

KIC 010285114

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})
010285114-01	OBS	No	319.728743	195.202035	1289.7	4.656	10.9	8.4	4.53	11617	22.34	174.53
010285114-02	OBS	No	366.887968	468.324531	356.9	33.711	10.3	8.2	4.53	11617	9.22	145.28
010285114-03	OBS	No	0.507039	131.872024	29.6	1.754	8.5	6.4	4.53	11617	2.81	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010285114-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
010285114-02	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED
010285114-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED

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

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

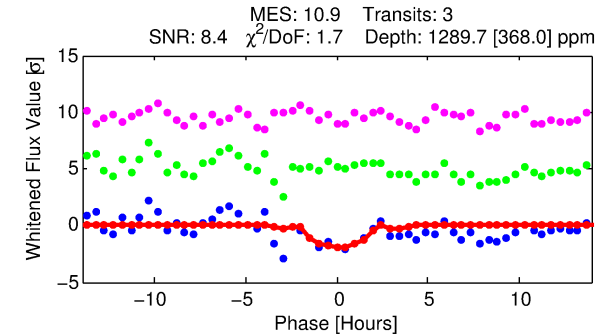
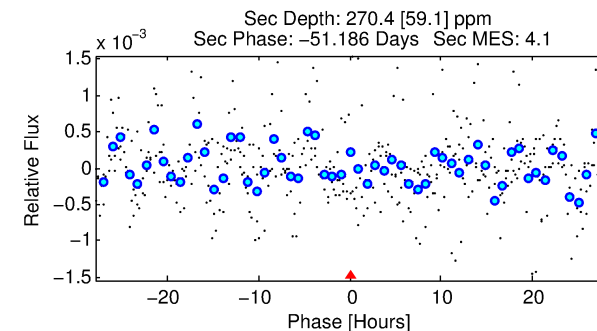
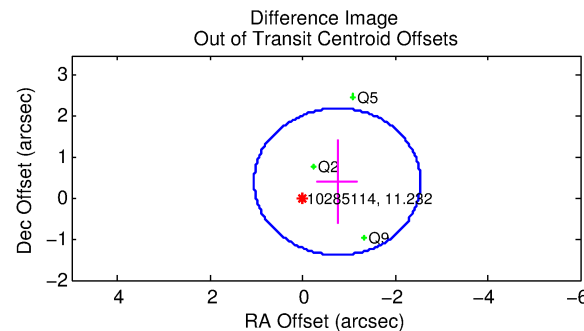
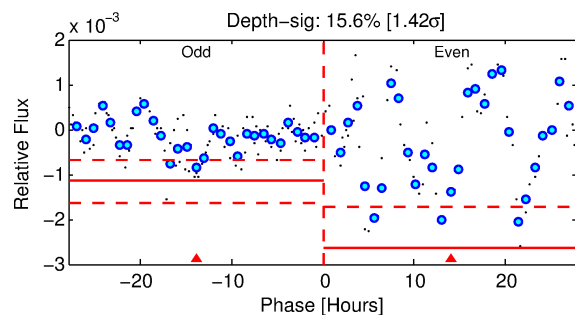
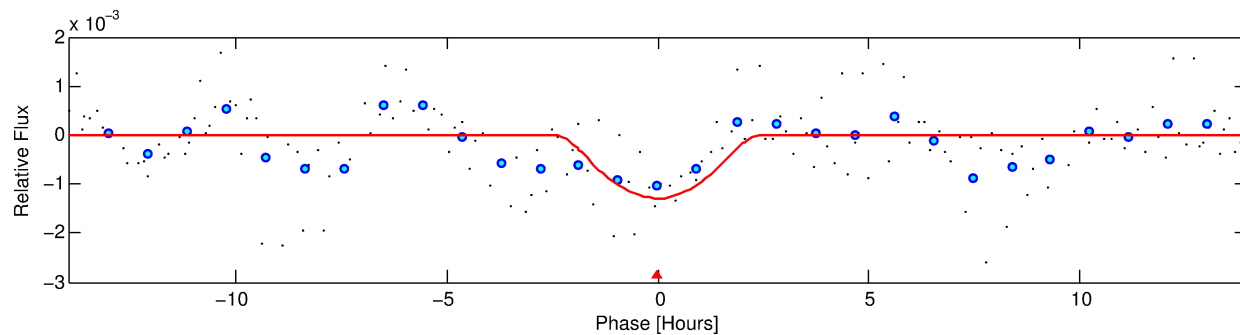
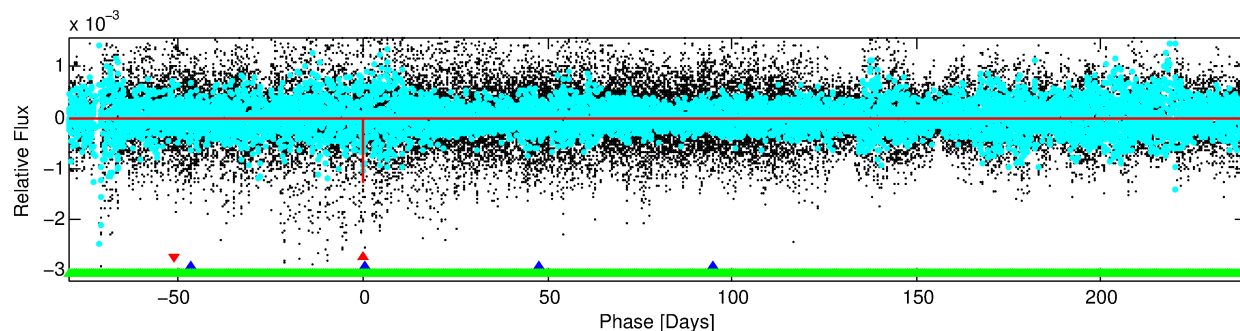
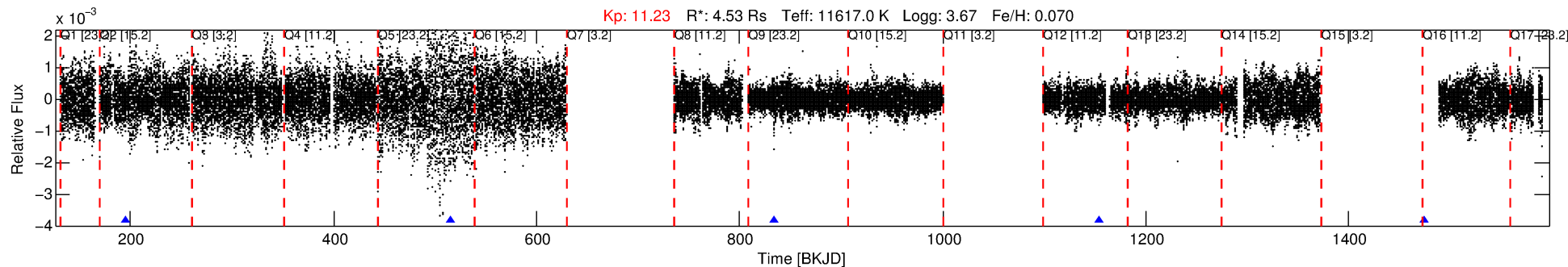
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010285114-01

No Significant Match Found

DV One-Page Summary

KIC: 10285114 Candidate: 1 of 3 Period: 319.729 d



DV Fit Results:

Period = 319.72874 [0.01022] d
Epoch = 195.2020 [0.0173] BKJD
 R_p/R^* = 0.0451 [0.0451]
 a/R^* = 193.78 [70.92]
 b = 0.98 [0.09]
 S_{eff} = 174.53 [180.59]
 T_{eq} = 927 [240] K
 R_p = 22.34 [25.71] R_{e}
 a = 1.3863 [0.7848] AU
 A_g = 573.04 [1265.37] [0.45 σ]
 T_{eff} = 7011 [3617] K [1.68 σ]

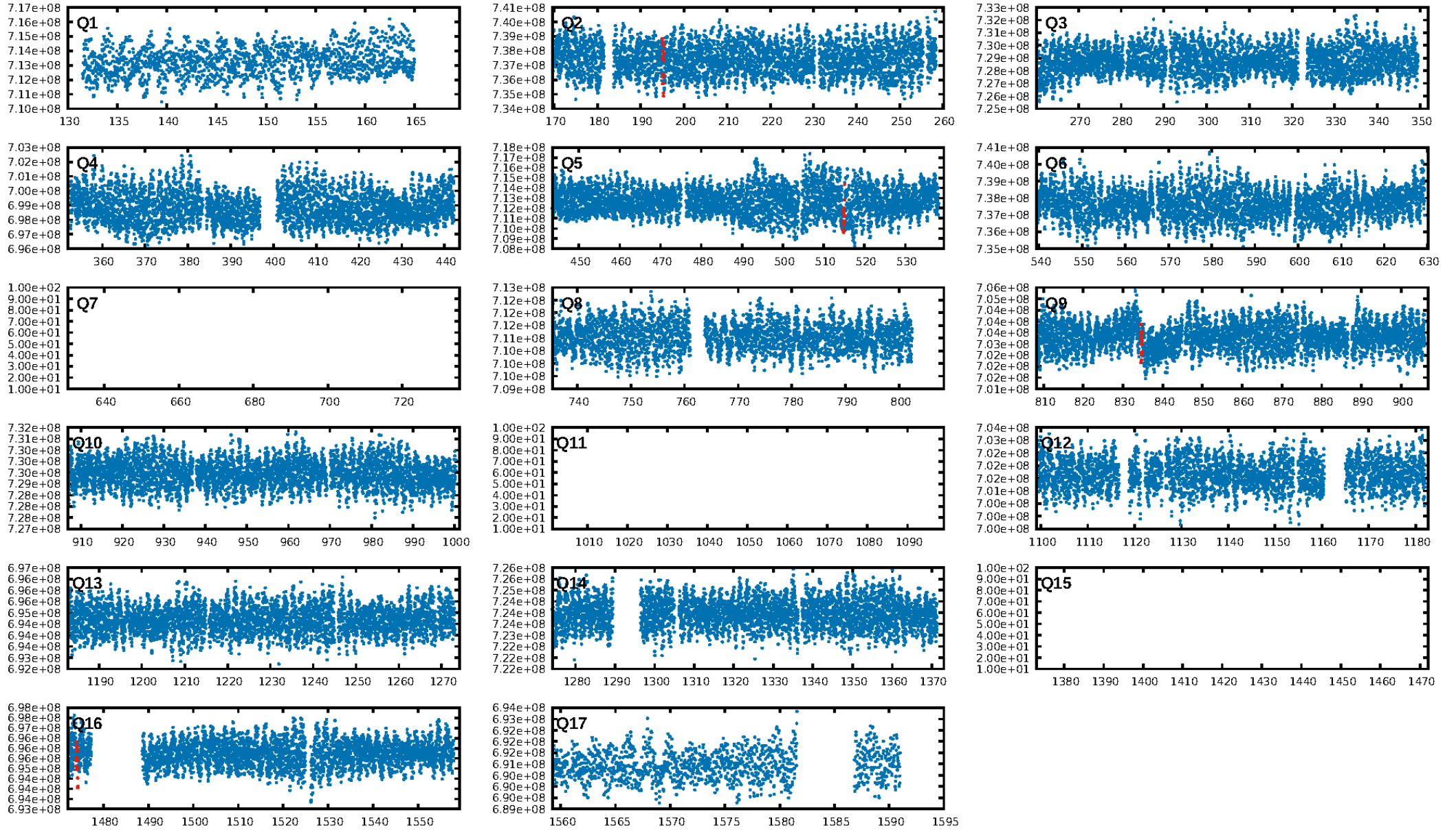
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [1539.84 σ]
LongPeriod-sig: 100.0% [33.26 σ]
ModelChiSquare2-sig: 0.6%
ModelChiSquareGof-sig: 89.8%
Bootstrap-pfa: 5.22e-20
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -8.032
Centroid-sig: 0.2%
Centroid-so: 1.258 arcsec [4.34 σ]
OotOffset-rm: 0.851 arcsec [1.42 σ]
KicOffset-rm: 0.999 arcsec [1.77 σ]
OotOffset-st: 1/0/0/2 [3]
KicOffset-st: 1/0/0/2 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.00 [0/3]

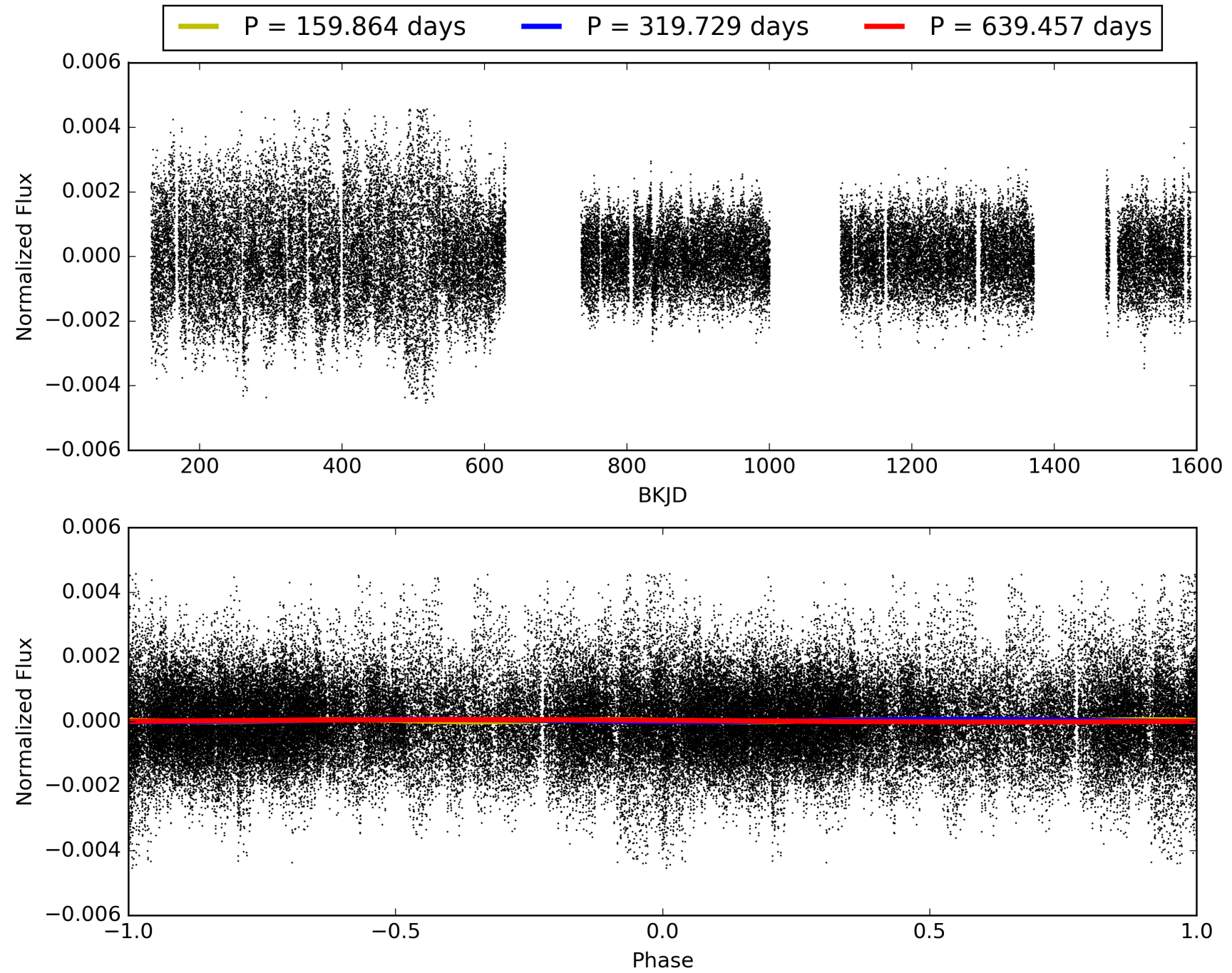
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:24:02 Z

