

KIC 012350399

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})
012350399-01	OBS	No	393.831085	204.672952	4917.1	11.136	43.0	5.2	2.59	7449	19.80	11.38
012350399-02	OBS	No	191.769781	149.577800	7651.2	4.375	24.3	10.3	2.59	7449	40.29	29.70
012350399-03	OBS	No	353.124077	368.370010	1945.2	3.500	26.5	-1.0	2.59	7449	11.50	13.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012350399-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
012350399-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—HALO_GHOST
012350399-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

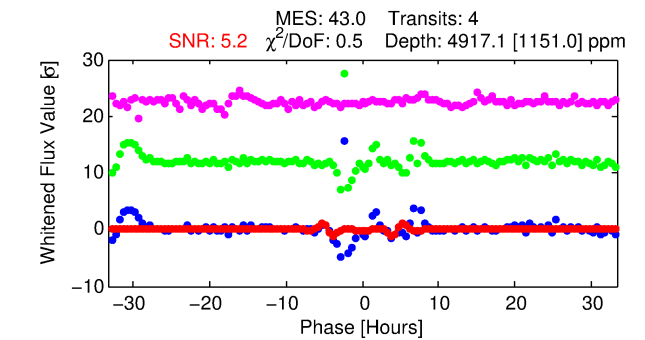
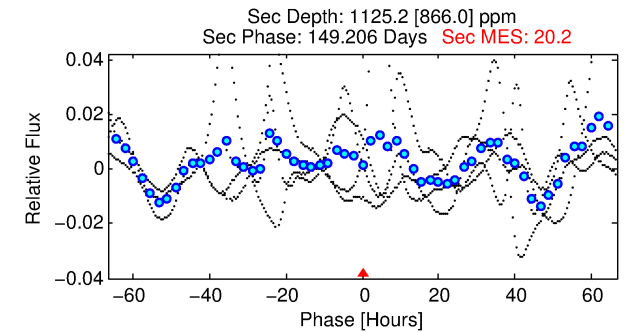
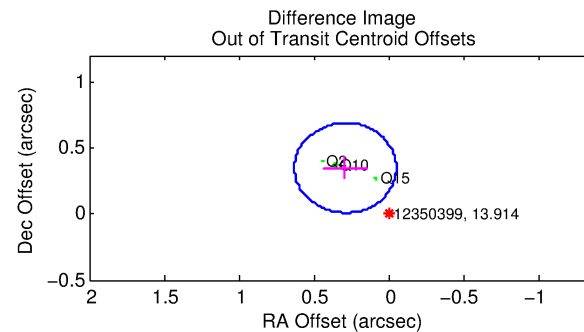
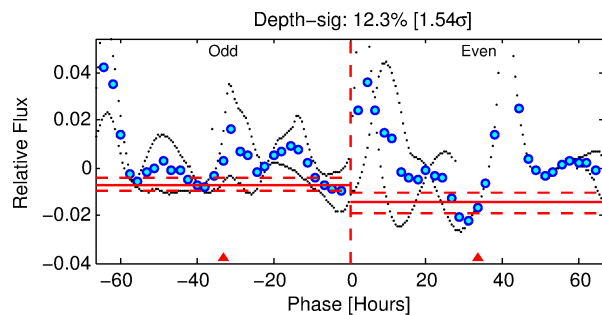
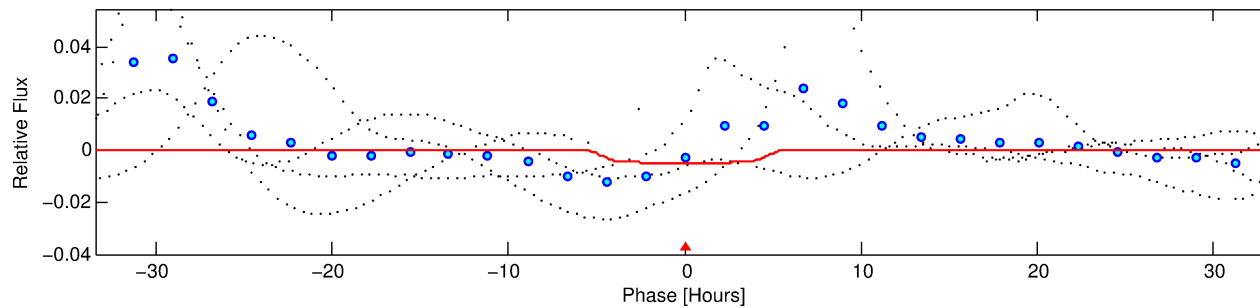
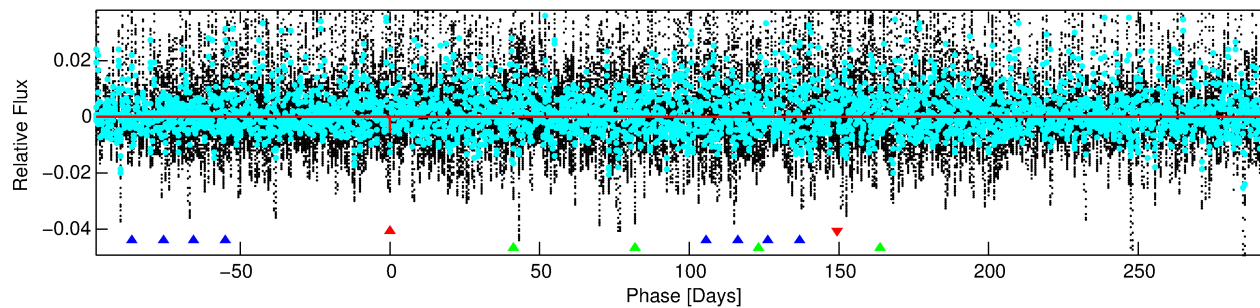
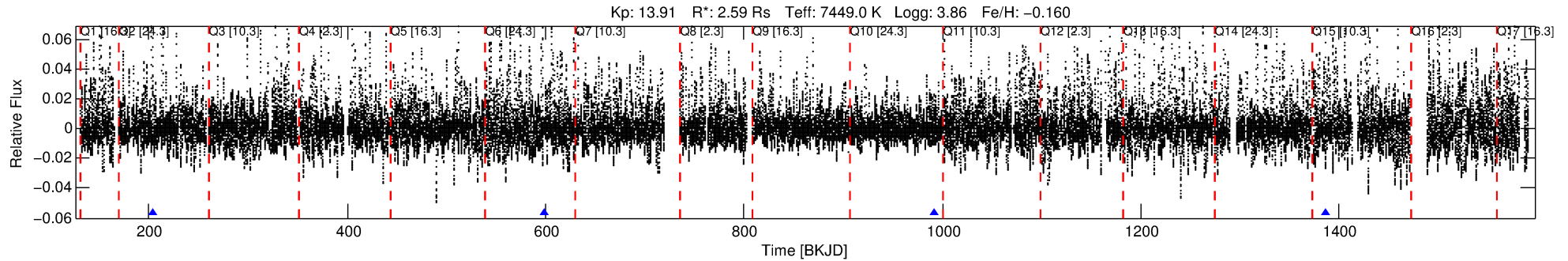
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012350399-01

No Significant Match Found

DV One-Page Summary

KIC: 12350399 Candidate: 1 of 3 Period: 393.831 d



DV Fit Results:

Period = 393.83109 [0.00307] d
Epoch = 204.6730 [0.0052] BKJD
Rp/R* = 0.0702 [0.0083]
a/R* = 202.29 [12.81]
b = 0.76 [0.04]
Seff = 11.38 [6.87]
Teq = 468 [71] K
Rp = 19.80 [7.88] Re
a = 1.2738 [0.4612] AU
Ag = 2560.77 [2535.16] [1.01 σ]
Teffp = 5151 [1063] K [4.40 σ]

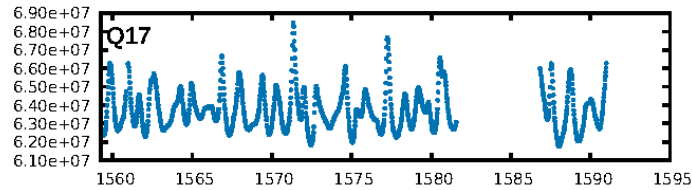
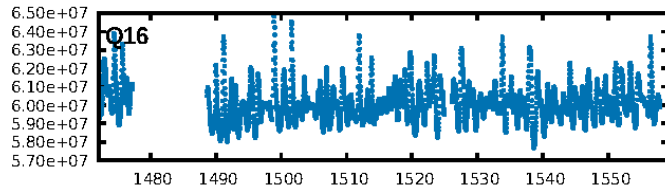
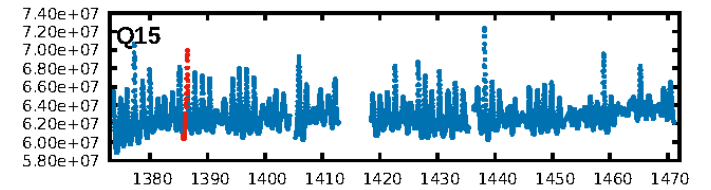
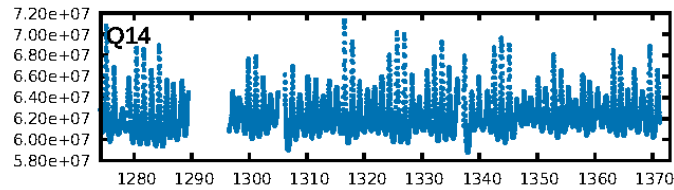
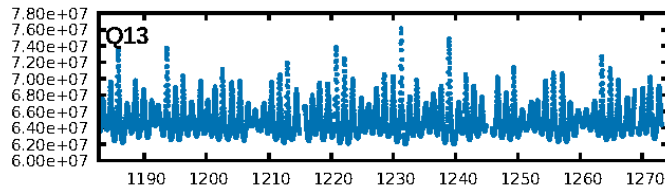
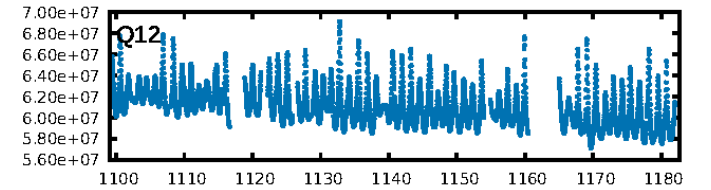
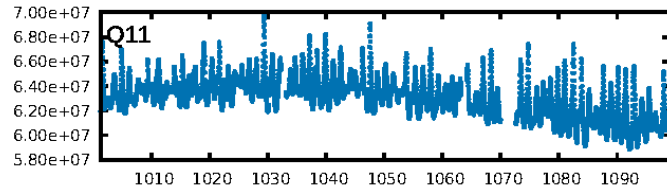
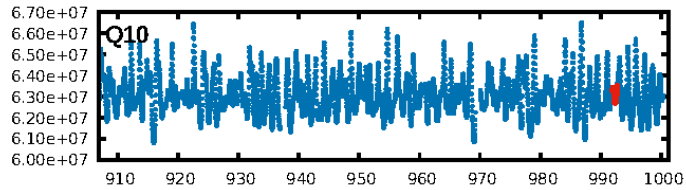
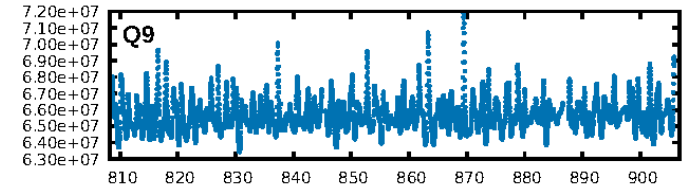
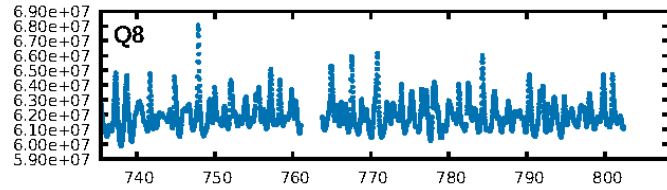
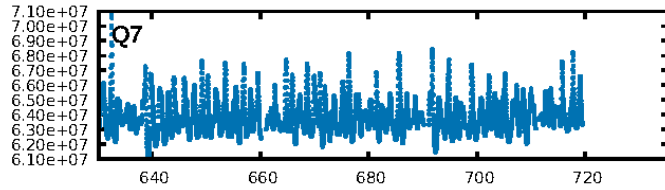
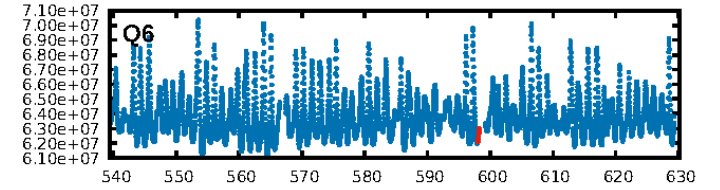
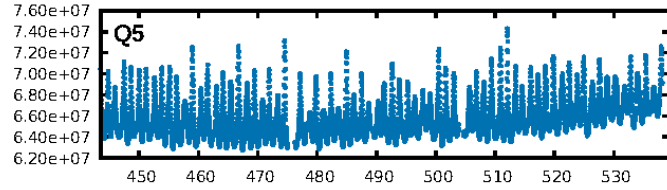
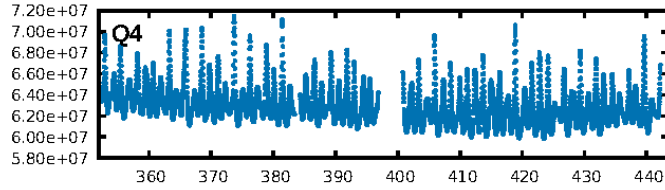
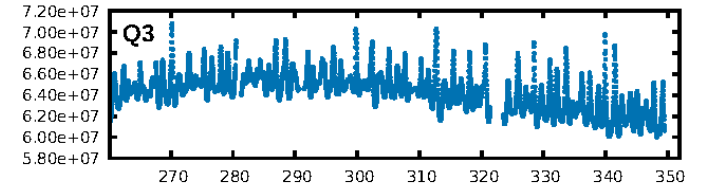
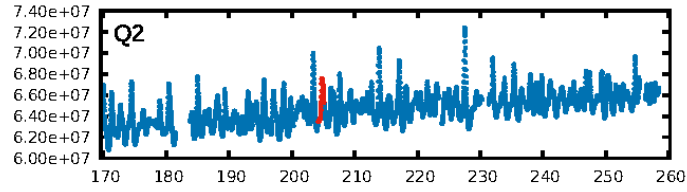
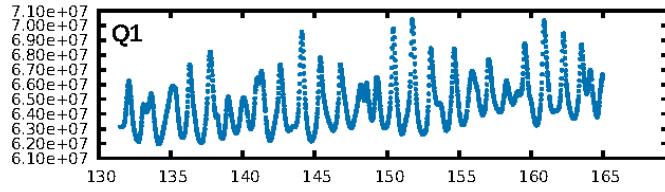
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [83.69 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 7.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.2108
Centroid-sig: N/A
Centroid-so: 1.374 arcsec [1.93 σ]
OotOffset-rm: 0.452 arcsec [3.99 σ]
KicOffset-rm: 0.198 arcsec [2.47 σ]
OotOffset-st: 2/1/0/0 [3]
KicOffset-st: 2/1/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

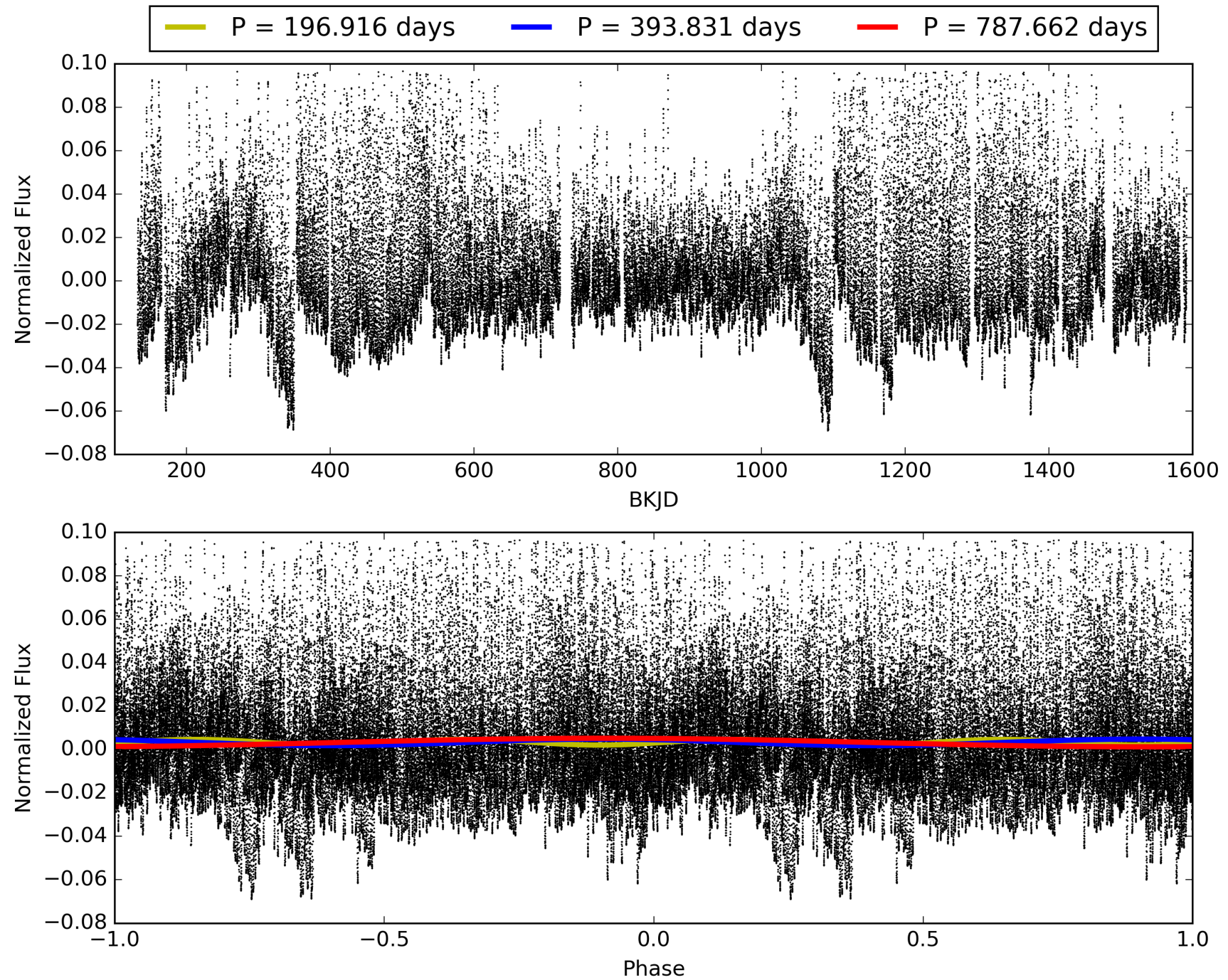
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 012350399-01, PDC Light Curves

