

KIC 007661222

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})
007661222-01	OBS	No	359.685145	247.525936	1032.9	15.000	11.1	-1.0	0.65	5198	2.06	0.38
007661222-02	OBS	No	374.564002	208.959003	2863.0	11.892	11.1	9.4	0.65	5198	3.45	0.36
007661222-03	OBS	No	368.777273	238.103362	6899.0	45.281	10.3	14.9	0.65	5198	9.90	0.37
007661222-04	OBS	No	372.326694	216.897769	6571.1	69.139	8.3	11.7	0.65	5198	9.67	0.36
007661222-05	OBS	No	376.728785	147.882192	795.8	24.903	7.8	6.3	0.65	5198	2.36	0.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007661222-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
007661222-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007661222-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
007661222-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
007661222-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_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.

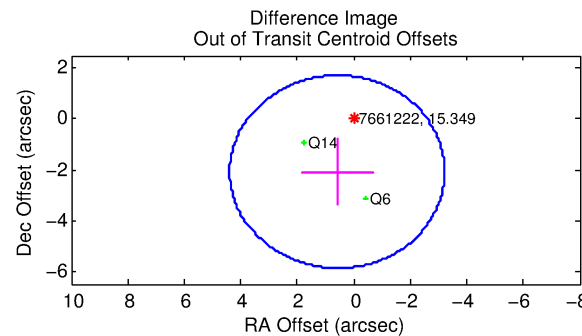
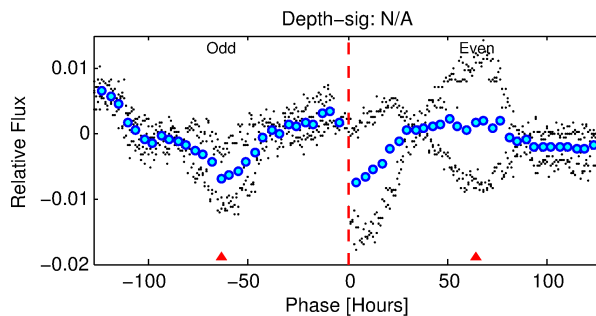
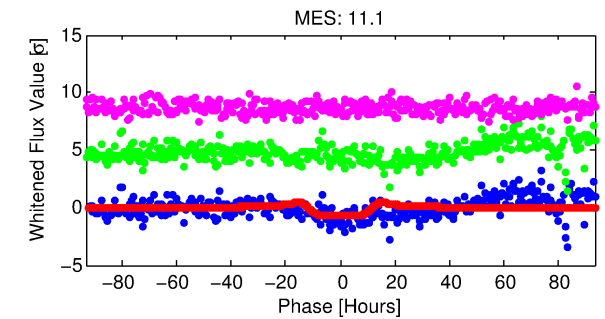
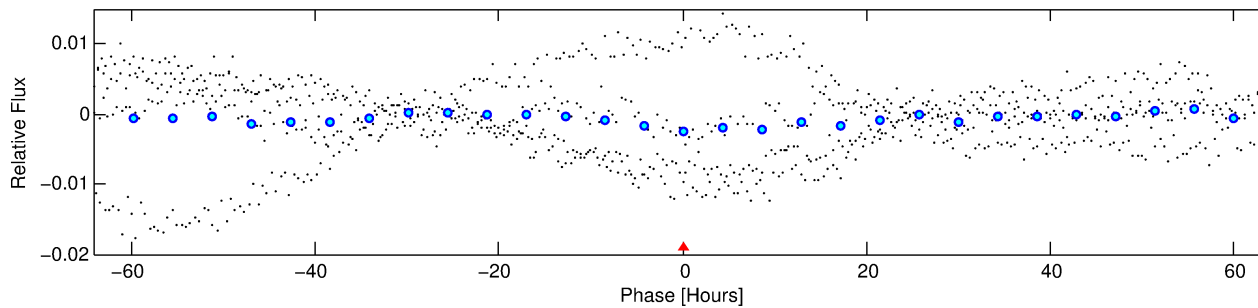
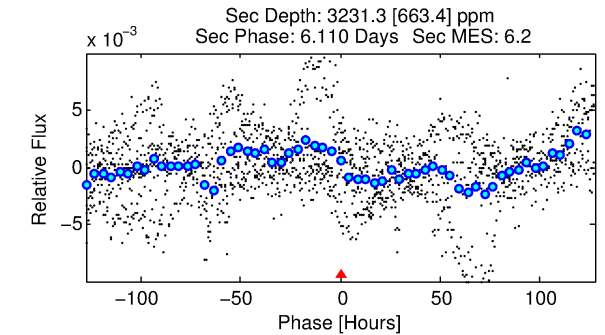
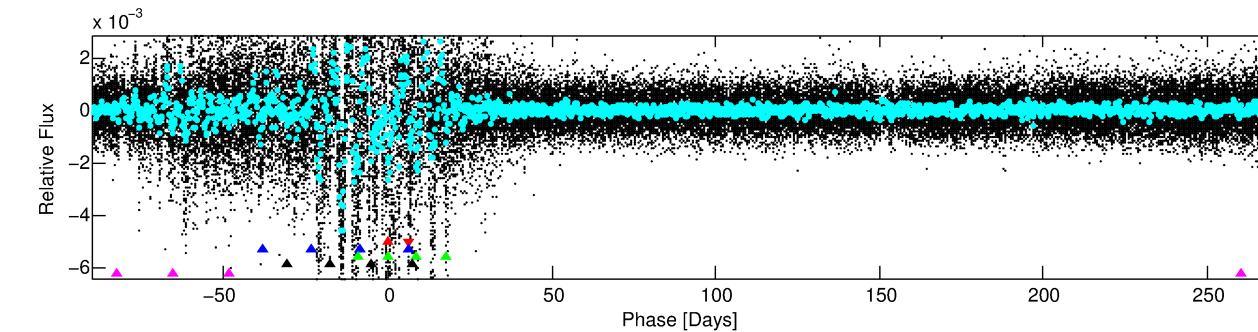
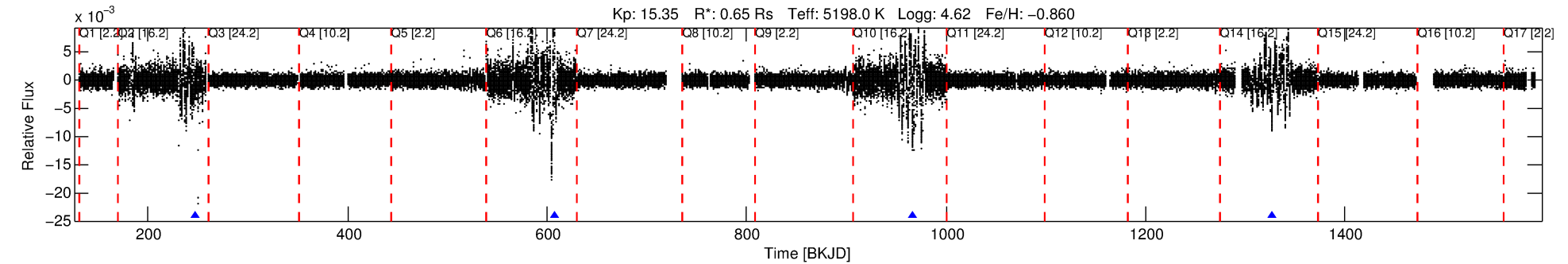
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007661222-01

No Significant Match Found

DV One-Page Summary

KIC: 7661222 Candidate: 1 of 5 Period: 359.685 d



TPS TCE Results:

Period = 359.68515 d
Epoch = 247.5259 BKJD

DV fit results are unavailable

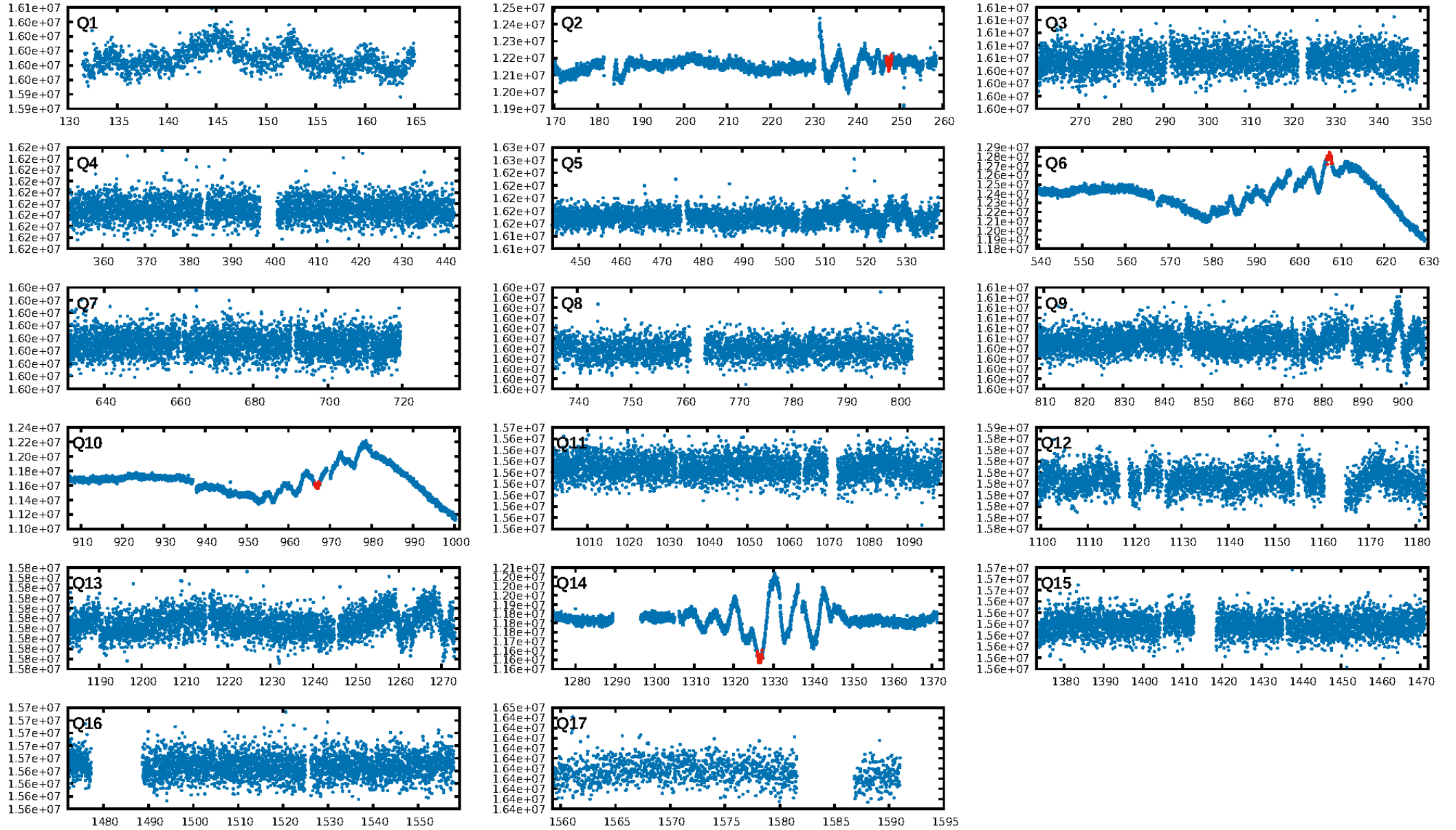
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [4.57σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.40e-15
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.2442
Centroid-sig: 1.3%
Centroid-so: 4.427 arcsec [2.11σ]
OotOffset-rm: 2.161 arcsec [1.71σ]
KicOffset-rm: 1.585 arcsec [1.12σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.50 [1/2]

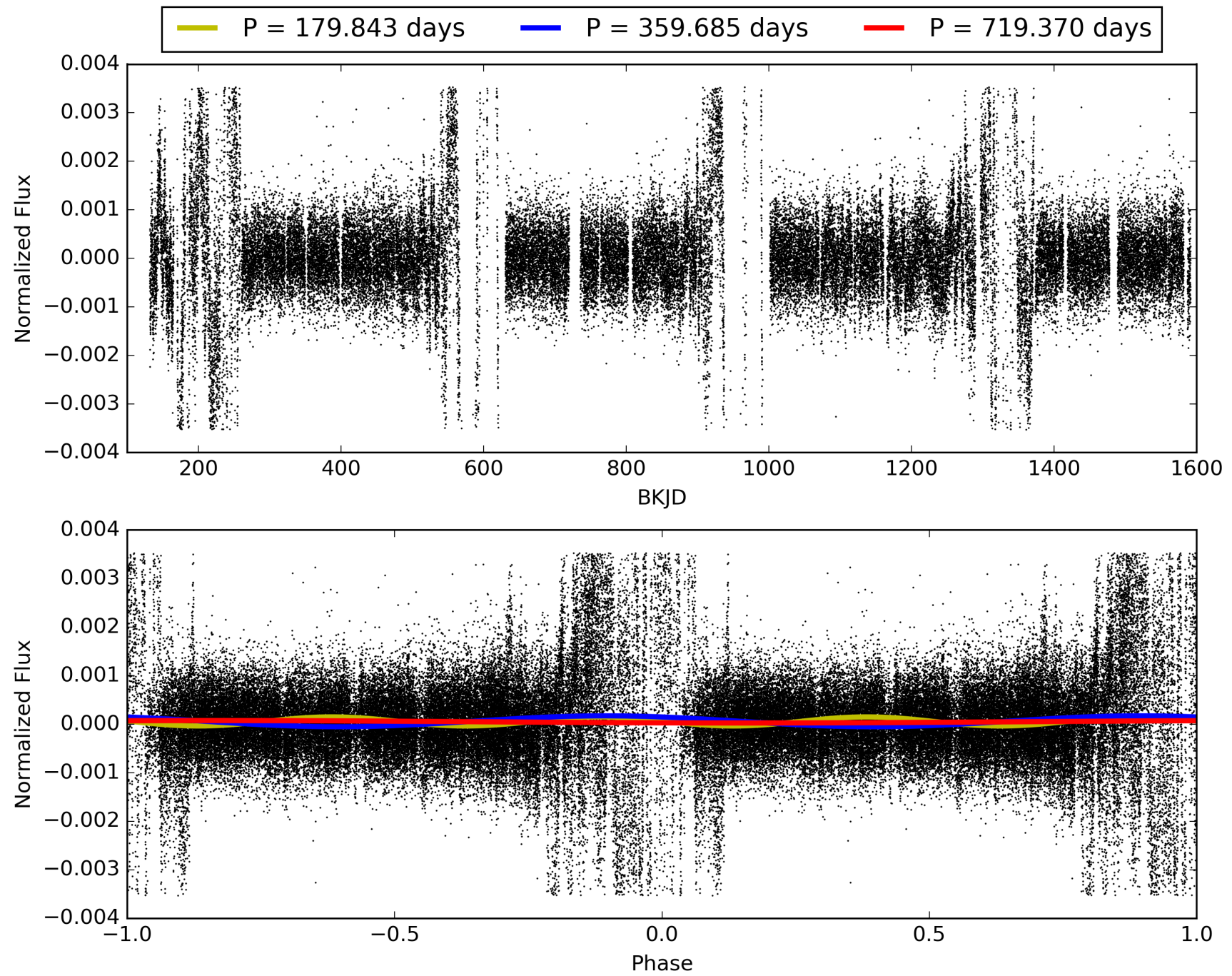
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 21:24:01 Z

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

TCE 007661222-01, PDC Light Curves

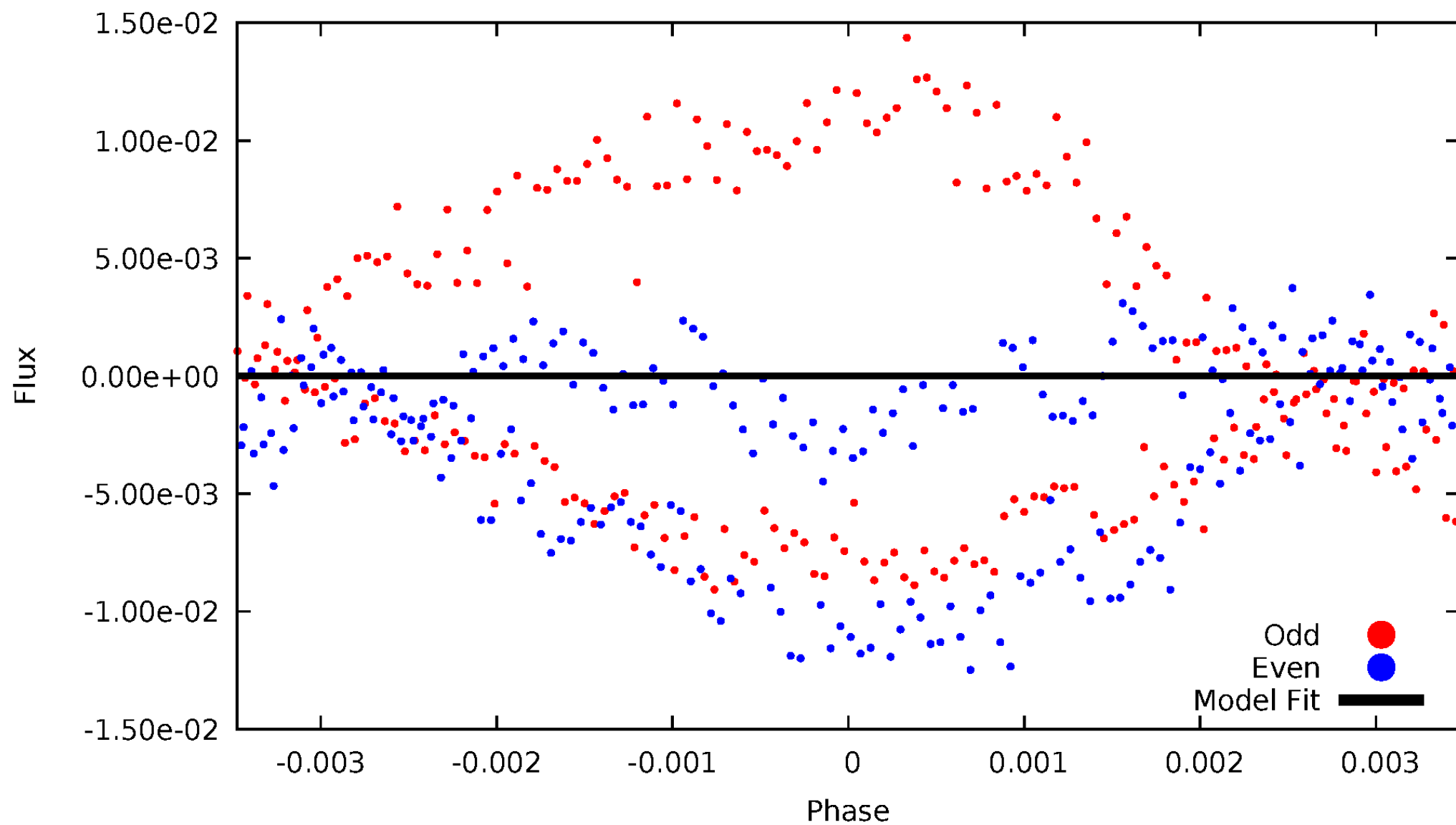


TCE 007661222-01



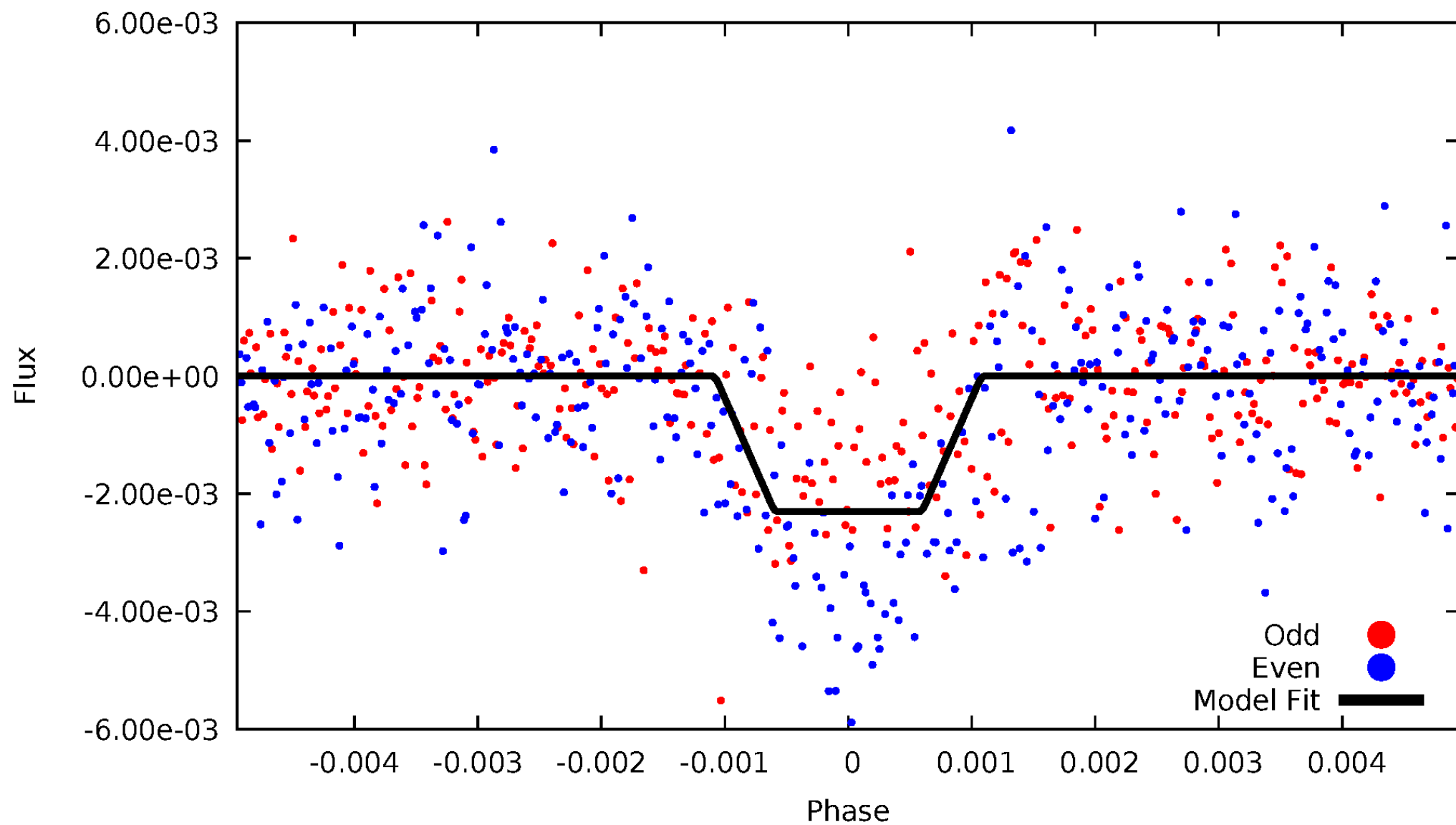
DV Odd/Even

TCE 007661222-01

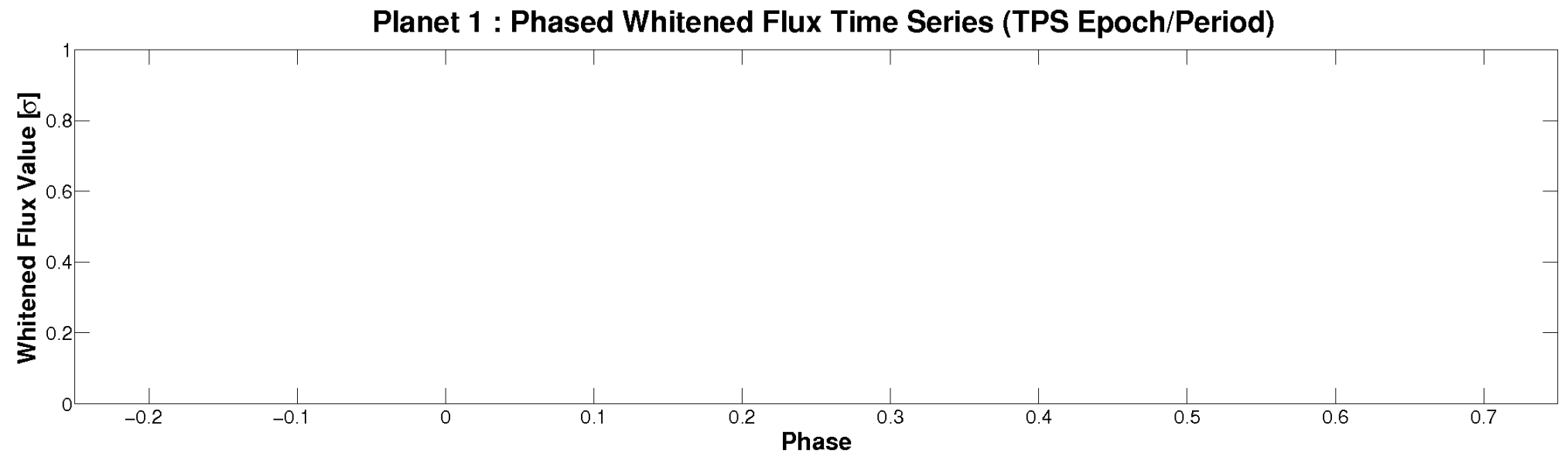
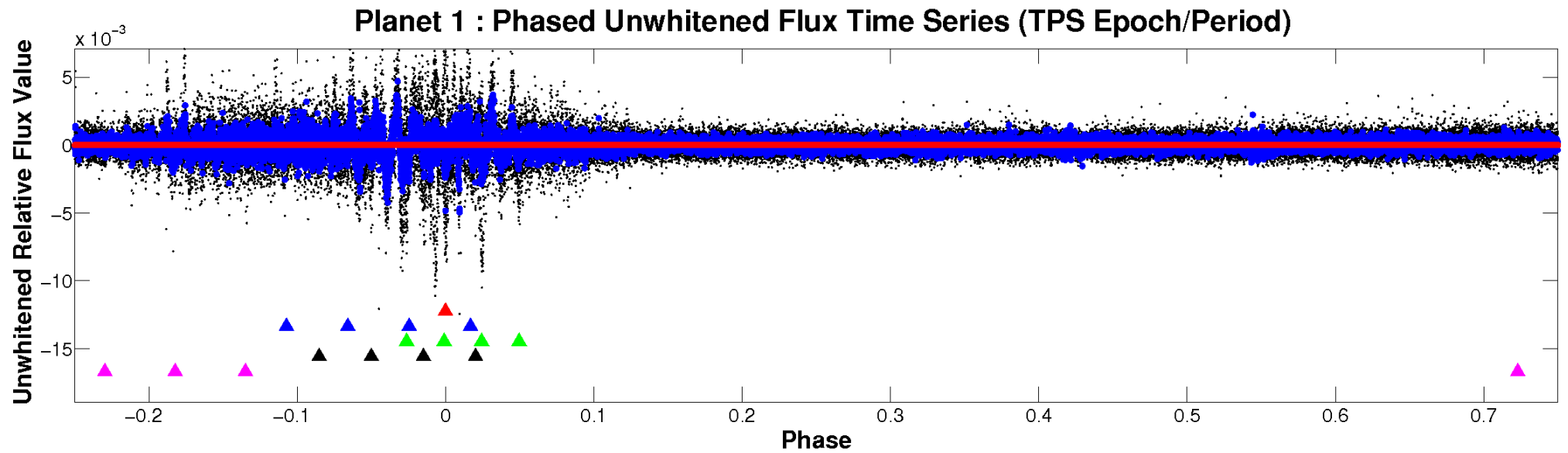


ALT Odd/Even

TCE 007661222-01

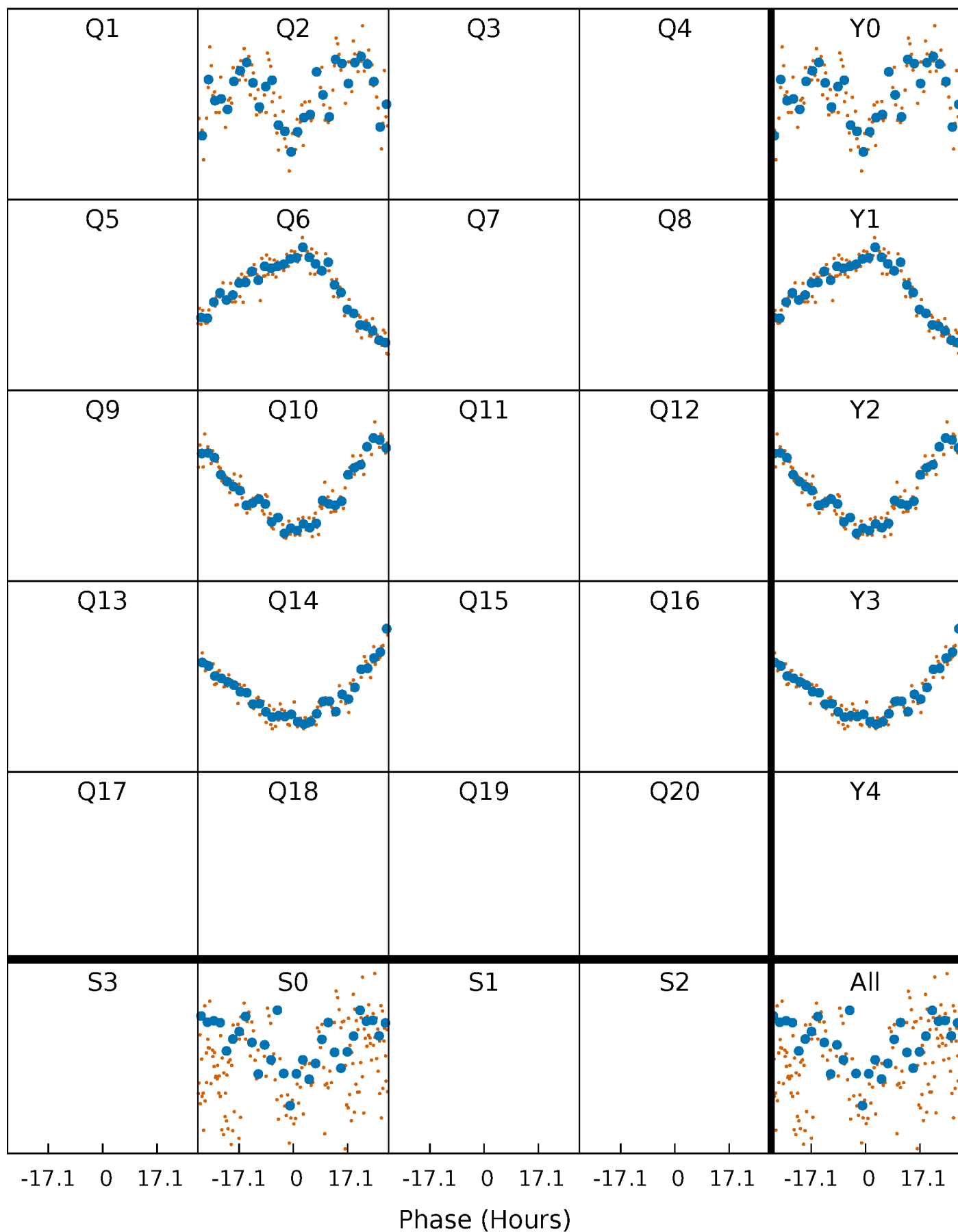


Non-Whitened Vs. Whitened Light Curve



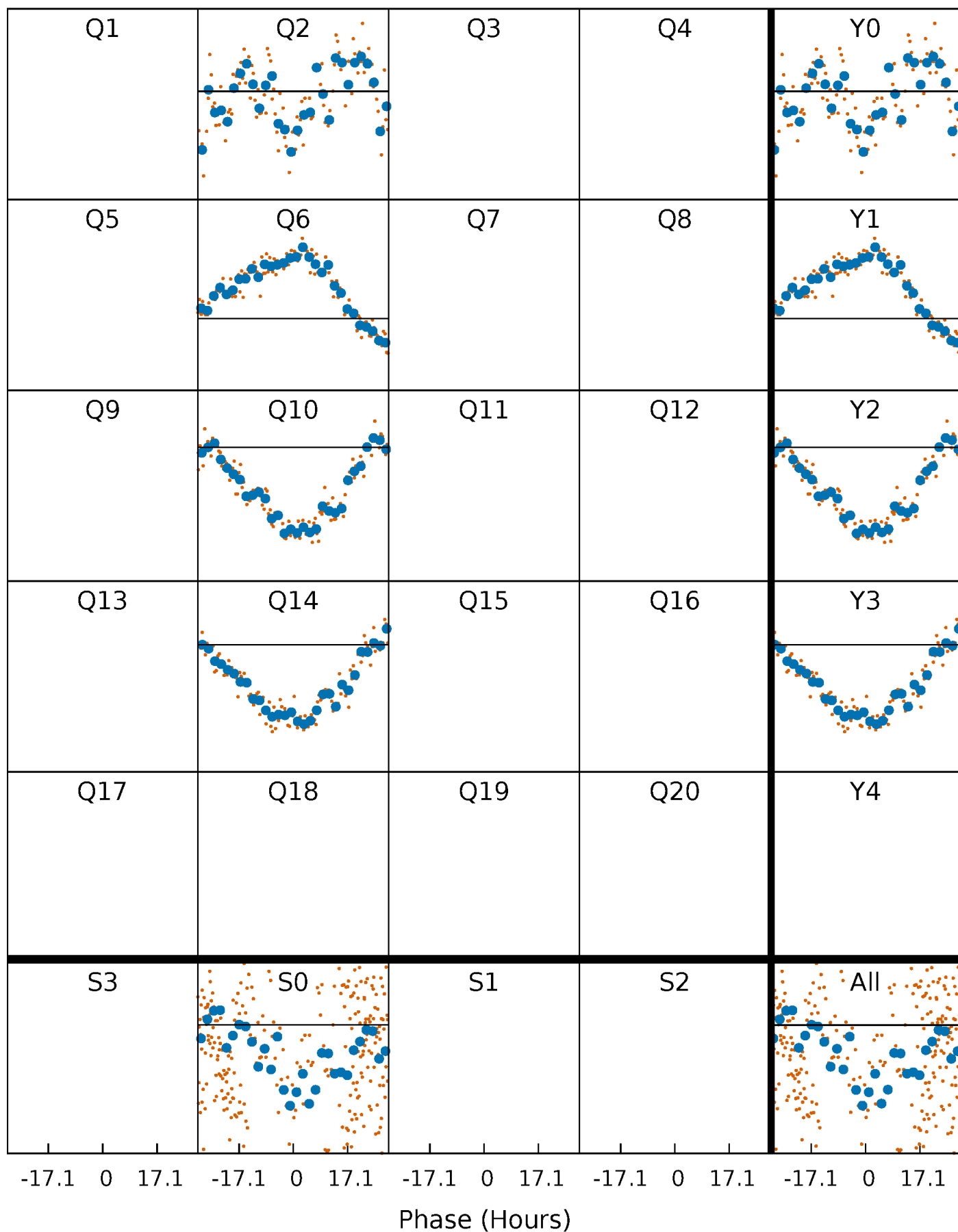
PDC Quarter-Phased Transit Curves

TCE 007661222-01 $P=359.685145$ Days $T_0=247.525936$ (BKJD)



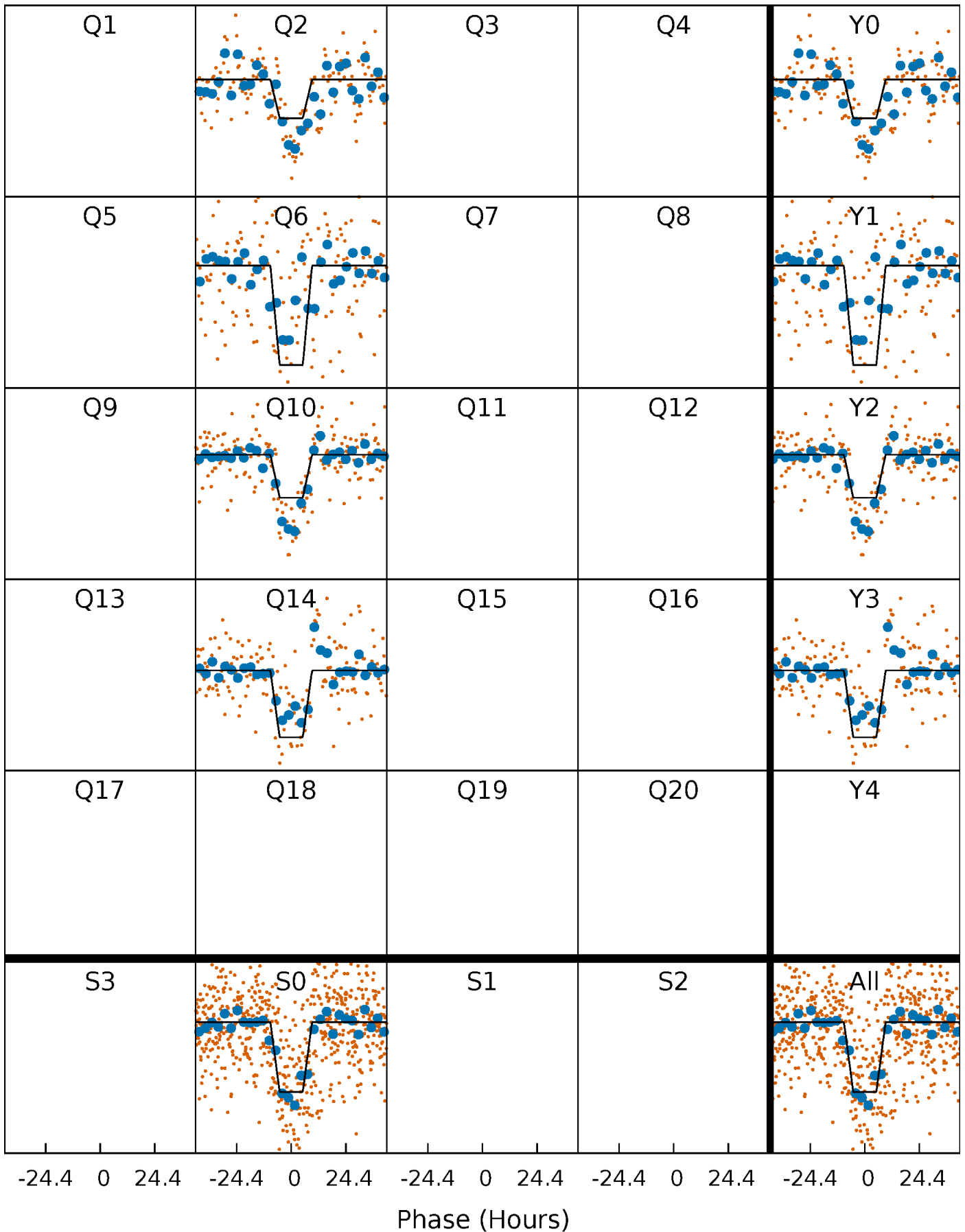
DV Quarter-Phased Transit Curves

TCE 007661222-01 P=359.685145 Days $T_0=247.525936$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

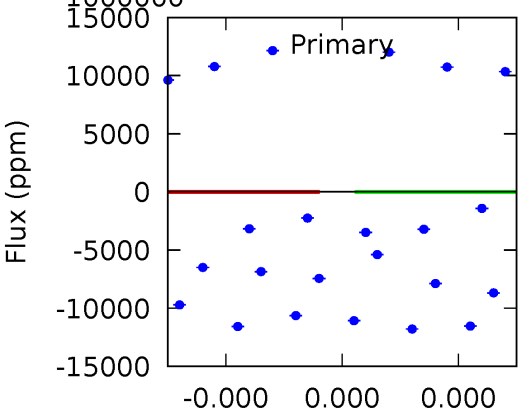
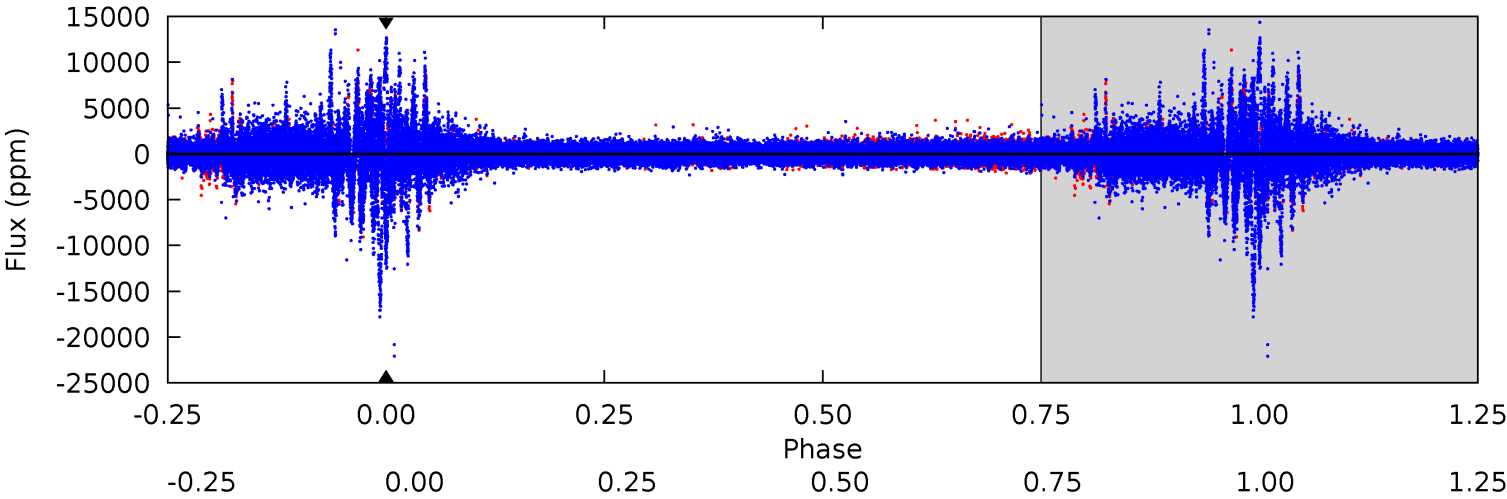
TCE 007661222-01 P=359.685145 Days $T_0=247.465022$ (BKJD)



