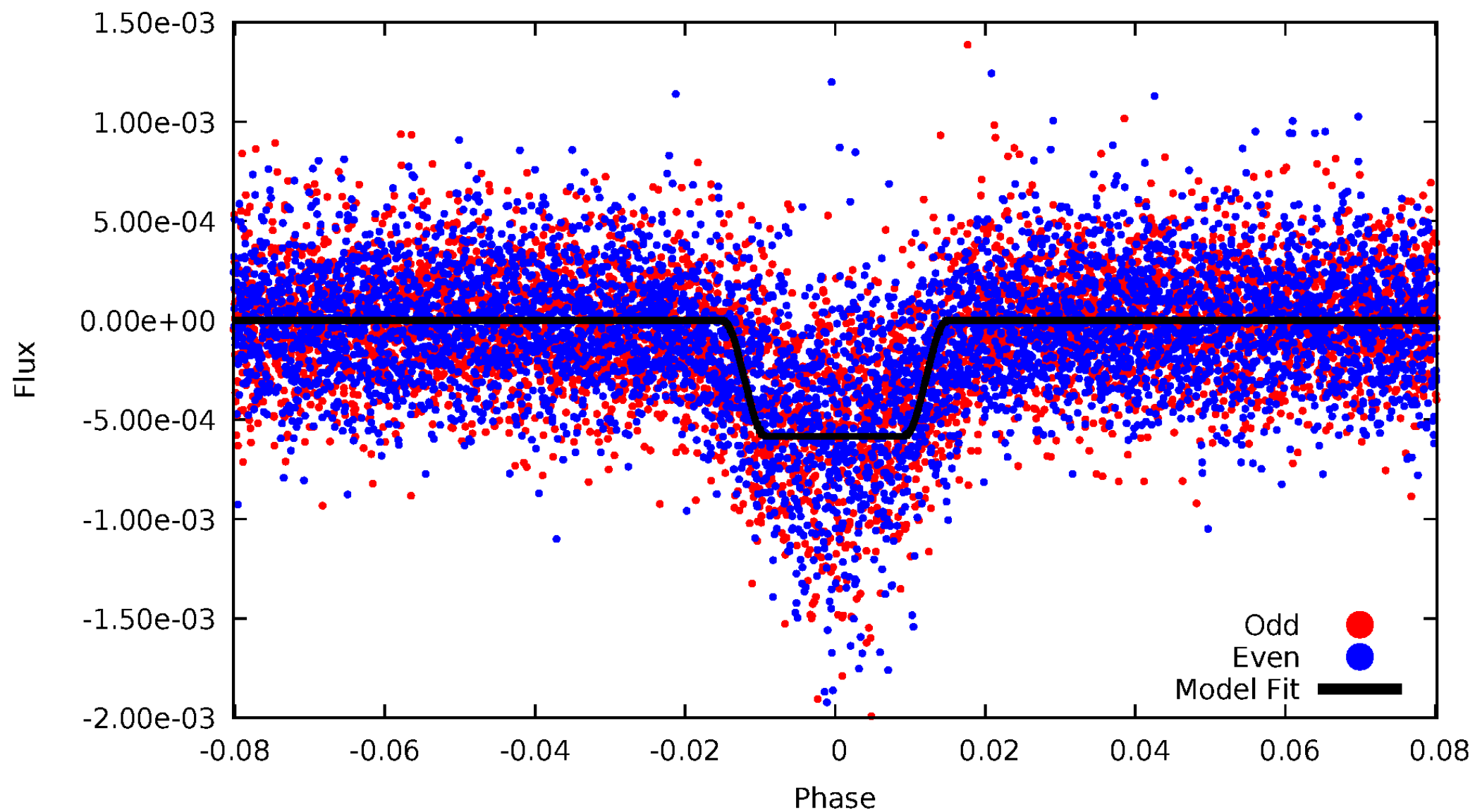
DV Odd/Even

TCE 007983756-01



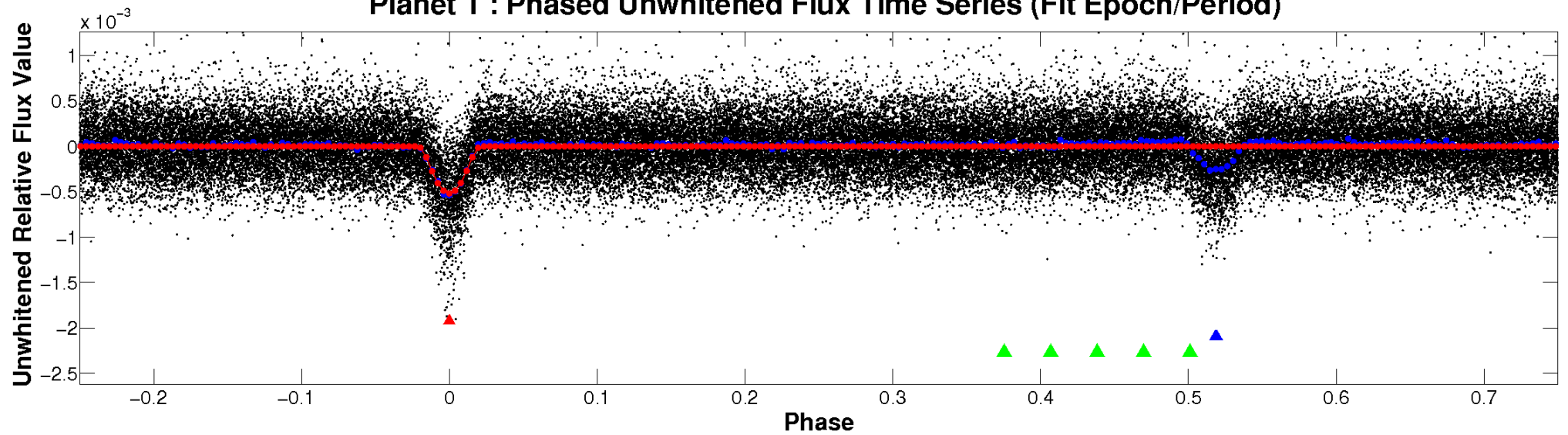
ALT Odd/Even

TCE 007983756-01

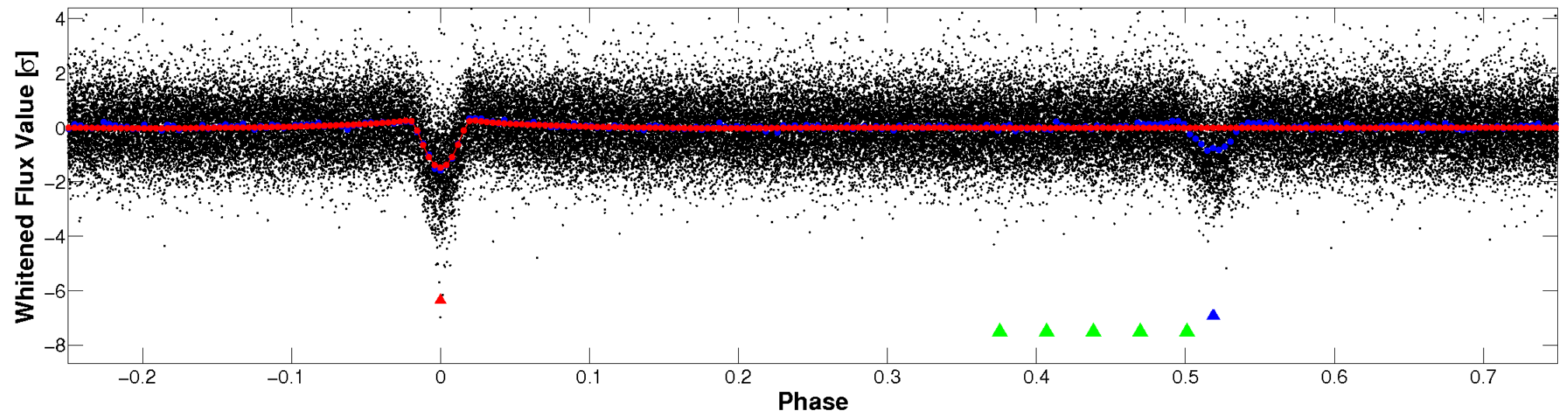


Non-Whitened Vs. Whitened Light Curve

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

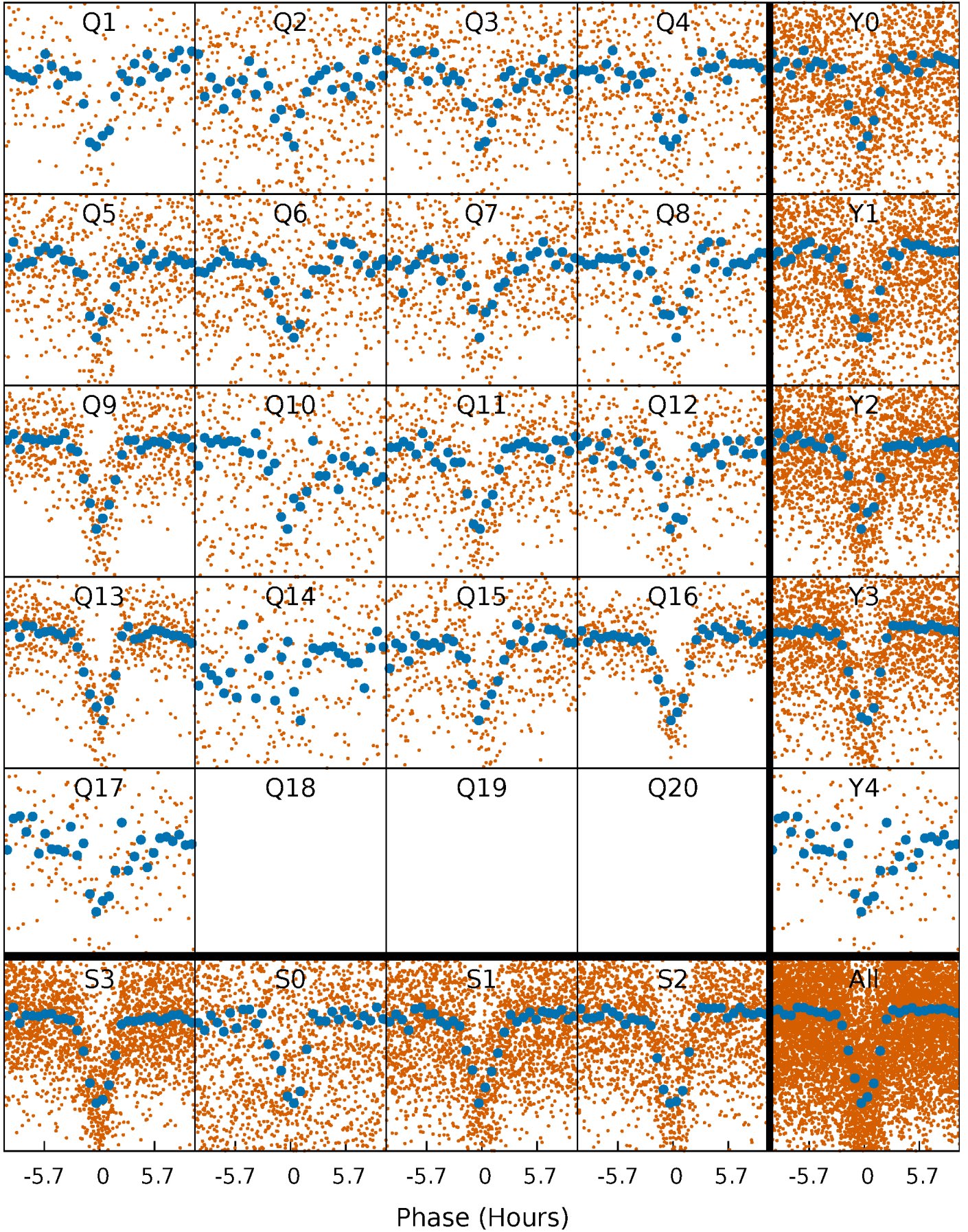


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



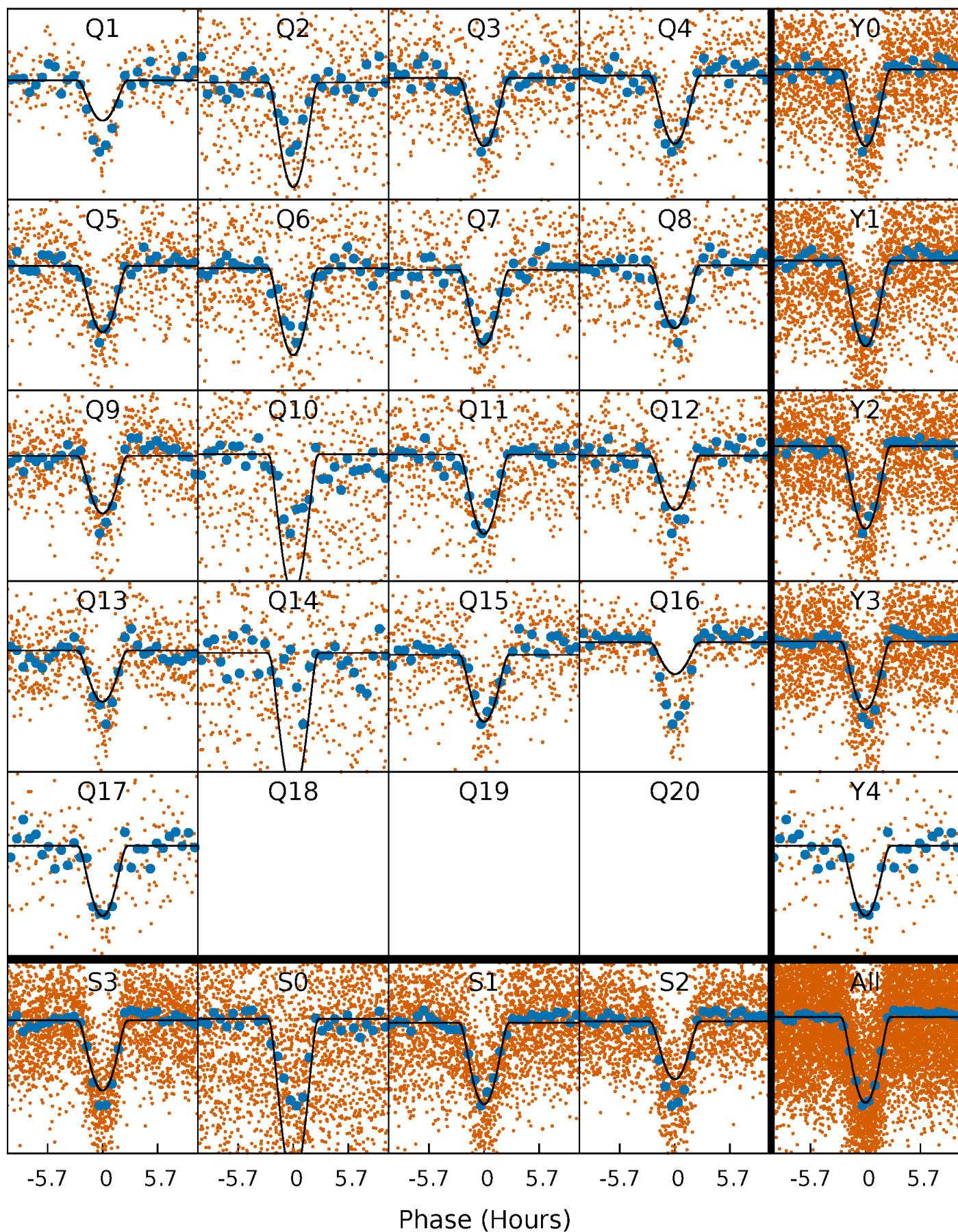
PDC Quarter-Phased Transit Curves

TCE 007983756-01 P= 5.240753 Days $T_0=136.554287$ (BKJD)



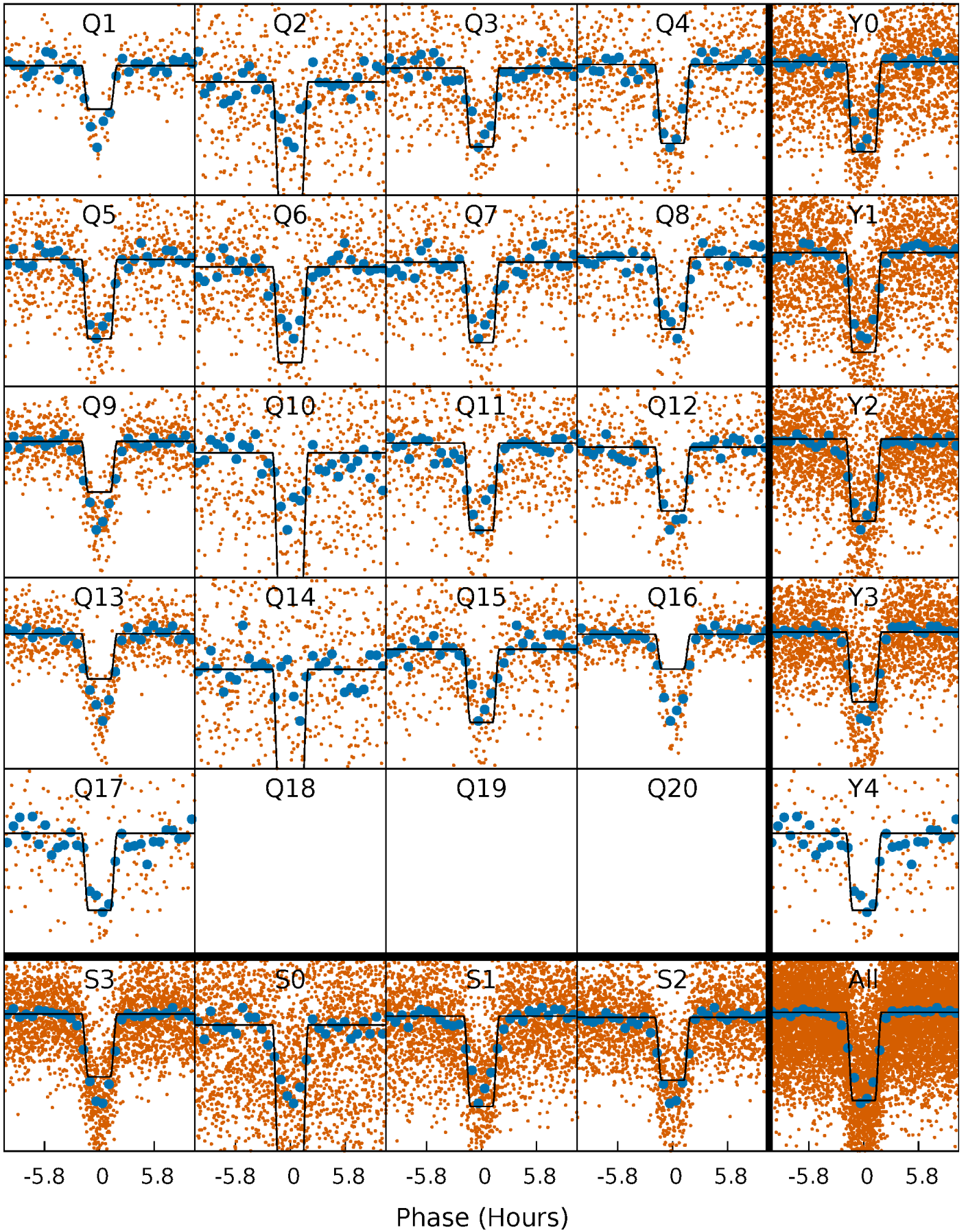
DV Quarter-Phased Transit Curves

TCE 007983756-01 P= 5.240753 Days $T_0=136.554287$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

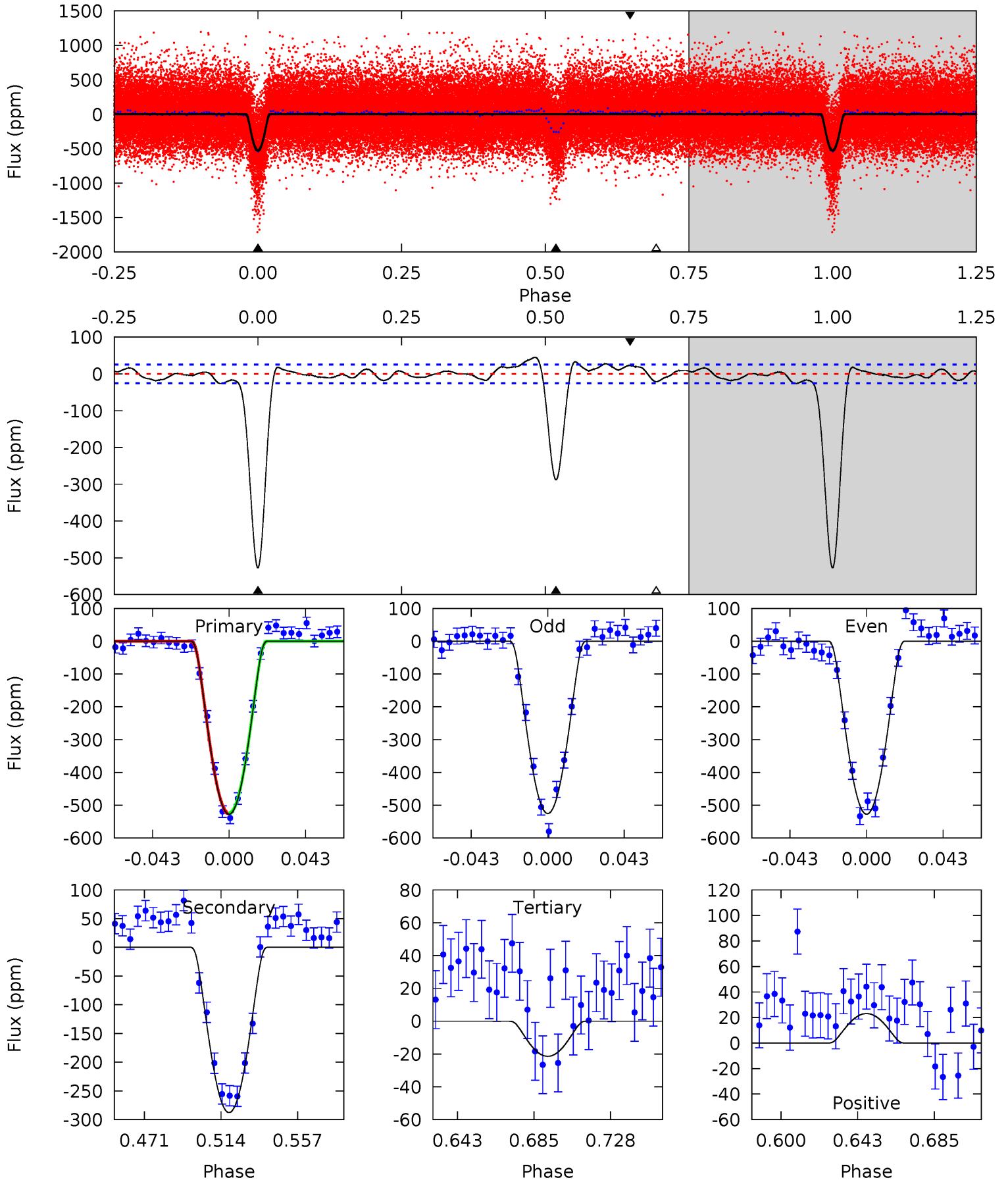
TCE 007983756-01 P= 5.240732 Days $T_0=136.557092$ (BKJD)



DV Model-Shift Uniqueness Test

007983756-01, P = 5.240753 Days, E = 131.313534 Days

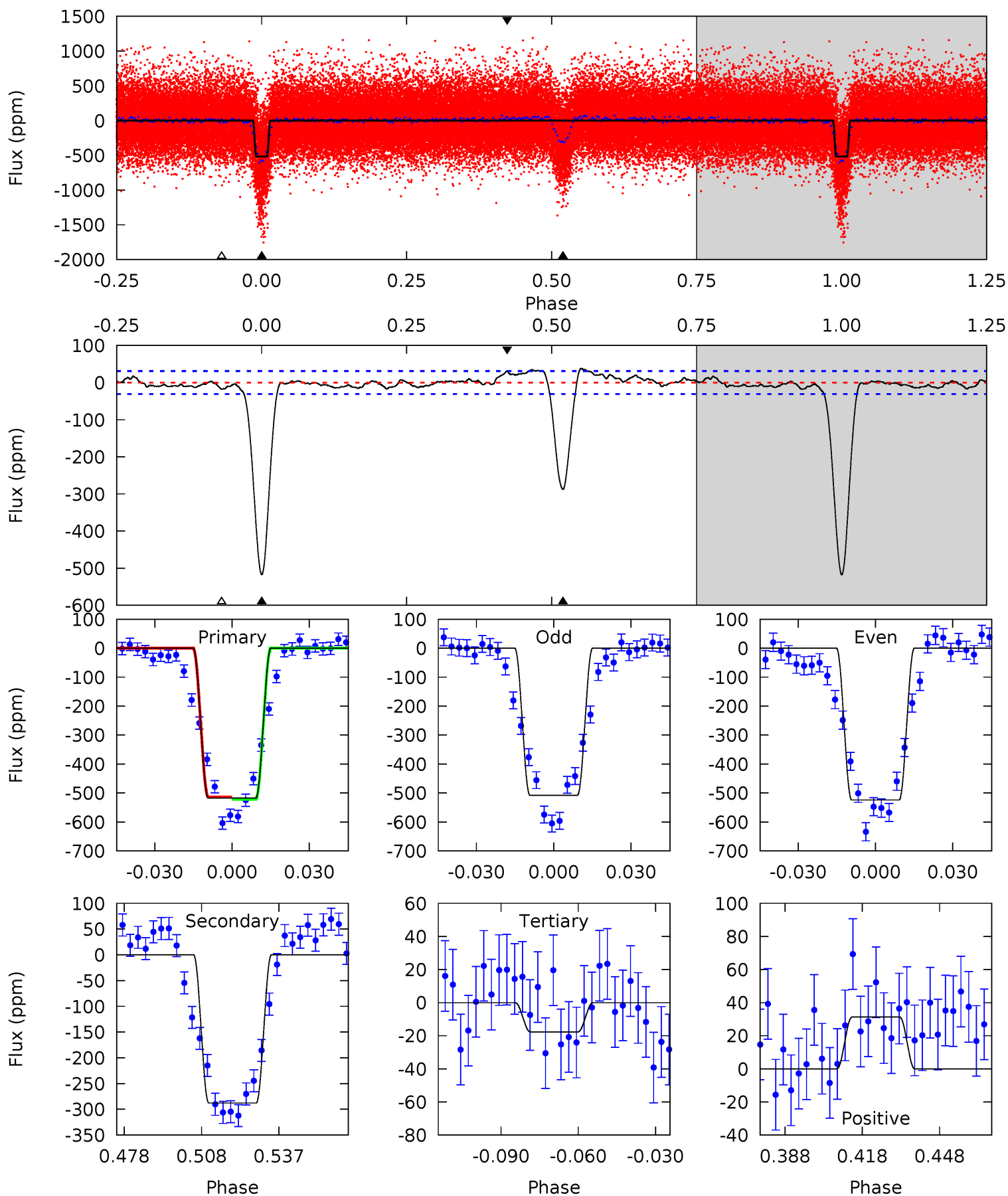
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
97.8	53.4	3.97	4.28	4.74	2.03	2.39	93.8	93.5	49.4	49.1	0.20	1.01	0.08	0.12



Alt Model-Shift Uniqueness Test

007983756-01, P = 5.240732 Days, E = 131.316360 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
80.6	44.8	2.75	4.87	4.81	2.17	2.00	77.9	75.7	42.1	40.0	1.24	1.05	0.07	0.62



Stellar Parameters For KIC 007983756

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6192^{+169}_{-206}	$4.503^{+0.052}_{-0.208}$	$-0.420^{+0.300}_{-0.300}$	$0.917^{+0.276}_{-0.092}$	$0.976^{+0.123}_{-0.123}$	$1.785^{+0.490}_{-0.965}$
	+3%/-3%	+1%/-5%	+71%/-71%	+30%/-10%	+13%/-13%	+27%/-54%
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 007983756-01 / KOI 3846.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-288 ± 5	$4.09^{+1.90}_{-1.90}$	1542^{+105}_{-74}	4309^{+1278}_{-560}	32^{+80}_{-17}
Alt.	-288 ± 6	$2.77^{+1.76}_{-1.64}$	1540^{+101}_{-73}	5056^{+2853}_{-932}	70^{+361}_{-44}

