

KIC 004758350

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})
004758350-01	OBS	6447.01	1.120936	131.540051	45.9	6.243	8.9	9.4	4.84	6720	6.27	60134.87
004758350-02	OBS	No	95.011757	197.822359	505.4	3.636	9.2	10.2	4.84	6720	11.82	161.51
004758350-03	OBS	No	96.090049	189.921096	409.6	7.506	9.0	9.5	4.84	6720	12.57	159.10
004758350-04	OBS	No	8.956177	133.855318	151.8	3.553	9.2	9.5	4.84	6720	6.74	3764.76
004758350-06	OBS	No	235.351197	303.610912	485.1	5.963	9.2	9.7	4.84	6720	12.16	48.19
004758350-07	OBS	No	59.039315	165.845414	496.1	2.491	9.1	8.9	4.84	6720	12.81	304.59
004758350-08	OBS	No	103.210000	175.789471	404.4	6.858	7.7	7.6	4.84	6720	18.77	144.63
004758350-09	OBS	No	57.135180	142.505796	361.3	4.612	8.9	10.2	4.84	6720	11.45	318.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004758350-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT
004758350-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
004758350-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

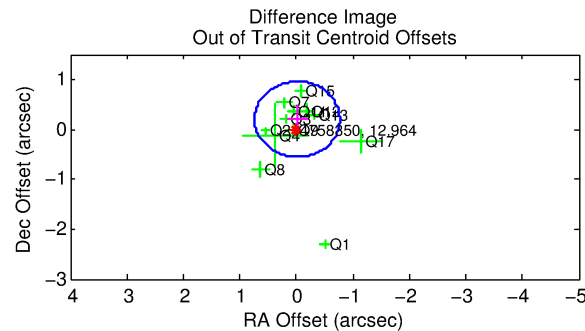
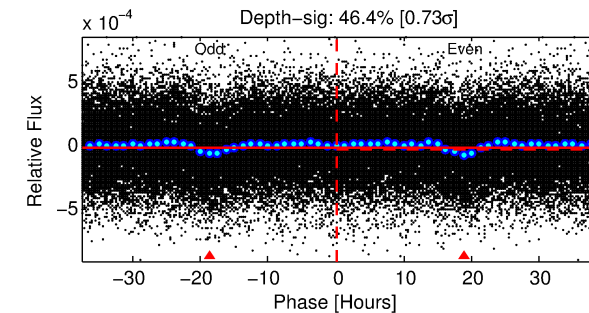
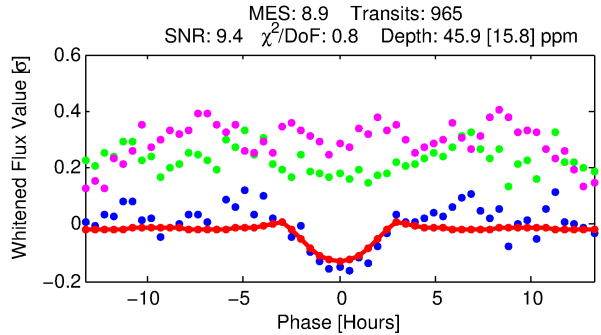
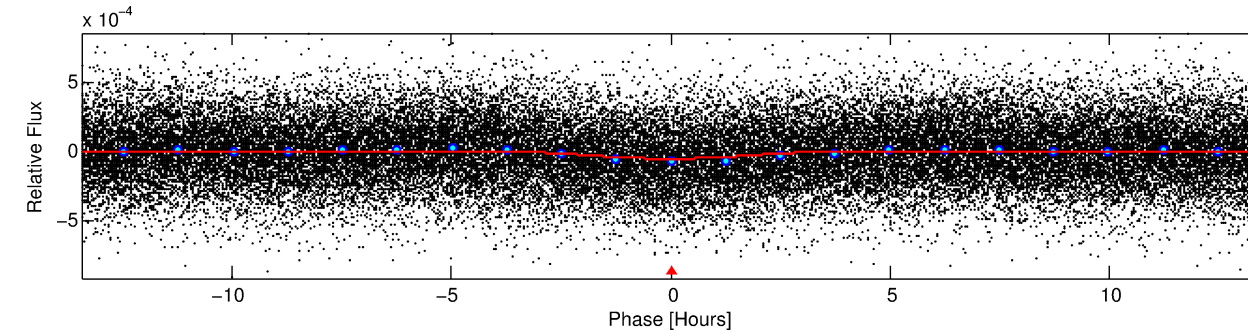
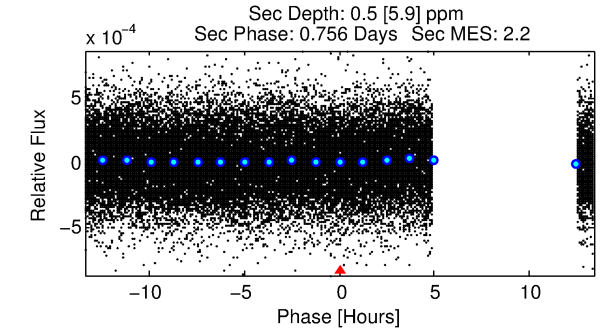
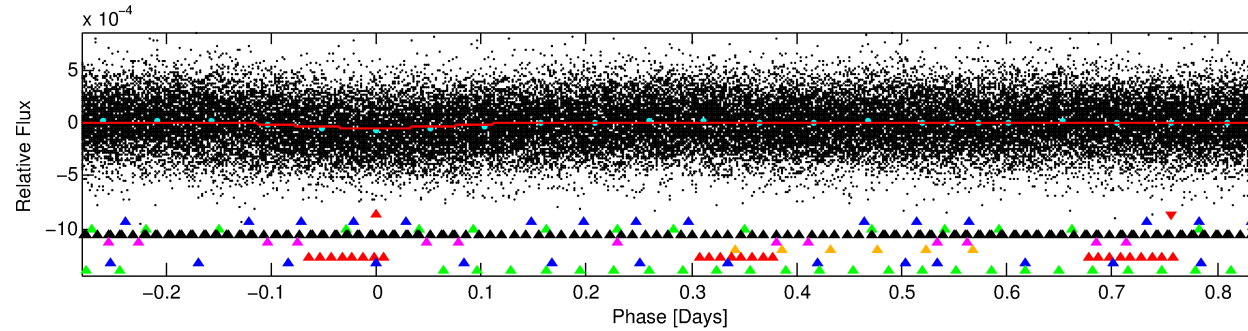
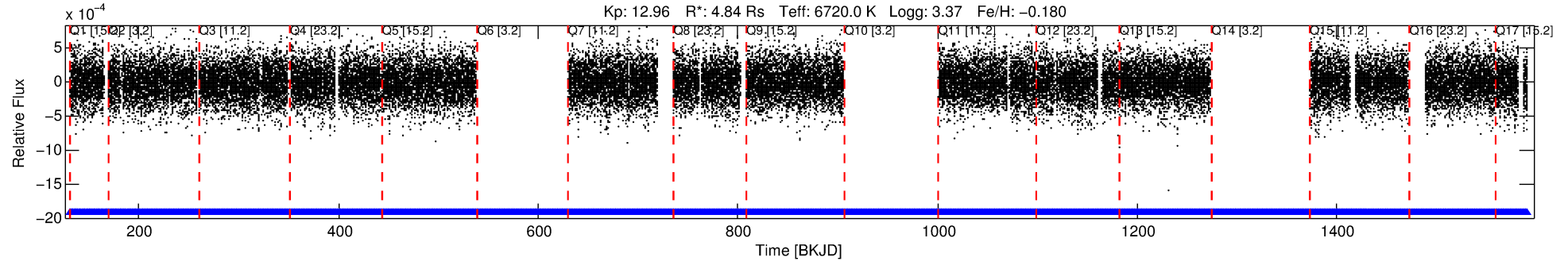
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004758350-01

No Significant Match Found

DV One-Page Summary

KIC: 4758350 Candidate: 1 of 9 Period: 1.121 d
KOI: K06447.01 Corr: 0.807



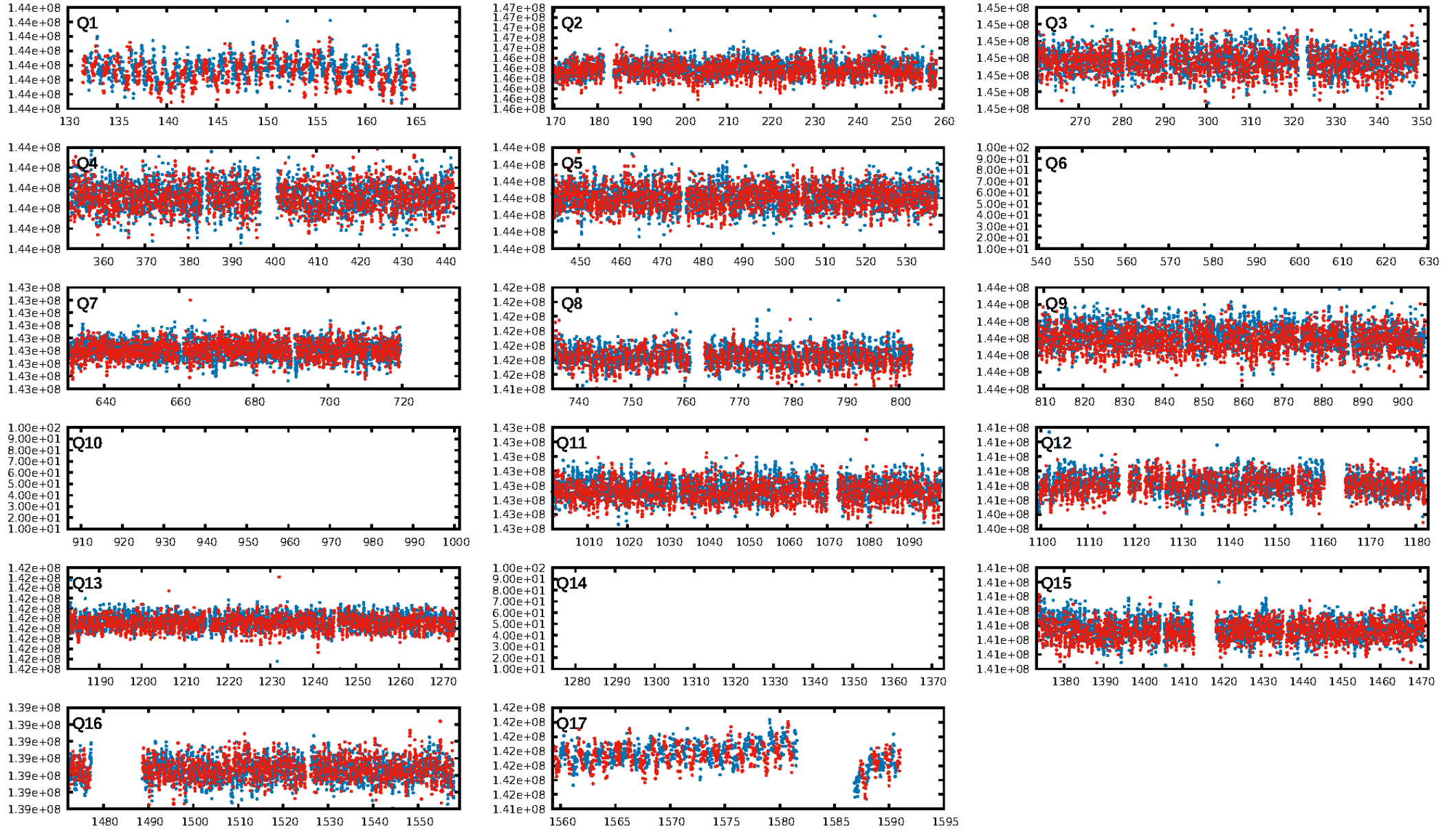
DV Fit Results:

Period = 1.12094 [0.00002] d
Epoch = 131.5401 [0.0087] BKJD
Rp/R* = 0.0119 [0.0177]
a/R* = 1.03 [0.01]
b = 1.00 [0.03]
Seff = 60134.87 [38277.46]
Teq = 3993 [635] K
Rp = 6.27 [9.69] Re
a = 0.0267 [0.0104] AU
Ag = 0.00 [0.06] [-16.41σ]
Teffp = 1636 [5026] K [-0.47σ]

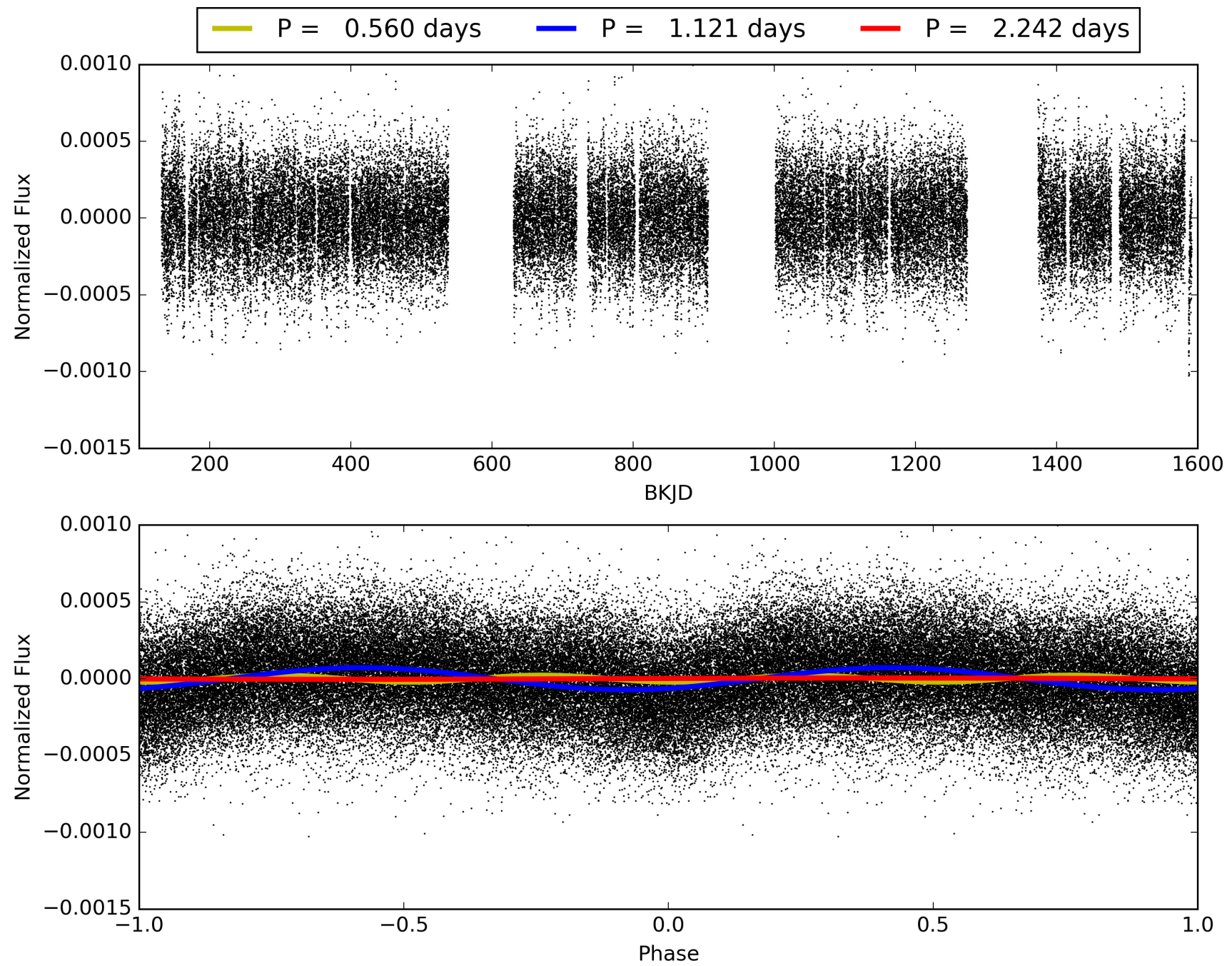
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [26.18σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [911/911]
GhostDiagnostic-chr: 2.435
Centroid-sig: 0.1%
Centroid-so: 1.225 arcsec [2.53σ]
OotOffset-rm: 0.200 arcsec [0.79σ]
KicOffset-rm: 0.207 arcsec [0.98σ]
OotOffset-st: 1/4/3/4 [12]
KicOffset-st: 1/4/3/4 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 004758350-01, PDC Light Curves

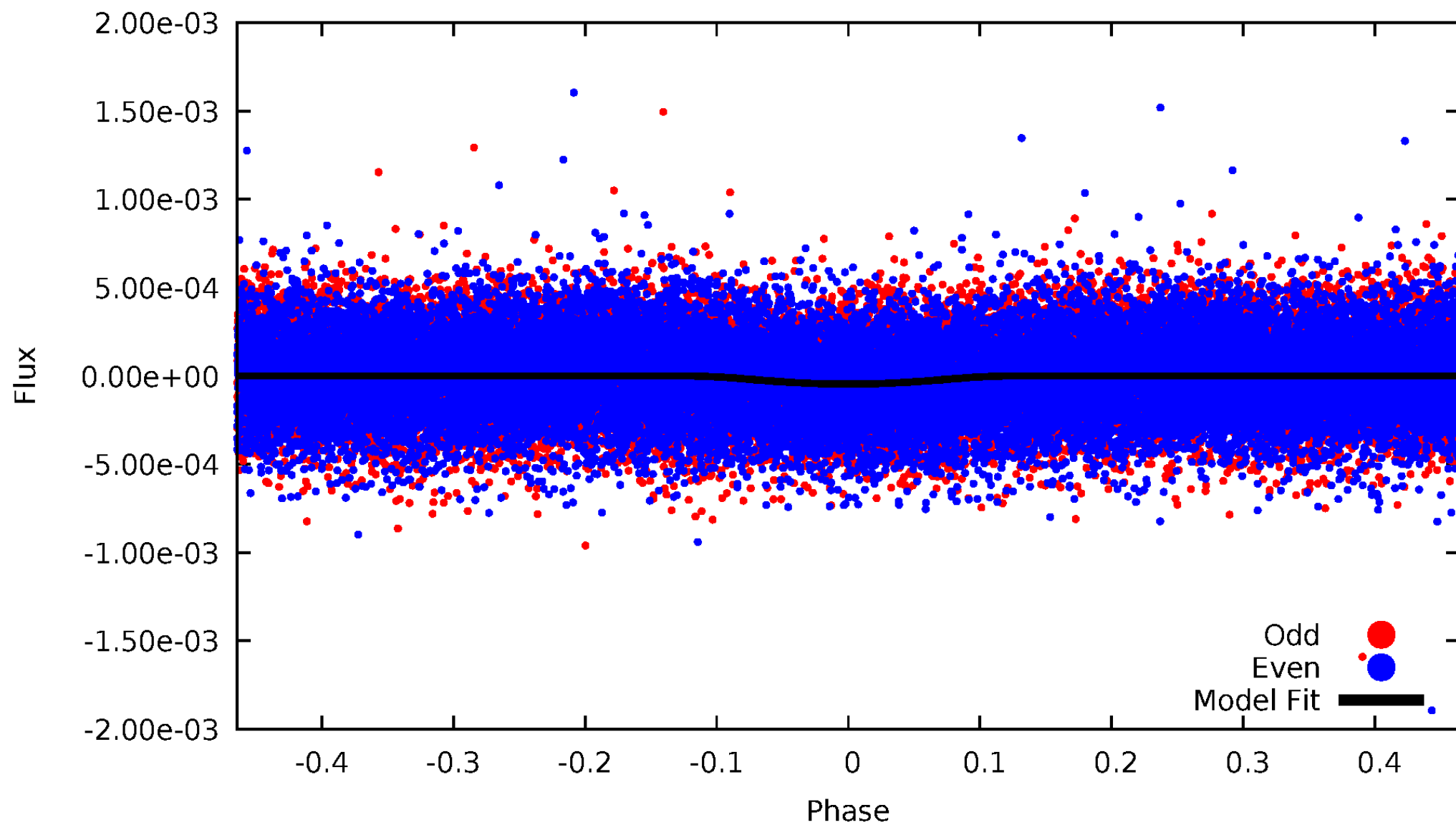


TCE 004758350-01



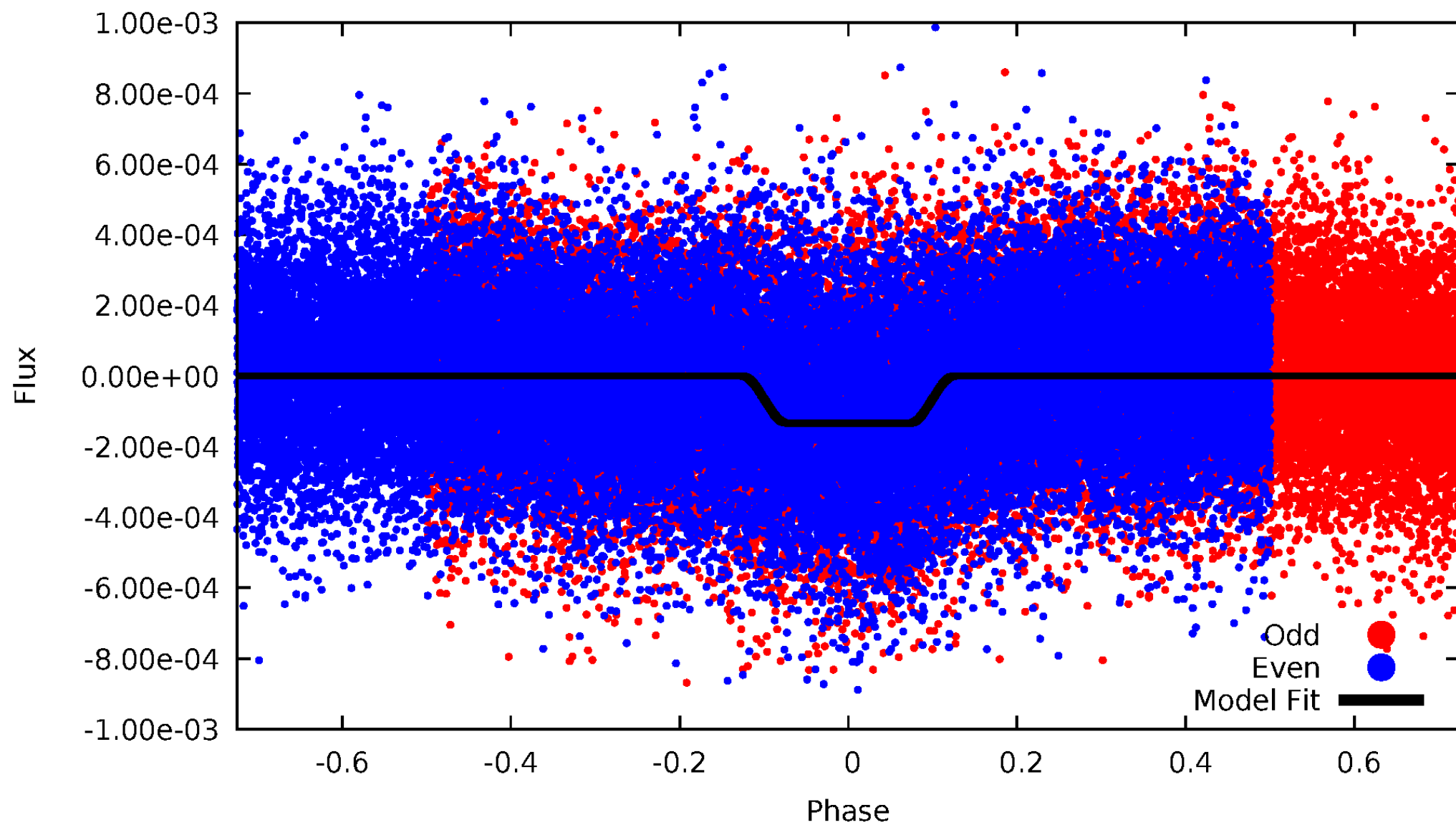
DV Odd/Even

TCE 004758350-01

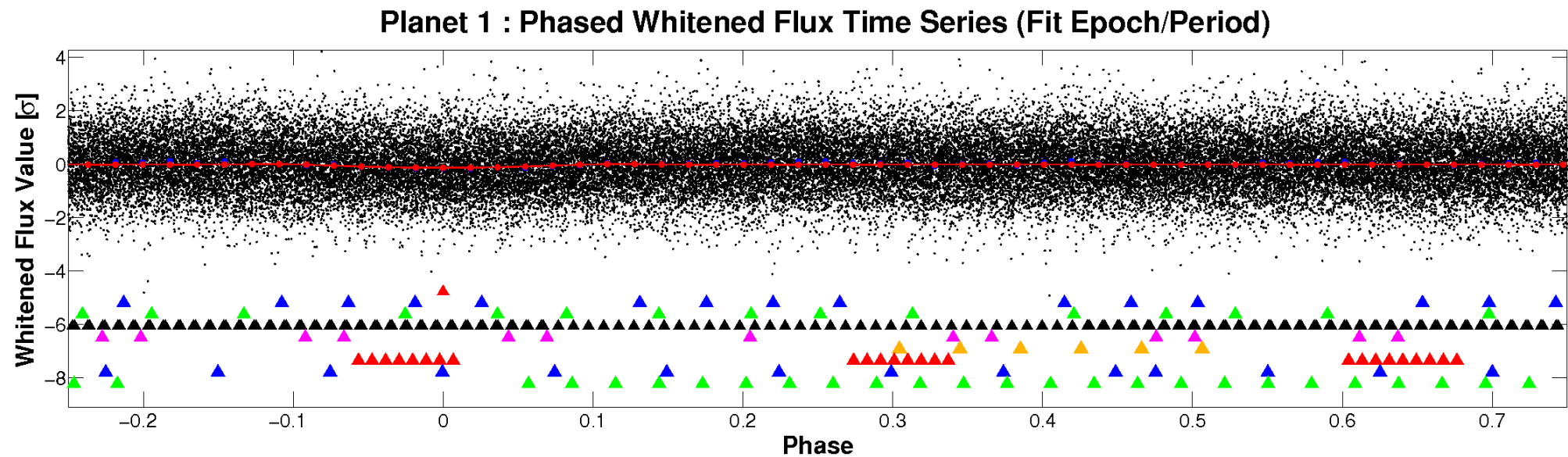
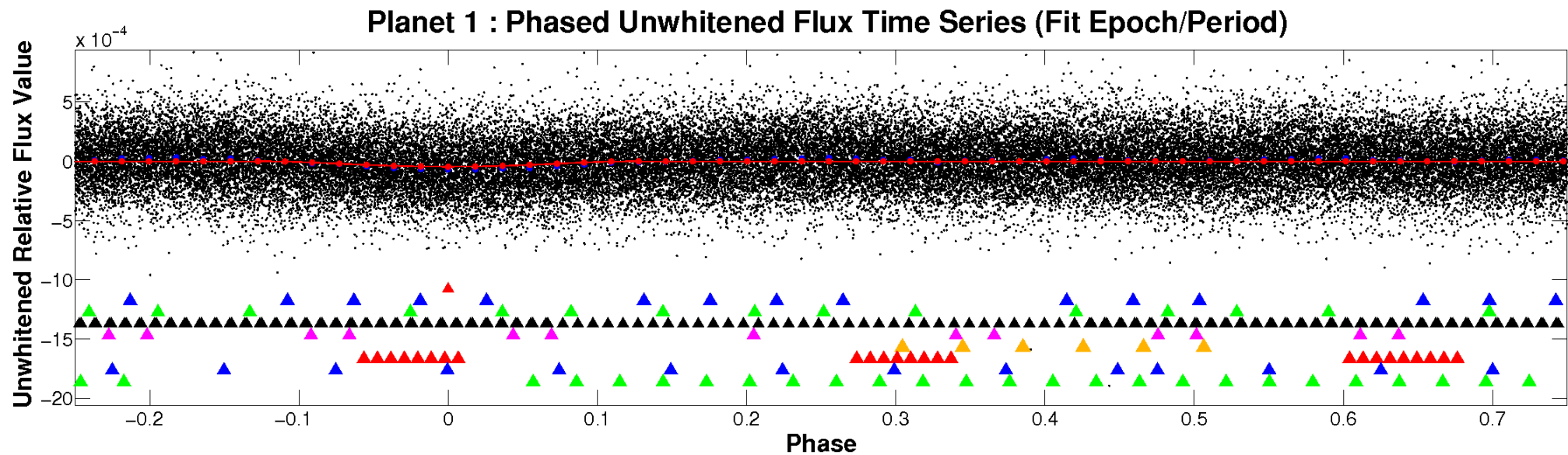


ALT Odd/Even

TCE 004758350-01

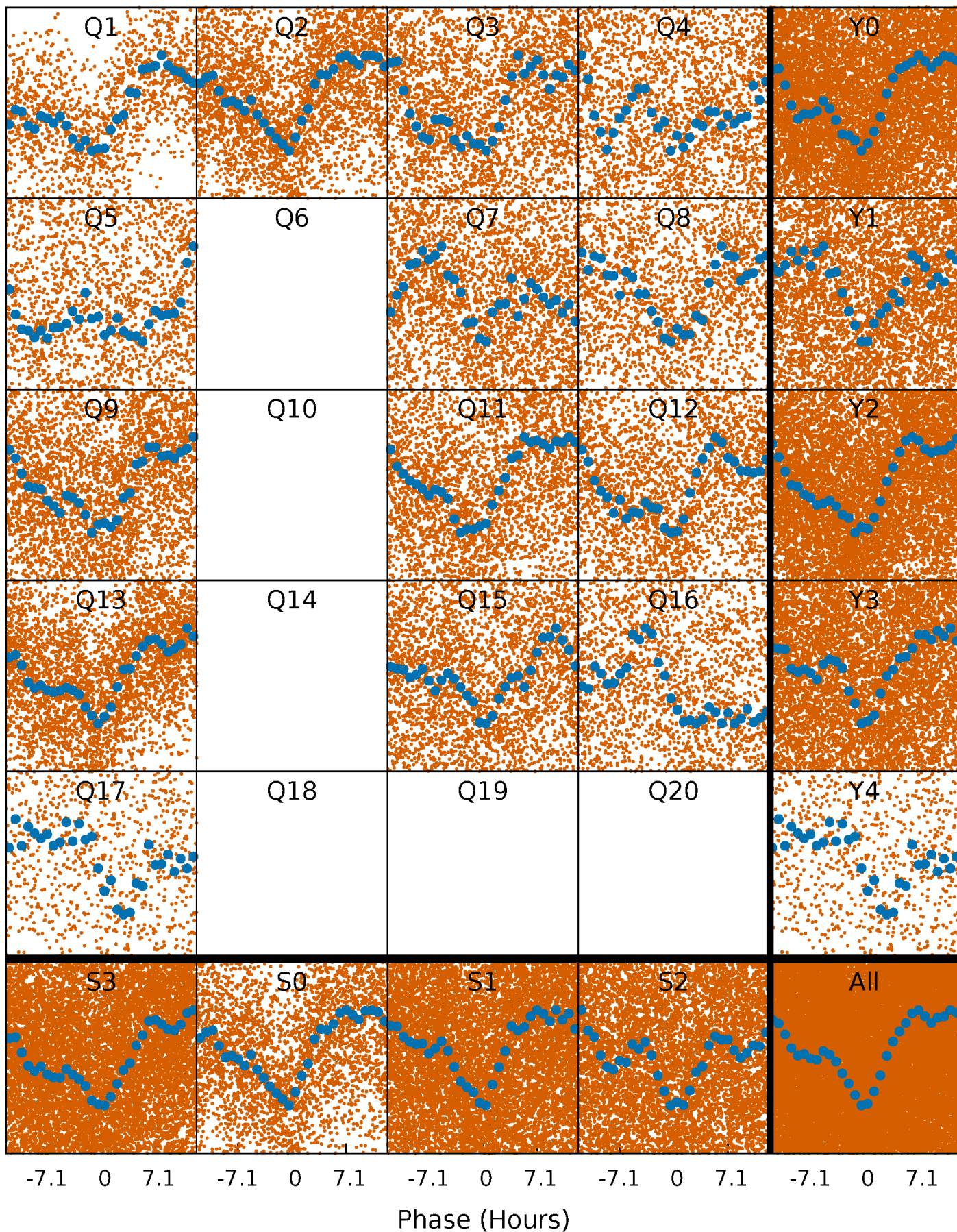


Non-Whitened Vs. Whitened Light Curve



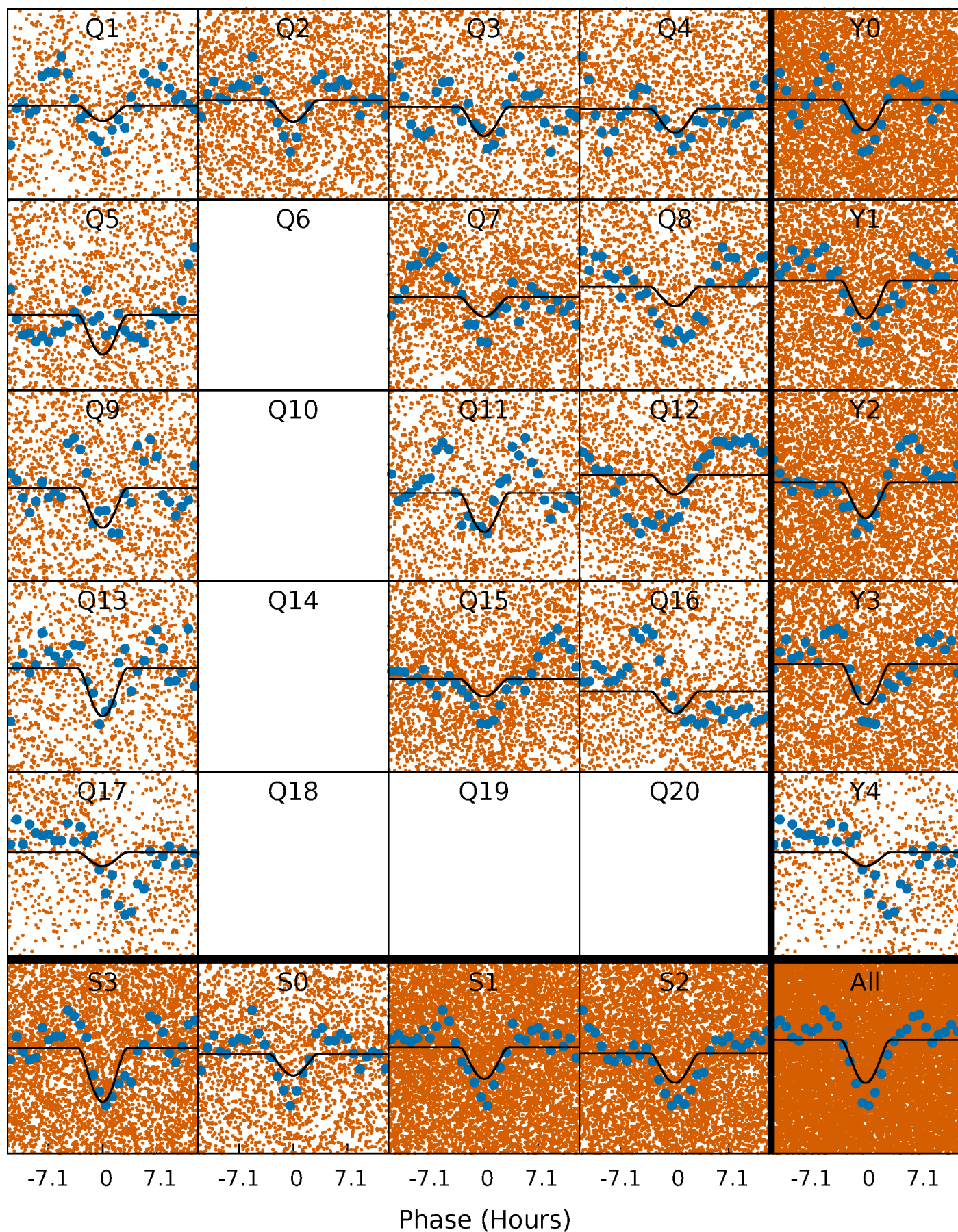
PDC Quarter-Phased Transit Curves

TCE 004758350-01 P= 1.120936 Days $T_0=131.540051$ (BKJD)



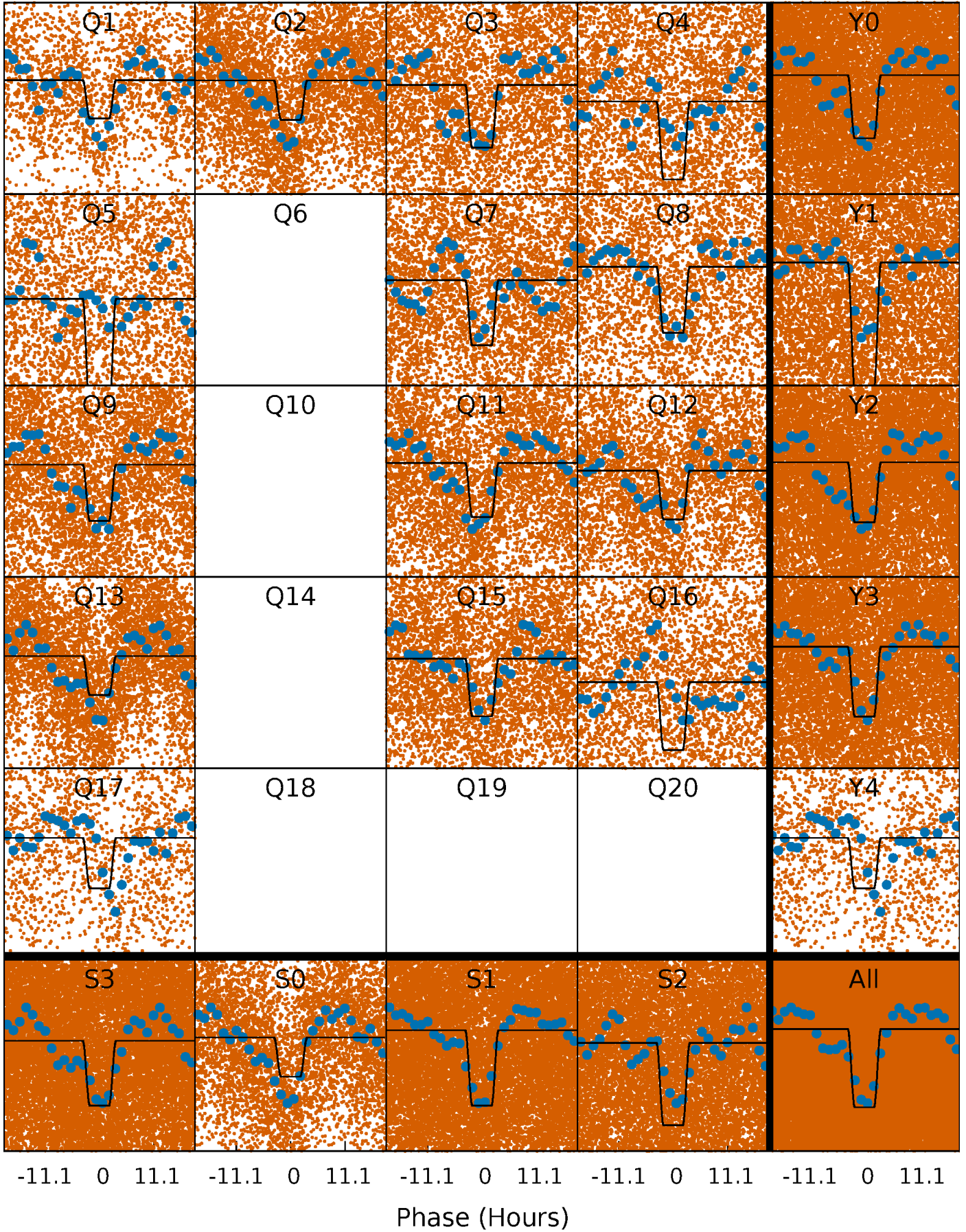
DV Quarter-Phased Transit Curves

TCE 004758350-01 P= 1.120936 Days $T_0=131.540051$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

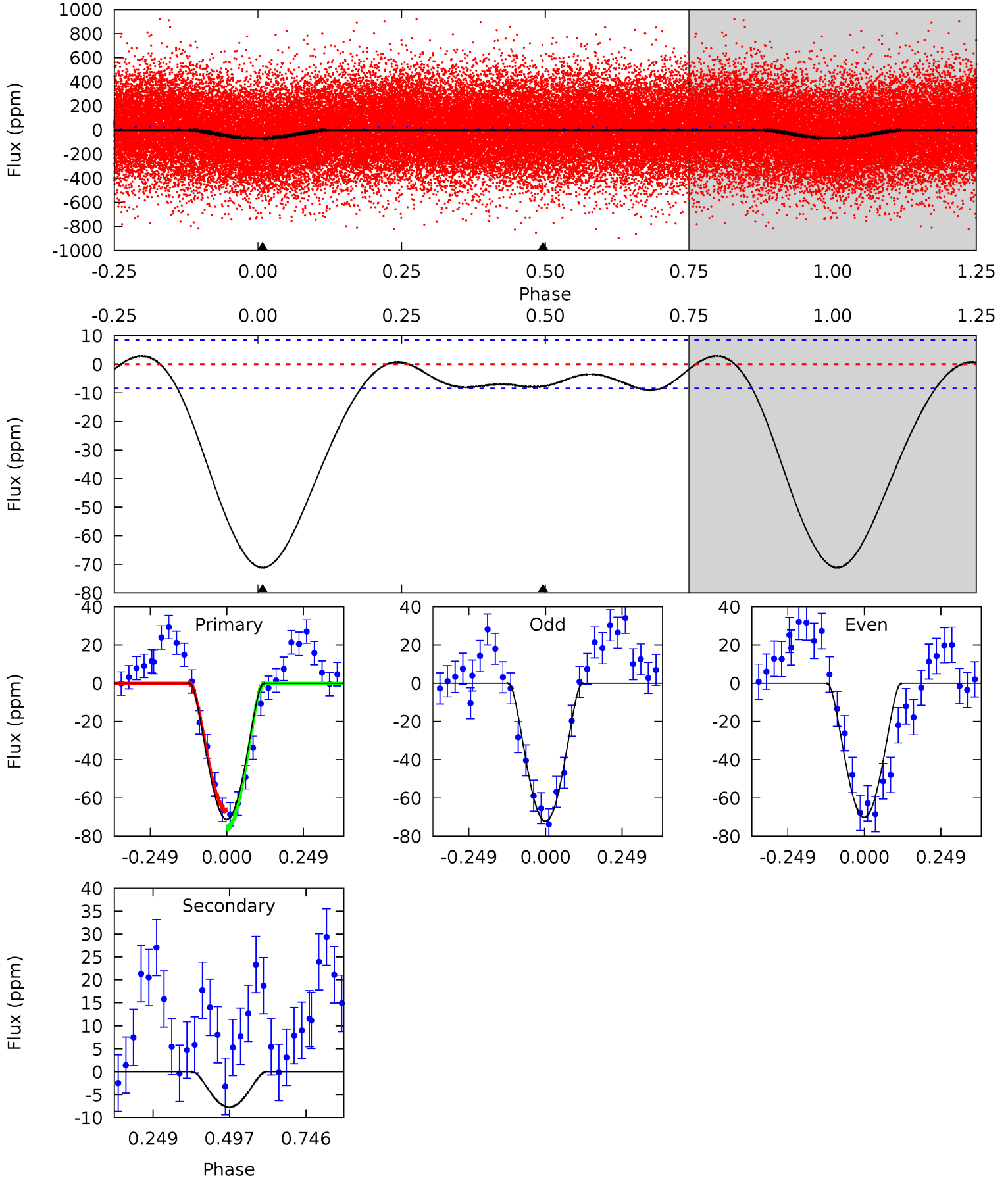
TCE 004758350-01 P= 1.120943 Days $T_0=131.524519$ (BKJD)



DV Model-Shift Uniqueness Test

004758350-01, P = 1.120936 Days, E = 130.419115 Days

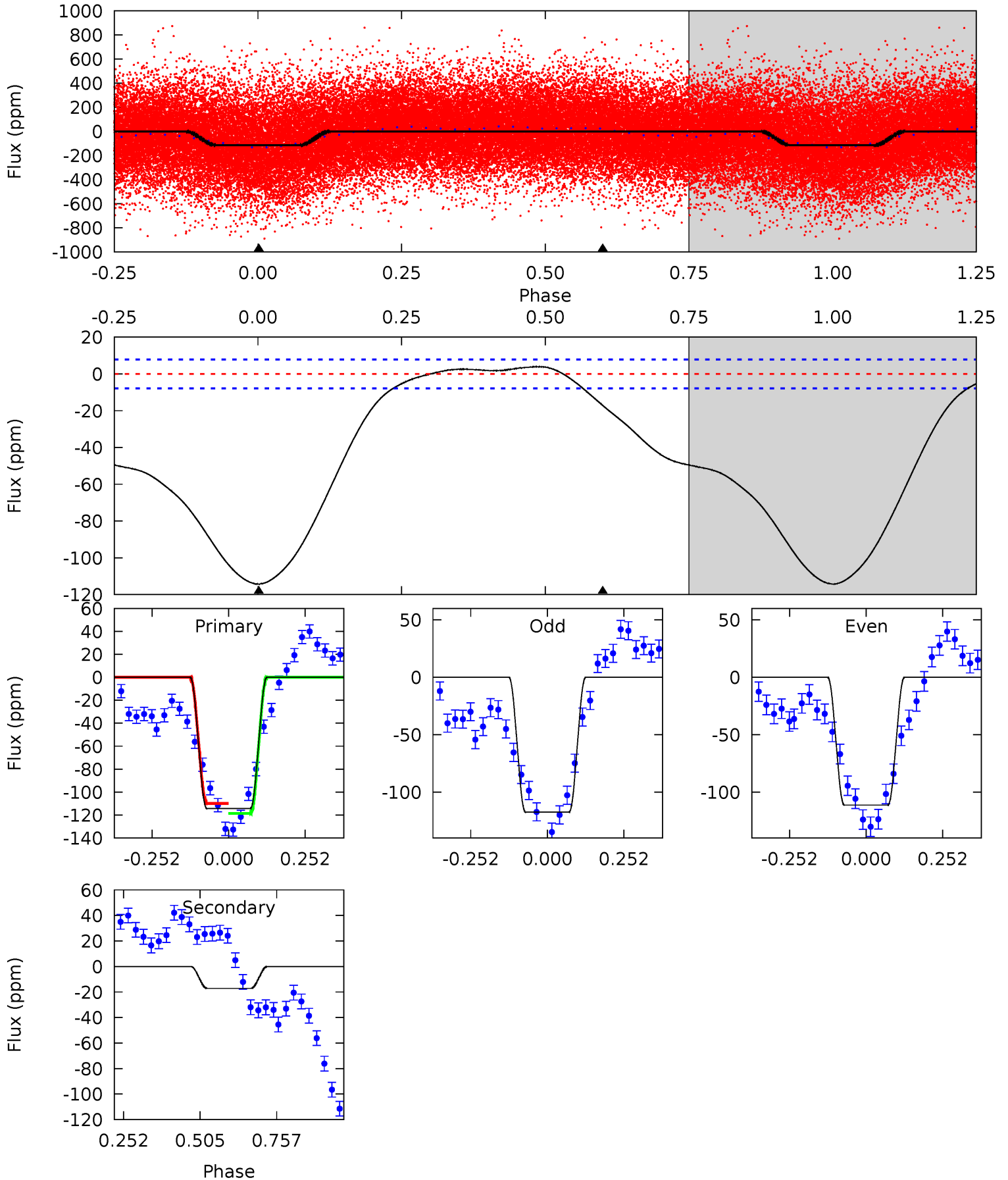
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.6	3.96	0	0	4.37	1.15	1.18	36.6	36.6	3.96	3.96	0.54	0.98	0.04	2.35



Alt Model-Shift Uniqueness Test

004758350-01, P = 1.120943 Days, E = 130.403576 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
63.4	9.51	0	0	4.37	1.14	1.27	63.4	63.4	9.51	9.51	1.70	0.99	0.03	2.29



Stellar Parameters For KIC 004758350

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6720^{+180}_{-220}	$3.373^{+0.366}_{-0.065}$	$-0.180^{+0.350}_{-0.250}$	$4.845^{+0.345}_{-1.955}$	$2.020^{+0.124}_{-0.372}$	$0.025^{+0.075}_{-0.003}$
	+3%/-3%	+11%/-2%	+194%/-139%	+7%/-40%	+6%/-18%	+298%/-14%
Source	PHO1	FLK73	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 004758350-01 / KOI 6447.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-8 ± 2	$8.51^{+8.11}_{-5.89}$	5459^{+291}_{-547}	-4351^{+8259}_{-340}	$0.042^{+0.402}_{-0.031}$
Alt.	-17 ± 2	$7.92^{+7.34}_{-5.36}$	5483^{+265}_{-548}	-4100^{+9396}_{-517}	$0.106^{+0.910}_{-0.078}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

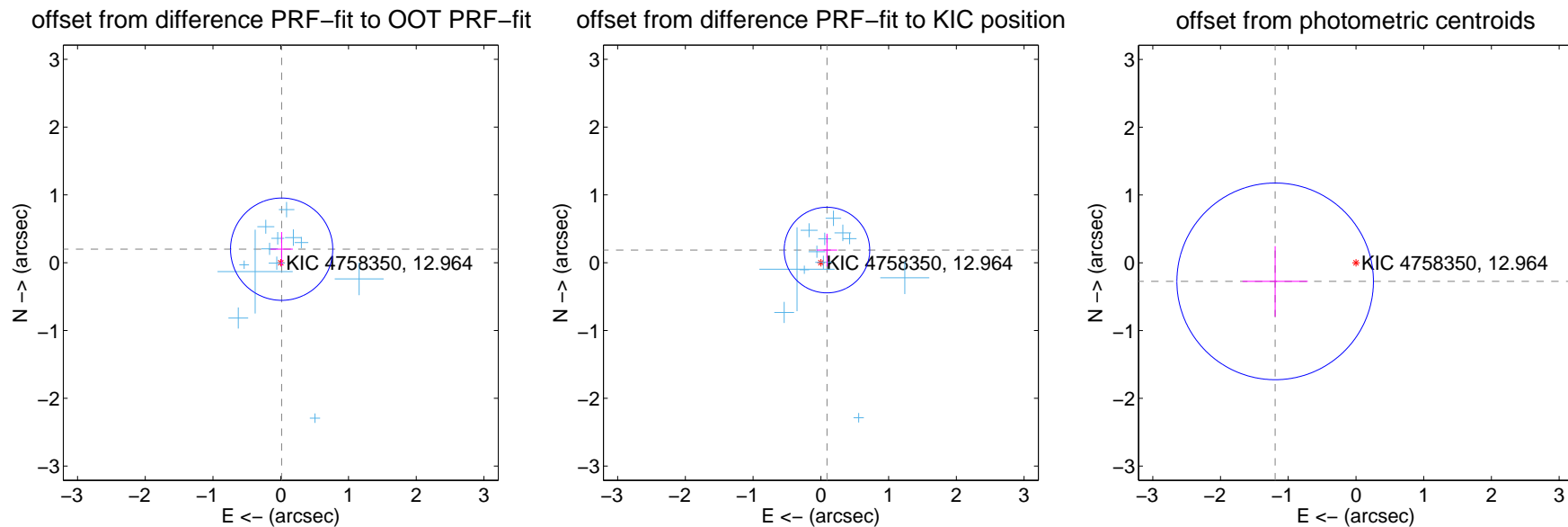
DV Centroid Data

Supplemental centroid analysis for 004758350-01. Kepler magnitude: 12.96. Transit SNR 9.43

There are 12 quarters with good PRF difference image offsets

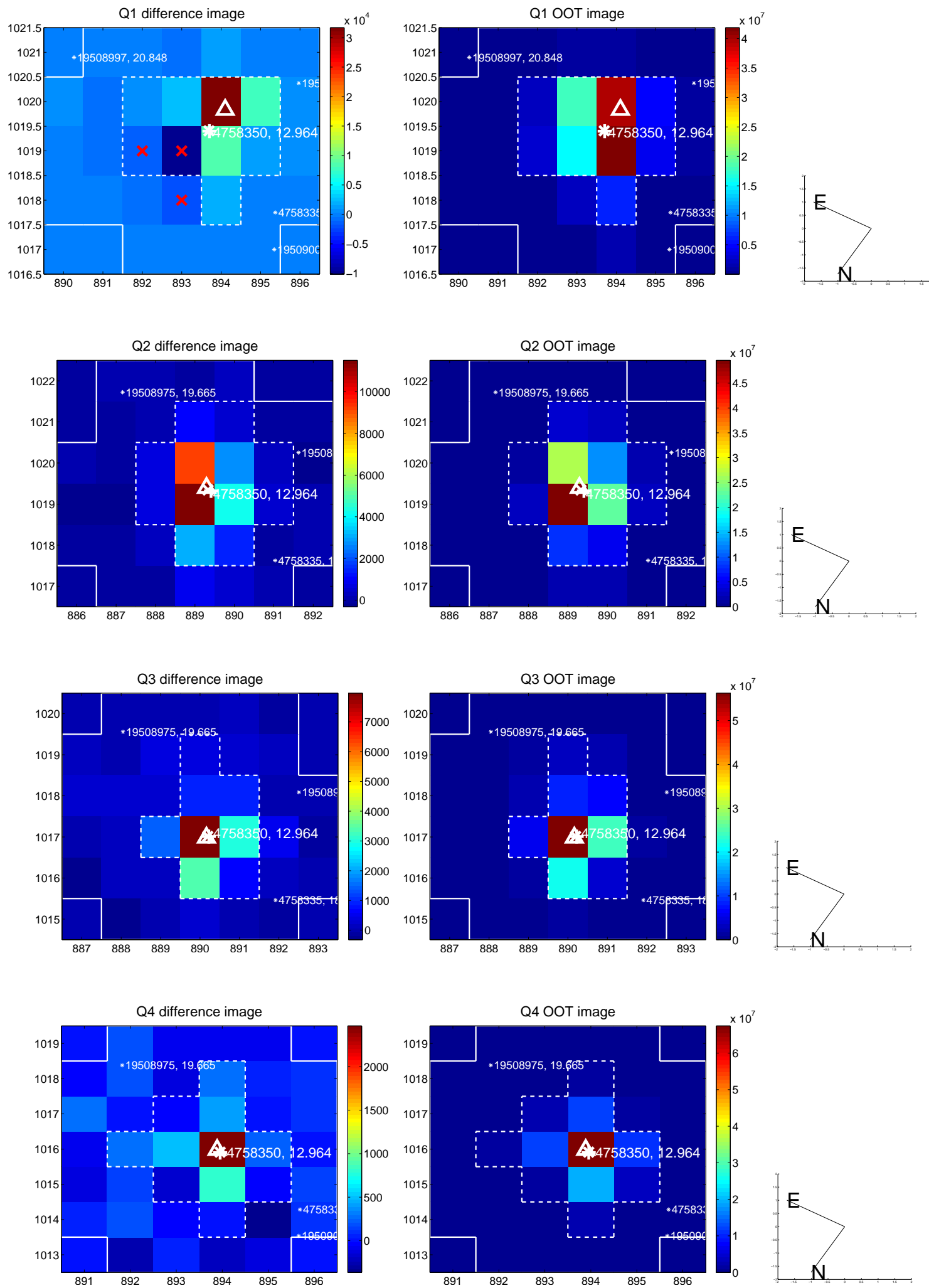
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.200 ± 0.252	0.79	-0.013 ± 0.166	0.199 ± 0.252
PRF-fit source offset from KIC position	0.207 ± 0.211	0.98	-0.090 ± 0.151	0.186 ± 0.241
photometric centroid source offset	1.22 ± 0.48	2.53	1.19 ± 0.48	-0.27 ± 0.52

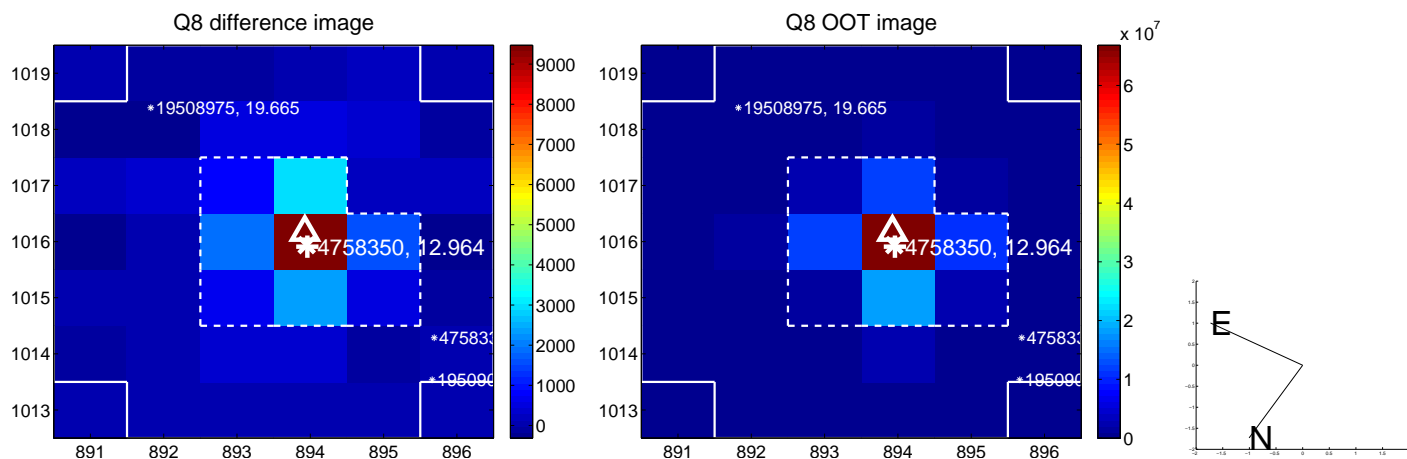
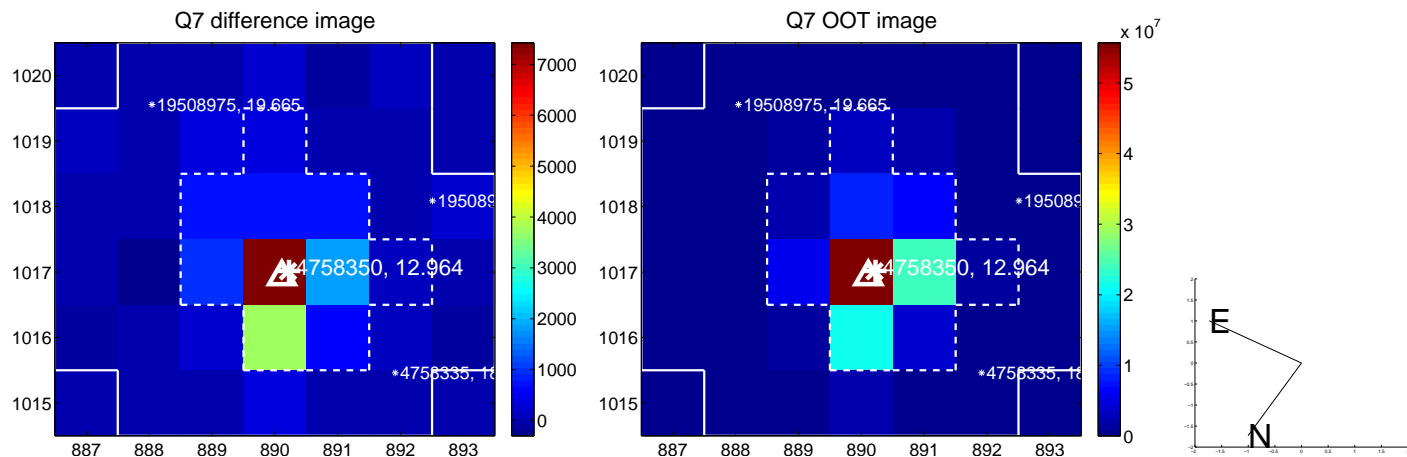
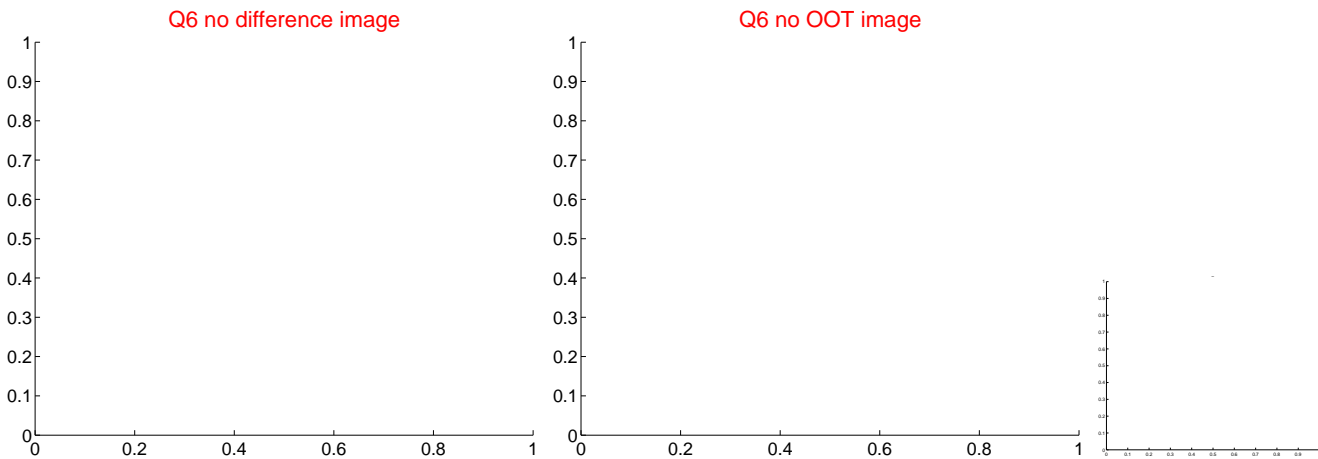
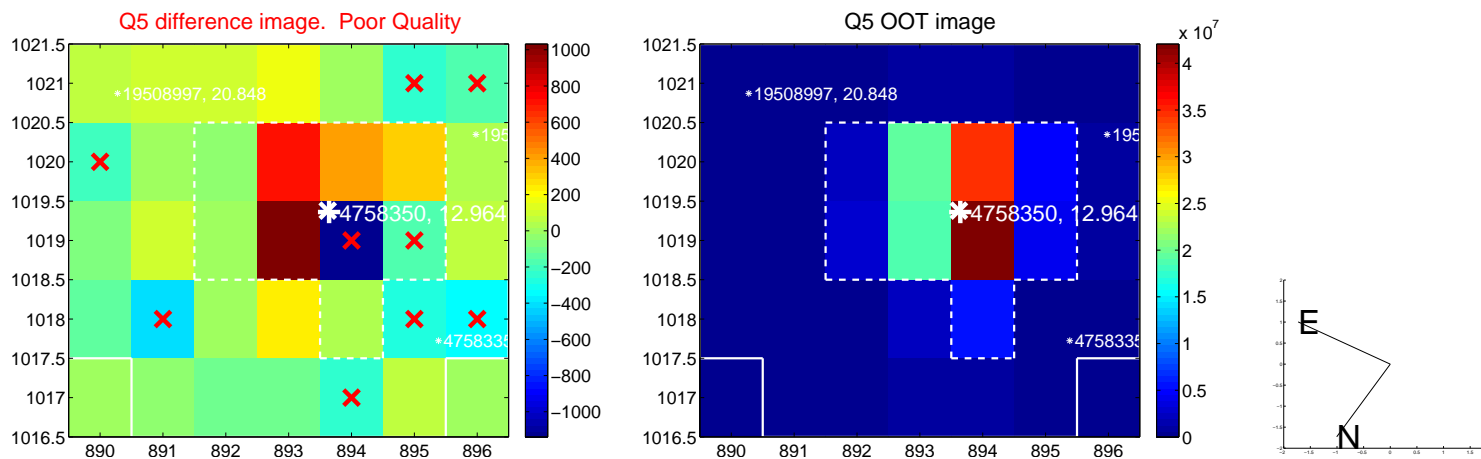


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

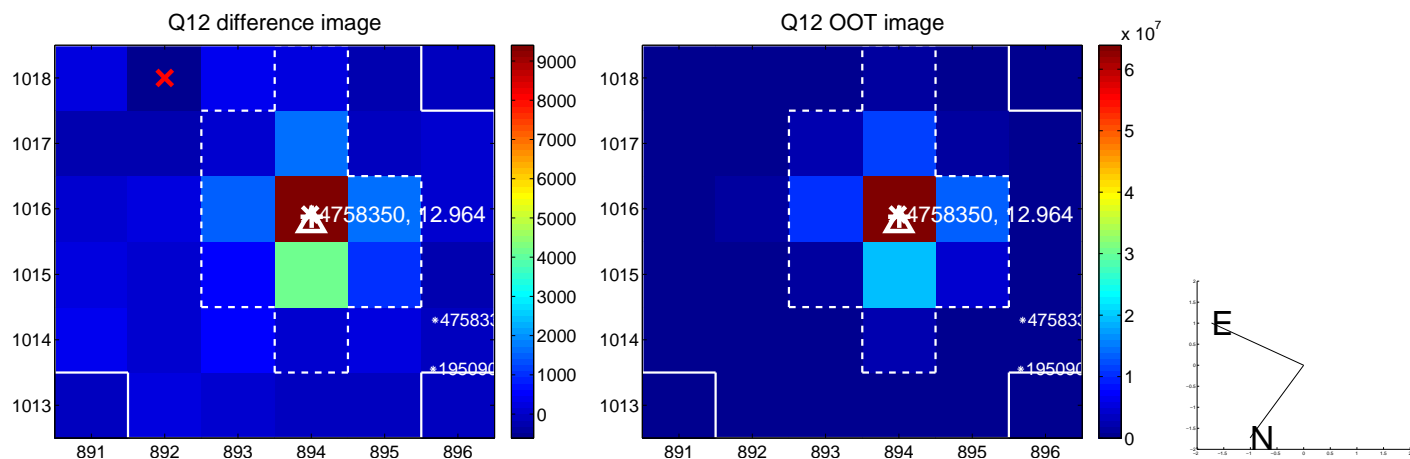
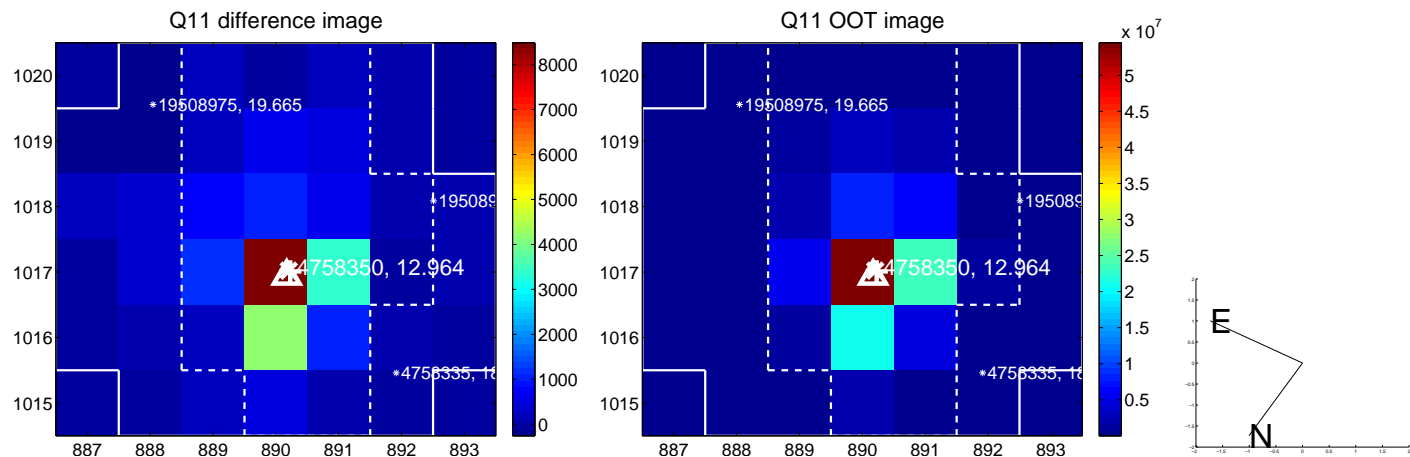
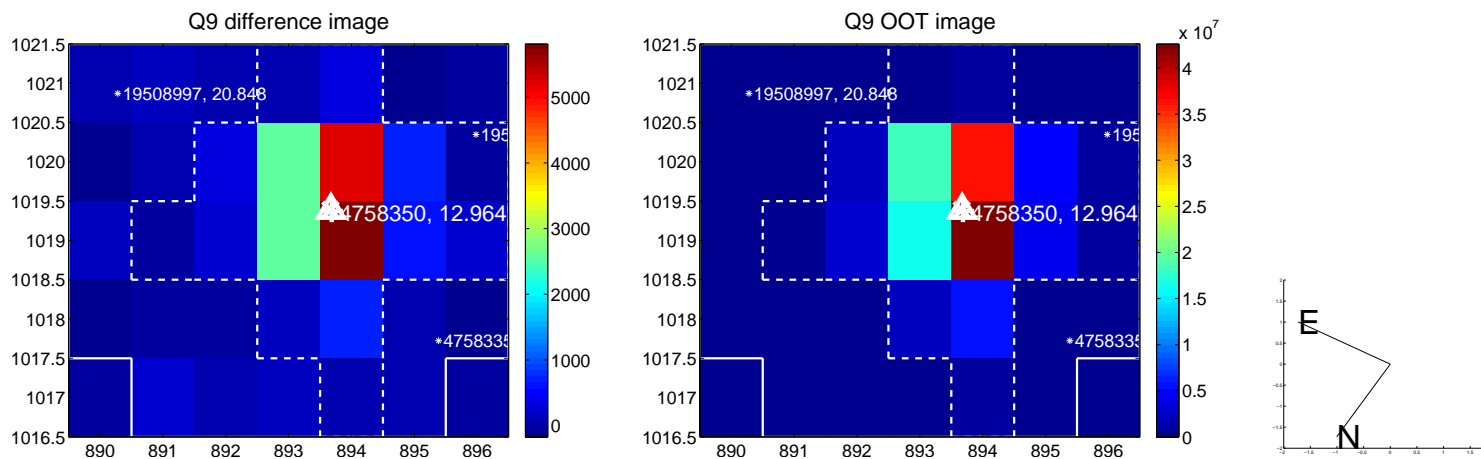
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



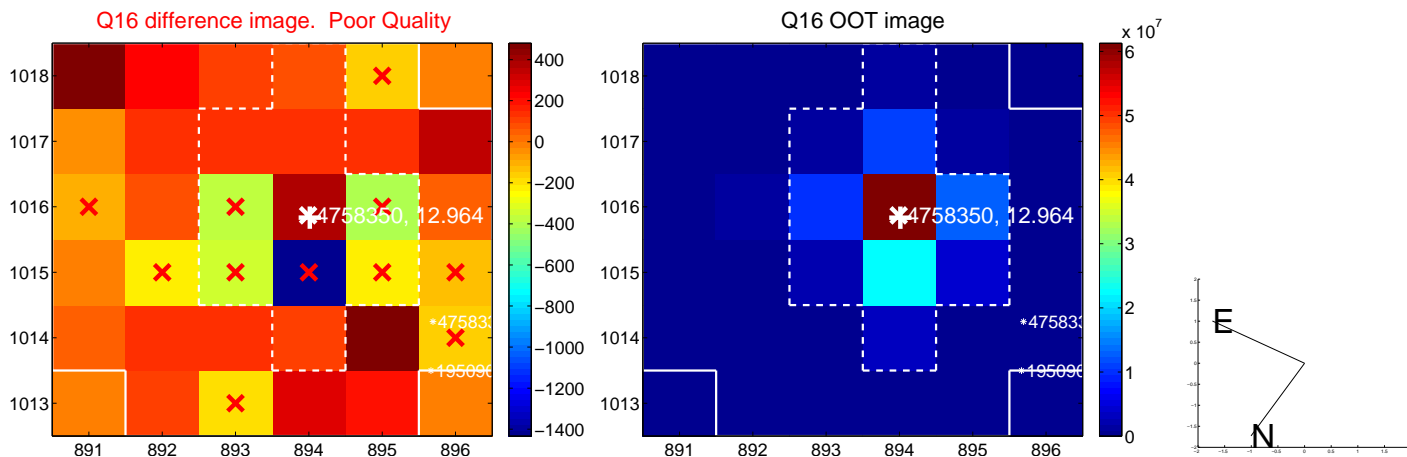
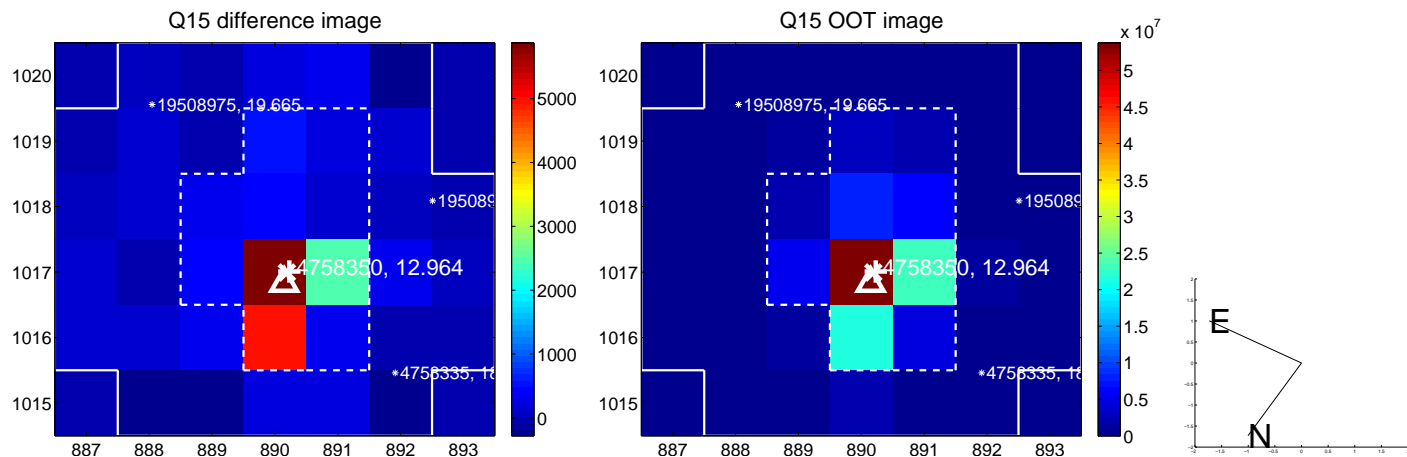
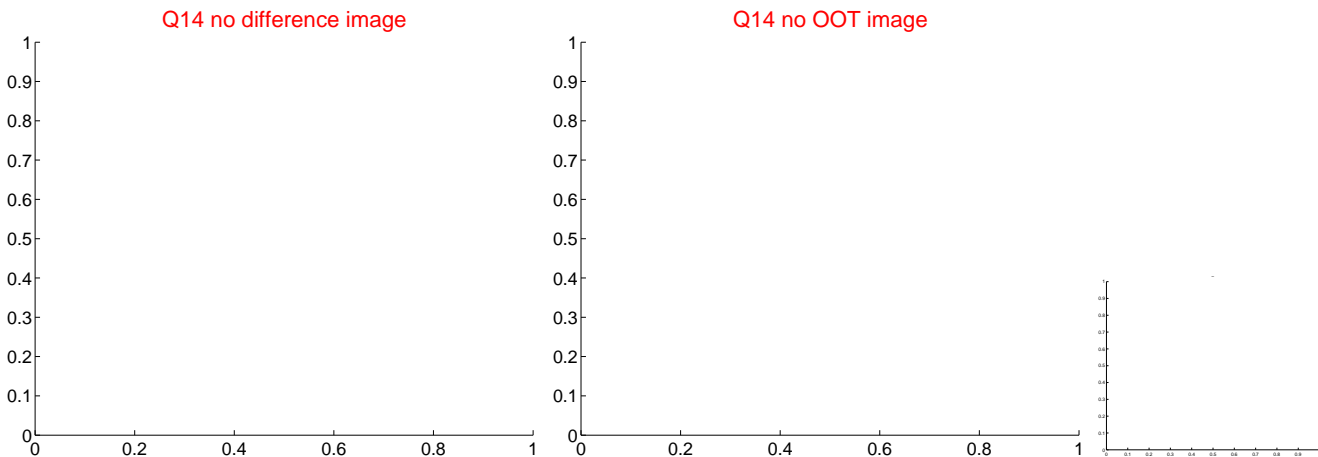
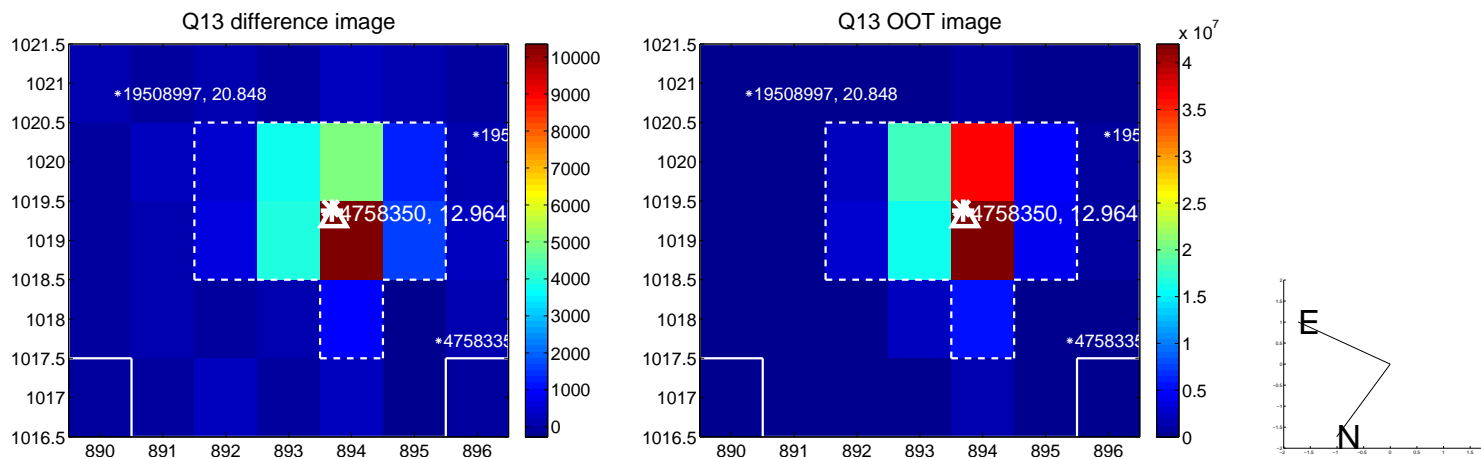
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



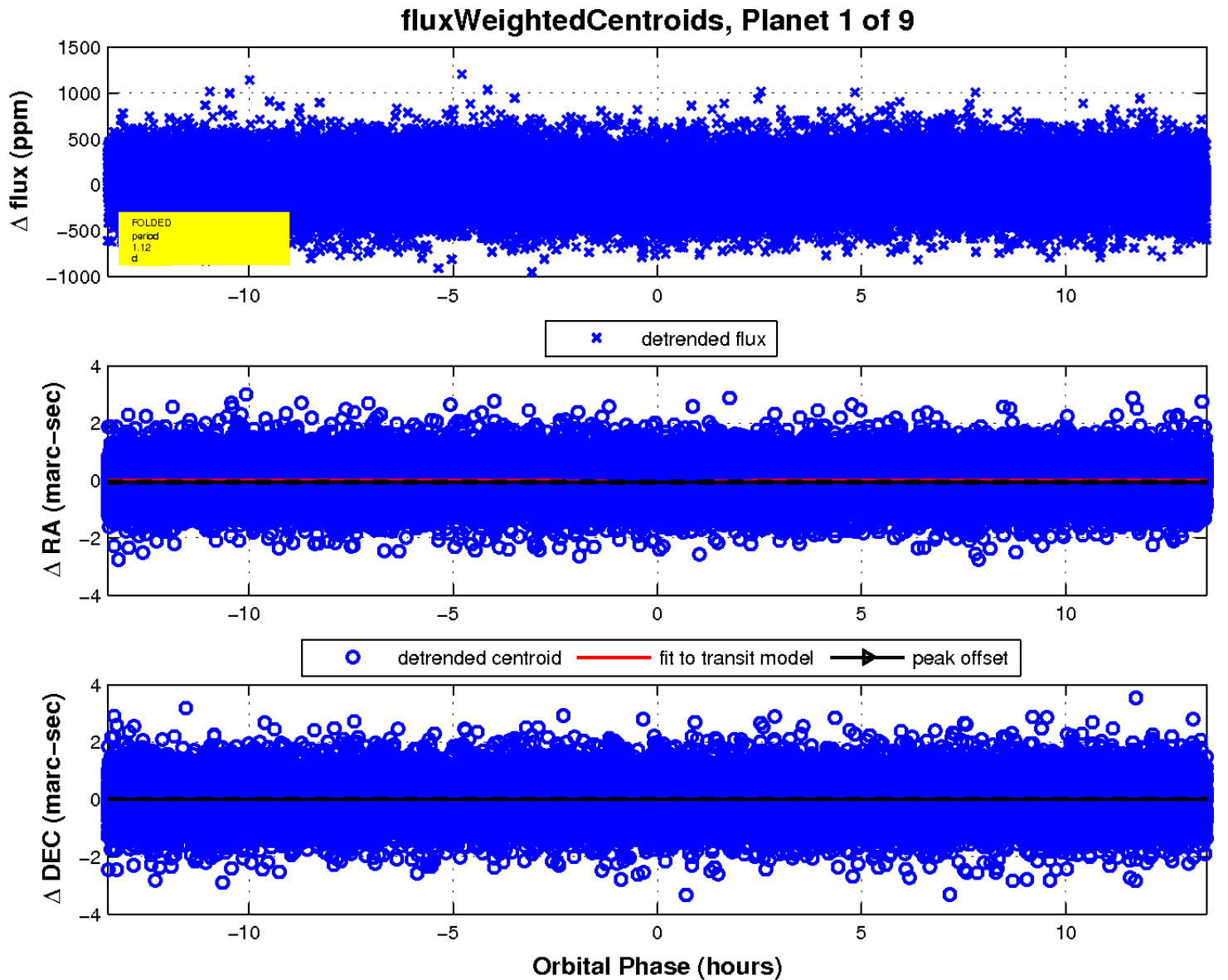
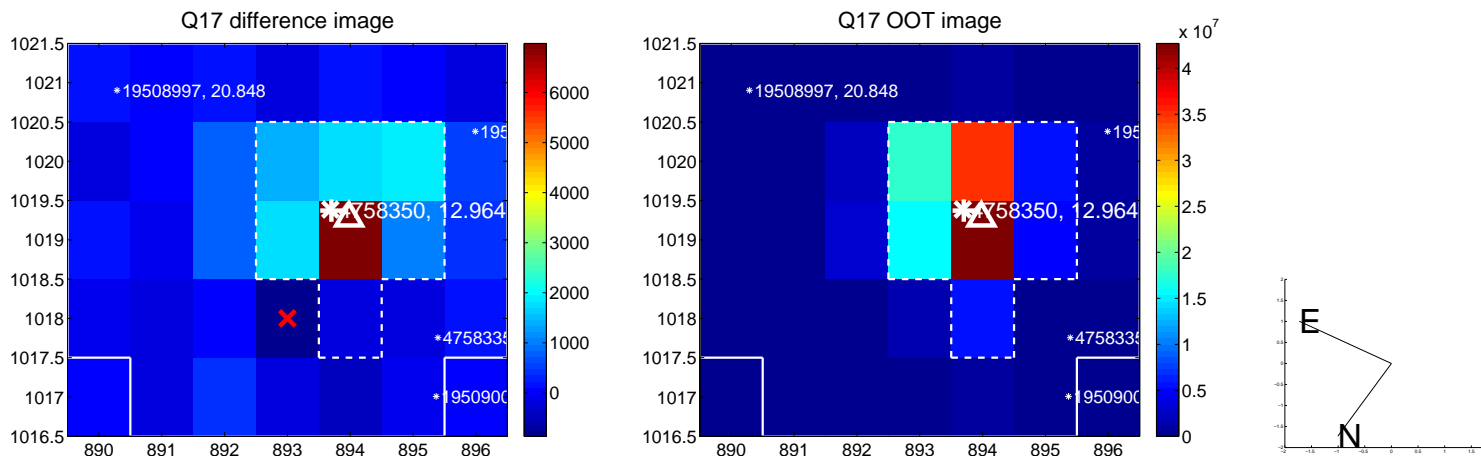
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

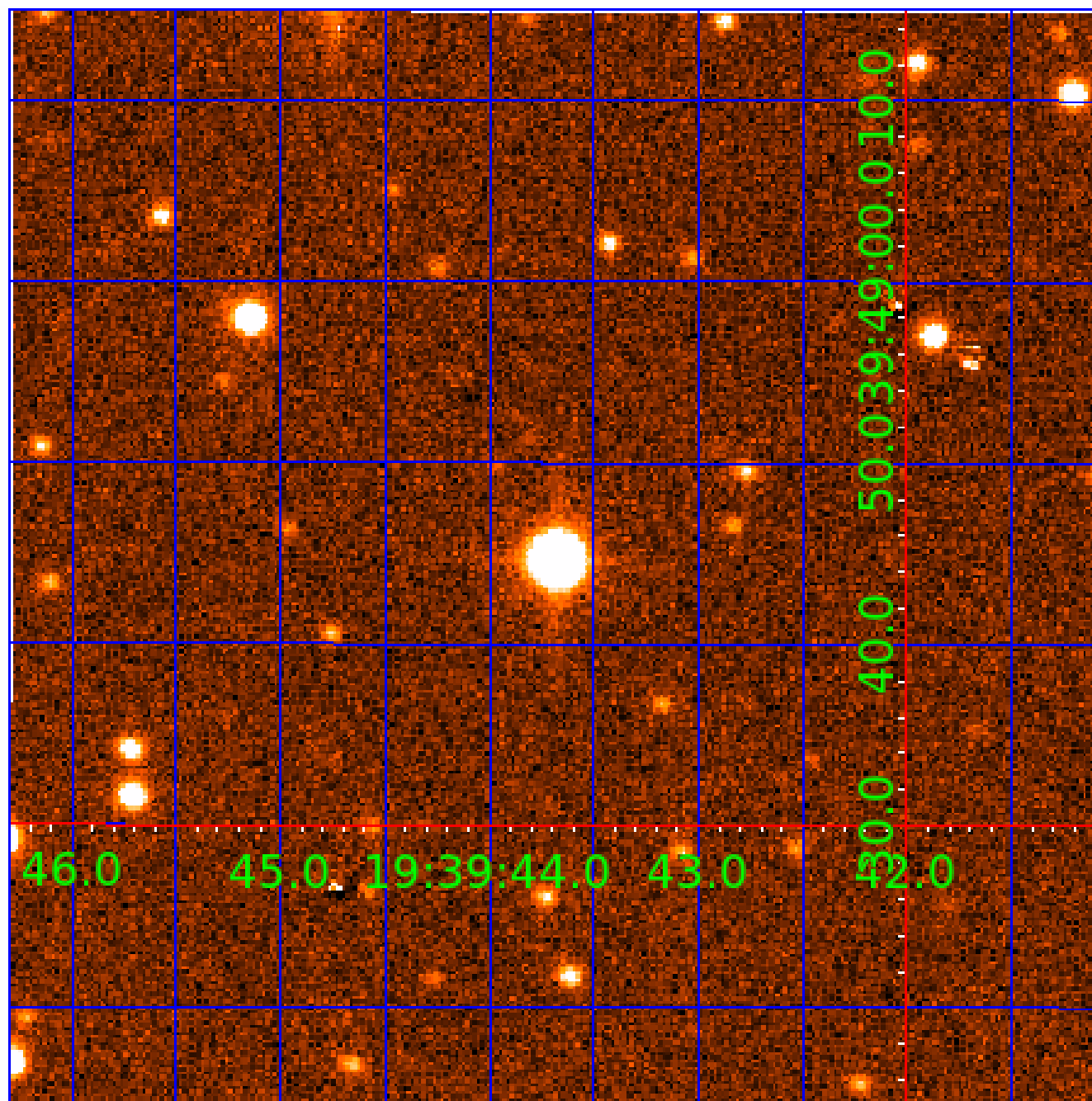


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004758350

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})
004758350-01	OBS	6447.01	1.120936	131.540051	45.9	6.243	8.9	9.4	4.84	6720	6.27	60134.87
004758350-02	OBS	No	95.011757	197.822359	505.4	3.636	9.2	10.2	4.84	6720	11.82	161.51
004758350-03	OBS	No	96.090049	189.921096	409.6	7.506	9.0	9.5	4.84	6720	12.57	159.10
004758350-04	OBS	No	8.956177	133.855318	151.8	3.553	9.2	9.5	4.84	6720	6.74	3764.76
004758350-06	OBS	No	235.351197	303.610912	485.1	5.963	9.2	9.7	4.84	6720	12.16	48.19
004758350-07	OBS	No	59.039315	165.845414	496.1	2.491	9.1	8.9	4.84	6720	12.81	304.59
004758350-08	OBS	No	103.210000	175.789471	404.4	6.858	7.7	7.6	4.84	6720	18.77	144.63
004758350-09	OBS	No	57.135180	142.505796	361.3	4.612	8.9	10.2	4.84	6720	11.45	318.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004758350-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT
004758350-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
004758350-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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.