DV Model-Shift Uniqueness Test

007661222-01, P = 359.685145 Days, E = 247.525936 Days

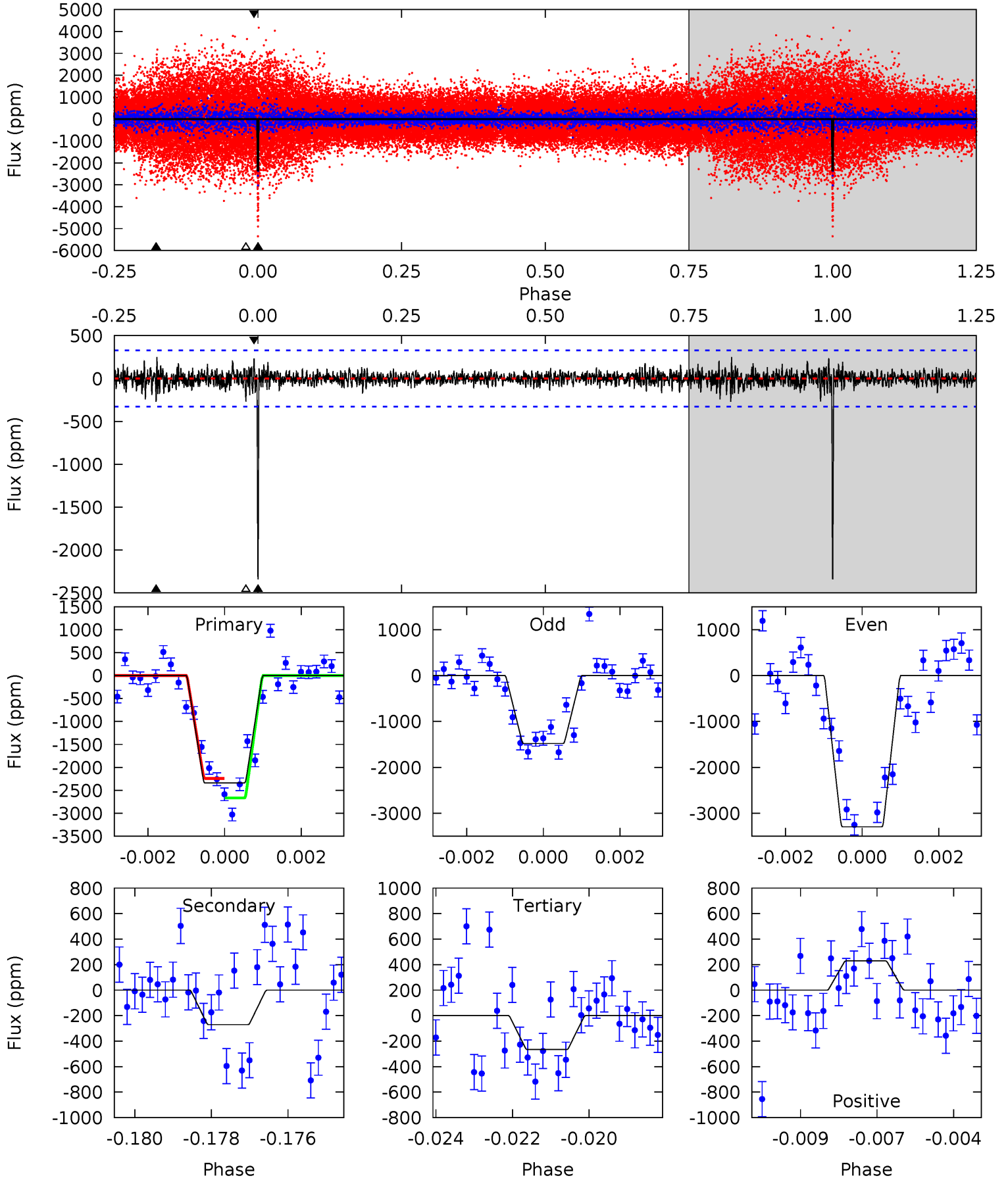
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007661222-01, P = 359.685145 Days, E = 247.465022 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.8	4.37	4.30	3.70	5.31	3.06	0.89	33.5	34.1	0.08	0.67	14.7	0.98	0.10	3.44



Stellar Parameters For KIC 007661222

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5198^{+156}_{-156}	$4.617^{+0.072}_{-0.044}$	$-0.860^{+0.350}_{-0.300}$	$0.648^{+0.057}_{-0.057}$	$0.634^{+0.061}_{-0.028}$	$3.275^{+0.891}_{-0.526}$
	+3%/-3%	+2%/-1%	+41%/-35%	+9%/-9%	+10%/-4%	+27%/-16%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007661222-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$5.55^{+5.53}_{-3.64}$	279^{+10}_{-11}	4211^{+12201}_{-18015}	$27572^{+2611114}_{-1890688}$
Alt.	-271 ± 62	$6.17^{+5.88}_{-4.36}$	278^{+11}_{-10}	2947^{+1334}_{-505}	2999^{+27742}_{-2307}

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

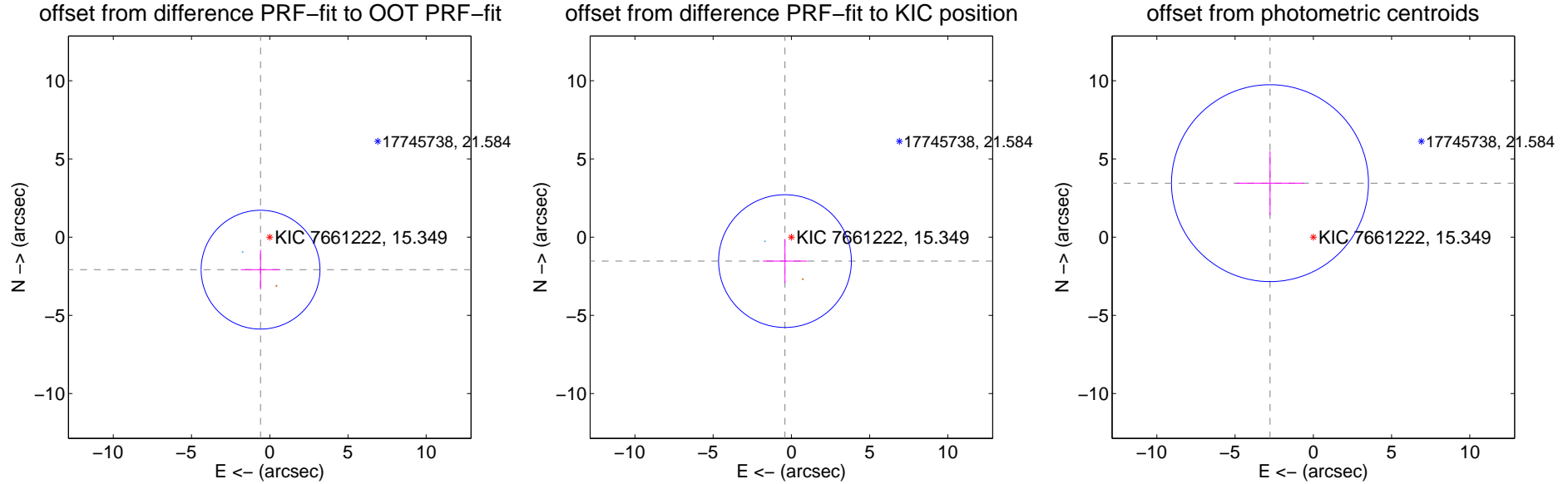
DV Centroid Data

Supplemental centroid analysis for 007661222-01. Kepler magnitude: 15.35. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.68 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.161 ± 1.266	1.71	0.586 ± 1.263	-2.079 ± 1.267
PRF-fit source offset from KIC position	1.585 ± 1.415	1.12	0.409 ± 1.415	-1.531 ± 1.415
photometric centroid source offset	4.43 ± 2.10	2.11	2.77 ± 2.17	3.45 ± 2.05

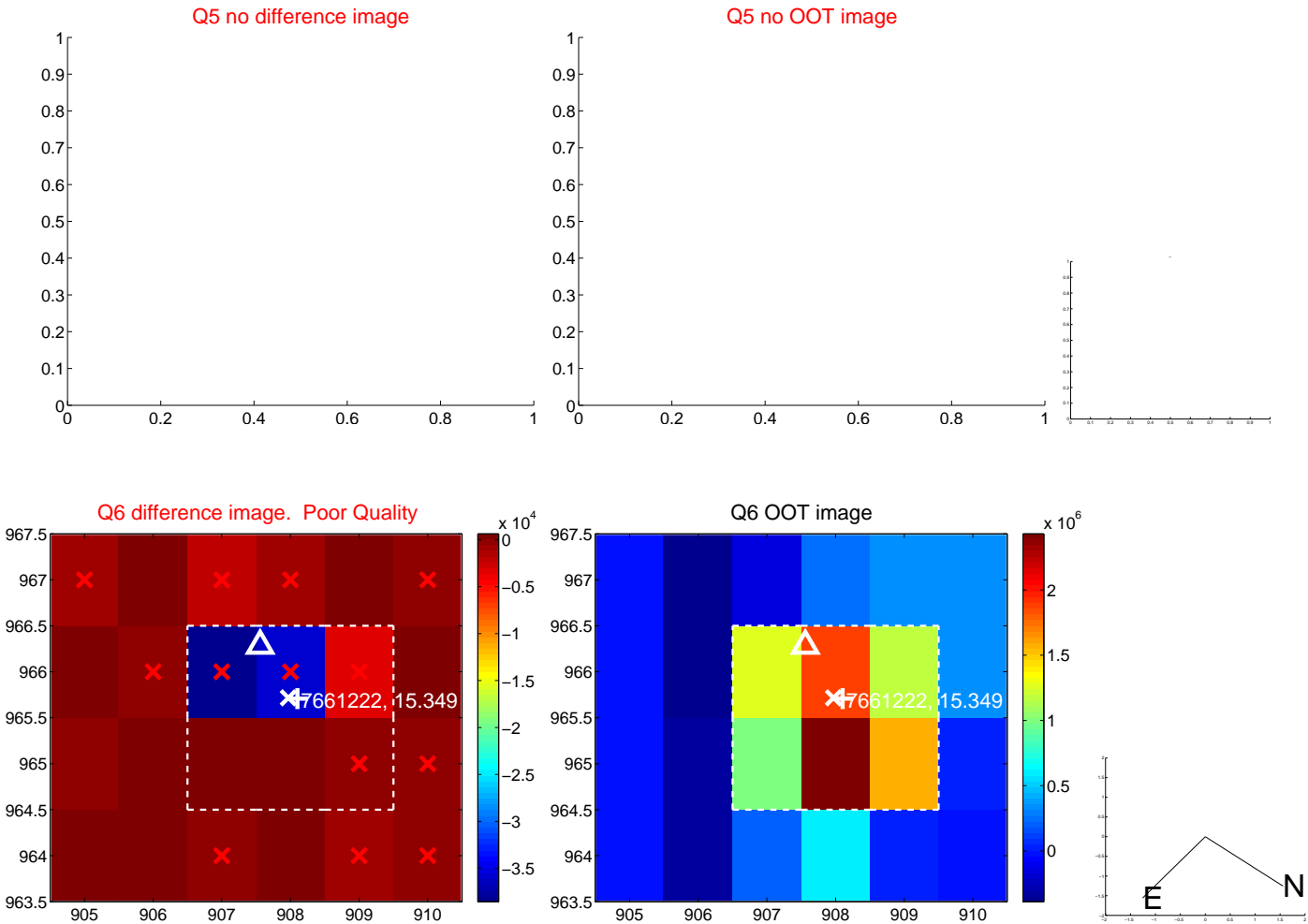


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



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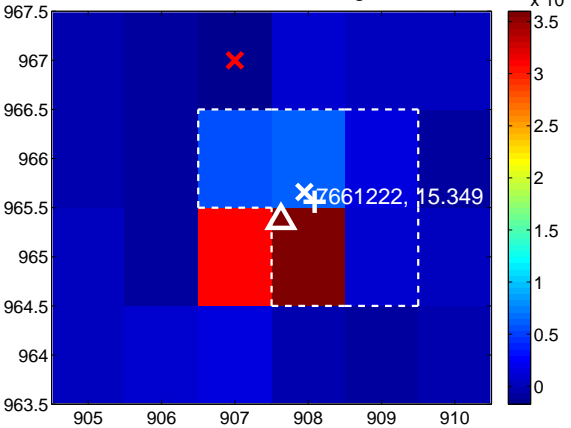
Q13 no difference image



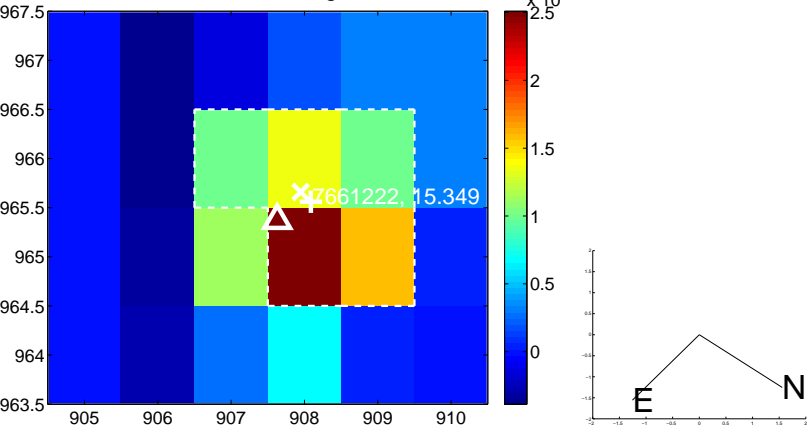
Q13 no OOT image



Q14 difference image



Q14 OOT image



Q15 no difference image



Q15 no OOT image



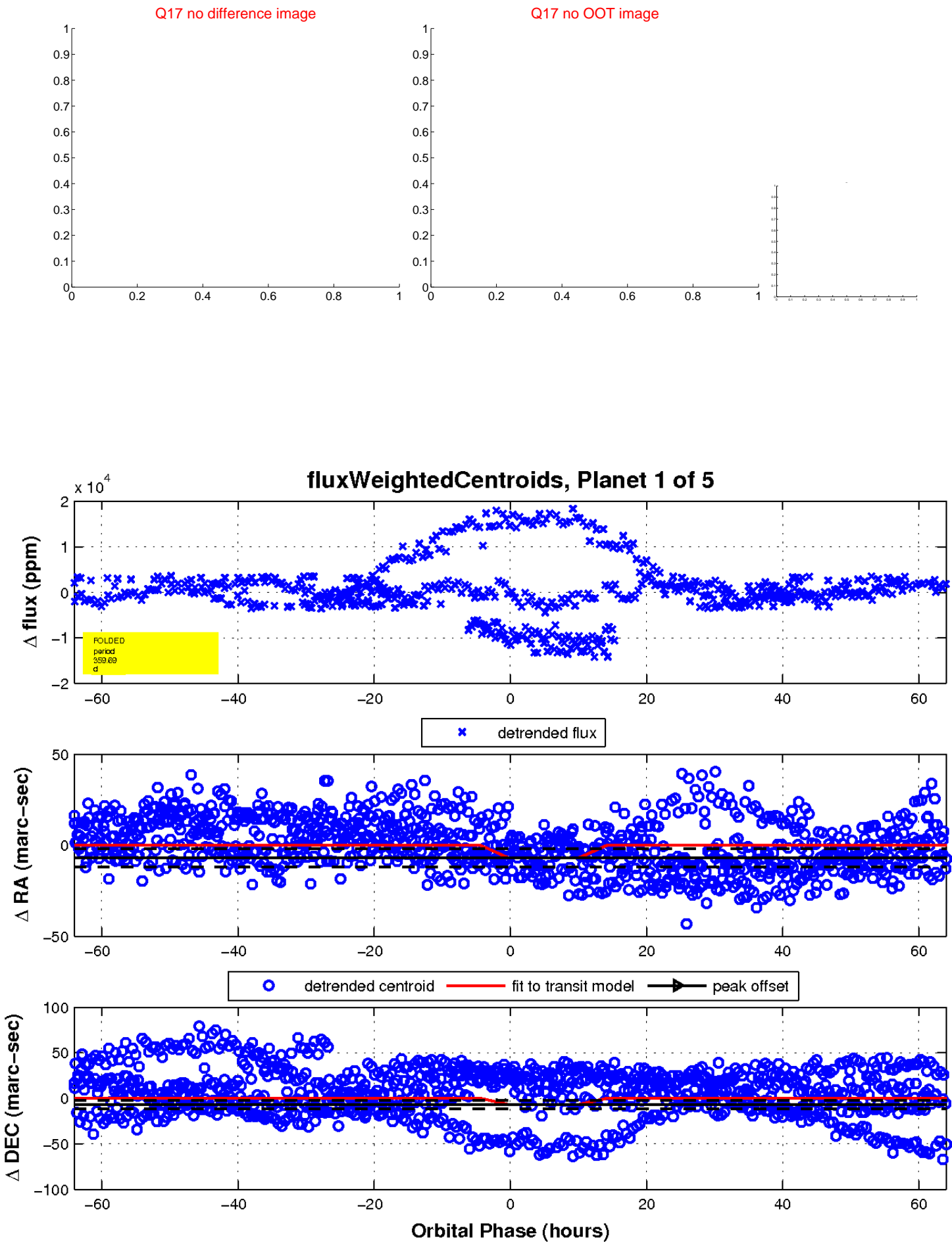
Q16 no difference image



Q16 no OOT image

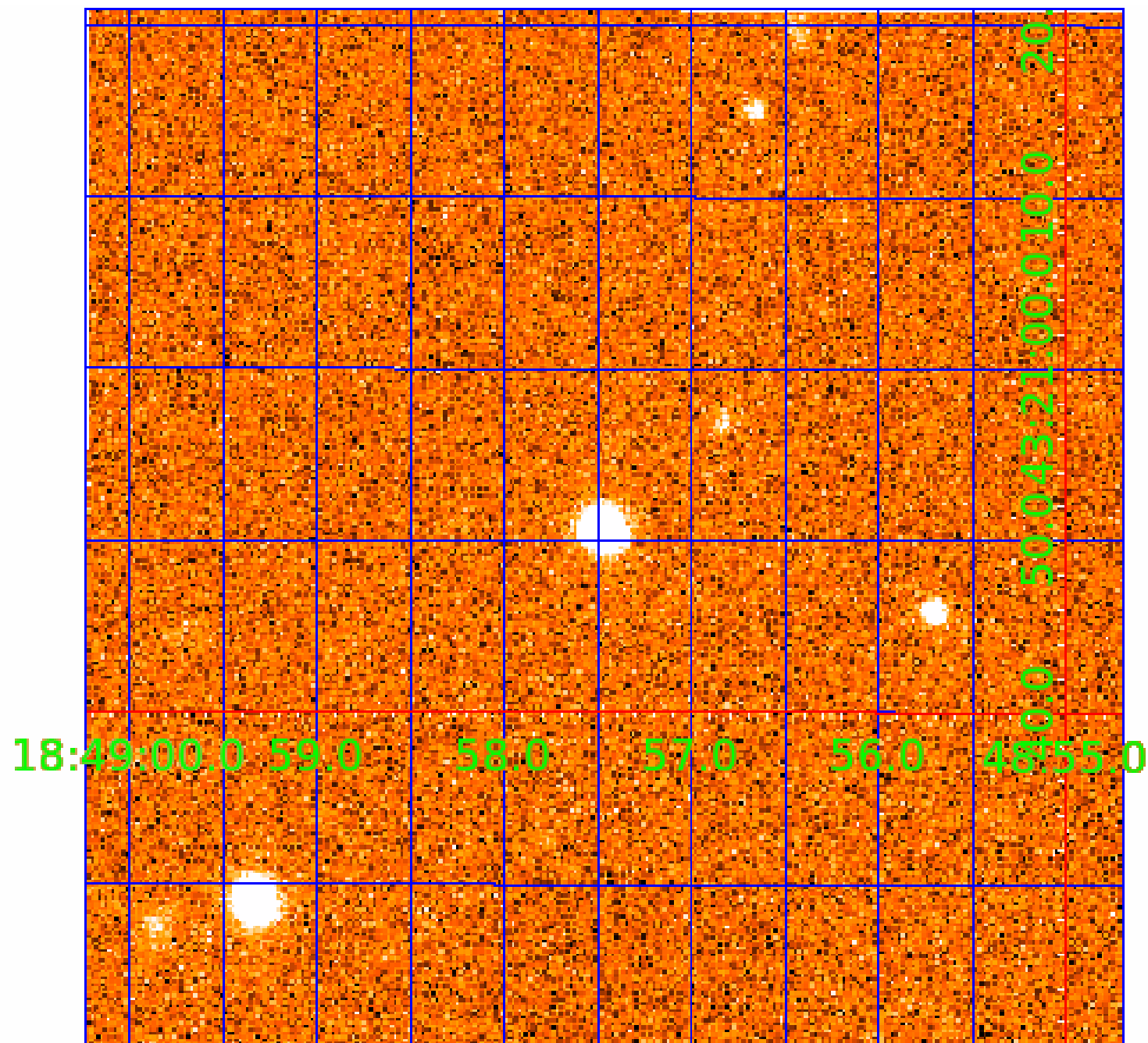


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007661222

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})
007661222-01	OBS	No	359.685145	247.525936	1032.9	15.000	11.1	-1.0	0.65	5198	2.06	0.38
007661222-02	OBS	No	374.564002	208.959003	2863.0	11.892	11.1	9.4	0.65	5198	3.45	0.36
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007661222-04	OBS	No	372.326694	216.897769	6571.1	69.139	8.3	11.7	0.65	5198	9.67	0.36
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007661222-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
007661222-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007661222-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
007661222-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
007661222-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_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.

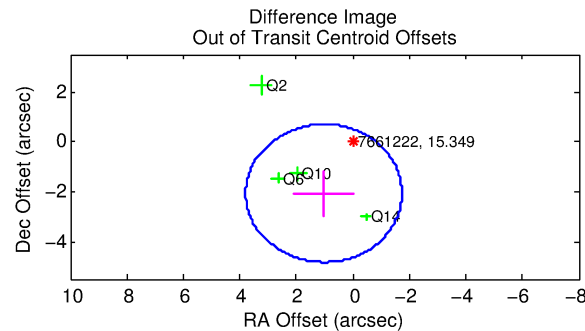
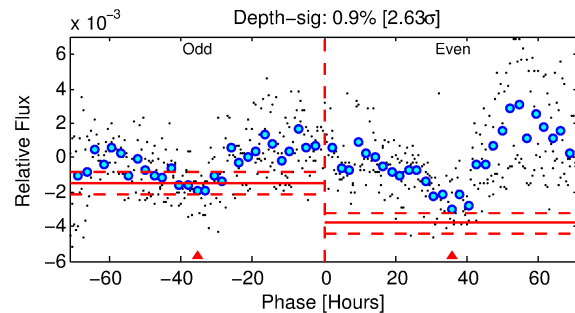
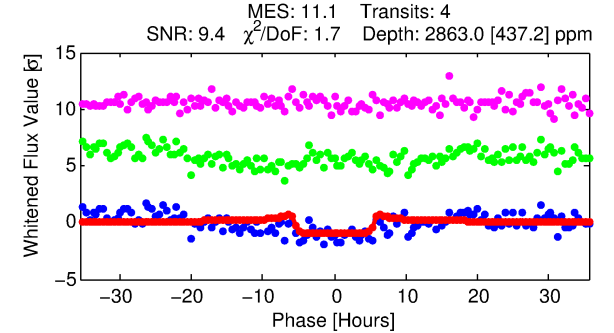
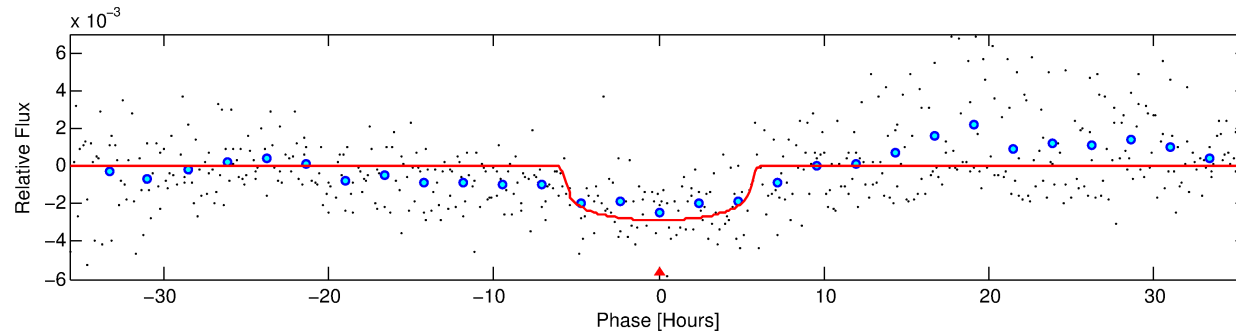
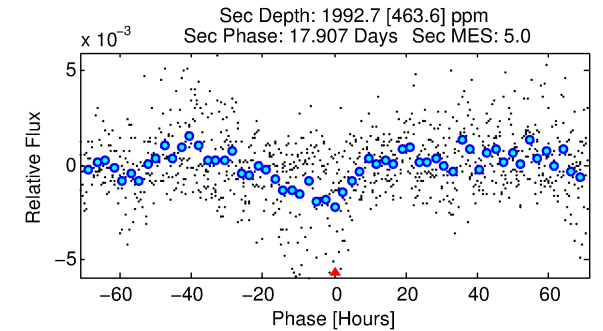
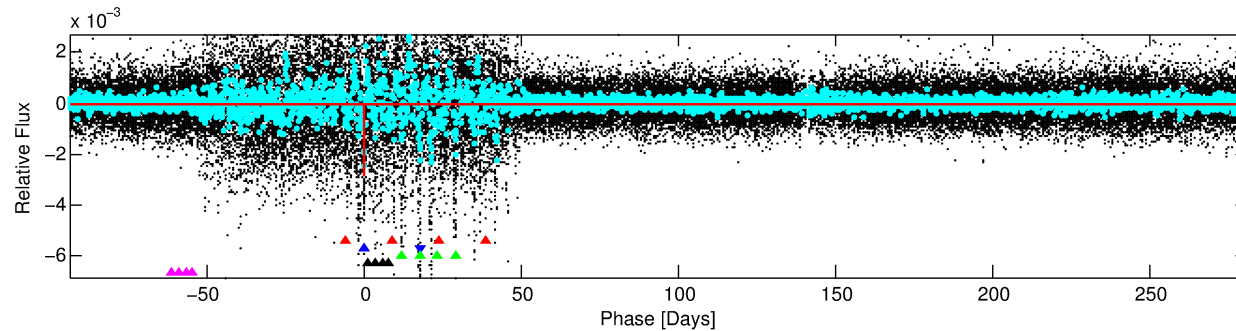
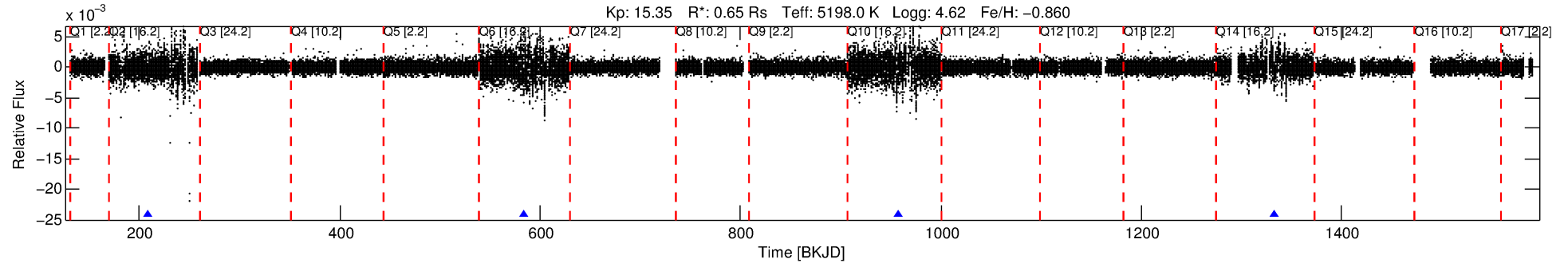
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007661222-02

No Significant Match Found

DV One-Page Summary

KIC: 7661222 Candidate: 2 of 5 Period: 374.564 d



DV Fit Results:

Period = 374.56400 [0.00696] d
Epoch = 208.9590 [0.0149] BKJD
Rp/R* = 0.0487 [0.0164]
a/R* = 244.34 [326.68]
b = 0.26 [4.78]
Seff = 0.36 [0.06]
Teq = 197 [9] K
Rp = 3.45 [1.20] Re
a = 0.8738 [0.0704] AU
Ag = 70506.46 [50952.20] [1.38σ]
Teffp = 4975 [898] K [5.32σ]

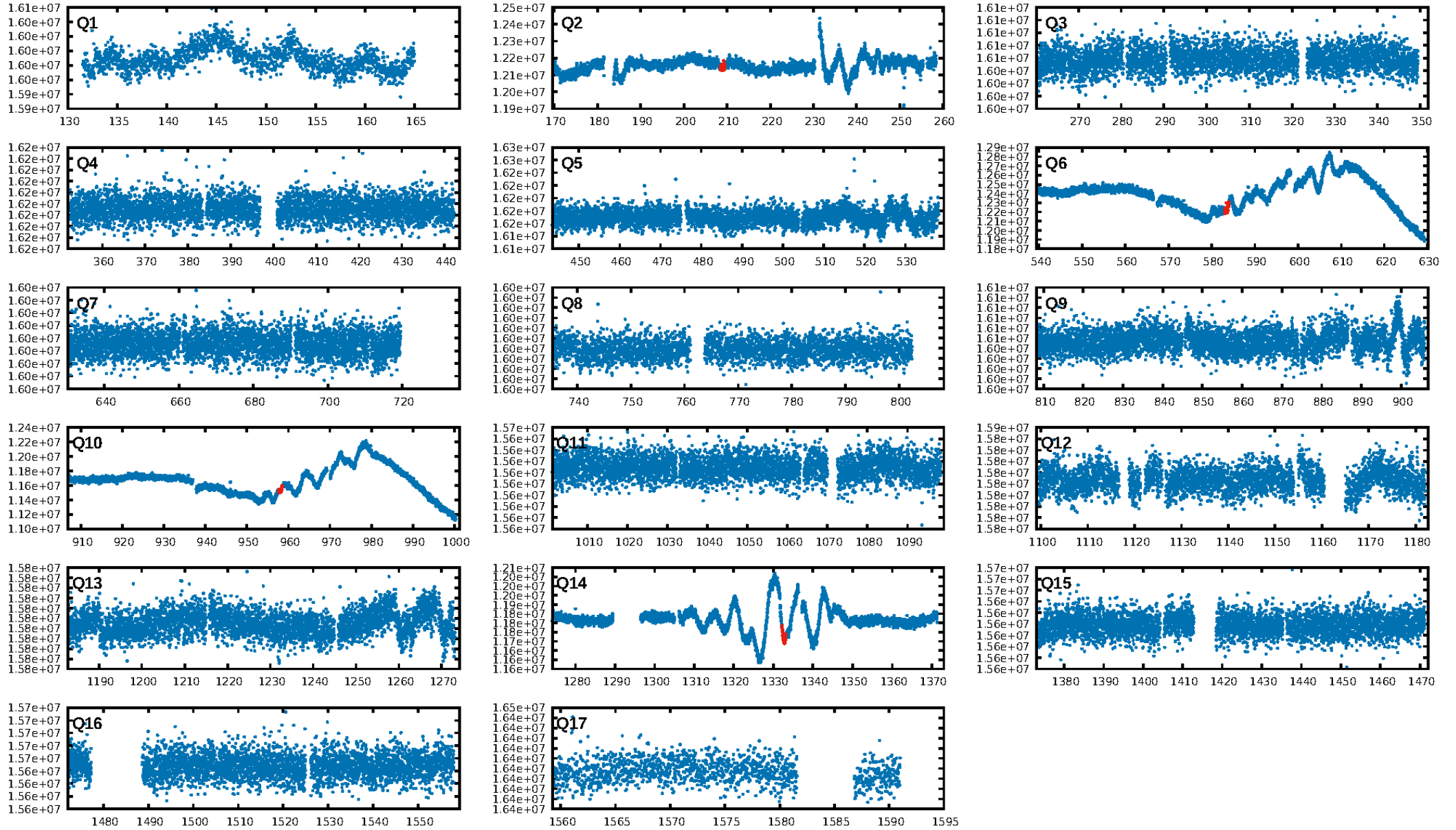
DV Diagnostic Results:

ShortPeriod-sig: 55.6% [0.77σ]
LongPeriod-sig: 94.0% [1.88σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 29.2%
Bootstrap-pfa: 2.41e-20
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.067
Centroid-sig: 13.0%
Centroid-so: 2.197 arcsec [1.40σ]
OotOffset-rm: 2.308 arcsec [2.51σ]
OotOffset-st: 4/0/0/0 [4]
KicOffset-rm: 1.698 arcsec [1.86σ]
KicOffset-st: 4/0/0/0 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 0.75 [3/4]

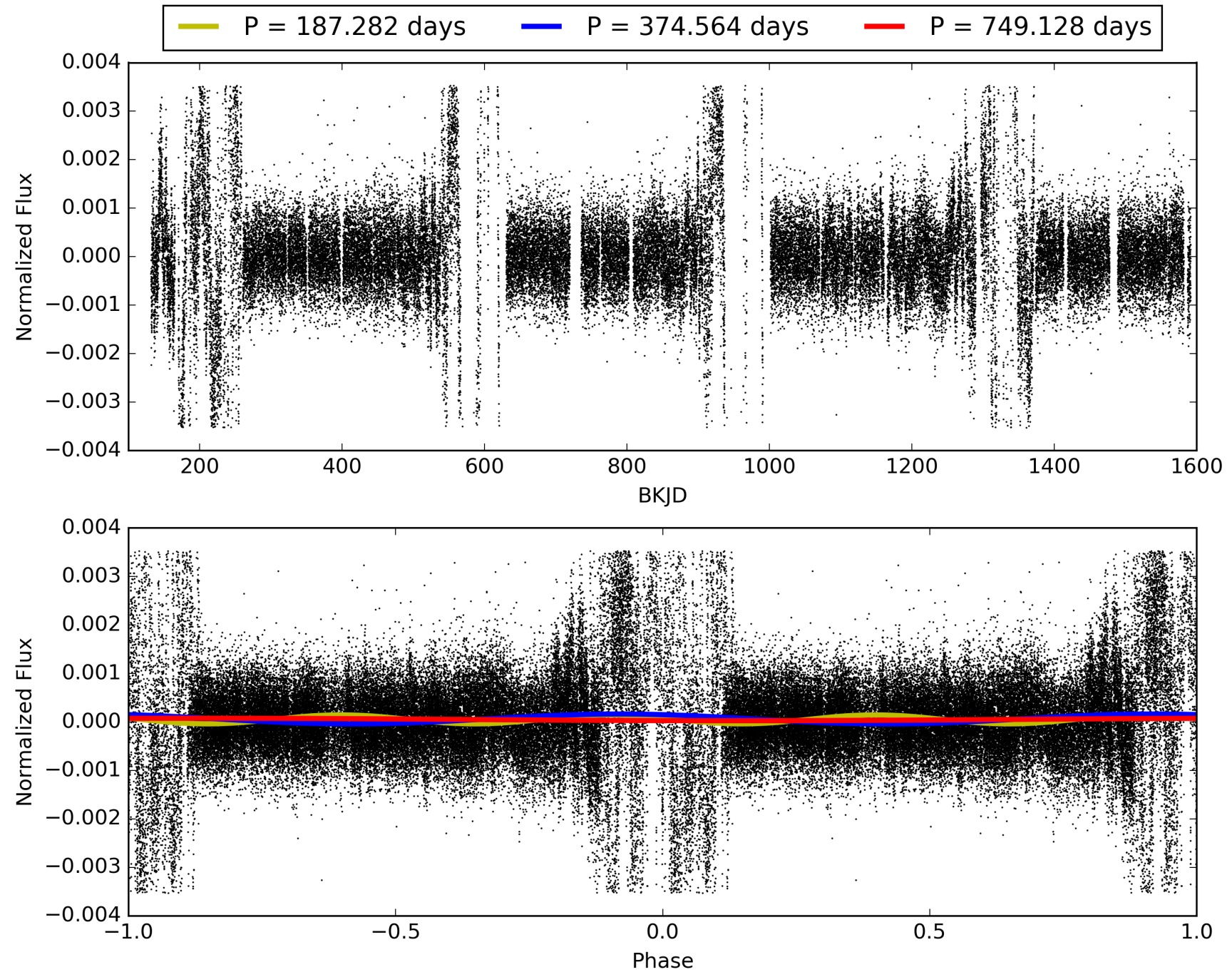
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 21:24:10 Z

