

KIC 008947255

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})
008947255-01	OBS	No	265.672434	278.499139	1759.5	8.332	16.4	7.9	0.39	3504	1.75	0.06
008947255-02	OBS	No	411.533699	236.099099	1903.2	8.078	16.7	8.1	0.39	3504	1.96	0.03
008947255-03	OBS	No	415.647580	469.433461	2111.7	2.689	14.0	7.9	0.39	3504	1.76	0.03
008947255-05	OBS	No	407.071141	151.135478	1952.1	12.204	14.2	6.3	0.39	3504	1.74	0.03
008947255-06	OBS	No	425.937558	536.177216	1003.9	12.500	13.0	-1.0	0.39	3504	1.21	0.03
008947255-07	OBS	No	447.141041	248.175127	1693.7	3.877	11.8	6.8	0.39	3504	1.77	0.03
008947255-08	OBS	No	309.716060	276.625165	1283.2	18.611	12.6	5.2	0.39	3504	1.42	0.05
008947255-09	OBS	No	661.829386	251.745466	1217.9	5.000	11.9	-1.0	0.39	3504	1.34	0.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008947255-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
008947255-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
008947255-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008947255-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008947255-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
008947255-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV
008947255-08	OBS	FP	0.00	1	0	1	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
008947255-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_NOFITS

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

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

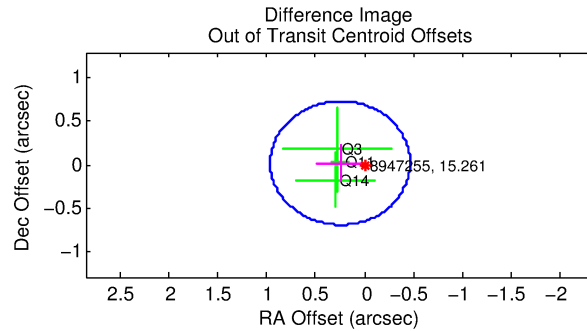
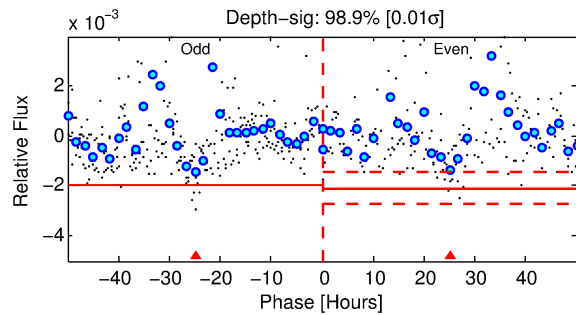
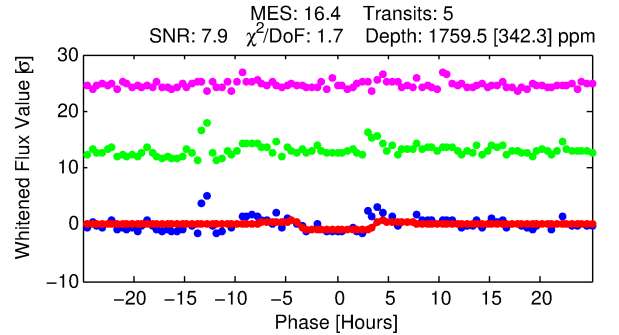
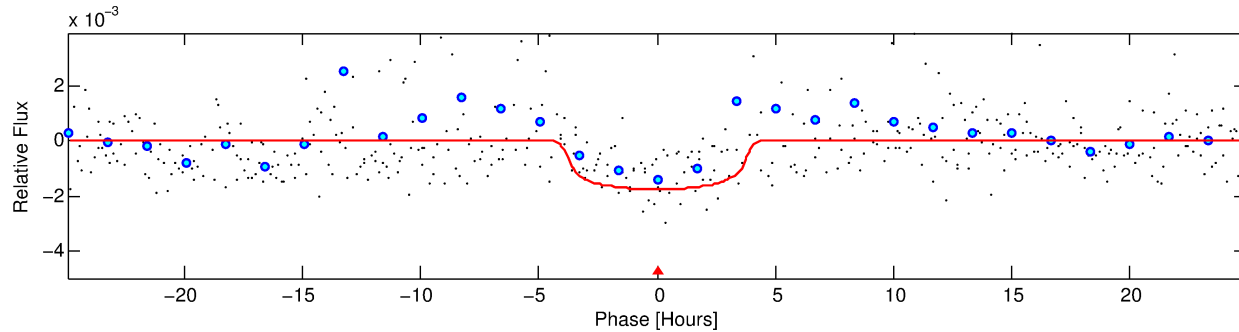
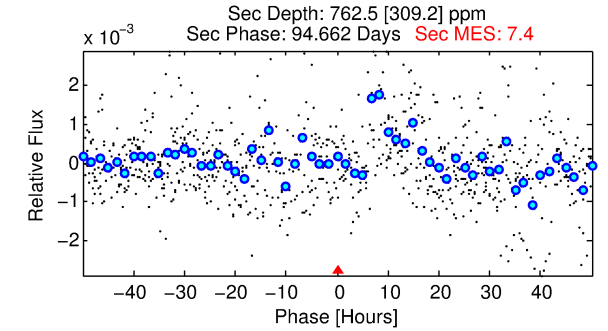
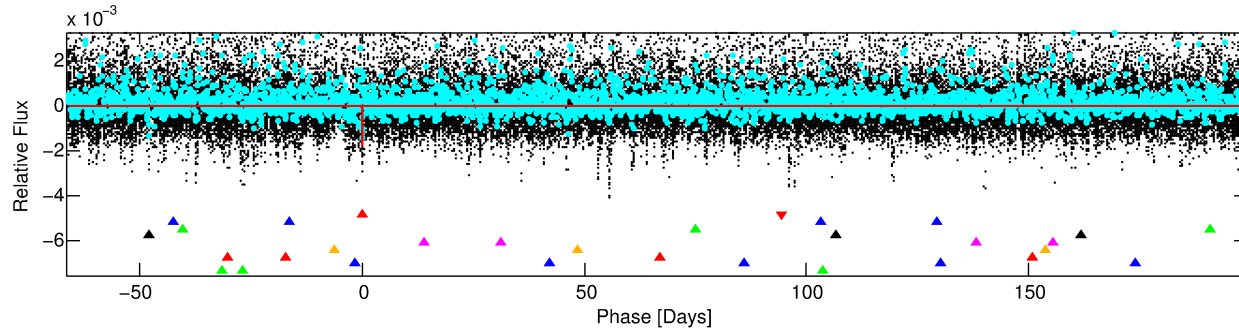
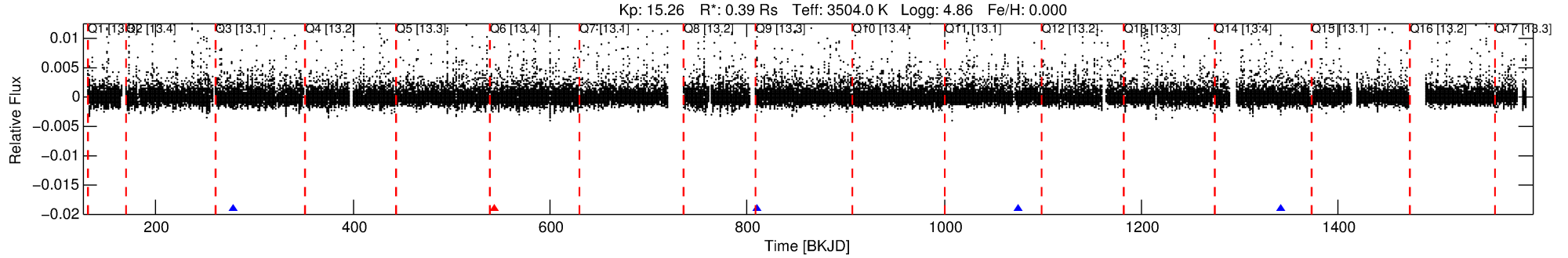
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008947255-01

No Significant Match Found

DV One-Page Summary

KIC: 8947255 Candidate: 1 of 9 Period: 265.672 d



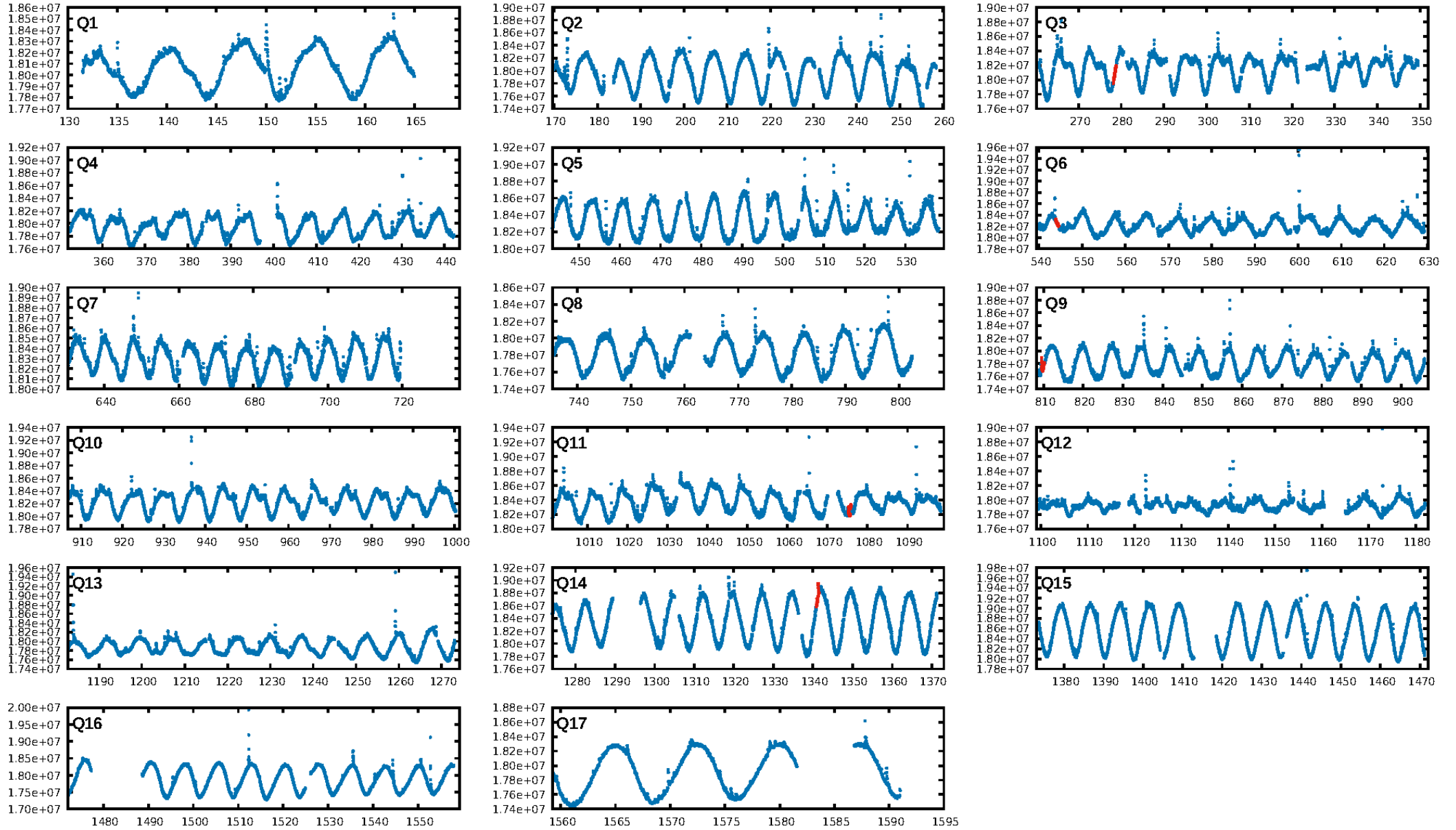
DV Fit Results:

Period = 265.67243 [0.00507] d
Epoch = 278.4991 [0.0131] BKJD
Rp/R* = 0.0413 [0.0094]
a/R* = 182.20 [142.40]
b = 0.72 [0.52]
Seff = 0.06 [0.01]
Teq = 125 [4] K
Rp = 1.75 [0.43] Re
a = 0.5951 [0.0442] AU
Ag = 48382.31 [29787.98] [1.62σ]
Teffp = 2866 [438] K [6.25σ]

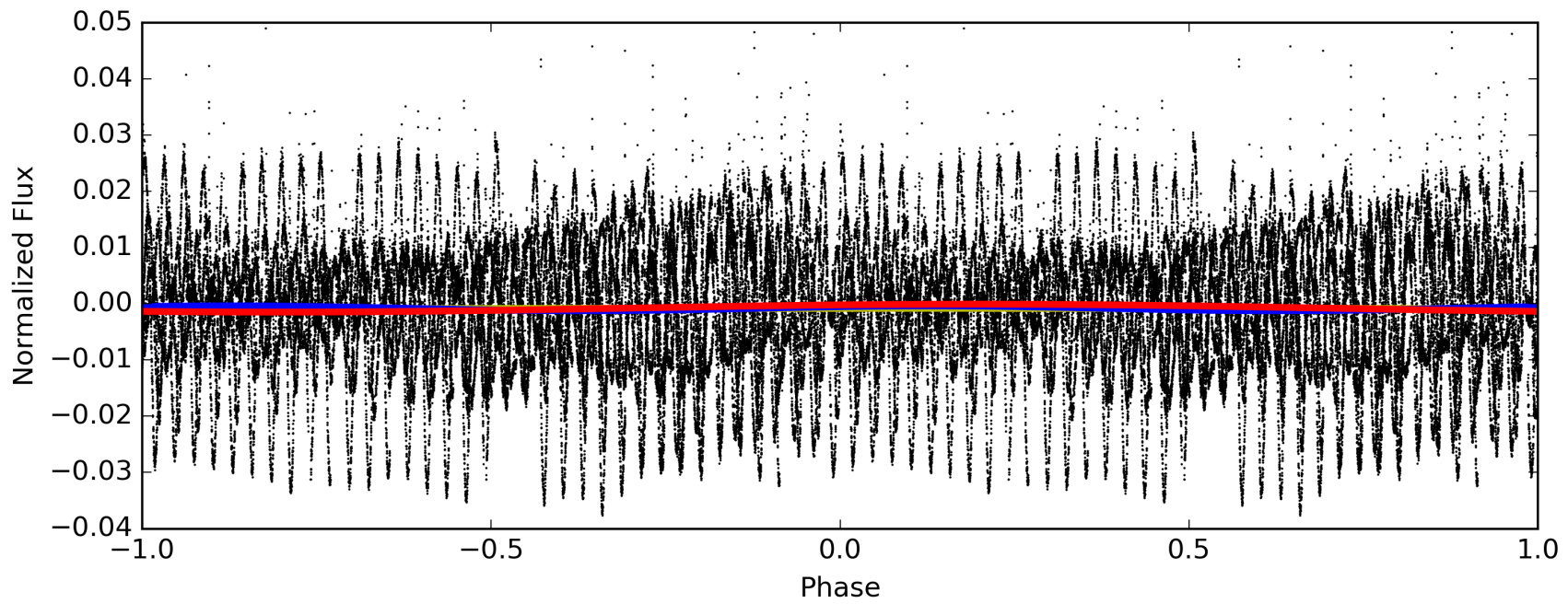
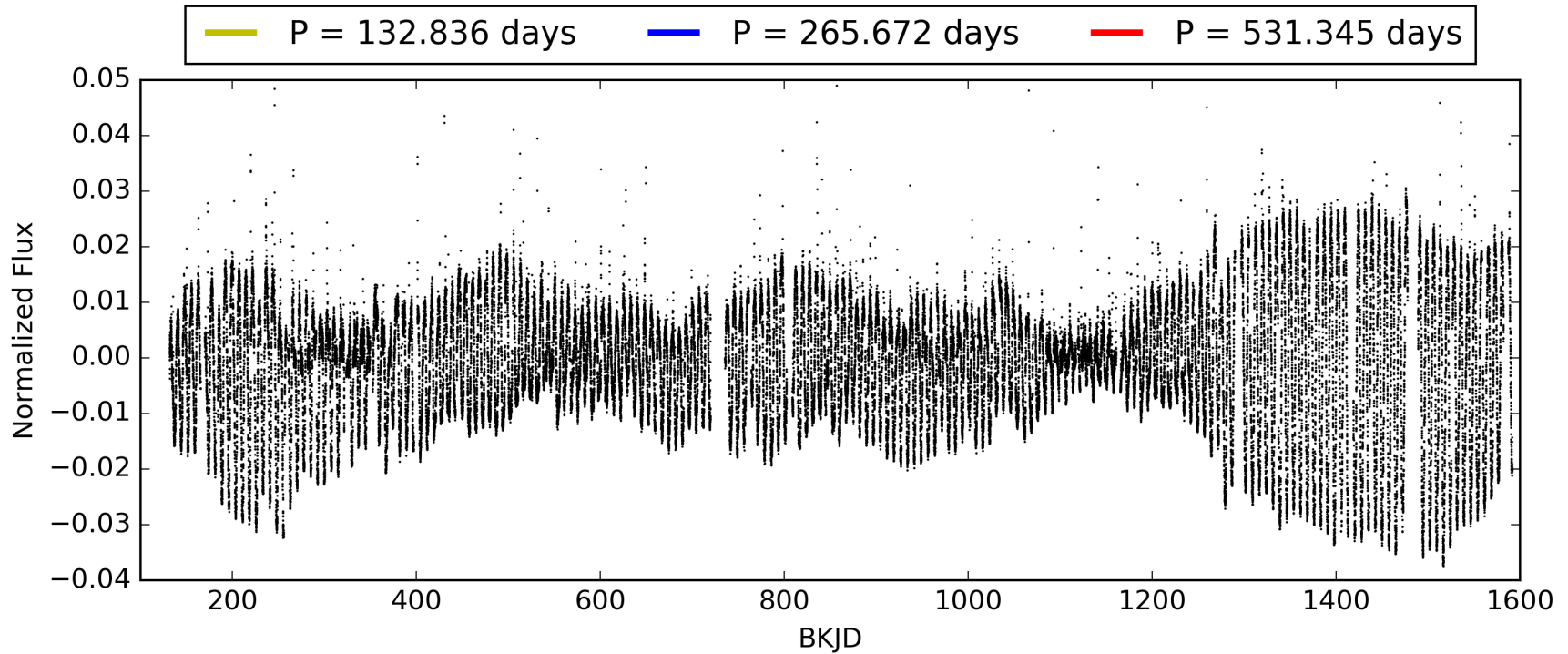
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [51.84σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 89.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.80 [4/5]
GhostDiagnostic-chr: 0.7204
Centroid-sig: 76.8%
Centroid-so: 0.406 arcsec [0.68σ]
OotOffset-rm: 0.250 arcsec [1.05σ]
OotOffset-st: 1/2/0/0 [3]
KicOffset-st: 1/2/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 008947255-01, PDC Light Curves

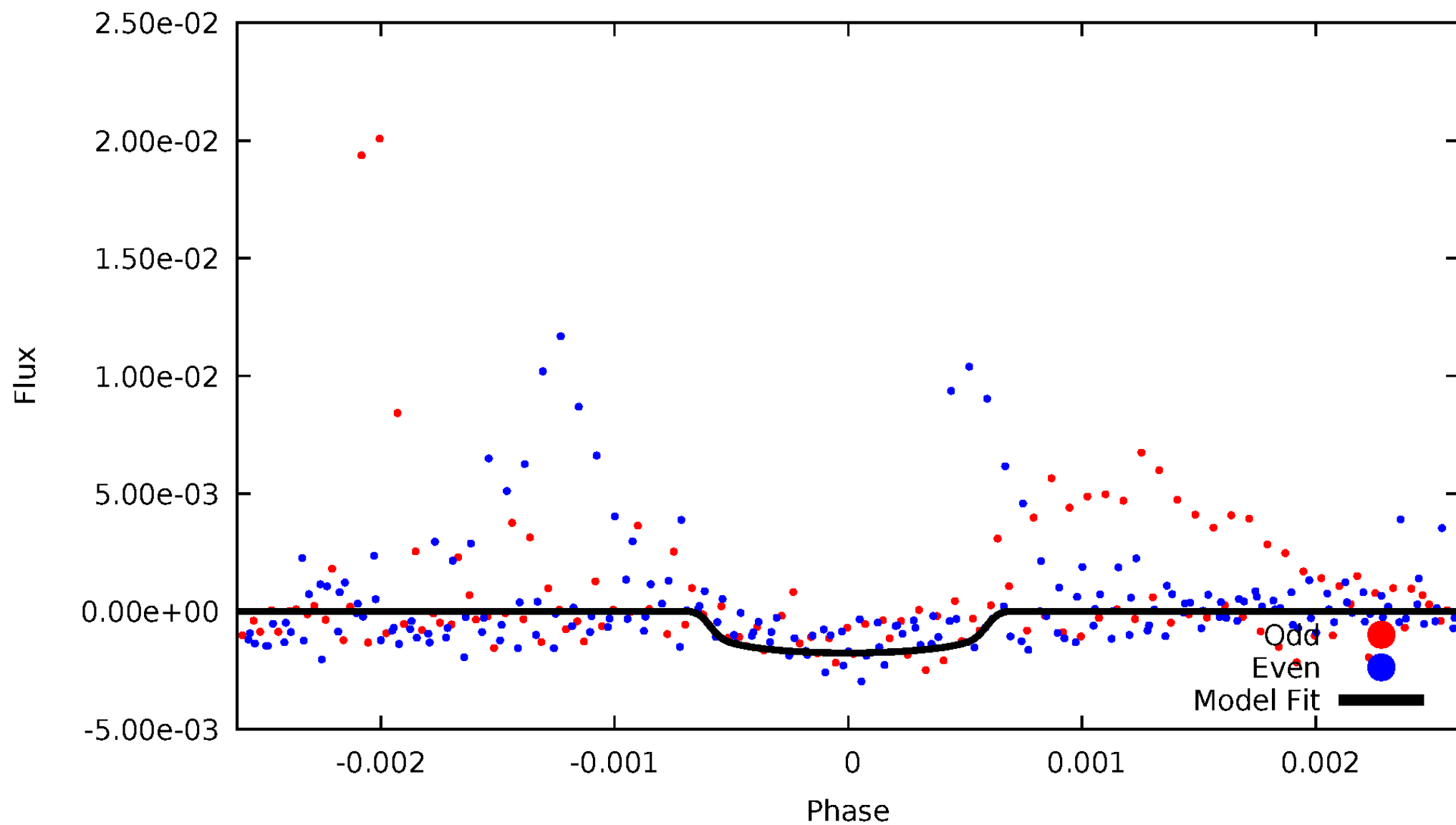


TCE 008947255-01



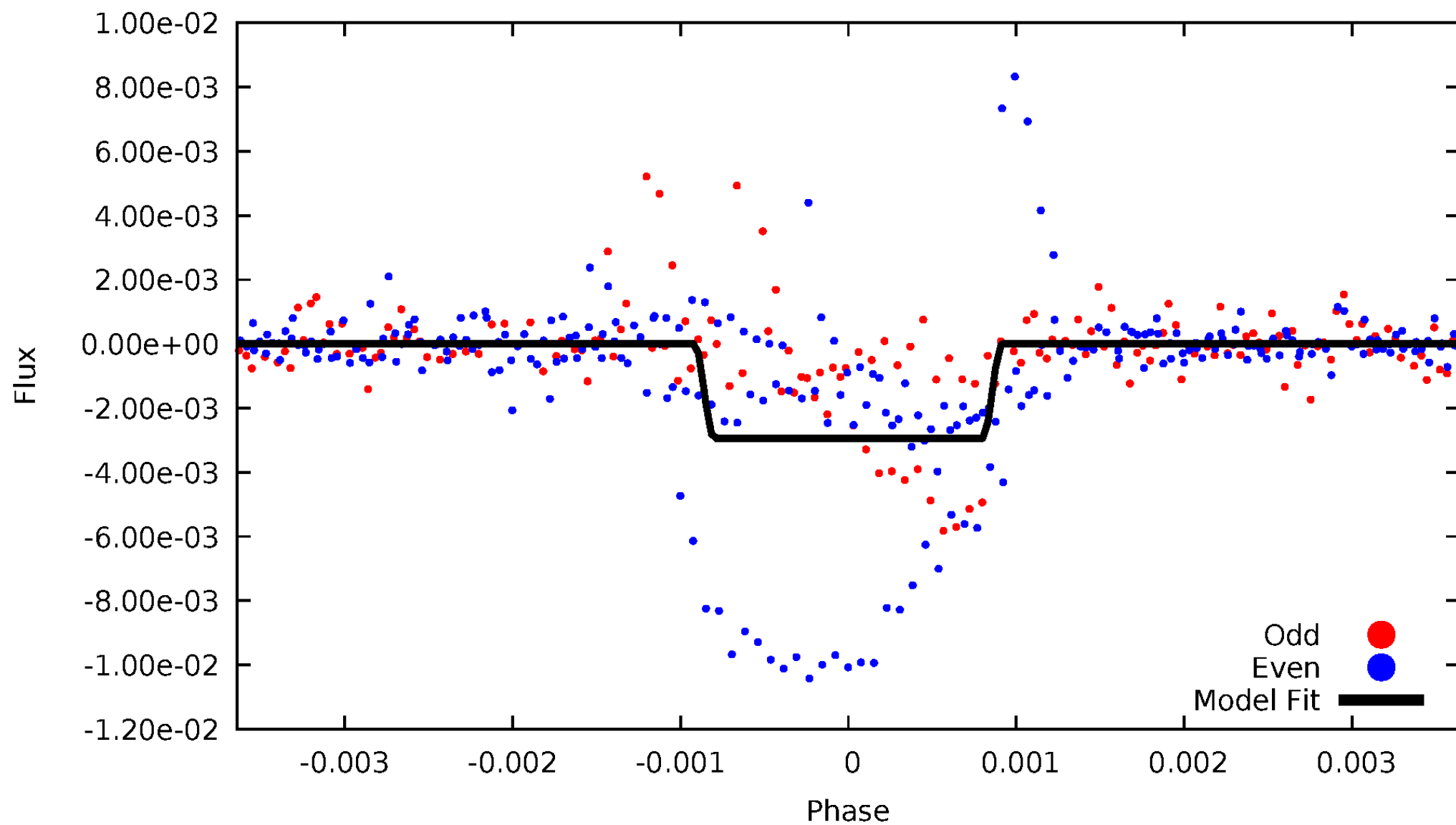
DV Odd/Even

TCE 008947255-01



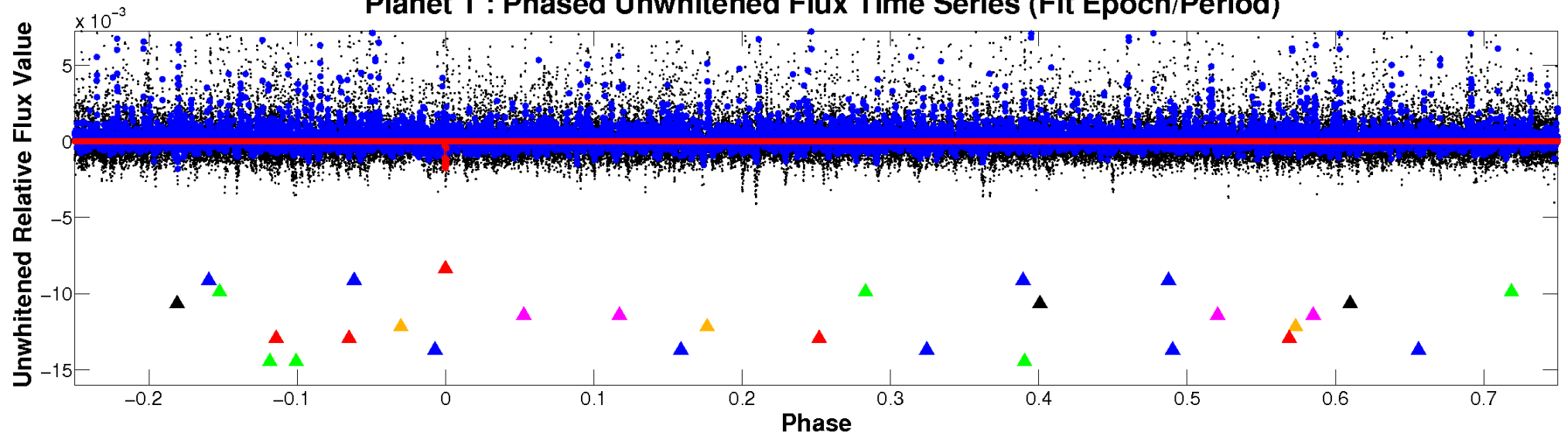
ALT Odd/Even

TCE 008947255-01

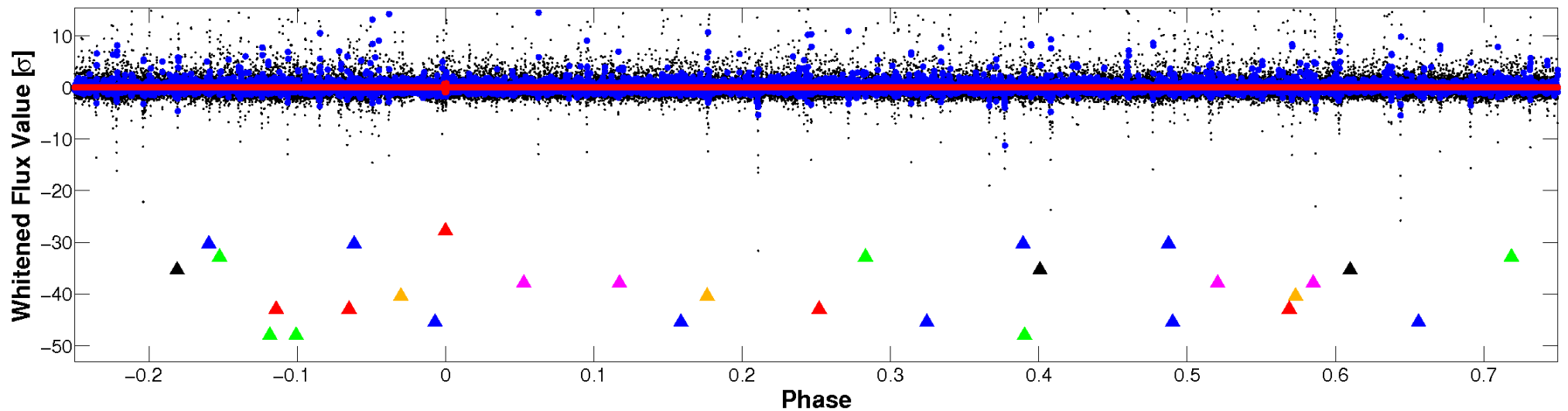


Non-Whitened Vs. Whitened Light Curve

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

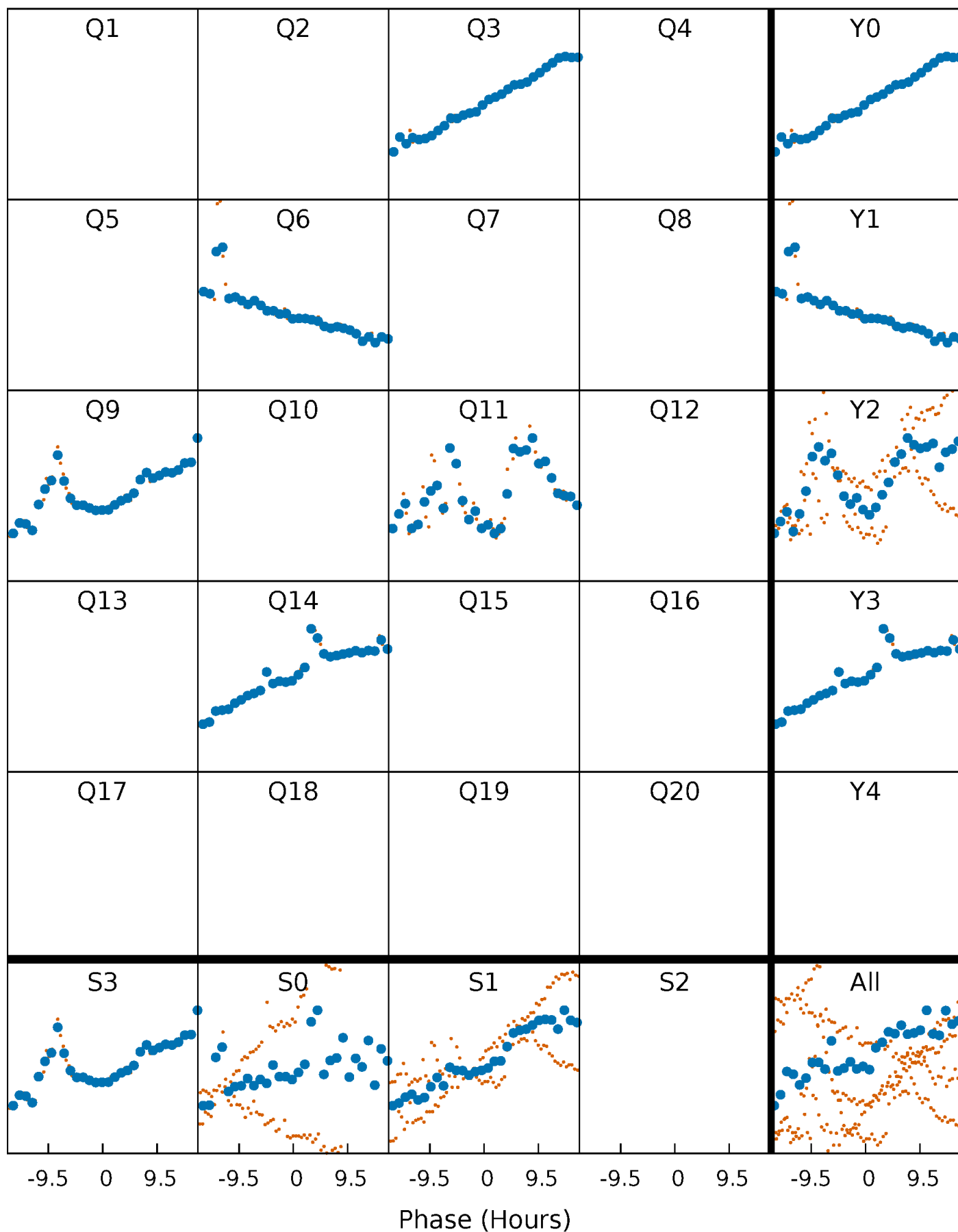


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



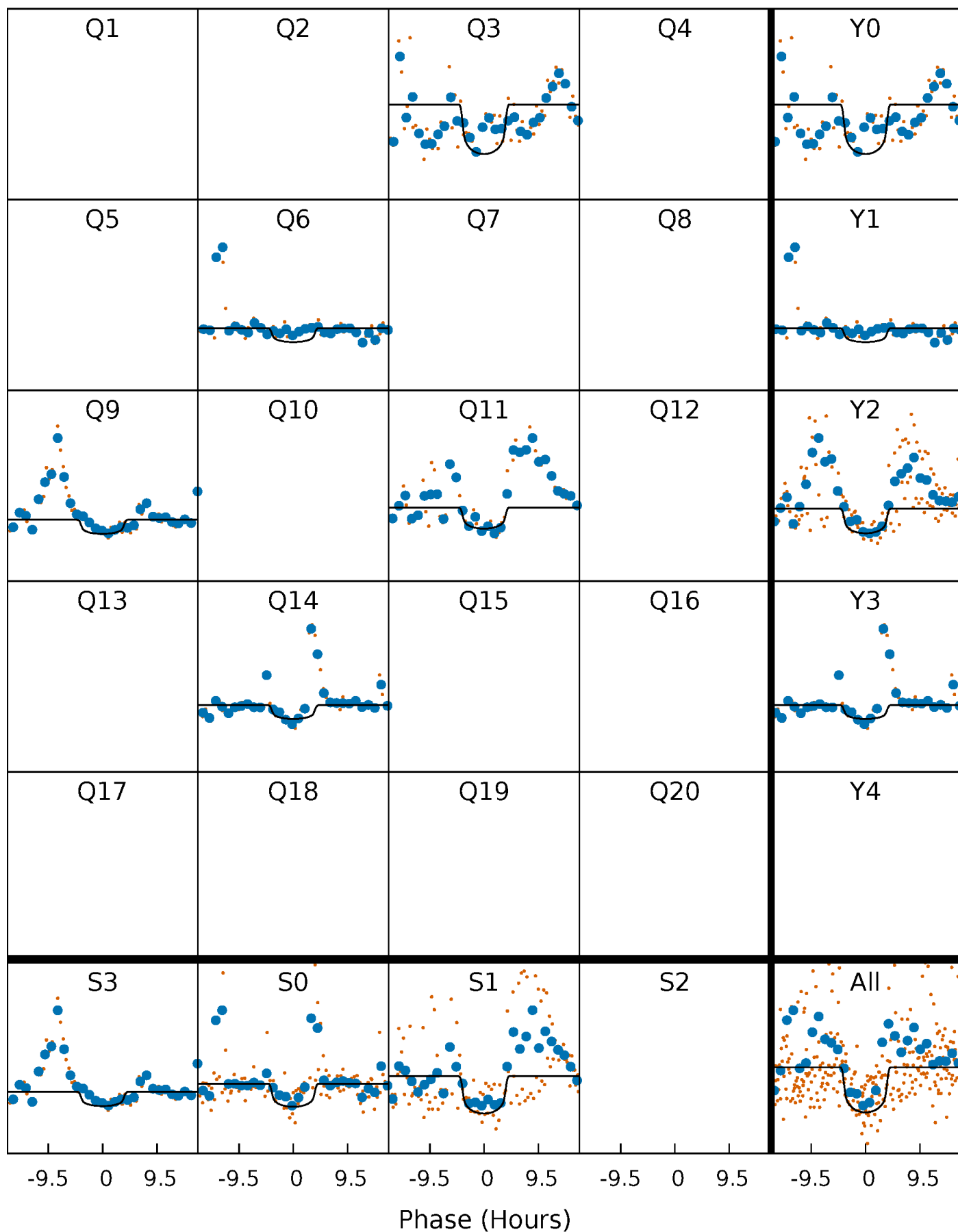
PDC Quarter-Phased Transit Curves

TCE 008947255-01 P=265.672434 Days $T_0=278.499139$ (BKJD)



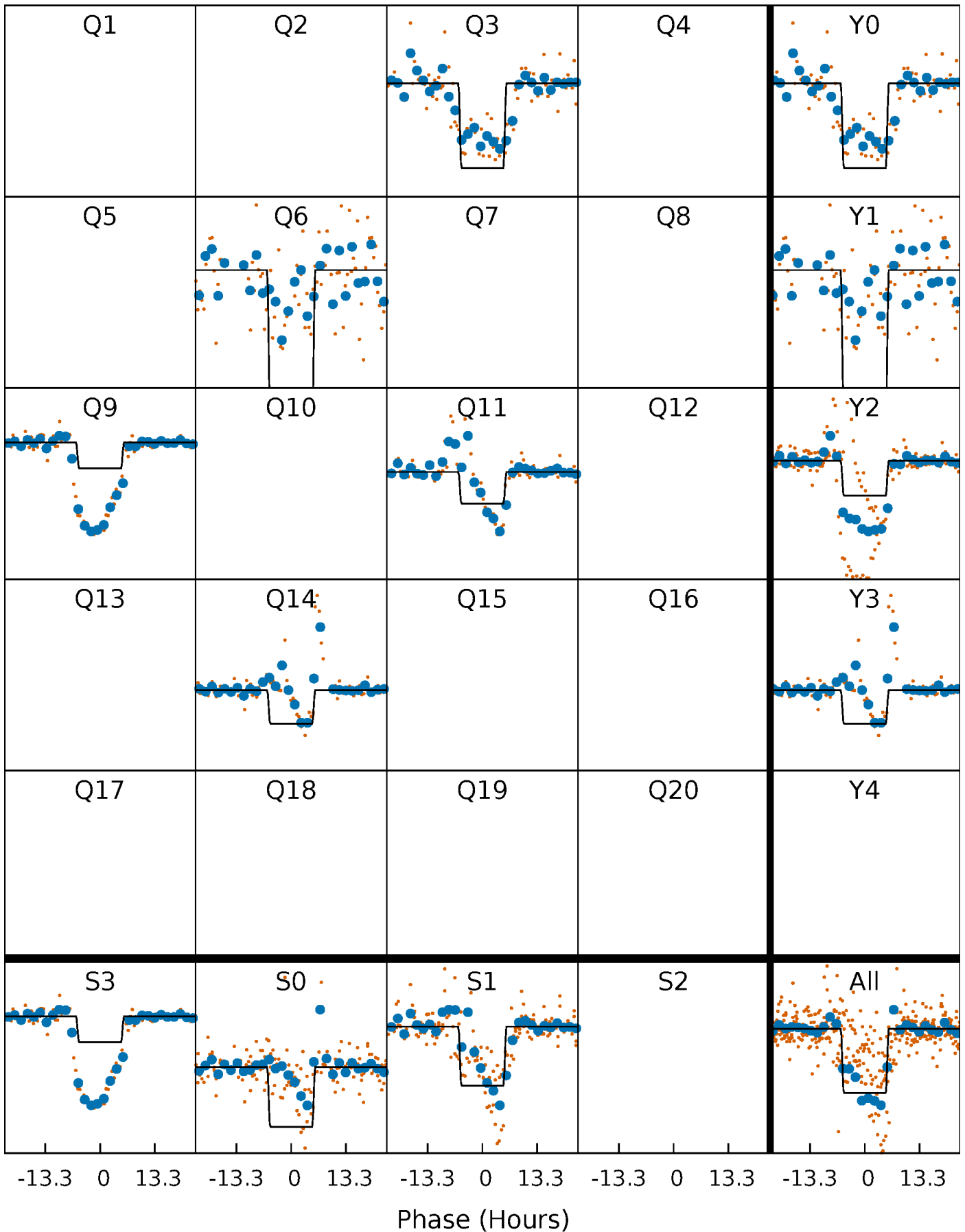
DV Quarter-Phased Transit Curves

TCE 008947255-01 P=265.672434 Days $T_0=278.499139$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

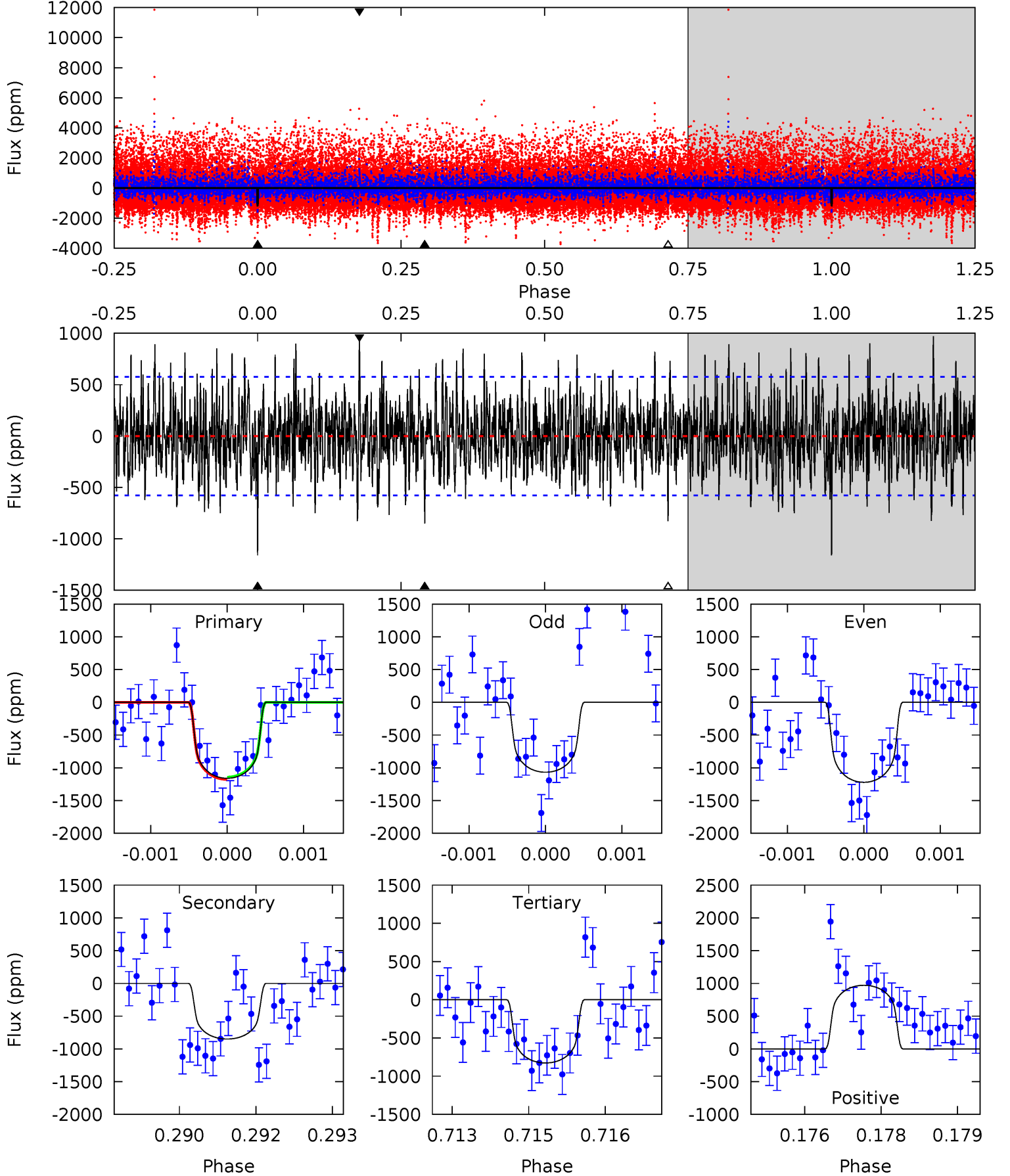
TCE 008947255-01 P=265.609035 Days $T_0=278.626489$ (BKJD)



DV Model-Shift Uniqueness Test

008947255-01, $P = 265.672434$ Days, $E = 12.826705$ Days

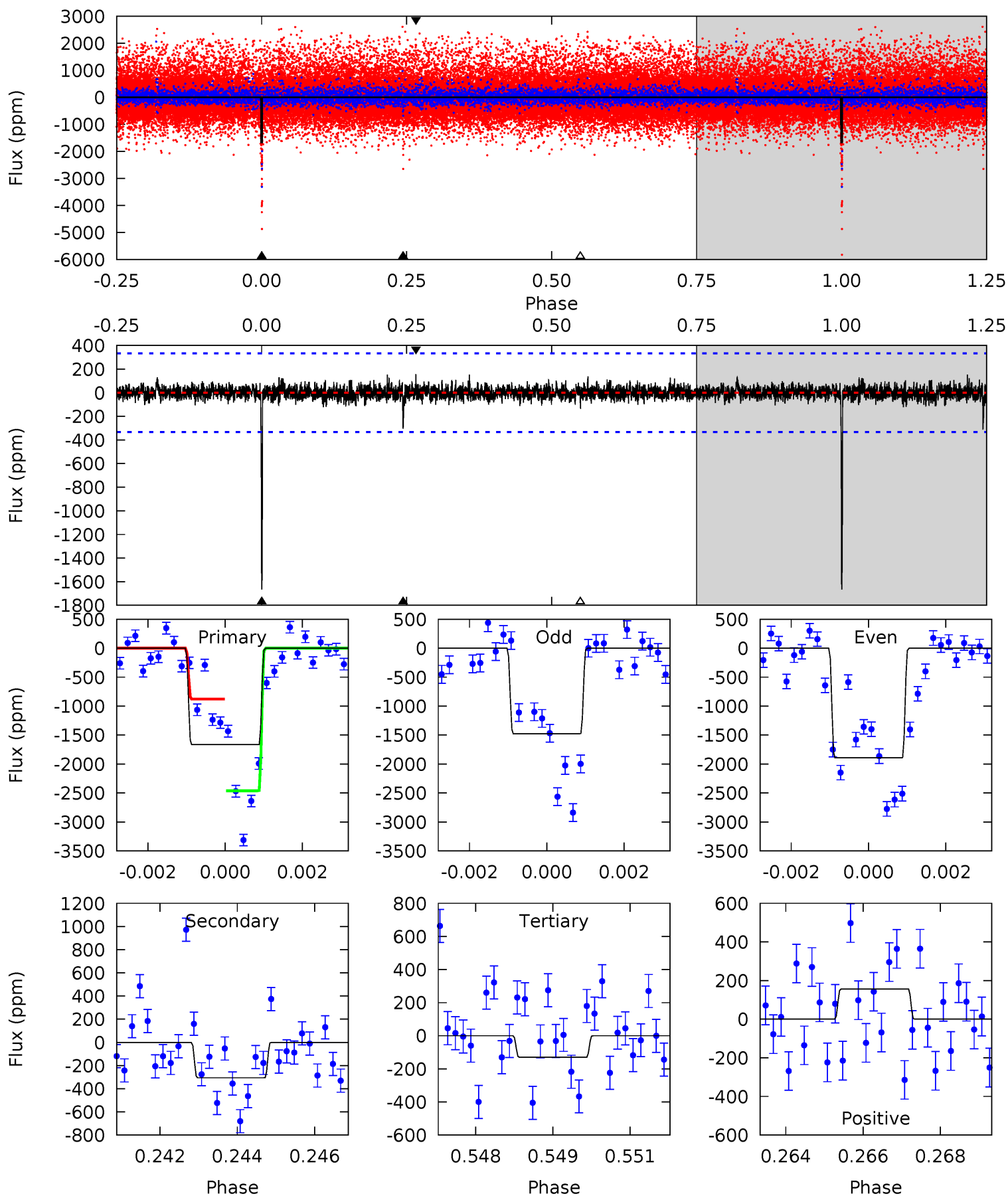
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	7.95	7.74	9.10	5.40	3.20	2.47	3.12	1.77	0.21	-1.14	0.64	0.79	0.46	0.16



Alt Model-Shift Uniqueness Test

008947255-01, $P = 265.609035$ Days, $E = 13.017454$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.7	4.90	2.08	2.49	5.35	3.12	0.55	24.6	24.2	2.81	2.40	3.34	1.43	0.09	0



Stellar Parameters For KIC 008947255

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3504^{+56}_{-56}	$4.858^{+0.042}_{-0.031}$	$0.000^{+0.100}_{-0.100}$	$0.389^{+0.032}_{-0.039}$	$0.400^{+0.038}_{-0.047}$	$9.533^{+2.131}_{-1.300}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+8%/-10%	+9%/-12%	+22%/-14%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 008947255-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-850 ± 107	$1.73^{+0.42}_{-0.43}$	174^{+4}_{-4}	3168^{+304}_{-213}	56545^{+45751}_{-21543}
Alt.	-306 ± 62	$2.27^{+0.47}_{-0.38}$	175^{+4}_{-4}	2554^{+157}_{-127}	11476^{+6045}_{-4085}

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

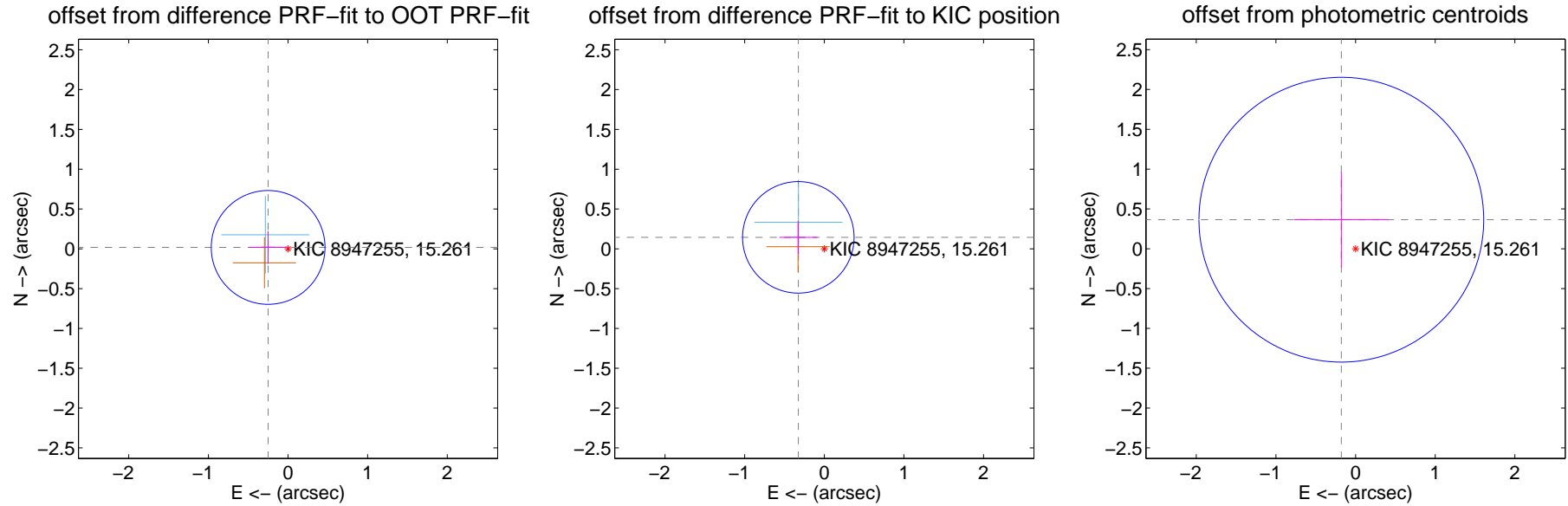
DV Centroid Data

Supplemental centroid analysis for 008947255-01. Kepler magnitude: 15.26. Transit SNR 7.93

There are 2 quarters with good PRF difference image offsets

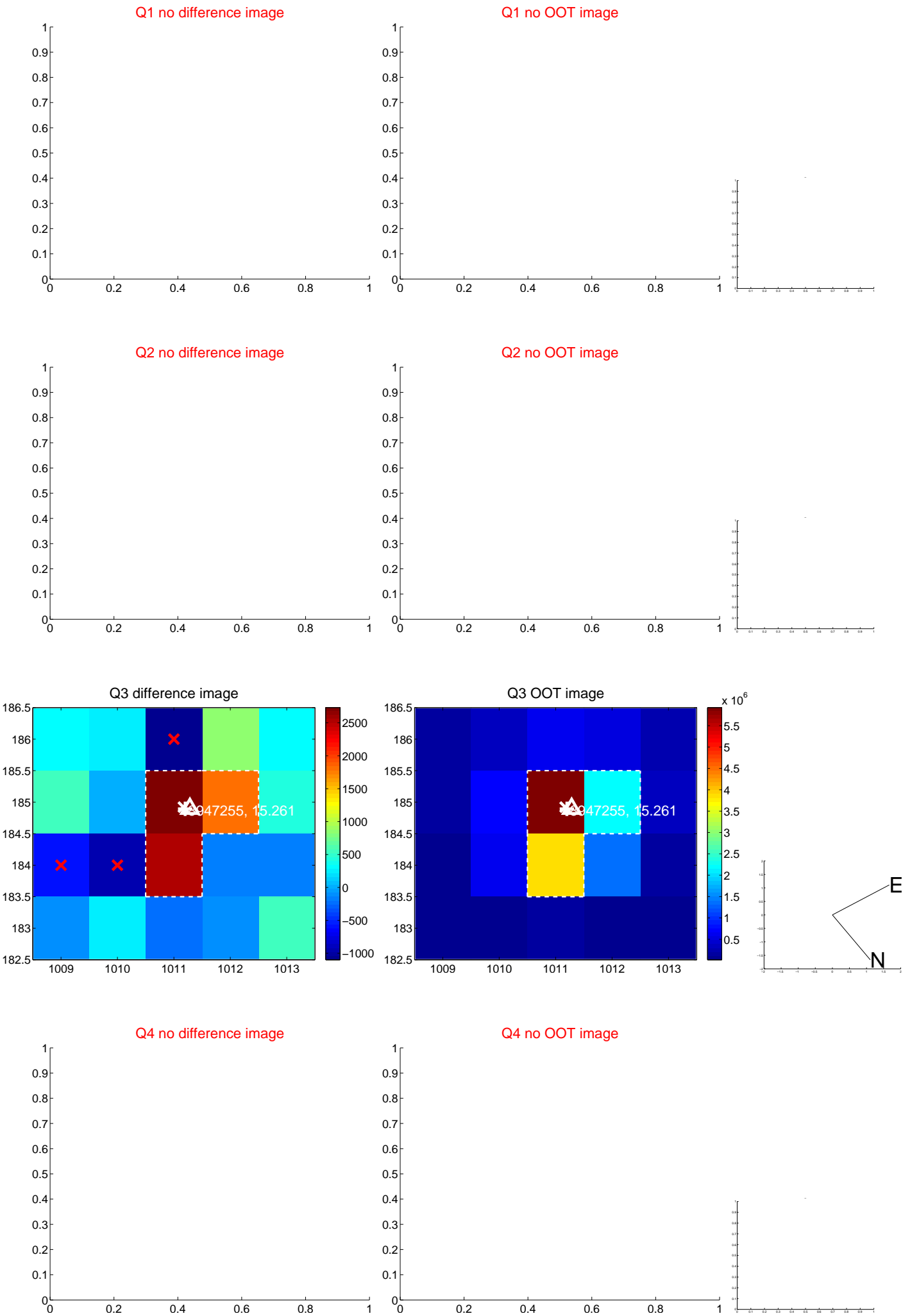
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.250 ± 0.238	1.05	0.250 ± 0.238	0.018 ± 0.206
PRF-fit source offset from KIC position	0.357 ± 0.233	1.53	0.326 ± 0.238	0.144 ± 0.206
photometric centroid source offset	0.41 ± 0.60	0.68	0.18 ± 0.59	0.36 ± 0.60

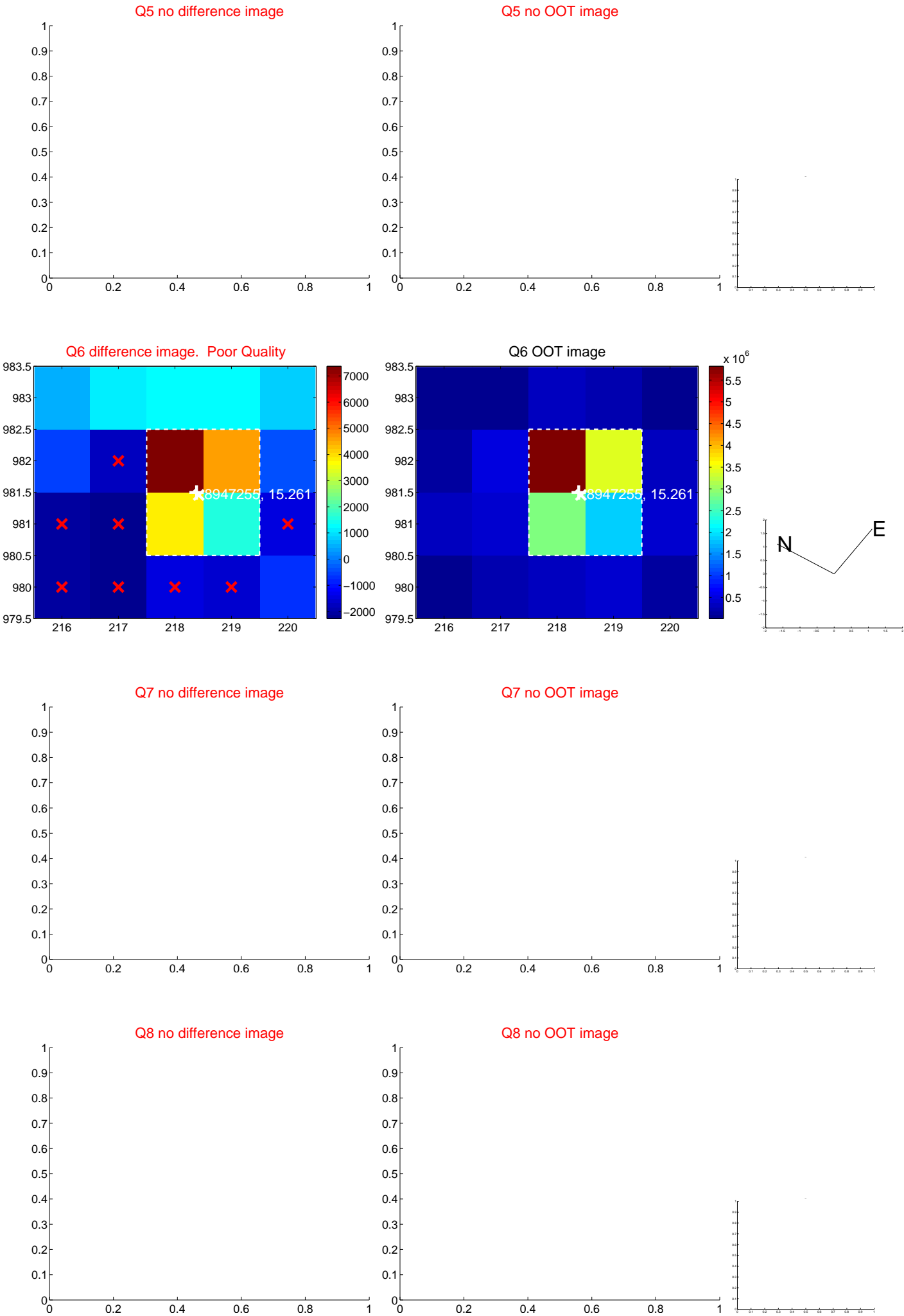


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

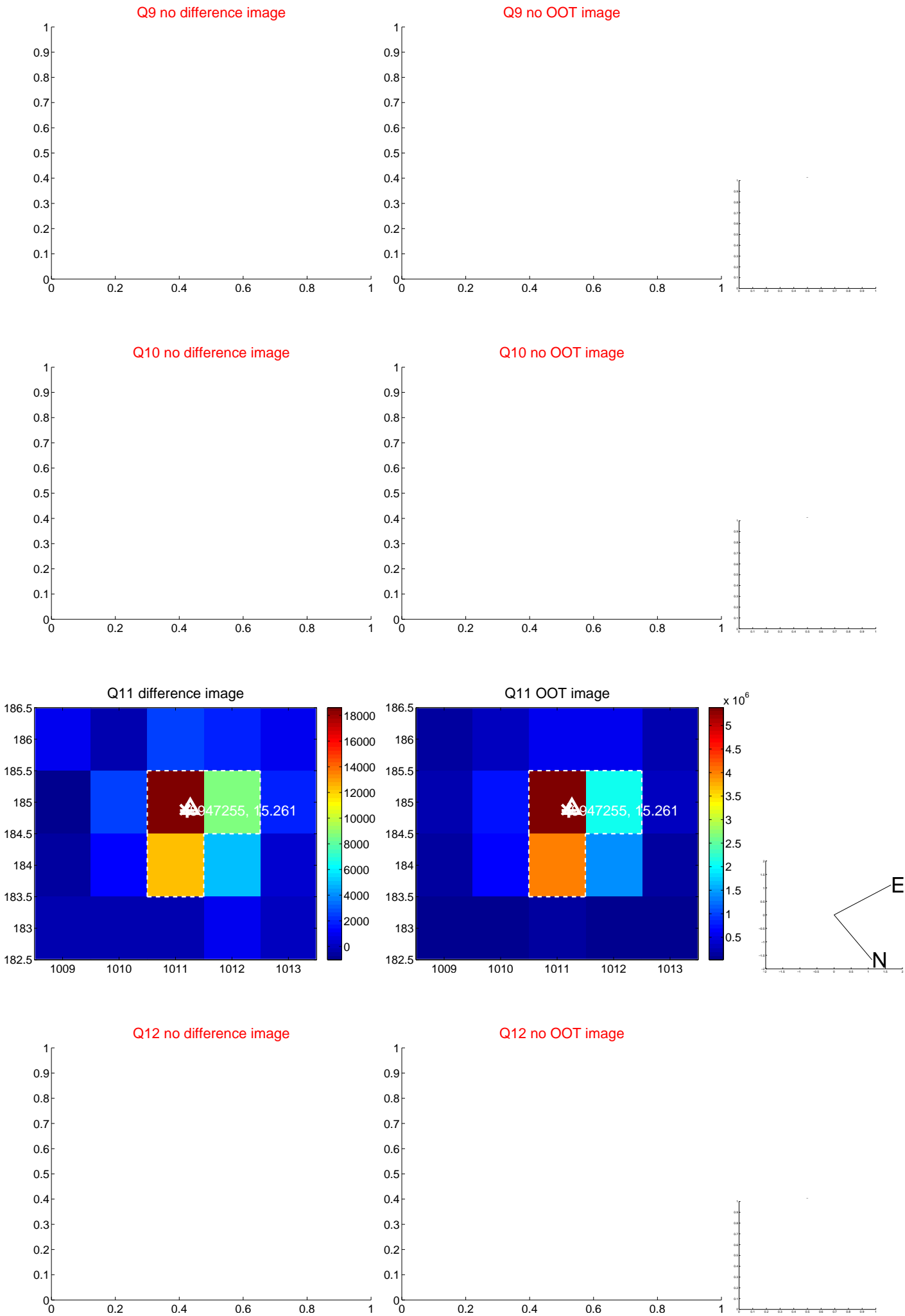
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



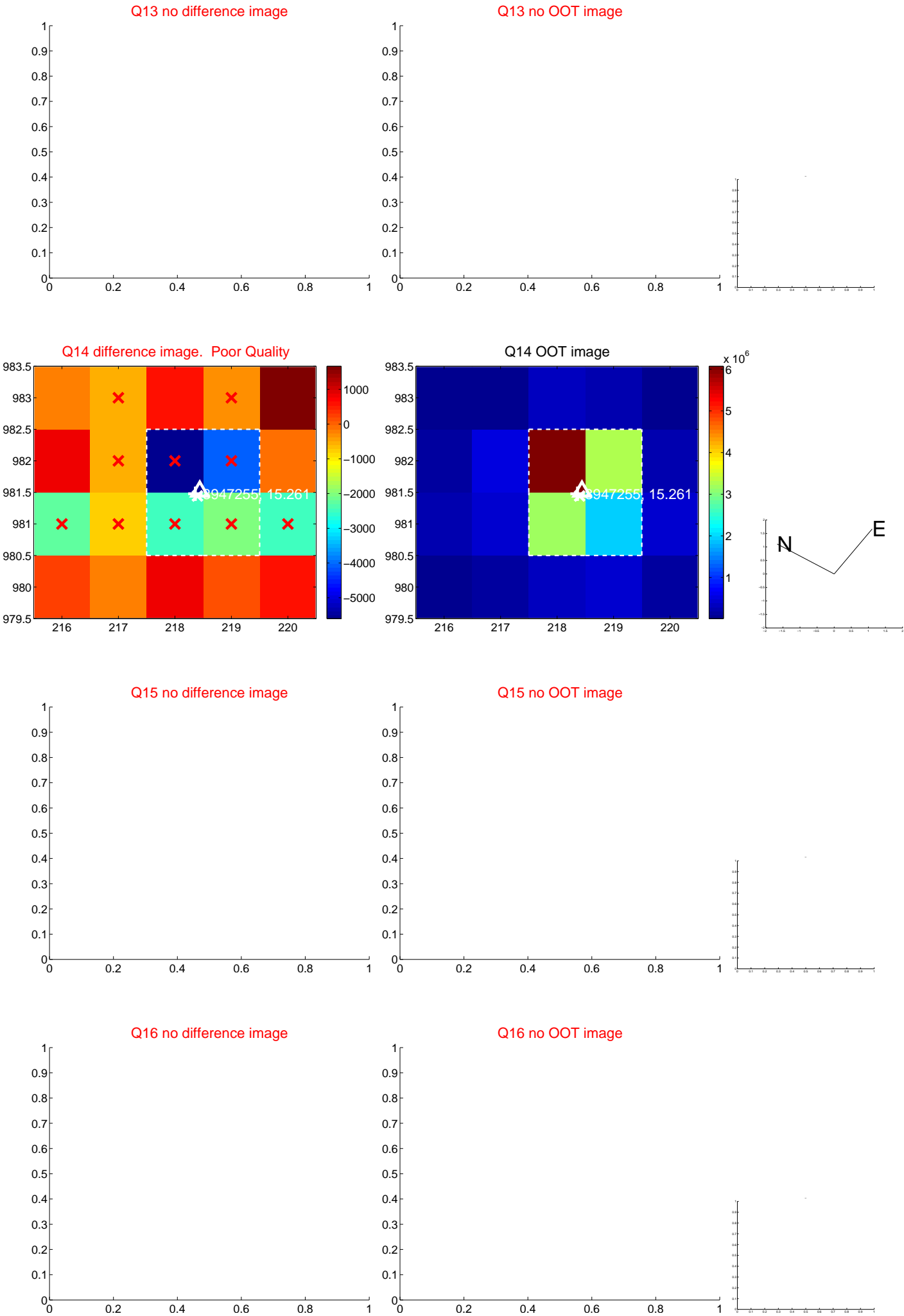
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



