

KIC 011205401

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})
011205401-01	OBS	No	343.099732	244.051374	1153.8	13.274	7.4	8.2	0.91	6308	3.11	1.29
011205401-02	OBS	No	353.123787	242.344836	1139.3	20.250	8.4	9.6	0.91	6308	3.49	1.24
011205401-03	OBS	No	415.608531	493.265168	1248.9	19.938	8.2	8.9	0.91	6308	4.42	1.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011205401-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011205401-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS
011205401-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—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.

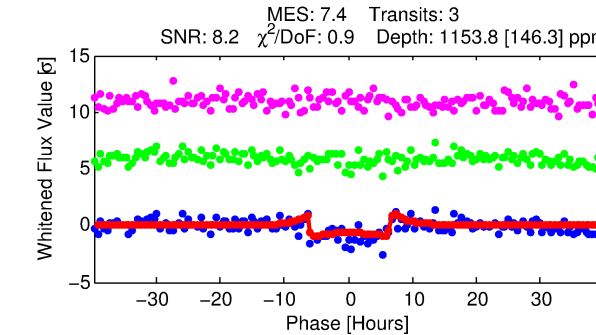
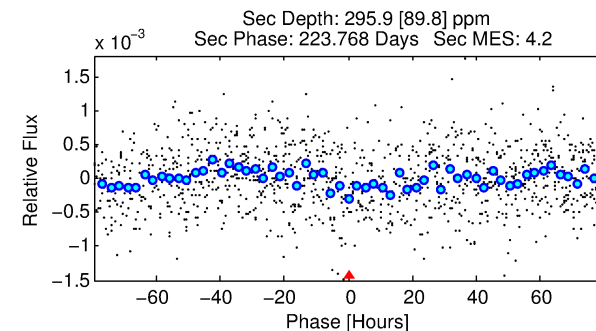
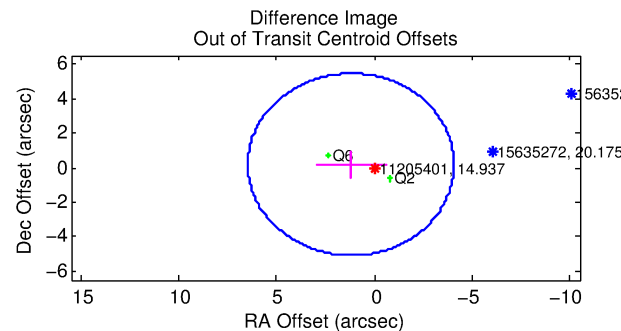
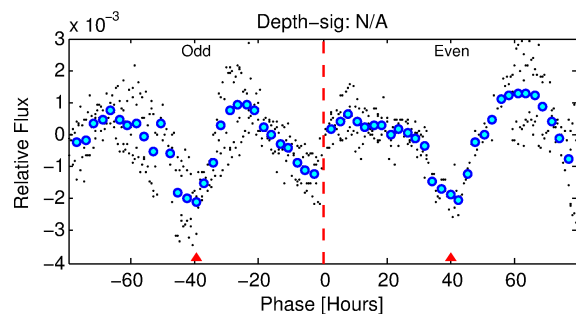
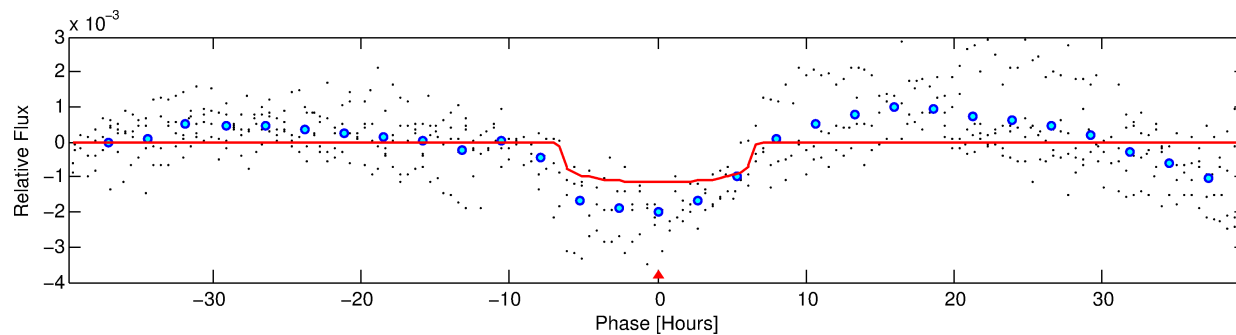
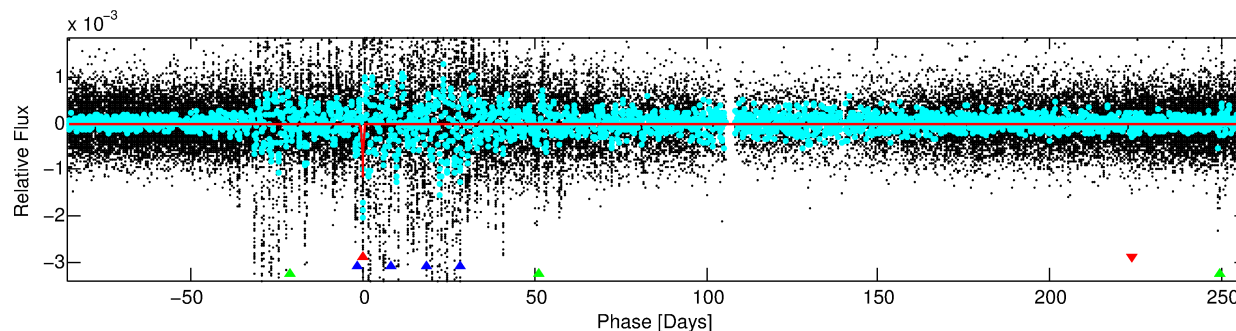
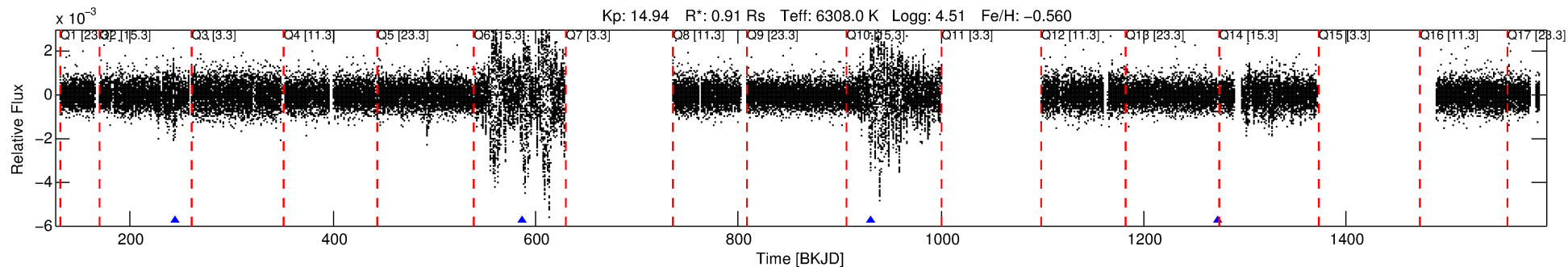
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011205401-01

No Significant Match Found

DV One-Page Summary

KIC: 11205401 Candidate: 1 of 3 Period: 343.100 d



DV Fit Results:

Period = 343.09973 [0.00771] d
Epoch = 244.0514 [0.0099] BKJD
Rp/R* = 0.0314 [0.0077]
a/R* = 199.01 [235.52]
b = 0.22 [5.16]
Seff = 1.29 [0.52]
Teq = 272 [27] K
Rp = 3.11 [1.23] Re
a = 0.9493 [0.2491] AU
Ag = 15205.30 [10523.48] [1.44σ]
Teffp = 4668 [692] K [6.35σ]

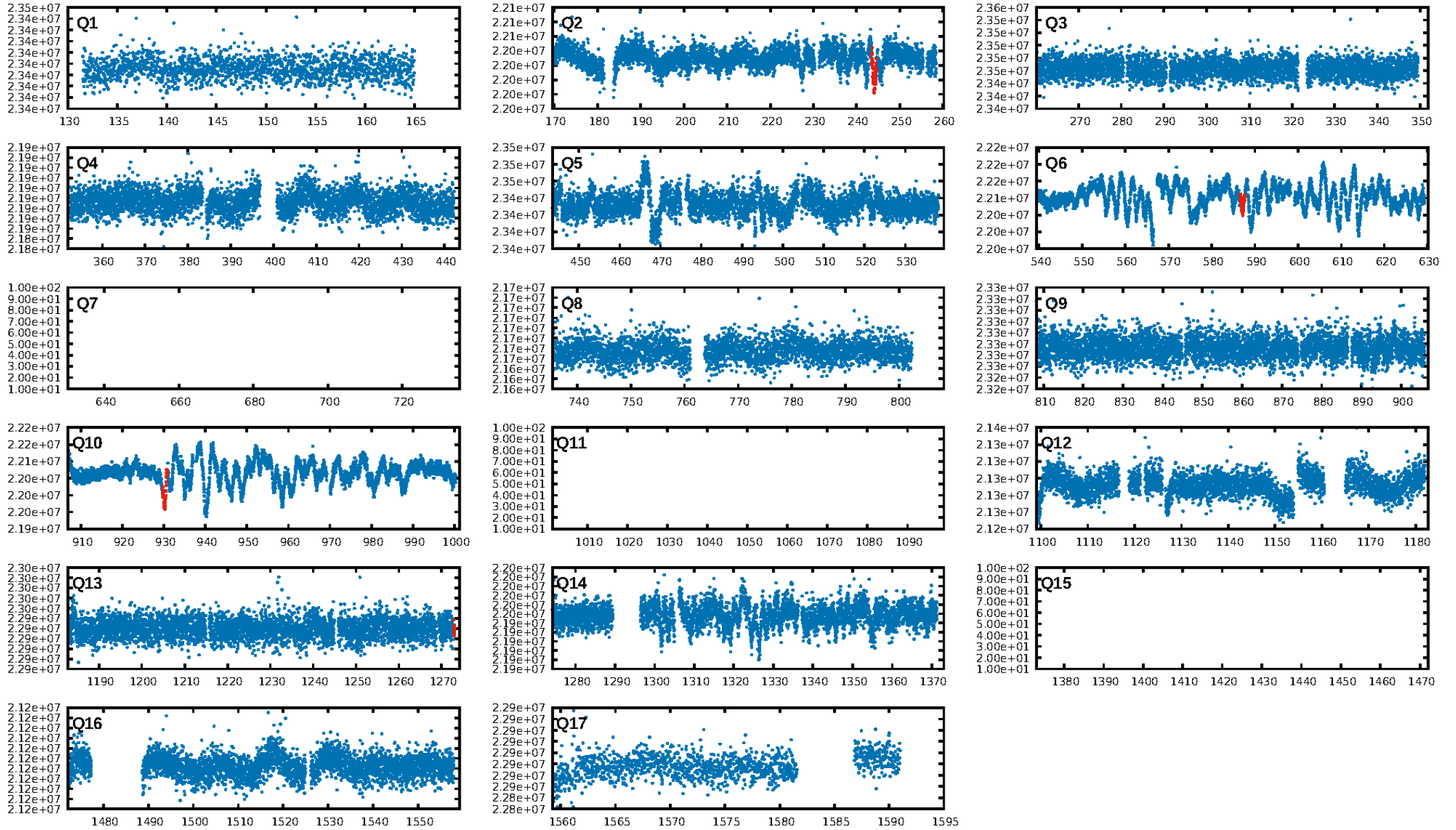
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [9.94σ]
ModelChiSquare2-sig: 7.0%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 6.27e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.914
Centroid-sig: 13.9%
Centroid-so: 1.271 arcsec [1.21σ]
OotOffset-rm: 1.216 arcsec [0.69σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-rm: 1.316 arcsec [0.75σ]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

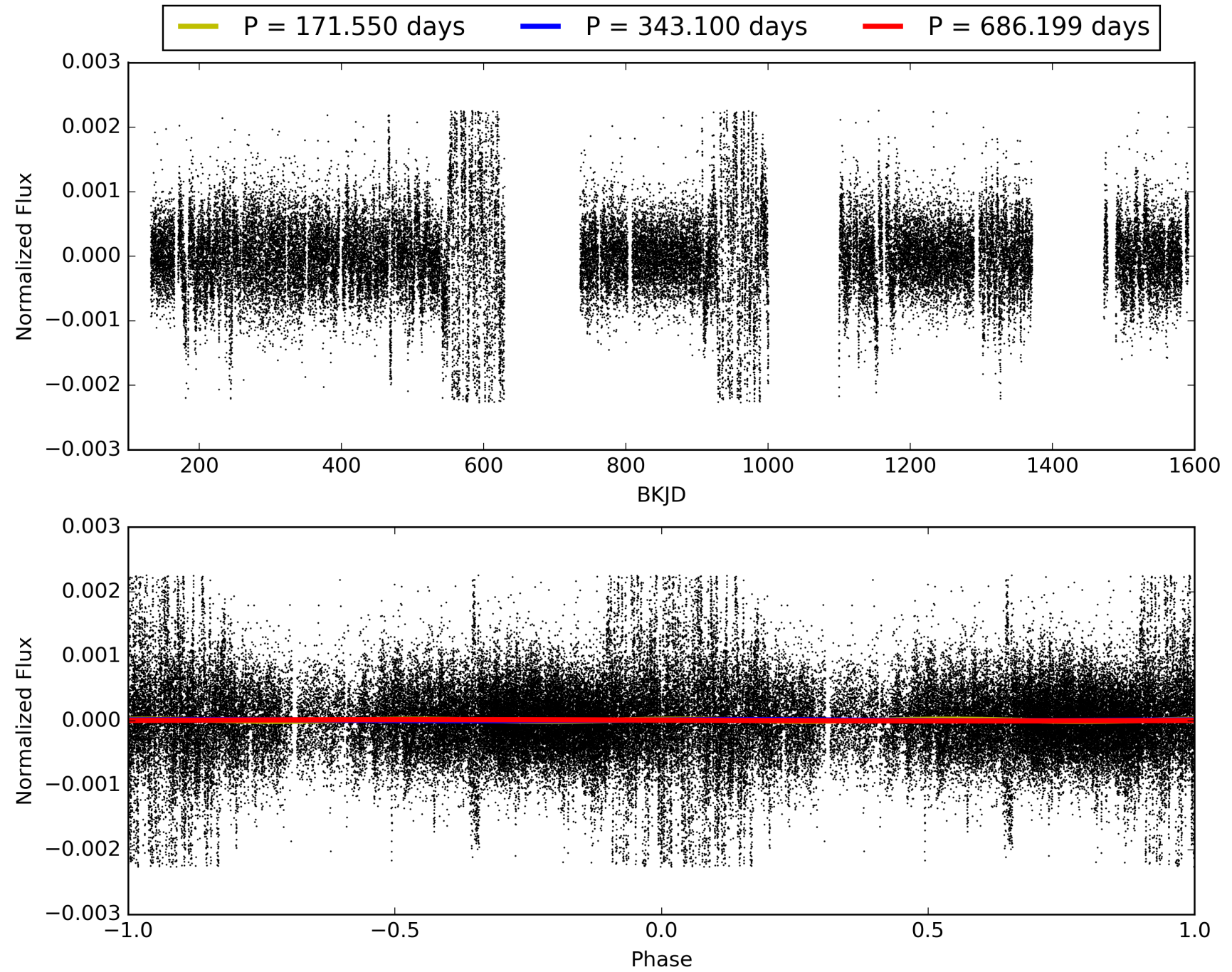
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:54:05 Z