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

TCE 007661222-02, PDC Light Curves

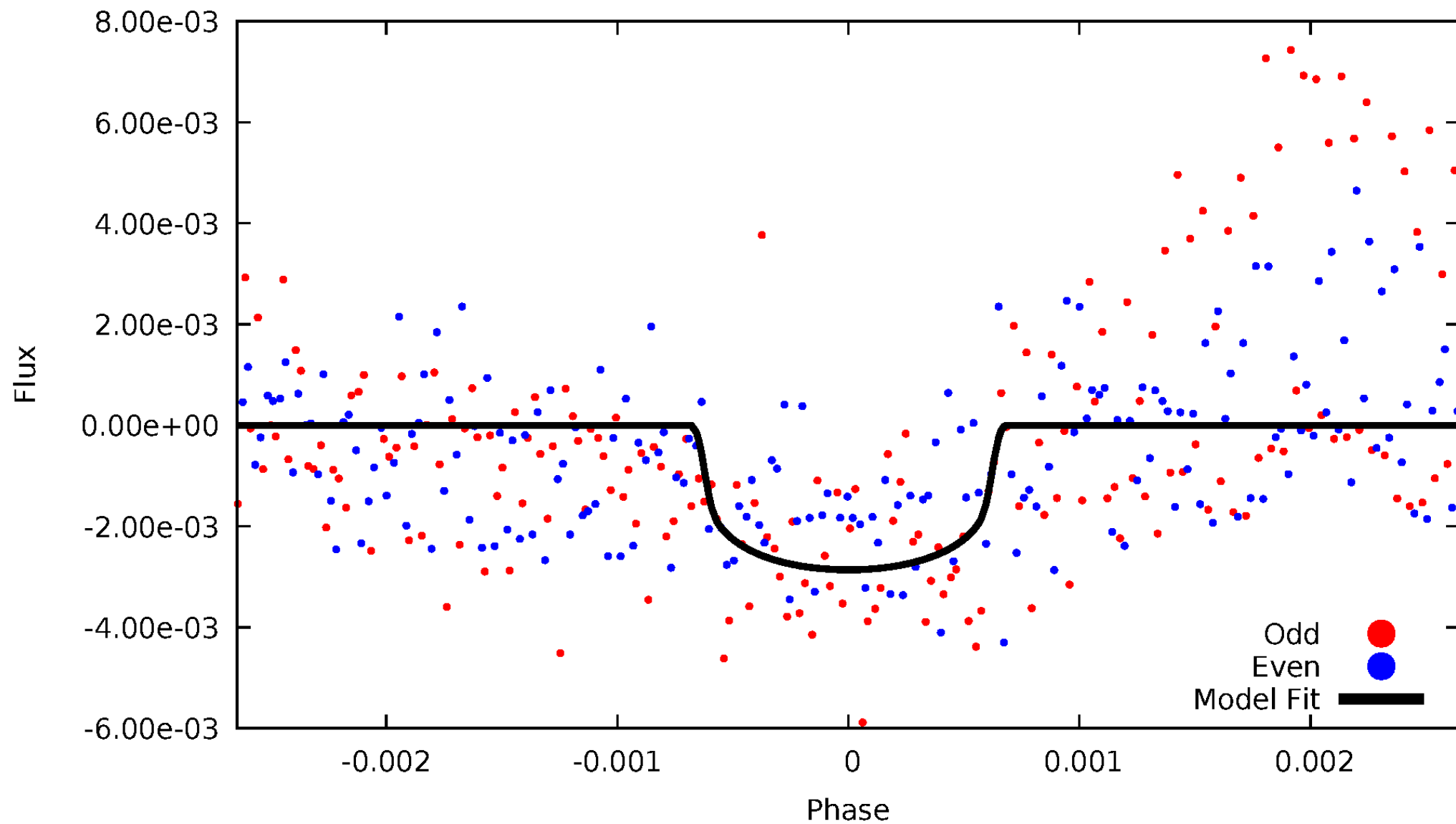


TCE 007661222-02



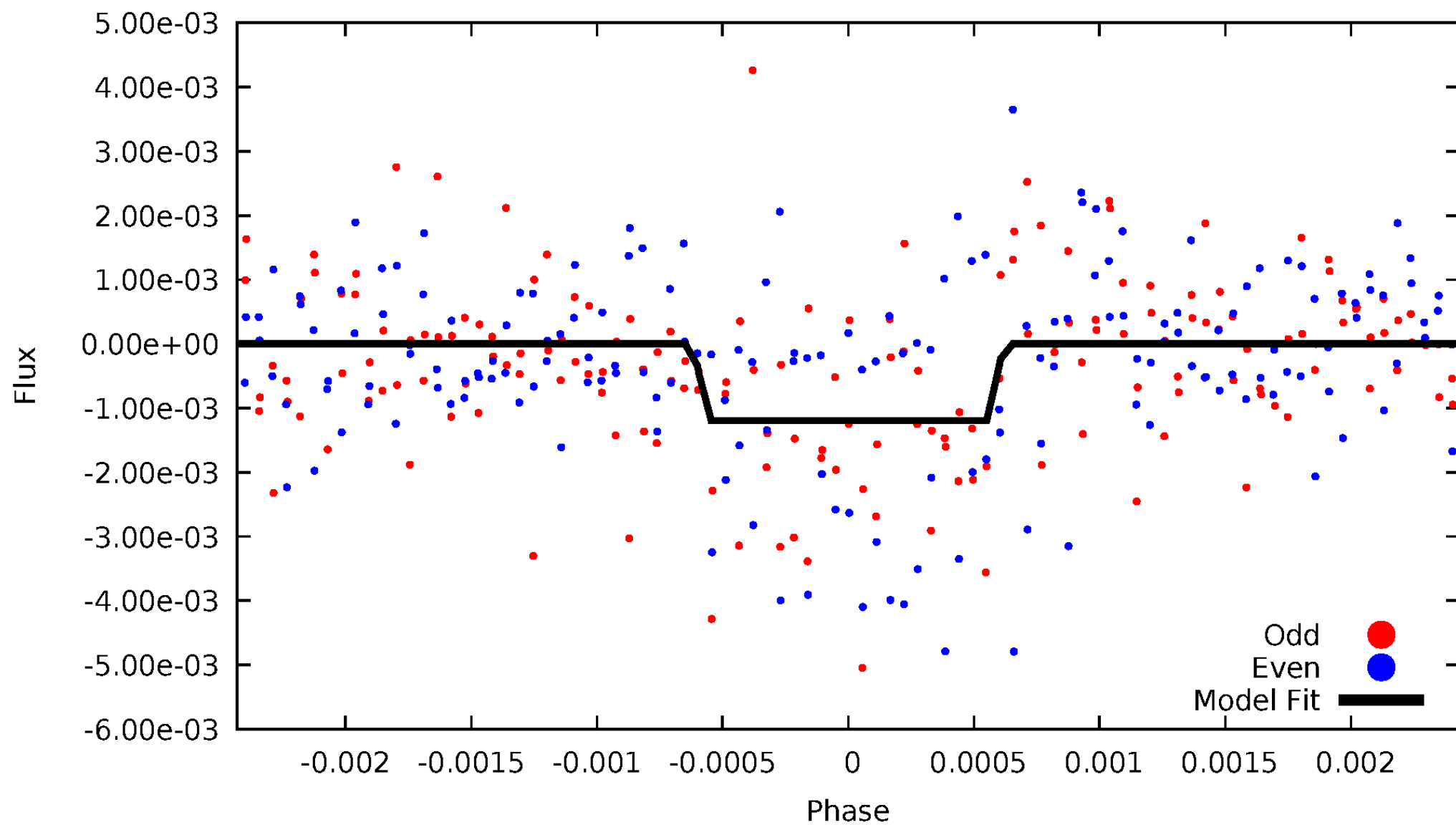
DV Odd/Even

TCE 007661222-02



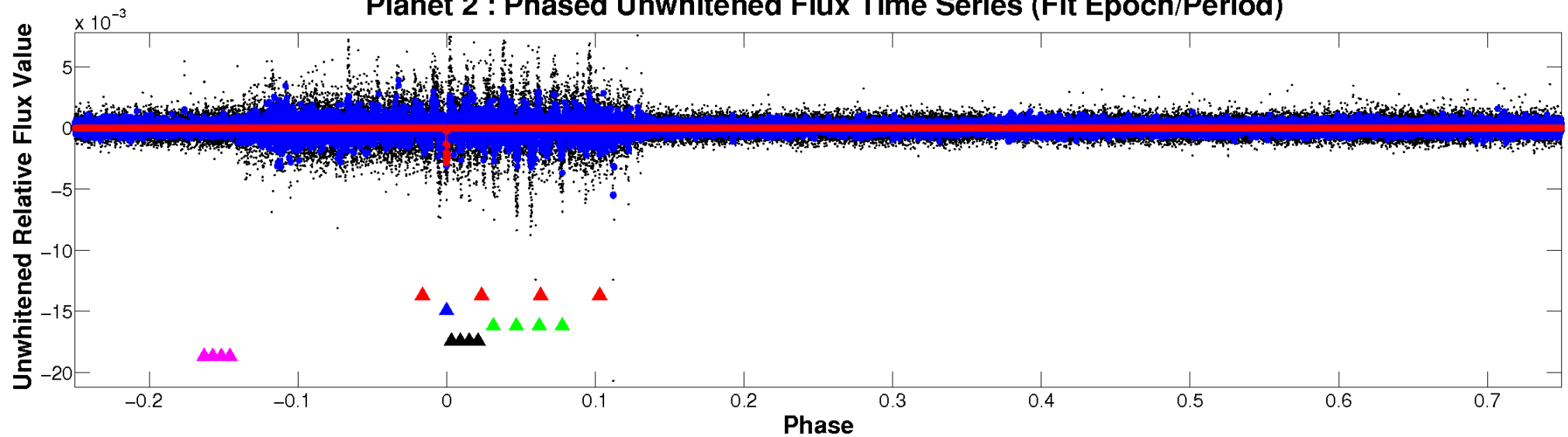
ALT Odd/Even

TCE 007661222-02

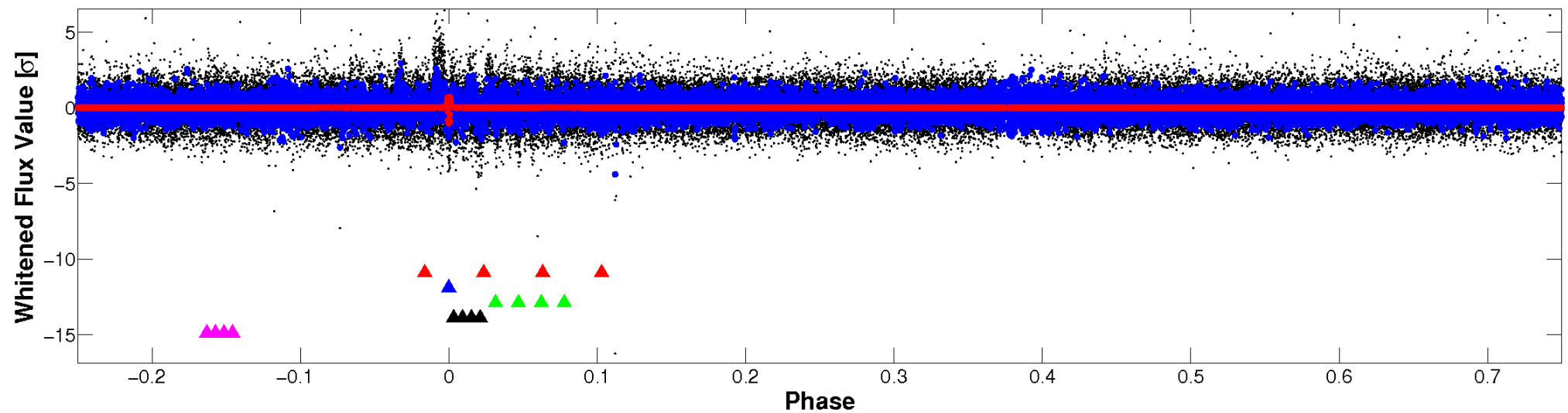


Non-Whitened Vs. Whitened Light Curve

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

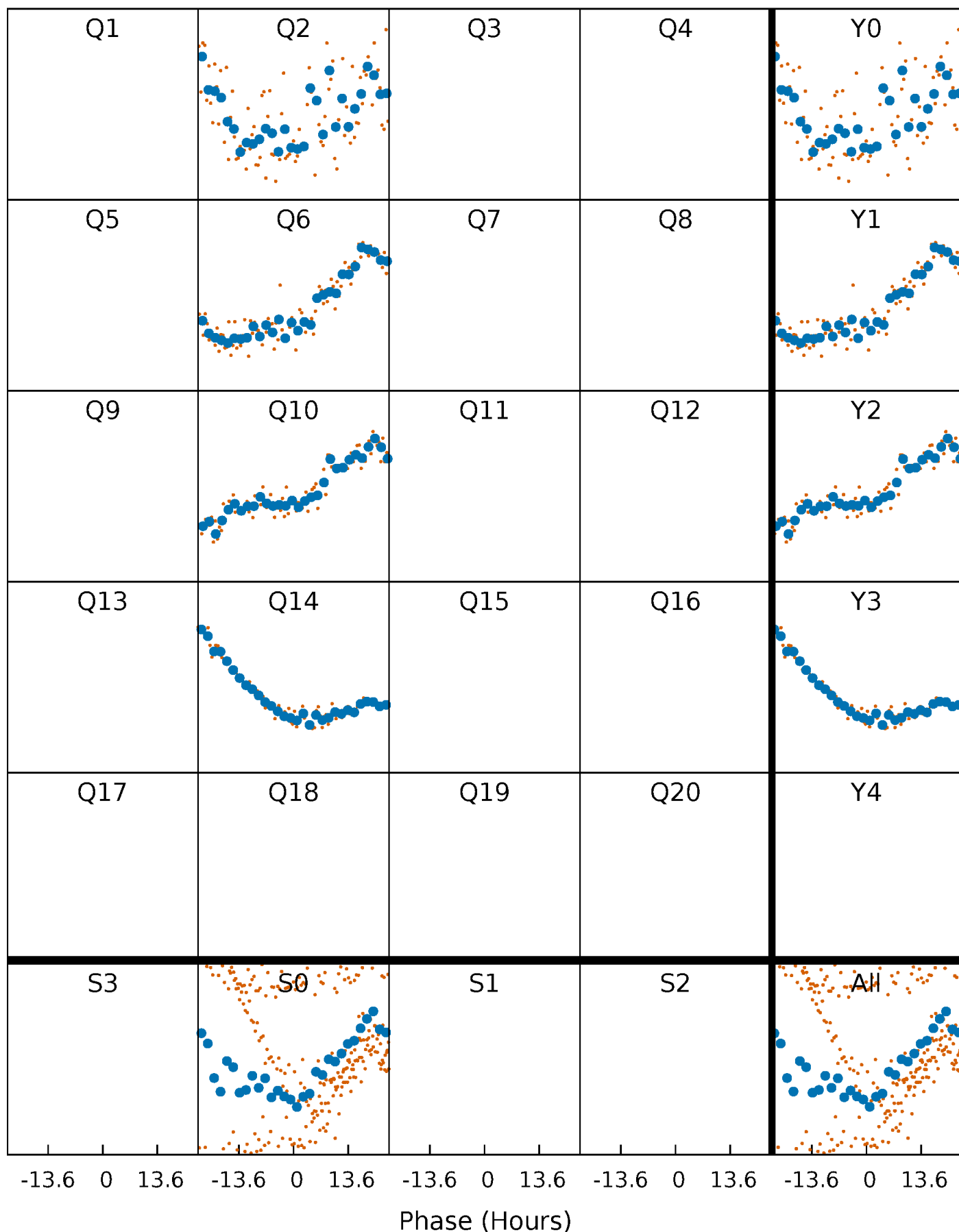


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



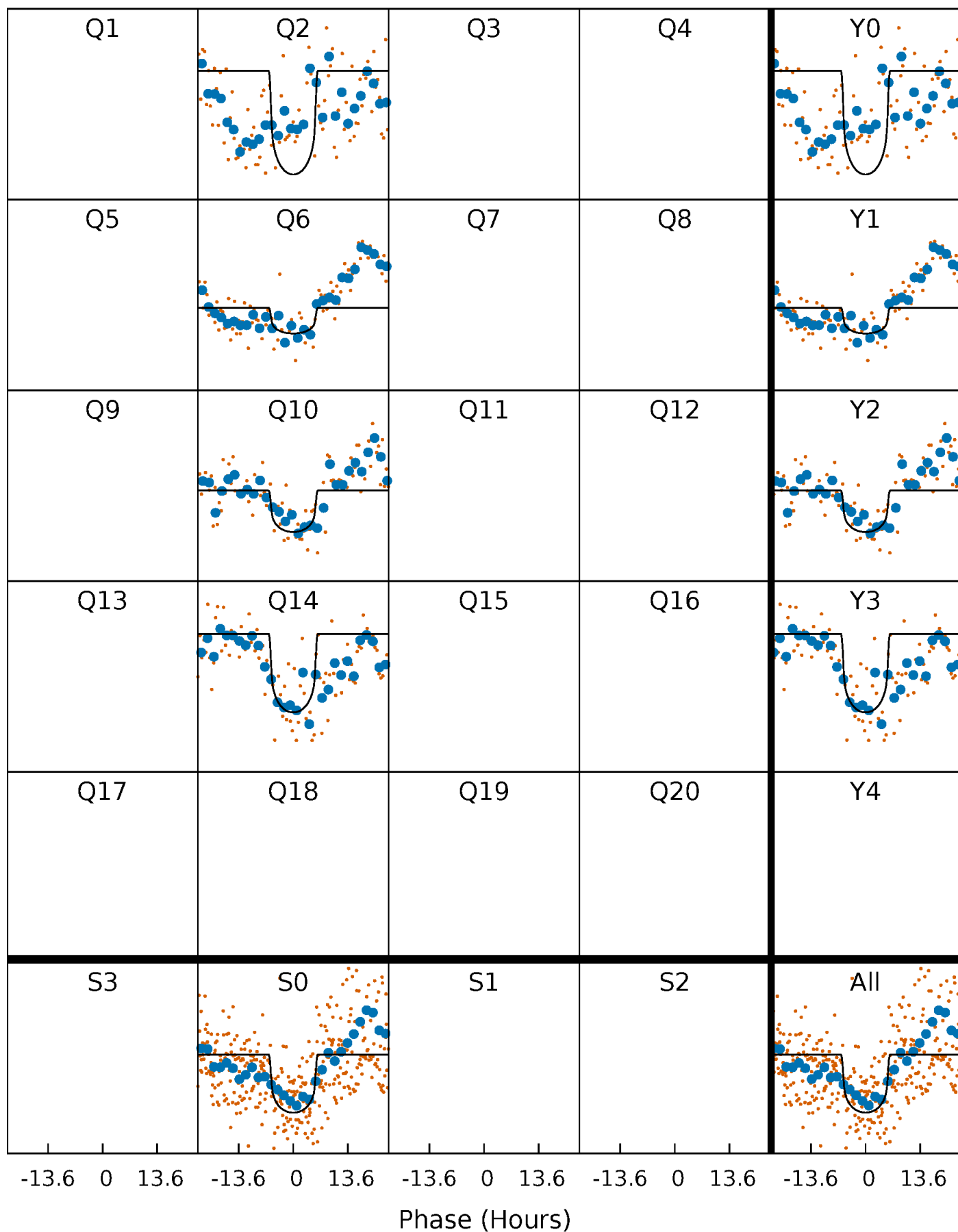
PDC Quarter-Phased Transit Curves

TCE 007661222-02 P=374.564002 Days $T_0=208.959002$ (BKJD)



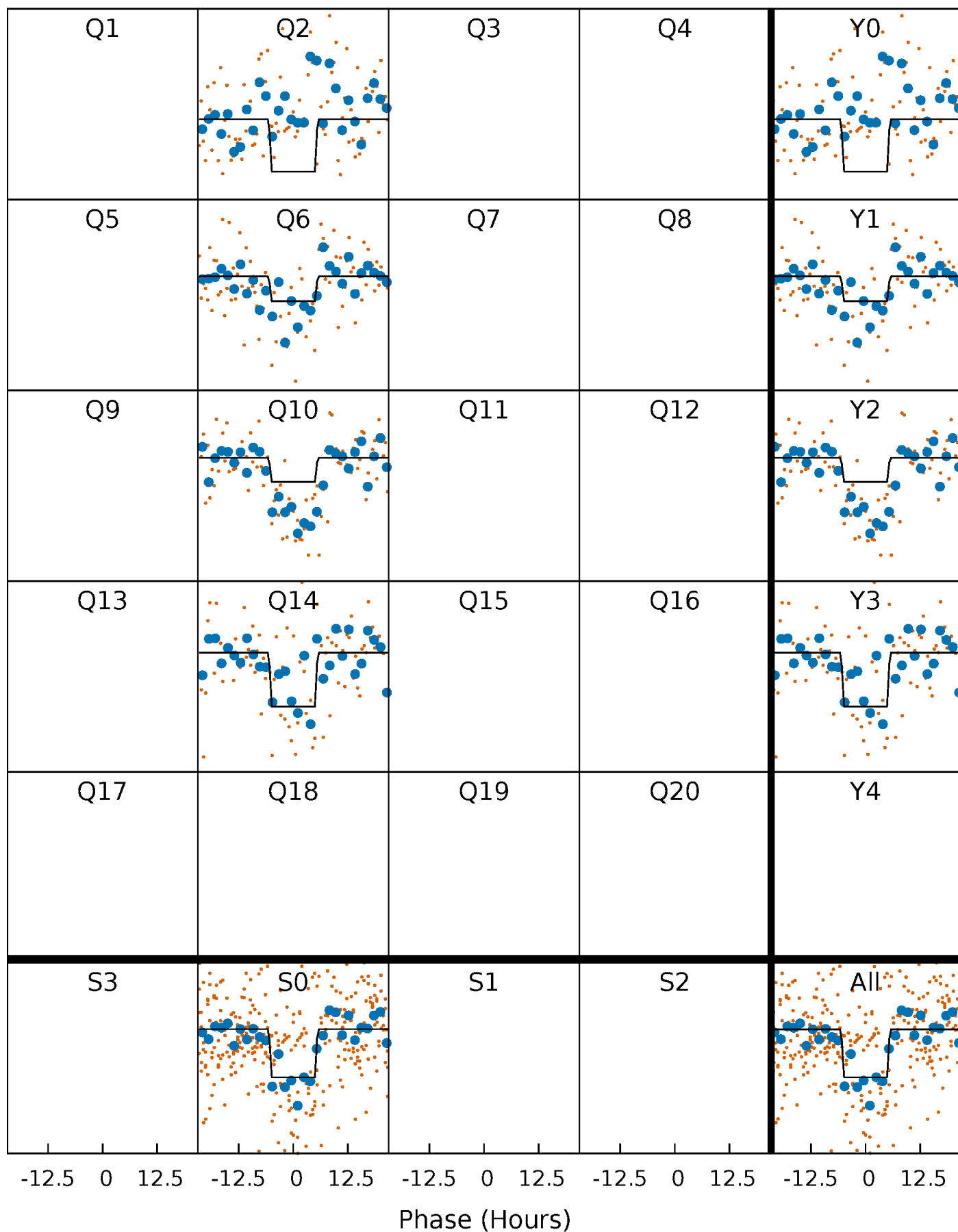
DV Quarter-Phased Transit Curves

TCE 007661222-02 P=374.564002 Days $T_0=208.959002$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

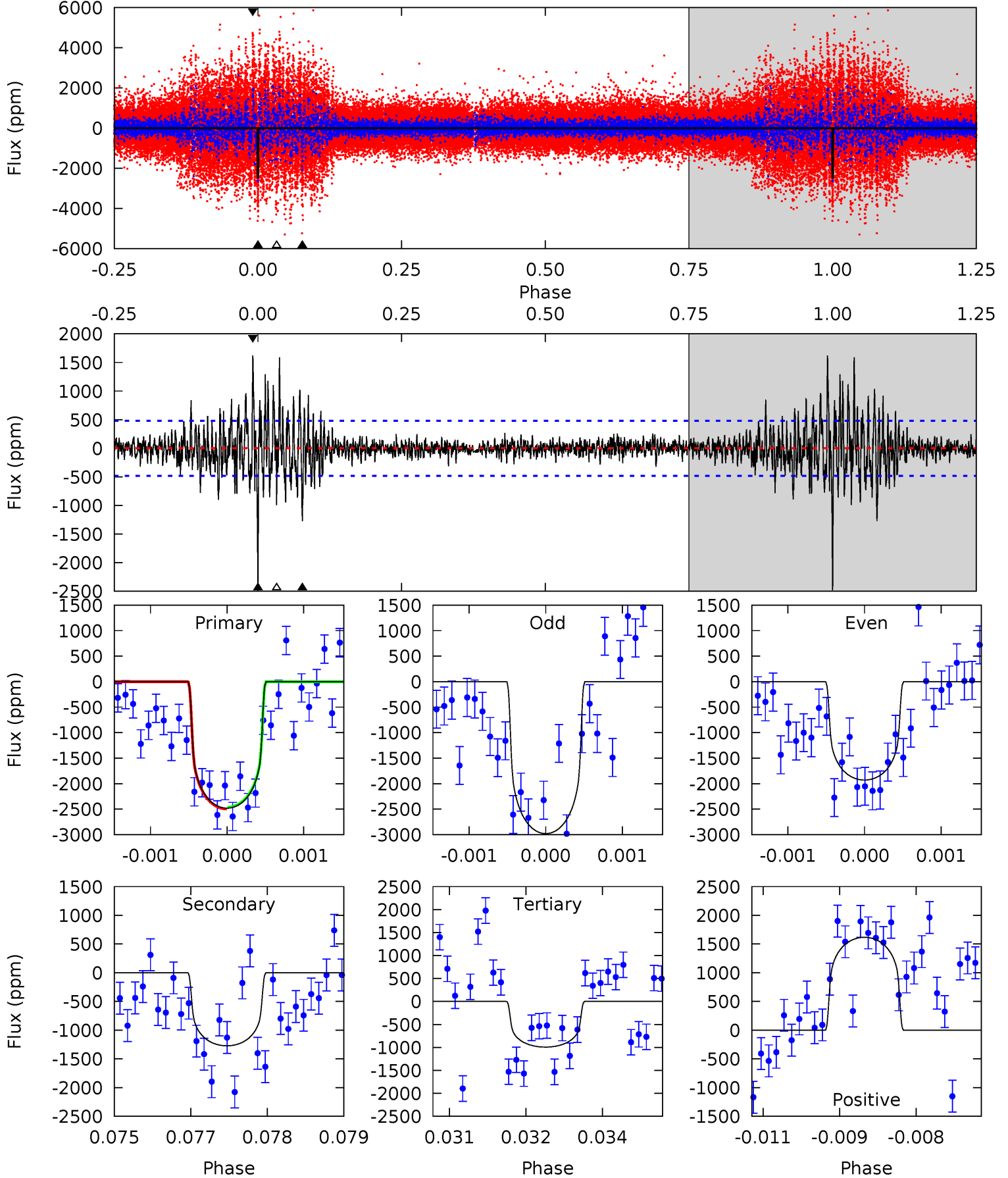
TCE 007661222-02 P=374.567588 Days $T_0=208.957625$ (BKJD)



DV Model-Shift Uniqueness Test

007661222-02, P = 374.564002 Days, E = 208.959002 Days

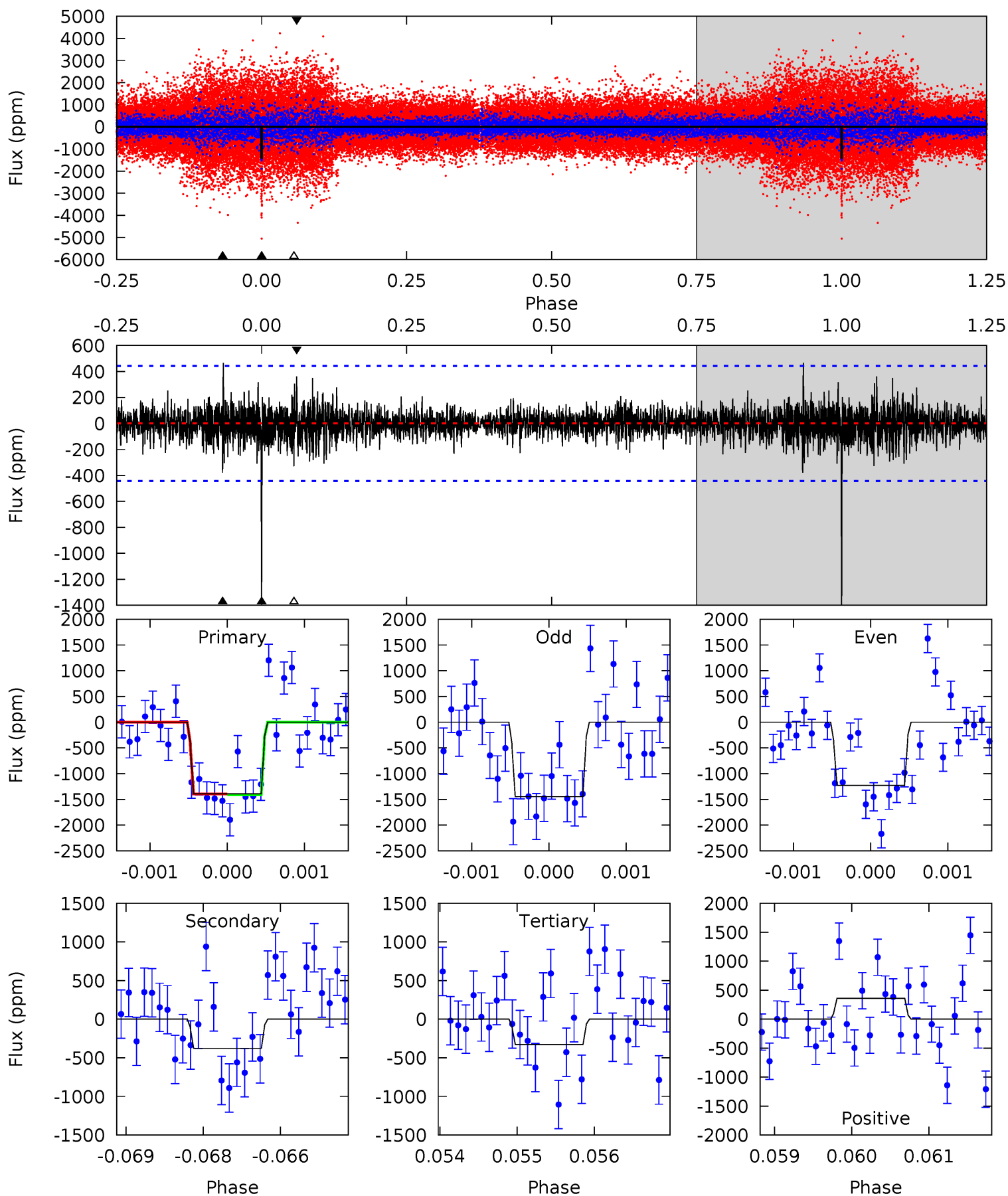
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.8	14.3	11.2	18.2	5.40	3.21	2.56	16.7	9.68	3.13	-3.87	5.56	0.91	0.39	0.19



Alt Model-Shift Uniqueness Test

007661222-02, P = 374.567588 Days, E = 208.957625 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.0	4.62	4.01	4.41	5.41	3.23	0.91	13.0	12.6	0.61	0.21	1.34	0.95	0.25	0.11



Stellar Parameters For KIC 007661222

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5198^{+156}_{-156}	$4.617^{+0.072}_{-0.044}$	$-0.860^{+0.350}_{-0.300}$	$0.648^{+0.057}_{-0.057}$	$0.634^{+0.061}_{-0.028}$	$3.275^{+0.891}_{-0.526}$
	+3%/-3%	+2%/-1%	+41%/-35%	+9%/-9%	+10%/-4%	+27%/-16%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007661222-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1272 ± 89	$3.46^{+1.15}_{-1.14}$	275^{+10}_{-11}	4544^{+844}_{-456}	44880^{+54090}_{-19825}
Alt.	-378 ± 82	$2.43^{+1.16}_{-1.09}$	275^{+10}_{-10}	4124^{+1116}_{-554}	26152^{+64472}_{-14567}

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

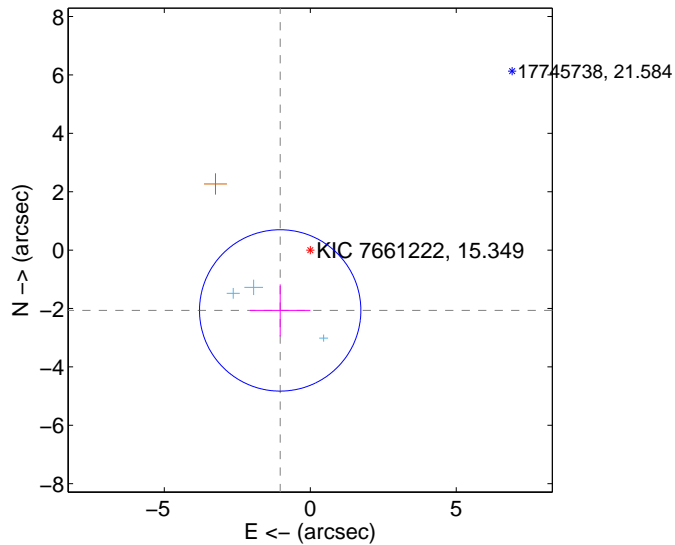
Supplemental centroid analysis for 007661222-02. Kepler magnitude: 15.35. Transit SNR 9.43

There are 3 quarters with good PRF difference image offsets

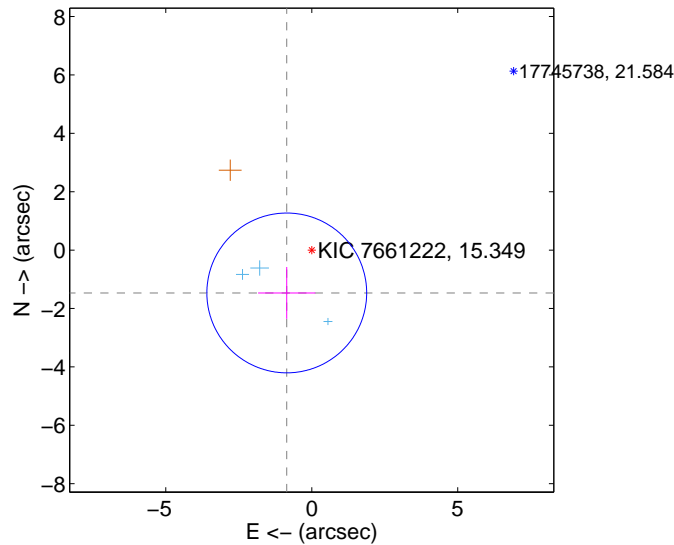
The direct PRF centroid is offset from the target star catalog position by about 0.58 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.308 ± 0.921	2.51	1.030 ± 1.036	-2.066 ± 0.890
PRF-fit source offset from KIC position	1.698 ± 0.912	1.86	0.856 ± 0.980	-1.467 ± 0.887
photometric centroid source offset	2.20 ± 1.57	1.40	-2.07 ± 1.58	-0.74 ± 1.52

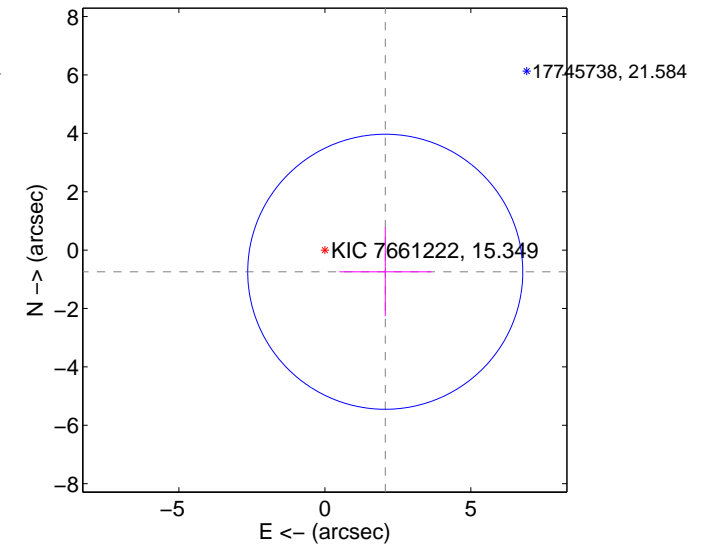
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

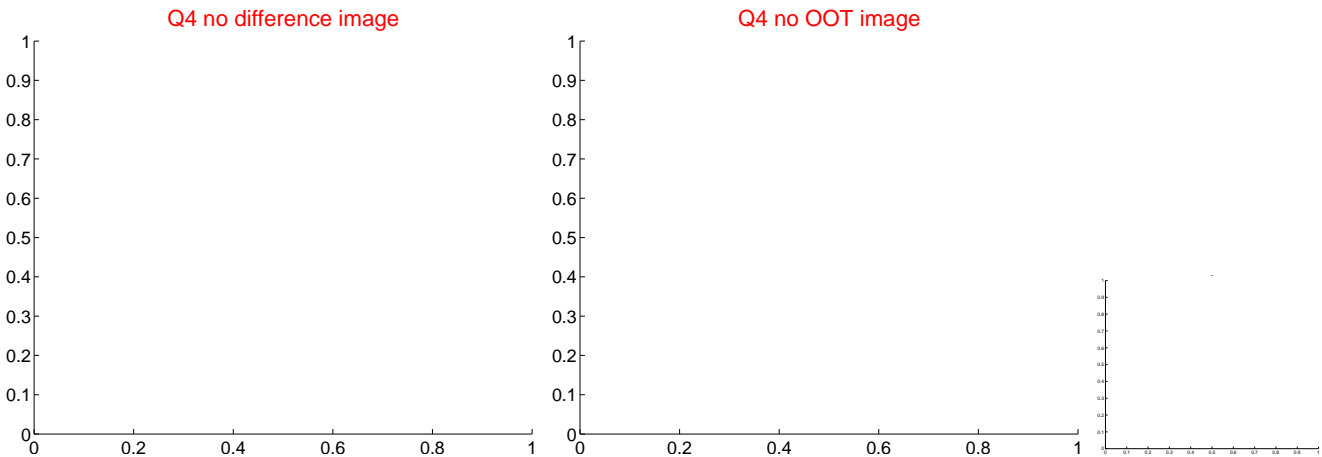
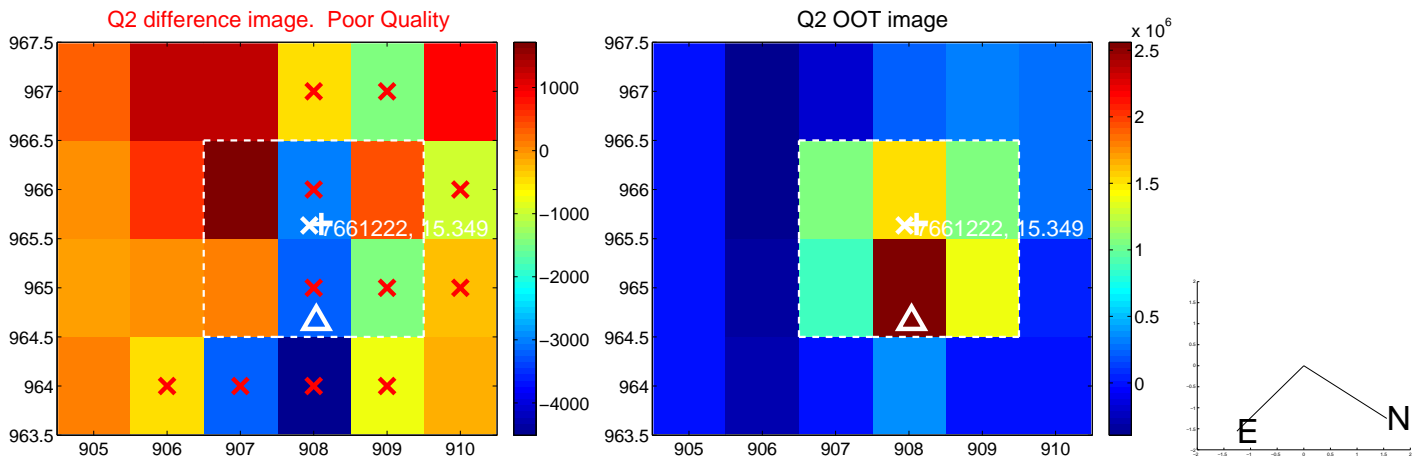


offset from photometric centroids

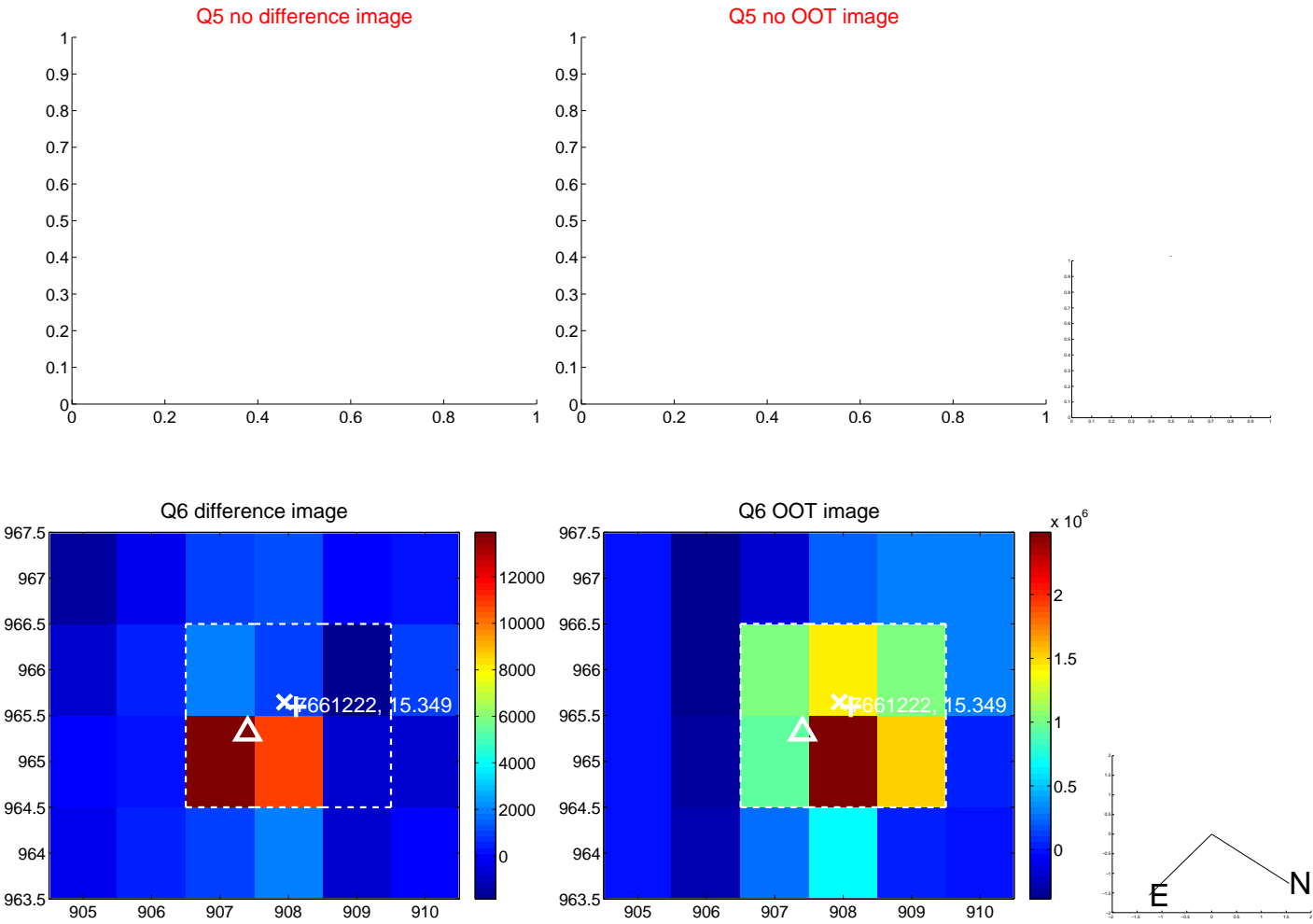


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

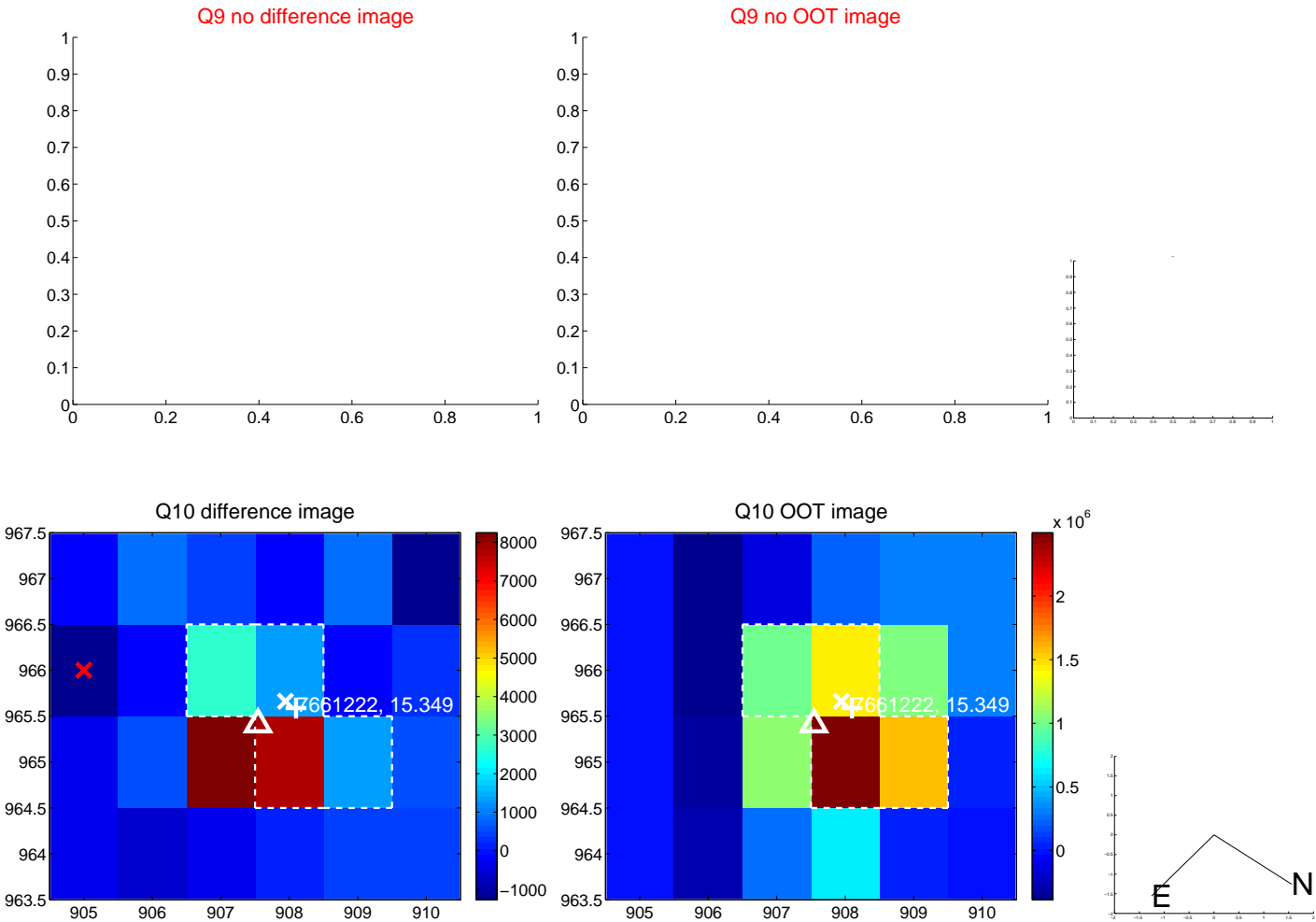
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



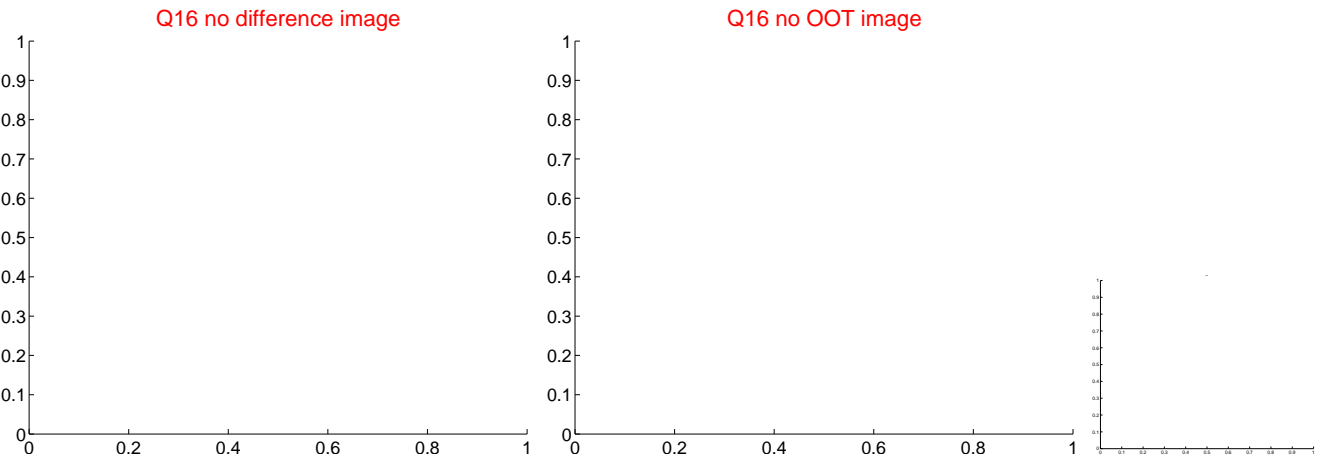
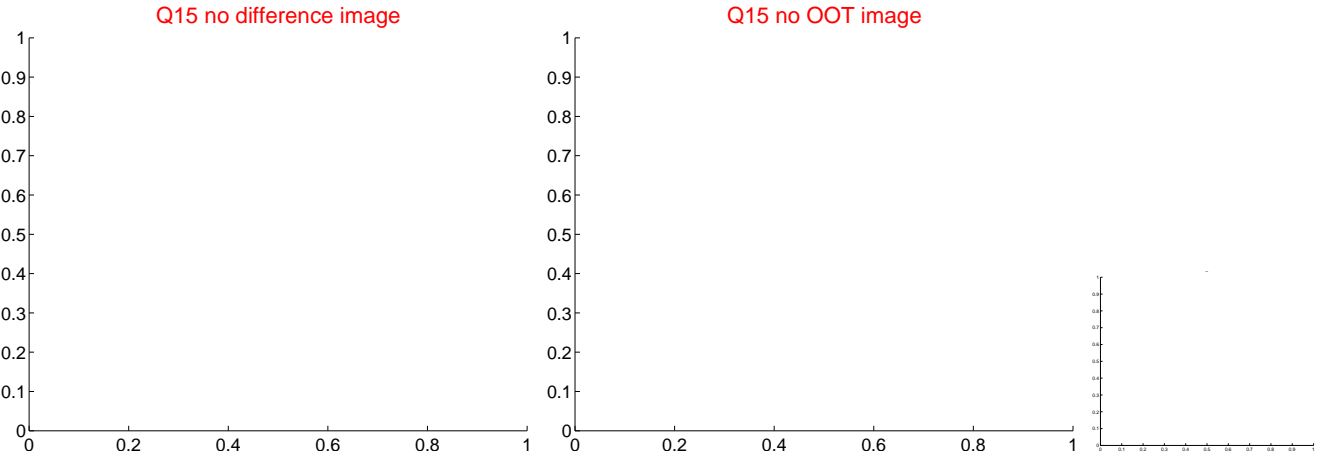
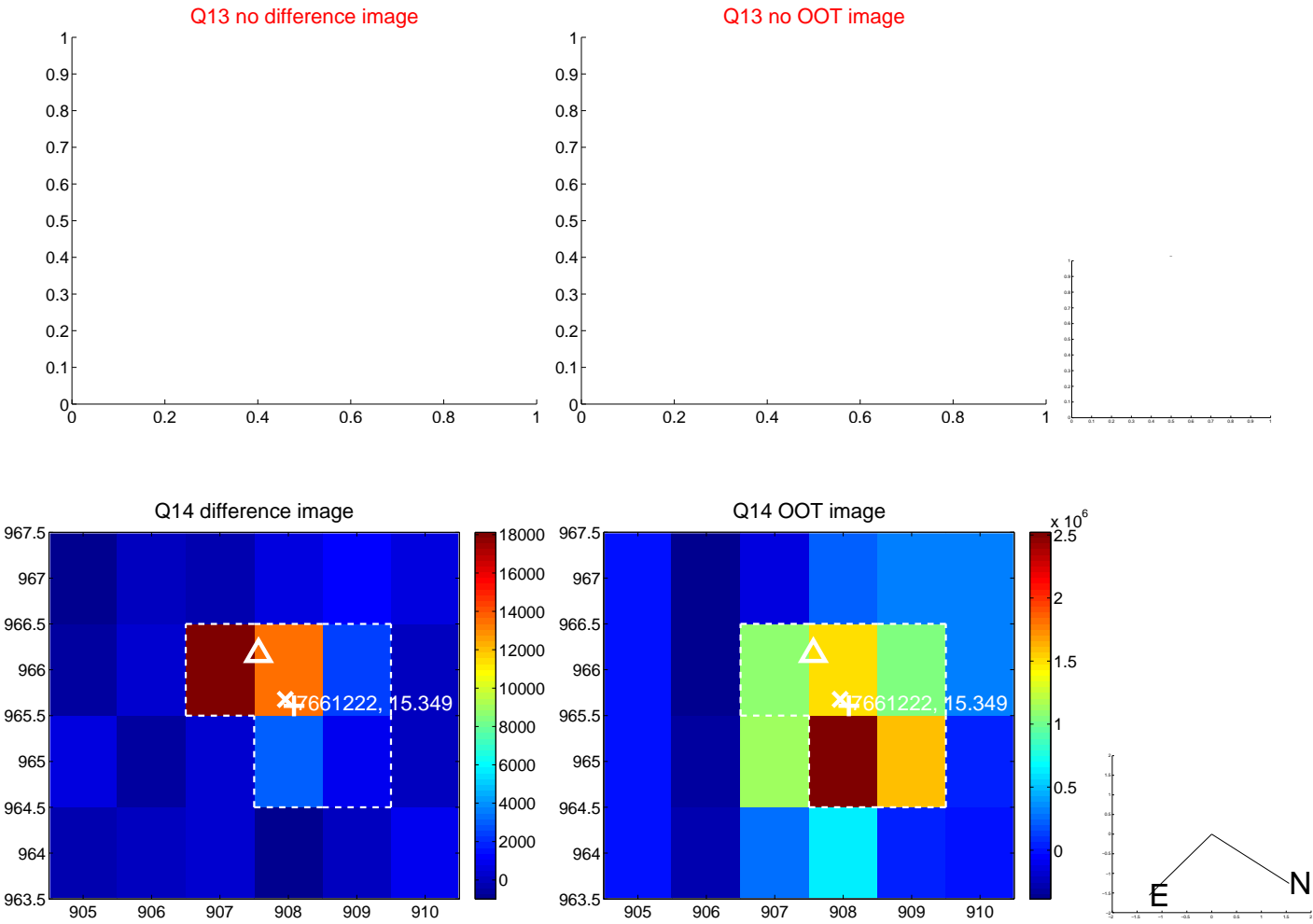
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