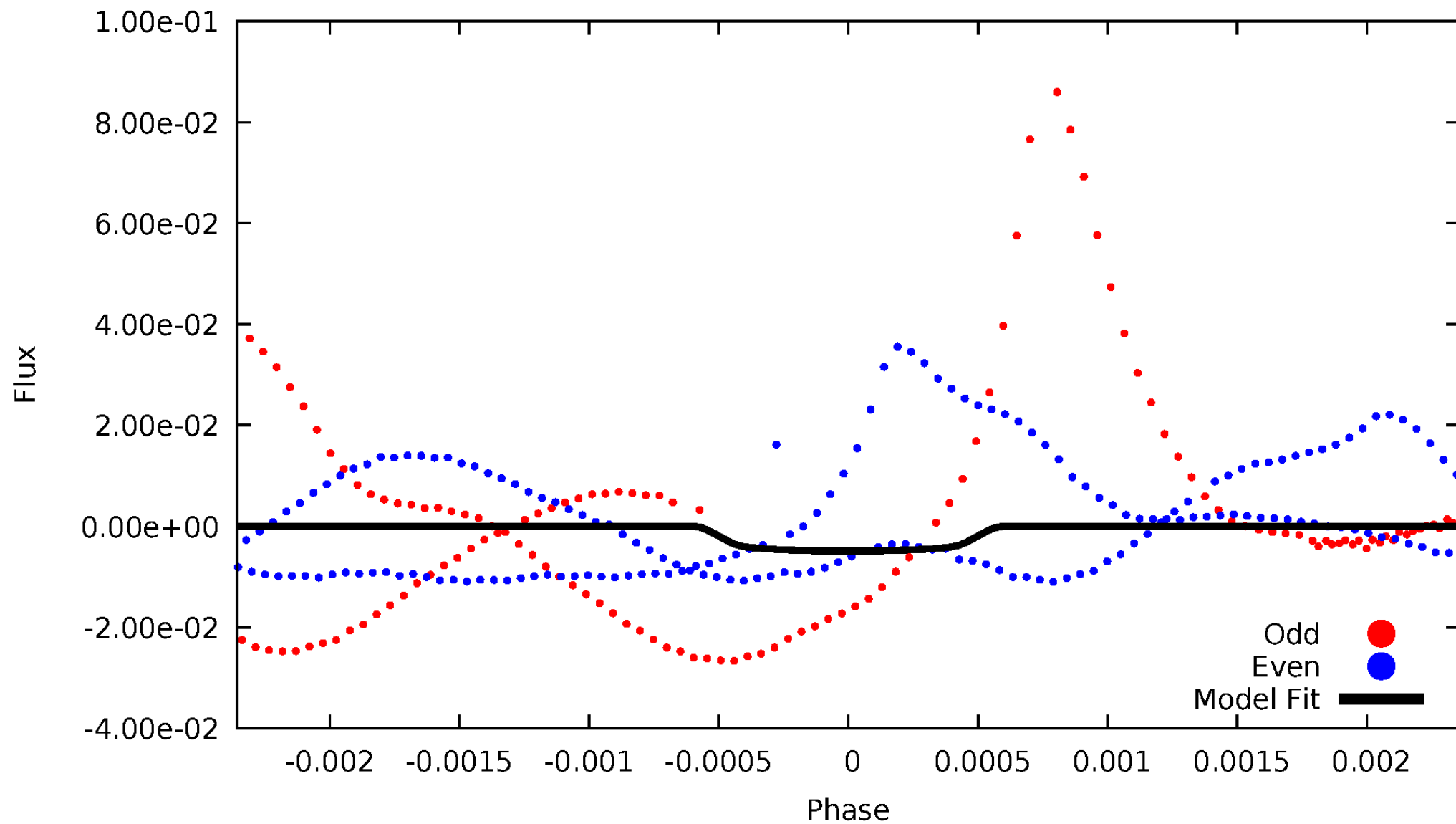


TCE 012350399-01



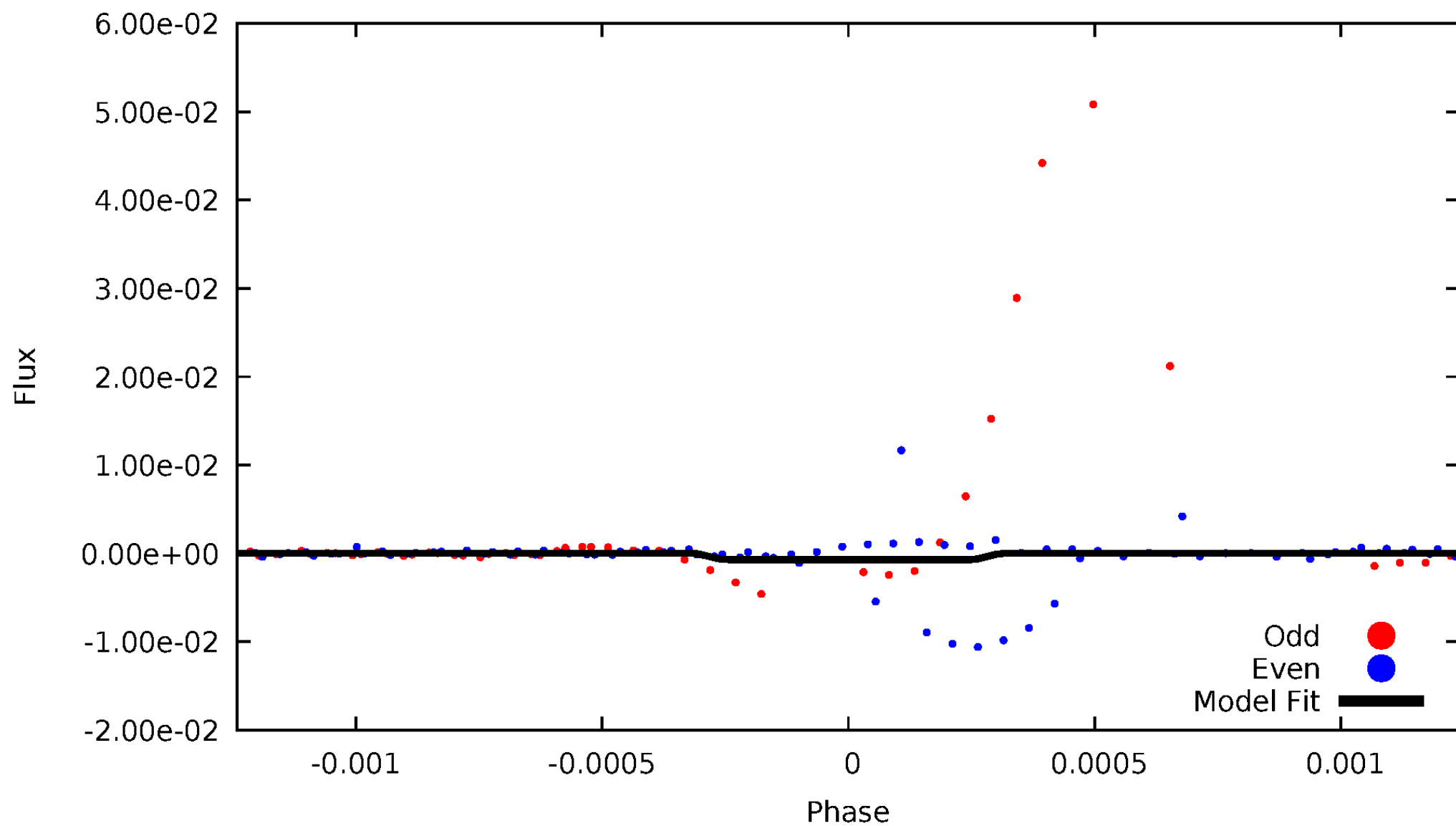
DV Odd/Even

TCE 012350399-01



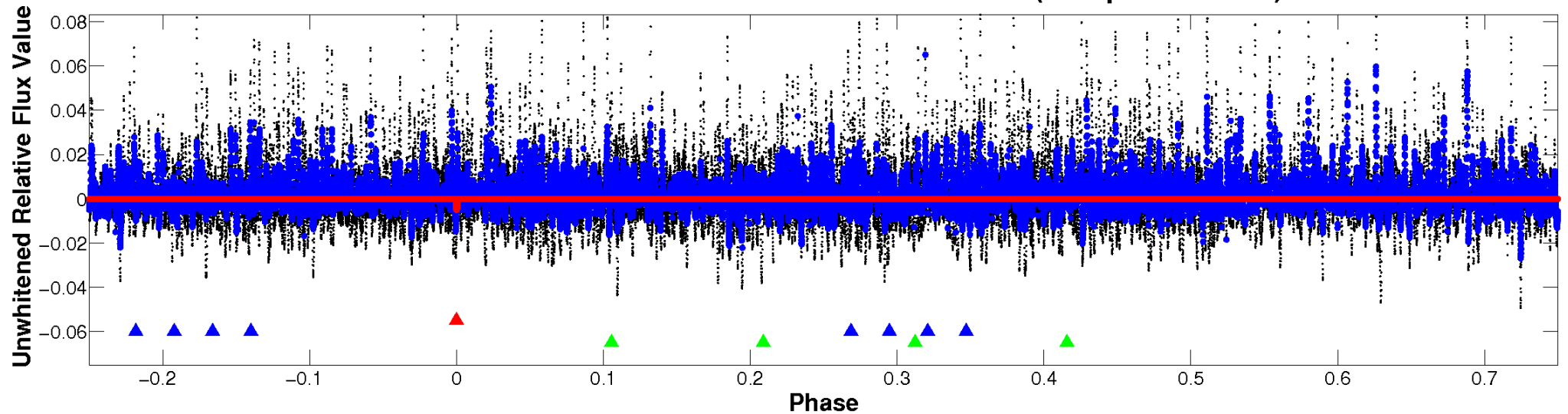
ALT Odd/Even

TCE 012350399-01

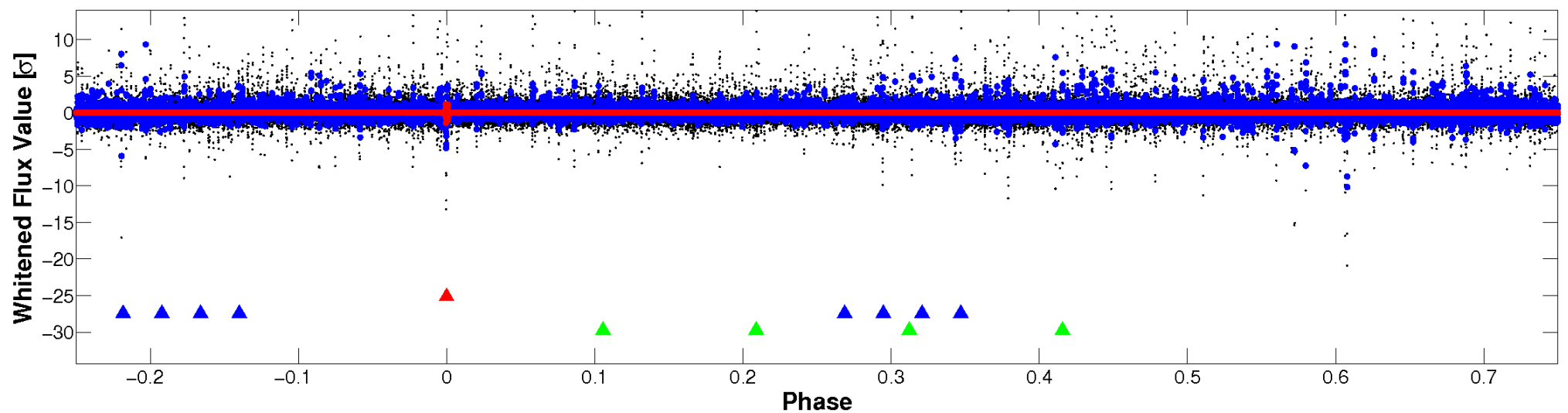


Non-Whitened Vs. Whitened Light Curve

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

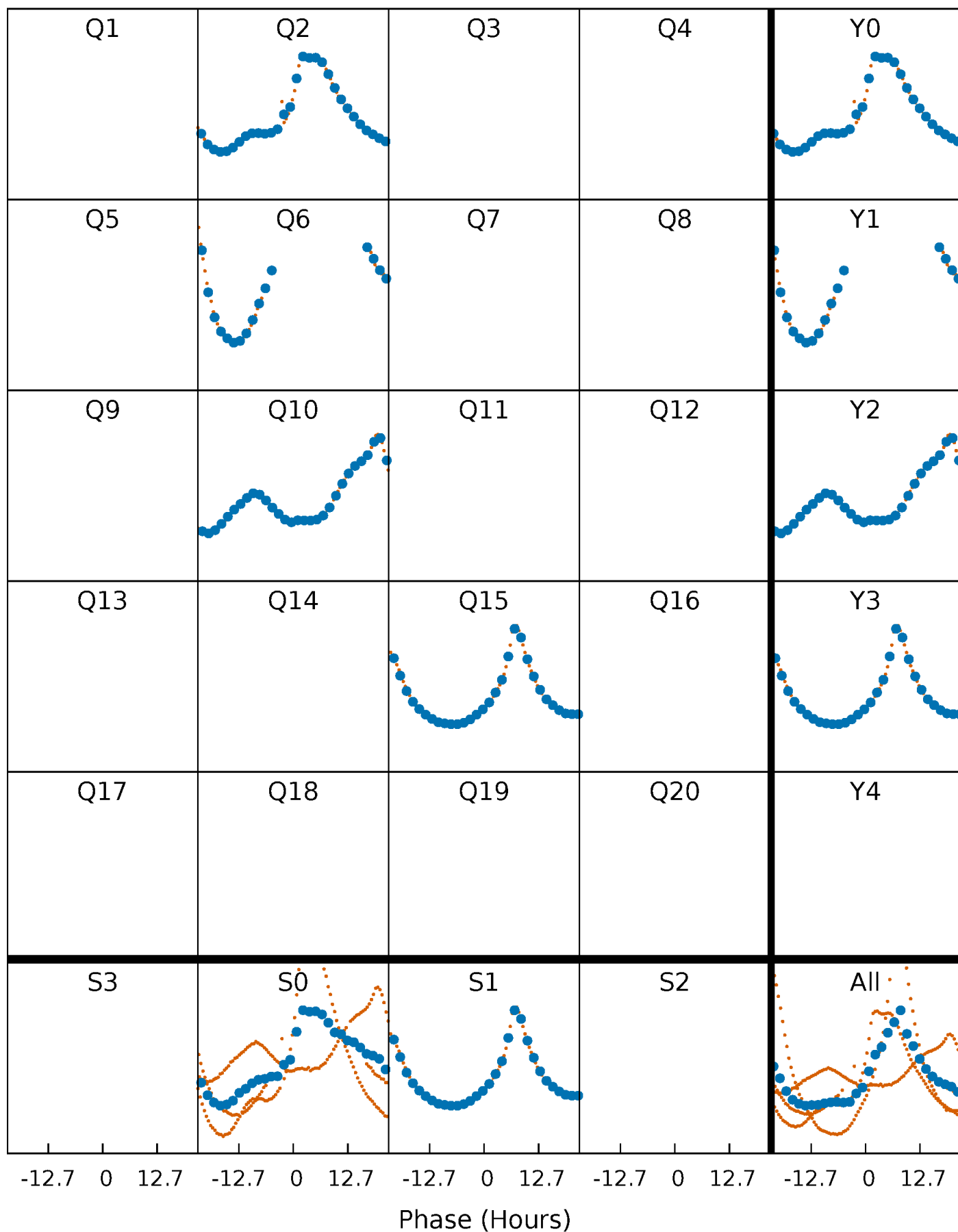


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



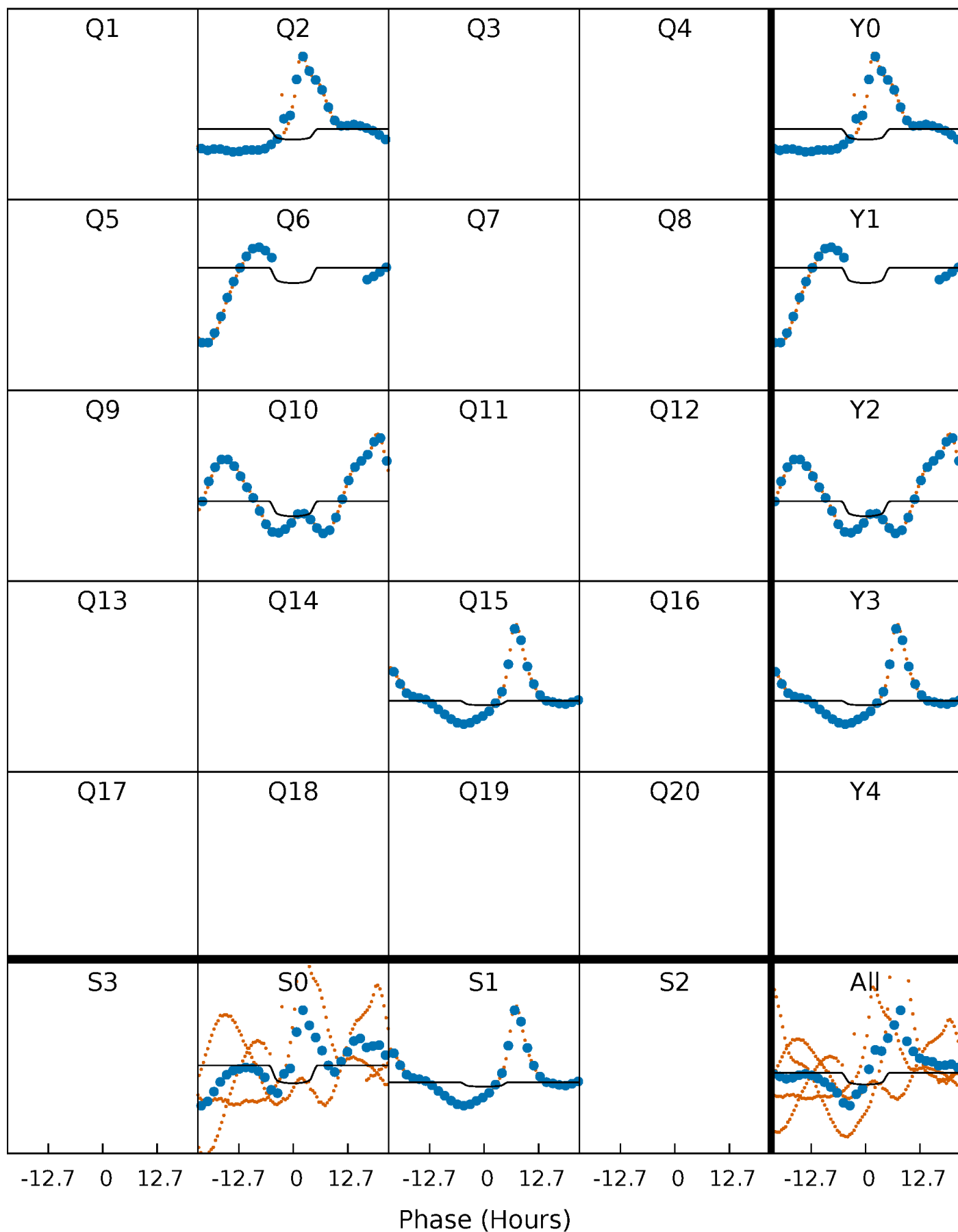
PDC Quarter-Phased Transit Curves

TCE 012350399-01 $P=393.831085$ Days $T_0=204.672952$ (BKJD)



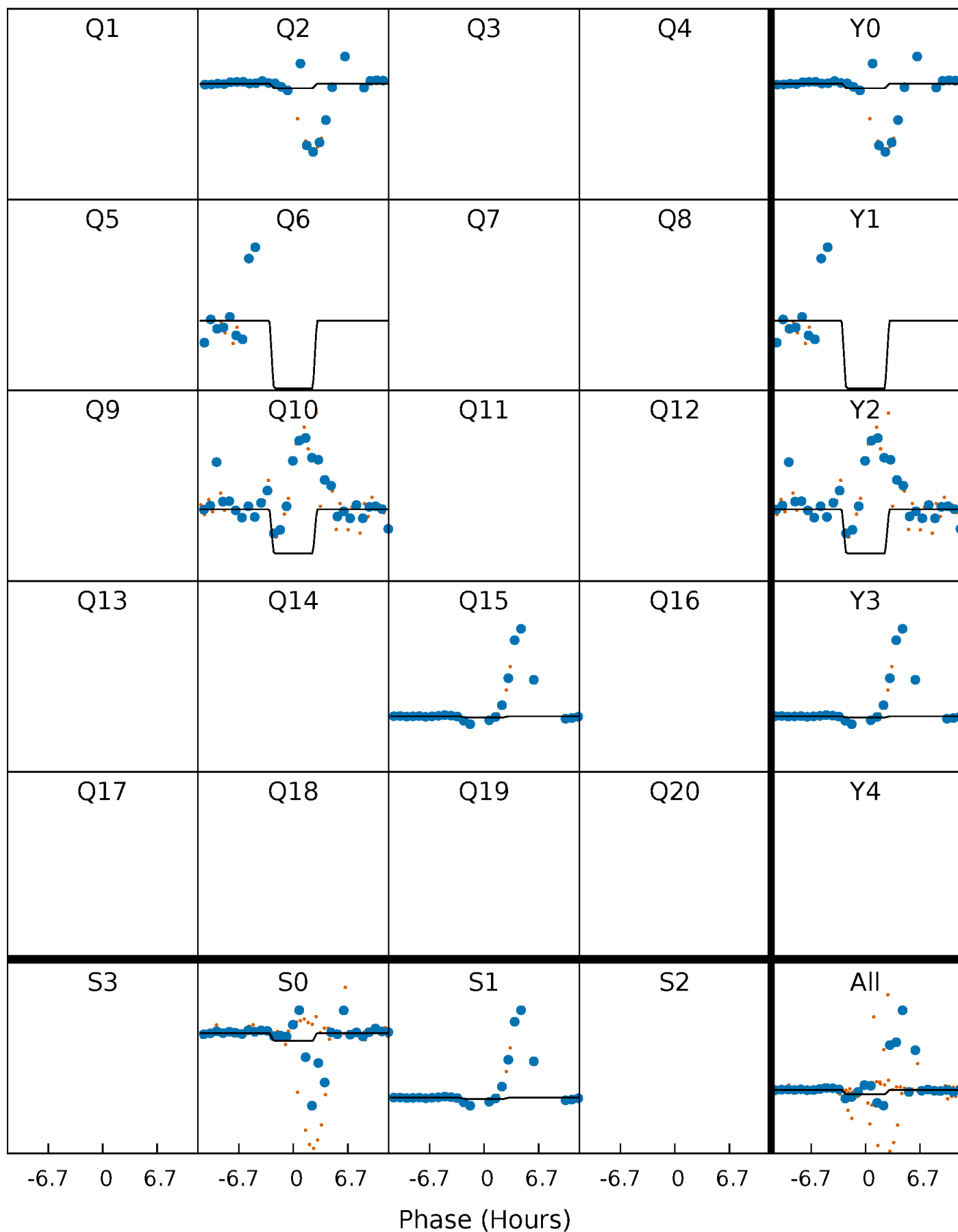
DV Quarter-Phased Transit Curves

TCE 012350399-01 P=393.831085 Days $T_0=204.672952$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

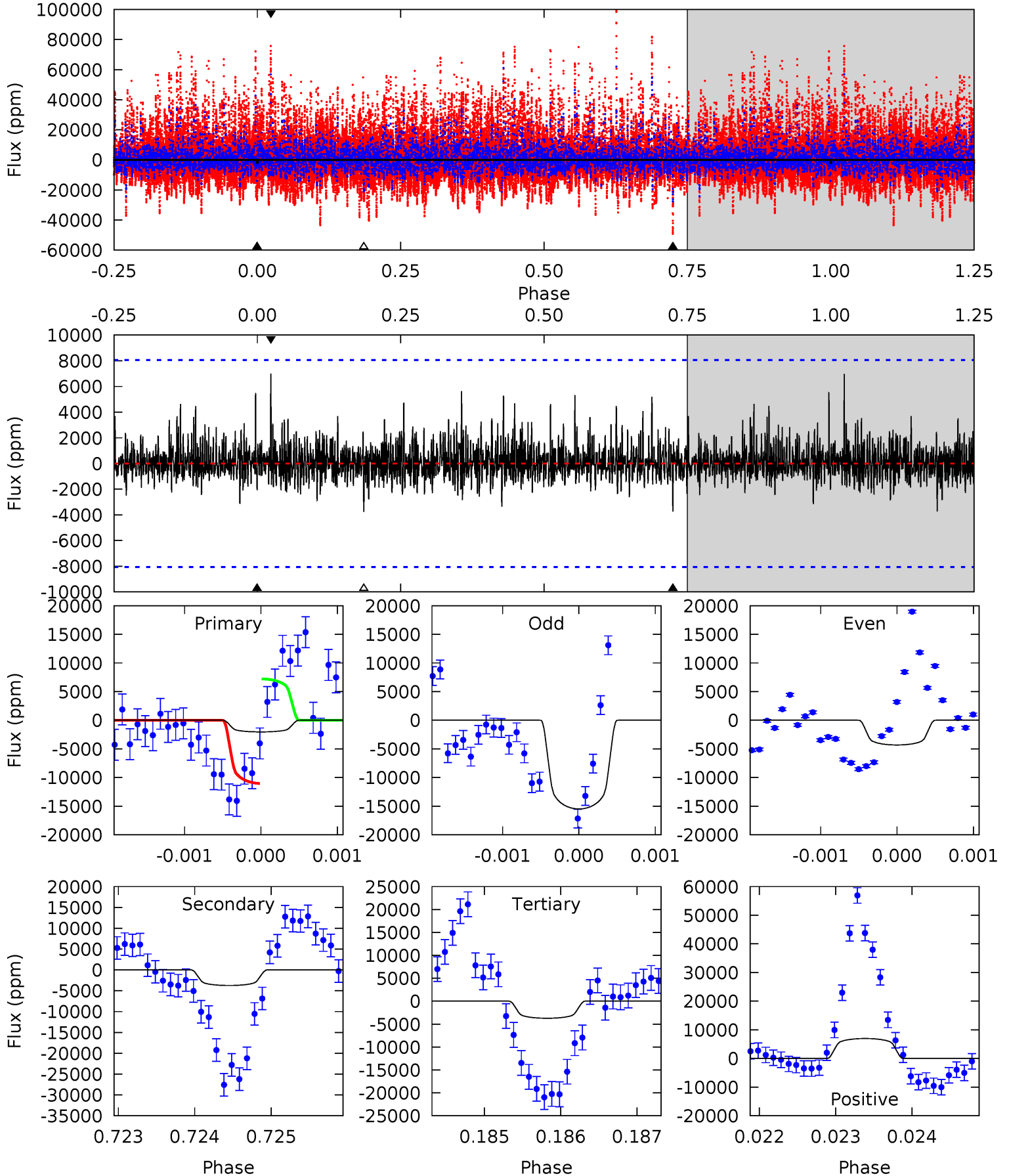
TCE 012350399-01 P=393.921944 Days $T_0=204.521307$ (BKJD)



DV Model-Shift Uniqueness Test

012350399-01, P = 393.831085 Days, E = 204.672952 Days

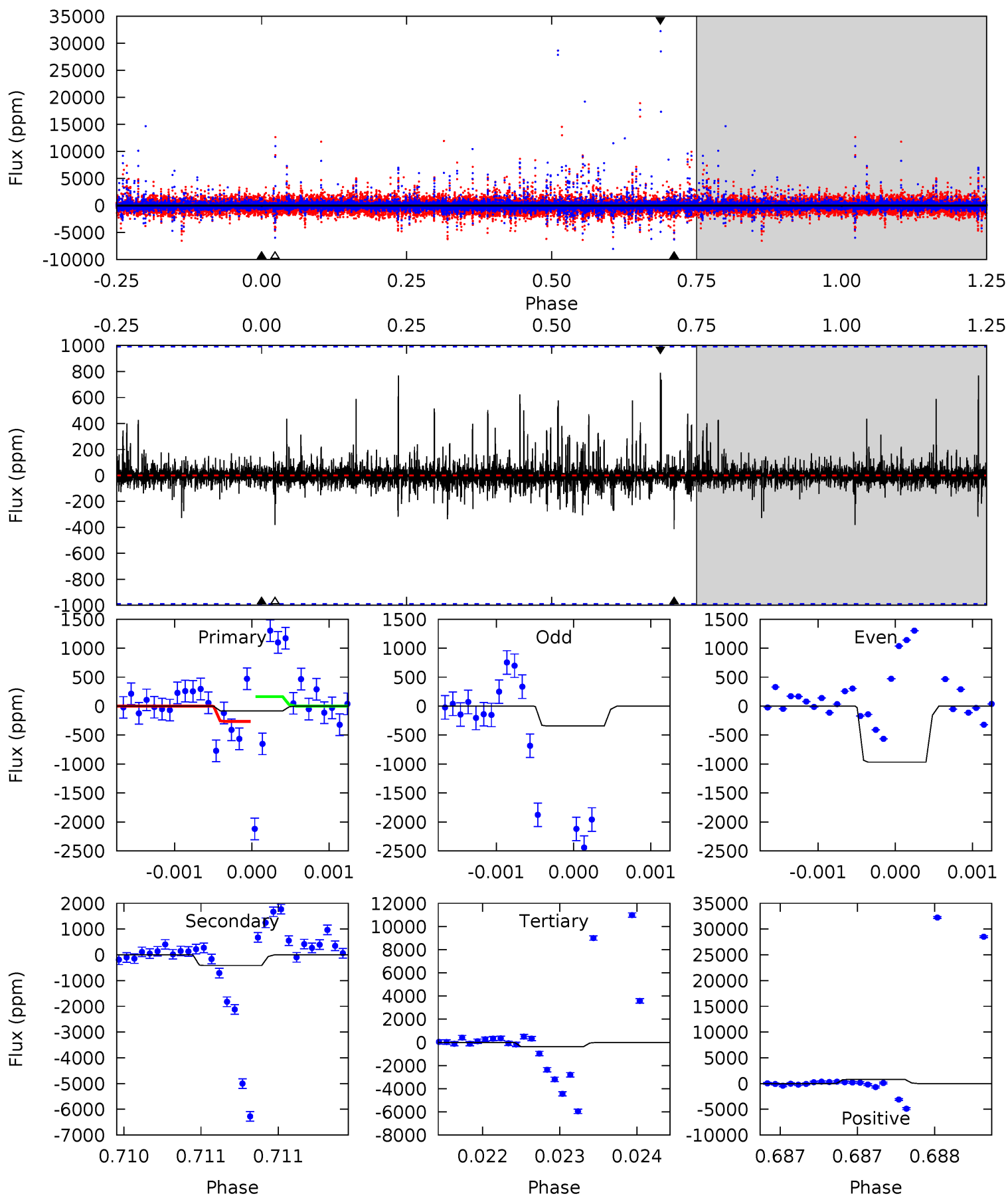
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.37	2.51	2.50	4.67	5.42	3.24	0.78	-1.14	-3.30	0.01	-2.16	3.25	0.29	0.65	1.30



Alt Model-Shift Uniqueness Test

012350399-01, P = 393.921944 Days, E = 204.521307 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.47	2.31	2.12	4.40	5.53	3.42	0.34	-1.64	-3.93	0.19	-2.09	1.22	2.47	0.66	0.29



Stellar Parameters For KIC 012350399

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7449^{+206}_{-336}	$3.862^{+0.337}_{-0.112}$	$-0.160^{+0.250}_{-0.350}$	$2.587^{+0.454}_{-0.983}$	$1.777^{+0.173}_{-0.403}$	$0.145^{+0.379}_{-0.051}$
	+3%/-5%	+9%/-3%	+156%/-219%	+18%/-38%	+10%/-23%	+262%/-35%
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 012350399-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3739 ± 1488	$18.78^{+3.67}_{-3.85}$	636^{+47}_{-65}	6764^{+994}_{-974}	9174^{+7082}_{-4292}
Alt.	-414 ± 179	$6.93^{+2.58}_{-2.20}$	638^{+42}_{-61}	6320^{+1532}_{-1149}	7006^{+10087}_{-4121}

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

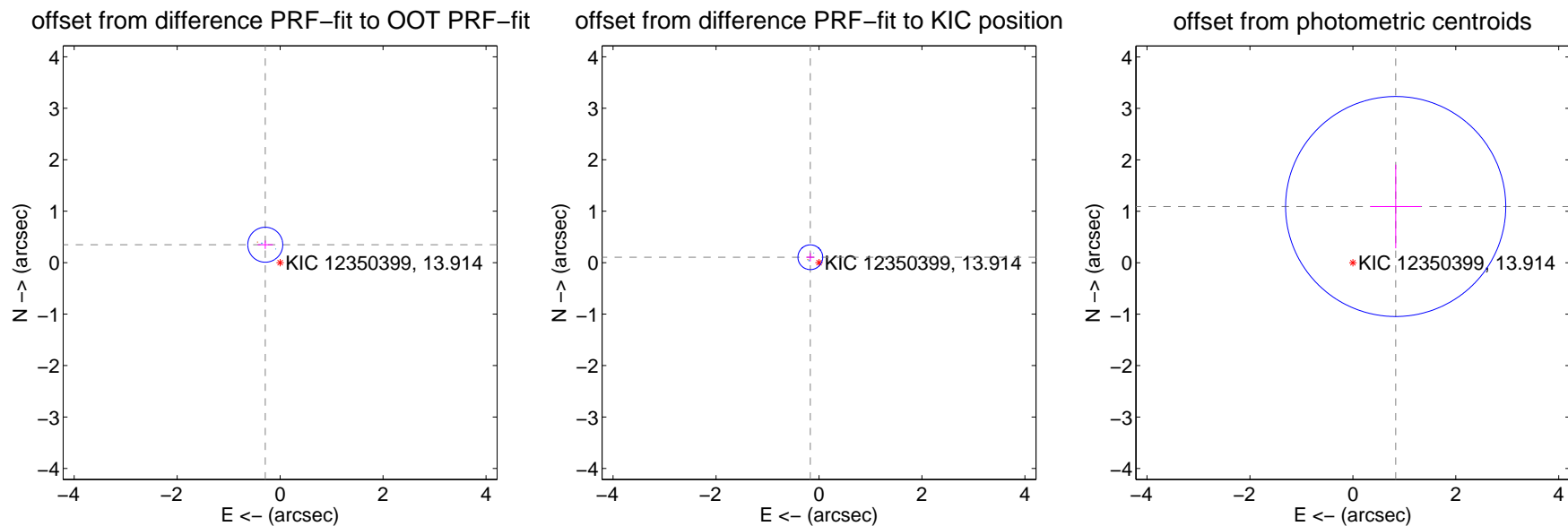
DV Centroid Data

Supplemental centroid analysis for 012350399-01. Kepler magnitude: 13.91. Transit SNR 5.19

