

KIC 006450625

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})
006450625-01	OBS	No	293.965024	374.933203	902.4	7.340	13.4	6.8	0.72	5312	2.23	0.64
006450625-03	OBS	No	624.325324	318.832777	1380.1	3.371	11.6	7.5	0.72	5312	2.73	0.23
006450625-04	OBS	No	397.856649	353.076132	1086.2	4.564	9.8	8.6	0.72	5312	2.50	0.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006450625-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006450625-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS
006450625-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_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.

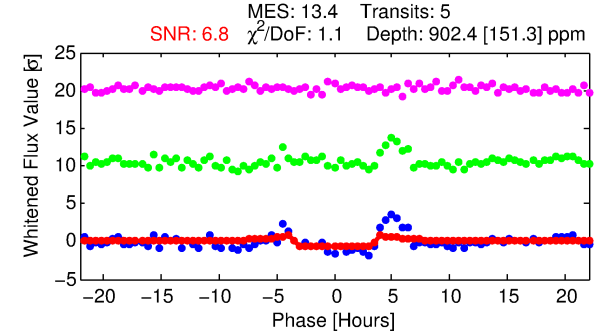
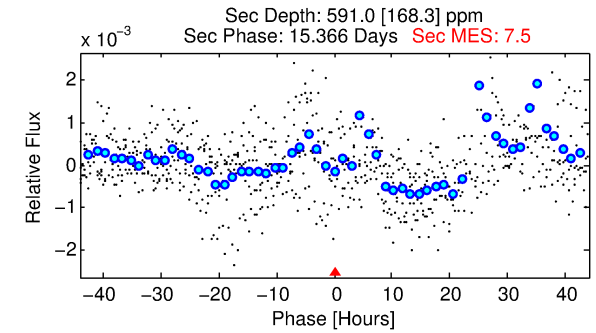
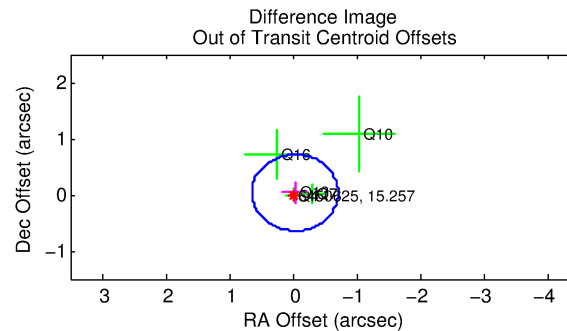
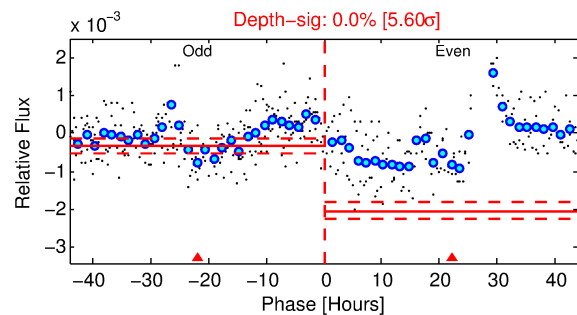
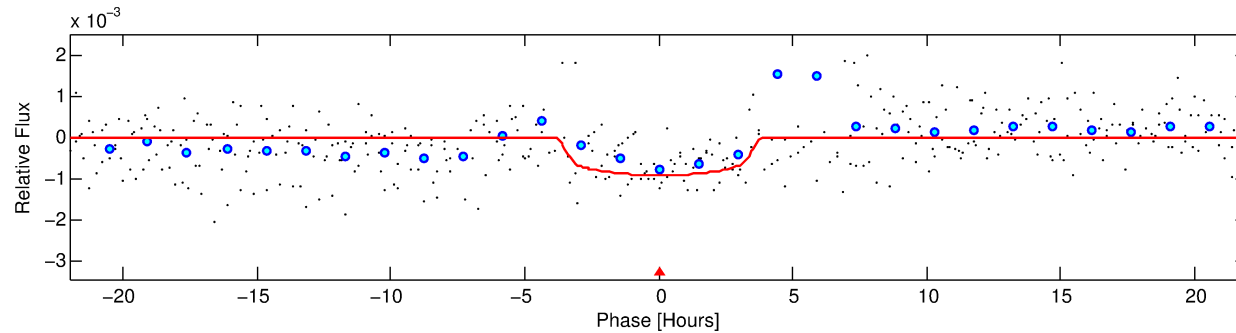
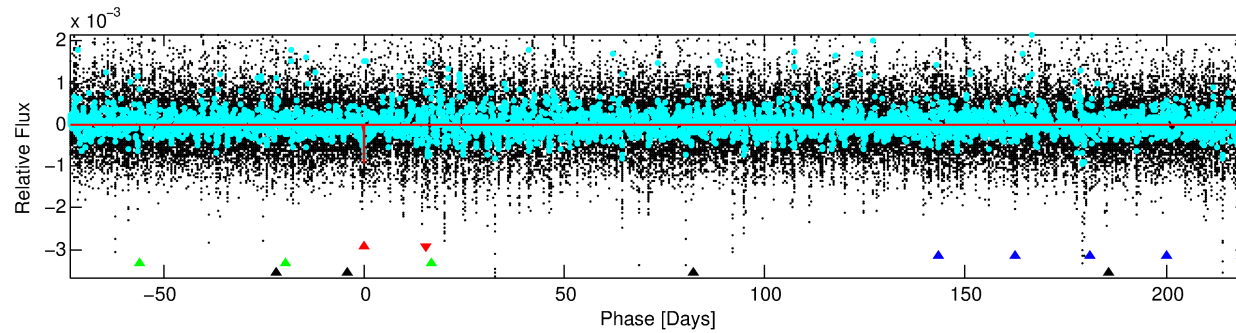
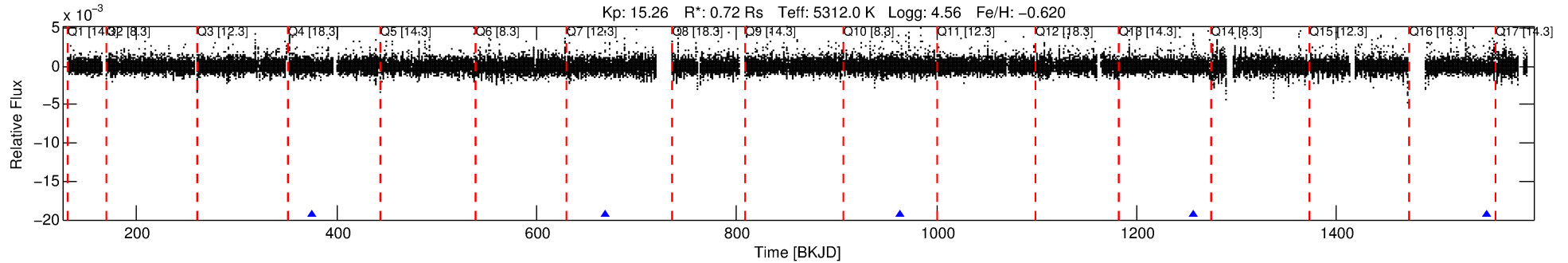
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006450625-01

No Significant Match Found

DV One-Page Summary

KIC: 6450625 Candidate: 1 of 4 Period: 293.965 d



DV Fit Results:

Period = 293.96502 [0.00466] d
Epoch = 374.9332 [0.0101] BKJD
Rp/R* = 0.0284 [0.0247]
a/R* = 262.69 [940.26]
b = 0.57 [4.34]
Seff = 0.64 [0.13]
Teq = 228 [11] K
Rp = 2.23 [1.95] Re
a = 0.7617 [0.0782] AU
Ag = 37928.47 [67041.17] [0.57 σ]
Teffp = 4916 [2169] K [2.16 σ]

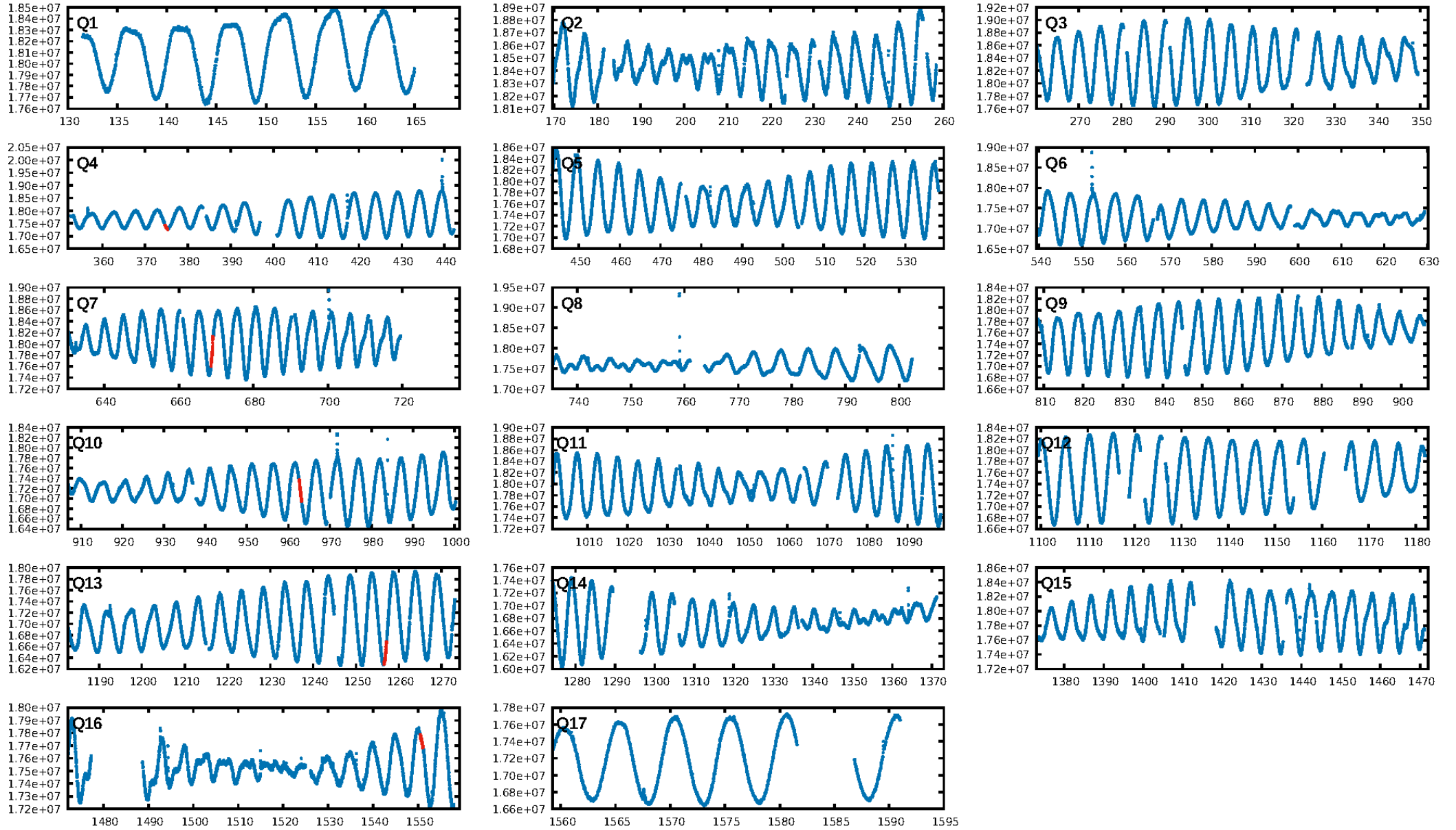
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [49.29 σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 81.1%
Bootstrap-pfa: 8.18e-15
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.3815
Centroid-sig: 31.0%
Centroid-so: 1.132 arcsec [0.94 σ]
OotOffset-rm: 0.049 arcsec [0.22 σ]
KicOffset-rm: 0.123 arcsec [0.46 σ]
OotOffset-st: 1/1/2/1 [5]
KicOffset-st: 1/1/2/1 [5]
DiffImageQuality-fgm: 0.60 [3/5]
DiffImageOverlap-fno: 1.00 [5/5]

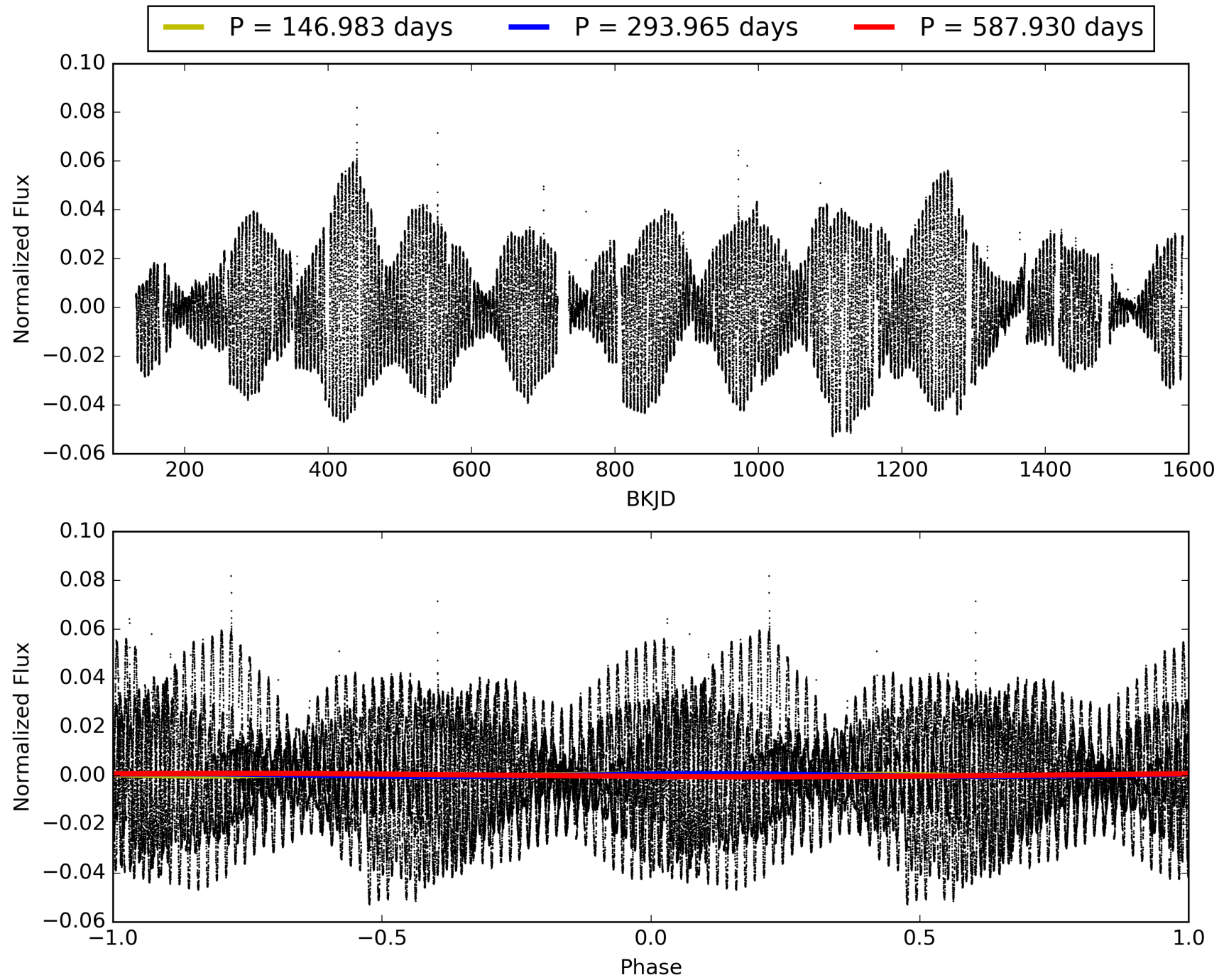
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:31:28 Z