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

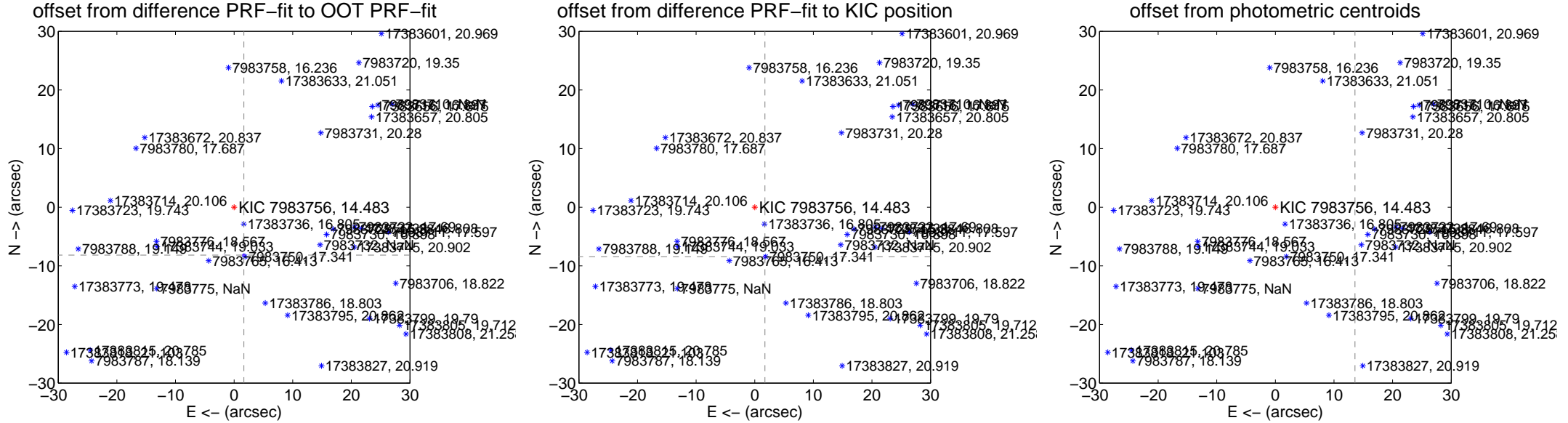
DV Centroid Data

Supplemental centroid analysis for 007983756-01. Kepler magnitude: 14.48. Transit SNR 47.32

There are 17 quarters with good PRF difference image offsets

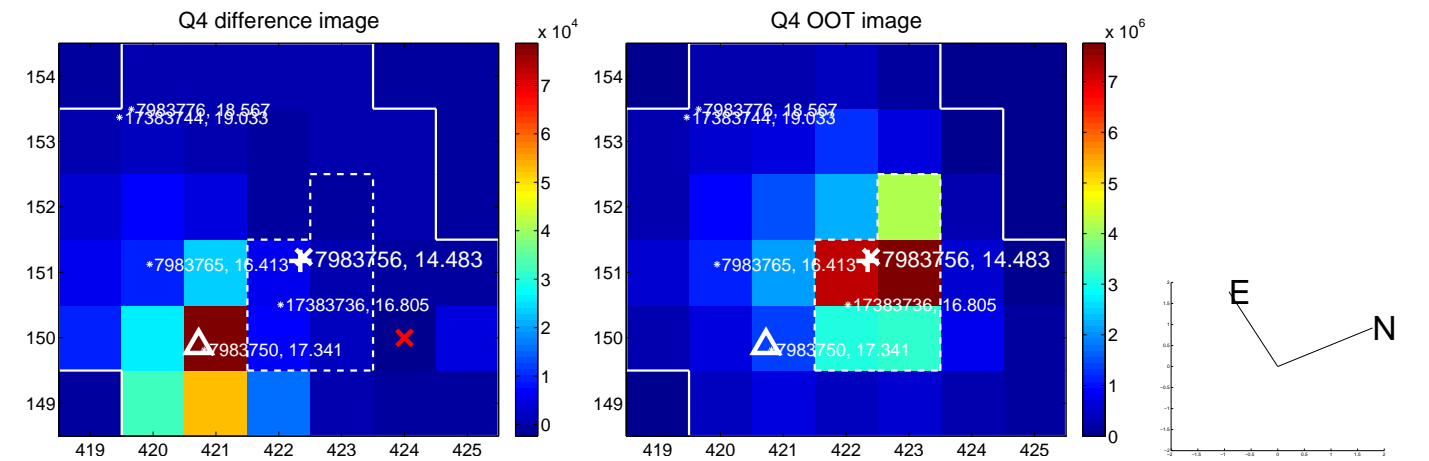
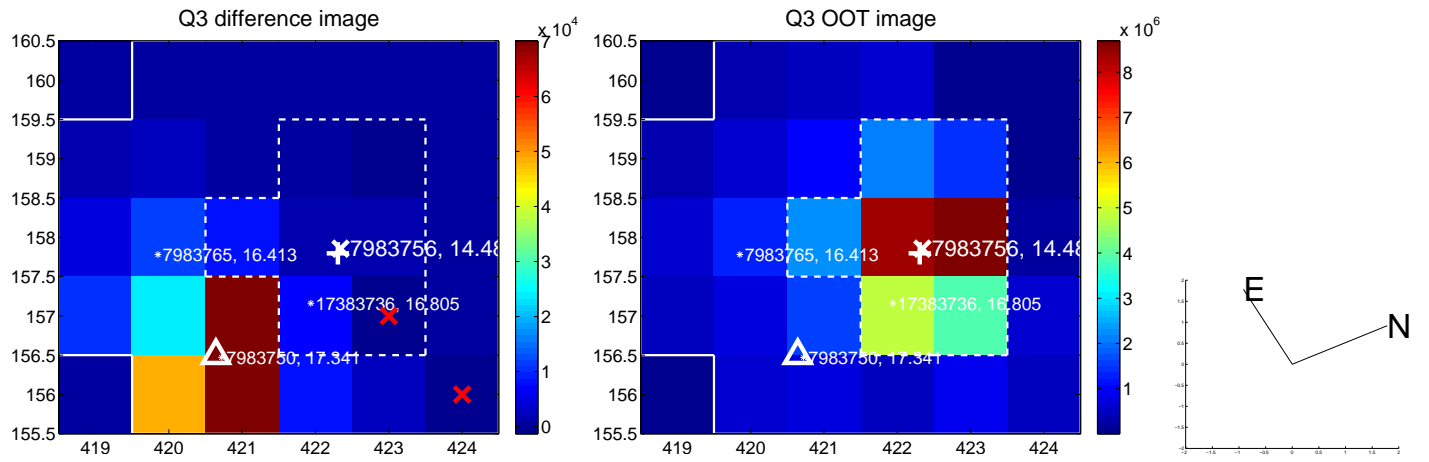
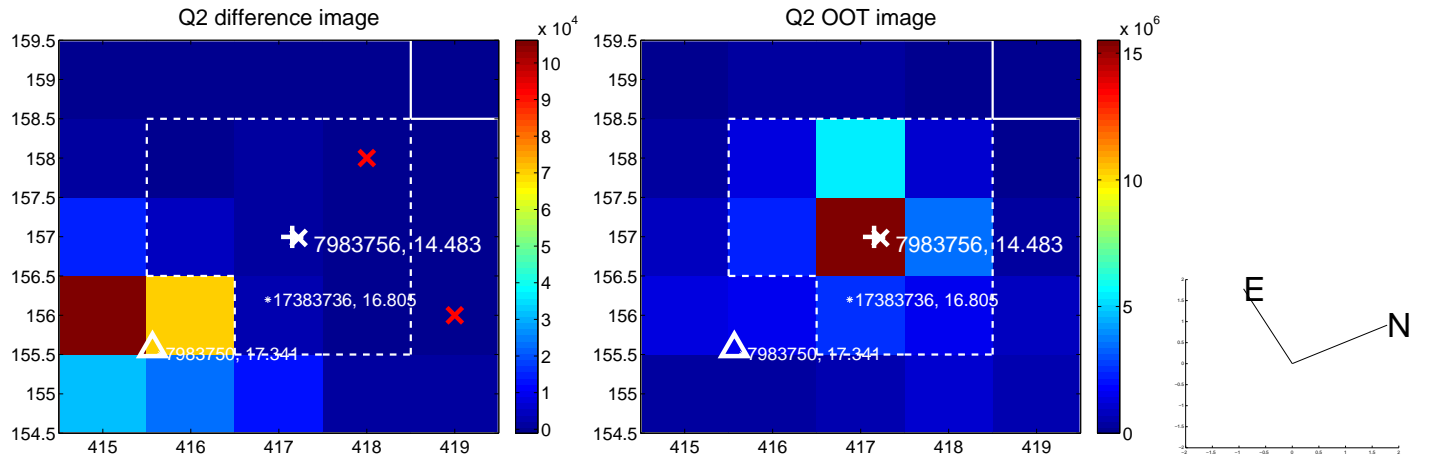
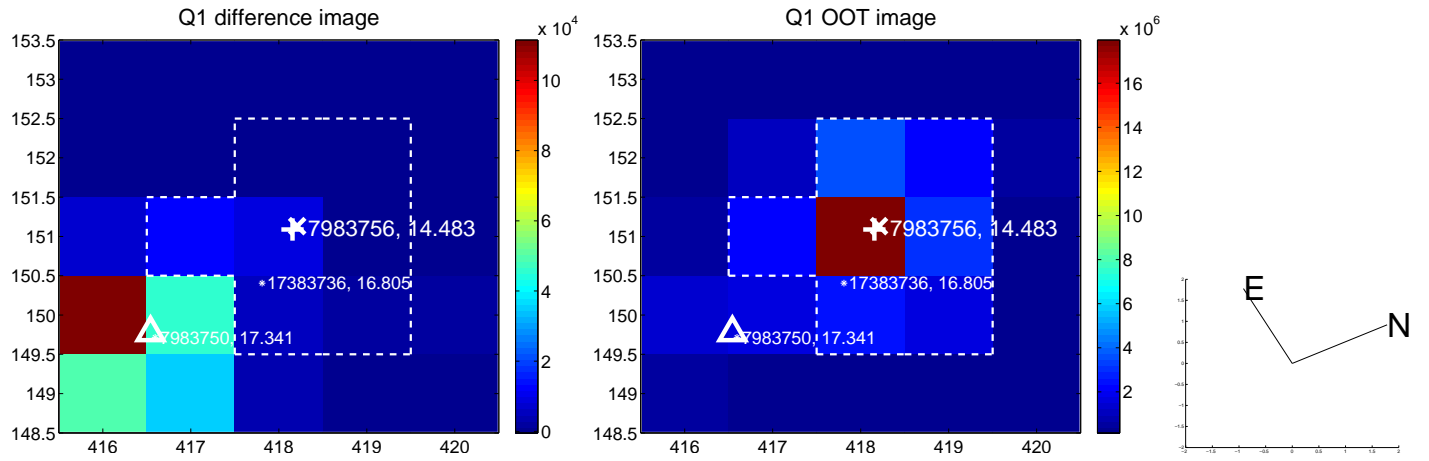
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.342 \pm 0.071	118.29	-1.670 \pm 0.091	-8.174 \pm 0.070
PRF-fit source offset from KIC position	8.601 \pm 0.068	125.89	-1.735 \pm 0.068	-8.425 \pm 0.068
photometric centroid source offset	66.86 \pm 0.25	264.07	-13.58 \pm 0.28	-65.47 \pm 0.25

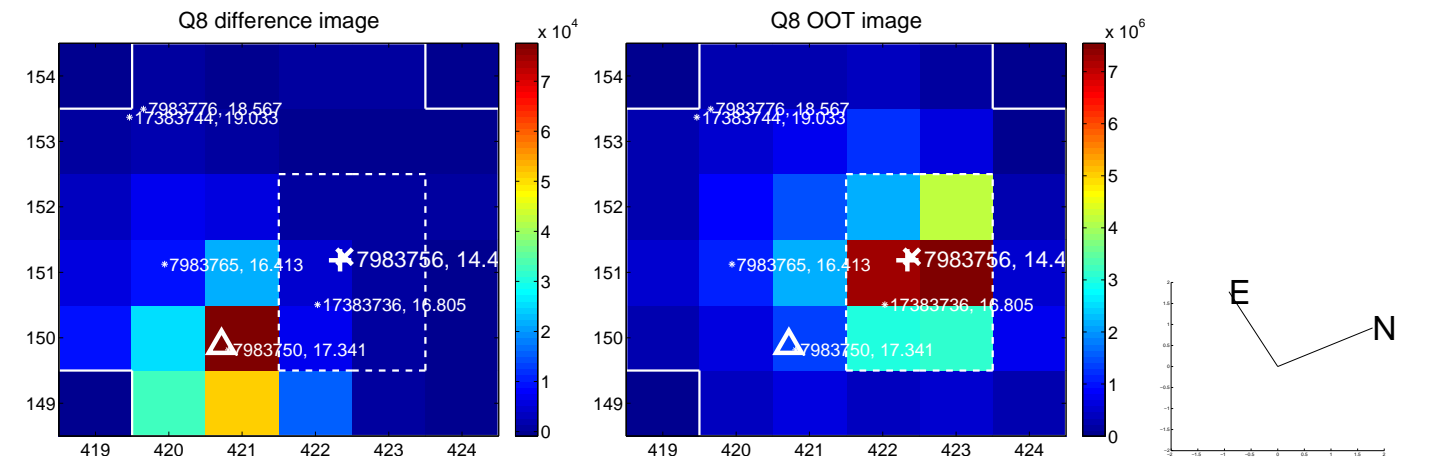
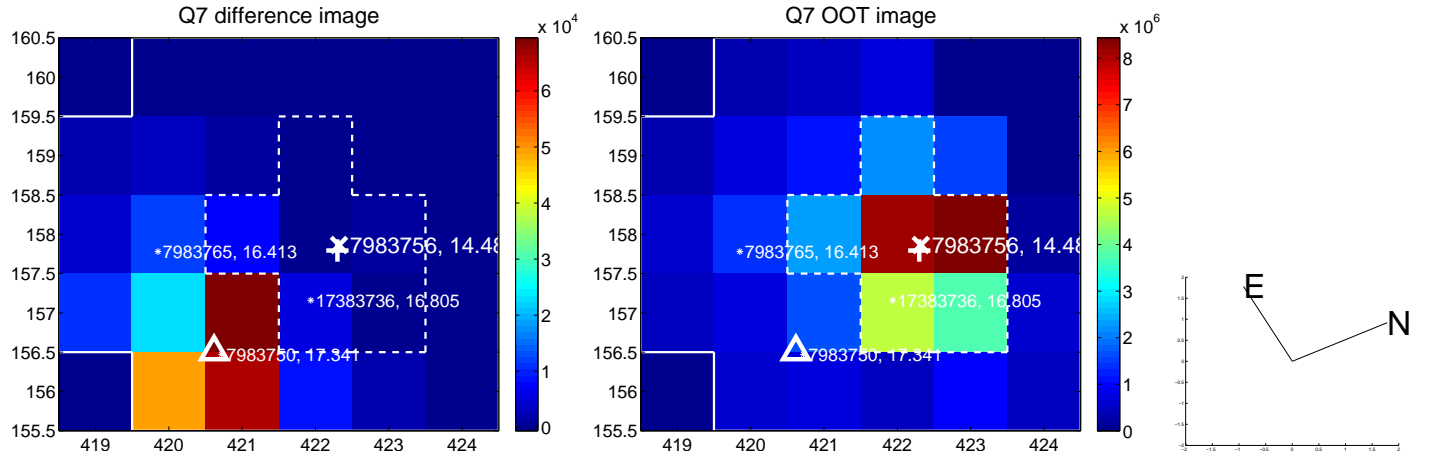
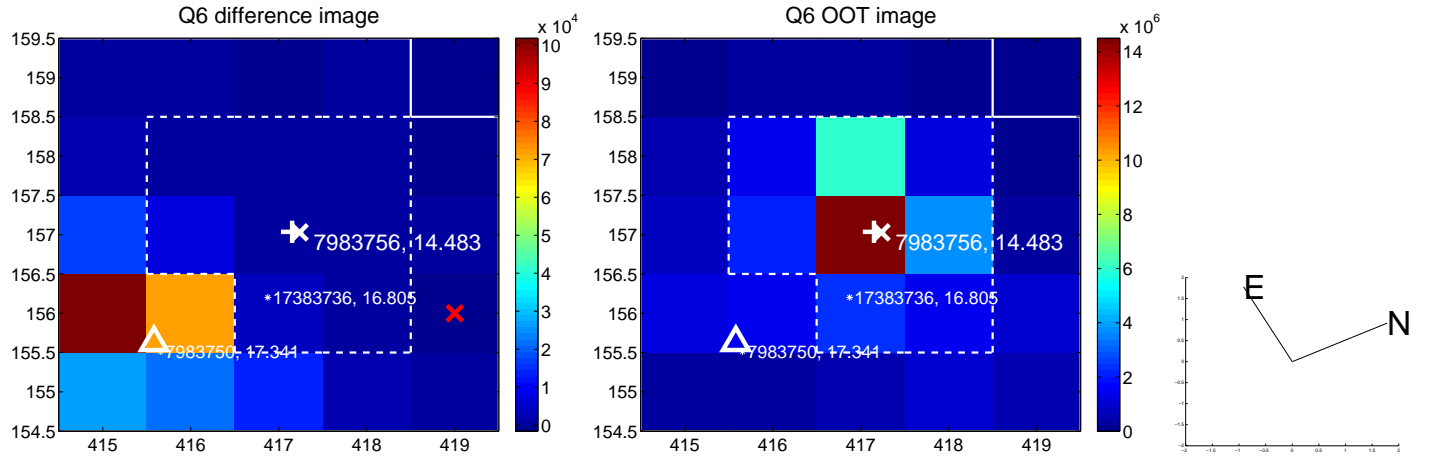
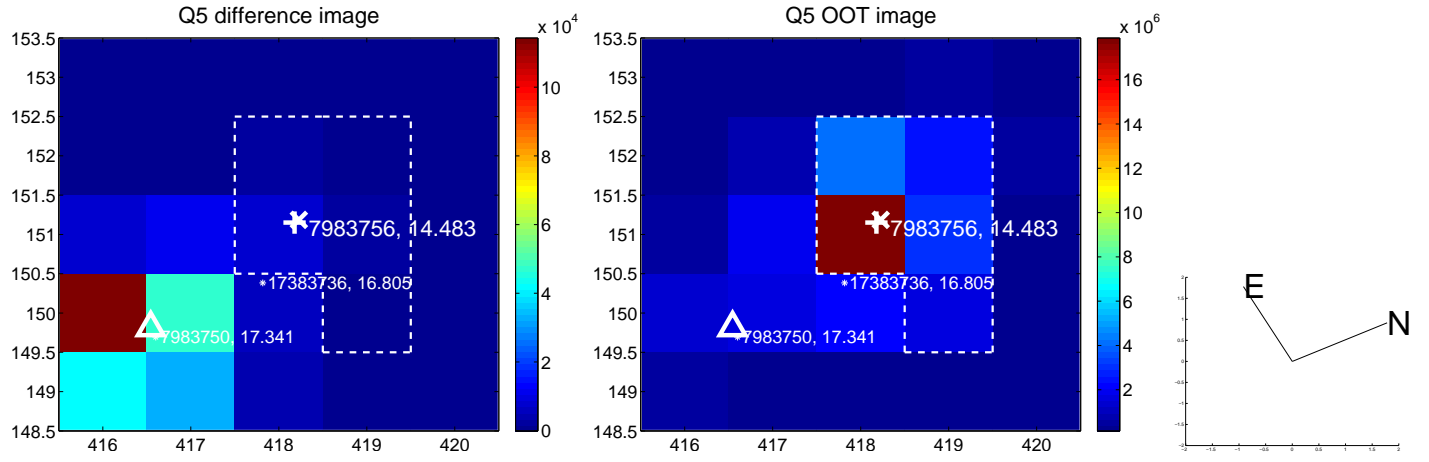


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

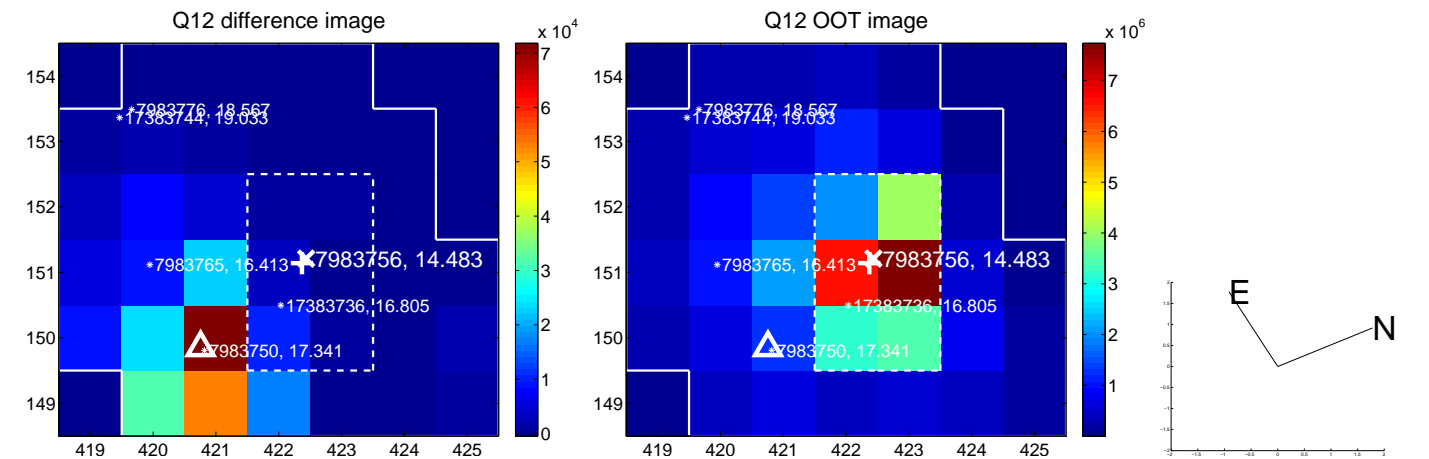
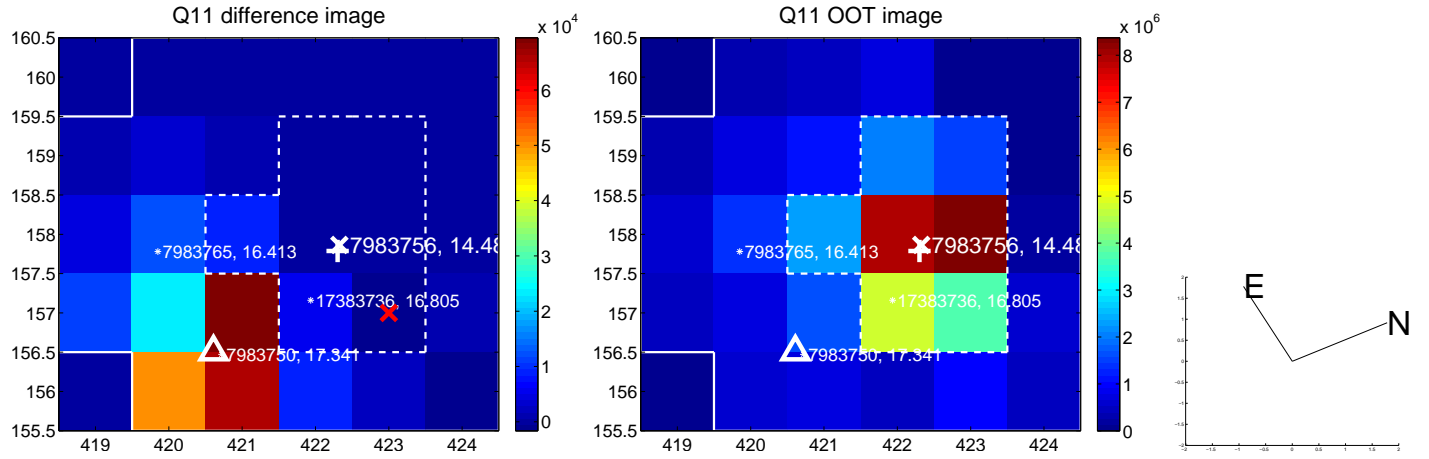
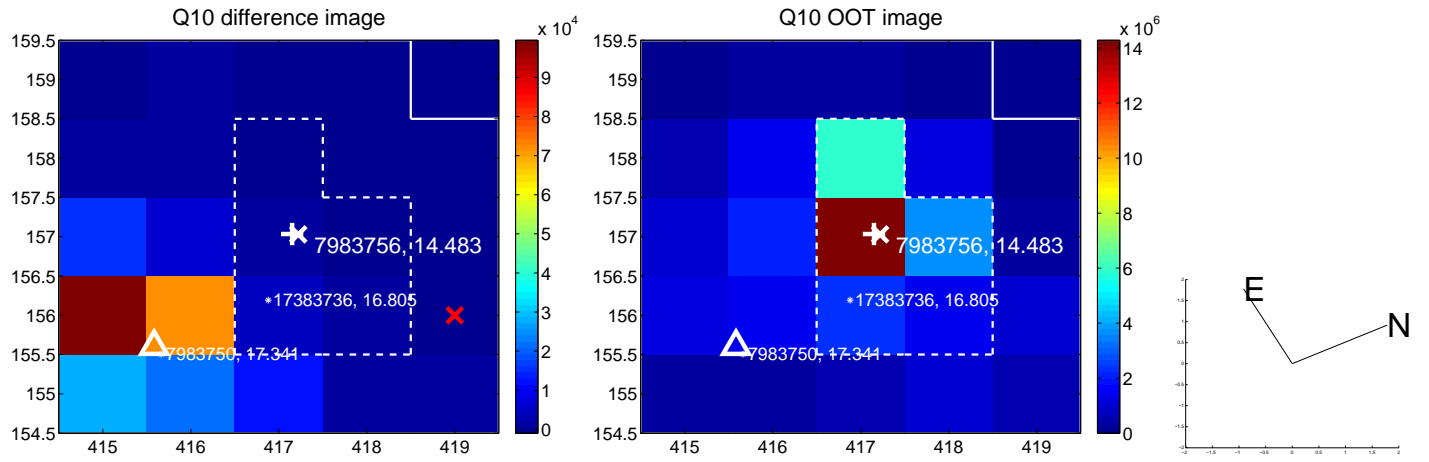
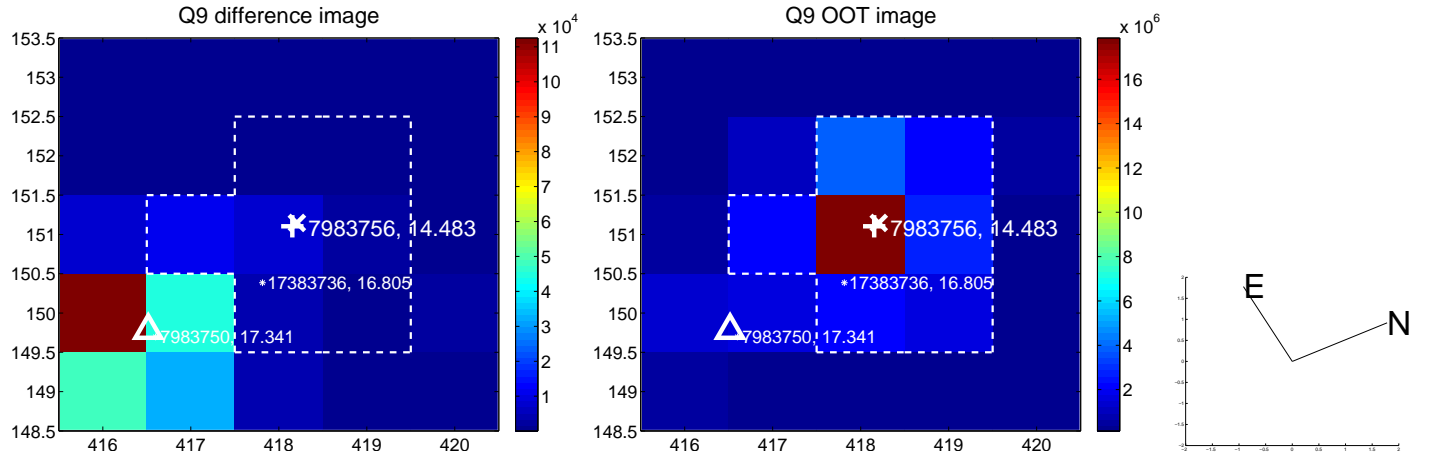
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