There are 2 quarters with good PRF difference image offsets

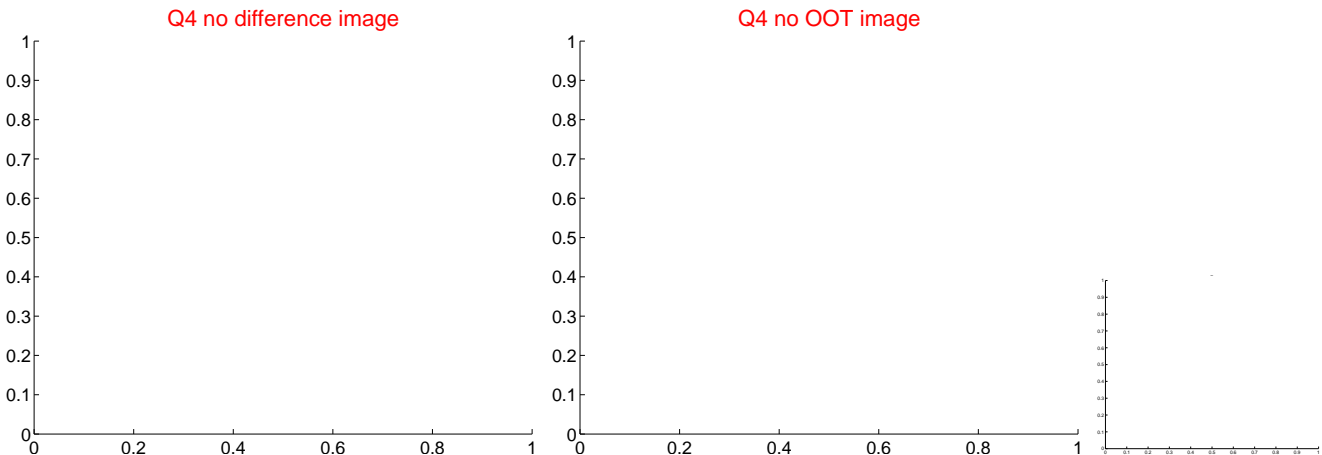
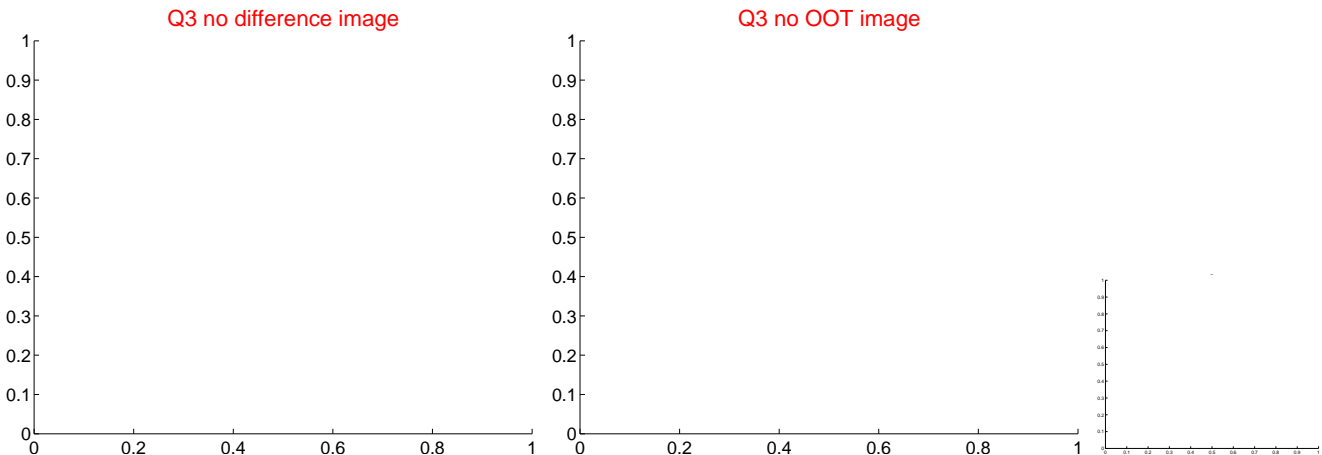
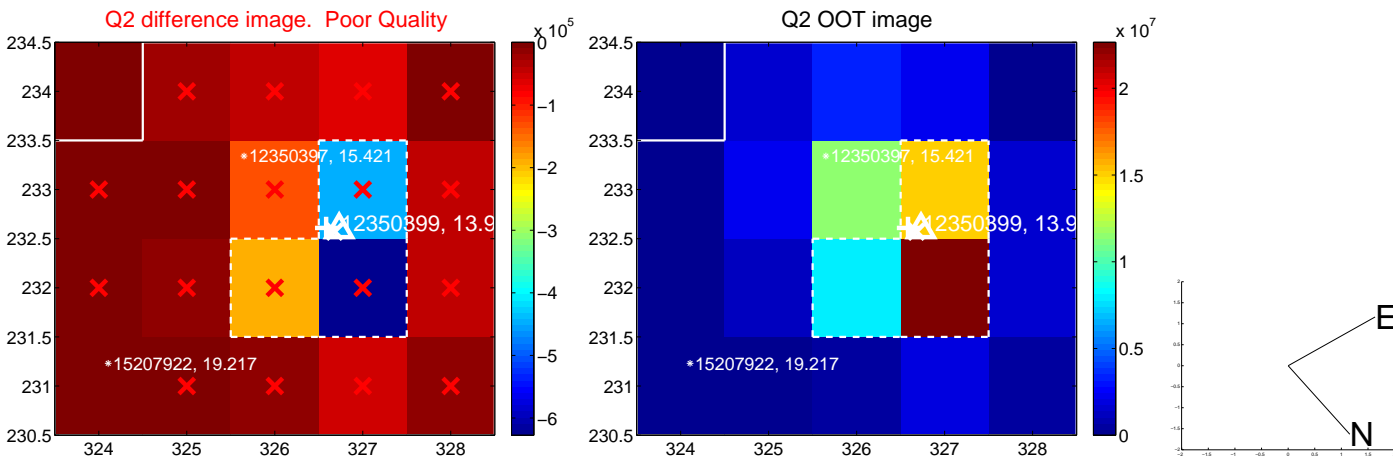
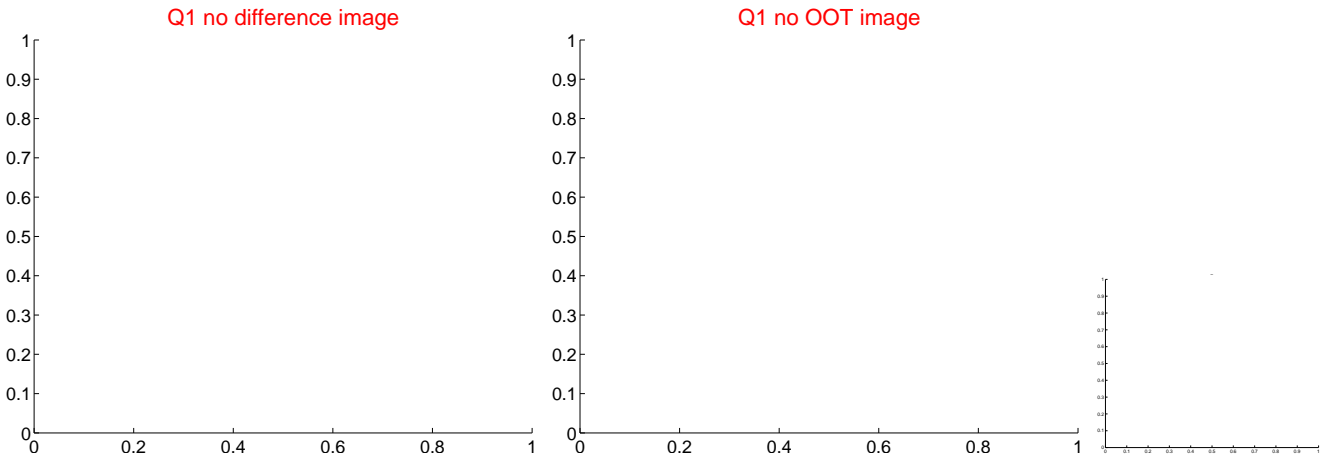
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.452 \pm 0.113	3.99	0.288 \pm 0.147	0.348 \pm 0.083
PRF-fit source offset from KIC position	0.198 \pm 0.080	2.47	0.168 \pm 0.079	0.105 \pm 0.083
photometric centroid source offset	1.37 \pm 0.71	1.93	-0.83 \pm 0.49	1.09 \pm 0.81



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

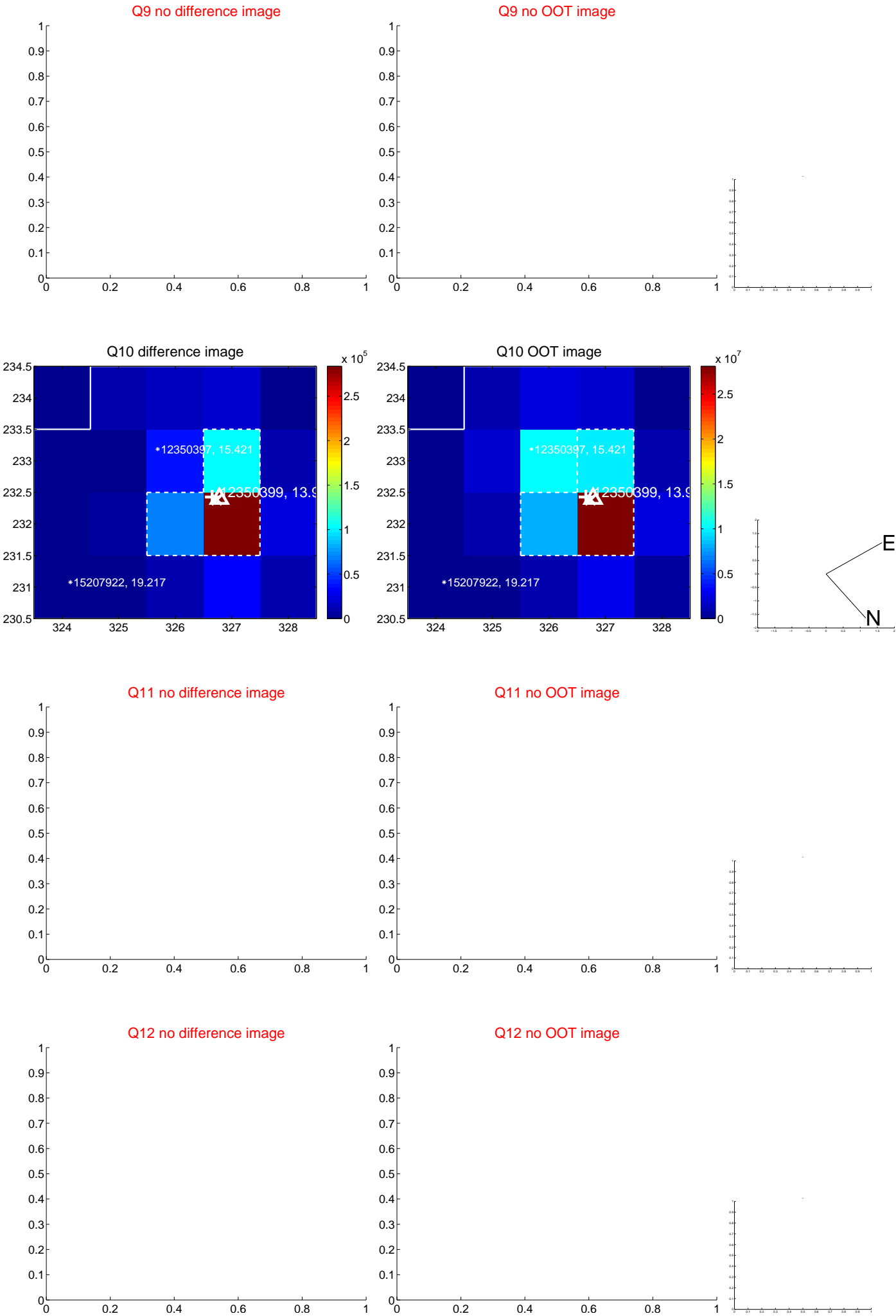
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



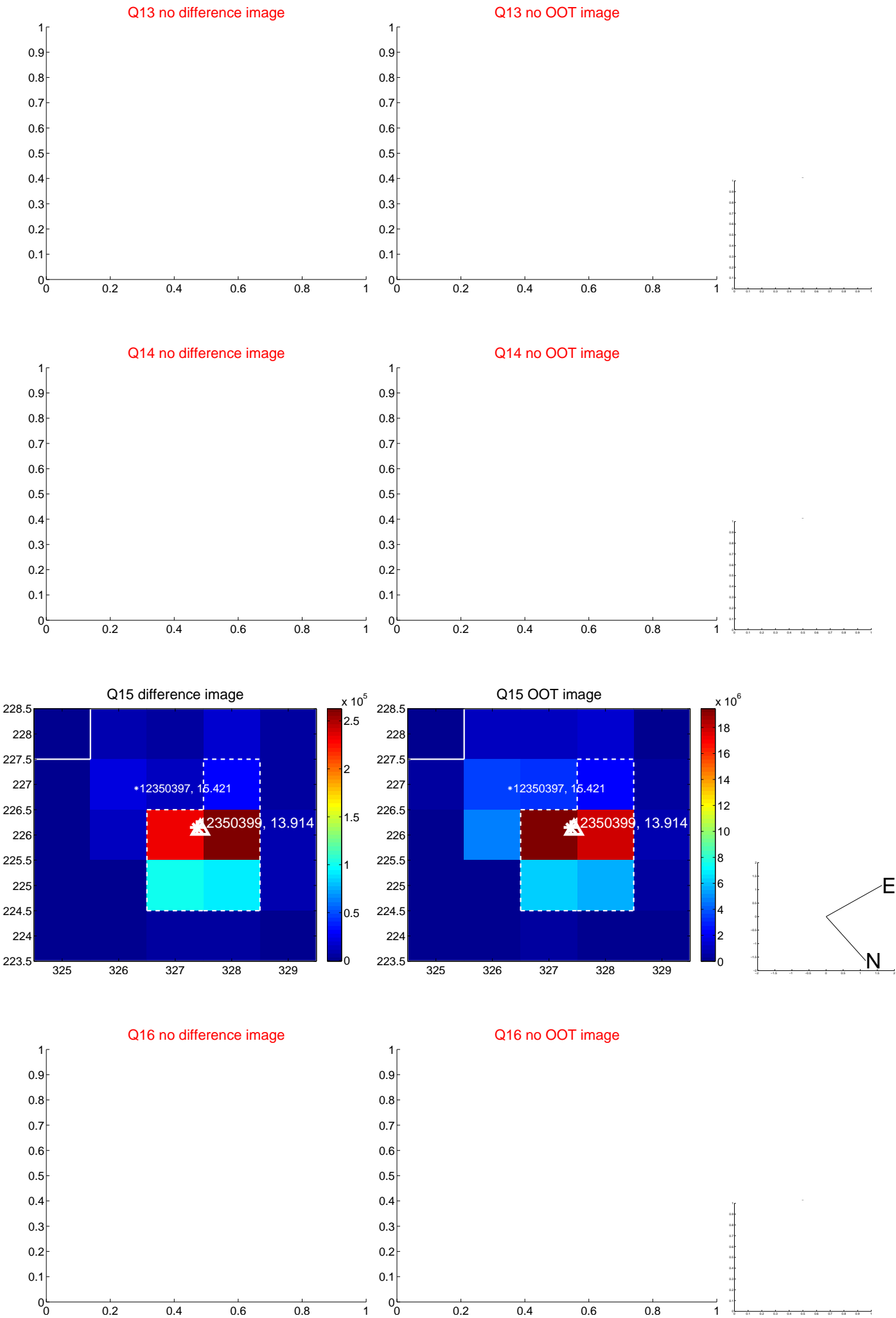
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



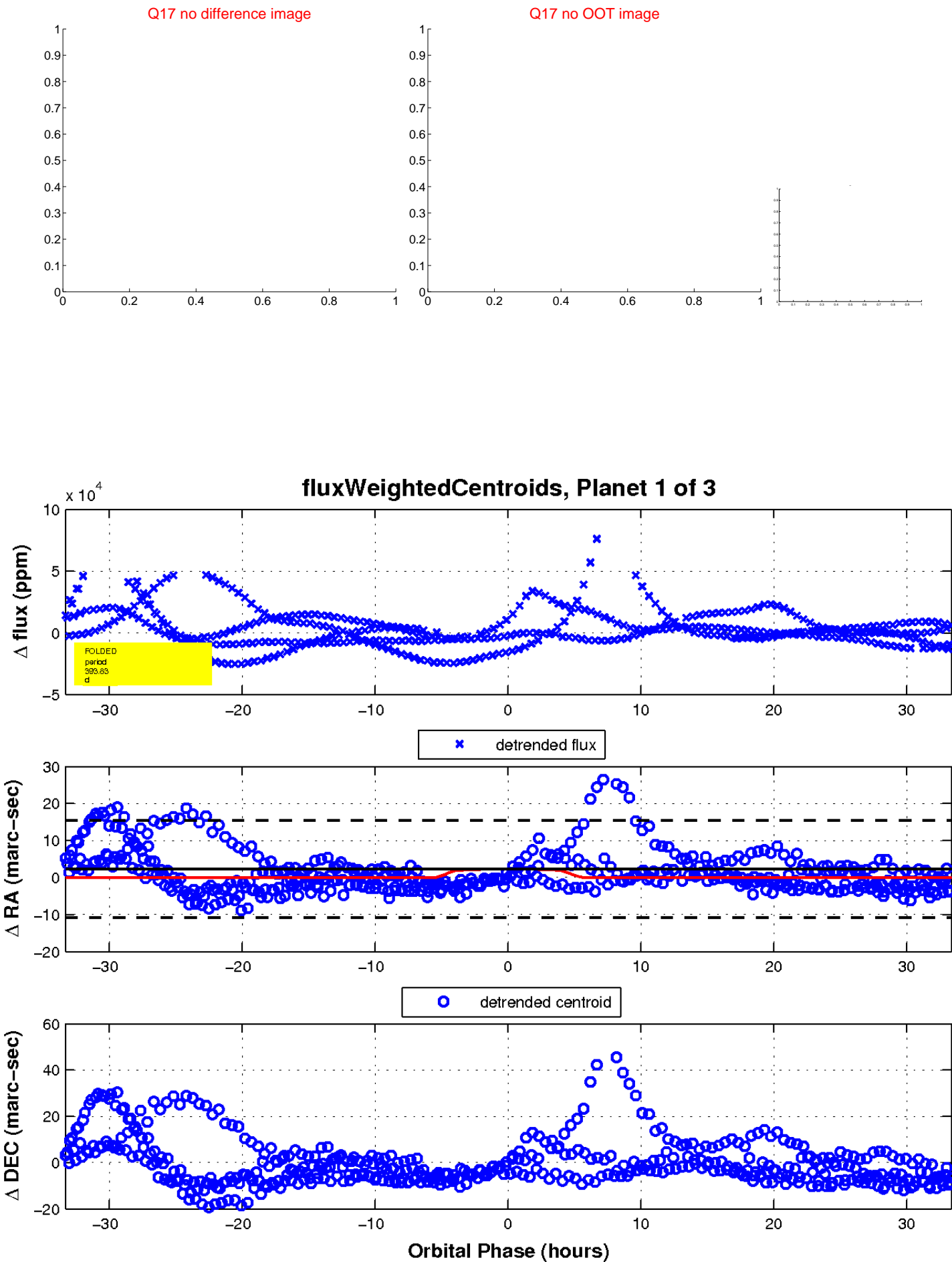
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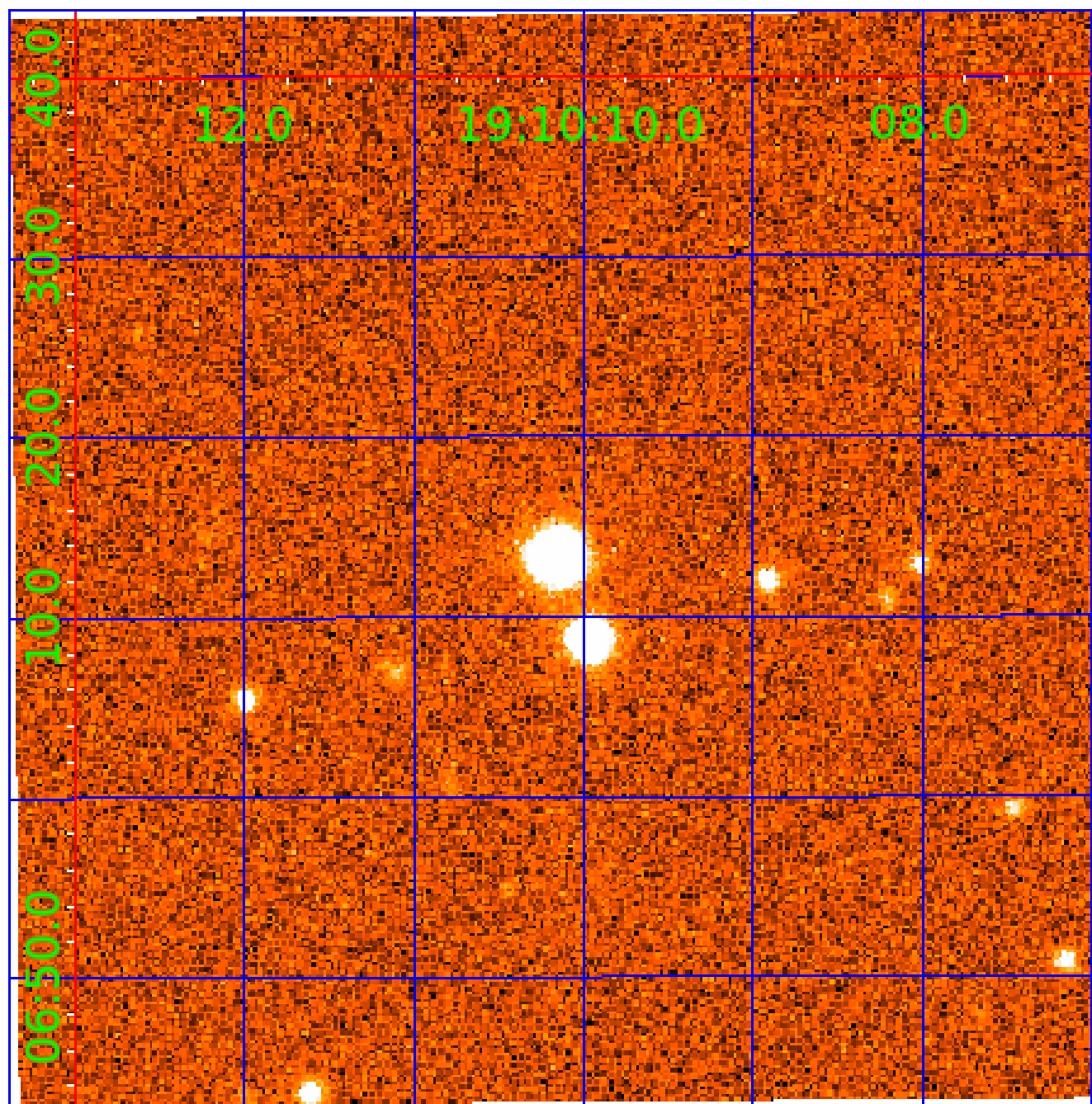


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 012350399

Q1-17 DR25 TCE Parameters

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Robovetter Results

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012350399-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—HALO_GHOST
012350399-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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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.

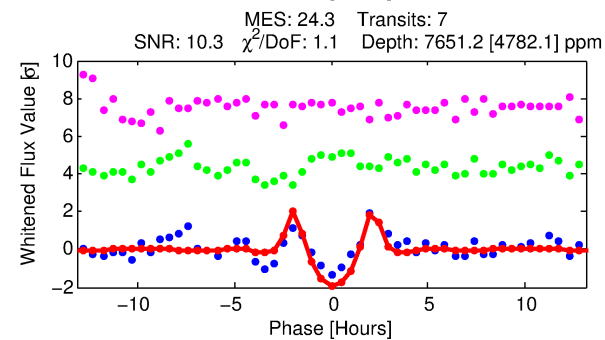
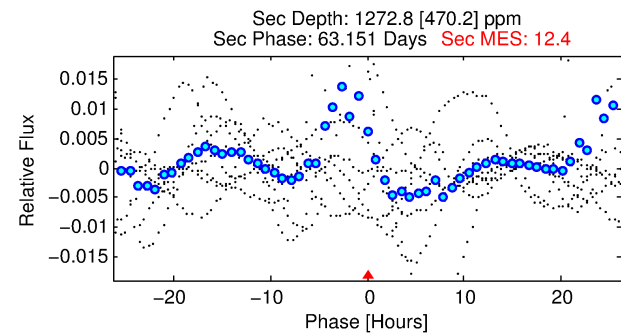
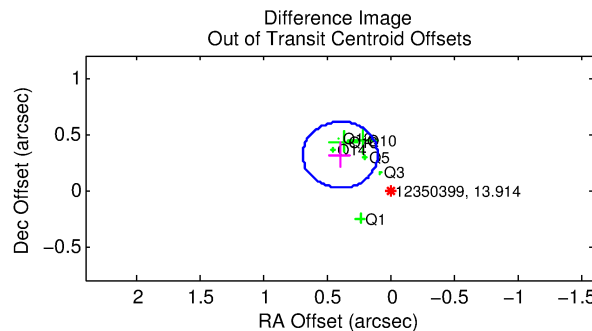
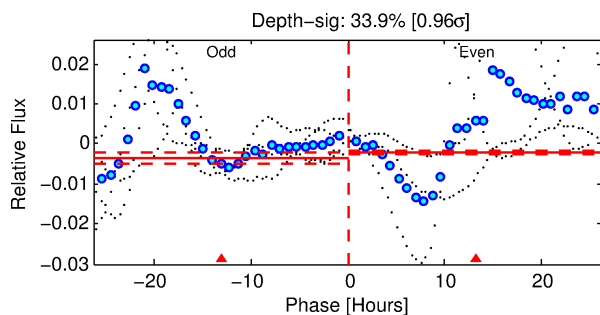
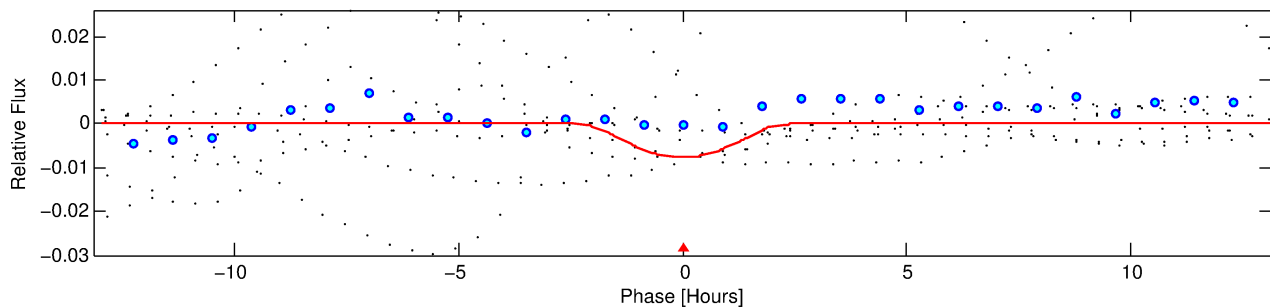
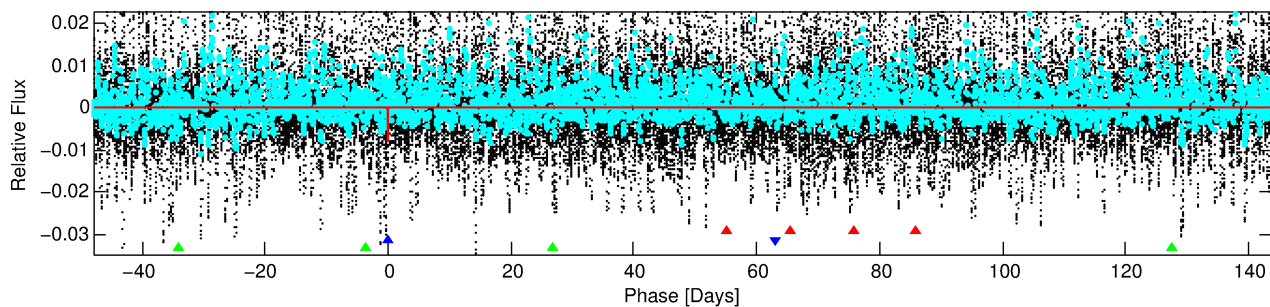
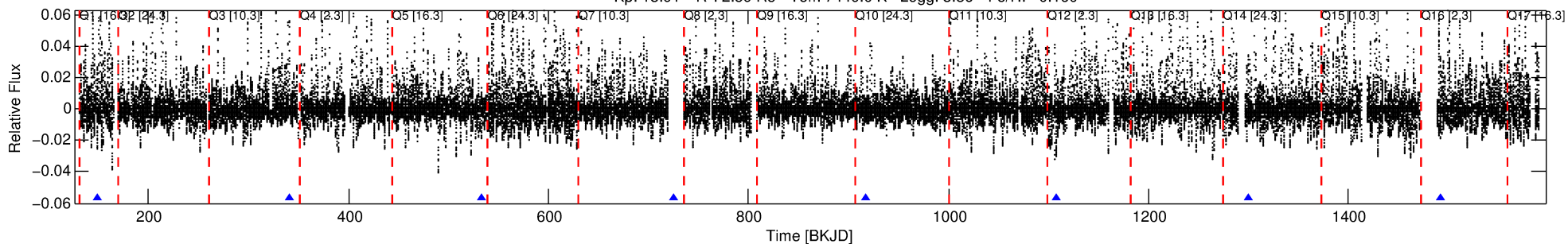
Ephemeris Match Information For 012350399-02

No Significant Match Found

DV One-Page Summary

KIC: 12350399 Candidate: 2 of 3 Period: 191.770 d

Kp: 13.91 R*: 2.59 Rs Teff: 7449.0 K Logg: 3.86 Fe/H: -0.160



DV Fit Results:

Period = 191.76978 [0.00105] d
Epoch = 149.5778 [0.0043] BKJD
Rp/R* = 0.1427 [0.1388]
a/R* = 185.16 [29.62]
b = 1.00 [0.14]
Seff = 29.70 [17.93]
Teff = 595 [90] K
Rp = 40.29 [42.07] Re
a = 0.7884 [0.2854] AU
Ag = 268.17 [552.97] [0.48σ]
Teffp = 3724 [1851] K [1.69σ]

