

KIC 003763058

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})
003763058-01	OBS	No	626.479672	268.188808	1222.6	8.242	14.2	7.1	0.61	4080	2.38	0.06
003763058-02	OBS	No	398.641576	452.758025	2455.6	3.021	13.9	14.4	0.61	4080	3.02	0.12
003763058-03	OBS	No	352.839301	171.824795	1073.0	4.766	12.8	7.1	0.61	4080	2.06	0.14
003763058-04	OBS	No	277.251249	224.074408	539.4	3.836	11.5	3.8	0.61	4080	1.57	0.19
003763058-05	OBS	No	380.012677	252.899547	1042.5	6.492	12.8	6.4	0.61	4080	2.42	0.12
003763058-06	OBS	No	525.115407	481.343576	1116.2	9.002	12.1	6.3	0.61	4080	2.10	0.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003763058-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
003763058-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—MOD_POS_DV—INCONSISTENT_TRANS
003763058-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003763058-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS—HALO_GHOST
003763058-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
003763058-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

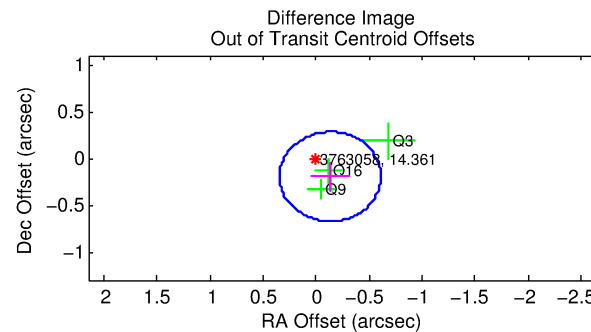
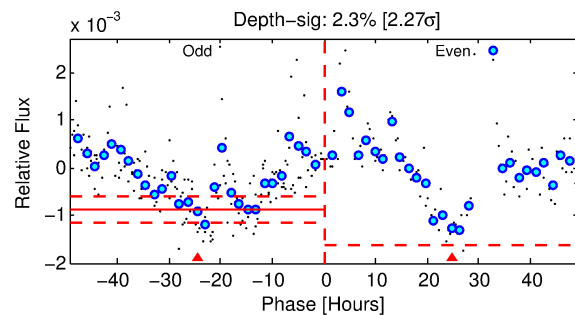
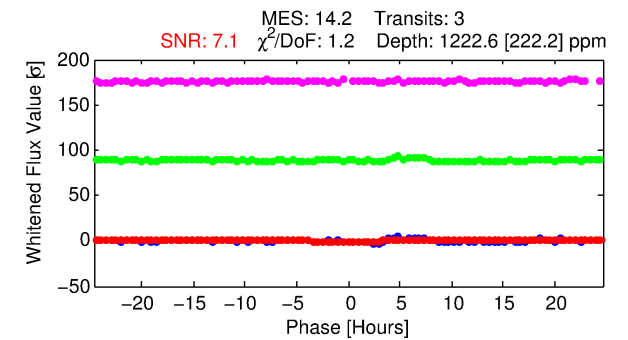
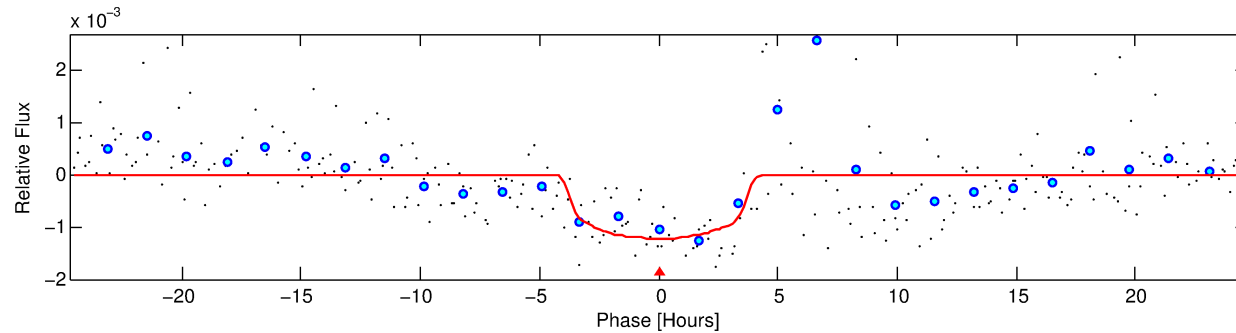
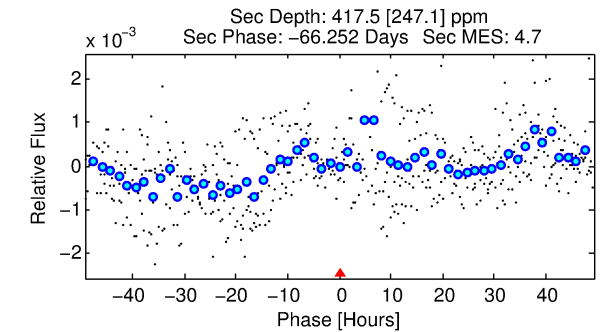
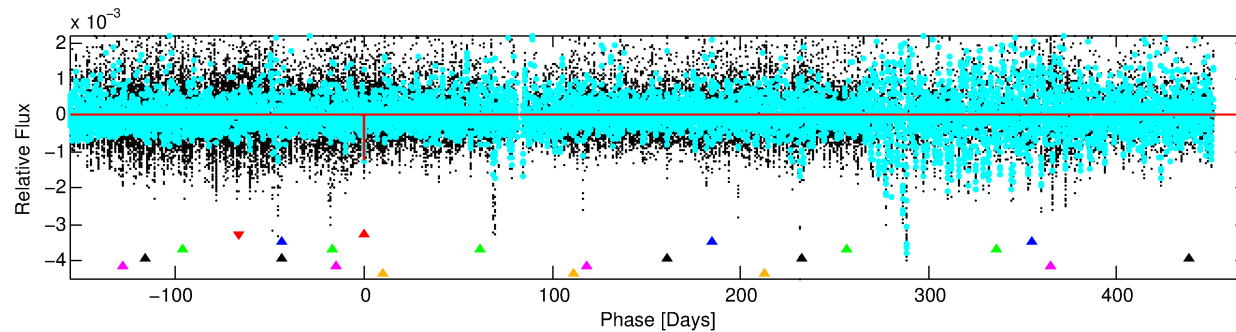
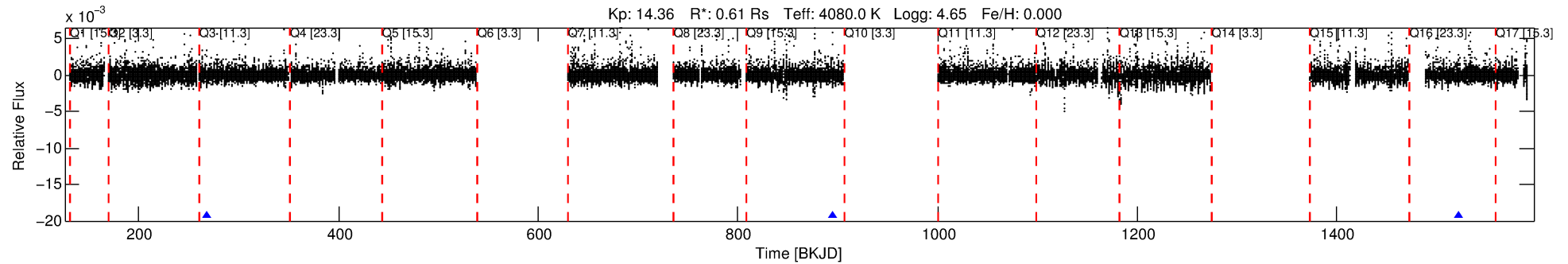
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003763058-01

No Significant Match Found

DV One-Page Summary

KIC: 3763058 Candidate: 1 of 6 Period: 626.480 d



DV Fit Results:

Period = 626.47967 [0.00893] d
Epoch = 268.1888 [0.0112] BKJD
Rp/R* = 0.0356 [0.0083]
a/R* = 390.25 [285.91]
b = 0.79 [0.36]
Seff = 0.06 [0.01]
Teq = 128 [6] K
Rp = 2.38 [0.62] Re
a = 1.2132 [0.1079] AU
Ag = 59572.25 [45360.29] [1.31 σ]
Teffp = 3090 [593] K [5.00 σ]

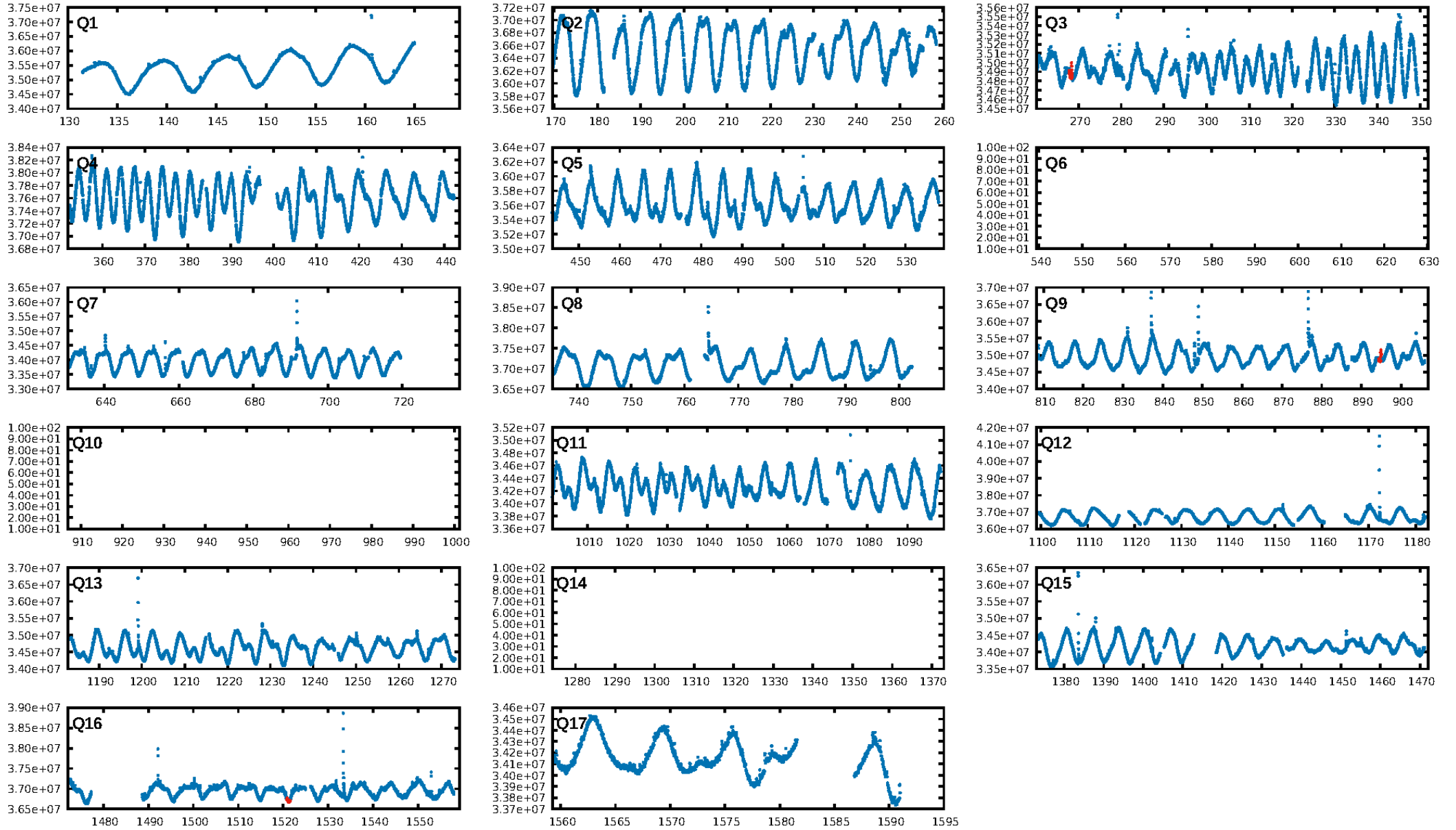
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [199.32 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 81.7%
Bootstrap-pfa: 5.58e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.9634
Centroid-sig: 18.6%
Centroid-so: 0.634 arcsec [0.75 σ]
OotOffset-rm: 0.235 arcsec [1.48 σ]
KicOffset-rm: 0.261 arcsec [1.74 σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

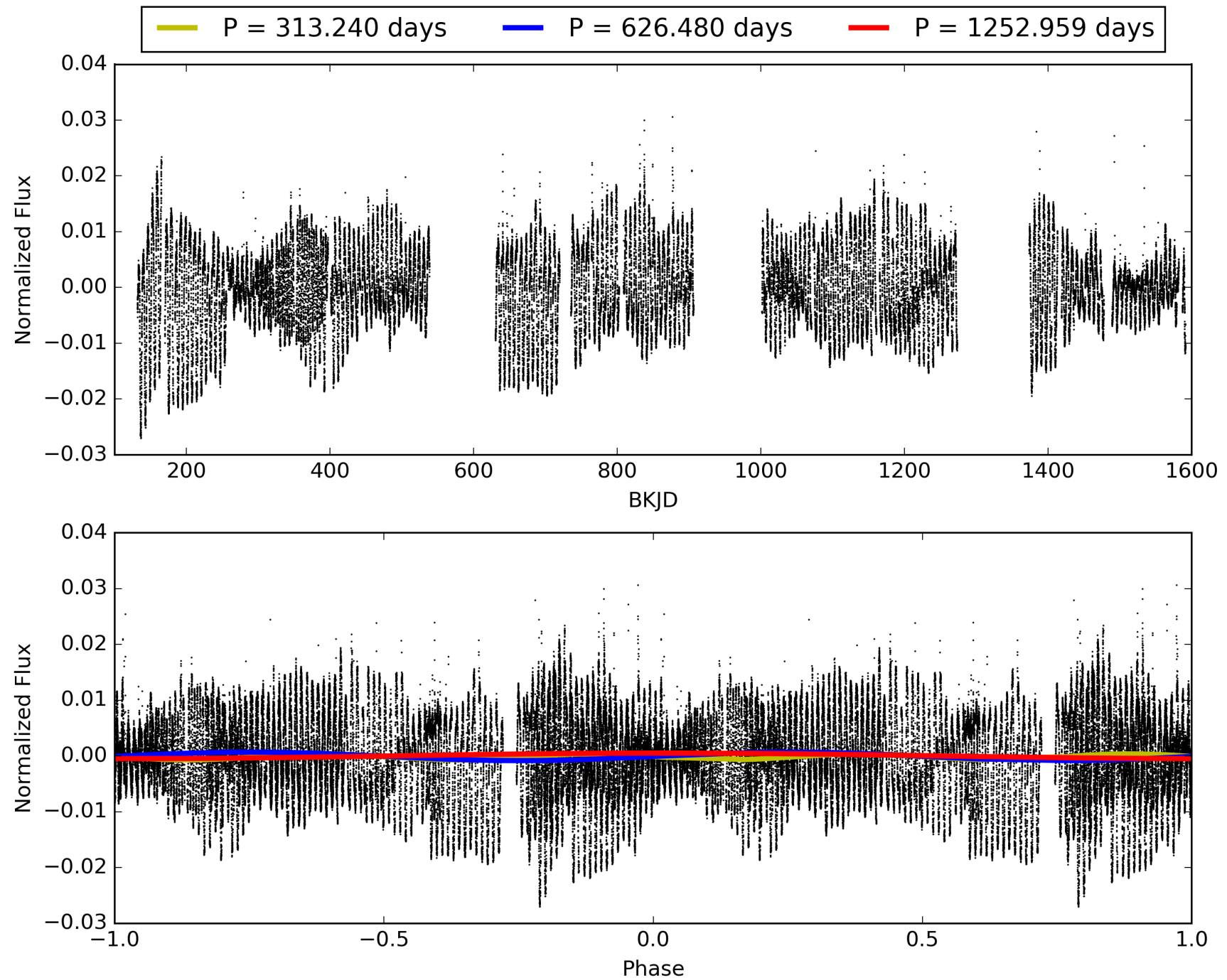
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 003763058-01, PDC Light Curves

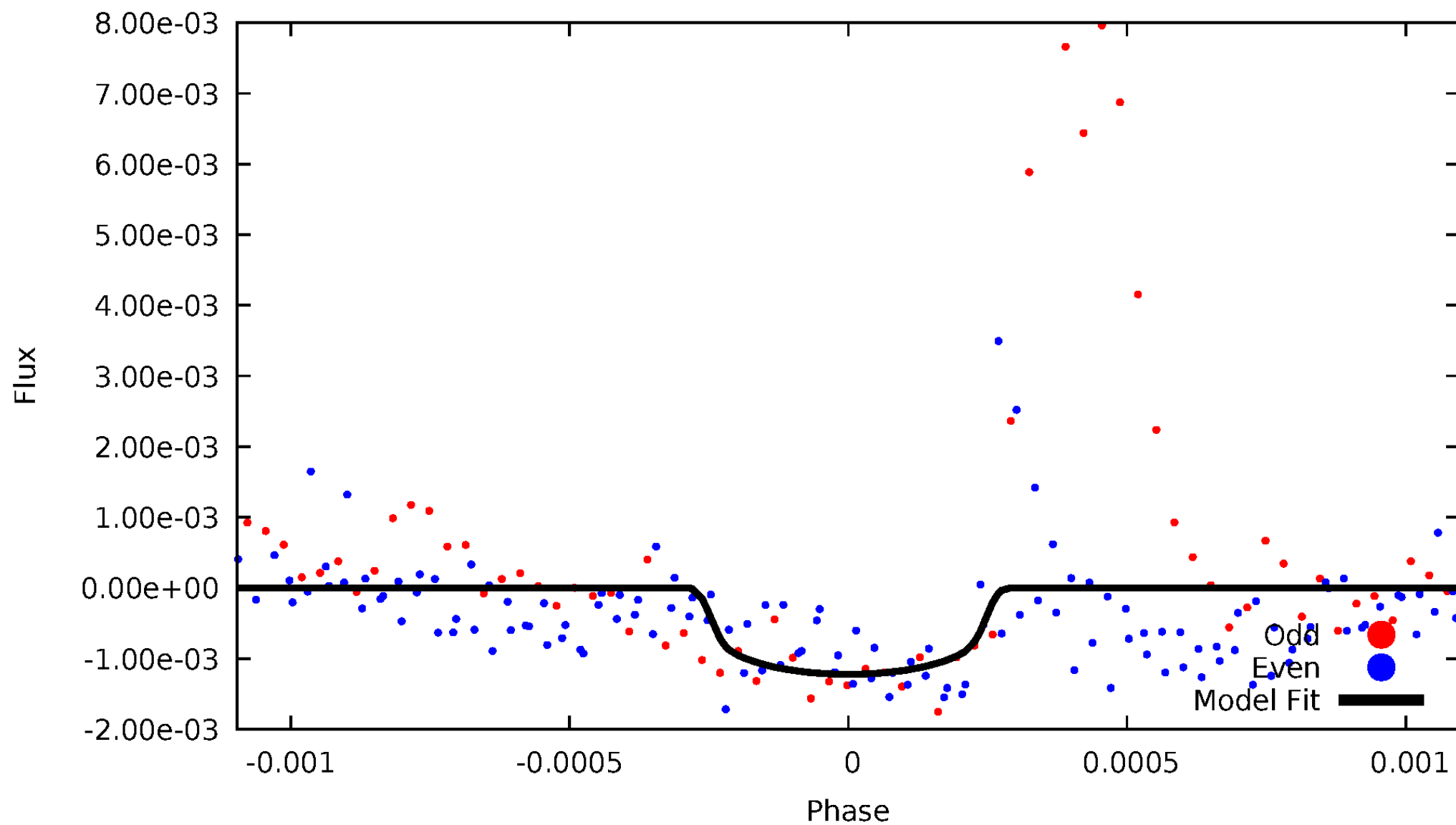


TCE 003763058-01



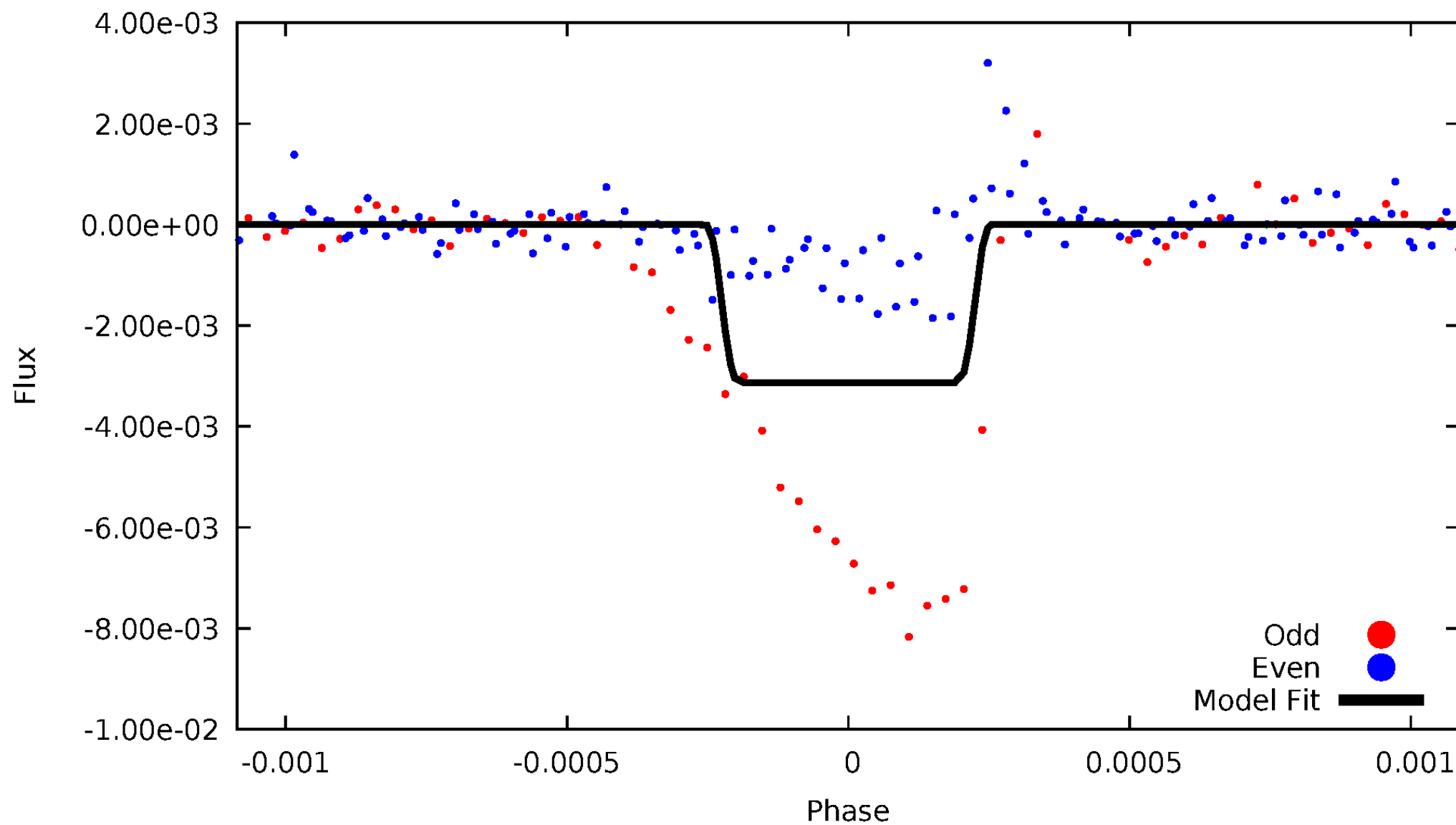
DV Odd/Even

TCE 003763058-01



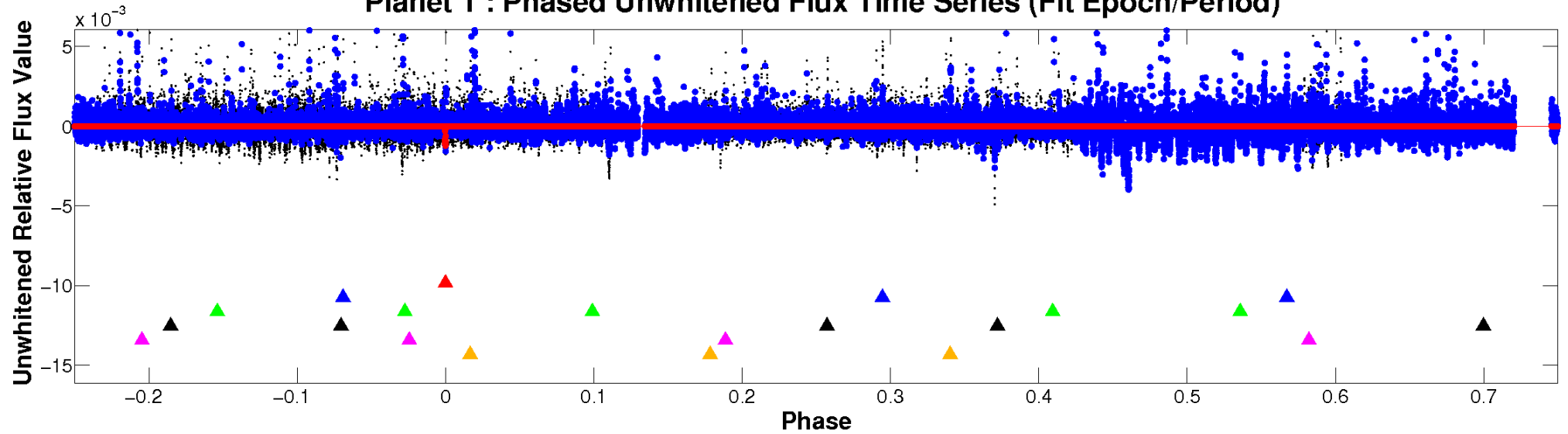
ALT Odd/Even

TCE 003763058-01

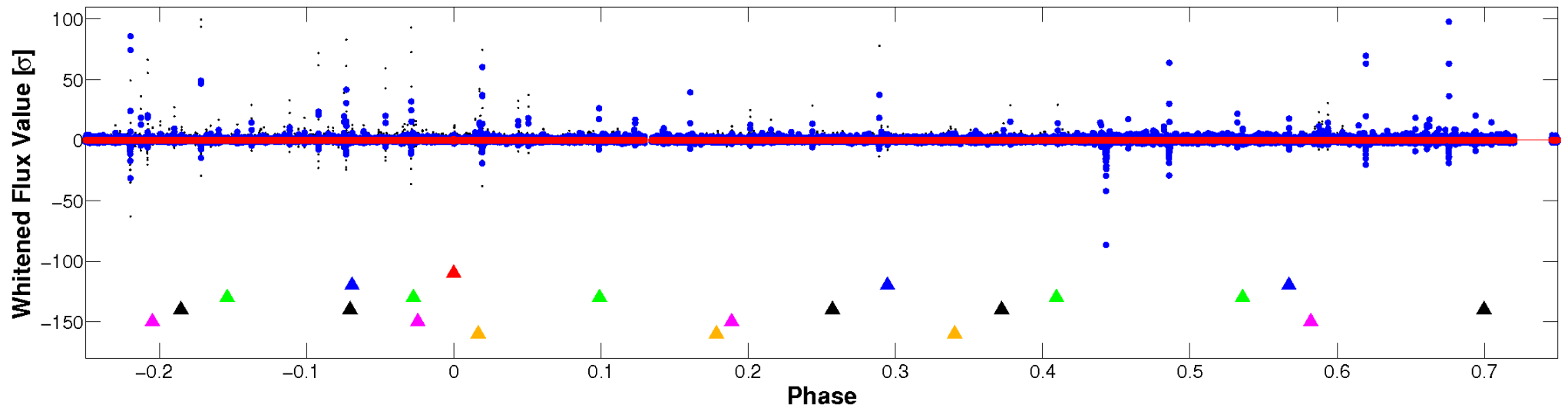


Non-Whitened Vs. Whitened Light Curve

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

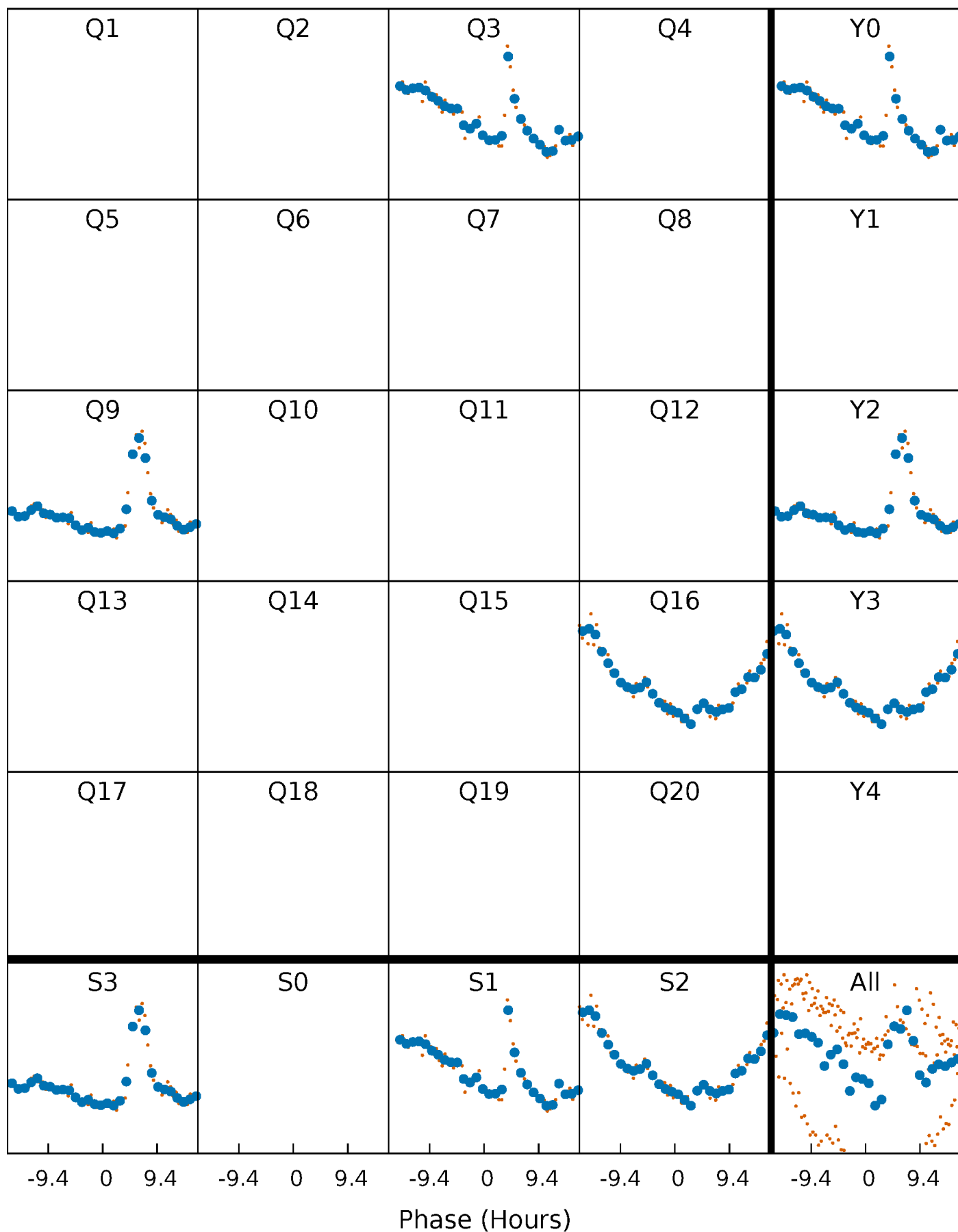


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



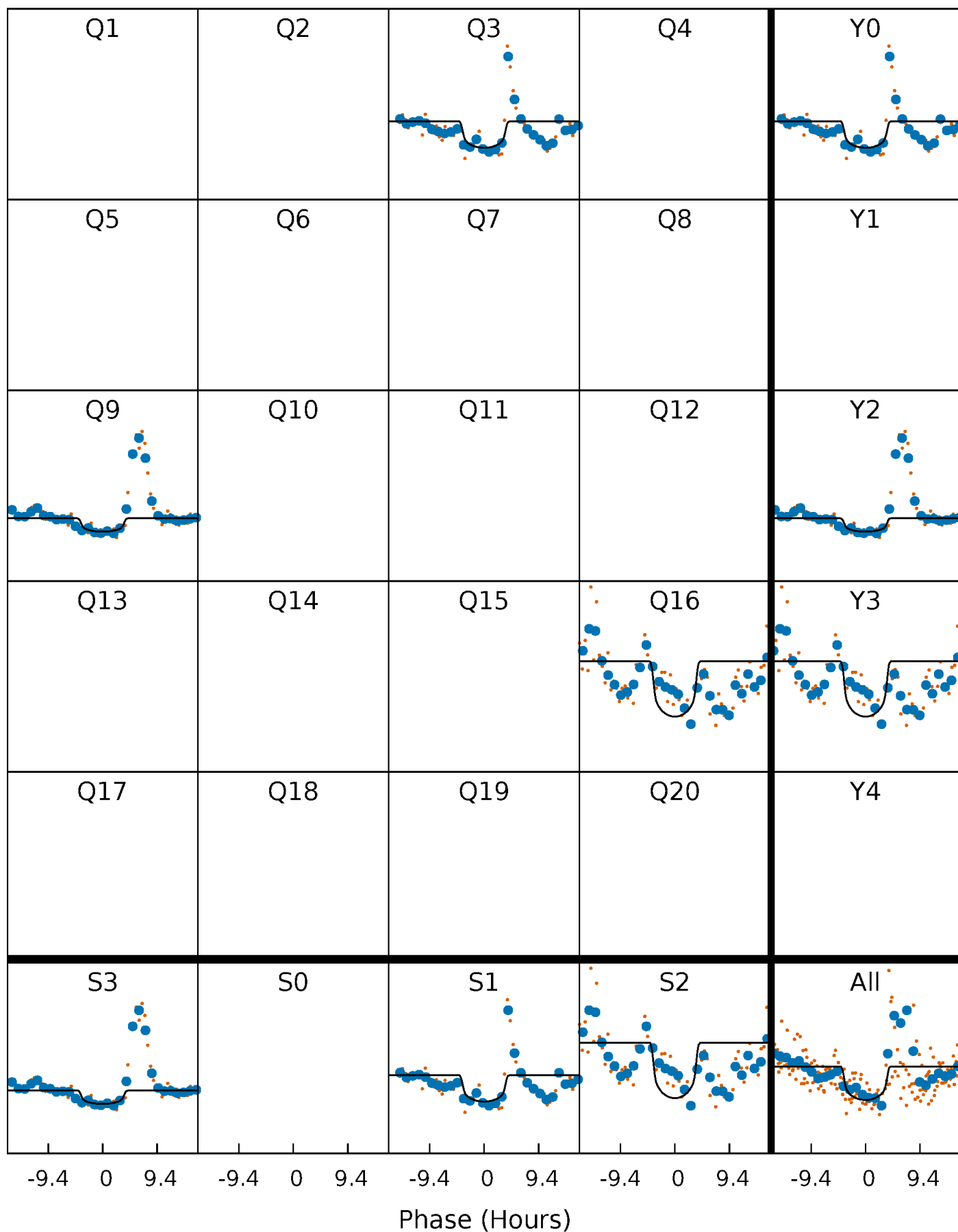
PDC Quarter-Phased Transit Curves

TCE 003763058-01 P=626.479672 Days $T_0=268.188808$ (BKJD)



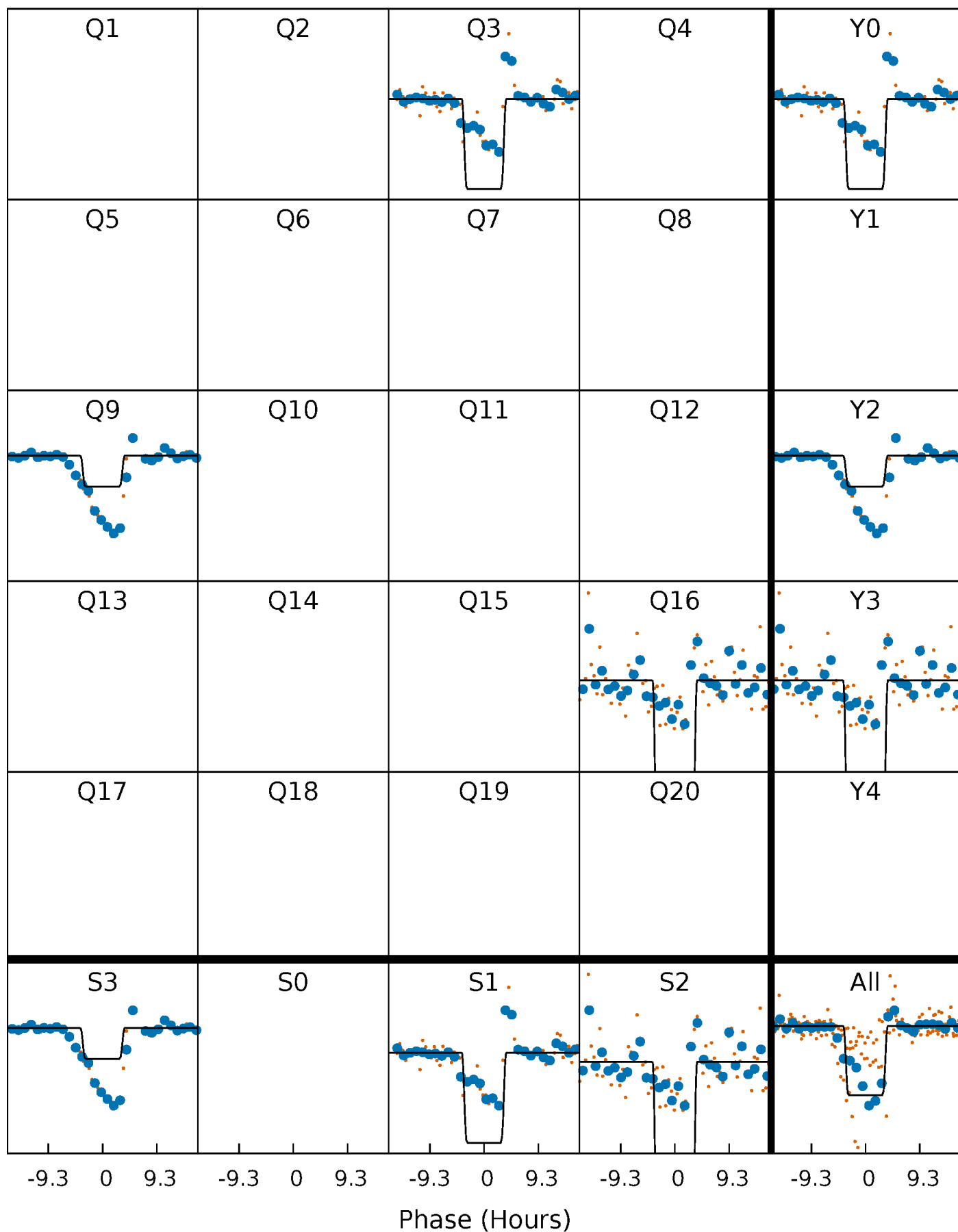
DV Quarter-Phased Transit Curves

TCE 003763058-01 P=626.479672 Days $T_0=268.188808$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

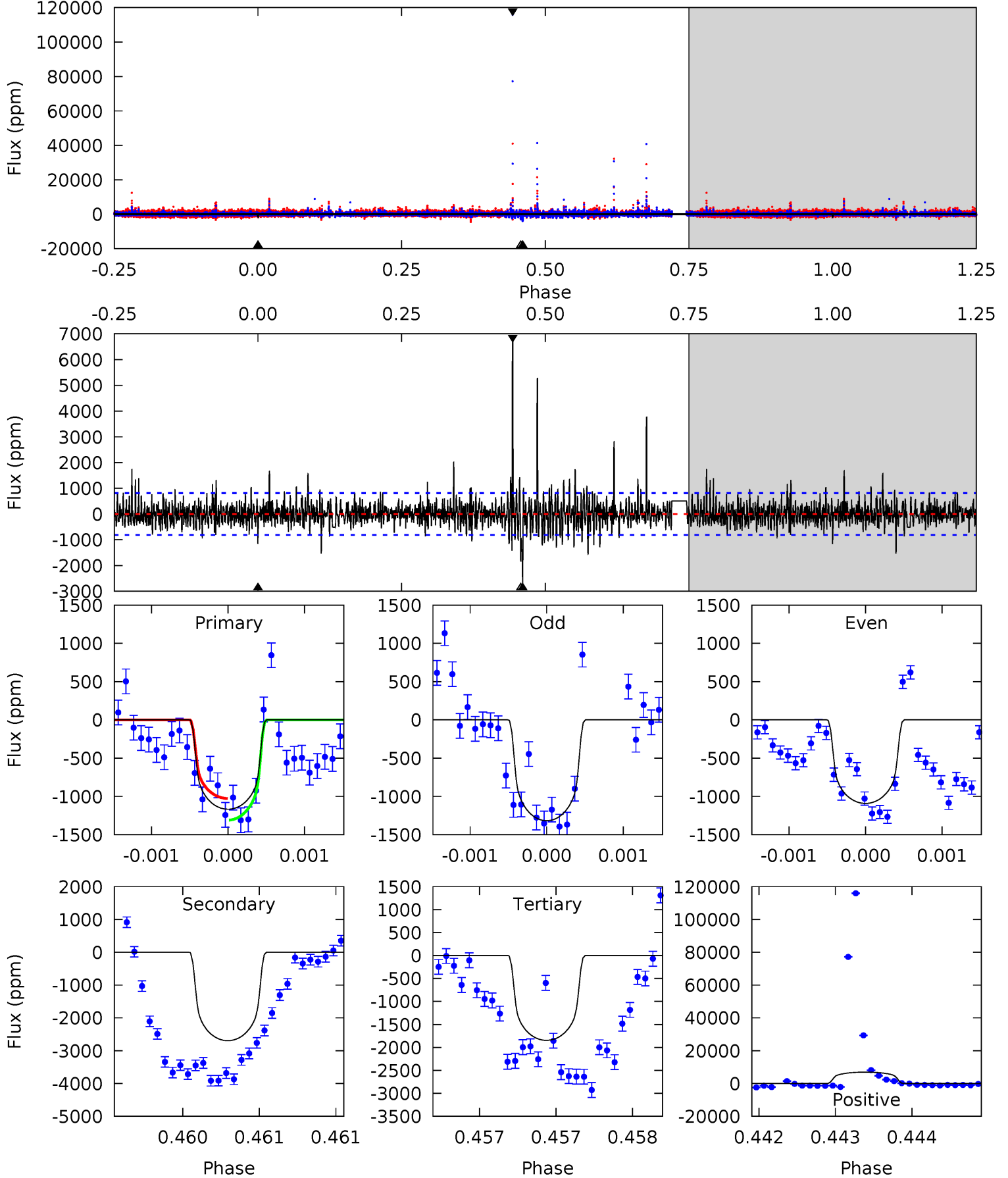
TCE 003763058-01 P=626.499761 Days $T_0=268.202299$ (BKJD)



DV Model-Shift Uniqueness Test

003763058-01, P = 626.479672 Days, E = 268.188808 Days

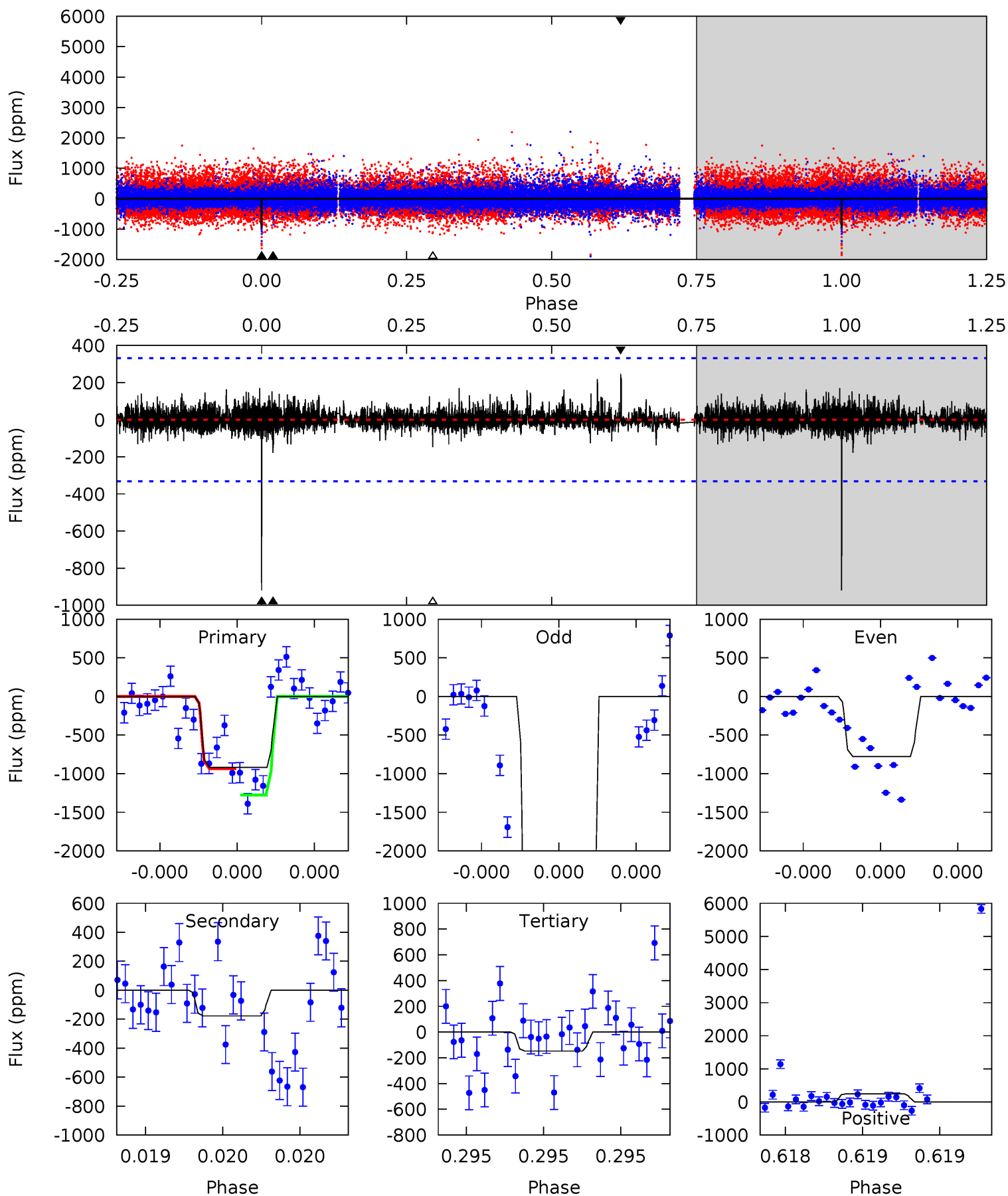
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.95	18.4	12.6	47.2	5.55	3.44	2.96	-4.63	-39.3	5.79	-28.9	0.53	0.89	0.72	0.95



Alt Model-Shift Uniqueness Test

003763058-01, P = 626.499761 Days, E = 268.202299 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.4	2.99	2.48	4.16	5.58	3.49	0.56	13.0	11.3	0.51	-1.17	53.7	2.04	0.21	2.77



Stellar Parameters For KIC 003763058

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4080^{+141}_{-155}	$4.646^{+0.060}_{-0.020}$	$0.000^{+0.250}_{-0.300}$	$0.613^{+0.038}_{-0.070}$	$0.606^{+0.057}_{-0.063}$	$3.712^{+1.094}_{-0.389}$
	+3%/-4%	+1%/-0%	+inf%/-inf%	+6%/-11%	+9%/-10%	+29%/-10%
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 003763058-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2696 ± 147	$2.40^{+0.56}_{-0.60}$	177^{+7}_{-8}	4684^{+589}_{-408}	$389959^{+279295}_{-138951}$
Alt.	-178 ± 59	$3.73^{+0.61}_{-0.63}$	177^{+7}_{-7}	2629^{+186}_{-168}	10105^{+6256}_{-3913}

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

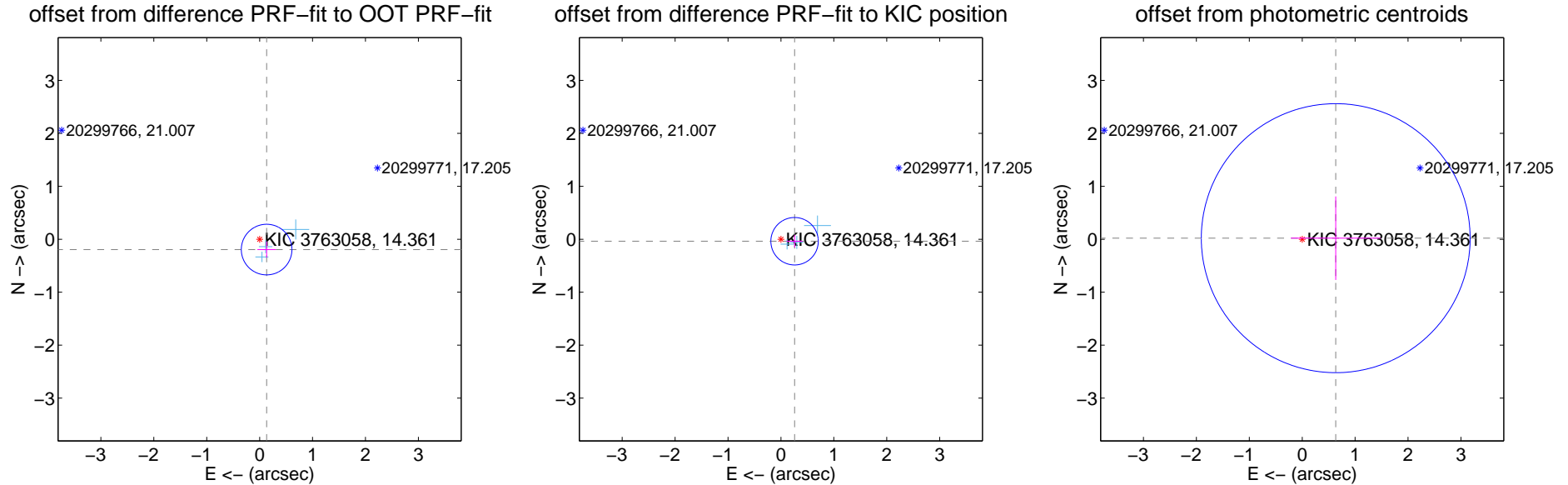
DV Centroid Data

Supplemental centroid analysis for 003763058-01. Kepler magnitude: 14.36. Transit SNR 7.05

There are 3 quarters with good PRF difference image offsets

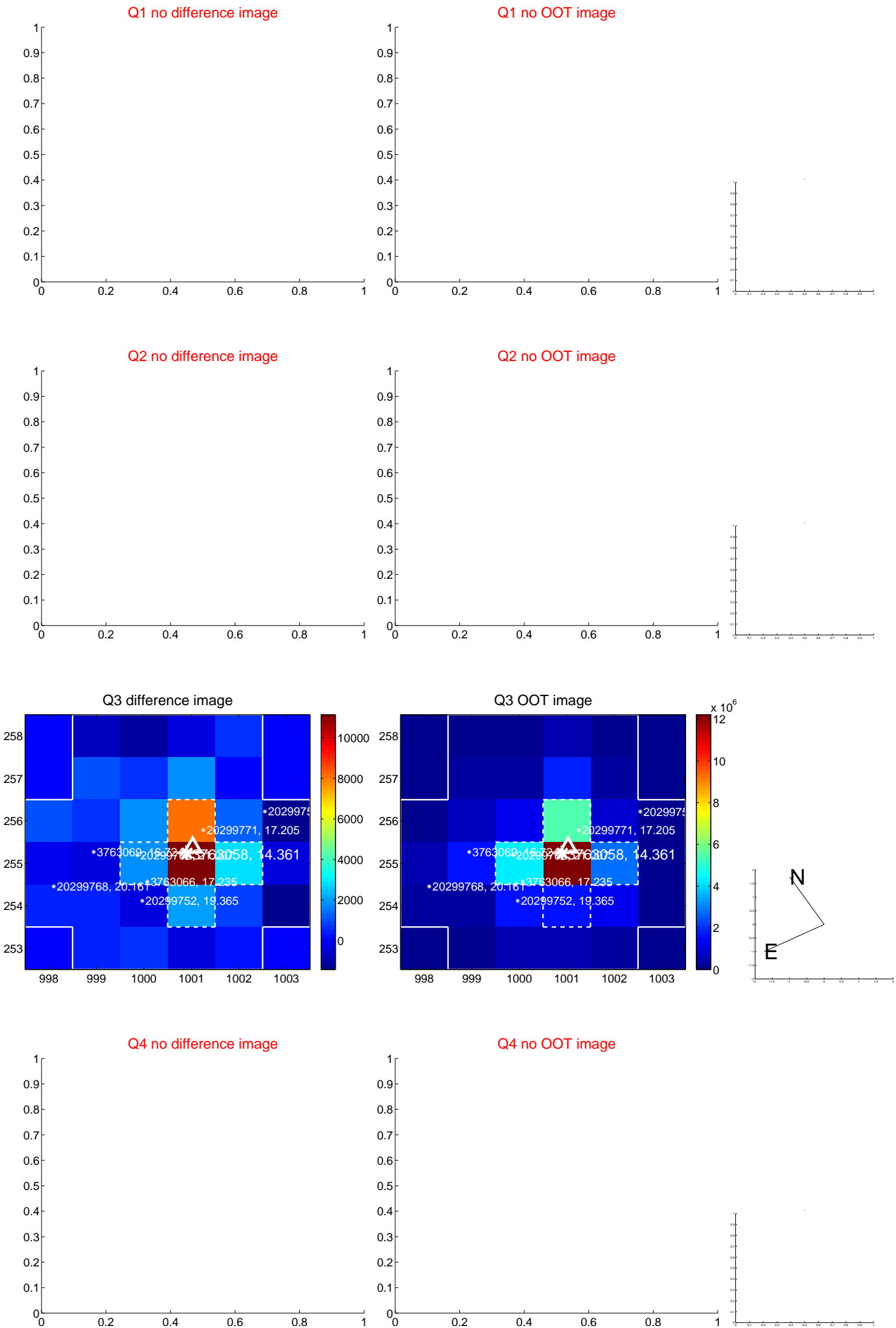
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.235 ± 0.159	1.48	-0.132 ± 0.174	-0.195 ± 0.152
PRF-fit source offset from KIC position	0.261 ± 0.149	1.74	-0.258 ± 0.150	-0.037 ± 0.119
photometric centroid source offset	0.63 ± 0.85	0.75	-0.63 ± 0.85	0.02 ± 0.79



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.