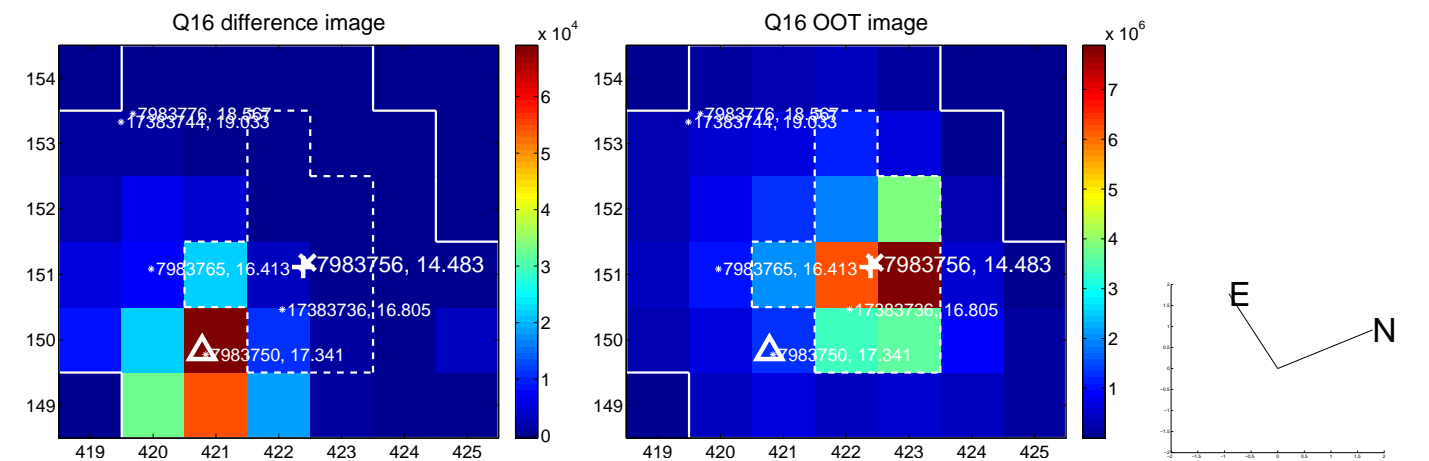
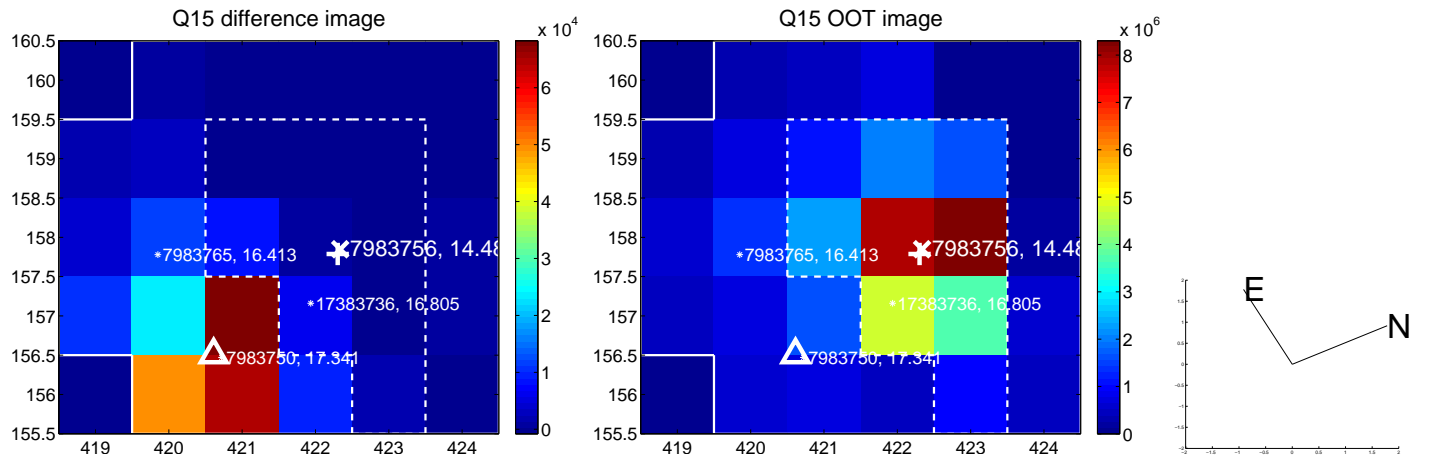
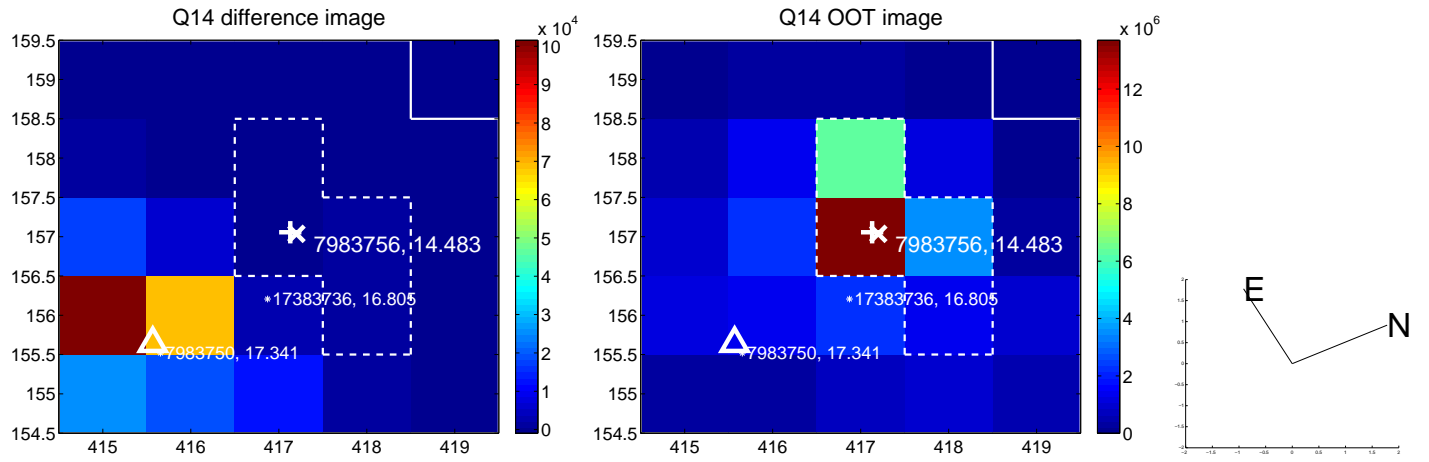
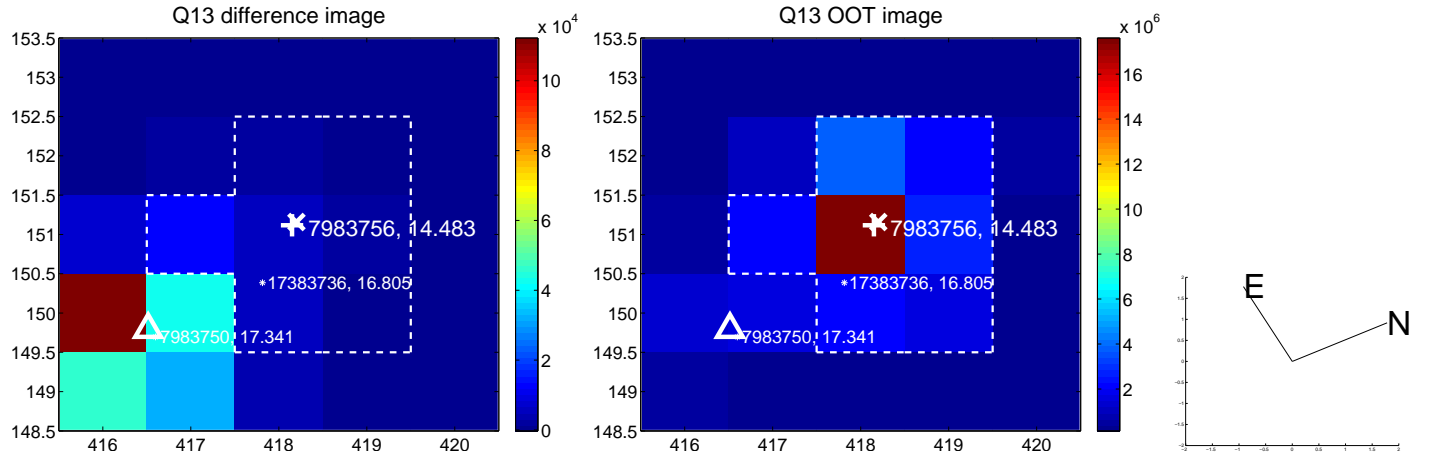
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



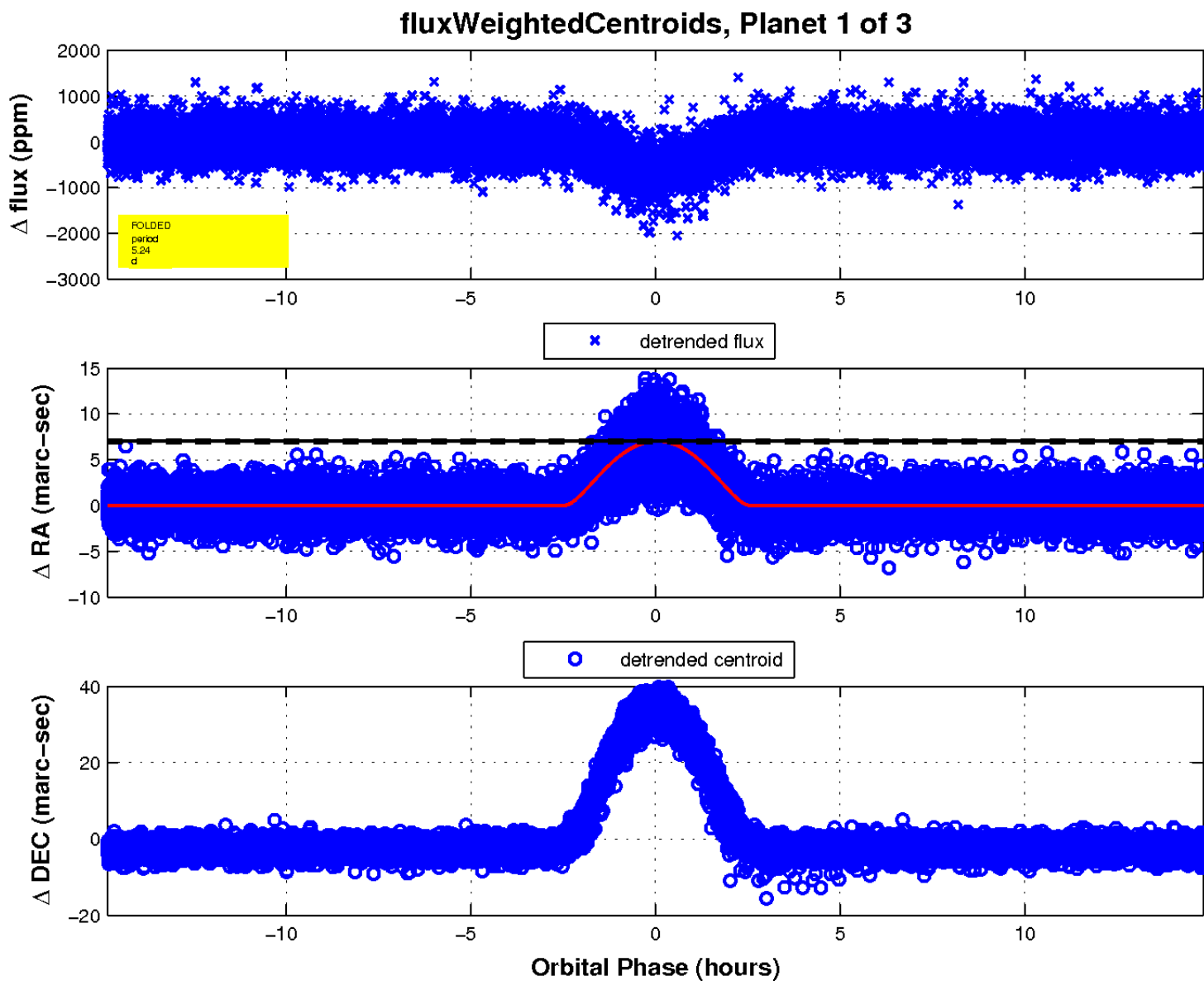
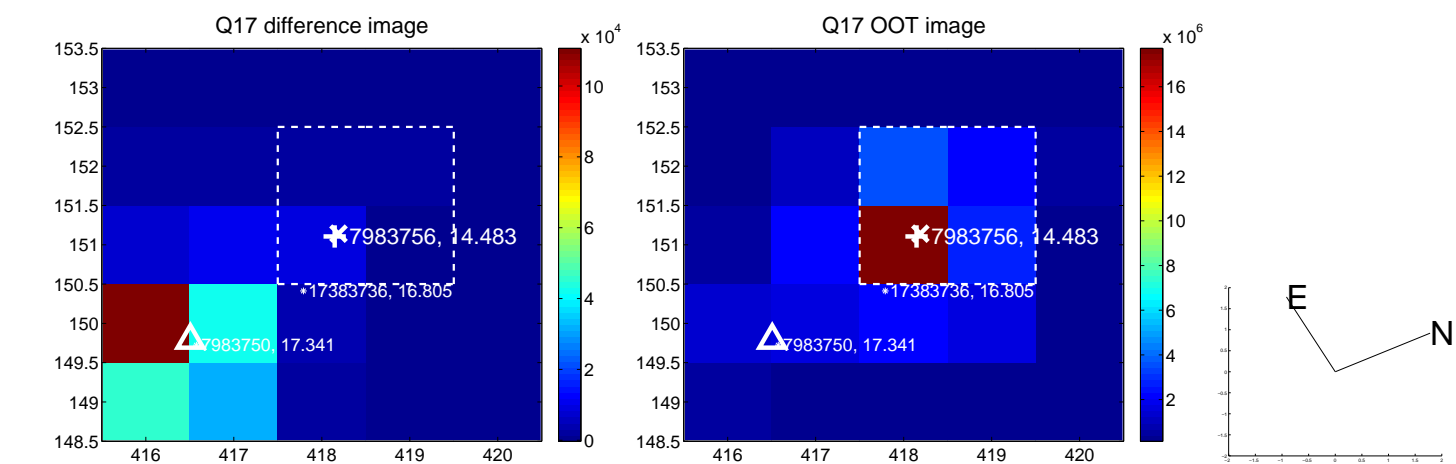
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

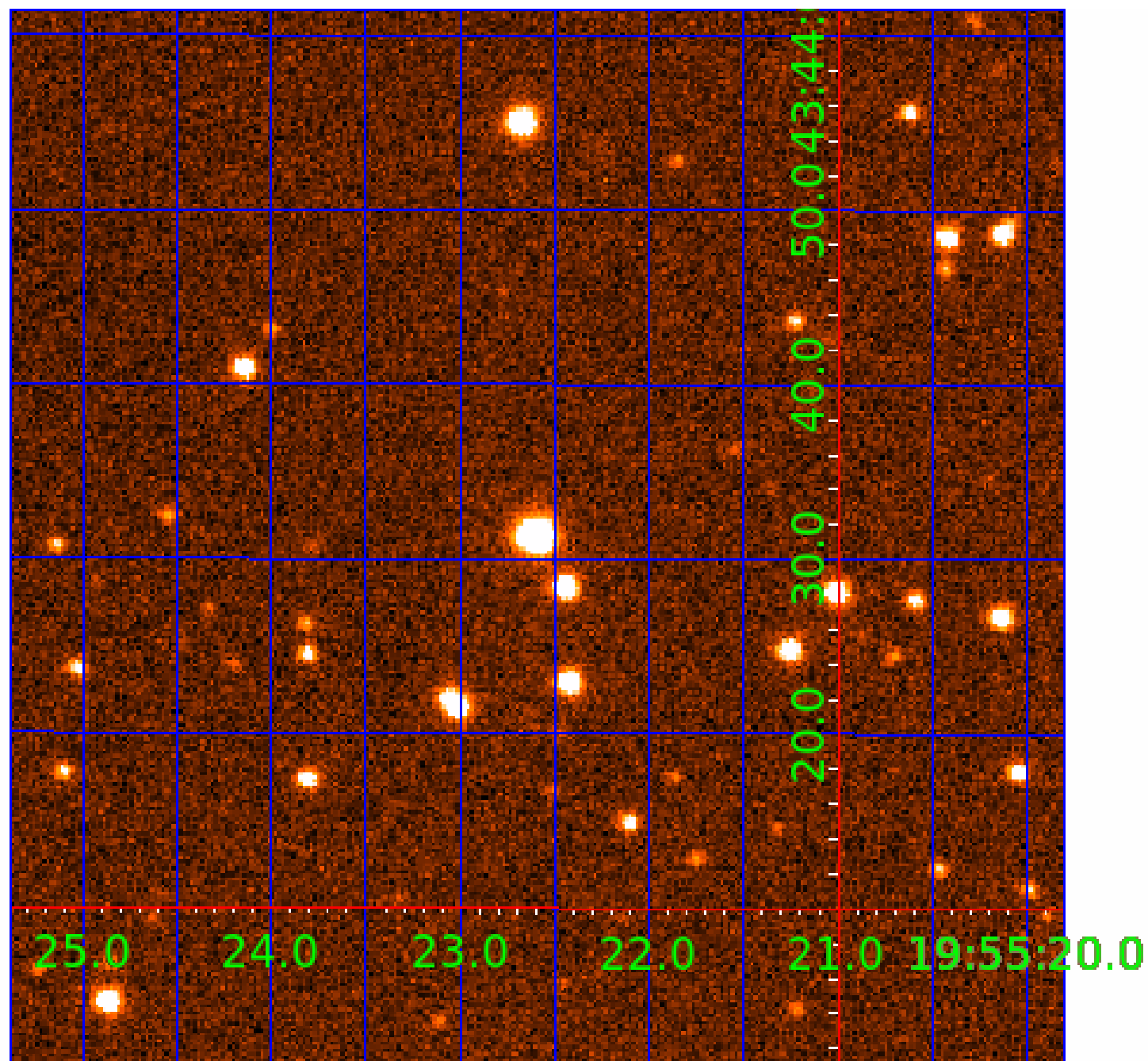


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



UKIRT Image

Declination



KIC 007983756

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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007983756-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET
007983756-03	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—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.

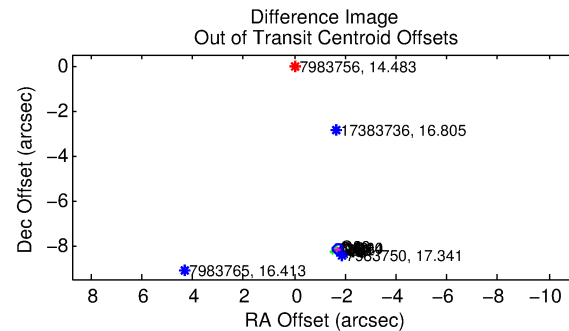
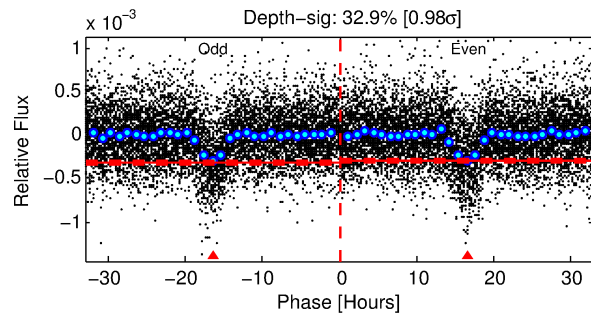
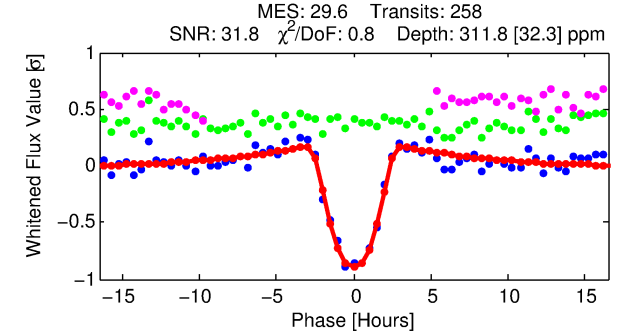
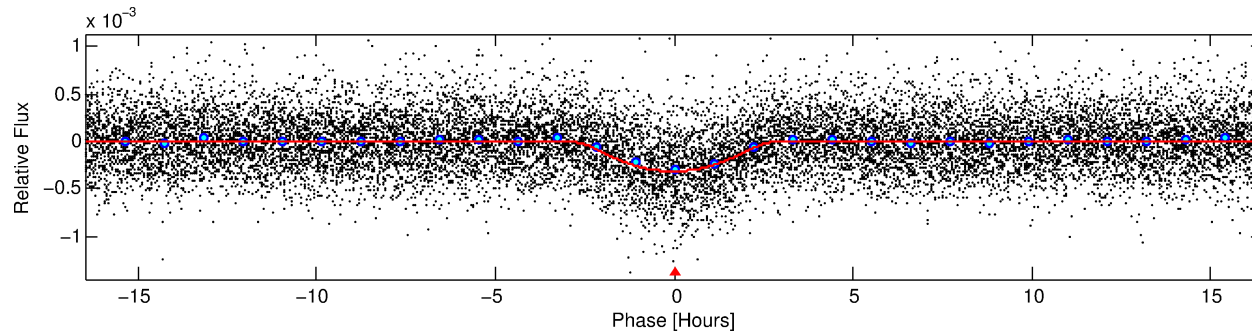
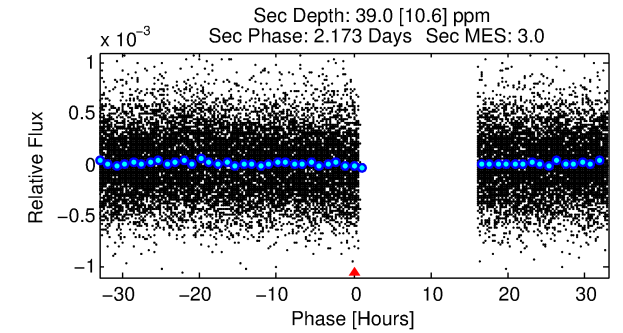
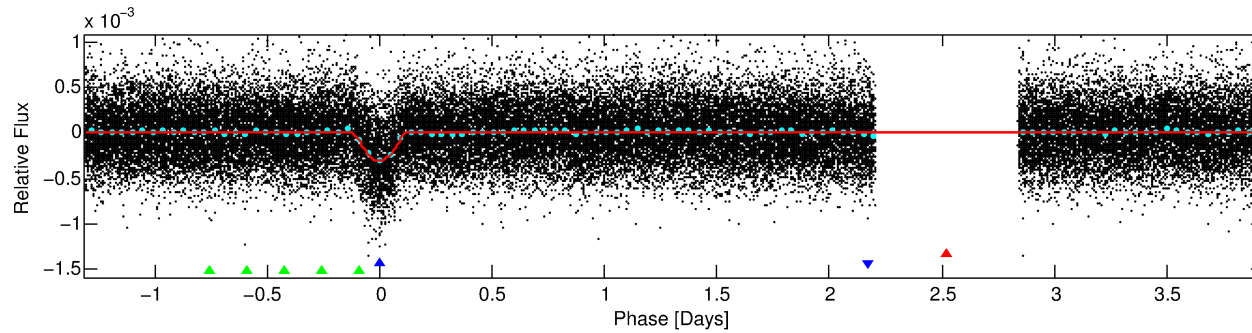
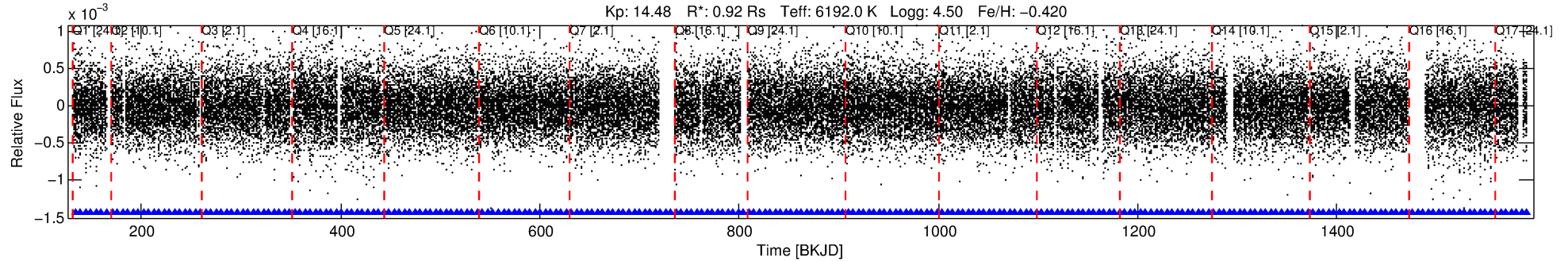
Ephemeris Match Information For 007983756-02

No Significant Match Found

DV One-Page Summary

KIC: 7983756 Candidate: 2 of 3 Period: 5.241 d
KOI: K03846 Corr: No Ephemeris Match

Kp: 14.48 R*: 0.92 Rs Teff: 6192.0 K Logg: 4.50 Fe/H: -0.420



DV Fit Results:

Period = 5.24077 [0.00002] d
Epoch = 134.0296 [0.0035] BKJD
Rp/R* = 0.0239 [0.0059]
a/R* = 2.25 [0.23]
b = 0.99 [0.01]
Seff = 322.56 [128.99]
Teq = 1081 [108] K
Rp = 2.39 [0.93] Re
a = 0.0586 [0.0150] AU
Ag = 12.90 [8.76] [1.36σ]
Teffp = 3166 [459] K [4.42σ]