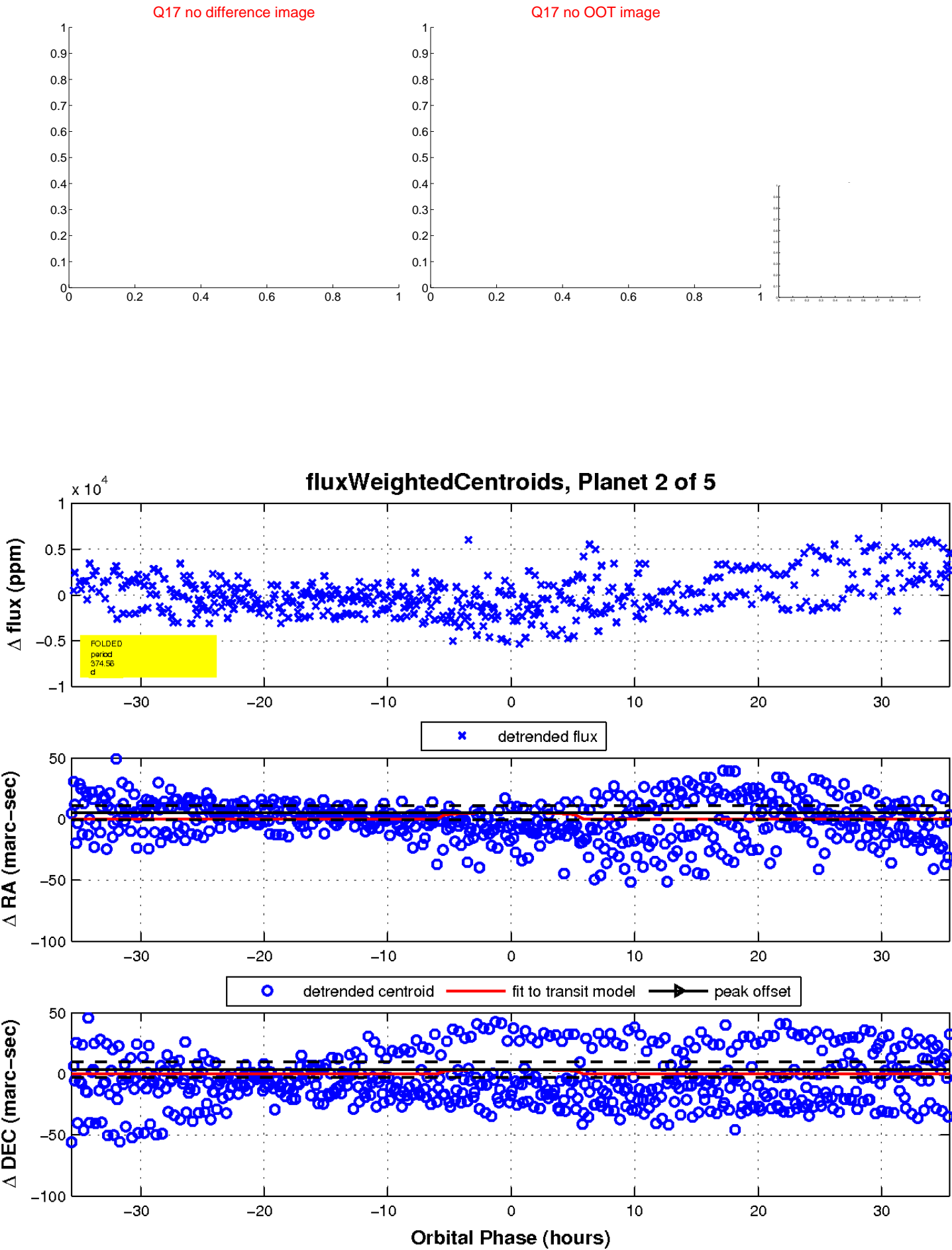
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

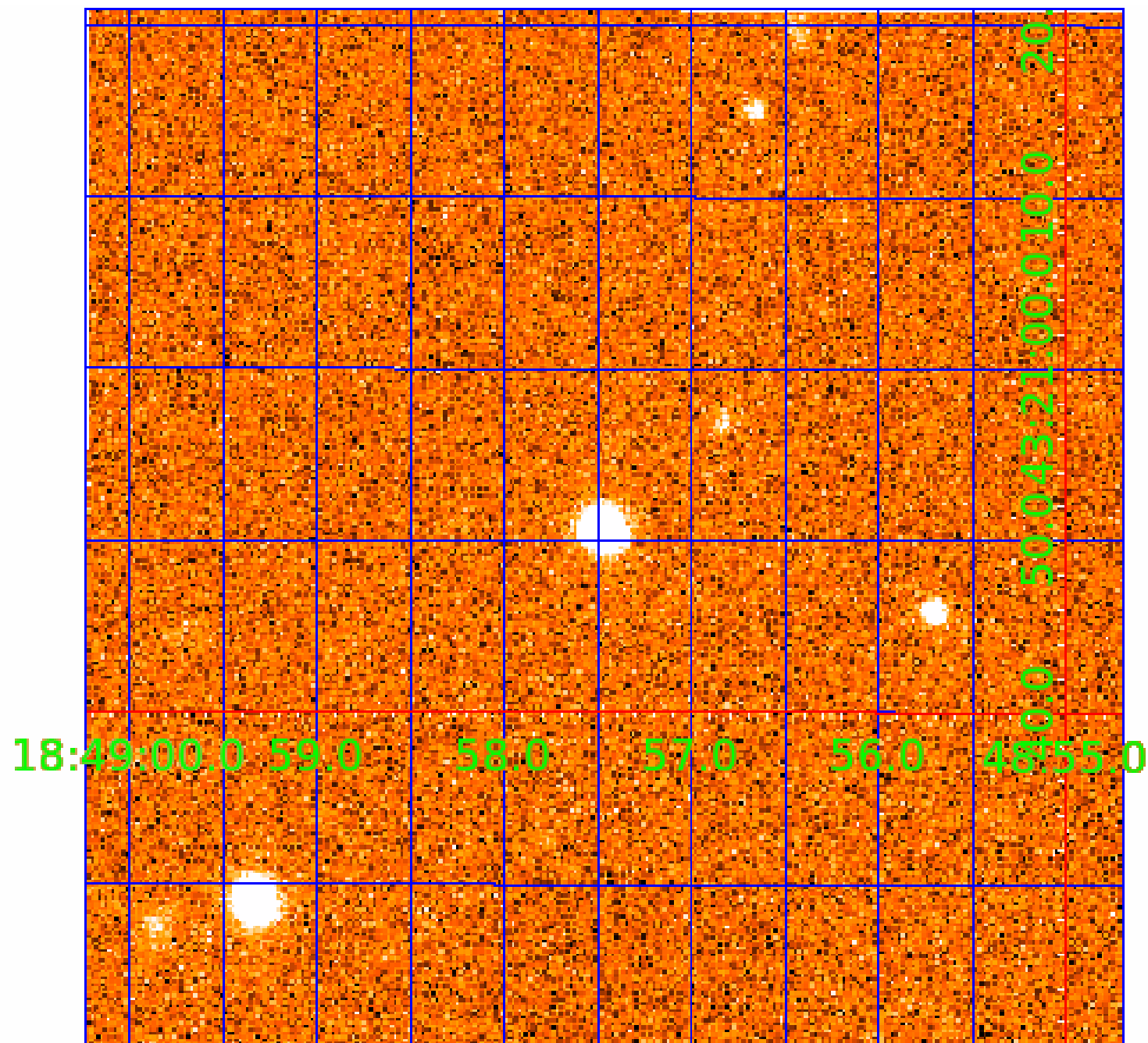


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007661222

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})
007661222-01	OBS	No	359.685145	247.525936	1032.9	15.000	11.1	-1.0	0.65	5198	2.06	0.38
007661222-02	OBS	No	374.564002	208.959003	2863.0	11.892	11.1	9.4	0.65	5198	3.45	0.36
007661222-03	OBS	No	368.777273	238.103362	6899.0	45.281	10.3	14.9	0.65	5198	9.90	0.37
007661222-04	OBS	No	372.326694	216.897769	6571.1	69.139	8.3	11.7	0.65	5198	9.67	0.36
007661222-05	OBS	No	376.728785	147.882192	795.8	24.903	7.8	6.3	0.65	5198	2.36	0.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007661222-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
007661222-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007661222-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
007661222-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
007661222-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_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.

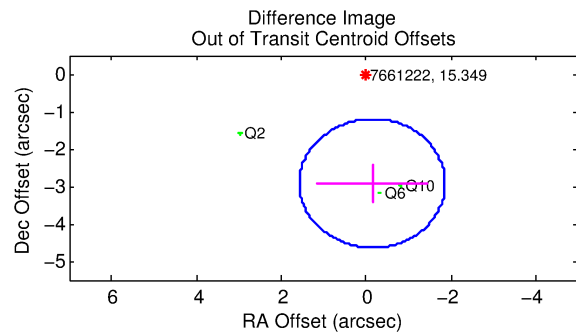
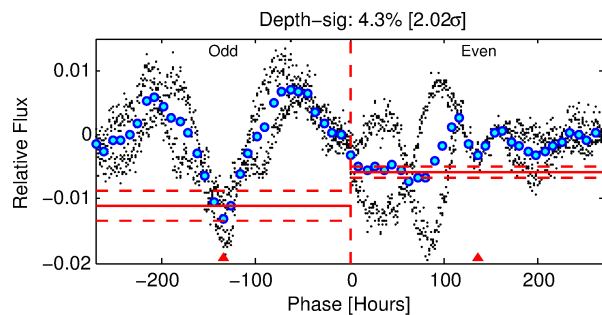
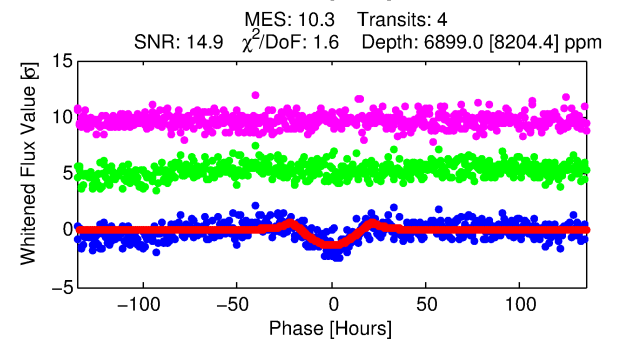
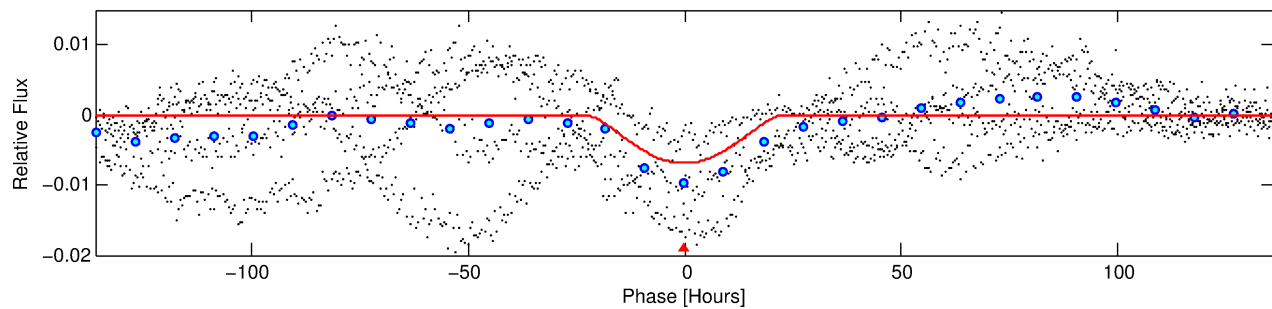
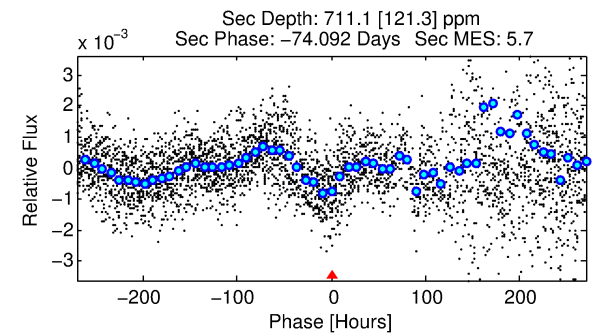
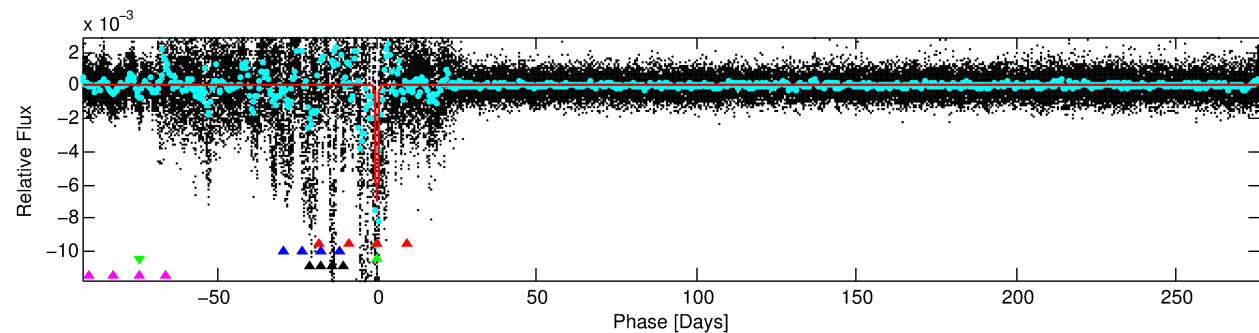
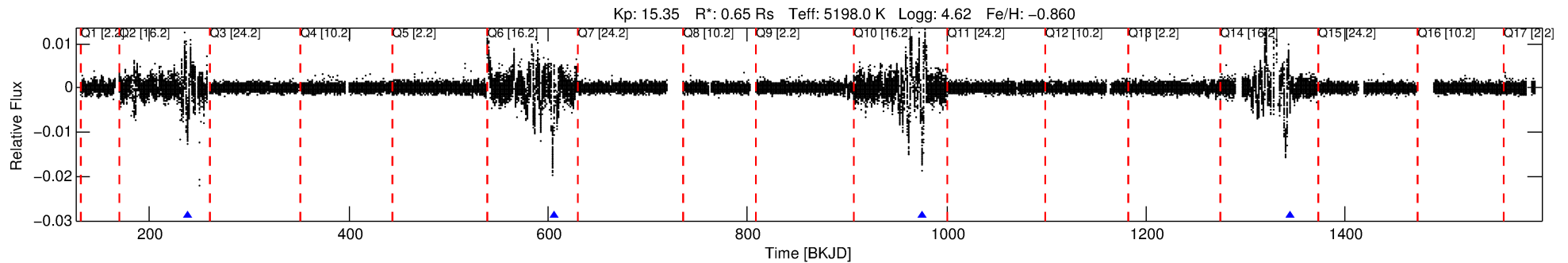
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007661222-03

No Significant Match Found

DV One-Page Summary

KIC: 7661222 Candidate: 3 of 5 Period: 368.777 d



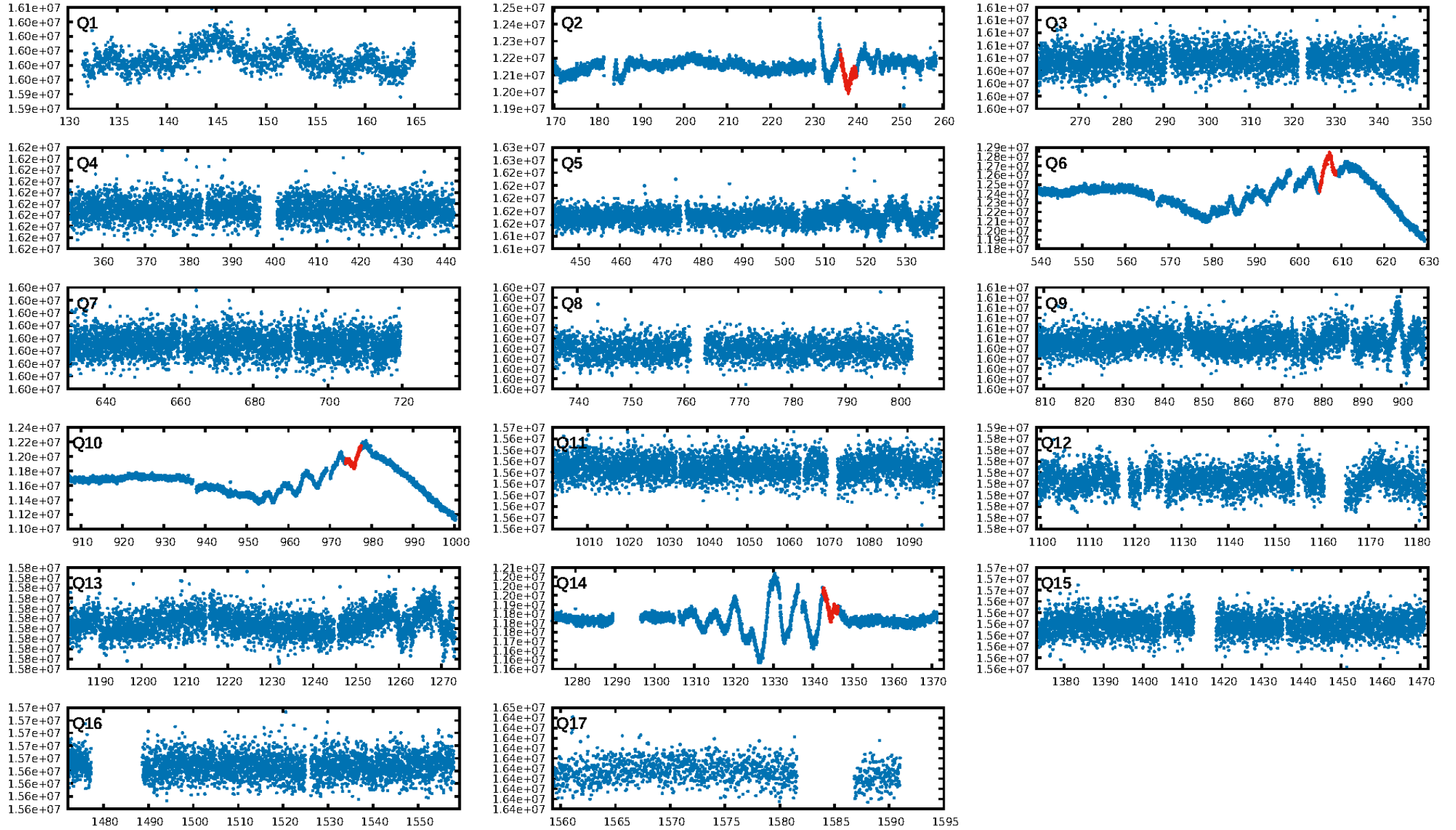
DV Fit Results:

Period = 368.77727 [0.02865] d
Epoch = 238.1034 [0.0667] BKJD
Rp/R* = 0.1400 [0.2534]
a/R* = 34.07 [9.74]
b = 1.00 [0.25]
Seff = 0.37 [0.06]
Teq = 198 [9] K
Rp = 9.90 [17.94] Re
a = 0.8648 [0.0697] AU
Ag = 2985.09 [10825.22] [0.28σ]
Teffp = 2269 [2057] K [1.01σ]

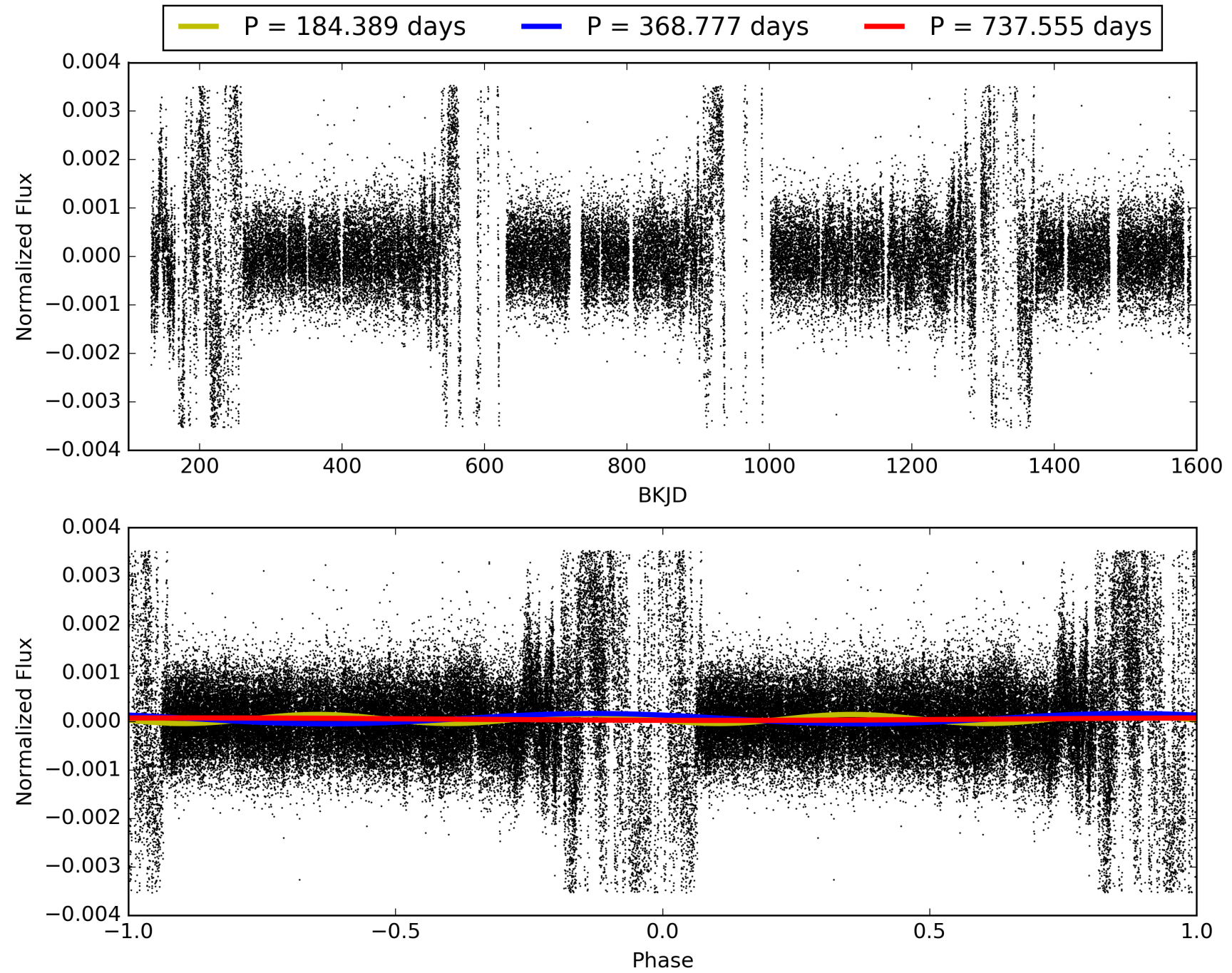
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [4.57σ]
LongPeriod-sig: 69.7% [1.03σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 1.16e-13
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -5.406
Centroid-sig: 5.1%
Centroid-so: 2.337 arcsec [1.79σ]
OotOffset-rm: 2.923 arcsec [5.10σ]
KicOffset-rm: 2.505 arcsec [4.15σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.75 [3/4]

TCE 007661222-03, PDC Light Curves

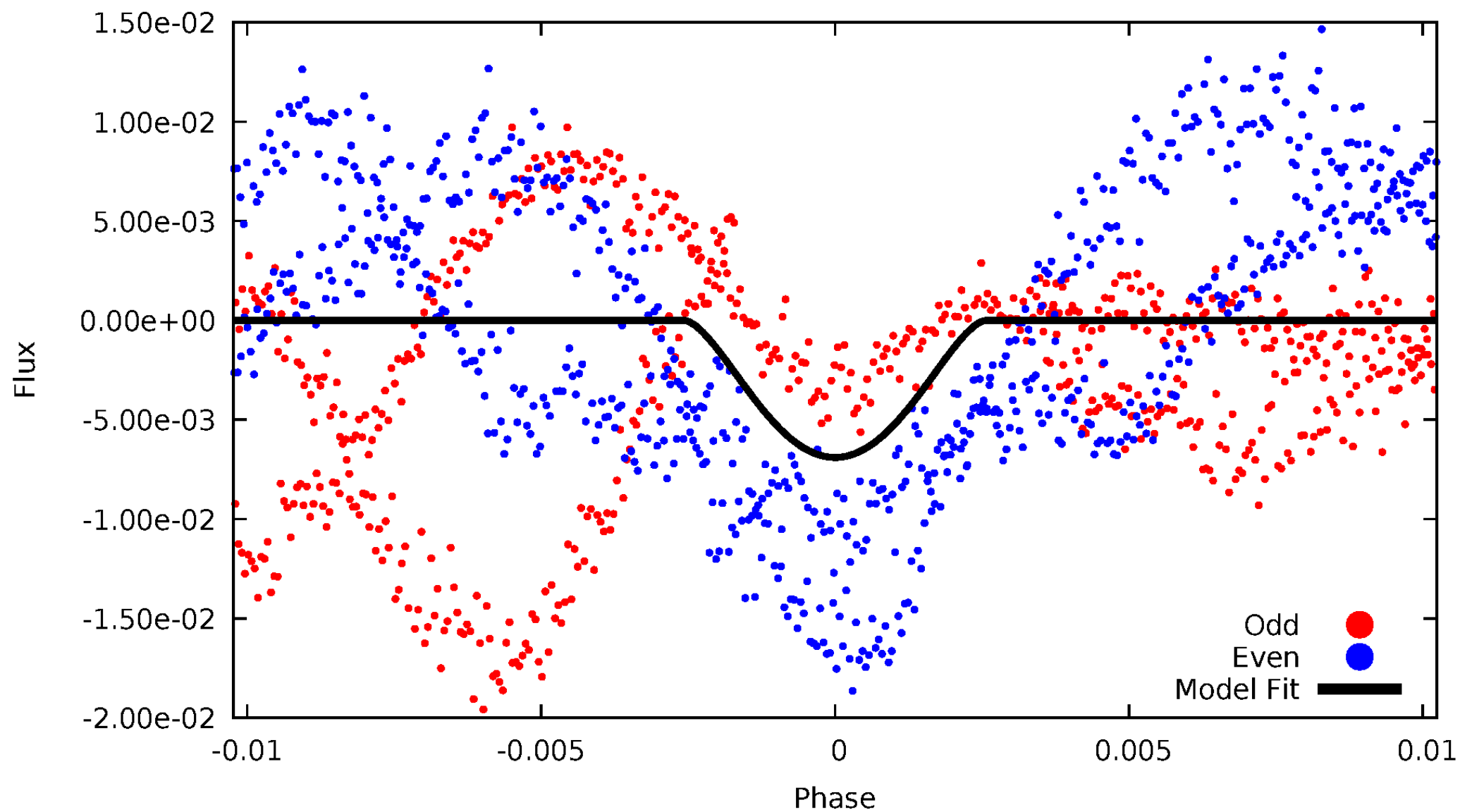


TCE 007661222-03



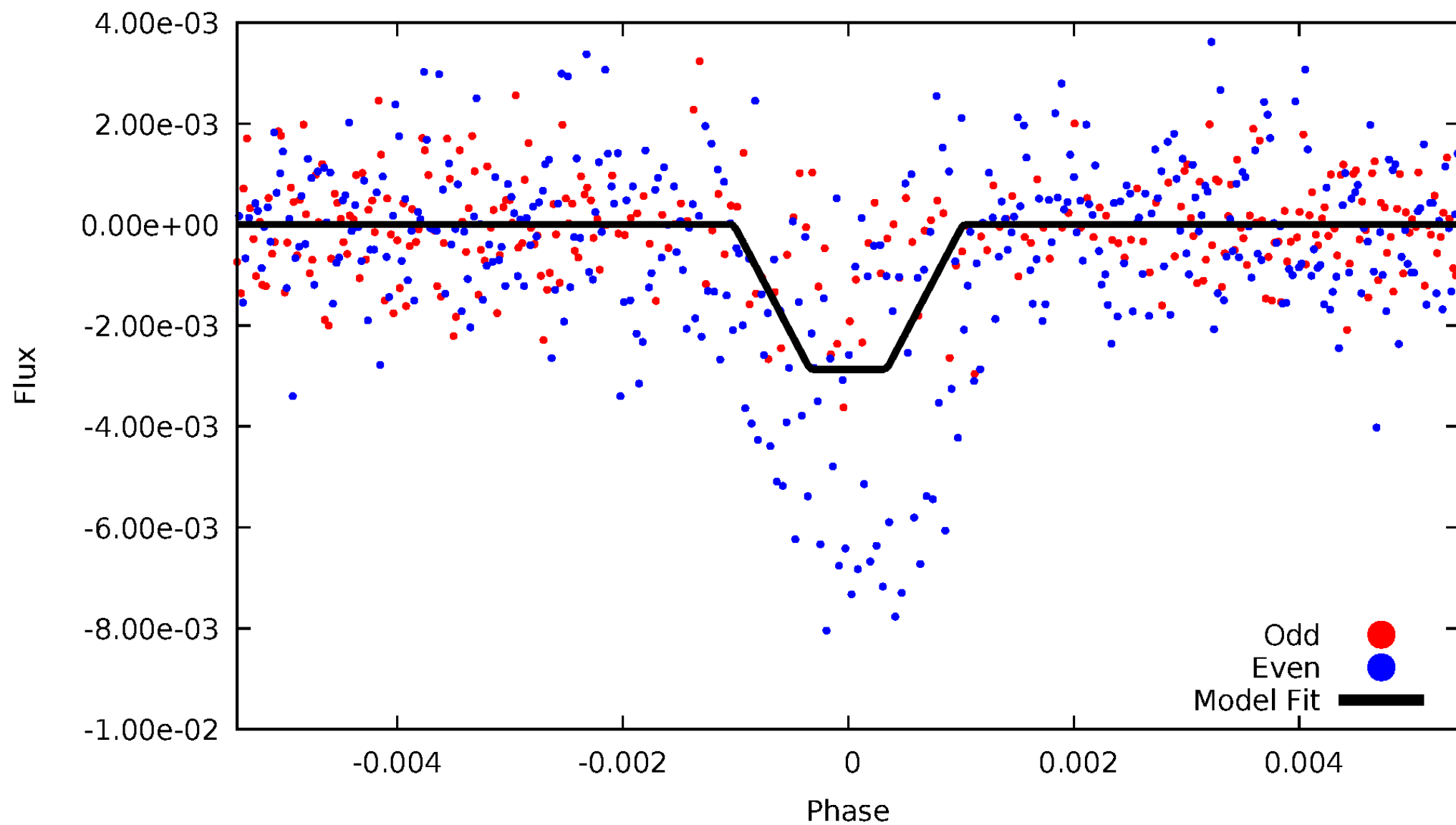
DV Odd/Even

TCE 007661222-03



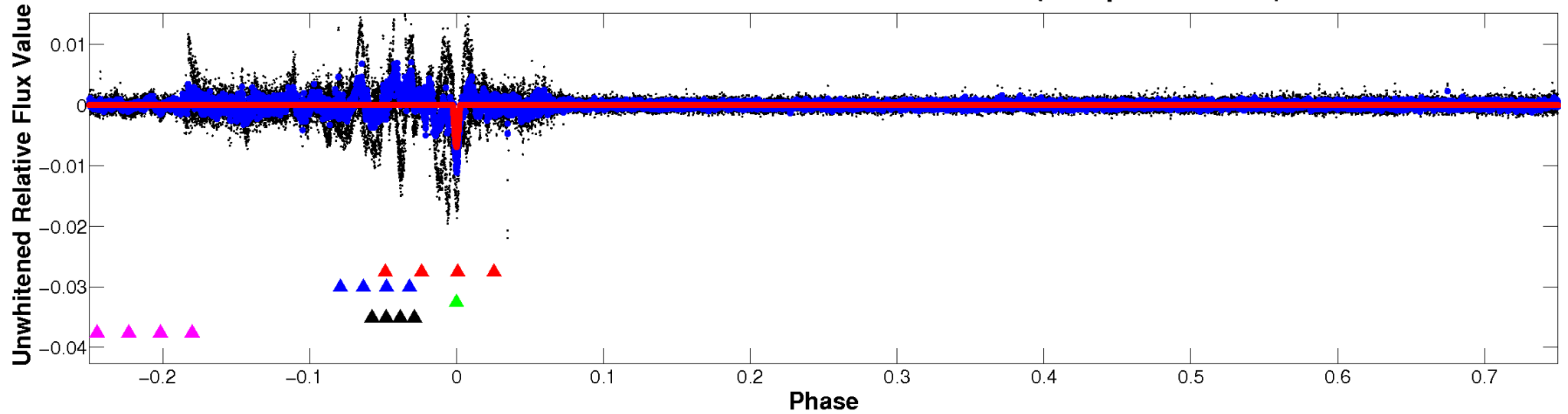
ALT Odd/Even

TCE 007661222-03

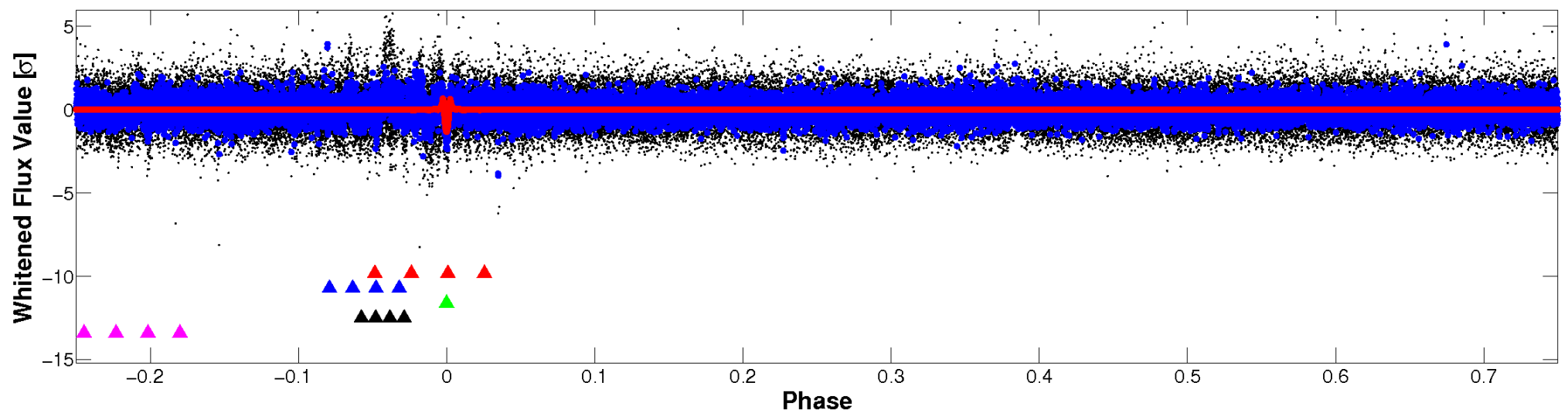


Non-Whitened Vs. Whitened Light Curve

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

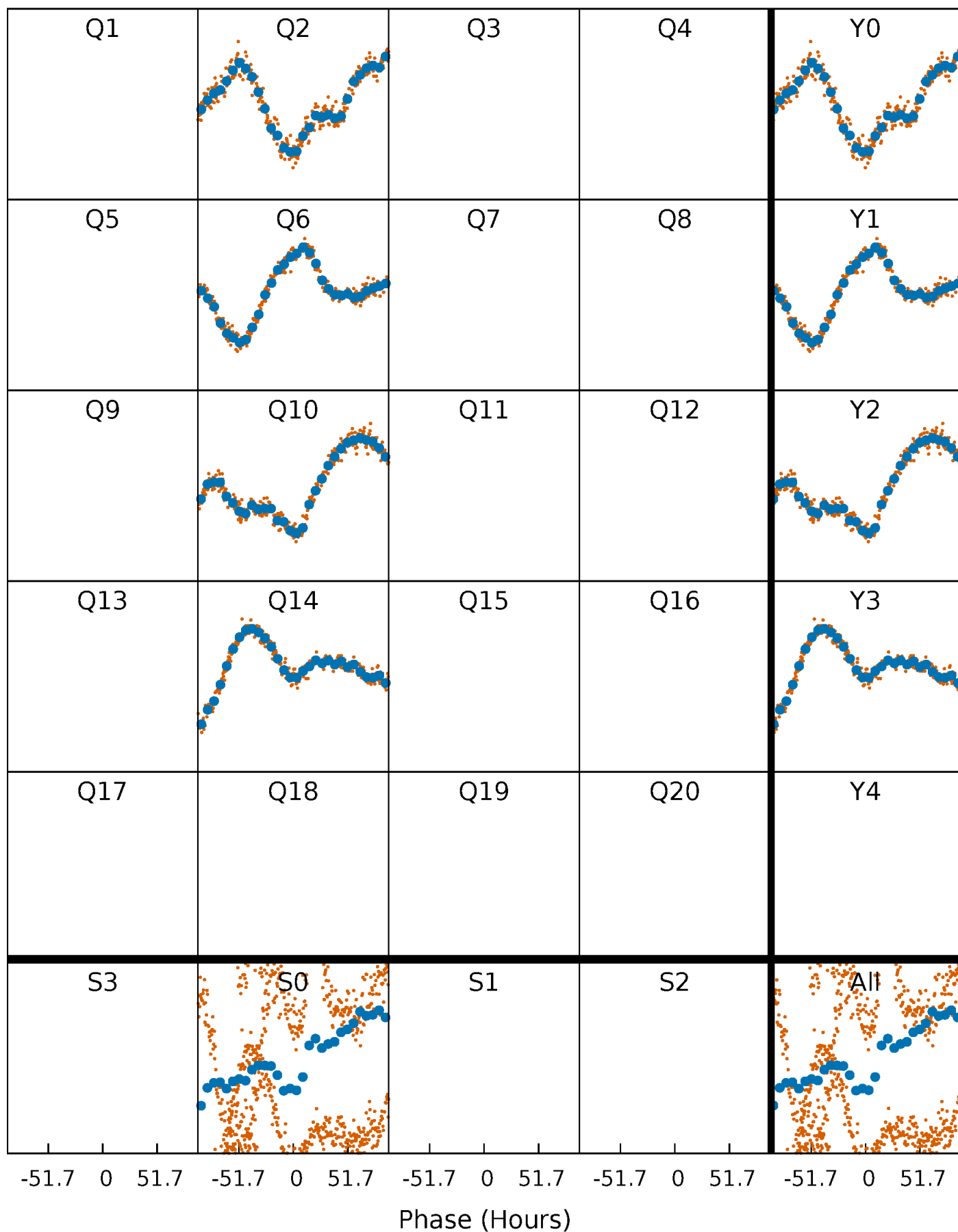


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



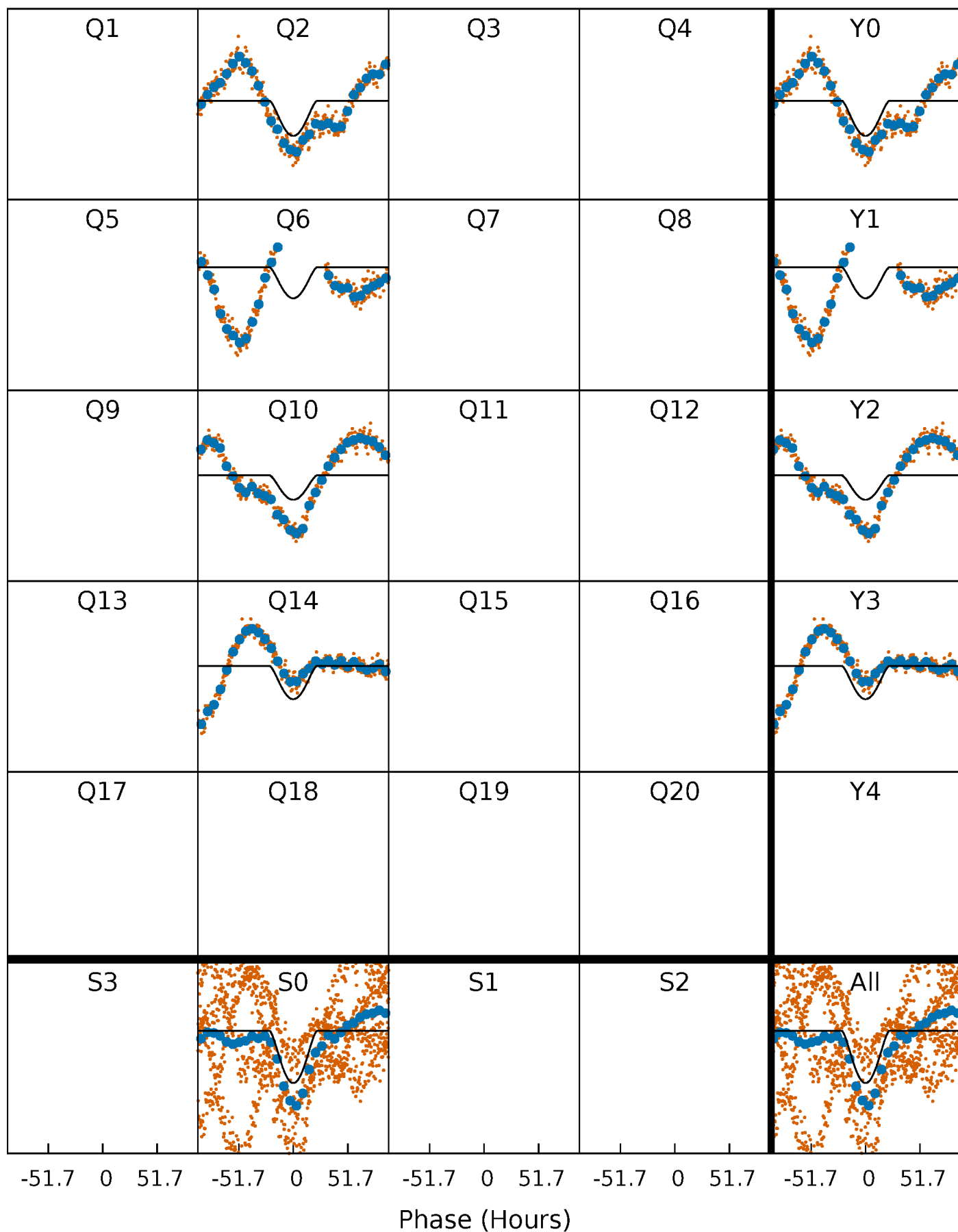
PDC Quarter-Phased Transit Curves

TCE 007661222-03 P=368.777273 Days $T_0=238.103362$ (BKJD)