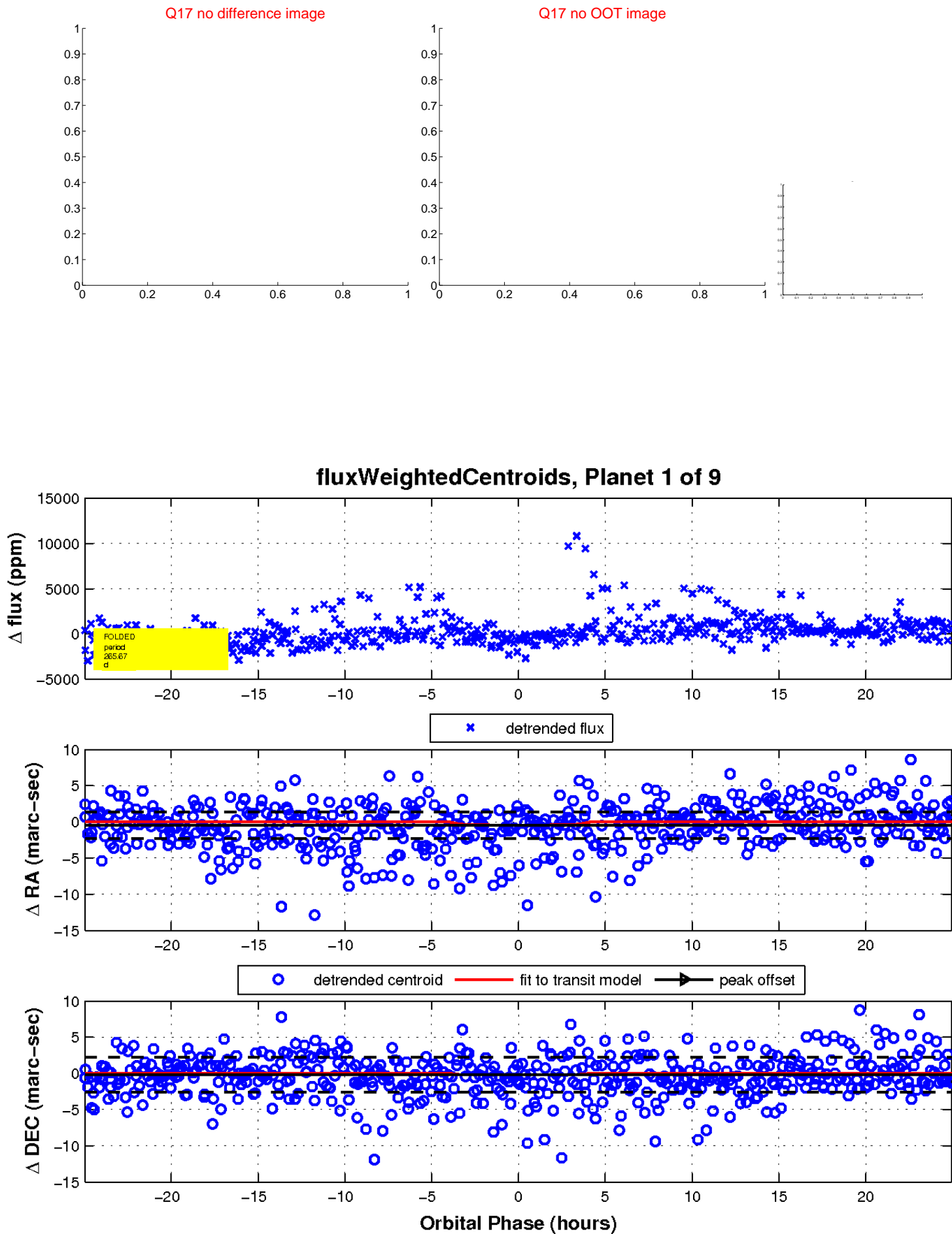
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white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

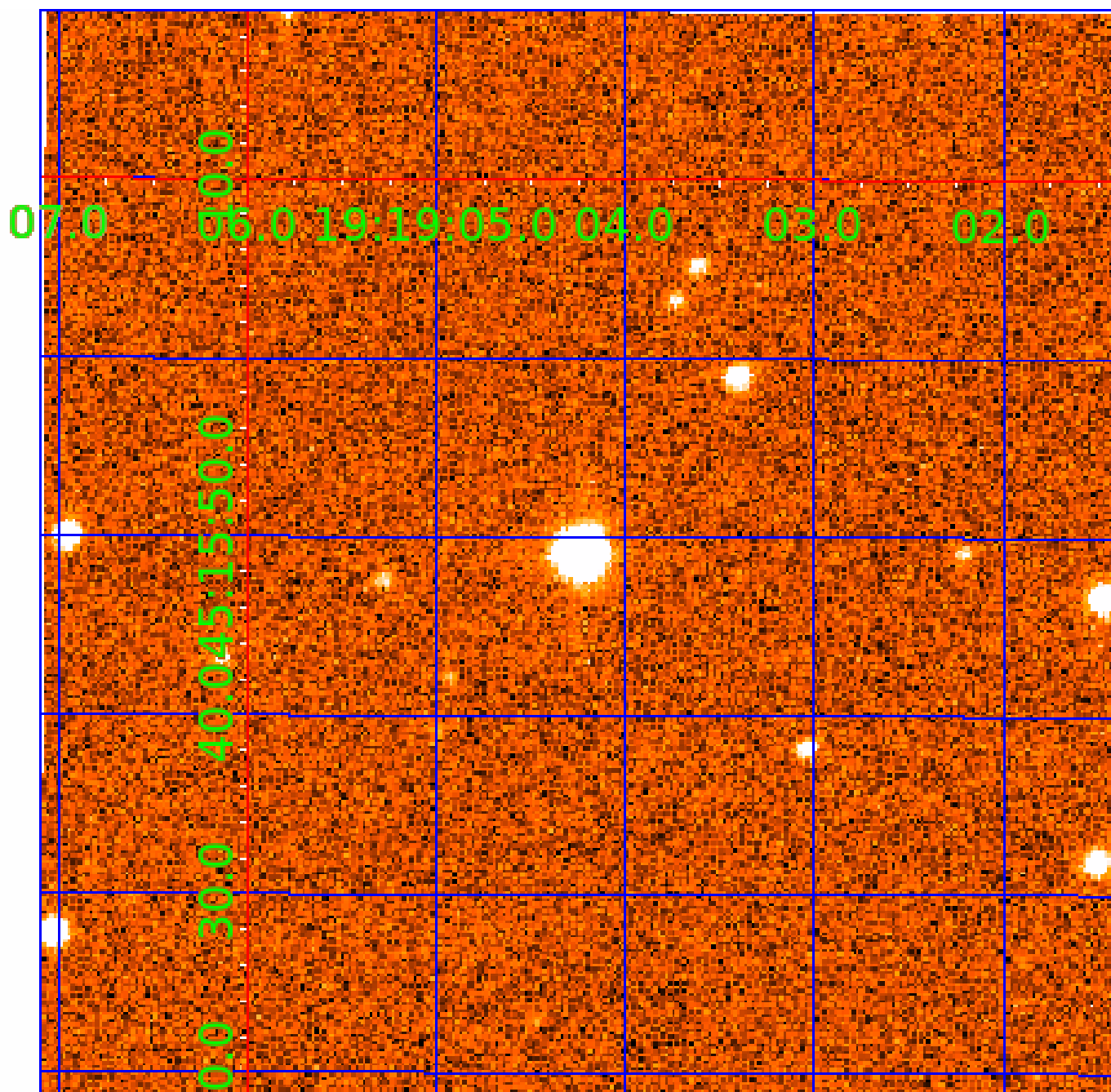


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008947255

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})
008947255-01	OBS	No	265.672434	278.499139	1759.5	8.332	16.4	7.9	0.39	3504	1.75	0.06
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008947255-03	OBS	No	415.647580	469.433461	2111.7	2.689	14.0	7.9	0.39	3504	1.76	0.03
008947255-05	OBS	No	407.071141	151.135478	1952.1	12.204	14.2	6.3	0.39	3504	1.74	0.03
008947255-06	OBS	No	425.937558	536.177216	1003.9	12.500	13.0	-1.0	0.39	3504	1.21	0.03
008947255-07	OBS	No	447.141041	248.175127	1693.7	3.877	11.8	6.8	0.39	3504	1.77	0.03
008947255-08	OBS	No	309.716060	276.625165	1283.2	18.611	12.6	5.2	0.39	3504	1.42	0.05
008947255-09	OBS	No	661.829386	251.745466	1217.9	5.000	11.9	-1.0	0.39	3504	1.34	0.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008947255-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
008947255-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
008947255-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008947255-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008947255-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
008947255-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV
008947255-08	OBS	FP	0.00	1	0	1	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
008947255-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_NOFITS

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

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

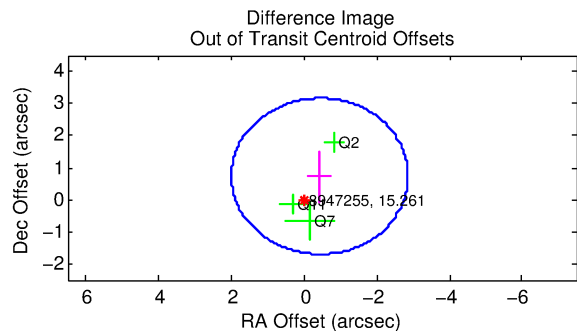
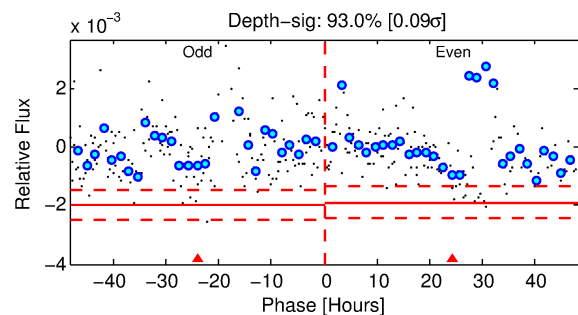
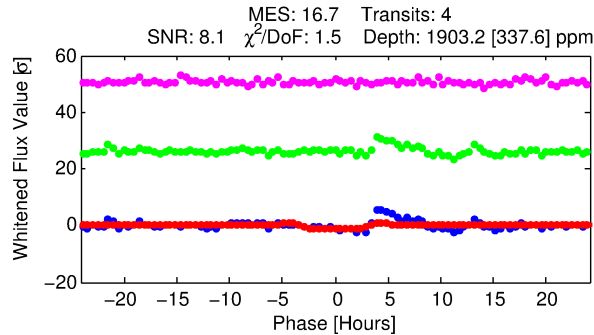
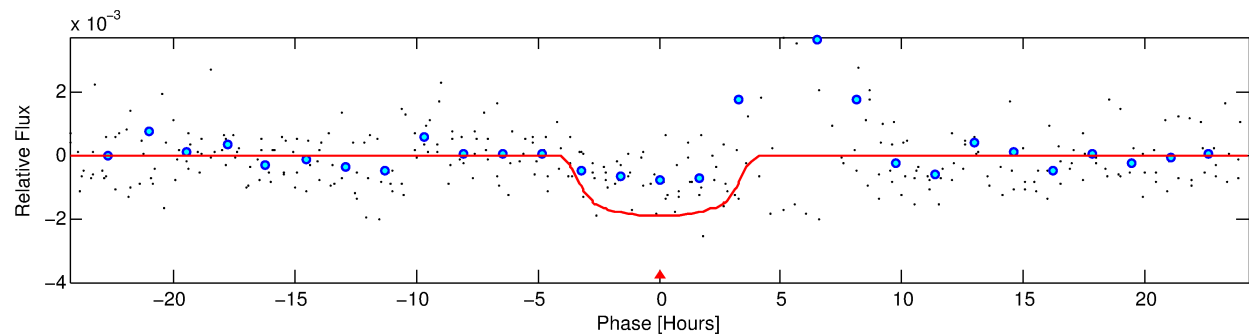
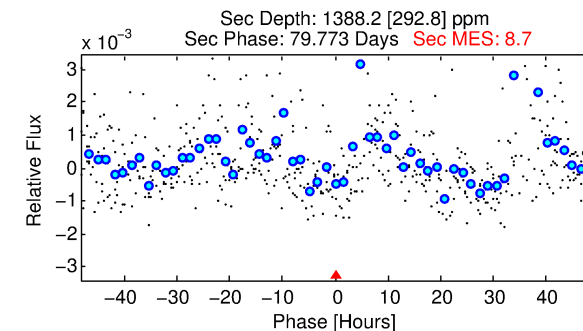
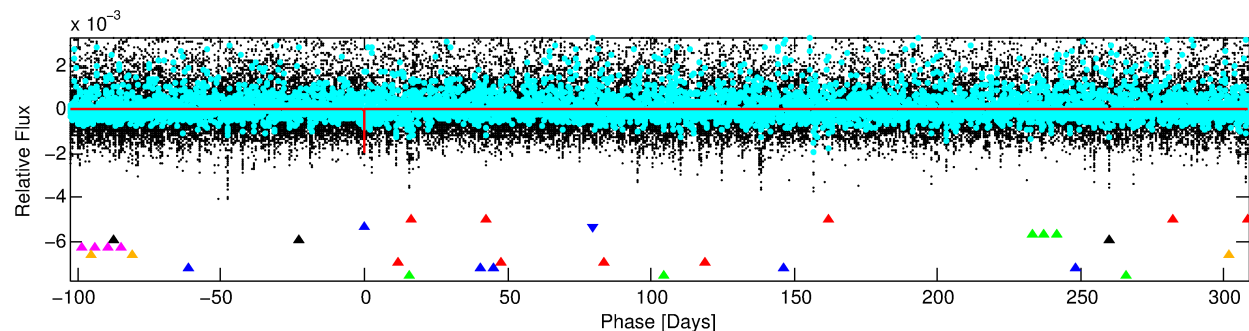
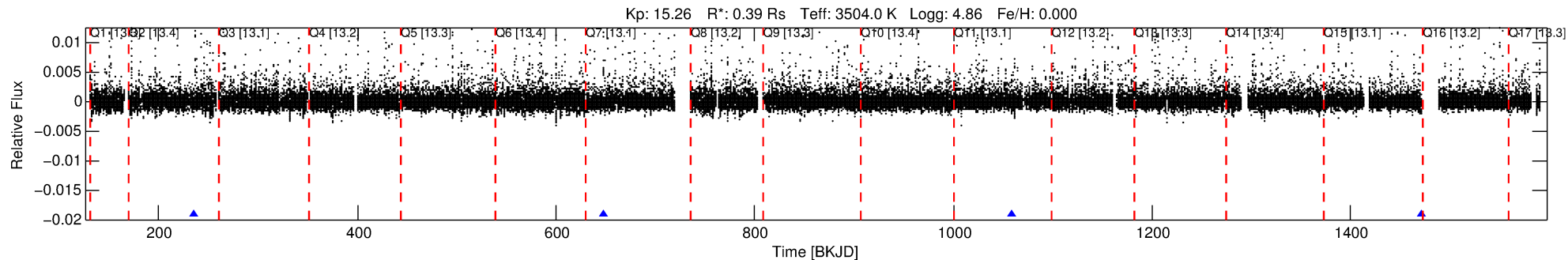
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008947255-02

No Significant Match Found

DV One-Page Summary

KIC: 8947255 Candidate: 2 of 9 Period: 411.534 d



DV Fit Results:

Period = 411.53370 [0.00833] d
Epoch = 236.0991 [0.0153] BKJD
Rp/R* = 0.0462 [0.0063]
a/R* = 229.65 [84.06]
b = 0.86 [0.11]
Seff = 0.03 [0.00]
Teq = 108 [3] K
Rp = 1.96 [0.33] Re
a = 0.7966 [0.0591] AU
Ag = 125799.24 [45050.85] [2.79σ]
Teff = 3145 [277] K [10.98σ]

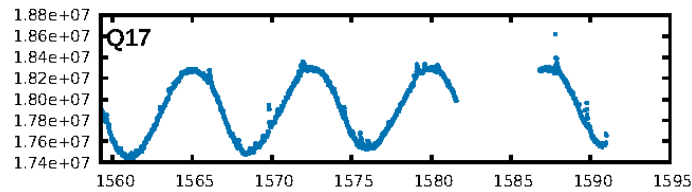
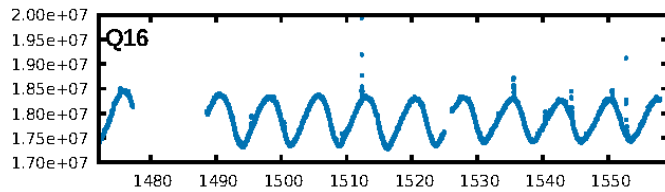
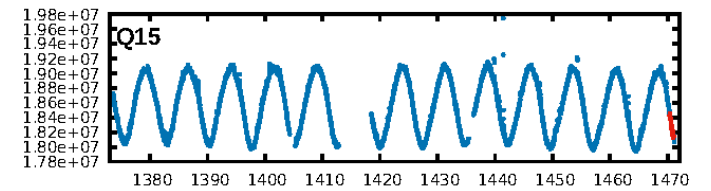
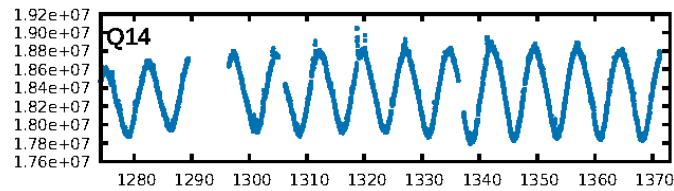
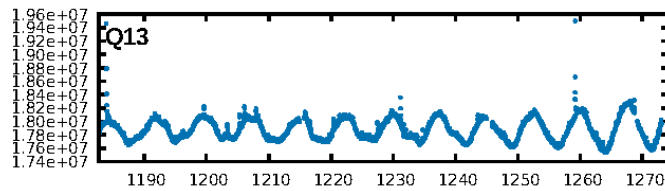
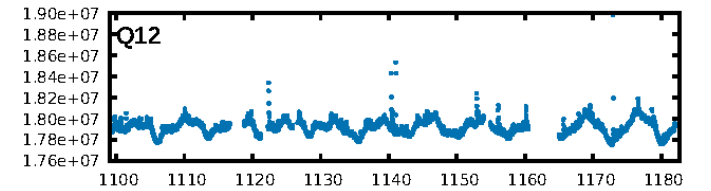
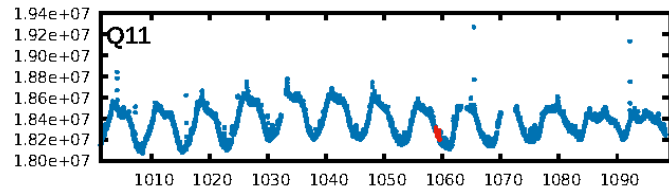
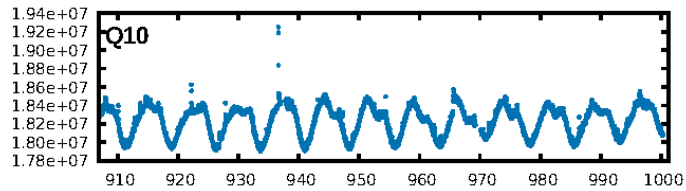
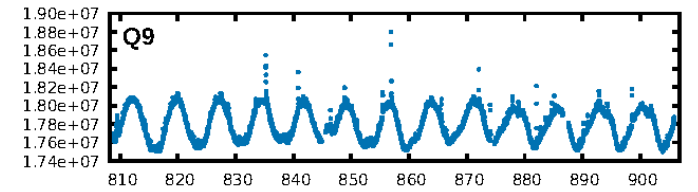
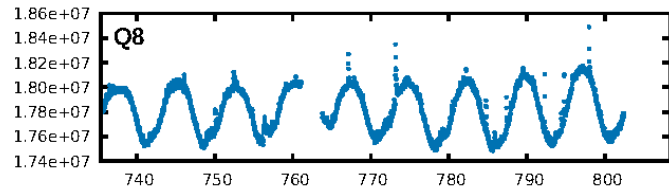
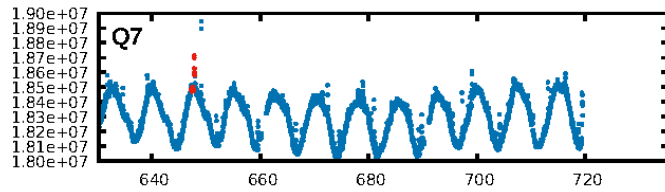
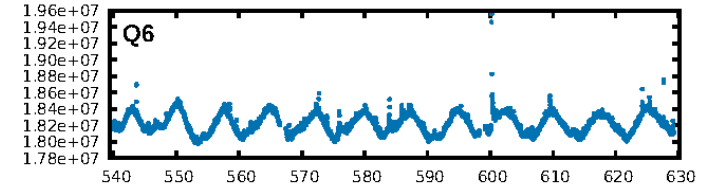
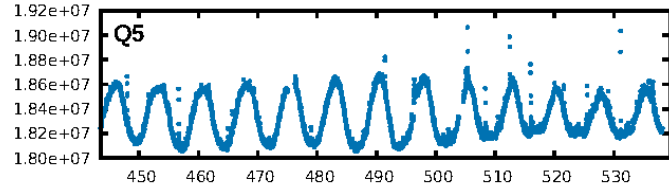
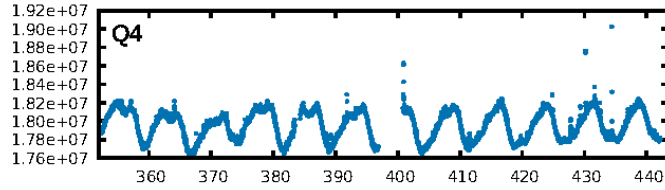
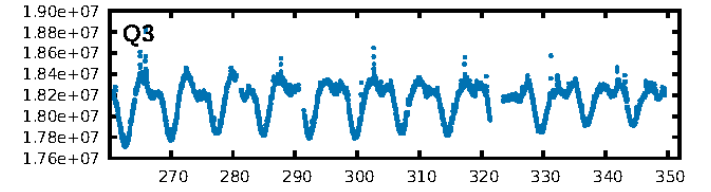
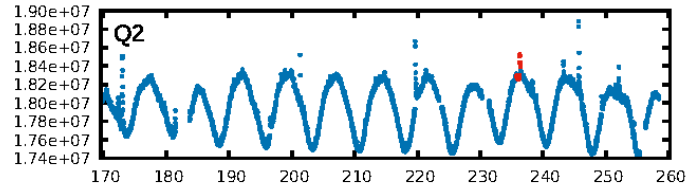
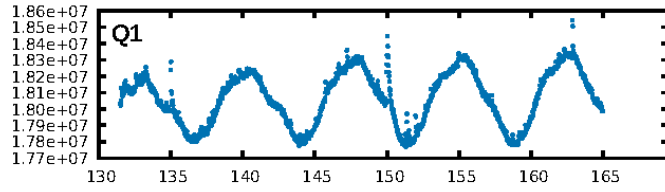
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [7.32σ]
LongPeriod-sig: 100.0% [11.60σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 90.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.9104
Centroid-sig: 71.3%
Centroid-so: 0.060 arcsec [0.09σ]
OotOffset-rm: 0.852 arcsec [1.05σ]
KicOffset-rm: 0.957 arcsec [1.10σ]
OotOffset-st: 1/2/0/0 [3]
KicOffset-st: 1/2/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

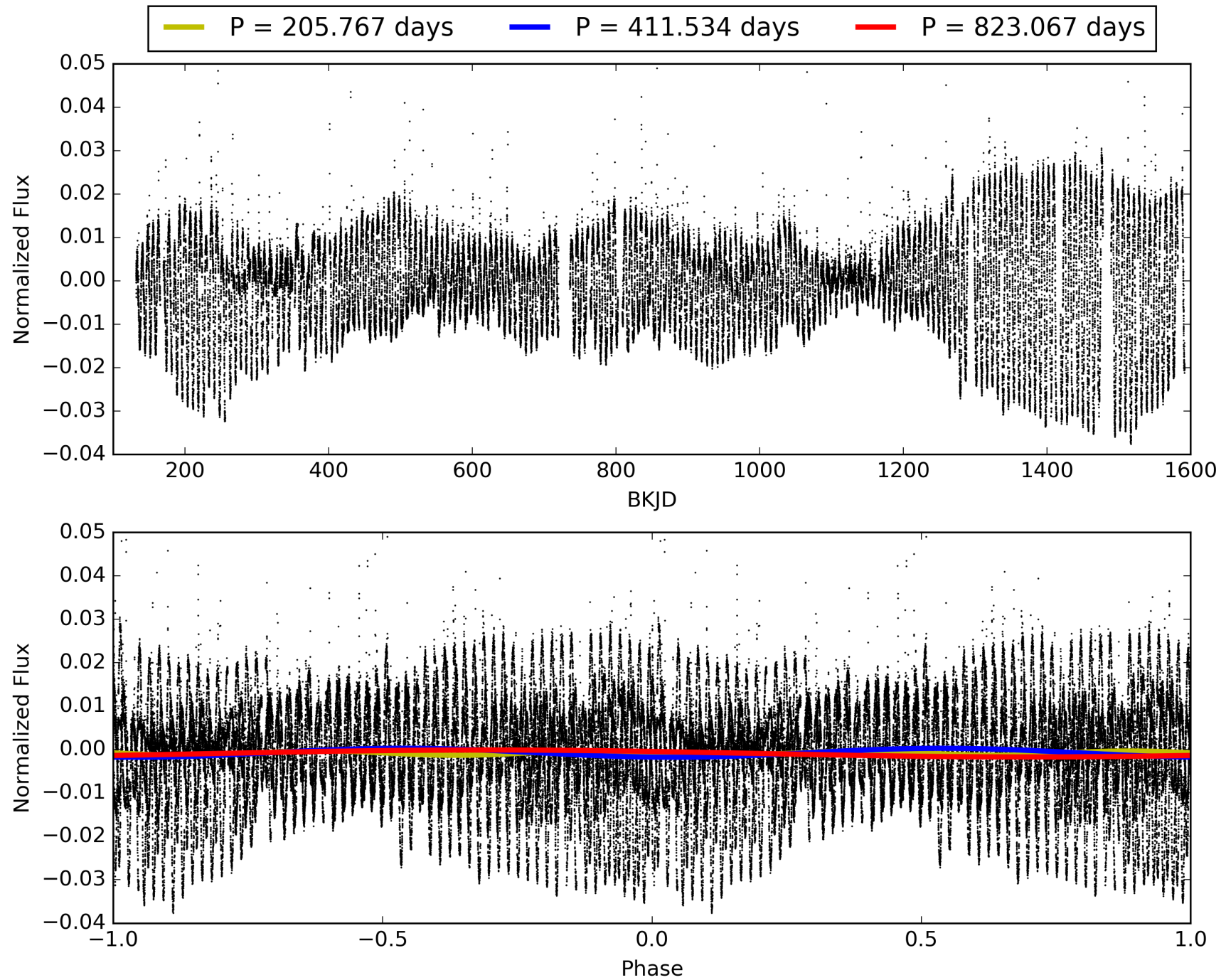
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:09:14 Z

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

TCE 008947255-02, PDC Light Curves

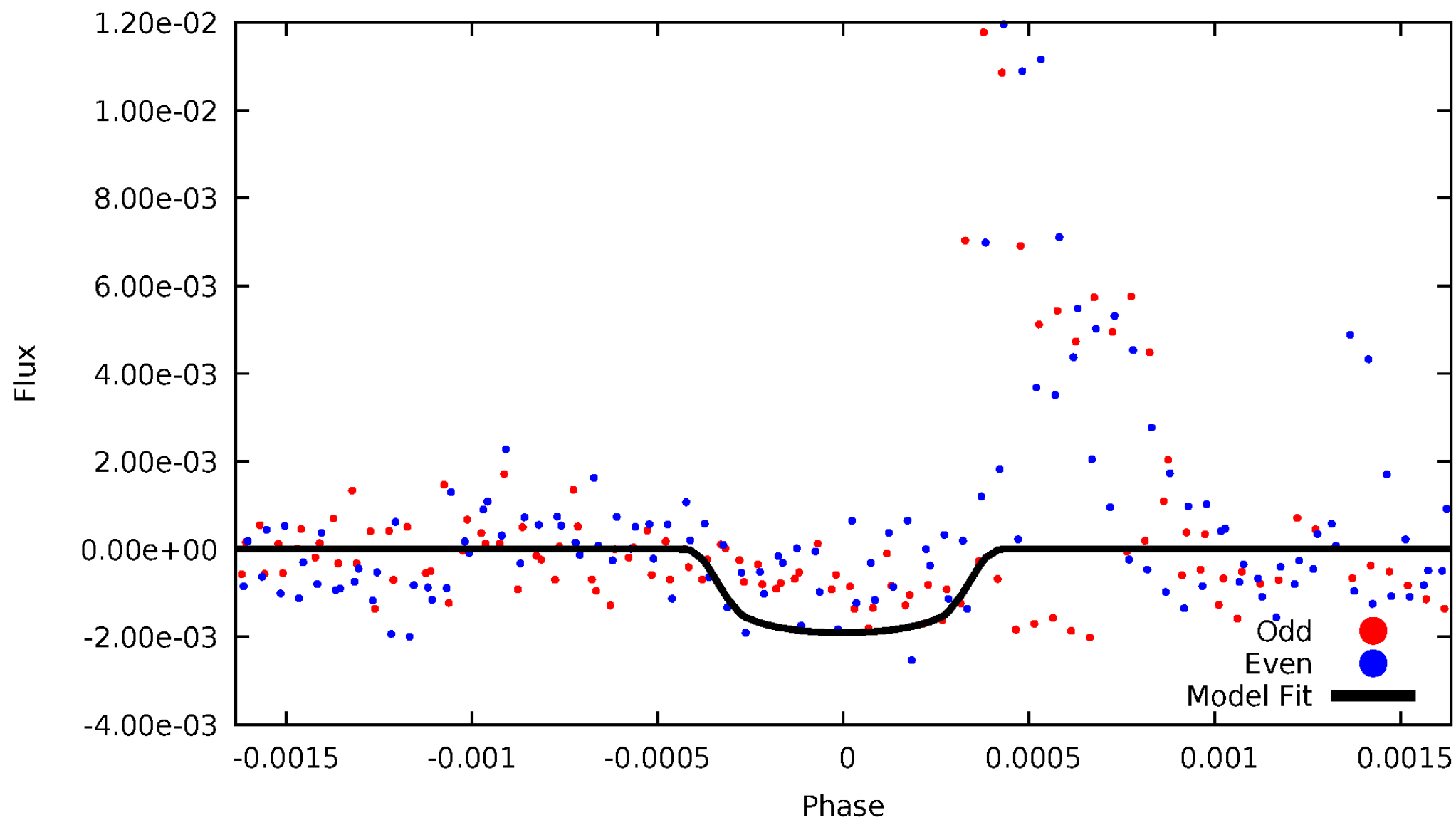


TCE 008947255-02



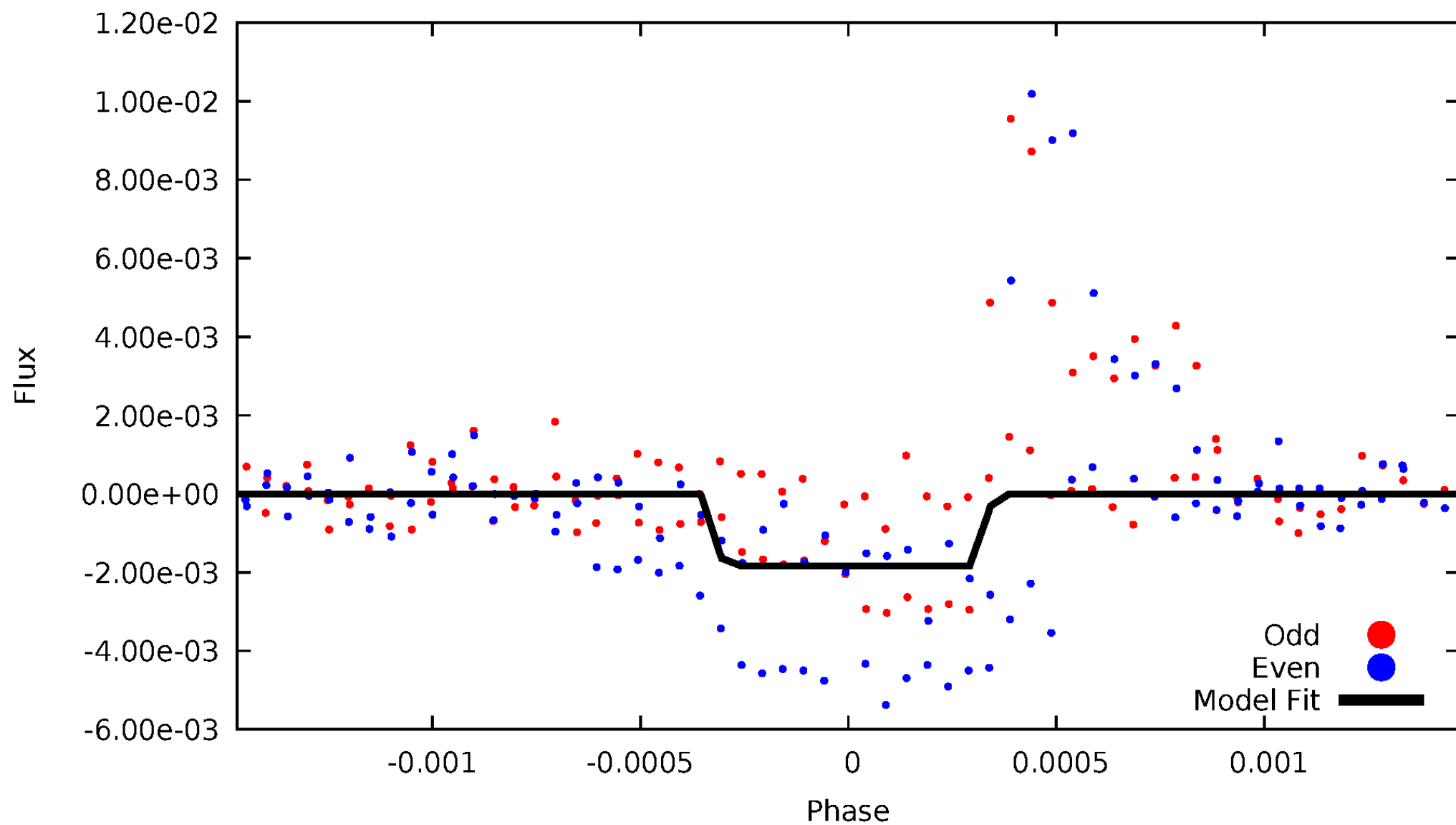
DV Odd/Even

TCE 008947255-02



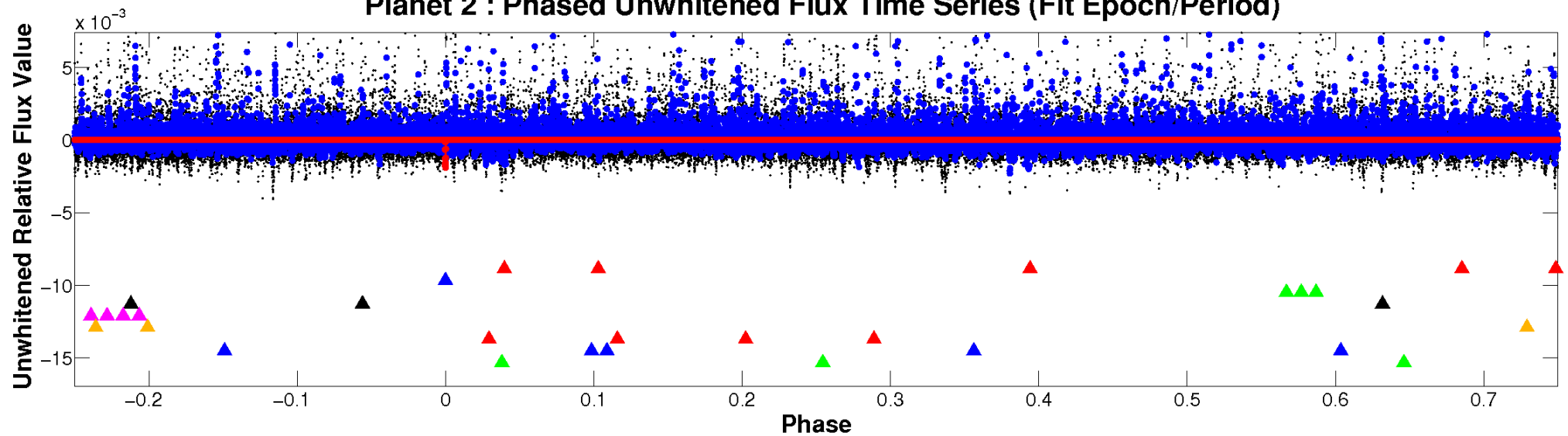
ALT Odd/Even

TCE 008947255-02

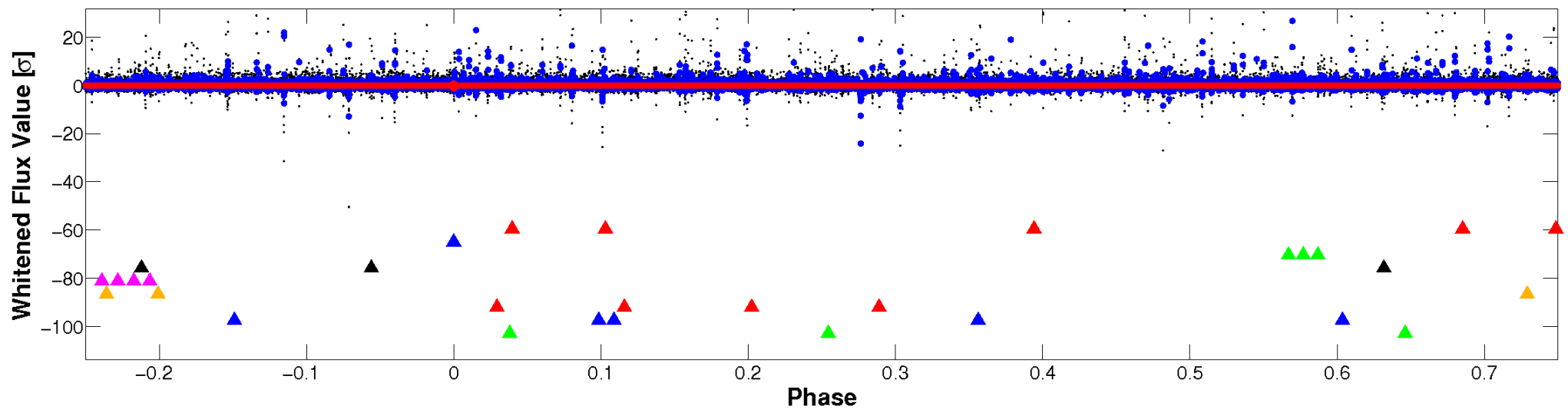


Non-Whitened Vs. Whitened Light Curve

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



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



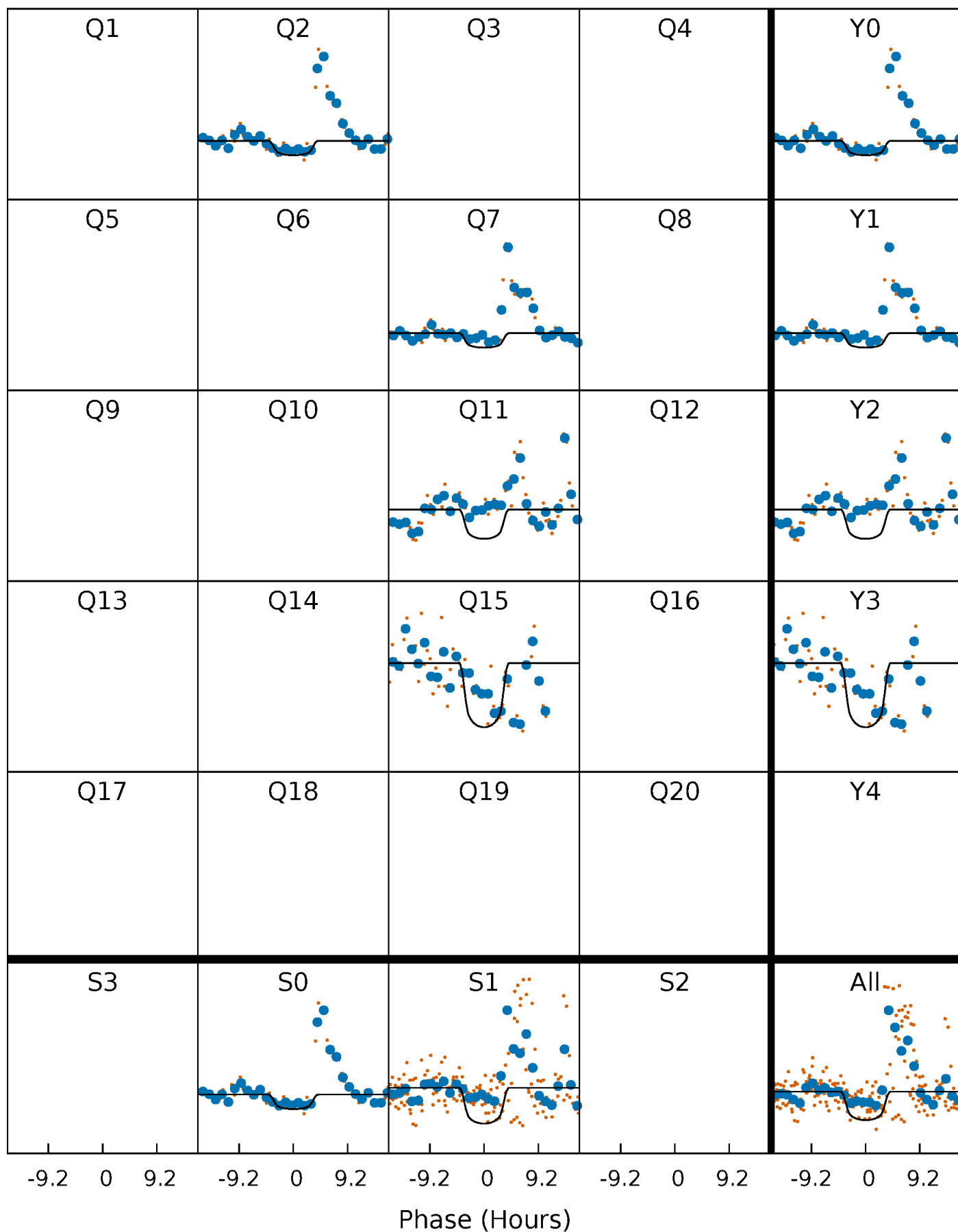
PDC Quarter-Phased Transit Curves

TCE 008947255-02 P=411.533700 Days $T_0=236.099099$ (BKJD)



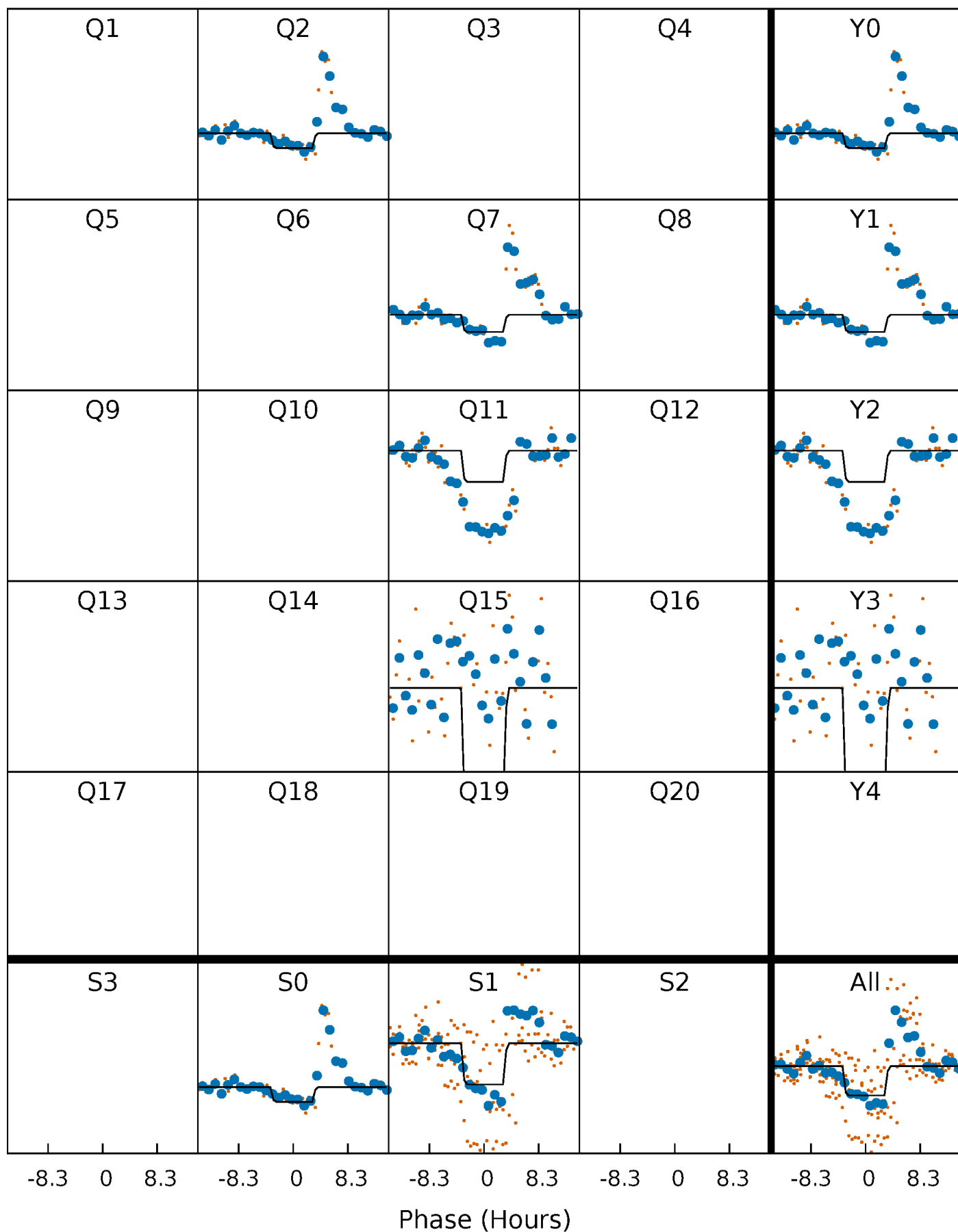
DV Quarter-Phased Transit Curves

TCE 008947255-02 $P=411.533700$ Days $T_0=236.099099$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

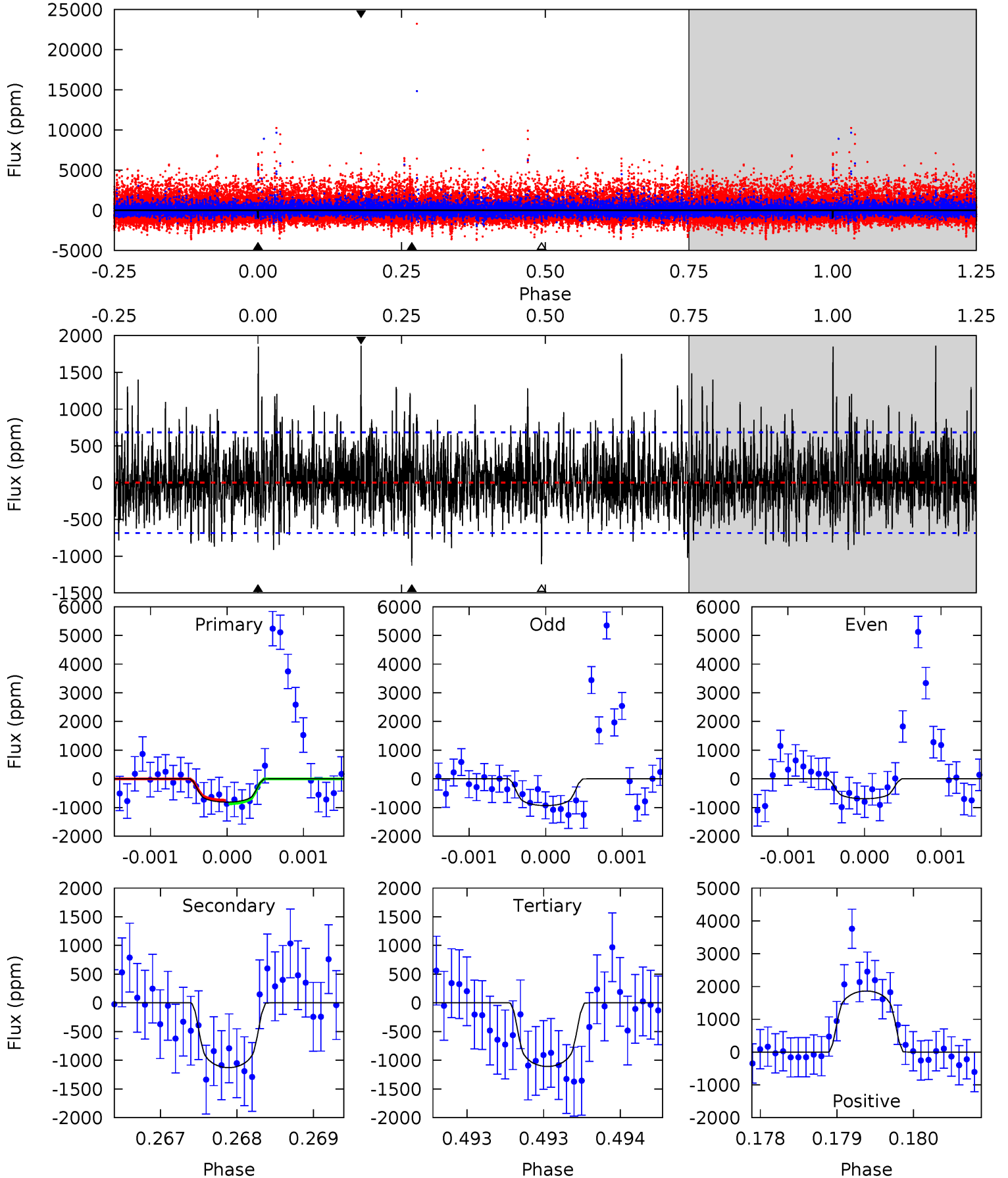
TCE 008947255-02 P=411.531898 Days $T_0=236.095659$ (BKJD)



DV Model-Shift Uniqueness Test

008947255-02, P = 411.533700 Days, E = 236.099099 Days

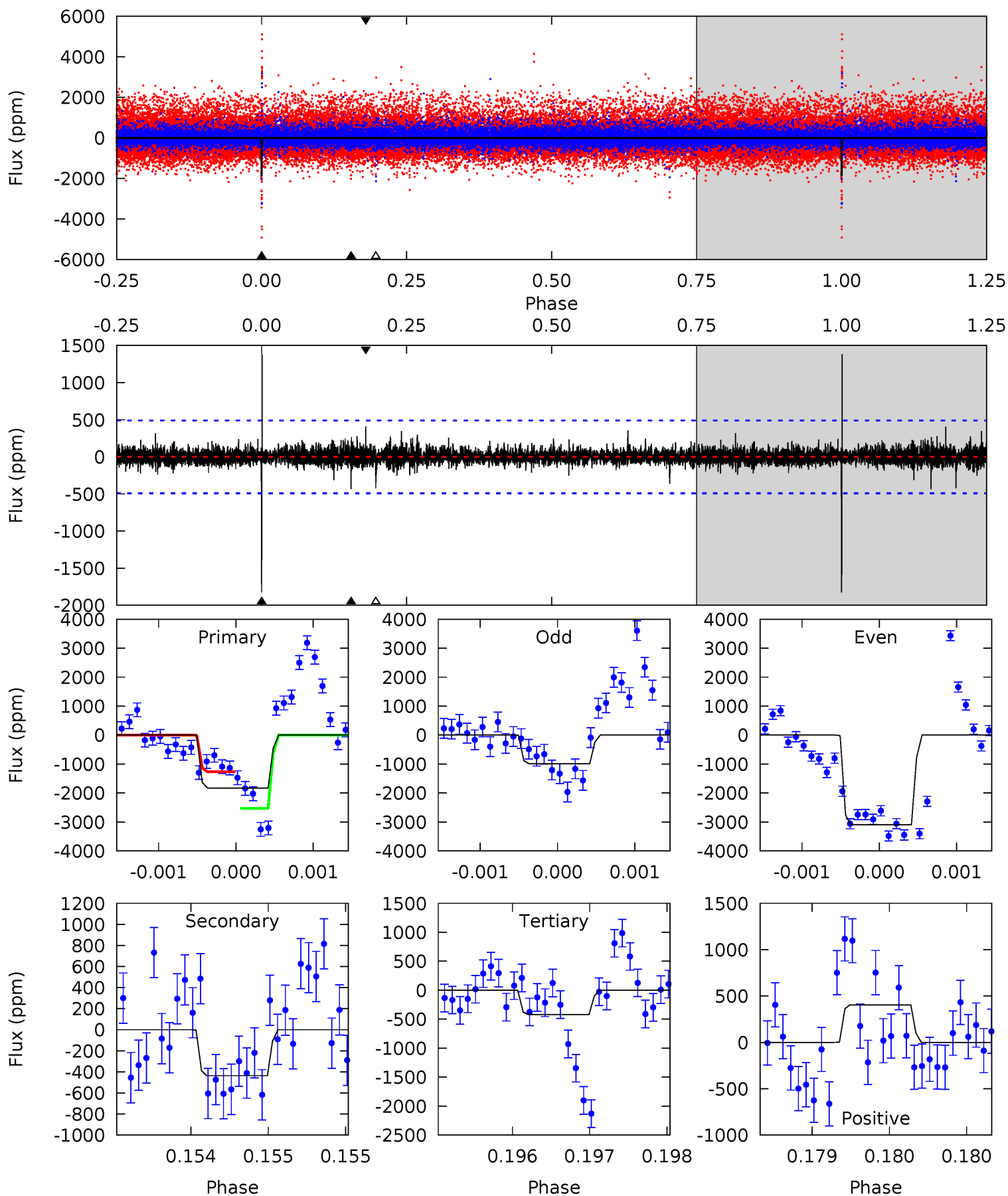
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.50	9.02	8.85	14.9	5.48	3.33	2.69	-2.36	-8.40	0.17	-5.87	0.72	0.94	0.62	0.50



Alt Model-Shift Uniqueness Test

008947255-02, P = 411.531898 Days, E = 236.095659 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.6	4.91	4.74	4.56	5.51	3.39	0.73	15.8	16.0	0.17	0.35	13.2	1.11	0.43	7.05



Stellar Parameters For KIC 008947255

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3504^{+56}_{-56}	$4.858^{+0.042}_{-0.031}$	$0.000^{+0.100}_{-0.100}$	$0.389^{+0.032}_{-0.039}$	$0.400^{+0.038}_{-0.047}$	$9.533^{+2.131}_{-1.300}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+8%/-10%	+9%/-12%	+22%/-14%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 008947255-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1129 ± 125	$1.96^{+0.28}_{-0.29}$	151^{+3}_{-4}	3180^{+164}_{-129}	102751^{+40123}_{-23733}
Alt.	-436 ± 89	$1.81^{+0.28}_{-0.26}$	151^{+3}_{-3}	2838^{+145}_{-138}	45656^{+20062}_{-13297}

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

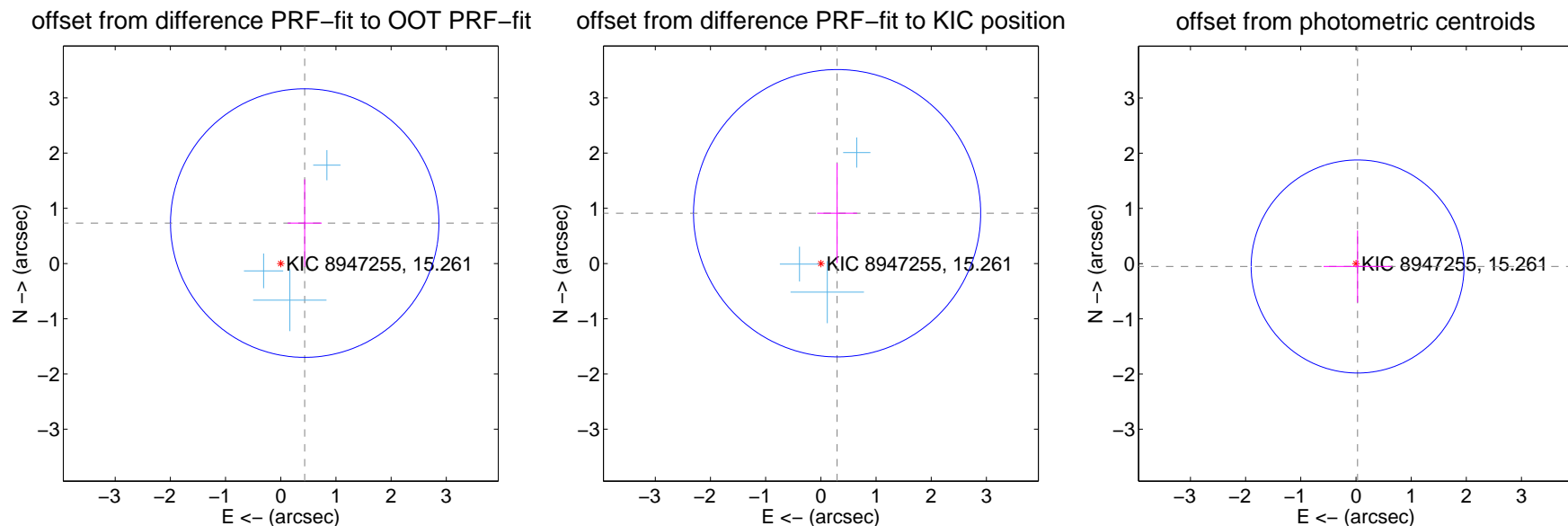
DV Centroid Data

Supplemental centroid analysis for 008947255-02. Kepler magnitude: 15.26. Transit SNR 8.09

There are 3 quarters with good PRF difference image offsets

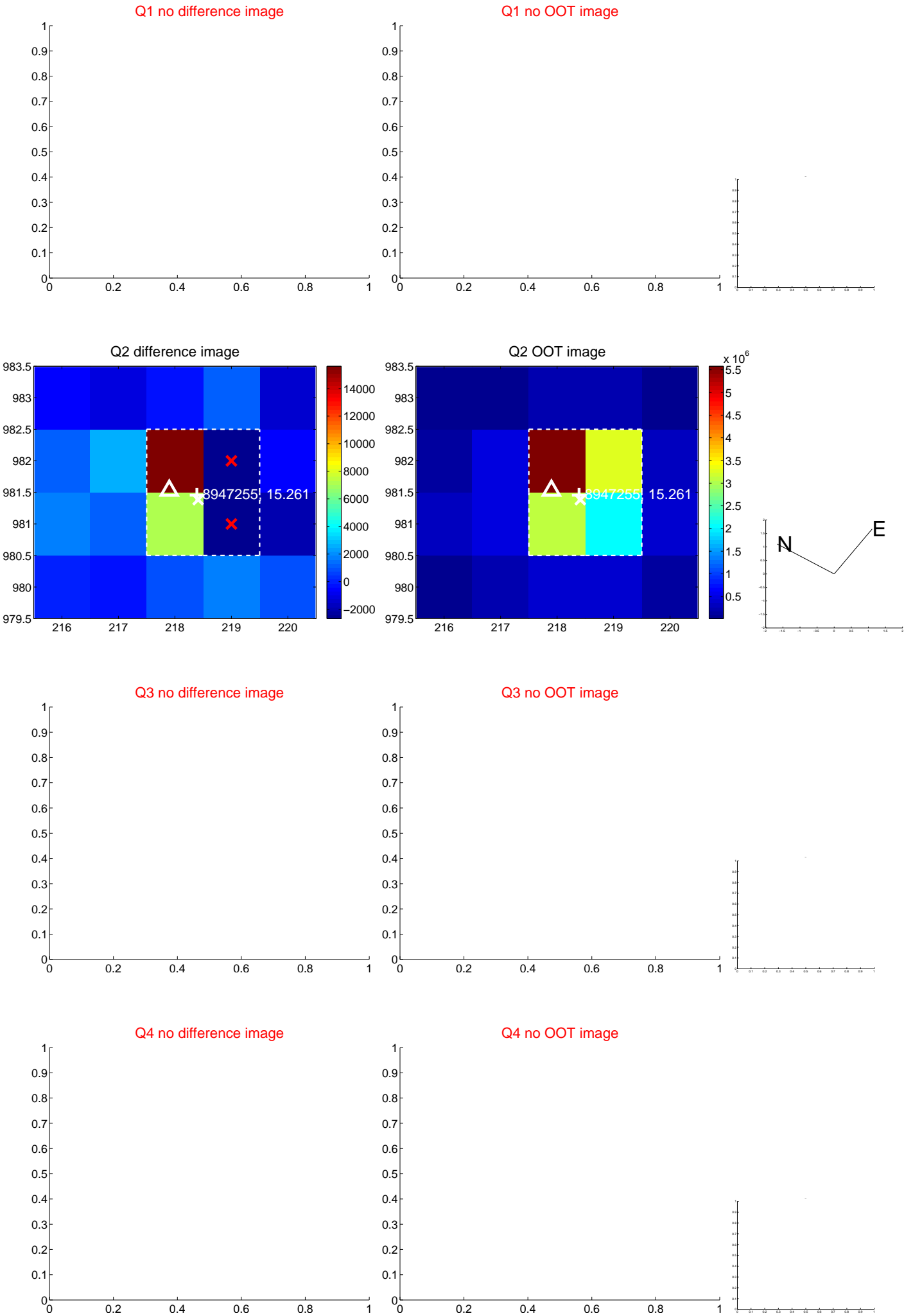
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.852 ± 0.810	1.05	-0.434 ± 0.309	0.733 ± 0.791
PRF-fit source offset from KIC position	0.957 ± 0.867	1.10	-0.294 ± 0.363	0.911 ± 0.904
photometric centroid source offset	0.06 ± 0.64	0.09	-0.03 ± 0.62	-0.05 ± 0.65



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

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



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

Q5 no difference image



Q5 no OOT image



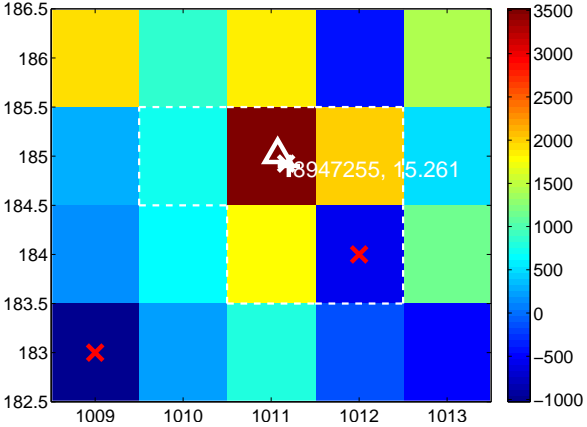
Q6 no difference image



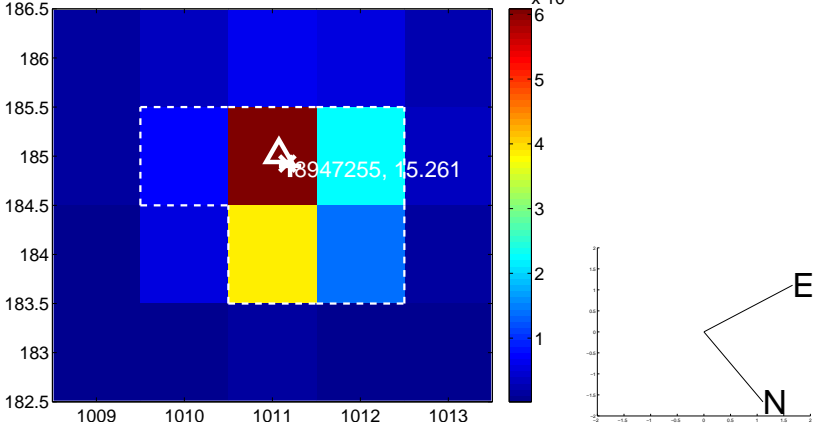
Q6 no OOT image



Q7 difference image



Q7 OOT image



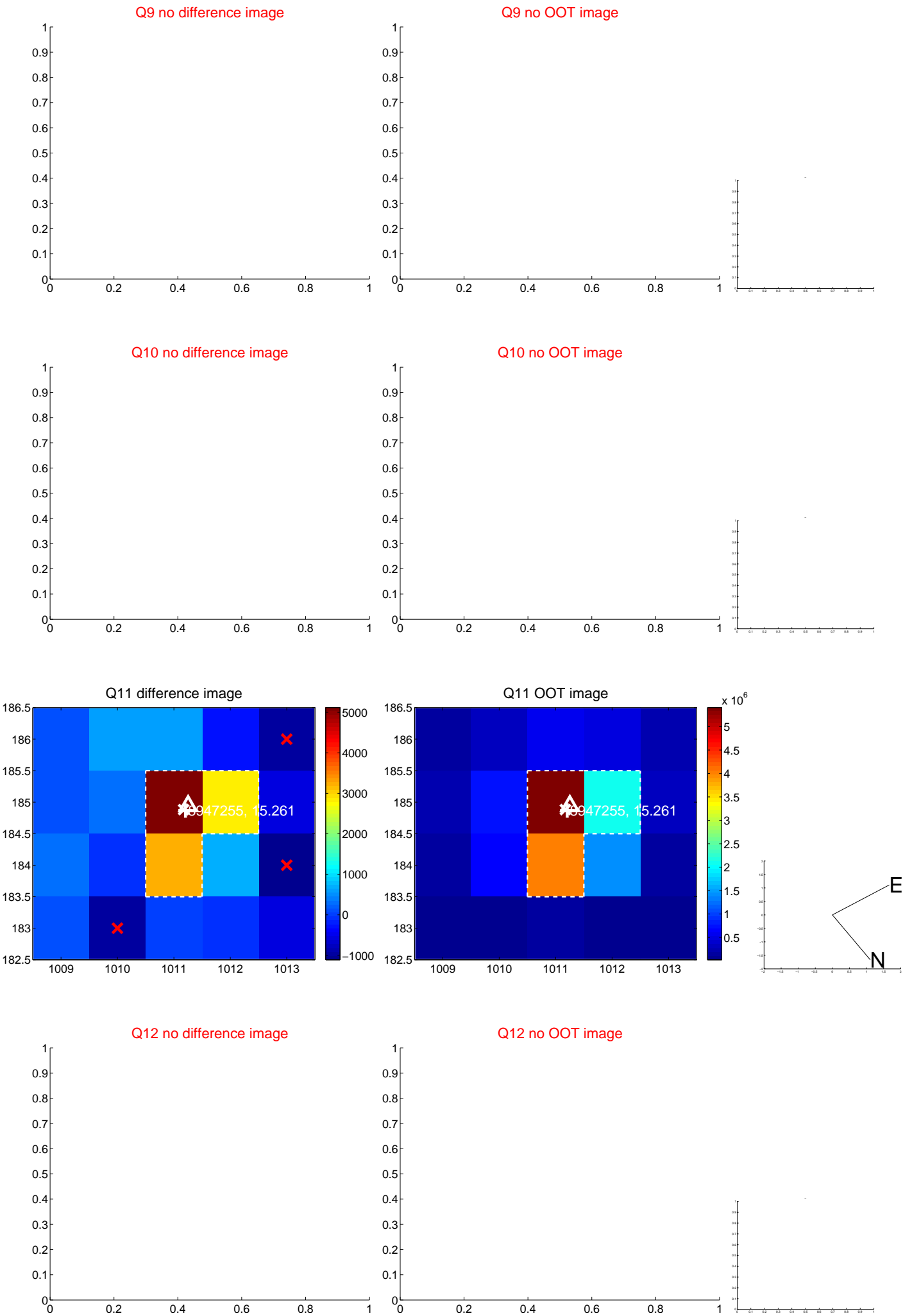
Q8 no difference image



Q8 no OOT image



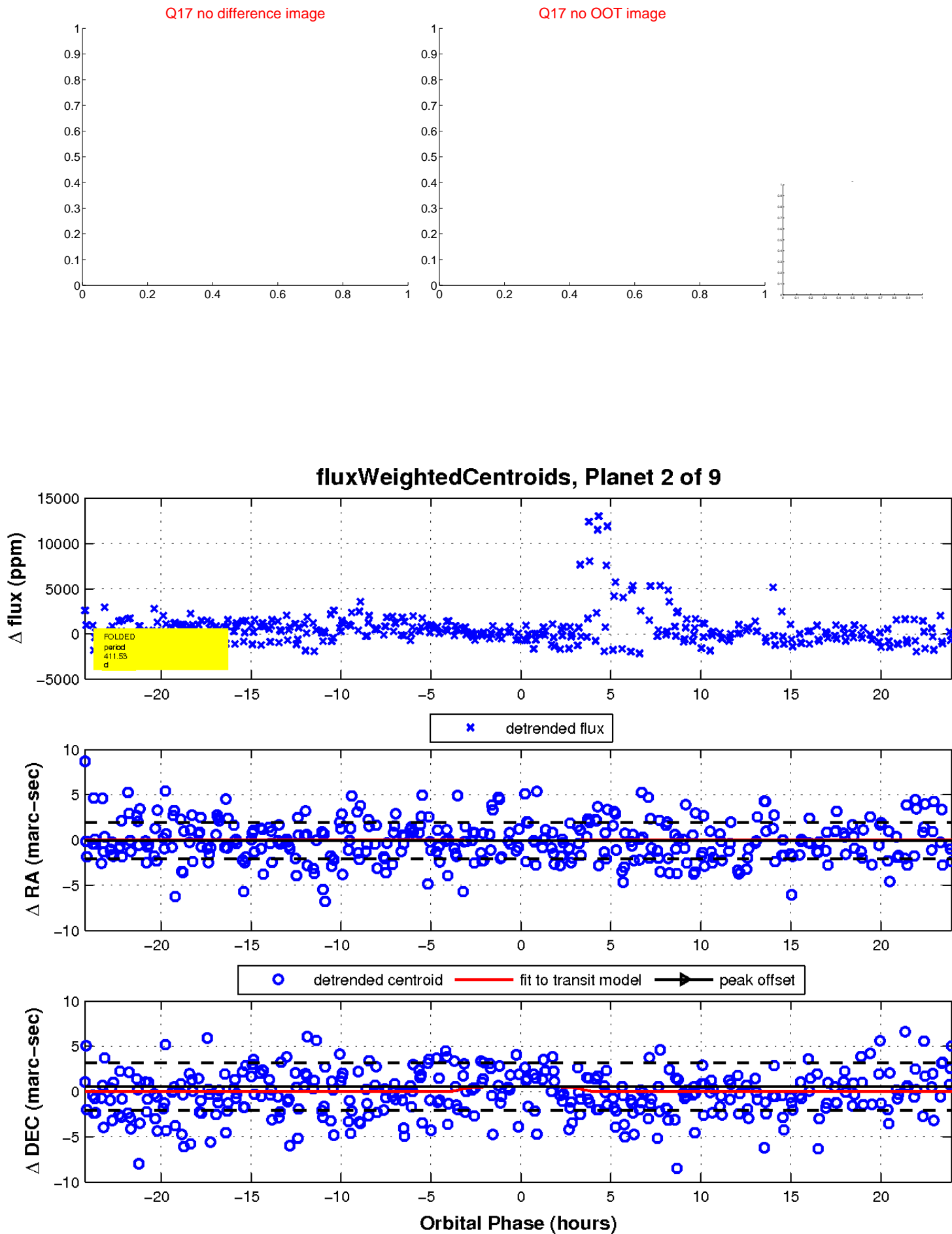
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