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

TCE 006450625-01, PDC Light Curves

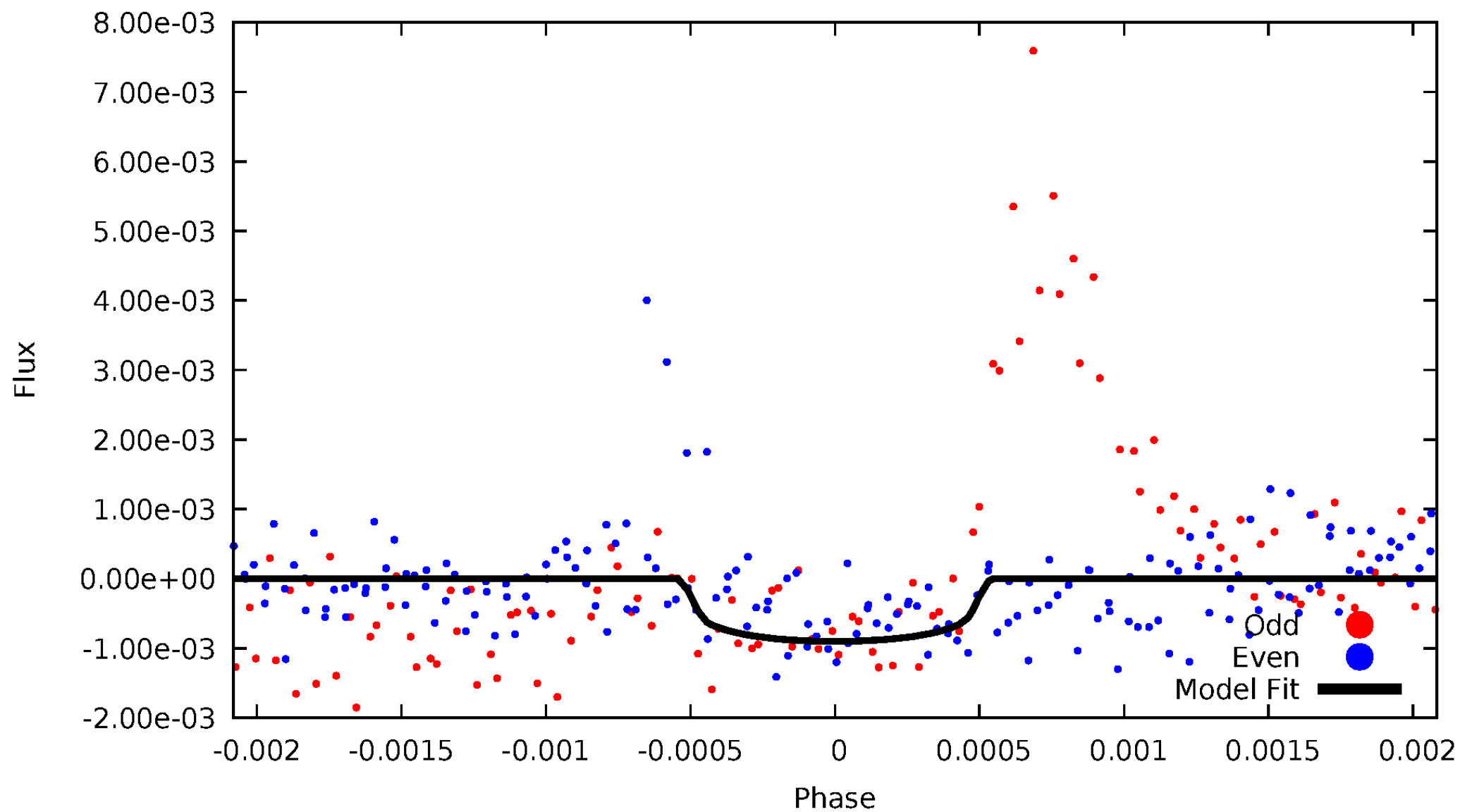


TCE 006450625-01



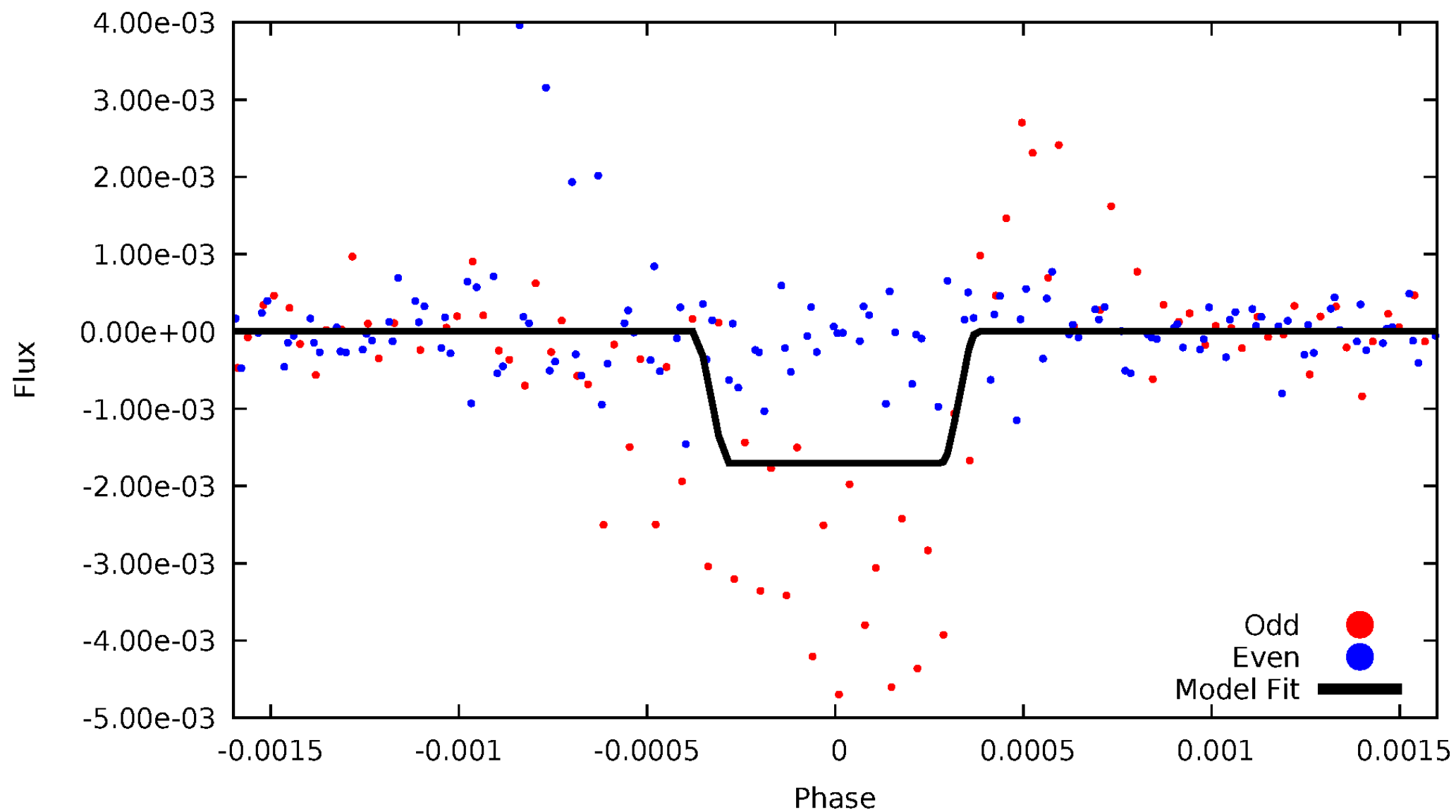
DV Odd/Even

TCE 006450625-01



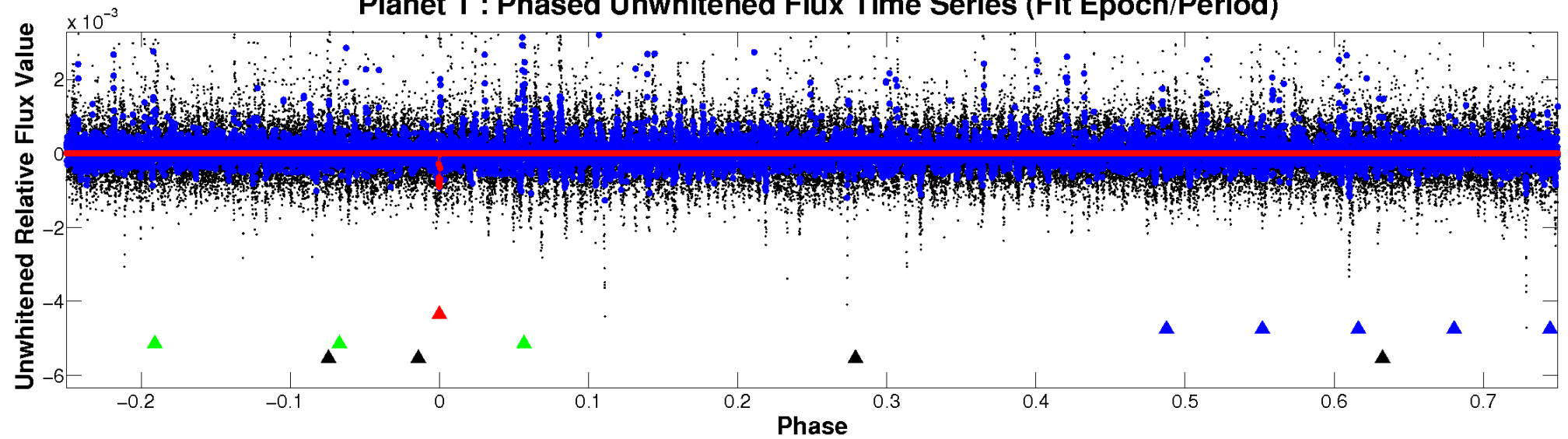
ALT Odd/Even

TCE 006450625-01

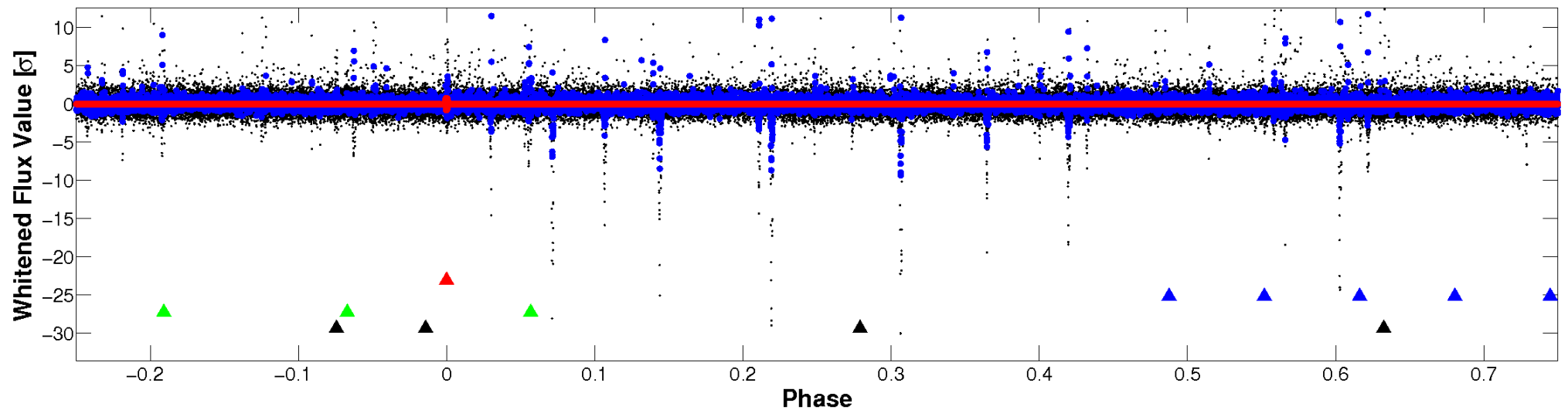


Non-Whitened Vs. Whitened Light Curve

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

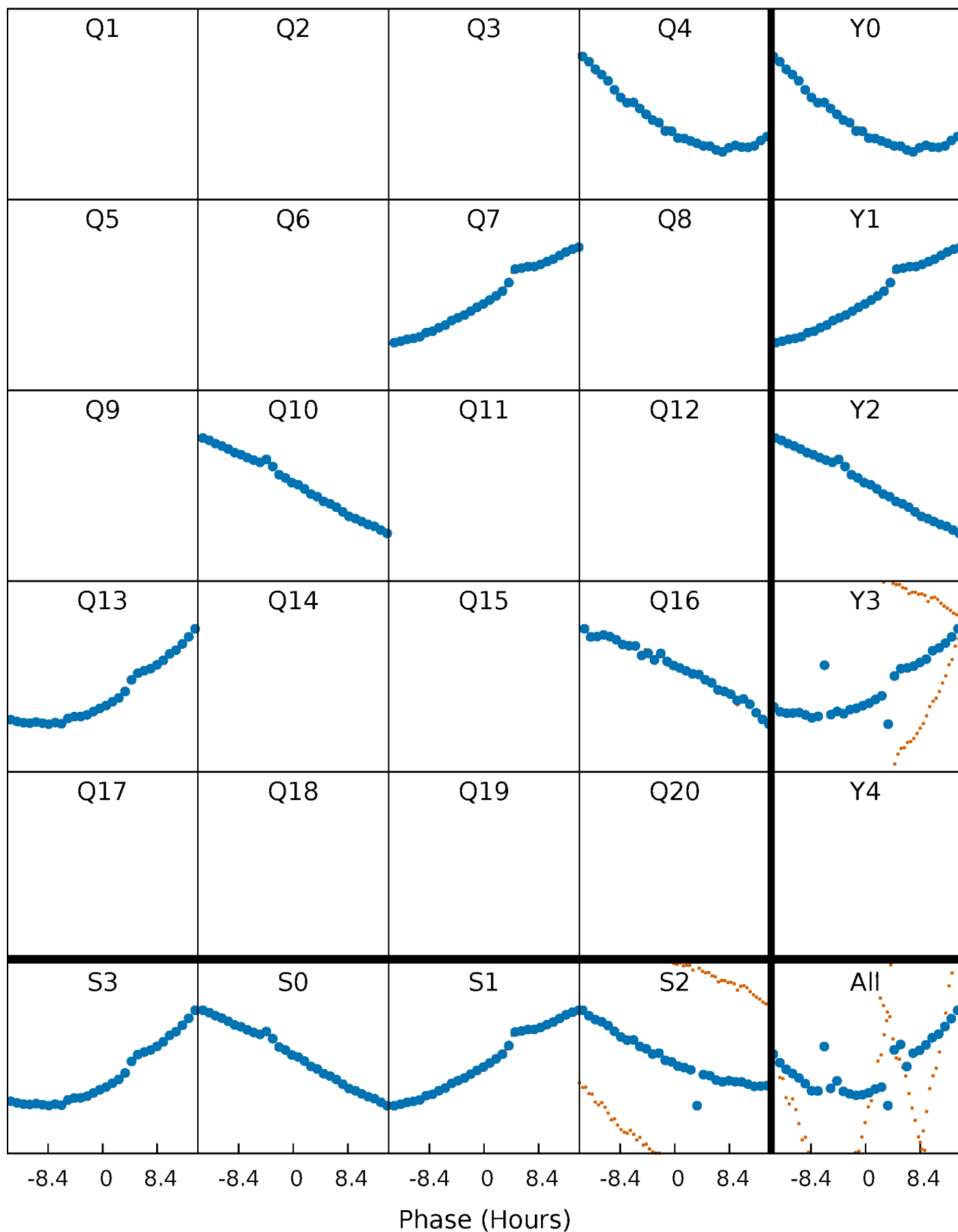


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



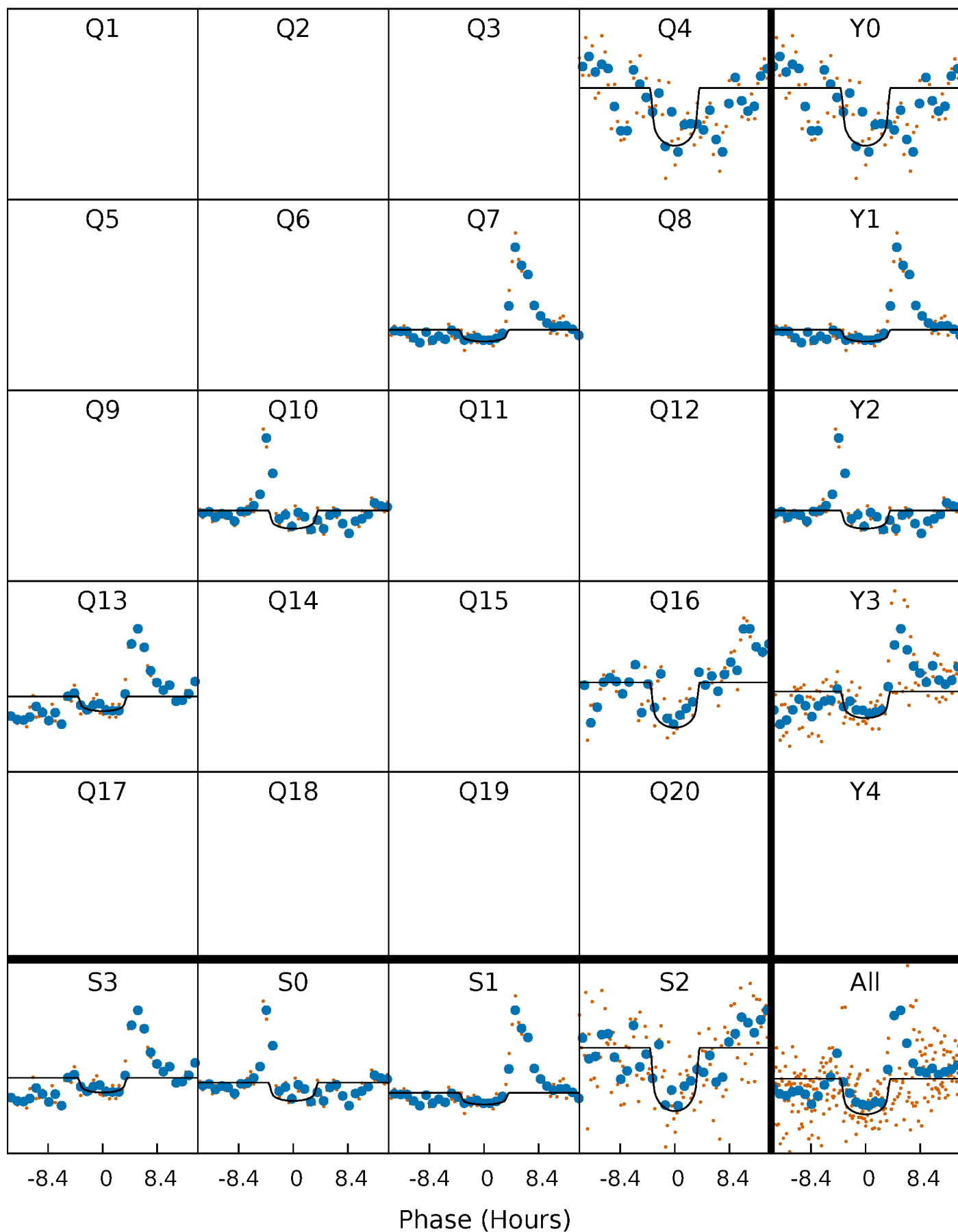
PDC Quarter-Phased Transit Curves

TCE 006450625-01 P=293.965024 Days $T_0=374.933203$ (BKJD)



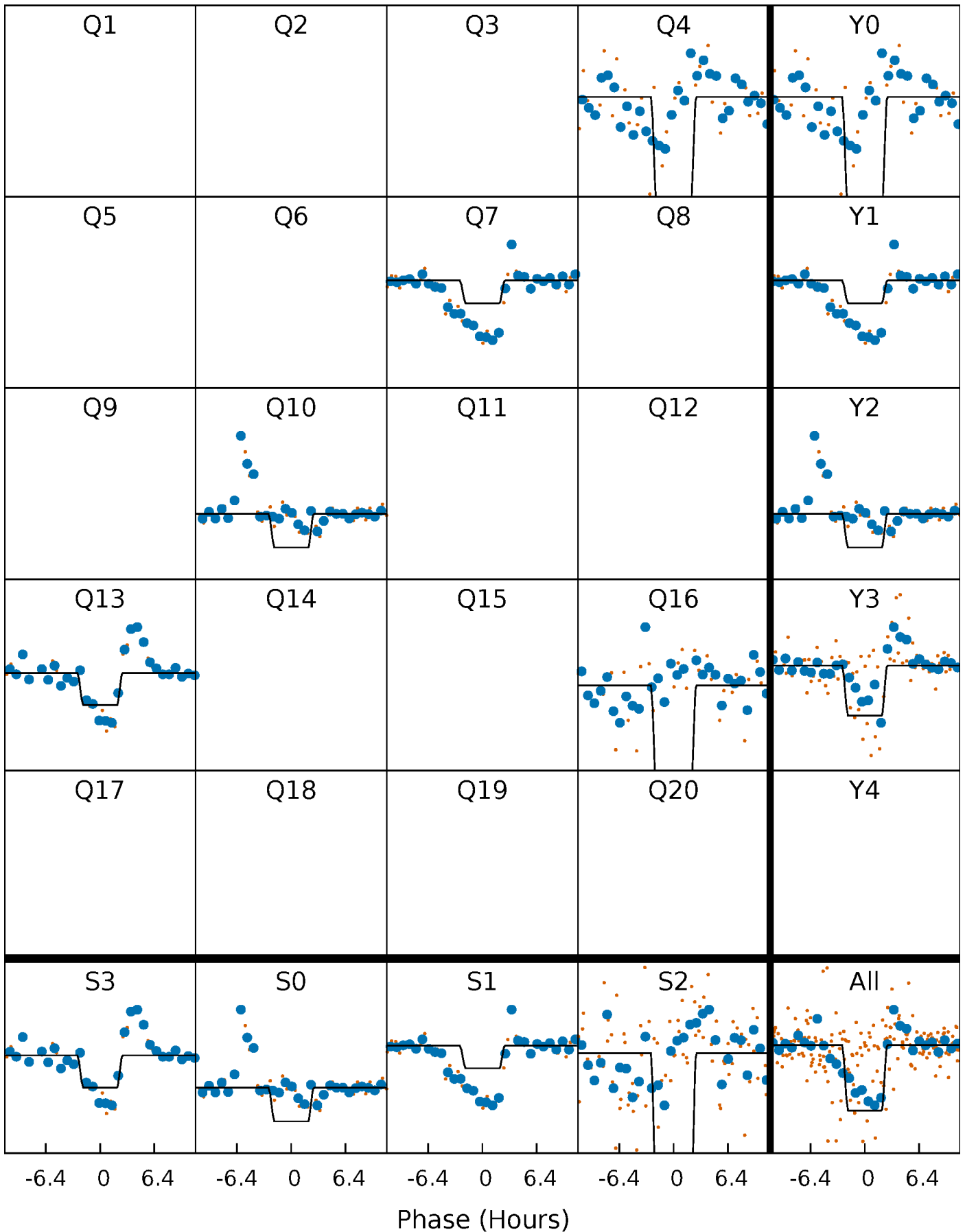
DV Quarter-Phased Transit Curves

TCE 006450625-01 P=293.965024 Days $T_0=374.933203$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

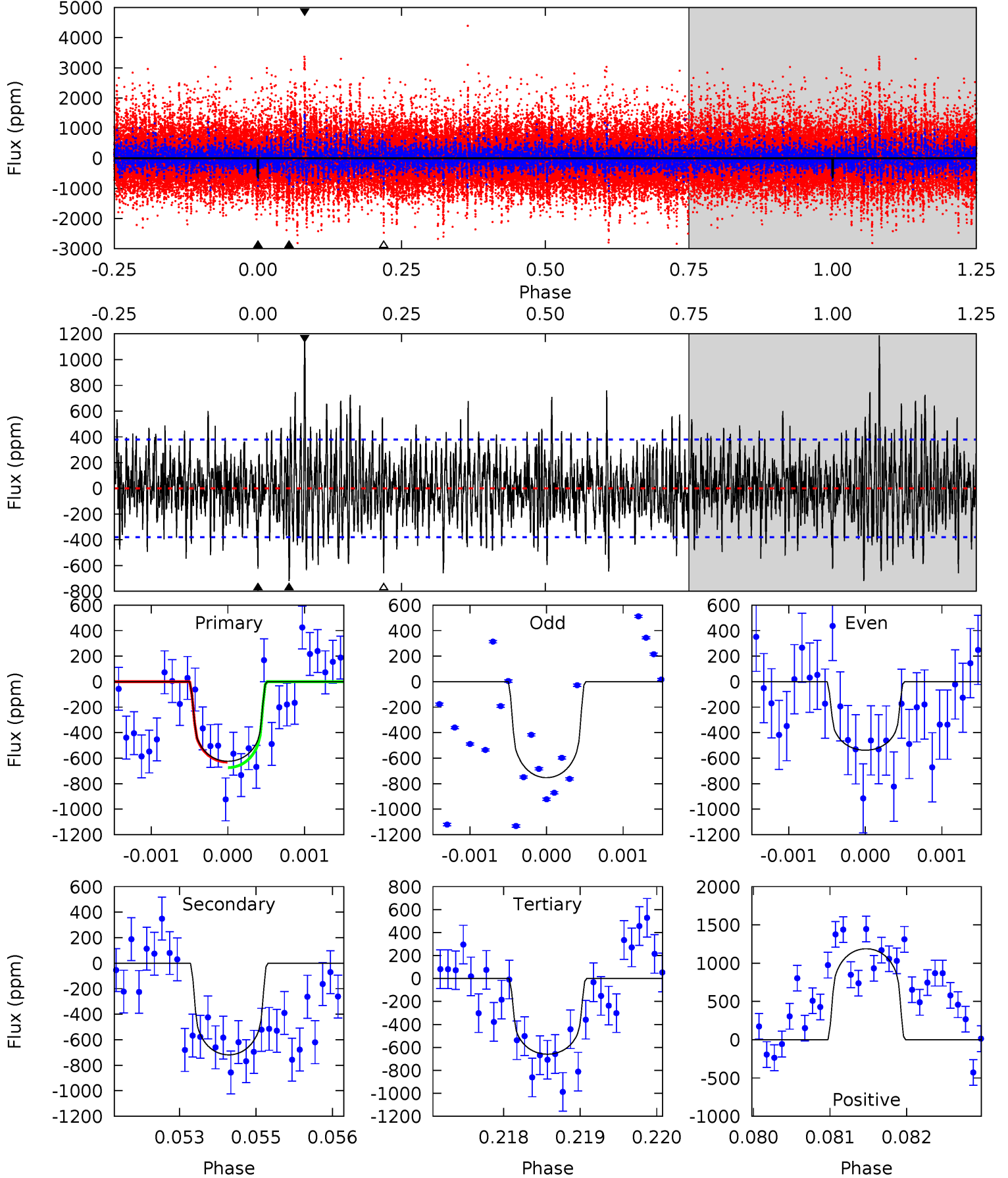
TCE 006450625-01 P=293.964005 Days $T_0=374.989977$ (BKJD)



DV Model-Shift Uniqueness Test

006450625-01, P = 293.965024 Days, E = 80.968179 Days

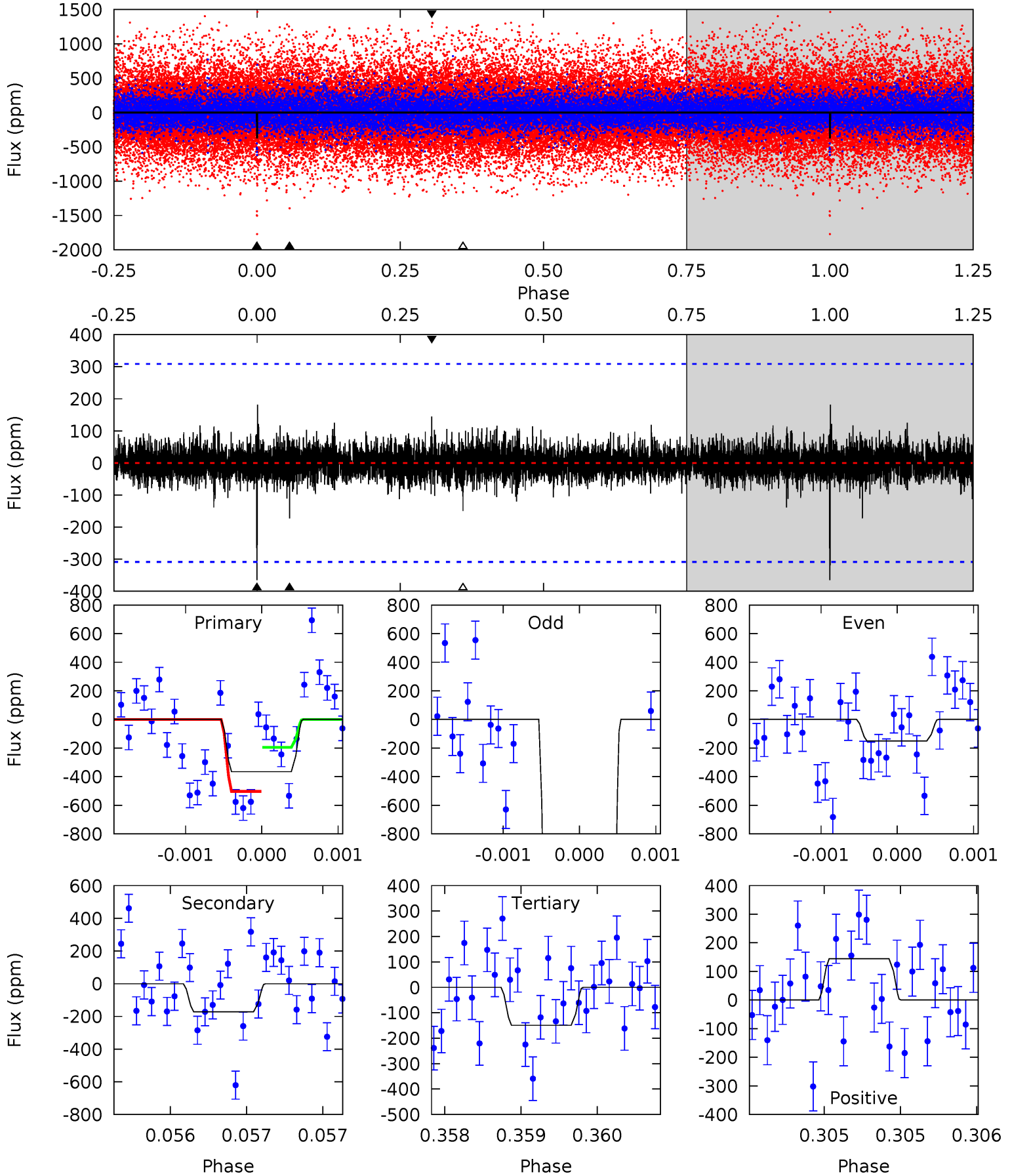
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.95	10.3	9.45	17.0	5.44	3.27	3.04	-0.50	-8.08	0.85	-6.74	1.42	0.93	0.62	0.31



Alt Model-Shift Uniqueness Test

006450625-01, $P = 293.964005$ Days, $E = 81.025972$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.53	3.08	2.67	2.59	5.51	3.39	0.54	3.86	3.94	0.41	0.49	31.2	4.10	0.33	2.75



Stellar Parameters For KIC 006450625

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5312^{+160}_{-160}	$4.557^{+0.090}_{-0.060}$	$-0.620^{+0.350}_{-0.300}$	$0.720^{+0.082}_{-0.073}$	$0.681^{+0.090}_{-0.032}$	$2.573^{+0.949}_{-0.581}$
	+3%/-3%	+2%/-1%	+56%/-48%	+11%/-10%	+13%/-5%	+37%/-23%
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 006450625-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-718 ± 70	$2.43^{+1.74}_{-1.42}$	316^{+14}_{-13}	4943^{+3022}_{-893}	$39516^{+203955}_{-26093}$
Alt.	-172 ± 56	$3.49^{+1.89}_{-1.88}$	318^{+13}_{-14}	3399^{+1004}_{-465}	4503^{+17116}_{-2719}

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 $A_{obs} \gg 1.0$

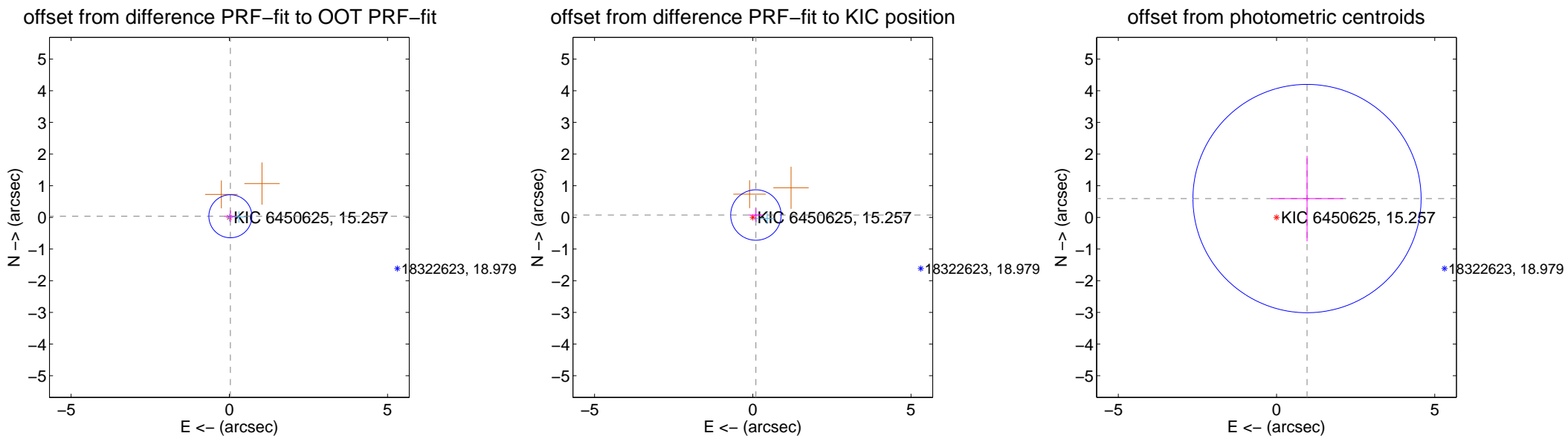
DV Centroid Data

Supplemental centroid analysis for 006450625-01. Kepler magnitude: 15.26. Transit SNR 6.77

There are 3 quarters with good PRF difference image offsets

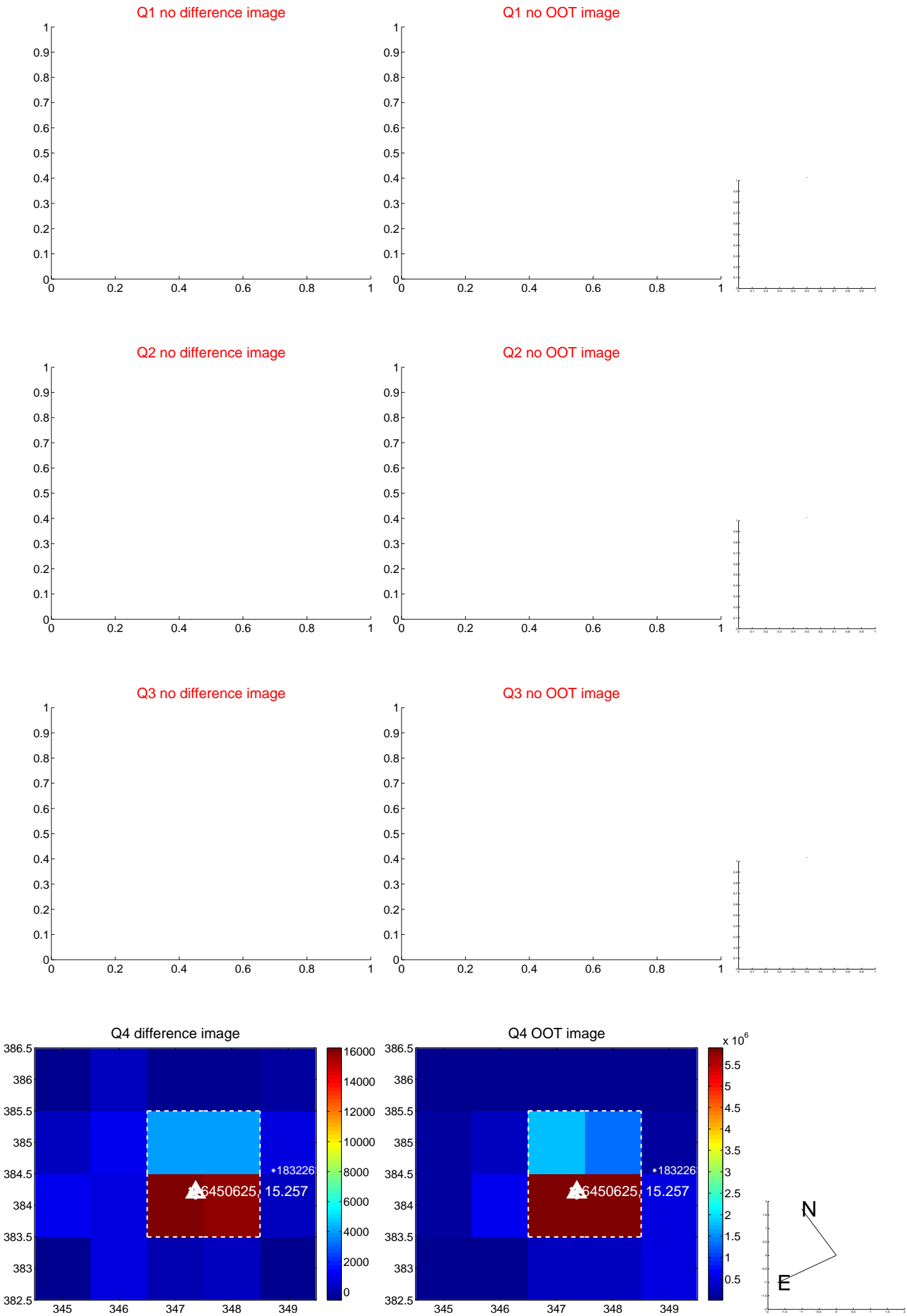
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.049 ± 0.226	0.22	-0.033 ± 0.189	0.036 ± 0.180
PRF-fit source offset from KIC position	0.123 ± 0.266	0.46	-0.098 ± 0.225	0.075 ± 0.213
photometric centroid source offset	1.13 ± 1.20	0.94	-0.96 ± 1.14	0.59 ± 1.35