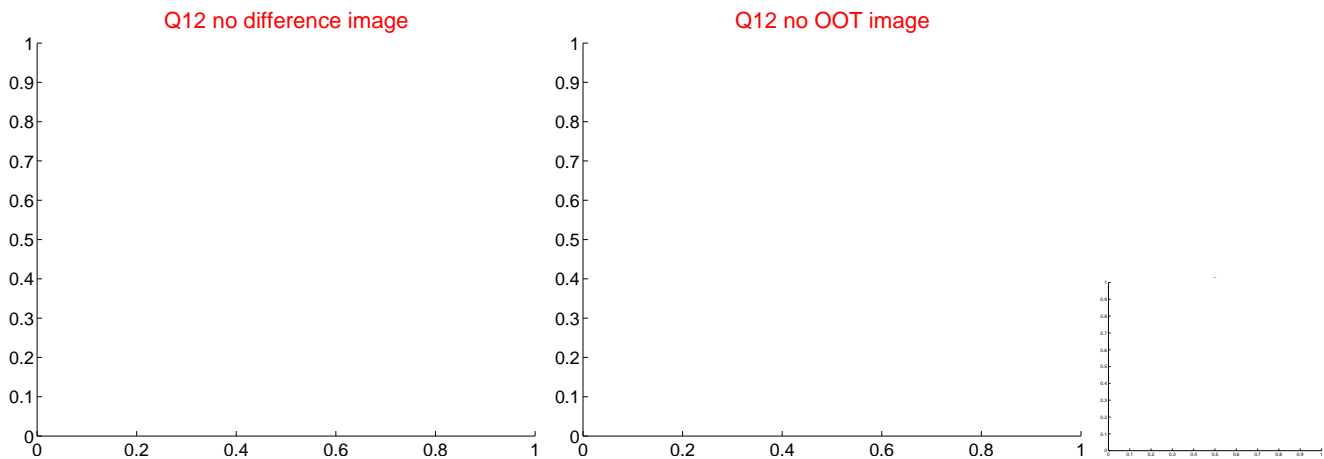
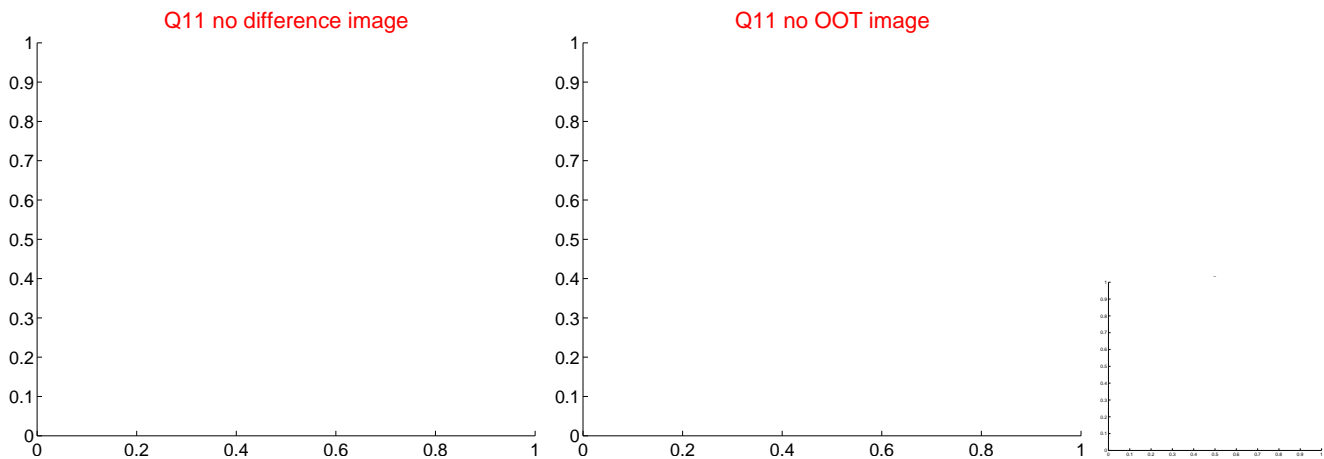
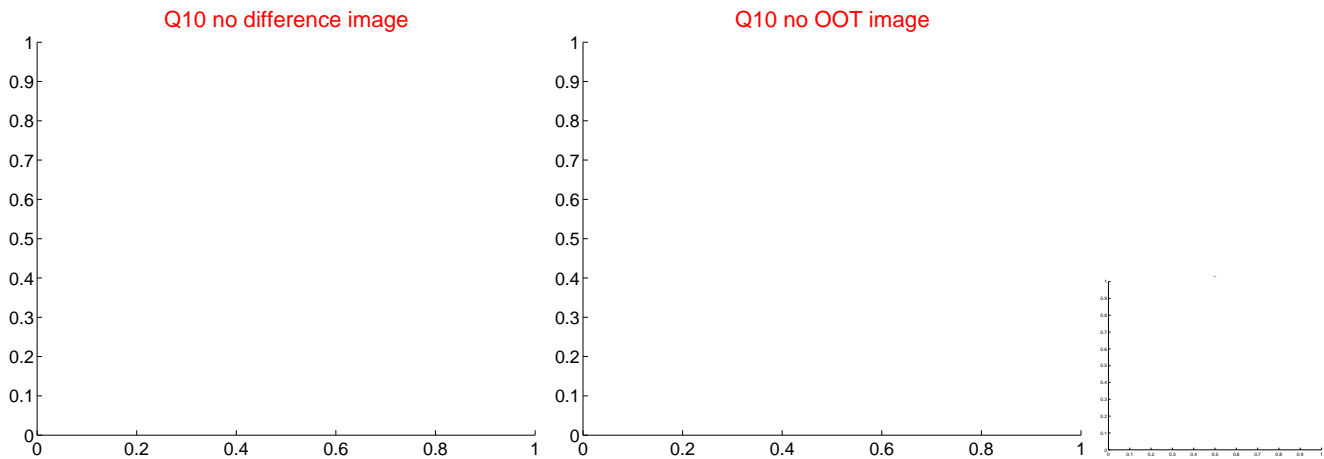
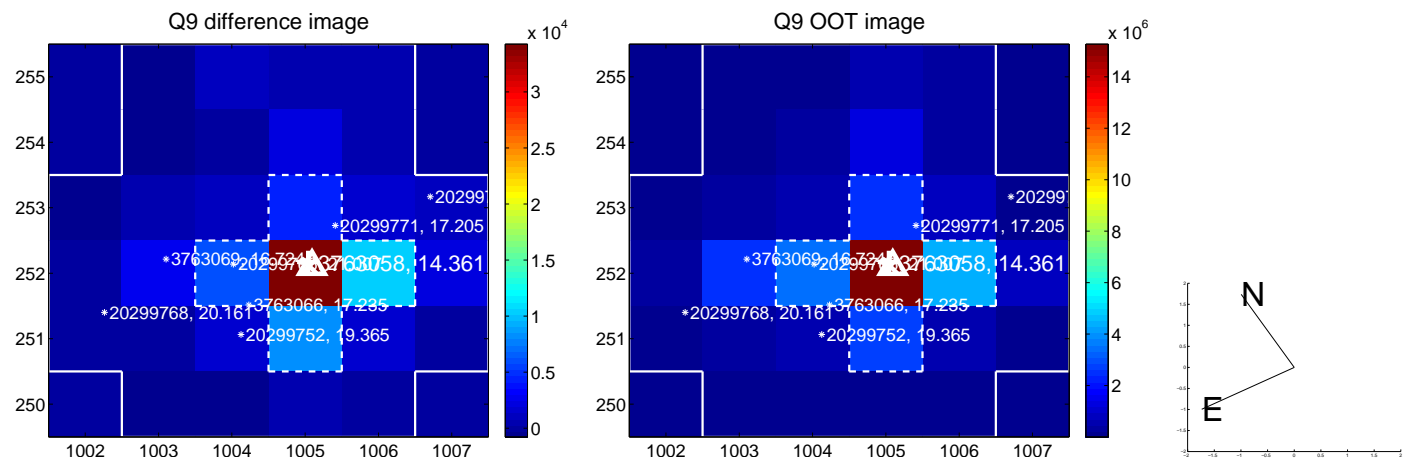
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



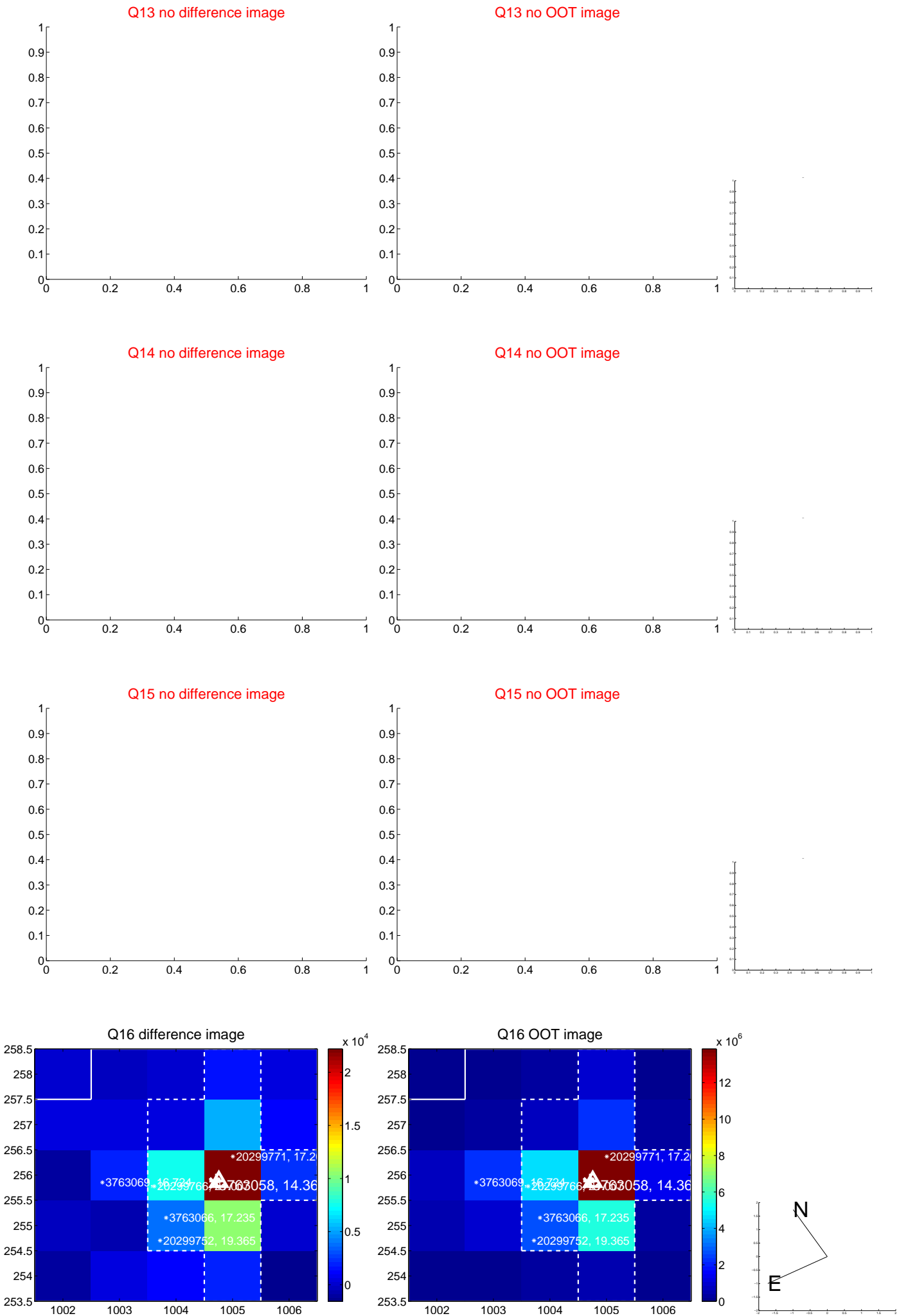
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



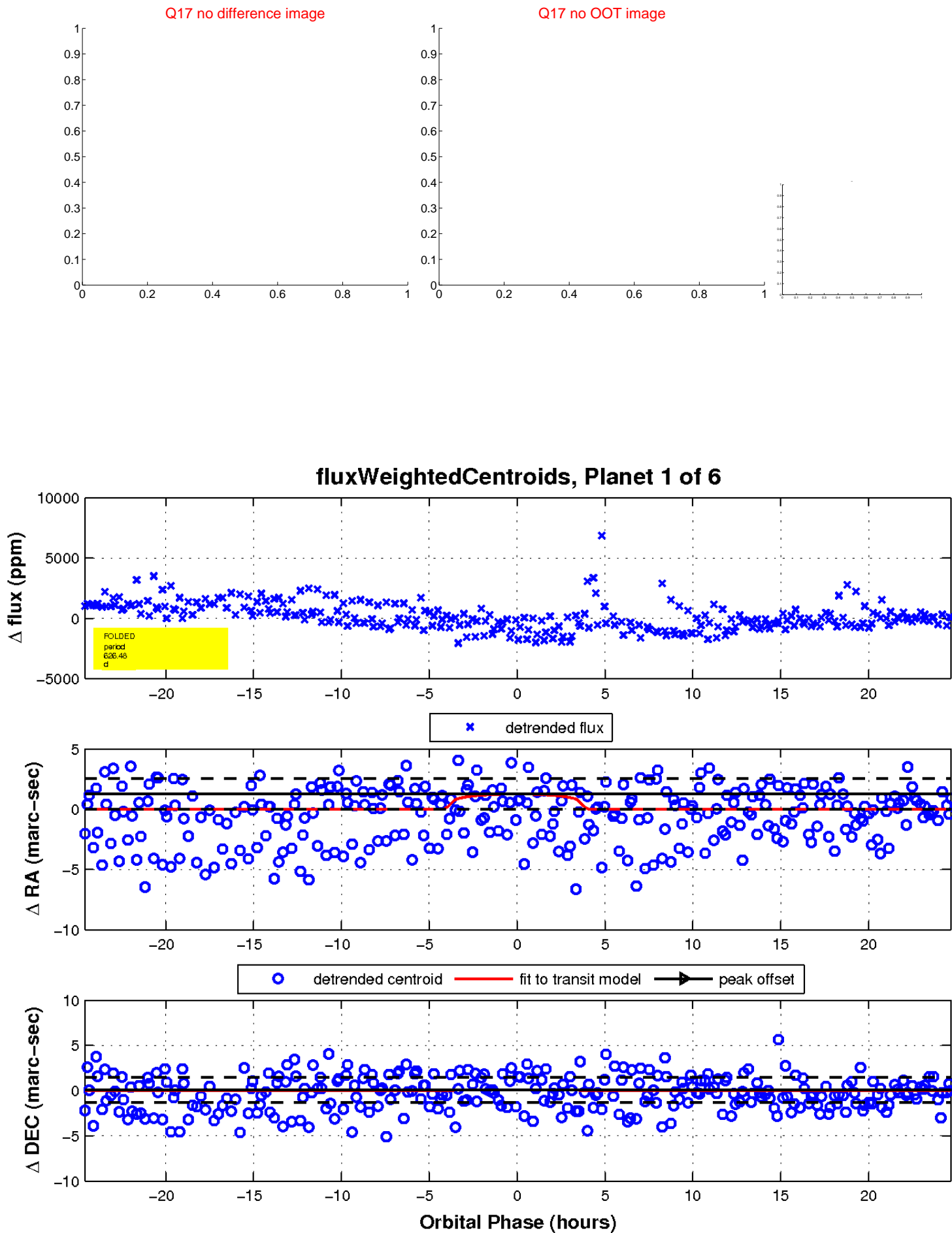
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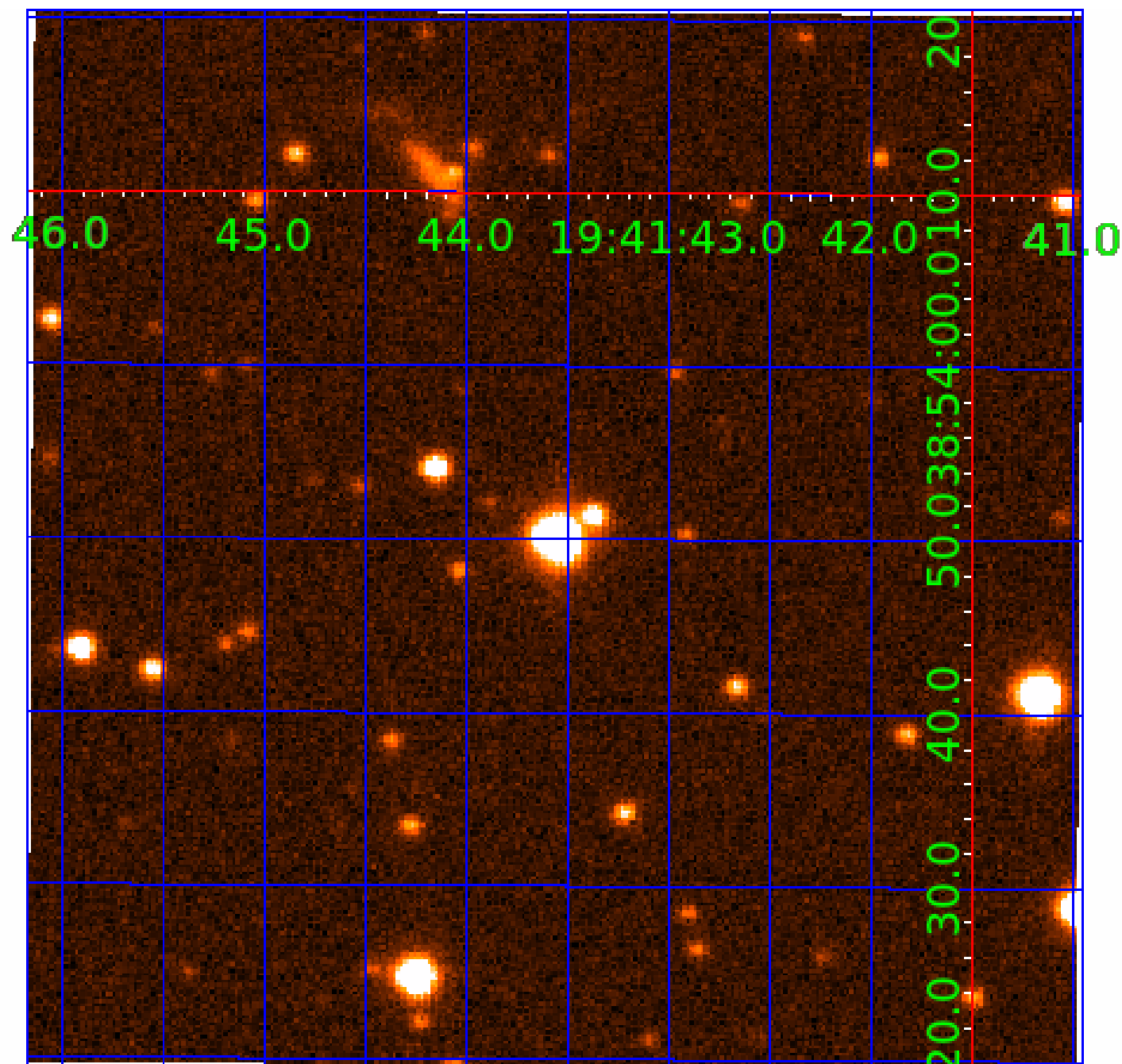


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003763058

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003763058-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
003763058-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—MOD_POS_DV—INCONSISTENT_TRANS
003763058-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003763058-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS—HALO_GHOST
003763058-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
003763058-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

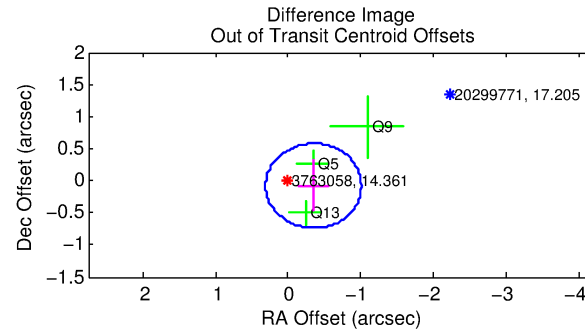
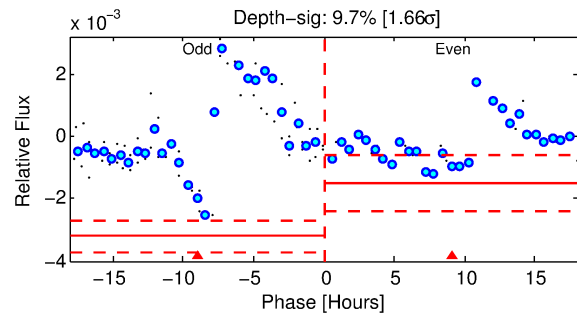
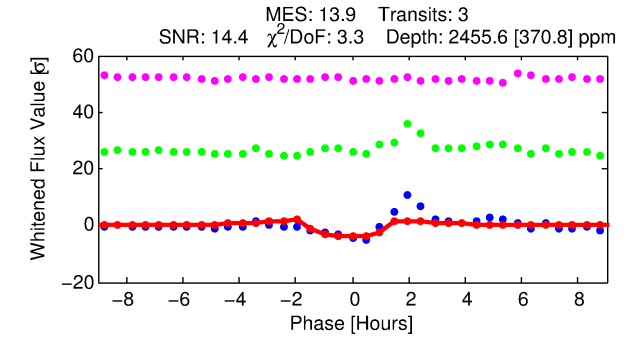
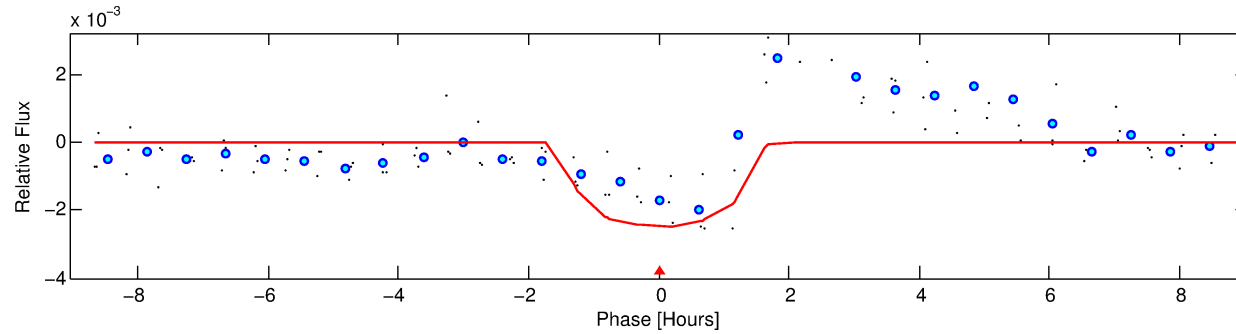
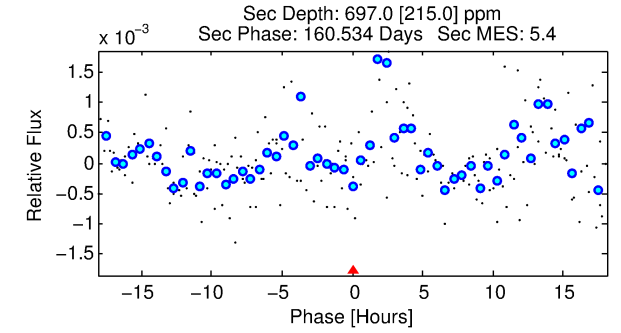
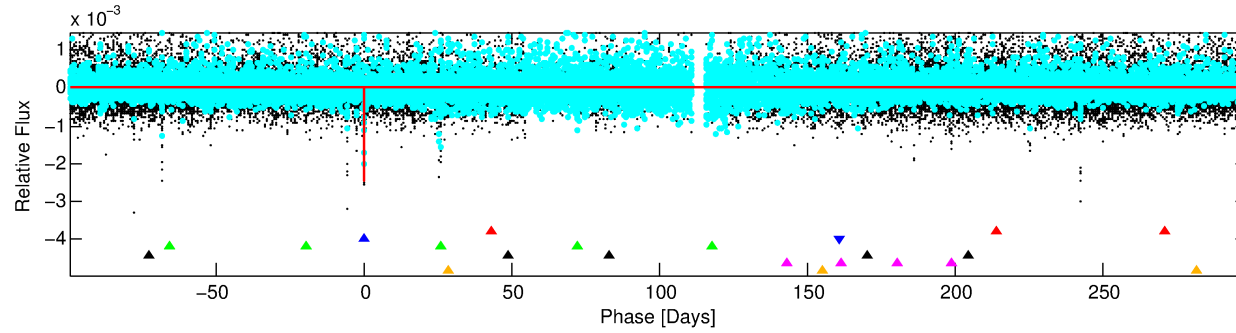
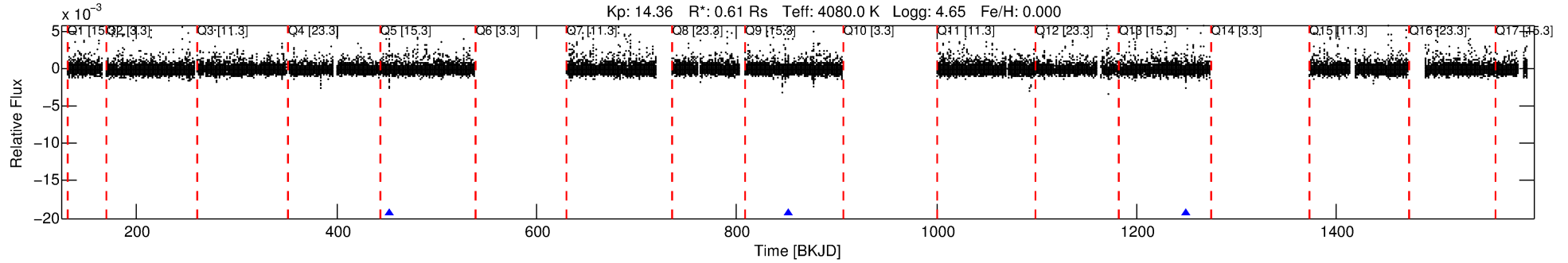
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003763058-02

No Significant Match Found

DV One-Page Summary

KIC: 3763058 Candidate: 2 of 6 Period: 398.642 d



DV Fit Results:

Period = 398.64158 [0.00508] d
Epoch = 452.7580 [0.0065] BKJD
Rp/R* = 0.0451 [0.0933]
a/R* = 979.59 [6602.67]
b = 0.38 [15.28]
Seff = 0.12 [0.02]
Teq = 149 [7] K
Rp = 3.02 [6.25] Re
a = 0.8976 [0.0799] AU
Ag = 33949.32 [140853.03] [0.24 σ]
Teffp = 3122 [3239] K [0.92 σ]

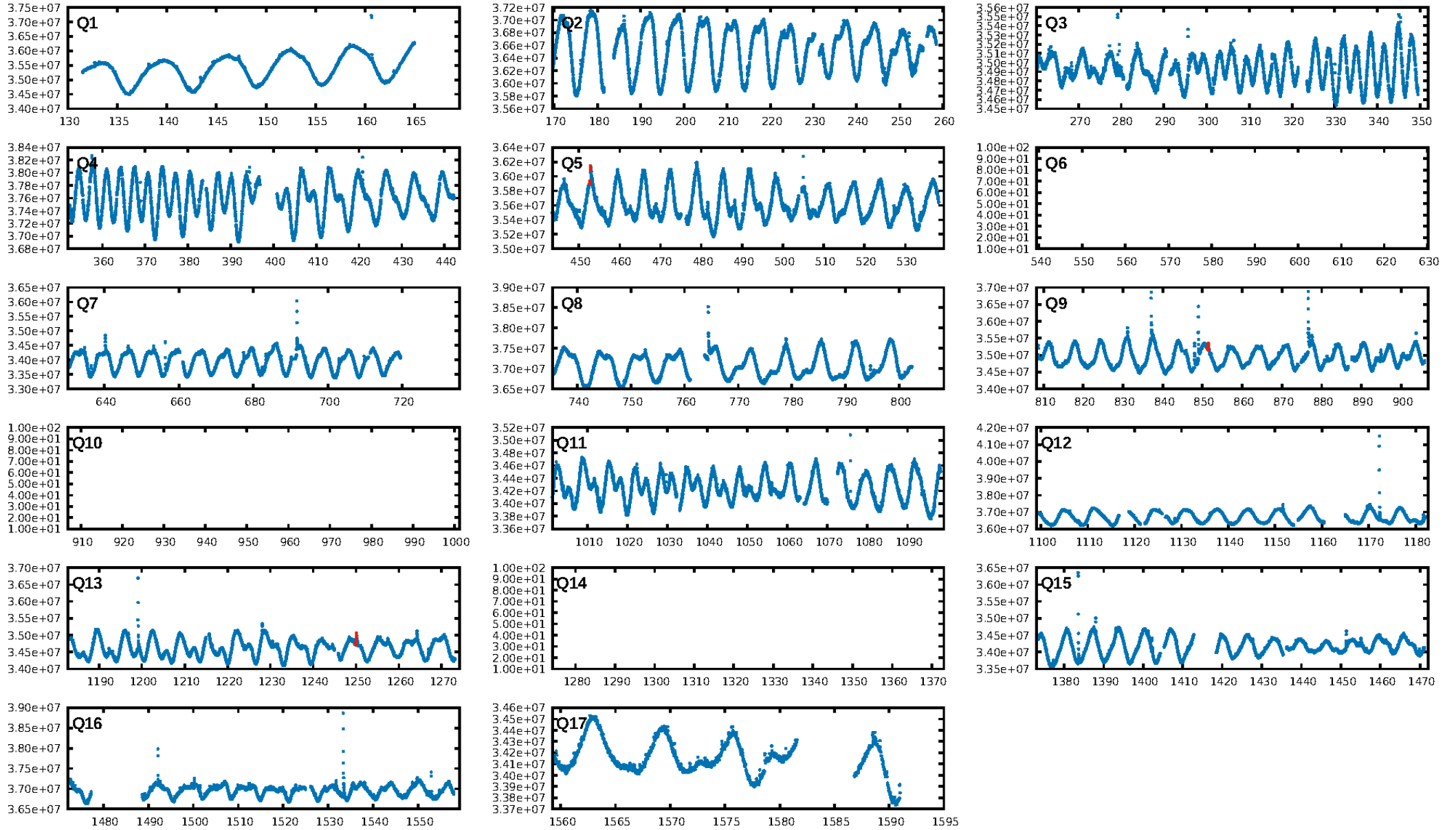
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [62.44 σ]
LongPeriod-sig: 100.0% [319.67 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.2%
Bootstrap-pfa: 2.03e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.115
Centroid-sig: 0.8%
Centroid-so: 0.810 arcsec [1.51 σ]
OotOffset-rm: 0.359 arcsec [1.63 σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-rm: 0.326 arcsec [0.83 σ]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

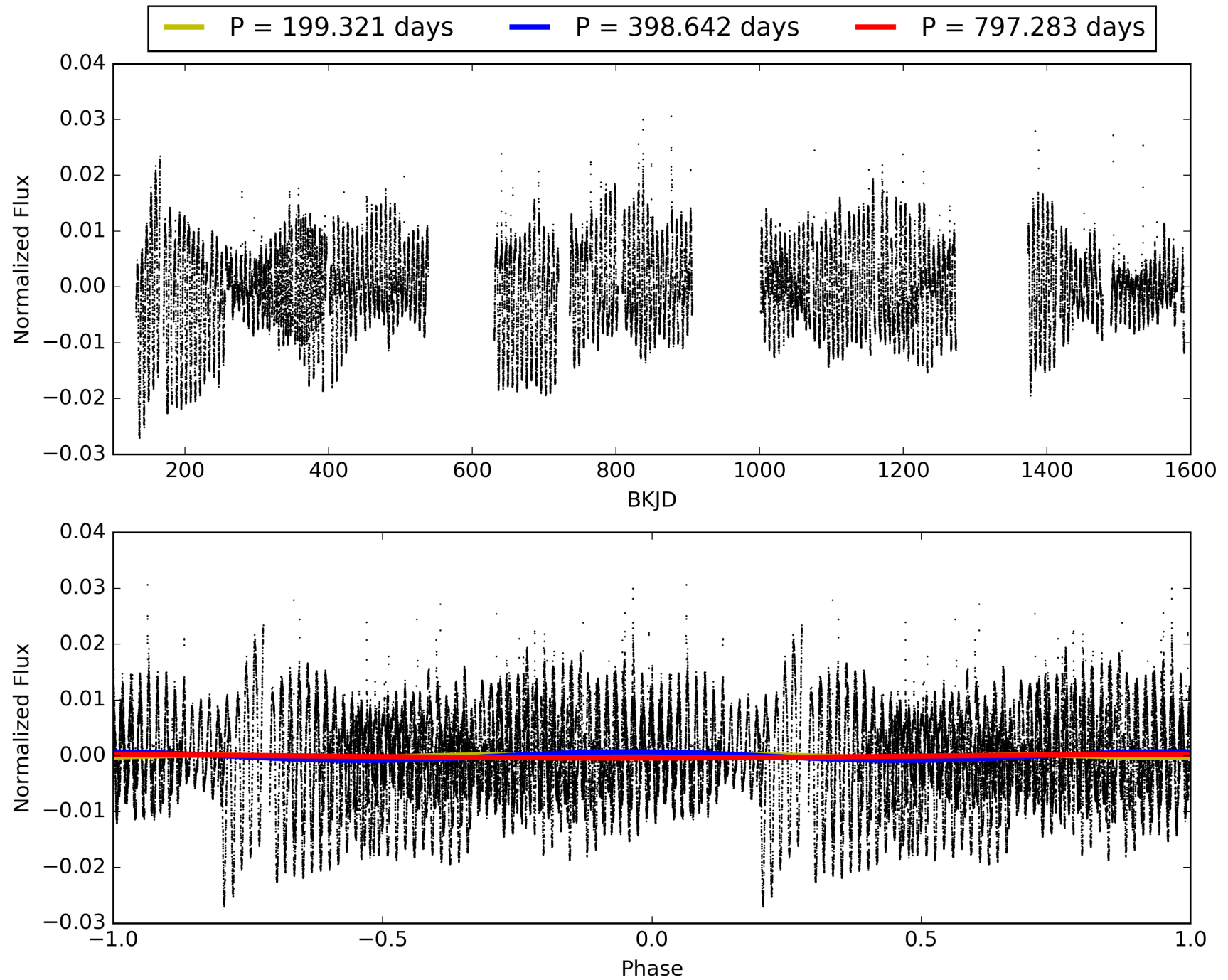
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:02:14 Z

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

TCE 003763058-02, PDC Light Curves

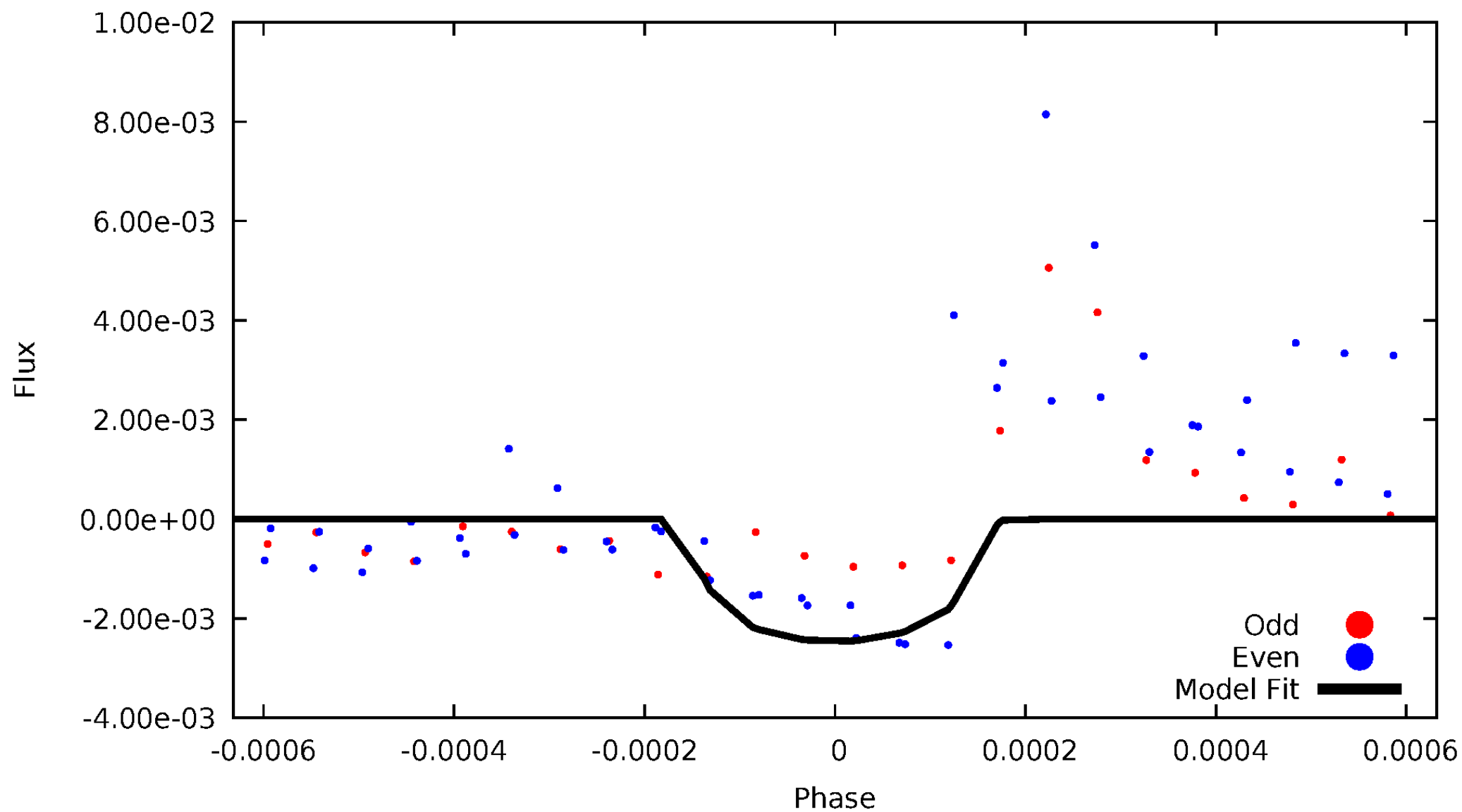


TCE 003763058-02



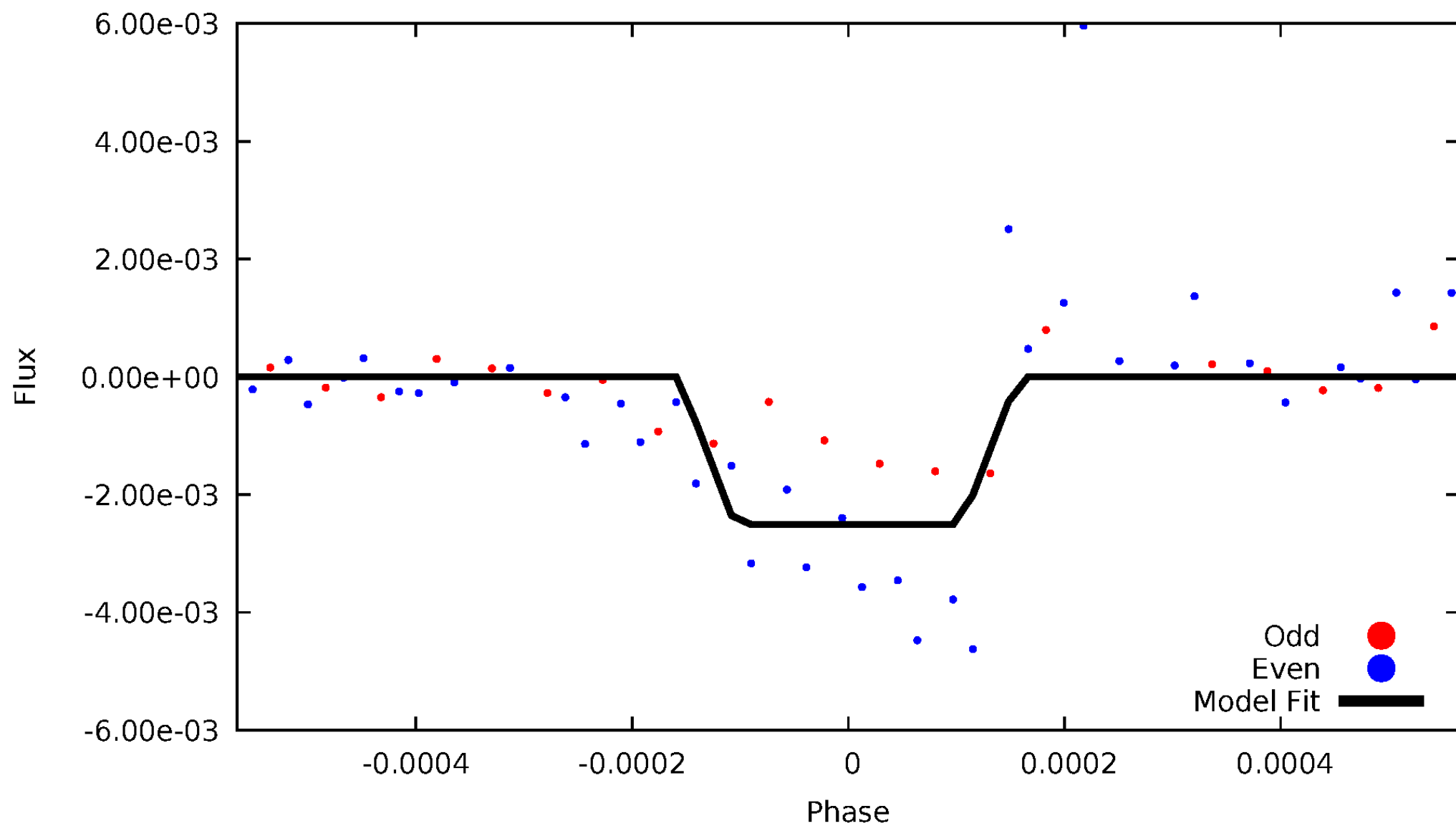
DV Odd/Even

TCE 003763058-02



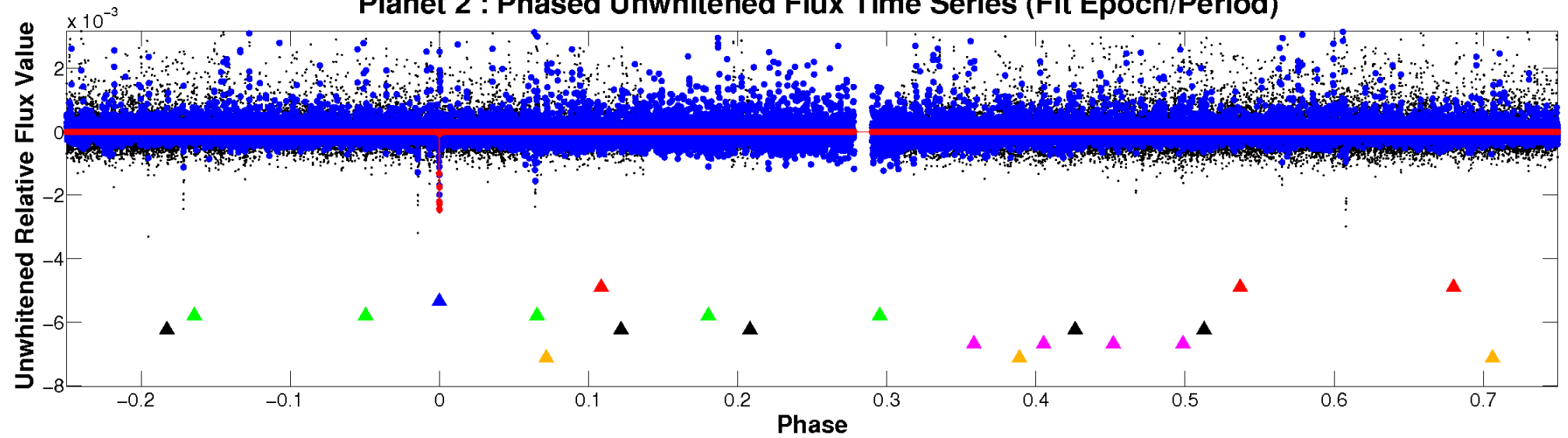
ALT Odd/Even

TCE 003763058-02

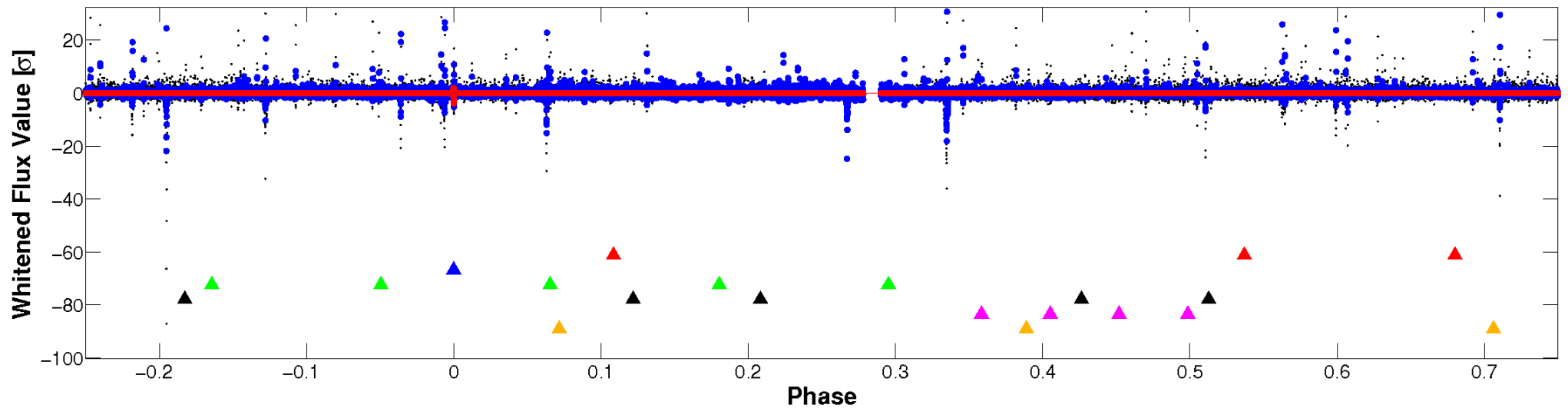


Non-Whitened Vs. Whitened Light Curve

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

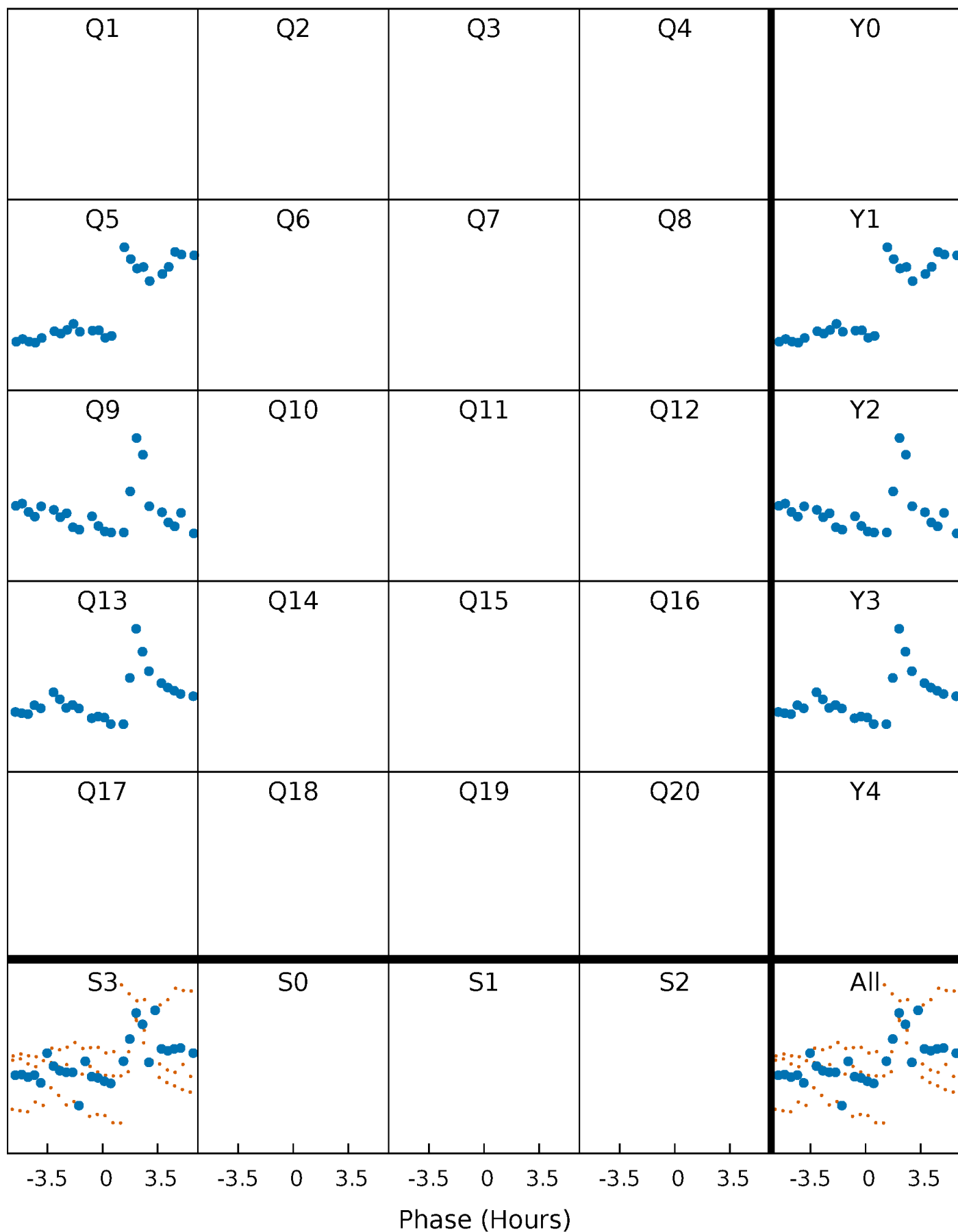


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



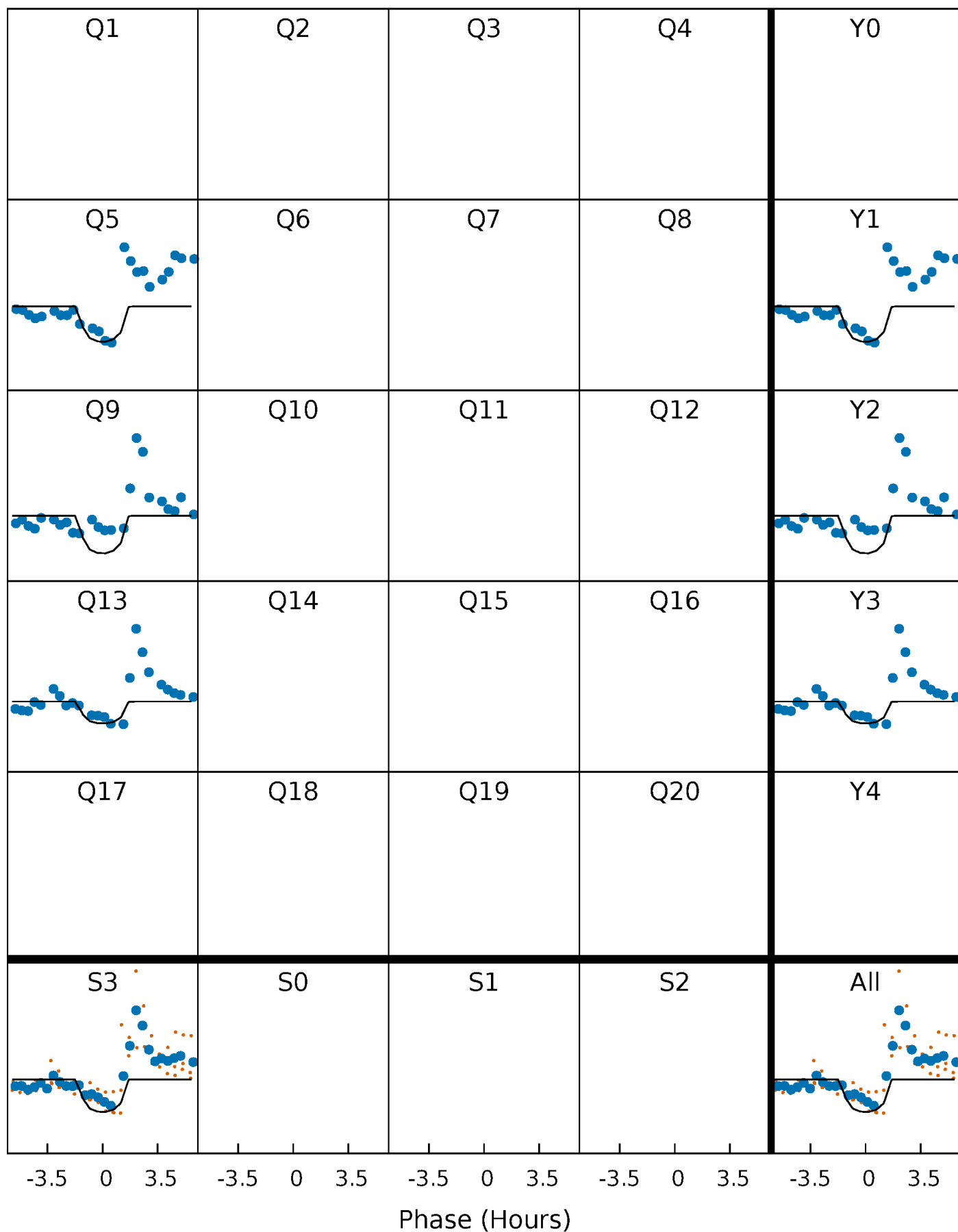
PDC Quarter-Phased Transit Curves

TCE 003763058-02 $P=398.641576$ Days $T_0=452.758025$ (BKJD)