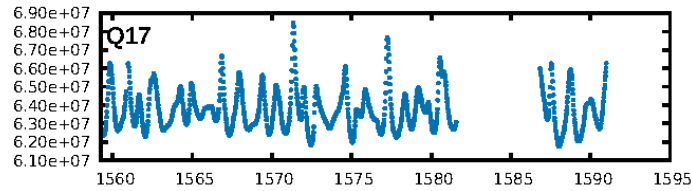
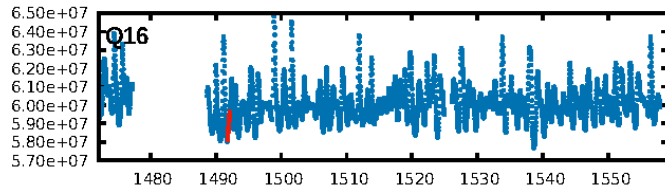
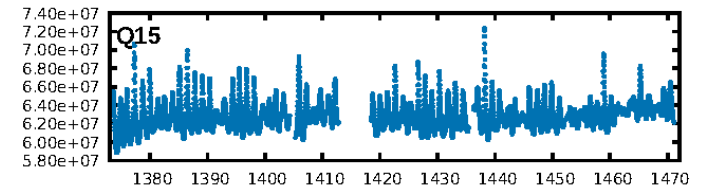
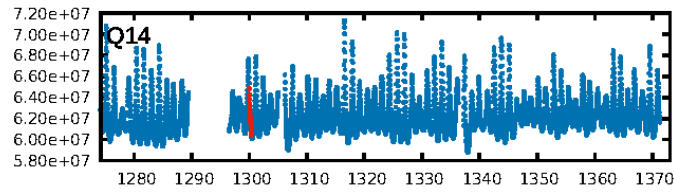
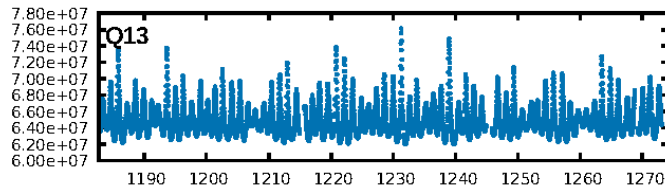
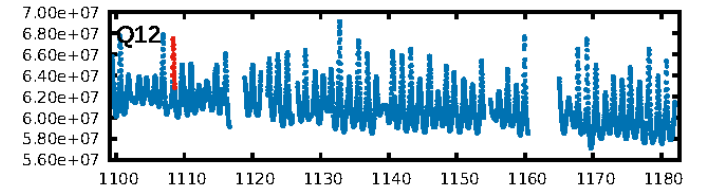
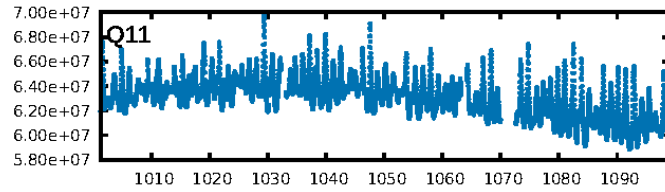
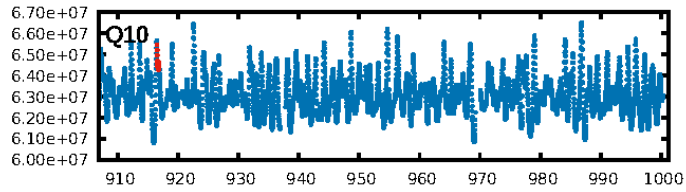
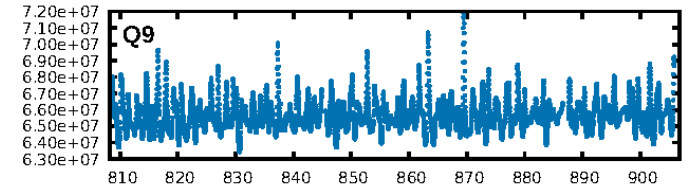
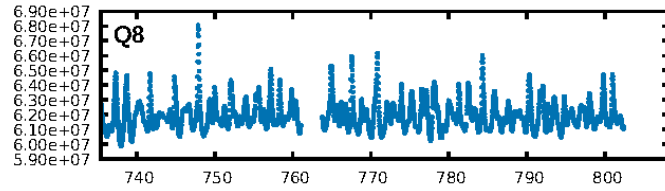
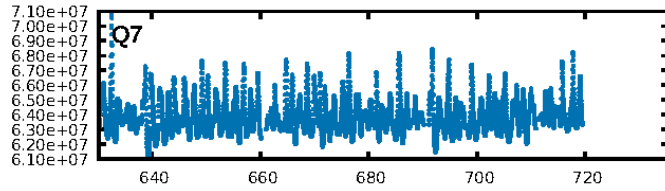
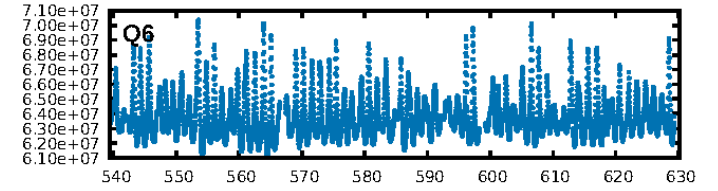
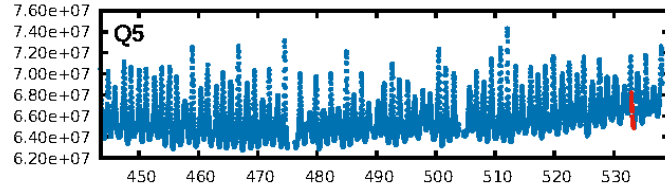
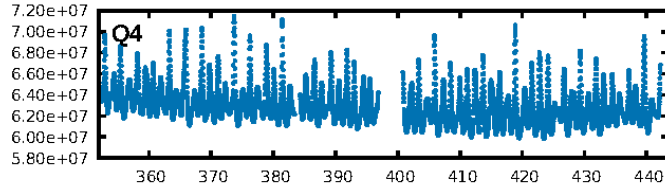
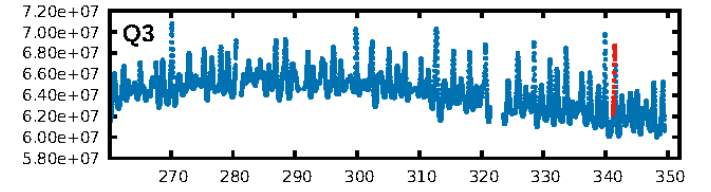
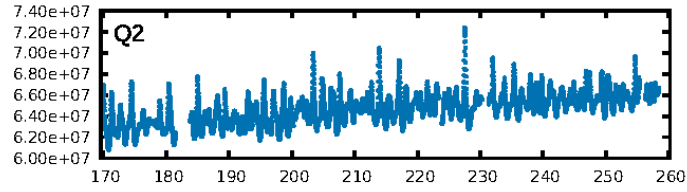
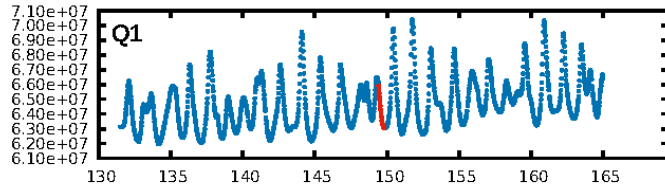
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [691.16σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 97.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -0.01399
Centroid-sig: N/A
Centroid-so: 0.877 arcsec [3.56σ]
OotOffset-rm: 0.505 arcsec [5.15σ]
KicOffset-rm: 0.064 arcsec [0.65σ]
OotOffset-st: 2/1/2/2 [7]
KicOffset-st: 2/1/2/2 [7]
DiffImageQuality-fgm: 0.71 [5/7]
DiffImageOverlap-fno: 1.00 [7/7]

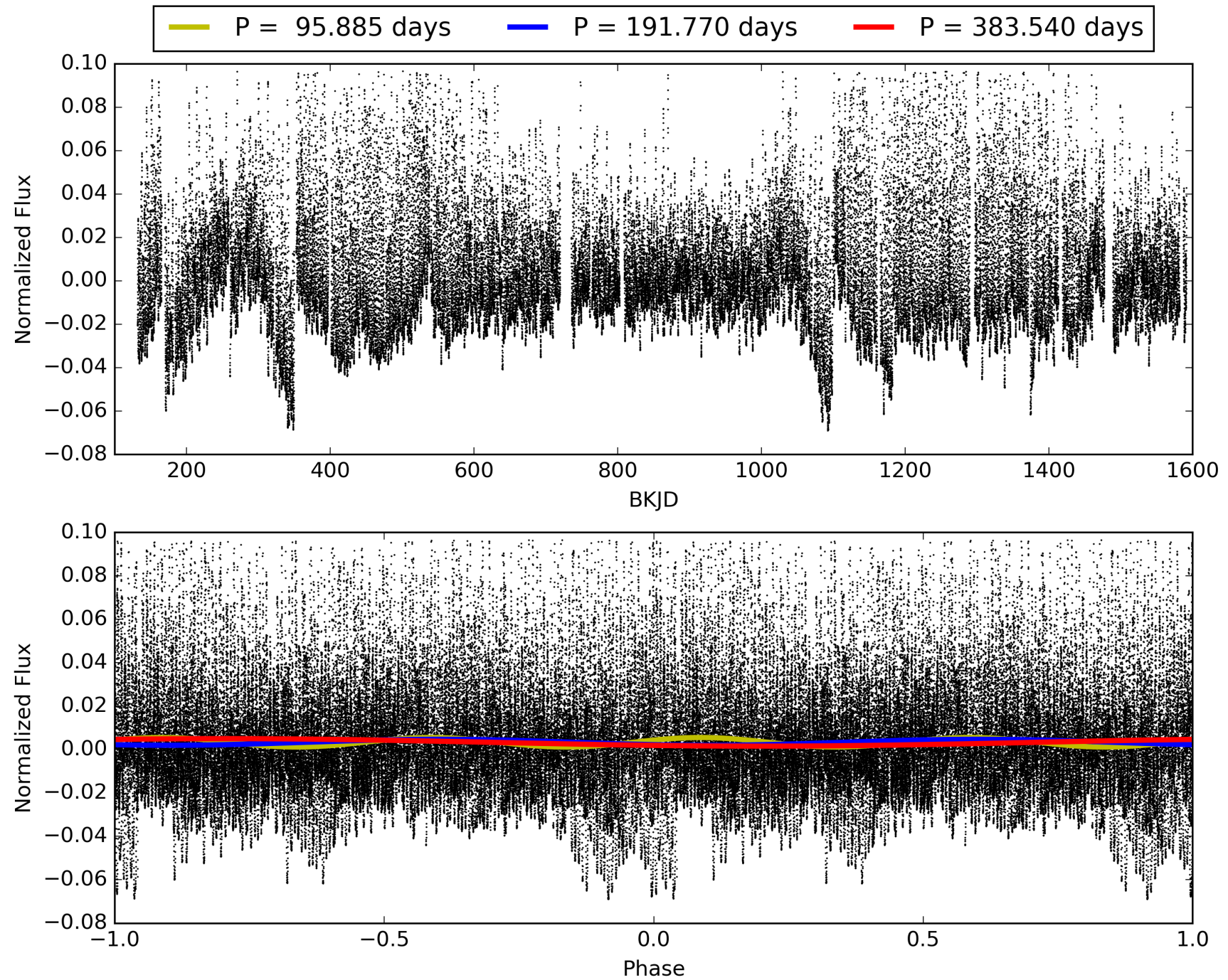
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 04:55:15 Z

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

TCE 012350399-02, PDC Light Curves

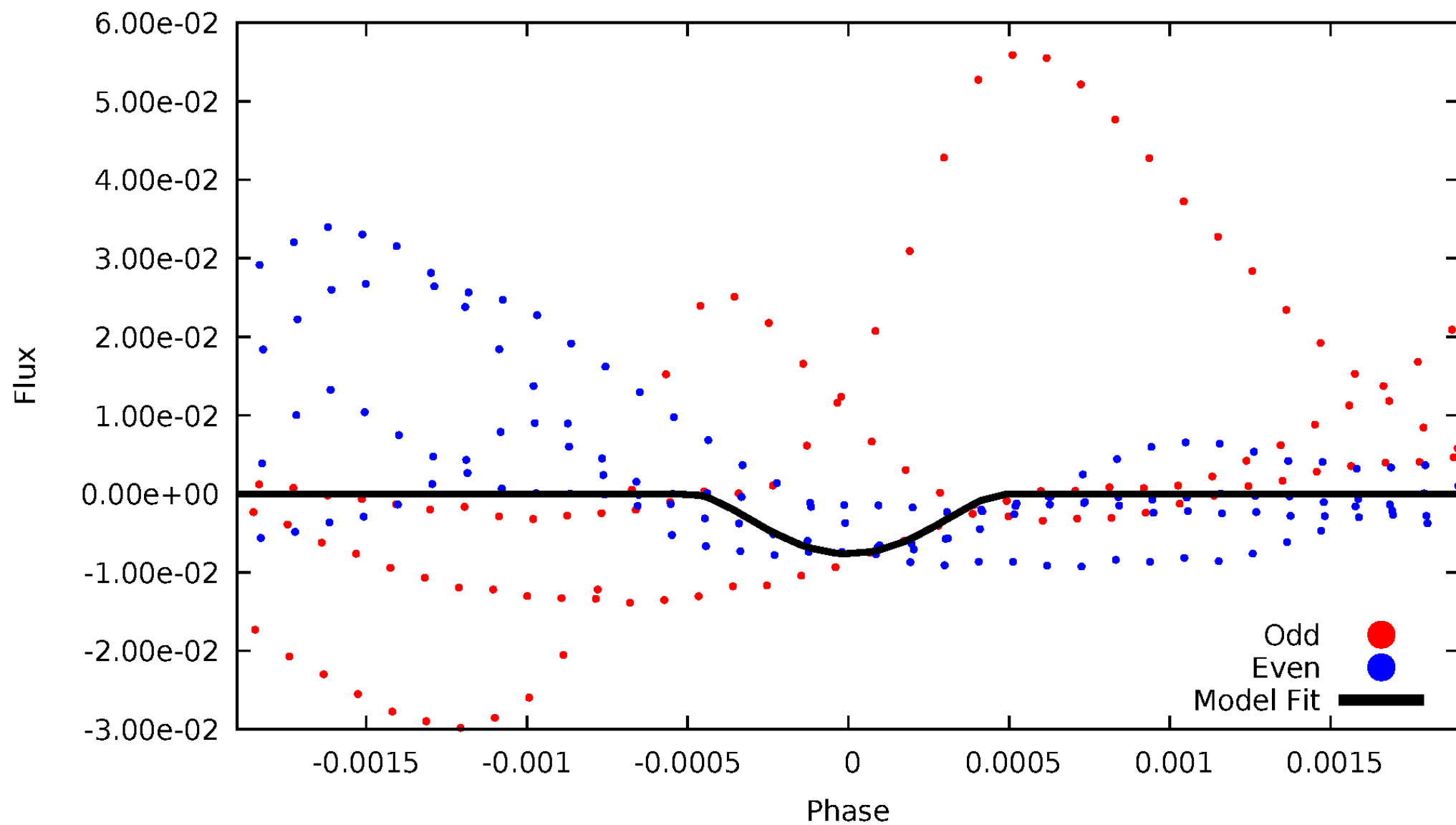


TCE 012350399-02



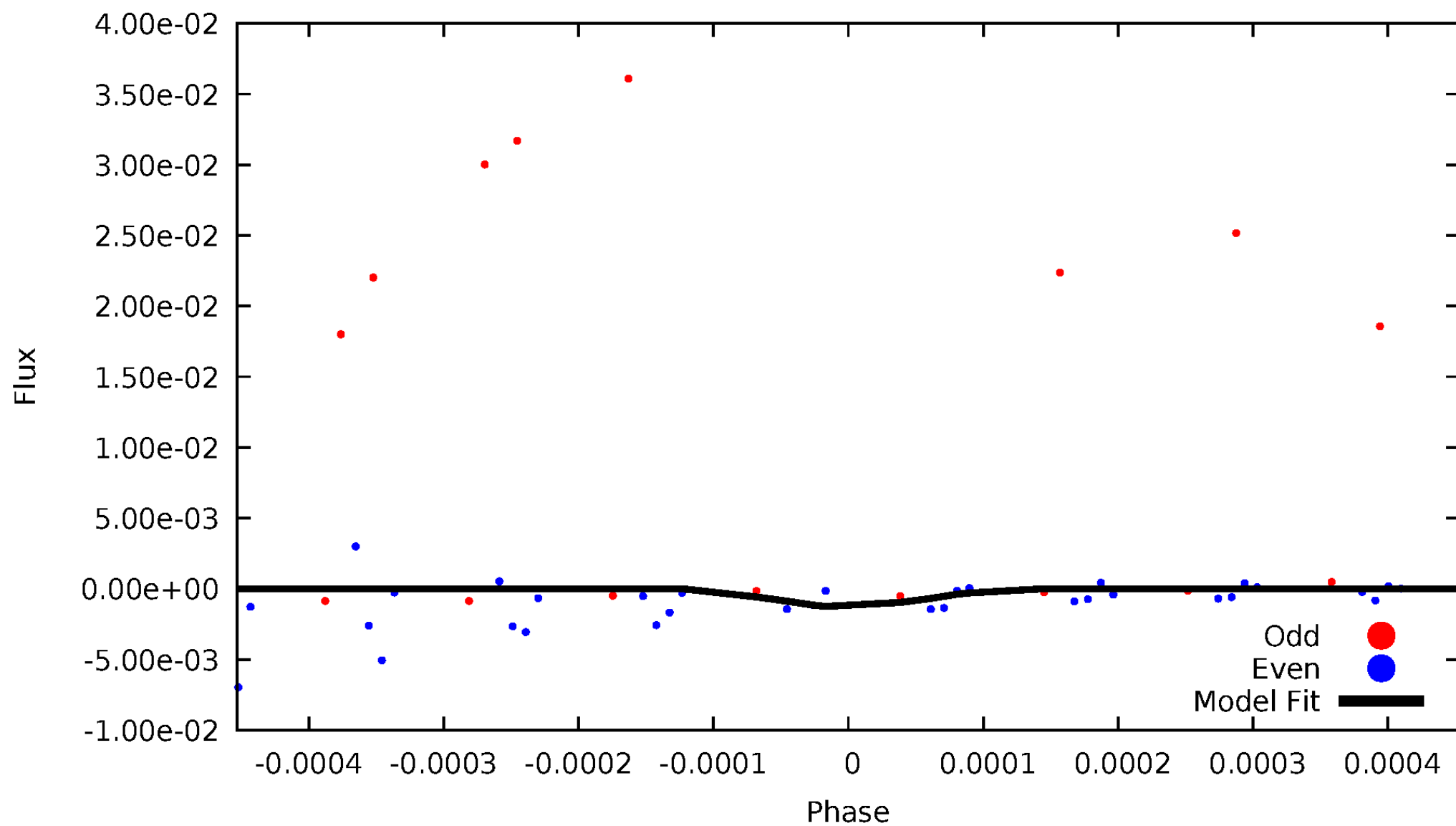
DV Odd/Even

TCE 012350399-02



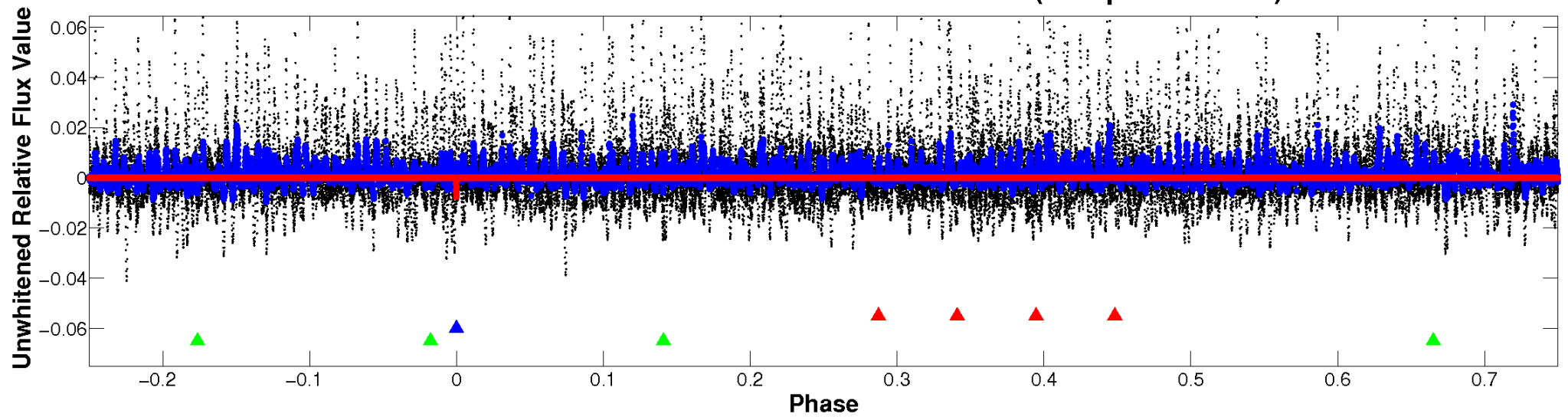
ALT Odd/Even

TCE 012350399-02

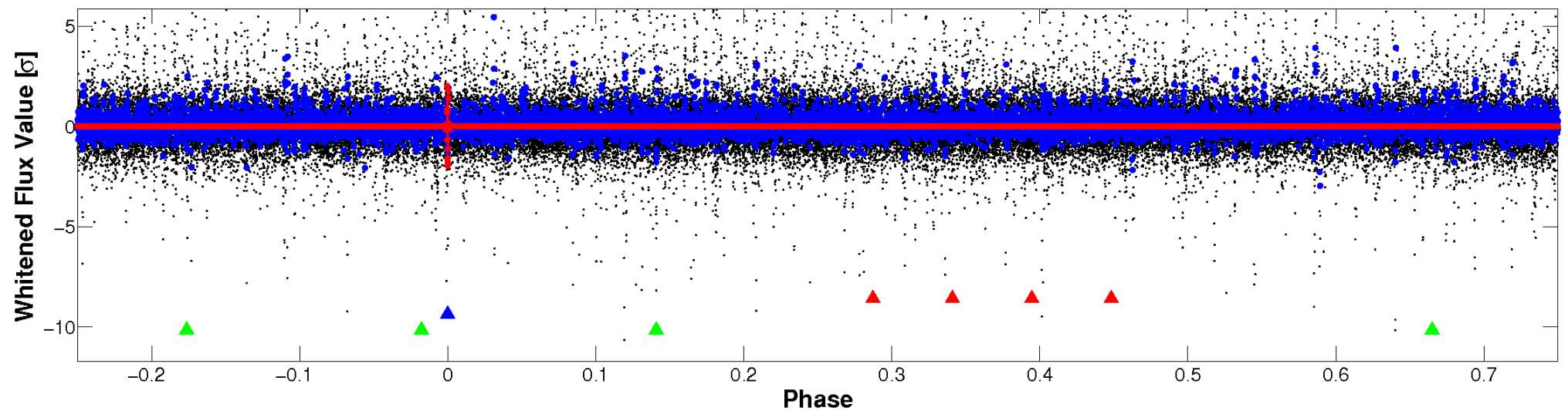


Non-Whitened Vs. Whitened Light Curve

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

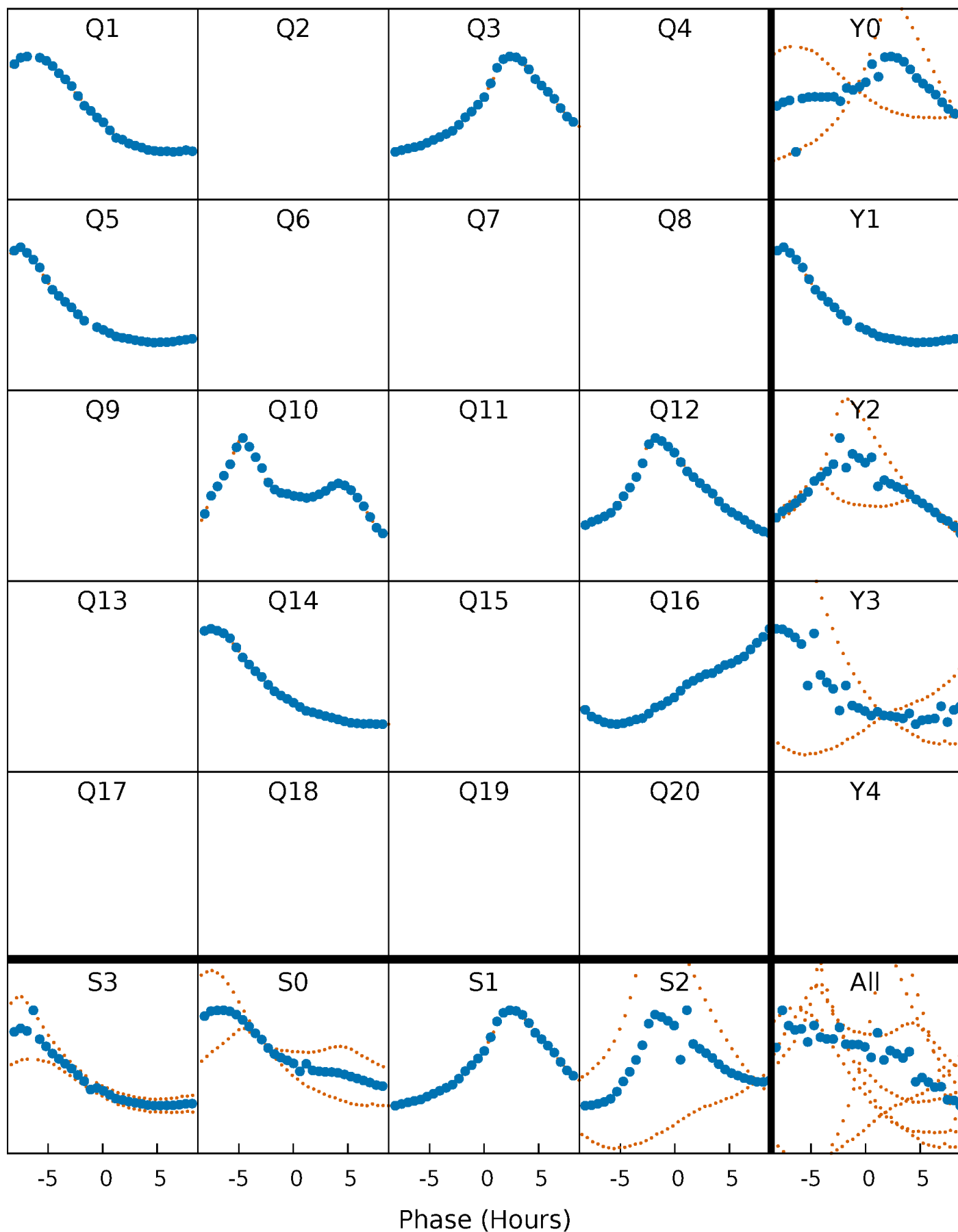


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



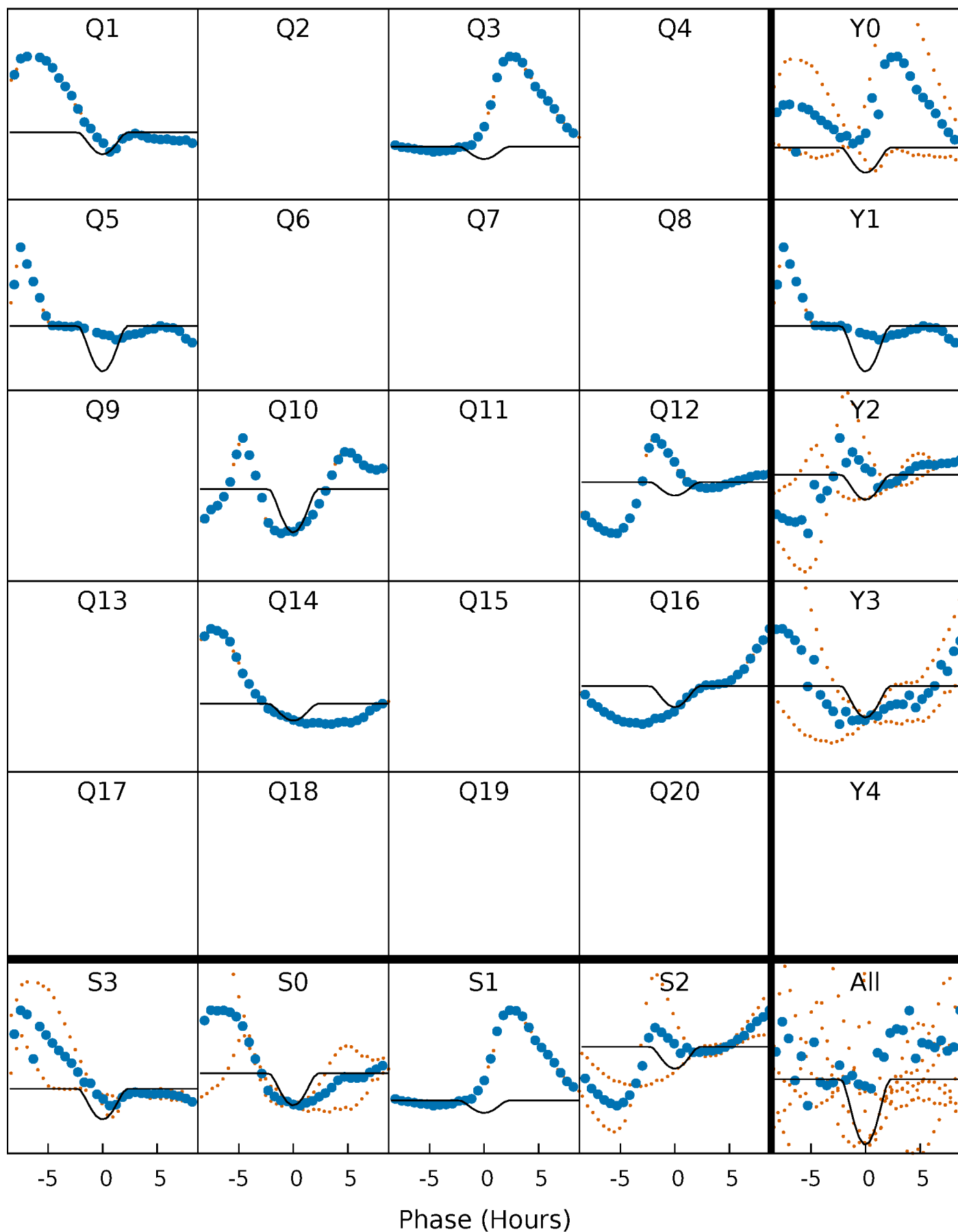
PDC Quarter-Phased Transit Curves

TCE 012350399-02 $P=191.769781$ Days $T_0=149.577800$ (BKJD)