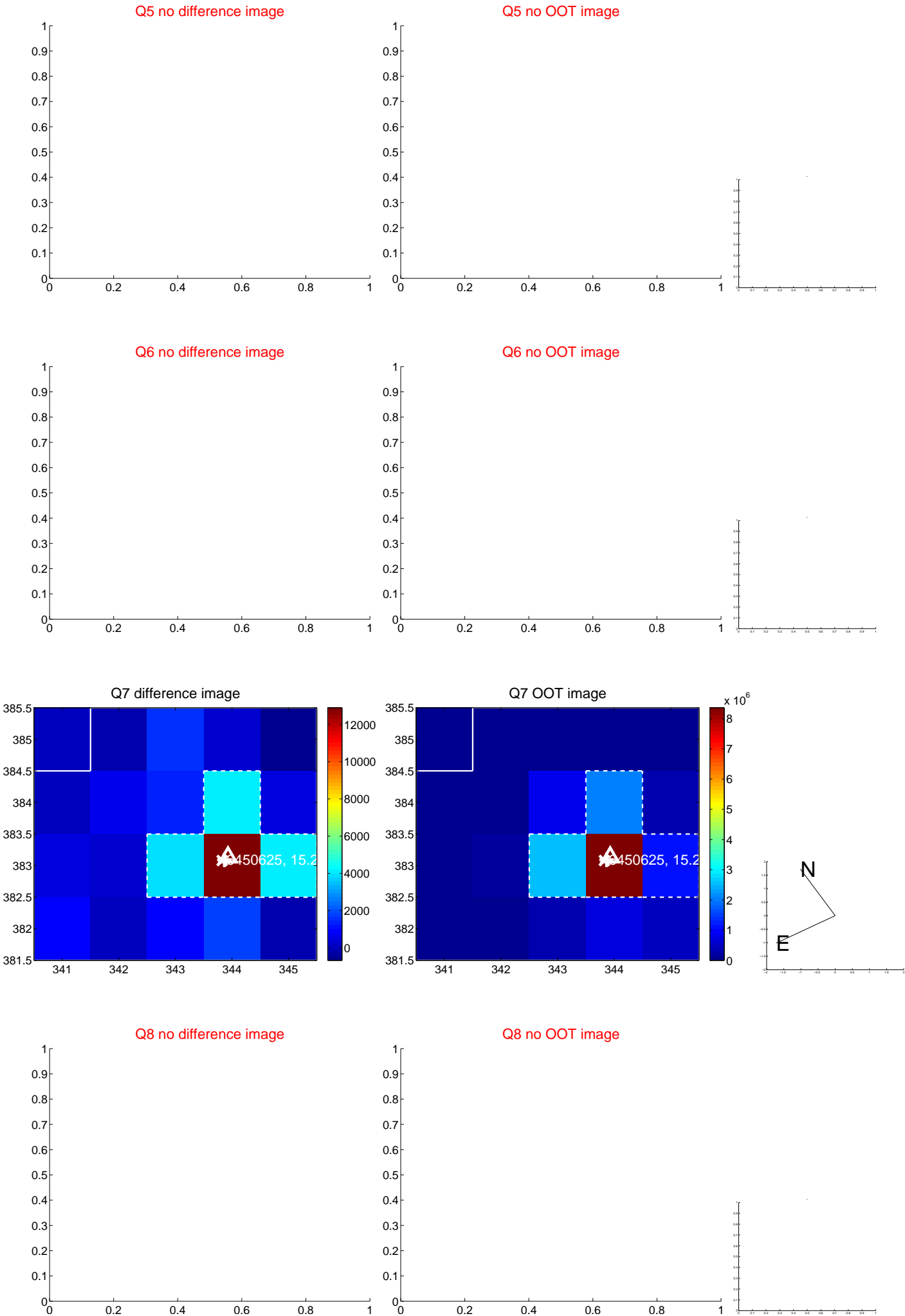


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

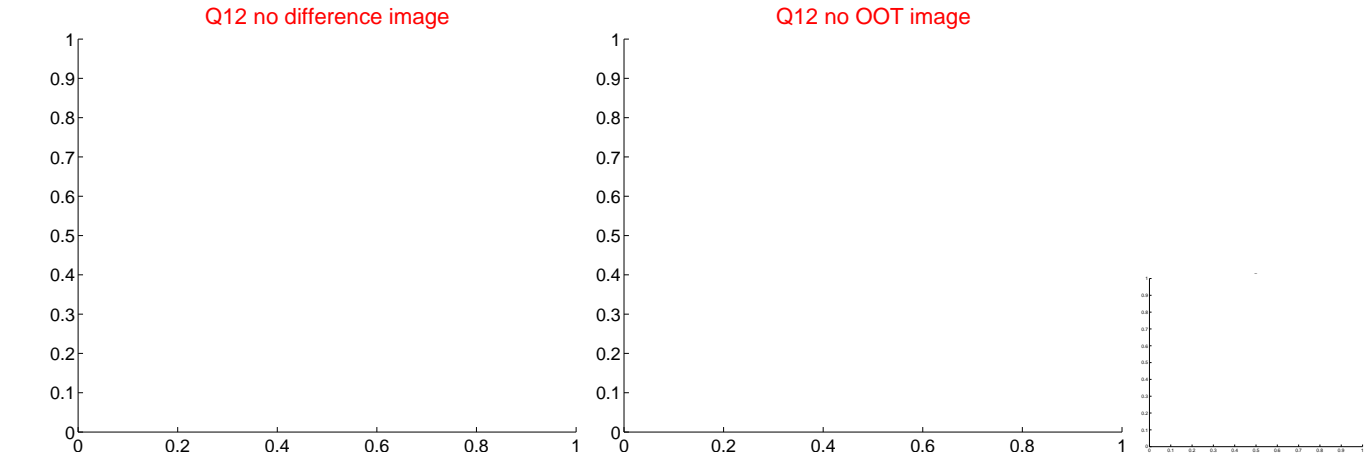
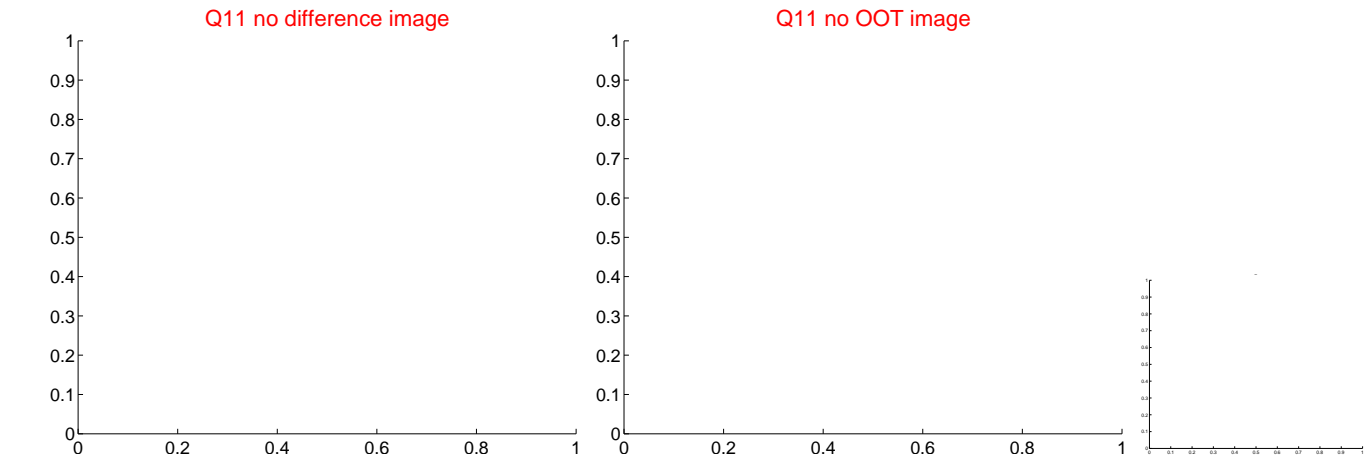
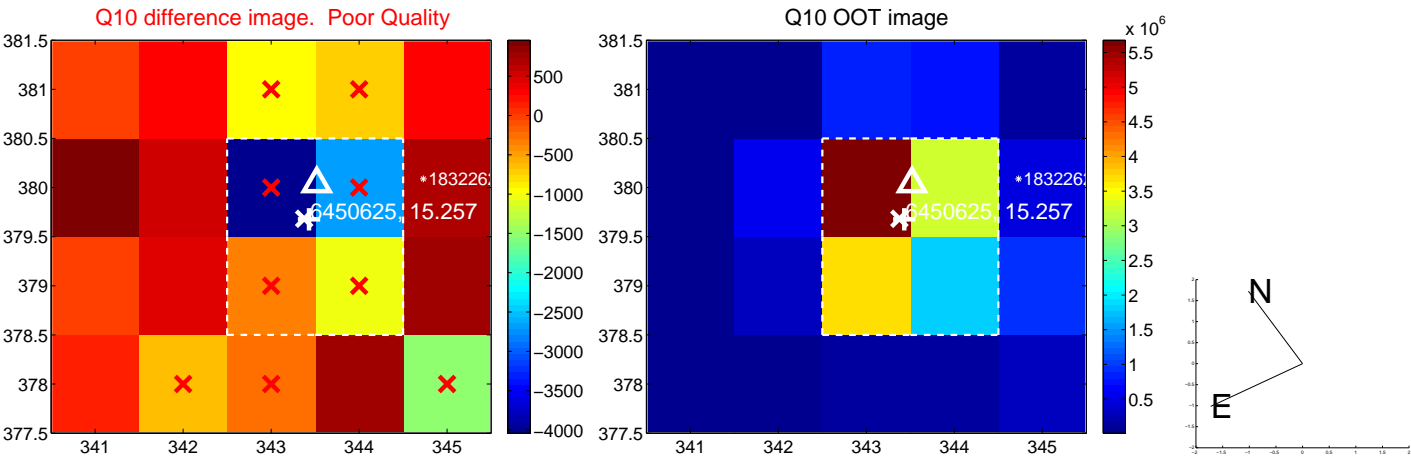
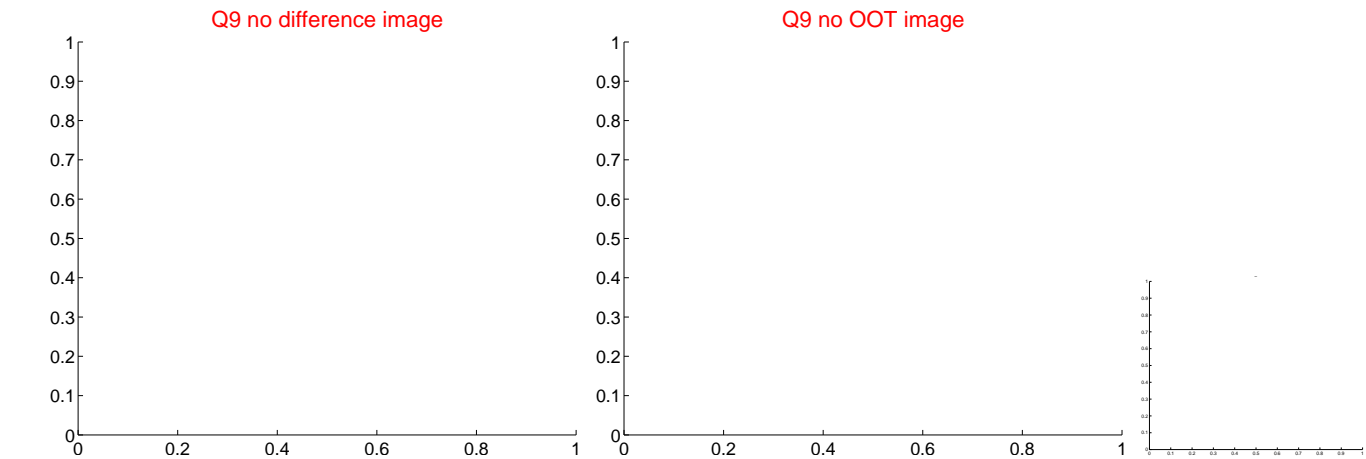
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



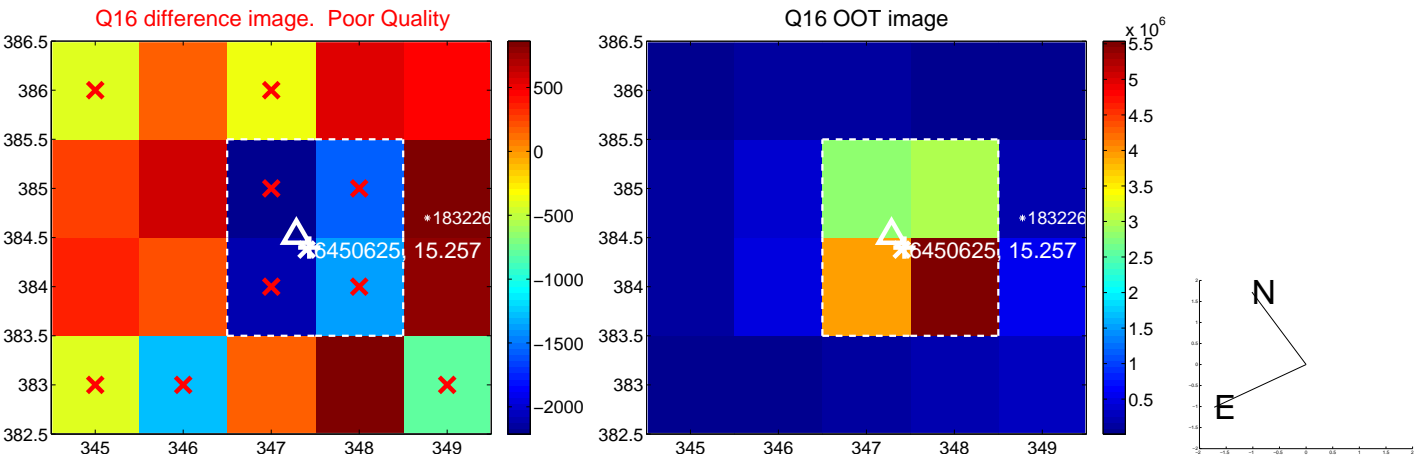
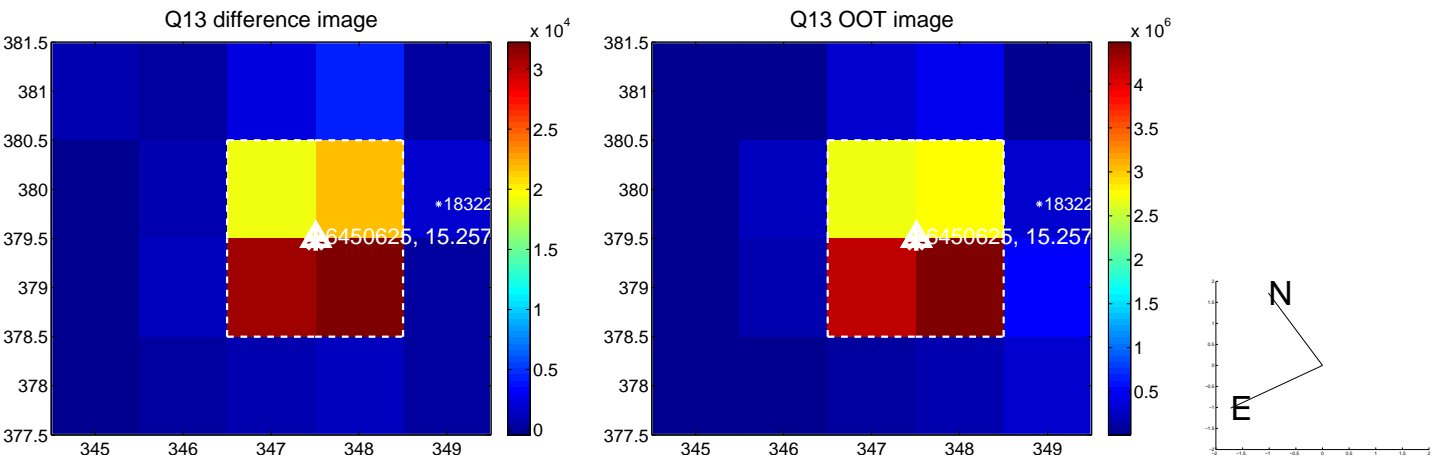
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



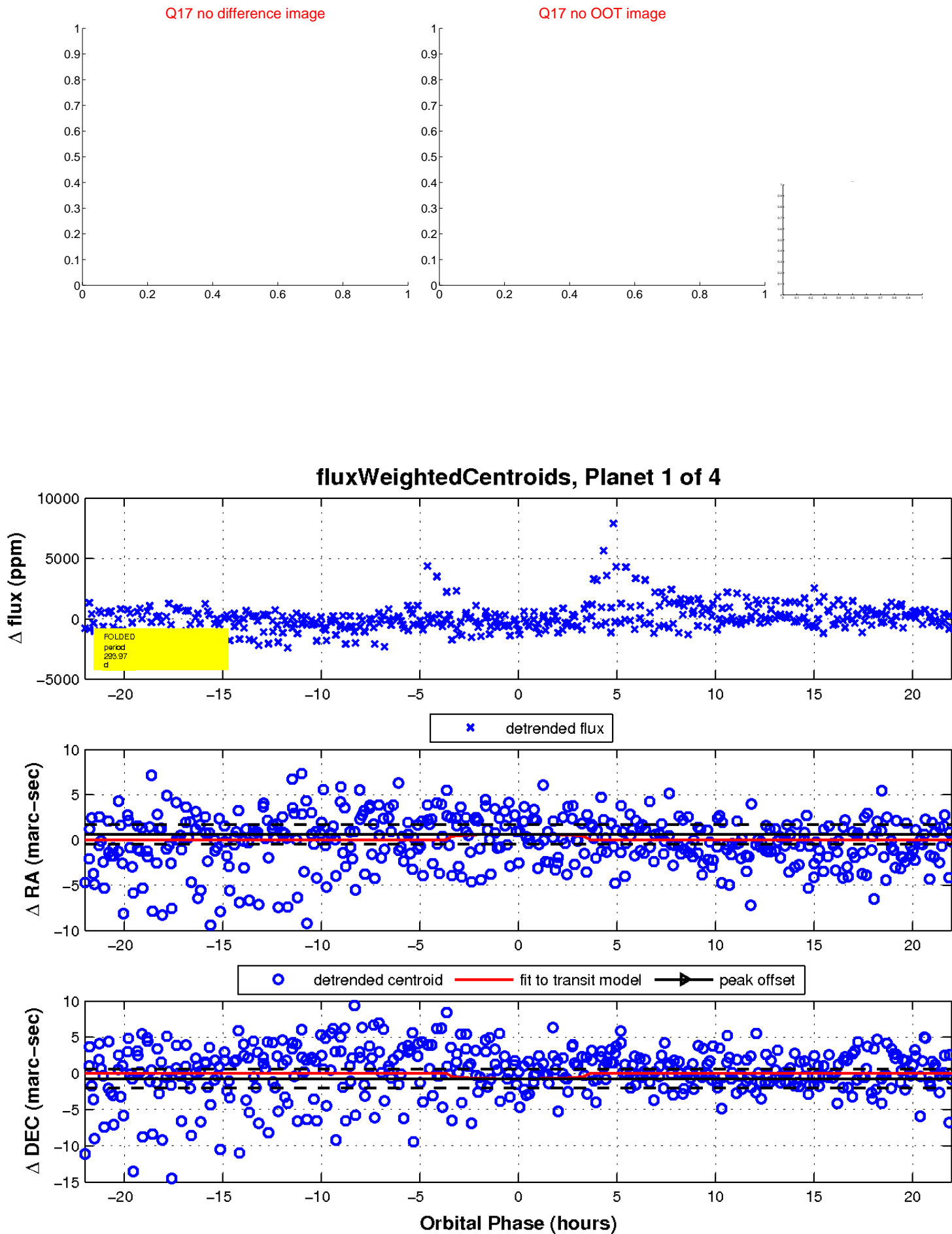
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

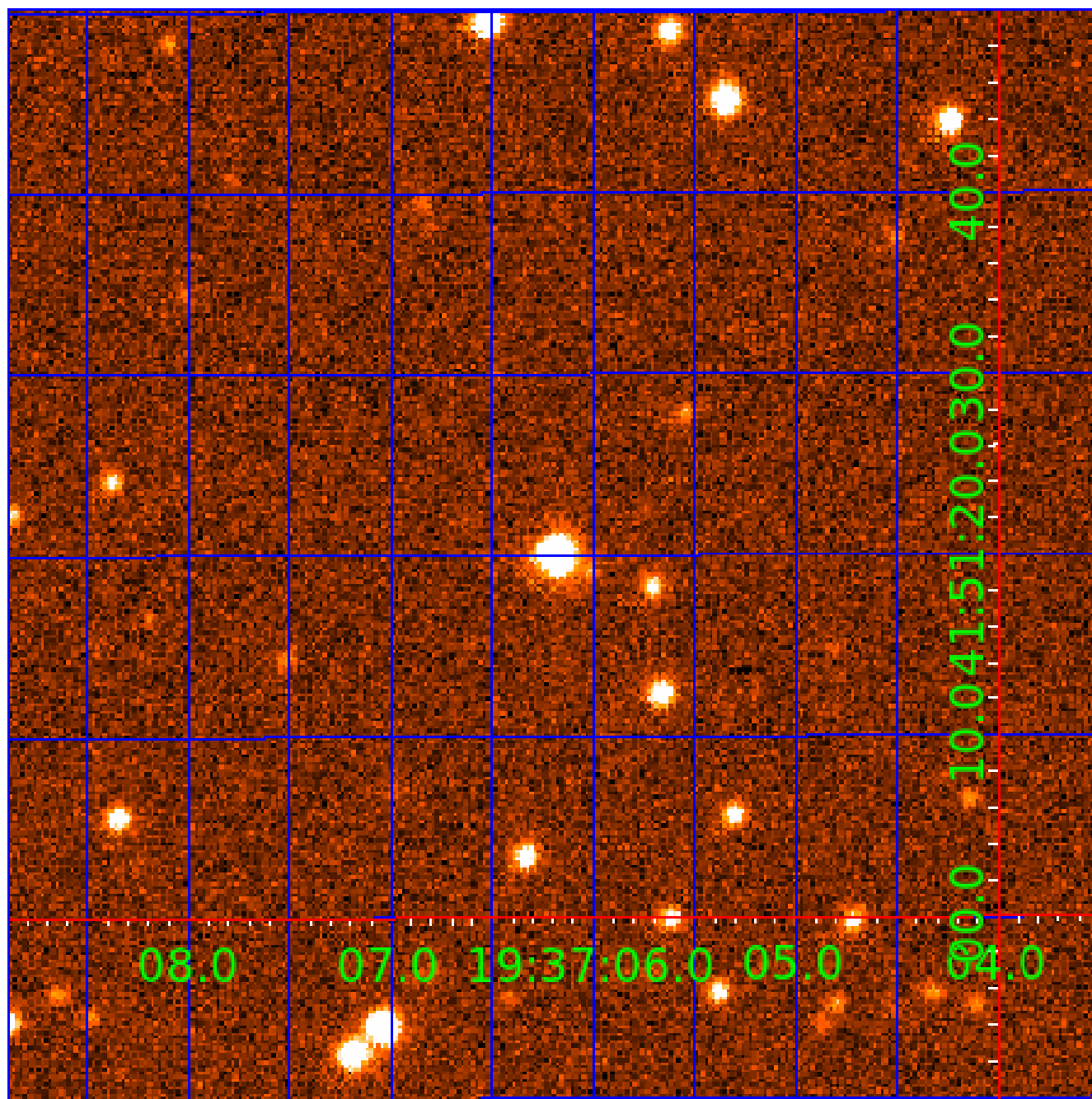


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006450625

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})
006450625-01	OBS	No	293.965024	374.933203	902.4	7.340	13.4	6.8	0.72	5312	2.23	0.64
006450625-03	OBS	No	624.325324	318.832777	1380.1	3.371	11.6	7.5	0.72	5312	2.73	0.23
006450625-04	OBS	No	397.856649	353.076132	1086.2	4.564	9.8	8.6	0.72	5312	2.50	0.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006450625-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006450625-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS
006450625-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_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.