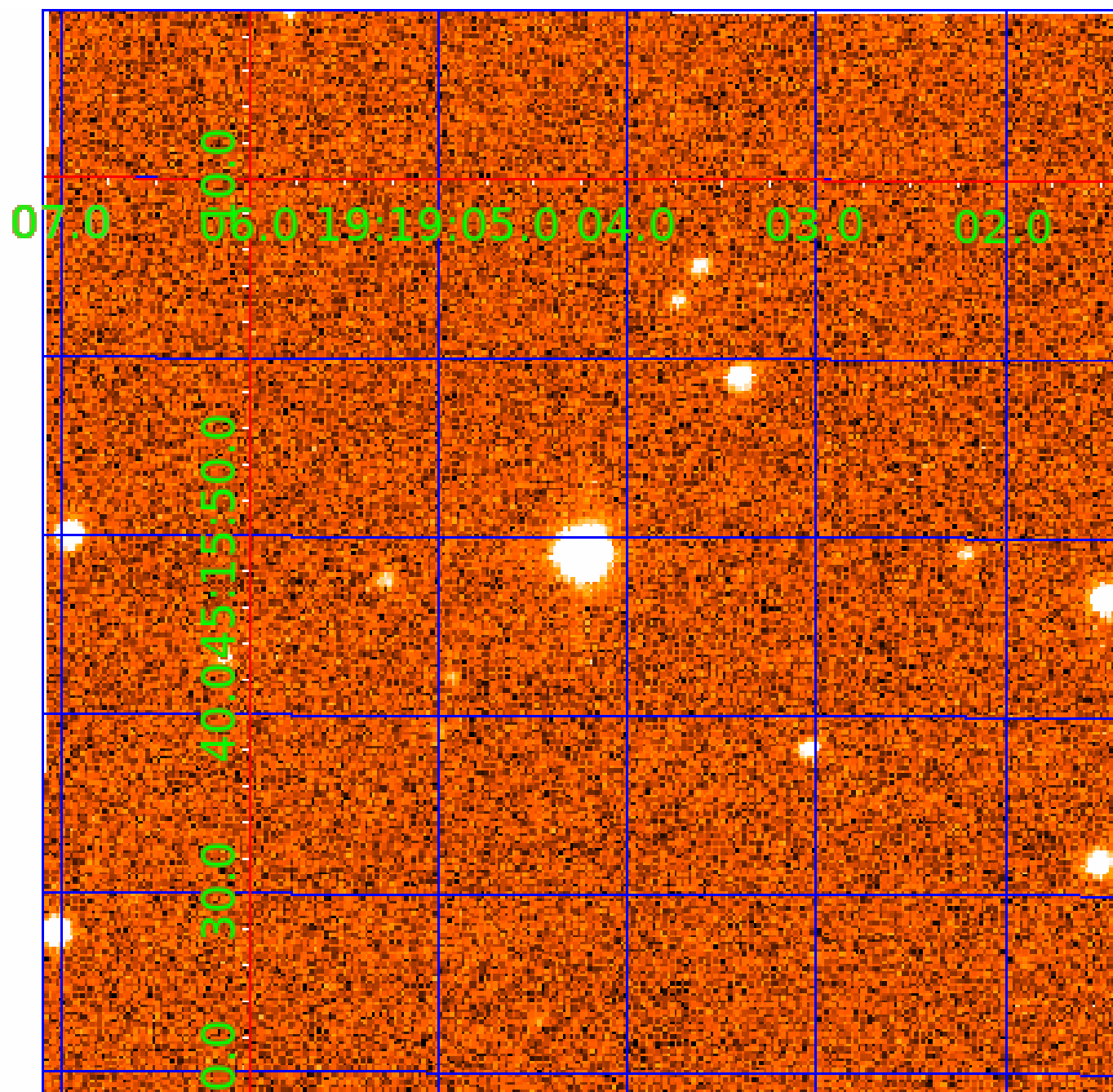


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008947255

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})
008947255-01	OBS	No	265.672434	278.499139	1759.5	8.332	16.4	7.9	0.39	3504	1.75	0.06
008947255-02	OBS	No	411.533699	236.099099	1903.2	8.078	16.7	8.1	0.39	3504	1.96	0.03
008947255-03	OBS	No	415.647580	469.433461	2111.7	2.689	14.0	7.9	0.39	3504	1.76	0.03
008947255-05	OBS	No	407.071141	151.135478	1952.1	12.204	14.2	6.3	0.39	3504	1.74	0.03
008947255-06	OBS	No	425.937558	536.177216	1003.9	12.500	13.0	-1.0	0.39	3504	1.21	0.03
008947255-07	OBS	No	447.141041	248.175127	1693.7	3.877	11.8	6.8	0.39	3504	1.77	0.03
008947255-08	OBS	No	309.716060	276.625165	1283.2	18.611	12.6	5.2	0.39	3504	1.42	0.05
008947255-09	OBS	No	661.829386	251.745466	1217.9	5.000	11.9	-1.0	0.39	3504	1.34	0.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008947255-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
008947255-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
008947255-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008947255-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008947255-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
008947255-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV
008947255-08	OBS	FP	0.00	1	0	1	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
008947255-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_NOFITS

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

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

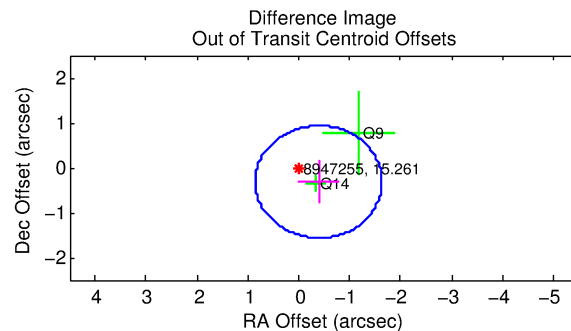
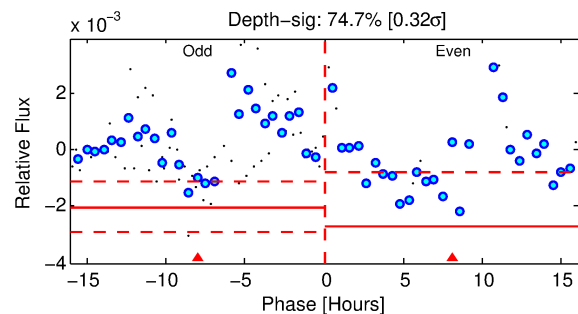
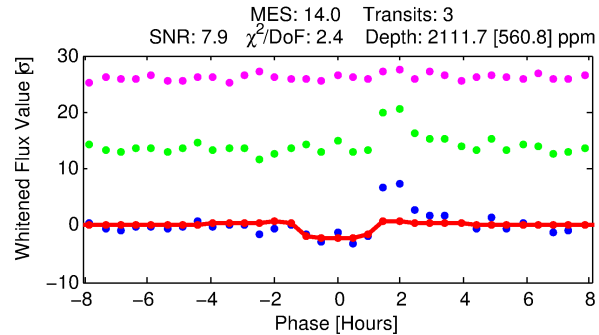
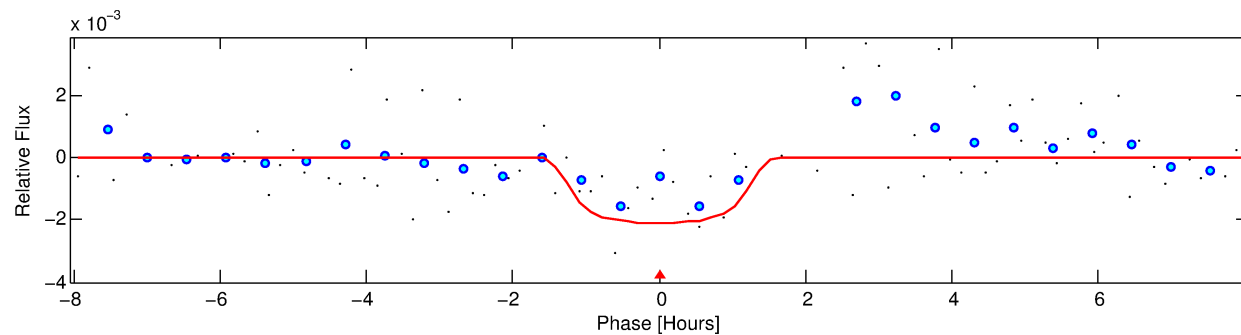
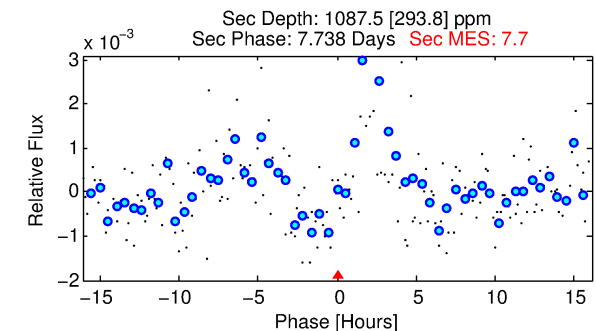
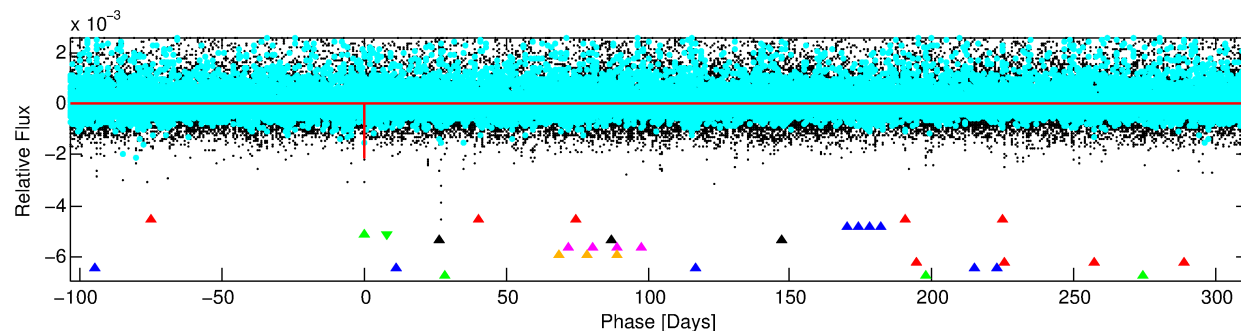
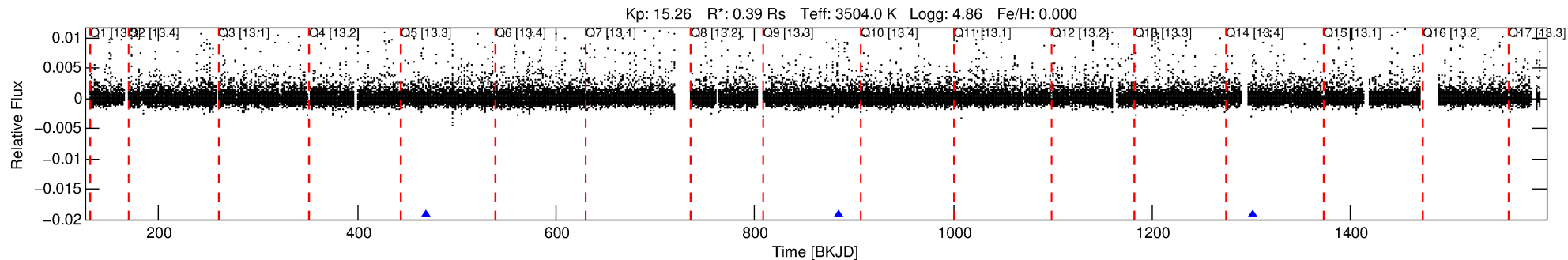
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008947255-03

No Significant Match Found

DV One-Page Summary

KIC: 8947255 Candidate: 3 of 9 Period: 415.648 d



DV Fit Results:

Period = 415.64758 [0.00664] d
Epoch = 469.4335 [0.0076] BKJD
Rp/R* = 0.0415 [0.1409]
a/R* = 1229.26 [17624.48]
b = 0.03 [514.76]
Seff = 0.03 [0.00]
Teq = 108 [3] K
Rp = 1.76 [5.98] Re
a = 0.8019 [0.0595] AU
Ag = 123877.63 [841345.48] [0.15σ]
Teffp = 3123 [5302] K [0.57σ]

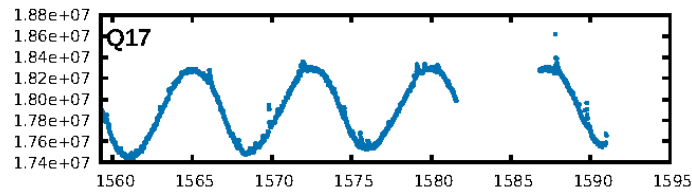
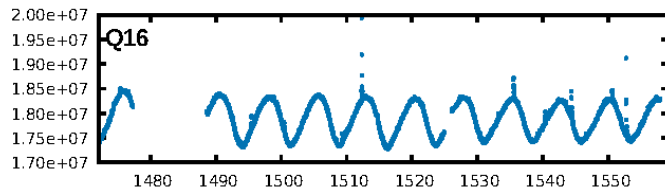
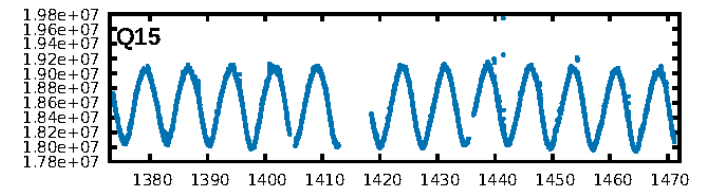
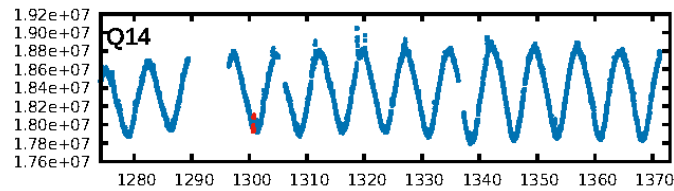
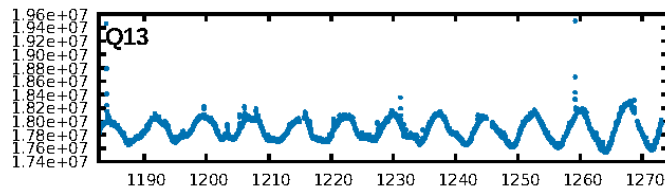
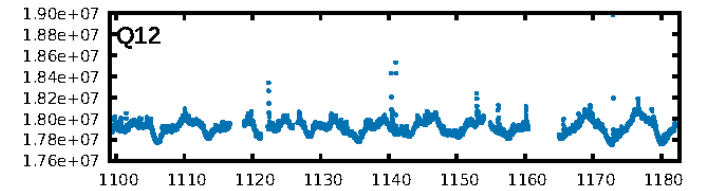
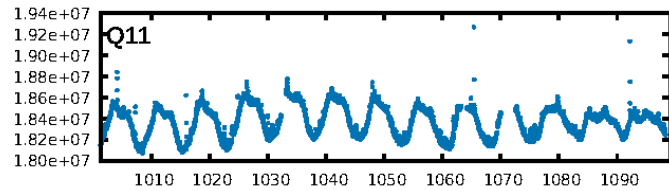
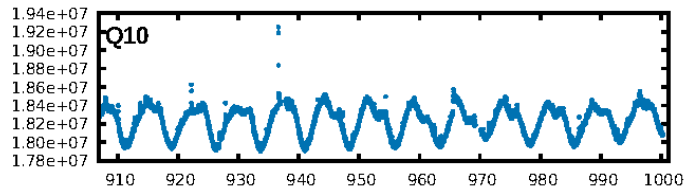
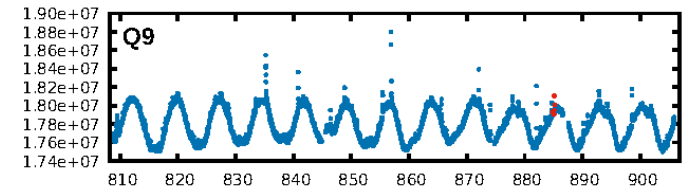
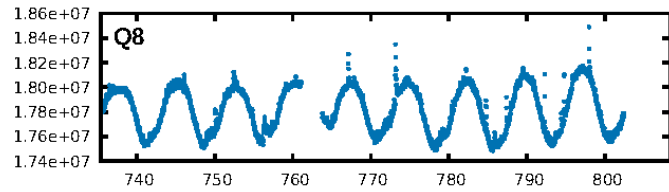
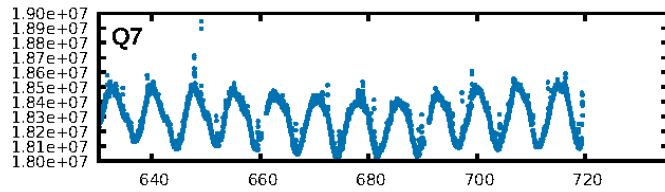
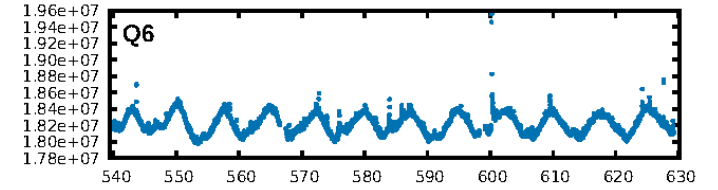
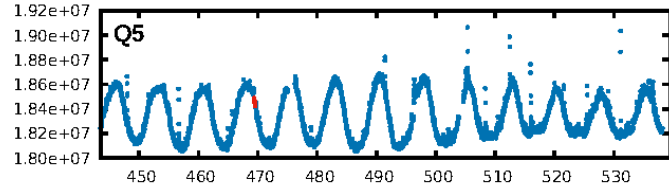
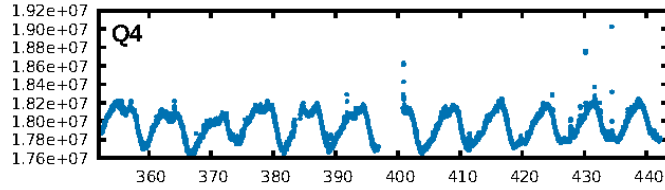
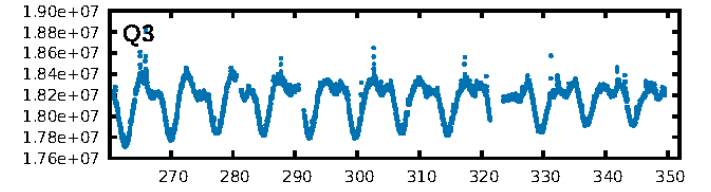
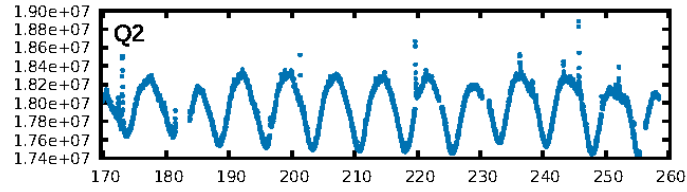
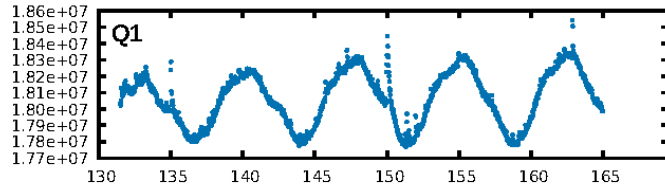
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [11.60σ]
LongPeriod-sig: 100.0% [19.31σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 3.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.5537
Centroid-sig: 18.0%
Centroid-so: 1.377 arcsec [1.39σ]
OotOffset-rm: 0.502 arcsec [1.20σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-rm: 0.366 arcsec [0.95σ]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

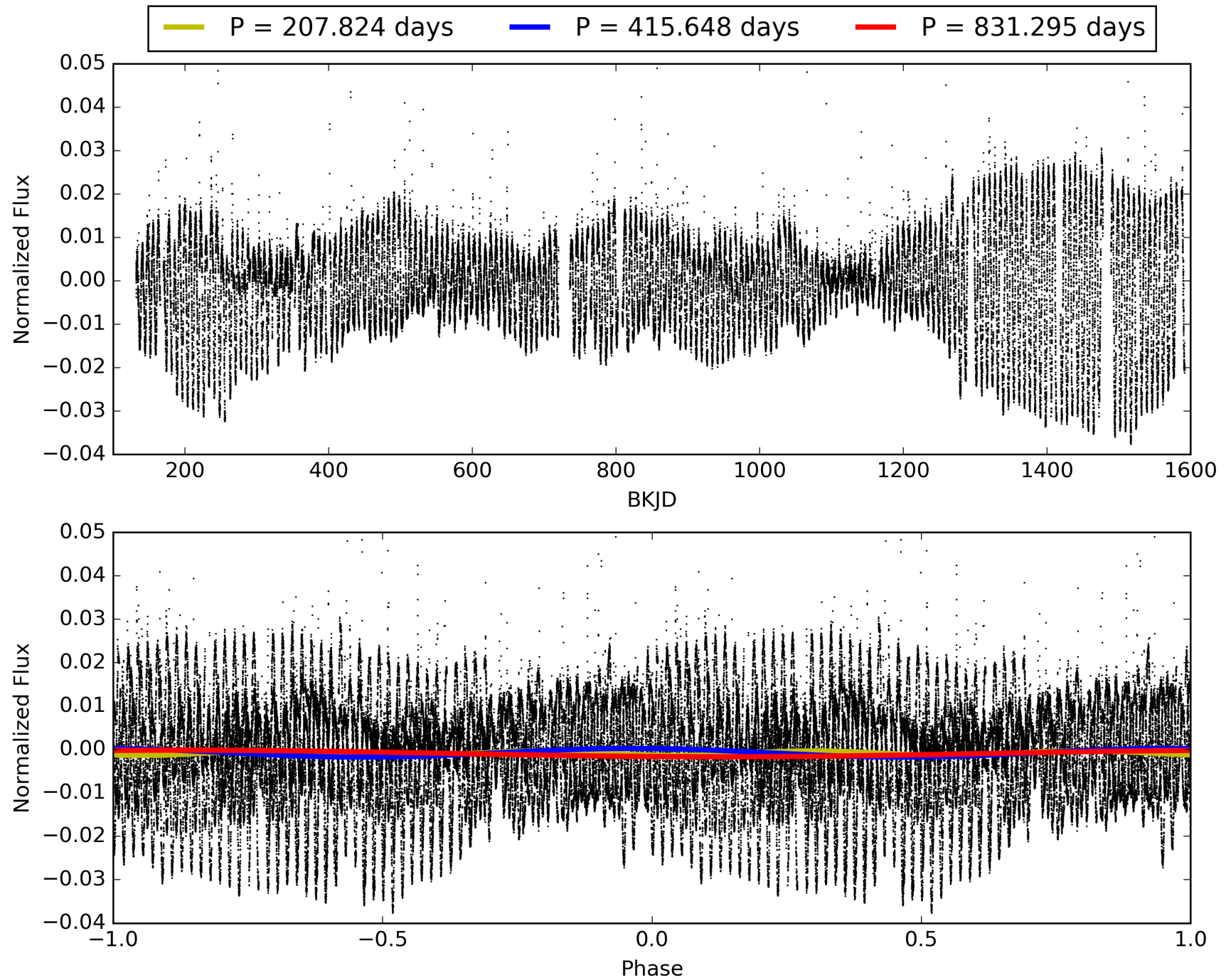
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:09:35 Z

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

TCE 008947255-03, PDC Light Curves

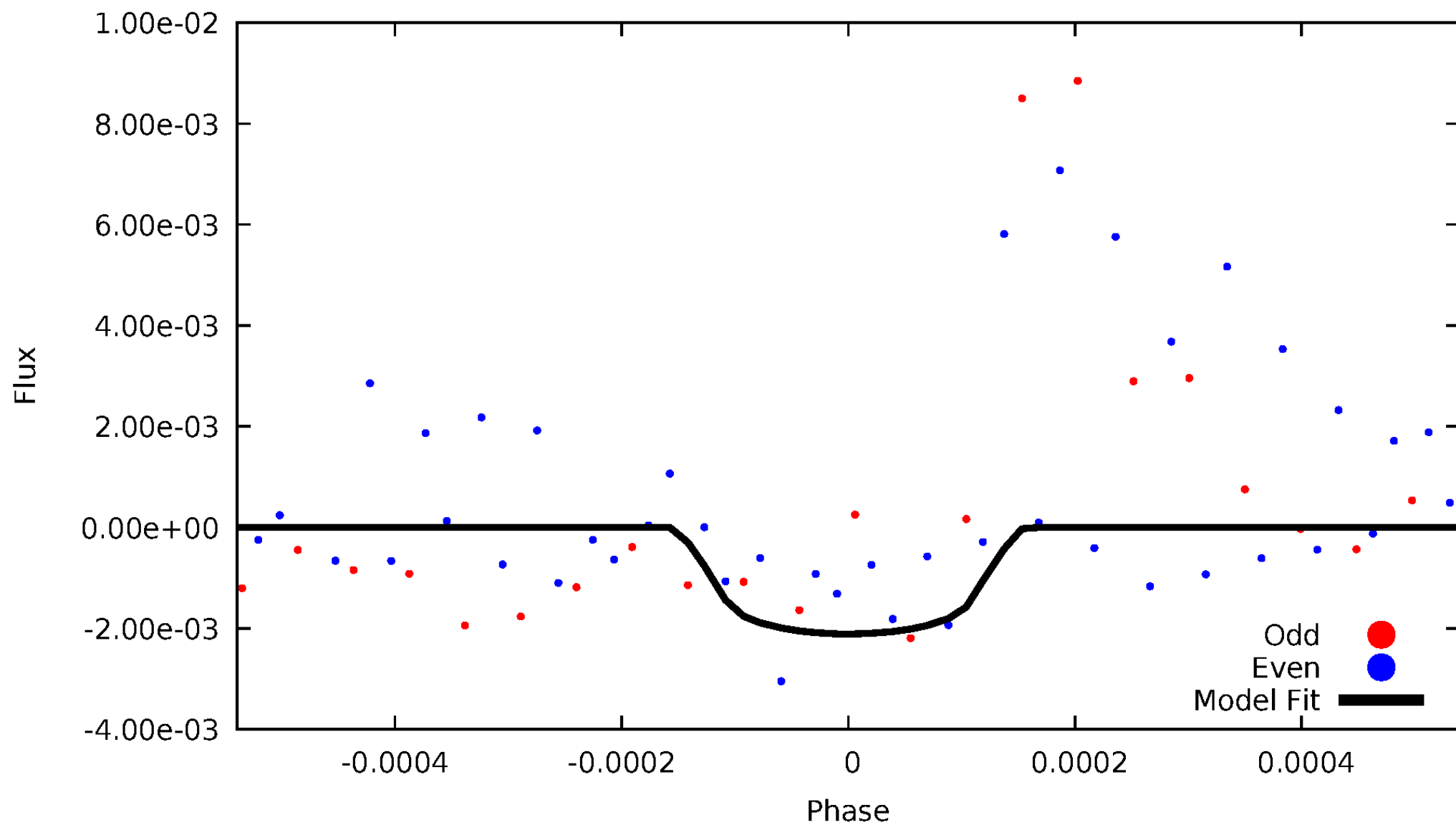


TCE 008947255-03



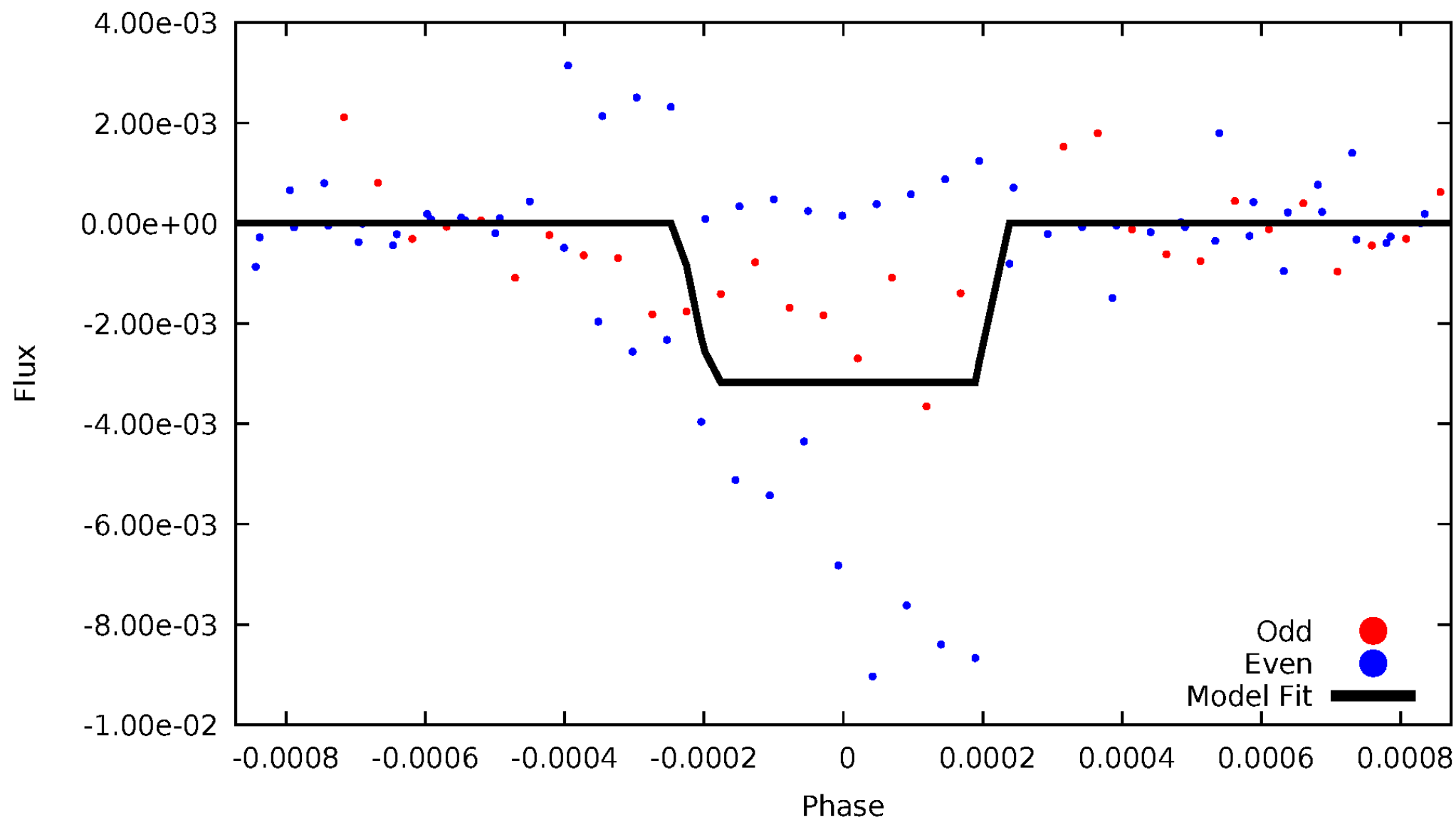
DV Odd/Even

TCE 008947255-03



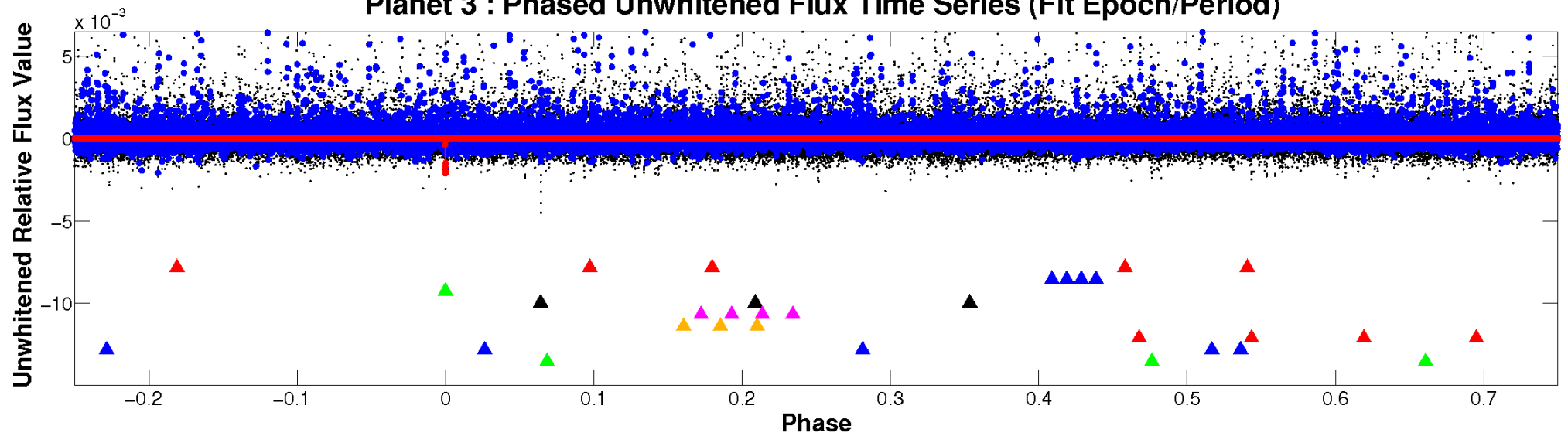
ALT Odd/Even

TCE 008947255-03

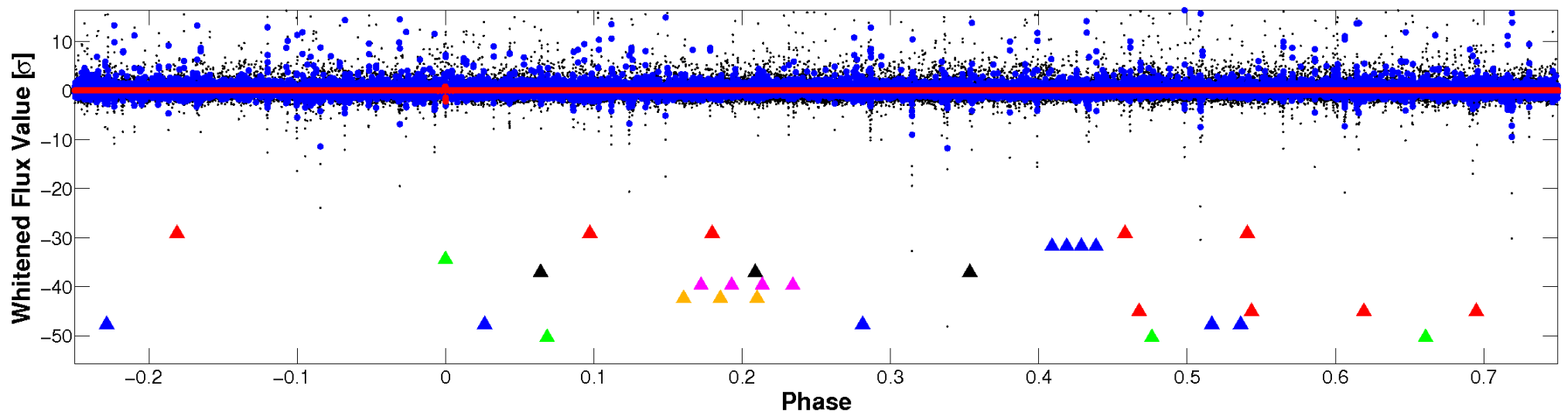


Non-Whitened Vs. Whitened Light Curve

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

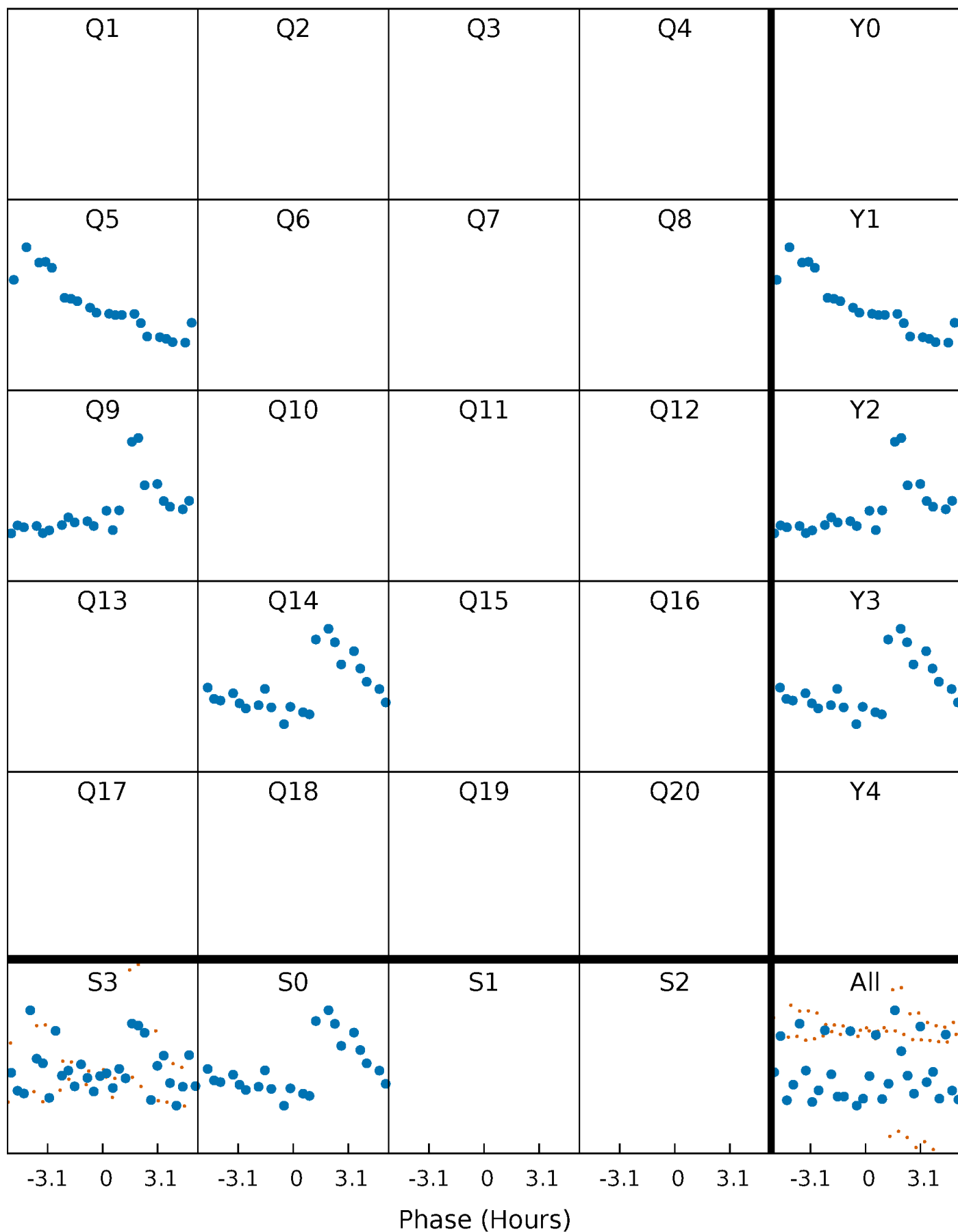


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



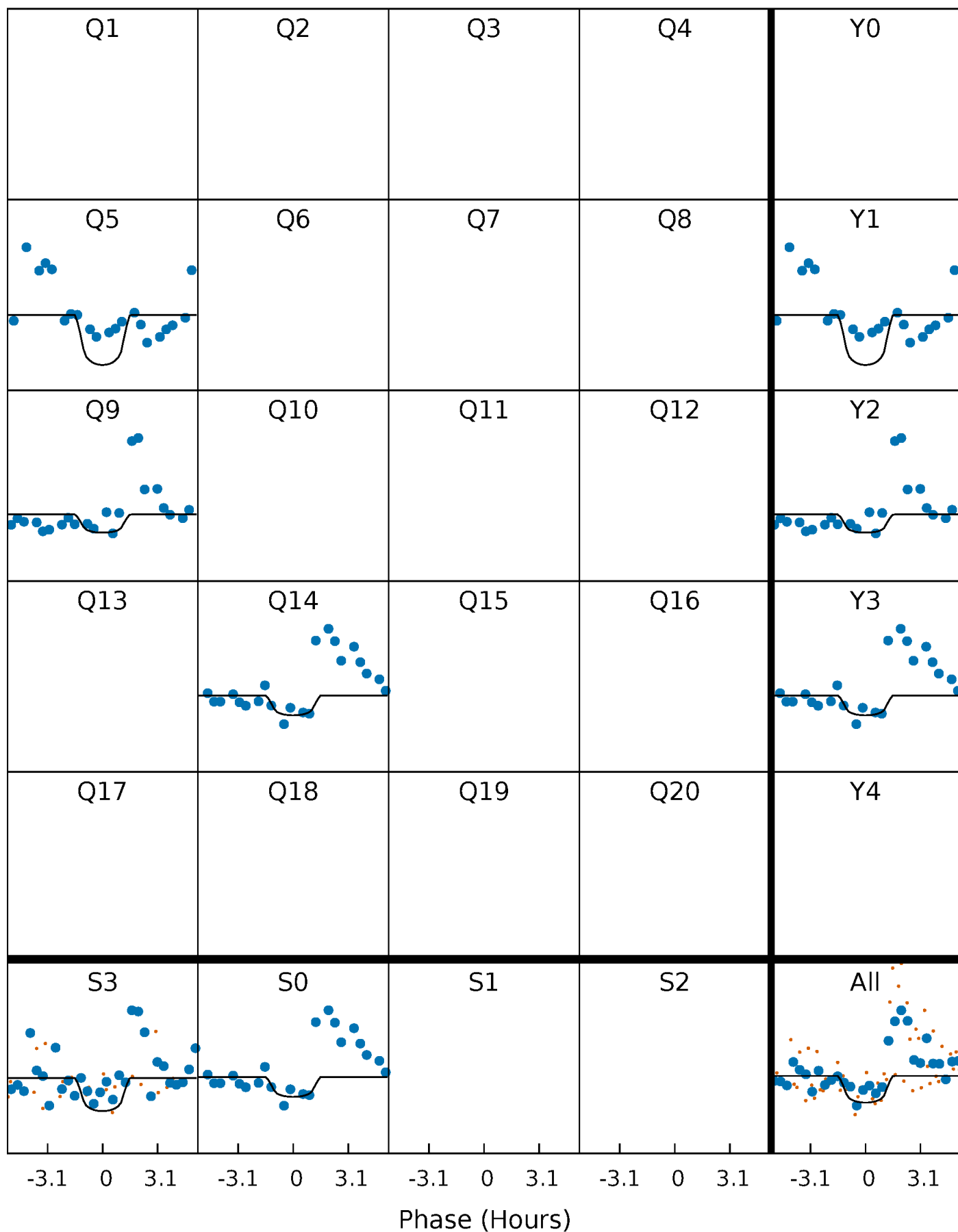
PDC Quarter-Phased Transit Curves

TCE 008947255-03 $P=415.647580$ Days $T_0=469.433461$ (BKJD)



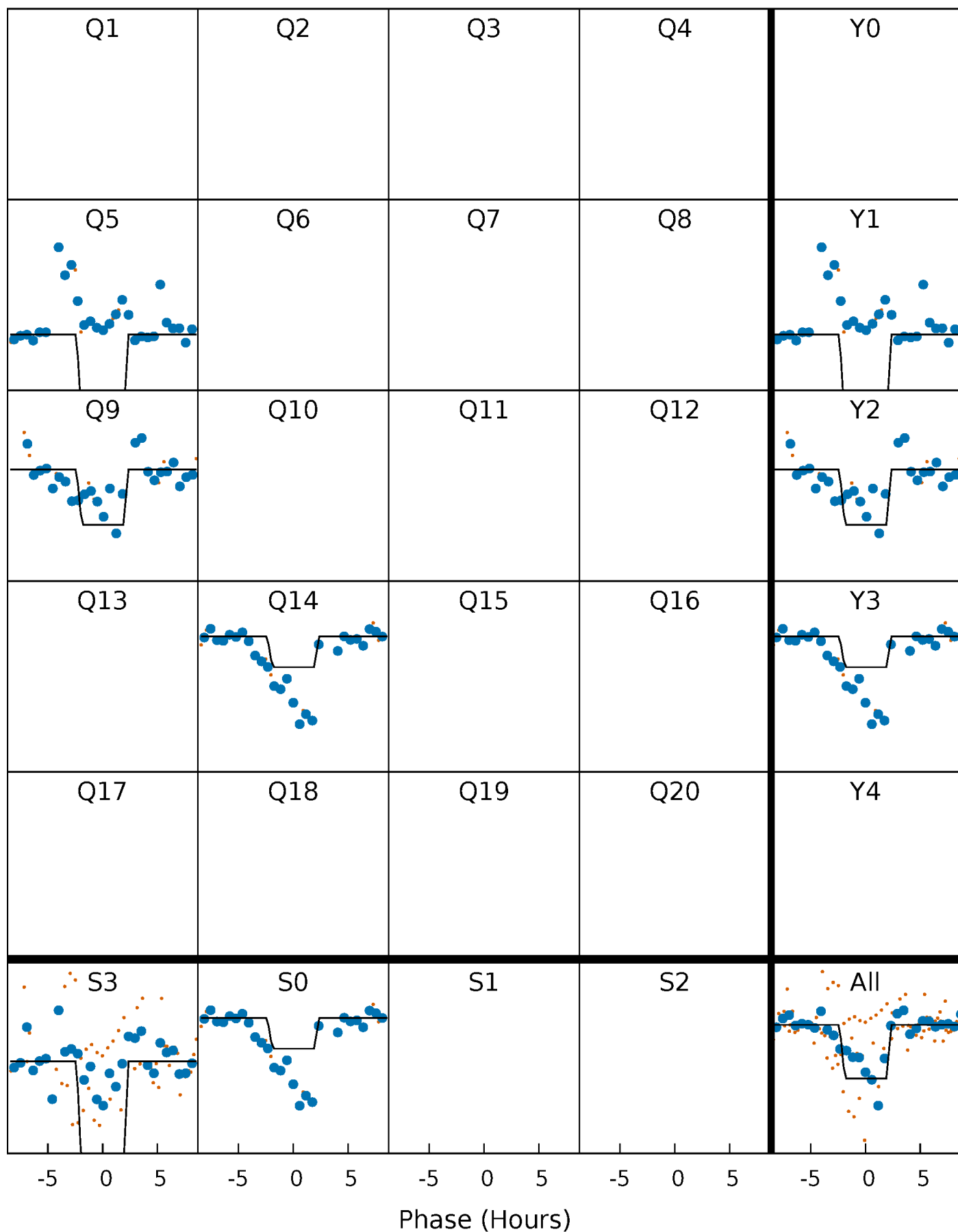
DV Quarter-Phased Transit Curves

TCE 008947255-03 $P=415.647580$ Days $T_0=469.433461$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

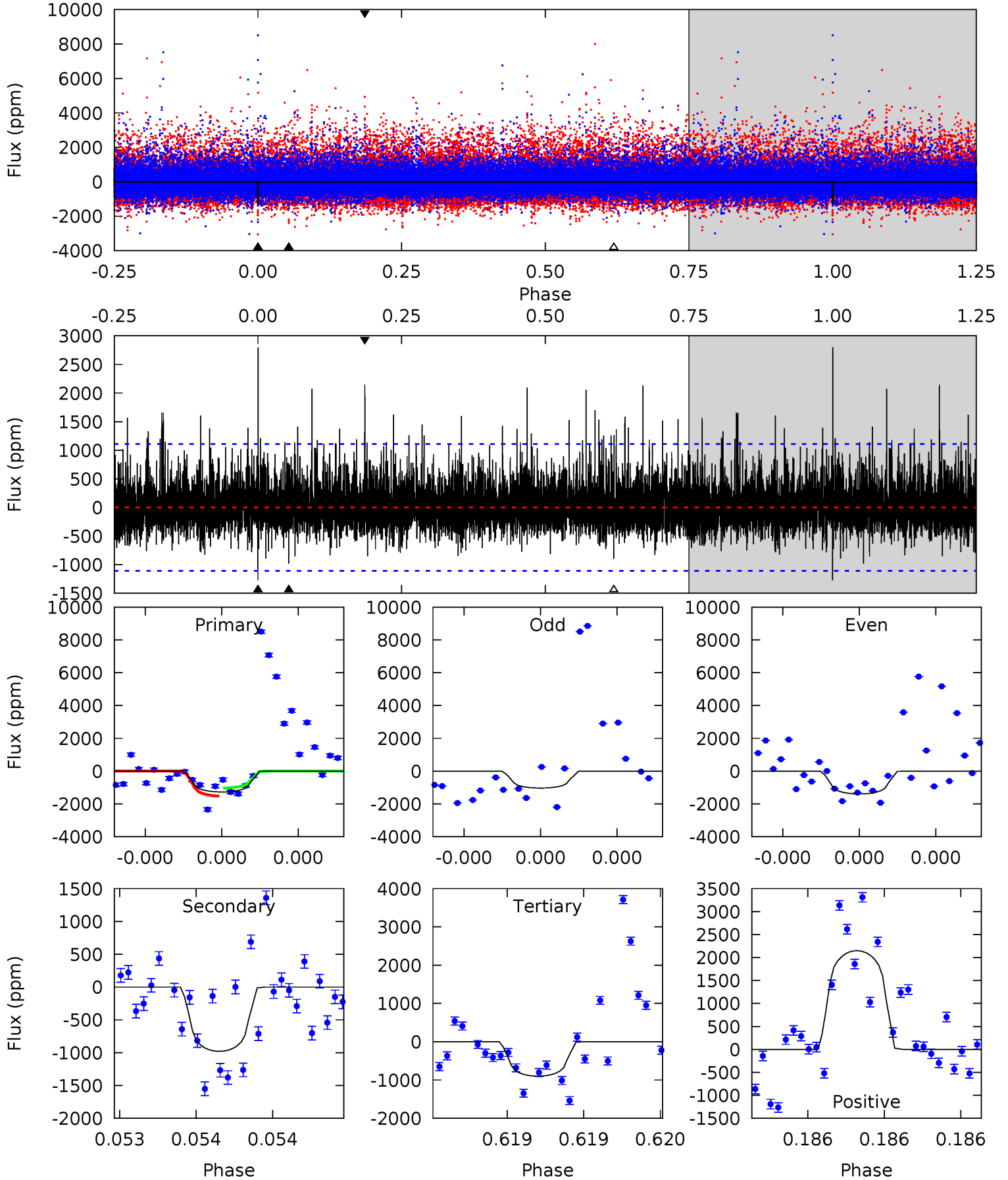
TCE 008947255-03 P=415.632233 Days $T_0=469.422158$ (BKJD)



DV Model-Shift Uniqueness Test

008947255-03, P = 415.647580 Days, E = 53.785881 Days

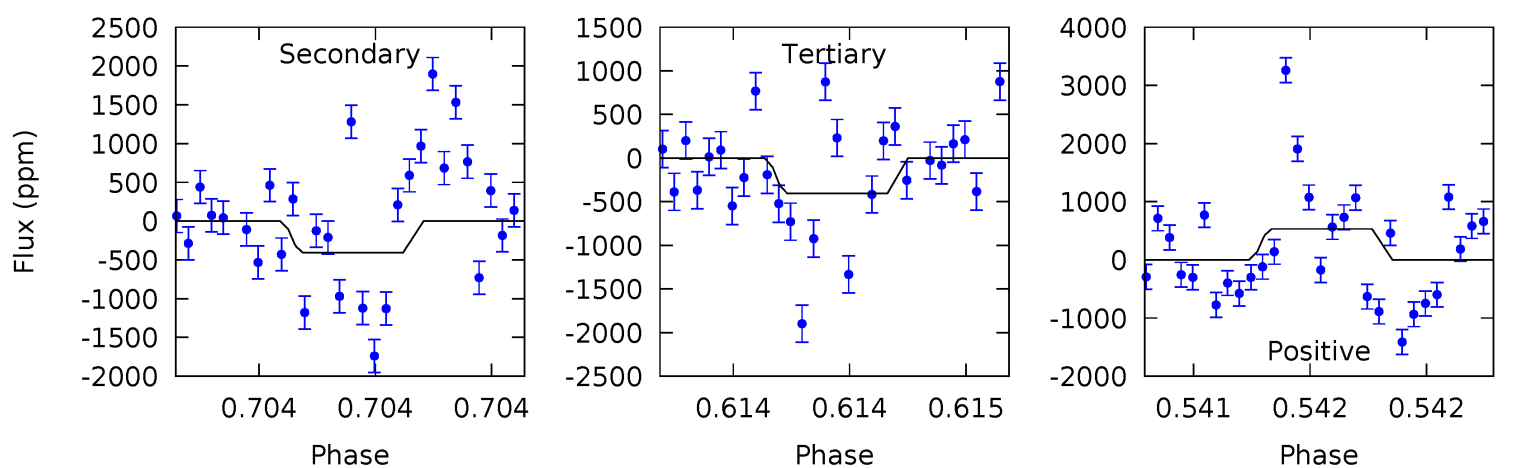
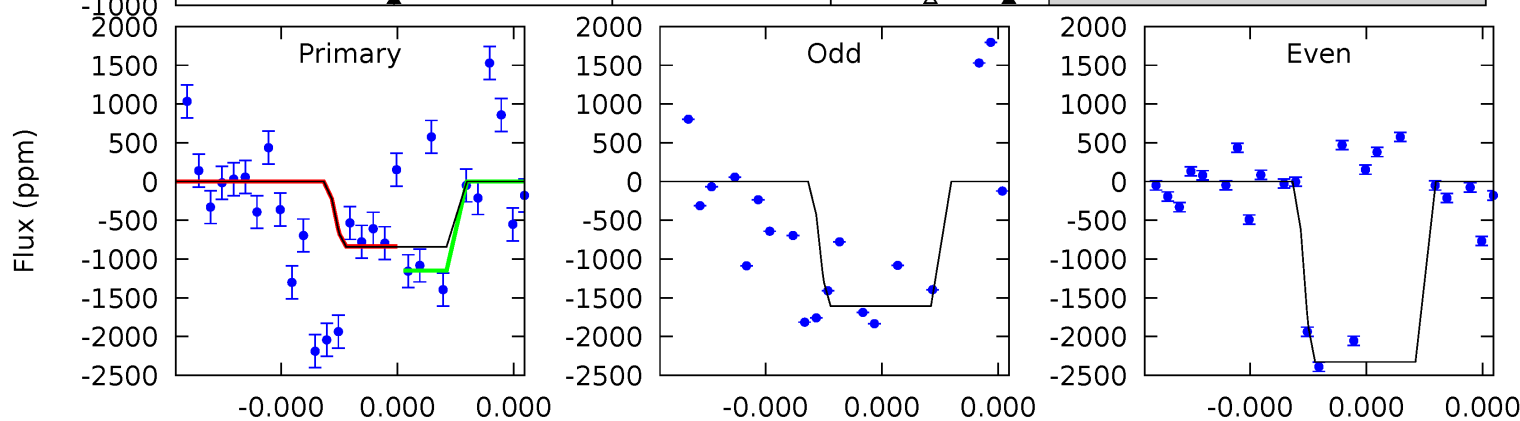
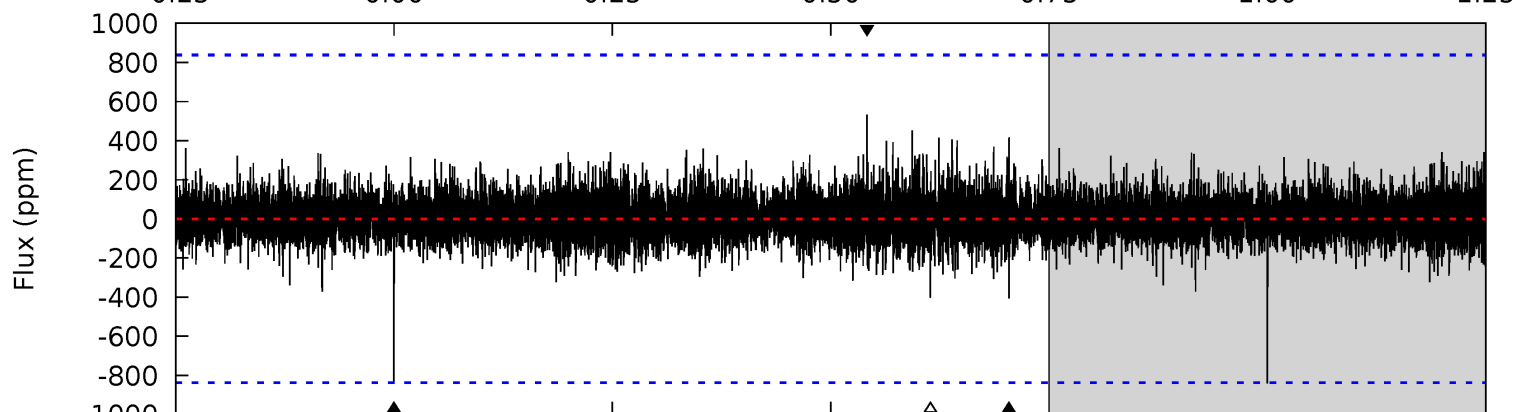
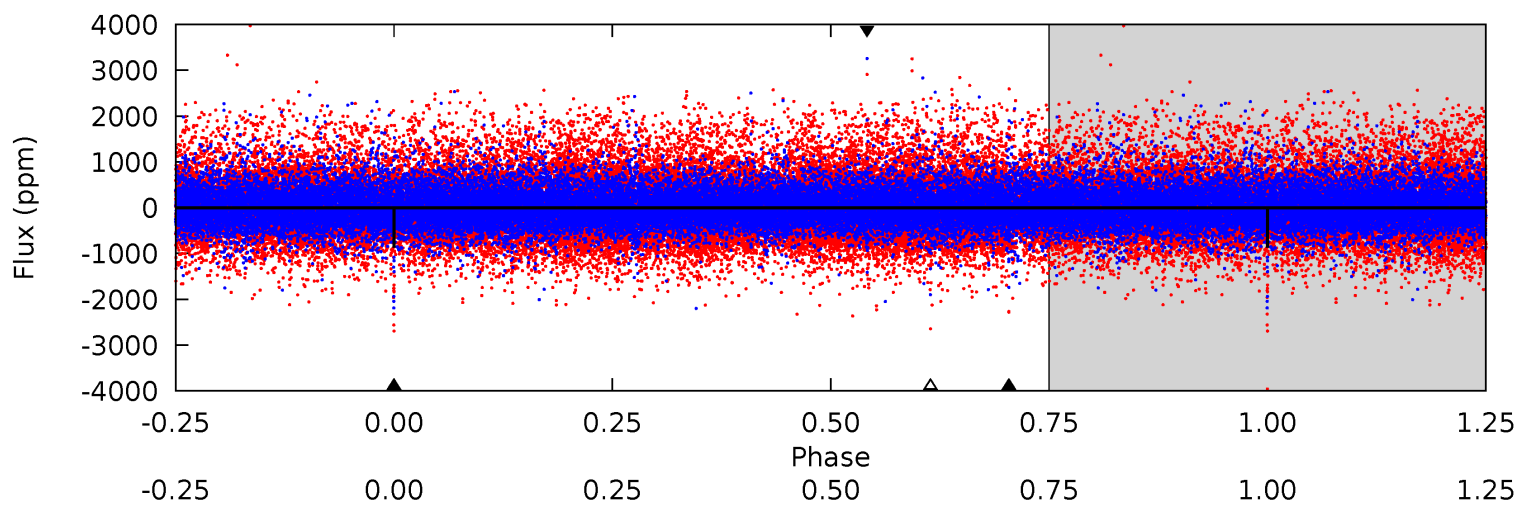
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.50	5.01	4.59	11.0	5.66	3.61	1.63	1.91	-4.47	0.41	-5.97	0.62	1.13	0.69	1.26



Alt Model-Shift Uniqueness Test

008947255-03, $P = 415.632233$ Days, $E = 53.789925$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.63	2.73	2.70	3.57	5.61	3.54	0.57	2.93	2.05	0.03	-0.85	2.64	1.47	0.39	0.94



Stellar Parameters For KIC 008947255

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3504^{+56}_{-56}	$4.858^{+0.042}_{-0.031}$	$0.000^{+0.100}_{-0.100}$	$0.389^{+0.032}_{-0.039}$	$0.400^{+0.038}_{-0.047}$	$9.533^{+2.131}_{-1.300}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+8%/-10%	+9%/-12%	+22%/-14%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 008947255-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-980 ± 196	$4.68^{+4.64}_{-3.33}$	150^{+3}_{-4}	2479^{+940}_{-368}	$16819^{+153867}_{-12828}$
Alt.	-407 ± 149	$5.03^{+4.57}_{-3.33}$	150^{+4}_{-3}	2195^{+688}_{-292}	5473^{+44620}_{-4071}

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

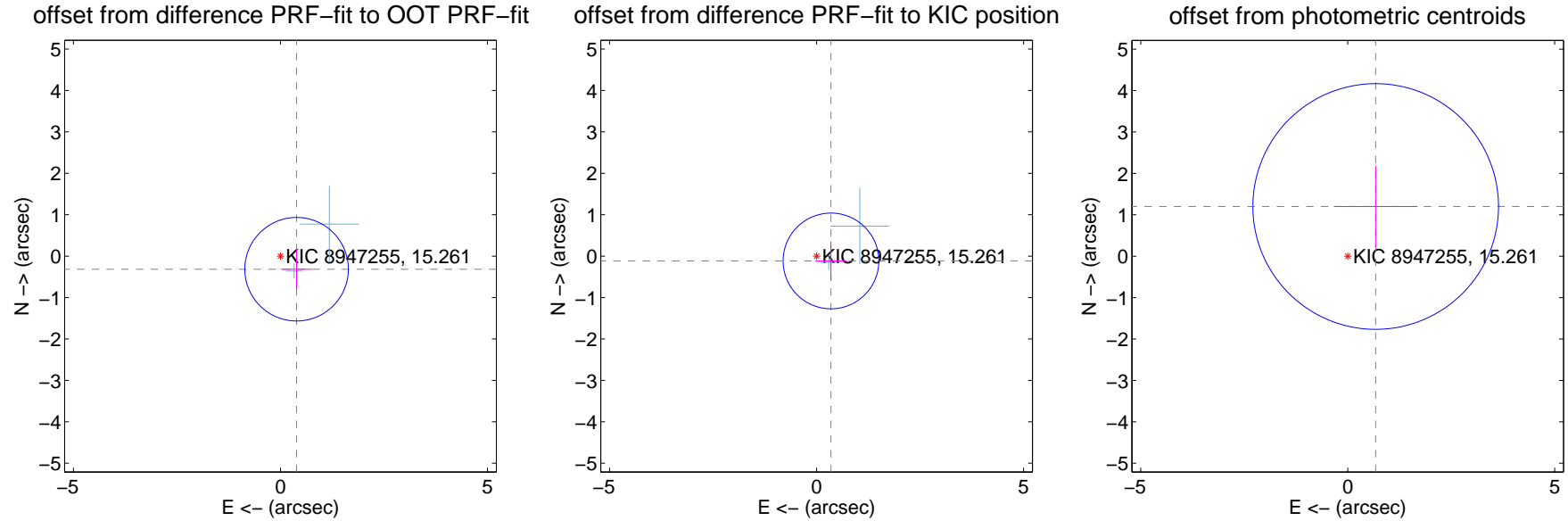
DV Centroid Data

Supplemental centroid analysis for 008947255-03. Kepler magnitude: 15.26. Transit SNR 7.91

There are 2 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.502 ± 0.417	1.20	-0.390 ± 0.374	-0.316 ± 0.474
PRF-fit source offset from KIC position	0.366 ± 0.385	0.95	-0.348 ± 0.374	-0.116 ± 0.474
photometric centroid source offset	1.38 ± 0.99	1.39	-0.68 ± 1.01	1.20 ± 0.98

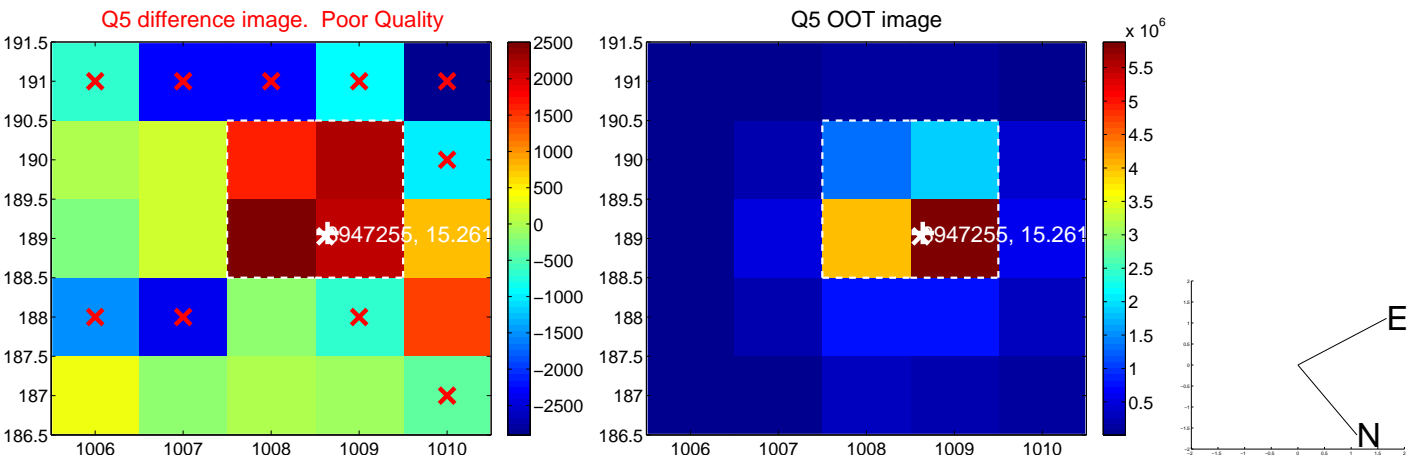


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

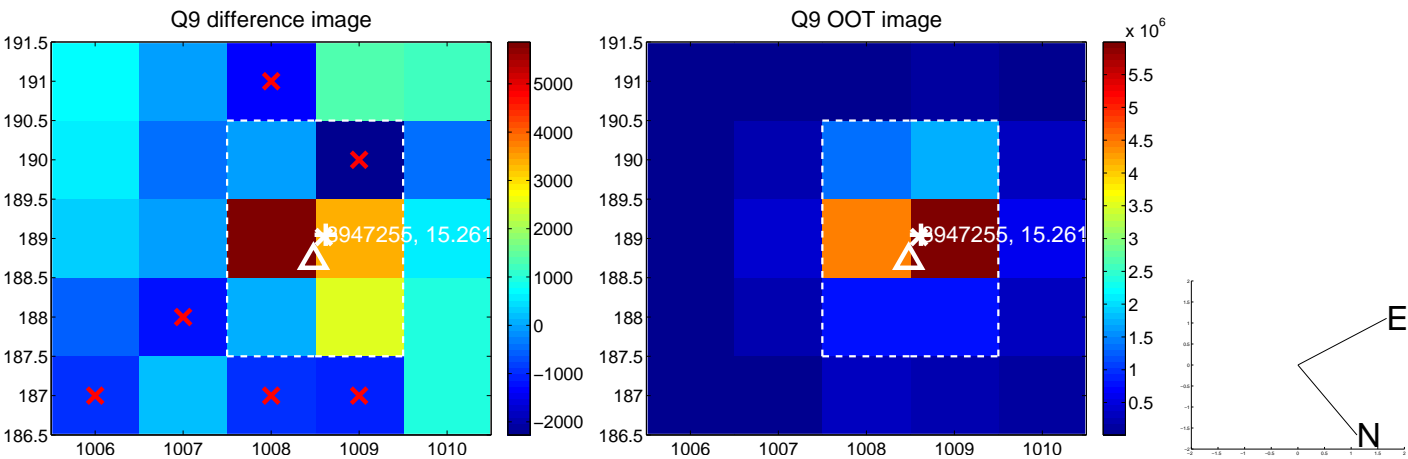
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



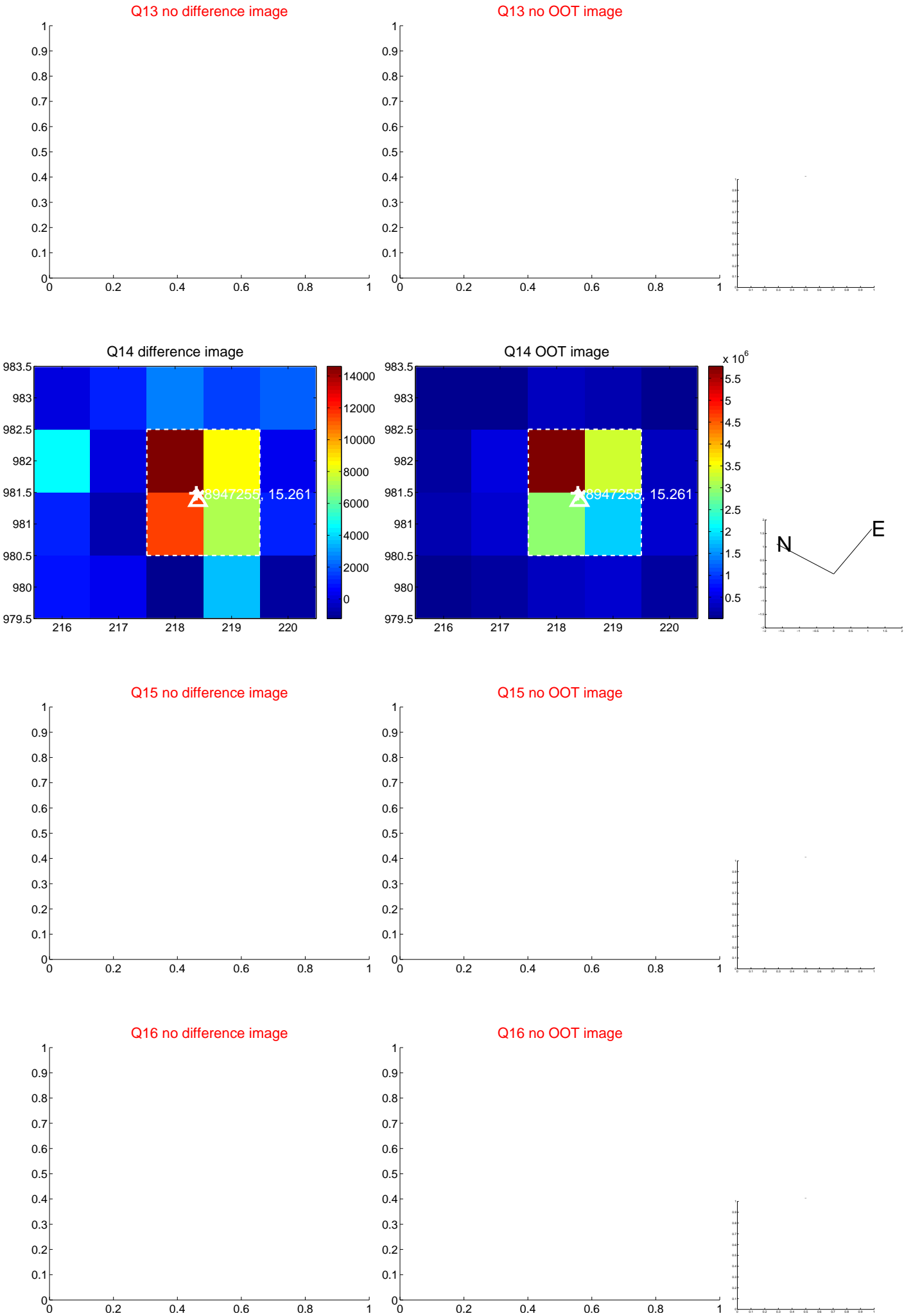
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



