

KIC 008142547

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})
008142547-01	OBS	No	377.765656	392.498830	1507.8	3.522	18.8	8.6	0.68	4996	2.75	0.33
008142547-02	OBS	No	434.105578	460.231558	1534.9	5.304	15.9	7.7	0.68	4996	2.81	0.27
008142547-03	OBS	No	508.975269	483.723031	2847.7	11.131	16.0	10.4	0.68	4996	7.03	0.22
008142547-04	OBS	No	253.584568	355.759960	1087.7	12.879	14.4	5.8	0.68	4996	2.79	0.56
008142547-05	OBS	No	257.549270	276.005526	1131.3	7.934	13.7	7.8	0.68	4996	2.29	0.54
008142547-06	OBS	No	512.691643	275.427962	808.3	9.000	13.4	-1.0	0.68	4996	1.88	0.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008142547-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008142547-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008142547-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008142547-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
008142547-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—HALO_GHOST
008142547-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—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.

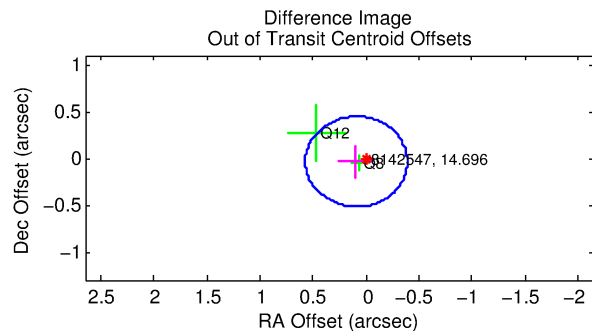
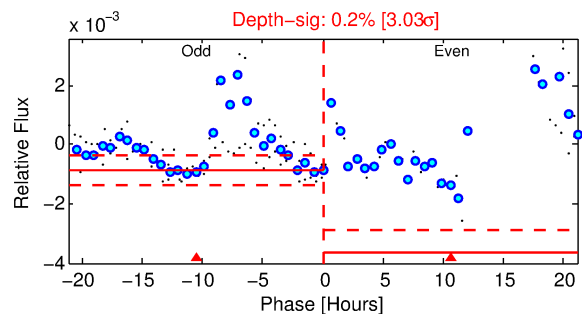
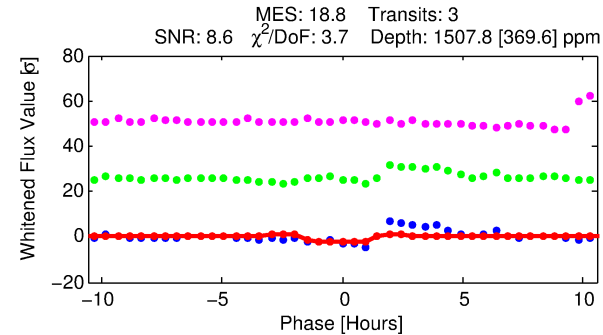
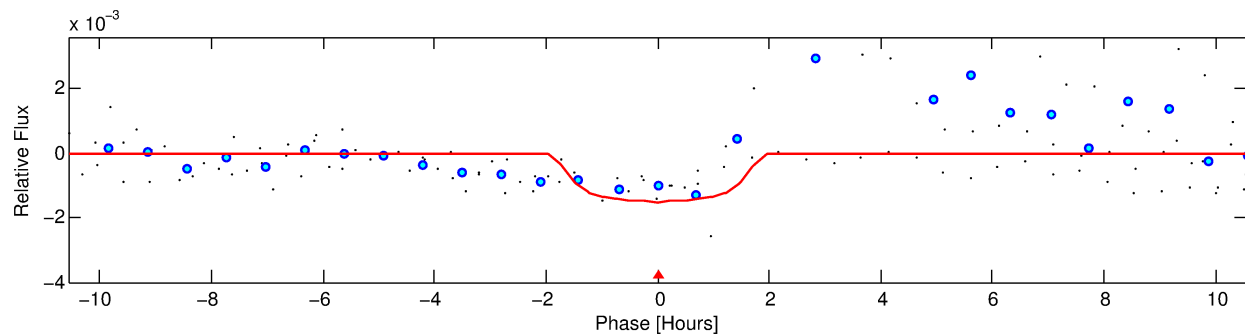
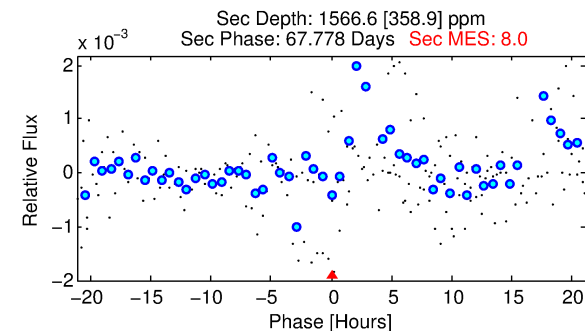
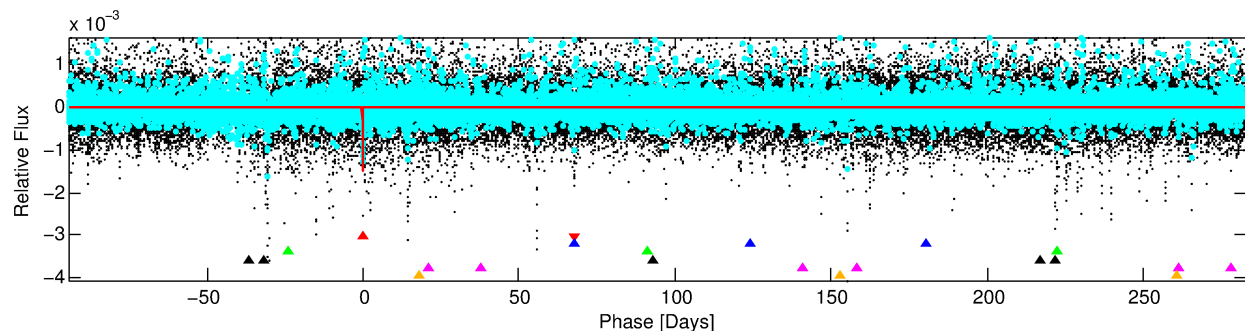
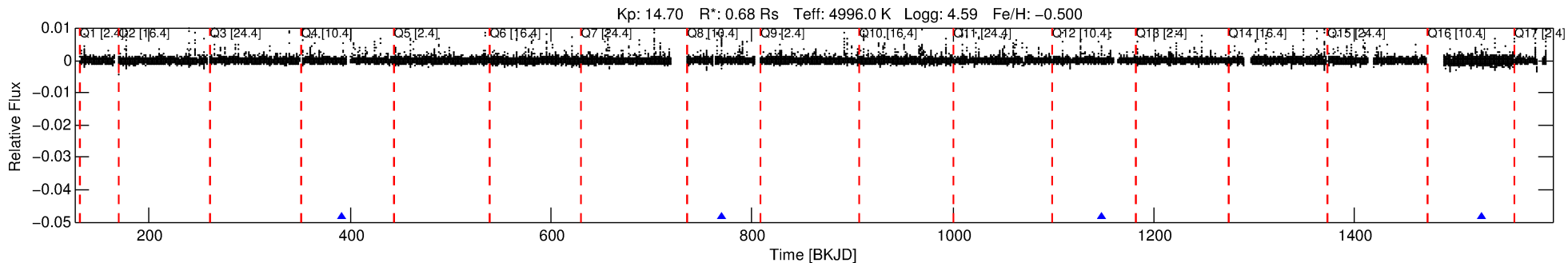
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008142547-01

No Significant Match Found

DV One-Page Summary

KIC: 8142547 Candidate: 1 of 6 Period: 377.766 d



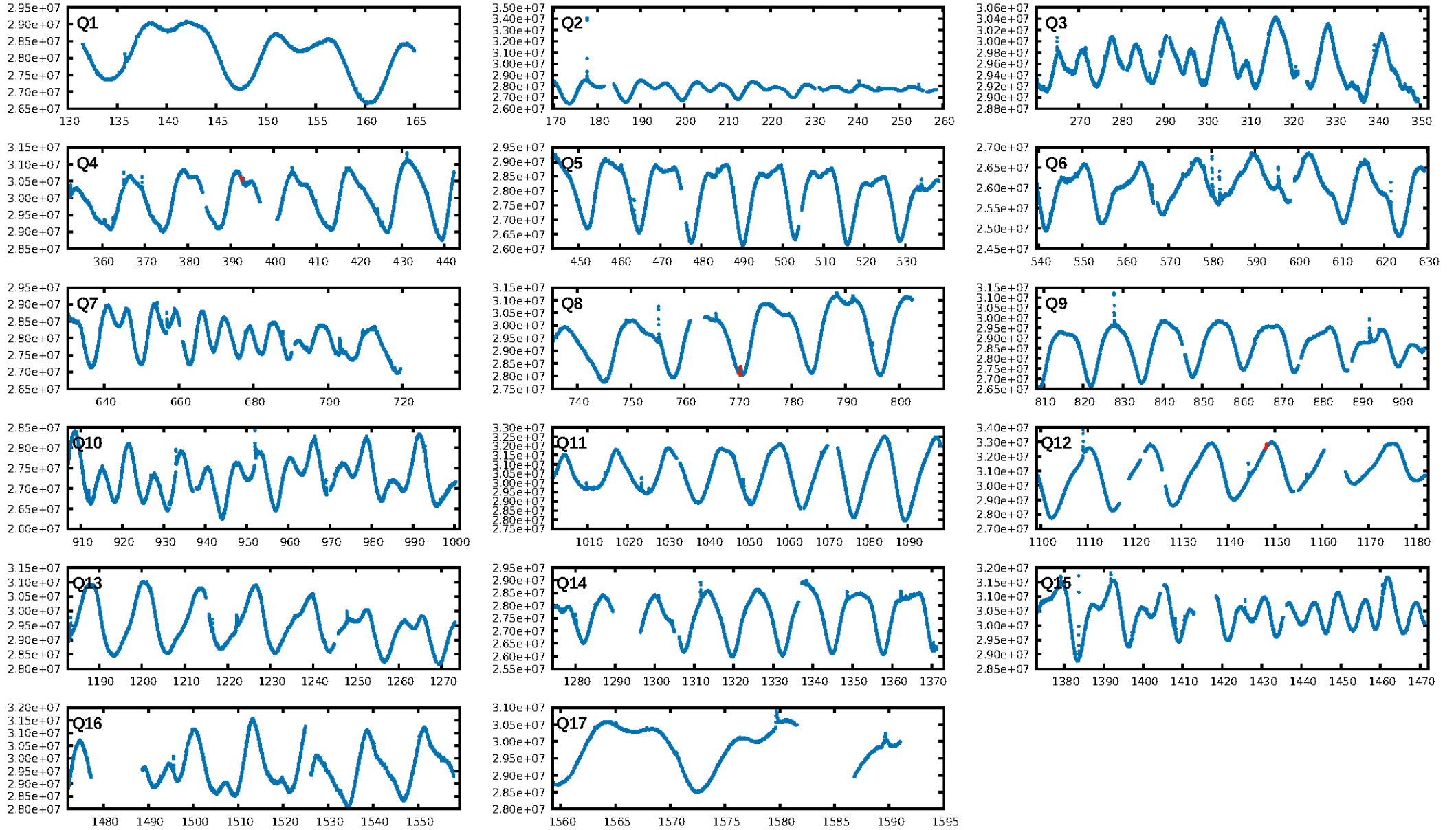
DV Fit Results:

Period = 377.76566 [0.00807] d
Epoch = 392.4988 [0.0112] BKJD
Rp/R* = 0.0370 [0.1206]
a/R* = 680.93 [8028.63]
b = 0.62 [11.91]
Seff = 0.33 [0.06]
Teq = 193 [8] K
Rp = 2.75 [8.95] Re
a = 0.8896 [0.0791] AU
Ag = 90440.72 [589685.90] [0.15σ]
Teffp = 5167 [8422] K [0.59σ]

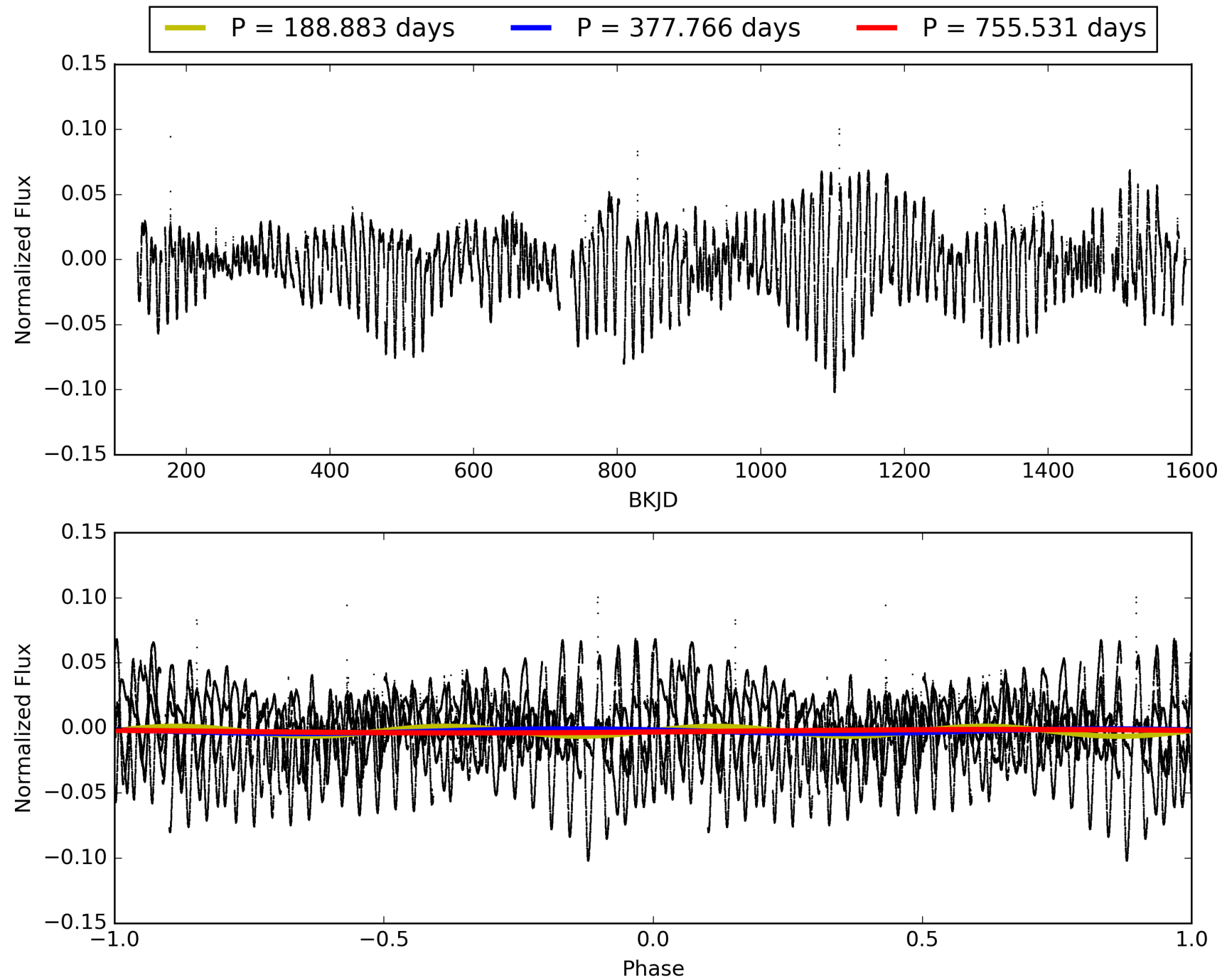
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [332.37σ]
LongPeriod-sig: 100.0% [212.36σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.7364
Centroid-sig: 5.3%
Centroid-so: 1.107 arcsec [1.34σ]
OotOffset-rm: 0.099 arcsec [0.62σ]
KicOffset-rm: 0.014 arcsec [0.08σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 008142547-01, PDC Light Curves

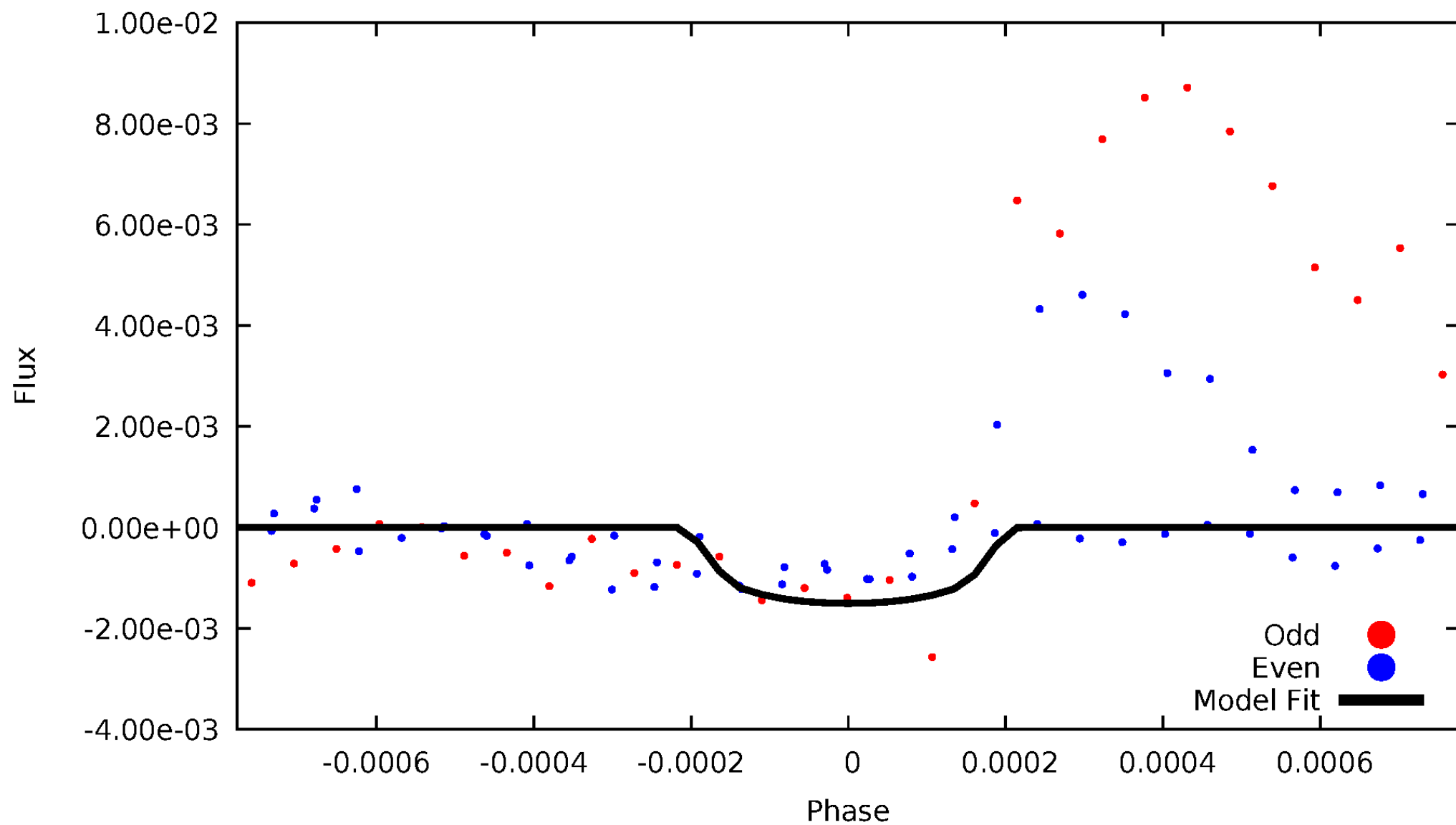


TCE 008142547-01



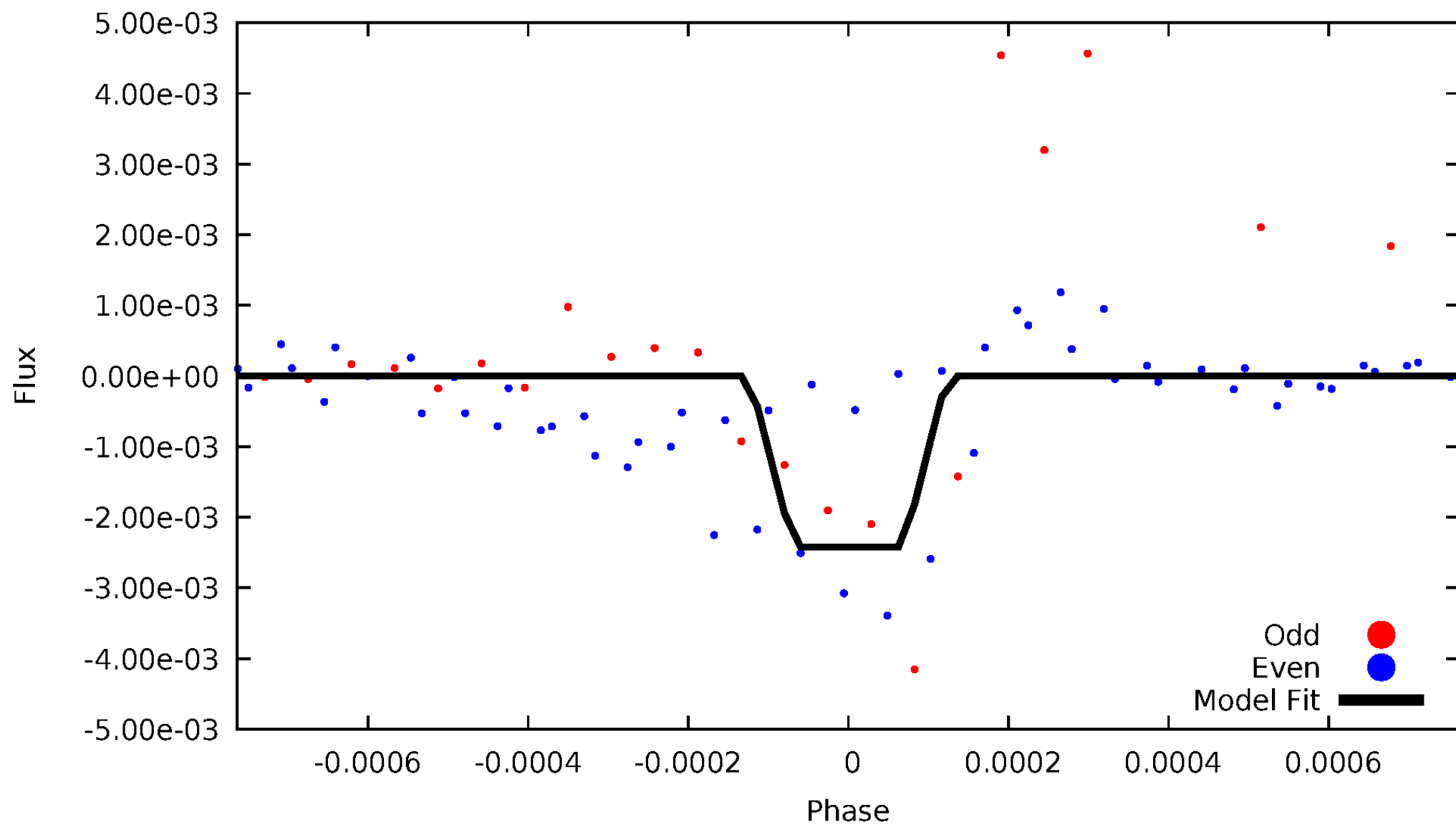
DV Odd/Even

TCE 008142547-01



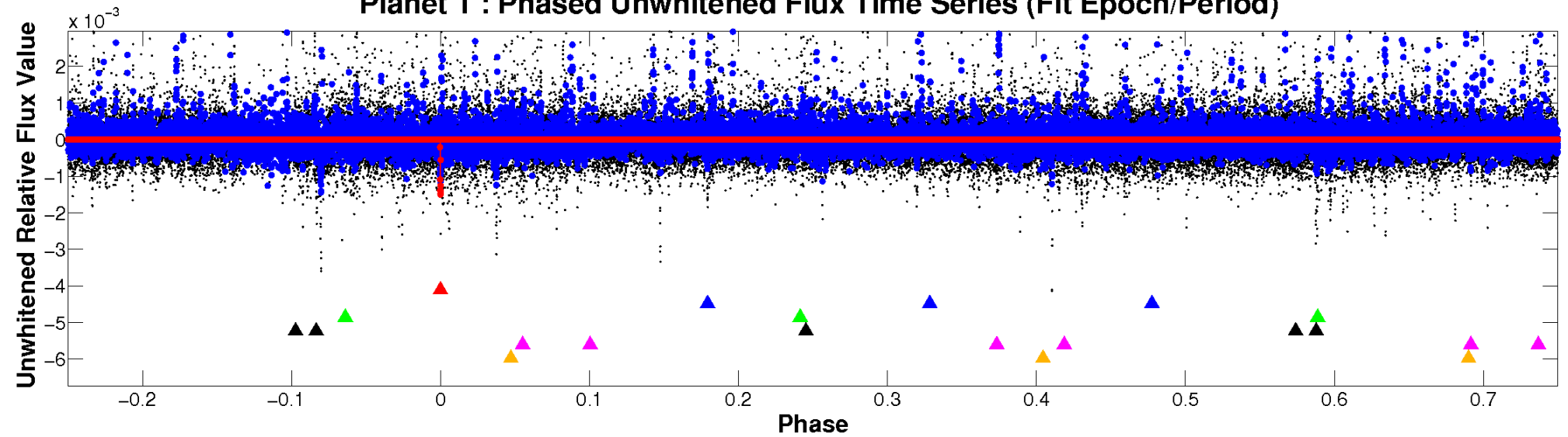
ALT Odd/Even

TCE 008142547-01

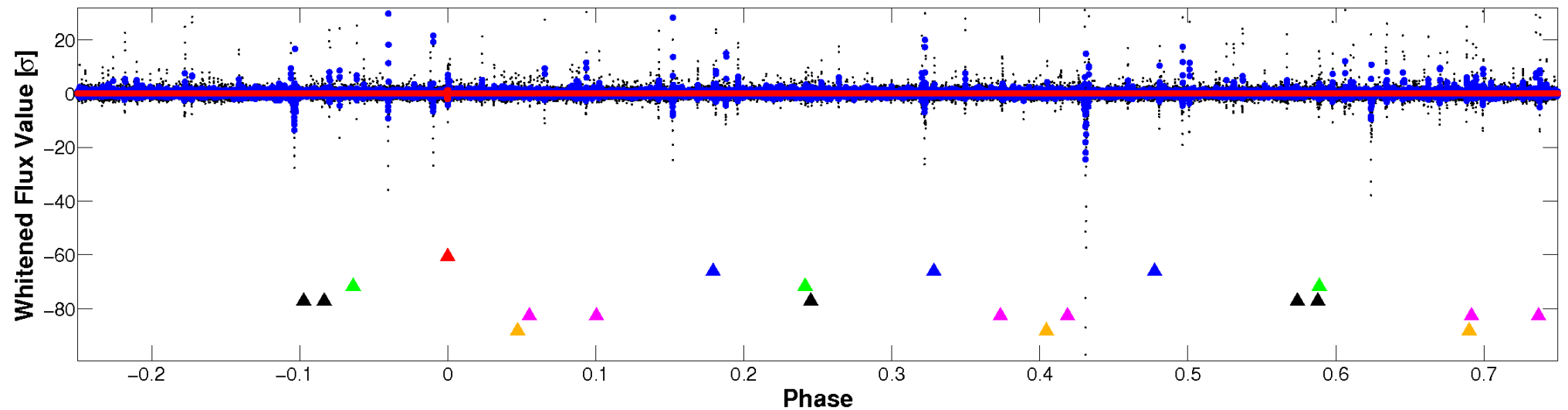


Non-Whitened Vs. Whitened Light Curve

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

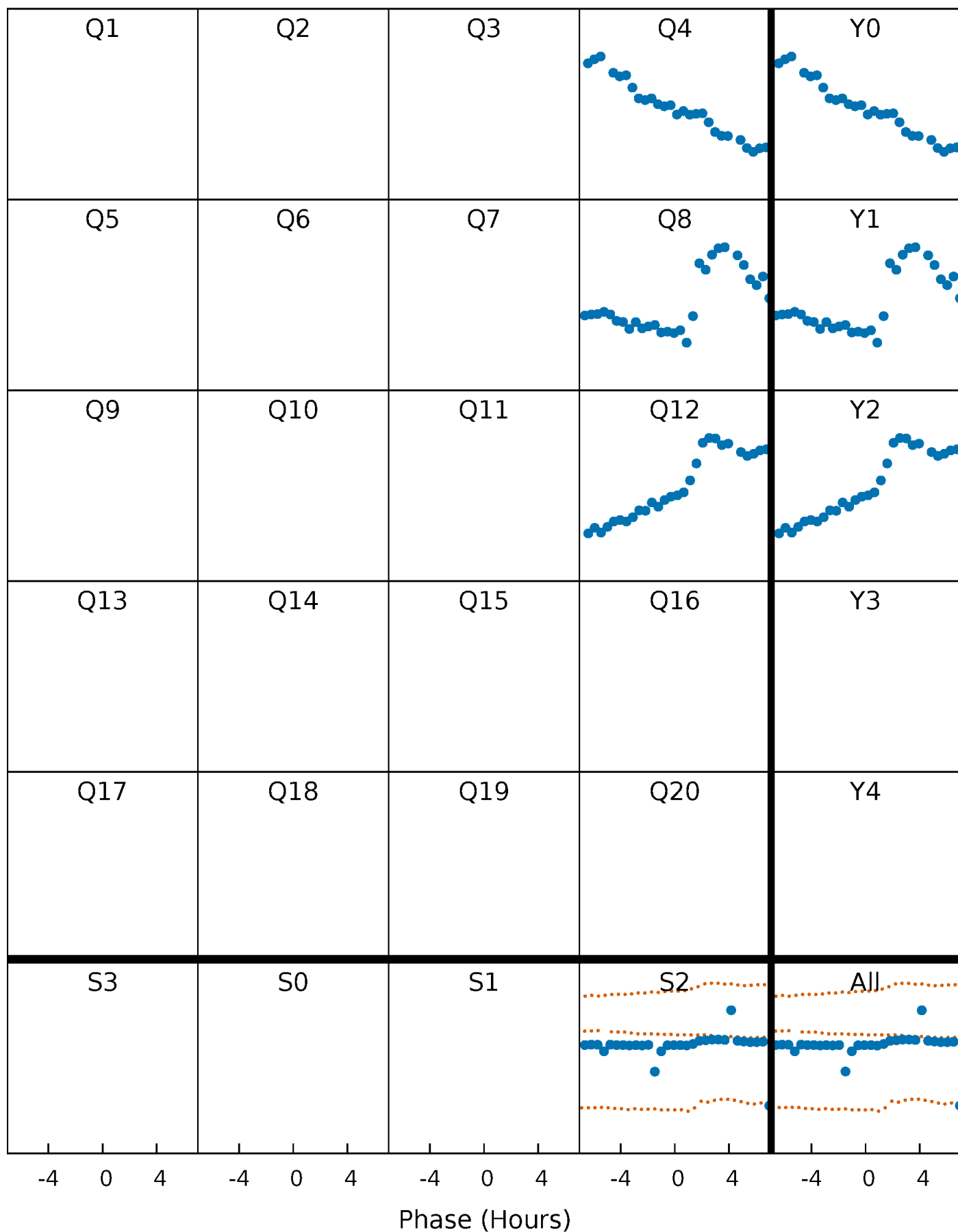


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



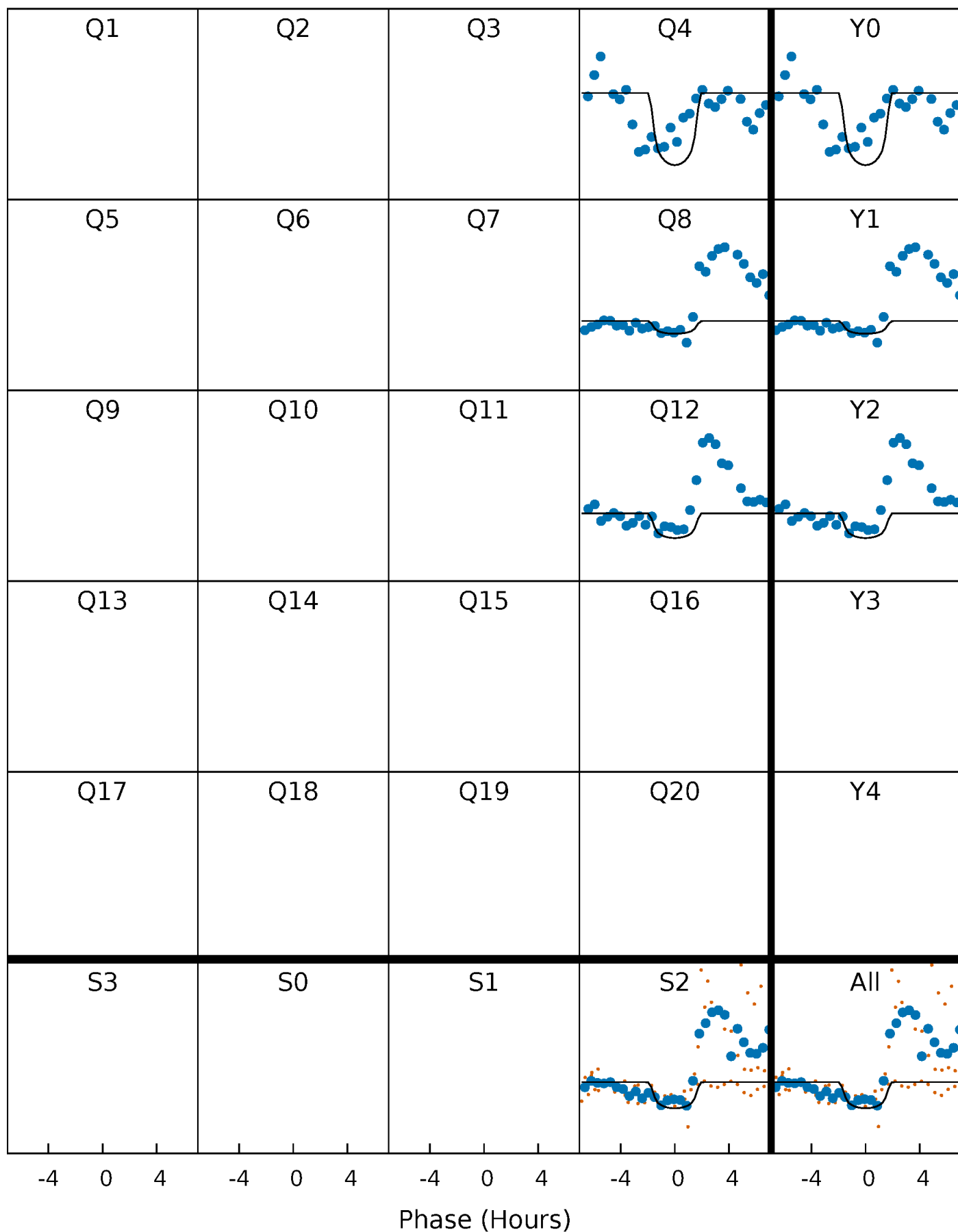
PDC Quarter-Phased Transit Curves

TCE 008142547-01 P=377.765656 Days $T_0=392.498829$ (BKJD)



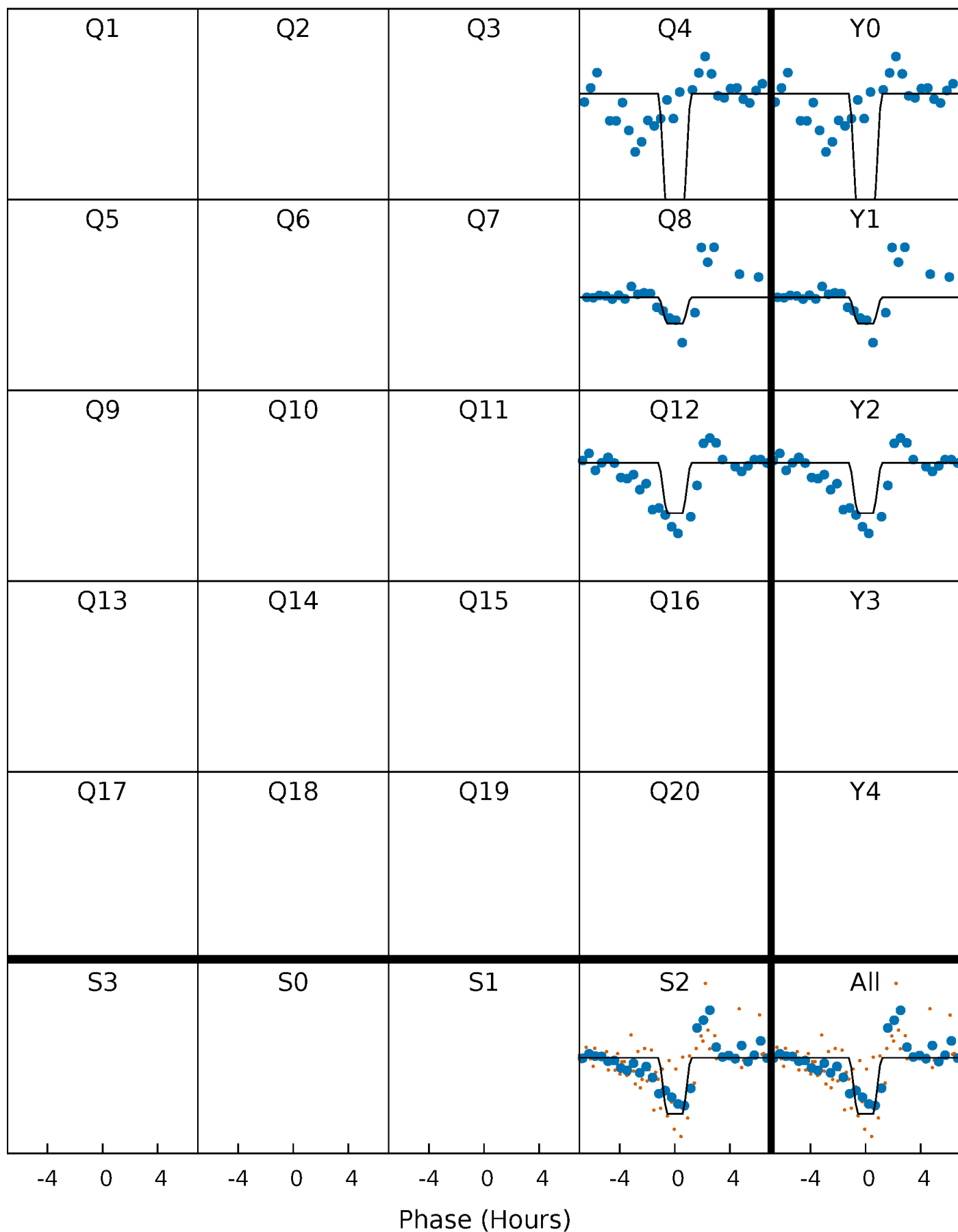
DV Quarter-Phased Transit Curves

TCE 008142547-01 P=377.765656 Days $T_0=392.498829$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

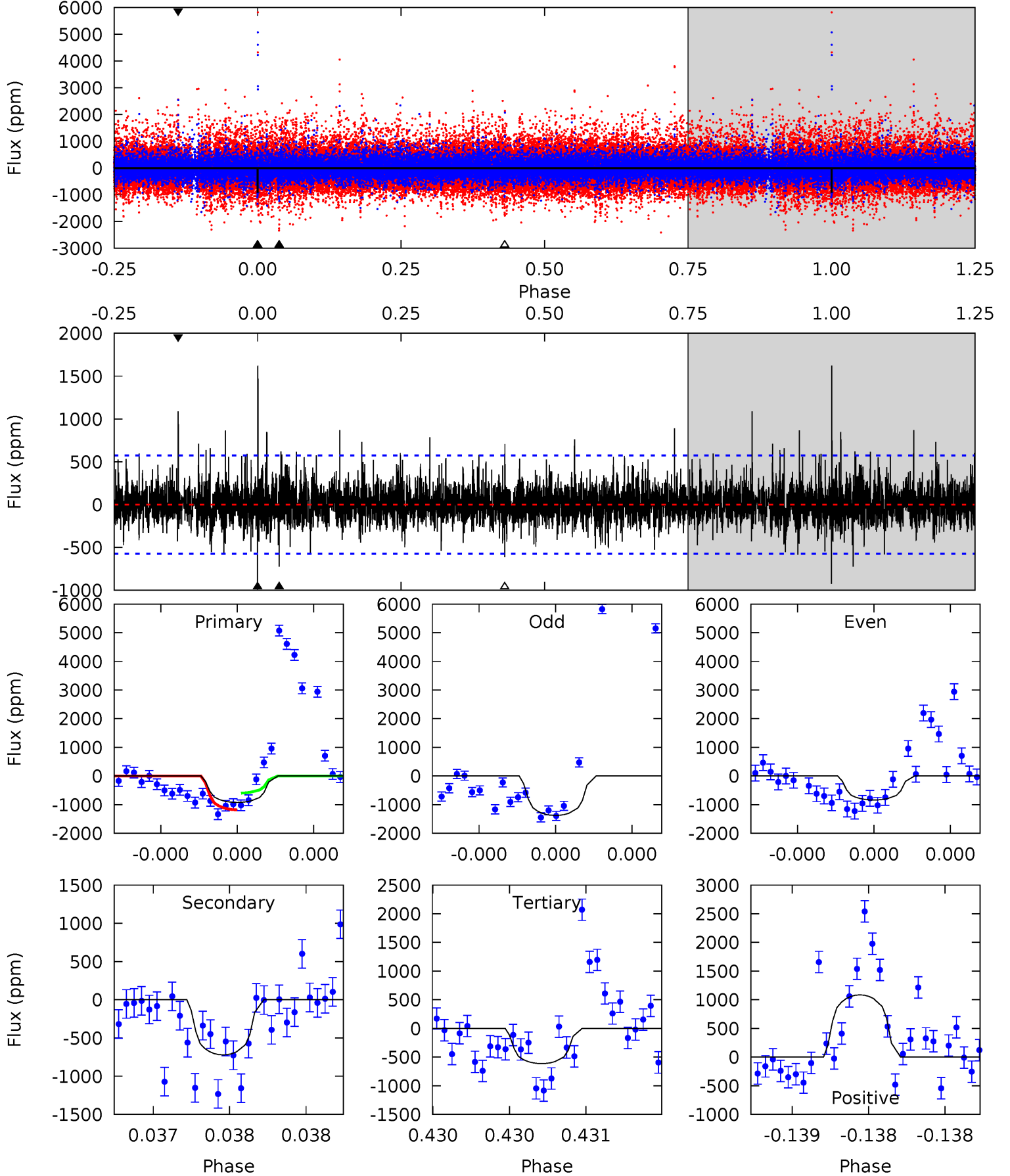
TCE 008142547-01 P=377.768846 Days $T_0=392.504696$ (BKJD)



DV Model-Shift Uniqueness Test

008142547-01, $P = 377.765656$ Days, $E = 14.733173$ Days

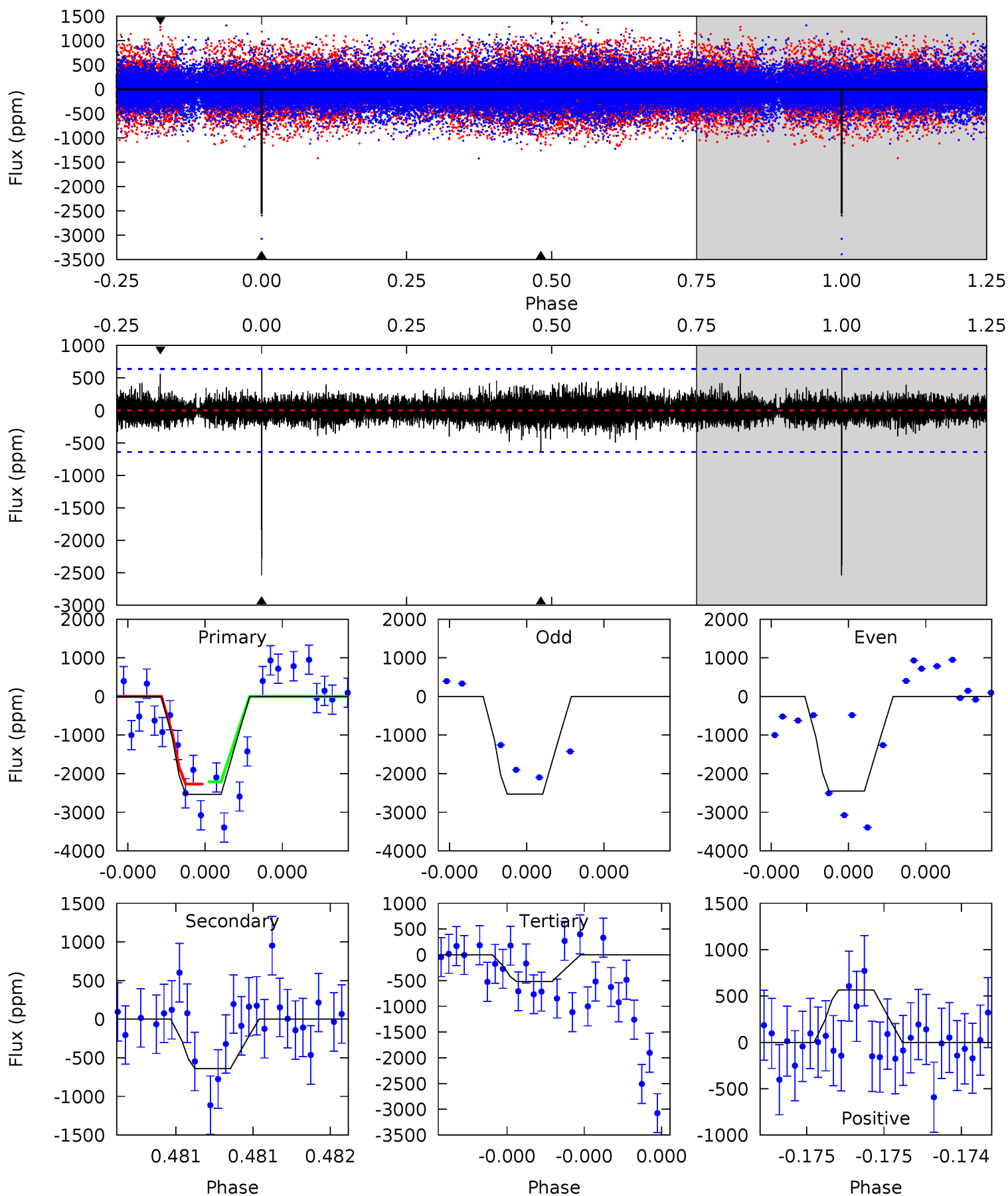
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.00	7.03	5.97	10.6	5.59	3.50	1.49	3.02	-1.57	1.05	-3.54	1.83	1.11	0.64	2.85



Alt Model-Shift Uniqueness Test

008142547-01, $P = 377.768846$ Days, $E = 14.735850$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.7	5.72	4.64	5.04	5.70	3.68	0.88	18.0	17.6	1.08	0.68	0.43	0.79	0.21	0.28



Stellar Parameters For KIC 008142547

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4996^{+148}_{-148}	$4.591^{+0.072}_{-0.048}$	$-0.500^{+0.300}_{-0.300}$	$0.680^{+0.071}_{-0.065}$	$0.657^{+0.090}_{-0.036}$	$2.948^{+0.878}_{-0.523}$
	+3%/-3%	+2%/-1%	+60%/-60%	+10%/-10%	+14%/-5%	+30%/-18%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008142547-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-722 ± 103	$7.09^{+7.09}_{-4.83}$	268^{+10}_{-10}	3193^{+1534}_{-544}	6592^{+56832}_{-4987}
Alt.	-641 ± 112	$8.01^{+7.44}_{-5.79}$	268^{+11}_{-10}	3022^{+1649}_{-478}	4352^{+53852}_{-3179}

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 $A_{obs} \gg 1.0$

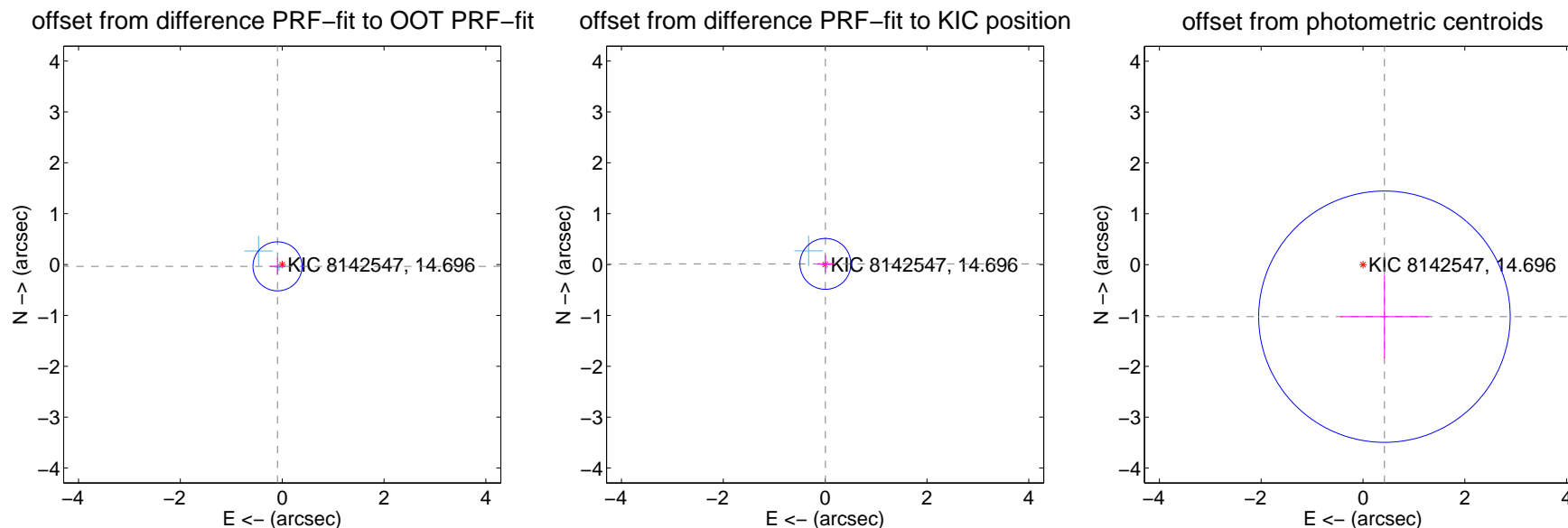
DV Centroid Data

Supplemental centroid analysis for 008142547-01. Kepler magnitude: 14.70. Transit SNR 8.64

There are 2 quarters with good PRF difference image offsets

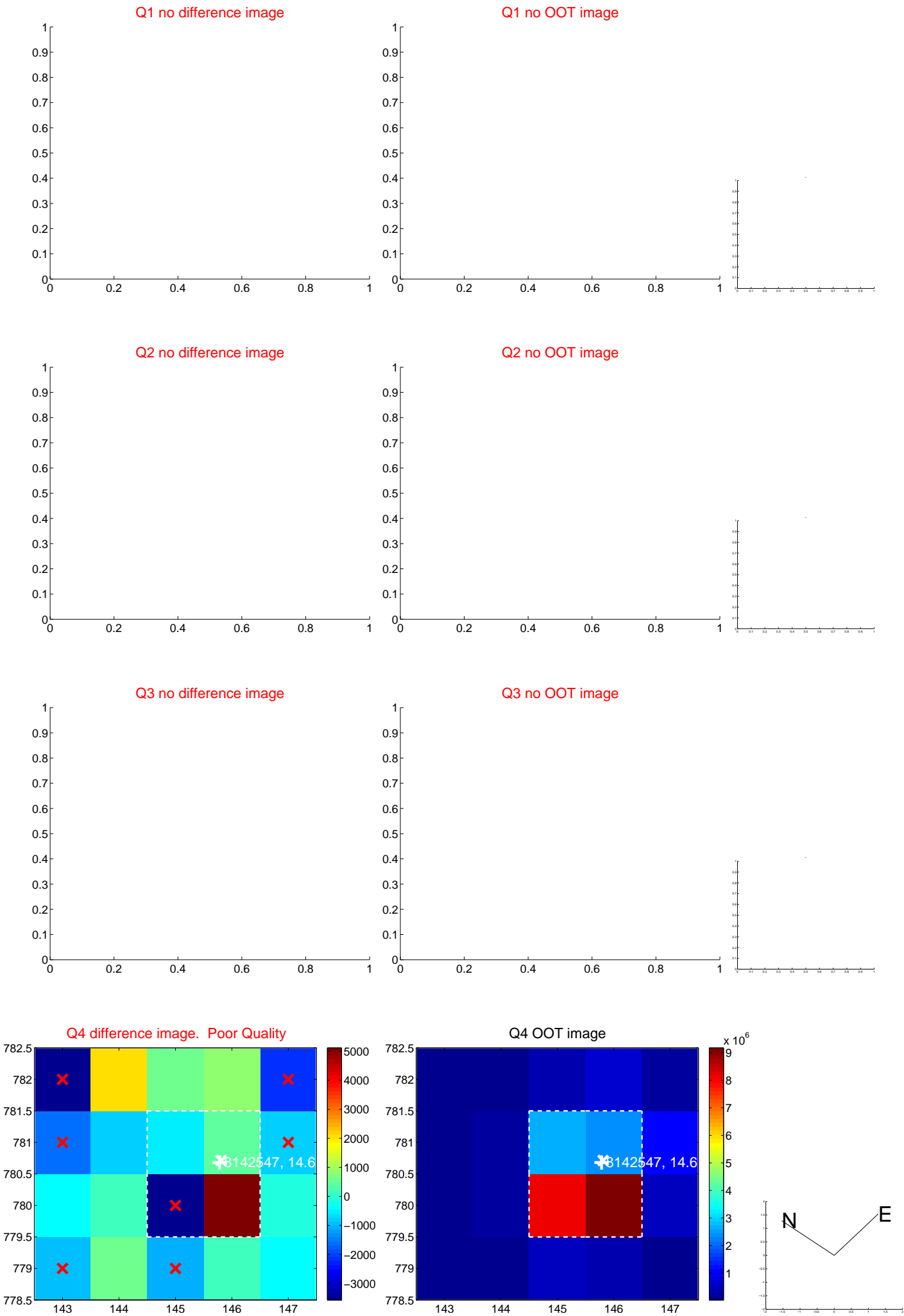
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.099 ± 0.161	0.62	0.093 ± 0.160	-0.035 ± 0.168
PRF-fit source offset from KIC position	0.014 ± 0.167	0.08	-0.005 ± 0.160	0.013 ± 0.168
photometric centroid source offset	1.11 ± 0.82	1.34	-0.42 ± 0.87	-1.02 ± 0.82