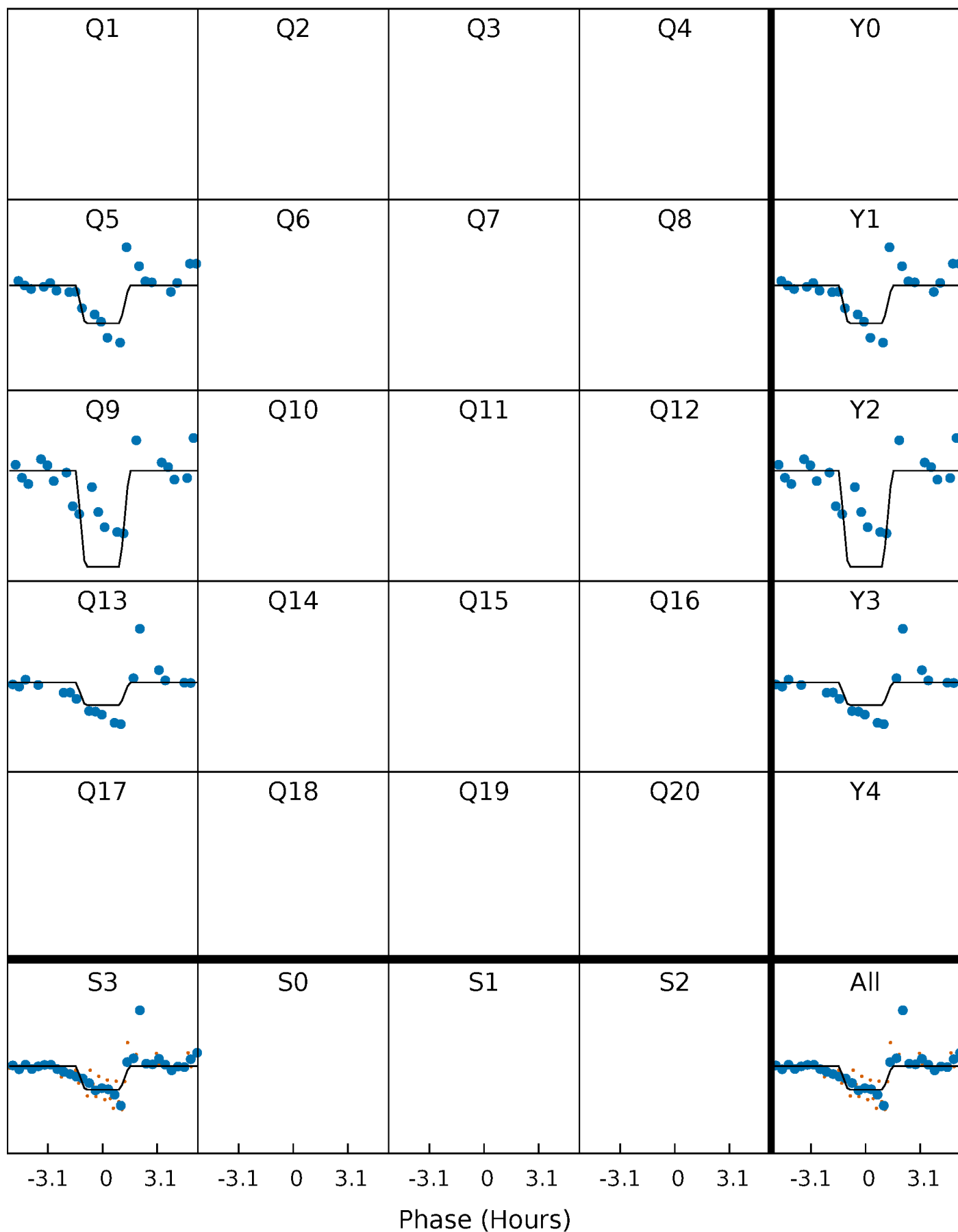
DV Quarter-Phased Transit Curves

TCE 003763058-02 $P=398.641576$ Days $T_0=452.758025$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

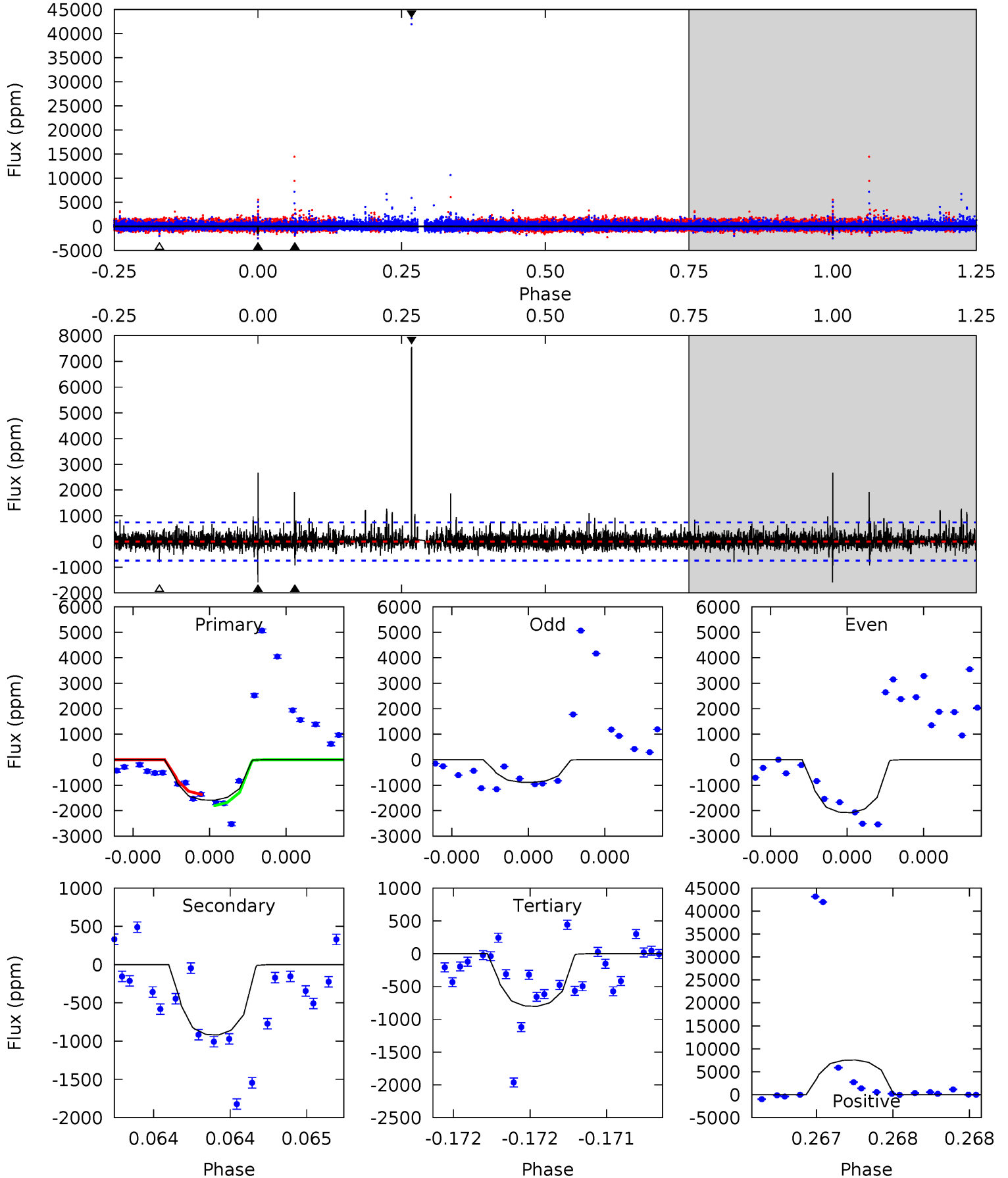
TCE 003763058-02 $P=398.646945$ Days $T_0=452.748772$ (BKJD)



DV Model-Shift Uniqueness Test

003763058-02, P = 398.641576 Days, E = 54.116449 Days

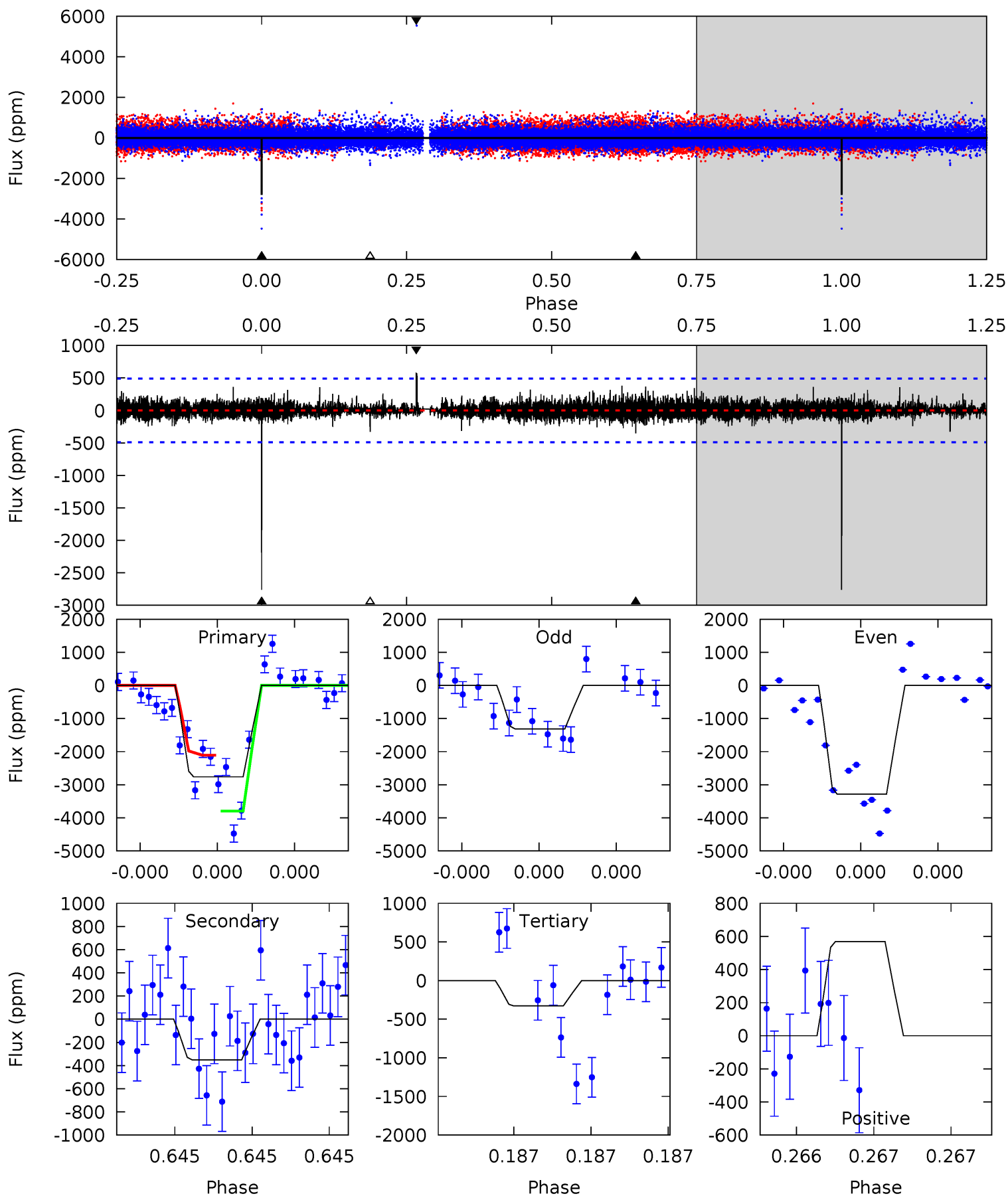
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	7.01	6.12	57.6	5.66	3.61	1.63	5.99	-45.5	0.89	-50.6	2.80	1.09	0.83	1.61



Alt Model-Shift Uniqueness Test

003763058-02, $P = 398.646945$ Days, $E = 54.101827$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.0	4.06	3.80	6.59	5.67	3.62	0.83	28.2	25.4	0.26	-2.53	11.6	1.02	0.17	8.94



Stellar Parameters For KIC 003763058

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4080^{+141}_{-155}	$4.646^{+0.060}_{-0.020}$	$0.000^{+0.250}_{-0.300}$	$0.613^{+0.038}_{-0.070}$	$0.606^{+0.057}_{-0.063}$	$3.712^{+1.094}_{-0.389}$
	+3%/-4%	+1%/-0%	+inf%/-inf%	+6%/-11%	+9%/-10%	+29%/-10%
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 003763058-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-920 ± 131	$5.79^{+4.78}_{-3.92}$	206^{+9}_{-9}	2948^{+1207}_{-431}	$12716^{+107301}_{-9013}$
Alt.	-350 ± 86	$5.40^{+5.39}_{-3.44}$	206^{+8}_{-9}	2621^{+872}_{-422}	5422^{+31977}_{-4164}

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

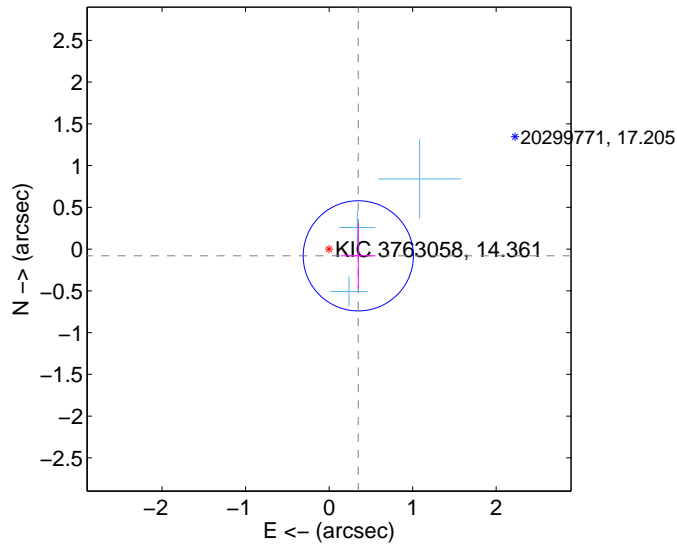
Supplemental centroid analysis for 003763058-02. Kepler magnitude: 14.36. Transit SNR 14.43

There are 3 quarters with good PRF difference image offsets

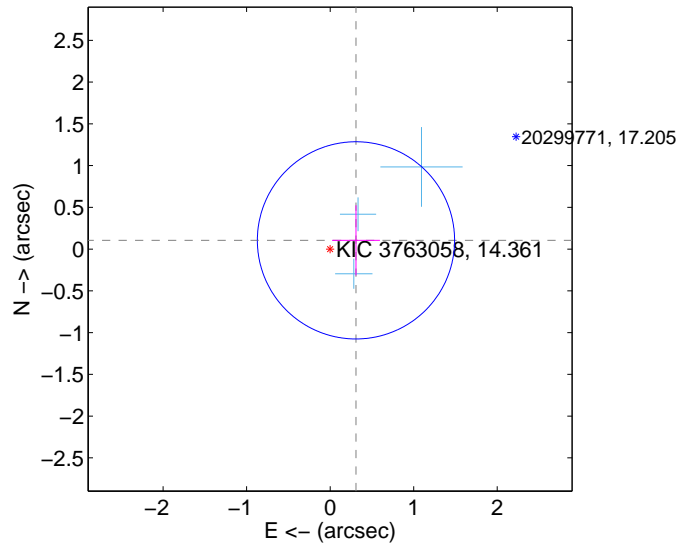
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.359 ± 0.220	1.63	-0.349 ± 0.207	-0.081 ± 0.391
PRF-fit source offset from KIC position	0.326 ± 0.394	0.83	-0.309 ± 0.287	0.105 ± 0.420
photometric centroid source offset	0.81 ± 0.54	1.51	-0.15 ± 0.59	-0.79 ± 0.53

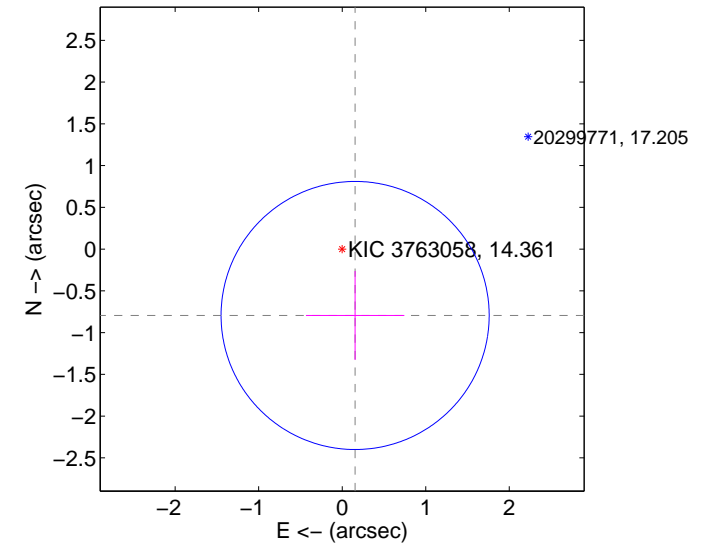
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

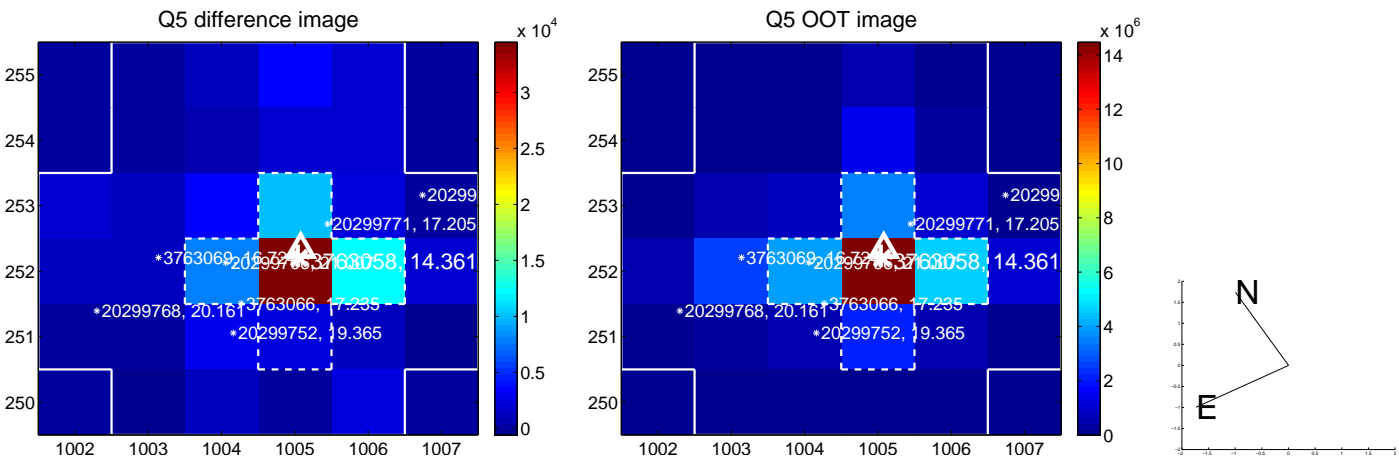


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

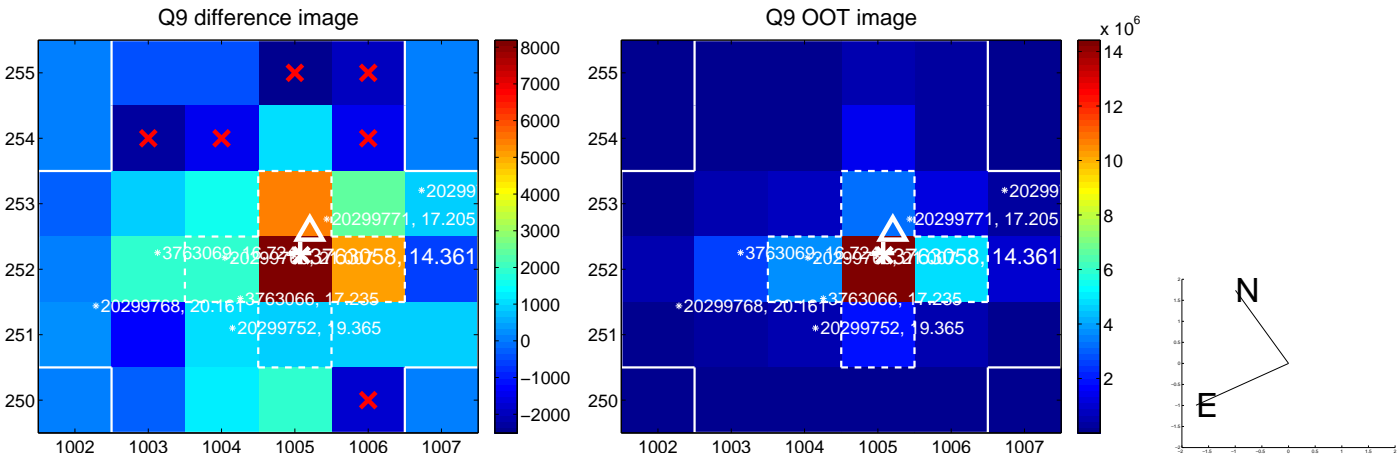
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



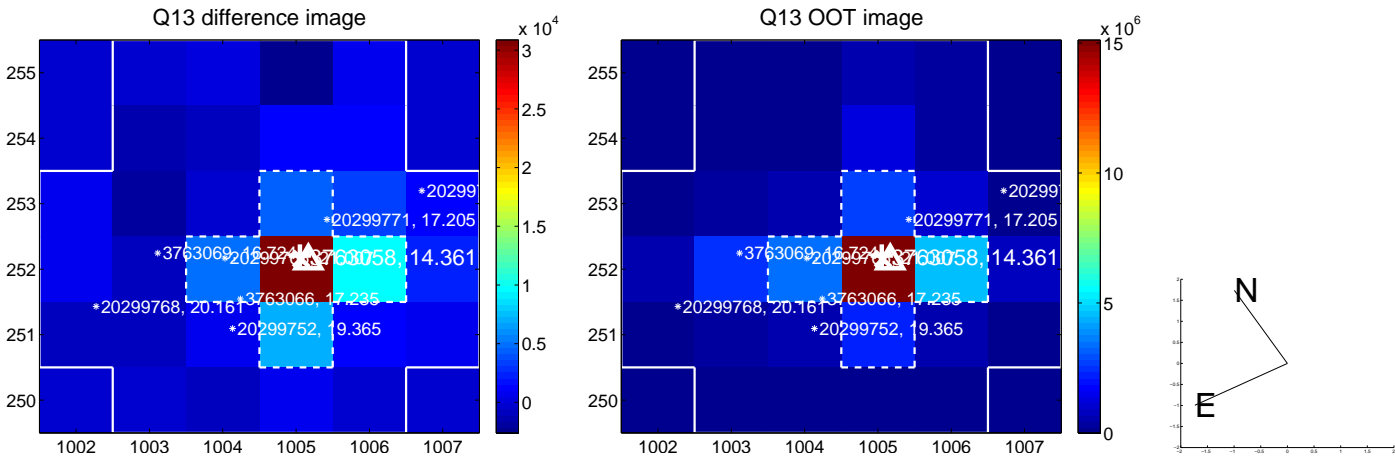
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



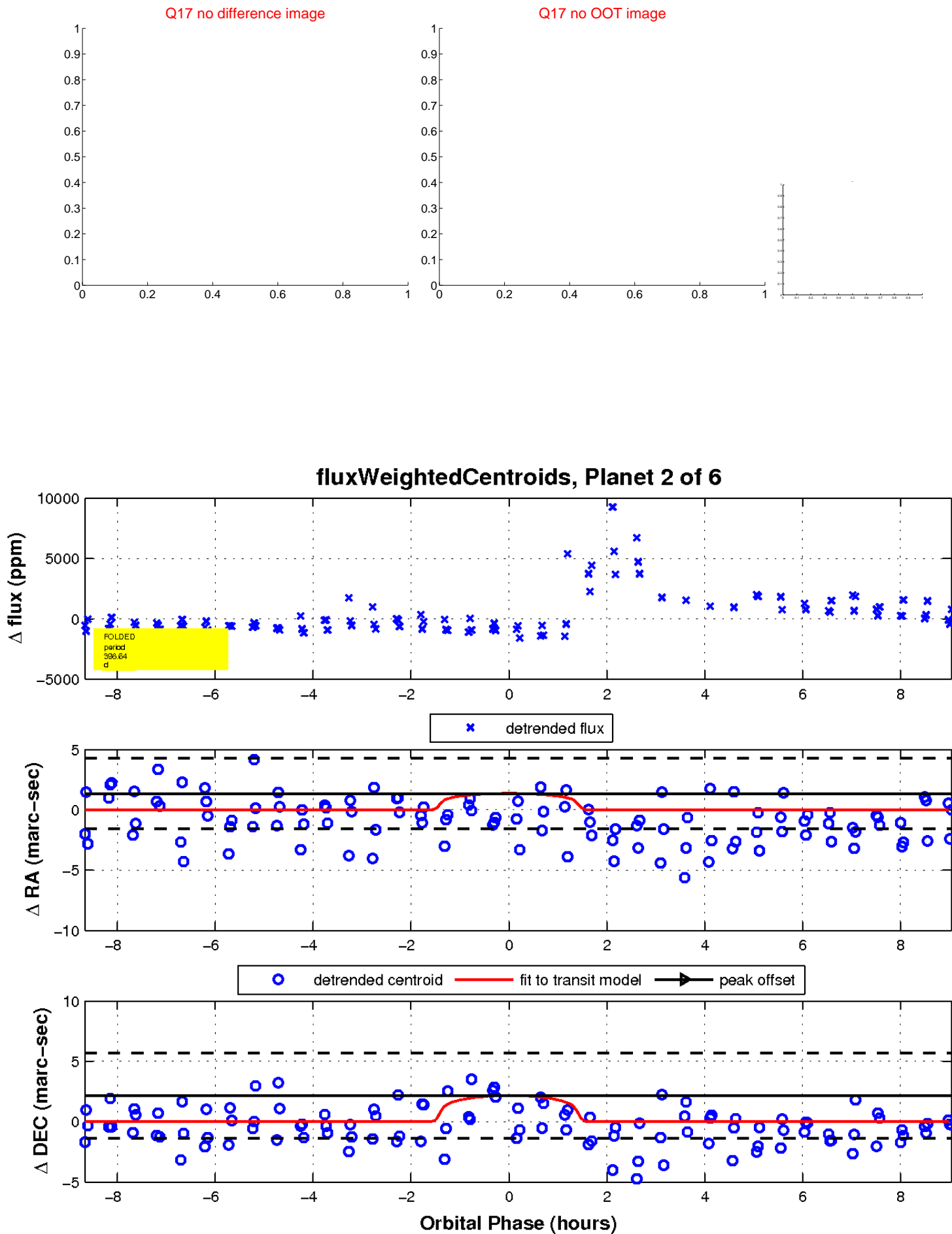
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

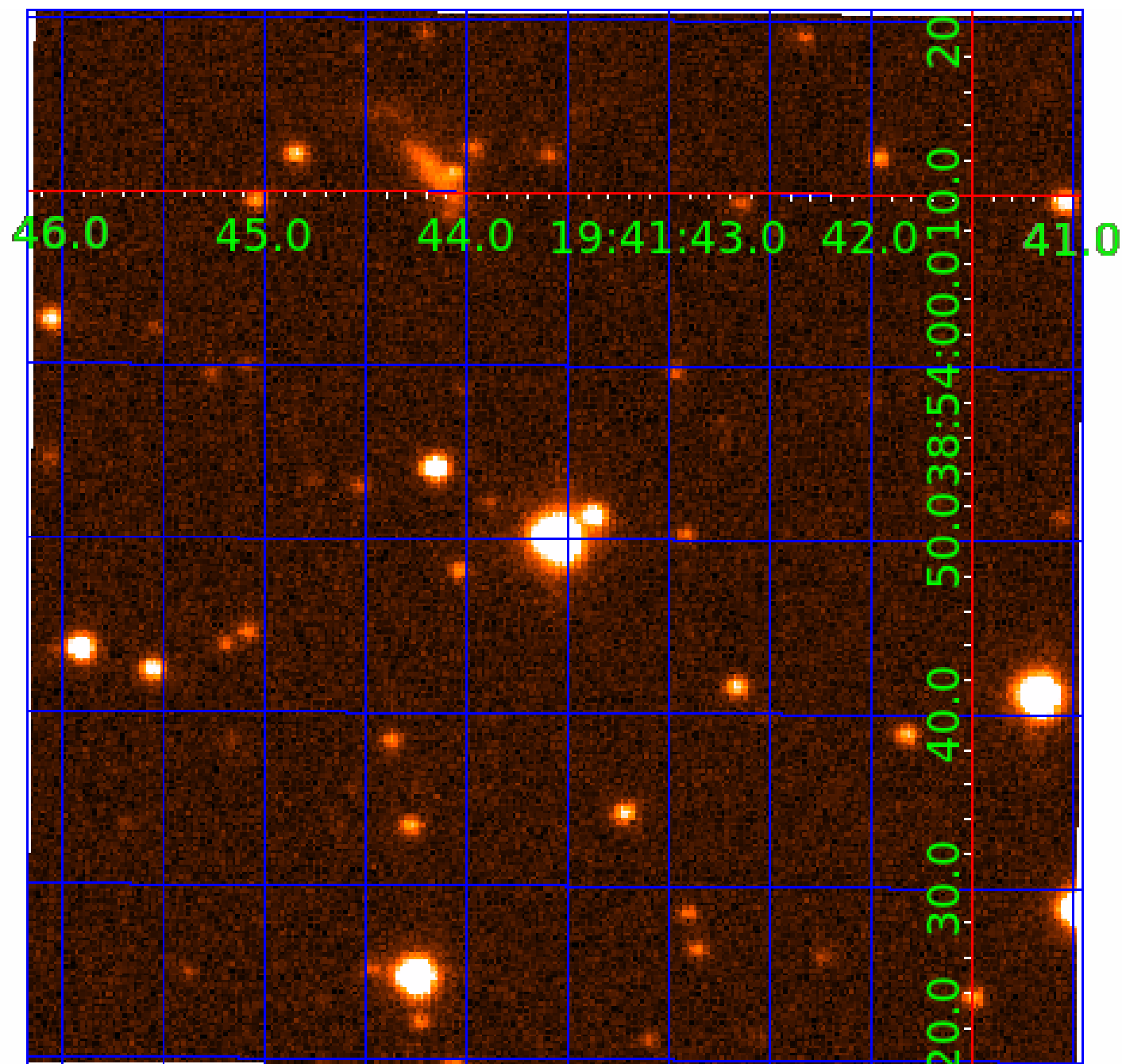


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003763058

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})
003763058-01	OBS	No	626.479672	268.188808	1222.6	8.242	14.2	7.1	0.61	4080	2.38	0.06
003763058-02	OBS	No	398.641576	452.758025	2455.6	3.021	13.9	14.4	0.61	4080	3.02	0.12
003763058-03	OBS	No	352.839301	171.824795	1073.0	4.766	12.8	7.1	0.61	4080	2.06	0.14
003763058-04	OBS	No	277.251249	224.074408	539.4	3.836	11.5	3.8	0.61	4080	1.57	0.19
003763058-05	OBS	No	380.012677	252.899547	1042.5	6.492	12.8	6.4	0.61	4080	2.42	0.12
003763058-06	OBS	No	525.115407	481.343576	1116.2	9.002	12.1	6.3	0.61	4080	2.10	0.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003763058-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
003763058-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—MOD_POS_DV—INCONSISTENT_TRANS
003763058-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003763058-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS—HALO_GHOST
003763058-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
003763058-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

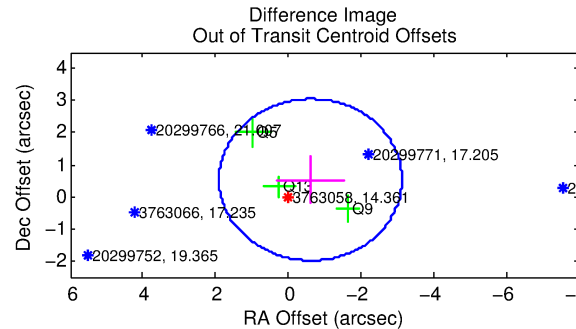
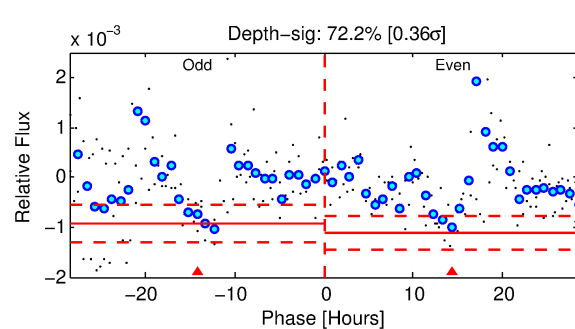
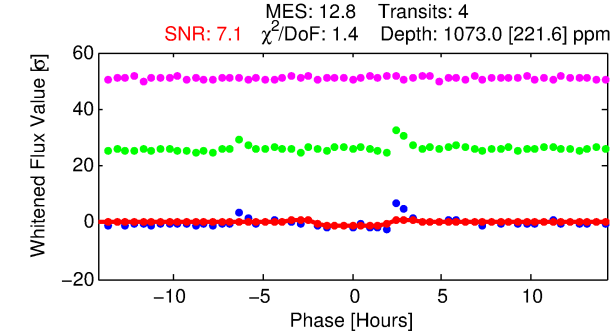
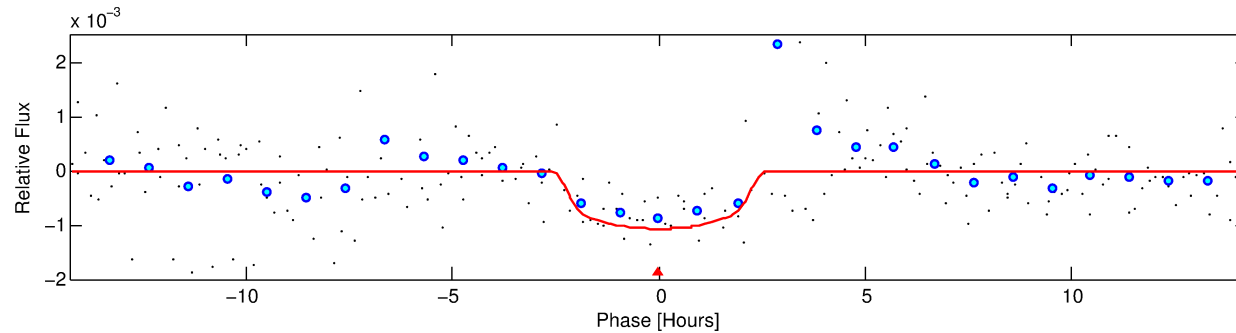
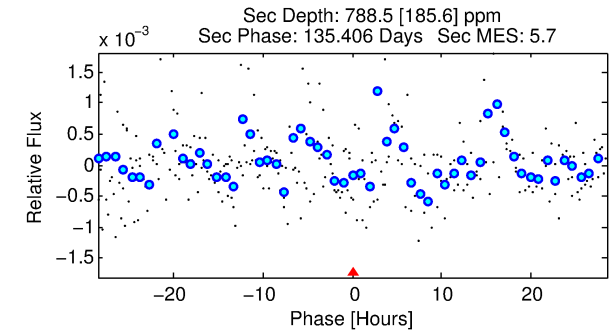
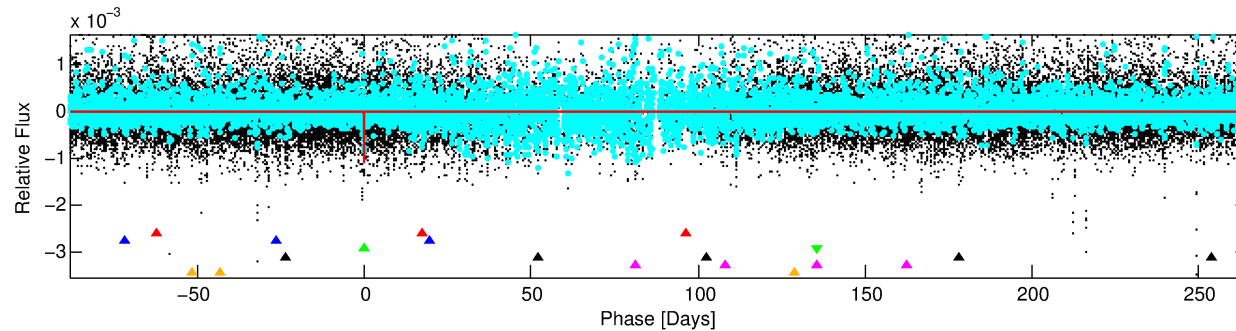
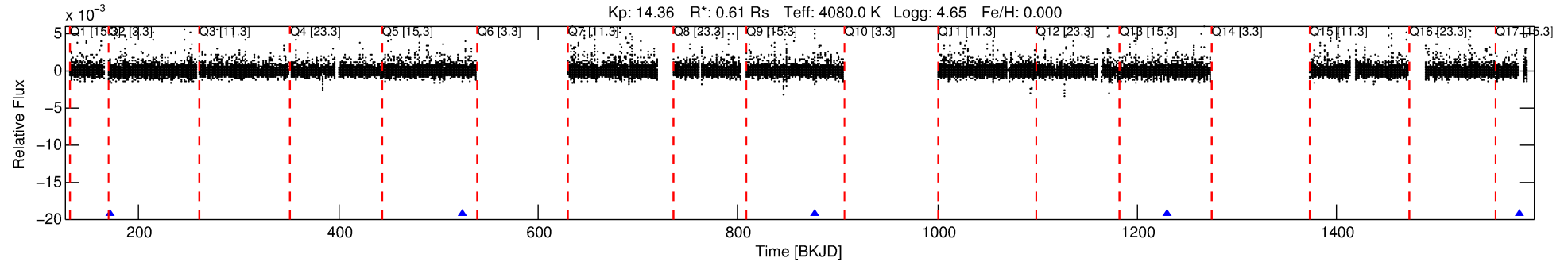
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003763058-03

No Significant Match Found

DV One-Page Summary

KIC: 3763058 Candidate: 3 of 6 Period: 352.839 d



DV Fit Results:

Period = 352.83930 [0.00524] d
Epoch = 171.8248 [0.0106] BKJD
Rp/R* = 0.0309 [0.0483]
a/R* = 481.02 [2588.97]
b = 0.58 [6.20]
Seff = 0.14 [0.03]
Teq = 155 [7] K
Rp = 2.06 [3.24] Re
a = 0.8274 [0.0736] AU
Ag = 69658.50 [218640.92] [0.32 σ]
Teffp = 3891 [3055] K [1.22 σ]

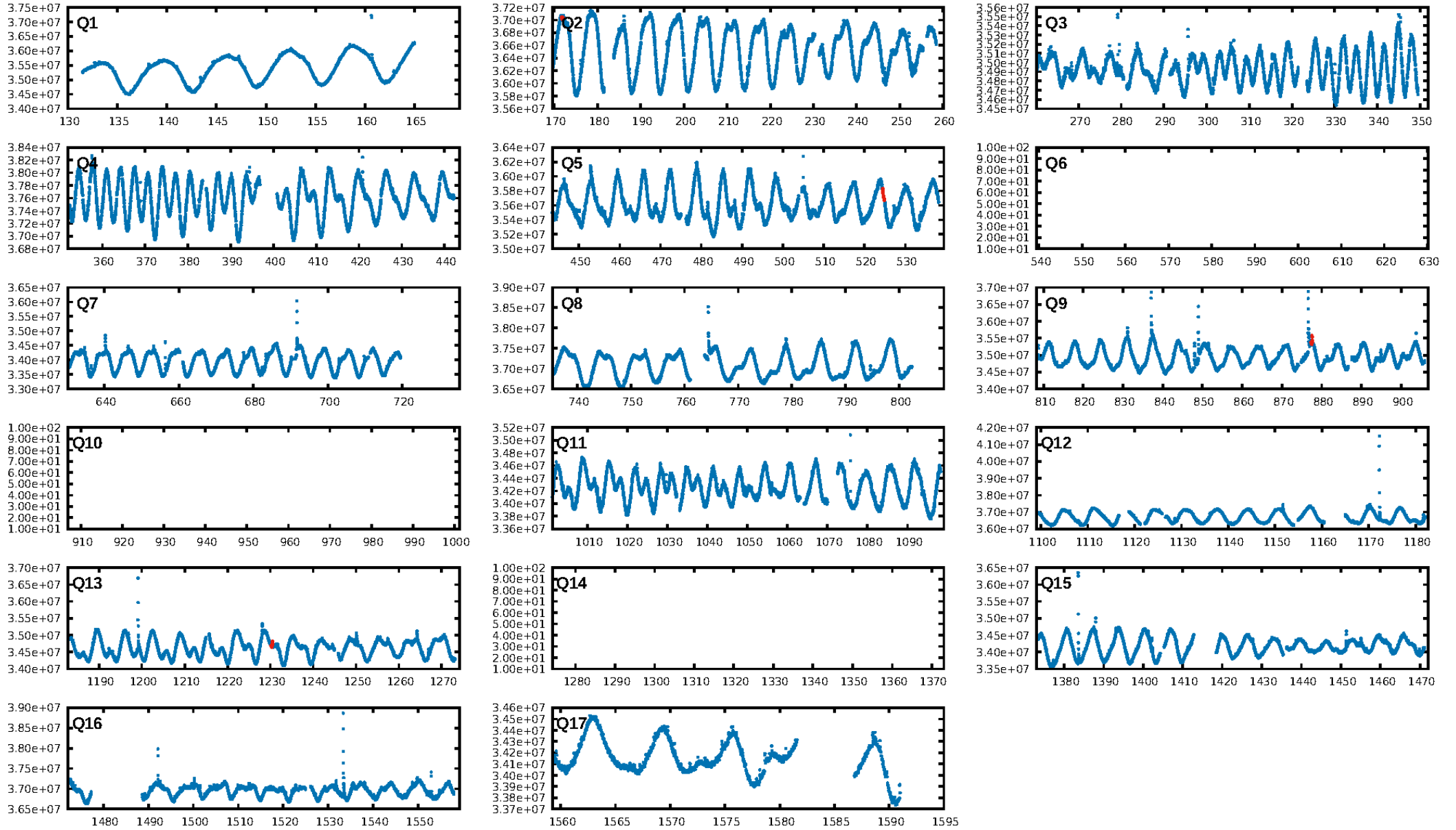
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [296.56 σ]
LongPeriod-sig: 100.0% [80.98 σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 78.2%
Bootstrap-pfa: 5.39e-12
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.719
Centroid-sig: 52.0%
Centroid-so: 0.497 arcsec [0.51 σ]
OotOffset-rm: 0.809 arcsec [0.96 σ]
KicOffset-rm: 0.968 arcsec [1.17 σ]
OotOffset-st: 0/0/0/3 [3]
KicOffset-st: 0/0/0/3 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [4/4]

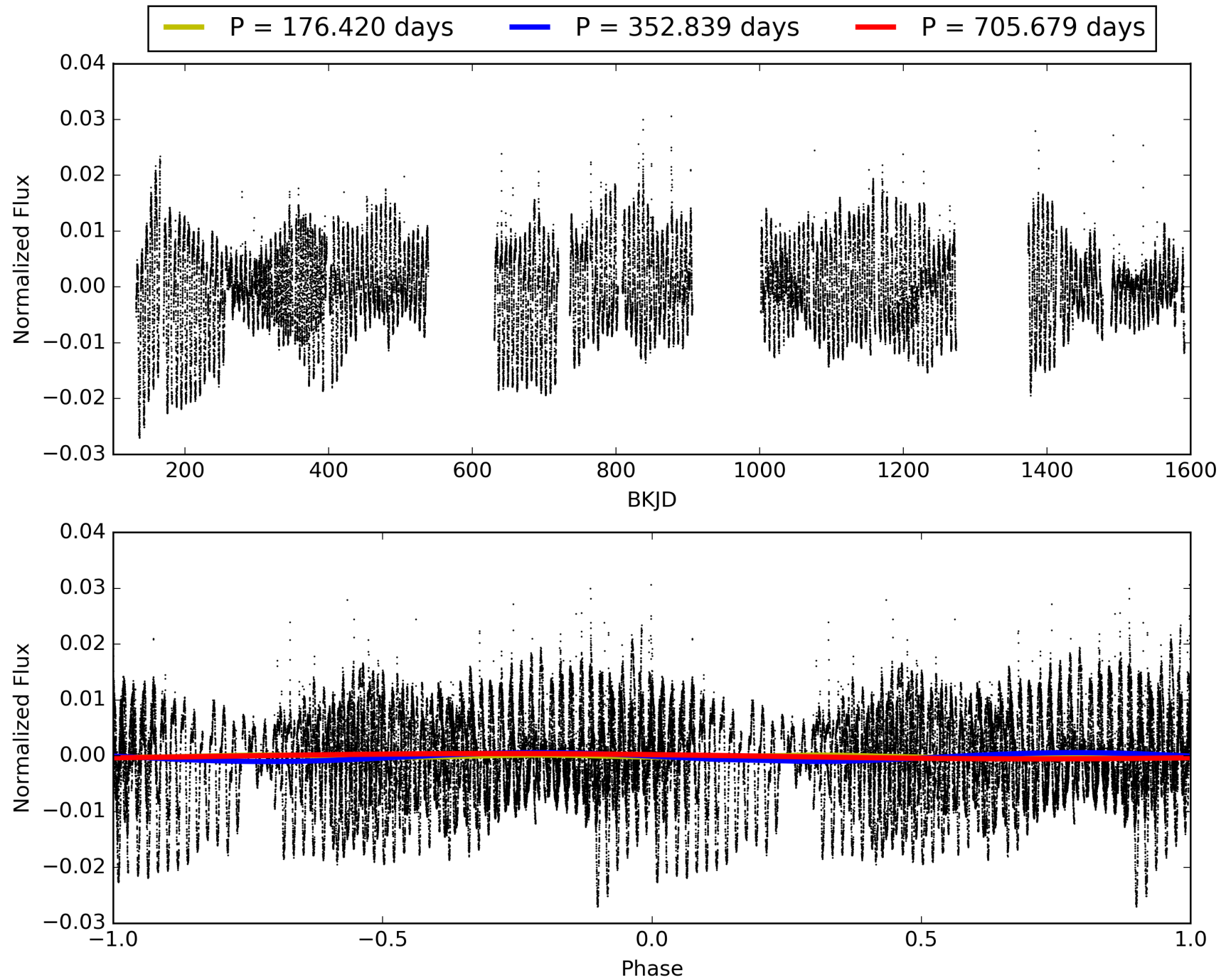
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:02:25 Z