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

TCE 010285114-01, PDC Light Curves

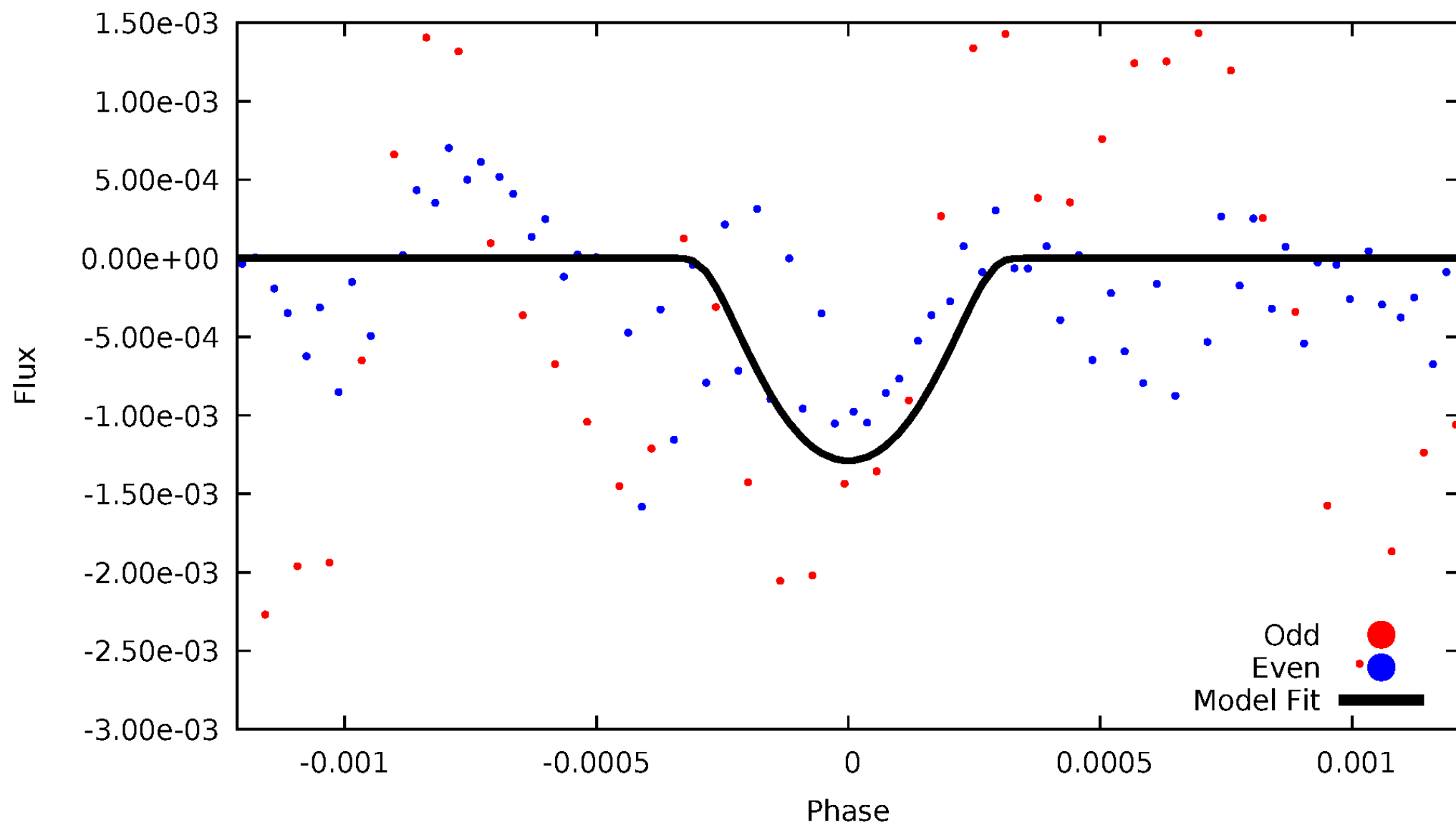


TCE 010285114-01



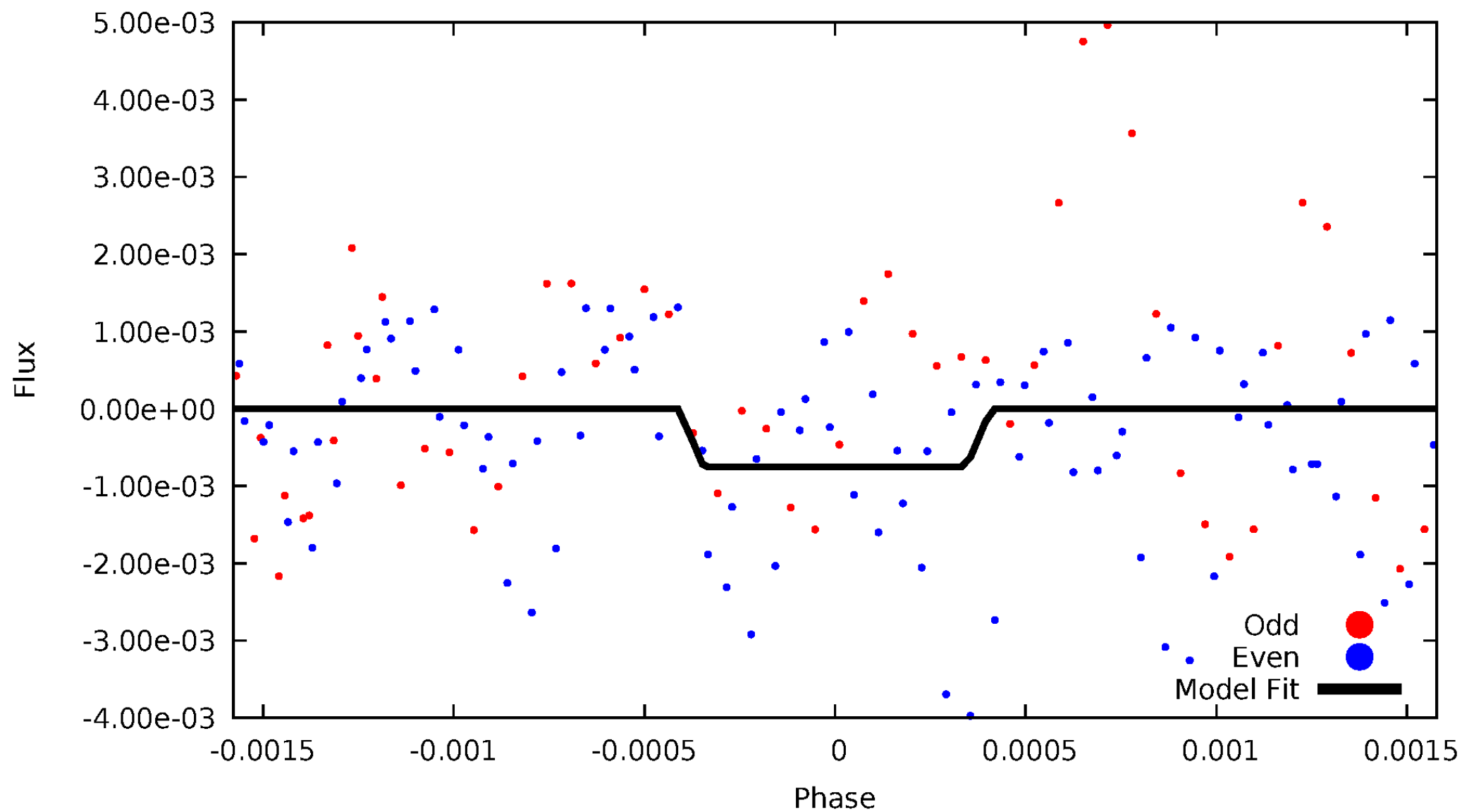
DV Odd/Even

TCE 010285114-01



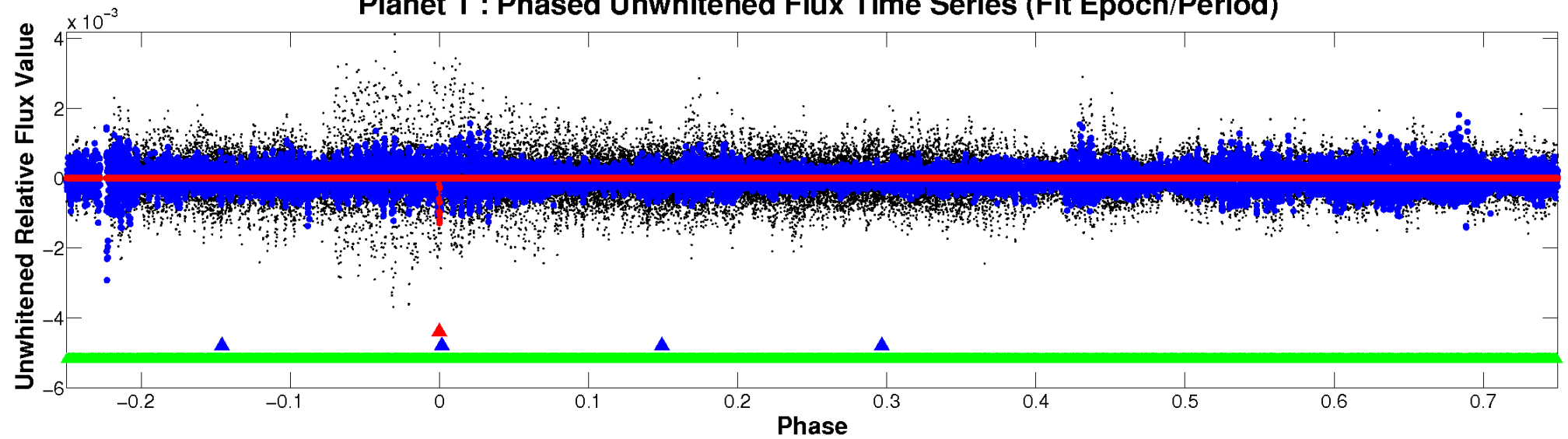
ALT Odd/Even

TCE 010285114-01

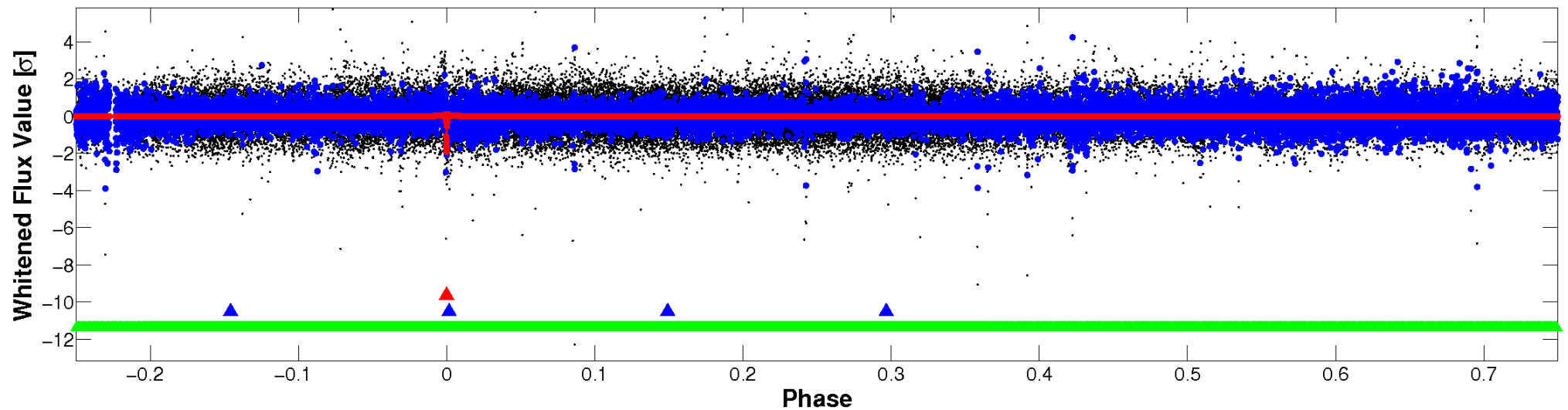


Non-Whitened Vs. Whitened Light Curve

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

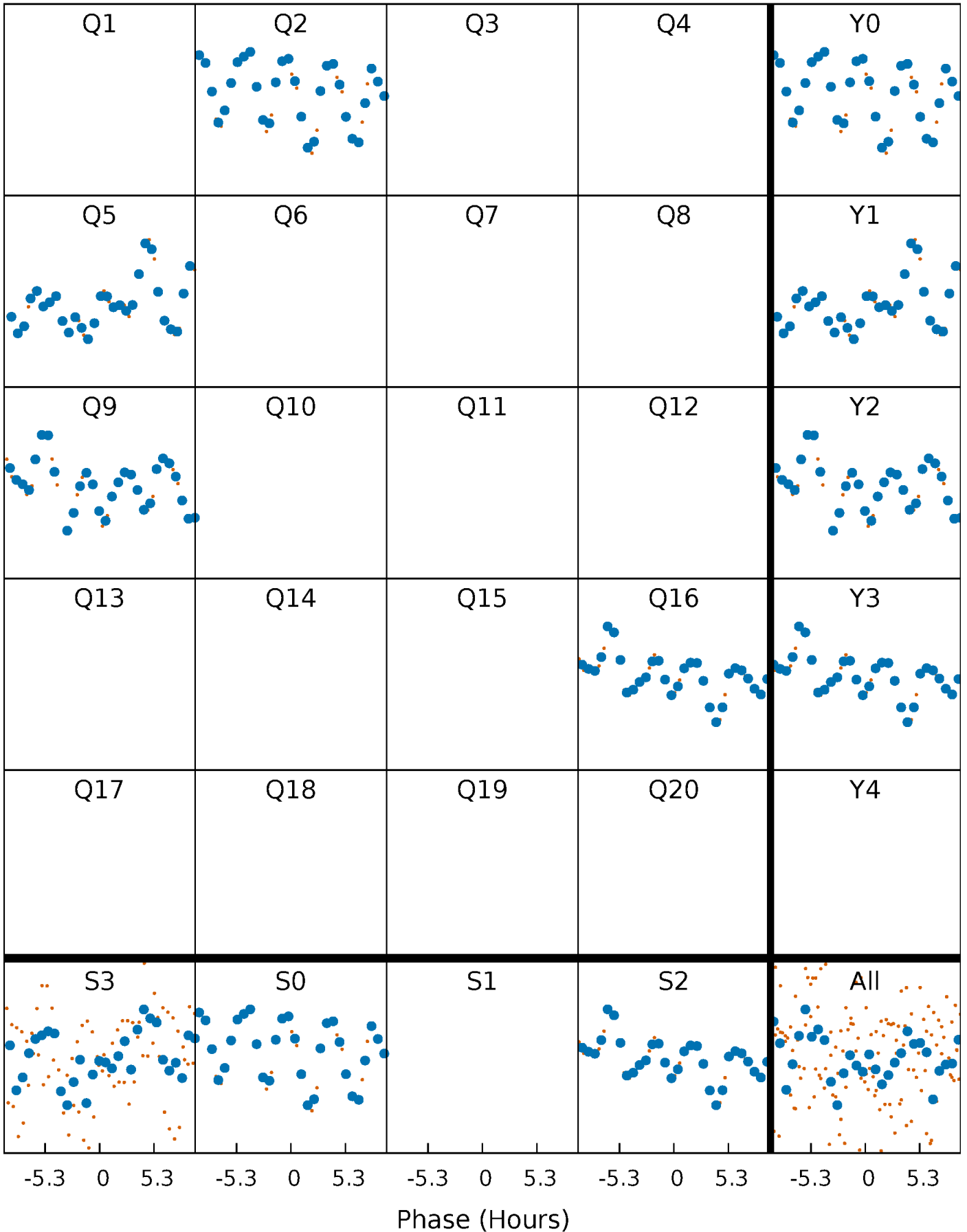


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



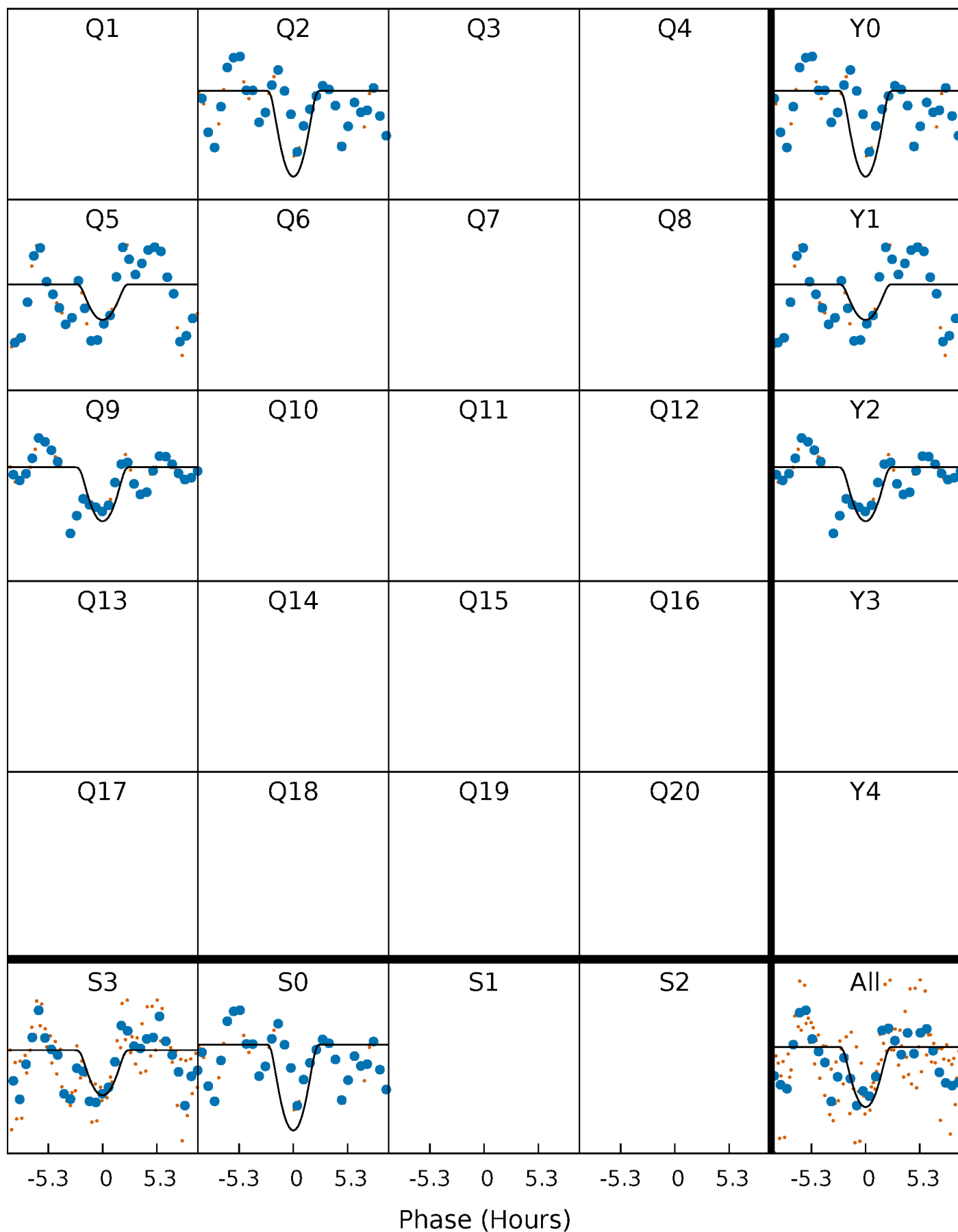
PDC Quarter-Phased Transit Curves

TCE 010285114-01 $P=319.728743$ Days $T_0=195.202035$ (BKJD)



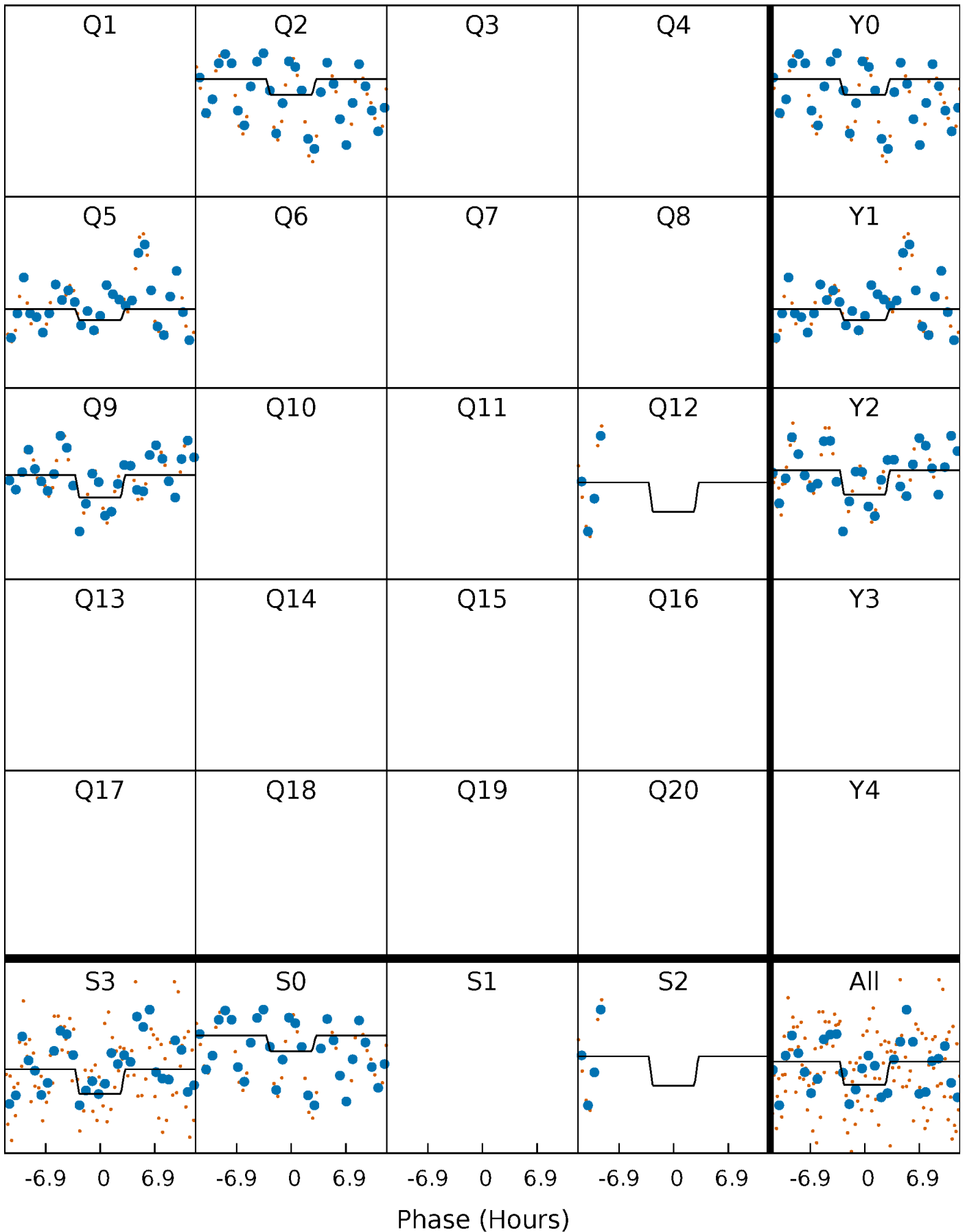
DV Quarter-Phased Transit Curves

TCE 010285114-01 P=319.728743 Days $T_0=195.202035$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

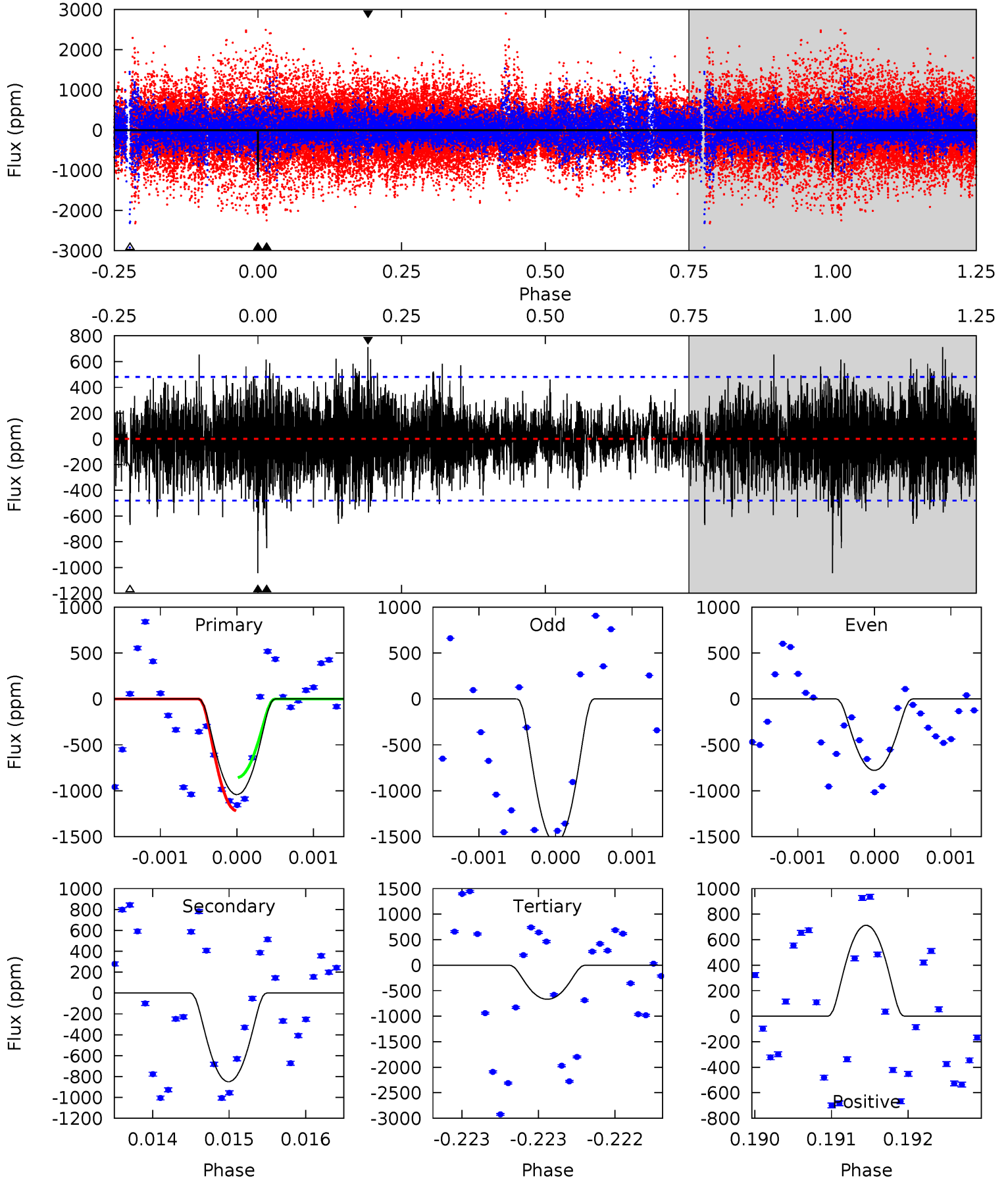
TCE 010285114-01 P=319.730725 Days $T_0=195.173540$ (BKJD)



DV Model-Shift Uniqueness Test

010285114-01, P = 319.728743 Days, E = 195.202035 Days

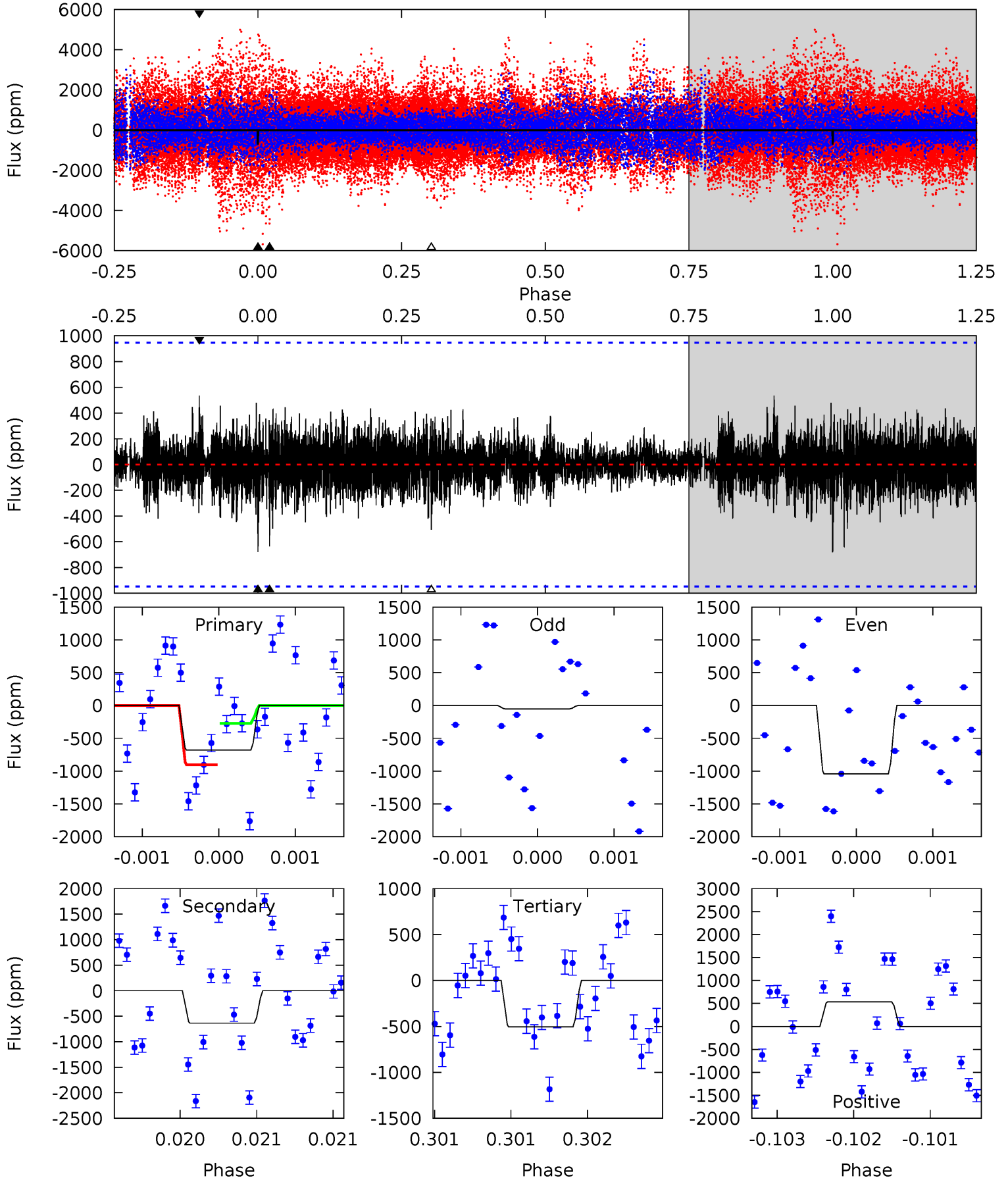
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.0	9.79	7.69	8.20	5.53	3.41	1.99	4.30	3.79	2.10	1.58	3.86	1.01	0.41	2.06



Alt Model-Shift Uniqueness Test

010285114-01, P = 319.730725 Days, E = 195.173540 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.95	3.69	2.93	3.10	5.49	3.36	0.73	1.02	0.85	0.76	0.59	2.62	0.92	0.44	1.77



Stellar Parameters For KIC 010285114

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	11617^{+593}_{-1384}	$3.666^{+0.544}_{-0.096}$	$0.070^{+0.050}_{-0.550}$	$4.534^{+0.459}_{-2.600}$	$3.472^{+0.069}_{-1.170}$	$0.052^{+0.373}_{-0.017}$
	+5%/-12%	+15%/-3%	+71%/-786%	+10%/-57%	+2%/-34%	+710%/-32%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010285114-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-850 ± 87	$22.85^{+21.88}_{-14.59}$	1223^{+141}_{-198}	7369^{+7477}_{-1897}	1610^{+10419}_{-1178}
Alt.	-636 ± 172	$18.22^{+19.47}_{-11.80}$	1222^{+144}_{-210}	7597^{+10107}_{-2209}	1797^{+14464}_{-1351}

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 $A_{obs} \gg 1.0$

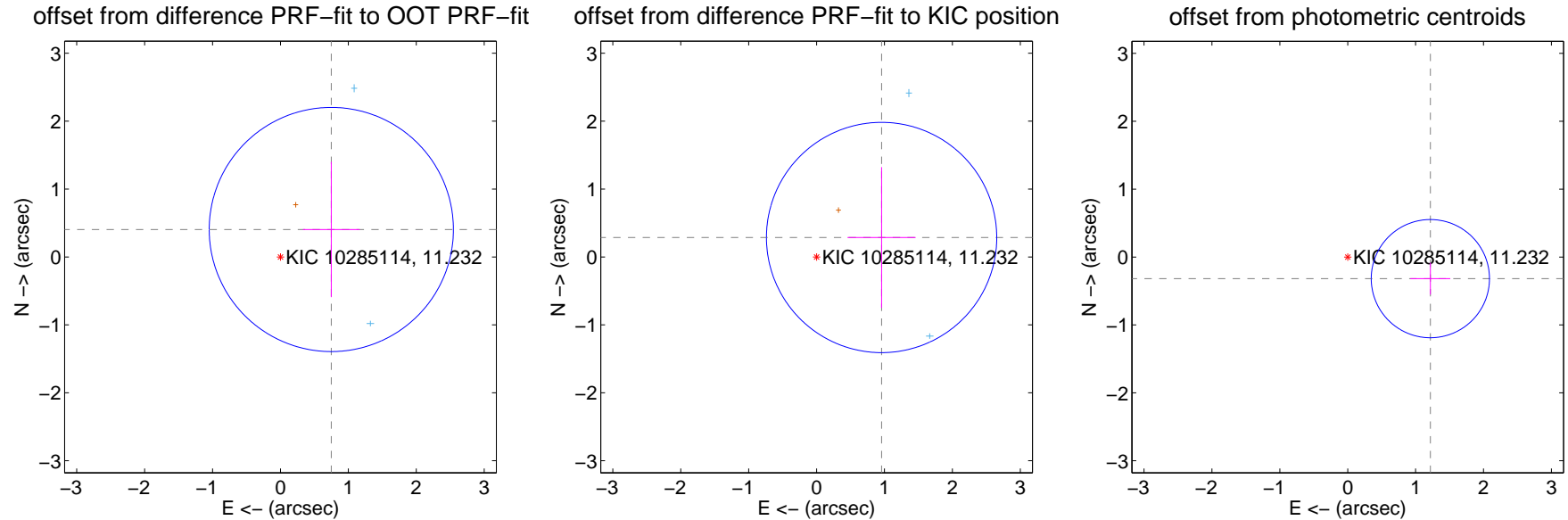
DV Centroid Data

Supplemental centroid analysis for 010285114-01. **Kepler magnitude: 11.23.** Transit SNR 8.36

There are 2 quarters with good PRF difference image offsets

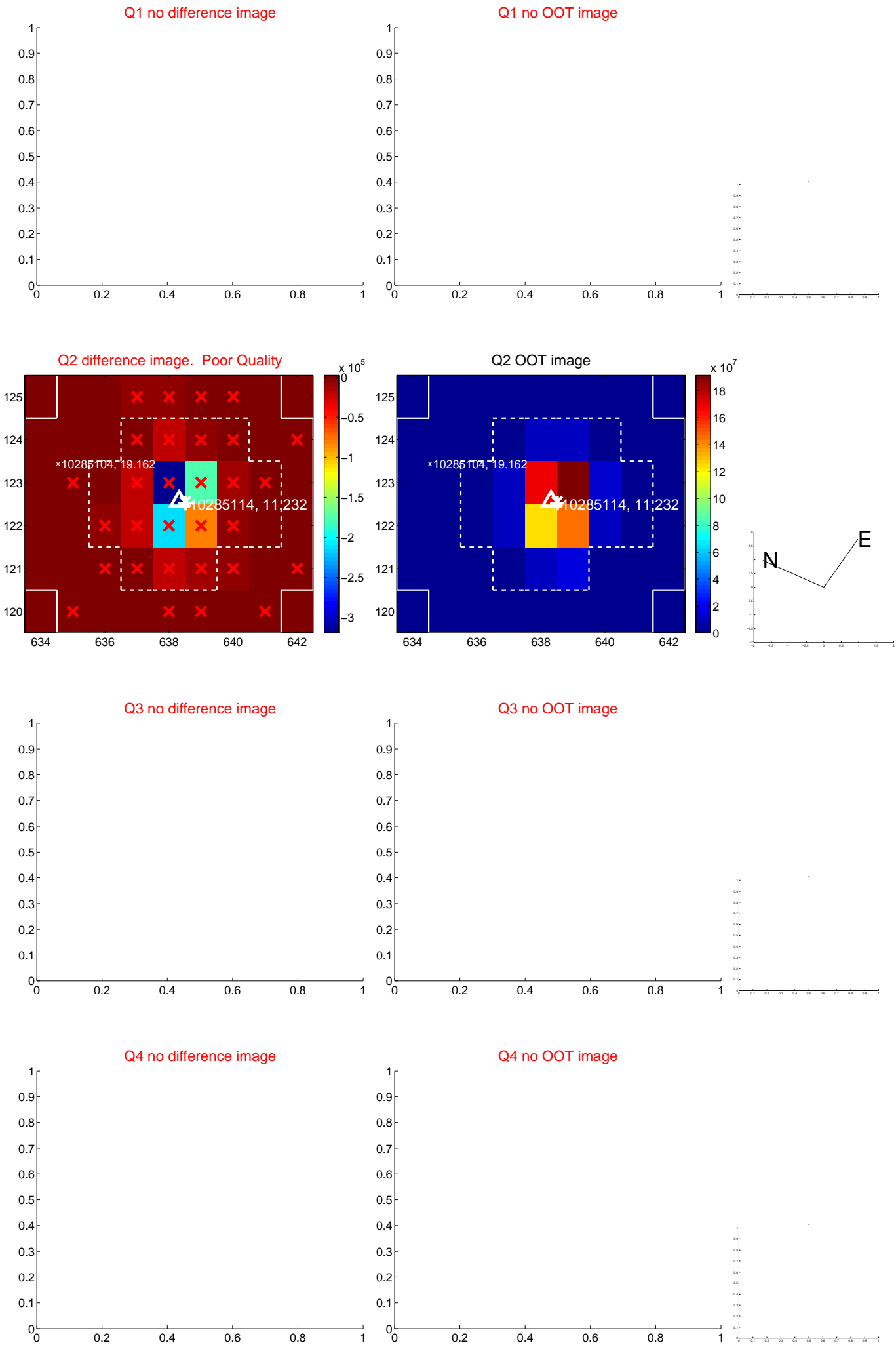
The direct PRF centroid is offset from the target star catalog position by about 0.39 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.851 ± 0.599	1.42	-0.749 ± 0.418	0.405 ± 0.996
PRF-fit source offset from KIC position	0.999 ± 0.565	1.77	-0.957 ± 0.502	0.287 ± 1.037
photometric centroid source offset	1.26 ± 0.29	4.34	-1.22 ± 0.29	-0.32 ± 0.24