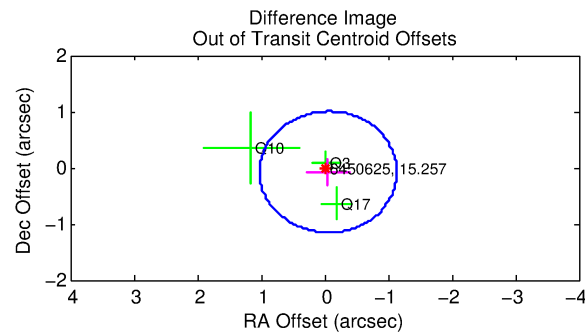
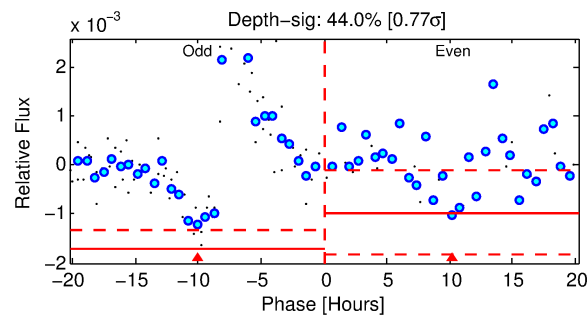
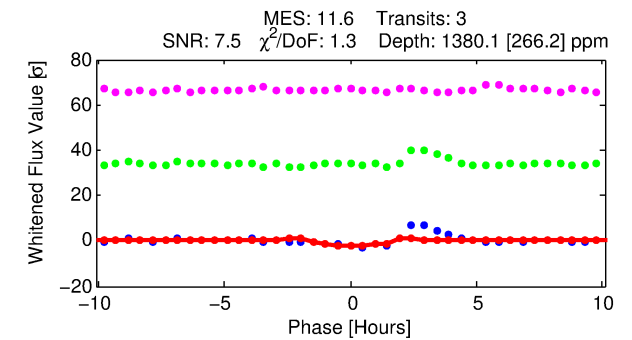
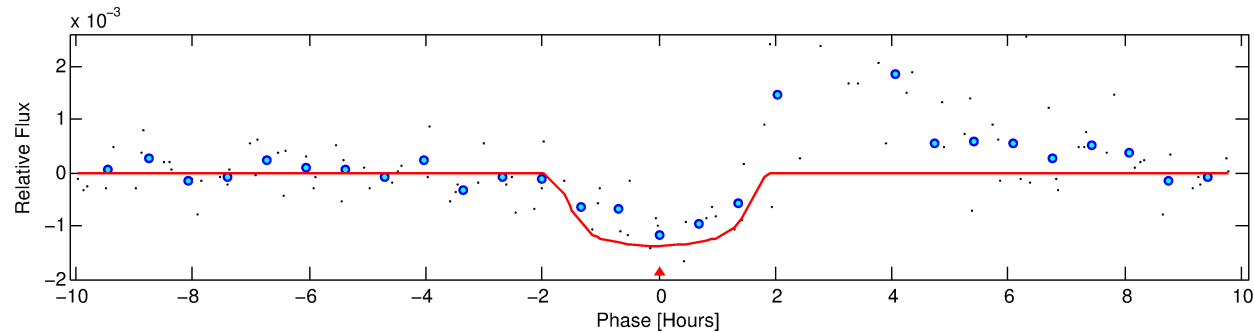
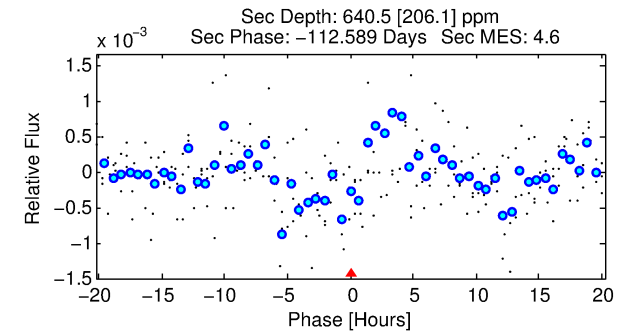
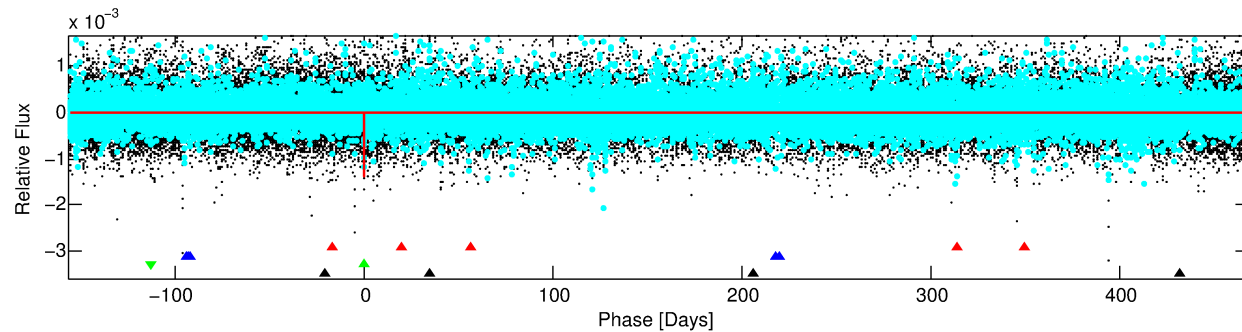
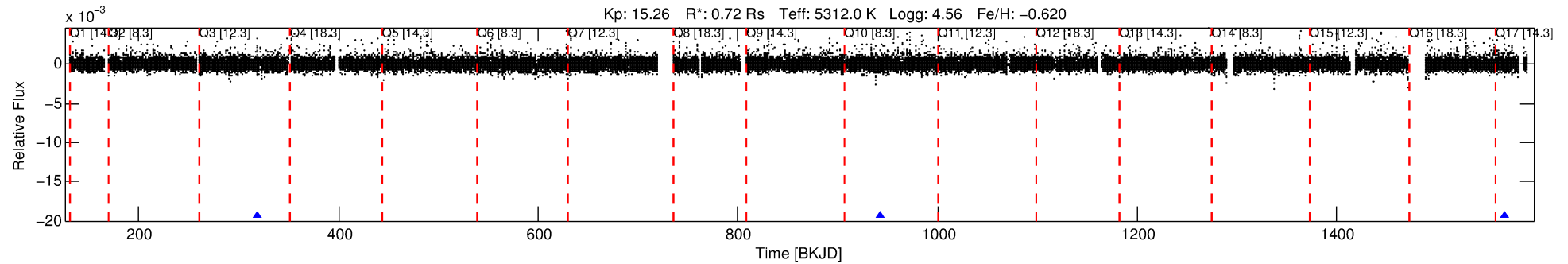
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006450625-03

No Significant Match Found

DV One-Page Summary

KIC: 6450625 Candidate: 3 of 4 Period: 624.325 d



DV Fit Results:

Period = 624.32532 [0.00802] d
Epoch = 318.8328 [0.0098] BKJD
Rp/R* = 0.0347 [0.1671]
a/R* = 1284.89 [25634.06]
b = 0.50 [30.76]
Seff = 0.23 [0.05]
Teq = 177 [9] K
Rp = 2.73 [13.13] Re
a = 1.2585 [0.1292] AU
Ag = 75091.27 [723701.66] [0.10 σ]
Teffp = 4537 [10930] K [0.40 σ]

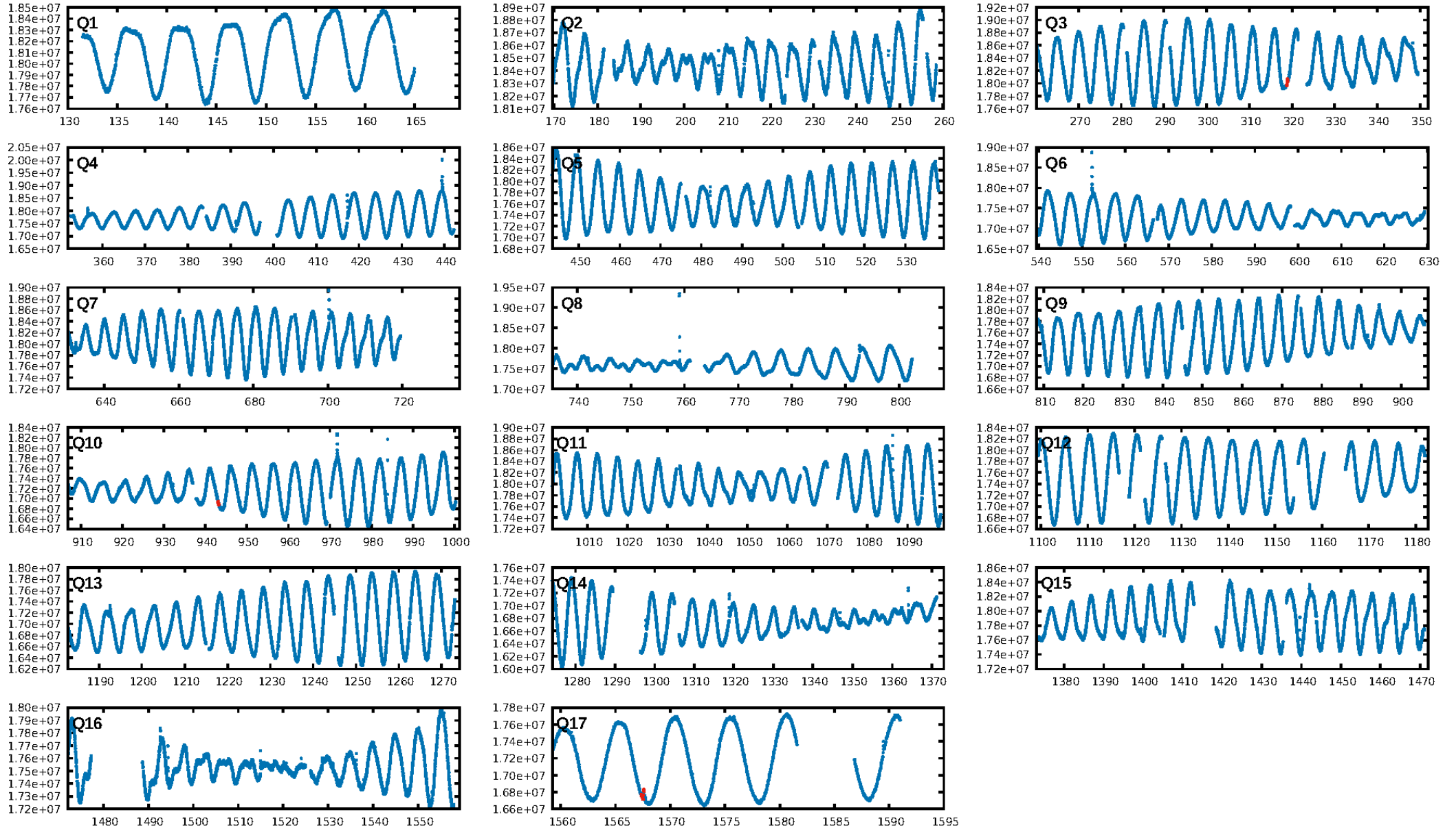
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [957.88 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.4%
ModelChiSquareGof-sig: 70.1%
Bootstrap-pfa: 1.26e-11
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.8923
Centroid-sig: 80.8%
Centroid-so: 0.809 arcsec [0.62 σ]
OotOffset-rm: 0.096 arcsec [0.27 σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-rm: 0.174 arcsec [0.63 σ]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

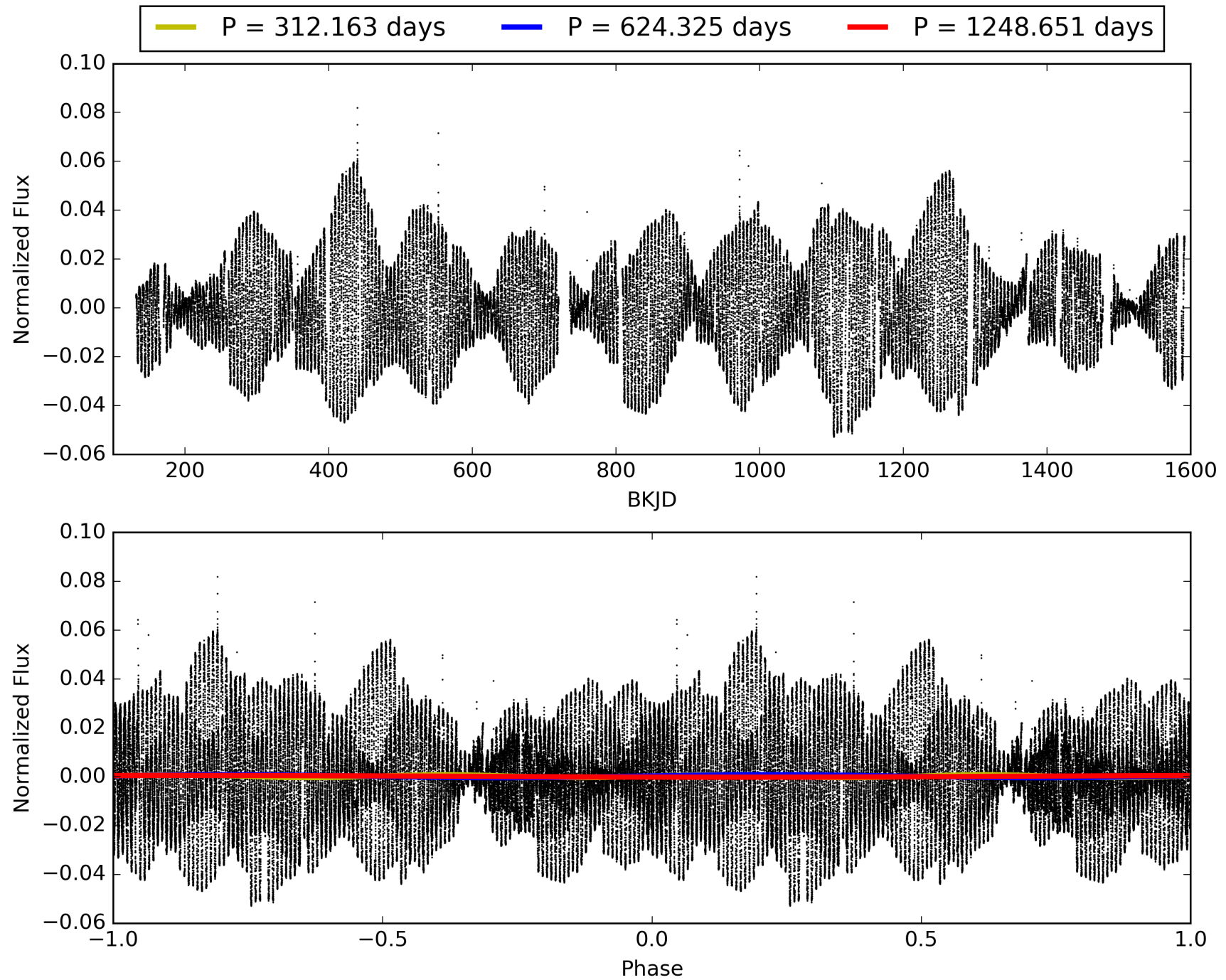
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:32:04 Z