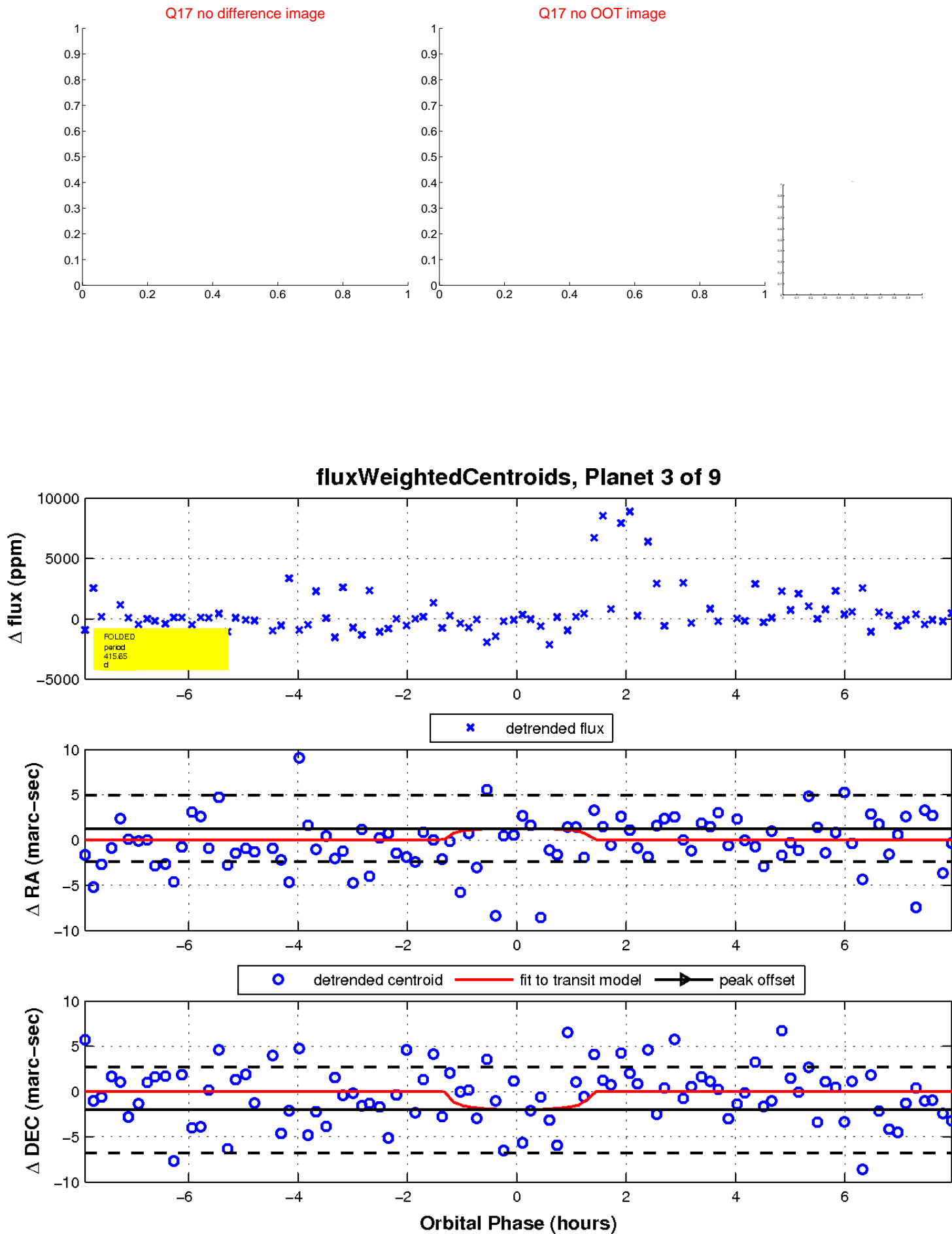
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

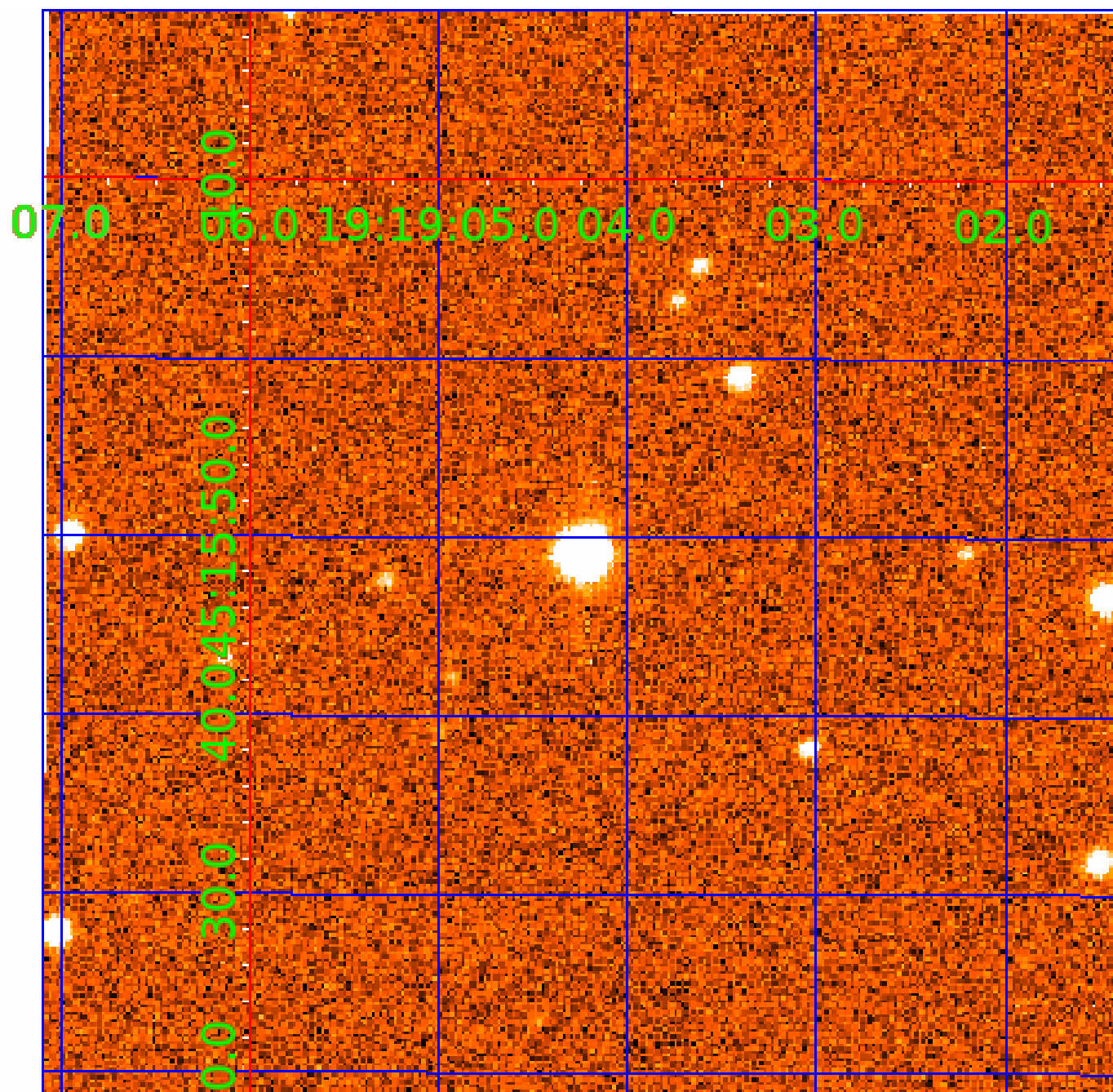


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008947255

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})
008947255-01	OBS	No	265.672434	278.499139	1759.5	8.332	16.4	7.9	0.39	3504	1.75	0.06
008947255-02	OBS	No	411.533699	236.099099	1903.2	8.078	16.7	8.1	0.39	3504	1.96	0.03
008947255-03	OBS	No	415.647580	469.433461	2111.7	2.689	14.0	7.9	0.39	3504	1.76	0.03
008947255-05	OBS	No	407.071141	151.135478	1952.1	12.204	14.2	6.3	0.39	3504	1.74	0.03
008947255-06	OBS	No	425.937558	536.177216	1003.9	12.500	13.0	-1.0	0.39	3504	1.21	0.03
008947255-07	OBS	No	447.141041	248.175127	1693.7	3.877	11.8	6.8	0.39	3504	1.77	0.03
008947255-08	OBS	No	309.716060	276.625165	1283.2	18.611	12.6	5.2	0.39	3504	1.42	0.05
008947255-09	OBS	No	661.829386	251.745466	1217.9	5.000	11.9	-1.0	0.39	3504	1.34	0.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008947255-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
008947255-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
008947255-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008947255-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008947255-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
008947255-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV
008947255-08	OBS	FP	0.00	1	0	1	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
008947255-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_NOFITS

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

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

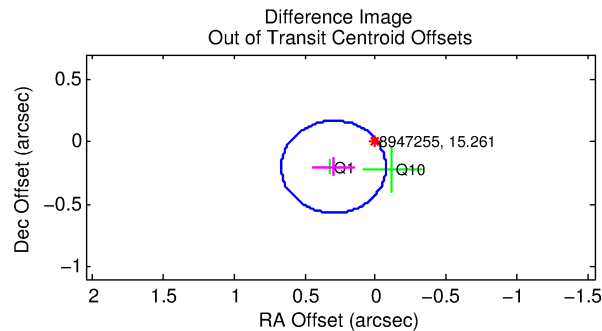
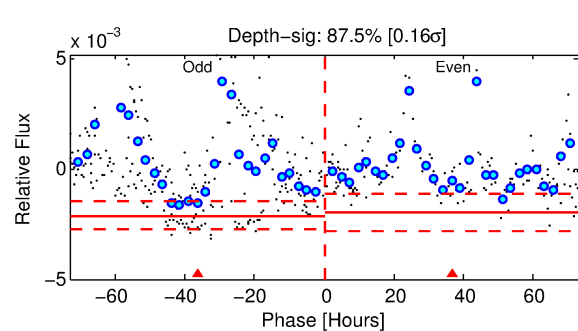
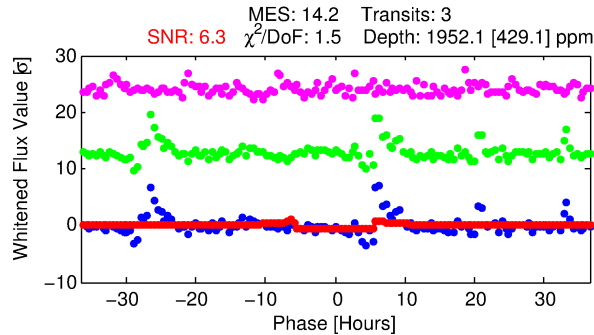
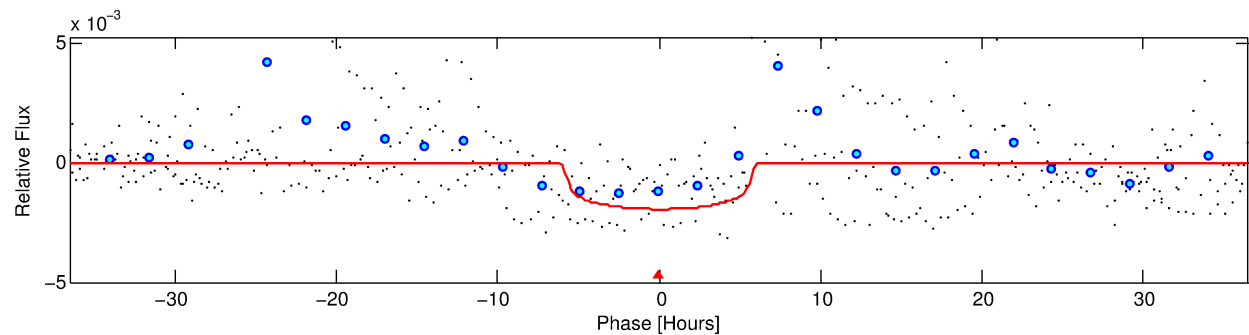
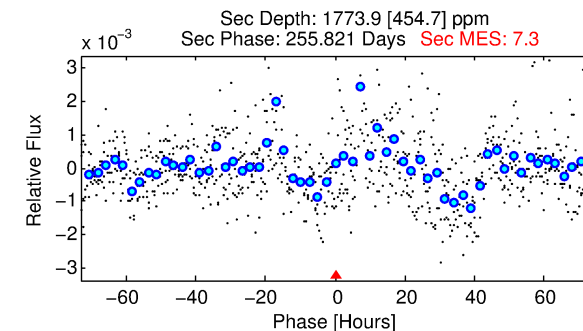
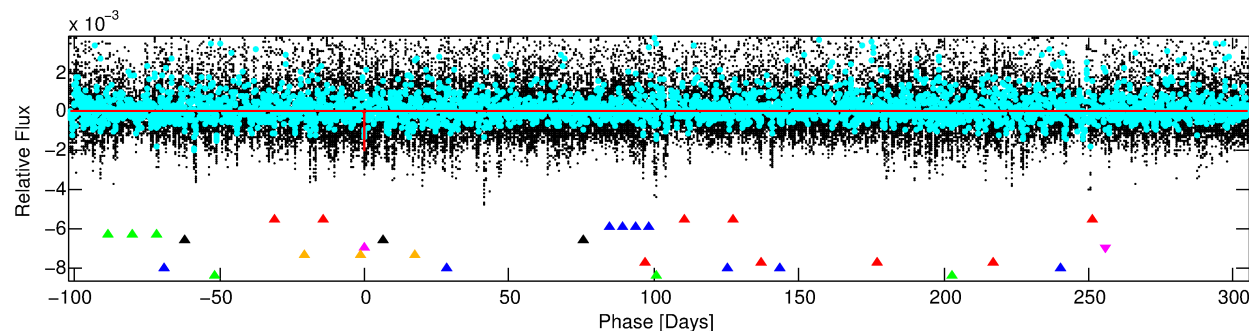
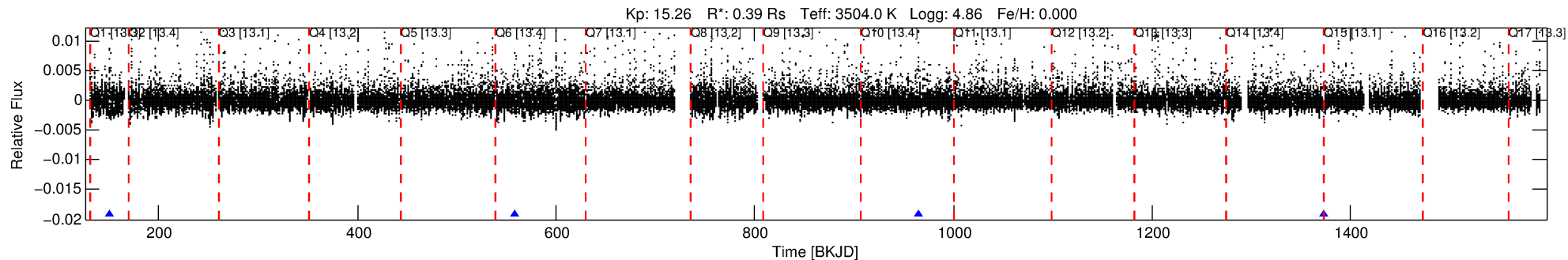
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008947255-05

No Significant Match Found

DV One-Page Summary

KIC: 8947255 Candidate: 5 of 9 Period: 407.071 d



DV Fit Results:

Period = 407.07114 [0.01344] d
Epoch = 151.1355 [0.0136] BKJD
Rp/R* = 0.0410 [0.0125]
a/R* = 236.77 [263.59]
b = 0.47 [1.86]
Seff = 0.03 [0.00]
Teq = 108 [3] K
Rp = 1.74 [0.56] Re
a = 0.7909 [0.0587] AU
Ag = 201313.44 [134730.04] [1.49σ]
Teffp = 3551 [591] K [5.82σ]

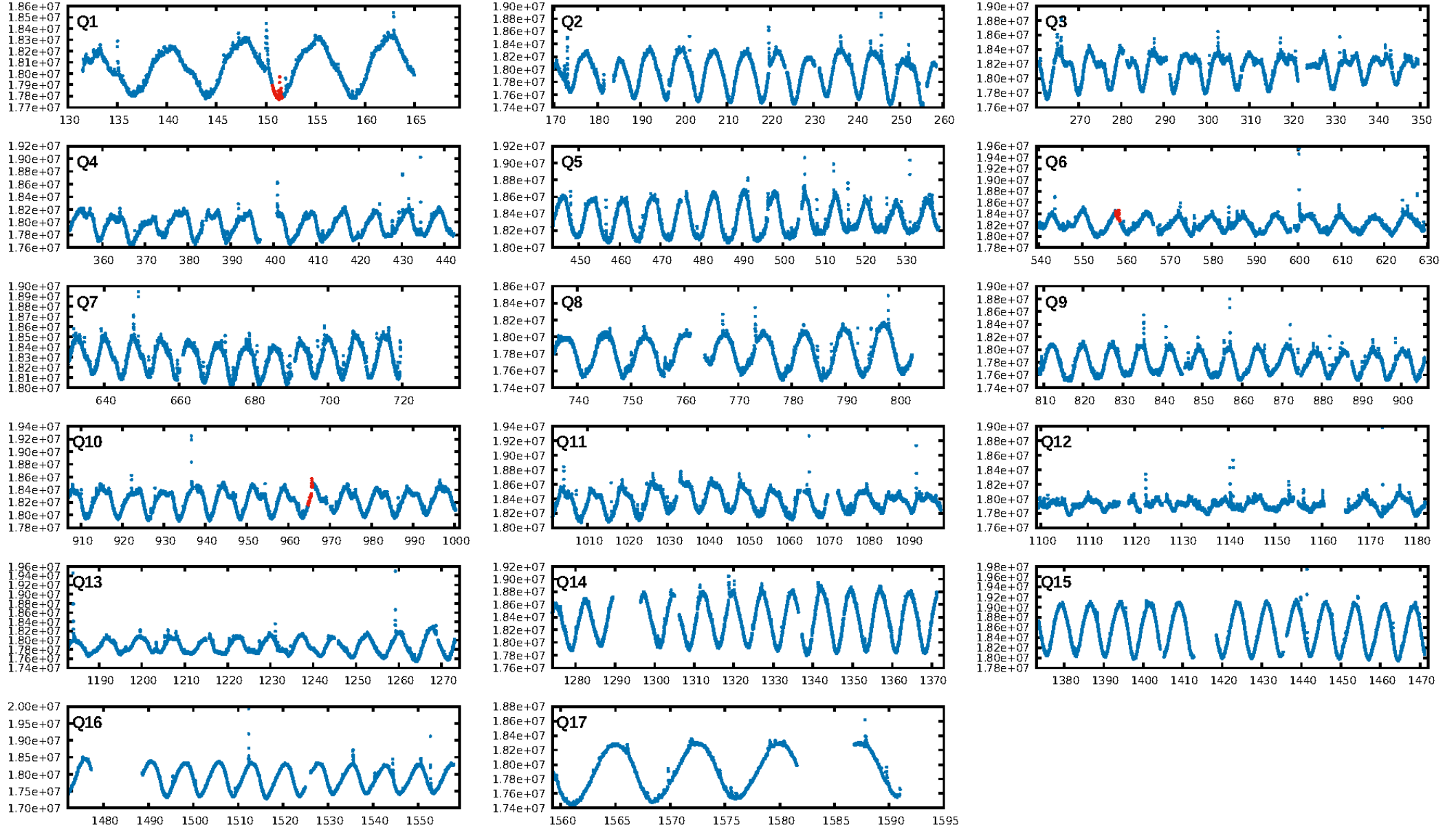
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [104.99σ]
LongPeriod-sig: 100.0% [7.32σ]
ModelChiSquare2-sig: 84.2%
ModelChiSquareGof-sig: 90.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 1.024
Centroid-sig: 0.1%
Centroid-so: 0.956 arcsec [1.65σ]
OotOffset-rm: 0.359 arcsec [2.91σ]
KicOffset-rm: 0.469 arcsec [3.02σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 0.67 [2/3]

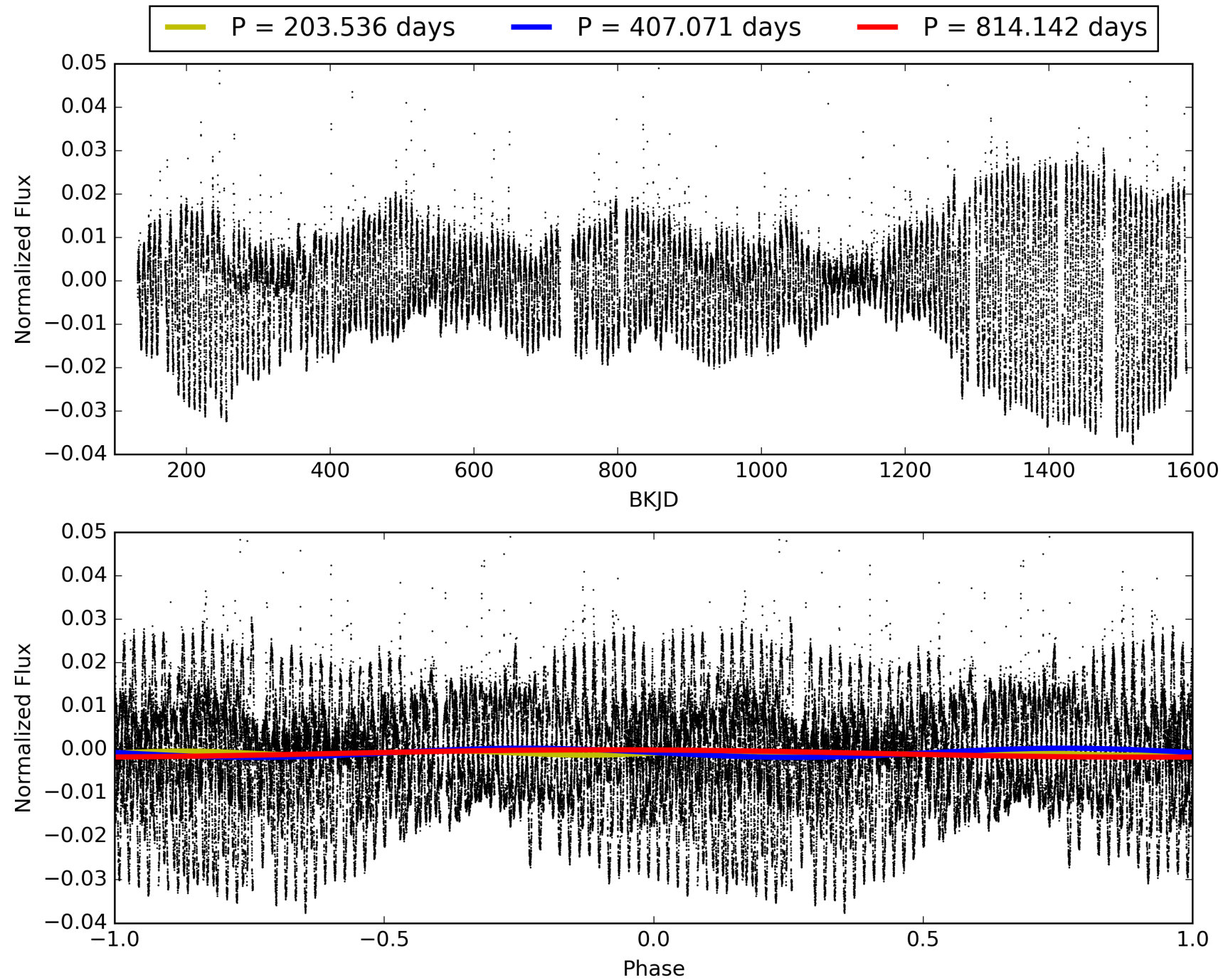
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:09:59 Z

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

TCE 008947255-05, PDC Light Curves

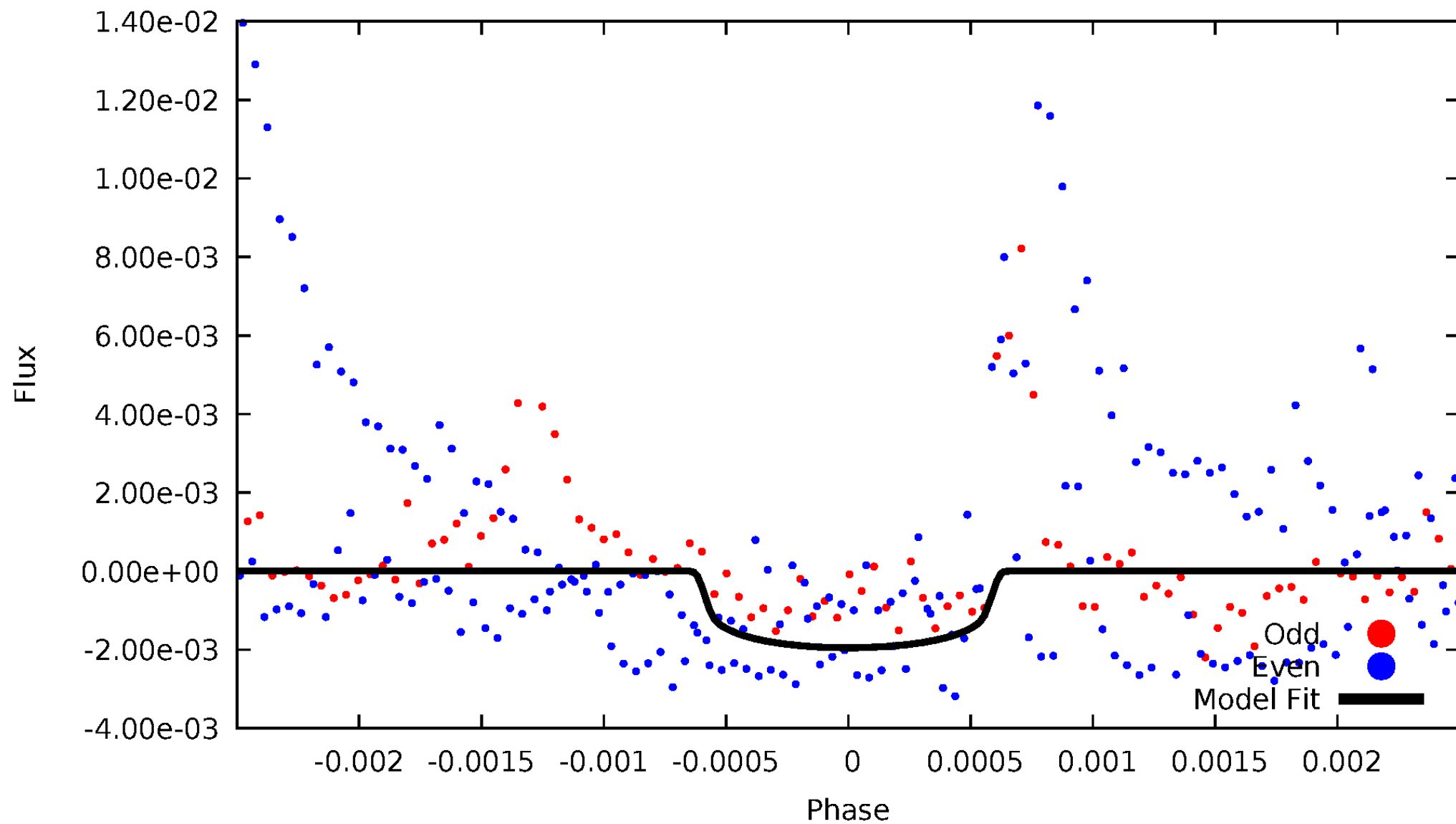


TCE 008947255-05



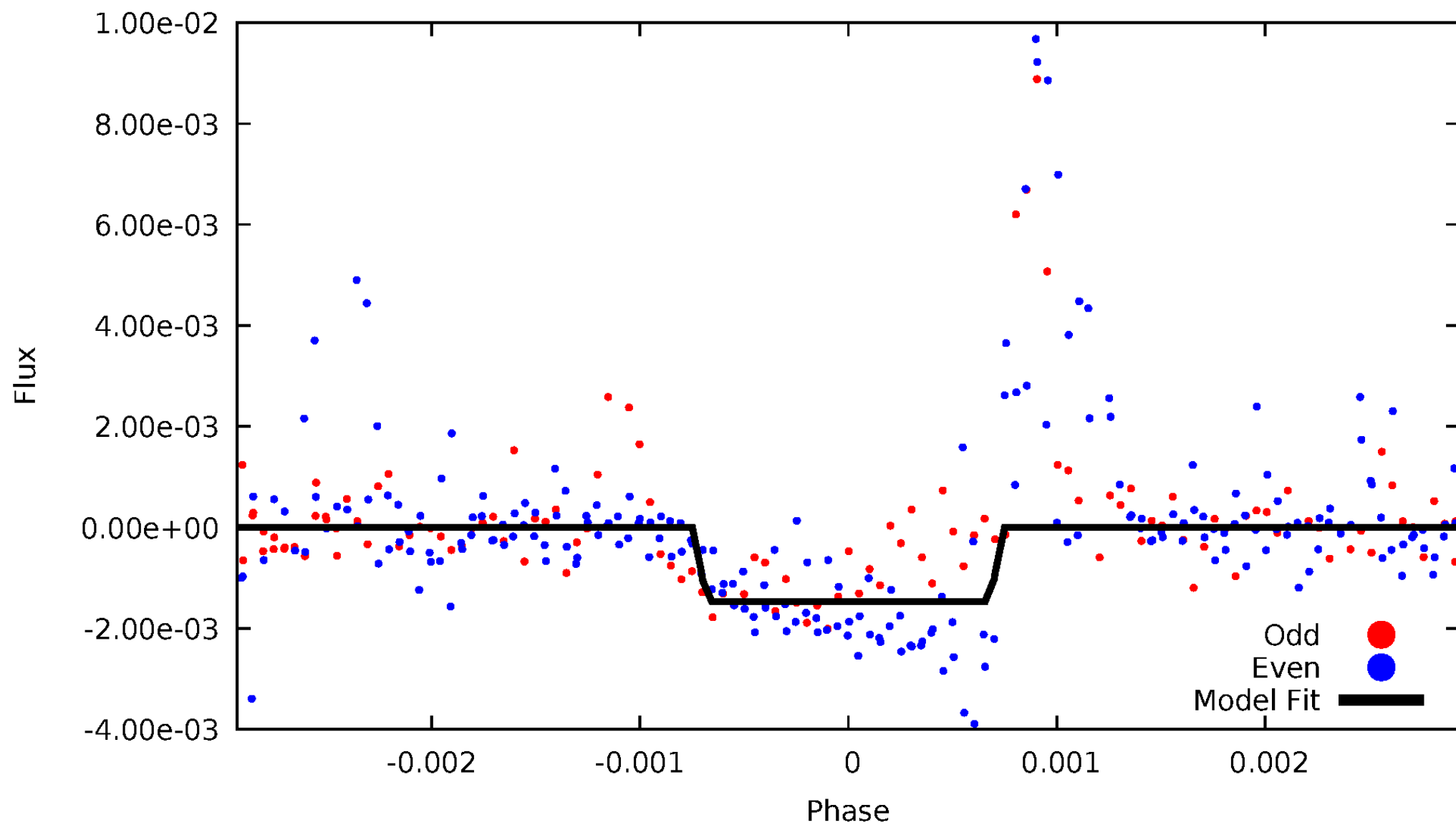
DV Odd/Even

TCE 008947255-05



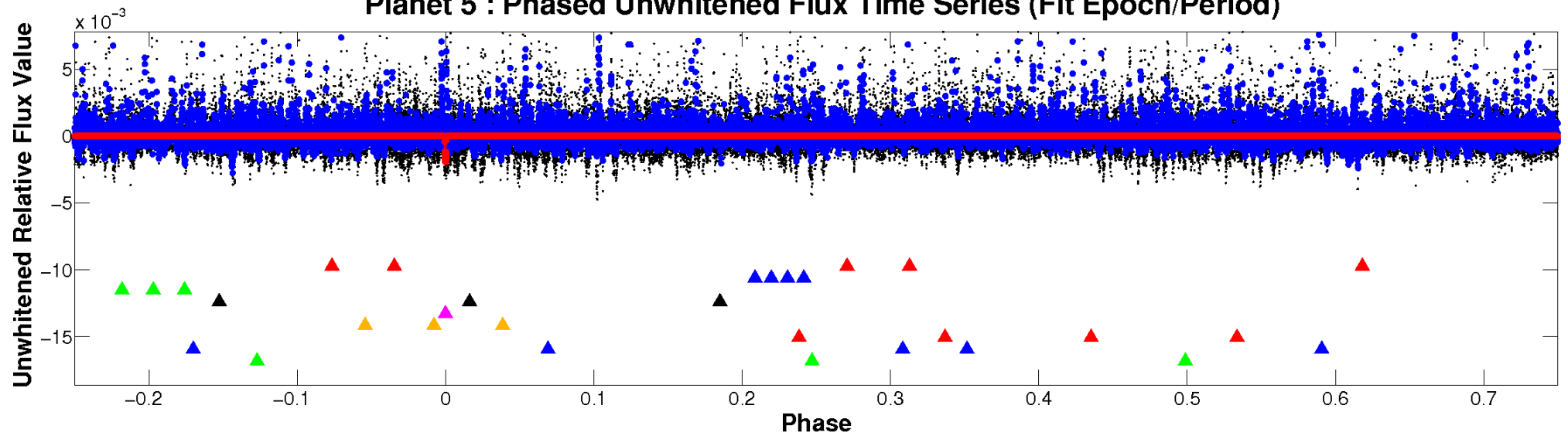
ALT Odd/Even

TCE 008947255-05

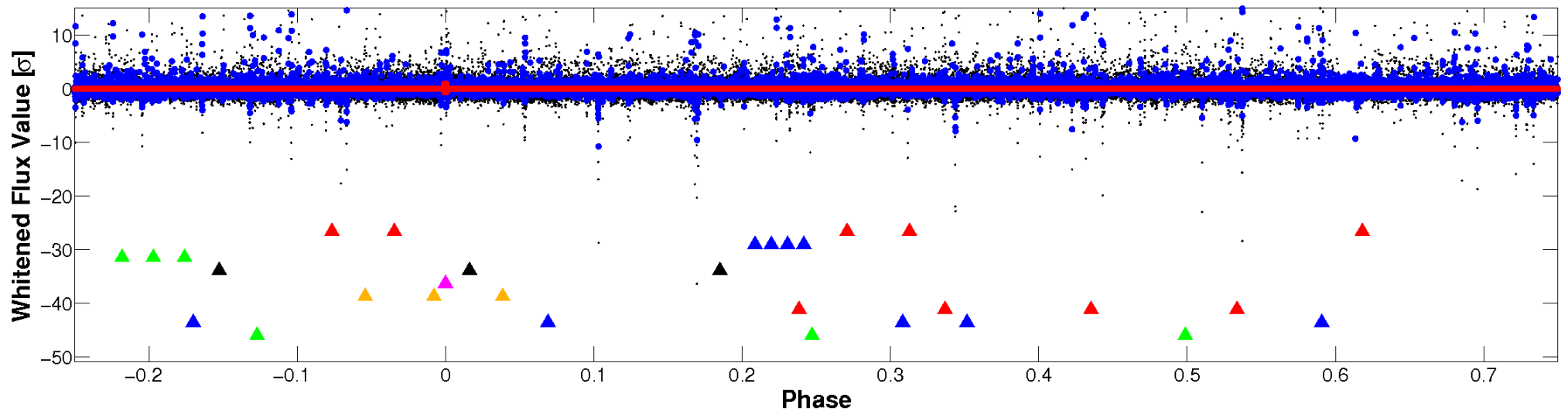


Non-Whitened Vs. Whitened Light Curve

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

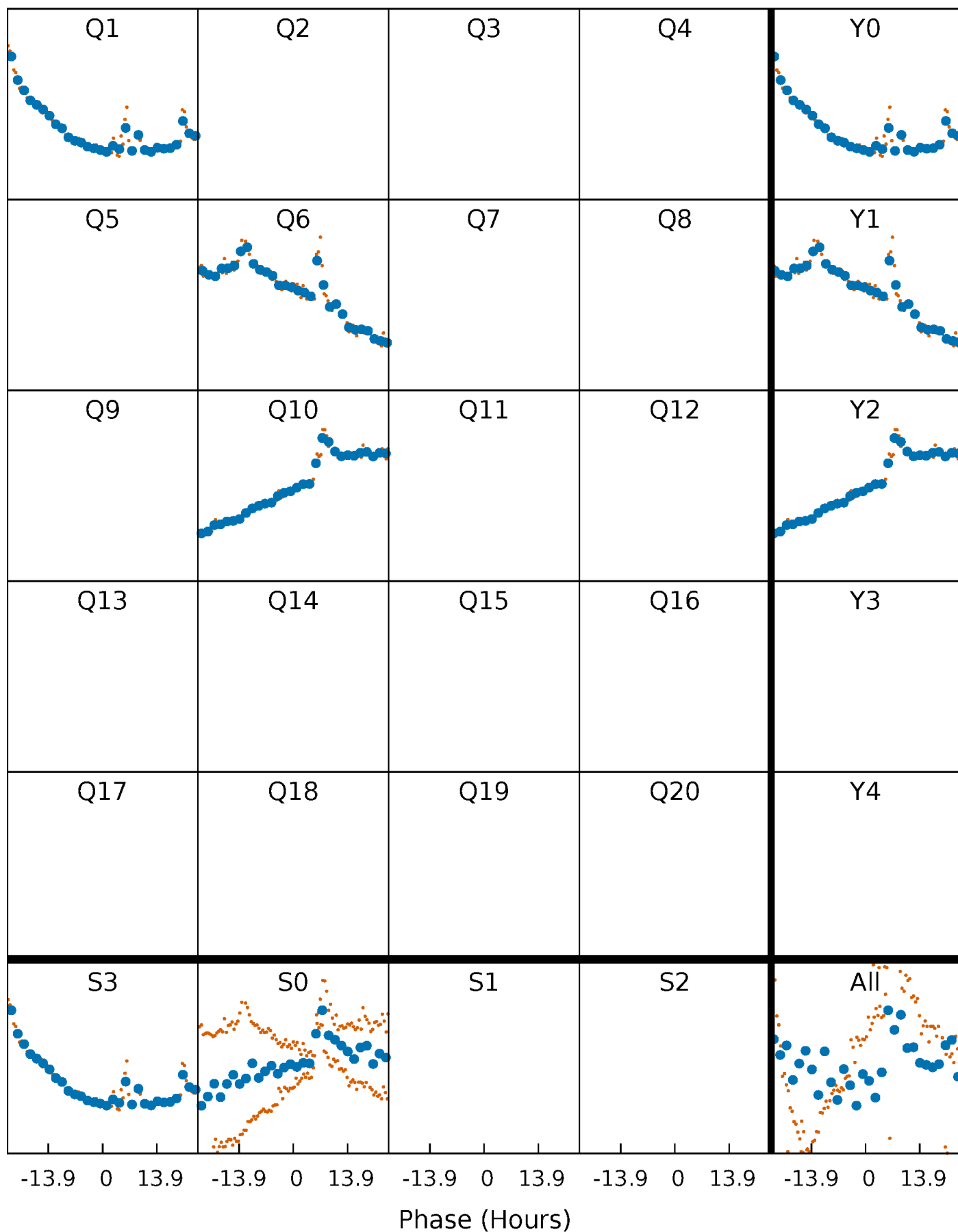


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



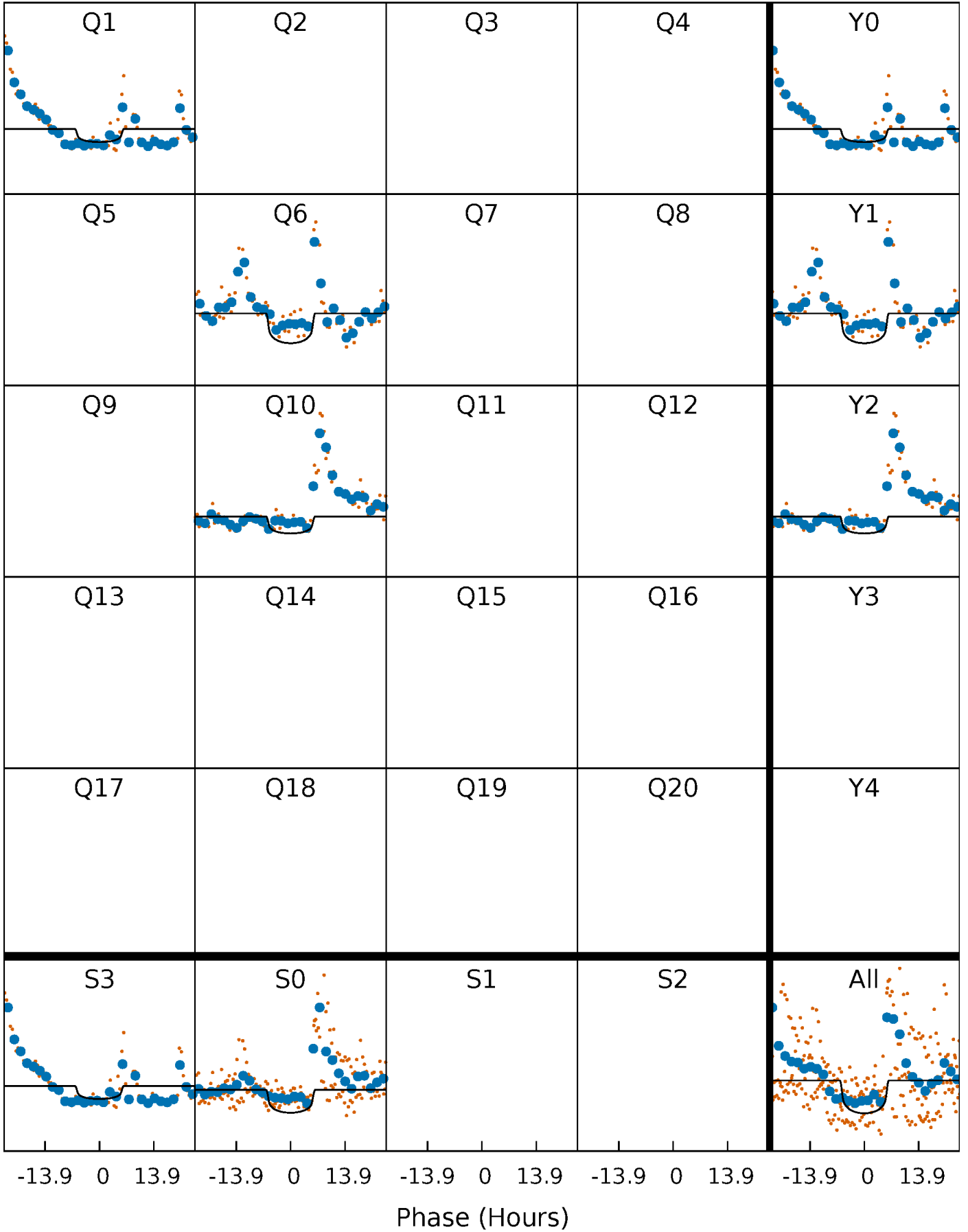
PDC Quarter-Phased Transit Curves

TCE 008947255-05 $P=407.071141$ Days $T_0=151.135478$ (BKJD)



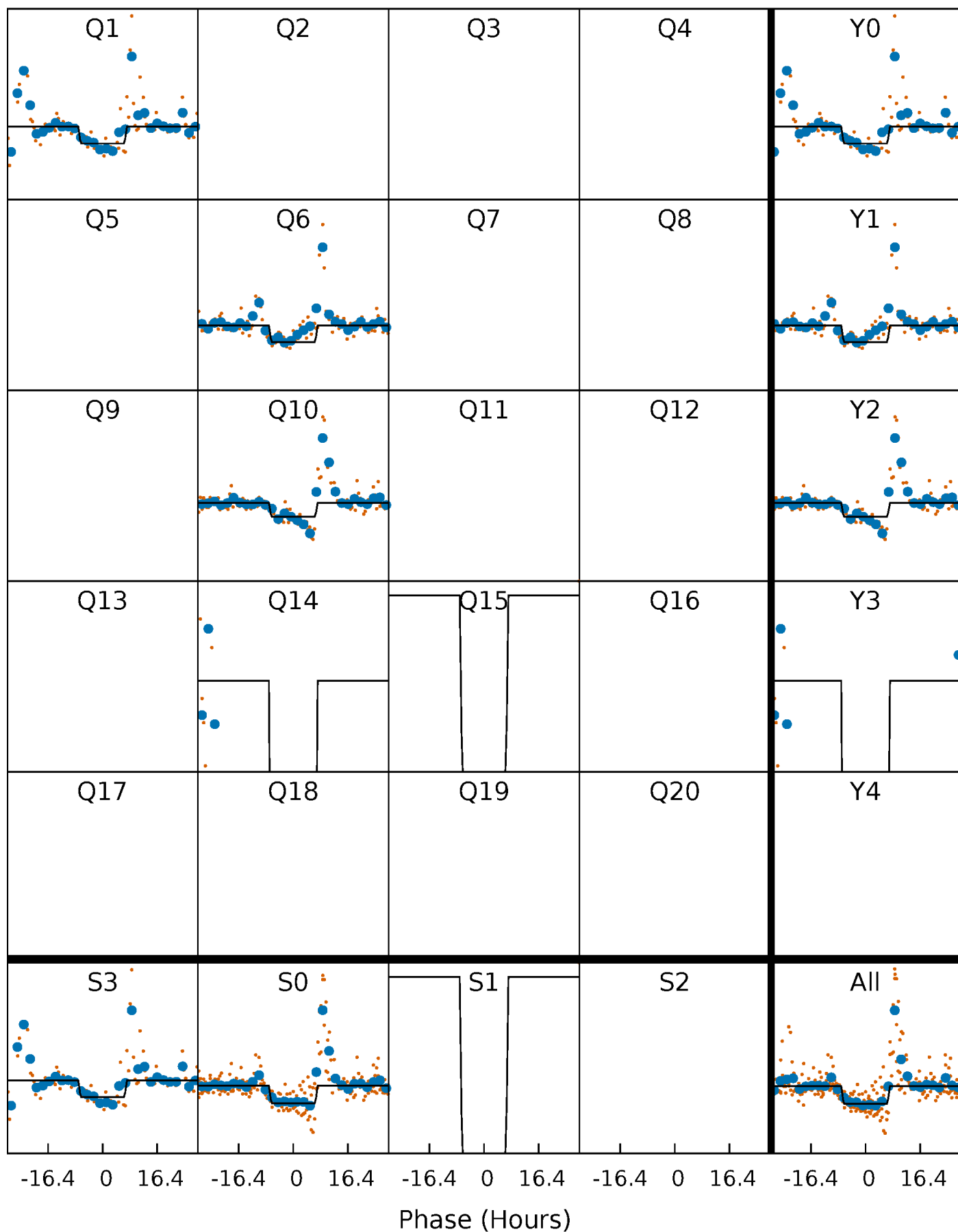
DV Quarter-Phased Transit Curves

TCE 008947255-05 $P=407.071141$ Days $T_0=151.135478$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

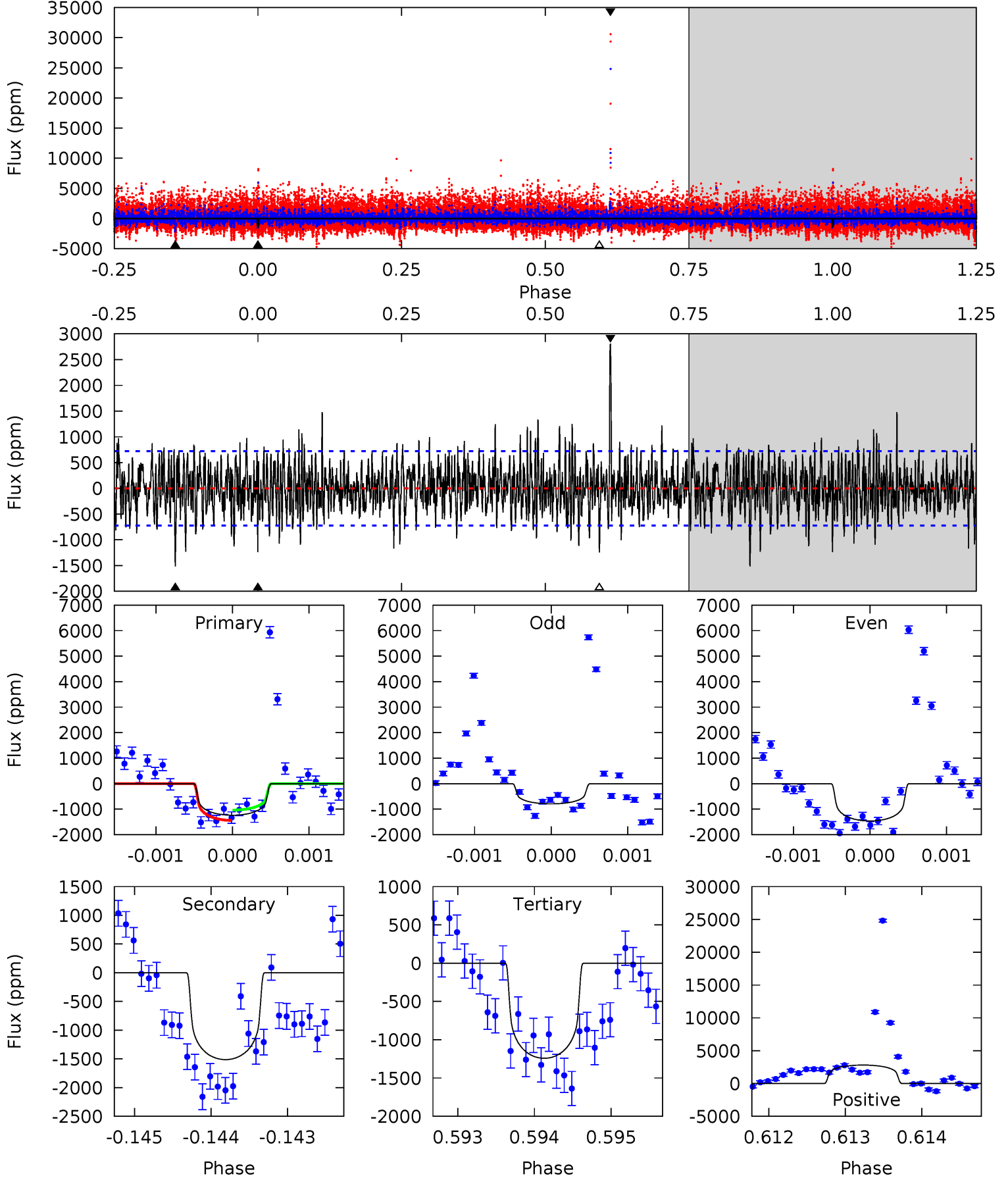
TCE 008947255-05 $P=407.097816$ Days $T_0=151.028183$ (BKJD)



DV Model-Shift Uniqueness Test

008947255-05, P = 407.071141 Days, E = 151.135478 Days

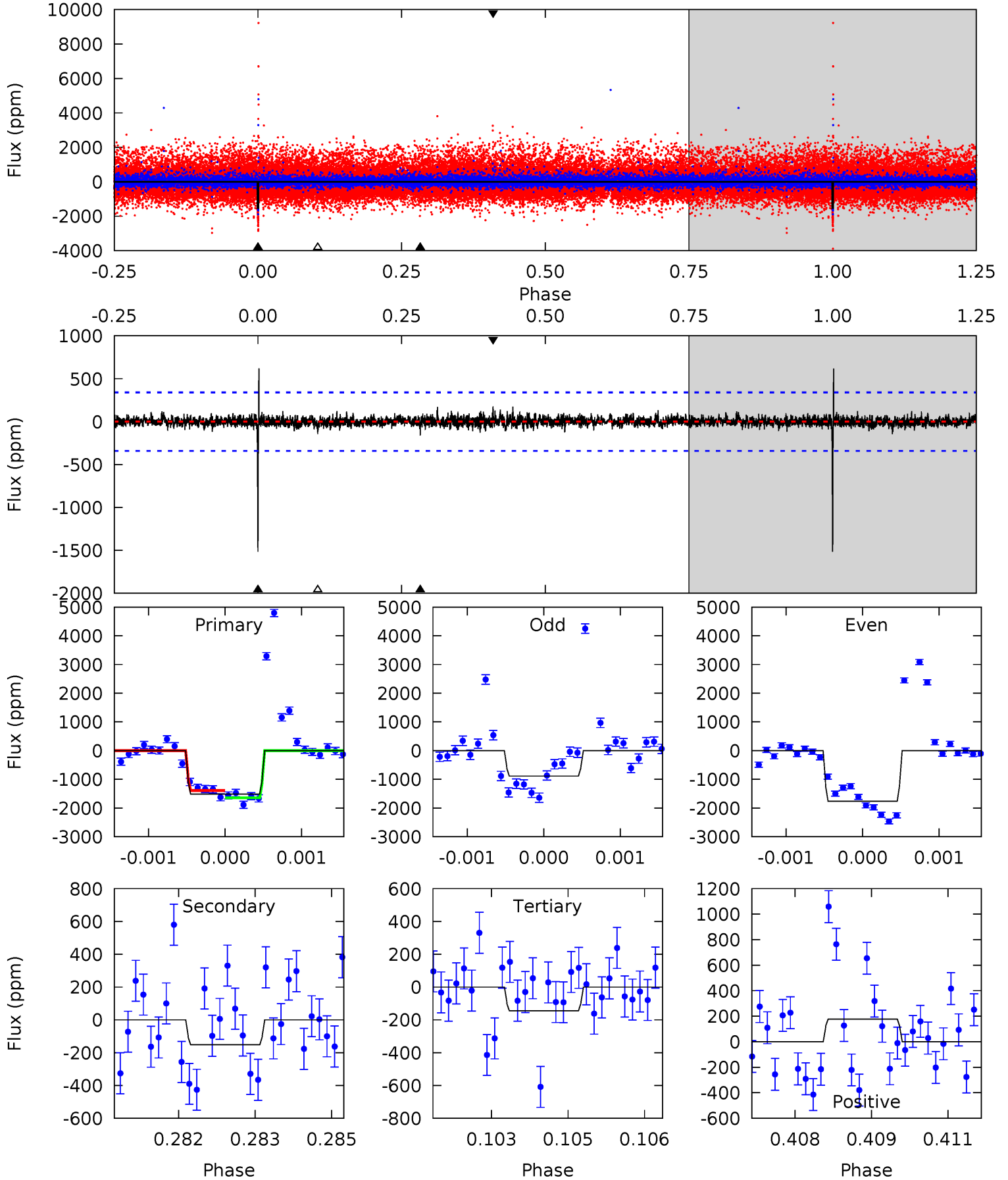
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.27	11.3	9.31	21.0	5.41	3.22	2.90	-0.04	-11.8	2.03	-9.71	1.95	1.56	0.65	1.53



Alt Model-Shift Uniqueness Test

008947255-05, P = 407.097816 Days, E = 151.028183 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.9	2.40	2.29	2.79	5.38	3.18	0.54	21.6	21.1	0.11	-0.39	6.58	0.92	0.29	2.02



Stellar Parameters For KIC 008947255

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3504^{+56}_{-56}	$4.858^{+0.042}_{-0.031}$	$0.000^{+0.100}_{-0.100}$	$0.389^{+0.032}_{-0.039}$	$0.400^{+0.038}_{-0.047}$	$9.533^{+2.131}_{-1.300}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+8%/-10%	+9%/-12%	+22%/-14%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 008947255-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1513 ± 133	$1.74^{+0.51}_{-0.52}$	151^{+4}_{-3}	3450^{+453}_{-277}	$174131^{+182372}_{-70783}$
Alt.	-152 ± 63	$1.63^{+0.53}_{-0.54}$	151^{+3}_{-4}	2536^{+312}_{-220}	19275^{+27935}_{-10056}

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

DV Centroid Data

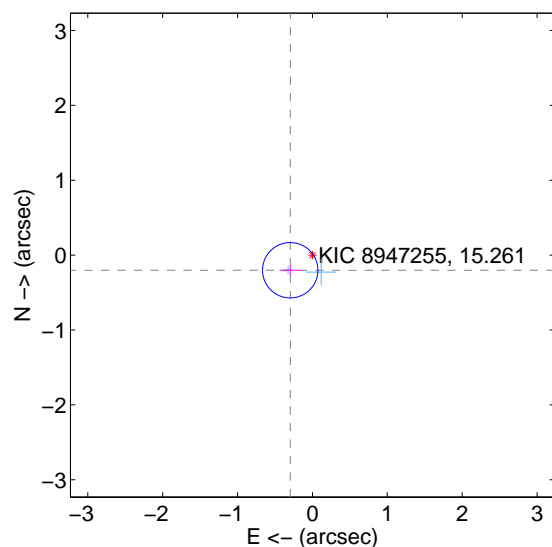
Supplemental centroid analysis for 008947255-05. Kepler magnitude: 15.26. Transit SNR 6.30

There are 2 quarters with good PRF difference image offsets

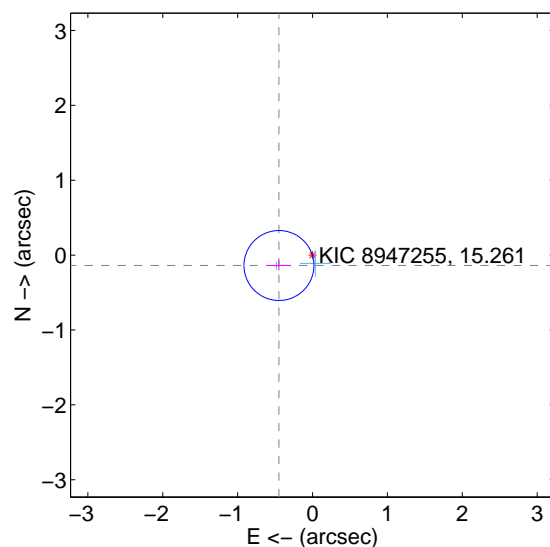
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.359 ± 0.123	2.91	0.297 ± 0.142	-0.202 ± 0.067
PRF-fit source offset from KIC position	0.469 ± 0.156	3.02	0.448 ± 0.162	-0.139 ± 0.067
photometric centroid source offset	0.96 ± 0.58	1.65	-0.08 ± 0.64	-0.95 ± 0.58

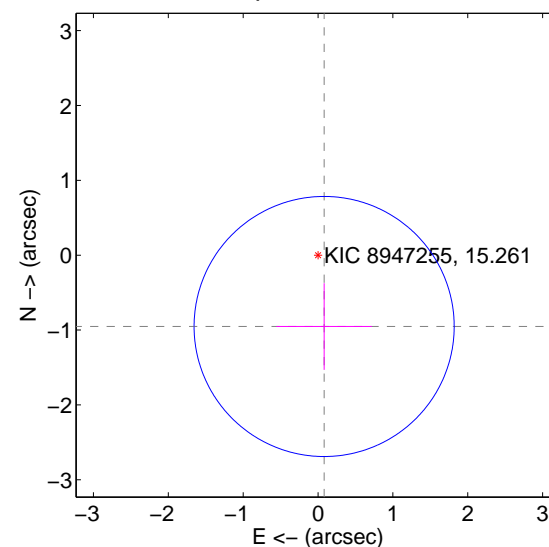
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

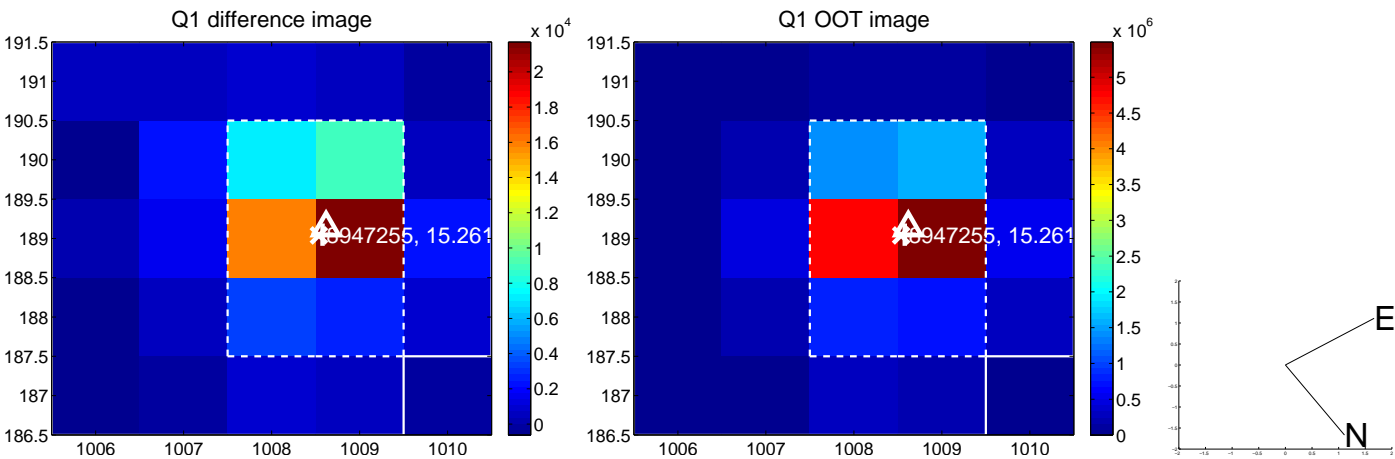


offset from photometric centroids

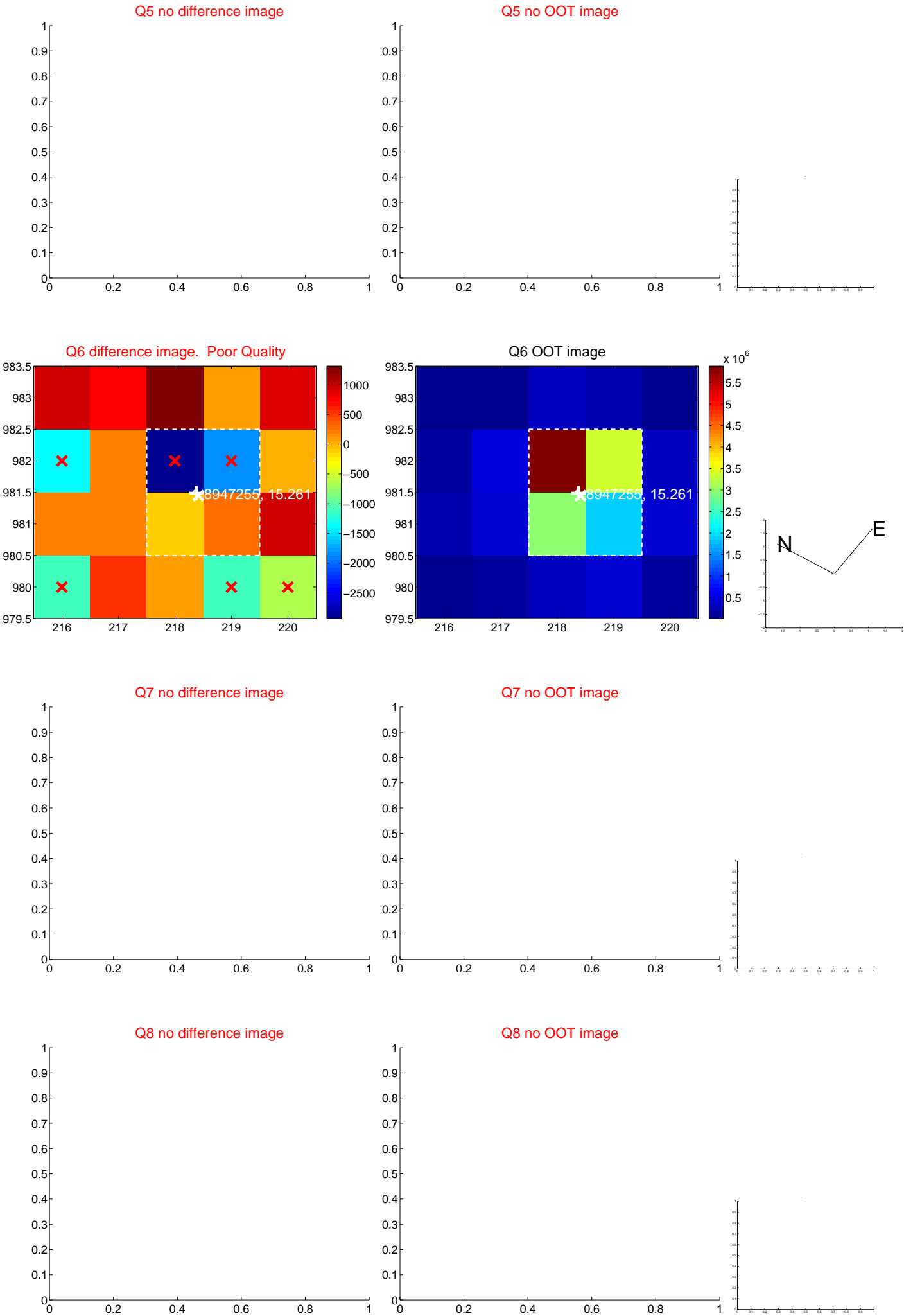


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

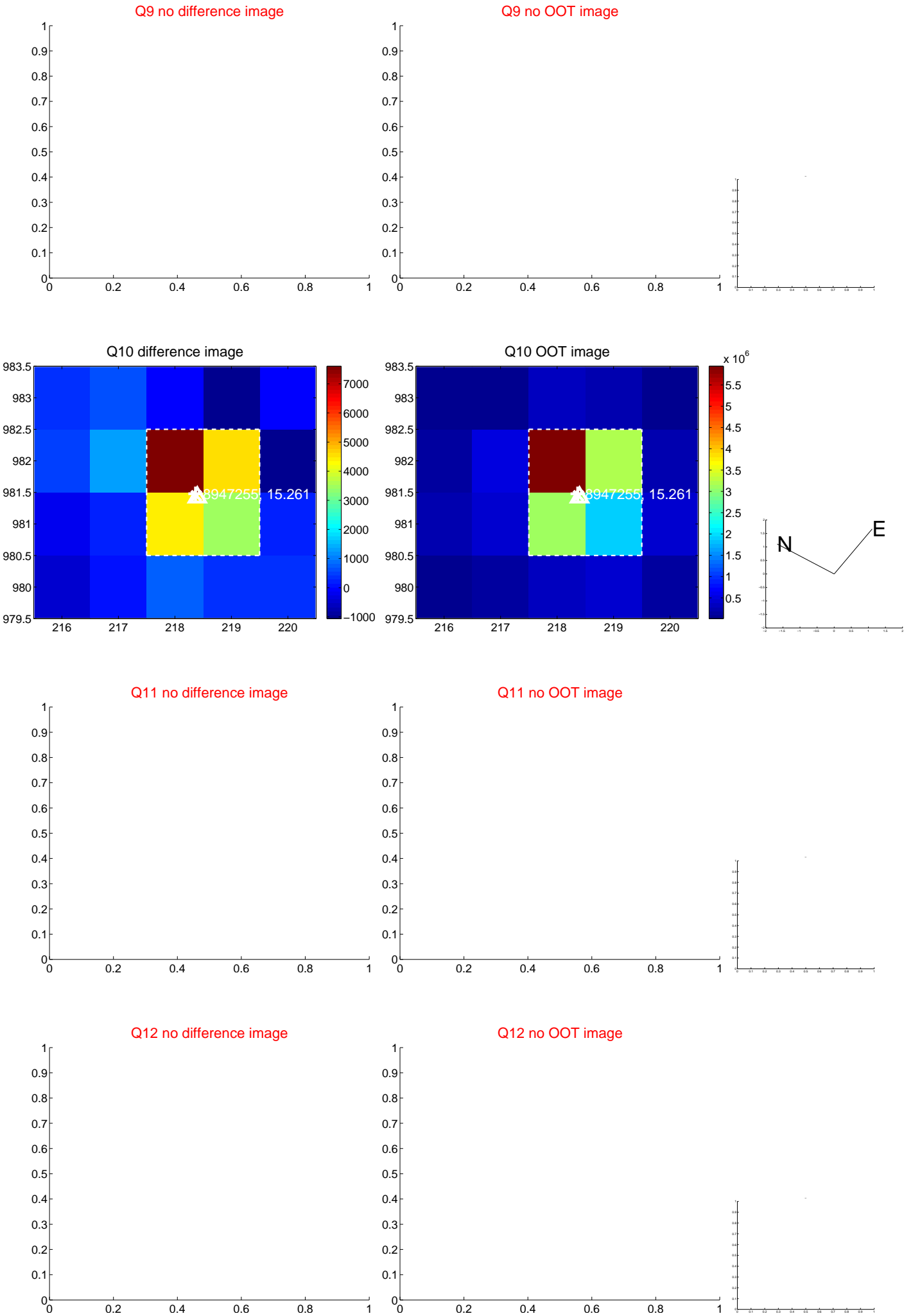
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