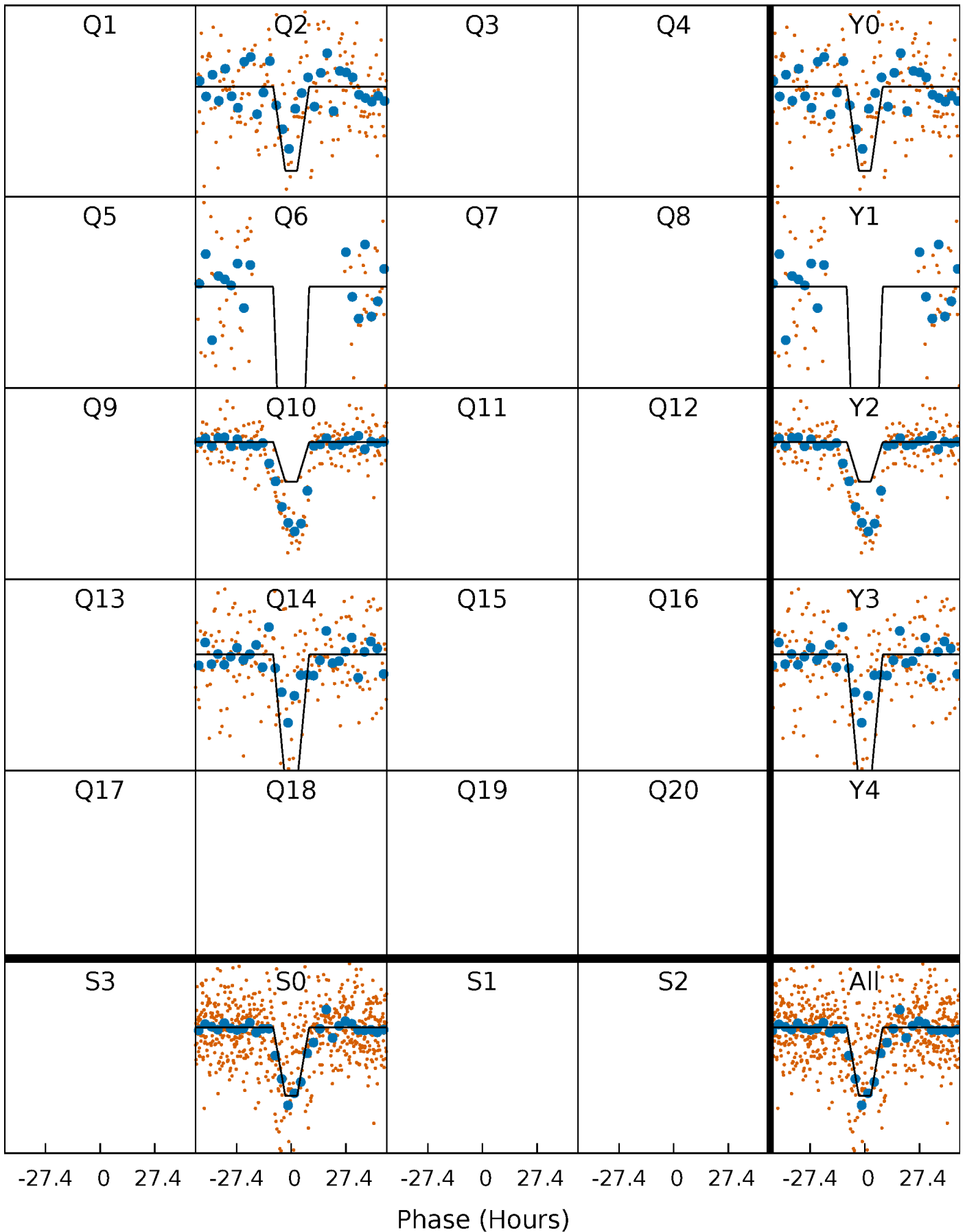
DV Quarter-Phased Transit Curves

TCE 007661222-03 $P=368.777273$ Days $T_0=238.103362$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

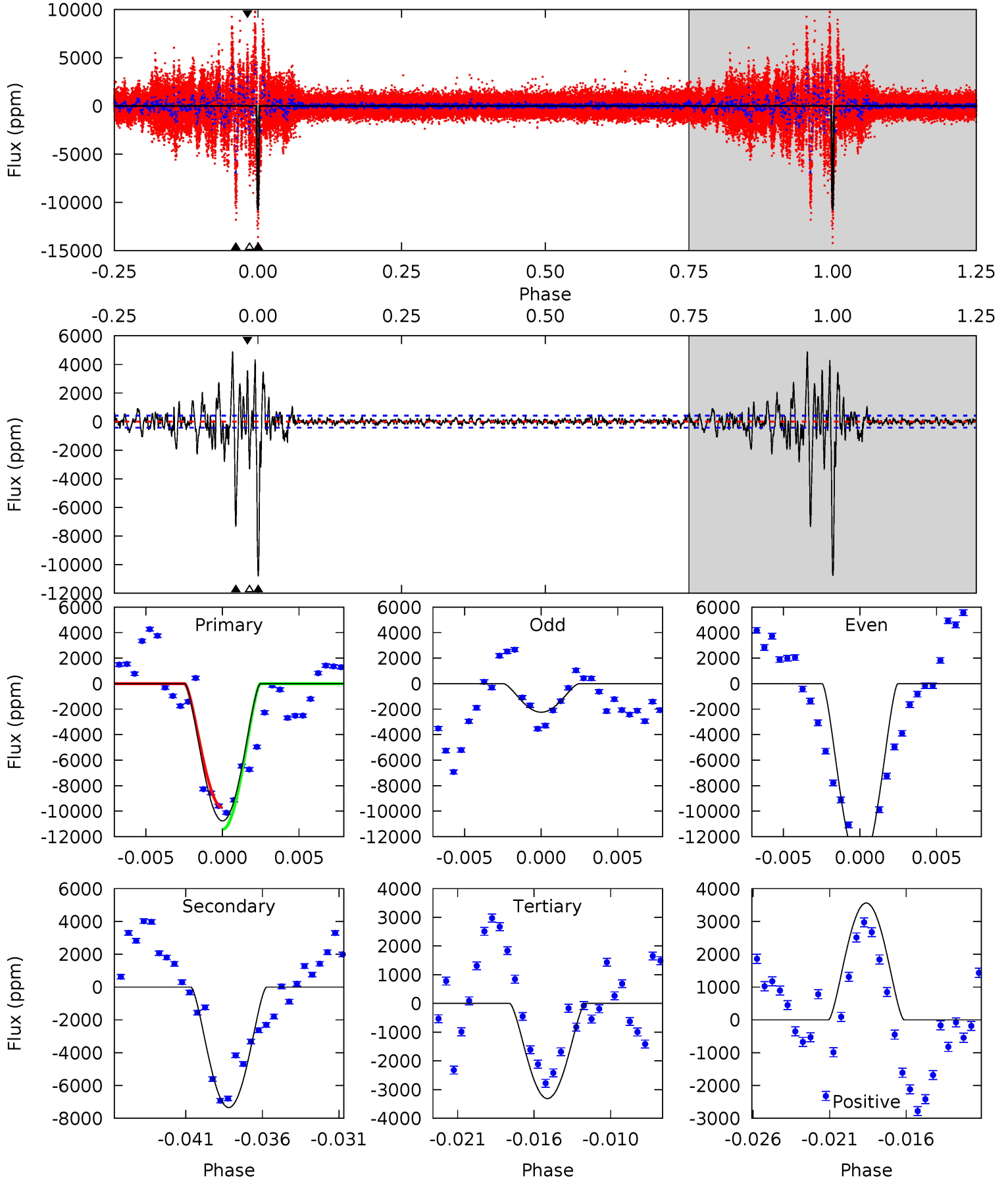
TCE 007661222-03 P=368.771269 Days $T_0=238.297492$ (BKJD)



DV Model-Shift Uniqueness Test

007661222-03, P = 368.777273 Days, E = 238.103362 Days

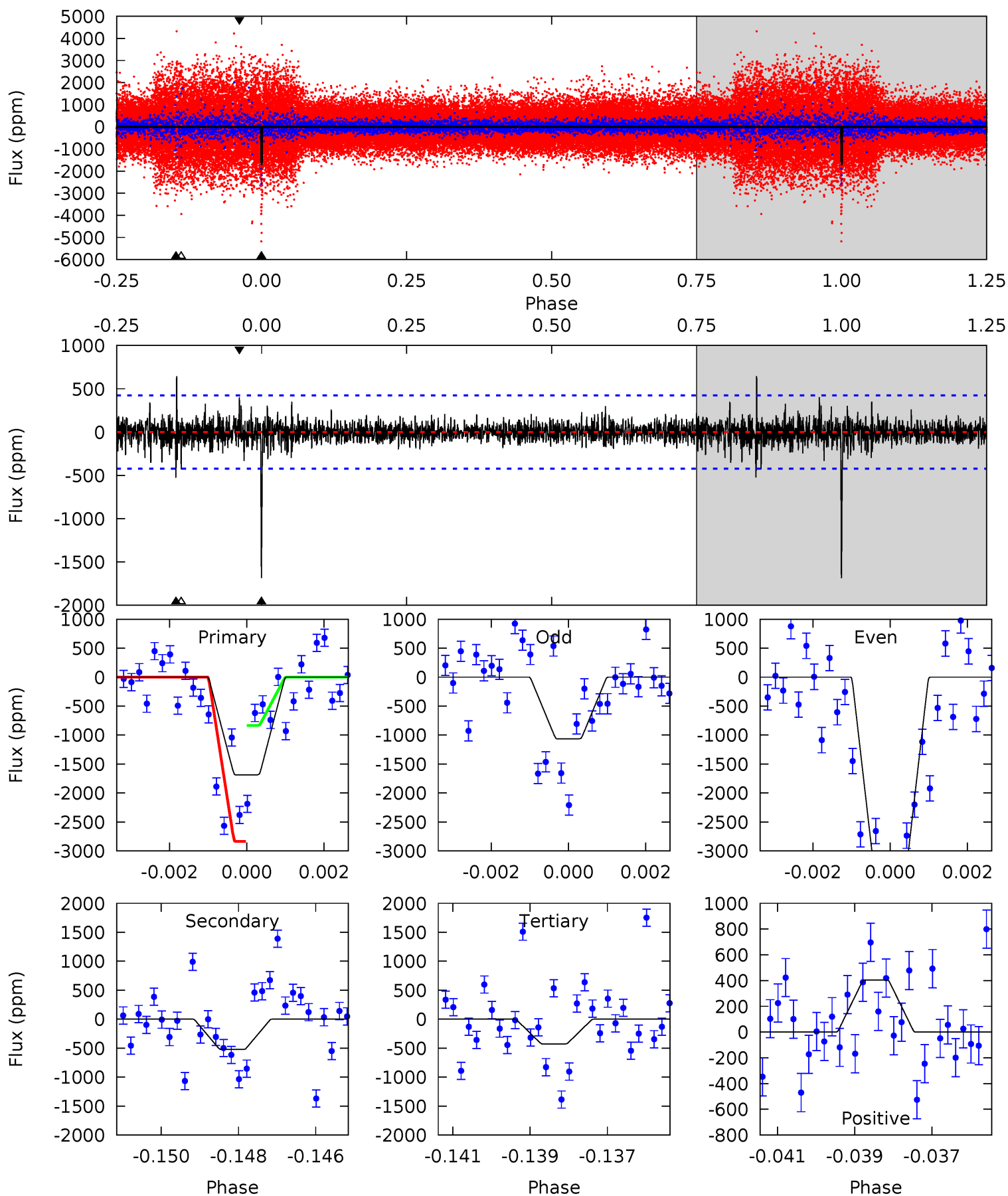
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
131.7	89.9	40.5	43.6	5.15	2.80	6.46	91.1	88.1	49.3	46.3	55.3	0.62	0.31	0



Alt Model-Shift Uniqueness Test

007661222-03, P = 368.771269 Days, E = 238.297492 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.2	6.58	5.39	5.08	5.32	3.08	1.03	15.8	16.1	1.19	1.49	18.5	2.39	0.28	12.7



Stellar Parameters For KIC 007661222

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5198^{+156}_{-156}	$4.617^{+0.072}_{-0.044}$	$-0.860^{+0.350}_{-0.300}$	$0.648^{+0.057}_{-0.057}$	$0.634^{+0.061}_{-0.028}$	$3.275^{+0.891}_{-0.526}$
	+3%/-3%	+2%/-1%	+41%/-35%	+9%/-9%	+10%/-4%	+27%/-16%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007661222-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-7346 ± 82	$16.65^{+14.39}_{-11.54}$	276^{+11}_{-10}	3553^{+2023}_{-602}	$11131^{+105261}_{-7950}$
Alt.	-523 ± 79	$13.70^{+14.06}_{-9.22}$	277^{+10}_{-12}	2585^{+979}_{-410}	1156^{+9738}_{-882}

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

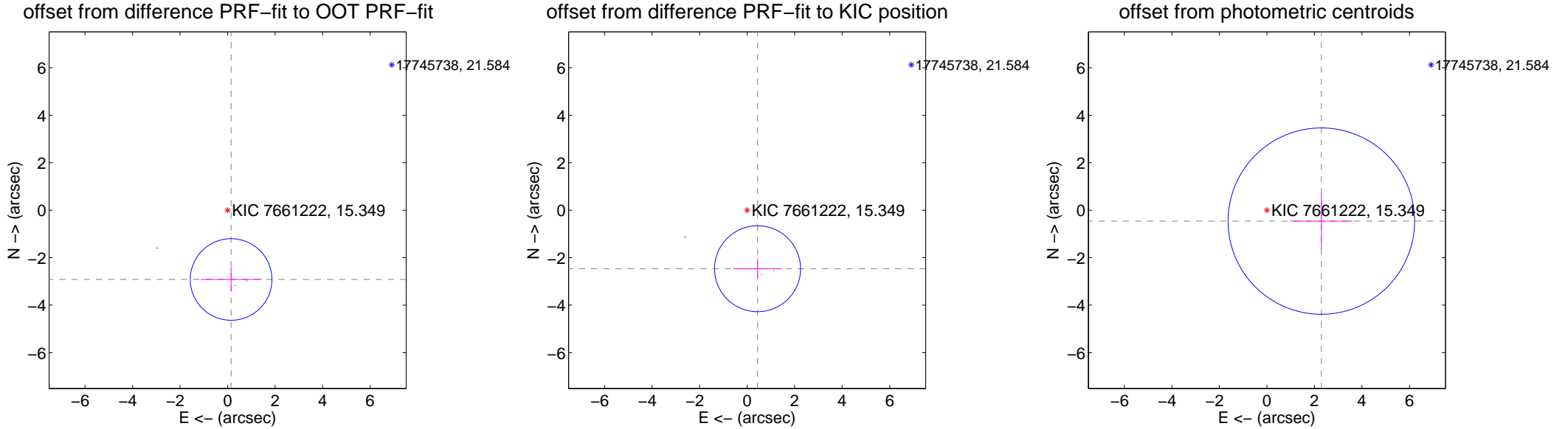
DV Centroid Data

Supplemental centroid analysis for 007661222-03. Kepler magnitude: 15.35. Transit SNR 14.89

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.54 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.923 ± 0.573	5.10	-0.148 ± 1.280	-2.919 ± 0.510
PRF-fit source offset from KIC position	2.505 ± 0.603	4.15	-0.439 ± 1.028	-2.466 ± 0.433
photometric centroid source offset	2.34 ± 1.31	1.79	-2.29 ± 1.31	-0.46 ± 1.18



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.

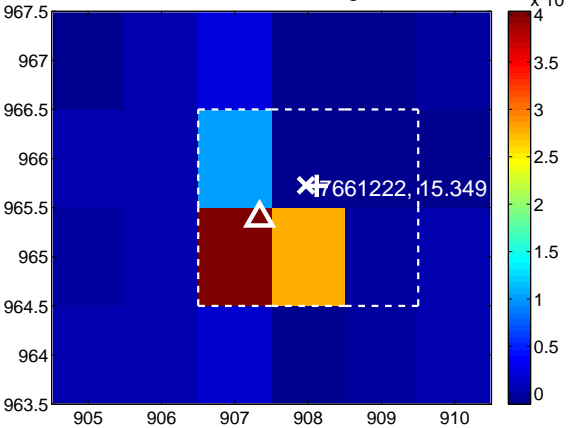
Q1 no difference image



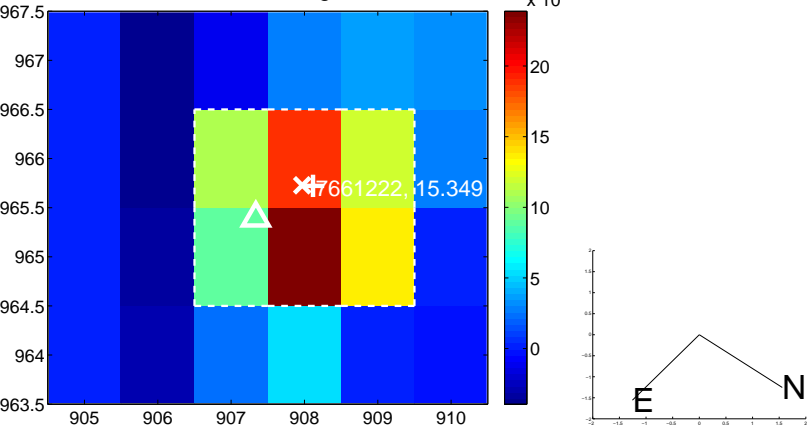
Q1 no OOT image



Q2 difference image



Q2 OOT image



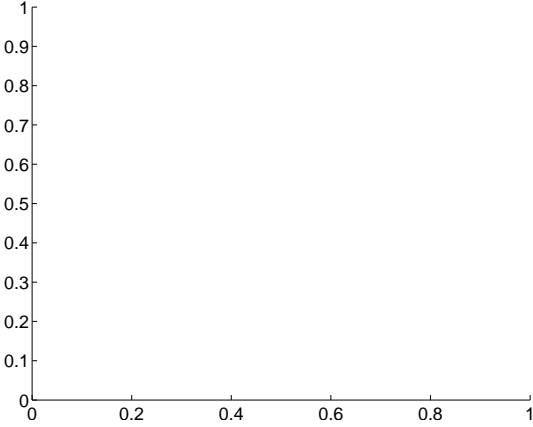
Q3 no difference image



Q3 no OOT image



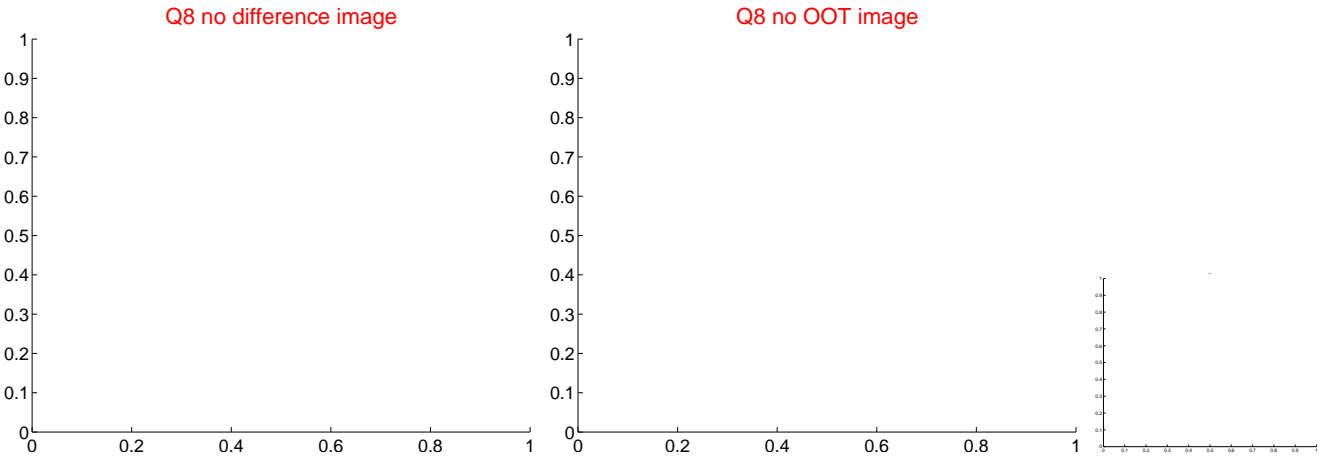
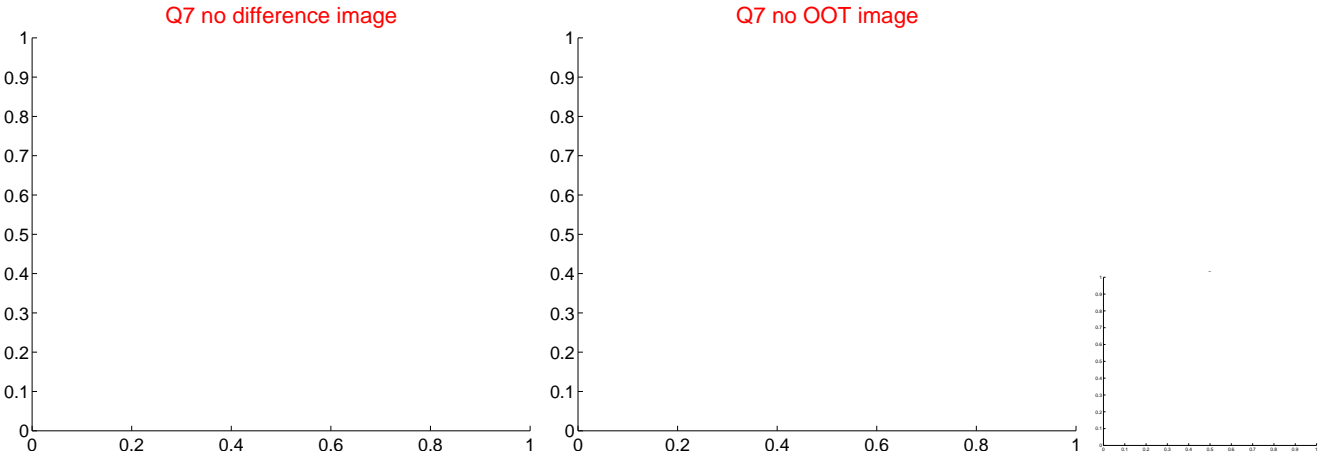
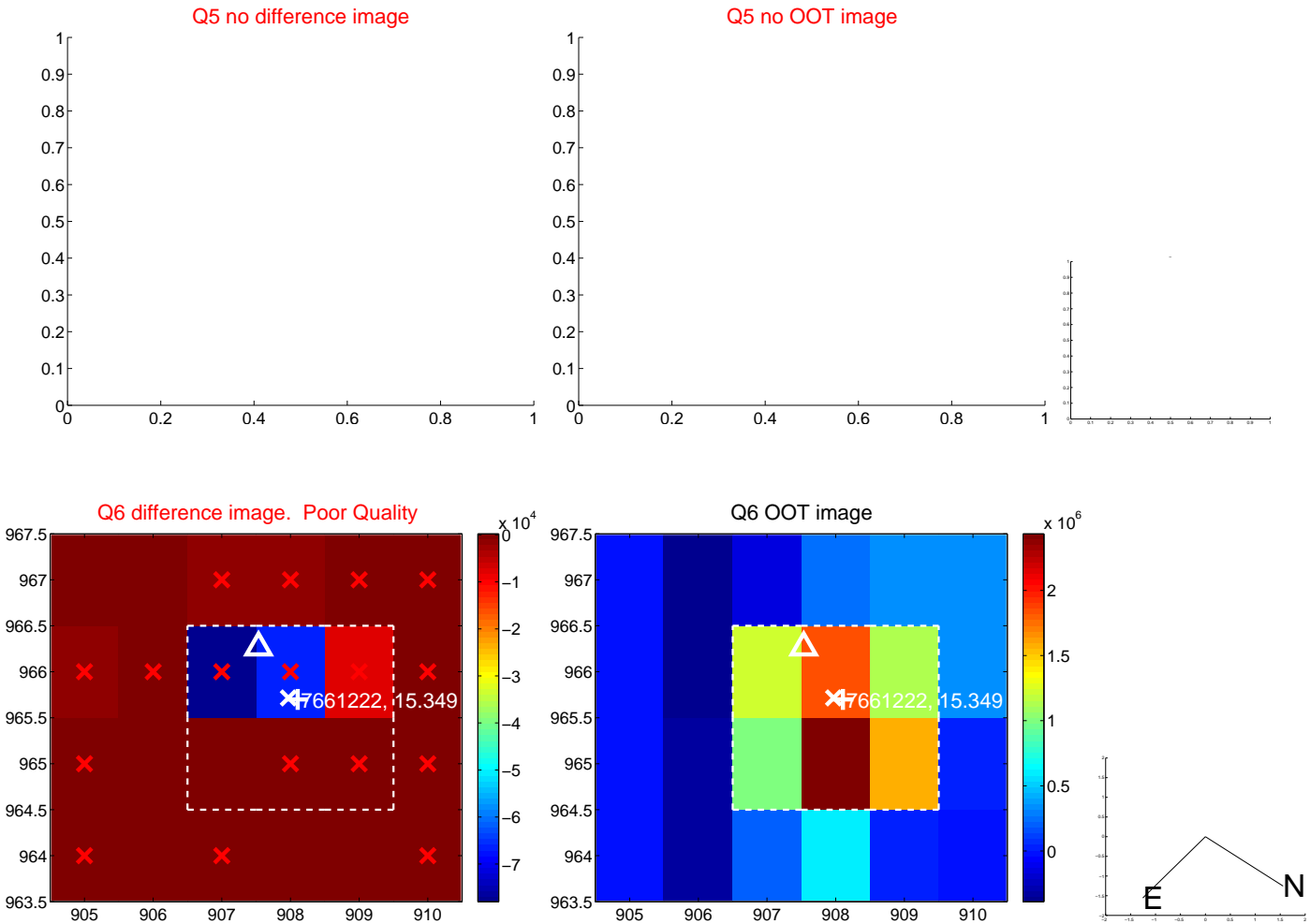
Q4 no difference image



Q4 no OOT image



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



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

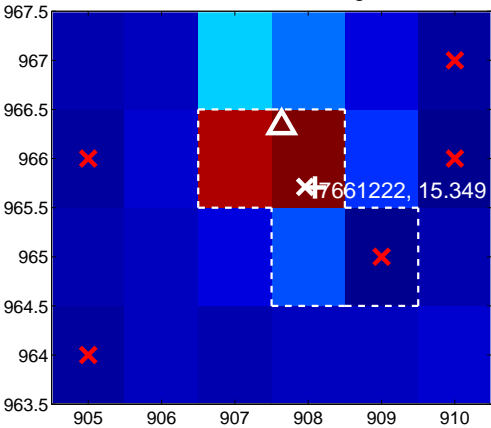
Q9 no difference image



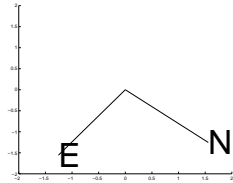
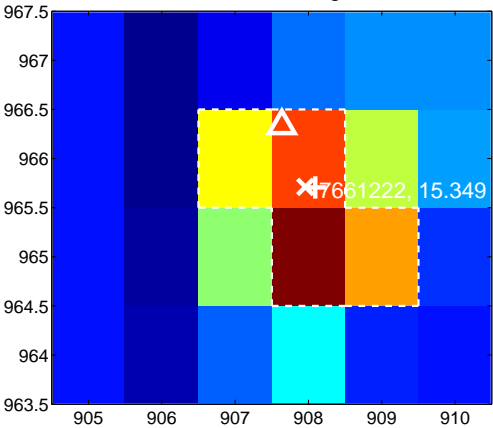
Q9 no OOT image



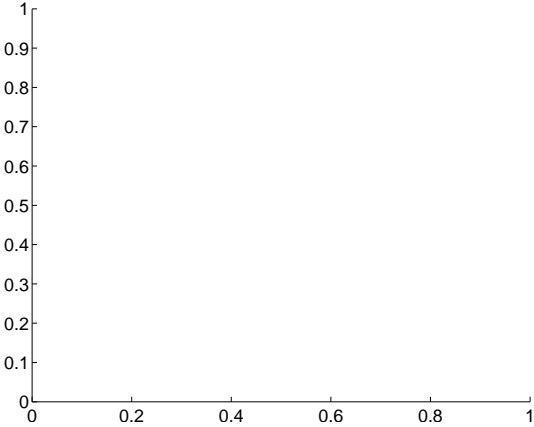
Q10 difference image



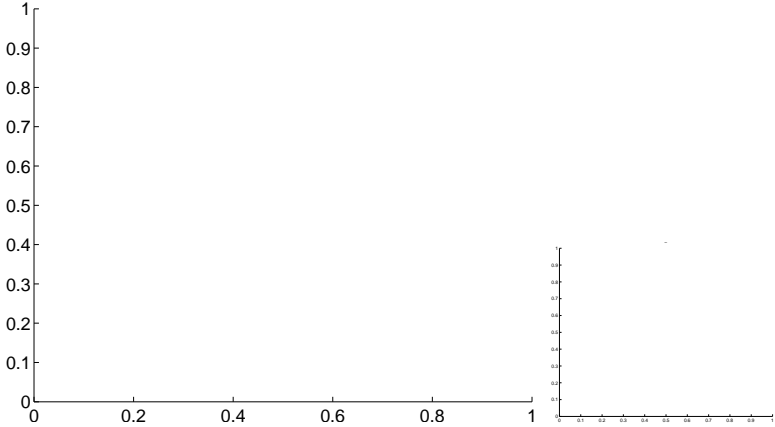
Q10 OOT image



Q11 no difference image



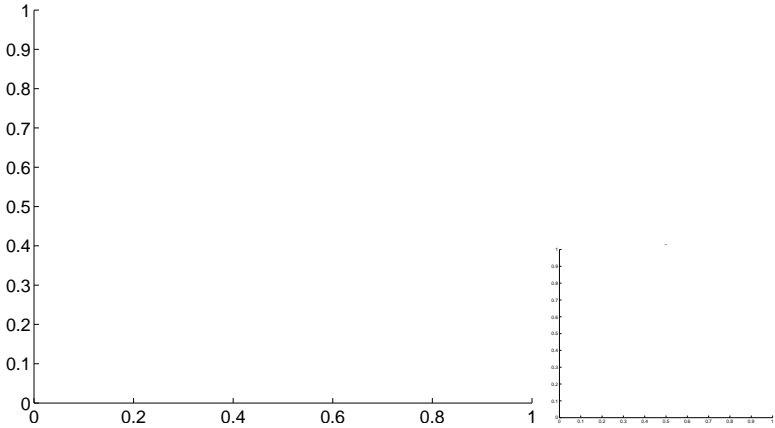
Q11 no OOT image



Q12 no difference image



Q12 no OOT image



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

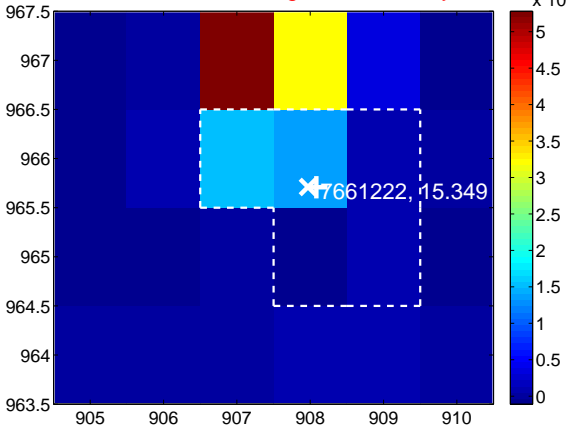
Q13 no difference image



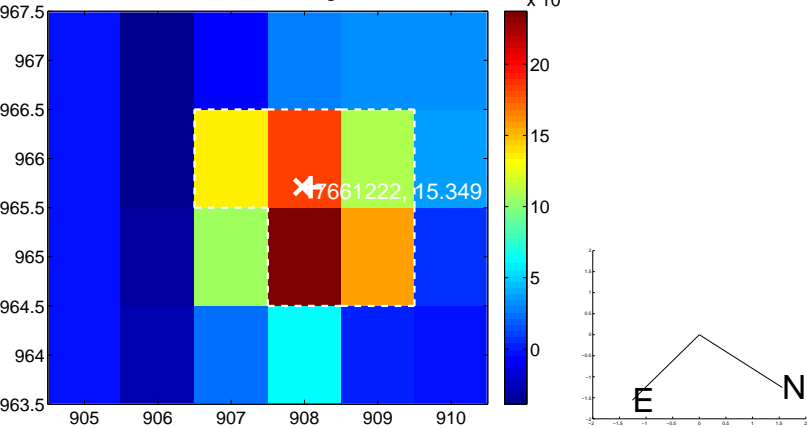
Q13 no OOT image



Q14 difference image. Poor Quality



Q14 OOT image



Q15 no difference image



Q15 no OOT image



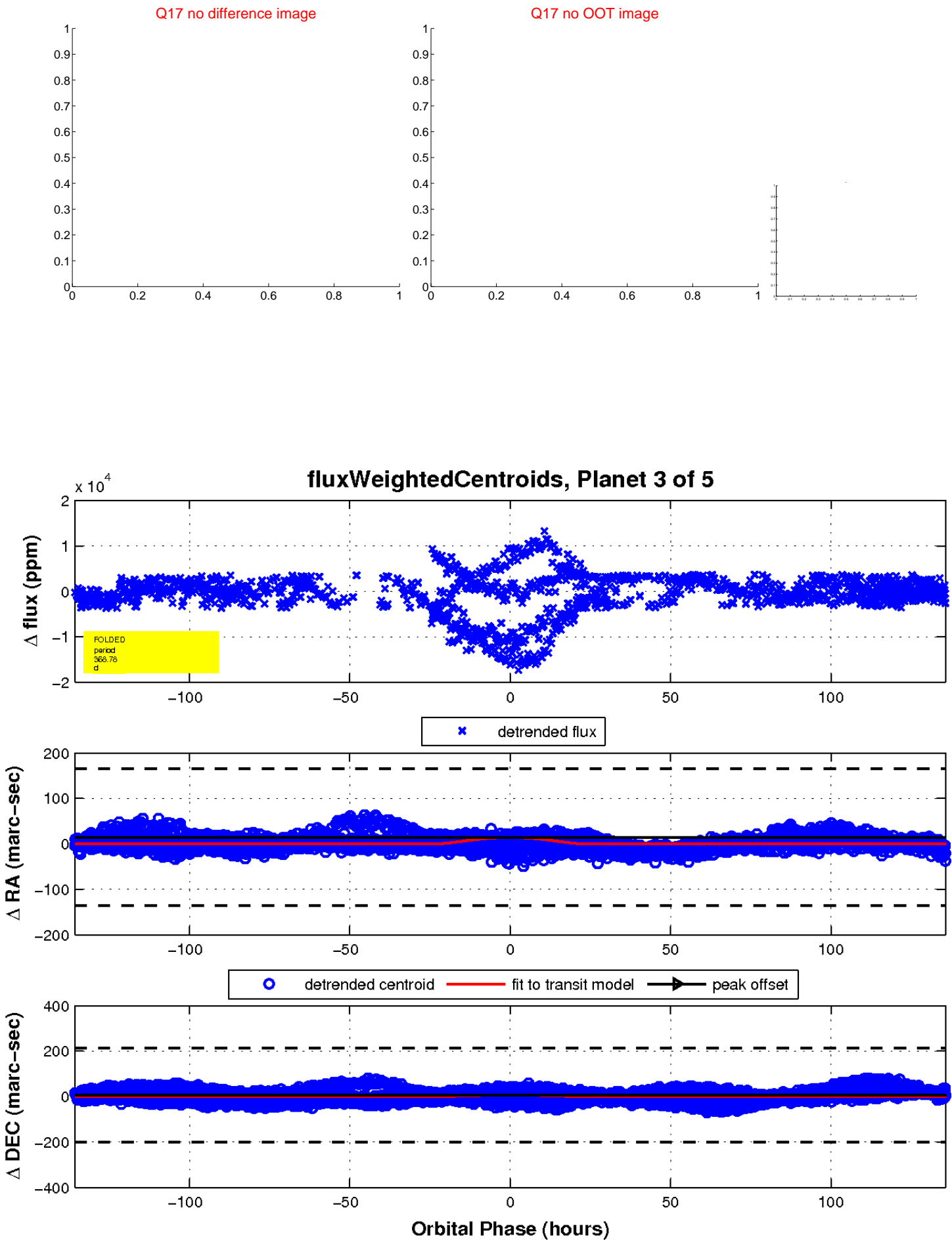
Q16 no difference image



Q16 no OOT image

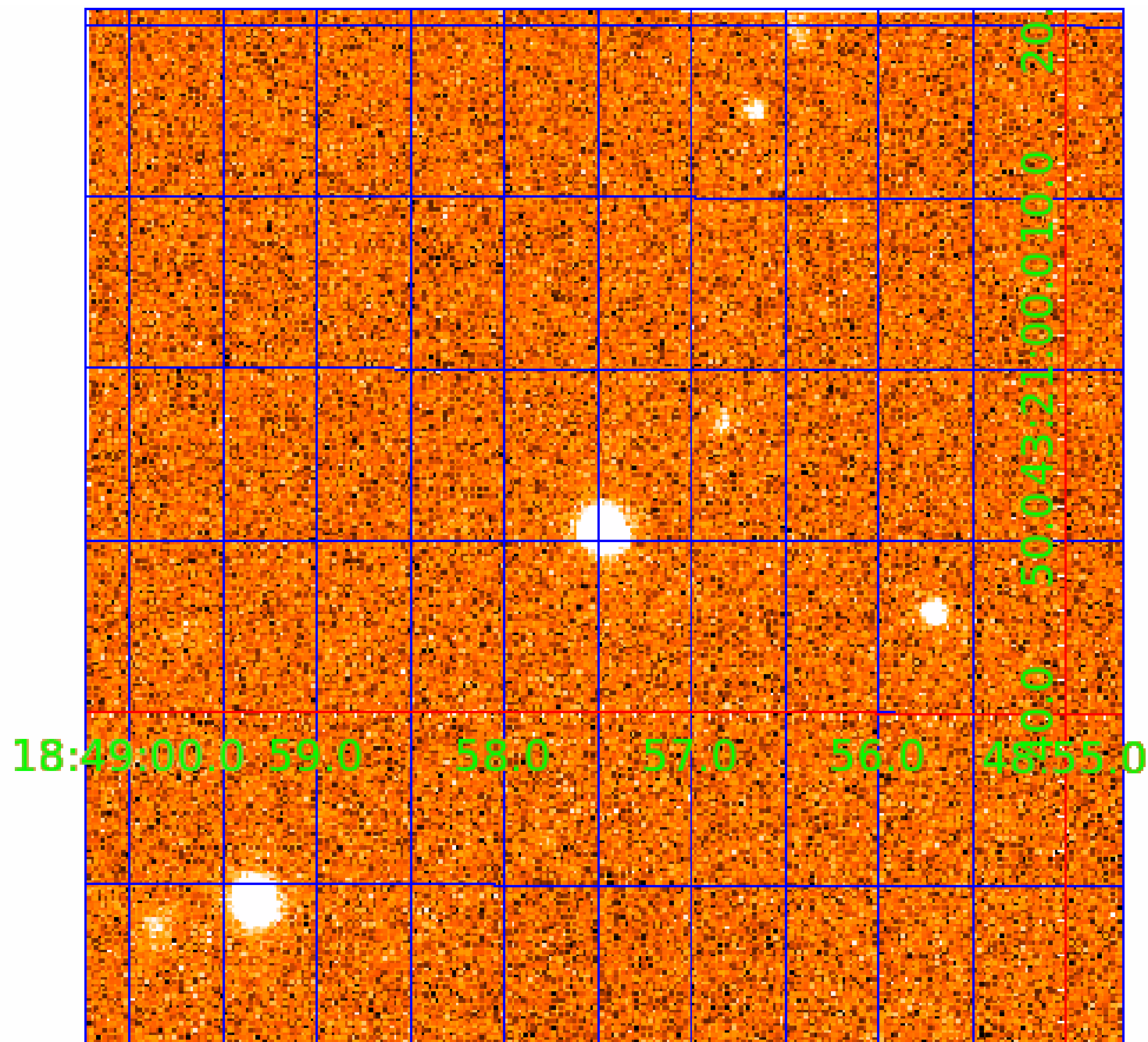


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007661222

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})
007661222-01	OBS	No	359.685145	247.525936	1032.9	15.000	11.1	-1.0	0.65	5198	2.06	0.38
007661222-02	OBS	No	374.564002	208.959003	2863.0	11.892	11.1	9.4	0.65	5198	3.45	0.36
007661222-03	OBS	No	368.777273	238.103362	6899.0	45.281	10.3	14.9	0.65	5198	9.90	0.37
007661222-04	OBS	No	372.326694	216.897769	6571.1	69.139	8.3	11.7	0.65	5198	9.67	0.36
007661222-05	OBS	No	376.728785	147.882192	795.8	24.903	7.8	6.3	0.65	5198	2.36	0.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007661222-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
007661222-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007661222-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
007661222-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
007661222-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_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.