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

TCE 006450625-03, PDC Light Curves

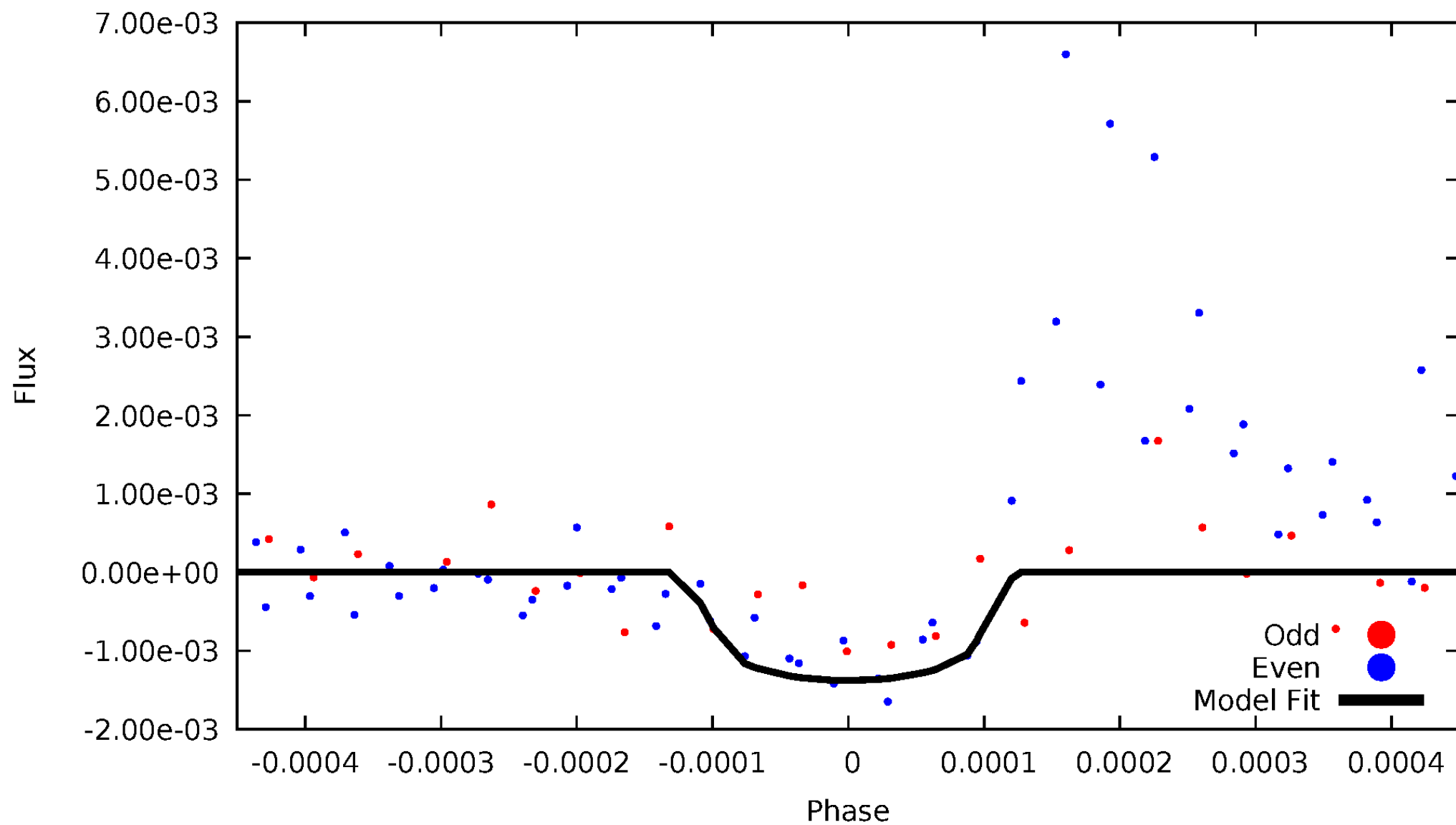


TCE 006450625-03



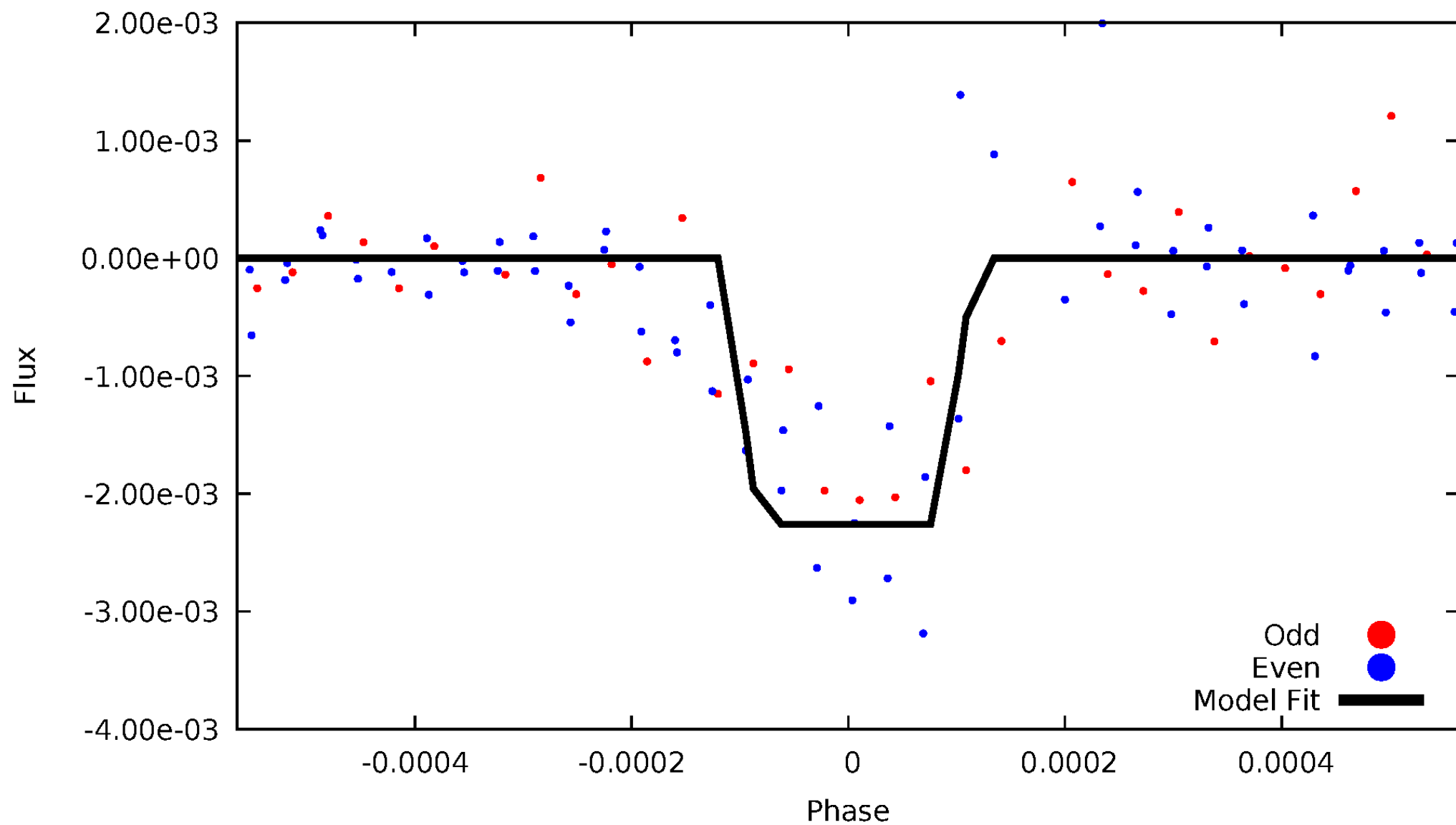
DV Odd/Even

TCE 006450625-03



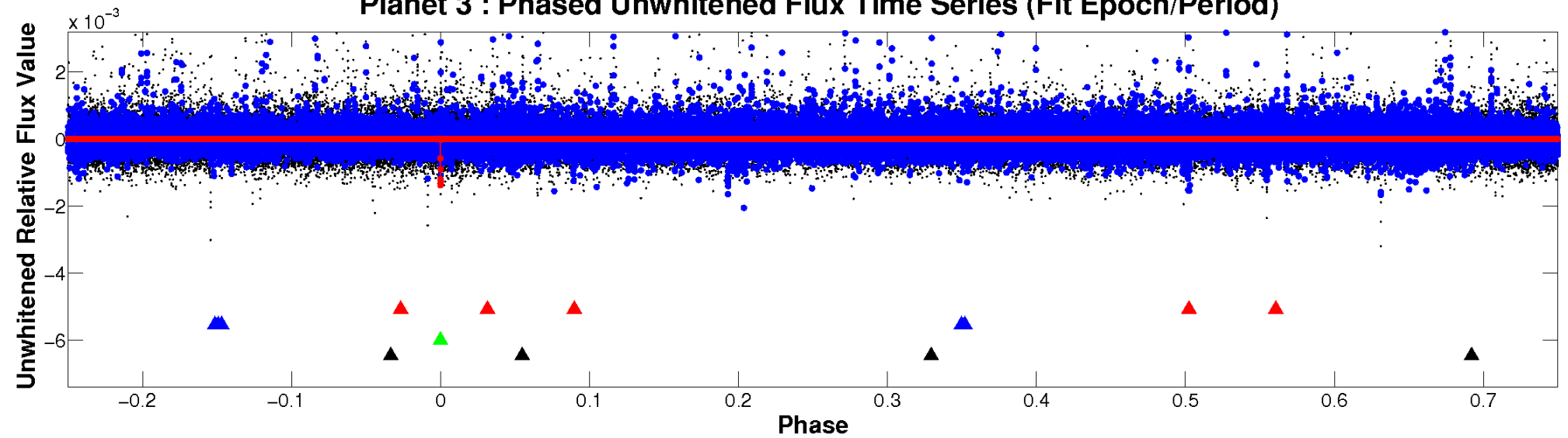
ALT Odd/Even

TCE 006450625-03

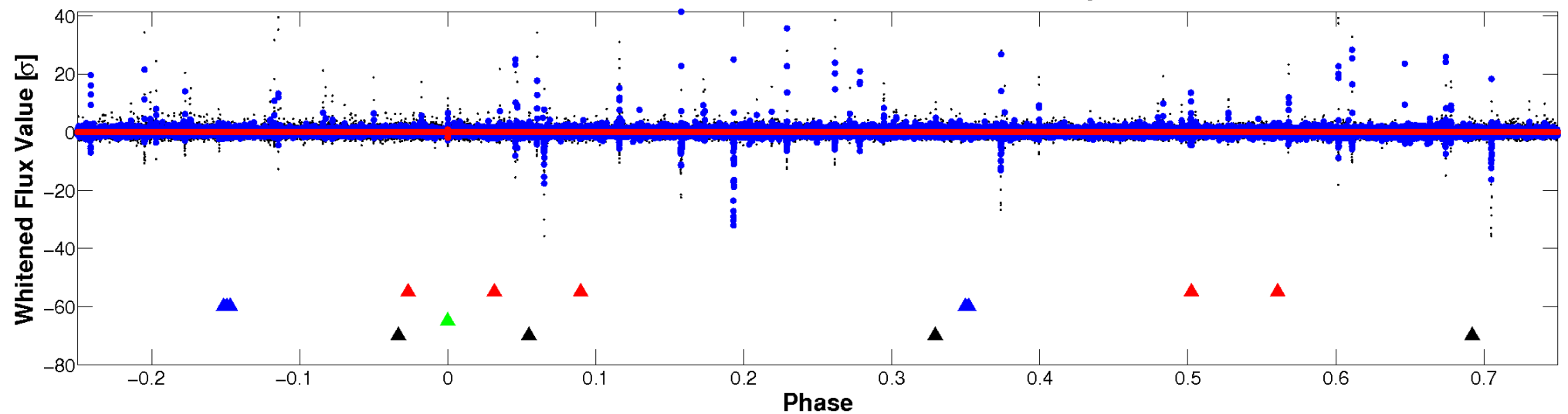


Non-Whitened Vs. Whitened Light Curve

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

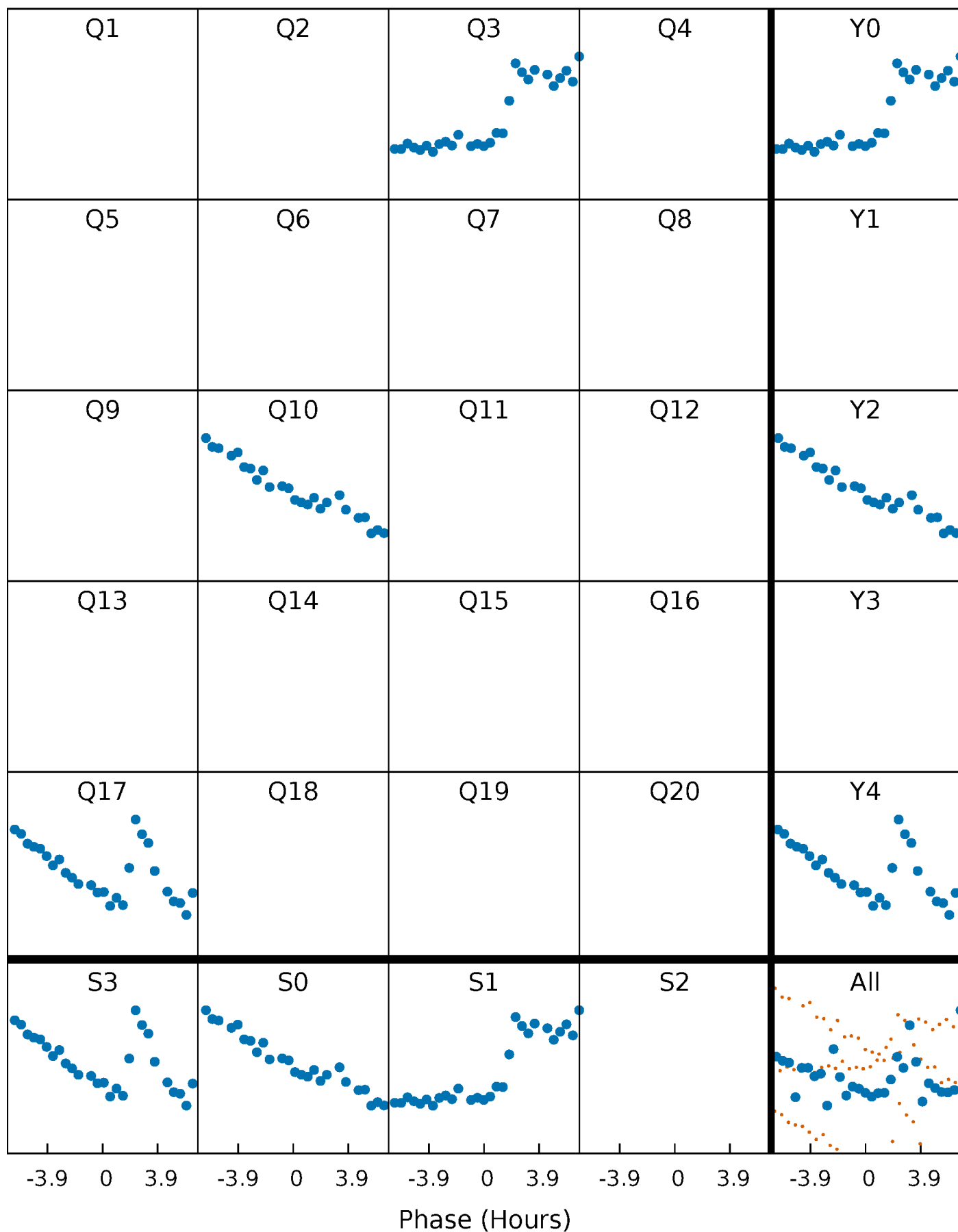


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



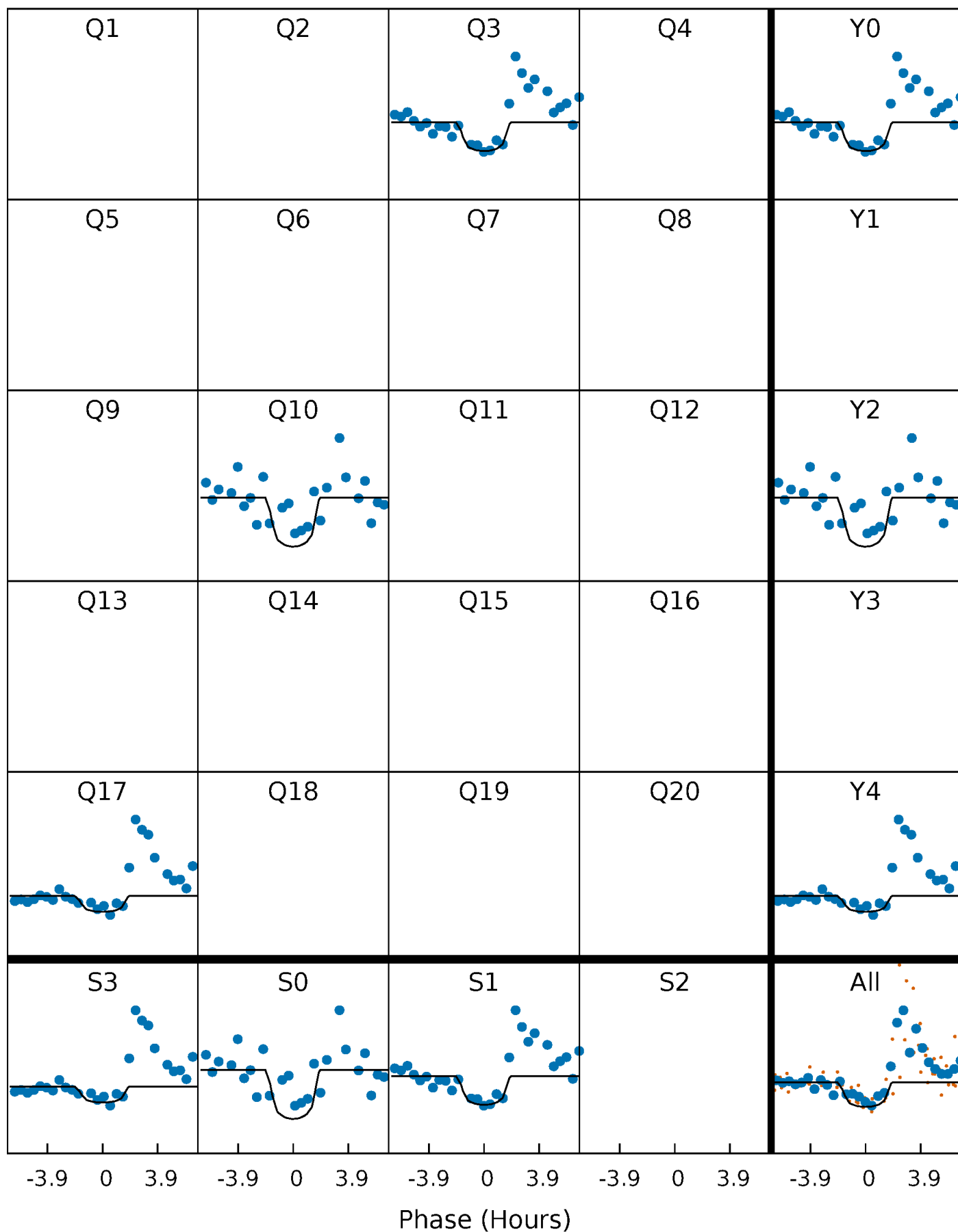
PDC Quarter-Phased Transit Curves

TCE 006450625-03 $P=624.325324$ Days $T_0=318.832777$ (BKJD)



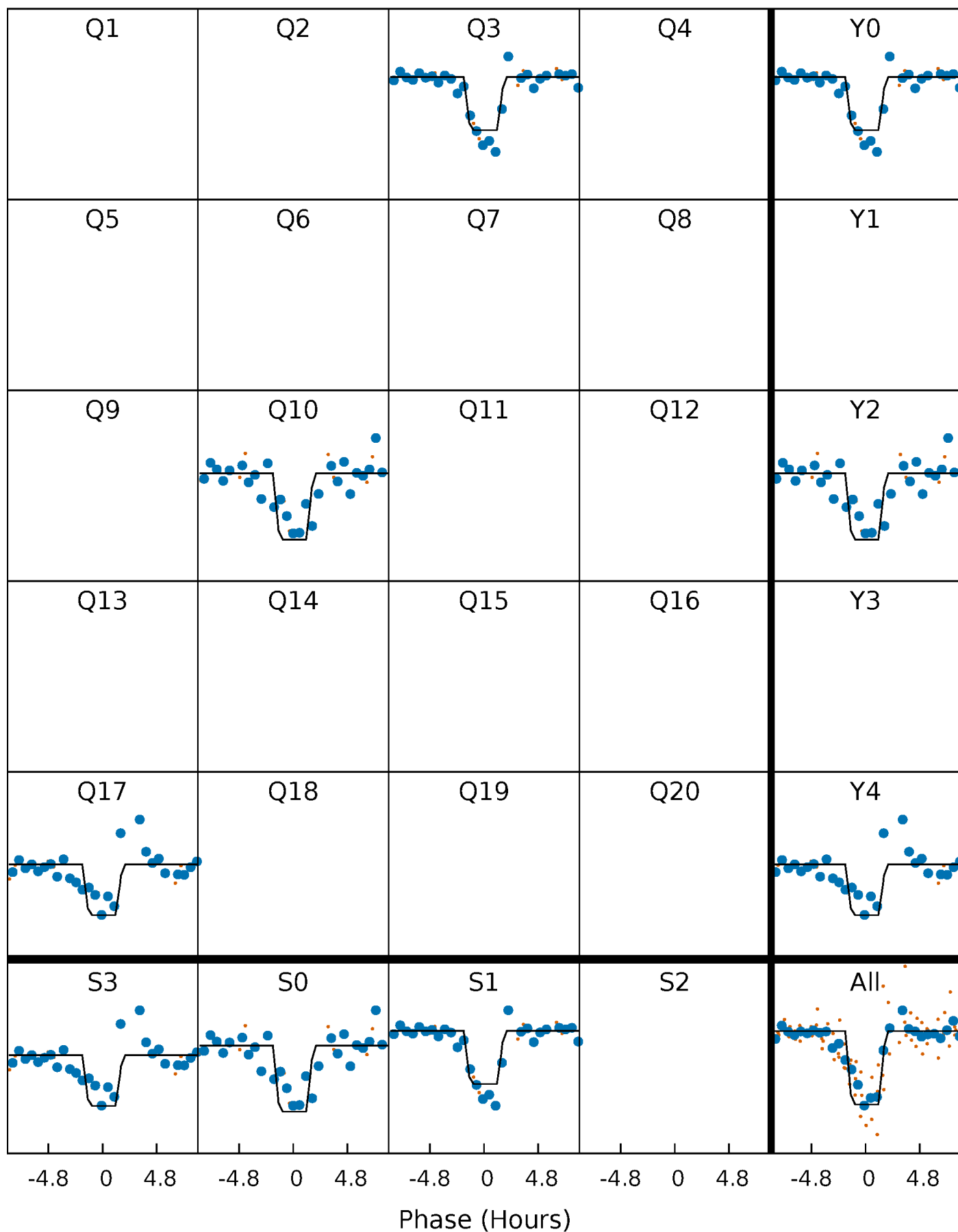
DV Quarter-Phased Transit Curves

TCE 006450625-03 P=624.325324 Days $T_0=318.832777$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

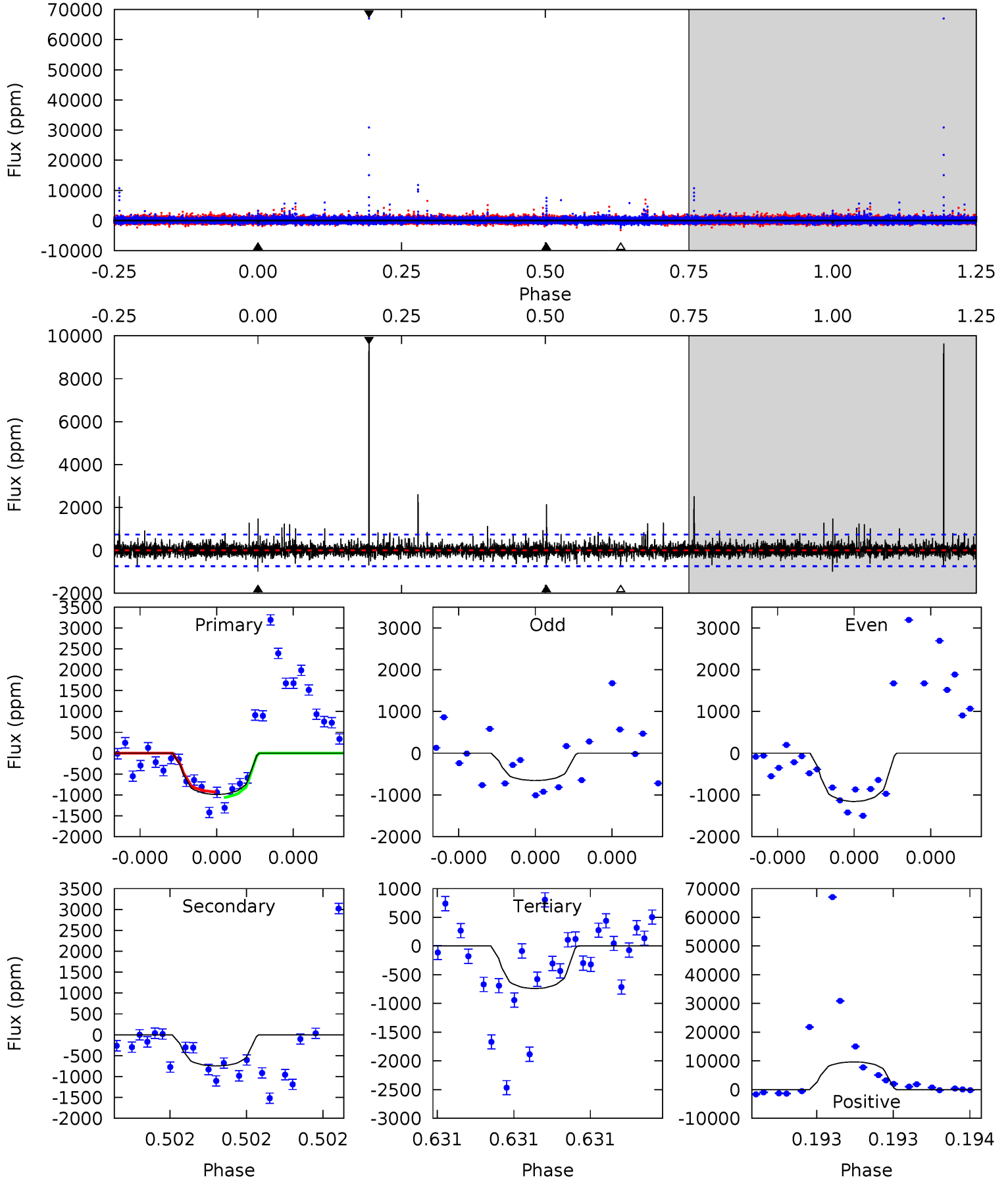
TCE 006450625-03 P=624.326992 Days $T_0=318.844300$ (BKJD)



DV Model-Shift Uniqueness Test

006450625-03, P = 624.325324 Days, E = 318.832777 Days

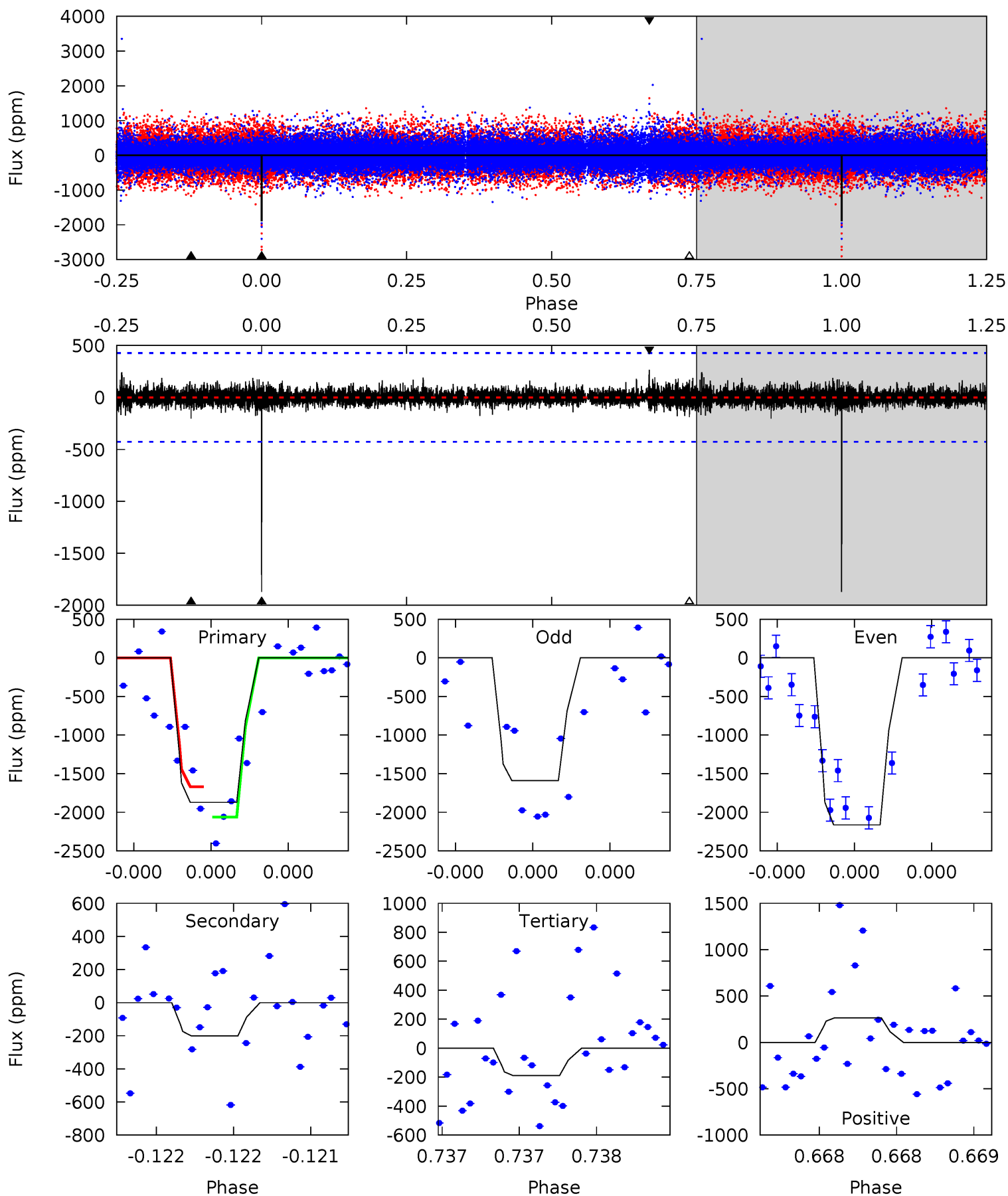
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.65	5.77	5.73	74.5	5.71	3.68	1.80	1.92	-66.8	0.04	-68.7	1.10	0.91	0.91	0.52



Alt Model-Shift Uniqueness Test

006450625-03, P = 624.326992 Days, E = 318.844300 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.0	2.69	2.54	3.55	5.71	3.68	0.55	22.5	21.5	0.16	-0.86	3.81	1.21	0.12	2.64



Stellar Parameters For KIC 006450625

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5312^{+160}_{-160}	$4.557^{+0.090}_{-0.060}$	$-0.620^{+0.350}_{-0.300}$	$0.720^{+0.082}_{-0.073}$	$0.681^{+0.090}_{-0.032}$	$2.573^{+0.949}_{-0.581}$
	+3%/-3%	+2%/-1%	+56%/-48%	+11%/-10%	+13%/-5%	+37%/-23%
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 006450625-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-747 ± 130	$10.30^{+9.50}_{-6.53}$	247^{+10}_{-11}	3051^{+1180}_{-506}	6249^{+41899}_{-4637}
Alt.	-201 ± 75	$9.71^{+11.39}_{-6.73}$	245^{+11}_{-10}	2572^{+1008}_{-414}	1790^{+16366}_{-1424}

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

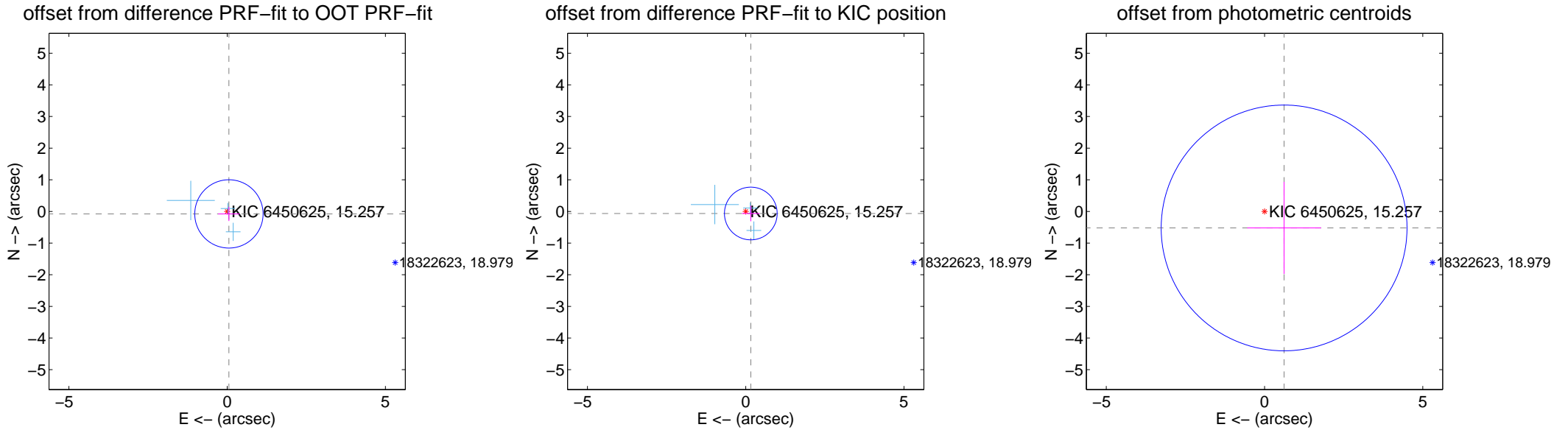
DV Centroid Data

Supplemental centroid analysis for 006450625-03. Kepler magnitude: 15.26. Transit SNR 7.55

There are 3 quarters with good PRF difference image offsets

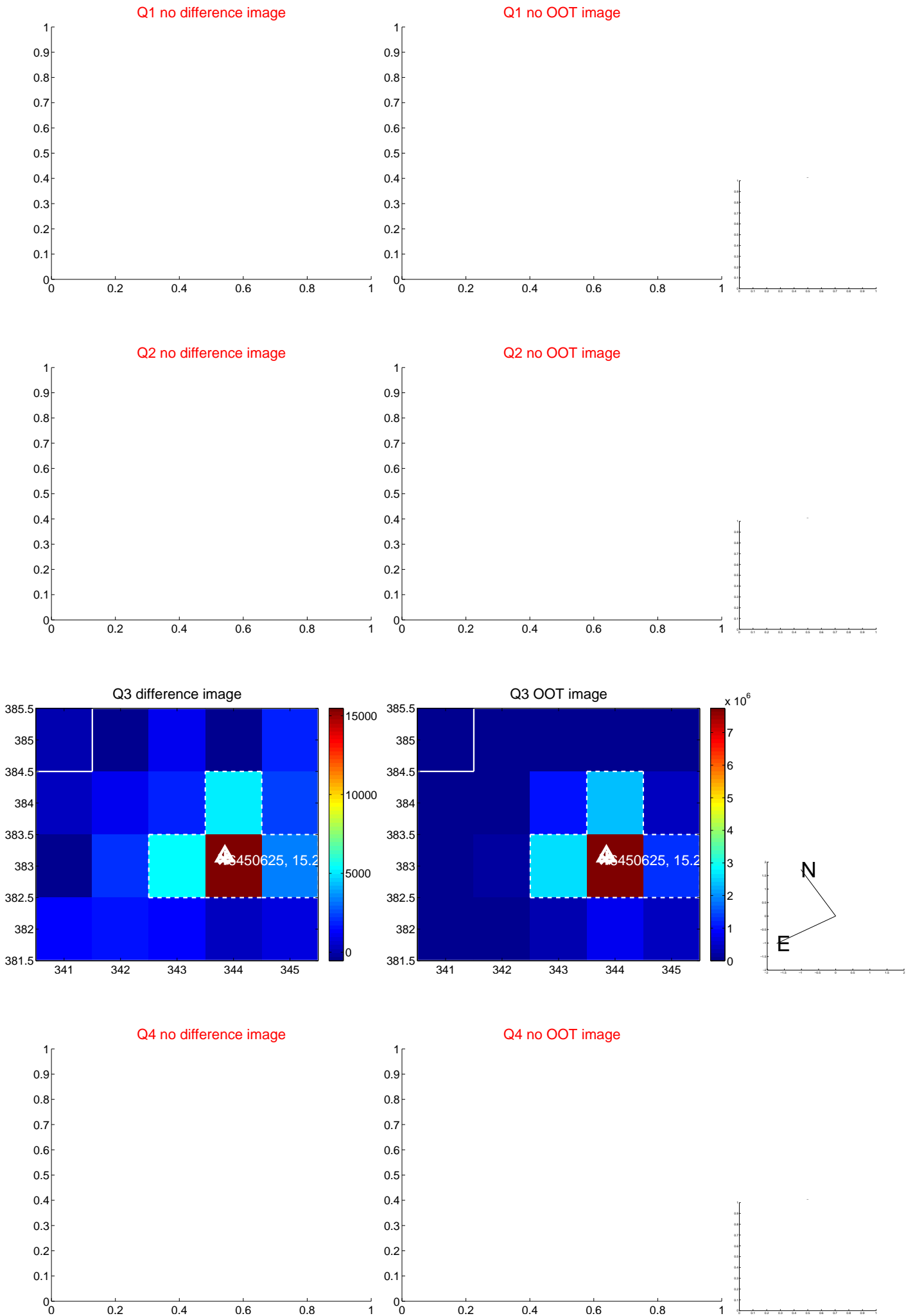
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.096 ± 0.360	0.27	-0.055 ± 0.338	-0.078 ± 0.224
PRF-fit source offset from KIC position	0.174 ± 0.278	0.63	-0.161 ± 0.283	-0.065 ± 0.245
photometric centroid source offset	0.81 ± 1.29	0.62	-0.62 ± 1.17	-0.52 ± 1.46



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.