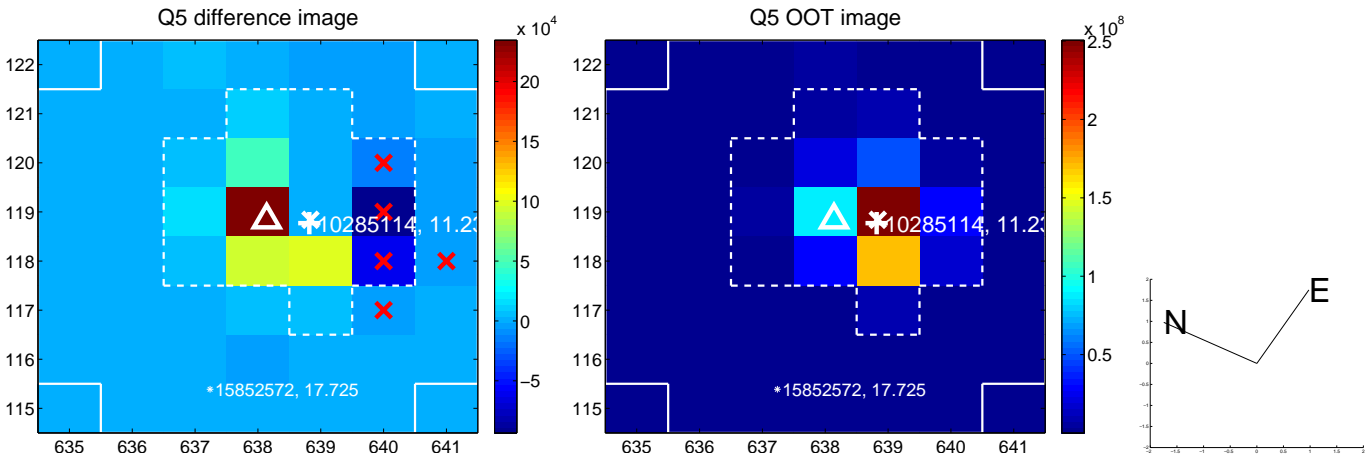


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

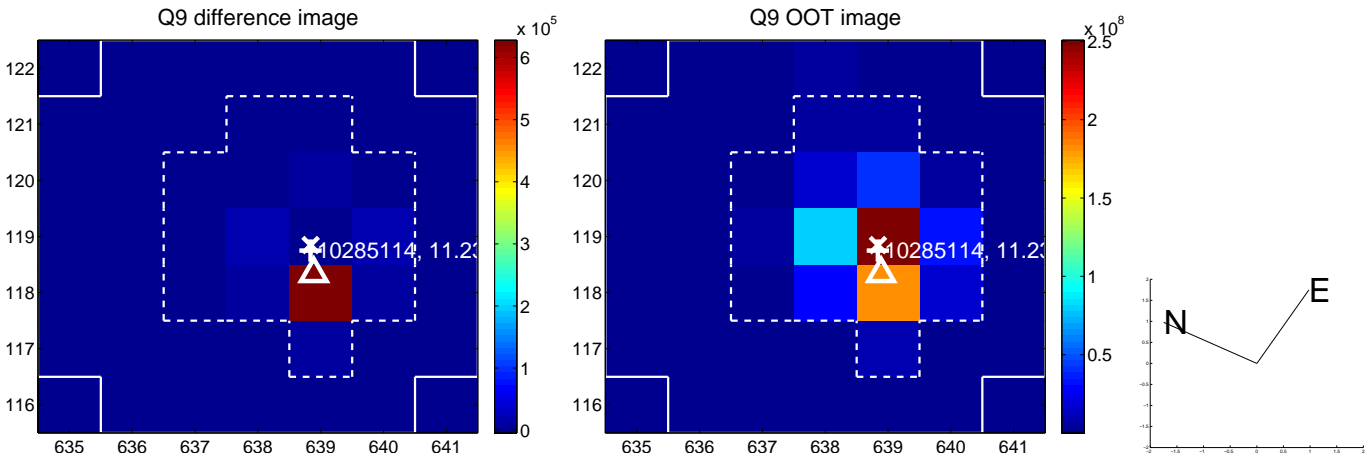
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



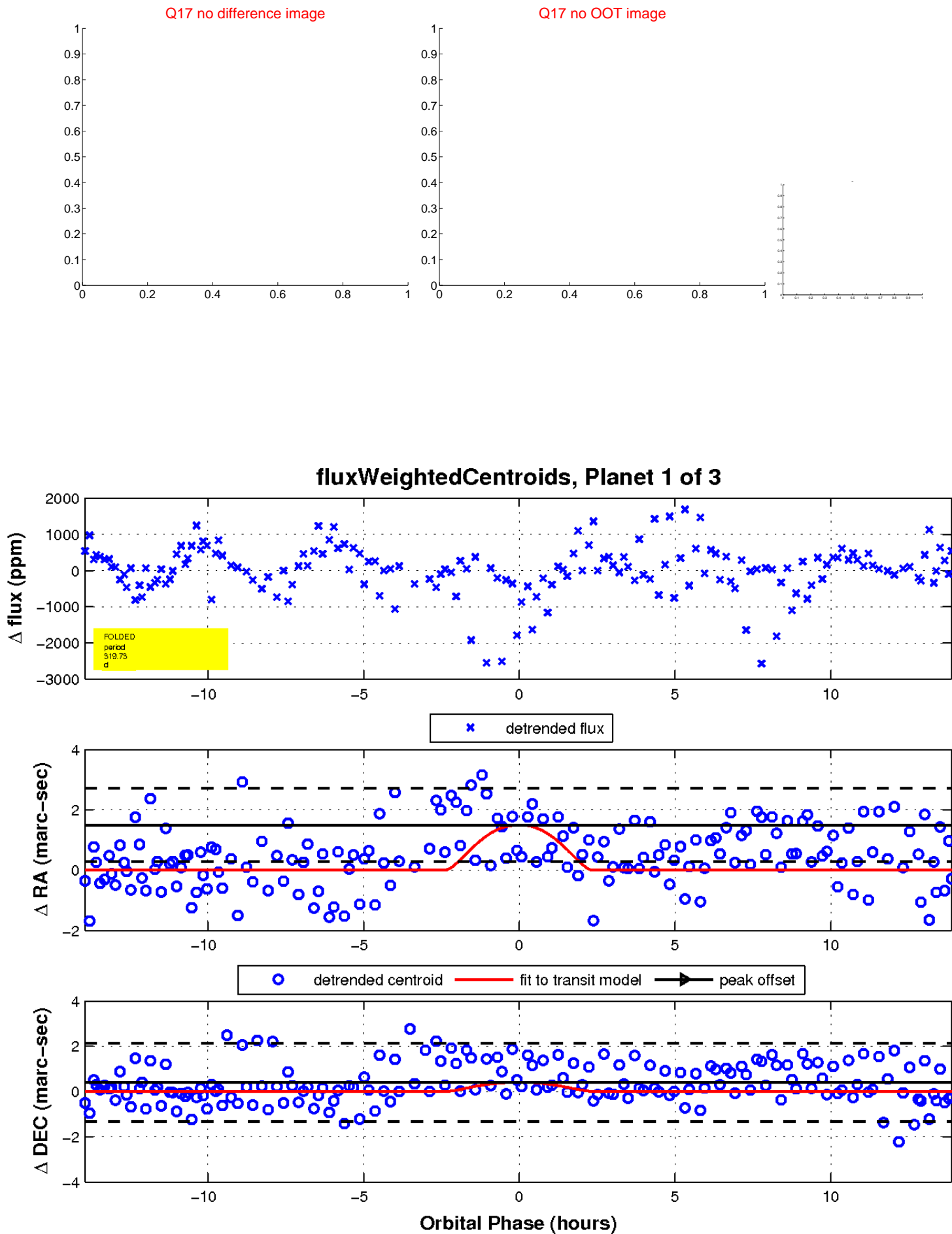
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

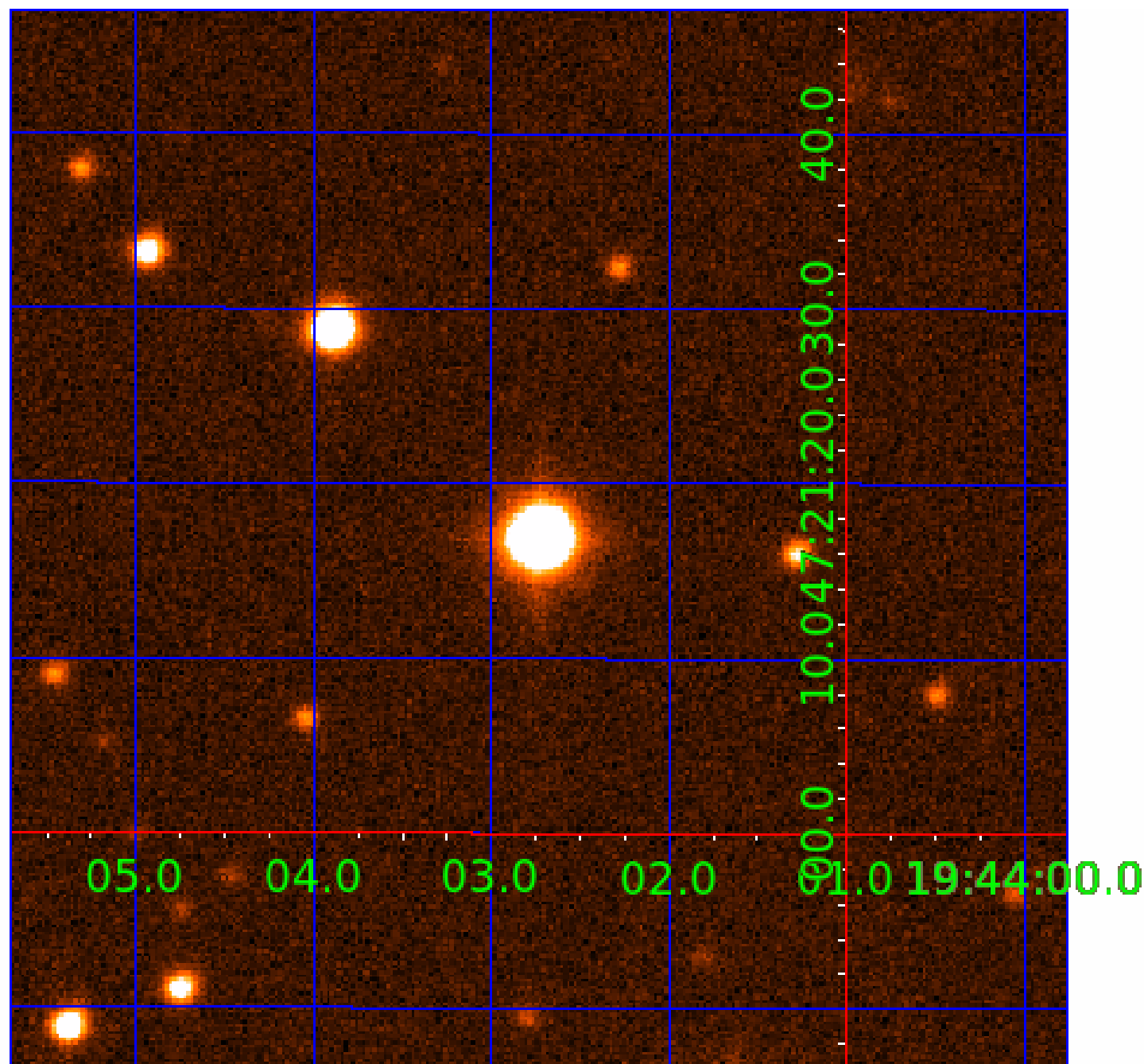


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010285114

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})
010285114-01	OBS	No	319.728743	195.202035	1289.7	4.656	10.9	8.4	4.53	11617	22.34	174.53
010285114-02	OBS	No	366.887968	468.324531	356.9	33.711	10.3	8.2	4.53	11617	9.22	145.28
010285114-03	OBS	No	0.507039	131.872024	29.6	1.754	8.5	6.4	4.53	11617	2.81	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010285114-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
010285114-02	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED
010285114-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED

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

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

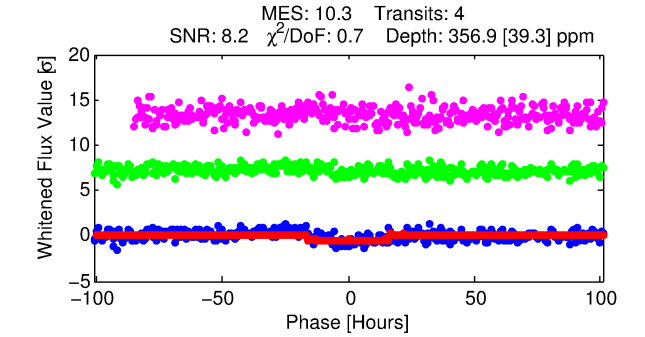
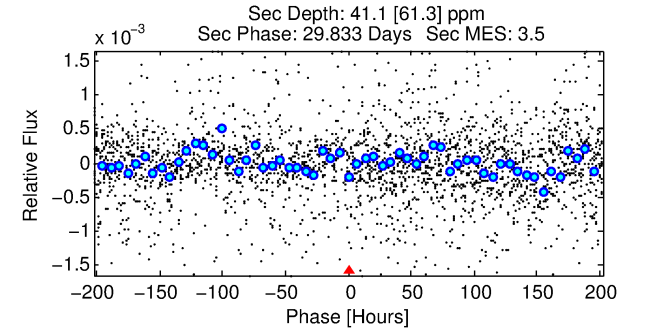
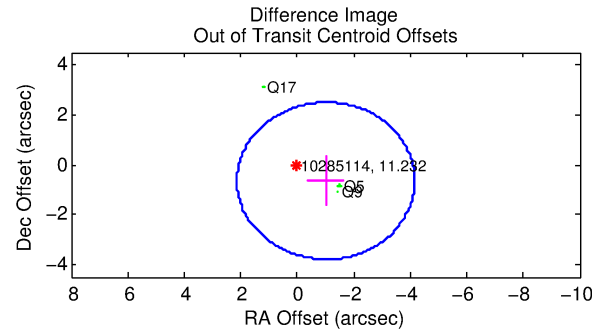
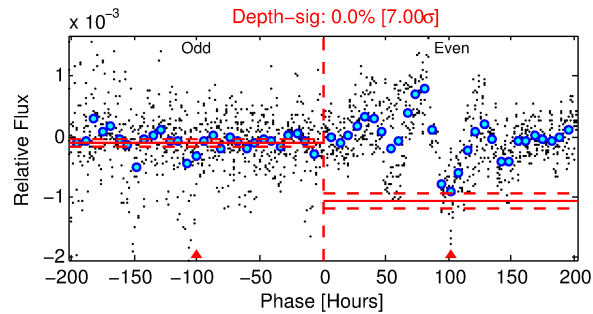
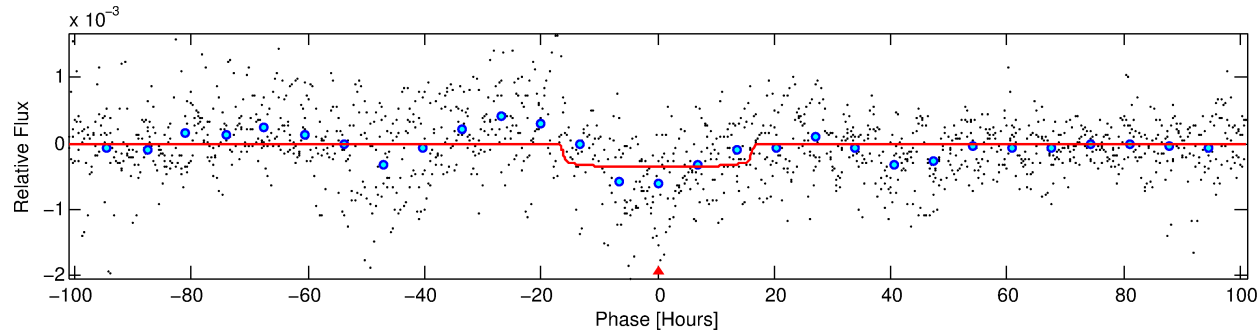
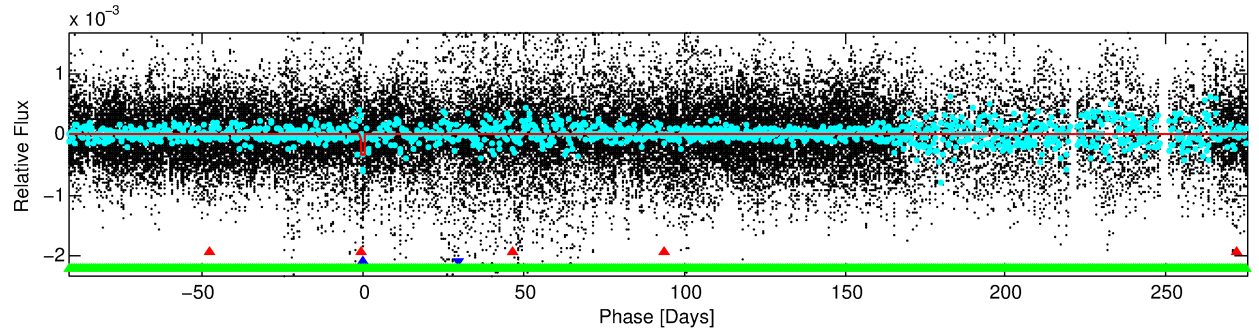
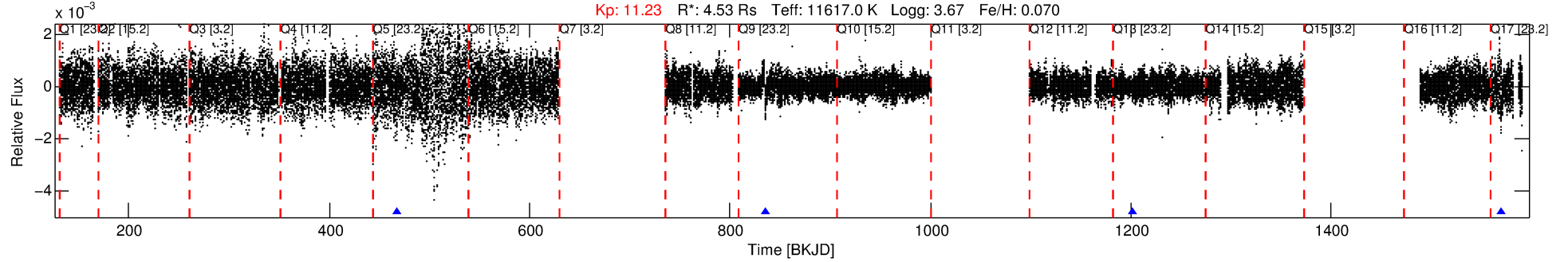
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010285114-02

No Significant Match Found

DV One-Page Summary

KIC: 10285114 Candidate: 2 of 3 Period: 366.888 d



DV Fit Results:

Period = 366.88797 [0.01468] d
Epoch = 468.3245 [0.0297] BKJD
Rp/R* = 0.0186 [0.0012]
a/R* = 61.47 [14.74]
b = 0.70 [0.17]
Seff = 145.28 [150.32]
Teq = 885 [229] K
Rp = 9.22 [5.32] Re
a = 1.5195 [0.8602] AU
Ag = 614.03 [1078.93] [0.57 σ]
Teffp = 6813 [2678] K [2.21 σ]

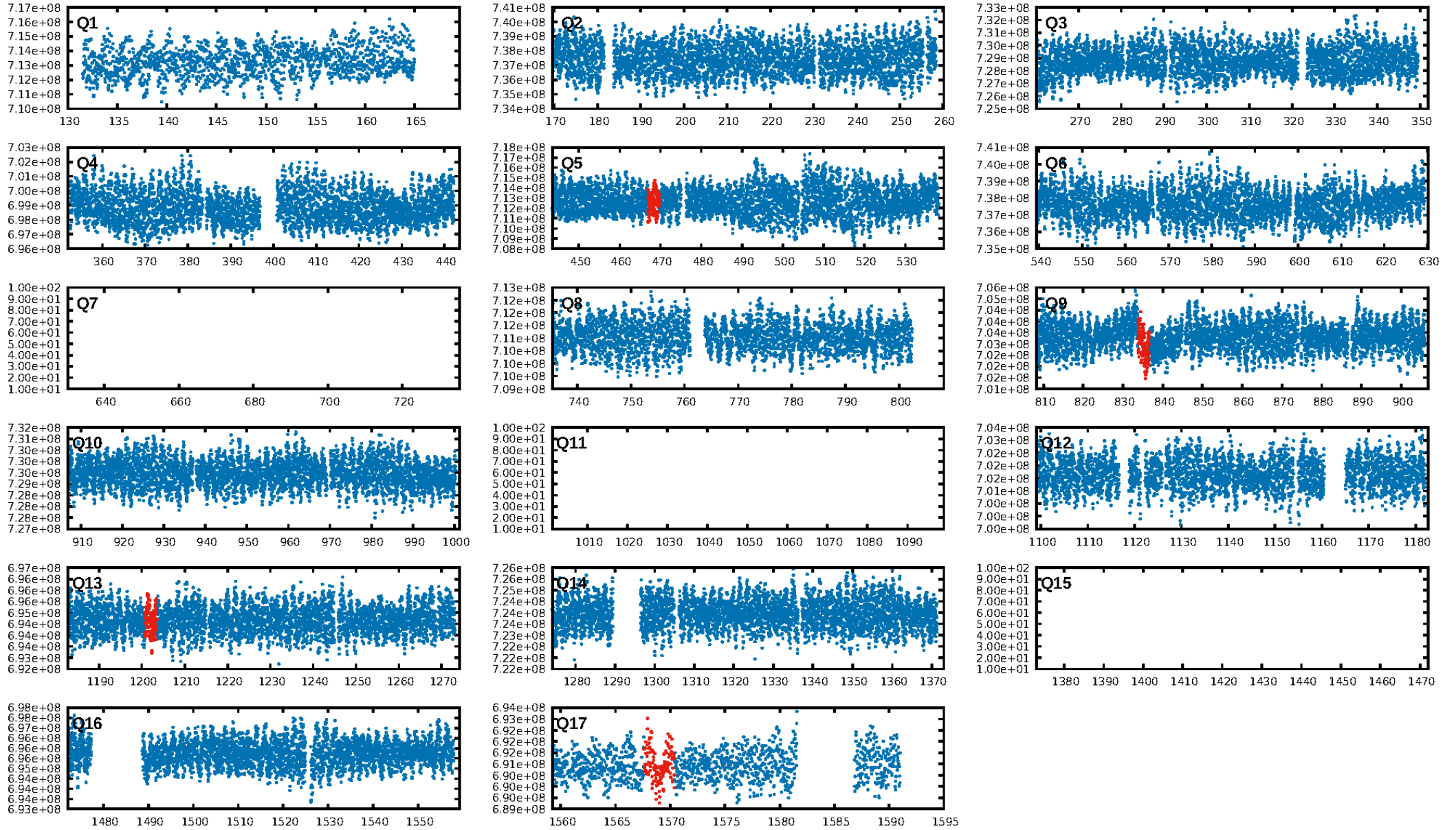
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [33.26 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.54e-15
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.335
Centroid-sig: 12.6%
Centroid-so: 0.410 arcsec [0.95 σ]
OotOffset-rm: 1.204 arcsec [1.15 σ]
KicOffset-rm: 1.584 arcsec [1.24 σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.00 [0/3]

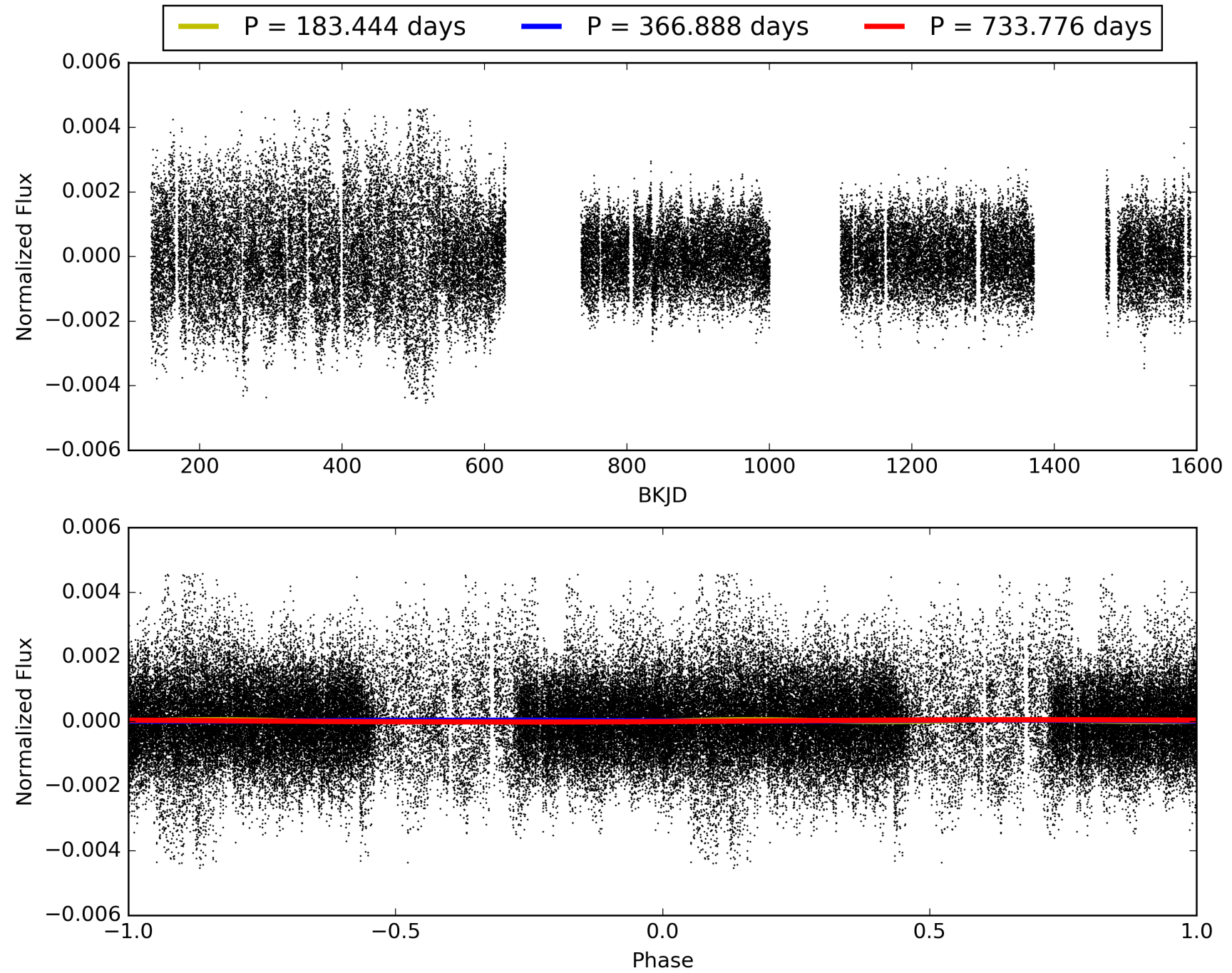
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:24:09 Z