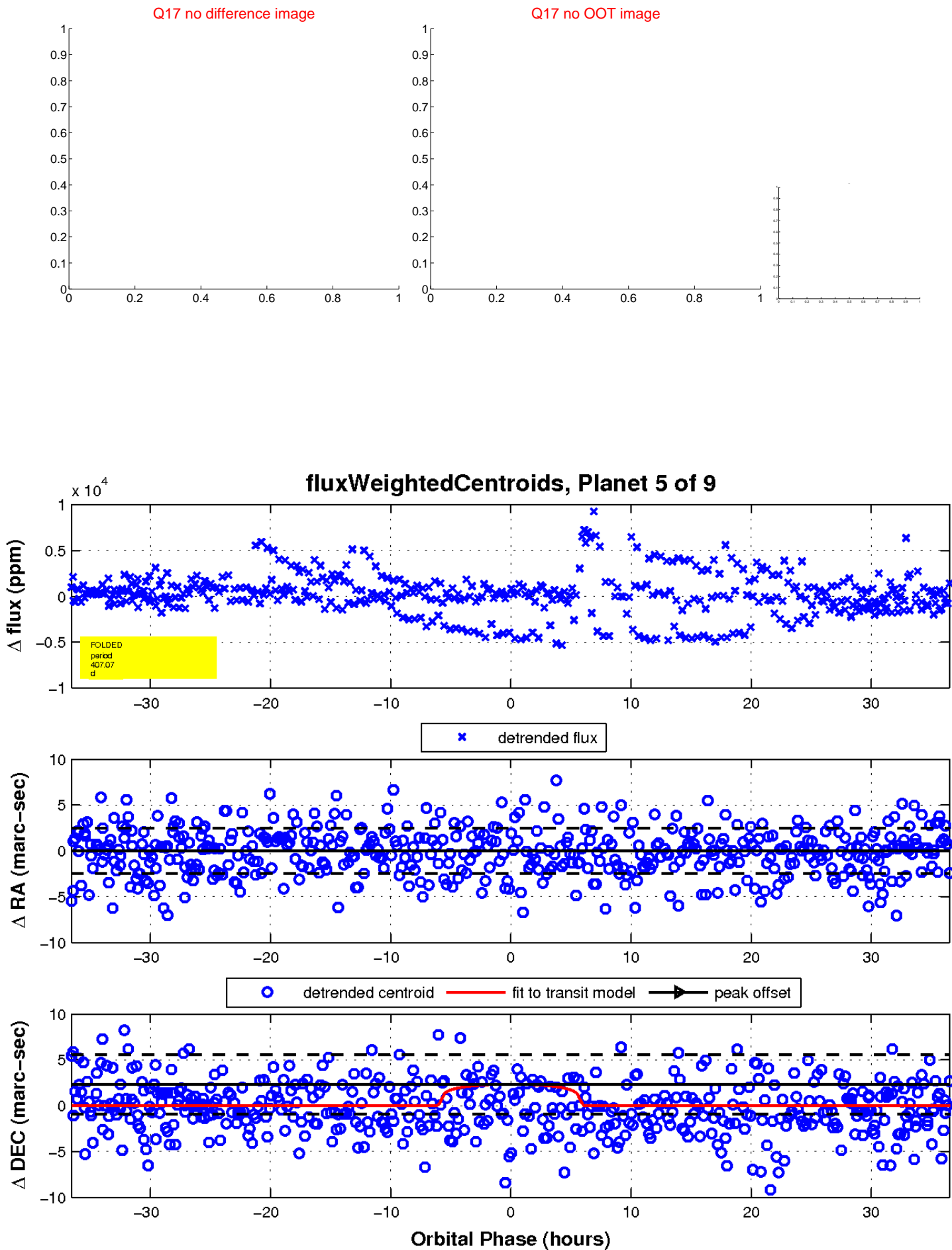
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

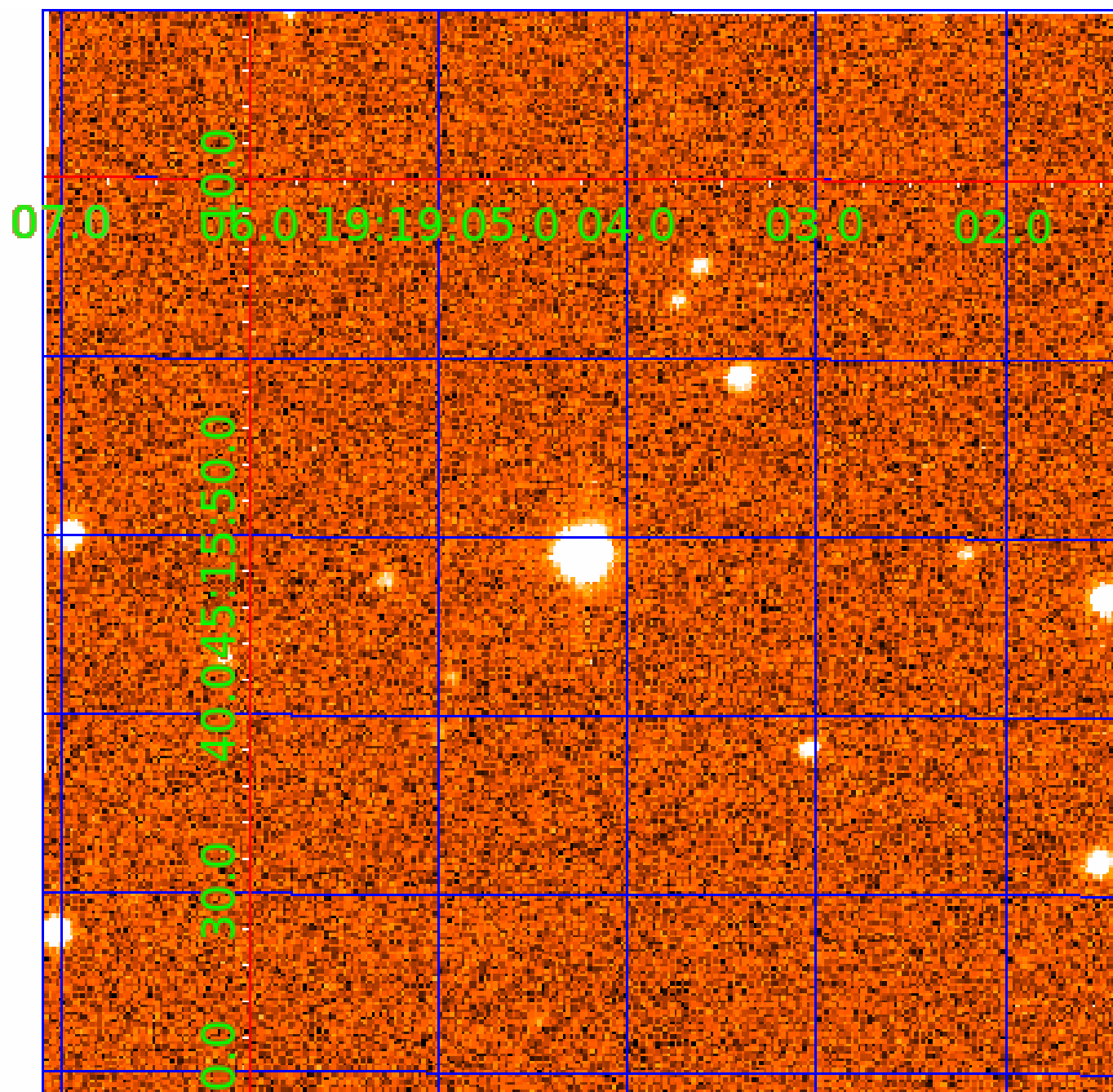


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008947255

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})
008947255-01	OBS	No	265.672434	278.499139	1759.5	8.332	16.4	7.9	0.39	3504	1.75	0.06
008947255-02	OBS	No	411.533699	236.099099	1903.2	8.078	16.7	8.1	0.39	3504	1.96	0.03
008947255-03	OBS	No	415.647580	469.433461	2111.7	2.689	14.0	7.9	0.39	3504	1.76	0.03
008947255-05	OBS	No	407.071141	151.135478	1952.1	12.204	14.2	6.3	0.39	3504	1.74	0.03
008947255-06	OBS	No	425.937558	536.177216	1003.9	12.500	13.0	-1.0	0.39	3504	1.21	0.03
008947255-07	OBS	No	447.141041	248.175127	1693.7	3.877	11.8	6.8	0.39	3504	1.77	0.03
008947255-08	OBS	No	309.716060	276.625165	1283.2	18.611	12.6	5.2	0.39	3504	1.42	0.05
008947255-09	OBS	No	661.829386	251.745466	1217.9	5.000	11.9	-1.0	0.39	3504	1.34	0.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008947255-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
008947255-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
008947255-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008947255-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008947255-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
008947255-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV
008947255-08	OBS	FP	0.00	1	0	1	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
008947255-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_NOFITS

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

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

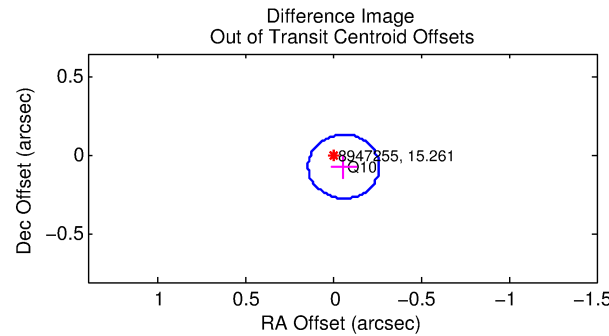
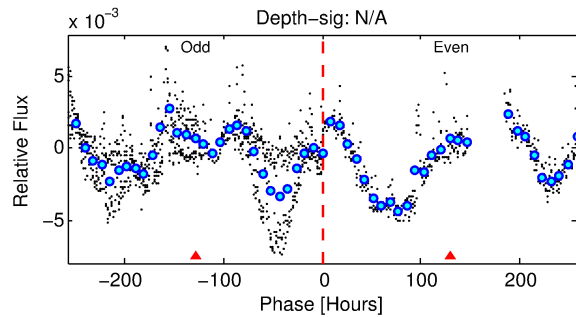
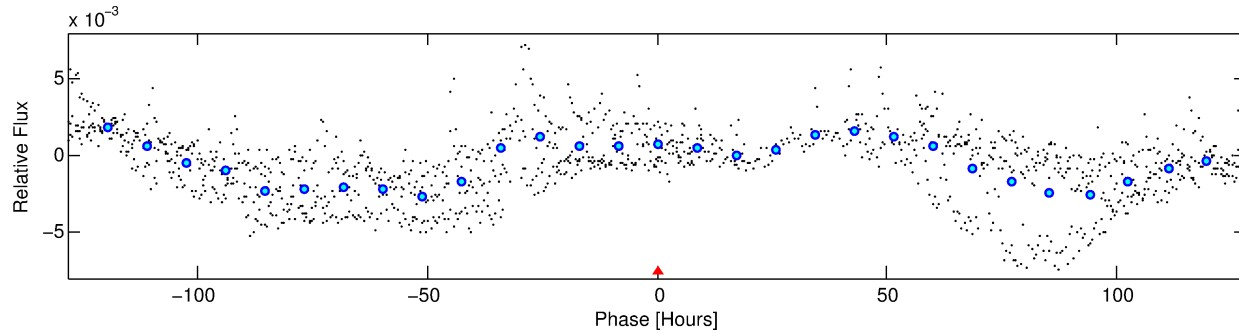
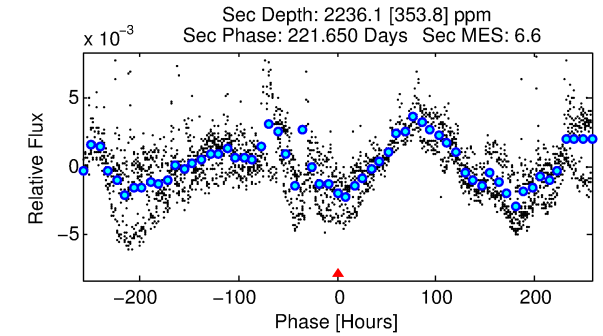
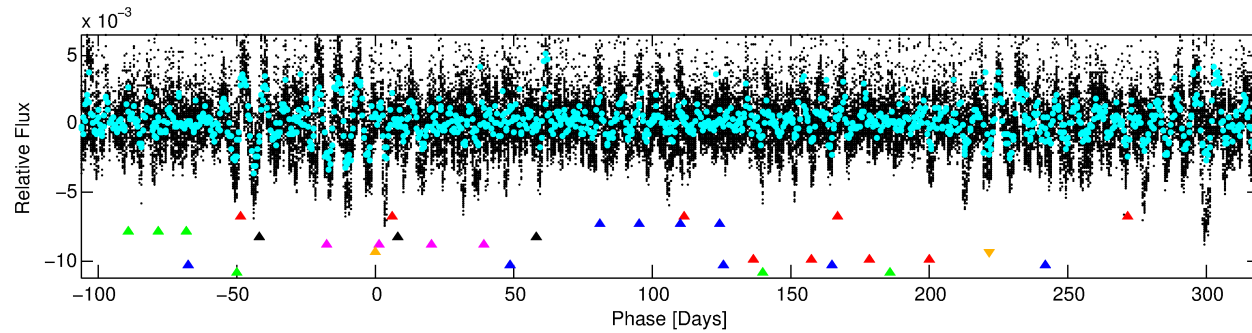
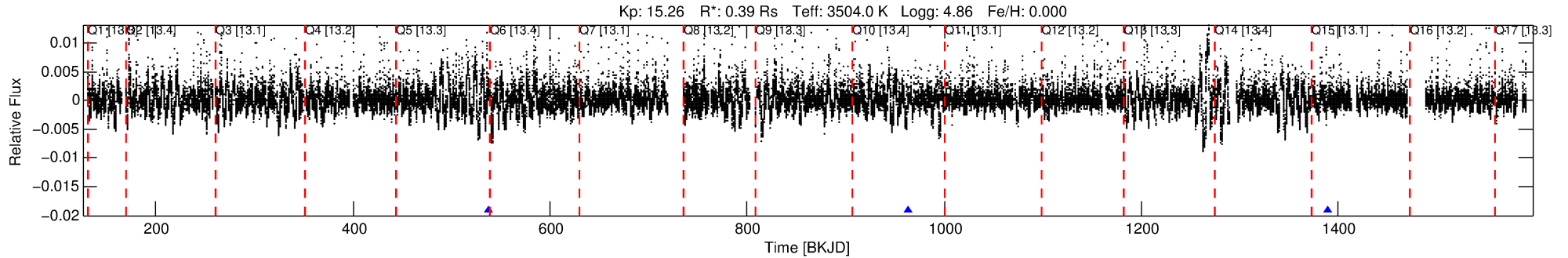
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008947255-06

No Significant Match Found

DV One-Page Summary

KIC: 8947255 Candidate: 6 of 9 Period: 425.938 d



TPS TCE Results:

Period = 425.93756 d
Epoch = 536.1772 BKJD

DV fit results are unavailable

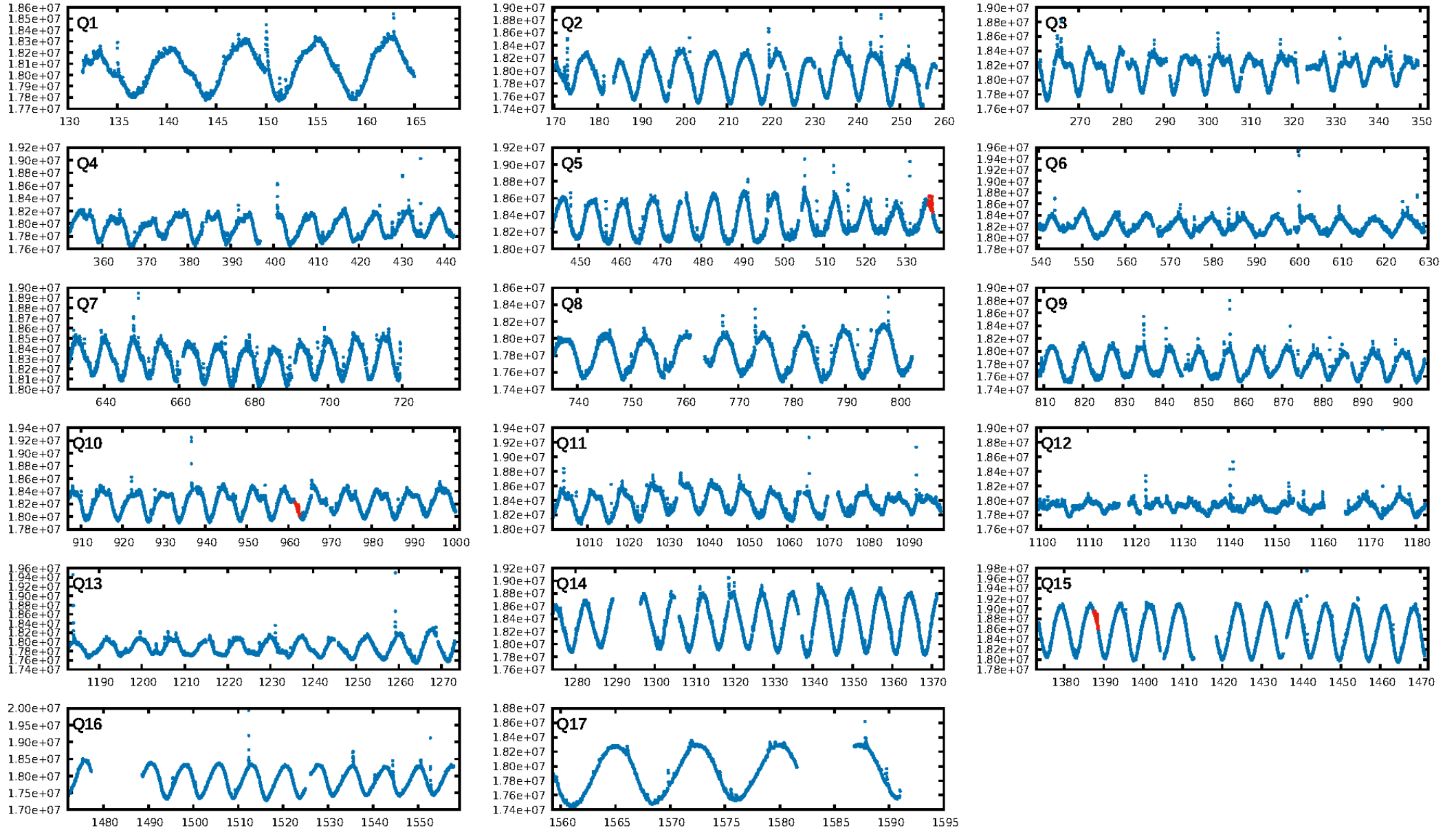
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [19.31σ]
LongPeriod-sig: 100.0% [38.88σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.1817
Centroid-sig: 79.8%
Centroid-so: 0.716 arcsec [0.55σ]
OotOffset-rm: 0.089 arcsec [1.32σ]
KicOffset-rm: 0.053 arcsec [0.79σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 0.00 [0/1]

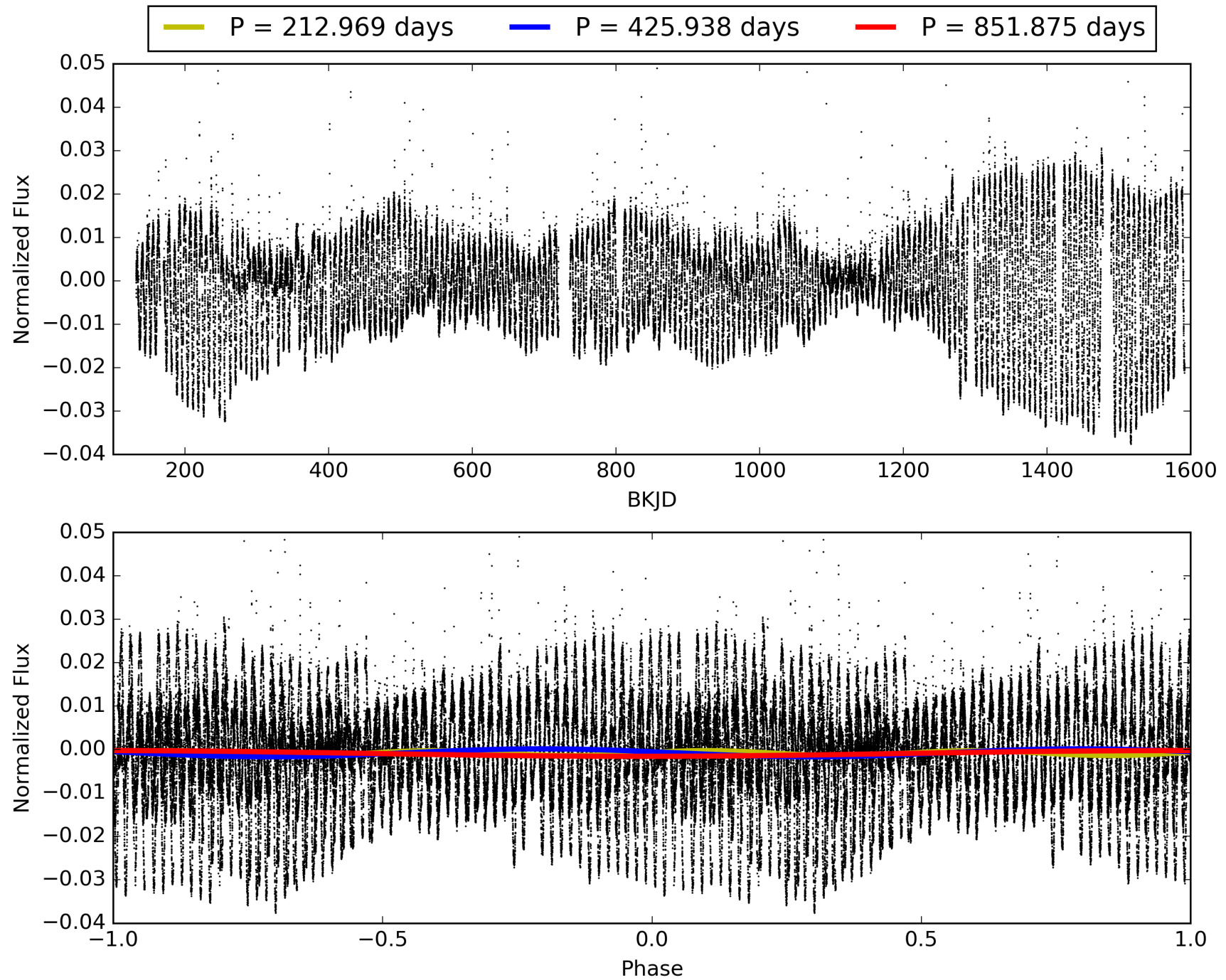
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:10:07 Z

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

TCE 008947255-06, PDC Light Curves

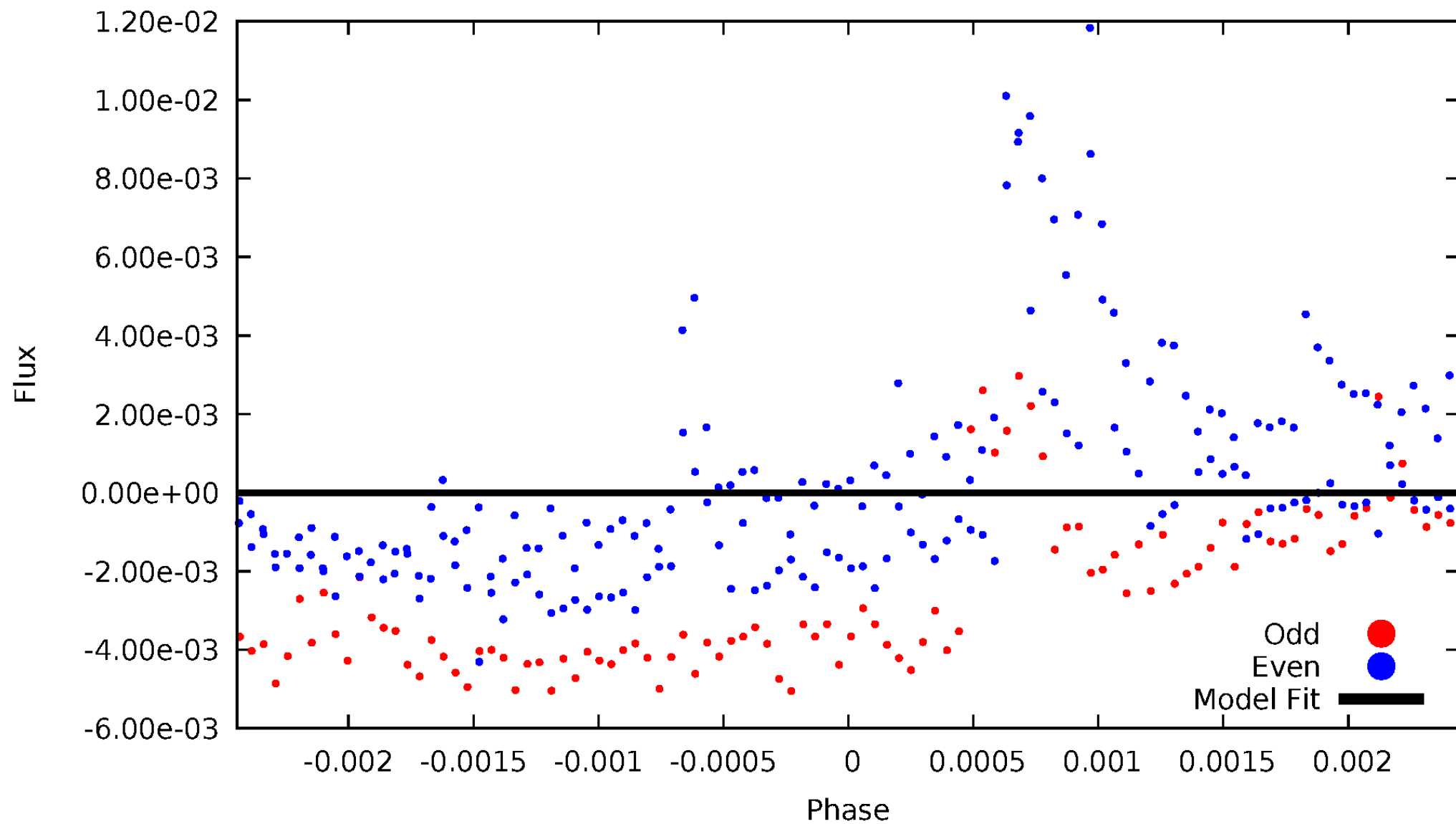


TCE 008947255-06



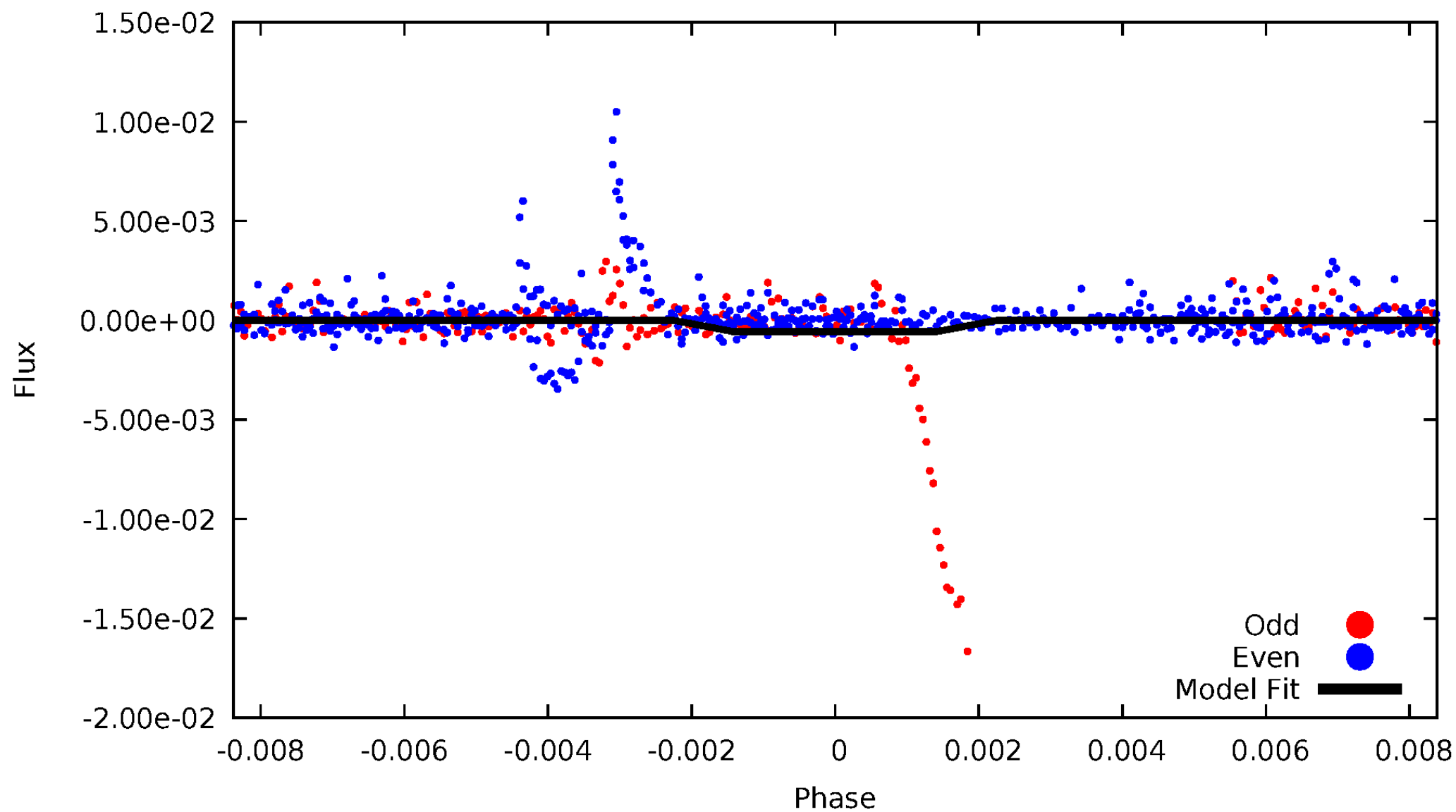
DV Odd/Even

TCE 008947255-06



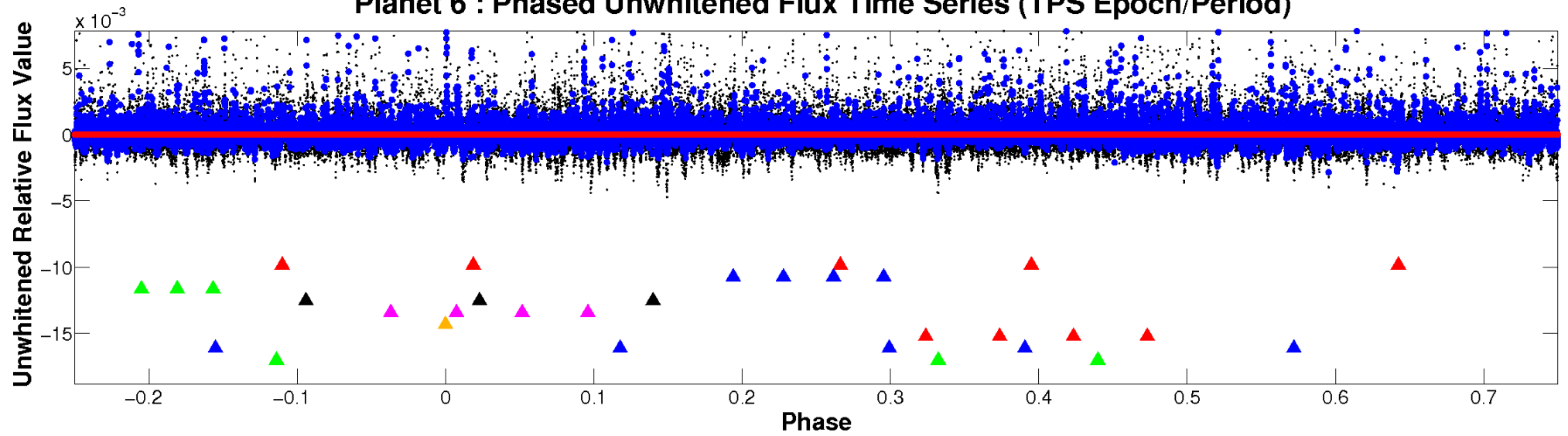
ALT Odd/Even

TCE 008947255-06

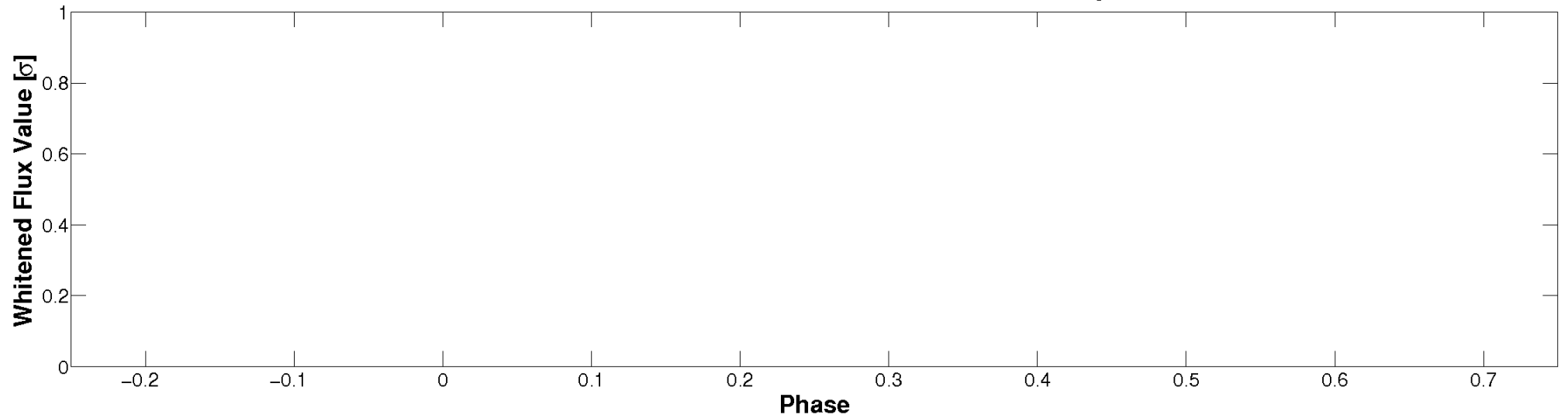


Non-Whitened Vs. Whitened Light Curve

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

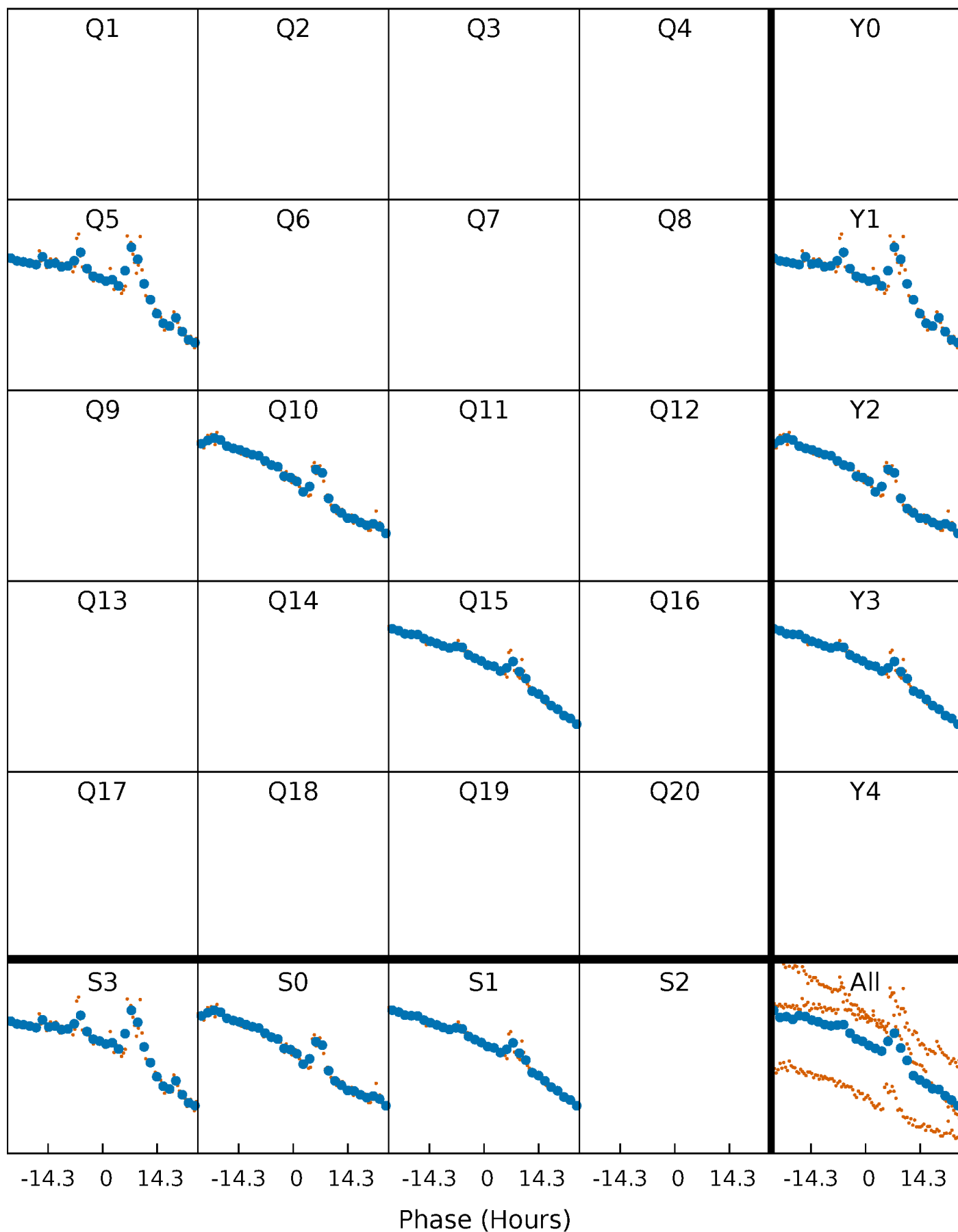


Planet 6 : Phased Whitened Flux Time Series (TPS Epoch/Period)



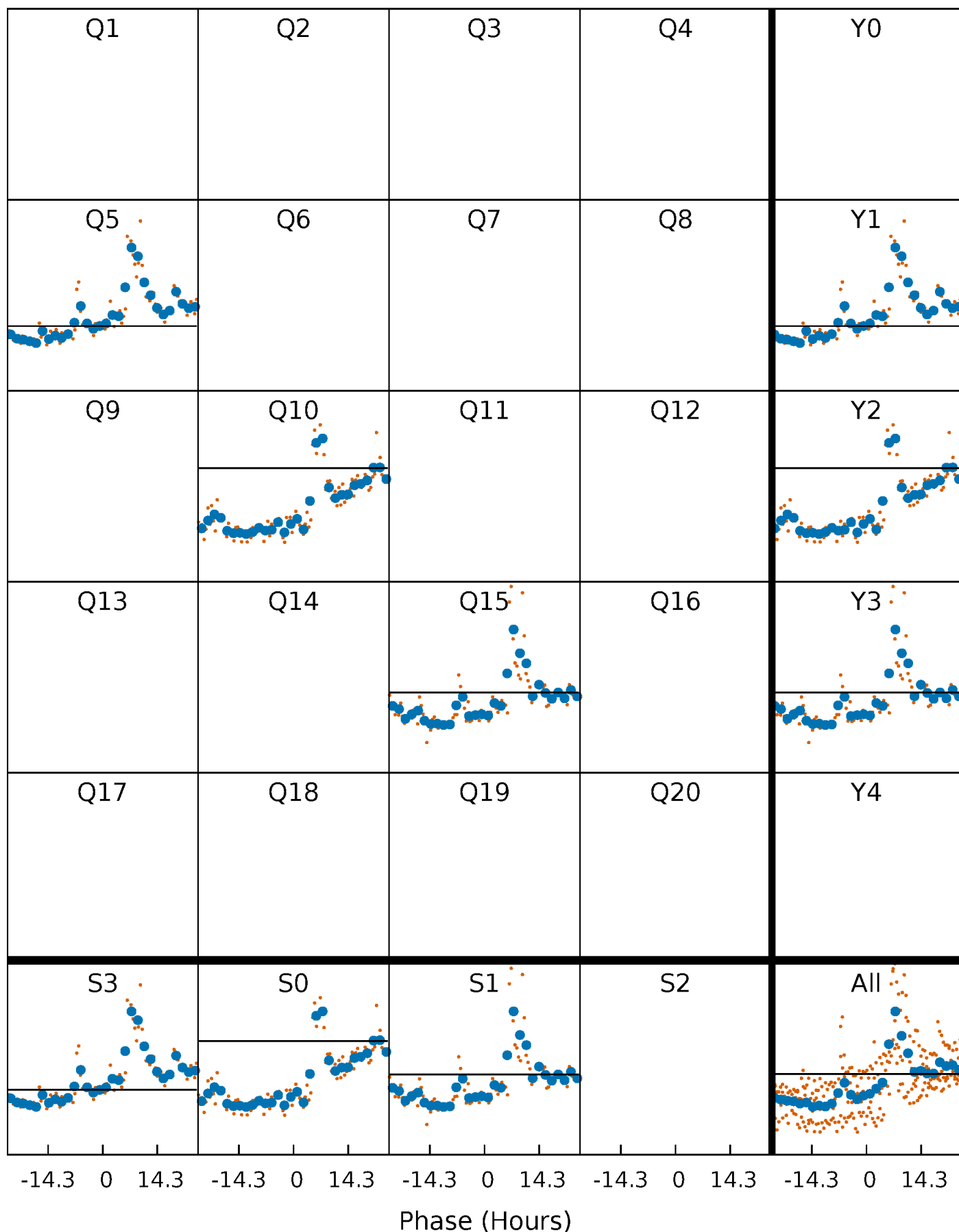
PDC Quarter-Phased Transit Curves

TCE 008947255-06 $P=425.937558$ Days $T_0=536.177216$ (BKJD)



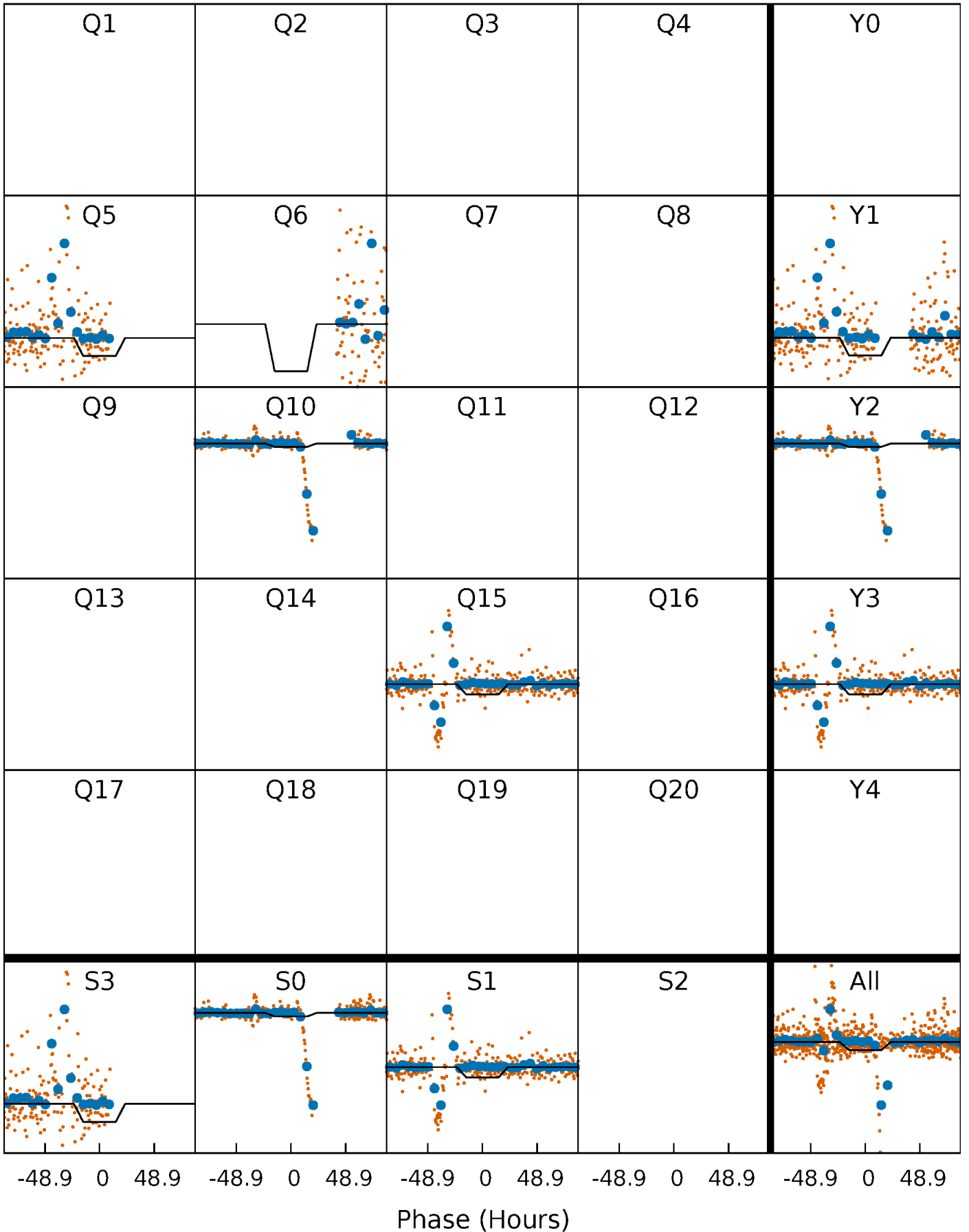
DV Quarter-Phased Transit Curves

TCE 008947255-06 P=425.937558 Days $T_0=536.177216$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

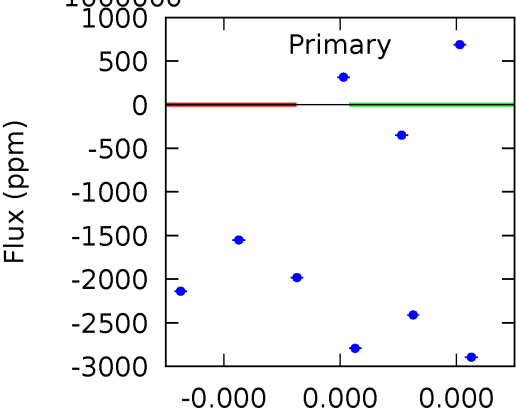
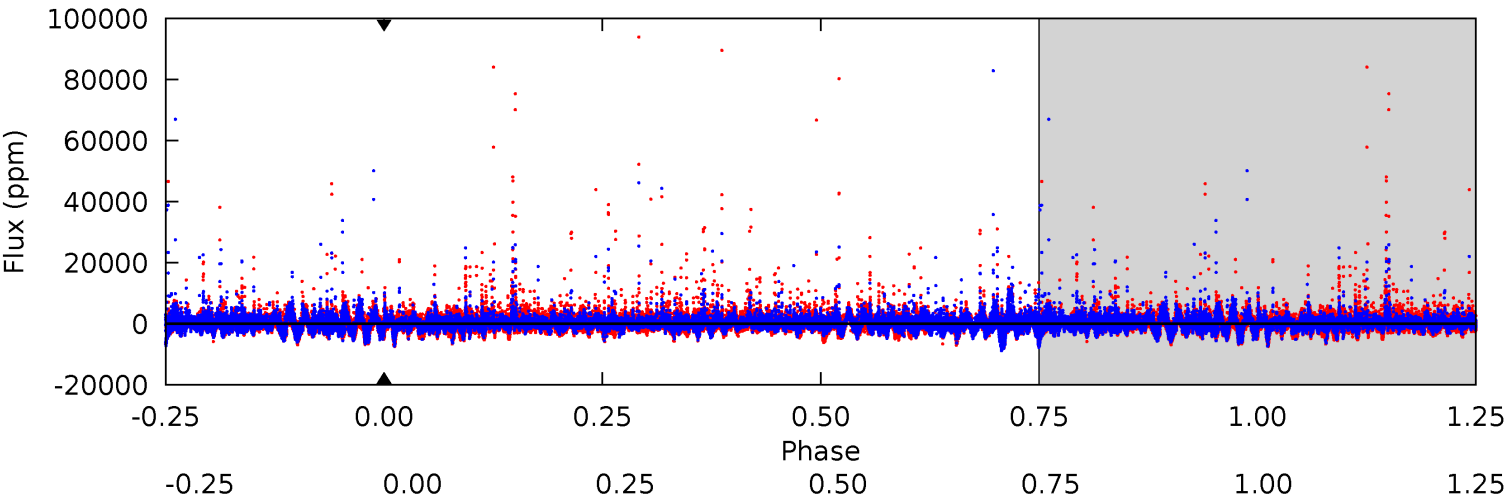
TCE 008947255-06 P=425.937558 Days $T_0=537.766144$ (BKJD)



DV Model-Shift Uniqueness Test

008947255-06, P = 425.937558 Days, E = 110.239658 Days

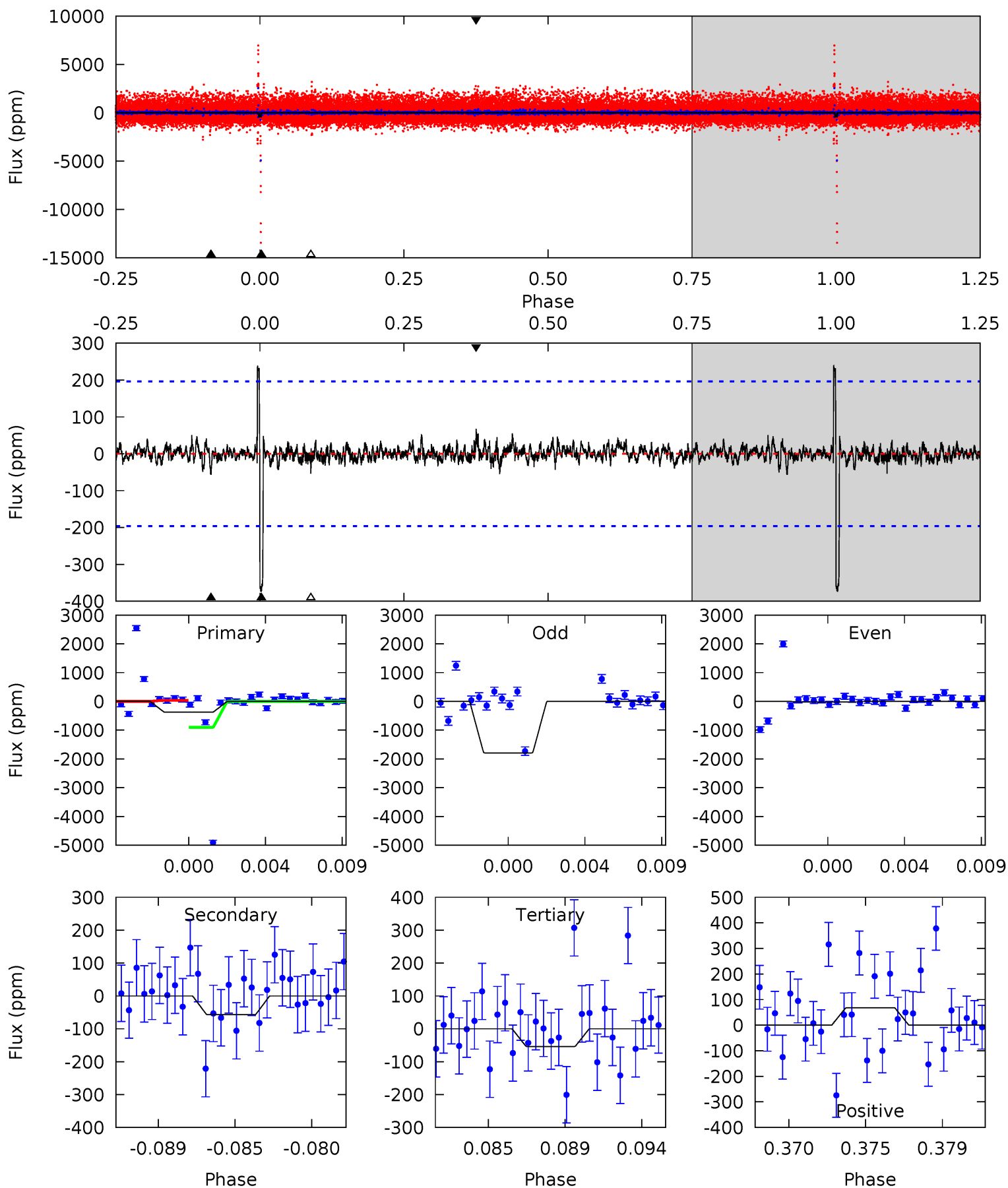
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008947255-06, P = 425.937558 Days, E = 111.828586 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.87	1.50	1.42	1.79	5.18	2.84	0.48	8.45	8.08	0.08	-0.29	20.7	-21.8	0.39	11.3



Stellar Parameters For KIC 008947255

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3504^{+56}_{-56}	$4.858^{+0.042}_{-0.031}$	$0.000^{+0.100}_{-0.100}$	$0.389^{+0.032}_{-0.039}$	$0.400^{+0.038}_{-0.047}$	$9.533^{+2.131}_{-1.300}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+8%/-10%	+9%/-12%	+22%/-14%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 008947255-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$3.42^{+3.14}_{-2.32}$	149^{+3}_{-4}	-2754^{+10226}_{-3909}	$-41569.787^{+7129336.420}_{-4921554.565}$
Alt.	-57 ± 38	$3.20^{+3.32}_{-2.24}$	149^{+4}_{-3}	1915^{+537}_{-310}	1531^{+14948}_{-1307}

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 $A_{obs} \gg 1.0$

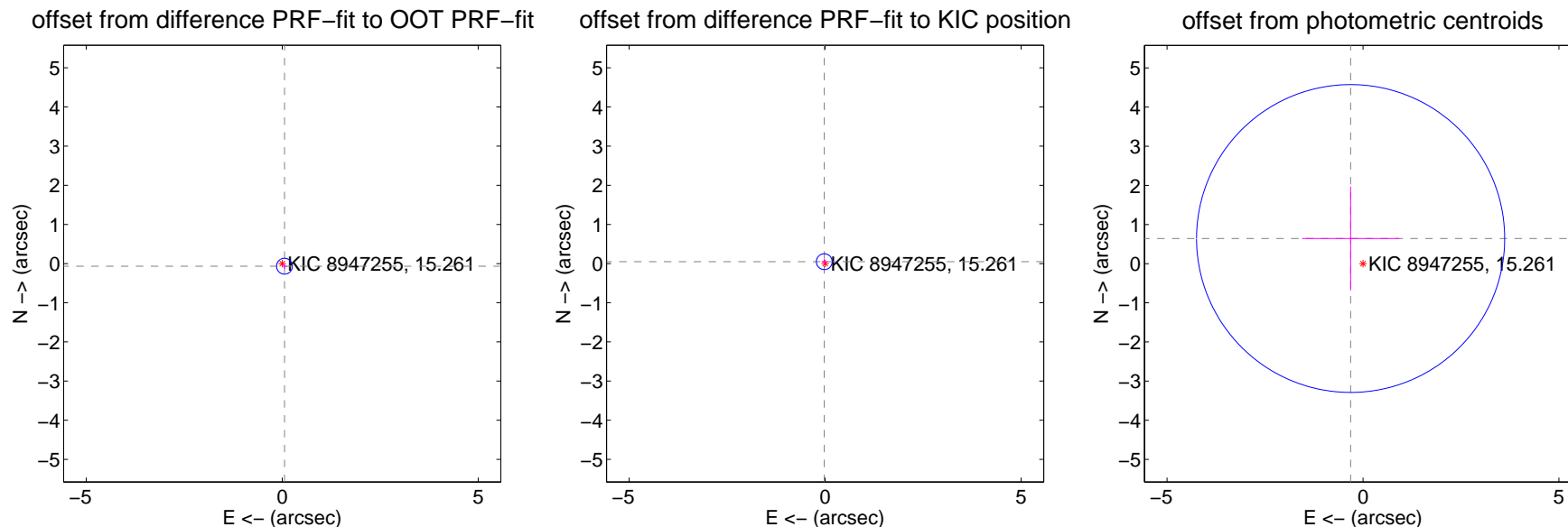
DV Centroid Data

Supplemental centroid analysis for 008947255-06. Kepler magnitude: 15.26. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.089 ± 0.067	1.32	-0.058 ± 0.068	-0.067 ± 0.067
PRF-fit source offset from KIC position	0.053 ± 0.067	0.79	0.021 ± 0.068	0.049 ± 0.067
photometric centroid source offset	0.72 ± 1.31	0.55	0.32 ± 1.24	0.64 ± 1.33



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.

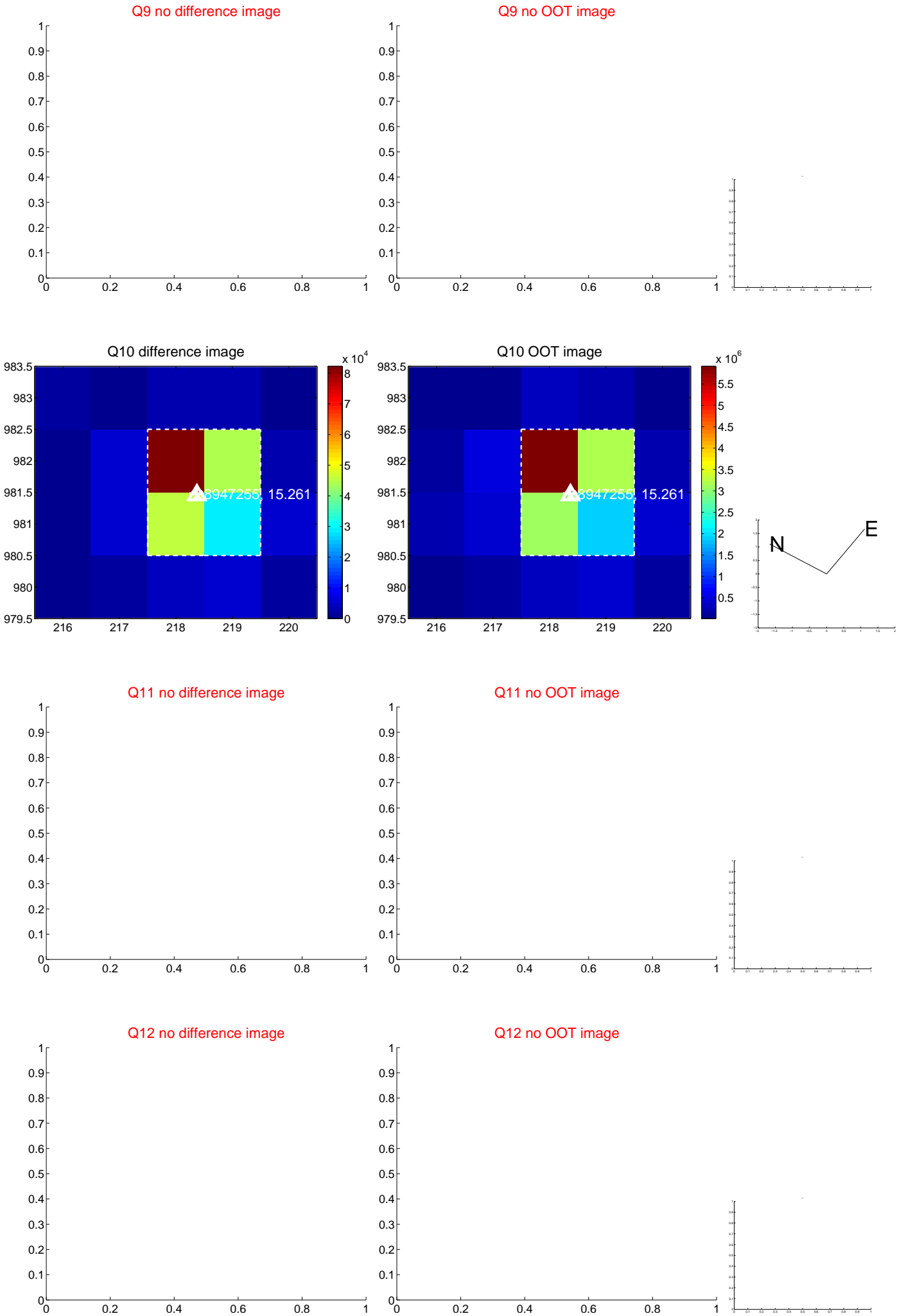
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



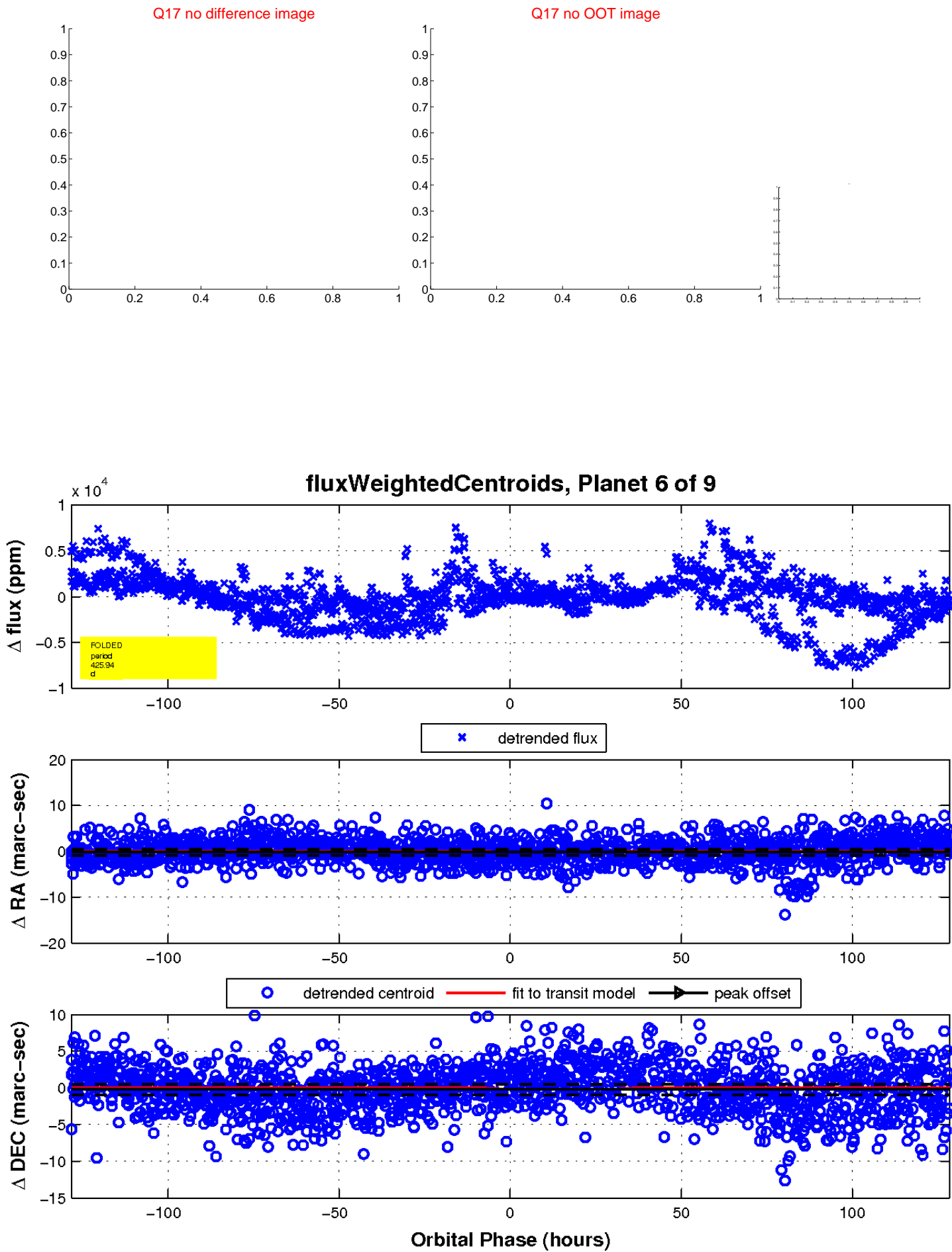
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

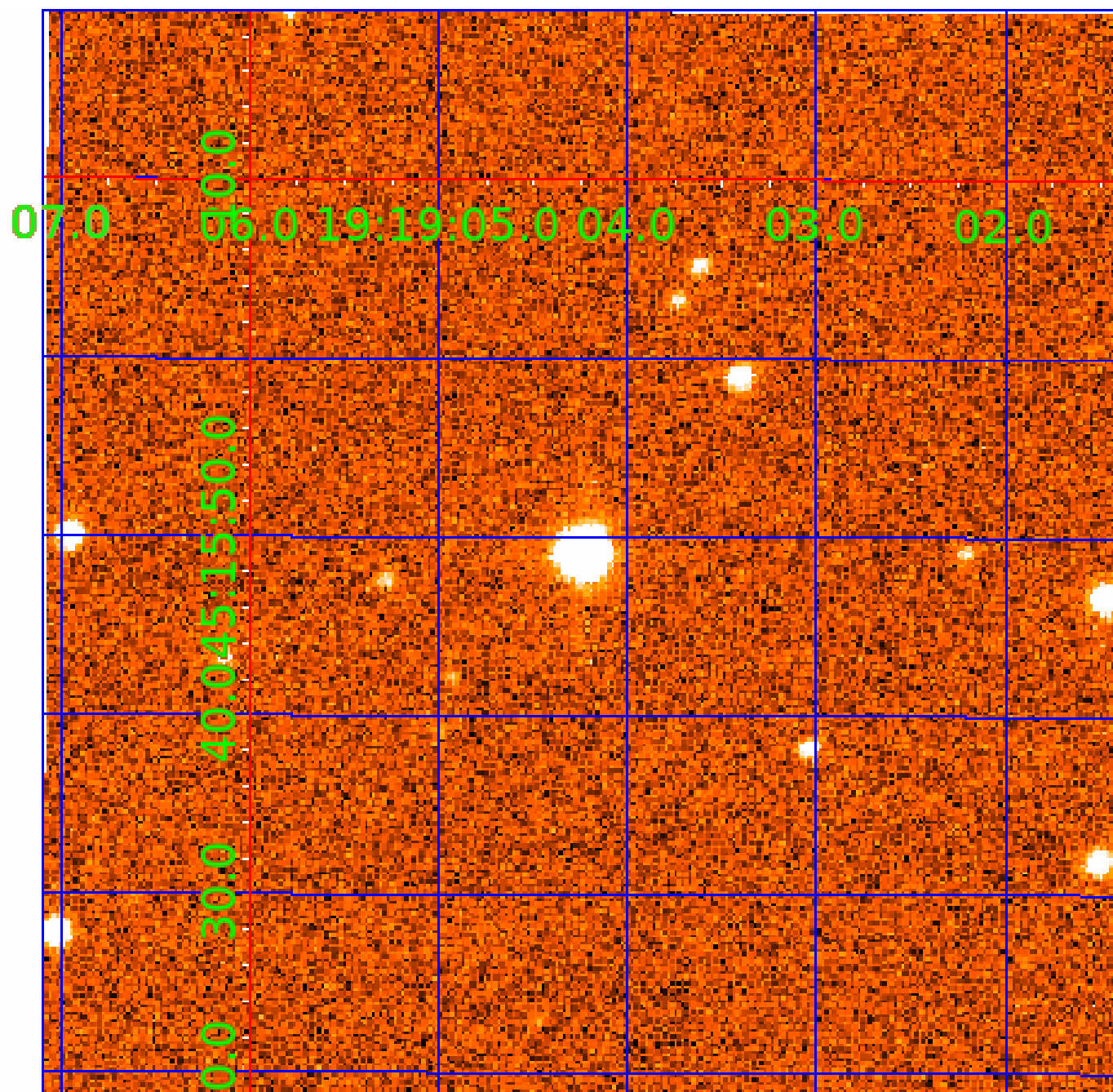


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008947255

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})
008947255-01	OBS	No	265.672434	278.499139	1759.5	8.332	16.4	7.9	0.39	3504	1.75	0.06
008947255-02	OBS	No	411.533699	236.099099	1903.2	8.078	16.7	8.1	0.39	3504	1.96	0.03
008947255-03	OBS	No	415.647580	469.433461	2111.7	2.689	14.0	7.9	0.39	3504	1.76	0.03
008947255-05	OBS	No	407.071141	151.135478	1952.1	12.204	14.2	6.3	0.39	3504	1.74	0.03
008947255-06	OBS	No	425.937558	536.177216	1003.9	12.500	13.0	-1.0	0.39	3504	1.21	0.03
008947255-07	OBS	No	447.141041	248.175127	1693.7	3.877	11.8	6.8	0.39	3504	1.77	0.03
008947255-08	OBS	No	309.716060	276.625165	1283.2	18.611	12.6	5.2	0.39	3504	1.42	0.05
008947255-09	OBS	No	661.829386	251.745466	1217.9	5.000	11.9	-1.0	0.39	3504	1.34	0.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008947255-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
008947255-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
008947255-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008947255-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008947255-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
008947255-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV
008947255-08	OBS	FP	0.00	1	0	1	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
008947255-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_NOFITS