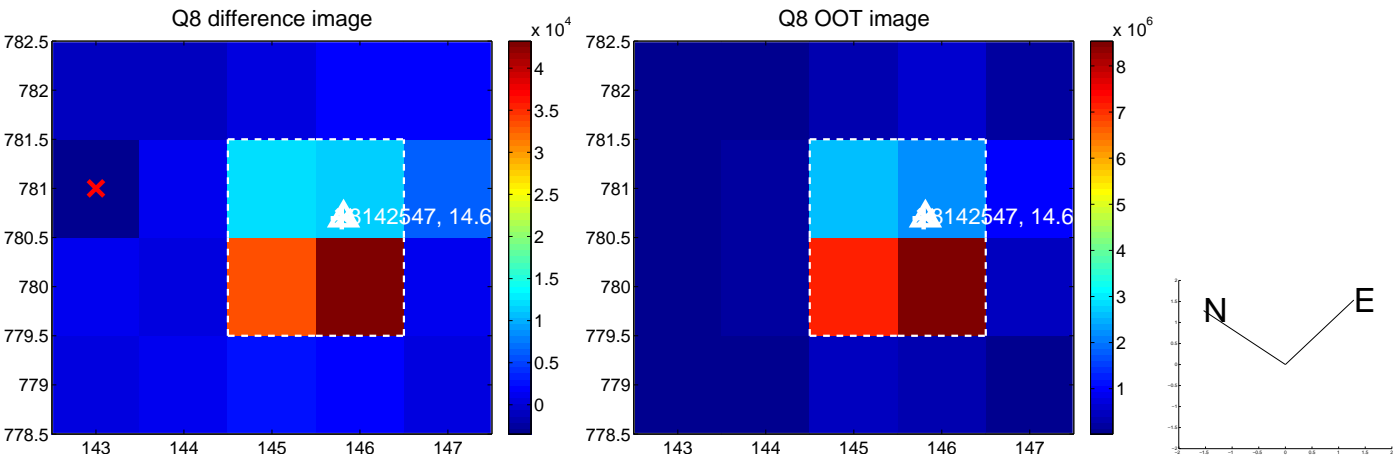
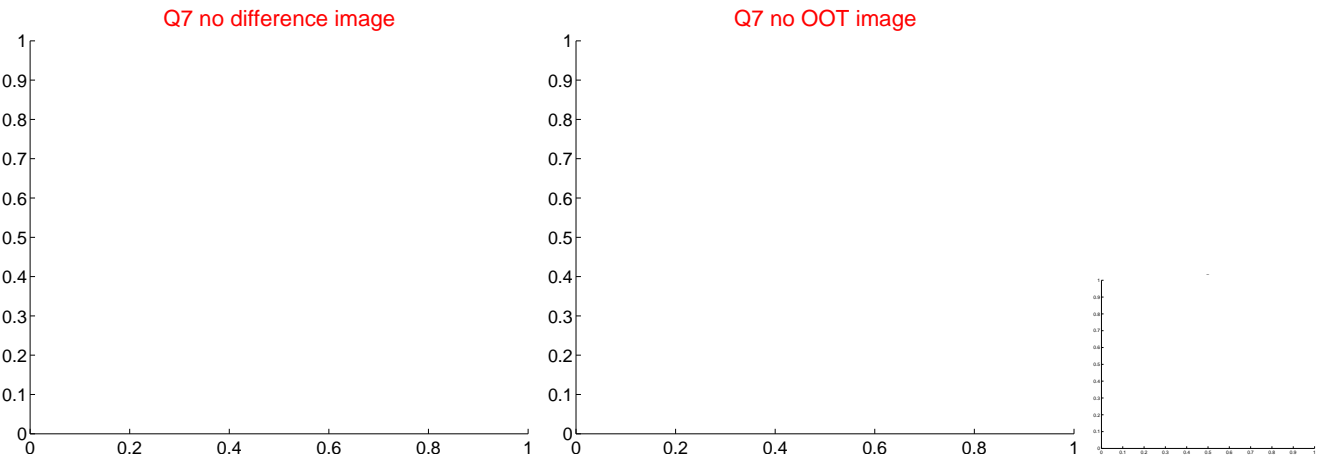
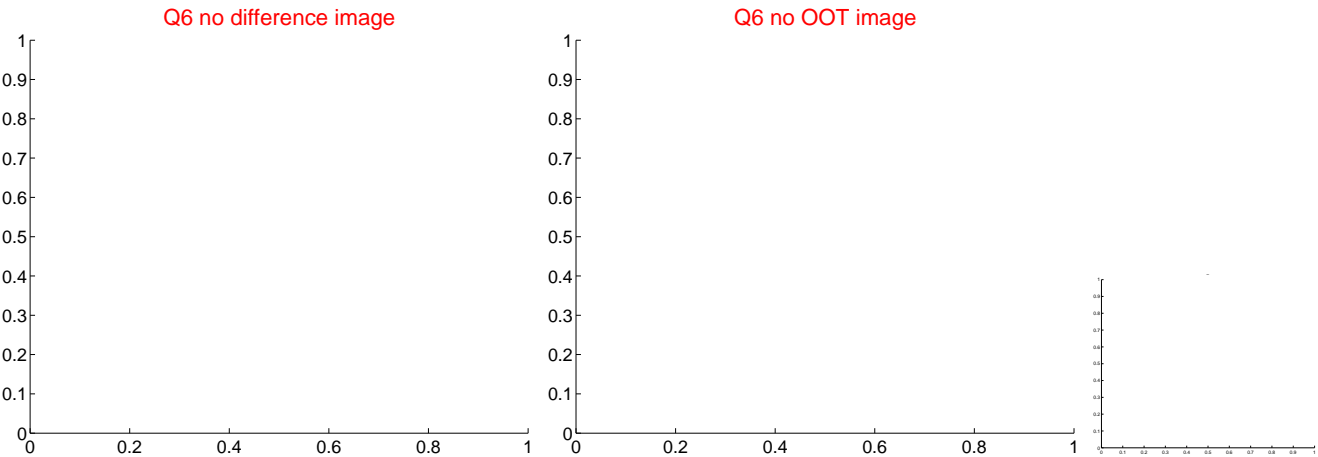
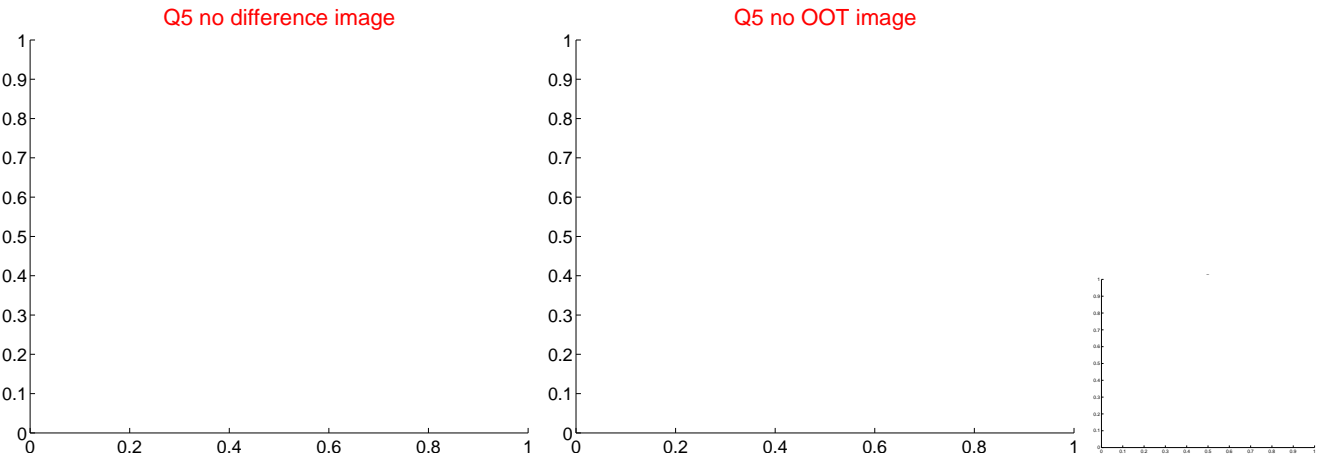


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

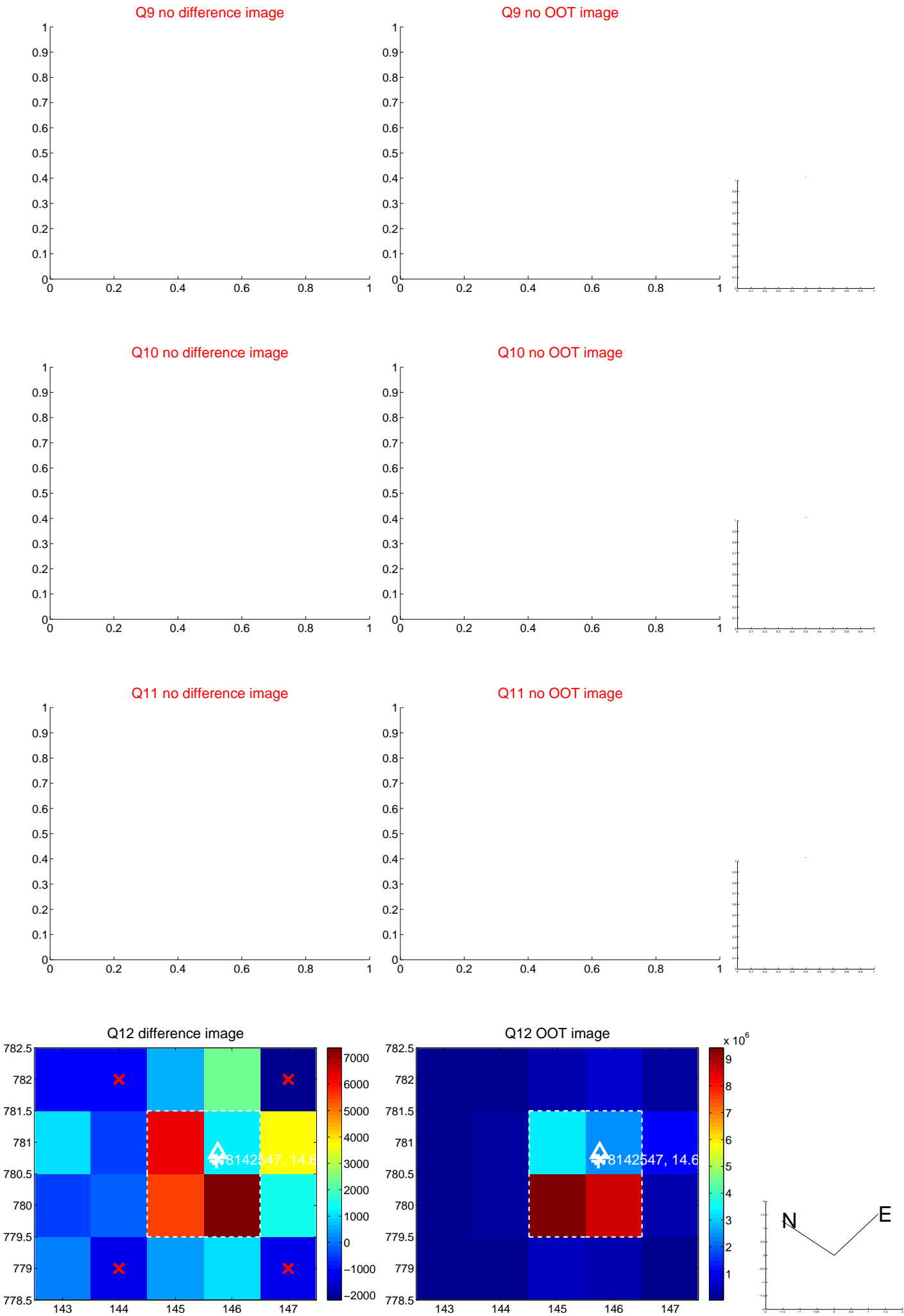
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



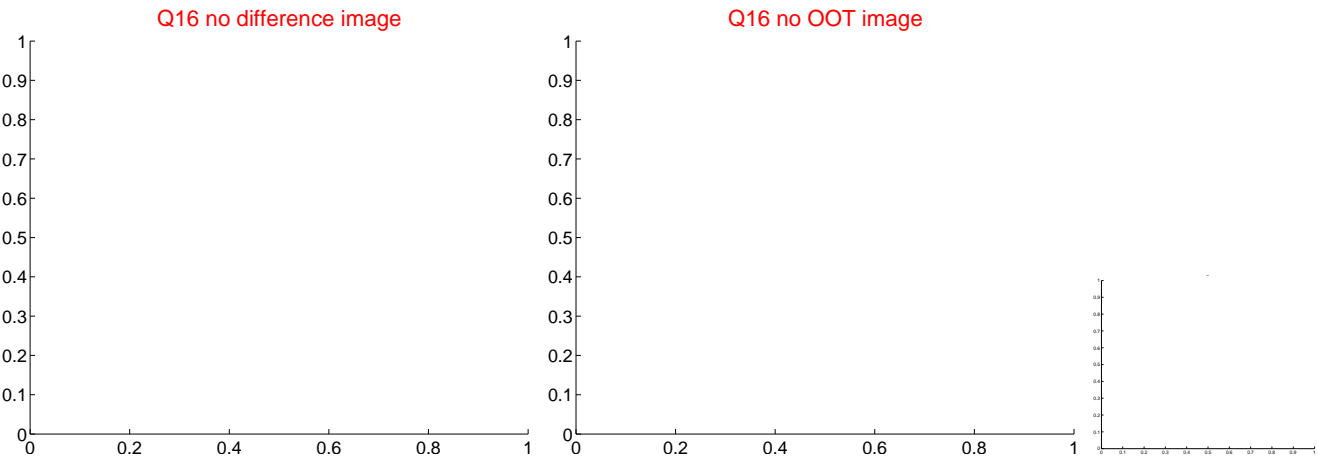
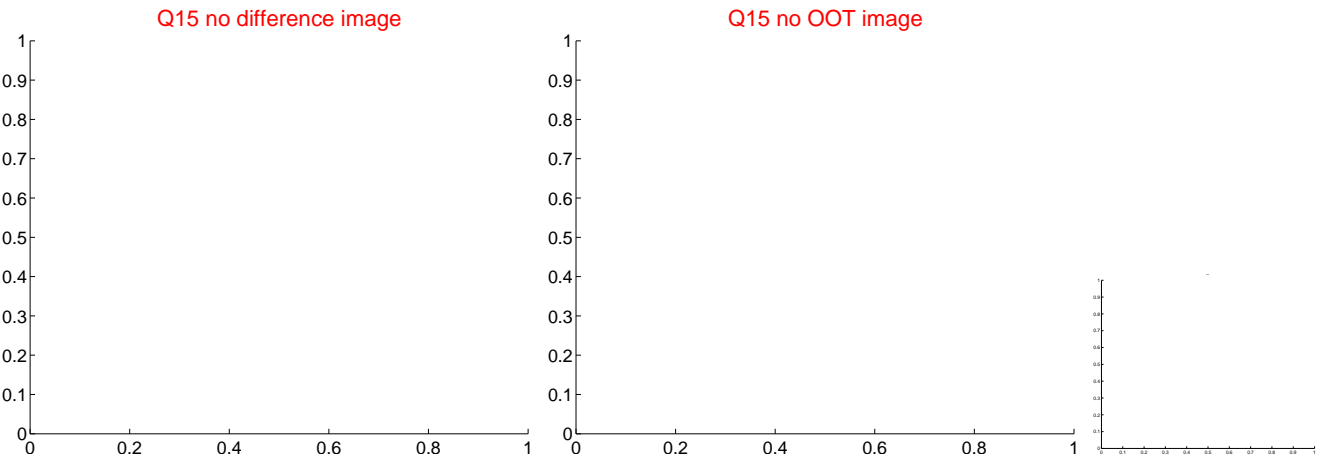
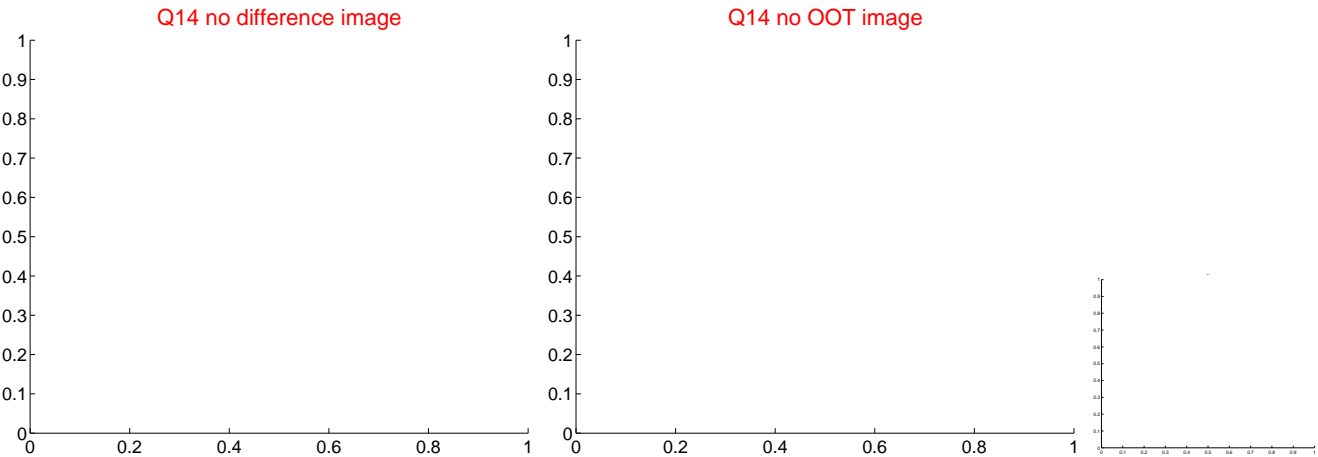
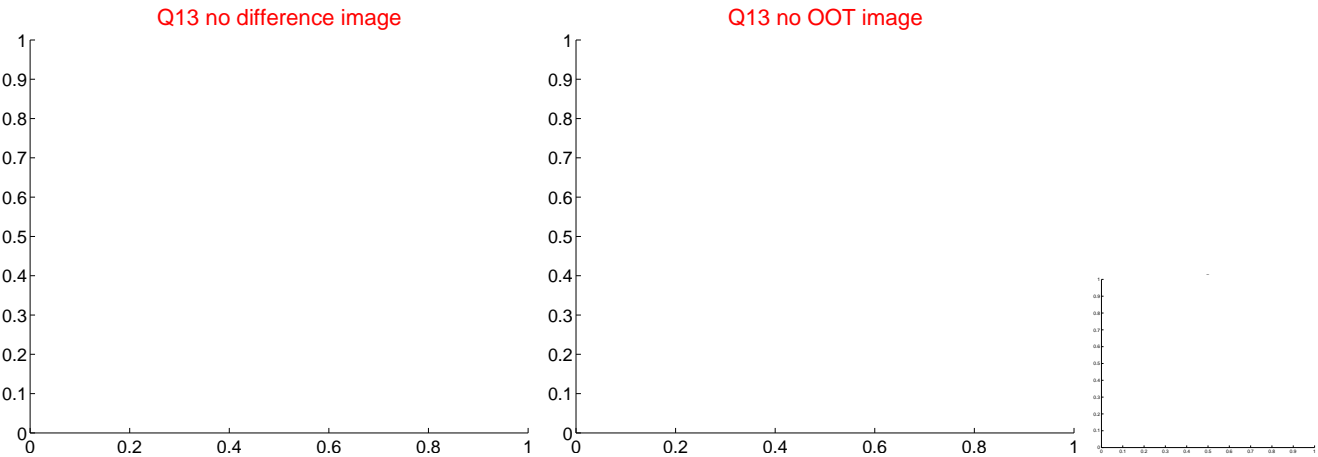
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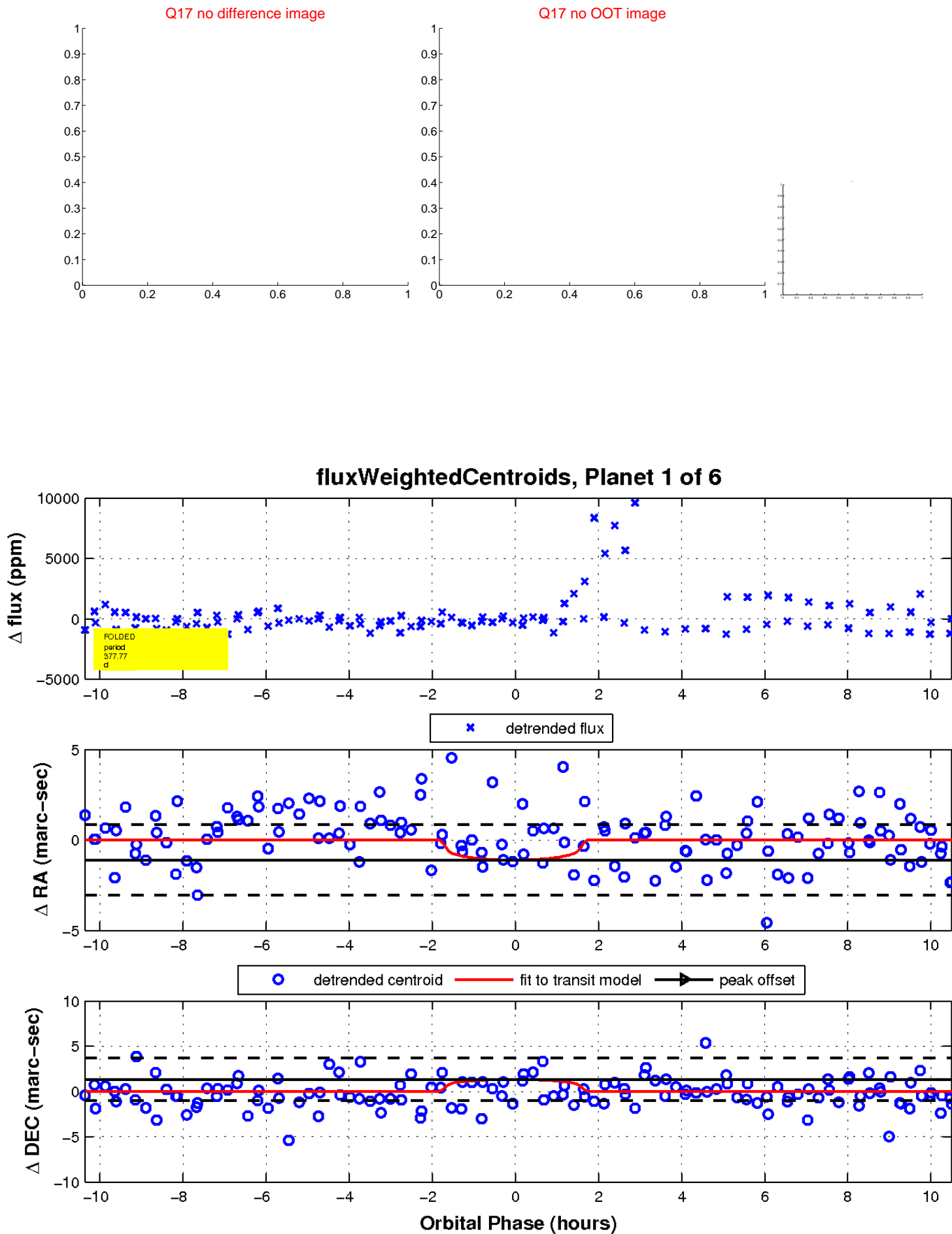
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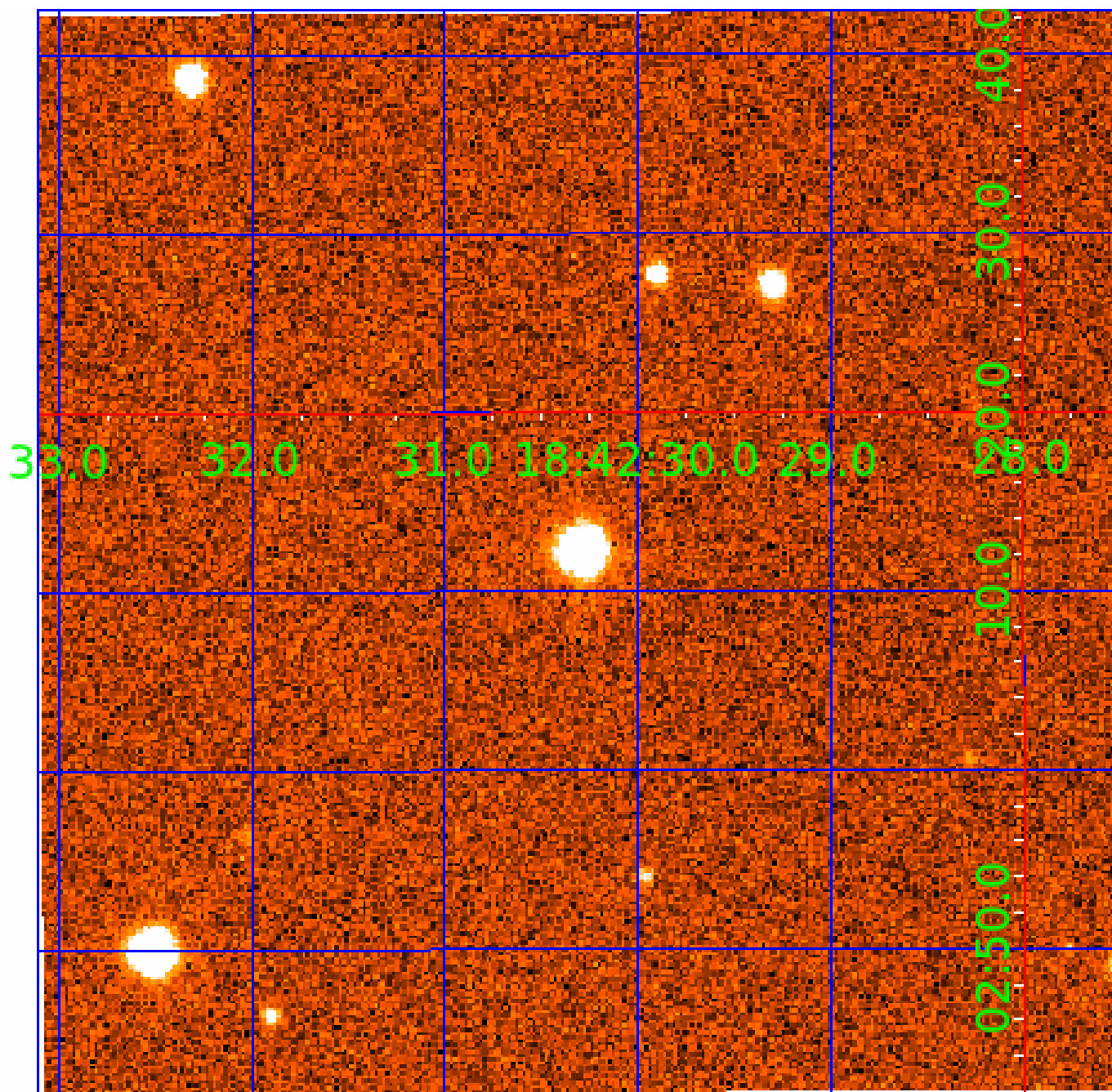


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008142547

Q1-17 DR25 TCE Parameters

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

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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008142547-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008142547-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008142547-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
008142547-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—HALO_GHOST
008142547-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—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.

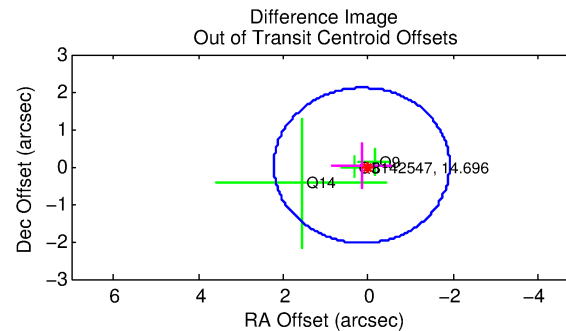
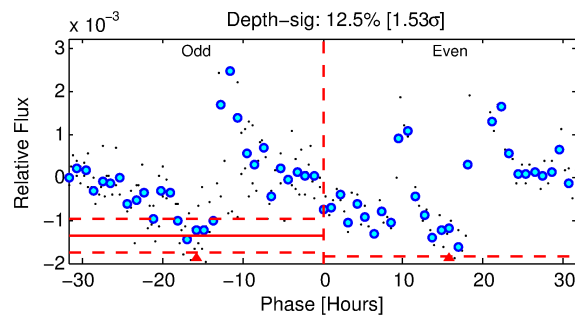
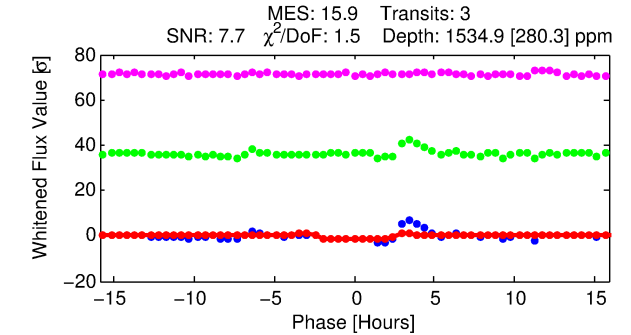
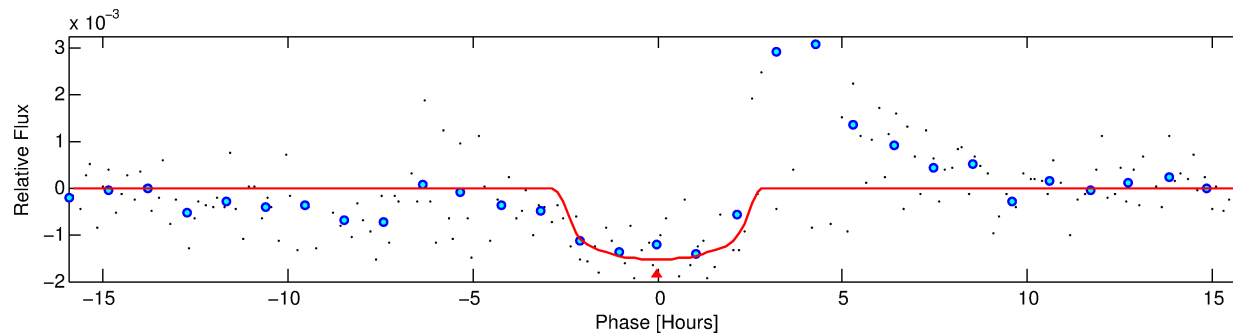
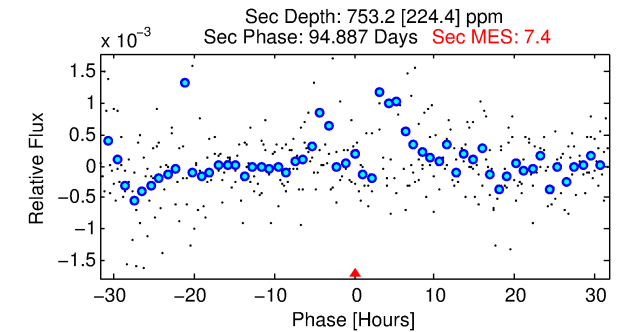
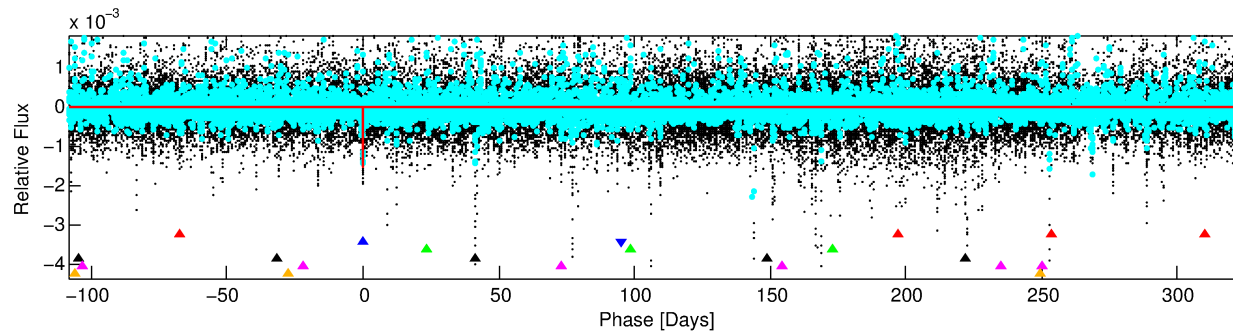
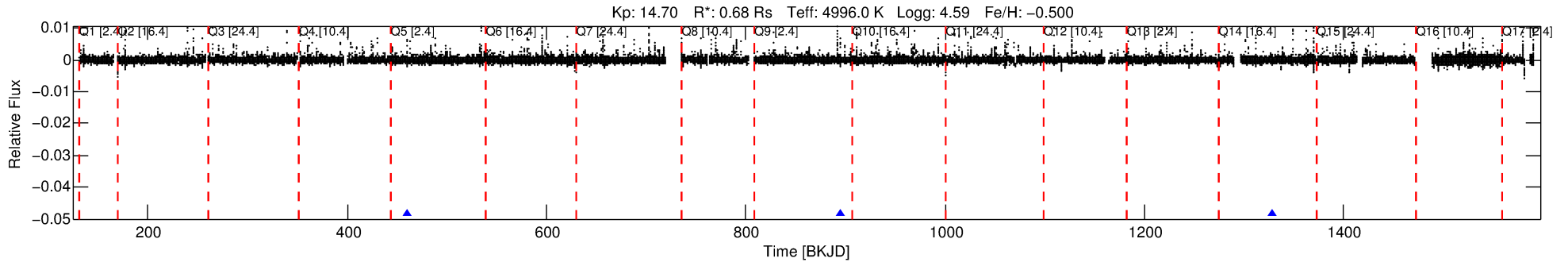
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008142547-02

No Significant Match Found

DV One-Page Summary

KIC: 8142547 Candidate: 2 of 6 Period: 434.106 d



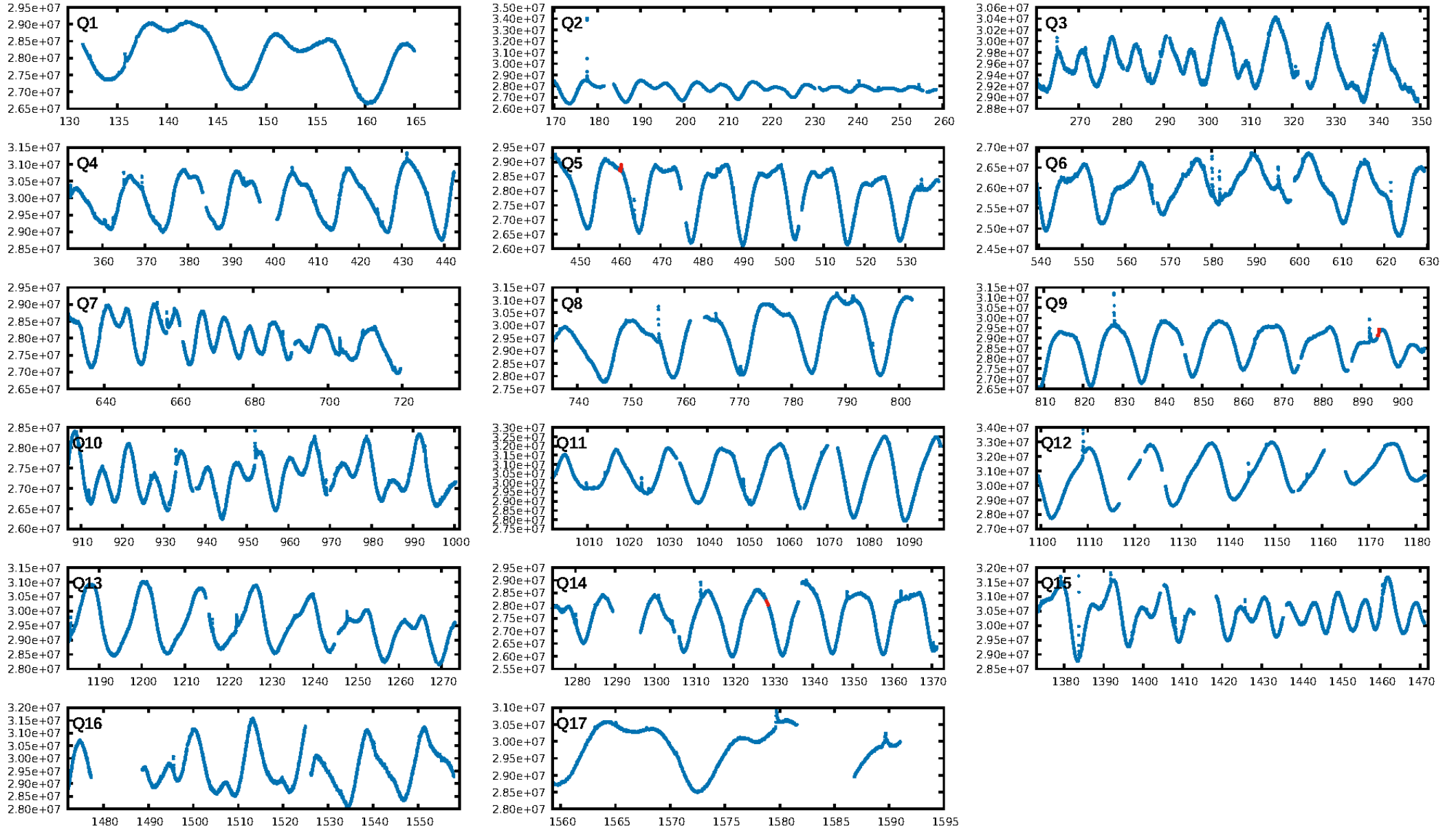
DV Fit Results:

Period = 434.10558 [0.00910] d
Epoch = 460.2316 [0.0097] BKJD
Rp/R* = 0.0378 [0.0313]
a/R* = 498.65 [1475.26]
b = 0.66 [2.52]
Seff = 0.27 [0.05]
Teq = 184 [8] K
Rp = 2.81 [2.34] Re
a = 0.9760 [0.0867] AU
Ag = 50126.85 [84446.71] [0.59σ]
Teffp = 4256 [1792] K [2.27σ]

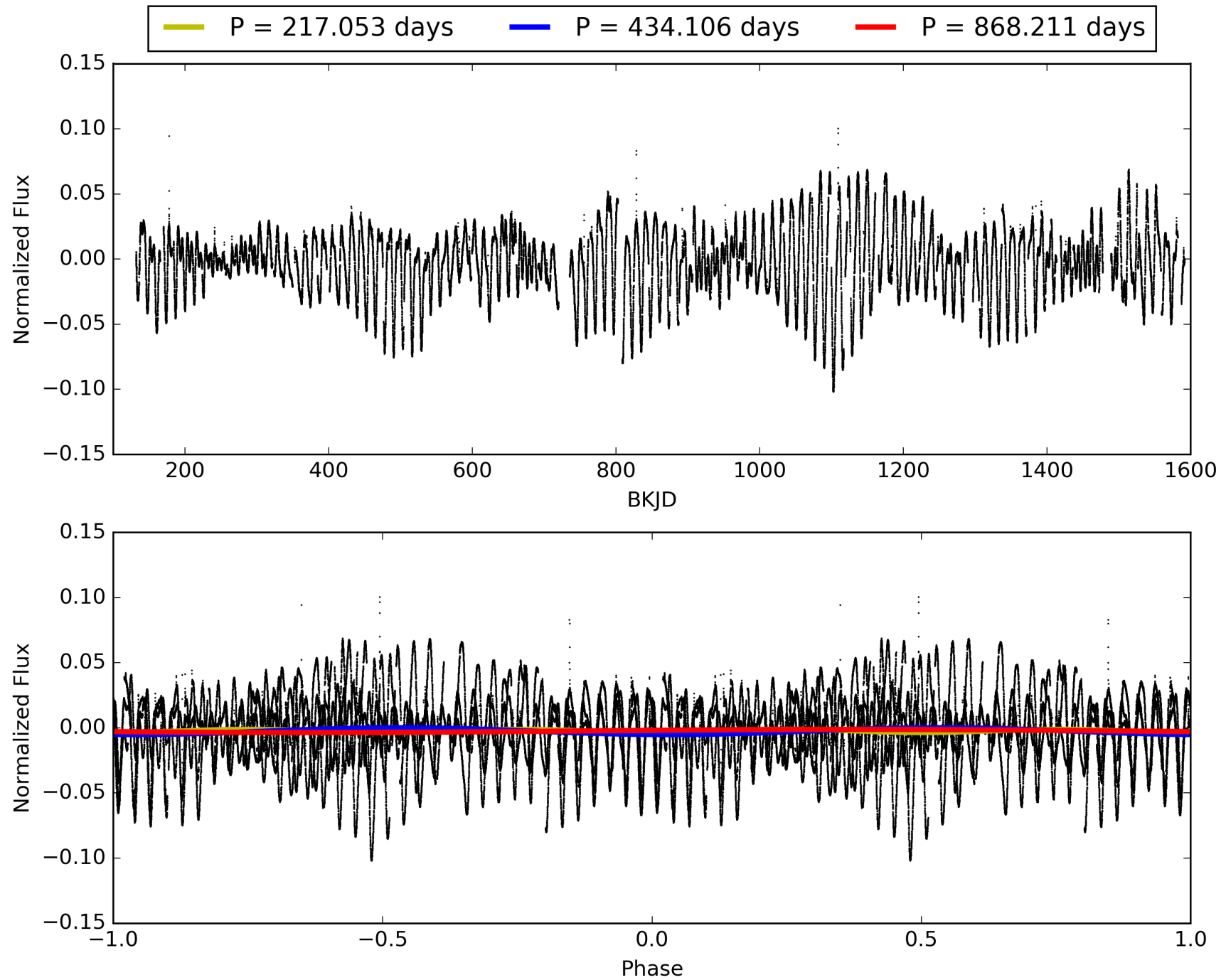
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [212.36σ]
LongPeriod-sig: 100.0% [145.73σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 32.4%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.993
Centroid-sig: 36.8%
Centroid-so: 1.585 arcsec [1.93σ]
OotOffset-rm: 0.150 arcsec [0.22σ]
KicOffset-rm: 0.131 arcsec [0.22σ]
OotOffset-st: 1/0/0/2 [3]
KicOffset-st: 1/0/0/2 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 008142547-02, PDC Light Curves

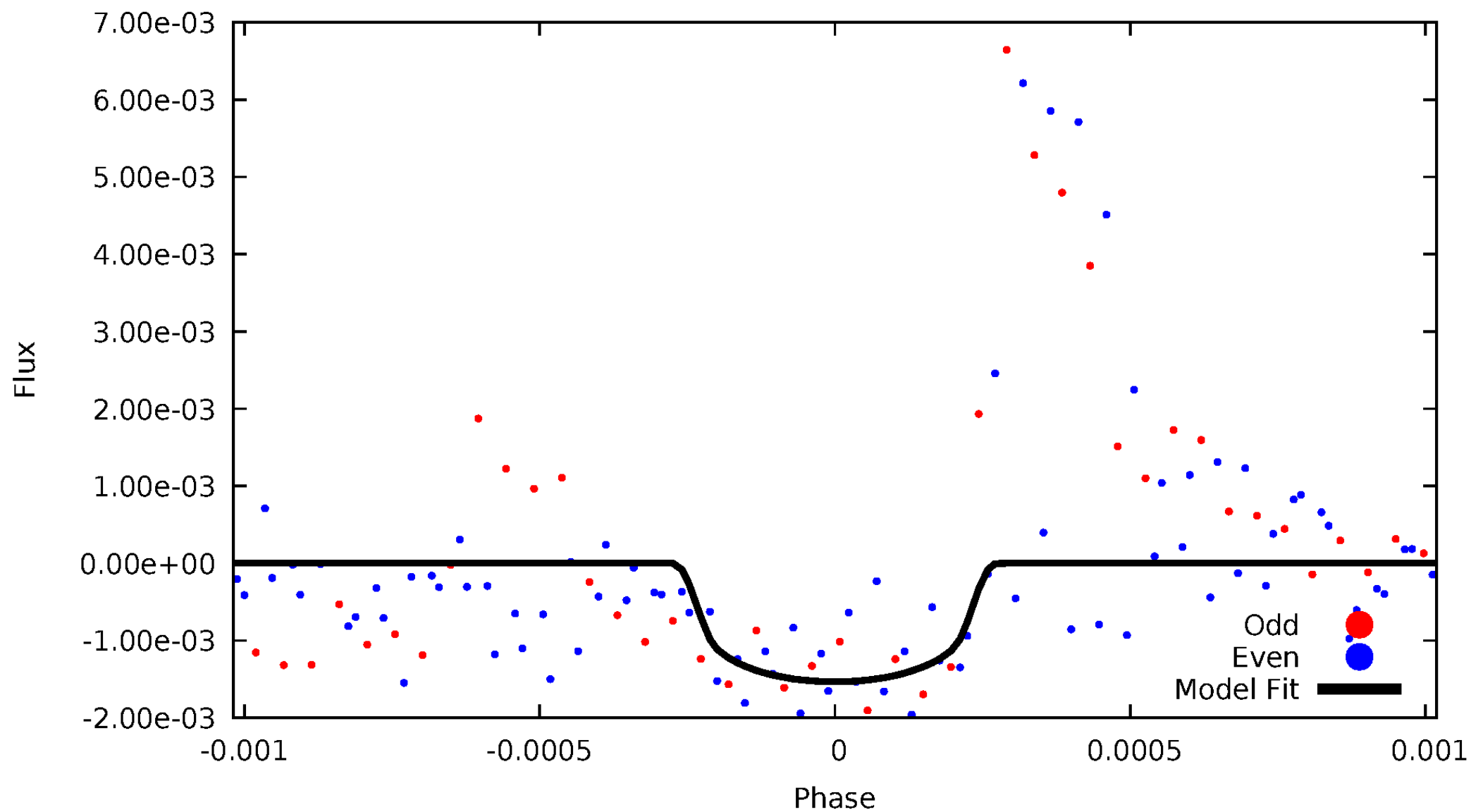


TCE 008142547-02



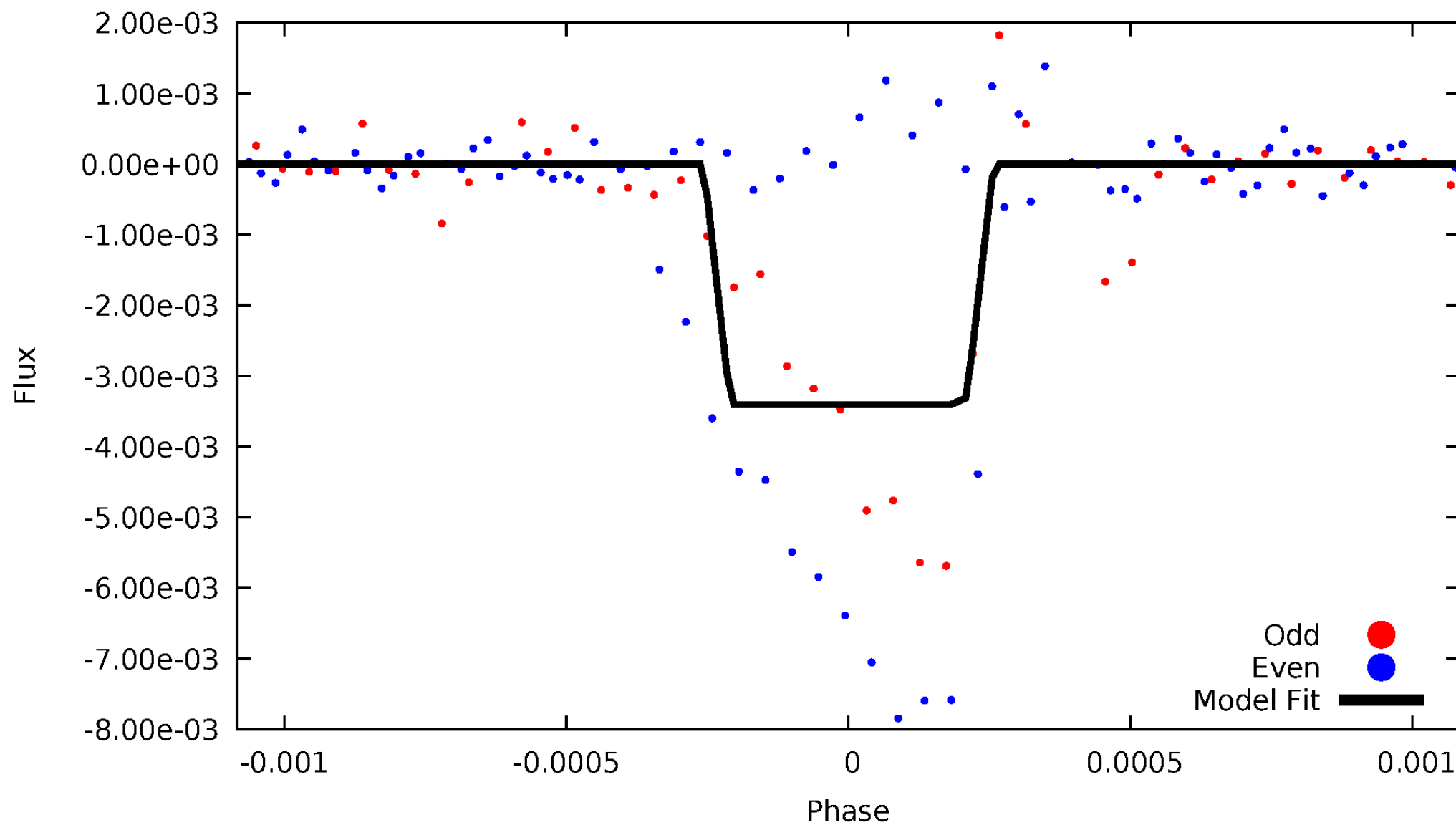
DV Odd/Even

TCE 008142547-02



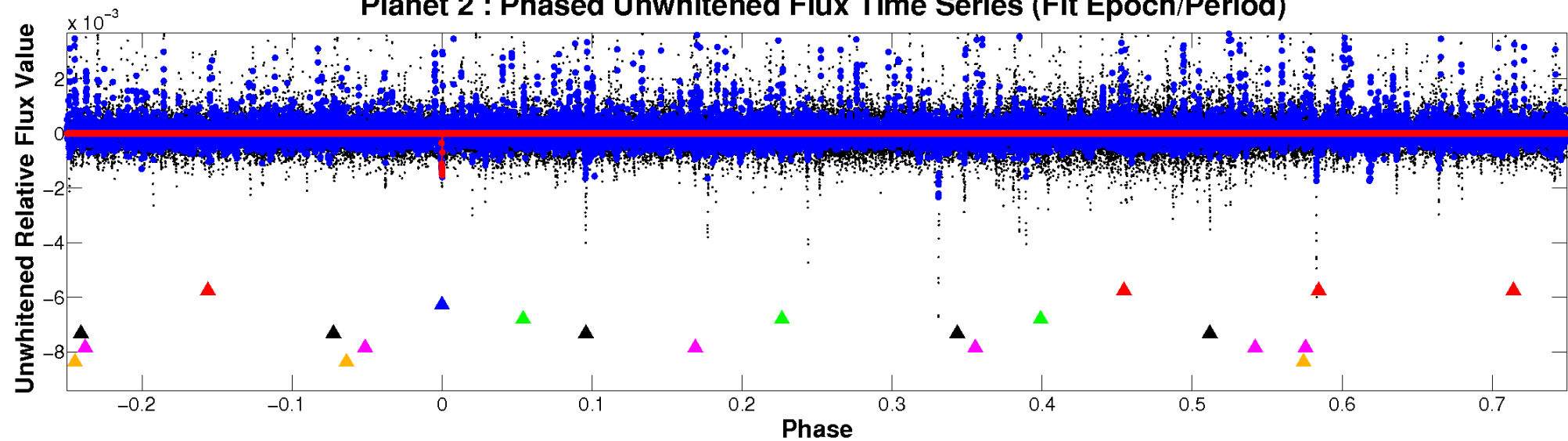
ALT Odd/Even

TCE 008142547-02

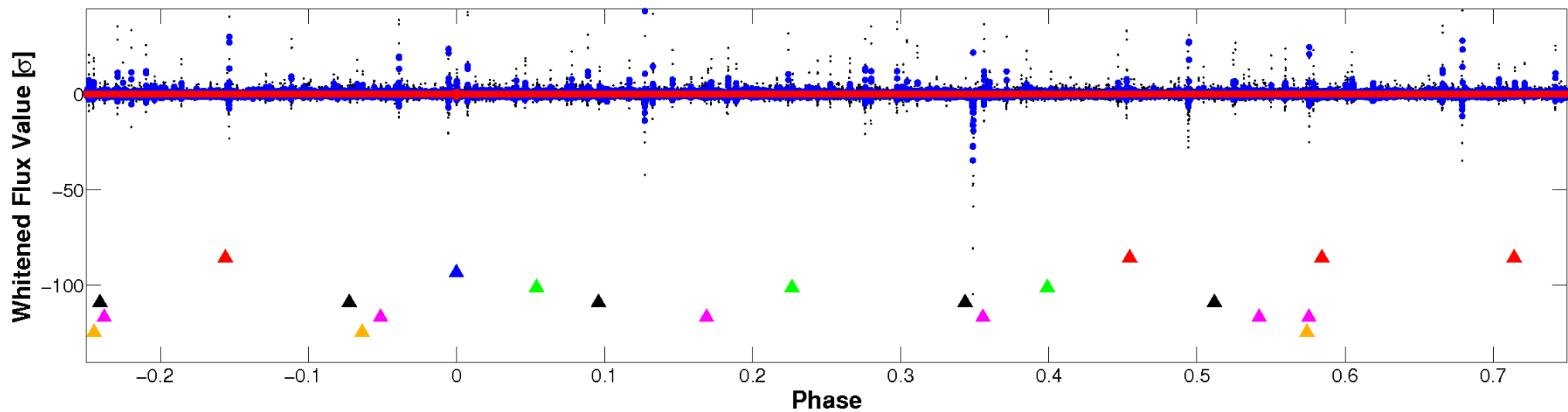


Non-Whitened Vs. Whitened Light Curve

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

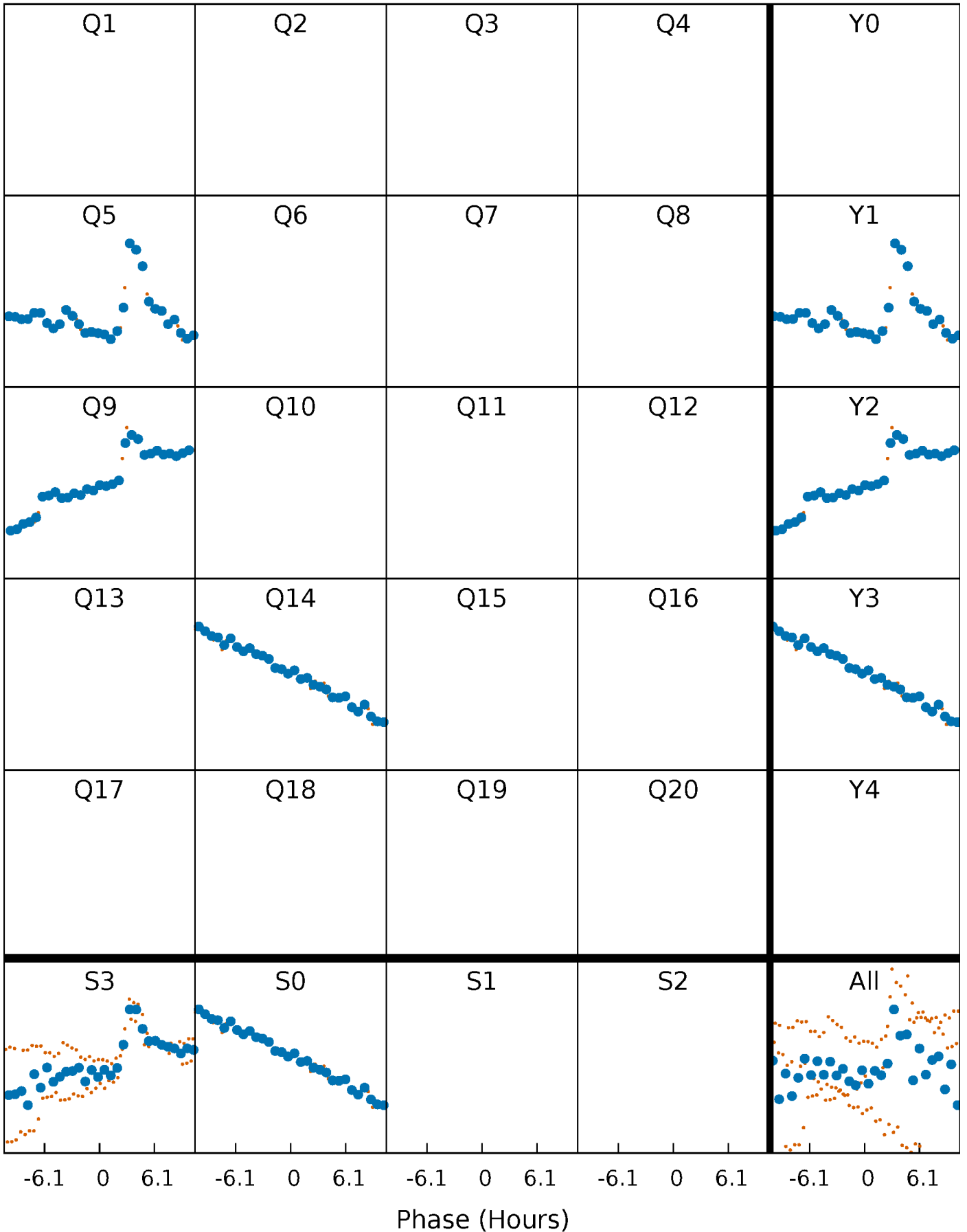


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



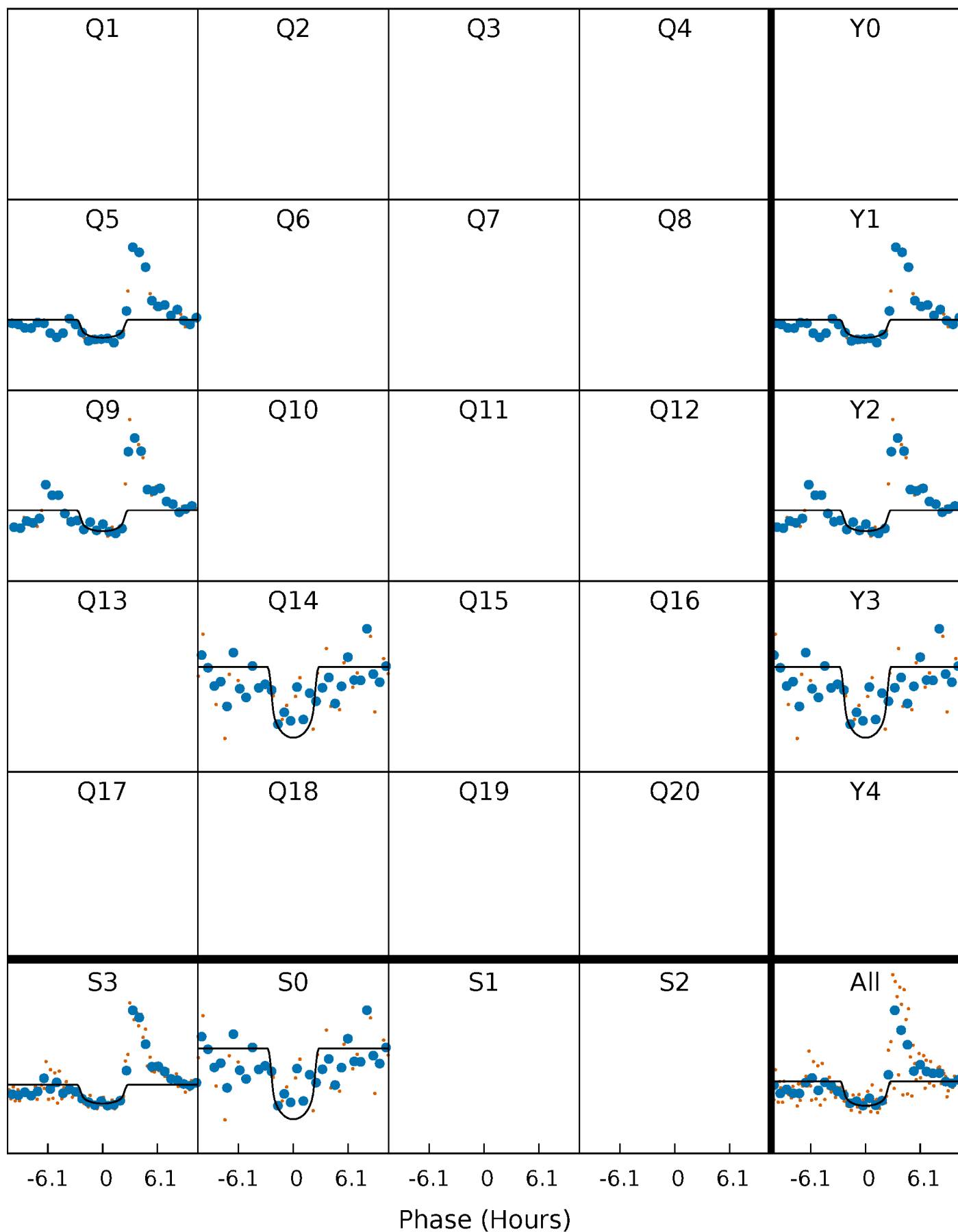
PDC Quarter-Phased Transit Curves

TCE 008142547-02 $P=434.105578$ Days $T_0=460.231558$ (BKJD)