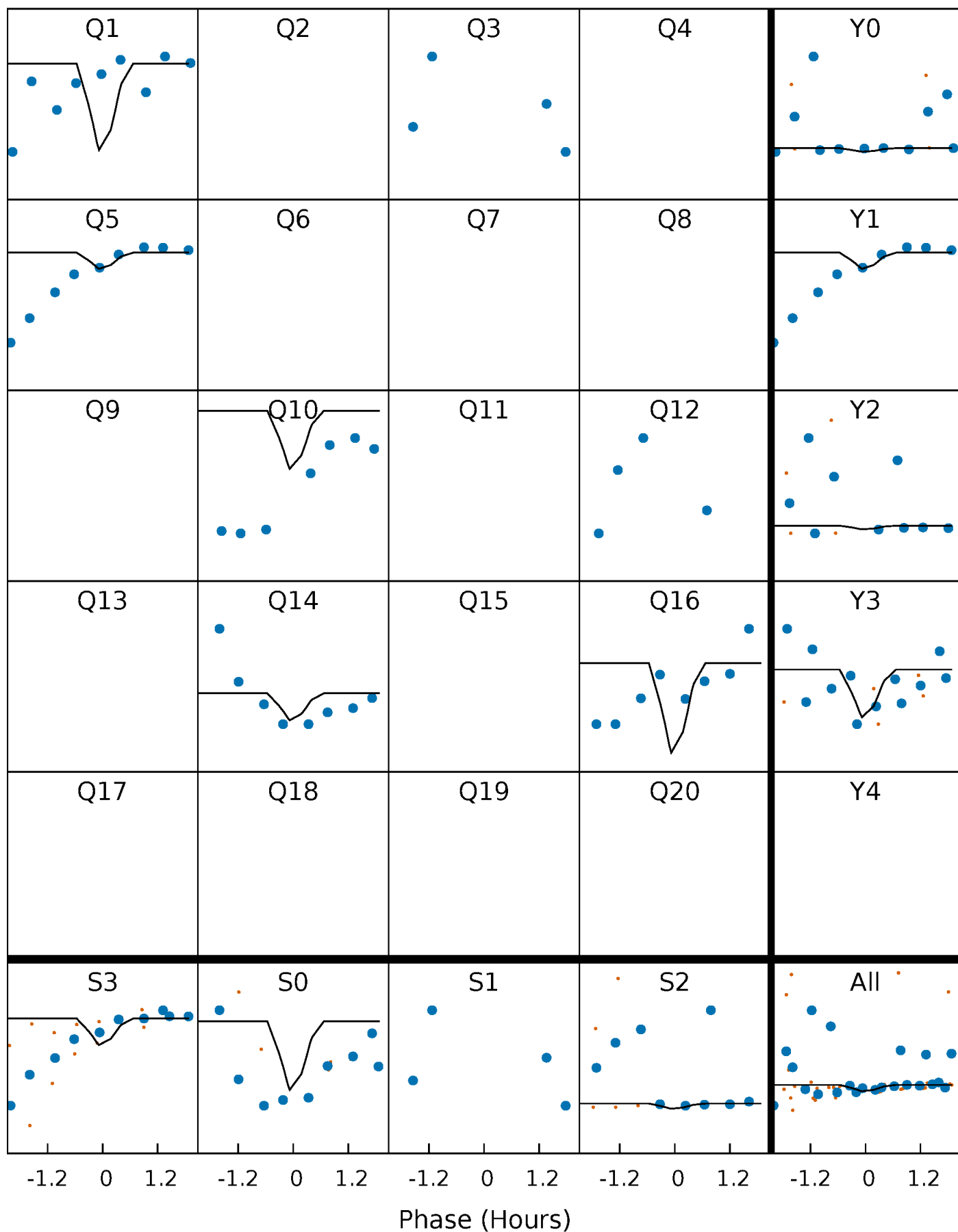
DV Quarter-Phased Transit Curves

TCE 012350399-02 $P=191.769781$ Days $T_0=149.577800$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

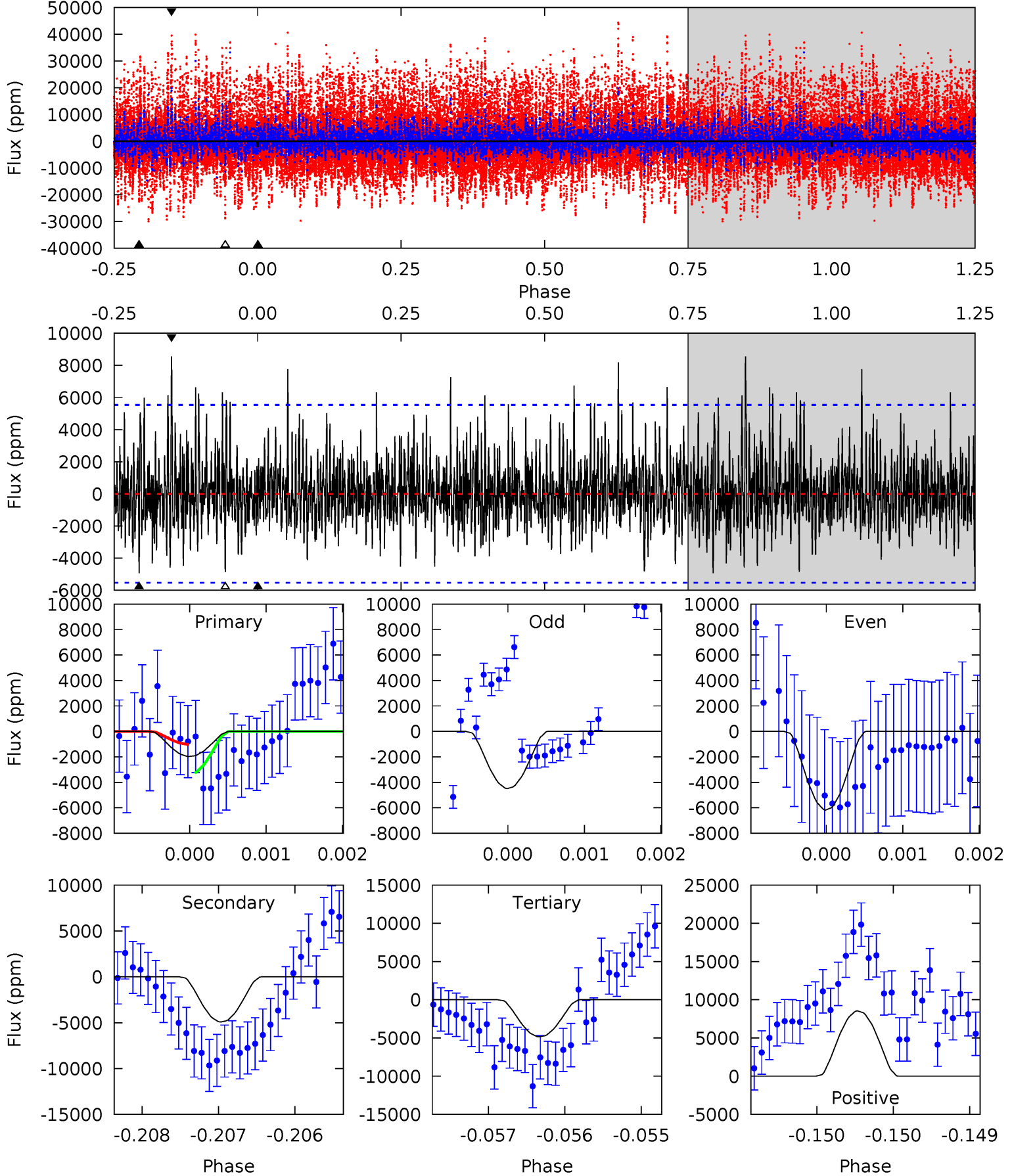
TCE 012350399-02 P=191.729489 Days $T_0=149.722221$ (BKJD)



DV Model-Shift Uniqueness Test

012350399-02, P = 191.769781 Days, E = 149.577800 Days

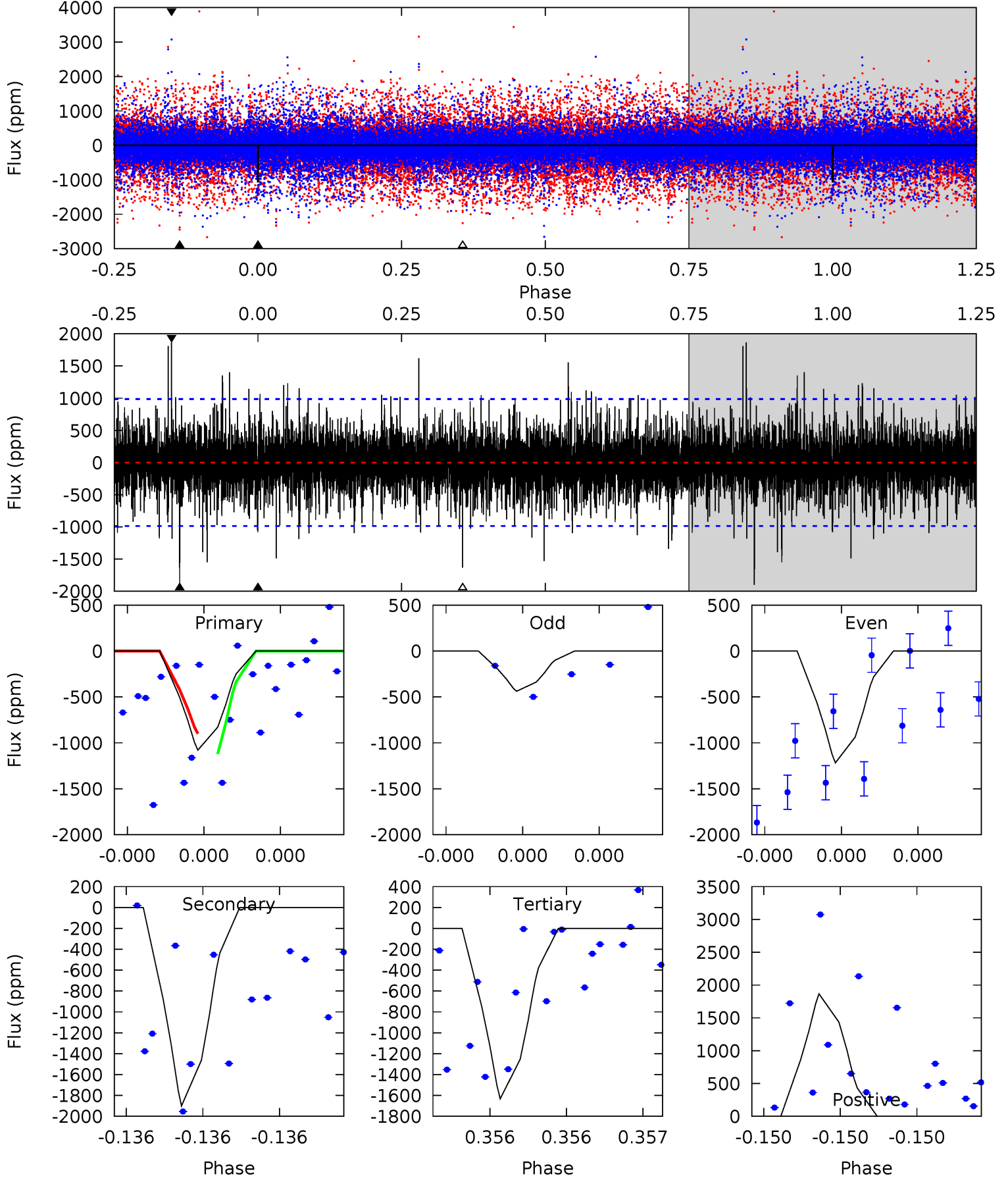
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.94	4.86	4.79	8.43	5.45	3.30	1.72	-2.85	-6.49	0.07	-3.57	0.73	-0.03	0.63	1.13



Alt Model-Shift Uniqueness Test

012350399-02, P = 191.729489 Days, E = 149.722221 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.25	11.0	9.46	10.8	5.72	3.70	1.64	-3.21	-4.56	1.56	0.20	0.97	1.19	0.50	0.63



Stellar Parameters For KIC 012350399

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7449^{+206}_{-336}	$3.862^{+0.337}_{-0.112}$	$-0.160^{+0.250}_{-0.350}$	$2.587^{+0.454}_{-0.983}$	$1.777^{+0.173}_{-0.403}$	$0.145^{+0.379}_{-0.051}$
	+3%/-5%	+9%/-3%	+156%/-219%	+18%/-38%	+10%/-23%	+262%/-35%
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 012350399-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-4932 ± 1015	$40.78^{+37.89}_{-25.47}$	805^{+60}_{-70}	4884^{+3145}_{-999}	927^{+5835}_{-663}
Alt.	-1901 ± 173	$27.44^{+32.10}_{-18.46}$	814^{+56}_{-83}	4794^{+3415}_{-1135}	847^{+6542}_{-664}

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

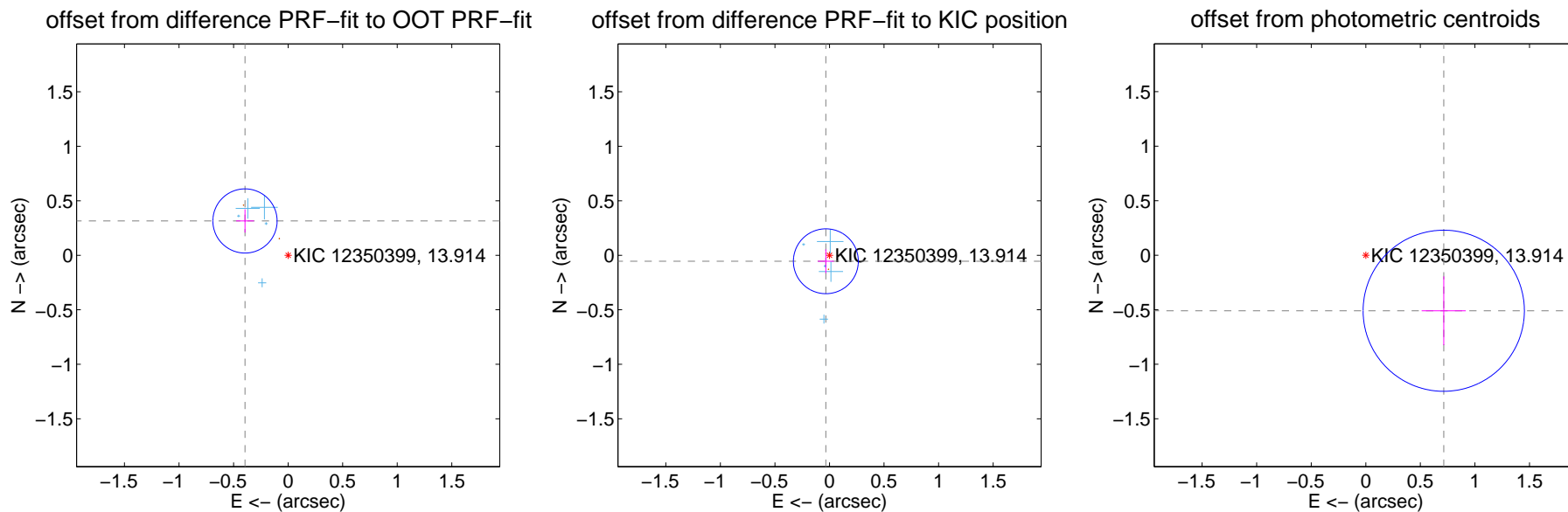
DV Centroid Data

Supplemental centroid analysis for 012350399-02. Kepler magnitude: 13.91. Transit SNR 10.26

There are 5 quarters with good PRF difference image offsets

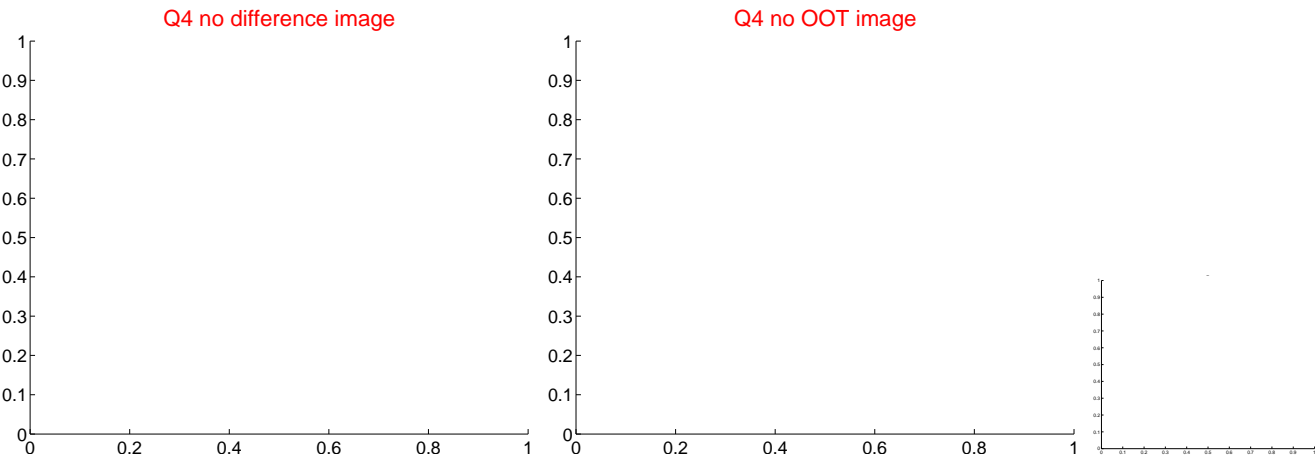
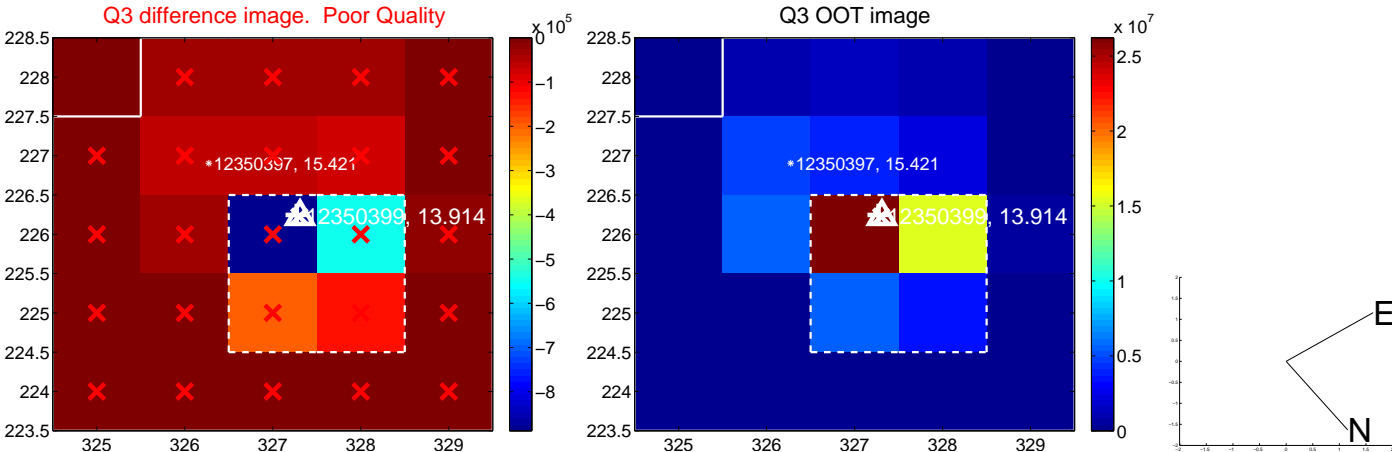
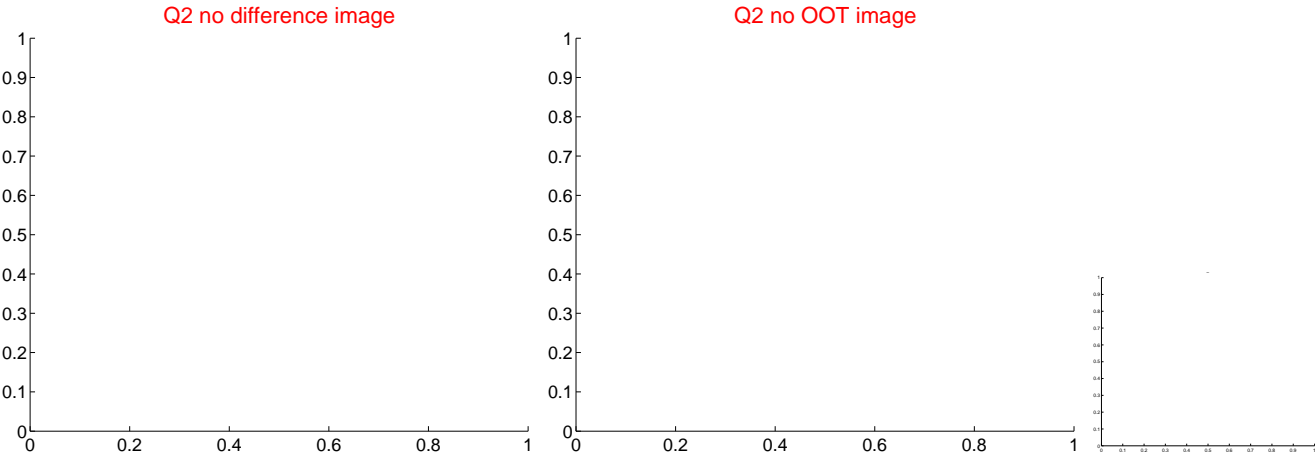
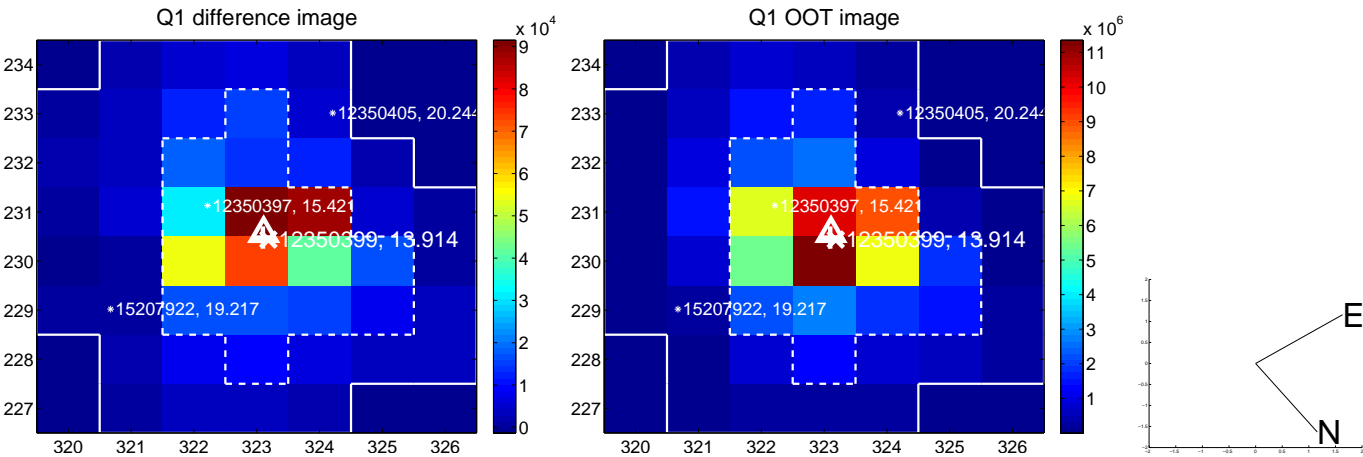
The direct PRF centroid is offset from the target star catalog position by about 0.69 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.505 ± 0.098	5.15	0.395 ± 0.082	0.315 ± 0.107
PRF-fit source offset from KIC position	0.064 ± 0.099	0.65	0.033 ± 0.073	-0.055 ± 0.109
photometric centroid source offset	0.88 ± 0.25	3.56	-0.71 ± 0.20	-0.51 ± 0.32

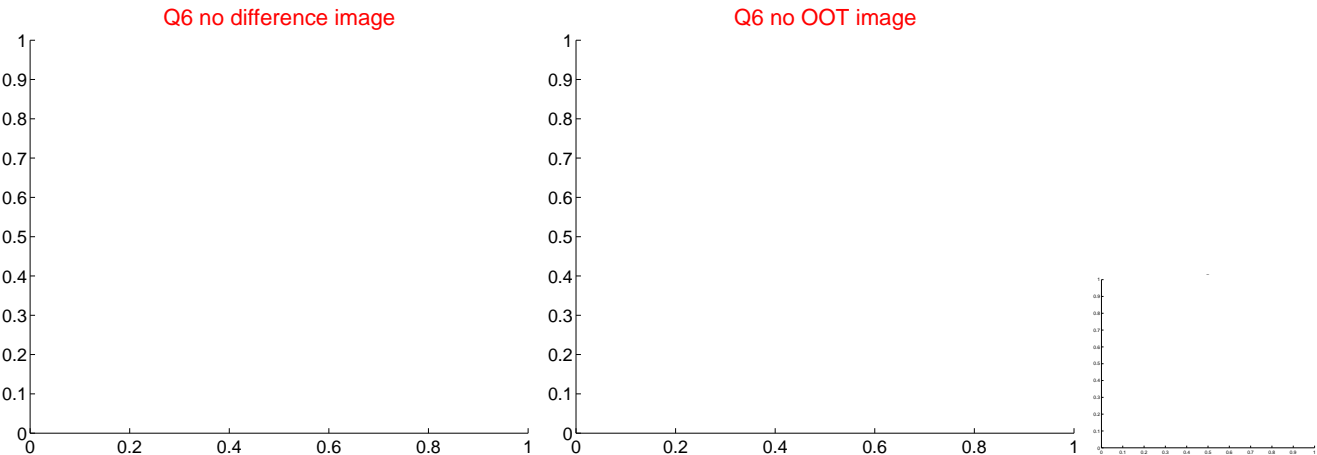
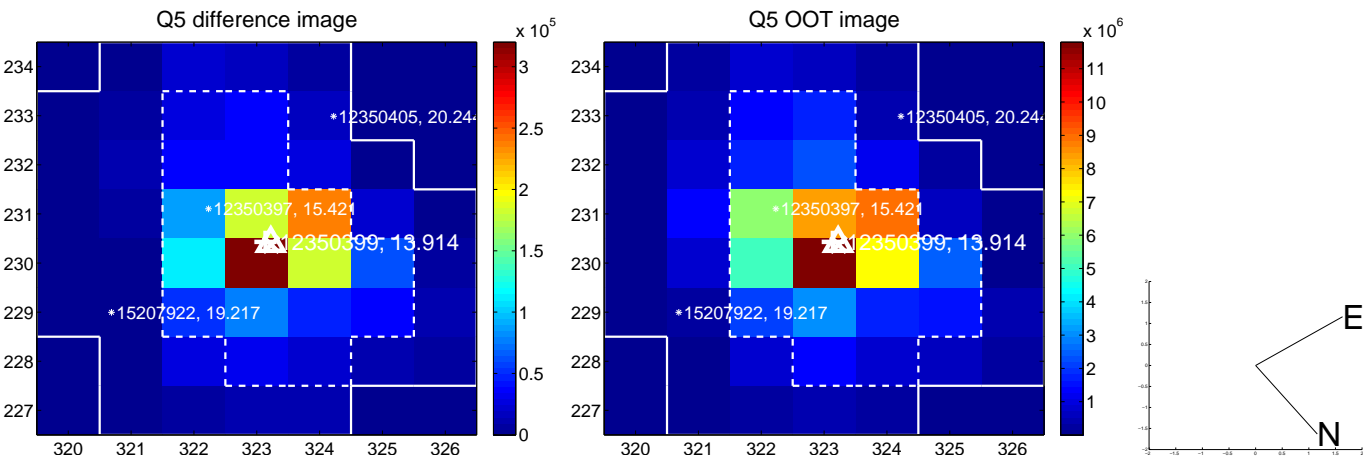