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

TCE 011205401-01, PDC Light Curves

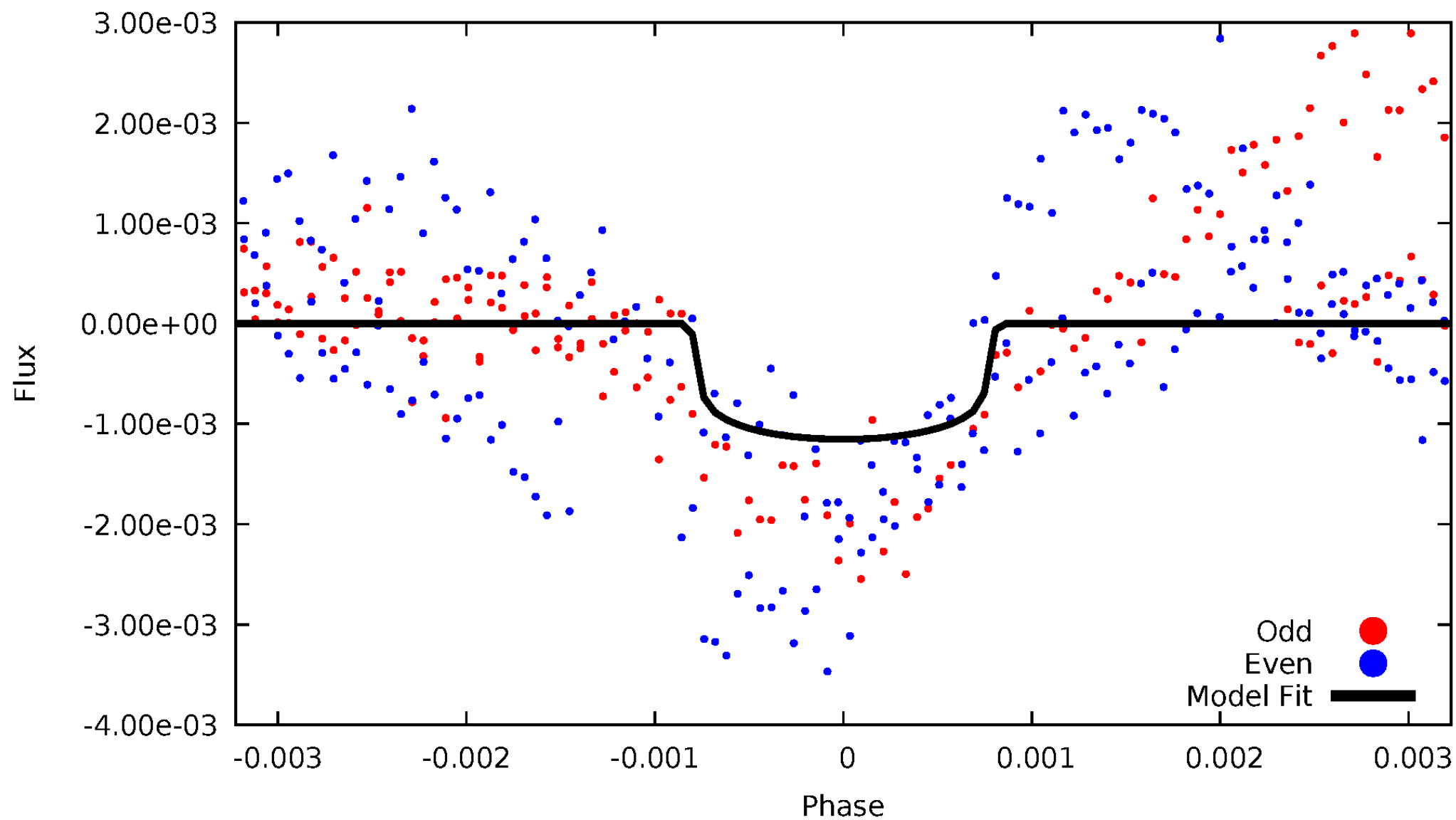


TCE 011205401-01



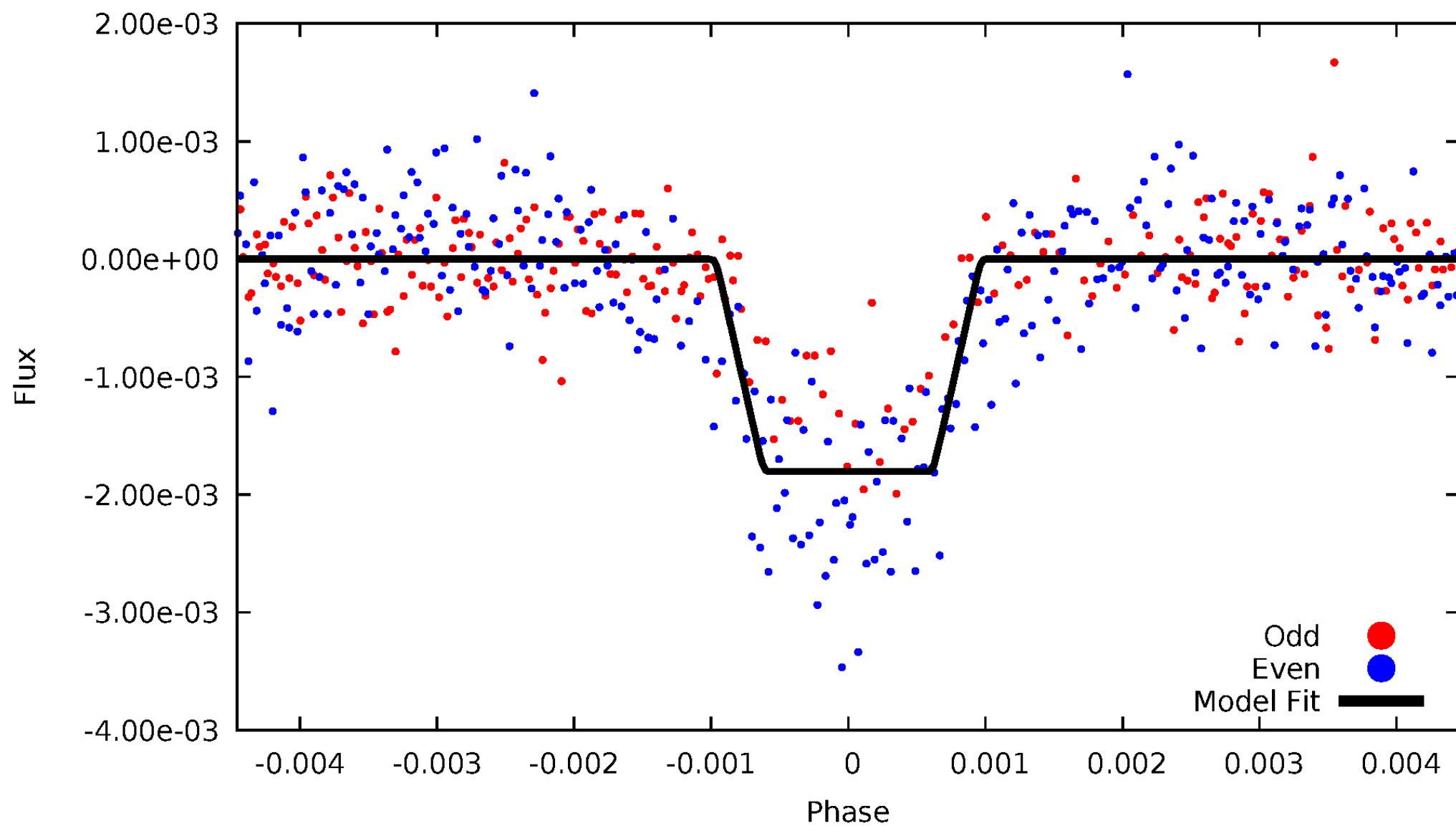
DV Odd/Even

TCE 011205401-01



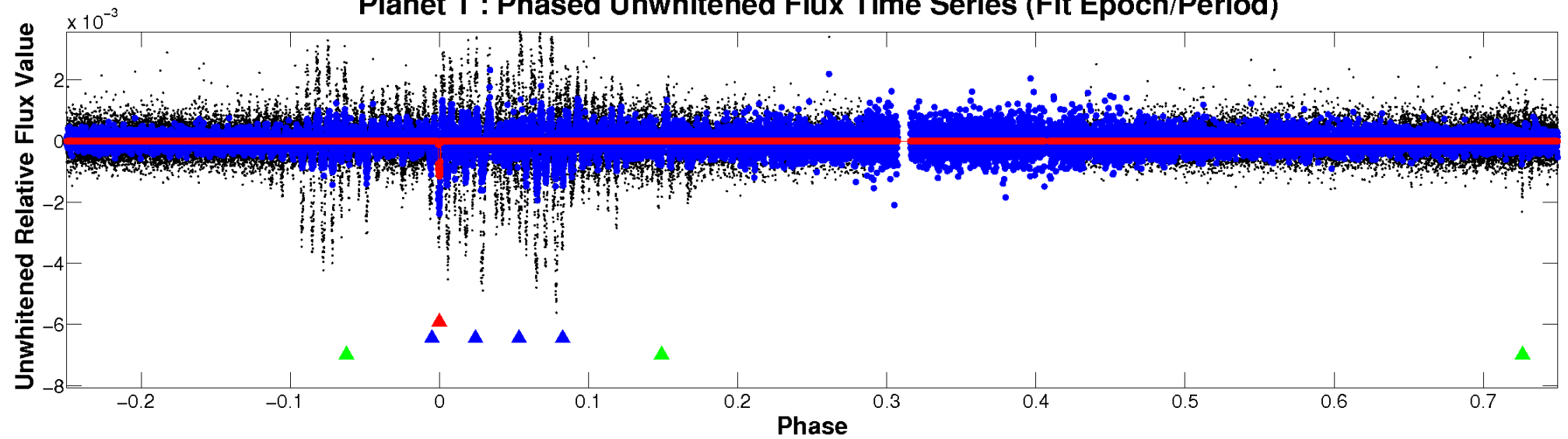
ALT Odd/Even

TCE 011205401-01

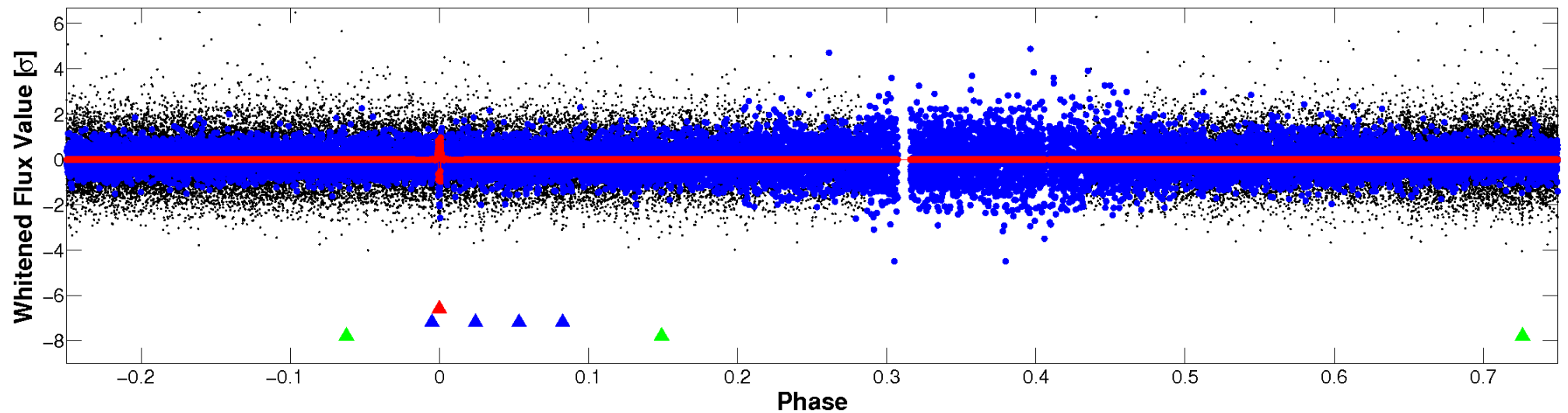


Non-Whitened Vs. Whitened Light Curve

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

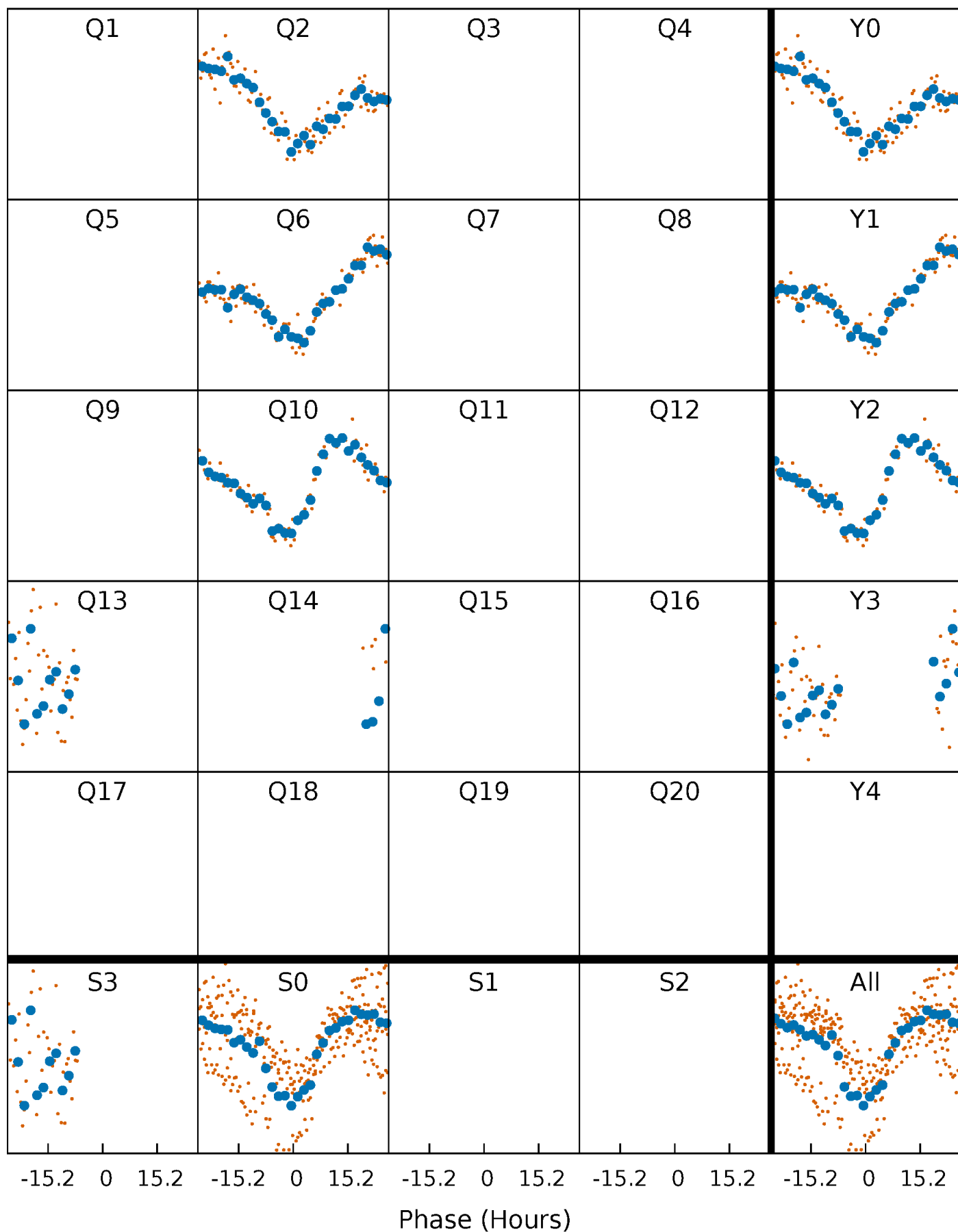


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



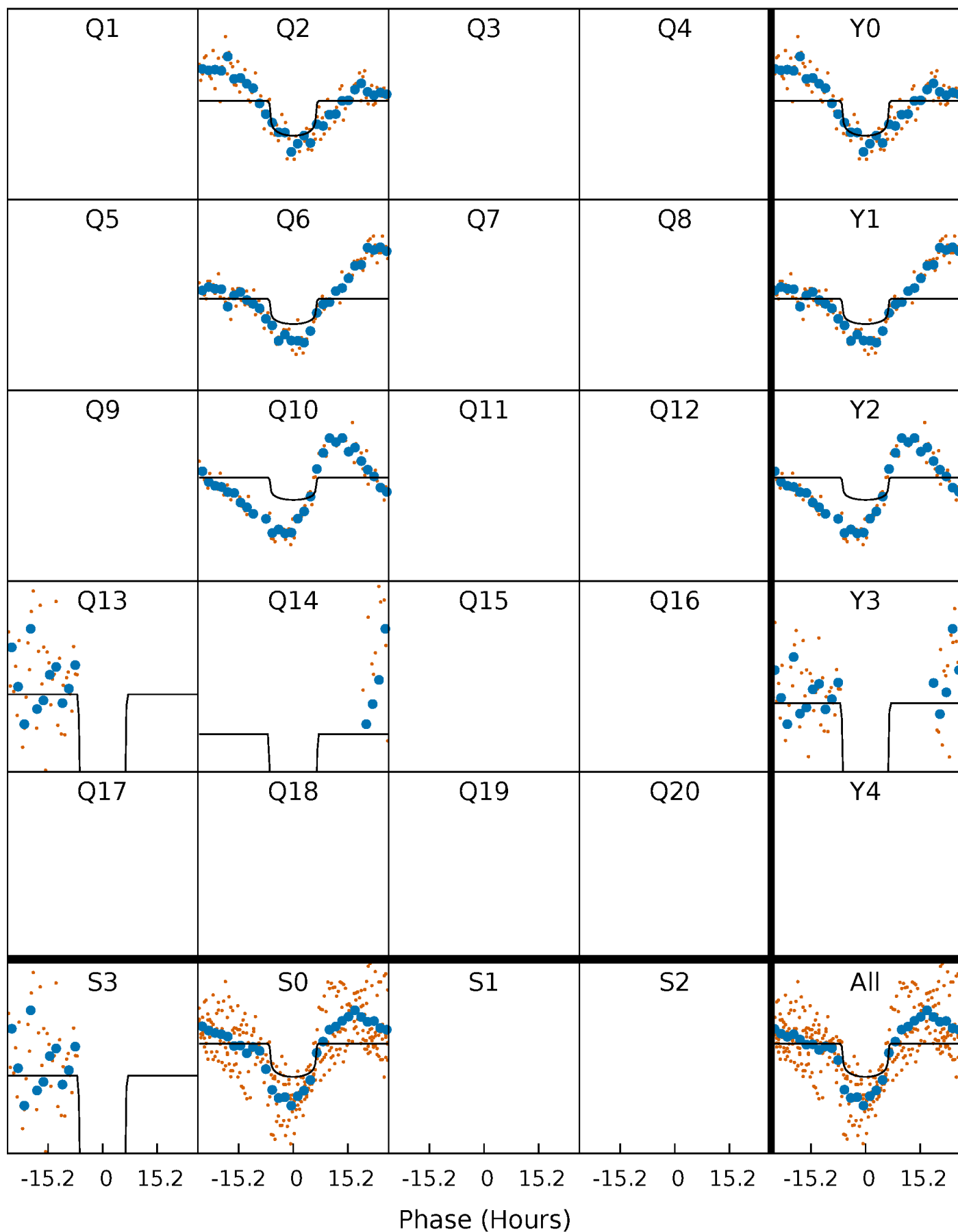
PDC Quarter-Phased Transit Curves

TCE 011205401-01 P=343.099732 Days $T_0=244.051374$ (BKJD)



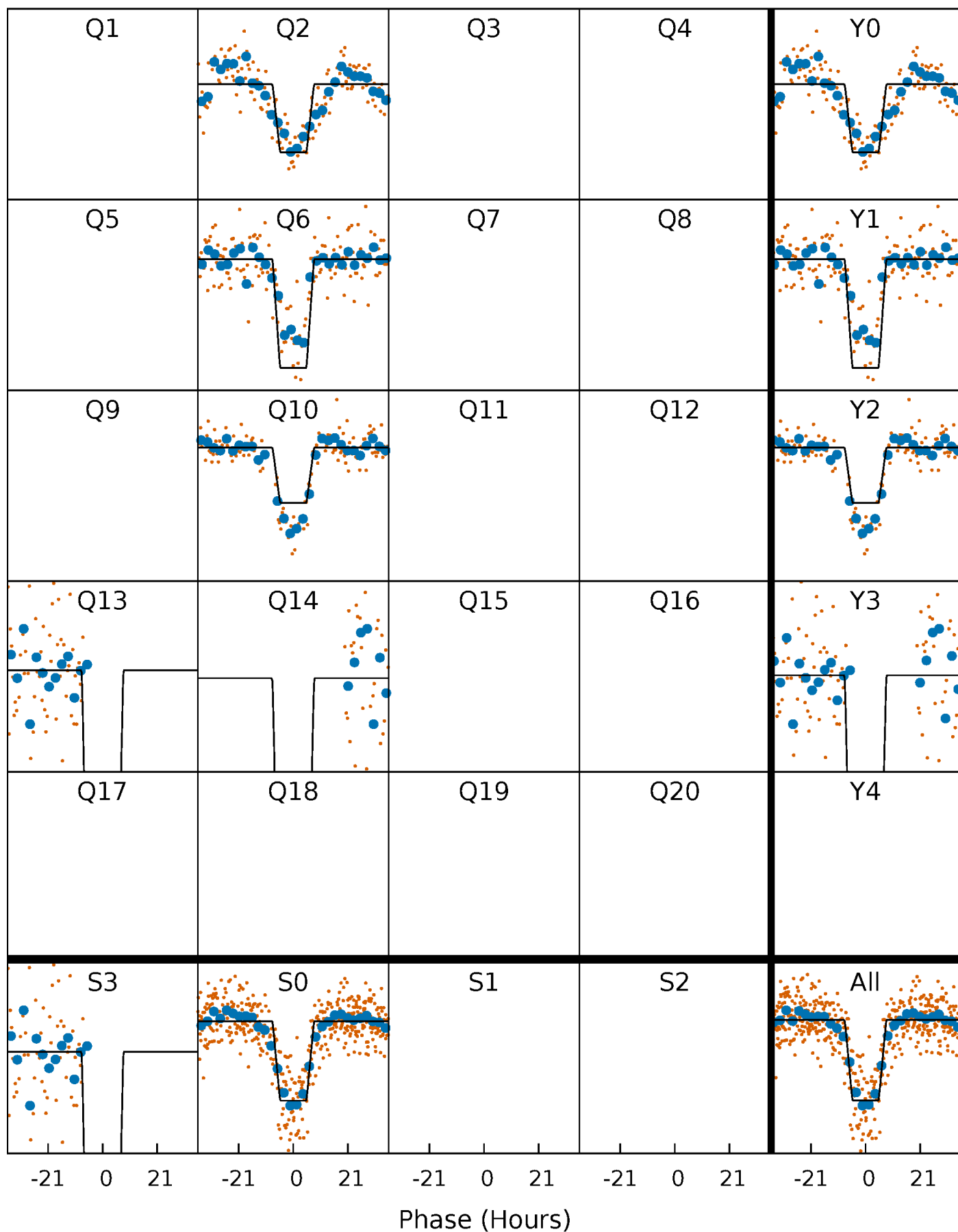
DV Quarter-Phased Transit Curves

TCE 011205401-01 P=343.099732 Days $T_0=244.051374$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

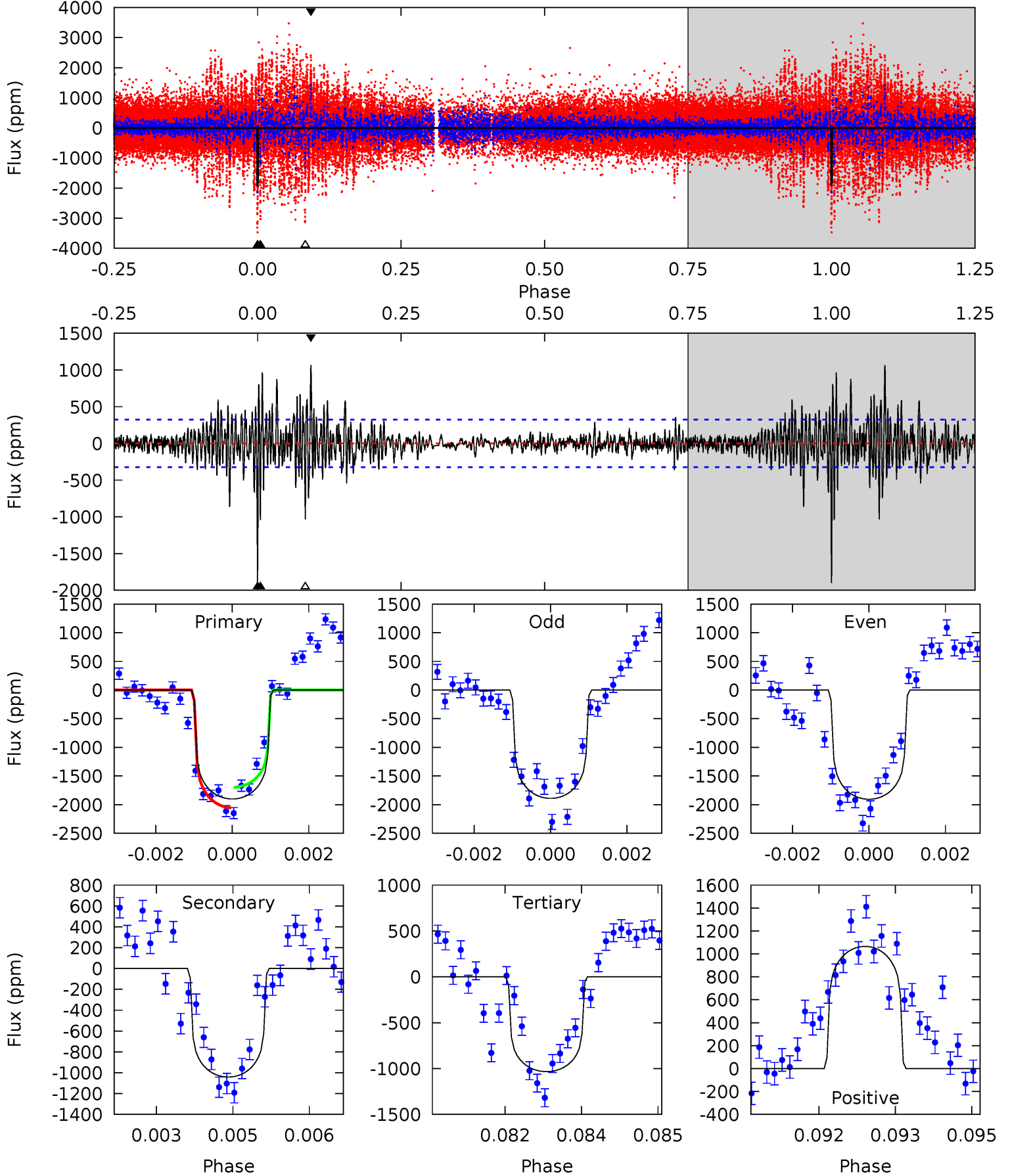
TCE 011205401-01 P=343.093095 Days $T_0=244.051854$ (BKJD)



DV Model-Shift Uniqueness Test

011205401-01, P = 343.099732 Days, E = 244.051374 Days

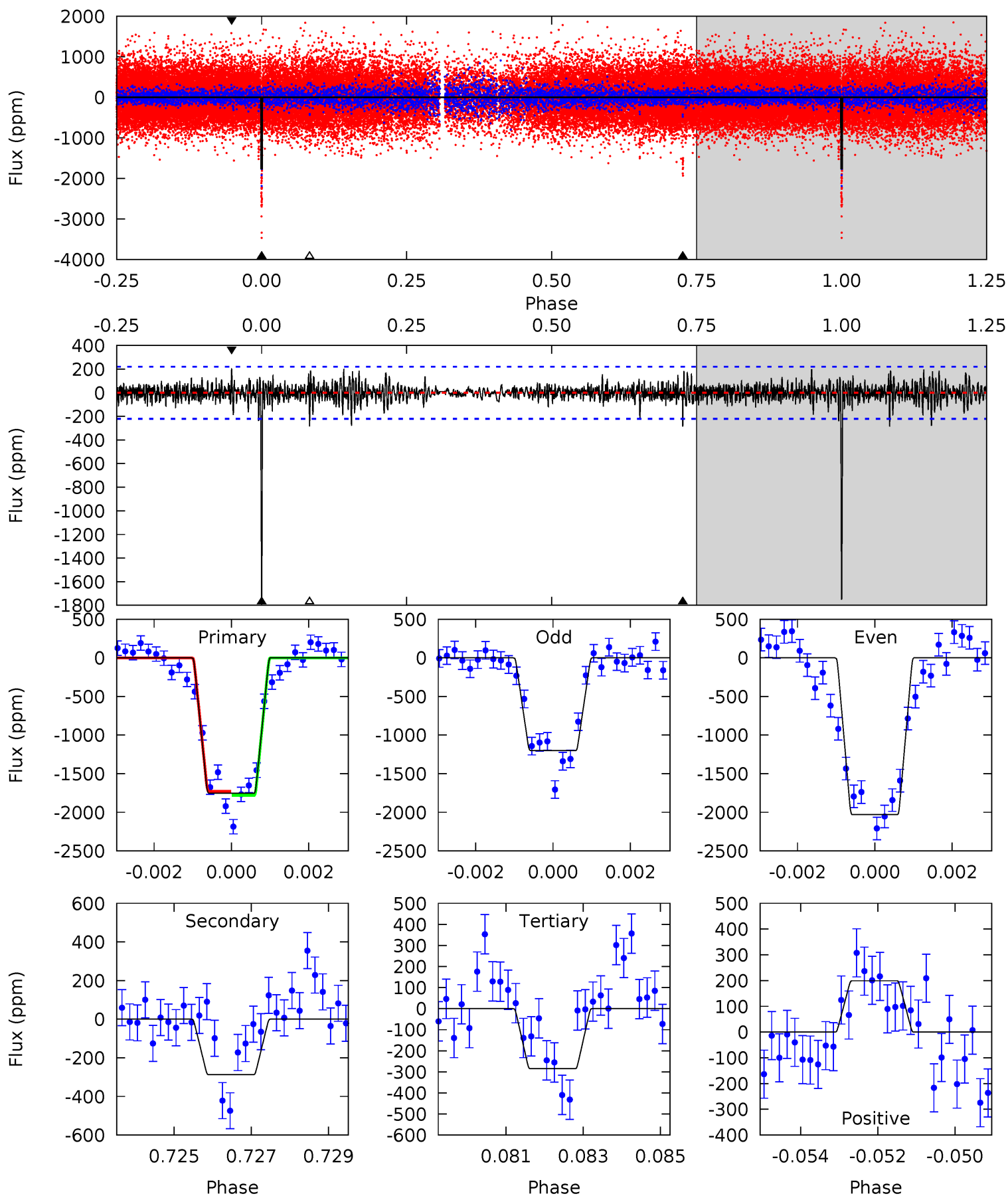
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.6	17.3	17.2	17.7	5.37	3.15	2.96	14.4	13.9	0.13	-0.40	0.10	1.01	0.36	2.72



Alt Model-Shift Uniqueness Test

011205401-01, P = 343.093095 Days, E = 244.051854 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
42.3	6.93	6.88	4.80	5.33	3.09	1.26	35.4	37.5	0.06	2.13	9.69	0.92	0.10	0.64



Stellar Parameters For KIC 011205401

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6308^{+171}_{-209}	$4.510^{+0.052}_{-0.208}$	$-0.560^{+0.300}_{-0.300}$	$0.906^{+0.283}_{-0.088}$	$0.968^{+0.118}_{-0.118}$	$1.834^{+0.401}_{-1.011}$
	+3%/-3%	+1%/-5%	+54%/-54%	+31%/-10%	+12%/-12%	+22%/-55%
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 011205401-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1041 ± 60	$3.20^{+0.97}_{-0.81}$	388^{+27}_{-19}	6418^{+1032}_{-715}	49570^{+38407}_{-20290}
Alt.	-287 ± 41	$4.42^{+1.00}_{-0.92}$	388^{+31}_{-19}	4232^{+362}_{-284}	7115^{+4191}_{-2446}

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

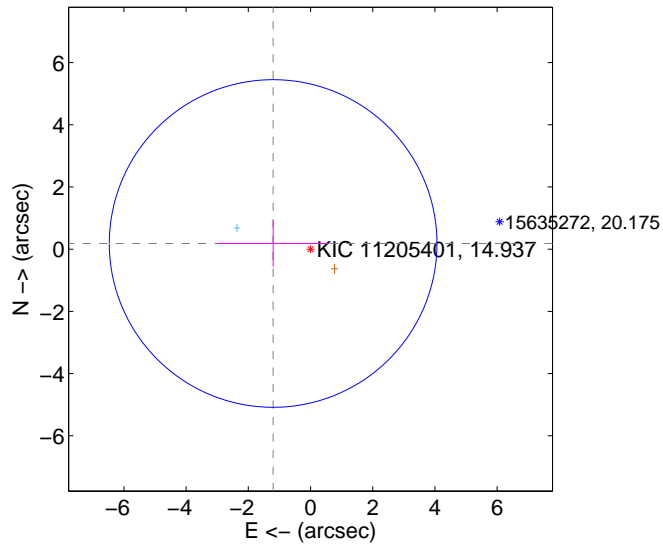
Supplemental centroid analysis for 011205401-01. Kepler magnitude: 14.94. Transit SNR 8.20

There are 1 quarters with good PRF difference image offsets

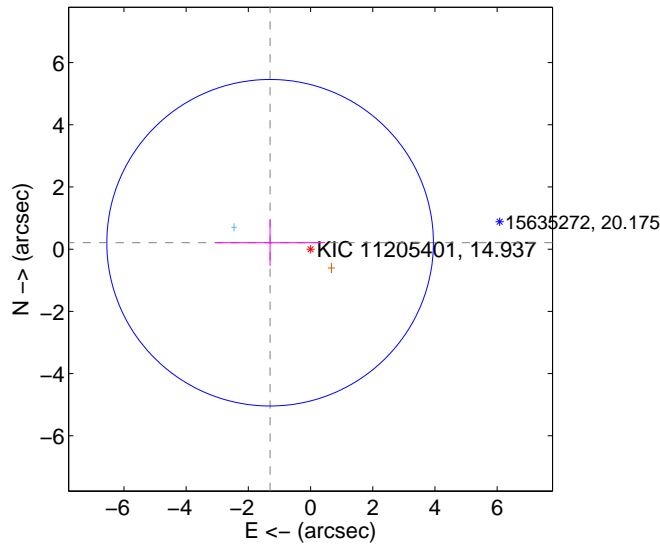
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.216 ± 1.755	0.69	1.202 ± 1.772	0.182 ± 0.748
PRF-fit source offset from KIC position	1.316 ± 1.750	0.75	1.300 ± 1.768	0.207 ± 0.744
photometric centroid source offset	1.27 ± 1.05	1.21	-1.14 ± 1.01	-0.56 ± 1.19