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

TCE 003763058-03, PDC Light Curves

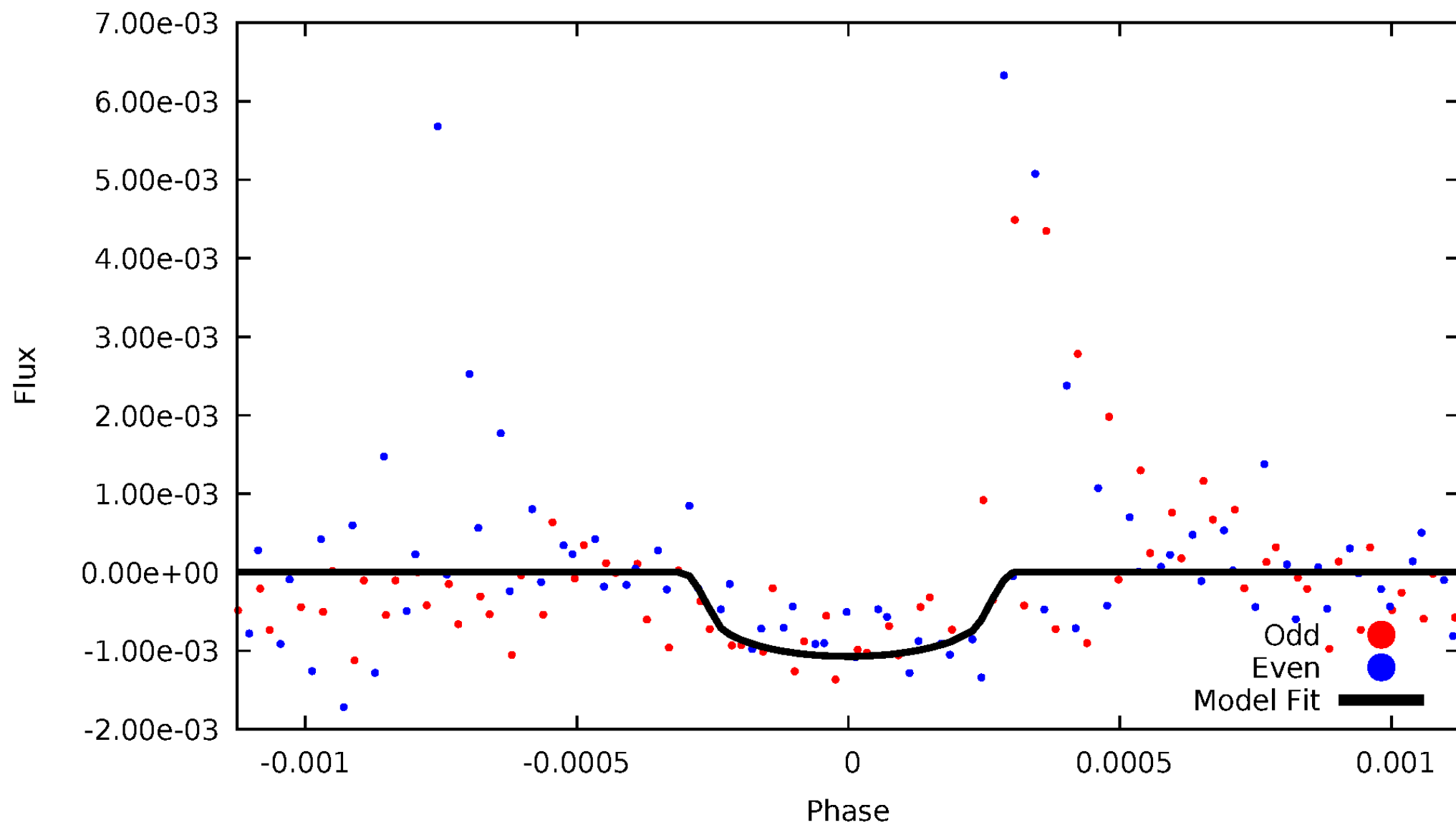


TCE 003763058-03



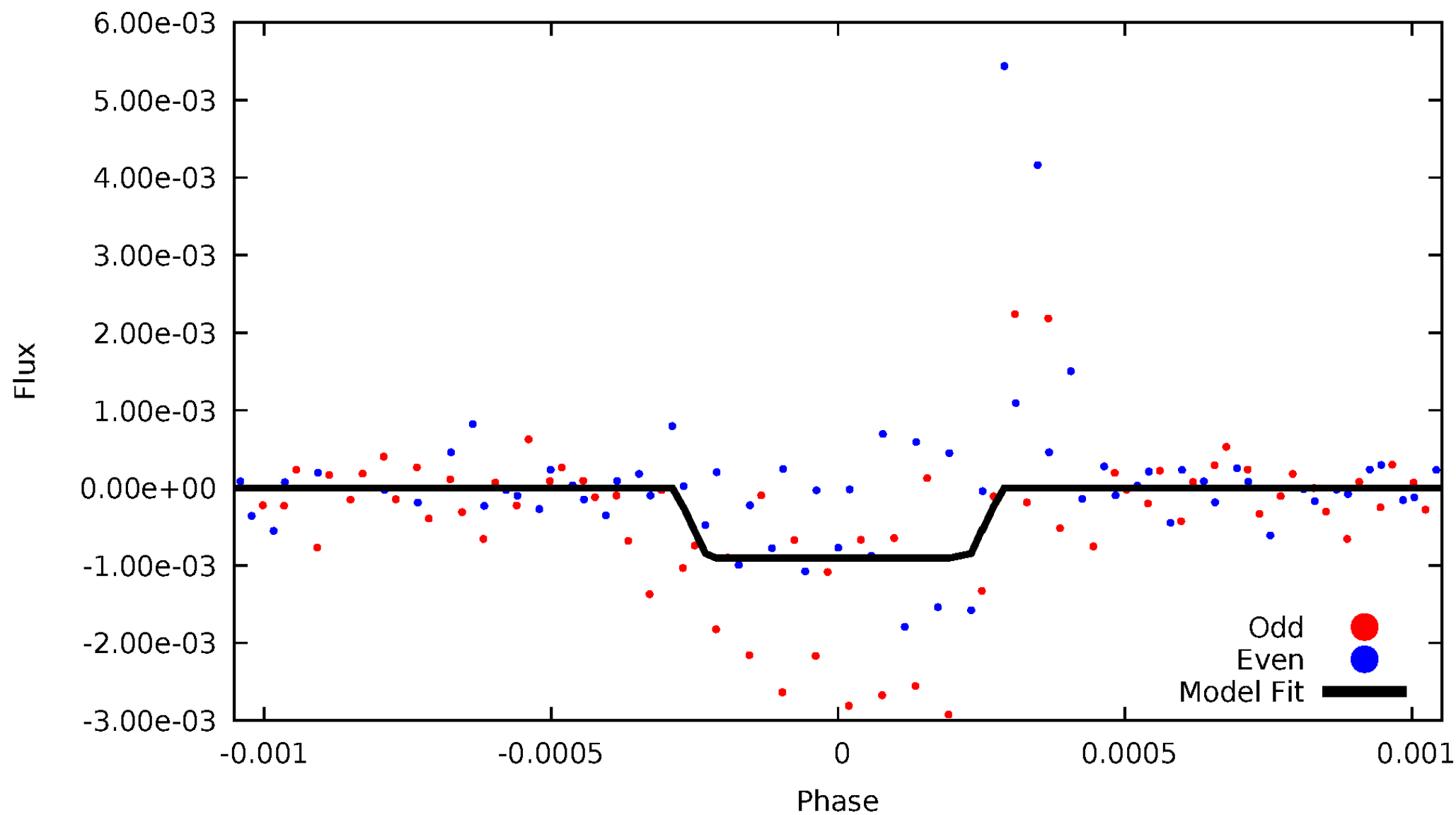
DV Odd/Even

TCE 003763058-03



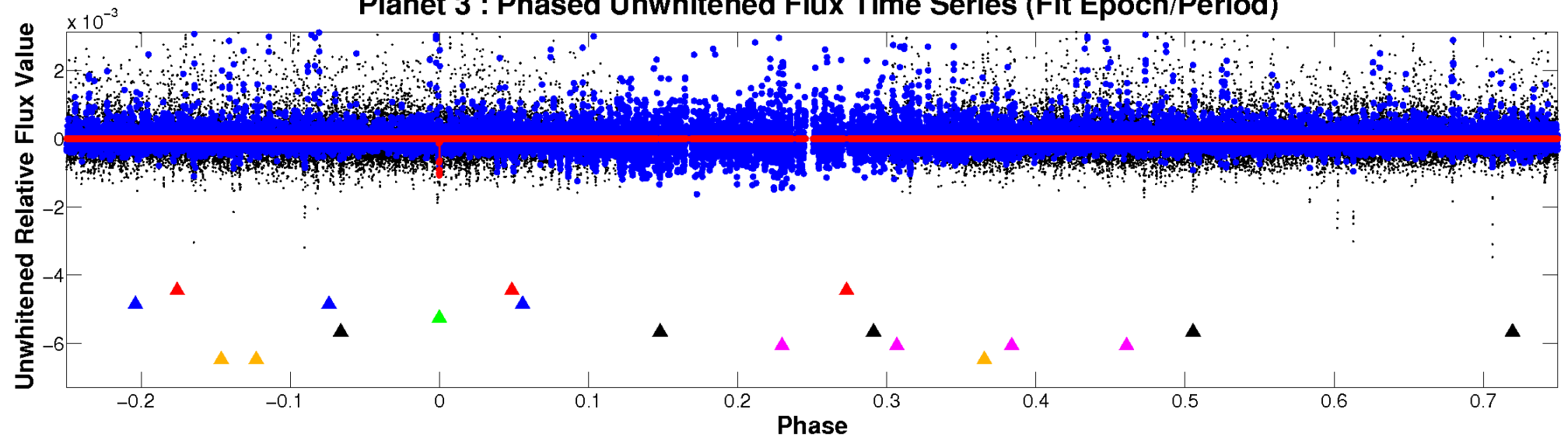
ALT Odd/Even

TCE 003763058-03

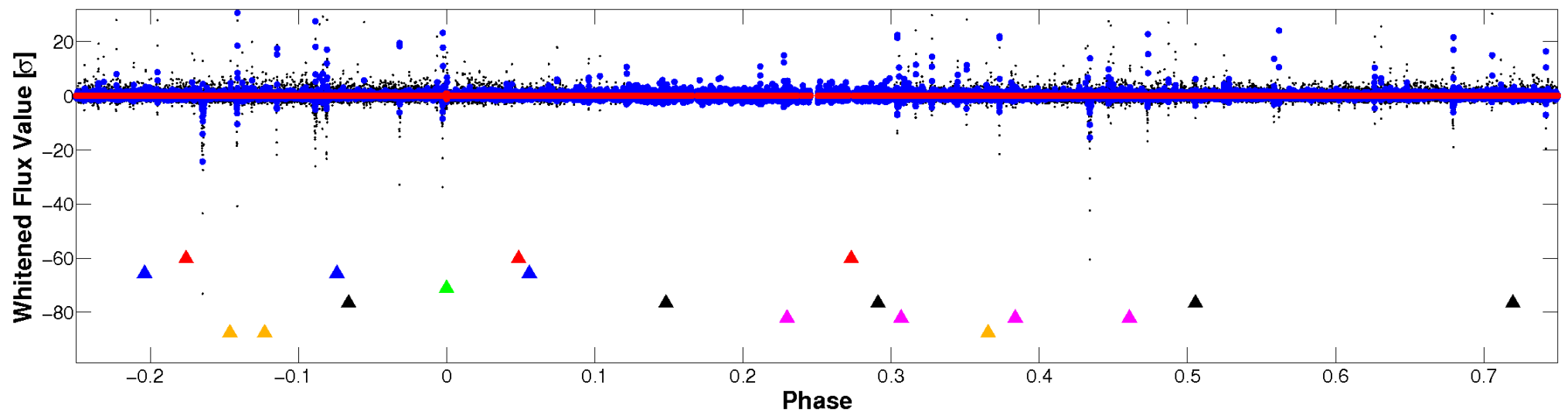


Non-Whitened Vs. Whitened Light Curve

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

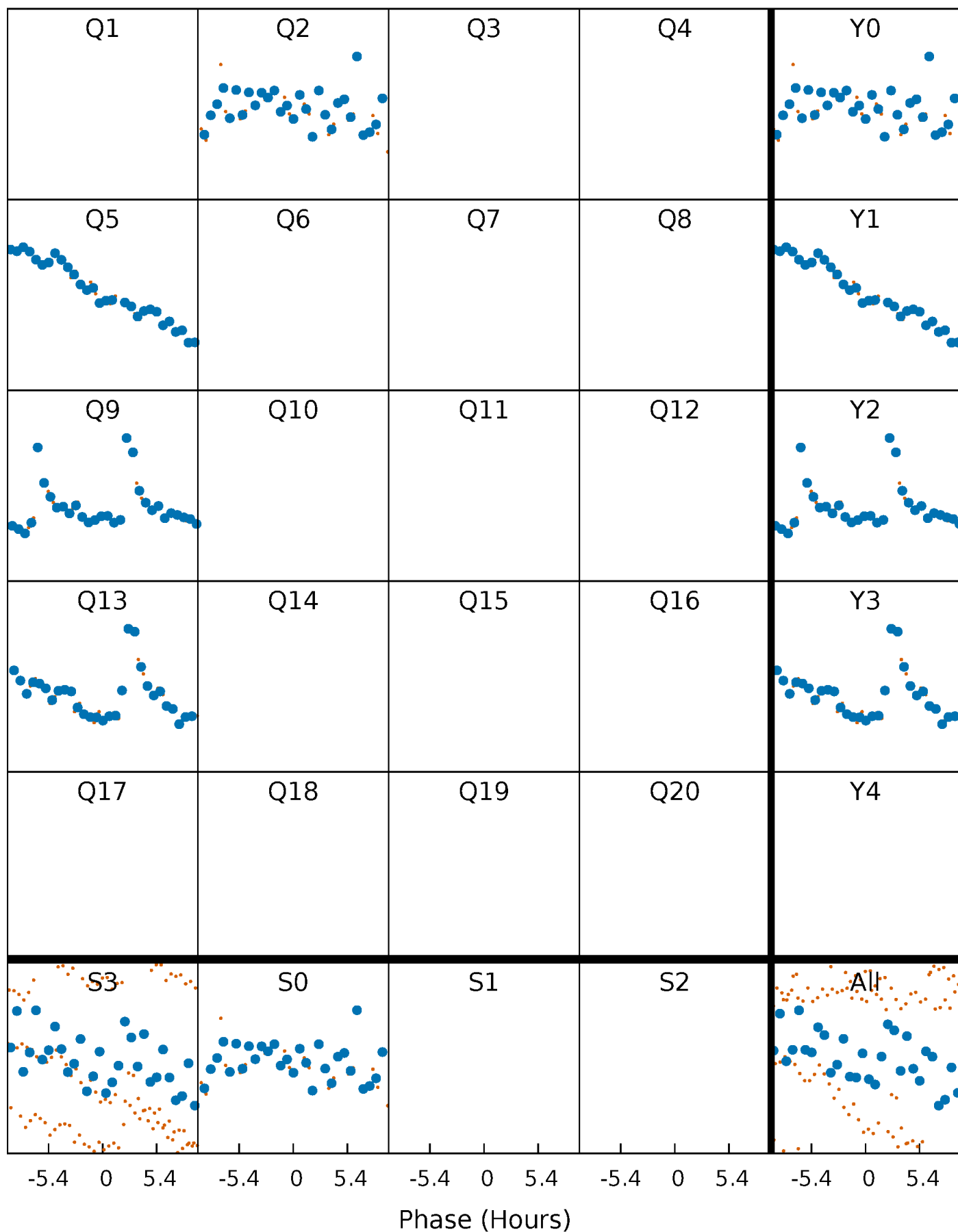


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



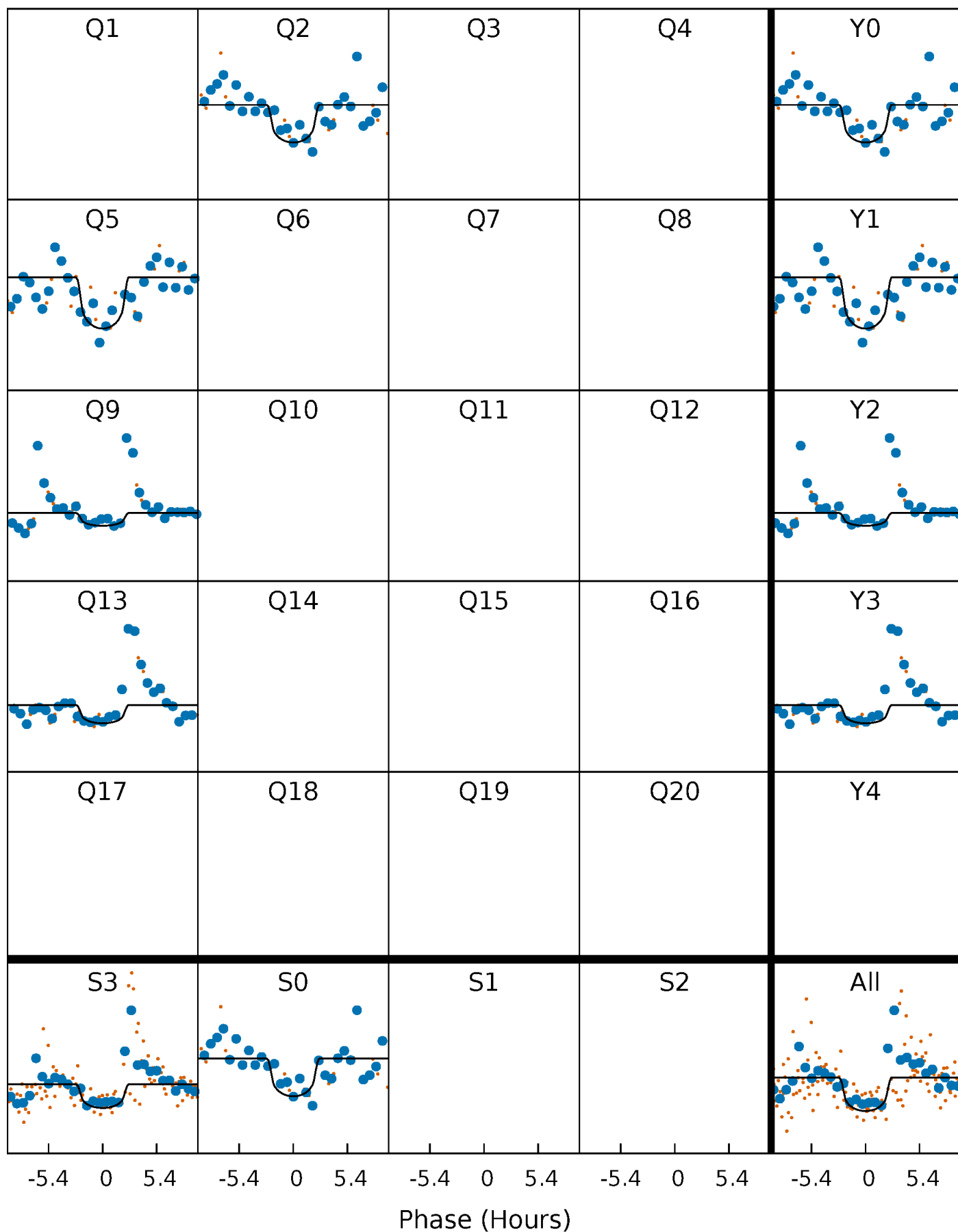
PDC Quarter-Phased Transit Curves

TCE 003763058-03 $P=352.839301$ Days $T_0=171.824795$ (BKJD)



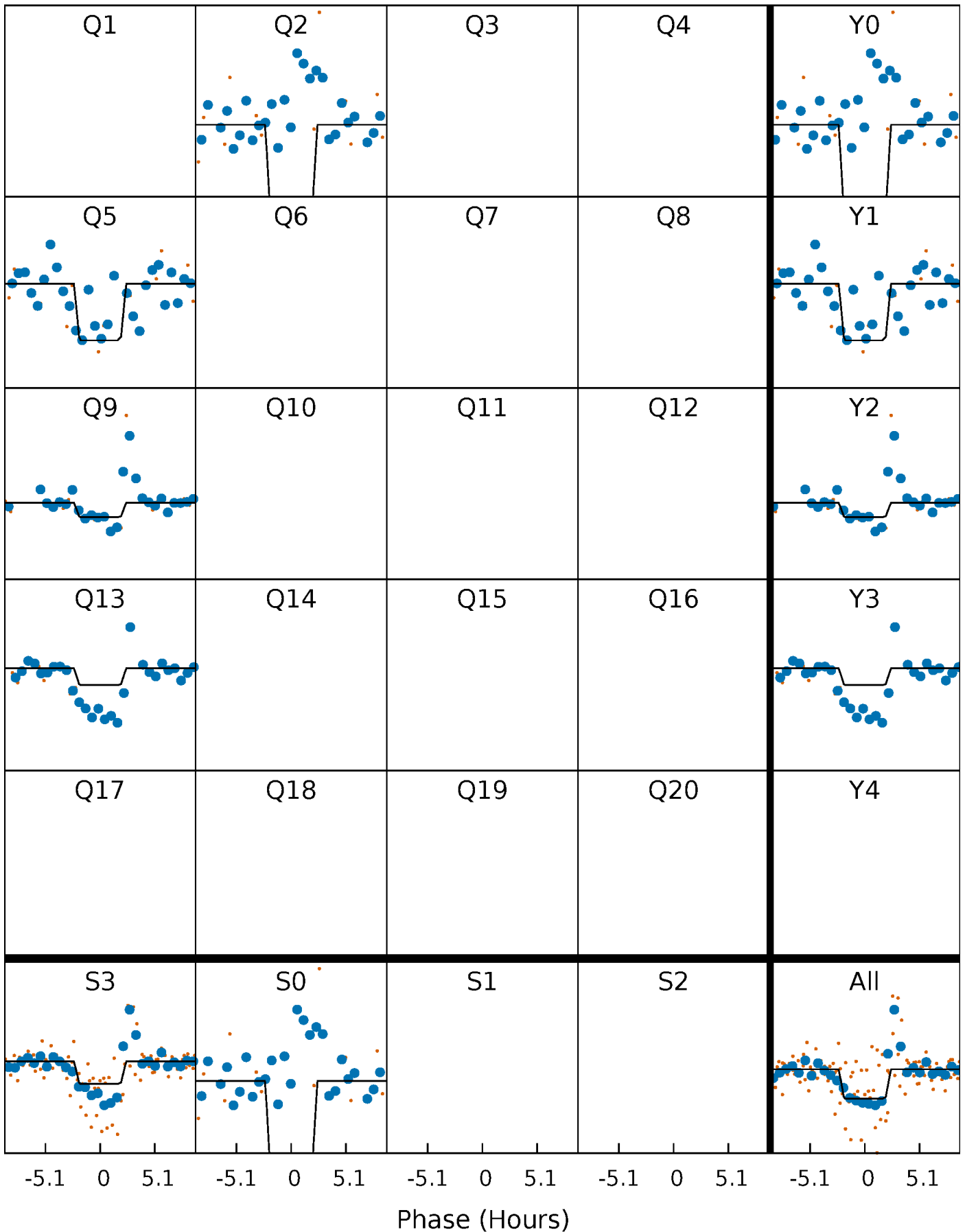
DV Quarter-Phased Transit Curves

TCE 003763058-03 $P=352.839301$ Days $T_0=171.824795$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

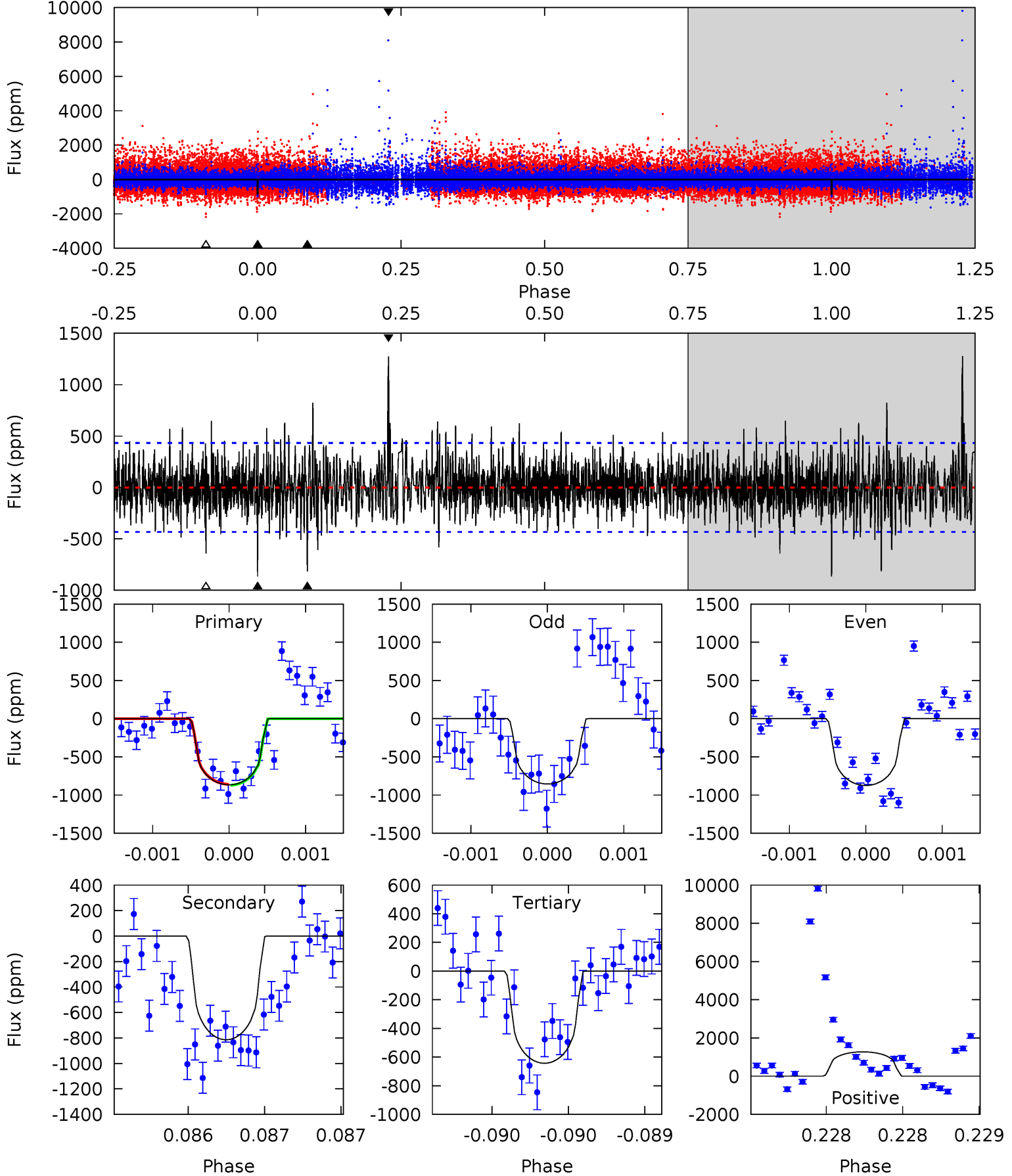
TCE 003763058-03 $P=352.839903$ Days $T_0=171.822321$ (BKJD)



DV Model-Shift Uniqueness Test

003763058-03, P = 352.839301 Days, E = 171.824795 Days

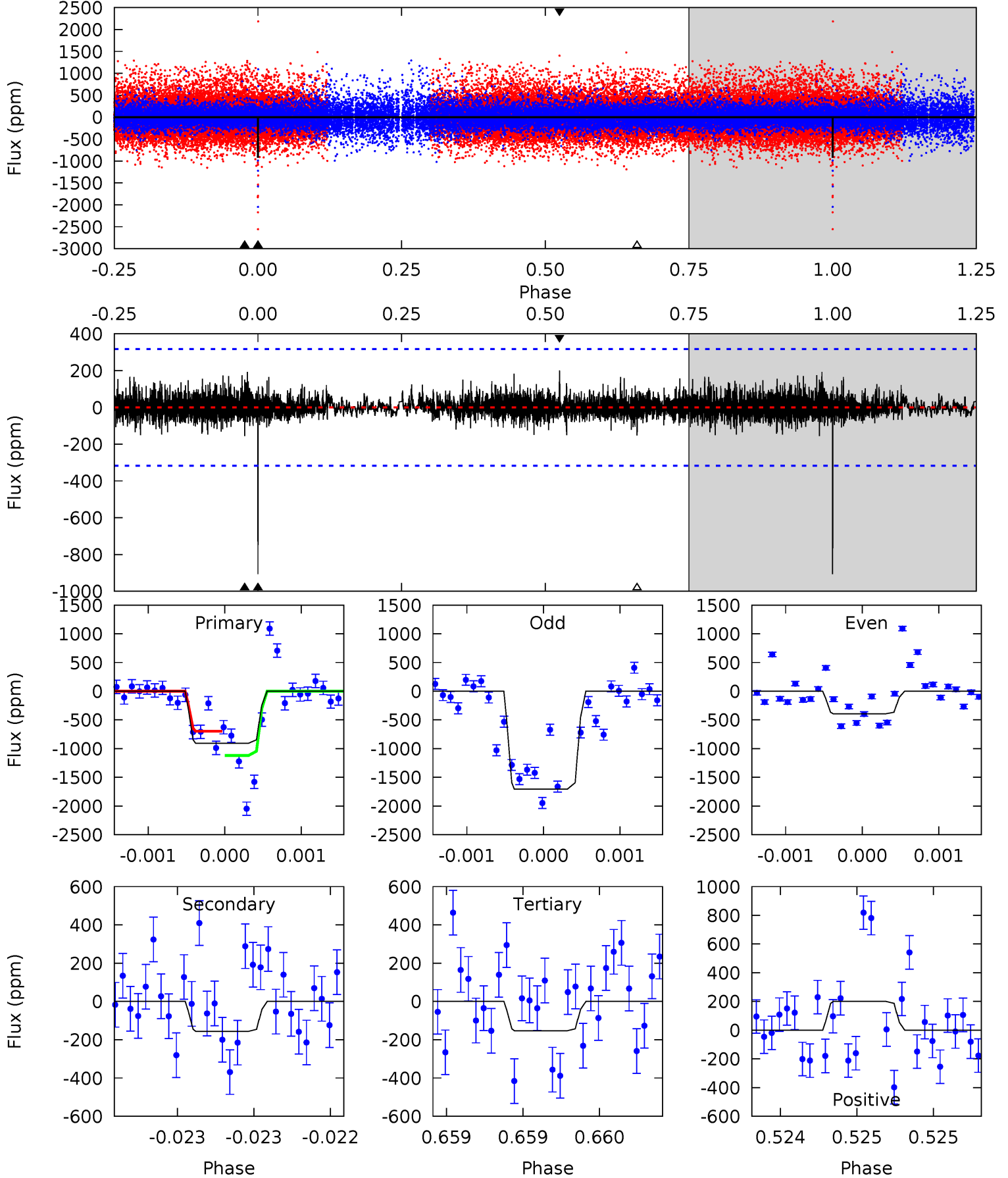
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	10.4	8.25	16.3	5.54	3.43	2.14	2.85	-5.24	2.19	-5.90	0.10	1.01	0.60	0.08



Alt Model-Shift Uniqueness Test

003763058-03, P = 352.839903 Days, E = 171.822321 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.9	2.73	2.68	3.50	5.55	3.45	0.68	13.2	12.4	0.05	-0.77	12.8	1.16	0.18	3.50



Stellar Parameters For KIC 003763058

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4080^{+141}_{-155}	$4.646^{+0.060}_{-0.020}$	$0.000^{+0.250}_{-0.300}$	$0.613^{+0.038}_{-0.070}$	$0.606^{+0.057}_{-0.063}$	$3.712^{+1.094}_{-0.389}$
	+3%/-4%	+1%/-0%	+inf%/-inf%	+6%/-11%	+9%/-10%	+29%/-10%
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 003763058-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-814 ± 78	$2.96^{+2.84}_{-1.90}$	214^{+8}_{-9}	3486^{+1594}_{-607}	$35133^{+229612}_{-25802}$
Alt.	-156 ± 57	$3.10^{+2.83}_{-2.11}$	215^{+8}_{-9}	2708^{+1081}_{-392}	5966^{+52424}_{-4303}

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

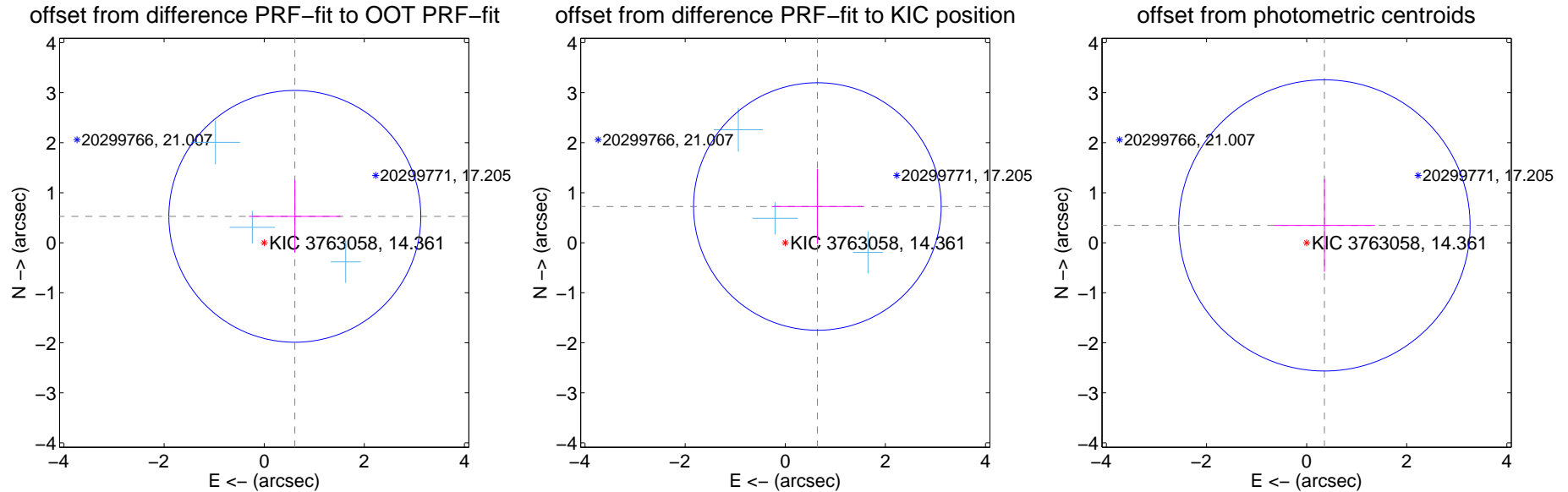
DV Centroid Data

Supplemental centroid analysis for 003763058-03. Kepler magnitude: 14.36. Transit SNR 7.07

There are 3 quarters with good PRF difference image offsets

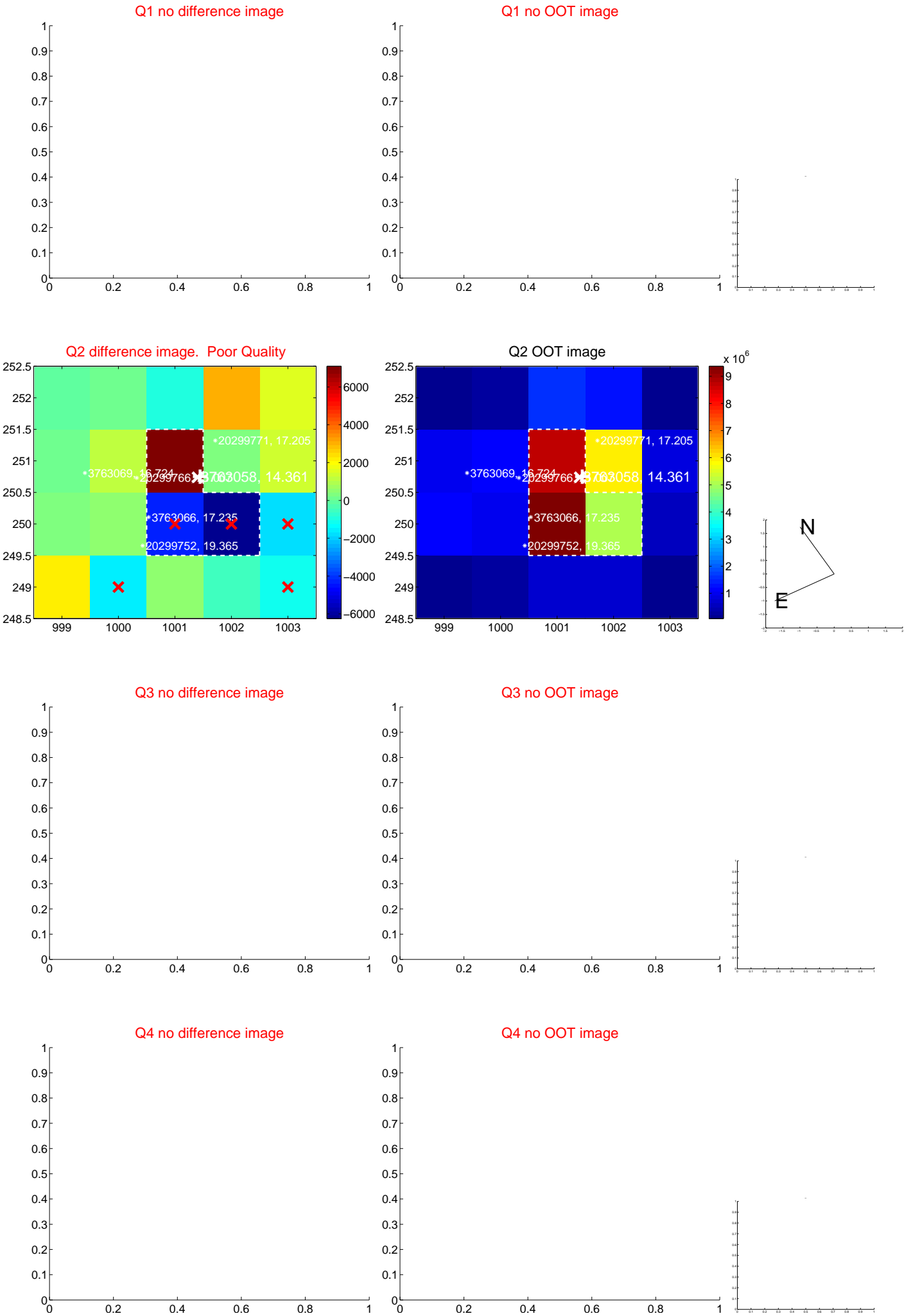
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.809 ± 0.839	0.96	-0.612 ± 0.914	0.528 ± 0.726
PRF-fit source offset from KIC position	0.968 ± 0.825	1.17	-0.641 ± 0.910	0.725 ± 0.751
photometric centroid source offset	0.50 ± 0.97	0.51	-0.36 ± 1.01	0.35 ± 0.93

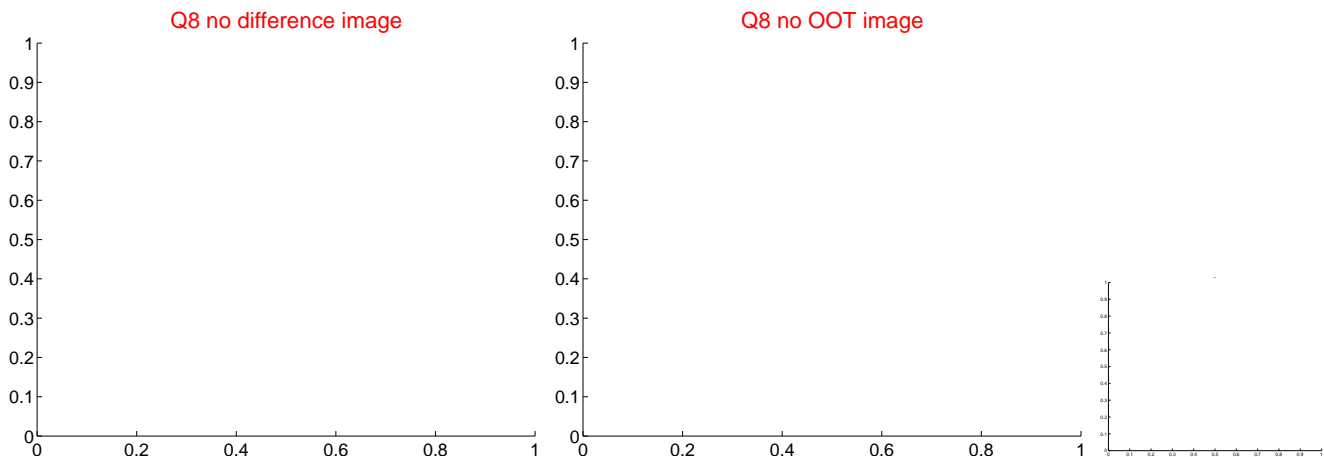
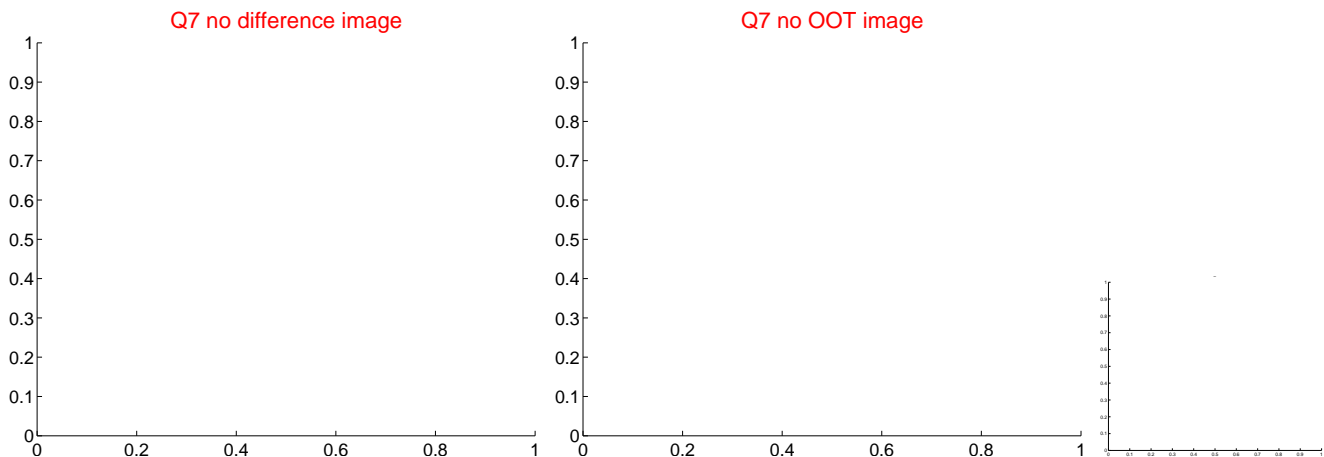
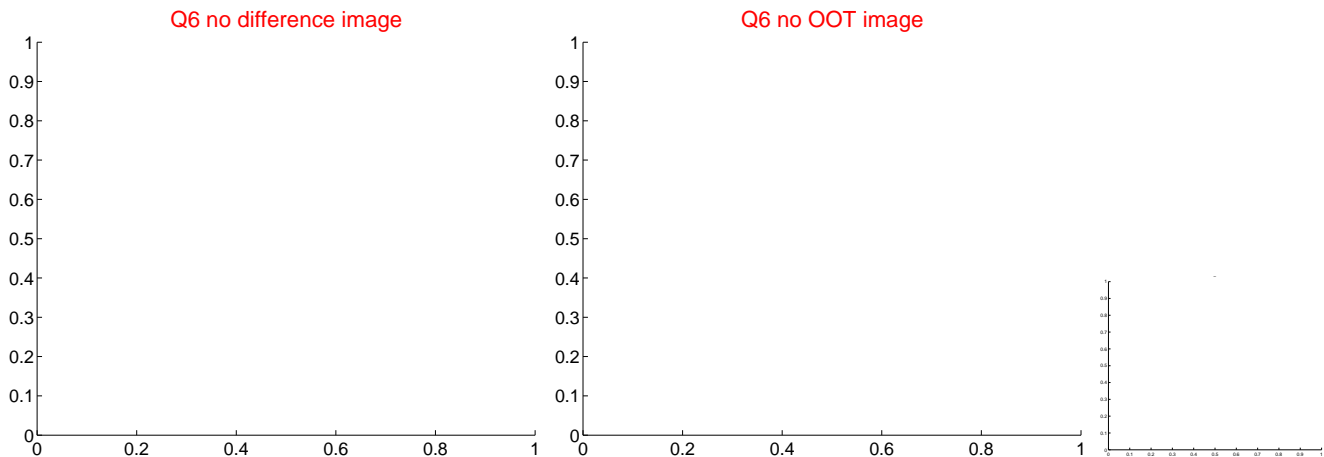
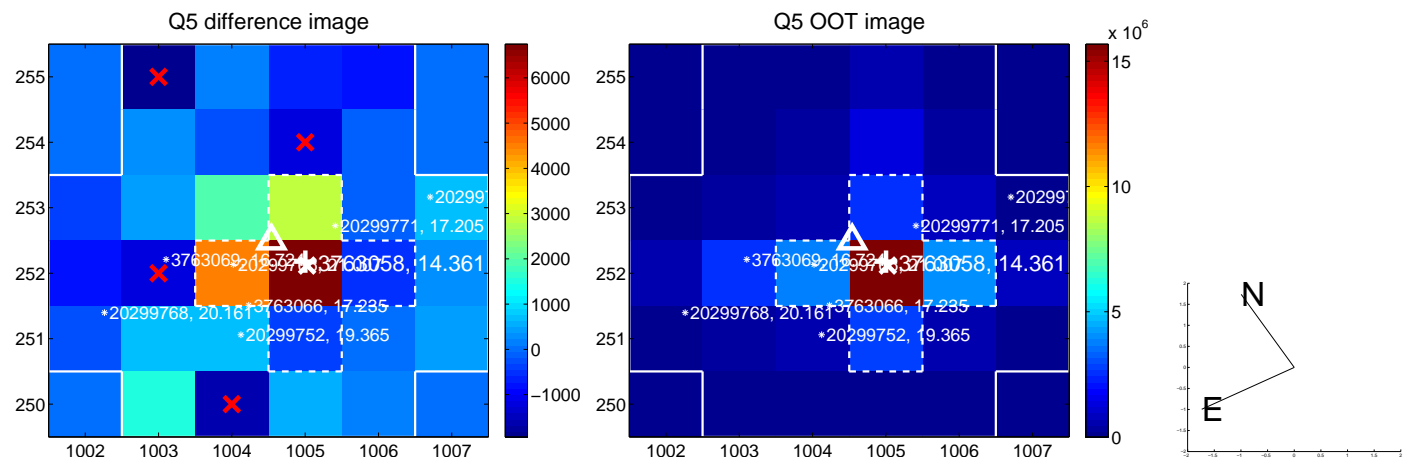


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

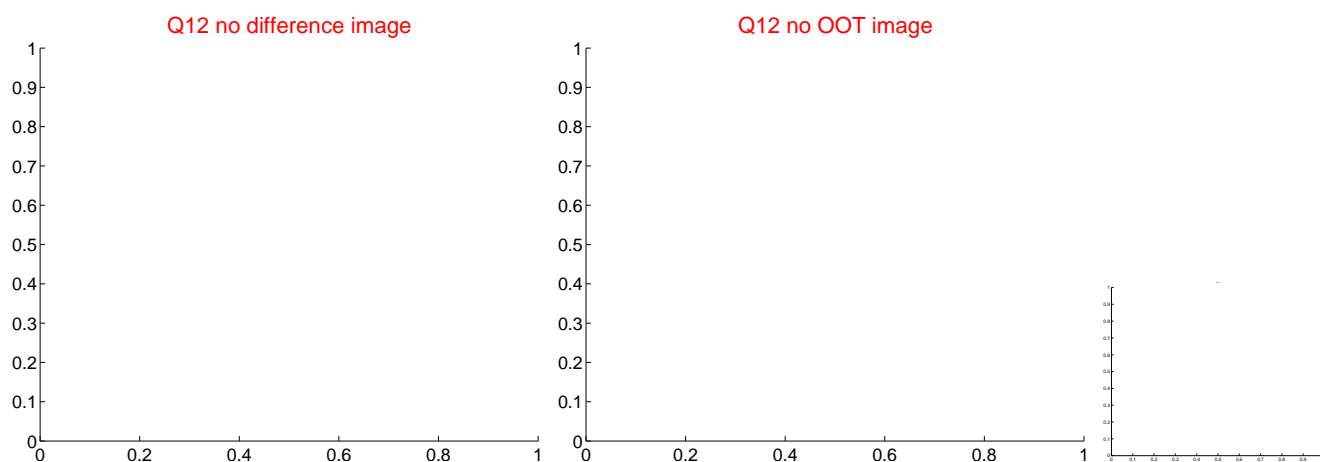
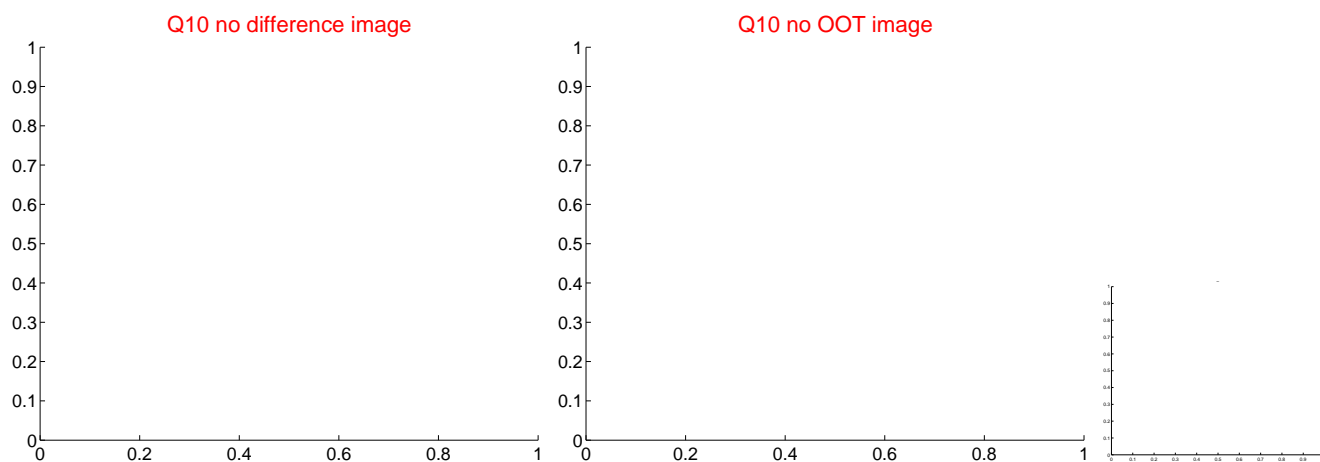
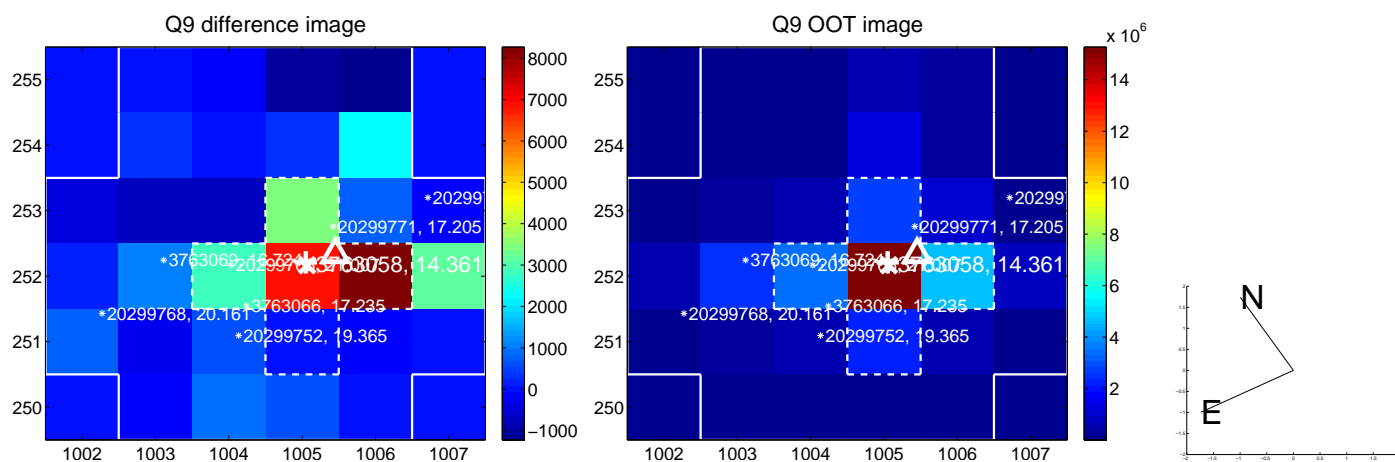
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



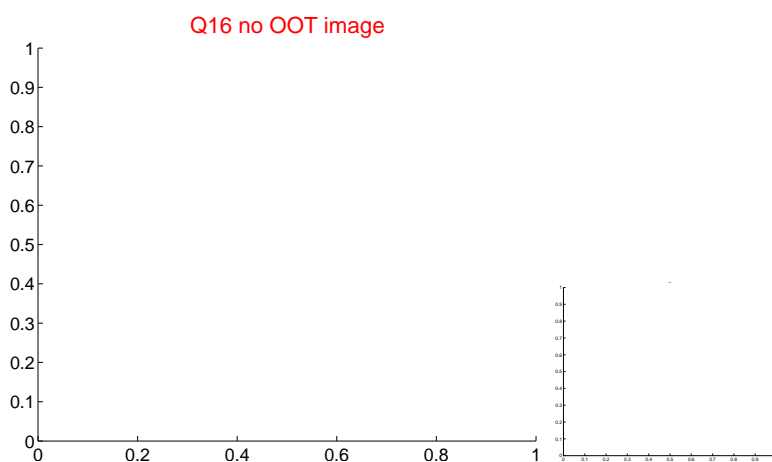
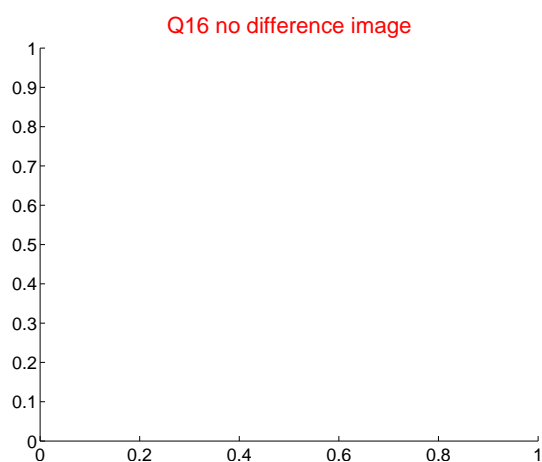
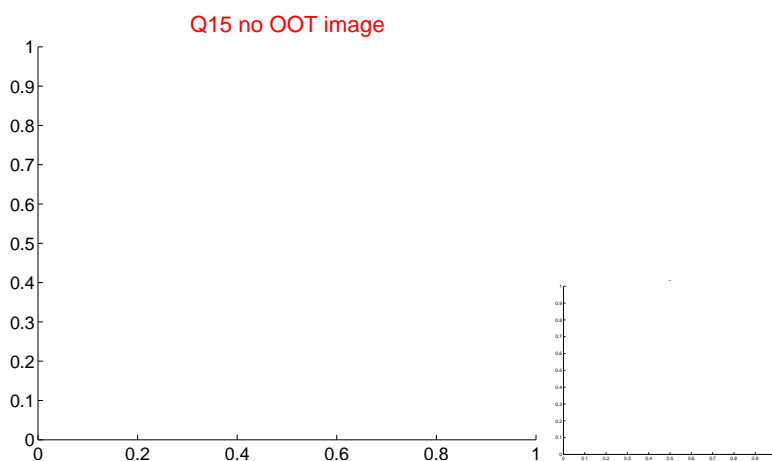
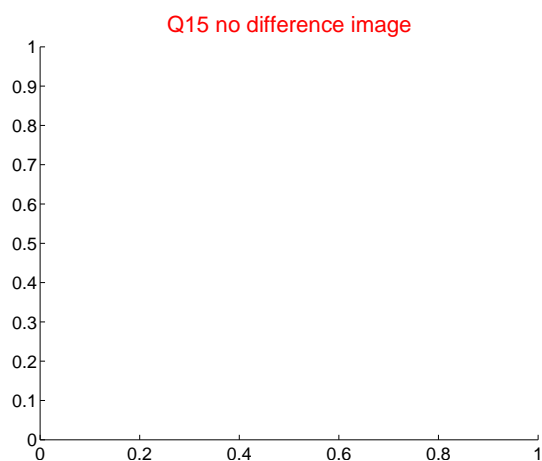
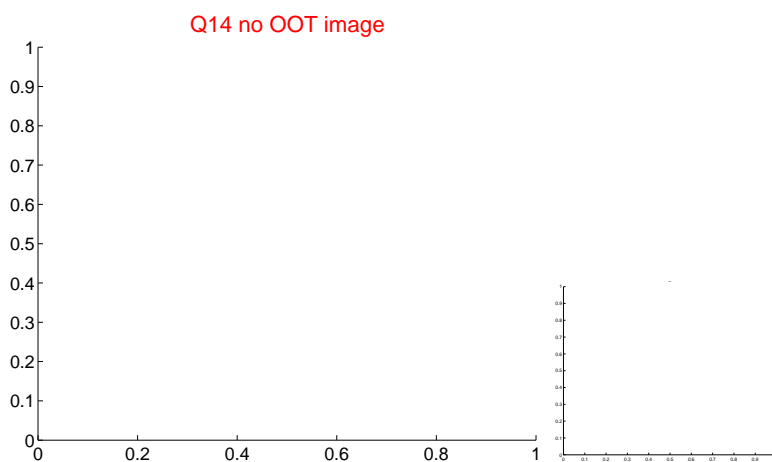
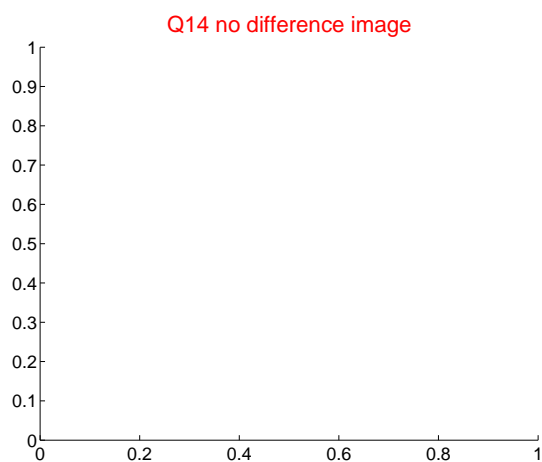
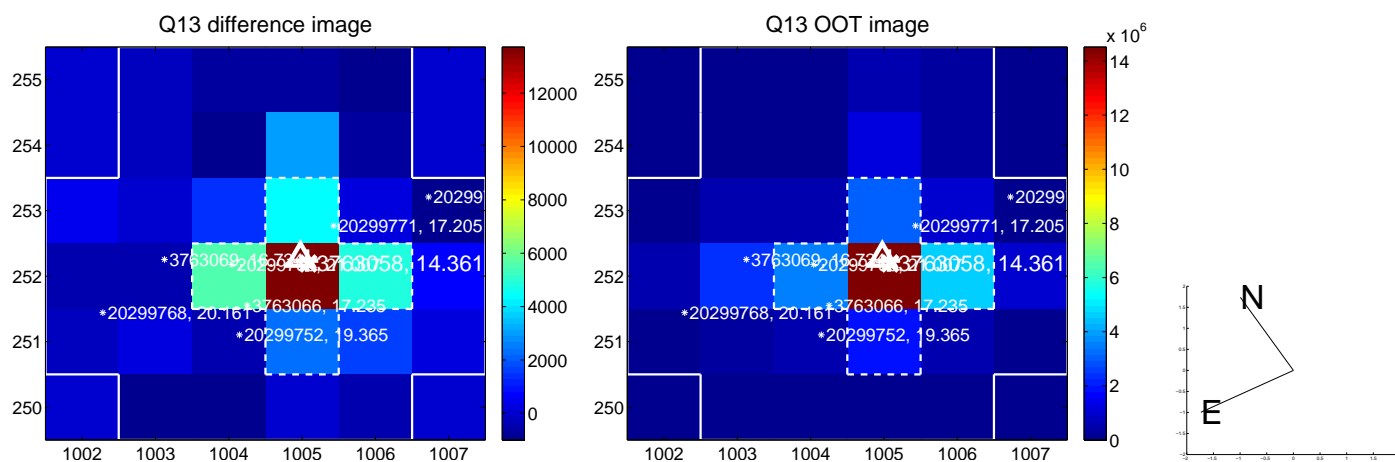
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