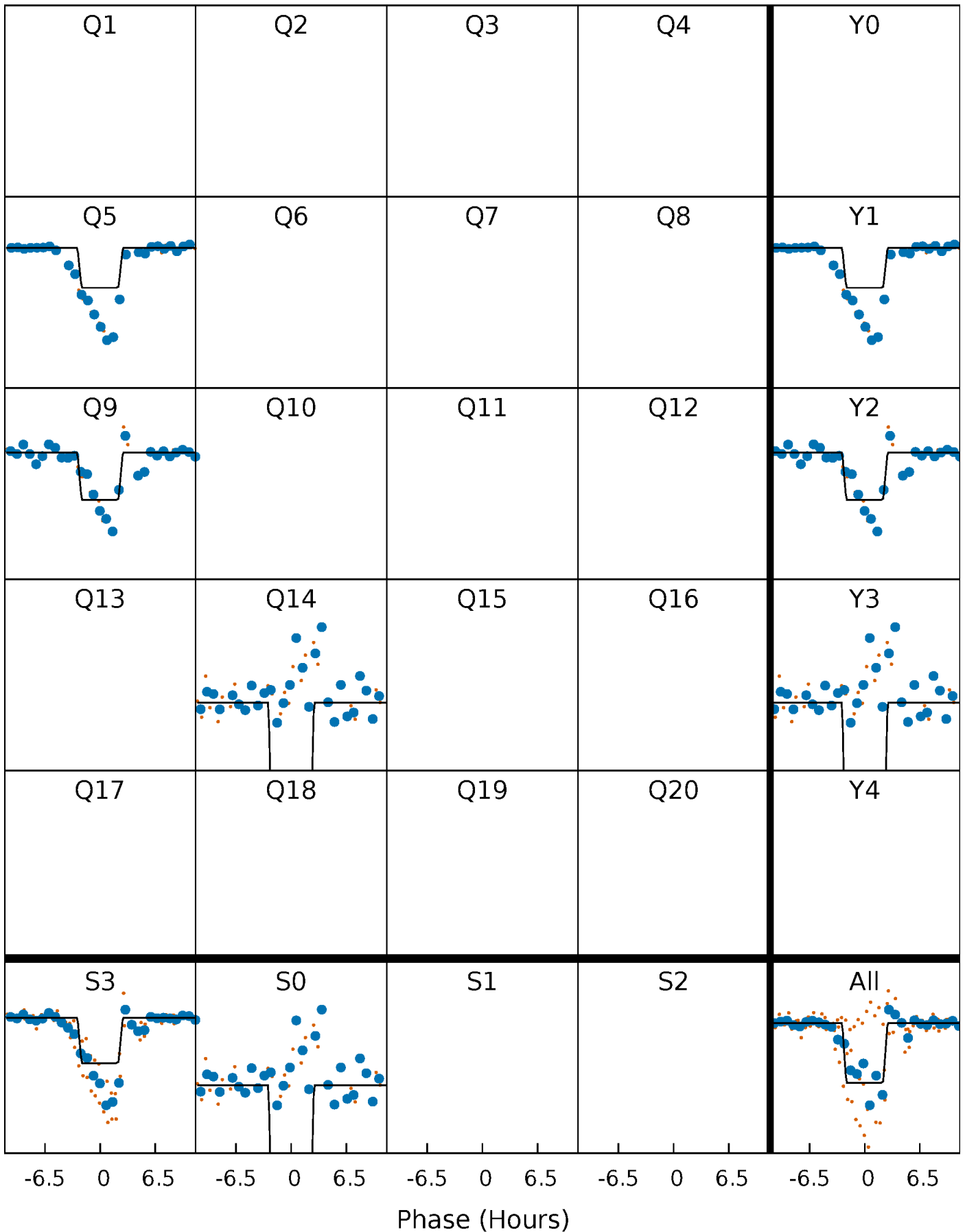
DV Quarter-Phased Transit Curves

TCE 008142547-02 $P=434.105578$ Days $T_0=460.231558$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

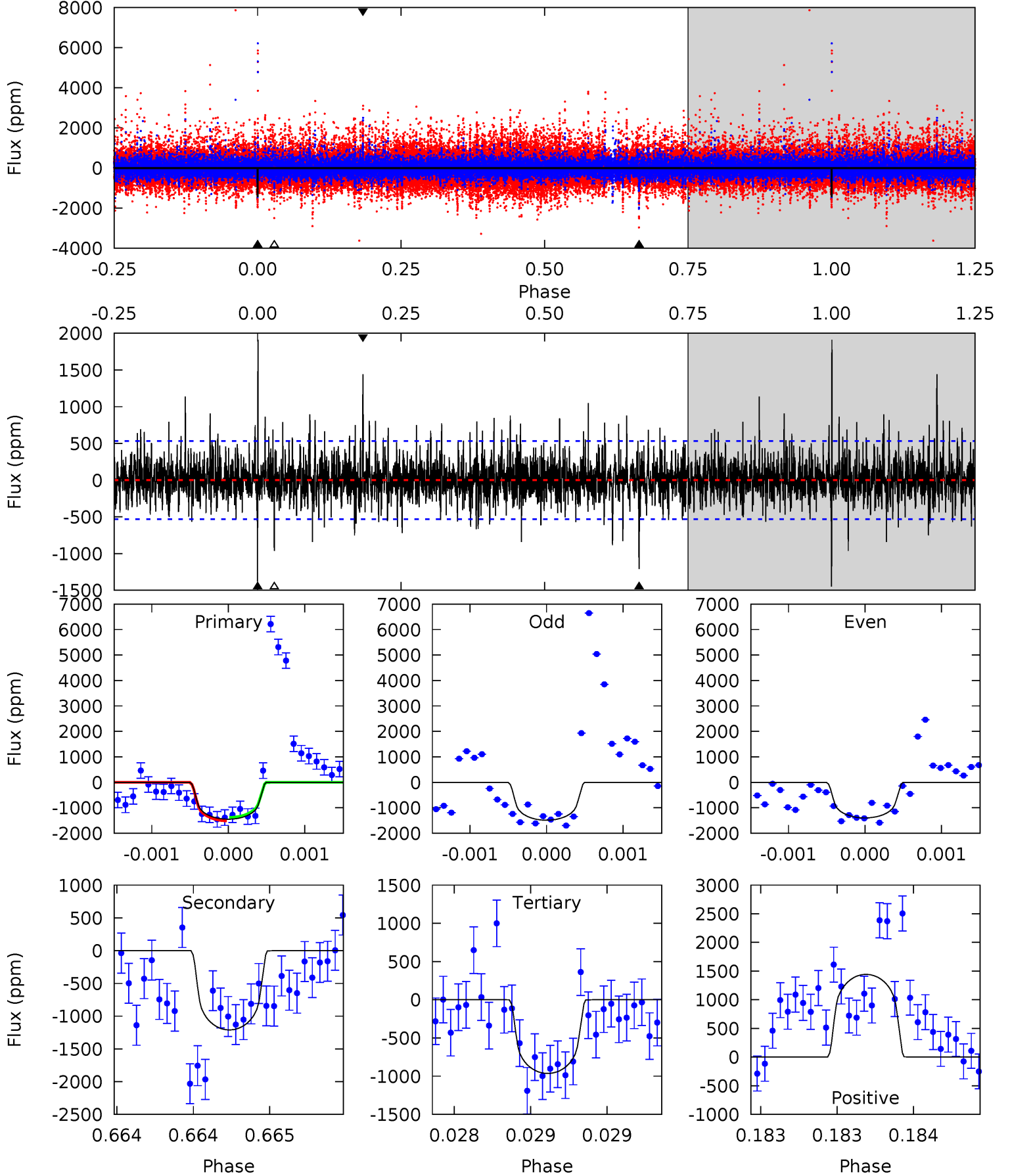
TCE 008142547-02 P=434.097360 Days $T_0=460.249687$ (BKJD)



DV Model-Shift Uniqueness Test

008142547-02, P = 434.105578 Days, E = 26.125980 Days

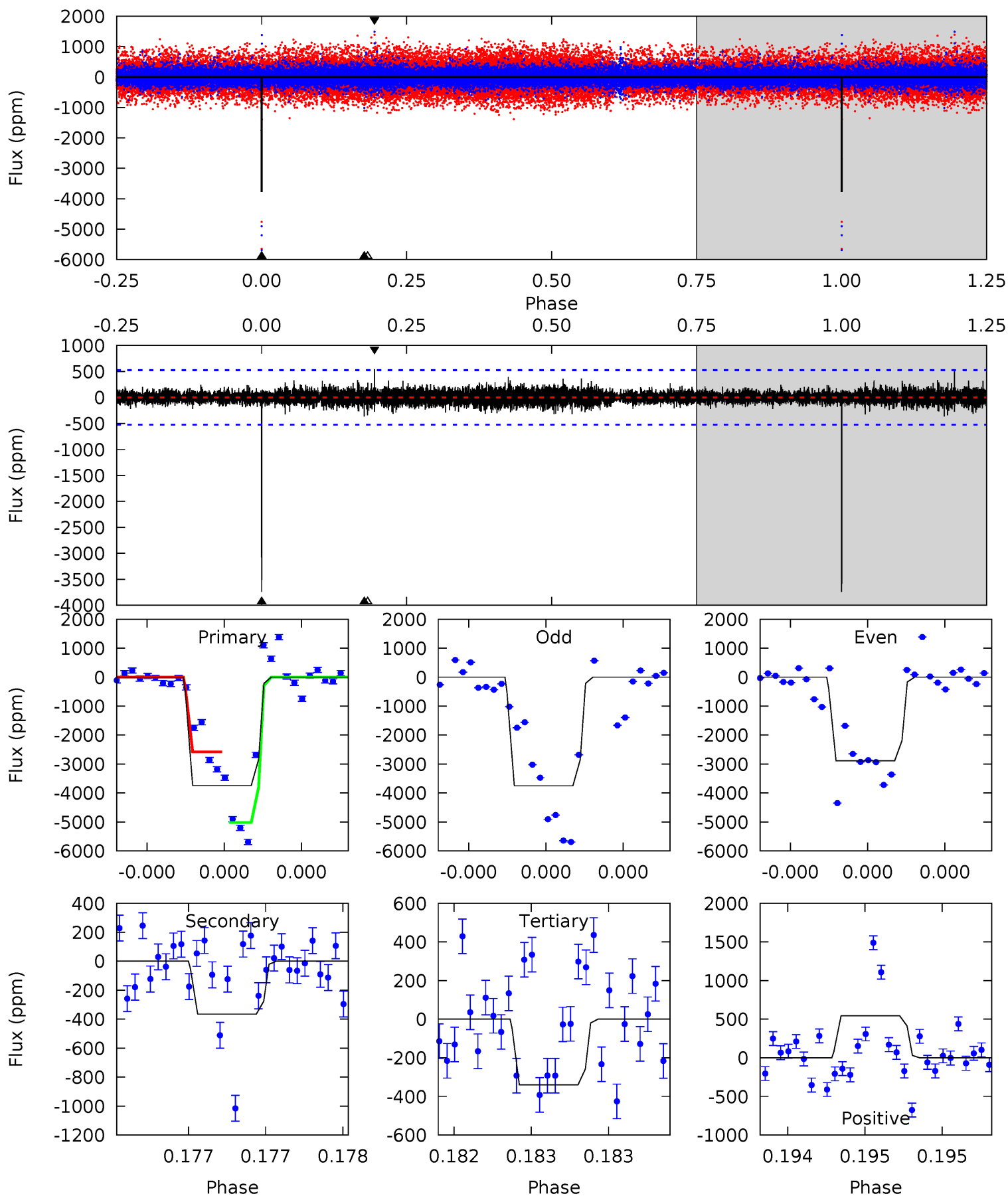
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	12.6	10.1	15.1	5.56	3.46	2.23	5.05	0.06	2.58	-2.42	0.27	0.96	0.57	0.71



Alt Model-Shift Uniqueness Test

008142547-02, P = 434.097360 Days, E = 26.152327 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.7	3.87	3.61	5.76	5.57	3.48	0.77	36.1	33.9	0.26	-1.90	7.07	0.88	0.13	0



Stellar Parameters For KIC 008142547

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4996^{+148}_{-148}	$4.591^{+0.072}_{-0.048}$	$-0.500^{+0.300}_{-0.300}$	$0.680^{+0.071}_{-0.065}$	$0.657^{+0.090}_{-0.036}$	$2.948^{+0.878}_{-0.523}$
	+3%/-3%	+2%/-1%	+60%/-60%	+10%/-10%	+14%/-5%	+30%/-18%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008142547-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1210 ± 96	$3.15^{+2.05}_{-1.93}$	256^{+10}_{-9}	4629^{+2635}_{-788}	$64954^{+372660}_{-41245}$
Alt.	-365 ± 94	$4.38^{+2.36}_{-2.11}$	256^{+9}_{-10}	3303^{+849}_{-385}	9693^{+25374}_{-5680}

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 $A_{obs} \gg 1.0$

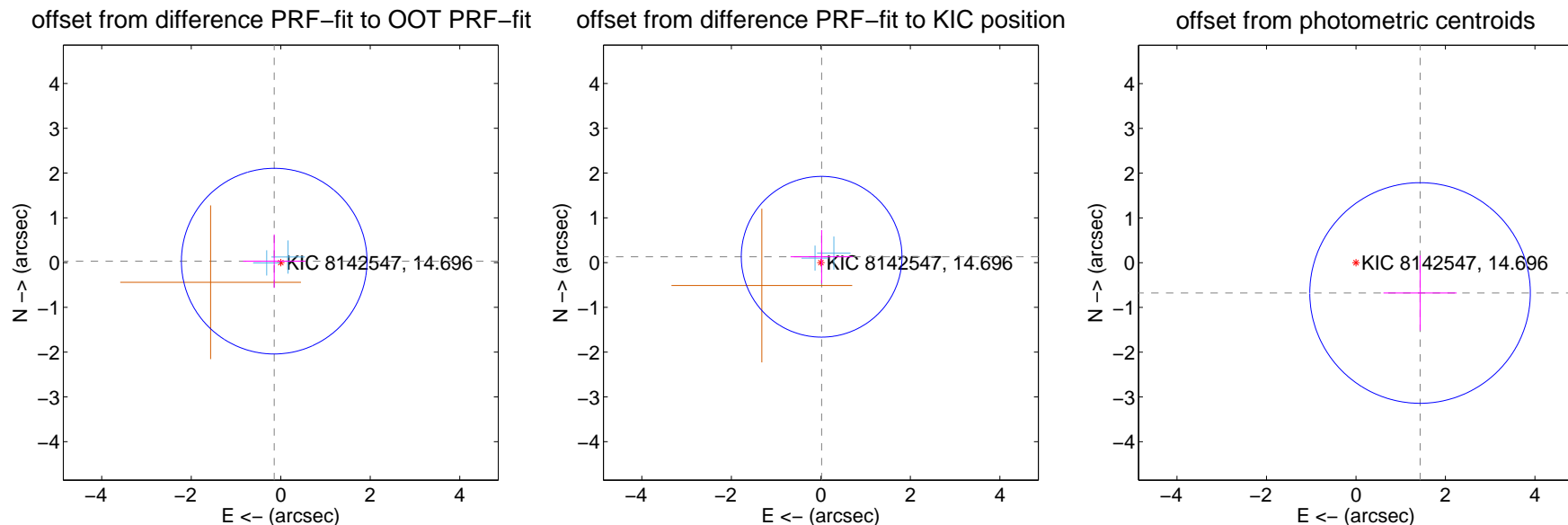
DV Centroid Data

Supplemental centroid analysis for 008142547-02. Kepler magnitude: 14.70. Transit SNR 7.66

There are 2 quarters with good PRF difference image offsets

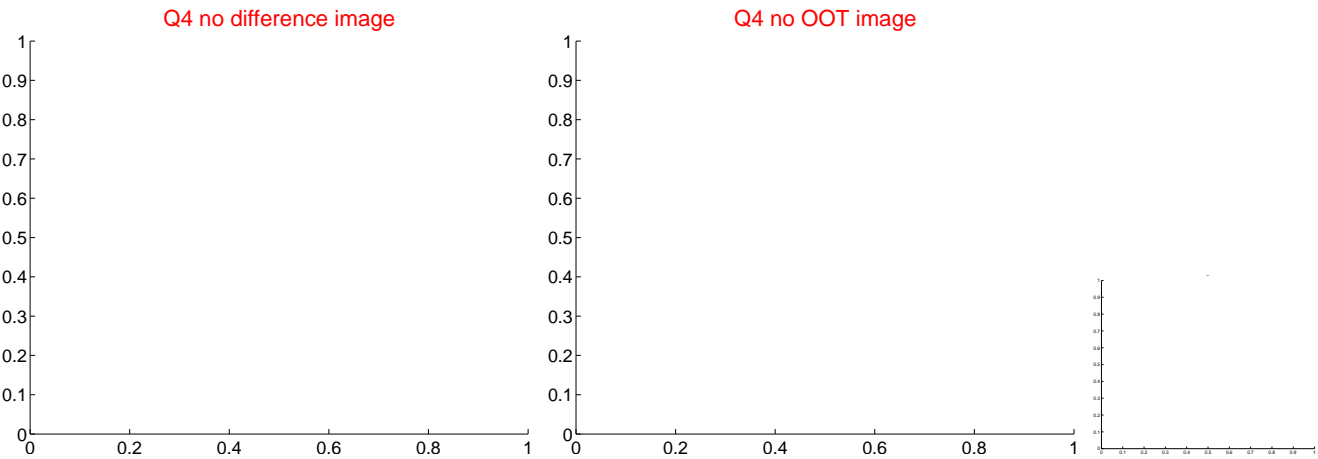
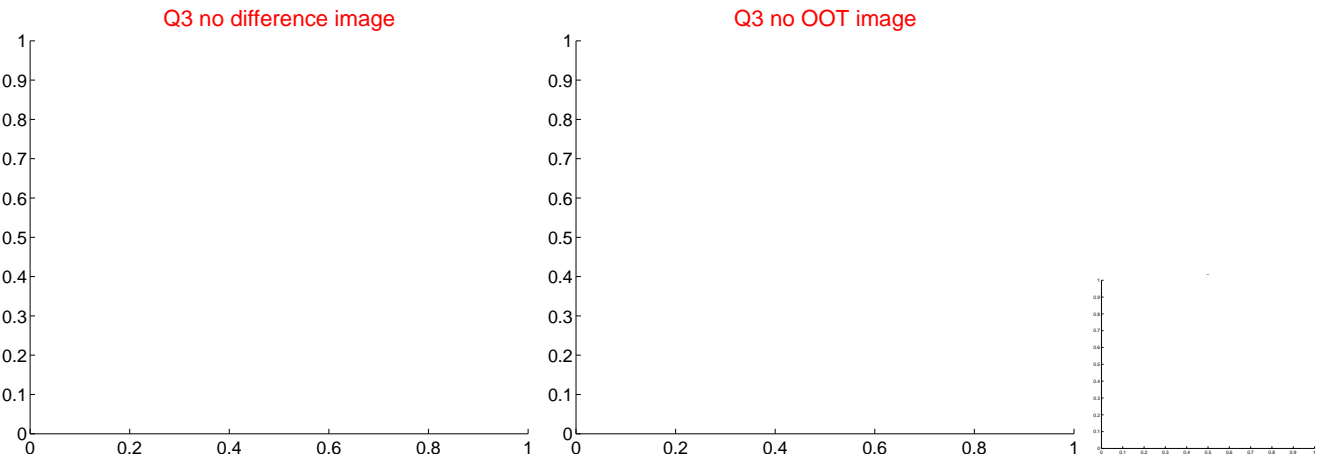
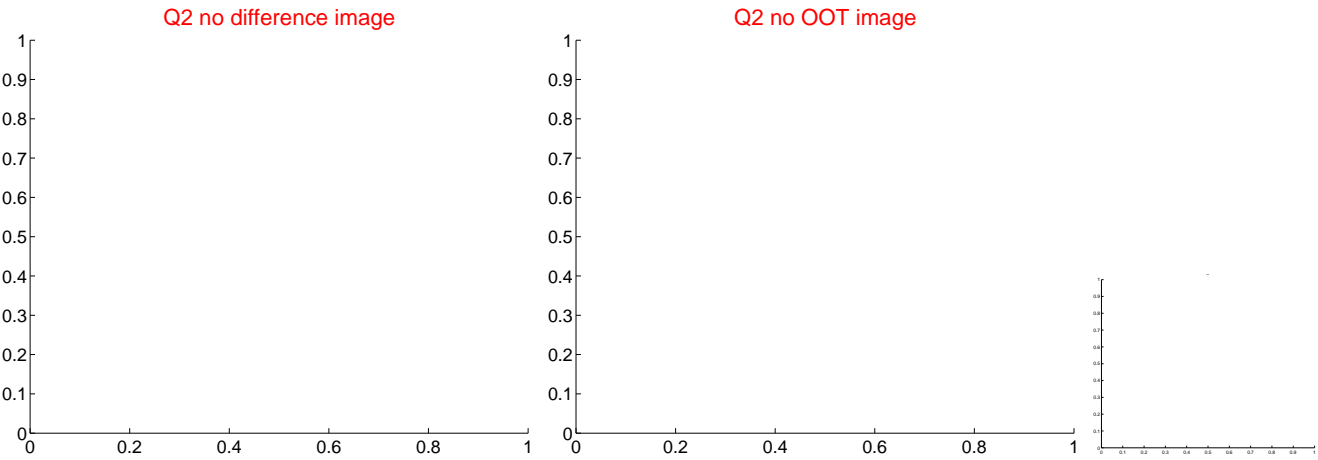
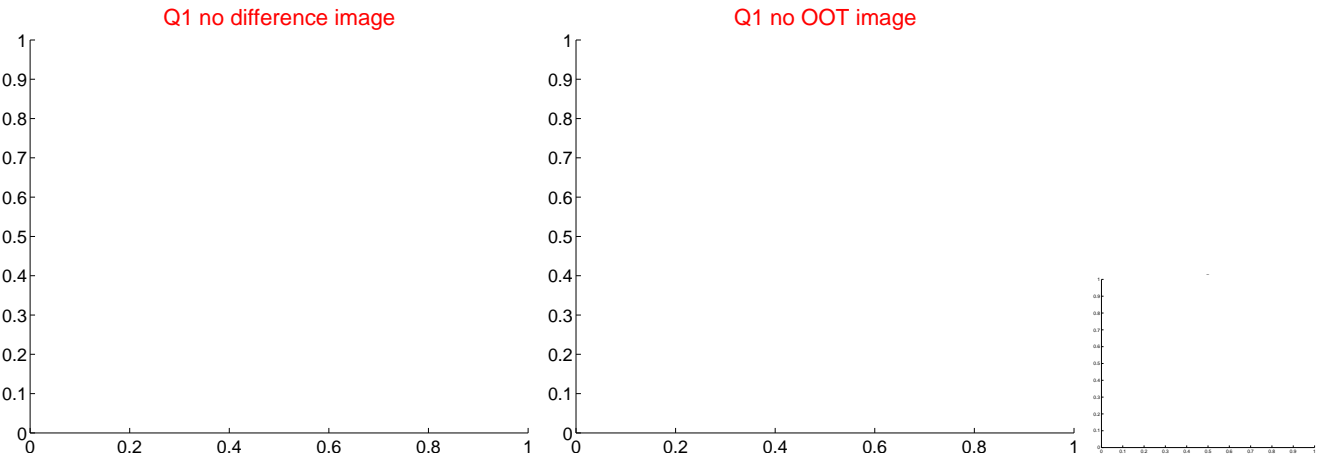
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.150 ± 0.691	0.22	0.146 ± 0.696	0.032 ± 0.597
PRF-fit source offset from KIC position	0.131 ± 0.598	0.22	-0.017 ± 0.696	0.130 ± 0.597
photometric centroid source offset	1.59 ± 0.82	1.93	-1.43 ± 0.82	-0.68 ± 0.84

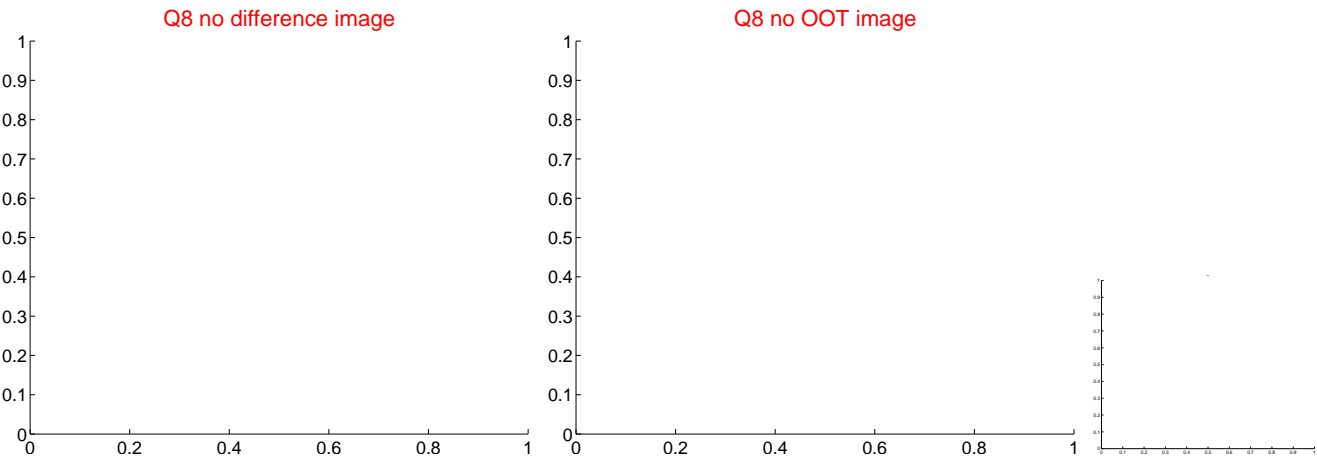
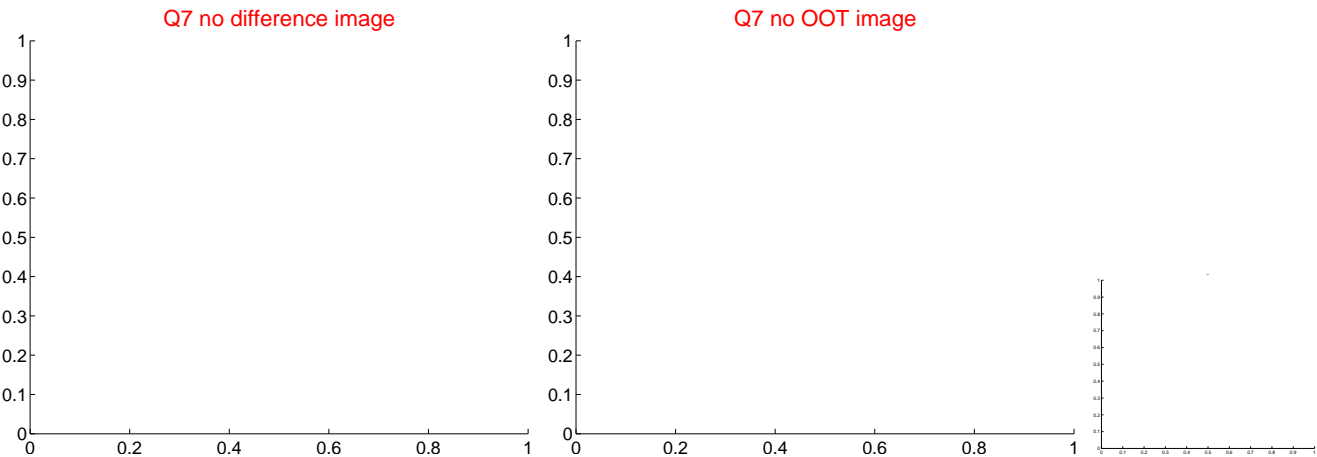
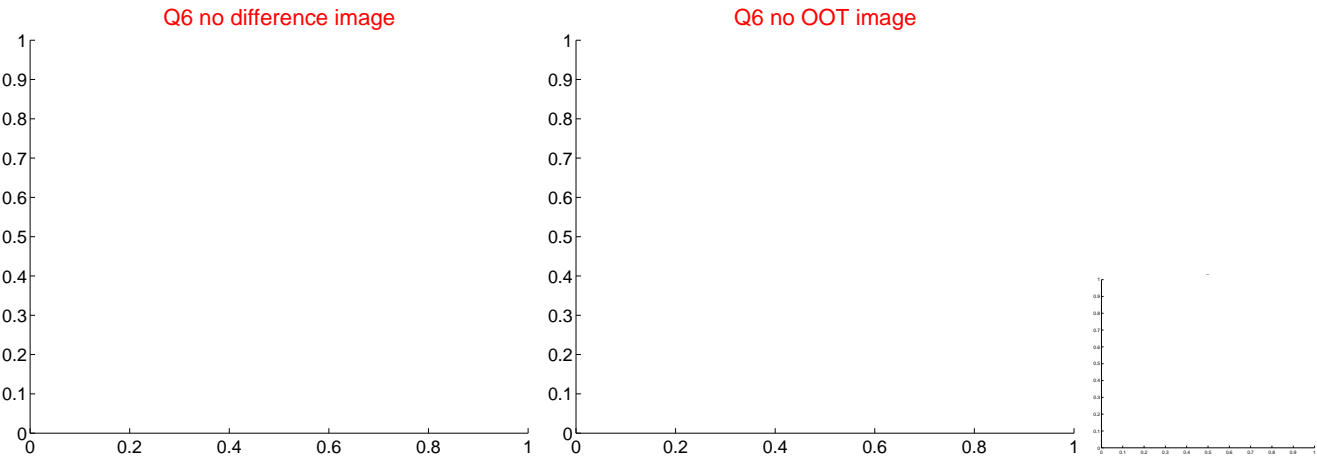
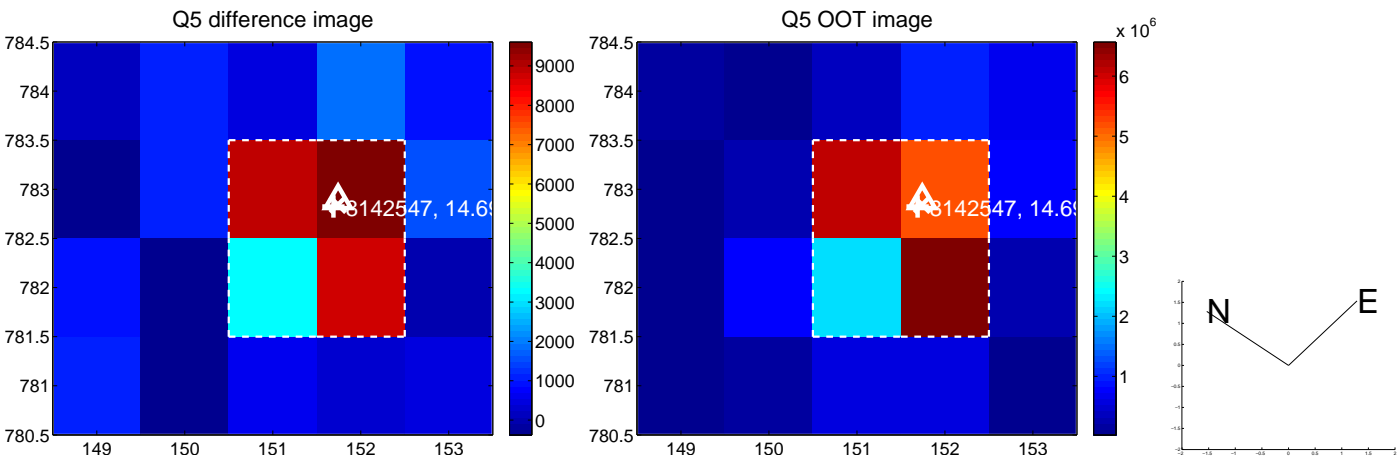


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

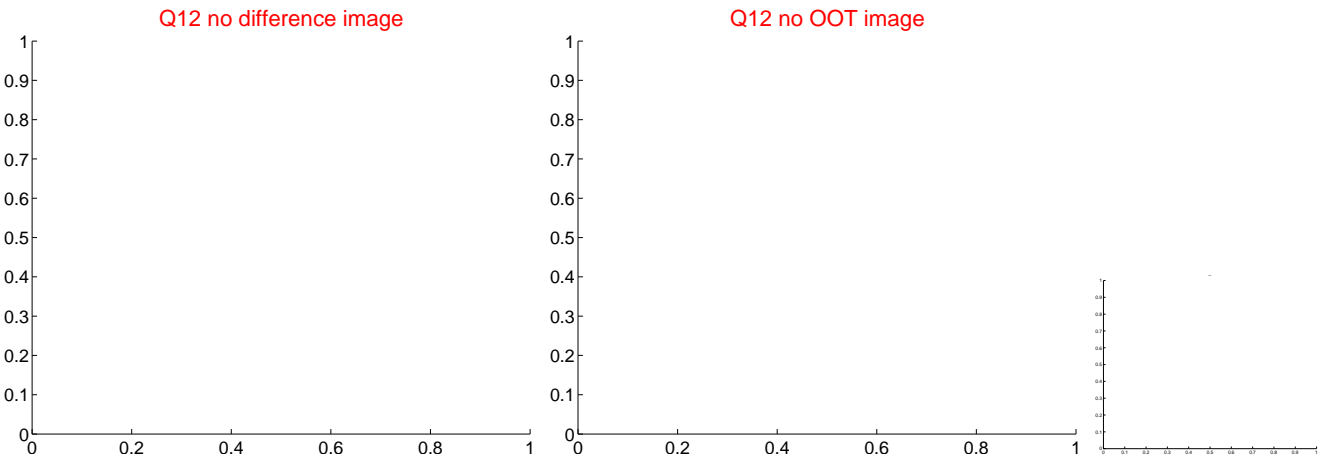
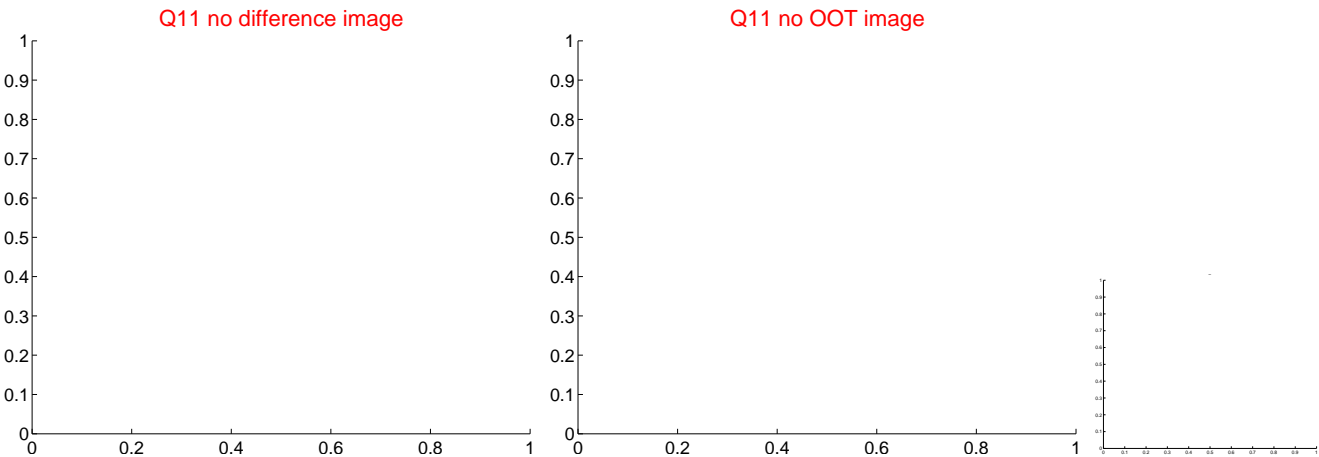
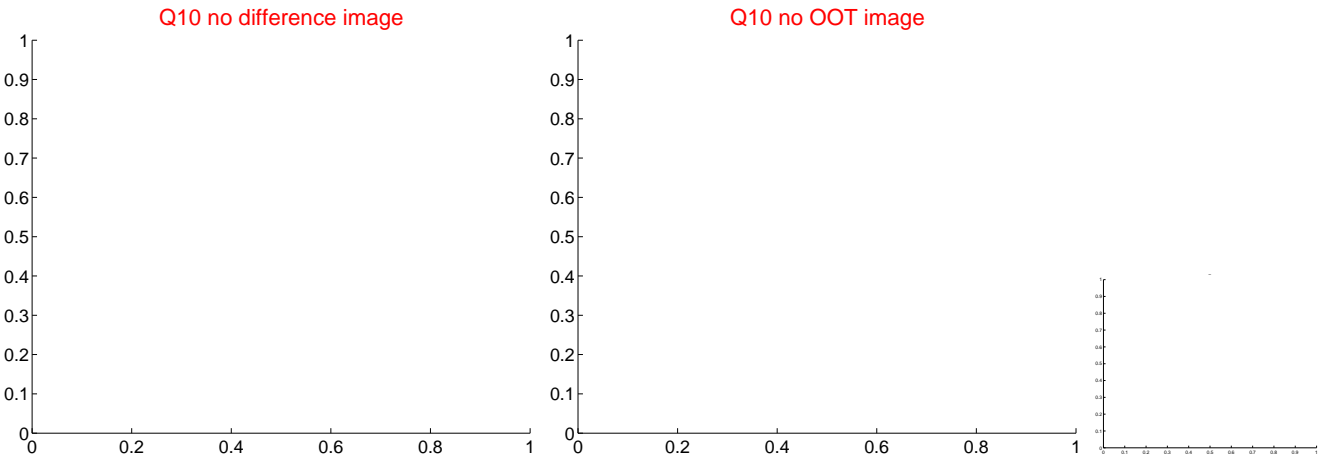
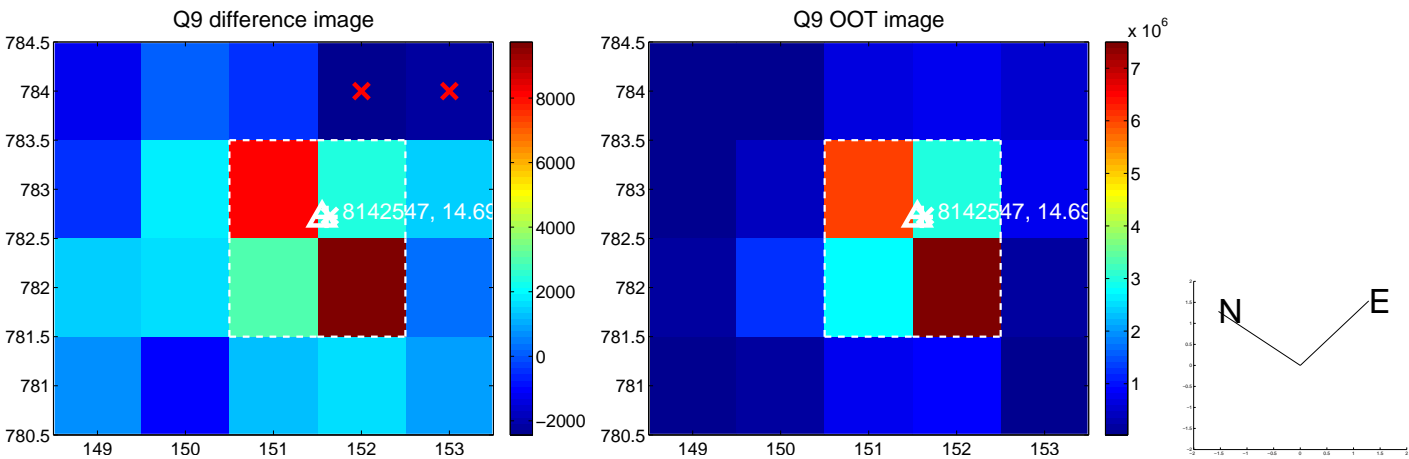
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



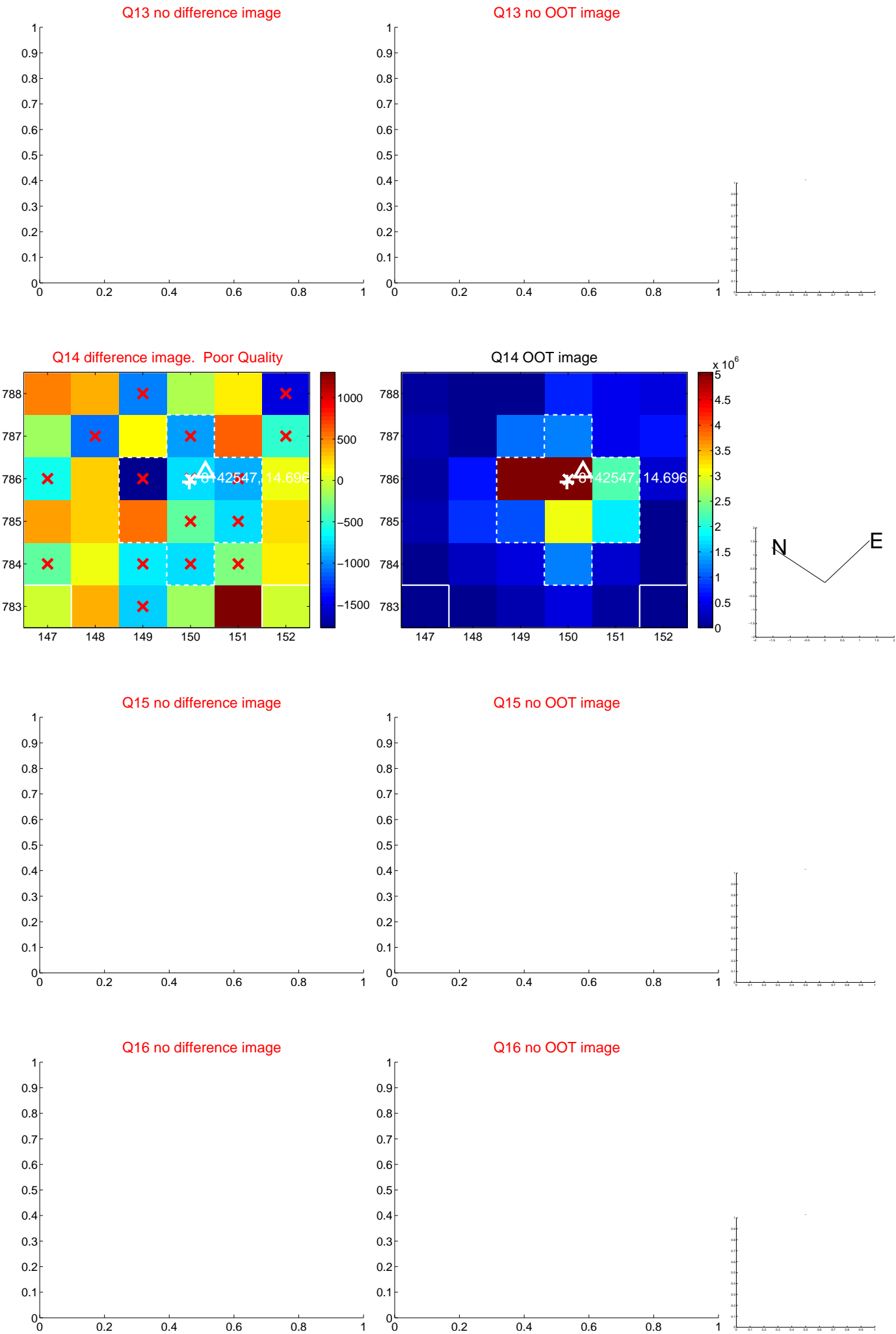
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



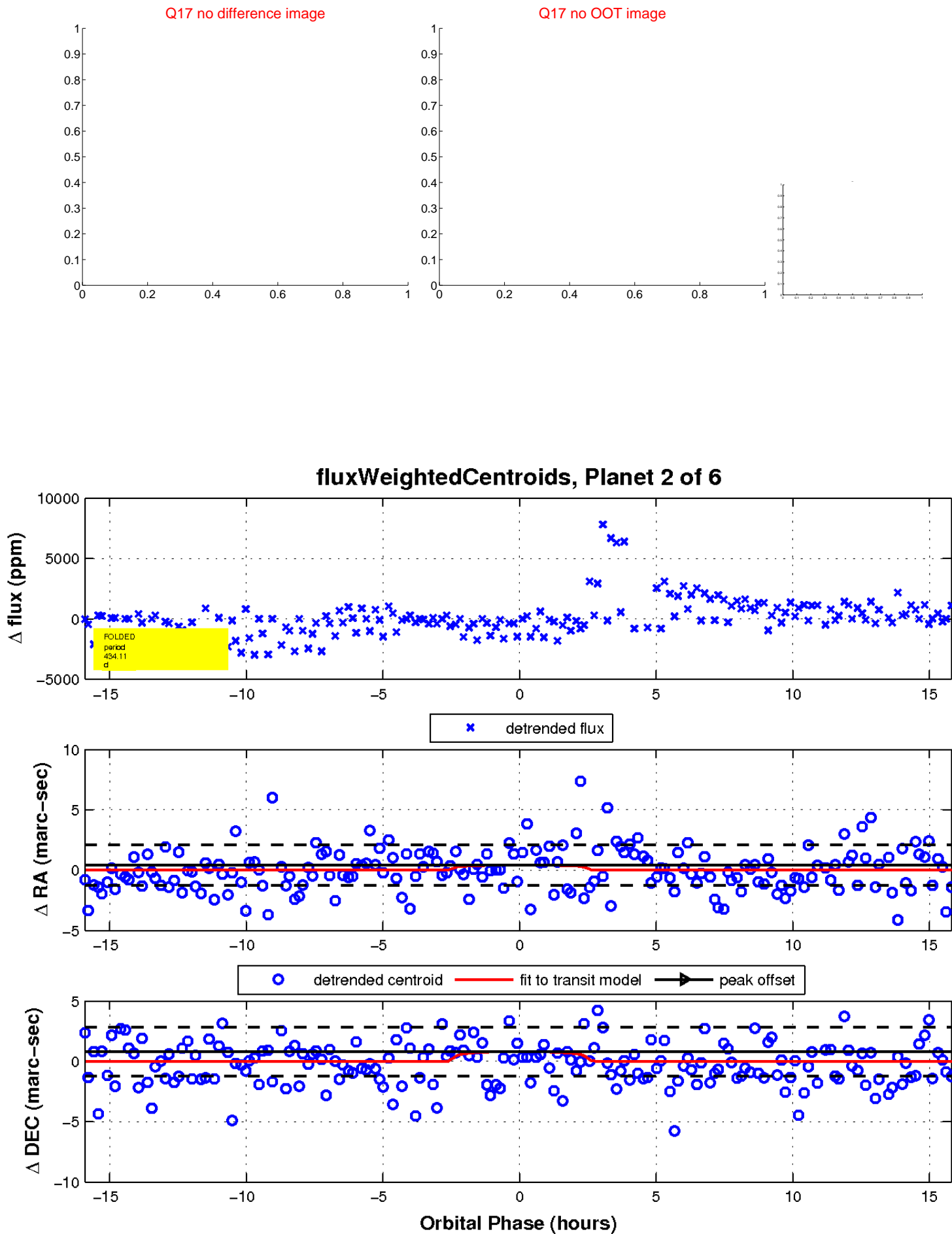
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

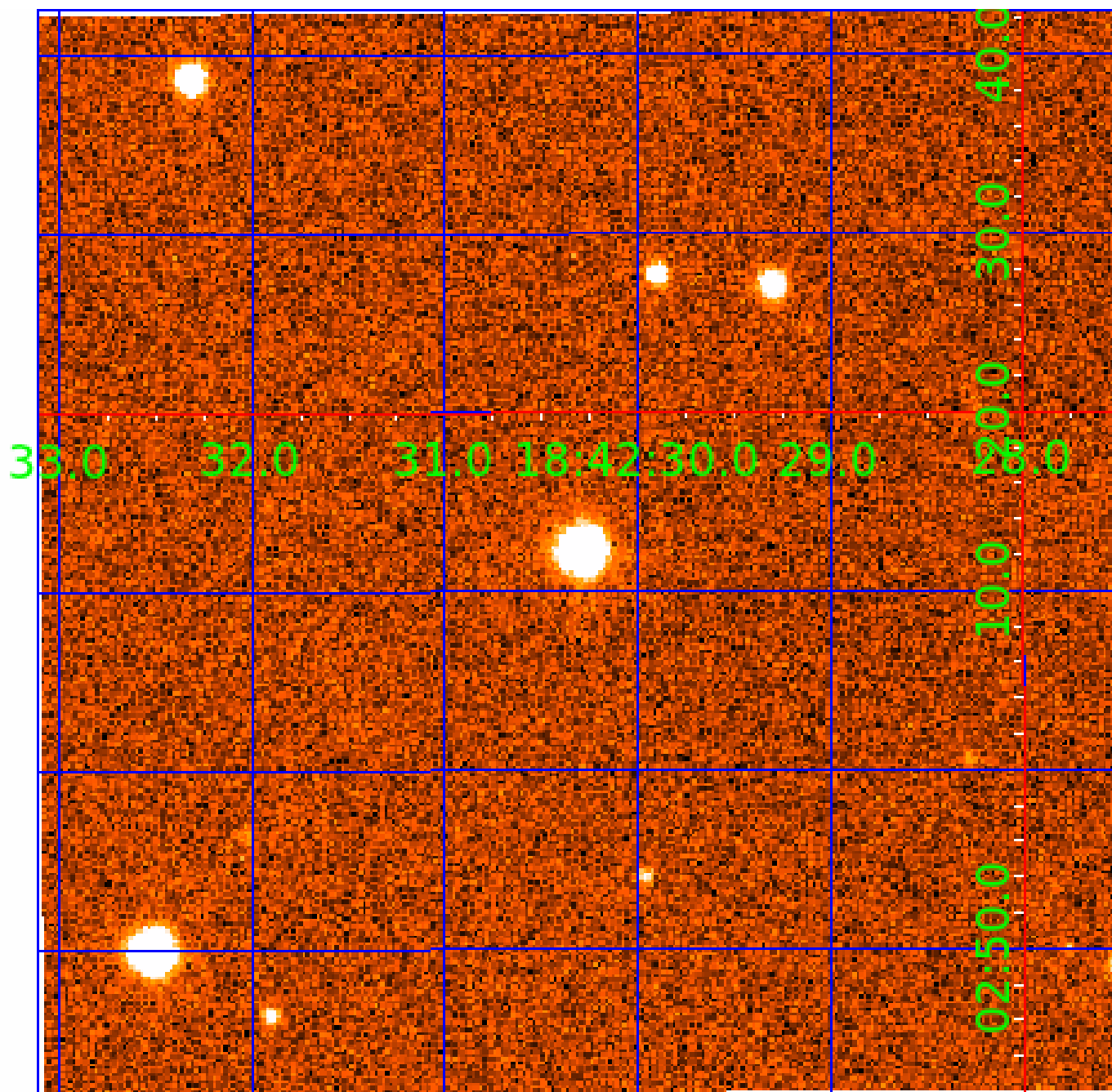


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008142547

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})
008142547-01	OBS	No	377.765656	392.498830	1507.8	3.522	18.8	8.6	0.68	4996	2.75	0.33
008142547-02	OBS	No	434.105578	460.231558	1534.9	5.304	15.9	7.7	0.68	4996	2.81	0.27
008142547-03	OBS	No	508.975269	483.723031	2847.7	11.131	16.0	10.4	0.68	4996	7.03	0.22
008142547-04	OBS	No	253.584568	355.759960	1087.7	12.879	14.4	5.8	0.68	4996	2.79	0.56
008142547-05	OBS	No	257.549270	276.005526	1131.3	7.934	13.7	7.8	0.68	4996	2.29	0.54
008142547-06	OBS	No	512.691643	275.427962	808.3	9.000	13.4	-1.0	0.68	4996	1.88	0.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008142547-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008142547-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008142547-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008142547-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
008142547-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—HALO_GHOST
008142547-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—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.