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

TCE 010285114-02, PDC Light Curves

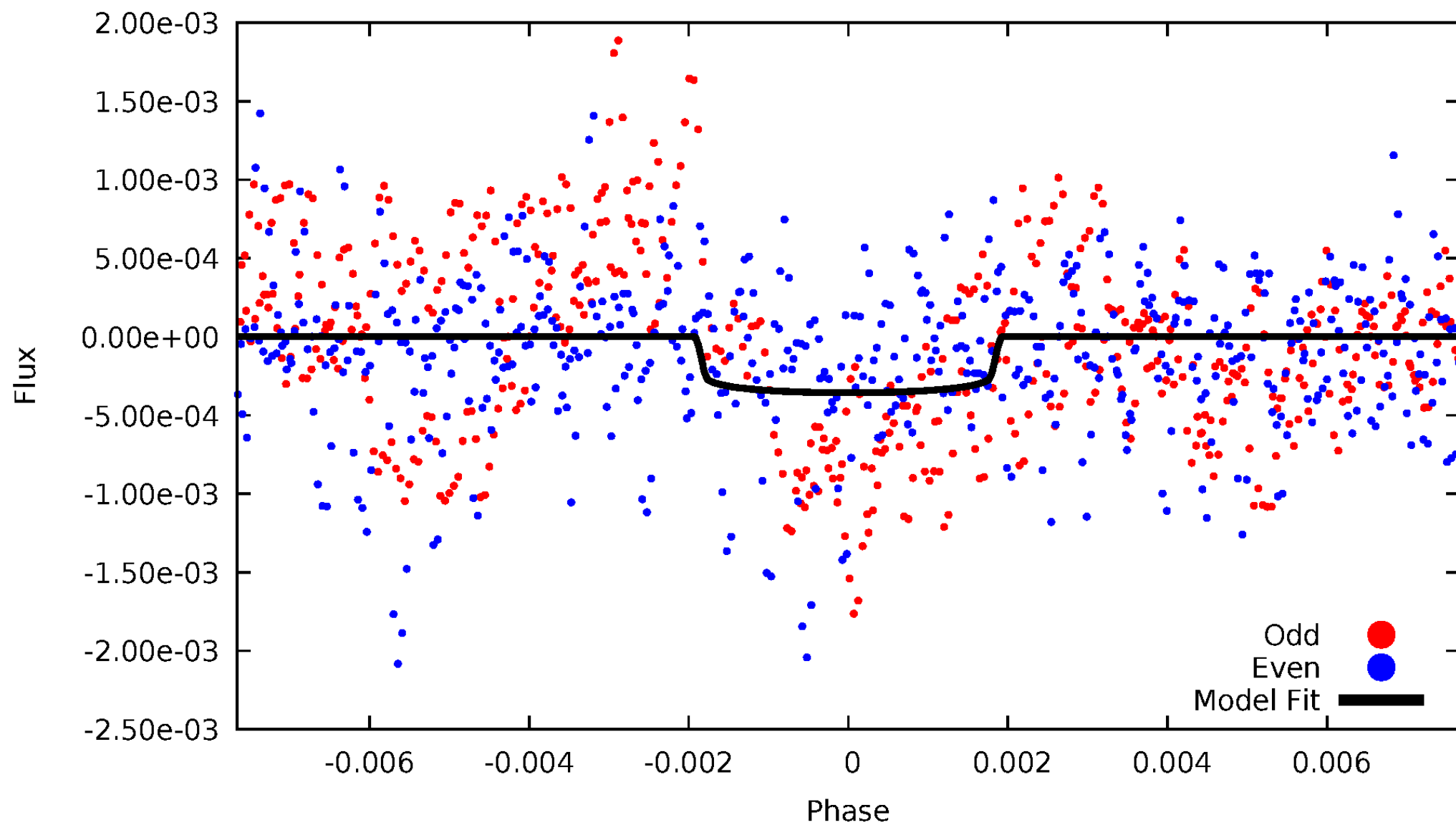


TCE 010285114-02



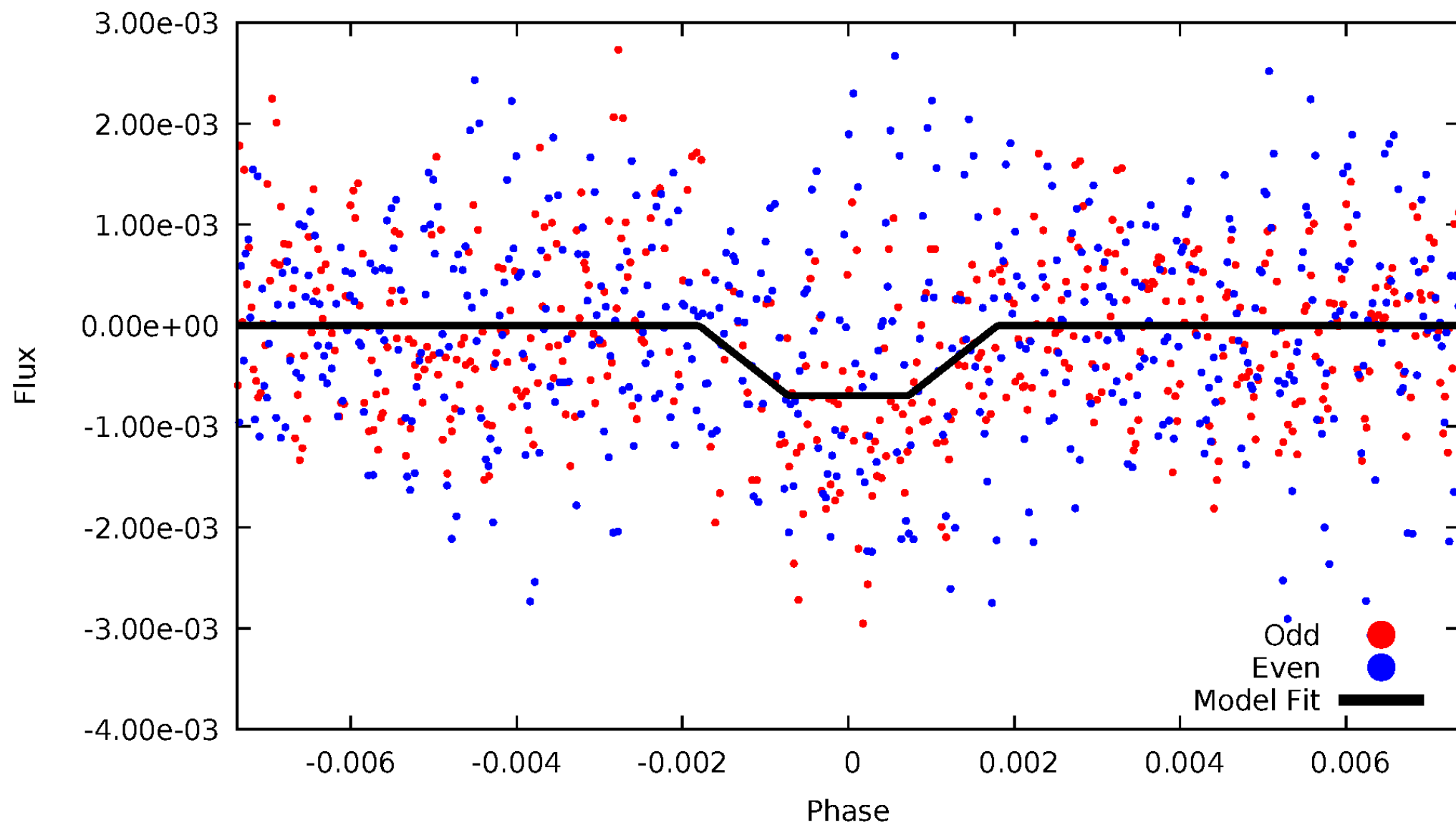
DV Odd/Even

TCE 010285114-02



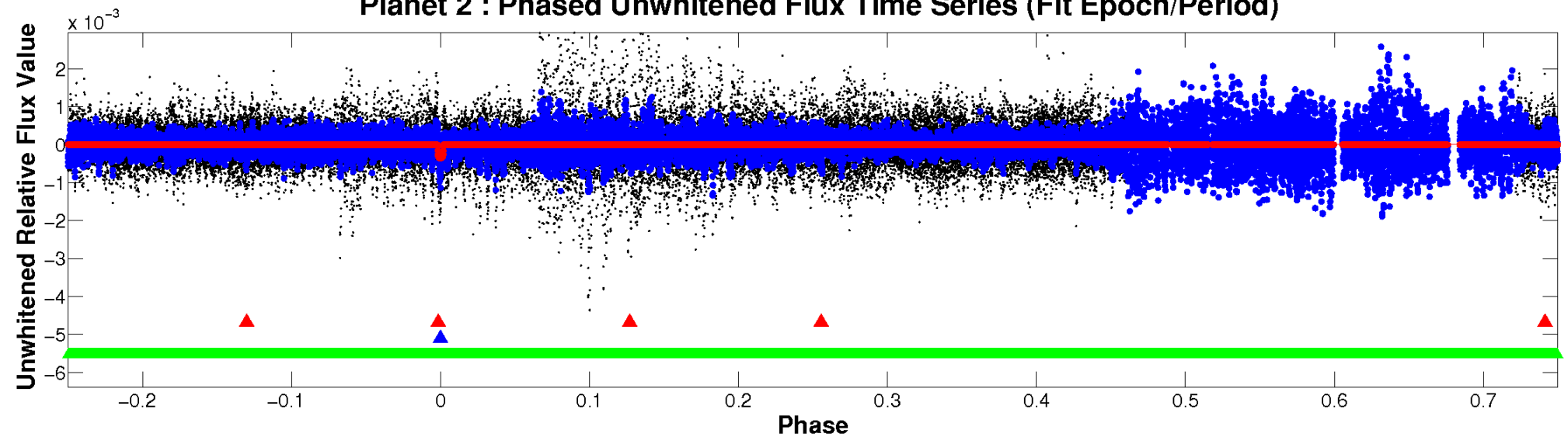
ALT Odd/Even

TCE 010285114-02

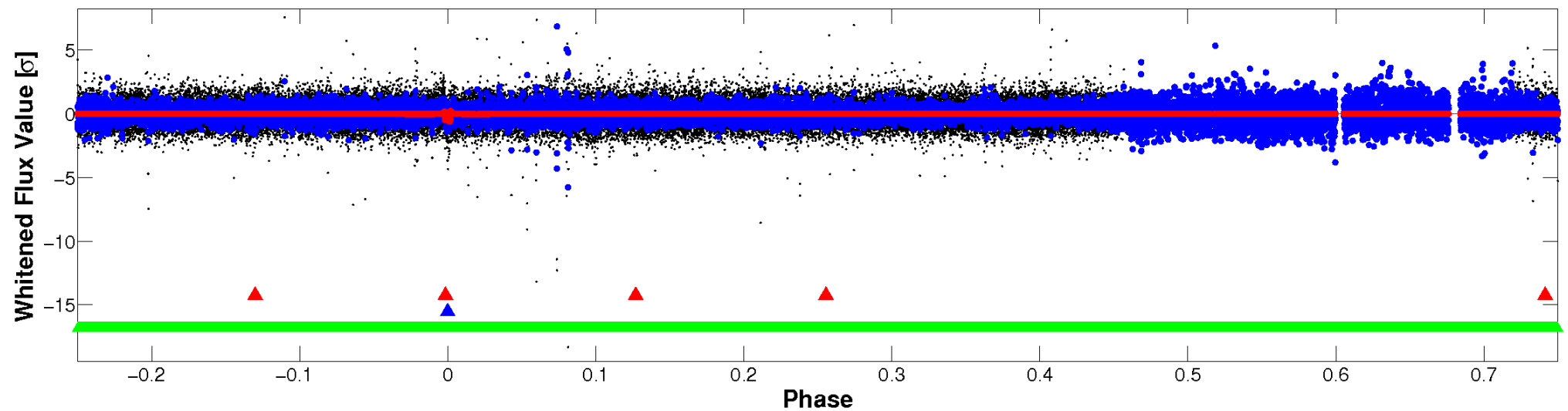


Non-Whitened Vs. Whitened Light Curve

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

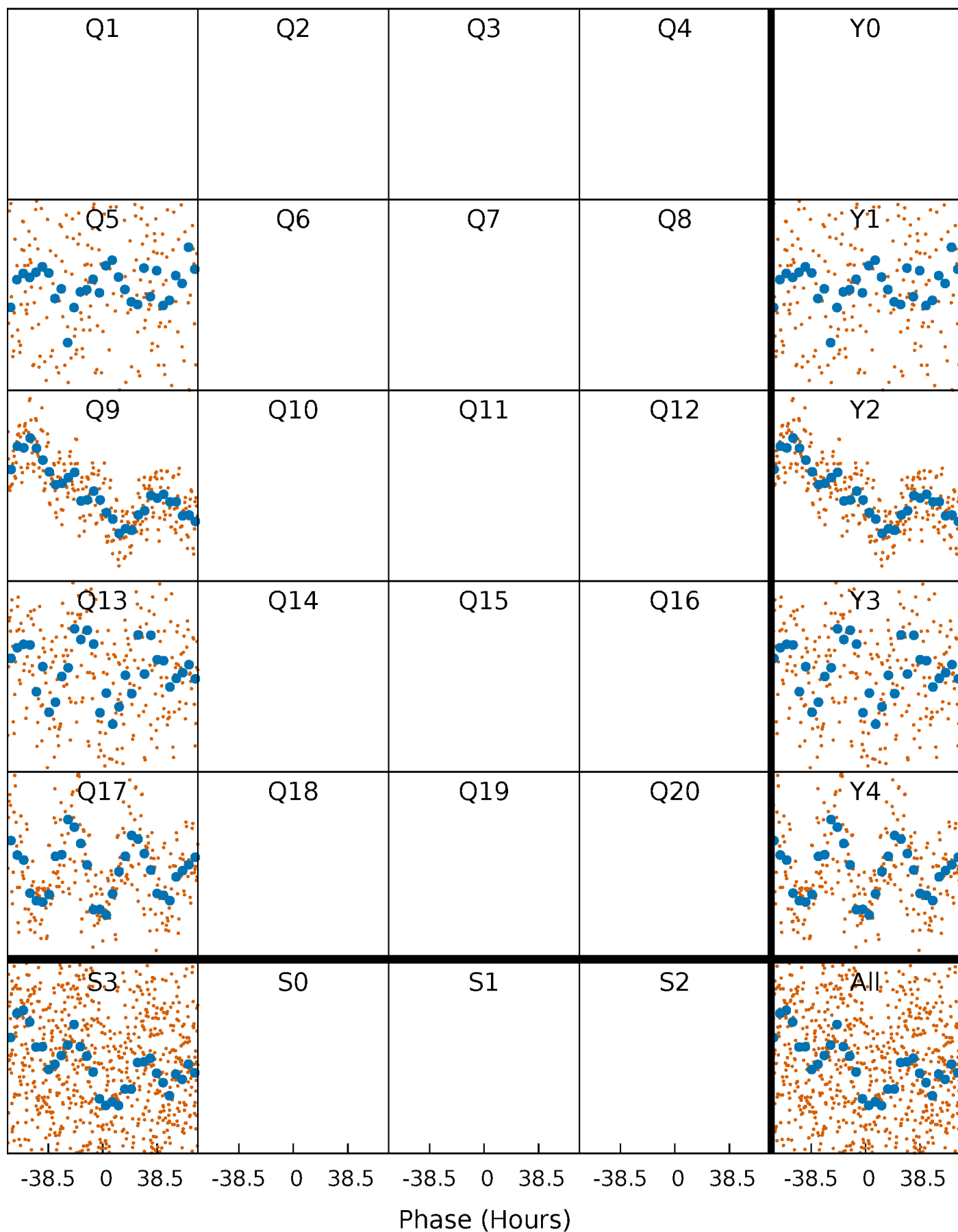


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



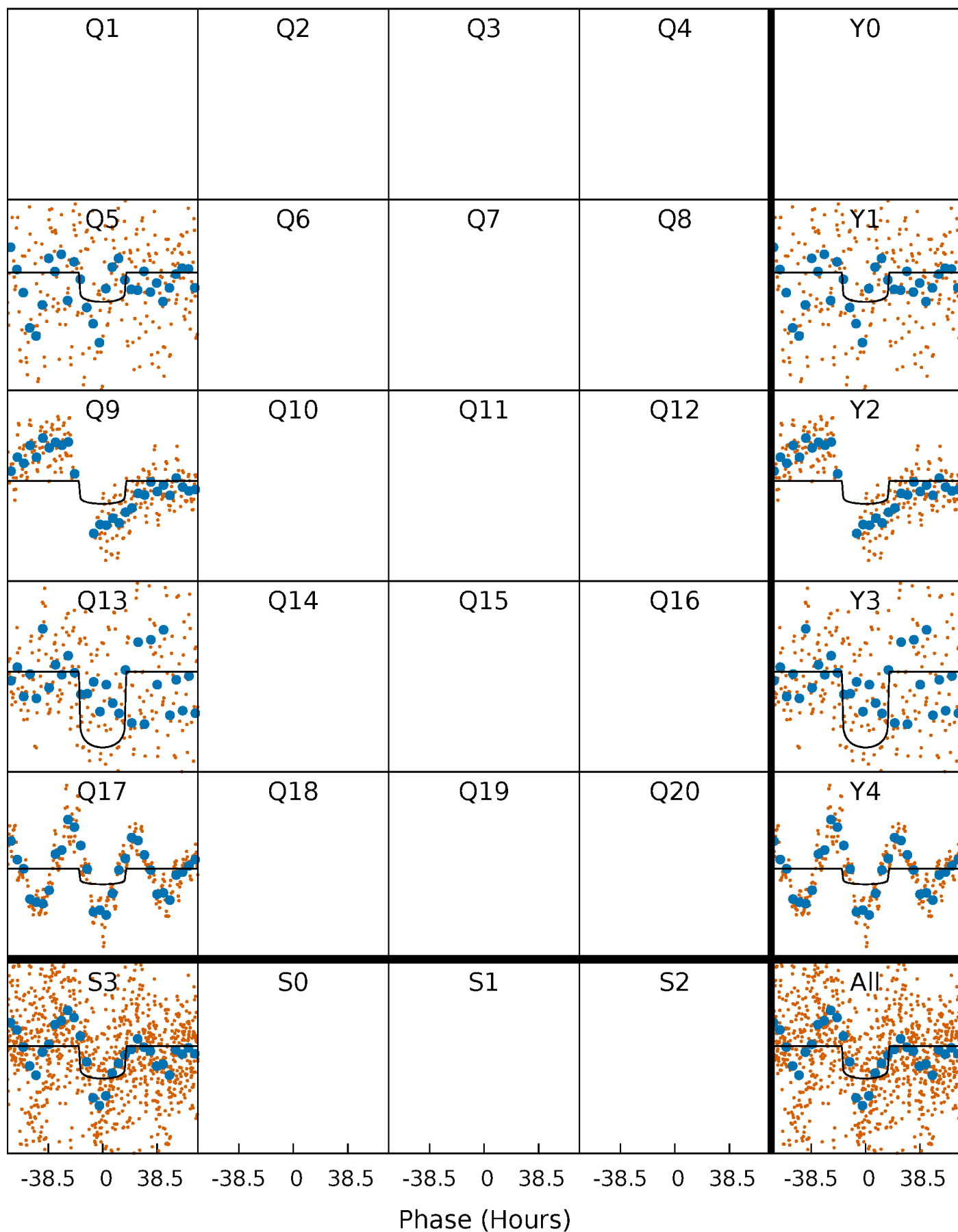
PDC Quarter-Phased Transit Curves

TCE 010285114-02 P=366.887968 Days $T_0=468.324531$ (BKJD)



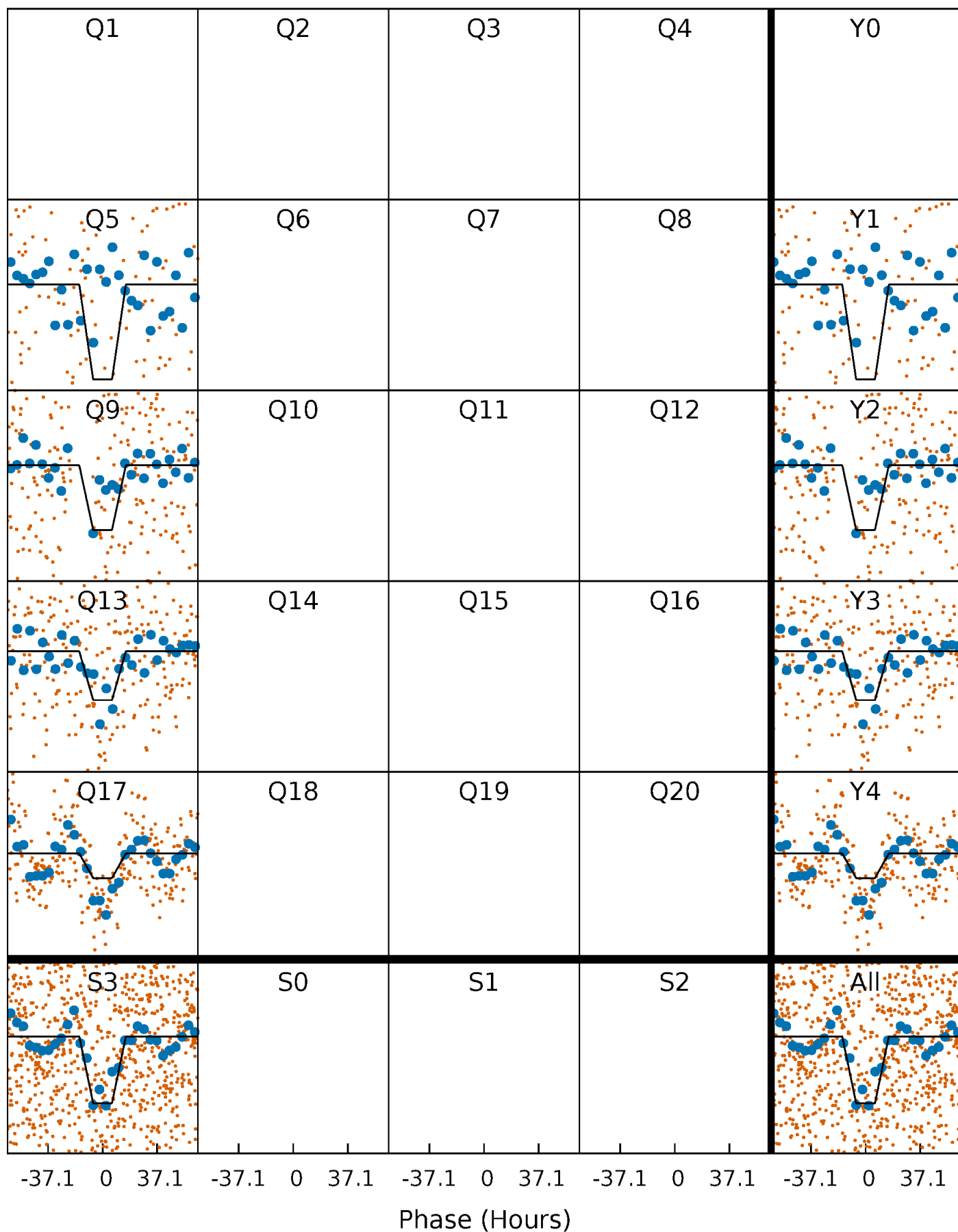
DV Quarter-Phased Transit Curves

TCE 010285114-02 P=366.887968 Days $T_0=468.324531$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

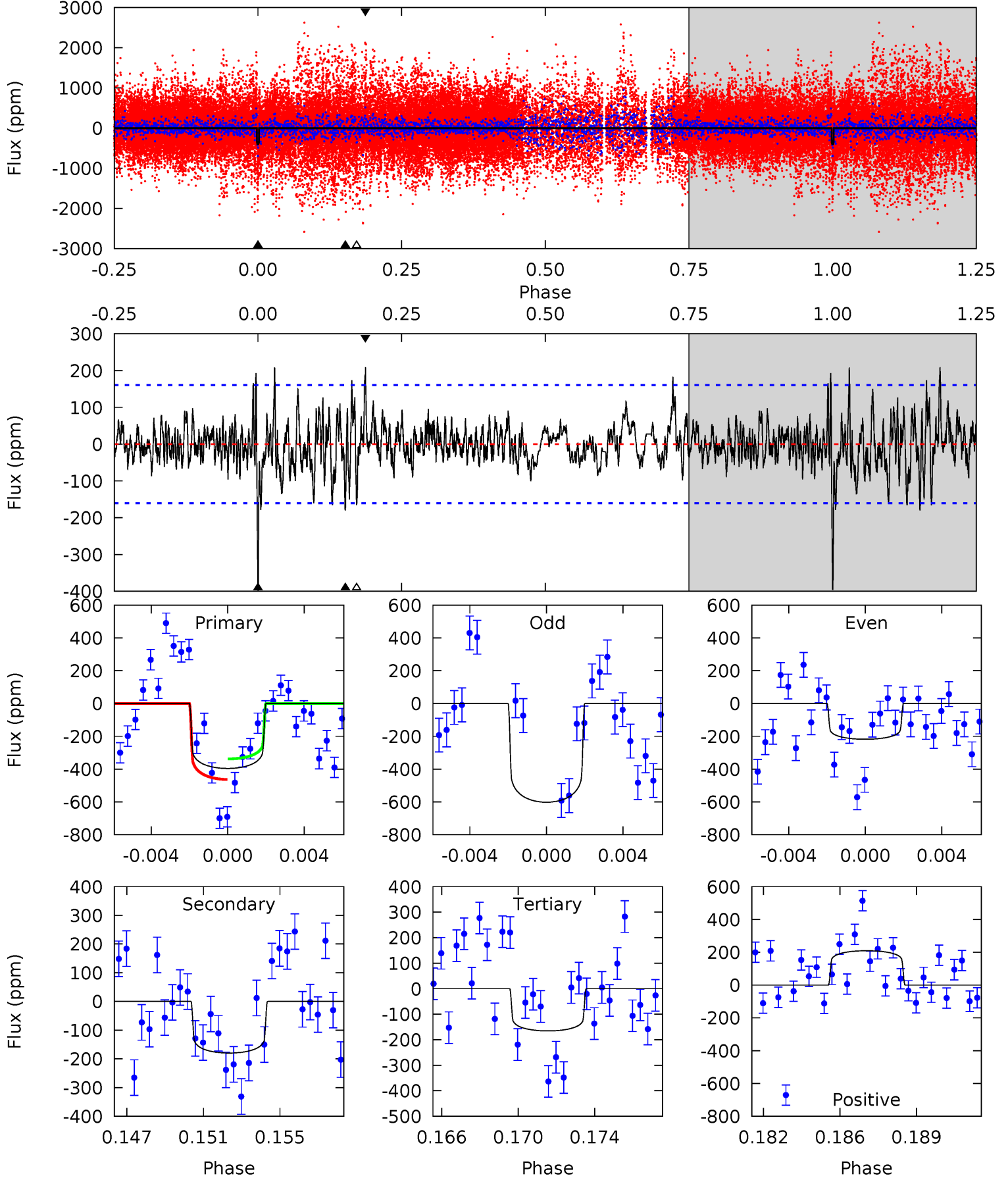
TCE 010285114-02 $P=366.850514$ Days $T_0=468.397079$ (BKJD)