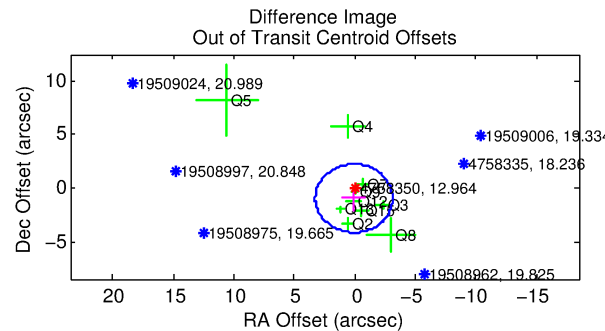
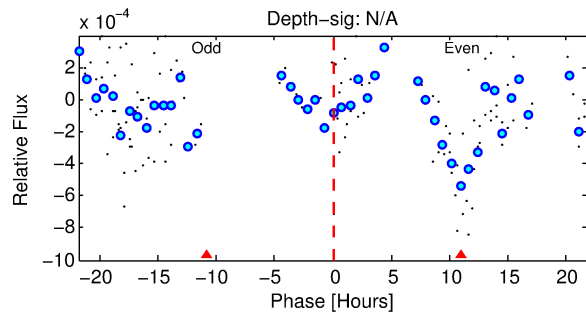
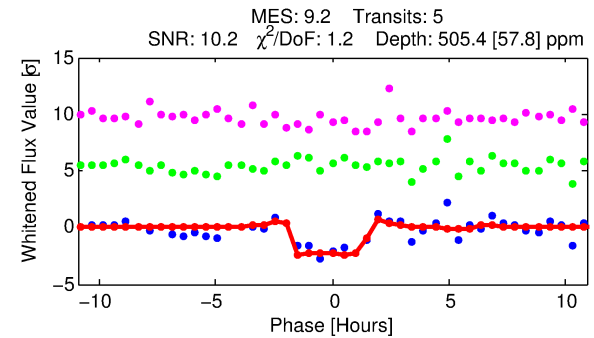
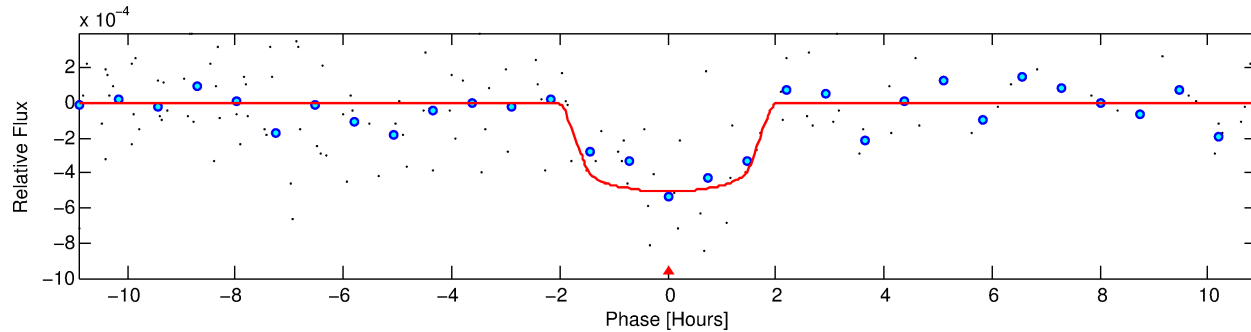
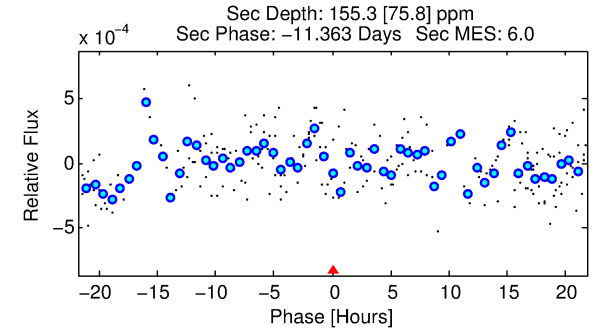
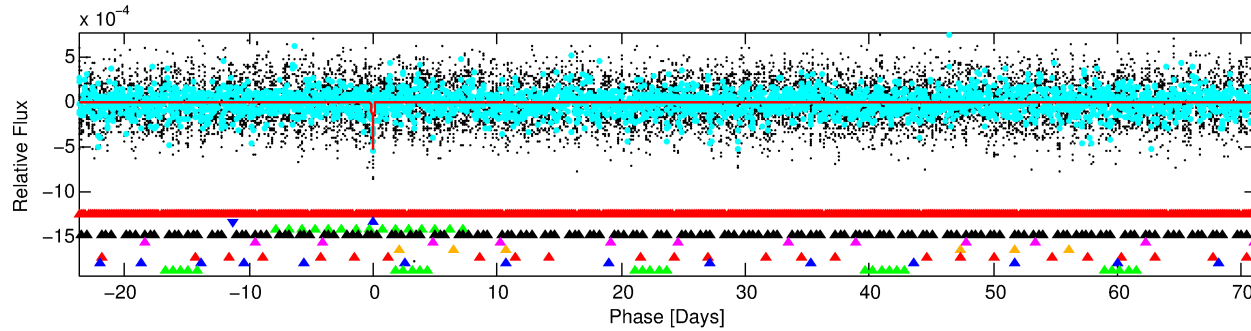
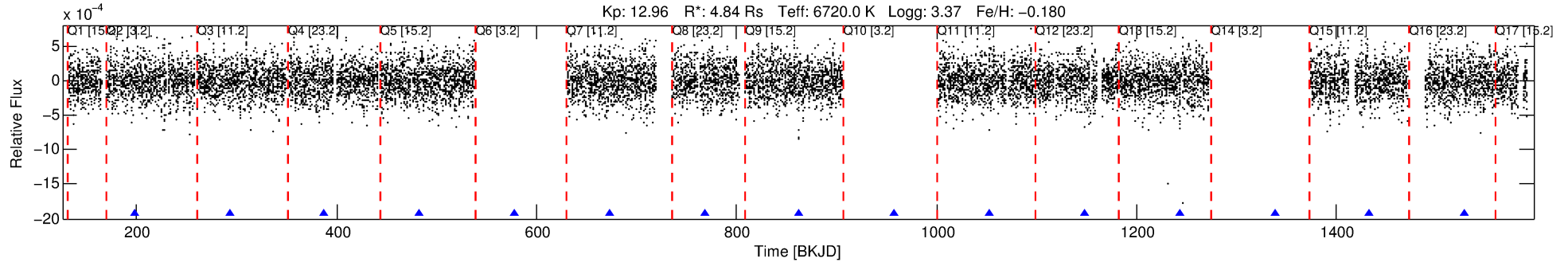
Ephemeris Match Information For 004758350-02

No Significant Match Found

DV One-Page Summary

KIC: 4758350 Candidate: 2 of 9 Period: 95.012 d
KOI: K06447 Corr: No Ephemeris Match

Kp: 12.96 R*: 4.84 Rs Teff: 6720.0 K Logg: 3.37 Fe/H: -0.180



DV Fit Results:

Period = 95.01176 [0.00085] d
Epoch = 197.8224 [0.0076] BKJD
Rp/R* = 0.0224 [0.0160]
a/R* = 139.13 [570.87]
b = 0.75 [2.44]
Seff = 161.51 [102.81]
Teq = 909 [145] K
Rp = 11.82 [9.73] Re
a = 0.5153 [0.2004] AU
Ag = 162.47 [266.14] [0.61σ]
Teffp = 5018 [1908] K [2.15σ]

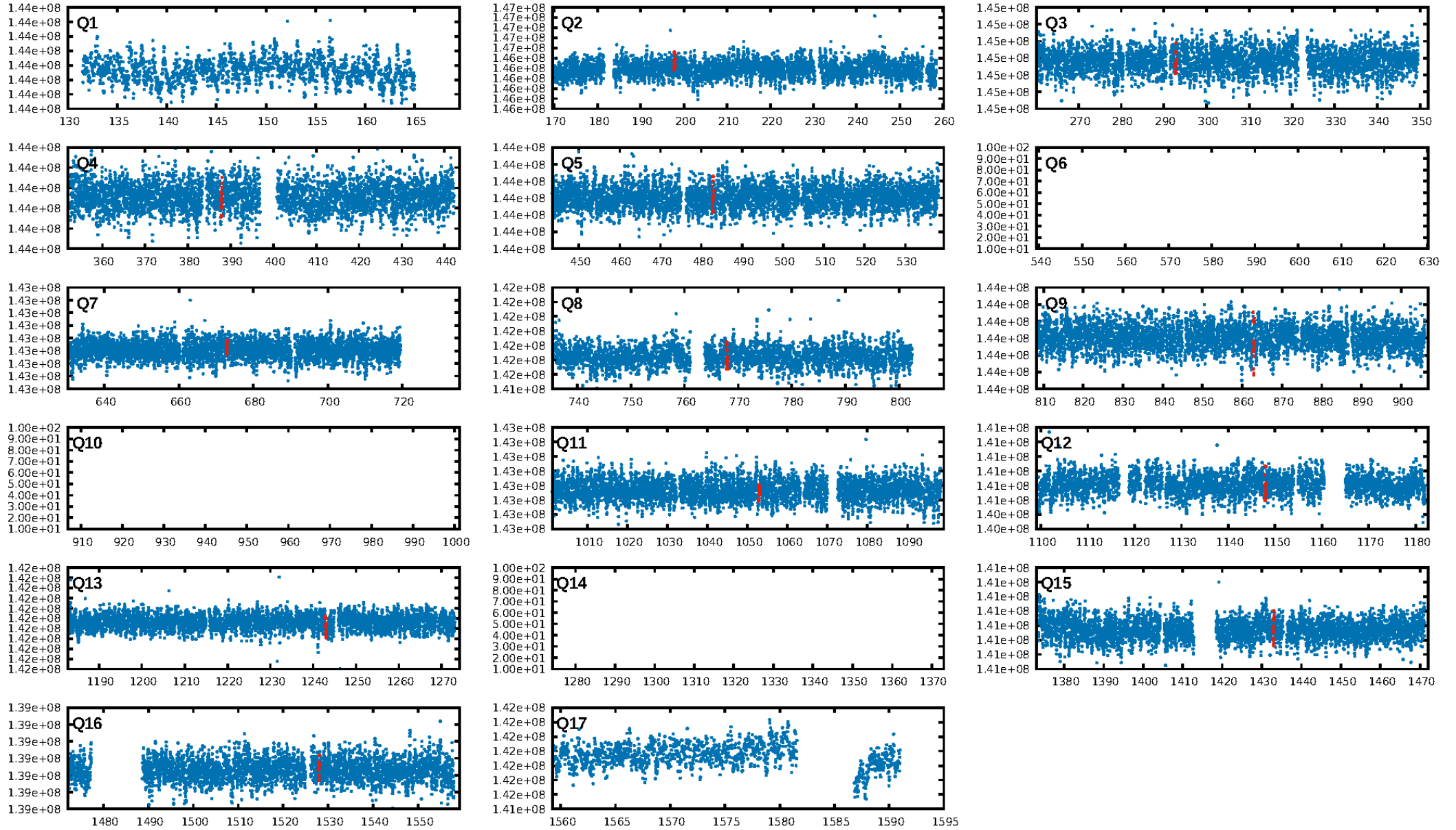
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [195.91σ]
LongPeriod-sig: 99.8% [3.10σ]
ModelChiSquare2-sig: 9.4%
ModelChiSquareGof-sig: 99.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.7185
Centroid-sig: 8.1%
Centroid-so: 0.428 arcsec [1.01σ]
OotOffset-rm: 0.972 arcsec [0.91σ]
KicOffset-rm: 0.965 arcsec [0.85σ]
OotOffset-st: 1/3/3/3 [10]
KicOffset-st: 1/3/3/3 [10]
DiffImageQuality-fgm: 0.60 [6/10]
DiffImageOverlap-fno: 0.08 [1/12]

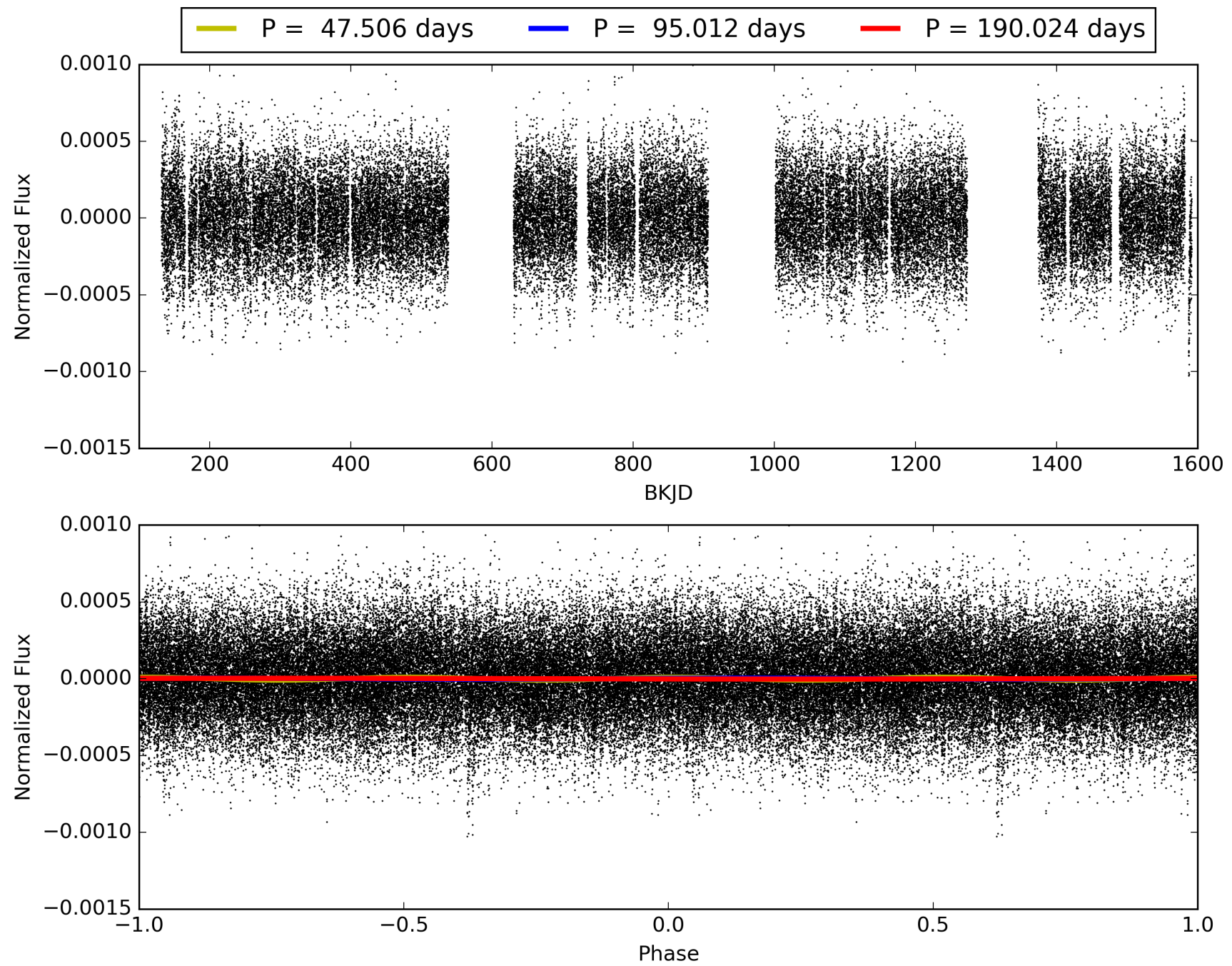
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:34:27 Z

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

TCE 004758350-02, PDC Light Curves

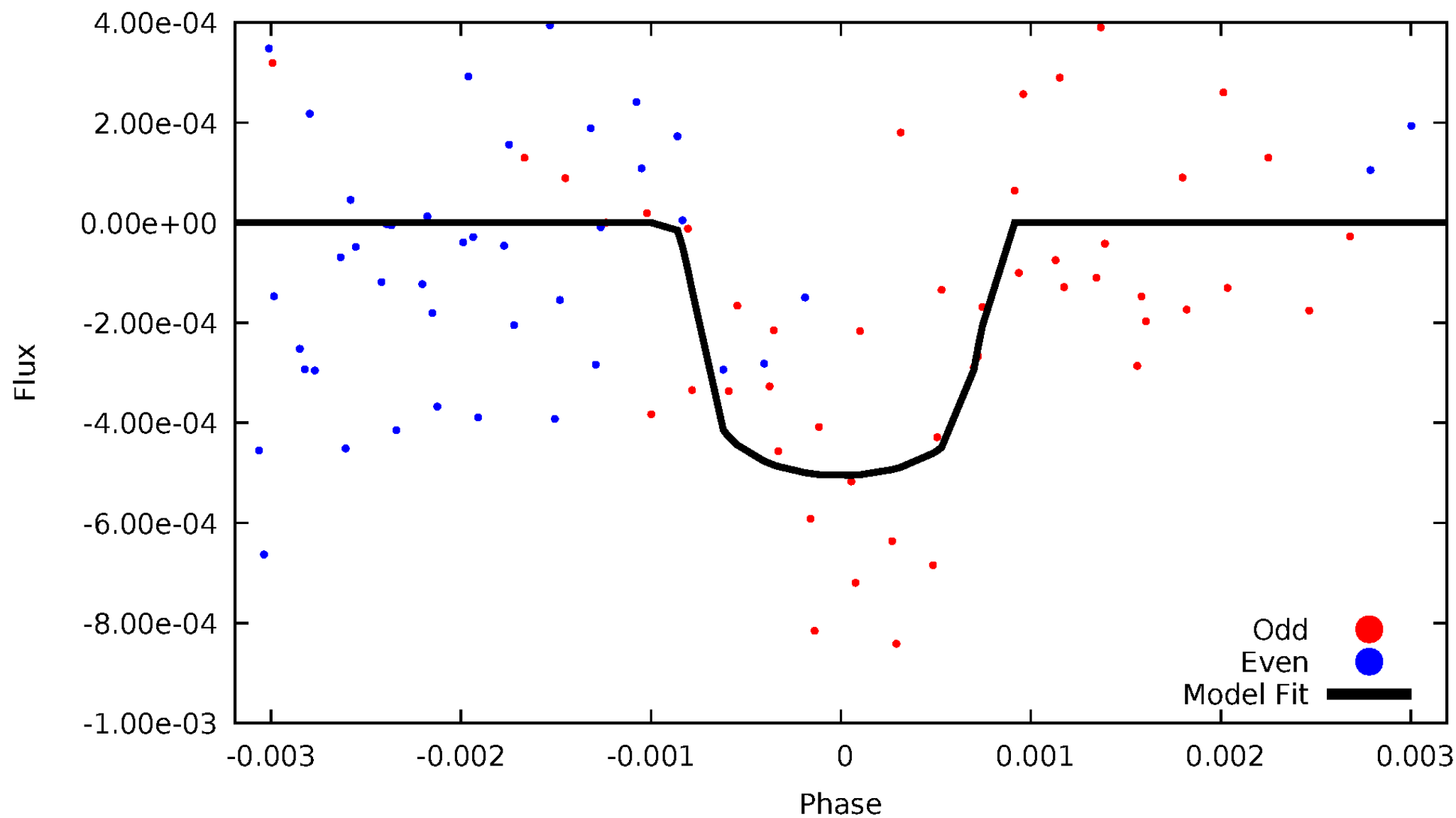


TCE 004758350-02



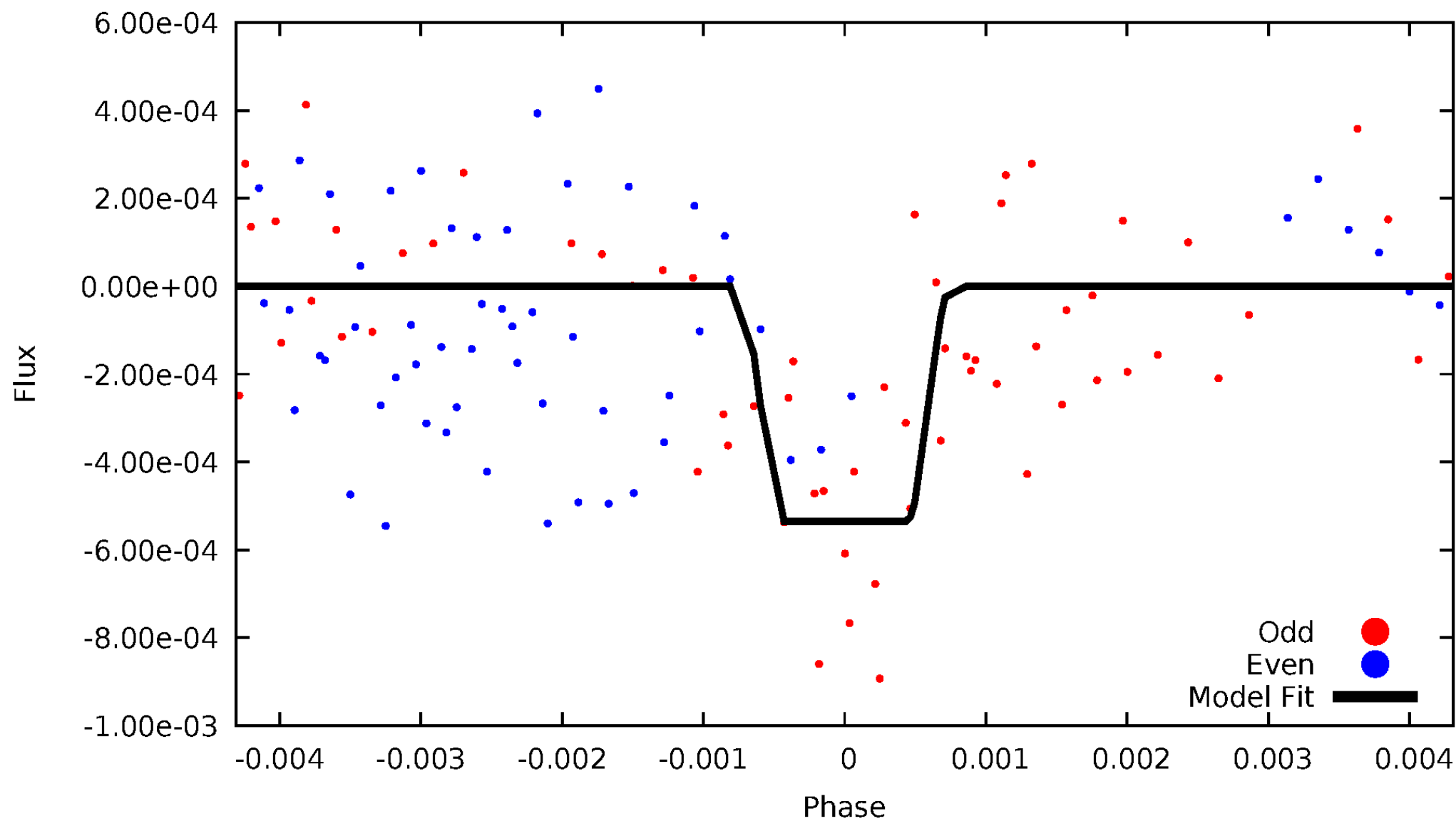
DV Odd/Even

TCE 004758350-02



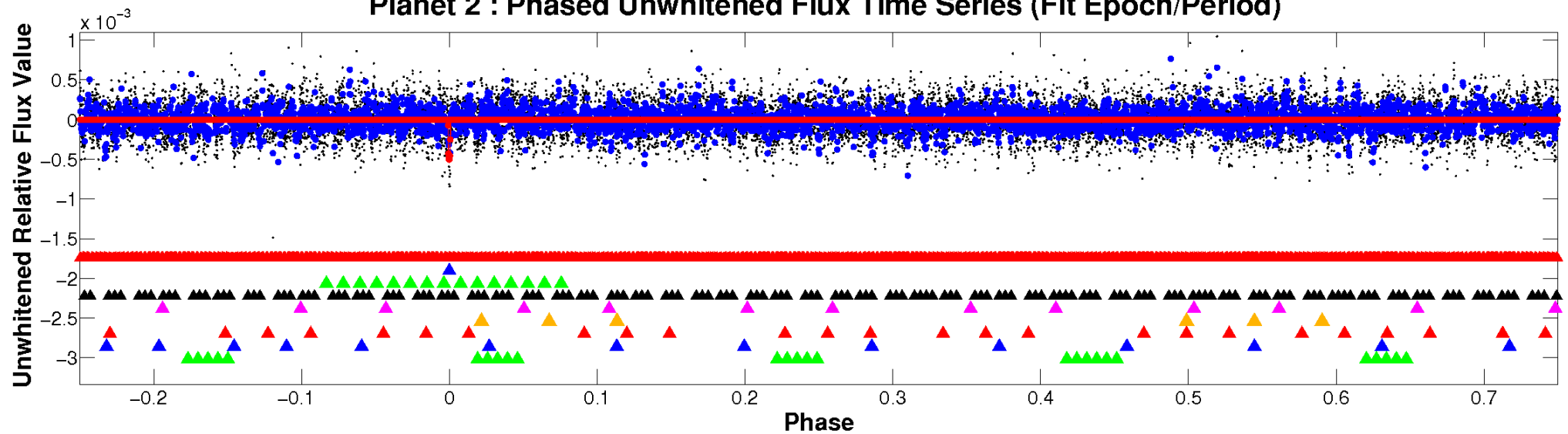
ALT Odd/Even

TCE 004758350-02

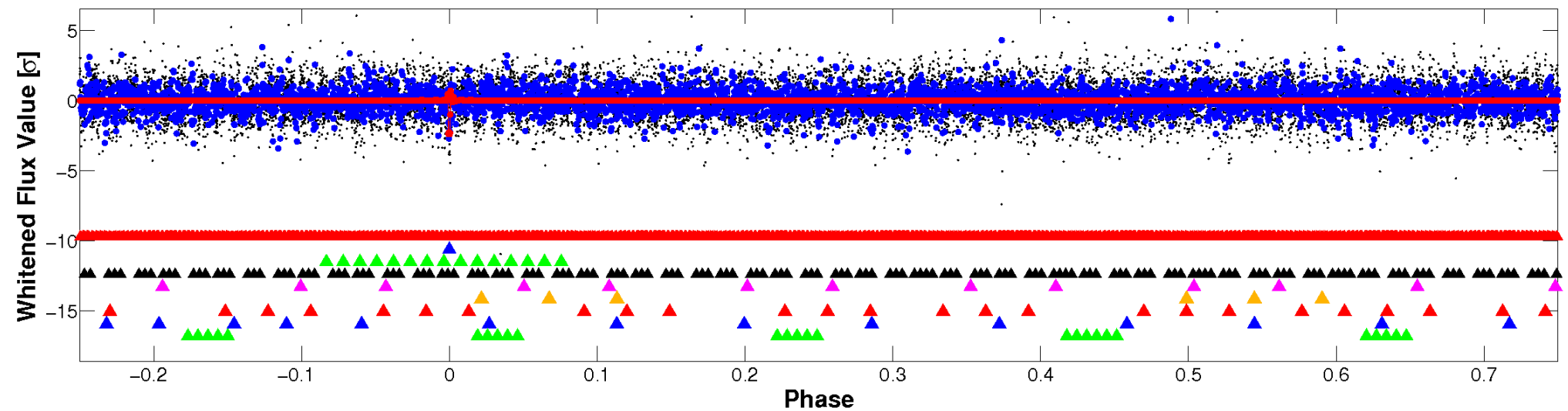


Non-Whitened Vs. Whitened Light Curve

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

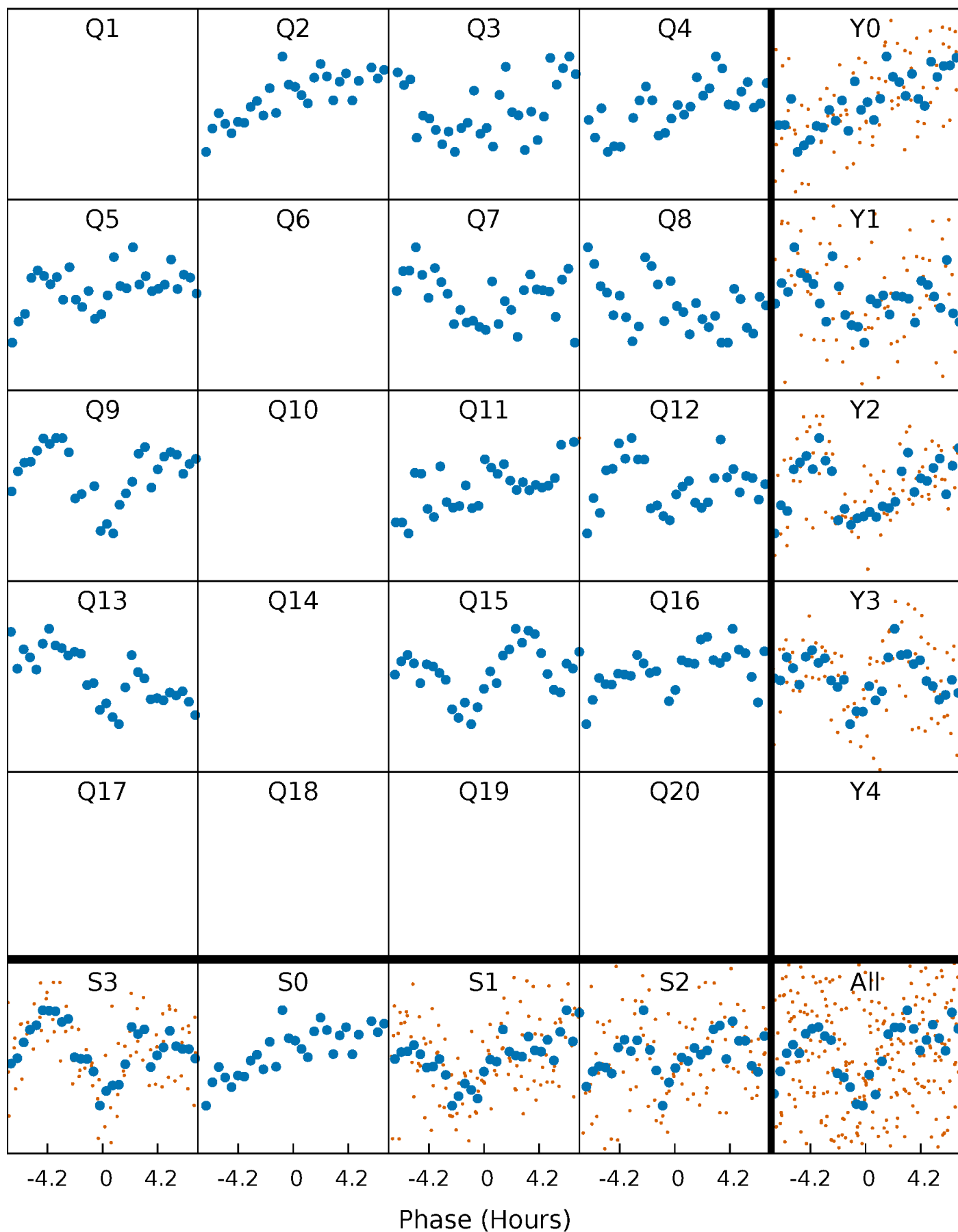


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



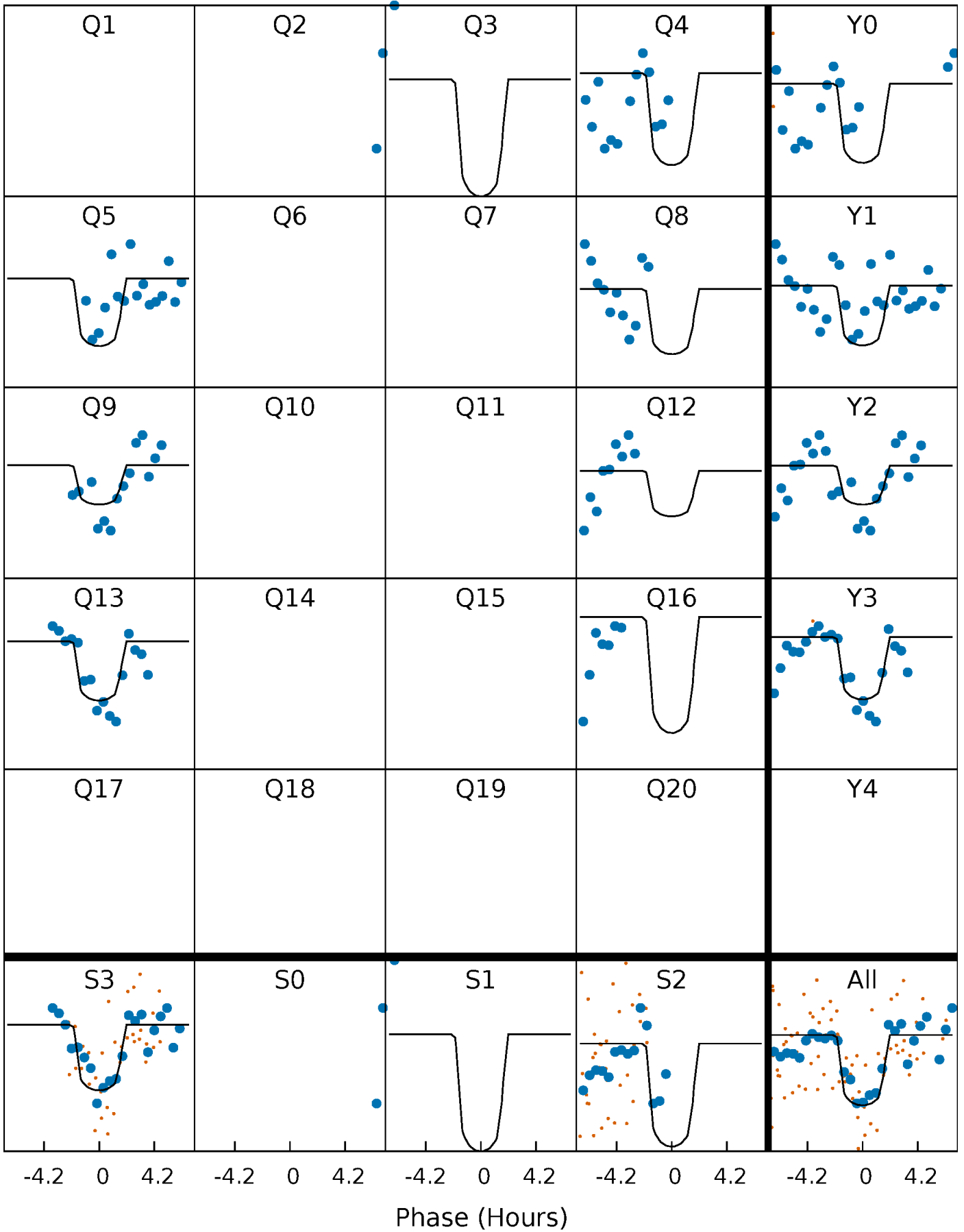
PDC Quarter-Phased Transit Curves

TCE 004758350-02 P= 95.011757 Days $T_0=197.822359$ (BKJD)



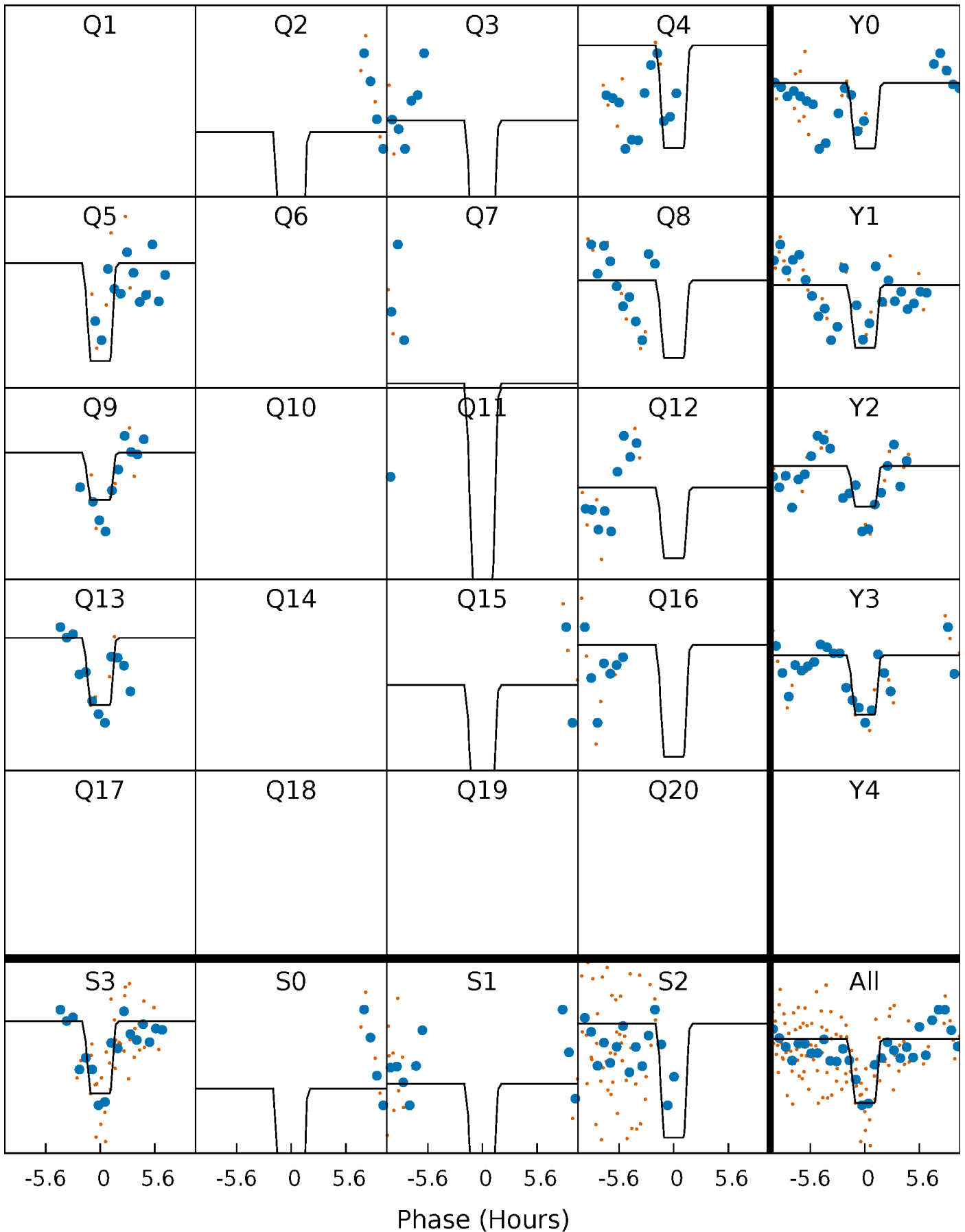
DV Quarter-Phased Transit Curves

TCE 004758350-02 P= 95.011757 Days $T_0=197.822359$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

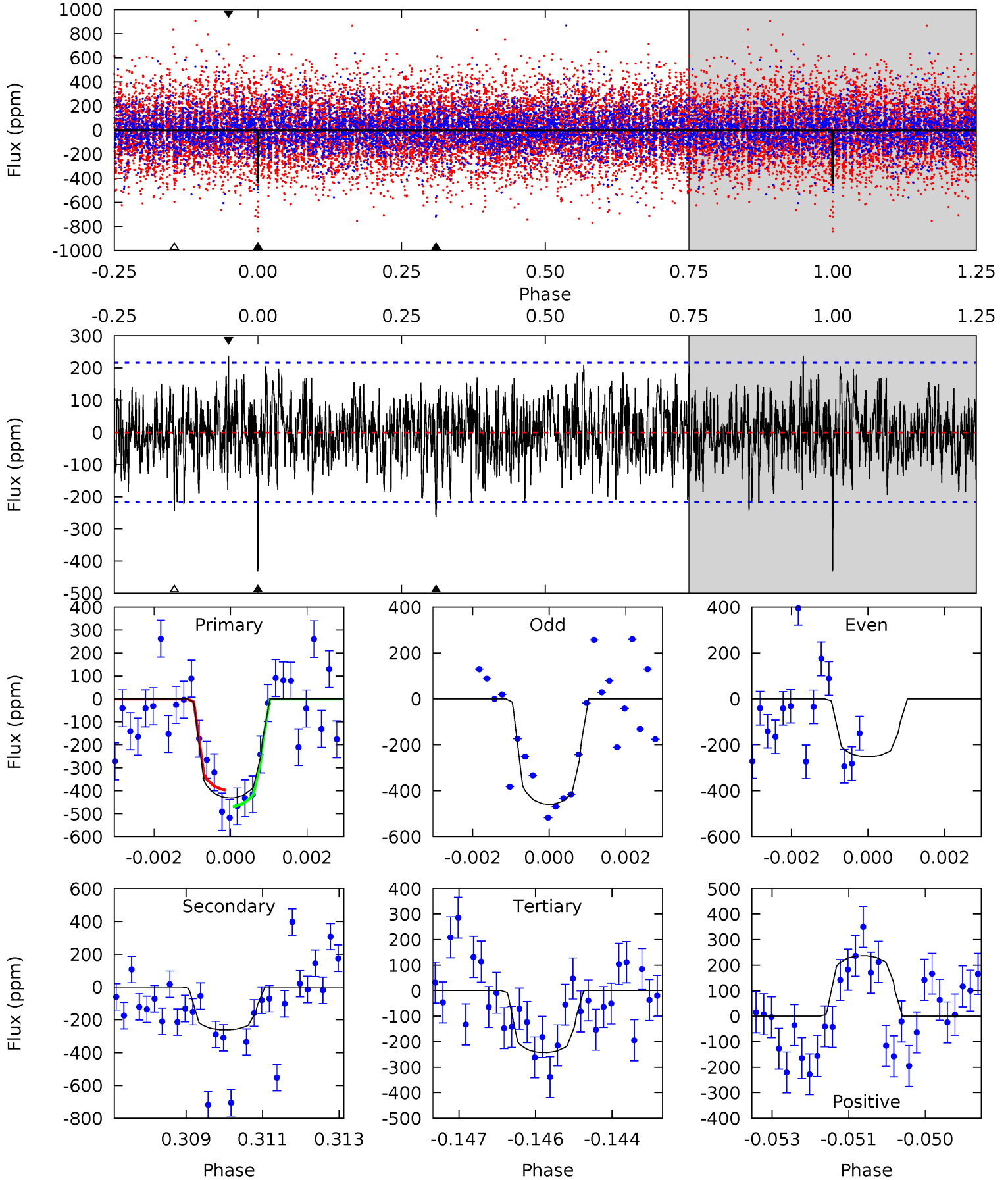
TCE 004758350-02 $P = 95.017094$ Days $T_0 = 197.789062$ (BKJD)



DV Model-Shift Uniqueness Test

004758350-02, P = 95.011757 Days, E = 102.810602 Days

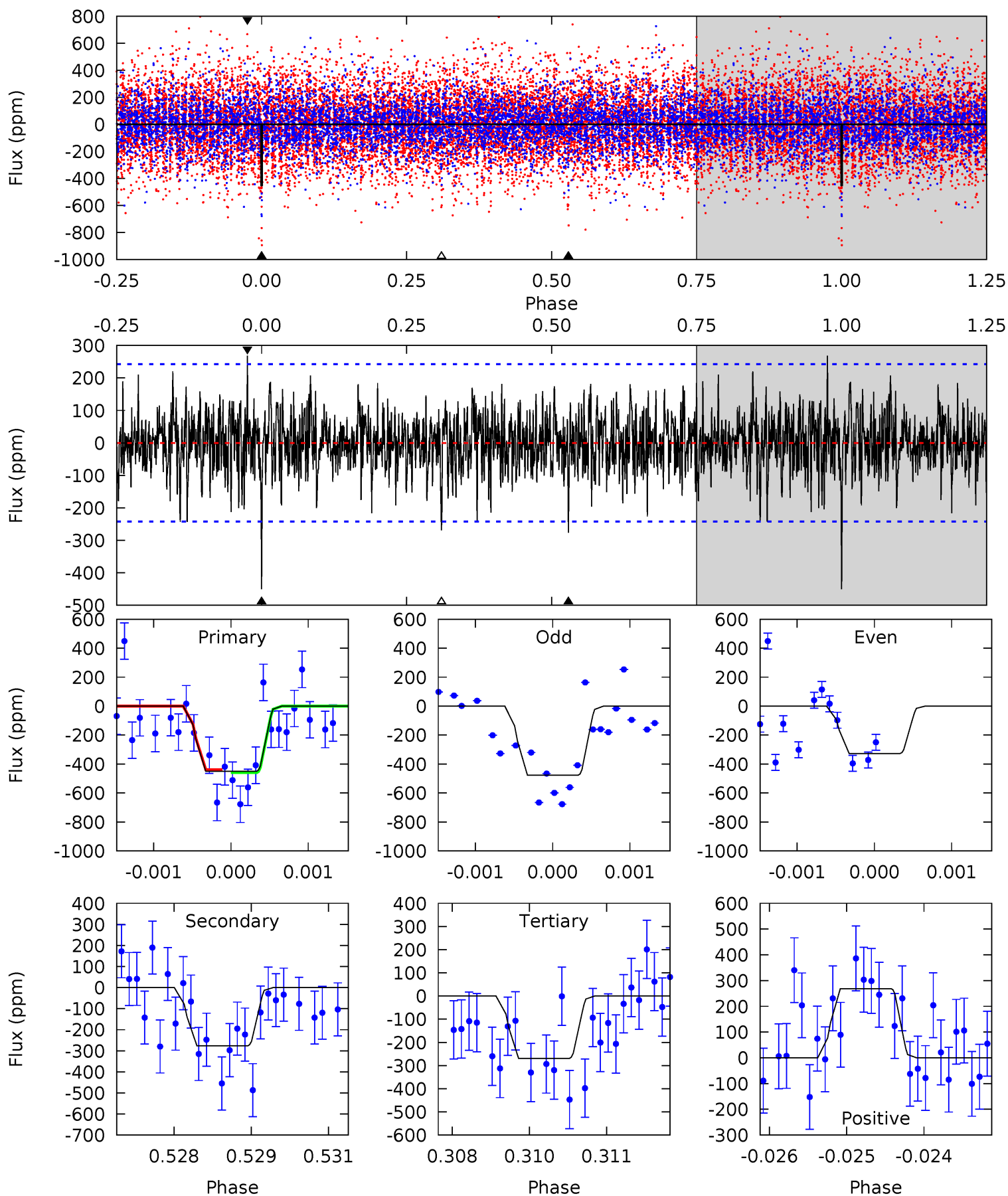
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	6.45	5.99	5.85	5.35	3.13	1.84	4.66	4.80	0.46	0.60	1.86	1.04	0.35	0.87



Alt Model-Shift Uniqueness Test

004758350-02, P = 95.017094 Days, E = 102.771968 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.0	6.16	6.00	5.99	5.40	3.21	1.57	4.03	4.04	0.16	0.17	1.35	1.03	0.37	0.24



Stellar Parameters For KIC 004758350

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6720^{+180}_{-220}	$3.373^{+0.366}_{-0.065}$	$-0.180^{+0.350}_{-0.250}$	$4.845^{+0.345}_{-1.955}$	$2.020^{+0.124}_{-0.372}$	$0.025^{+0.075}_{-0.003}$
	+3%/-3%	+11%/-2%	+194%/-139%	+7%/-40%	+6%/-18%	+298%/-14%
Source	PHO1	FLK73	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 004758350-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-261 ± 41	$11.53^{+8.03}_{-6.72}$	1240^{+67}_{-129}	5523^{+3177}_{-1057}	285^{+1340}_{-188}
Alt.	-276 ± 45	$12.40^{+7.71}_{-7.11}$	1240^{+67}_{-125}	5425^{+2792}_{-992}	261^{+1188}_{-167}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

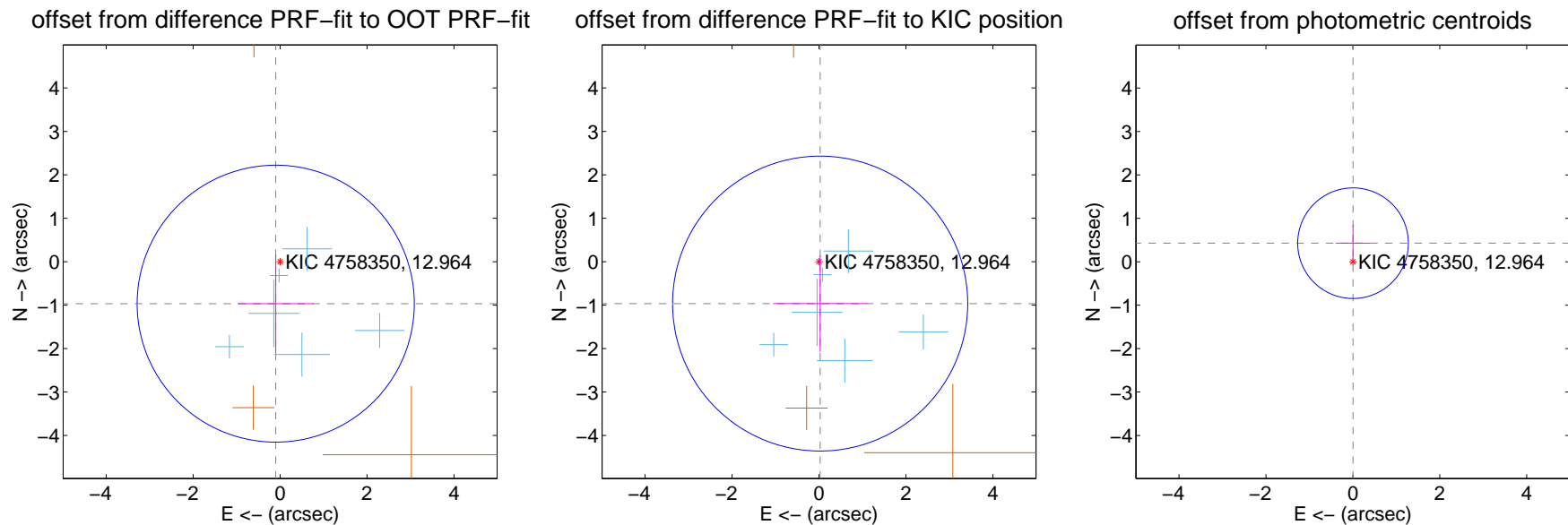
DV Centroid Data

Supplemental centroid analysis for 004758350-02. Kepler magnitude: 12.96. Transit SNR 10.24

There are 6 quarters with good PRF difference image offsets

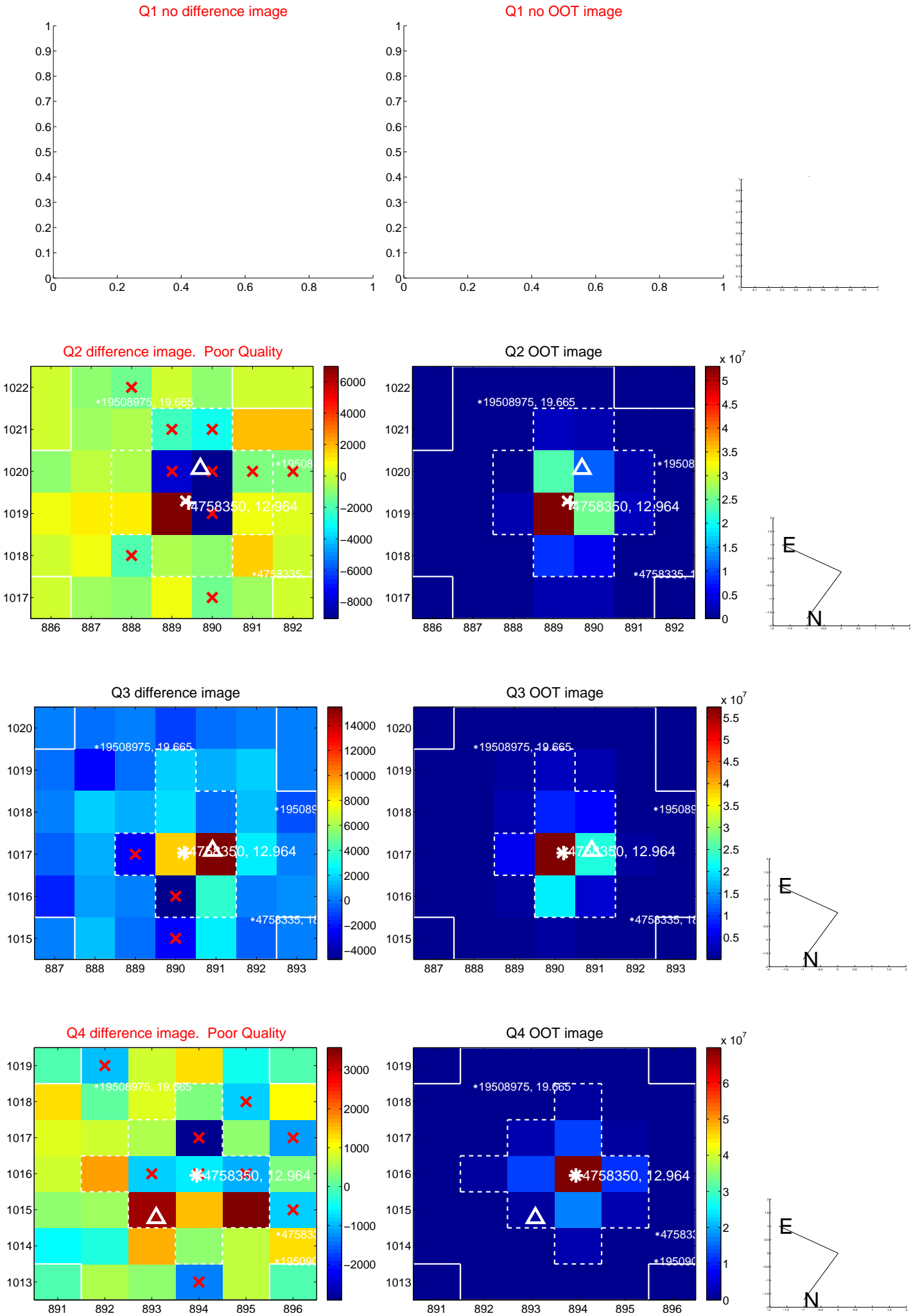
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.972 ± 1.063	0.91	0.101 ± 0.876	-0.967 ± 1.134
PRF-fit source offset from KIC position	0.965 ± 1.132	0.85	-0.027 ± 1.081	-0.964 ± 1.108
photometric centroid source offset	0.43 ± 0.42	1.01	-0.00 ± 0.40	0.43 ± 0.42

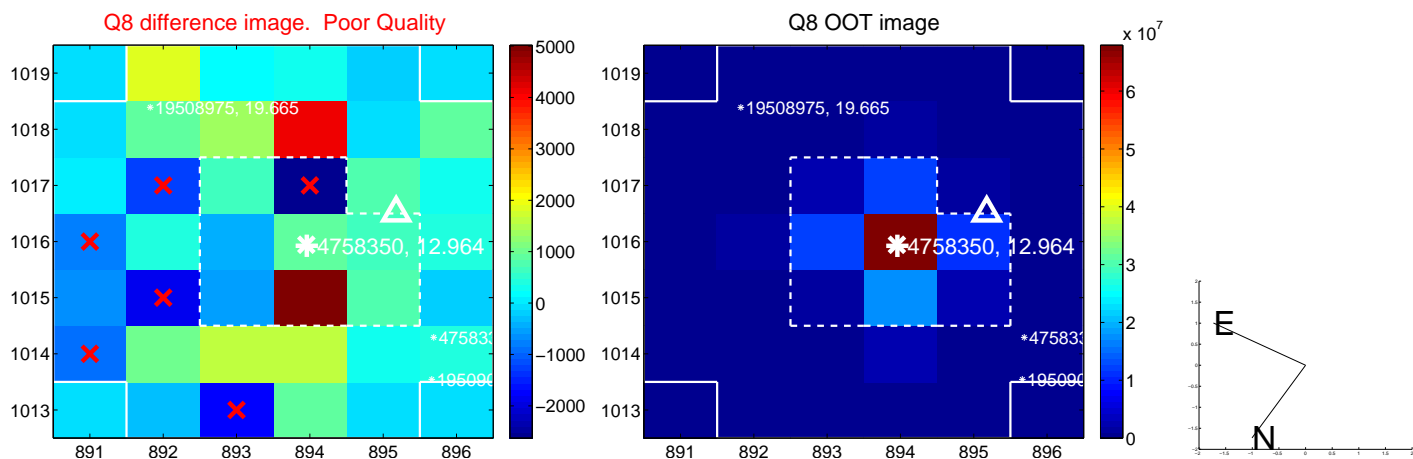
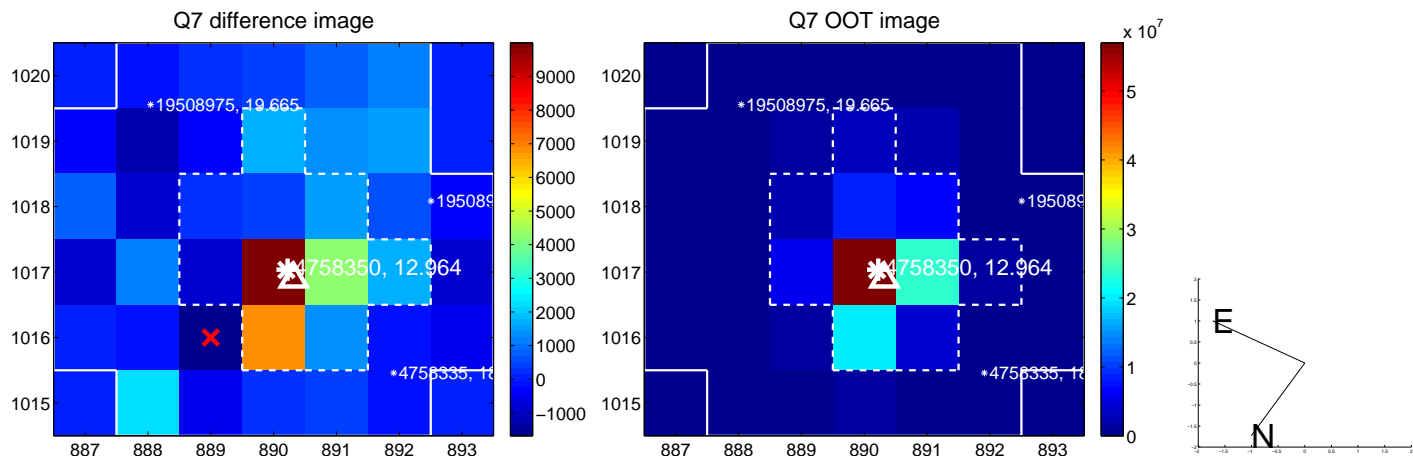
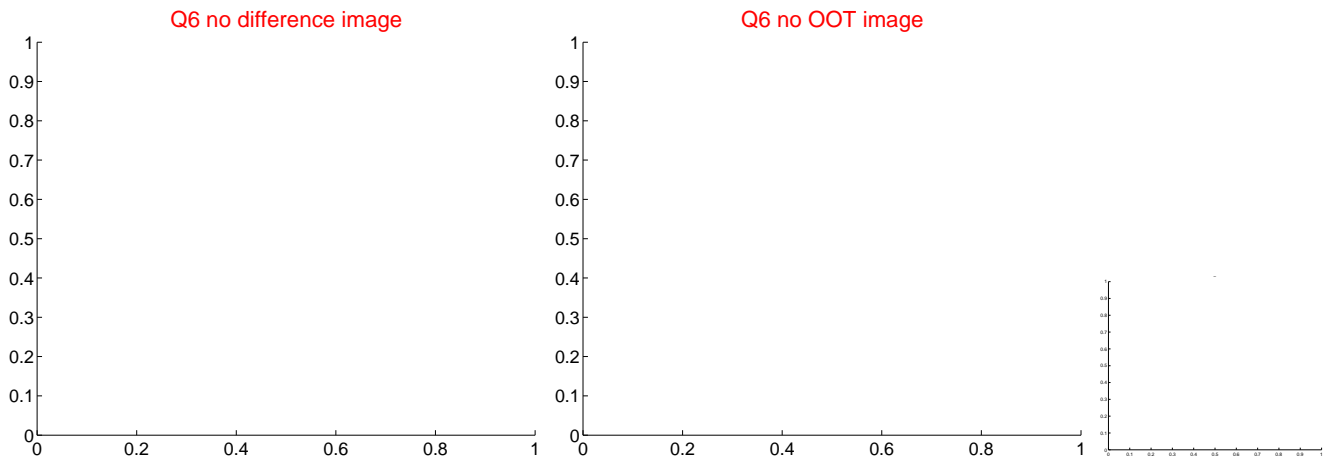
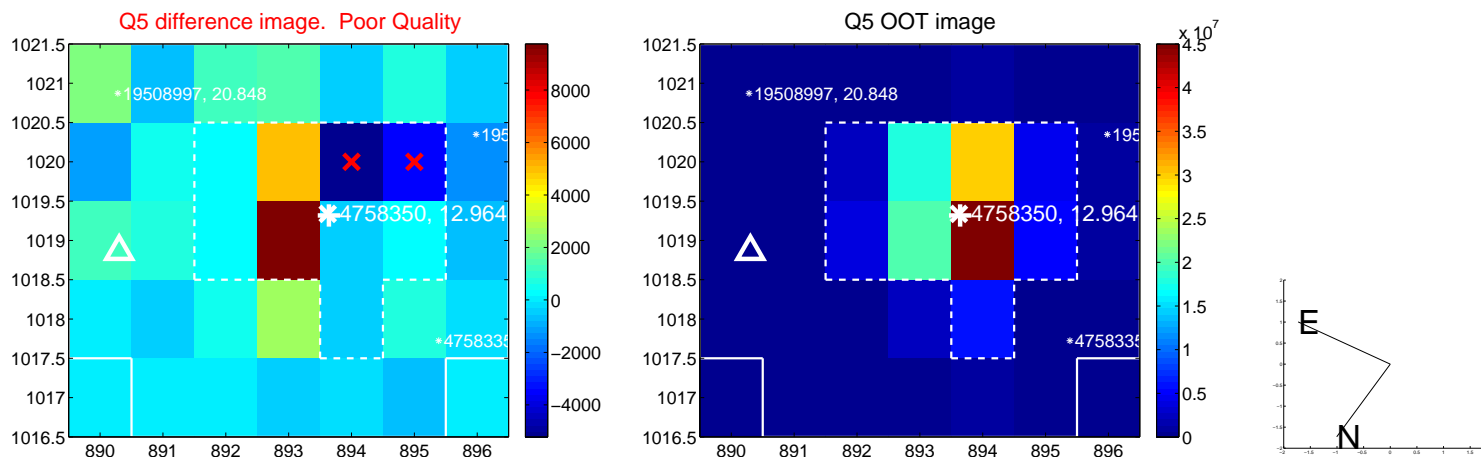


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

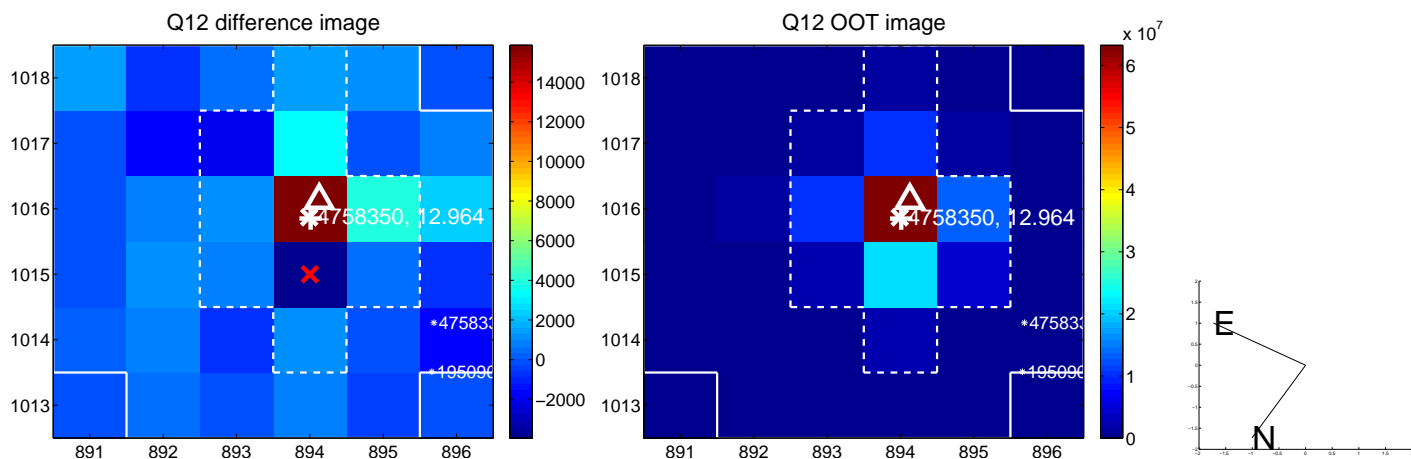
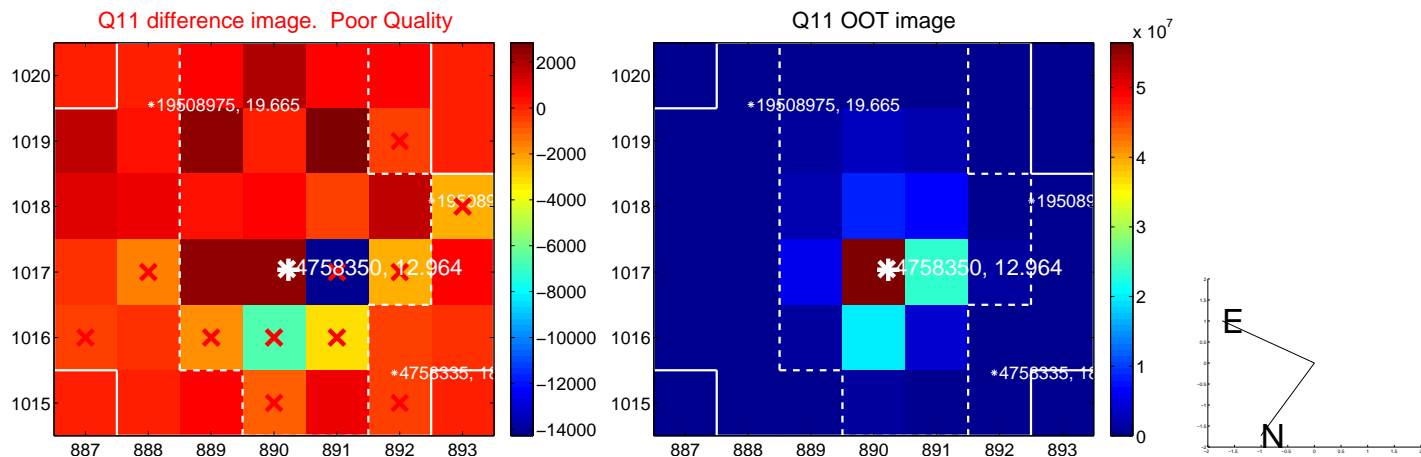
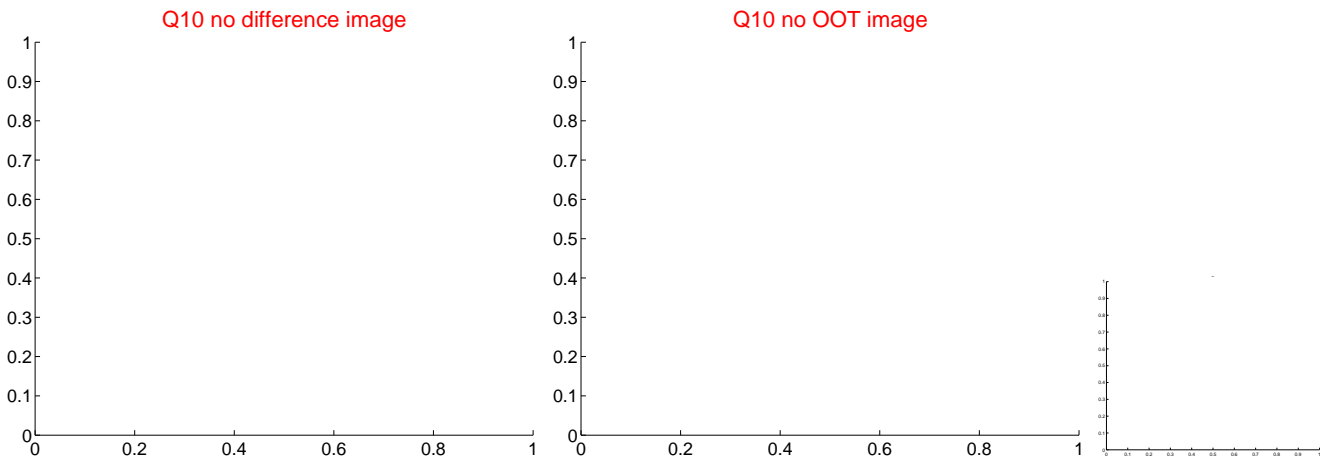
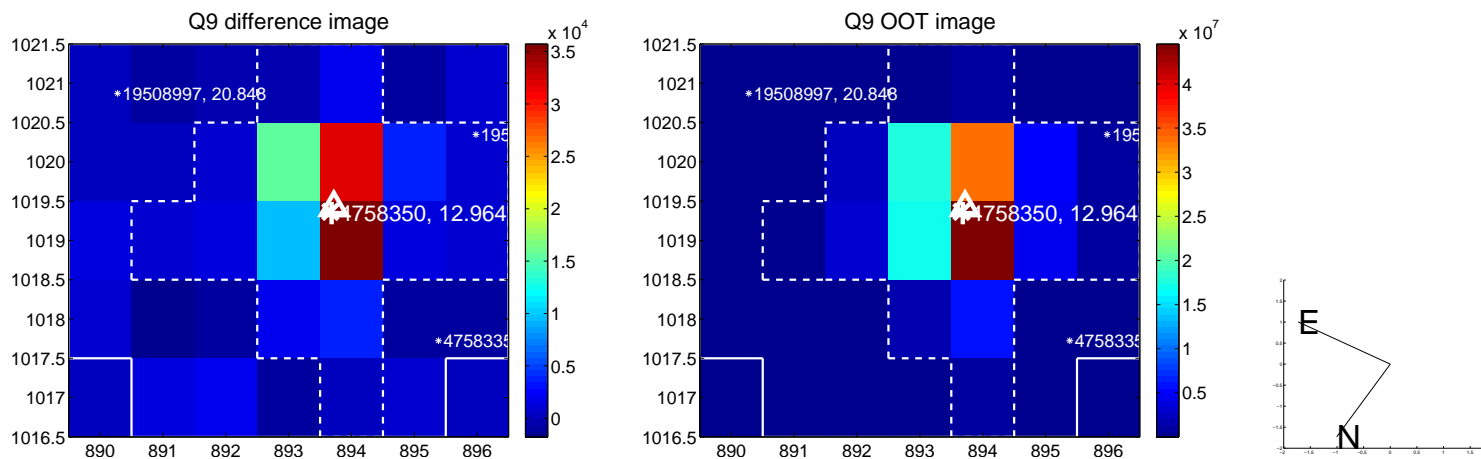
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