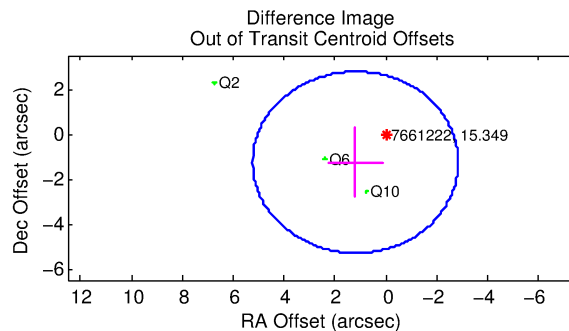
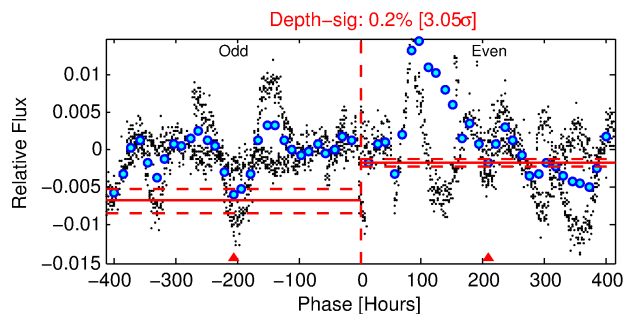
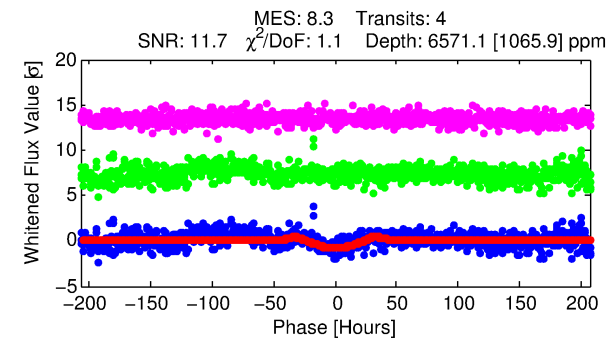
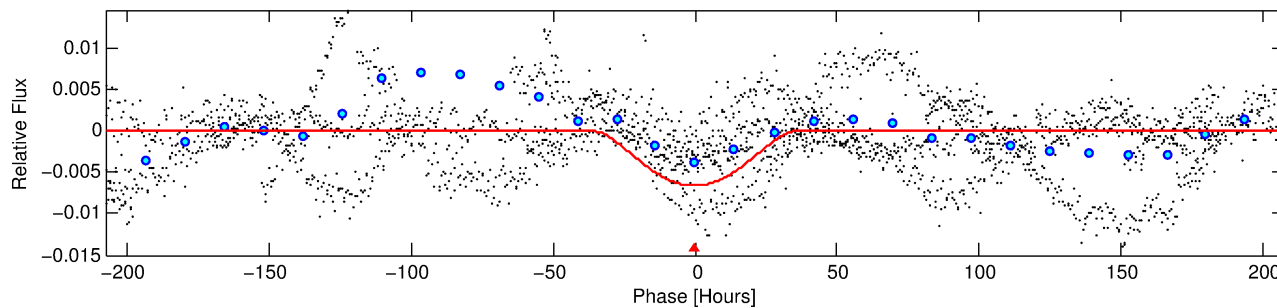
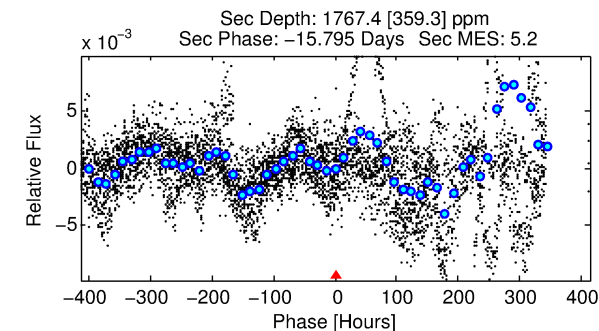
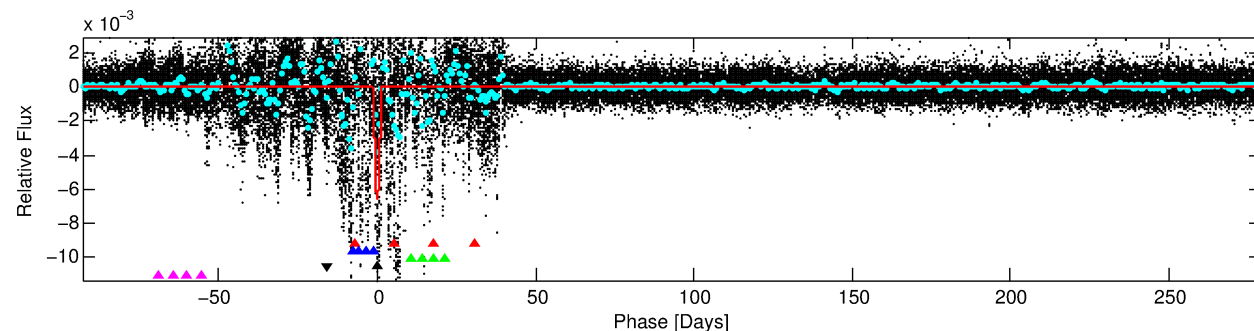
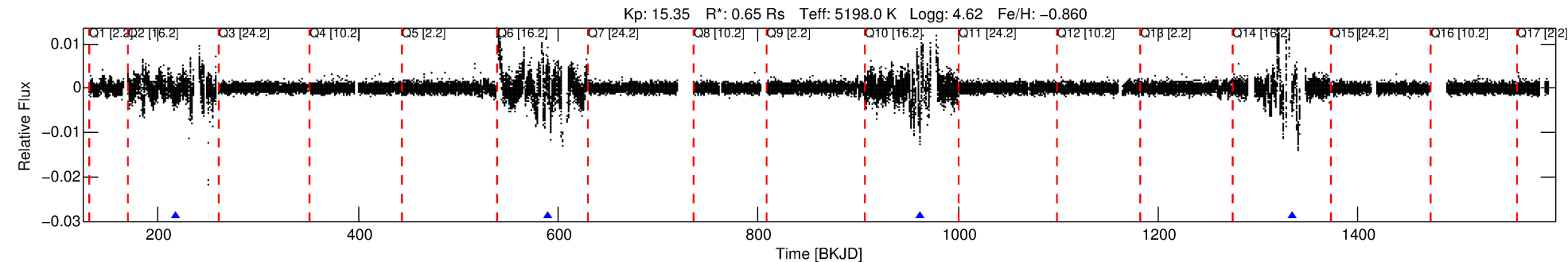
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007661222-04

No Significant Match Found

DV One-Page Summary

KIC: 7661222 Candidate: 4 of 5 Period: 372.327 d



DV Fit Results:

Period = 372.32669 [0.05707] d
Epoch = 216.8978 [0.1122] BKJD
Rp/R* = 0.1368 [0.2368]
a/R* = 22.28 [6.66]
b = 1.00 [0.32]
Seff = 0.36 [0.06]
Teq = 198 [9] K
Rp = 9.67 [16.77] Re
a = 0.8704 [0.0701] AU
Ag = 7876.06 [27342.14] [0.29σ]
Teff = 2882 [2501] K [1.07σ]

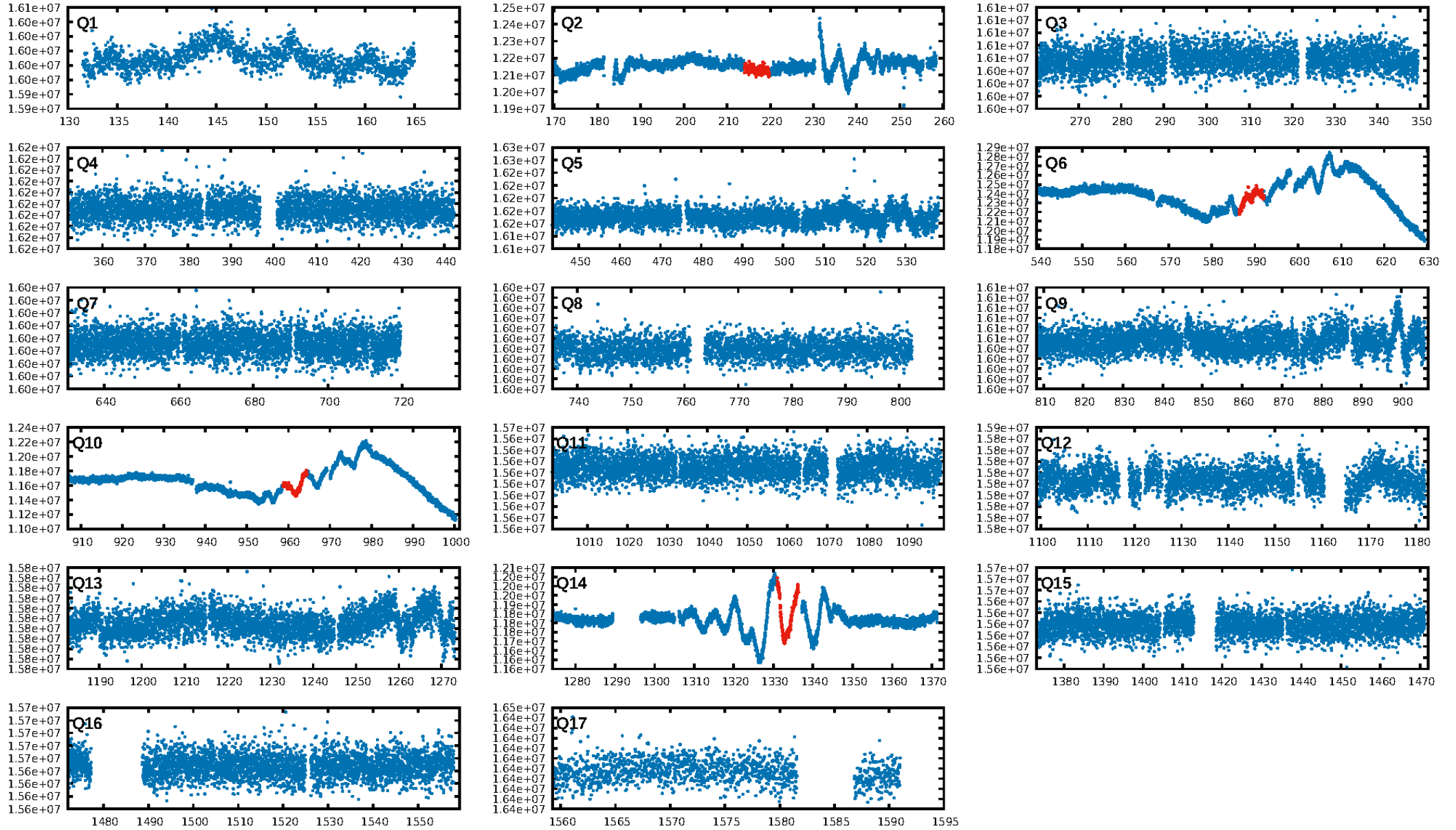
DV Diagnostic Results:

ShortPeriod-sig: 69.7% [1.03σ]
LongPeriod-sig: 55.6% [0.77σ]
ModelChiSquare2-sig: 2.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.85e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.277
Centroid-sig: 0.3%
Centroid-so: 3.439 arcsec [2.05σ]
OotOffset-rm: 1.736 arcsec [1.29σ]
KicOffset-rm: 1.216 arcsec [1.02σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.67 [2/3]

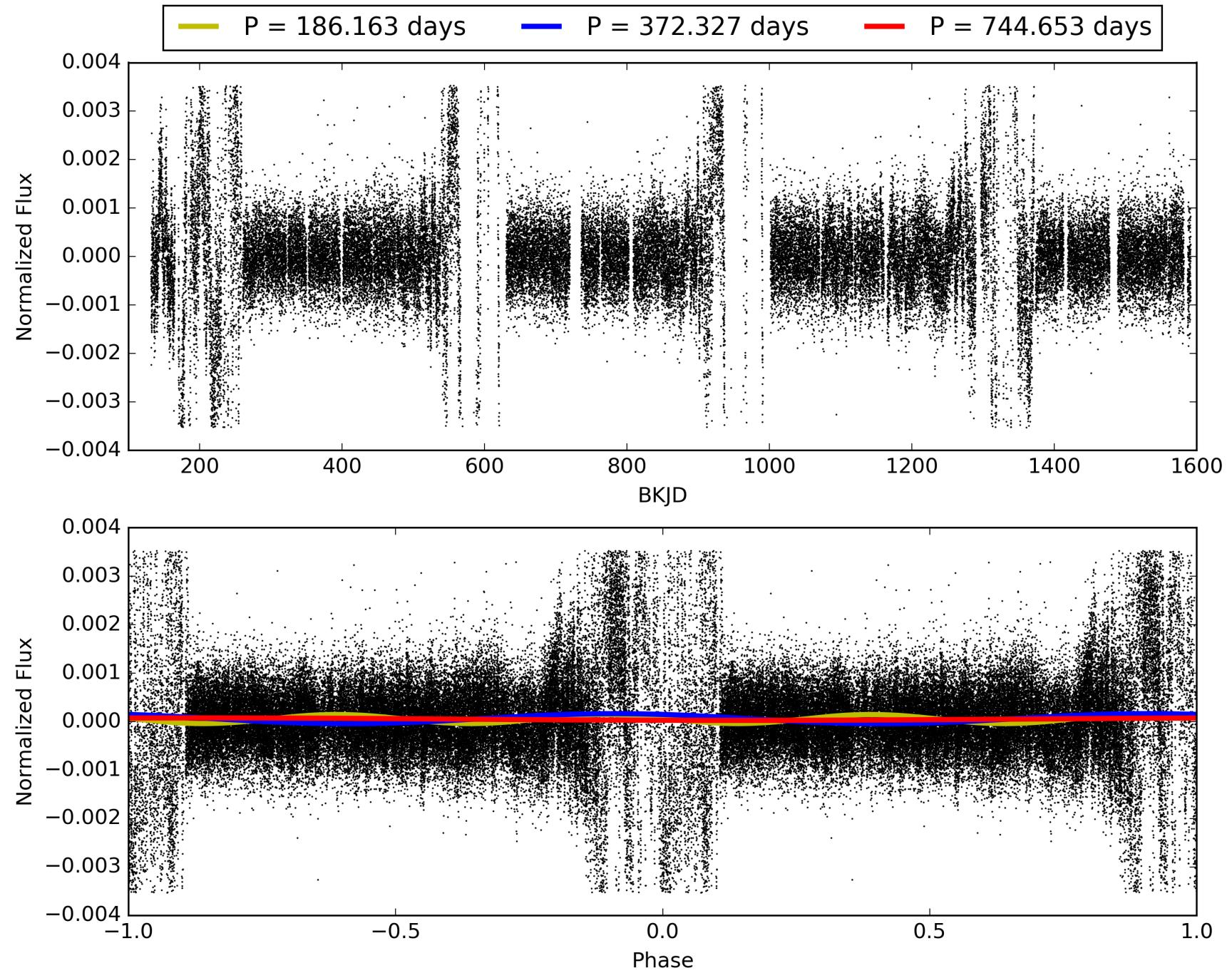
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 21:24:36 Z

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

TCE 007661222-04, PDC Light Curves

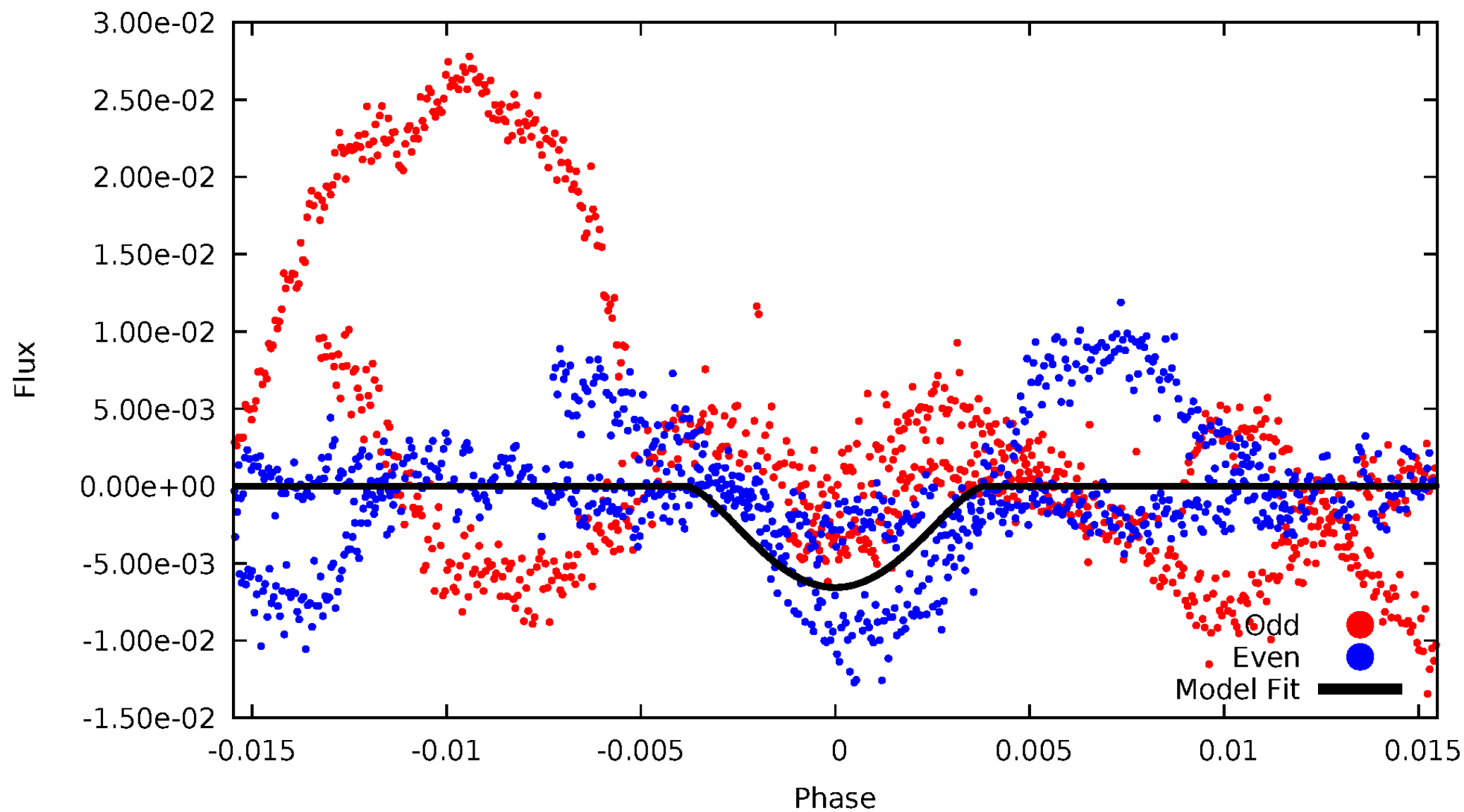


TCE 007661222-04



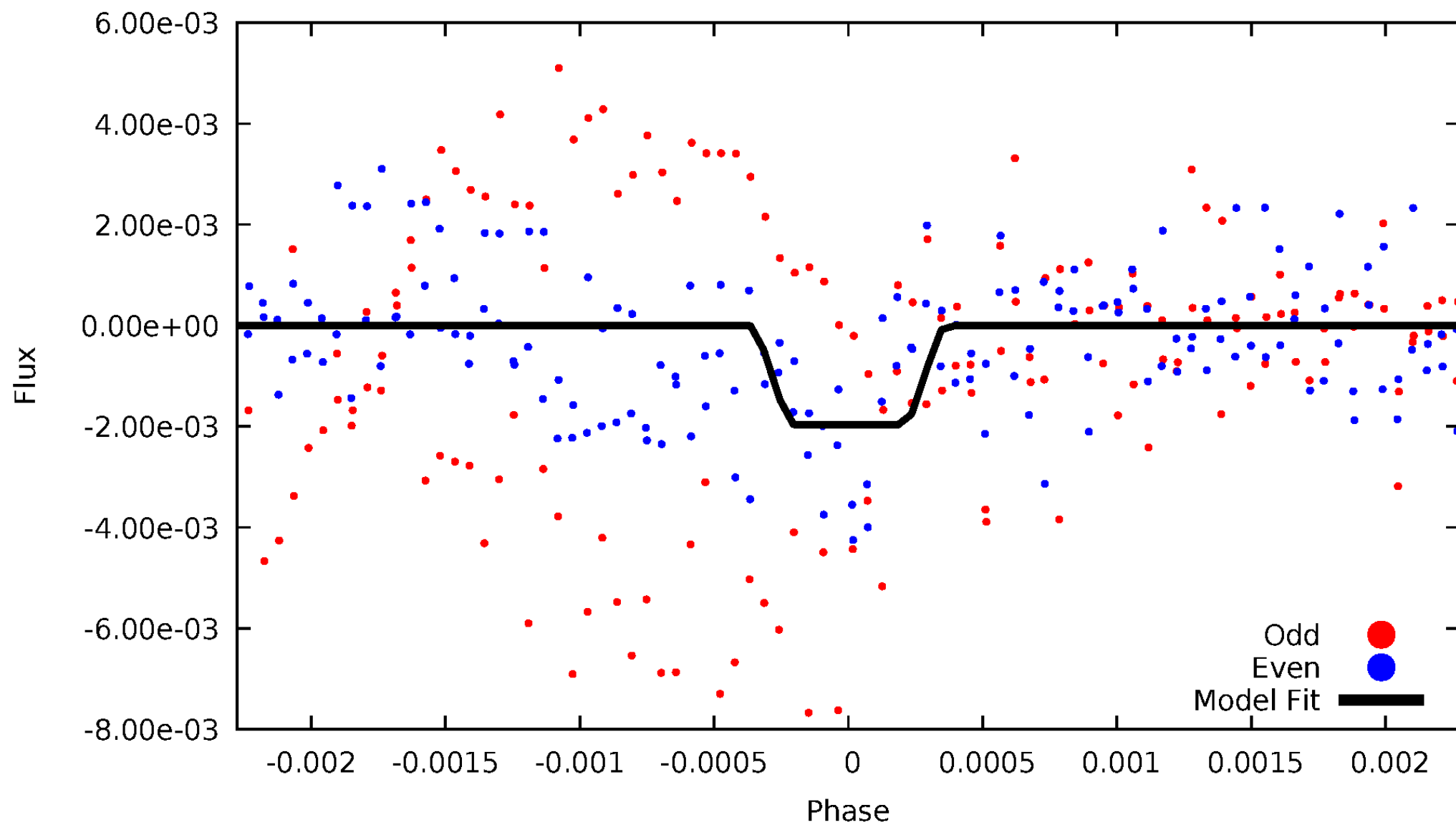
DV Odd/Even

TCE 007661222-04



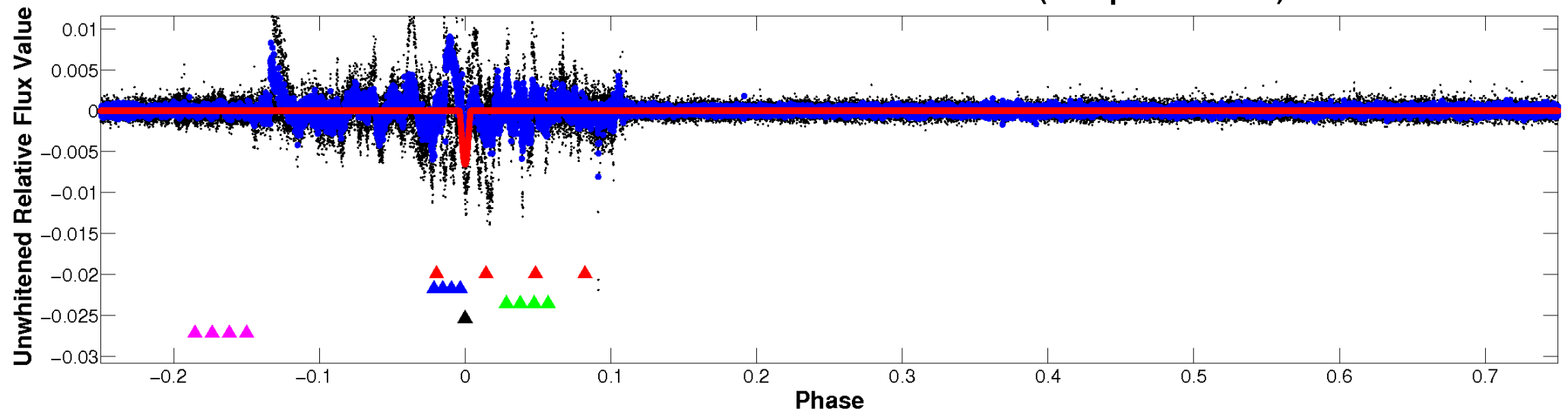
ALT Odd/Even

TCE 007661222-04

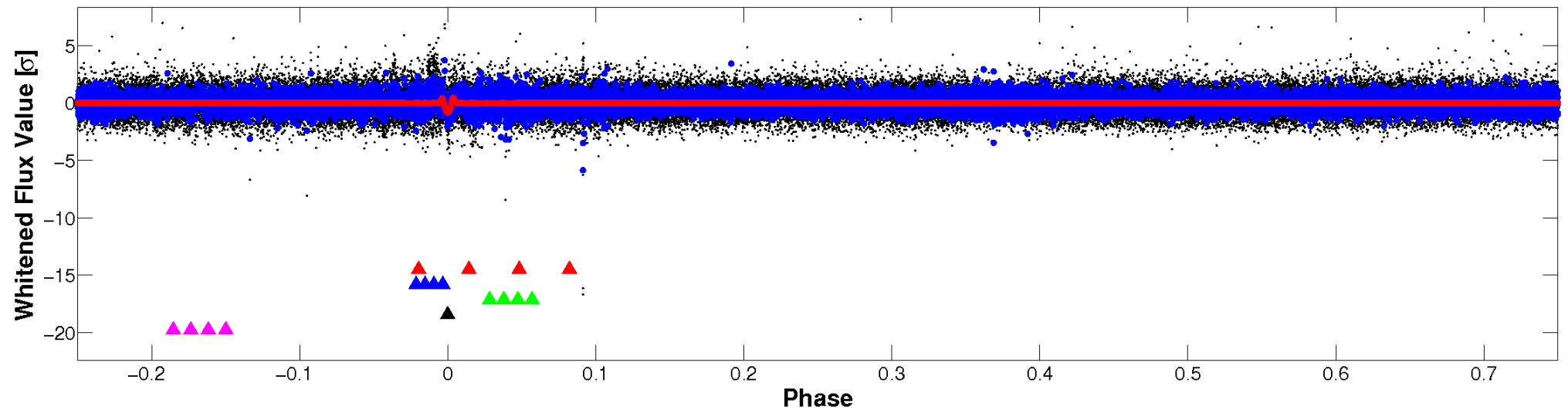


Non-Whitened Vs. Whitened Light Curve

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

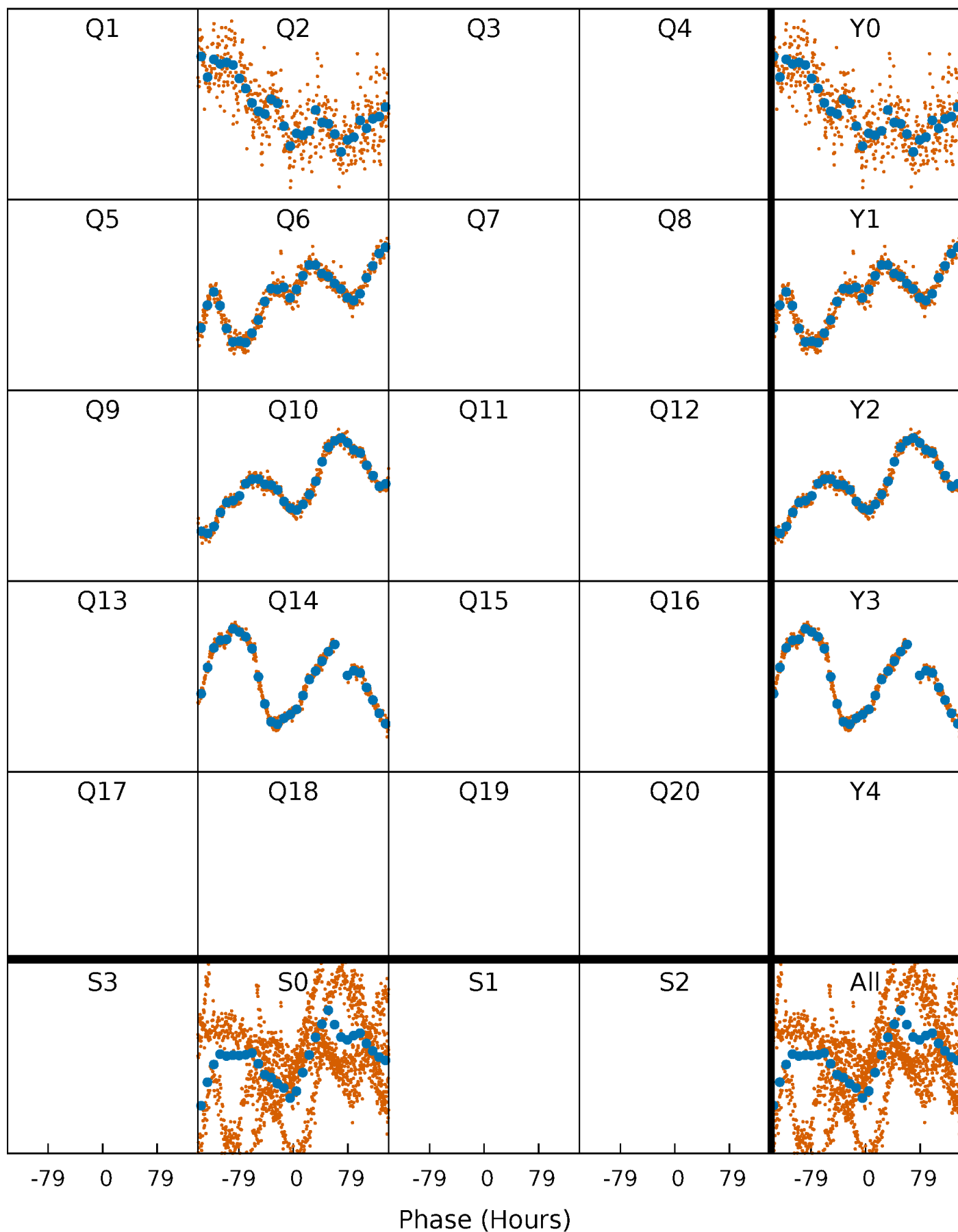


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



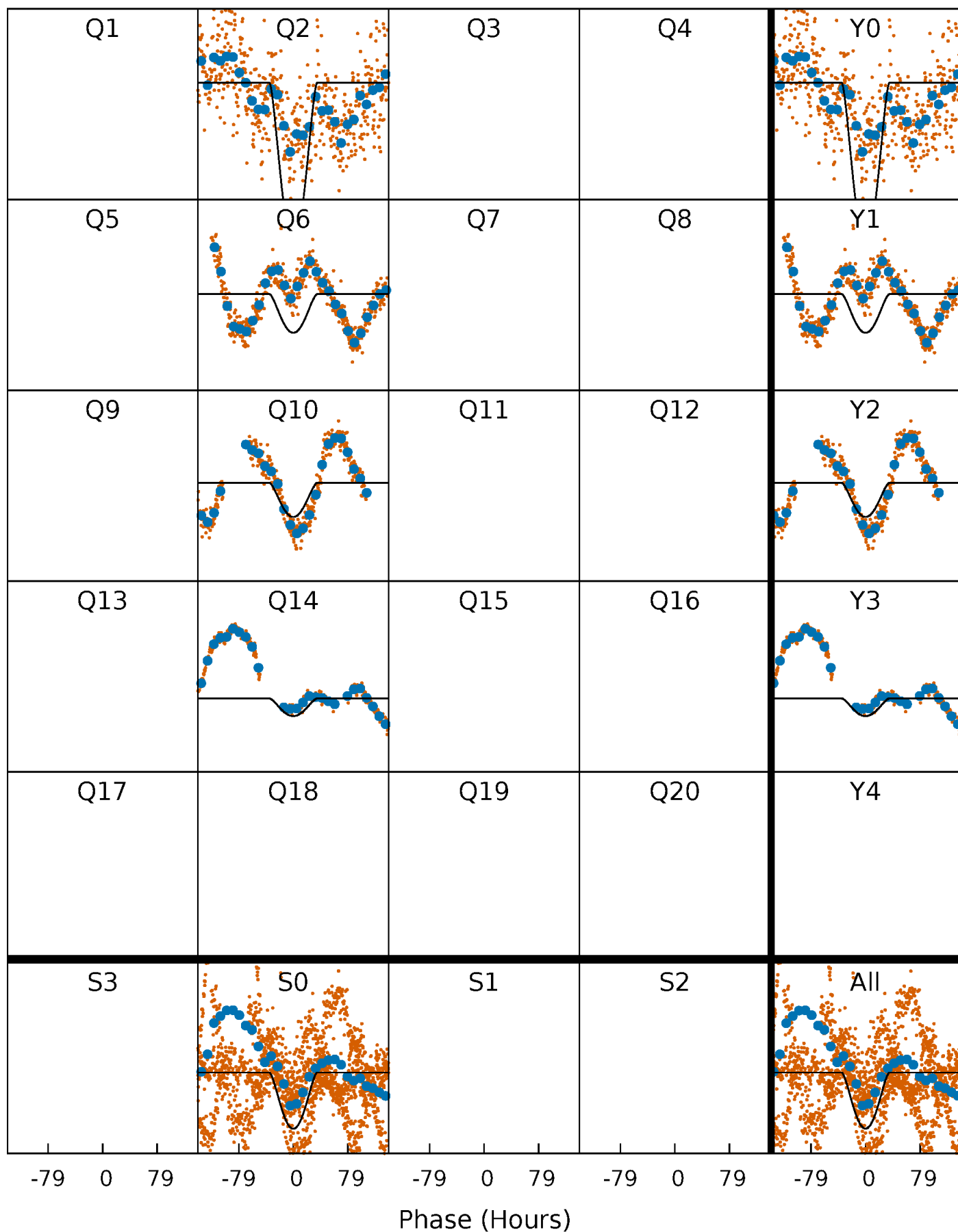
PDC Quarter-Phased Transit Curves

TCE 007661222-04 P=372.326694 Days $T_0=216.897769$ (BKJD)



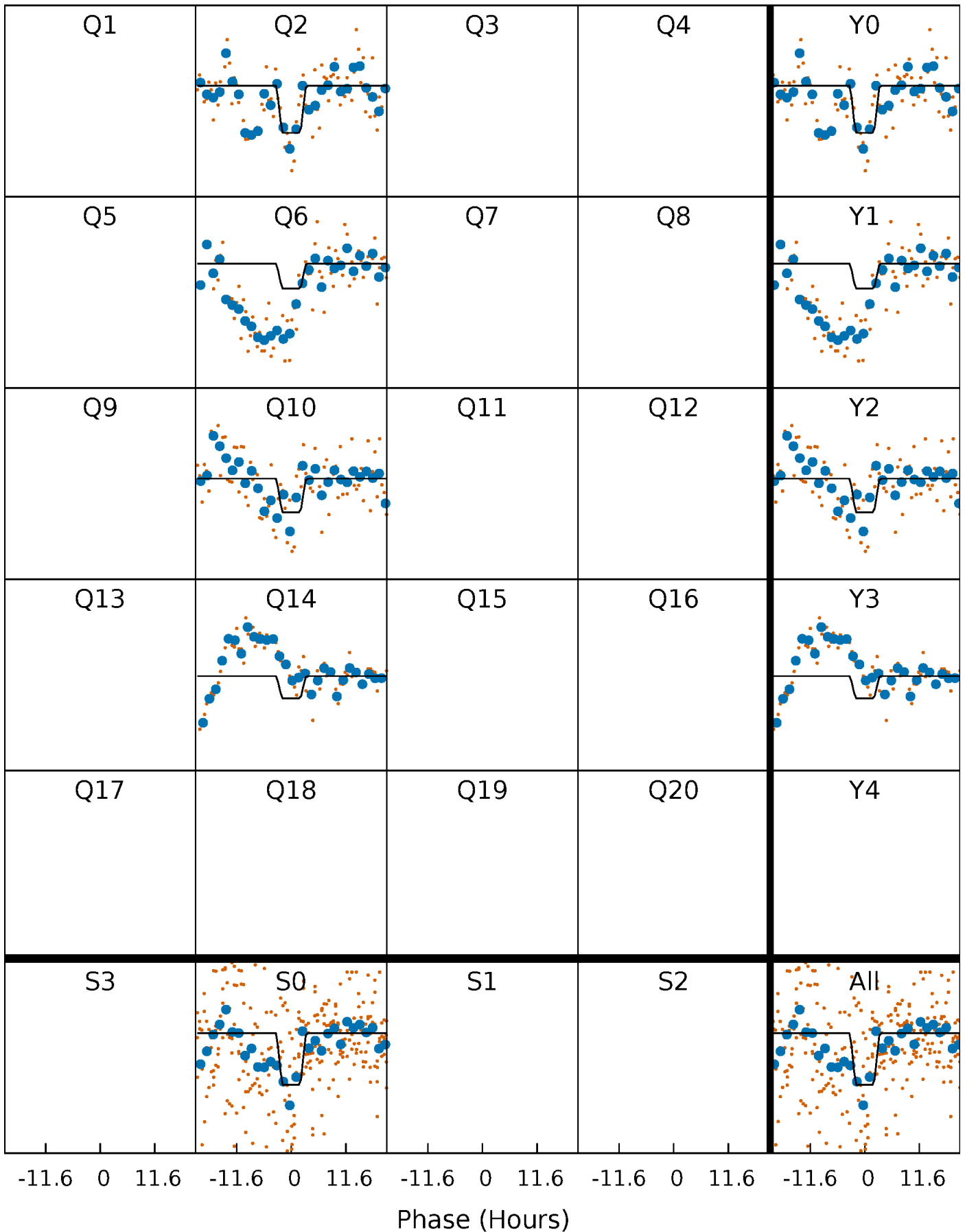
DV Quarter-Phased Transit Curves

TCE 007661222-04 P=372.326694 Days $T_0=216.897769$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

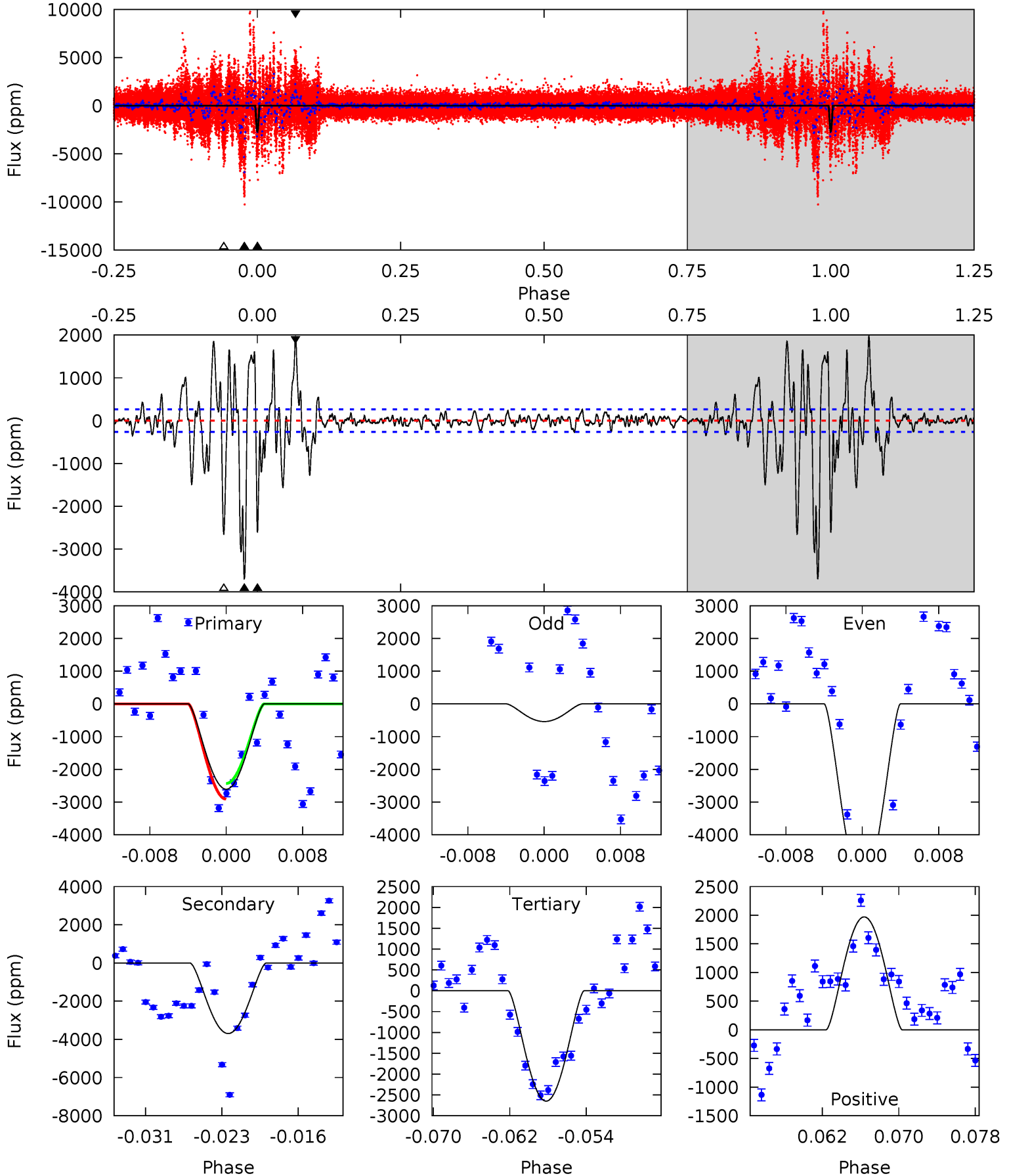
TCE 007661222-04 P=372.503799 Days $T_0=216.716831$ (BKJD)