DV Model-Shift Uniqueness Test

010285114-02, P = 366.887968 Days, E = 101.436563 Days

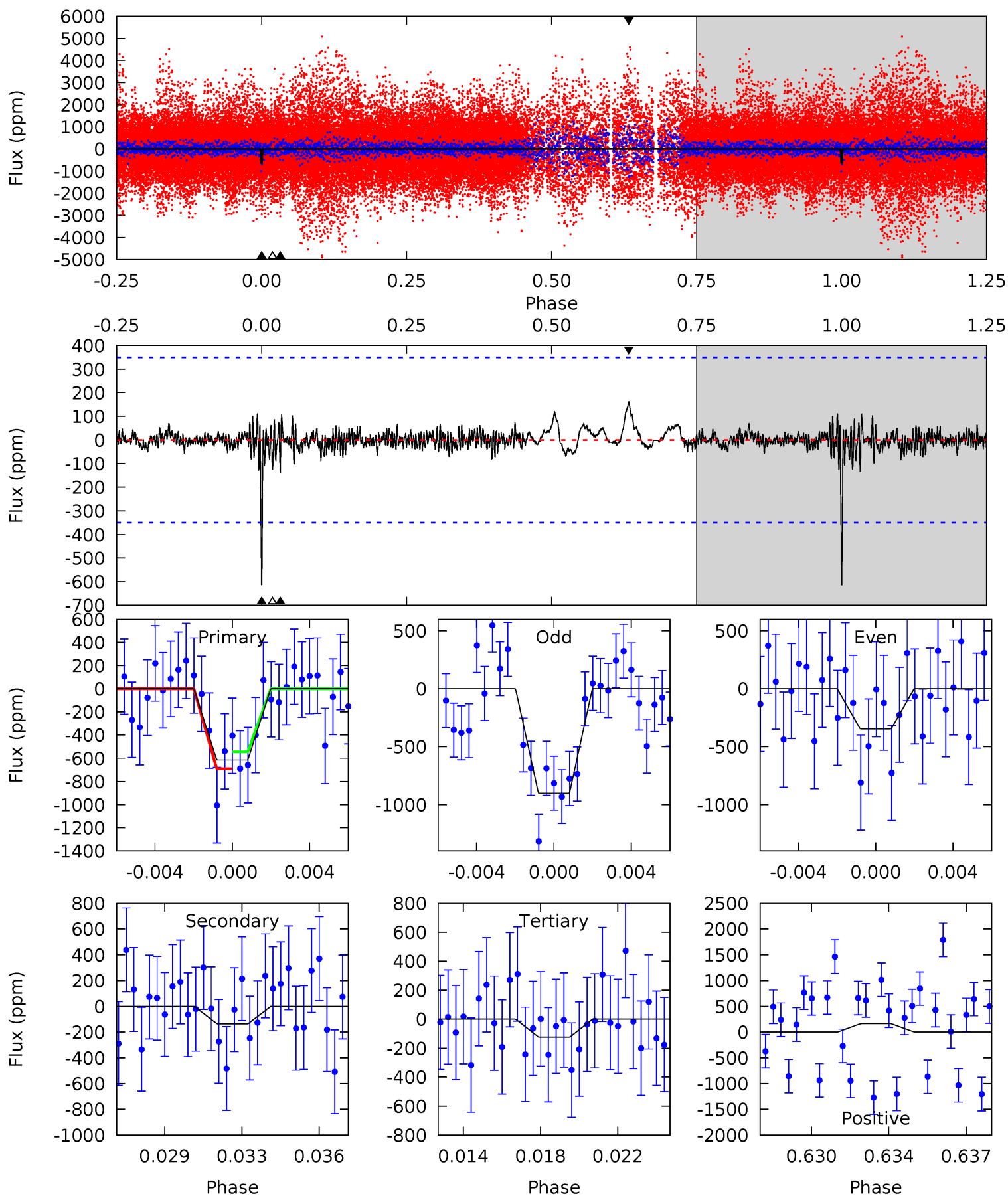
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	5.82	5.36	6.78	5.21	2.89	1.59	7.47	6.05	0.46	-0.96	6.08	1.01	0.35	2.05



Alt Model-Shift Uniqueness Test

010285114-02, P = 366.850514 Days, E = 101.546565 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.19	2.03	1.85	2.42	5.22	2.91	0.45	7.34	6.77	0.18	-0.39	4.19	1.19	0.21	1.08



Stellar Parameters For KIC 010285114

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	11617^{+593}_{-1384}	$3.666^{+0.544}_{-0.096}$	$0.070^{+0.050}_{-0.550}$	$4.534^{+0.459}_{-2.600}$	$3.472^{+0.069}_{-1.170}$	$0.052^{+0.373}_{-0.017}$
	+5%/-12%	+15%/-3%	+71%/-786%	+10%/-57%	+2%/-34%	+710%/-32%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010285114-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-180 ± 31	$8.69^{+1.30}_{-2.56}$	1158^{+134}_{-180}	8884^{+944}_{-971}	3031^{+2565}_{-893}
Alt.	-136 ± 67	$12.44^{+1.55}_{-3.79}$	1162^{+133}_{-195}	6611^{+972}_{-1114}	1175^{+1035}_{-606}

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 $A_{obs} \gg 1.0$

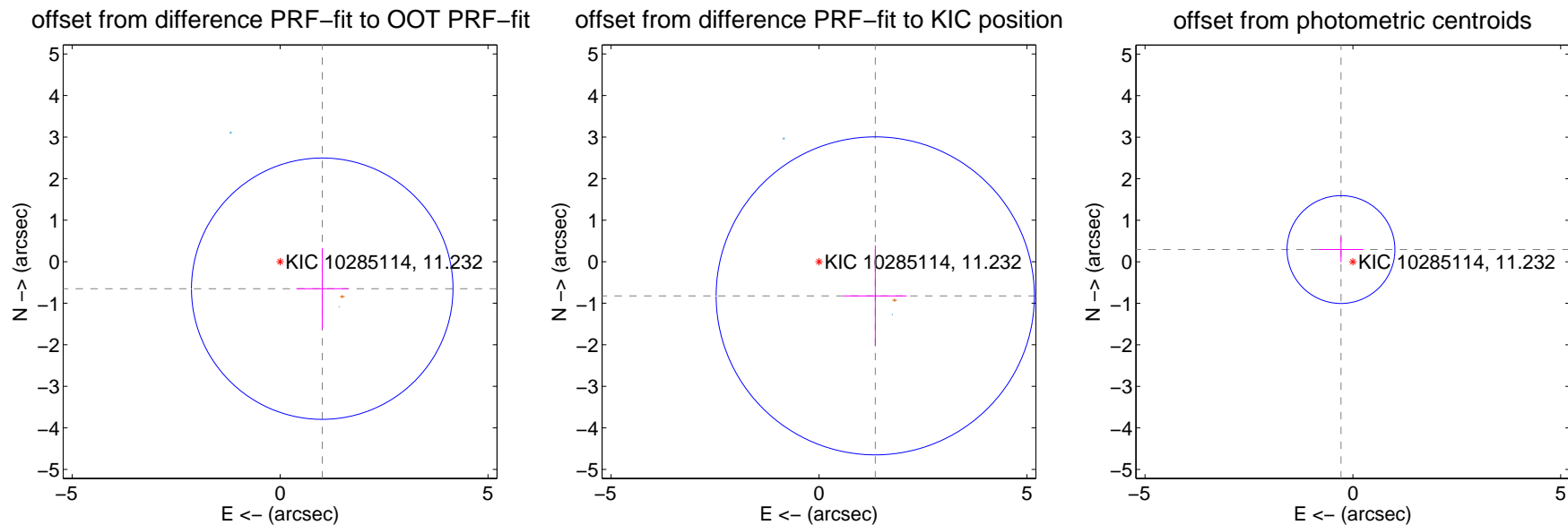
DV Centroid Data

Supplemental centroid analysis for 010285114-02. **Kepler magnitude: 11.23.** Transit SNR 8.23

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.204 ± 1.048	1.15	-1.013 ± 0.625	-0.650 ± 0.974
PRF-fit source offset from KIC position	1.584 ± 1.275	1.24	-1.353 ± 0.760	-0.823 ± 1.213
photometric centroid source offset	0.41 ± 0.43	0.95	0.29 ± 0.54	0.29 ± 0.30

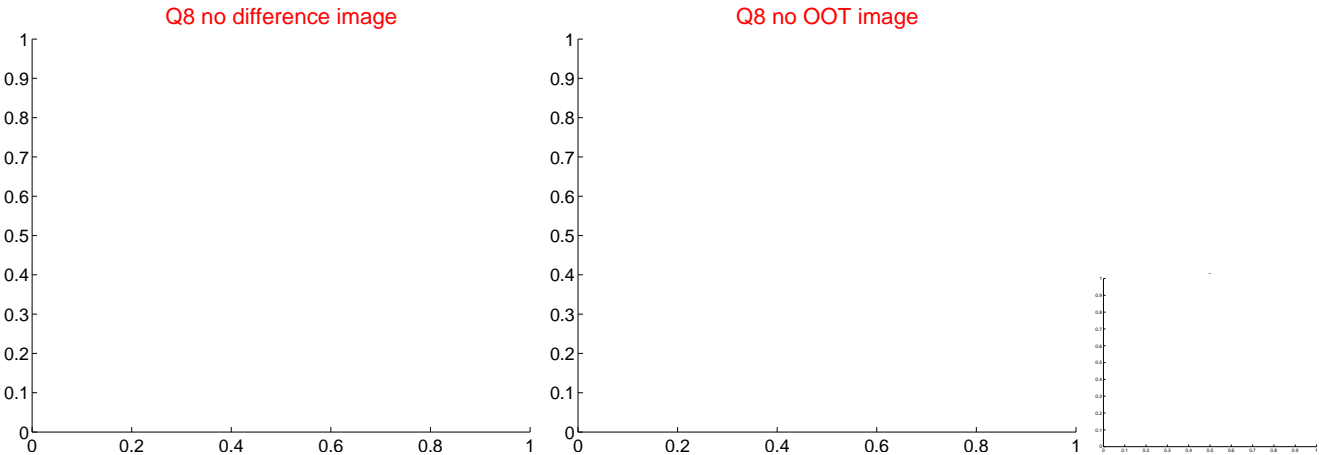
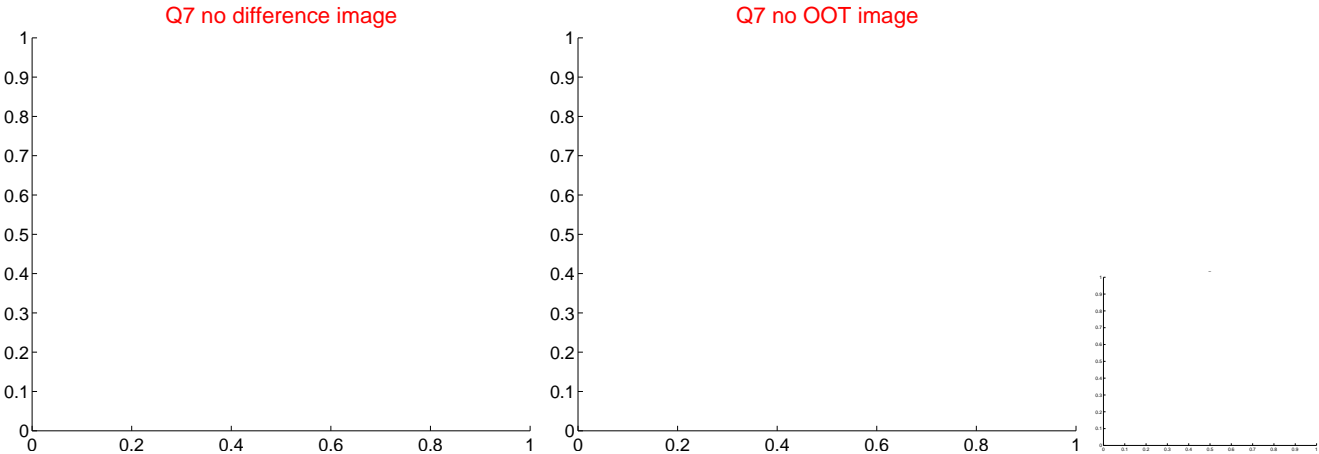
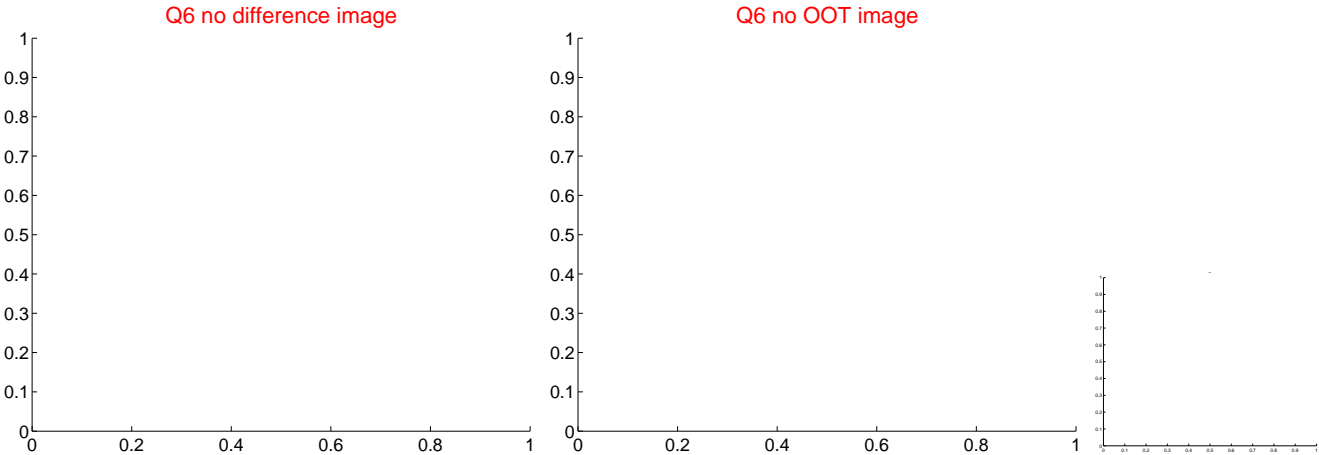
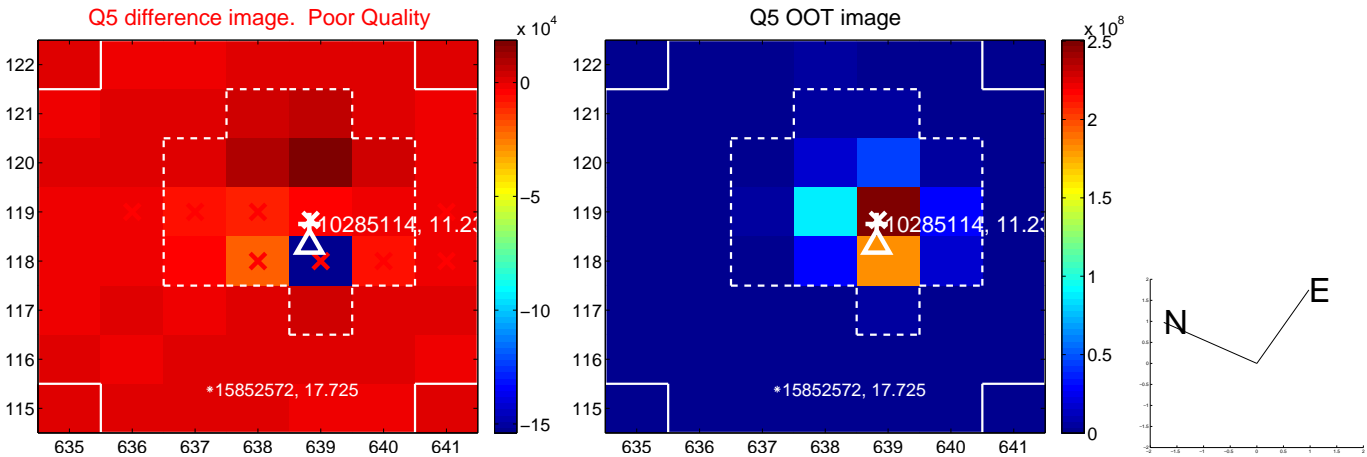


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

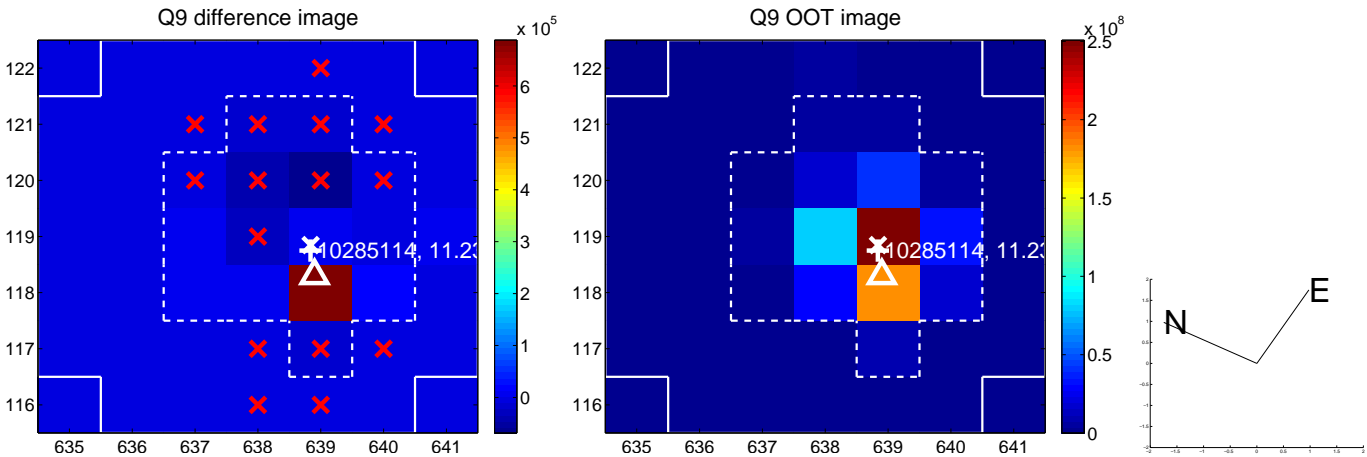
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



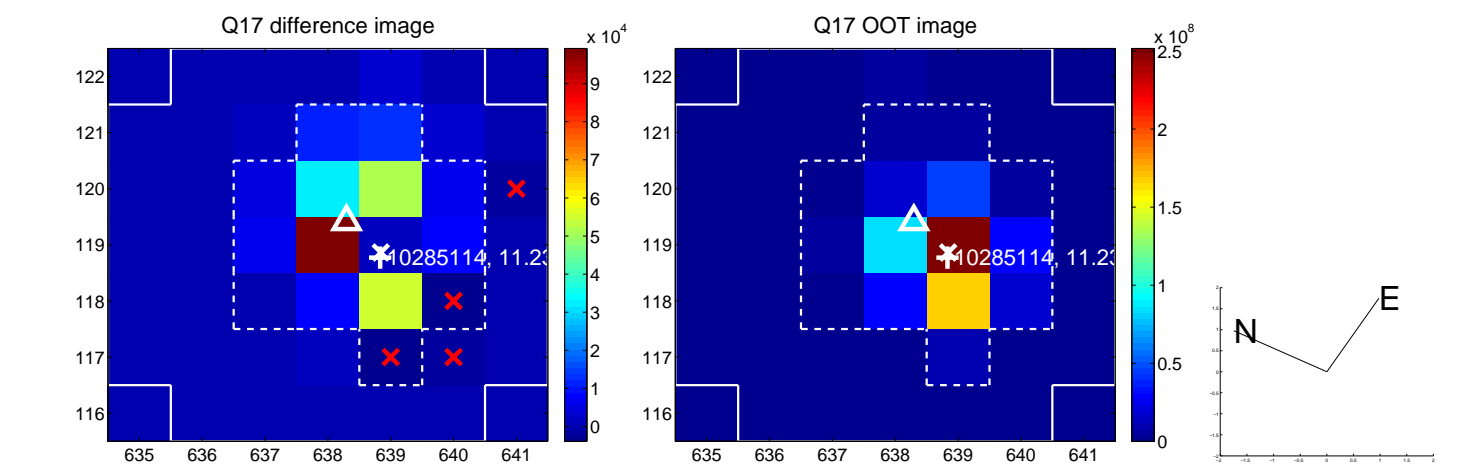
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



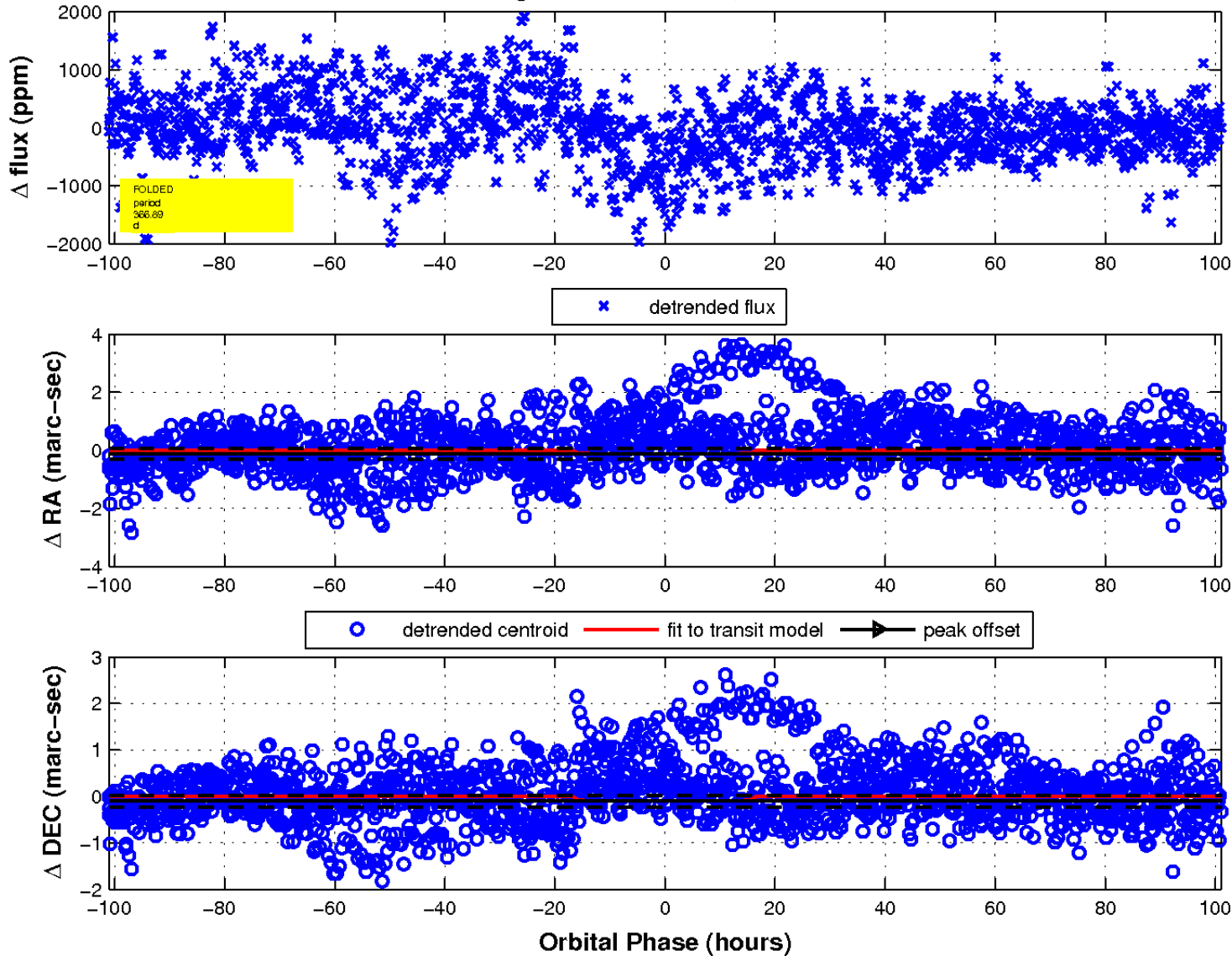
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

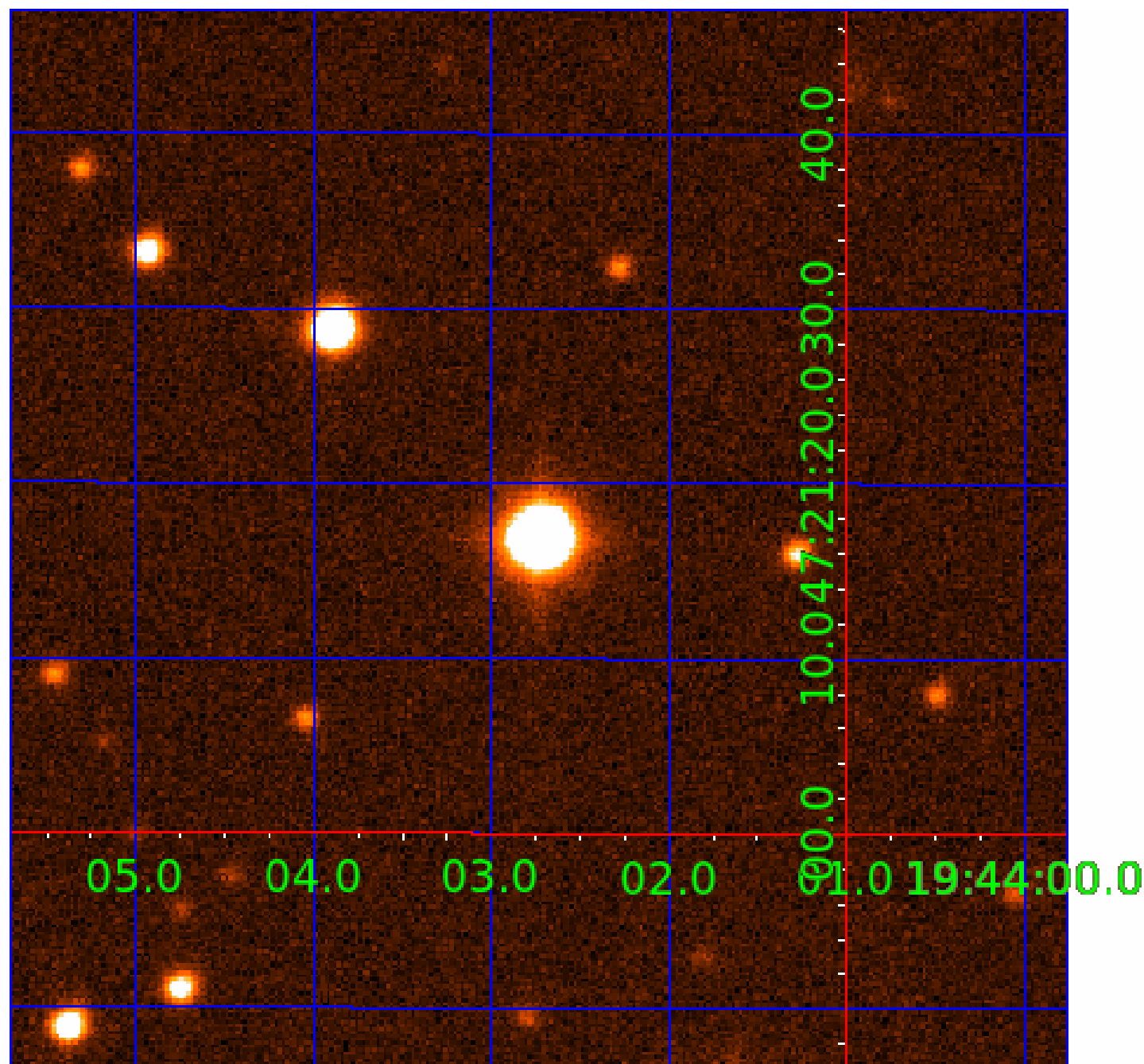


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 010285114

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})
010285114-01	OBS	No	319.728743	195.202035	1289.7	4.656	10.9	8.4	4.53	11617	22.34	174.53
010285114-02	OBS	No	366.887968	468.324531	356.9	33.711	10.3	8.2	4.53	11617	9.22	145.28
010285114-03	OBS	No	0.507039	131.872024	29.6	1.754	8.5	6.4	4.53	11617	2.81	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010285114-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
010285114-02	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_SATURATED
010285114-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED