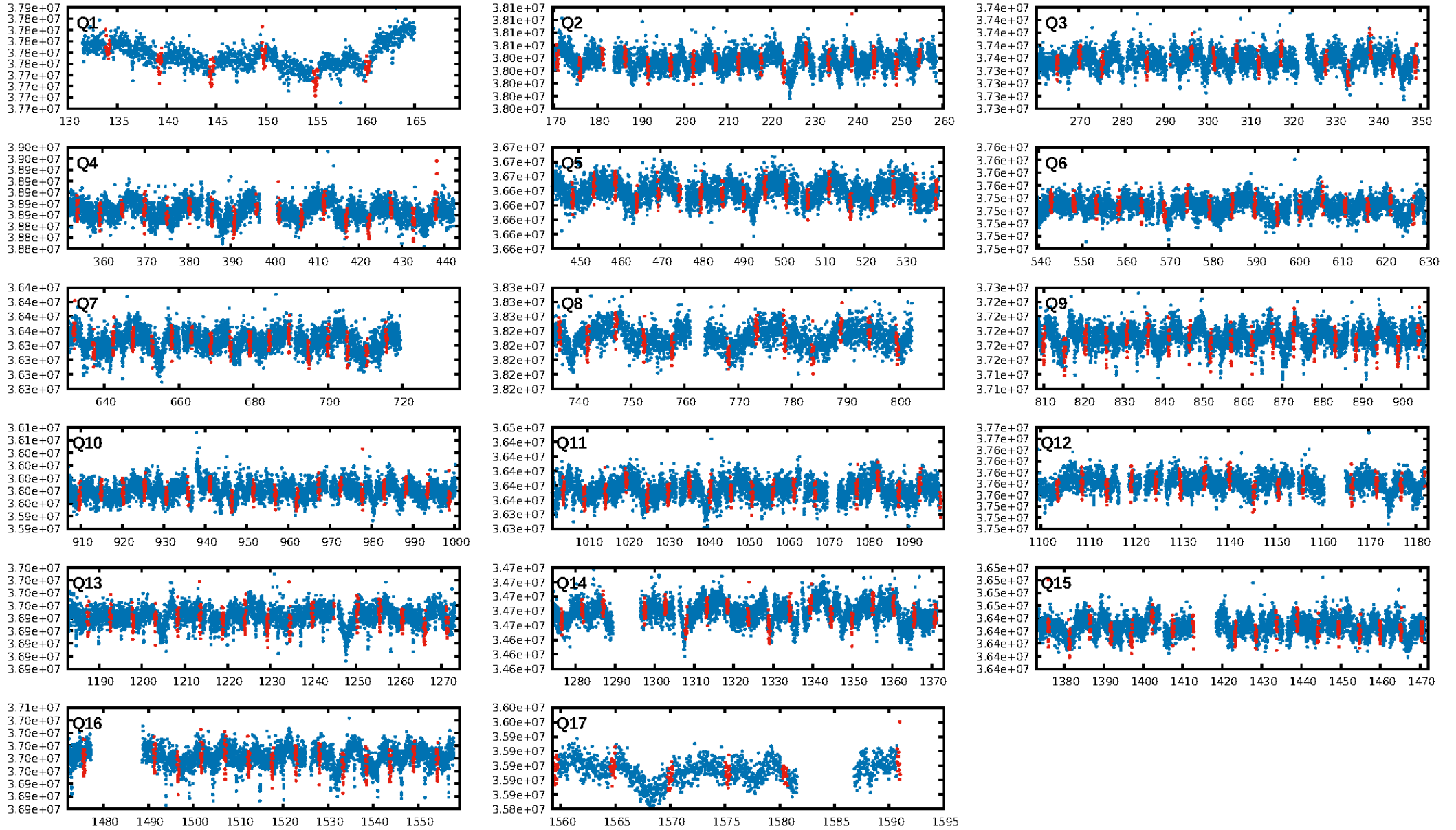
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [202.41σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.17e-183
RollingBand-fgt: 1.00 [246/246]
GhostDiagnostic-chr: -0.432
Centroid-sig: N/A
Centroid-so: 65.248 arcsec [167.35σ]
OotOffset-rm: 8.352 arcsec [118.44σ]
KicOffset-rm: 8.606 arcsec [126.62σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
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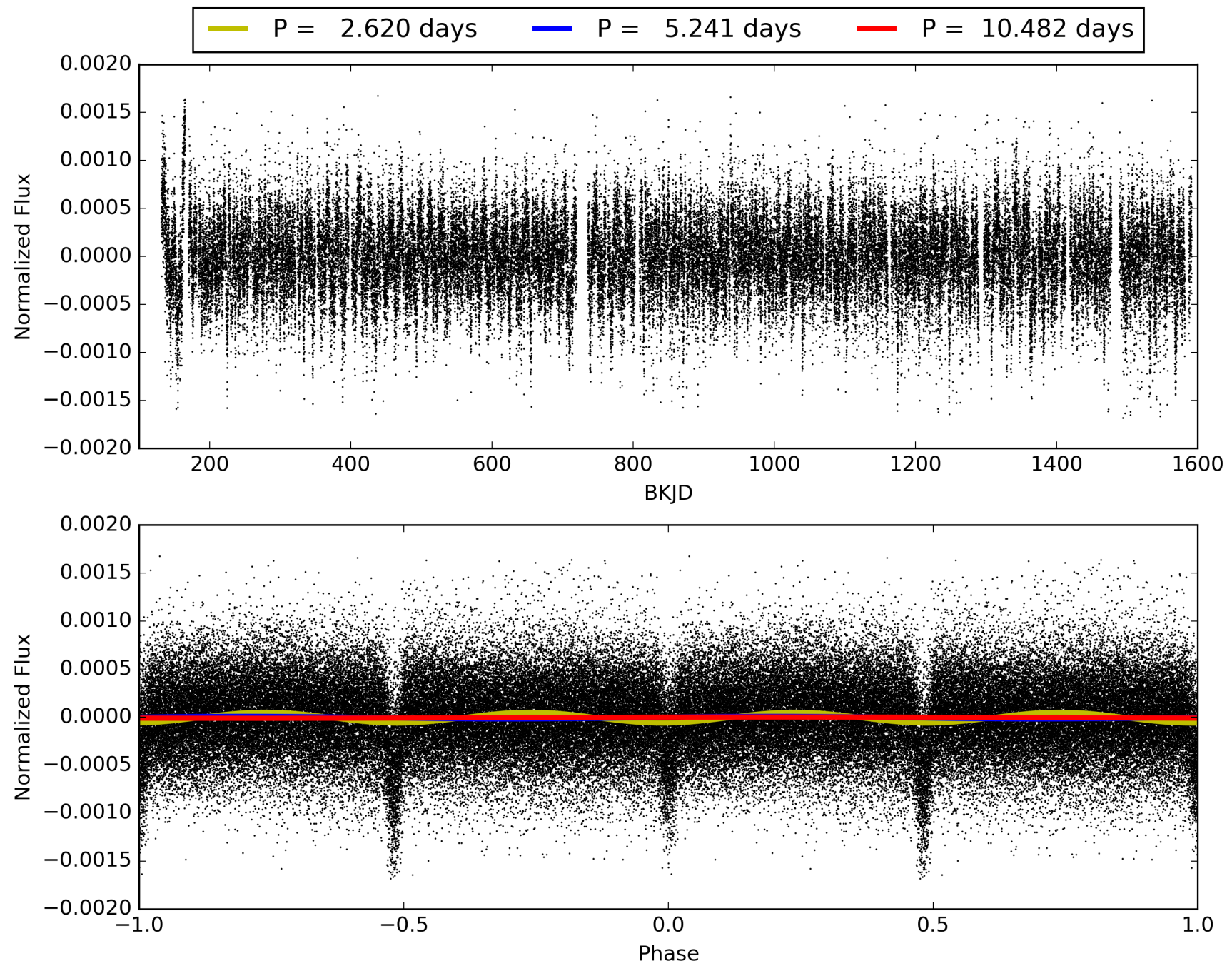
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:39:23 Z

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

TCE 007983756-02, PDC Light Curves

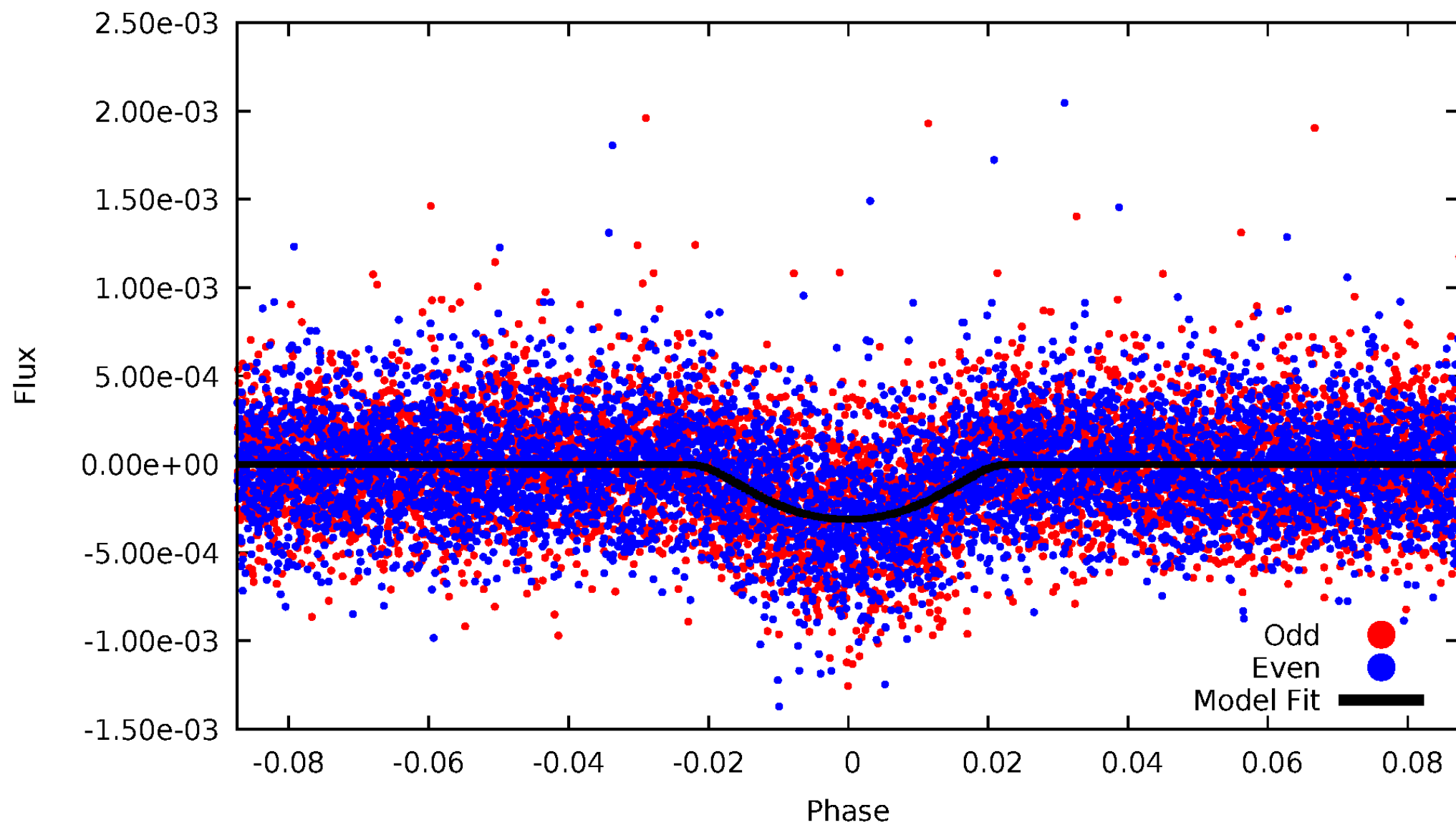


TCE 007983756-02



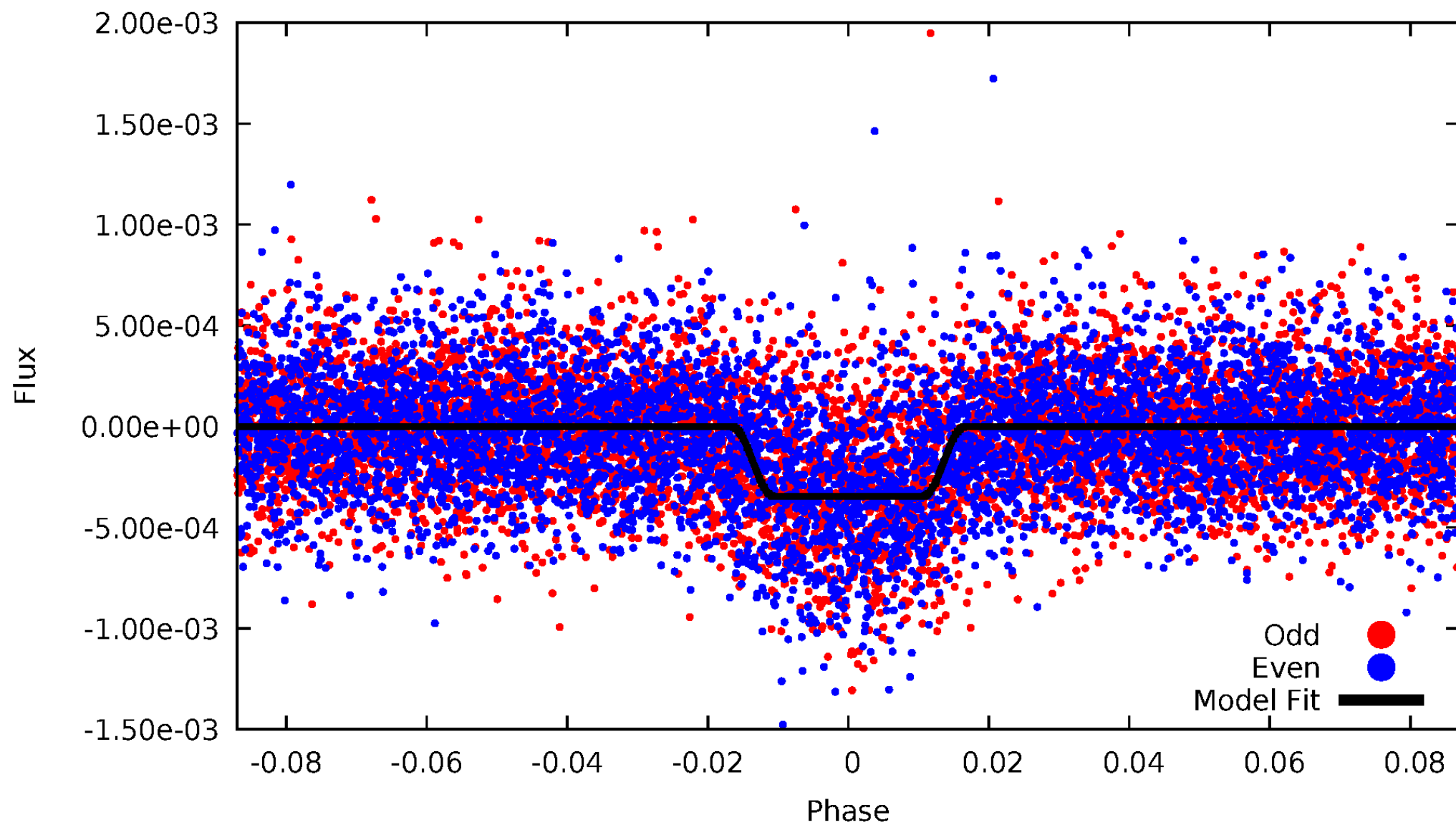
DV Odd/Even

TCE 007983756-02



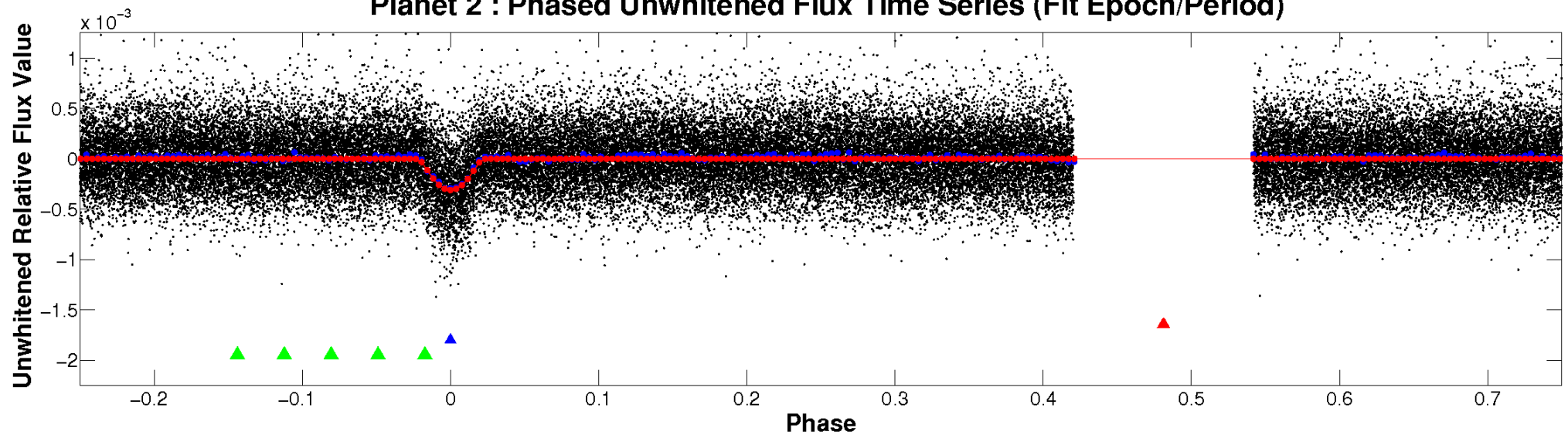
ALT Odd/Even

TCE 007983756-02

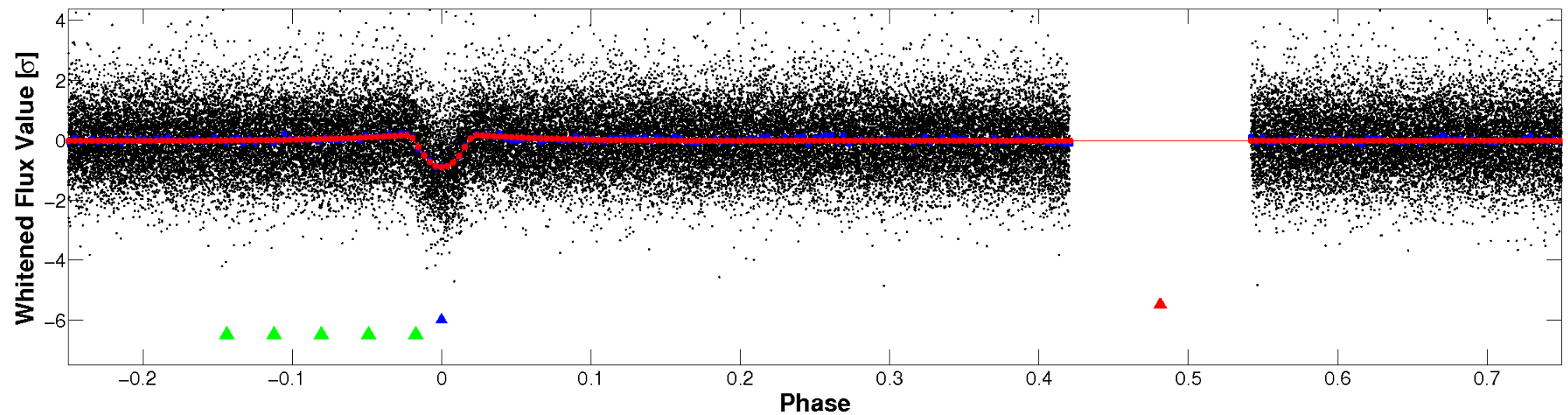


Non-Whitened Vs. Whitened Light Curve

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

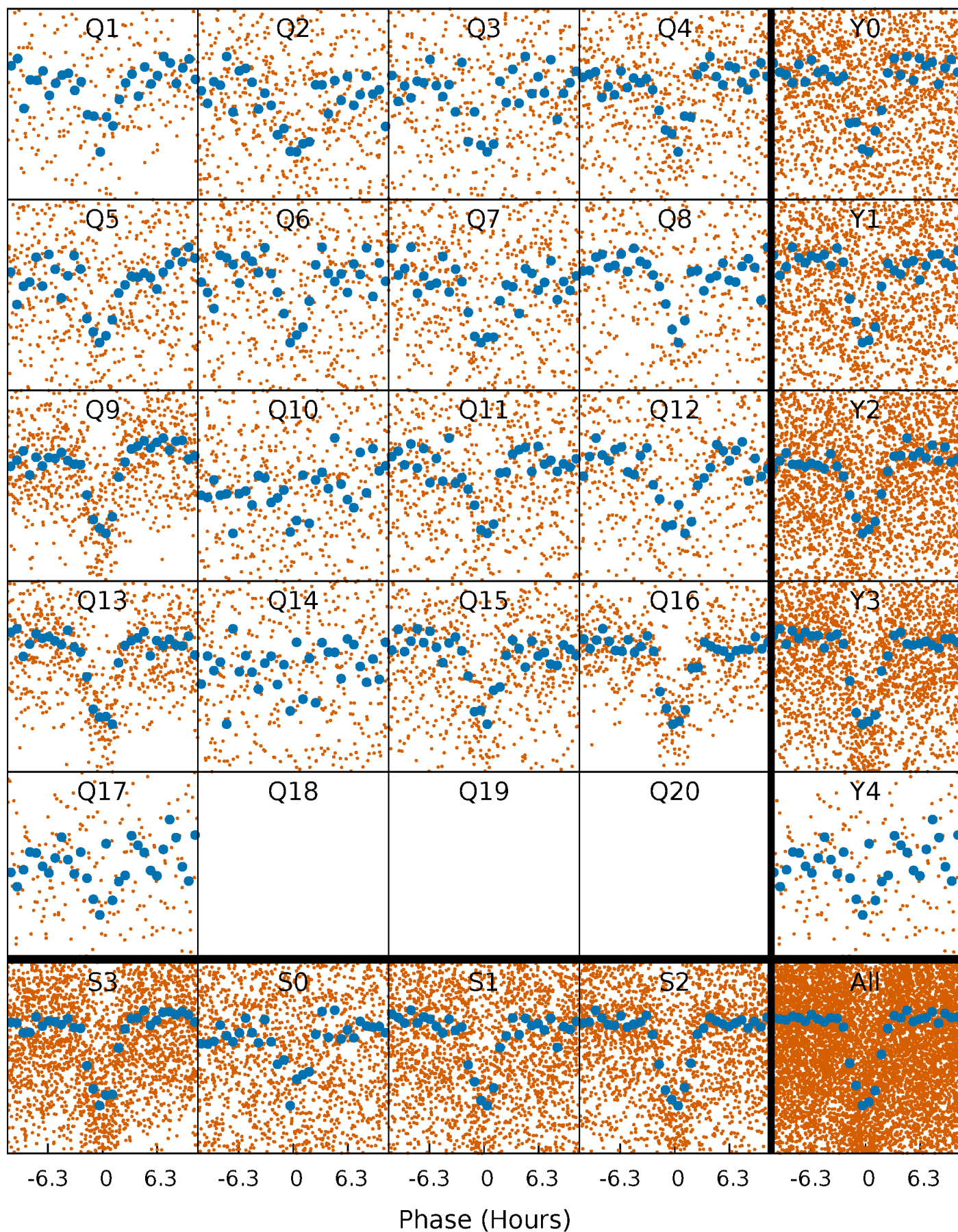


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



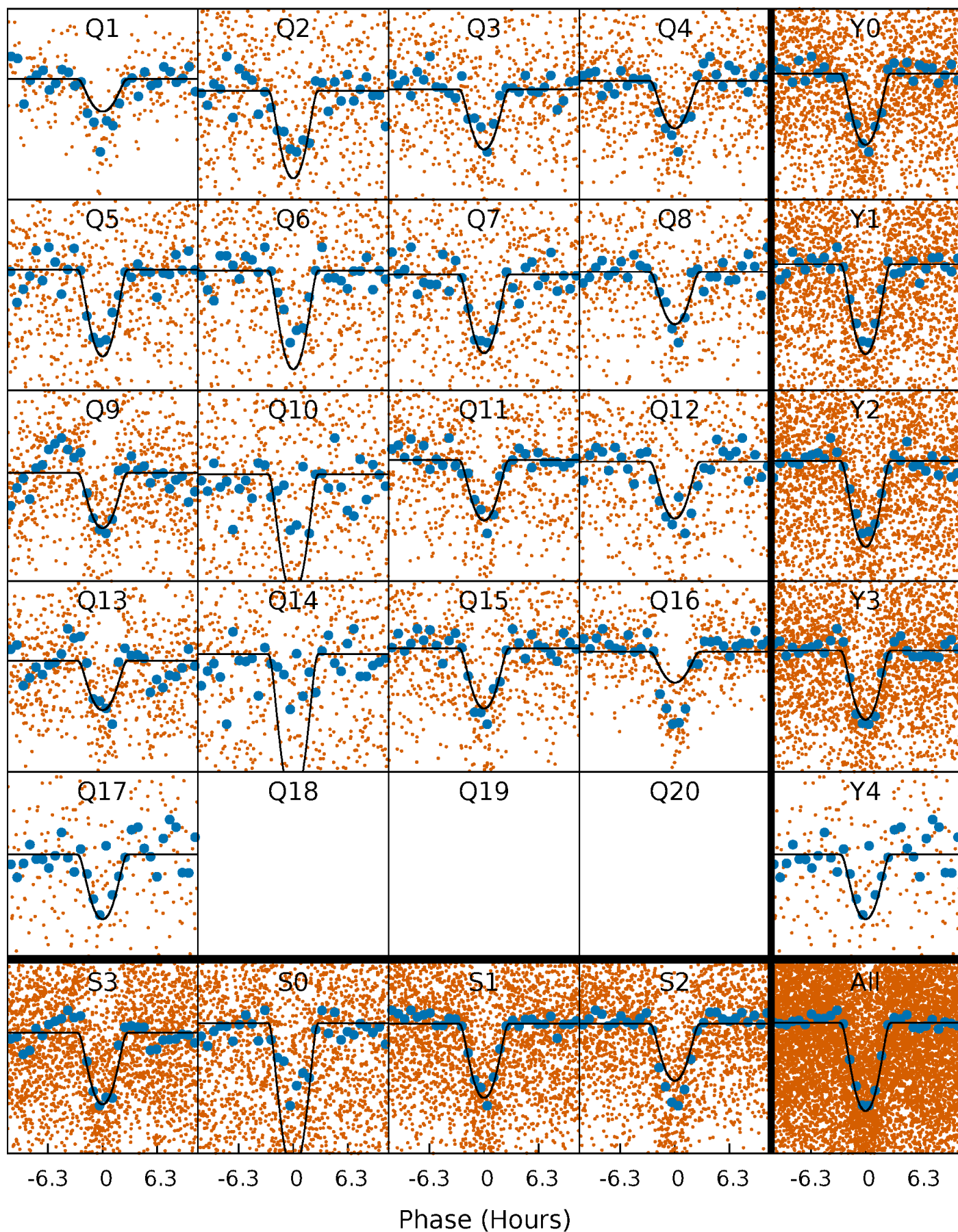
PDC Quarter-Phased Transit Curves

TCE 007983756-02 P= 5.240771 Days $T_0=134.029617$ (BKJD)



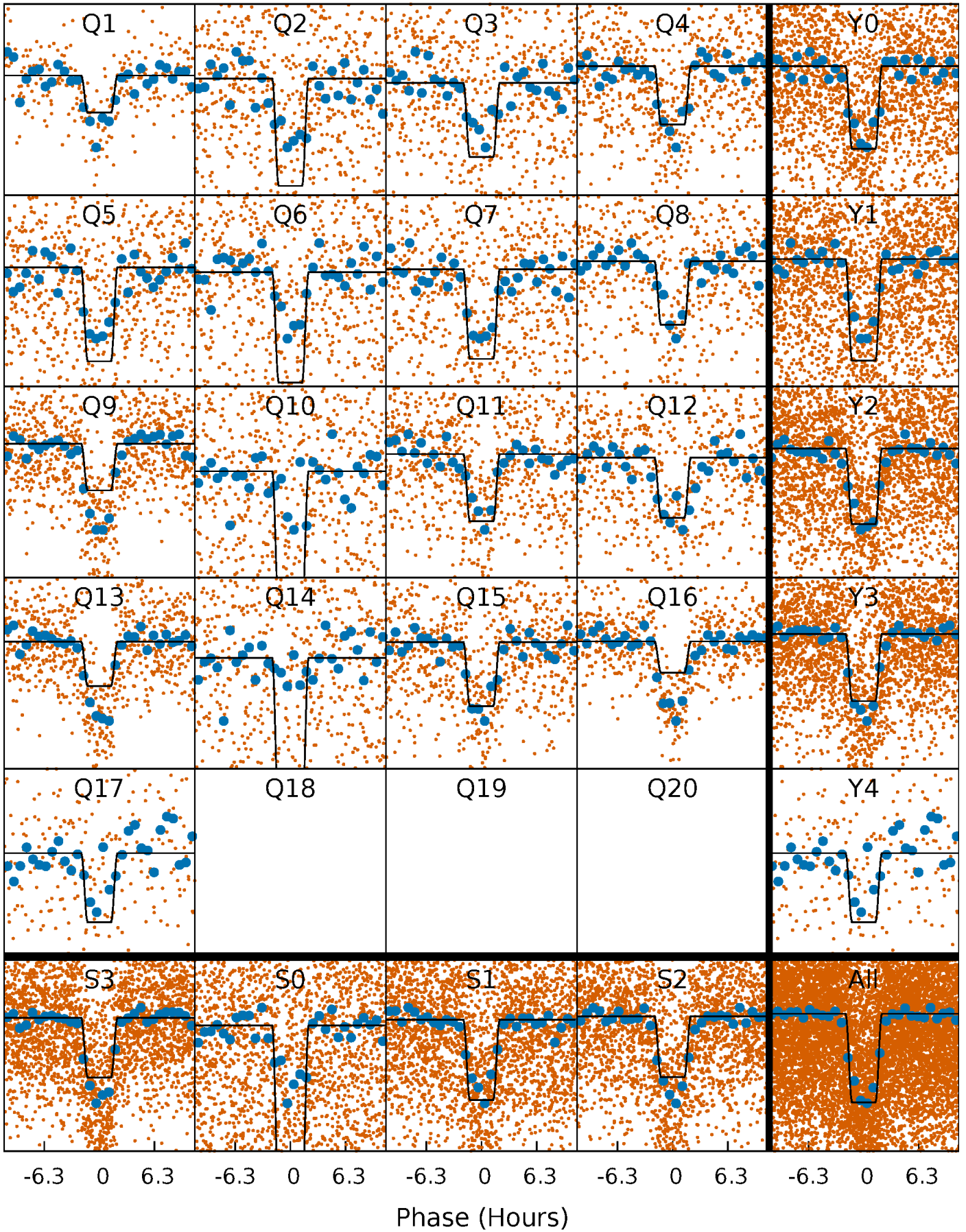
DV Quarter-Phased Transit Curves

TCE 007983756-02 P= 5.240771 Days $T_0=134.029617$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