DV Model-Shift Uniqueness Test

007661222-04, P = 372.326694 Days, E = 216.897769 Days

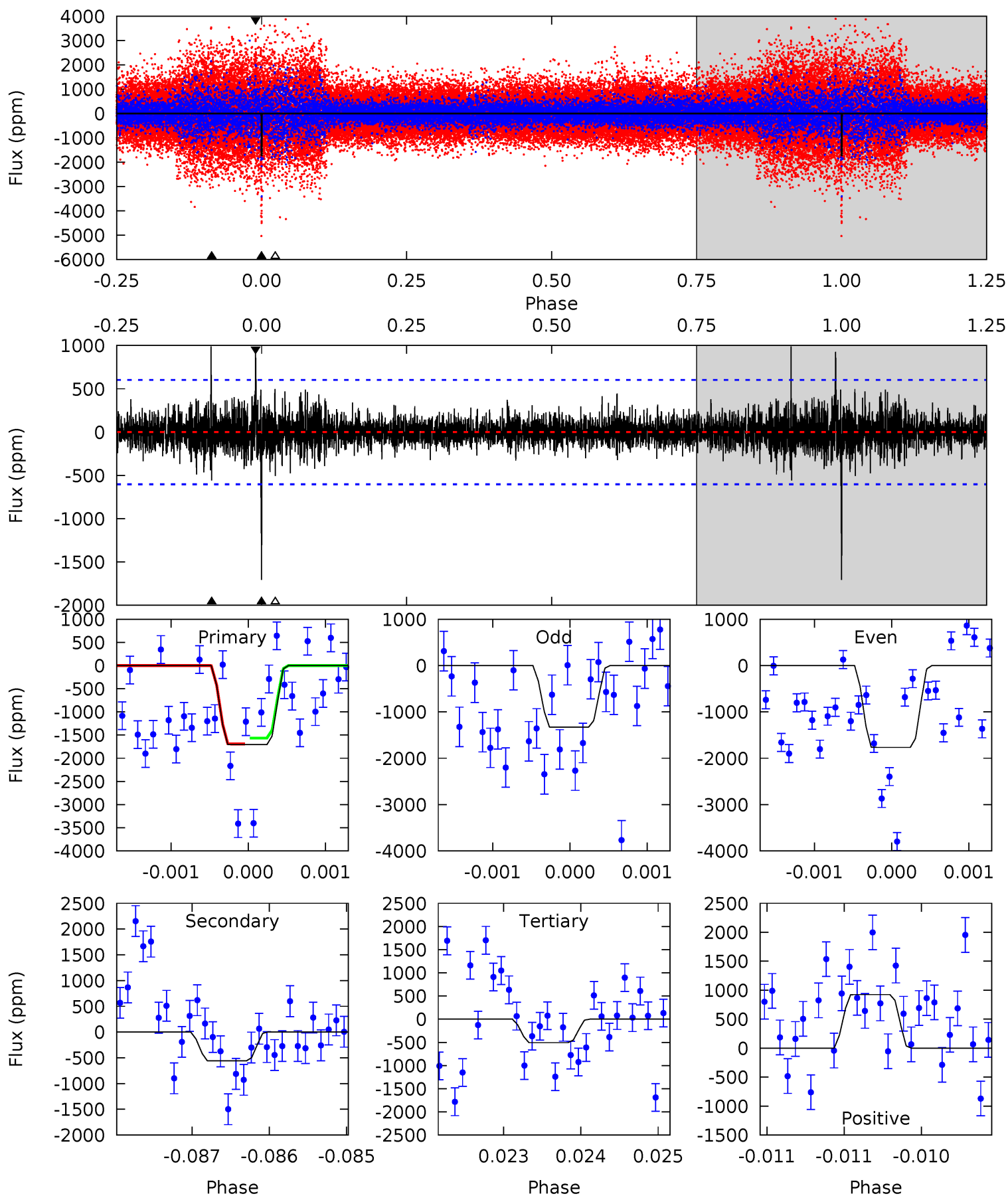
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
50.3	71.2	51.1	38.0	5.07	2.66	7.81	-0.80	12.3	20.2	33.2	31.0	1.08	0.35	0



Alt Model-Shift Uniqueness Test

007661222-04, P = 372.503799 Days, E = 216.716831 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.6	5.10	4.62	8.44	5.50	3.36	1.09	11.0	7.13	0.48	-3.34	2.15	1.12	0.37	0.58



Stellar Parameters For KIC 007661222

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5198^{+156}_{-156}	$4.617^{+0.072}_{-0.044}$	$-0.860^{+0.350}_{-0.300}$	$0.648^{+0.057}_{-0.057}$	$0.634^{+0.061}_{-0.028}$	$3.275^{+0.891}_{-0.526}$
	+3%/-3%	+2%/-1%	+41%/-35%	+9%/-9%	+10%/-4%	+27%/-16%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007661222-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3695 ± 52	$16.21^{+13.43}_{-10.94}$	275^{+10}_{-10}	3225^{+1512}_{-498}	5951^{+50185}_{-4174}
Alt.	-559 ± 110	$12.04^{+11.74}_{-8.10}$	275^{+11}_{-9}	2703^{+1053}_{-435}	1664^{+13648}_{-1271}

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

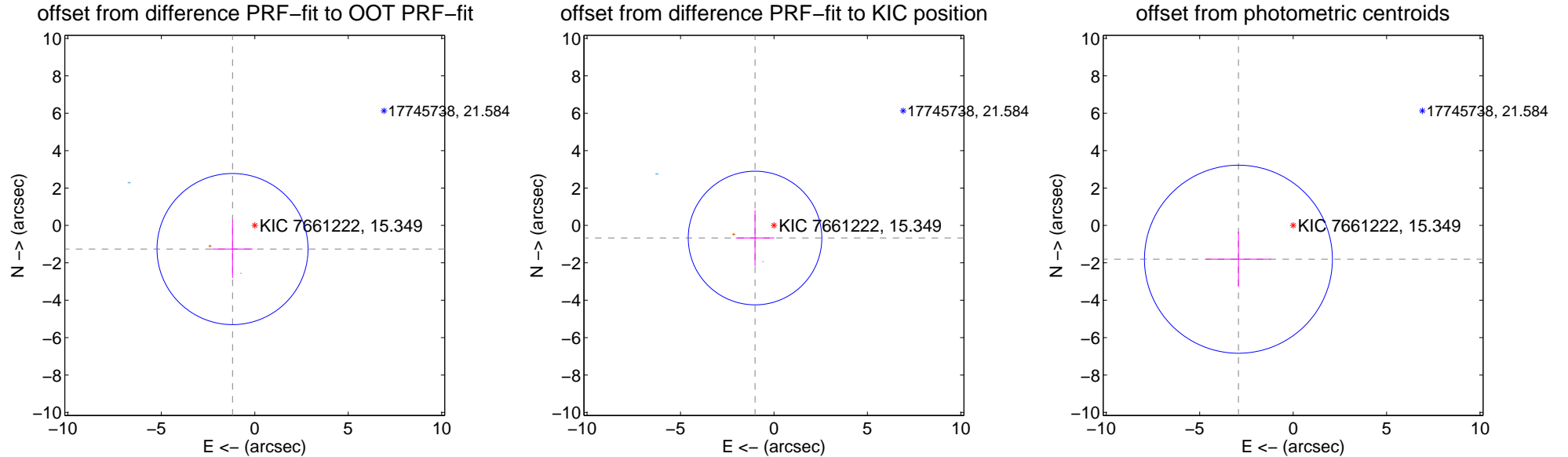
DV Centroid Data

Supplemental centroid analysis for 007661222-04. Kepler magnitude: 15.35. Transit SNR 11.69

There are 2 quarters with good PRF difference image offsets

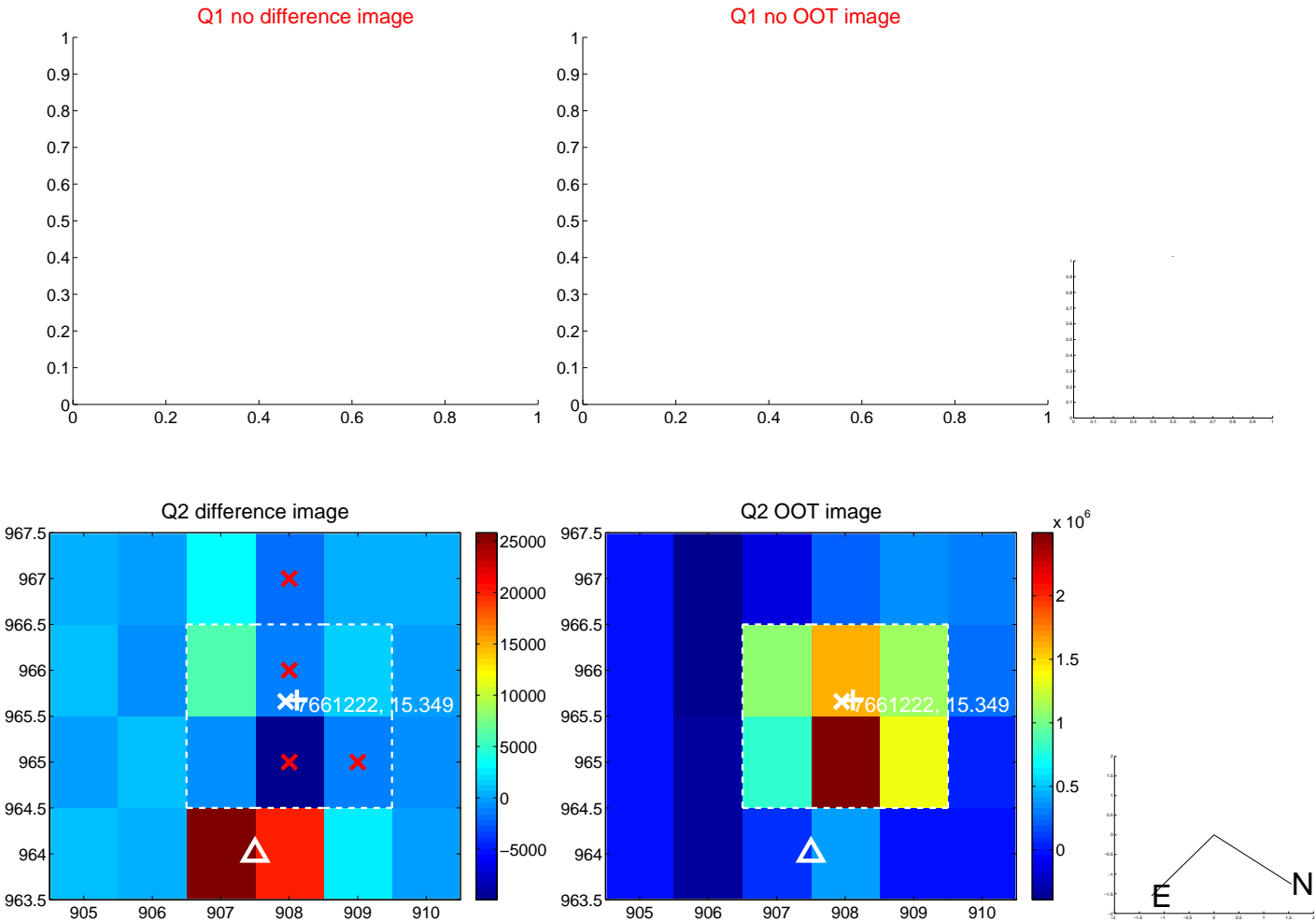
The direct PRF centroid is offset from the target star catalog position by about 0.65 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.736 ± 1.346	1.29	1.191 ± 1.084	-1.263 ± 1.543
PRF-fit source offset from KIC position	1.216 ± 1.191	1.02	1.012 ± 1.030	-0.673 ± 1.493
photometric centroid source offset	3.44 ± 1.68	2.05	2.93 ± 1.75	-1.81 ± 1.48



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

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



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

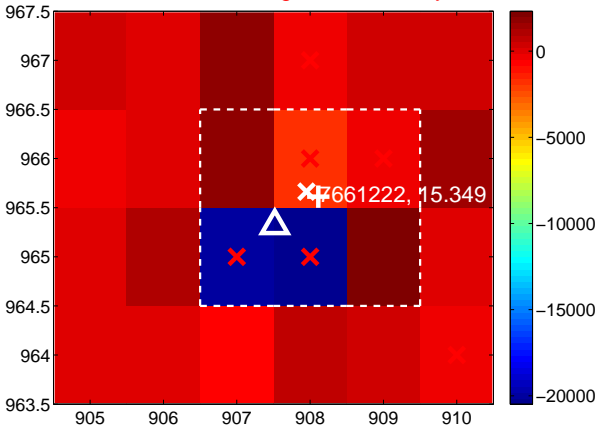
Q5 no difference image



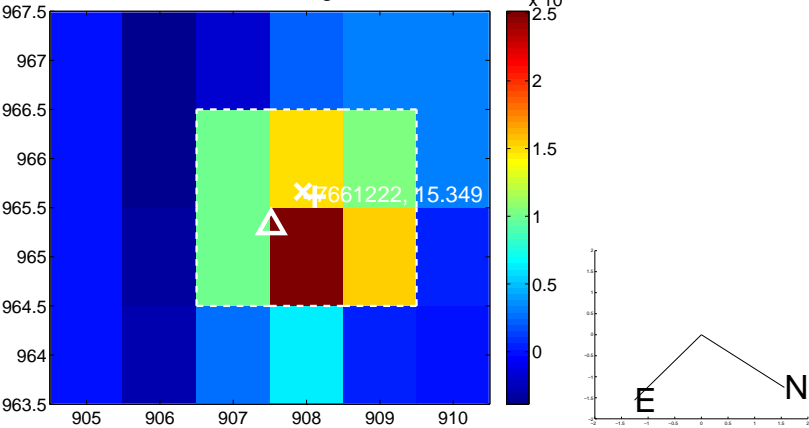
Q5 no OOT image



Q6 difference image. Poor Quality



Q6 OOT image



Q7 no difference image



Q7 no OOT image



Q8 no difference image

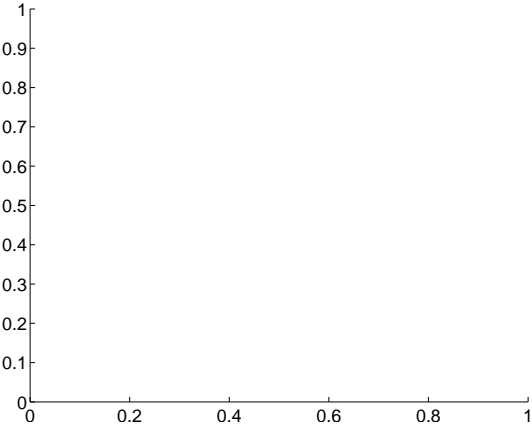


Q8 no OOT image

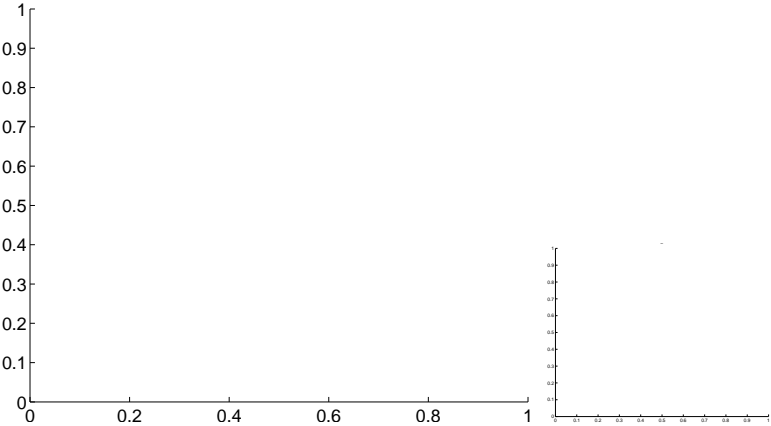


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

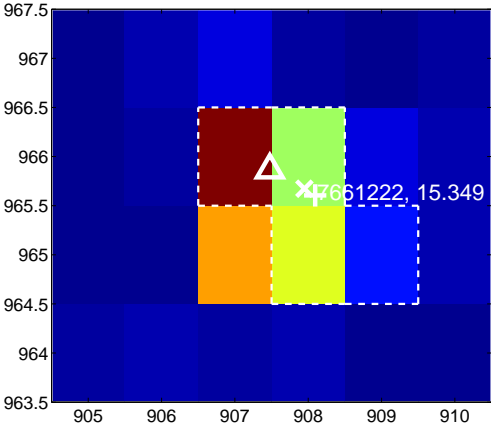
Q9 no difference image



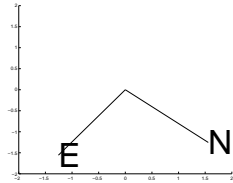
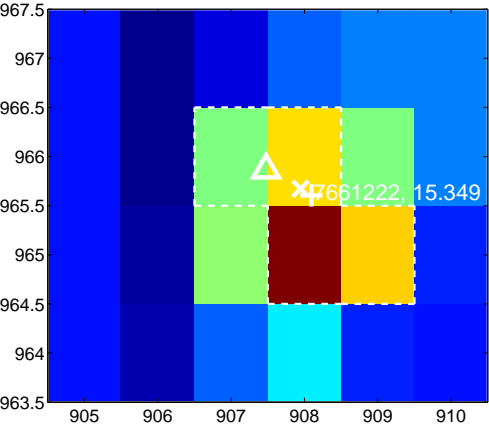
Q9 no OOT image



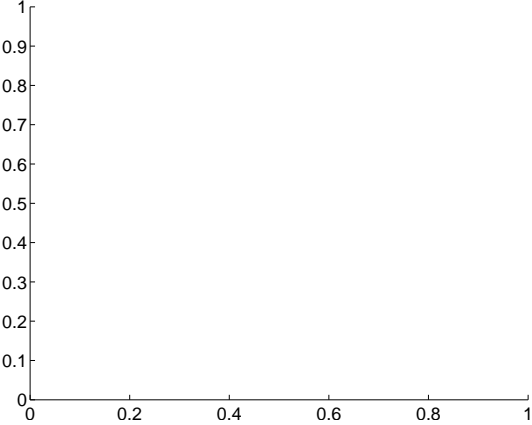
Q10 difference image



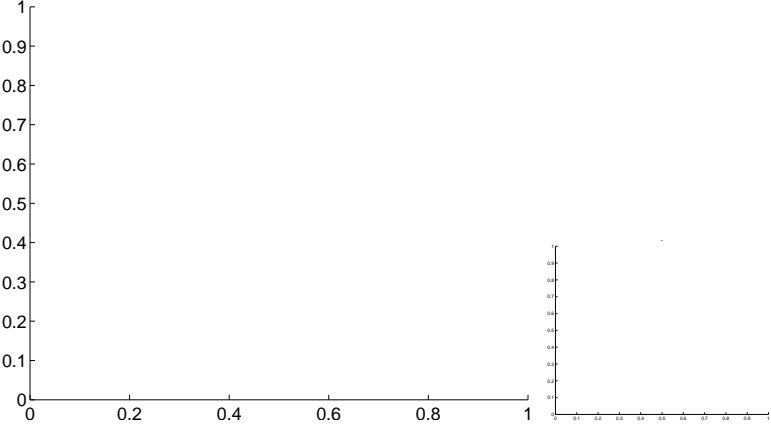
Q10 OOT image



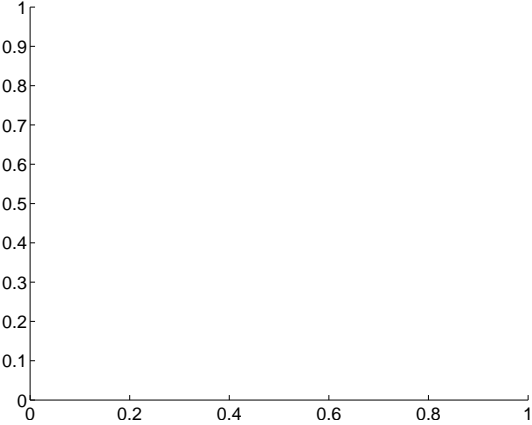
Q11 no difference image



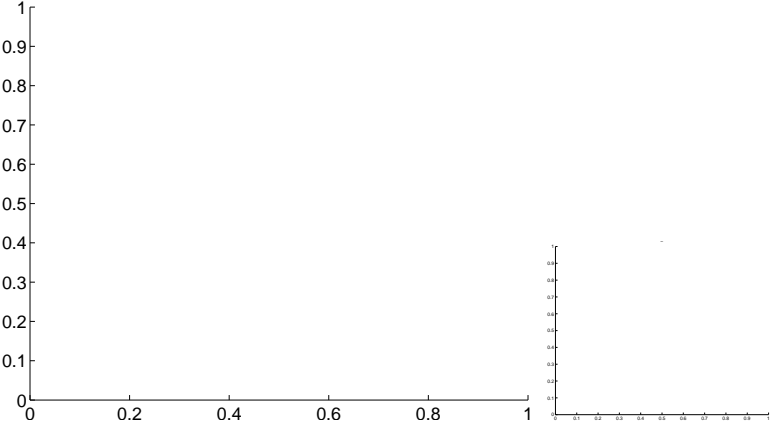
Q11 no OOT image



Q12 no difference image



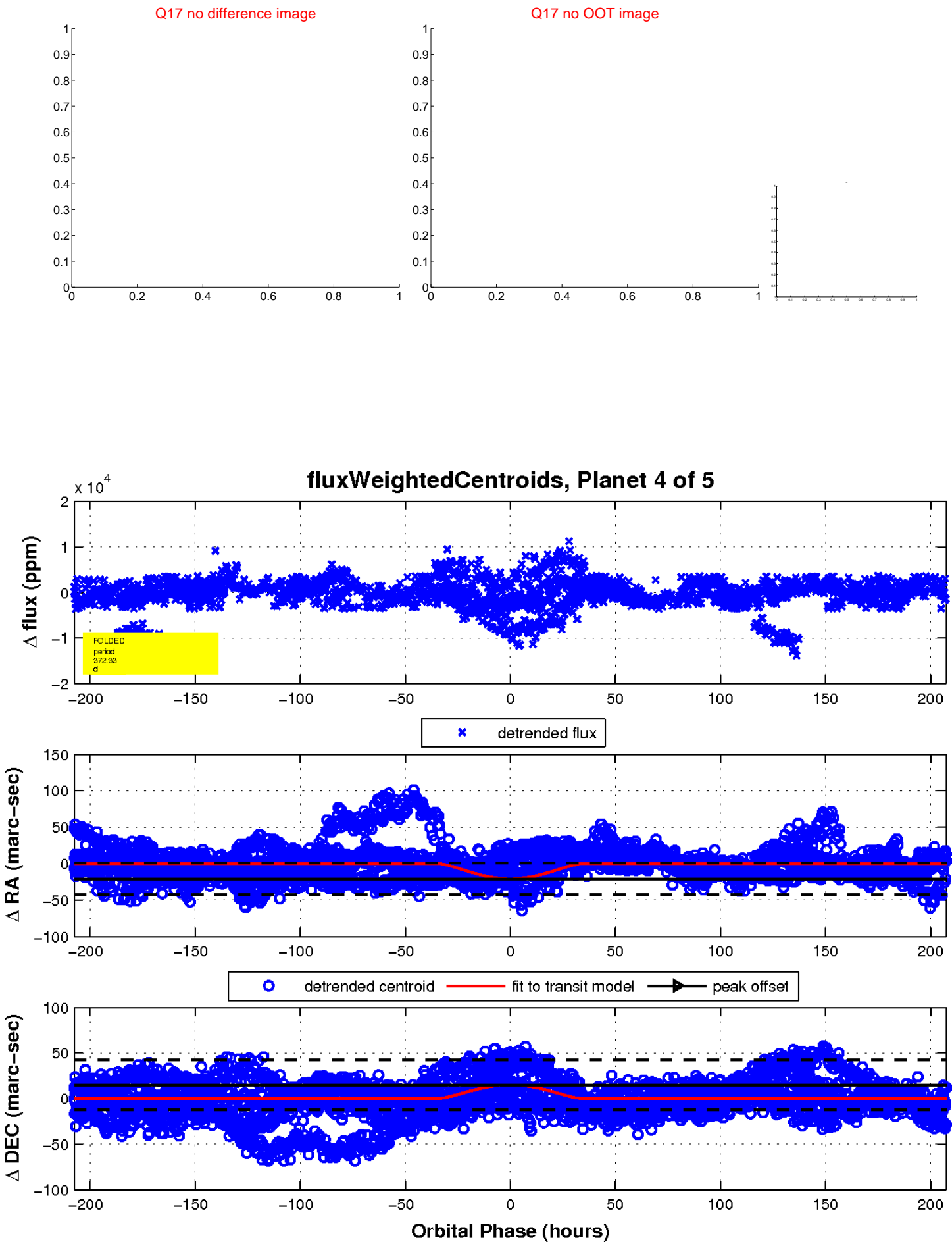
Q12 no OOT image



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

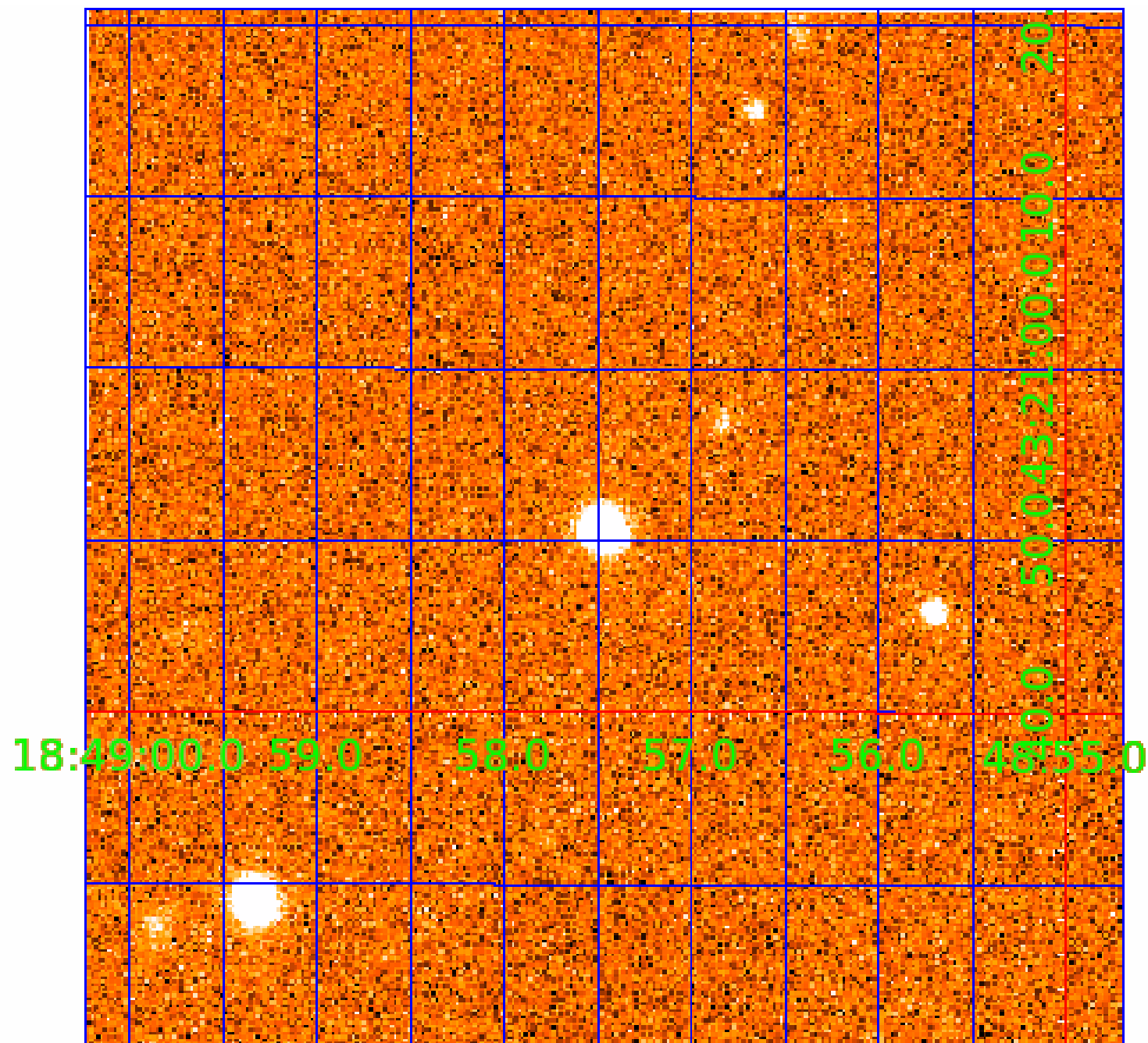


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007661222

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})
007661222-01	OBS	No	359.685145	247.525936	1032.9	15.000	11.1	-1.0	0.65	5198	2.06	0.38
007661222-02	OBS	No	374.564002	208.959003	2863.0	11.892	11.1	9.4	0.65	5198	3.45	0.36
007661222-03	OBS	No	368.777273	238.103362	6899.0	45.281	10.3	14.9	0.65	5198	9.90	0.37
007661222-04	OBS	No	372.326694	216.897769	6571.1	69.139	8.3	11.7	0.65	5198	9.67	0.36
007661222-05	OBS	No	376.728785	147.882192	795.8	24.903	7.8	6.3	0.65	5198	2.36	0.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007661222-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
007661222-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS
007661222-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
007661222-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
007661222-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_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.

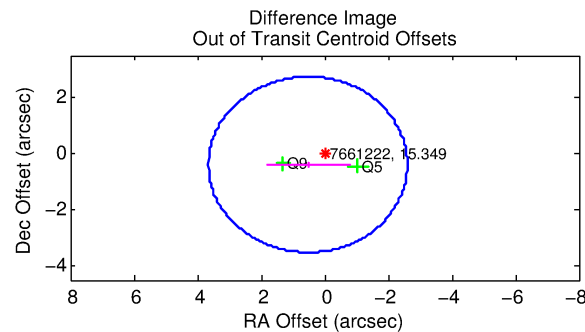
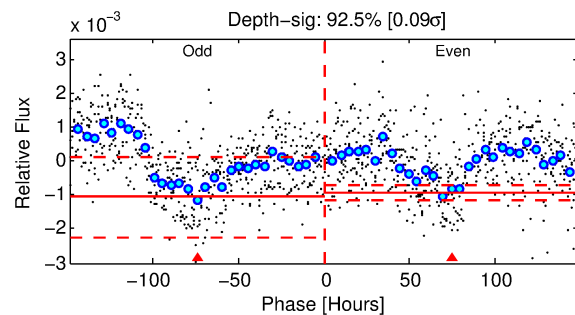
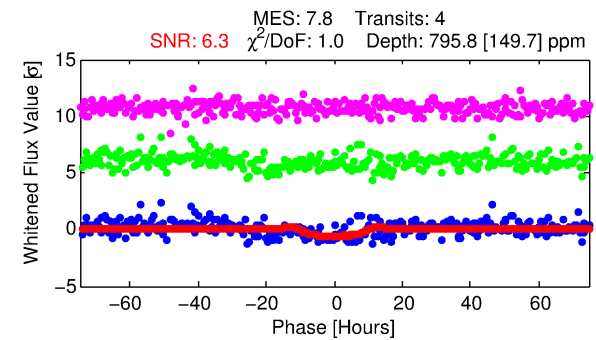
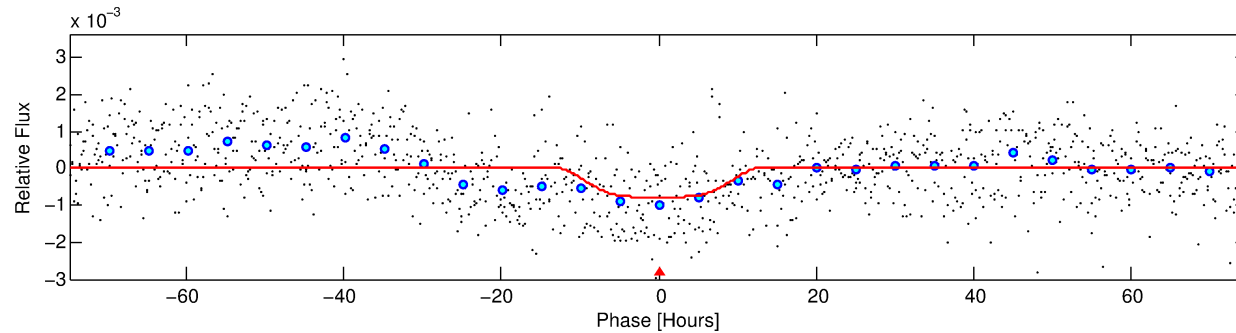
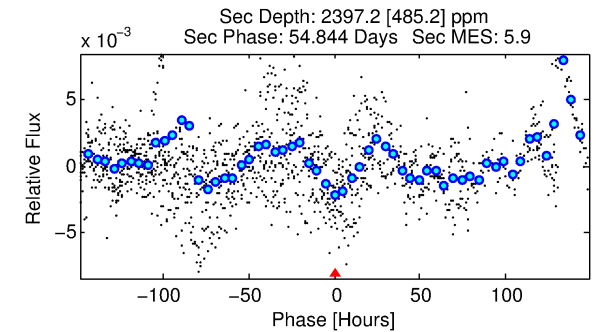
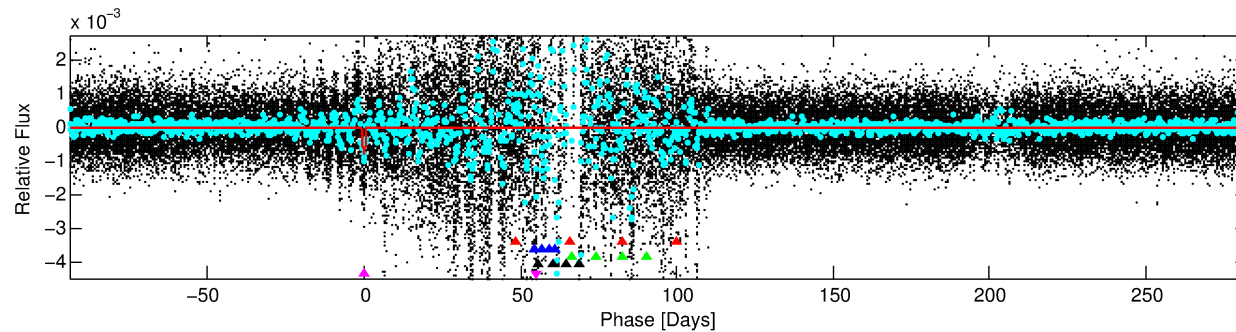
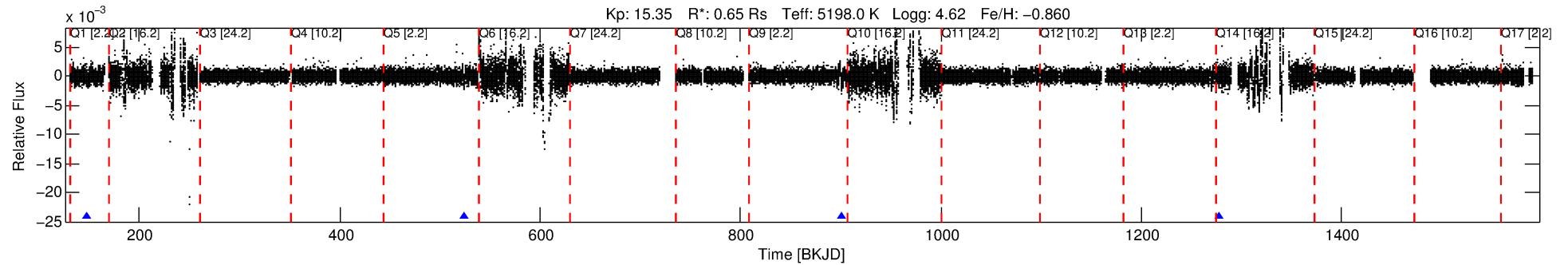
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007661222-05

No Significant Match Found

DV One-Page Summary

KIC: 7661222 Candidate: 5 of 5 Period: 376.729 d



DV Fit Results:

Period = 376.72879 [0.04362] d
Epoch = 147.8822 [0.0685] BKJD
Rp/R* = 0.0333 [0.0043]
a/R* = 46.33 [12.81]
b = 0.95 [0.03]
Seff = 0.36 [0.06]
Teq = 197 [9] K
Rp = 2.36 [0.37] Re
a = 0.8772 [0.0707] AU
Ag = 182575.85 [64167.75] [2.85σ]
Teffp = 6299 [551] K [11.08σ]

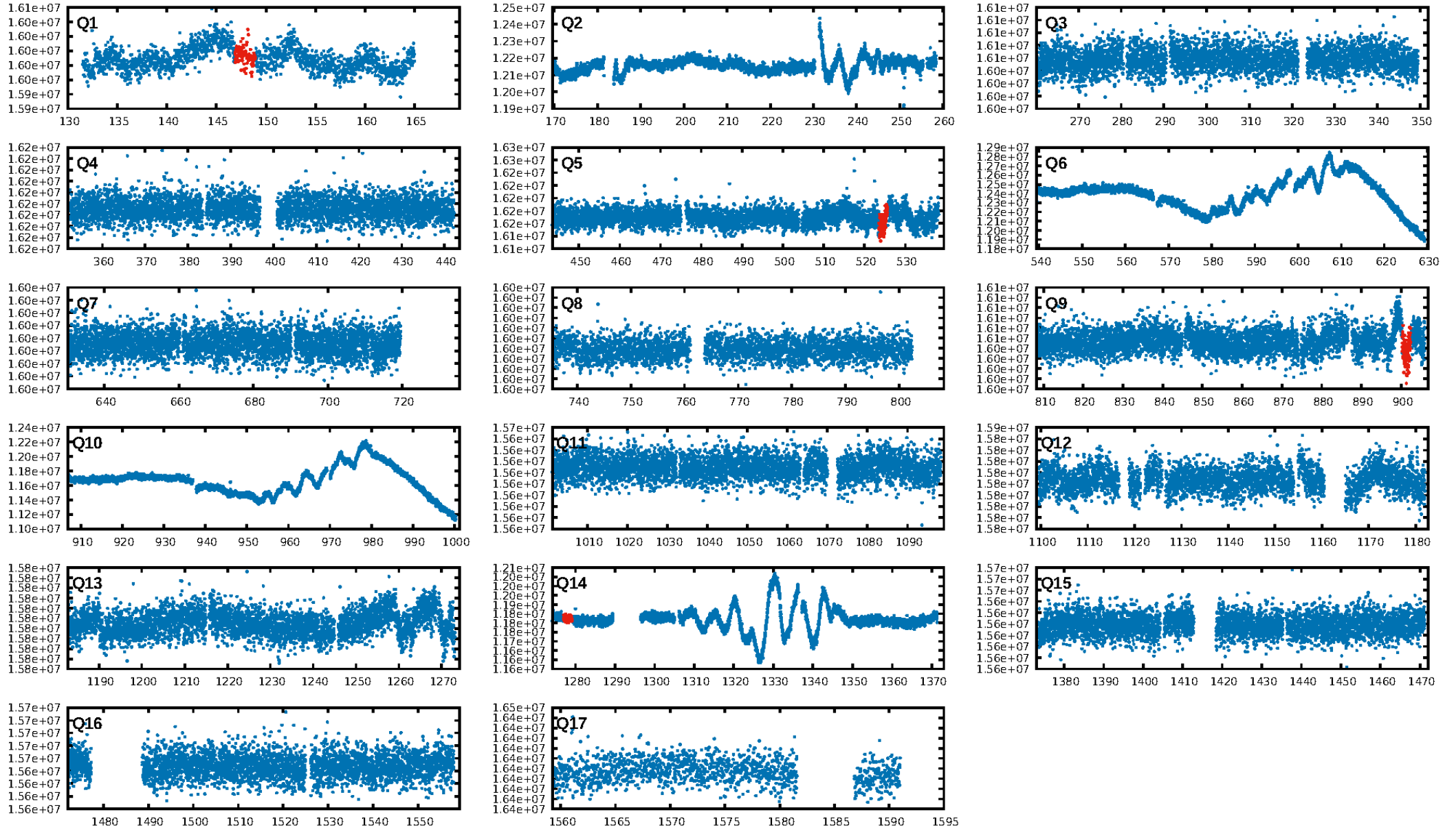
DV Diagnostic Results:

ShortPeriod-sig: 94.0% [1.88σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 19.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.82e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.201
Centroid-sig: 44.0%
Centroid-so: 1.554 arcsec [1.10σ]
OotOffset-rm: 0.654 arcsec [0.63σ]
OotOffset-st: 0/0/0/2 [2]
KicOffset-rm: 0.701 arcsec [0.64σ]
KicOffset-st: 0/0/0/2 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

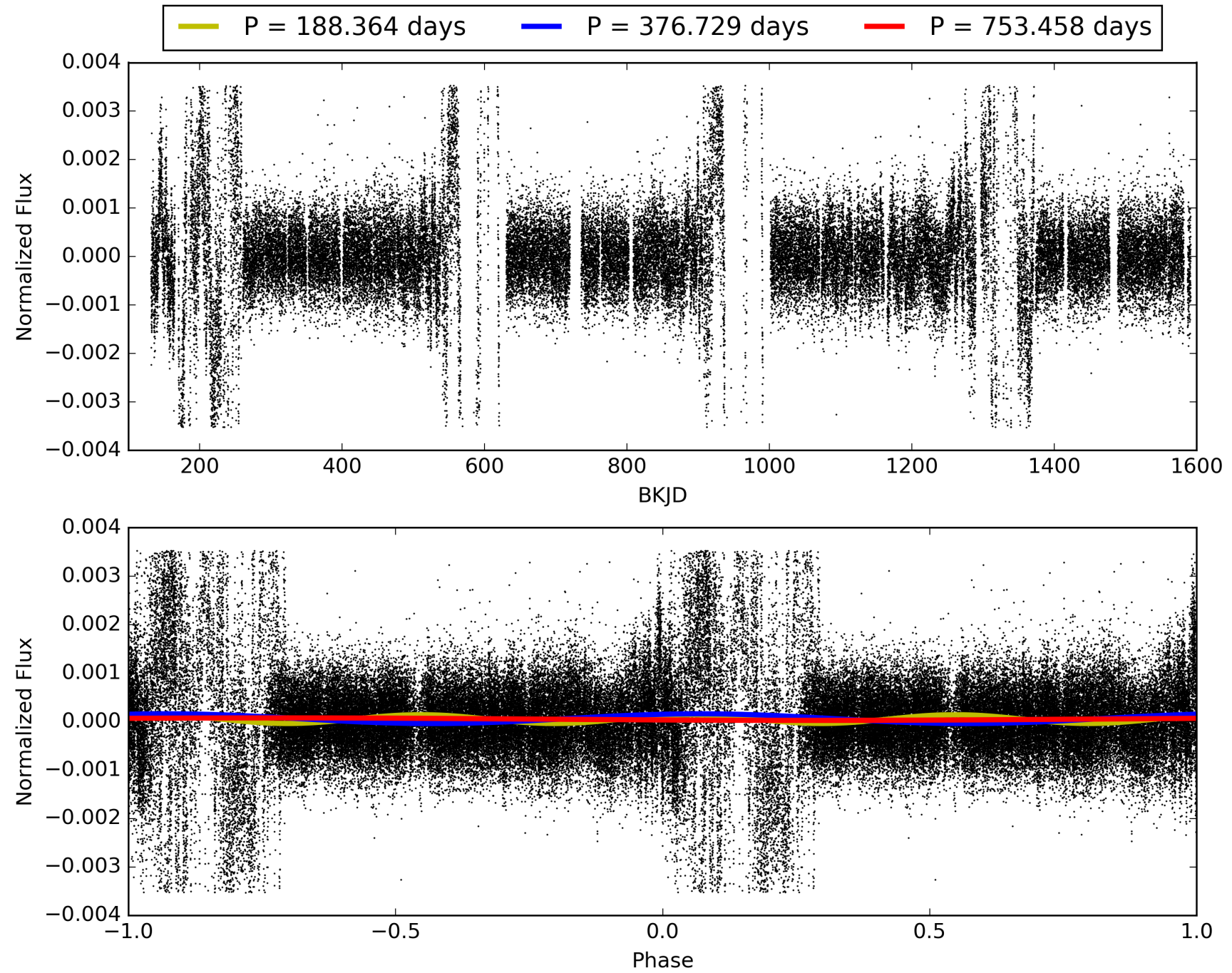
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 21:24:47 Z