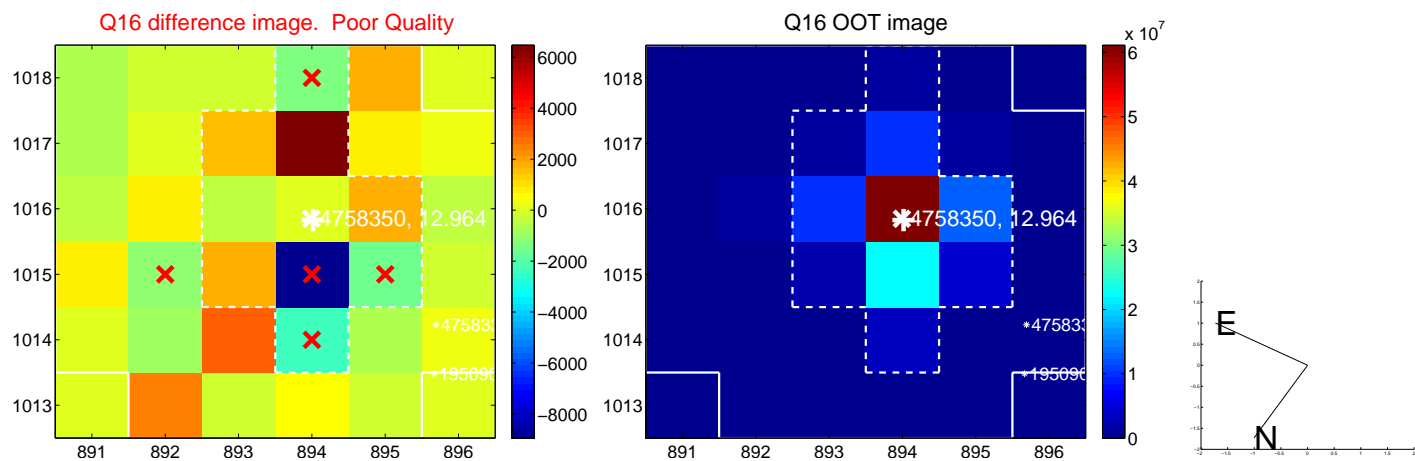
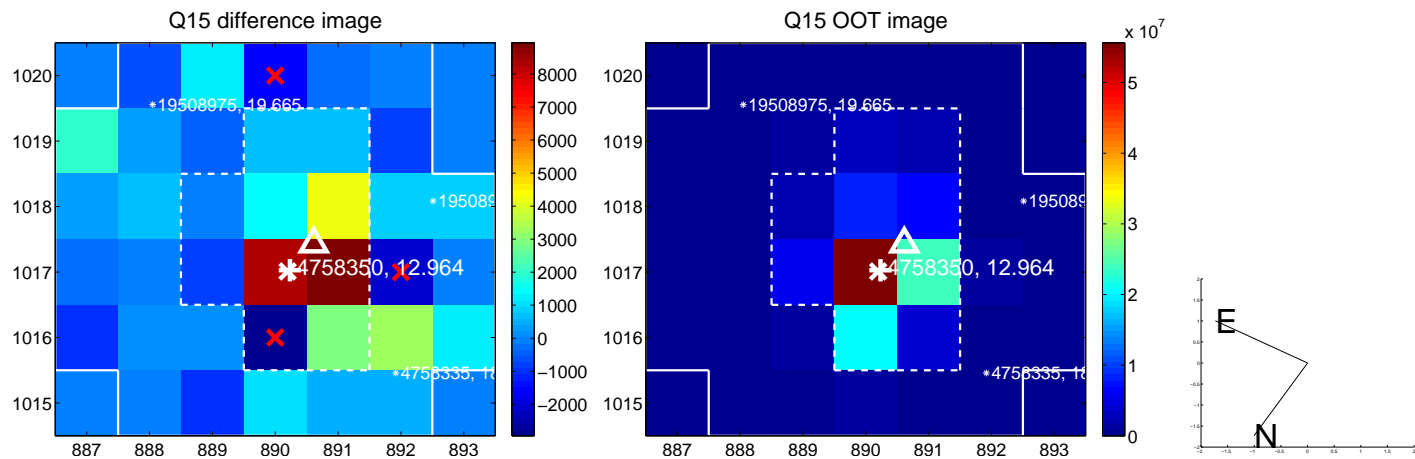
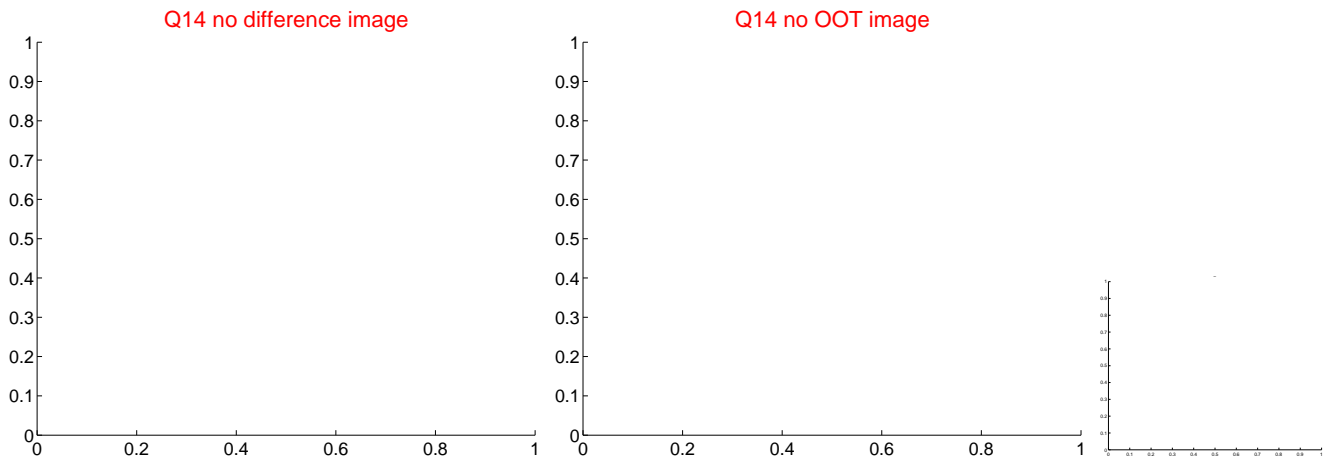
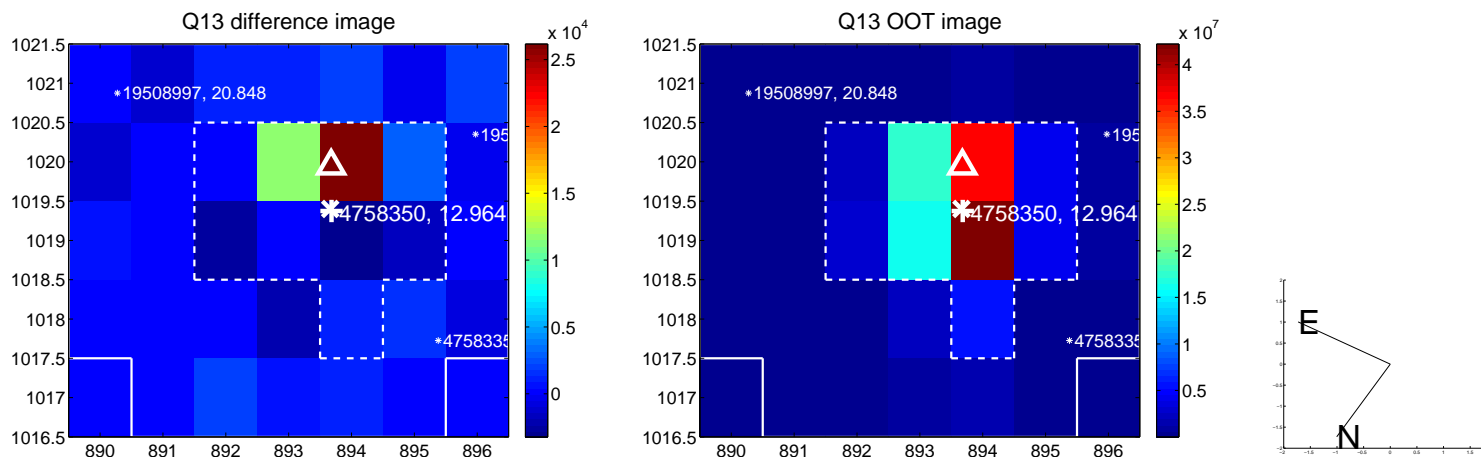
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



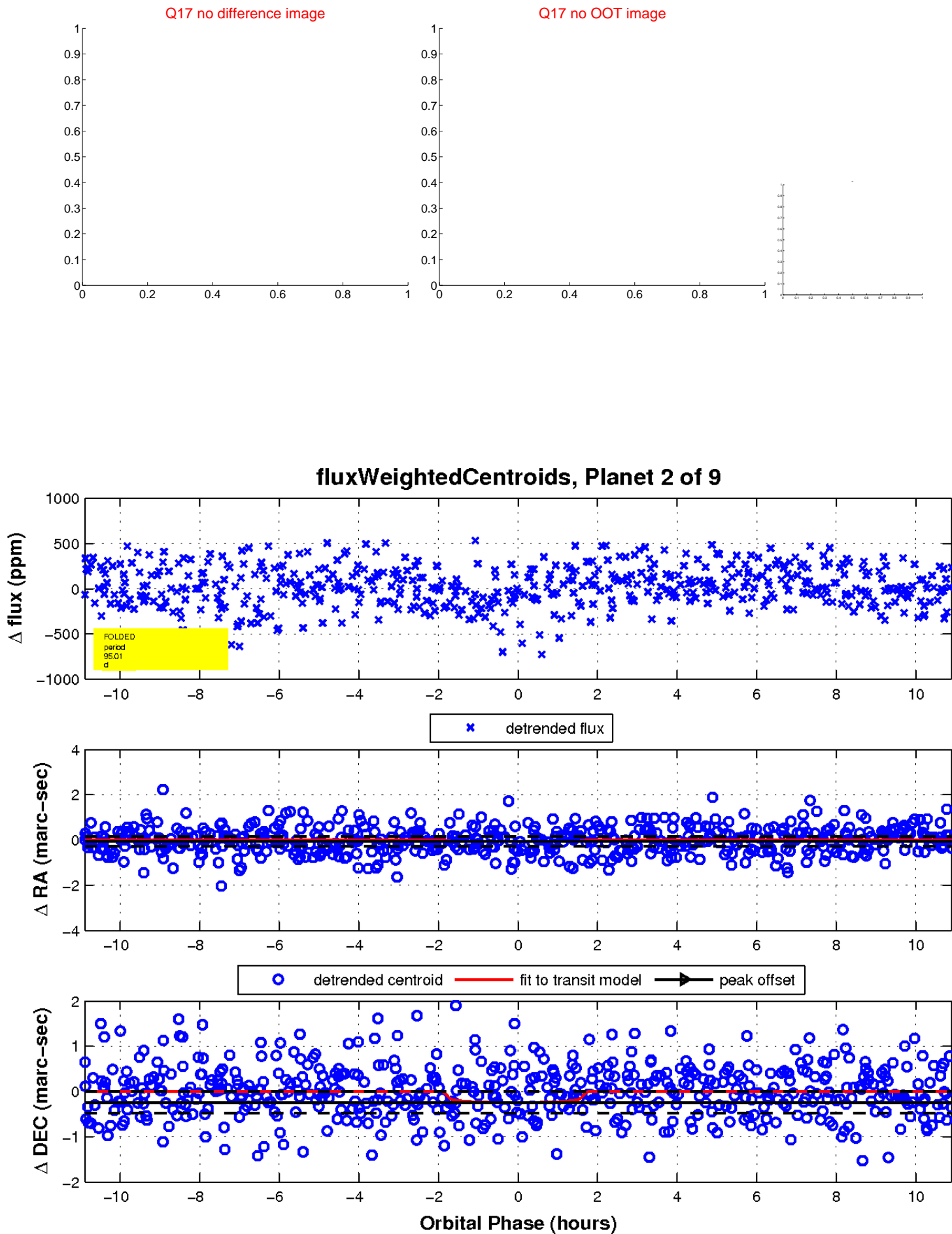
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

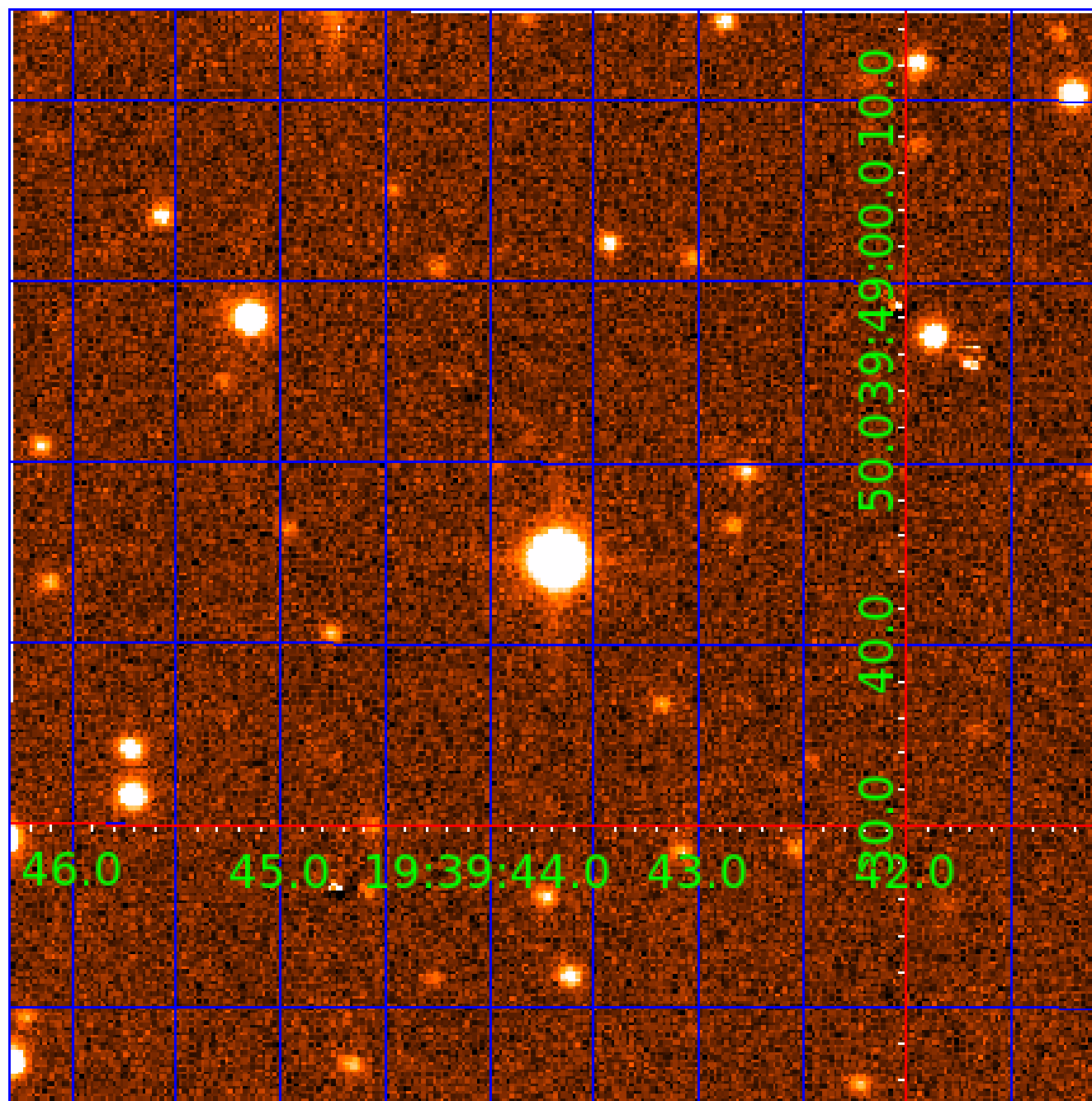


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004758350

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})
004758350-01	OBS	6447.01	1.120936	131.540051	45.9	6.243	8.9	9.4	4.84	6720	6.27	60134.87
004758350-02	OBS	No	95.011757	197.822359	505.4	3.636	9.2	10.2	4.84	6720	11.82	161.51
004758350-03	OBS	No	96.090049	189.921096	409.6	7.506	9.0	9.5	4.84	6720	12.57	159.10
004758350-04	OBS	No	8.956177	133.855318	151.8	3.553	9.2	9.5	4.84	6720	6.74	3764.76
004758350-06	OBS	No	235.351197	303.610912	485.1	5.963	9.2	9.7	4.84	6720	12.16	48.19
004758350-07	OBS	No	59.039315	165.845414	496.1	2.491	9.1	8.9	4.84	6720	12.81	304.59
004758350-08	OBS	No	103.210000	175.789471	404.4	6.858	7.7	7.6	4.84	6720	18.77	144.63
004758350-09	OBS	No	57.135180	142.505796	361.3	4.612	8.9	10.2	4.84	6720	11.45	318.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004758350-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT
004758350-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
004758350-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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.

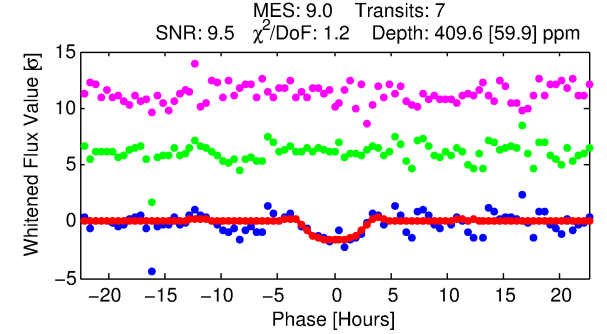
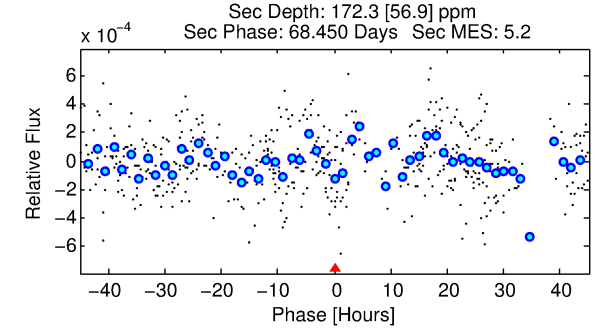
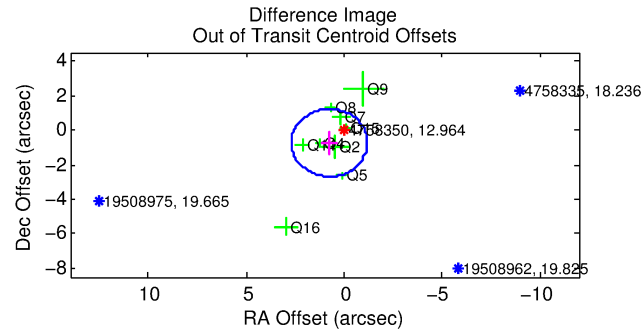
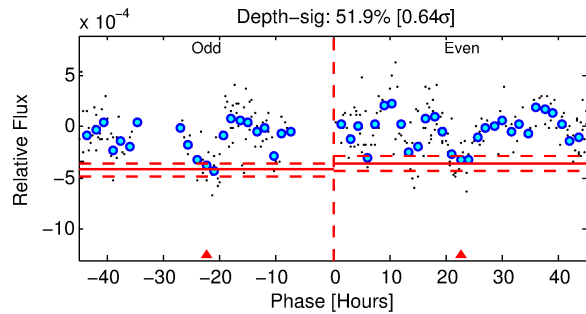
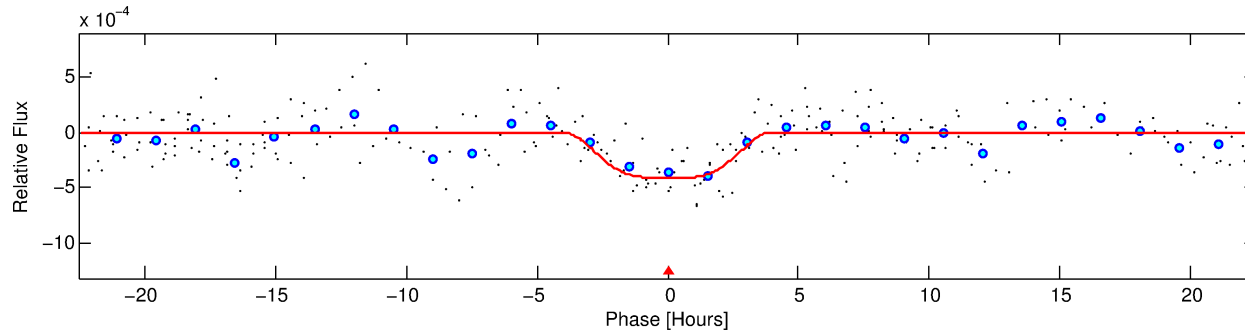
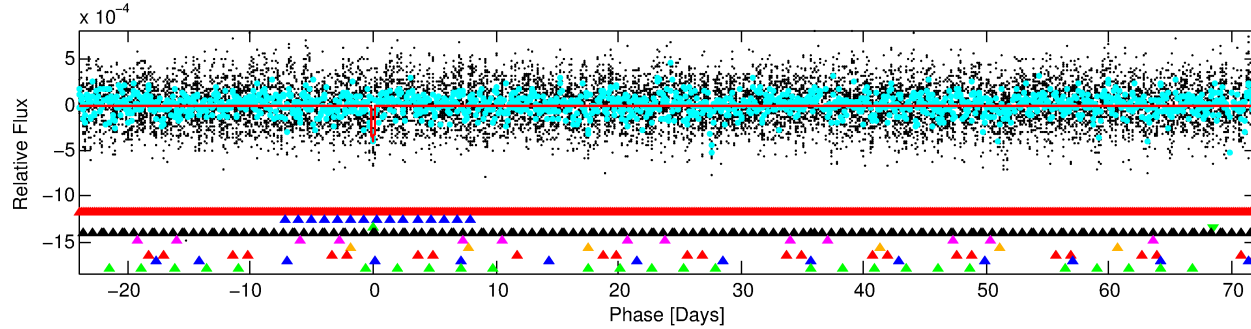
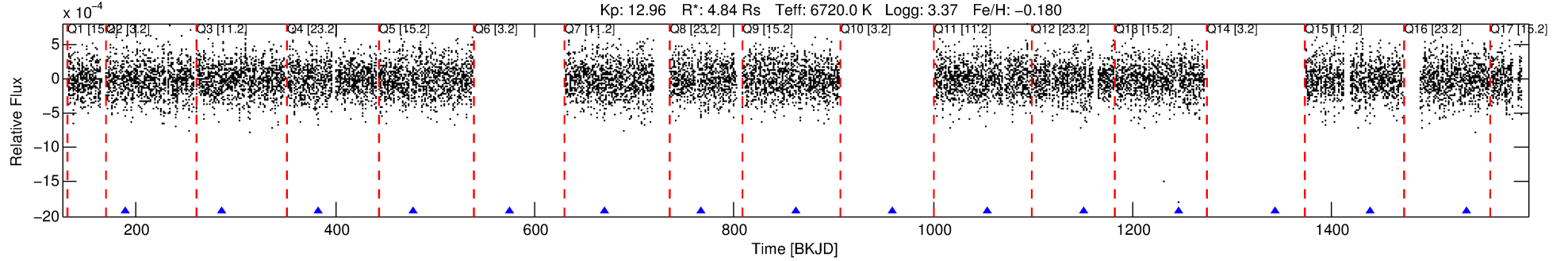
Ephemeris Match Information For 004758350-03

No Significant Match Found

DV One-Page Summary

KIC: 4758350 Candidate: 3 of 9 Period: 96.090 d
KOI: K06447 Corr: No Ephemeris Match

Kp: 12.96 R*: 4.84 Rs Teff: 6720.0 K Logg: 3.37 Fe/H: -0.180



DV Fit Results:

Period = 96.09005 [0.00218] d
Epoch = 189.9211 [0.0188] BKJD
Rp/R* = 0.0238 [0.0022]
a/R* = 32.03 [6.18]
b = 0.97 [0.01]
Seff = 159.10 [101.27]
Teq = 906 [144] K
Rp = 12.57 [5.20] Re
a = 0.5192 [0.2019] AU
Ag = 161.74 [117.91] [1.36σ]
Teffp = 4993 [500] K [7.85σ]

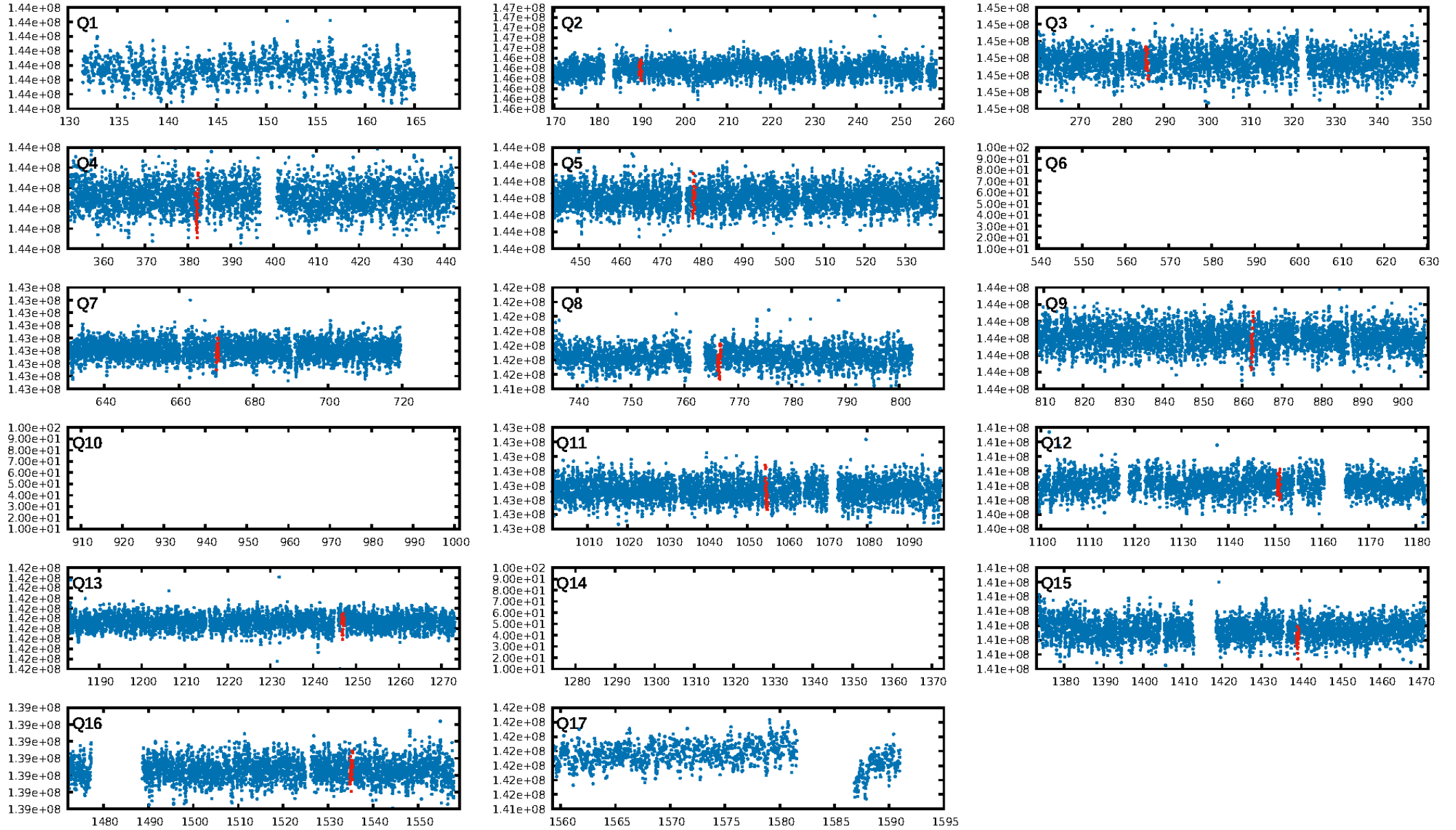
DV Diagnostic Results:

ShortPeriod-sig: 99.8% [3.10σ]
LongPeriod-sig: 100.0% [16.81σ]
ModelChiSquare2-sig: 93.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 0.2277
Centroid-sig: 6.4%
Centroid-so: 0.435 arcsec [0.97σ]
OotOffset-rm: 1.063 arcsec [1.63σ]
OotOffset-st: 1/3/3/2 [9]
KicOffset-rm: 0.761 arcsec [1.31σ]
KicOffset-st: 1/3/3/2 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 0.00 [0/11]

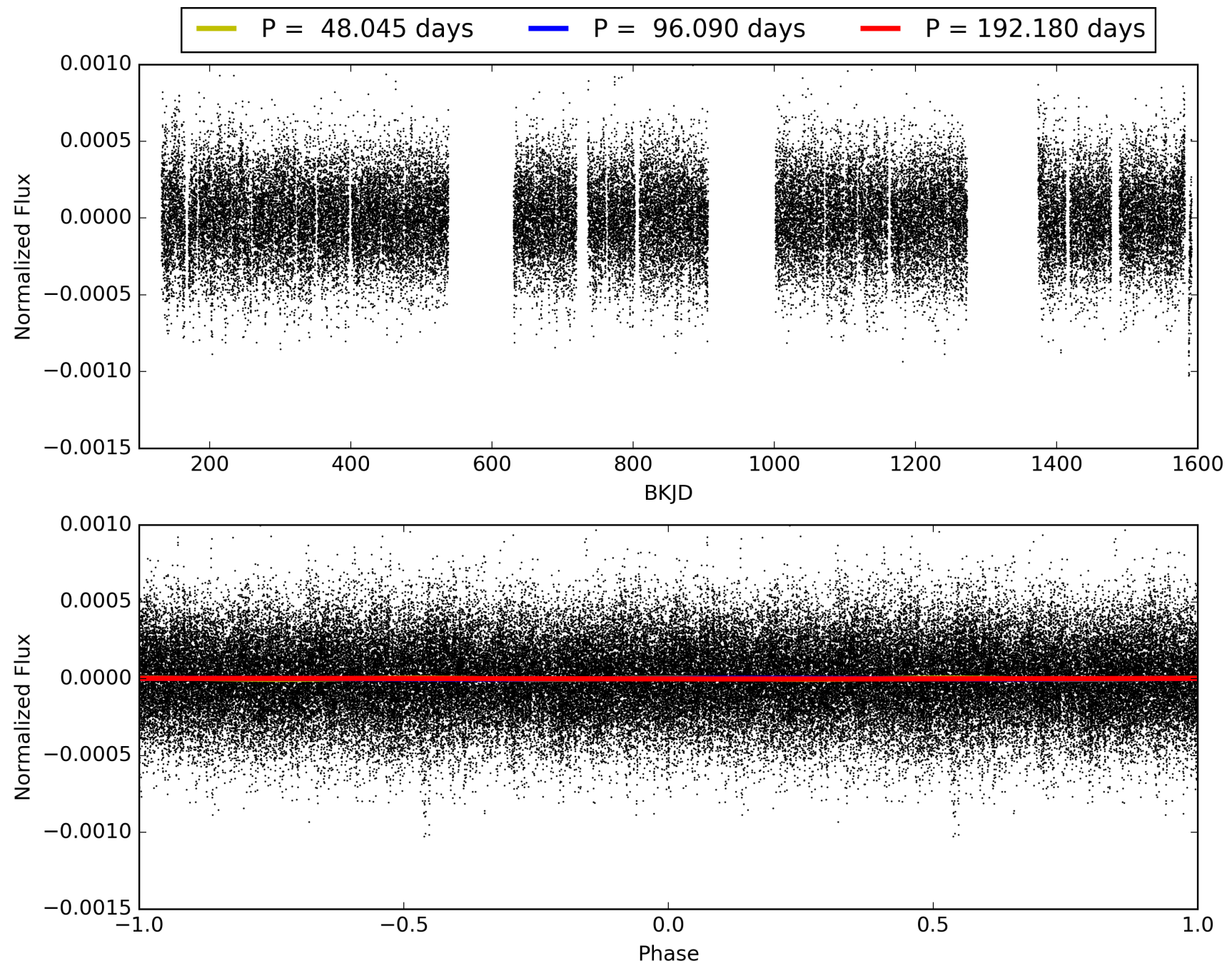
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:34:31 Z

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

TCE 004758350-03, PDC Light Curves

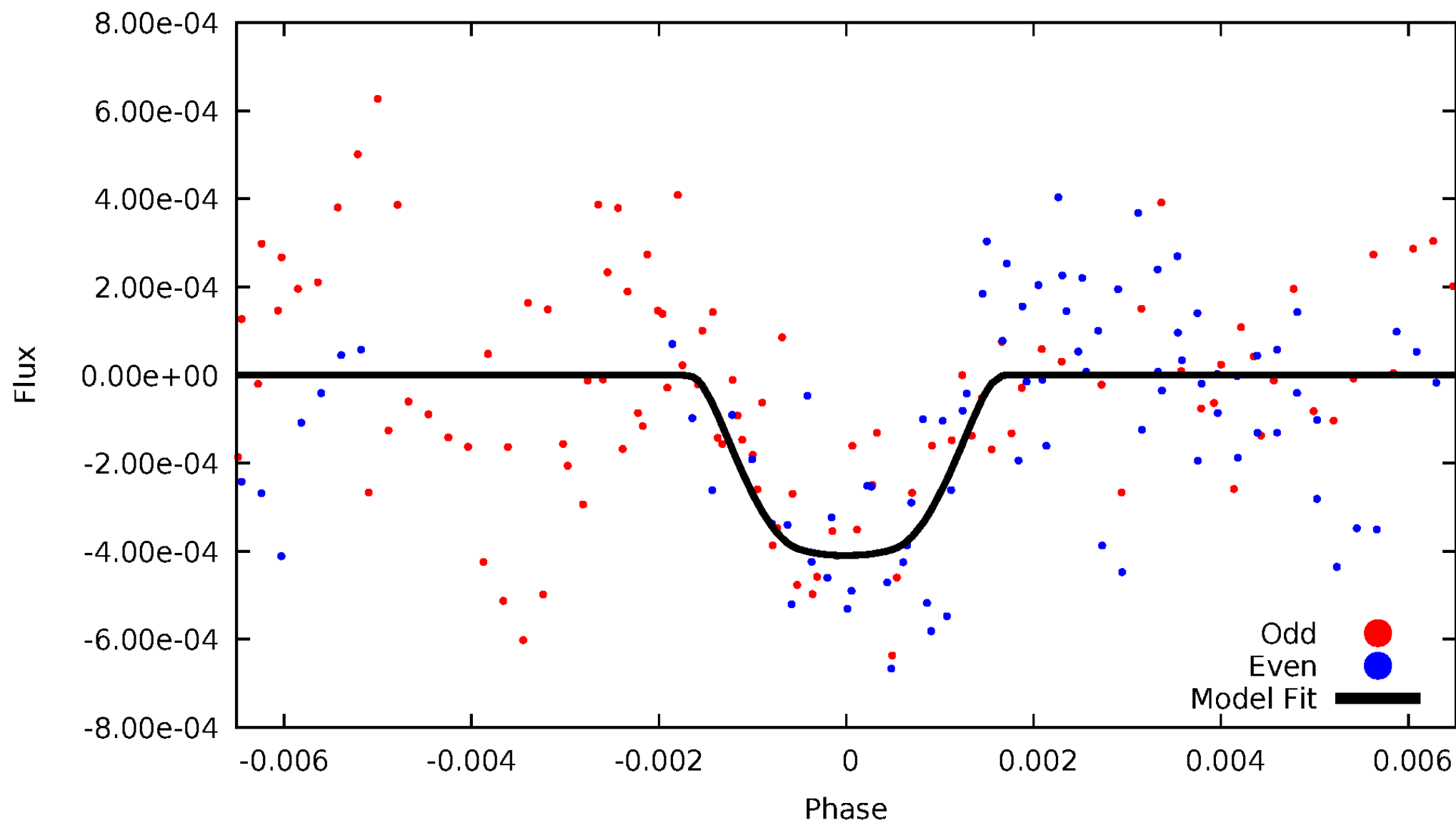


TCE 004758350-03



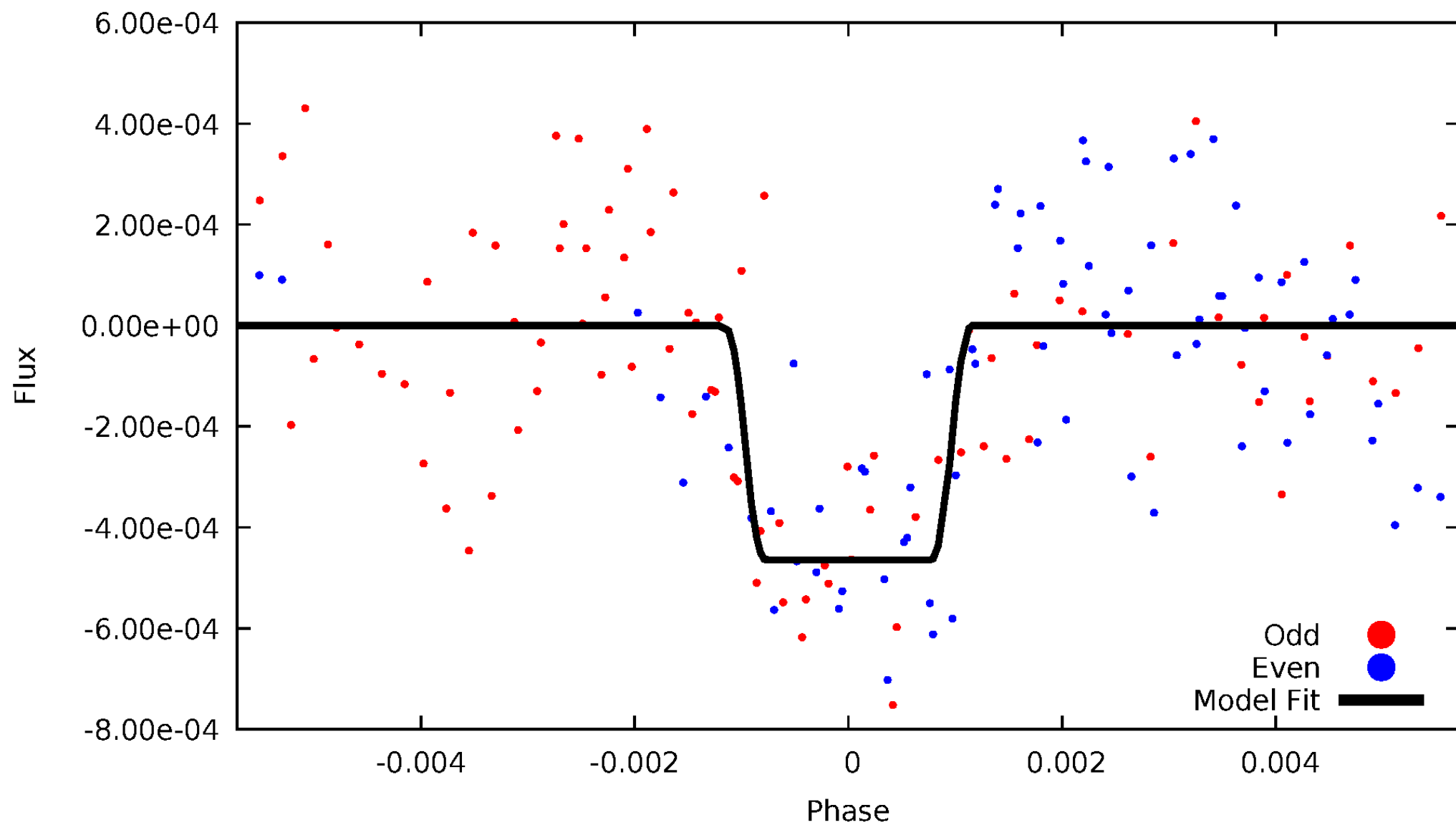
DV Odd/Even

TCE 004758350-03



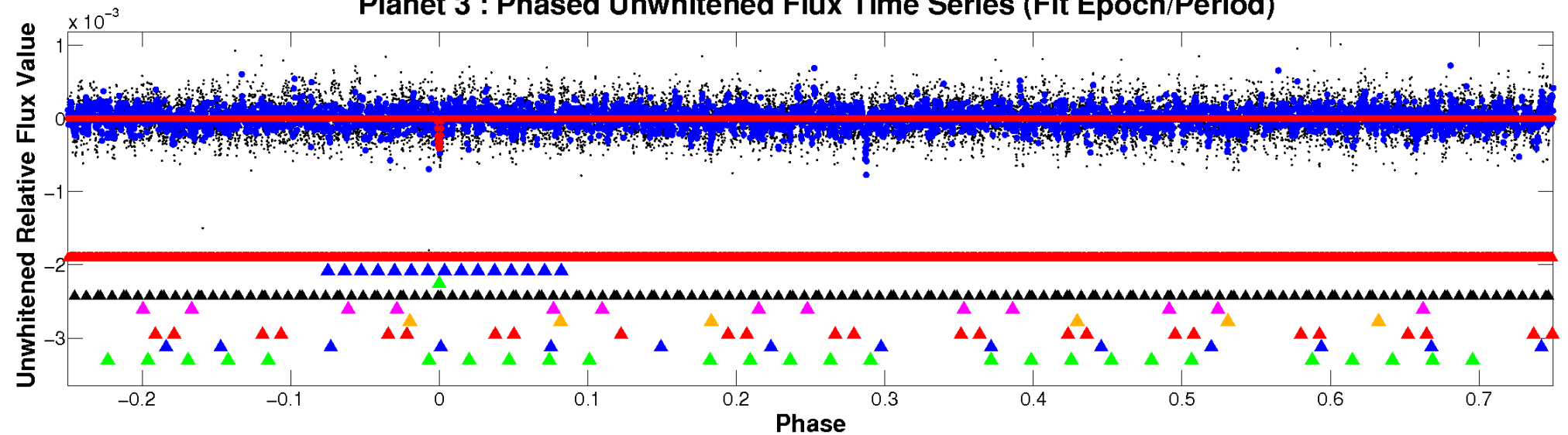
ALT Odd/Even

TCE 004758350-03

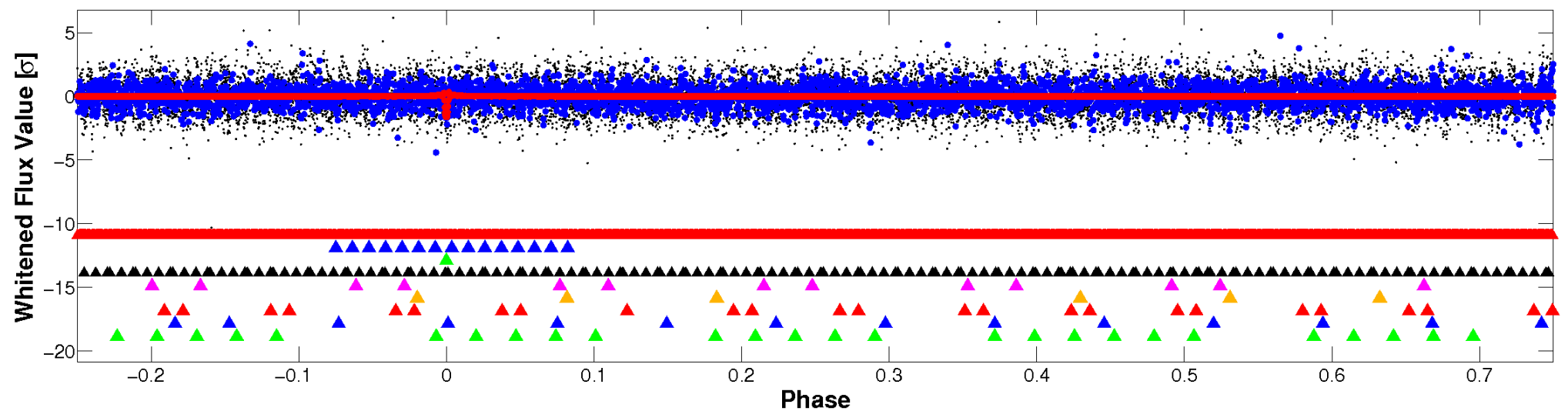


Non-Whitened Vs. Whitened Light Curve

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

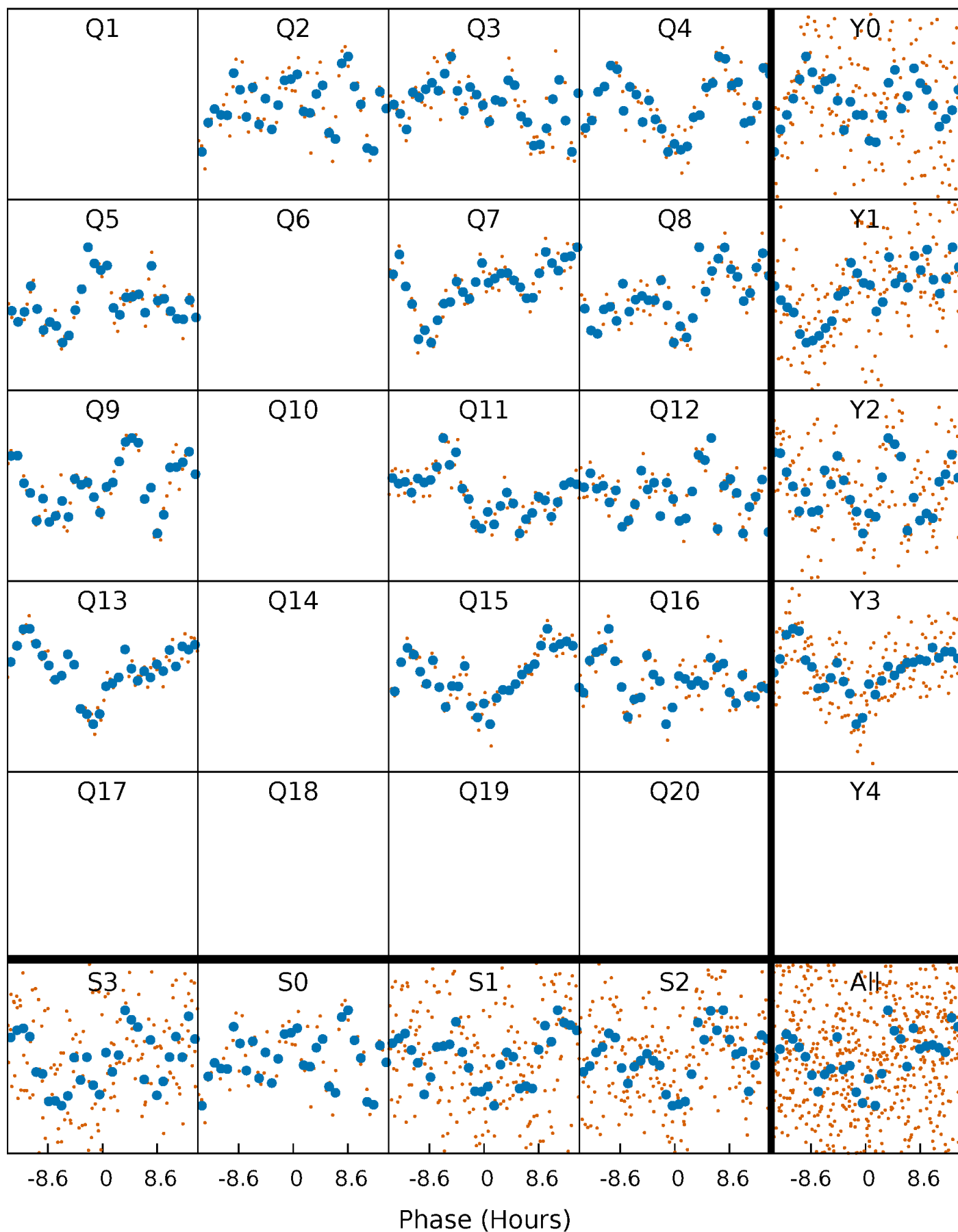


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



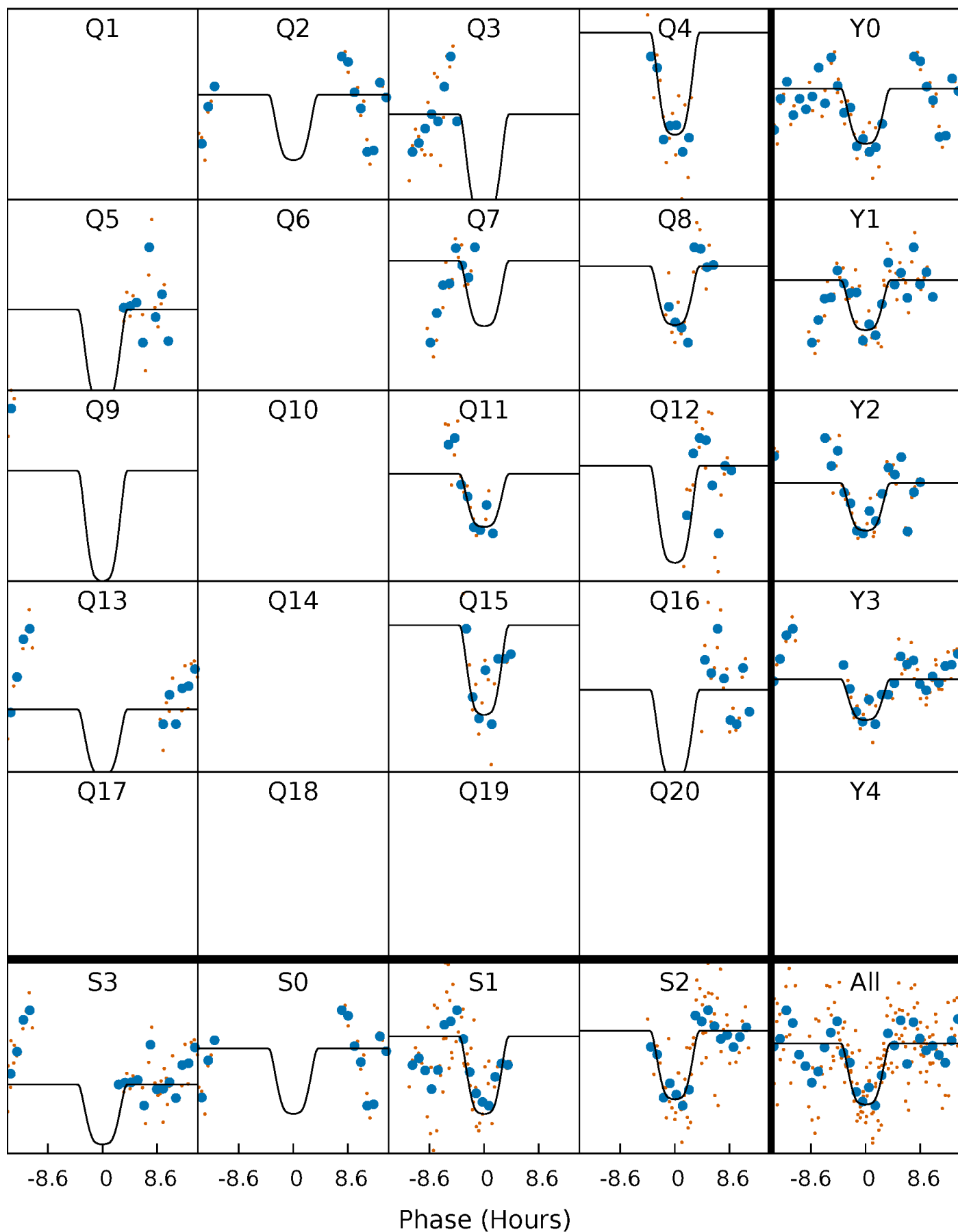
PDC Quarter-Phased Transit Curves

TCE 004758350-03 P= 96.090049 Days $T_0=189.921096$ (BKJD)



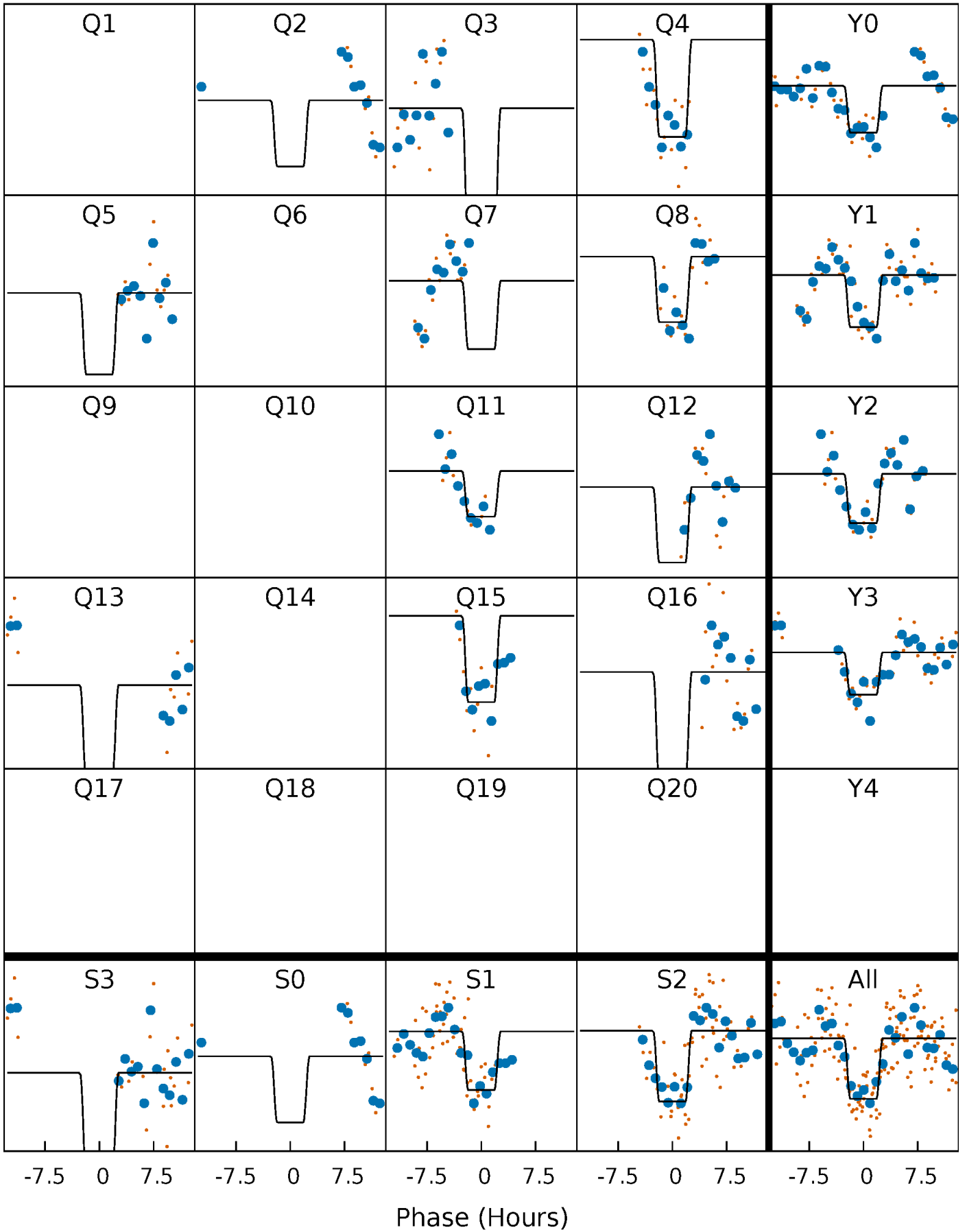
DV Quarter-Phased Transit Curves

TCE 004758350-03 P= 96.090049 Days $T_0=189.921096$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

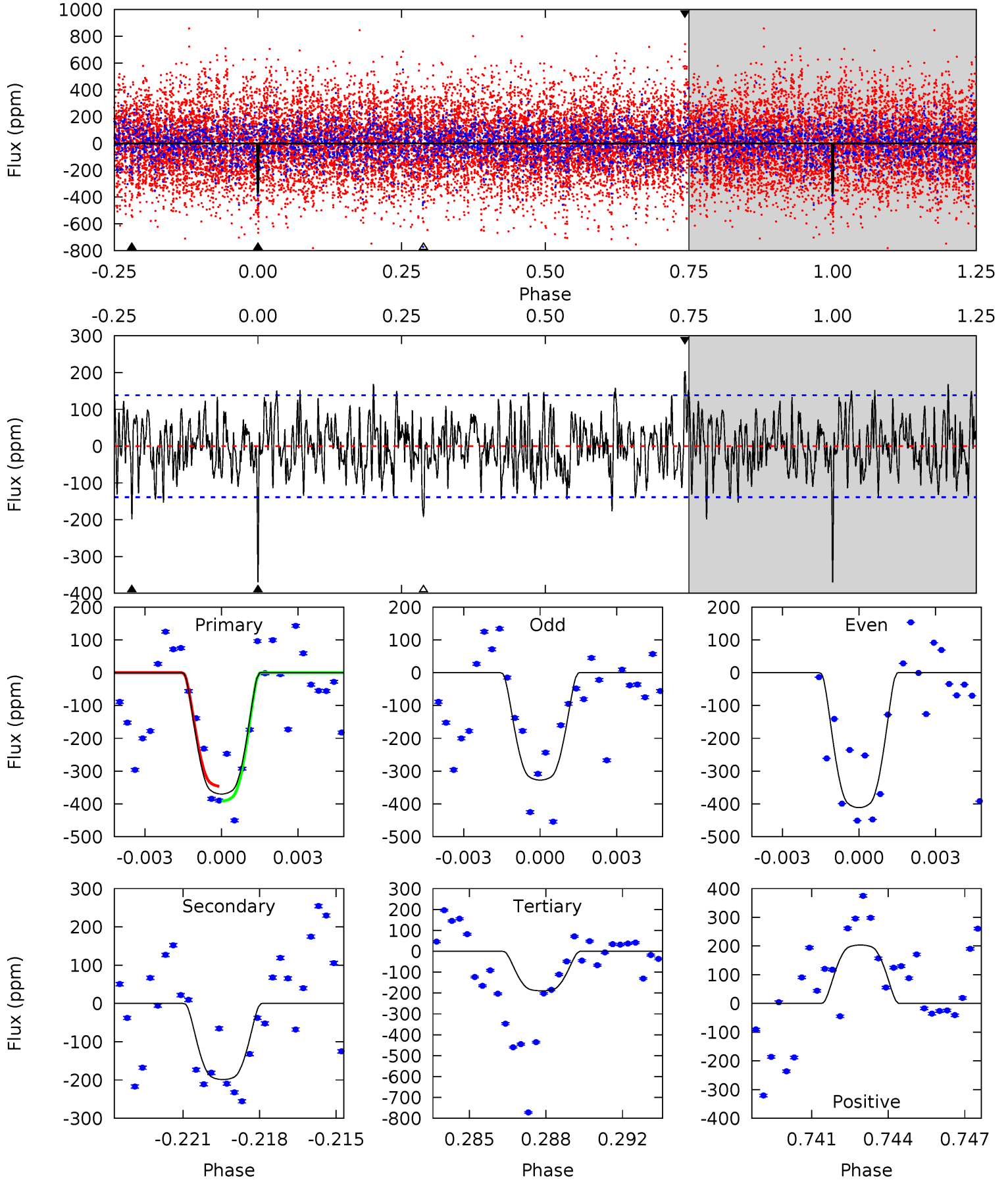
TCE 004758350-03 P= 96.089695 Days $T_0=189.932661$ (BKJD)



DV Model-Shift Uniqueness Test

004758350-03, P = 96.090049 Days, E = 93.831047 Days

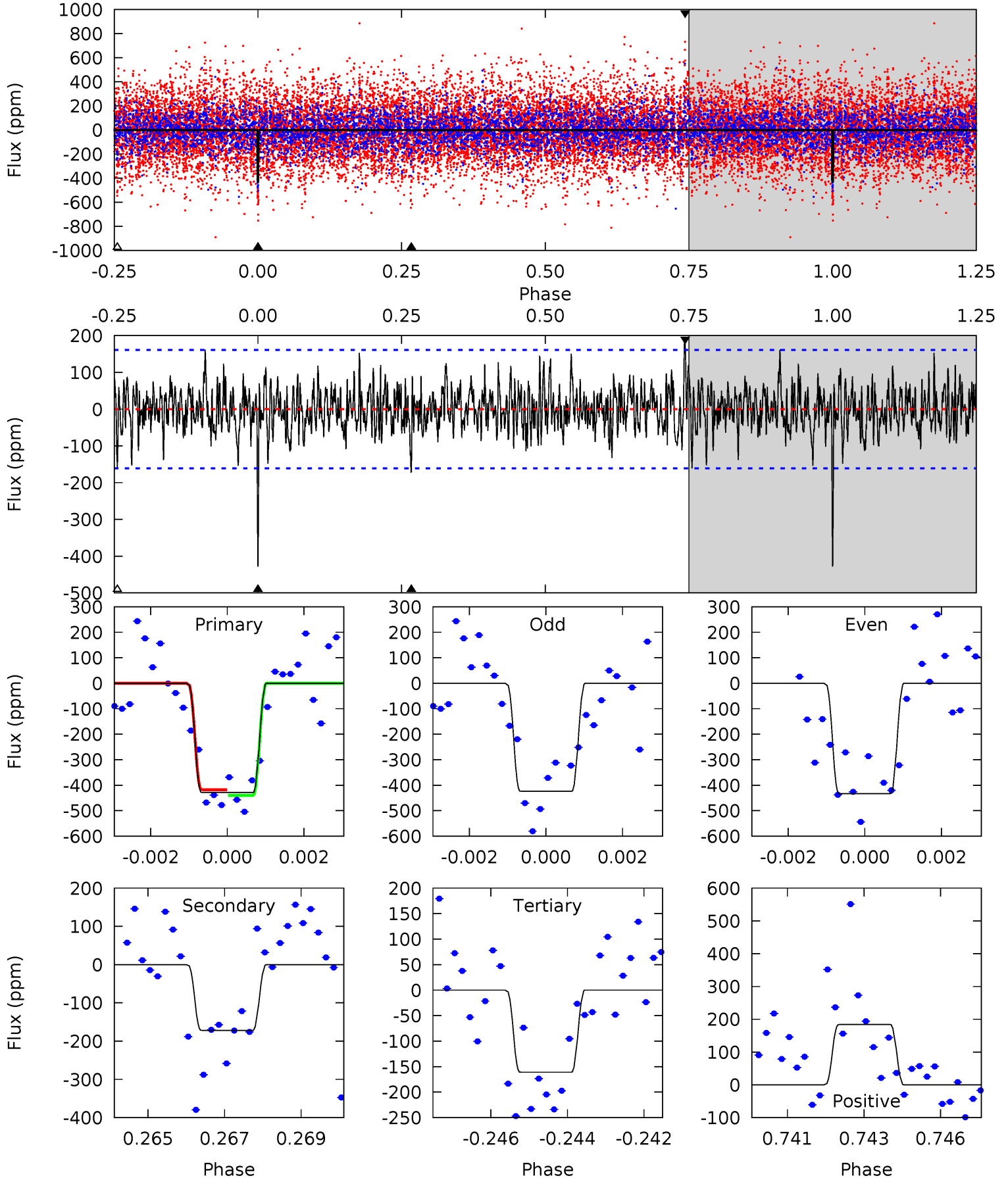
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.0	7.50	7.16	7.69	5.23	2.93	2.26	6.81	6.28	0.35	-0.18	1.58	0.81	0.36	0.84



Alt Model-Shift Uniqueness Test

004758350-03, P = 96.089695 Days, E = 93.842966 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	5.66	5.30	6.06	5.30	3.05	1.62	8.81	8.05	0.36	-0.40	0.16	0.69	0.30	0.36



Stellar Parameters For KIC 004758350

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6720^{+180}_{-220}	$3.373^{+0.366}_{-0.065}$	$-0.180^{+0.350}_{-0.250}$	$4.845^{+0.345}_{-1.955}$	$2.020^{+0.124}_{-0.372}$	$0.025^{+0.075}_{-0.003}$
	+3%/-3%	+11%/-2%	+194%/-139%	+7%/-40%	+6%/-18%	+298%/-14%
Source	PHO1	FLK73	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 004758350-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-199 ± 26	$12.04^{+1.69}_{-2.42}$	1240^{+60}_{-112}	5206^{+292}_{-273}	206^{+104}_{-56}
Alt.	-172 ± 30	$10.88^{+1.60}_{-2.18}$	1239^{+65}_{-104}	5255^{+385}_{-328}	216^{+115}_{-62}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming A=0.3)

A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

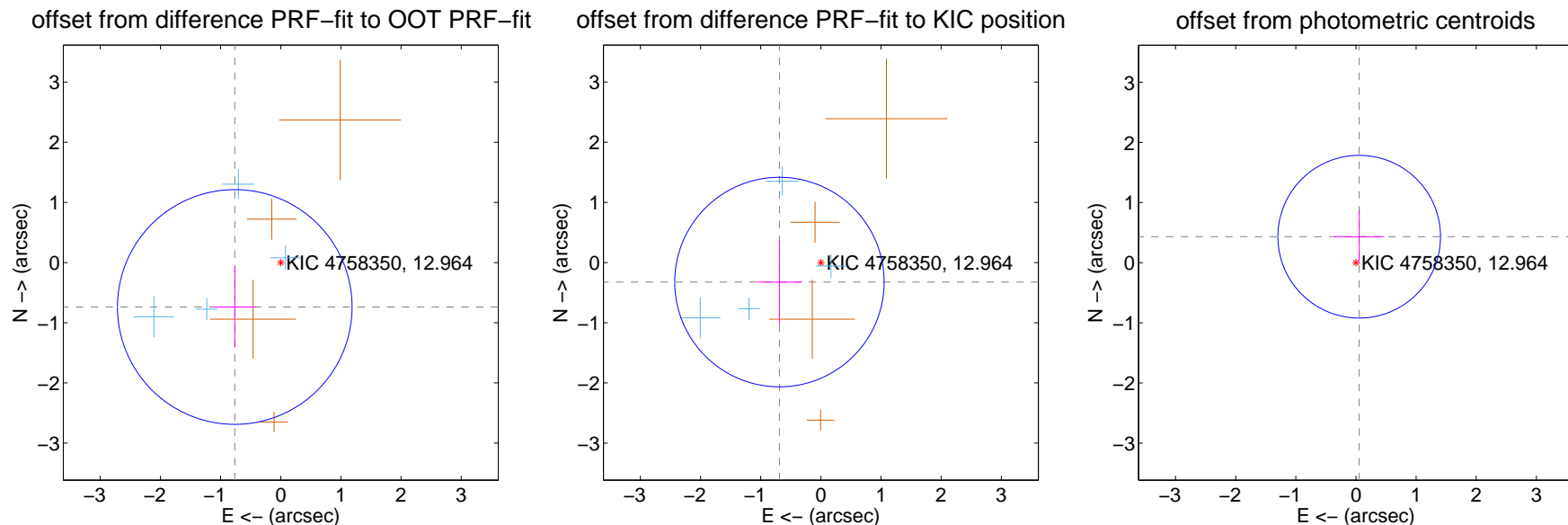
DV Centroid Data

Supplemental centroid analysis for 004758350-03. Kepler magnitude: 12.96. Transit SNR 9.52

There are 4 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.063 ± 0.650	1.63	0.765 ± 0.355	-0.738 ± 0.672
PRF-fit source offset from KIC position	0.761 ± 0.580	1.31	0.689 ± 0.373	-0.324 ± 0.698
photometric centroid source offset	0.44 ± 0.45	0.97	-0.05 ± 0.42	0.43 ± 0.45



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.

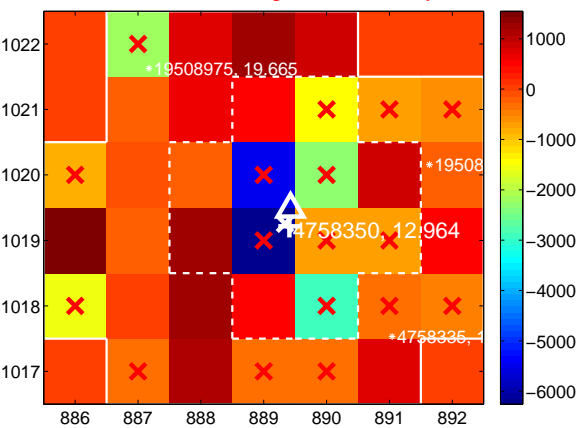
Q1 no difference image



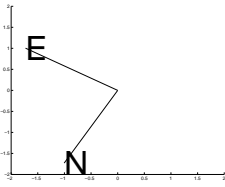
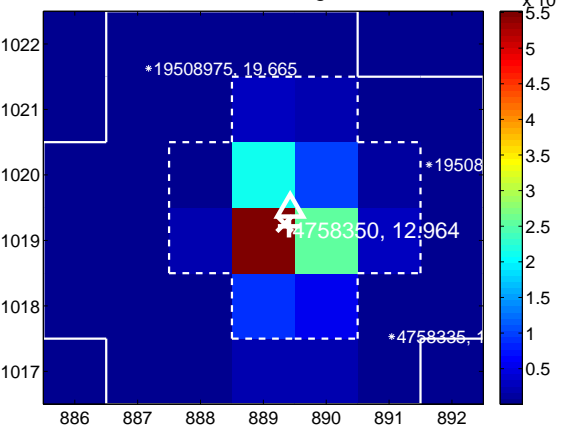
Q1 no OOT image



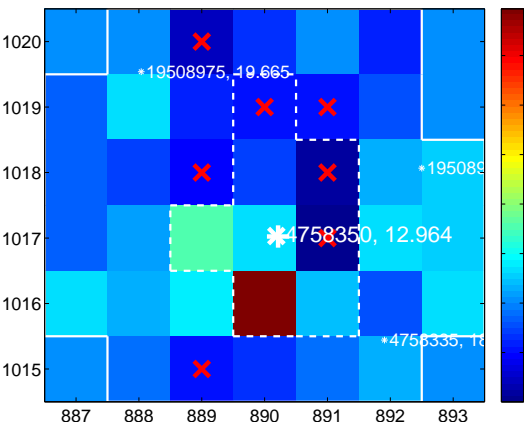
Q2 difference image. Poor Quality



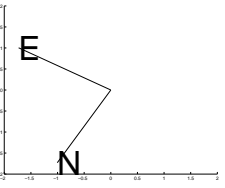
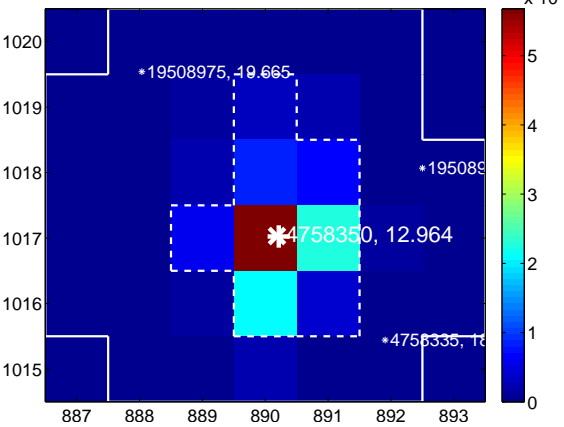
Q2 OOT image



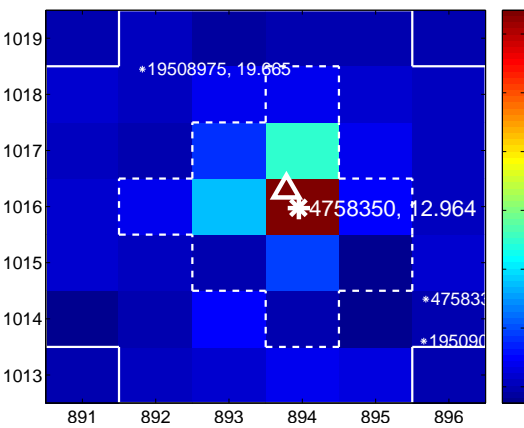
Q3 difference image. Poor Quality



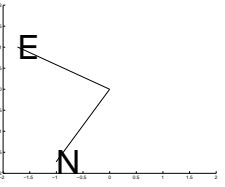
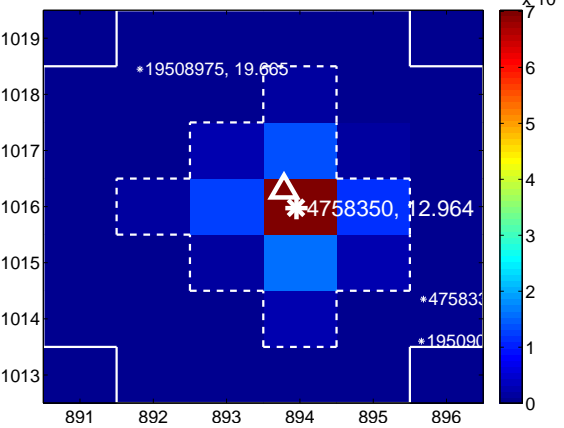
Q3 OOT image



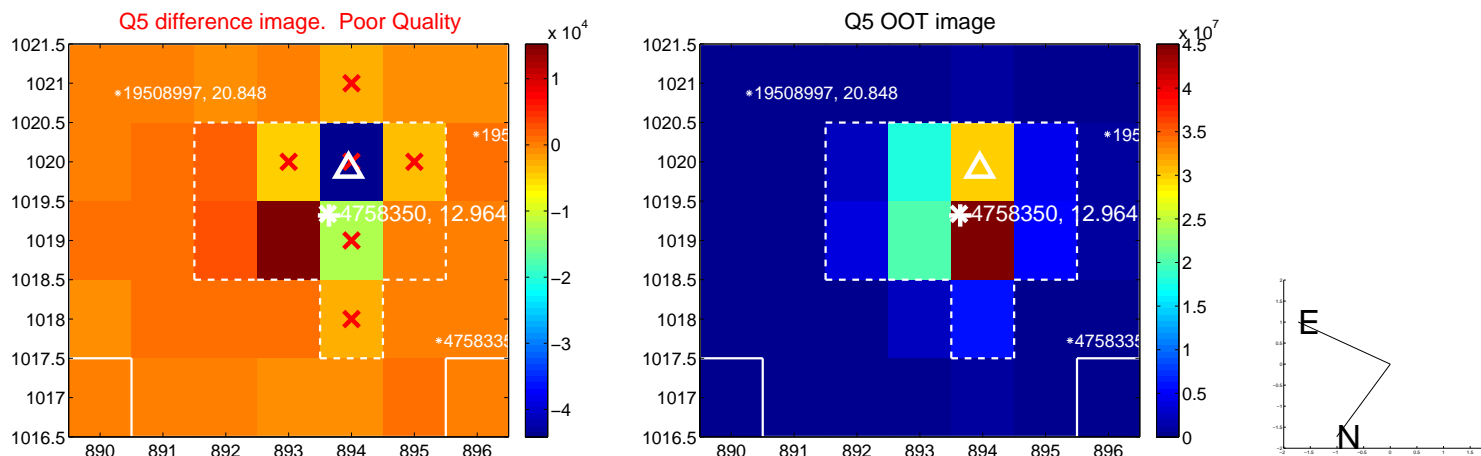
Q4 difference image



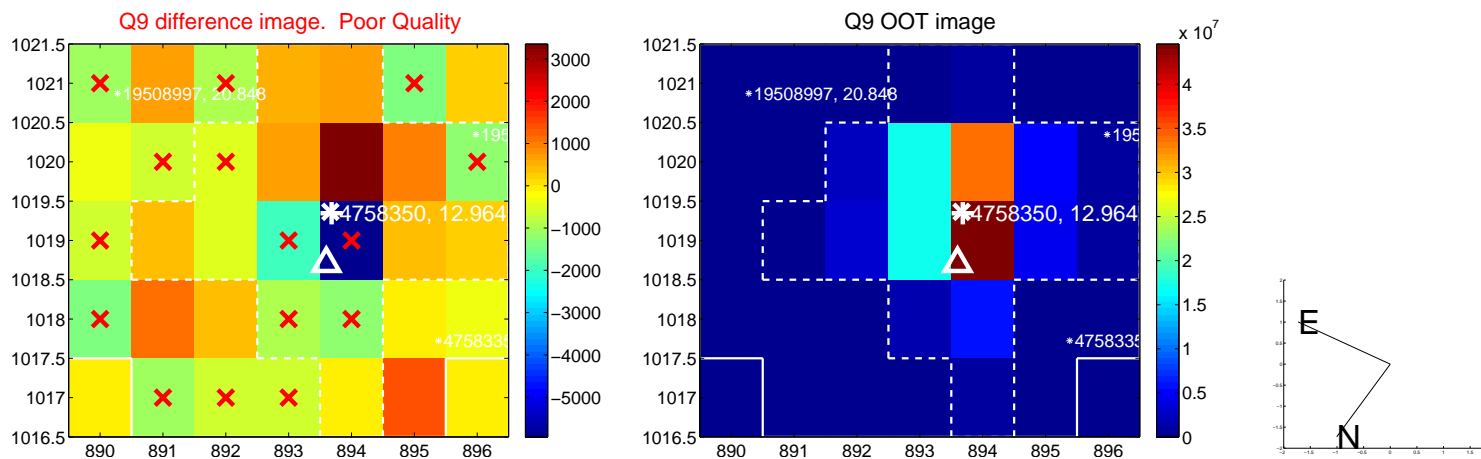
Q4 OOT image



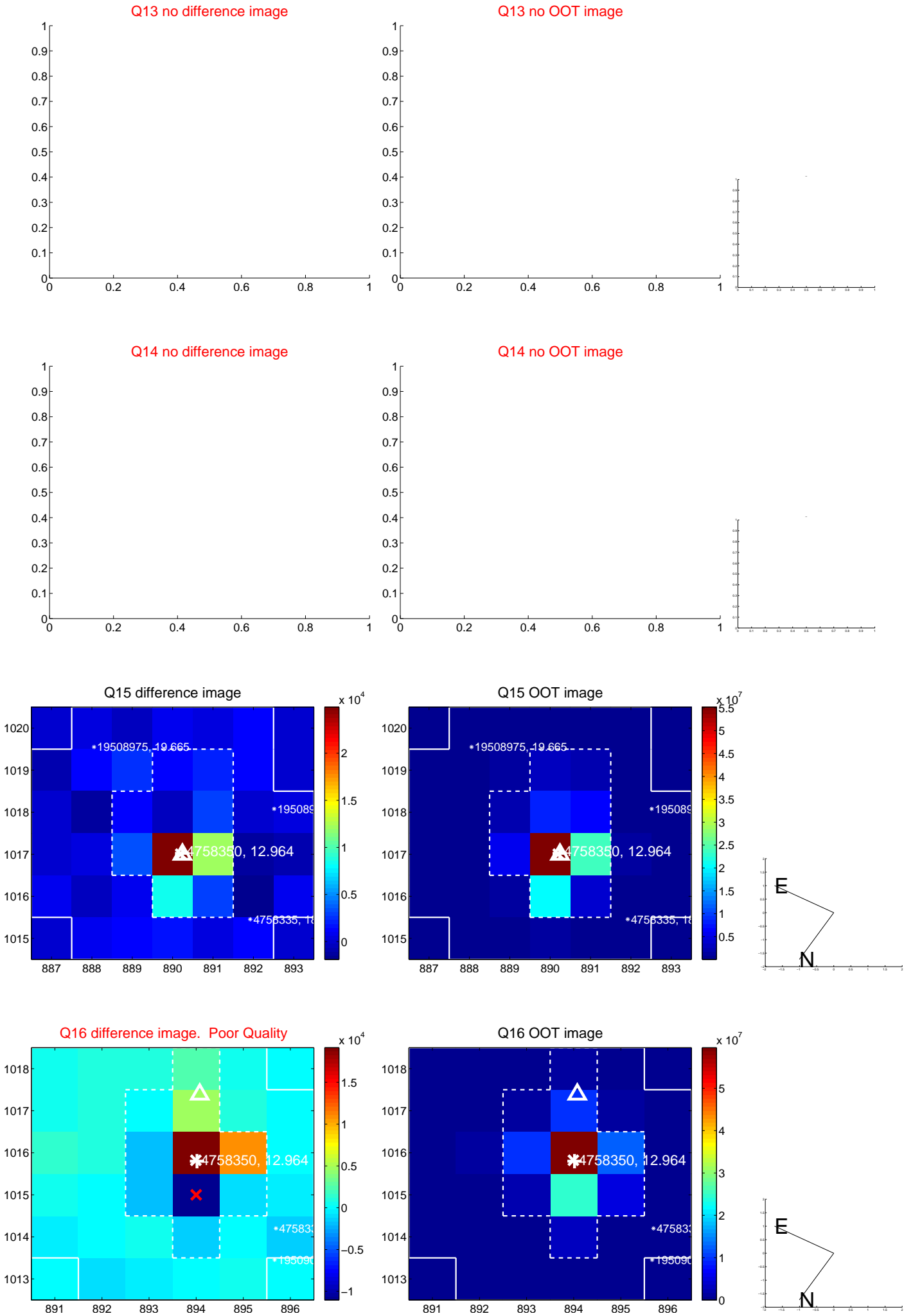
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



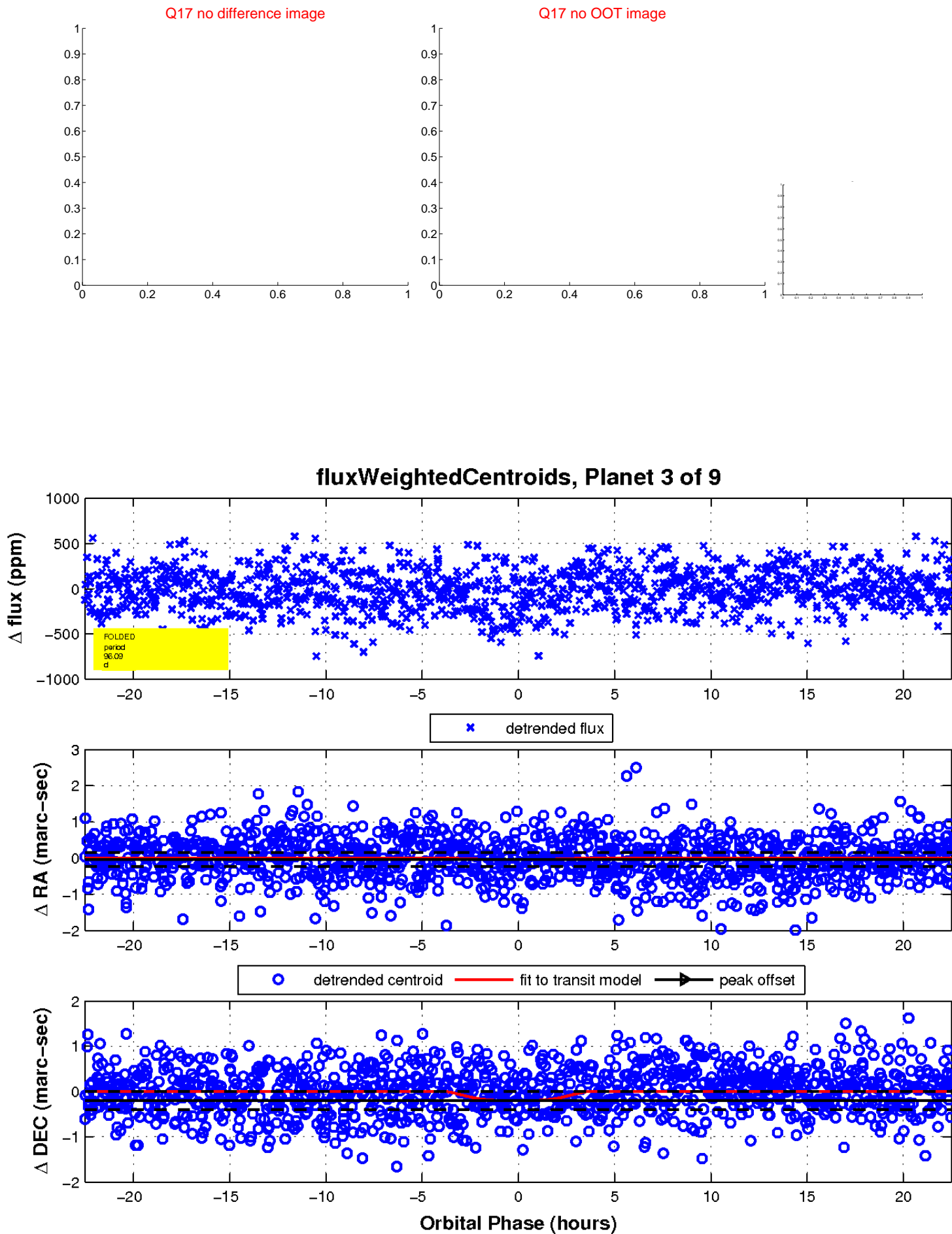
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

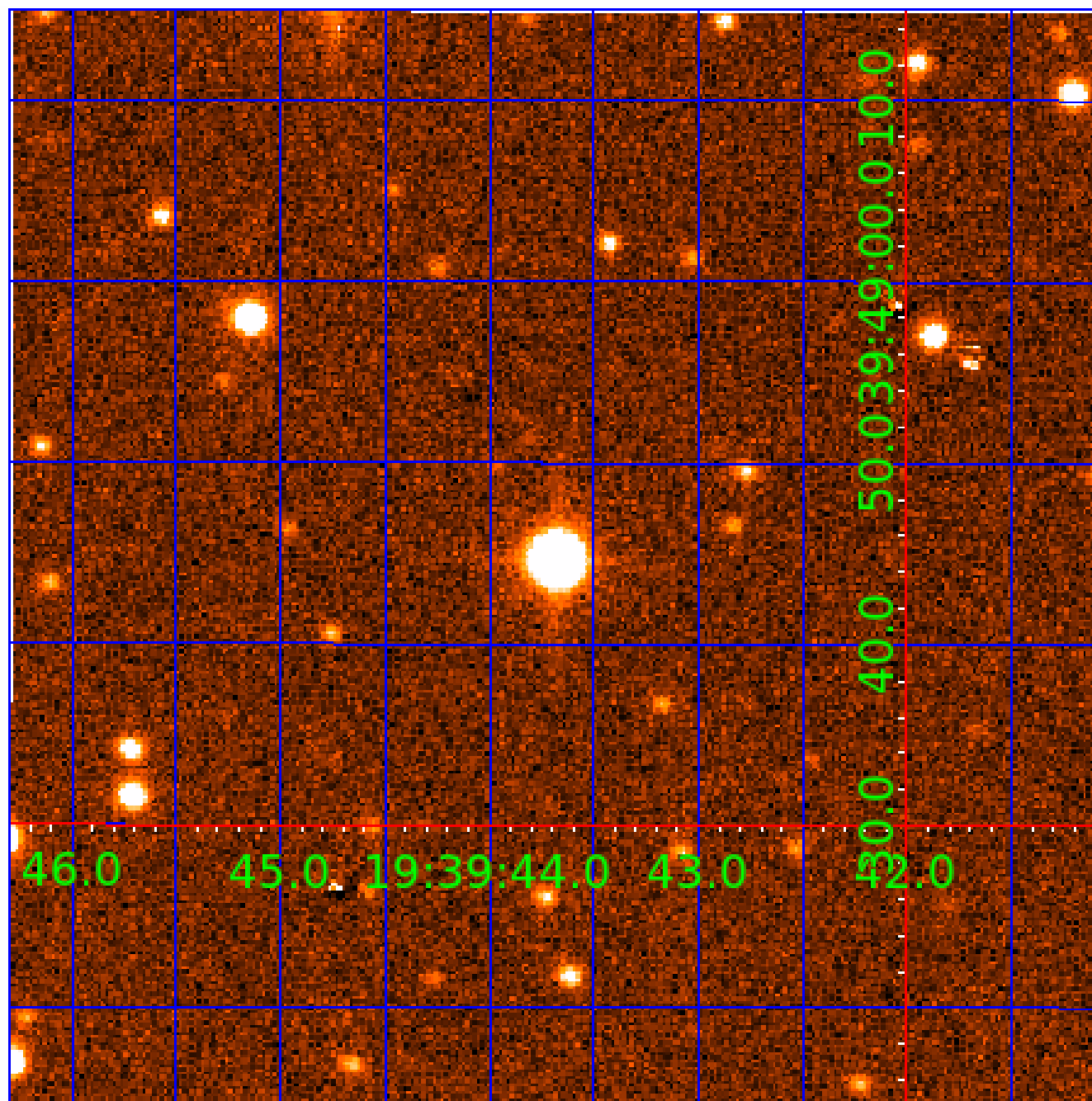


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004758350

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})
004758350-01	OBS	6447.01	1.120936	131.540051	45.9	6.243	8.9	9.4	4.84	6720	6.27	60134.87
004758350-02	OBS	No	95.011757	197.822359	505.4	3.636	9.2	10.2	4.84	6720	11.82	161.51
004758350-03	OBS	No	96.090049	189.921096	409.6	7.506	9.0	9.5	4.84	6720	12.57	159.10
004758350-04	OBS	No	8.956177	133.855318	151.8	3.553	9.2	9.5	4.84	6720	6.74	3764.76
004758350-06	OBS	No	235.351197	303.610912	485.1	5.963	9.2	9.7	4.84	6720	12.16	48.19
004758350-07	OBS	No	59.039315	165.845414	496.1	2.491	9.1	8.9	4.84	6720	12.81	304.59
004758350-08	OBS	No	103.210000	175.789471	404.4	6.858	7.7	7.6	4.84	6720	18.77	144.63
004758350-09	OBS	No	57.135180	142.505796	361.3	4.612	8.9	10.2	4.84	6720	11.45	318.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004758350-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT
004758350-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
004758350-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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.