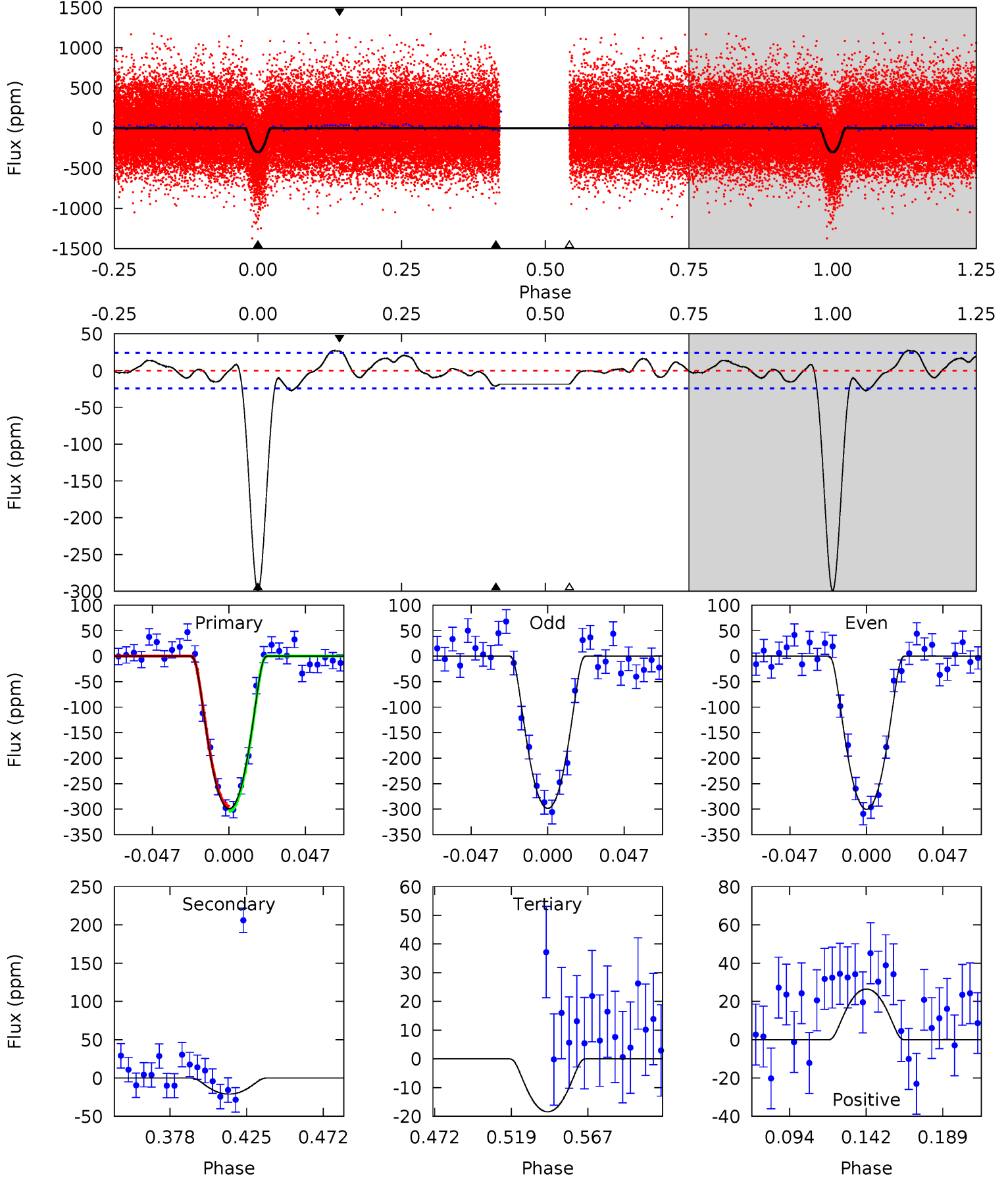
TCE 007983756-02 P= 5.240755 Days $T_0=134.030940$ (BKJD)



DV Model-Shift Uniqueness Test

007983756-02, P = 5.240771 Days, E = 128.788846 Days

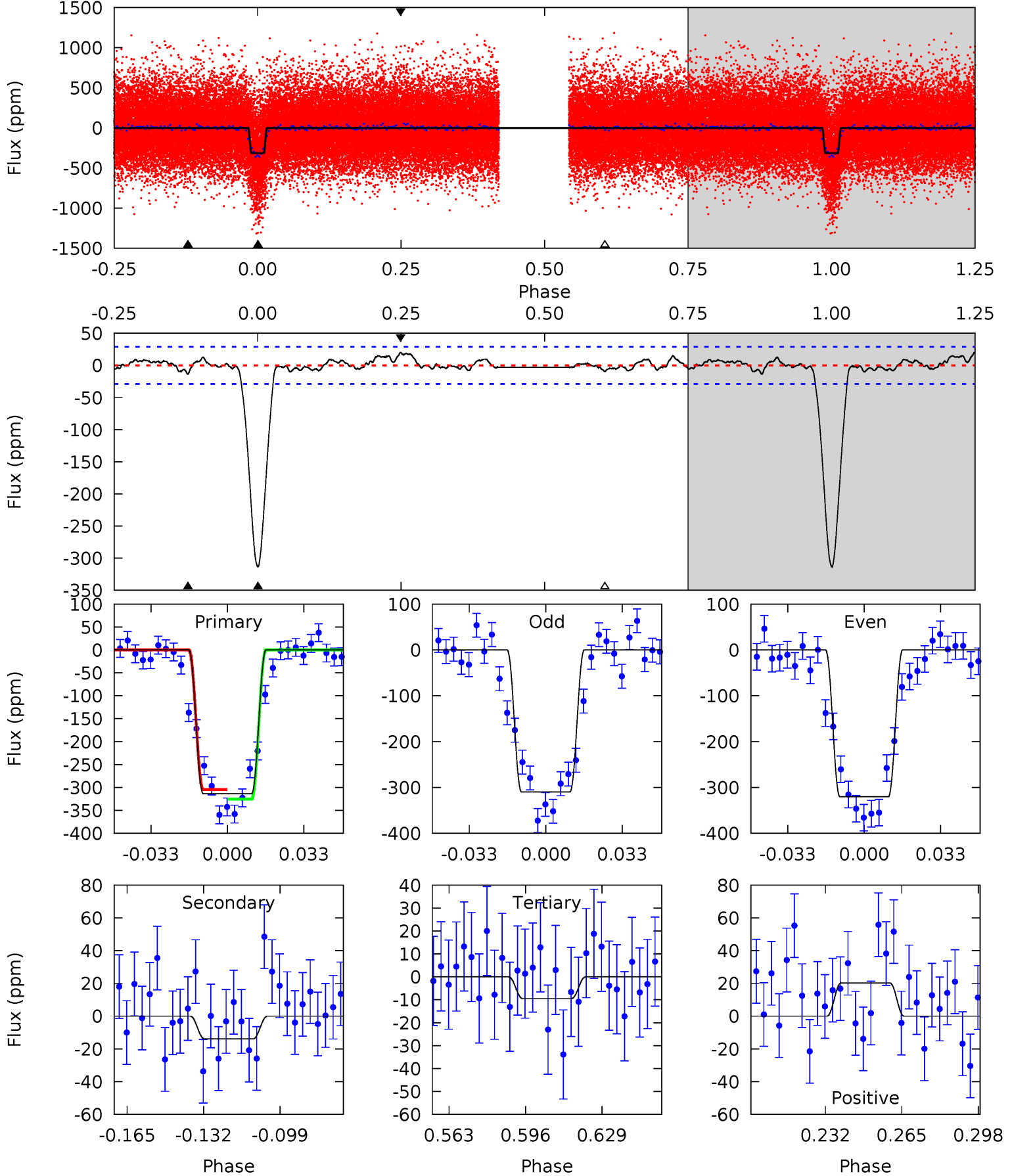
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
58.8	4.12	3.62	5.20	4.72	1.98	2.11	55.2	53.6	0.50	-1.08	0.19	1.02	0.08	0.90



Alt Model-Shift Uniqueness Test

007983756-02, P = 5.240755 Days, E = 128.790185 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.8	2.30	1.57	3.35	4.79	2.13	1.05	50.2	48.5	0.73	-1.05	0.89	1.07	0.06	1.73



Stellar Parameters For KIC 007983756

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6192^{+169}_{-206}	$4.503^{+0.052}_{-0.208}$	$-0.420^{+0.300}_{-0.300}$	$0.917^{+0.276}_{-0.092}$	$0.976^{+0.123}_{-0.123}$	$1.785^{+0.490}_{-0.965}$
	+3%/-3%	+1%/-5%	+71%/-71%	+30%/-10%	+13%/-13%	+27%/-54%
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 007983756-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-21 ± 5	$2.49^{+0.73}_{-0.66}$	1539^{+110}_{-68}	3239^{+332}_{-251}	$6.029^{+5.159}_{-2.548}$
Alt.	-14 ± 6	$1.94^{+0.70}_{-0.61}$	1540^{+107}_{-73}	3282^{+479}_{-399}	$6.695^{+8.205}_{-3.840}$

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

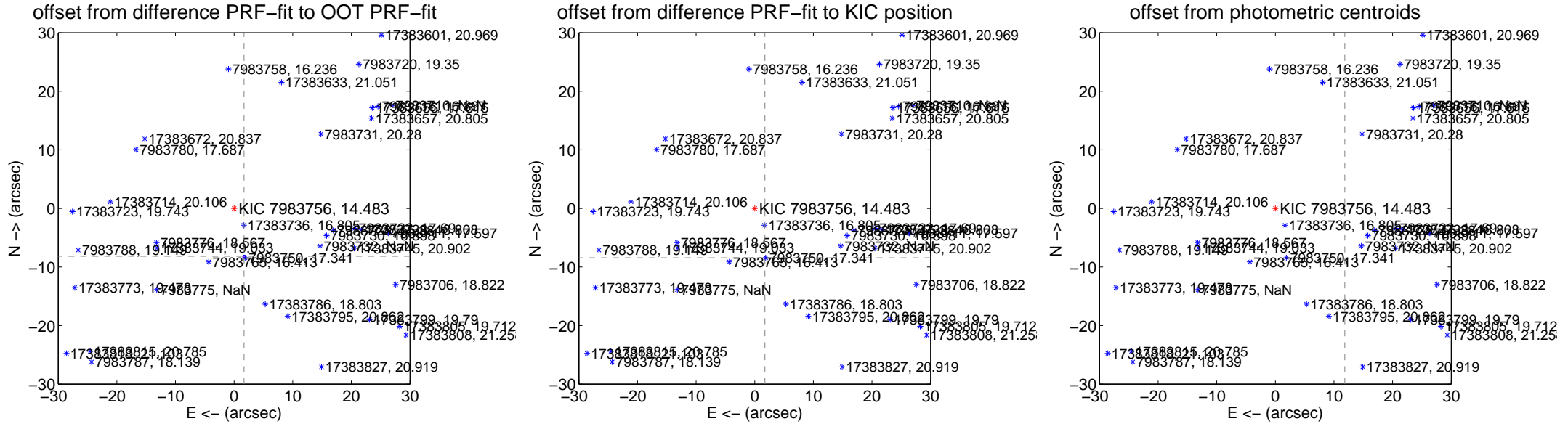
DV Centroid Data

Supplemental centroid analysis for 007983756-02. Kepler magnitude: 14.48. Transit SNR 31.84

There are 17 quarters with good PRF difference image offsets

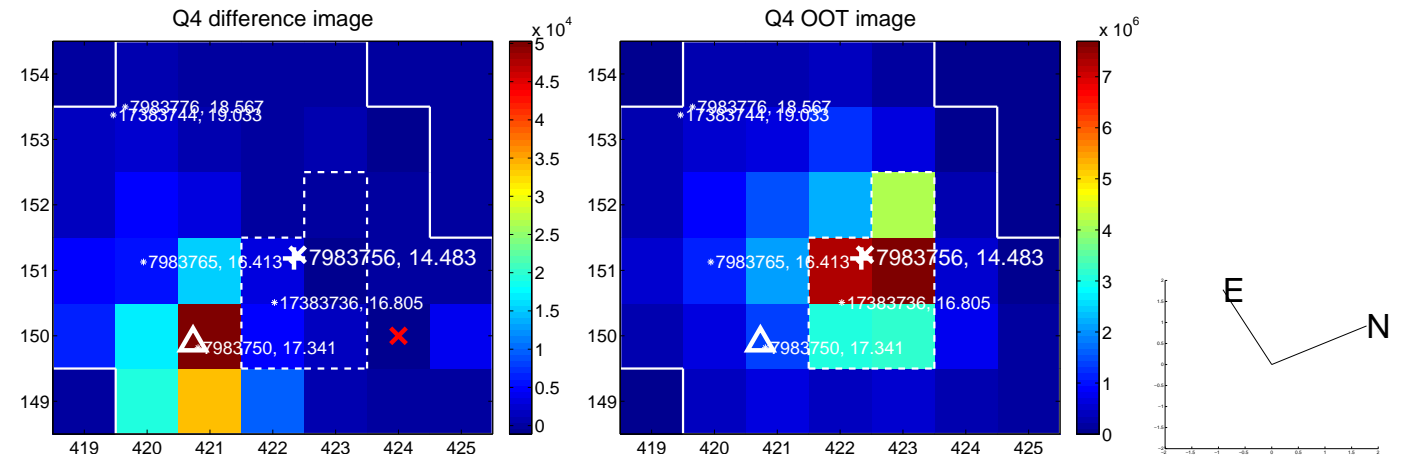
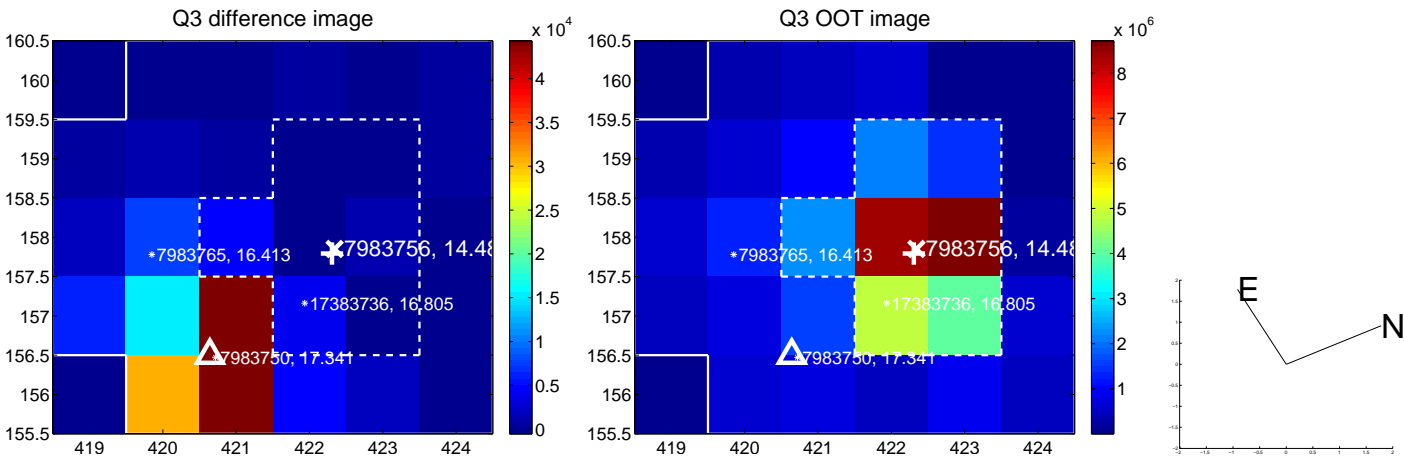
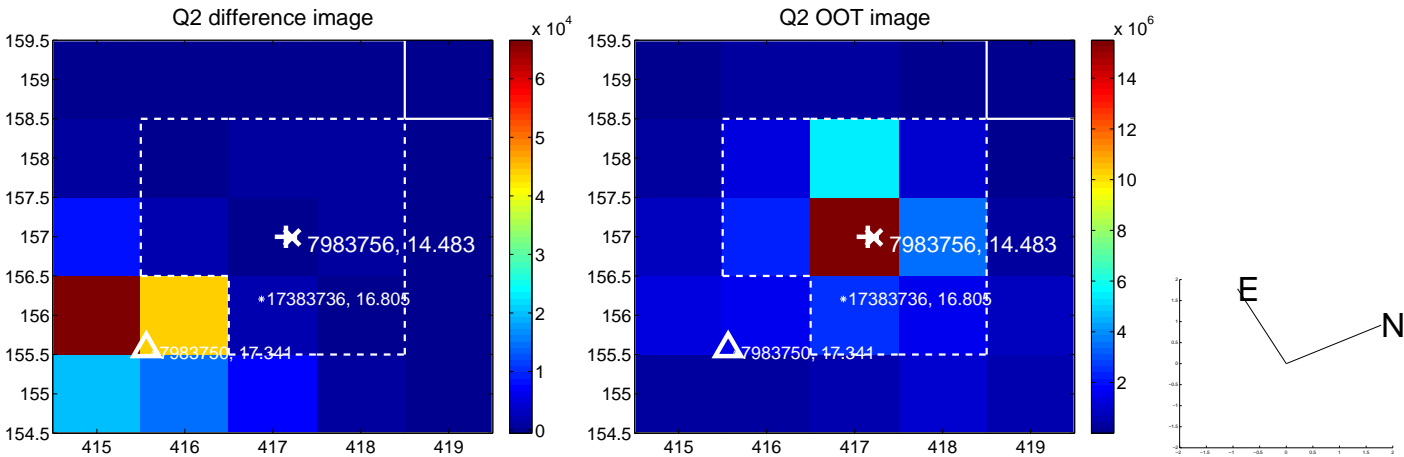
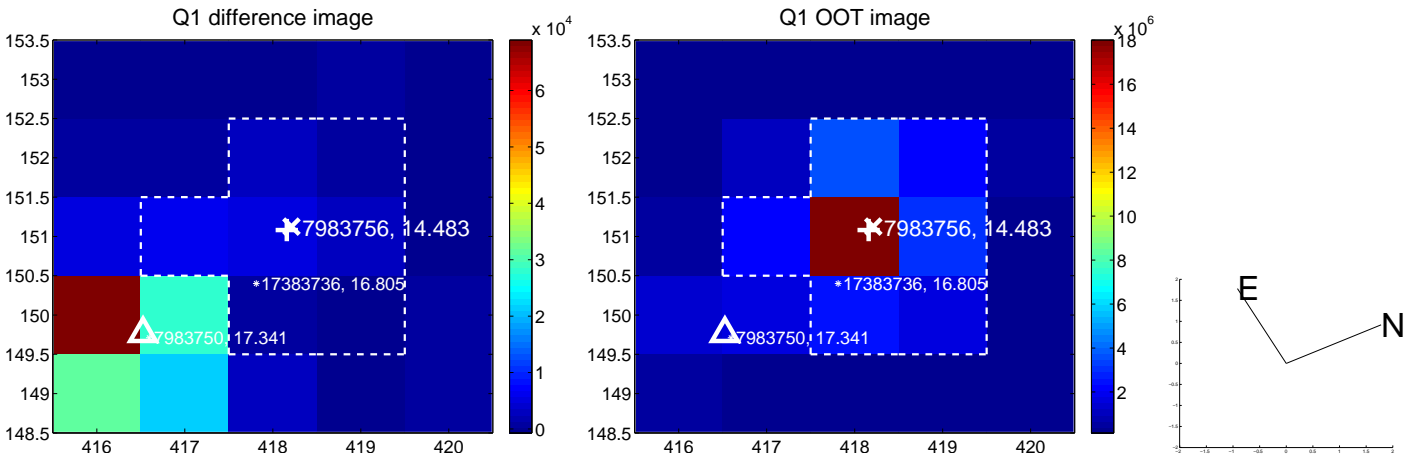
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.352 \pm 0.071	118.44	-1.697 \pm 0.097	-8.177 \pm 0.069
PRF-fit source offset from KIC position	8.606 \pm 0.068	126.62	-1.738 \pm 0.073	-8.429 \pm 0.068
photometric centroid source offset	65.25 \pm 0.39	167.35	-11.84 \pm 0.44	-64.16 \pm 0.39

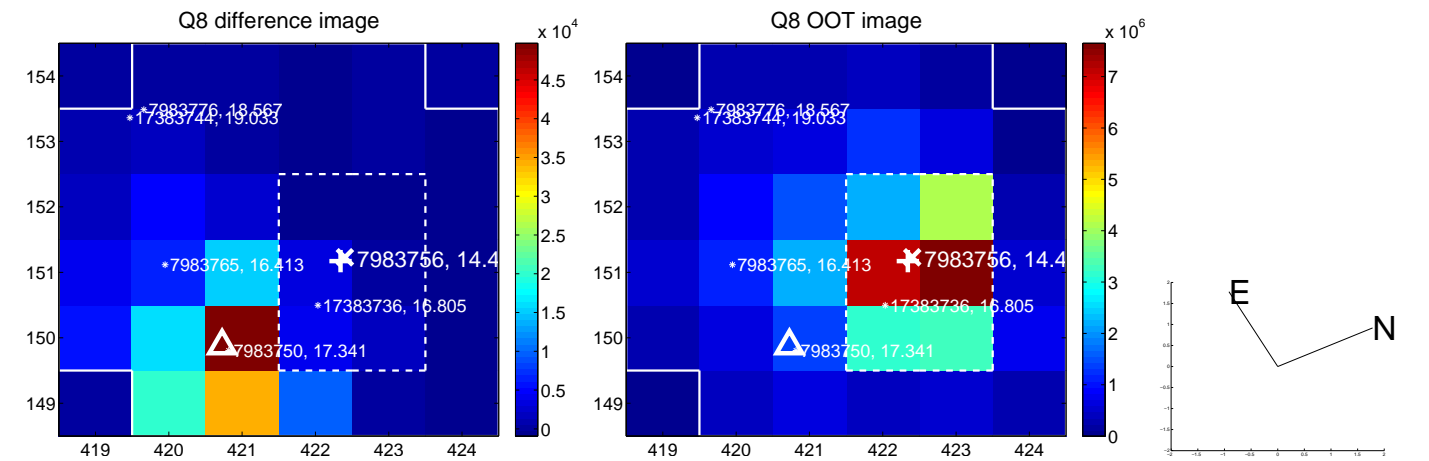
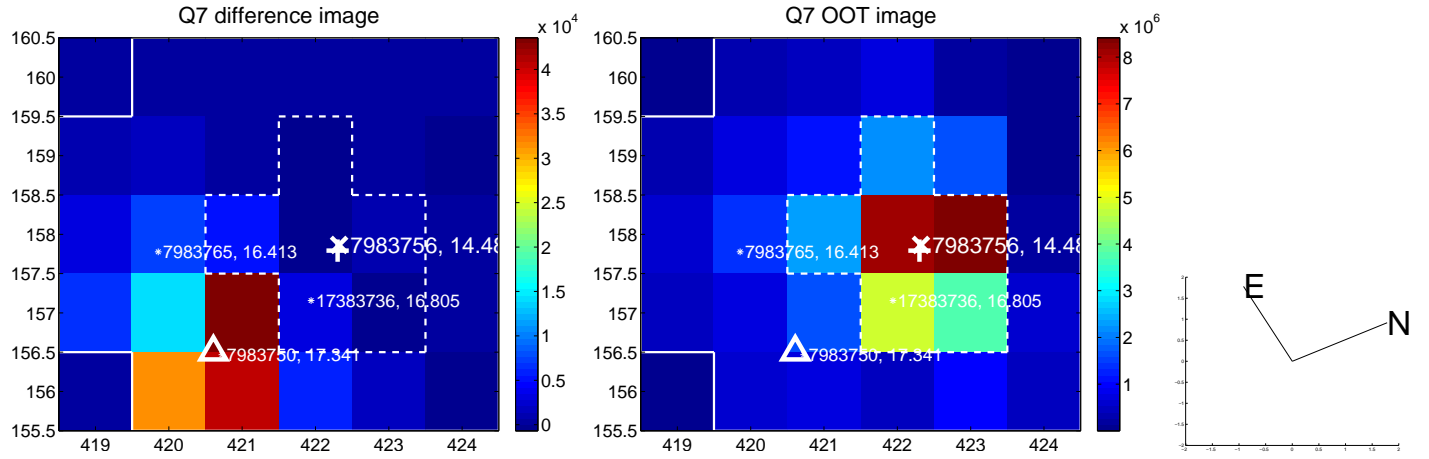
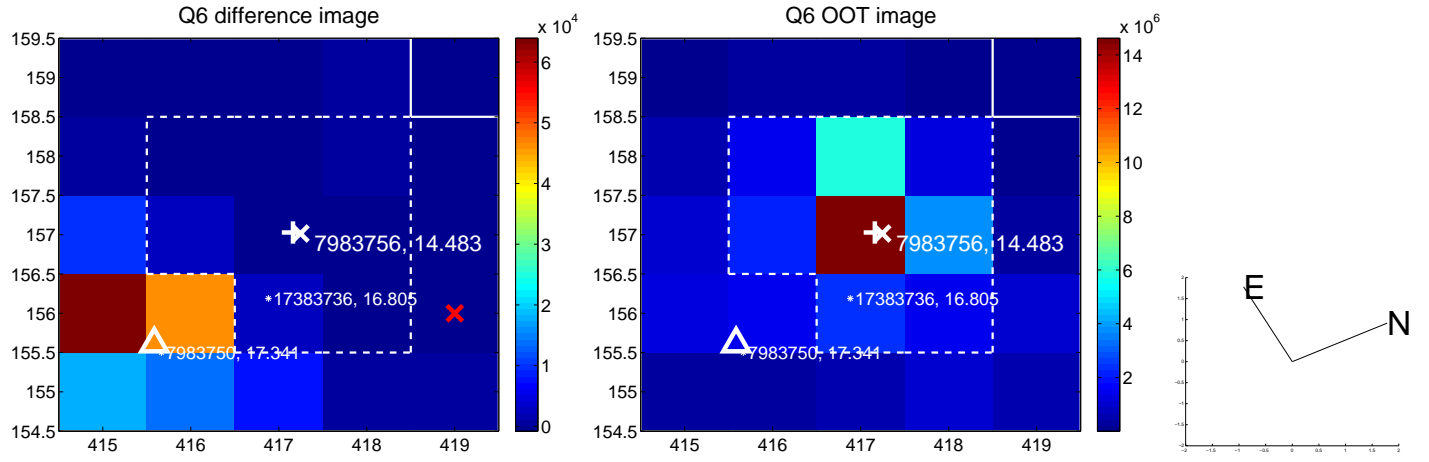
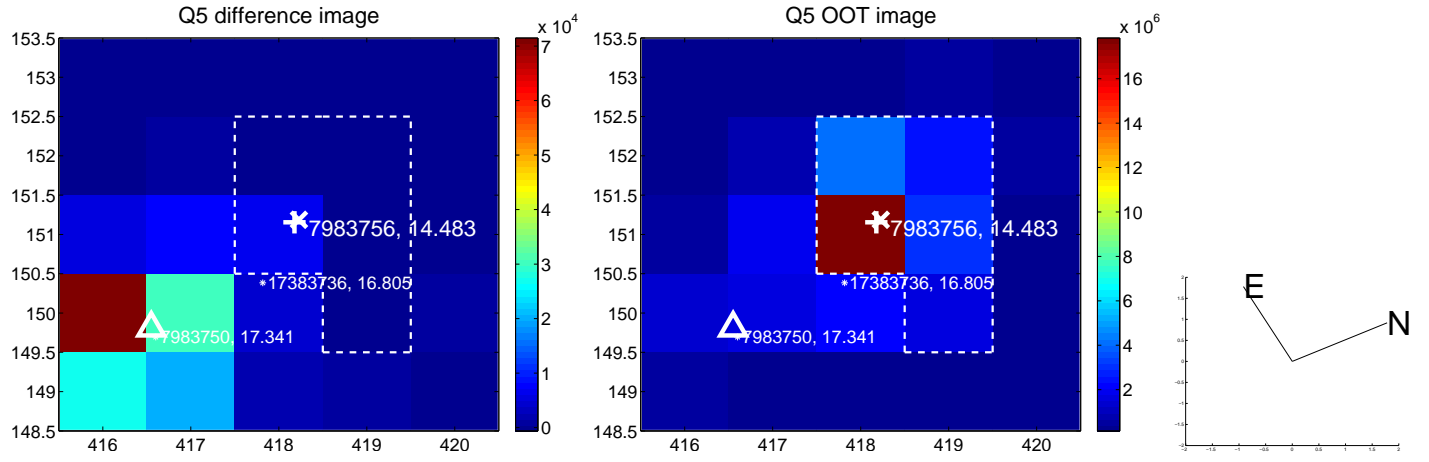