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

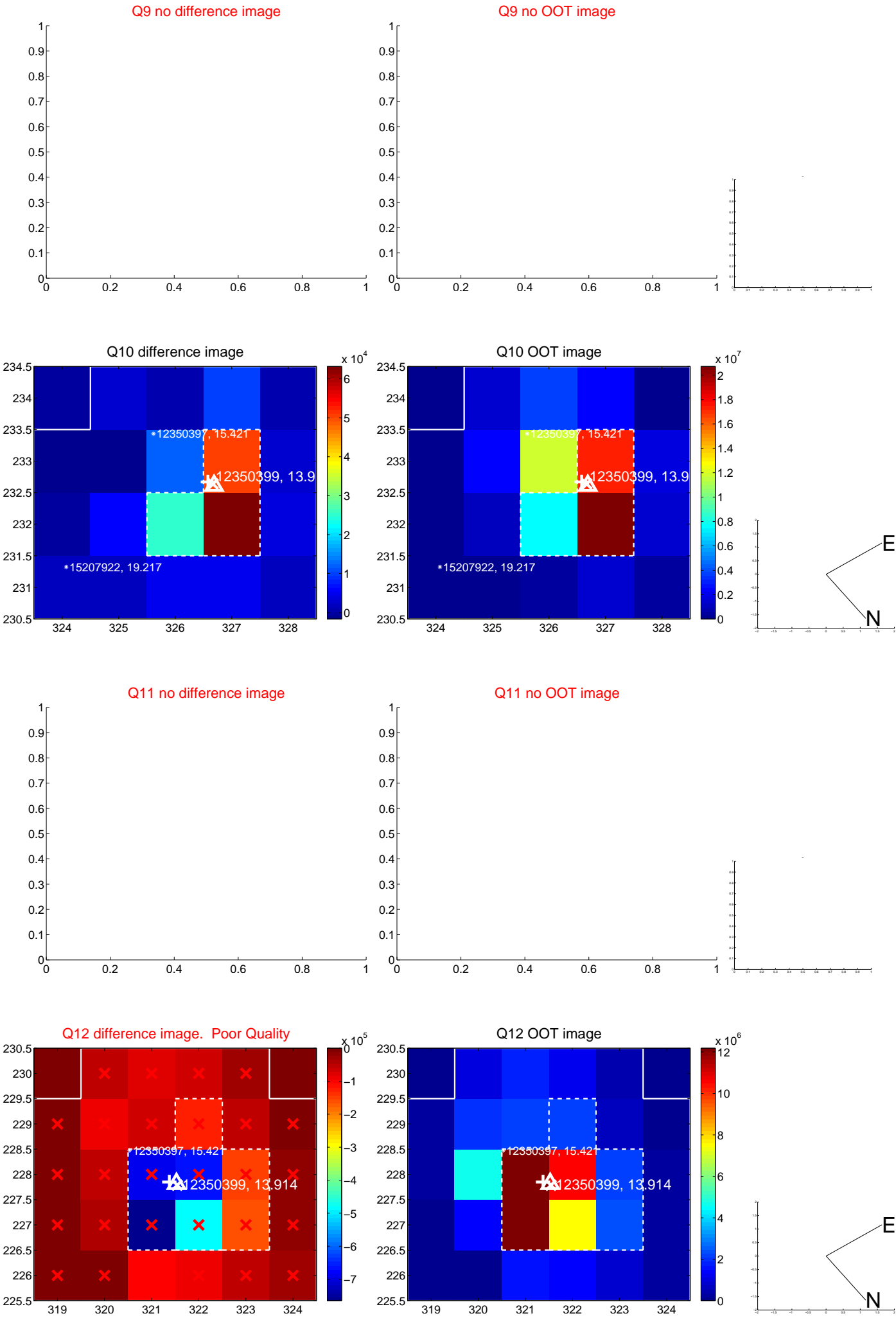
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

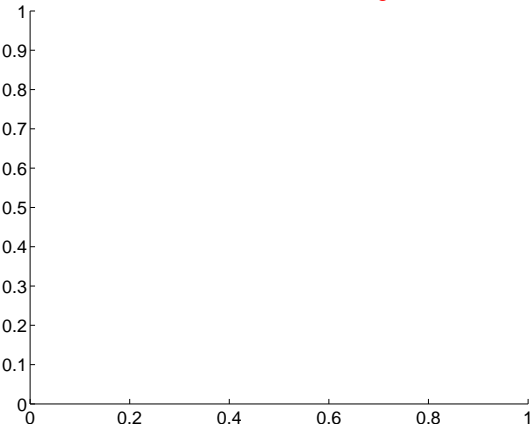


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

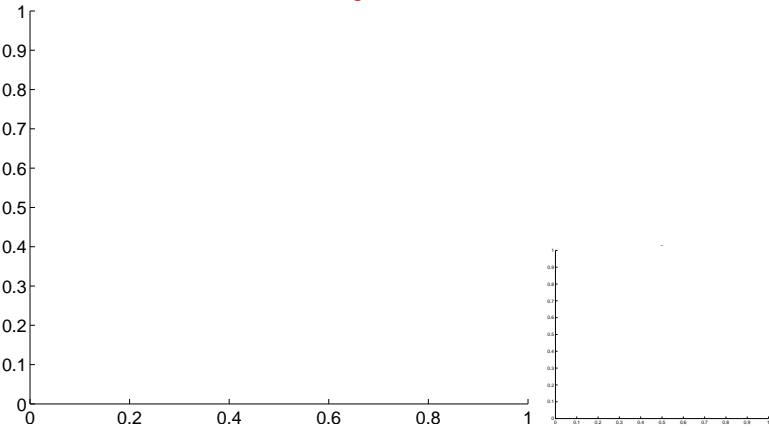


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

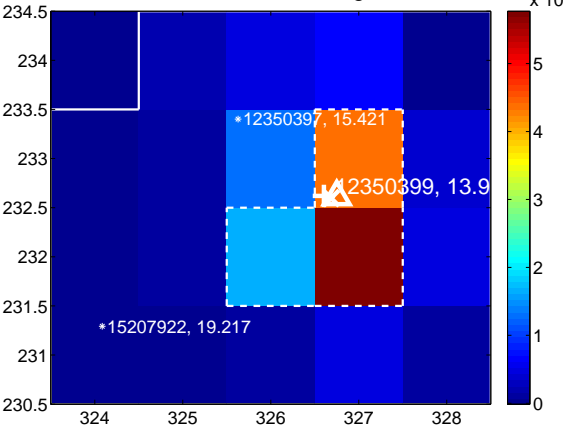
Q13 no difference image



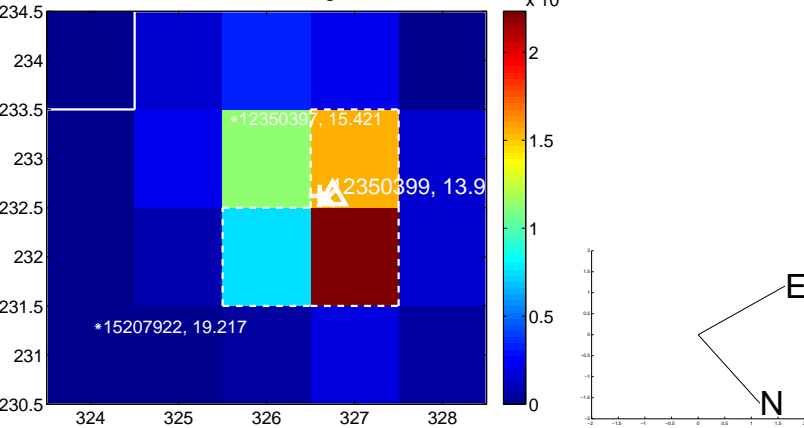
Q13 no OOT image



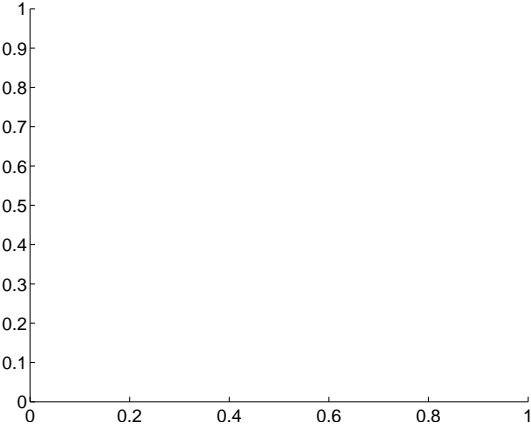
Q14 difference image



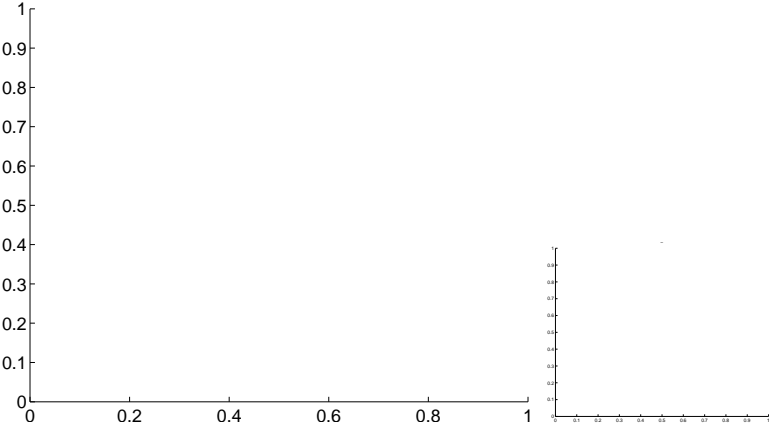
Q14 OOT image



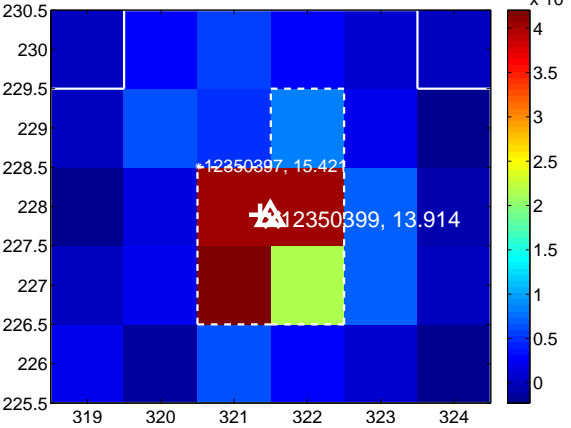
Q15 no difference image



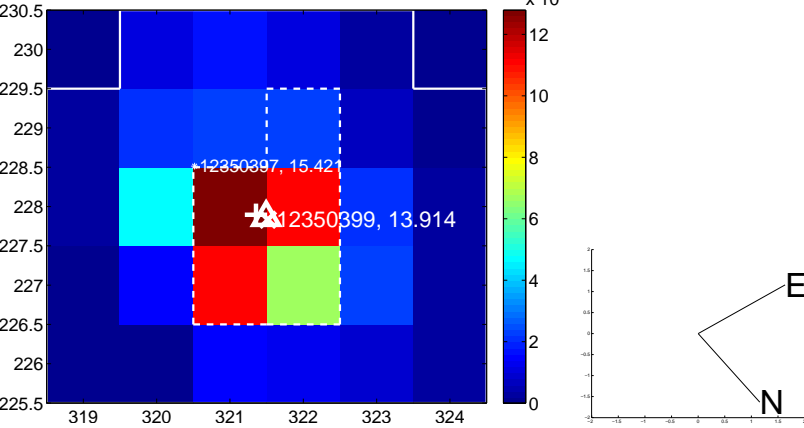
Q15 no OOT image



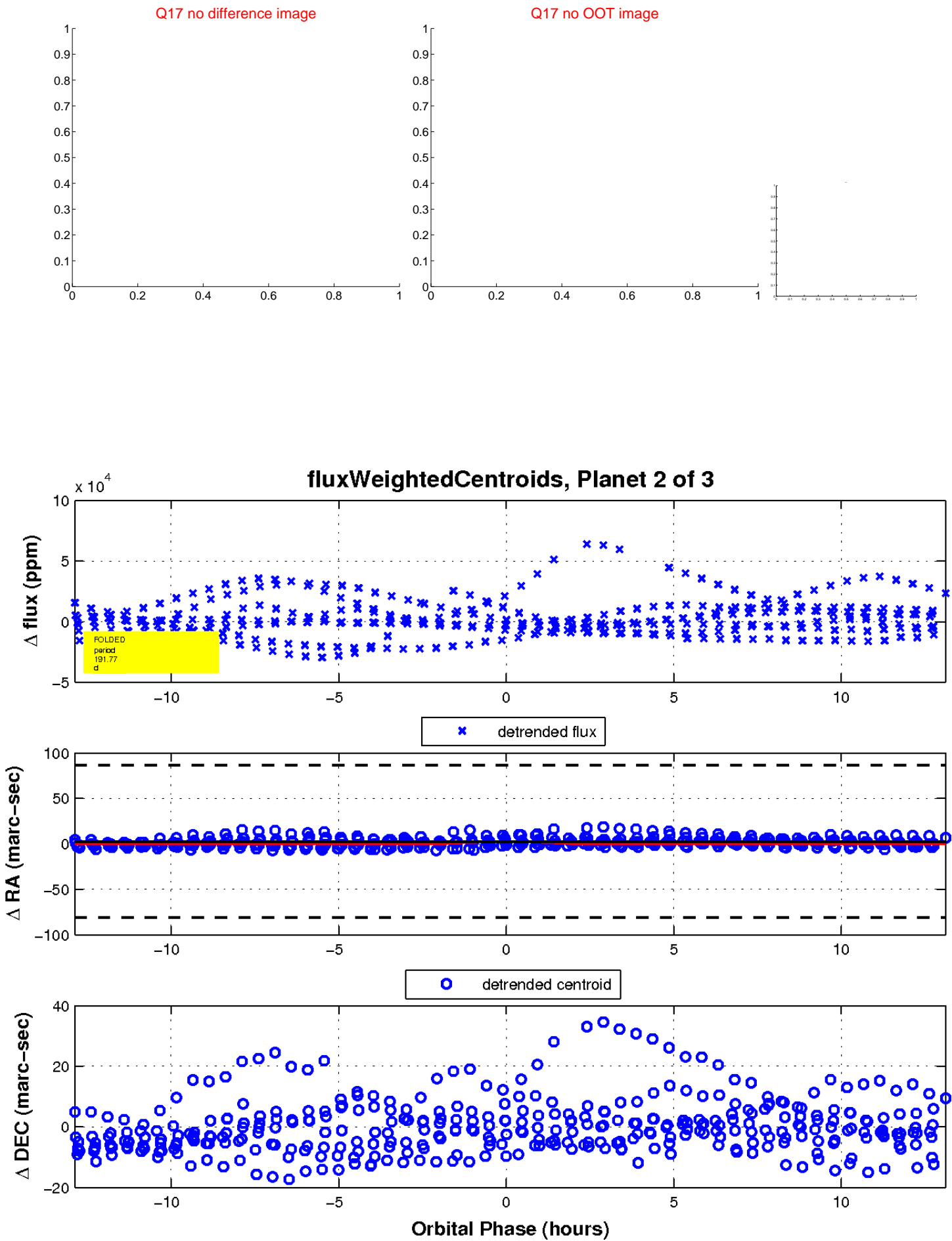
Q16 difference image



Q16 OOT image

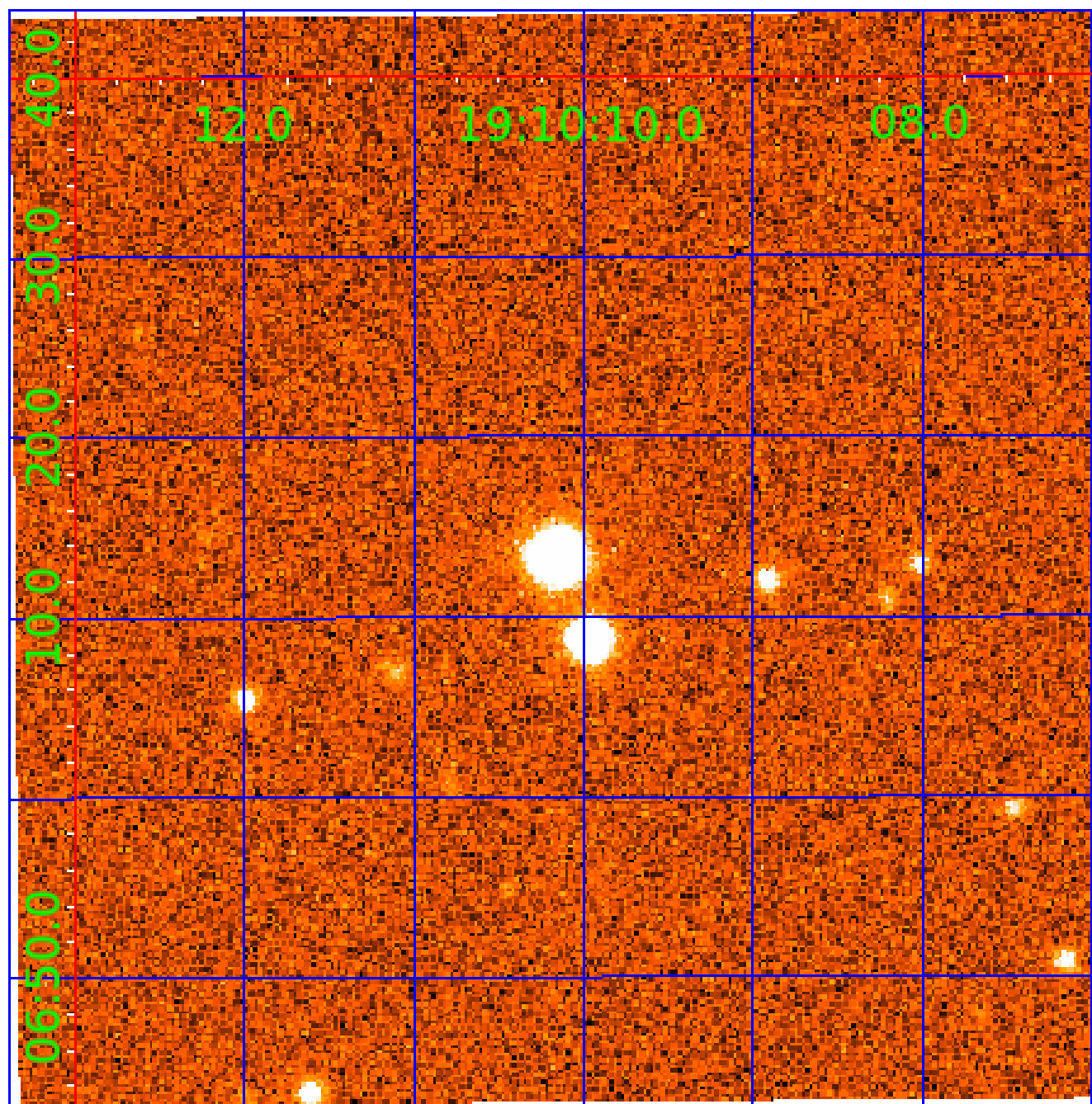


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 012350399

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})
012350399-01	OBS	No	393.831085	204.672952	4917.1	11.136	43.0	5.2	2.59	7449	19.80	11.38
012350399-02	OBS	No	191.769781	149.577800	7651.2	4.375	24.3	10.3	2.59	7449	40.29	29.70
012350399-03	OBS	No	353.124077	368.370010	1945.2	3.500	26.5	-1.0	2.59	7449	11.50	13.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012350399-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
012350399-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—HALO_GHOST
012350399-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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.

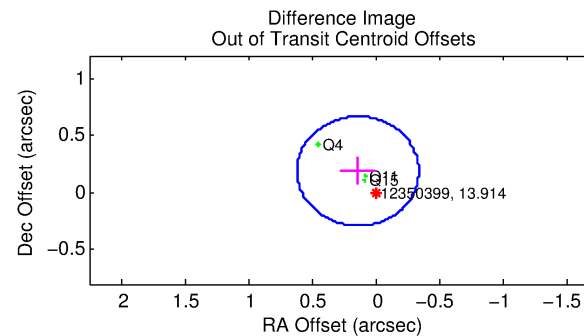
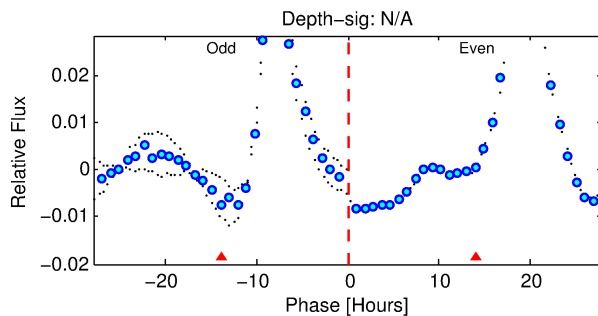
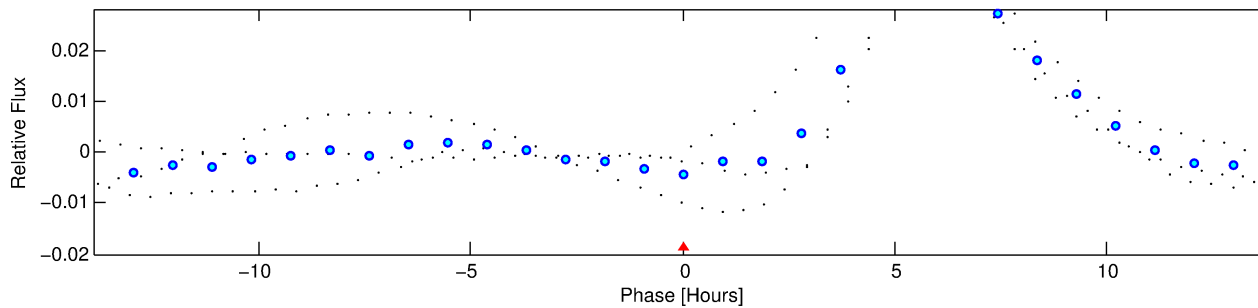
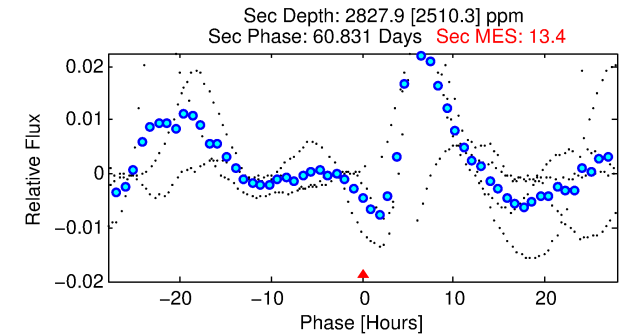
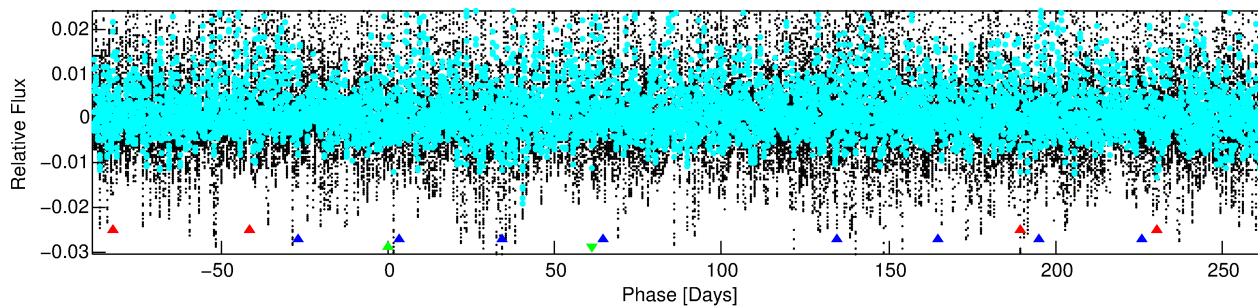
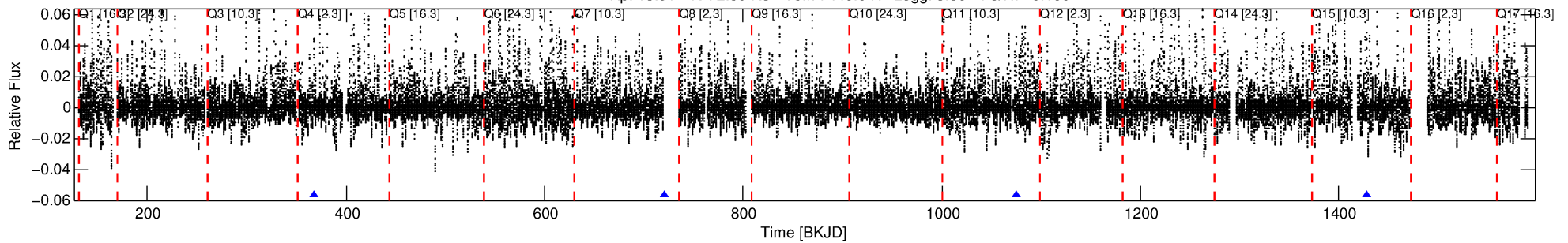
Ephemeris Match Information For 012350399-03

No Significant Match Found

DV One-Page Summary

KIC: 12350399 Candidate: 3 of 3 Period: 353.124 d

Kp: 13.91 R*: 2.59 Rs Teff: 7449.0 K Logg: 3.86 Fe/H: -0.160



TPS TCE Results:

Period = 353.12408 d
Epoch = 368.3700 BKJD

DV fit results are unavailable

DV Diagnostic Results:

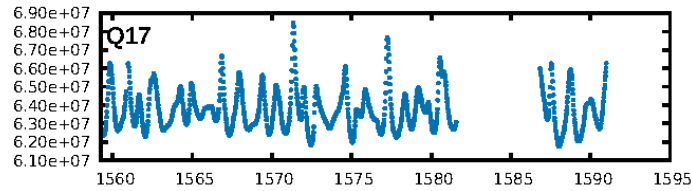
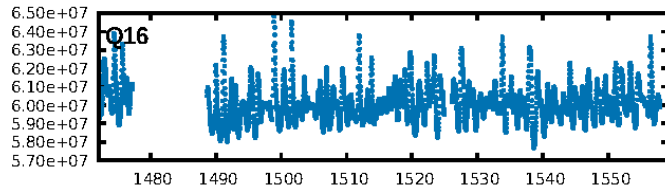
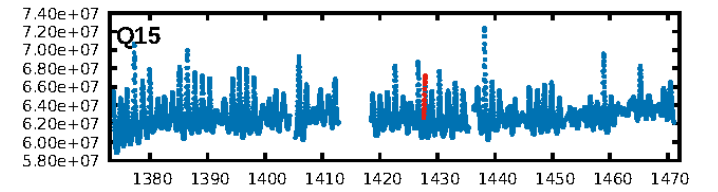
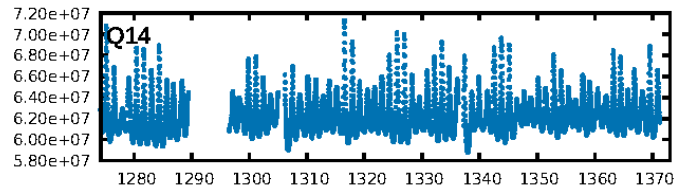
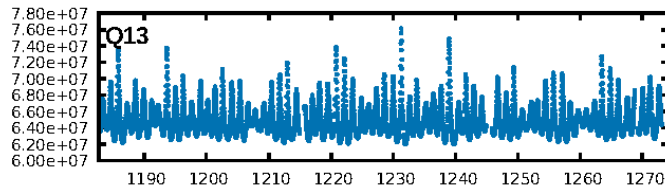
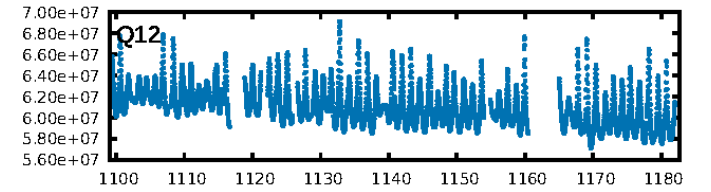
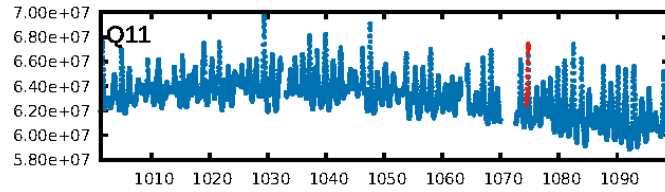
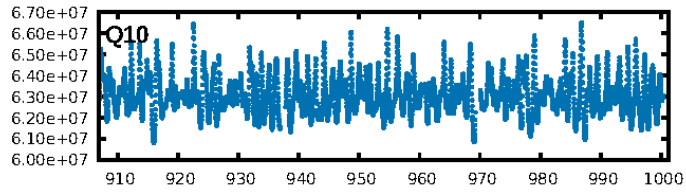
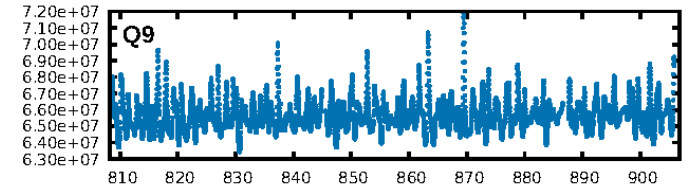
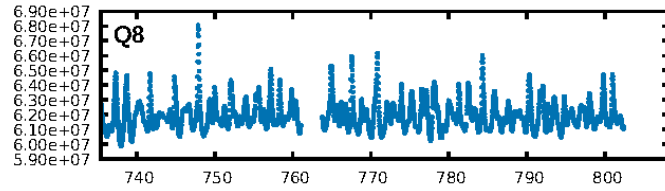
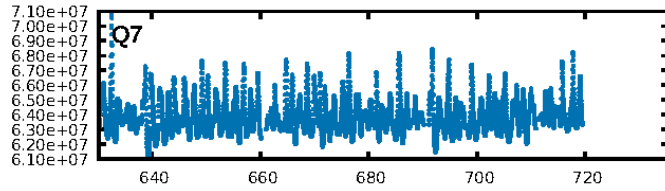
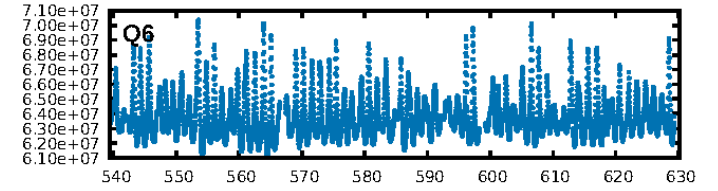
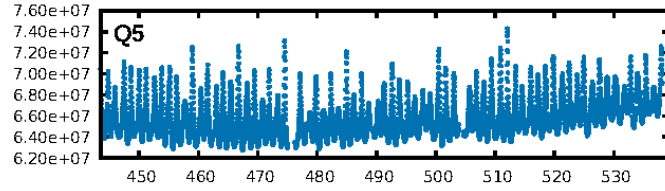
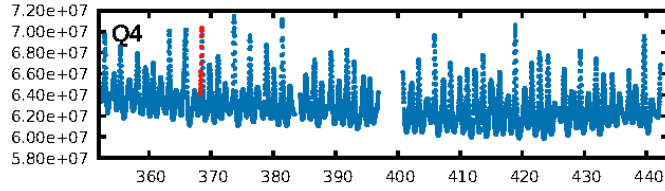
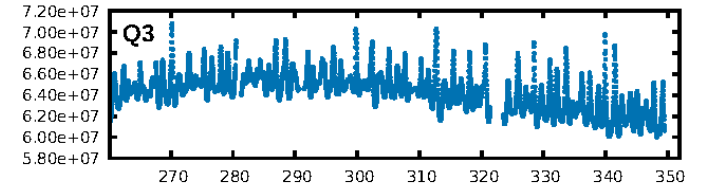
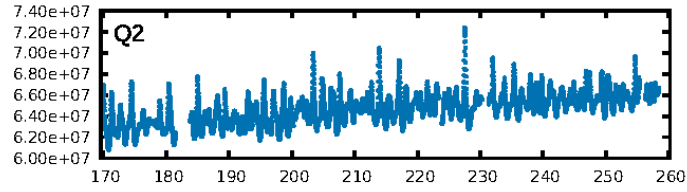
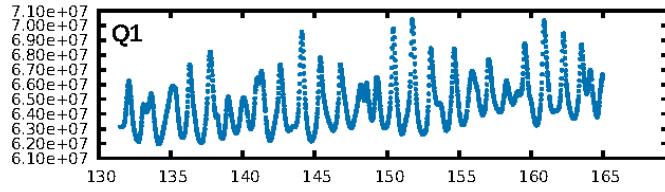
ShortPeriod-sig: 100.0% [691.16 σ]
LongPeriod-sig: 100.0% [83.69 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.437

Centroid-sig: N/A
Centroid-so: 0.183 arcsec [0.15 σ]
OotOffset-rm: 0.233 arcsec [1.46 σ]
KicOffset-rm: 0.079 arcsec [1.15 σ]
OotOffset-st: 0/2/1/0 [3]
KicOffset-st: 0/2/1/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

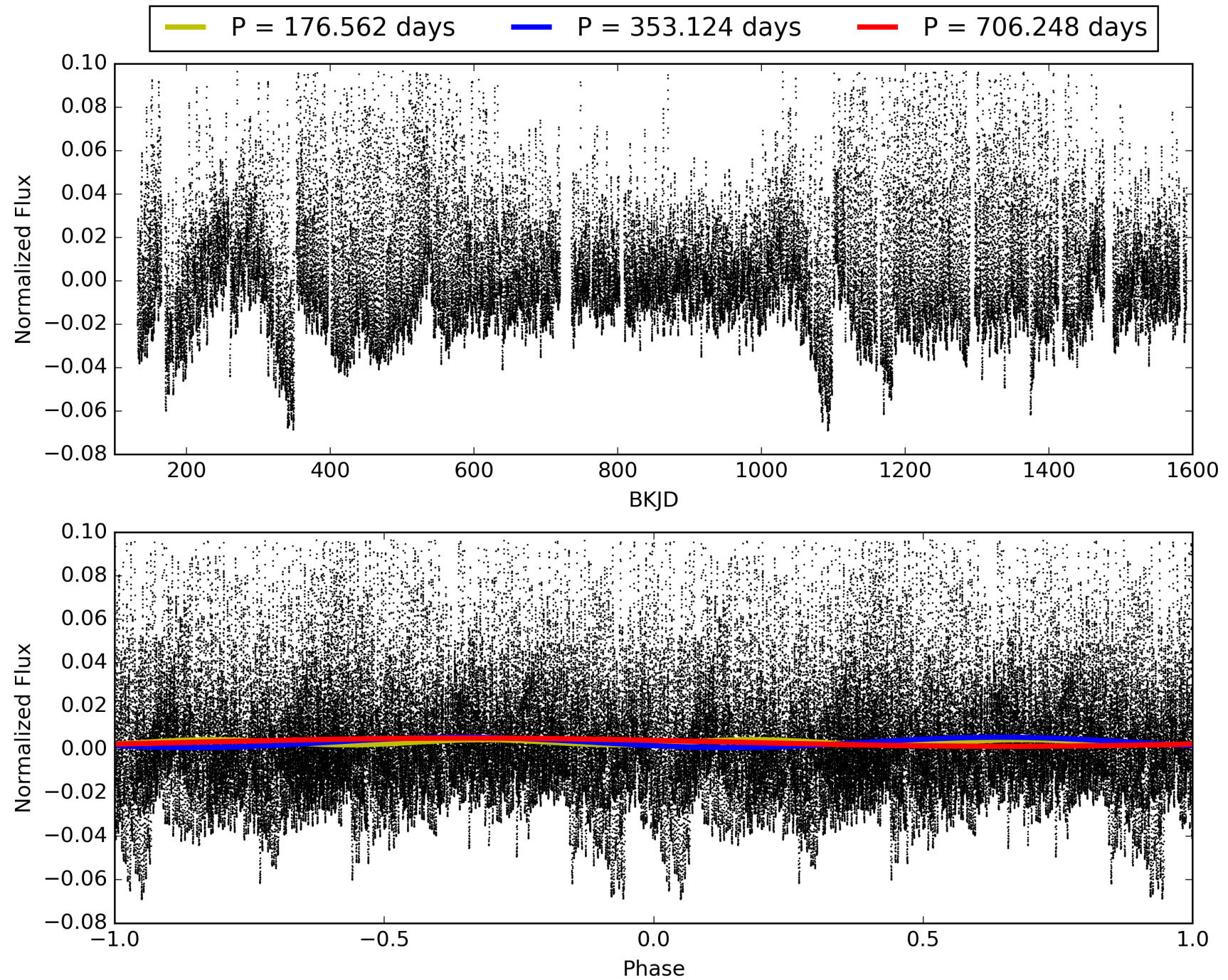
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 04:55:28 Z

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

TCE 012350399-03, PDC Light Curves

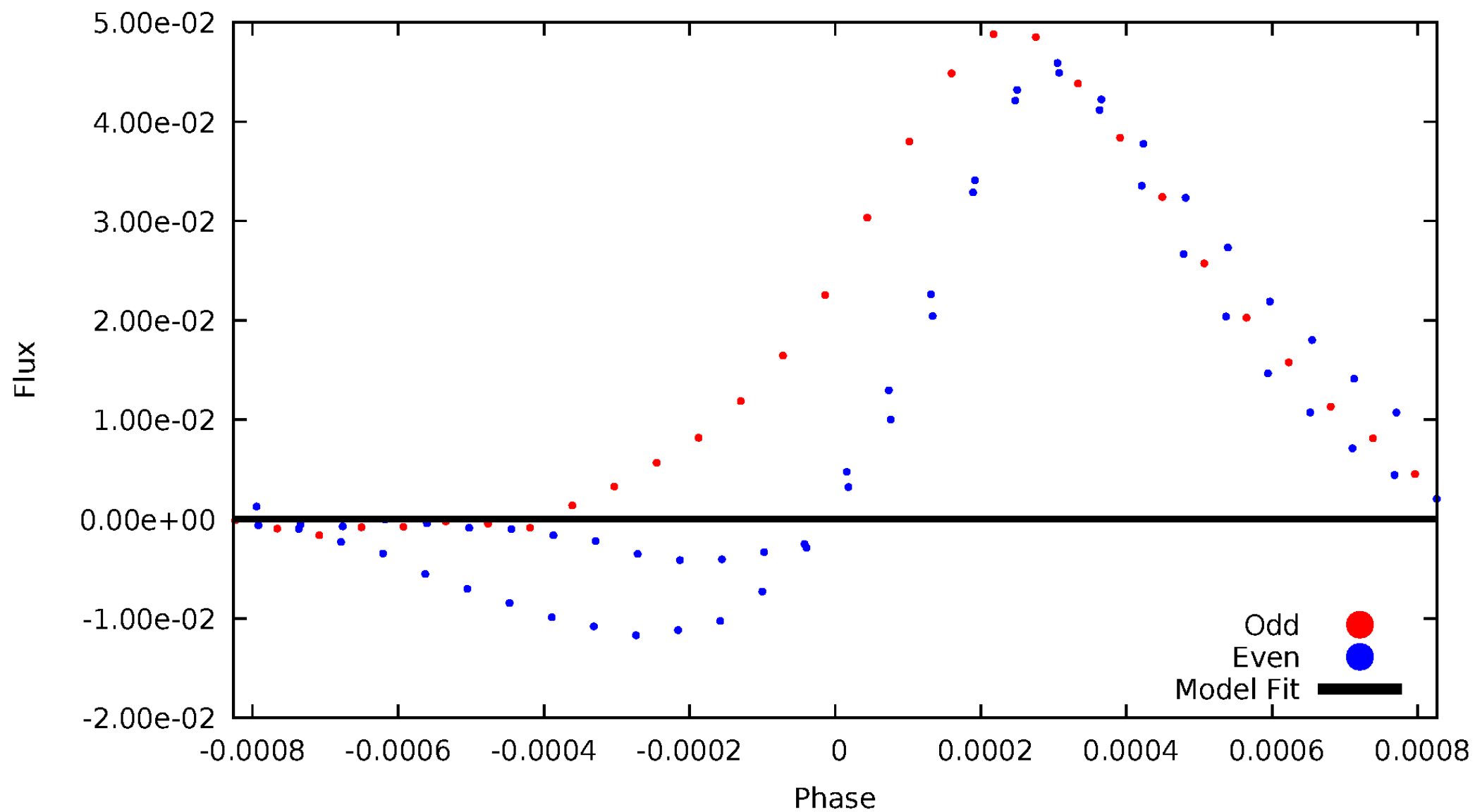


TCE 012350399-03



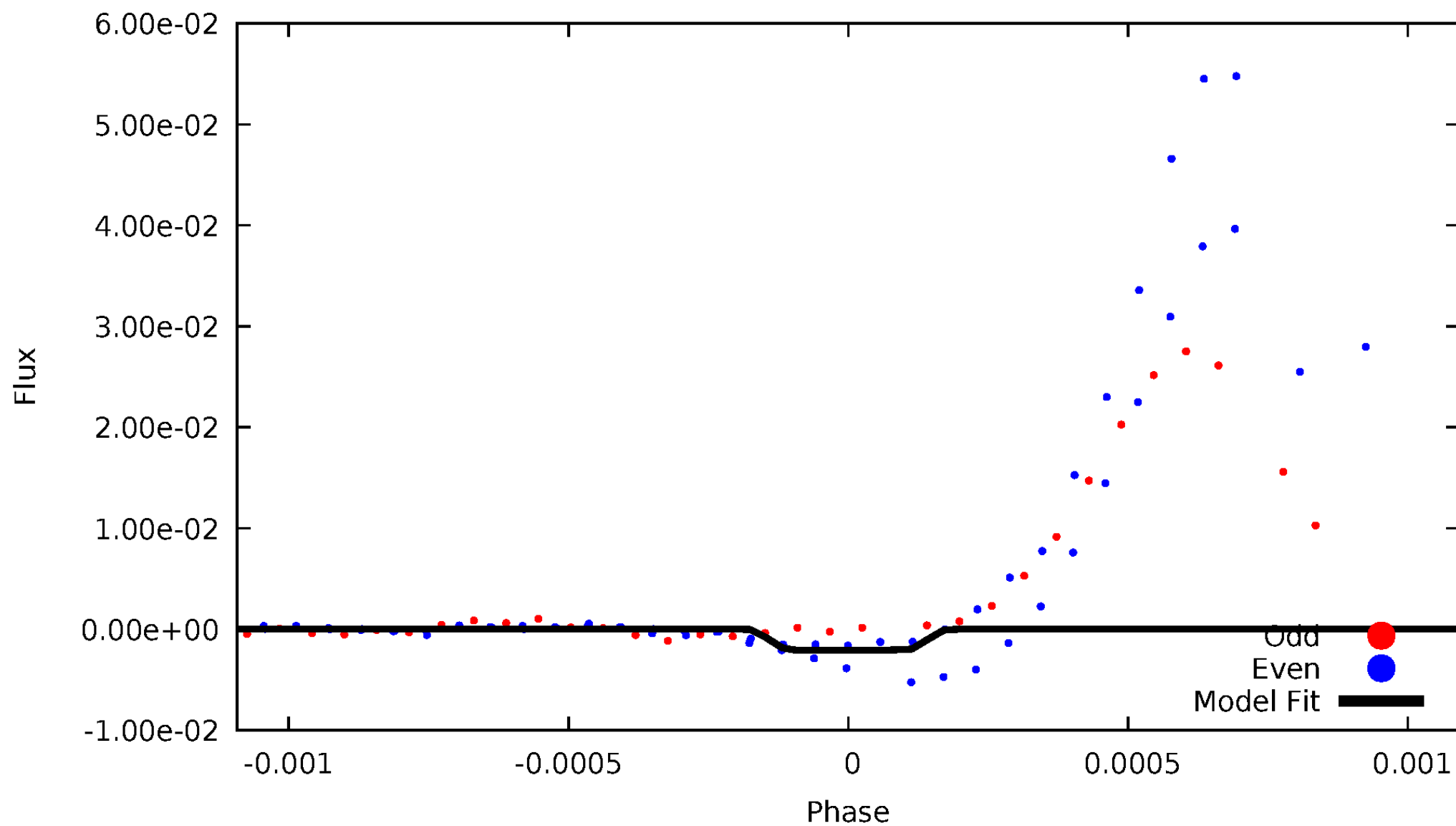
DV Odd/Even

TCE 012350399-03



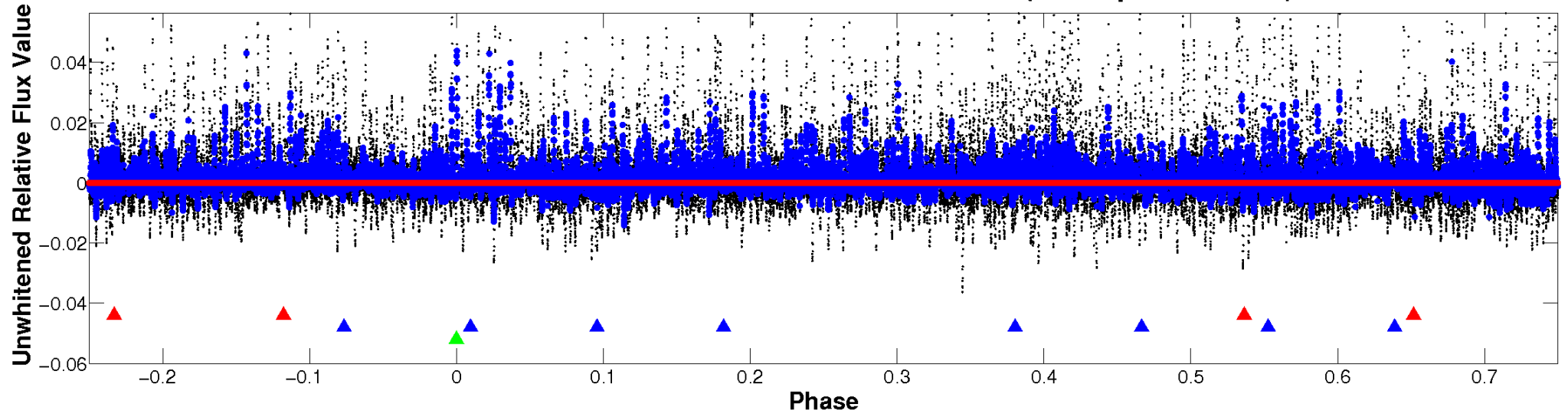
ALT Odd/Even

TCE 012350399-03

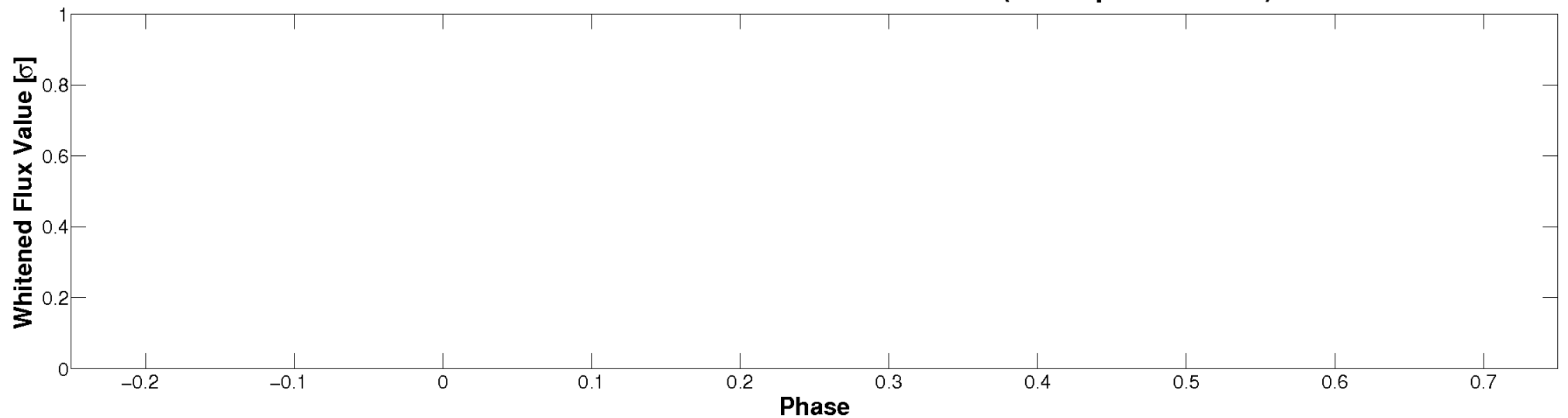


Non-Whitened Vs. Whitened Light Curve

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

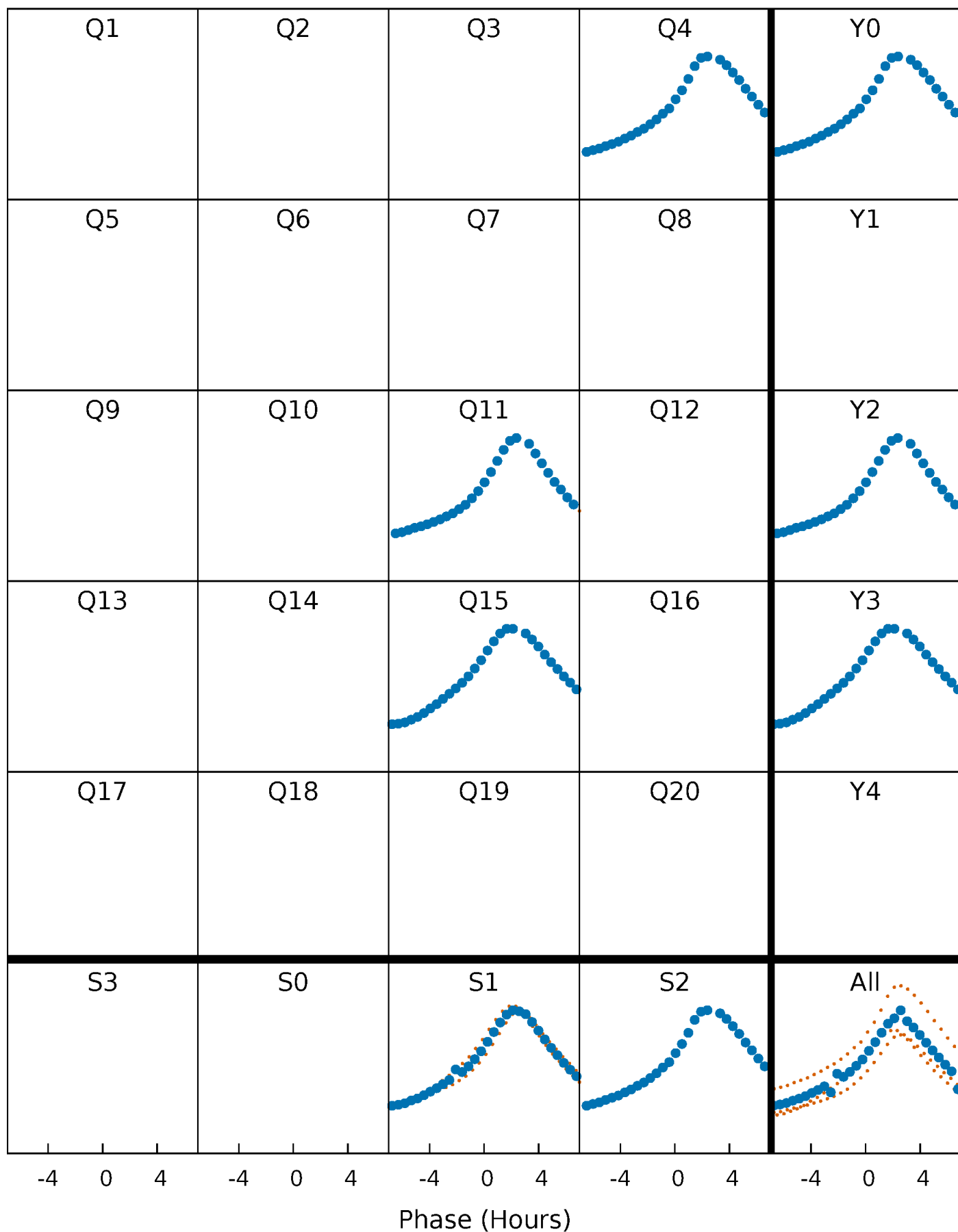


Planet 3 : Phased Whitened Flux Time Series (TPS Epoch/Period)



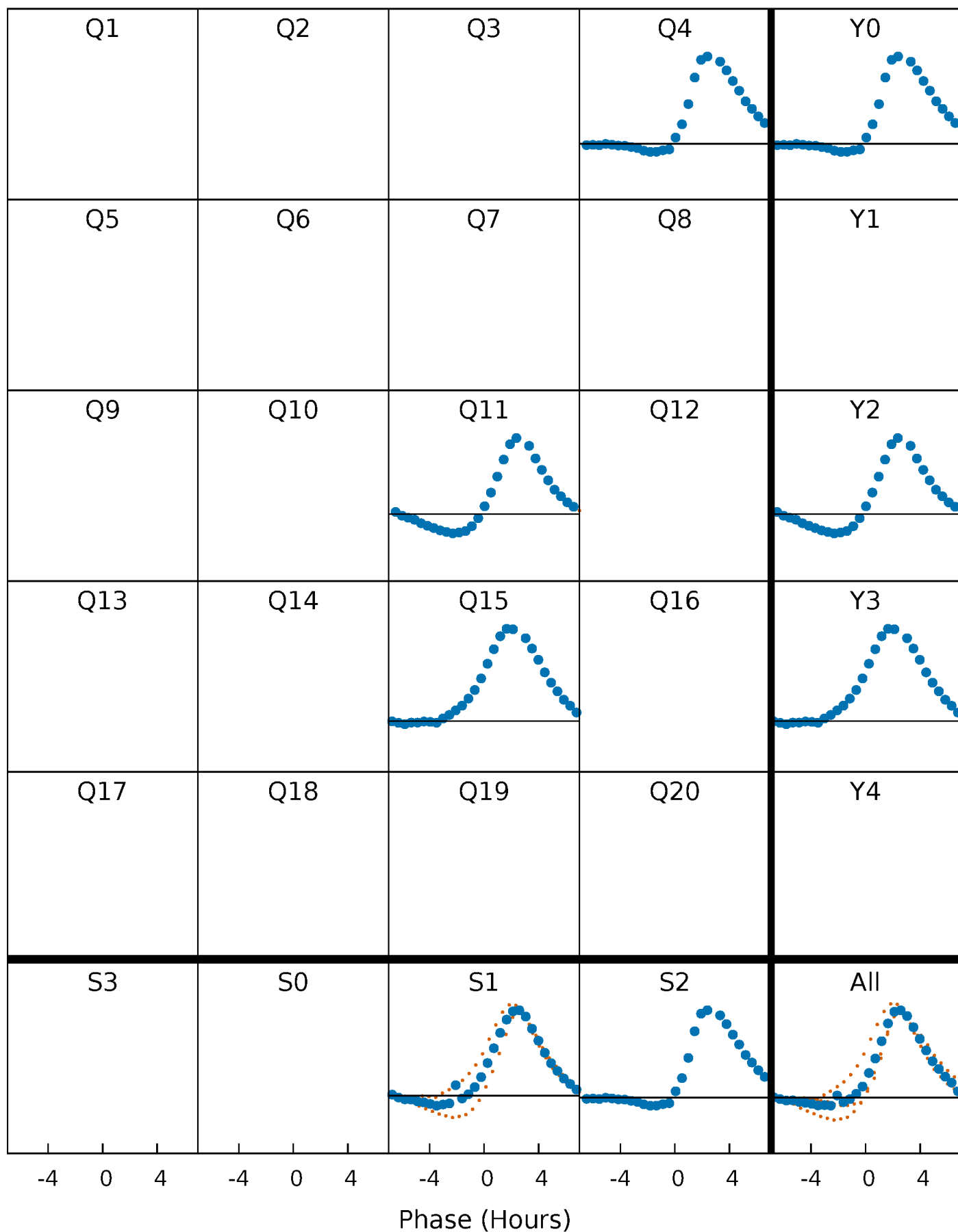
PDC Quarter-Phased Transit Curves

TCE 012350399-03 $P=353.124077$ Days $T_0=368.370010$ (BKJD)