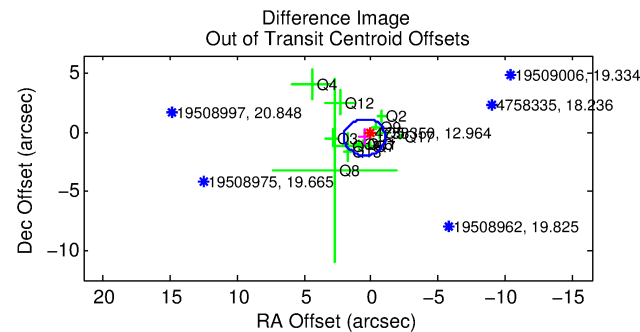
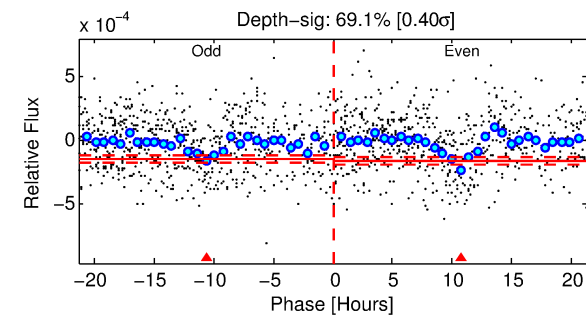
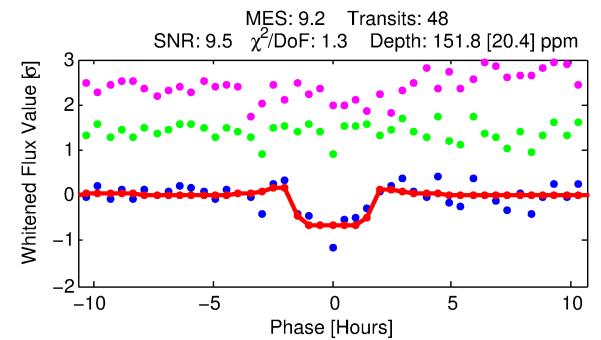
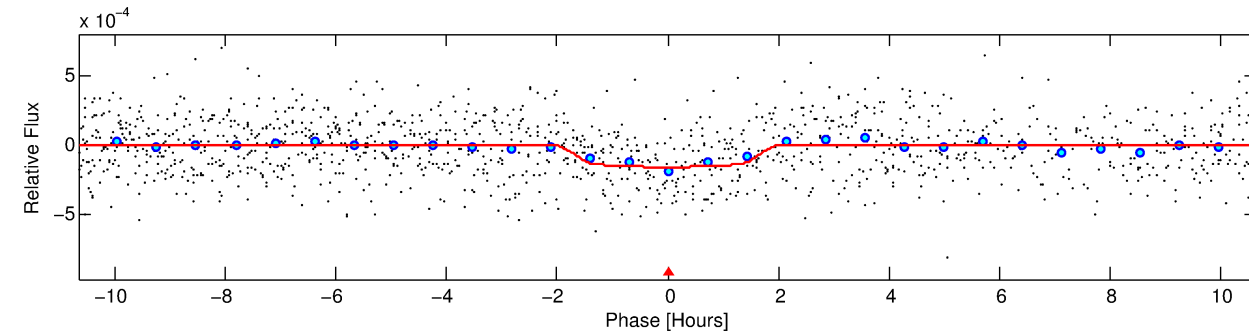
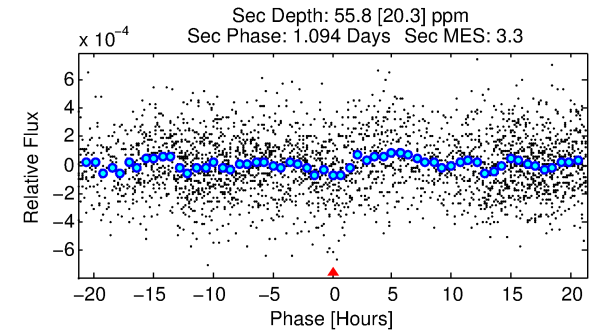
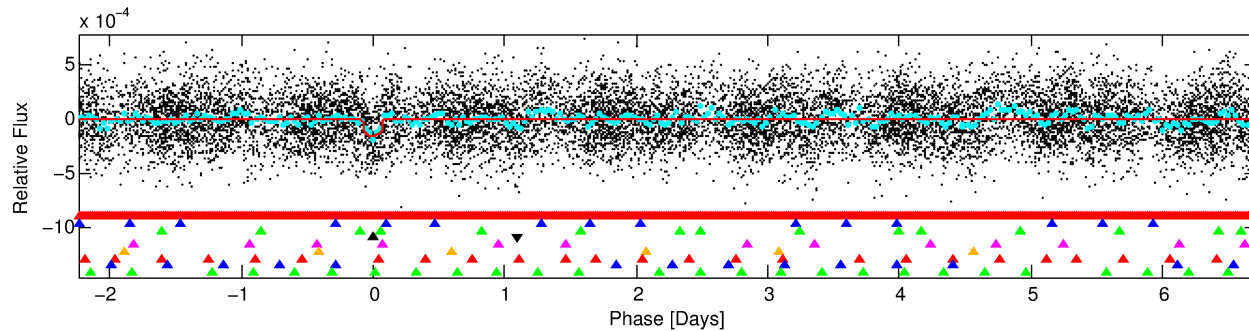
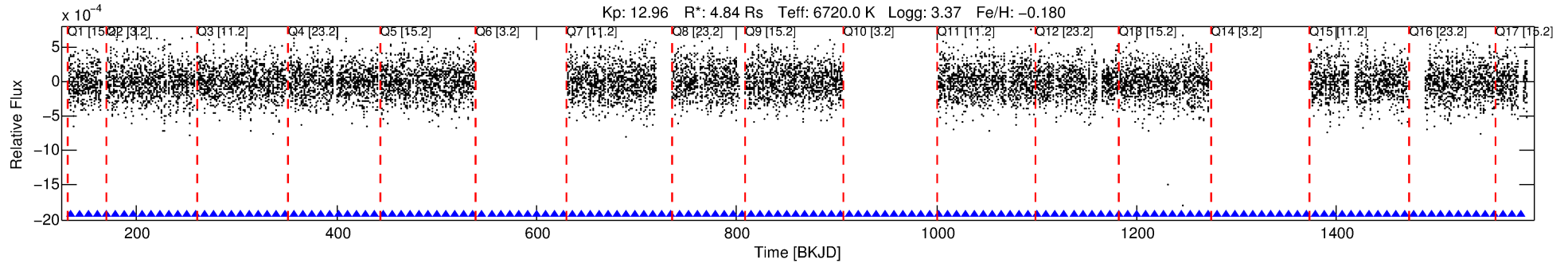
Ephemeris Match Information For 004758350-04

No Significant Match Found

DV One-Page Summary

KIC: 4758350 Candidate: 4 of 9 Period: 8.956 d
KOI: K06447 Corr: No Ephemeris Match

Kp: 12.96 R*: 4.84 Rs Teff: 6720.0 K Logg: 3.37 Fe/H: -0.180



DV Fit Results:

Period = 8.95618 [0.00007] d
Epoch = 133.8553 [0.0069] BKJD
Rp/R* = 0.0128 [0.0063]
a/R* = 10.61 [30.41]
b = 0.85 [0.94]
Seff = 3764.76 [2396.37]
Teff = 1997 [318] K
Rp = 6.74 [4.31] Re
a = 0.1067 [0.0415] AU
Ag = 7.70 [9.45] [0.71σ]
Teffp = 5144 [1370] K [2.24σ]

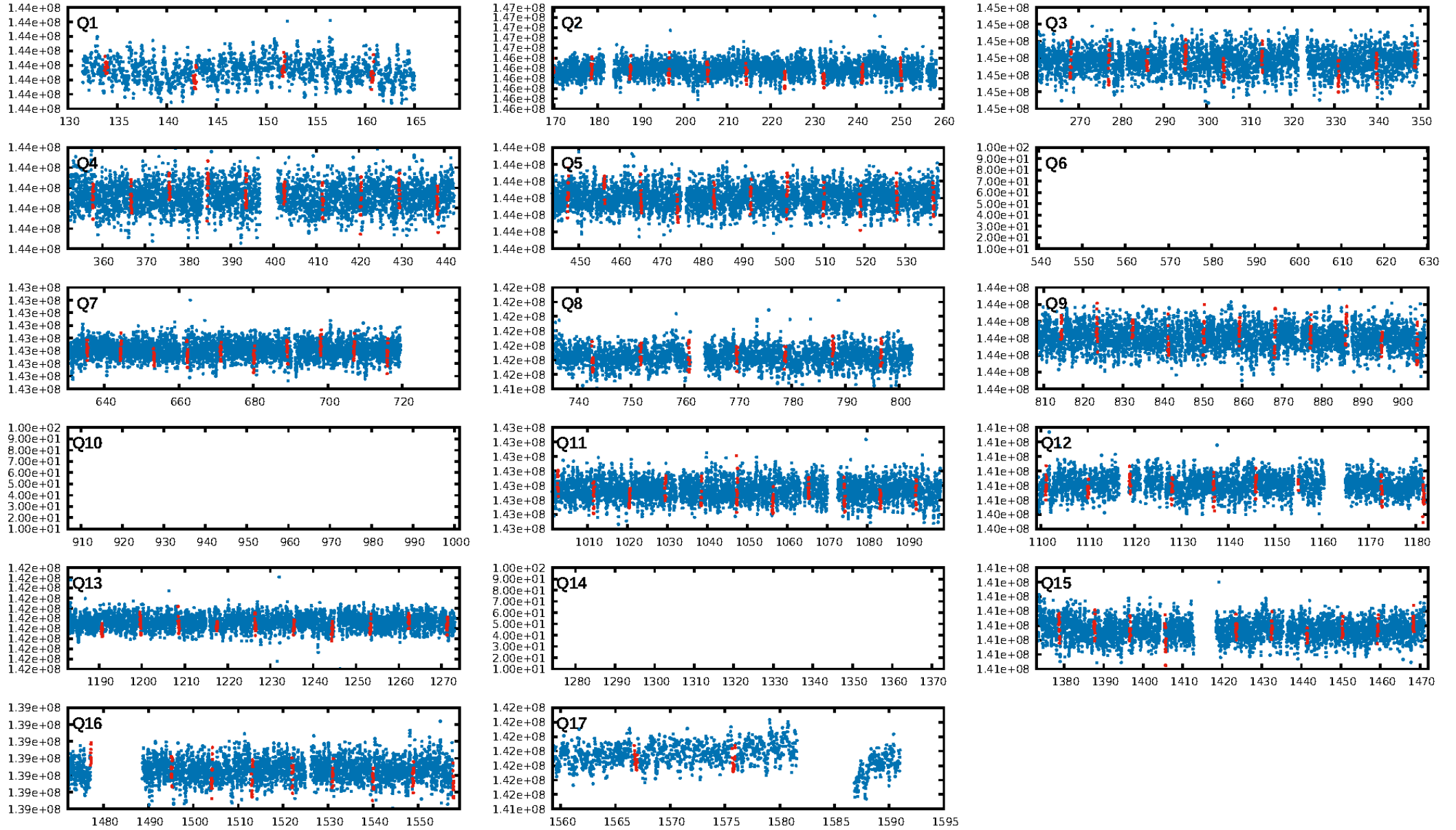
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [26.18σ]
LongPeriod-sig: 100.0% [198.60σ]
ModelChiSquare2-sig: 0.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [46/46]
GhostDiagnostic-chr: 1.544
Centroid-sig: 32.1%
Centroid-so: 0.612 arcsec [1.49σ]
OotOffset-rm: 0.649 arcsec [1.26σ]
KicOffset-rm: 0.567 arcsec [1.05σ]
OotOffset-st: 1/4/4/4 [13]
KicOffset-st: 1/4/4/4 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 0.29 [4/14]

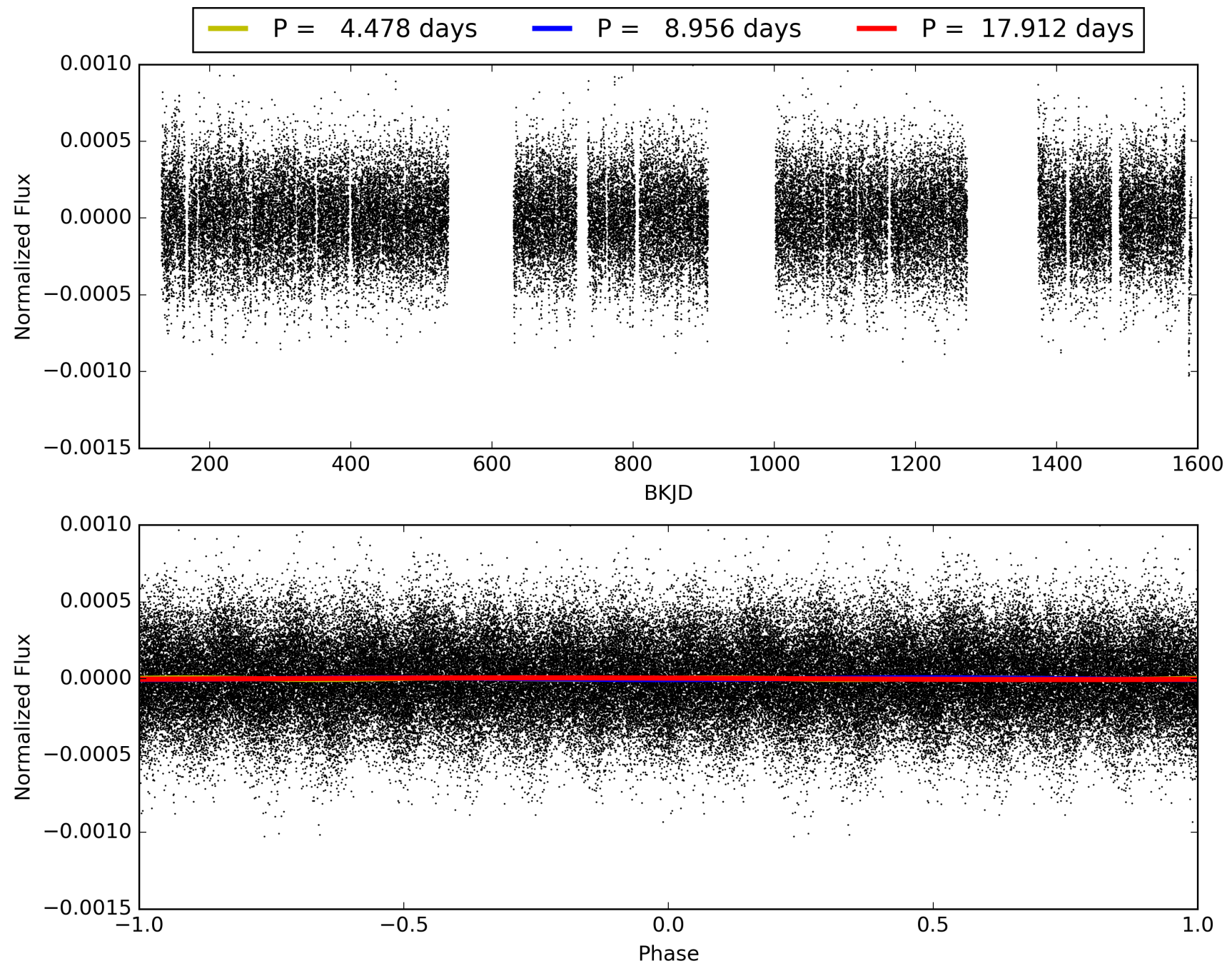
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:34:35 Z

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

TCE 004758350-04, PDC Light Curves

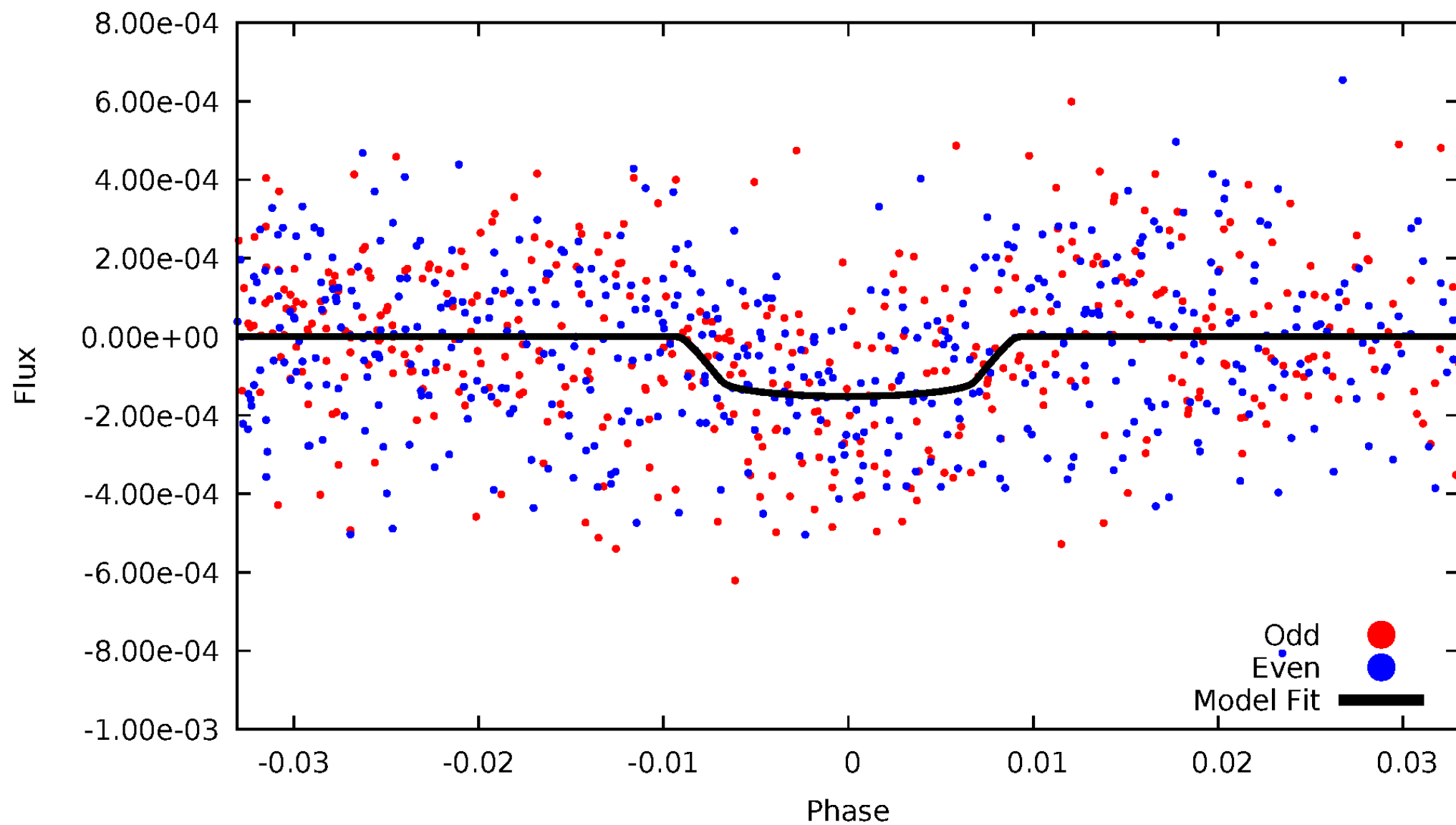


TCE 004758350-04



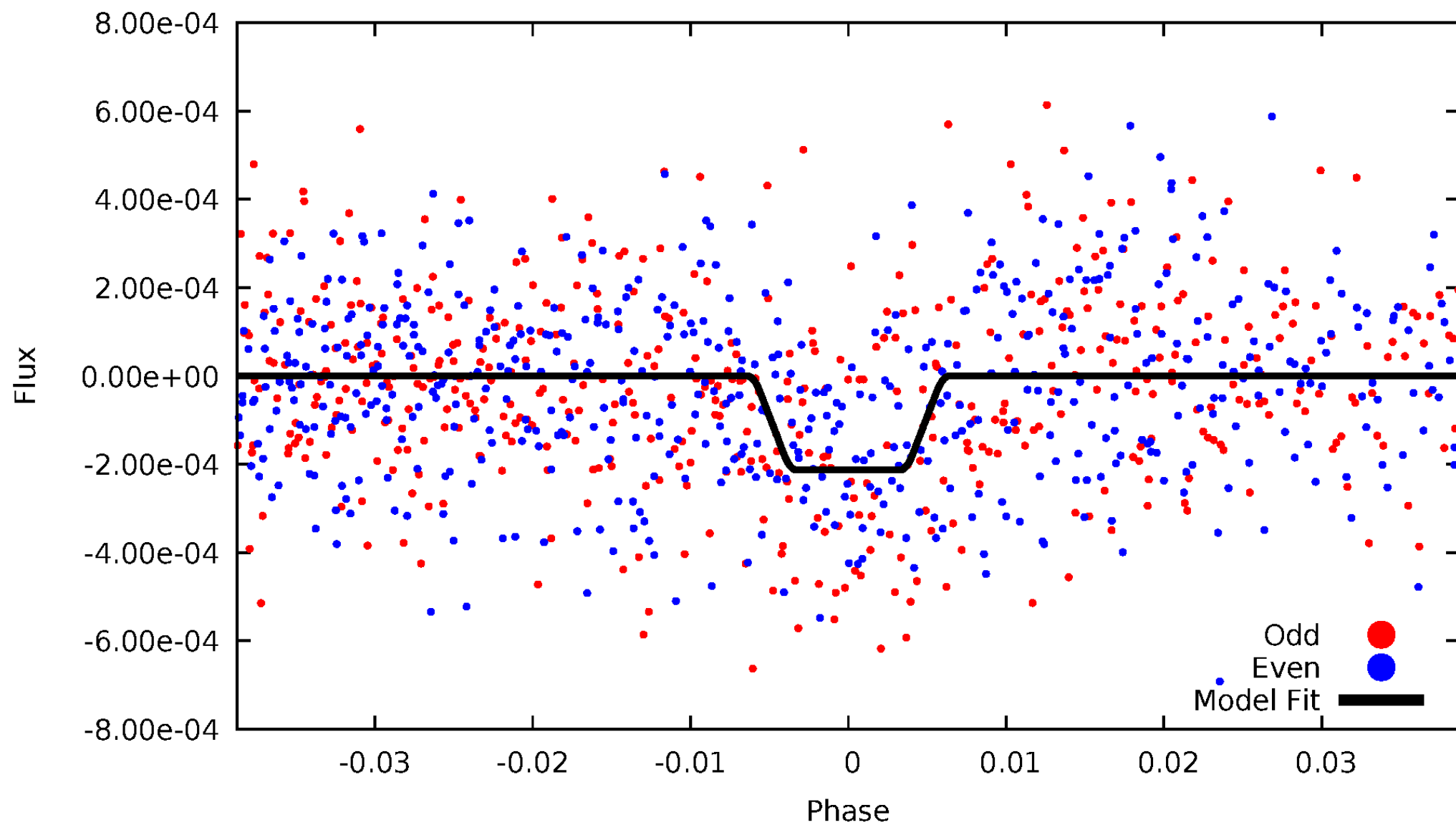
DV Odd/Even

TCE 004758350-04



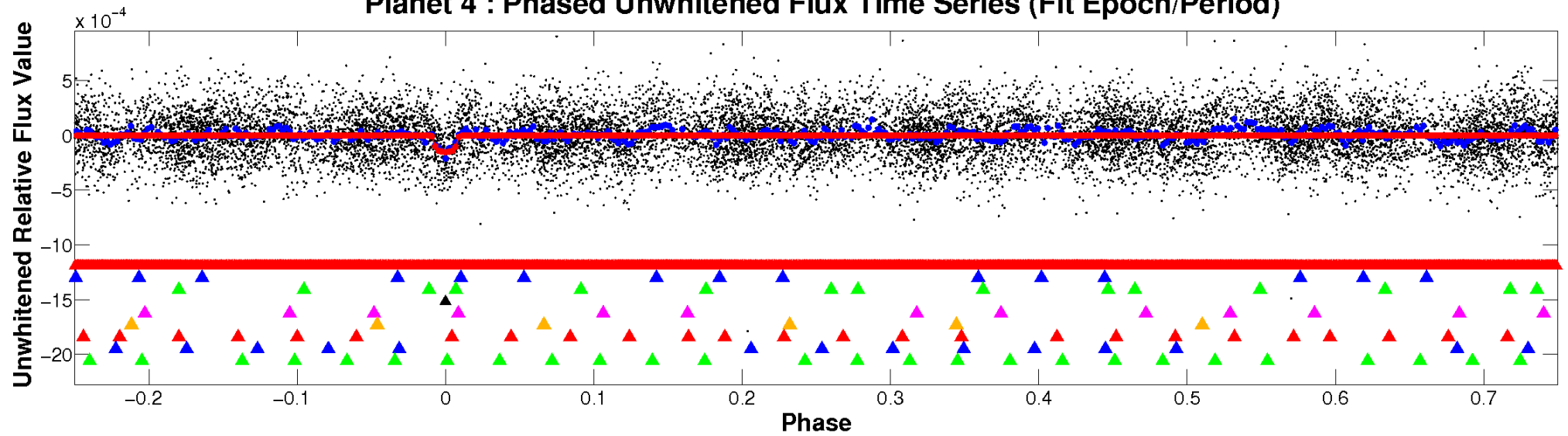
ALT Odd/Even

TCE 004758350-04

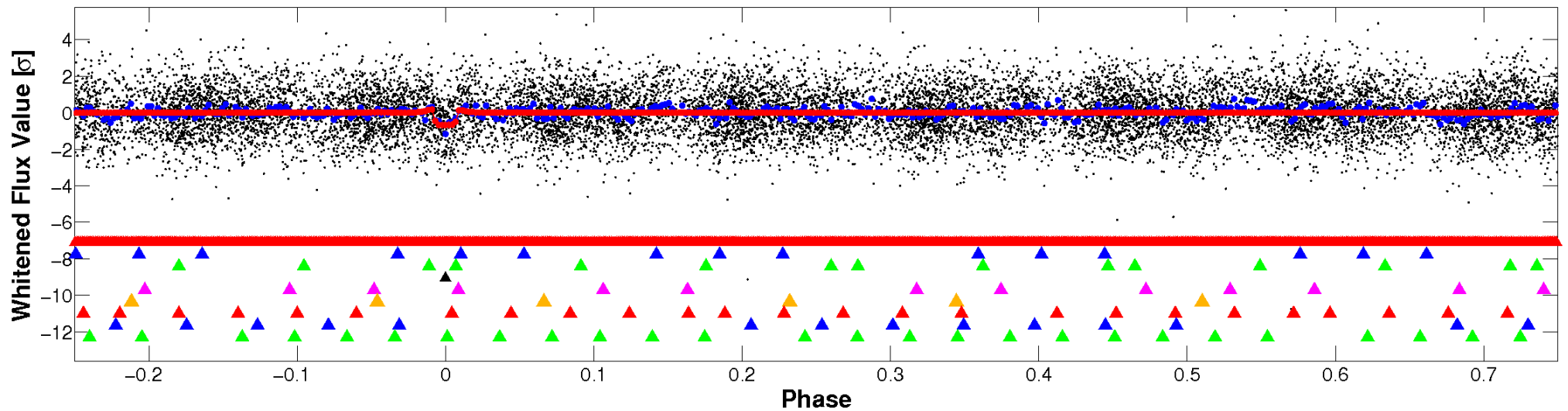


Non-Whitened Vs. Whitened Light Curve

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

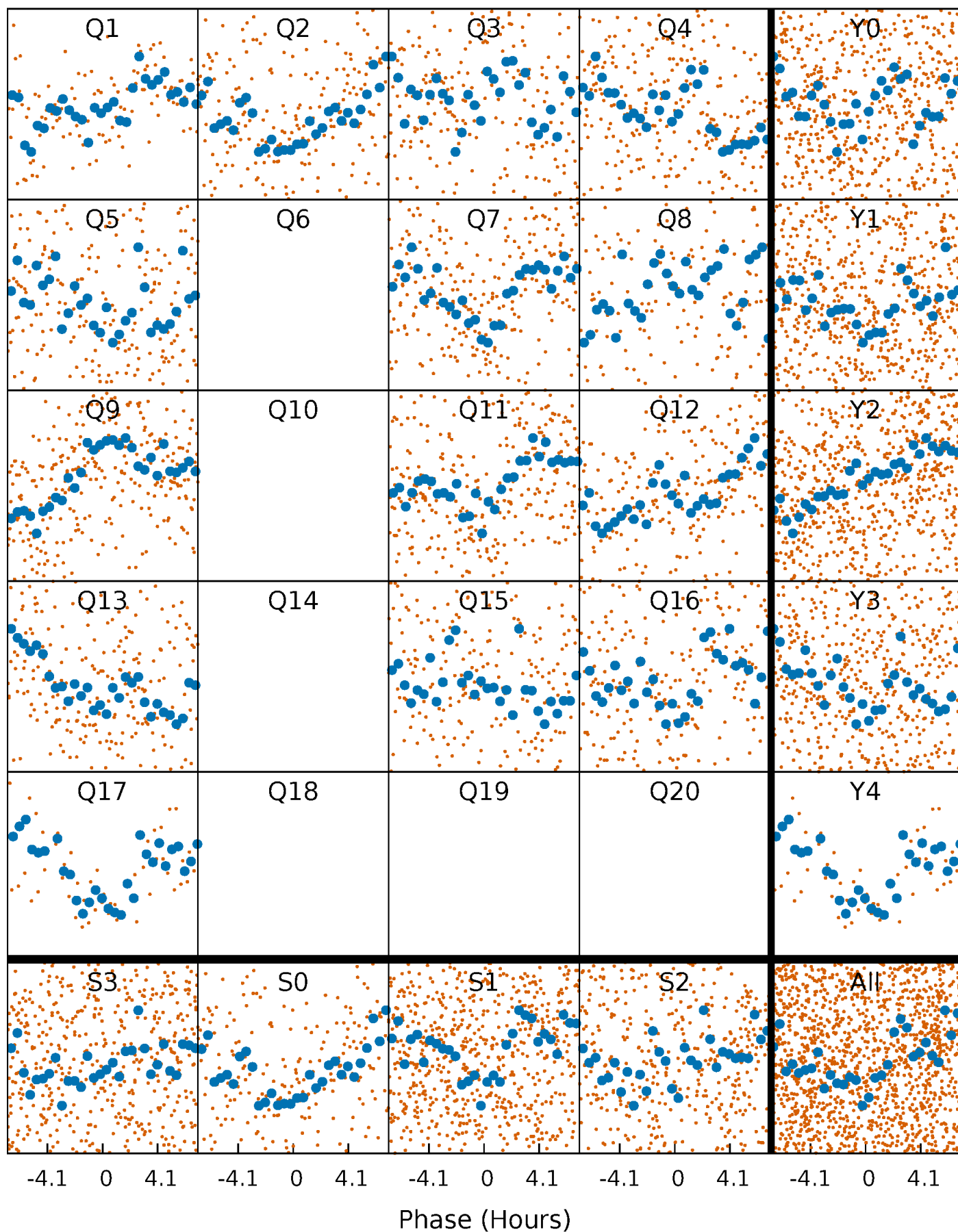


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



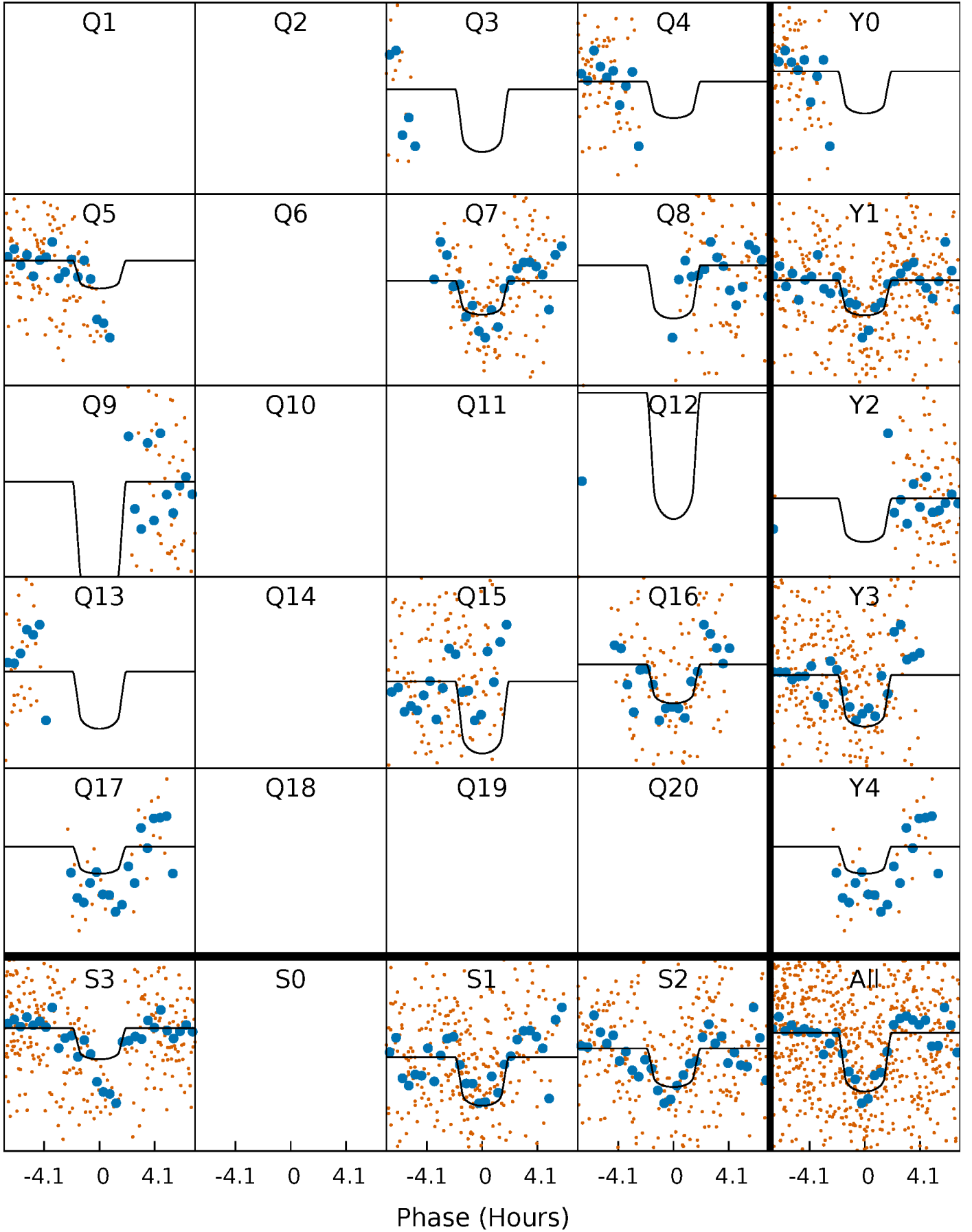
PDC Quarter-Phased Transit Curves

TCE 004758350-04 P= 8.956177 Days $T_0=133.855319$ (BKJD)



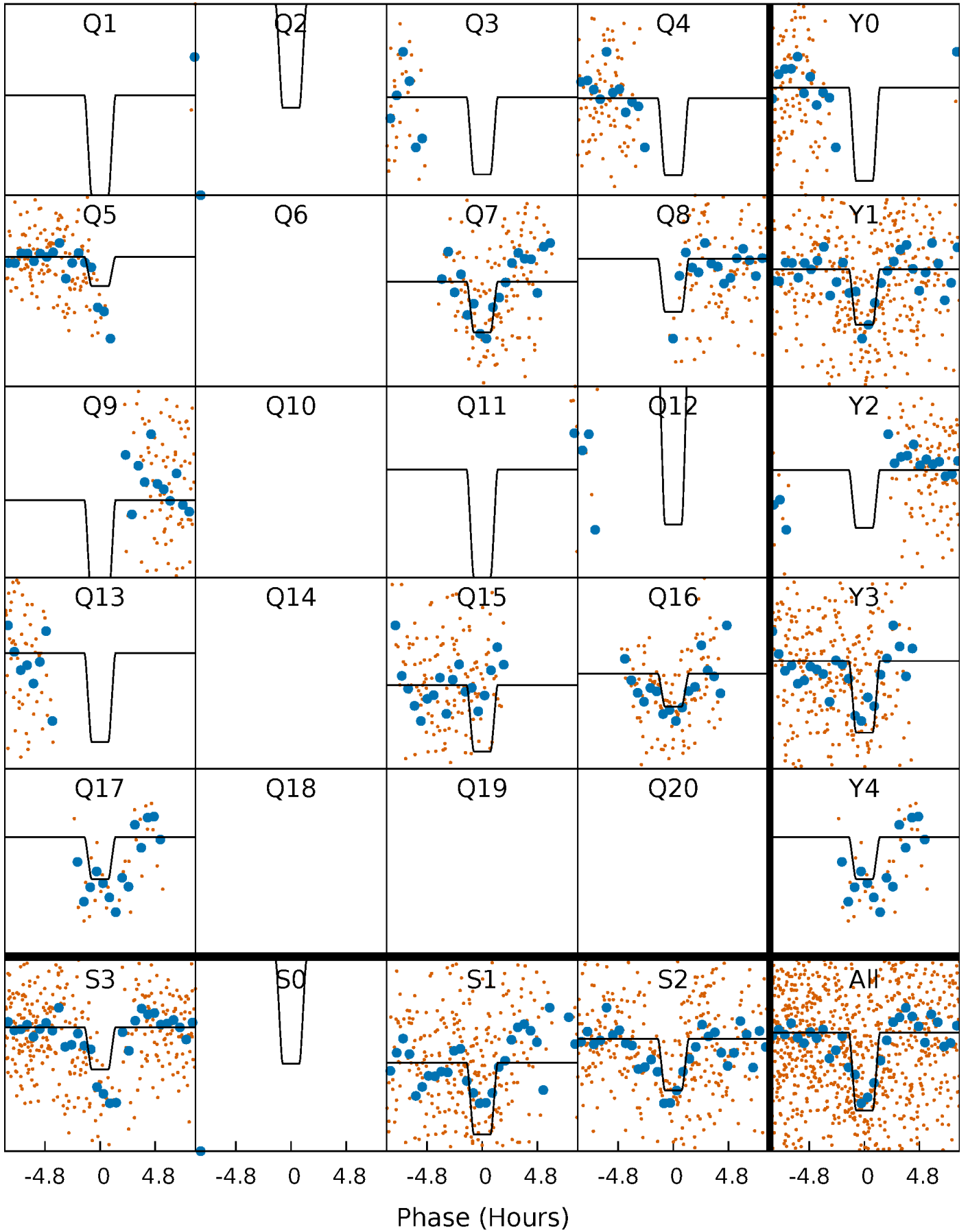
DV Quarter-Phased Transit Curves

TCE 004758350-04 P= 8.956177 Days $T_0=133.855319$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

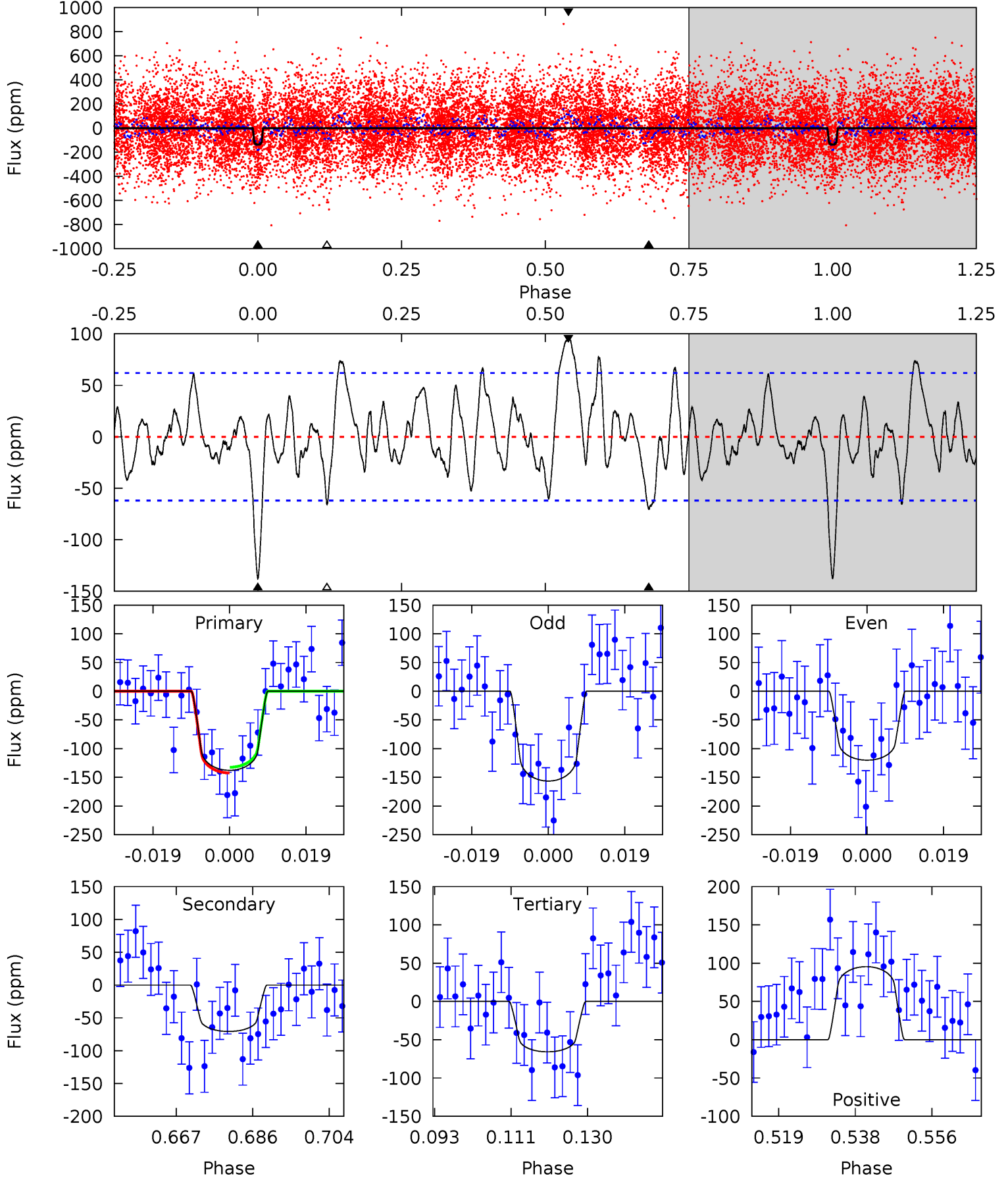
TCE 004758350-04 P= 8.956132 Days $T_0=133.857512$ (BKJD)



DV Model-Shift Uniqueness Test

004758350-04, P = 8.956177 Days, E = 124.899142 Days

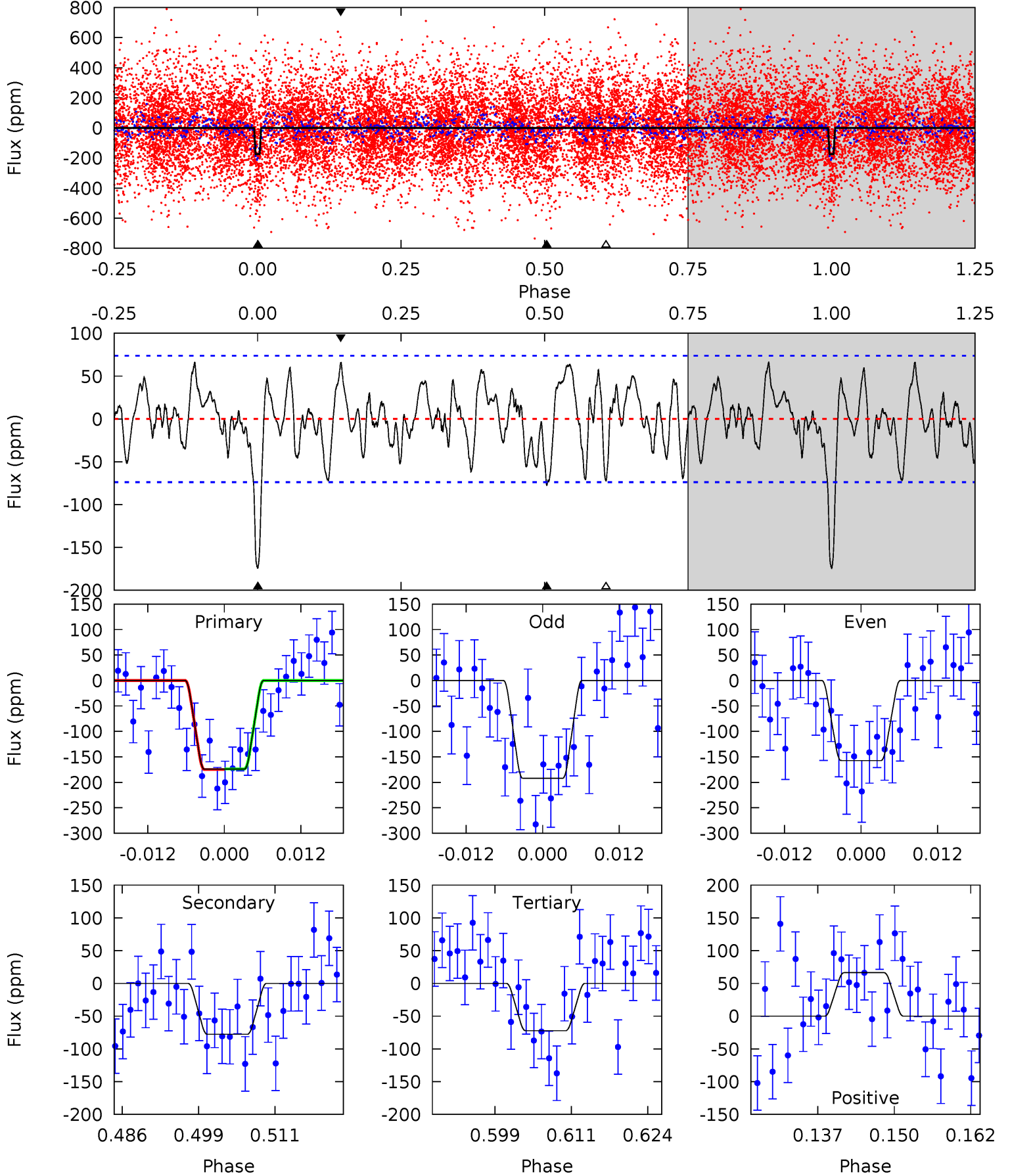
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	5.60	5.21	7.56	4.91	2.35	2.31	5.70	3.35	0.39	-1.96	1.44	0.75	0.41	0.39



Alt Model-Shift Uniqueness Test

004758350-04, P = 8.956132 Days, E = 124.901380 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	5.25	4.88	4.48	4.98	2.50	1.96	6.88	7.29	0.37	0.77	1.17	0.75	0.28	0.04



Stellar Parameters For KIC 004758350

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6720^{+180}_{-220}	$3.373^{+0.366}_{-0.065}$	$-0.180^{+0.350}_{-0.250}$	$4.845^{+0.345}_{-1.955}$	$2.020^{+0.124}_{-0.372}$	$0.025^{+0.075}_{-0.003}$
	+3%/-3%	+11%/-2%	+194%/-139%	+7%/-40%	+6%/-18%	+298%/-14%
Source	PHO1	FLK73	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 004758350-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-71 ± 13	$6.34^{+3.21}_{-3.23}$	2738^{+146}_{-281}	5368^{+2089}_{-886}	11^{+33}_{-6}
Alt.	-78 ± 15	$6.82^{+3.88}_{-3.11}$	2736^{+131}_{-272}	5226^{+1967}_{-814}	10^{+25}_{-6}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

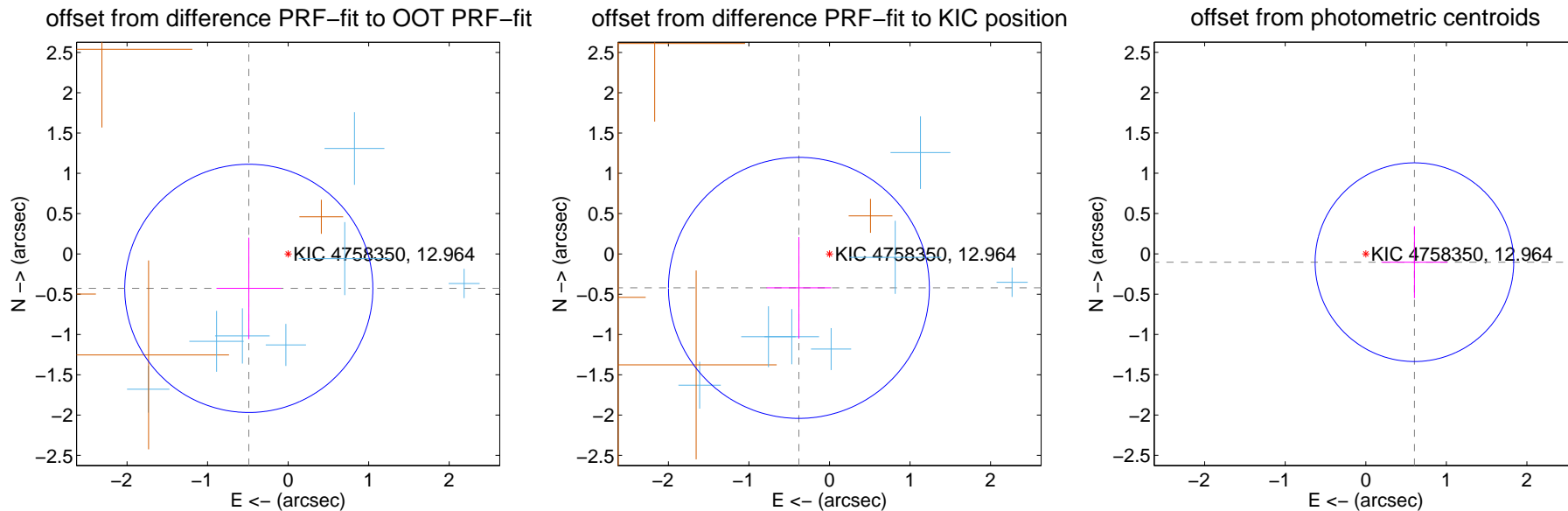
DV Centroid Data

Supplemental centroid analysis for 004758350-04. Kepler magnitude: 12.96. Transit SNR 9.45

There are 7 quarters with good PRF difference image offsets

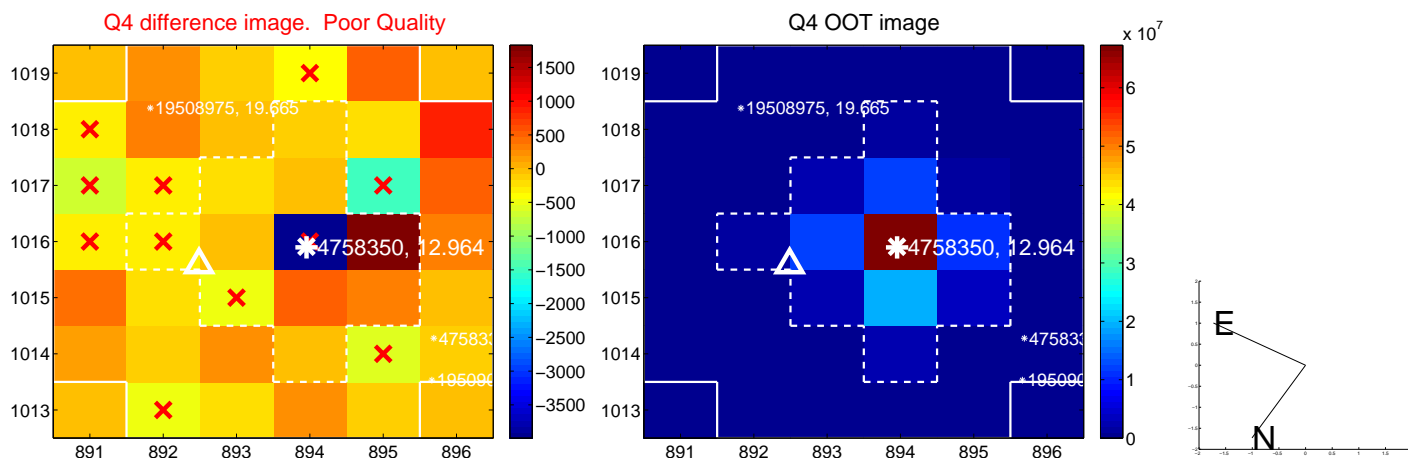
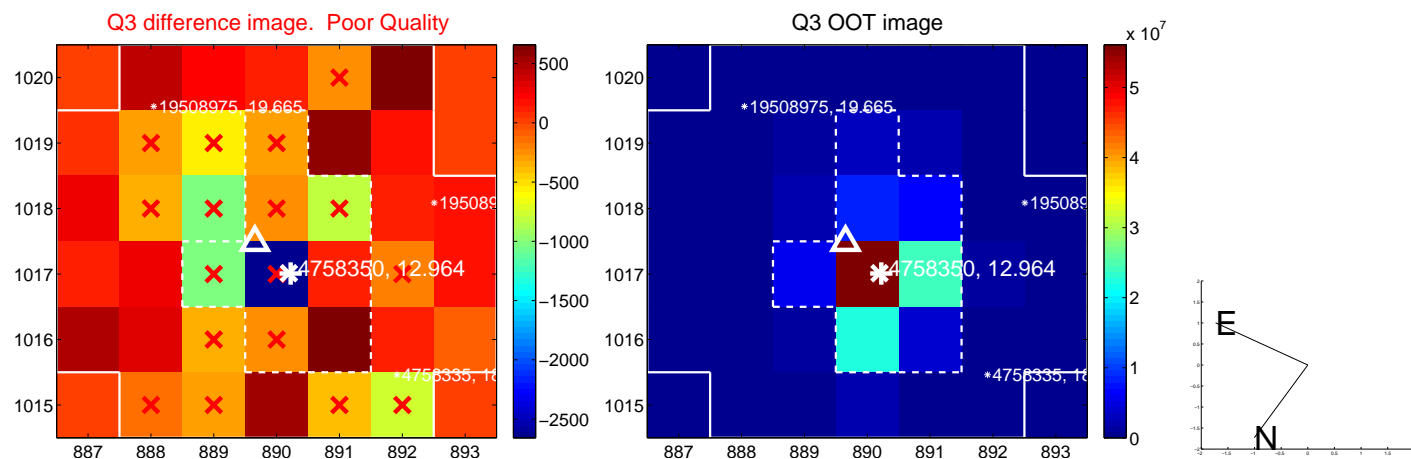
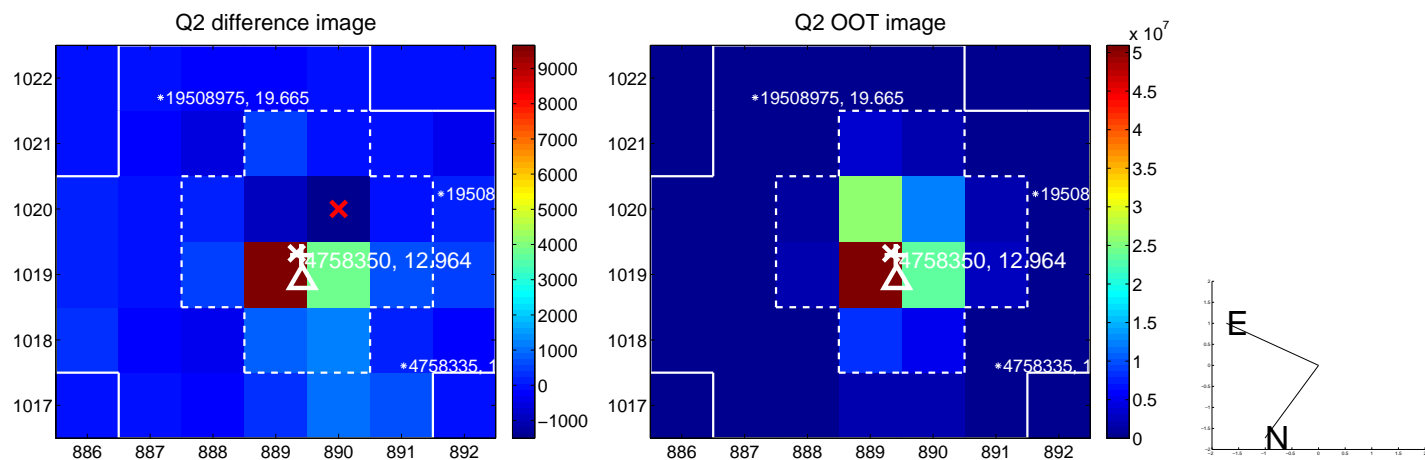
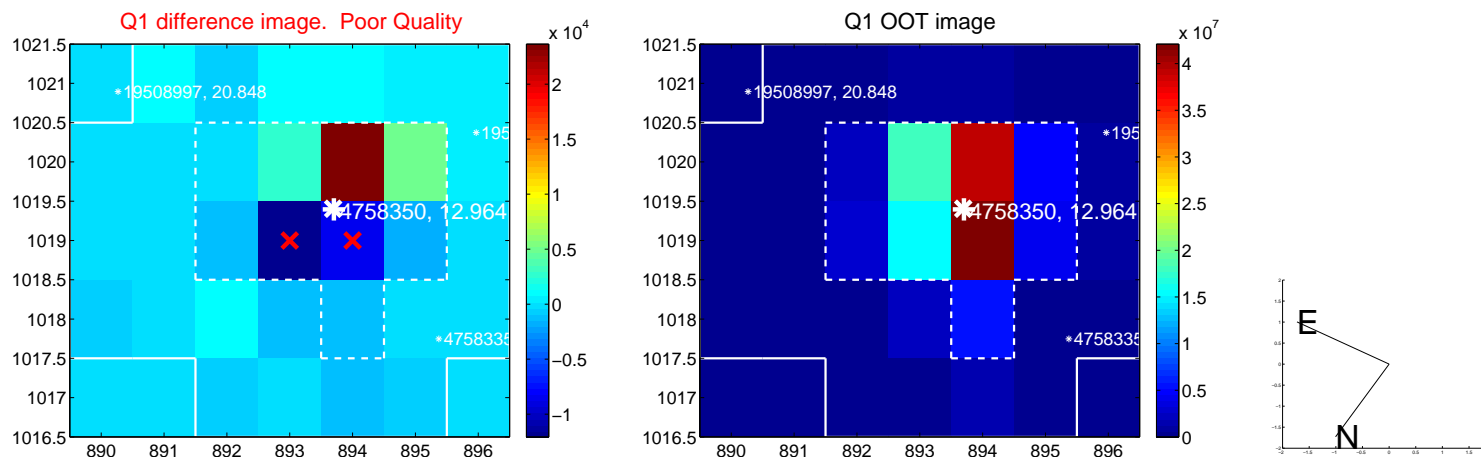
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.649 ± 0.513	1.26	0.488 ± 0.401	-0.428 ± 0.630
PRF-fit source offset from KIC position	0.567 ± 0.540	1.05	0.380 ± 0.401	-0.421 ± 0.630
photometric centroid source offset	0.61 ± 0.41	1.49	-0.60 ± 0.41	-0.10 ± 0.45

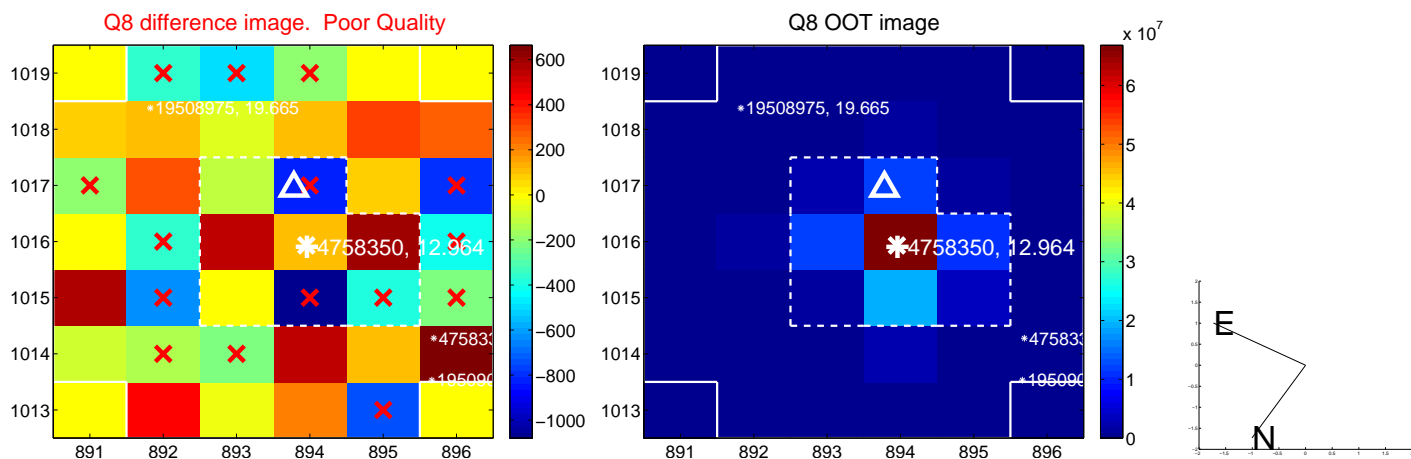
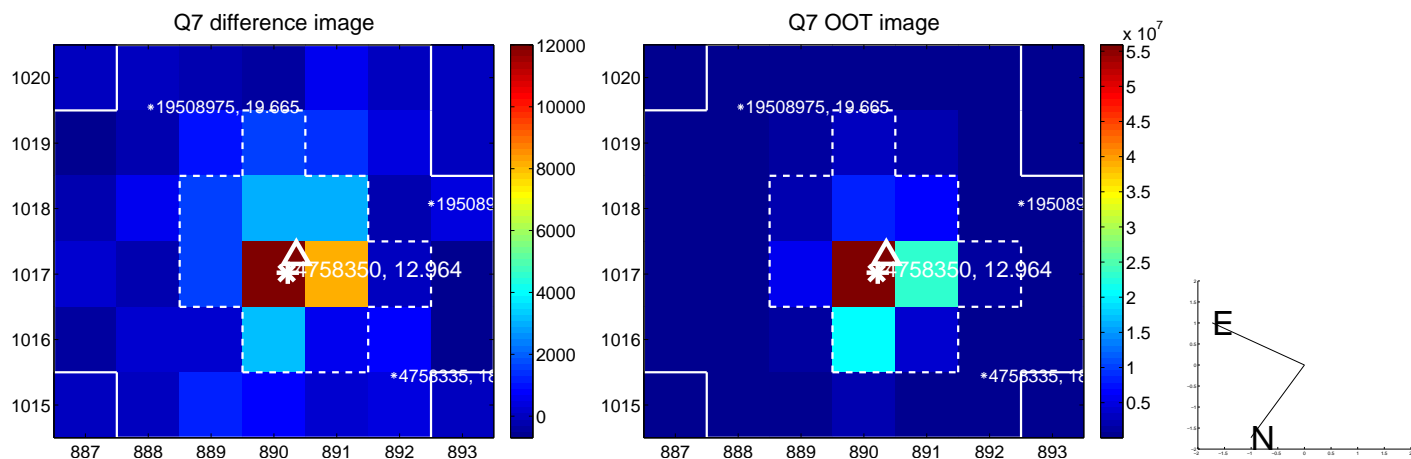
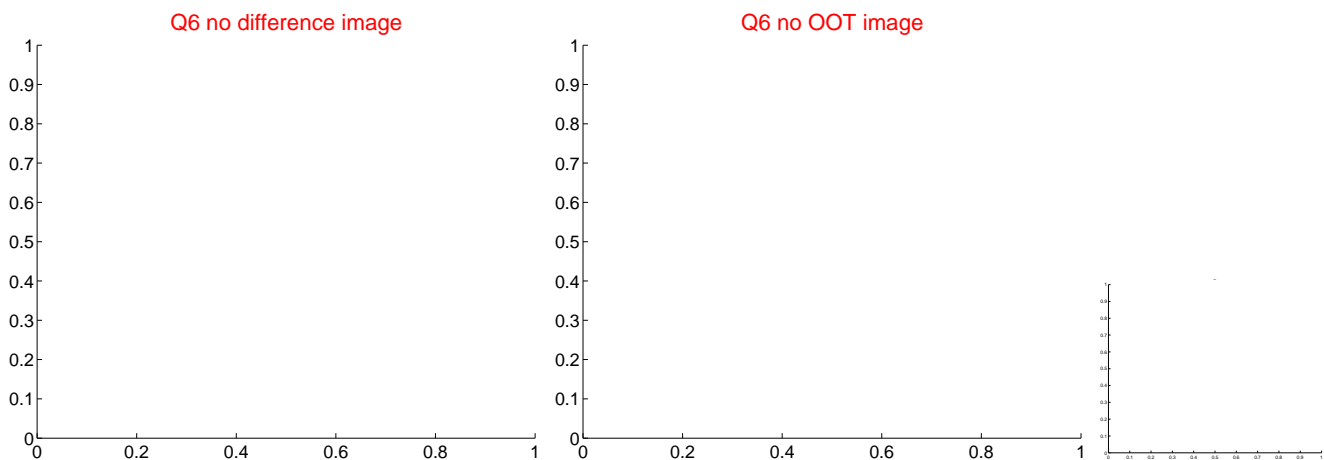
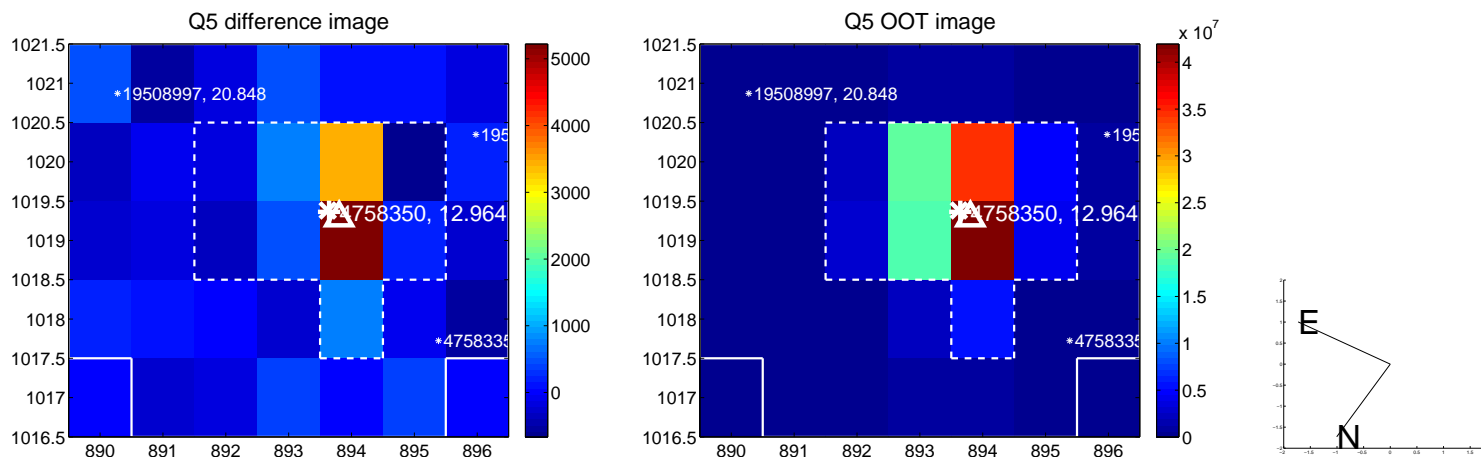


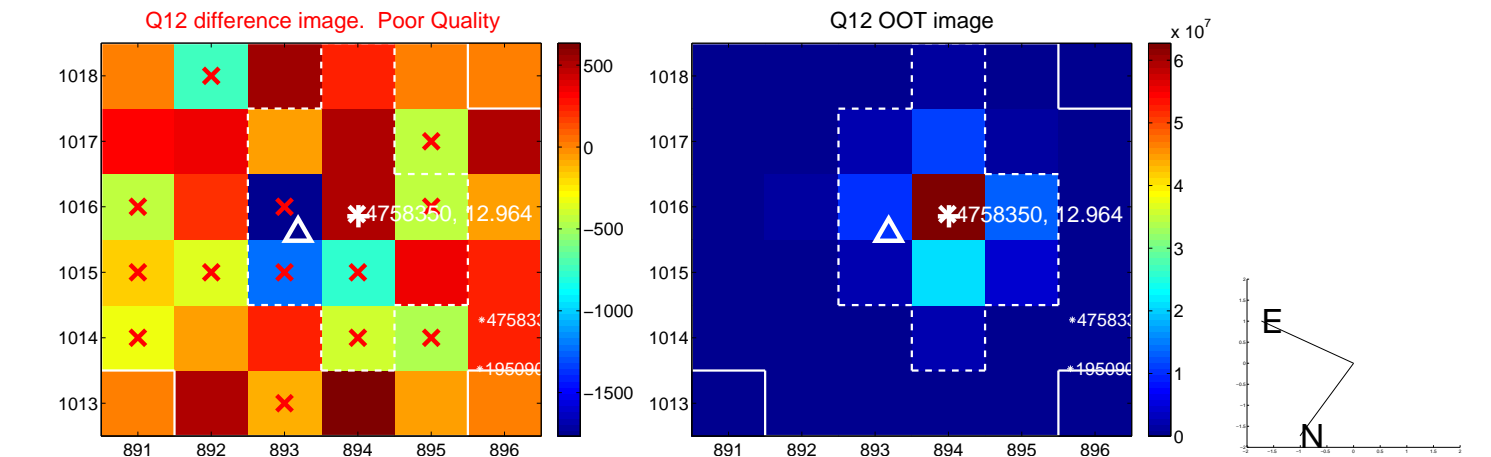
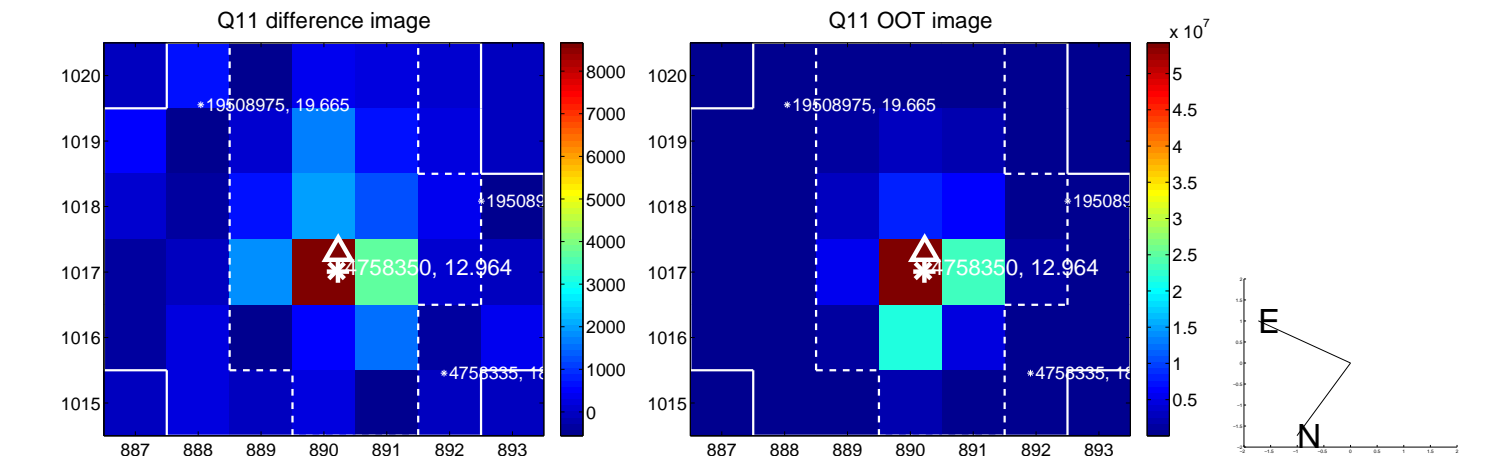
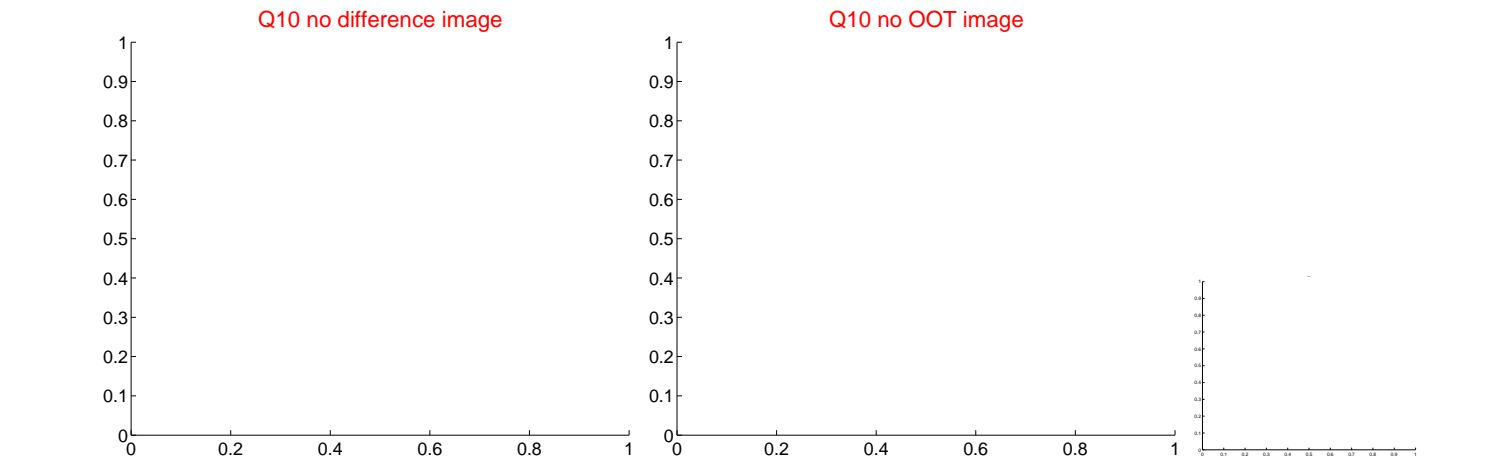
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

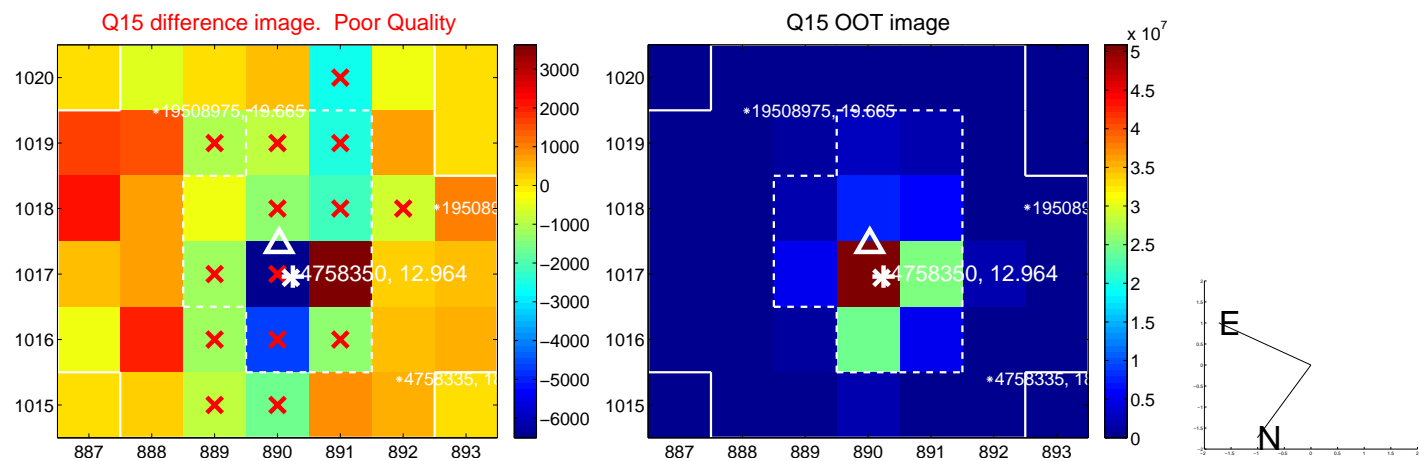
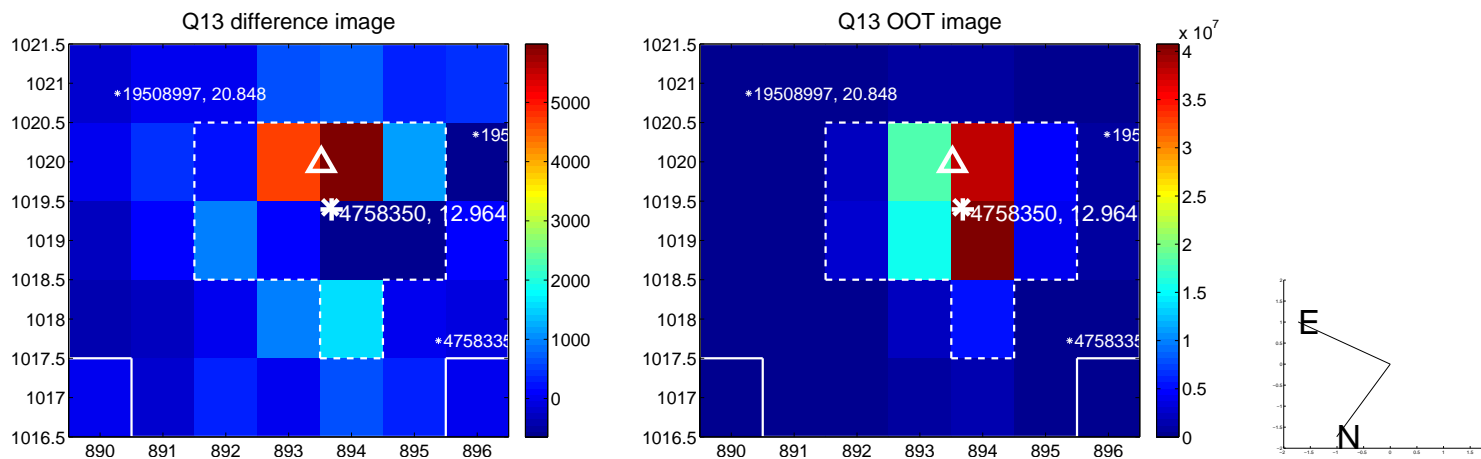


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

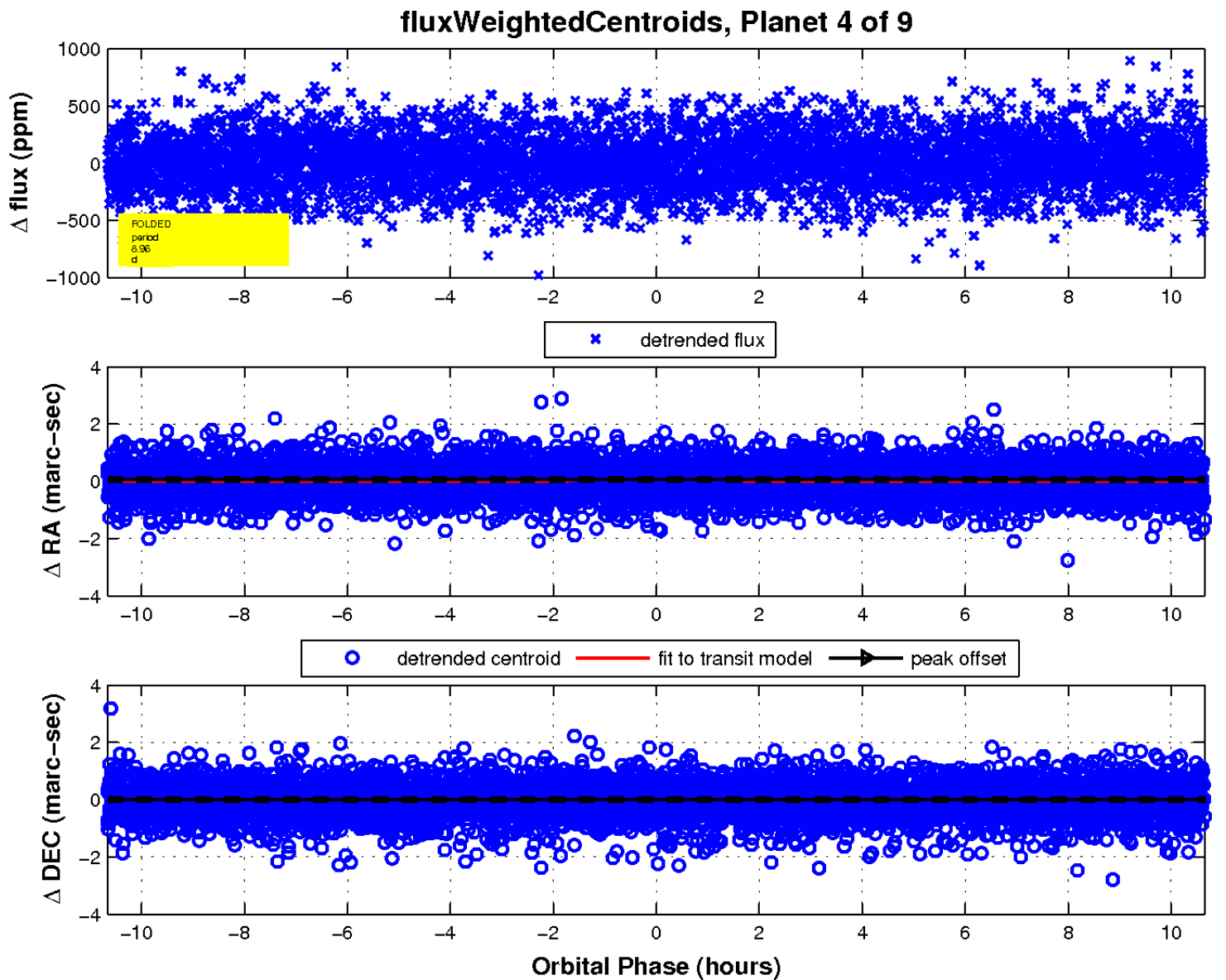
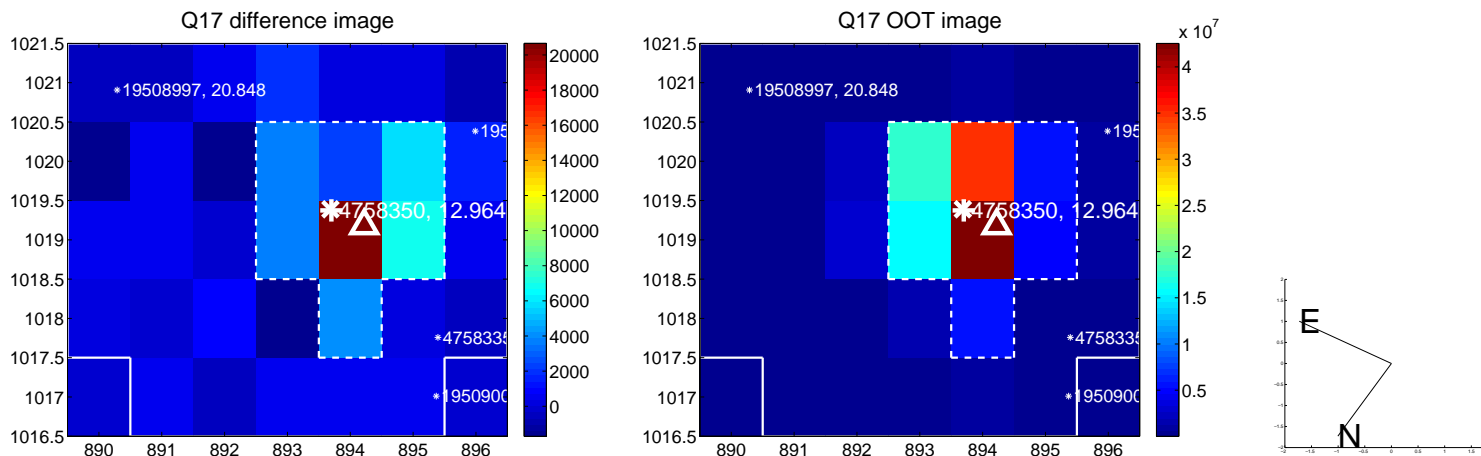




white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

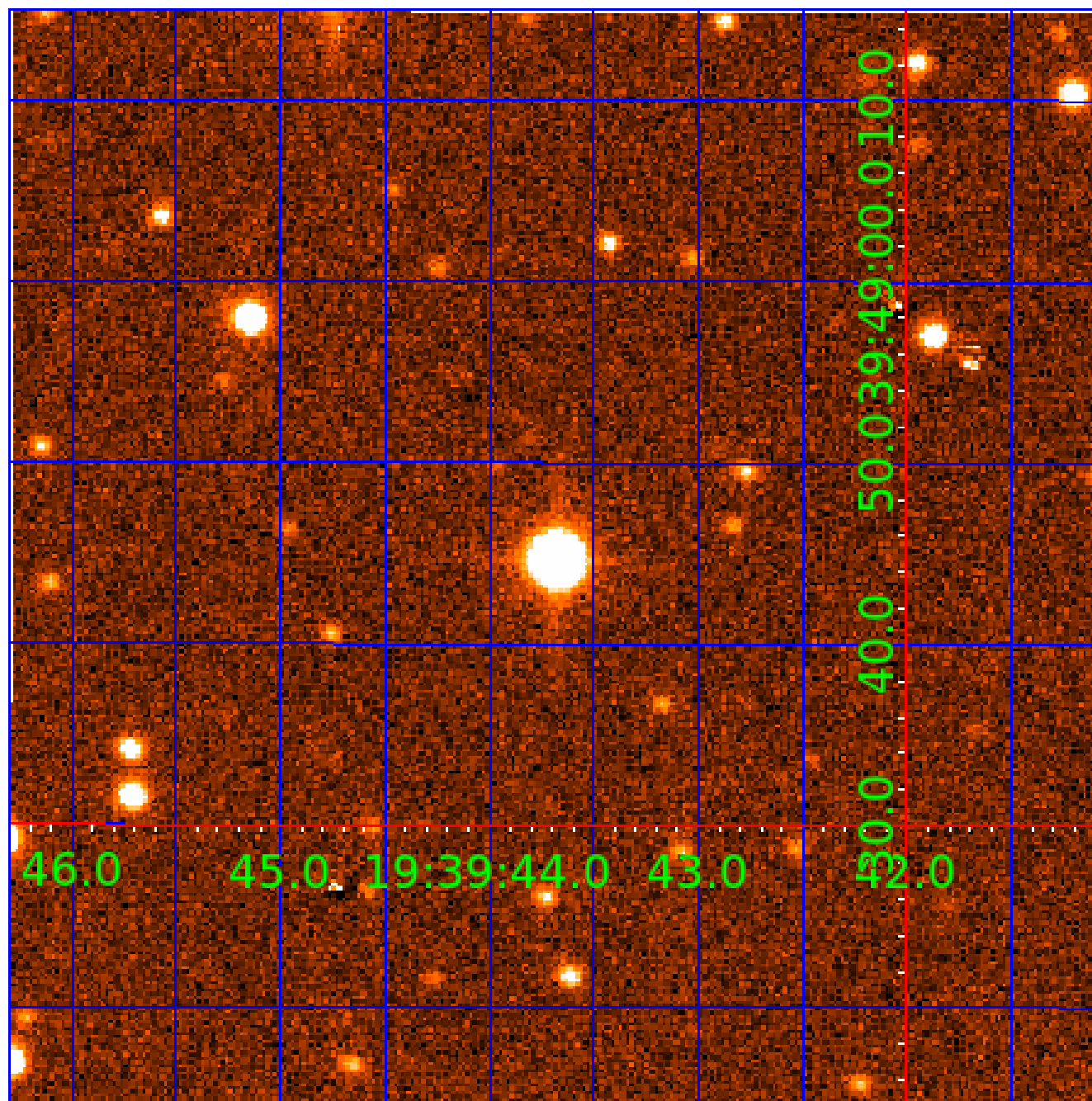


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004758350

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})
004758350-01	OBS	6447.01	1.120936	131.540051	45.9	6.243	8.9	9.4	4.84	6720	6.27	60134.87
004758350-02	OBS	No	95.011757	197.822359	505.4	3.636	9.2	10.2	4.84	6720	11.82	161.51
004758350-03	OBS	No	96.090049	189.921096	409.6	7.506	9.0	9.5	4.84	6720	12.57	159.10
004758350-04	OBS	No	8.956177	133.855318	151.8	3.553	9.2	9.5	4.84	6720	6.74	3764.76
004758350-06	OBS	No	235.351197	303.610912	485.1	5.963	9.2	9.7	4.84	6720	12.16	48.19
004758350-07	OBS	No	59.039315	165.845414	496.1	2.491	9.1	8.9	4.84	6720	12.81	304.59
004758350-08	OBS	No	103.210000	175.789471	404.4	6.858	7.7	7.6	4.84	6720	18.77	144.63
004758350-09	OBS	No	57.135180	142.505796	361.3	4.612	8.9	10.2	4.84	6720	11.45	318.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004758350-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT
004758350-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
004758350-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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.