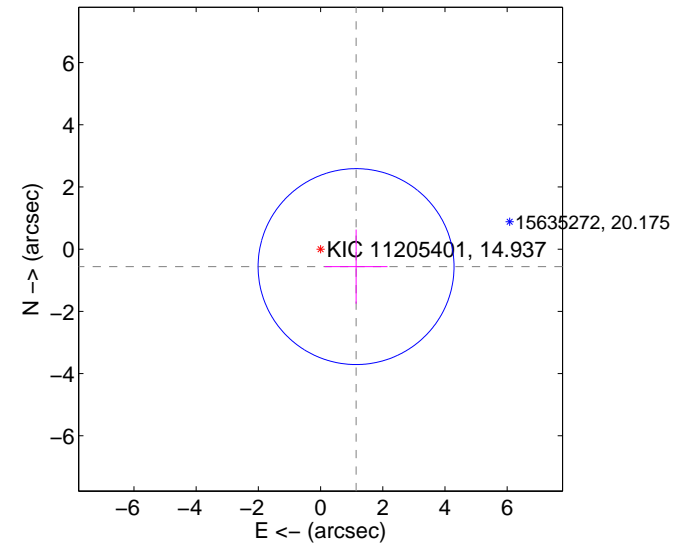
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

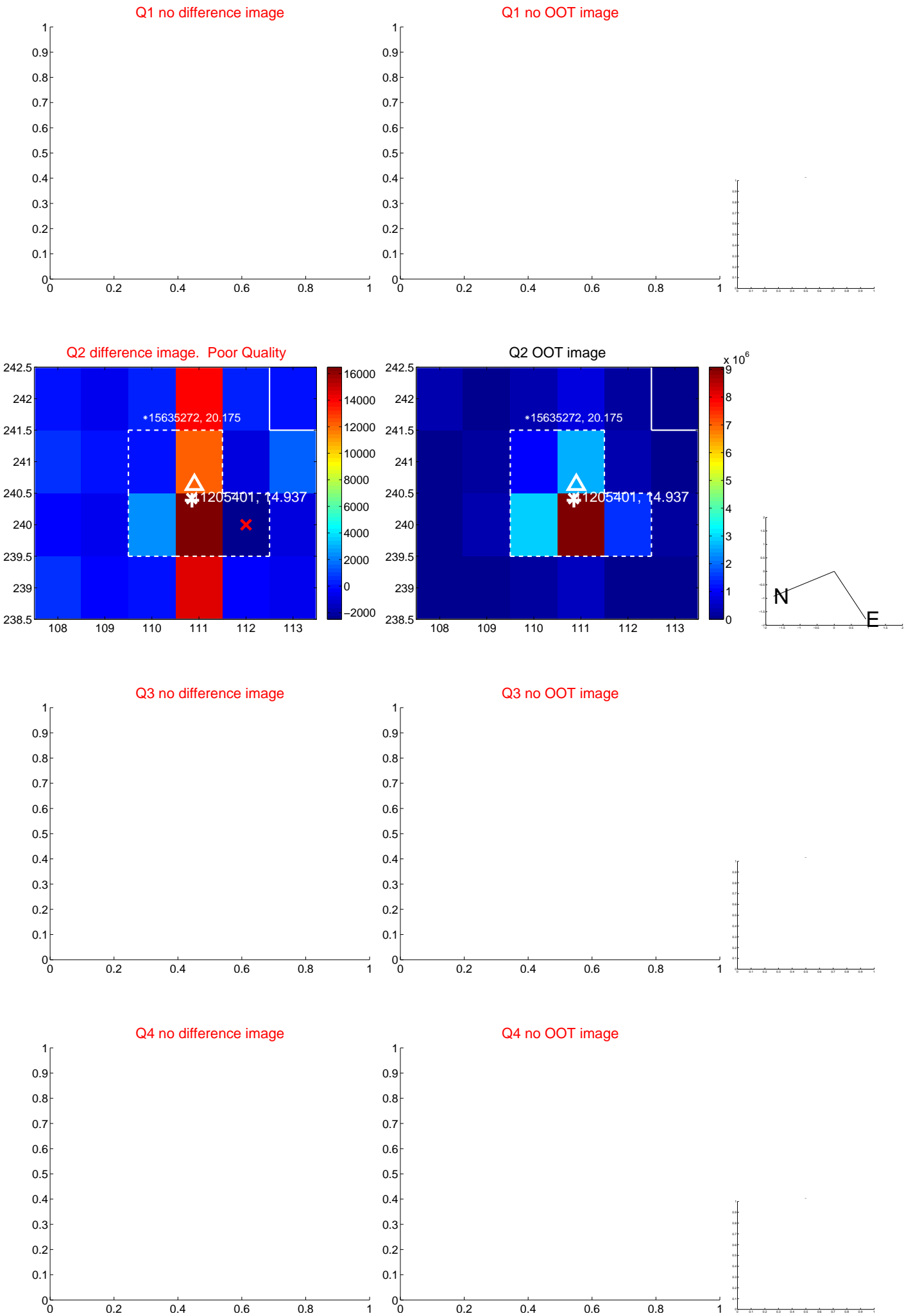


offset from photometric centroids

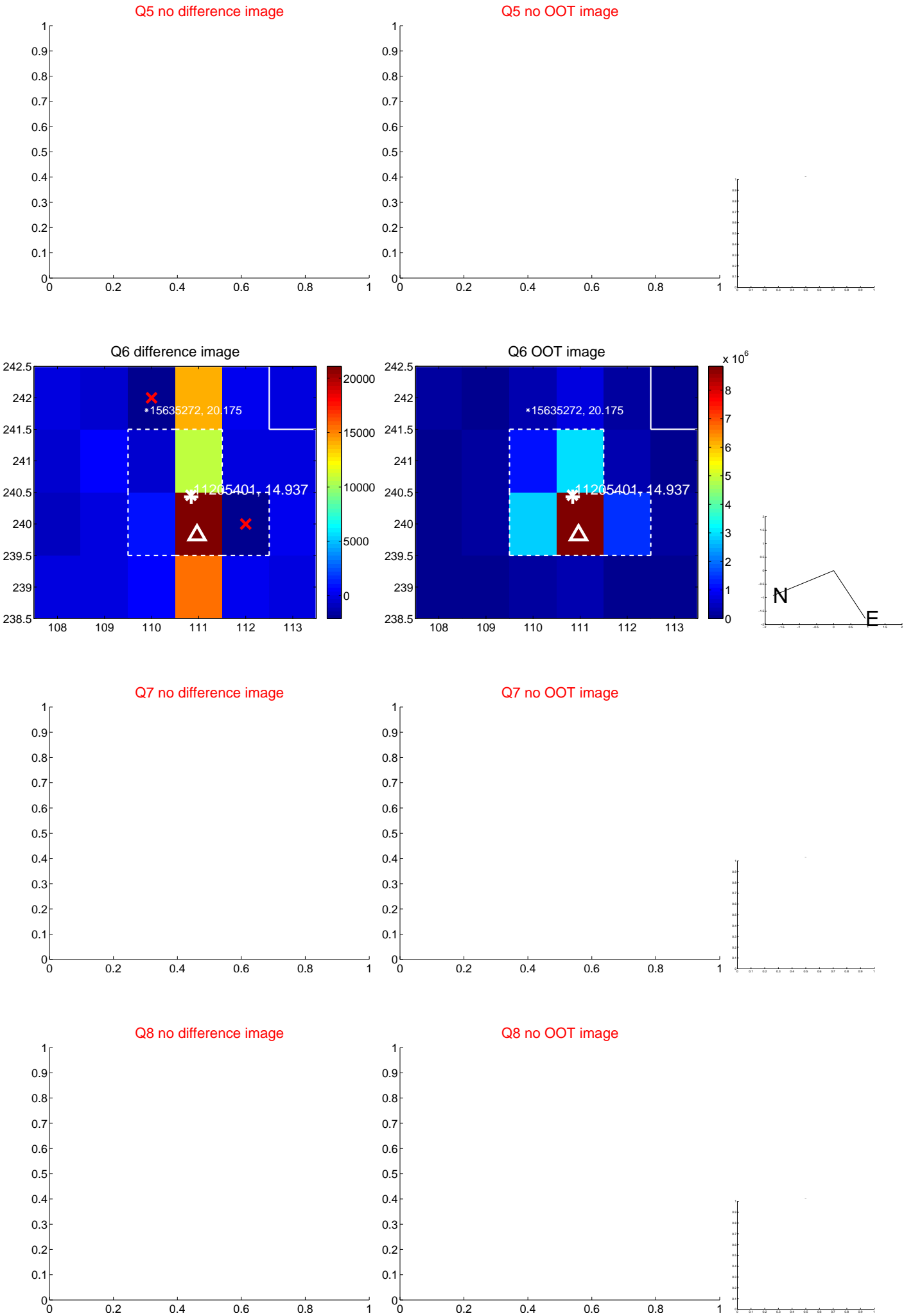


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

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



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



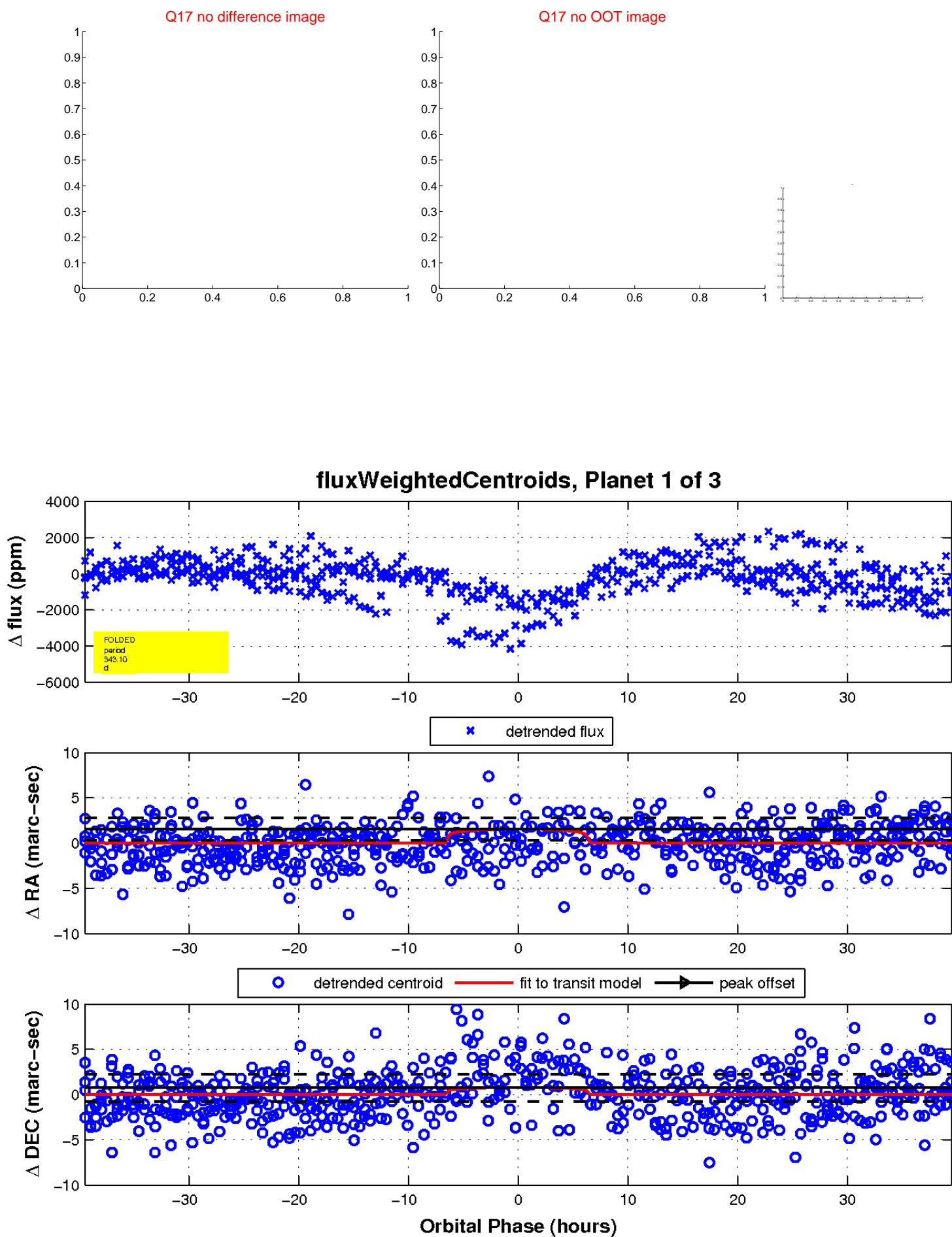
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



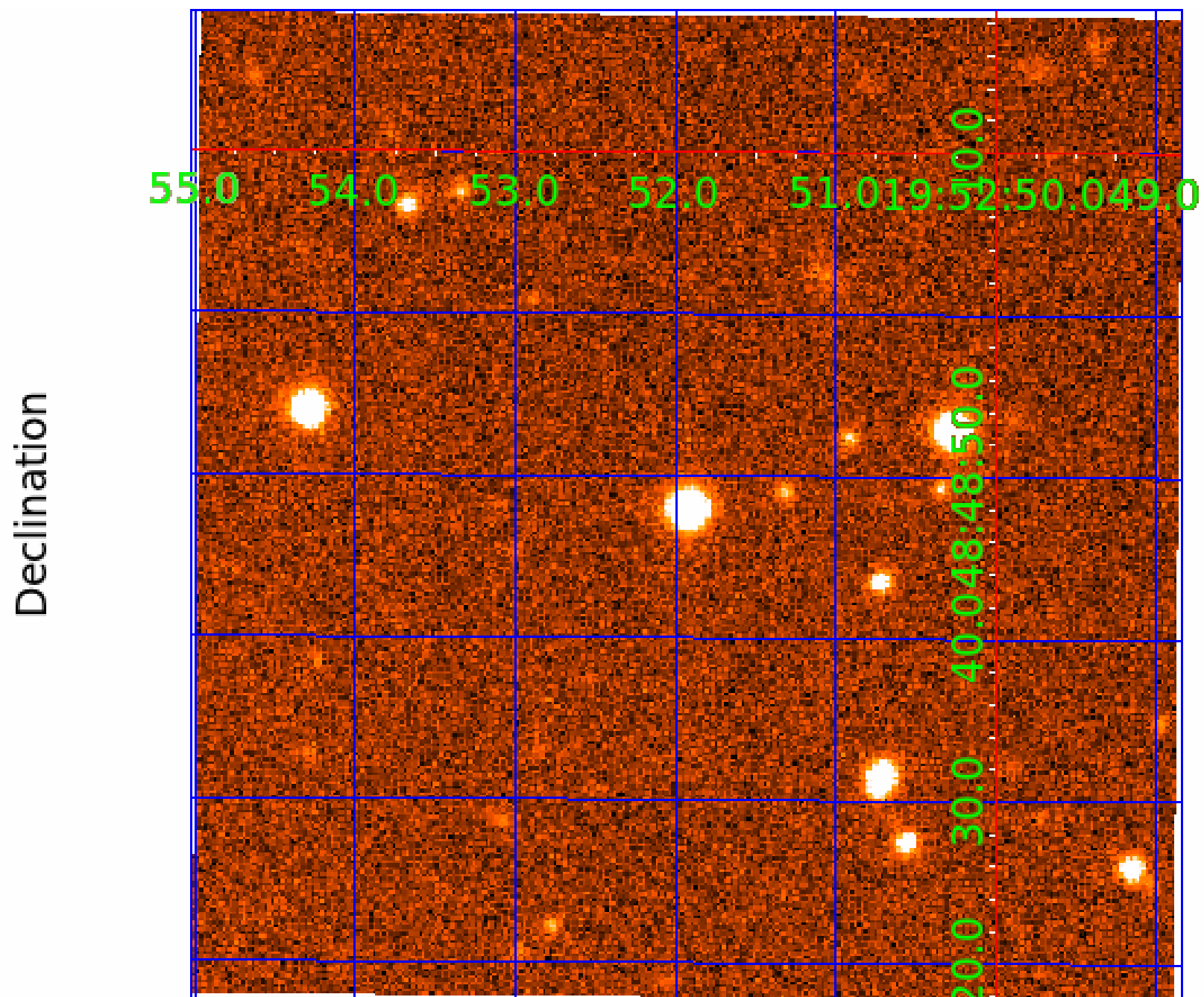
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 011205401

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})
011205401-01	OBS	No	343.099732	244.051374	1153.8	13.274	7.4	8.2	0.91	6308	3.11	1.29
011205401-02	OBS	No	353.123787	242.344836	1139.3	20.250	8.4	9.6	0.91	6308	3.49	1.24
011205401-03	OBS	No	415.608531	493.265168	1248.9	19.938	8.2	8.9	0.91	6308	4.42	1.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011205401-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011205401-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS
011205401-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—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.

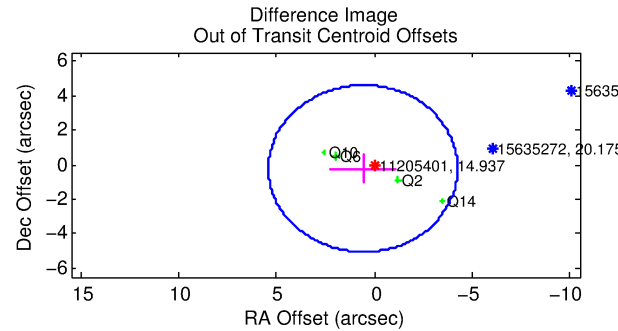
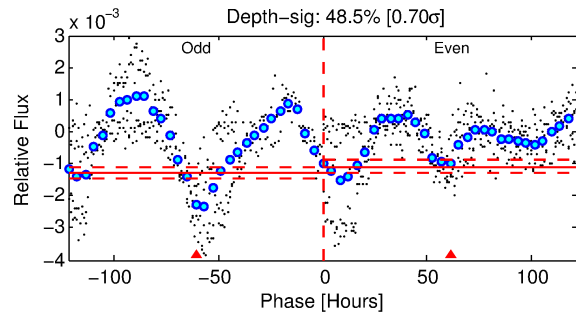
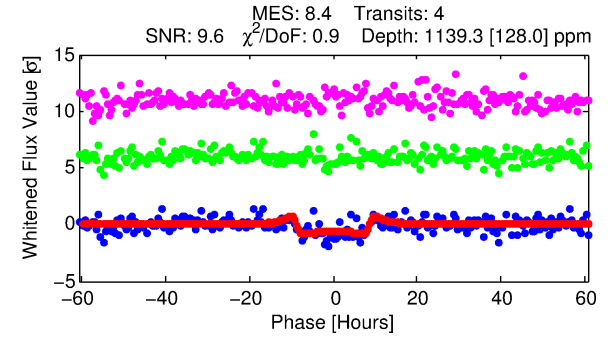
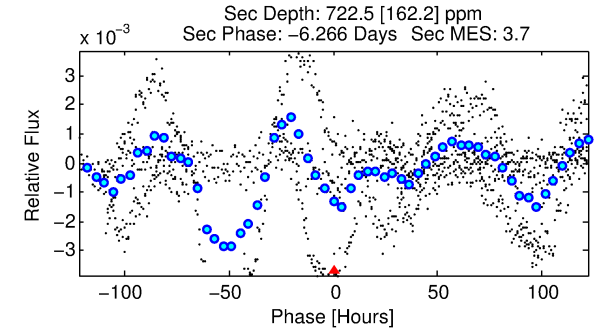
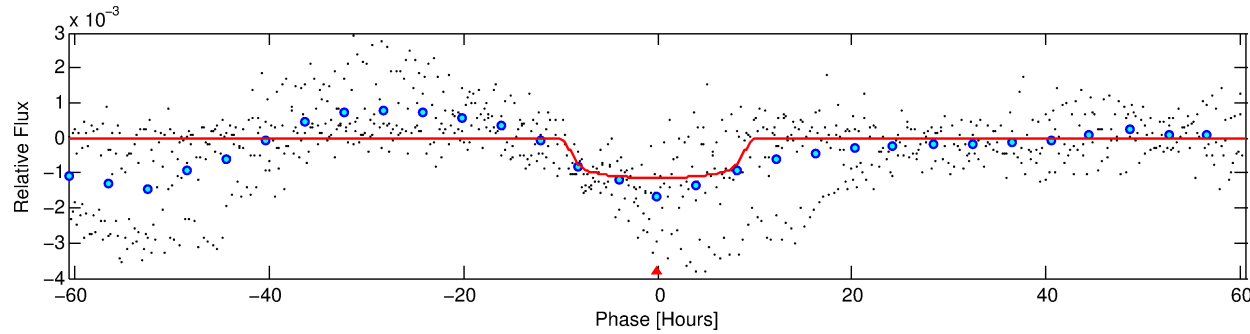
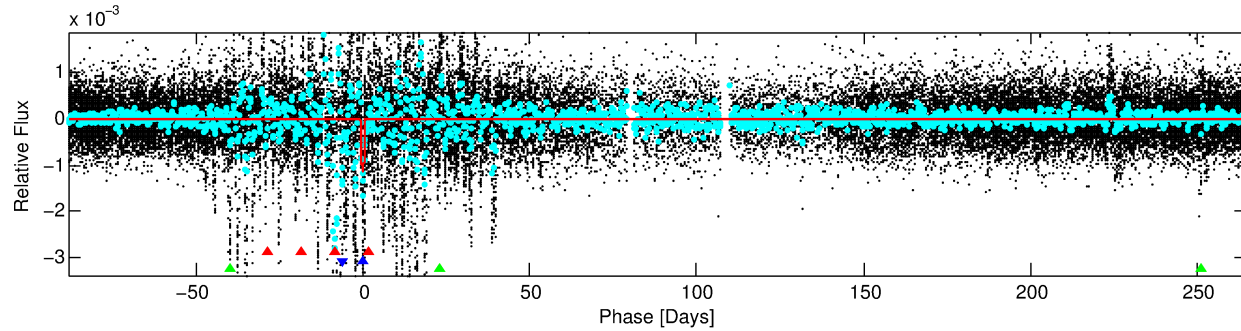
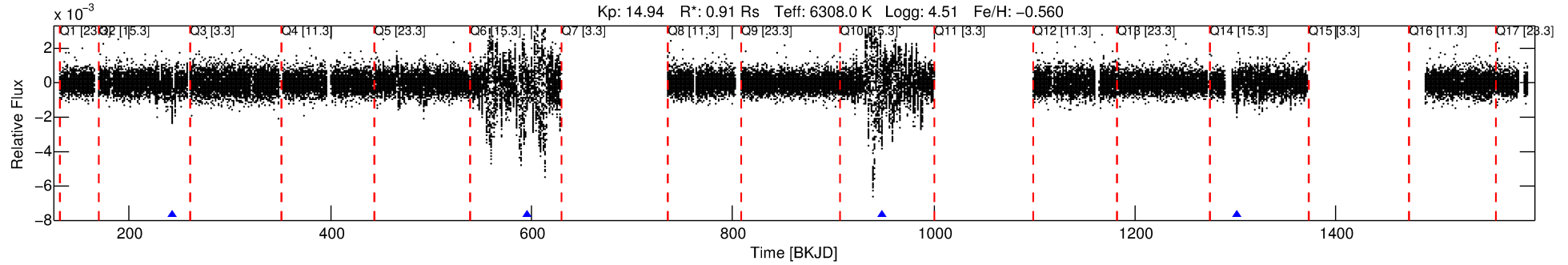
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011205401-02

No Significant Match Found

DV One-Page Summary

KIC: 11205401 Candidate: 2 of 3 Period: 353.124 d



DV Fit Results:

Period = 353.12379 [0.00833] d
Epoch = 242.3448 [0.0154] BKJD
Rp/R* = 0.0353 [0.0025]
a/R* = 75.82 [14.60]
b = 0.86 [0.06]
Seff = 1.24 [0.50]
Teq = 269 [27] K
Rp = 3.49 [1.12] Re
a = 0.9677 [0.2539] AU
Ag = 30598.83 [14222.31] [2.15σ]
Teffp = 5506 [409] K [12.78σ]