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

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

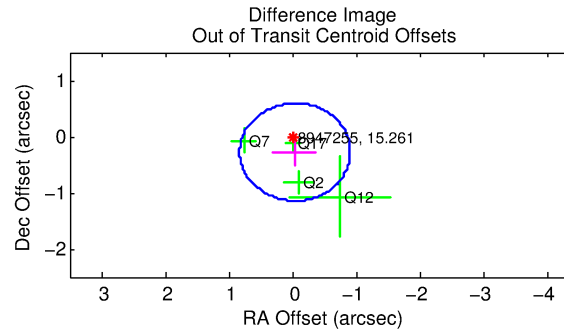
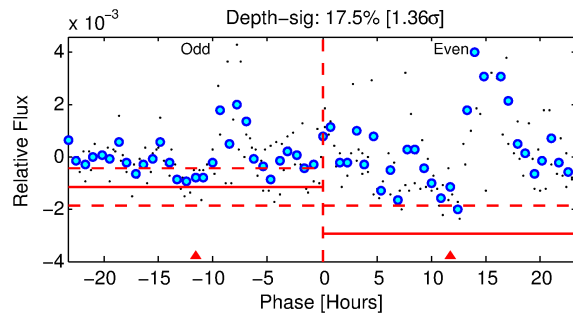
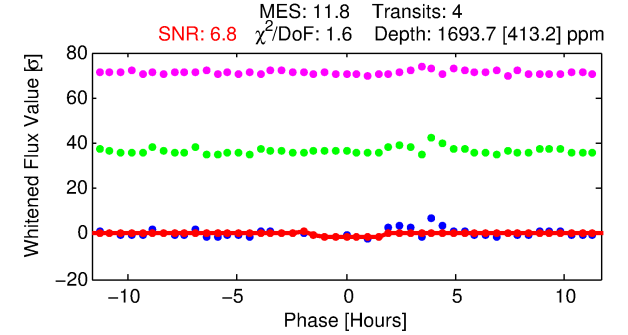
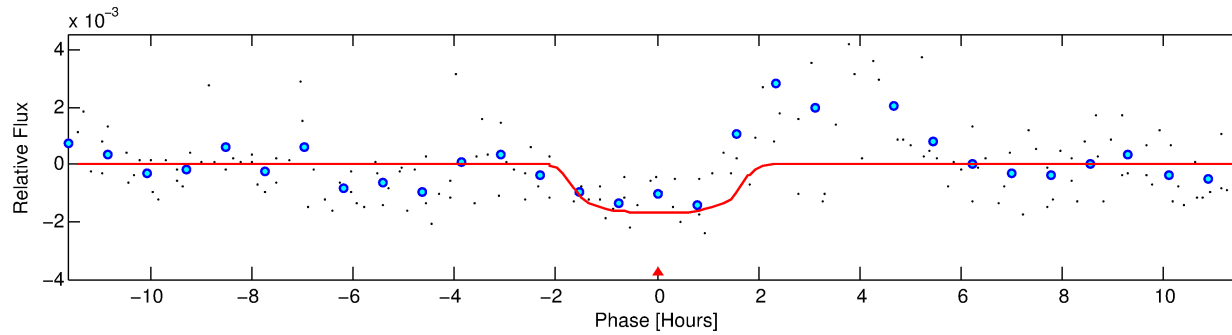
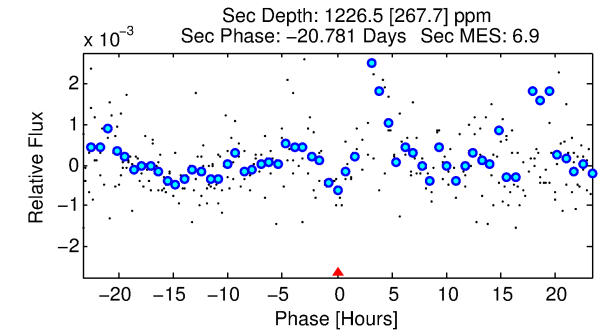
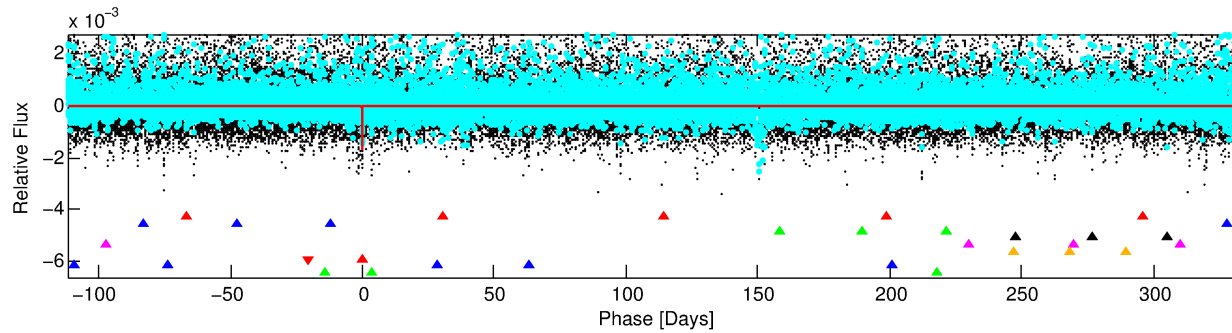
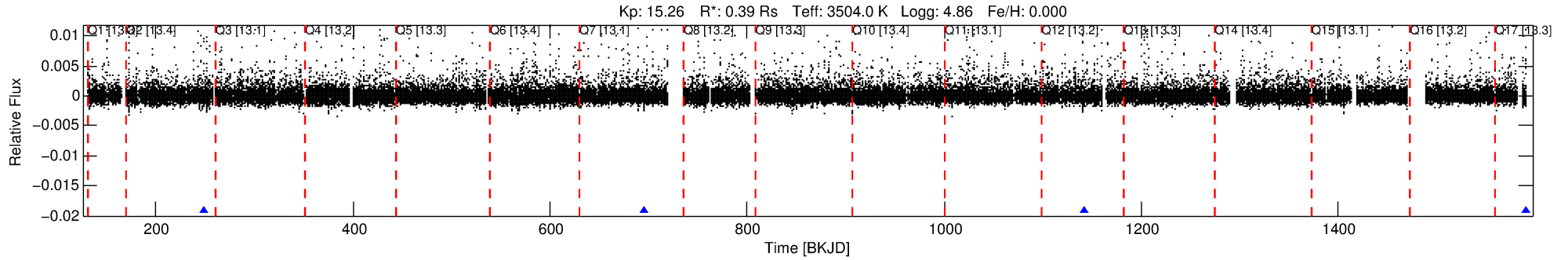
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008947255-07

No Significant Match Found

DV One-Page Summary

KIC: 8947255 Candidate: 7 of 9 Period: 447.141 d



DV Fit Results:

Period = 447.14104 [0.00528] d
Epoch = 248.1751 [0.0125] BKJD
Rp/R* = 0.0418 [0.0232]
a/R* = 590.66 [1269.38]
b = 0.80 [0.99]
Seff = 0.03 [0.00]
Teq = 105 [3] K
Rp = 1.77 [1.00] Re
a = 0.8420 [0.0625] AU
Ag = 151835.06 [172591.56] [0.88σ]
Teffp = 3207 [910] K [3.41σ]

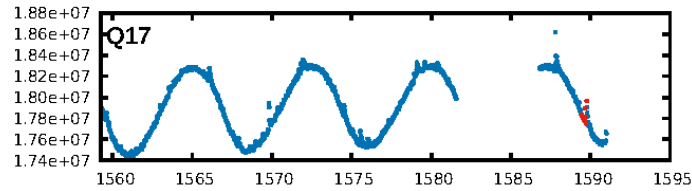
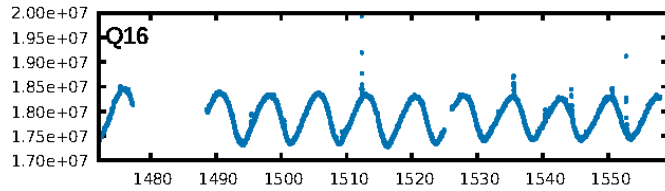
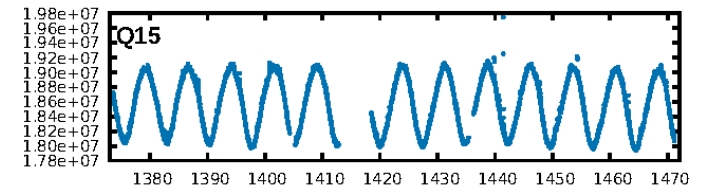
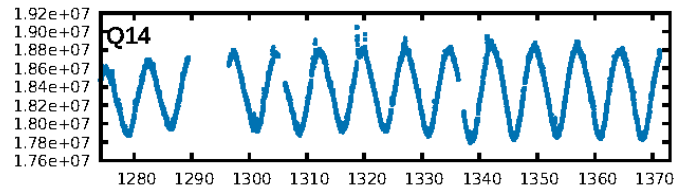
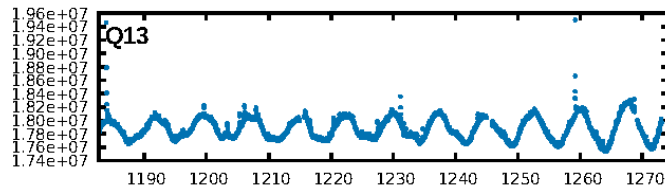
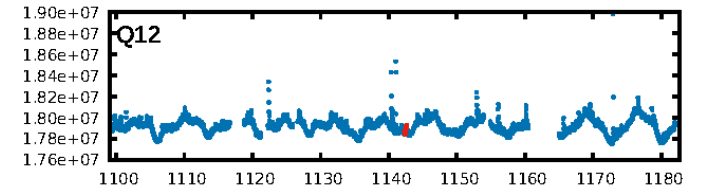
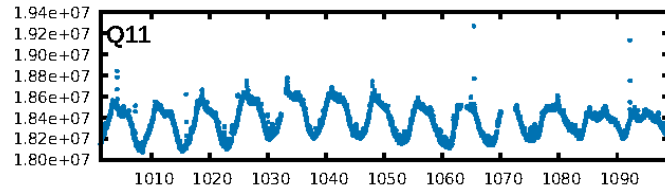
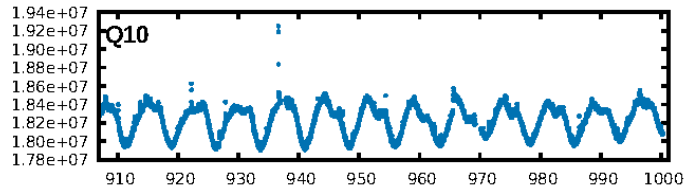
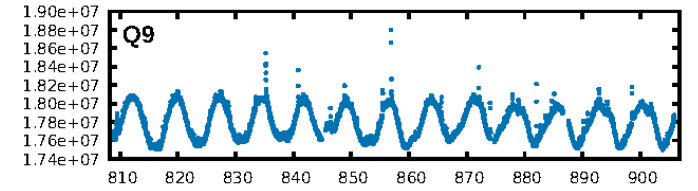
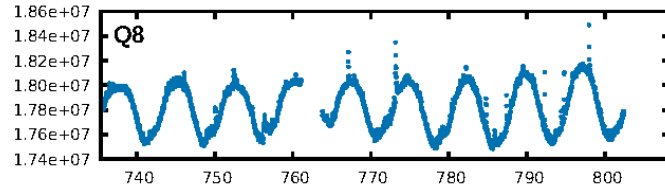
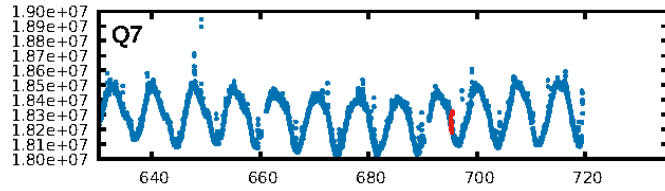
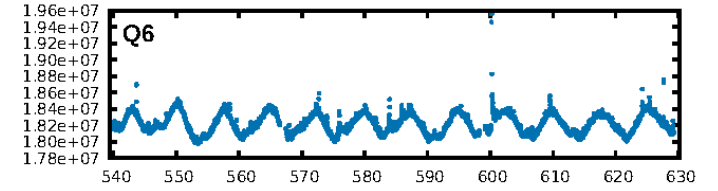
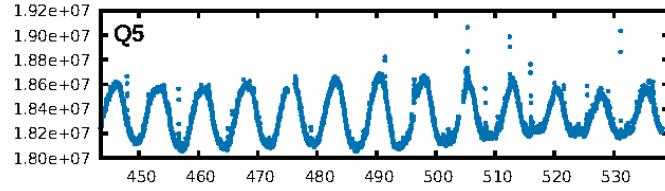
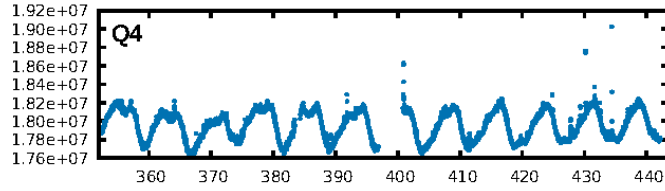
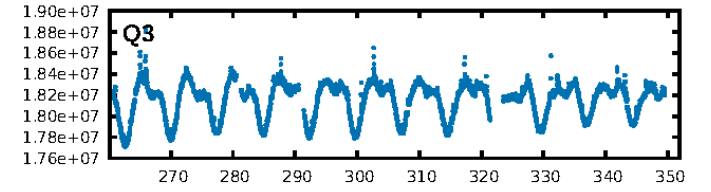
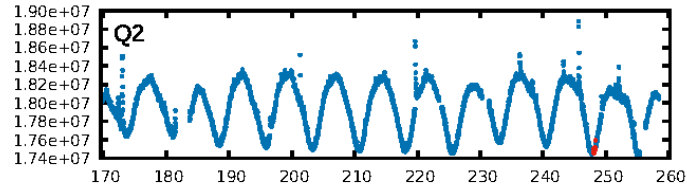
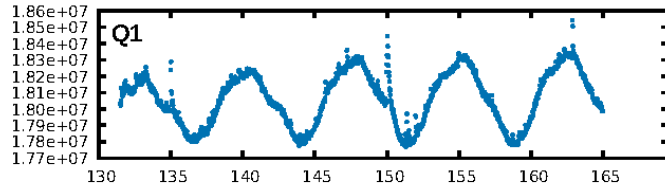
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [38.88σ]
LongPeriod-sig: 100.0% [101.28σ]
ModelChiSquare2-sig: 12.9%
ModelChiSquareGof-sig: 81.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.43
Centroid-sig: 83.7%
Centroid-so: 0.265 arcsec [0.28σ]
OotOffset-rm: 0.279 arcsec [0.96σ]
KicOffset-st: 1/1/1/1 [4]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [4/4]

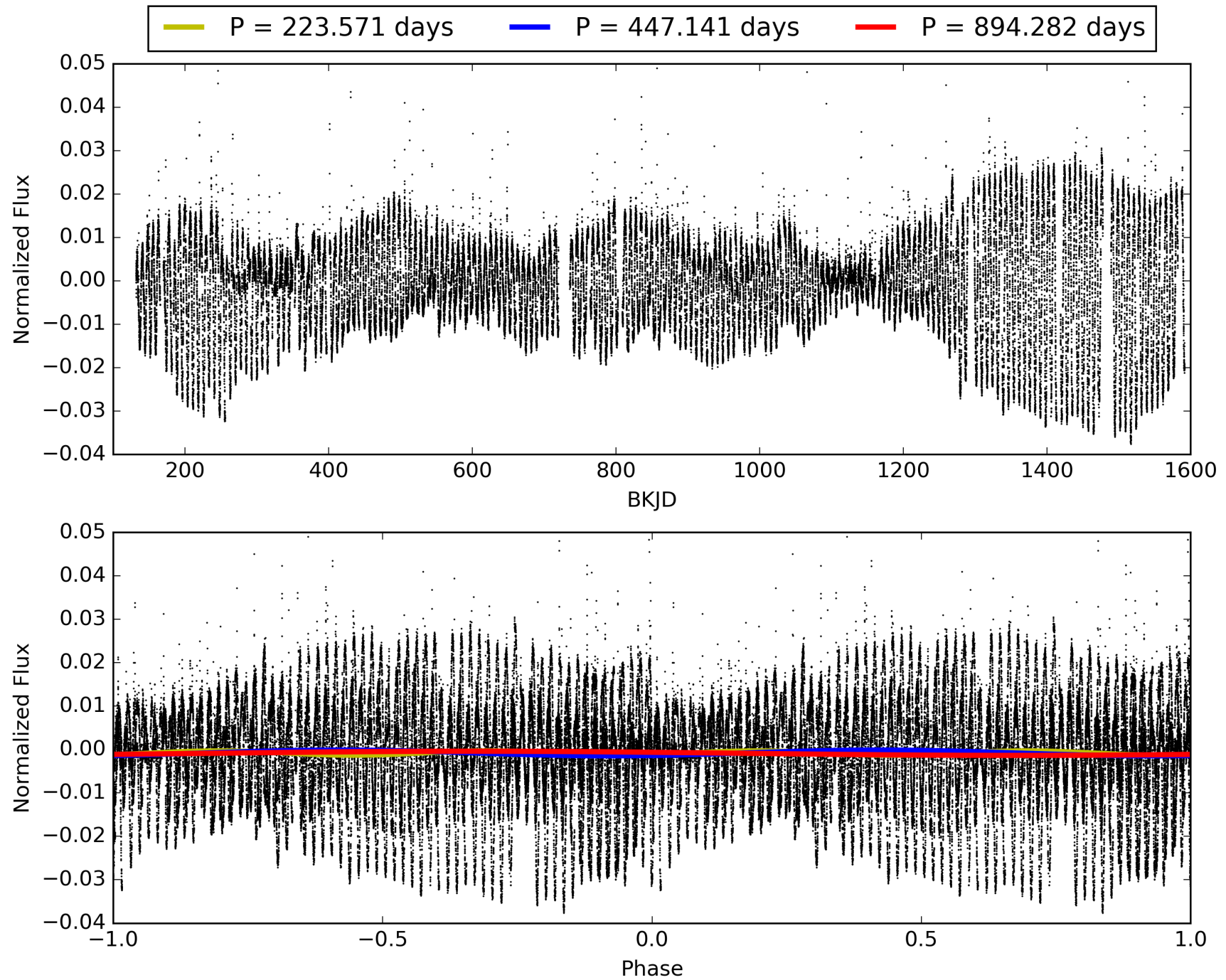
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:10:23 Z

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

TCE 008947255-07, PDC Light Curves

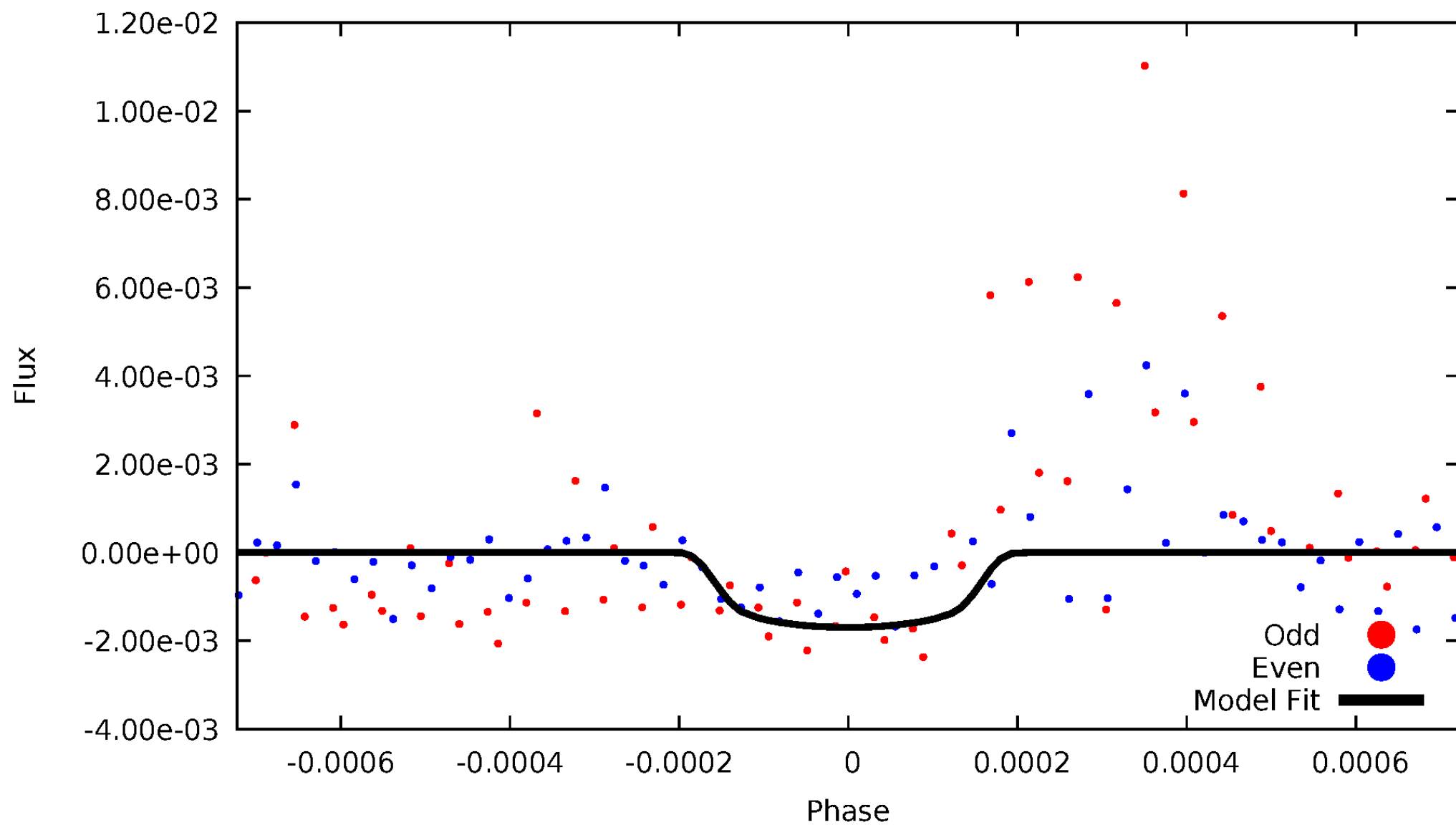


TCE 008947255-07



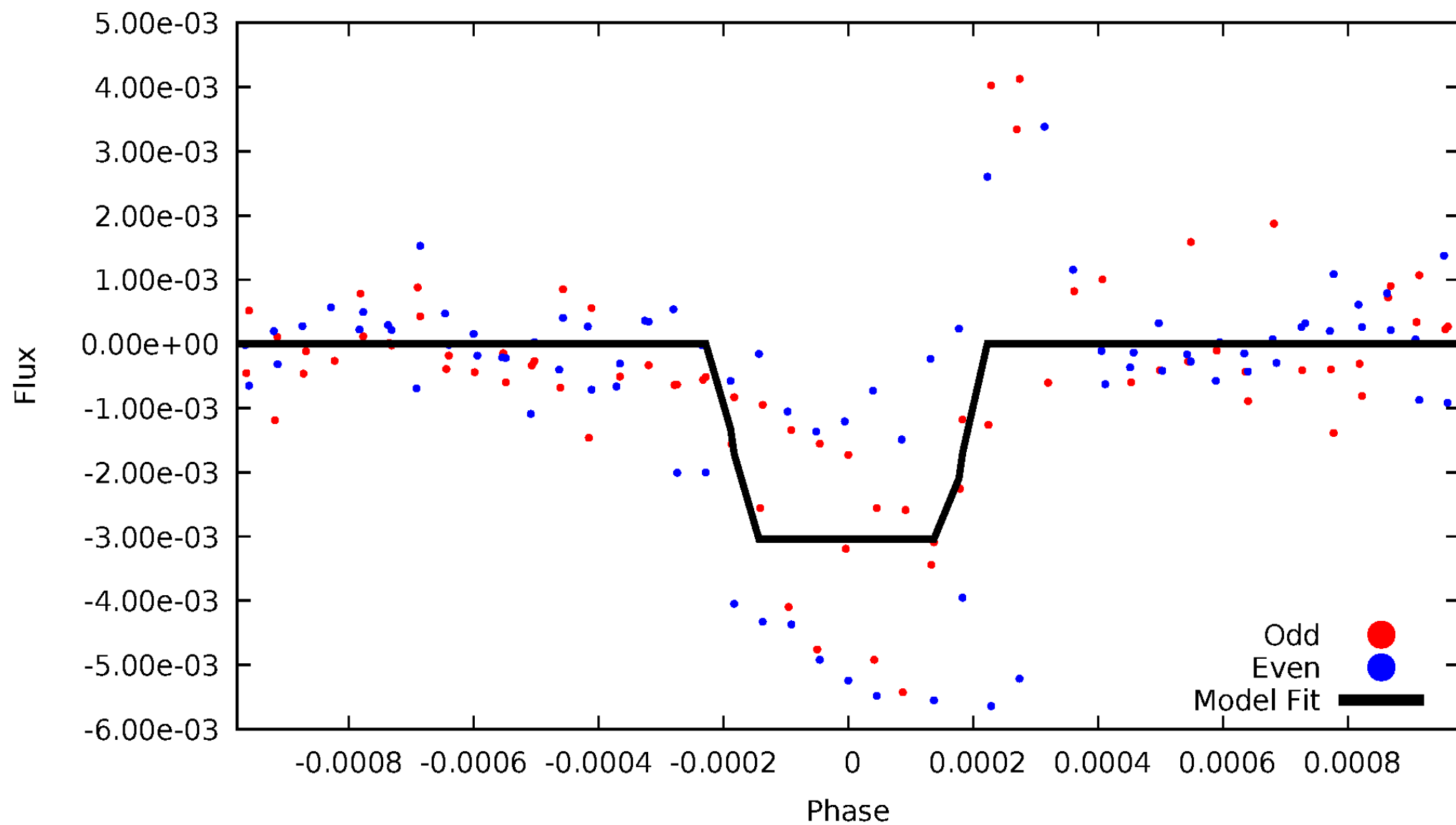
DV Odd/Even

TCE 008947255-07



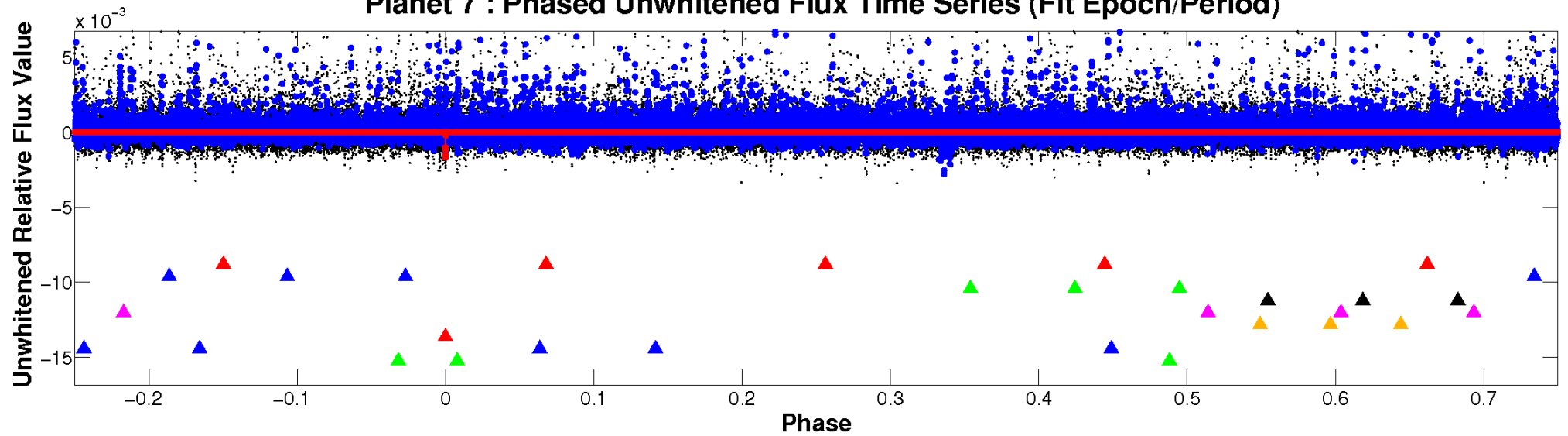
ALT Odd/Even

TCE 008947255-07

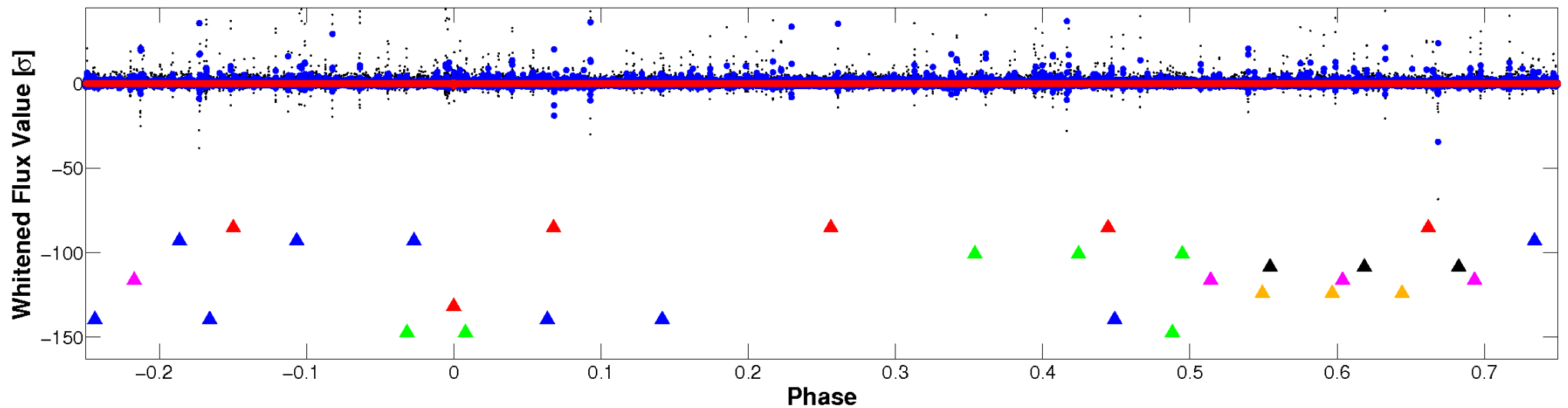


Non-Whitened Vs. Whitened Light Curve

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

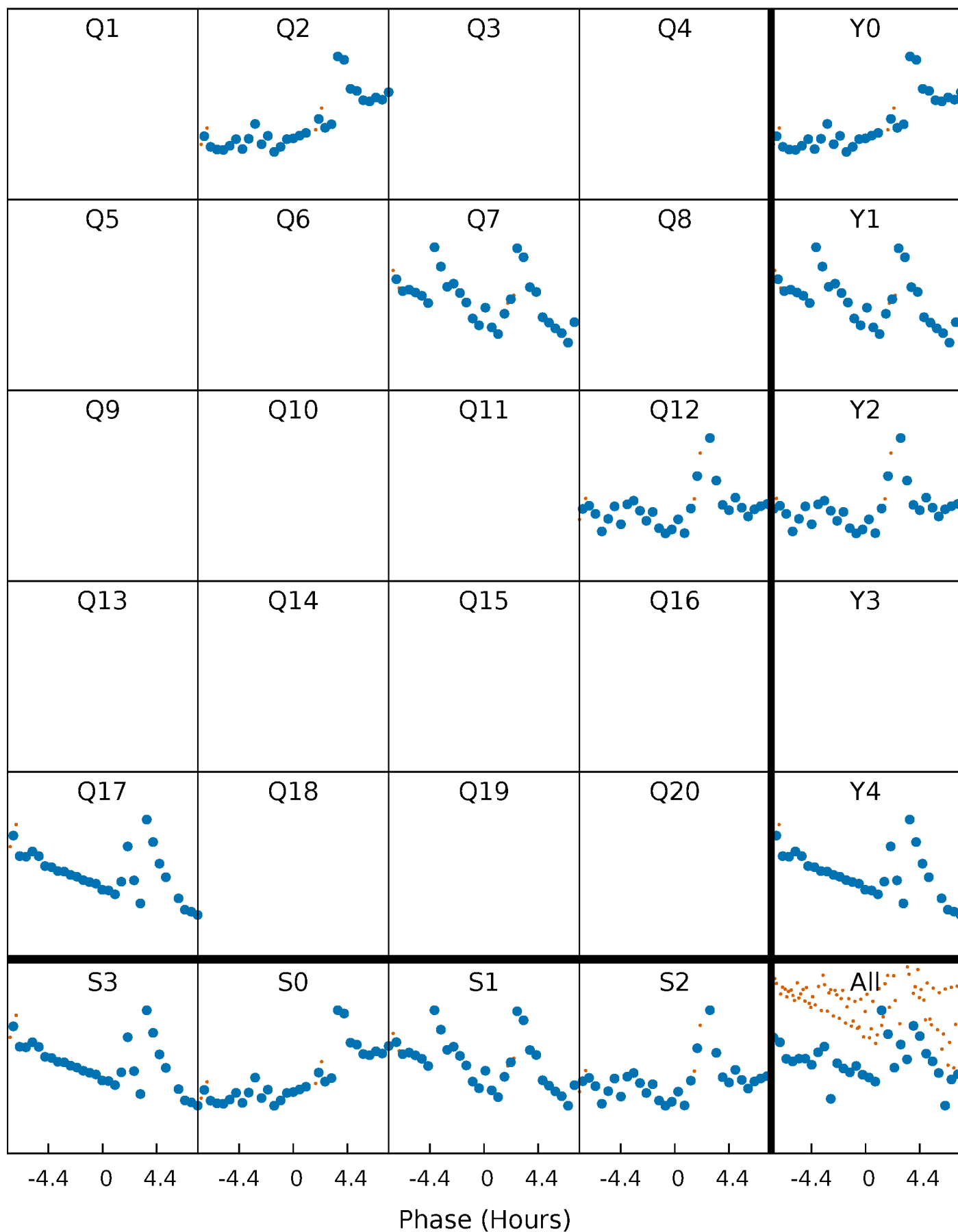


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



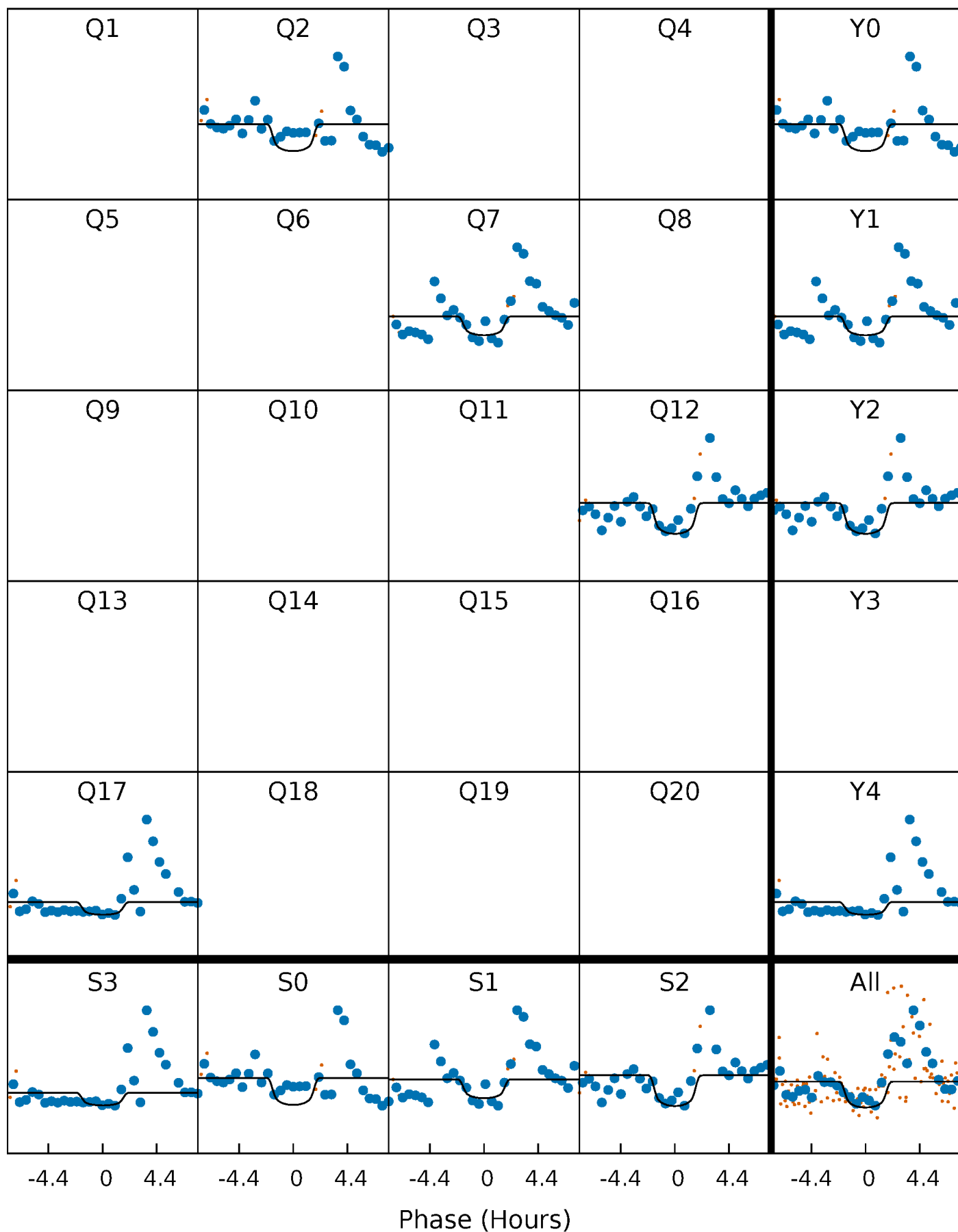
PDC Quarter-Phased Transit Curves

TCE 008947255-07 P=447.141041 Days $T_0=248.175127$ (BKJD)



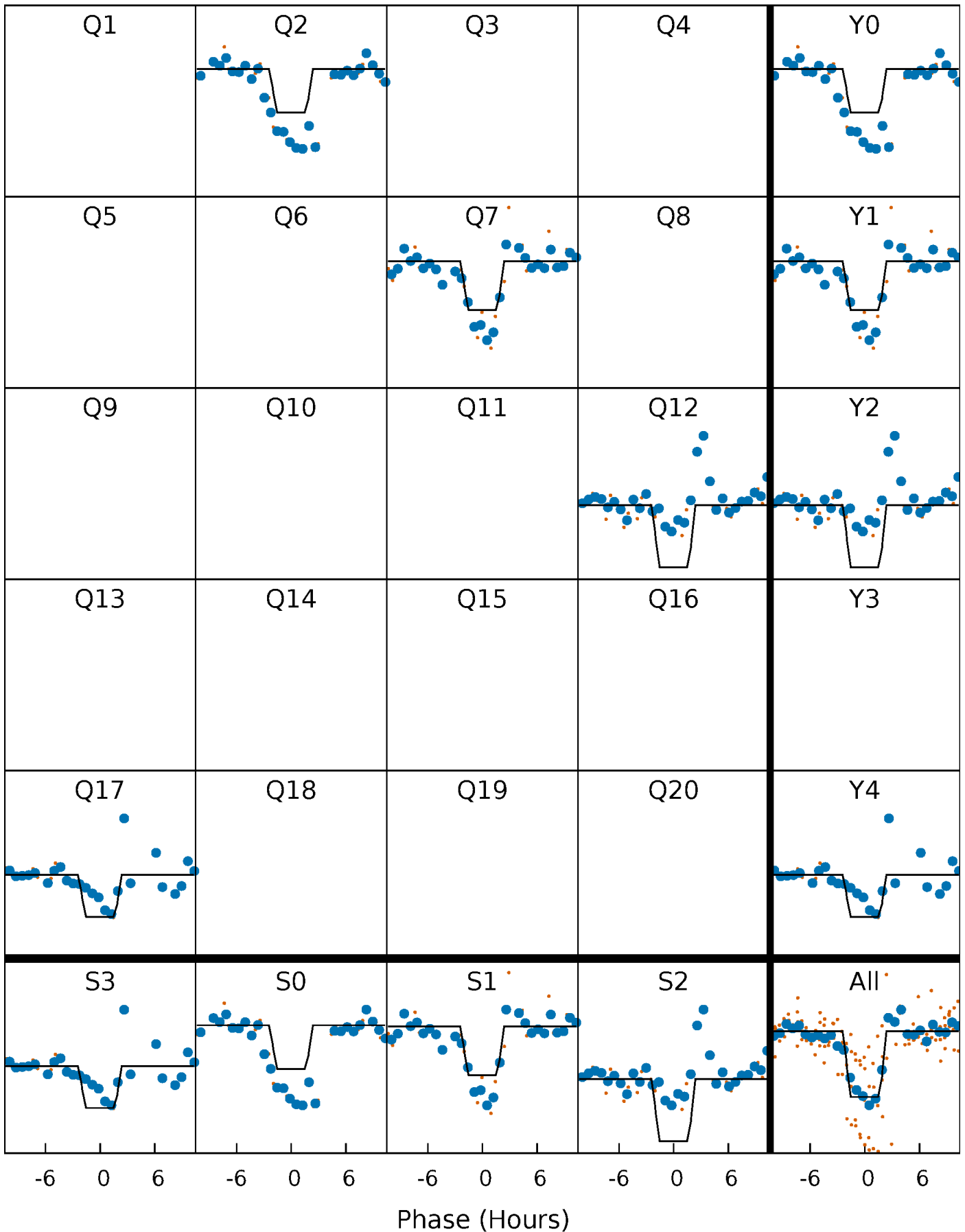
DV Quarter-Phased Transit Curves

TCE 008947255-07 $P=447.141041$ Days $T_0=248.175127$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

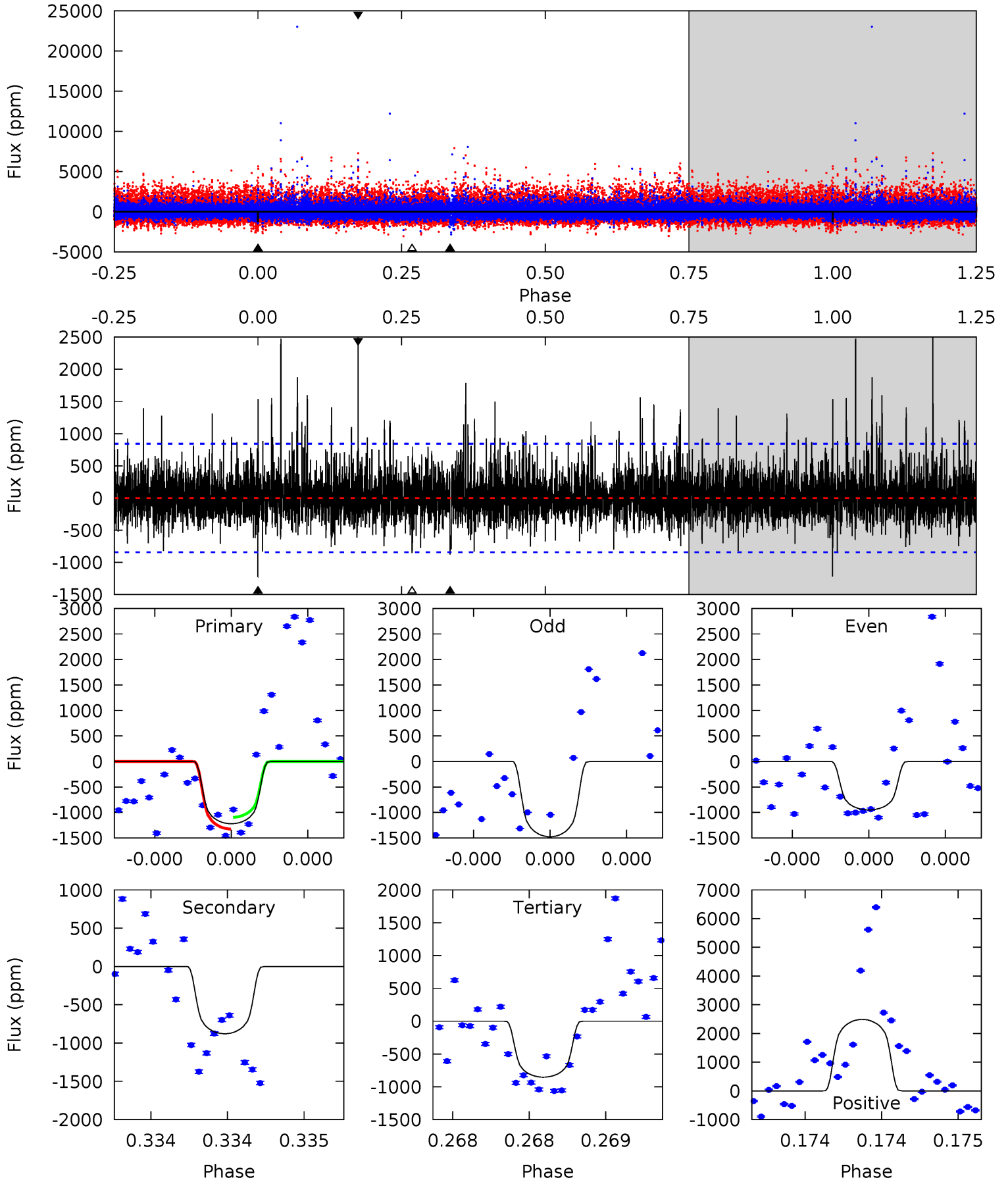
TCE 008947255-07 $P=447.127160$ Days $T_0=248.189568$ (BKJD)



DV Model-Shift Uniqueness Test

008947255-07, P = 447.141041 Days, E = 248.175127 Days

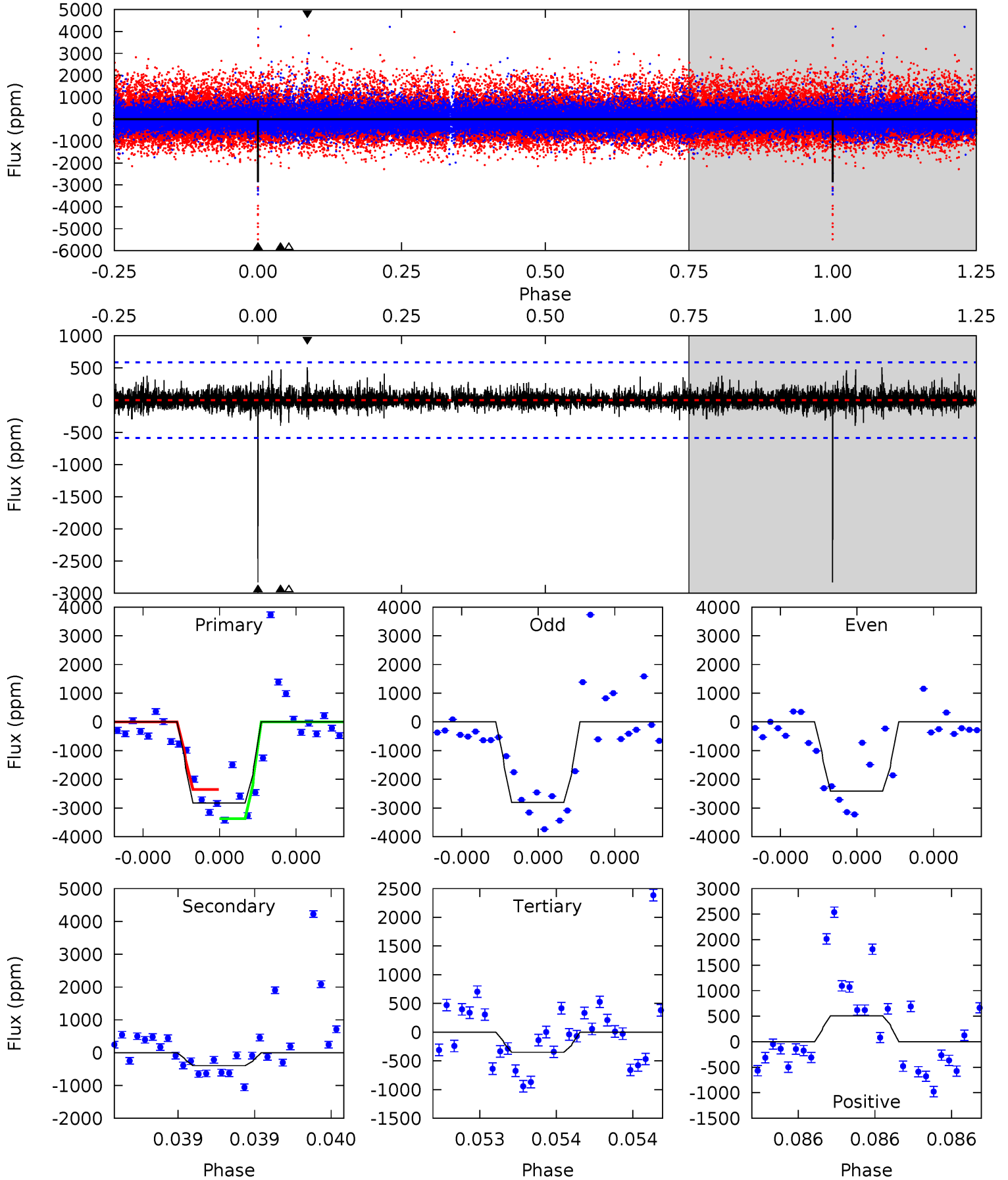
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.12	5.84	5.68	16.6	5.61	3.53	1.92	2.44	-8.45	0.17	-10.7	1.32	1.02	0.67	0.76



Alt Model-Shift Uniqueness Test

008947255-07, P = 447.127160 Days, E = 248.189568 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.0	3.79	3.35	4.86	5.61	3.53	0.72	23.6	22.1	0.44	-1.07	1.88	1.00	0.15	4.64



Stellar Parameters For KIC 008947255

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3504^{+56}_{-56}	$4.858^{+0.042}_{-0.031}$	$0.000^{+0.100}_{-0.100}$	$0.389^{+0.032}_{-0.039}$	$0.400^{+0.038}_{-0.047}$	$9.533^{+2.131}_{-1.300}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+8%/-10%	+9%/-12%	+22%/-14%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 008947255-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-879 ± 150	$1.75^{+0.95}_{-0.86}$	147^{+4}_{-4}	3161^{+767}_{-356}	$112106^{+326429}_{-64749}$
Alt.	-397 ± 105	$2.35^{+0.98}_{-1.00}$	147^{+3}_{-4}	2621^{+408}_{-236}	27778^{+52589}_{-14892}

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

DV Centroid Data

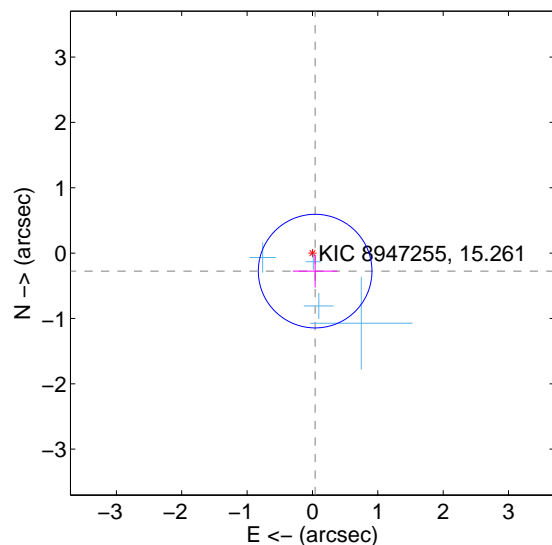
Supplemental centroid analysis for 008947255-07. Kepler magnitude: 15.26. Transit SNR 6.78

There are 4 quarters with good PRF difference image offsets

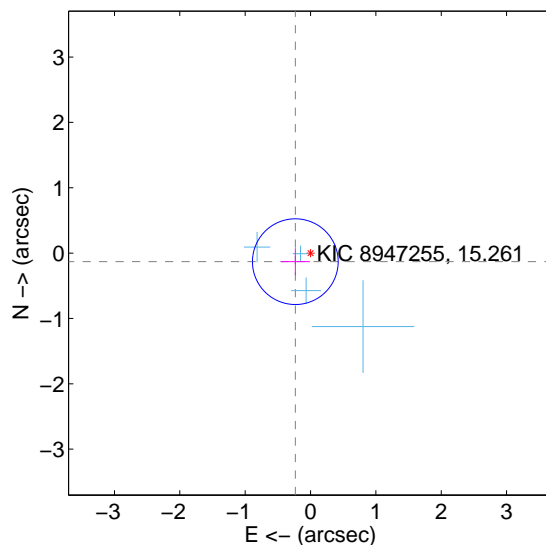
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.279 ± 0.290	0.96	-0.041 ± 0.340	-0.276 ± 0.249
PRF-fit source offset from KIC position	0.267 ± 0.219	1.22	0.233 ± 0.222	-0.131 ± 0.206
photometric centroid source offset	0.26 ± 0.94	0.28	-0.26 ± 0.94	0.01 ± 0.92

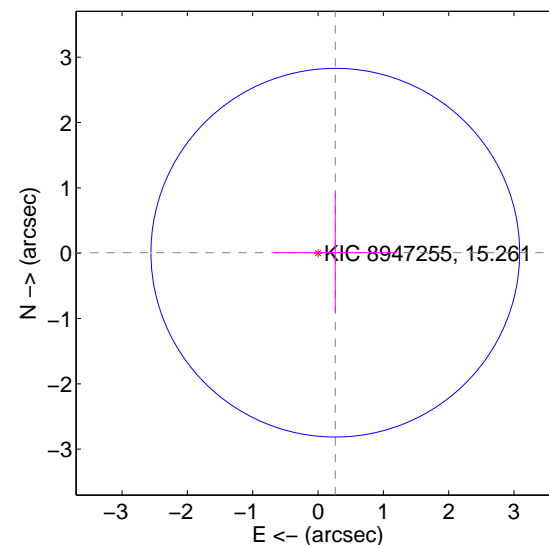
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

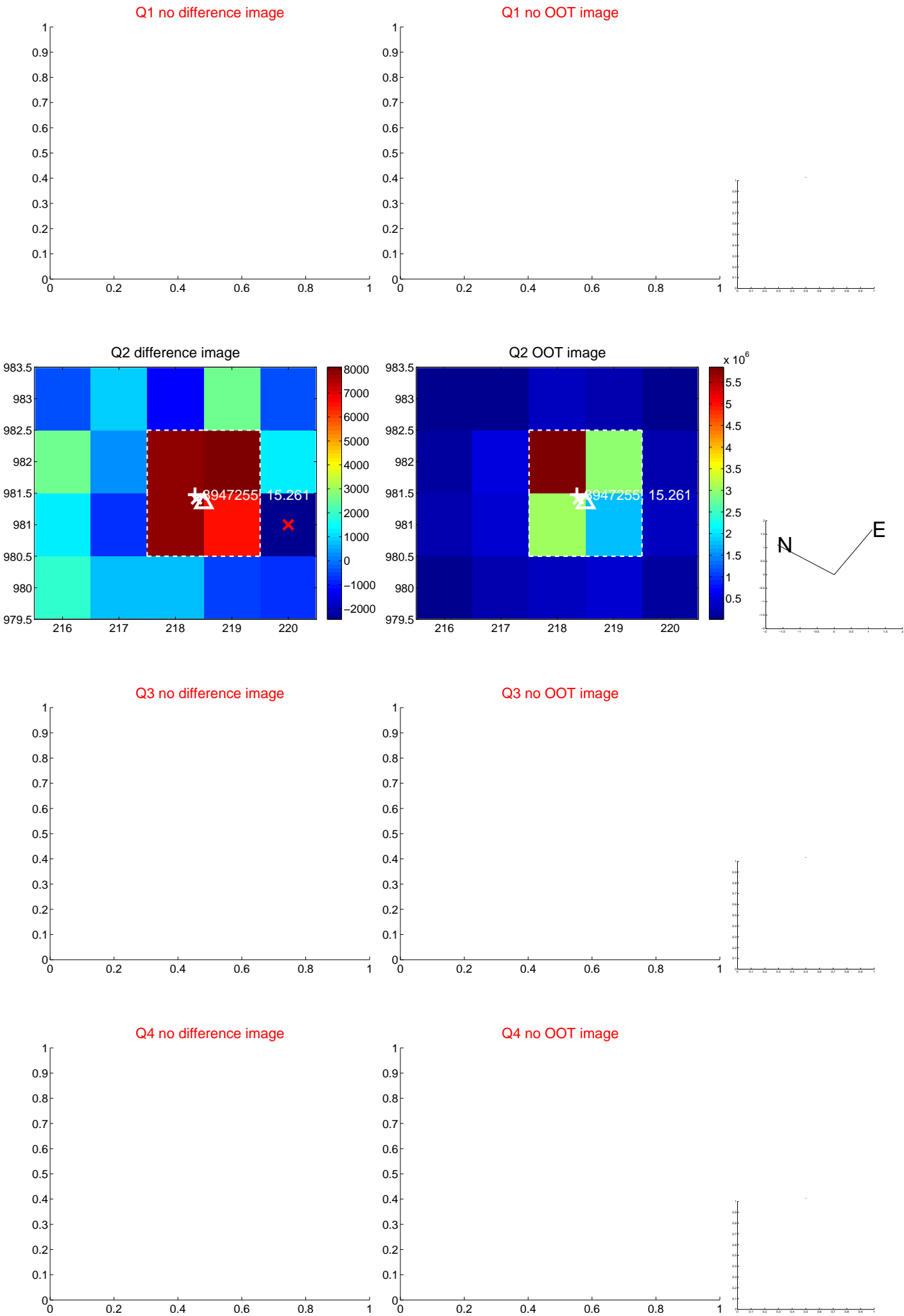


offset from photometric centroids

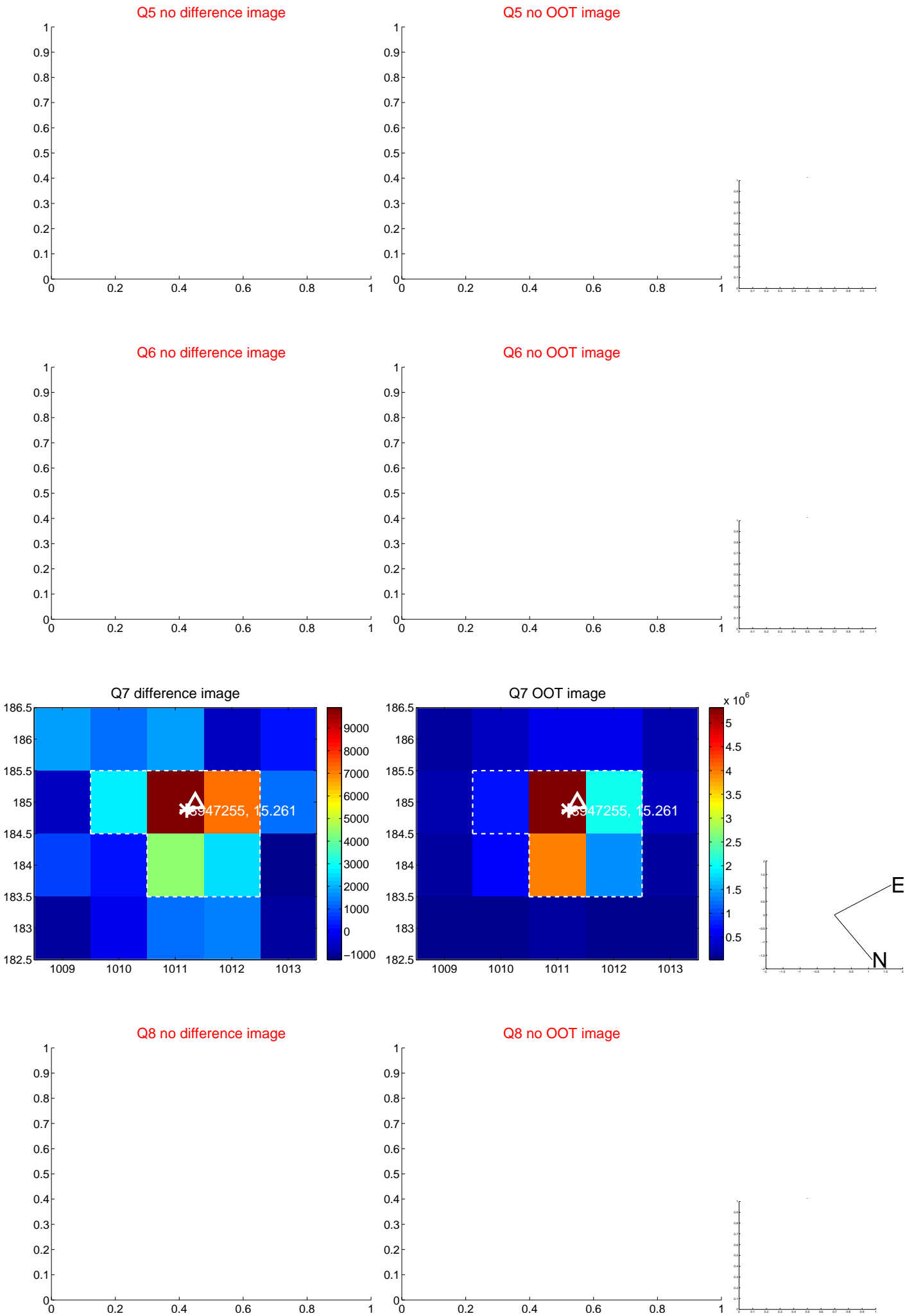


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

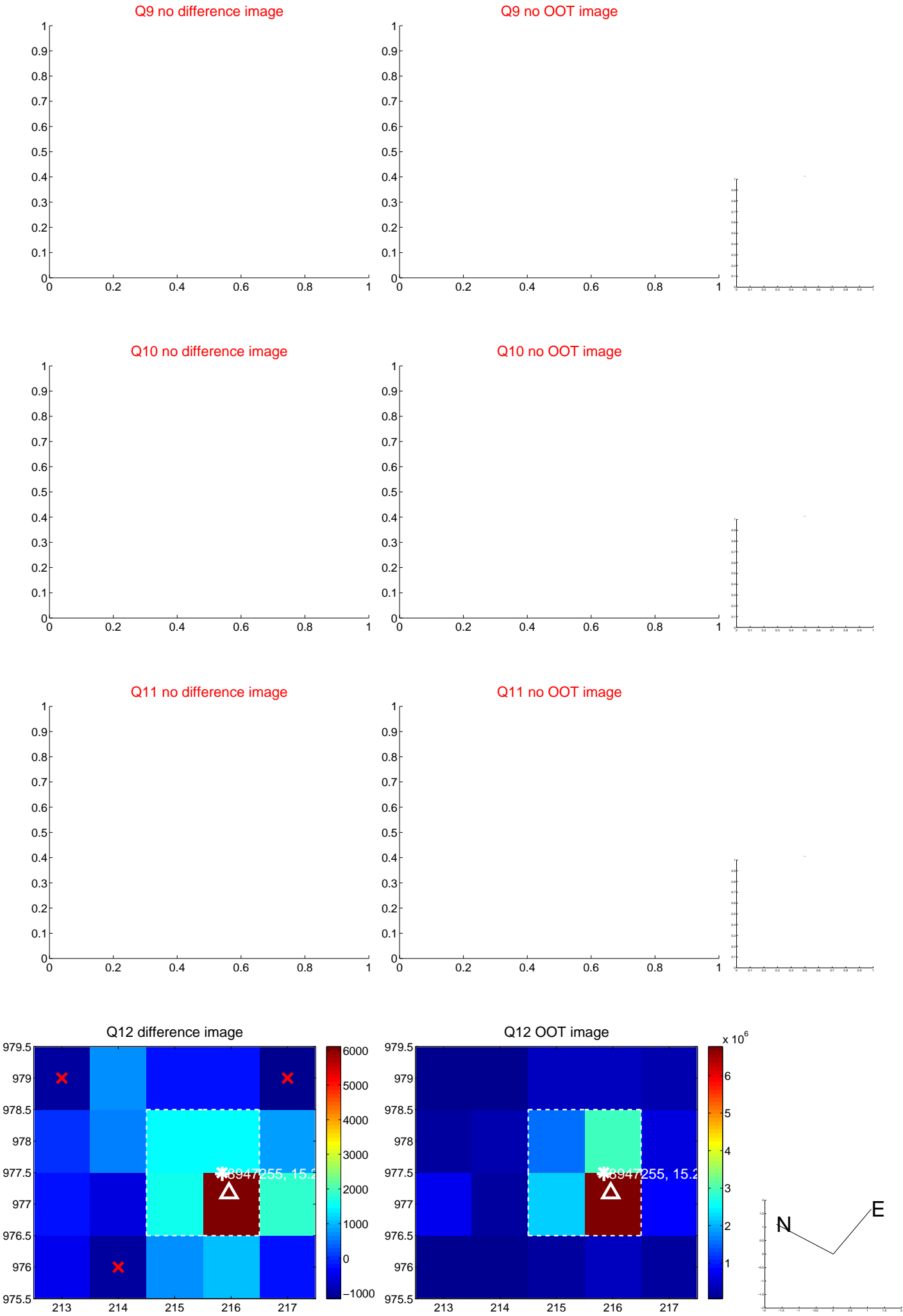
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



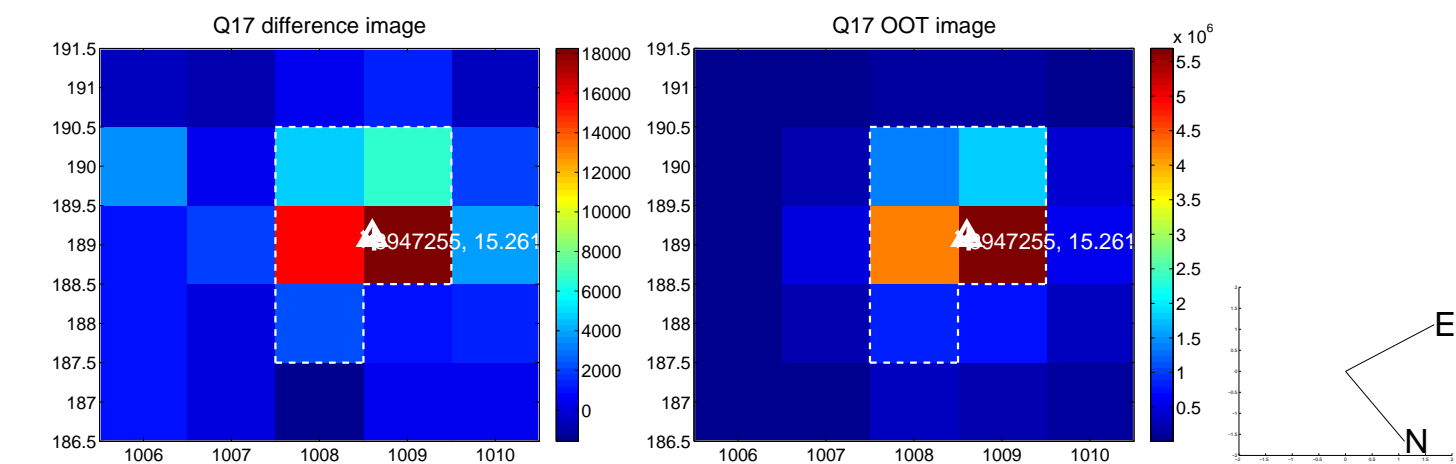
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



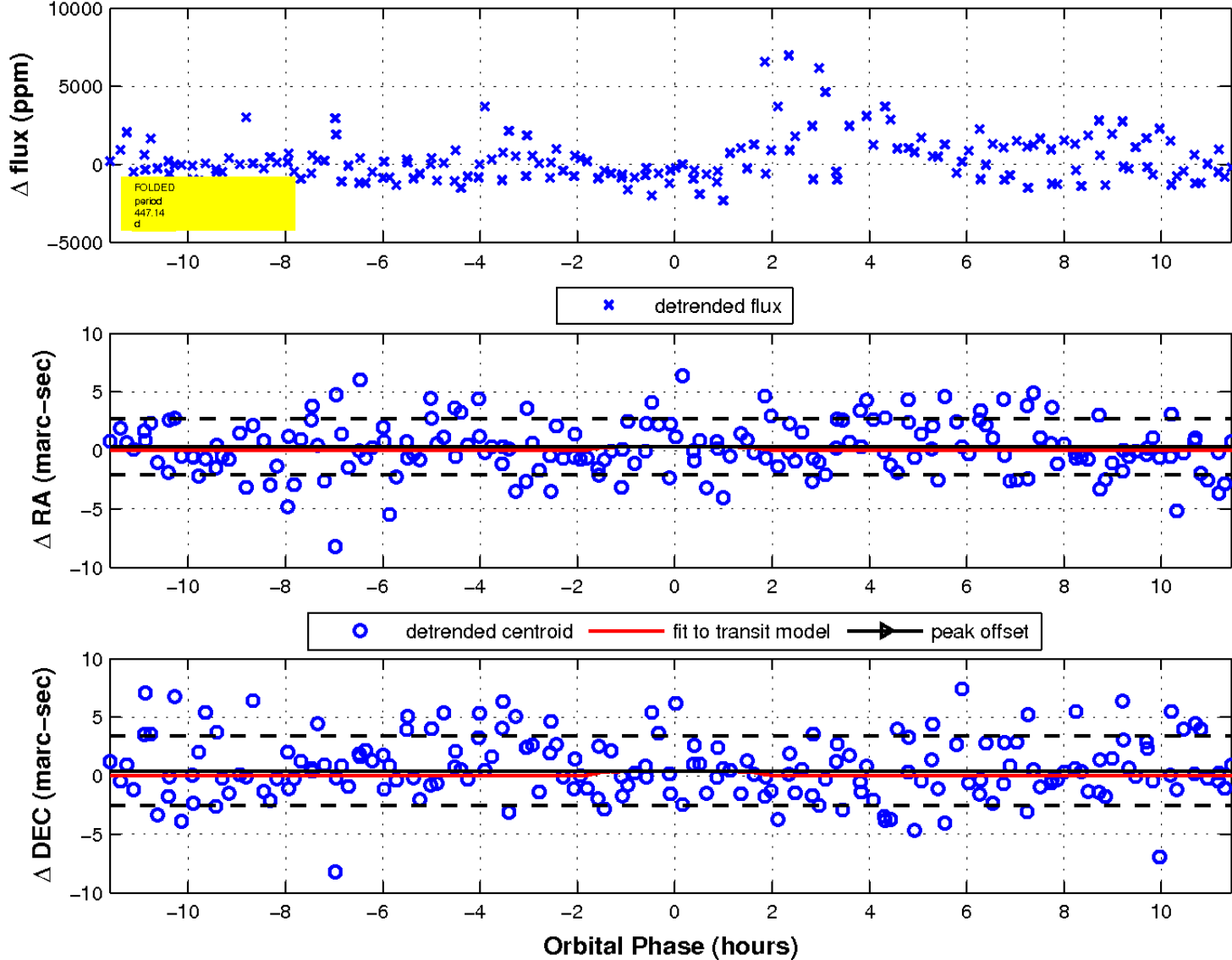
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