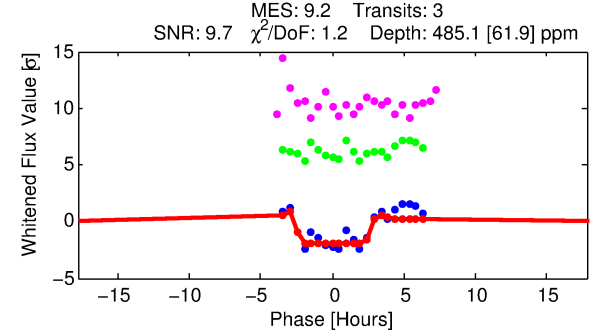
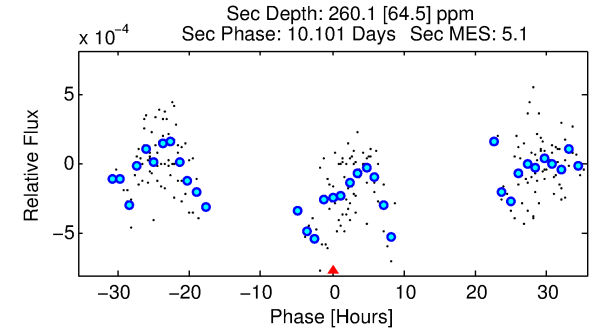
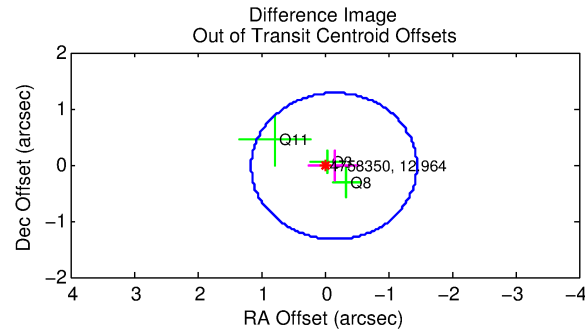
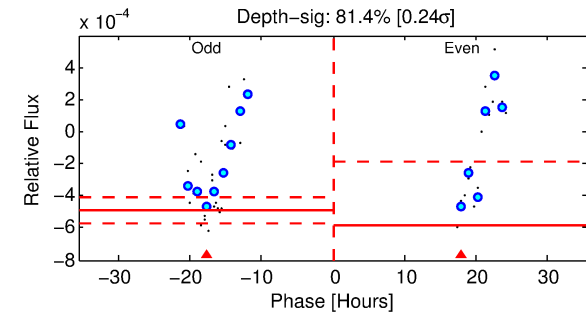
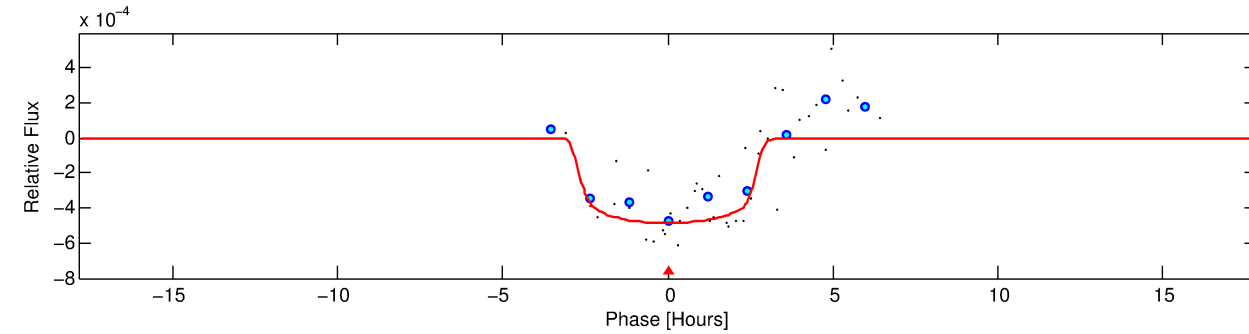
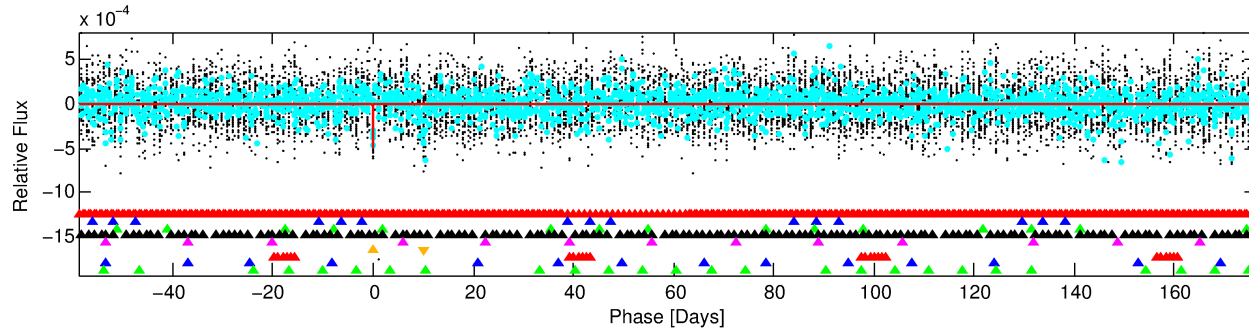
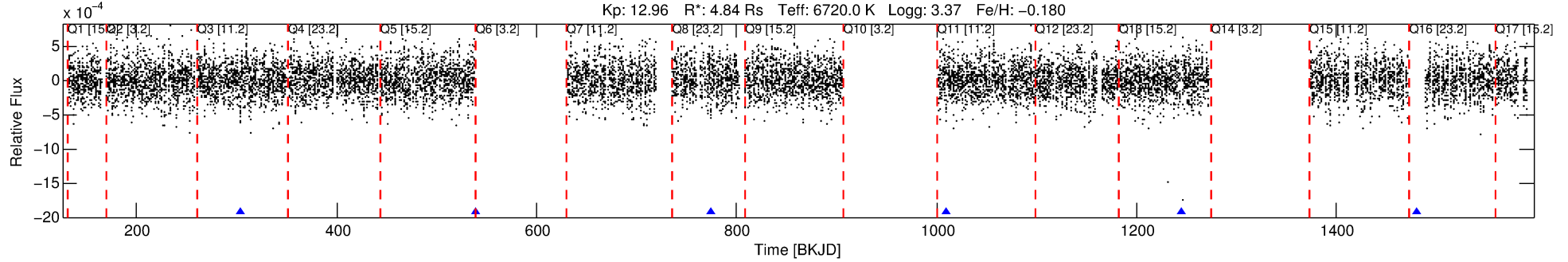
Ephemeris Match Information For 004758350-06

No Significant Match Found

DV One-Page Summary

KIC: 4758350 Candidate: 6 of 9 Period: 235.351 d
KOI: K06447 Corr: No Ephemeris Match

Kp: 12.96 R*: 4.84 Rs Teff: 6720.0 K Logg: 3.37 Fe/H: -0.180



DV Fit Results:

Period = 235.35120 [0.00509] d
Epoch = 303.6109 [0.0070] BKJD
Rp/R* = 0.0230 [0.0050]
a/R* = 163.49 [192.69]
b = 0.87 [0.34]
Seff = 48.19 [30.67]
Teq = 672 [107] K
Rp = 12.16 [5.57] Re
a = 0.9434 [0.3669] AU
Ag = 861.69 [688.93] [1.25σ]
Teffp = 5628 [729] K [6.73σ]

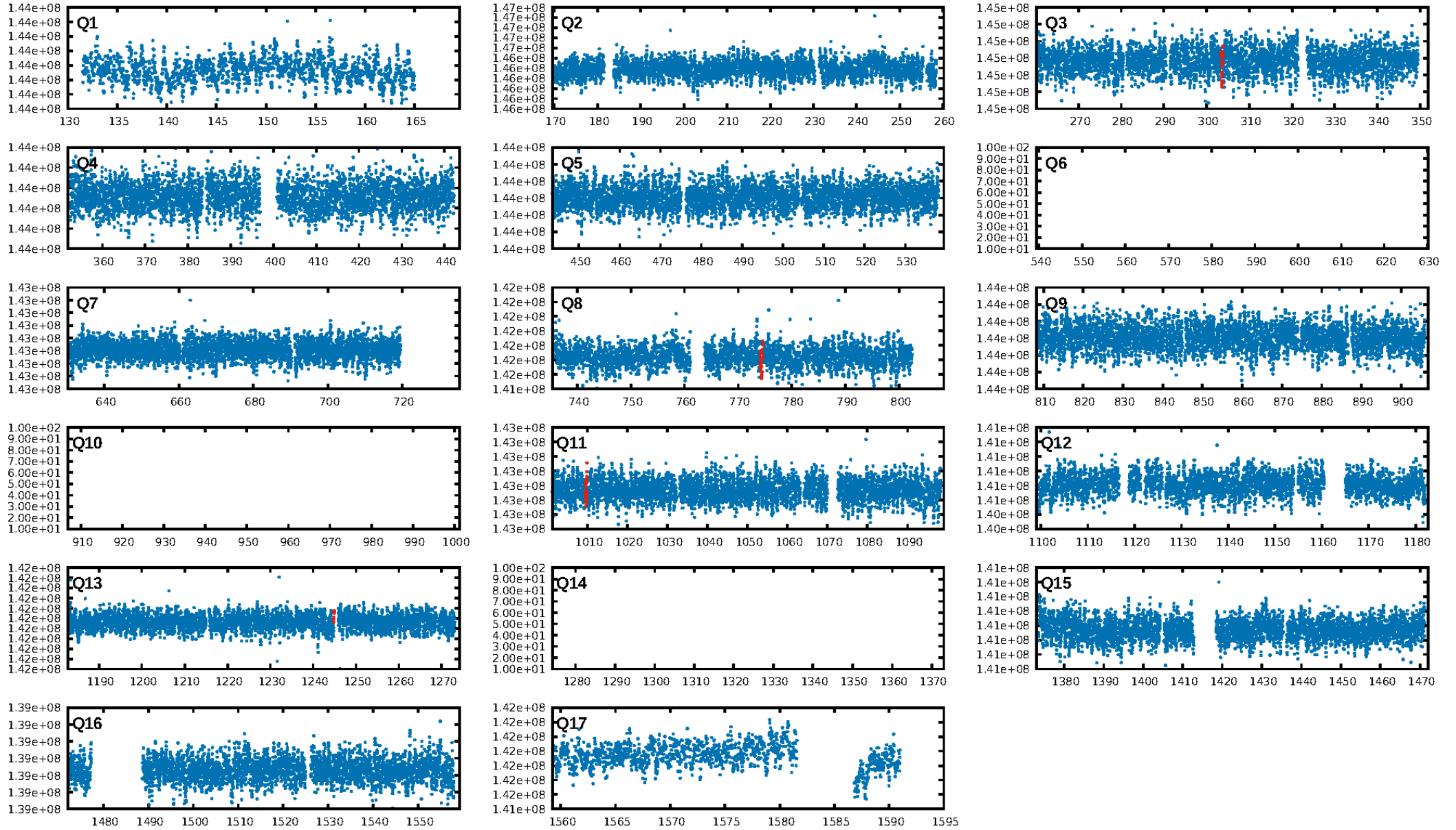
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [478.24σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 46.1%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.179
Centroid-sig: 12.3%
Centroid-so: 0.761 arcsec [1.14σ]
OotOffset-rm: 0.151 arcsec [0.35σ]
OotOffset-st: 0.2/1/0 [3]
KicOffset-rm: 0.233 arcsec [0.68σ]
KicOffset-st: 0.2/1/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 0.00 [0/3]

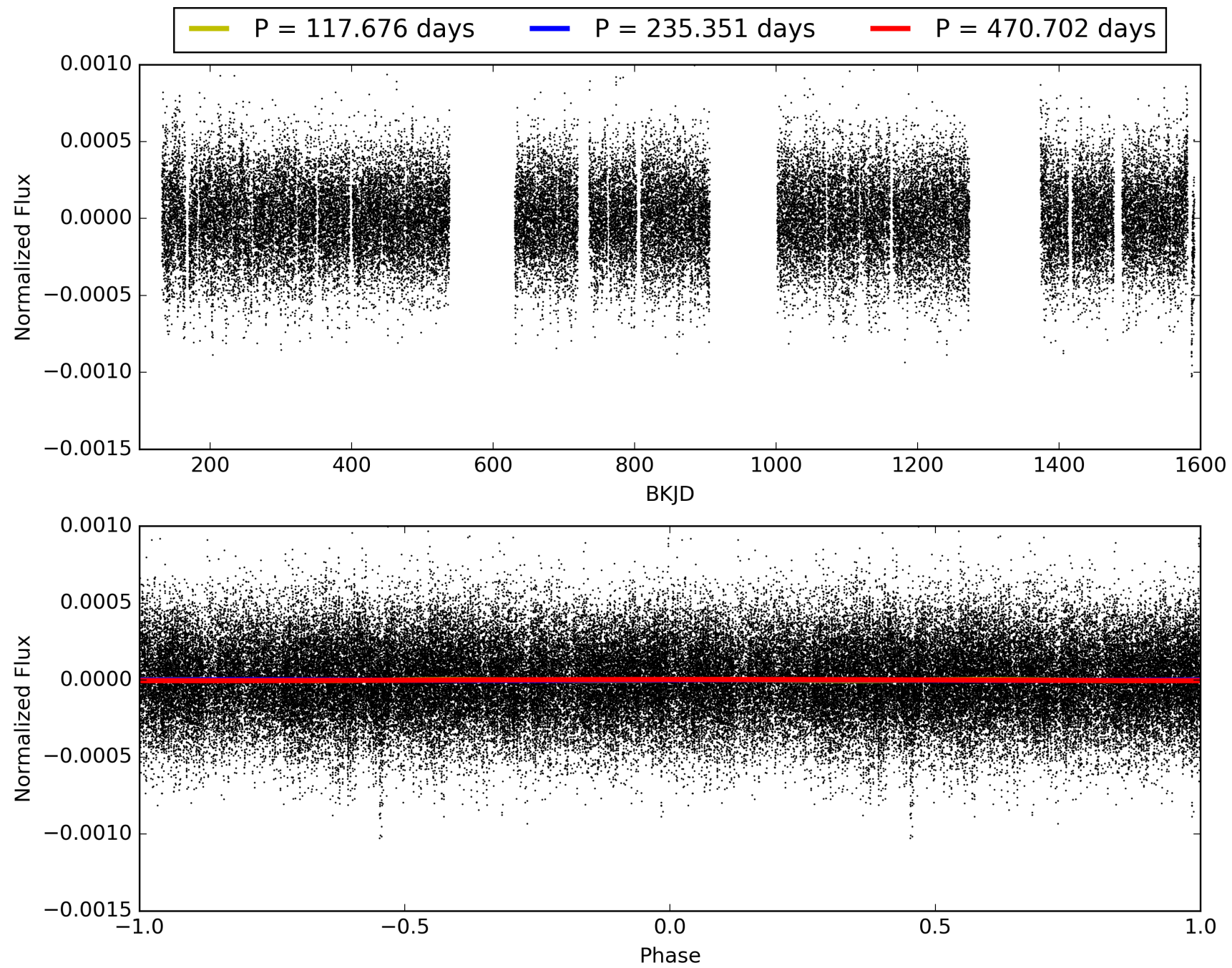
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:34:44 Z

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

TCE 004758350-06, PDC Light Curves

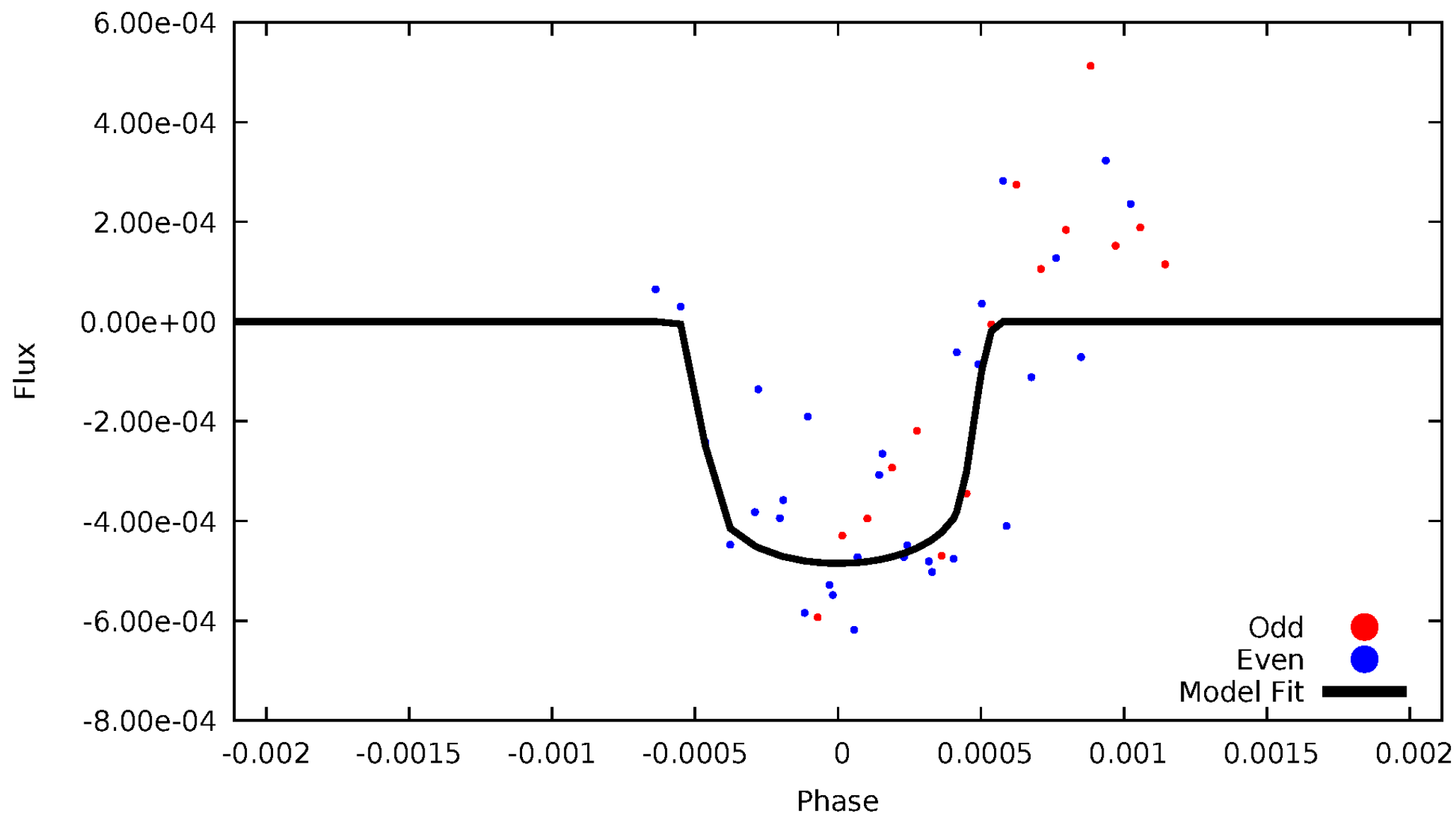


TCE 004758350-06



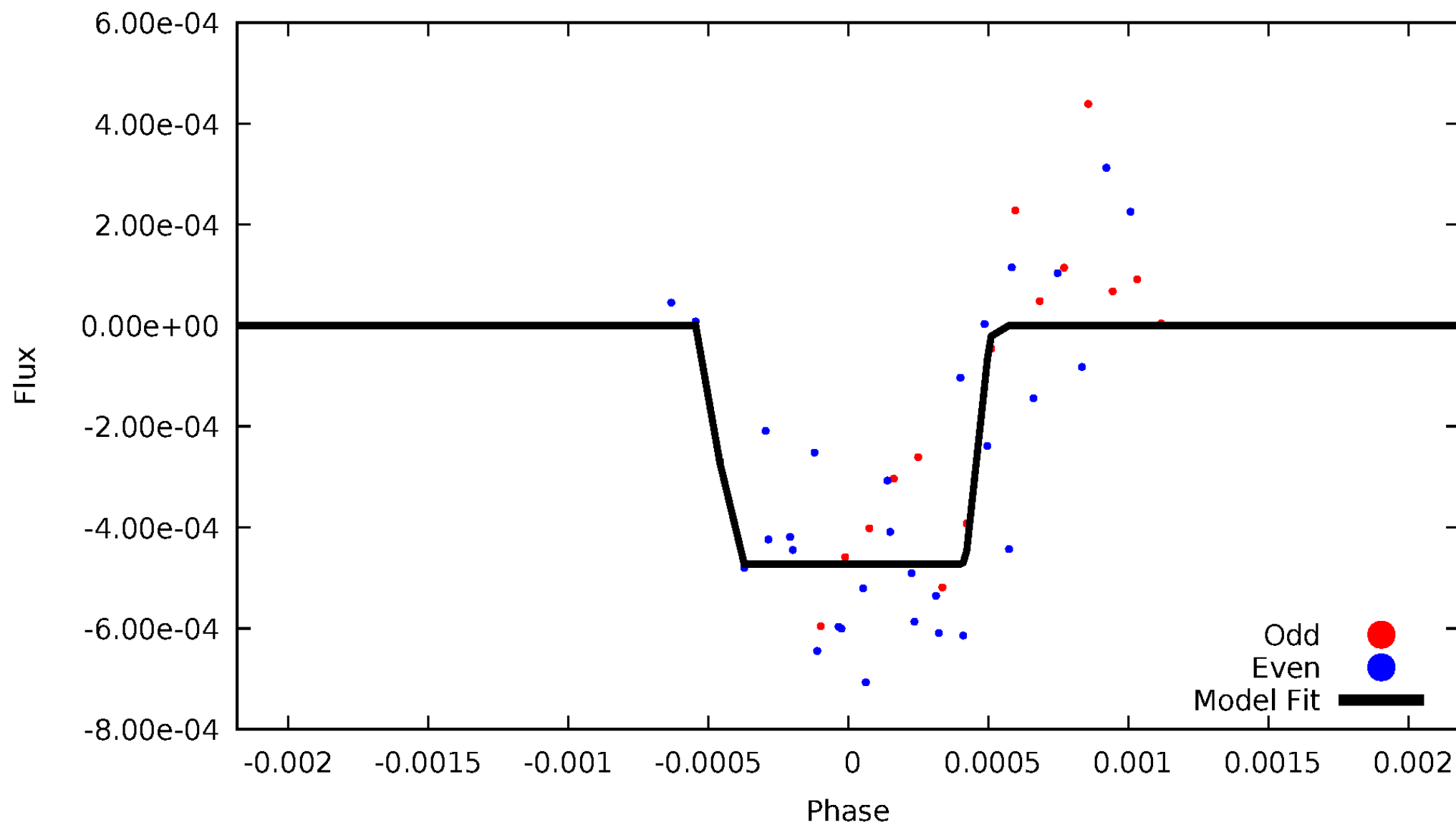
DV Odd/Even

TCE 004758350-06



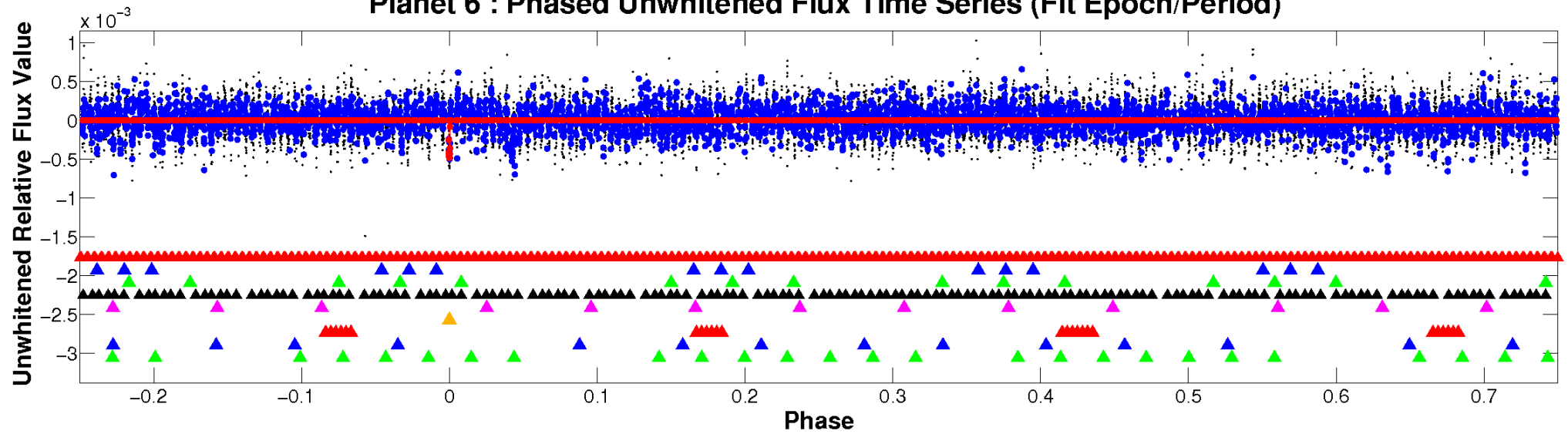
ALT Odd/Even

TCE 004758350-06

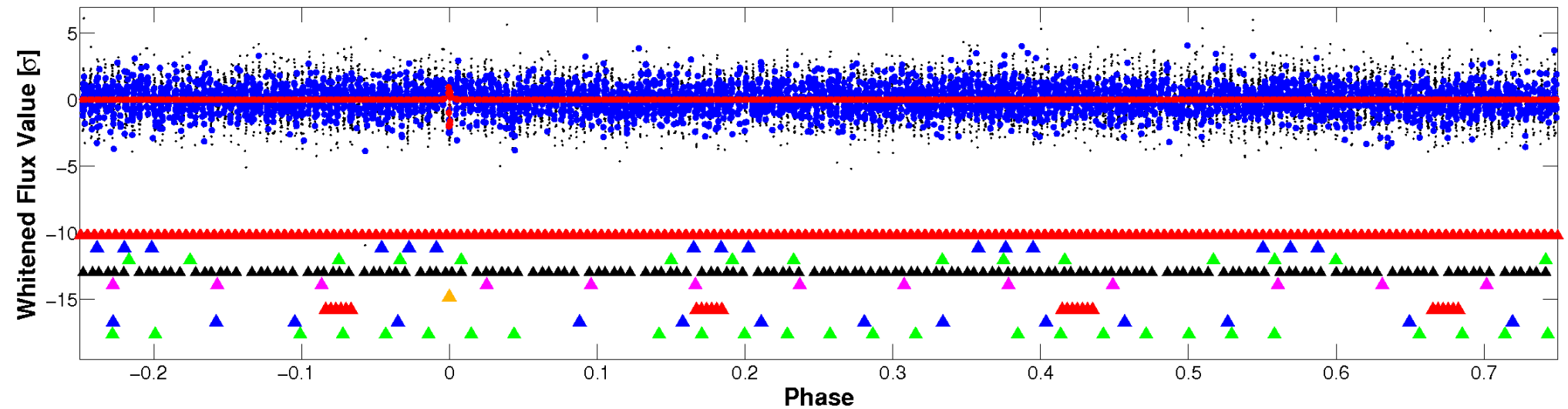


Non-Whitened Vs. Whitened Light Curve

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

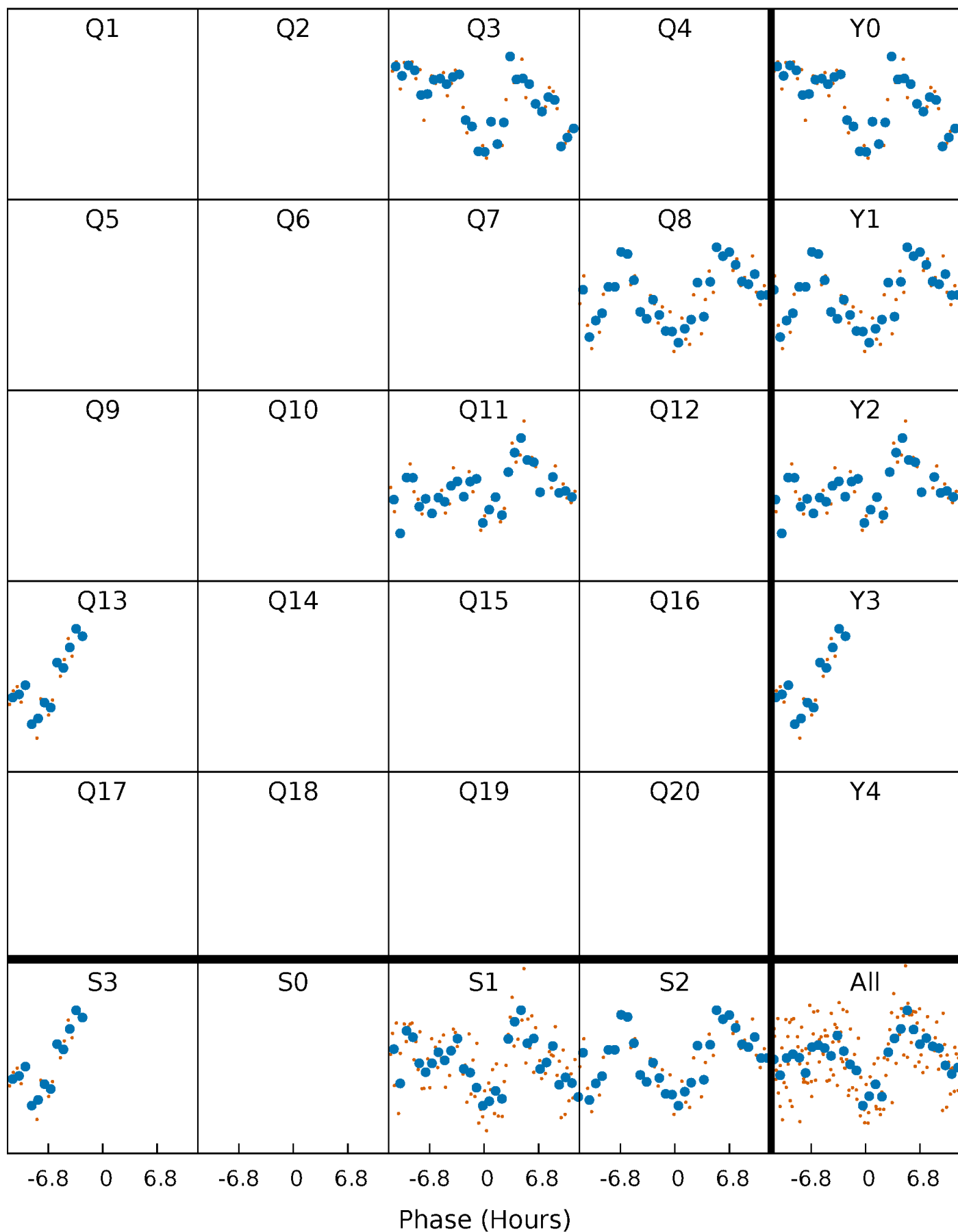


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



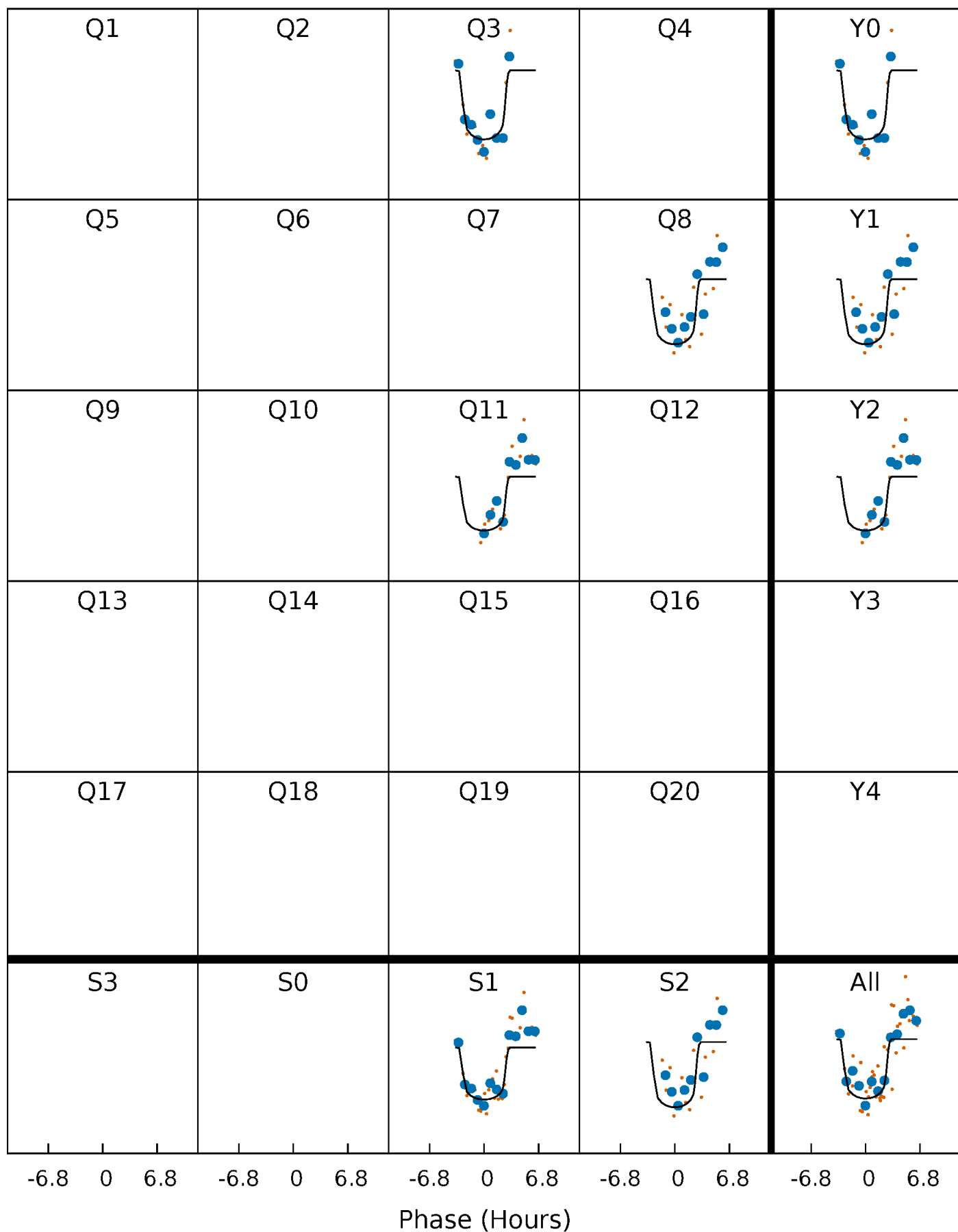
PDC Quarter-Phased Transit Curves

TCE 004758350-06 $P=235.351197$ Days $T_0=303.610912$ (BKJD)



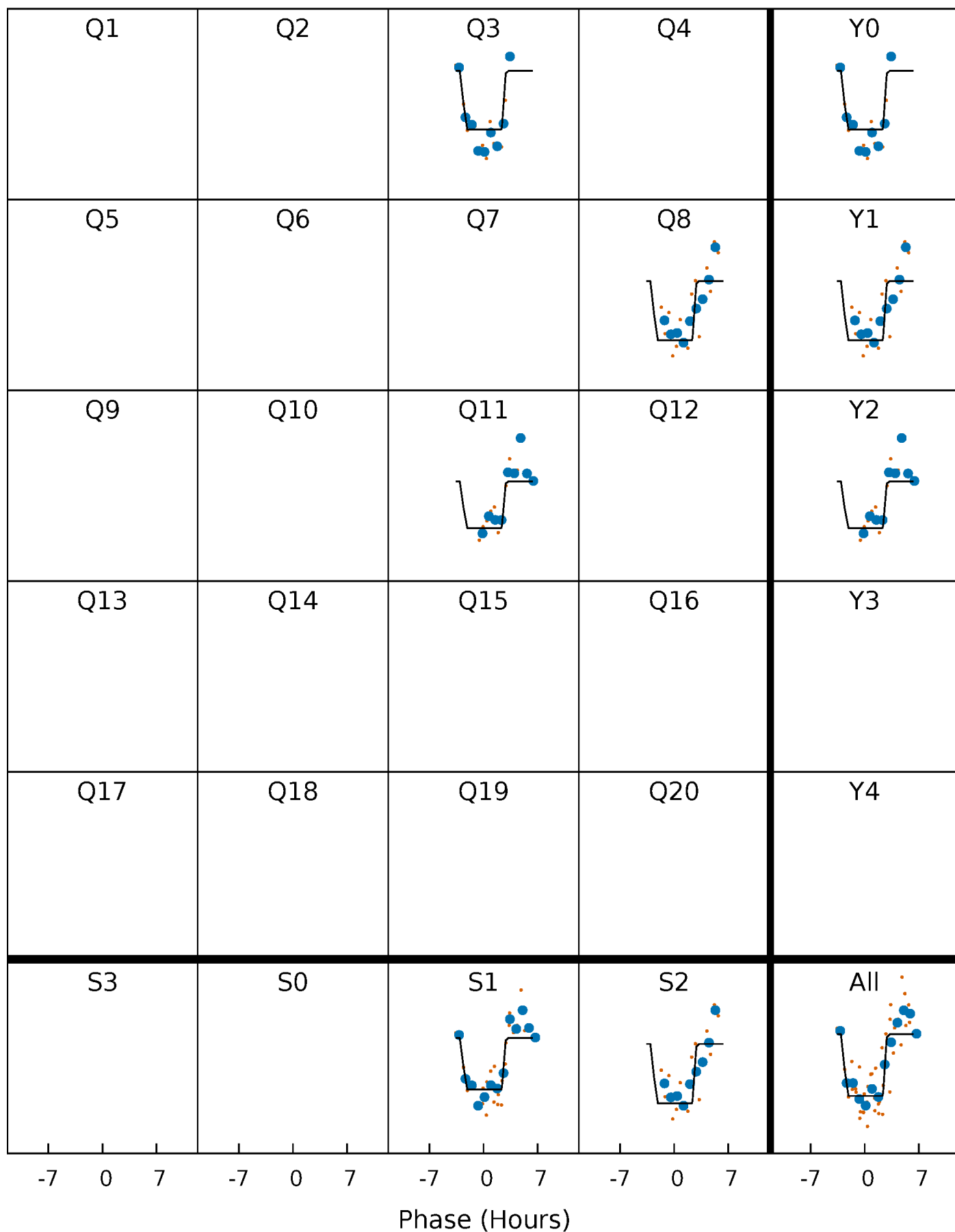
DV Quarter-Phased Transit Curves

TCE 004758350-06 P=235.351197 Days $T_0=303.610912$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

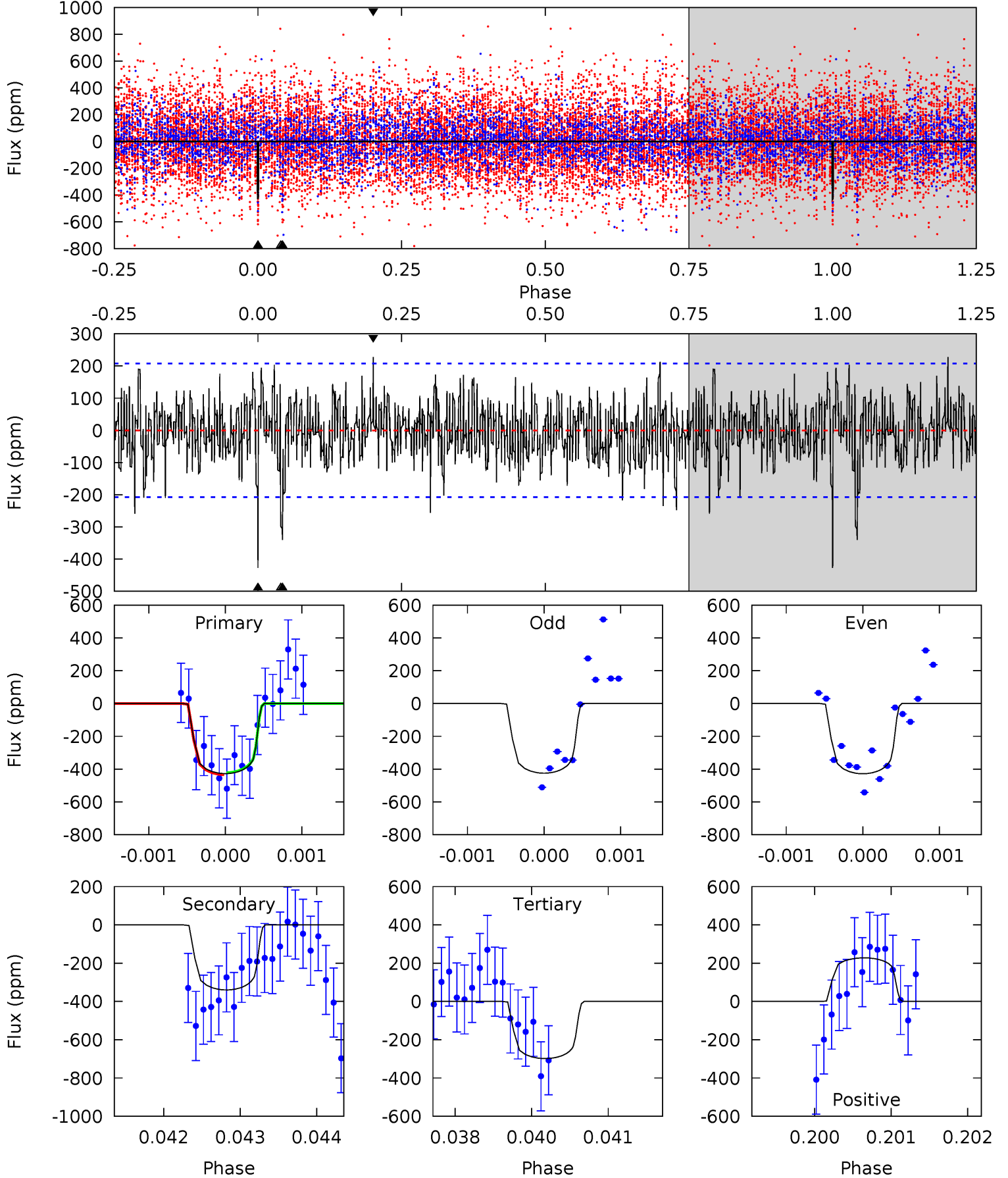
TCE 004758350-06 P=235.353744 Days $T_0=303.609597$ (BKJD)



DV Model-Shift Uniqueness Test

004758350-06, P = 235.351197 Days, E = 68.259715 Days

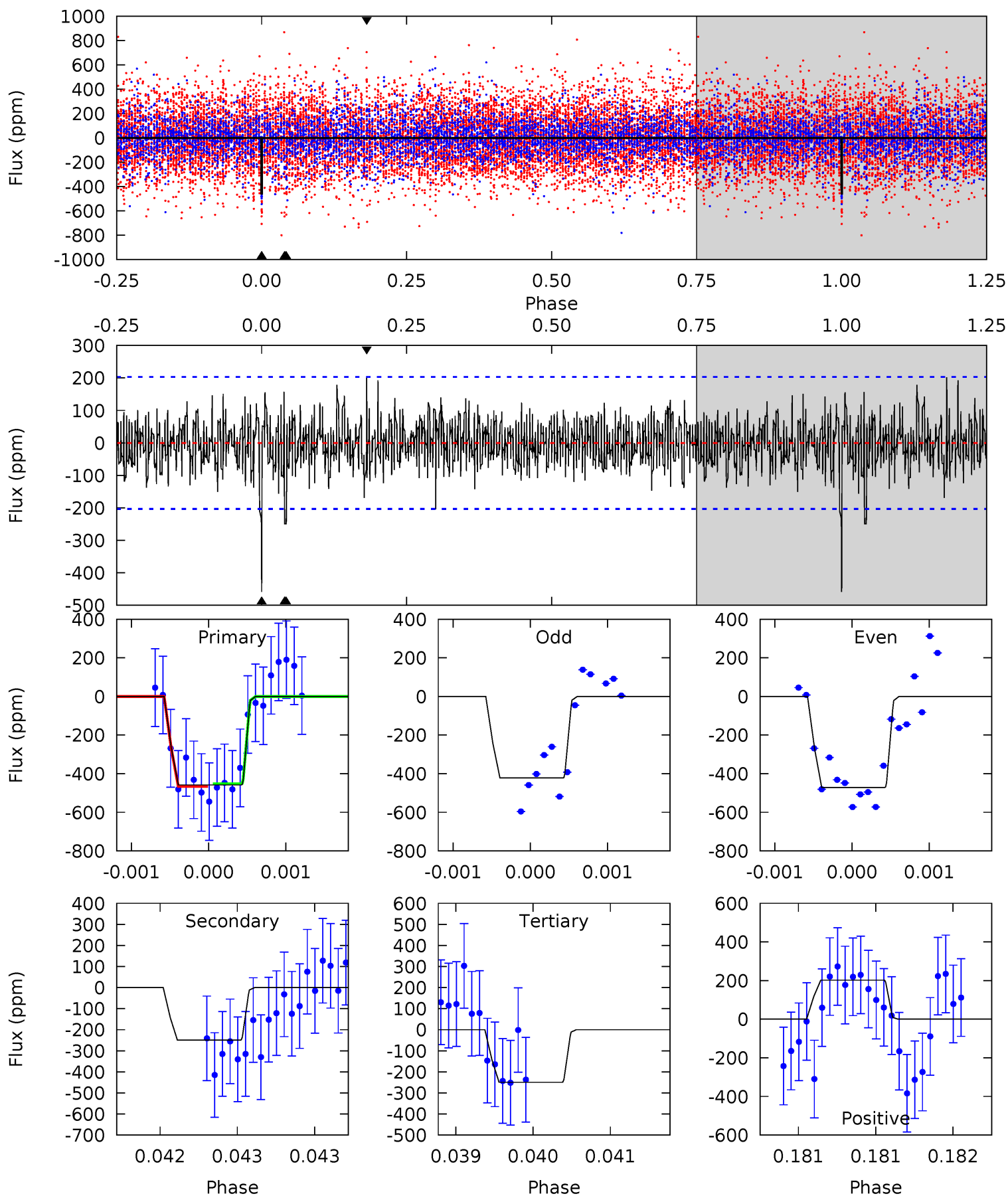
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	8.88	7.79	5.95	5.43	3.26	1.79	3.38	5.22	1.09	2.93	0.04	1.00	0.35	0.14



Alt Model-Shift Uniqueness Test

004758350-06, $P = 235.353744$ Days, $E = 68.255853$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	6.70	6.70	5.43	5.46	3.31	1.41	5.62	6.88	0.00	1.27	0.59	1.07	0.31	0.18



Stellar Parameters For KIC 004758350

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6720^{+180}_{-220}	$3.373^{+0.366}_{-0.065}$	$-0.180^{+0.350}_{-0.250}$	$4.845^{+0.345}_{-1.955}$	$2.020^{+0.124}_{-0.372}$	$0.025^{+0.075}_{-0.003}$
	+3%/-3%	+11%/-2%	+194%/-139%	+7%/-40%	+6%/-18%	+298%/-14%
Source	PHO1	FLK73	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 004758350-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-340 ± 38	$11.25^{+3.09}_{-3.02}$	922^{+50}_{-91}	5994^{+832}_{-588}	1302^{+1104}_{-515}
Alt.	-249 ± 37	$10.73^{+3.00}_{-3.13}$	922^{+48}_{-91}	5689^{+869}_{-554}	1036^{+1042}_{-401}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

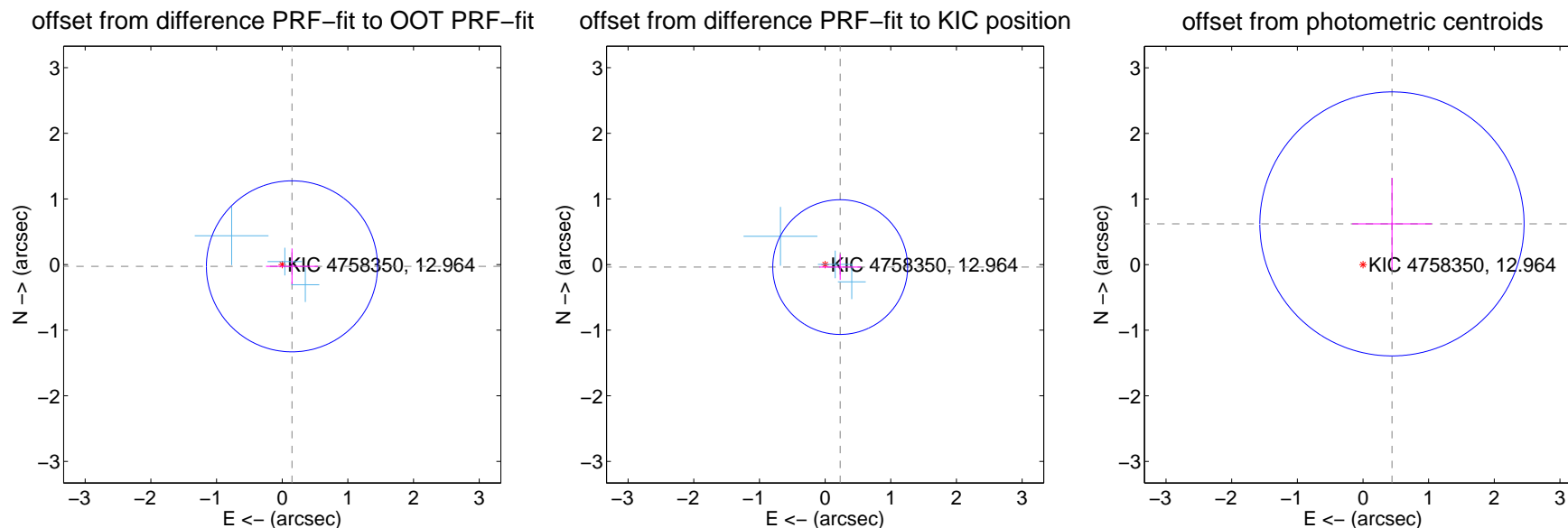
DV Centroid Data

Supplemental centroid analysis for 004758350-06. Kepler magnitude: 12.96. Transit SNR 9.65

There are 3 quarters with good PRF difference image offsets

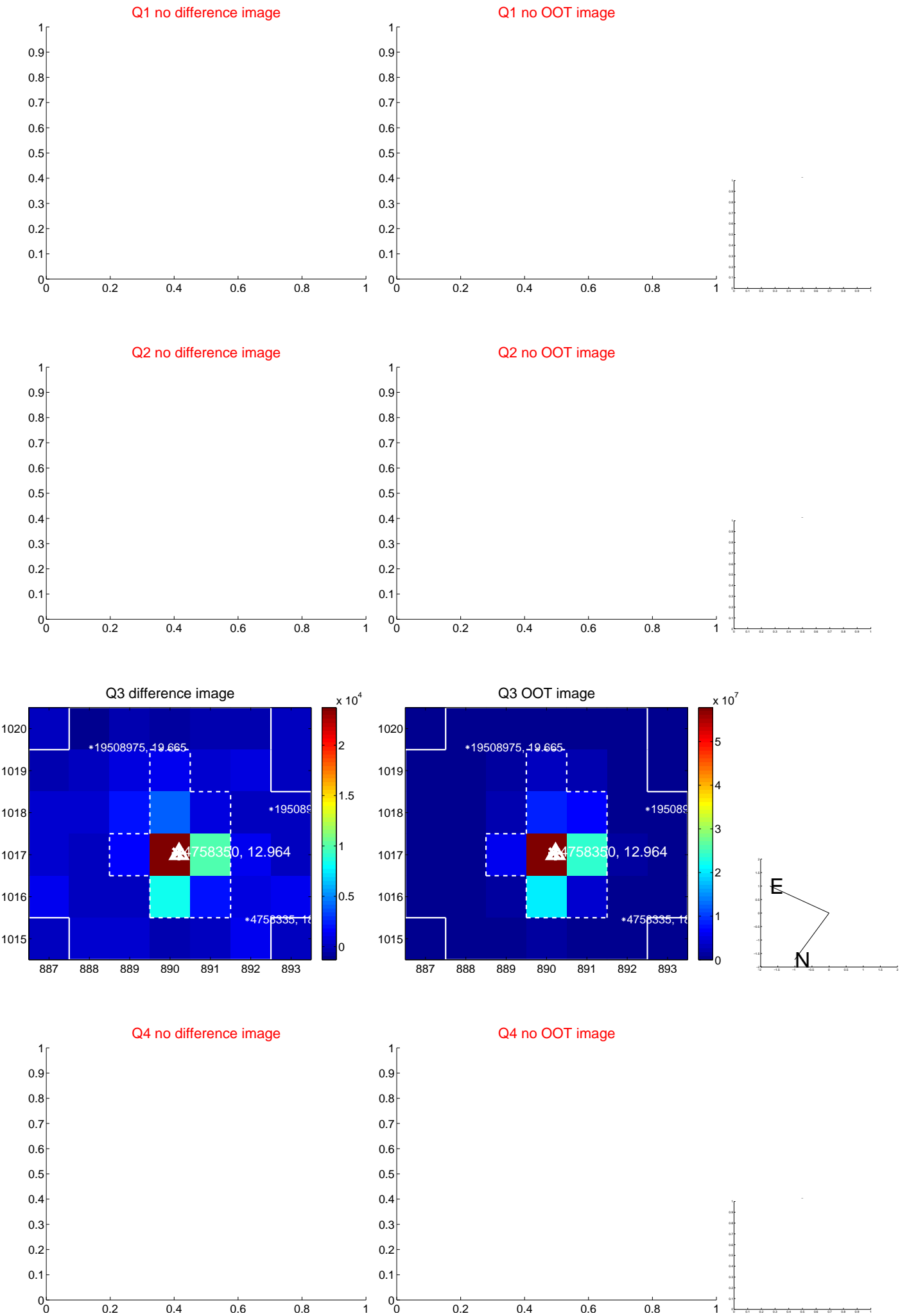
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.151 ± 0.434	0.35	-0.149 ± 0.395	-0.027 ± 0.272
PRF-fit source offset from KIC position	0.233 ± 0.342	0.68	-0.229 ± 0.317	-0.039 ± 0.195
photometric centroid source offset	0.76 ± 0.67	1.14	-0.44 ± 0.61	0.62 ± 0.70

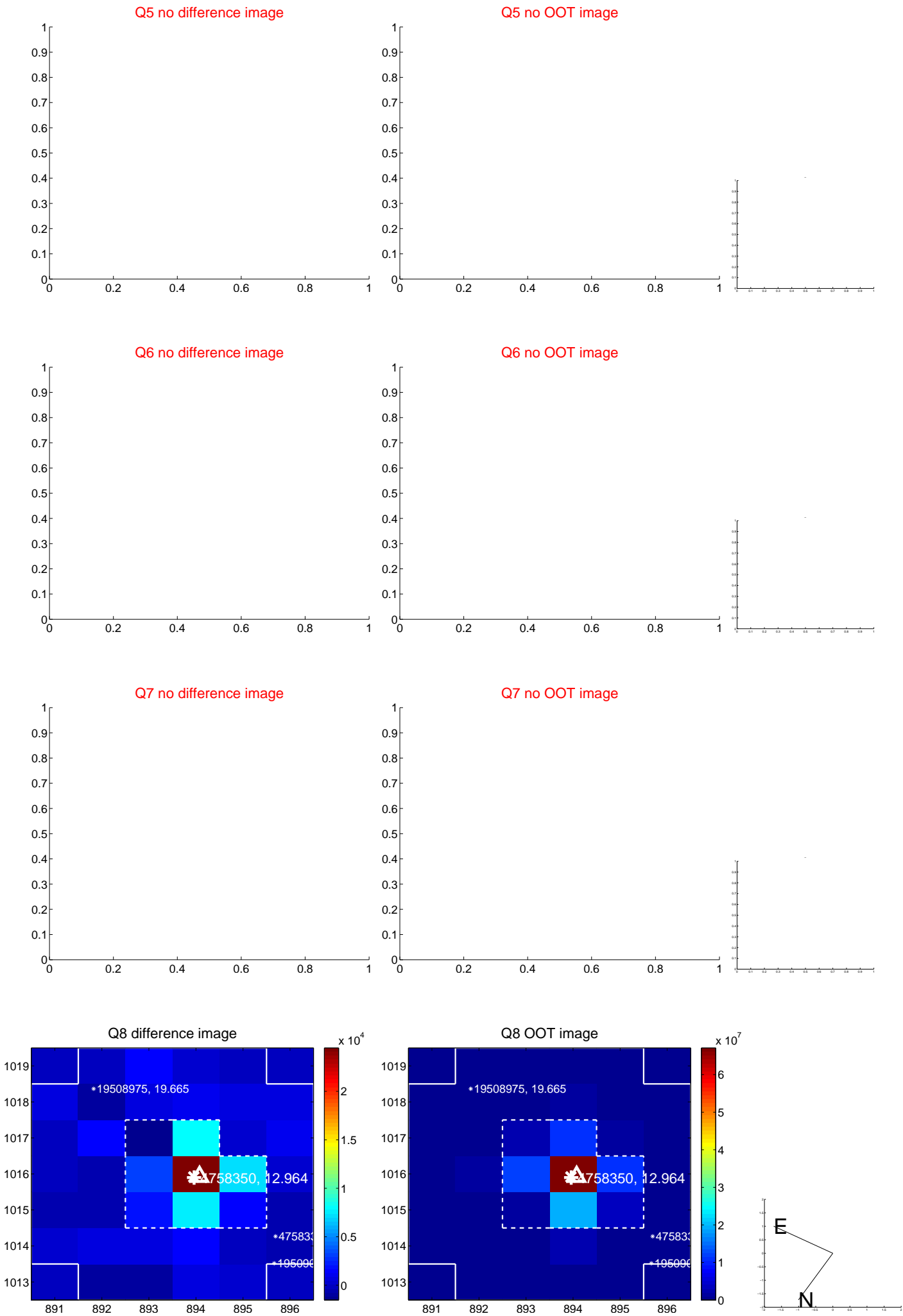


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

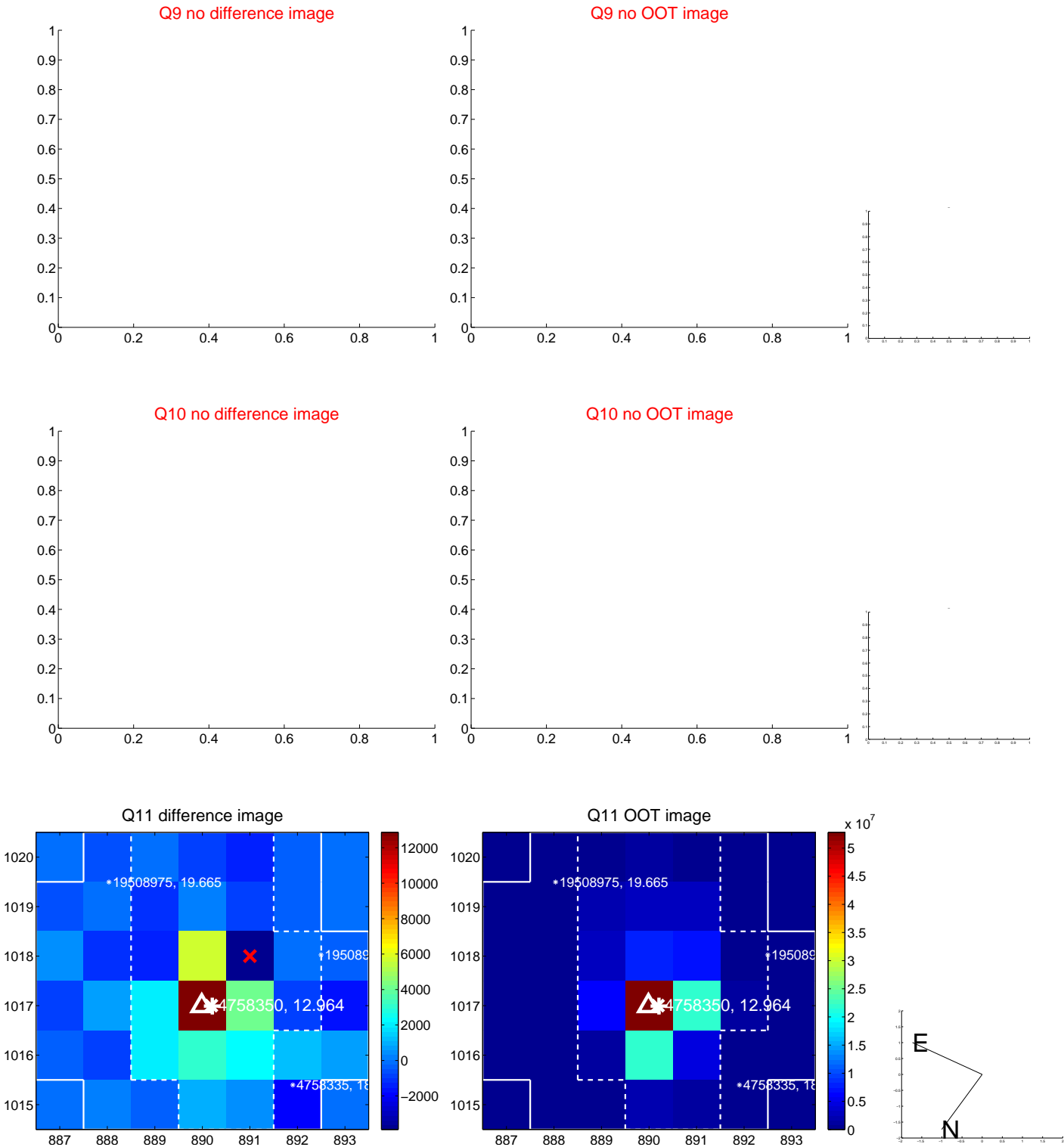
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



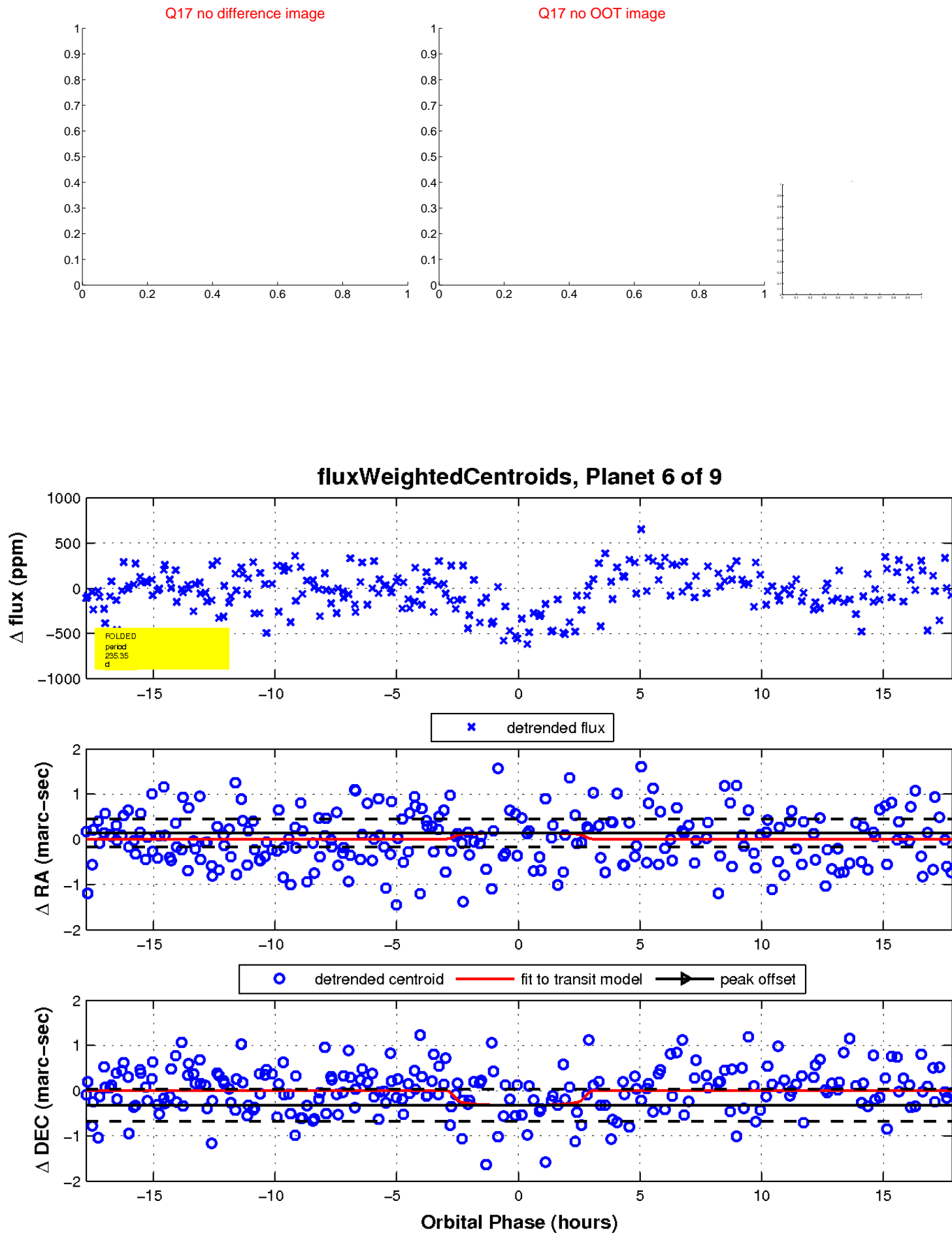
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

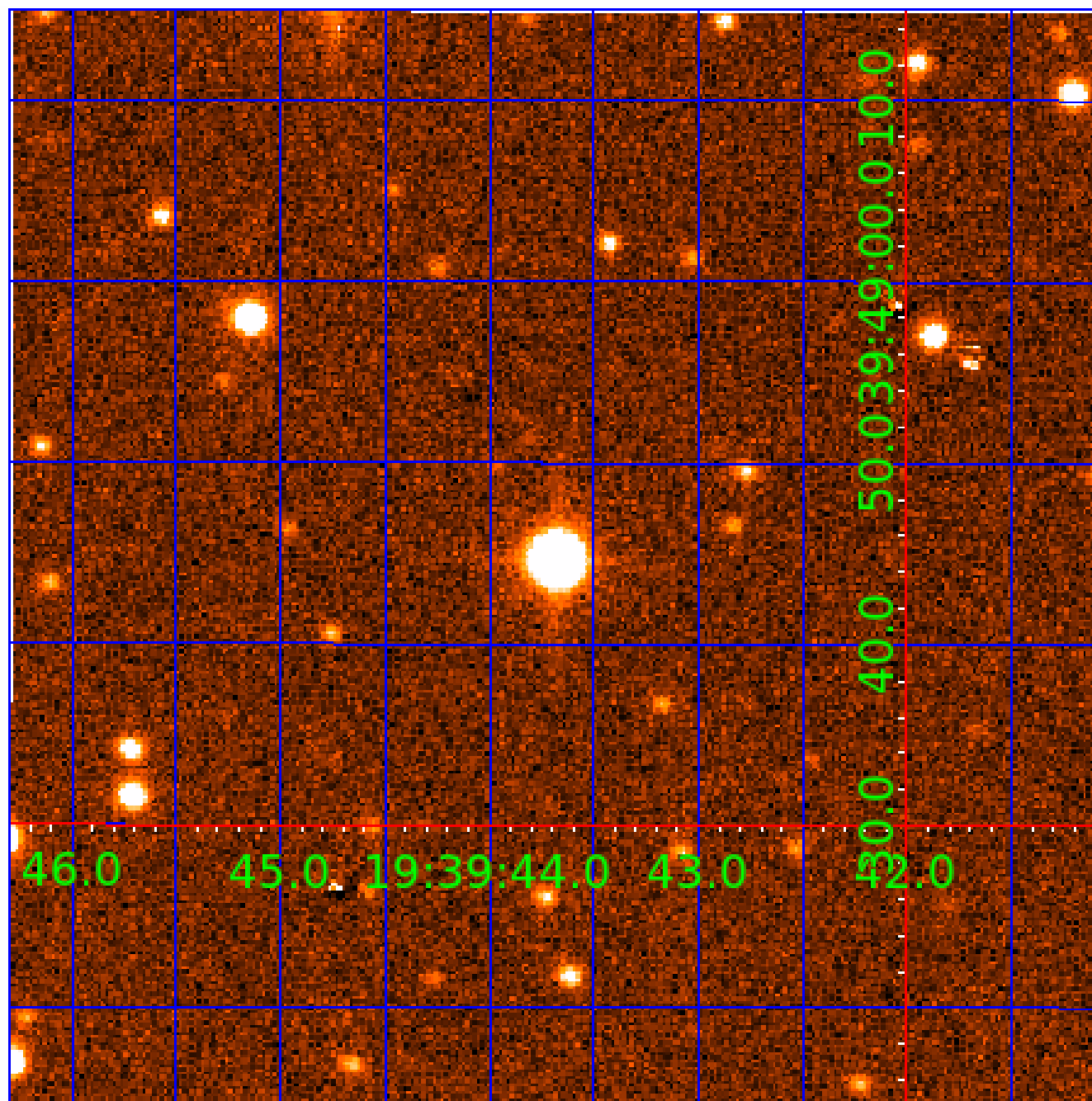


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004758350

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})
004758350-01	OBS	6447.01	1.120936	131.540051	45.9	6.243	8.9	9.4	4.84	6720	6.27	60134.87
004758350-02	OBS	No	95.011757	197.822359	505.4	3.636	9.2	10.2	4.84	6720	11.82	161.51
004758350-03	OBS	No	96.090049	189.921096	409.6	7.506	9.0	9.5	4.84	6720	12.57	159.10
004758350-04	OBS	No	8.956177	133.855318	151.8	3.553	9.2	9.5	4.84	6720	6.74	3764.76
004758350-06	OBS	No	235.351197	303.610912	485.1	5.963	9.2	9.7	4.84	6720	12.16	48.19
004758350-07	OBS	No	59.039315	165.845414	496.1	2.491	9.1	8.9	4.84	6720	12.81	304.59
004758350-08	OBS	No	103.210000	175.789471	404.4	6.858	7.7	7.6	4.84	6720	18.77	144.63
004758350-09	OBS	No	57.135180	142.505796	361.3	4.612	8.9	10.2	4.84	6720	11.45	318.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004758350-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT
004758350-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
004758350-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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.