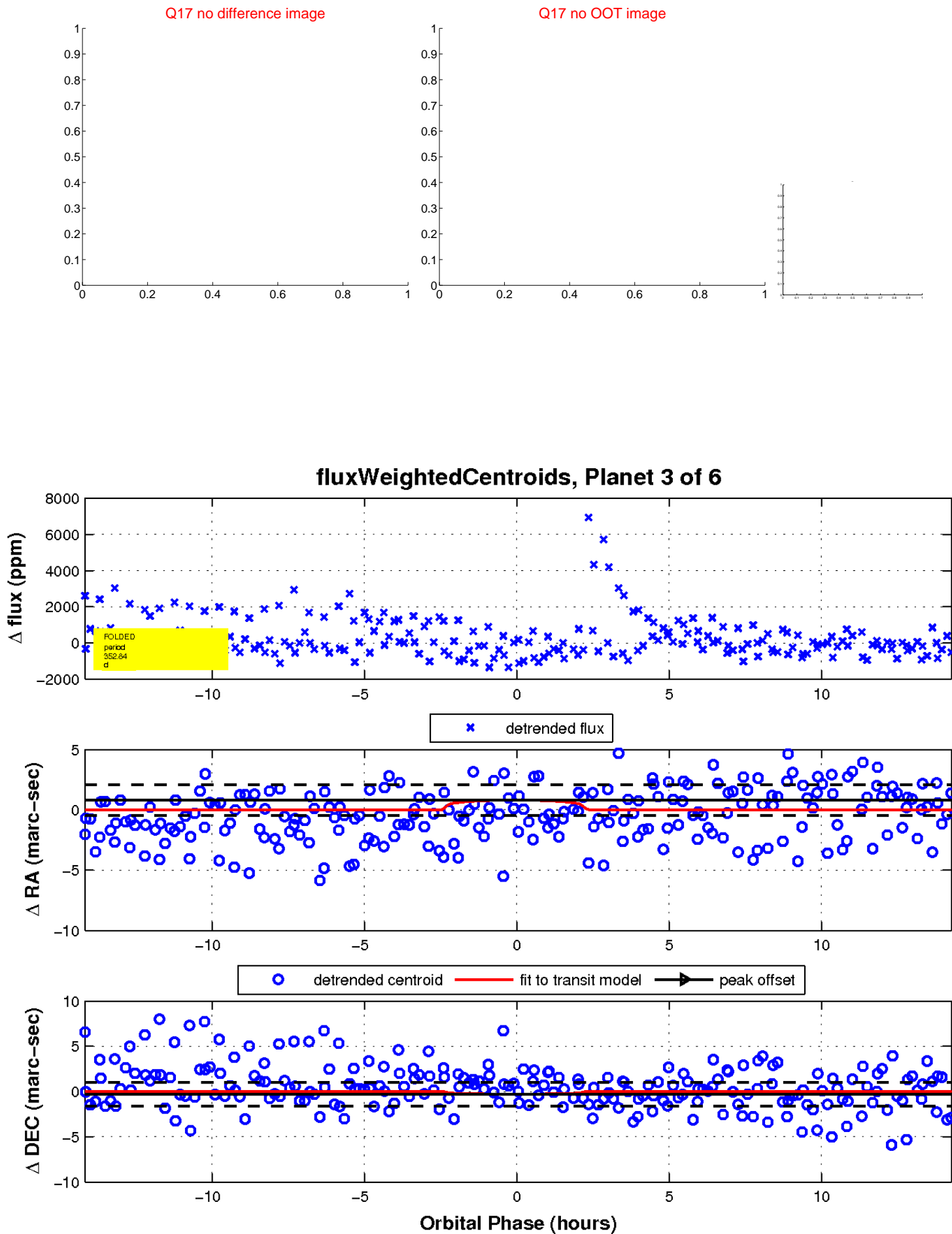
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

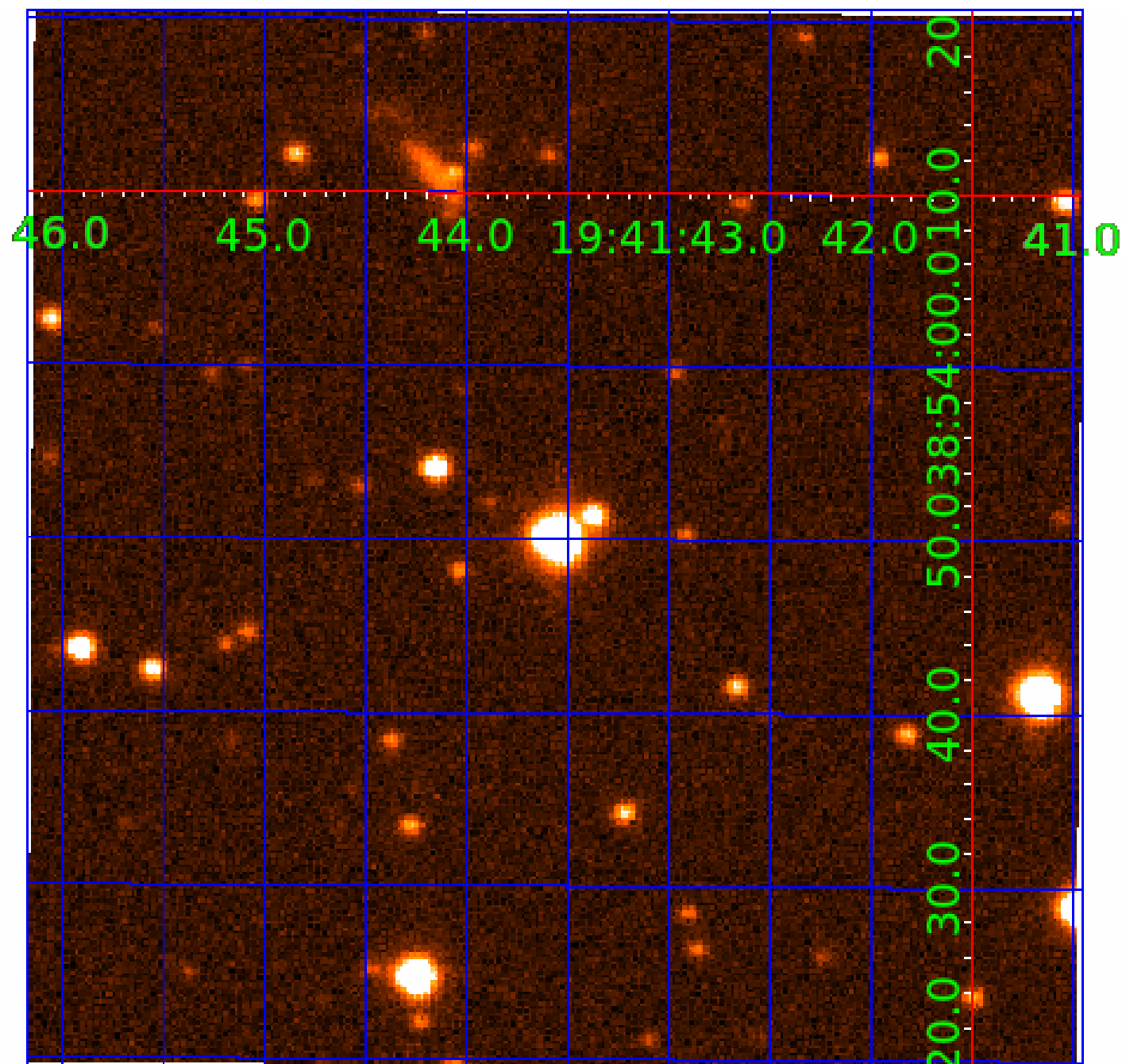


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003763058

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})
003763058-01	OBS	No	626.479672	268.188808	1222.6	8.242	14.2	7.1	0.61	4080	2.38	0.06
003763058-02	OBS	No	398.641576	452.758025	2455.6	3.021	13.9	14.4	0.61	4080	3.02	0.12
003763058-03	OBS	No	352.839301	171.824795	1073.0	4.766	12.8	7.1	0.61	4080	2.06	0.14
003763058-04	OBS	No	277.251249	224.074408	539.4	3.836	11.5	3.8	0.61	4080	1.57	0.19
003763058-05	OBS	No	380.012677	252.899547	1042.5	6.492	12.8	6.4	0.61	4080	2.42	0.12
003763058-06	OBS	No	525.115407	481.343576	1116.2	9.002	12.1	6.3	0.61	4080	2.10	0.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003763058-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
003763058-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—MOD_POS_DV—INCONSISTENT_TRANS
003763058-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003763058-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS—HALO_GHOST
003763058-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
003763058-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

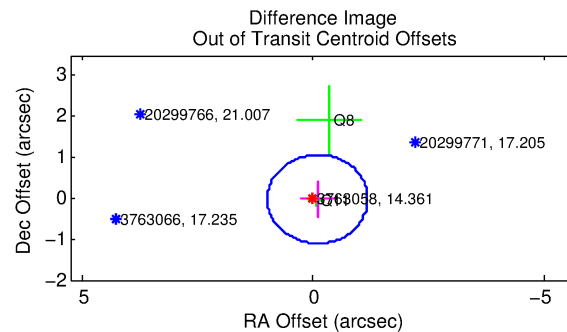
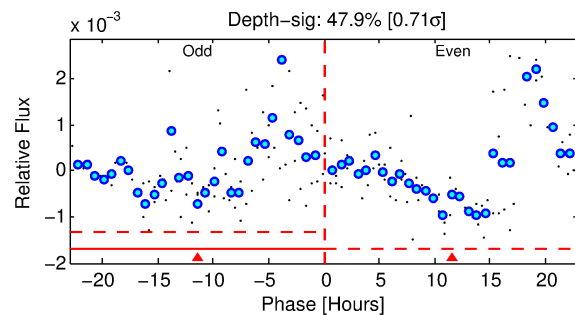
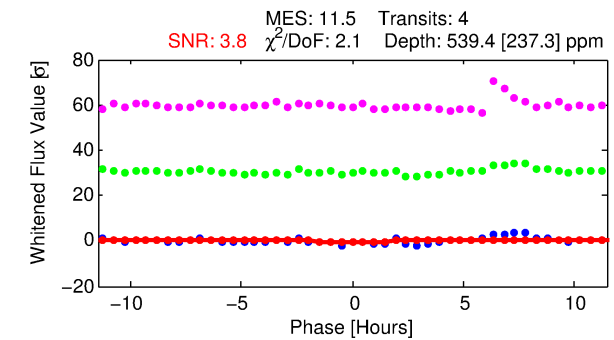
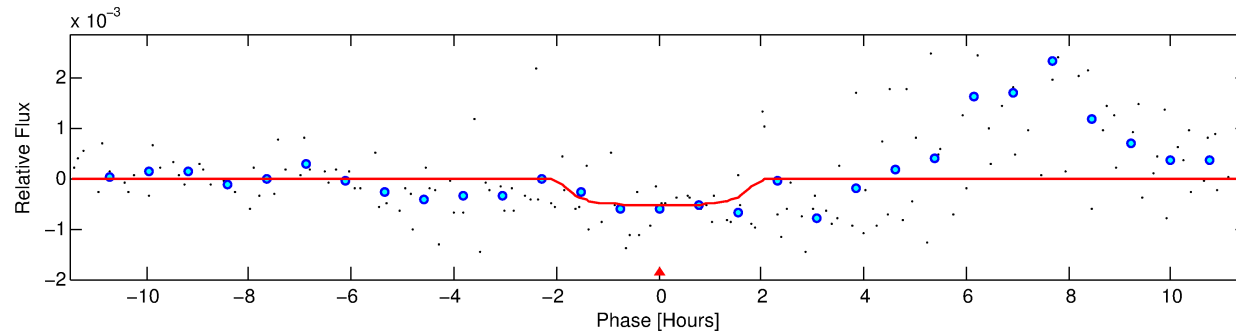
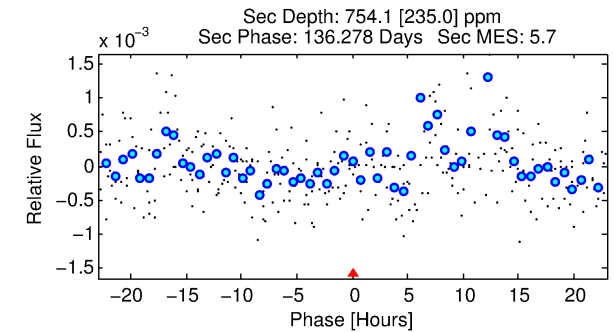
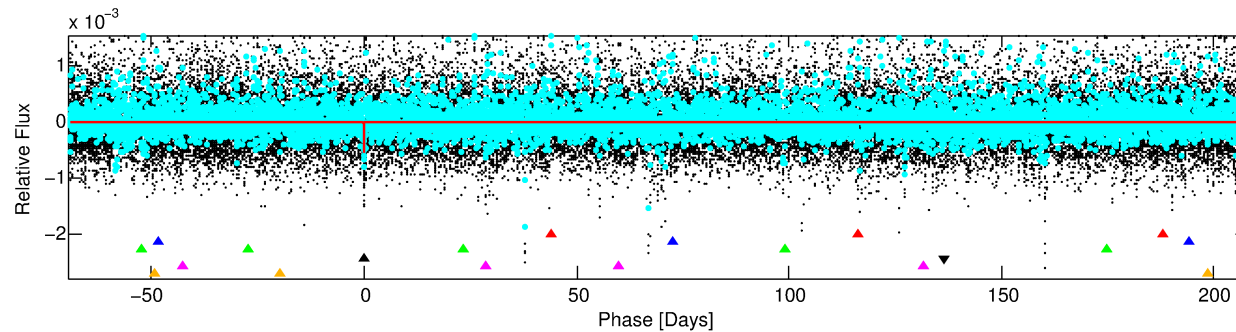
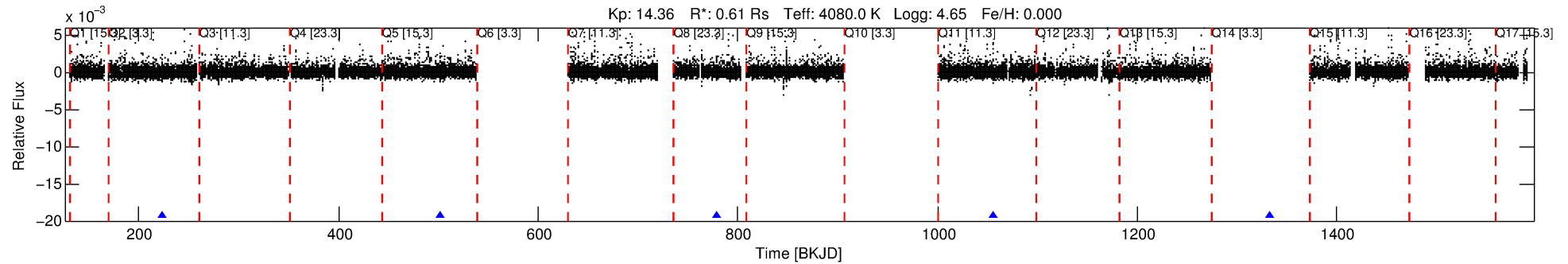
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003763058-04

No Significant Match Found

DV One-Page Summary

KIC: 3763058 Candidate: 4 of 6 Period: 277.251 d



DV Fit Results:

Period = 277.25125 [0.01284] d
Epoch = 224.0744 [0.0231] BKJD
Rp/R* = 0.0235 [0.0528]
a/R* = 371.32 [3029.38]
b = 0.77 [4.34]
Seff = 0.19 [0.04]
Teq = 168 [8] K
Rp = 1.57 [3.54] Re
a = 0.7046 [0.0627] AU
Ag = 83613.80 [377389.49] [0.22 σ]
Teffp = 4414 [4982] K [0.85 σ]

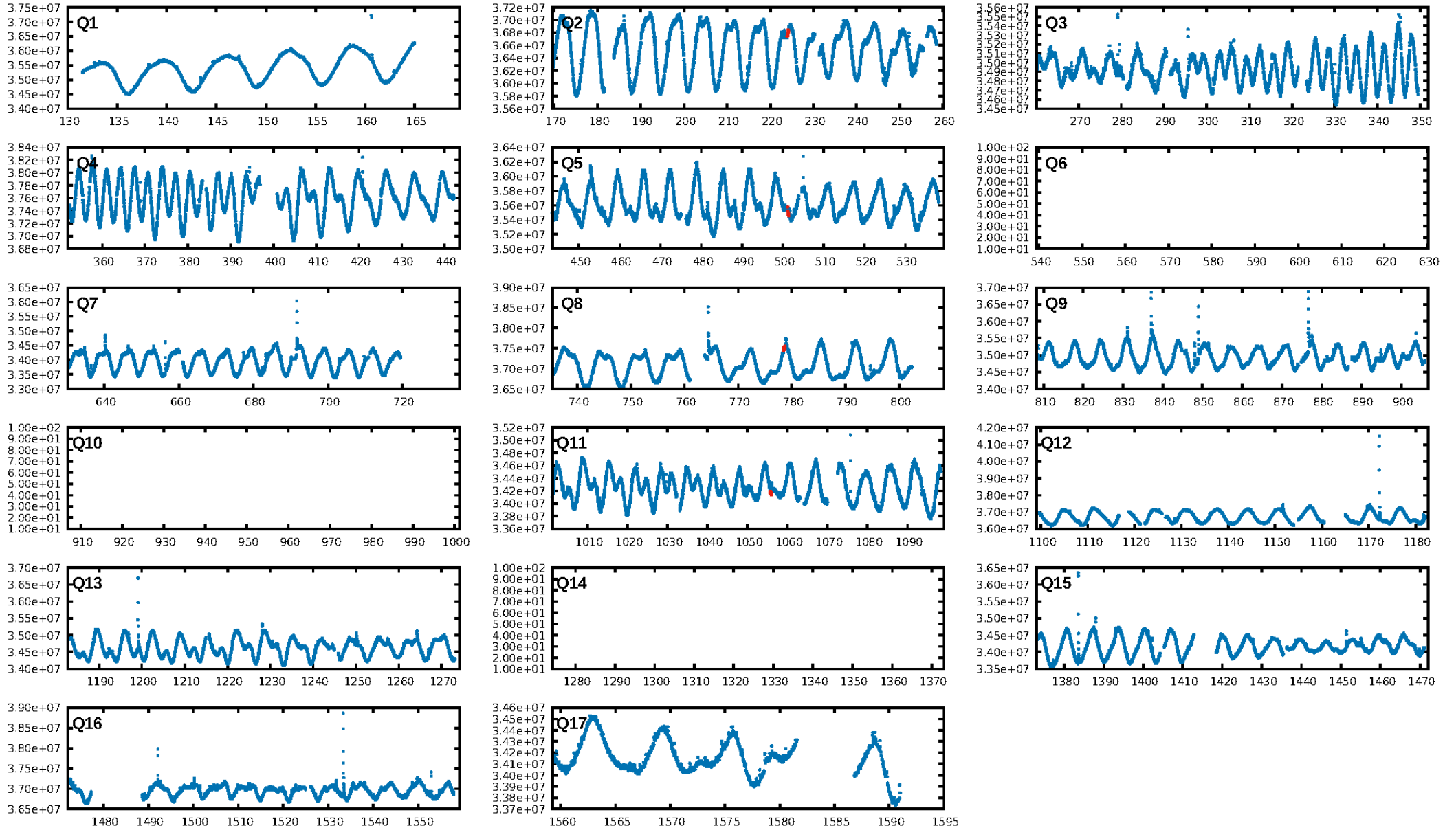
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [296.56 σ]
ModelChiSquare2-sig: 84.9%
ModelChiSquareGof-sig: 67.6%
Bootstrap-pfa: 3.67e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.2372
Centroid-sig: 89.4%
Centroid-so: 0.358 arcsec [0.16 σ]
OotOffset-rm: 0.097 arcsec [0.27 σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-rm: 0.177 arcsec [0.49 σ]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

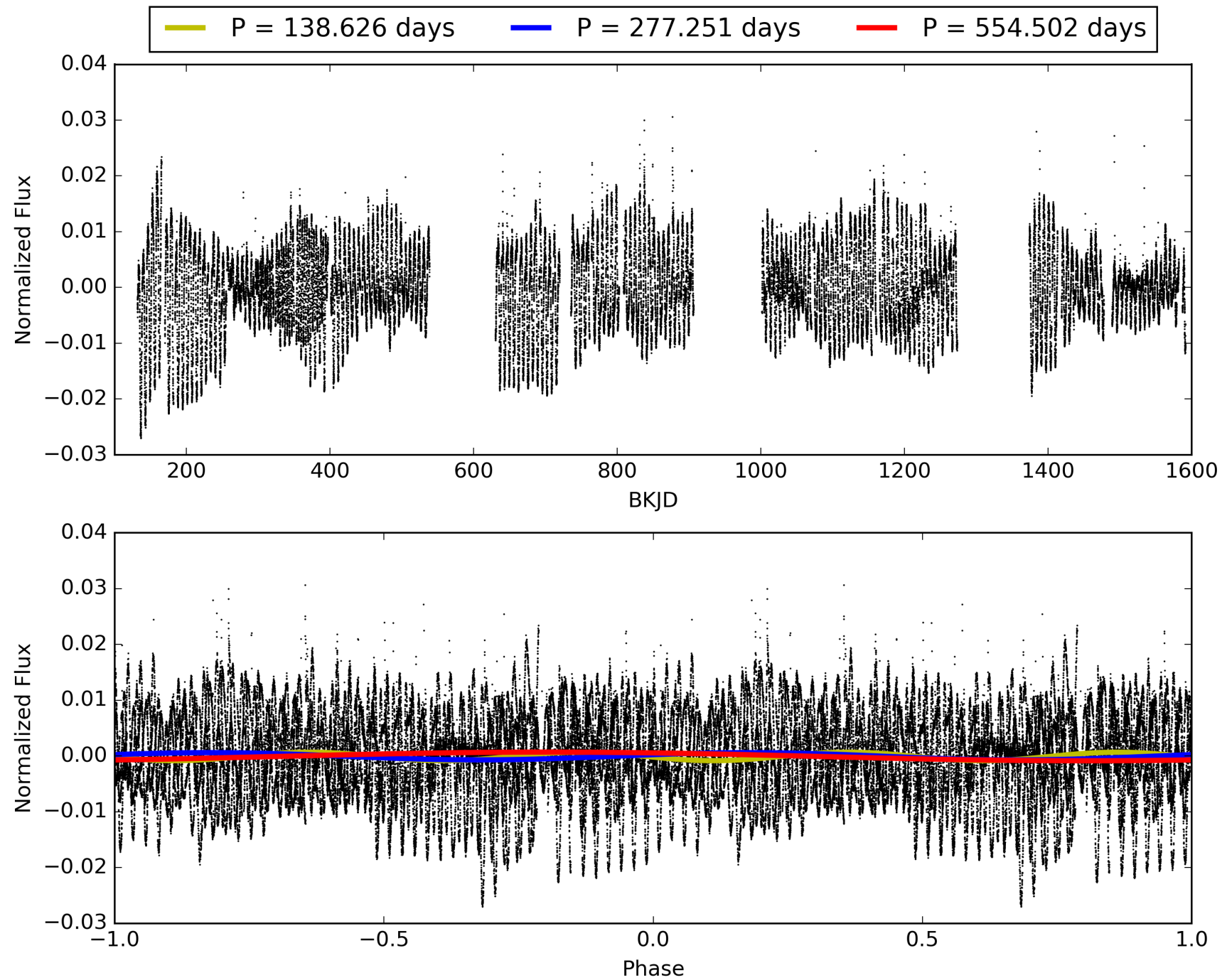
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:02:36 Z

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

TCE 003763058-04, PDC Light Curves

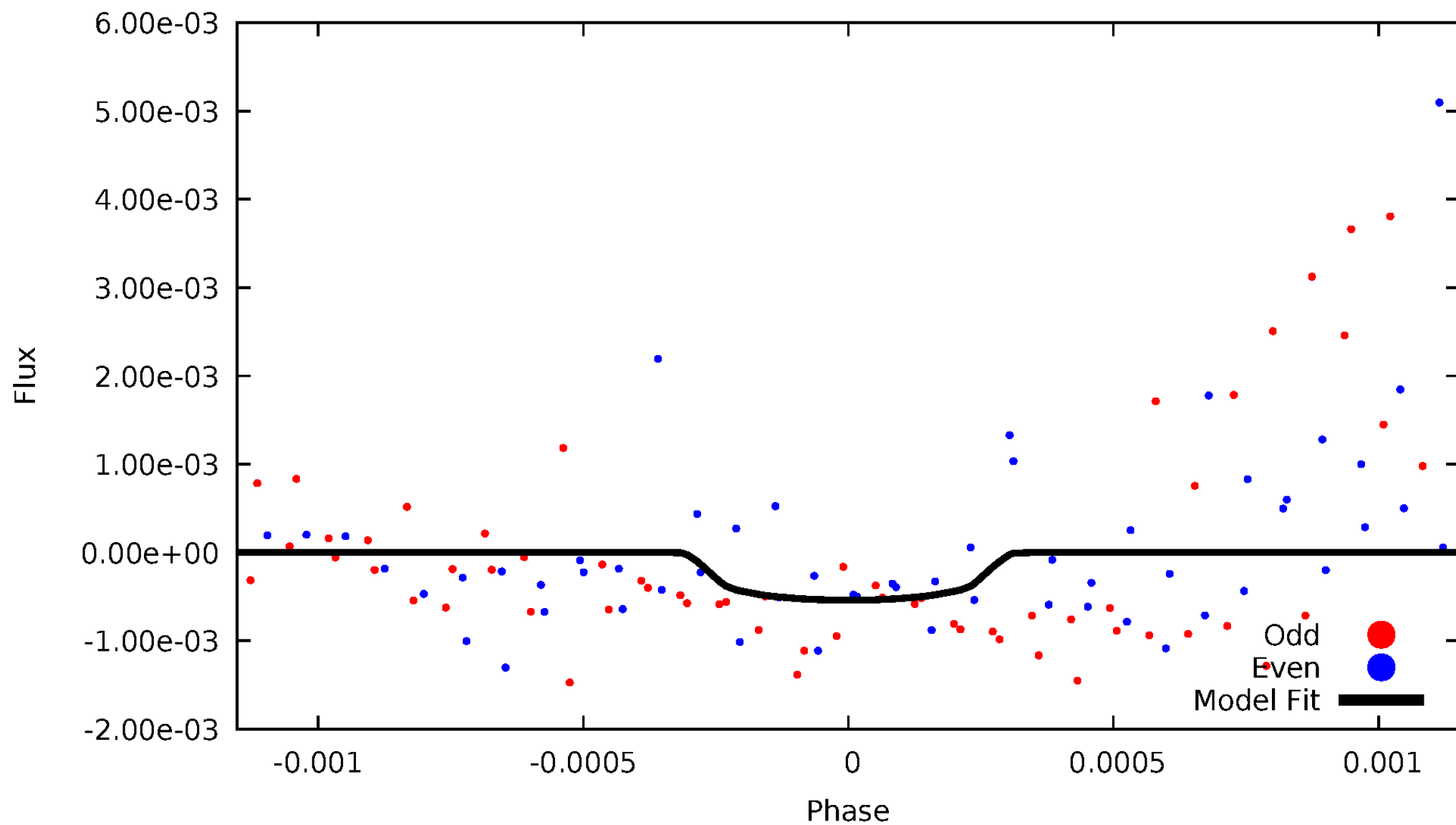


TCE 003763058-04



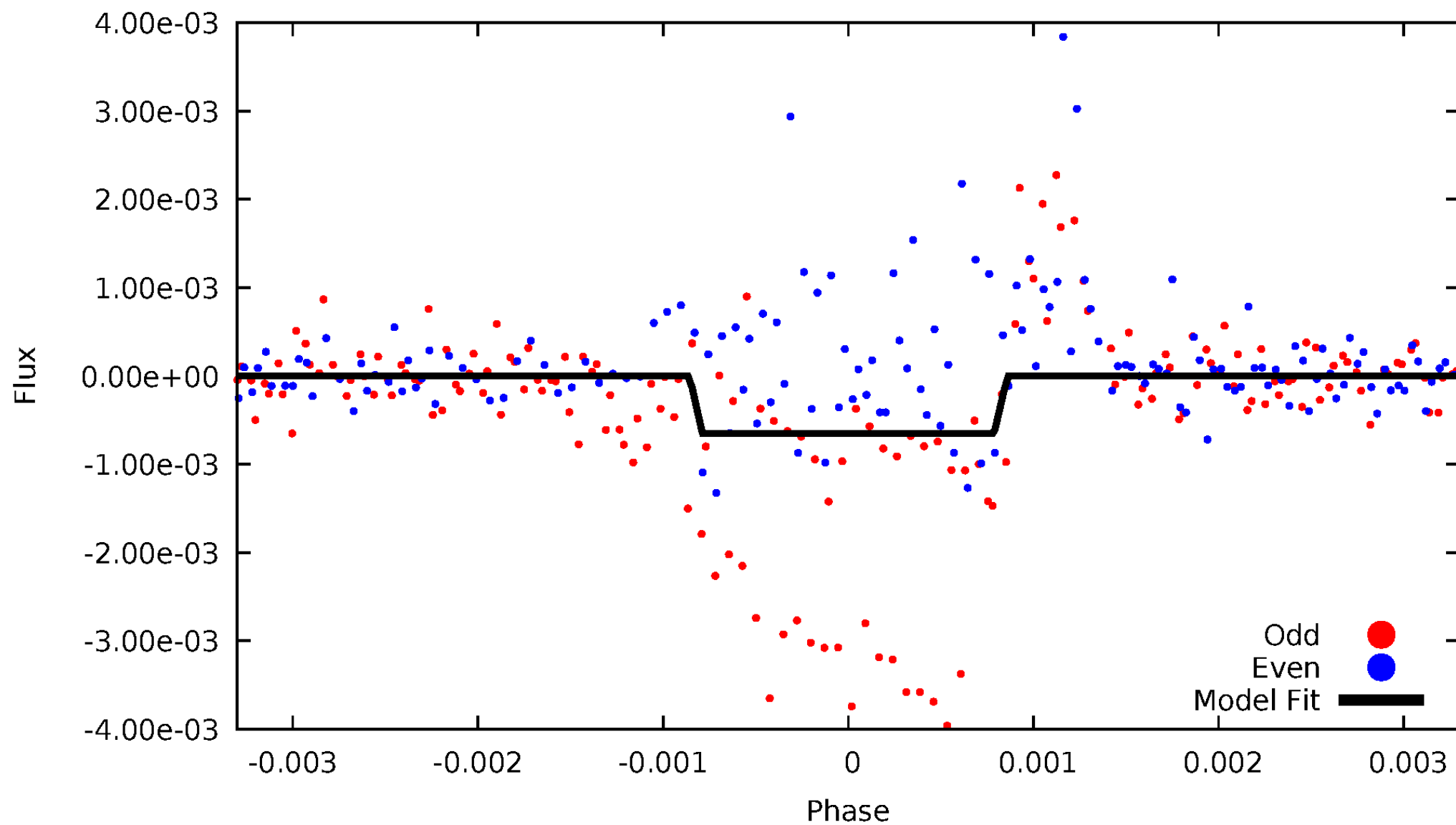
DV Odd/Even

TCE 003763058-04



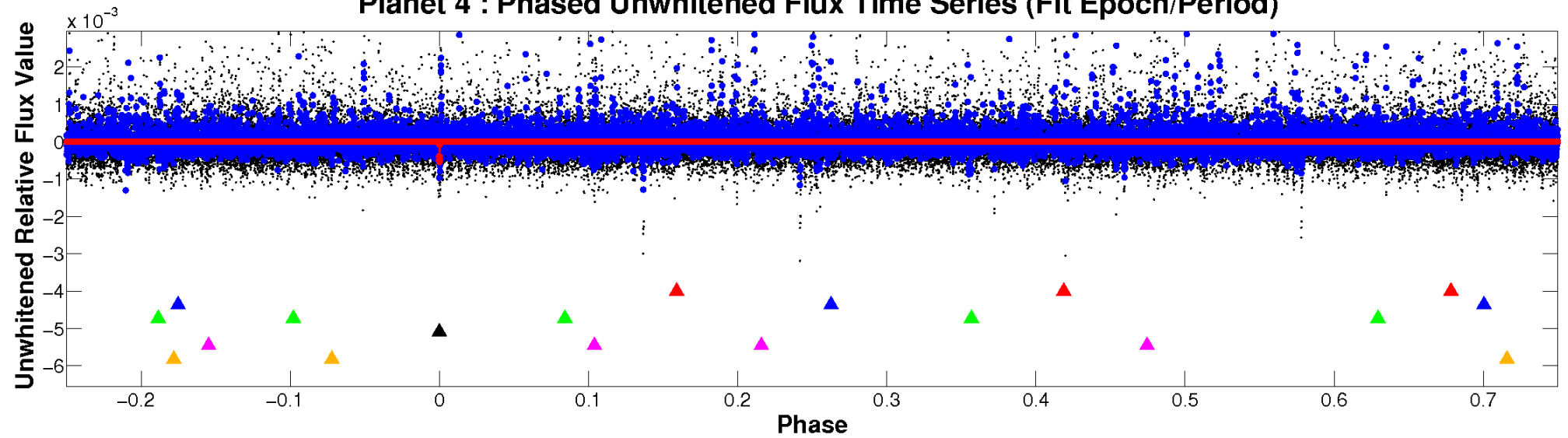
ALT Odd/Even

TCE 003763058-04

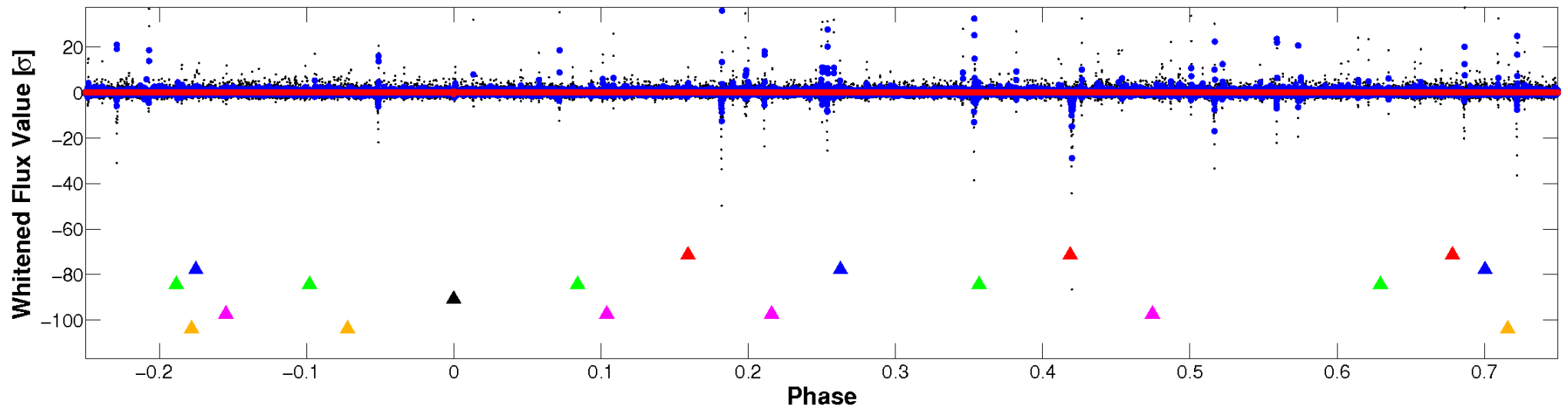


Non-Whitened Vs. Whitened Light Curve

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

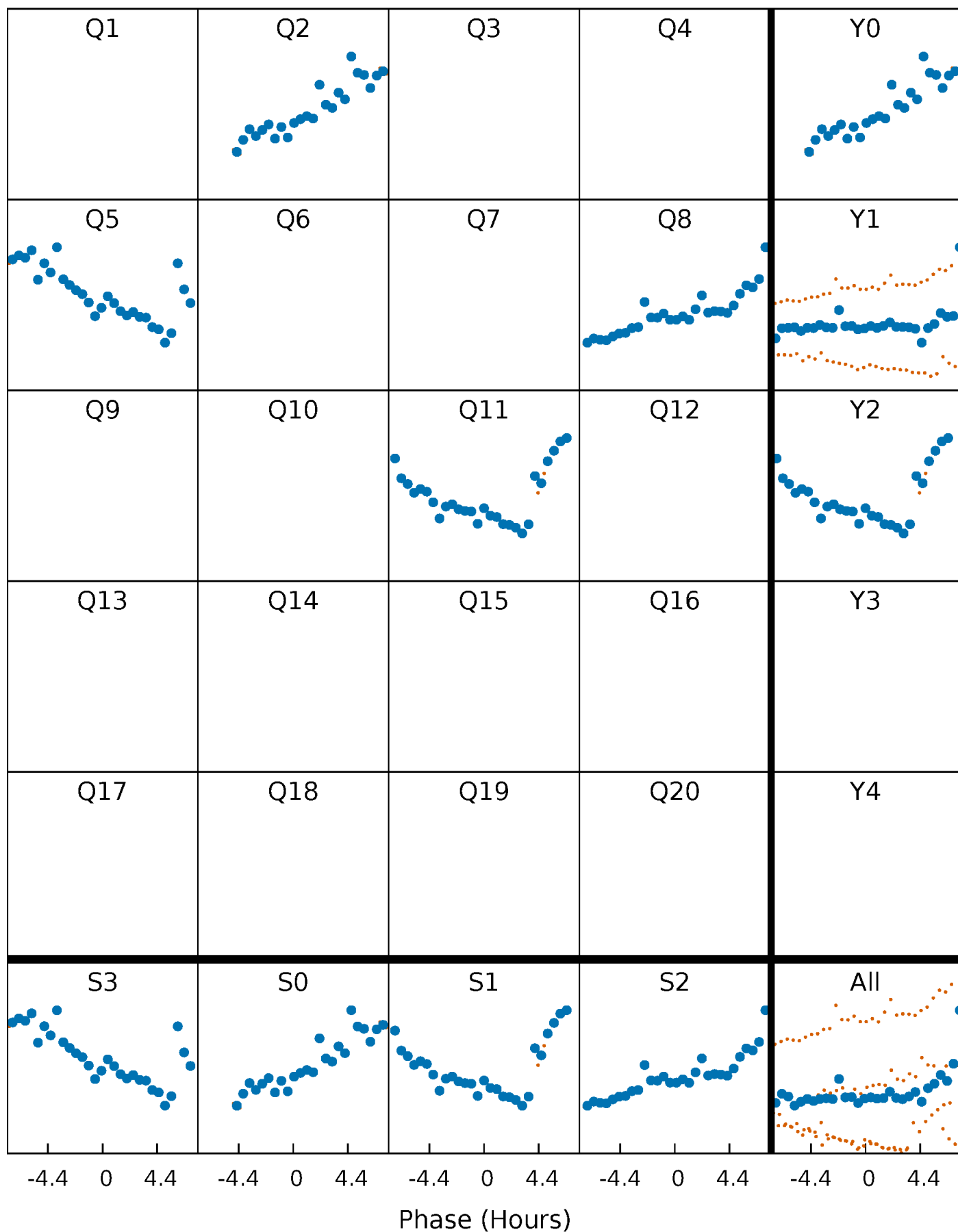


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



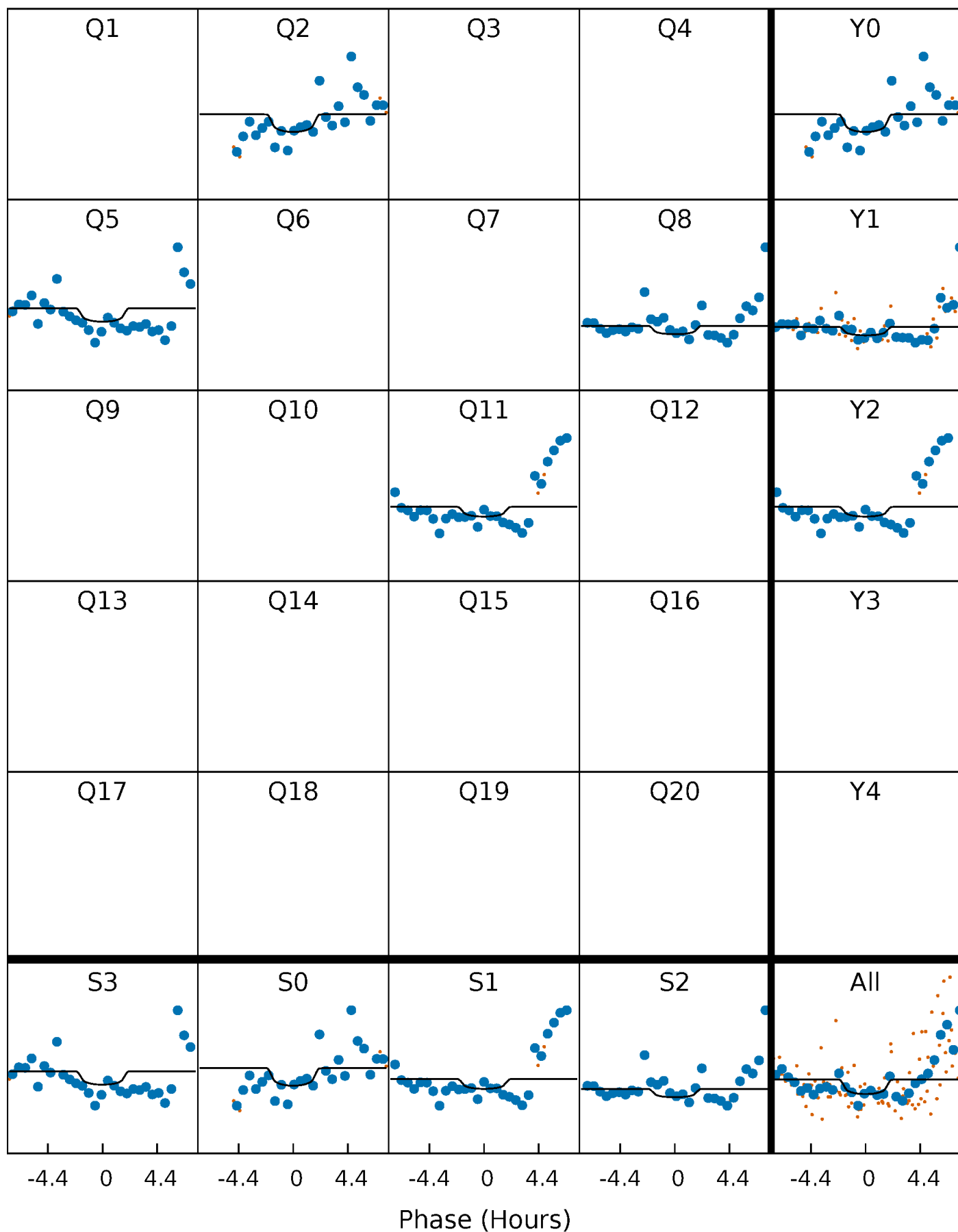
PDC Quarter-Phased Transit Curves

TCE 003763058-04 P=277.251249 Days $T_0=224.074408$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 003763058-04 $P=277.251249$ Days $T_0=224.074408$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

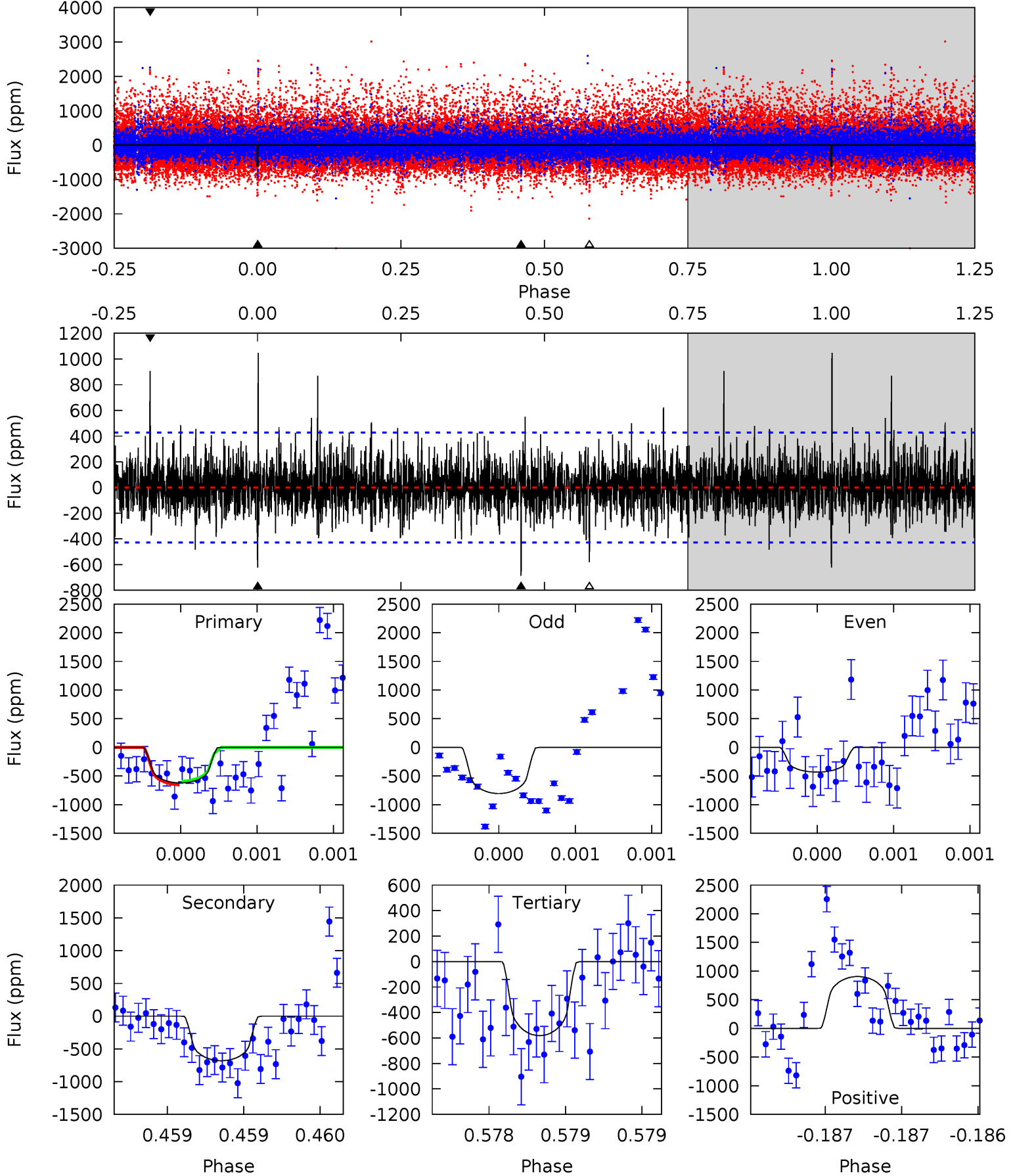
TCE 003763058-04 $P=277.235731$ Days $T_0=224.092922$ (BKJD)



DV Model-Shift Uniqueness Test

003763058-04, P = 277.251249 Days, E = 224.074408 Days

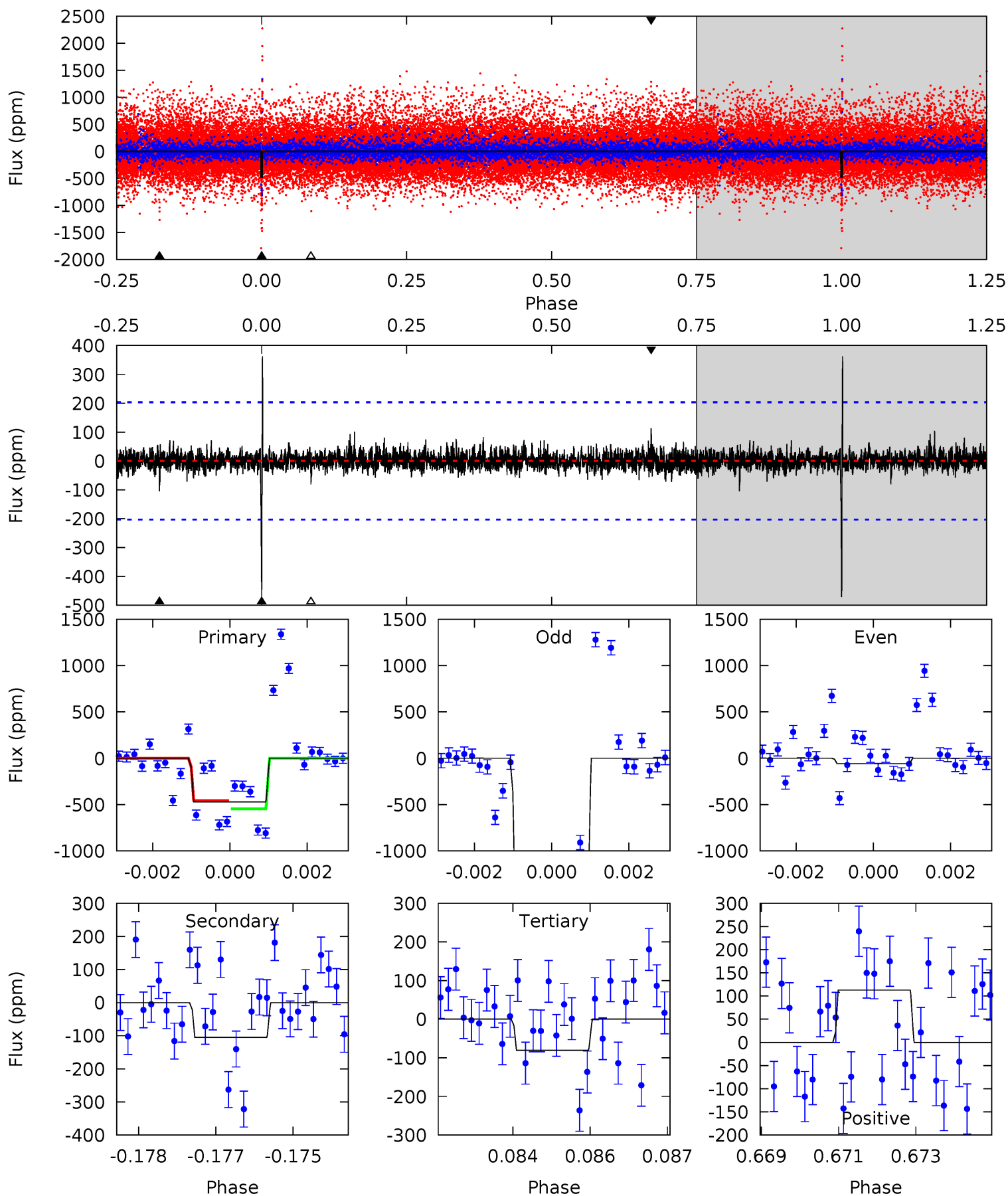
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.02	8.78	7.50	11.7	5.53	3.41	1.78	0.52	-3.66	1.28	-2.90	1.23	0.90	0.61	0.43



Alt Model-Shift Uniqueness Test

003763058-04, P = 277.235731 Days, E = 224.092922 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	2.77	2.12	2.98	5.36	3.14	0.52	10.3	9.46	0.65	-0.21	26.6	2.22	0.43	1.15



Stellar Parameters For KIC 003763058

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4080^{+141}_{-155}	$4.646^{+0.060}_{-0.020}$	$0.000^{+0.250}_{-0.300}$	$0.613^{+0.038}_{-0.070}$	$0.606^{+0.057}_{-0.063}$	$3.712^{+1.094}_{-0.389}$
	+3%/-4%	+1%/-0%	+inf%/-inf%	+6%/-11%	+9%/-10%	+29%/-10%
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 003763058-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-680 ± 77	$2.89^{+2.81}_{-2.08}$	232^{+9}_{-9}	3448^{+1972}_{-641}	$22689^{+256784}_{-17023}$
Alt.	-105 ± 38	$3.07^{+2.98}_{-2.03}$	232^{+10}_{-10}	2586^{+883}_{-390}	2995^{+22445}_{-2267}