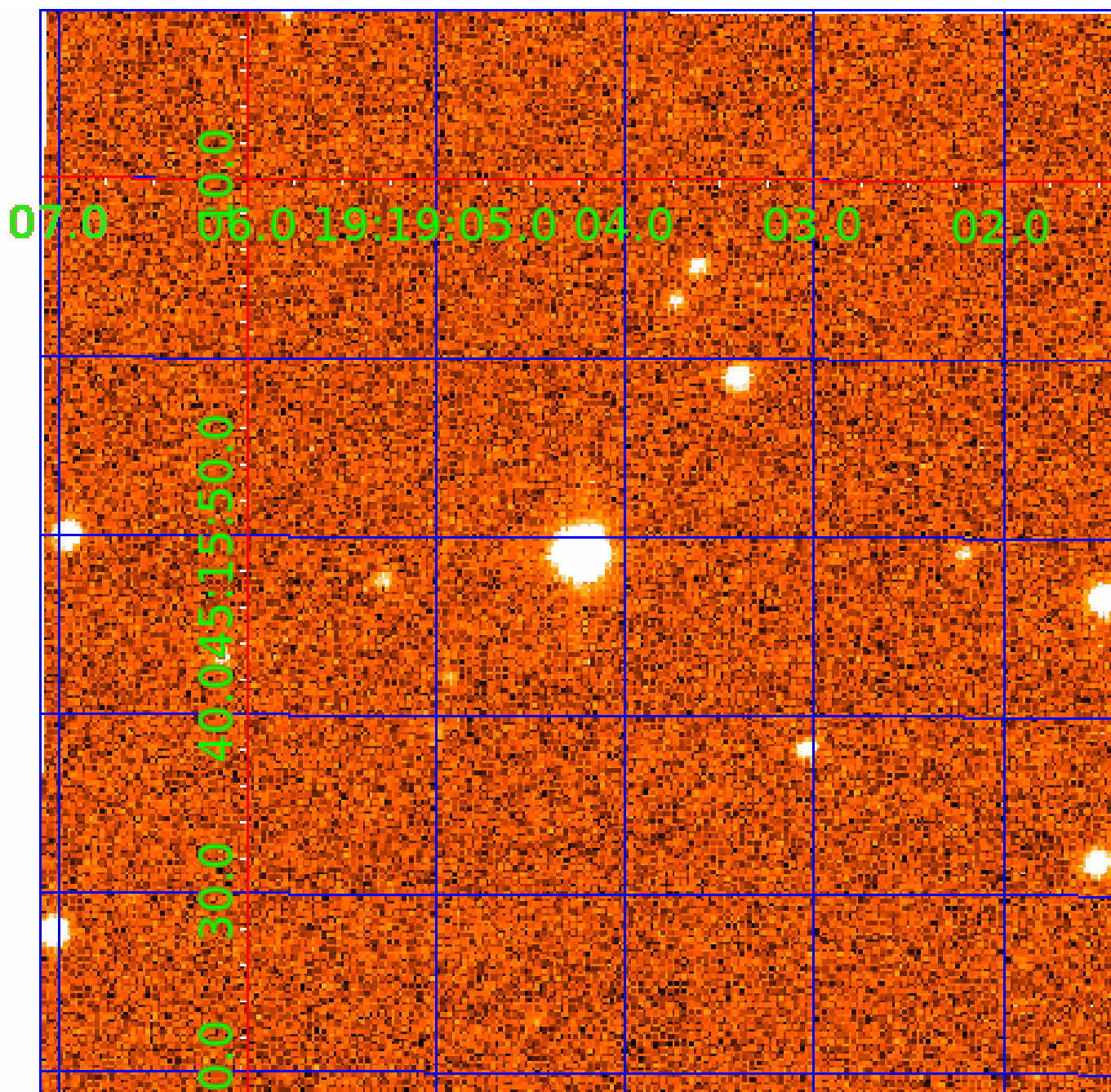


fluxWeightedCentroids, Planet 7 of 9



UKIRT Image

Declination



KIC 008947255

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})
008947255-01	OBS	No	265.672434	278.499139	1759.5	8.332	16.4	7.9	0.39	3504	1.75	0.06
008947255-02	OBS	No	411.533699	236.099099	1903.2	8.078	16.7	8.1	0.39	3504	1.96	0.03
008947255-03	OBS	No	415.647580	469.433461	2111.7	2.689	14.0	7.9	0.39	3504	1.76	0.03
008947255-05	OBS	No	407.071141	151.135478	1952.1	12.204	14.2	6.3	0.39	3504	1.74	0.03
008947255-06	OBS	No	425.937558	536.177216	1003.9	12.500	13.0	-1.0	0.39	3504	1.21	0.03
008947255-07	OBS	No	447.141041	248.175127	1693.7	3.877	11.8	6.8	0.39	3504	1.77	0.03
008947255-08	OBS	No	309.716060	276.625165	1283.2	18.611	12.6	5.2	0.39	3504	1.42	0.05
008947255-09	OBS	No	661.829386	251.745466	1217.9	5.000	11.9	-1.0	0.39	3504	1.34	0.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008947255-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
008947255-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
008947255-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008947255-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008947255-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
008947255-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV
008947255-08	OBS	FP	0.00	1	0	1	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
008947255-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_NOFITS

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

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

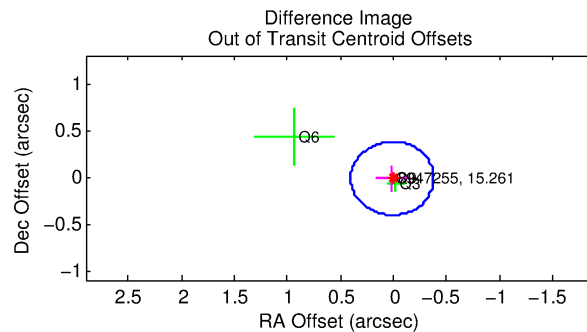
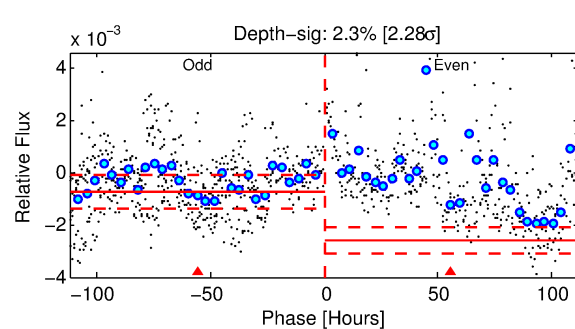
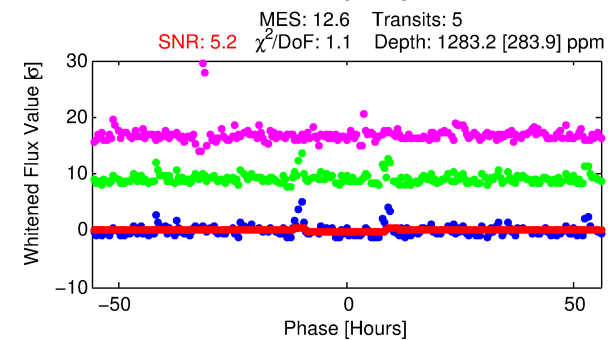
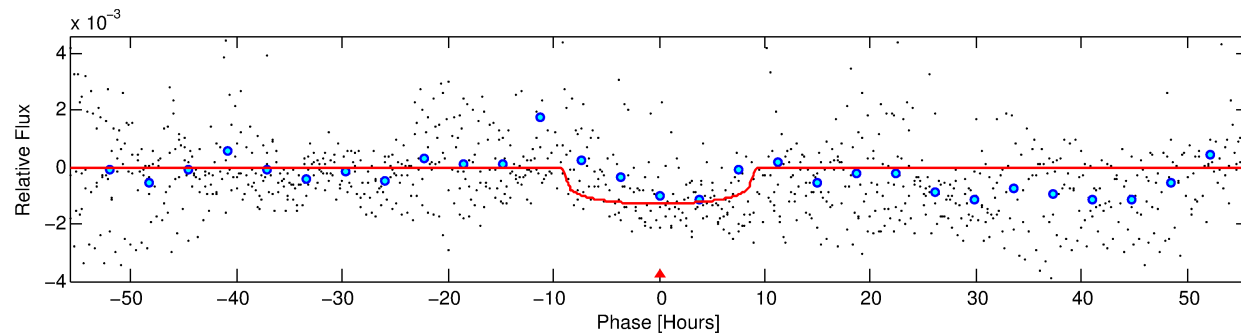
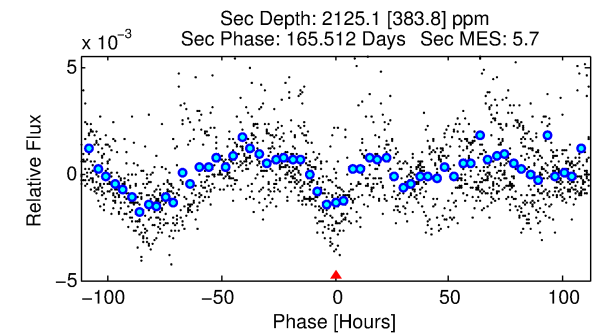
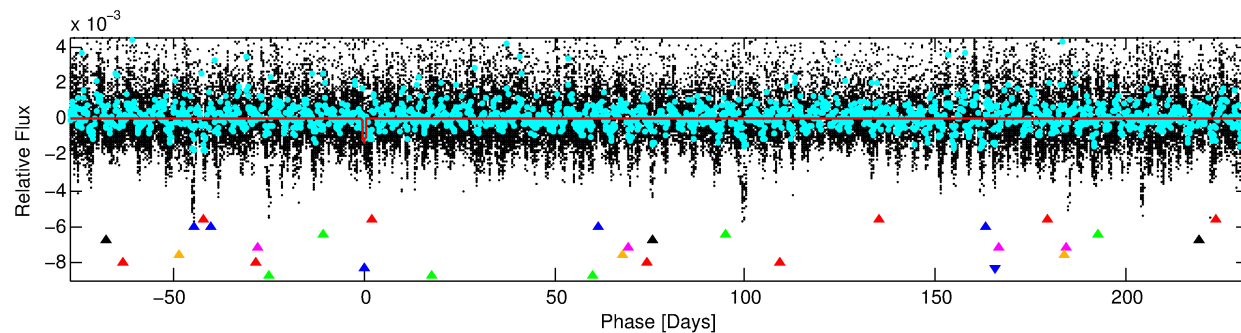
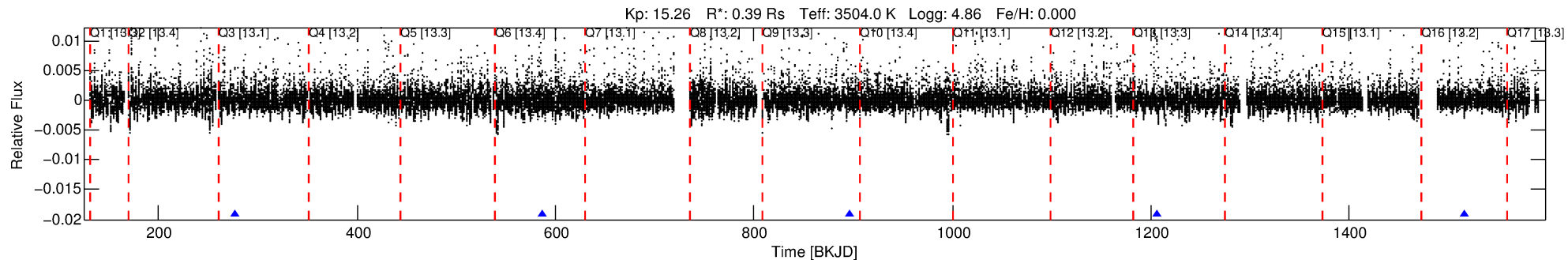
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008947255-08

No Significant Match Found

DV One-Page Summary

KIC: 8947255 Candidate: 8 of 9 Period: 309.716 d



DV Fit Results:

Period = 309.71606 [0.00705] d
Epoch = 276.6252 [0.0185] BKJD
Rp/R* = 0.0334 [0.0071]
a/R* = 114.75 [79.20]
b = 0.50 [1.03]
Seff = 0.05 [0.01]
Teq = 119 [3] K
Rp = 1.42 [0.33] Re
a = 0.6591 [0.0489] AU
Ag = 252324.90 [118471.55] [2.13σ]
Teffp = 4115 [478] K [8.36σ]

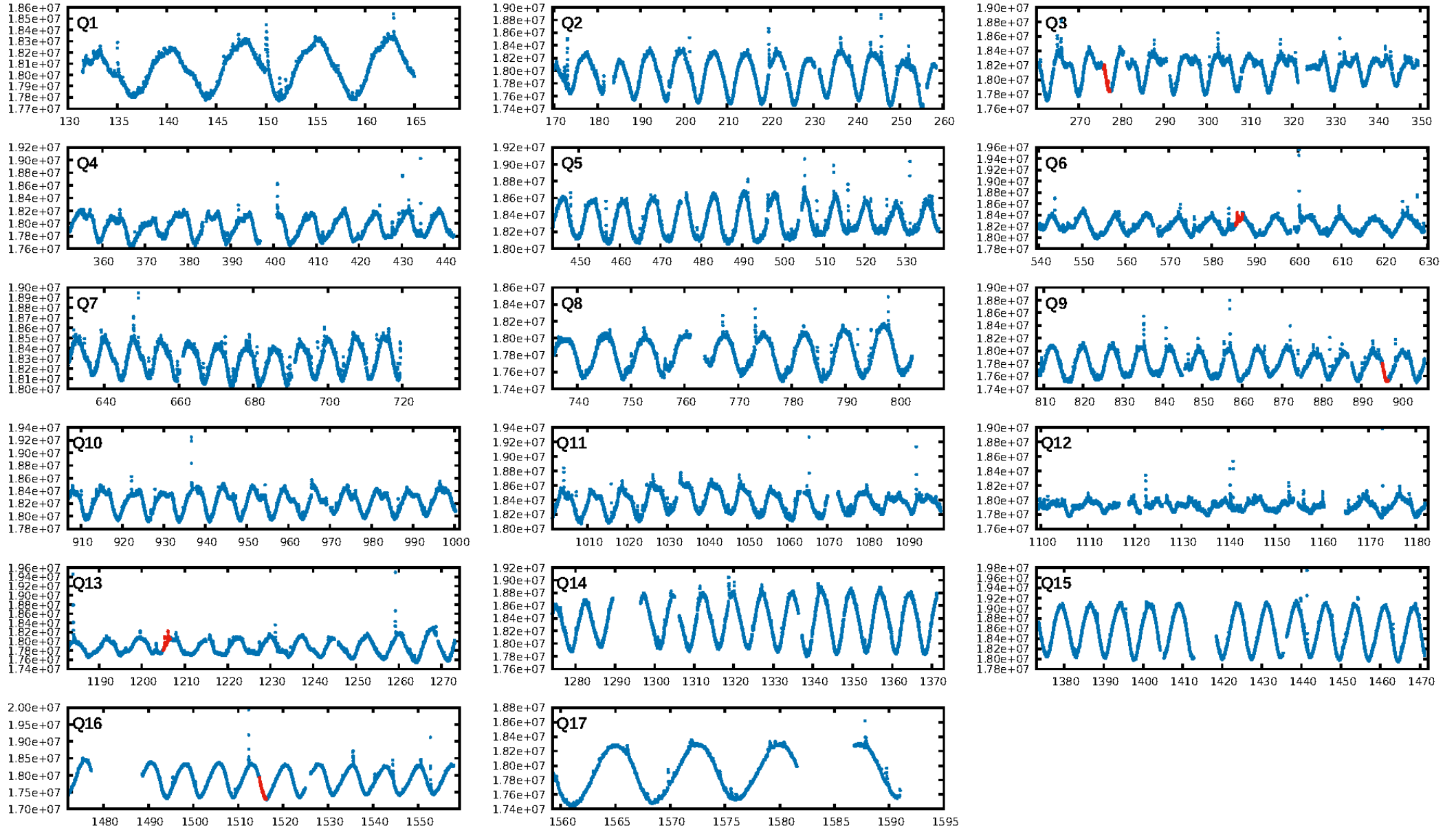
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [51.84σ]
LongPeriod-sig: 100.0% [104.99σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.1366
Centroid-sig: 0.0%
Centroid-so: 1.474 arcsec [2.38σ]
OotOffset-rm: 0.018 arcsec [0.14σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-rm: 0.136 arcsec [0.53σ]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

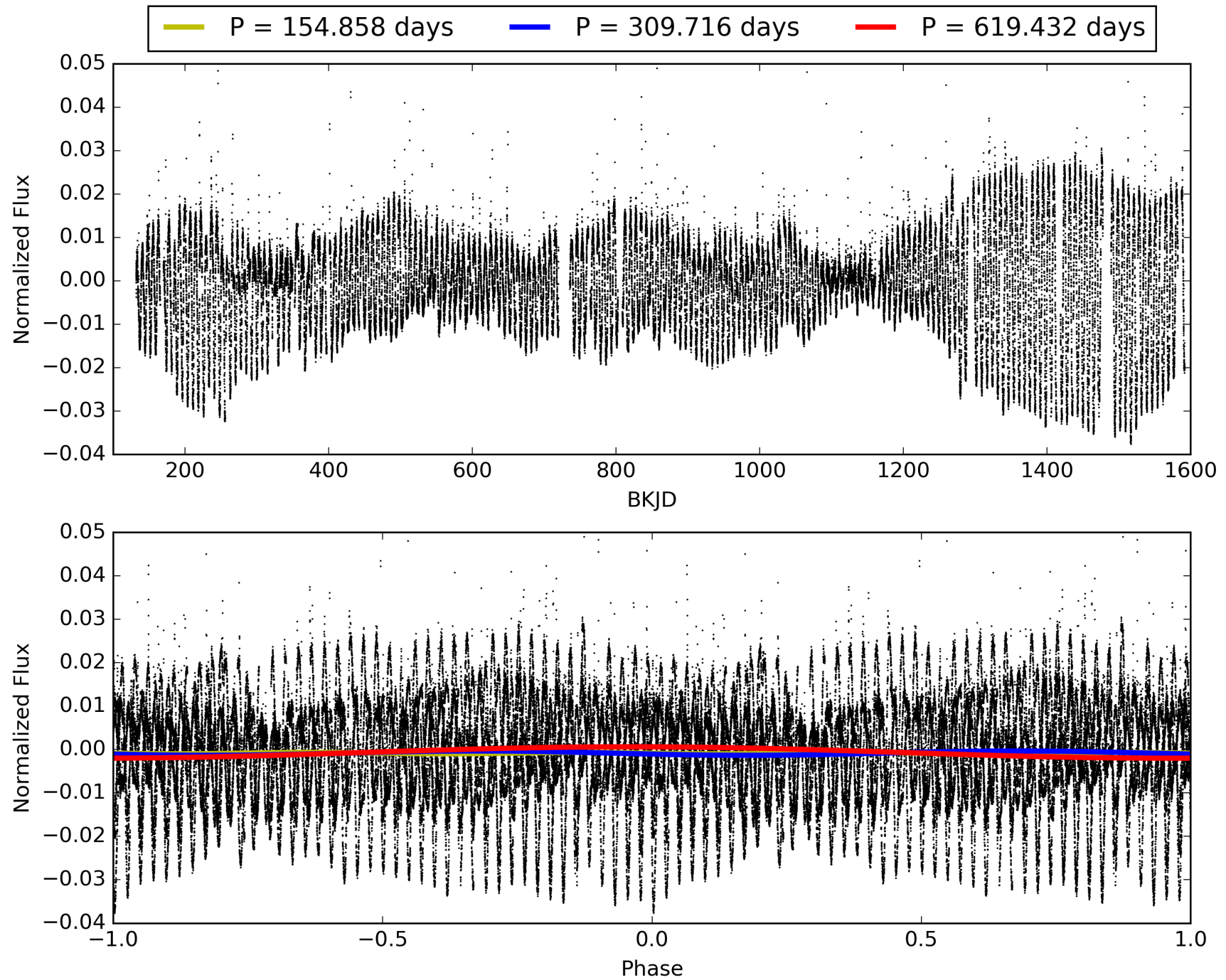
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:10:31 Z

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

TCE 008947255-08, PDC Light Curves

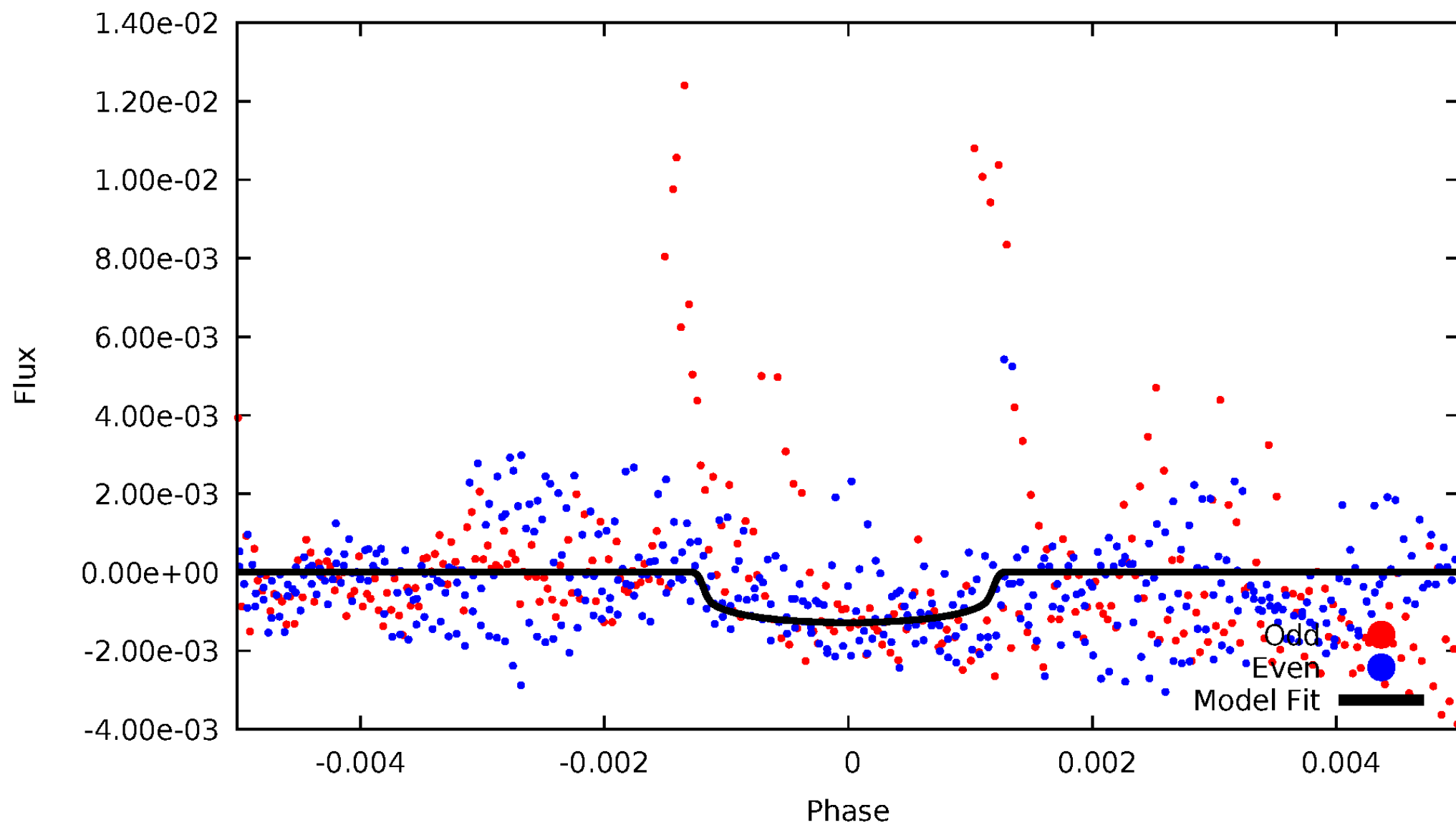


TCE 008947255-08



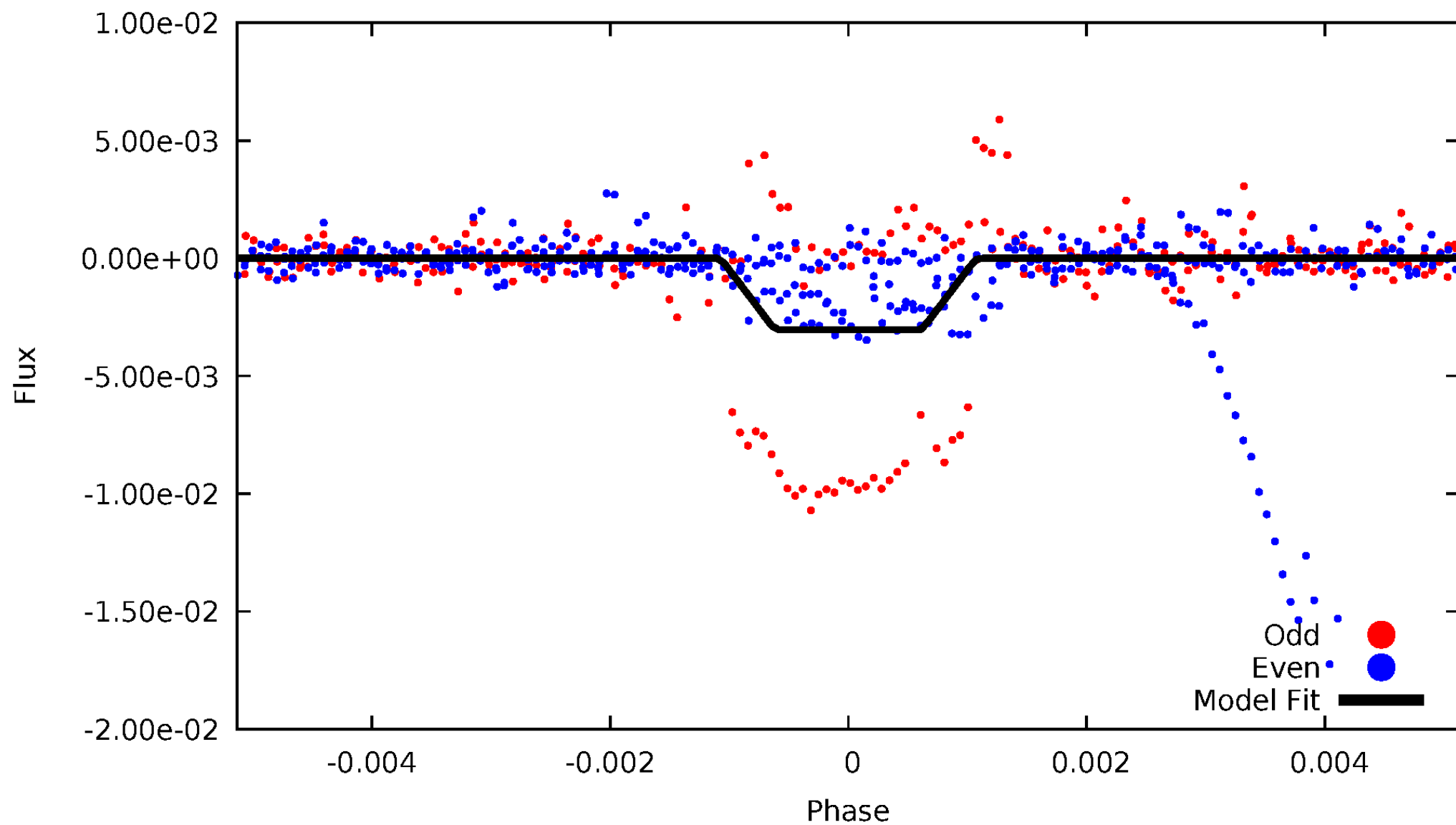
DV Odd/Even

TCE 008947255-08



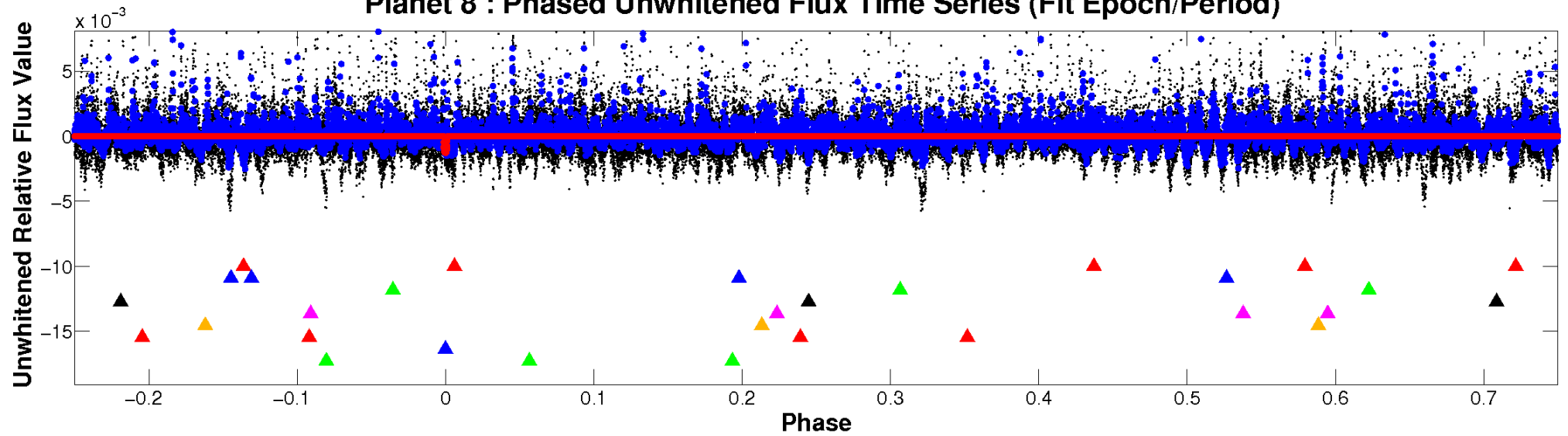
ALT Odd/Even

TCE 008947255-08

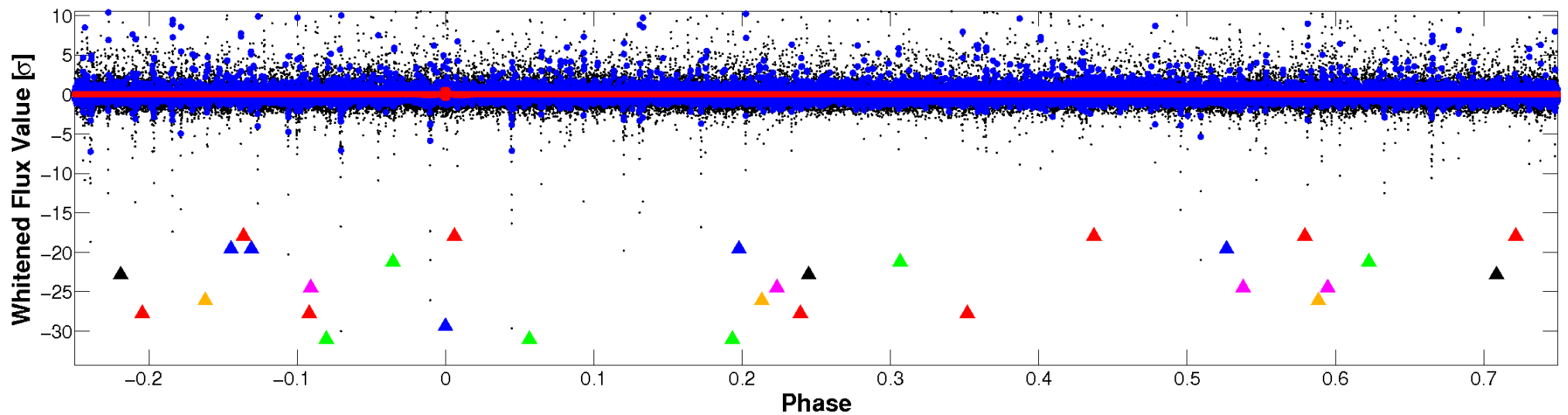


Non-Whitened Vs. Whitened Light Curve

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

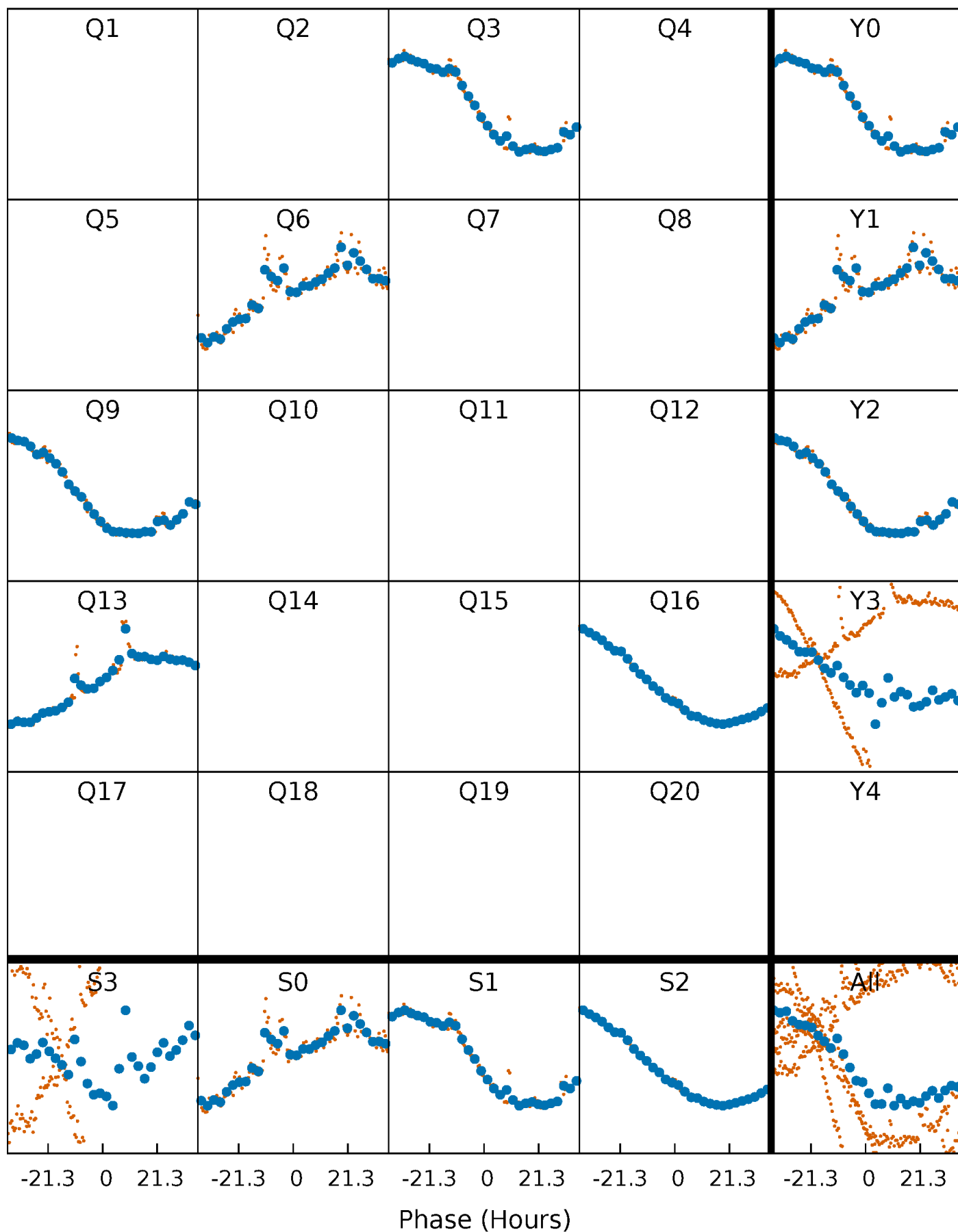


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



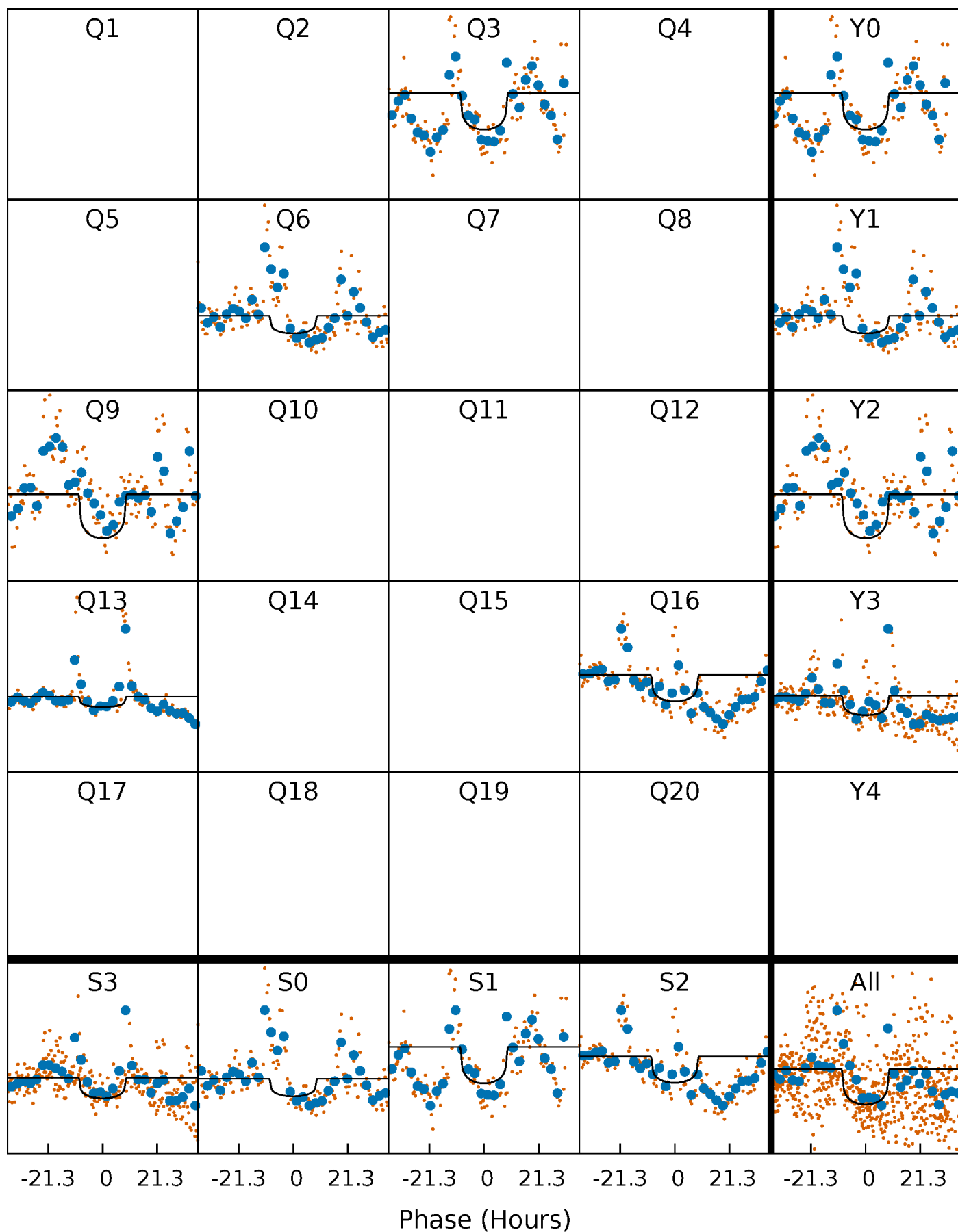
PDC Quarter-Phased Transit Curves

TCE 008947255-08 P=309.716059 Days $T_0=276.625165$ (BKJD)



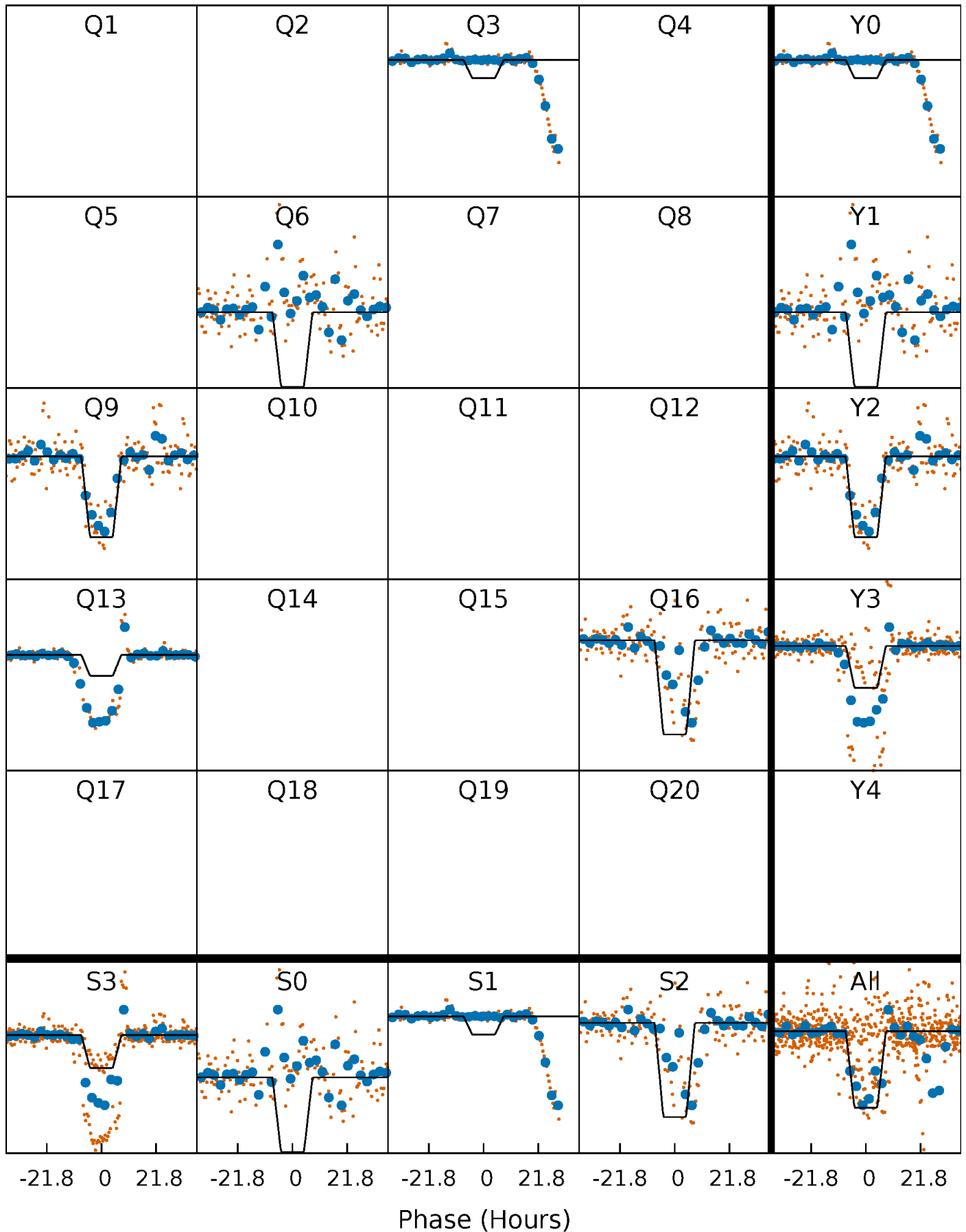
DV Quarter-Phased Transit Curves

TCE 008947255-08 $P=309.716059$ Days $T_0=276.625165$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

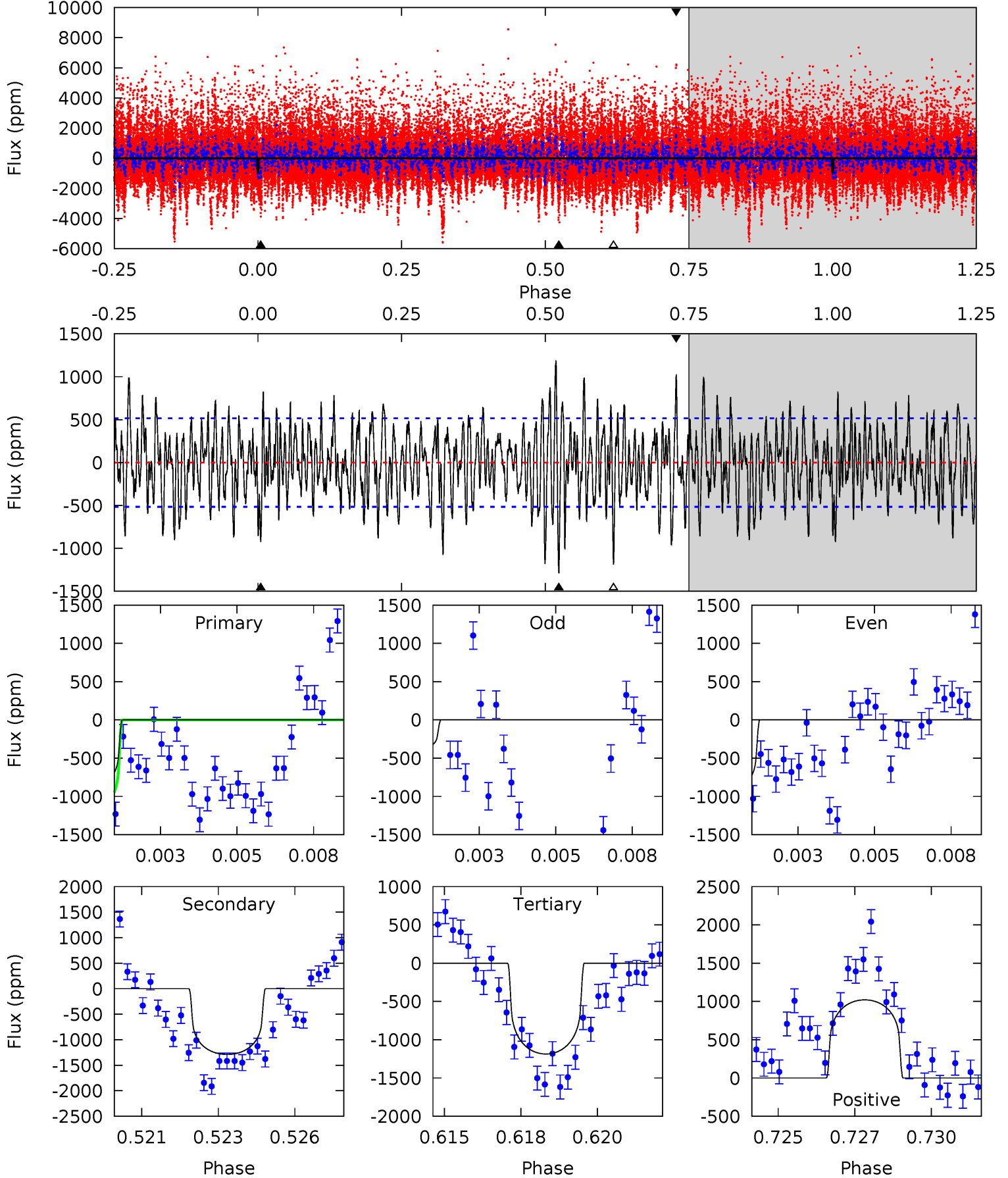
TCE 008947255-08 P=309.691035 Days $T_0=276.688564$ (BKJD)



DV Model-Shift Uniqueness Test

008947255-08, P = 309.716059 Days, E = 276.625165 Days

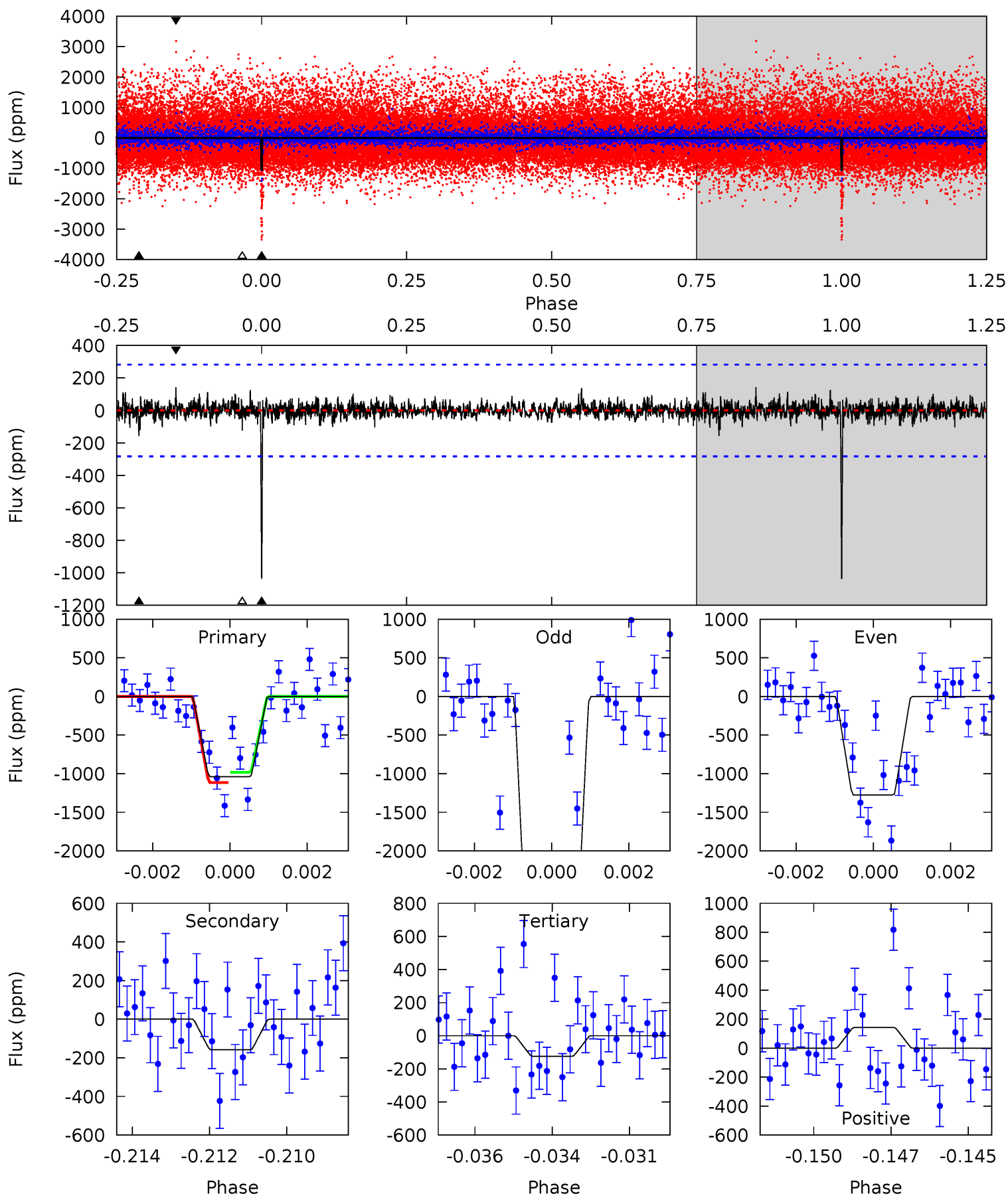
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.45	13.2	12.1	10.4	5.28	3.02	3.69	-2.68	-0.99	1.04	2.74	2.52	1.54	0.48	3.56



Alt Model-Shift Uniqueness Test

008947255-08, P = 309.691035 Days, E = 276.688564 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.5	2.96	2.32	2.67	5.31	3.06	0.57	17.2	16.8	0.64	0.29	29.4	1.78	0.12	1.25



Stellar Parameters For KIC 008947255

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3504^{+56}_{-56}	$4.858^{+0.042}_{-0.031}$	$0.000^{+0.100}_{-0.100}$	$0.389^{+0.032}_{-0.039}$	$0.400^{+0.038}_{-0.047}$	$9.533^{+2.131}_{-1.300}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+8%/-10%	+9%/-12%	+22%/-14%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 008947255-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1289 ± 98	$1.41^{+0.33}_{-0.31}$	166^{+4}_{-4}	3591^{+313}_{-237}	155519^{+95116}_{-50795}
Alt.	-158 ± 53	$2.33^{+0.32}_{-0.32}$	165^{+4}_{-4}	2349^{+109}_{-122}	6845^{+3375}_{-2405}

T_{max} = Theoretical Maximum Planetary Temperature

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

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

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

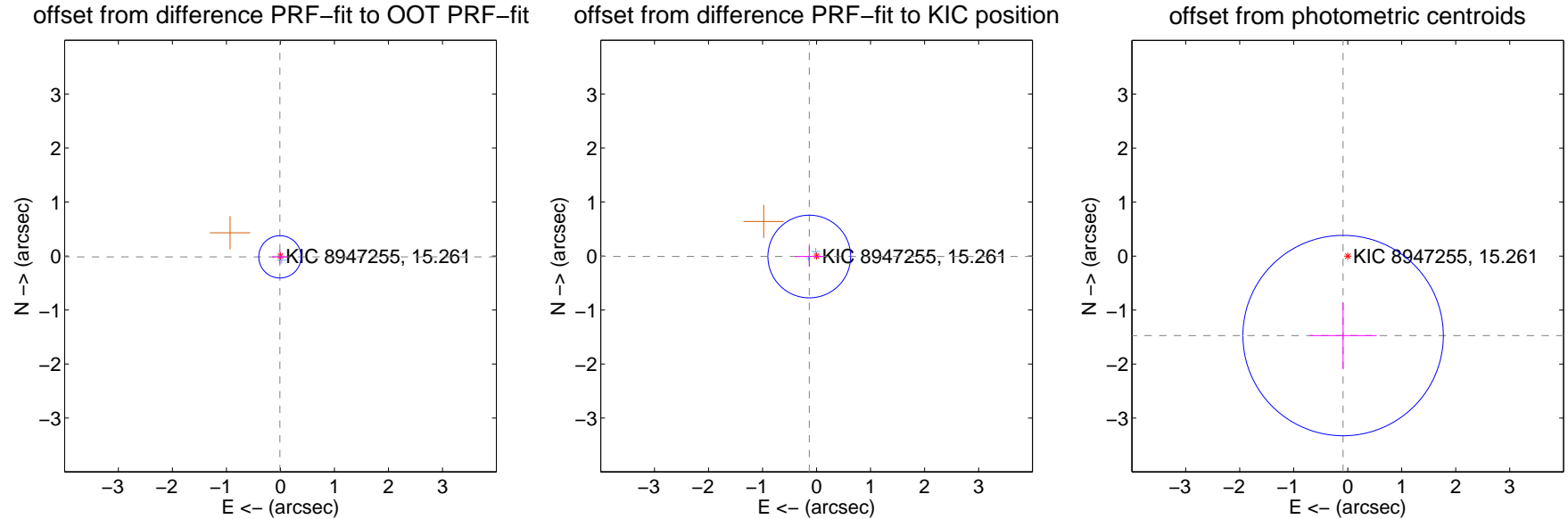
DV Centroid Data

Supplemental centroid analysis for 008947255-08. Kepler magnitude: 15.26. Transit SNR 5.21

There are 2 quarters with good PRF difference image offsets

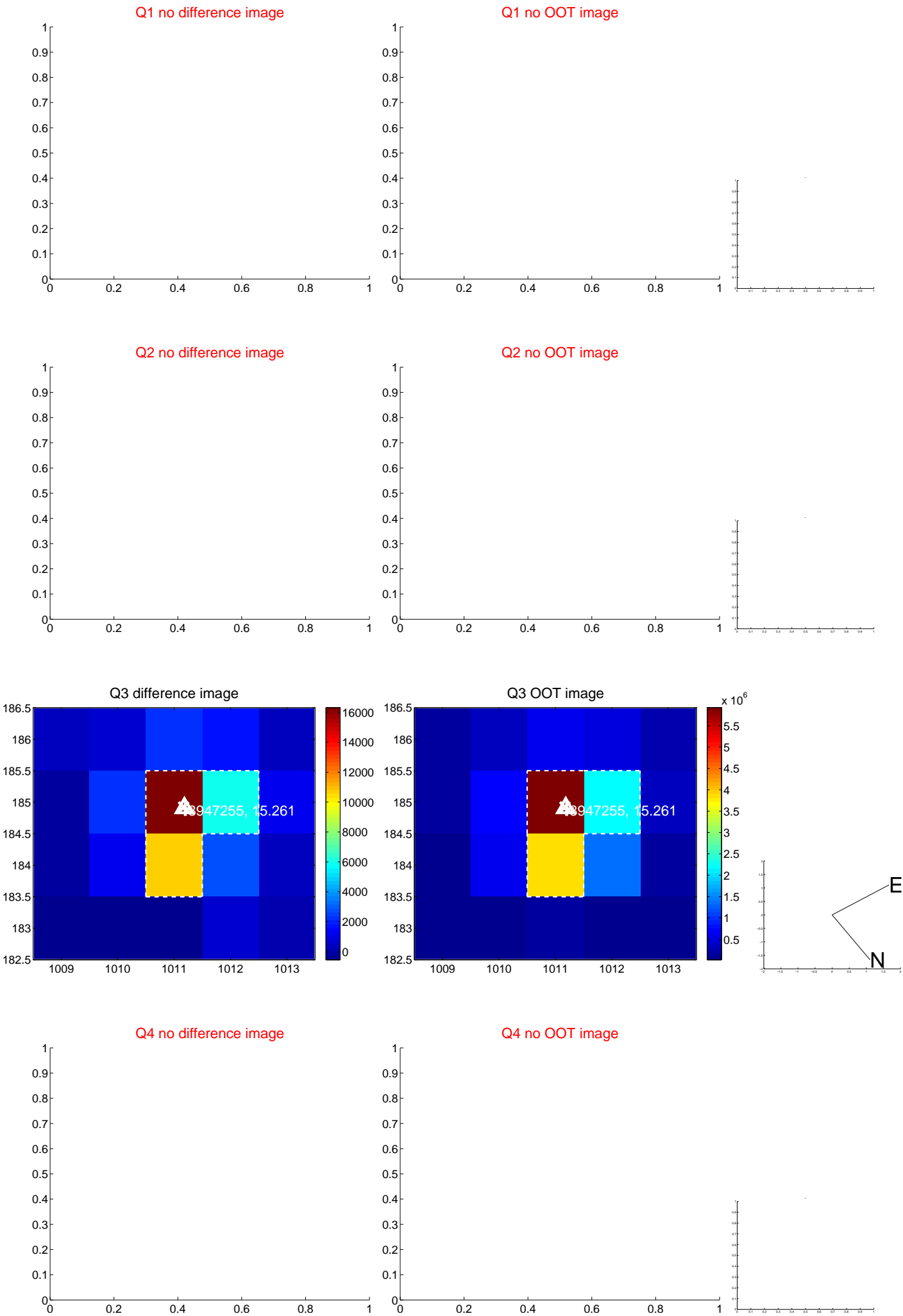
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.018 ± 0.131	0.14	0.010 ± 0.144	-0.015 ± 0.125
PRF-fit source offset from KIC position	0.136 ± 0.255	0.53	0.135 ± 0.267	-0.009 ± 0.192
photometric centroid source offset	1.47 ± 0.62	2.38	0.09 ± 0.62	-1.47 ± 0.62

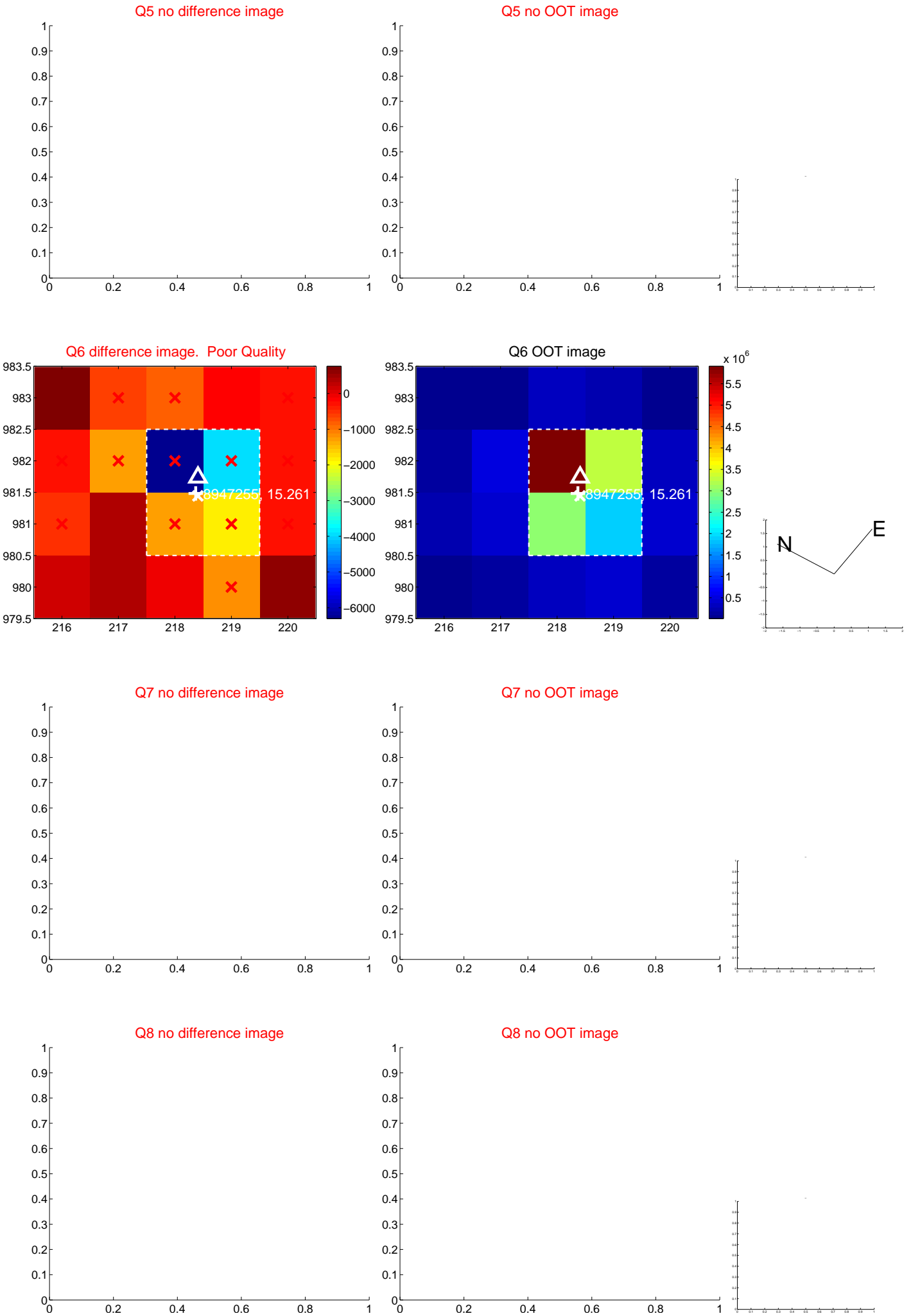


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

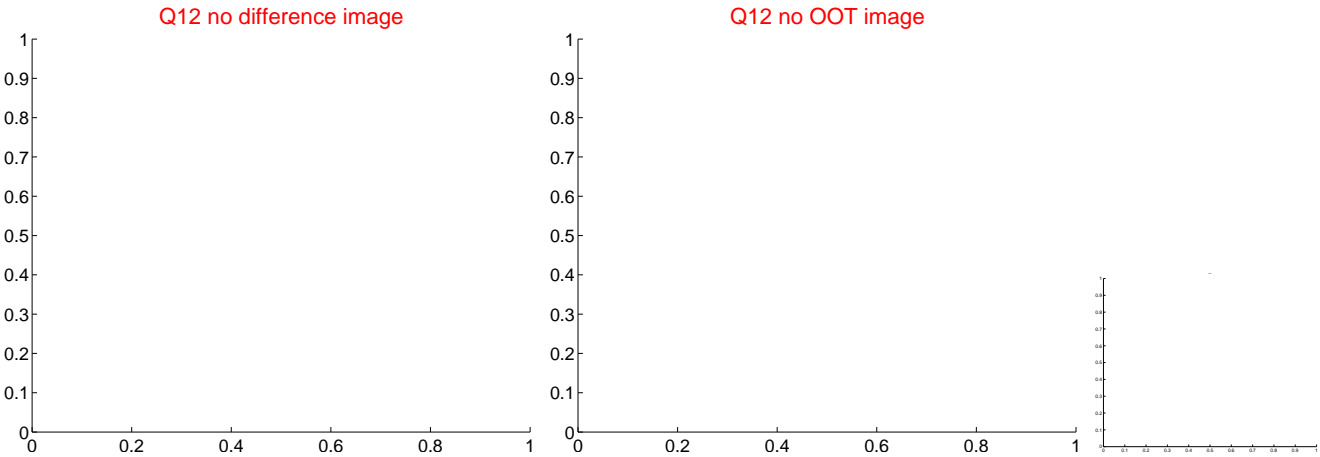
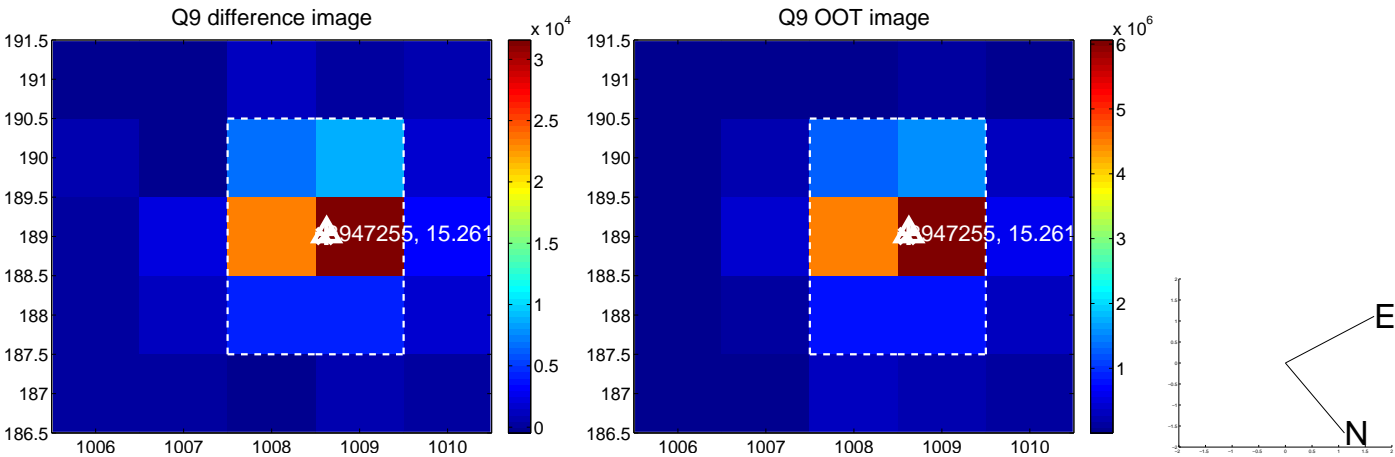
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



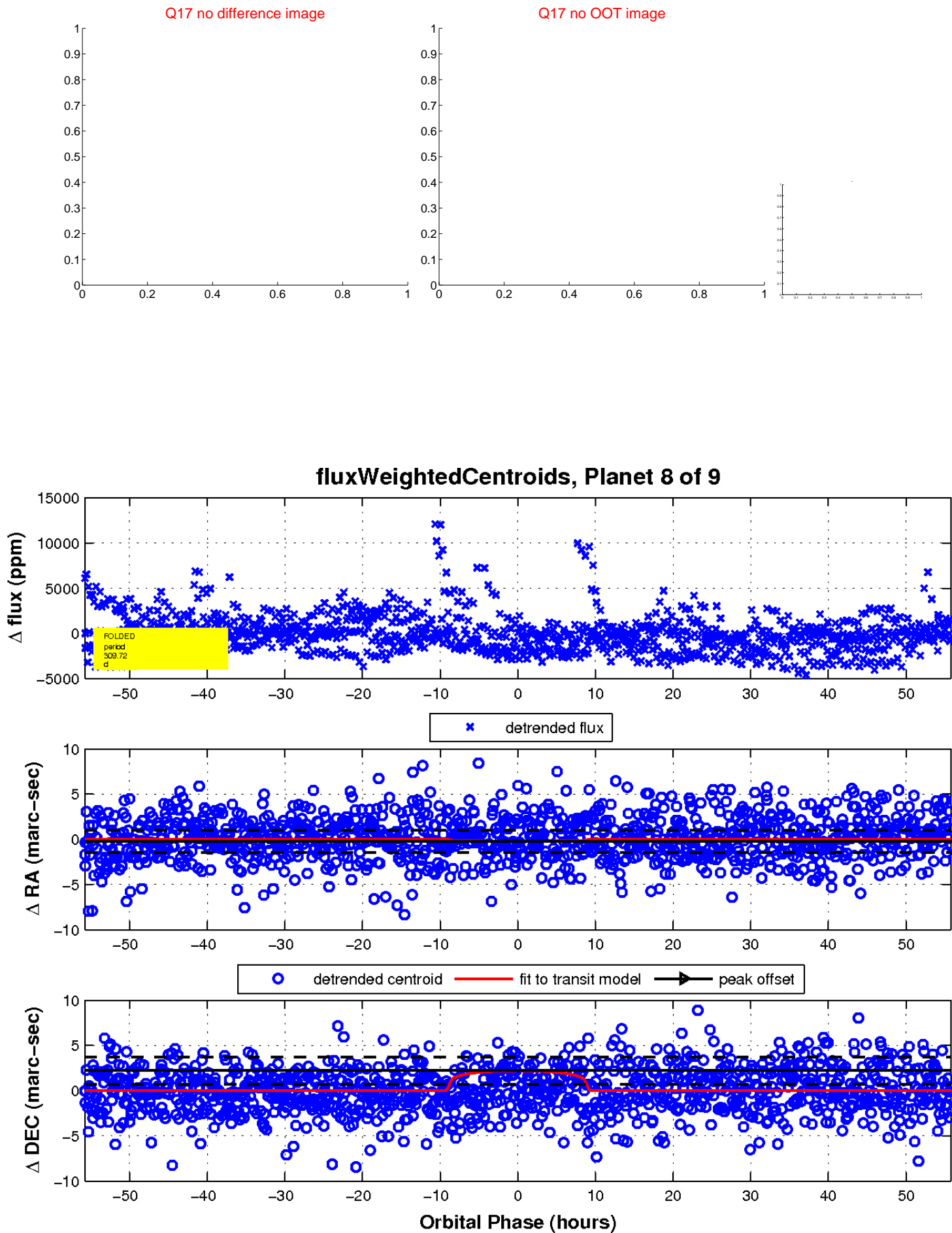
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