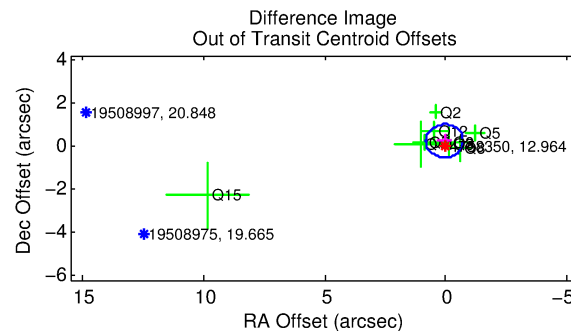
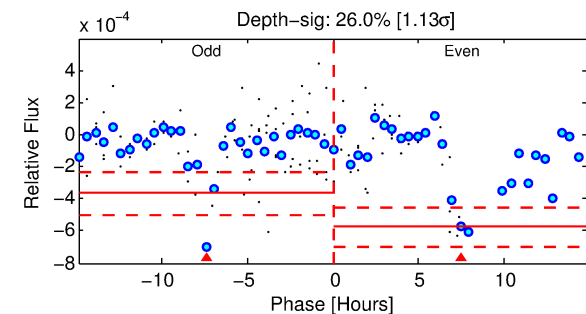
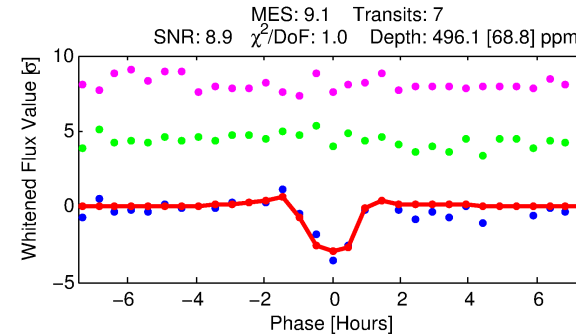
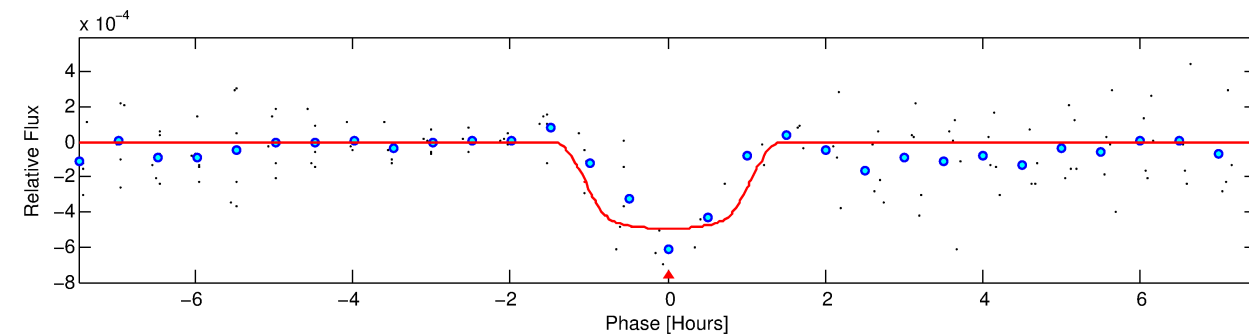
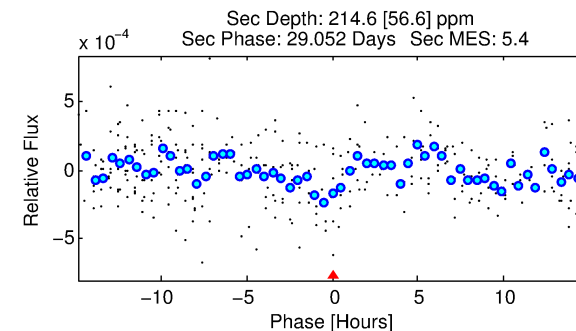
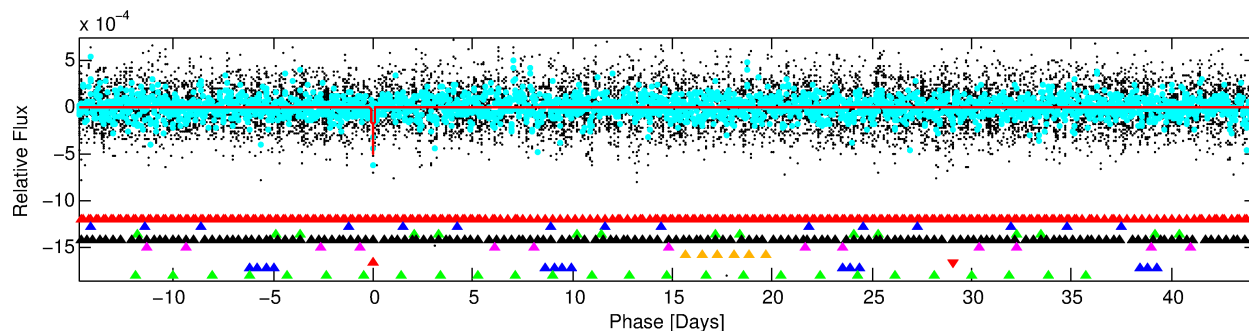
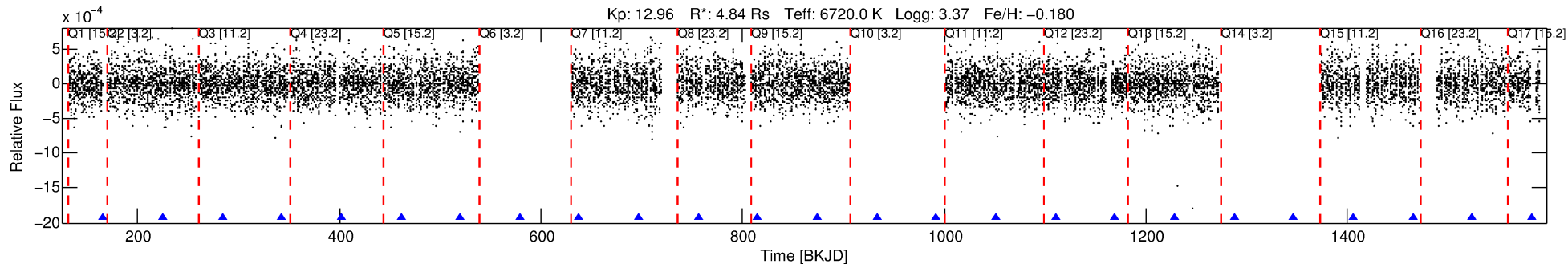
Ephemeris Match Information For 004758350-07

No Significant Match Found

DV One-Page Summary

KIC: 4758350 Candidate: 7 of 9 Period: 59.039 d
KOI: K06447 Corr: No Ephemeris Match

Kp: 12.96 R*: 4.84 Rs Teff: 6720.0 K Logg: 3.37 Fe/H: -0.180



DV Fit Results:

Period = 59.03932 [0.00056] d
Epoch = 165.8454 [0.0088] BKJD
Rp/R* = 0.0242 [0.0124]
a/R* = 81.46 [239.22]
b = 0.92 [0.50]
Seff = 304.59 [193.88]
Teq = 1065 [170] K
Rp = 12.81 [8.34] Re
a = 0.3752 [0.1460] AU
Ag = 101.33 [124.18] [0.81σ]
Teffp = 5226 [1389] K [2.97σ]

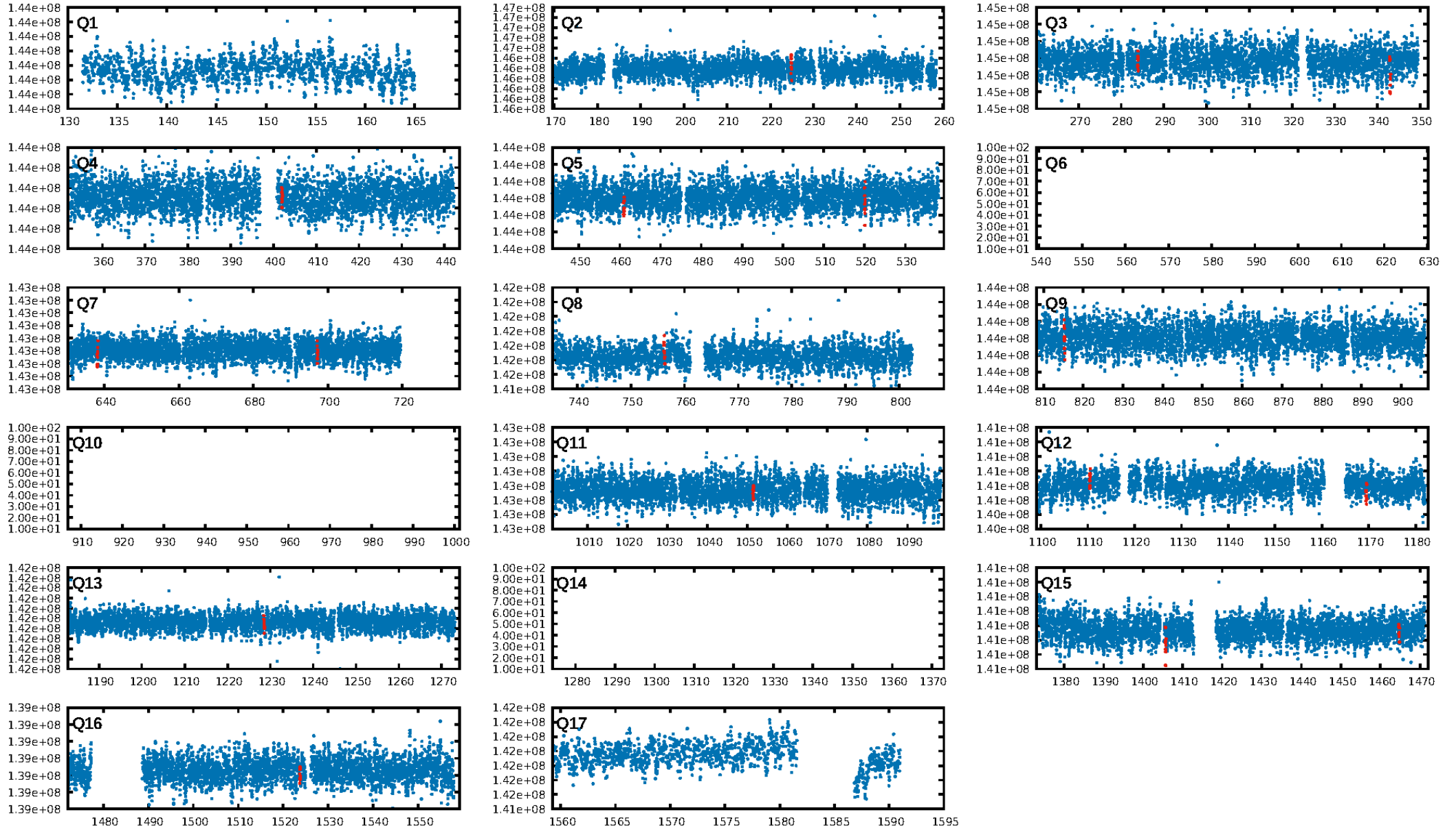
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [8.72σ]
LongPeriod-sig: 100.0% [195.91σ]
ModelChiSquare2-sig: 37.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -1.377
Centroid-sig: 56.3%
Centroid-so: 0.480 arcsec [1.16σ]
OotOffset-rm: 0.252 arcsec [0.97σ]
OotOffset-st: 1/4/2/2 [9]
KicOffset-rm: 0.267 arcsec [0.37σ]
KicOffset-st: 1/4/2/2 [9]
DiffImageQuality-fgm: 0.56 [5/9]
DiffImageOverlap-fno: 0.10 [1/10]

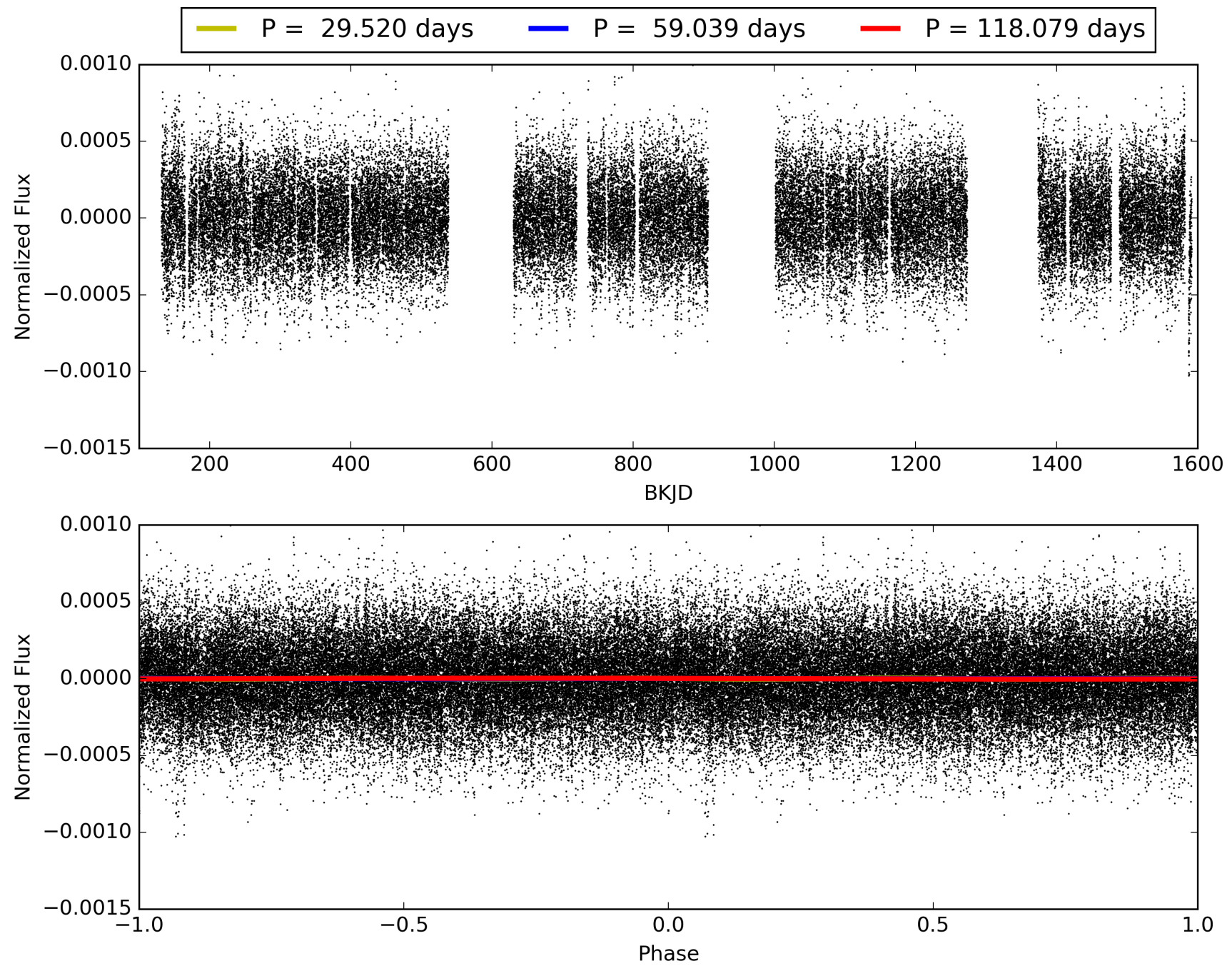
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:34:48 Z

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

TCE 004758350-07, PDC Light Curves

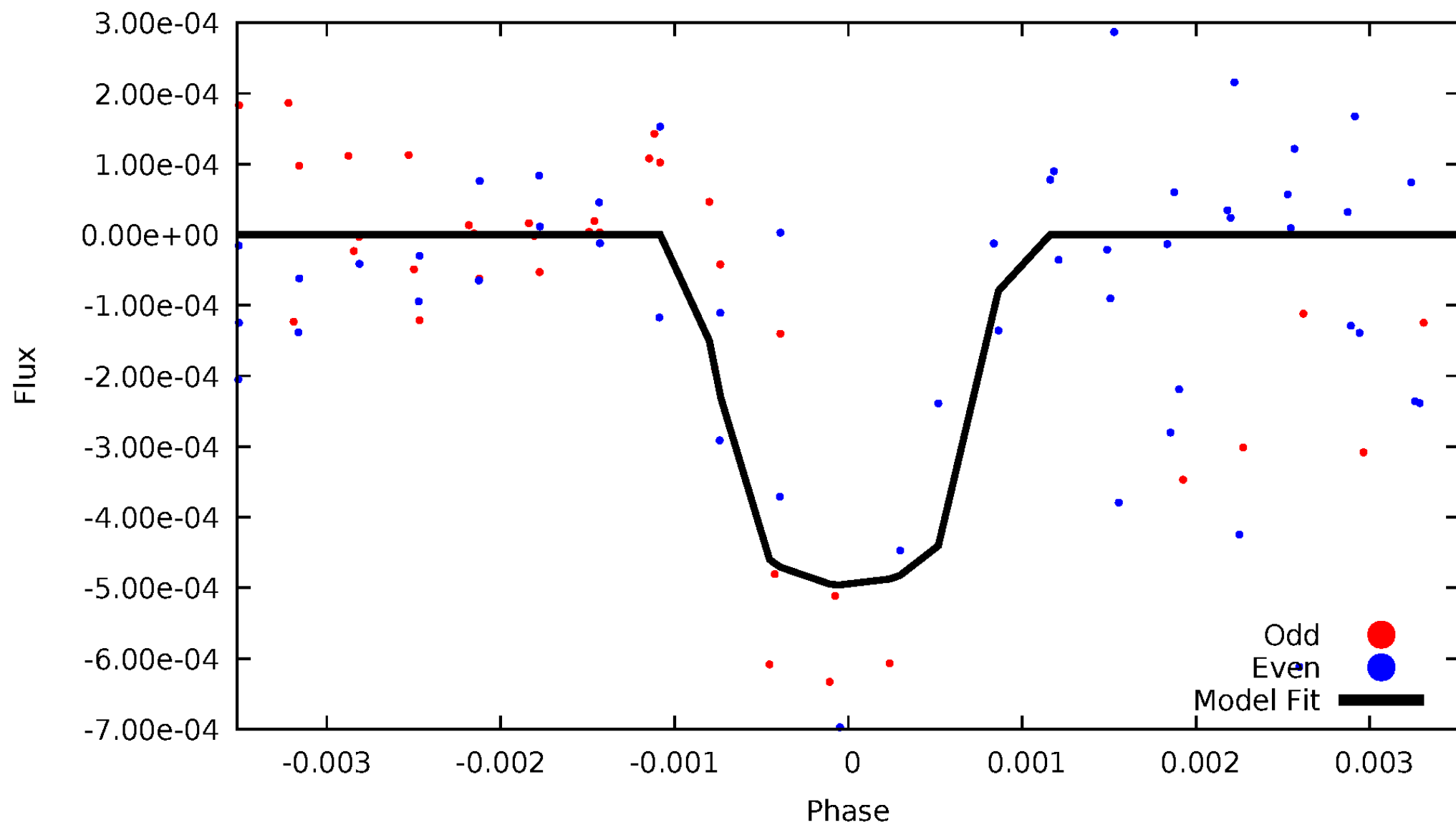


TCE 004758350-07



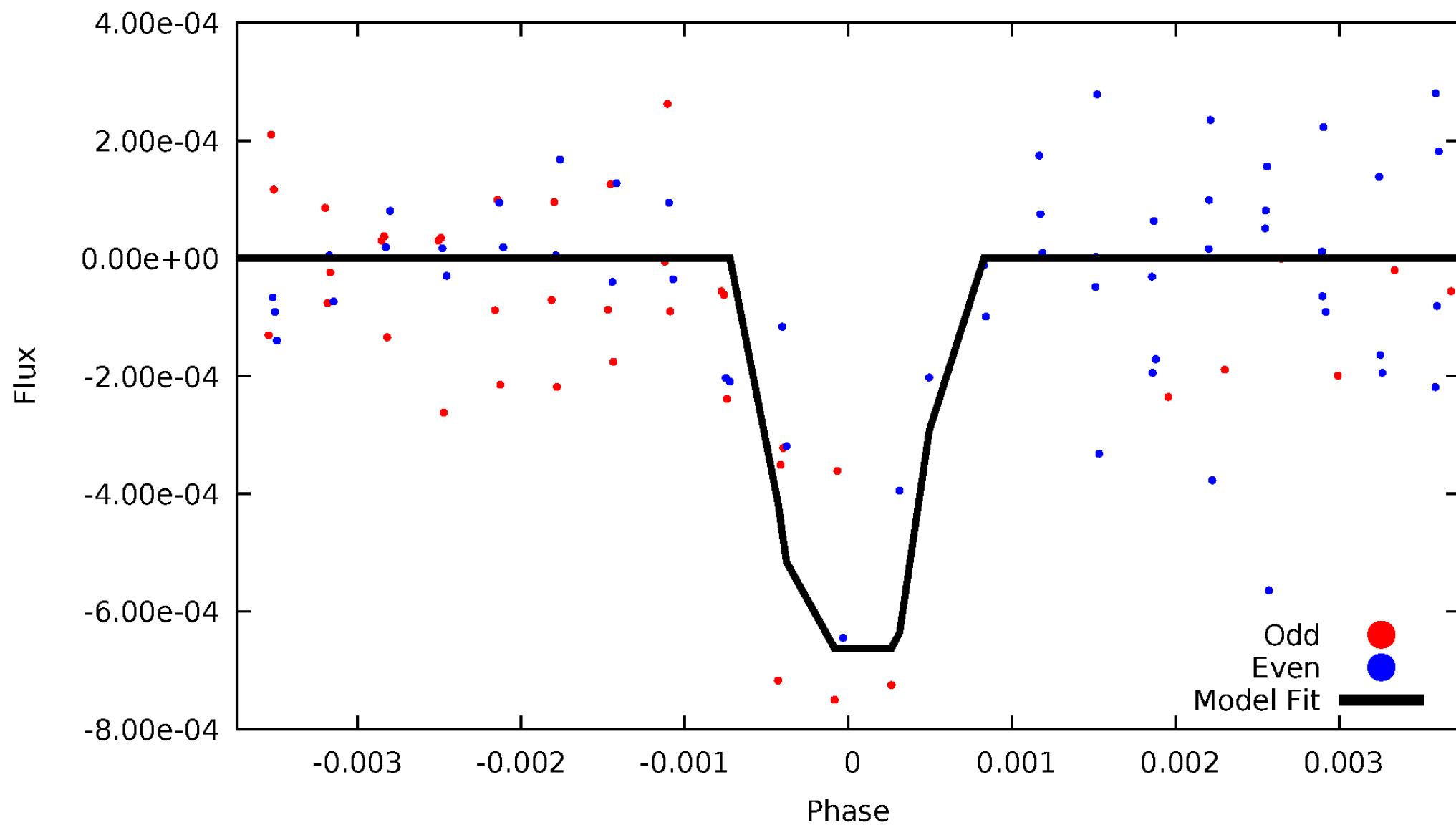
DV Odd/Even

TCE 004758350-07



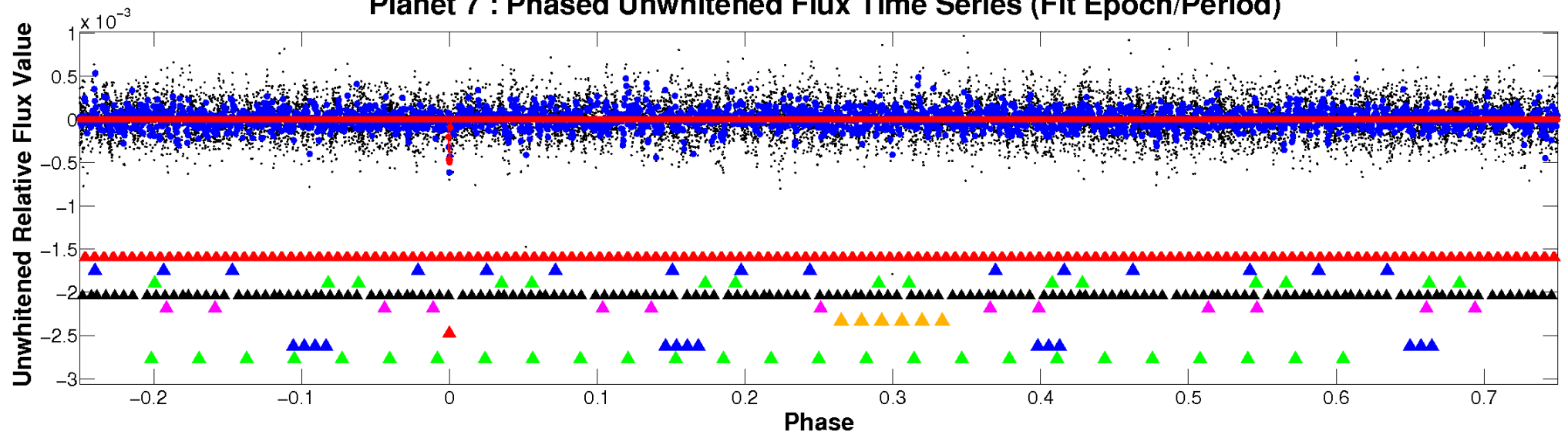
ALT Odd/Even

TCE 004758350-07

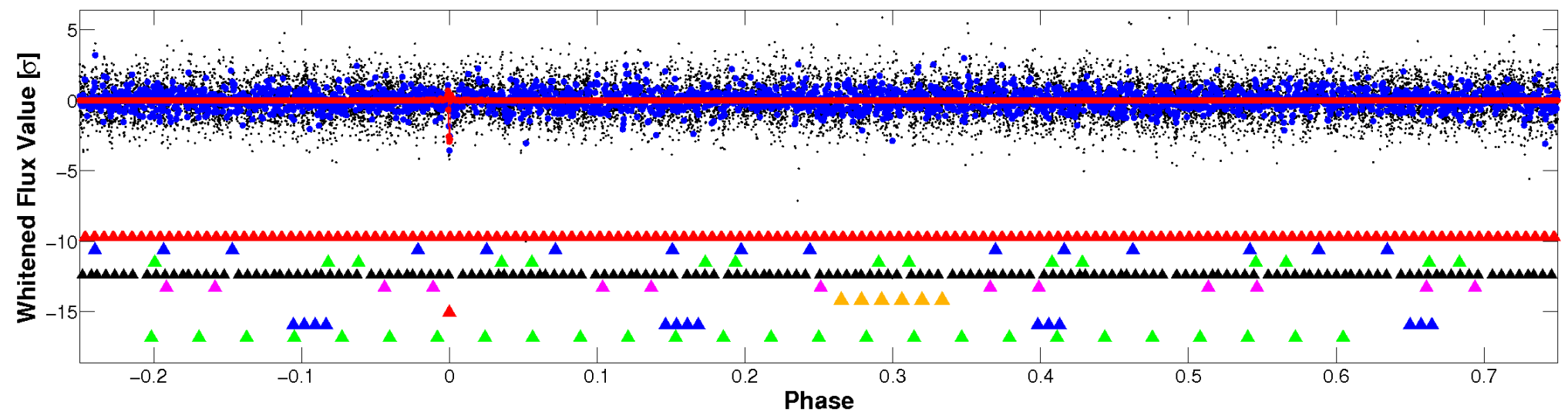


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

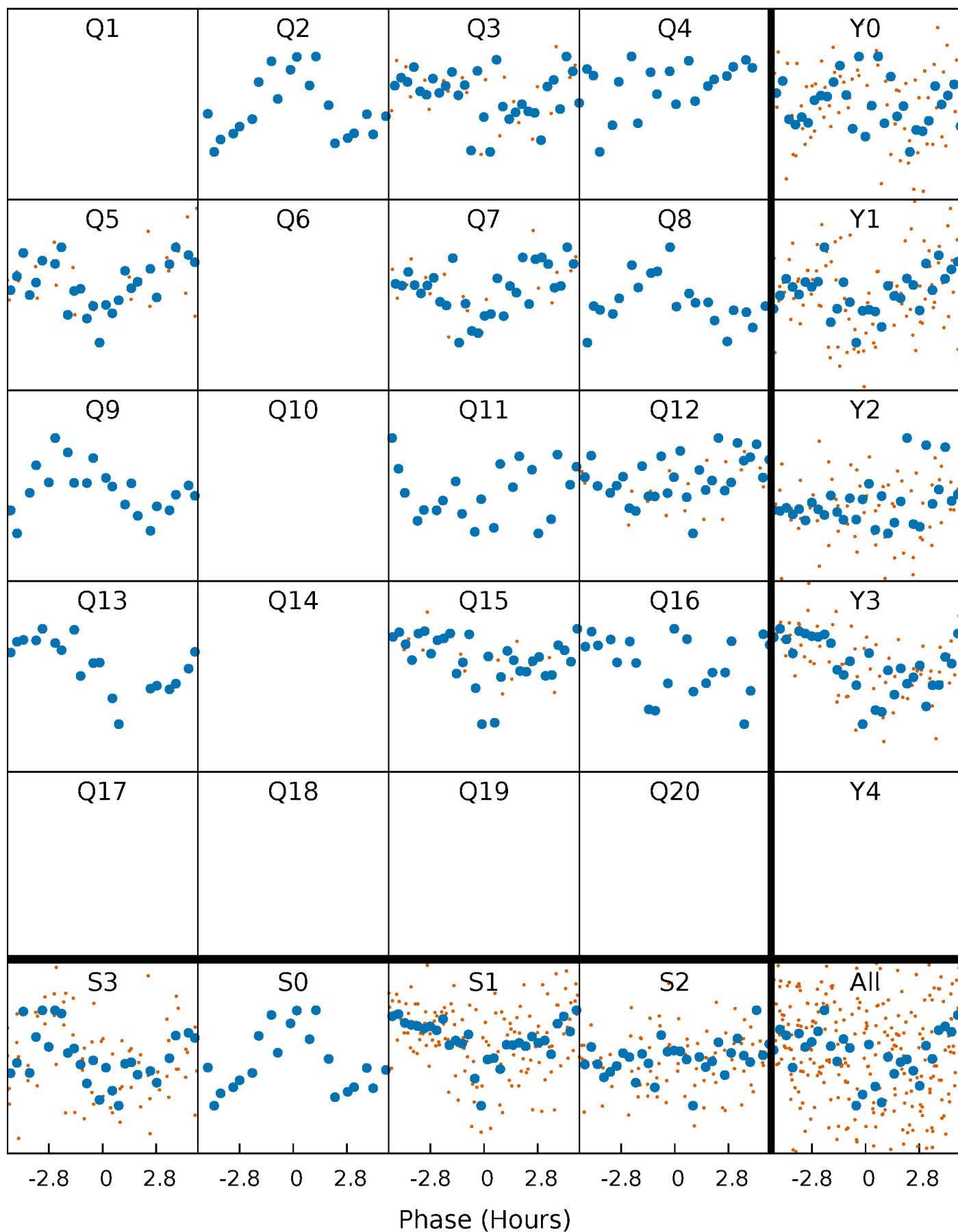


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



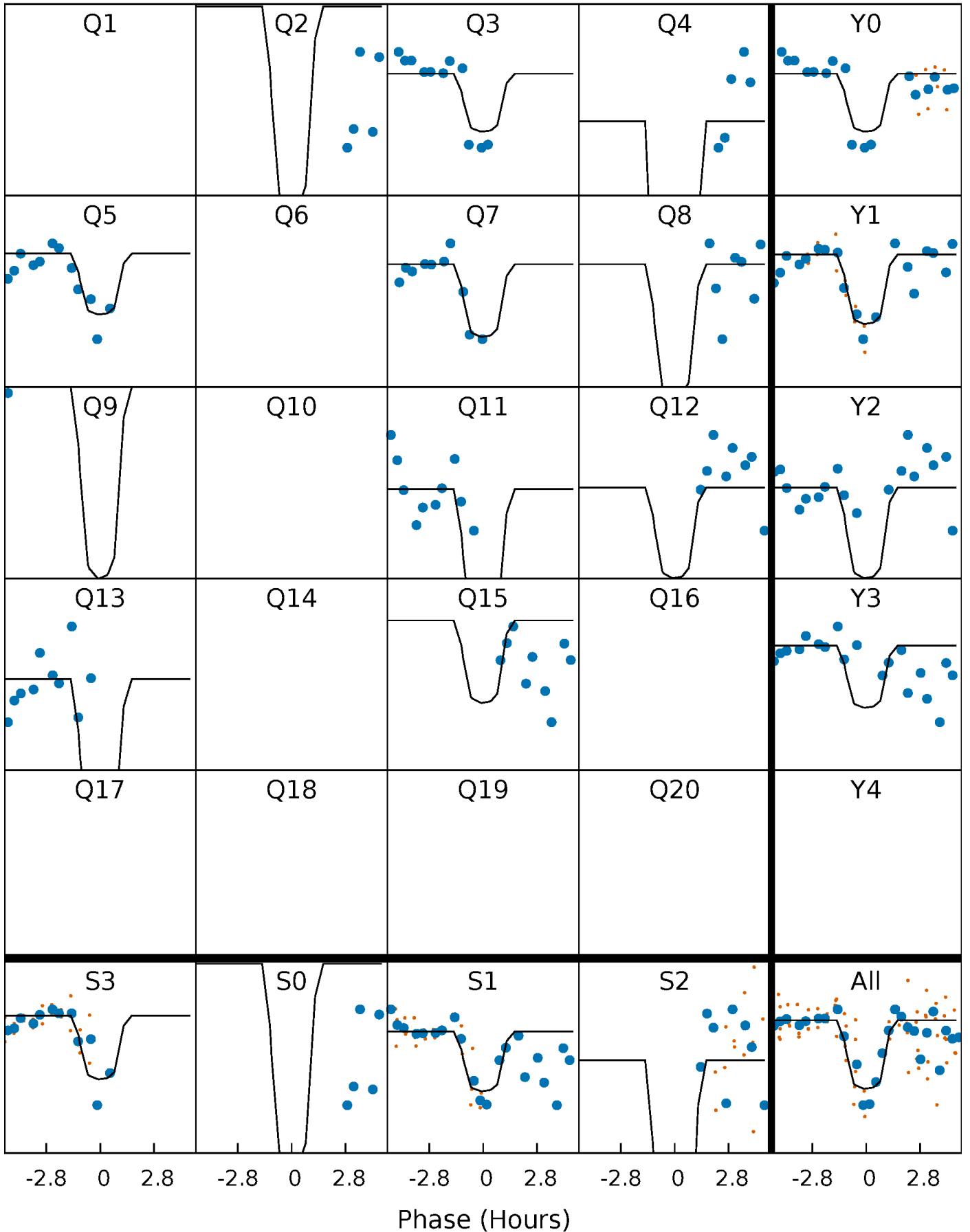
PDC Quarter-Phased Transit Curves

TCE 004758350-07 P= 59.039315 Days $T_0=165.845414$ (BKJD)



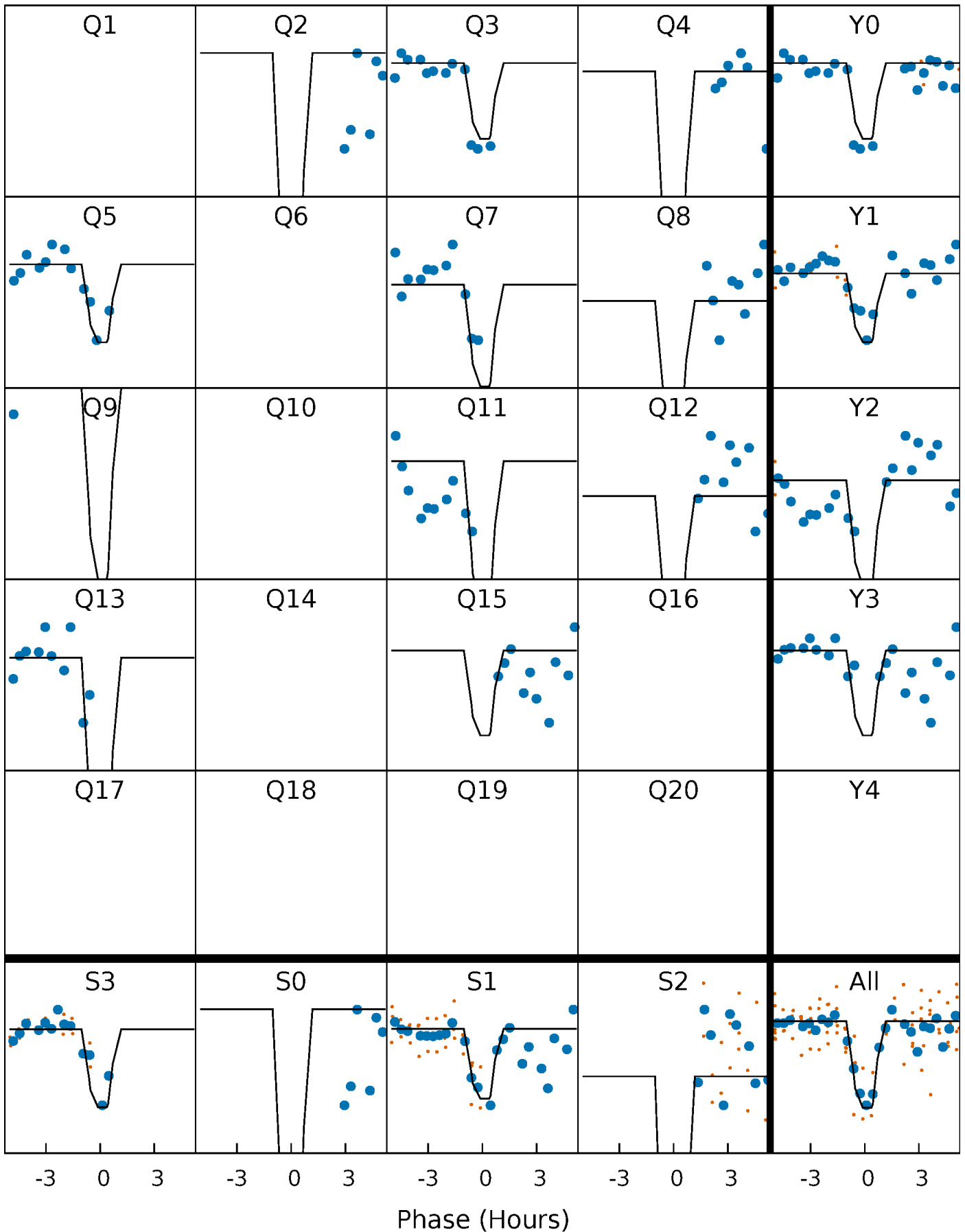
DV Quarter-Phased Transit Curves

TCE 004758350-07 $P = 59.039315$ Days $T_0 = 165.845414$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

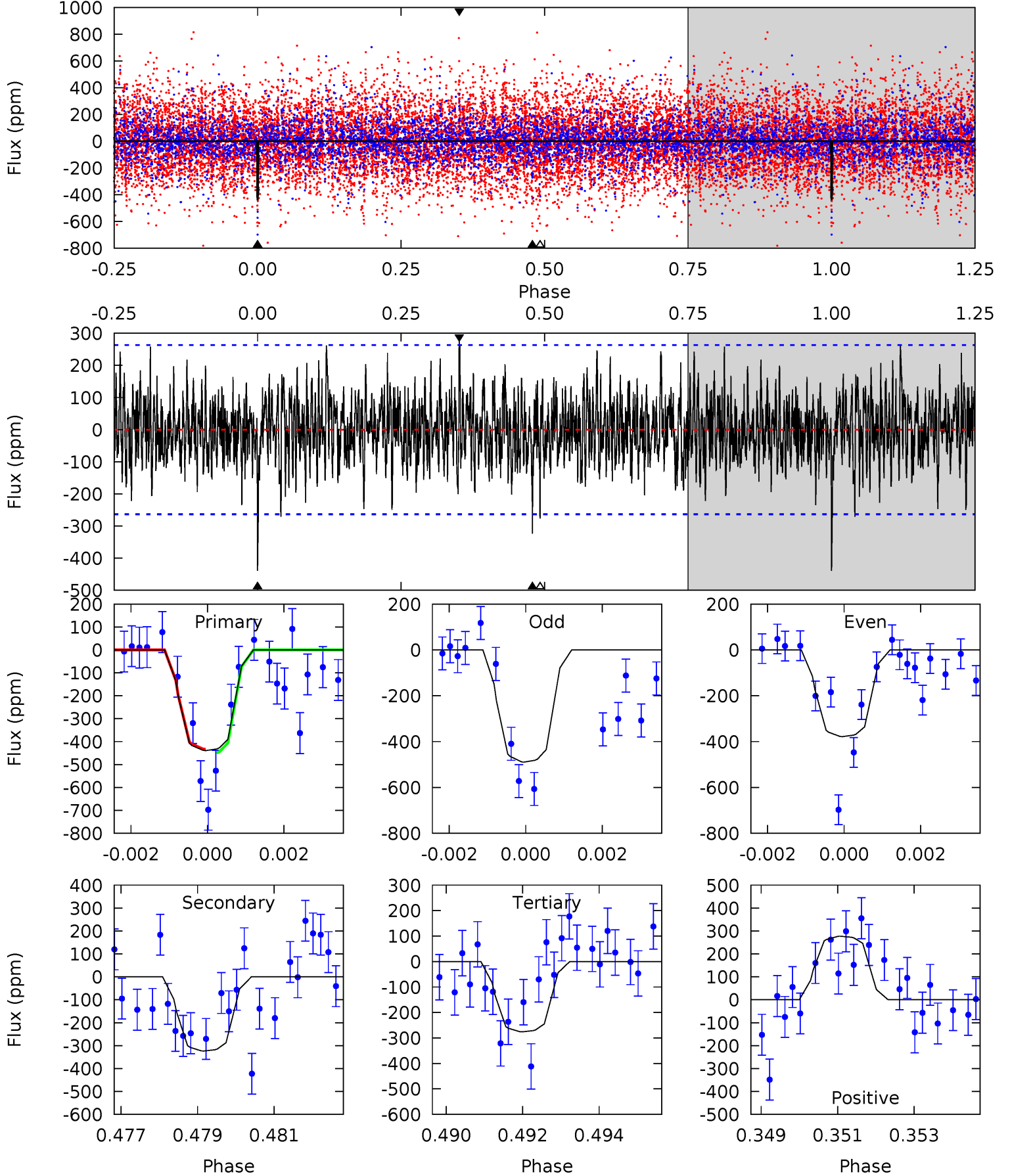
TCE 004758350-07 $P = 59.039463$ Days $T_0 = 165.843543$ (BKJD)



DV Model-Shift Uniqueness Test

004758350-07, P = 59.039315 Days, E = 106.806099 Days

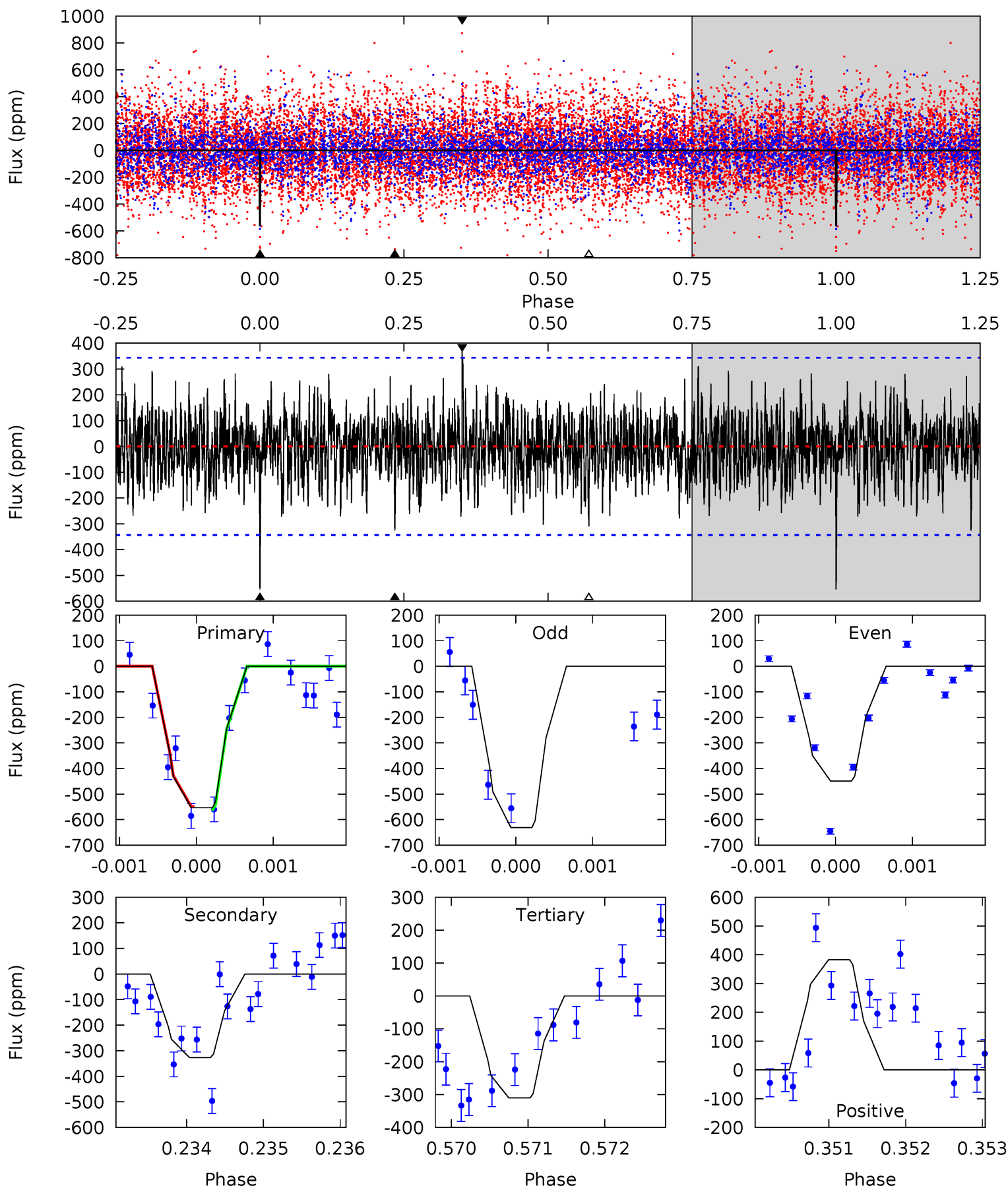
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.89	6.55	5.58	5.61	5.33	3.10	1.63	3.31	3.28	0.97	0.94	1.12	0.89	0.39	0.15



Alt Model-Shift Uniqueness Test

004758350-07, P = 59.039463 Days, E = 106.804080 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.72	5.14	4.89	6.03	5.41	3.23	1.45	3.83	2.69	0.25	-0.88	1.49	1.14	0.41	0.11



Stellar Parameters For KIC 004758350

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6720^{+180}_{-220}	$3.373^{+0.366}_{-0.065}$	$-0.180^{+0.350}_{-0.250}$	$4.845^{+0.345}_{-1.955}$	$2.020^{+0.124}_{-0.372}$	$0.025^{+0.075}_{-0.003}$
	+3%/-3%	+11%/-2%	+194%/-139%	+7%/-40%	+6%/-18%	+298%/-14%
Source	PHO1	FLK73	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 004758350-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-324 ± 49	$11.65^{+6.67}_{-5.52}$	1456^{+76}_{-154}	5729^{+2096}_{-952}	186^{+436}_{-113}
Alt.	-327 ± 63	$12.77^{+7.20}_{-5.72}$	1456^{+79}_{-141}	5536^{+1992}_{-907}	148^{+367}_{-84}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming A=0.3)

A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

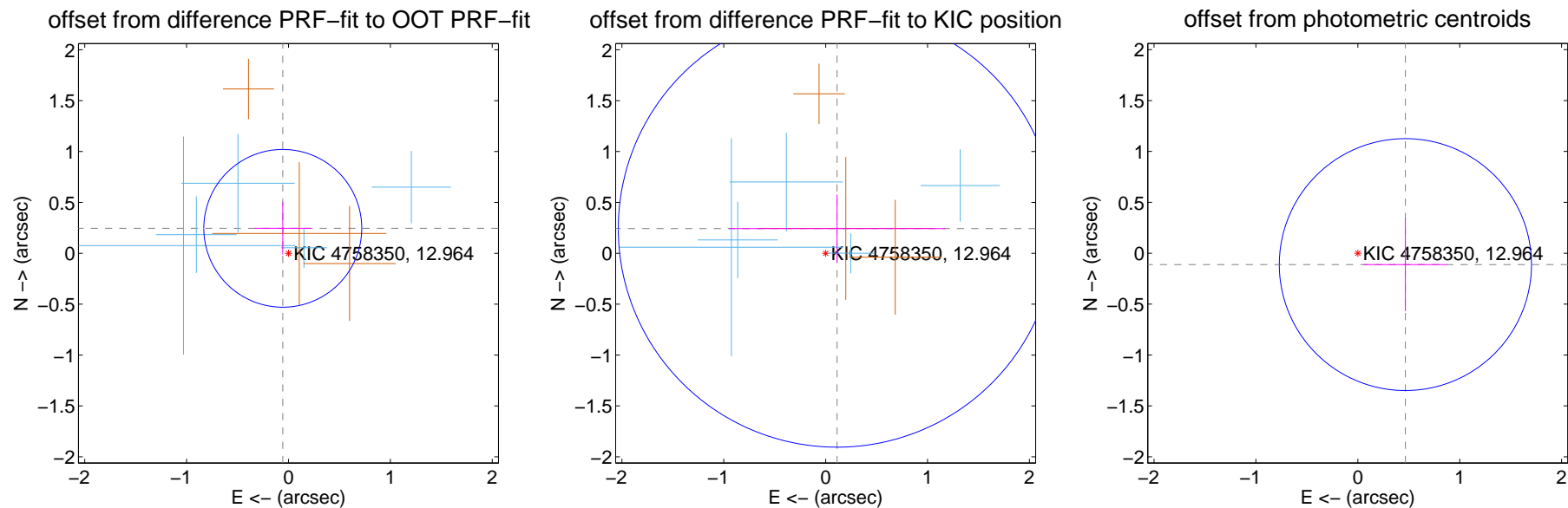
DV Centroid Data

Supplemental centroid analysis for 004758350-07. Kepler magnitude: 12.96. Transit SNR 8.95

There are 5 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.252 ± 0.258	0.97	0.056 ± 0.276	0.245 ± 0.257
PRF-fit source offset from KIC position	0.267 ± 0.716	0.37	-0.112 ± 1.061	0.243 ± 0.334
photometric centroid source offset	0.48 ± 0.41	1.16	-0.47 ± 0.41	-0.11 ± 0.46



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

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

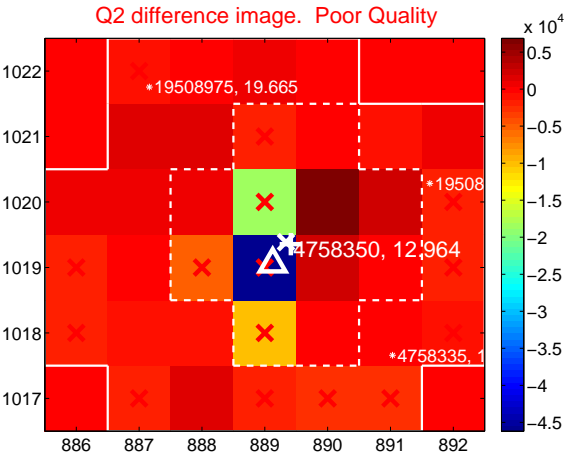
Q1 no difference image



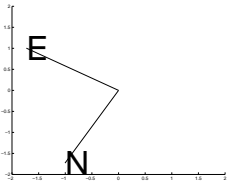
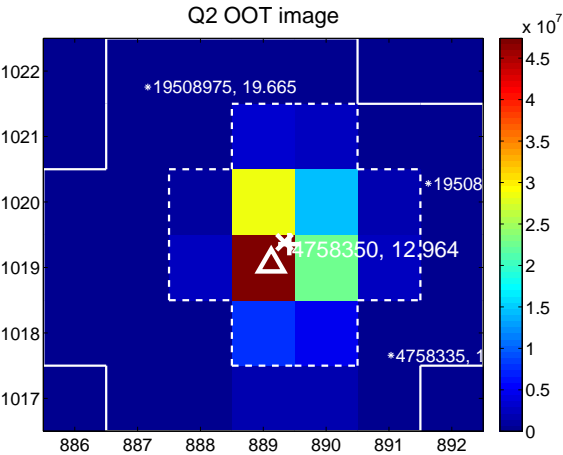
Q1 no OOT image



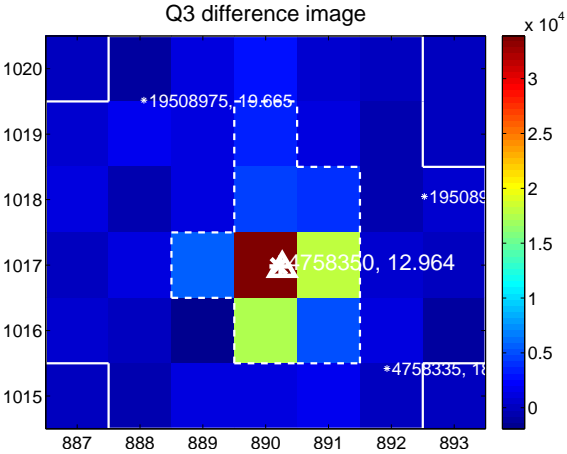
Q2 difference image. Poor Quality



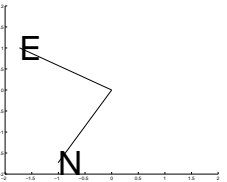
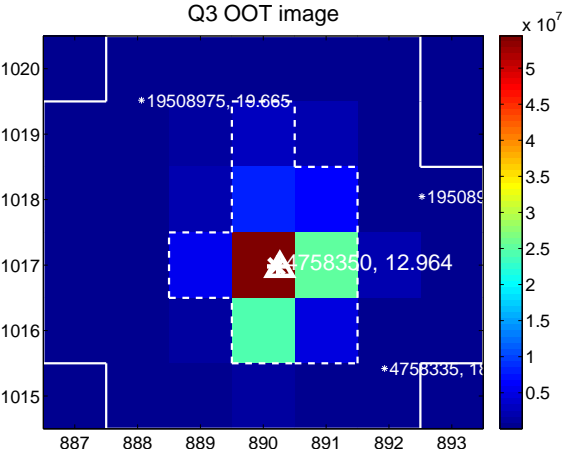
Q2 OOT image



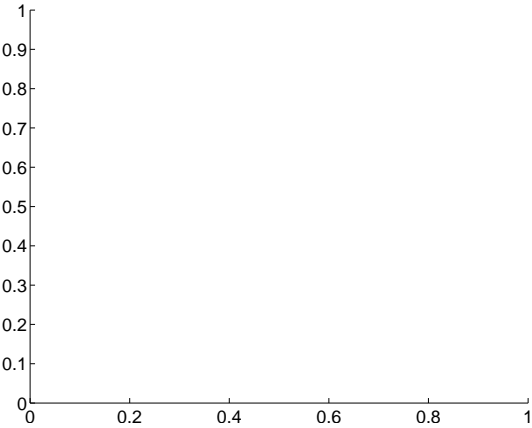
Q3 difference image



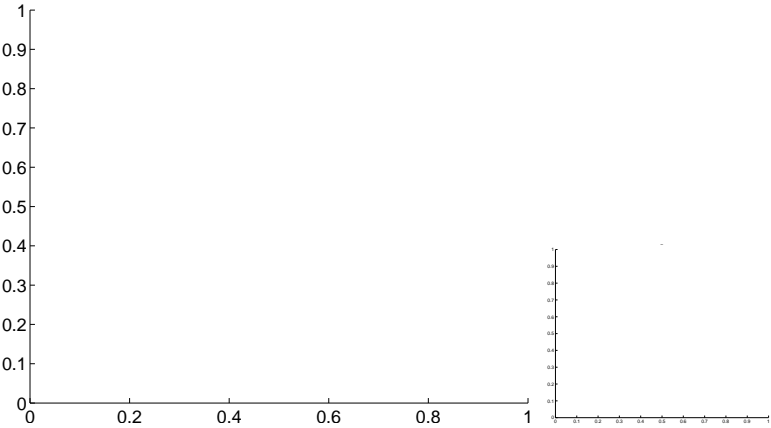
Q3 OOT image



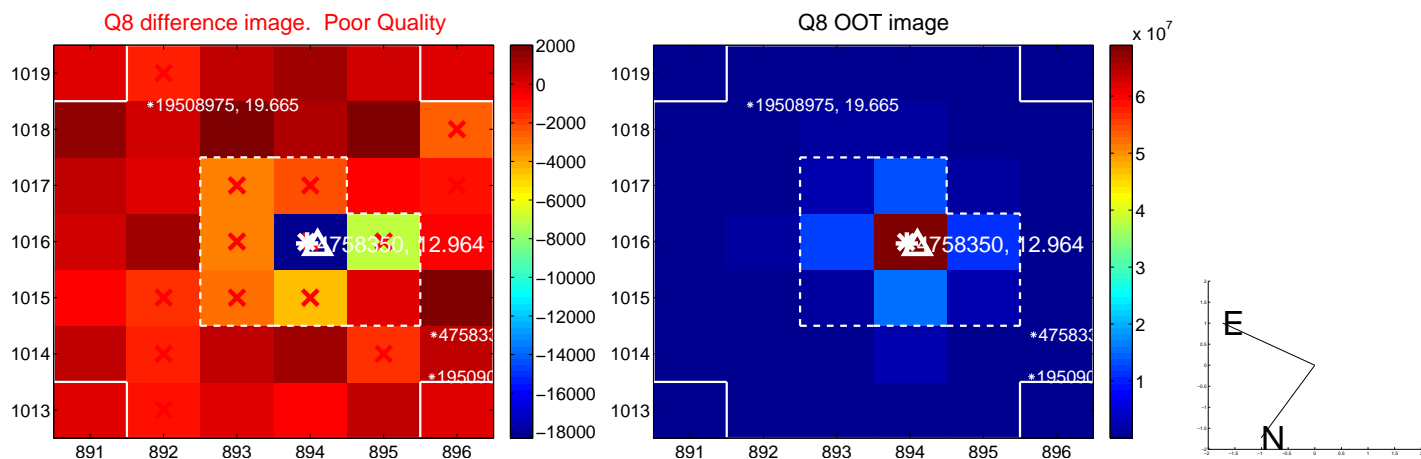
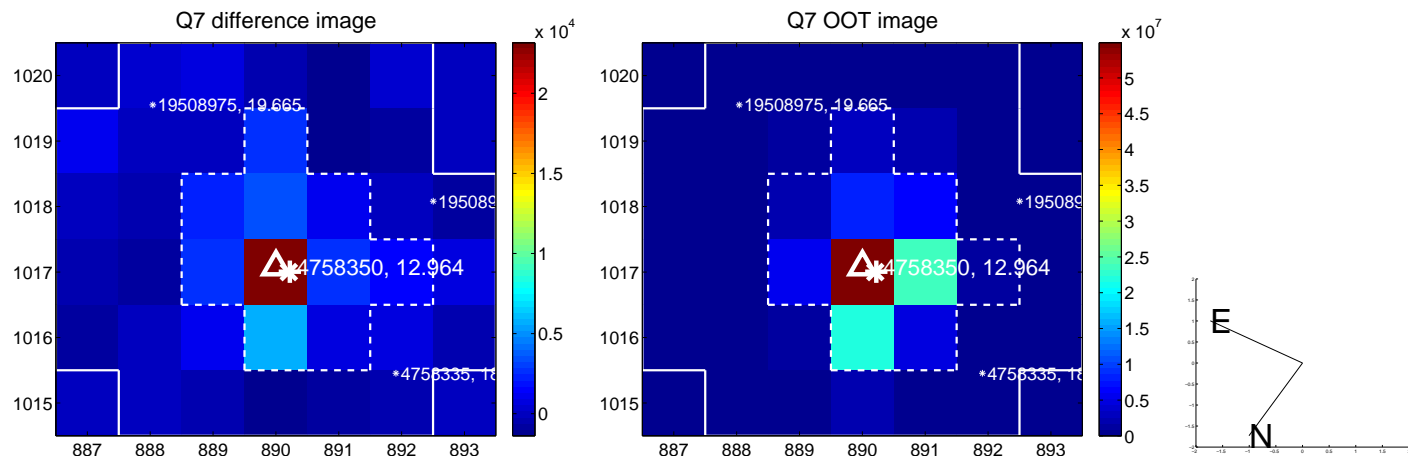
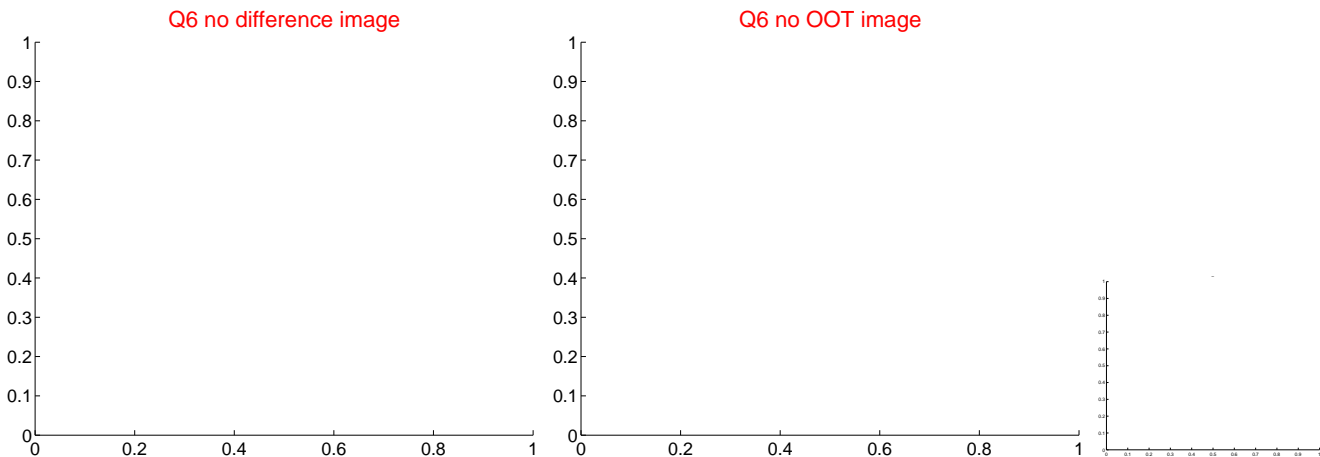
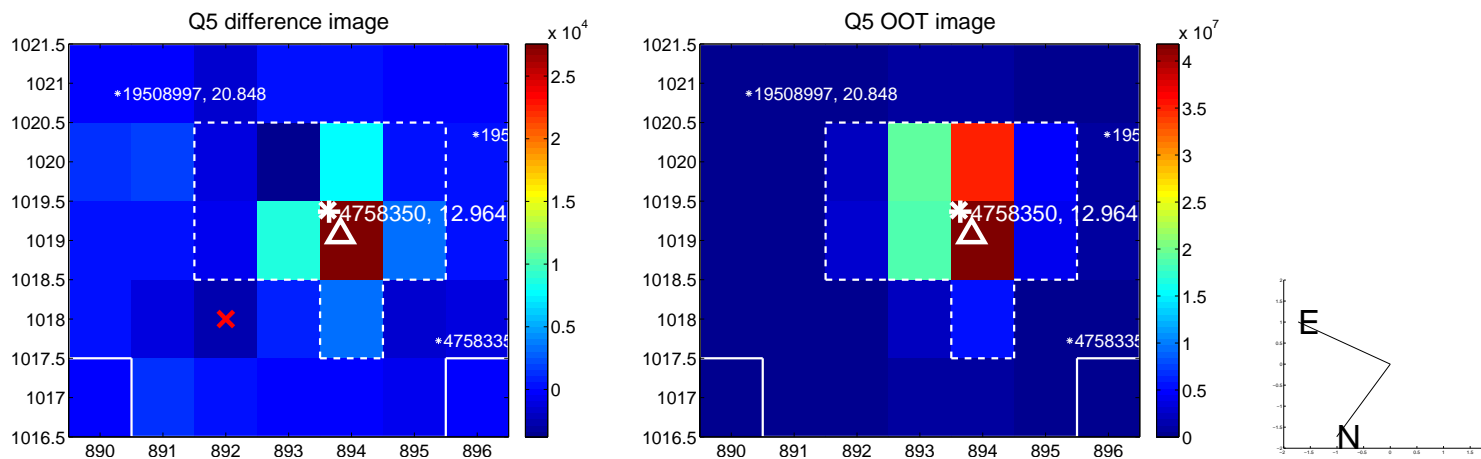
Q4 no difference image



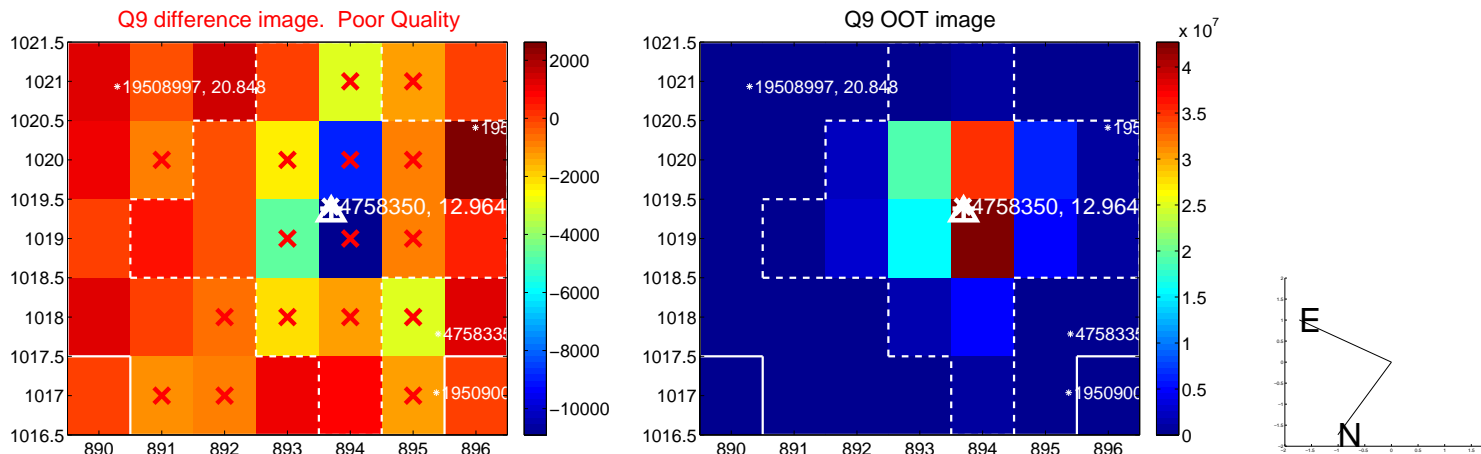
Q4 no OOT image



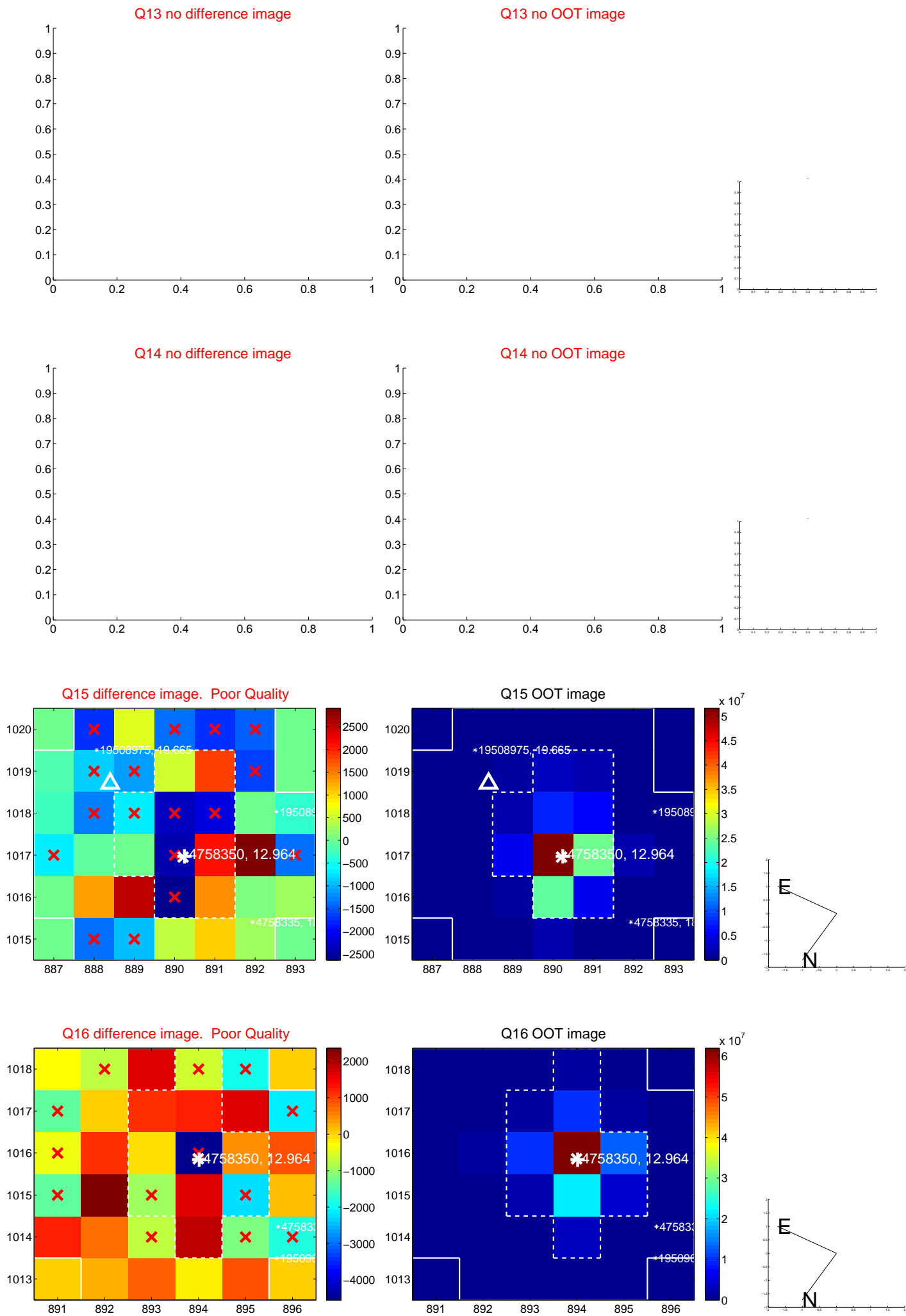
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



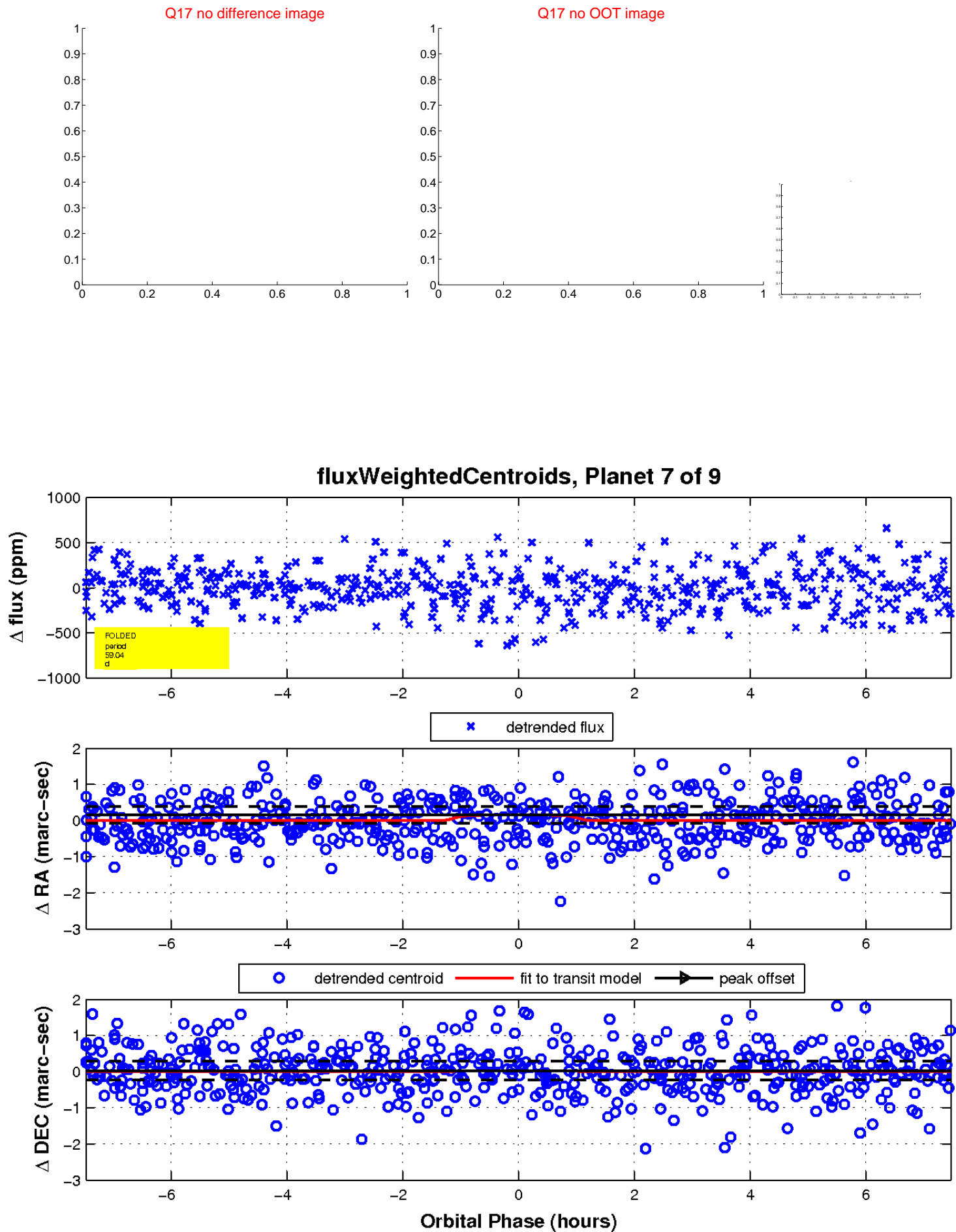
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

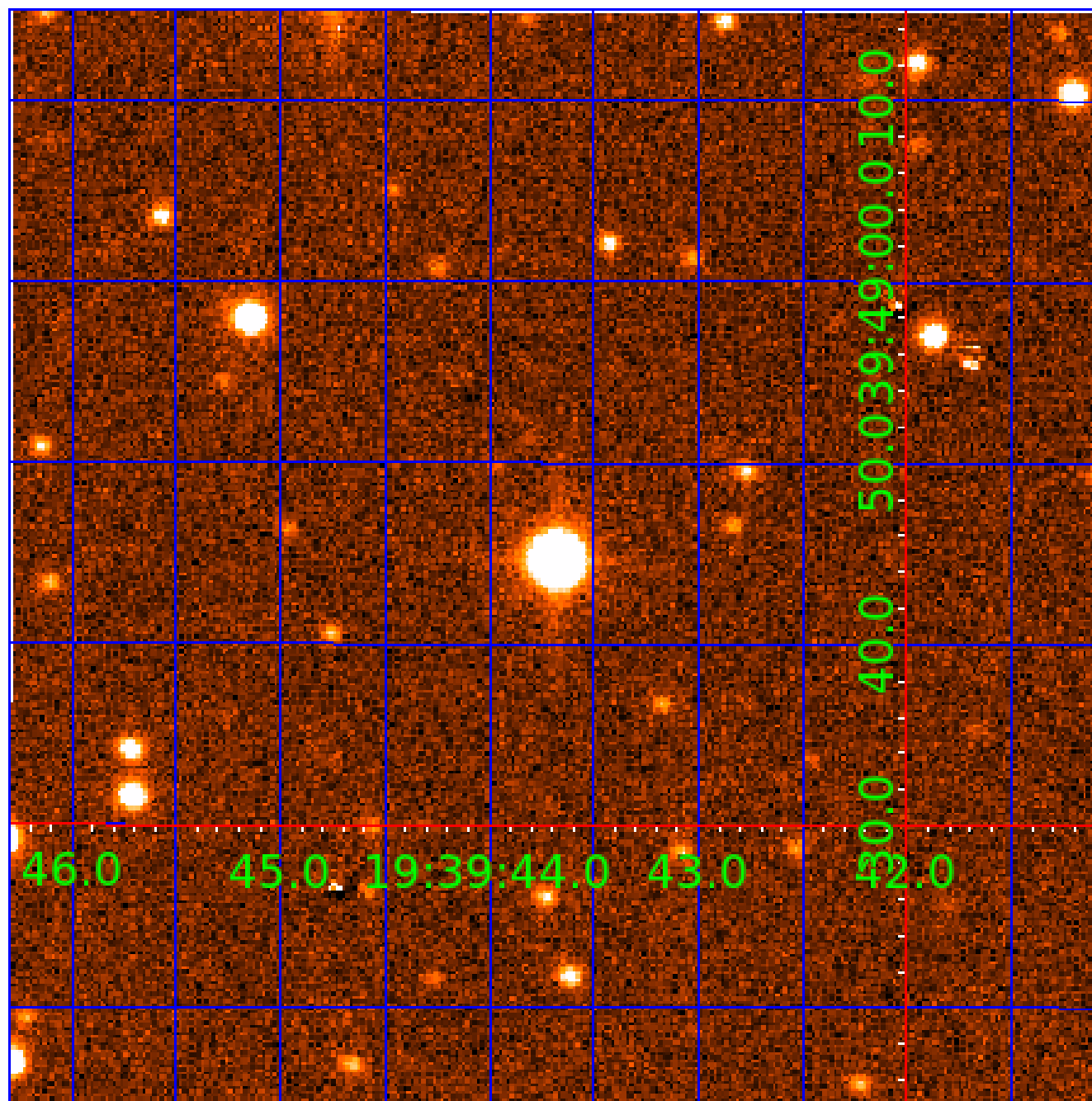


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004758350

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})
004758350-01	OBS	6447.01	1.120936	131.540051	45.9	6.243	8.9	9.4	4.84	6720	6.27	60134.87
004758350-02	OBS	No	95.011757	197.822359	505.4	3.636	9.2	10.2	4.84	6720	11.82	161.51
004758350-03	OBS	No	96.090049	189.921096	409.6	7.506	9.0	9.5	4.84	6720	12.57	159.10
004758350-04	OBS	No	8.956177	133.855318	151.8	3.553	9.2	9.5	4.84	6720	6.74	3764.76
004758350-06	OBS	No	235.351197	303.610912	485.1	5.963	9.2	9.7	4.84	6720	12.16	48.19
004758350-07	OBS	No	59.039315	165.845414	496.1	2.491	9.1	8.9	4.84	6720	12.81	304.59
004758350-08	OBS	No	103.210000	175.789471	404.4	6.858	7.7	7.6	4.84	6720	18.77	144.63
004758350-09	OBS	No	57.135180	142.505796	361.3	4.612	8.9	10.2	4.84	6720	11.45	318.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004758350-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT
004758350-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
004758350-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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.