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

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

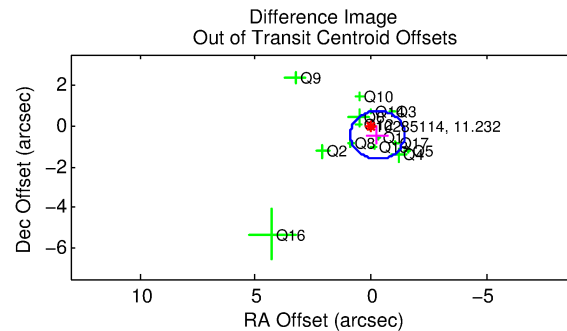
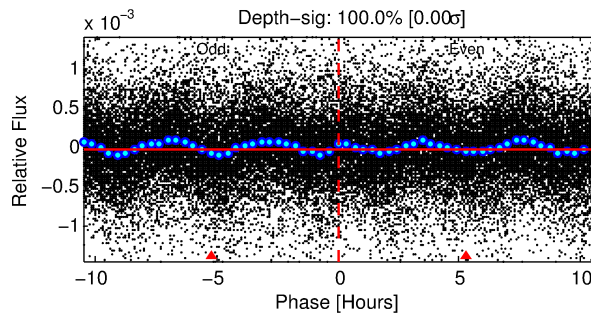
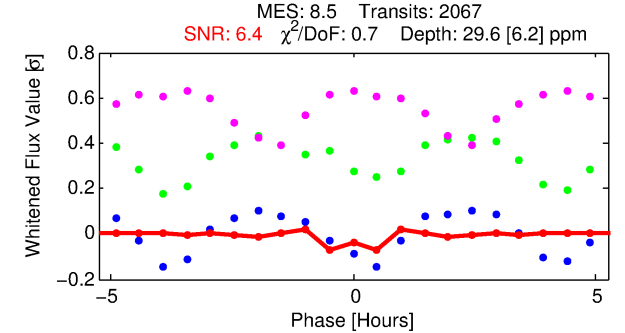
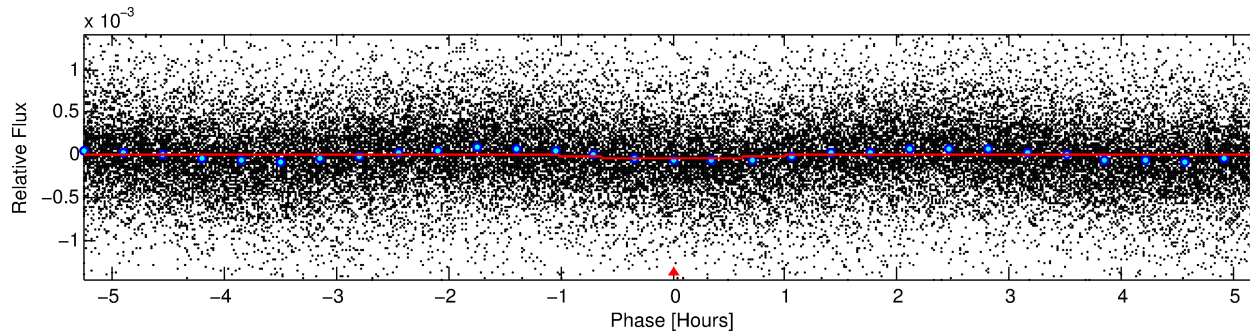
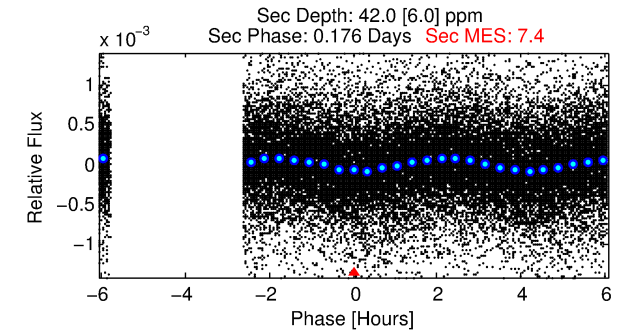
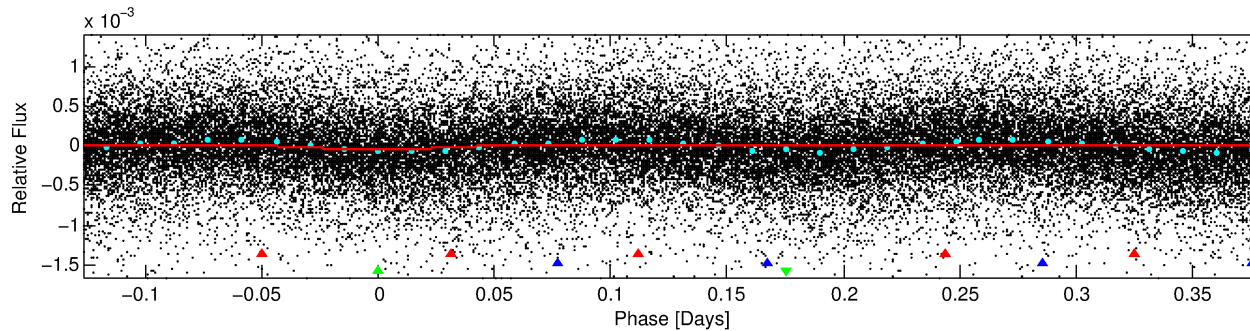
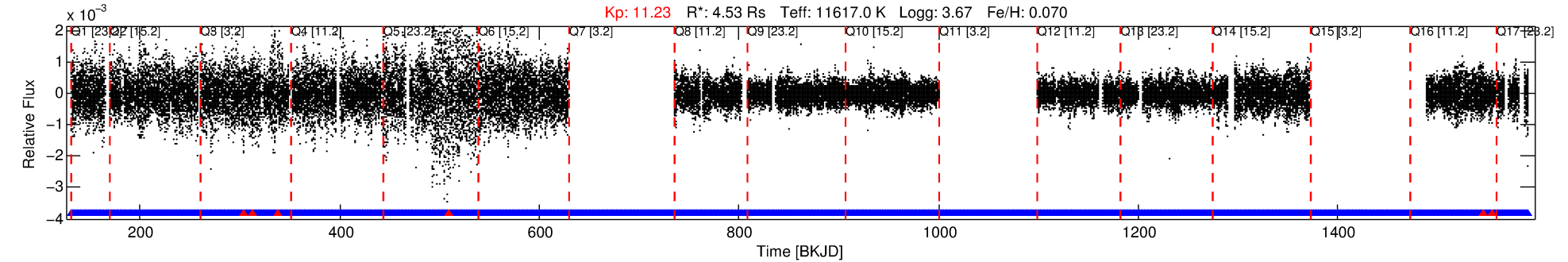
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010285114-03

No Significant Match Found

DV One-Page Summary

KIC: 10285114 Candidate: 3 of 3 Period: 0.507 d



DV Fit Results:

Period = 0.50704 [0.00002] d
Epoch = 131.8720 [0.0015] BKJD
Rp/R* = 0.0057 [0.0010]
a/R* = 1.36 [0.79]
b = 0.90 [0.27]
Seff = N/A
Teq = N/A
Rp = 2.81 [1.68] Re
a = N/A
Ag = N/A
Teffp = N/A

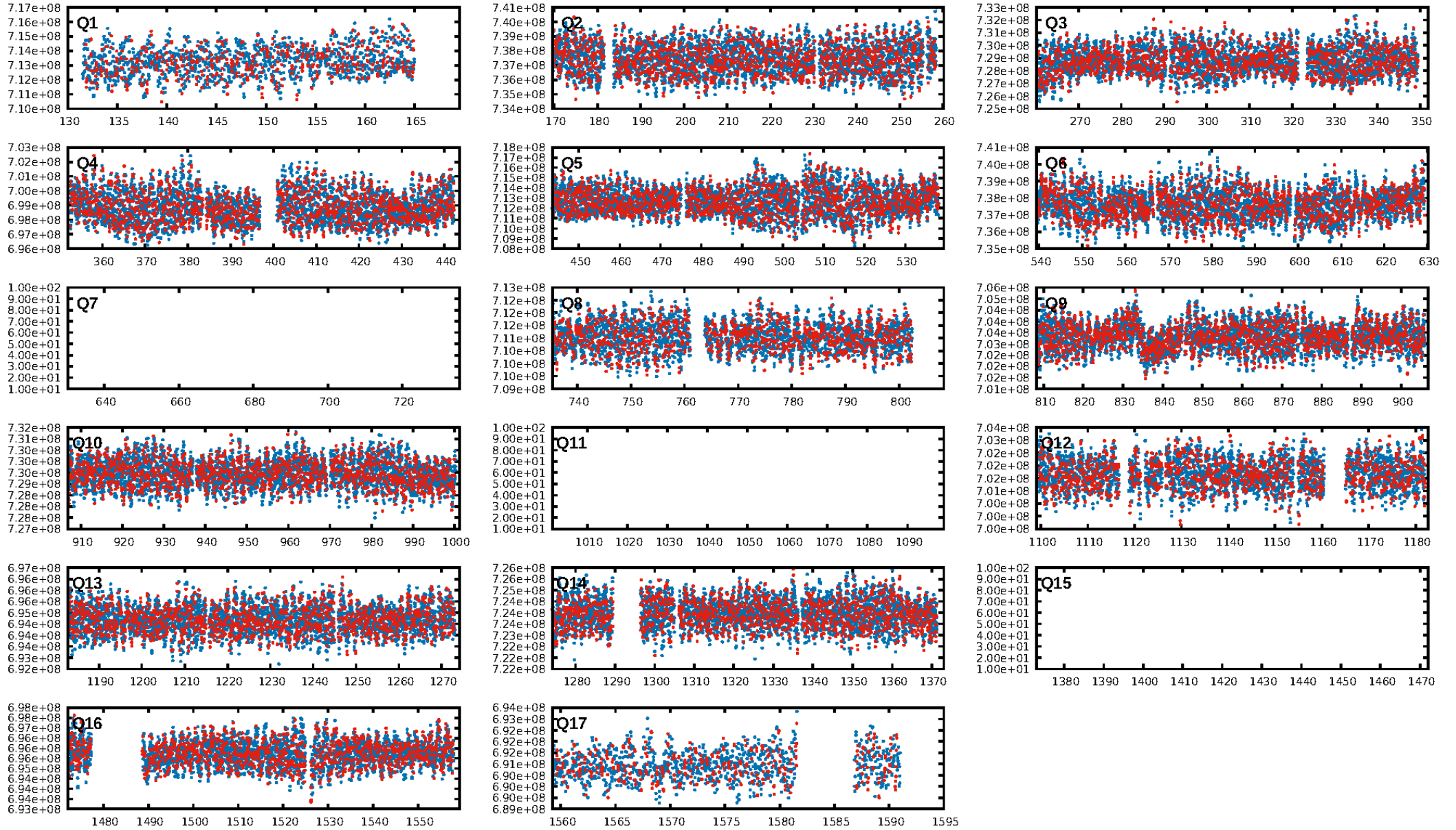
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [1539.84σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.50e-21
RollingBand-fgt: 1.00 [1951/1957]
GhostDiagnostic-chr: 0.995
Centroid-sig: 23.4%
Centroid-so: 0.347 arcsec [1.09σ]
OotOffset-rm: 0.516 arcsec [1.31σ]
KicOffset-rm: 0.713 arcsec [1.80σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.79 [11/14]
DiffImageOverlap-fno: 1.00 [14/14]

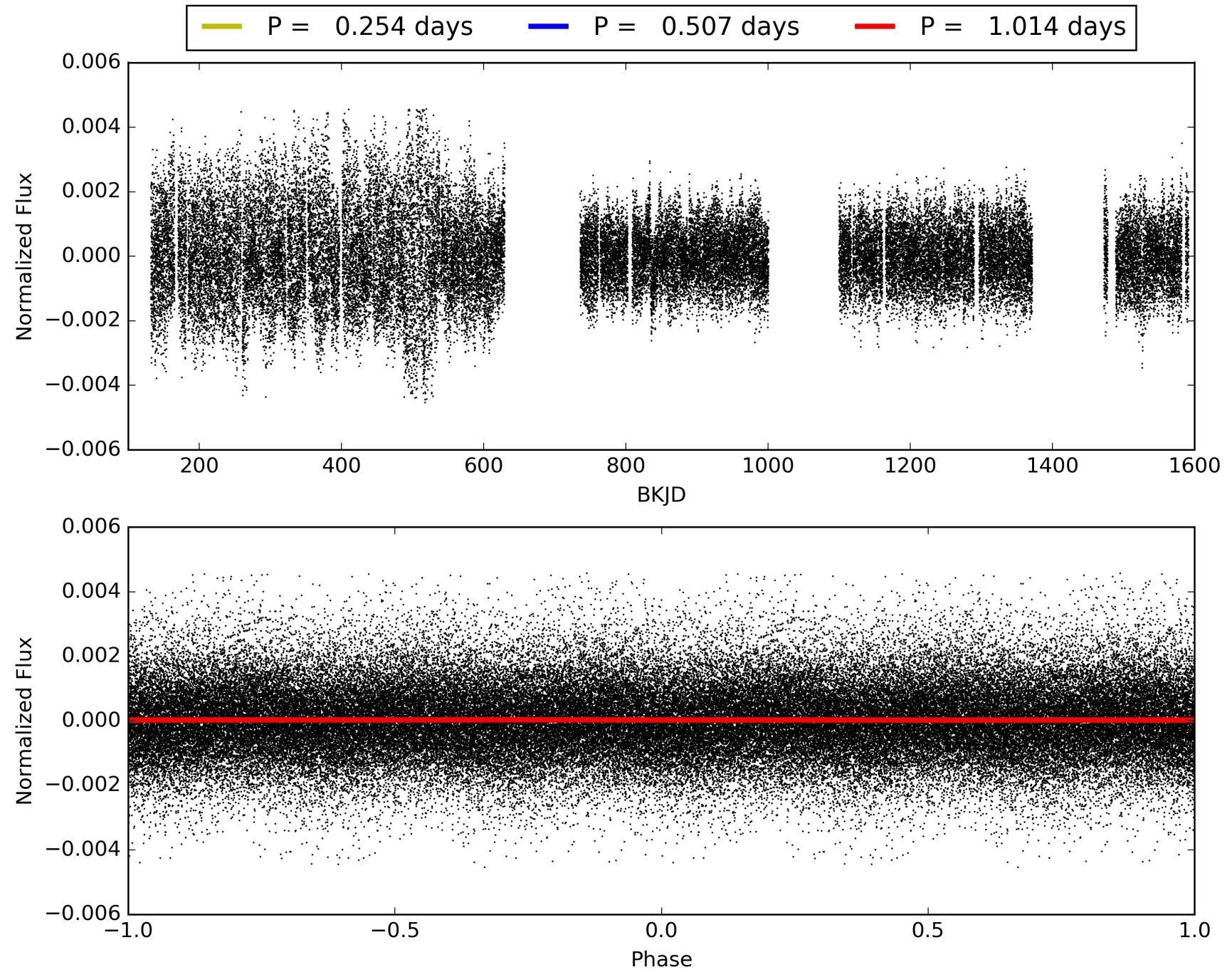
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 15:24:17 Z