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

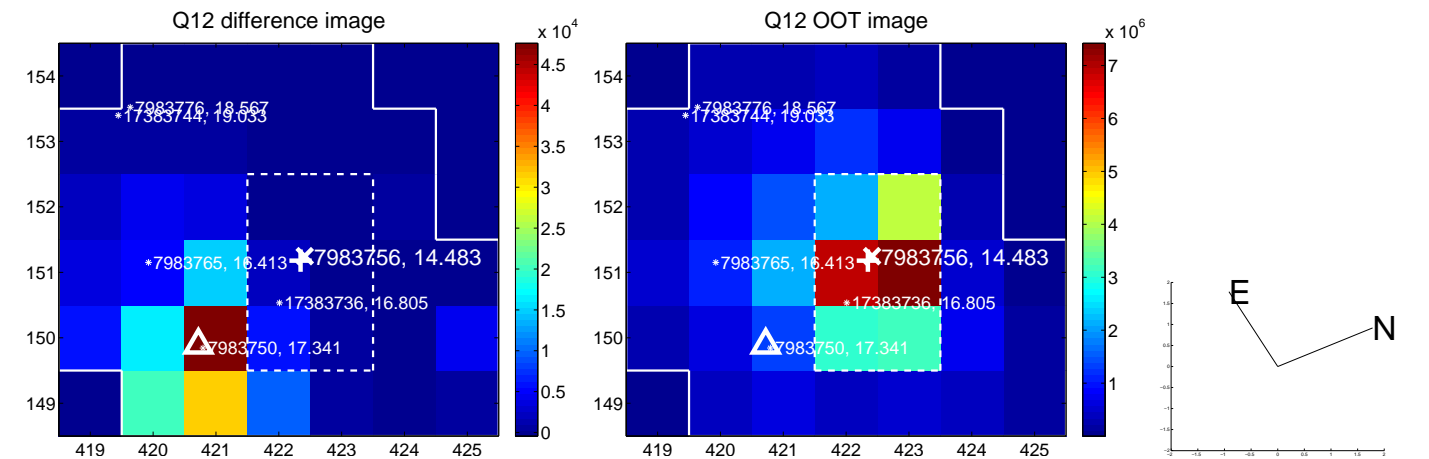
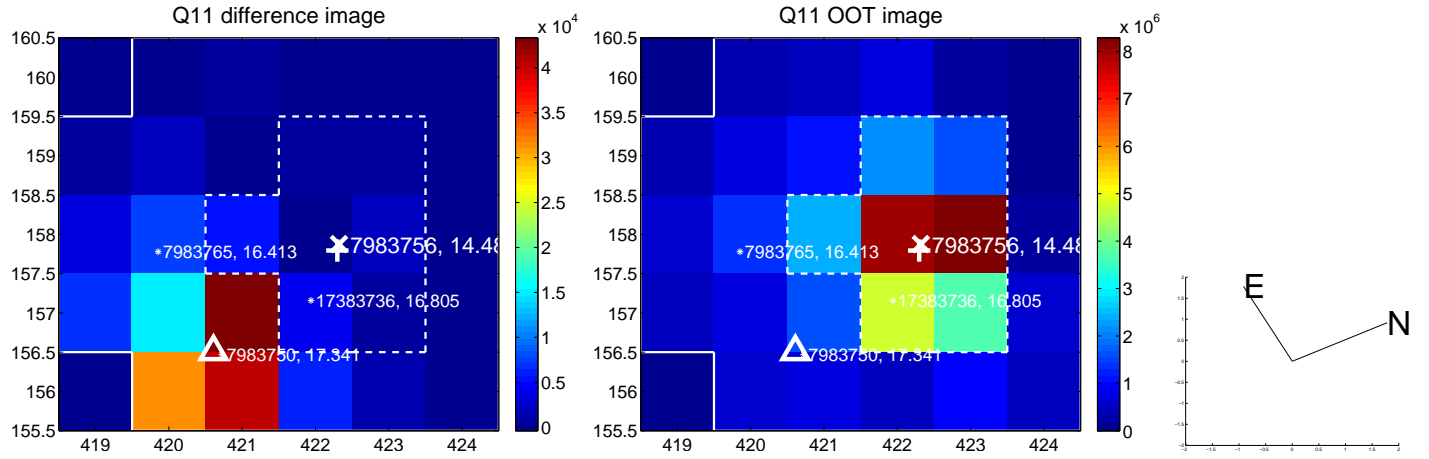
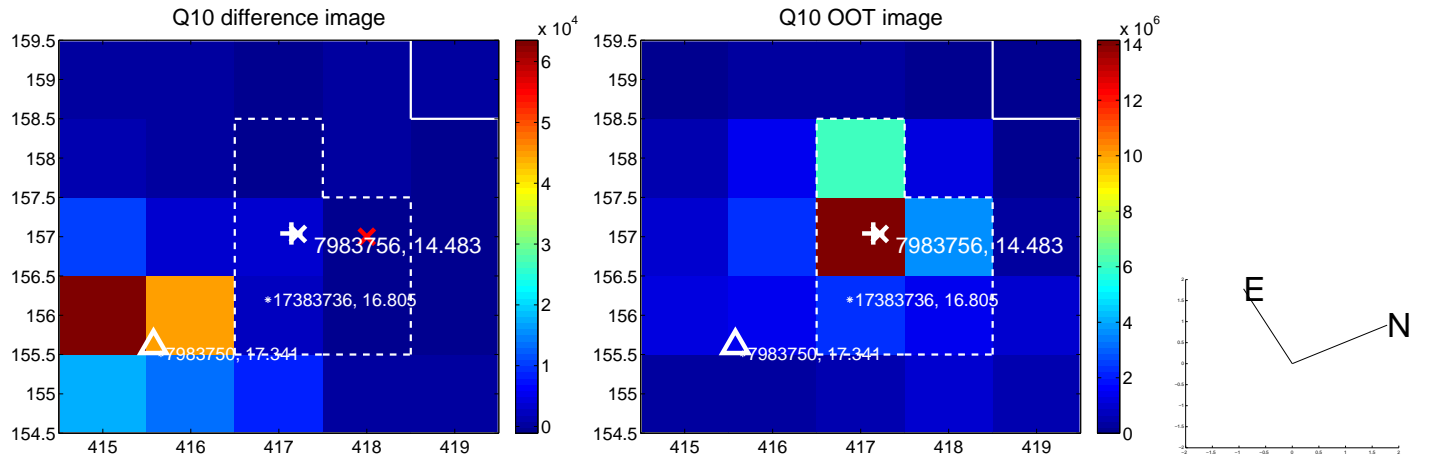
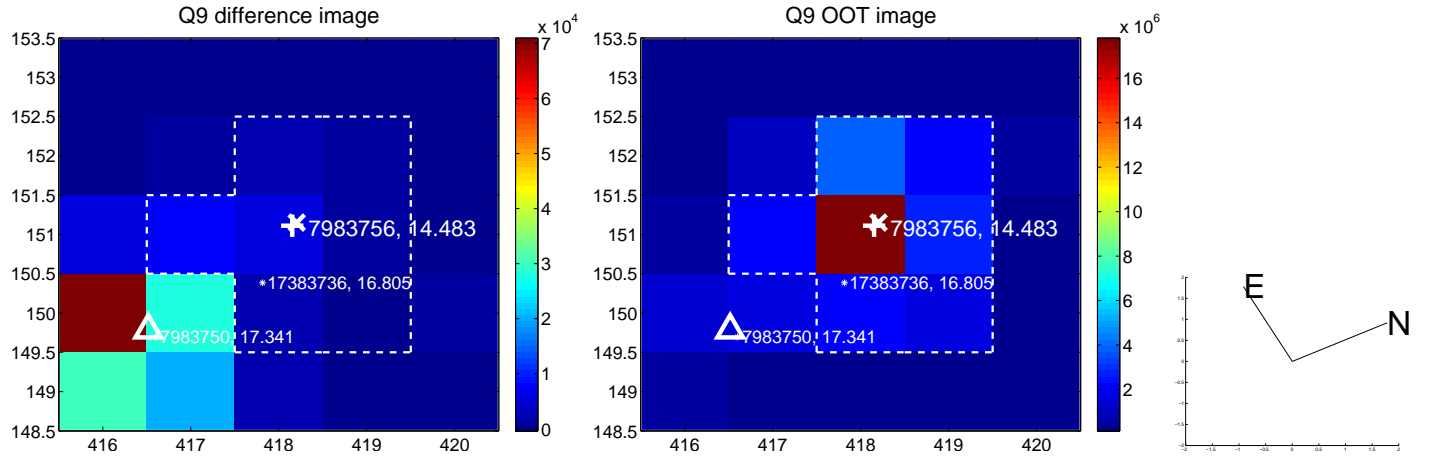
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



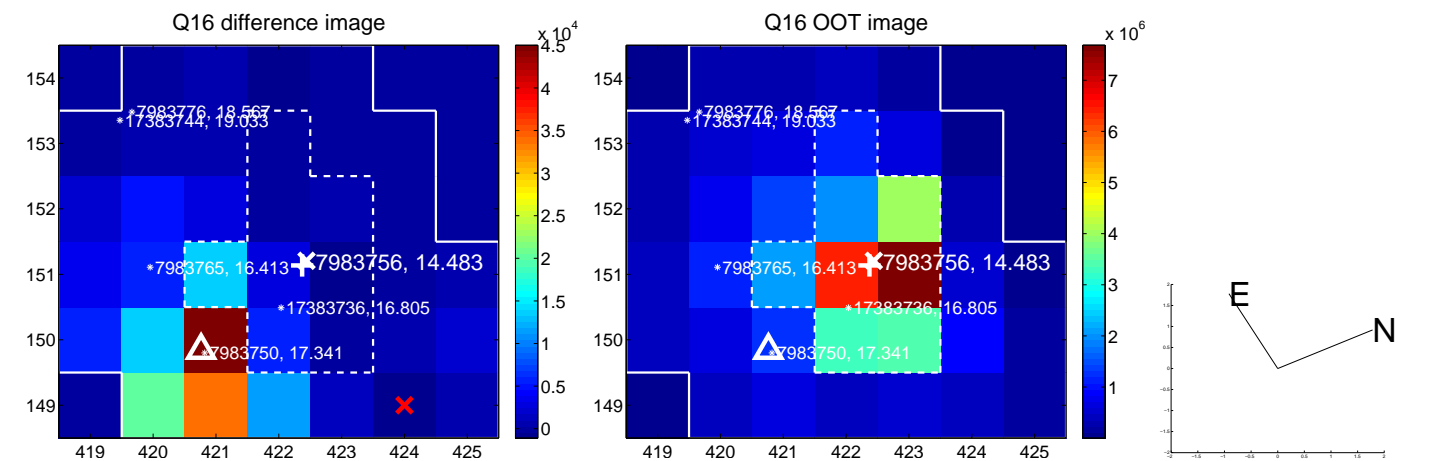
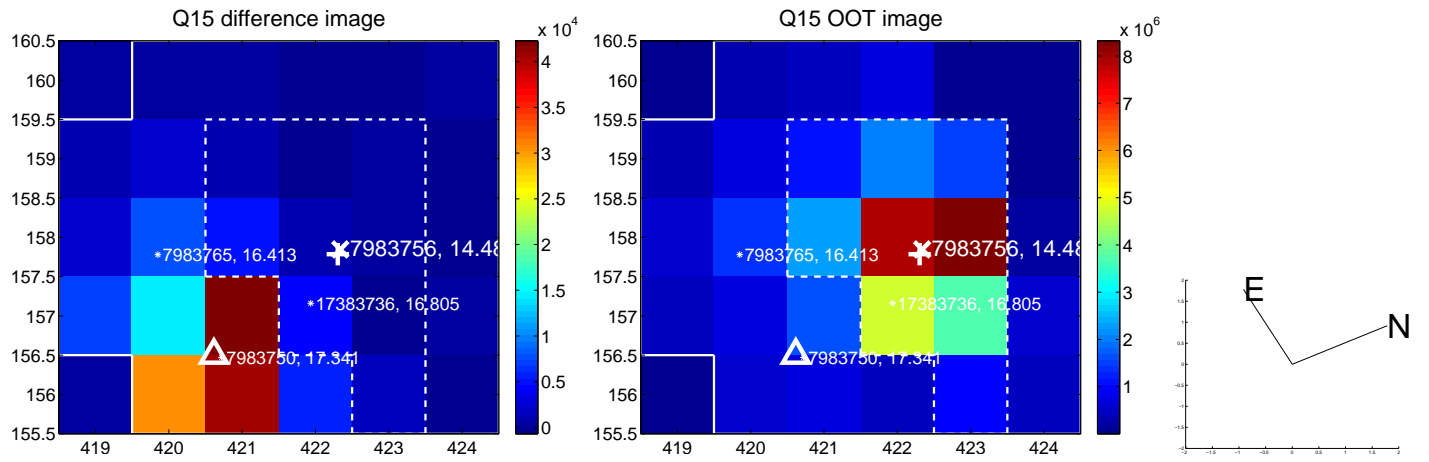
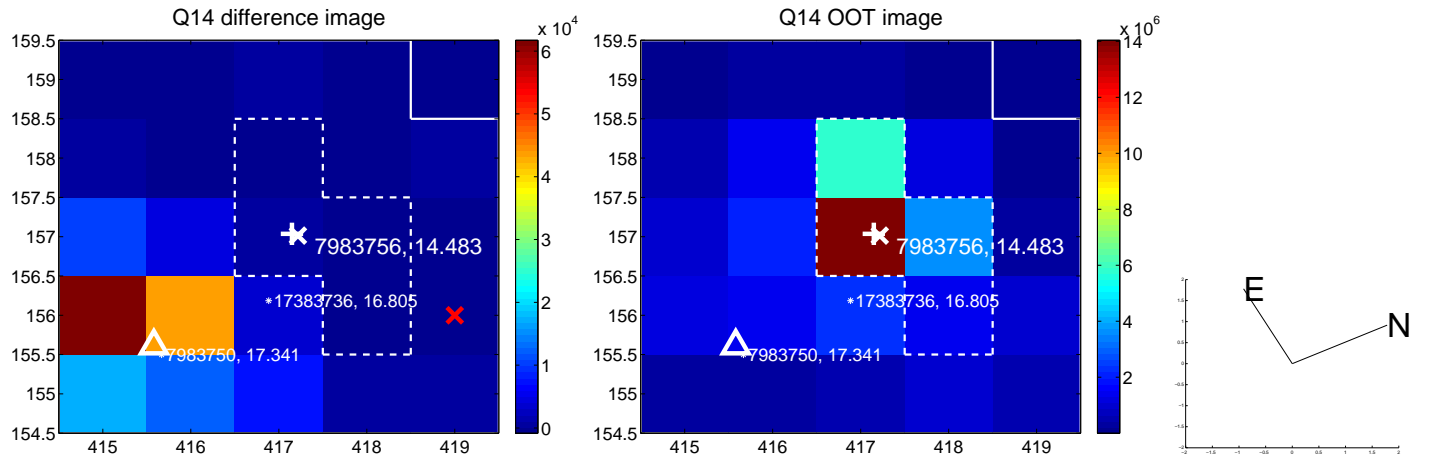
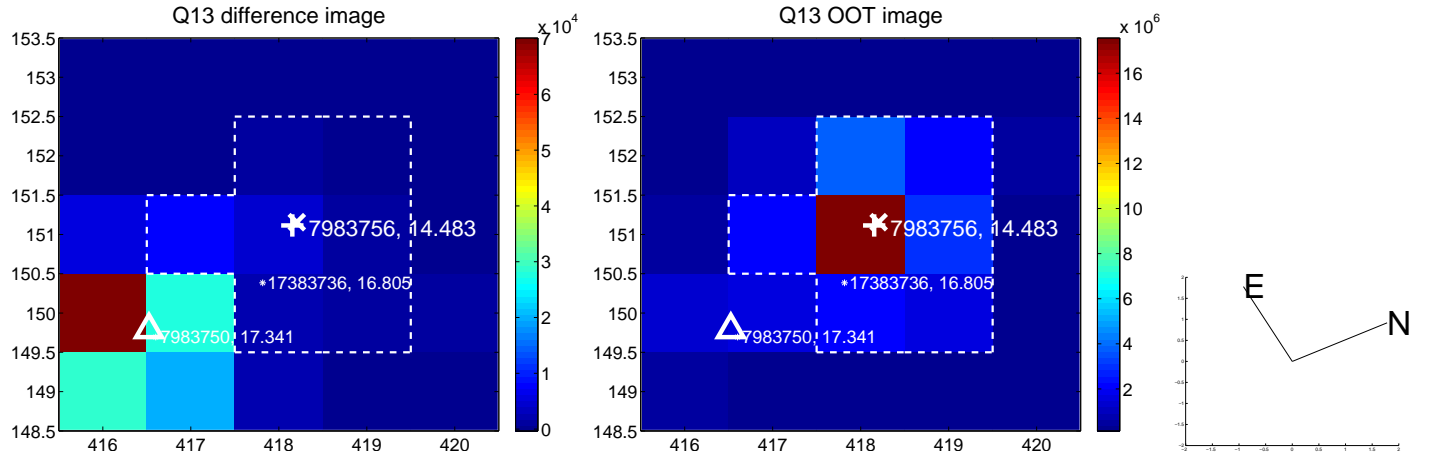
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



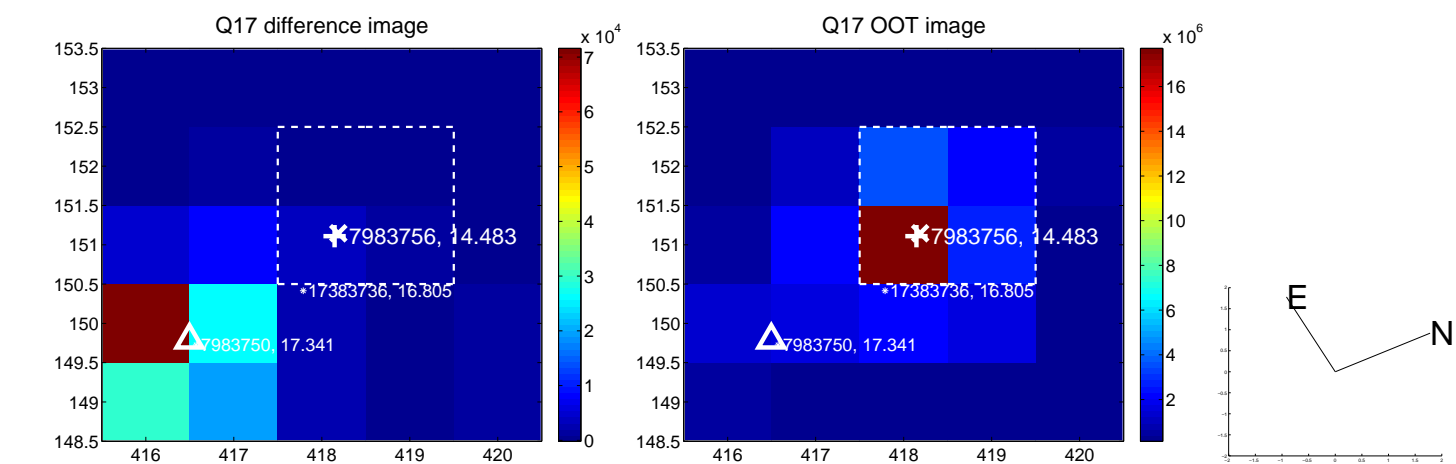
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



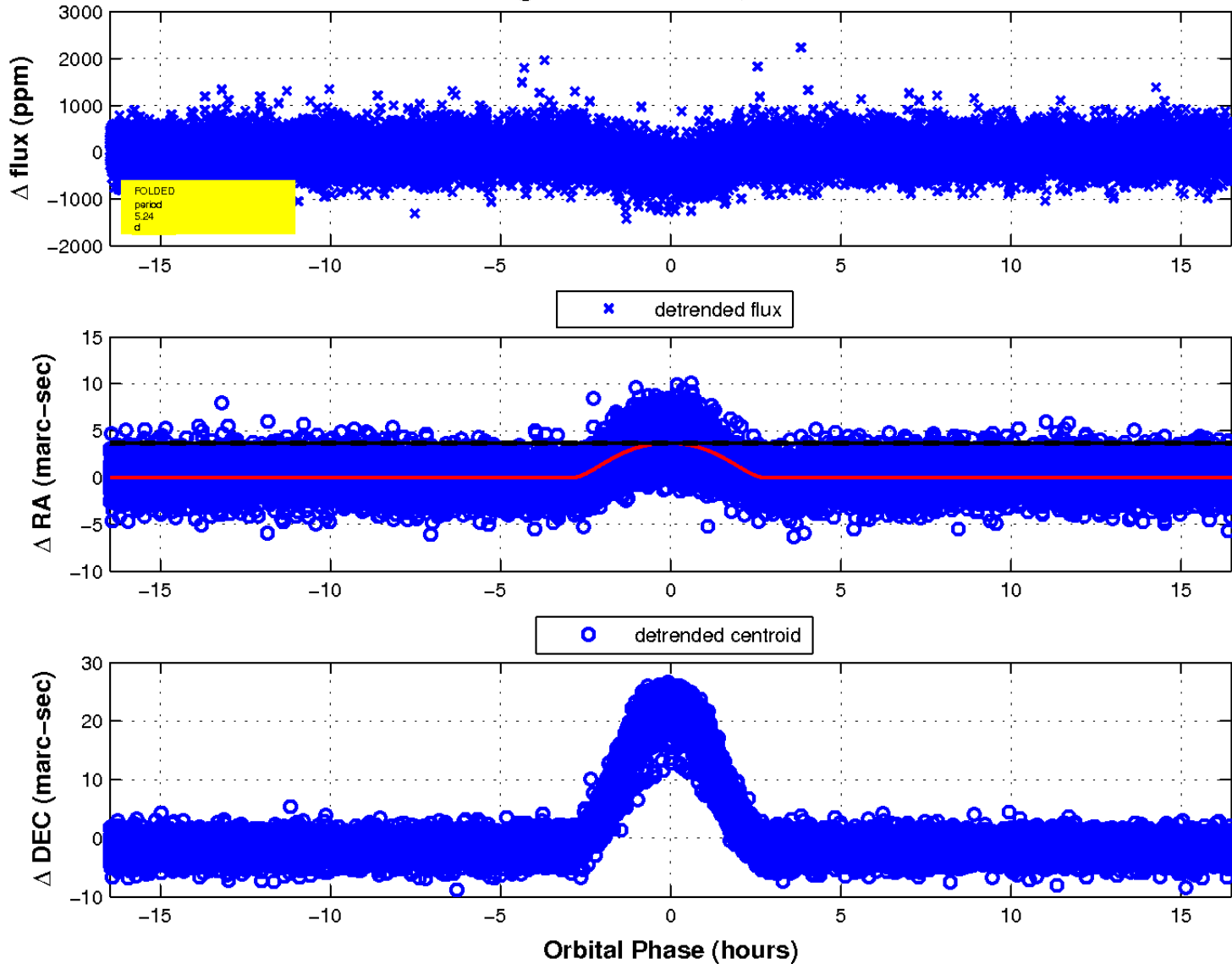
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

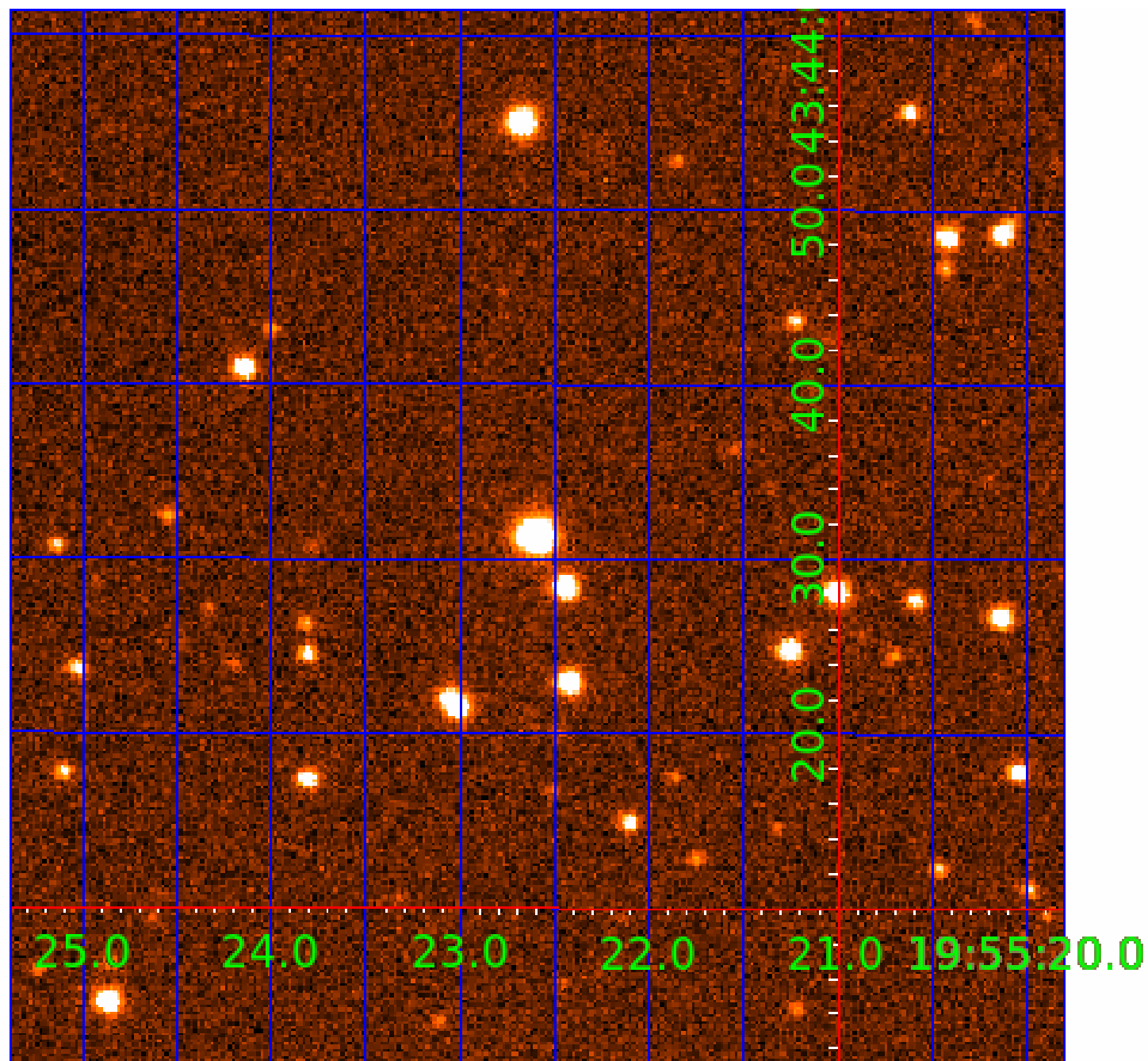


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 007983756

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})
007983756-01	OBS	3846.01	5.240753	136.554287	519.5	4.948	43.4	47.3	0.92	6192	3.73	322.56
007983756-02	OBS	No	5.240771	134.029617	311.8	5.495	29.6	31.8	0.92	6192	2.39	322.56
007983756-03	OBS	No	314.280506	280.680856	312.0	36.228	8.9	4.6	0.92	6192	1.66	1.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007983756-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE—CENT_RESOLVED_OFFSET
007983756-02	OBS	FP	0.00	1	1	1	0	IS_SEC_TCE—CENT_RESOLVED_OFFSET
007983756-03	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—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.