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

TCE 007661222-05, PDC Light Curves

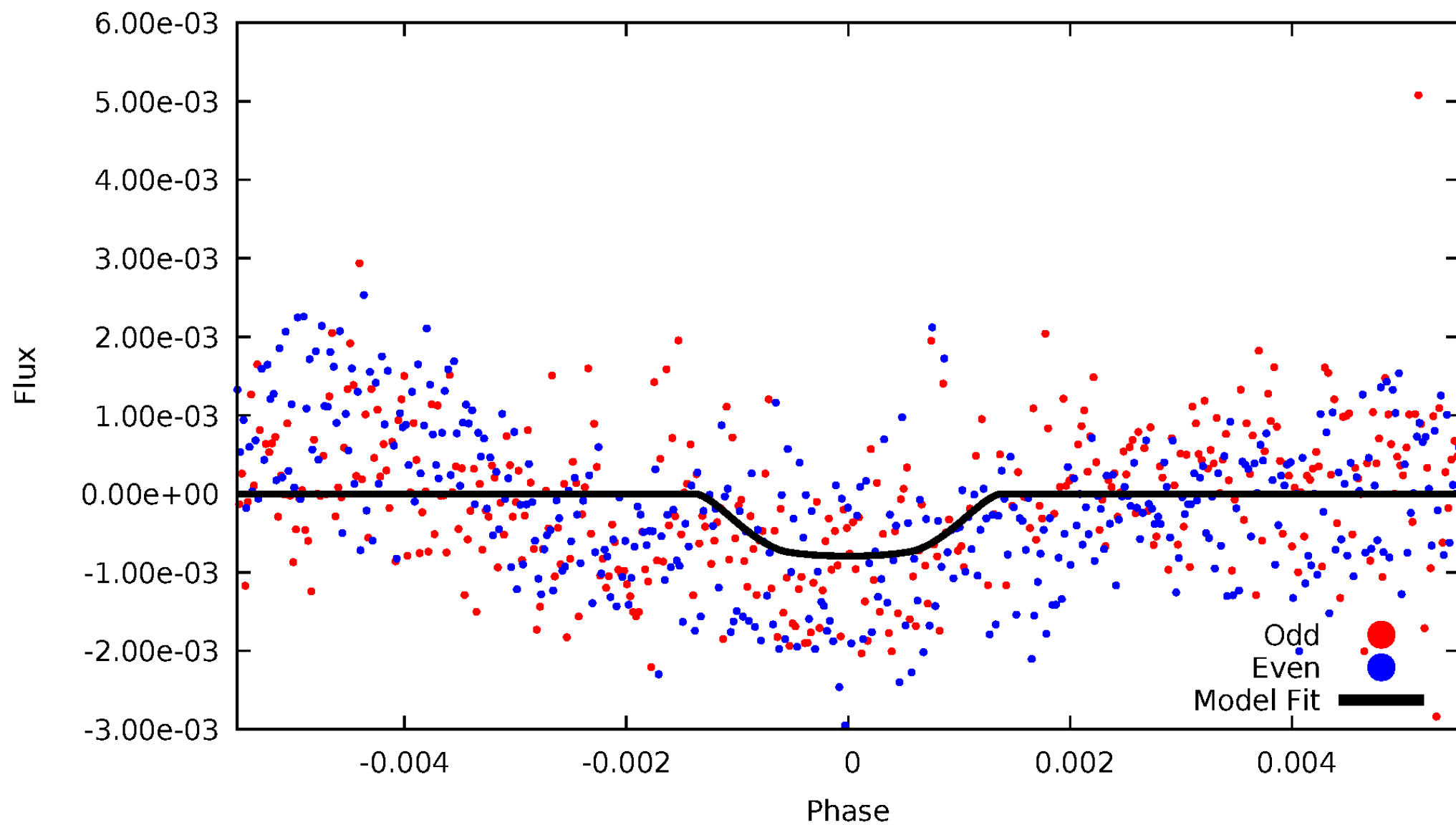


TCE 007661222-05



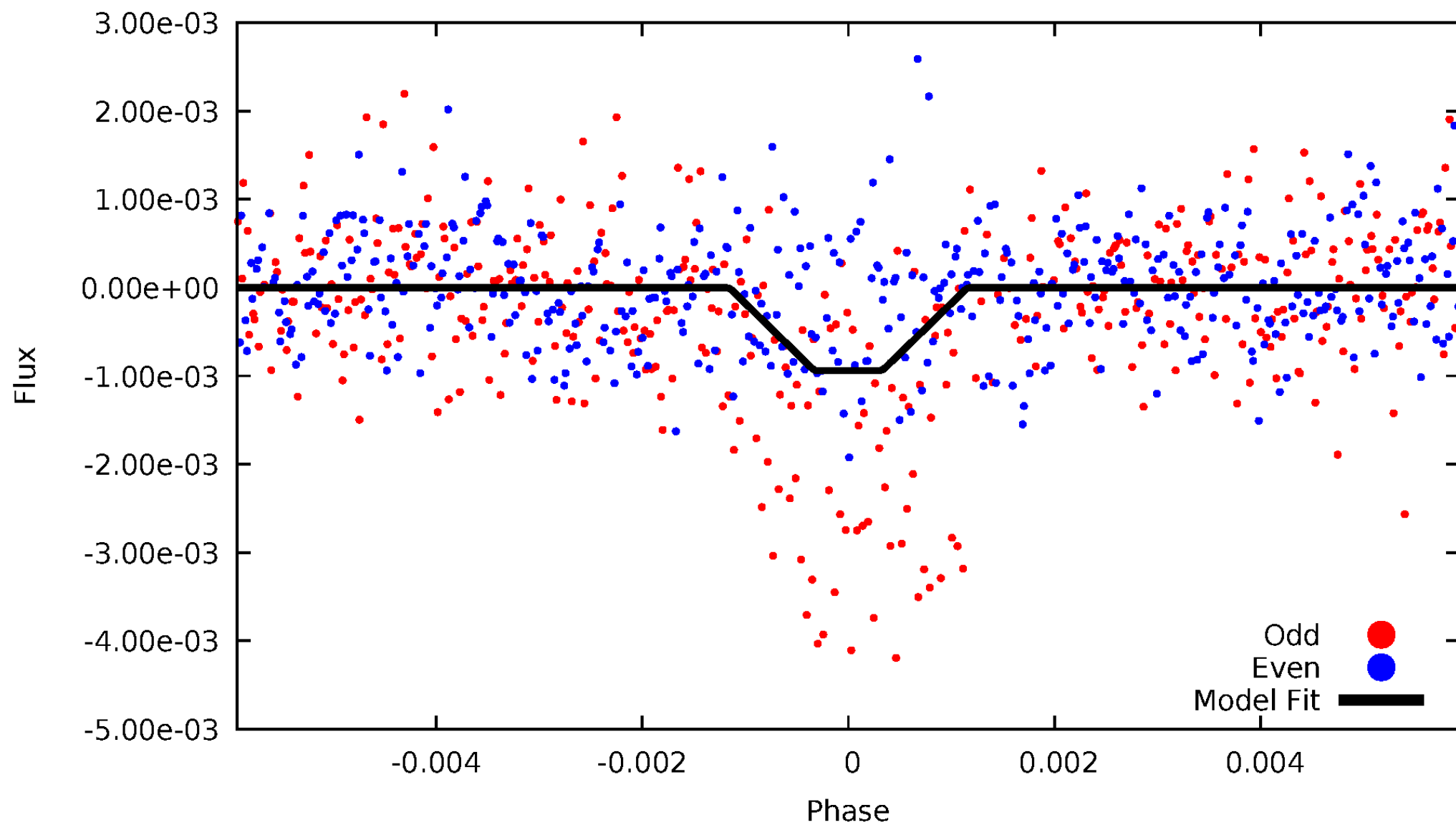
DV Odd/Even

TCE 007661222-05



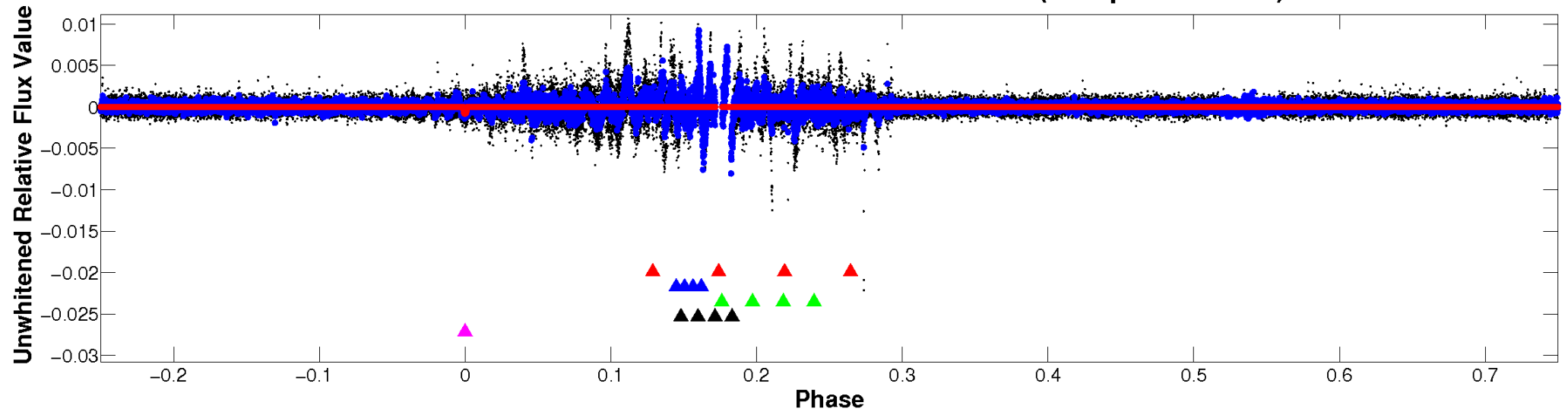
ALT Odd/Even

TCE 007661222-05

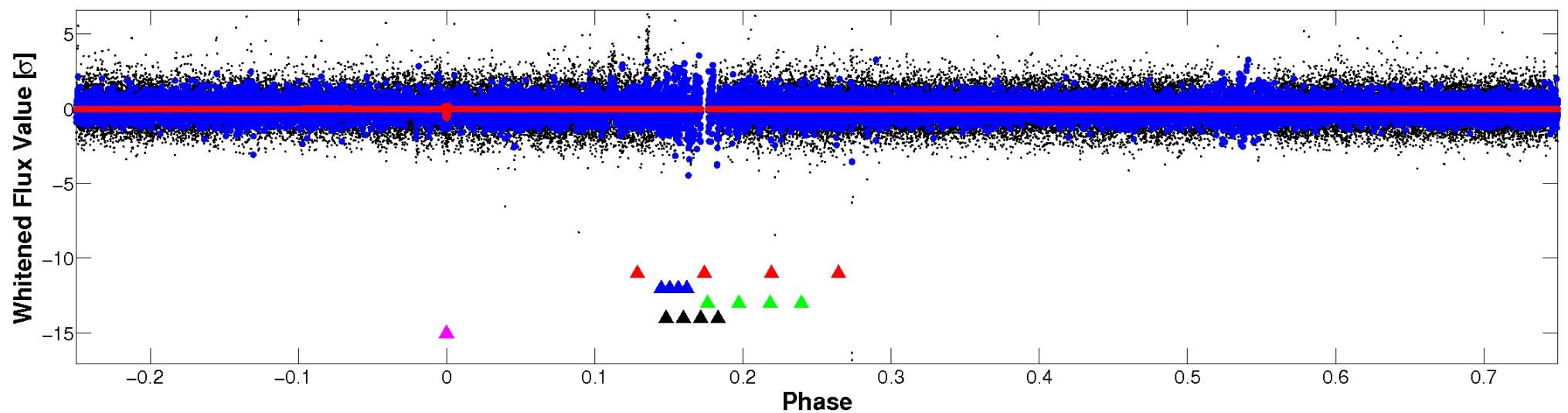


Non-Whitened Vs. Whitened Light Curve

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

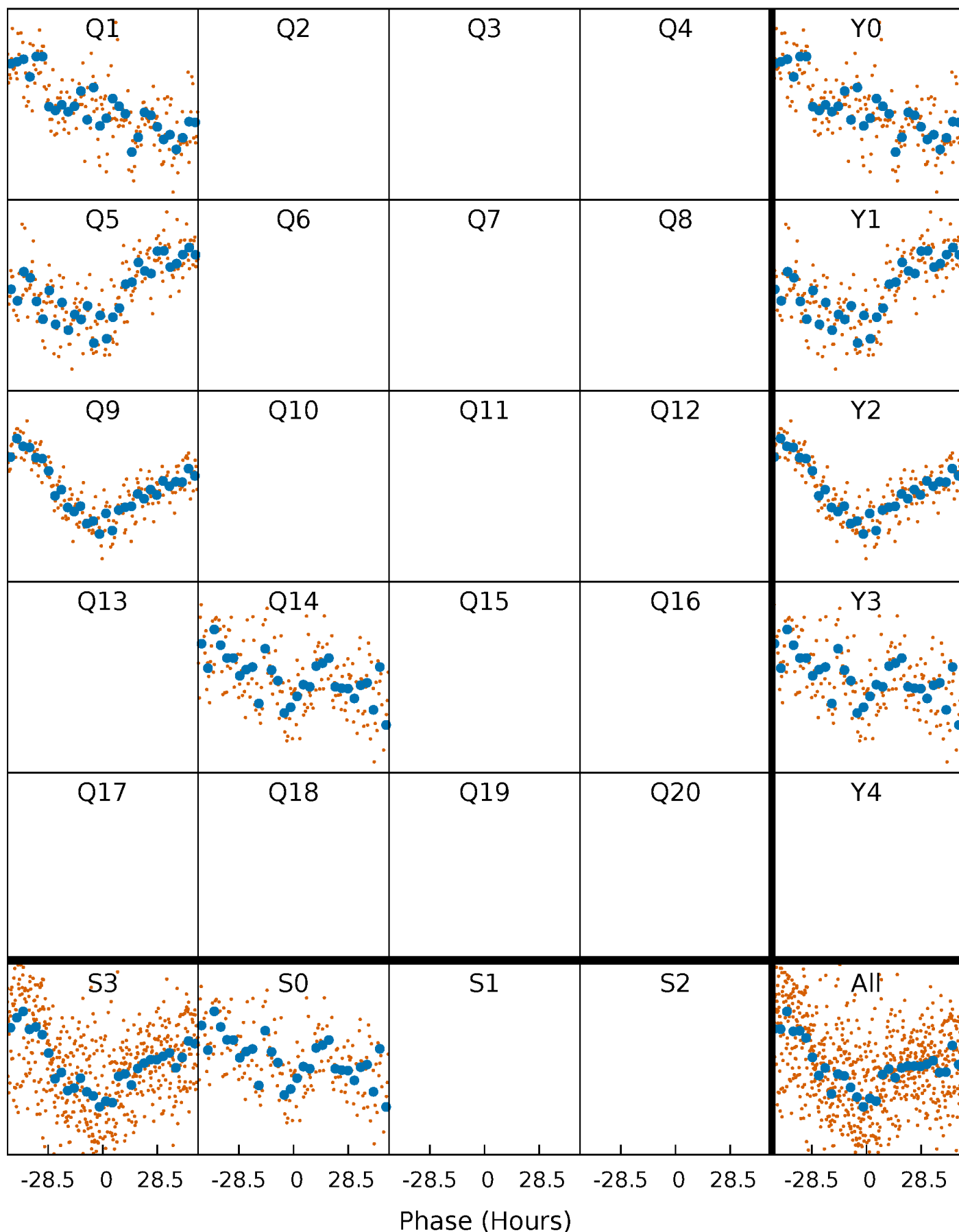


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



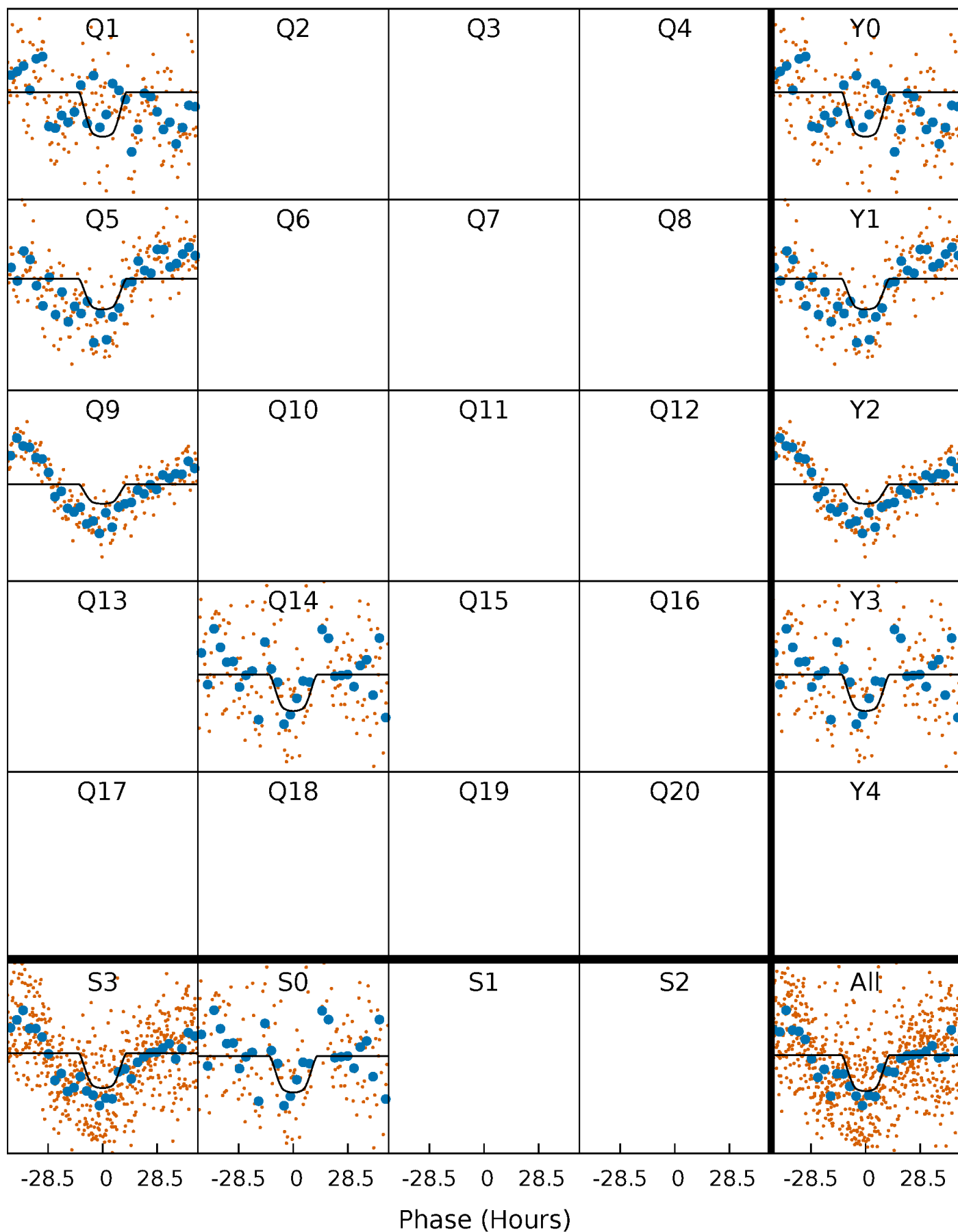
PDC Quarter-Phased Transit Curves

TCE 007661222-05 $P=376.728785$ Days $T_0=147.882192$ (BKJD)



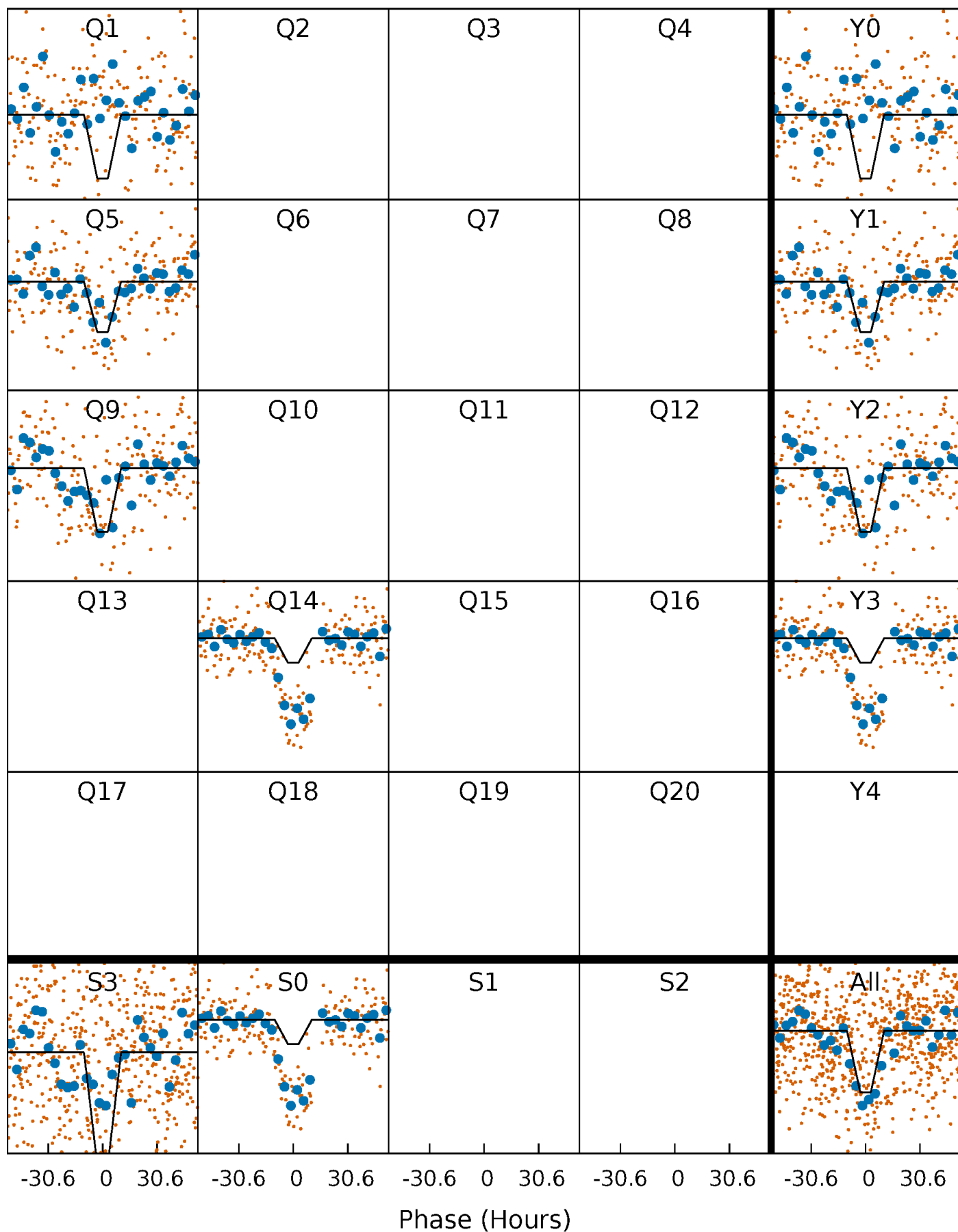
DV Quarter-Phased Transit Curves

TCE 007661222-05 $P=376.728785$ Days $T_0=147.882192$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

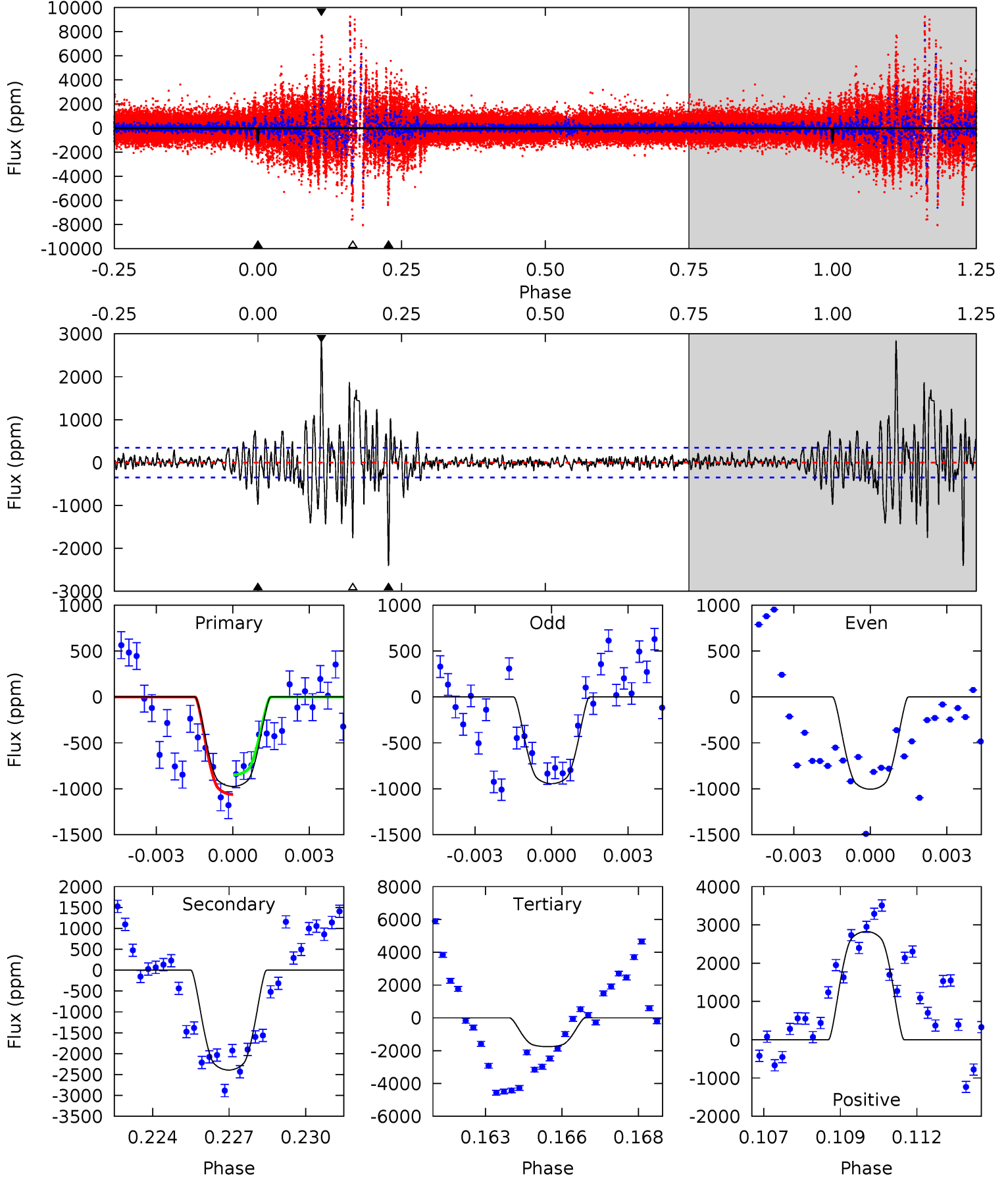
TCE 007661222-05 $P=376.706301$ Days $T_0=147.913122$ (BKJD)



DV Model-Shift Uniqueness Test

007661222-05, P = 376.728785 Days, E = 147.882192 Days

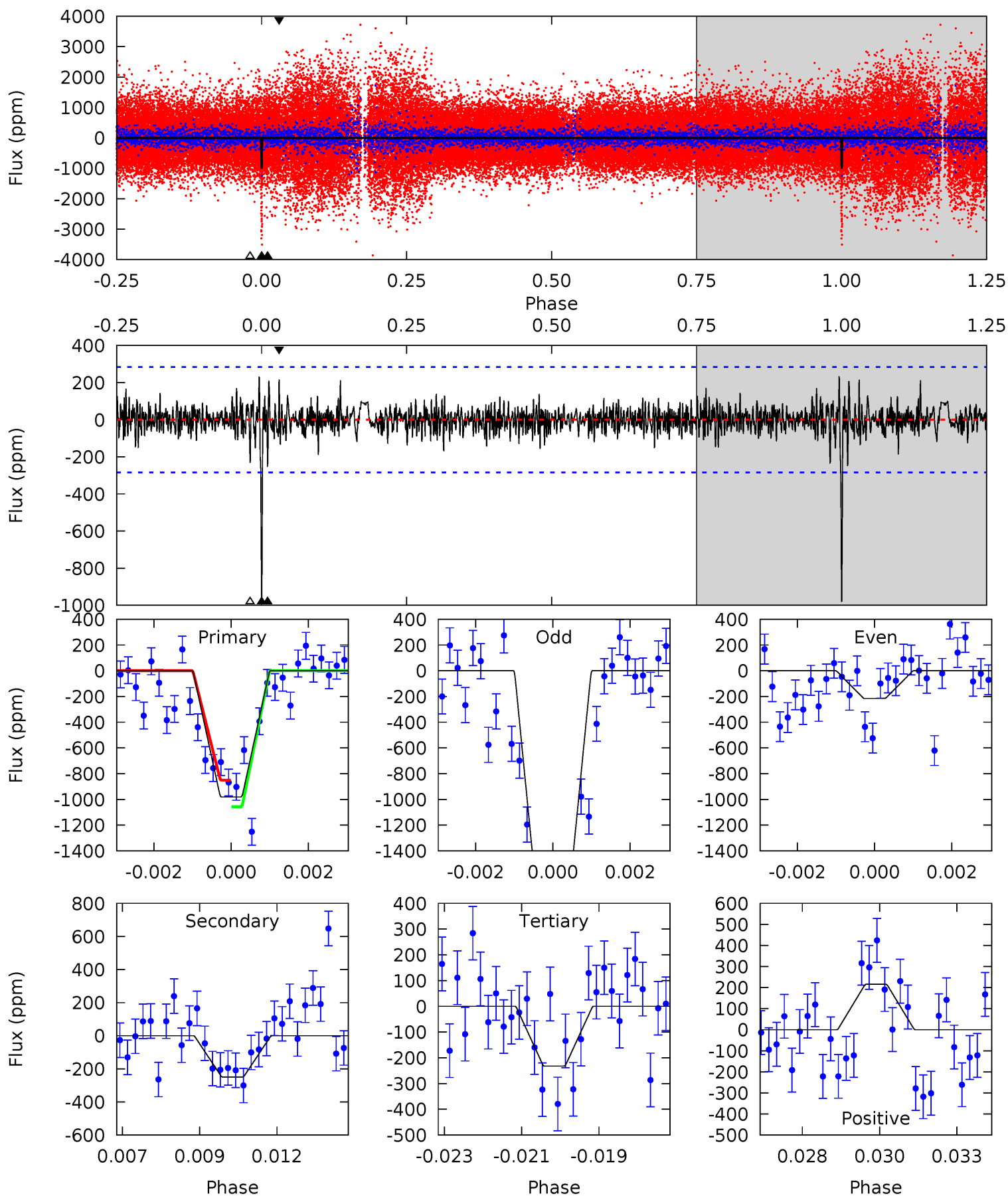
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.8	36.3	26.6	42.8	5.26	2.99	4.77	-11.8	-28.1	9.66	-6.59	0.38	1.02	0.54	1.54



Alt Model-Shift Uniqueness Test

007661222-05, P = 376.706301 Days, E = 147.913122 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.3	4.65	4.33	4.02	5.30	3.05	0.96	13.9	14.3	0.32	0.64	18.6	1.50	0.19	1.91



Stellar Parameters For KIC 007661222

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5198^{+156}_{-156}	$4.617^{+0.072}_{-0.044}$	$-0.860^{+0.350}_{-0.300}$	$0.648^{+0.057}_{-0.057}$	$0.634^{+0.061}_{-0.028}$	$3.275^{+0.891}_{-0.526}$
	+3%/-3%	+2%/-1%	+41%/-35%	+9%/-9%	+10%/-4%	+27%/-16%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007661222-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2393 ± 66	$2.35^{+0.33}_{-0.34}$	273^{+10}_{-10}	6206^{+569}_{-430}	185556^{+70694}_{-42523}
Alt.	-250 ± 54	$2.14^{+0.34}_{-0.30}$	274^{+11}_{-10}	3992^{+283}_{-263}	22800^{+10371}_{-7518}

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

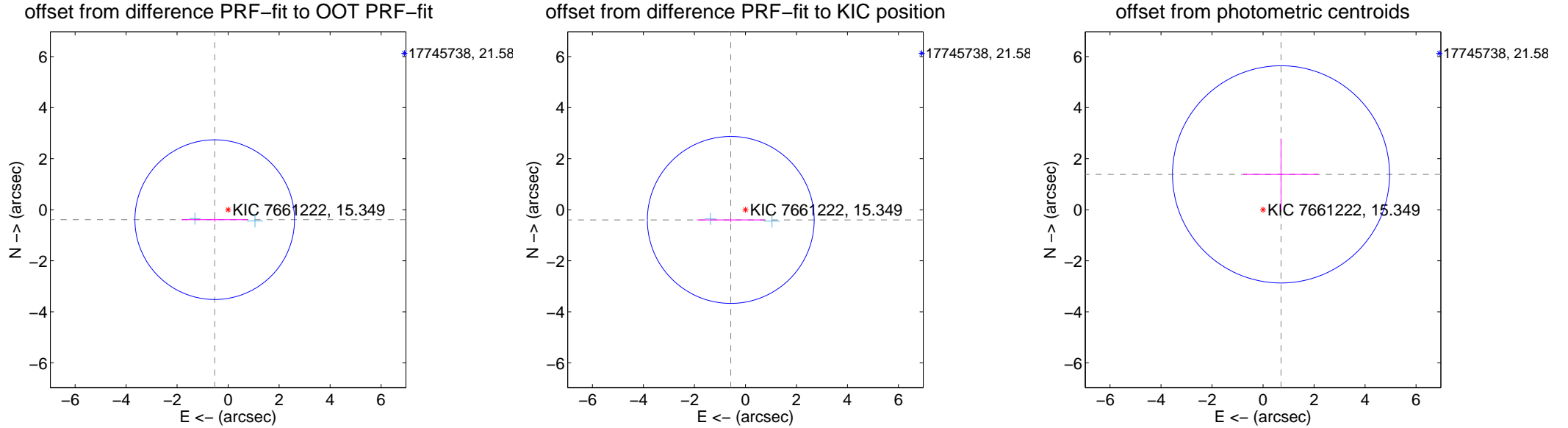
DV Centroid Data

Supplemental centroid analysis for 007661222-05. Kepler magnitude: 15.35. Transit SNR 6.34

There are 2 quarters with good PRF difference image offsets

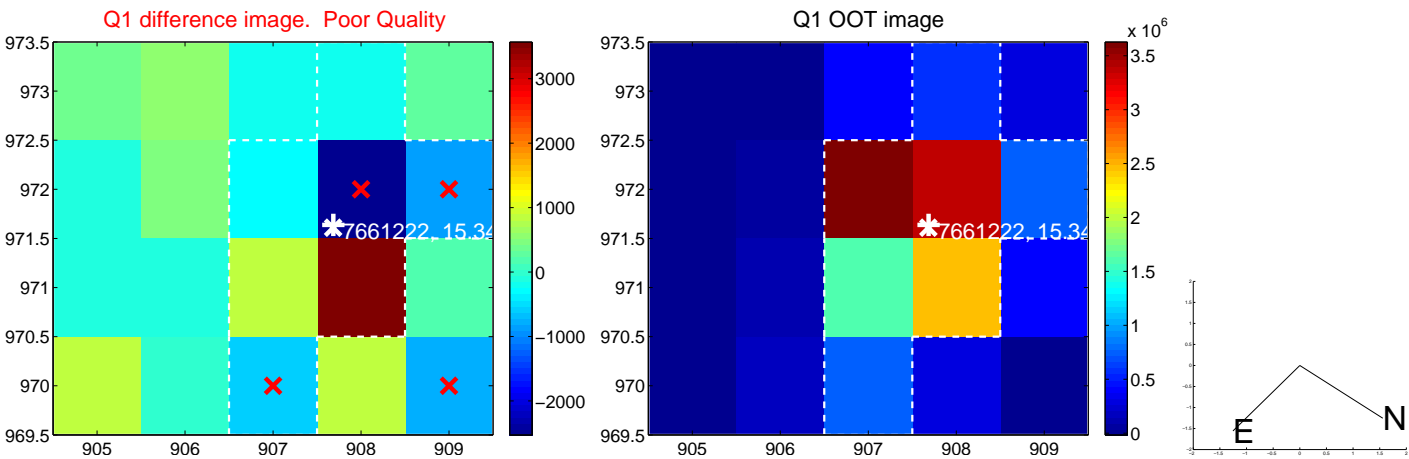
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.654 ± 1.043	0.63	0.525 ± 1.296	-0.389 ± 0.085
PRF-fit source offset from KIC position	0.701 ± 1.090	0.64	0.575 ± 1.327	-0.400 ± 0.082
photometric centroid source offset	1.55 ± 1.42	1.10	-0.70 ± 1.48	1.38 ± 1.40

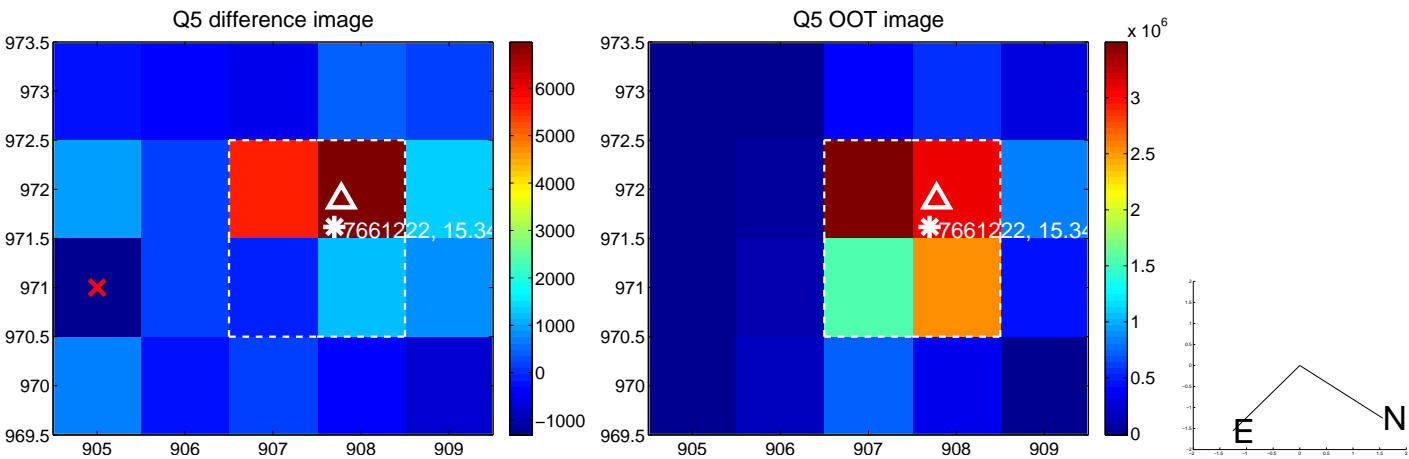


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

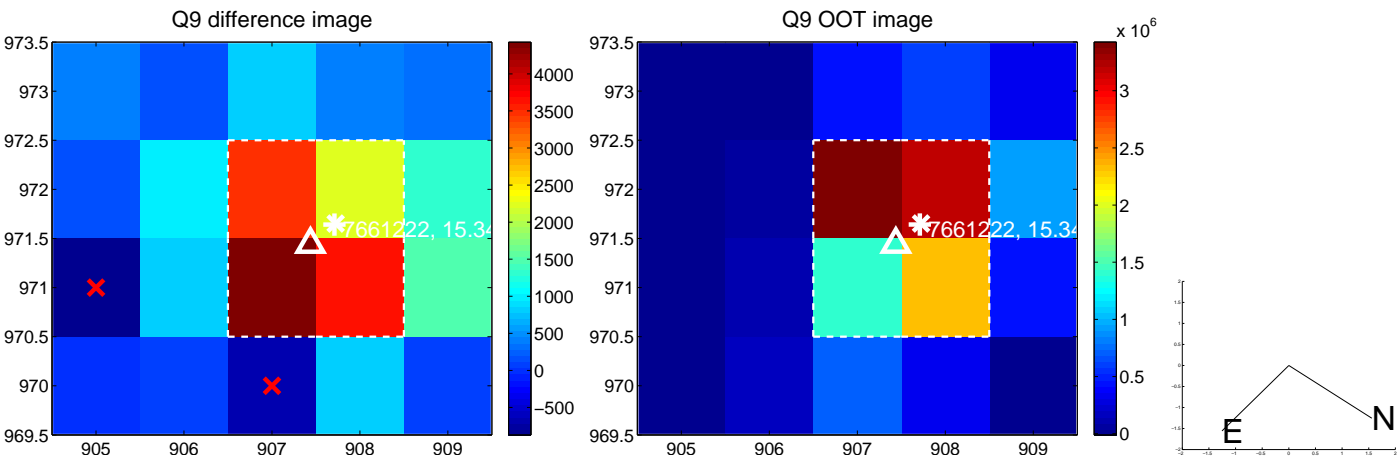
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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



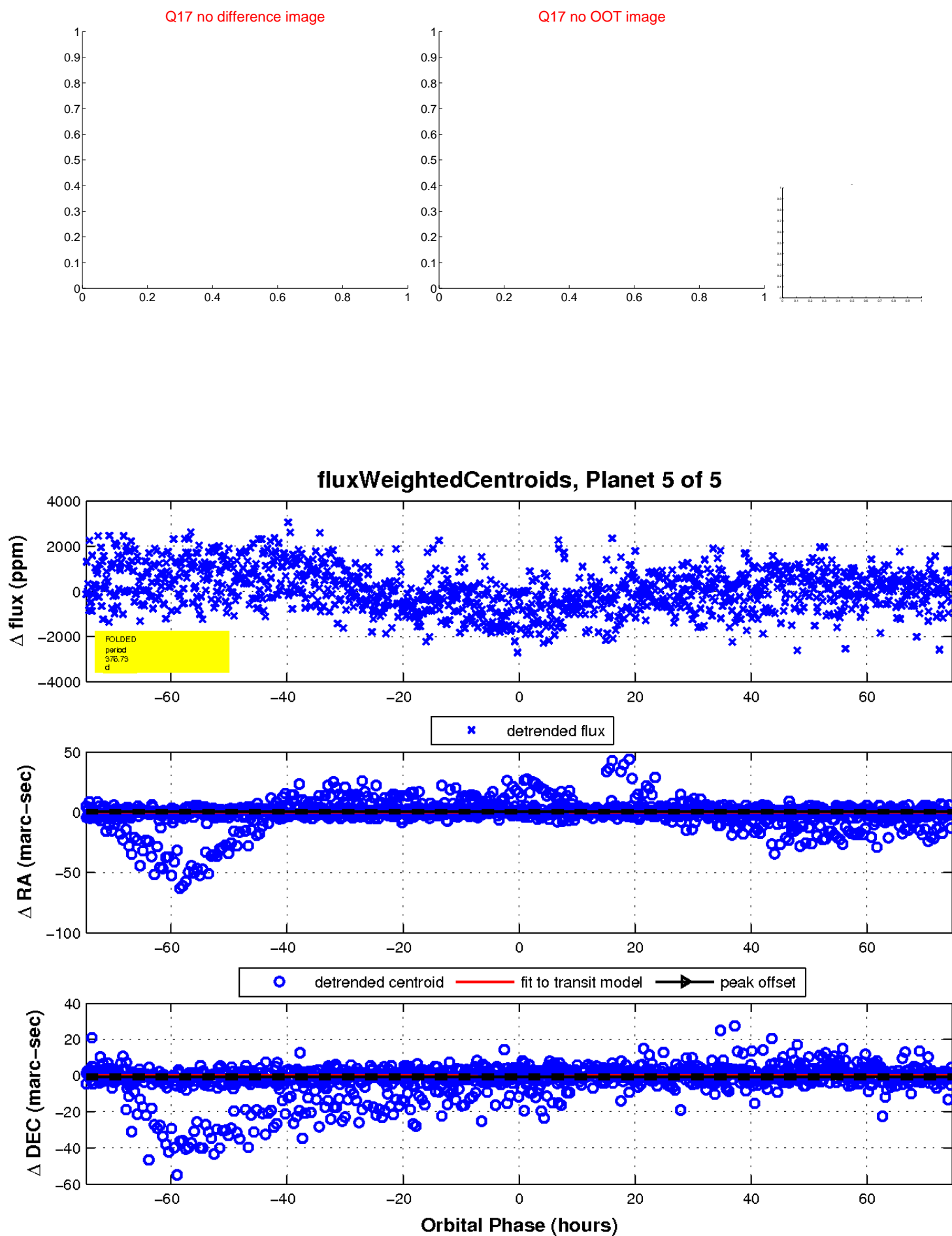
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