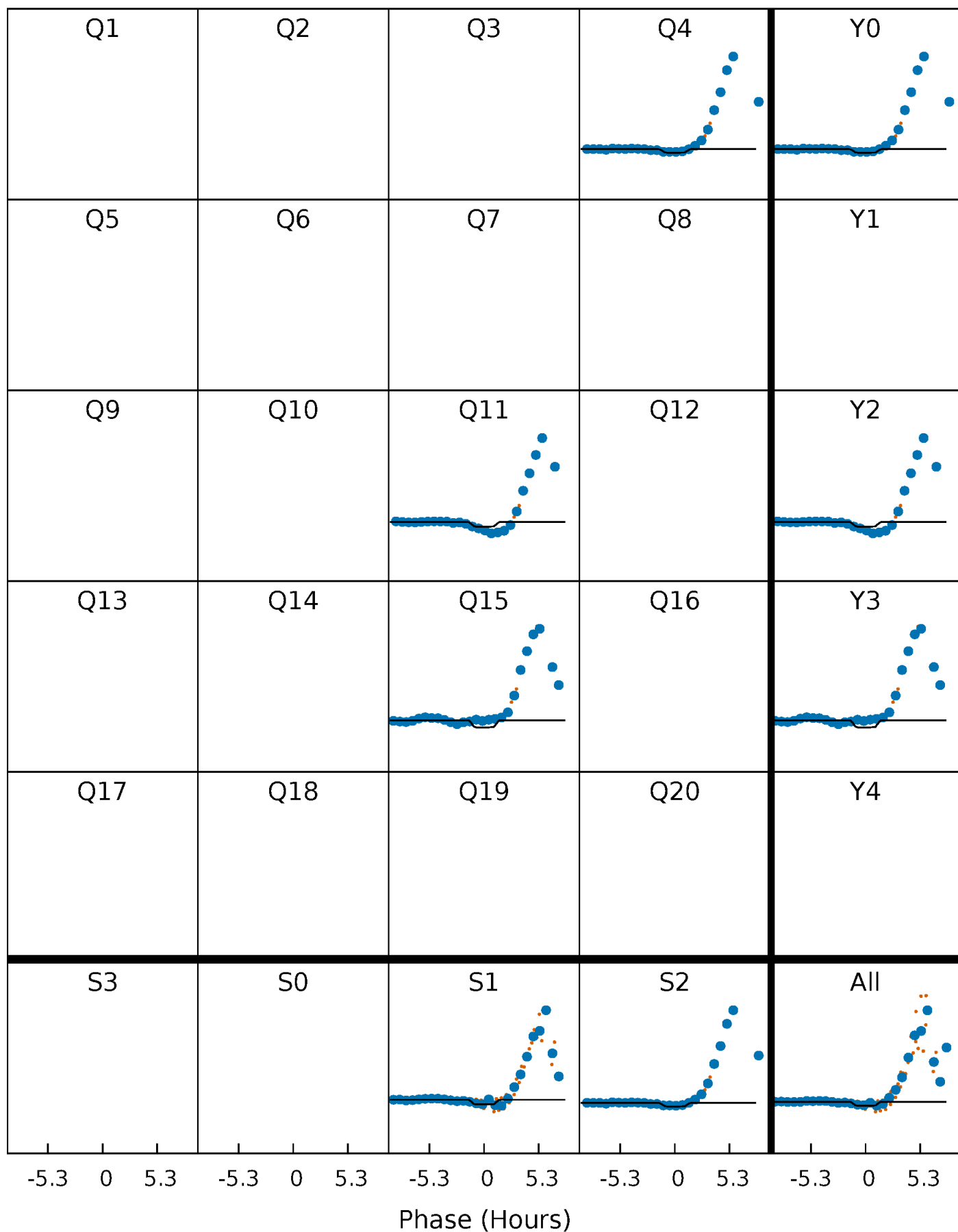
DV Quarter-Phased Transit Curves

TCE 012350399-03 P=353.124077 Days $T_0=368.370010$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

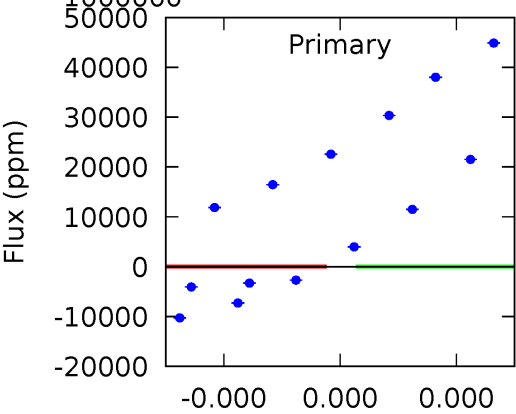
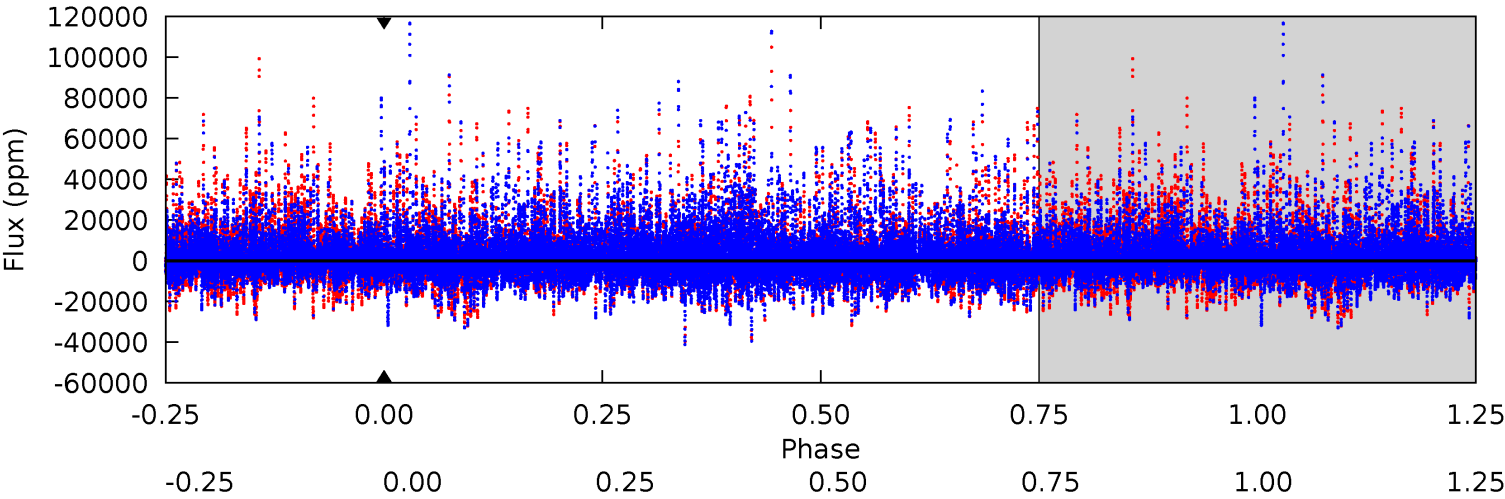
TCE 012350399-03 $P=353.124077$ Days $T_0=368.233731$ (BKJD)



DV Model-Shift Uniqueness Test

012350399-03, P = 353.124077 Days, E = 15.245933 Days

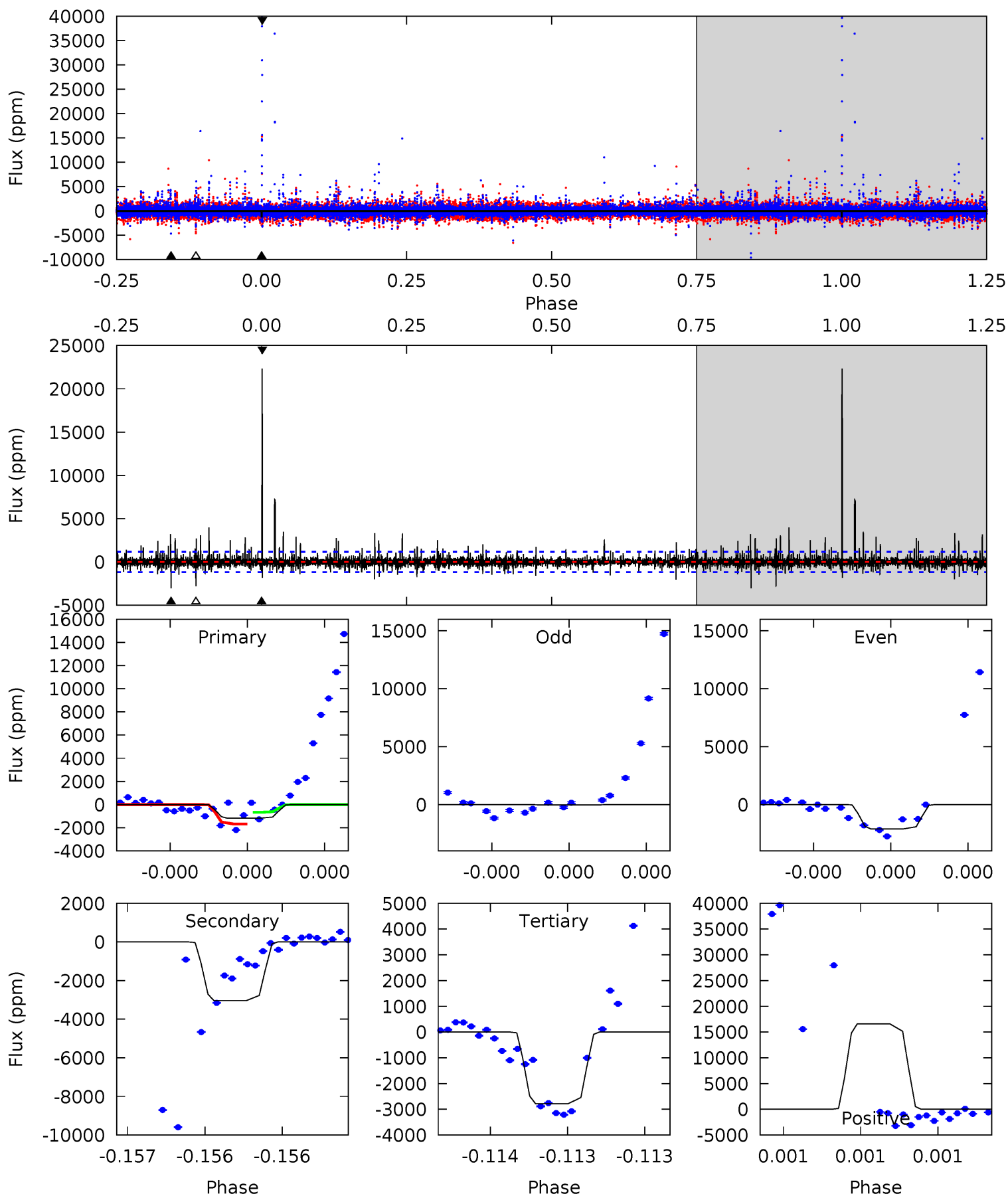
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

012350399-03, P = 353.124077 Days, E = 15.109654 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.66	14.6	13.4	79.9	5.64	3.58	2.15	-7.75	-74.3	1.22	-65.3	3.43	1.17	0.88	2.12



Stellar Parameters For KIC 012350399

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7449^{+206}_{-336}	$3.862^{+0.337}_{-0.112}$	$-0.160^{+0.250}_{-0.350}$	$2.587^{+0.454}_{-0.983}$	$1.777^{+0.173}_{-0.403}$	$0.145^{+0.379}_{-0.051}$
	+3%/-5%	+9%/-3%	+156%/-219%	+18%/-38%	+10%/-23%	+262%/-35%
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 012350399-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$23.29^{+22.46}_{-15.80}$	662^{+46}_{-62}	-3680^{+36993}_{-21165}	$-584.256^{+268090.483}_{-195929.672}$
Alt.	-3037 ± 208	$22.92^{+22.30}_{-15.21}$	663^{+49}_{-71}	5749^{+5638}_{-1391}	4412^{+33924}_{-3272}

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

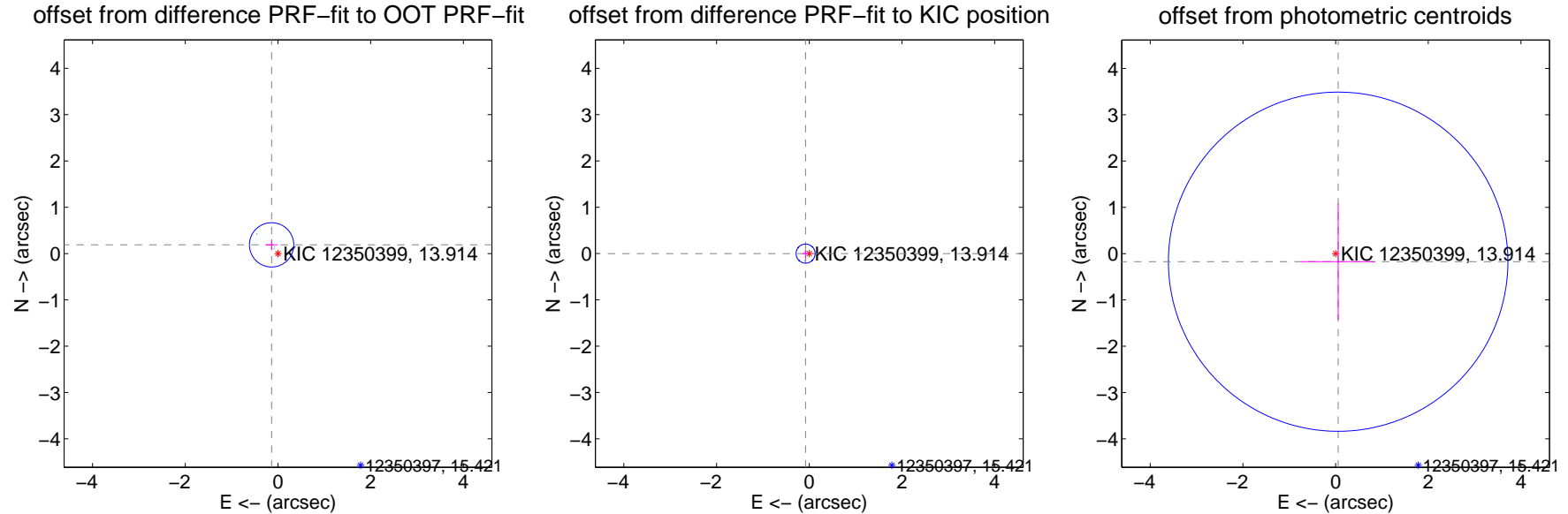
DV Centroid Data

Supplemental centroid analysis for 012350399-03. Kepler magnitude: 13.91. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

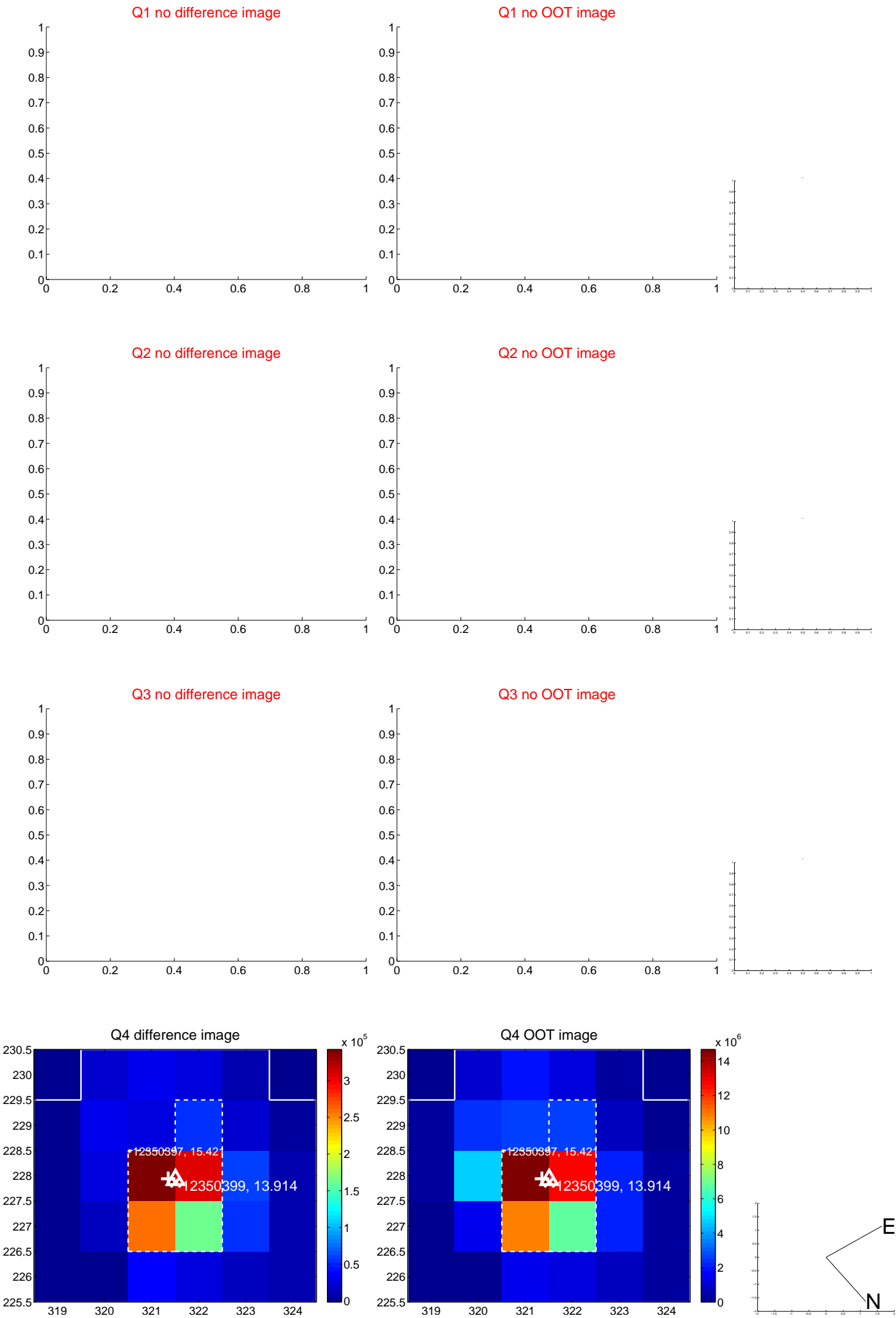
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.233 ± 0.159	1.46	0.137 ± 0.133	0.188 ± 0.117
PRF-fit source offset from KIC position	0.079 ± 0.069	1.15	0.079 ± 0.069	-0.001 ± 0.095
photometric centroid source offset	0.18 ± 1.22	0.15	-0.06 ± 0.80	-0.17 ± 1.26



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.

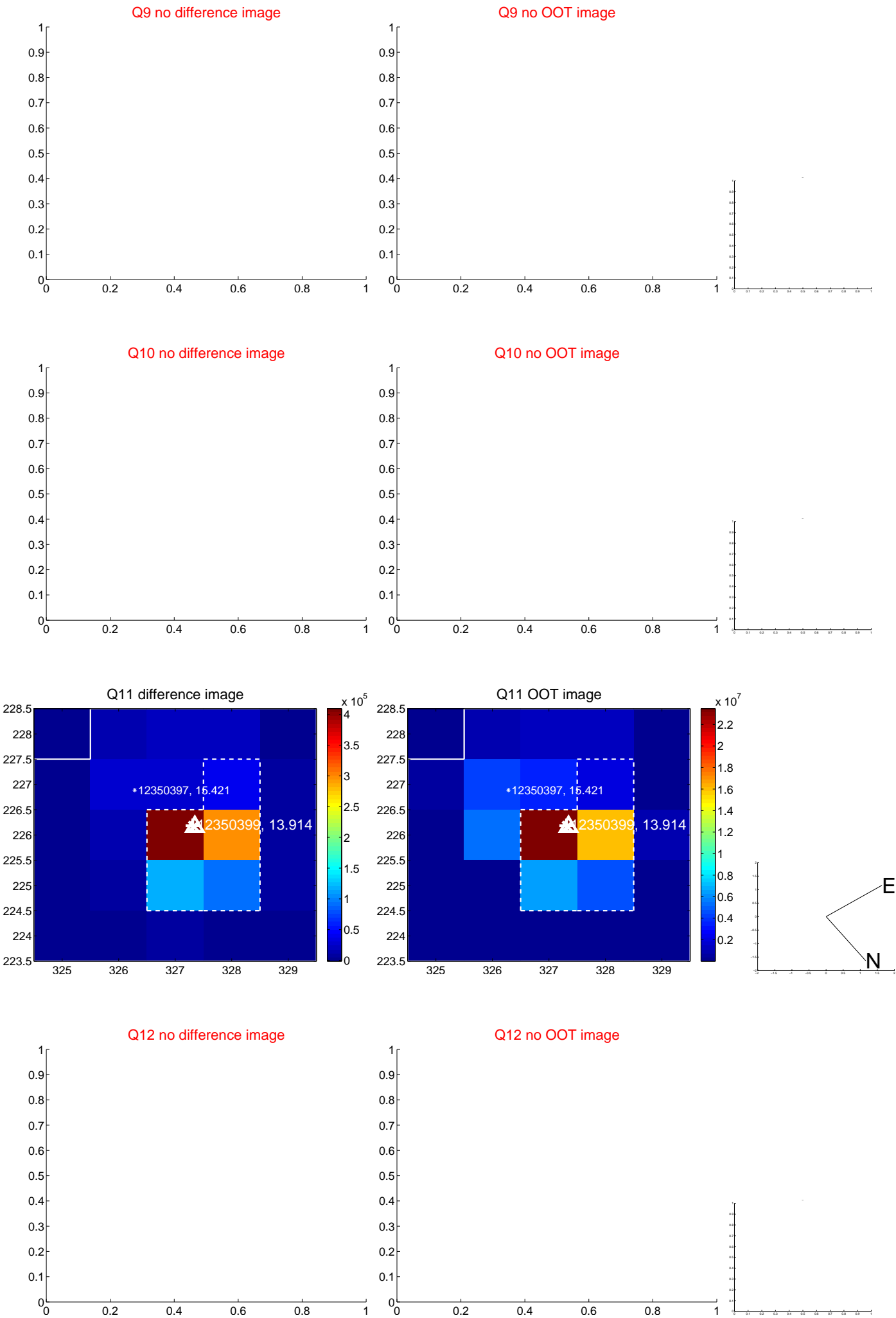
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



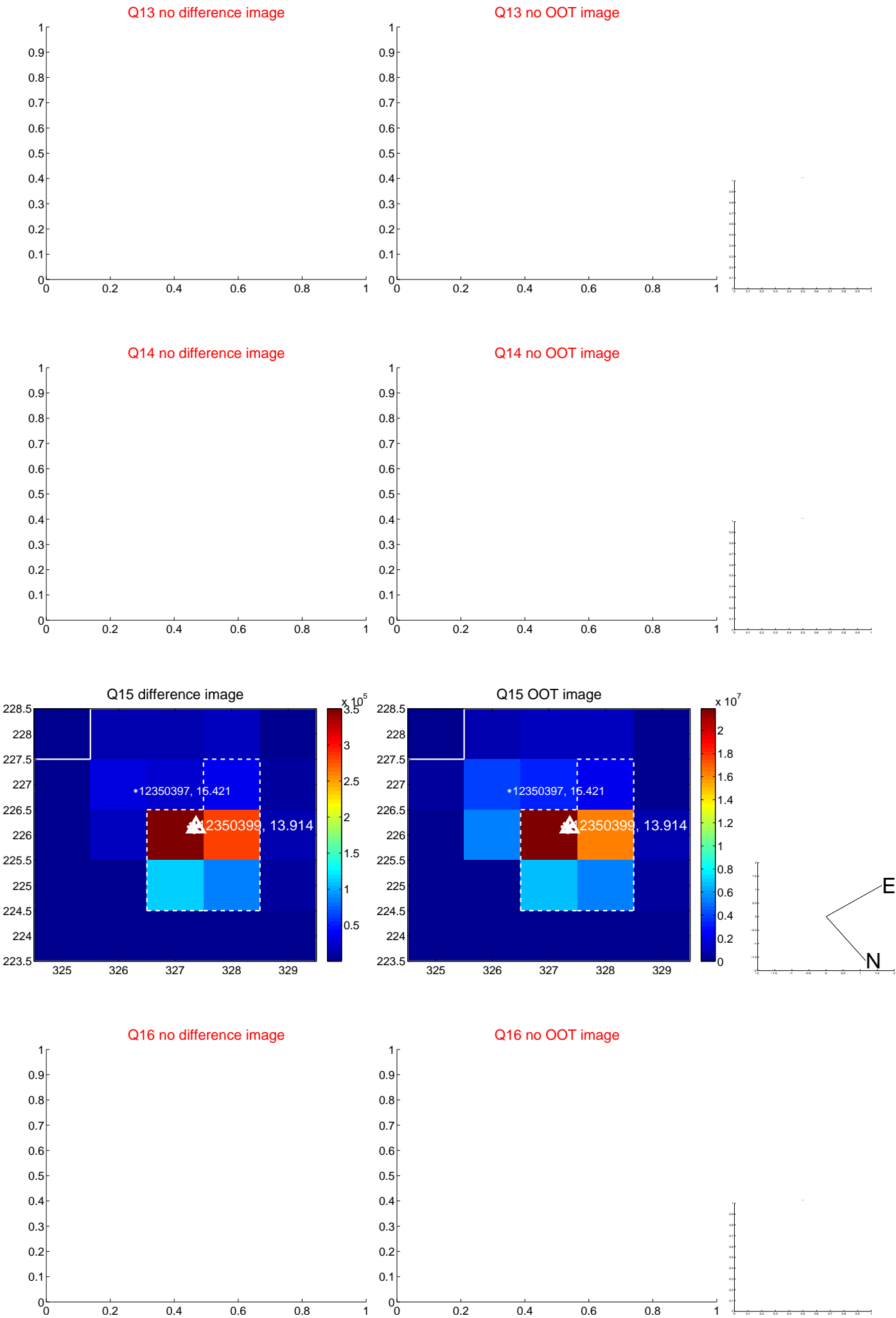
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



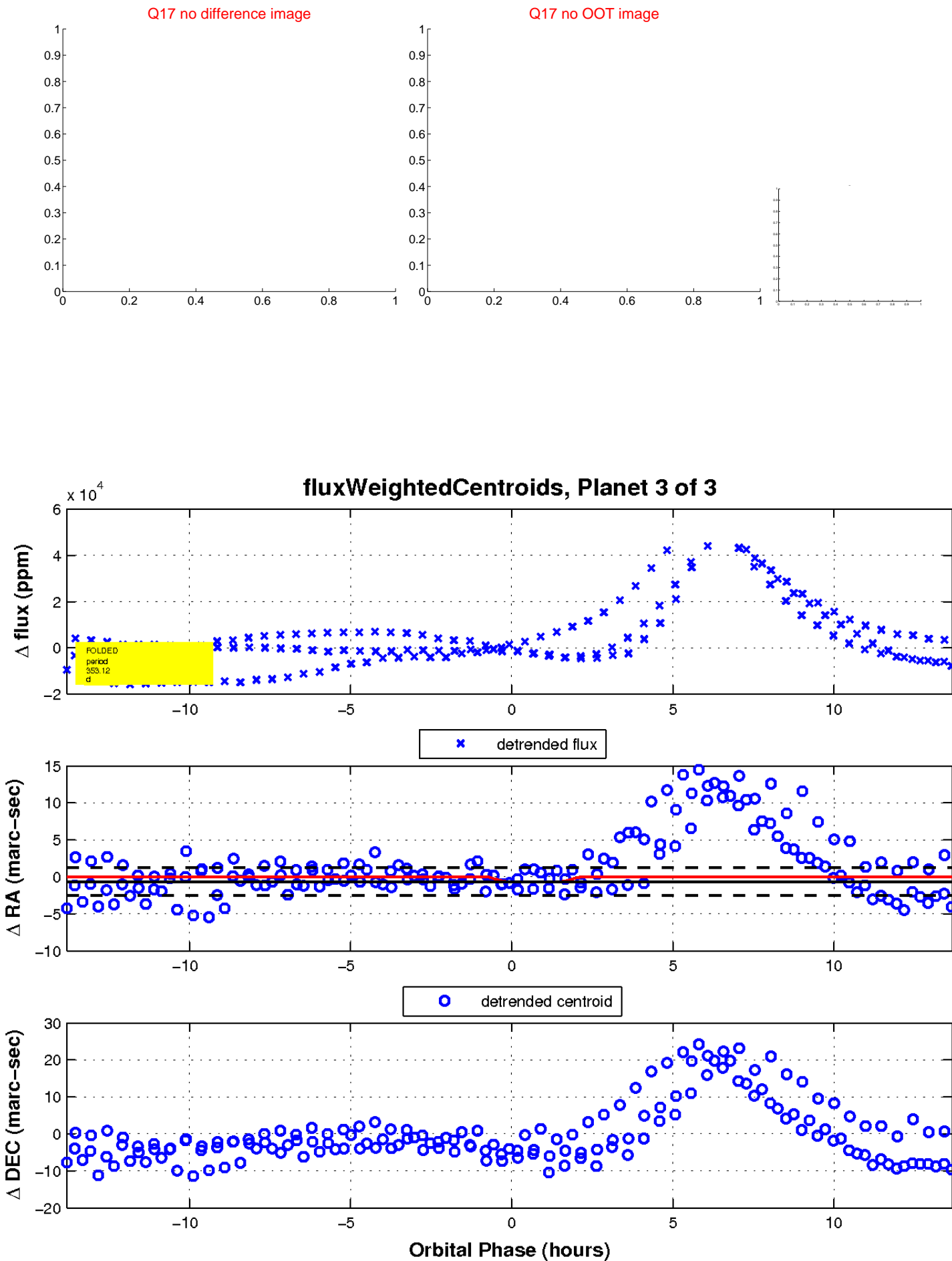
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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



UKIRT Image

Declination