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

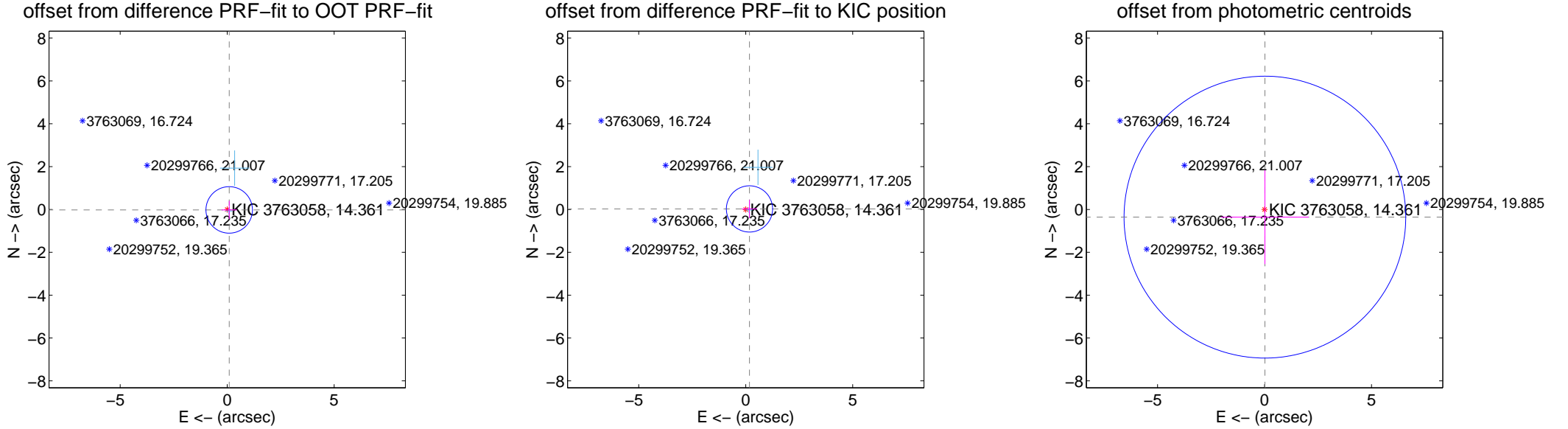
DV Centroid Data

Supplemental centroid analysis for 003763058-04. Kepler magnitude: 14.36. Transit SNR 3.82

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.097 ± 0.362	0.27	-0.095 ± 0.358	-0.021 ± 0.424
PRF-fit source offset from KIC position	0.177 ± 0.360	0.49	-0.176 ± 0.358	0.025 ± 0.424
photometric centroid source offset	0.36 ± 2.19	0.16	-0.02 ± 2.05	-0.36 ± 2.19

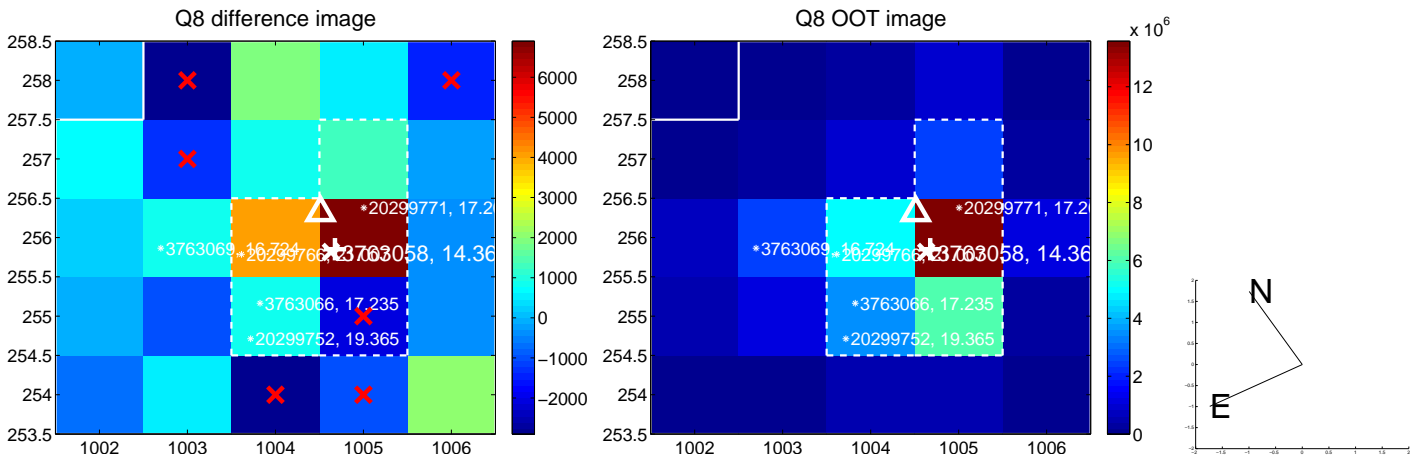
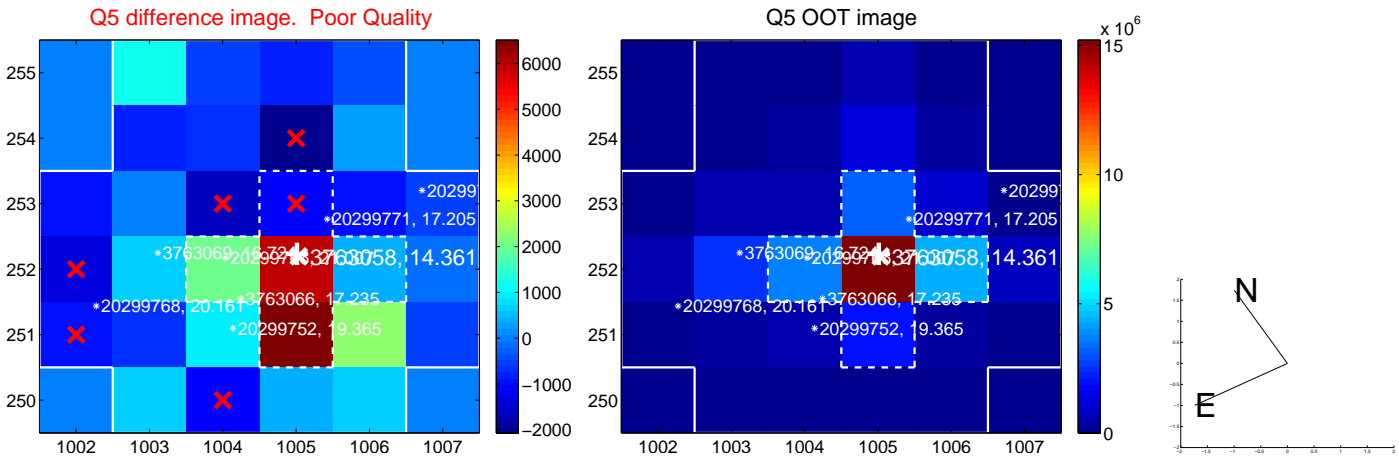


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

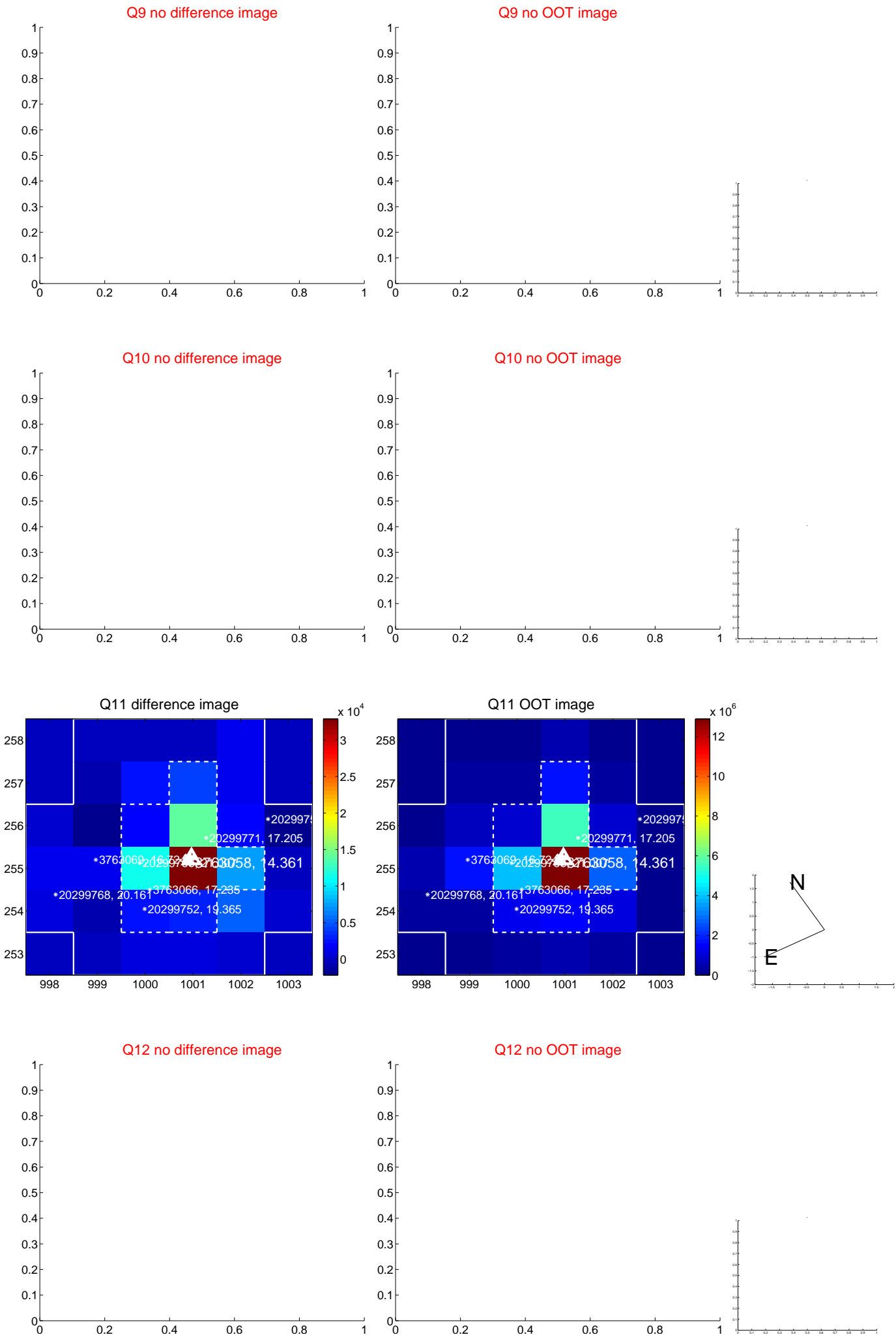
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



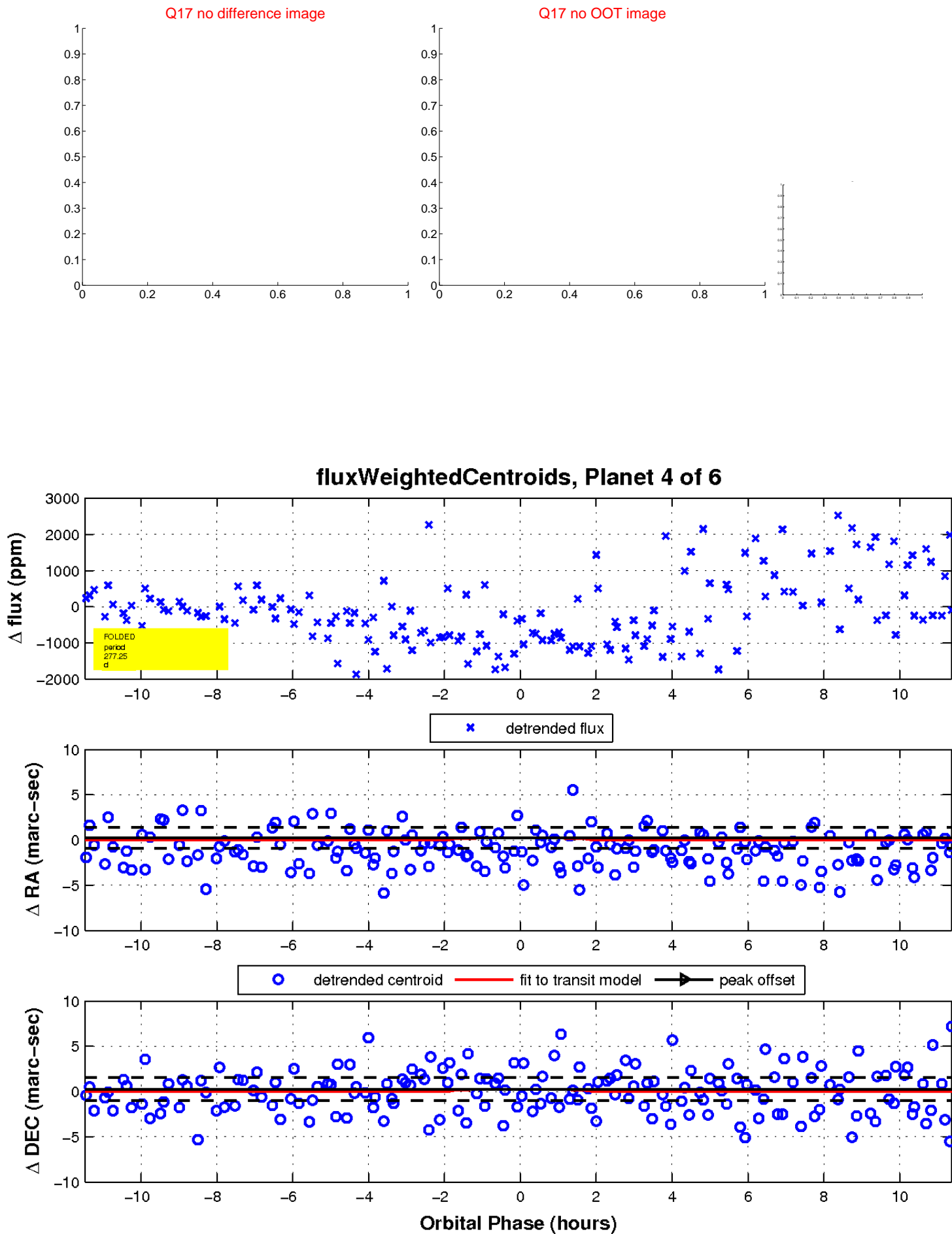
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

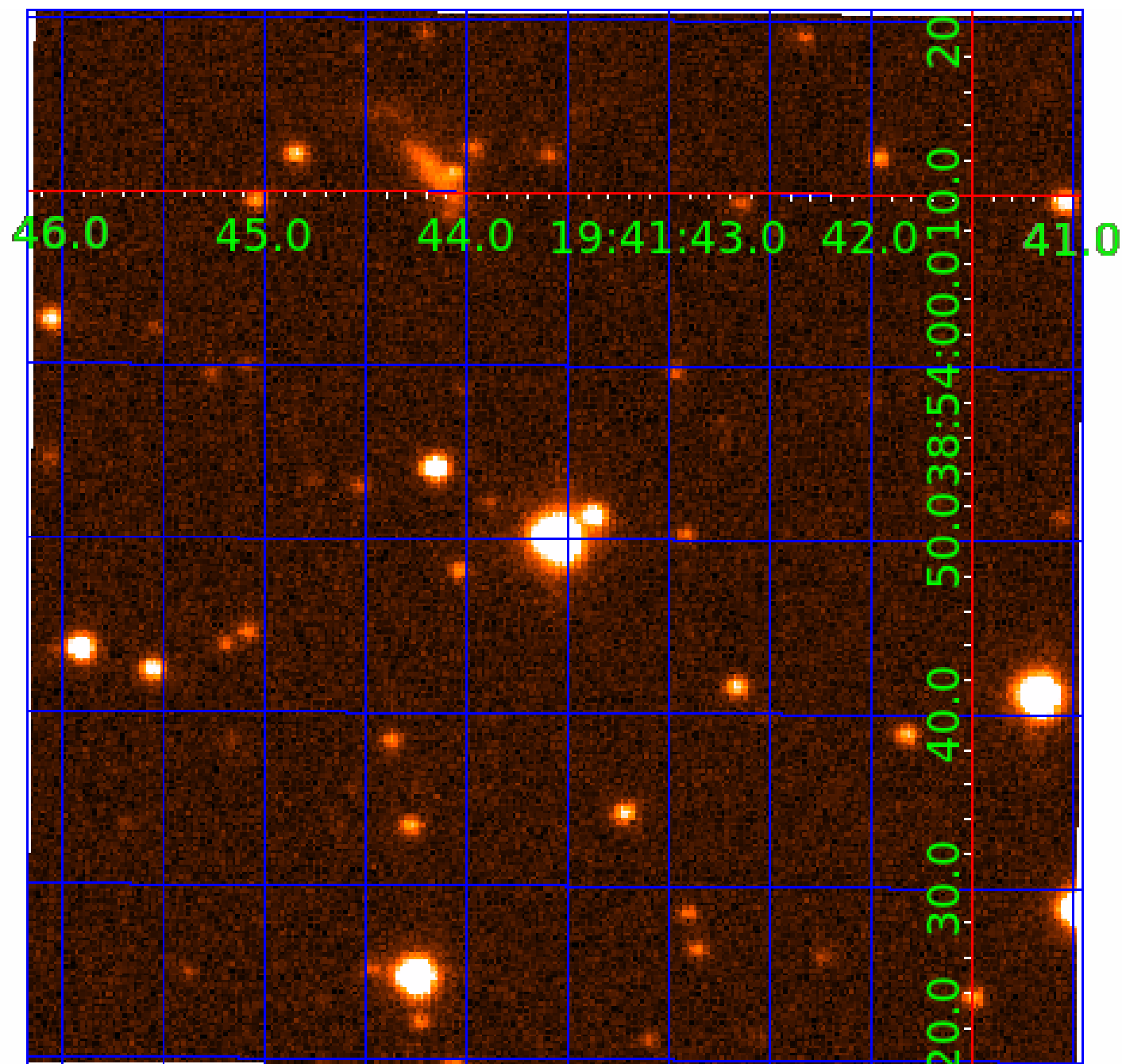


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003763058

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})
003763058-01	OBS	No	626.479672	268.188808	1222.6	8.242	14.2	7.1	0.61	4080	2.38	0.06
003763058-02	OBS	No	398.641576	452.758025	2455.6	3.021	13.9	14.4	0.61	4080	3.02	0.12
003763058-03	OBS	No	352.839301	171.824795	1073.0	4.766	12.8	7.1	0.61	4080	2.06	0.14
003763058-04	OBS	No	277.251249	224.074408	539.4	3.836	11.5	3.8	0.61	4080	1.57	0.19
003763058-05	OBS	No	380.012677	252.899547	1042.5	6.492	12.8	6.4	0.61	4080	2.42	0.12
003763058-06	OBS	No	525.115407	481.343576	1116.2	9.002	12.1	6.3	0.61	4080	2.10	0.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003763058-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
003763058-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—MOD_POS_DV—INCONSISTENT_TRANS
003763058-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003763058-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS—HALO_GHOST
003763058-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
003763058-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

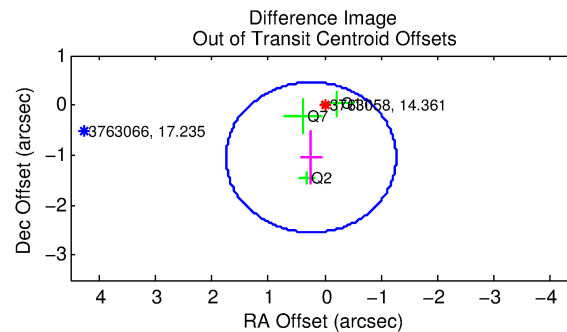
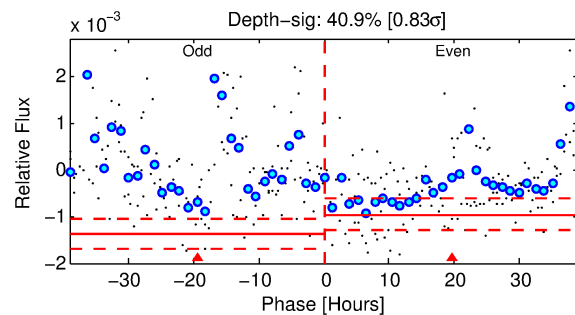
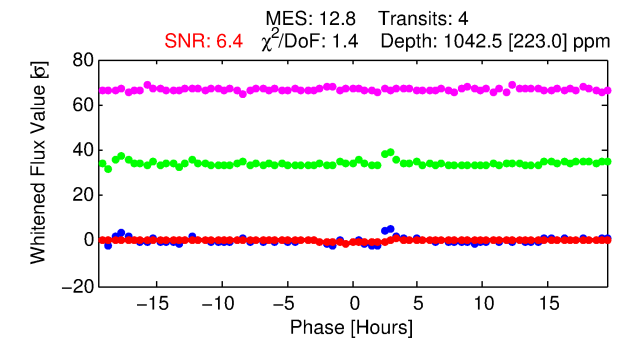
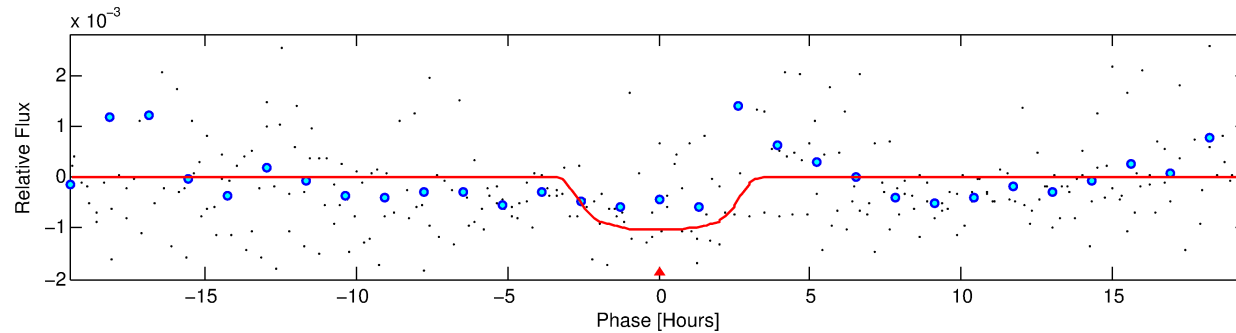
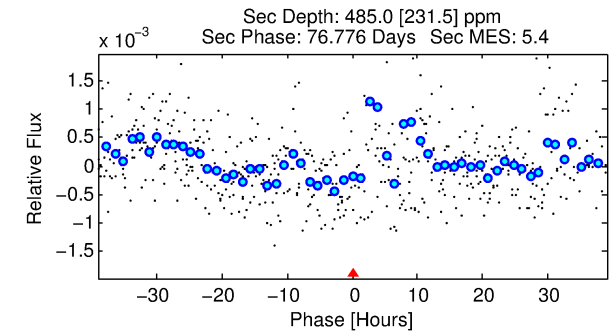
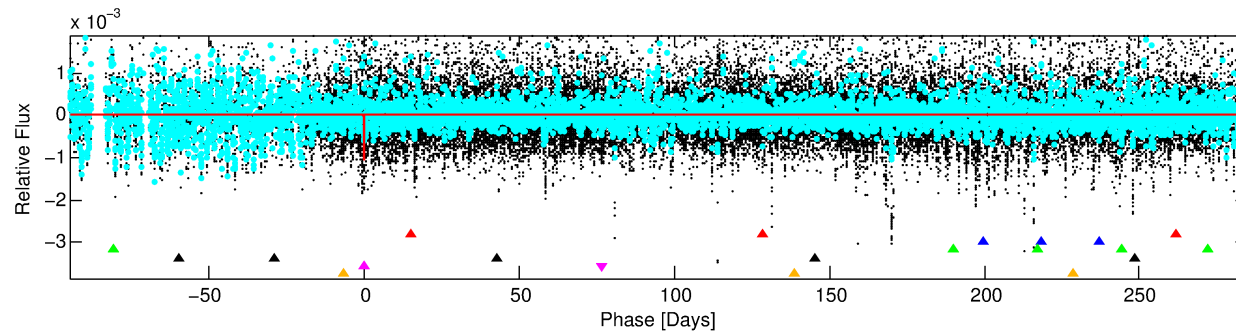
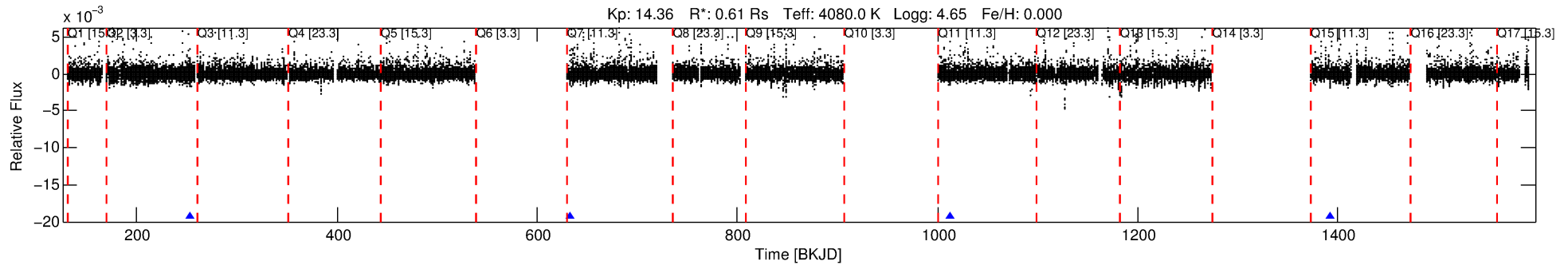
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003763058-05

No Significant Match Found

DV One-Page Summary

KIC: 3763058 Candidate: 5 of 6 Period: 380.013 d



DV Fit Results:

Period = 380.01268 [0.00836] d
Epoch = 252.8995 [0.0175] BKJD
Rp/R* = 0.0361 [0.0063]
a/R* = 226.54 [103.74]
b = 0.90 [0.10]
Seff = 0.12 [0.02]
Teq = 151 [7] K
Rp = 2.42 [0.50] Re
a = 0.8694 [0.0774] AU
Ag = 34495.18 [20790.17] [1.66 σ]
Teffp = 3185 [486] K [6.25 σ]

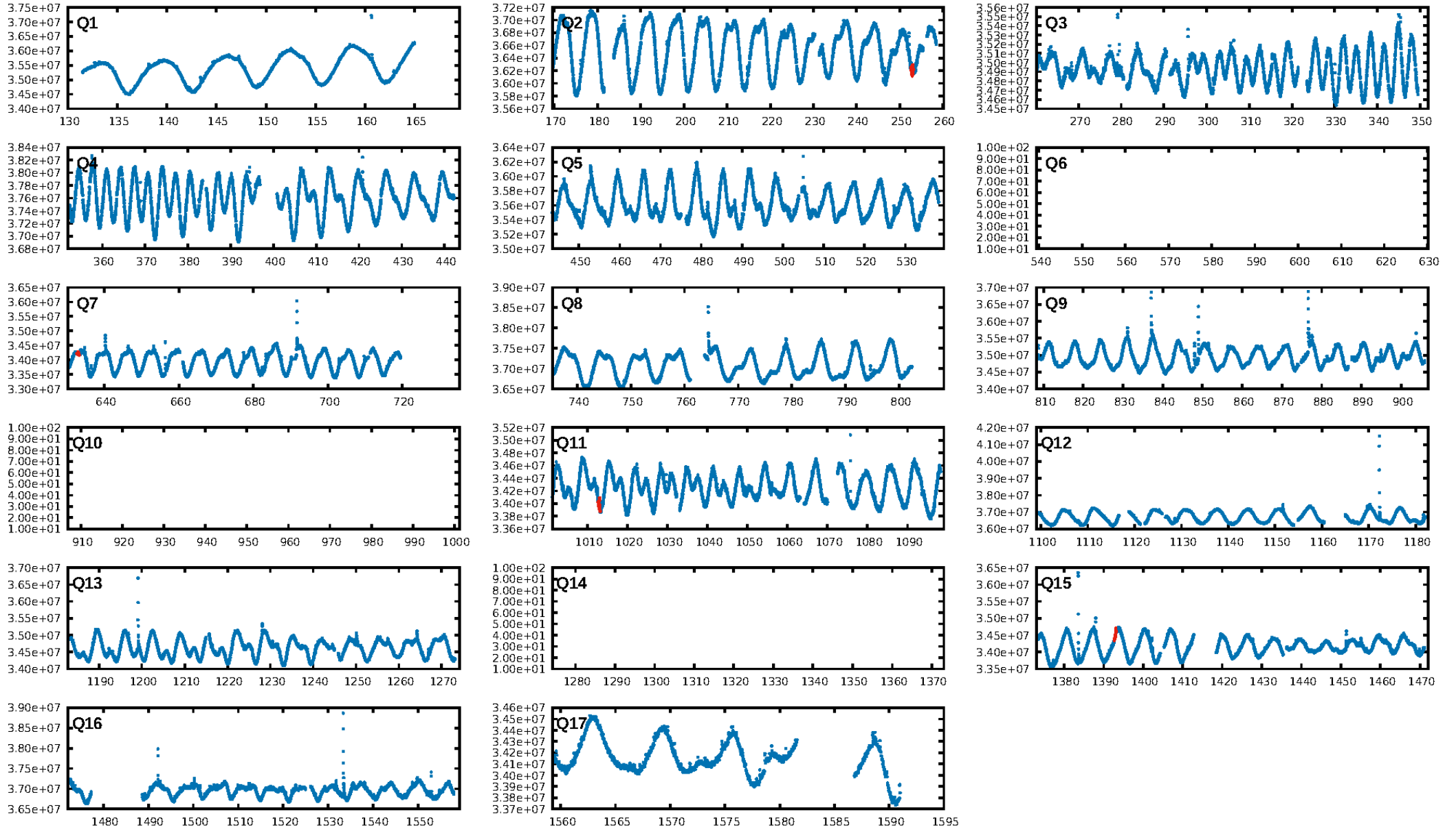
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [80.98 σ]
LongPeriod-sig: 100.0% [62.44 σ]
ModelChiSquare2-sig: 0.9%
ModelChiSquareGof-sig: 53.4%
Bootstrap-pfa: 4.74e-11
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 3.255
Centroid-sig: 99.4%
Centroid-so: 0.453 arcsec [0.41 σ]
OotOffset-rm: 1.072 arcsec [2.14 σ]
OotOffset-st: 1/2/0/0 [3]
KicOffset-rm: 1.095 arcsec [1.82 σ]
KicOffset-st: 1/2/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

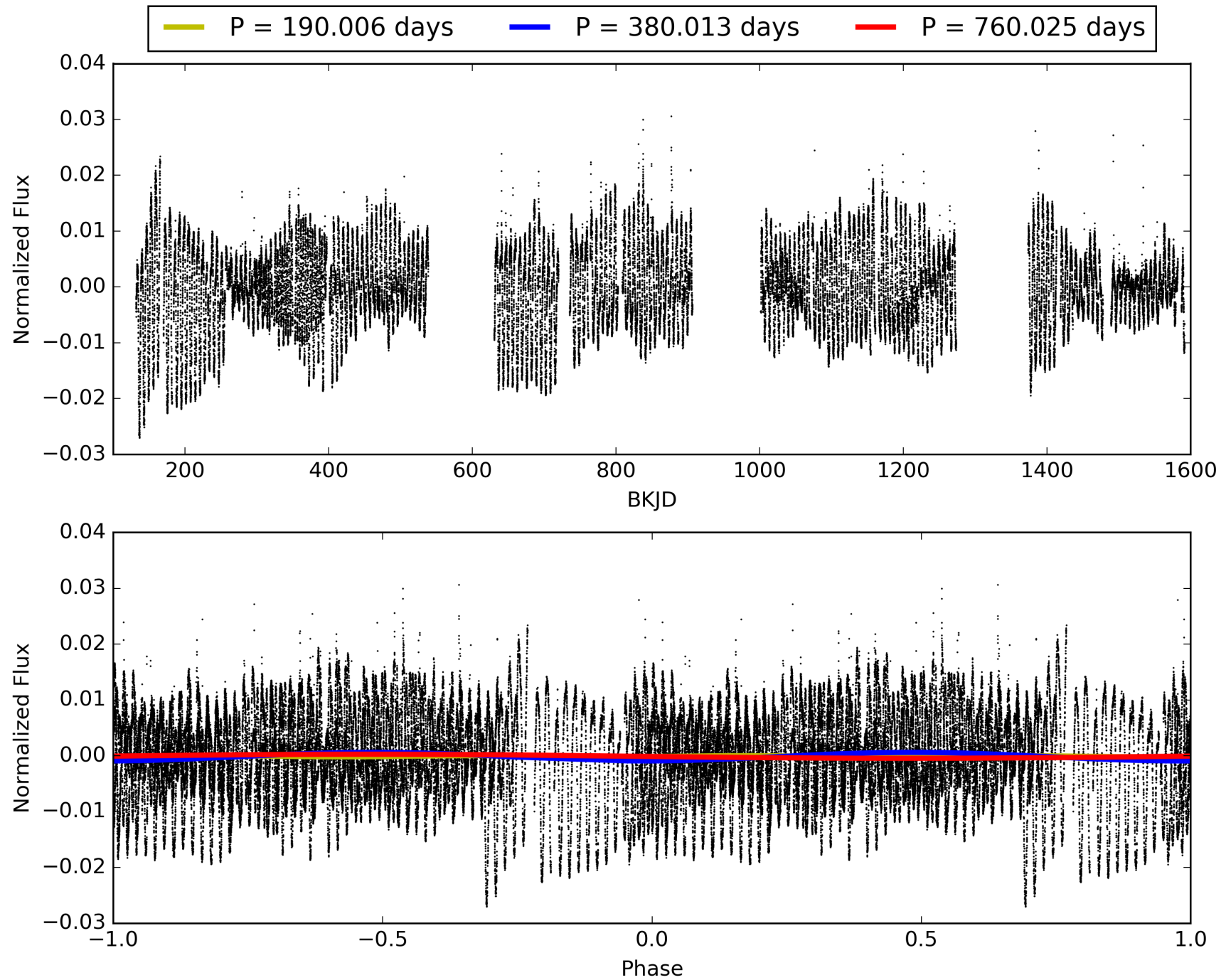
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:02:46 Z

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

TCE 003763058-05, PDC Light Curves

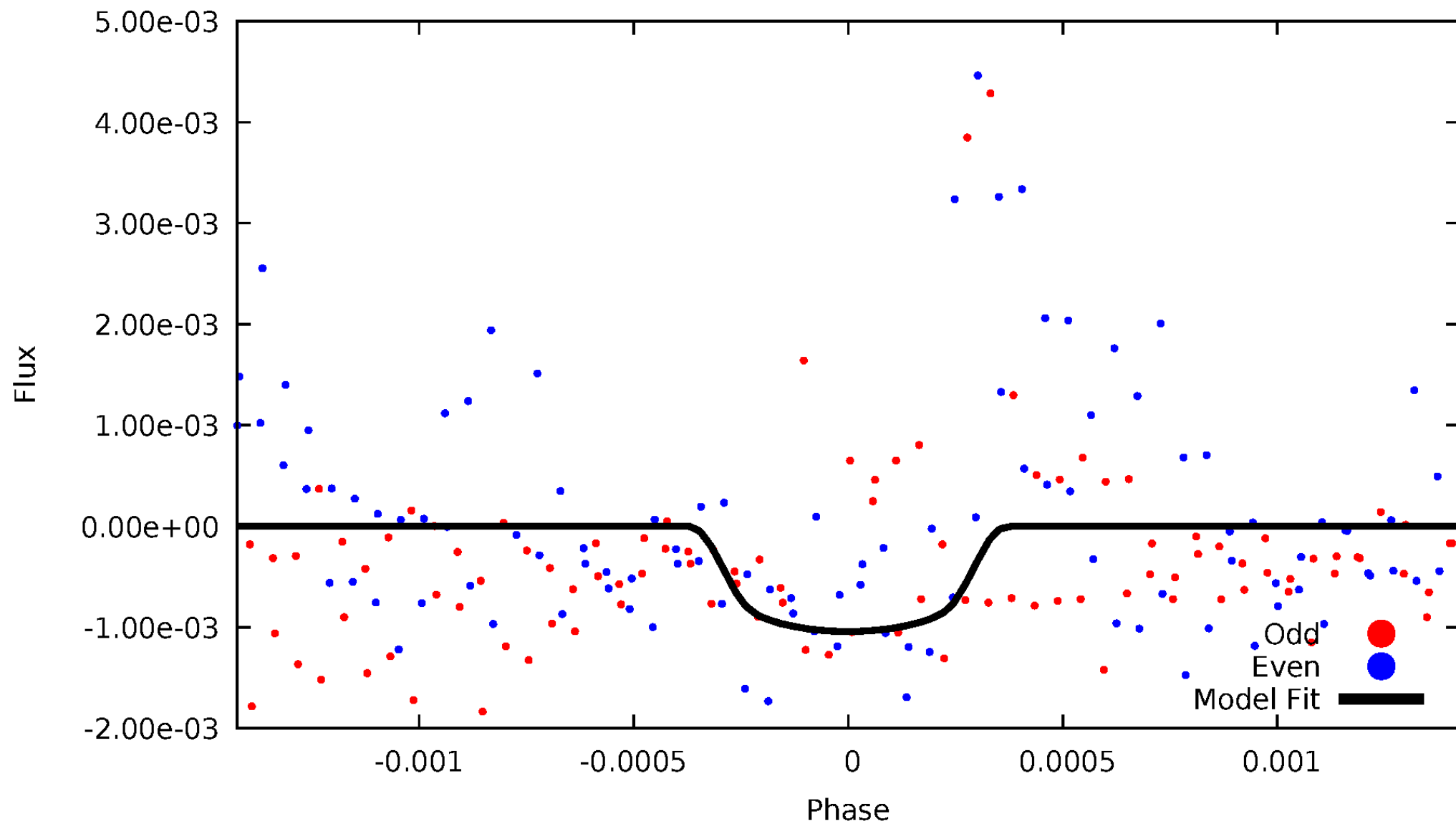


TCE 003763058-05



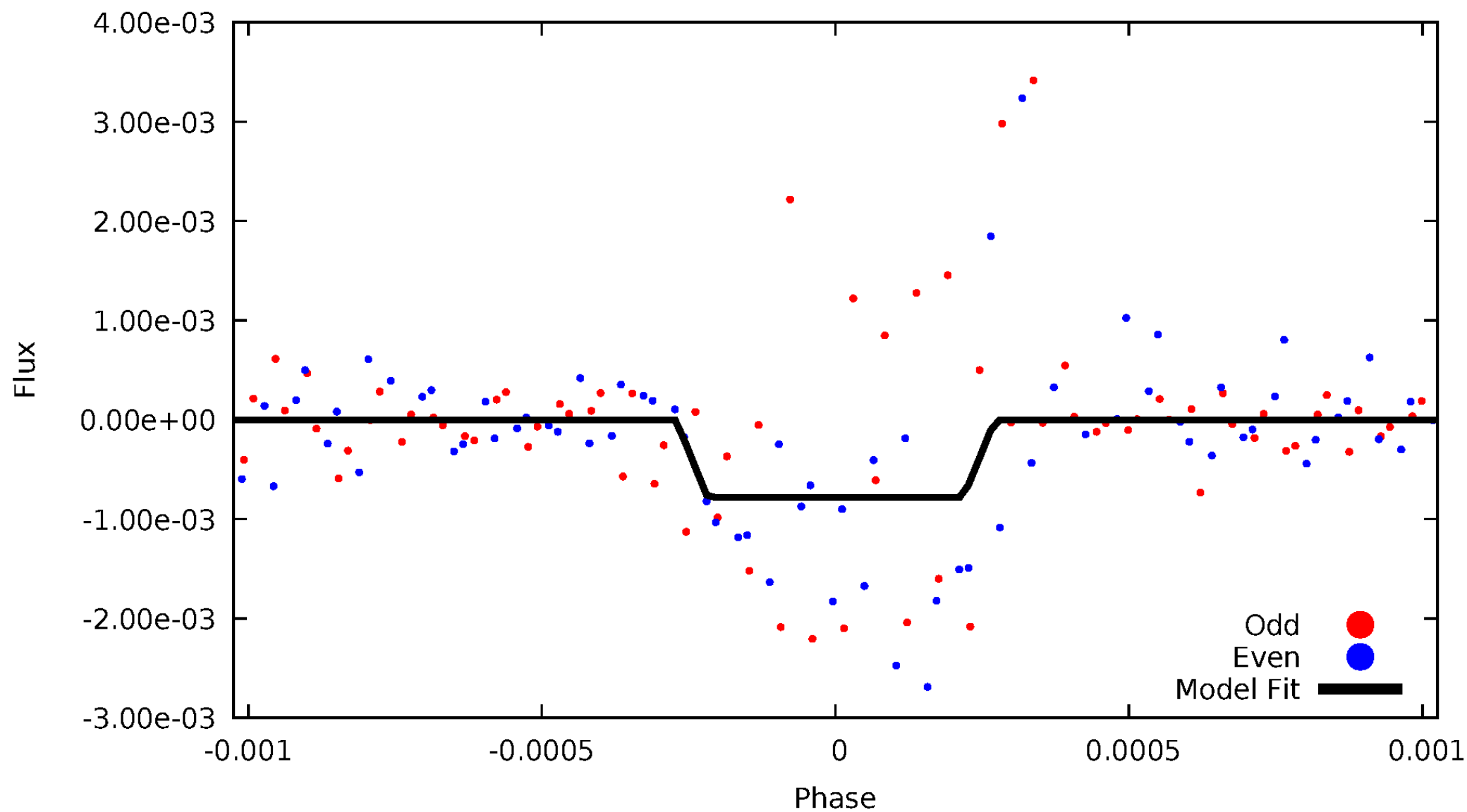
DV Odd/Even

TCE 003763058-05



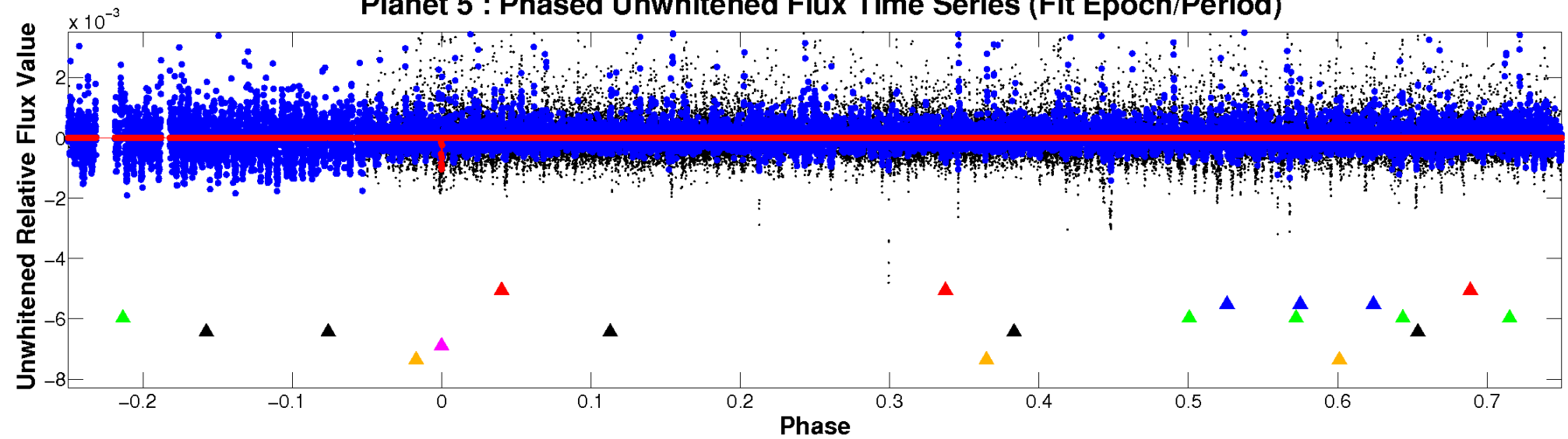
ALT Odd/Even

TCE 003763058-05

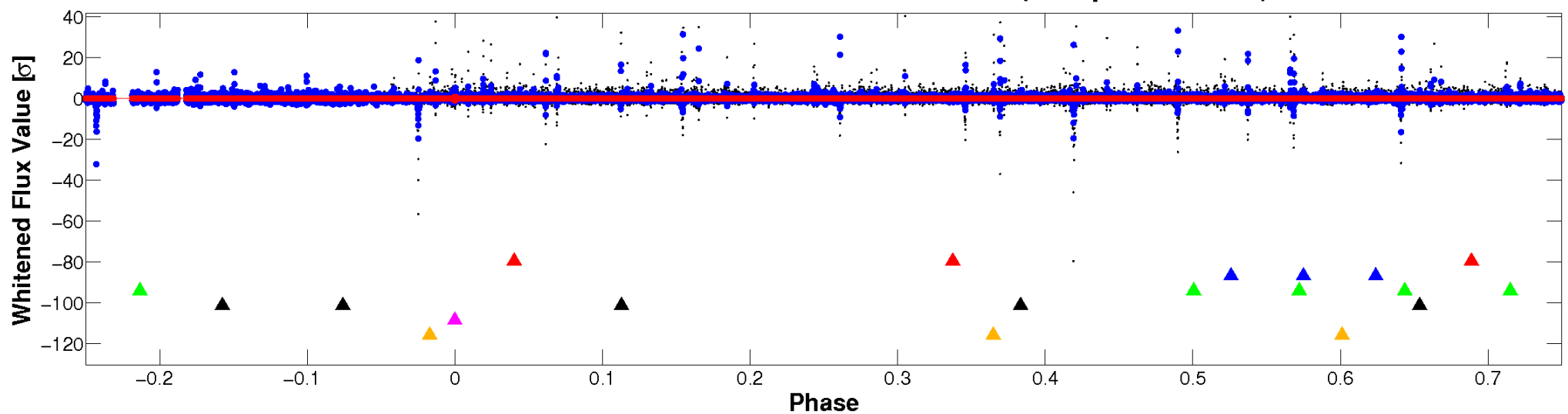


Non-Whitened Vs. Whitened Light Curve

Planet 5 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

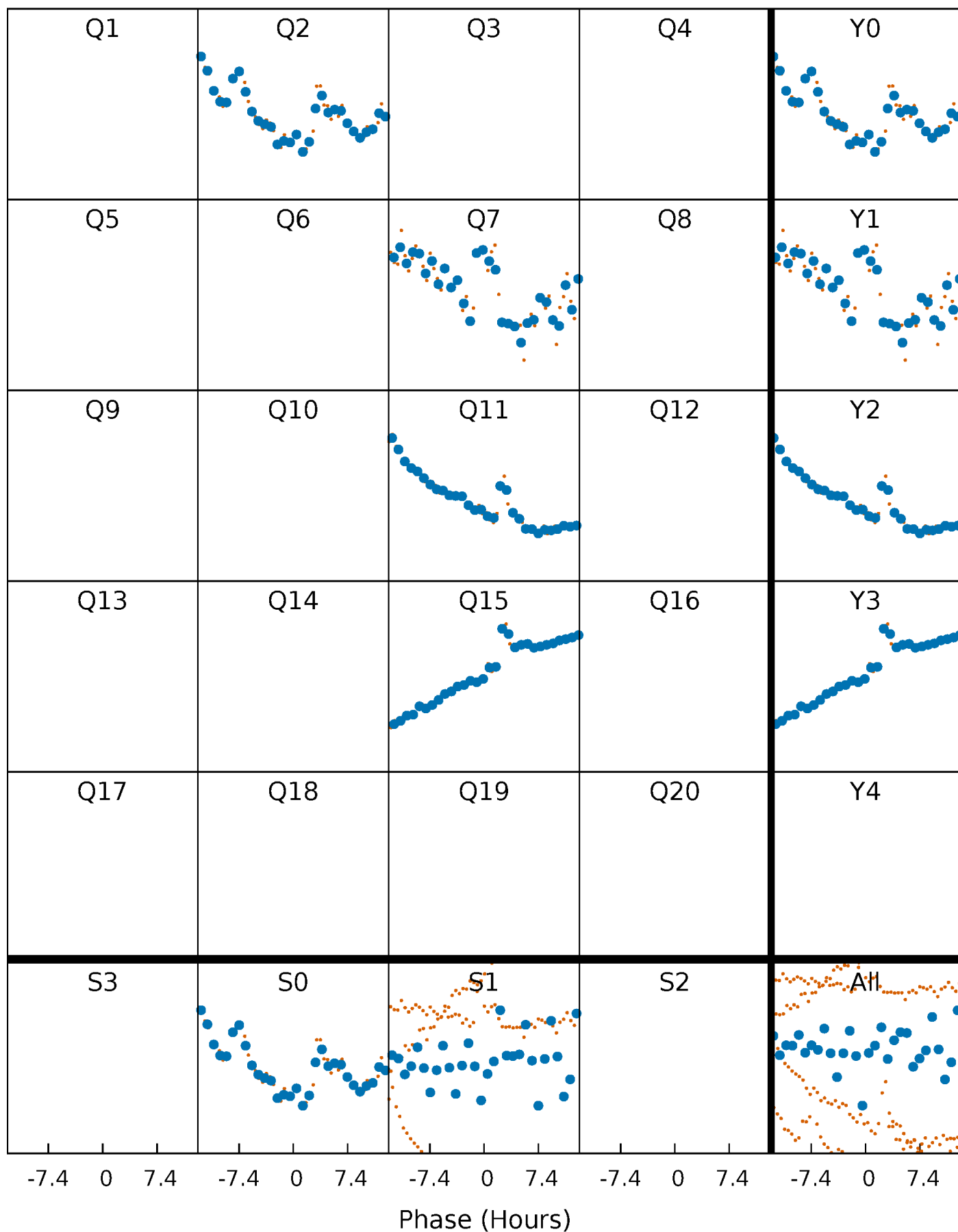


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



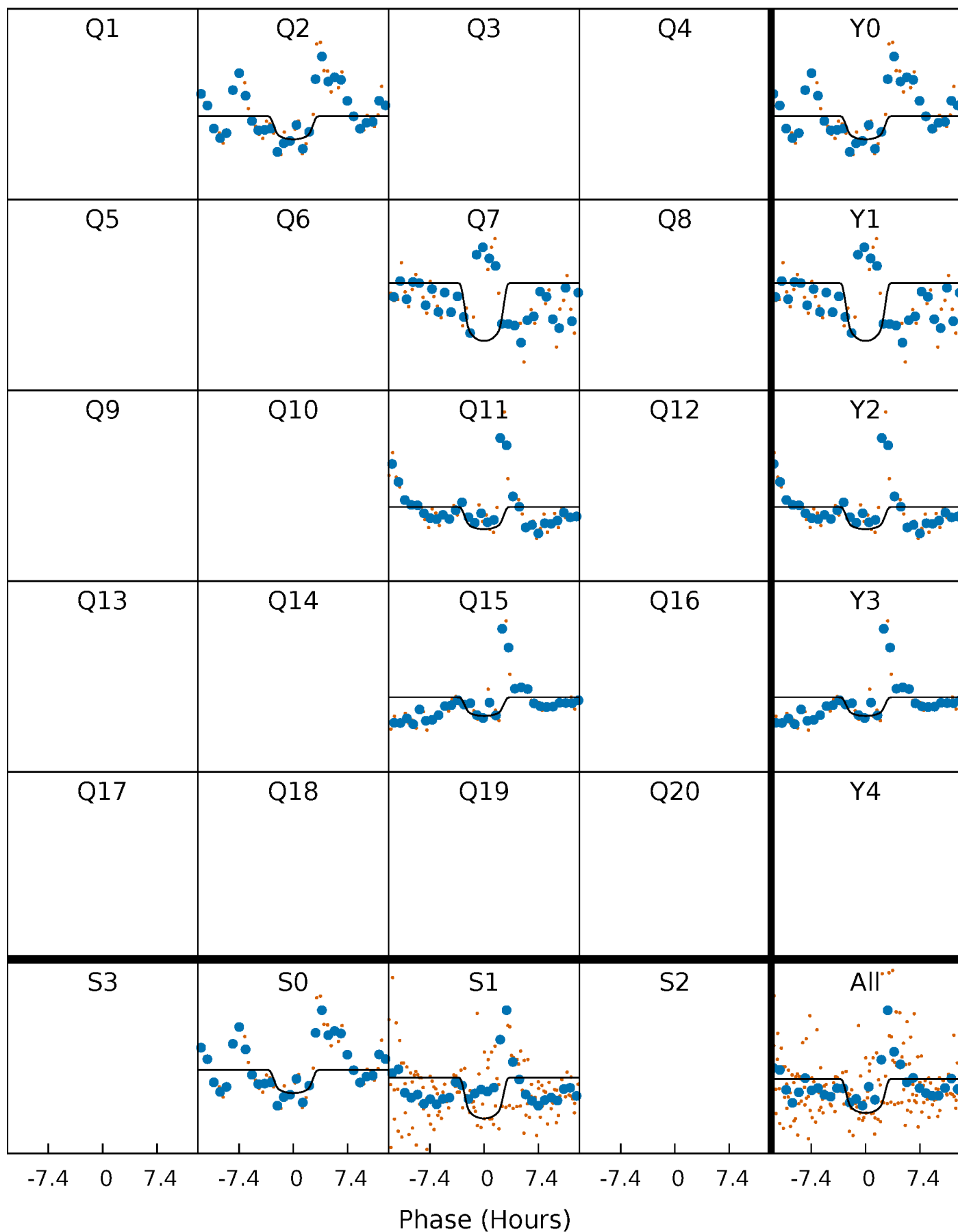
PDC Quarter-Phased Transit Curves

TCE 003763058-05 $P=380.012677$ Days $T_0=252.899547$ (BKJD)