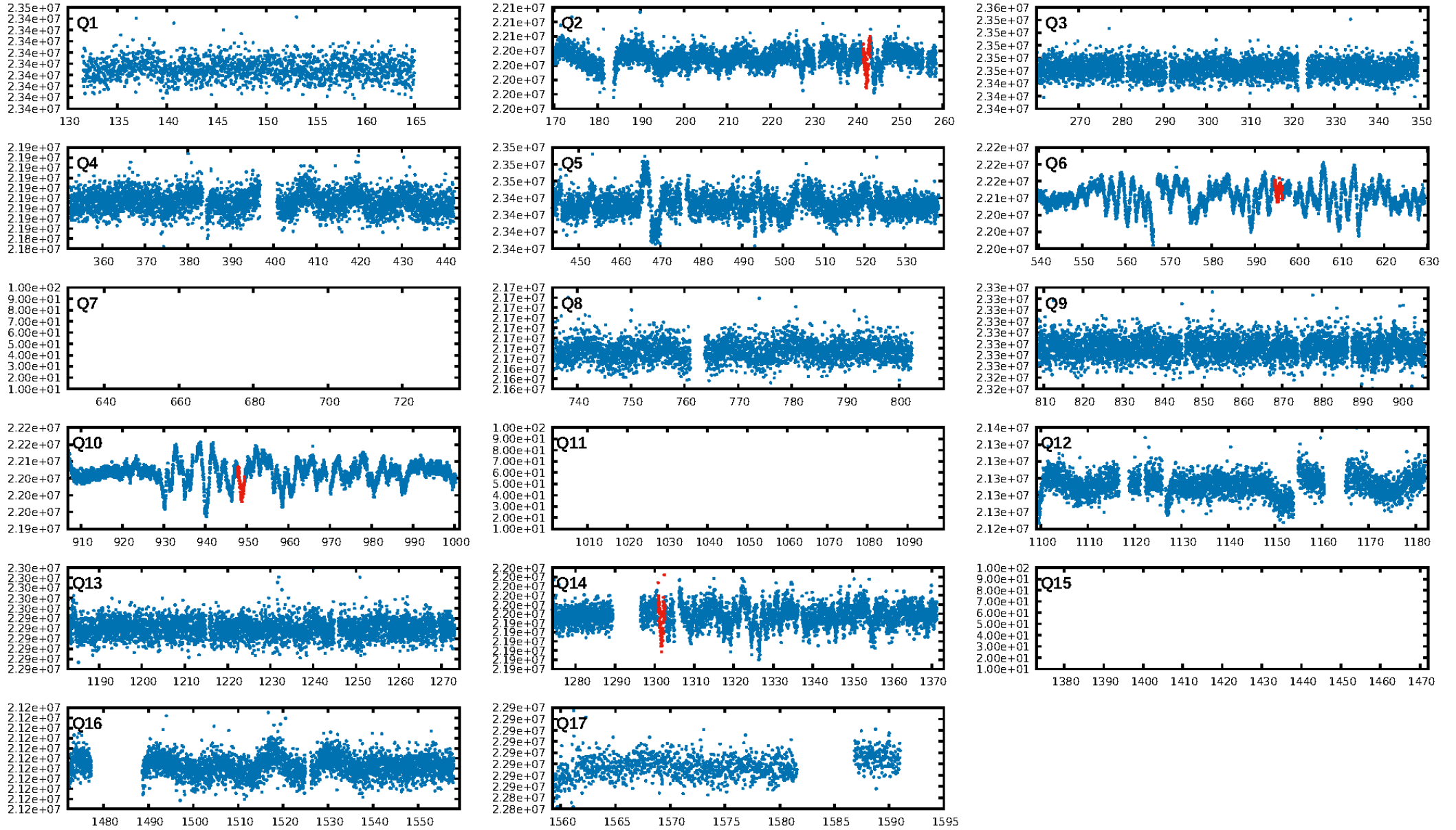
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [9.94σ]
LongPeriod-sig: 100.0% [52.77σ]
ModelChiSquare2-sig: 18.6%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 1.11e-11
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 2.905
Centroid-sig: 50.5%
Centroid-so: 0.639 arcsec [0.72σ]
OotOffset-rm: 0.624 arcsec [0.39σ]
OotOffset-st: 4/0/0/0 [4]
KicOffset-rm: 0.704 arcsec [0.43σ]
KicOffset-st: 4/0/0/0 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [4/4]

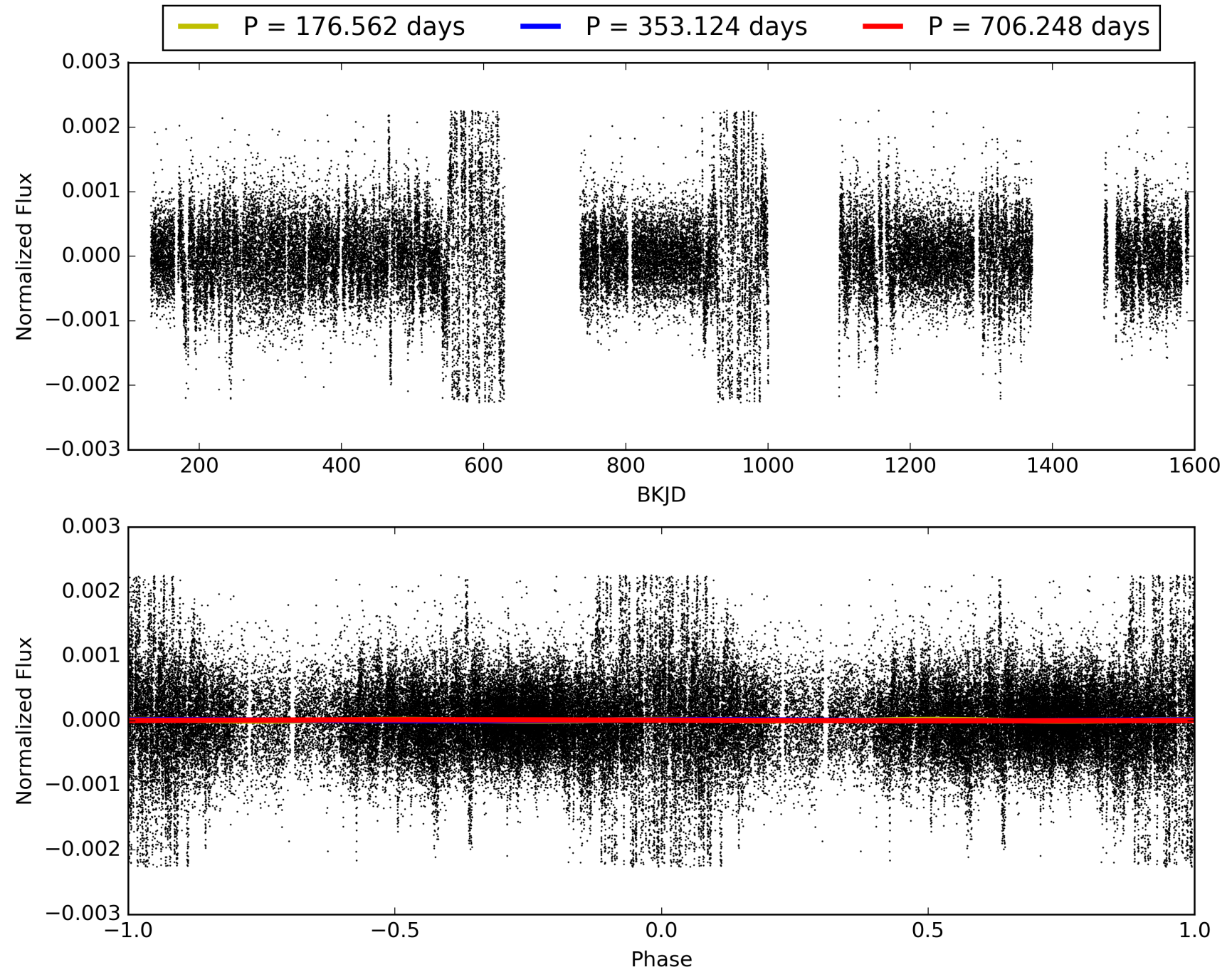
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:54:12 Z

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

TCE 011205401-02, PDC Light Curves

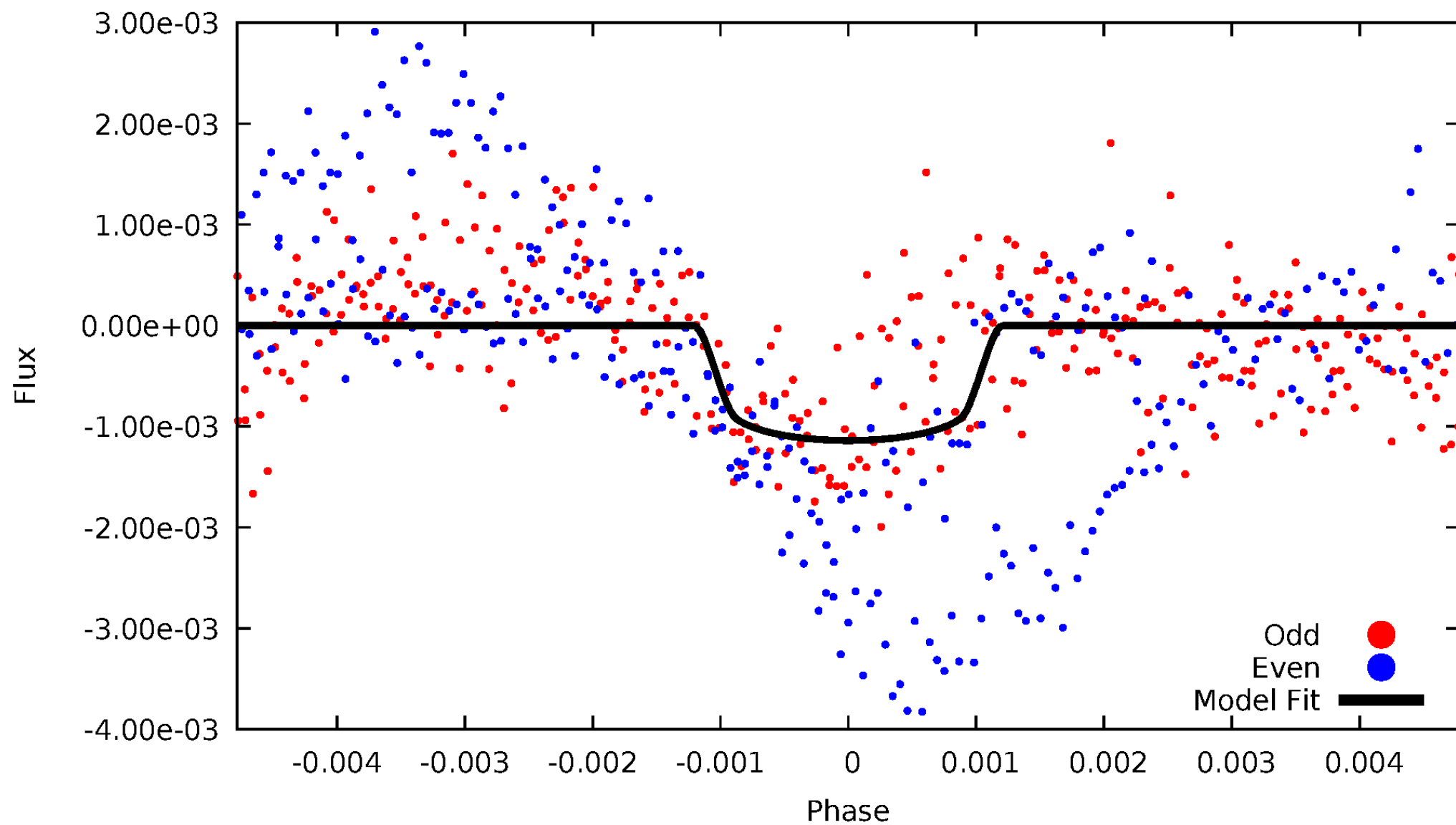


TCE 011205401-02



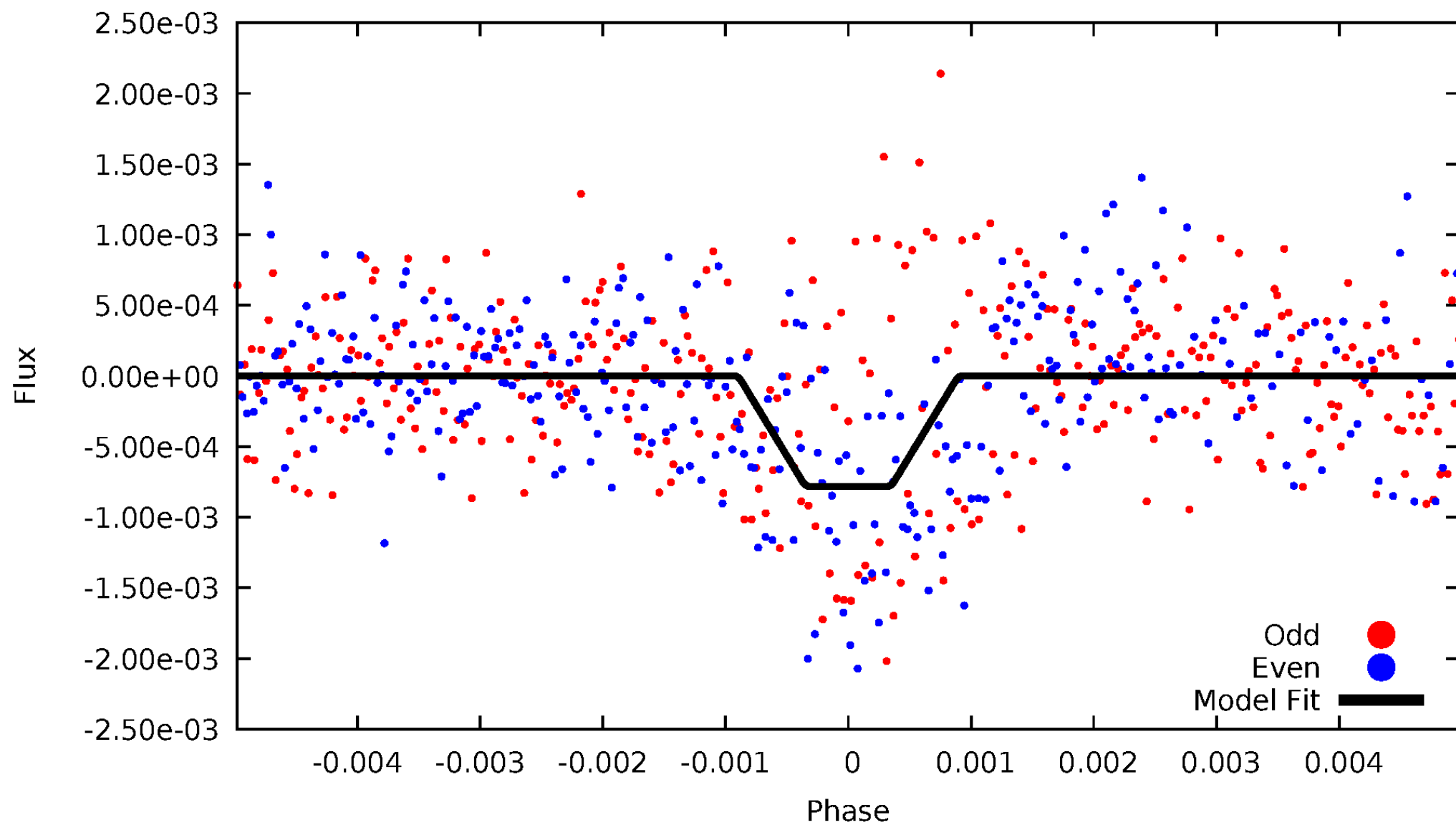
DV Odd/Even

TCE 011205401-02



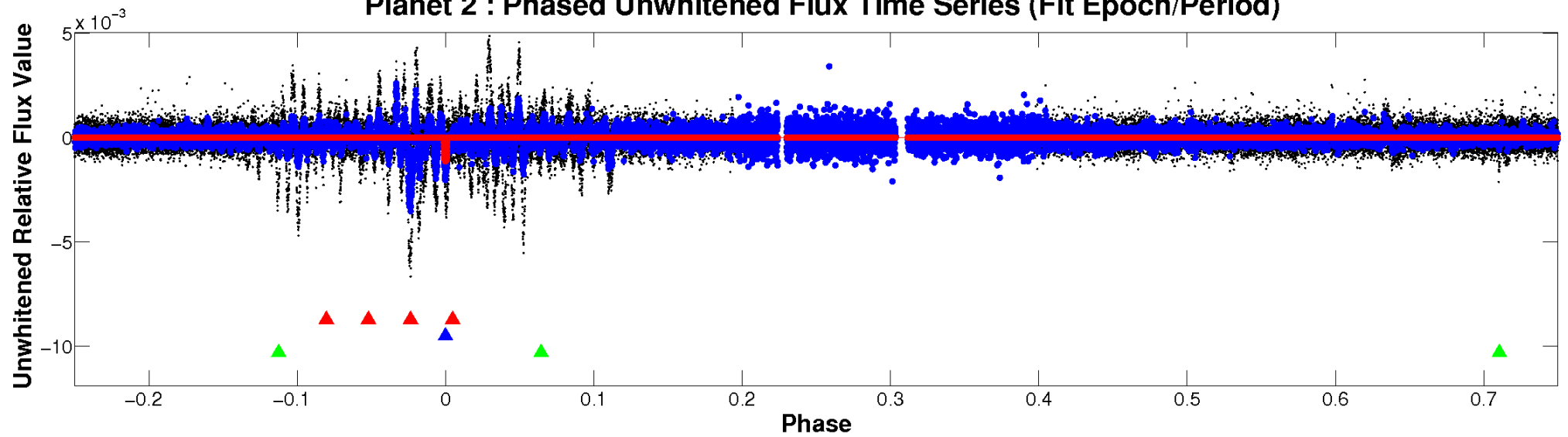
ALT Odd/Even

TCE 011205401-02

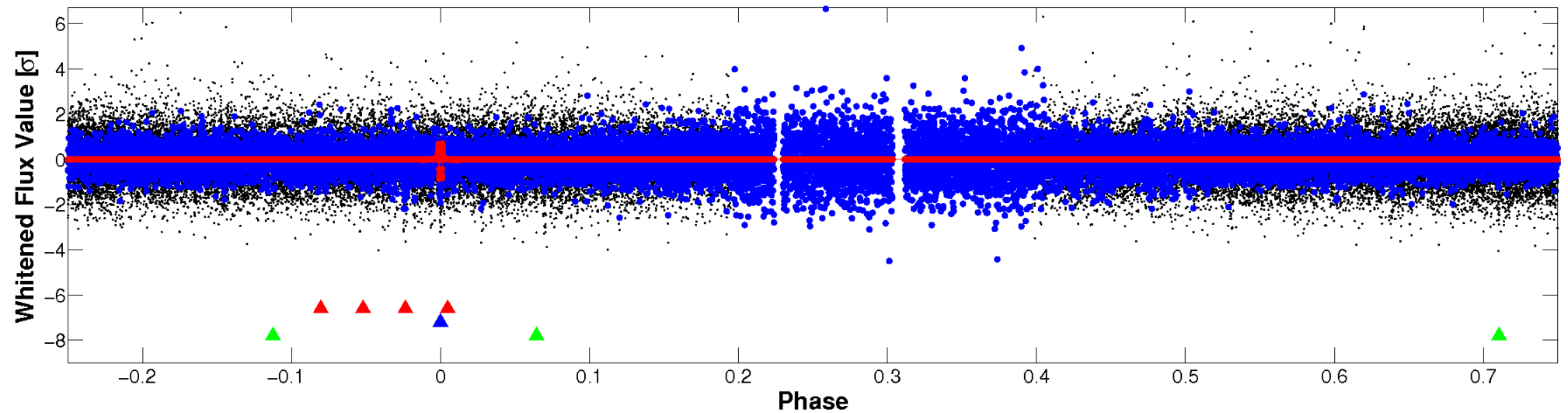


Non-Whitened Vs. Whitened Light Curve

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

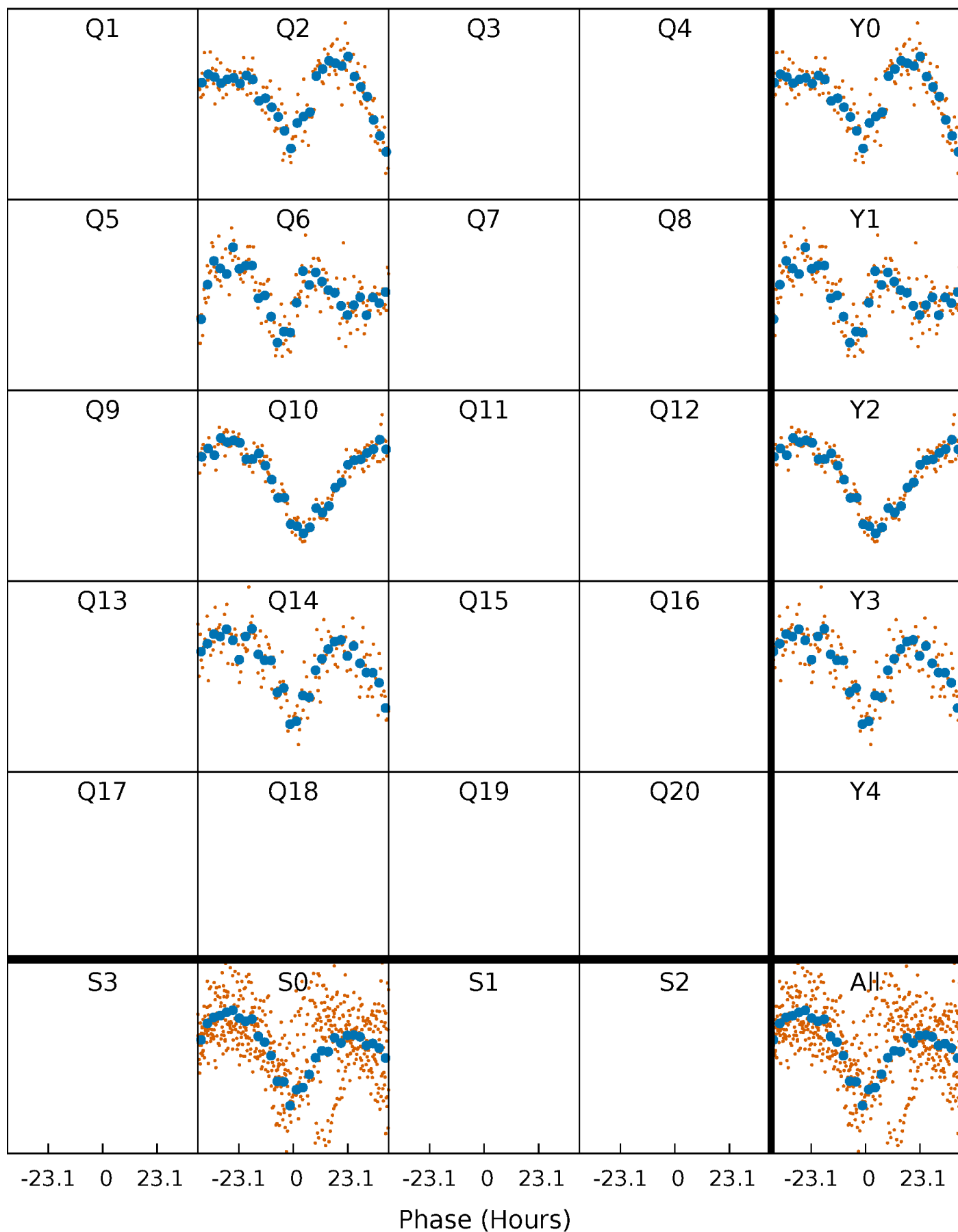


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



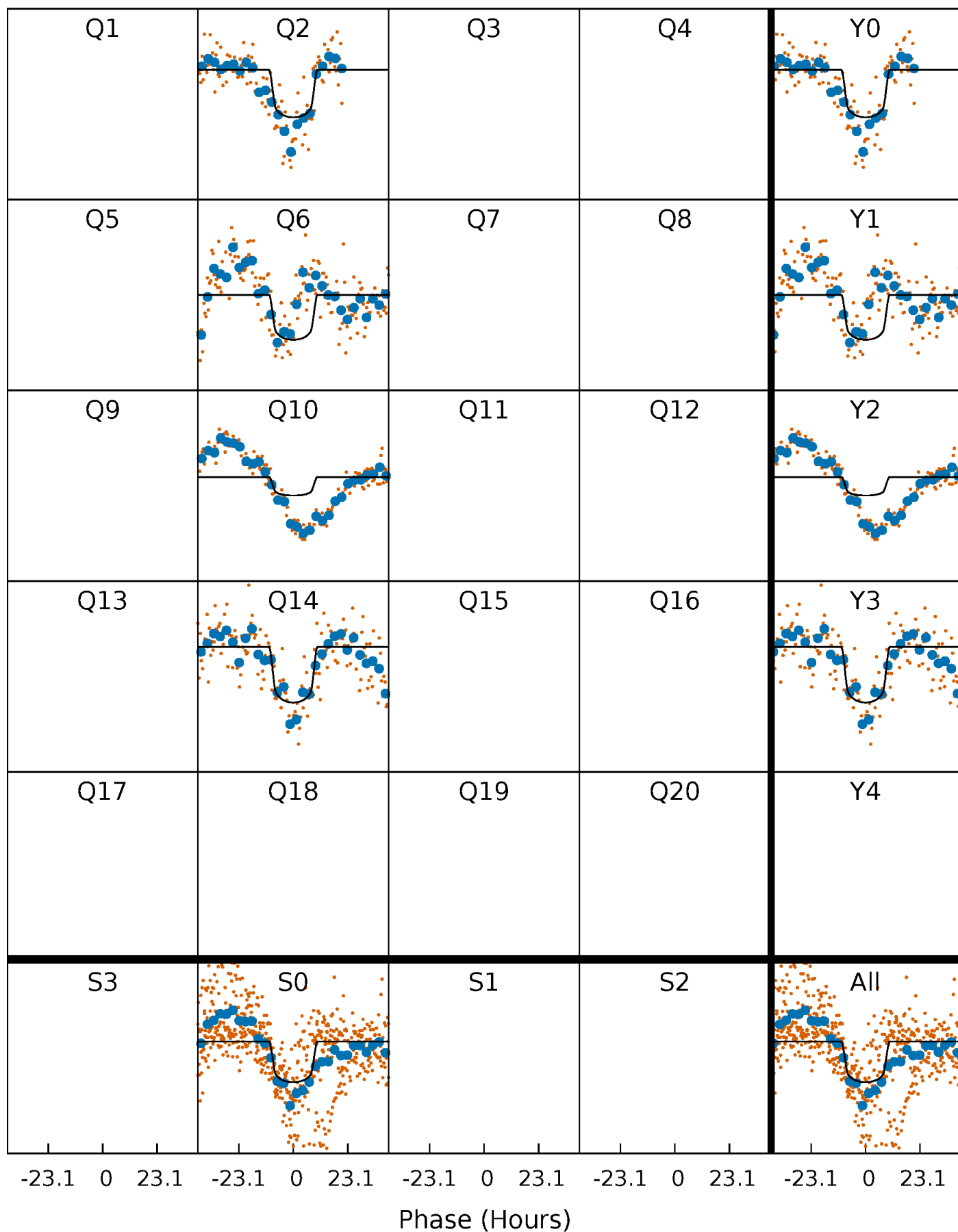
PDC Quarter-Phased Transit Curves

TCE 011205401-02 P=353.123787 Days $T_0=242.344836$ (BKJD)