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

TCE 010285114-03, PDC Light Curves

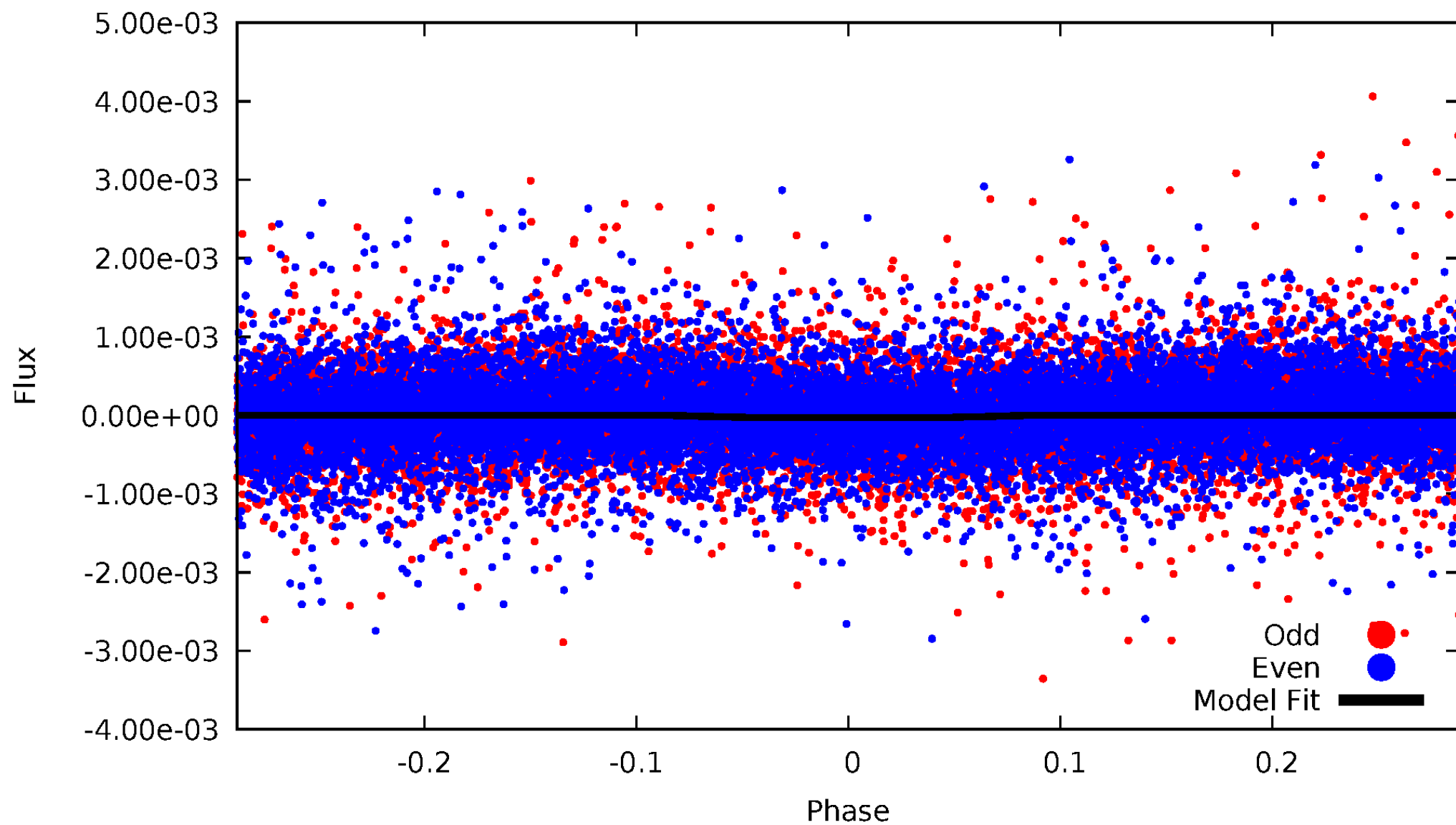


TCE 010285114-03



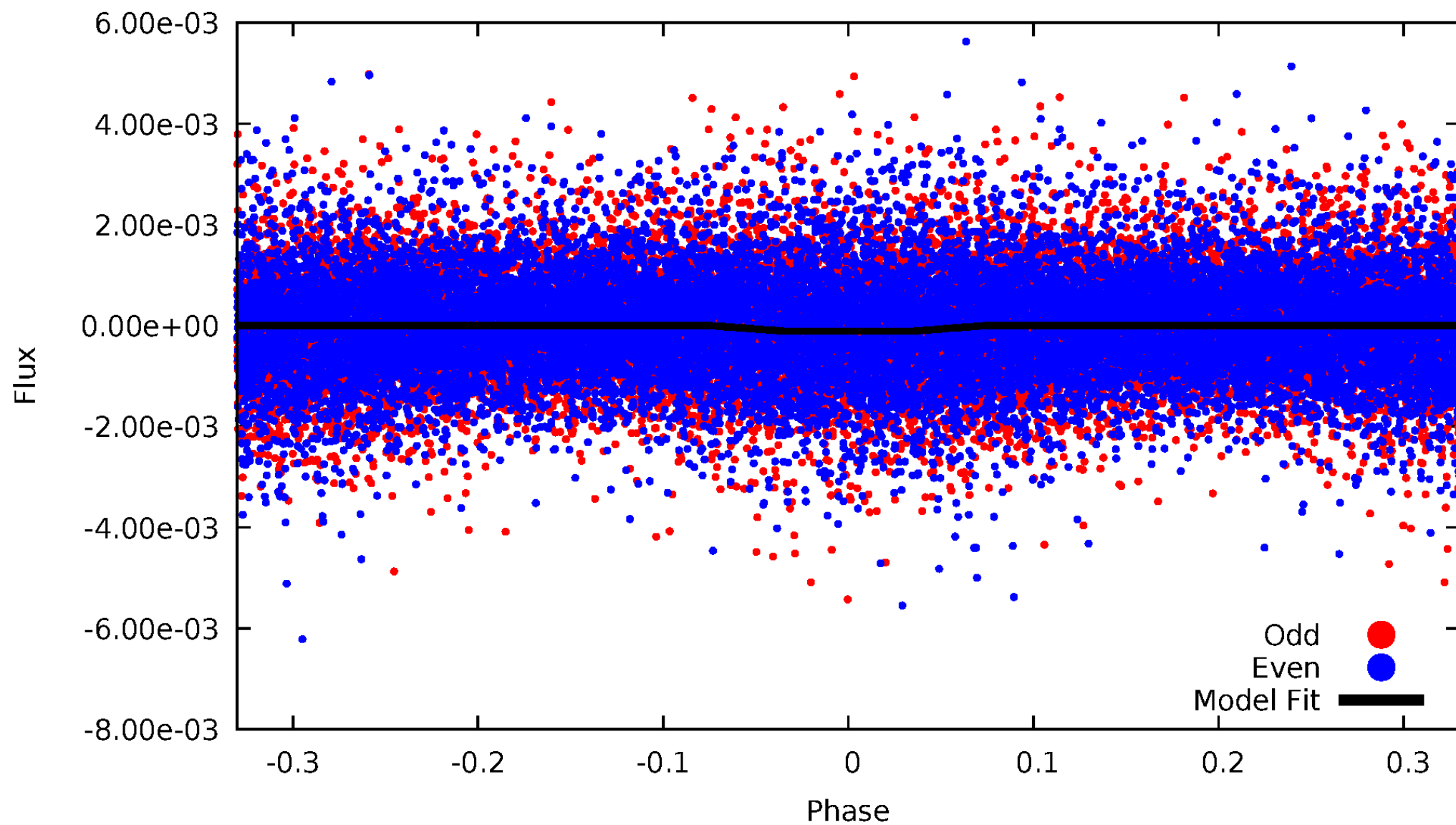
DV Odd/Even

TCE 010285114-03



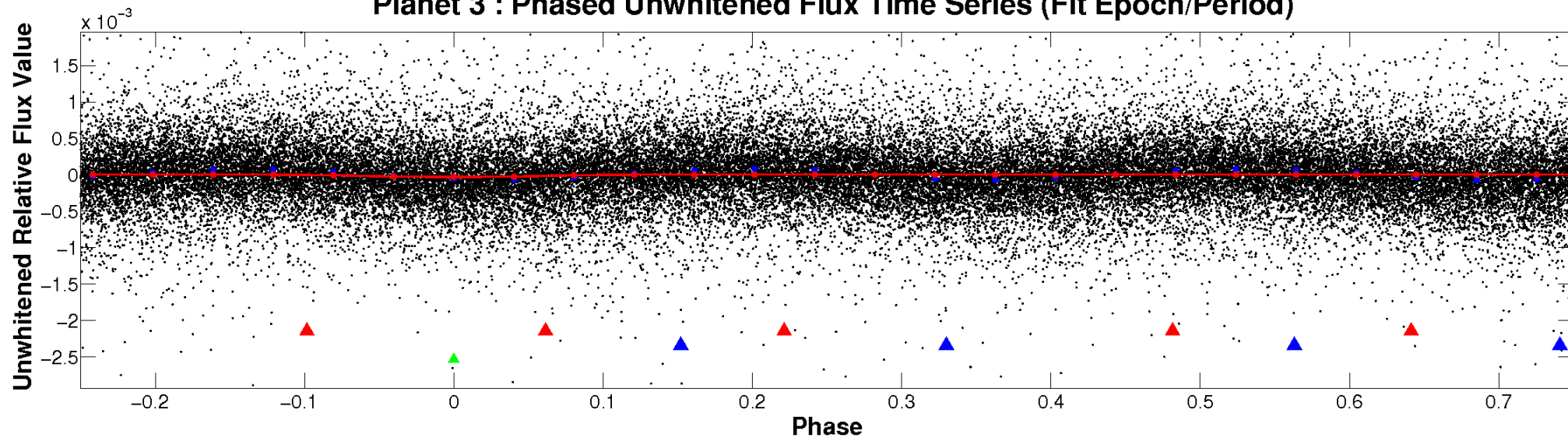
ALT Odd/Even

TCE 010285114-03

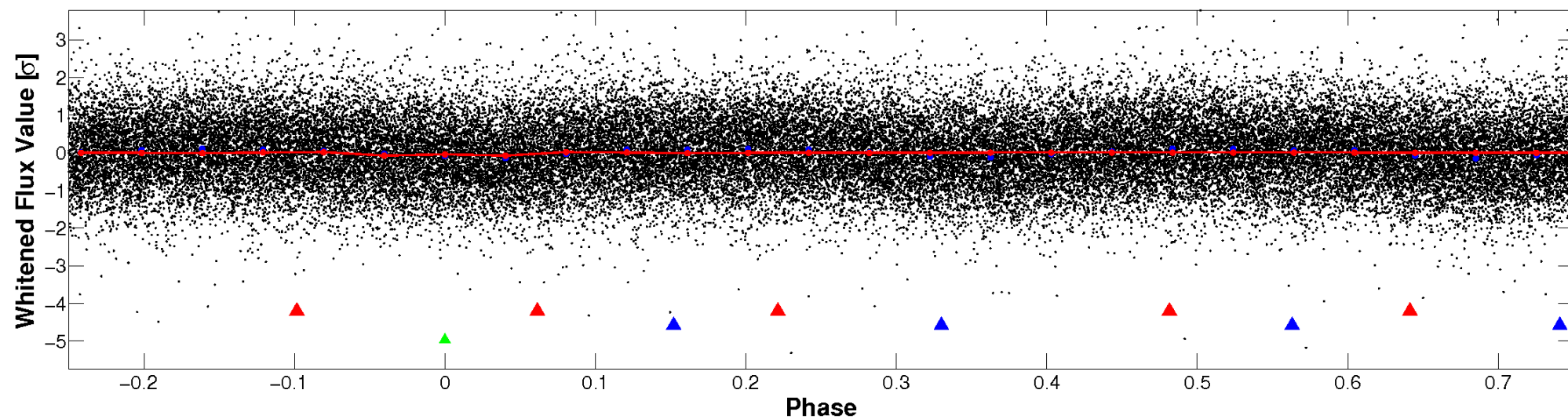


Non-Whitened Vs. Whitened Light Curve

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

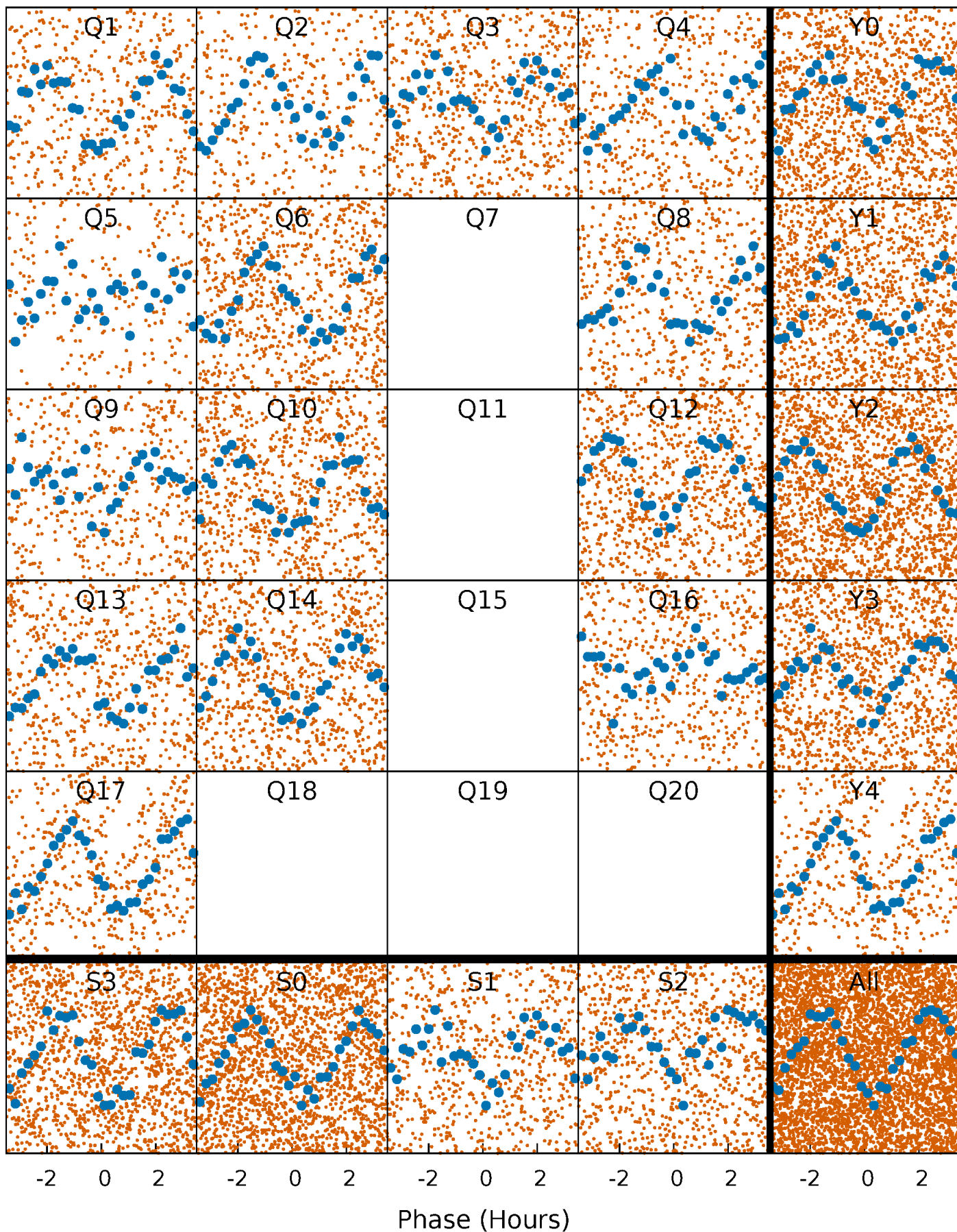


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



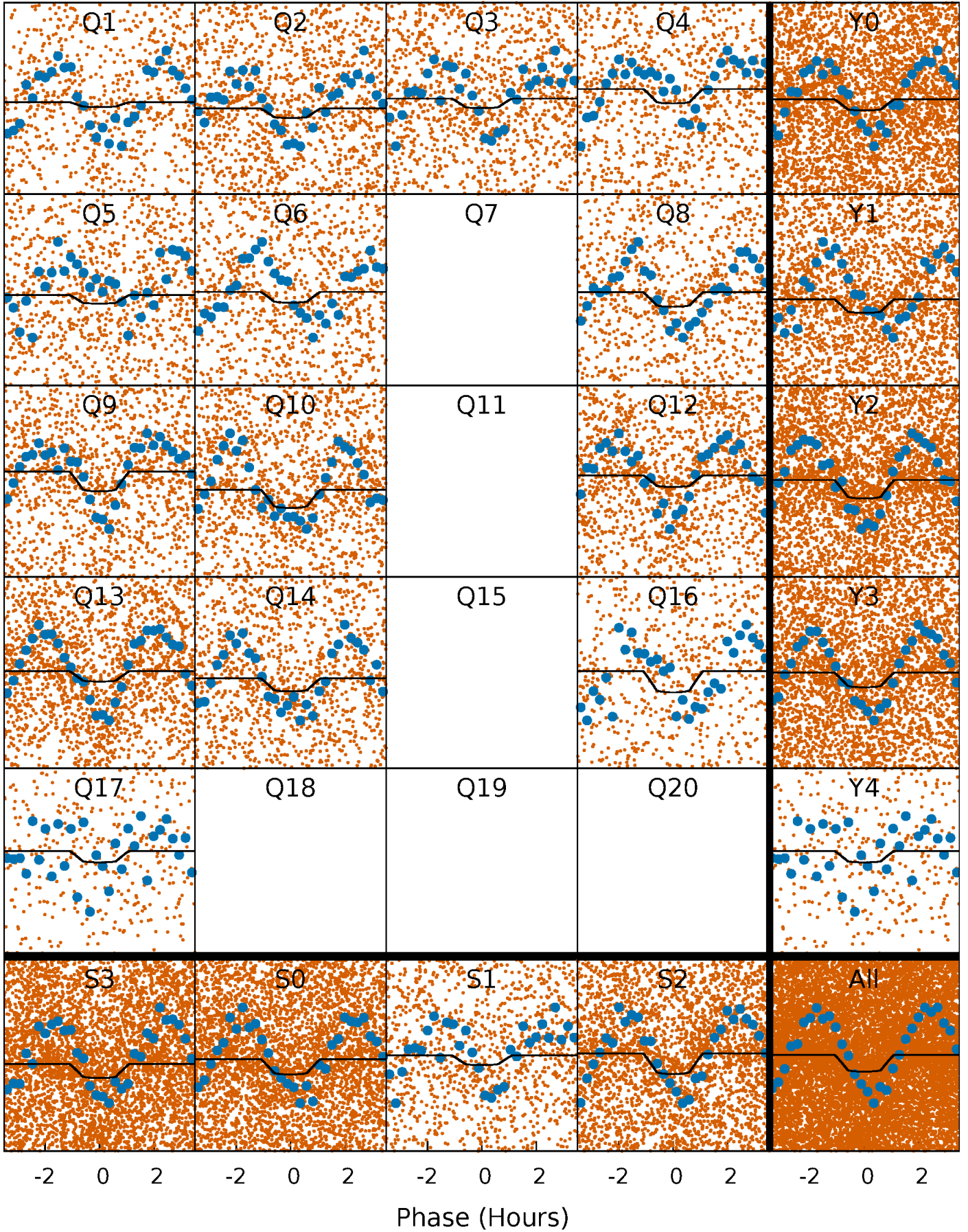
PDC Quarter-Phased Transit Curves

TCE 010285114-03 P= 0.507039 Days $T_0=131.872025$ (BKJD)



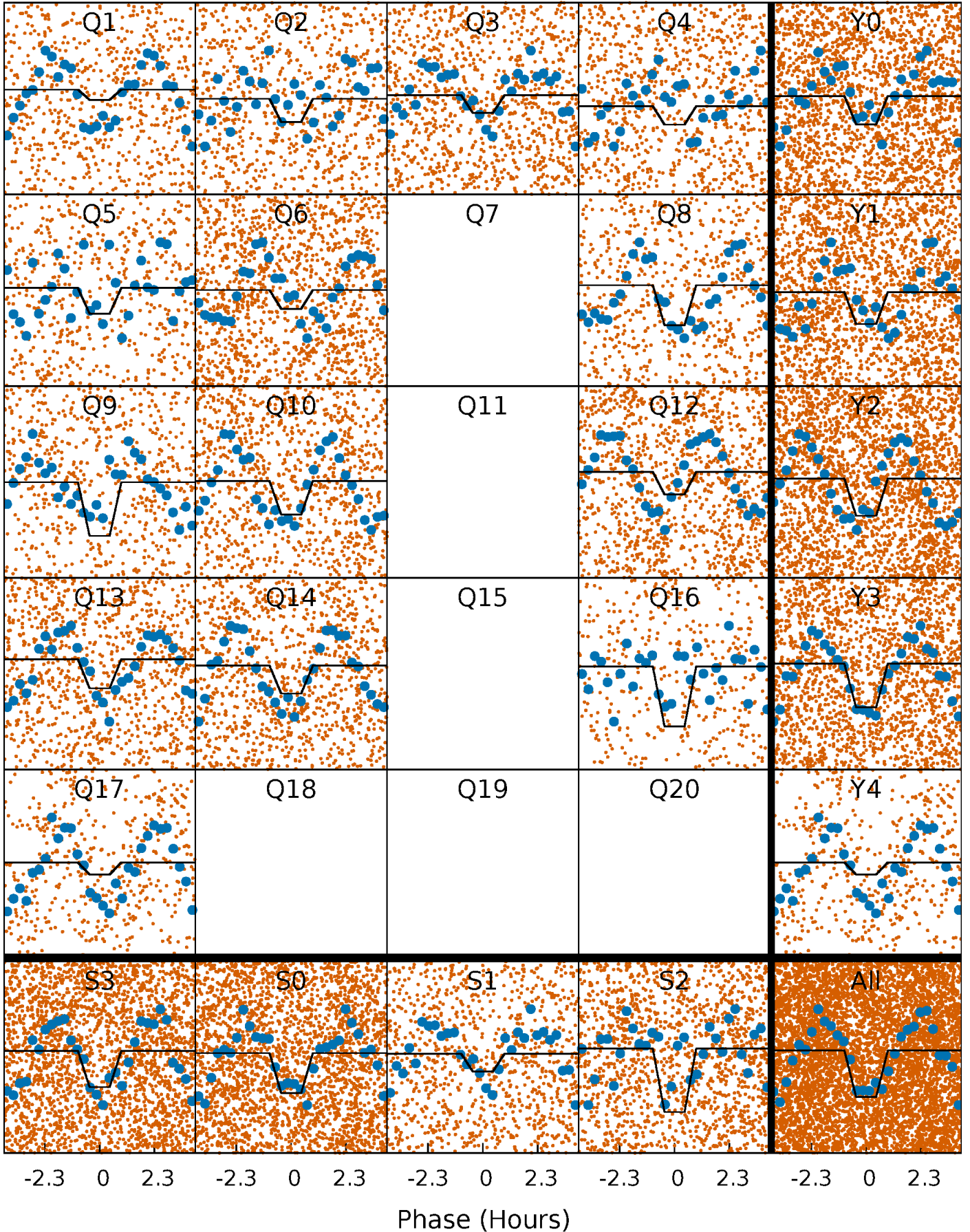
DV Quarter-Phased Transit Curves

TCE 010285114-03 P= 0.507039 Days $T_0=131.872025$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

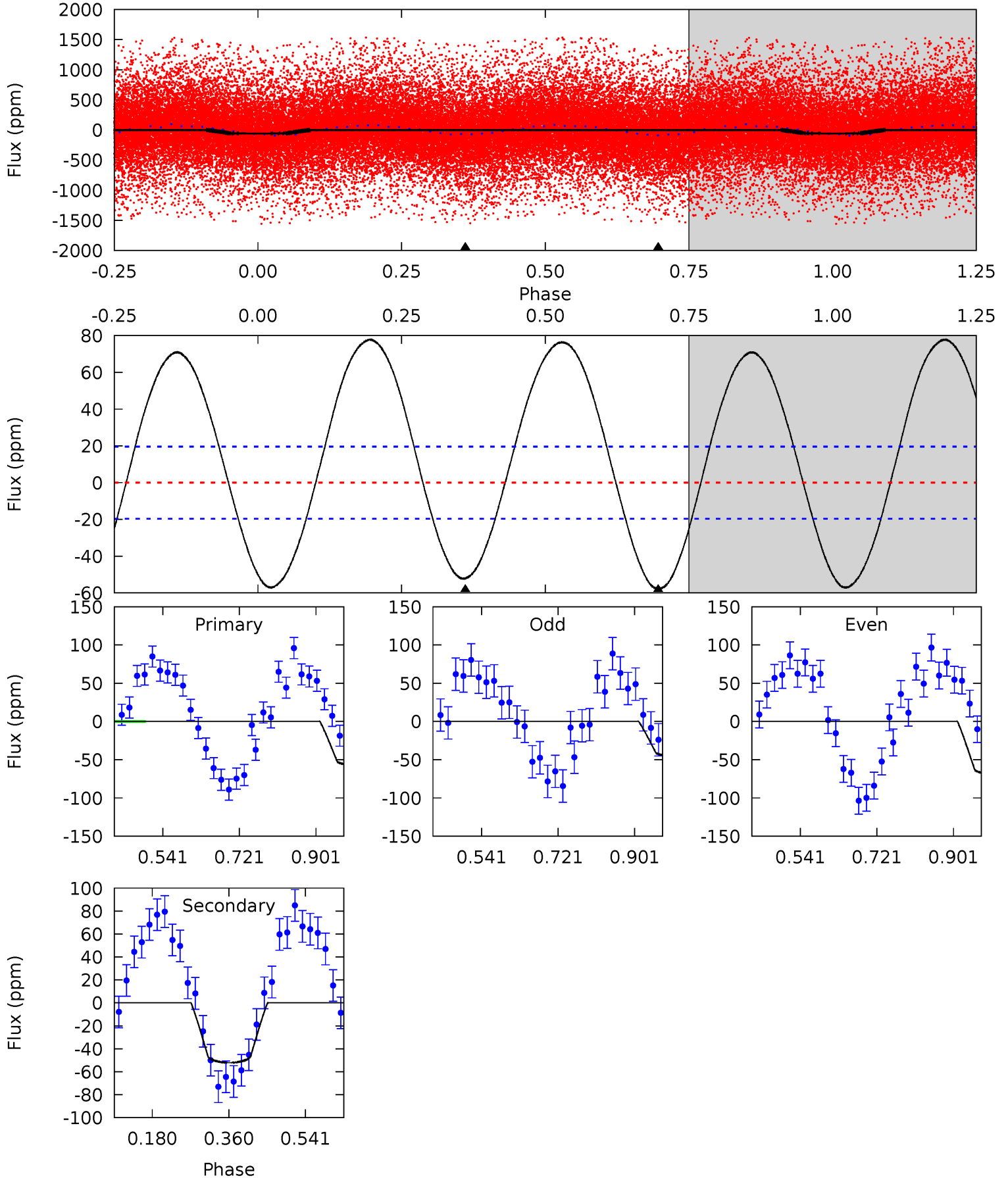
TCE 010285114-03 P= 0.507045 Days $T_0=131.872978$ (BKJD)



DV Model-Shift Uniqueness Test

010285114-03, P = 0.507039 Days, E = 131.364986 Days

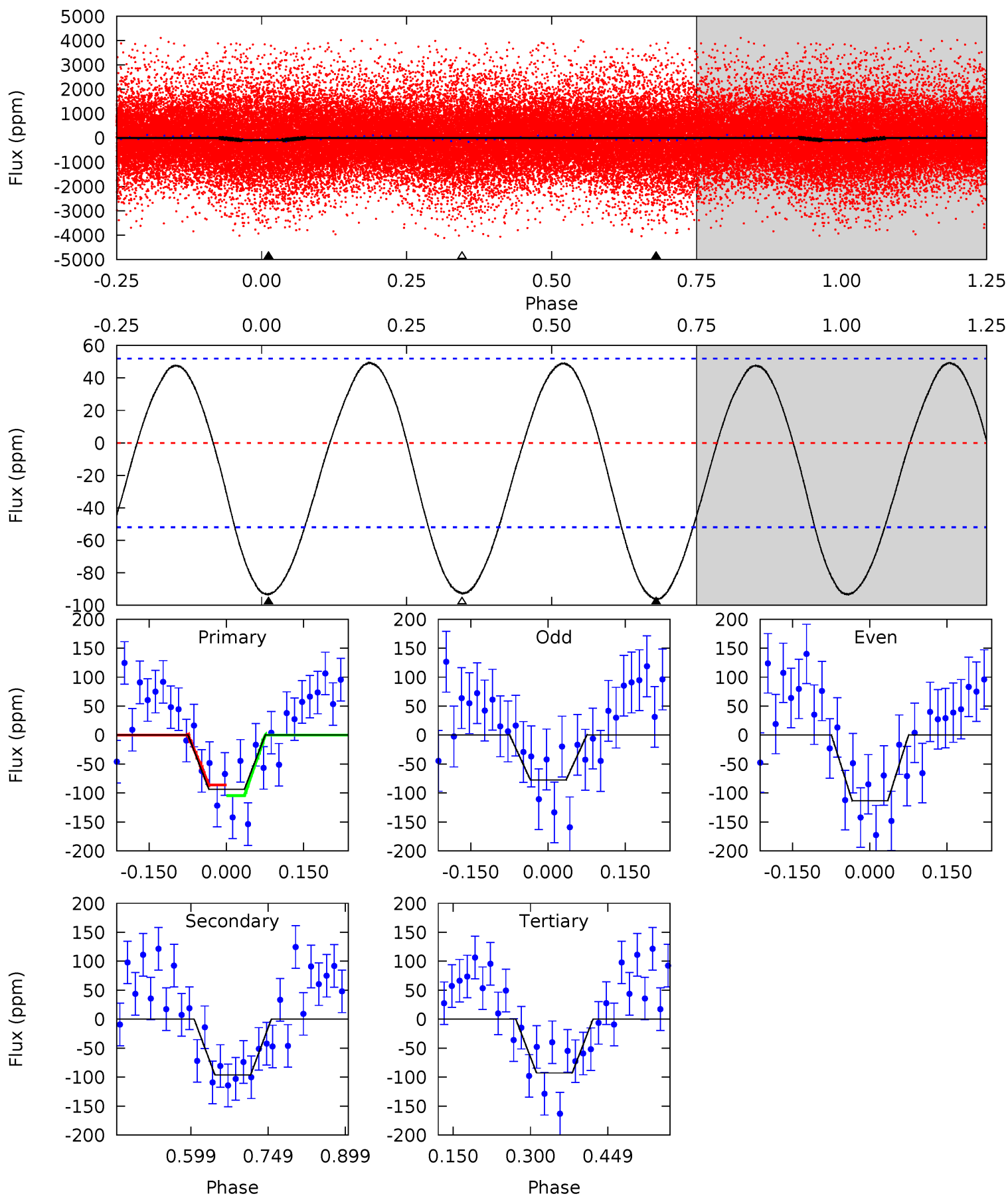
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	11.8	0	0	4.44	1.34	9.93	13.1	13.1	11.8	11.8	2.76	0.83	0.57	5.19



Alt Model-Shift Uniqueness Test

010285114-03, P = 0.507045 Days, E = 131.365933 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.07	8.31	8.01	0	4.48	1.44	4.52	0.05	8.07	0.30	8.31	1.52	1.26	0.34	0.80



Stellar Parameters For KIC 010285114

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	11617^{+593}_{-1384}	$3.666^{+0.544}_{-0.096}$	$0.070^{+0.050}_{-0.550}$	$4.534^{+0.459}_{-2.600}$	$3.472^{+0.069}_{-1.170}$	$0.052^{+0.373}_{-0.017}$
	+5%/-12%	+15%/-3%	+71%/-786%	+10%/-57%	+2%/-34%	+710%/-32%
Source	KIC0	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010285114-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-52 ± 4	$2.53^{+0.69}_{-0.74}$	10397^{+1309}_{-1667}	12502^{+3236}_{-2384}	$1.517^{+1.407}_{-0.563}$
Alt.	-96 ± 12	$4.86^{+0.90}_{-1.40}$	10340^{+1300}_{-1623}	8868^{+1669}_{-1494}	$0.775^{+0.639}_{-0.221}$

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 $A_{obs} \gg 1.0$

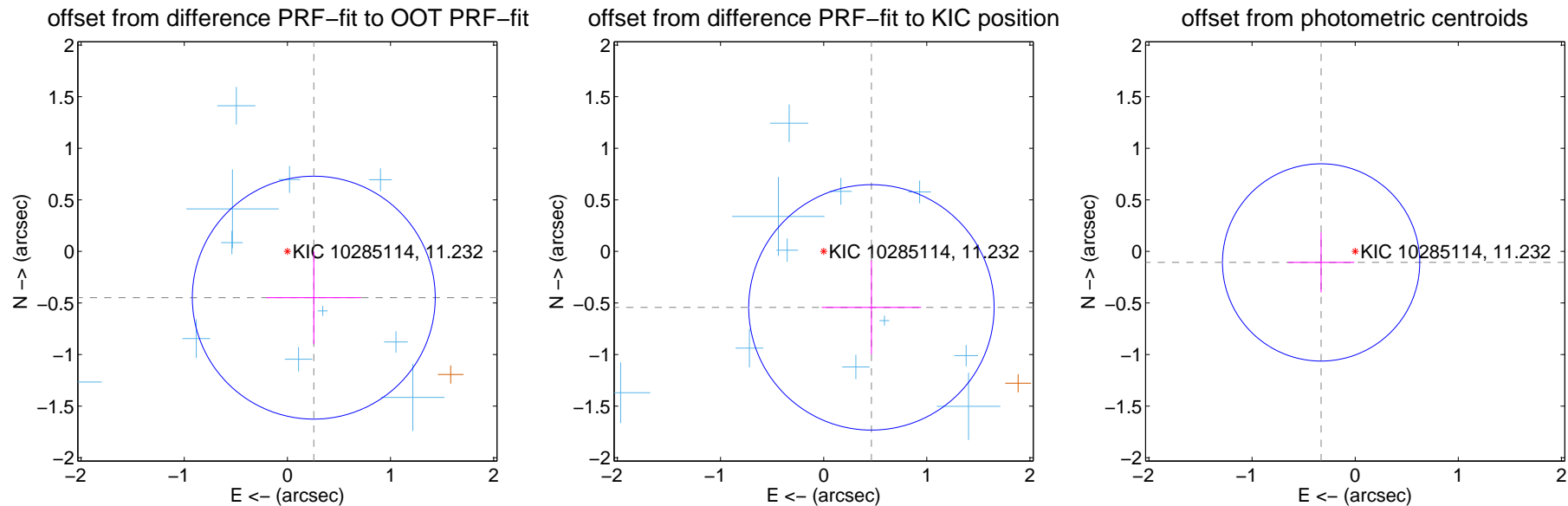
DV Centroid Data

Supplemental centroid analysis for 010285114-03. **Kepler magnitude: 11.23.** Transit SNR 6.39

There are 11 quarters with good PRF difference image offsets

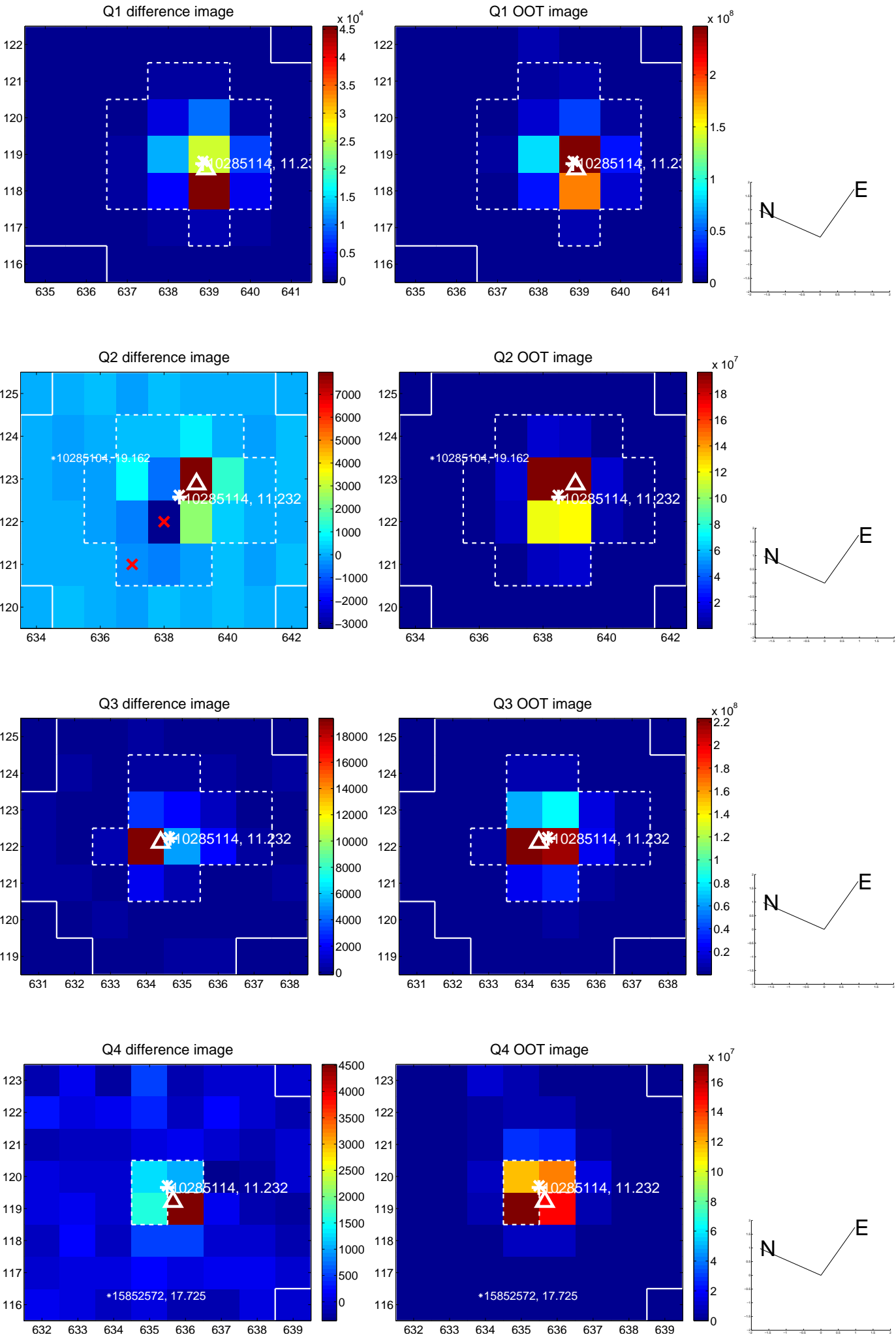
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.516 ± 0.392	1.31	-0.256 ± 0.458	-0.448 ± 0.449
PRF-fit source offset from KIC position	0.713 ± 0.397	1.80	-0.463 ± 0.482	-0.542 ± 0.453
photometric centroid source offset	0.35 ± 0.32	1.09	0.33 ± 0.32	-0.11 ± 0.29