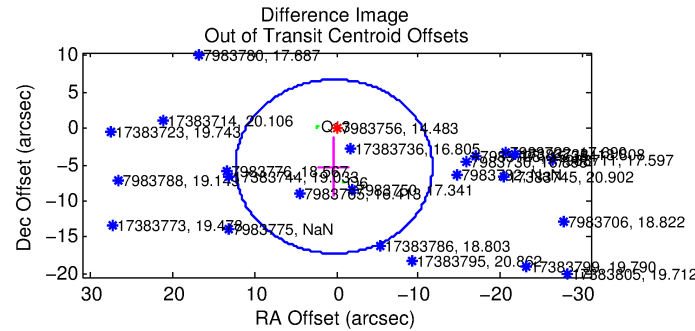
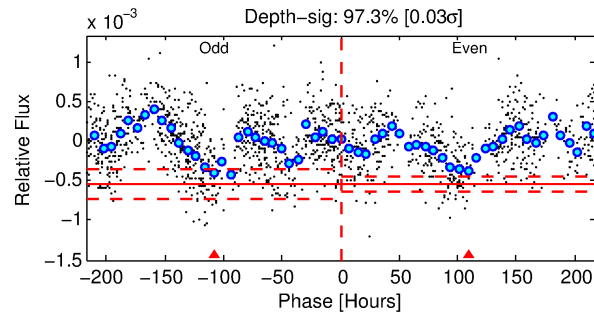
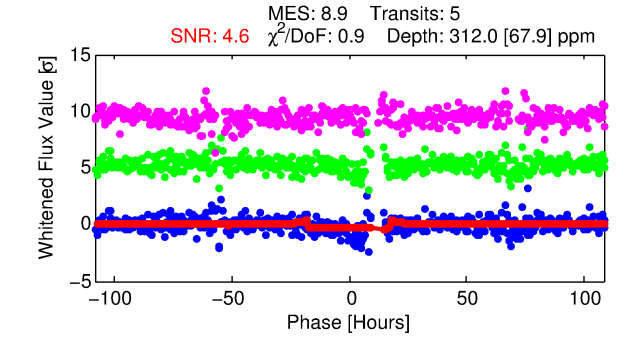
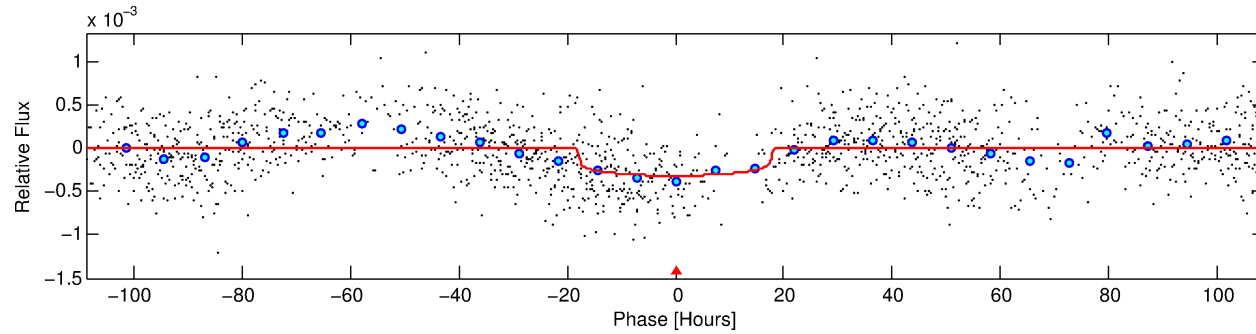
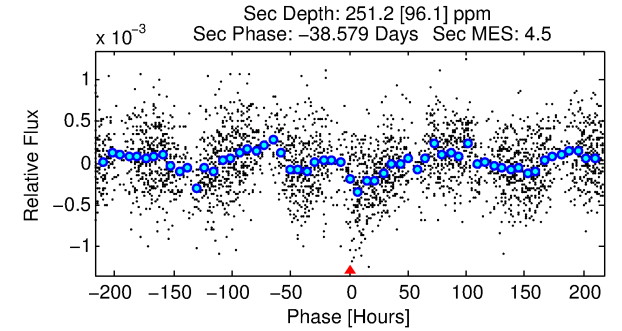
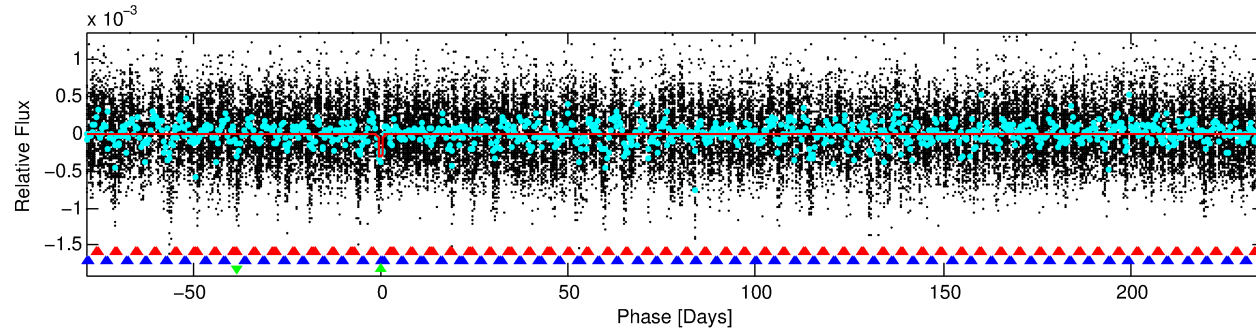
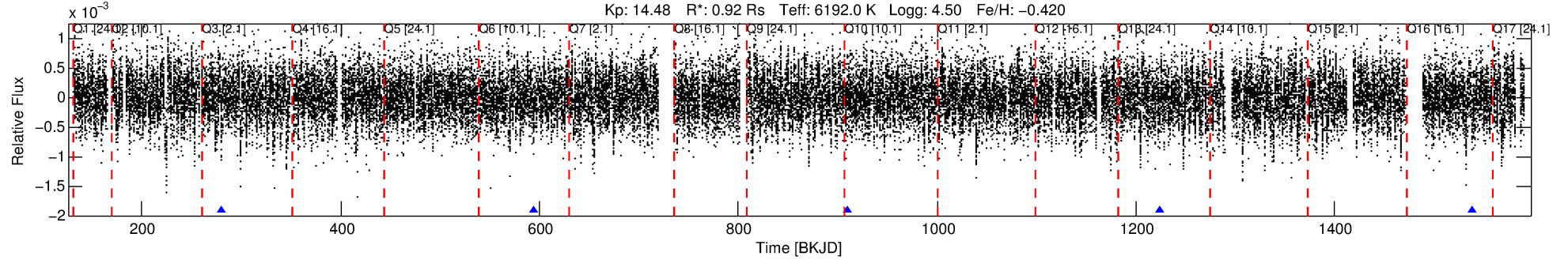
Ephemeris Match Information For 007983756-03

No Significant Match Found

DV One-Page Summary

KIC: 7983756 Candidate: 3 of 3 Period: 314.281 d
KOI: K03846 Corr: No Ephemeris Match

Kp: 14.48 R*: 0.92 Rs Teff: 6192.0 K Logg: 4.50 Fe/H: -0.420



DV Fit Results:

Period = 314.28051 [0.01374] d
Epoch = 280.6809 [0.0254] BKJD
Rp/R* = 0.0166 [0.0045]
a/R* = 59.88 [75.16]
b = 0.47 [2.12]
Seff = 1.37 [0.55]
Teff = 276 [28] K
Rp = 1.66 [0.67] Re
a = 0.8977 [0.2302] AU
Ag = 40307.91 [30821.92] [1.31σ]
Teffp = 6048 [1026] K [5.63σ]

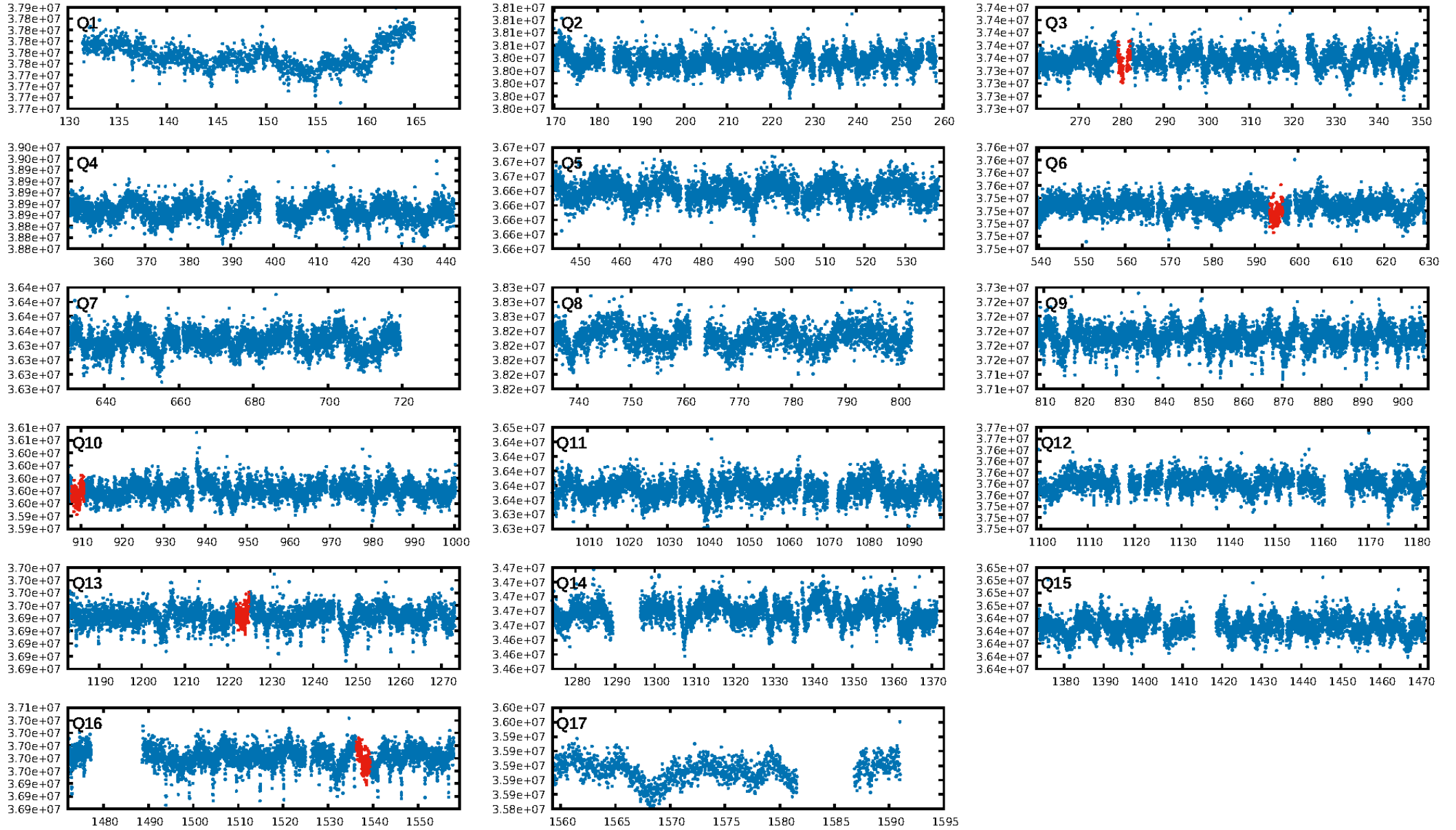
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [202.41σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 39.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.13e-10
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 37.81
Centroid-sig: N/A
Centroid-so: 0.869 arcsec [0.62σ]
OotOffset-rm: 5.267 arcsec [1.32σ]
KicOffset-rm: 5.562 arcsec [1.39σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.00 [0/3]

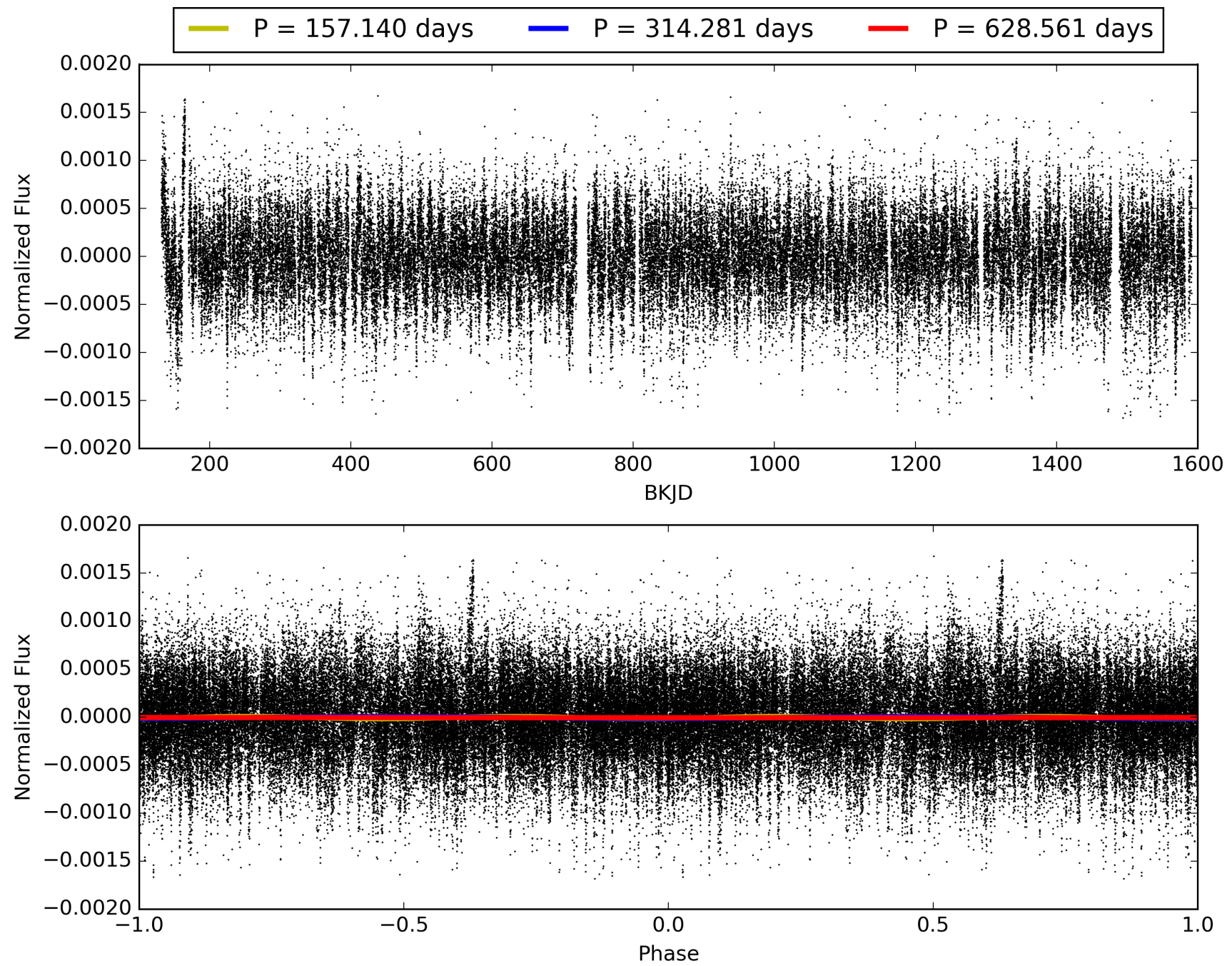
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:39:32 Z

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

TCE 007983756-03, PDC Light Curves

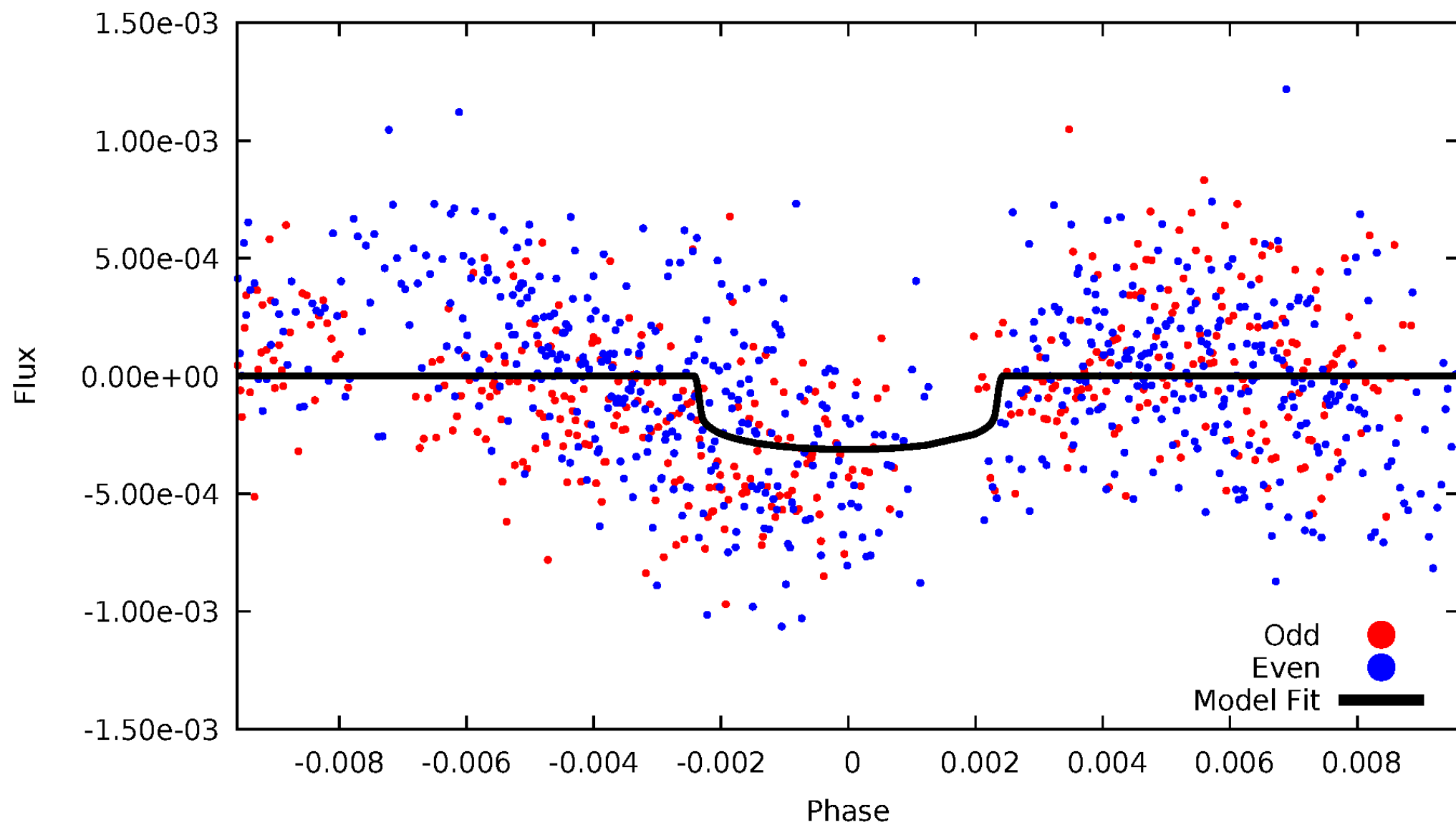


TCE 007983756-03



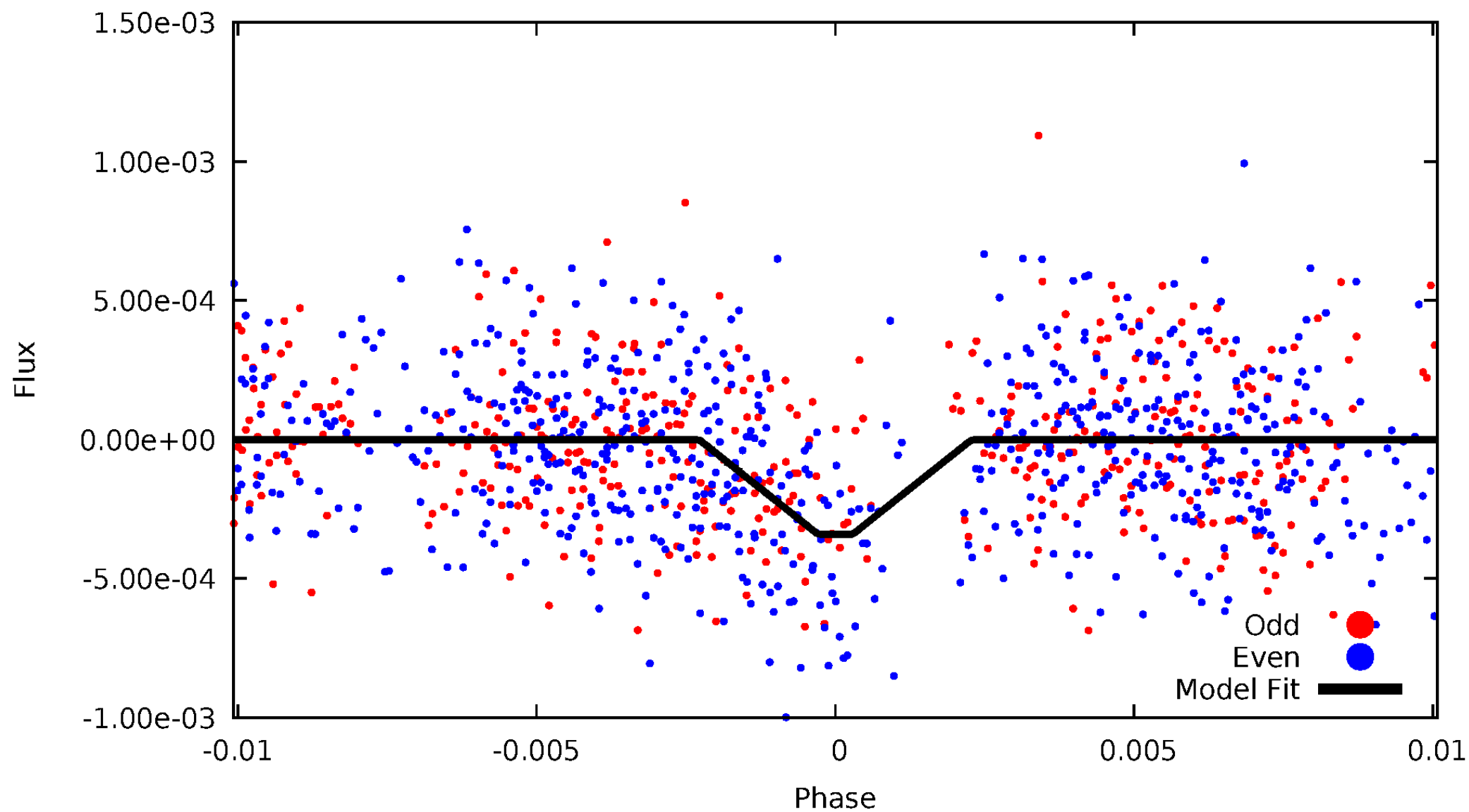
DV Odd/Even

TCE 007983756-03



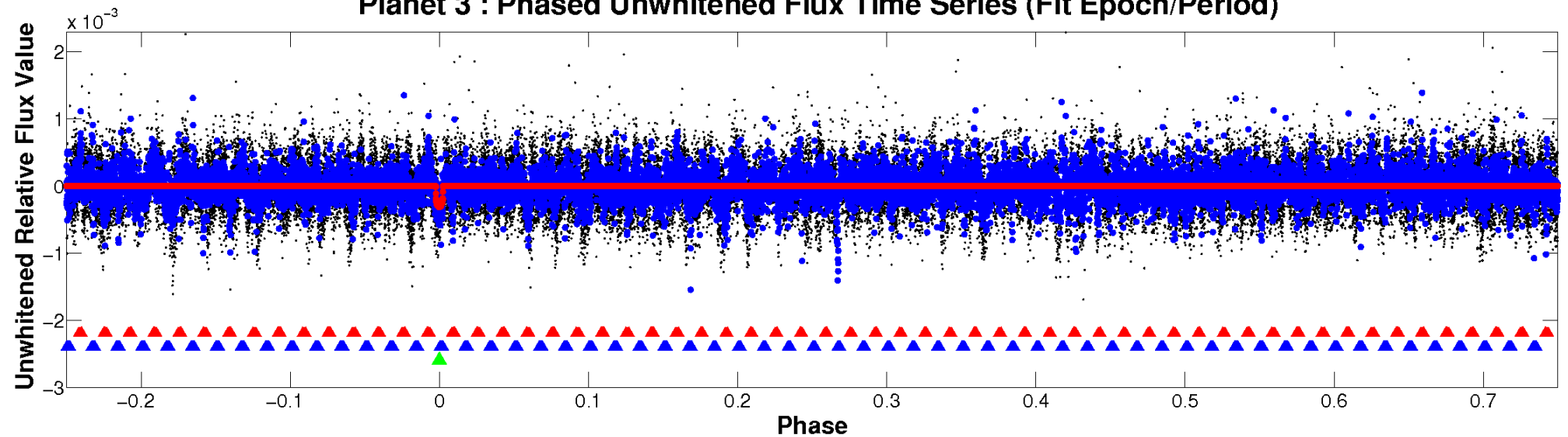
ALT Odd/Even

TCE 007983756-03

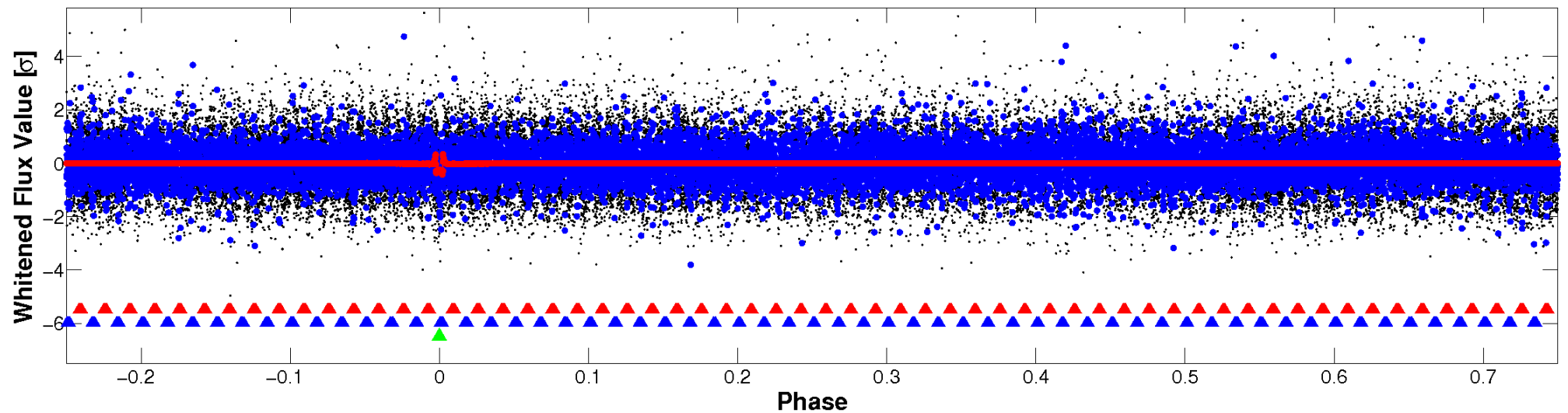


Non-Whitened Vs. Whitened Light Curve

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



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



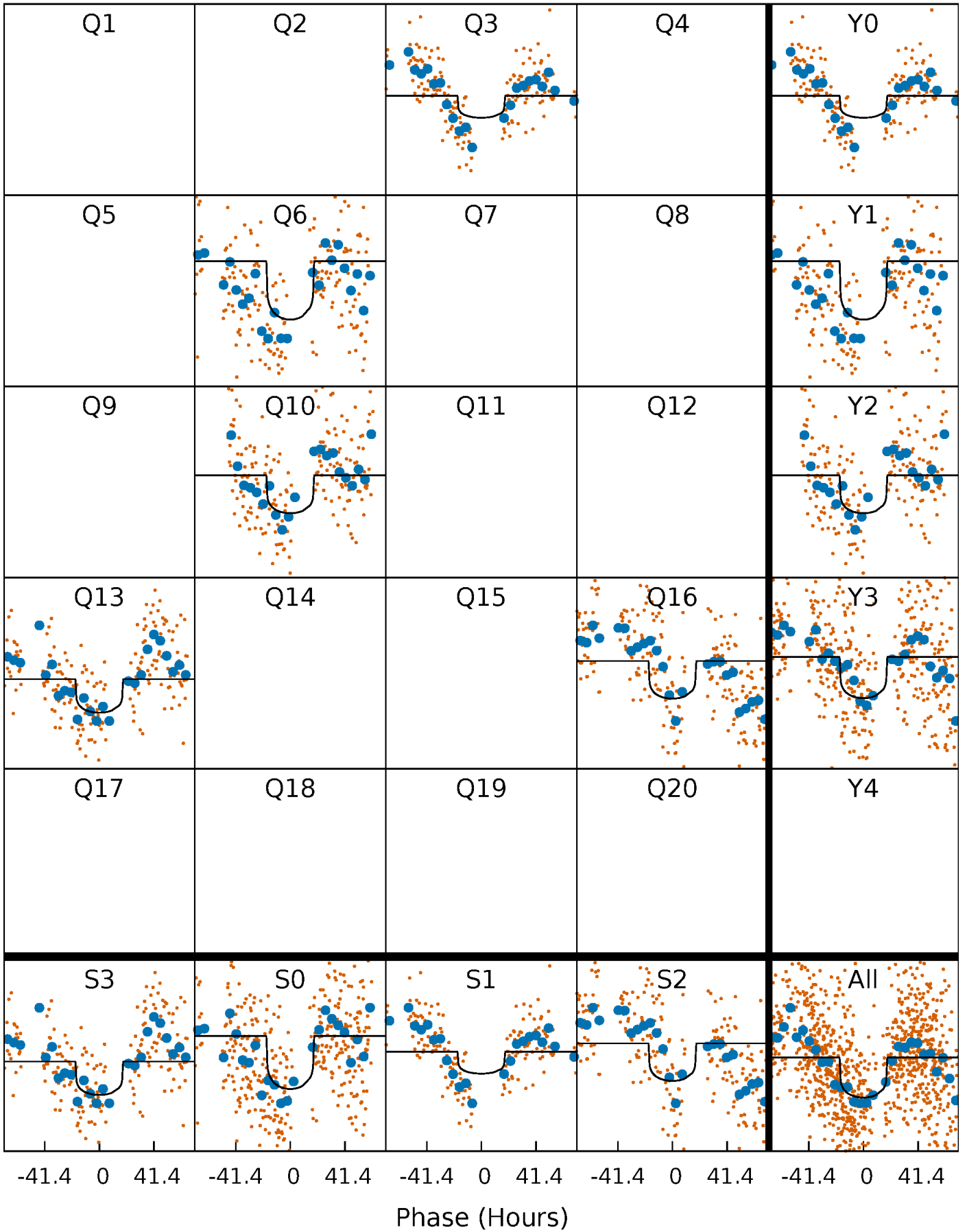
PDC Quarter-Phased Transit Curves

TCE 007983756-03 P=314.280506 Days $T_0=280.680856$ (BKJD)