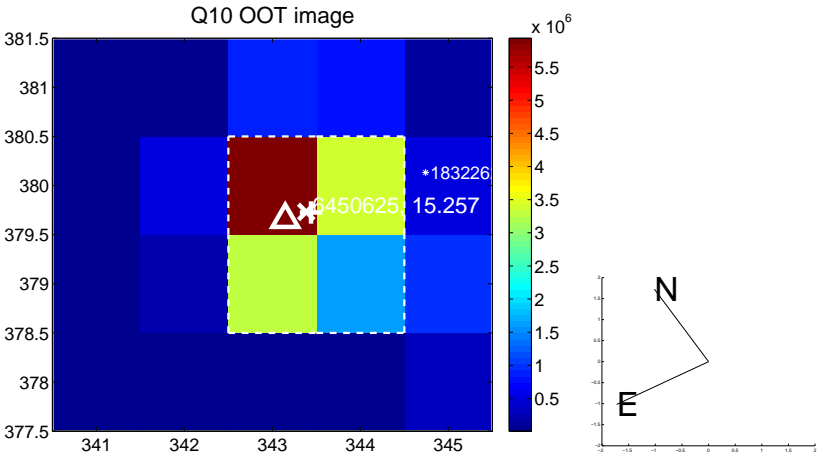
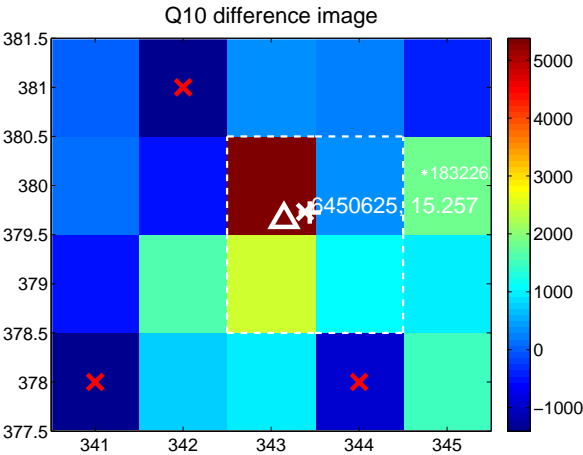


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

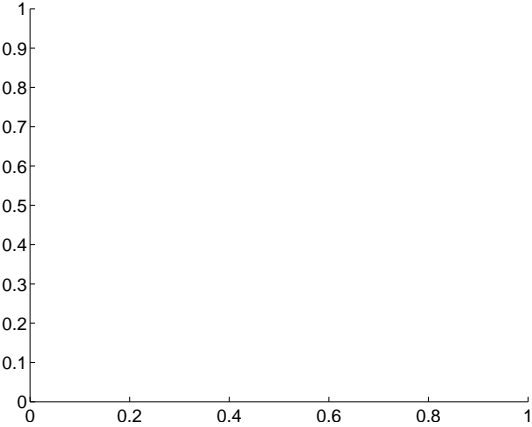
Q9 no difference image



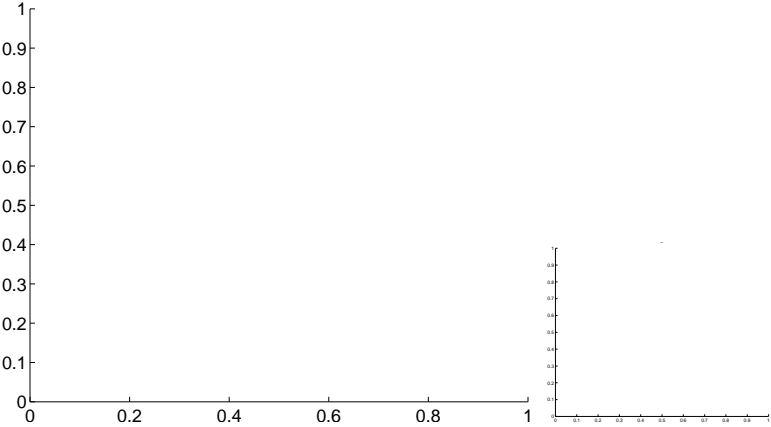
Q9 no OOT image



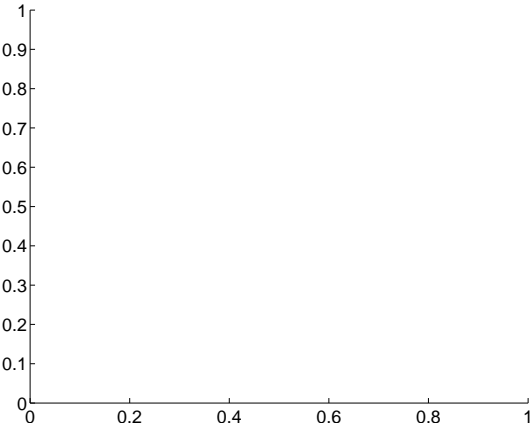
Q11 no difference image



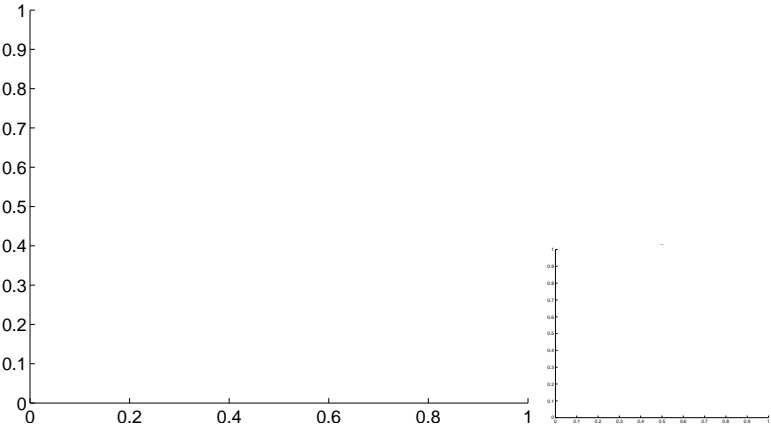
Q11 no OOT image



Q12 no difference image



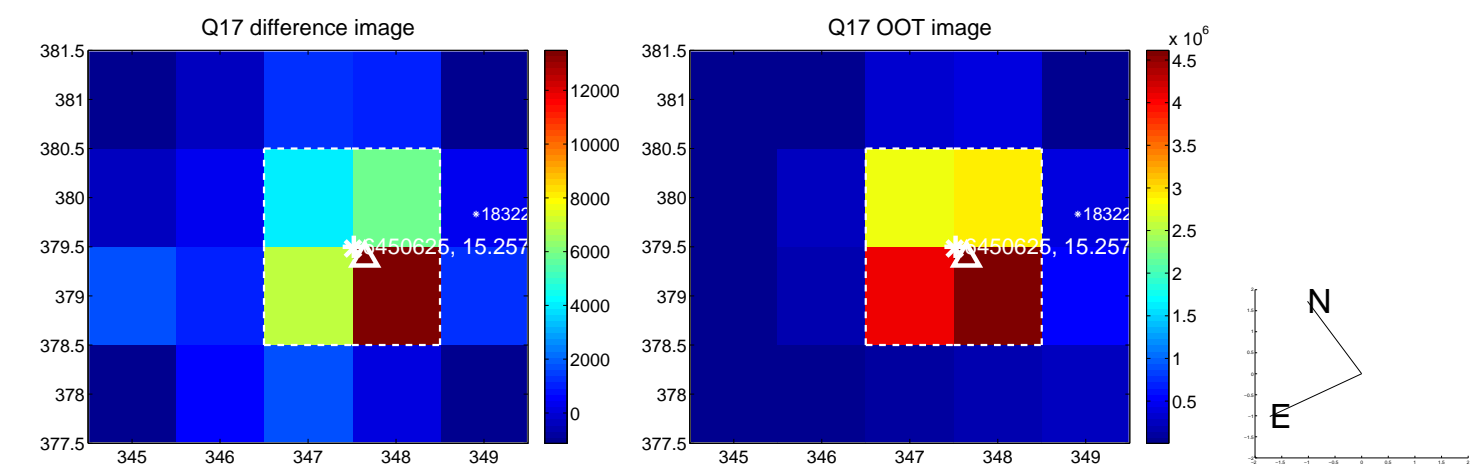
Q12 no OOT image



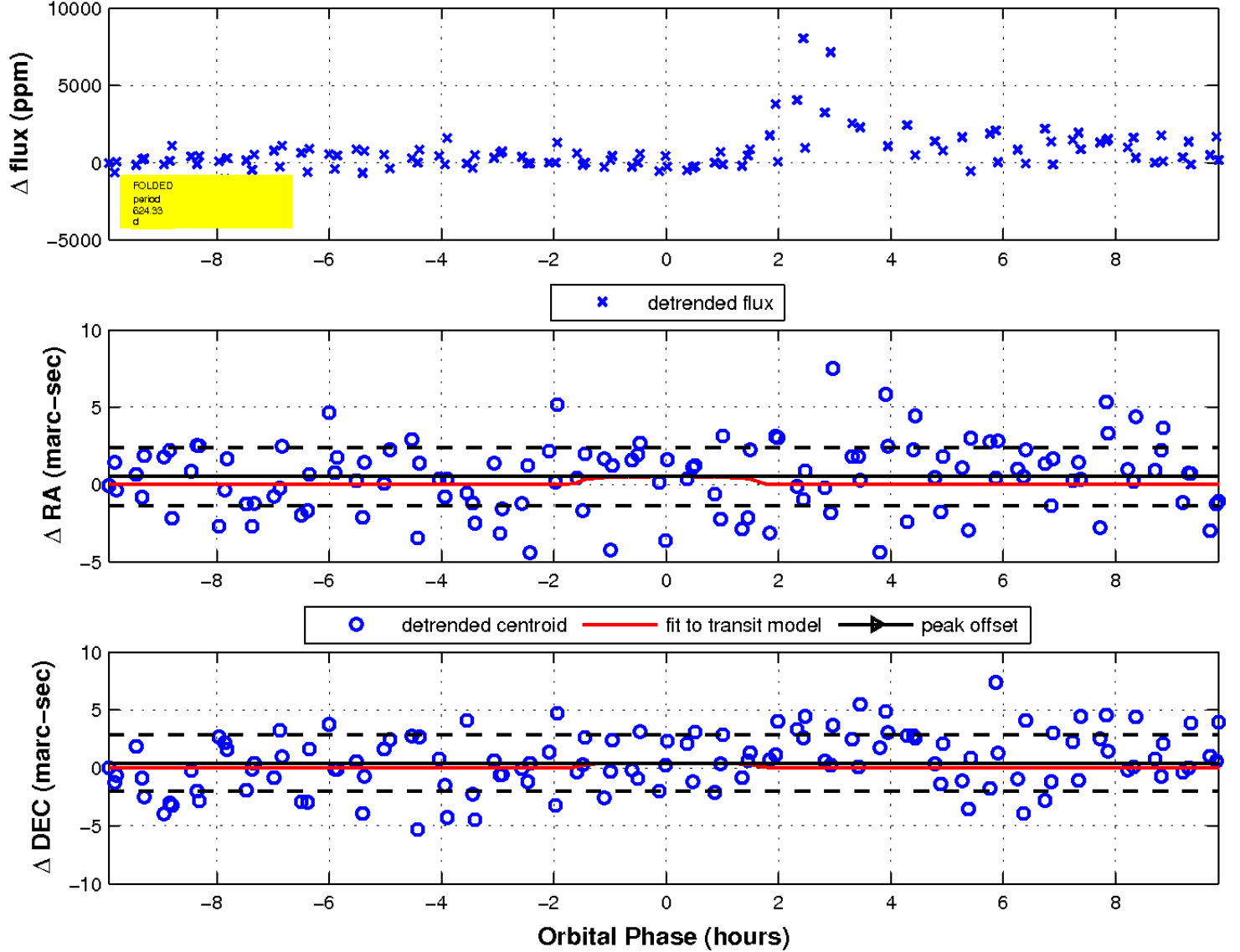
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

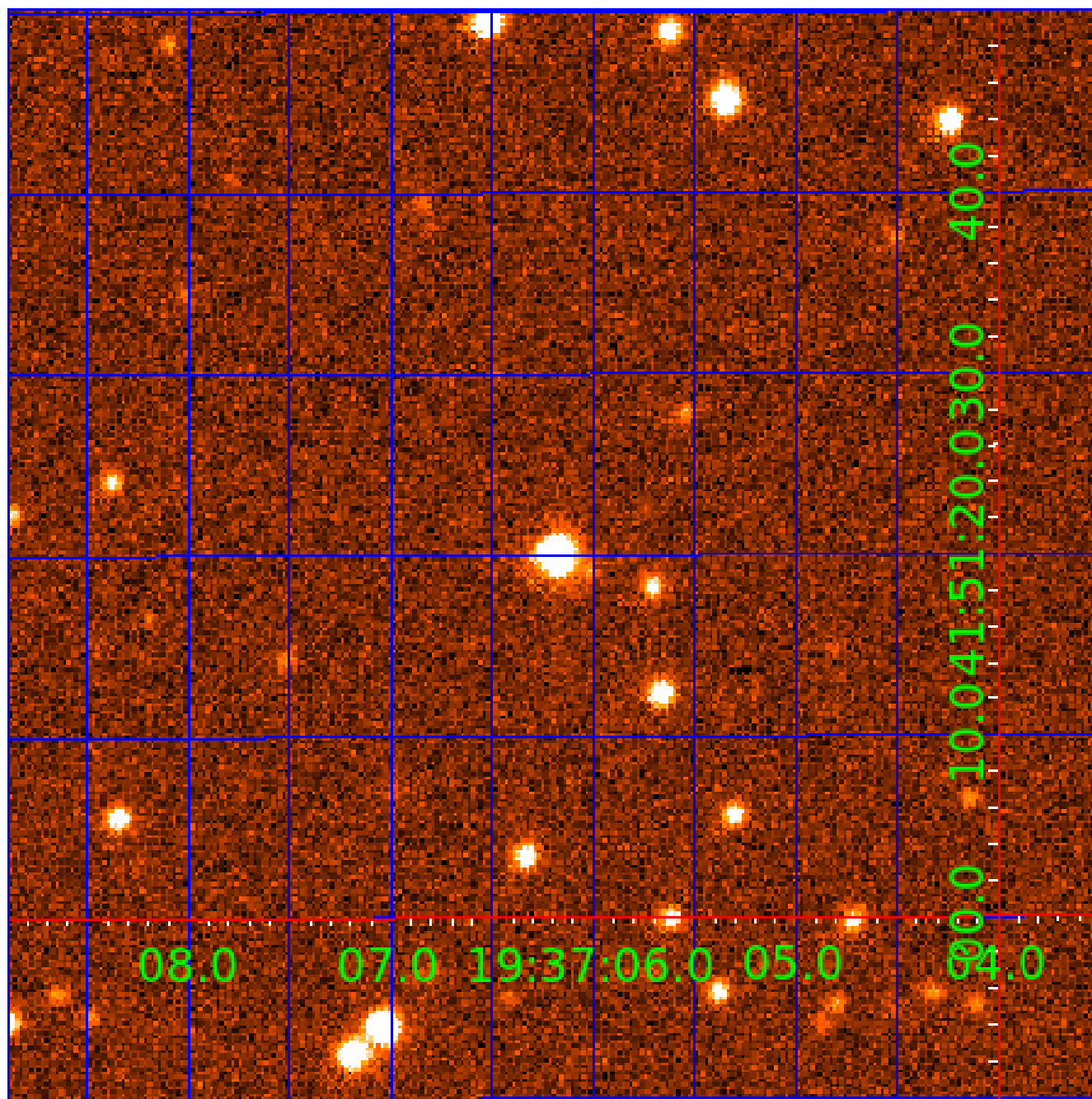


fluxWeightedCentroids, Planet 3 of 4



UKIRT Image

Declination



KIC 006450625

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})
006450625-01	OBS	No	293.965024	374.933203	902.4	7.340	13.4	6.8	0.72	5312	2.23	0.64
006450625-03	OBS	No	624.325324	318.832777	1380.1	3.371	11.6	7.5	0.72	5312	2.73	0.23
006450625-04	OBS	No	397.856649	353.076132	1086.2	4.564	9.8	8.6	0.72	5312	2.50	0.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006450625-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006450625-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS
006450625-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_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.

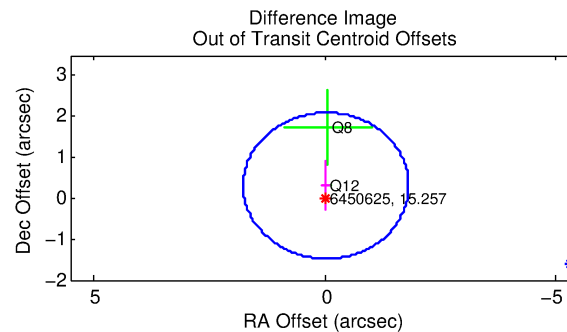
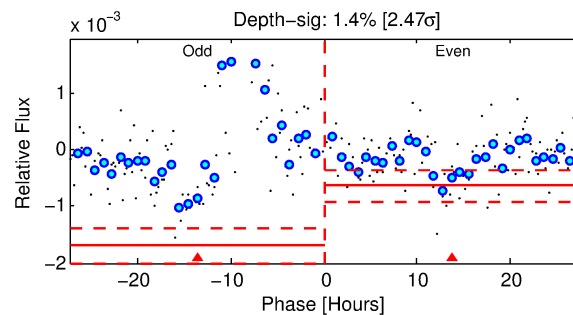
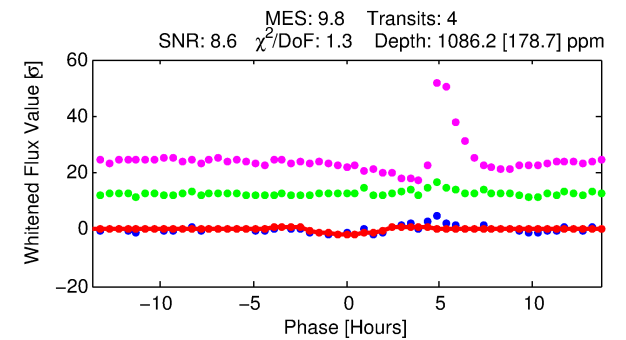
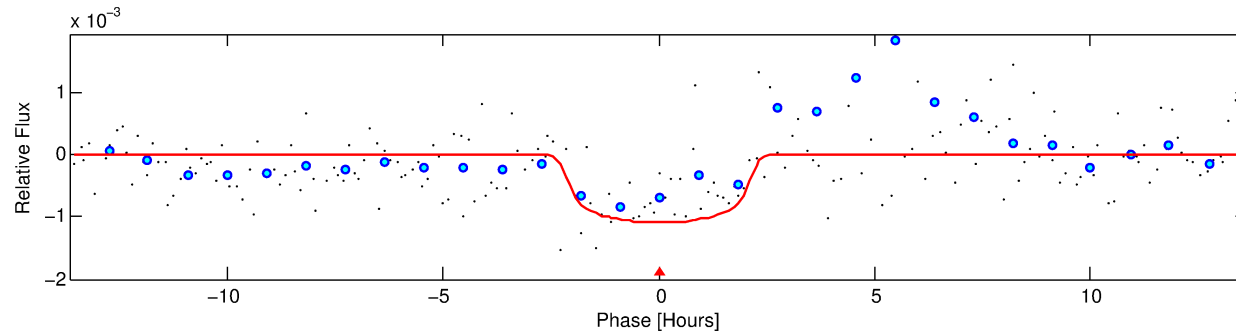
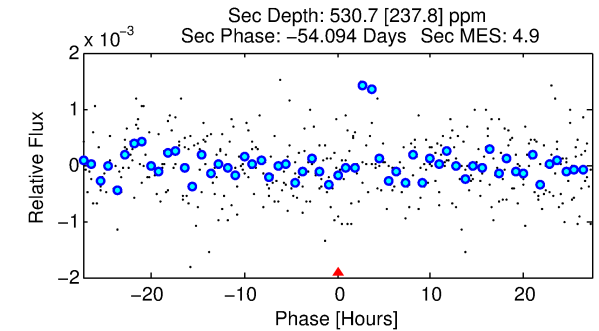
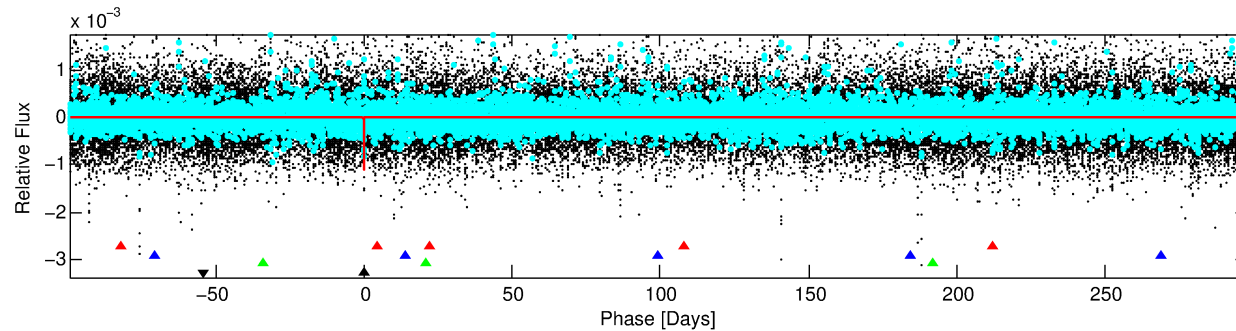
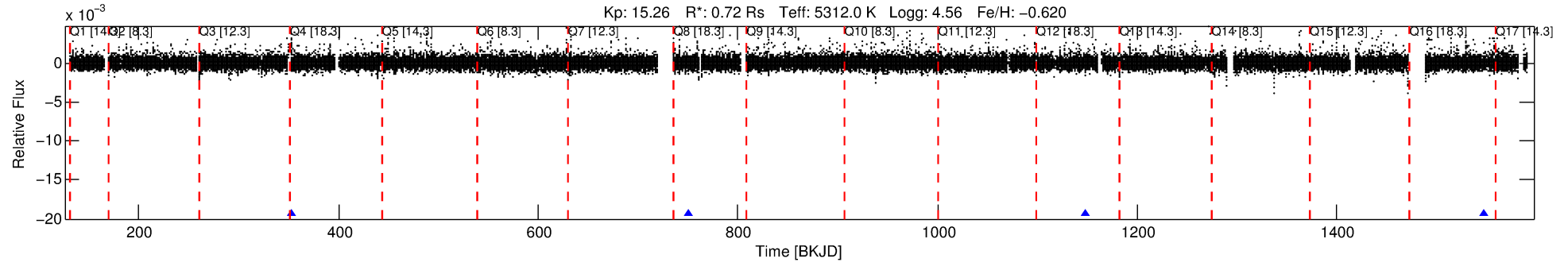
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006450625-04

No Significant Match Found

DV One-Page Summary

KIC: 6450625 Candidate: 4 of 4 Period: 397.857 d



DV Fit Results:

Period = 397.85665 [0.00600] d
Epoch = 353.0761 [0.0123] BKJD
Rp/R* = 0.0318 [0.0421]
a/R* = 532.90 [2930.65]
b = 0.65 [4.91]
Seff = 0.43 [0.08]
Teq = 206 [10] K
Rp = 2.50 [3.32] Re
Ag = 40701.93 [109706.49] [0.37 σ]
Teffp = 4523 [3046] K [1.42 σ]

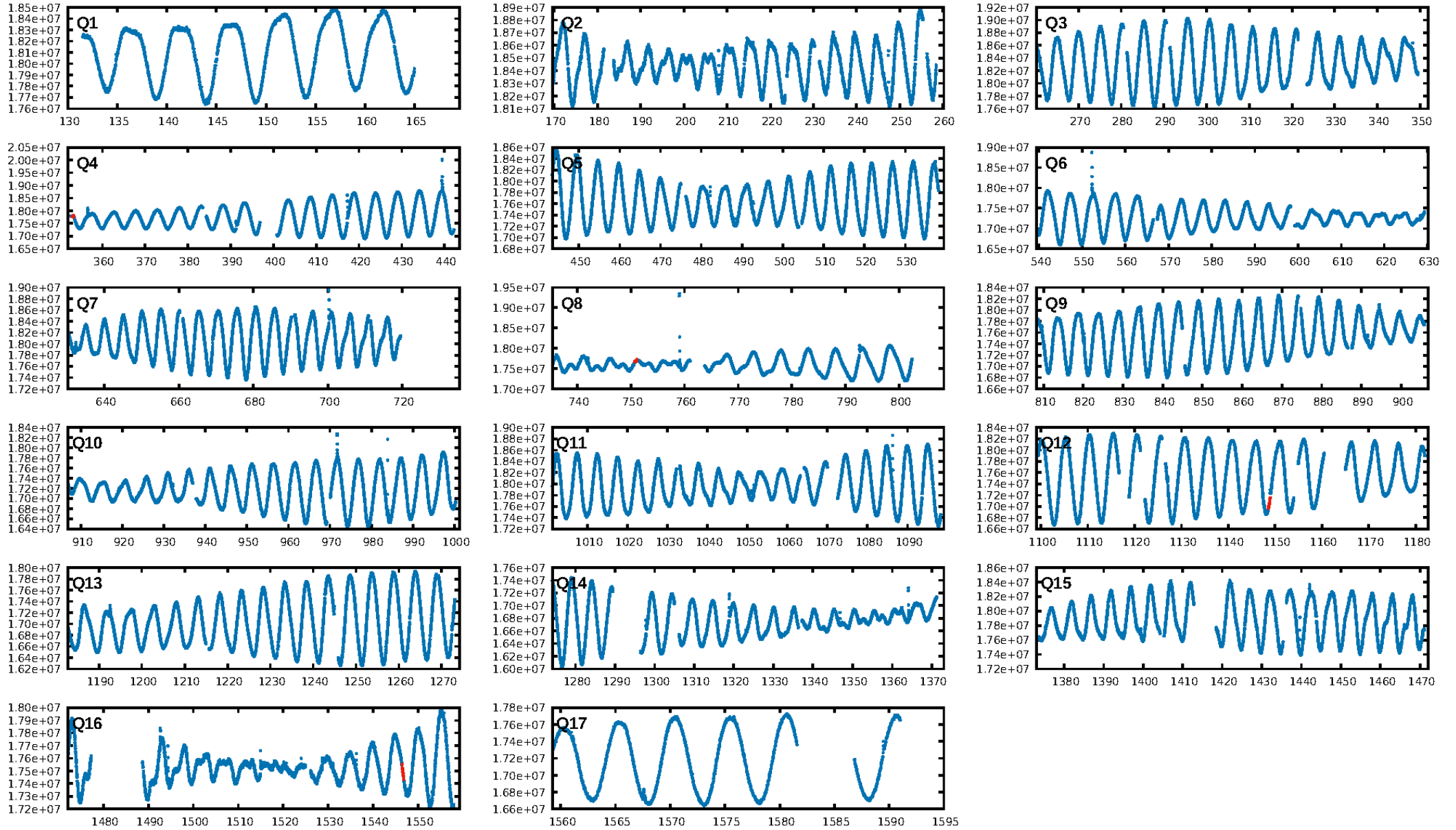
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [283.75 σ]
LongPeriod-sig: 100.0% [957.88 σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 87.8%
Bootstrap-pfa: 2.42e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.4955
Centroid-sig: 0.5%
Centroid-so: 2.445 arcsec [1.64 σ]
OotOffset-rm: 0.309 arcsec [0.52 σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-rm: 0.343 arcsec [0.73 σ]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