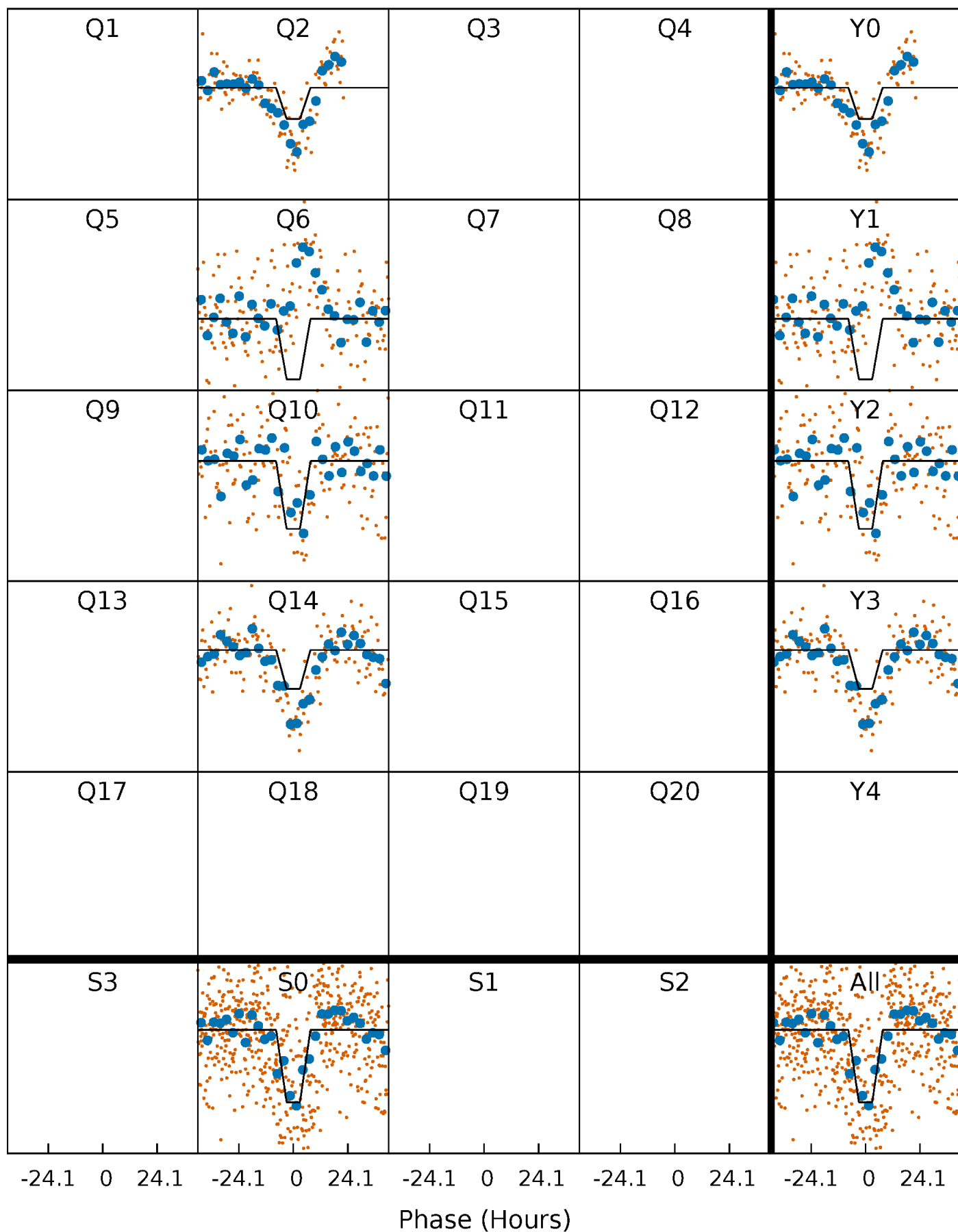
DV Quarter-Phased Transit Curves

TCE 011205401-02 $P=353.123787$ Days $T_0=242.344836$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

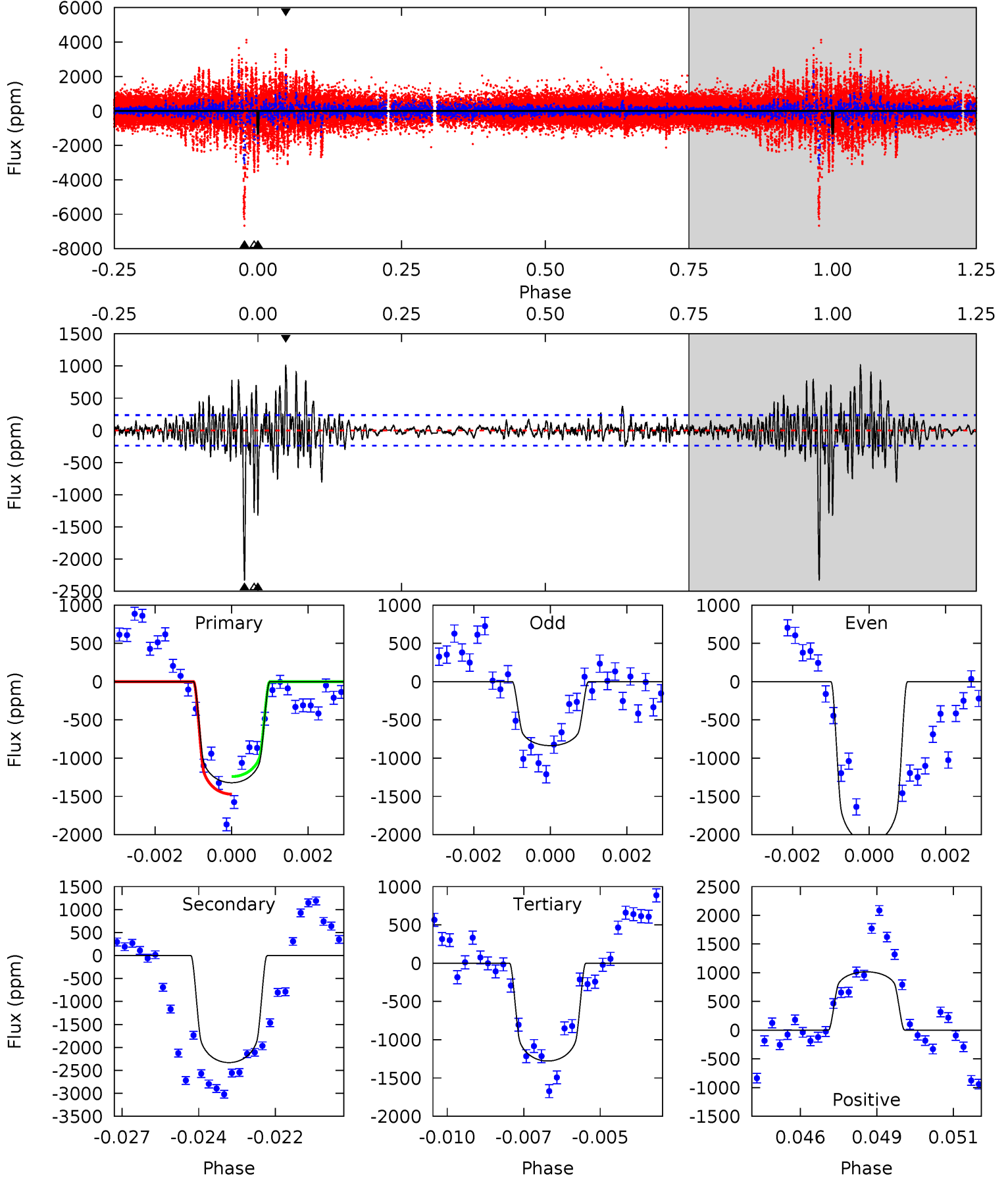
TCE 011205401-02 $P=353.139595$ Days $T_0=242.278274$ (BKJD)



DV Model-Shift Uniqueness Test

011205401-02, P = 353.123787 Days, E = 242.344836 Days

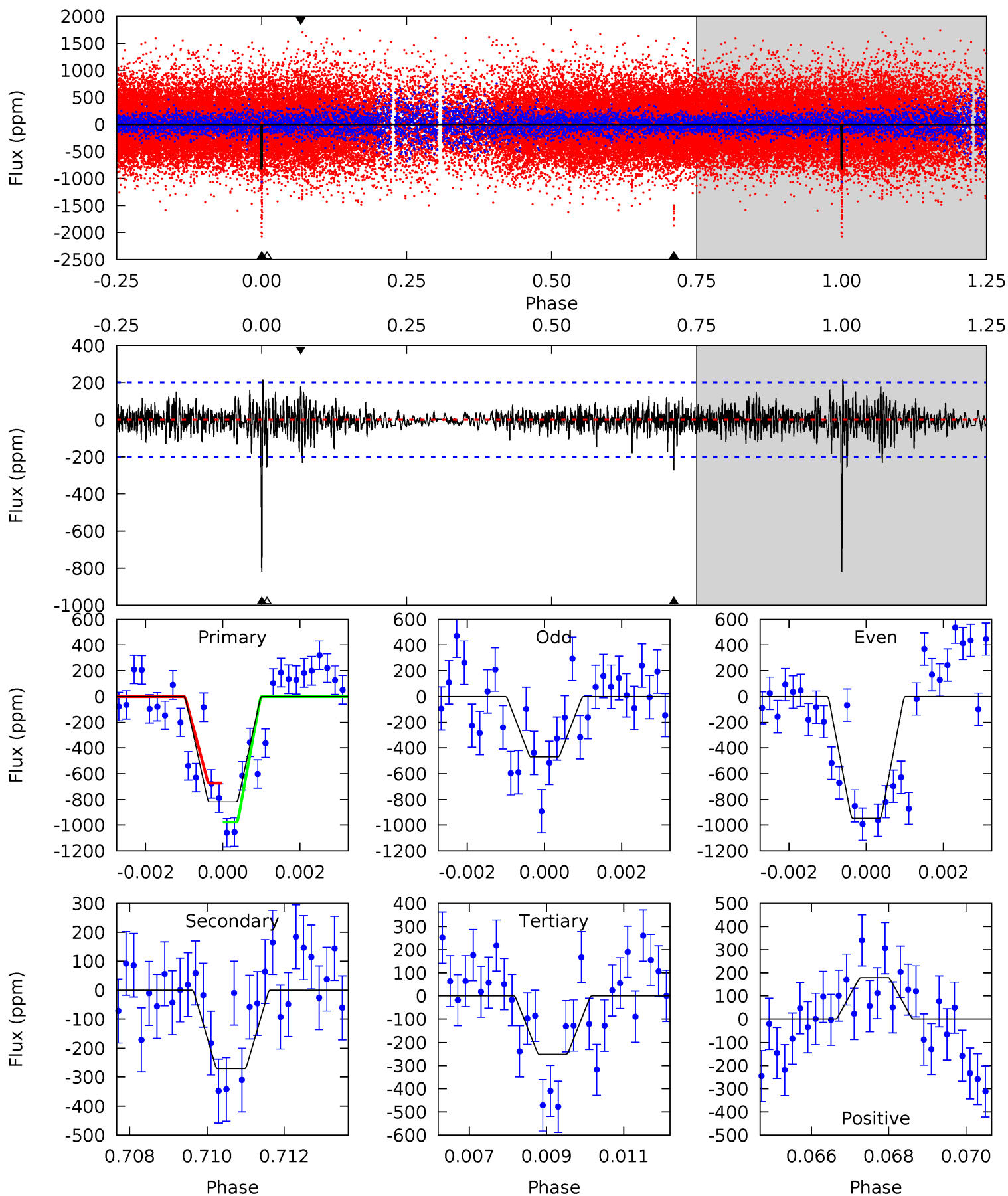
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.5	52.1	28.6	22.7	5.29	3.03	4.07	0.97	6.83	23.5	29.4	12.7	1.10	0.30	2.48



Alt Model-Shift Uniqueness Test

011205401-02, P = 353.139595 Days, E = 242.278274 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.8	7.21	6.66	4.78	5.34	3.12	1.31	15.1	17.0	0.55	2.43	6.51	0.74	0.21	3.99



Stellar Parameters For KIC 011205401

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6308^{+171}_{-209}	$4.510^{+0.052}_{-0.208}$	$-0.560^{+0.300}_{-0.300}$	$0.906^{+0.283}_{-0.088}$	$0.968^{+0.118}_{-0.118}$	$1.834^{+0.401}_{-1.011}$
	+3%/-3%	+1%/-5%	+54%/-54%	+31%/-10%	+12%/-12%	+22%/-55%
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 011205401-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2331 ± 45	$3.58^{+0.60}_{-0.39}$	383^{+27}_{-19}	7463^{+449}_{-382}	91506^{+21388}_{-21089}
Alt.	-271 ± 38	$2.85^{+0.51}_{-0.35}$	383^{+26}_{-17}	4931^{+285}_{-265}	16487^{+5942}_{-4762}

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

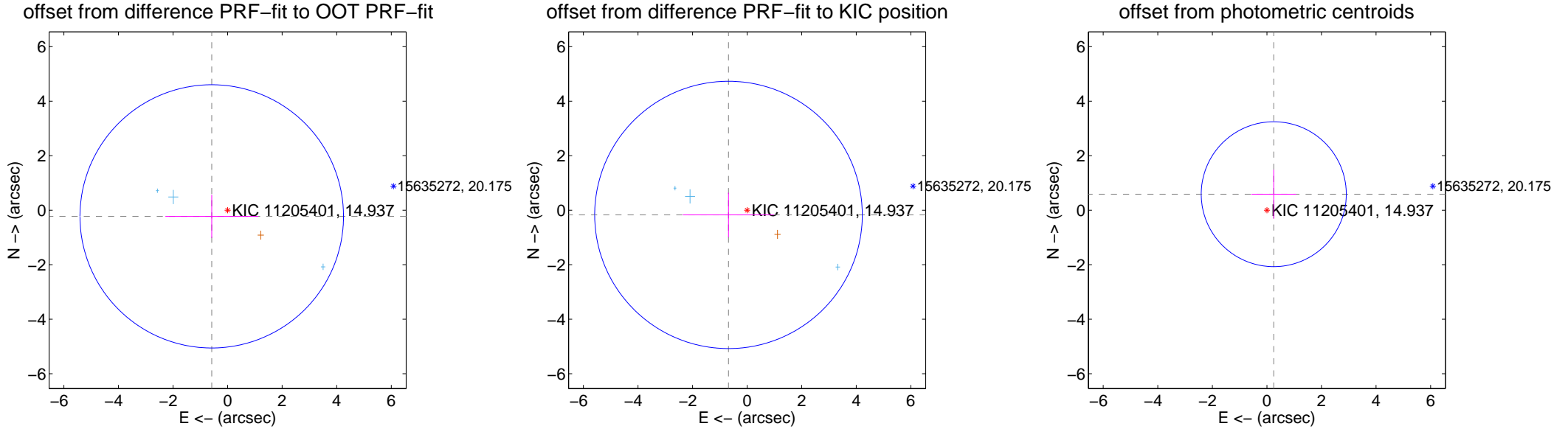
DV Centroid Data

Supplemental centroid analysis for 011205401-02. Kepler magnitude: 14.94. Transit SNR 9.60

There are 3 quarters with good PRF difference image offsets

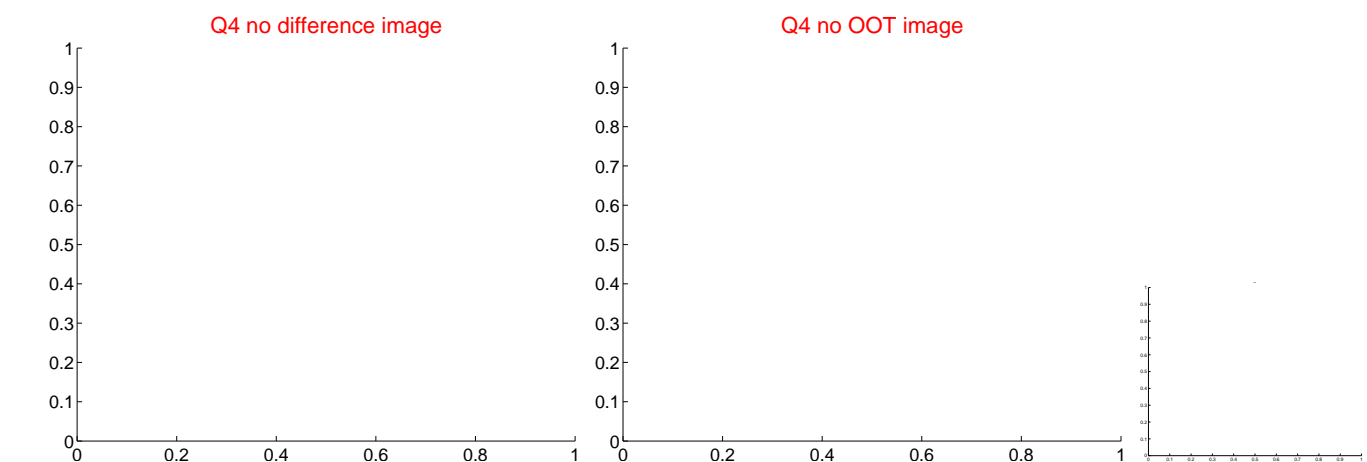
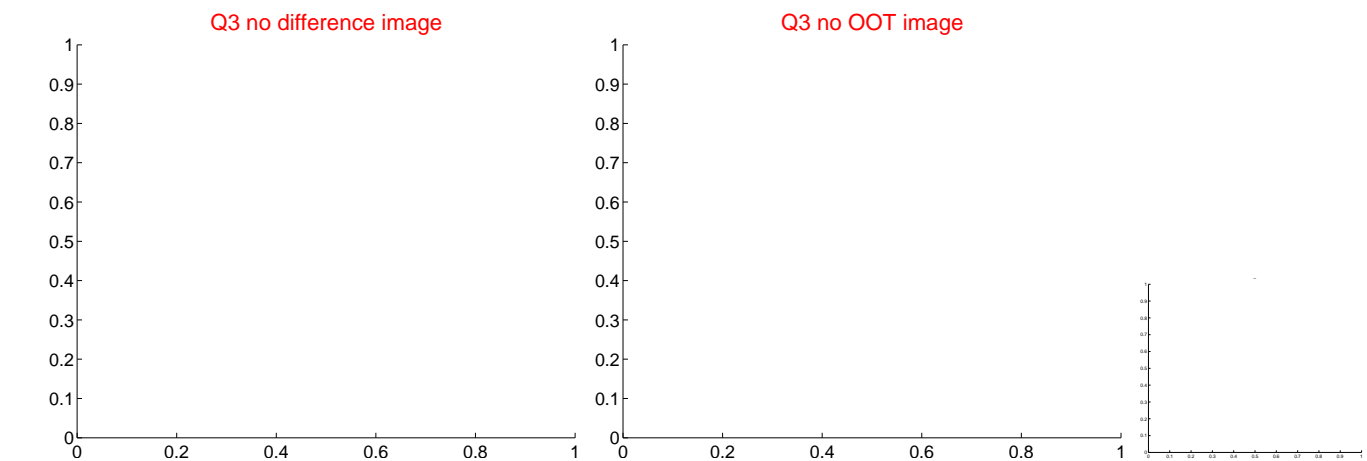
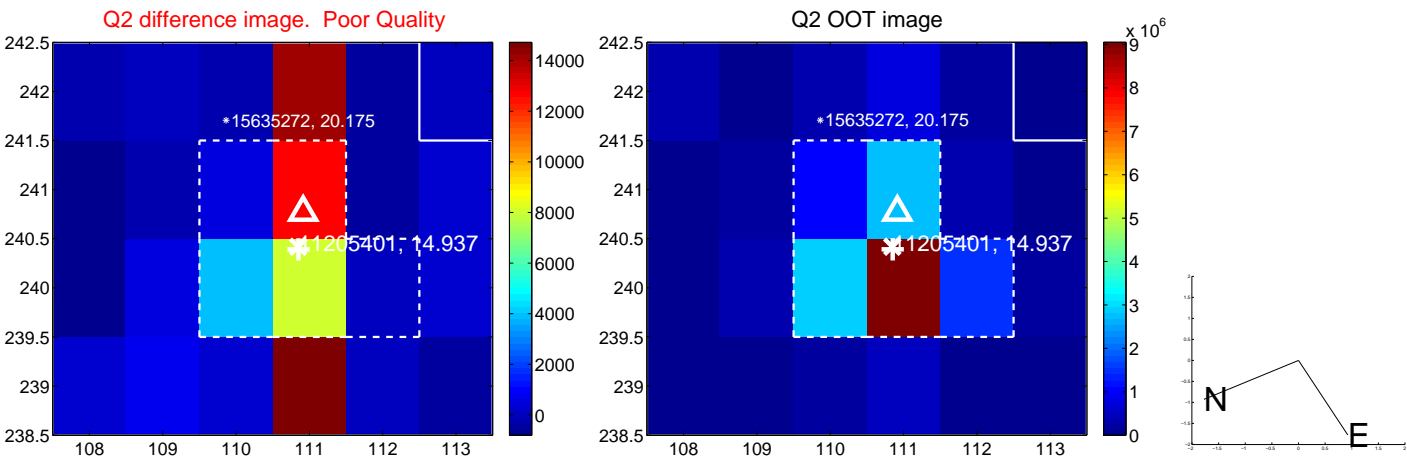
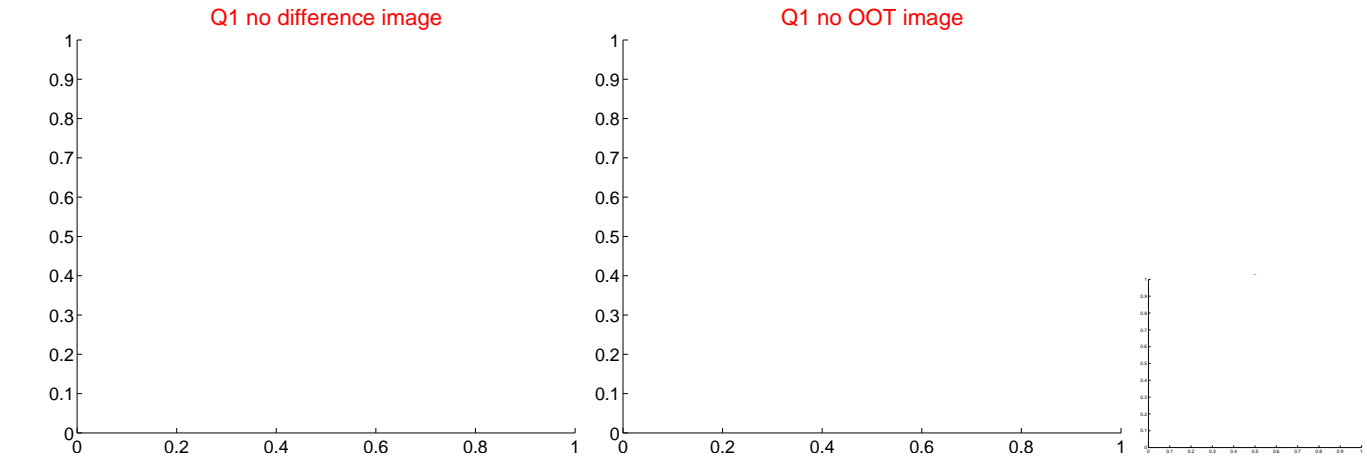
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.624 ± 1.610	0.39	0.581 ± 1.700	-0.226 ± 0.789
PRF-fit source offset from KIC position	0.704 ± 1.635	0.43	0.683 ± 1.673	-0.173 ± 0.815
photometric centroid source offset	0.64 ± 0.89	0.72	-0.25 ± 0.82	0.59 ± 0.90



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.