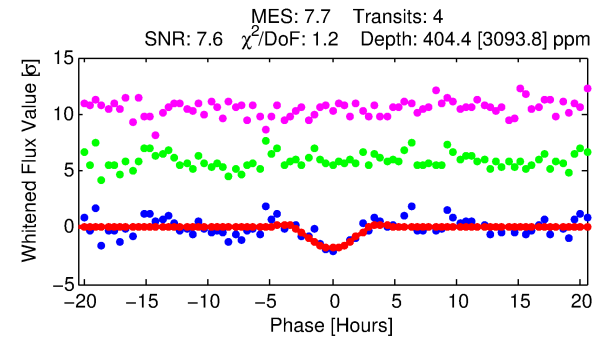
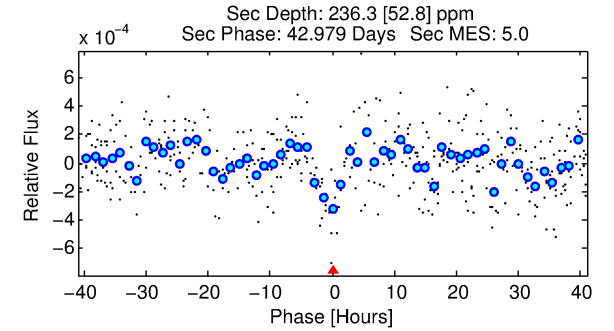
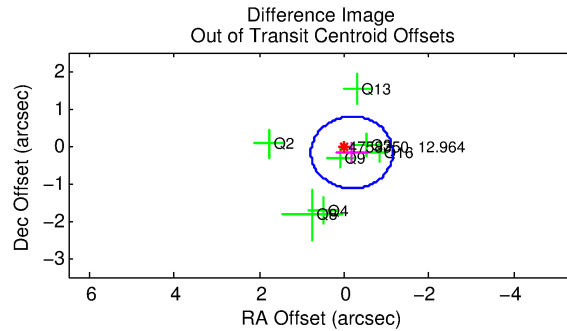
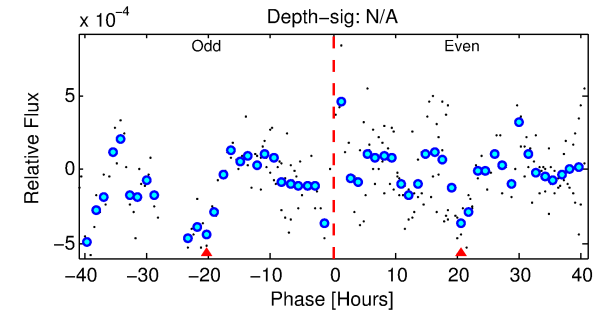
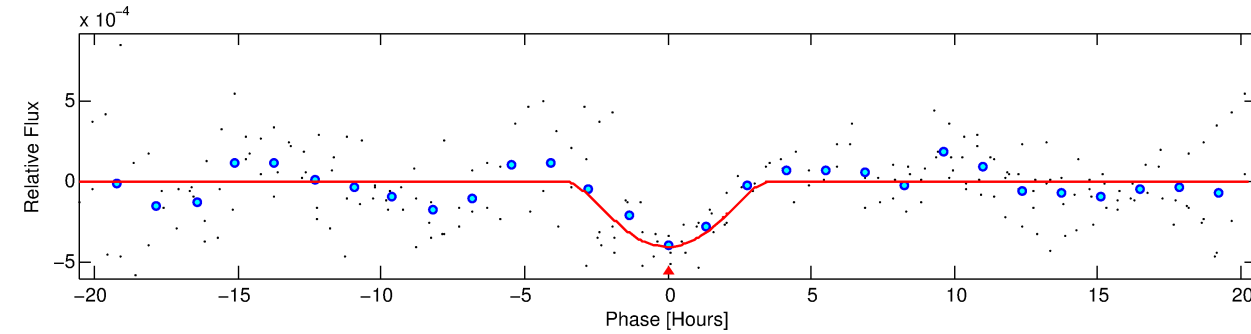
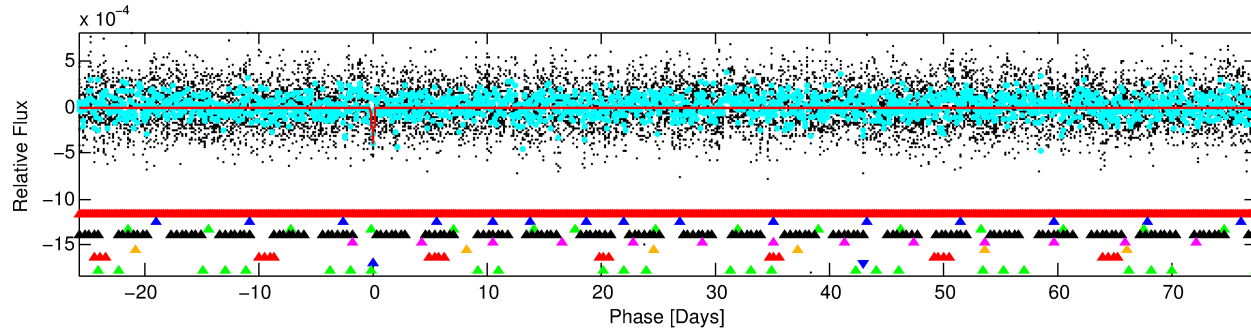
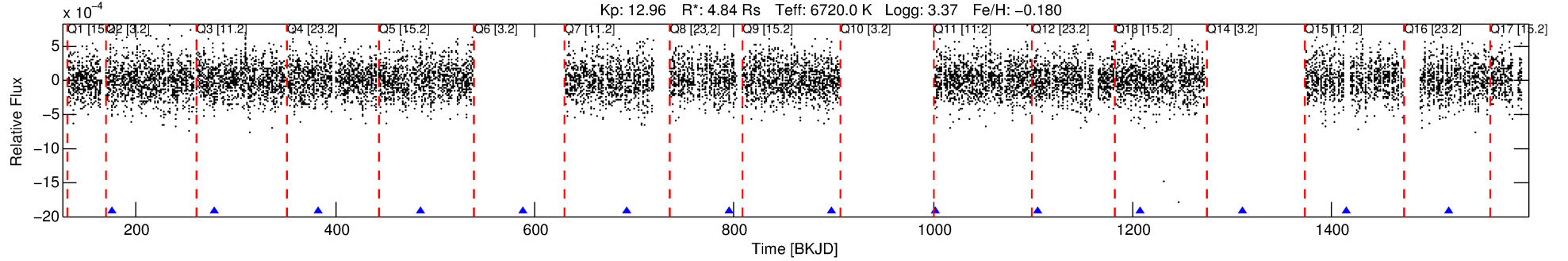
Ephemeris Match Information For 004758350-08

No Significant Match Found

DV One-Page Summary

KIC: 4758350 Candidate: 8 of 9 Period: 103.210 d
KOI: K06447 Corr: No Ephemeris Match

Kp: 12.96 R*: 4.84 Rs Teff: 6720.0 K Logg: 3.37 Fe/H: -0.180



DV Fit Results:

Period = 103.21000 [0.00210] d
Epoch = 175.7895 [0.0151] BKJD
Rp/R* = 0.0355 [0.1538]
a/R* = 30.93 [35.17]
b = 1.00 [0.41]
Seff = 144.63 [92.06]
Teq = 884 [141] K
Rp = 18.77 [81.65] Re
a = 0.5446 [0.2118] AU
Ag = 109.40 [950.25] [0.11σ]
Teffp = 4422 [9578] K [0.37σ]

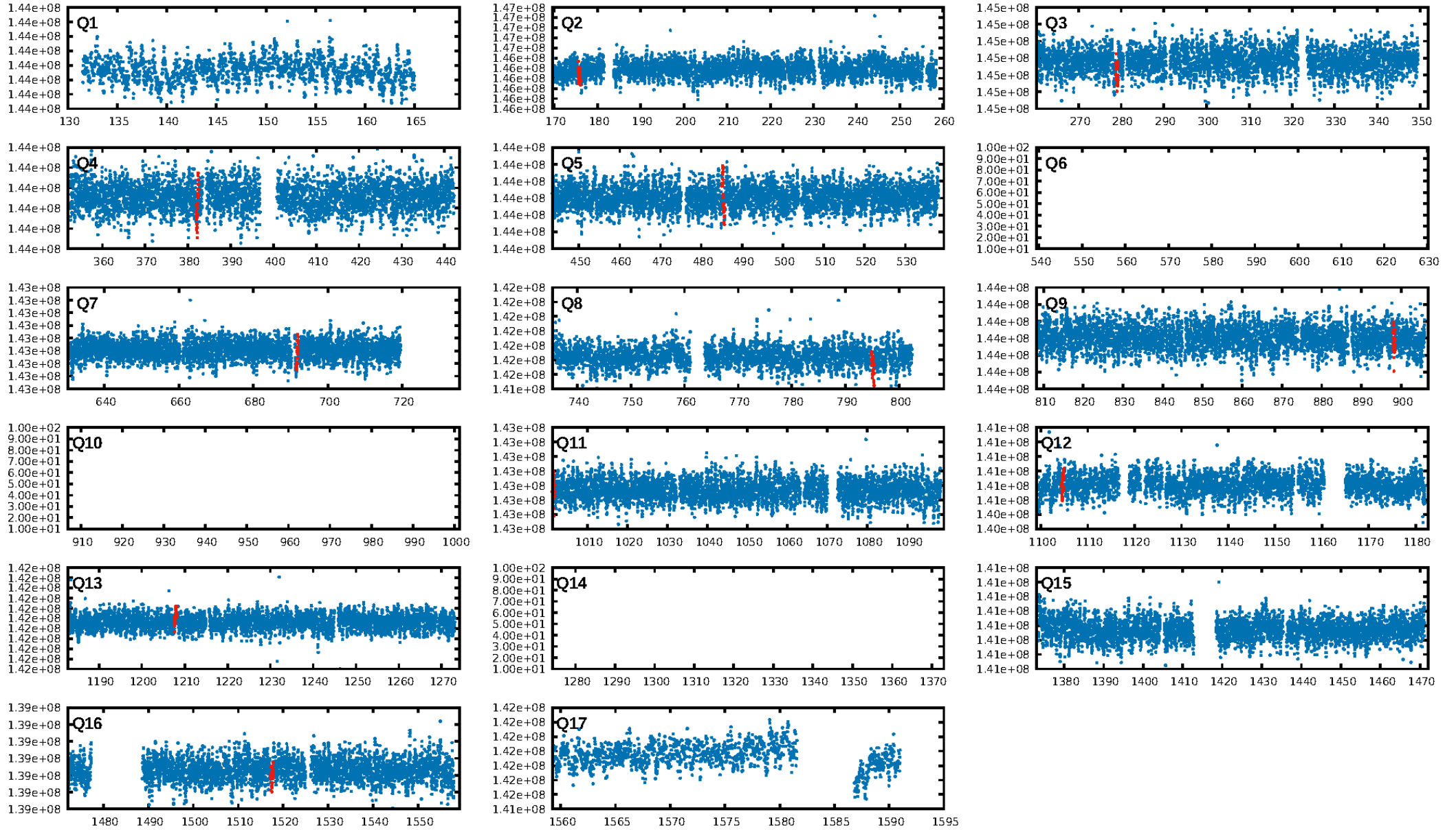
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [16.81σ]
LongPeriod-sig: 100.0% [20.60σ]
ModelChiSquare2-sig: 6.8%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -14.22
Centroid-sig: 60.5%
Centroid-so: 0.179 arcsec [0.35σ]
OotOffset-rm: 0.257 arcsec [0.80σ]
KicOffset-rm: 0.322 arcsec [0.80σ]
OotOffset-st: 1/1/3/2 [7]
KicOffset-st: 1/1/3/2 [7]
DiffImageQuality-fgm: 0.86 [6/7]
DiffImageOverlap-fno: 0.00 [0/8]

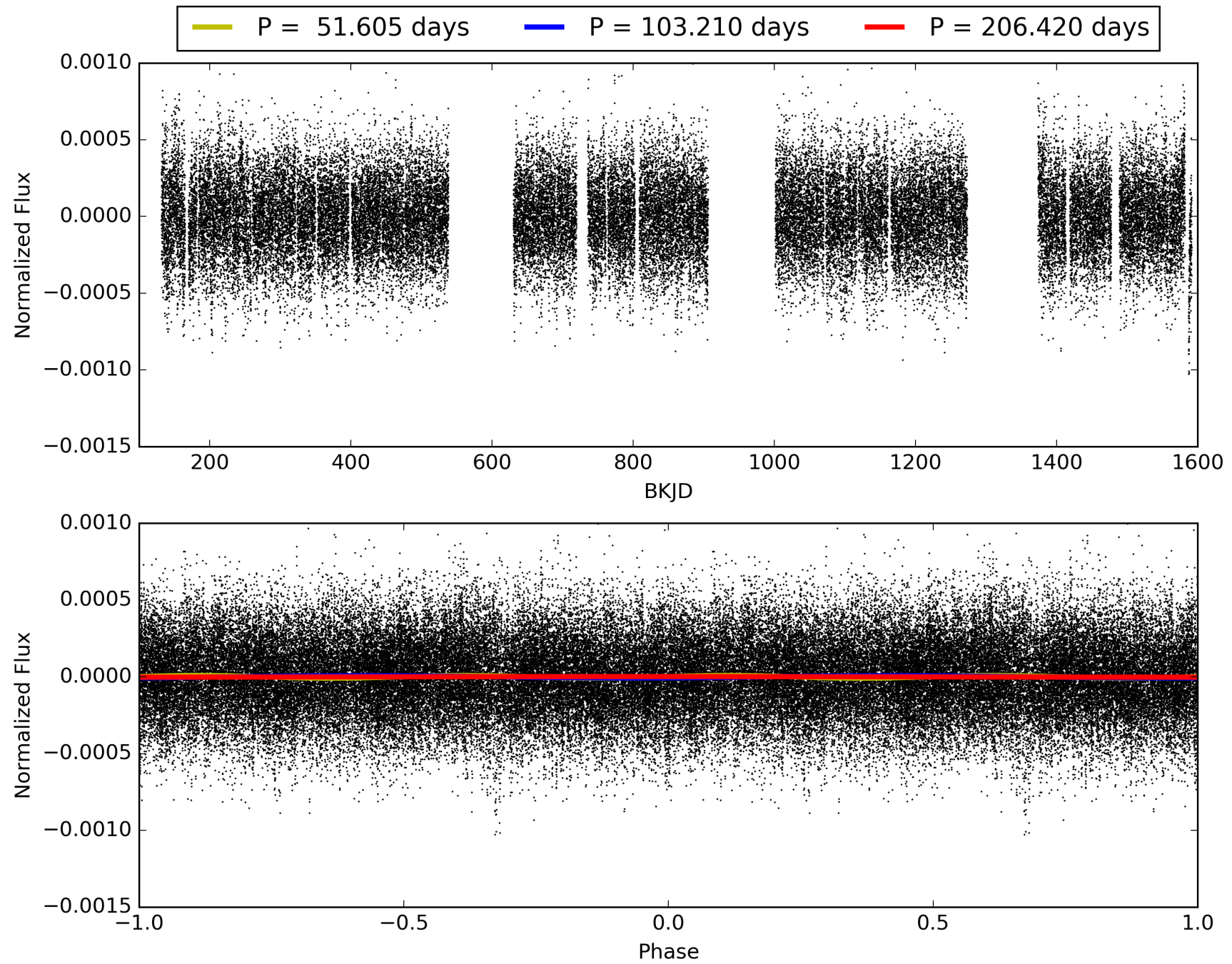
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:34:52 Z

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

TCE 004758350-08, PDC Light Curves

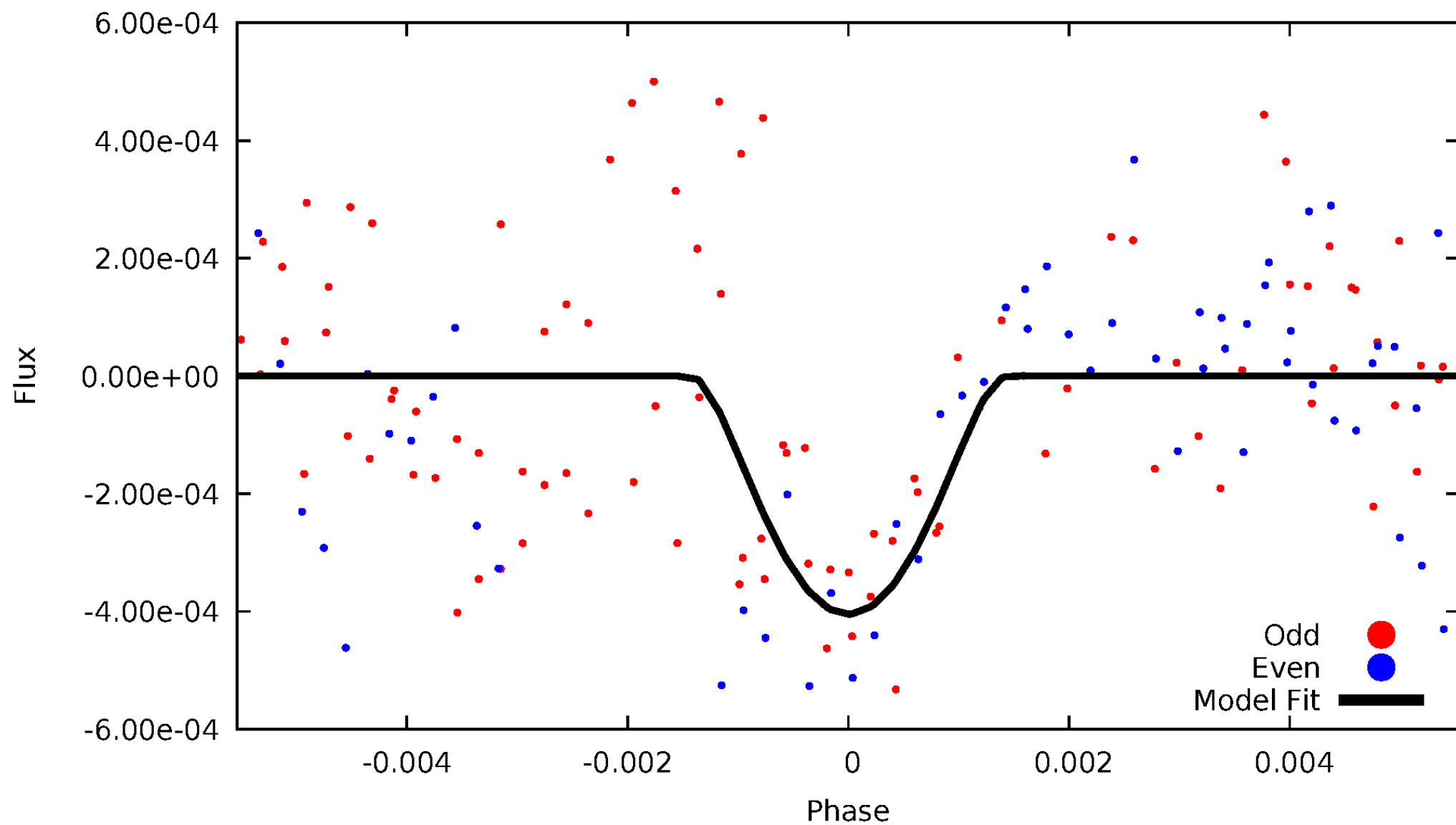


TCE 004758350-08



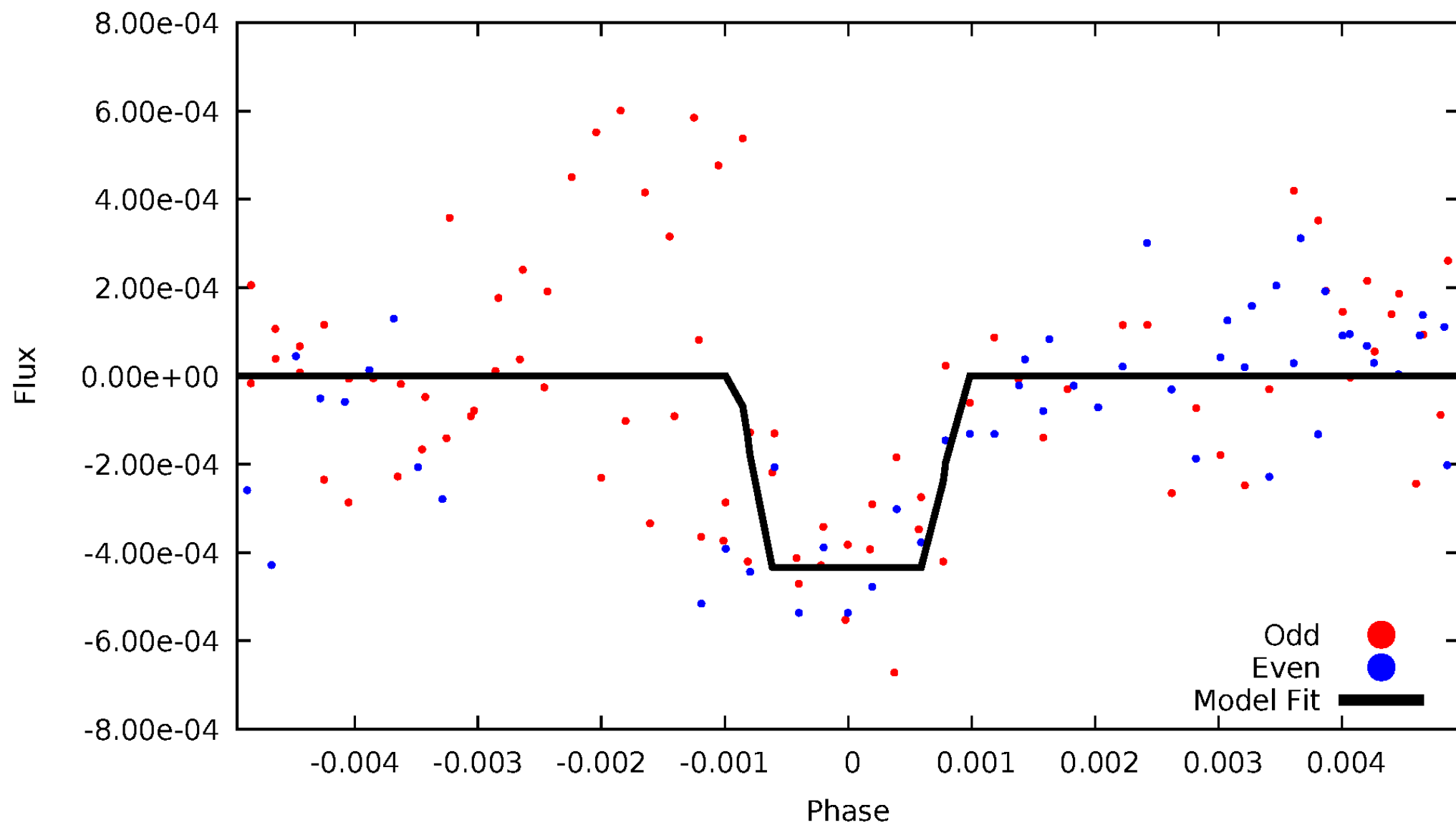
DV Odd/Even

TCE 004758350-08



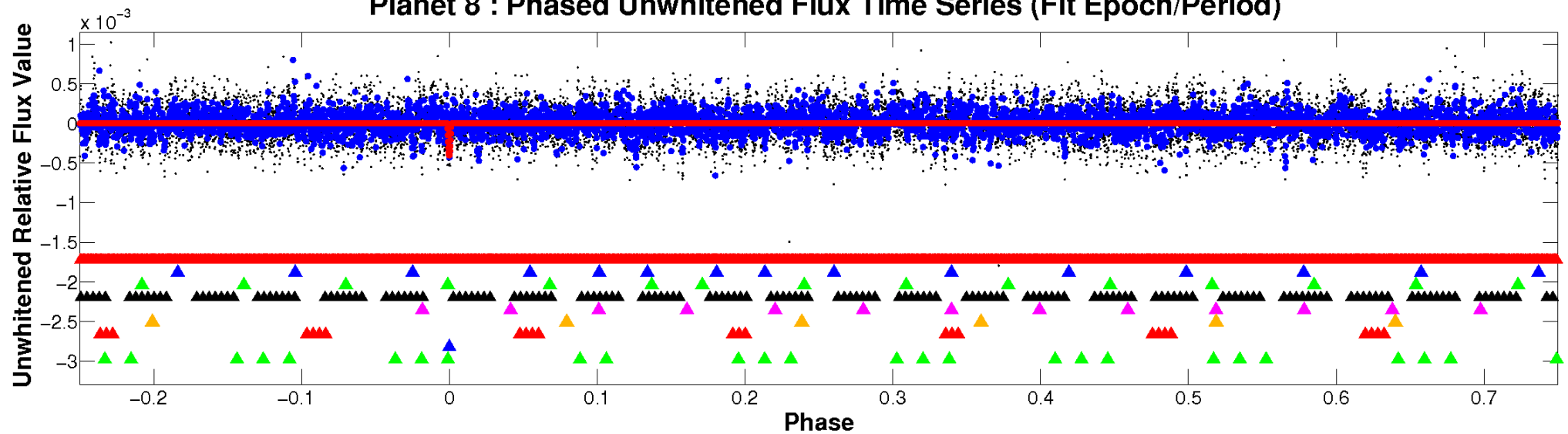
ALT Odd/Even

TCE 004758350-08

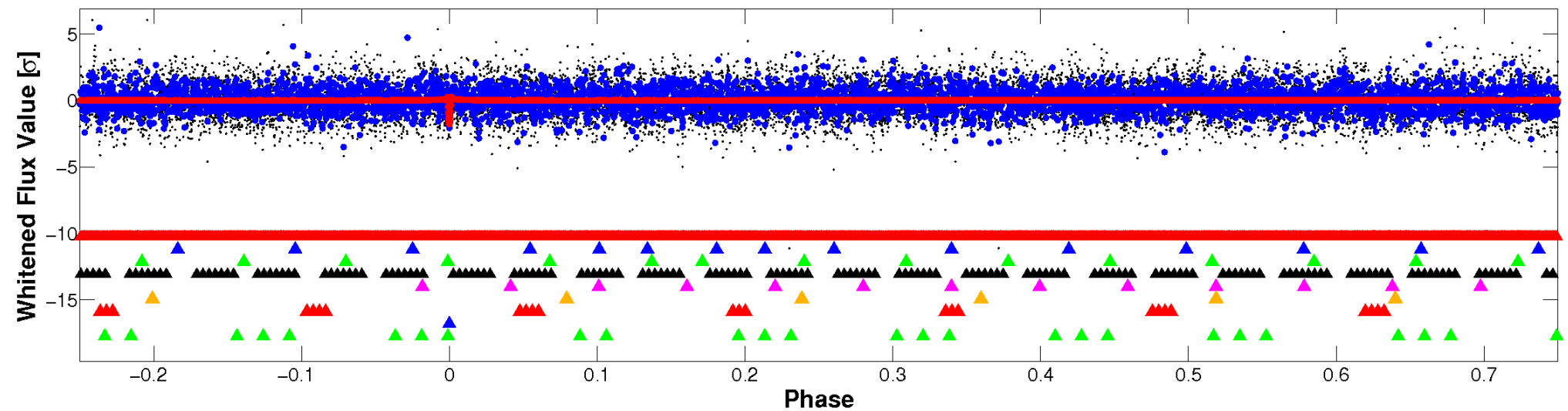


Non-Whitened Vs. Whitened Light Curve

Planet 8 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

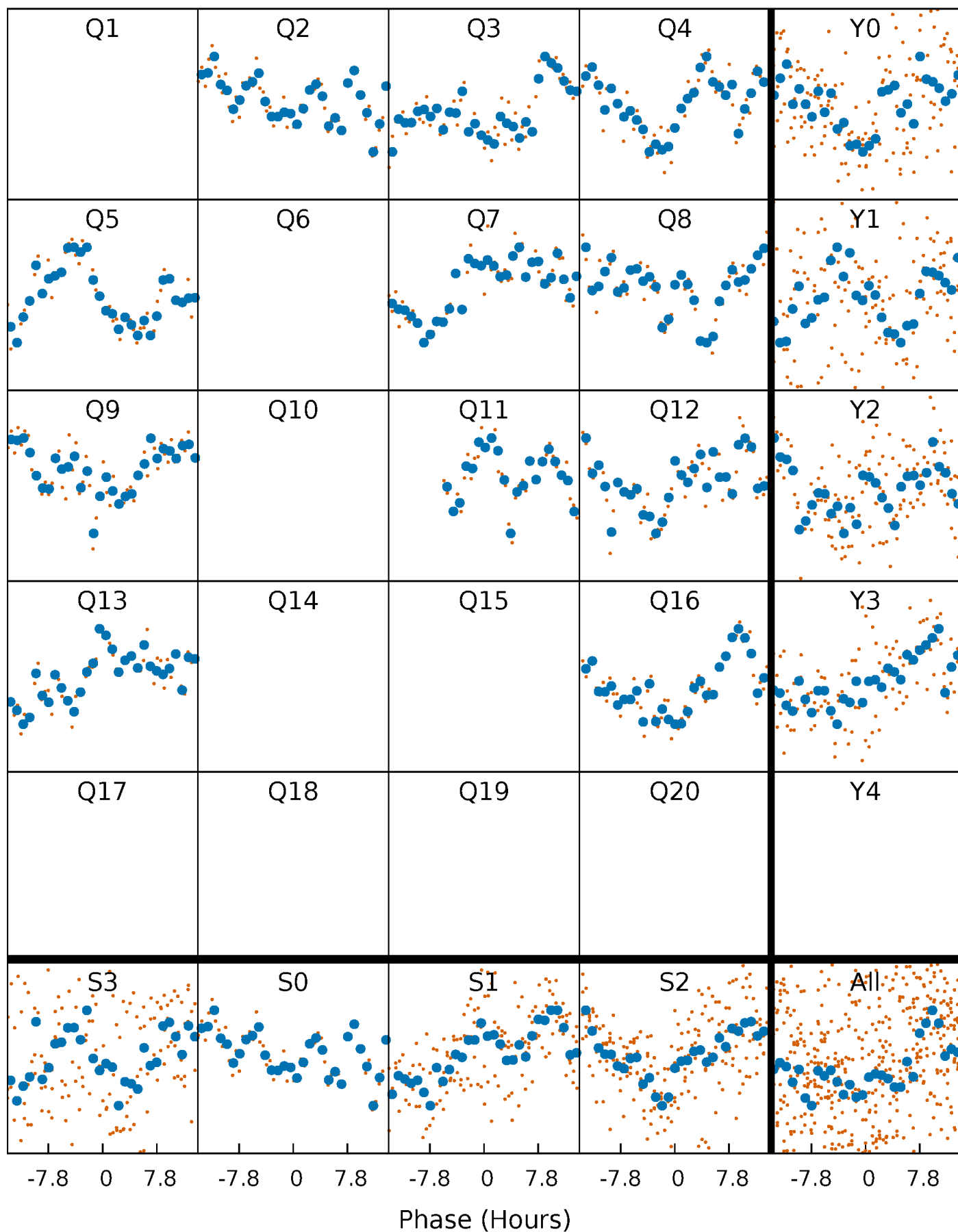


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



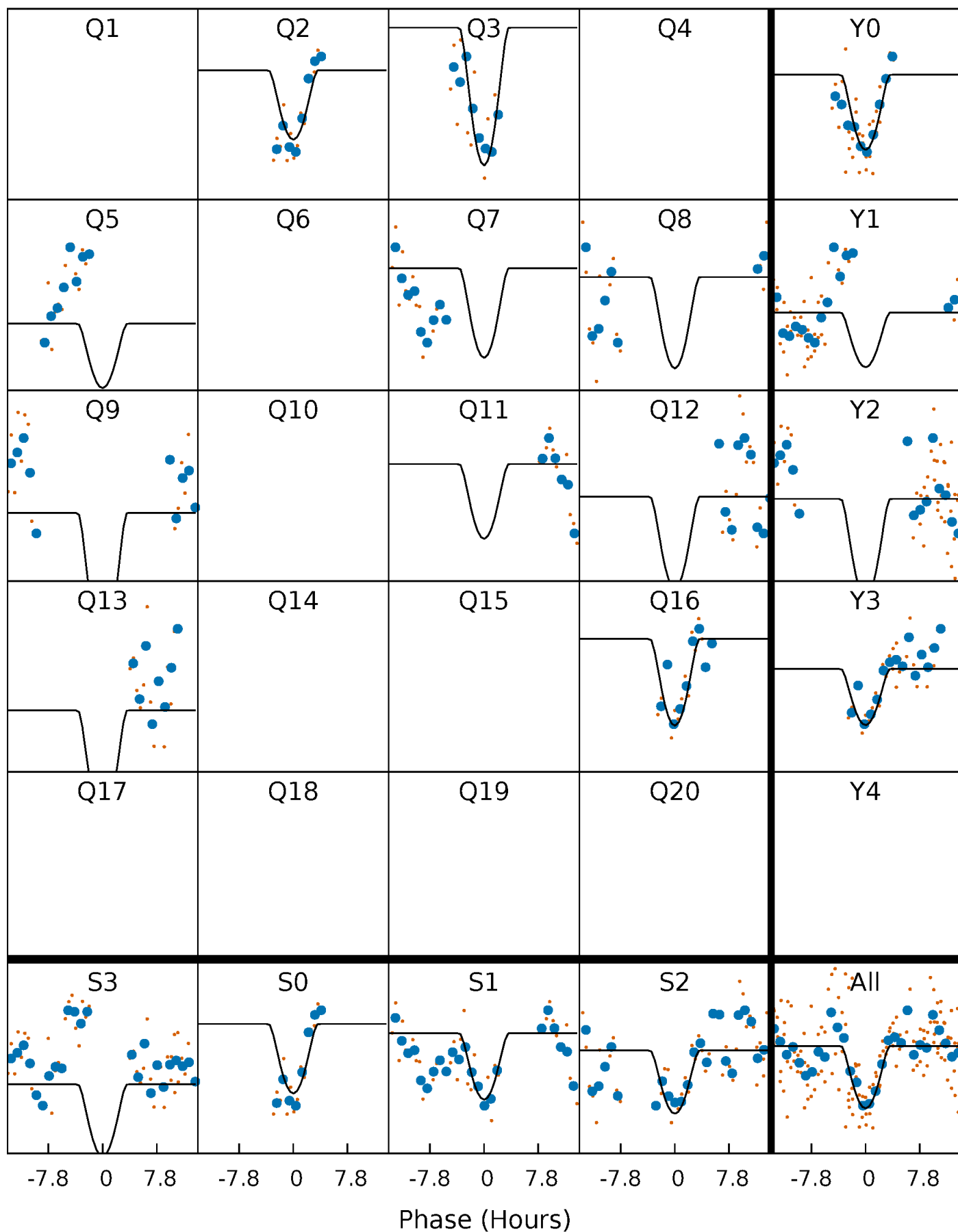
PDC Quarter-Phased Transit Curves

TCE 004758350-08 P=103.210000 Days $T_0=175.789471$ (BKJD)



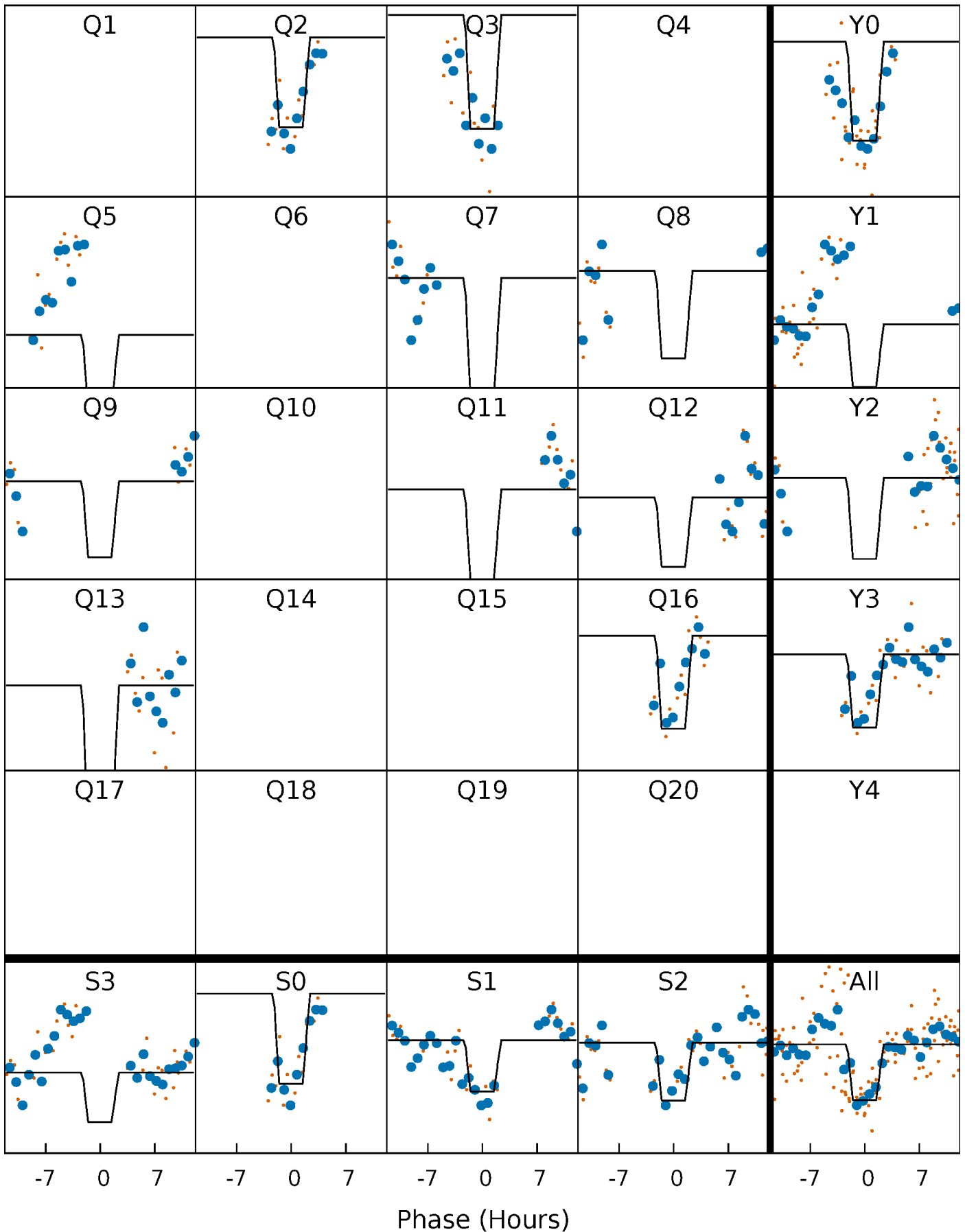
DV Quarter-Phased Transit Curves

TCE 004758350-08 $P=103.210000$ Days $T_0=175.789471$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

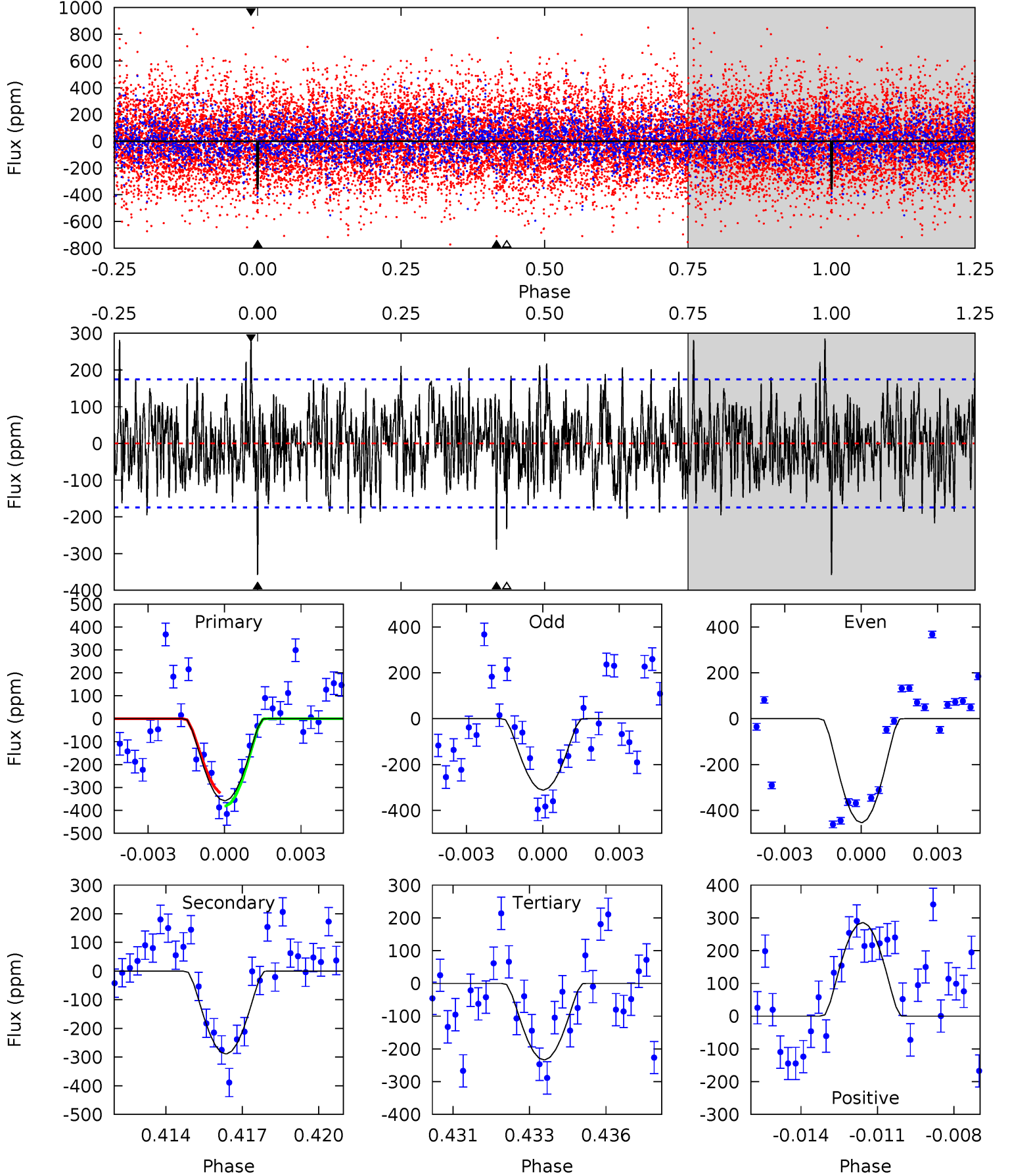
TCE 004758350-08 P=103.211286 Days $T_0=175.794079$ (BKJD)



DV Model-Shift Uniqueness Test

004758350-08, P = 103.210000 Days, E = 72.579471 Days

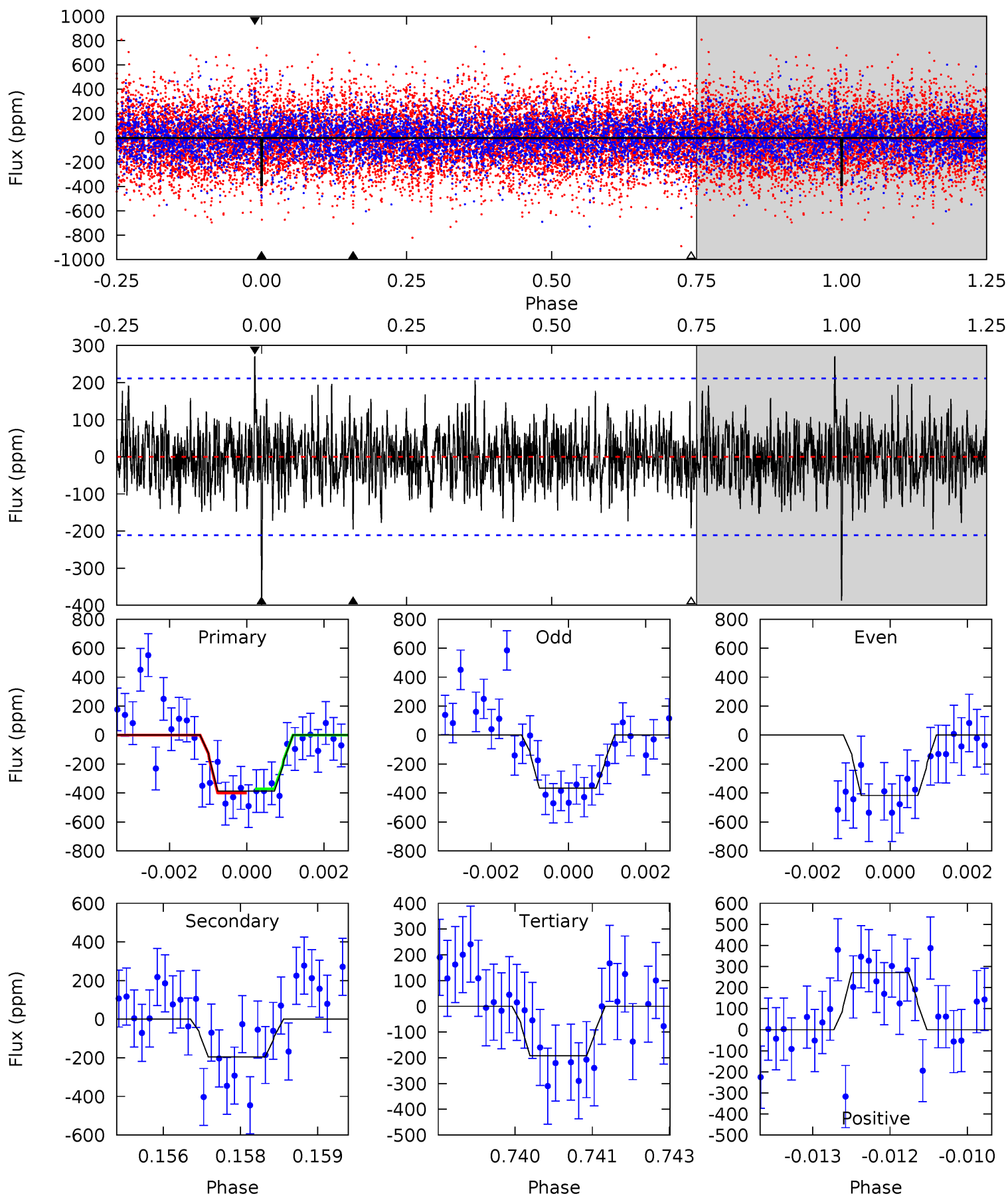
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	8.72	7.04	8.62	5.27	2.99	2.38	3.76	2.19	1.68	0.10	2.02	0.15	0.44	0.86



Alt Model-Shift Uniqueness Test

004758350-08, P = 103.211286 Days, E = 72.582793 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.83	4.97	4.87	6.88	5.36	3.15	1.58	4.96	2.95	0.10	-1.91	0.60	0.93	0.41	0.37



Stellar Parameters For KIC 004758350

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6720^{+180}_{-220}	$3.373^{+0.366}_{-0.065}$	$-0.180^{+0.350}_{-0.250}$	$4.845^{+0.345}_{-1.955}$	$2.020^{+0.124}_{-0.372}$	$0.025^{+0.075}_{-0.003}$
	+3%/-3%	+11%/-2%	+194%/-139%	+7%/-40%	+6%/-18%	+298%/-14%
Source	PHO1	FLK73	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 004758350-08 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-289 ± 33	$56.30^{+59.75}_{-39.10}$	1213^{+59}_{-110}	3168^{+1518}_{-559}	15^{+142}_{-11}
Alt.	-196 ± 39	$54.92^{+57.20}_{-38.24}$	1207^{+60}_{-130}	2991^{+1344}_{-551}	11^{+99}_{-8}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

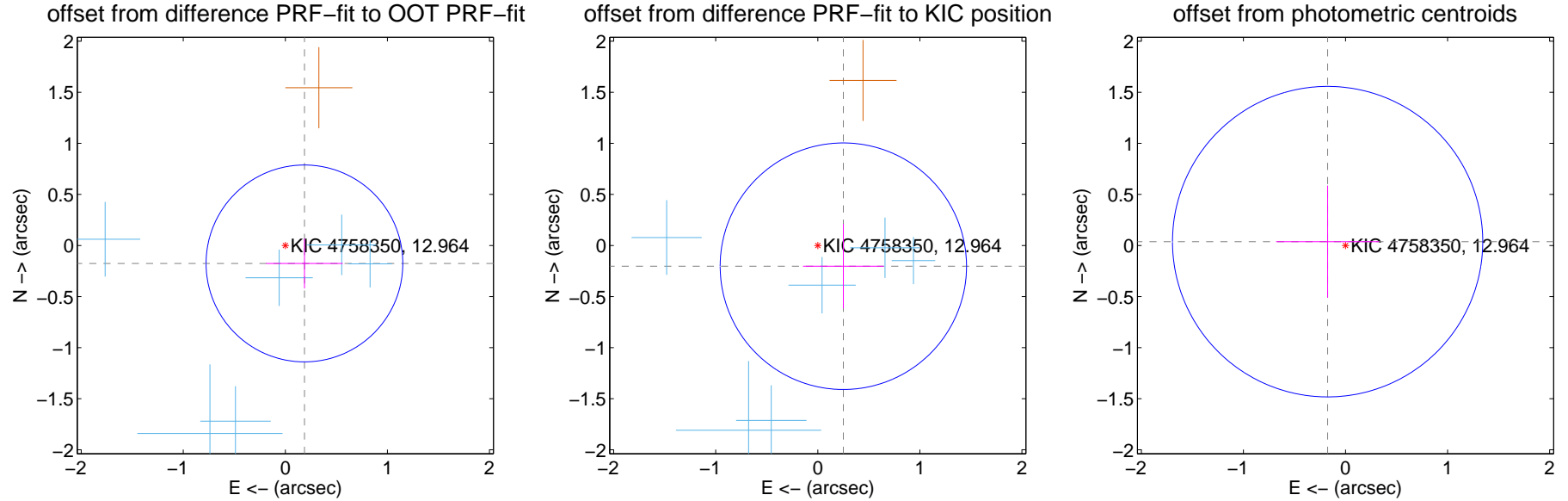
DV Centroid Data

Supplemental centroid analysis for 004758350-08. Kepler magnitude: 12.96. Transit SNR 7.57

There are 6 quarters with good PRF difference image offsets

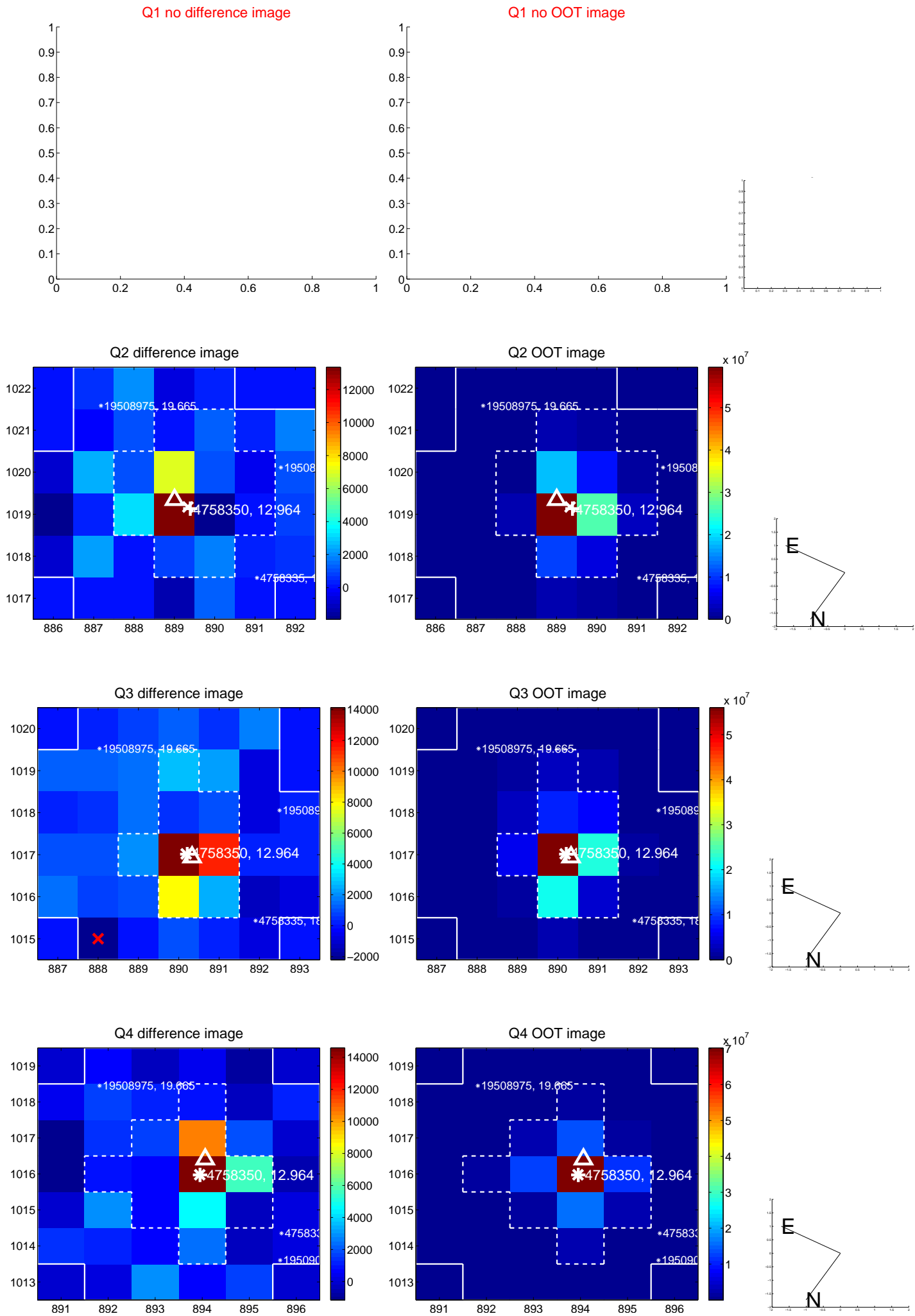
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

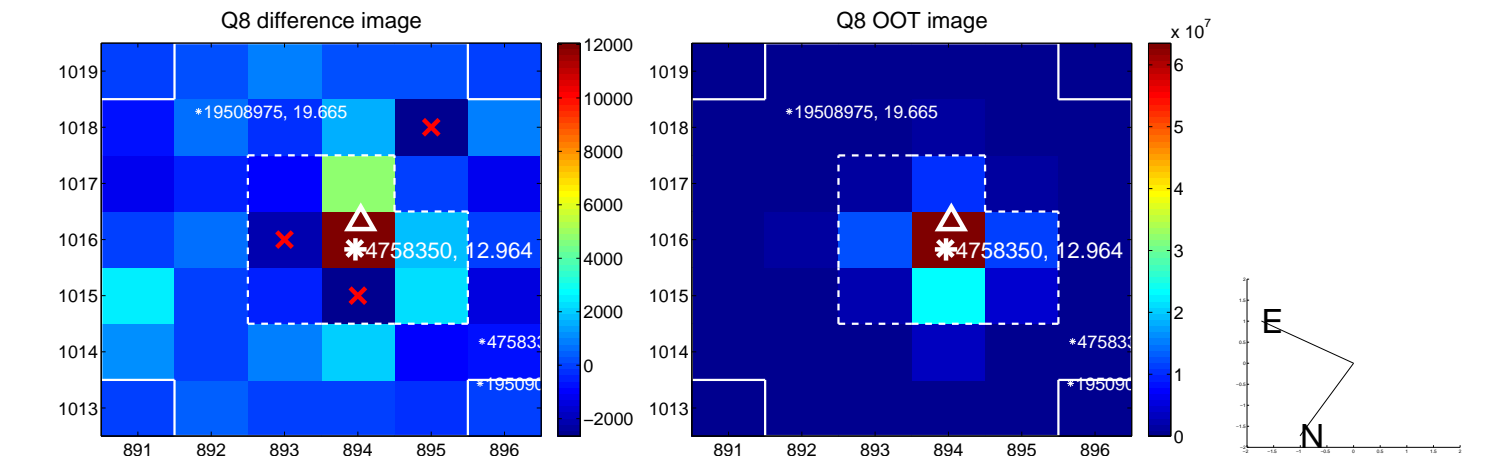
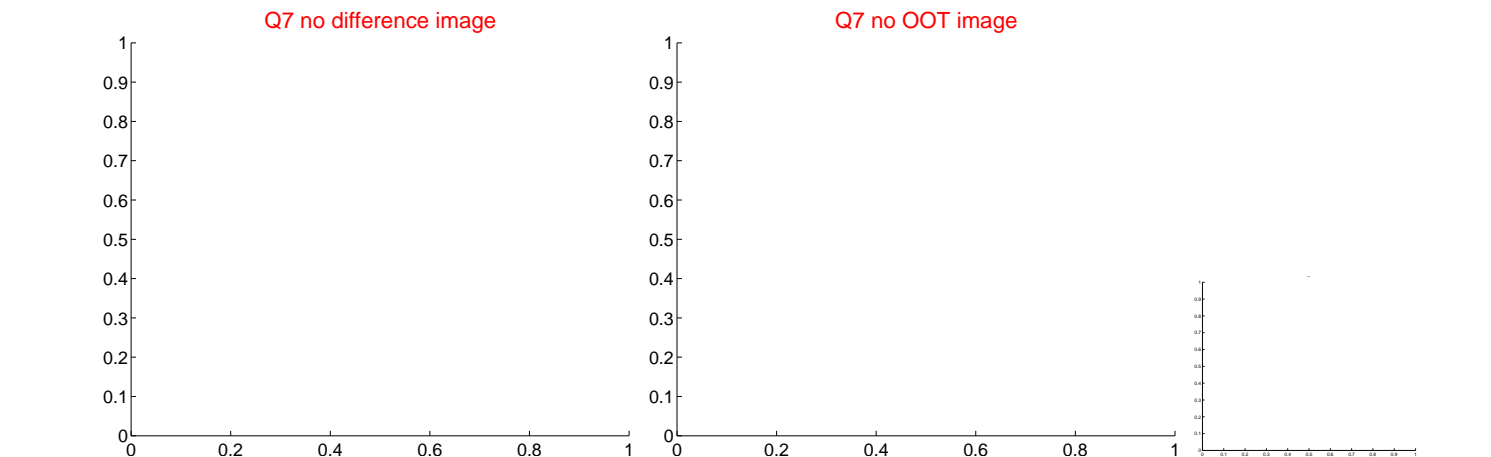
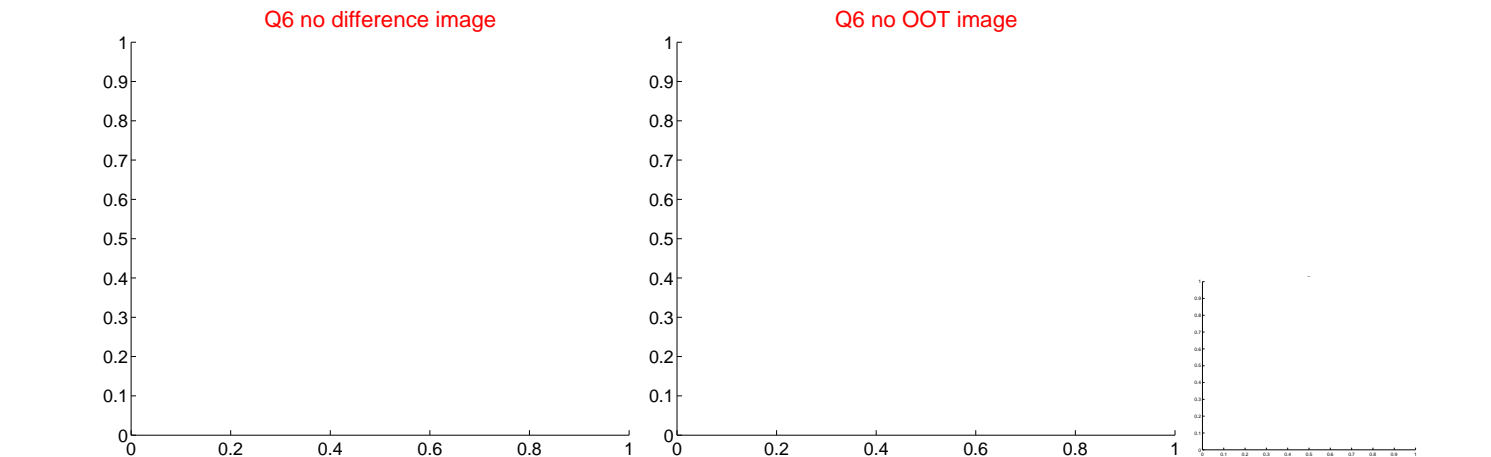
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.257 ± 0.321	0.80	-0.187 ± 0.376	-0.176 ± 0.244
PRF-fit source offset from KIC position	0.322 ± 0.402	0.80	-0.250 ± 0.395	-0.203 ± 0.413
photometric centroid source offset	0.18 ± 0.51	0.35	0.18 ± 0.50	0.04 ± 0.55



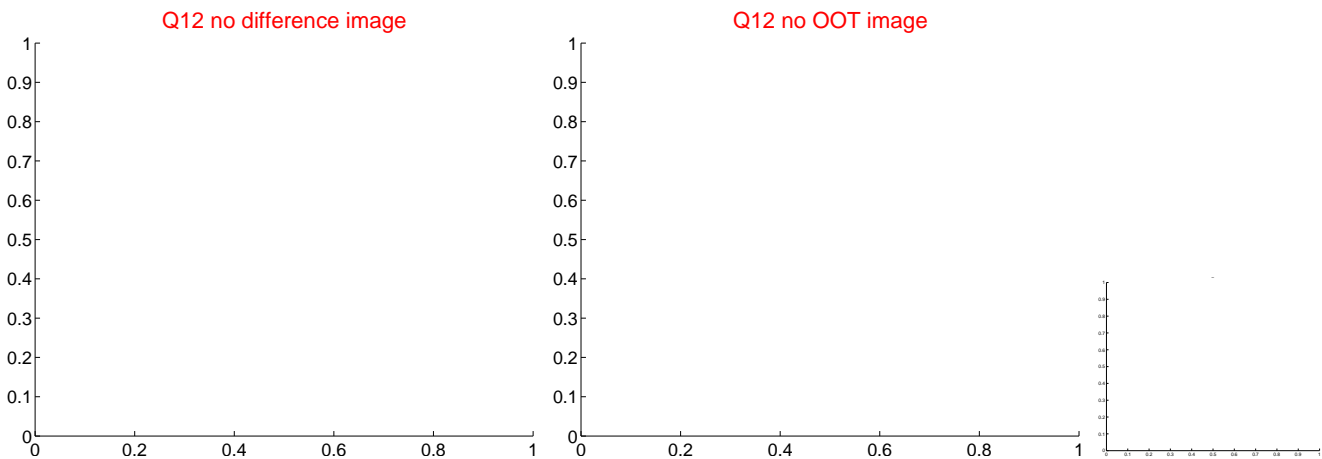
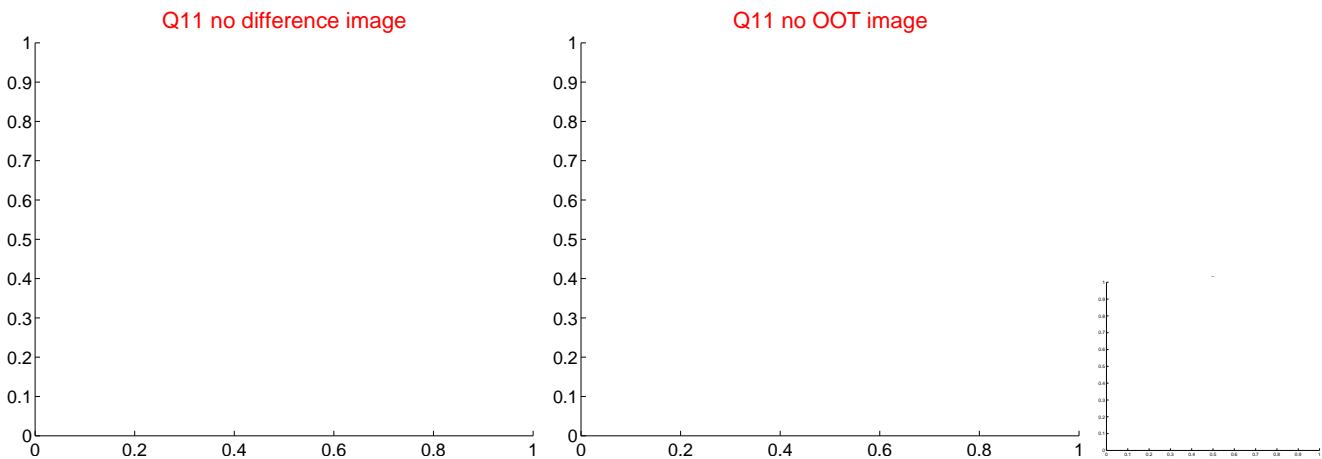
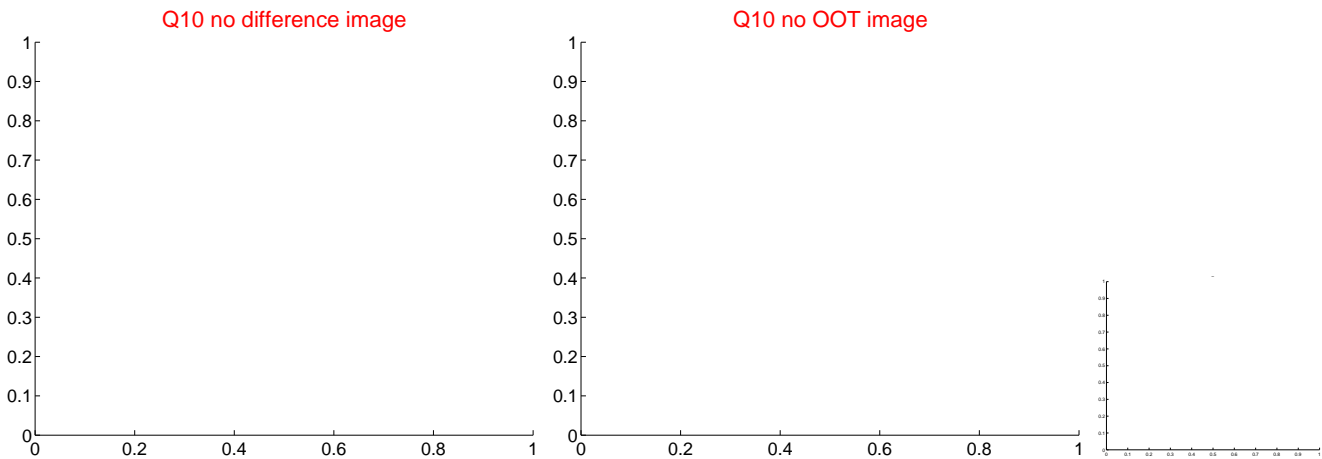
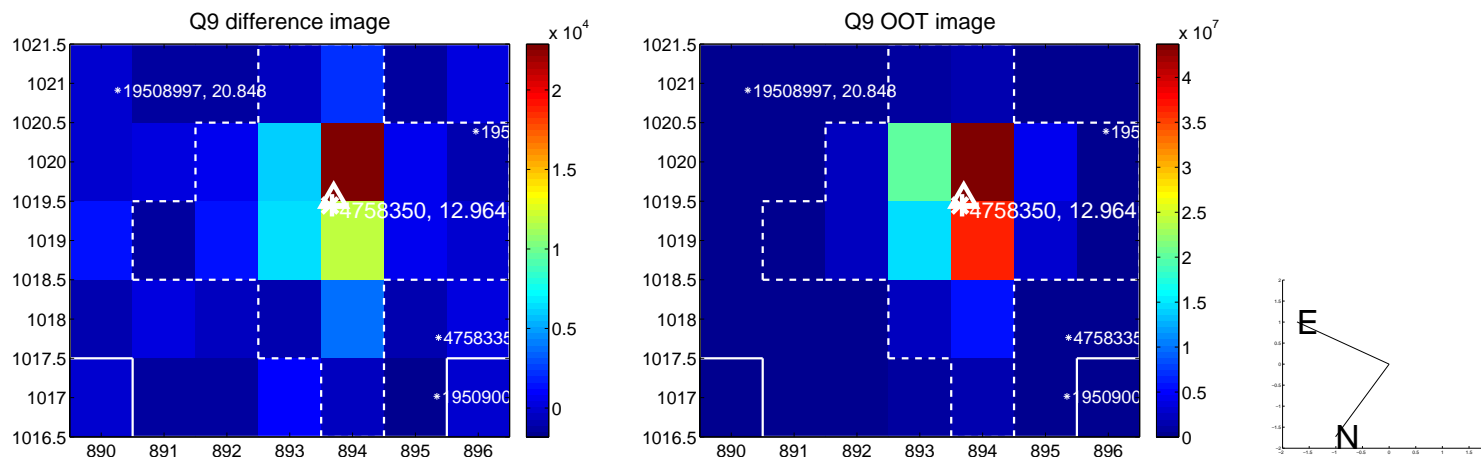
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

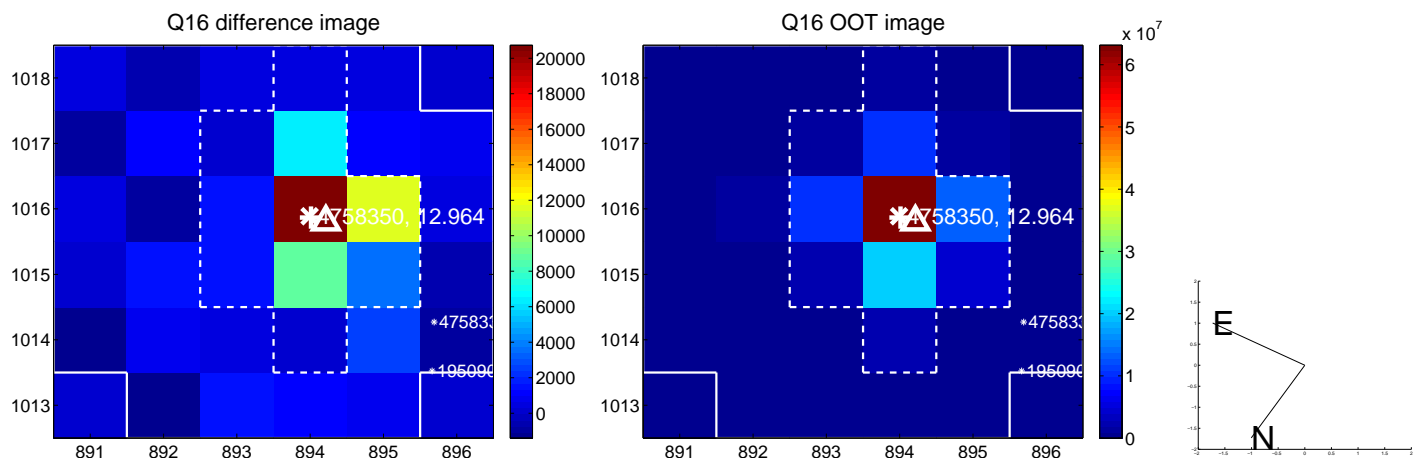
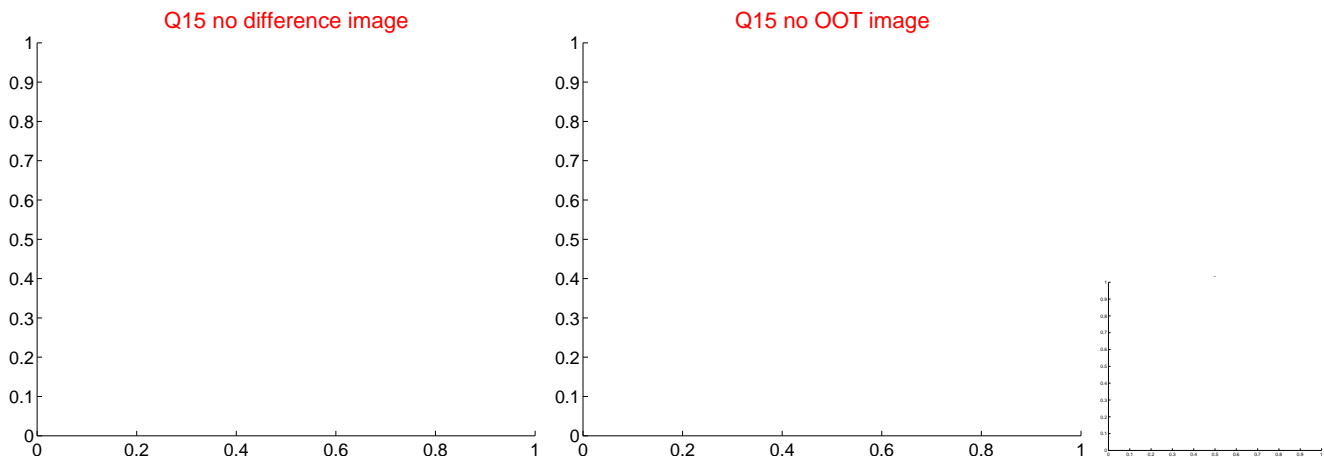
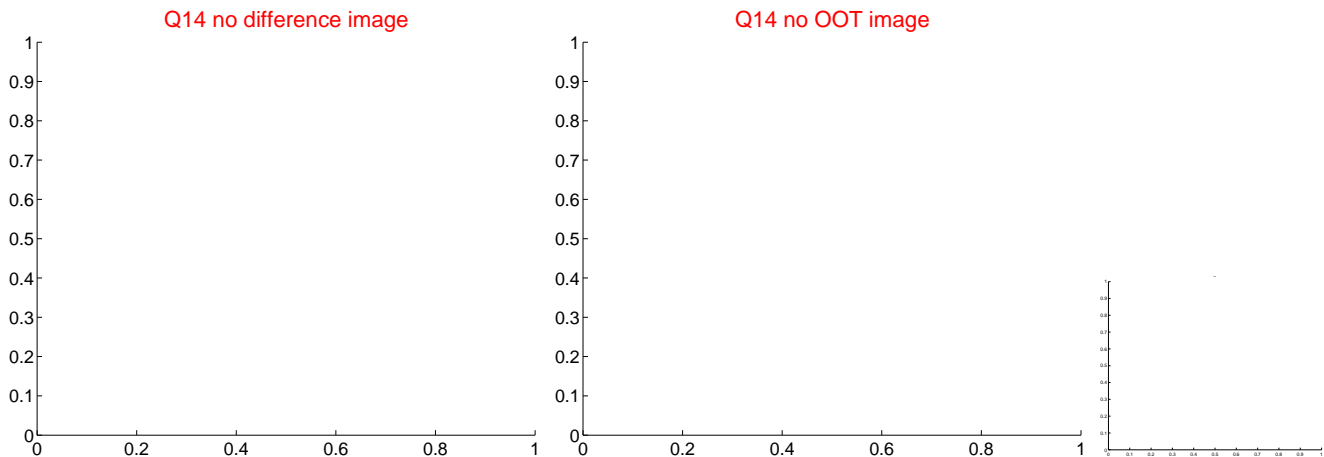
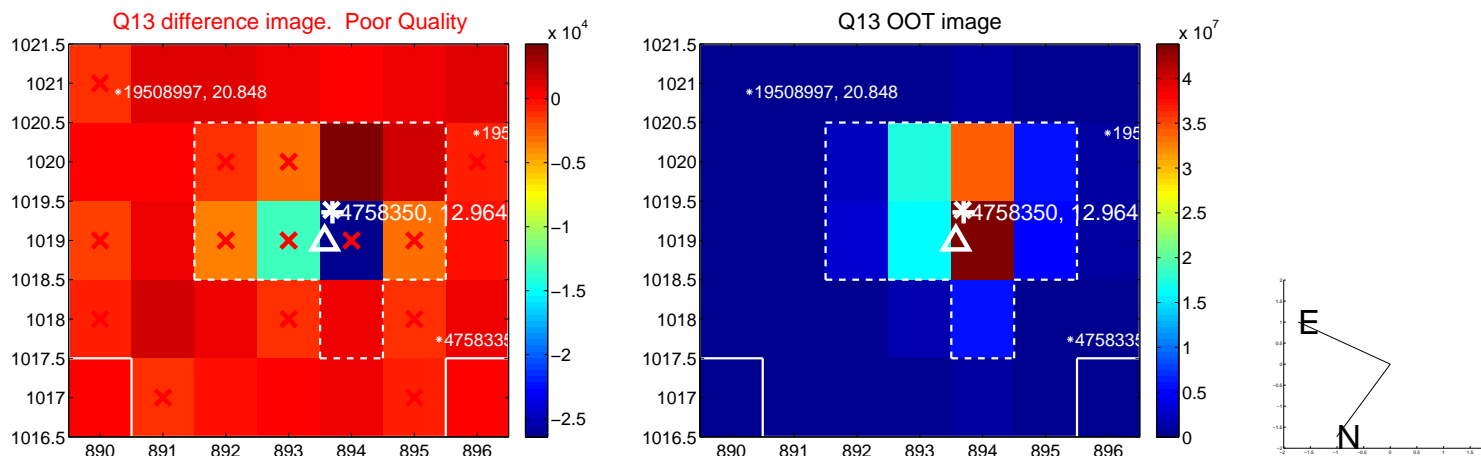




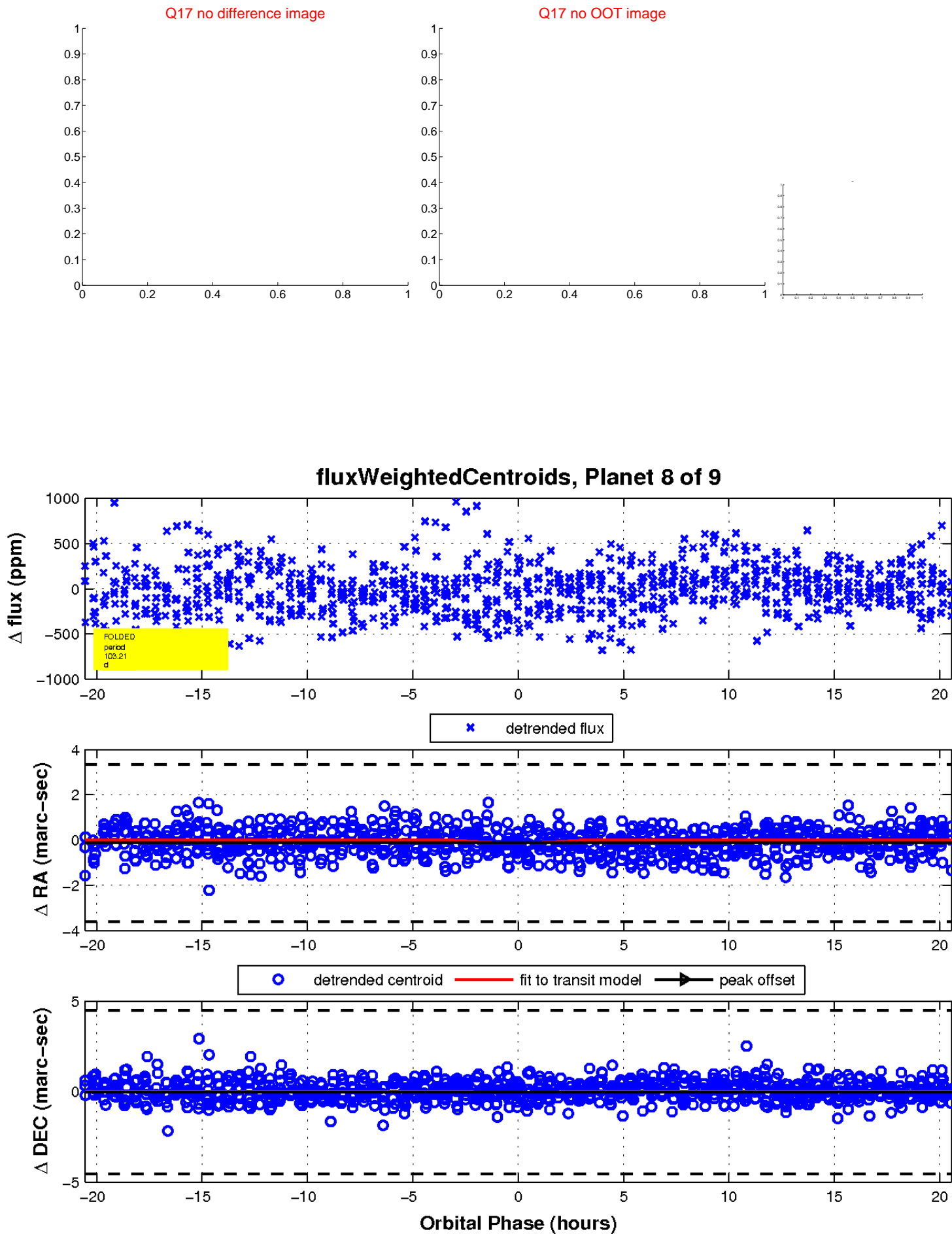
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

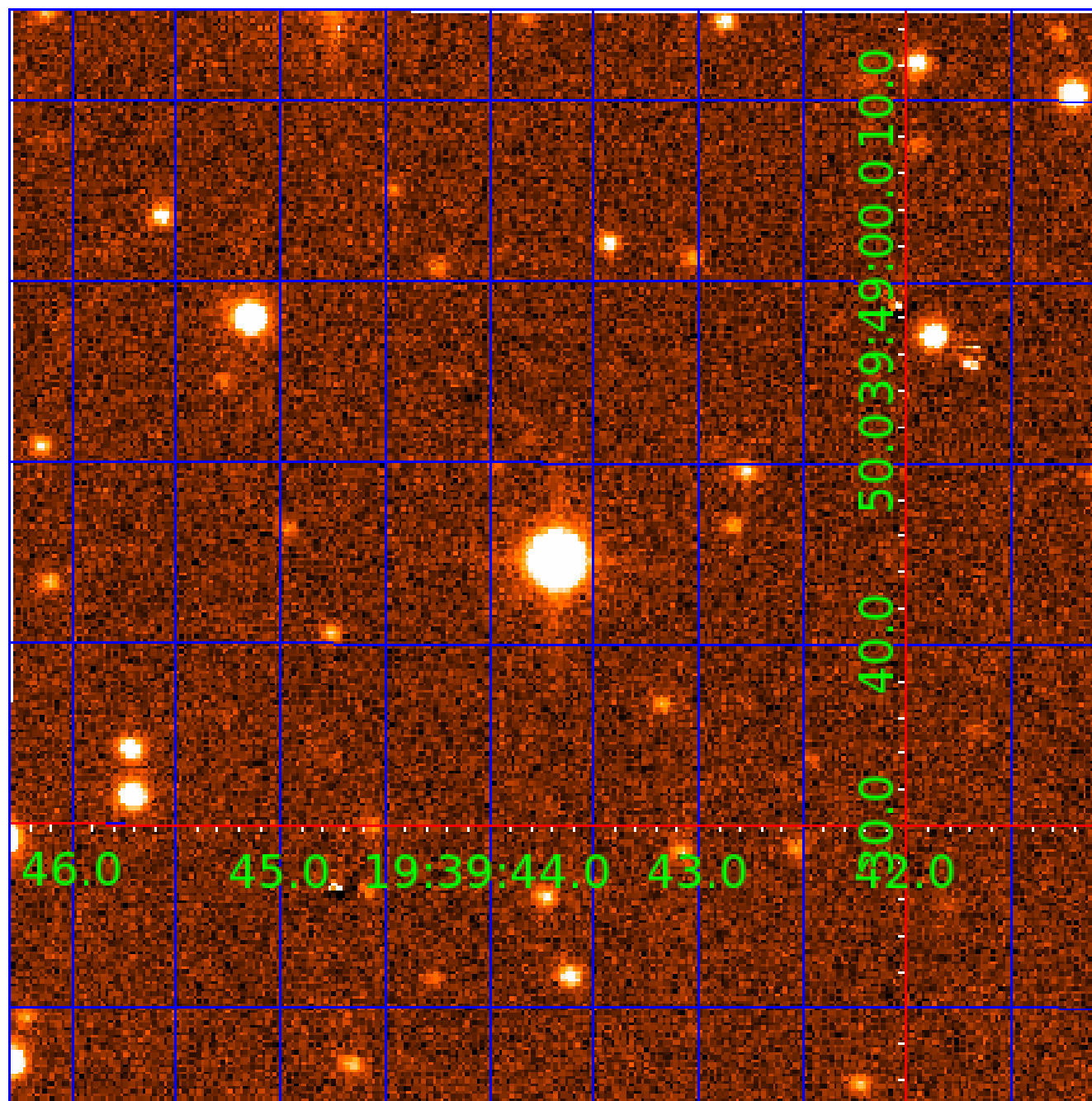


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004758350

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})
004758350-01	OBS	6447.01	1.120936	131.540051	45.9	6.243	8.9	9.4	4.84	6720	6.27	60134.87
004758350-02	OBS	No	95.011757	197.822359	505.4	3.636	9.2	10.2	4.84	6720	11.82	161.51
004758350-03	OBS	No	96.090049	189.921096	409.6	7.506	9.0	9.5	4.84	6720	12.57	159.10
004758350-04	OBS	No	8.956177	133.855318	151.8	3.553	9.2	9.5	4.84	6720	6.74	3764.76
004758350-06	OBS	No	235.351197	303.610912	485.1	5.963	9.2	9.7	4.84	6720	12.16	48.19
004758350-07	OBS	No	59.039315	165.845414	496.1	2.491	9.1	8.9	4.84	6720	12.81	304.59
004758350-08	OBS	No	103.210000	175.789471	404.4	6.858	7.7	7.6	4.84	6720	18.77	144.63
004758350-09	OBS	No	57.135180	142.505796	361.3	4.612	8.9	10.2	4.84	6720	11.45	318.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004758350-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT
004758350-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
004758350-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
004758350-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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.