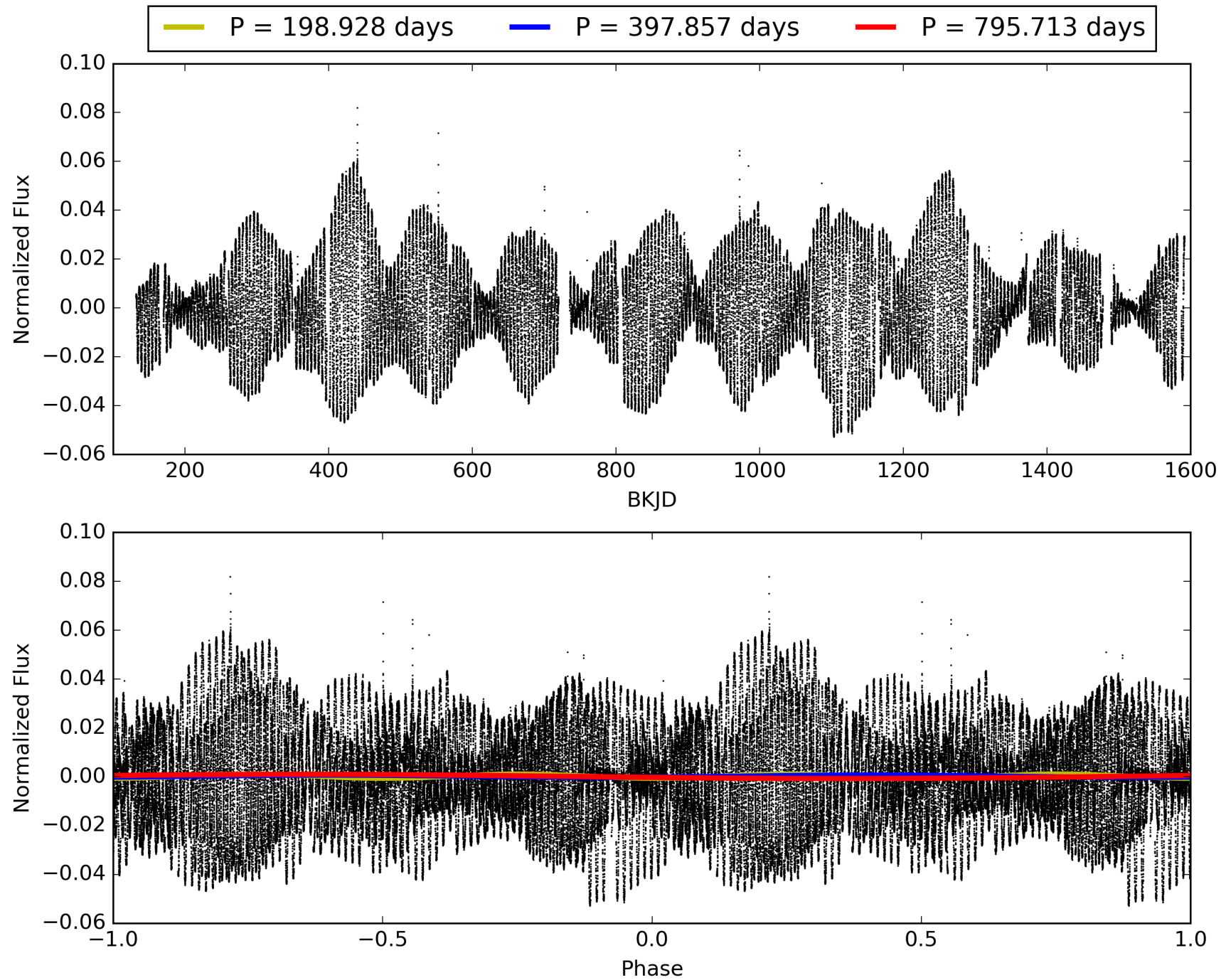
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 19:32:20 Z

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

TCE 006450625-04, PDC Light Curves

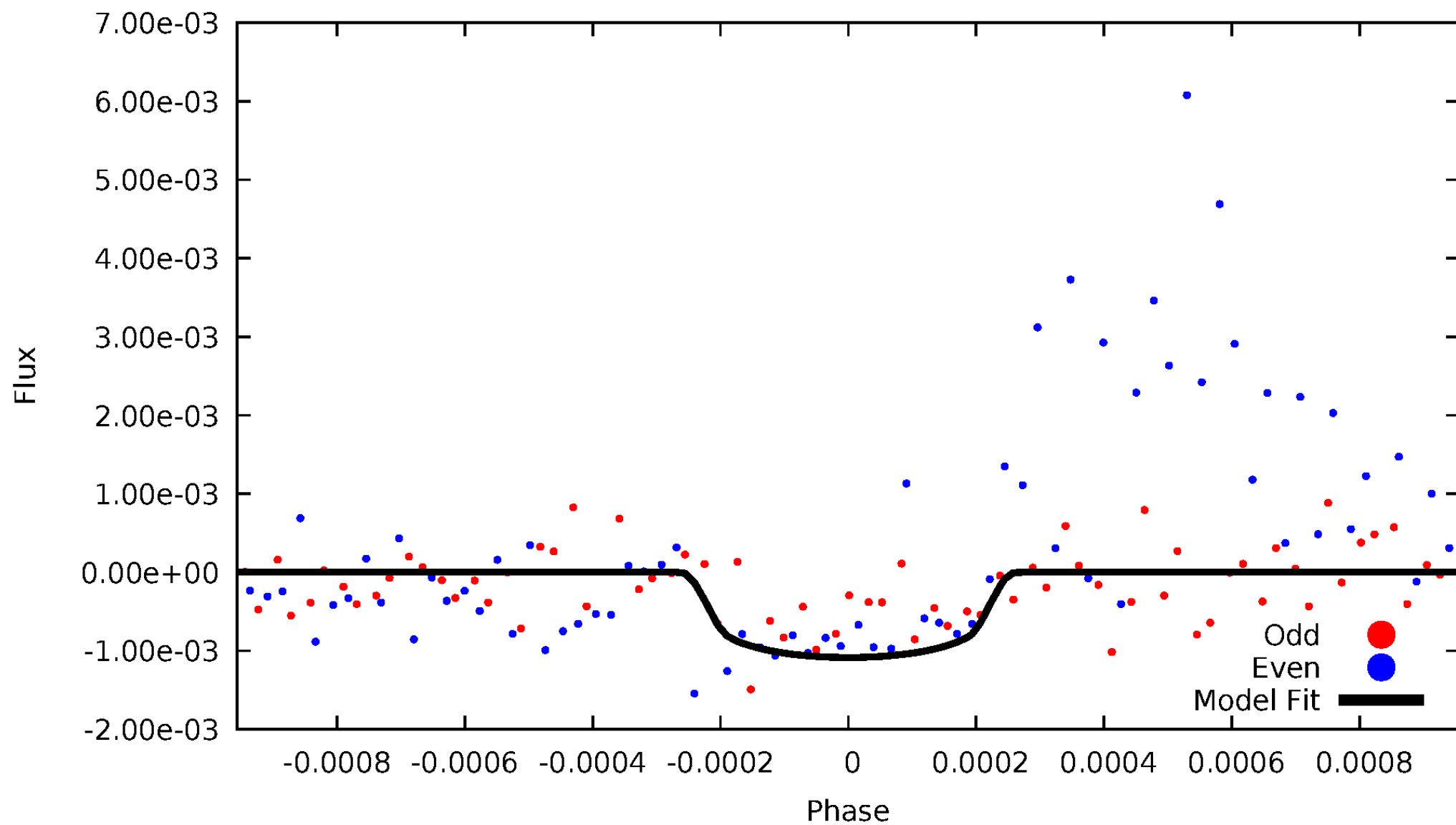


TCE 006450625-04



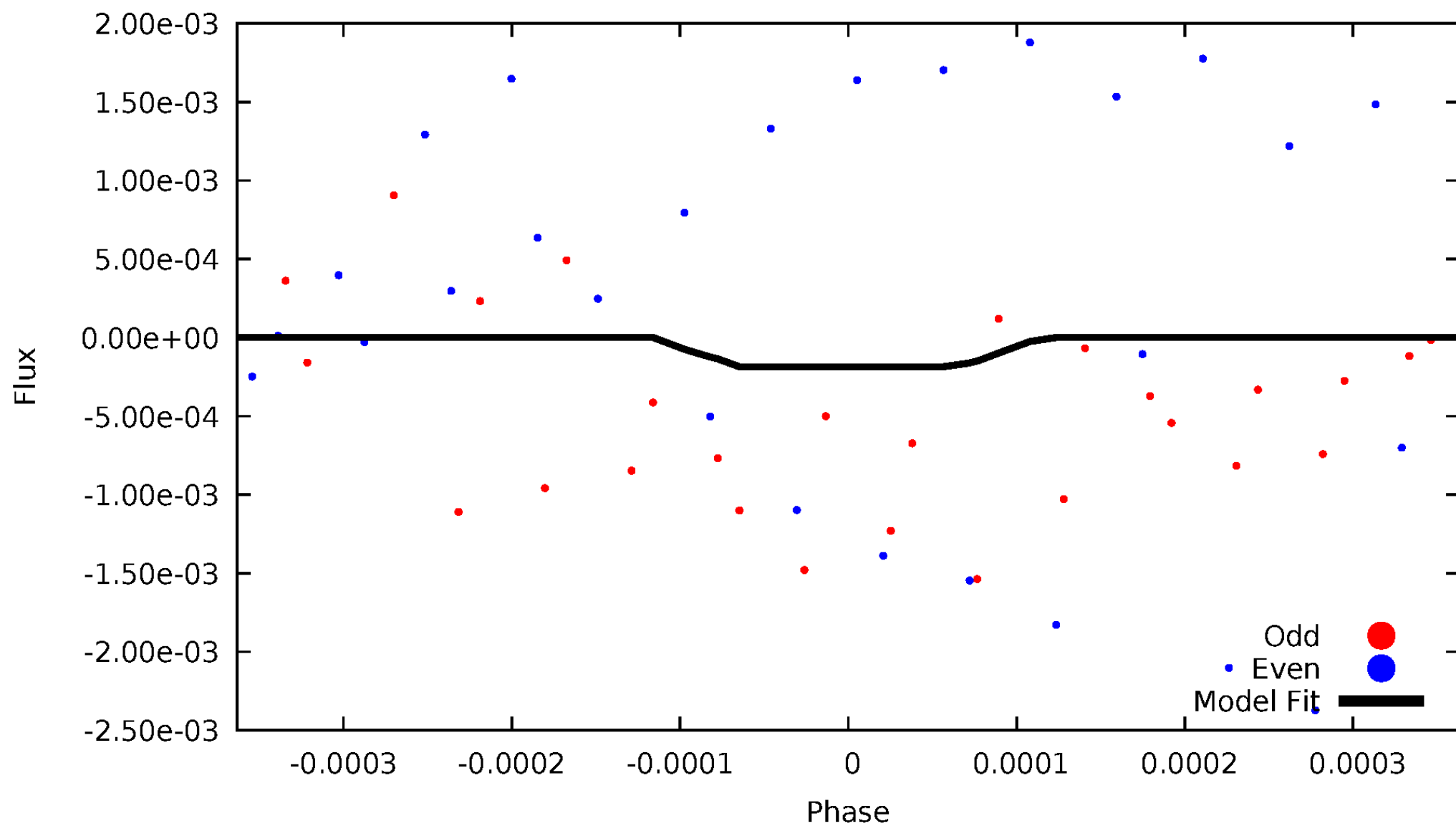
DV Odd/Even

TCE 006450625-04



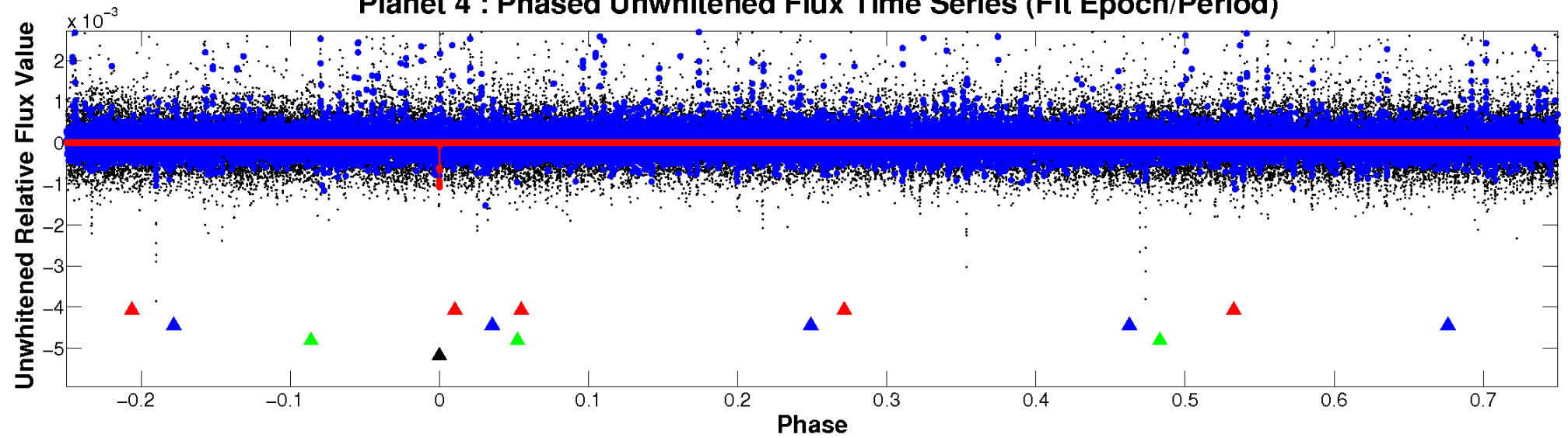
ALT Odd/Even

TCE 006450625-04

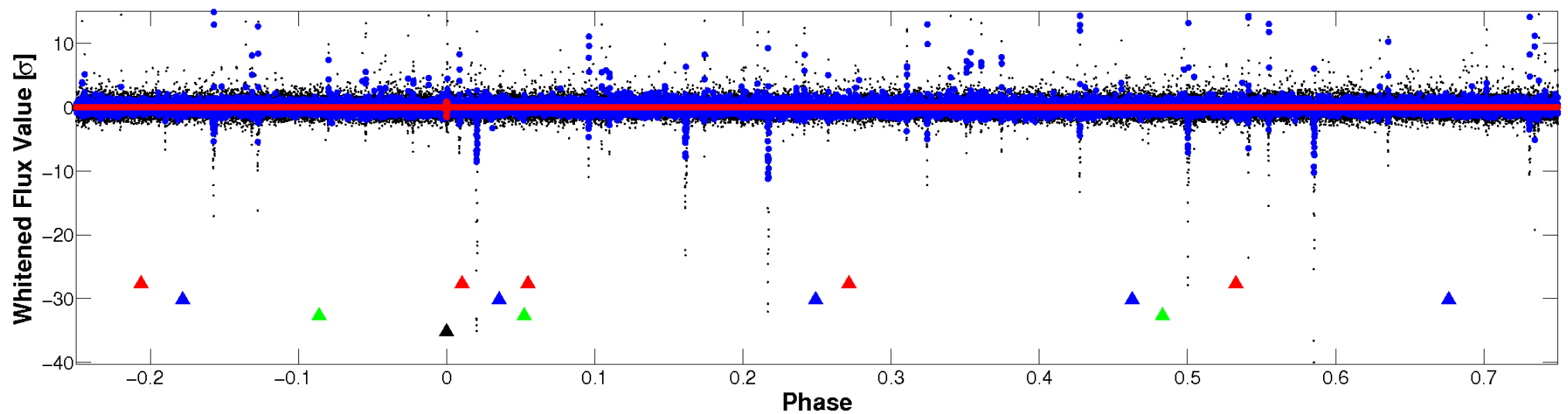


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

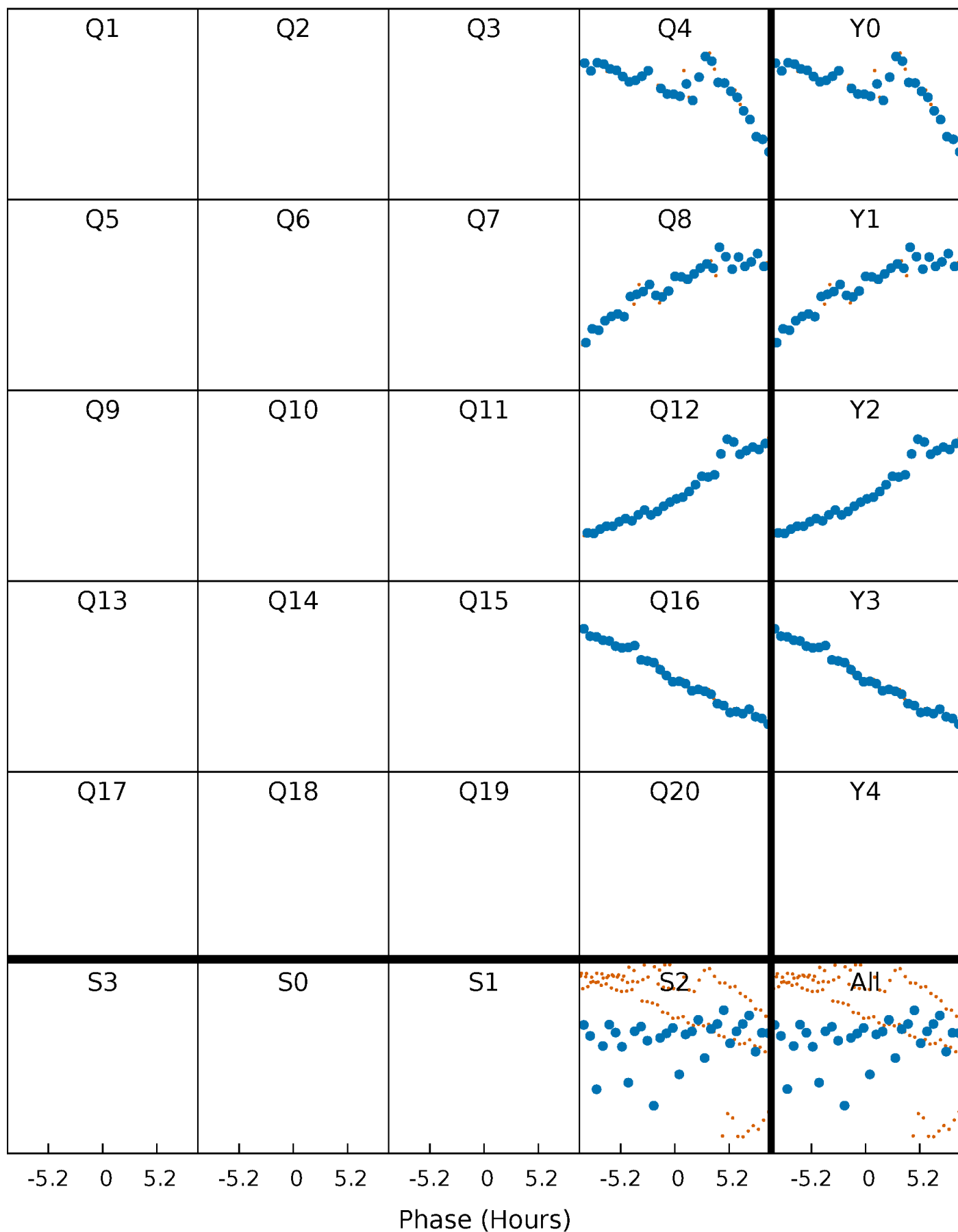


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



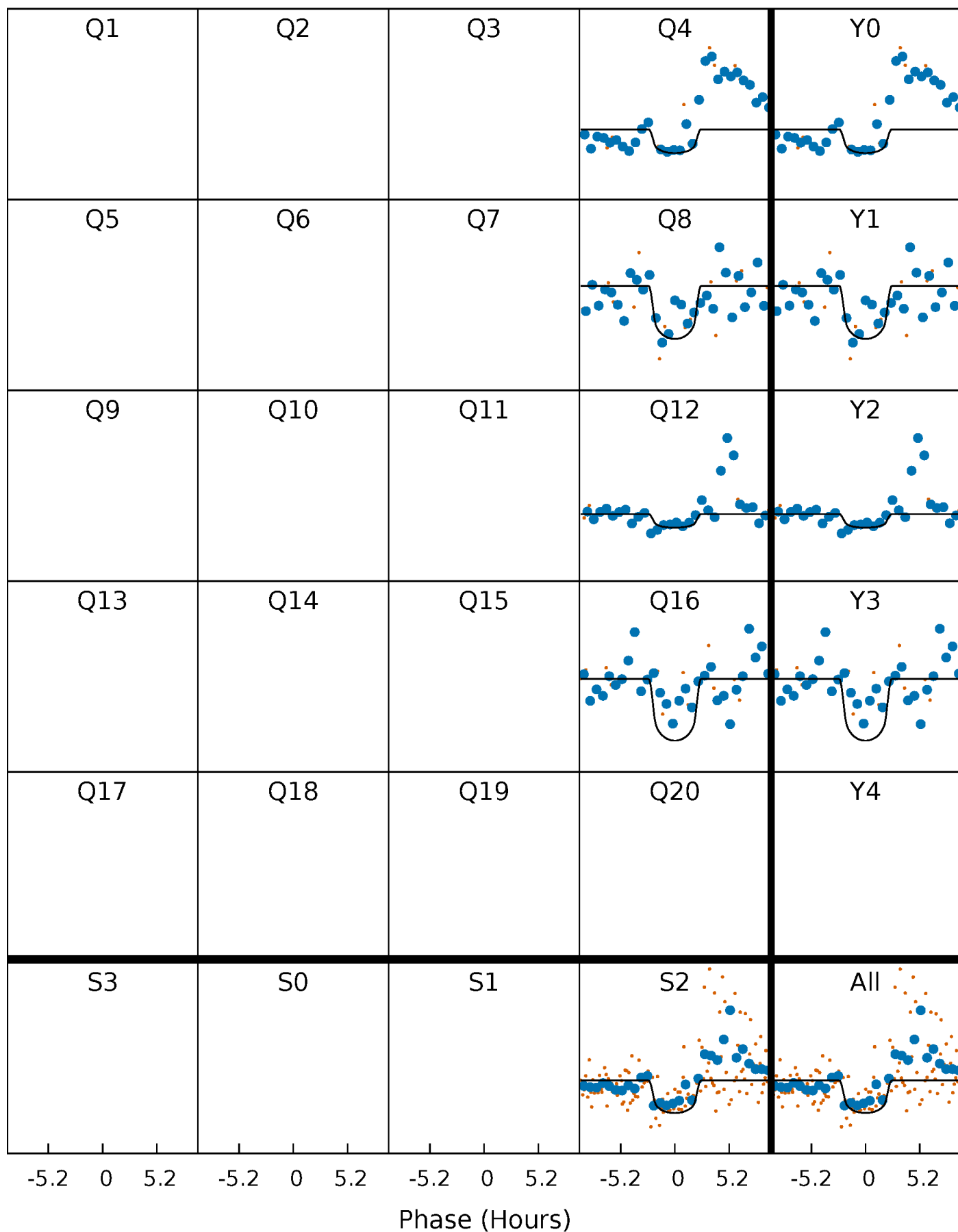
PDC Quarter-Phased Transit Curves

TCE 006450625-04 $P=397.856649$ Days $T_0=353.076132$ (BKJD)



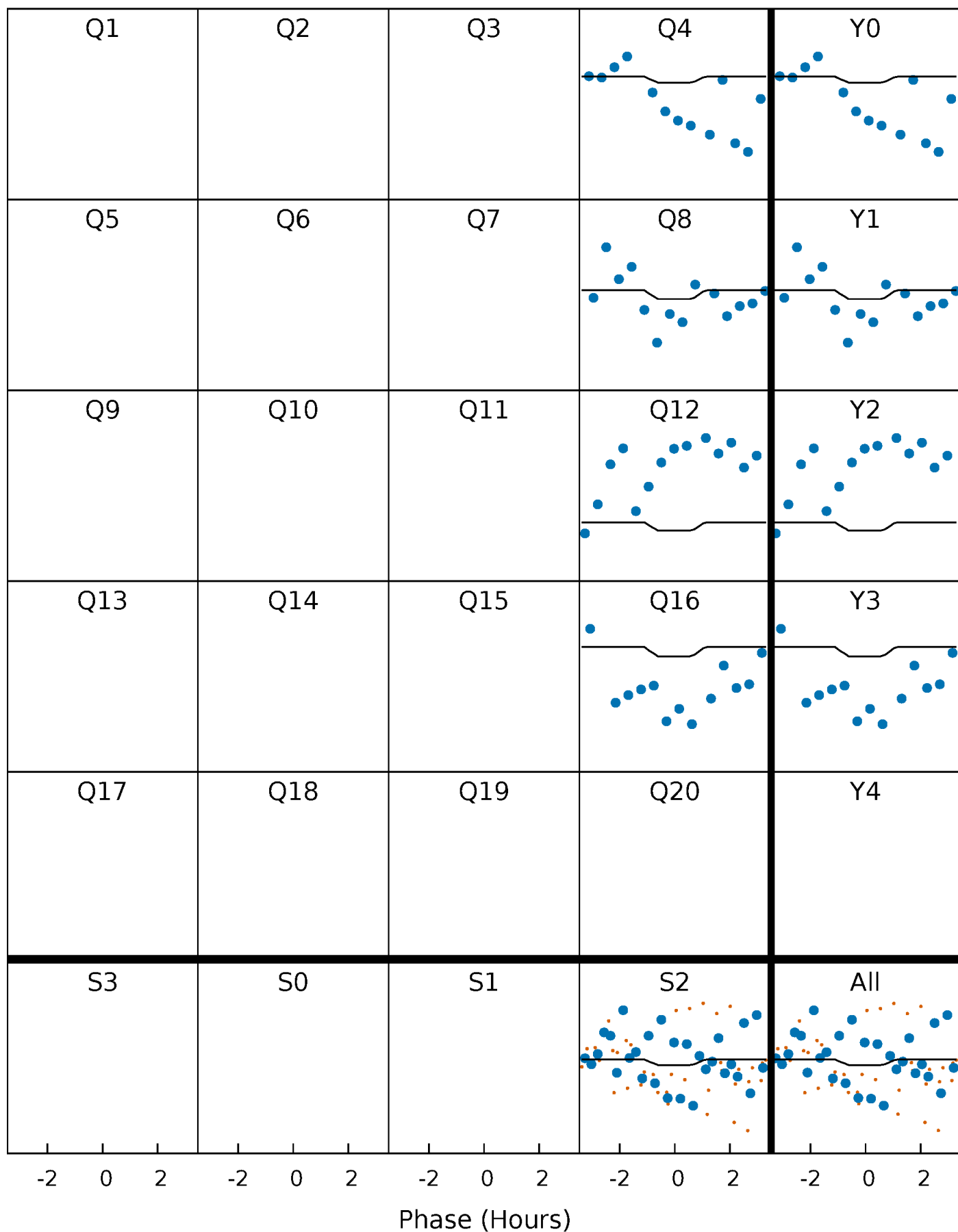
DV Quarter-Phased Transit Curves

TCE 006450625-04 $P=397.856649$ Days $T_0=353.076132$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