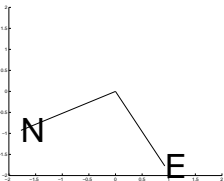
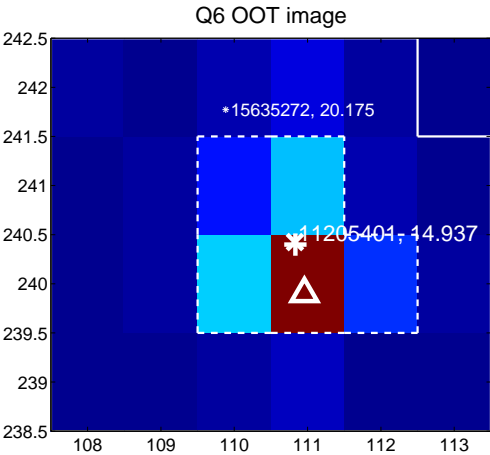
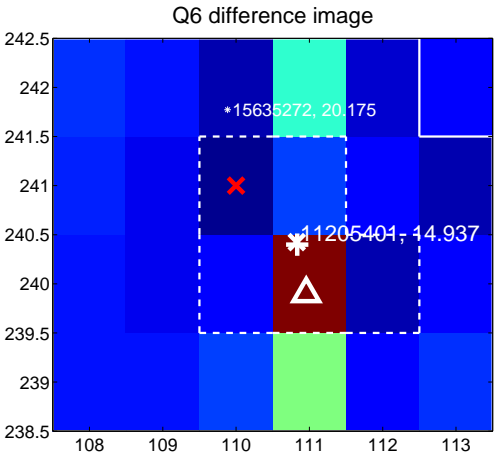


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

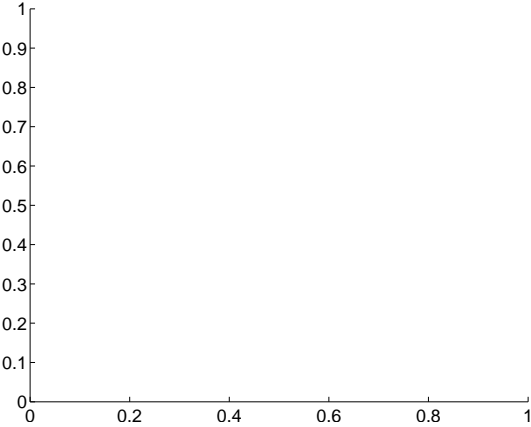
Q5 no difference image



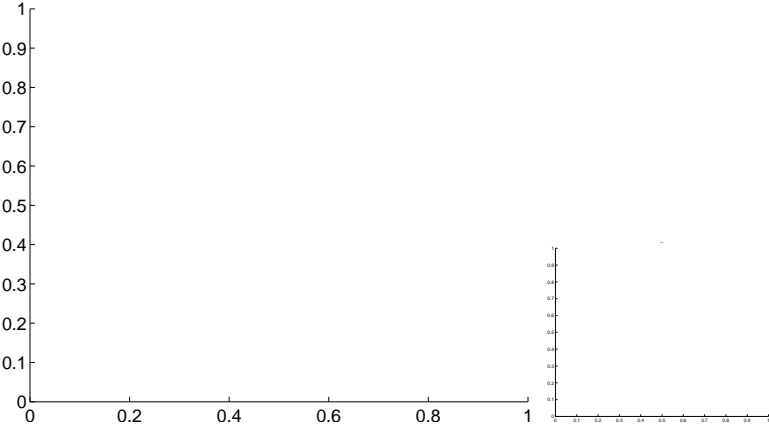
Q5 no OOT image



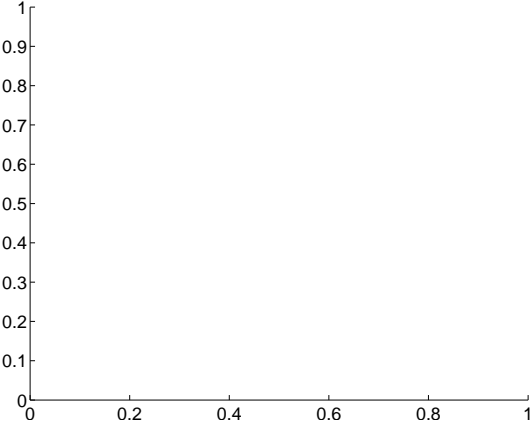
Q7 no difference image



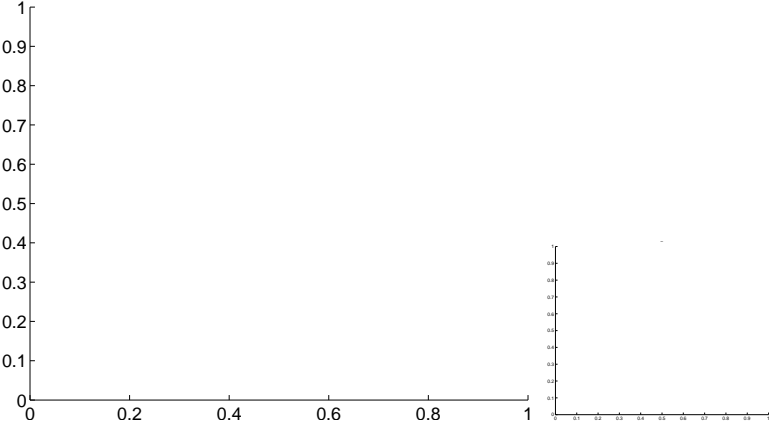
Q7 no OOT image



Q8 no difference image



Q8 no OOT image



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

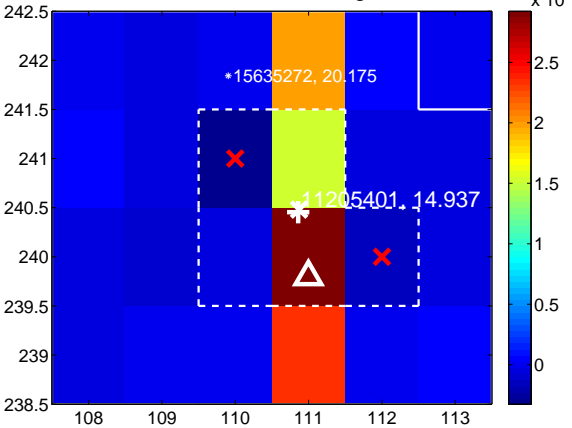
Q9 no difference image



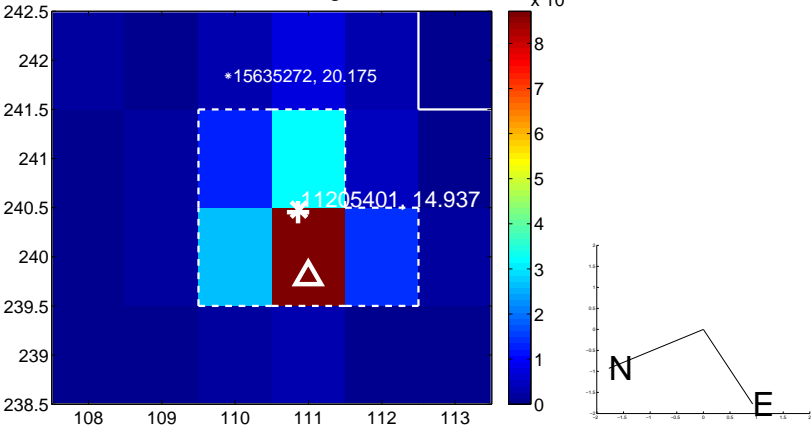
Q9 no OOT image



Q10 difference image



Q10 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.

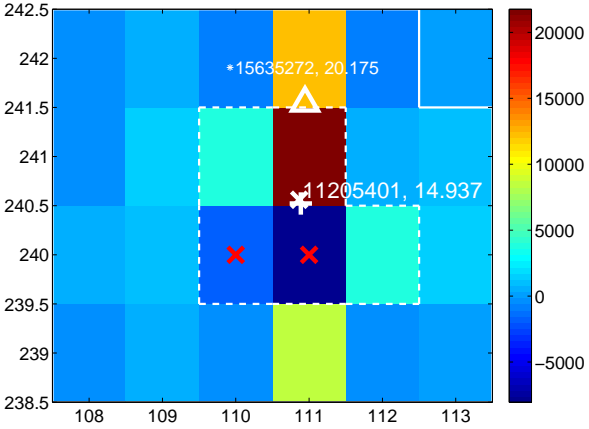
Q13 no difference image



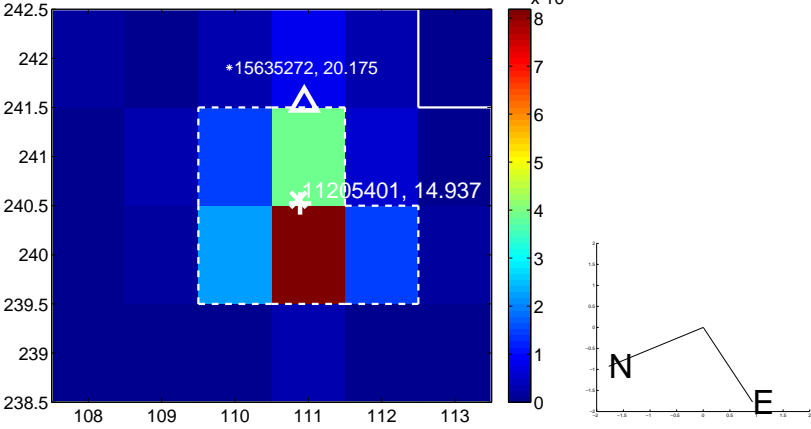
Q13 no OOT image



Q14 difference image



Q14 OOT image



Q15 no difference image



Q15 no OOT image



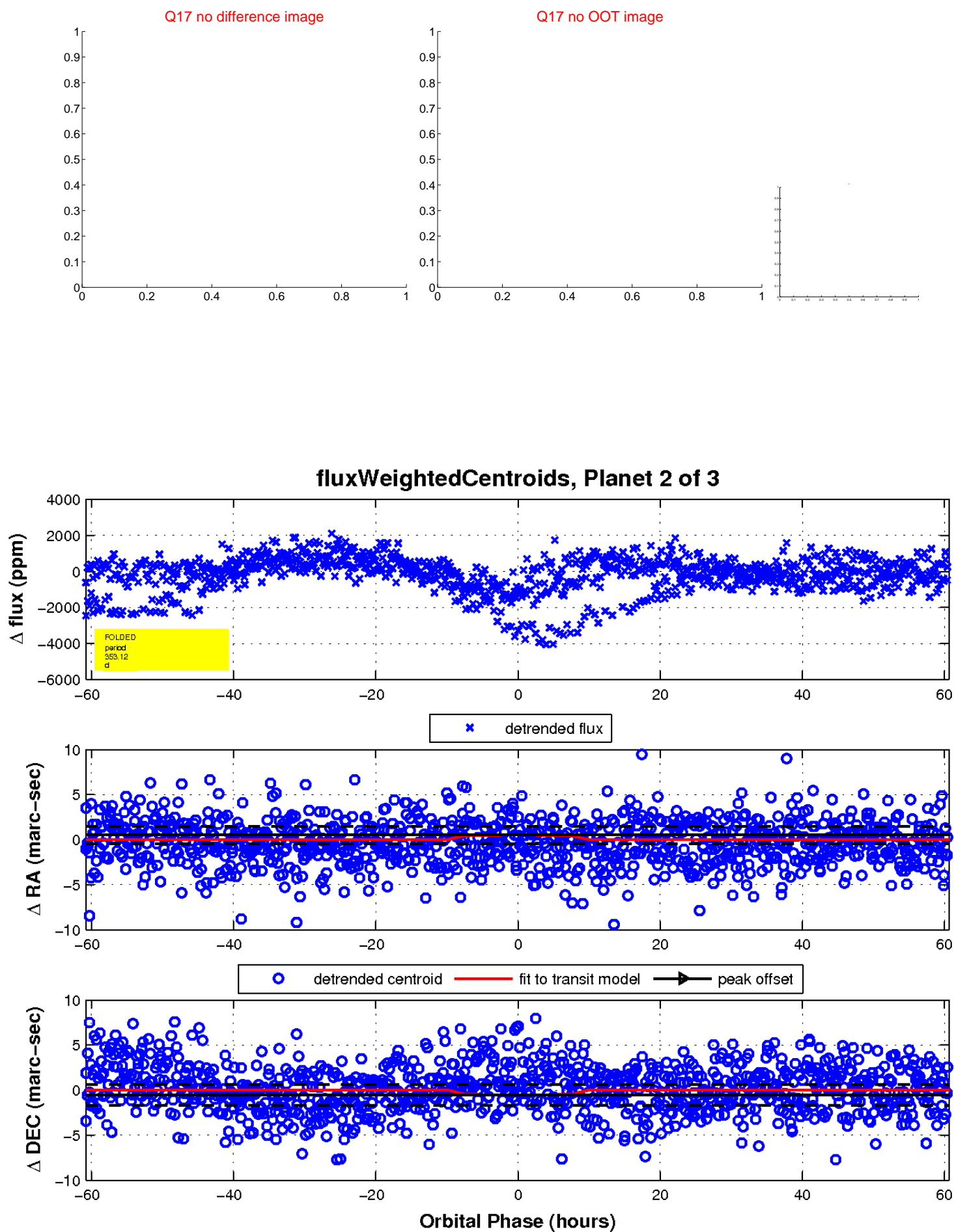
Q16 no difference image



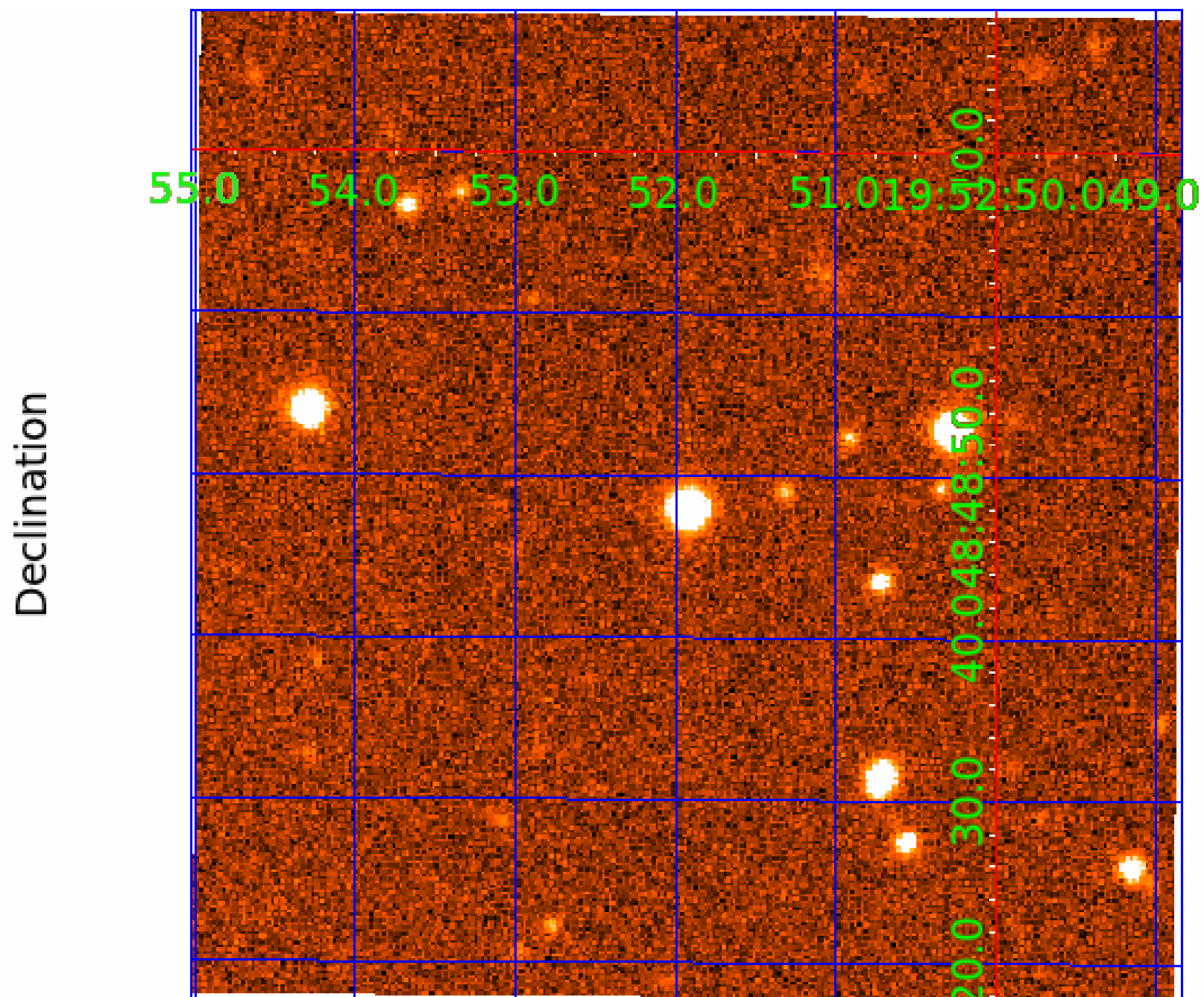
Q16 no OOT image



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



UKIRT Image



KIC 011205401

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})
011205401-01	OBS	No	343.099732	244.051374	1153.8	13.274	7.4	8.2	0.91	6308	3.11	1.29
011205401-02	OBS	No	353.123787	242.344836	1139.3	20.250	8.4	9.6	0.91	6308	3.49	1.24
011205401-03	OBS	No	415.608531	493.265168	1248.9	19.938	8.2	8.9	0.91	6308	4.42	1.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011205401-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011205401-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS
011205401-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—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.

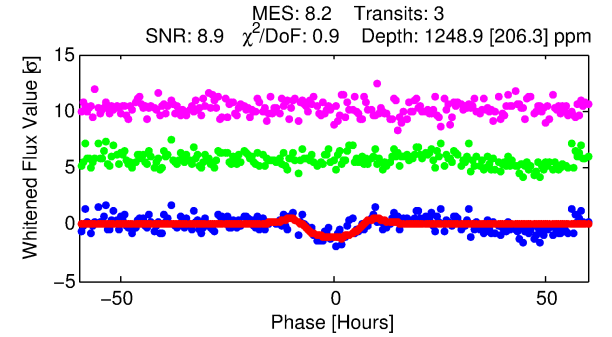
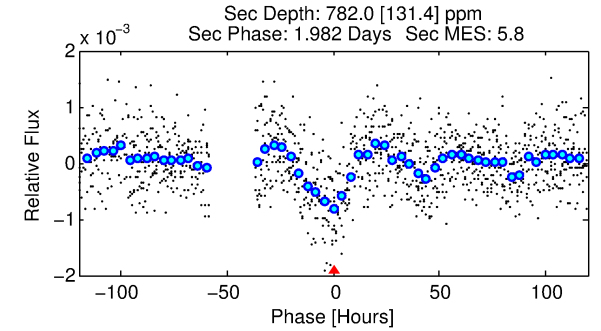
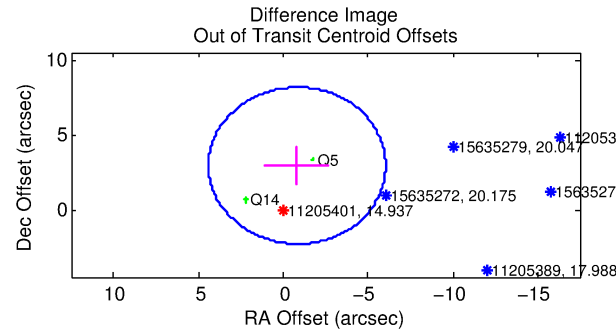
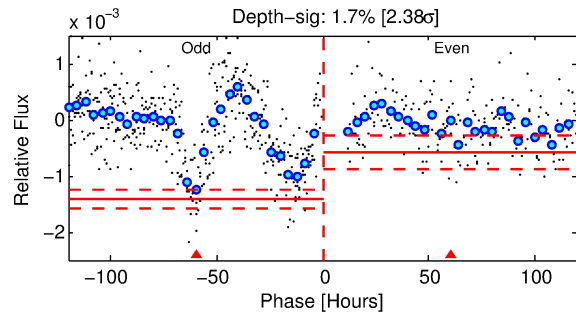
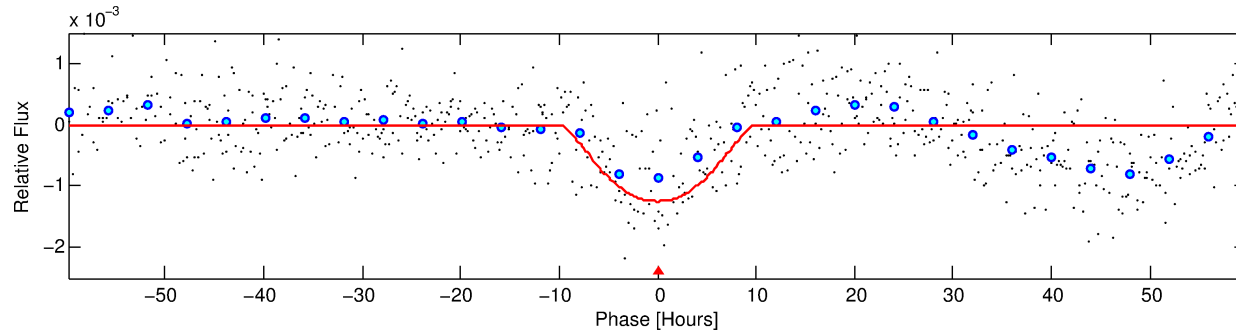
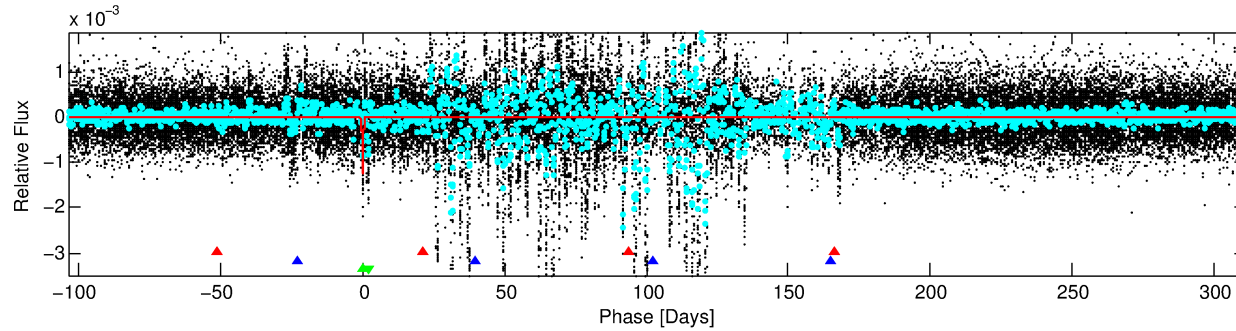
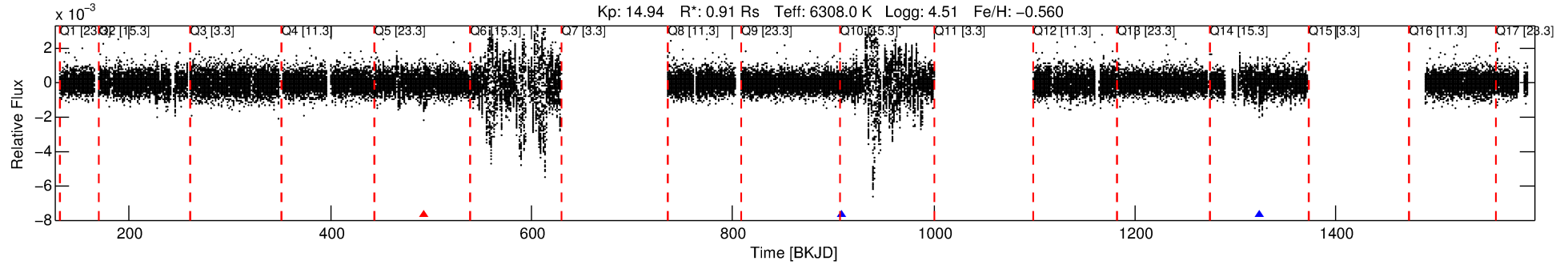
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011205401-03

No Significant Match Found

DV One-Page Summary

KIC: 11205401 Candidate: 3 of 3 Period: 415.609 d



DV Fit Results:

Period = 415.60853 [0.02146] d
Epoch = 493.2652 [0.0305] BKJD
Rp/R* = 0.0448 [0.0200]
a/R* = 61.15 [13.81]
b = 0.97 [0.04]
Seff = 1.00 [0.40]
Teq = 255 [26] K
Rp = 4.42 [2.41] Re
a = 1.0787 [0.2830] AU
Ag = 25569.31 [25167.37] [1.02 σ]
Teffp = 4986 [1143] K [4.14 σ]