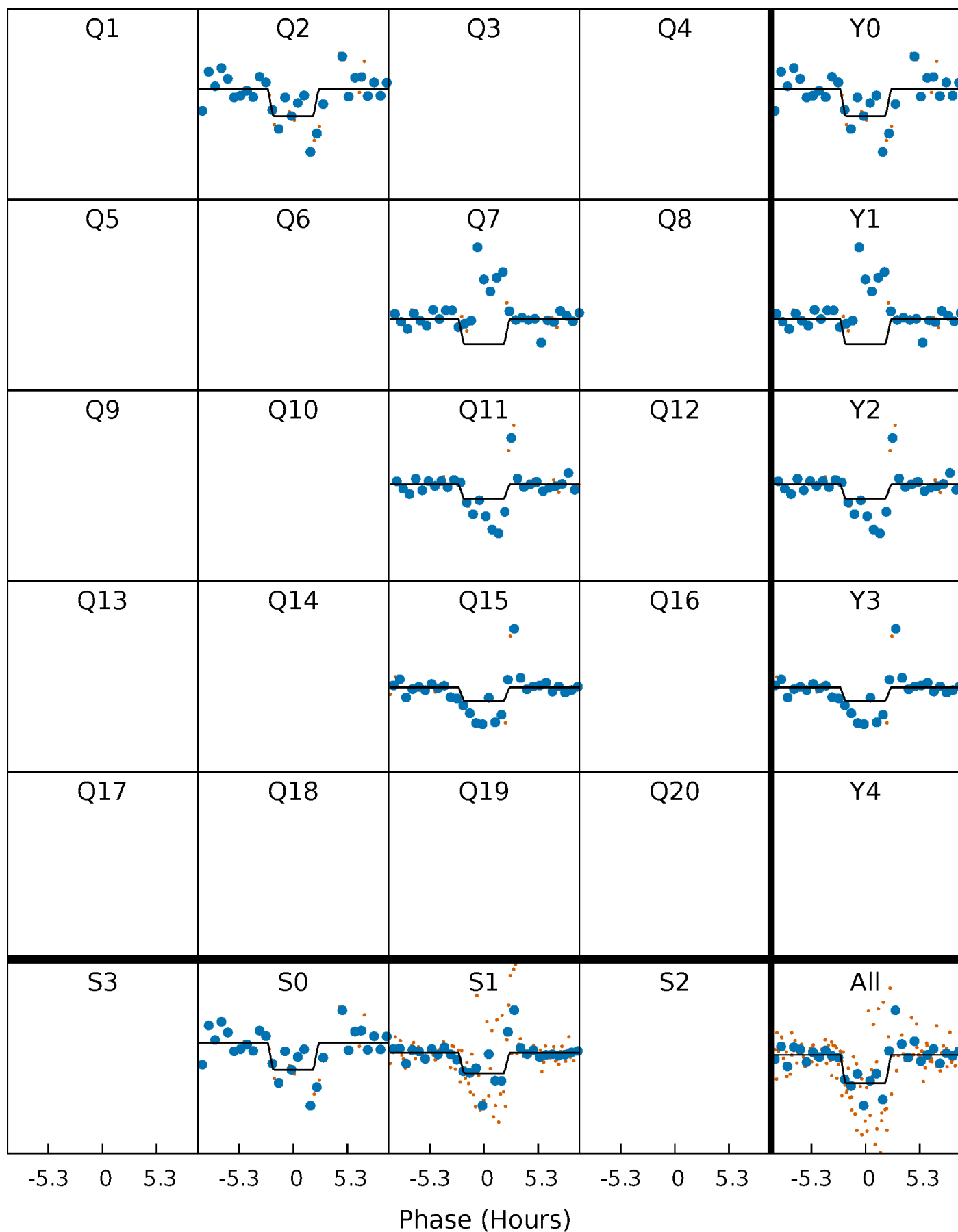
DV Quarter-Phased Transit Curves

TCE 003763058-05 $P=380.012677$ Days $T_0=252.899547$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

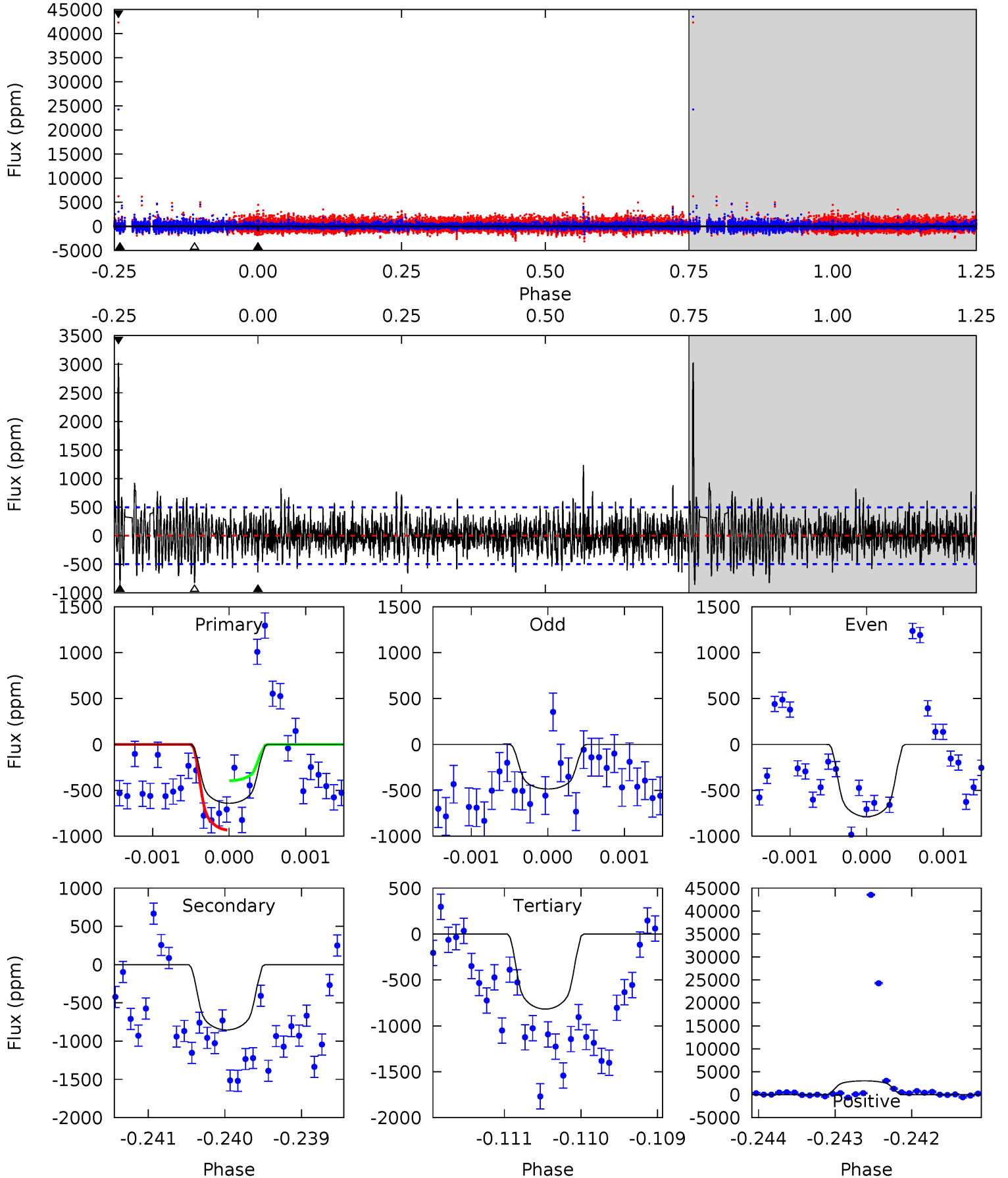
TCE 003763058-05 $P=380.016538$ Days $T_0=252.885594$ (BKJD)



DV Model-Shift Uniqueness Test

003763058-05, P = 380.012677 Days, E = 252.899547 Days

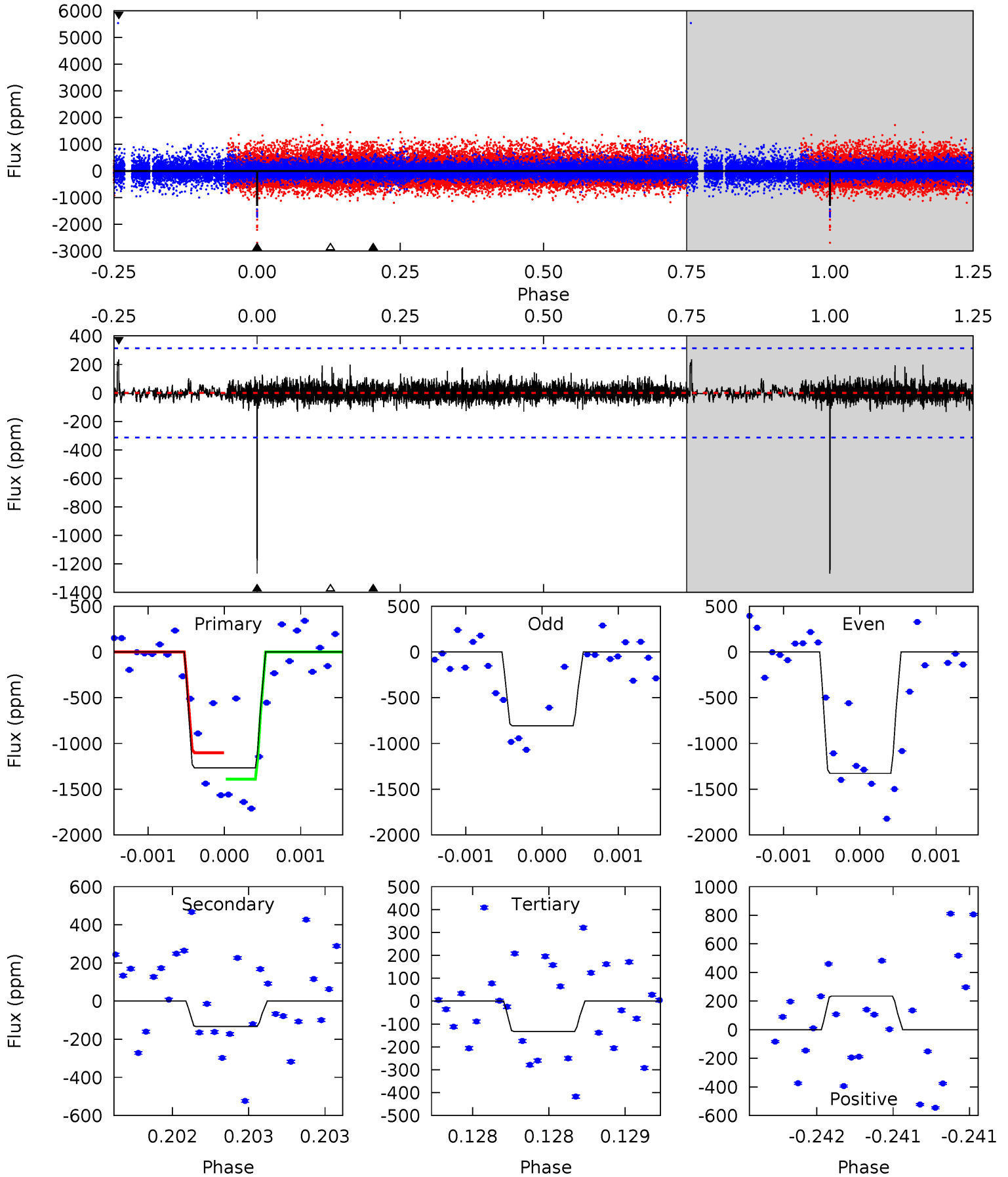
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.10	9.45	9.05	33.4	5.50	3.37	2.53	-1.95	-26.3	0.40	-23.9	1.12	1.22	0.78	2.81



Alt Model-Shift Uniqueness Test

003763058-05, $P = 380.016538$ Days, $E = 252.885594$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.5	2.37	2.35	4.18	5.57	3.47	0.63	20.2	18.4	0.02	-1.81	4.42	0.67	0.16	2.55



Stellar Parameters For KIC 003763058

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4080^{+141}_{-155}	$4.646^{+0.060}_{-0.020}$	$0.000^{+0.250}_{-0.300}$	$0.613^{+0.038}_{-0.070}$	$0.606^{+0.057}_{-0.063}$	$3.712^{+1.094}_{-0.389}$
	+3%/-4%	+1%/-0%	+inf%/-inf%	+6%/-11%	+9%/-10%	+29%/-10%
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 003763058-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-854 ± 90	$2.40^{+0.44}_{-0.44}$	209^{+8}_{-8}	3779^{+293}_{-239}	63178^{+29301}_{-17913}
Alt.	-134 ± 56	$1.83^{+0.44}_{-0.43}$	209^{+8}_{-9}	3066^{+298}_{-296}	16089^{+14929}_{-8039}

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

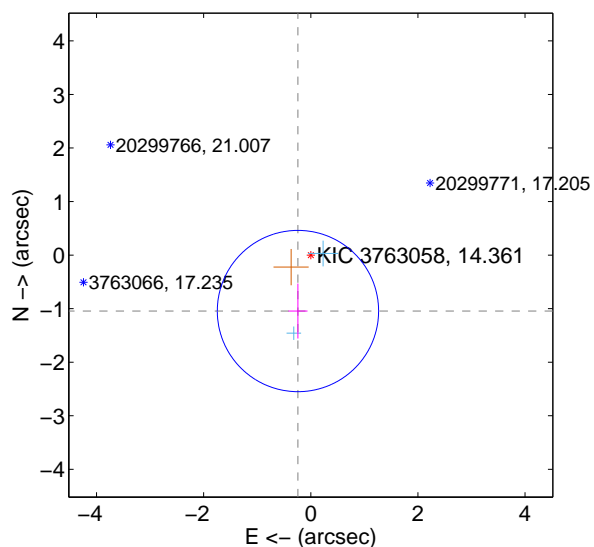
Supplemental centroid analysis for 003763058-05. Kepler magnitude: 14.36. Transit SNR 6.36

There are 2 quarters with good PRF difference image offsets

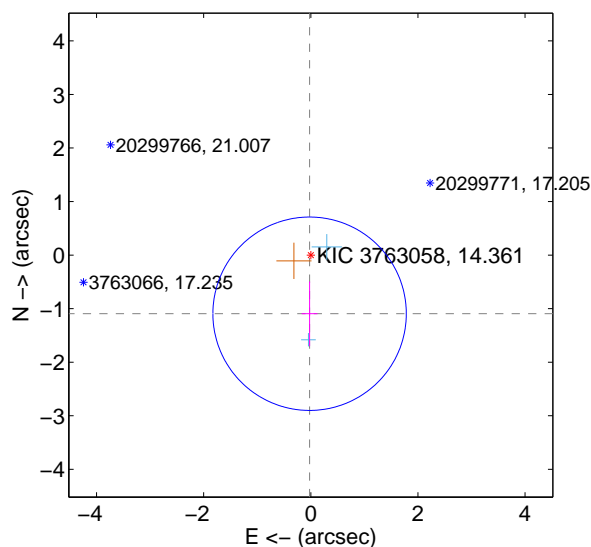
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.072 ± 0.502	2.14	0.240 ± 0.179	-1.045 ± 0.513
PRF-fit source offset from KIC position	1.095 ± 0.602	1.82	0.022 ± 0.147	-1.095 ± 0.602
photometric centroid source offset	0.45 ± 1.10	0.41	0.45 ± 1.10	0.04 ± 1.06

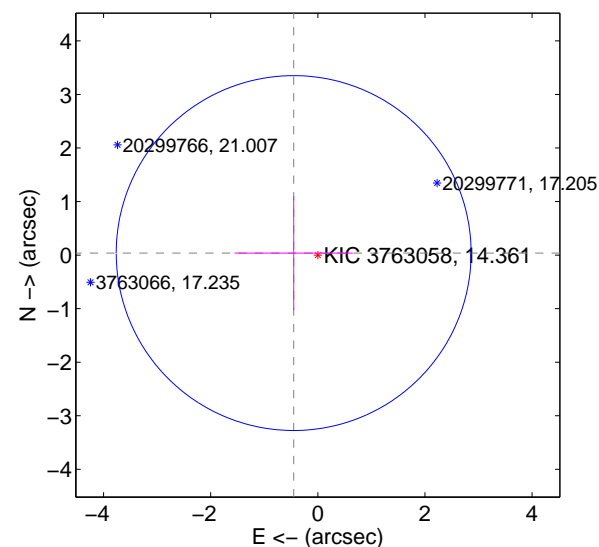
offset from difference PRF-fit to OOT PRF-fit



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.

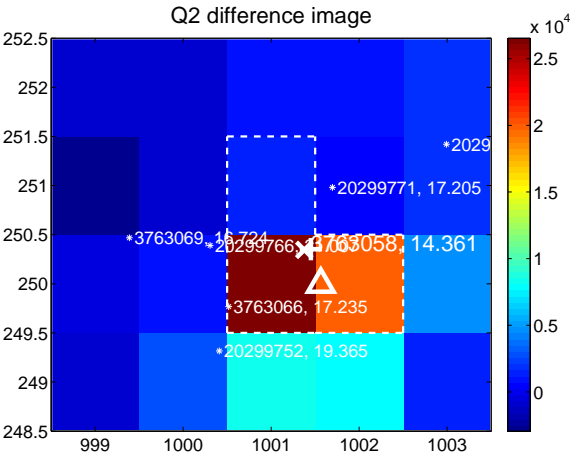
Q1 no difference image



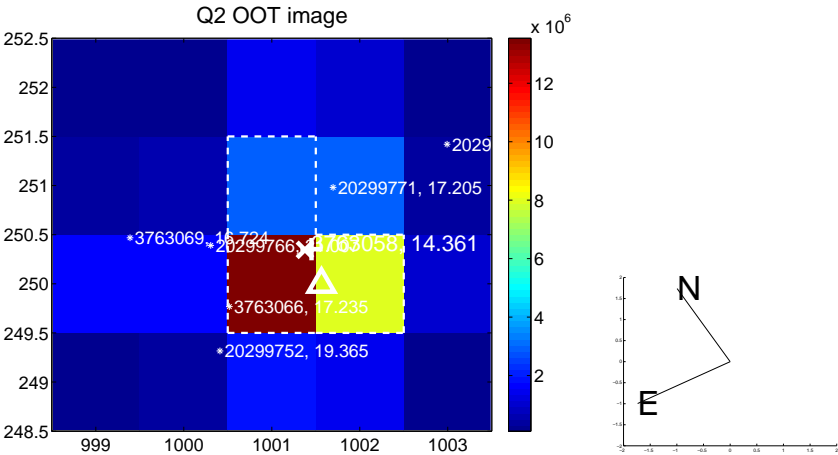
Q1 no OOT image



Q2 difference image



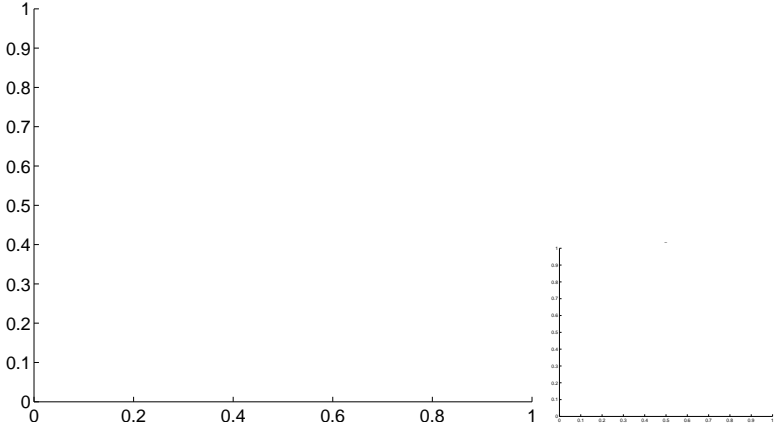
Q2 OOT image



Q3 no difference image



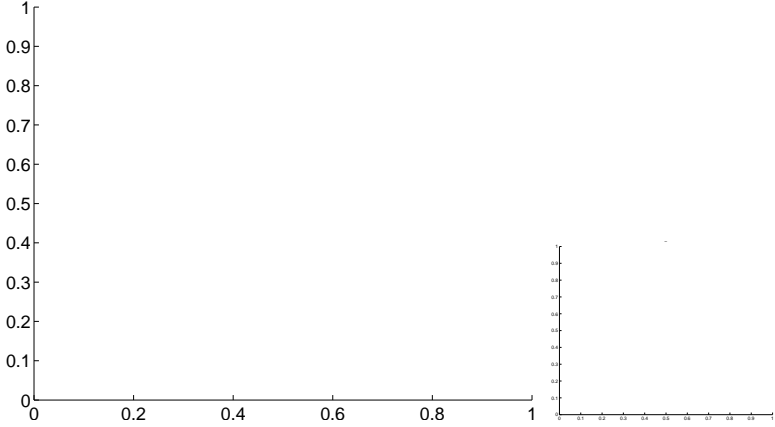
Q3 no OOT image



Q4 no difference image



Q4 no OOT image



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

Q5 no difference image



Q5 no OOT image



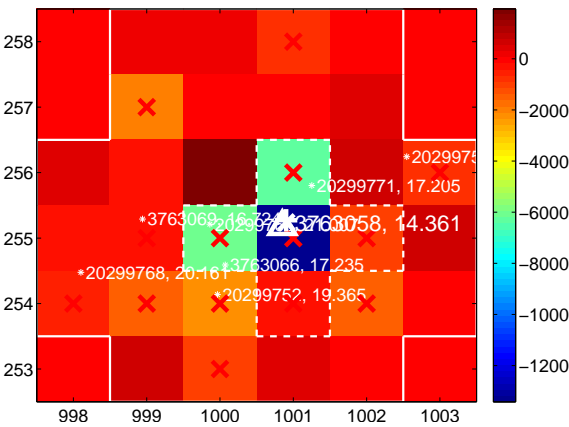
Q6 no difference image



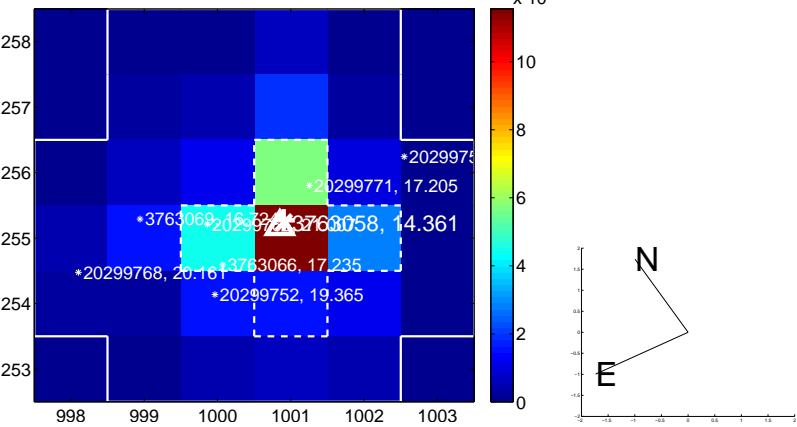
Q6 no OOT image



Q7 difference image. Poor Quality



Q7 OOT image



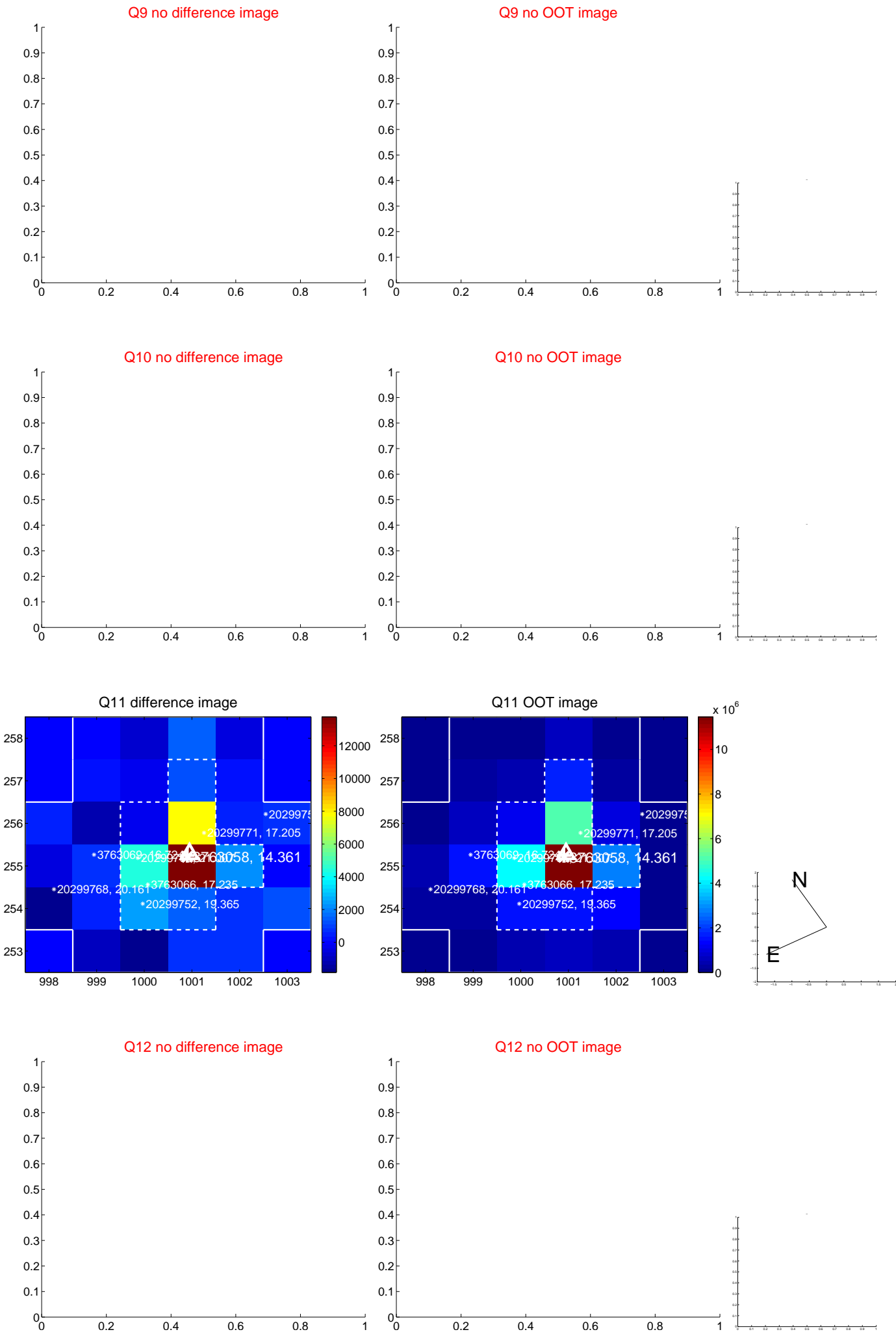
Q8 no difference image



Q8 no OOT image



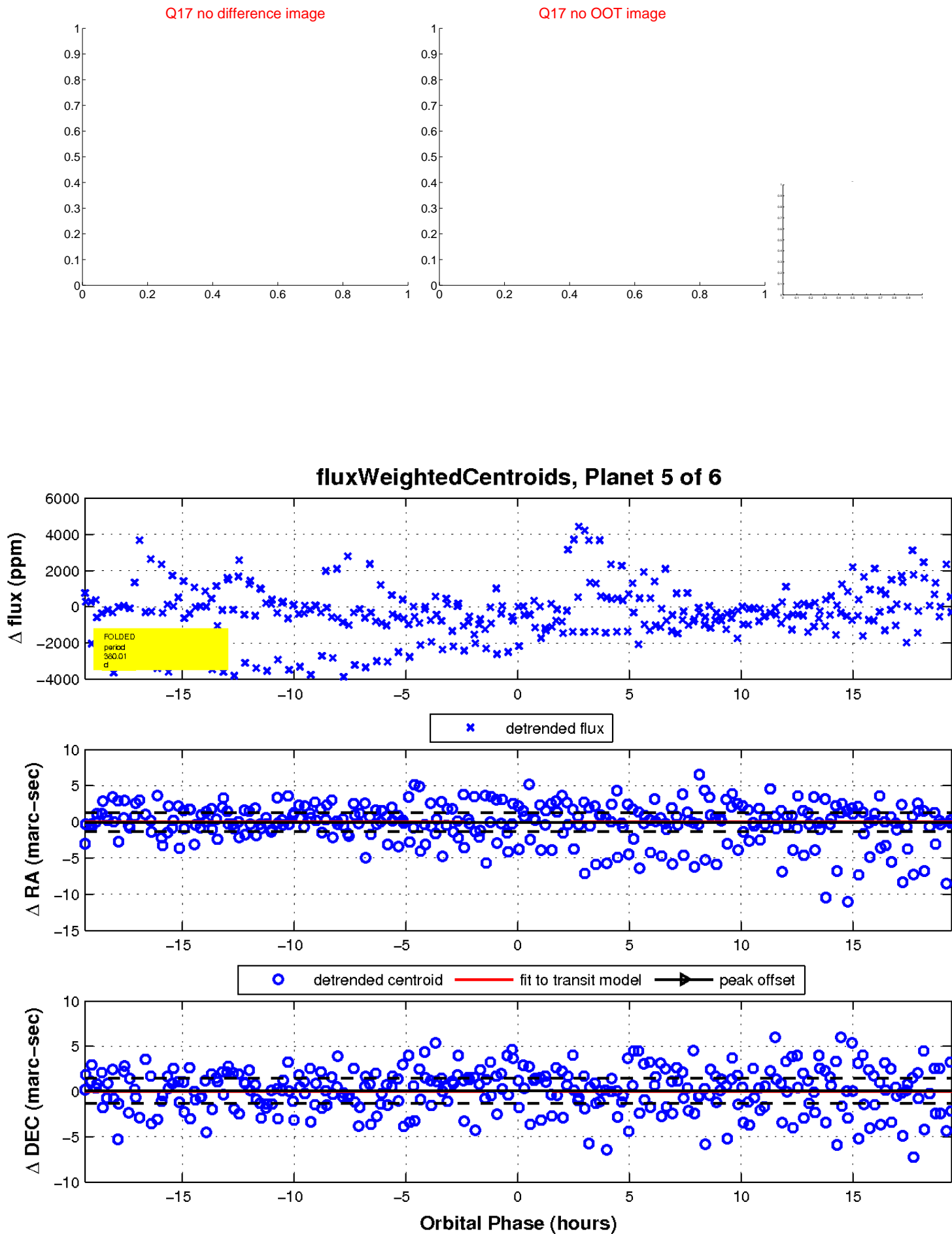
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

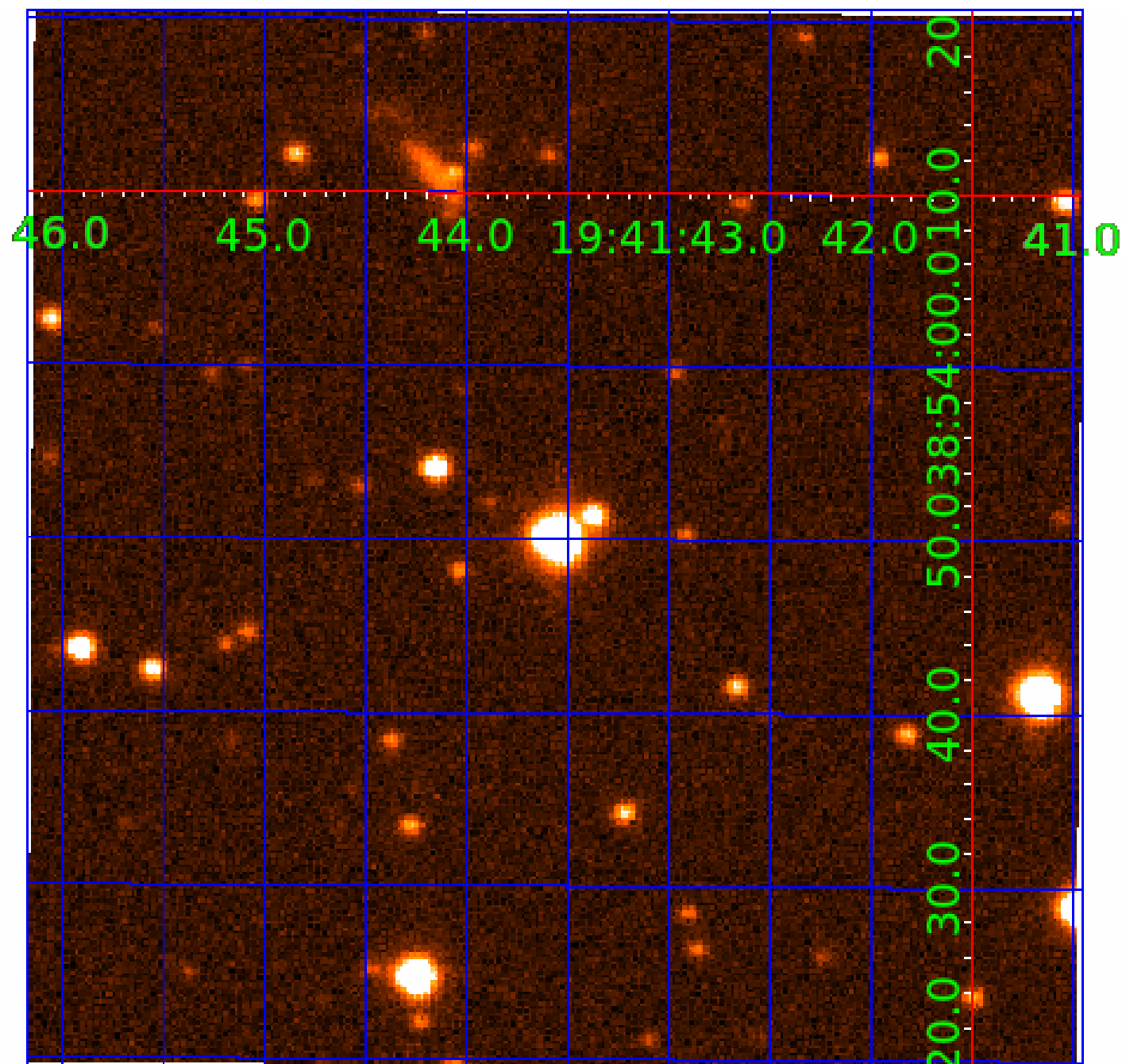


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 003763058

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})
003763058-01	OBS	No	626.479672	268.188808	1222.6	8.242	14.2	7.1	0.61	4080	2.38	0.06
003763058-02	OBS	No	398.641576	452.758025	2455.6	3.021	13.9	14.4	0.61	4080	3.02	0.12
003763058-03	OBS	No	352.839301	171.824795	1073.0	4.766	12.8	7.1	0.61	4080	2.06	0.14
003763058-04	OBS	No	277.251249	224.074408	539.4	3.836	11.5	3.8	0.61	4080	1.57	0.19
003763058-05	OBS	No	380.012677	252.899547	1042.5	6.492	12.8	6.4	0.61	4080	2.42	0.12
003763058-06	OBS	No	525.115407	481.343576	1116.2	9.002	12.1	6.3	0.61	4080	2.10	0.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003763058-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
003763058-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—MOD_POS_DV—INCONSISTENT_TRANS
003763058-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
003763058-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS—HALO_GHOST
003763058-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
003763058-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—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.

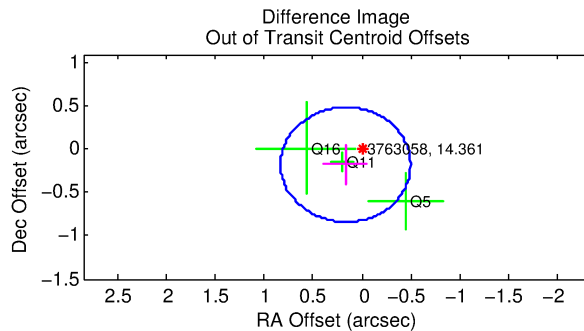
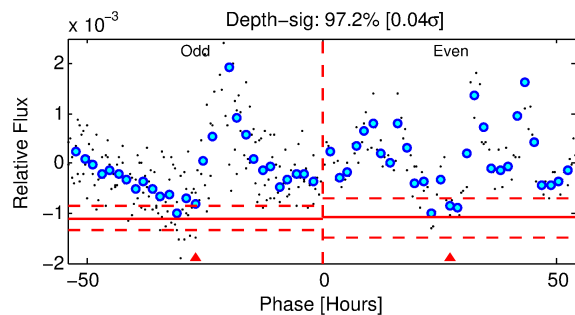
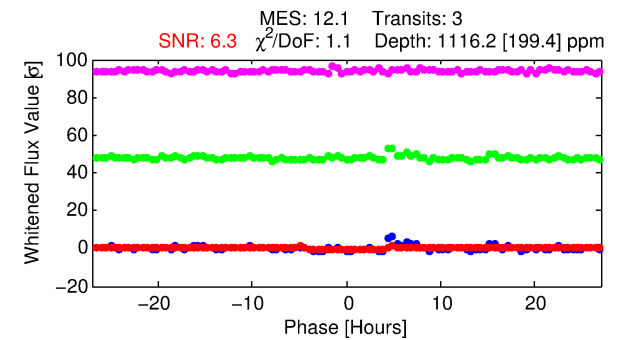
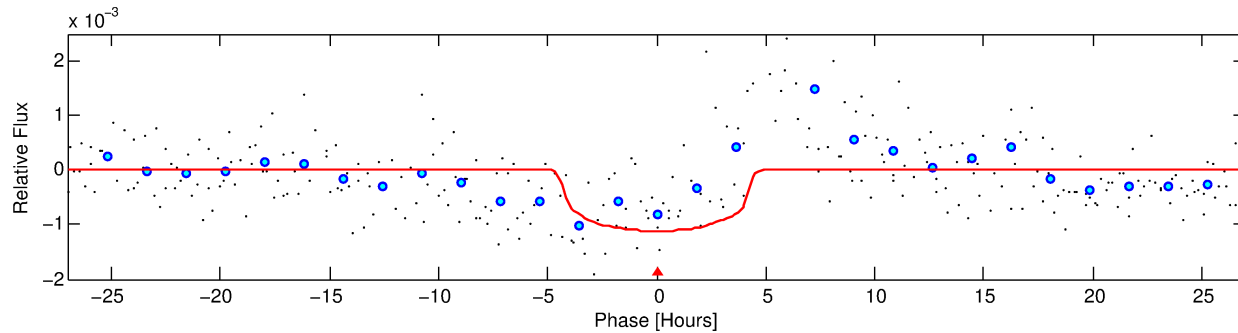
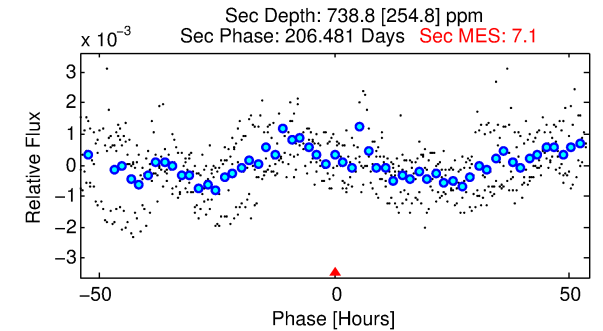
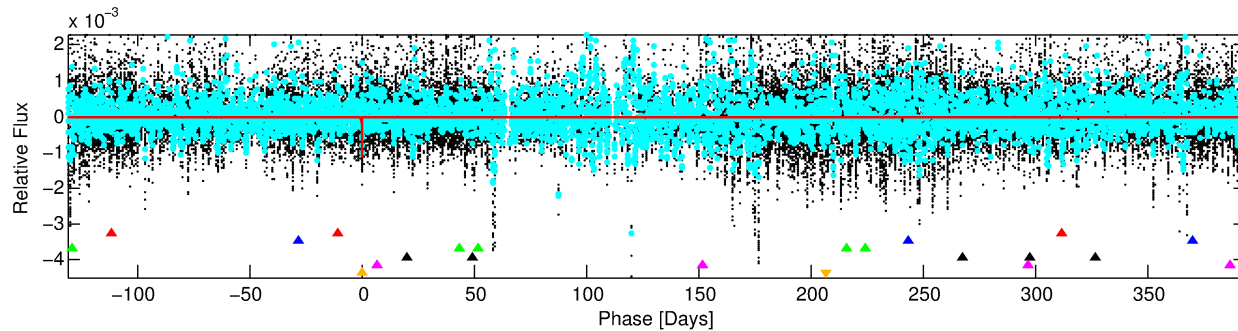
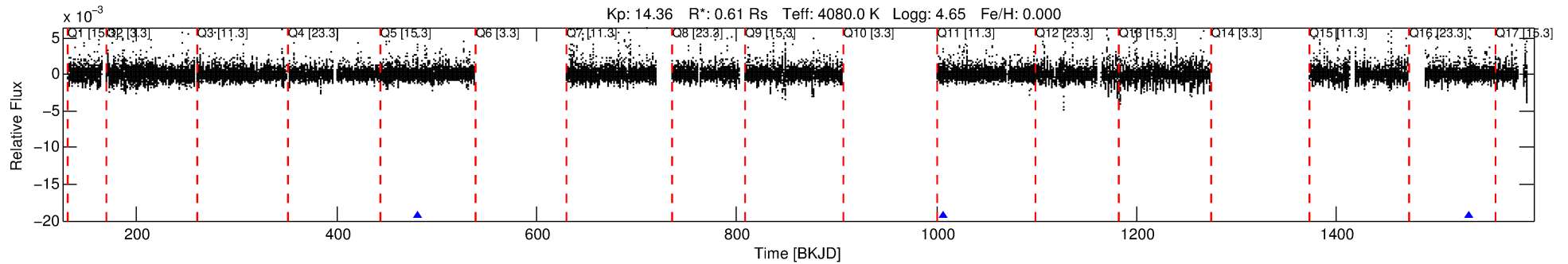
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003763058-06

No Significant Match Found

DV One-Page Summary

KIC: 3763058 Candidate: 6 of 6 Period: 525.115 d



DV Fit Results:

Period = 525.11541 [0.00799] d
Epoch = 481.3436 [0.0101] BKJD
Rp/R* = 0.0314 [0.0182]
a/R* = 381.45 [747.42]
b = 0.58 [2.30]
Seff = 0.08 [0.02]
Teq = 136 [7] K
Rp = 2.10 [1.24] Re
a = 1.0786 [0.0960] AU
Ag = 107092.51 [130104.92] [0.82 σ]
Teffp = 3795 [1156] K [3.17 σ]

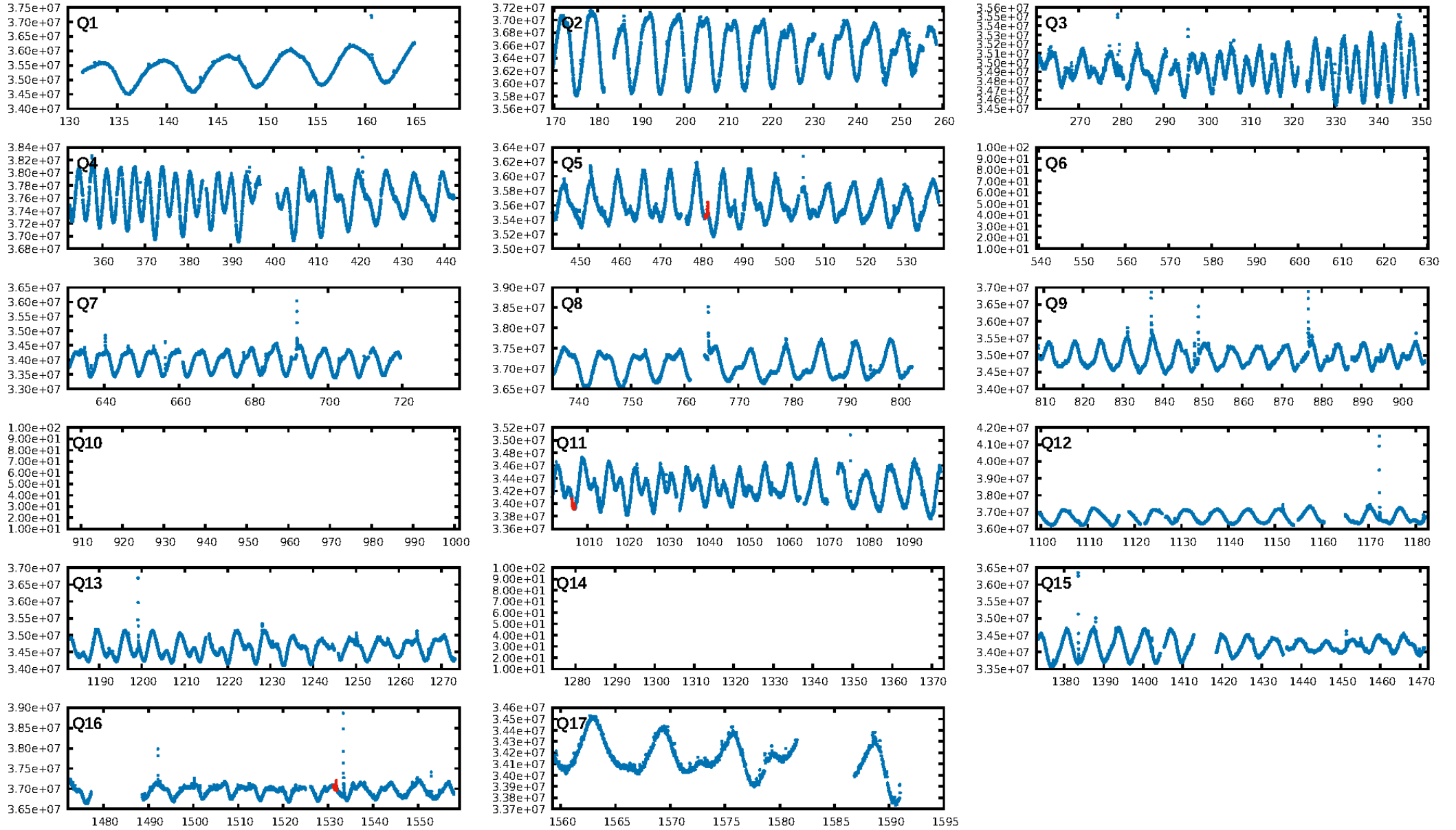
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [319.67 σ]
LongPeriod-sig: 100.0% [199.32 σ]
ModelChiSquare2-sig: 75.9%
ModelChiSquareGof-sig: 97.6%
Bootstrap-pfa: 9.79e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.804
Centroid-sig: 38.4%
Centroid-so: 0.683 arcsec [0.74 σ]
OotOffset-rm: 0.244 arcsec [1.10 σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-rm: 0.109 arcsec [0.49 σ]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

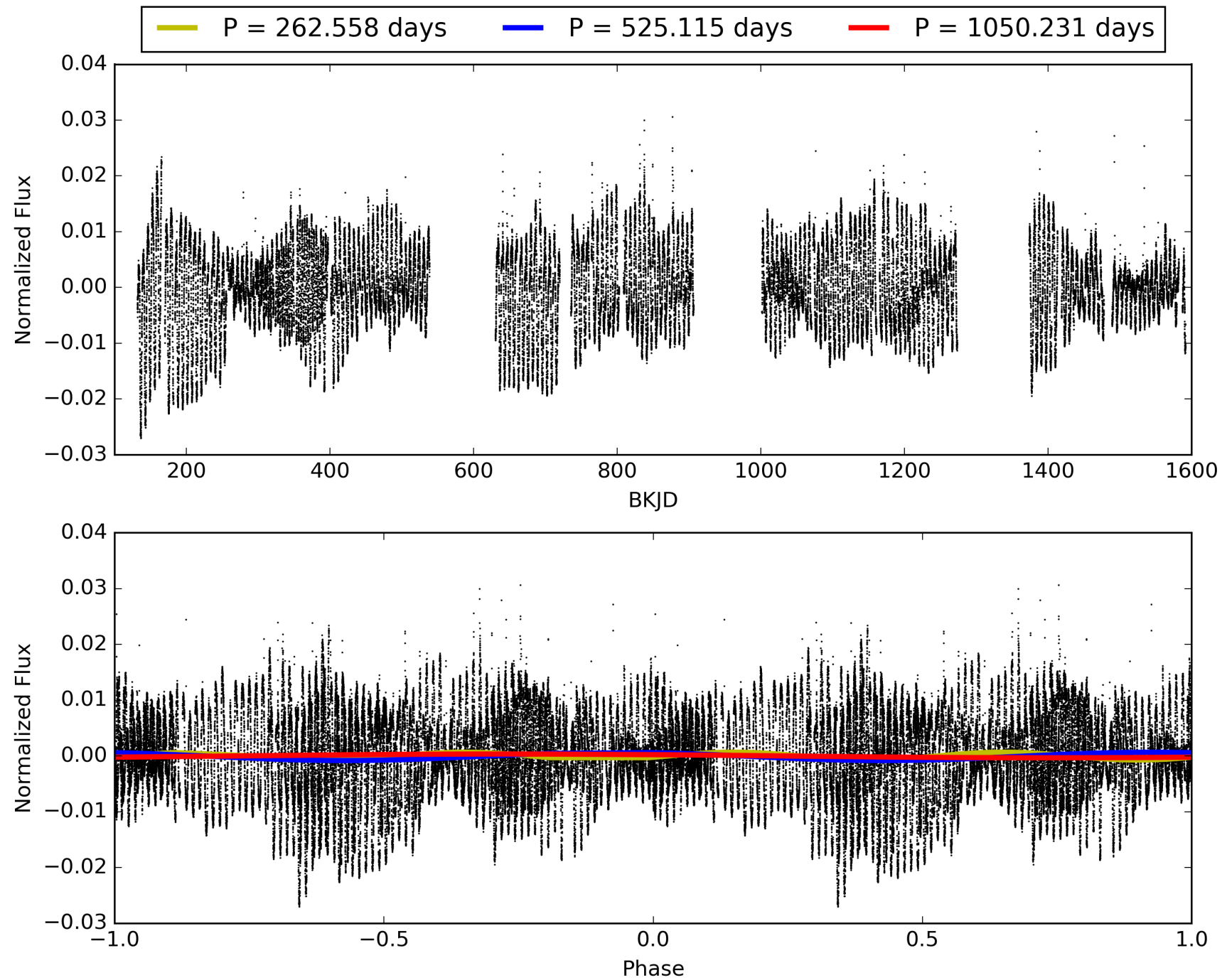
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:02:55 Z