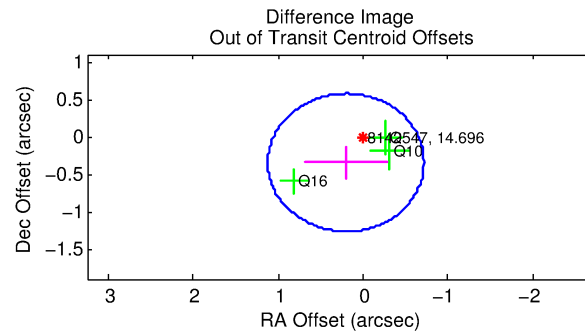
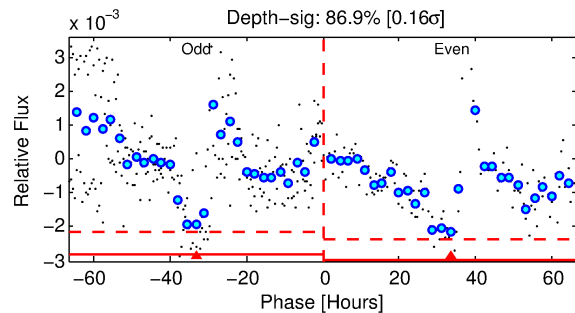
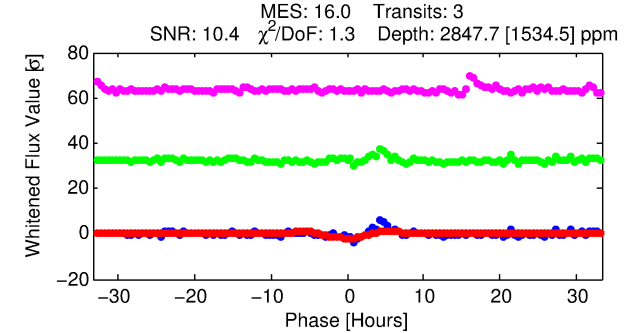
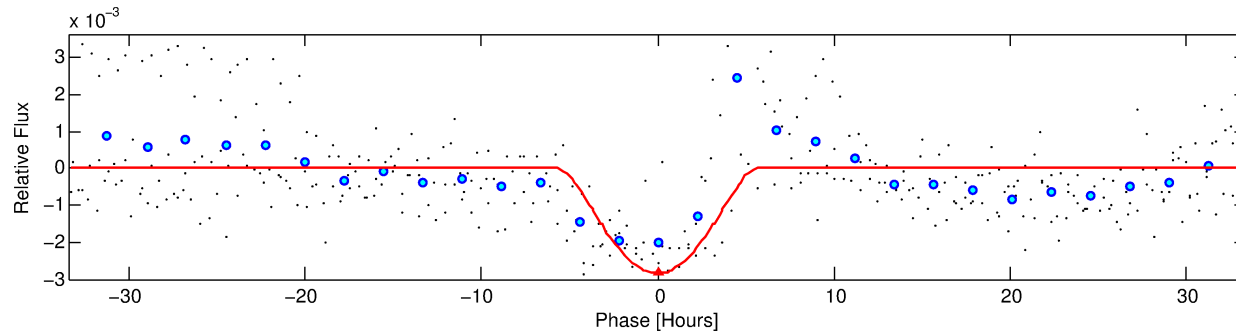
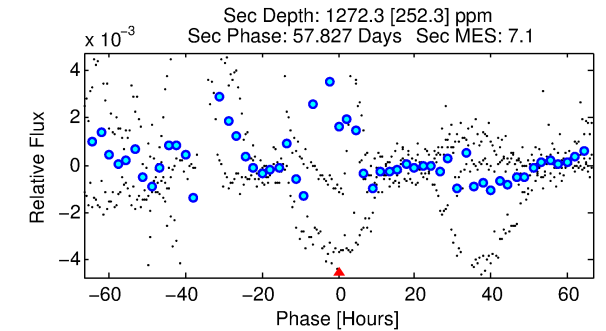
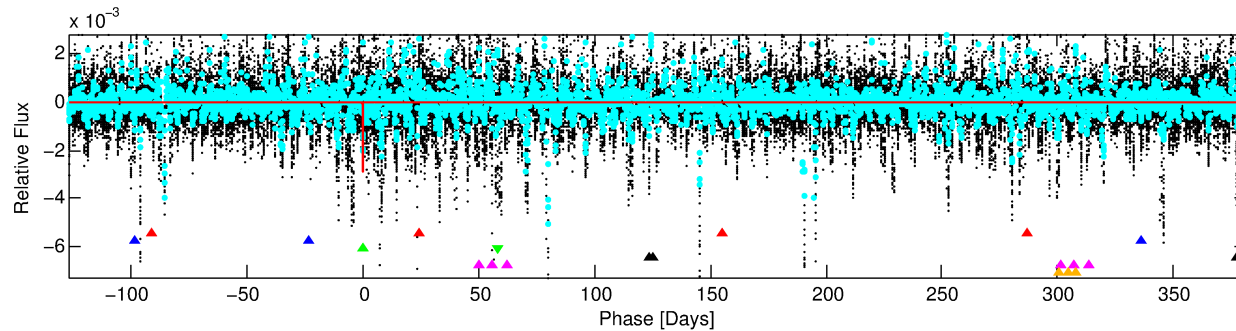
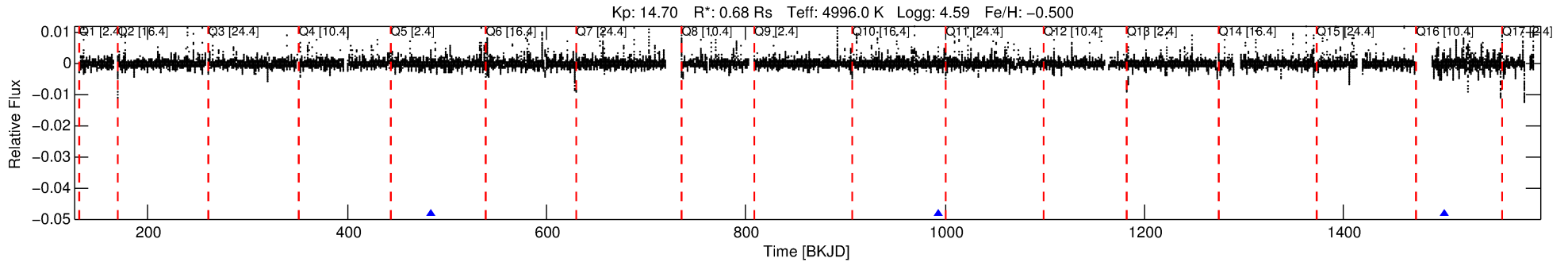
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008142547-03

No Significant Match Found

DV One-Page Summary

KIC: 8142547 Candidate: 3 of 6 Period: 508.975 d



DV Fit Results:

Period = 508.97527 [0.01392] d
Epoch = 483.7230 [0.0141] BKJD
Rp/R* = 0.0948 [0.2177]
a/R* = 155.65 [69.97]
b = 1.00 [0.27]
Seff = 0.22 [0.04]
Teq = 174 [8] K
Rp = 7.03 [16.17] Re
a = 1.0852 [0.0964] AU
Ag = 16671.55 [76719.73] [0.22σ]
Teffp = 3065 [3526] K [0.82σ]

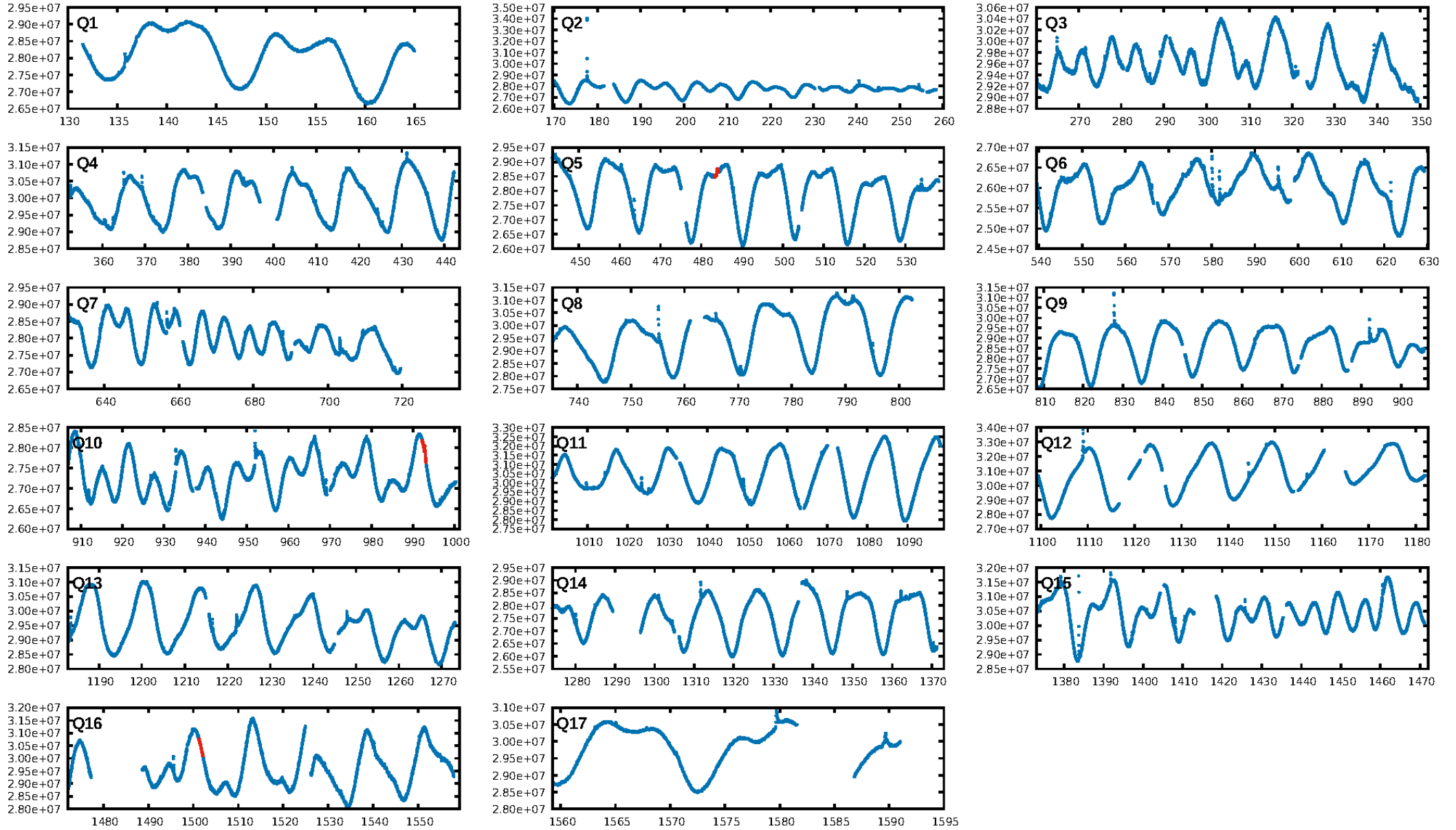
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [145.73σ]
LongPeriod-sig: 100.0% [6.23σ]
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 76.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.5504
Centroid-sig: 52.0%
Centroid-so: 0.897 arcsec [2.30σ]
OotOffset-rm: 0.398 arcsec [1.30σ]
KicOffset-rm: 0.247 arcsec [0.87σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

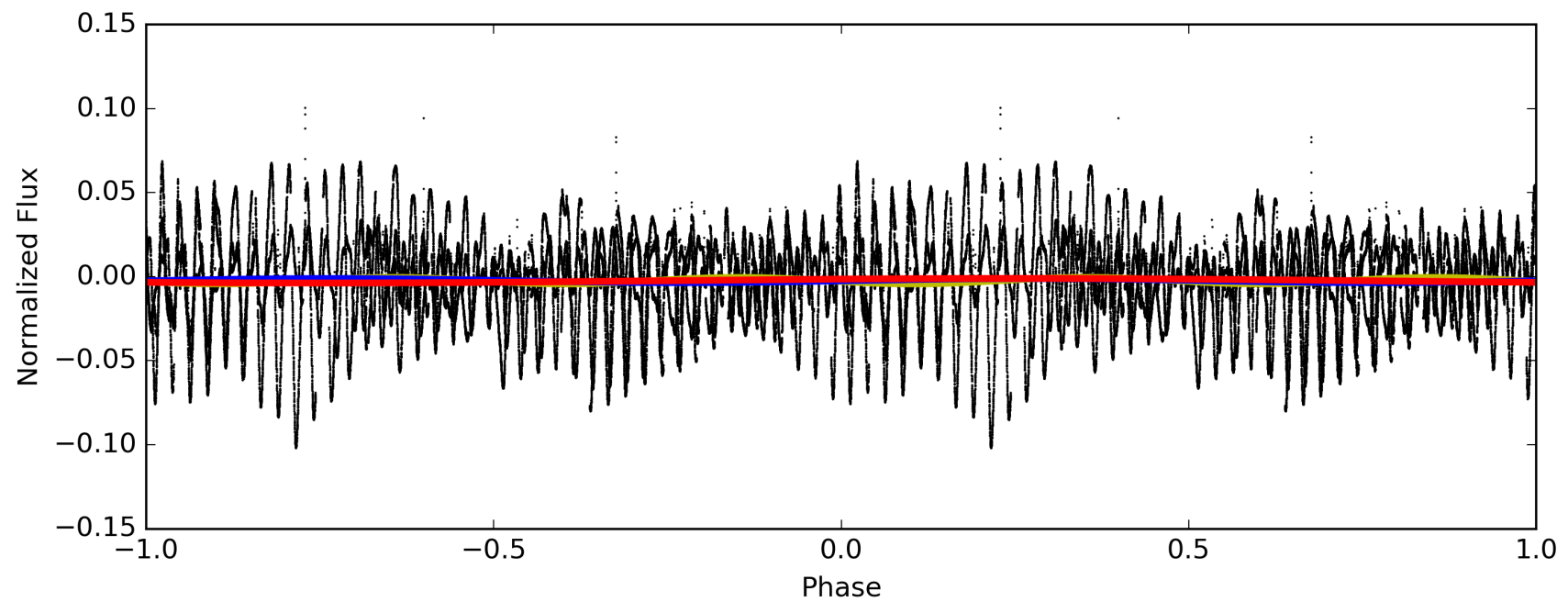
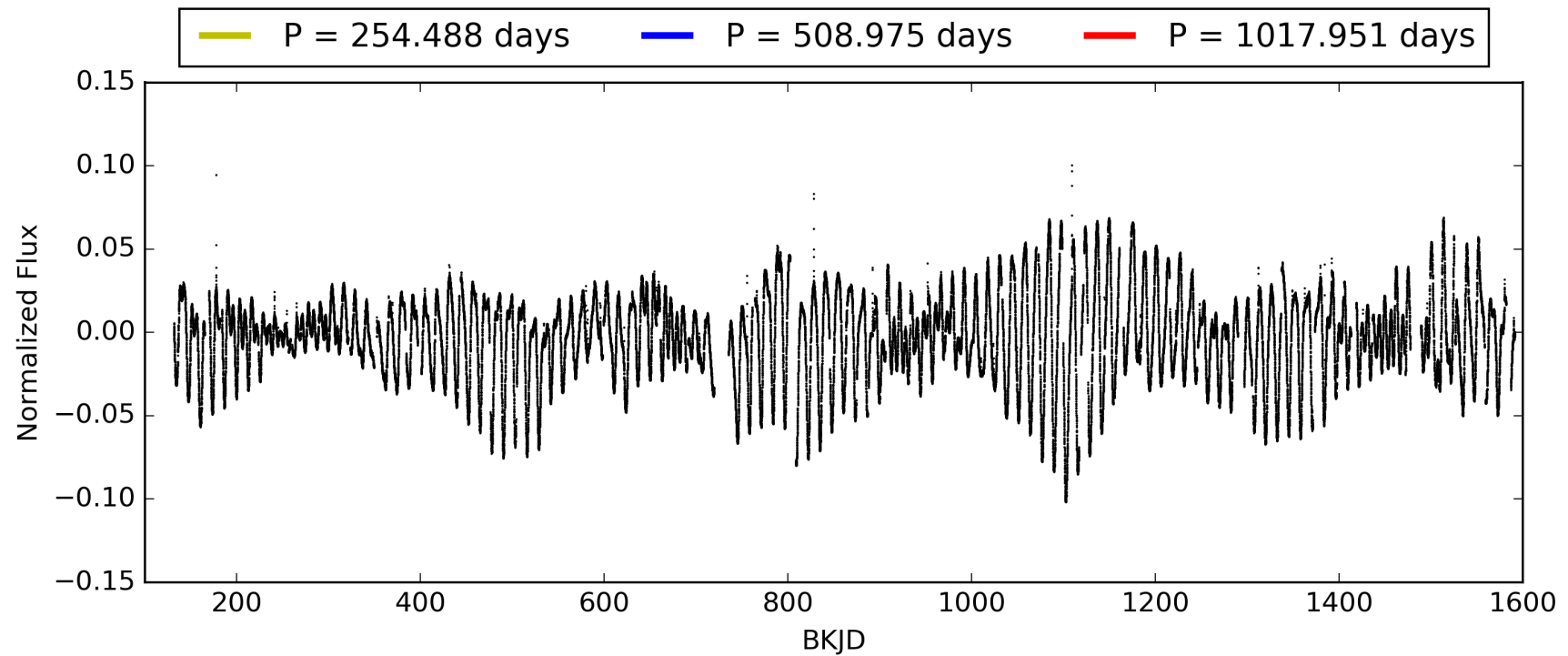
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 14:51:27 Z

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

TCE 008142547-03, PDC Light Curves

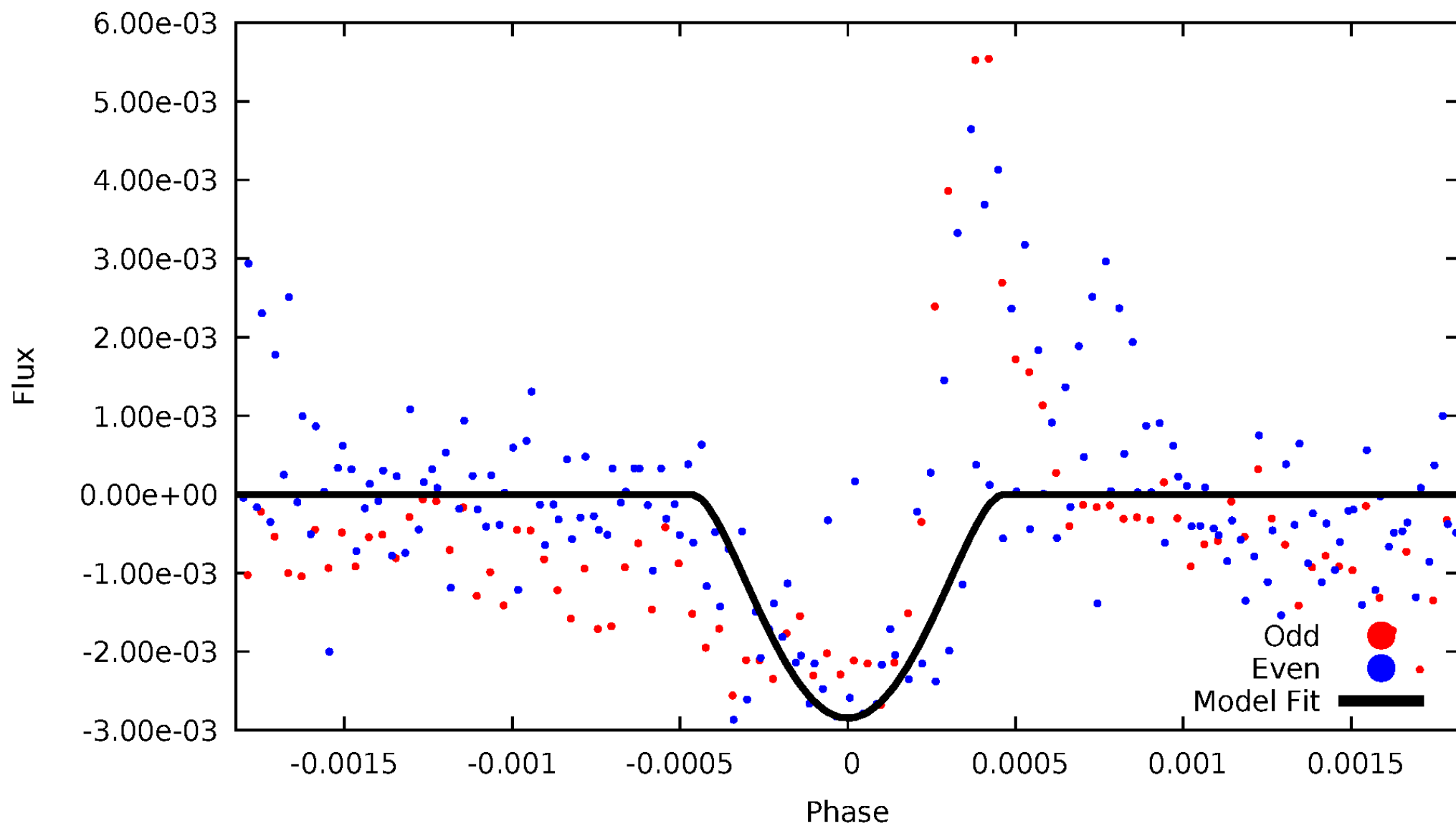


TCE 008142547-03



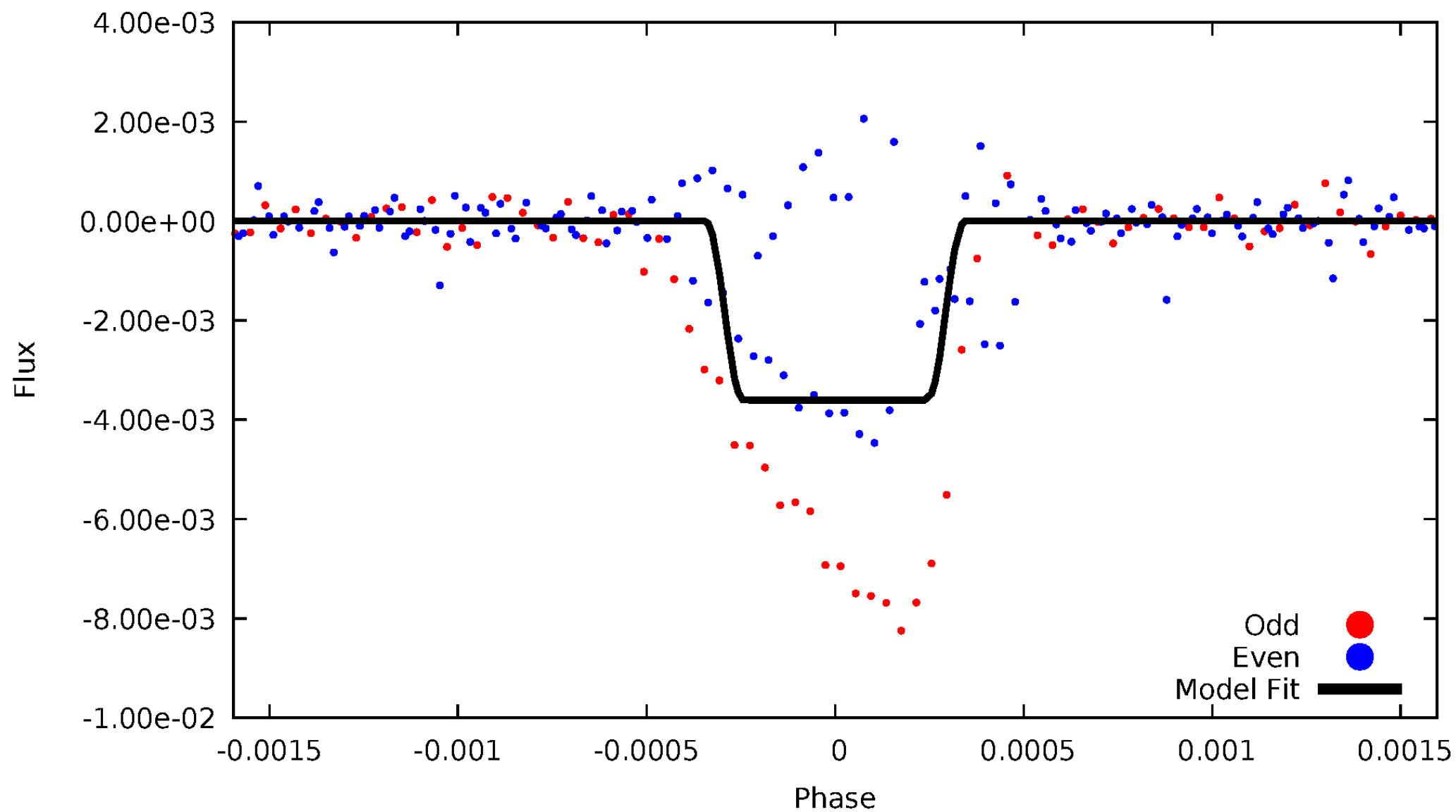
DV Odd/Even

TCE 008142547-03



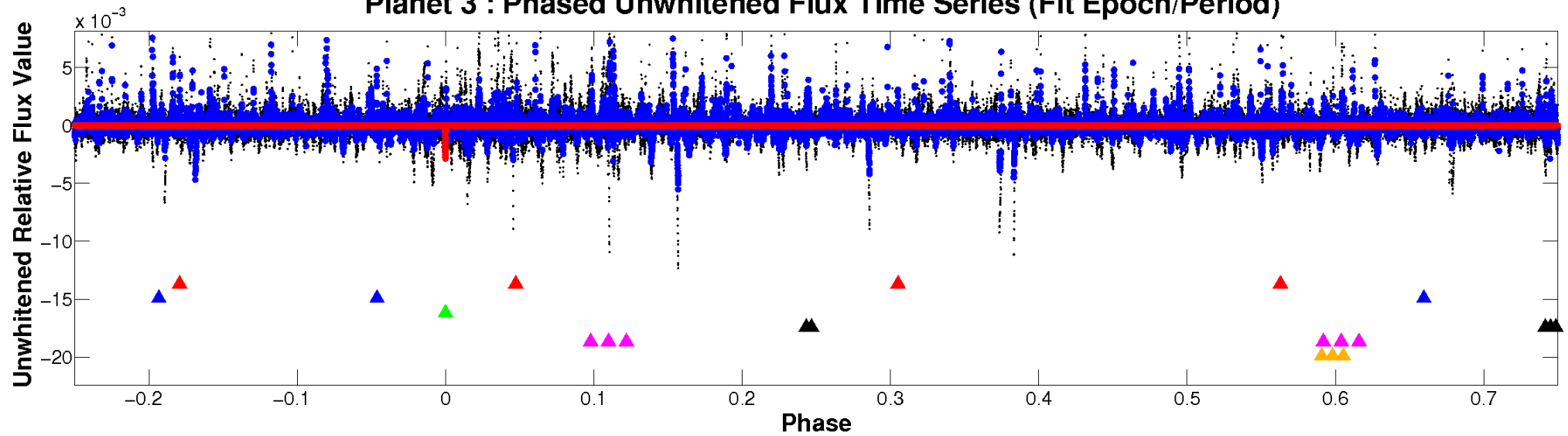
ALT Odd/Even

TCE 008142547-03

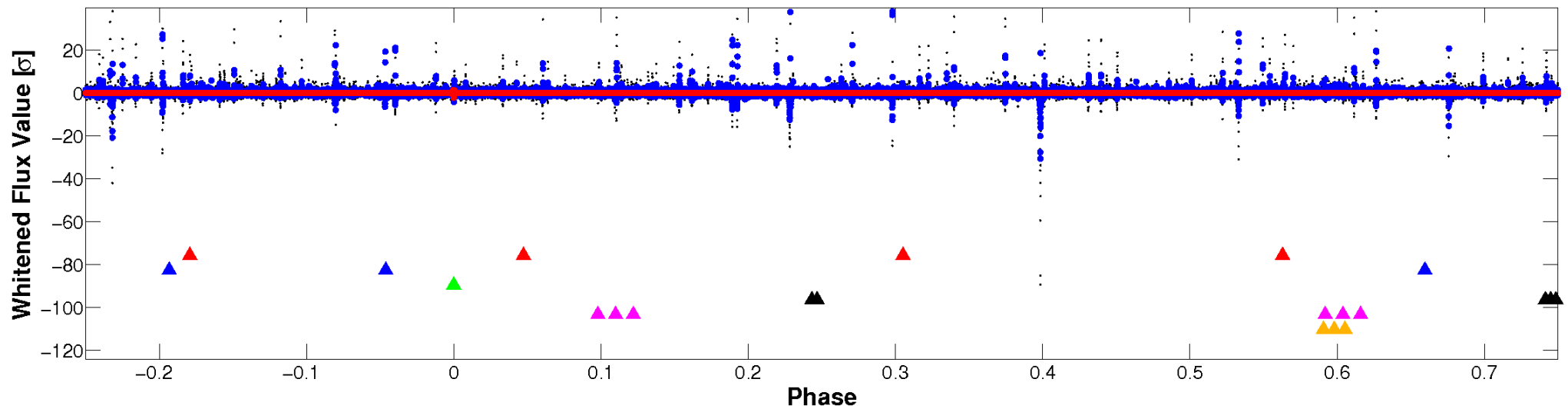


Non-Whitened Vs. Whitened Light Curve

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

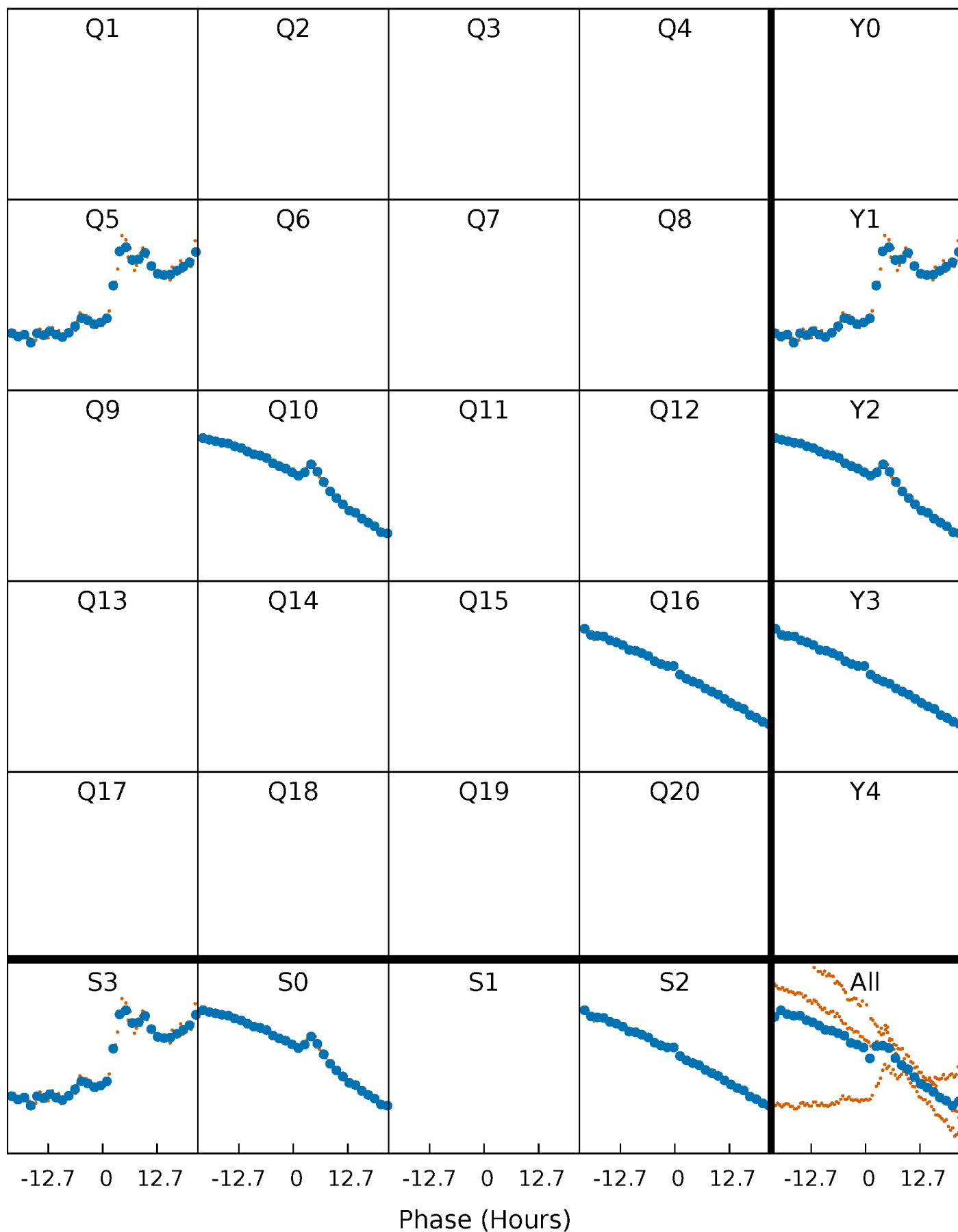


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



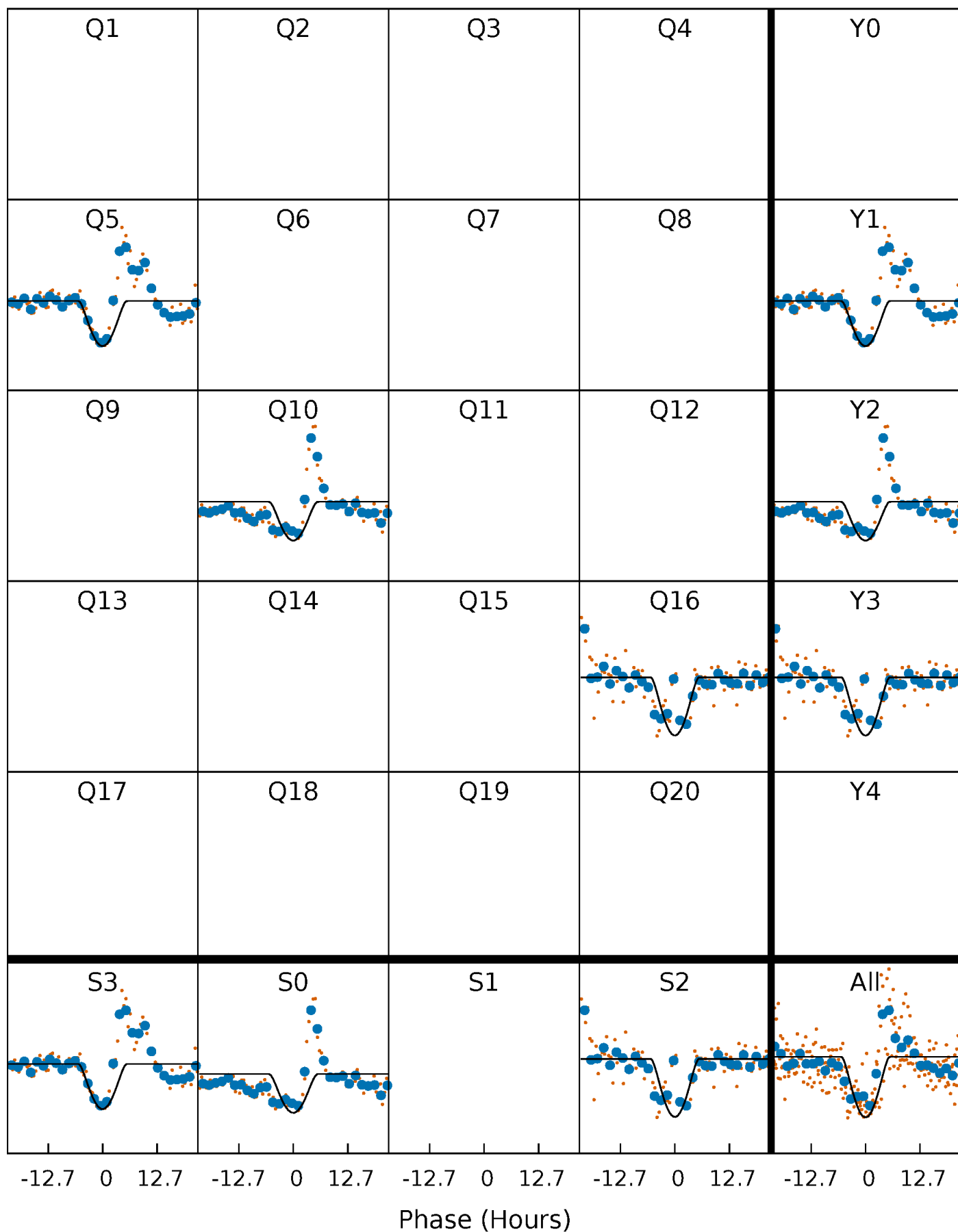
PDC Quarter-Phased Transit Curves

TCE 008142547-03 $P=508.975269$ Days $T_0=483.723031$ (BKJD)



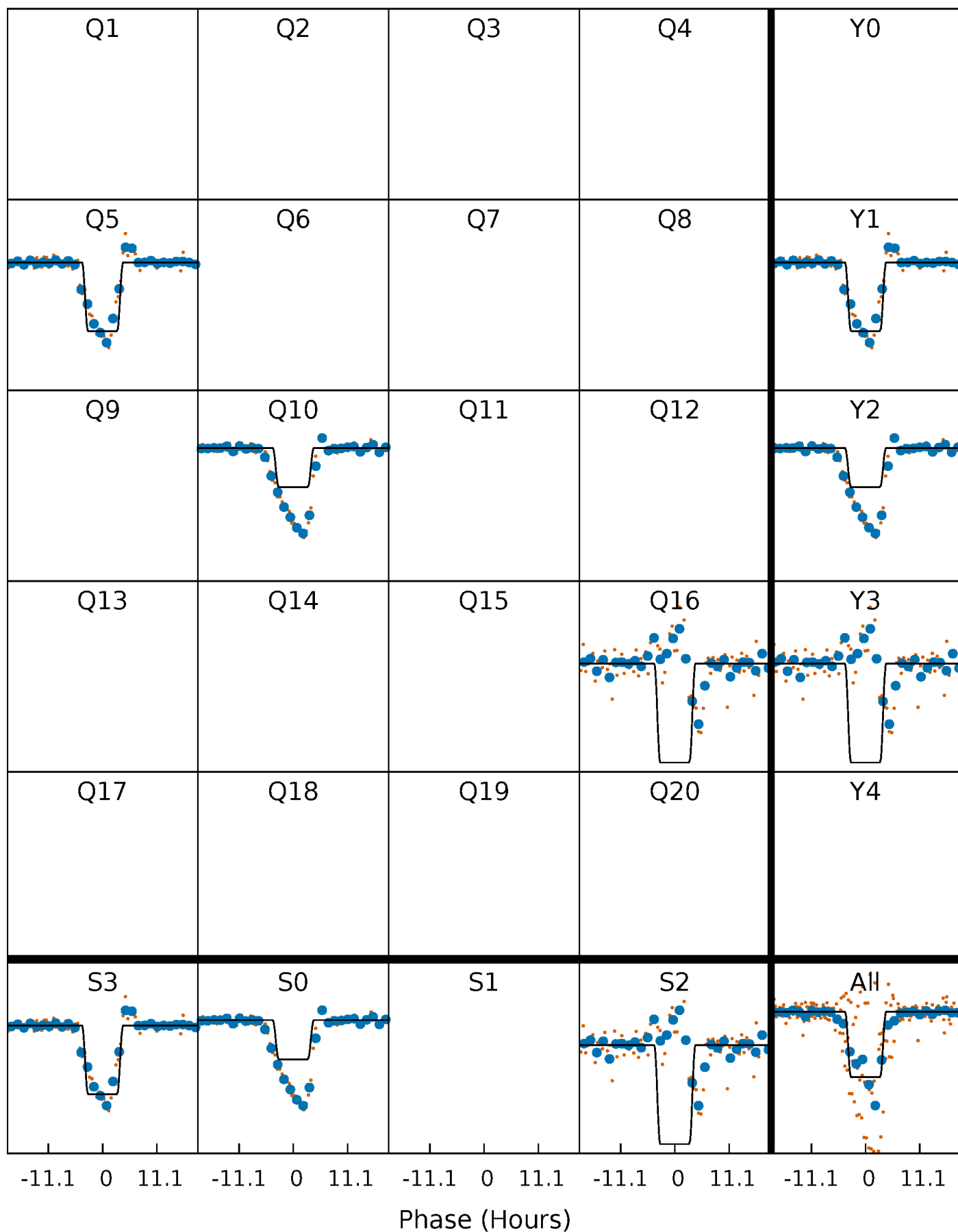
DV Quarter-Phased Transit Curves

TCE 008142547-03 $P=508.975269$ Days $T_0=483.723031$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

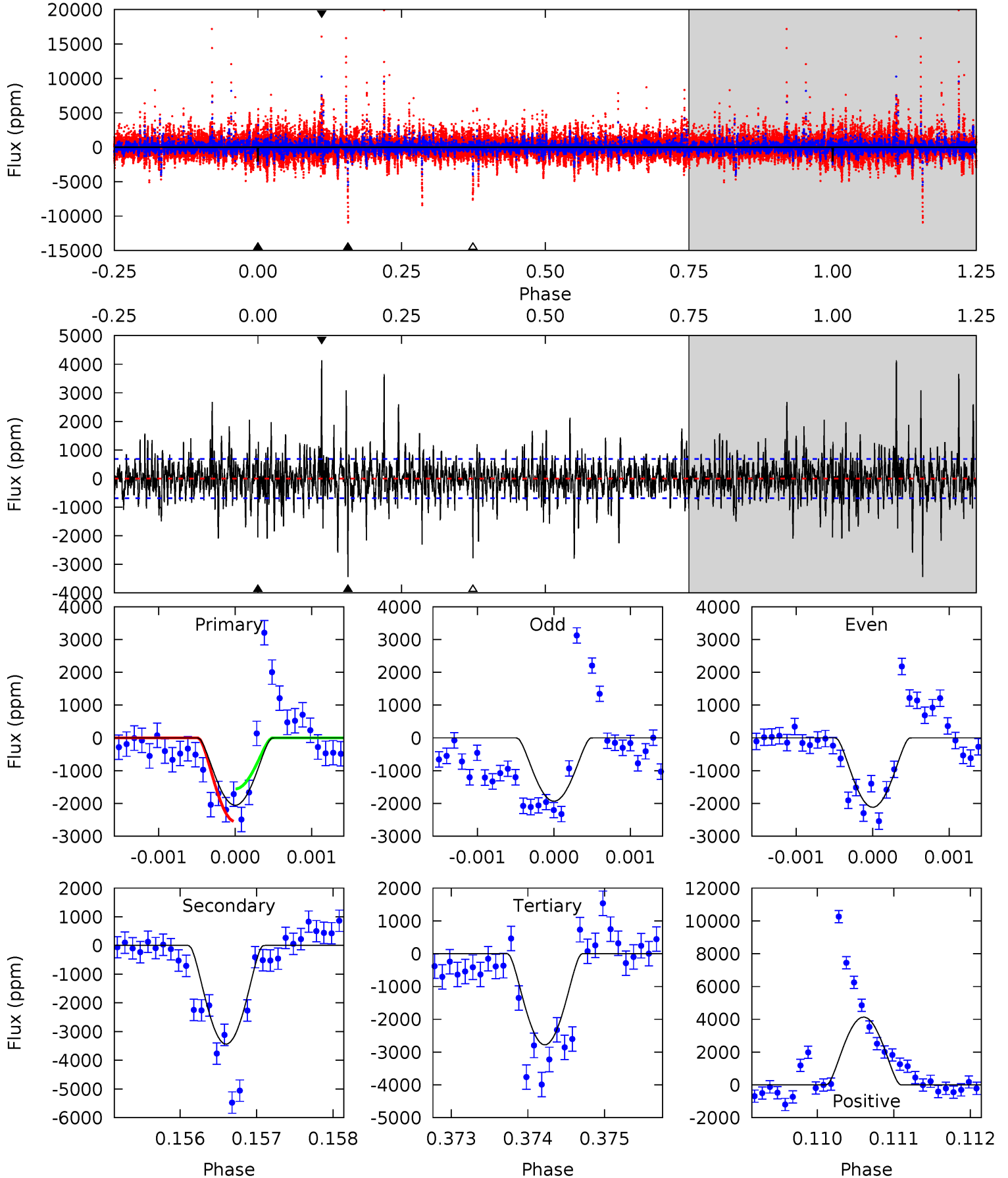
TCE 008142547-03 P=508.945490 Days $T_0=483.713997$ (BKJD)



DV Model-Shift Uniqueness Test

008142547-03, P = 508.975269 Days, E = 483.723031 Days

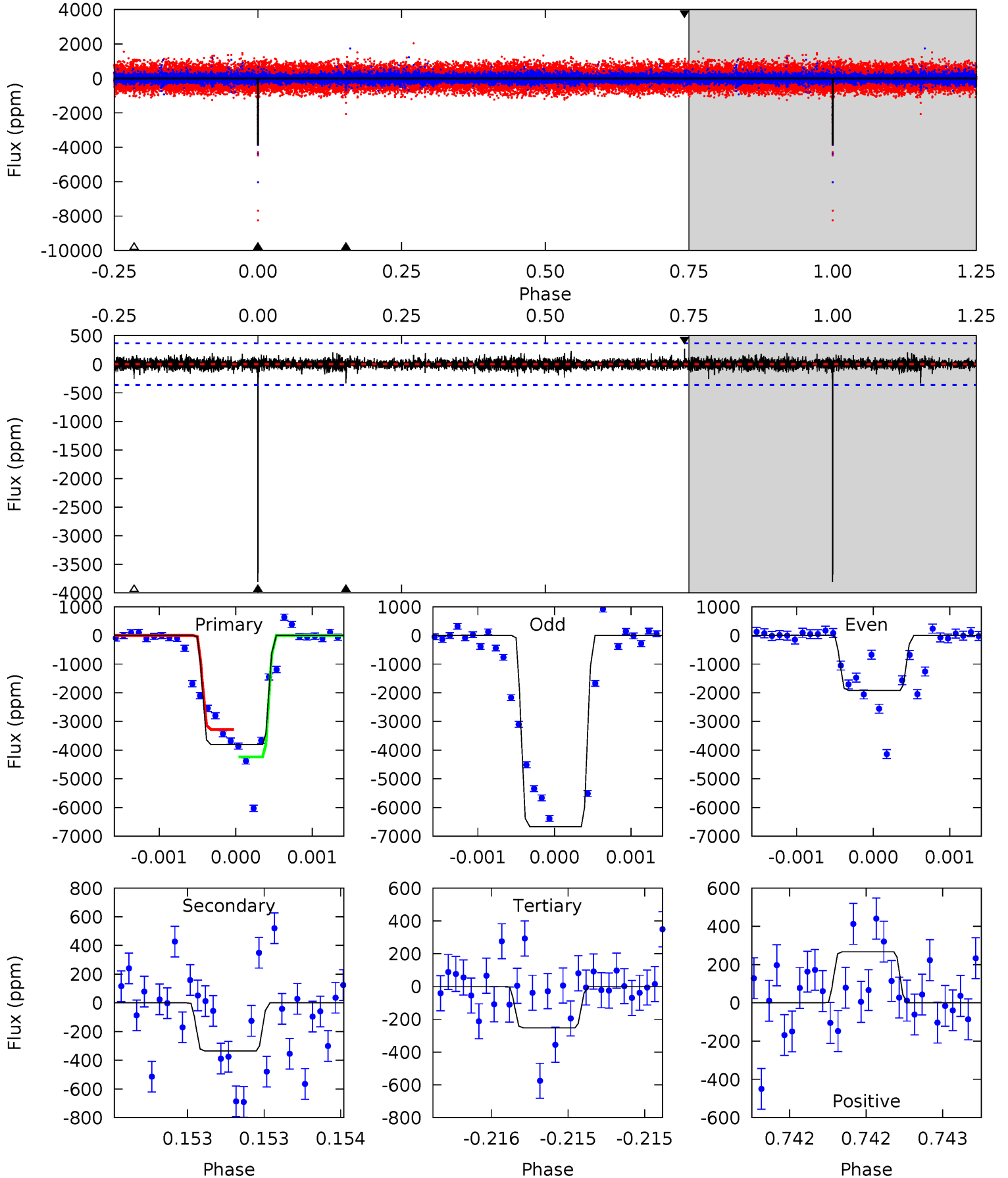
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	27.3	22.1	32.8	5.46	3.30	4.39	-5.76	-16.5	5.22	-5.53	0.50	1.01	0.55	3.93



Alt Model-Shift Uniqueness Test

008142547-03, P = 508.945490 Days, E = 483.713997 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
57.5	5.06	3.81	4.04	5.52	3.40	0.63	53.7	53.5	1.25	1.02	49.9	0.96	0.07	0



Stellar Parameters For KIC 008142547

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4996^{+148}_{-148}	$4.591^{+0.072}_{-0.048}$	$-0.500^{+0.300}_{-0.300}$	$0.680^{+0.071}_{-0.065}$	$0.657^{+0.090}_{-0.036}$	$2.948^{+0.878}_{-0.523}$
	+3%/-3%	+2%/-1%	+60%/-60%	+10%/-10%	+14%/-5%	+30%/-18%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008142547-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3437 ± 126	$13.63^{+14.23}_{-9.51}$	243^{+8}_{-9}	3334^{+1794}_{-629}	$12338^{+122336}_{-9406}$
Alt.	-335 ± 66	$12.99^{+12.86}_{-8.75}$	242^{+10}_{-9}	2458^{+863}_{-378}	1323^{+10631}_{-1003}

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

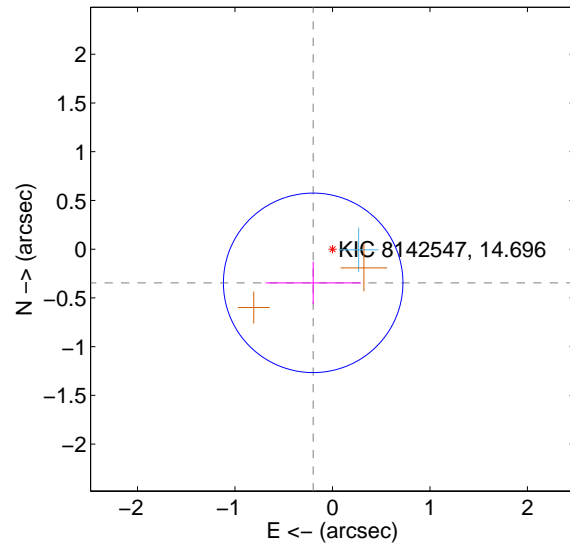
Supplemental centroid analysis for 008142547-03. Kepler magnitude: 14.70. Transit SNR 10.37

There are 1 quarters with good PRF difference image offsets

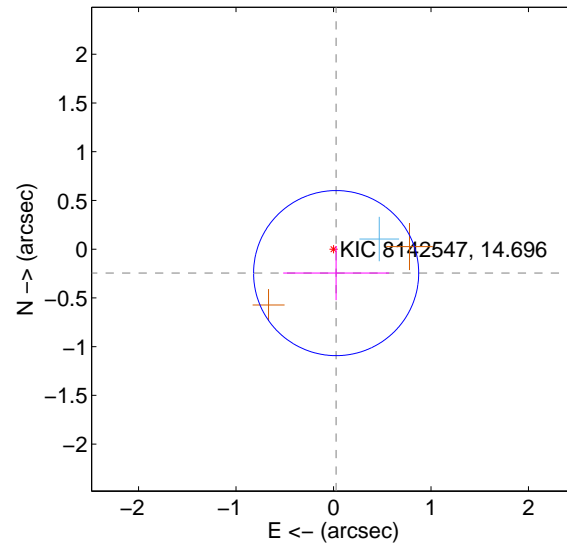
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.398 ± 0.307	1.30	0.198 ± 0.489	-0.345 ± 0.216
PRF-fit source offset from KIC position	0.247 ± 0.282	0.87	-0.027 ± 0.544	-0.246 ± 0.278
photometric centroid source offset	0.90 ± 0.39	2.30	-0.90 ± 0.39	-0.03 ± 0.32

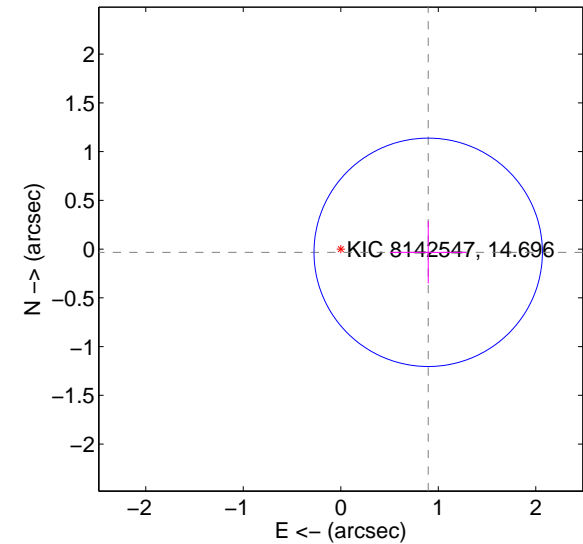
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

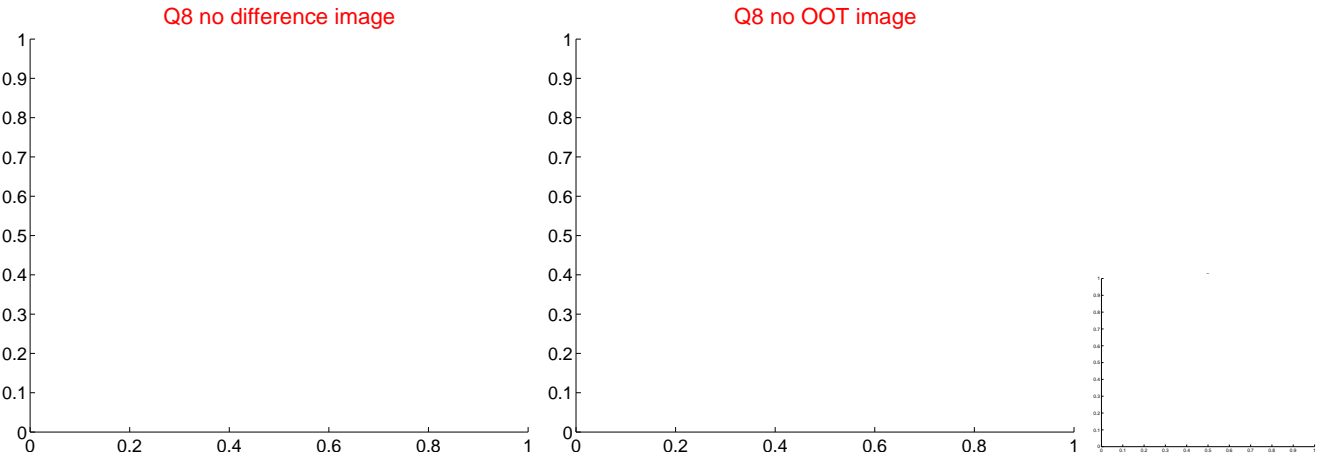
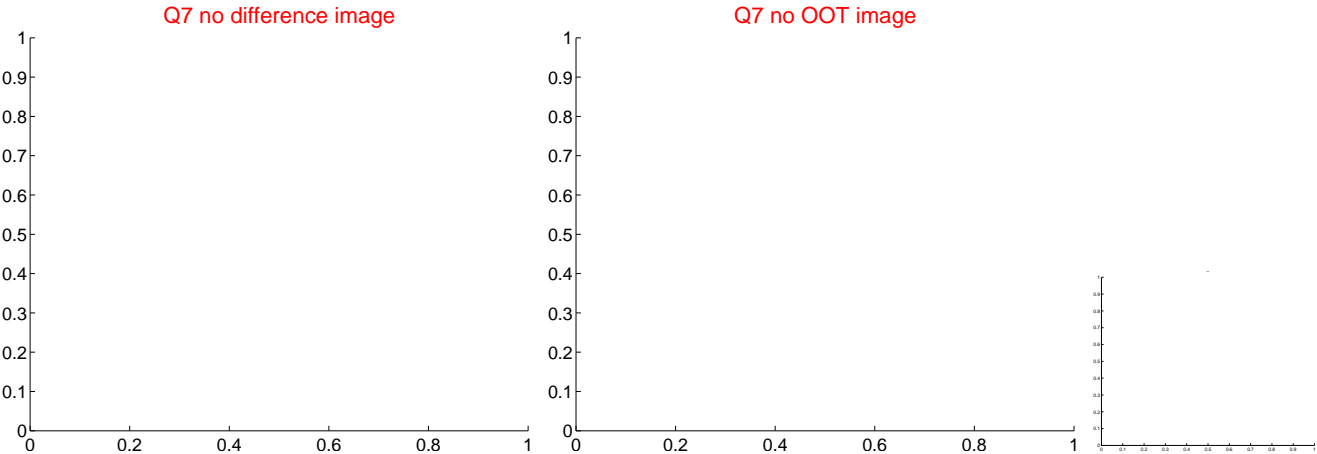
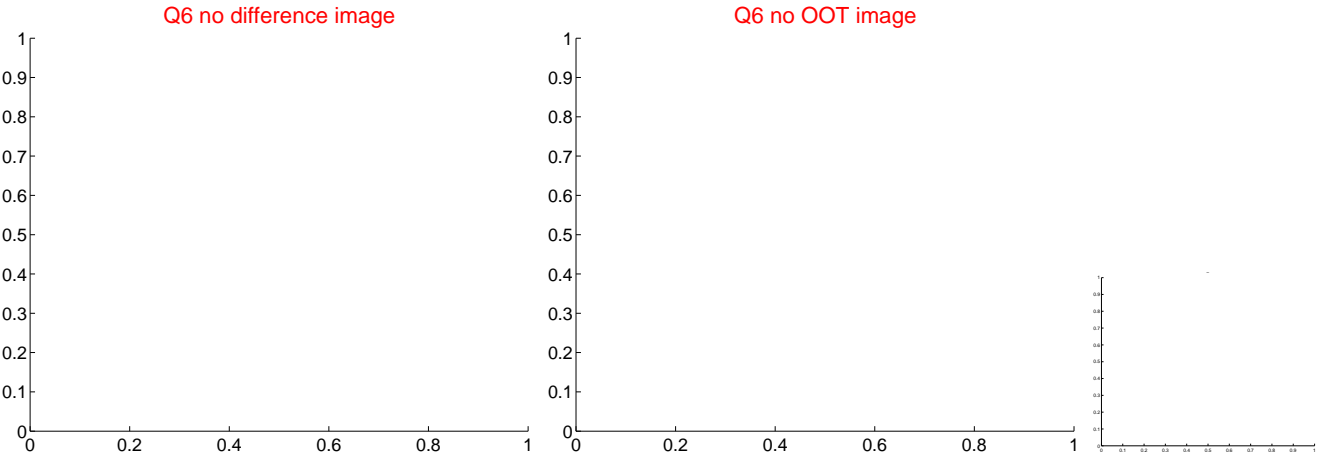
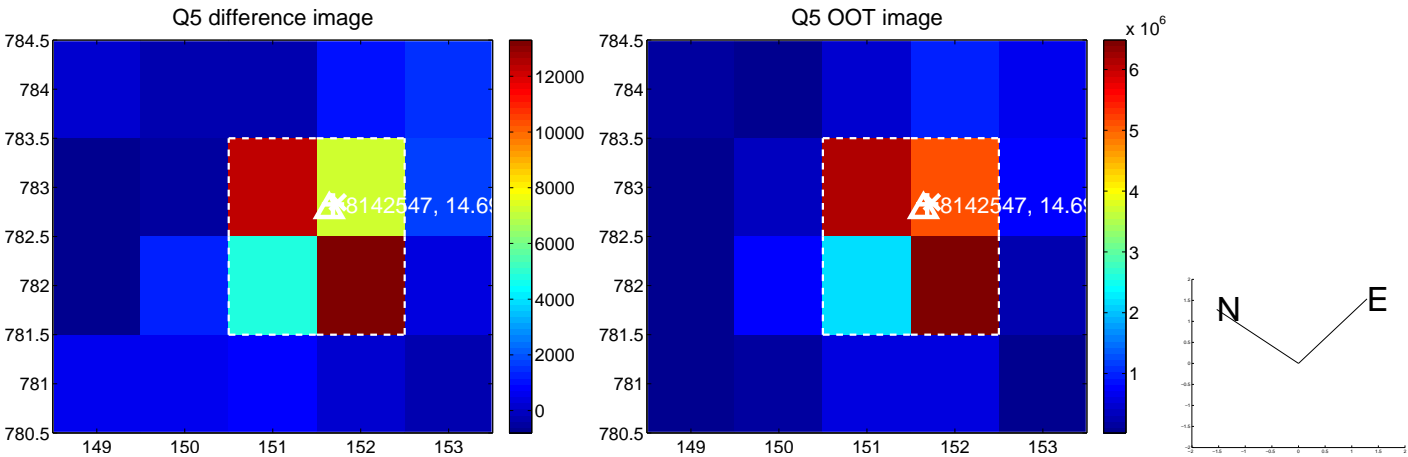


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

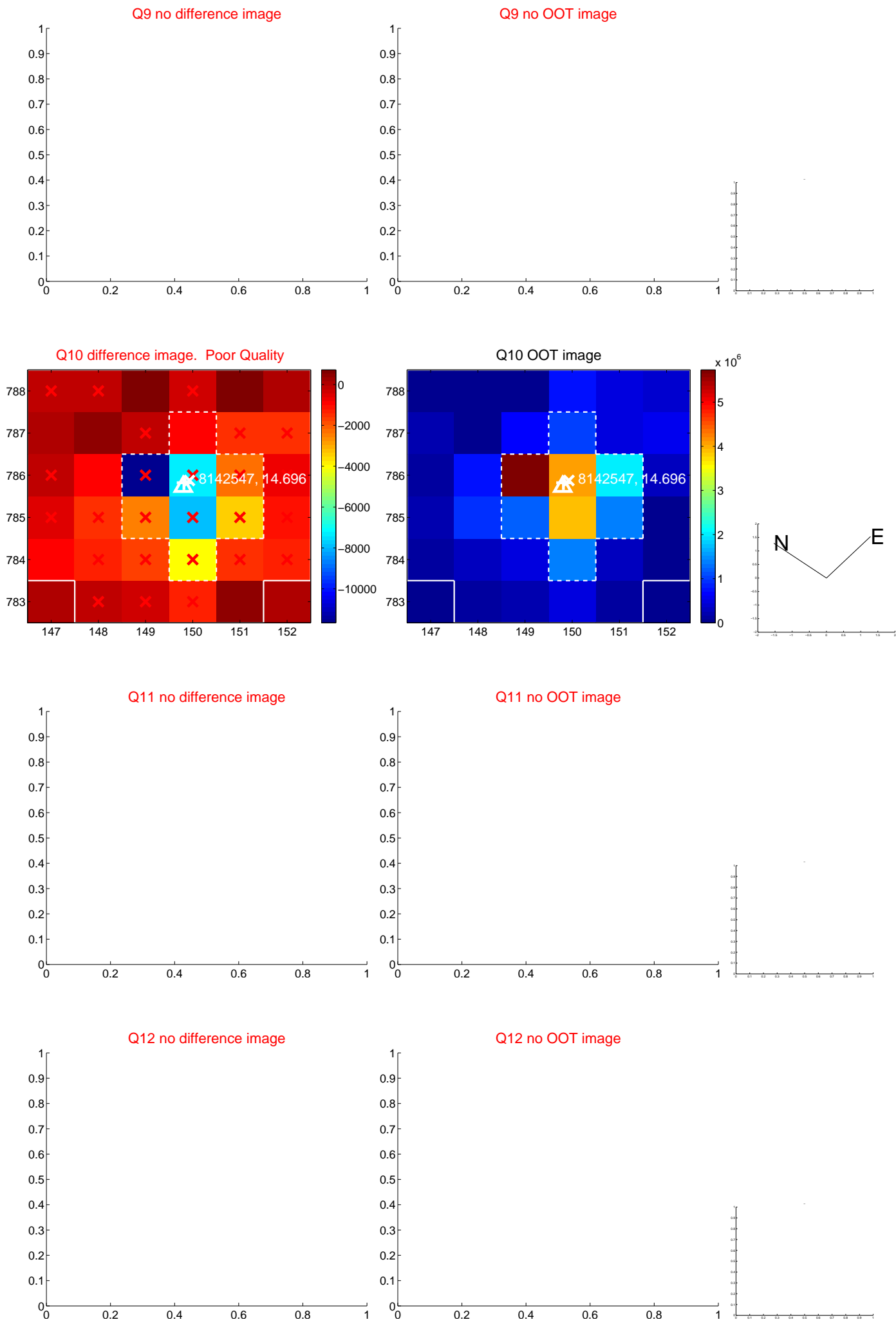
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