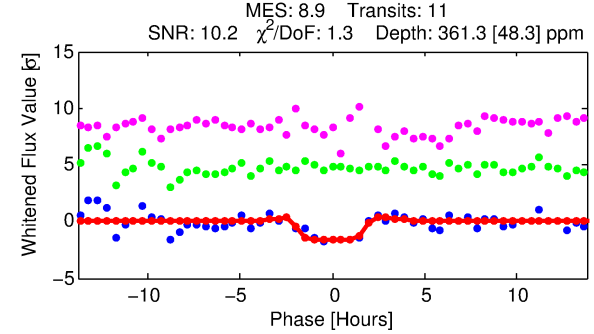
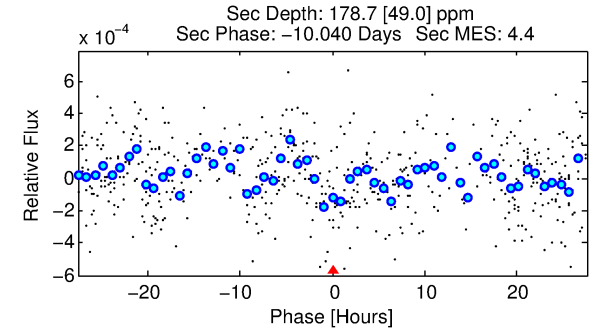
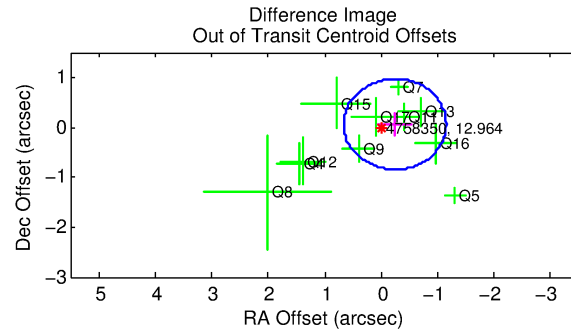
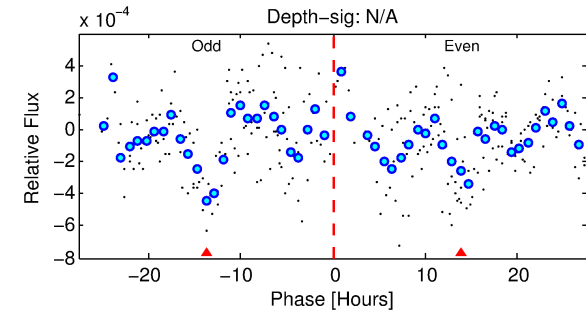
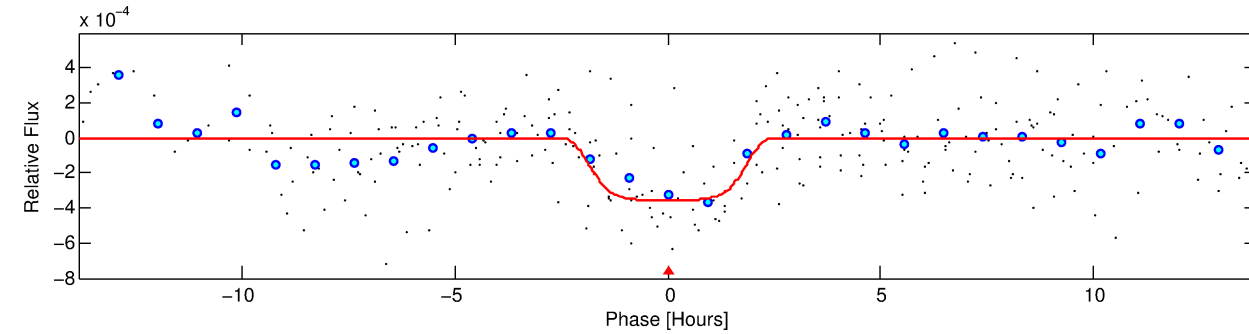
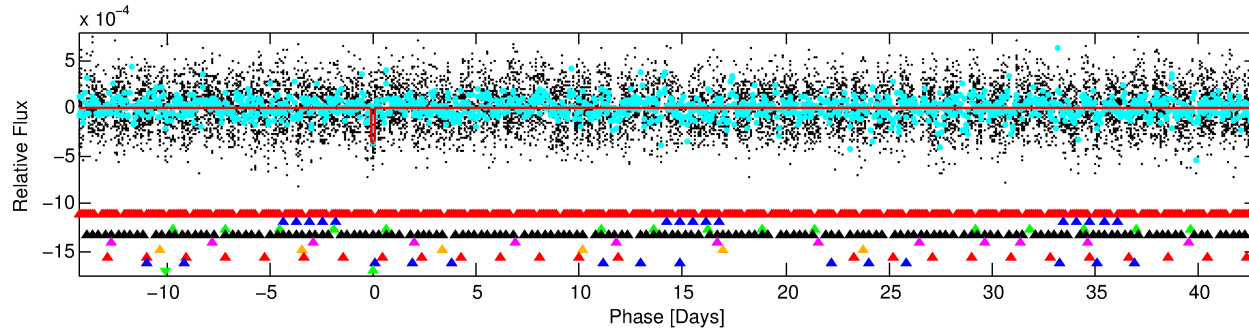
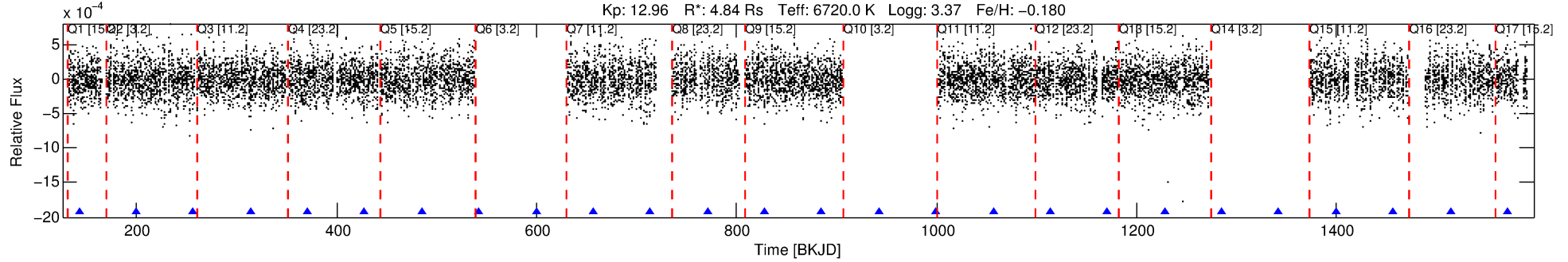
Ephemeris Match Information For 004758350-09

No Significant Match Found

DV One-Page Summary

KIC: 4758350 Candidate: 9 of 9 Period: 57.135 d
KOI: K06447 Corr: No Ephemeris Match

Kp: 12.96 R*: 4.84 Rs Teff: 6720.0 K Logg: 3.37 Fe/H: -0.180



DV Fit Results:

Period = 57.13518 [0.00169] d
Epoch = 142.5058 [0.0174] BKJD
Rp/R* = 0.0216 [0.0021]
a/R* = 34.04 [11.47]
b = 0.96 [0.03]
Seff = 318.20 [202.54]
Teff = 1077 [171] K
Rp = 11.45 [4.75] Re
a = 0.3671 [0.1428] AU
Ag = 101.15 [71.67] [1.40σ]
Teffp = 5281 [478] K [8.27σ]

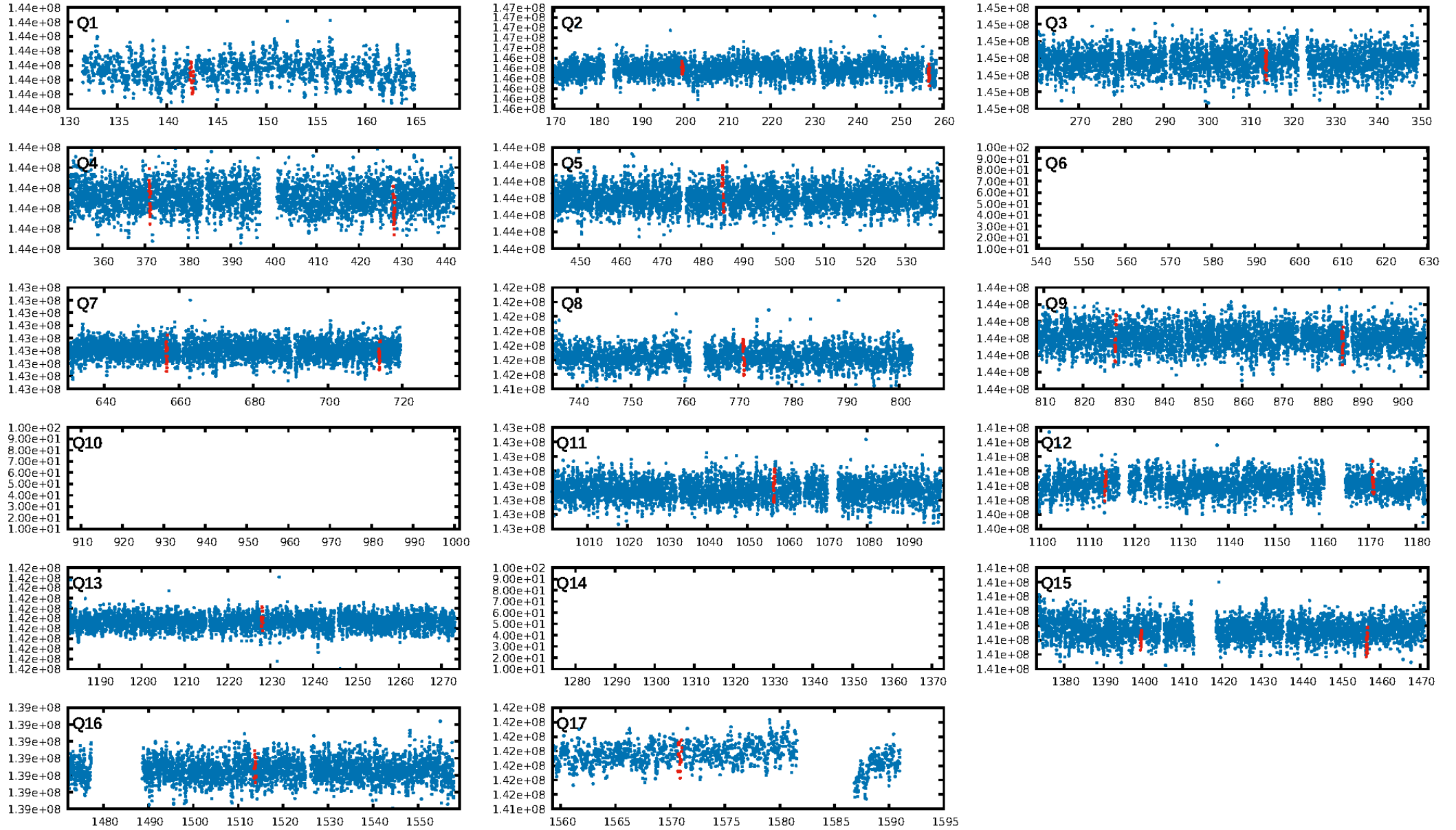
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [198.60σ]
LongPeriod-sig: 100.0% [8.72σ]
ModelChiSquare2-sig: 62.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [11/11]
GhostDiagnostic-chr: 1.825
Centroid-sig: 37.8%
Centroid-so: 0.365 arcsec [0.83σ]
OotOffset-rm: 0.251 arcsec [0.83σ]
KicOffset-rm: 0.350 arcsec [1.08σ]
OotOffset-st: 0/3/4/4 [11]
KicOffset-st: 0/3/4/4 [11]
DiffImageQuality-fgm: 0.64 [7/11]
DiffImageOverlap-fno: 0.00 [0/14]

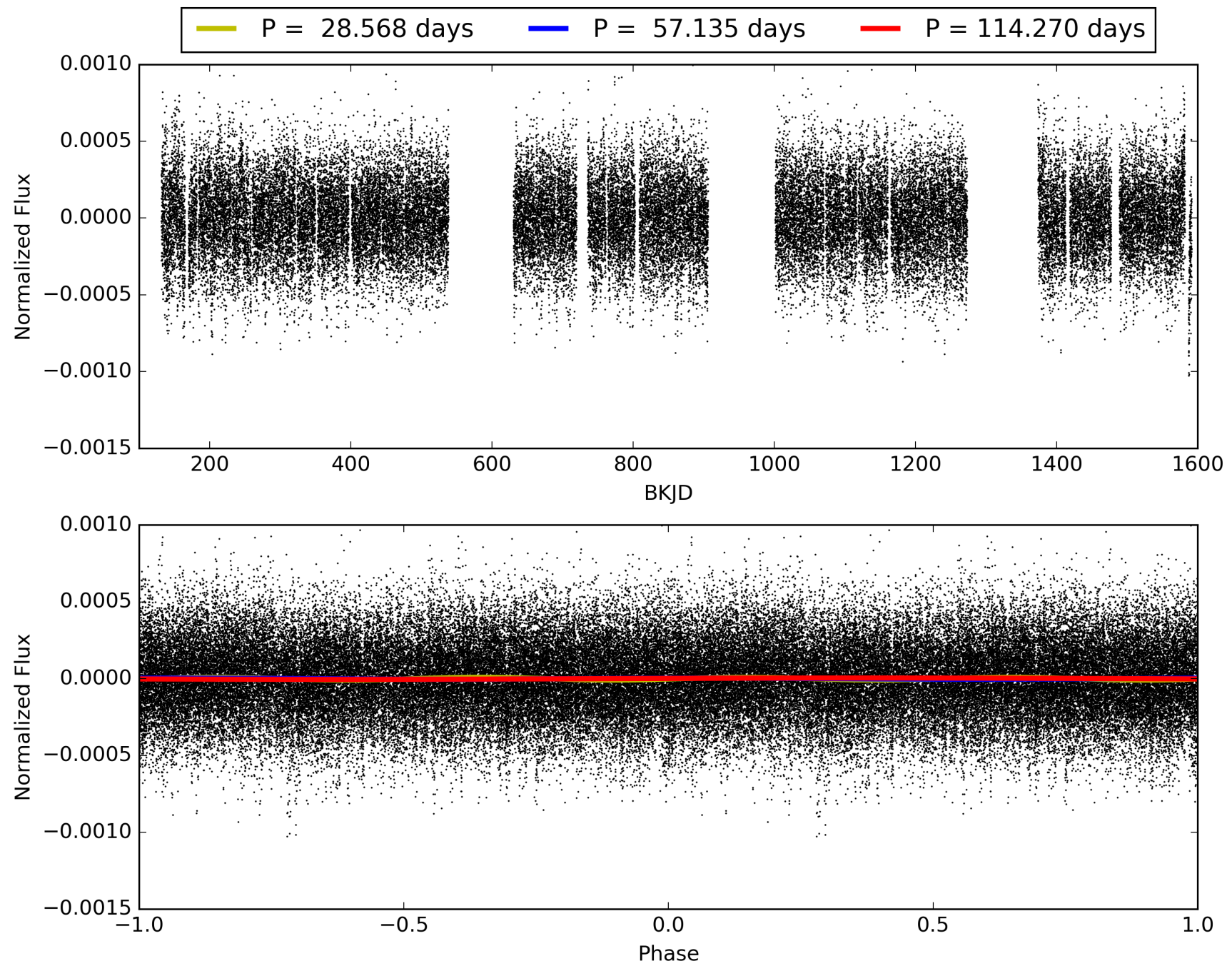
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:34:56 Z

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

TCE 004758350-09, PDC Light Curves

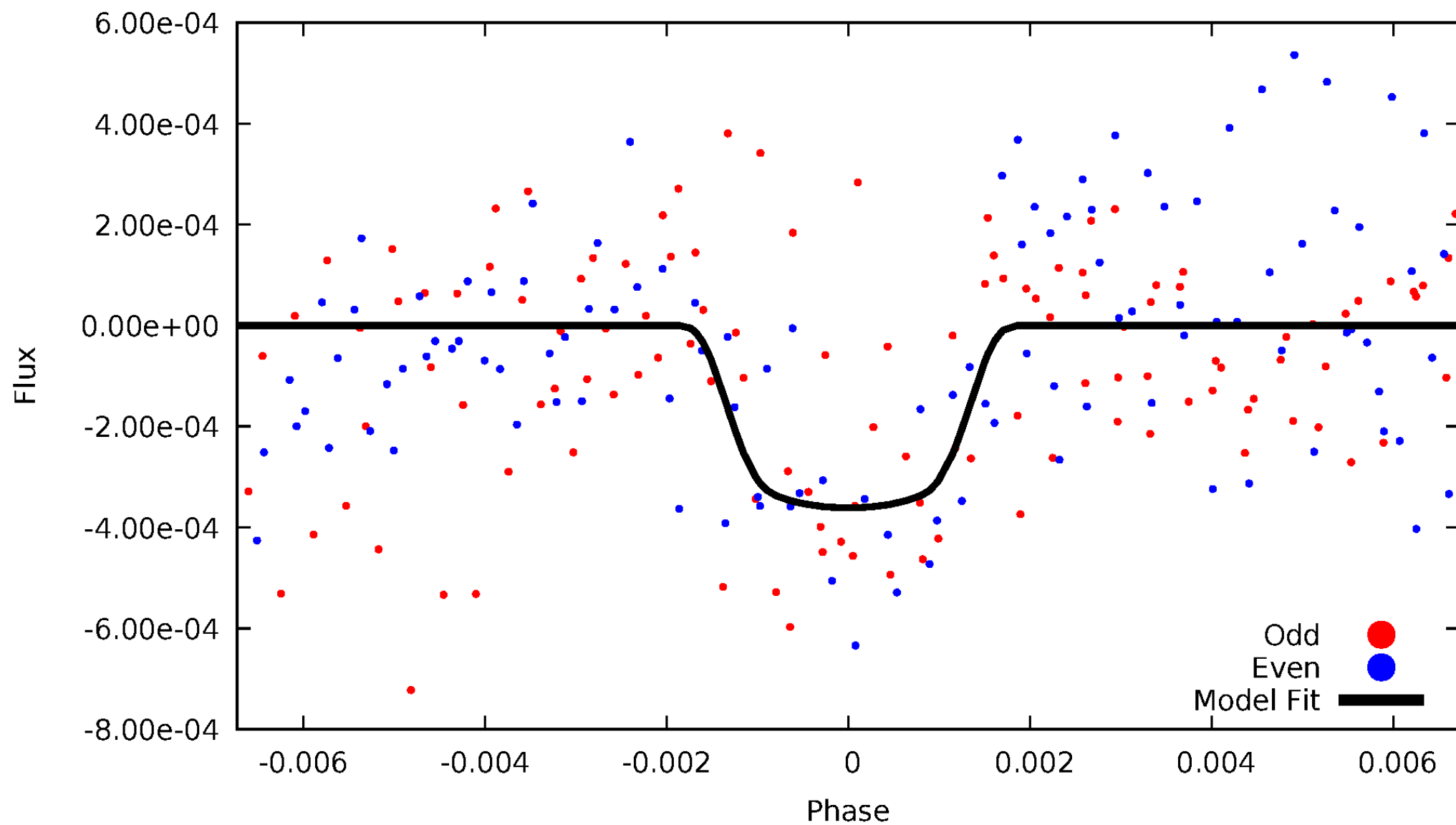


TCE 004758350-09



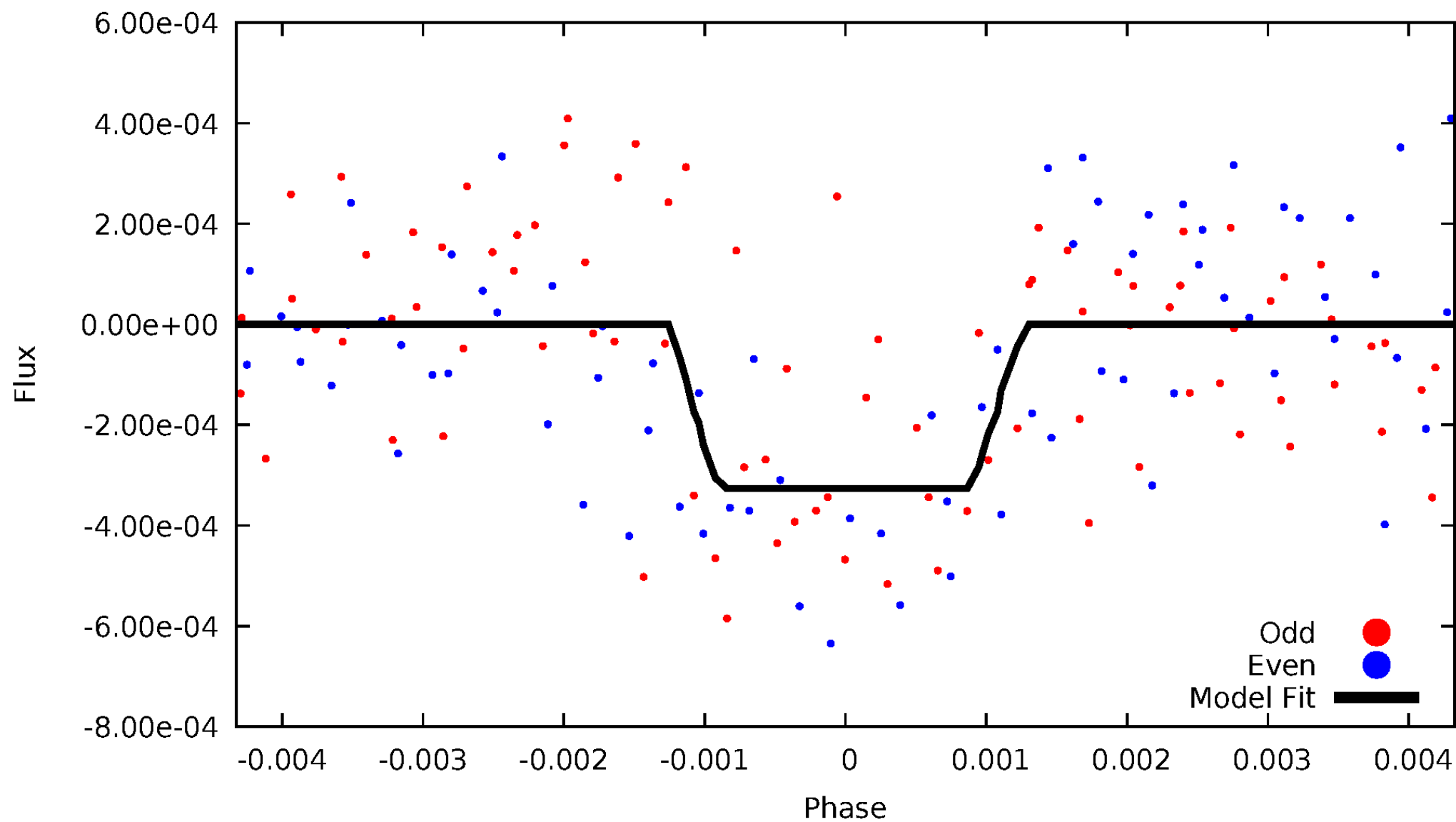
DV Odd/Even

TCE 004758350-09



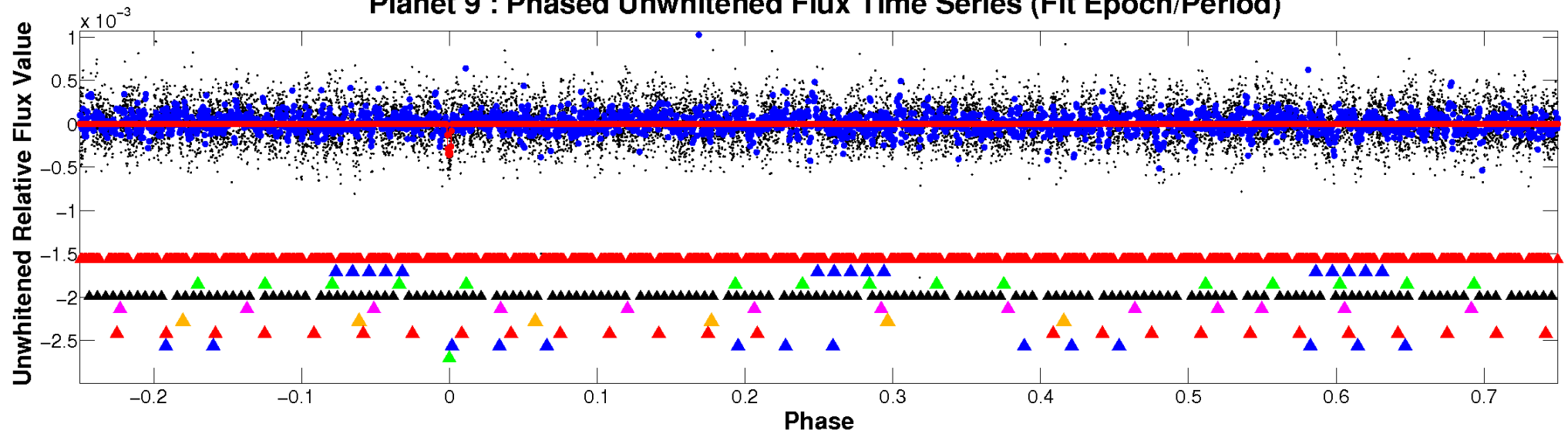
ALT Odd/Even

TCE 004758350-09

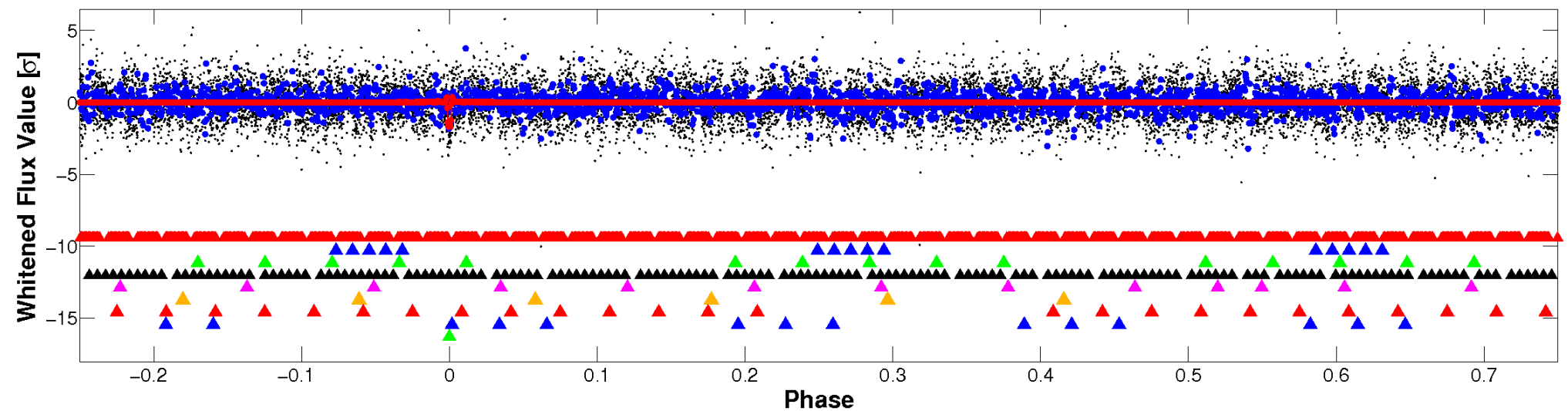


Non-Whitened Vs. Whitened Light Curve

Planet 9 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

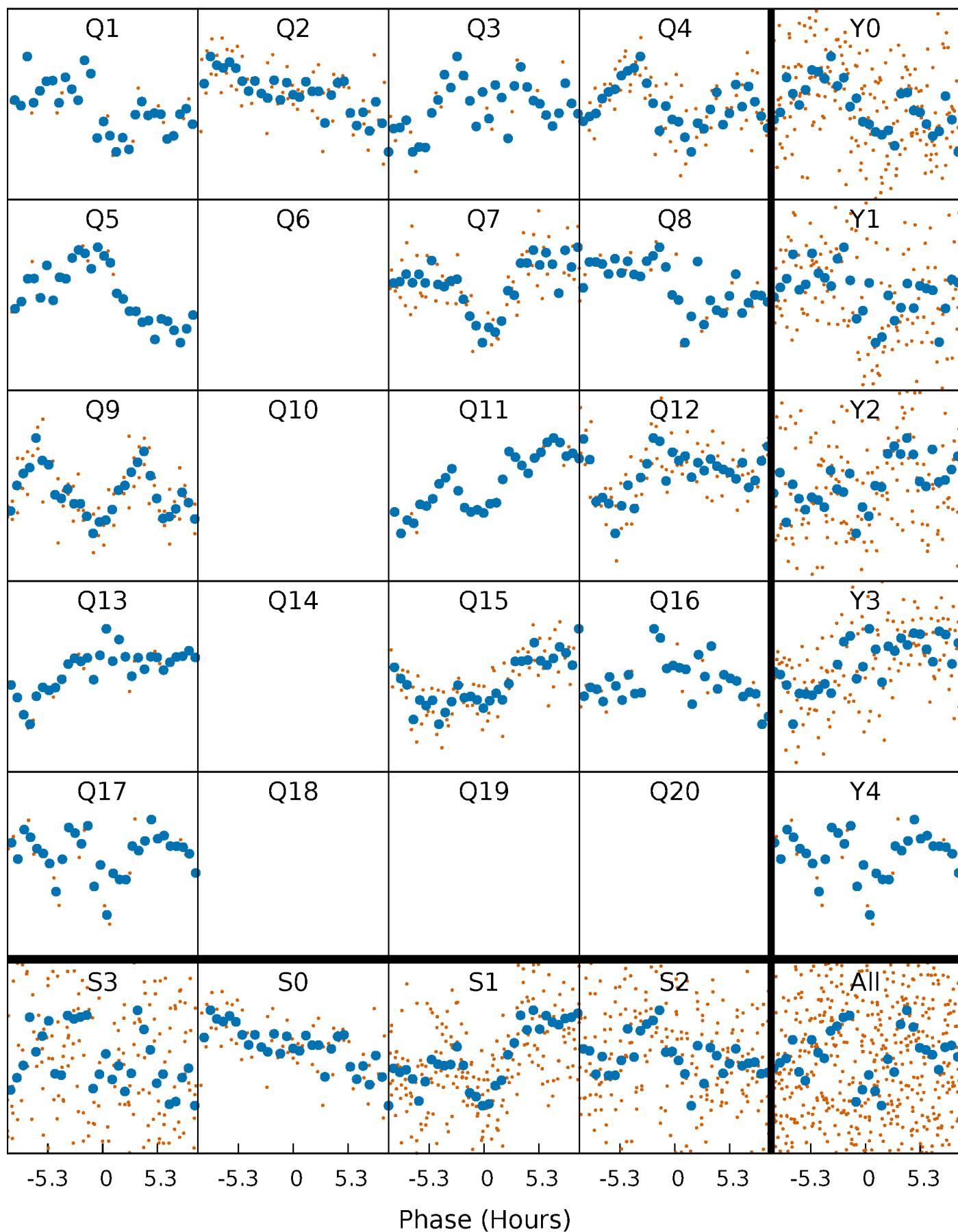


Planet 9 : Phased Whitened Flux Time Series (Fit Epoch/Period)



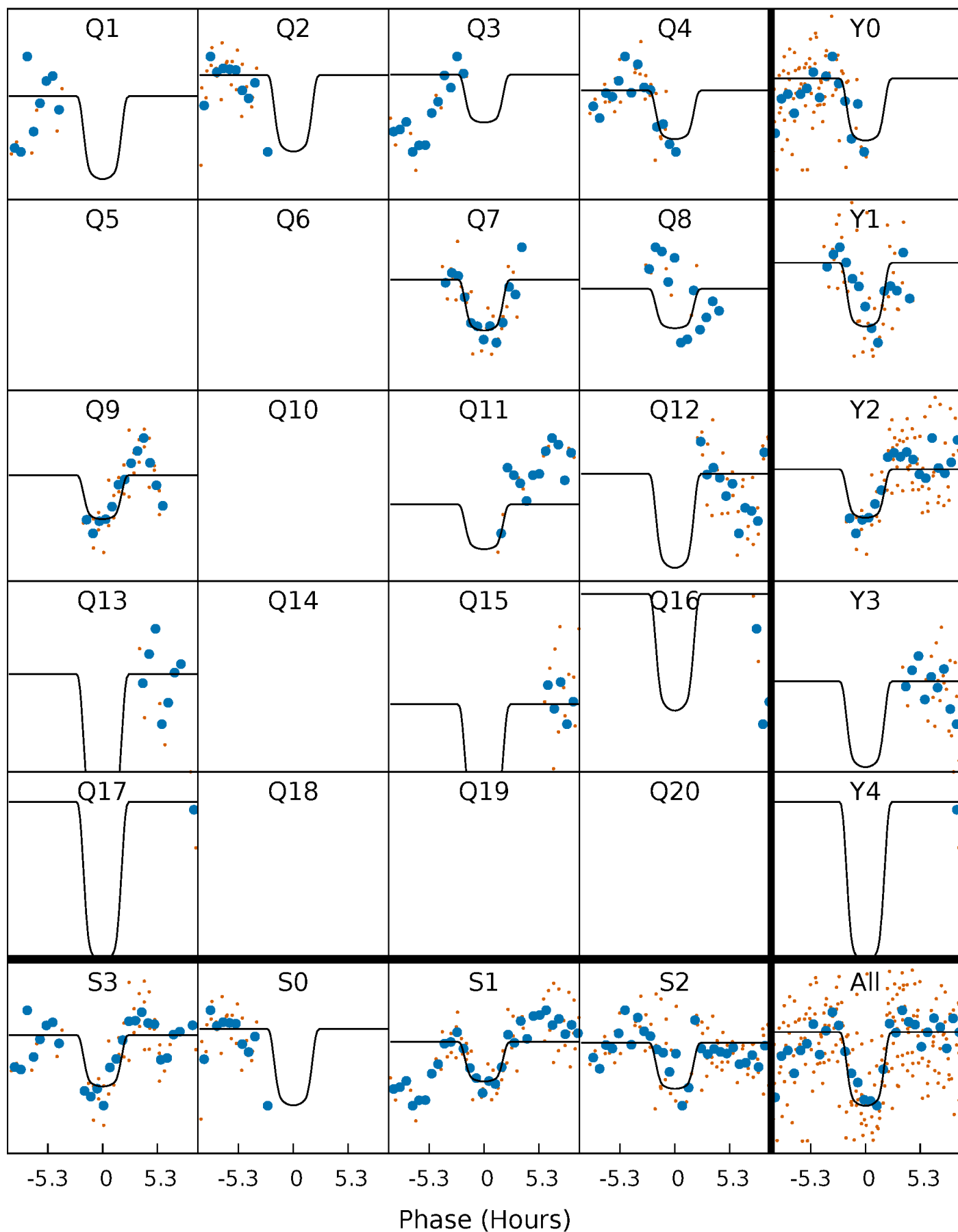
PDC Quarter-Phased Transit Curves

TCE 004758350-09 P= 57.135180 Days $T_0=142.505796$ (BKJD)



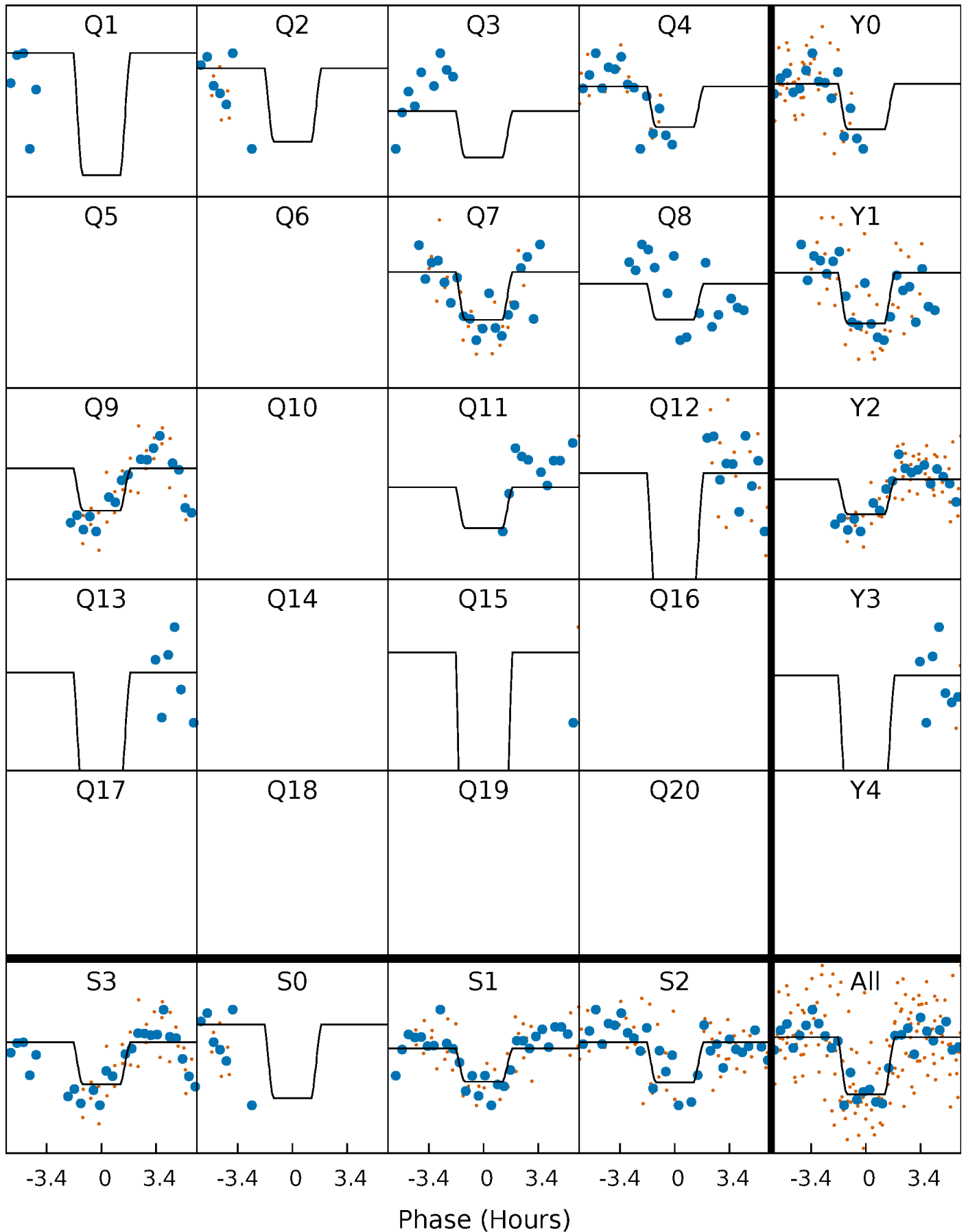
DV Quarter-Phased Transit Curves

TCE 004758350-09 P= 57.135180 Days $T_0=142.505796$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

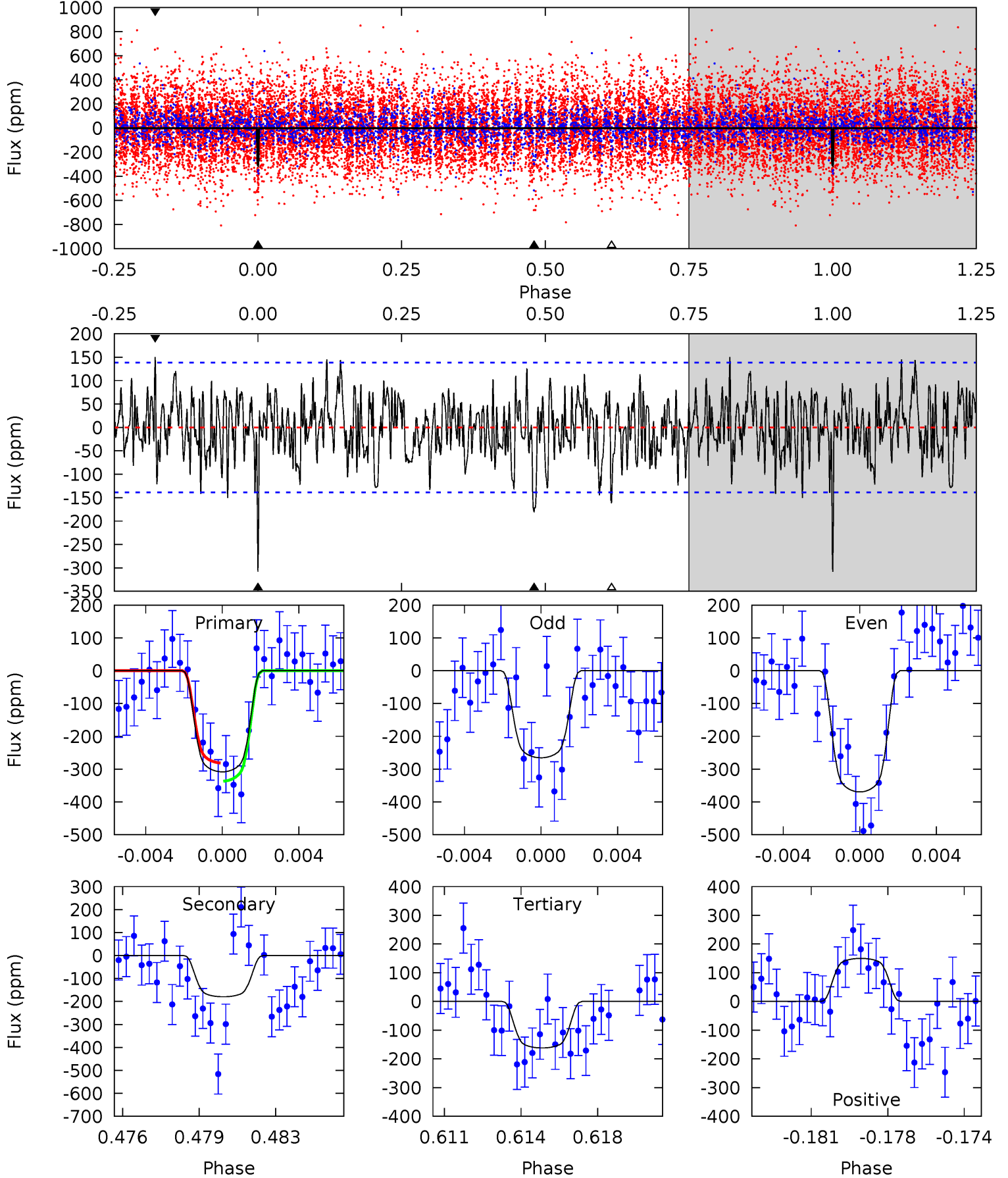
TCE 004758350-09 $P = 57.136224$ Days $T_0 = 142.503676$ (BKJD)



DV Model-Shift Uniqueness Test

004758350-09, P = 57.135180 Days, E = 85.370616 Days

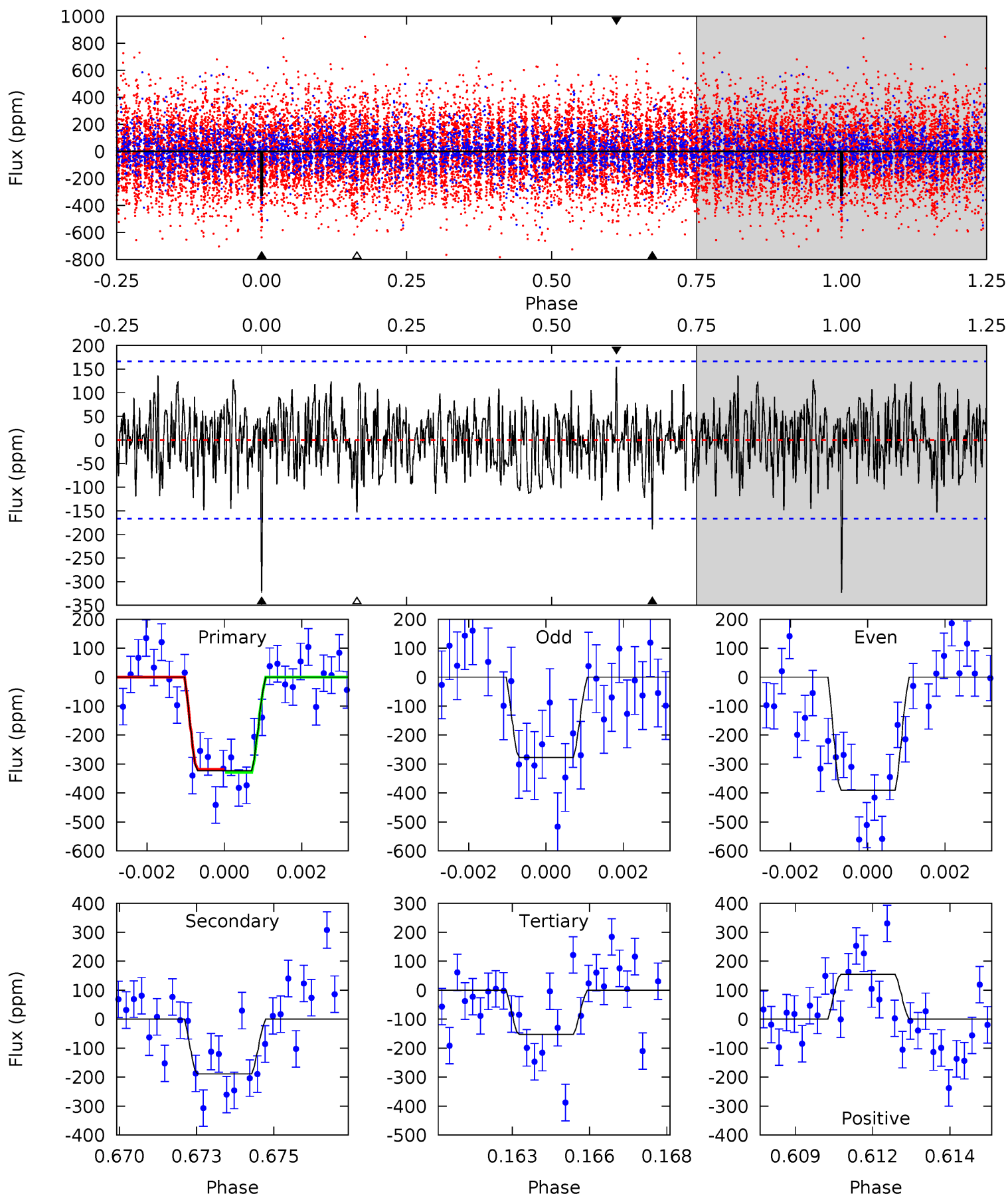
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	6.77	6.10	5.65	5.22	2.92	1.96	5.52	5.97	0.67	1.12	1.93	0.77	0.33	1.05



Alt Model-Shift Uniqueness Test

004758350-09, P = 57.136224 Days, E = 85.367452 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	6.00	4.85	4.91	5.29	3.03	1.52	5.41	5.35	1.14	1.09	1.78	1.03	0.32	0.16



Stellar Parameters For KIC 004758350

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6720^{+180}_{-220}	$3.373^{+0.366}_{-0.065}$	$-0.180^{+0.350}_{-0.250}$	$4.845^{+0.345}_{-1.955}$	$2.020^{+0.124}_{-0.372}$	$0.025^{+0.075}_{-0.003}$
	+3%/-3%	+11%/-2%	+194%/-139%	+7%/-40%	+6%/-18%	+298%/-14%
Source	PHO1	FLK73	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 004758350-09 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-180 ± 27	$10.75^{+1.74}_{-2.17}$	1466^{+85}_{-133}	5288^{+347}_{-297}	114^{+60}_{-33}
Alt.	-189 ± 31	$8.97^{+1.53}_{-2.01}$	1472^{+76}_{-141}	5837^{+487}_{-414}	173^{+107}_{-52}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

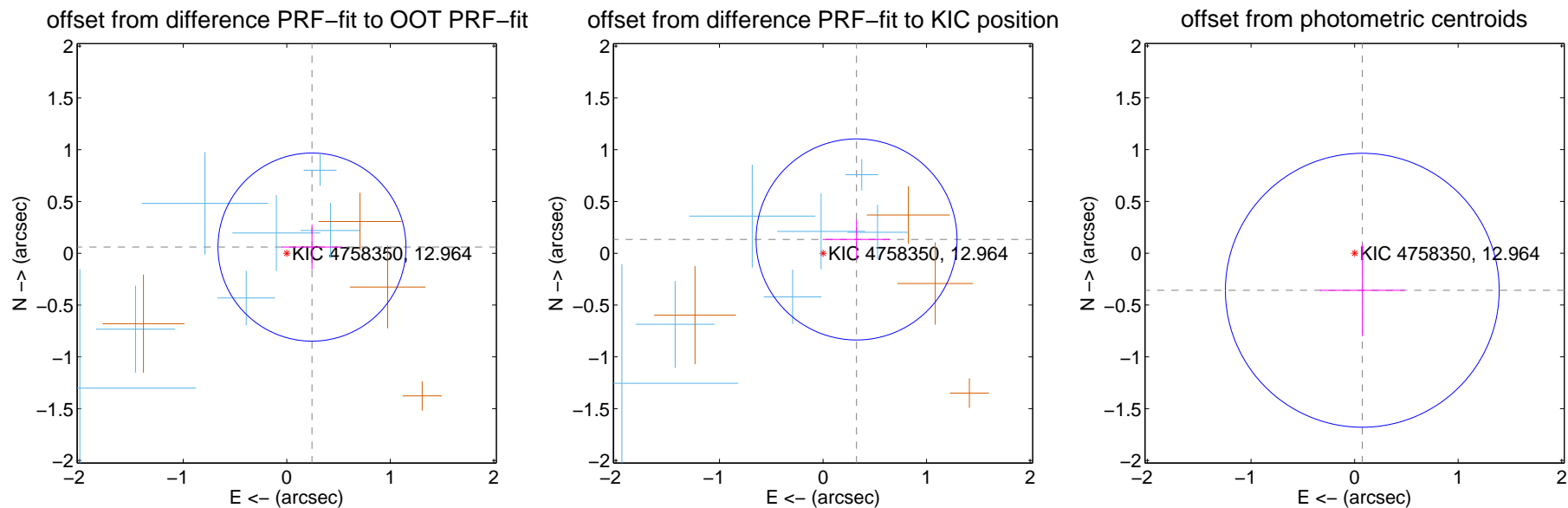
DV Centroid Data

Supplemental centroid analysis for 004758350-09. Kepler magnitude: 12.96. Transit SNR 10.23

There are 7 quarters with good PRF difference image offsets

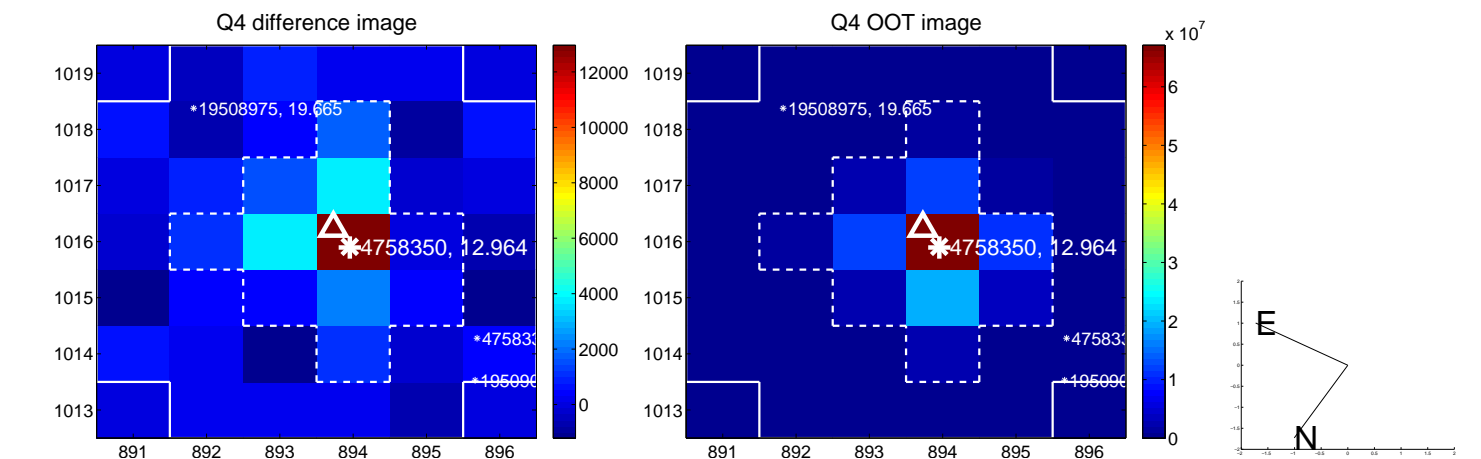
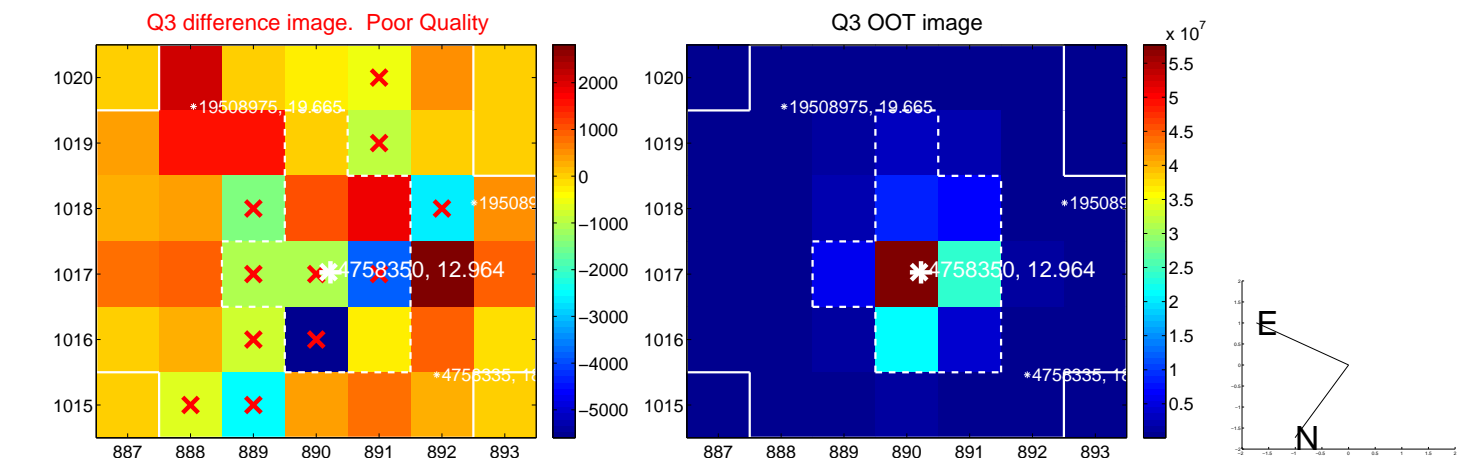
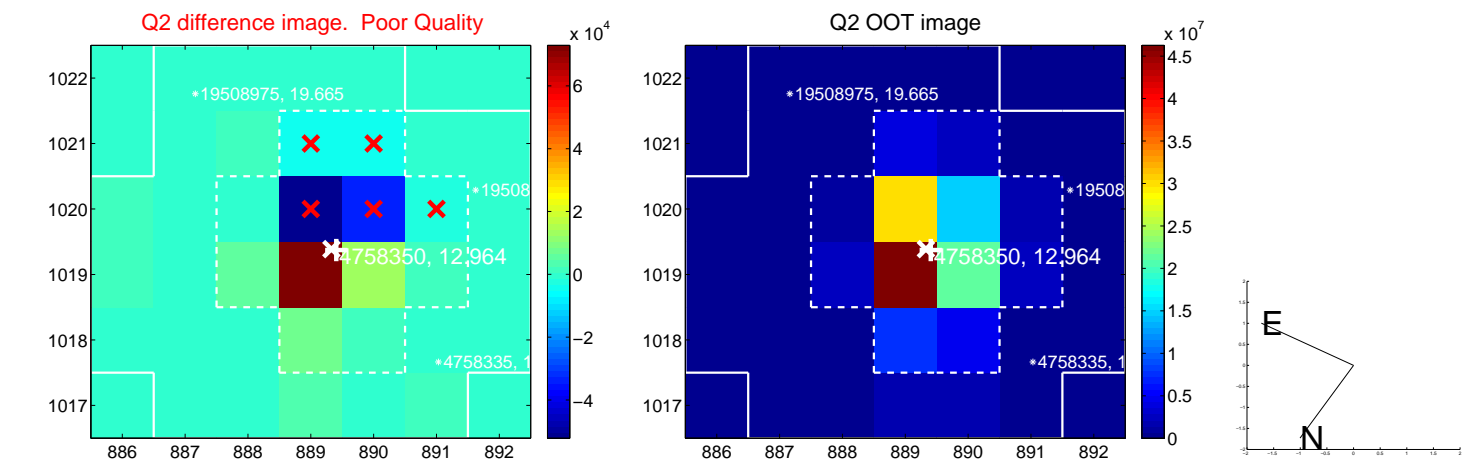
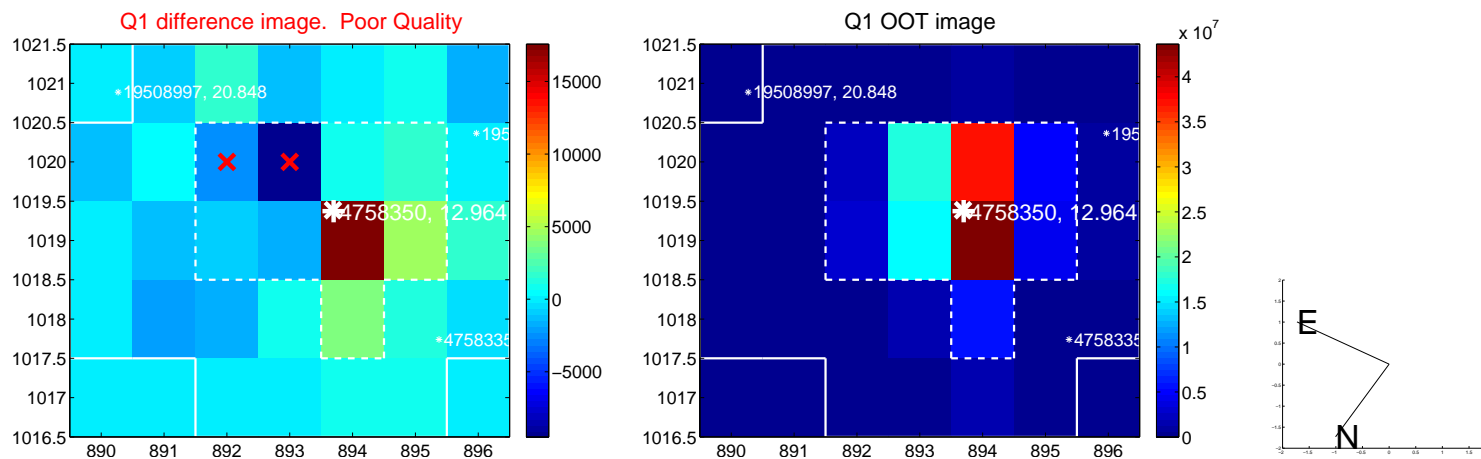
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.251 ± 0.303	0.83	-0.244 ± 0.294	0.060 ± 0.216
PRF-fit source offset from KIC position	0.350 ± 0.324	1.08	-0.324 ± 0.327	0.134 ± 0.191
photometric centroid source offset	0.37 ± 0.44	0.83	-0.07 ± 0.41	-0.36 ± 0.44

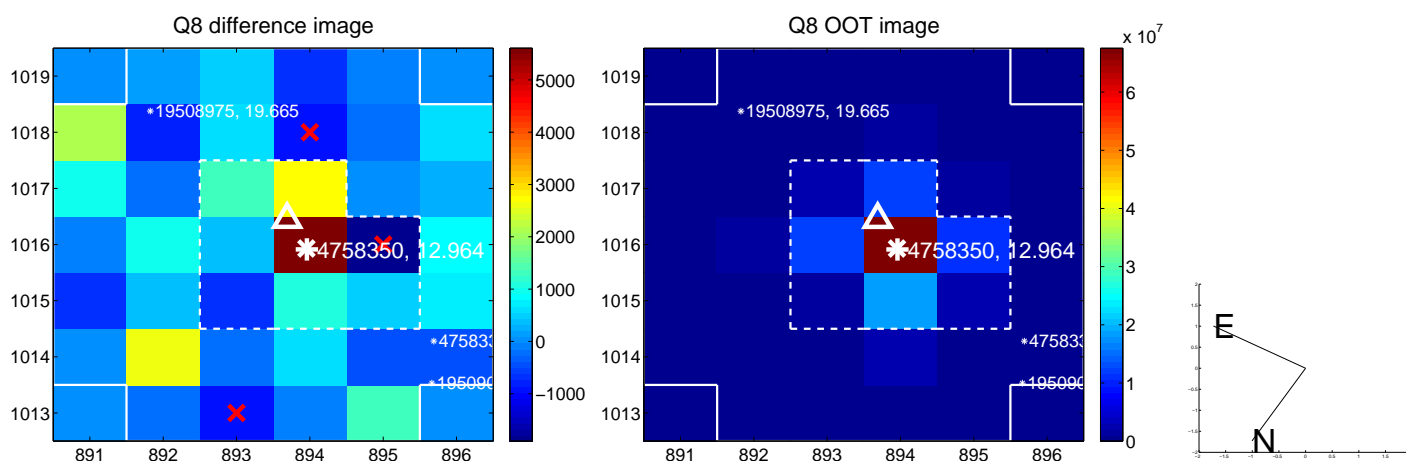
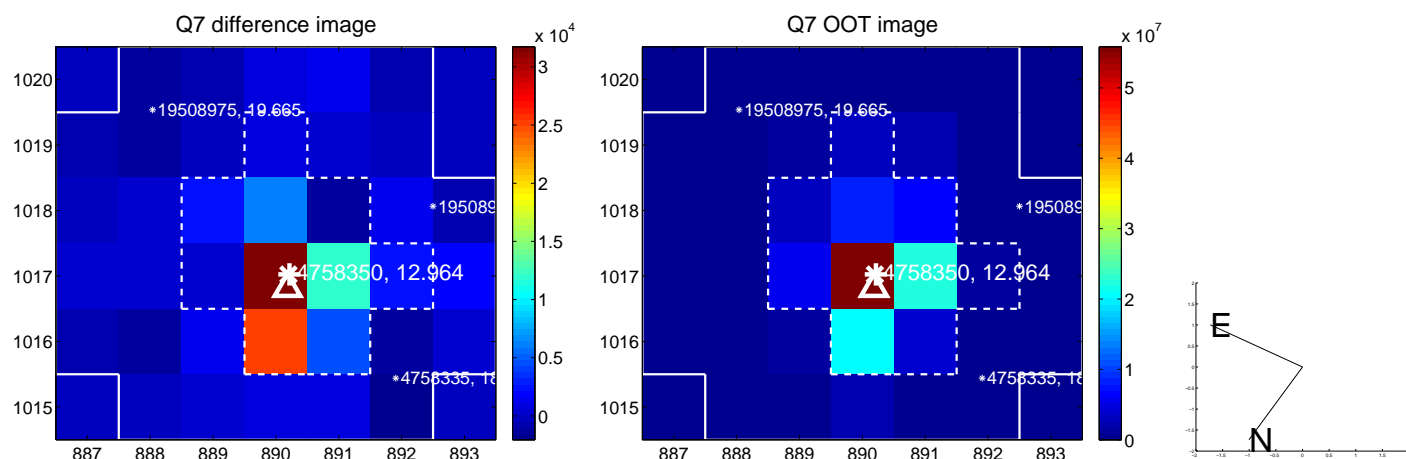
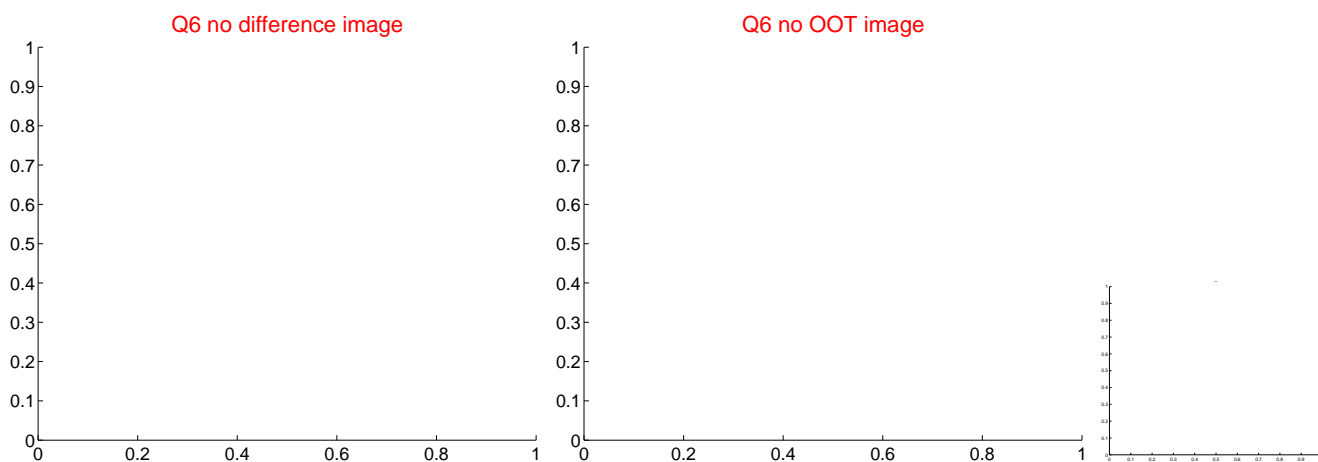
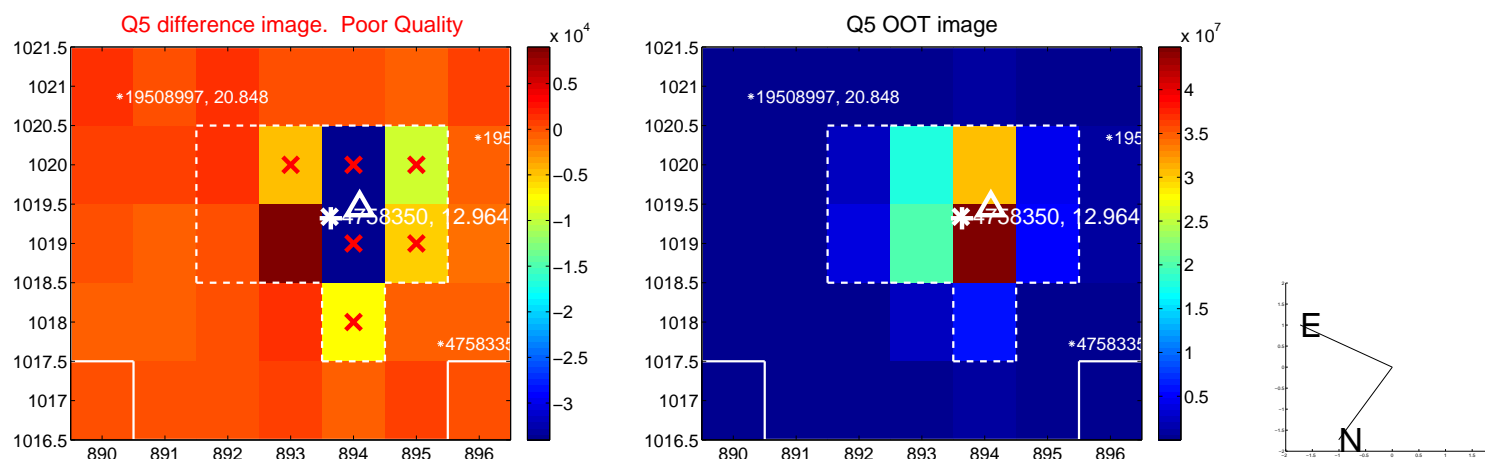


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

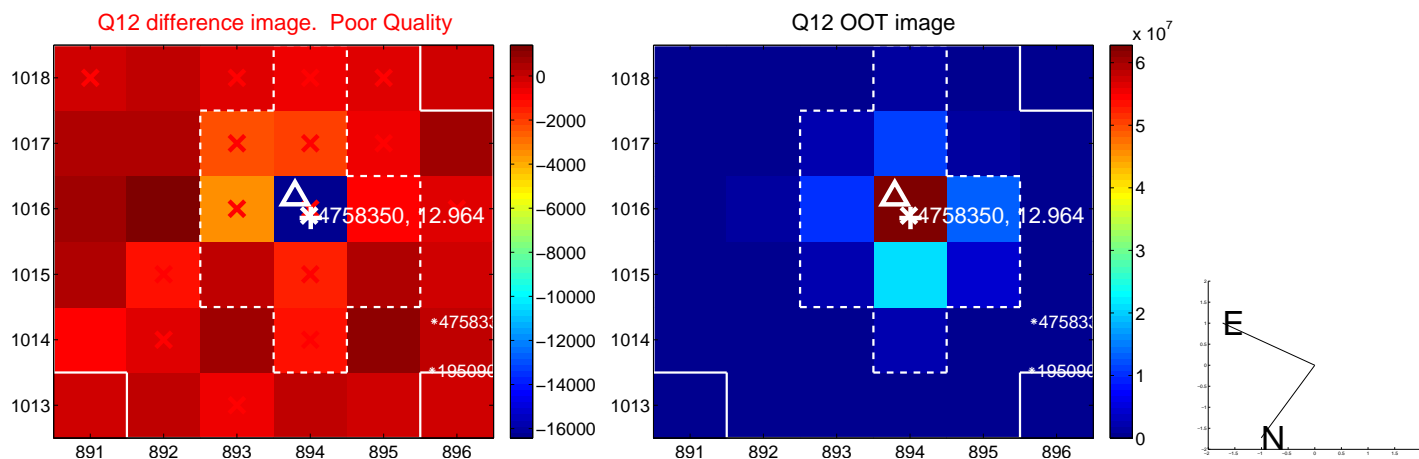
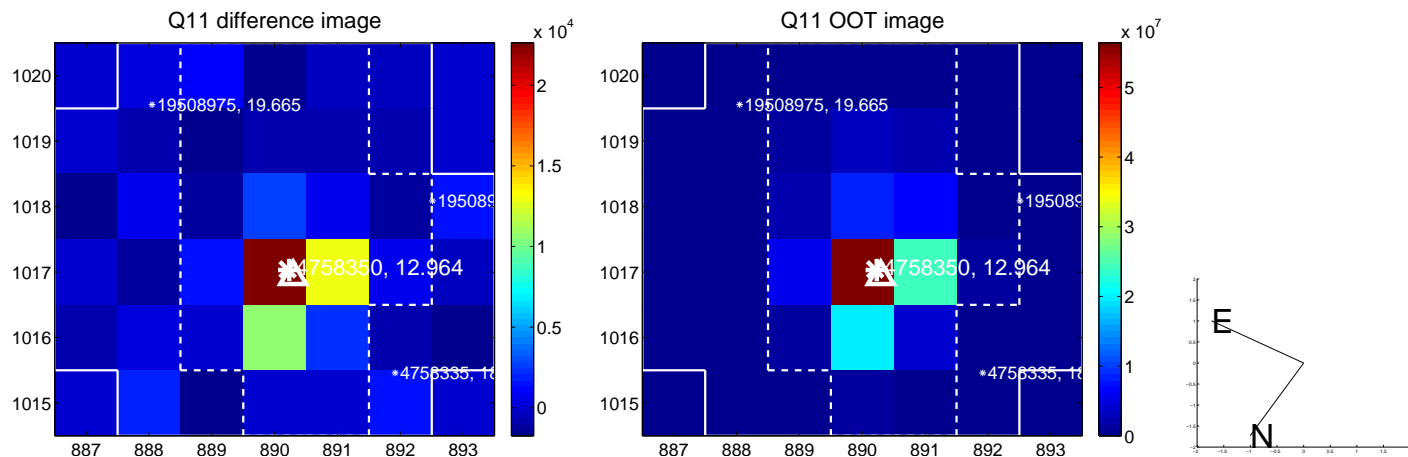
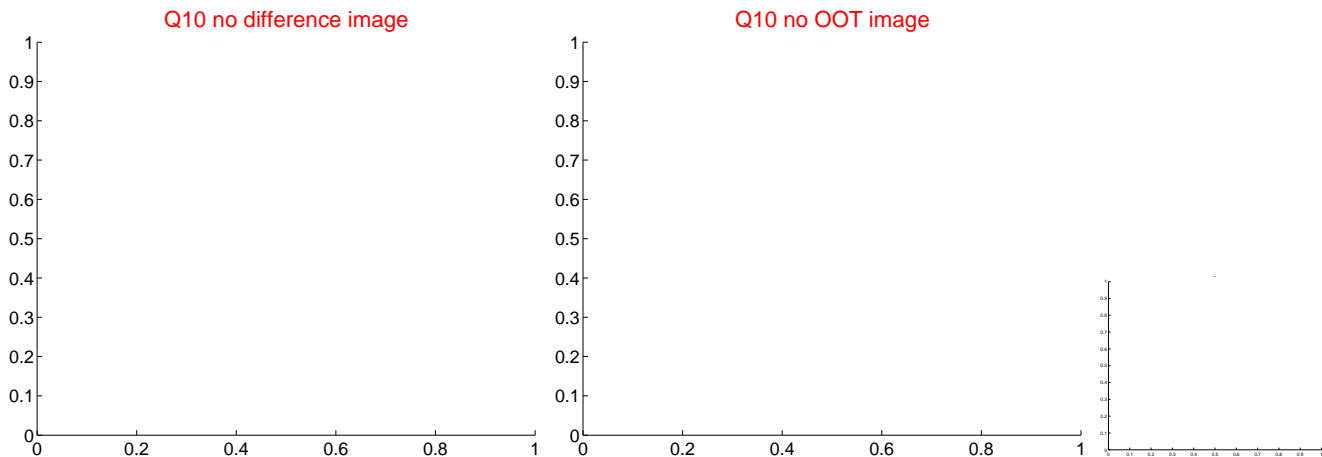
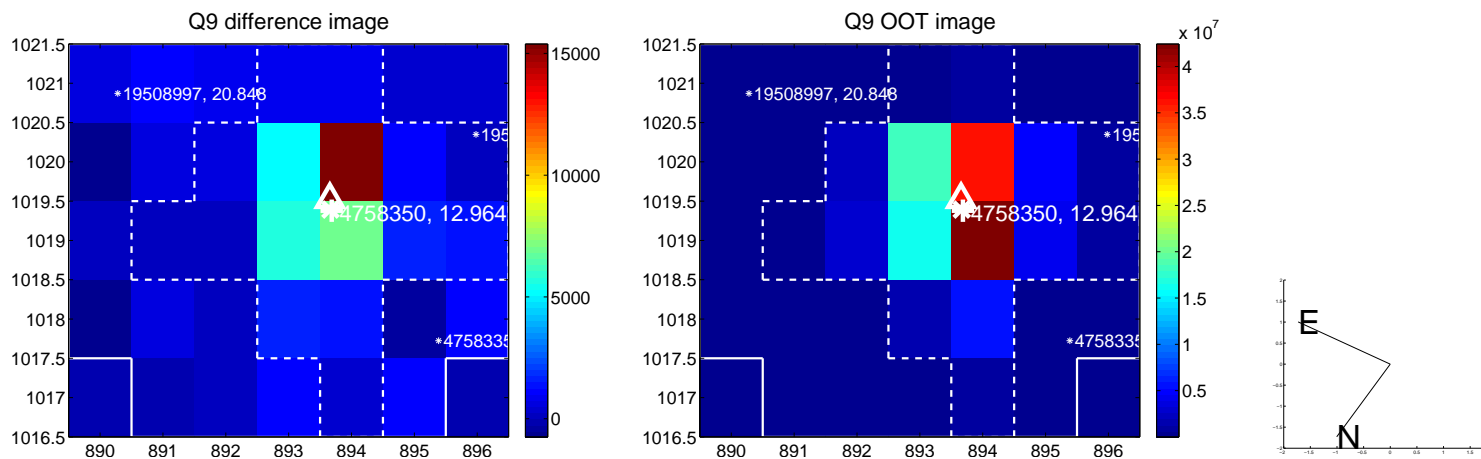
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



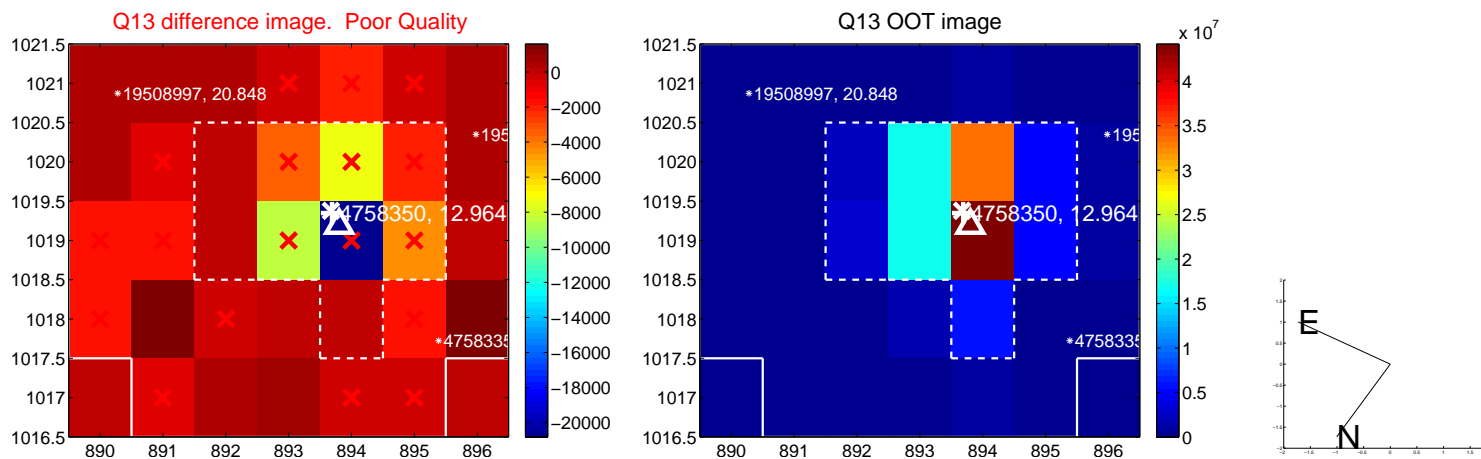
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



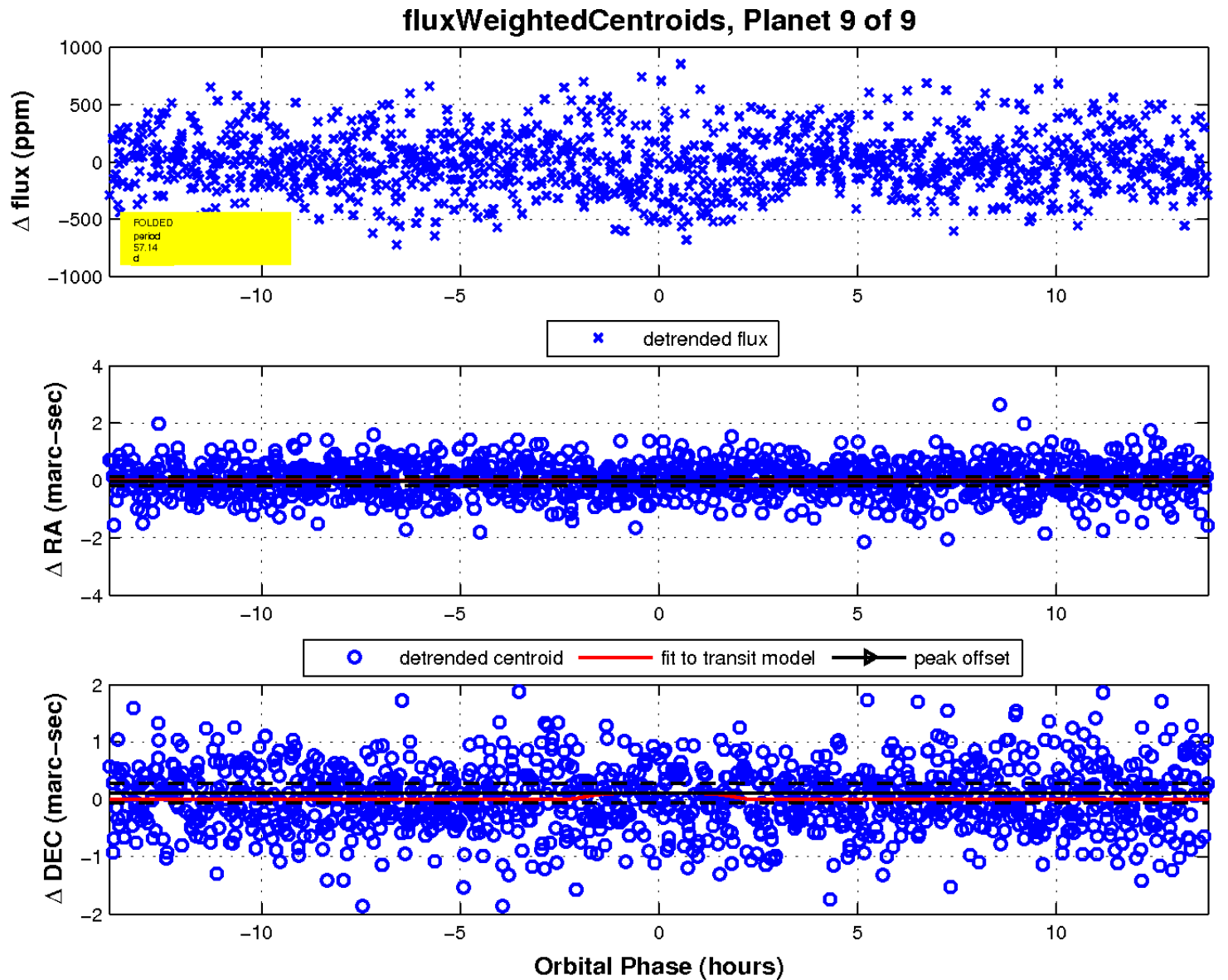
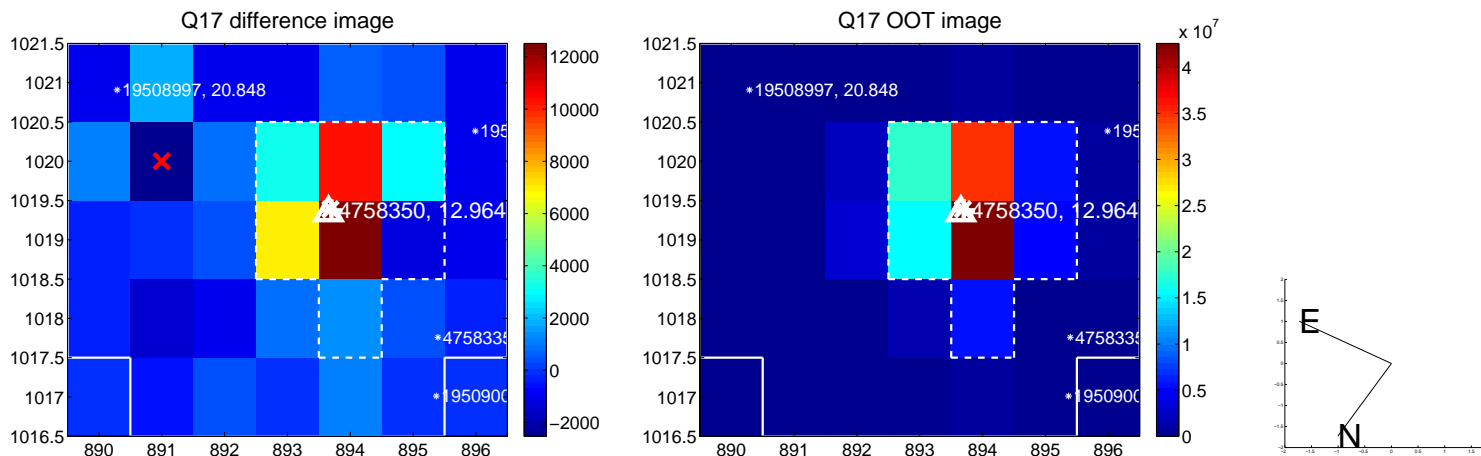
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