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

TCE 003763058-06, PDC Light Curves

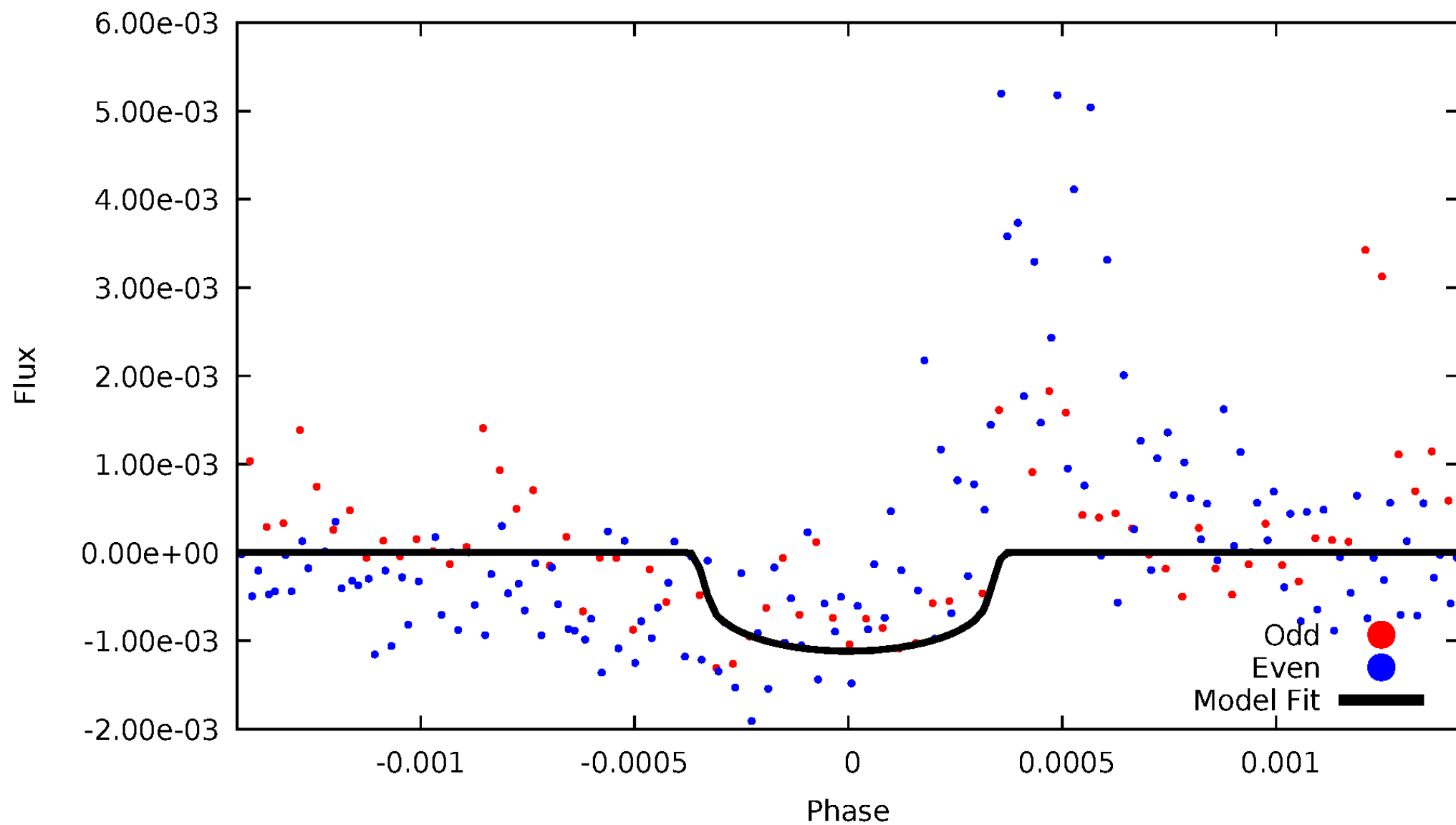


TCE 003763058-06



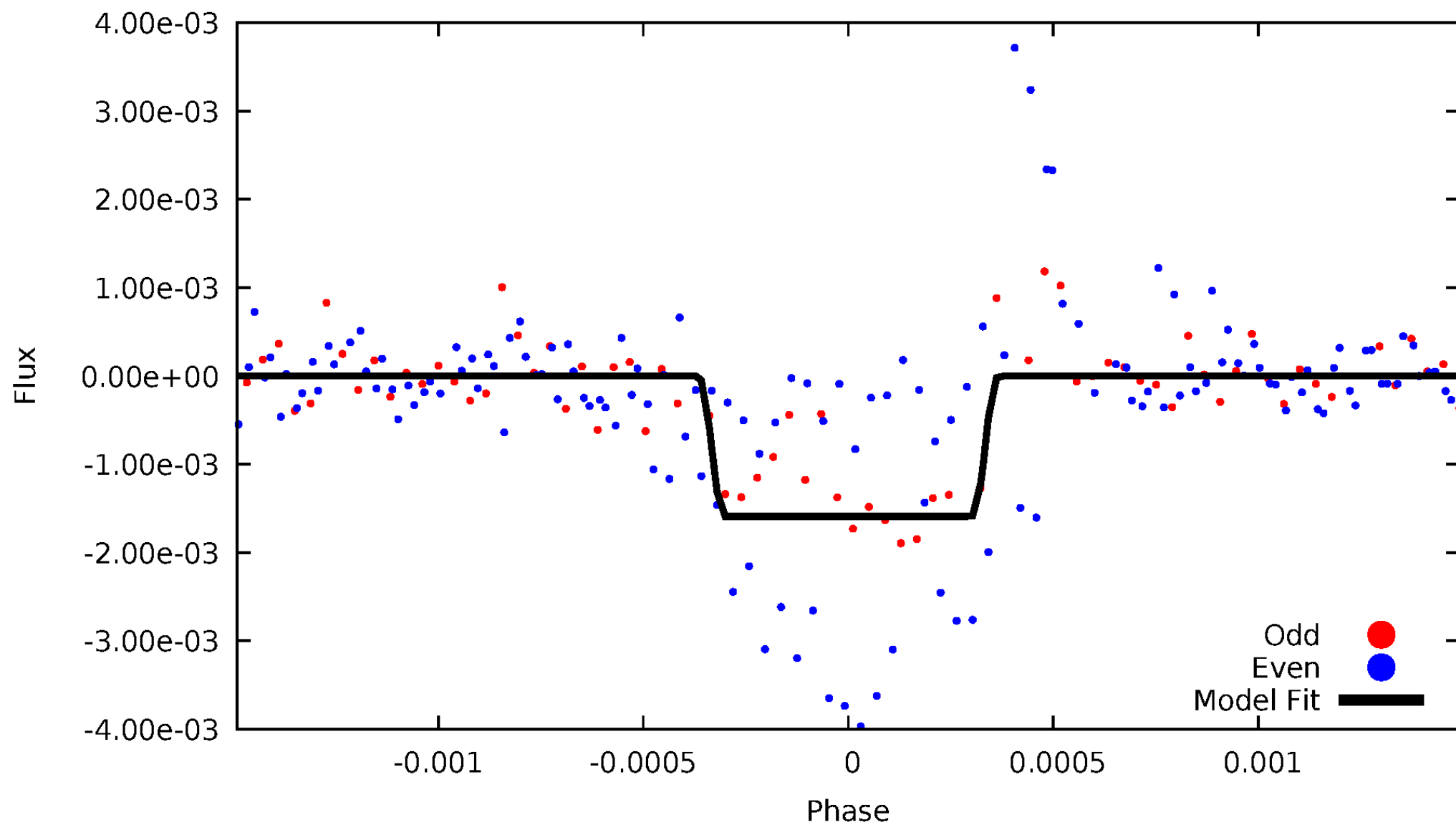
DV Odd/Even

TCE 003763058-06



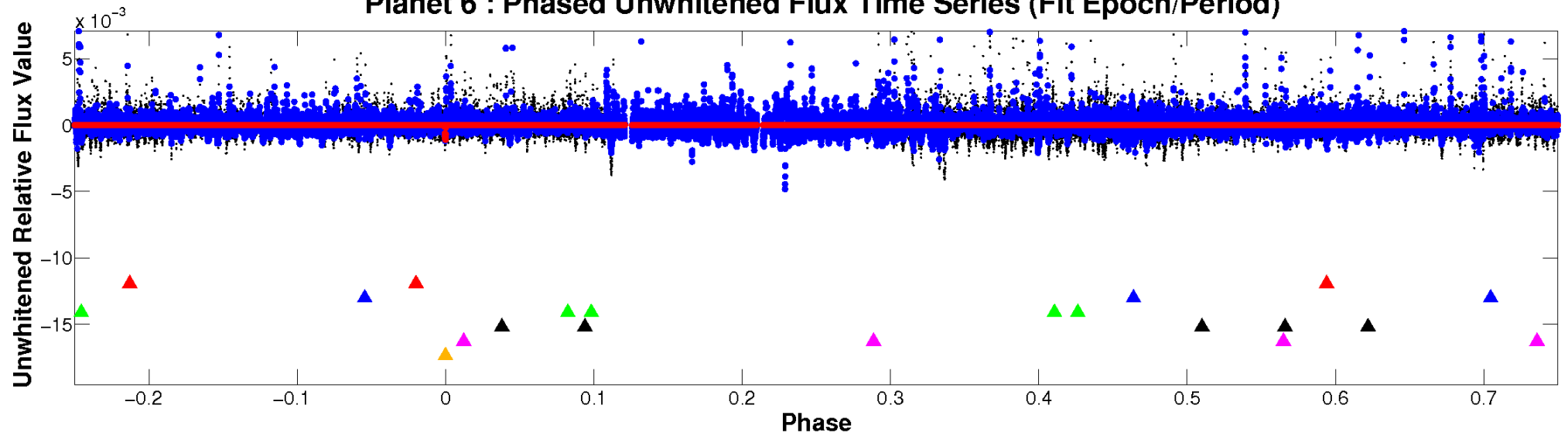
ALT Odd/Even

TCE 003763058-06

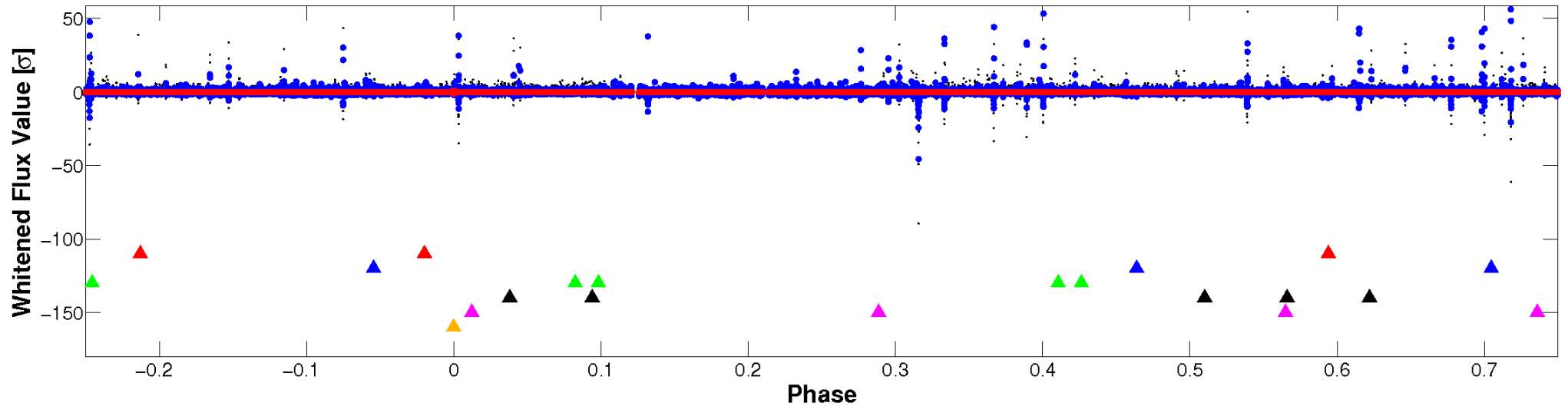


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

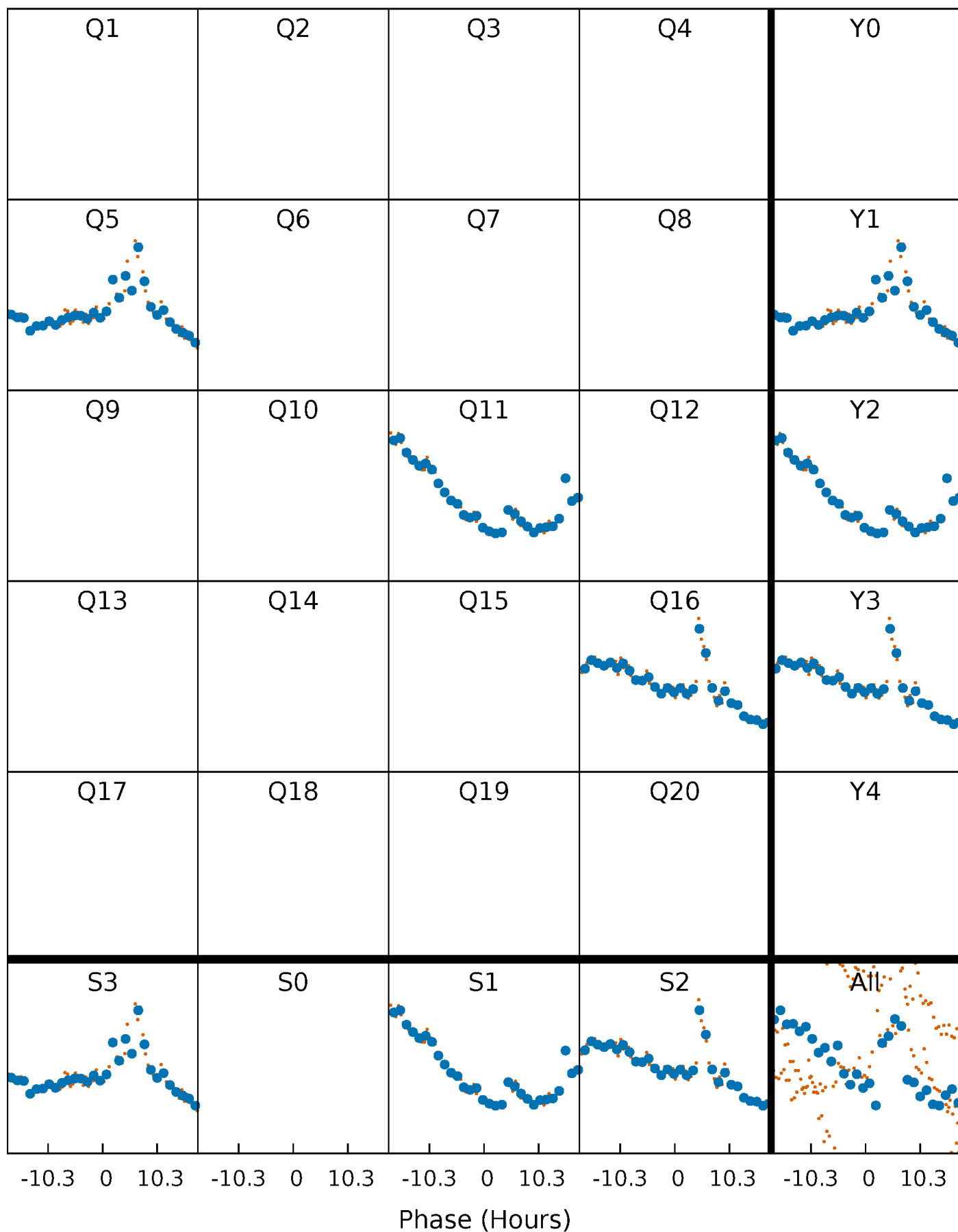


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



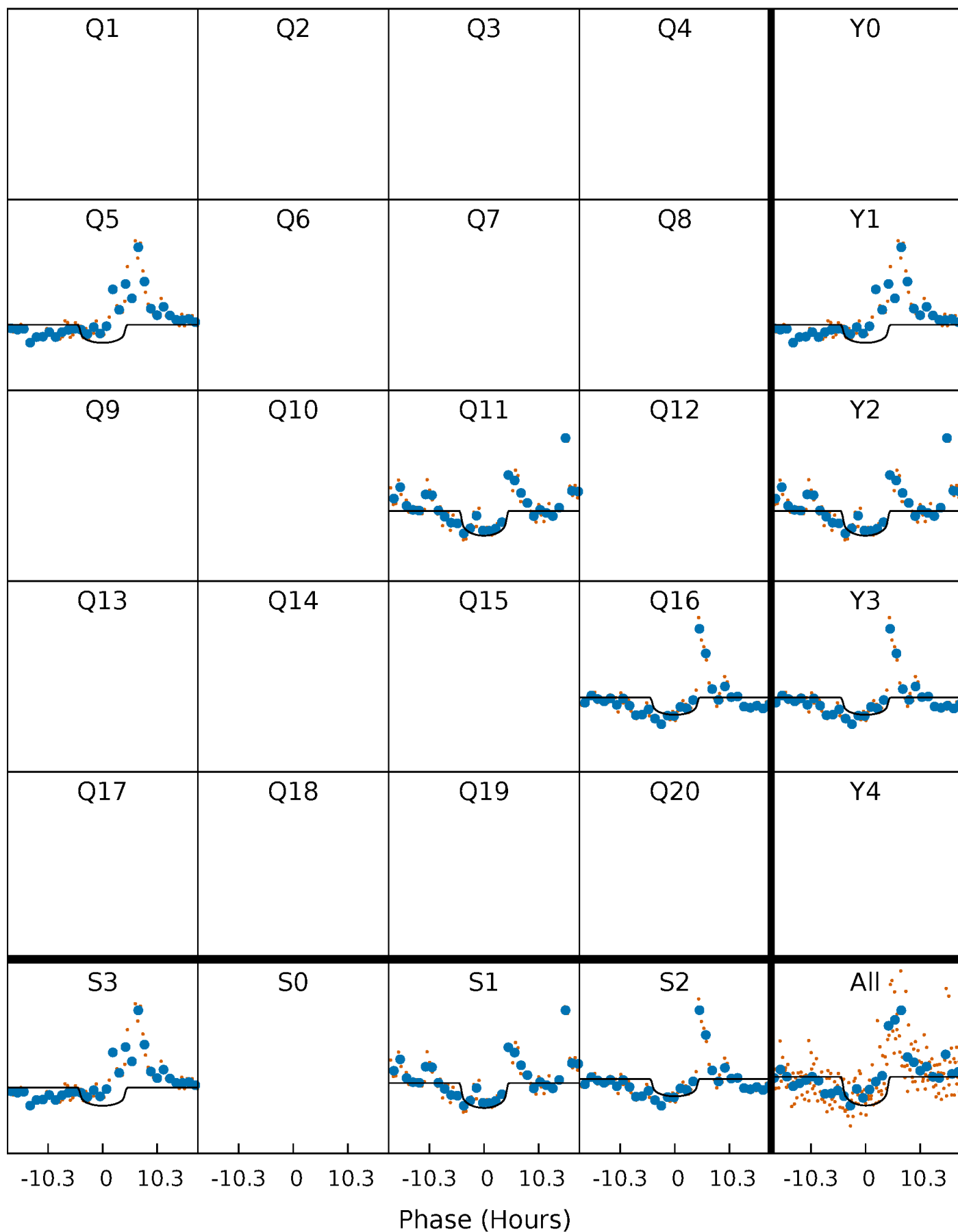
PDC Quarter-Phased Transit Curves

TCE 003763058-06 P=525.115407 Days $T_0=481.343576$ (BKJD)



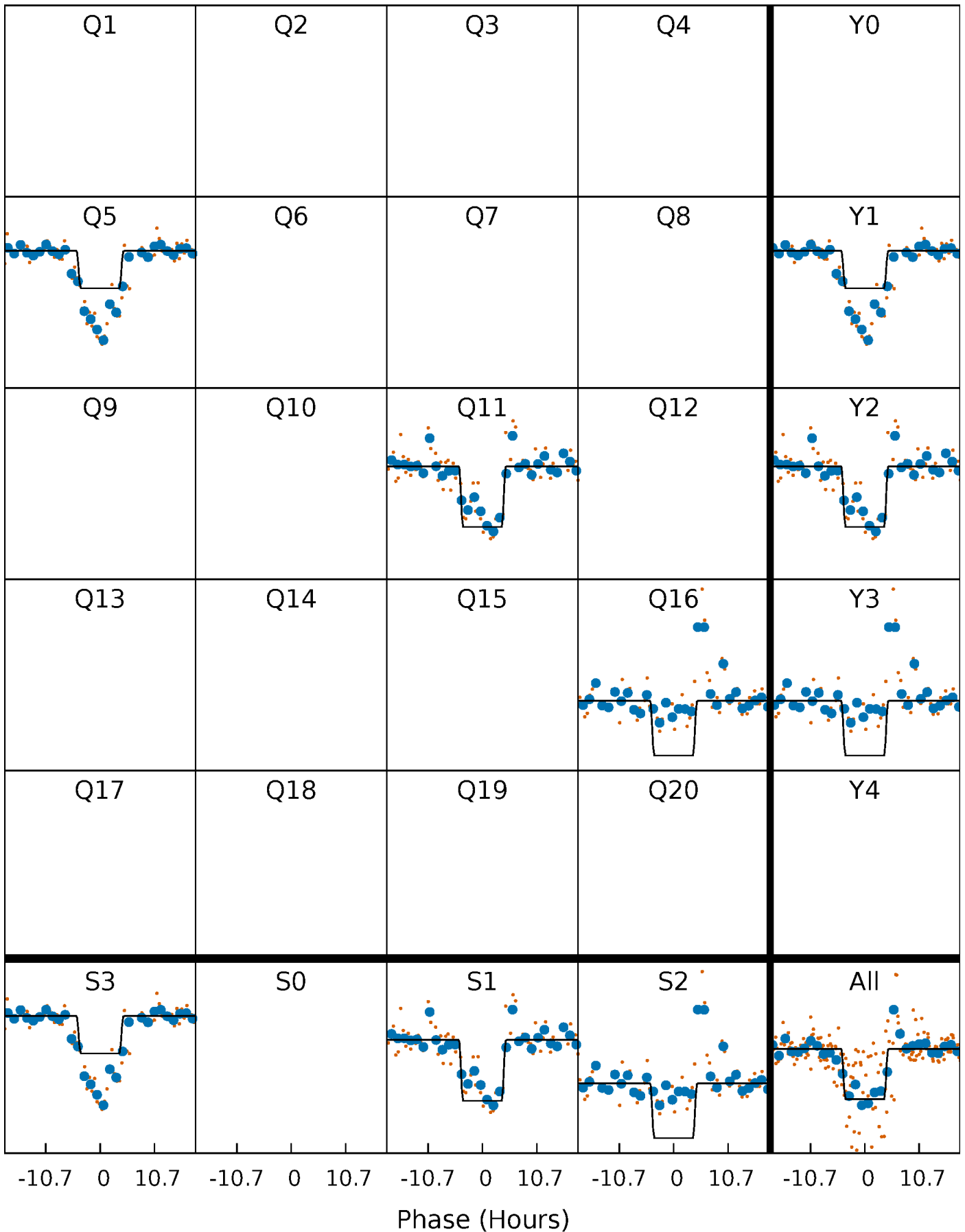
DV Quarter-Phased Transit Curves

TCE 003763058-06 $P=525.115407$ Days $T_0=481.343576$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

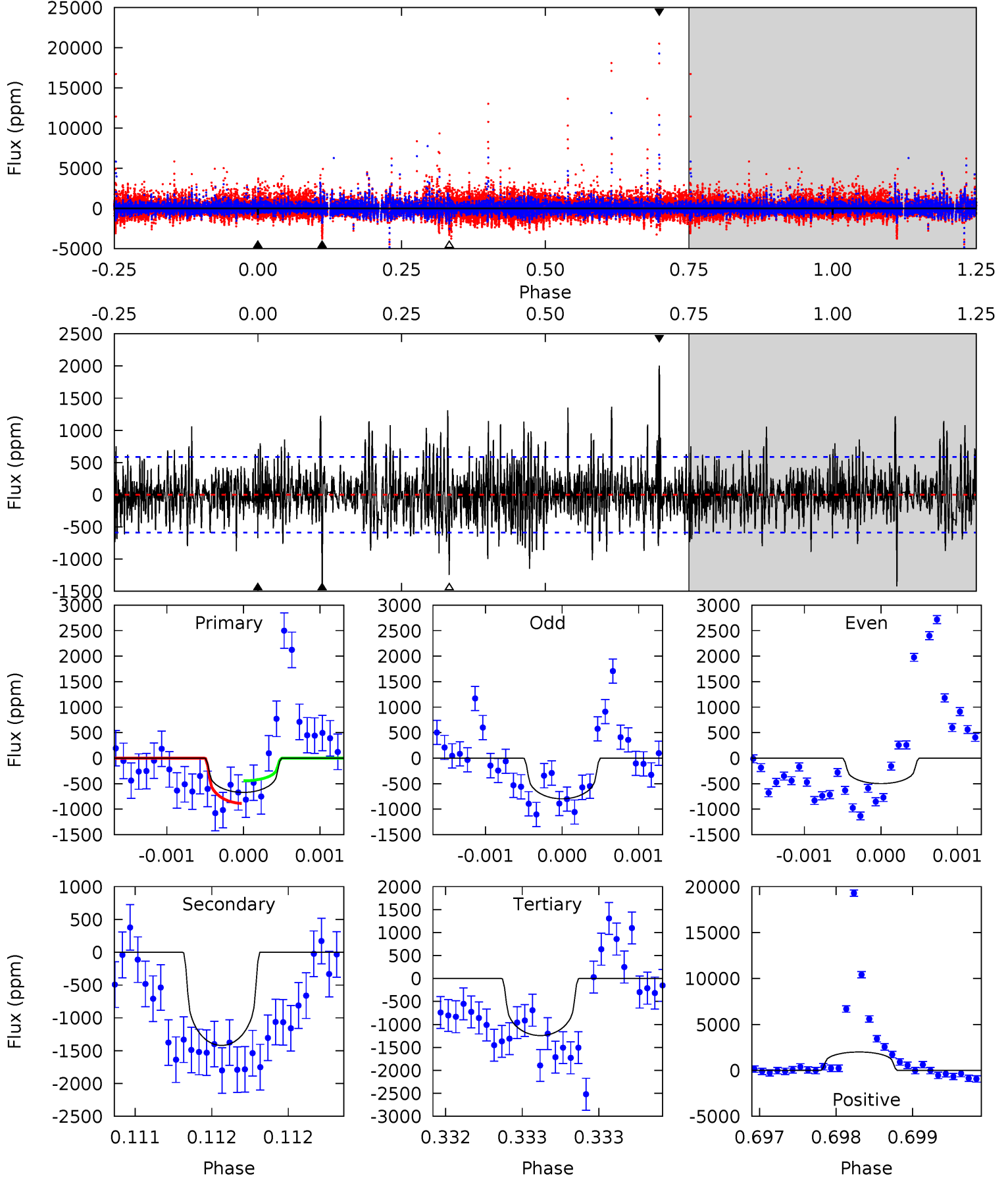
TCE 003763058-06 P=525.115247 Days $T_0=481.338922$ (BKJD)



DV Model-Shift Uniqueness Test

003763058-06, P = 525.115407 Days, E = 481.343576 Days

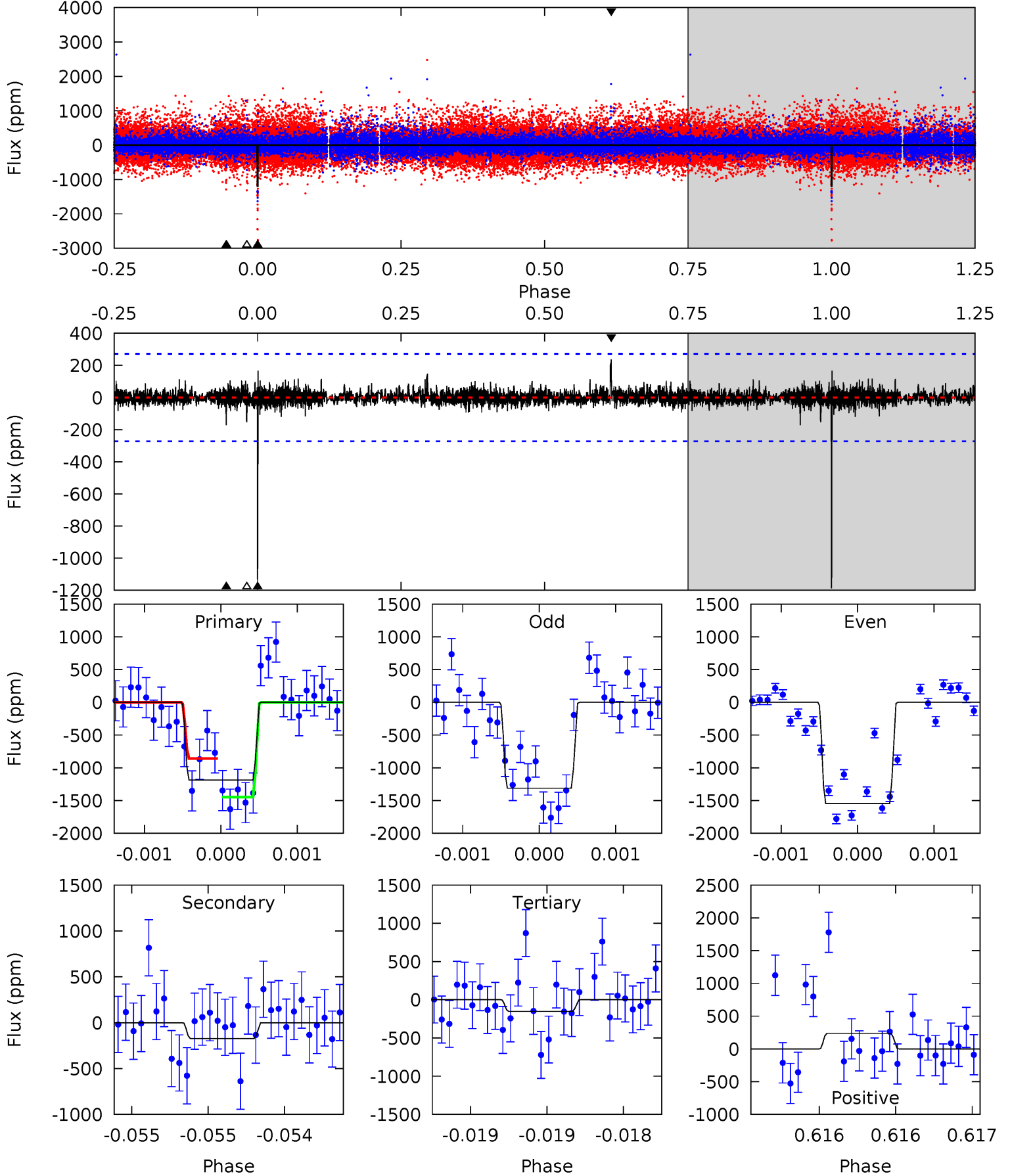
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.29	13.3	11.6	18.8	5.50	3.37	2.91	-5.35	-12.5	1.67	-5.45	0.78	0.73	0.59	2.08



Alt Model-Shift Uniqueness Test

003763058-06, P = 525.115247 Days, E = 481.338922 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.0	3.48	3.08	4.80	5.51	3.38	0.54	20.9	19.2	0.40	-1.32	2.50	1.15	0.17	0



Stellar Parameters For KIC 003763058

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4080^{+141}_{-155}	$4.646^{+0.060}_{-0.020}$	$0.000^{+0.250}_{-0.300}$	$0.613^{+0.038}_{-0.070}$	$0.606^{+0.057}_{-0.063}$	$3.712^{+1.094}_{-0.389}$
	+3%/-4%	+1%/-0%	+inf%/-inf%	+6%/-11%	+9%/-10%	+29%/-10%
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 003763058-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1420 ± 107	$2.18^{+1.15}_{-1.12}$	188^{+8}_{-7}	4296^{+1506}_{-650}	$191760^{+659738}_{-110921}$
Alt.	-172 ± 49	$2.65^{+1.14}_{-1.12}$	188^{+8}_{-8}	2878^{+513}_{-318}	15675^{+31531}_{-8882}

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

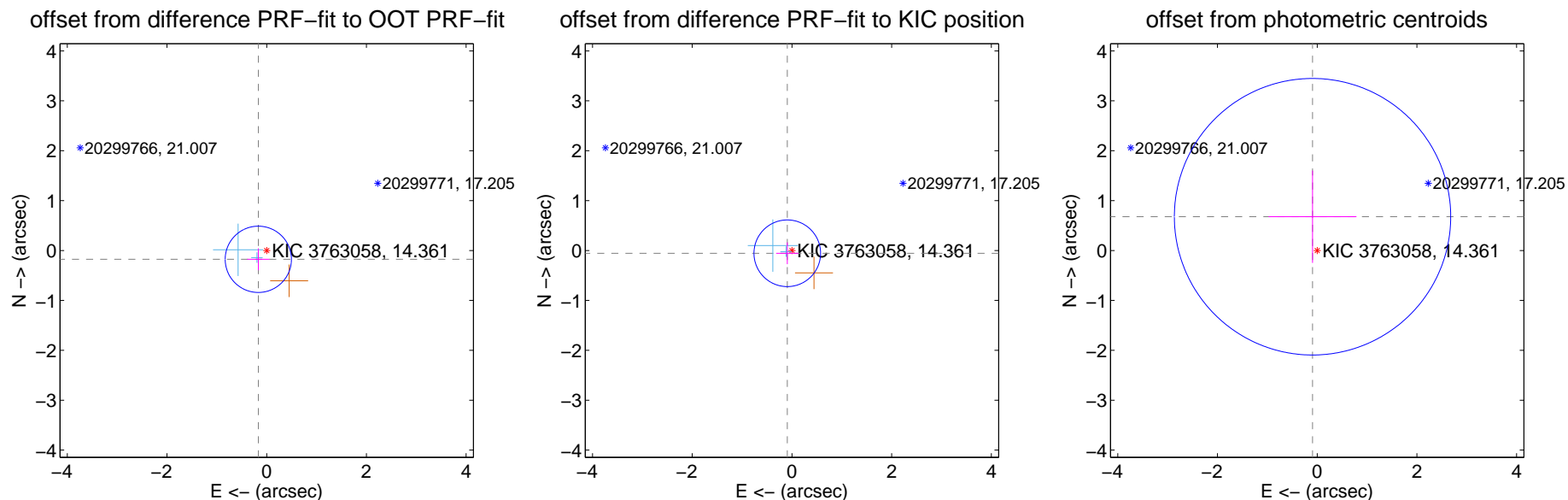
DV Centroid Data

Supplemental centroid analysis for 003763058-06. Kepler magnitude: 14.36. Transit SNR 6.31

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.244 ± 0.221	1.10	0.168 ± 0.224	-0.176 ± 0.219
PRF-fit source offset from KIC position	0.109 ± 0.223	0.49	0.094 ± 0.224	-0.055 ± 0.219
photometric centroid source offset	0.68 ± 0.92	0.74	0.09 ± 0.88	0.68 ± 0.92

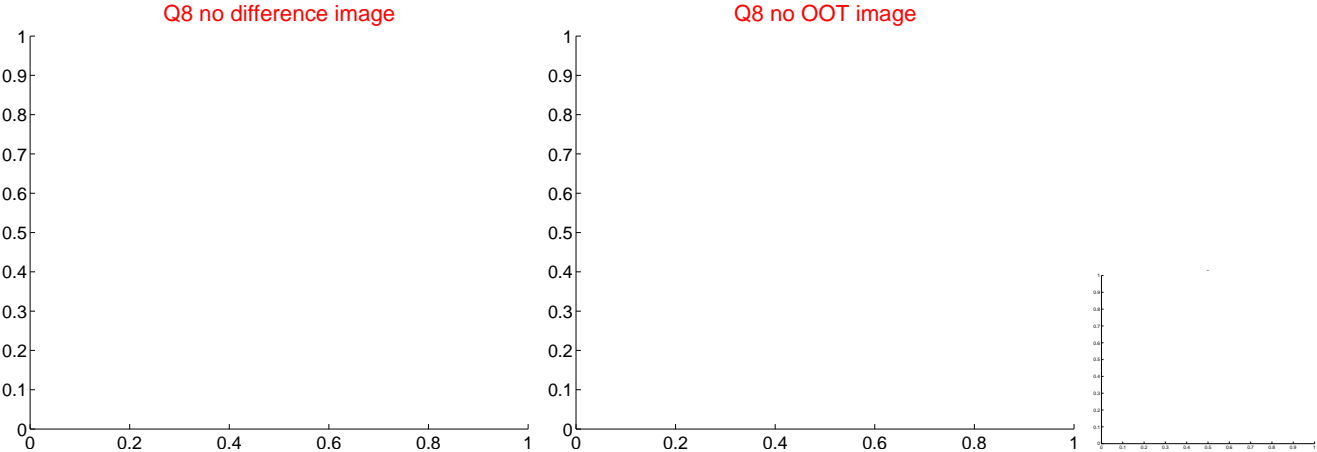
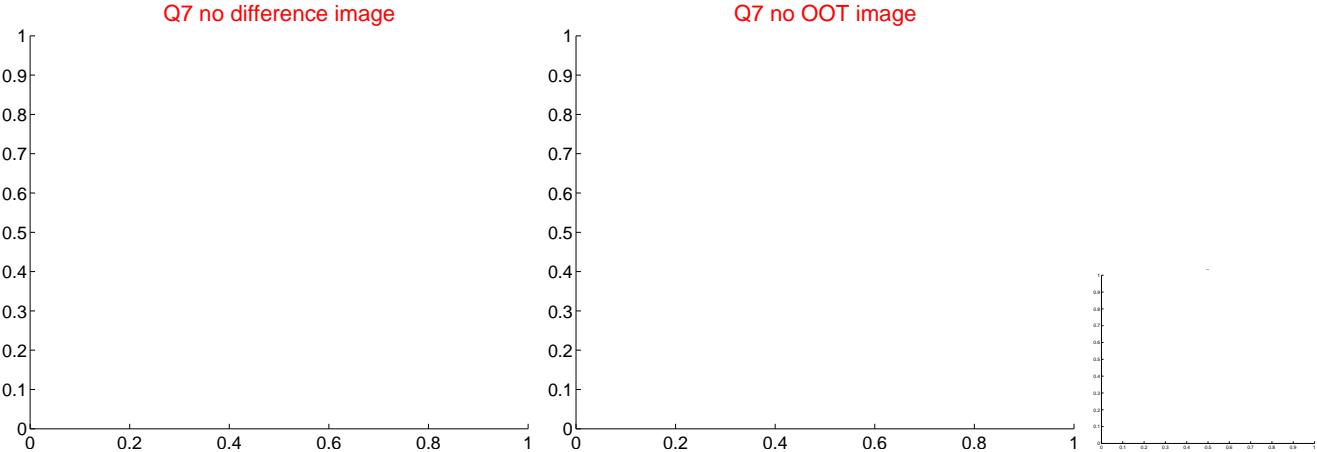
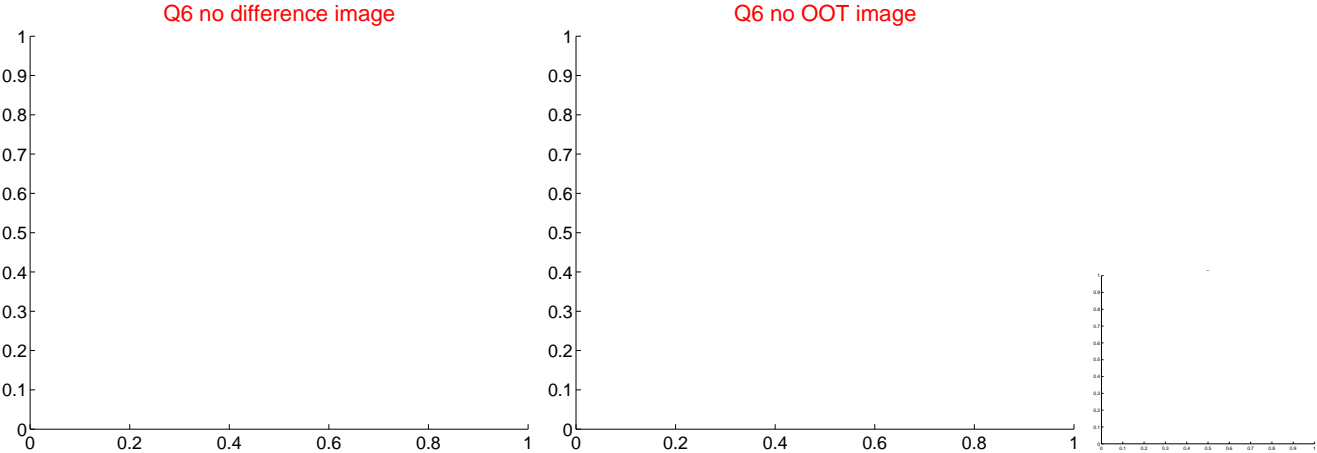
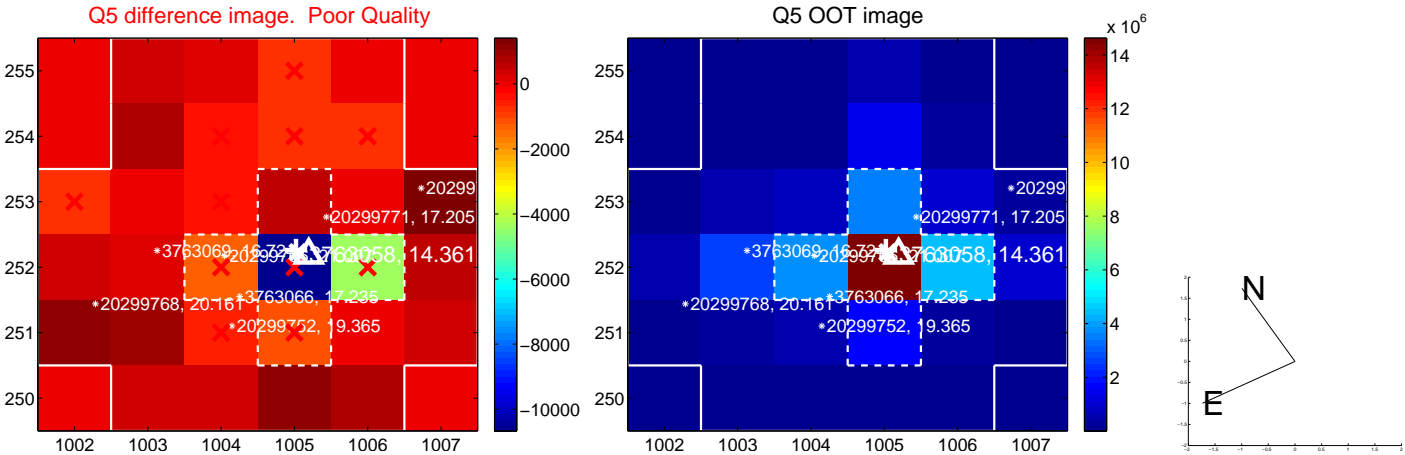


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

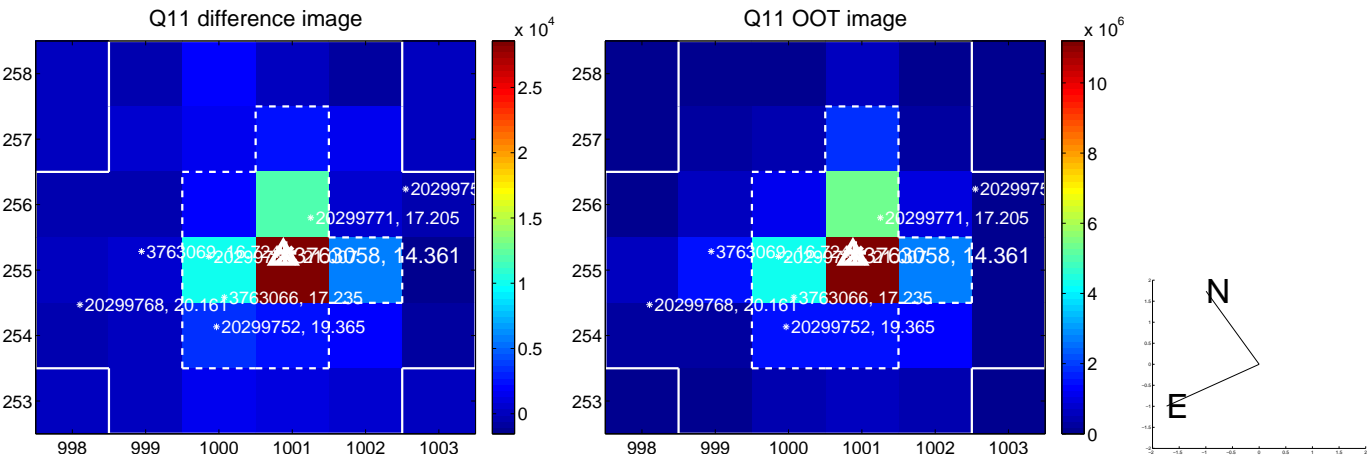
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



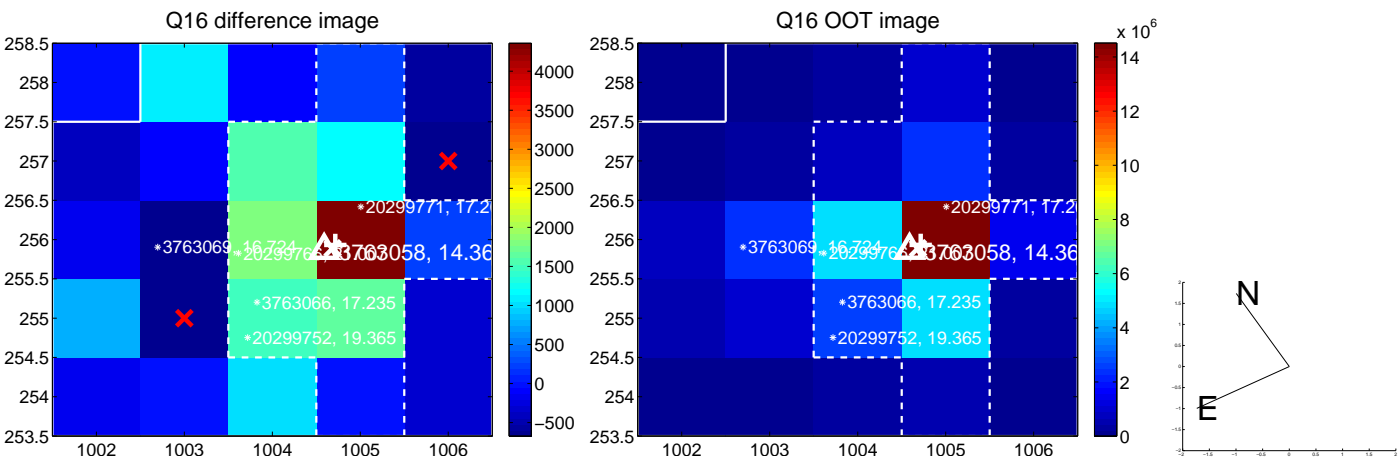
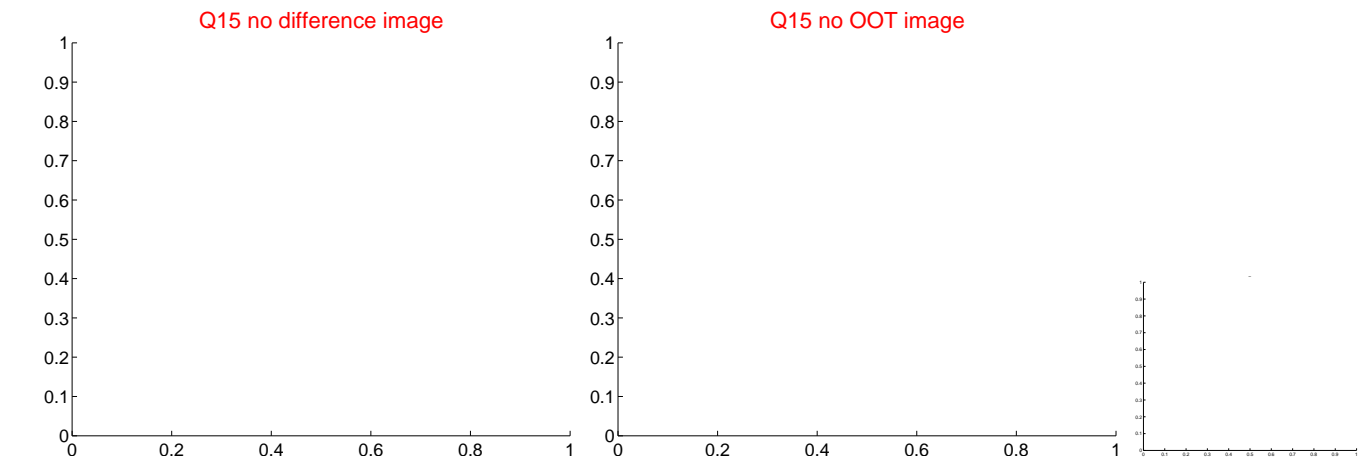
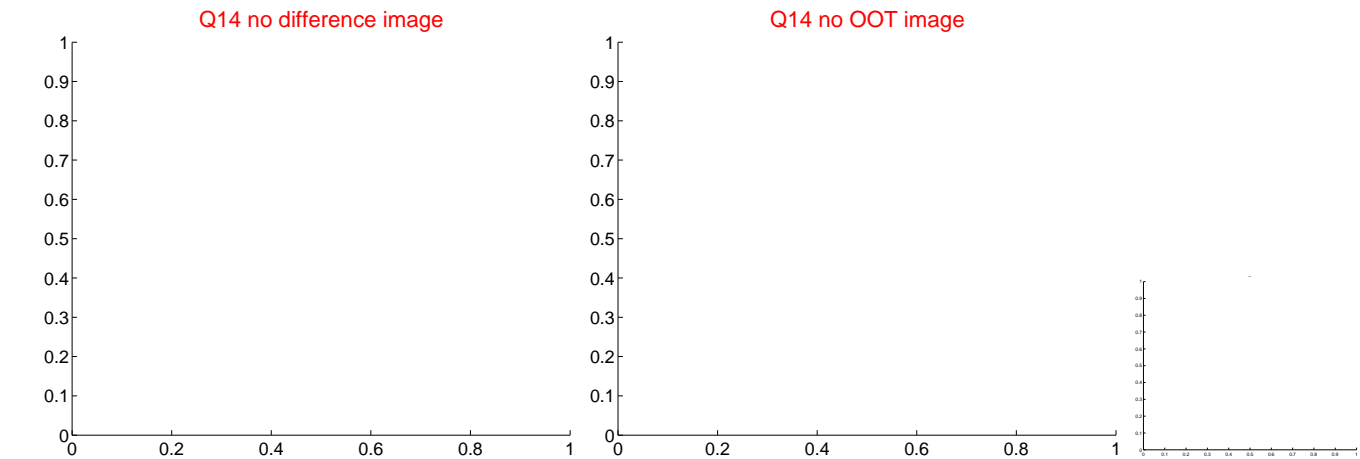
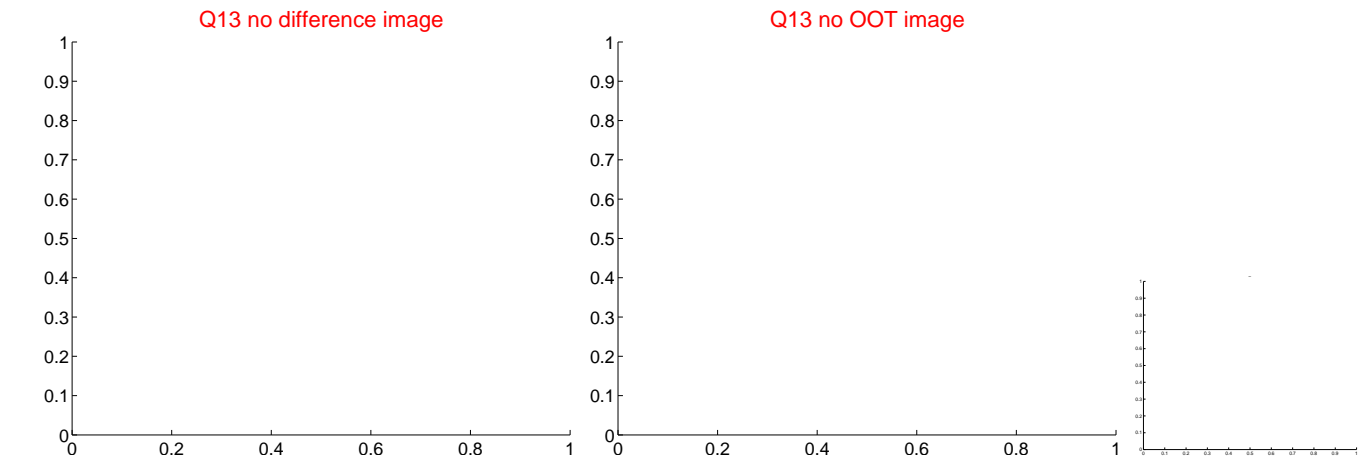
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



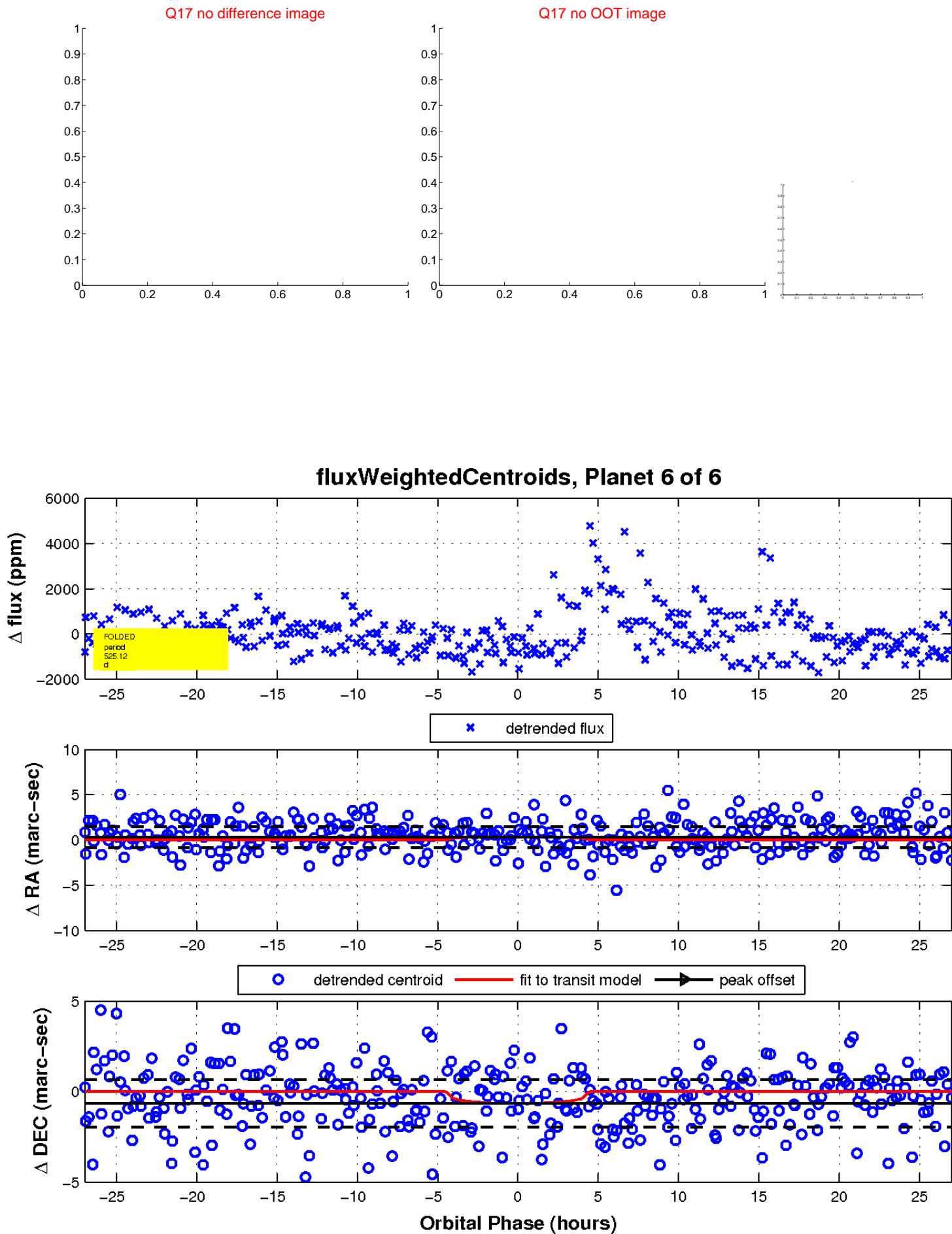
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