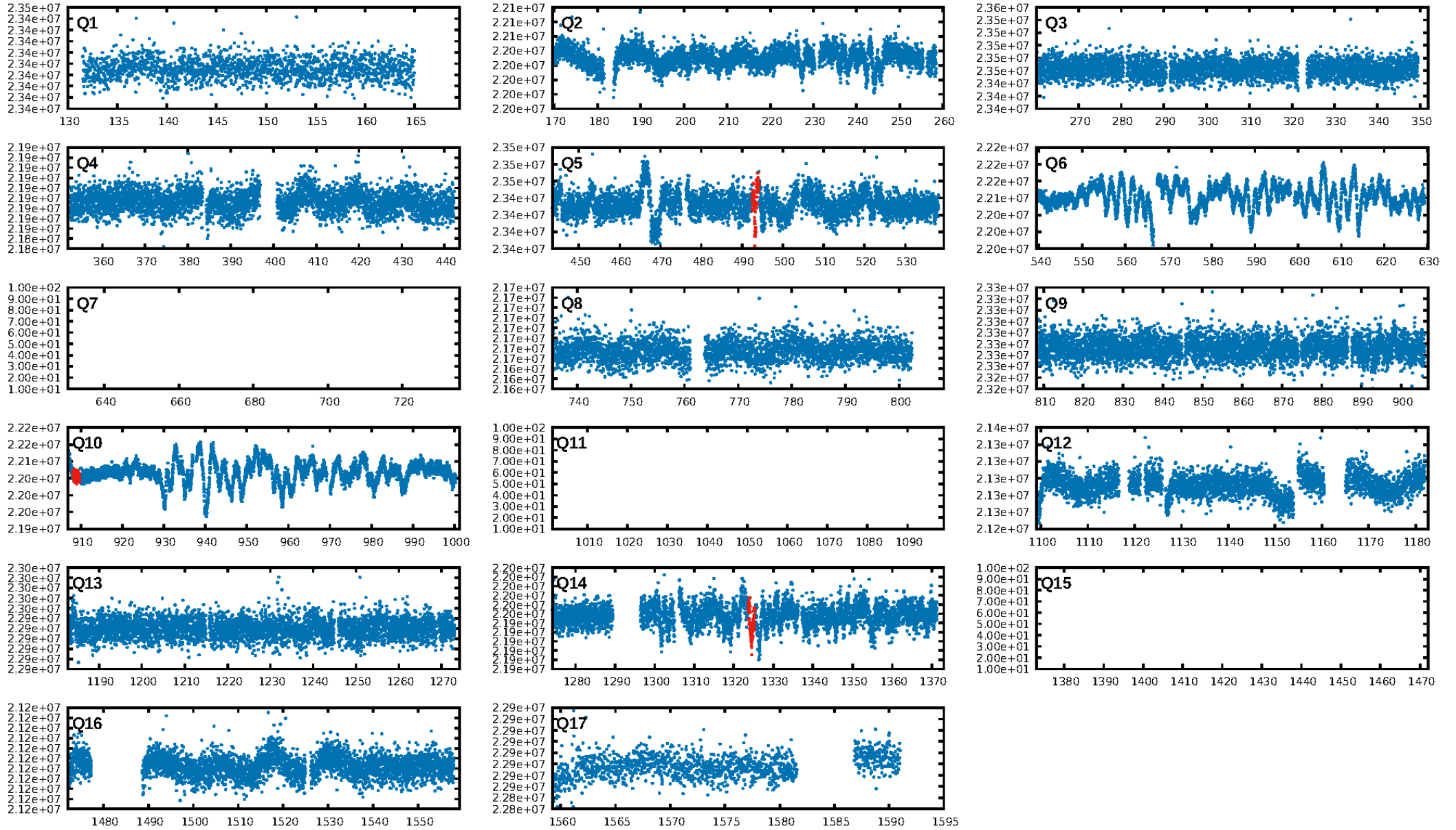
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [52.77 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 9.6%
ModelChiSquareGof-sig: 99.6%
Bootstrap-pfa: 1.58e-09
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 1.121
Centroid-sig: 0.0%
Centroid-so: 2.616 arcsec [2.61 σ]
OotOffset-rm: 3.048 arcsec [1.75 σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-rm: 3.041 arcsec [2.52 σ]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

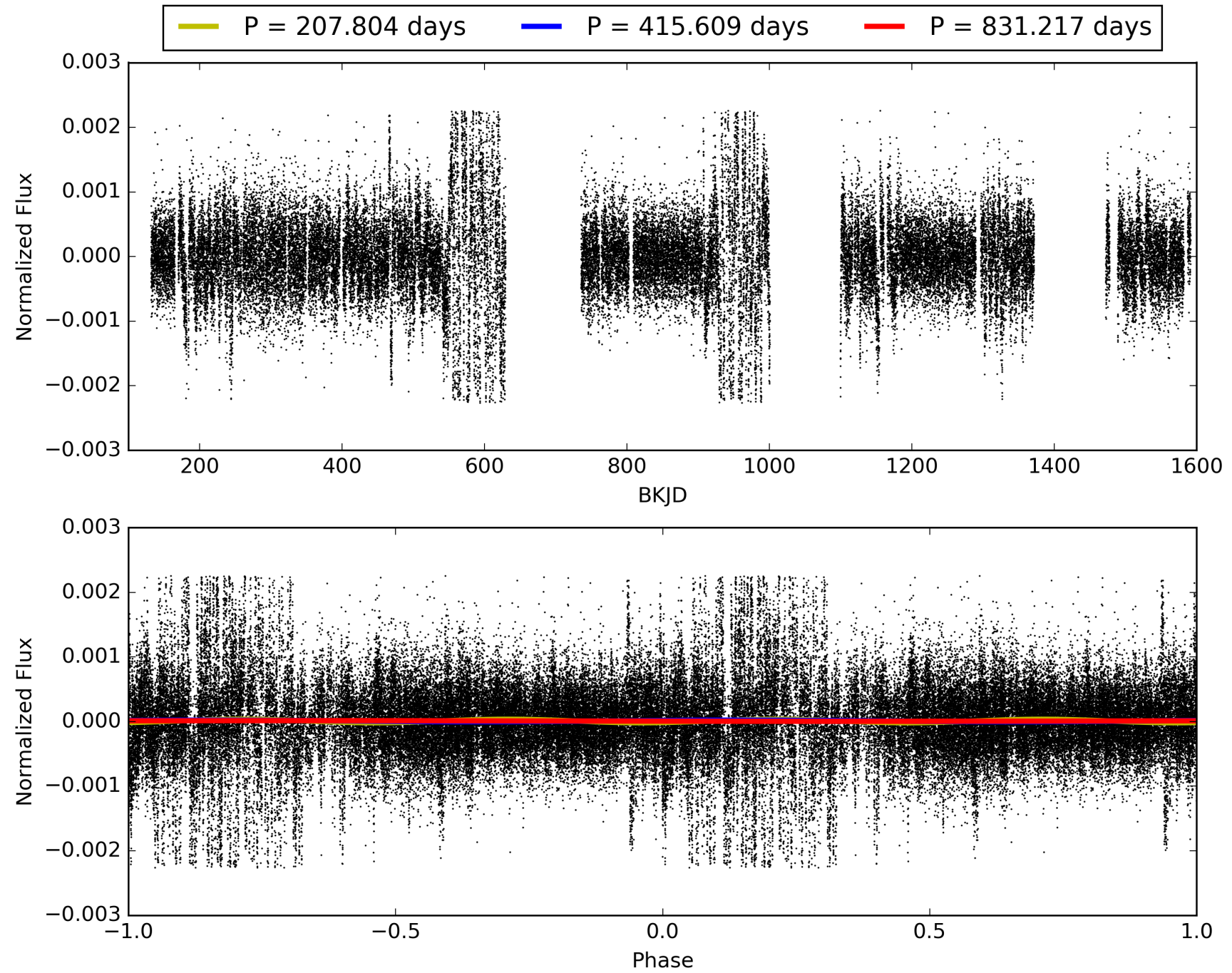
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:54:21 Z

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

TCE 011205401-03, PDC Light Curves

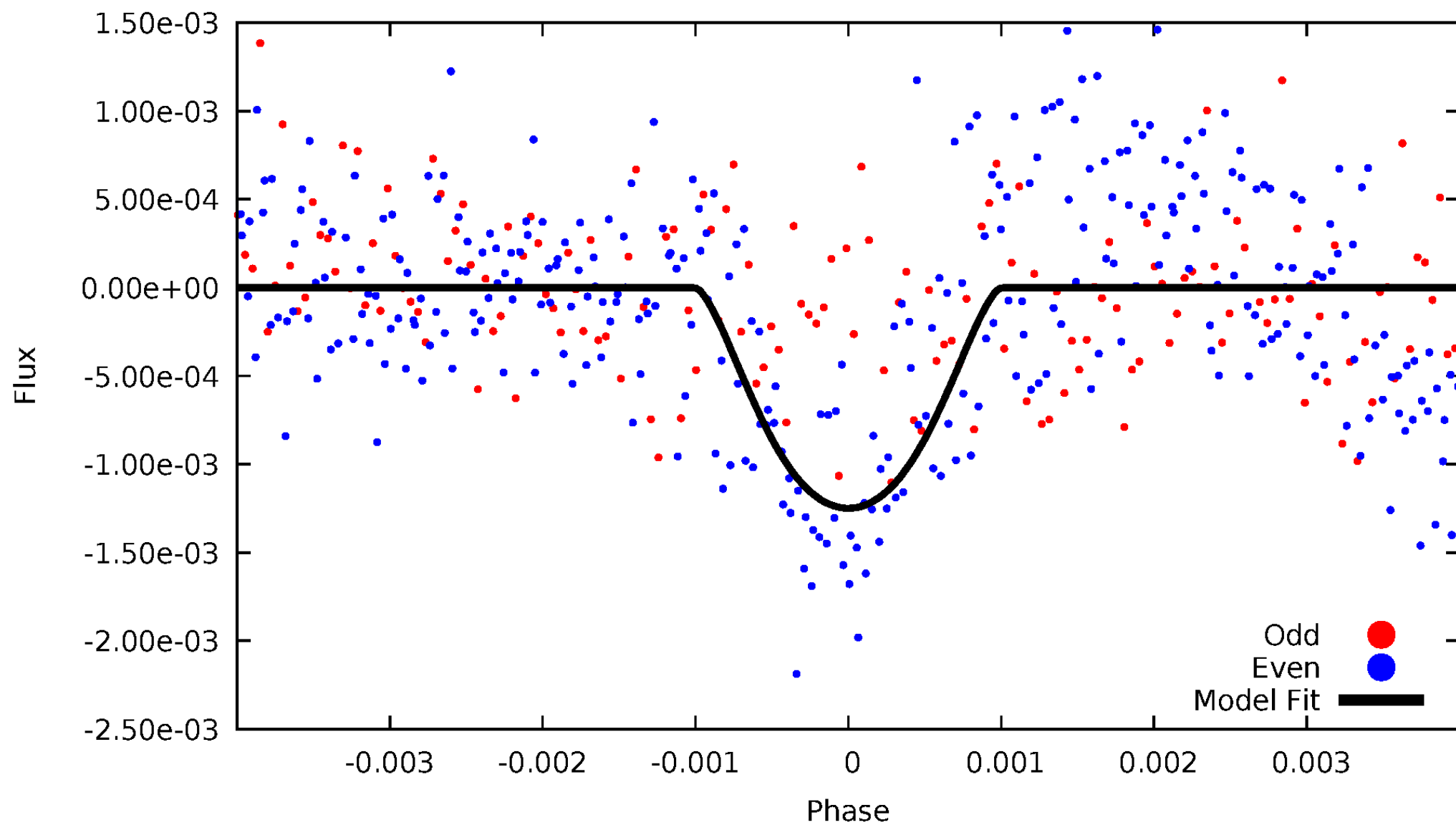


TCE 011205401-03



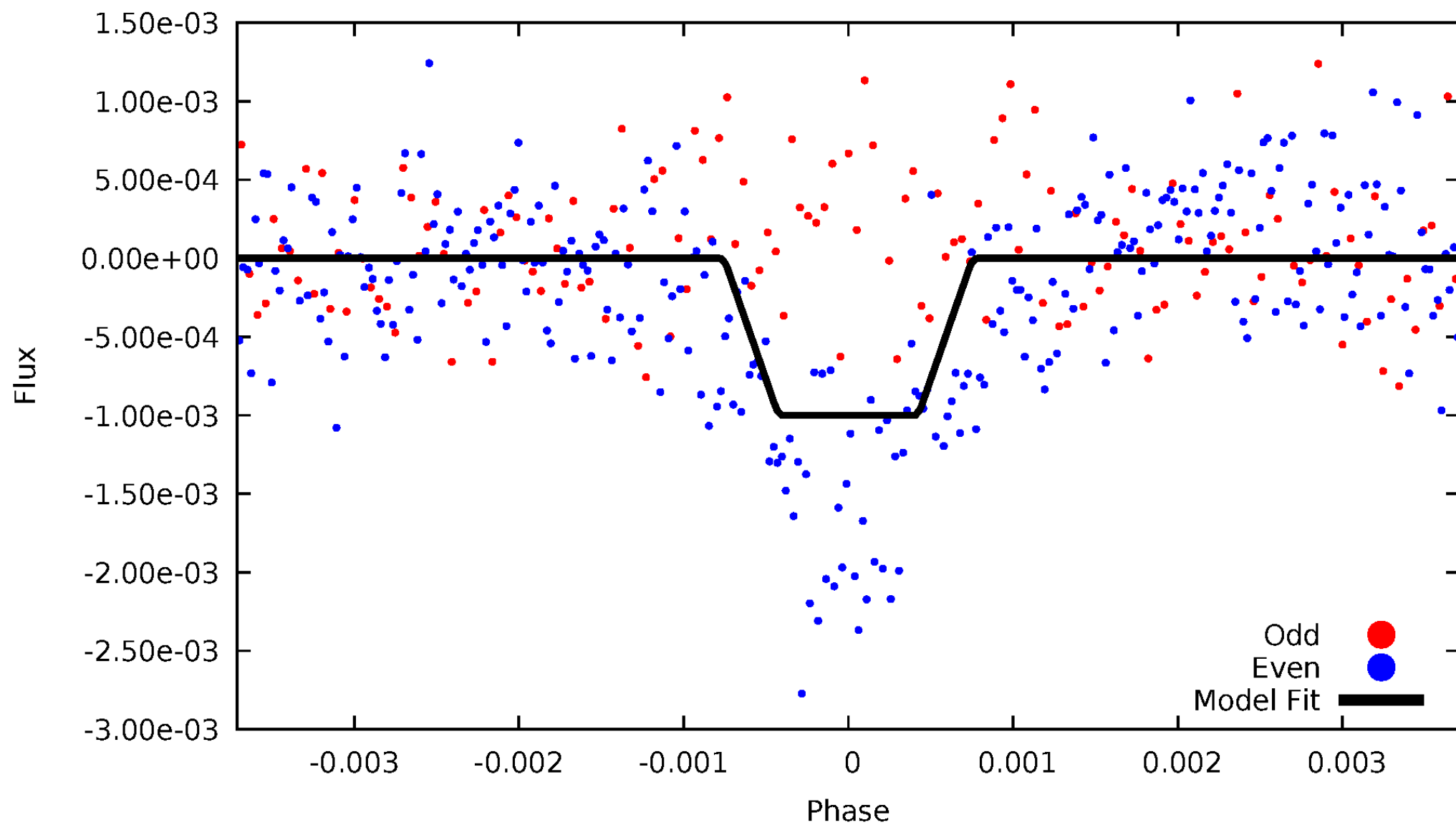
DV Odd/Even

TCE 011205401-03



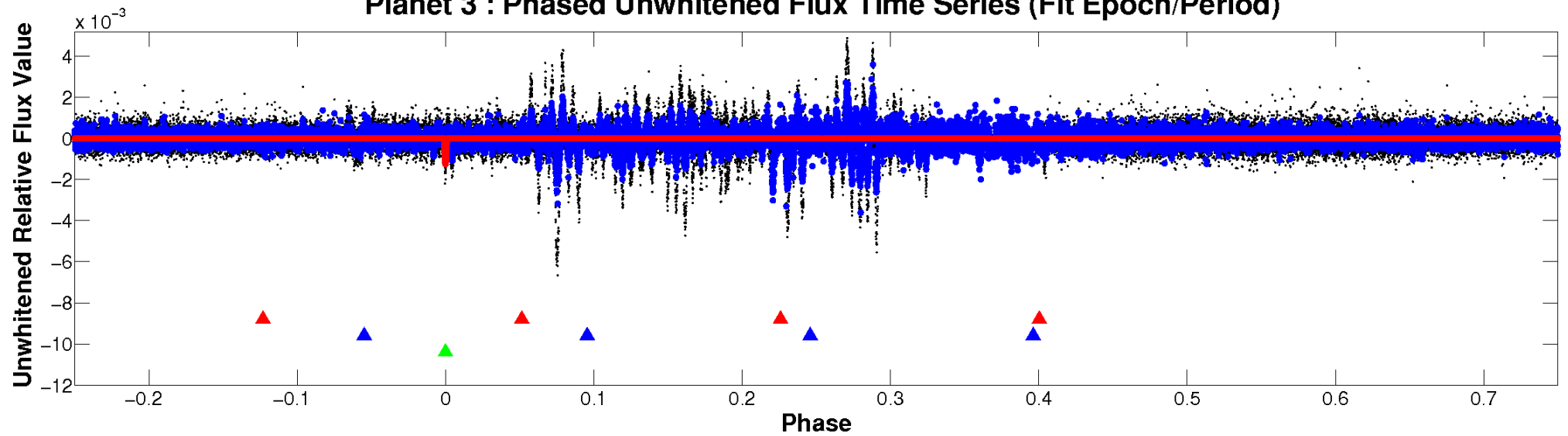
ALT Odd/Even

TCE 011205401-03

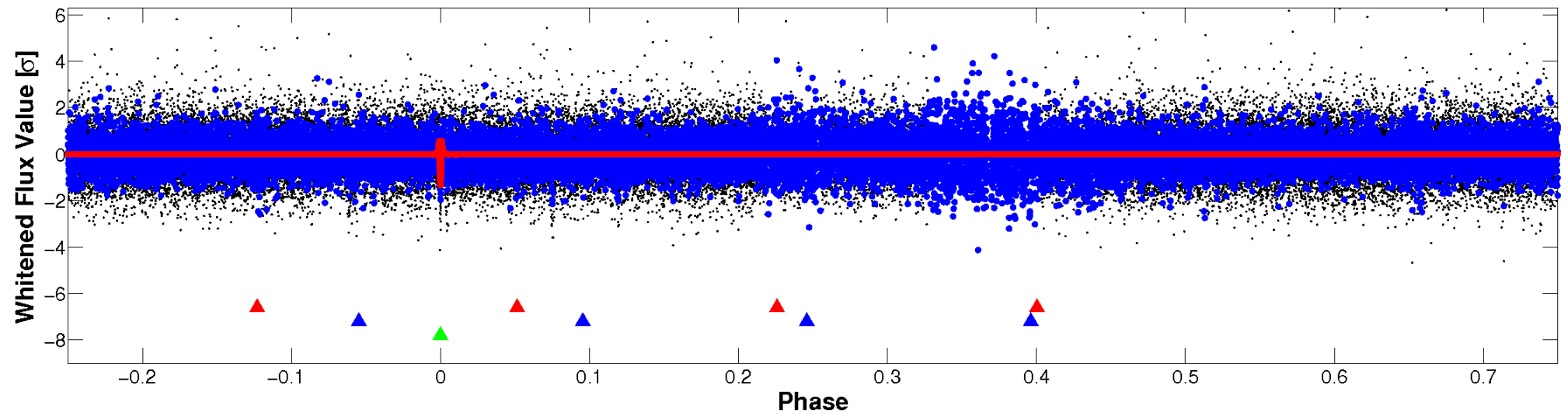


Non-Whitened Vs. Whitened Light Curve

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



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



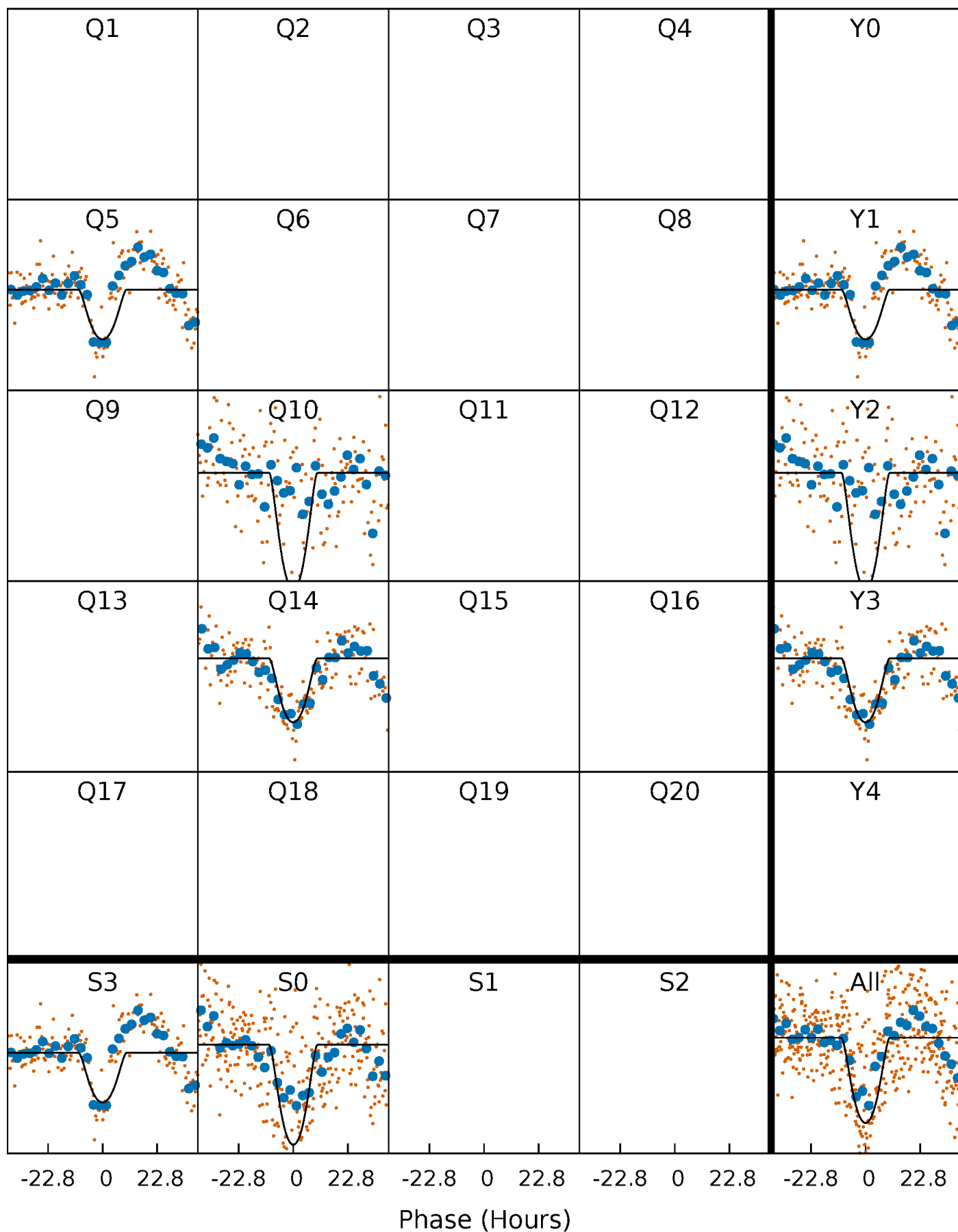
PDC Quarter-Phased Transit Curves

TCE 011205401-03 $P=415.608531$ Days $T_0=493.265168$ (BKJD)