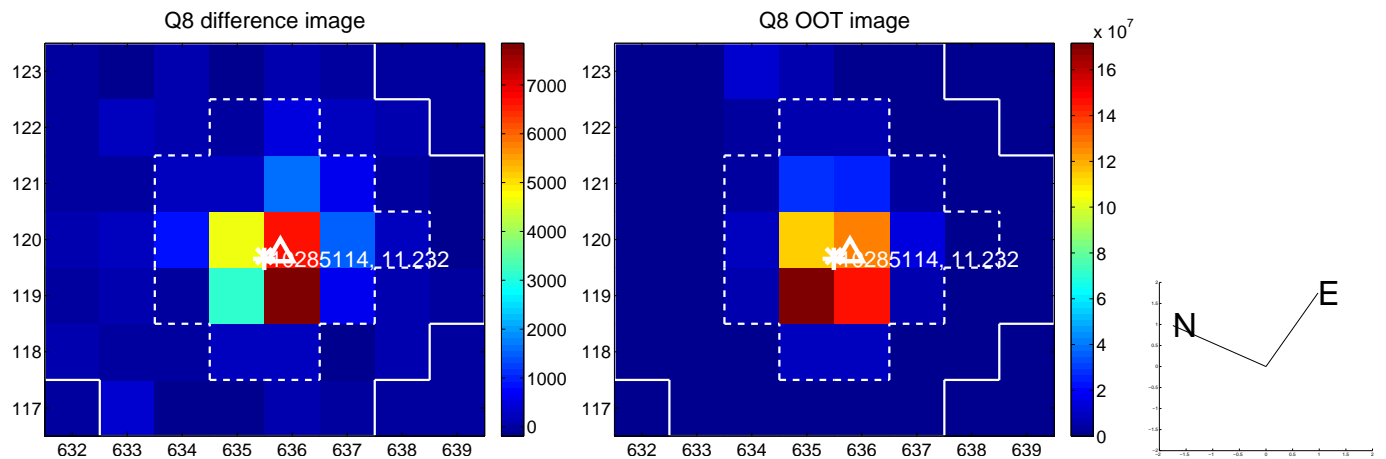
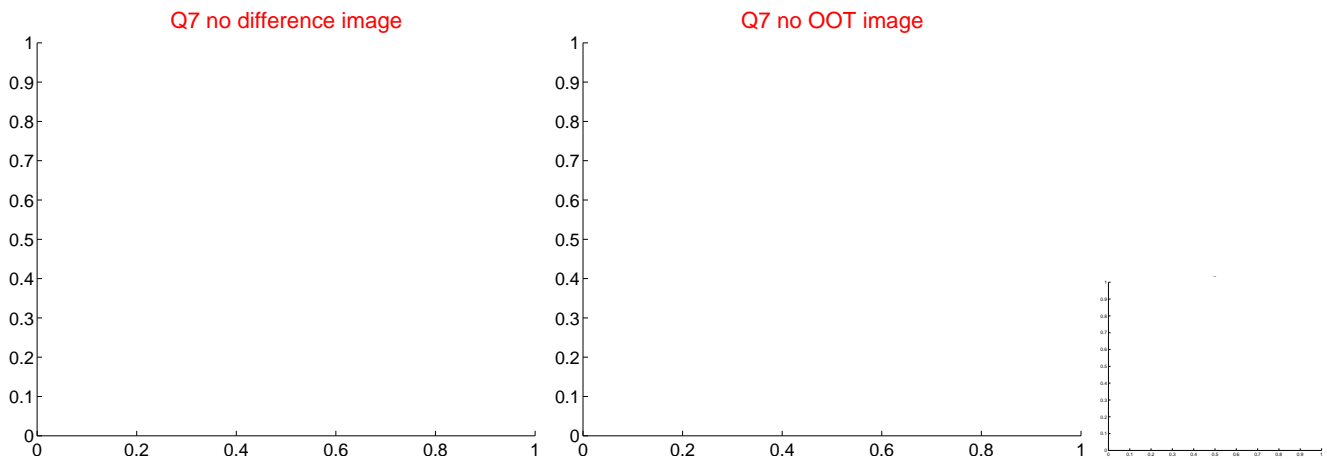
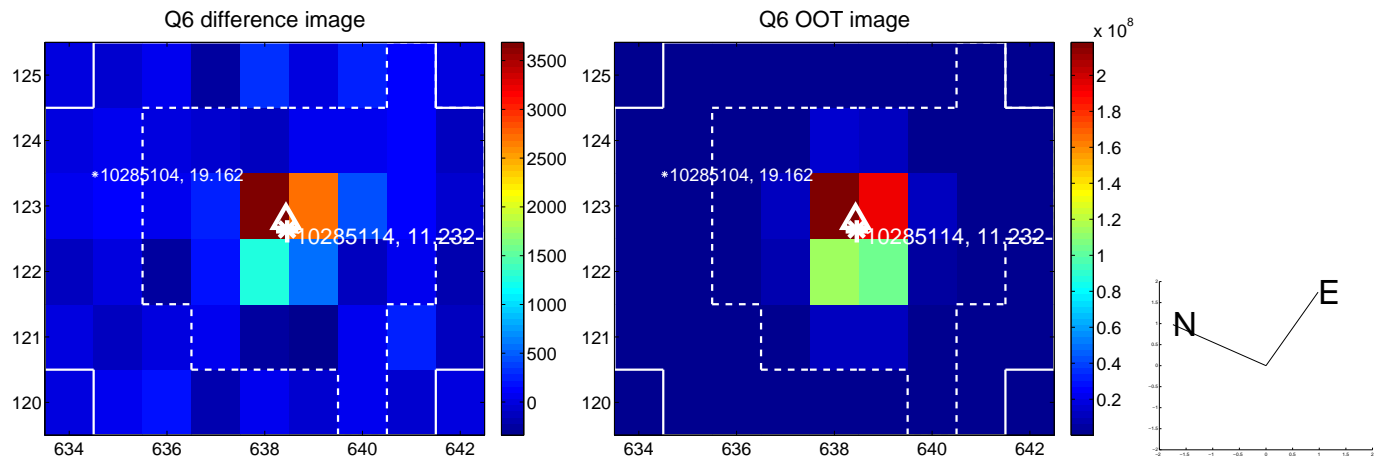
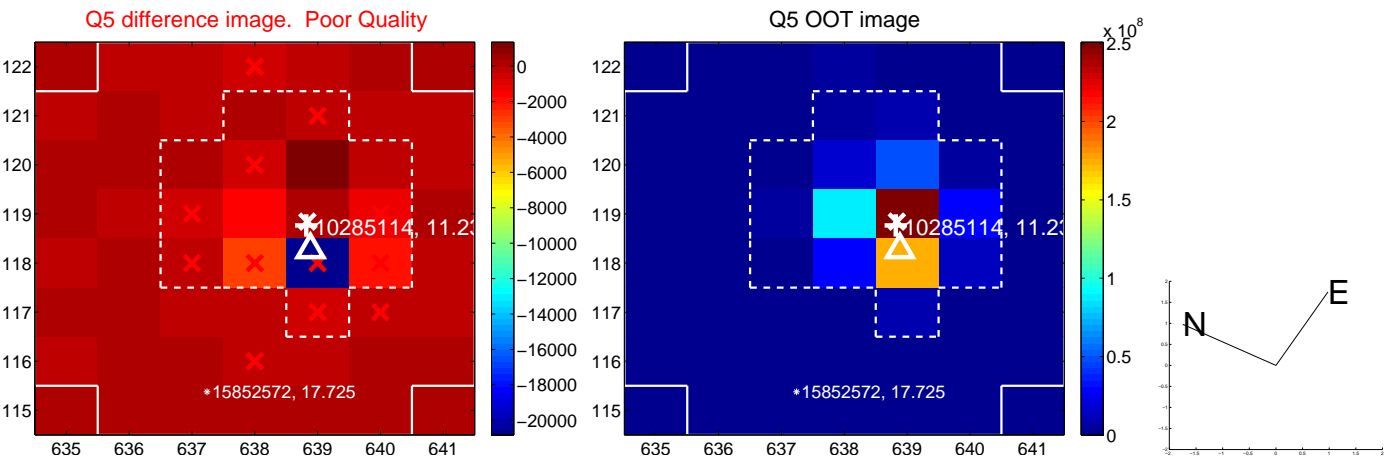


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

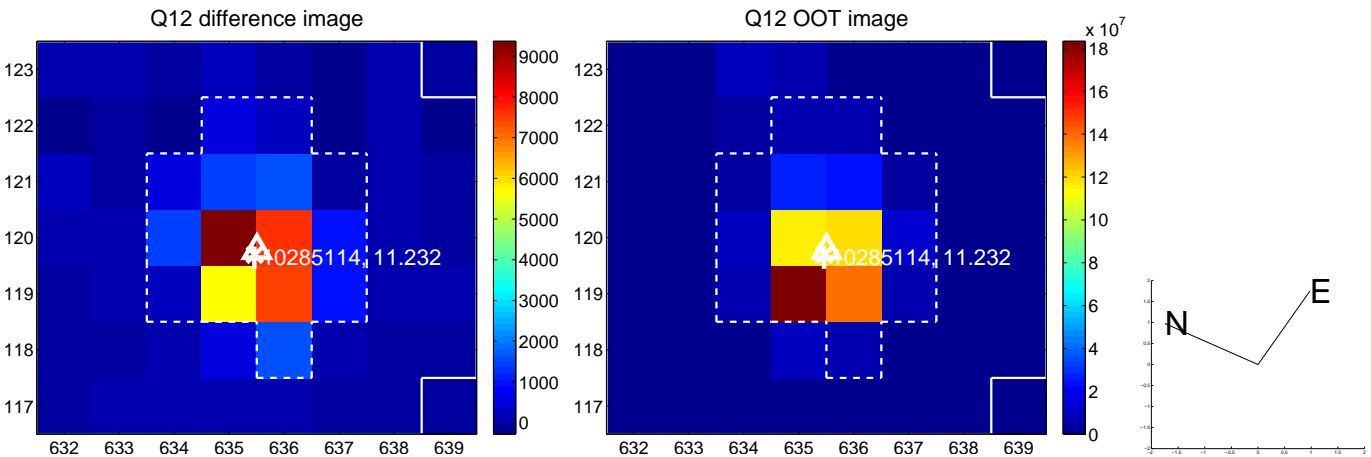
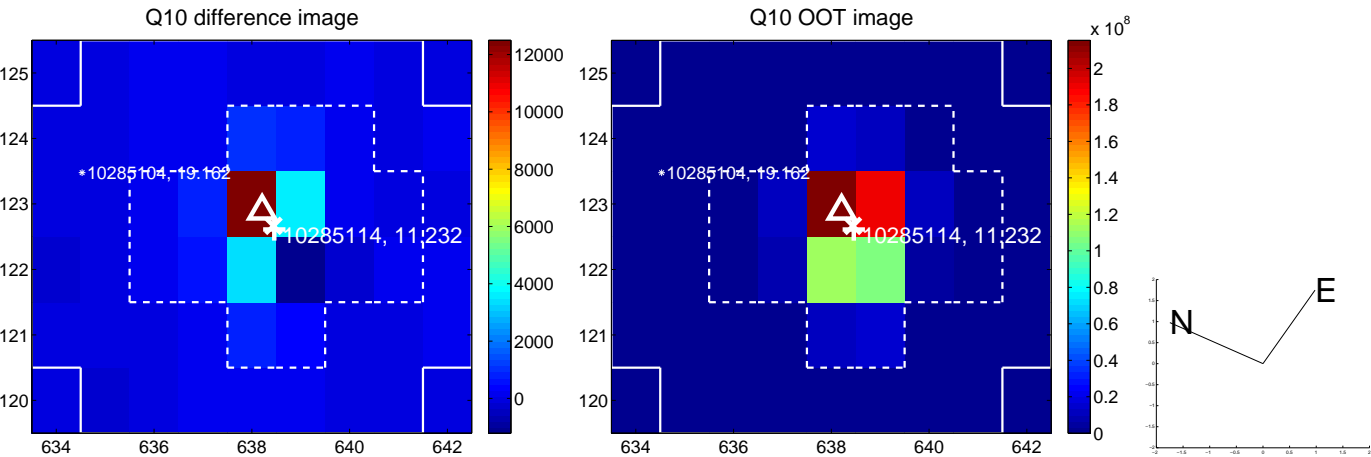
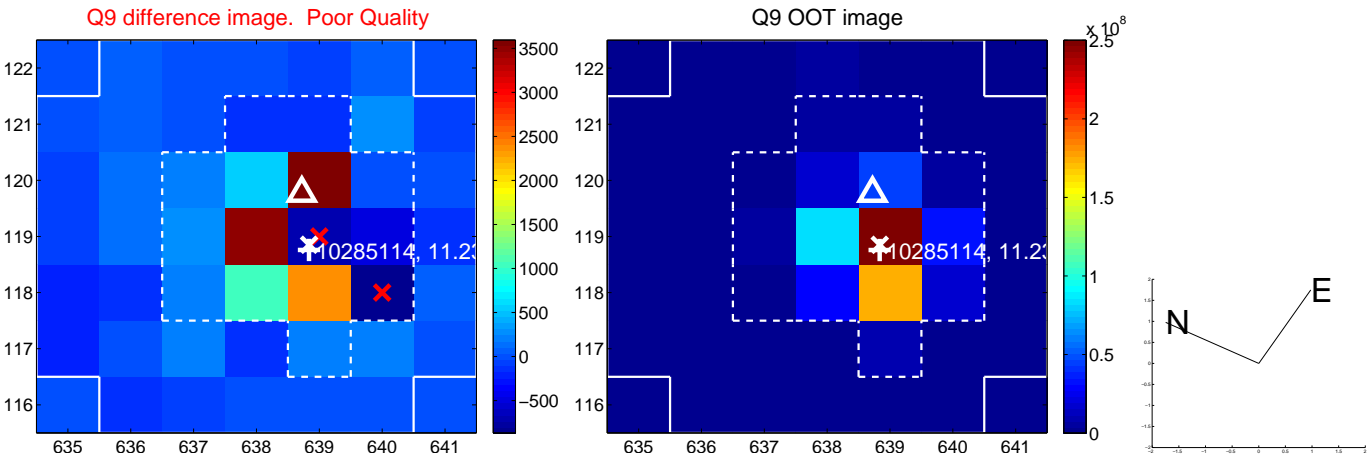
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



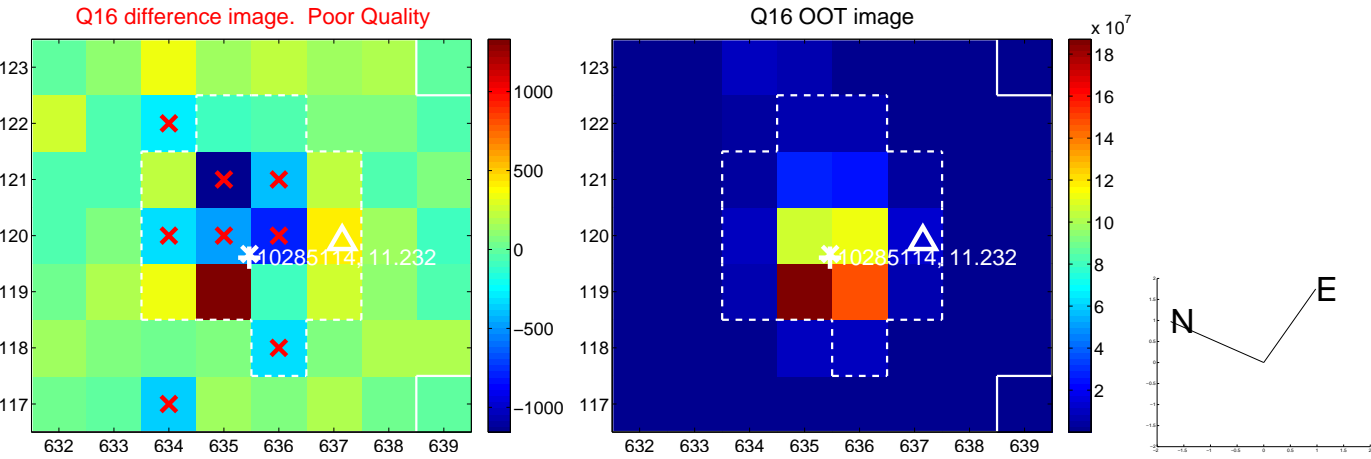
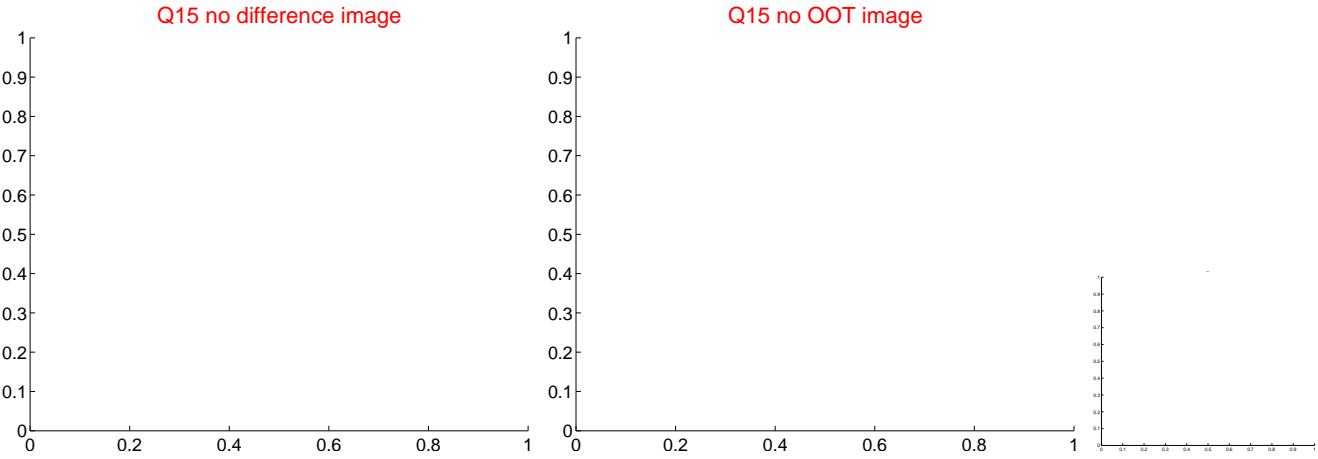
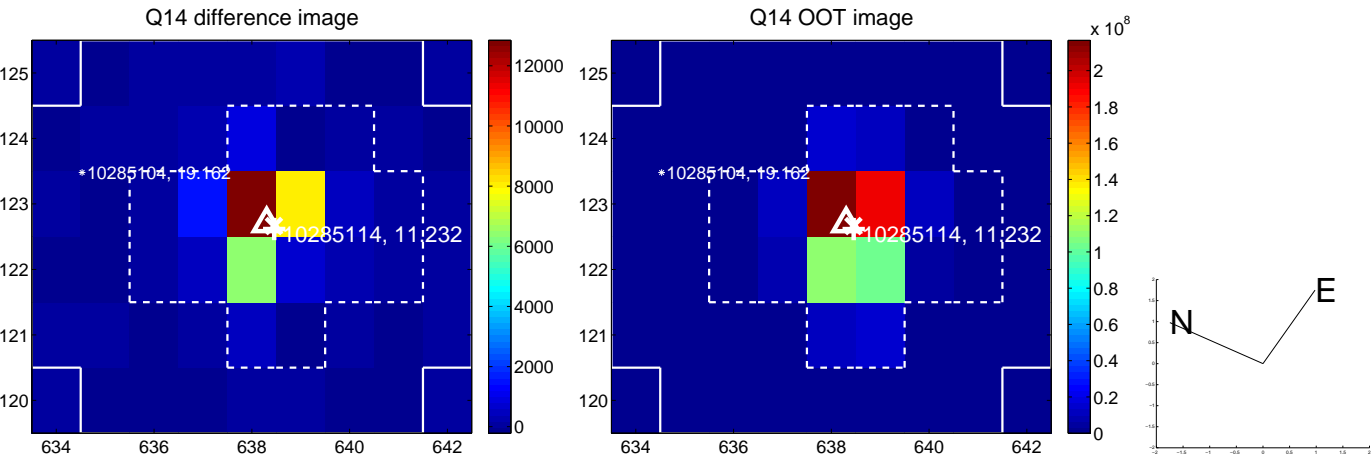
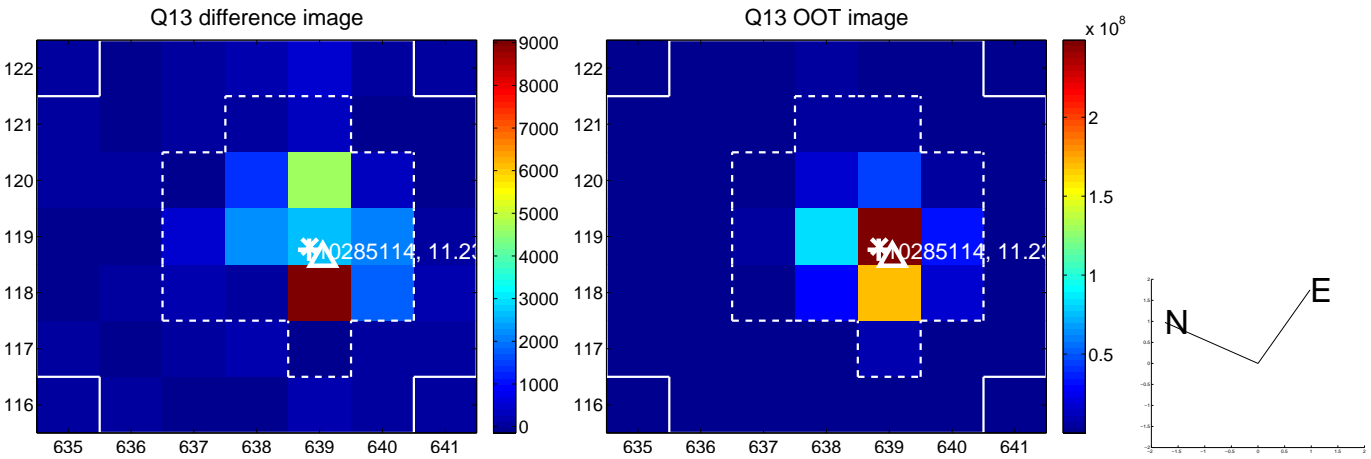
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



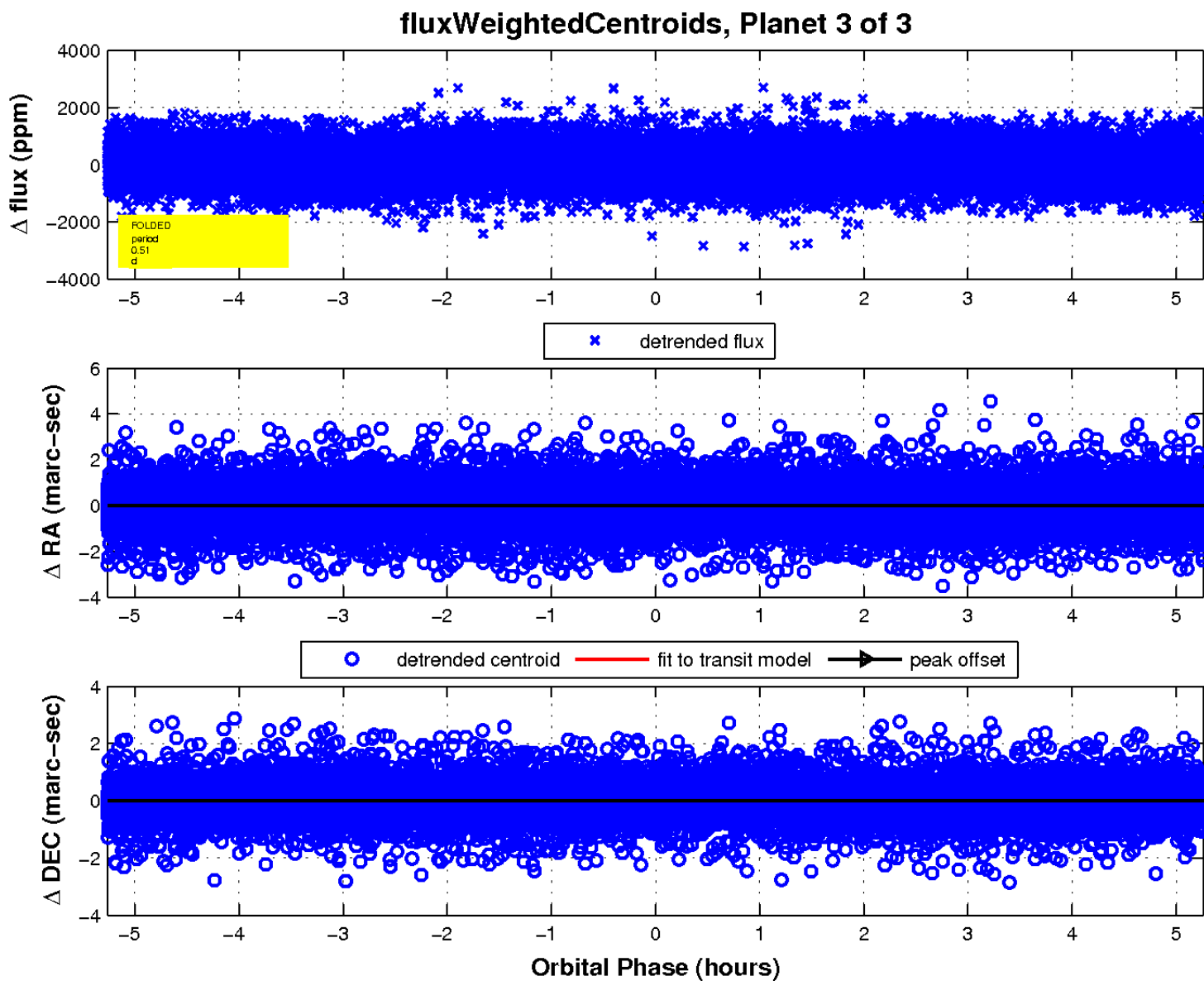
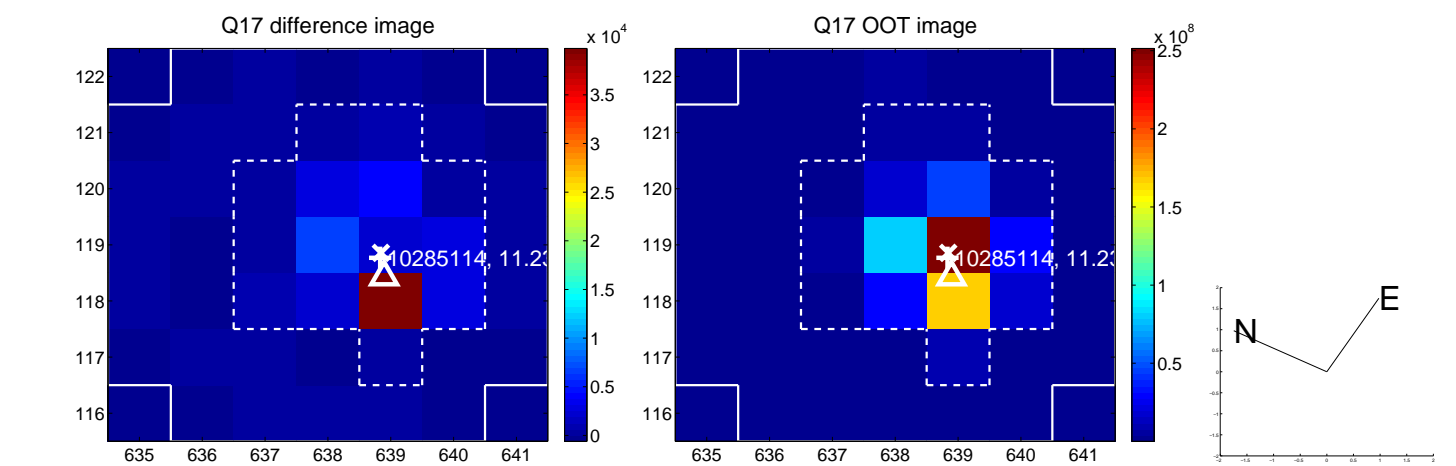
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