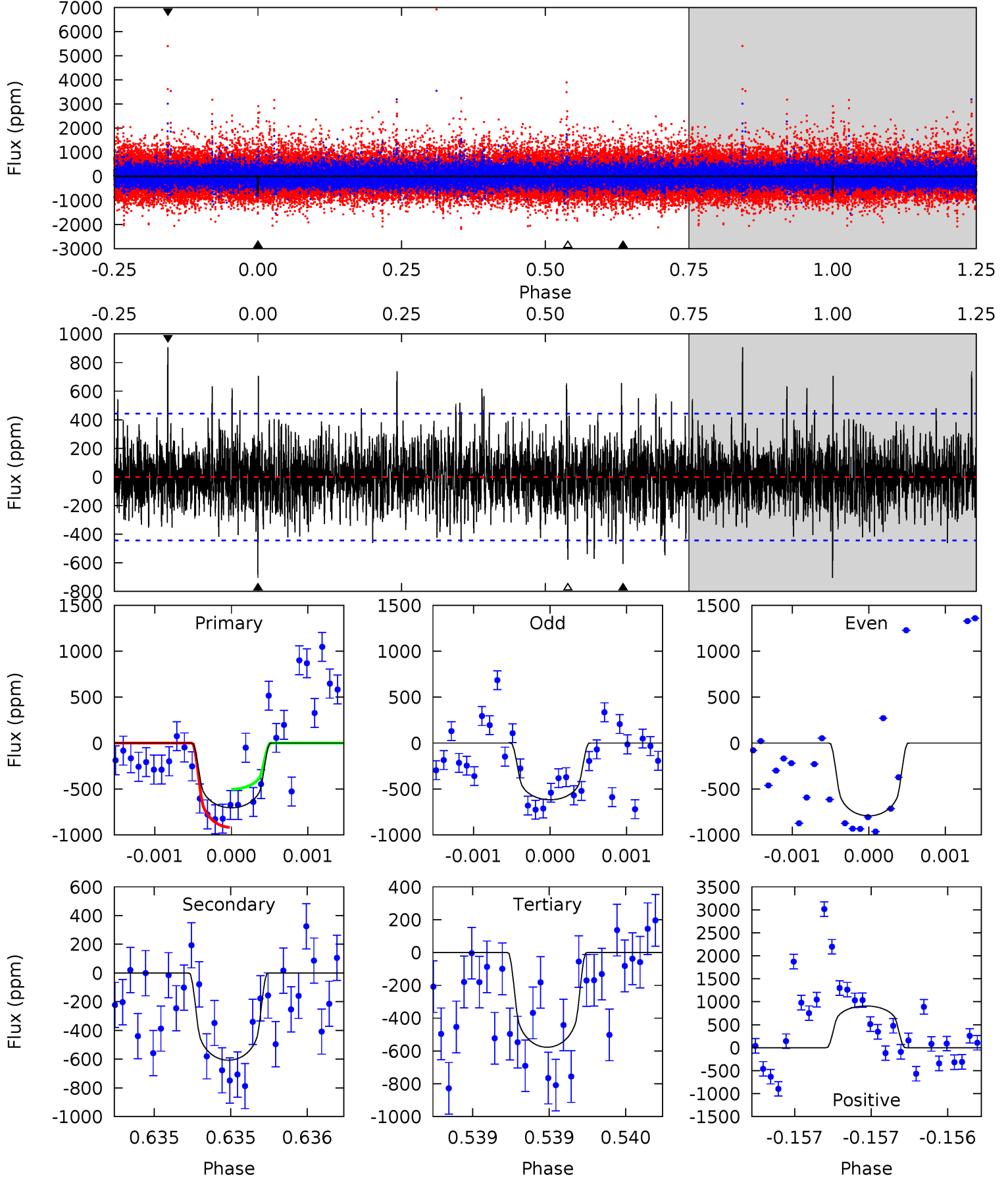
TCE 006450625-04 P=397.855036 Days $T_0=353.042723$ (BKJD)



DV Model-Shift Uniqueness Test

006450625-04, P = 397.856649 Days, E = 353.076132 Days

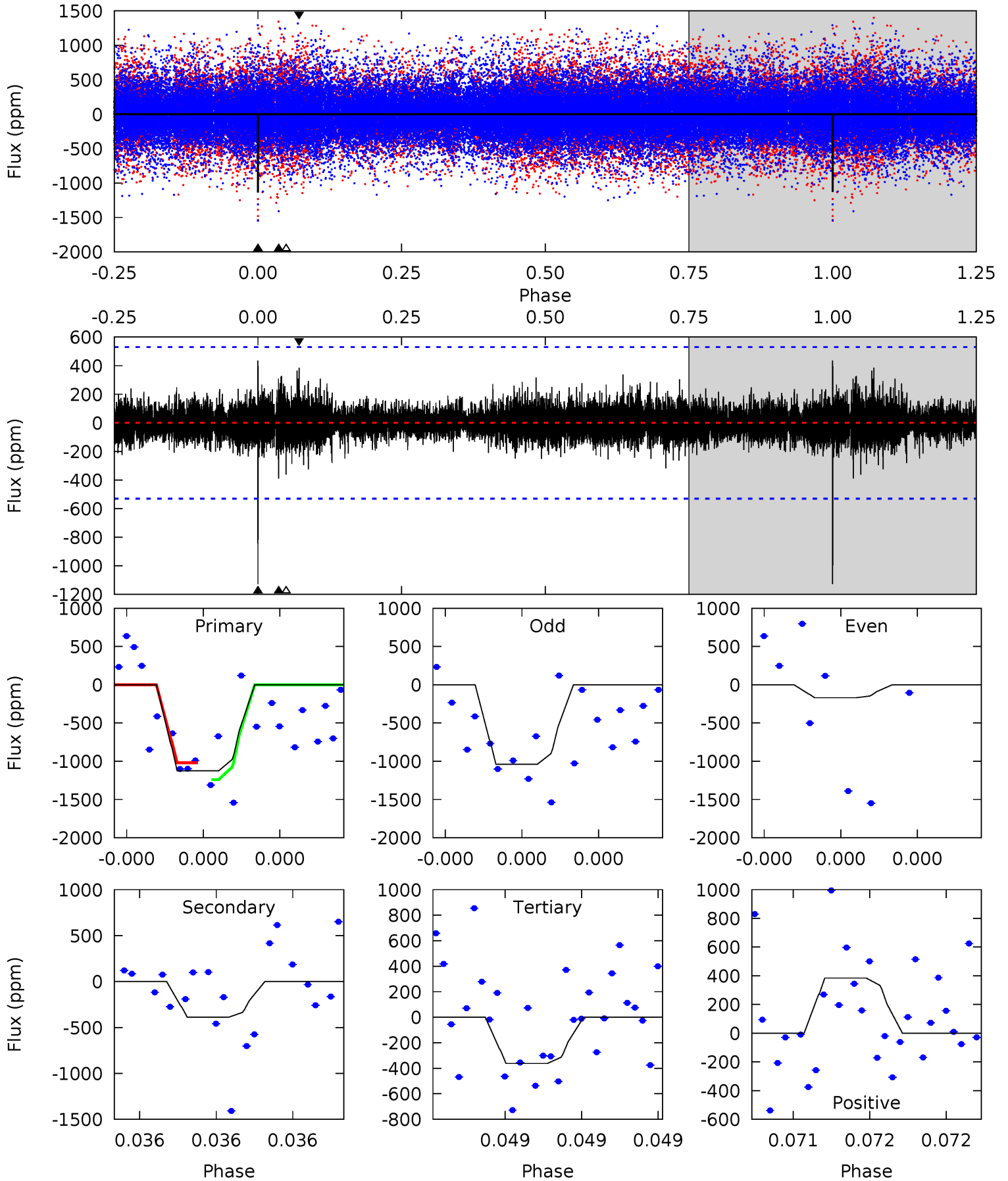
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.85	7.63	7.25	11.4	5.57	3.47	1.92	1.60	-2.54	0.38	-3.76	0.96	0.94	0.56	2.62



Alt Model-Shift Uniqueness Test

006450625-04, P = 397.855036 Days, E = 353.042723 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	4.20	3.92	4.16	5.74	3.73	0.75	8.28	8.03	0.29	0.04	5.68	0.44	0.28	1.20



Stellar Parameters For KIC 006450625

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5312^{+160}_{-160}	$4.557^{+0.090}_{-0.060}$	$-0.620^{+0.350}_{-0.300}$	$0.720^{+0.082}_{-0.073}$	$0.681^{+0.090}_{-0.032}$	$2.573^{+0.949}_{-0.581}$
	+3%/-3%	+2%/-1%	+56%/-48%	+11%/-10%	+13%/-5%	+37%/-23%
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 006450625-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-607 ± 80	$3.50^{+2.84}_{-2.39}$	286^{+12}_{-12}	4194^{+2754}_{-778}	$25209^{+202175}_{-17870}$
Alt.	-388 ± 92	$2.56^{+2.58}_{-1.73}$	286^{+11}_{-12}	4264^{+2770}_{-880}	$27468^{+237760}_{-20620}$

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 $A_{obs} \gg 1.0$

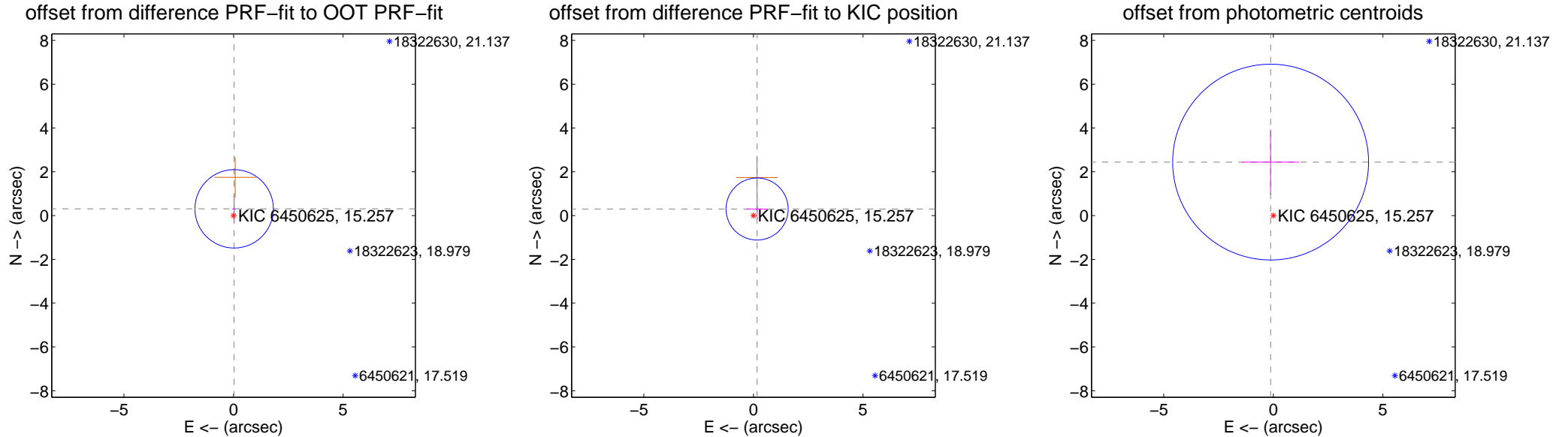
DV Centroid Data

Supplemental centroid analysis for 006450625-04. Kepler magnitude: 15.26. Transit SNR 8.63

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.309 ± 0.596	0.52	-0.027 ± 0.070	0.308 ± 0.597
PRF-fit source offset from KIC position	0.343 ± 0.472	0.73	-0.167 ± 0.479	0.300 ± 0.470
photometric centroid source offset	2.45 ± 1.49	1.64	0.12 ± 1.30	2.44 ± 1.49

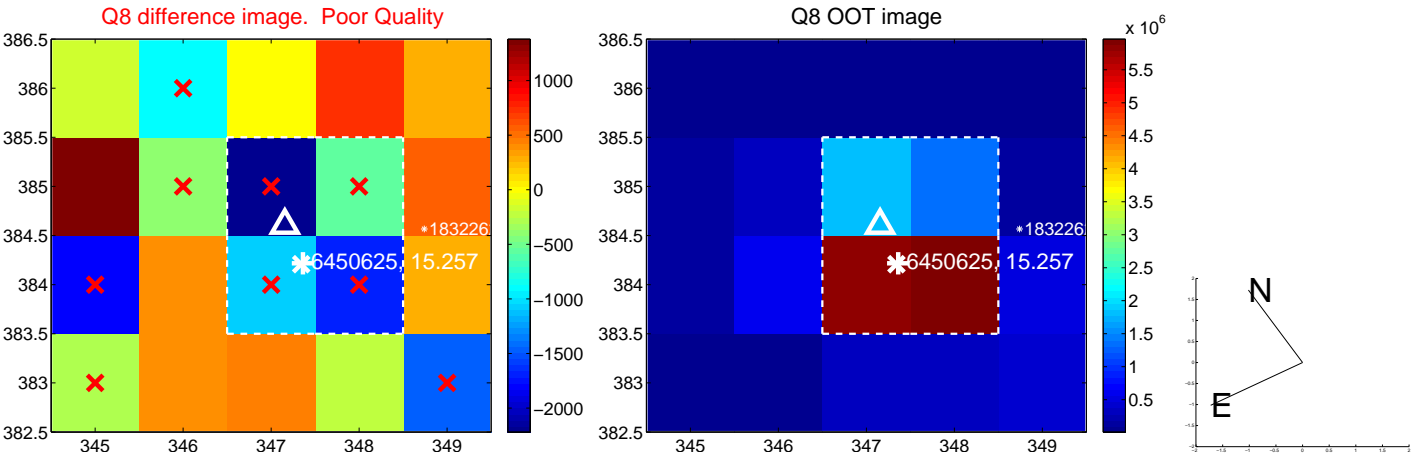
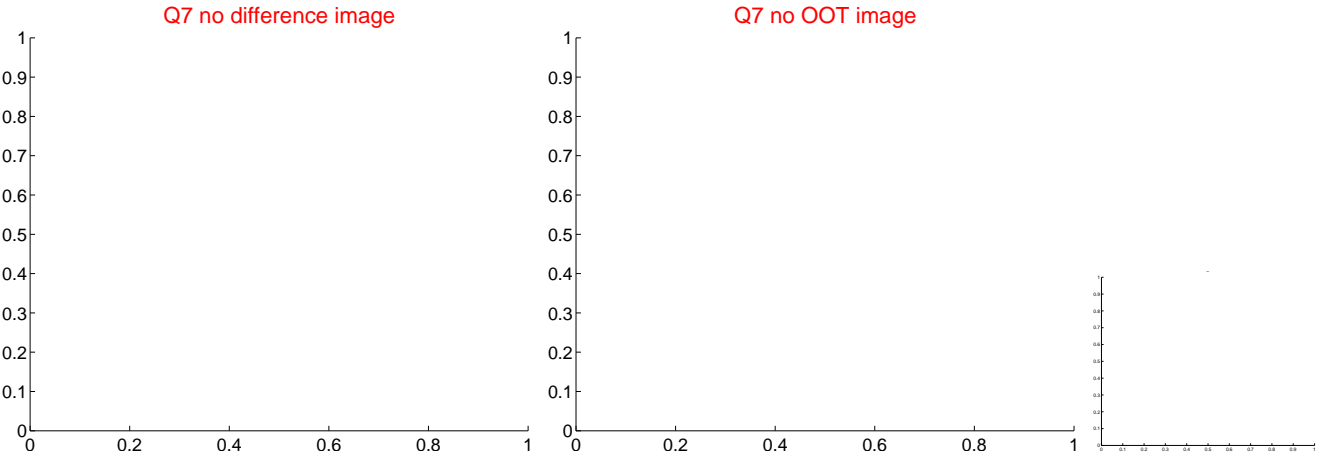
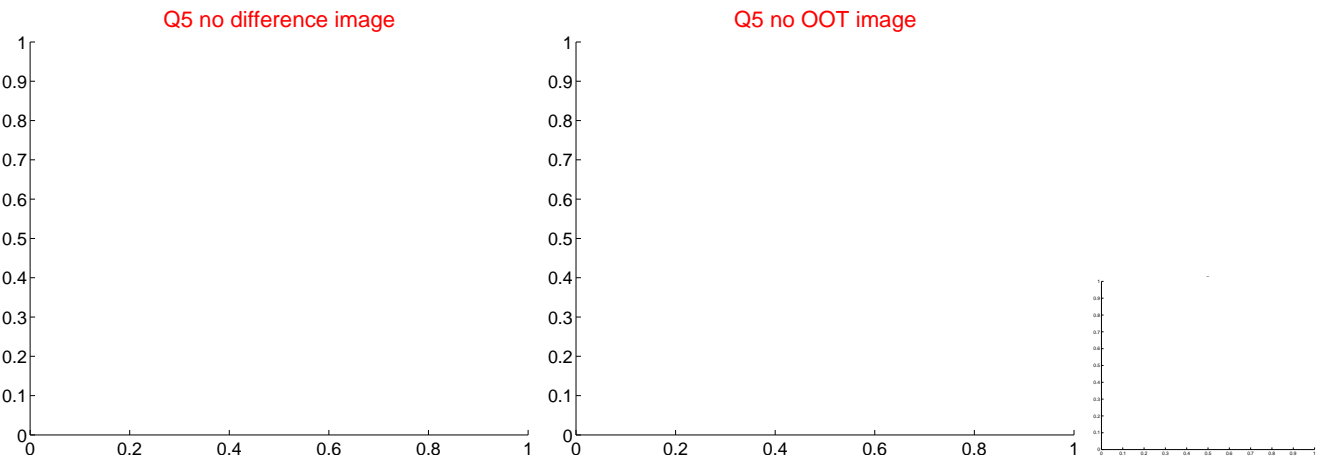


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

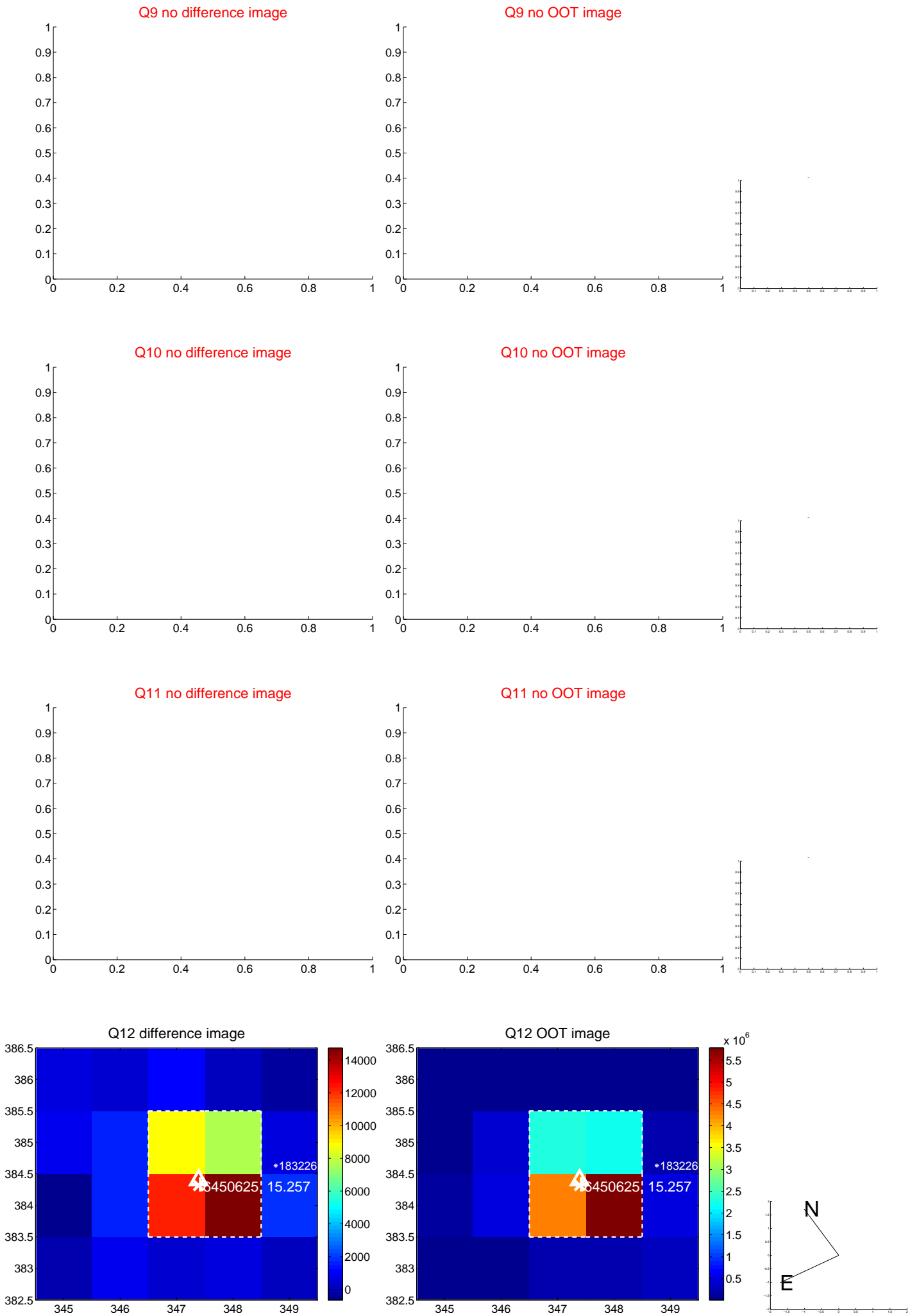
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



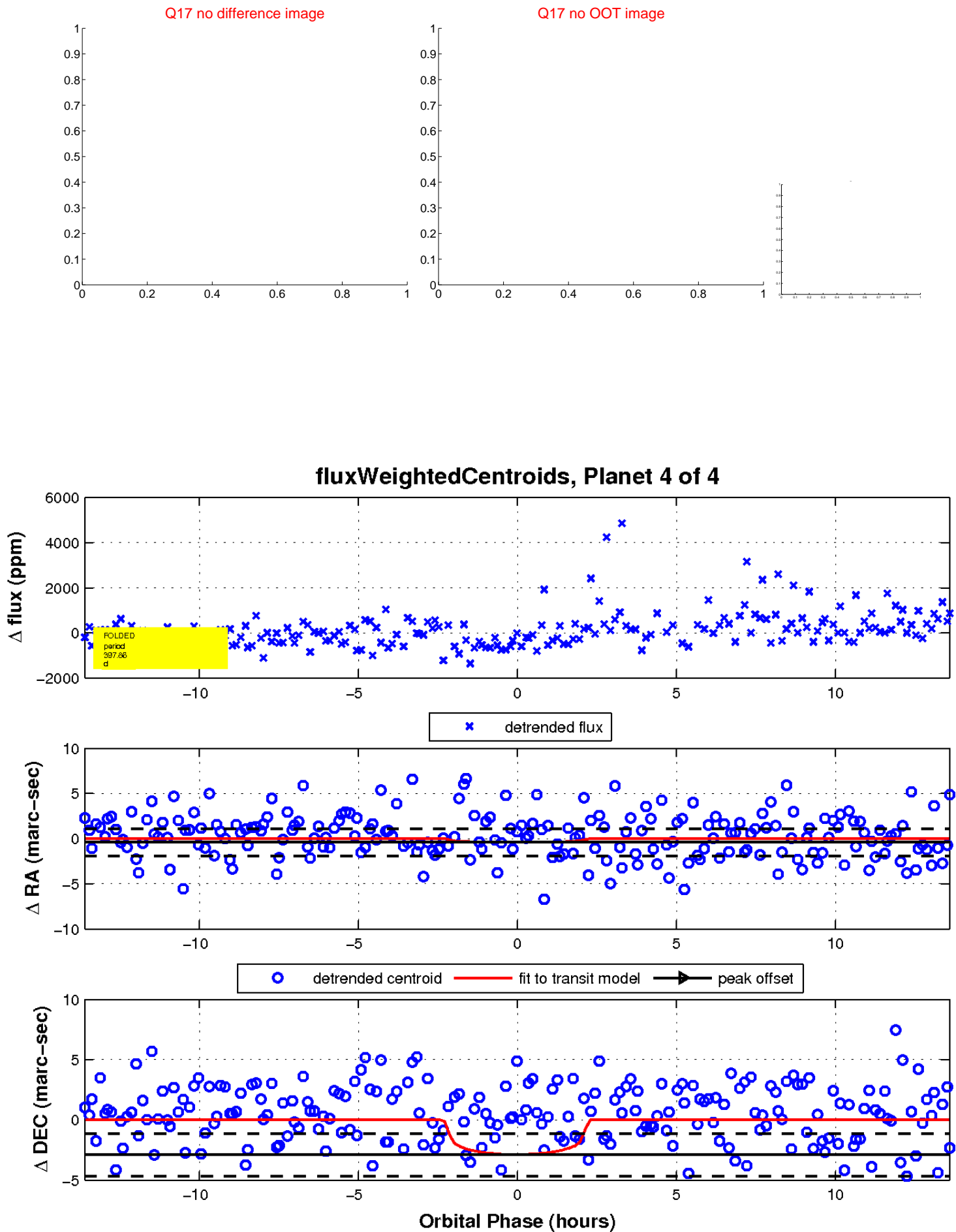
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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



UKIRT Image

Declination