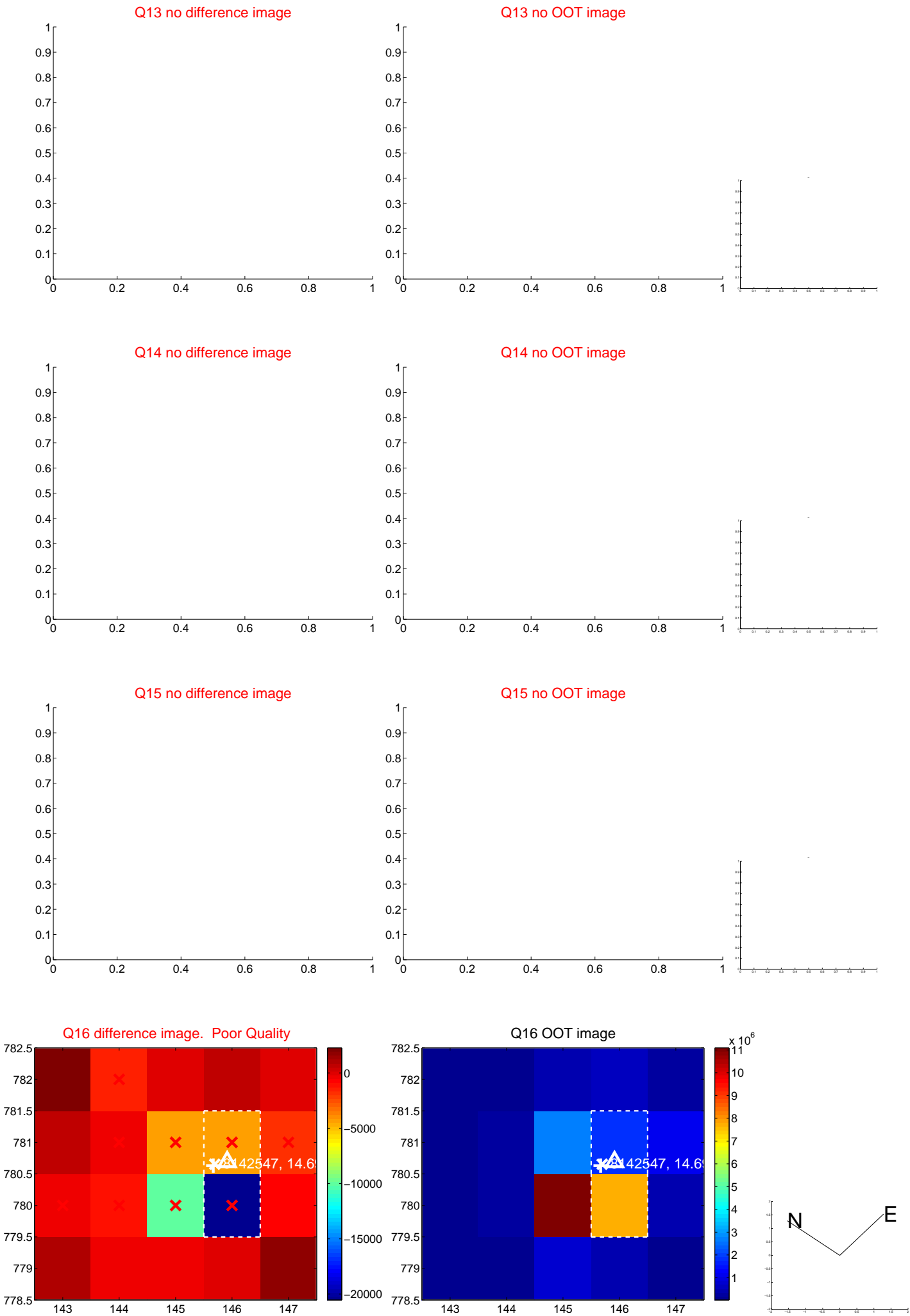
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



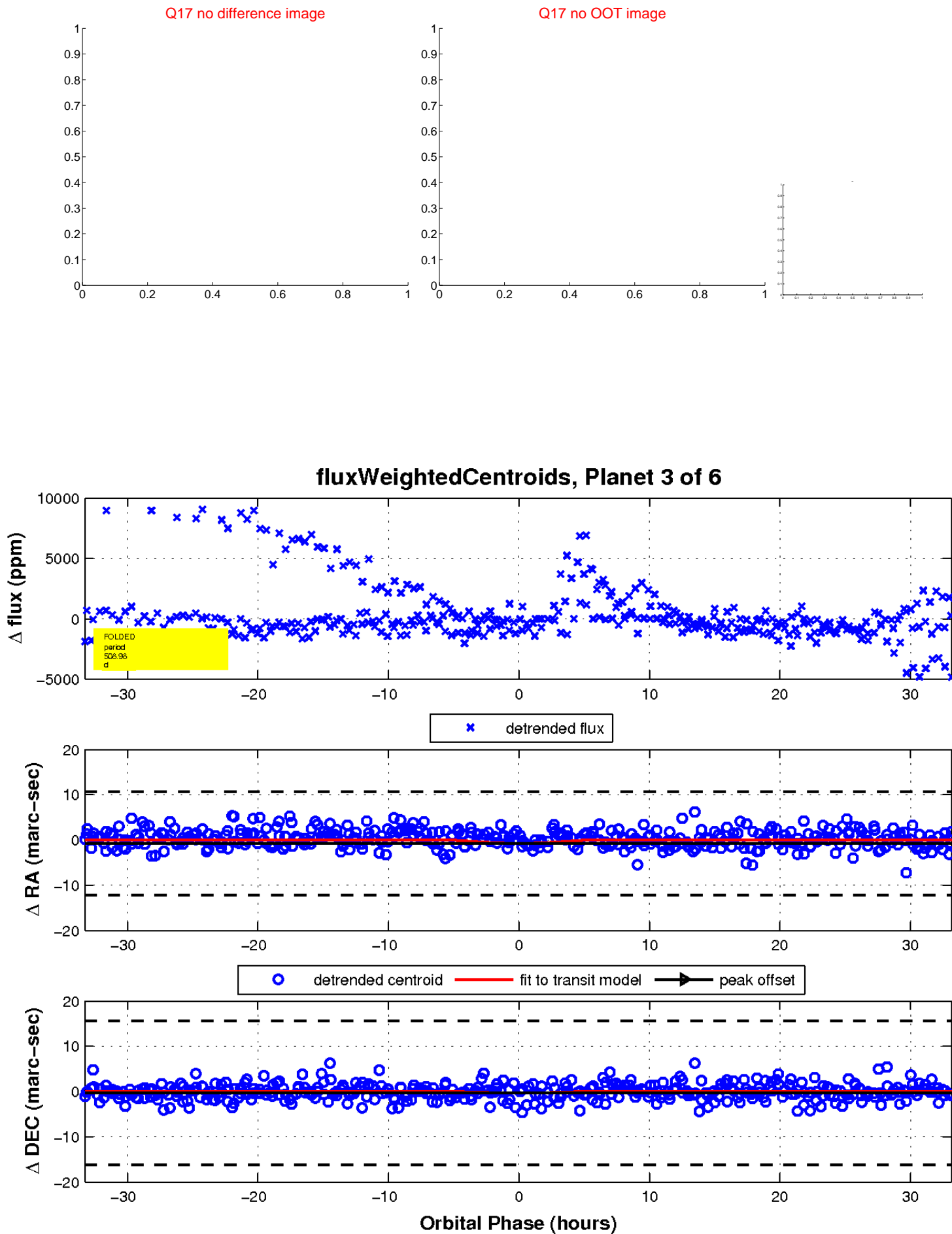
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

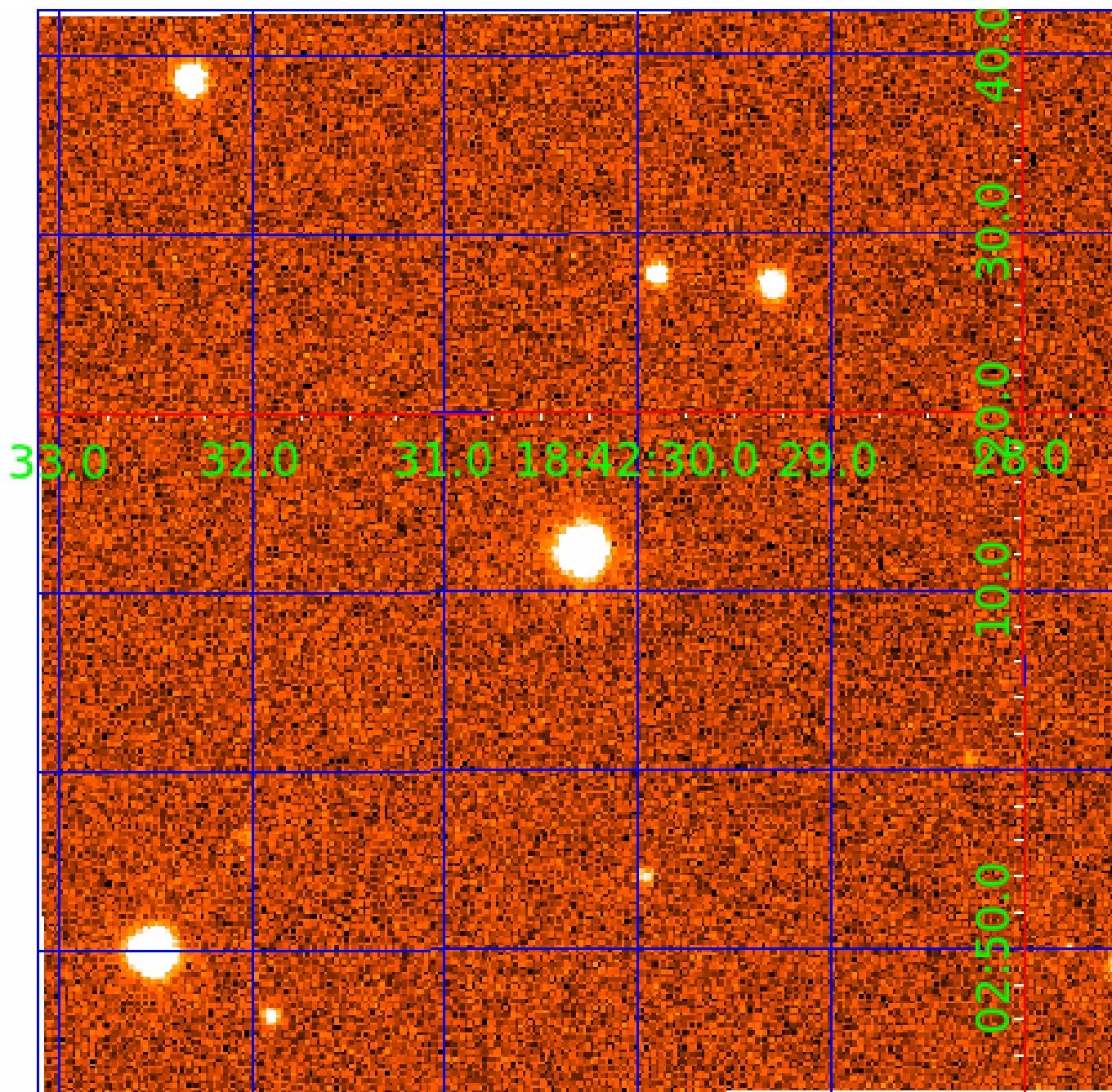


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008142547

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})
008142547-01	OBS	No	377.765656	392.498830	1507.8	3.522	18.8	8.6	0.68	4996	2.75	0.33
008142547-02	OBS	No	434.105578	460.231558	1534.9	5.304	15.9	7.7	0.68	4996	2.81	0.27
008142547-03	OBS	No	508.975269	483.723031	2847.7	11.131	16.0	10.4	0.68	4996	7.03	0.22
008142547-04	OBS	No	253.584568	355.759960	1087.7	12.879	14.4	5.8	0.68	4996	2.79	0.56
008142547-05	OBS	No	257.549270	276.005526	1131.3	7.934	13.7	7.8	0.68	4996	2.29	0.54
008142547-06	OBS	No	512.691643	275.427962	808.3	9.000	13.4	-1.0	0.68	4996	1.88	0.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008142547-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008142547-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008142547-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008142547-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
008142547-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—HALO_GHOST
008142547-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—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.

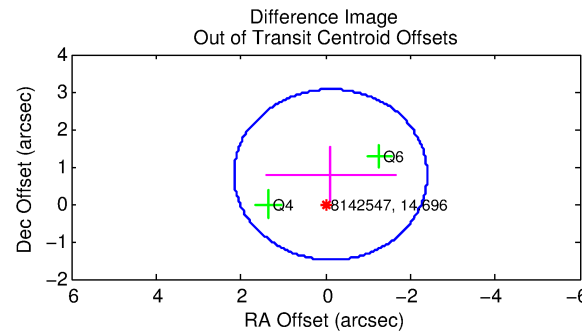
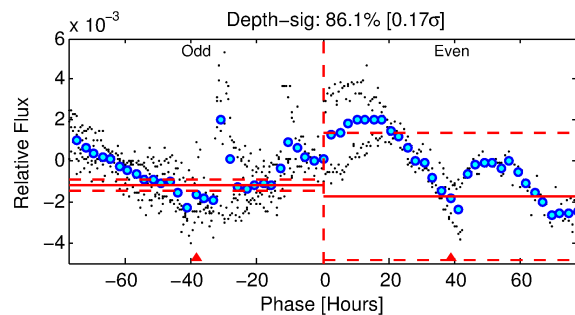
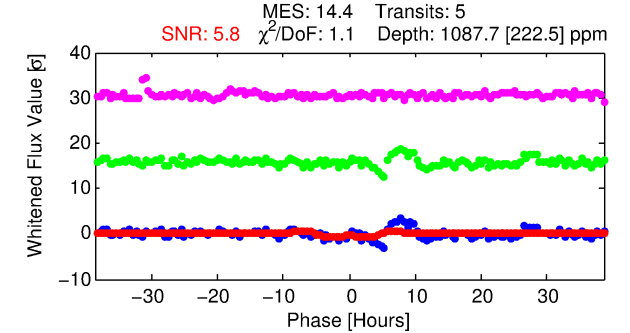
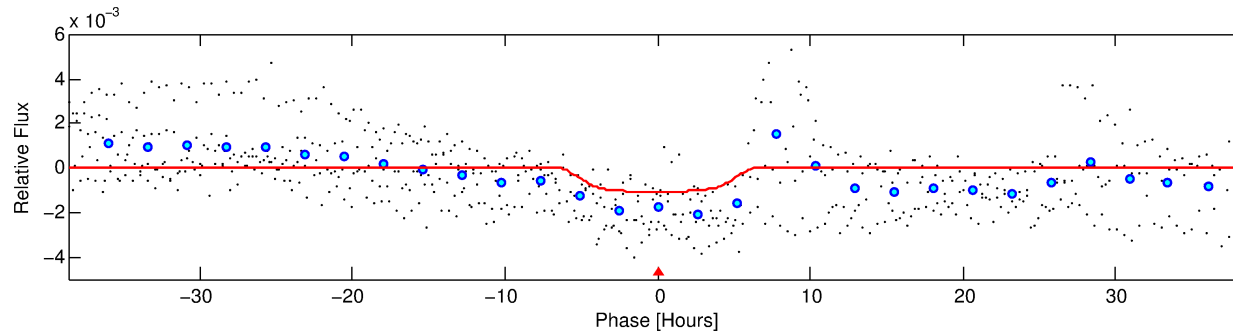
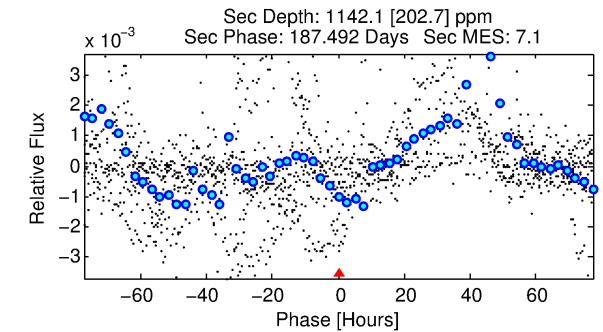
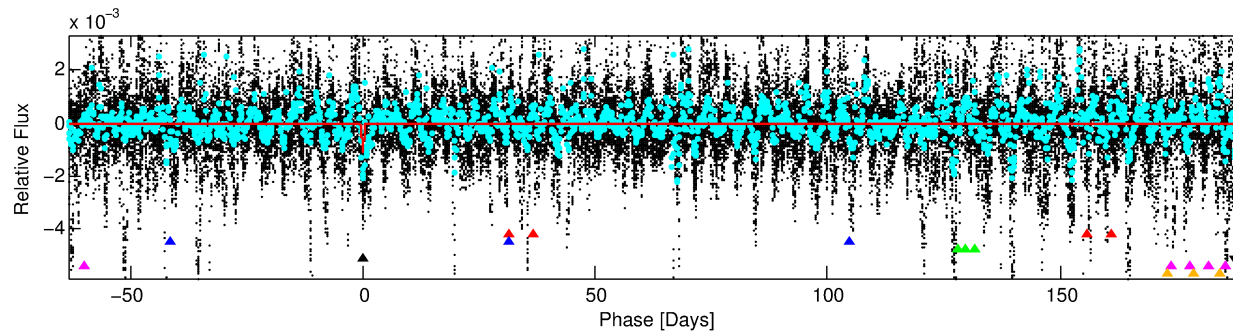
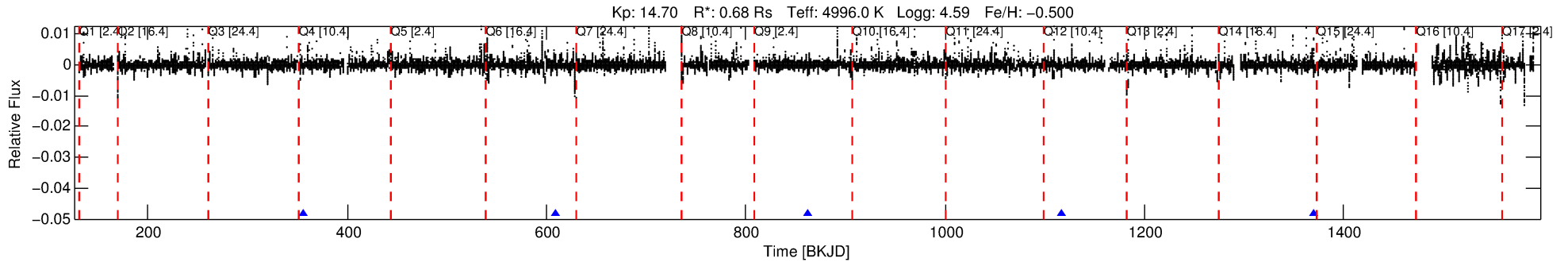
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008142547-04

No Significant Match Found

DV One-Page Summary

KIC: 8142547 Candidate: 4 of 6 Period: 253.585 d



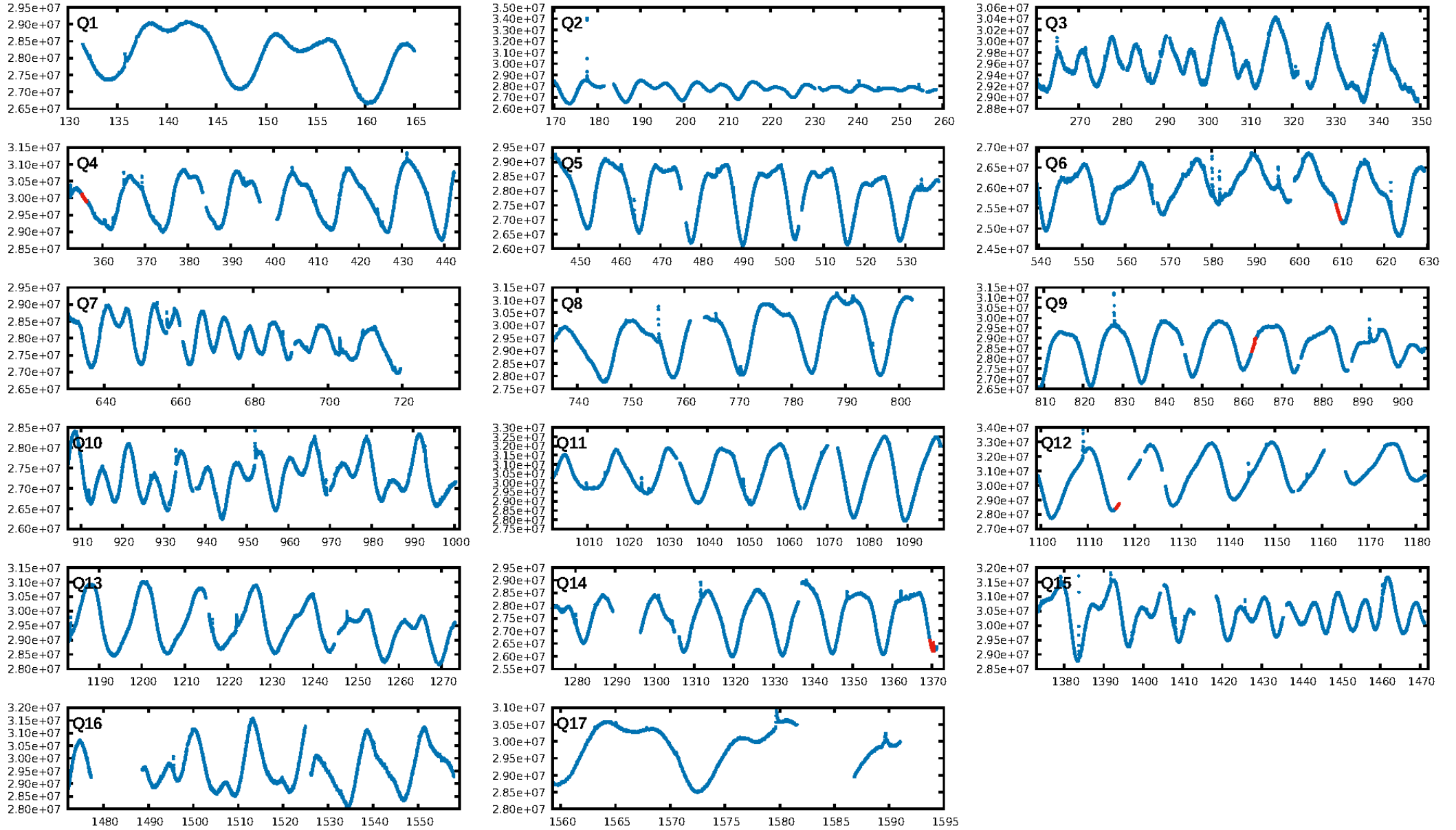
DV Fit Results:

Period = 253.58457 [0.01001] d
Epoch = 355.7600 [0.0232] BKJD
Rp/R* = 0.0376 [0.0047]
a/R* = 71.98 [16.88]
b = 0.92 [0.04]
Seff = 0.55 [0.10]
Teq = 220 [10] K
Rp = 2.79 [0.45] Re
a = 0.6820 [0.0606] AU
Ag = 37543.07 [12519.72] [3.00σ]
Teffp = 4736 [389] K [11.59σ]

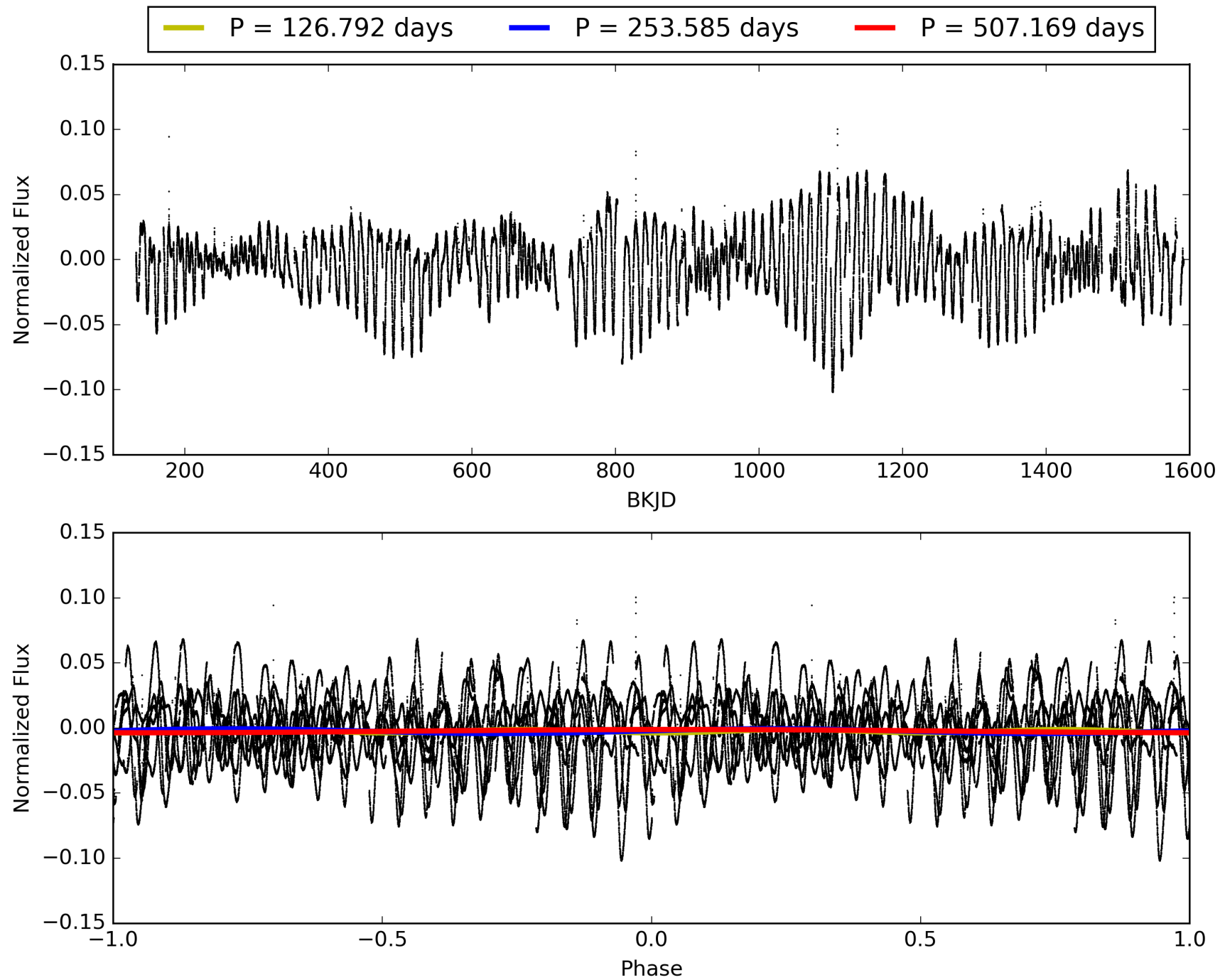
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [6.29σ]
ModelChiSquare2-sig: 0.5%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -2.553
Centroid-sig: 78.0%
Centroid-so: 1.348 arcsec [2.12σ]
OotOffset-rm: 0.797 arcsec [1.05σ]
KicOffset-rm: 0.976 arcsec [0.96σ]
OotOffset-st: 1/0/1/0 [2]
KicOffset-st: 1/0/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 008142547-04, PDC Light Curves

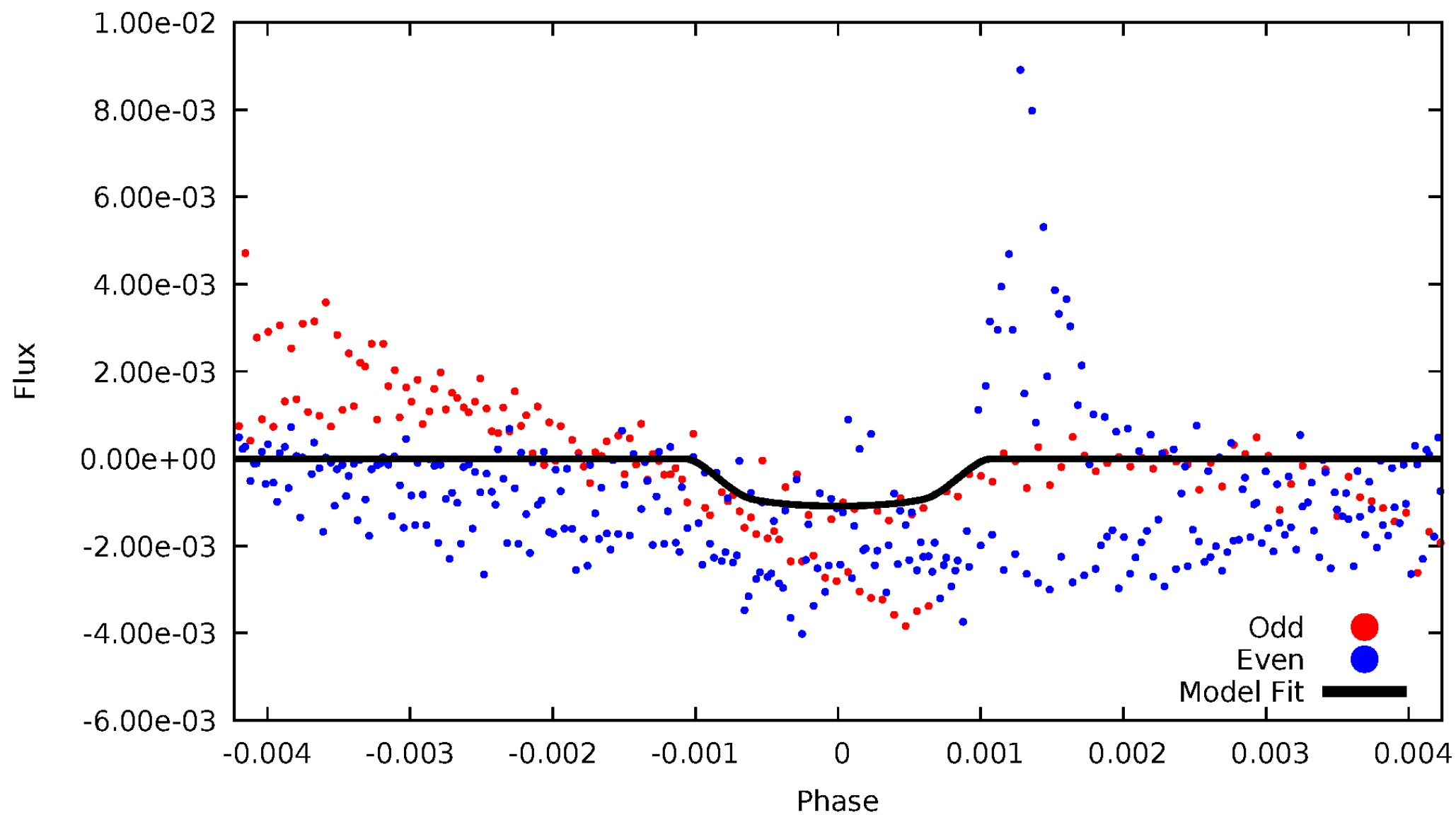


TCE 008142547-04



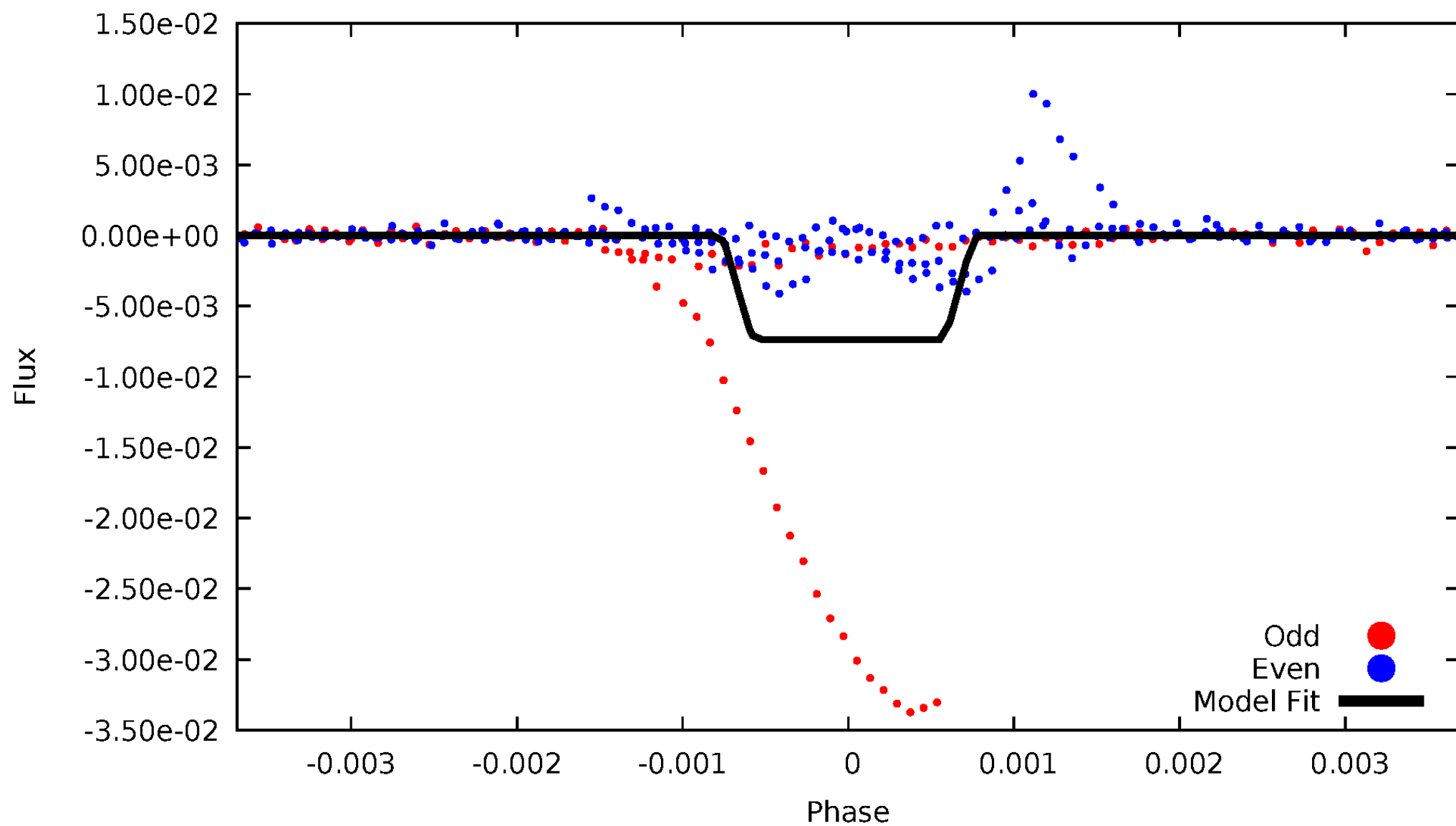
DV Odd/Even

TCE 008142547-04



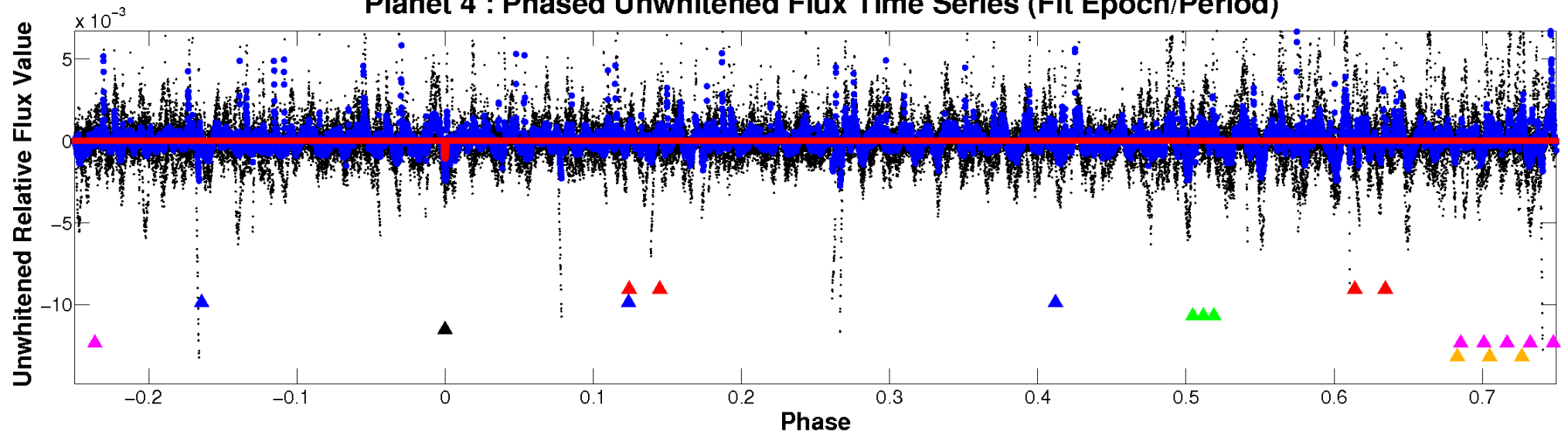
ALT Odd/Even

TCE 008142547-04

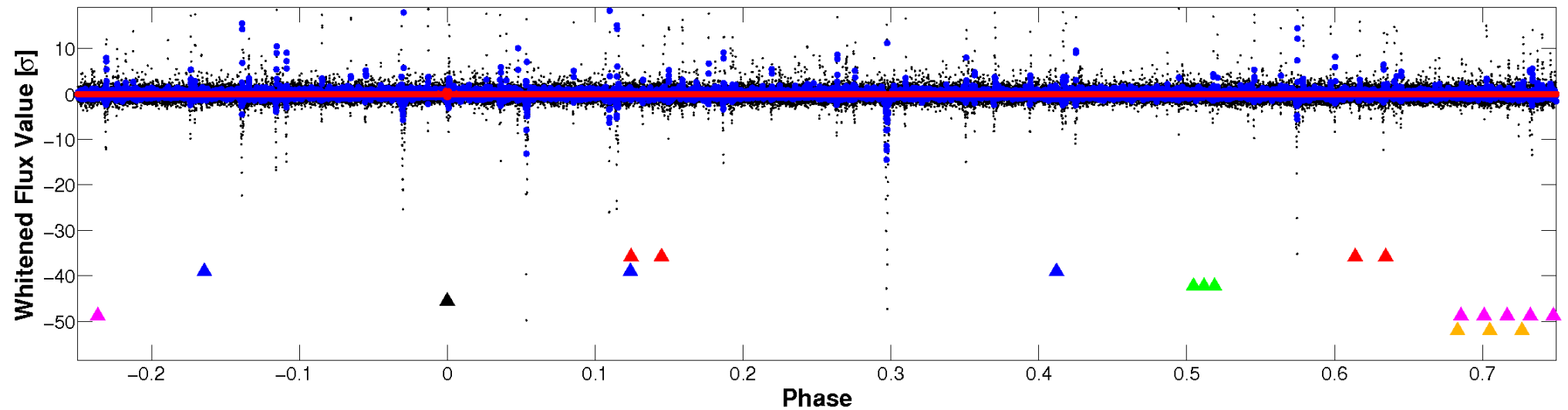


Non-Whitened Vs. Whitened Light Curve

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

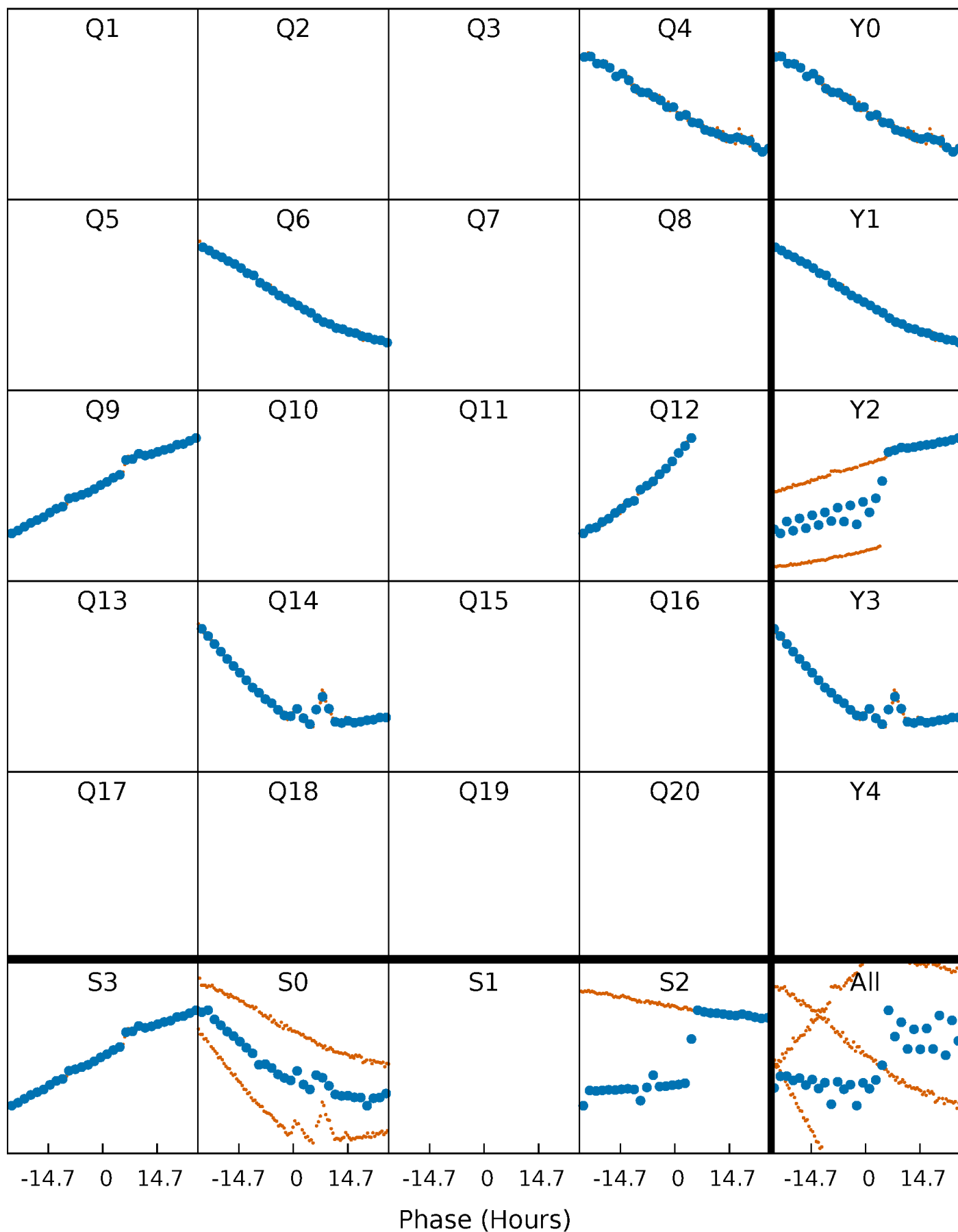


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



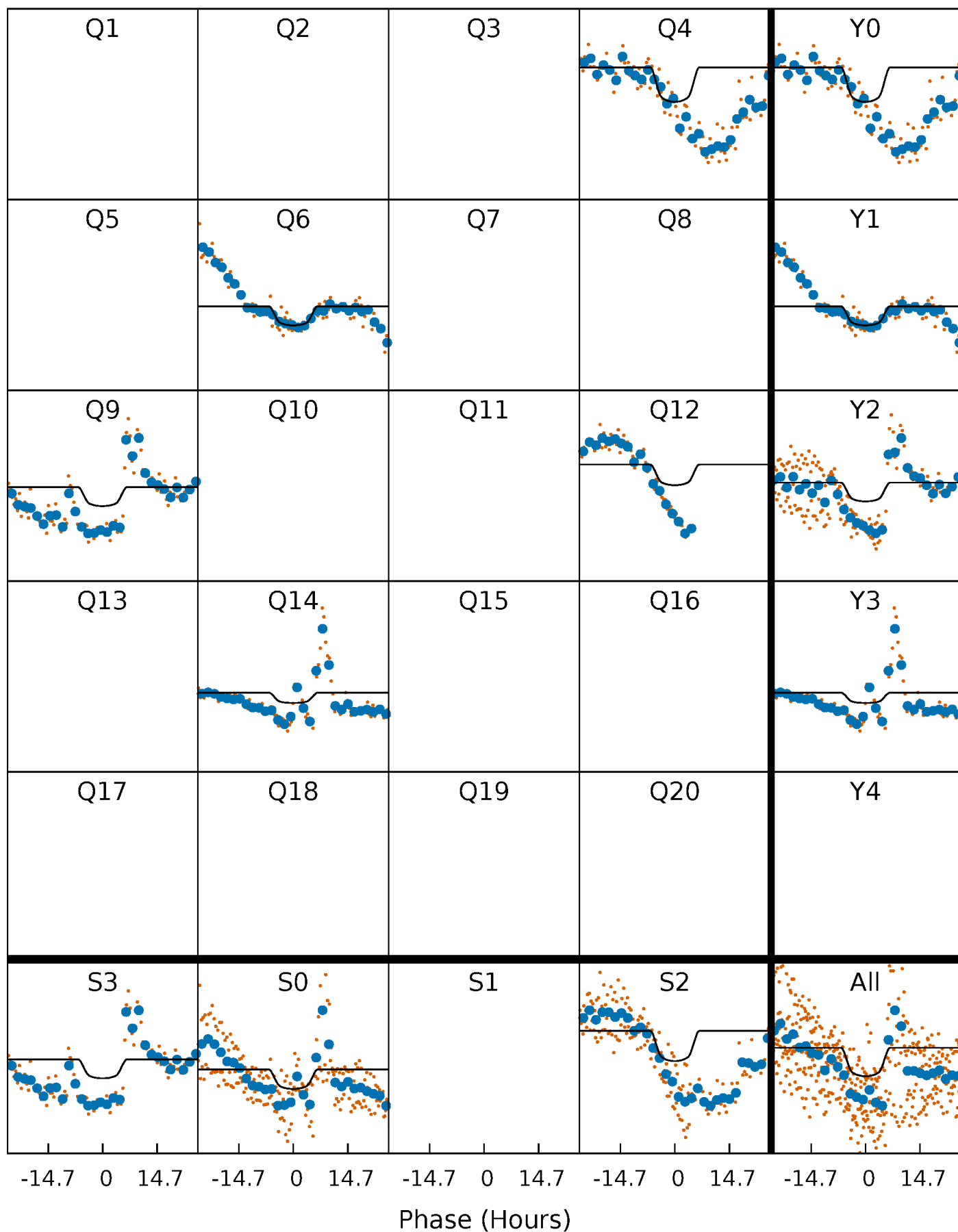
PDC Quarter-Phased Transit Curves

TCE 008142547-04 P=253.584568 Days $T_0=355.759960$ (BKJD)



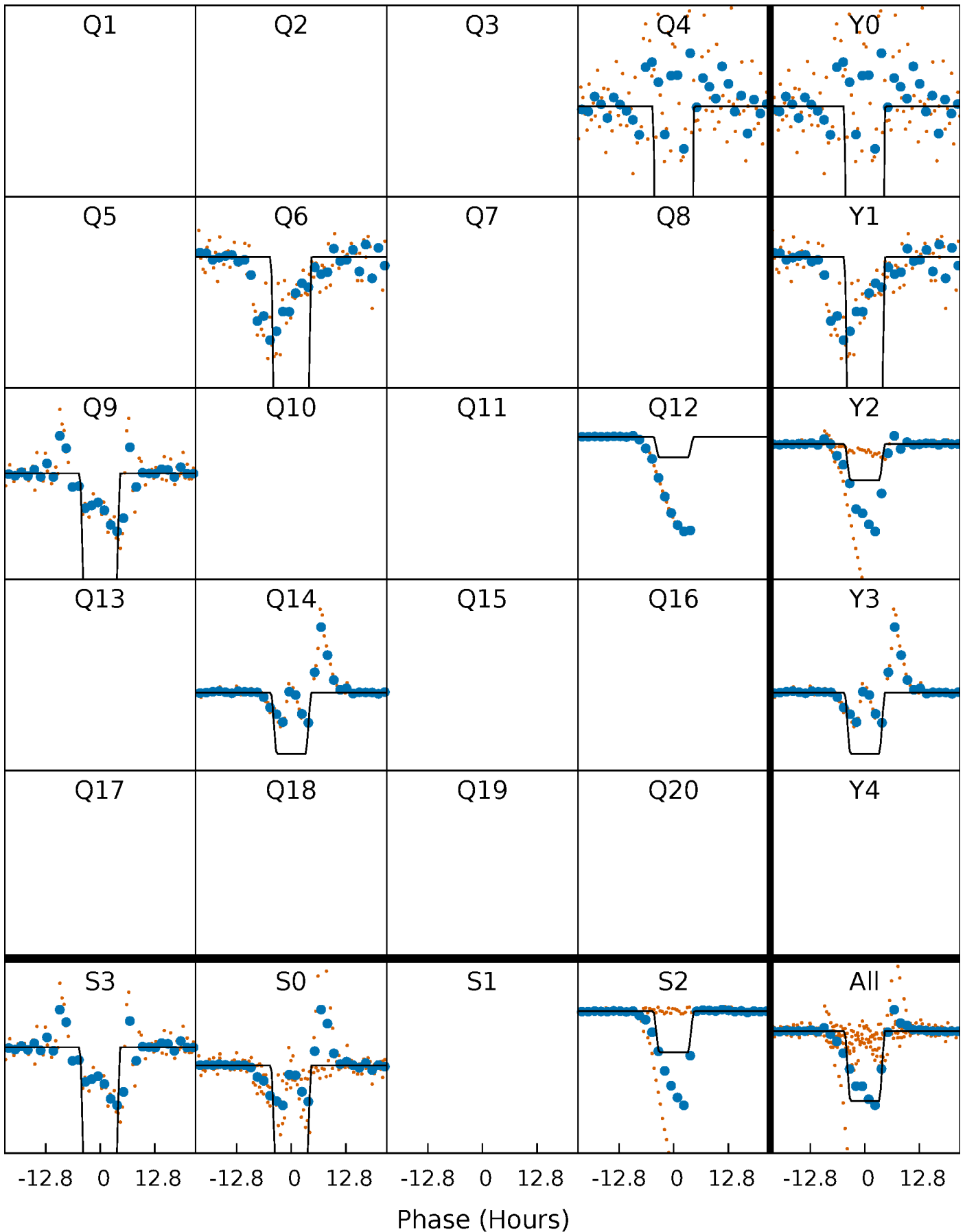
DV Quarter-Phased Transit Curves

TCE 008142547-04 $P=253.584568$ Days $T_0=355.759960$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

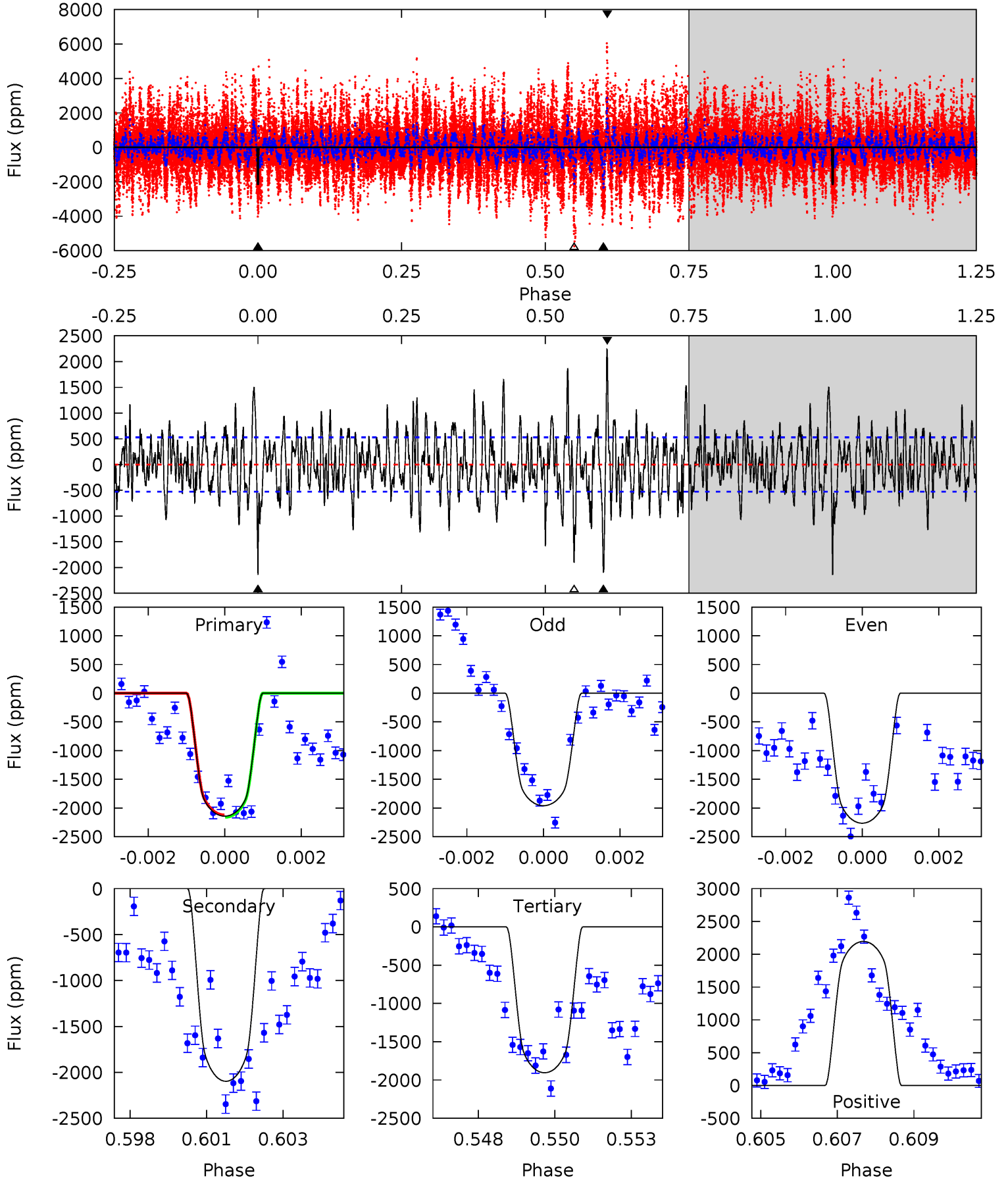
TCE 008142547-04 P=253.600913 Days $T_0=355.736127$ (BKJD)