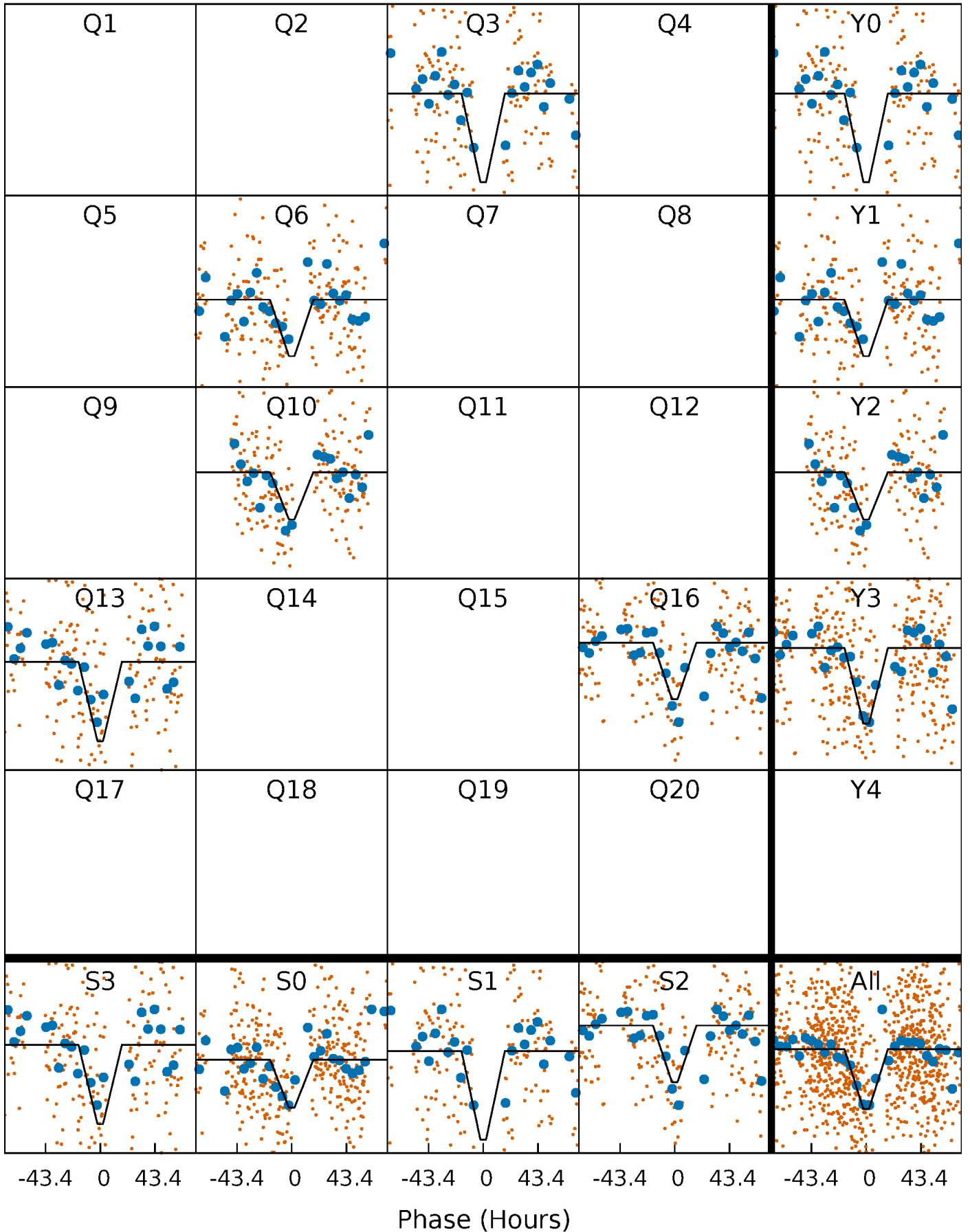
DV Quarter-Phased Transit Curves

TCE 007983756-03 $P=314.280506$ Days $T_0=280.680856$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

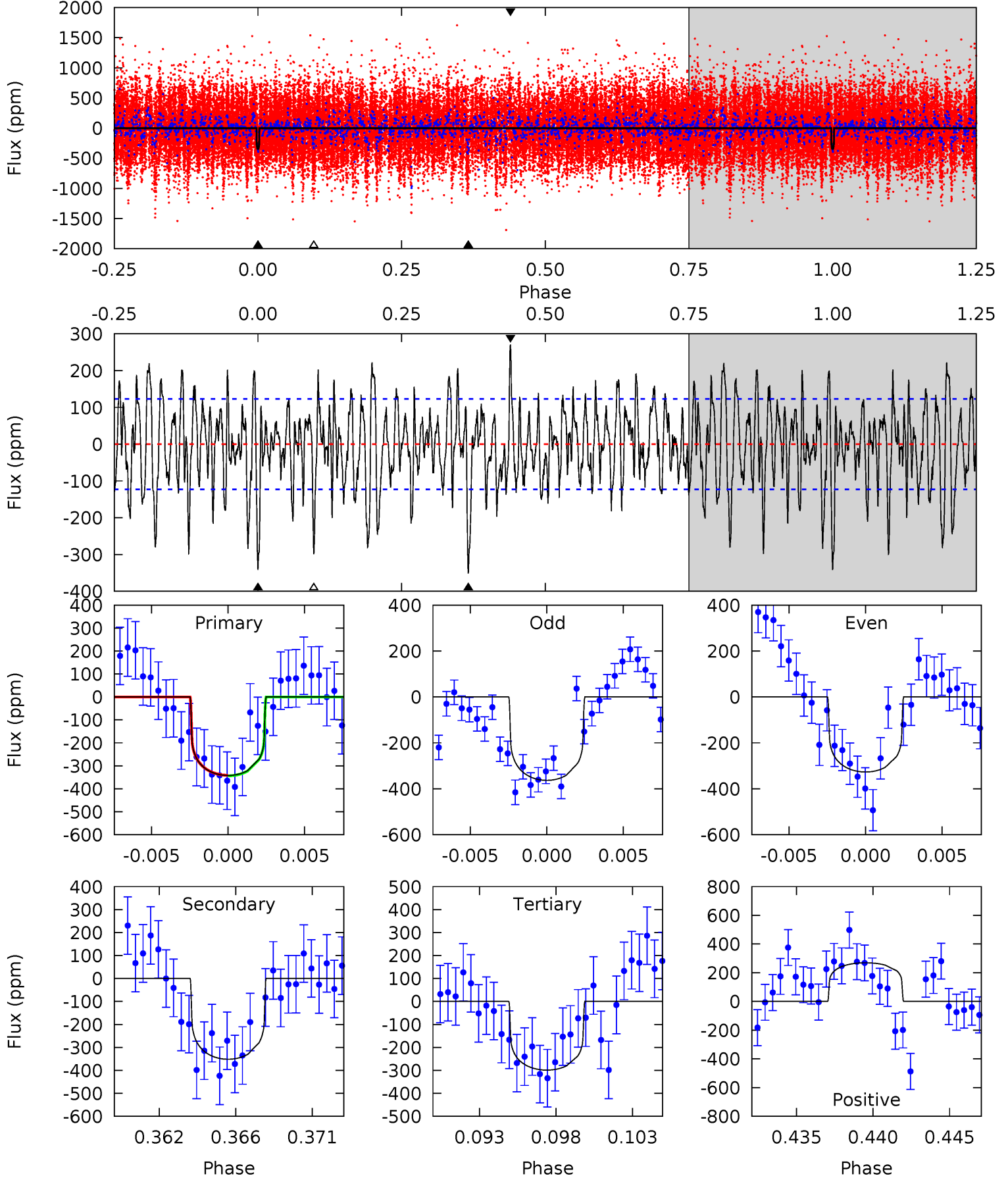
TCE 007983756-03 P=314.288586 Days $T_0=280.695046$ (BKJD)



DV Model-Shift Uniqueness Test

007983756-03, P = 314.280506 Days, E = 280.680856 Days

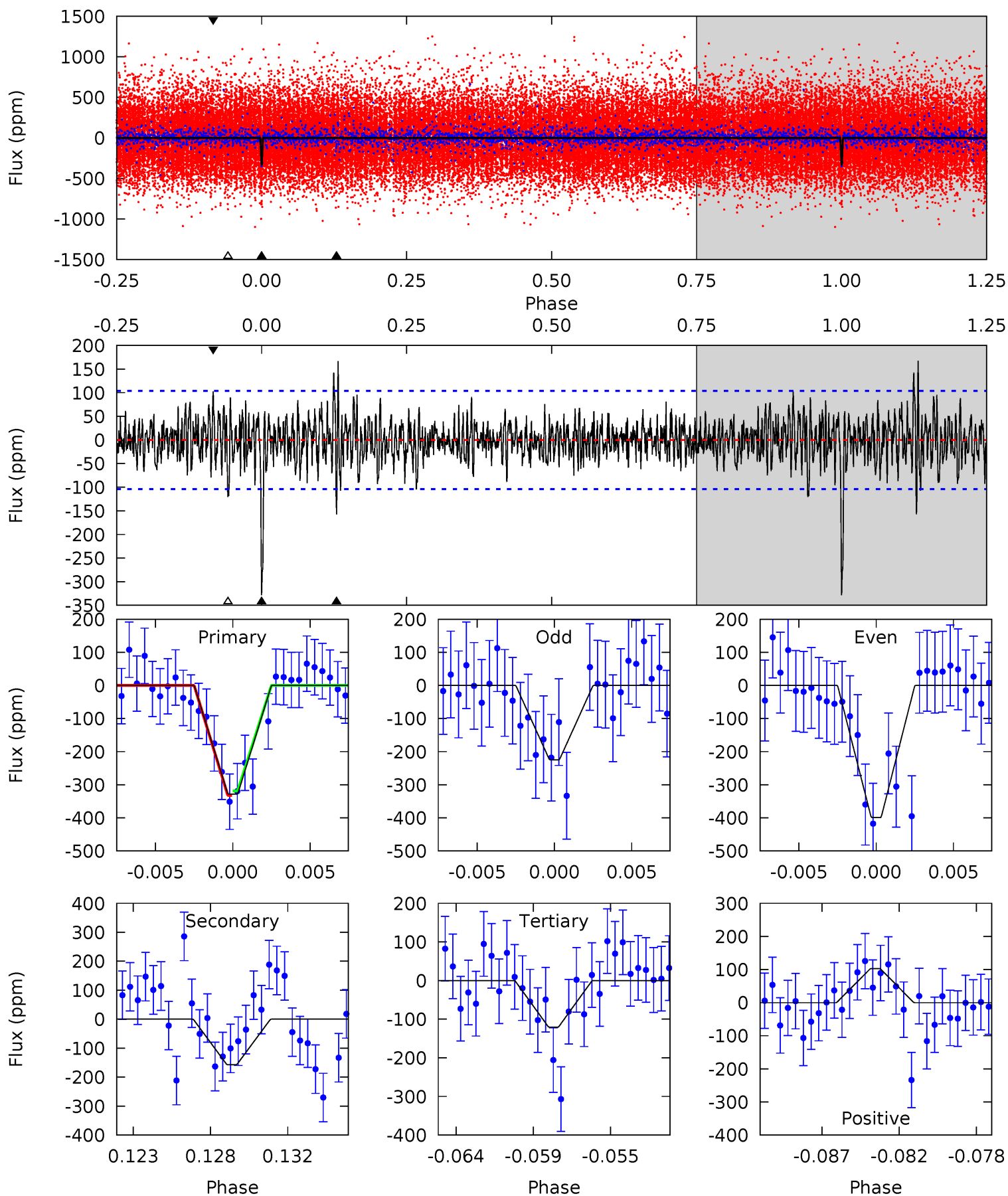
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	14.8	12.5	11.3	5.16	2.81	3.92	1.80	3.03	2.21	3.44	0.76	1.12	0.43	0.04



Alt Model-Shift Uniqueness Test

007983756-03, P = 314.288586 Days, E = 280.695046 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	7.83	6.01	5.11	5.17	2.84	1.60	10.3	11.2	1.82	2.72	4.28	1.23	0.34	0.28



Stellar Parameters For KIC 007983756

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6192^{+169}_{-206}	$4.503^{+0.052}_{-0.208}$	$-0.420^{+0.300}_{-0.300}$	$0.917^{+0.276}_{-0.092}$	$0.976^{+0.123}_{-0.123}$	$1.785^{+0.490}_{-0.965}$
	+3%/-3%	+1%/-5%	+71%/-71%	+30%/-10%	+13%/-13%	+27%/-54%
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 007983756-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-352 ± 24	$1.72^{+0.53}_{-0.47}$	394^{+26}_{-19}	6589^{+1324}_{-733}	51761^{+49274}_{-21924}
Alt.	-157 ± 20	$1.93^{+0.60}_{-0.49}$	393^{+28}_{-20}	5159^{+714}_{-516}	18260^{+14820}_{-7744}

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 $A_{obs} \gg 1.0$

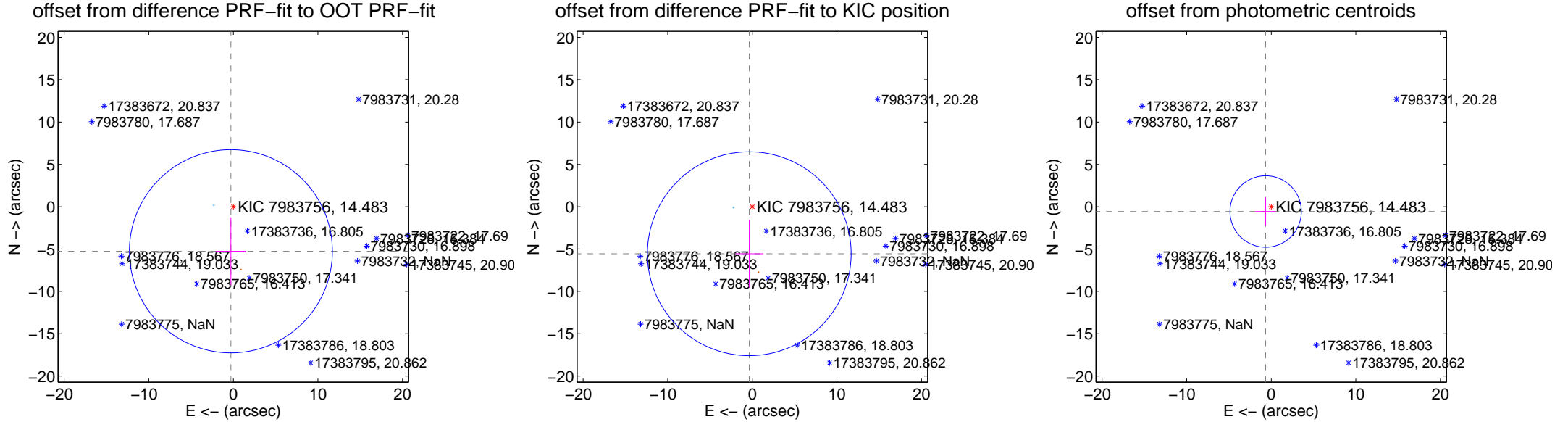
DV Centroid Data

Supplemental centroid analysis for 007983756-03. Kepler magnitude: 14.48. Transit SNR 4.62

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.267 ± 3.999	1.32	0.290 ± 1.814	-5.259 ± 4.004
PRF-fit source offset from KIC position	5.562 ± 4.013	1.39	0.358 ± 1.671	-5.550 ± 4.020
photometric centroid source offset	0.87 ± 1.41	0.62	0.66 ± 1.20	-0.57 ± 1.64



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.

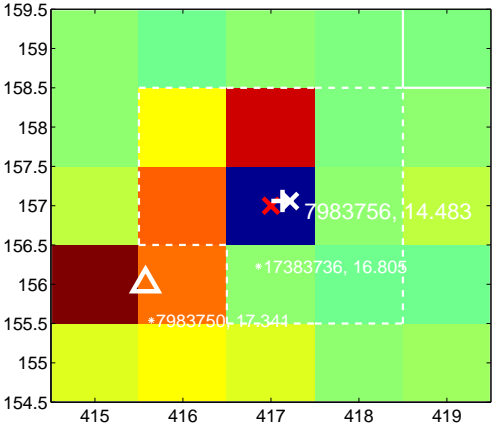
Q5 no difference image



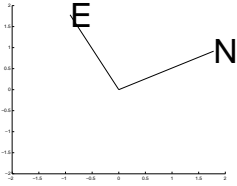
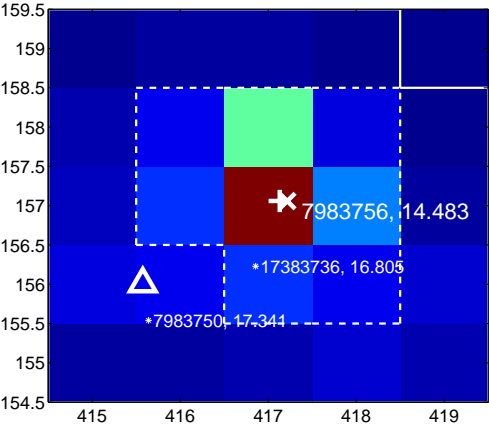
Q5 no OOT image



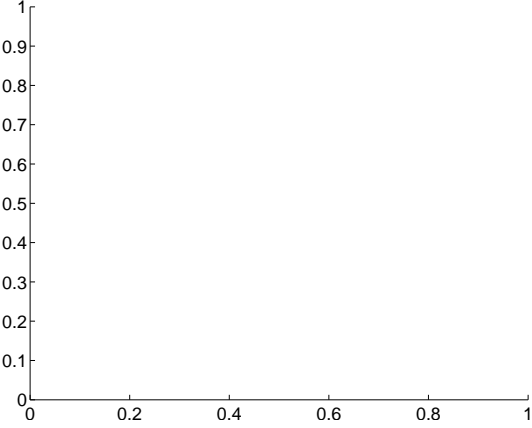
Q6 difference image. Poor Quality



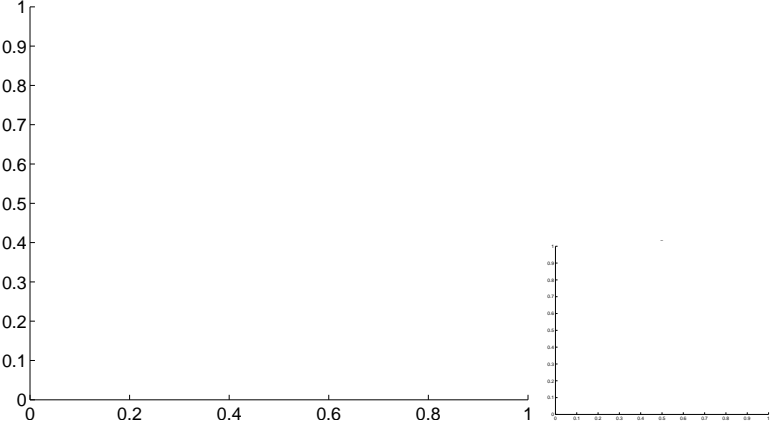
Q6 OOT image



Q7 no difference image



Q7 no OOT image



Q8 no difference image



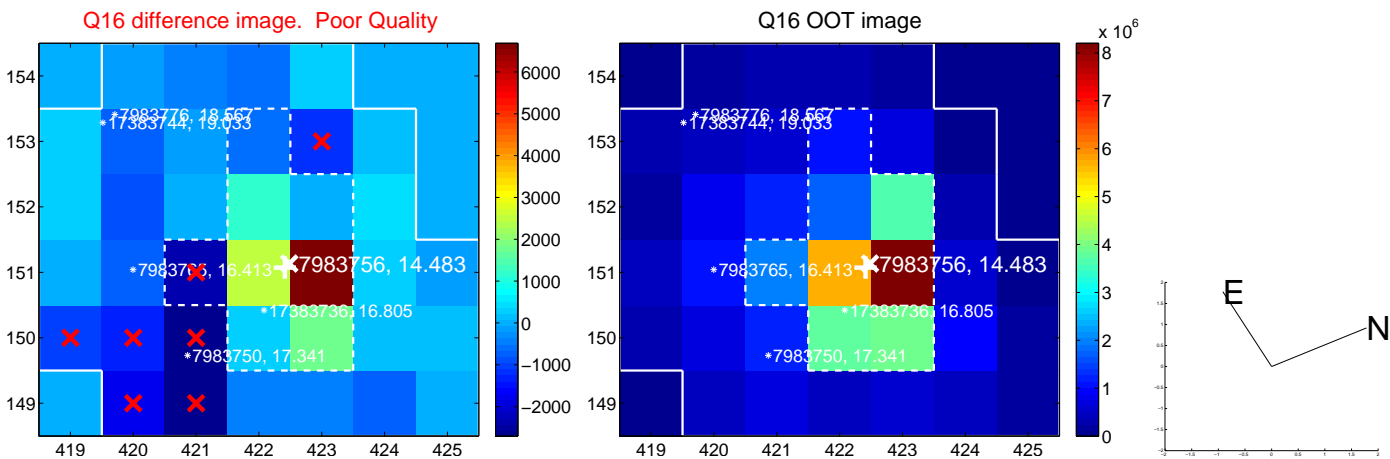
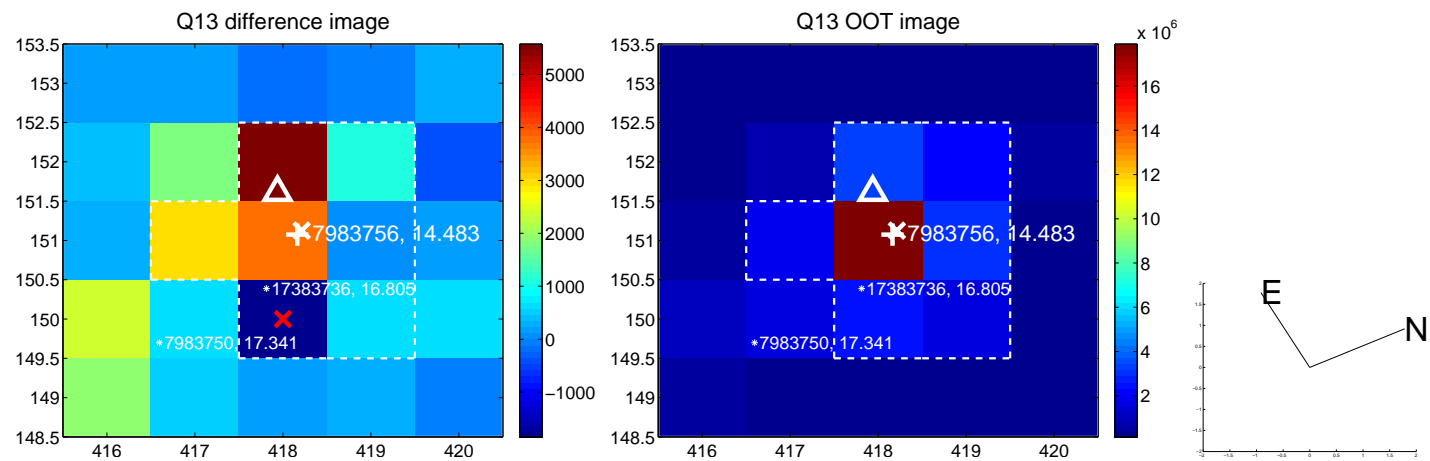
Q8 no OOT image



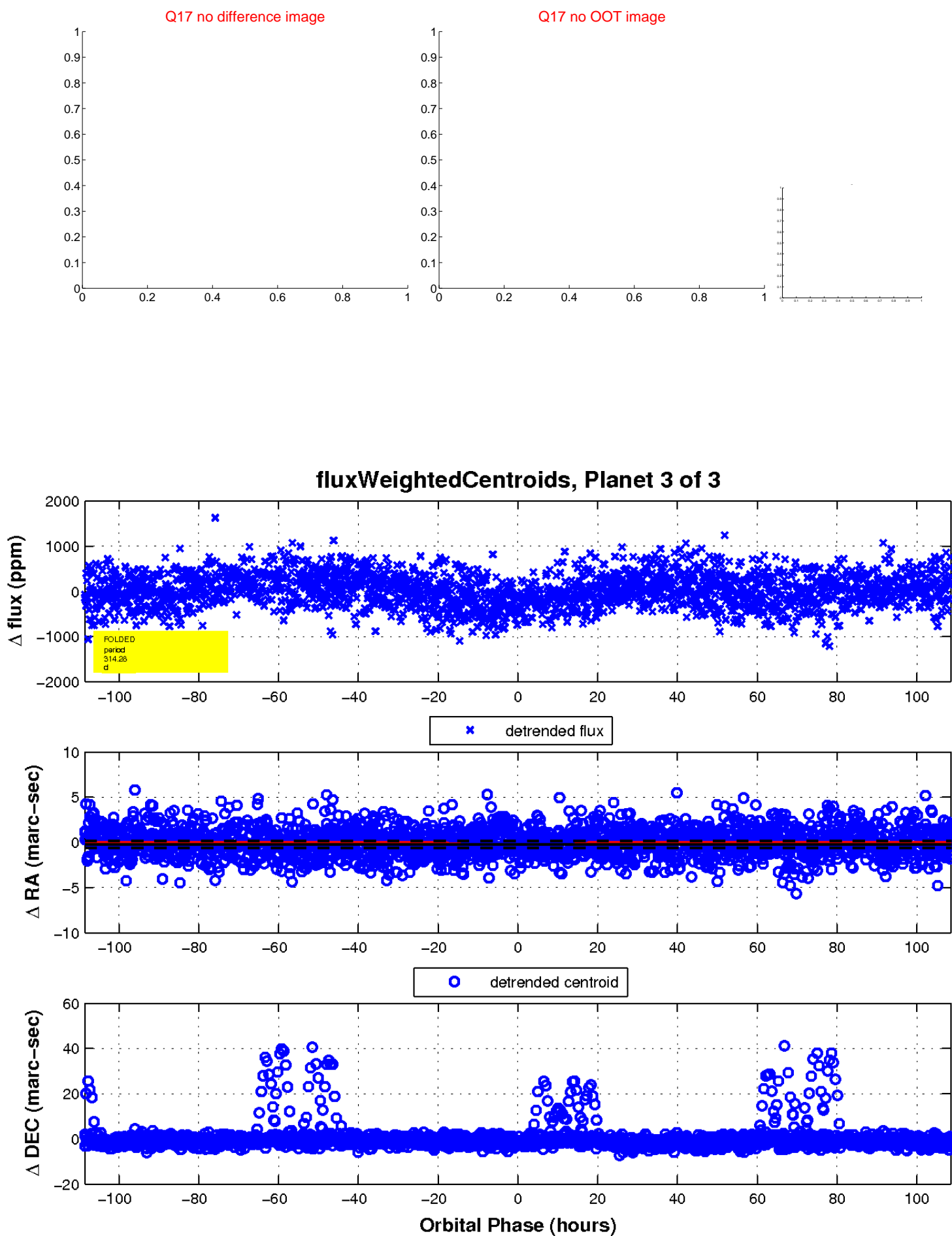
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