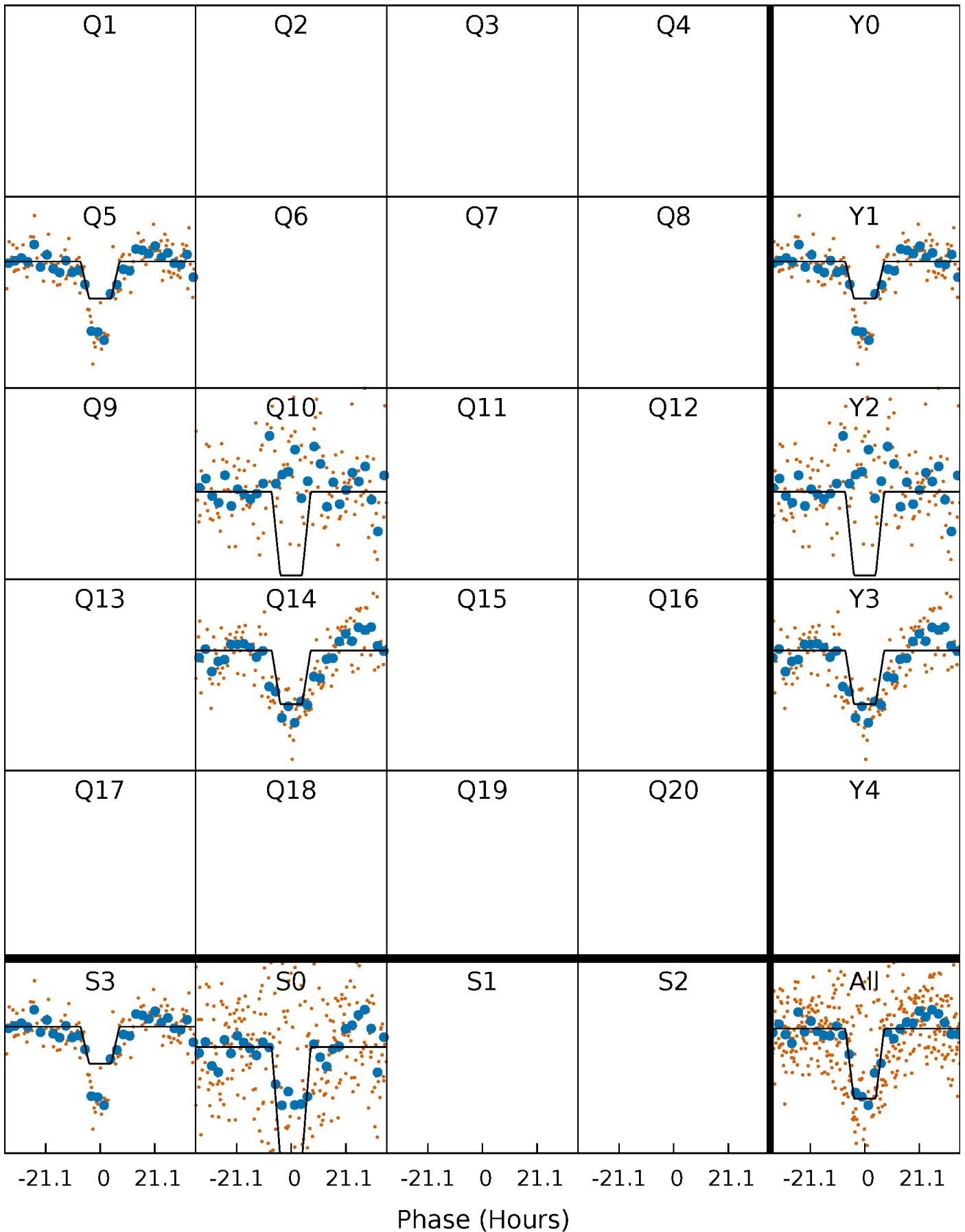
DV Quarter-Phased Transit Curves

TCE 011205401-03 $P=415.608531$ Days $T_0=493.265168$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

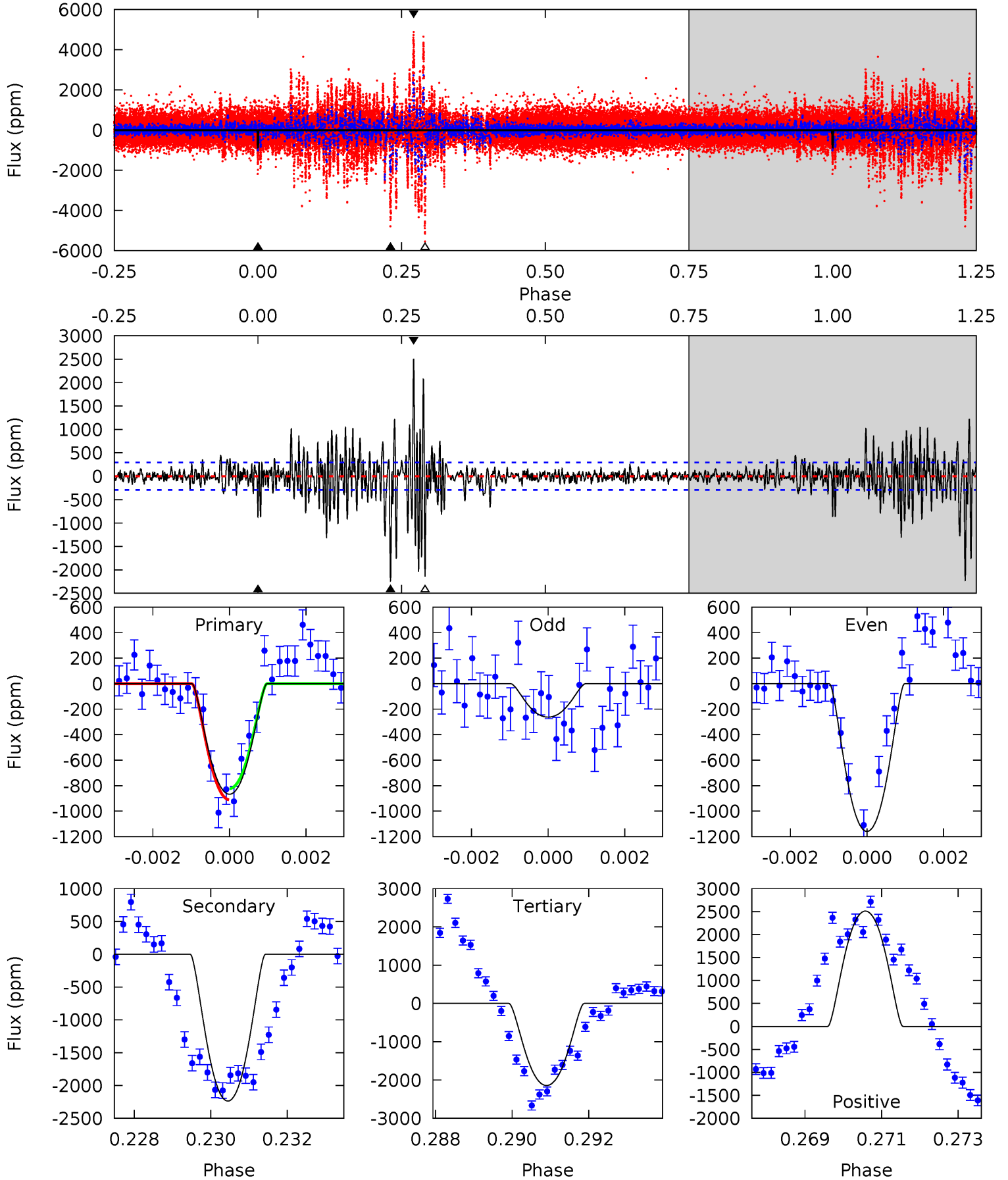
TCE 011205401-03 $P=415.625422$ Days $T_0=493.242197$ (BKJD)



DV Model-Shift Uniqueness Test

011205401-03, P = 415.608531 Days, E = 77.656637 Days

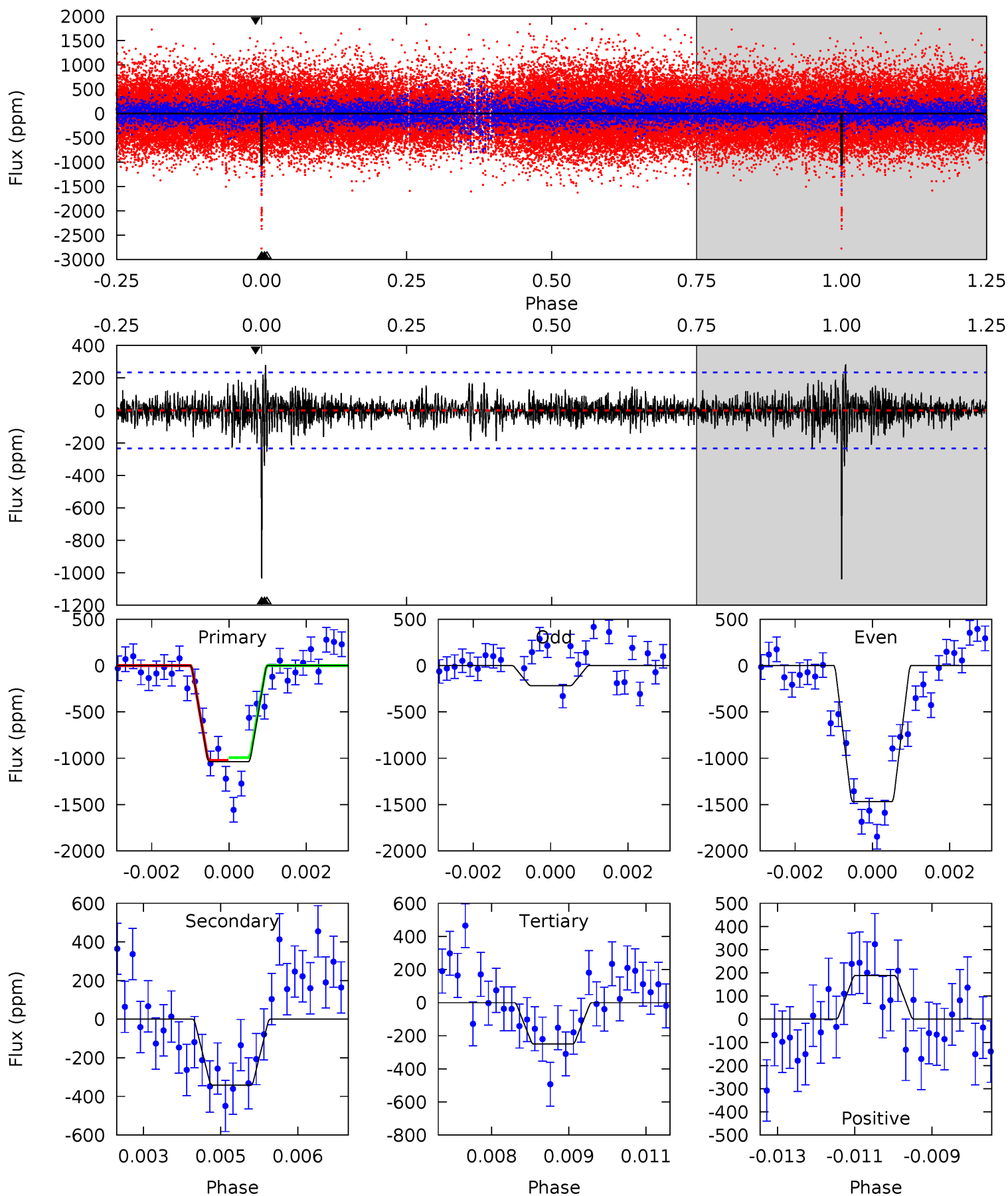
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	40.7	39.0	45.7	5.32	3.08	5.52	-23.2	-29.9	1.72	-4.99	7.51	0.86	0.53	0.76



Alt Model-Shift Uniqueness Test

011205401-03, $P = 415.625422$ Days, $E = 77.616775$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.8	7.83	5.74	4.34	5.37	3.16	1.21	18.1	19.5	2.09	3.50	13.8	0.75	0.21	0.33



Stellar Parameters For KIC 011205401

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6308^{+171}_{-209}	$4.510^{+0.052}_{-0.208}$	$-0.560^{+0.300}_{-0.300}$	$0.906^{+0.283}_{-0.088}$	$0.968^{+0.118}_{-0.118}$	$1.834^{+0.401}_{-1.011}$
	+3%/-3%	+1%/-5%	+54%/-54%	+31%/-10%	+12%/-12%	+22%/-55%
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 011205401-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2237 ± 55	$4.72^{+1.95}_{-2.05}$	364^{+26}_{-18}	6497^{+2592}_{-1091}	$64879^{+135515}_{-33279}$
Alt.	-341 ± 44	$3.55^{+1.94}_{-2.00}$	364^{+25}_{-16}	4778^{+2146}_{-727}	17105^{+71044}_{-10160}

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 $A_{obs} \gg 1.0$

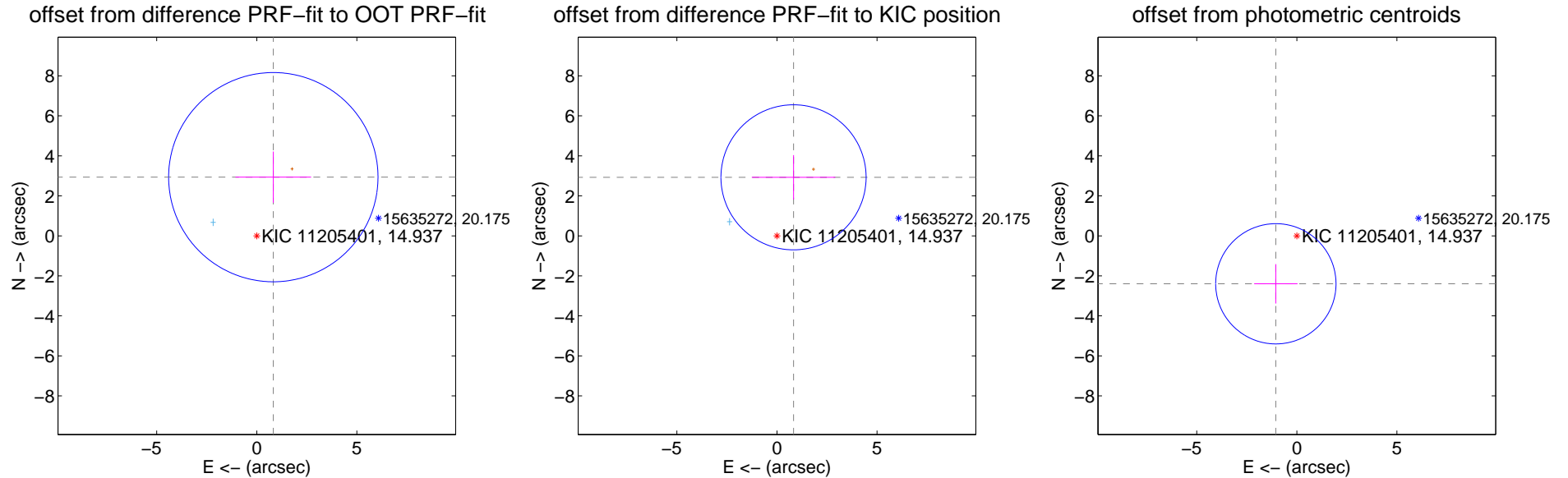
DV Centroid Data

Supplemental centroid analysis for 011205401-03. Kepler magnitude: 14.94. Transit SNR 8.90

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.048 ± 1.743	1.75	-0.826 ± 1.888	2.934 ± 1.280
PRF-fit source offset from KIC position	3.041 ± 1.208	2.52	-0.828 ± 2.087	2.926 ± 1.109
photometric centroid source offset	2.62 ± 1.00	2.61	1.05 ± 1.08	-2.40 ± 0.99

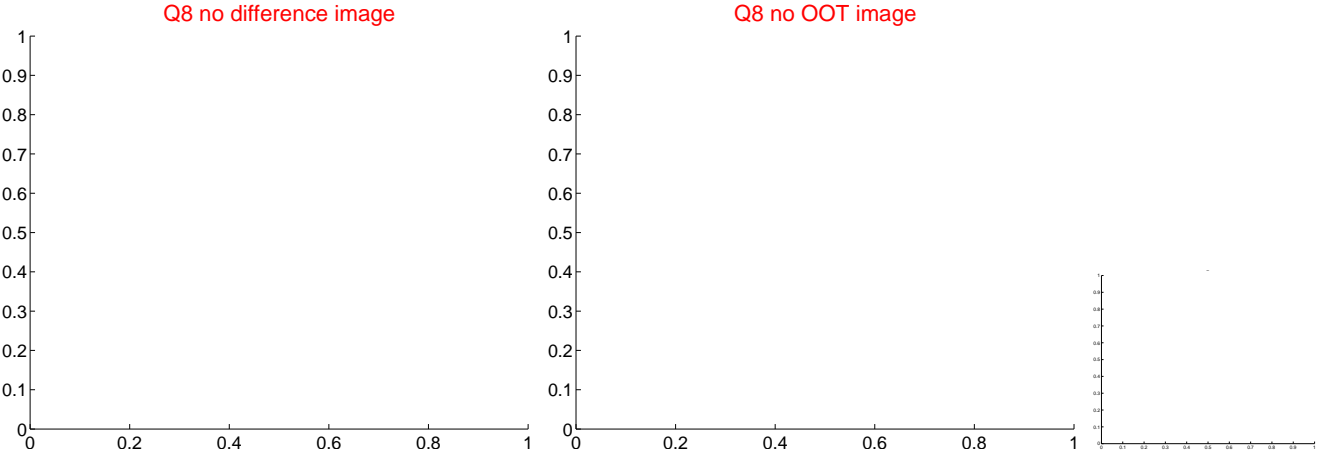
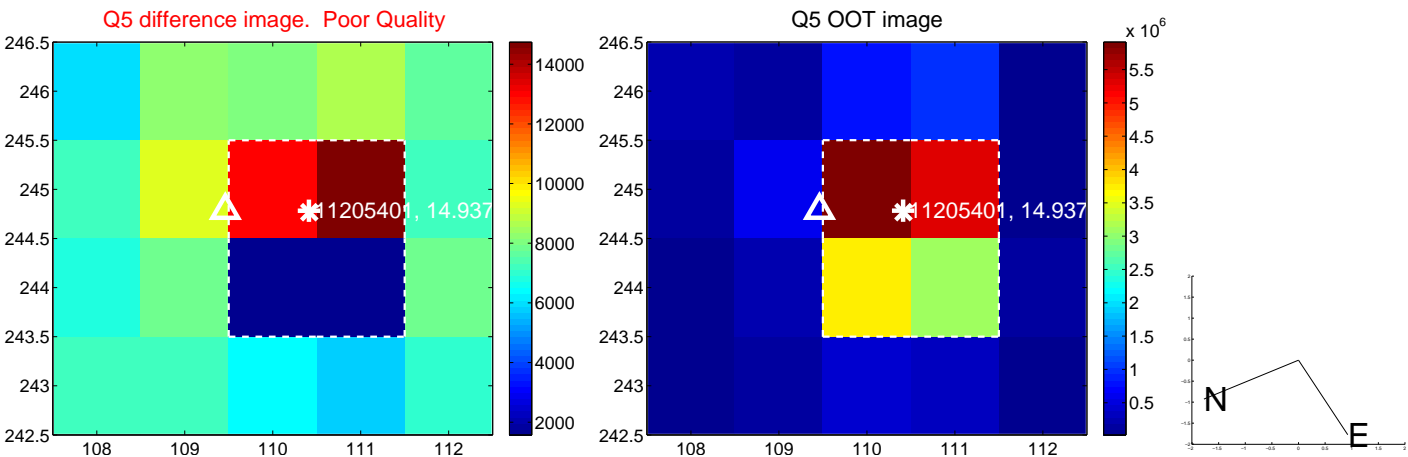


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

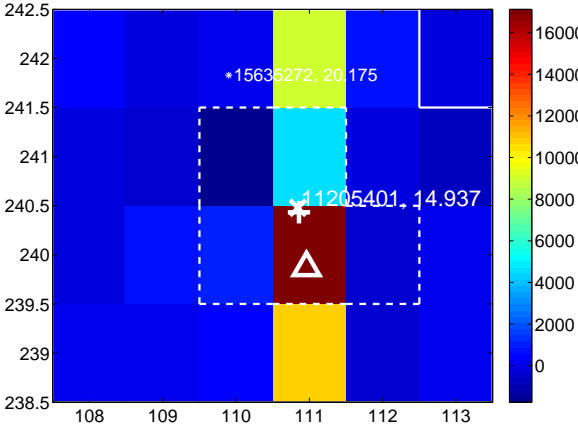
Q13 no difference image



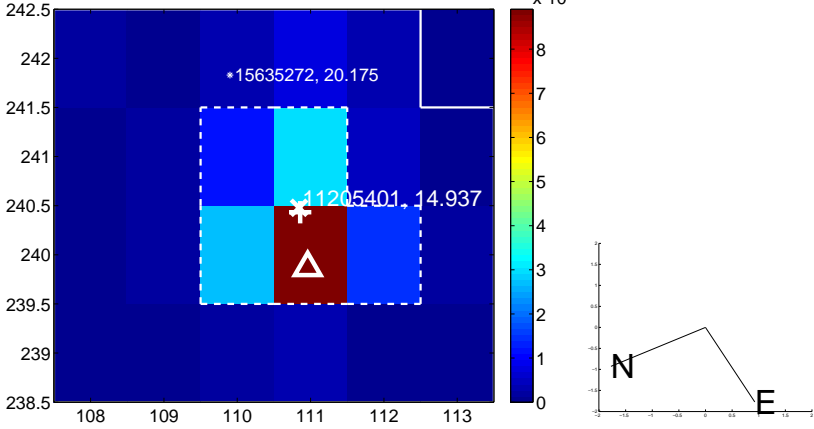
Q13 no OOT image



Q14 difference image



Q14 OOT image



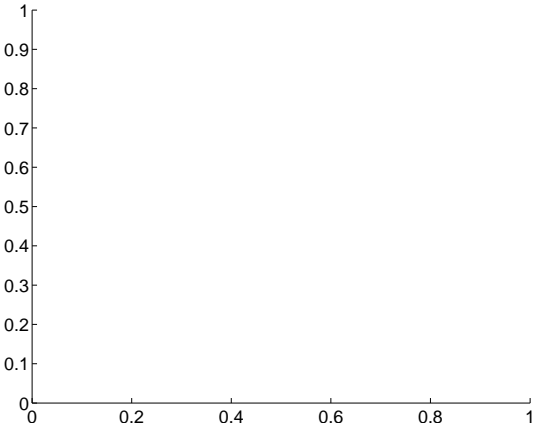
Q15 no difference image



Q15 no OOT image



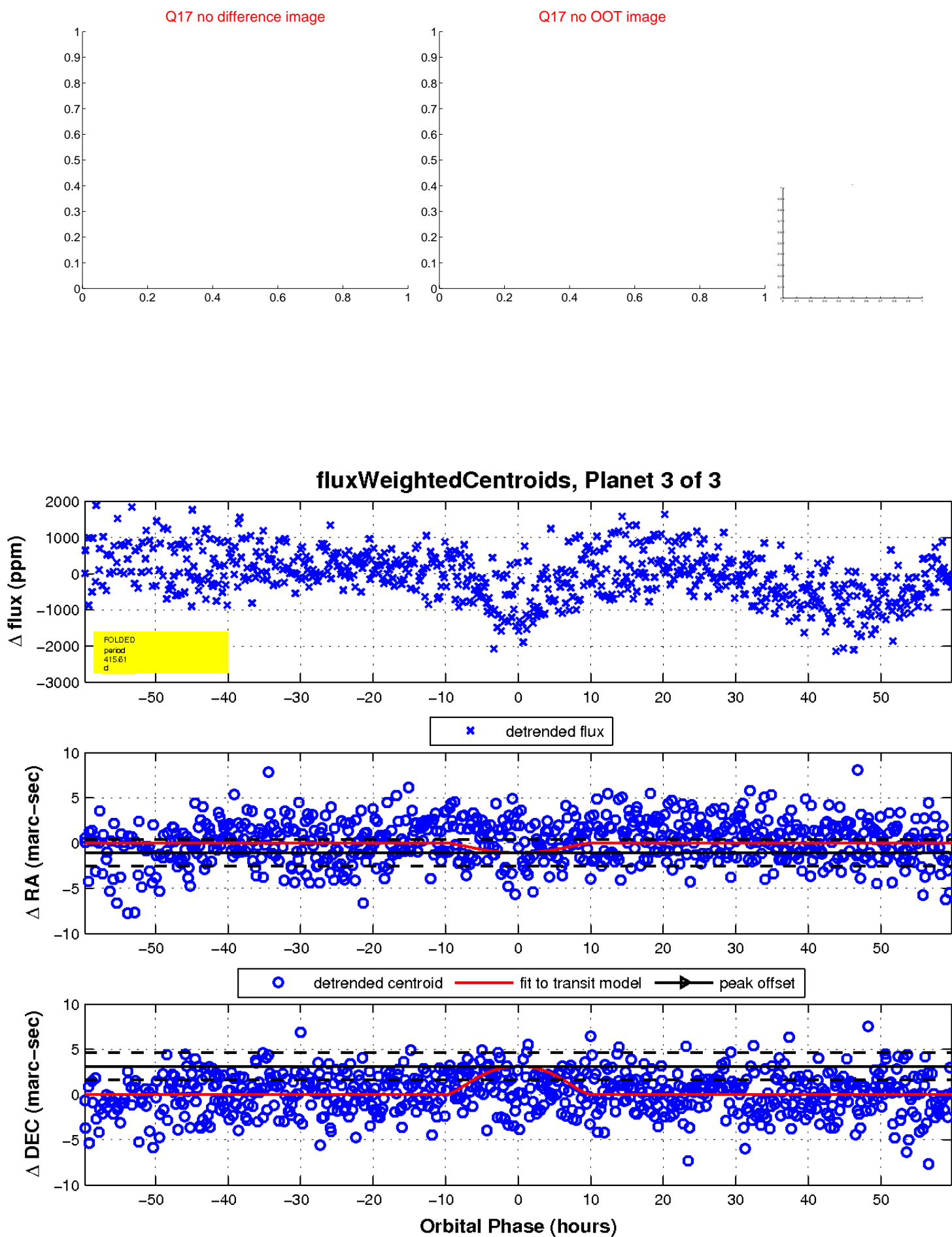
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