DV Model-Shift Uniqueness Test

008142547-04, P = 253.584568 Days, E = 102.175392 Days

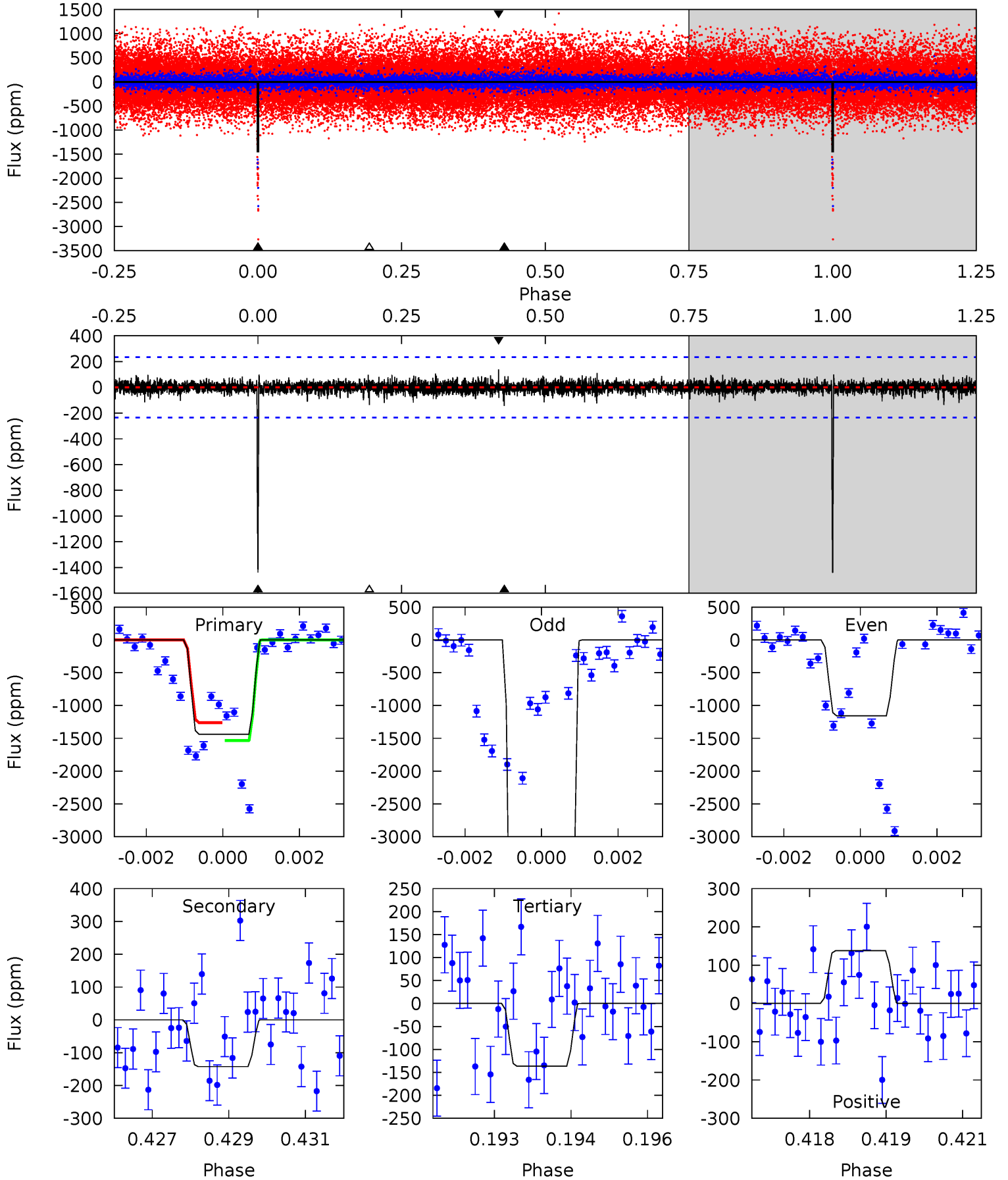
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.5	21.1	19.2	22.1	5.31	3.07	5.25	2.39	-0.53	1.94	-0.98	1.35	0.89	0.51	0.21



Alt Model-Shift Uniqueness Test

008142547-04, P = 253.600913 Days, E = 102.135214 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.0	3.27	3.12	3.15	5.37	3.15	0.61	29.8	29.8	0.14	0.11	108.1	3.75	0.09	3.11



Stellar Parameters For KIC 008142547

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4996^{+148}_{-148}	$4.591^{+0.072}_{-0.048}$	$-0.500^{+0.300}_{-0.300}$	$0.680^{+0.071}_{-0.065}$	$0.657^{+0.090}_{-0.036}$	$2.948^{+0.878}_{-0.523}$
	+3%/-3%	+2%/-1%	+60%/-60%	+10%/-10%	+14%/-5%	+30%/-18%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008142547-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2097 ± 99	$2.80^{+0.39}_{-0.36}$	306^{+11}_{-11}	5441^{+388}_{-320}	70239^{+22071}_{-16489}
Alt.	-143 ± 44	$6.34^{+0.54}_{-0.51}$	306^{+11}_{-12}	2642^{+109}_{-135}	932^{+329}_{-308}

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

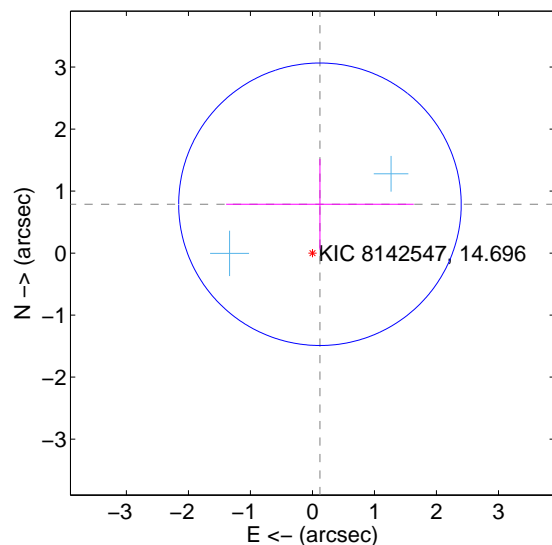
Supplemental centroid analysis for 008142547-04. Kepler magnitude: 14.70. Transit SNR 5.81

There are 2 quarters with good PRF difference image offsets

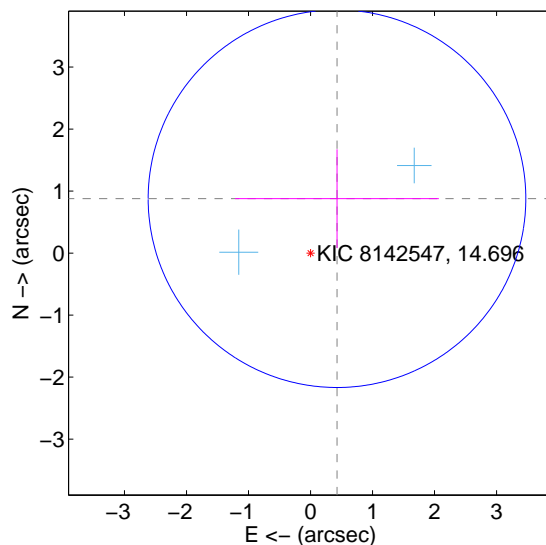
The direct PRF centroid is offset from the target star catalog position by about 0.43 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.797 ± 0.759	1.05	-0.121 ± 1.512	0.788 ± 0.732
PRF-fit source offset from KIC position	0.976 ± 1.015	0.96	-0.427 ± 1.643	0.877 ± 0.797
photometric centroid source offset	1.35 ± 0.63	2.12	-1.35 ± 0.63	0.04 ± 0.63

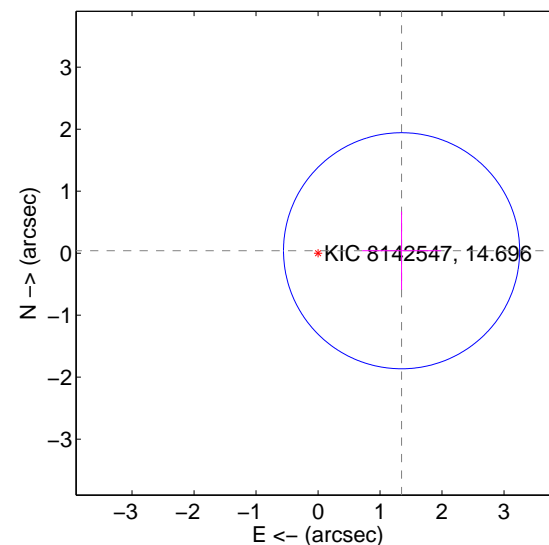
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

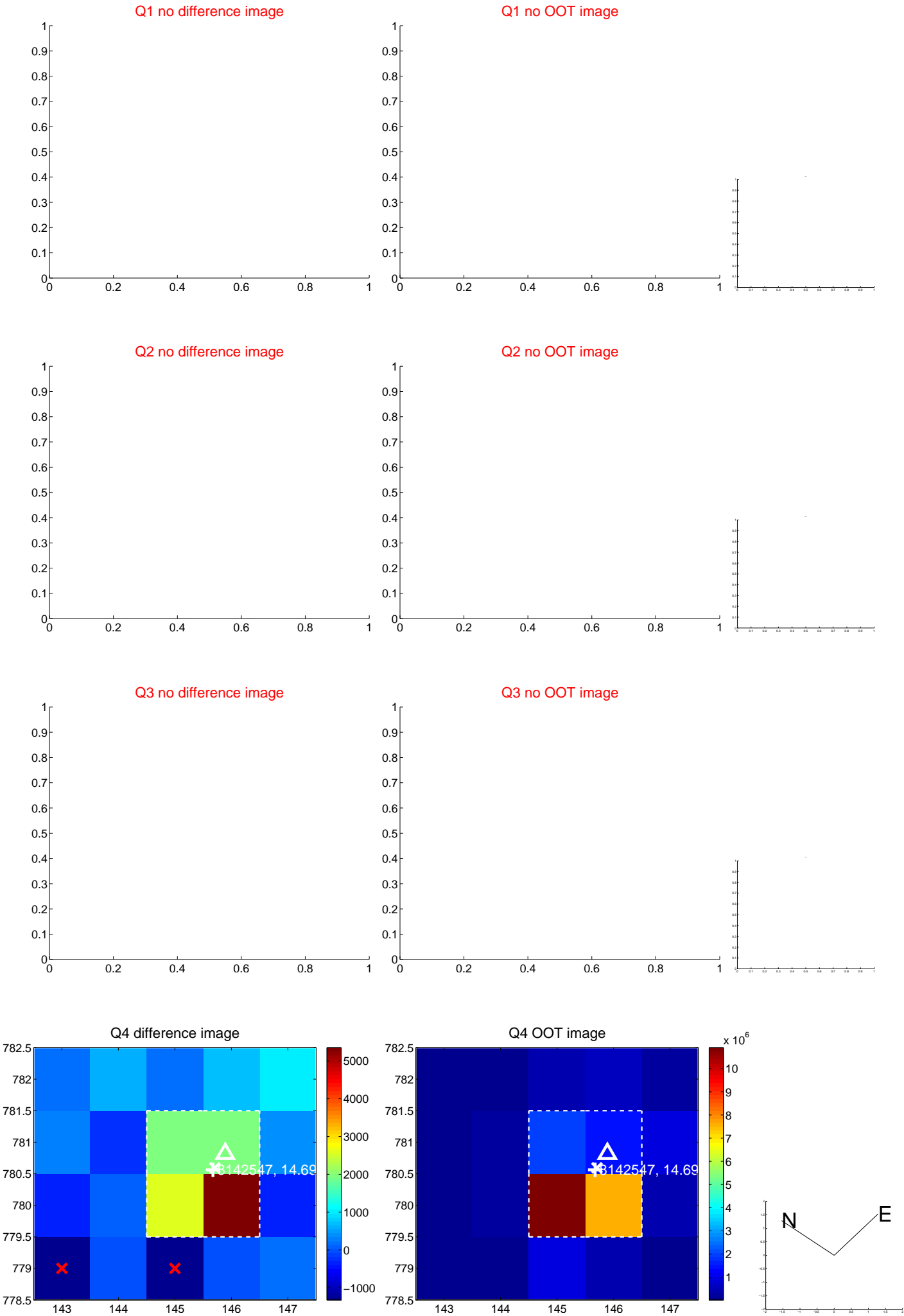


offset from photometric centroids

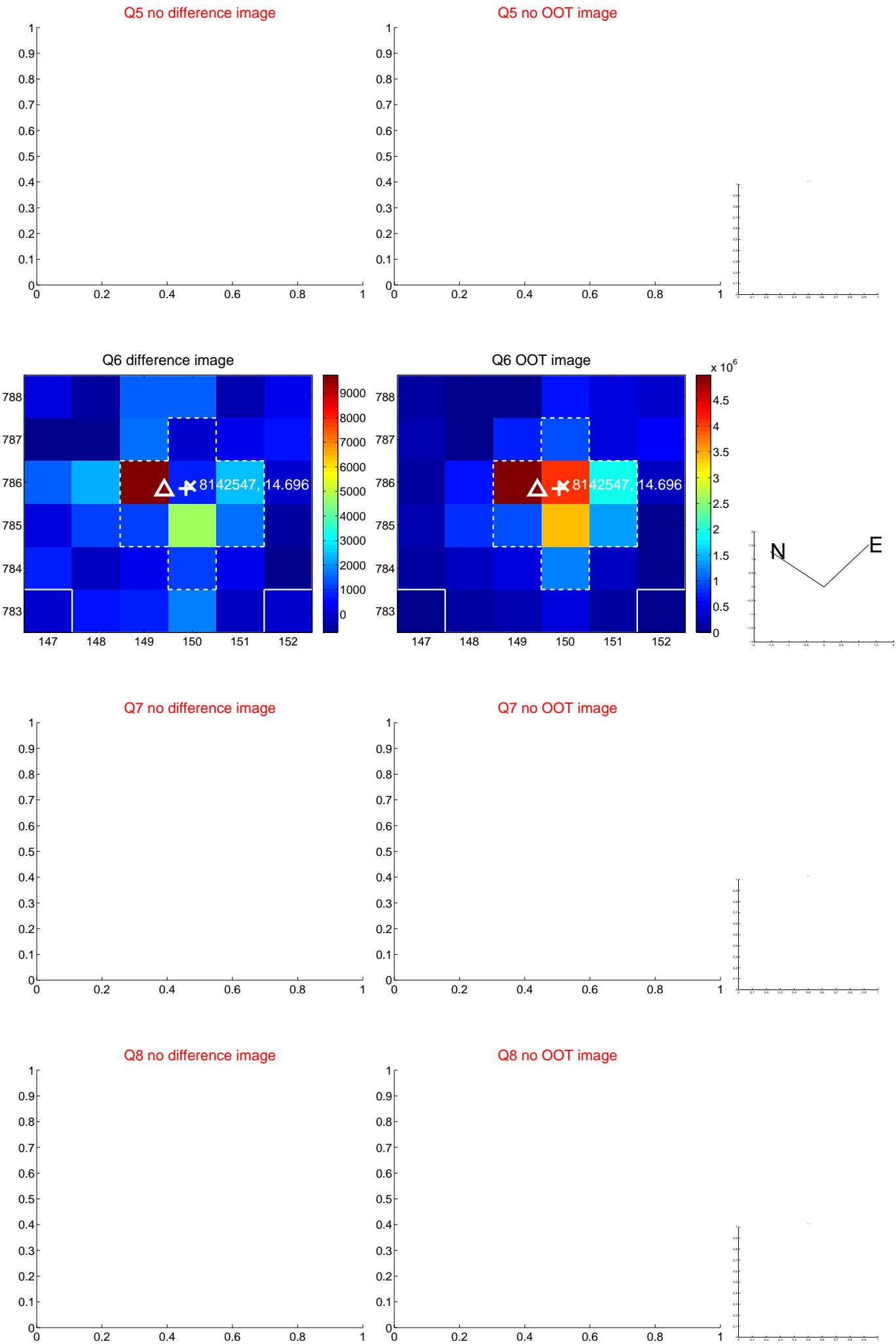


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

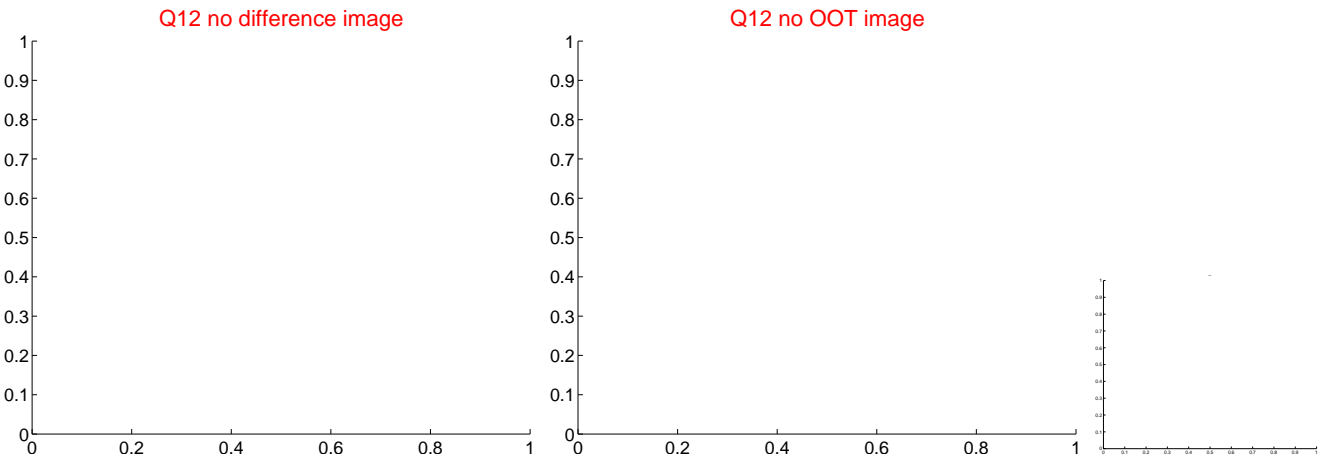
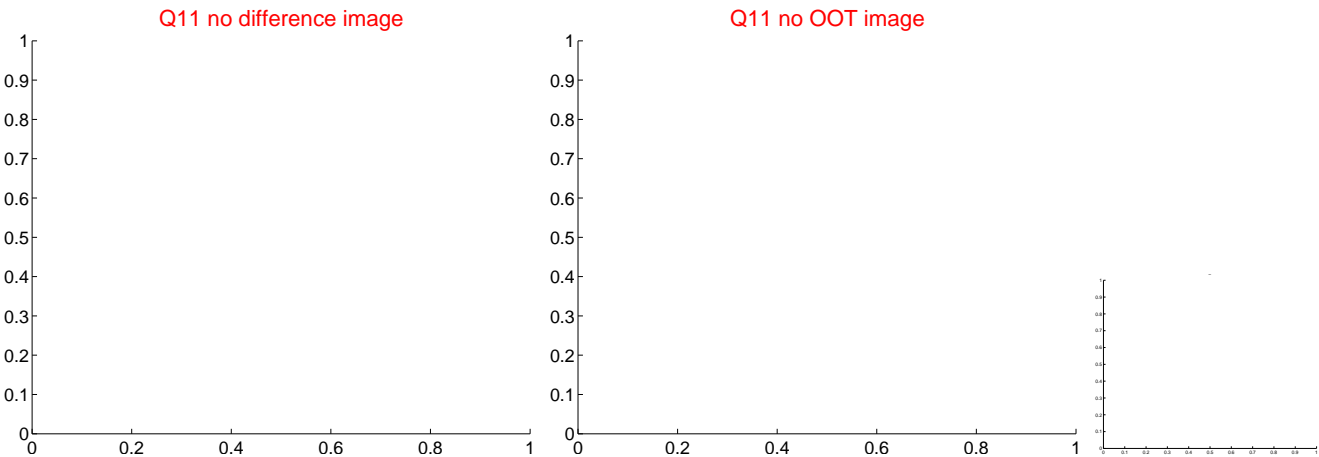
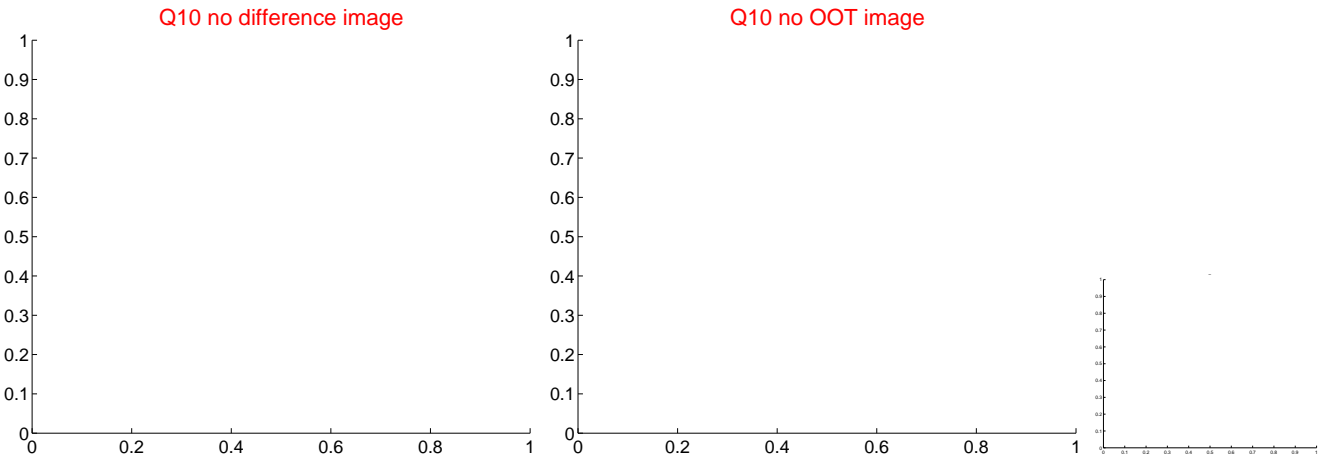
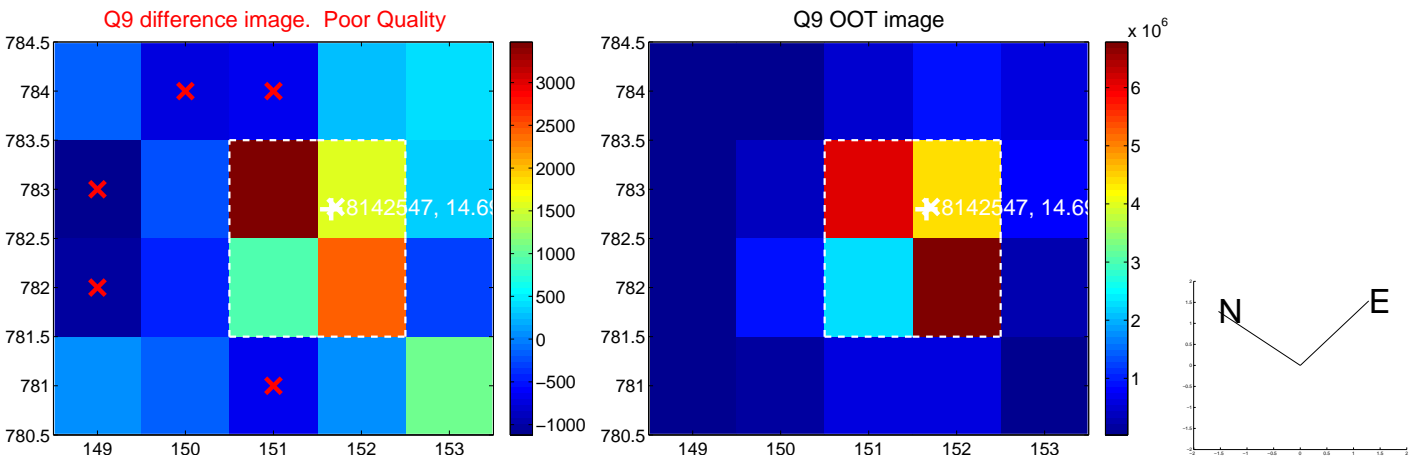
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



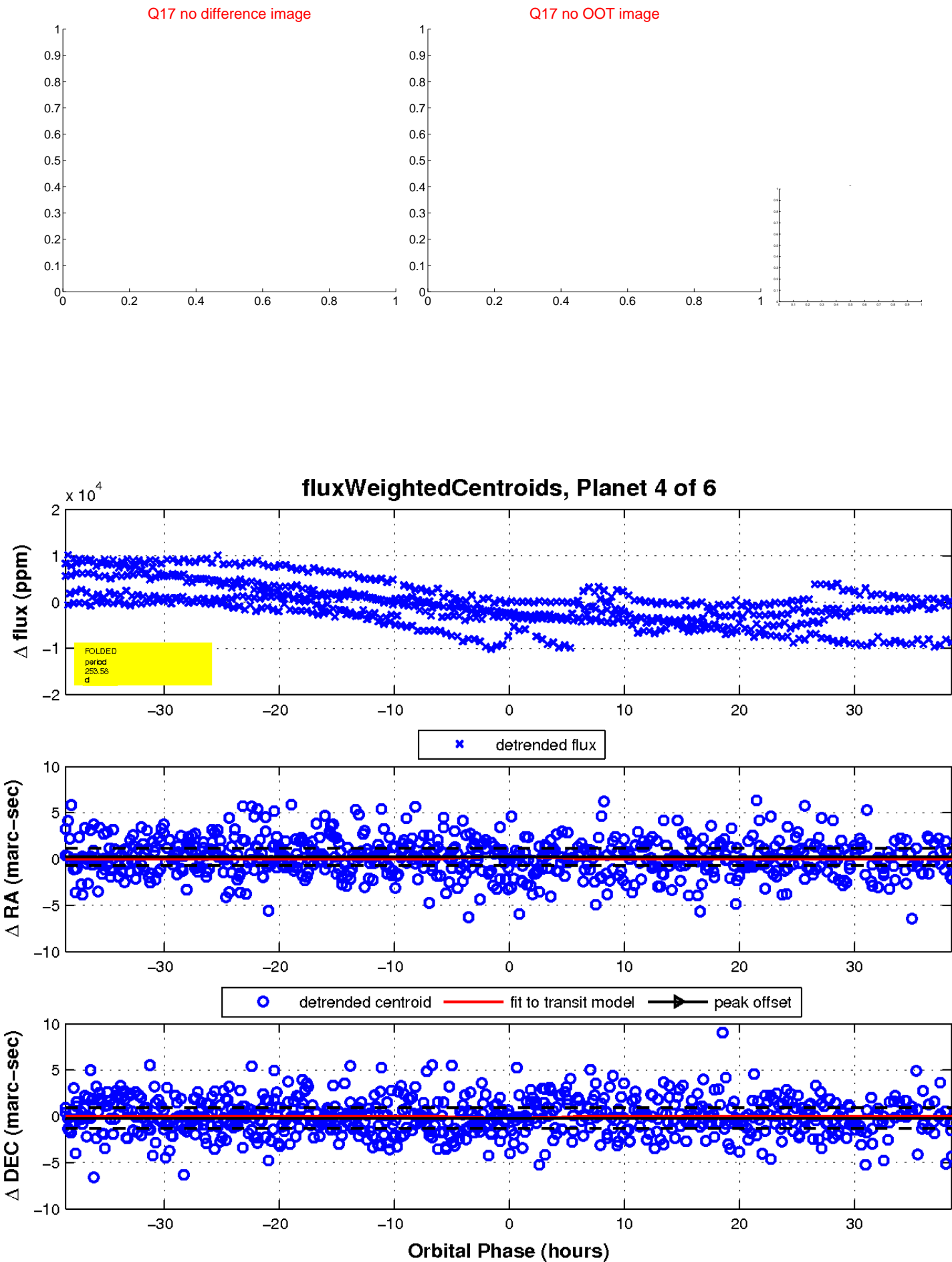
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

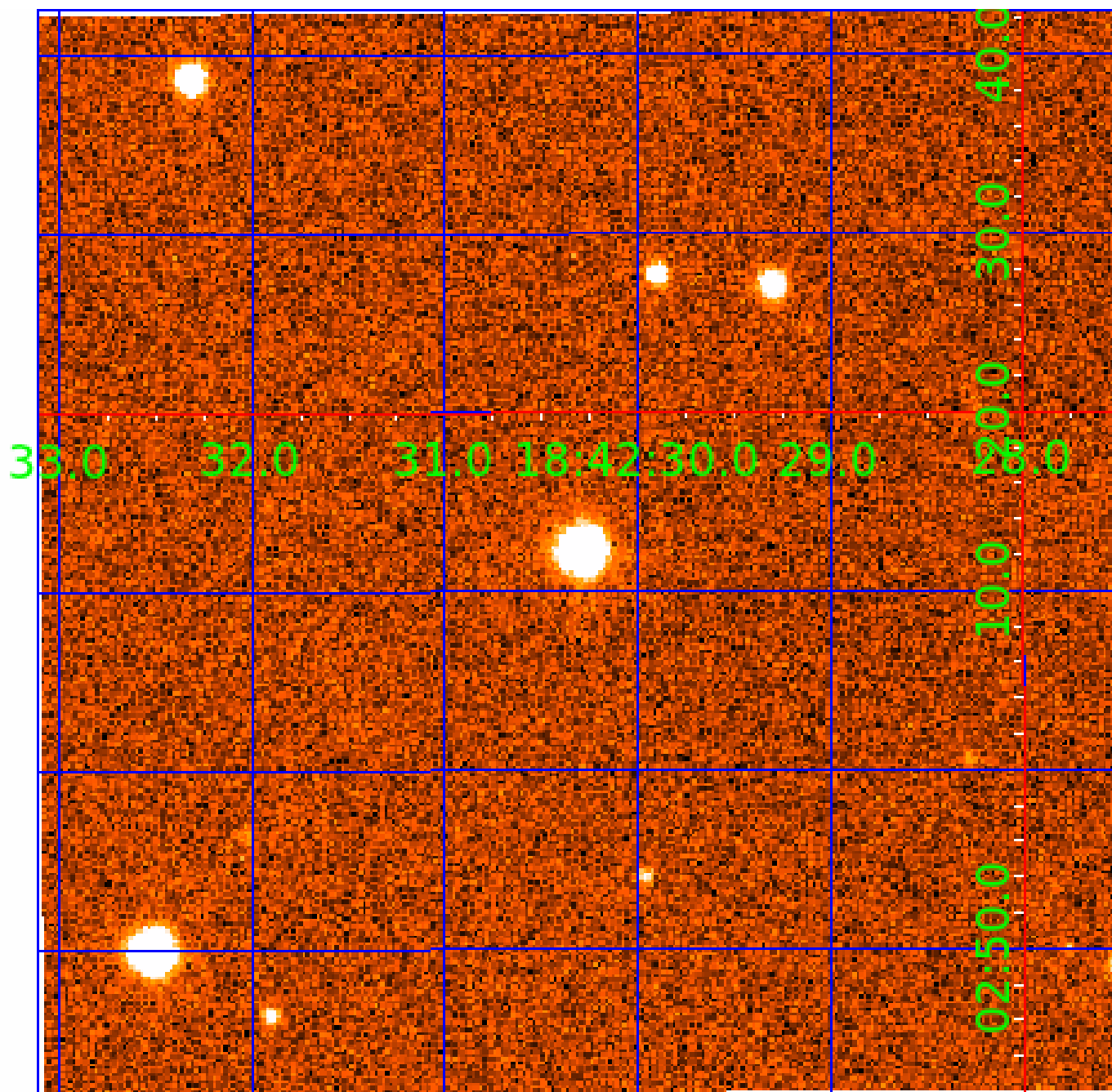


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008142547

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})
008142547-01	OBS	No	377.765656	392.498830	1507.8	3.522	18.8	8.6	0.68	4996	2.75	0.33
008142547-02	OBS	No	434.105578	460.231558	1534.9	5.304	15.9	7.7	0.68	4996	2.81	0.27
008142547-03	OBS	No	508.975269	483.723031	2847.7	11.131	16.0	10.4	0.68	4996	7.03	0.22
008142547-04	OBS	No	253.584568	355.759960	1087.7	12.879	14.4	5.8	0.68	4996	2.79	0.56
008142547-05	OBS	No	257.549270	276.005526	1131.3	7.934	13.7	7.8	0.68	4996	2.29	0.54
008142547-06	OBS	No	512.691643	275.427962	808.3	9.000	13.4	-1.0	0.68	4996	1.88	0.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008142547-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008142547-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008142547-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008142547-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
008142547-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—HALO_GHOST
008142547-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—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.

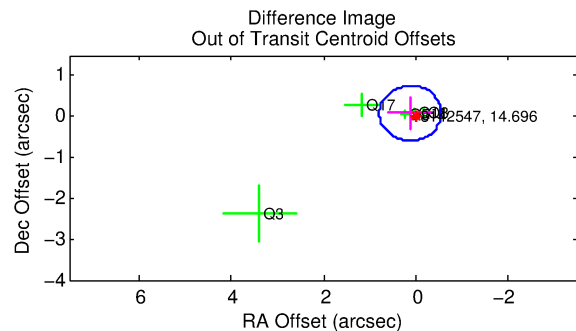
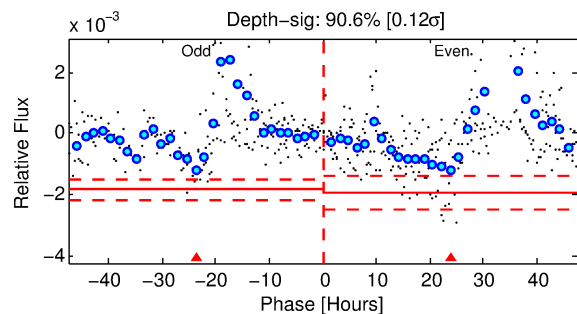
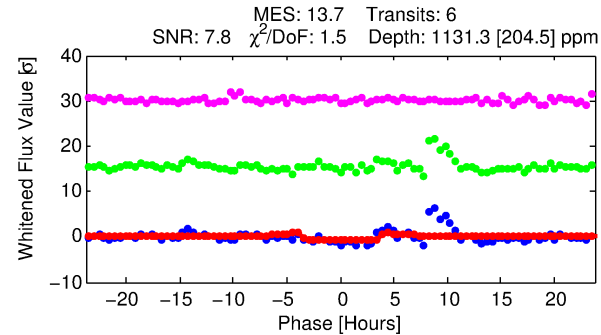
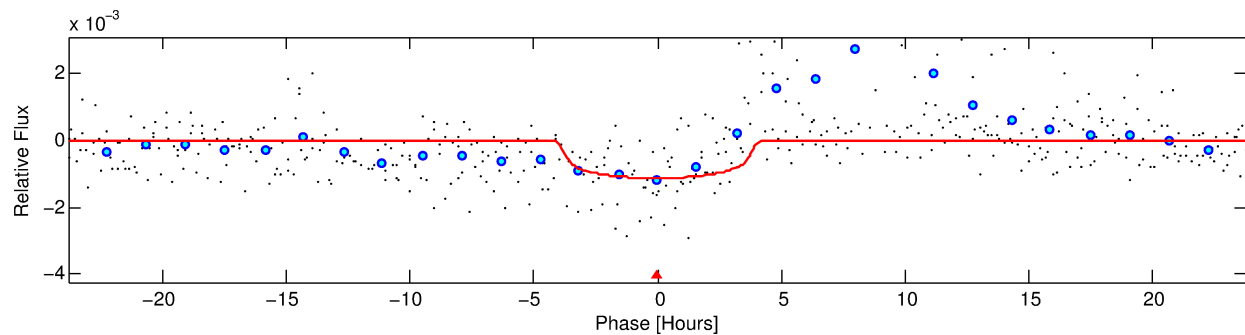
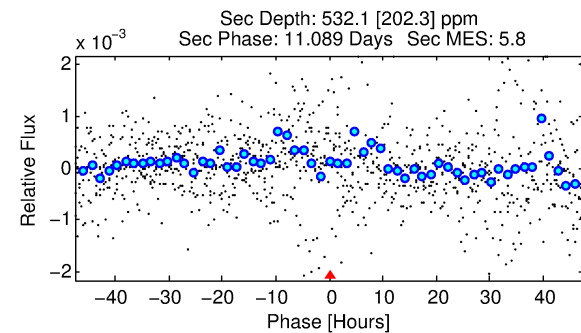
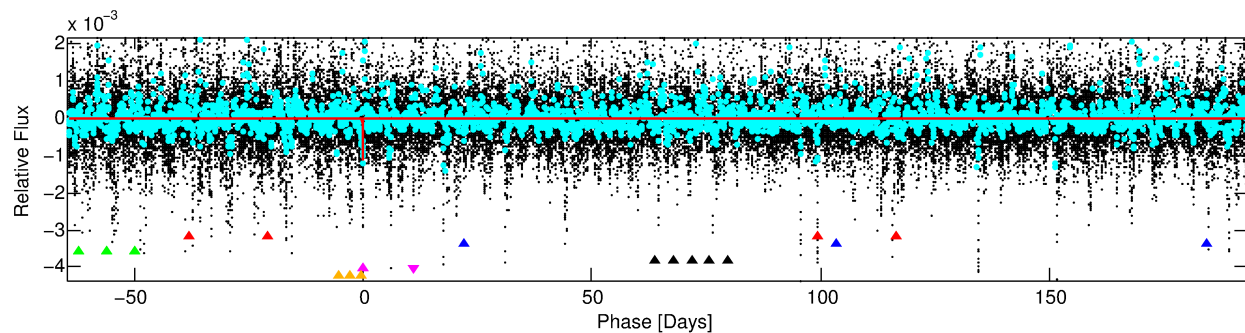
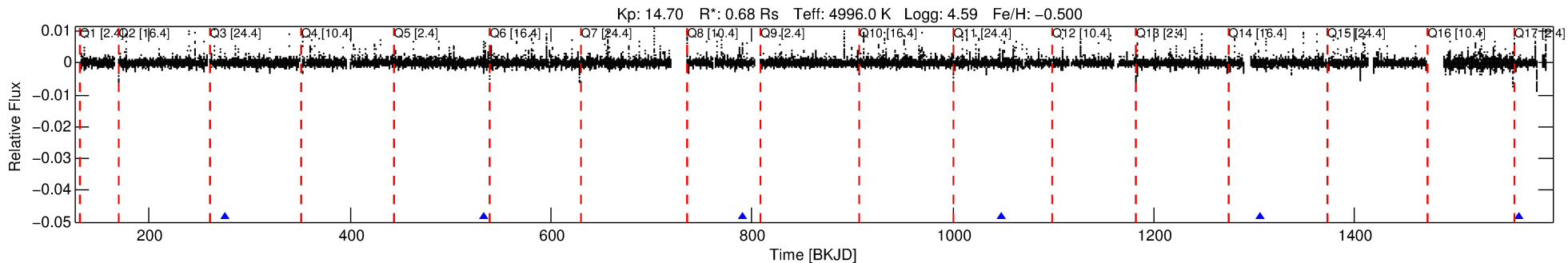
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008142547-05

No Significant Match Found

DV One-Page Summary

KIC: 8142547 Candidate: 5 of 6 Period: 257.549 d



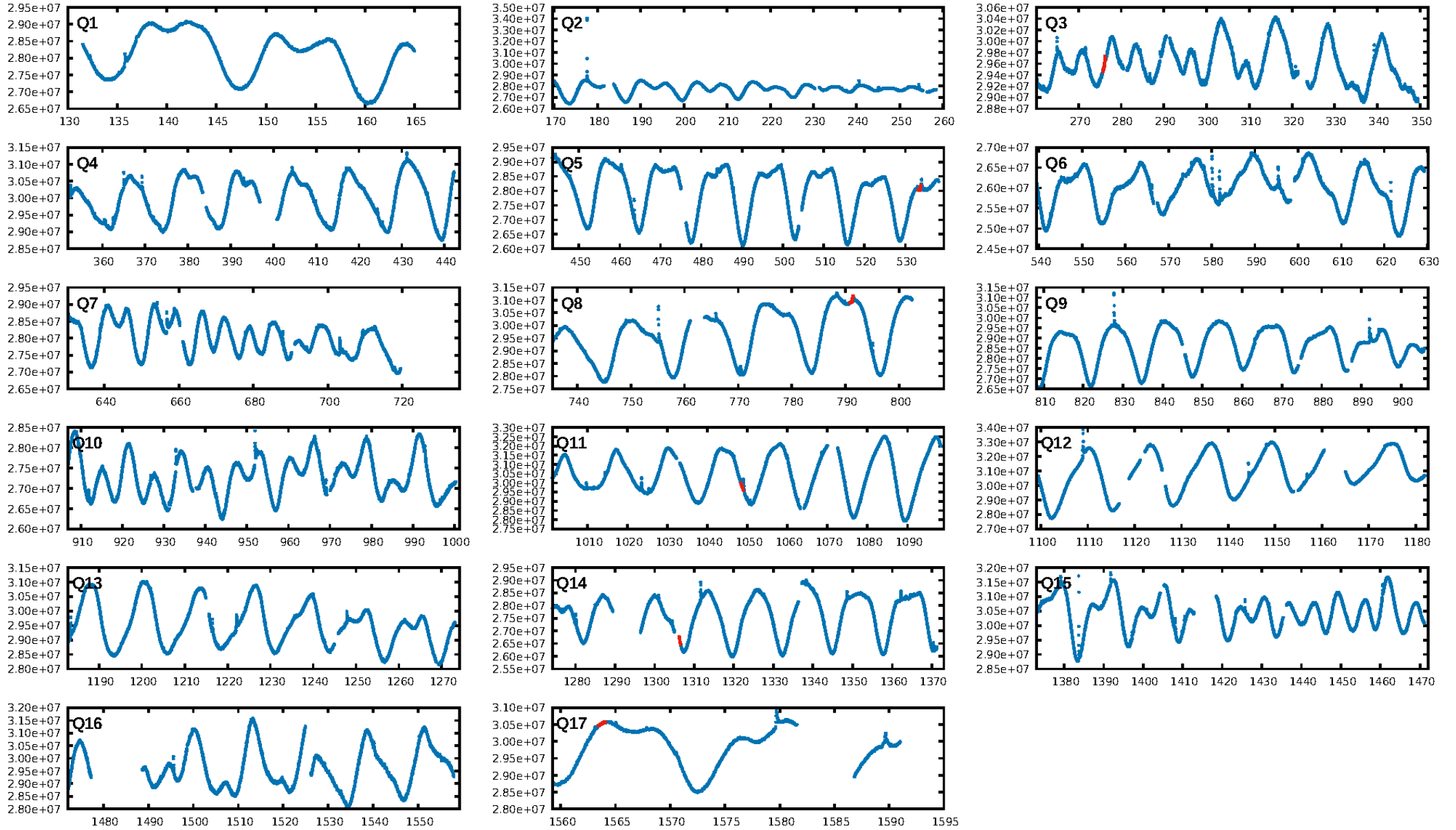
DV Fit Results:

Period = 257.54927 [0.00329] d
Epoch = 276.0055 [0.0097] BKJD
Rp/R* = 0.0309 [0.0364]
a/R* = 231.72 [988.56]
b = 0.44 [8.02]
Seff = 0.54 [0.10]
Teff = 219 [10] K
Rp = 2.29 [2.71] Re
a = 0.6891 [0.0612] AU
Ag = 26523.09 [63484.15] [0.42σ]
Teffp = 4320 [2584] K [1.59σ]

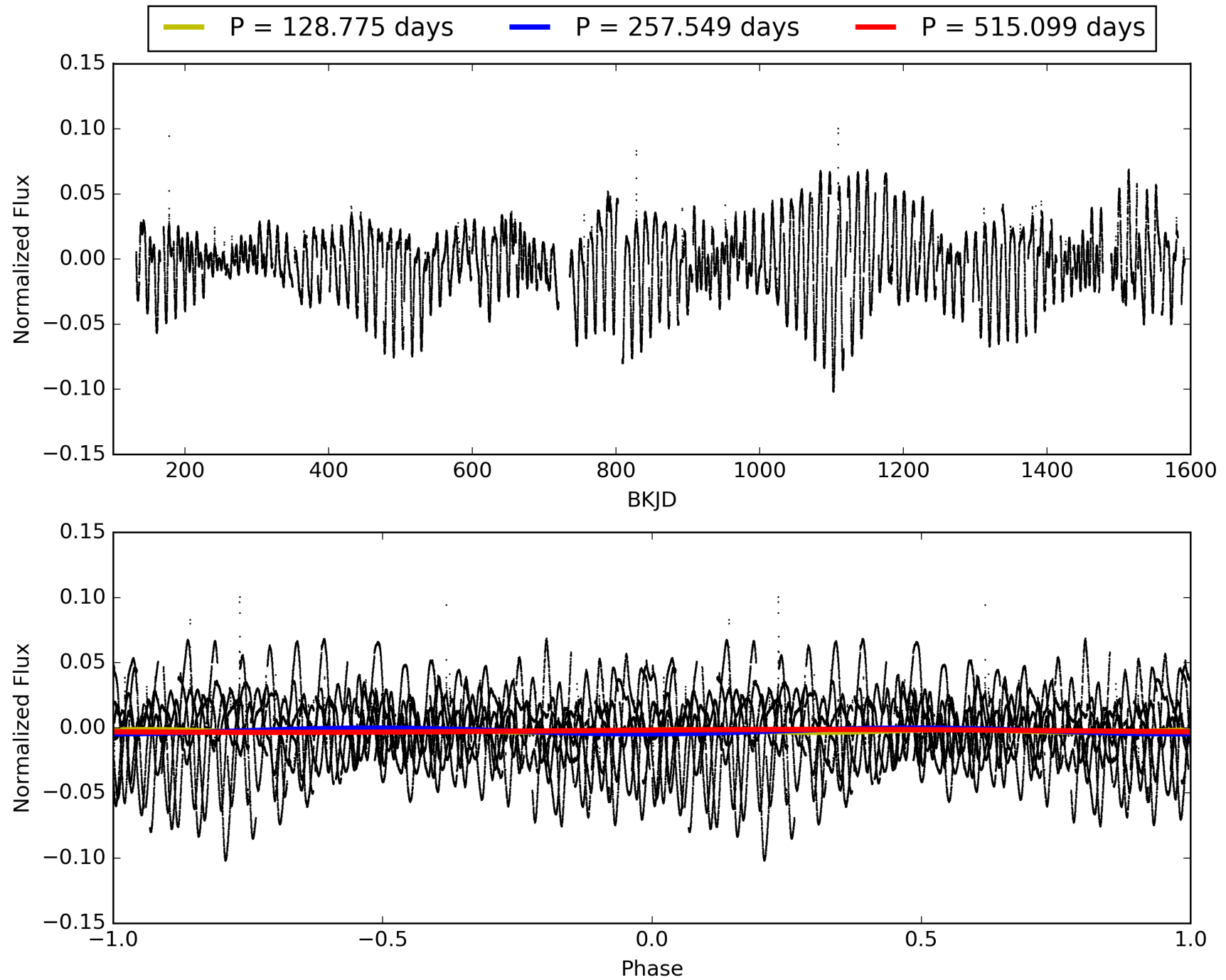
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [6.29σ]
LongPeriod-sig: 100.0% [332.37σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 65.4%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.08515
Centroid-sig: 0.3%
Centroid-so: 1.610 arcsec [2.51σ]
OotOffset-rm: 0.152 arcsec [0.68σ]
KicOffset-rm: 0.181 arcsec [0.57σ]
OotOffset-st: 0/2/1/2 [5]
KicOffset-st: 0/2/1/2 [5]
DiffImageQuality-fgm: 0.60 [3/5]
DiffImageOverlap-fno: 0.80 [4/5]

TCE 008142547-05, PDC Light Curves

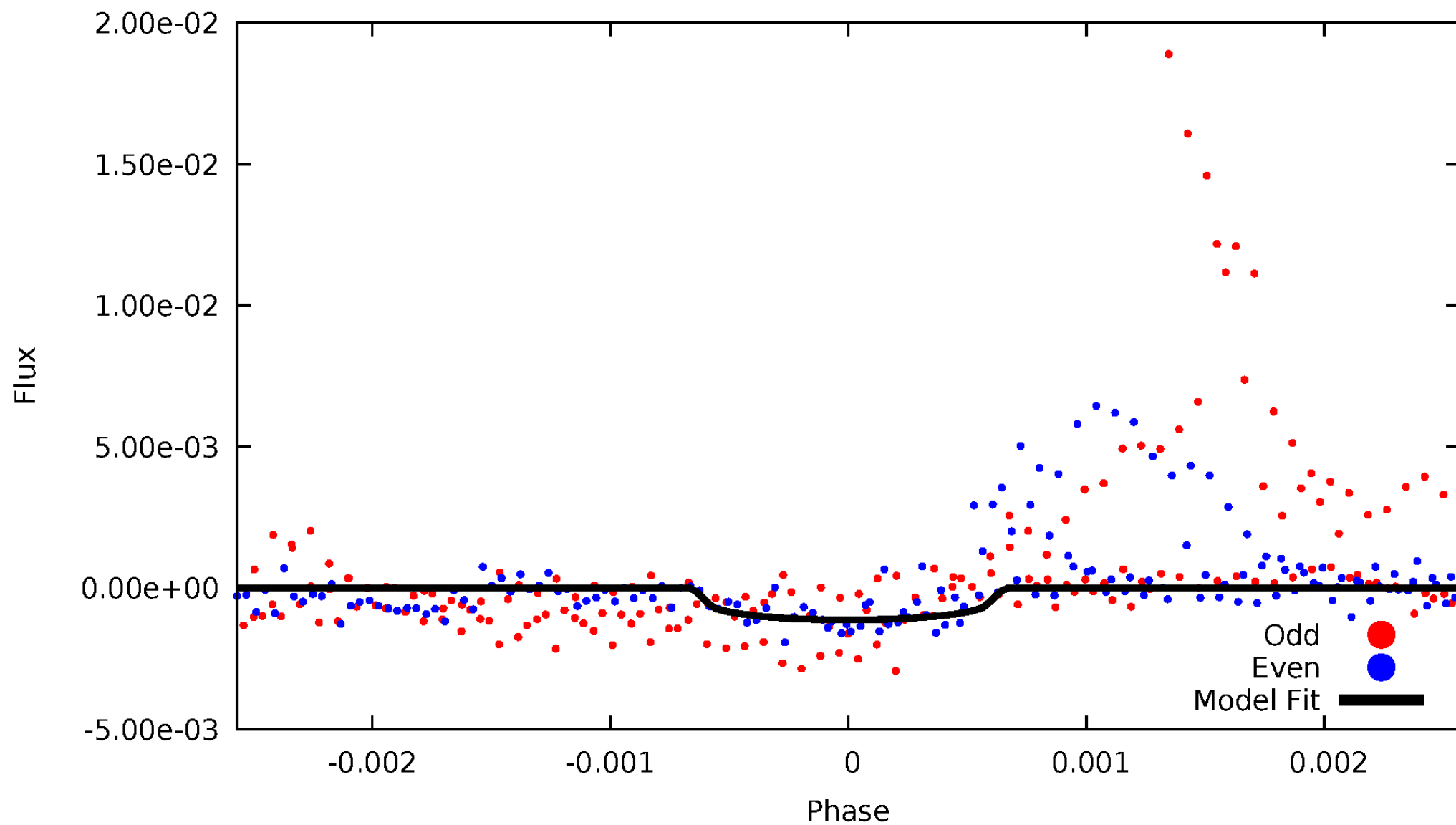


TCE 008142547-05



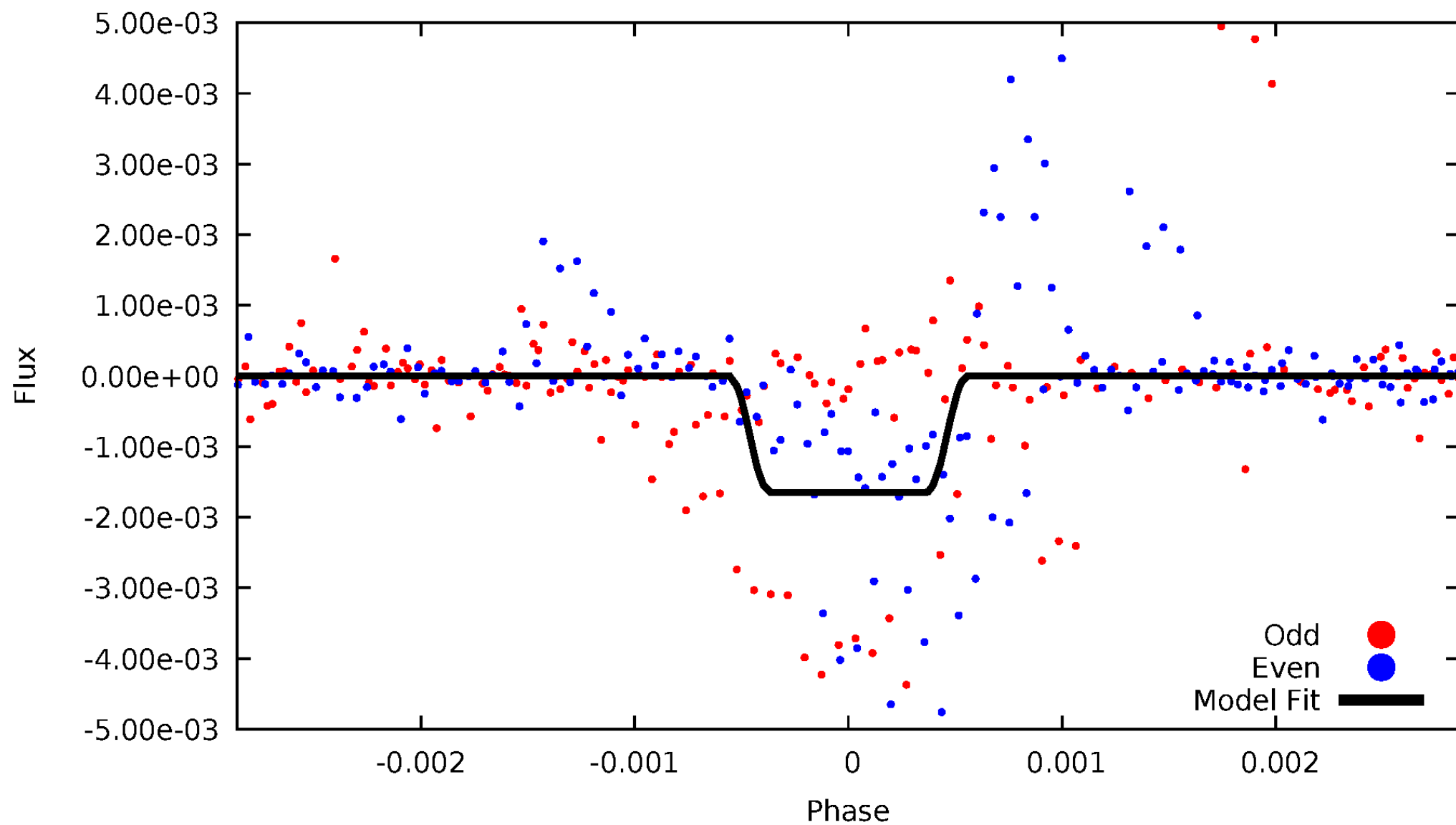
DV Odd/Even

TCE 008142547-05



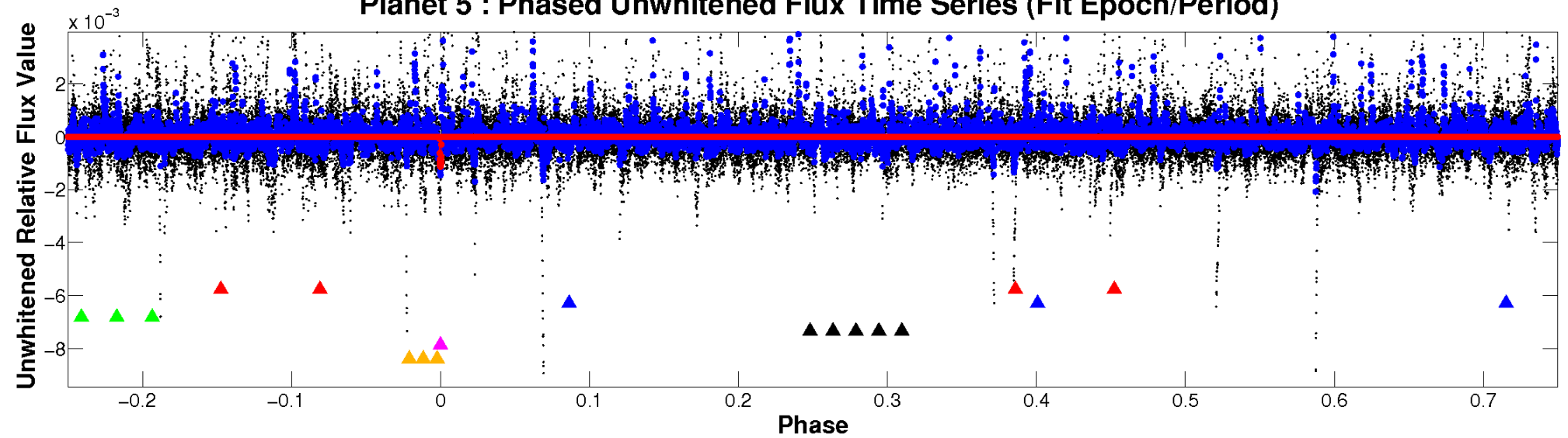
ALT Odd/Even

TCE 008142547-05

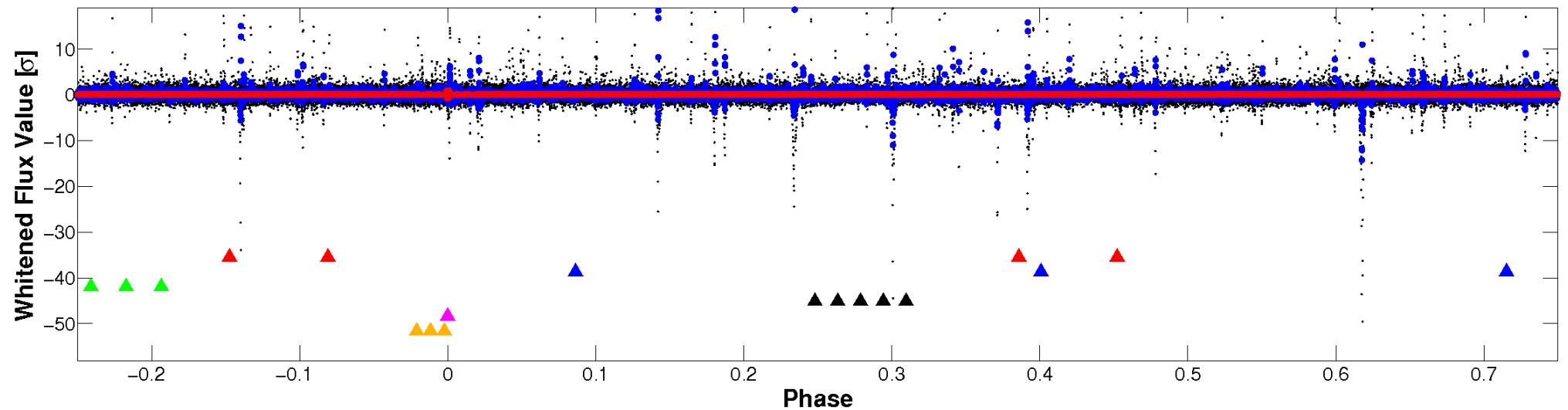


Non-Whitened Vs. Whitened Light Curve

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

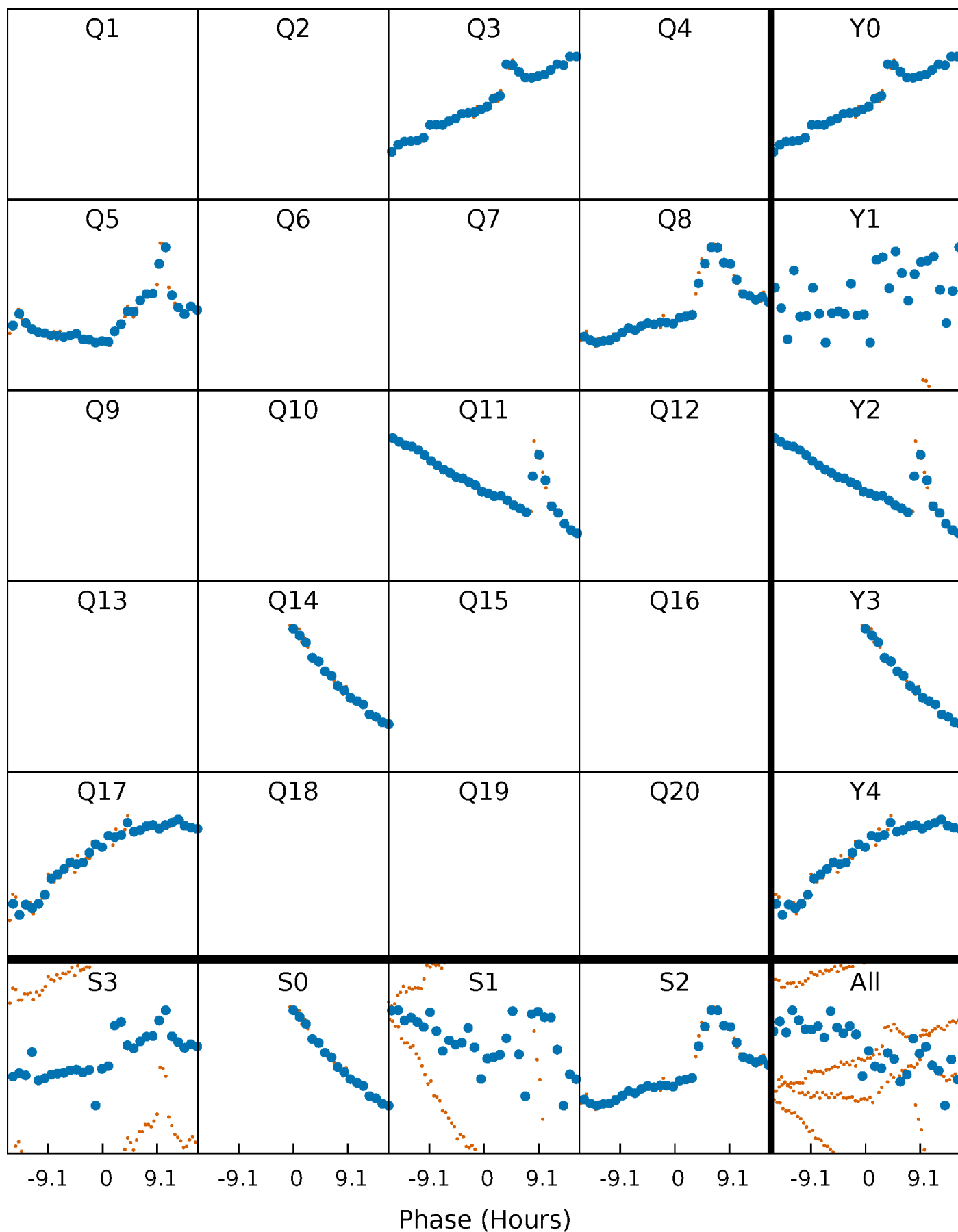


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



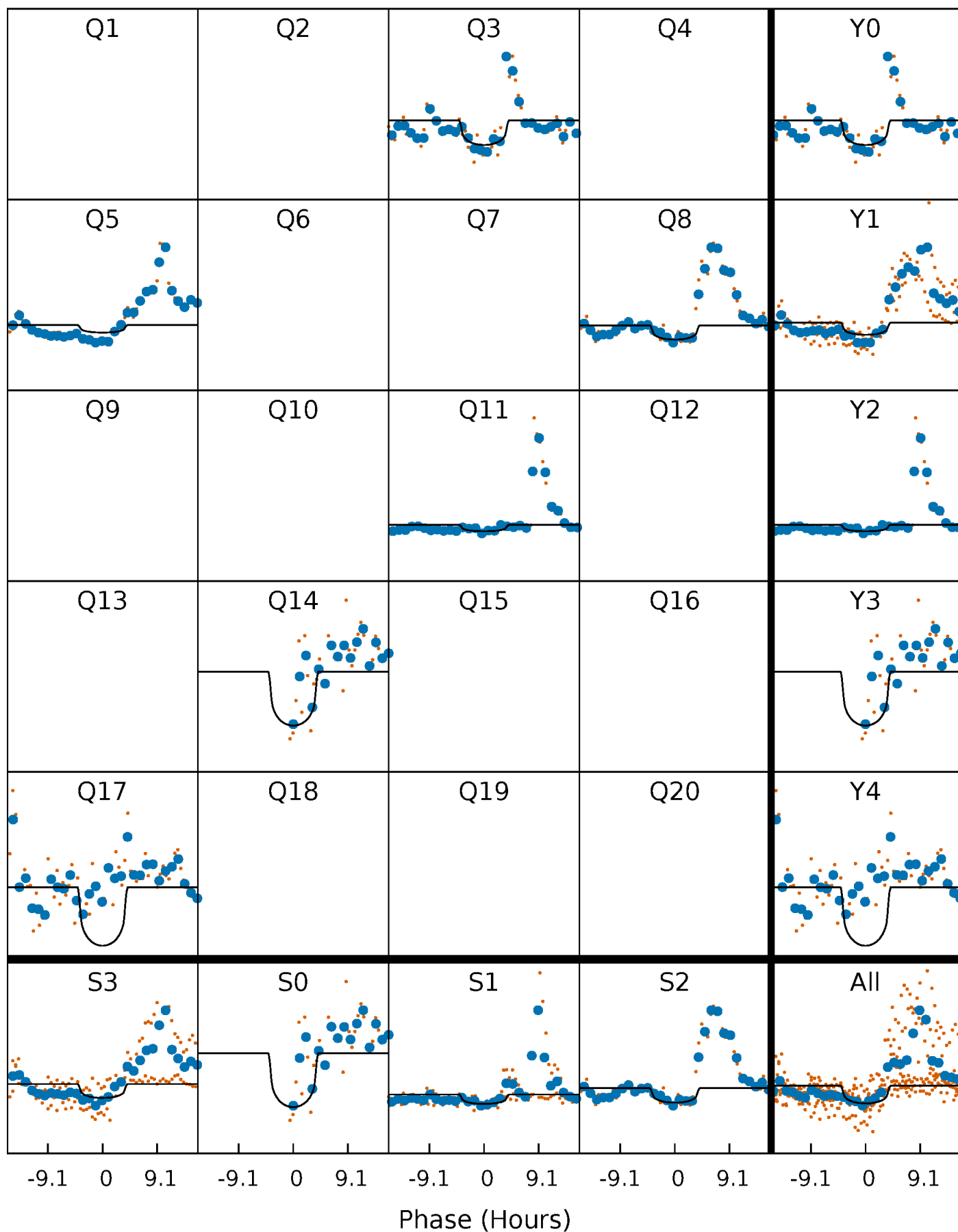
PDC Quarter-Phased Transit Curves

TCE 008142547-05 $P=257.549270$ Days $T_0=276.005526$ (BKJD)