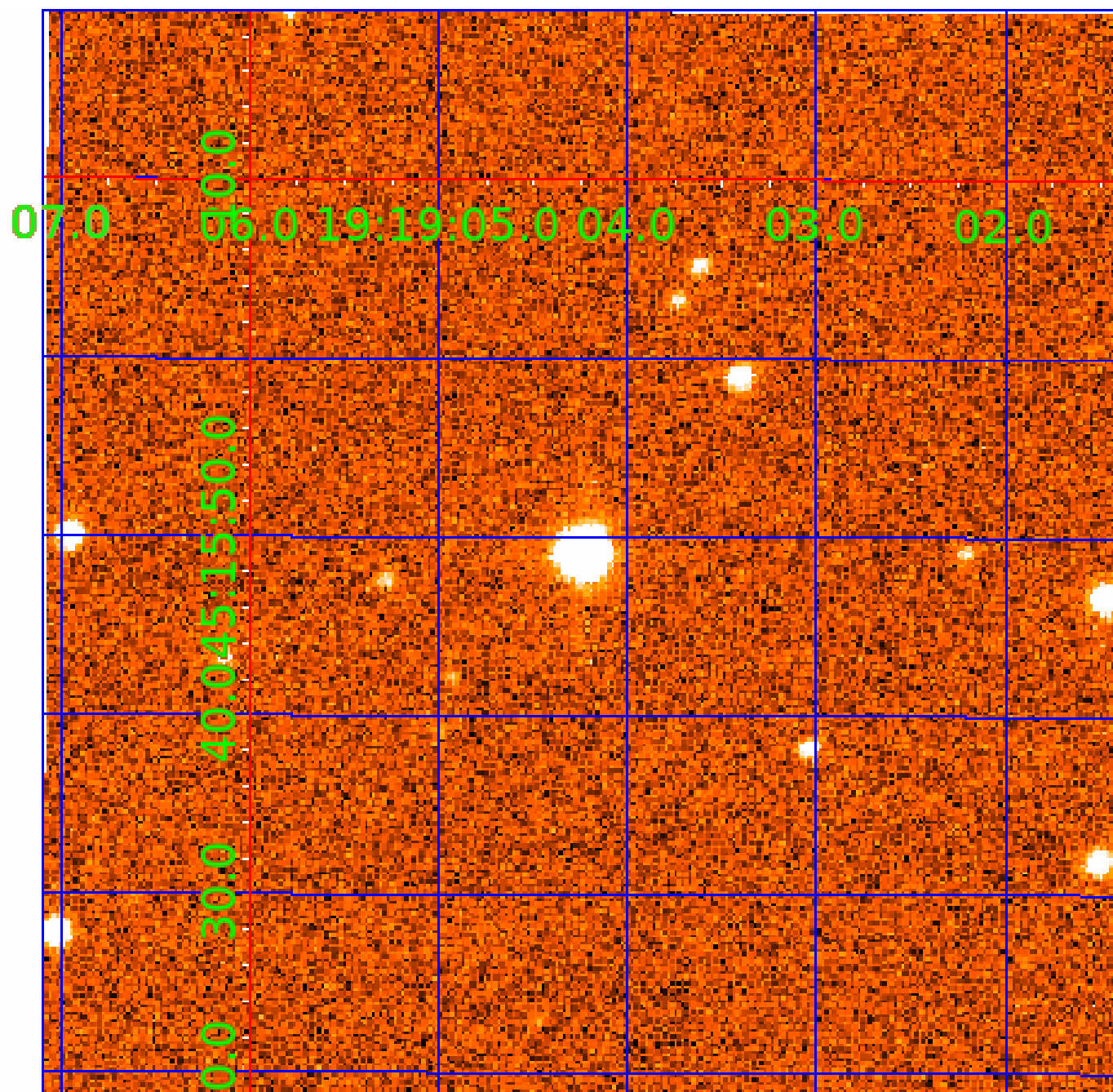


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008947255

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})
008947255-01	OBS	No	265.672434	278.499139	1759.5	8.332	16.4	7.9	0.39	3504	1.75	0.06
008947255-02	OBS	No	411.533699	236.099099	1903.2	8.078	16.7	8.1	0.39	3504	1.96	0.03
008947255-03	OBS	No	415.647580	469.433461	2111.7	2.689	14.0	7.9	0.39	3504	1.76	0.03
008947255-05	OBS	No	407.071141	151.135478	1952.1	12.204	14.2	6.3	0.39	3504	1.74	0.03
008947255-06	OBS	No	425.937558	536.177216	1003.9	12.500	13.0	-1.0	0.39	3504	1.21	0.03
008947255-07	OBS	No	447.141041	248.175127	1693.7	3.877	11.8	6.8	0.39	3504	1.77	0.03
008947255-08	OBS	No	309.716060	276.625165	1283.2	18.611	12.6	5.2	0.39	3504	1.42	0.05
008947255-09	OBS	No	661.829386	251.745466	1217.9	5.000	11.9	-1.0	0.39	3504	1.34	0.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008947255-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
008947255-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
008947255-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008947255-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
008947255-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—LPP_DV—LPP_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
008947255-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV
008947255-08	OBS	FP	0.00	1	0	1	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
008947255-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_NOFITS

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

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

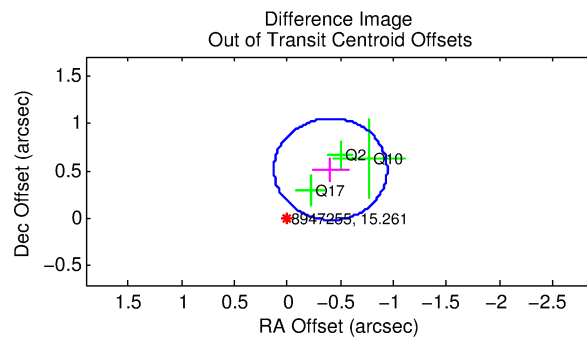
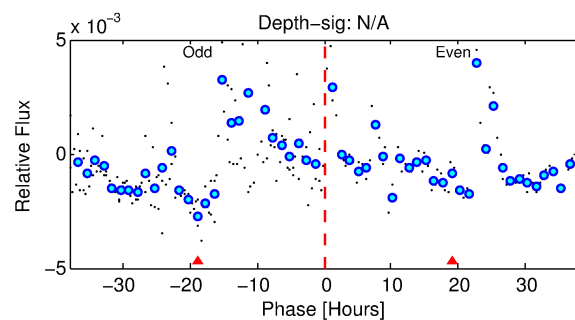
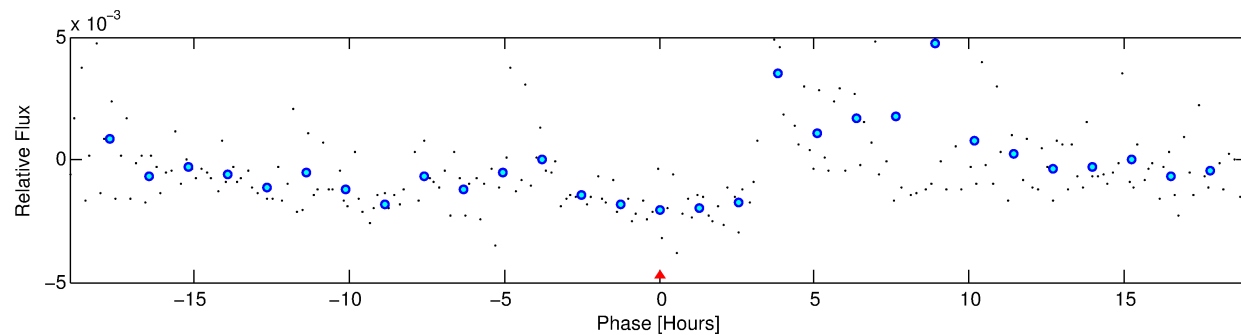
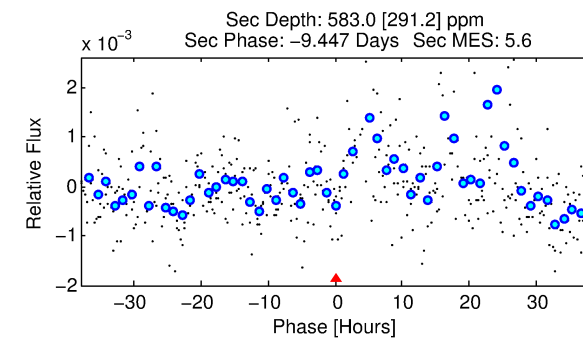
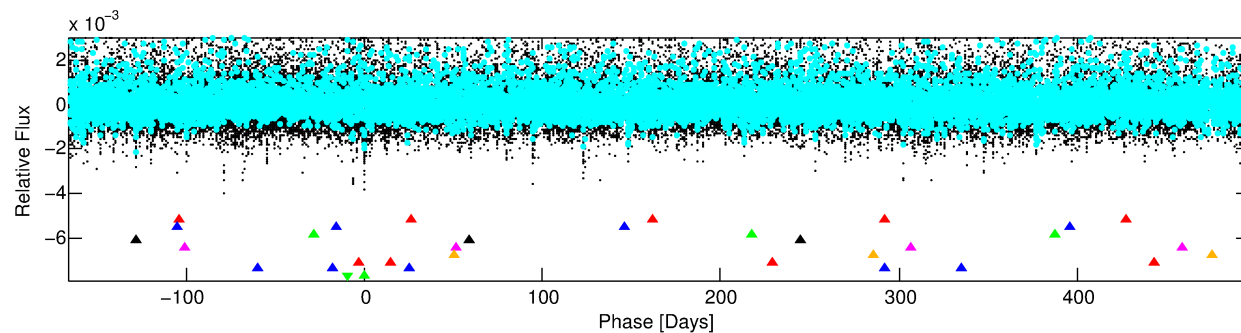
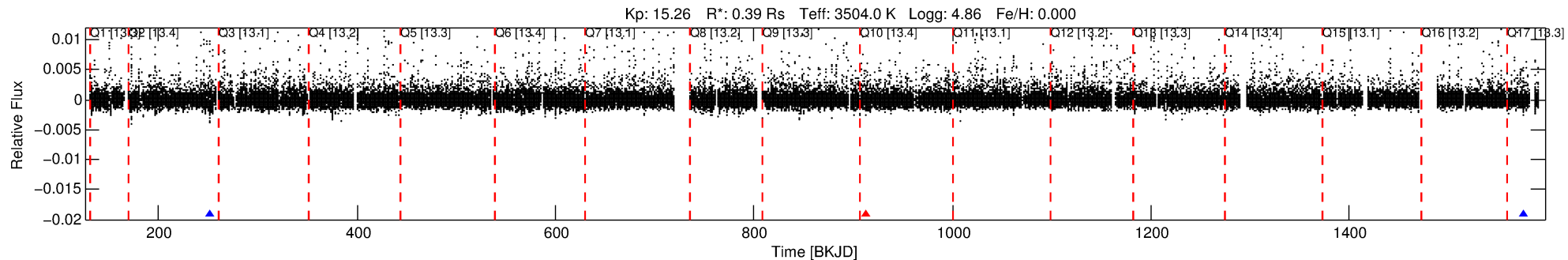
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008947255-09

No Significant Match Found

DV One-Page Summary

KIC: 8947255 Candidate: 9 of 9 Period: 661.829 d



TPS TCE Results:

Period = 661.82939 d
Epoch = 251.7455 BKJD

DV fit results are unavailable

DV Diagnostic Results:

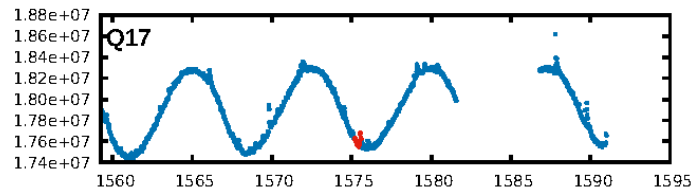
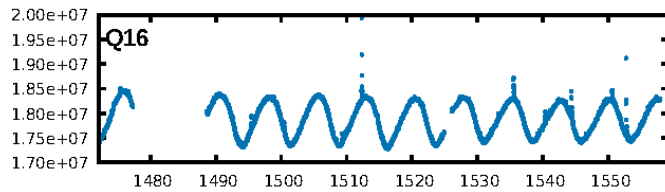
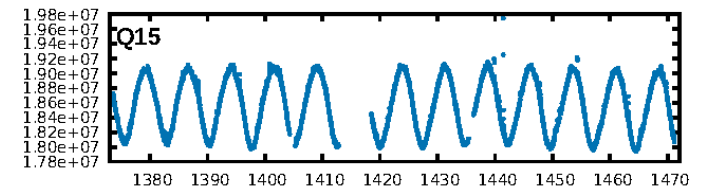
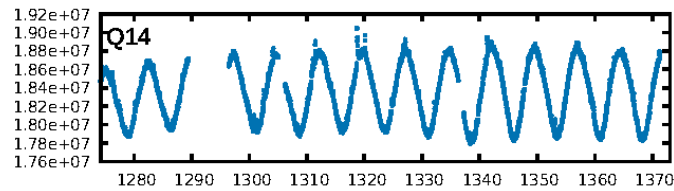
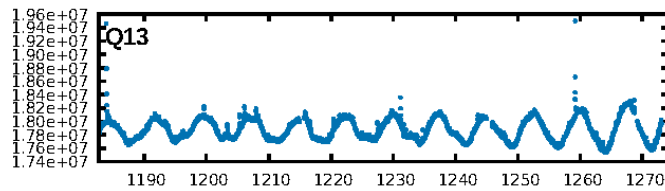
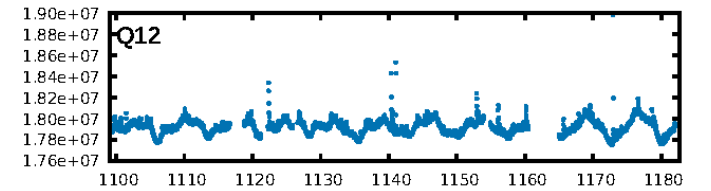
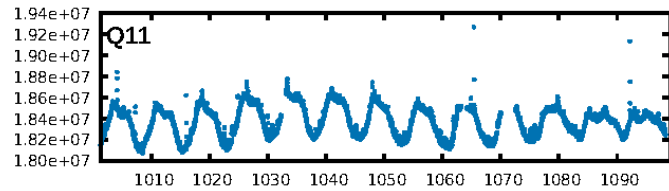
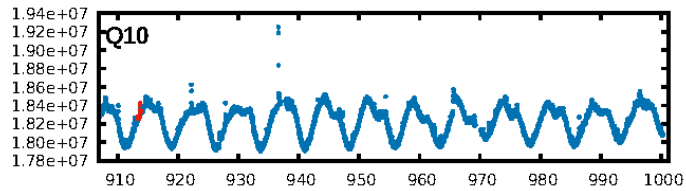
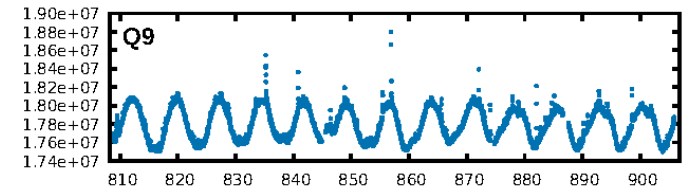
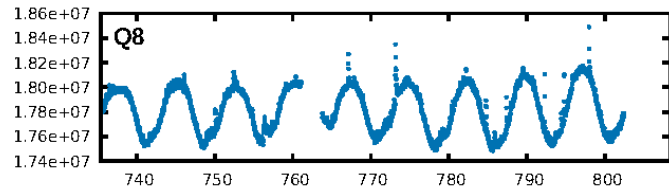
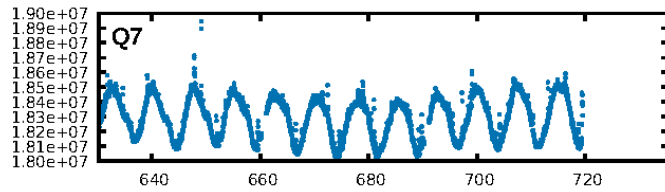
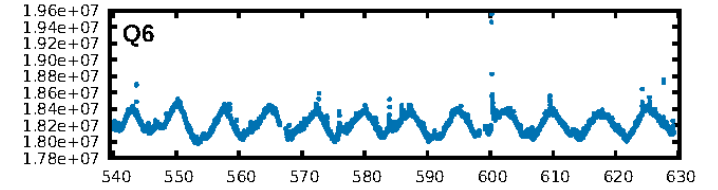
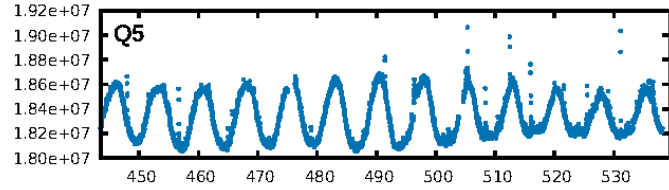
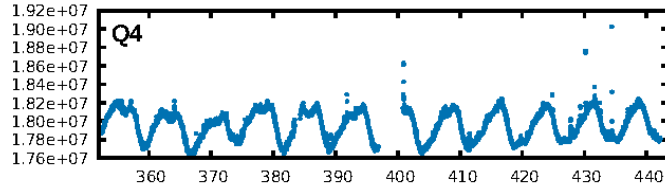
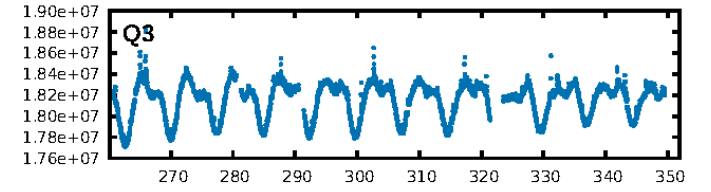
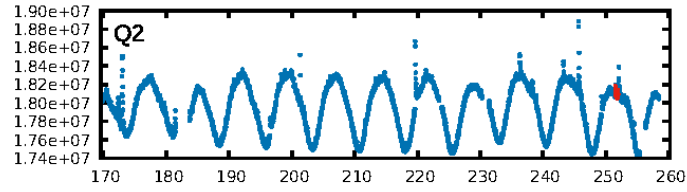
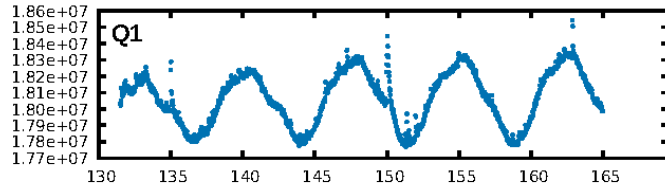
ShortPeriod-sig: 100.0% [596.47 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.50 [1/2]
GhostDiagnostic-chr: 2.247

Centroid-sig: 14.3%
Centroid-so: 0.442 arcsec [0.76 σ]
OotOffset-rm: 0.660 arcsec [3.71 σ]
KicOffset-rm: 0.746 arcsec [3.99 σ]
OotOffset-st: 2/0/0/1 [3]
KicOffset-st: 2/0/0/1 [3]
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DiffImageOverlap-fno: 1.00 [3/3]

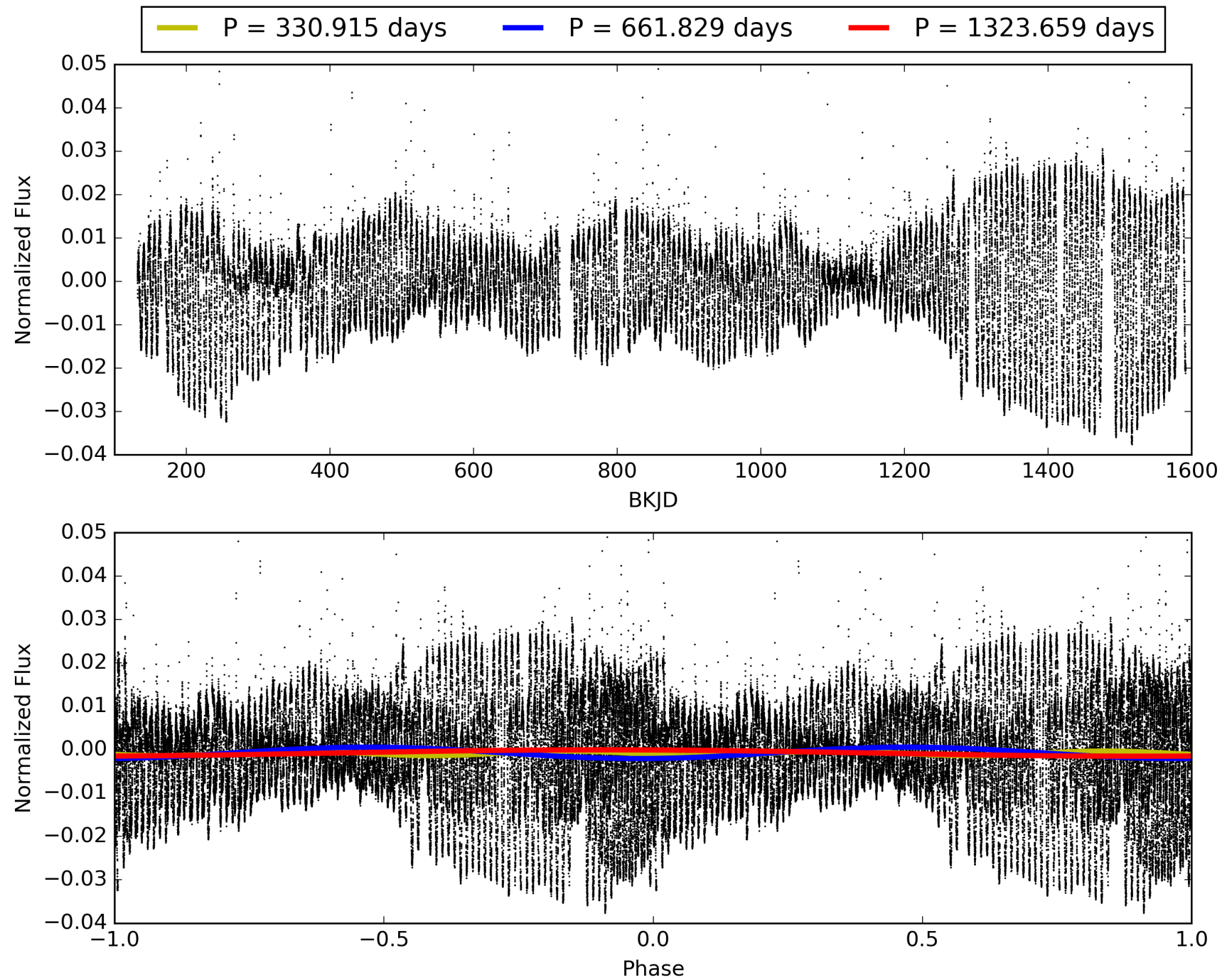
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 00:10:47 Z

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

TCE 008947255-09, PDC Light Curves

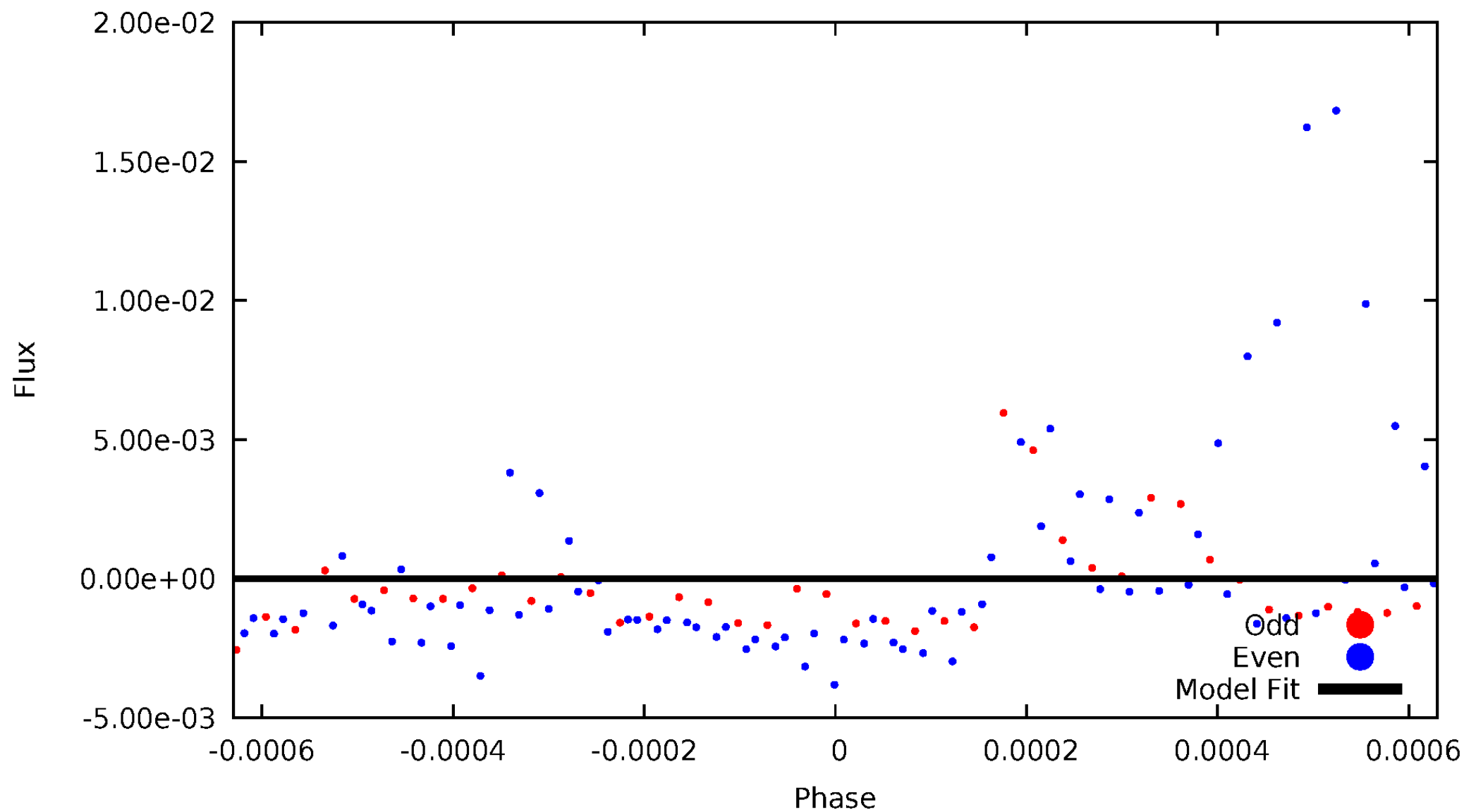


TCE 008947255-09



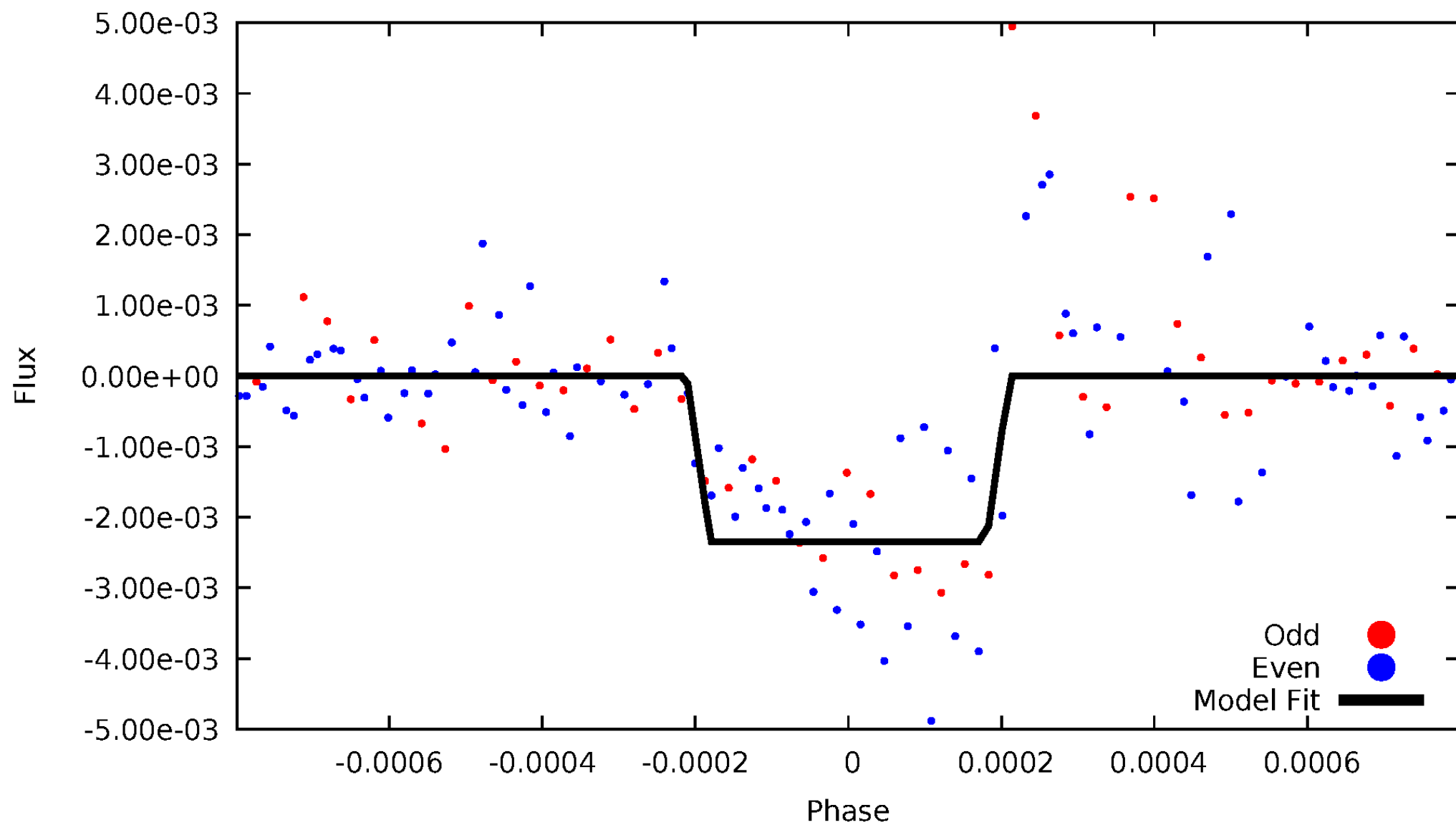
DV Odd/Even

TCE 008947255-09

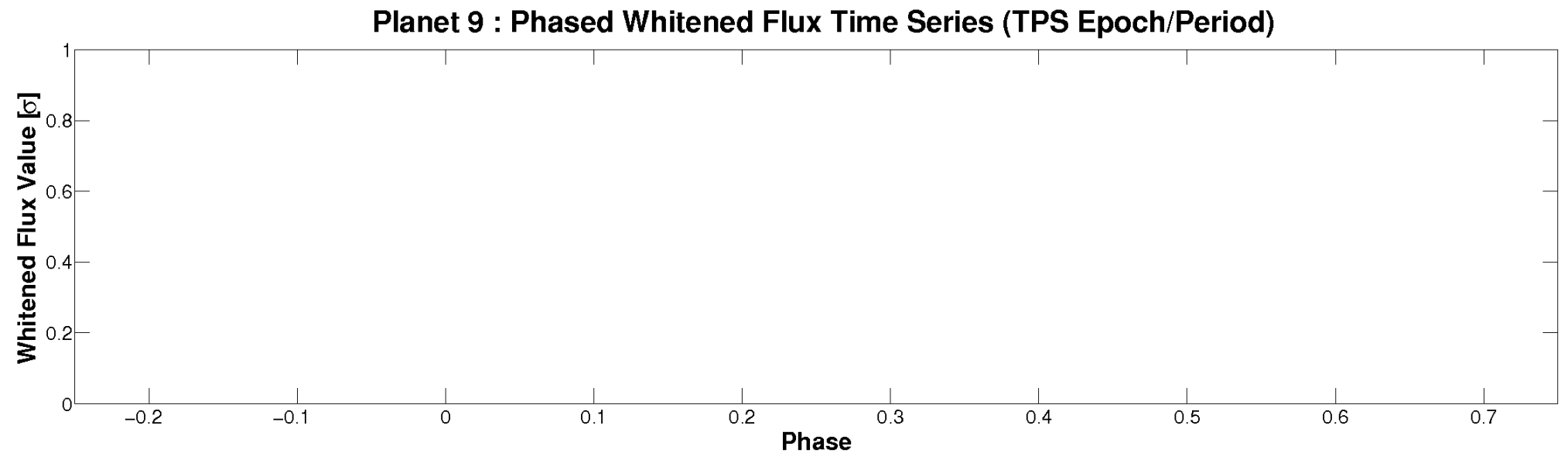
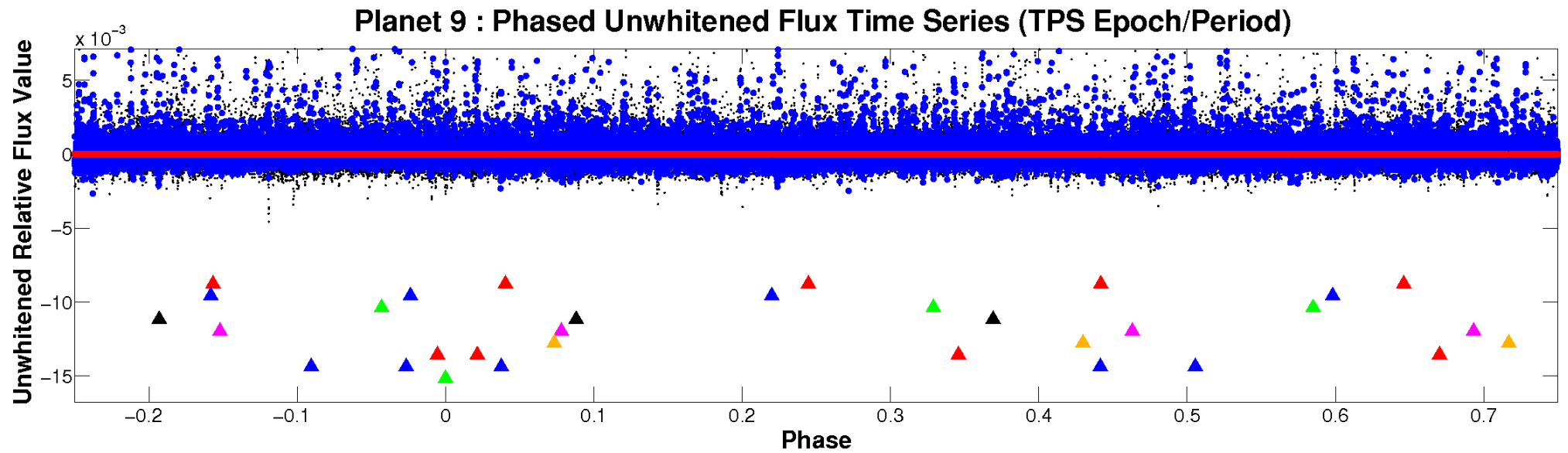


ALT Odd/Even

TCE 008947255-09

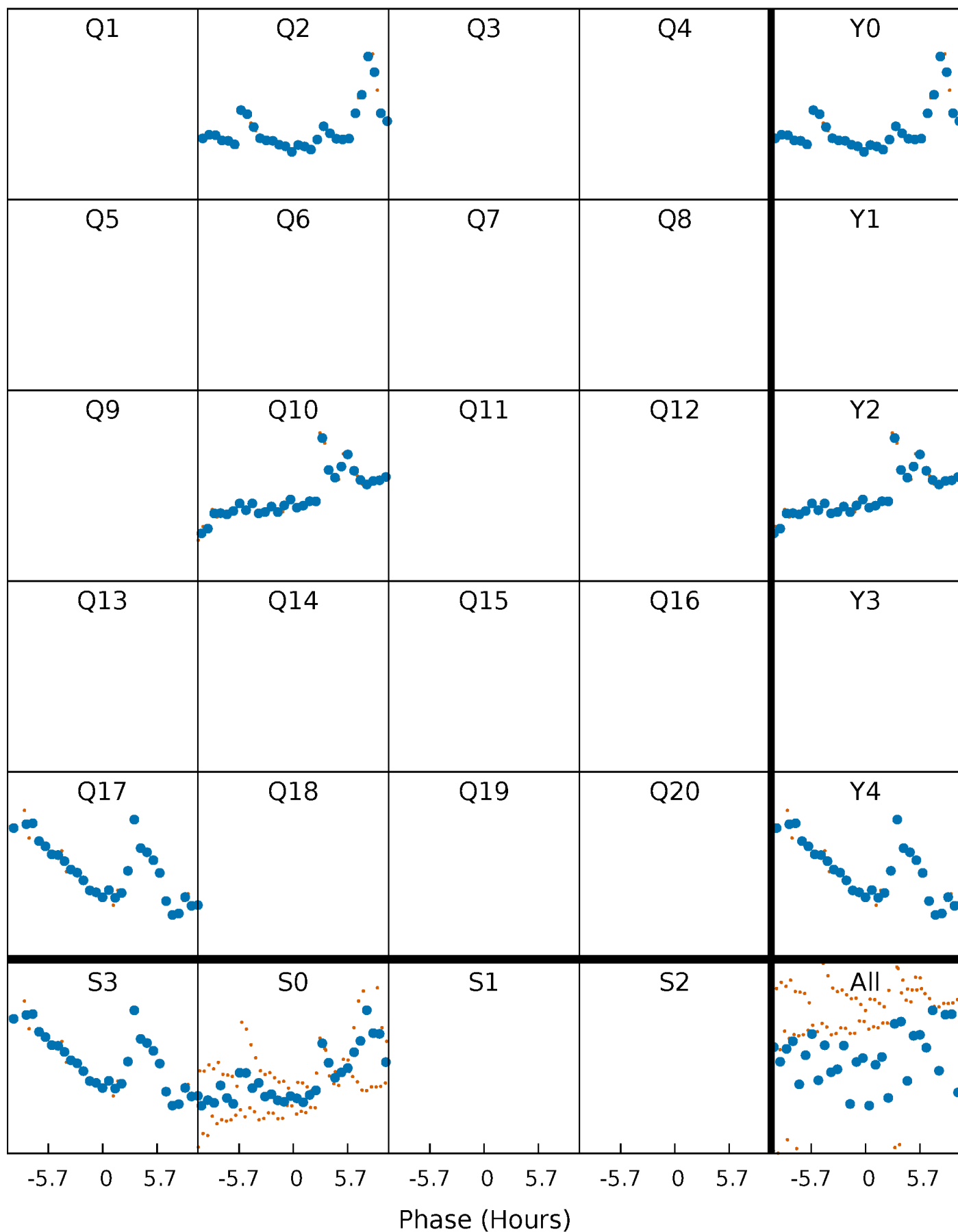


Non-Whitened Vs. Whitened Light Curve



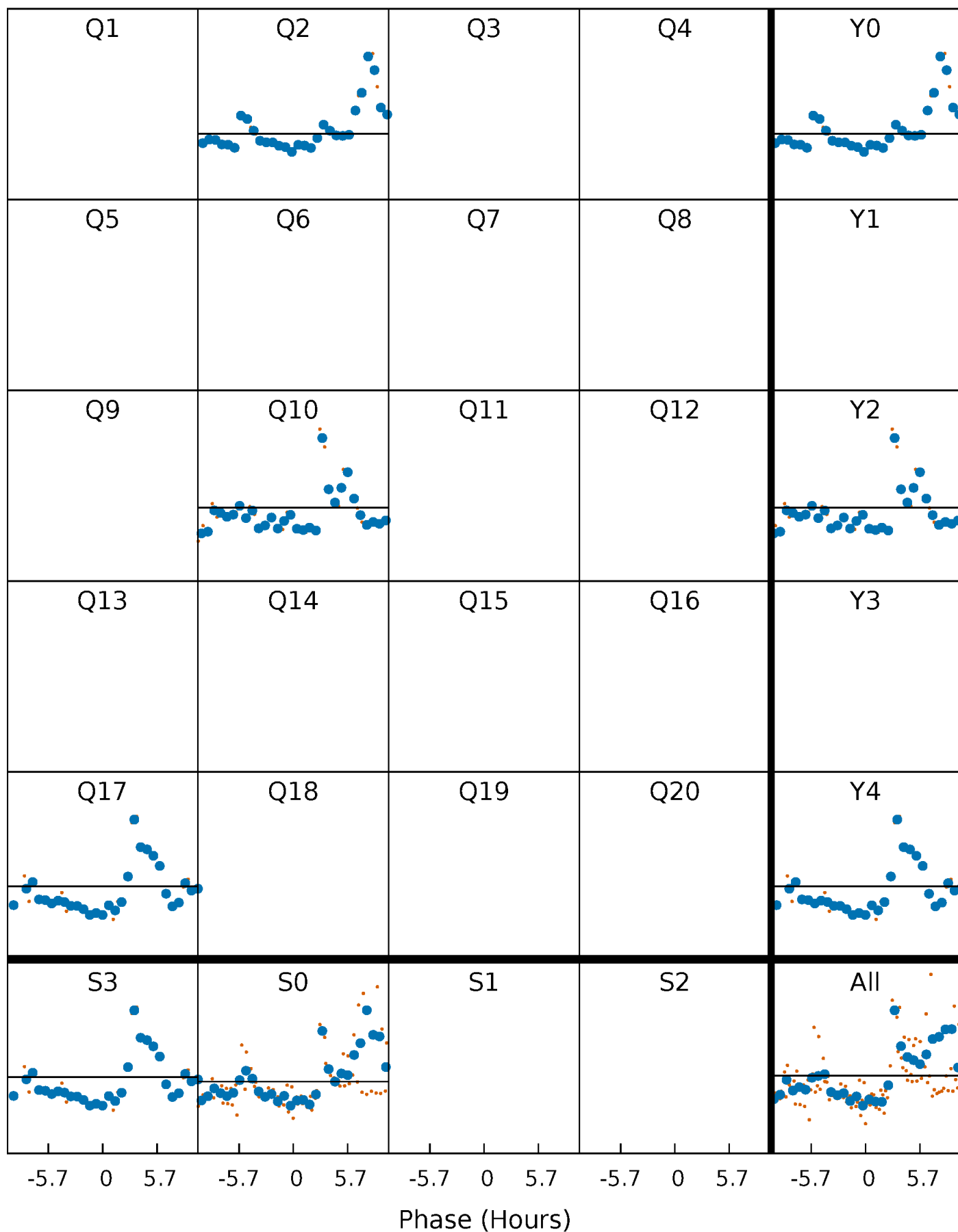
PDC Quarter-Phased Transit Curves

TCE 008947255-09 P=661.829386 Days $T_0=251.745466$ (BKJD)



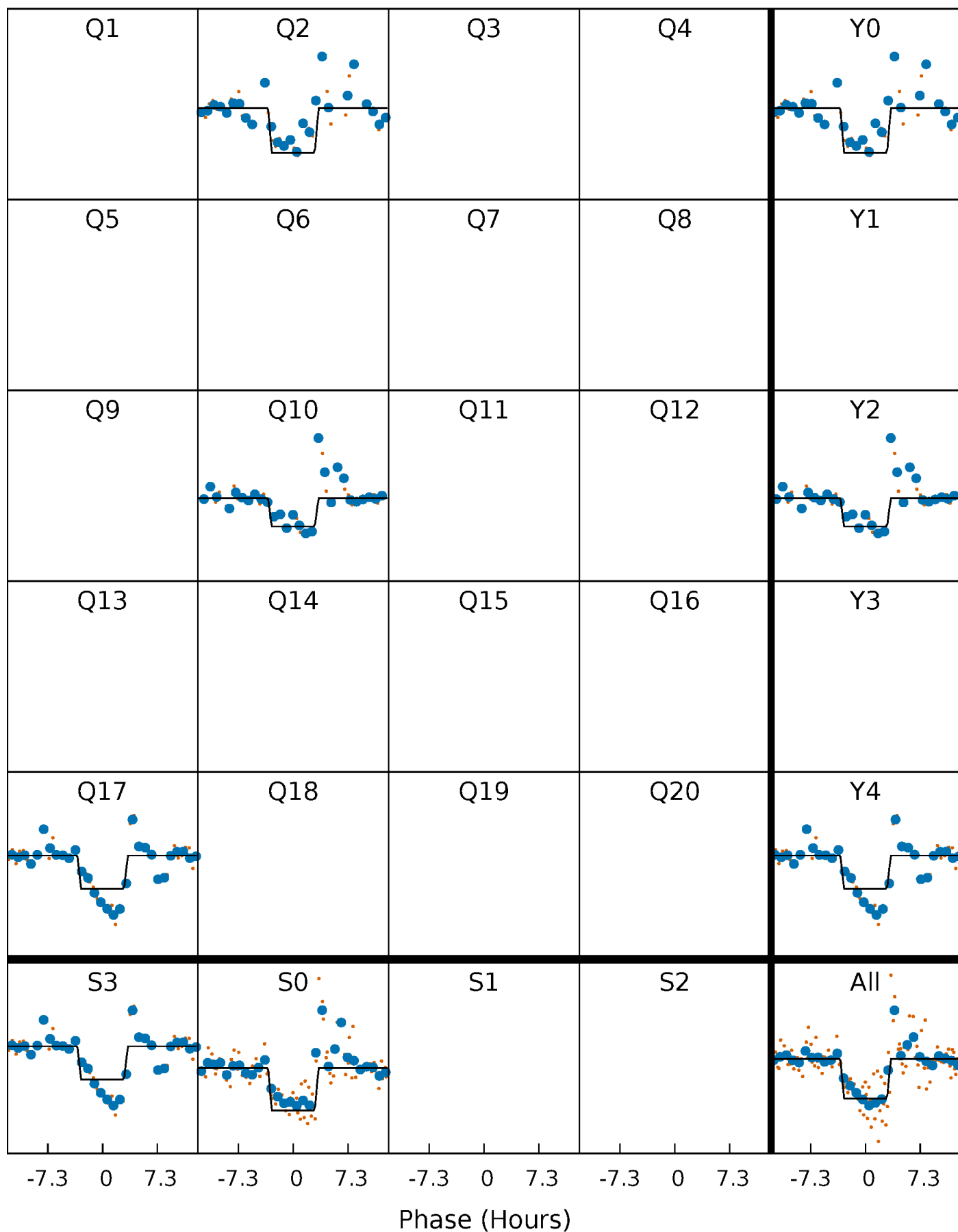
DV Quarter-Phased Transit Curves

TCE 008947255-09 $P=661.829386$ Days $T_0=251.745466$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

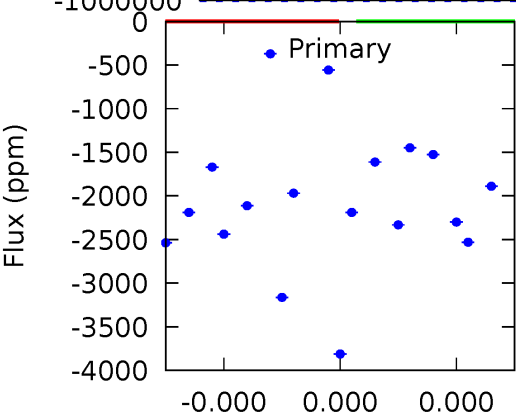
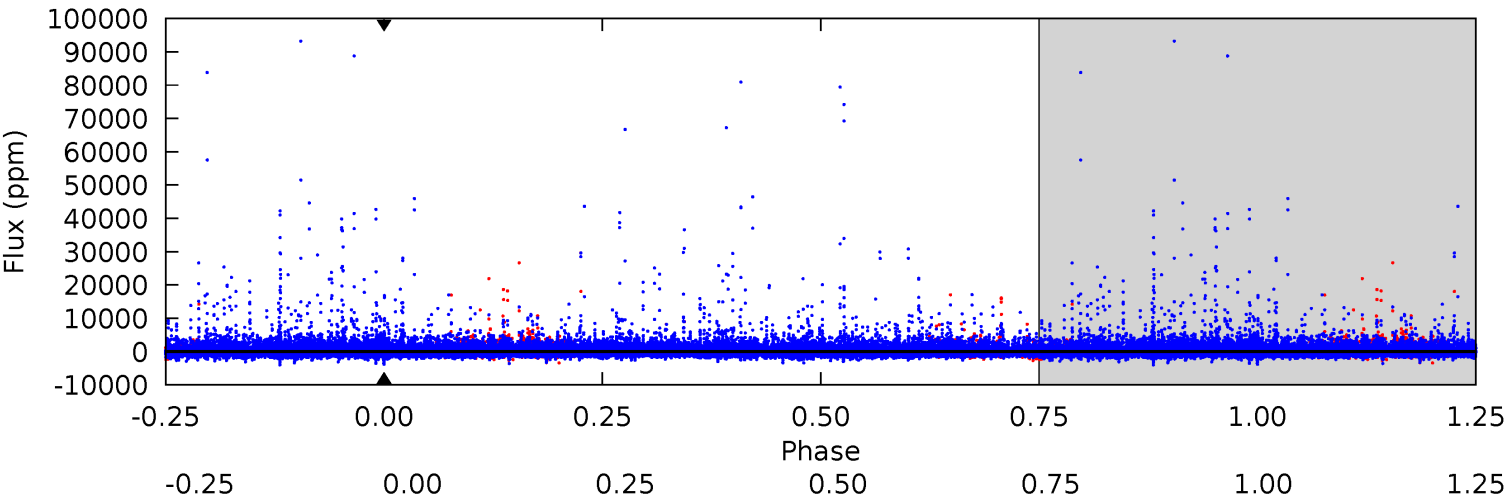
TCE 008947255-09 P=661.829386 Days $T_0=251.720264$ (BKJD)



DV Model-Shift Uniqueness Test

008947255-09, P = 661.829386 Days, E = 251.745466 Days

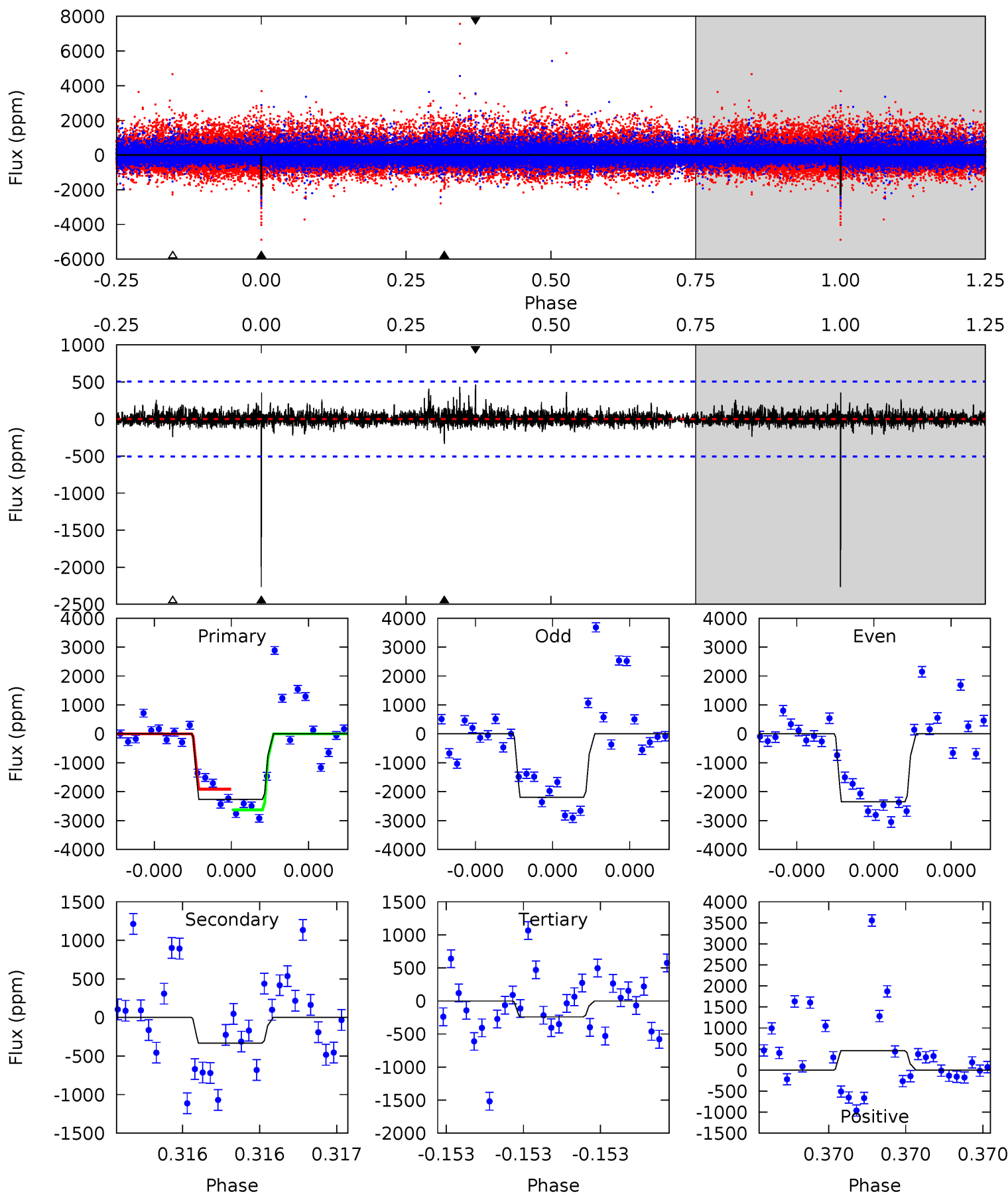
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008947255-09, P = 661.829386 Days, E = 251.720264 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.1	3.68	2.67	5.13	5.60	3.52	0.59	22.4	19.9	1.02	-1.45	0.78	1.04	0.17	3.95



Stellar Parameters For KIC 008947255

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3504^{+56}_{-56}	$4.858^{+0.042}_{-0.031}$	$0.000^{+0.100}_{-0.100}$	$0.389^{+0.032}_{-0.039}$	$0.400^{+0.038}_{-0.047}$	$9.533^{+2.131}_{-1.300}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+8%/-10%	+9%/-12%	+22%/-14%
Source	PHO2	PHO2	PHO2	DSEP		

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

Secondary Eclipse Parameters for KIC 008947255-09 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$3.51^{+3.37}_{-2.50}$	128^{+3}_{-3}	2342^{+5056}_{-8669}	$15538^{+12021276}_{-7211685}$
Alt.	-333 ± 90	$4.01^{+3.78}_{-2.72}$	129^{+3}_{-3}	2254^{+746}_{-296}	$14044^{+118625}_{-10559}$

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 $A_{obs} \gg 1.0$

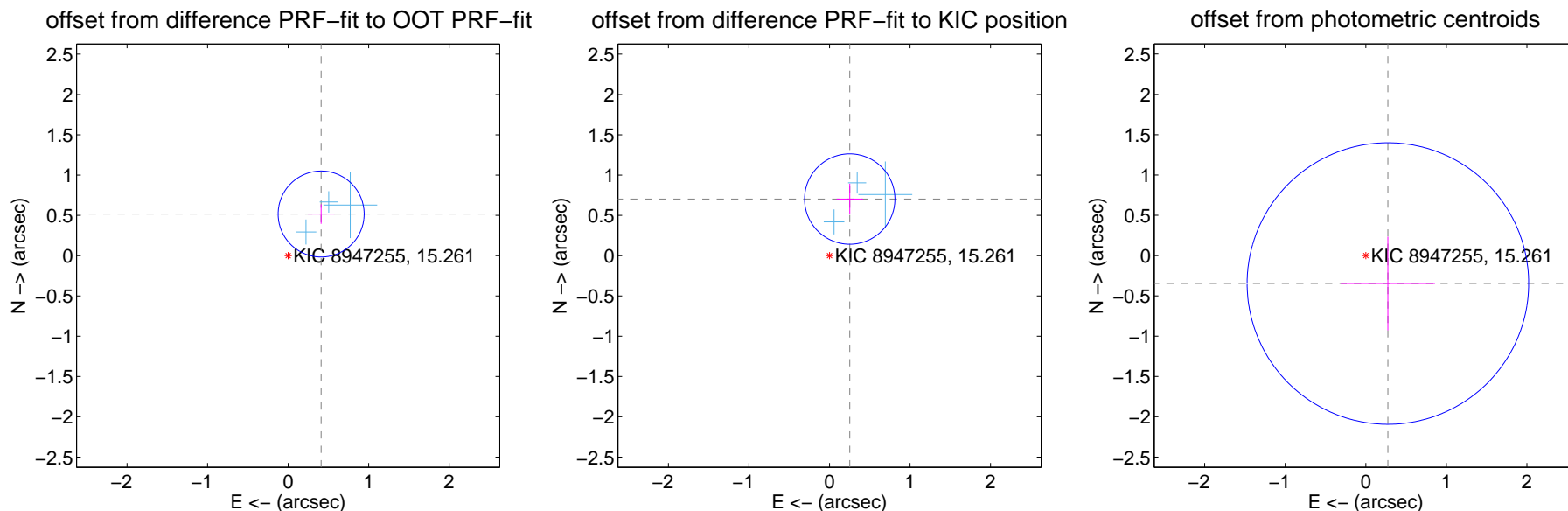
DV Centroid Data

Supplemental centroid analysis for 008947255-09. Kepler magnitude: 15.26. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

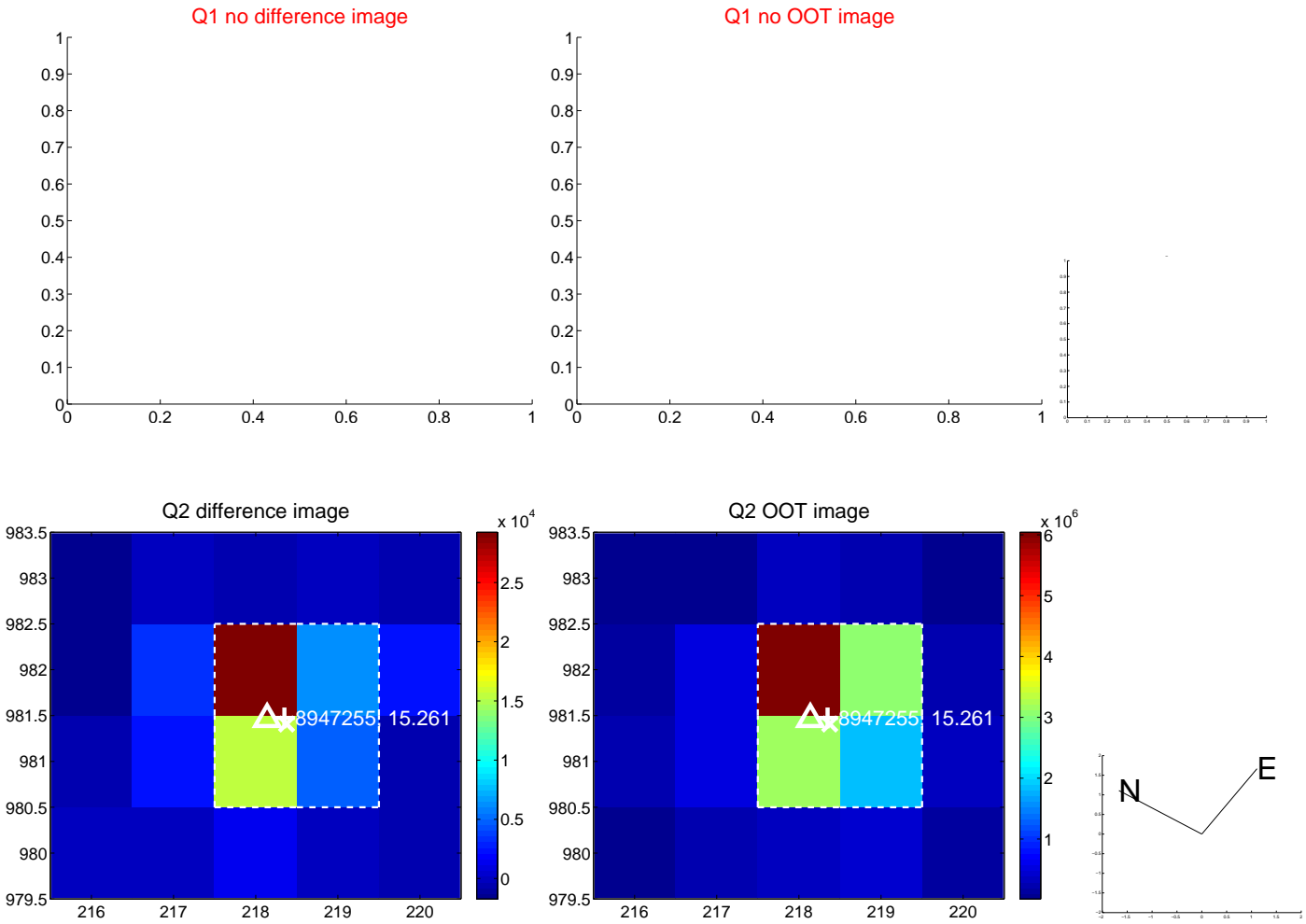
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.660 ± 0.178	3.71	-0.410 ± 0.164	0.517 ± 0.121
PRF-fit source offset from KIC position	0.746 ± 0.187	3.99	-0.251 ± 0.163	0.703 ± 0.190
photometric centroid source offset	0.44 ± 0.58	0.76	-0.27 ± 0.58	-0.35 ± 0.58



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

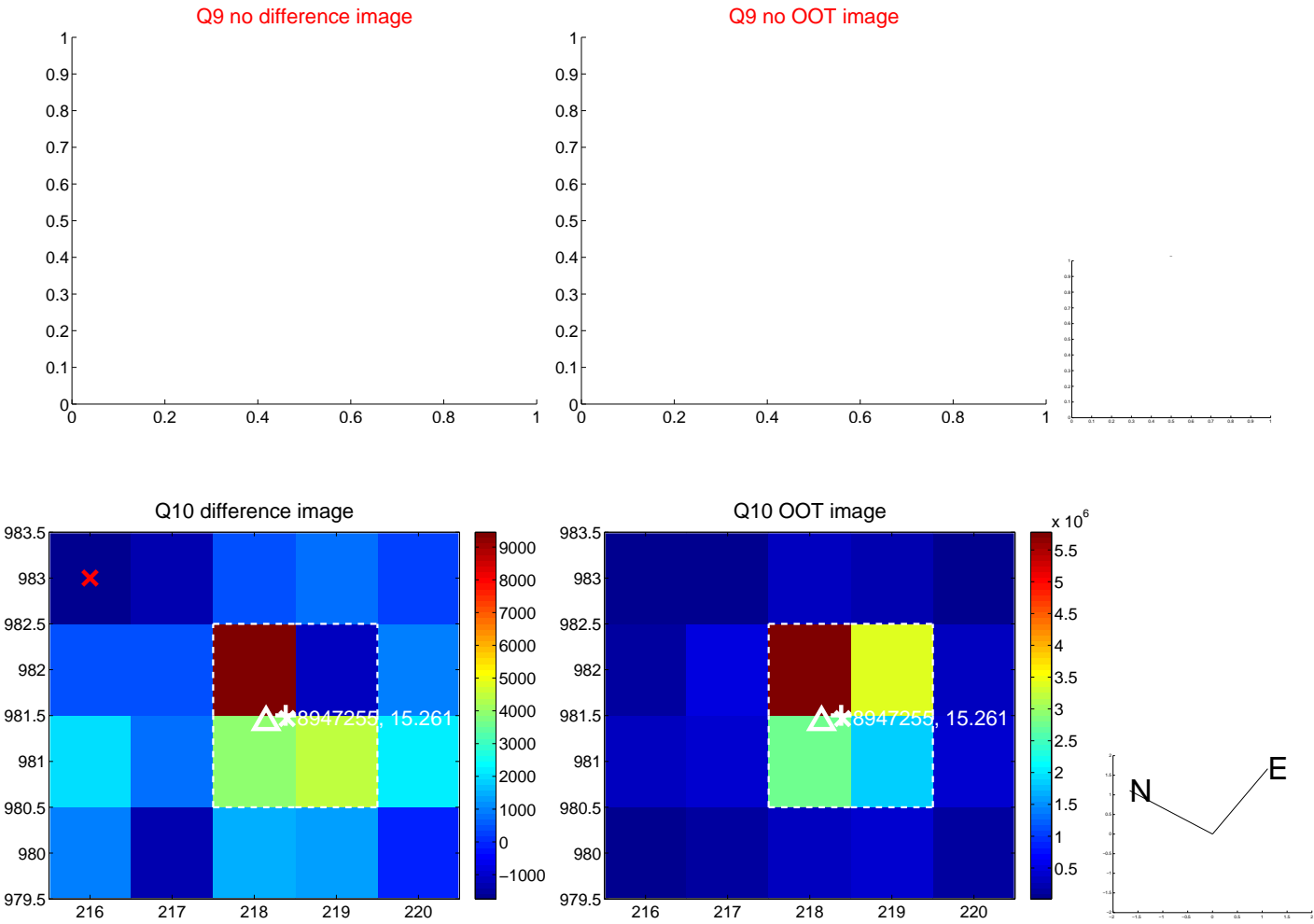
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



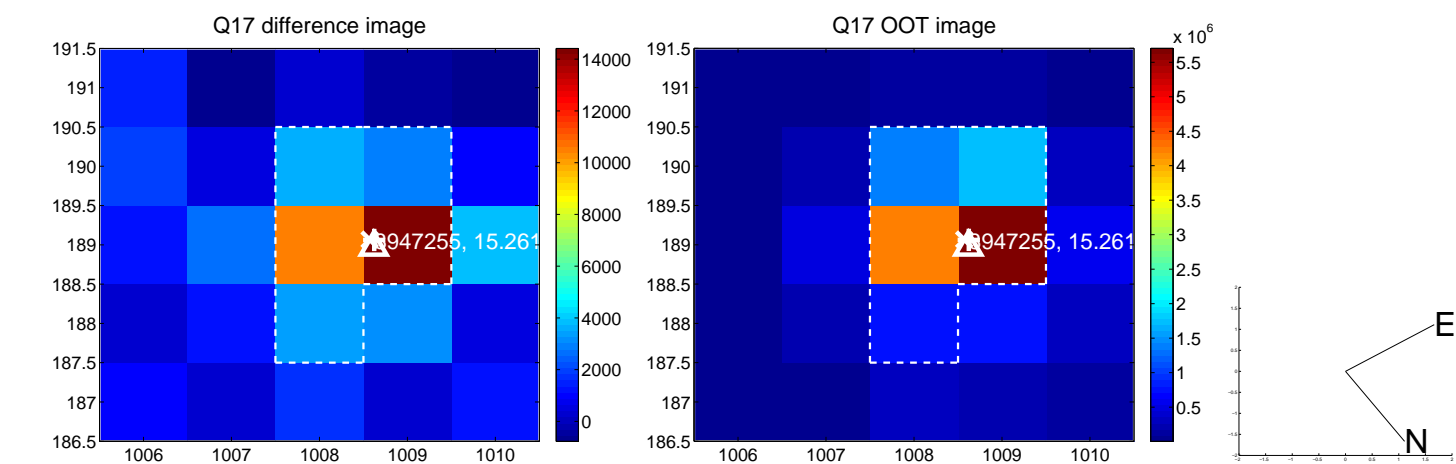
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



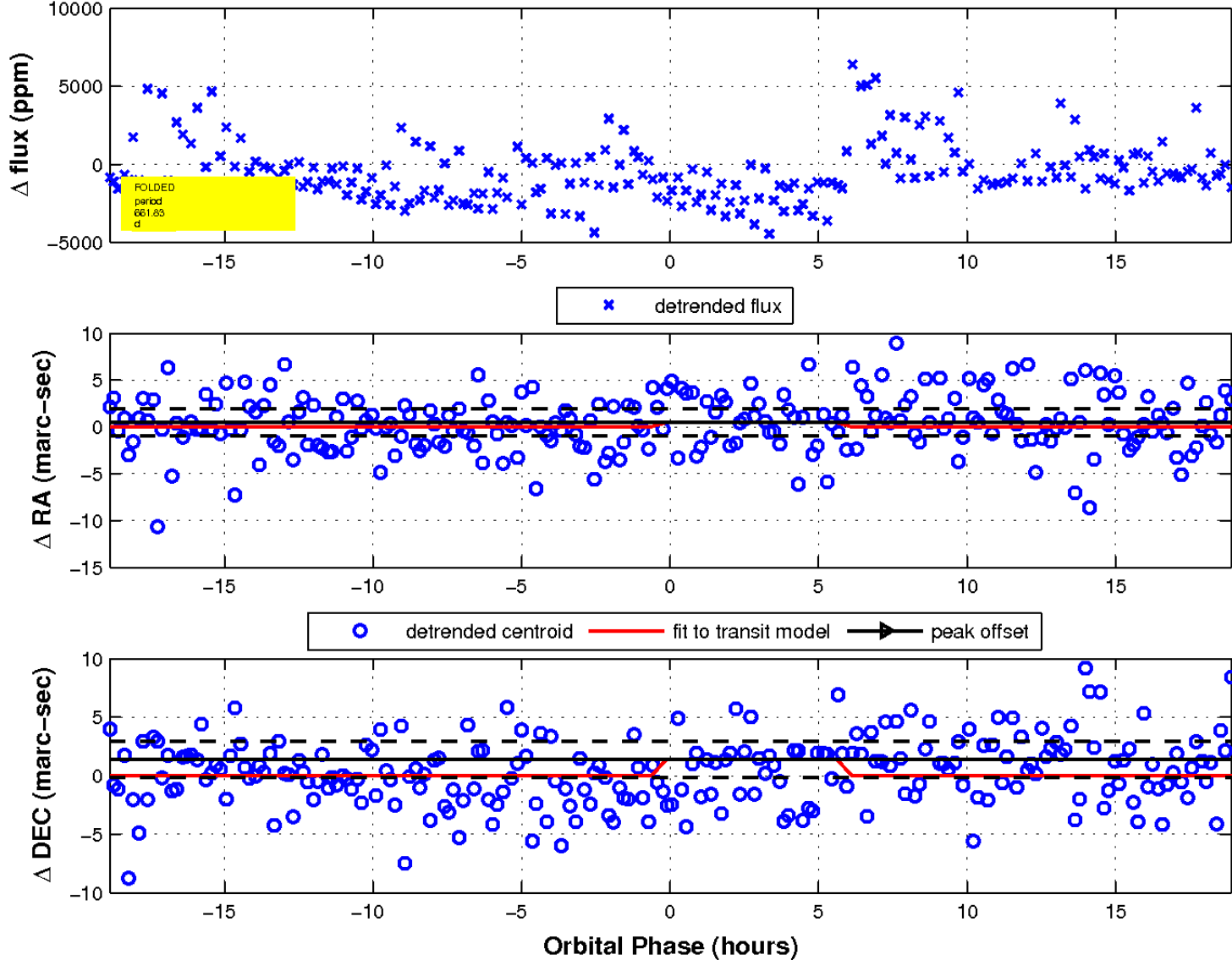
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 9 of 9



UKIRT Image

Declination