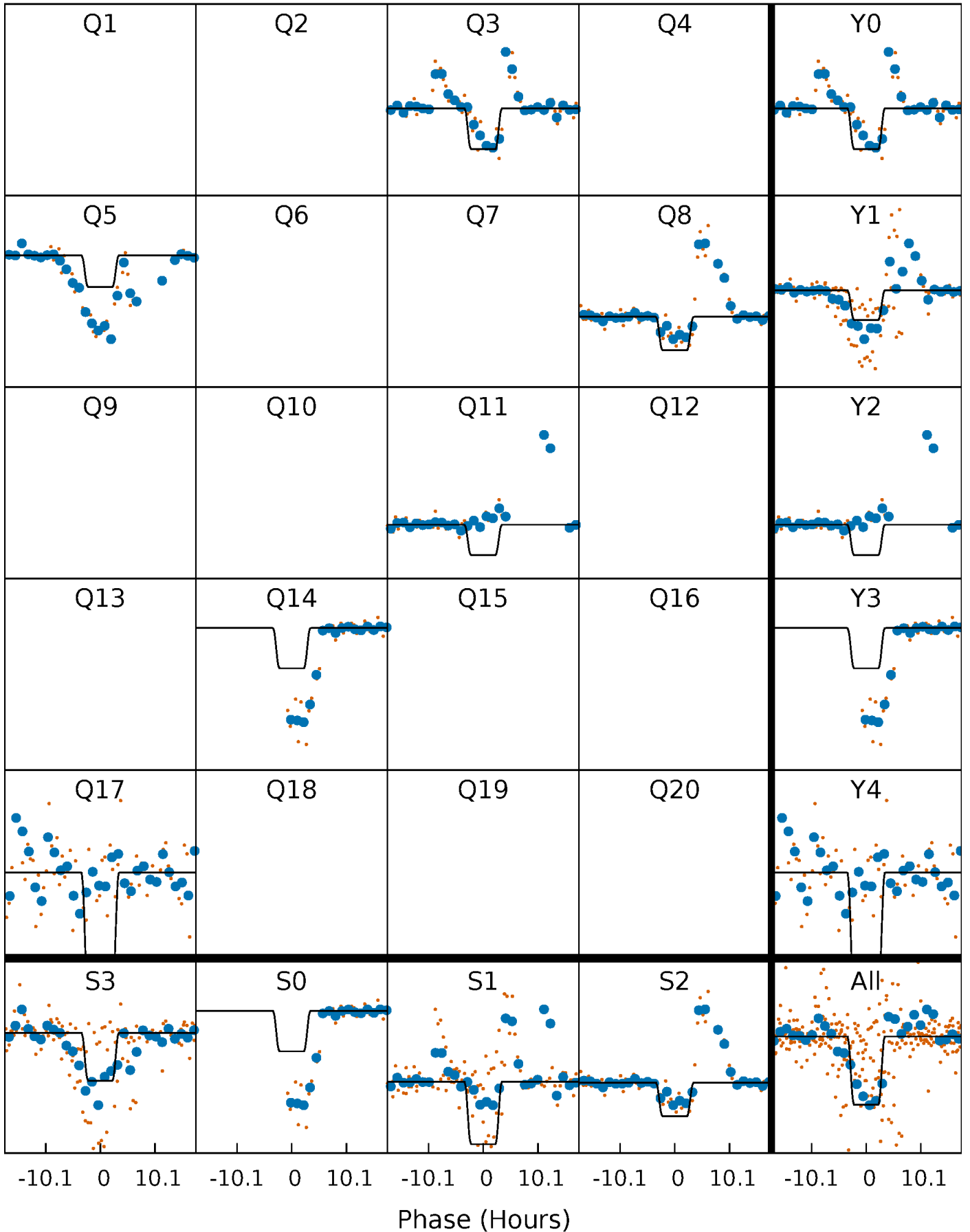
DV Quarter-Phased Transit Curves

TCE 008142547-05 $P=257.549270$ Days $T_0=276.005526$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

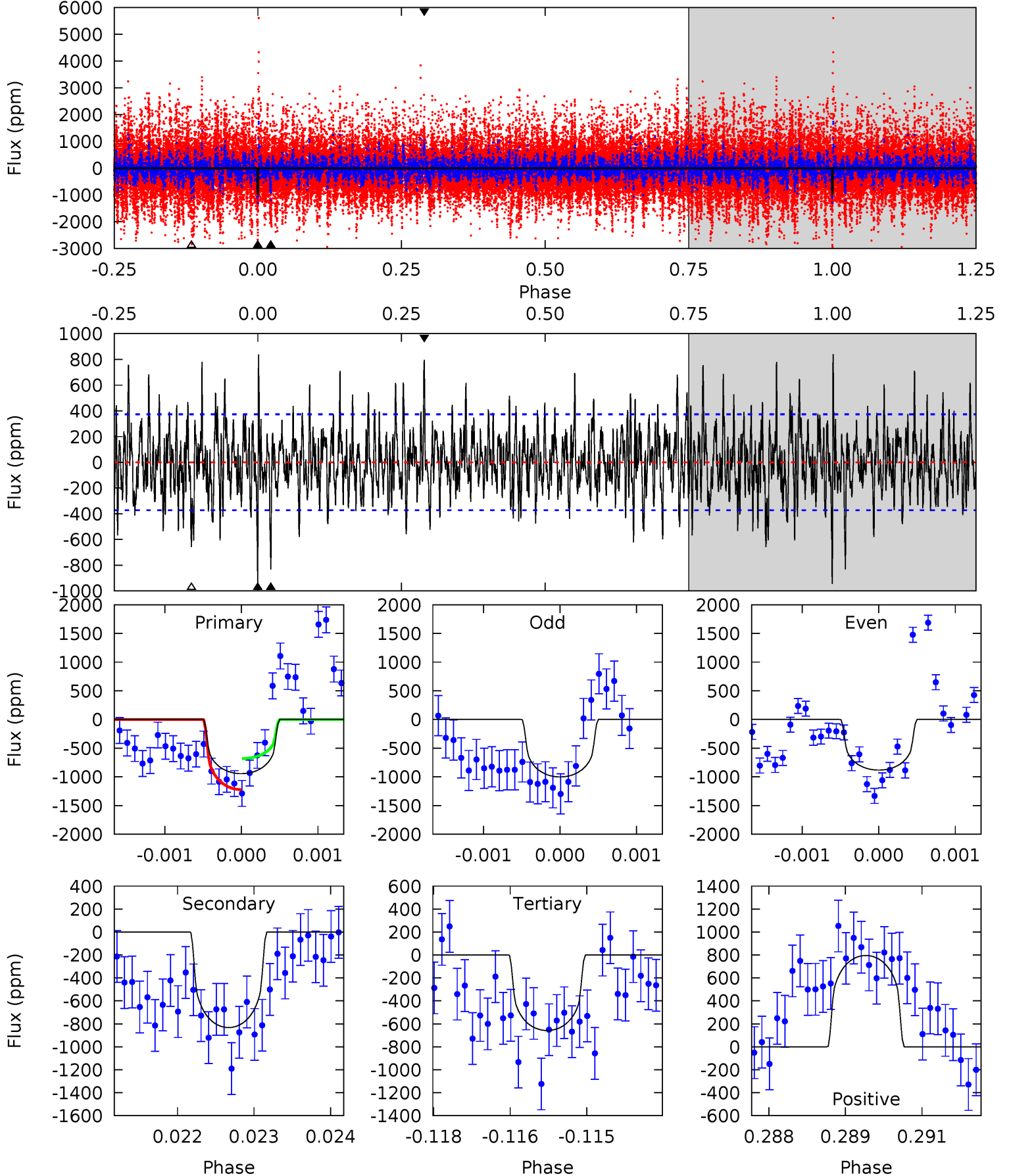
TCE 008142547-05 $P=257.558213$ Days $T_0=275.978023$ (BKJD)



DV Model-Shift Uniqueness Test

008142547-05, $P = 257.549270$ Days, $E = 18.456256$ Days

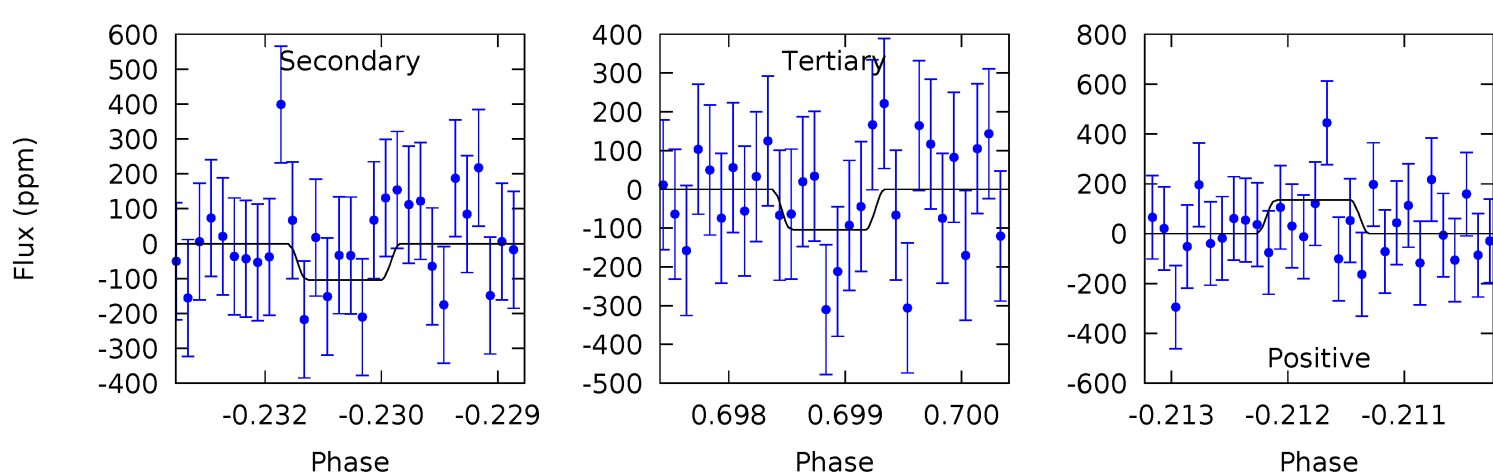
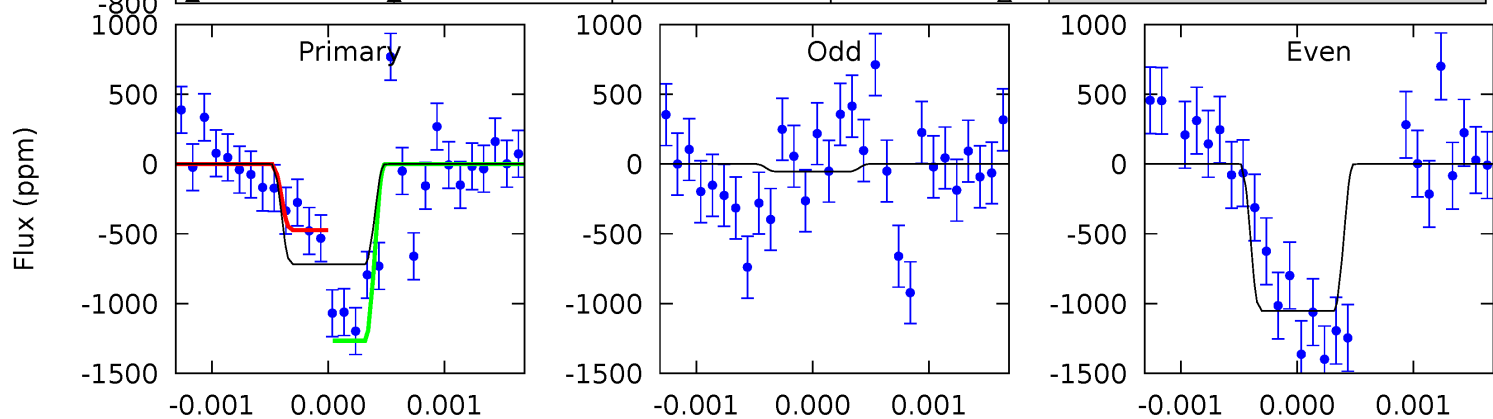
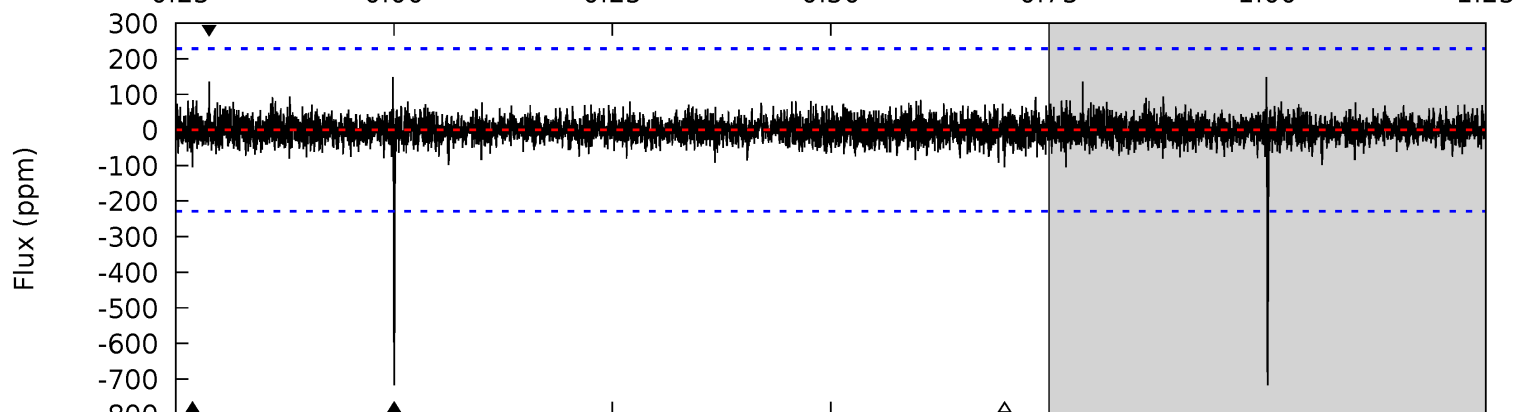
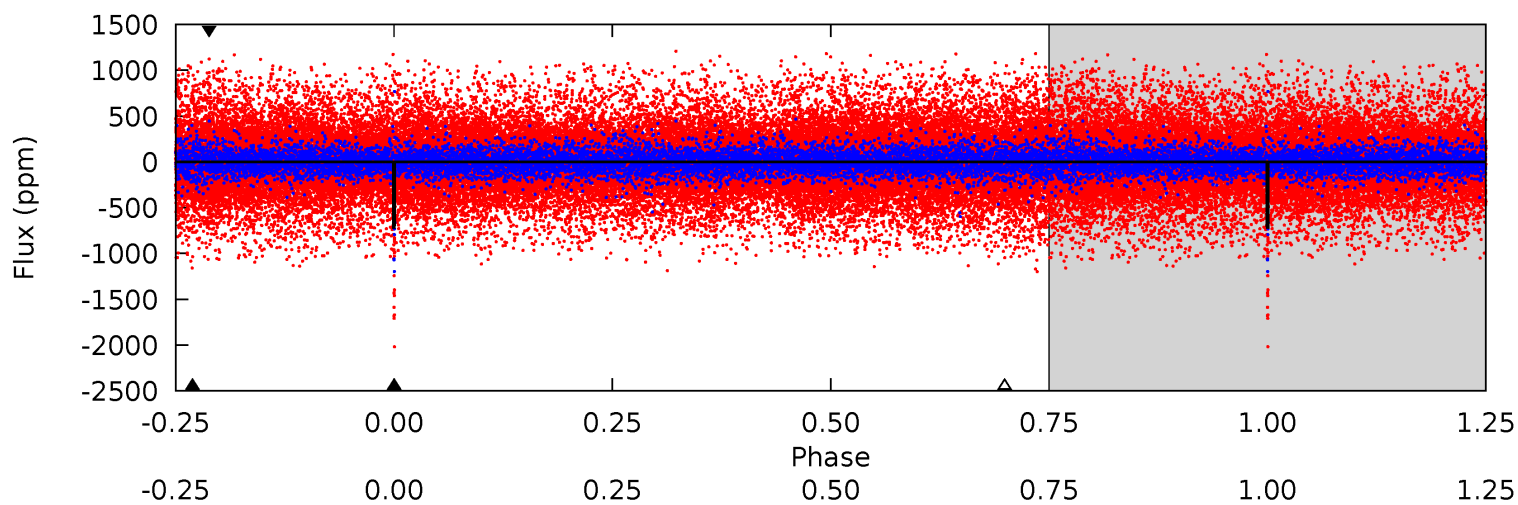
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	12.1	9.54	11.5	5.40	3.20	3.08	4.15	2.16	2.53	0.54	0.80	1.02	0.47	3.95



Alt Model-Shift Uniqueness Test

008142547-05, P = 257.558213 Days, E = 18.419810 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.0	2.48	2.48	3.23	5.43	3.25	0.57	14.6	13.8	0.00	-0.75	12.6	1.54	0.17	9.18



Stellar Parameters For KIC 008142547

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4996^{+148}_{-148}	$4.591^{+0.072}_{-0.048}$	$-0.500^{+0.300}_{-0.300}$	$0.680^{+0.071}_{-0.065}$	$0.657^{+0.090}_{-0.036}$	$2.948^{+0.878}_{-0.523}$
	+3%/-3%	+2%/-1%	+60%/-60%	+10%/-10%	+14%/-5%	+30%/-18%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008142547-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-833 ± 69	$2.91^{+2.55}_{-1.79}$	305^{+11}_{-12}	4423^{+2420}_{-861}	$26550^{+145078}_{-19242}$
Alt.	-105 ± 42	$3.41^{+2.42}_{-2.06}$	304^{+12}_{-12}	2984^{+994}_{-483}	2385^{+11839}_{-1746}

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 $A_{obs} \gg 1.0$

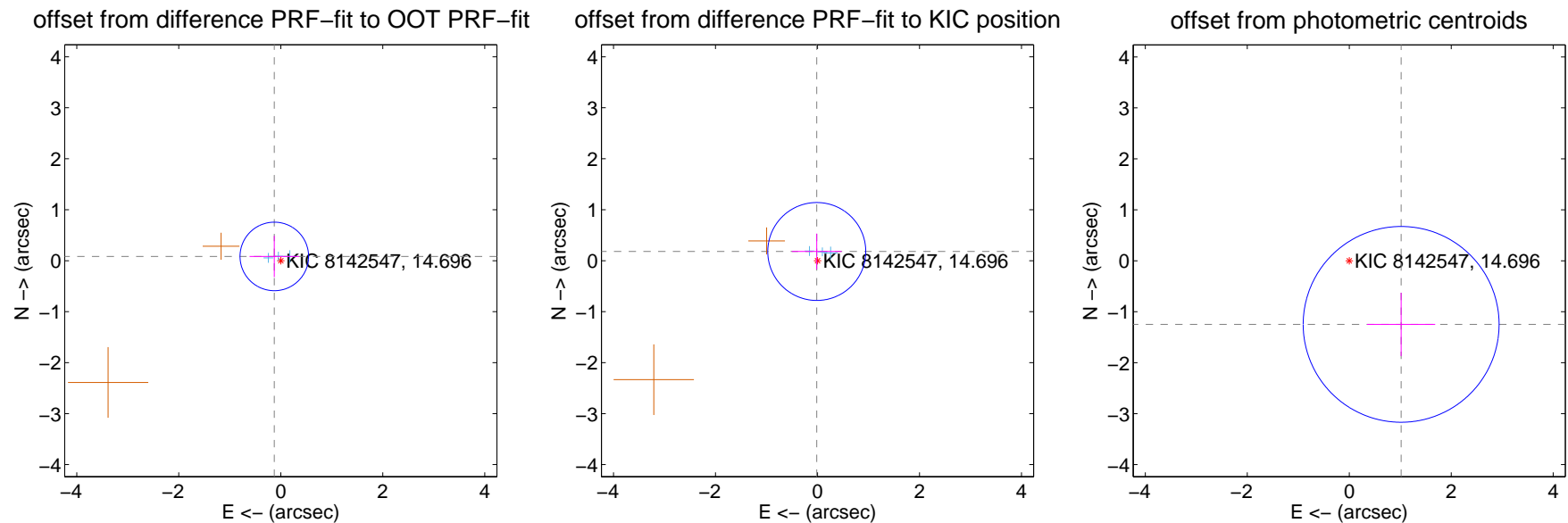
DV Centroid Data

Supplemental centroid analysis for 008142547-05. Kepler magnitude: 14.70. Transit SNR 7.82

There are 3 quarters with good PRF difference image offsets

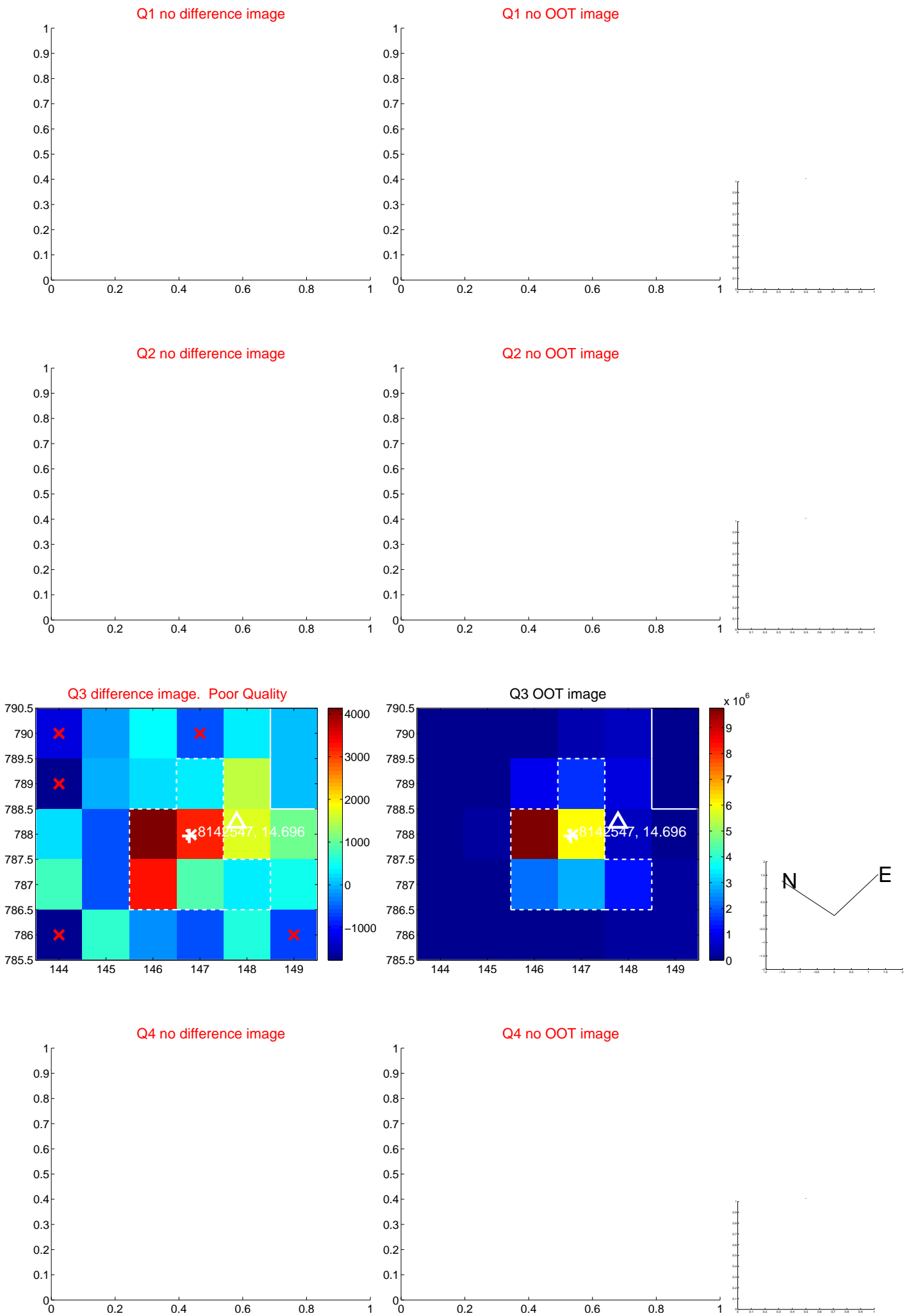
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.152 ± 0.224	0.68	0.127 ± 0.486	0.084 ± 0.405
PRF-fit source offset from KIC position	0.181 ± 0.320	0.57	0.015 ± 0.487	0.181 ± 0.352
photometric centroid source offset	1.61 ± 0.64	2.51	-1.02 ± 0.67	-1.25 ± 0.62

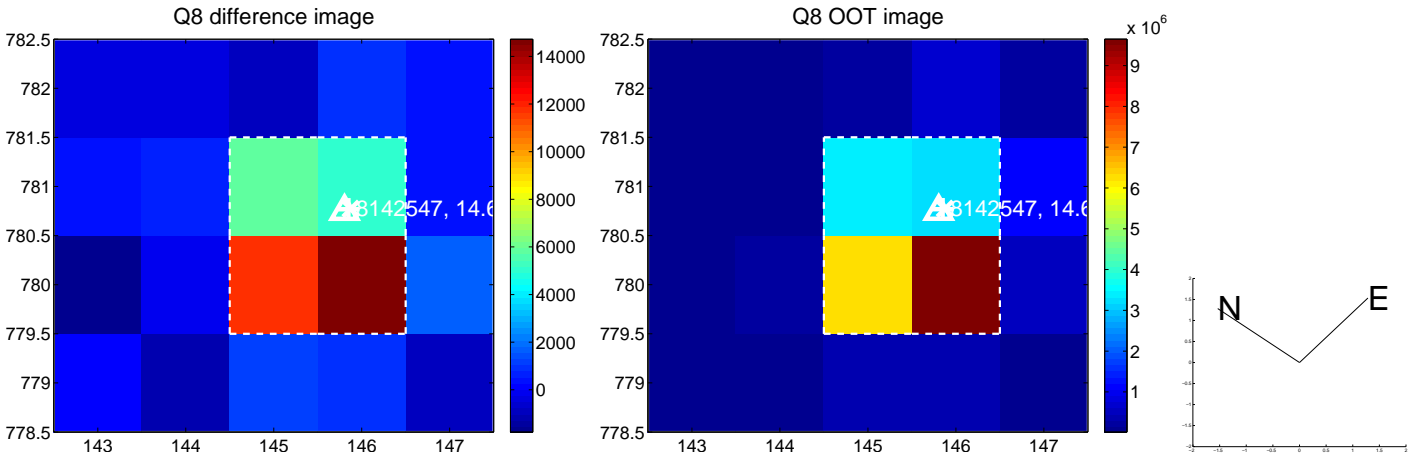
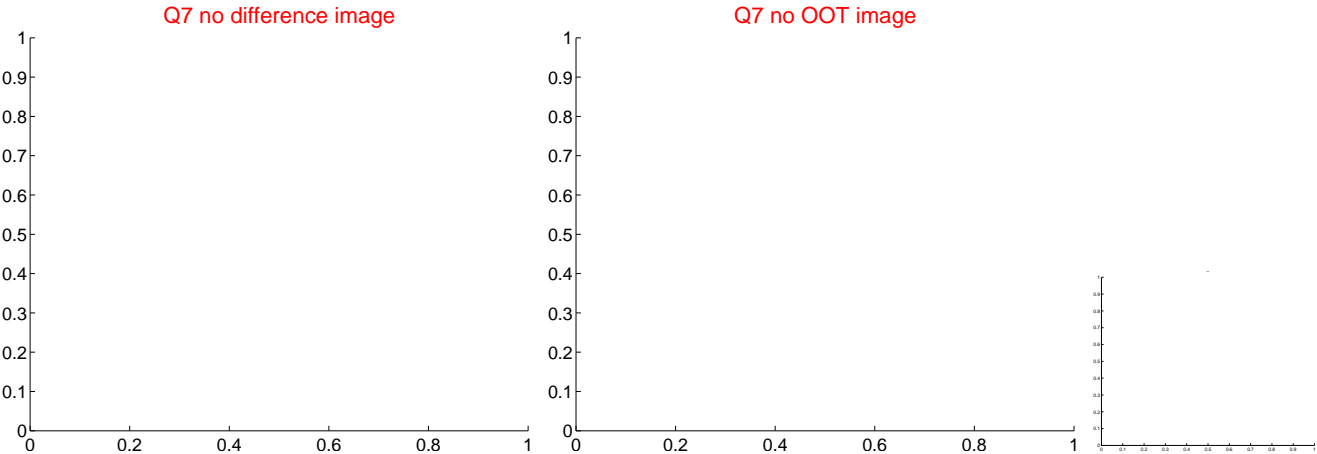
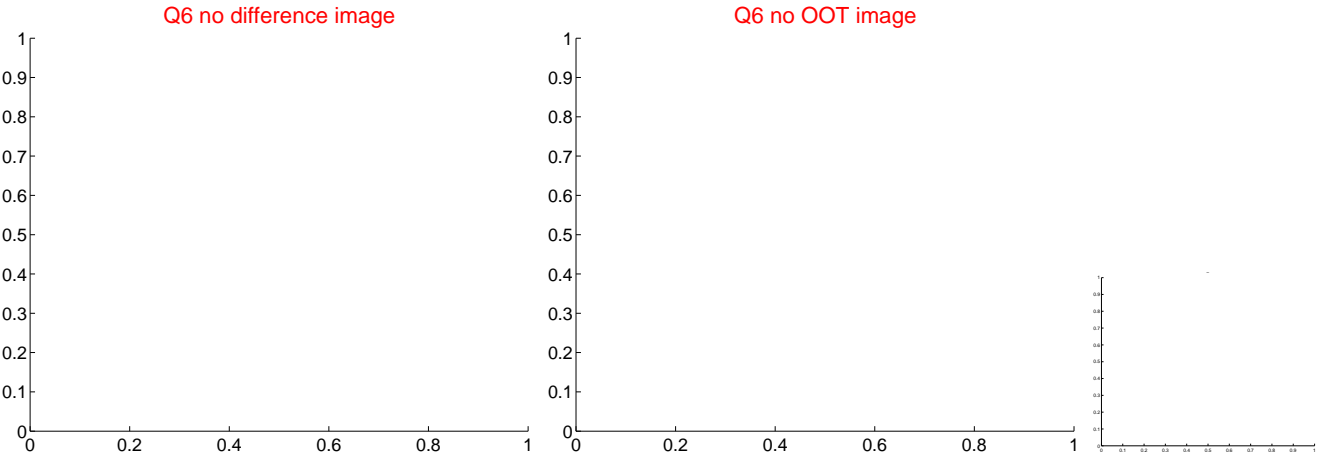
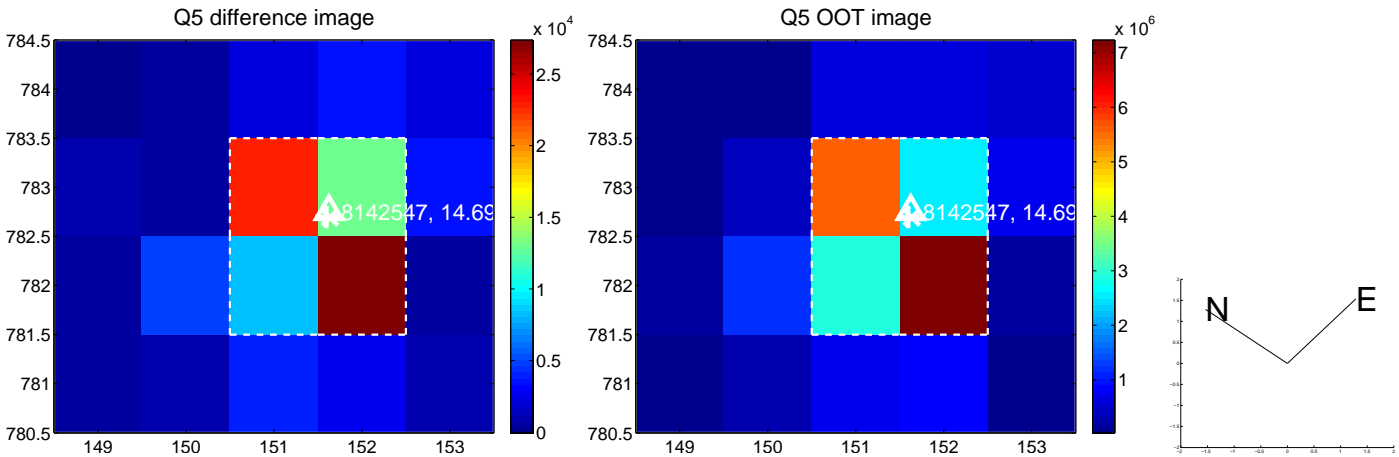


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

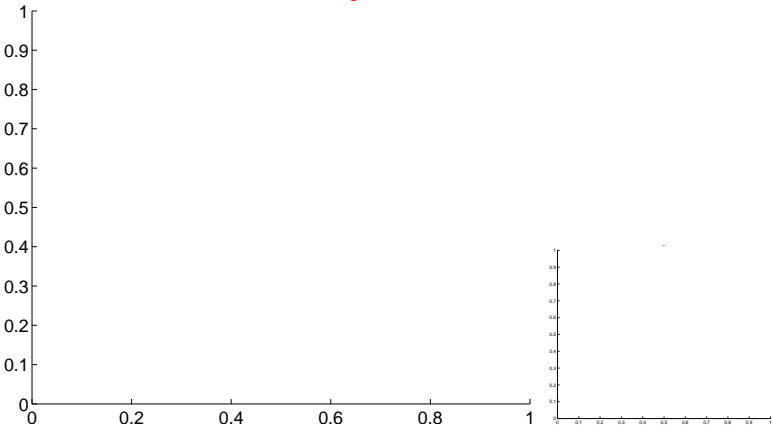


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

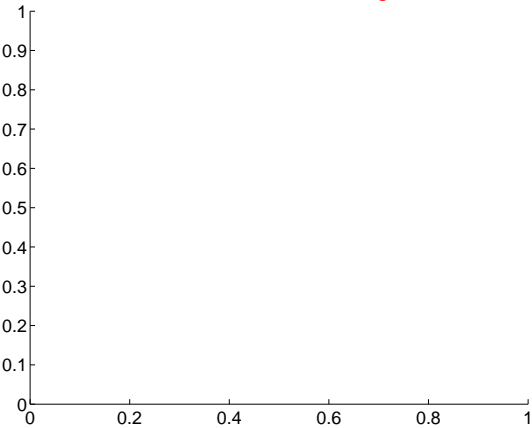
Q9 no difference image



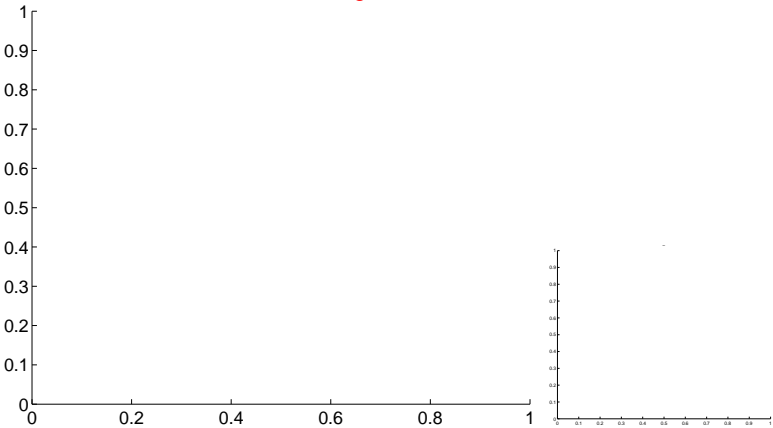
Q9 no OOT image



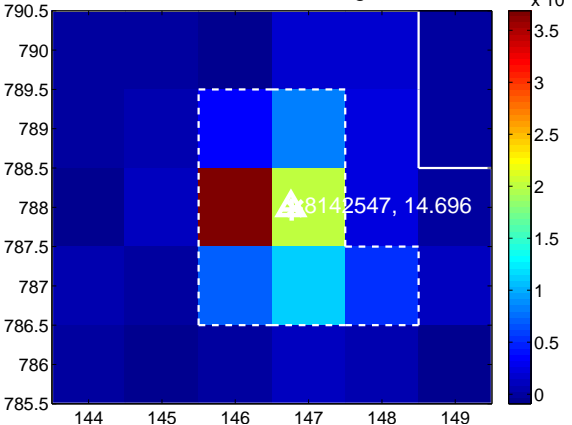
Q10 no difference image



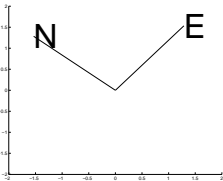
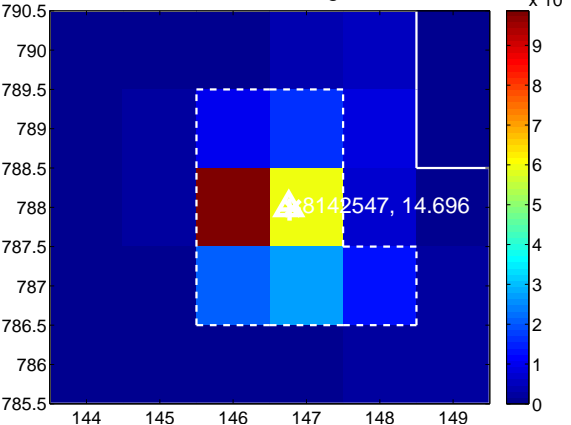
Q10 no OOT image



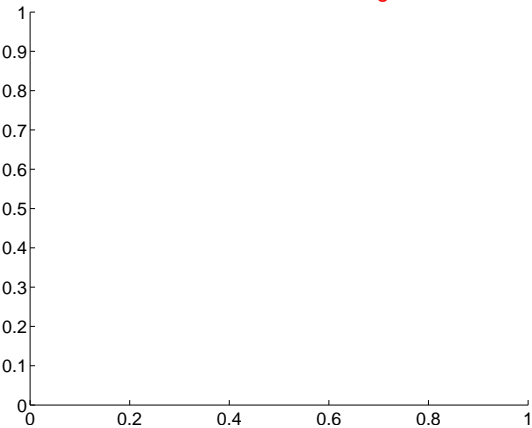
Q11 difference image



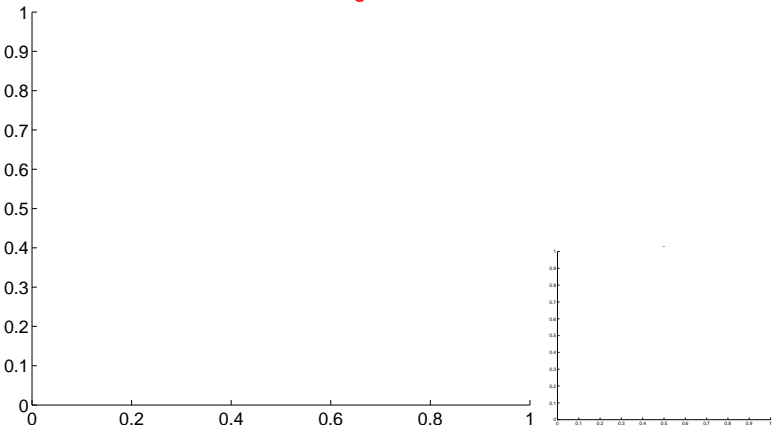
Q11 OOT image



Q12 no difference image



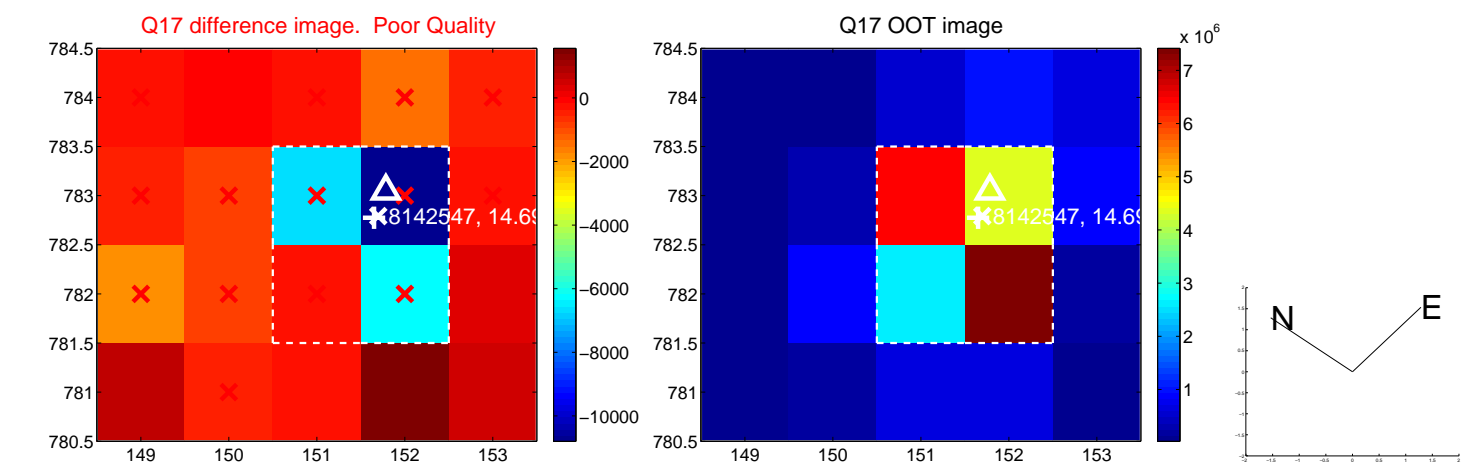
Q12 no OOT image



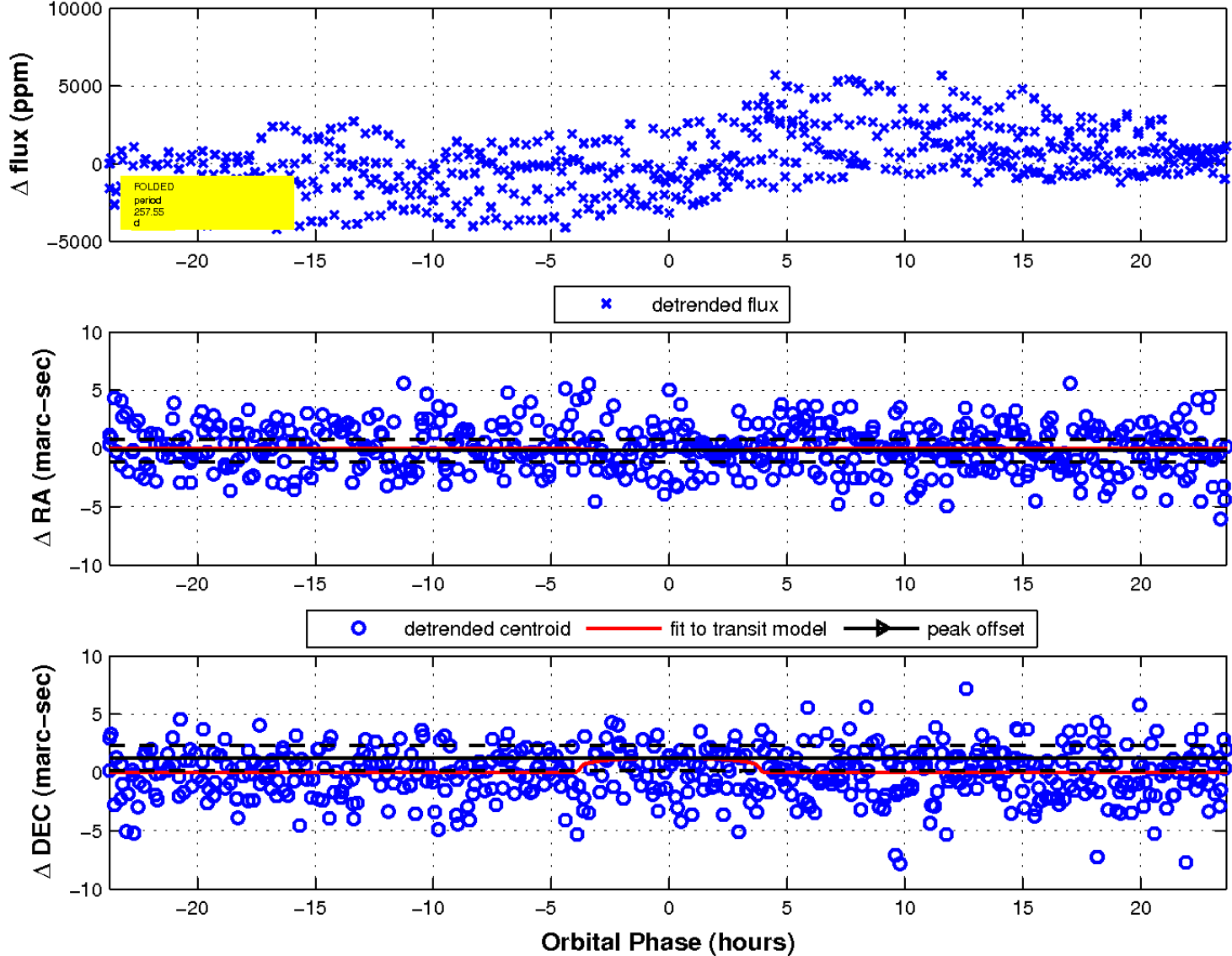
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

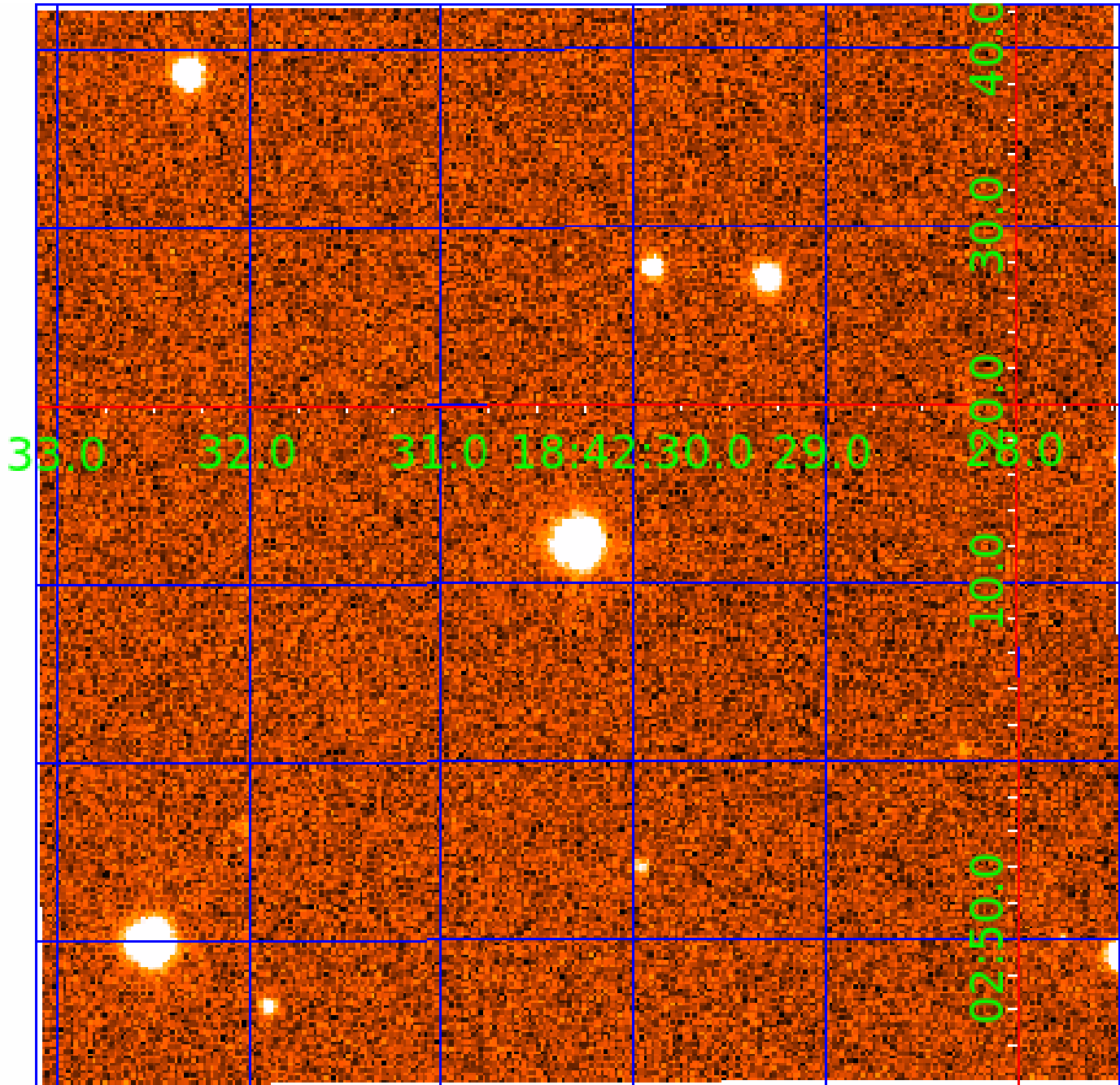


fluxWeightedCentroids, Planet 5 of 6



UKIRT Image

Declination



KIC 008142547

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})
008142547-01	OBS	No	377.765656	392.498830	1507.8	3.522	18.8	8.6	0.68	4996	2.75	0.33
008142547-02	OBS	No	434.105578	460.231558	1534.9	5.304	15.9	7.7	0.68	4996	2.81	0.27
008142547-03	OBS	No	508.975269	483.723031	2847.7	11.131	16.0	10.4	0.68	4996	7.03	0.22
008142547-04	OBS	No	253.584568	355.759960	1087.7	12.879	14.4	5.8	0.68	4996	2.79	0.56
008142547-05	OBS	No	257.549270	276.005526	1131.3	7.934	13.7	7.8	0.68	4996	2.29	0.54
008142547-06	OBS	No	512.691643	275.427962	808.3	9.000	13.4	-1.0	0.68	4996	1.88	0.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008142547-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008142547-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008142547-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008142547-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
008142547-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—HALO_GHOST
008142547-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—LPP_ALT—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.

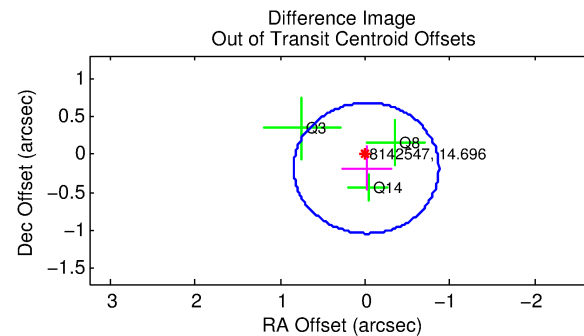
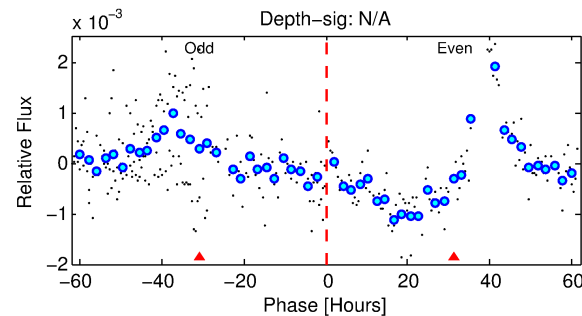
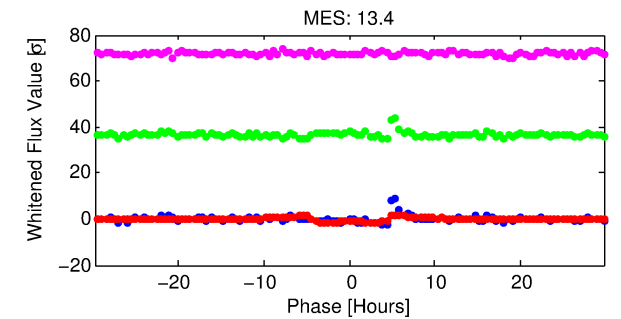
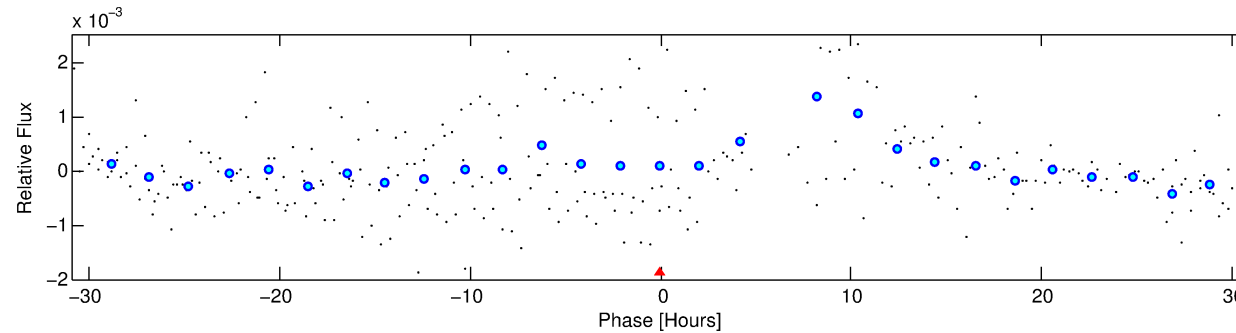
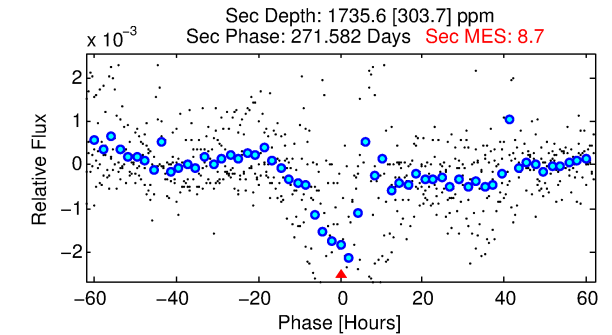
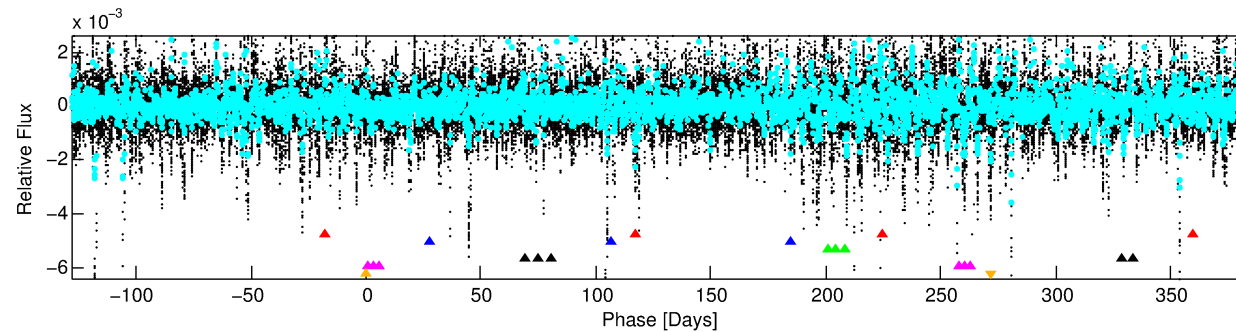
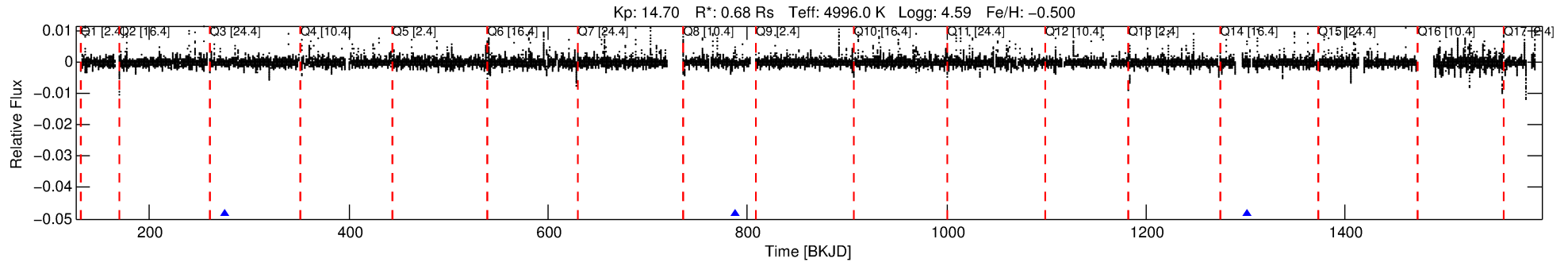
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008142547-06

No Significant Match Found

DV One-Page Summary

KIC: 8142547 Candidate: 6 of 6 Period: 512.692 d



TPS TCE Results:

Period = 512.69164 d
Epoch = 275.4280 BKJD

DV fit results are unavailable

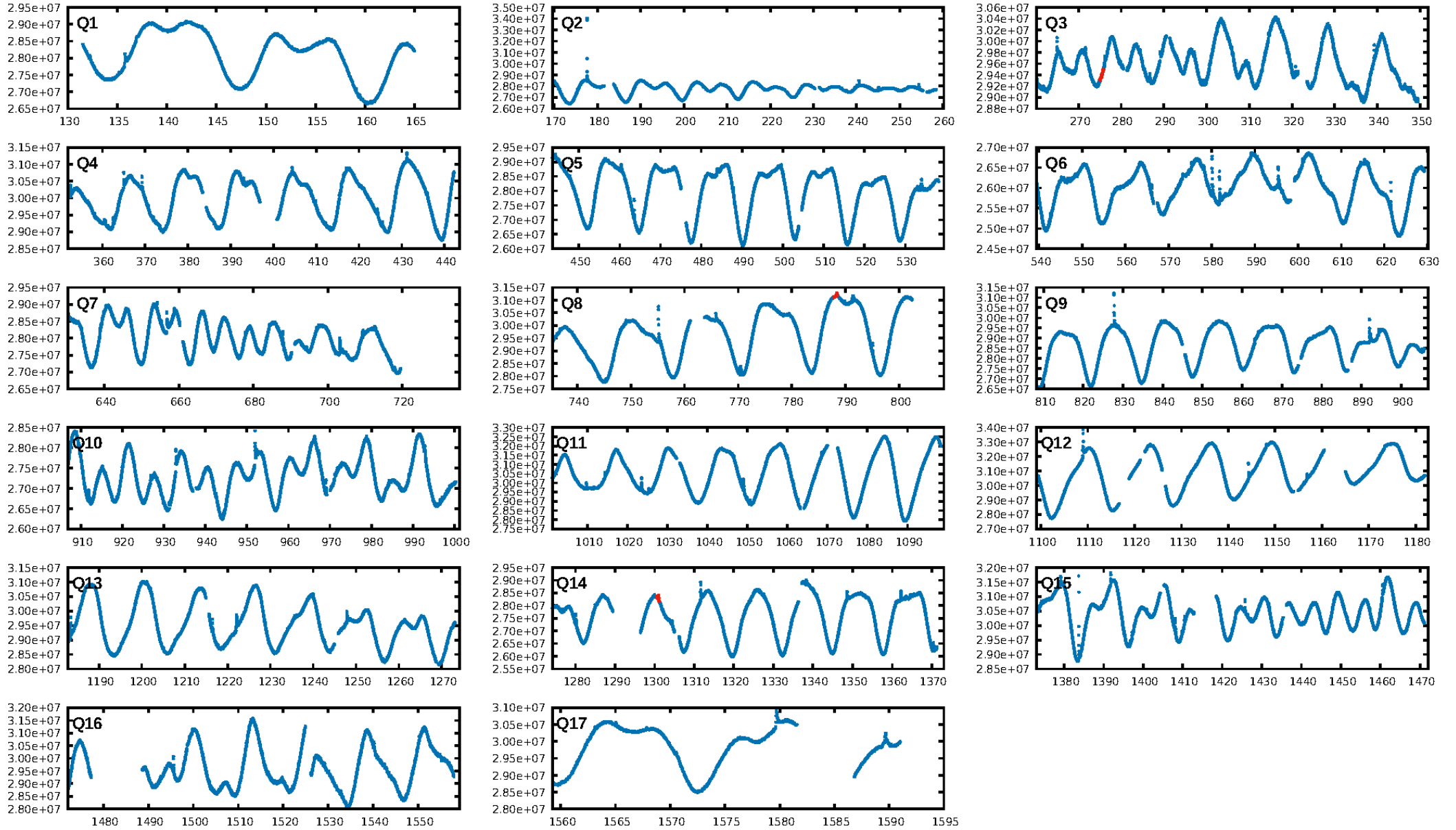
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [6.23σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -11.09
Centroid-sig: 16.2%
Centroid-so: 1.265 arcsec [2.88σ]
OotOffset-rm: 0.180 arcsec [0.63σ]
KicOffset-rm: 0.203 arcsec [0.60σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 0.67 [2/3]

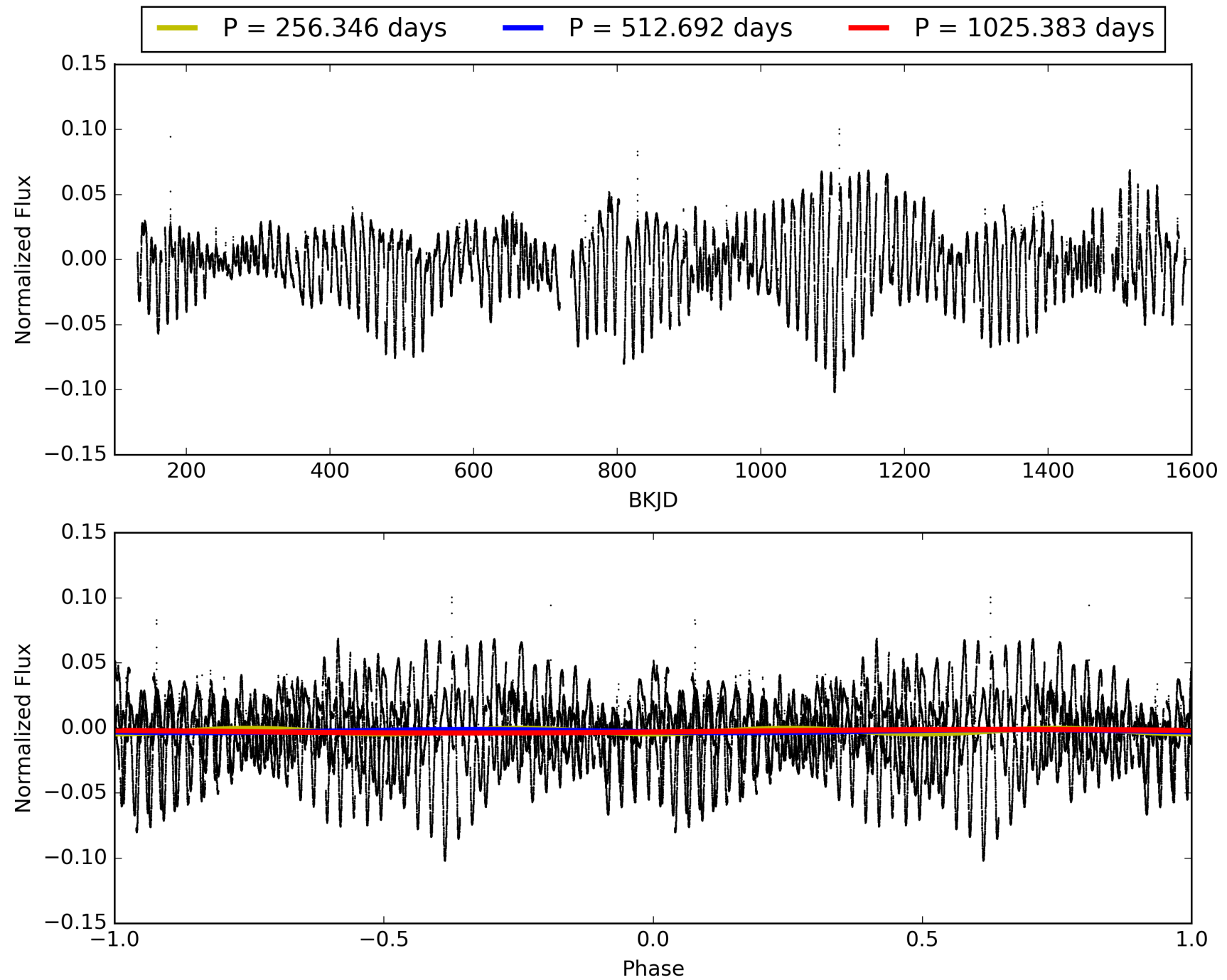
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 14:51:53 Z

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

TCE 008142547-06, PDC Light Curves

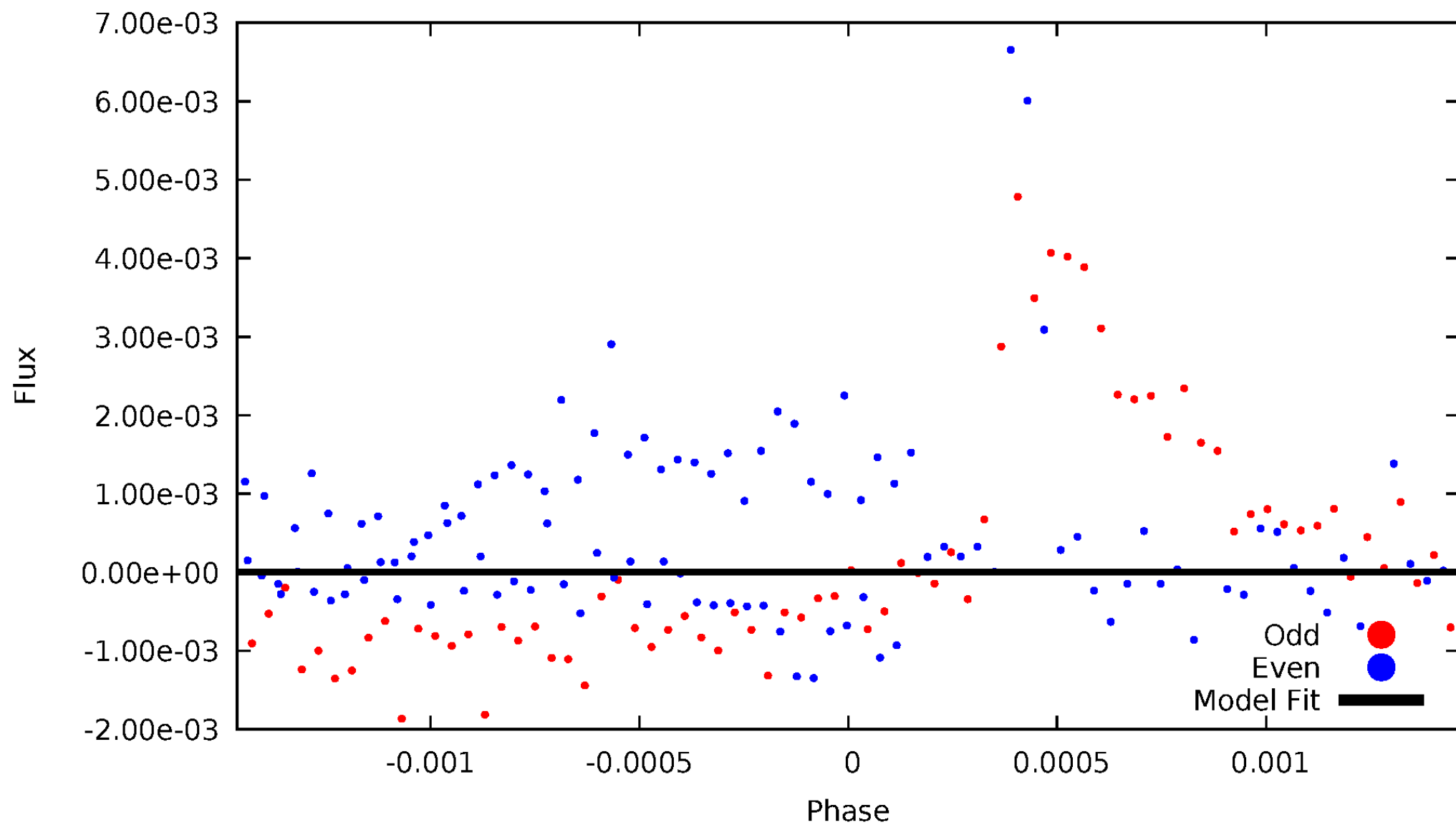


TCE 008142547-06



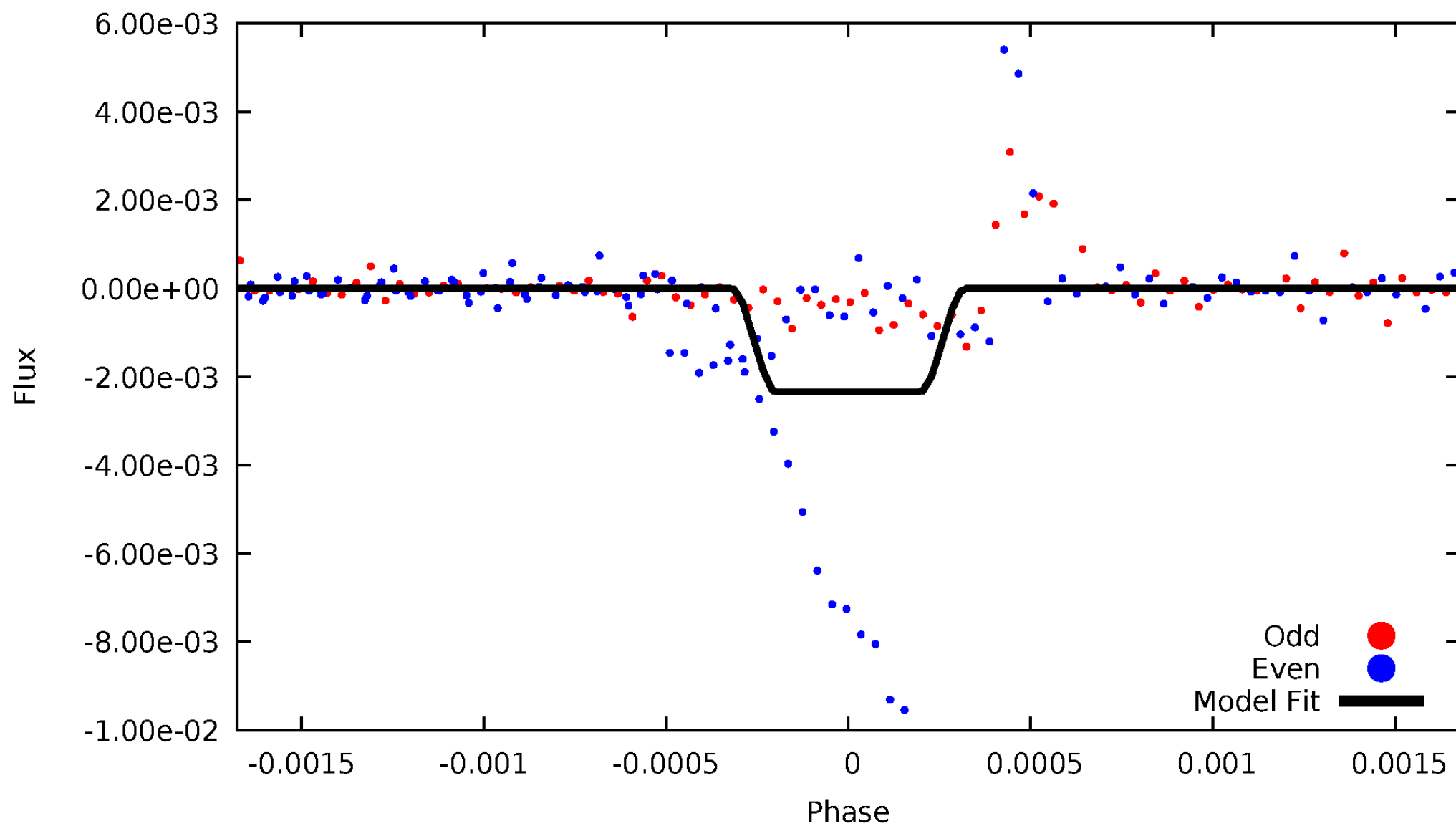
DV Odd/Even

TCE 008142547-06



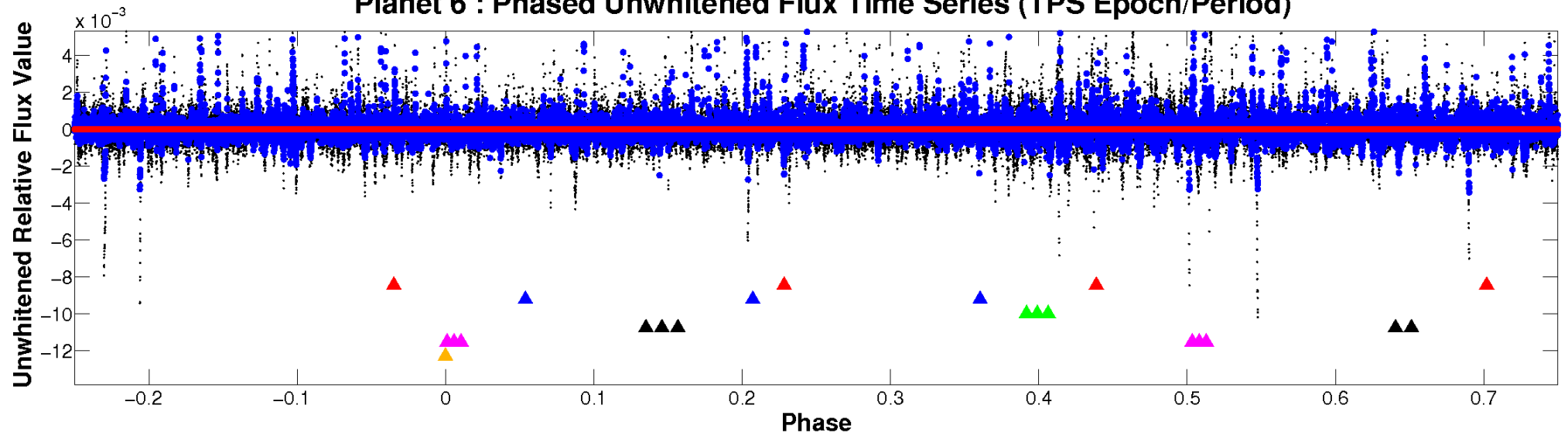
ALT Odd/Even

TCE 008142547-06

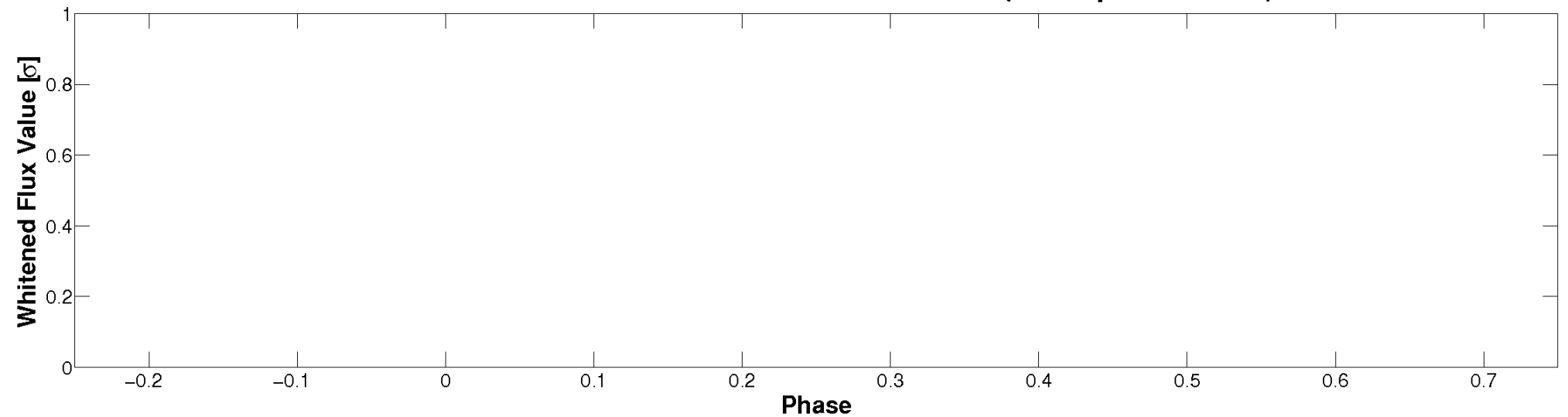


Non-Whitened Vs. Whitened Light Curve

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

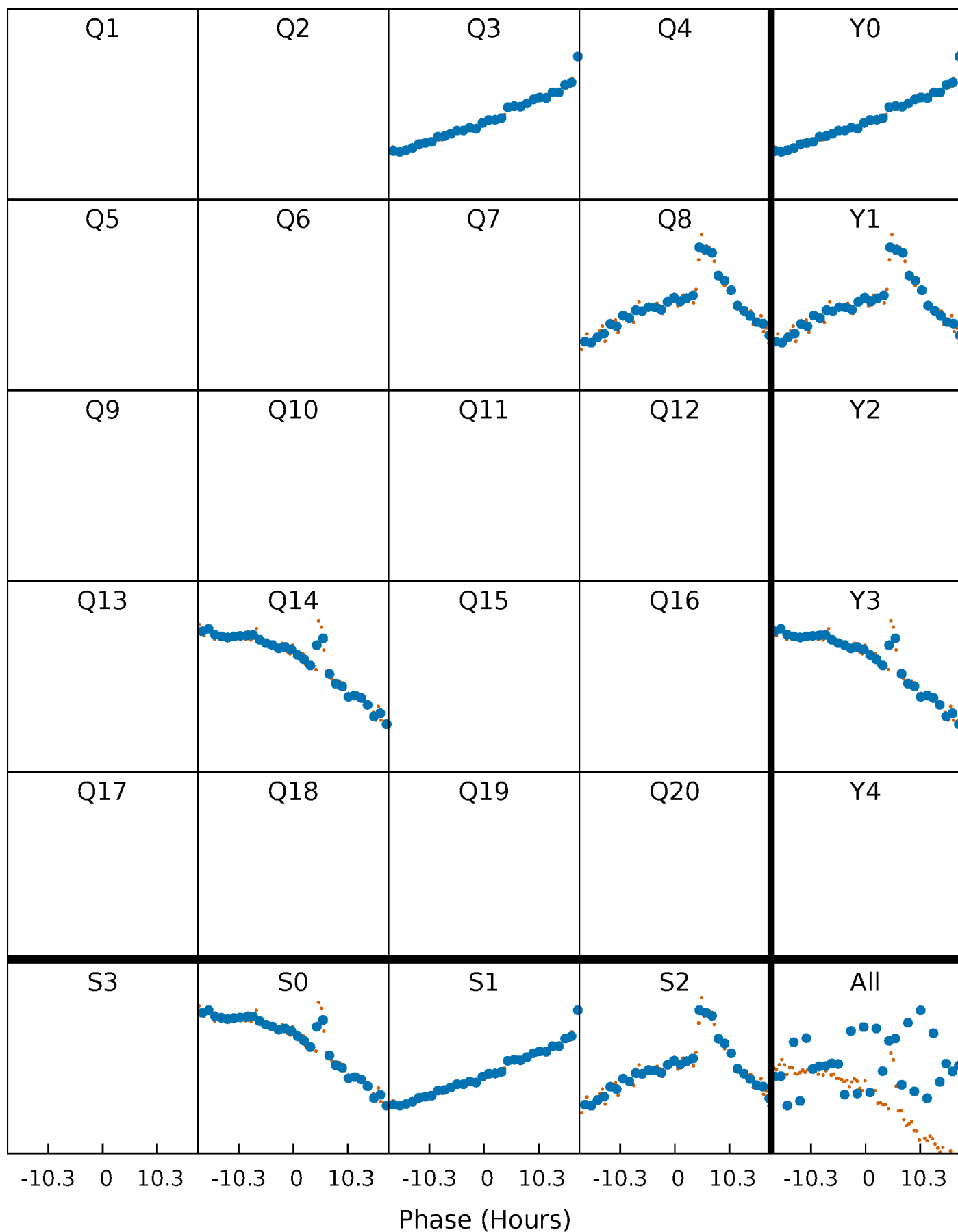


Planet 6 : Phased Whitened Flux Time Series (TPS Epoch/Period)



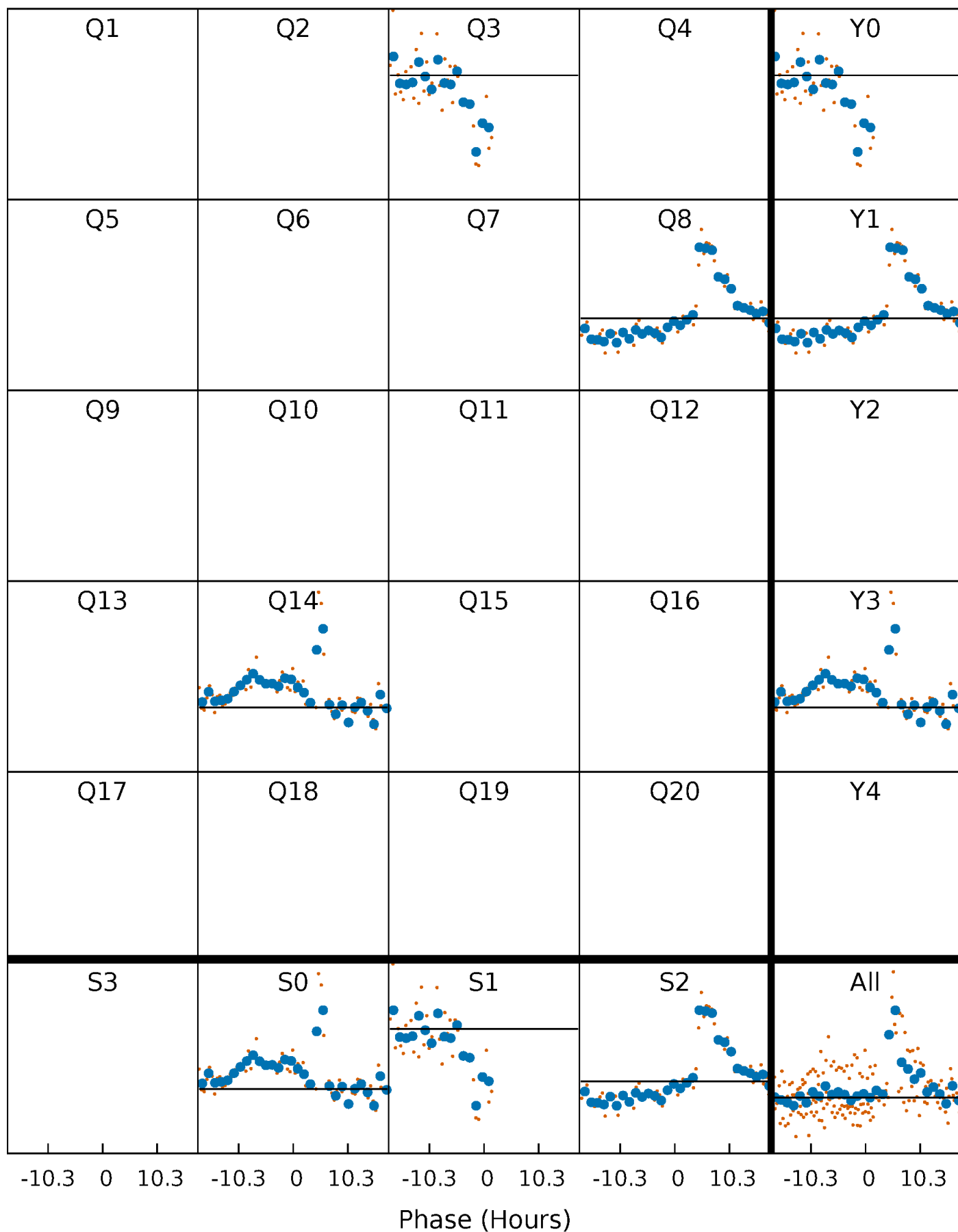
PDC Quarter-Phased Transit Curves

TCE 008142547-06 P=512.691643 Days $T_0=275.427962$ (BKJD)



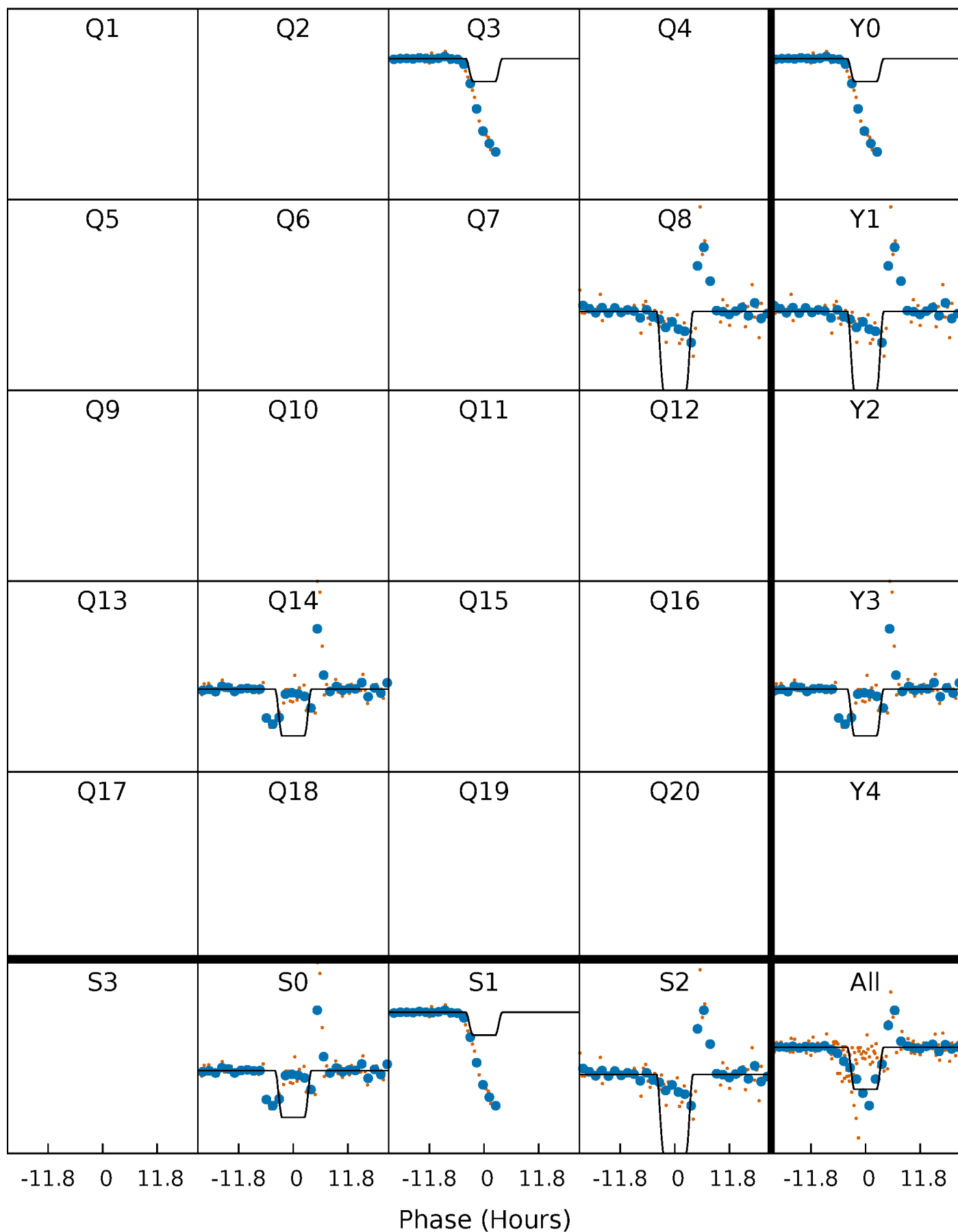
DV Quarter-Phased Transit Curves

TCE 008142547-06 P=512.691643 Days $T_0=275.427962$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

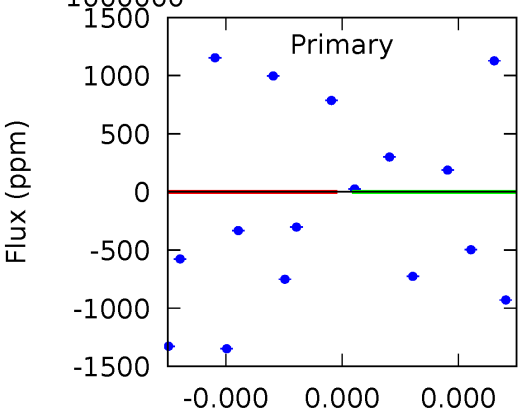
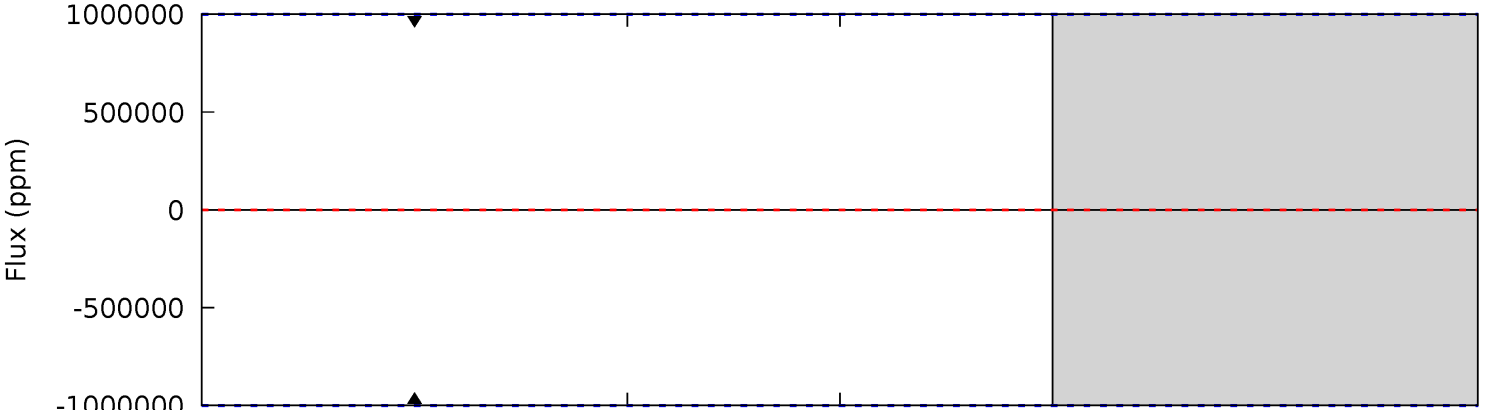
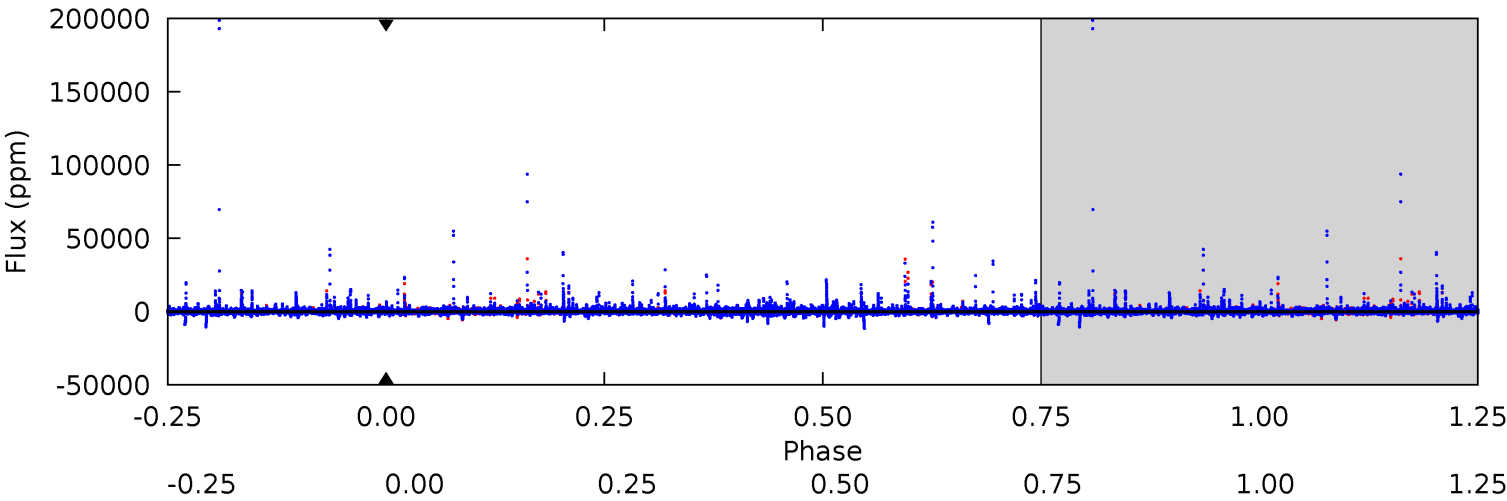
TCE 008142547-06 $P=512.691643$ Days $T_0=275.408443$ (BKJD)



DV Model-Shift Uniqueness Test

008142547-06, P = 512.691643 Days, E = 275.427962 Days

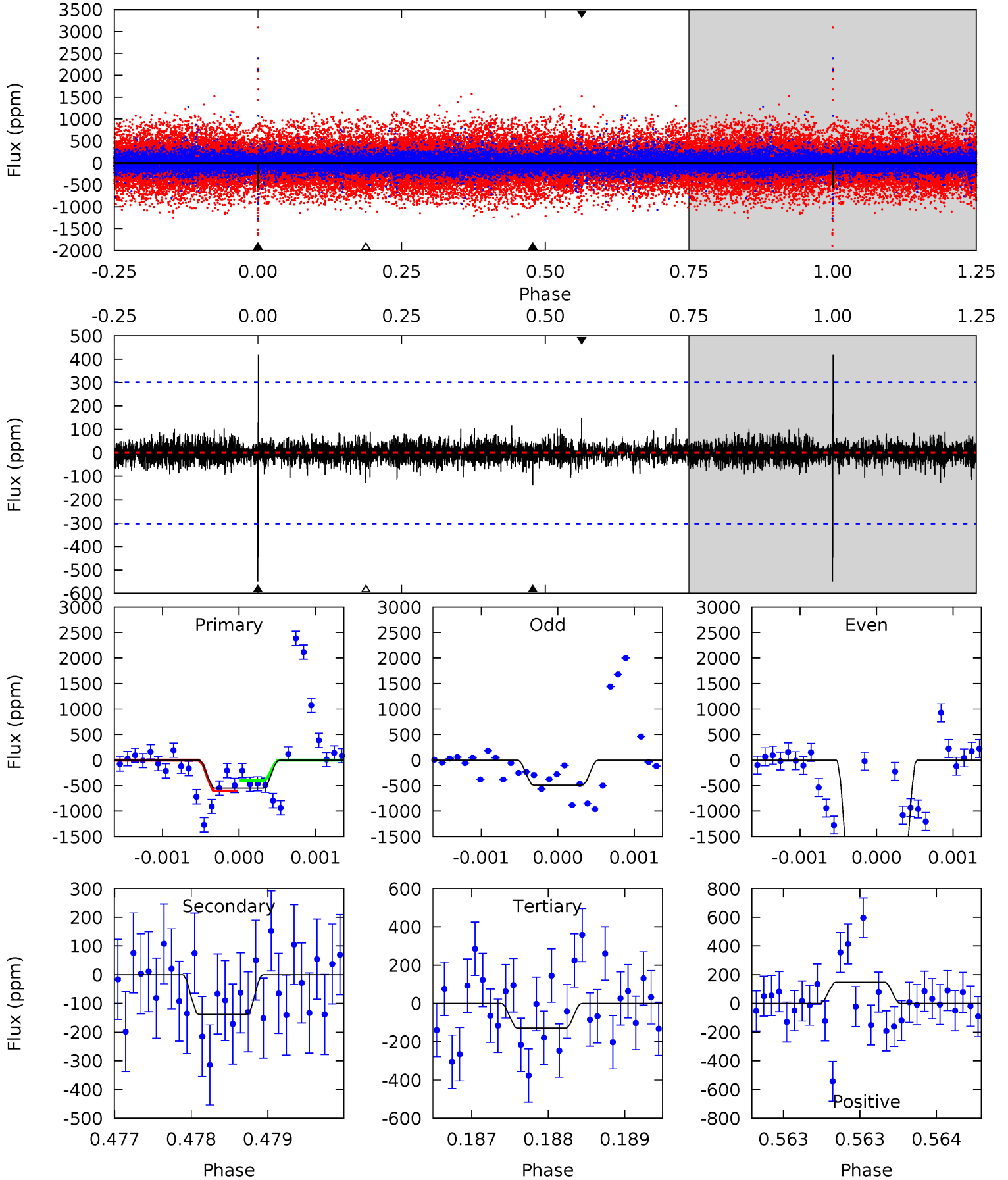
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008142547-06, P = 512.691643 Days, E = 275.408443 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	2.53	2.36	2.73	5.54	3.43	0.46	7.73	7.36	0.16	-0.21	22.0	5.17	0.43	0



Stellar Parameters For KIC 008142547

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4996^{+148}_{-148}	$4.591^{+0.072}_{-0.048}$	$-0.500^{+0.300}_{-0.300}$	$0.680^{+0.071}_{-0.065}$	$0.657^{+0.090}_{-0.036}$	$2.948^{+0.878}_{-0.523}$
	+3%/-3%	+2%/-1%	+60%/-60%	+10%/-10%	+14%/-5%	+30%/-18%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008142547-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$5.74^{+5.31}_{-3.90}$	242^{+9}_{-10}	4290^{+10344}_{-17594}	$52008^{+3791168}_{-3023339}$
Alt.	-138 ± 54	$6.86^{+6.36}_{-4.72}$	242^{+8}_{-10}	2564^{+976}_{-418}	1853^{+16096}_{-1435}

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

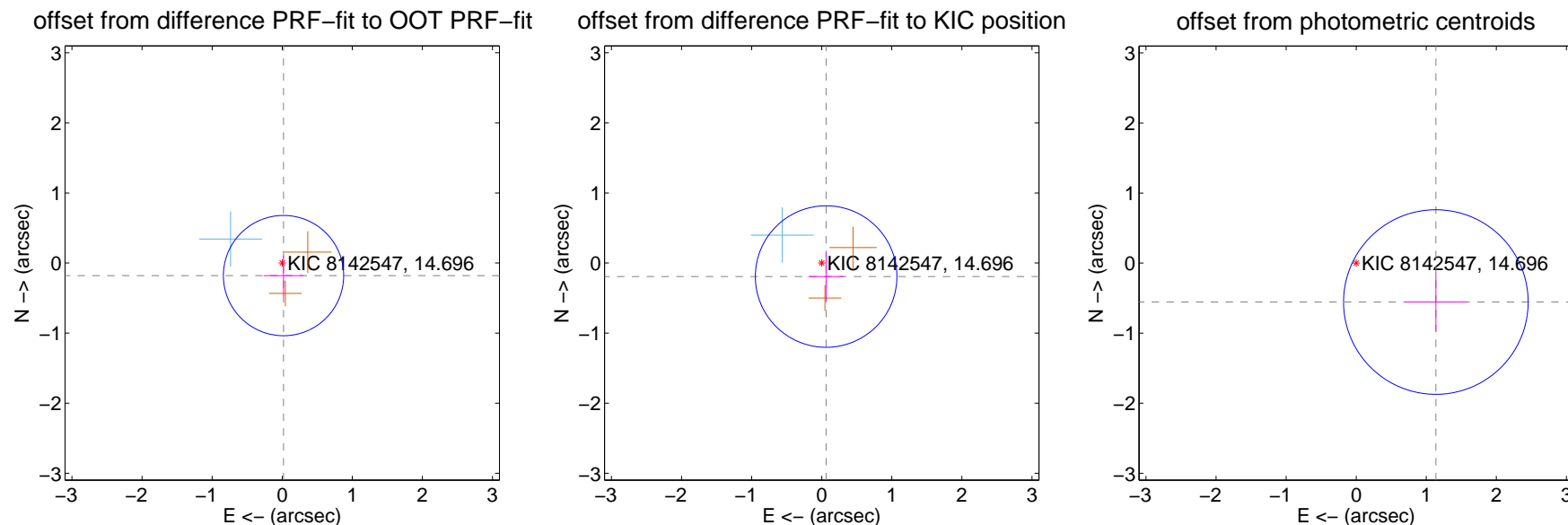
DV Centroid Data

Supplemental centroid analysis for 008142547-06. Kepler magnitude: 14.70. 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 0.06 arcsec

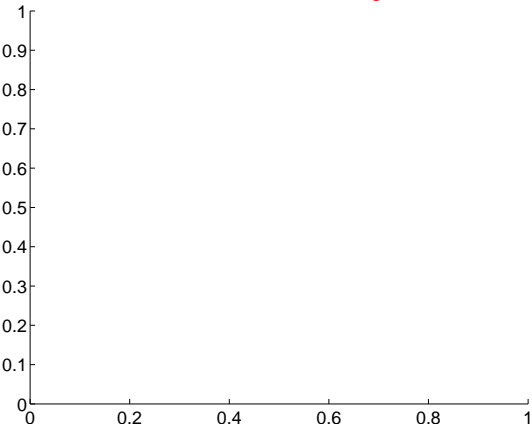
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.180 ± 0.286	0.63	-0.019 ± 0.283	-0.179 ± 0.286
PRF-fit source offset from KIC position	0.203 ± 0.337	0.60	-0.063 ± 0.252	-0.193 ± 0.344
photometric centroid source offset	1.27 ± 0.44	2.88	-1.14 ± 0.44	-0.56 ± 0.42



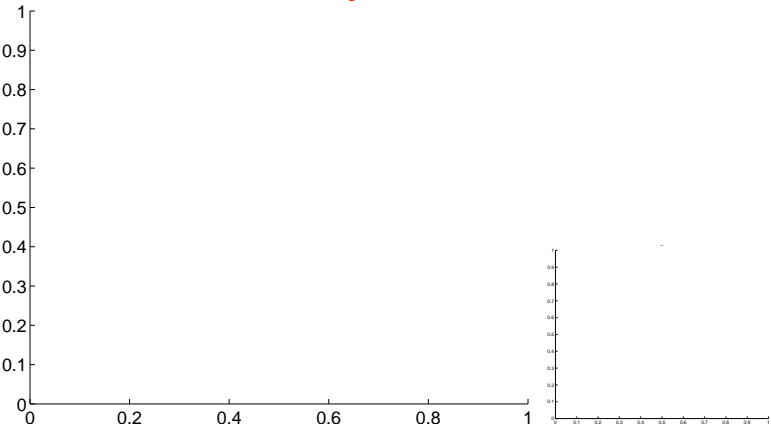
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

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

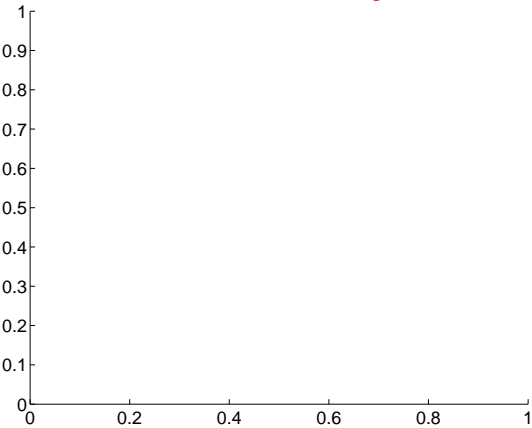
Q1 no difference image



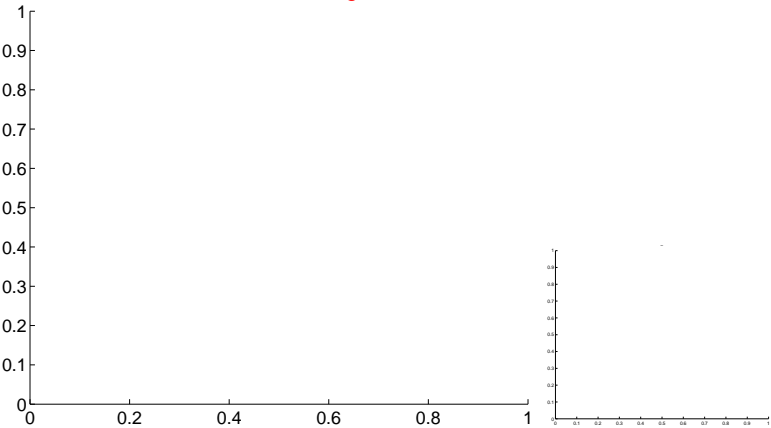
Q1 no OOT image



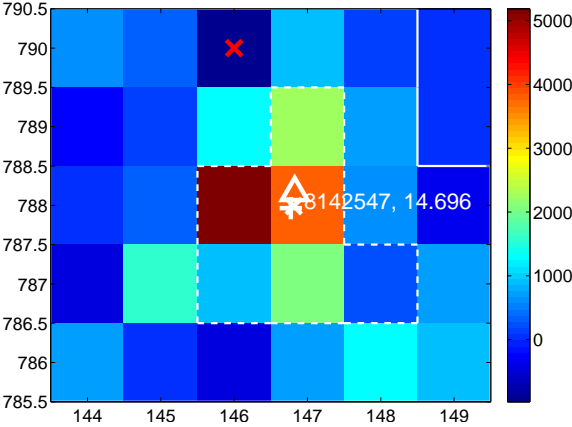
Q2 no difference image



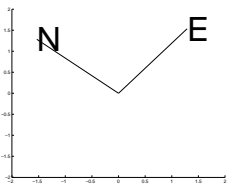
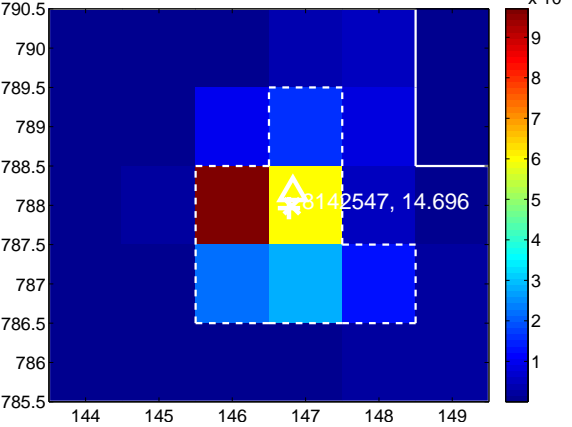
Q2 no OOT image



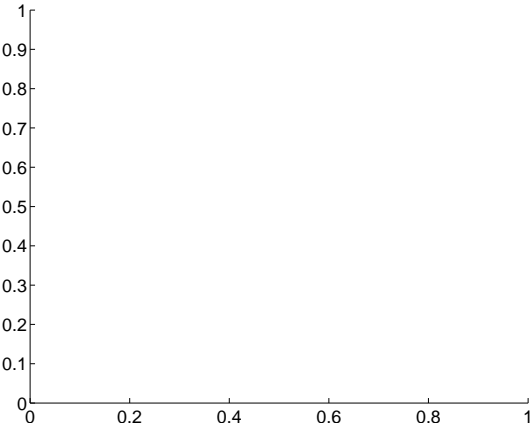
Q3 difference image



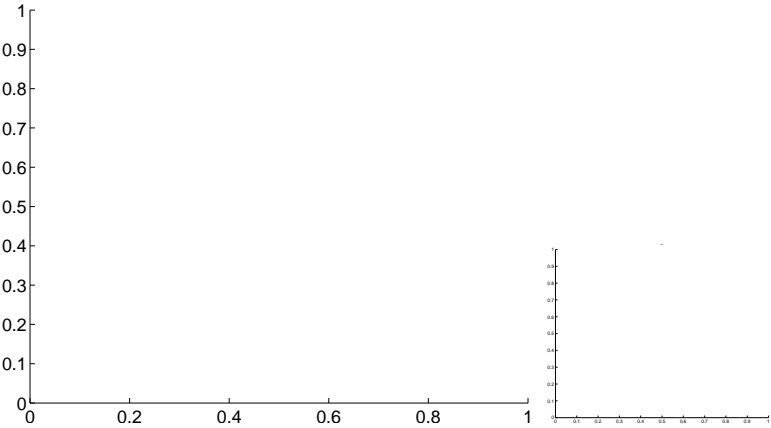
Q3 OOT image



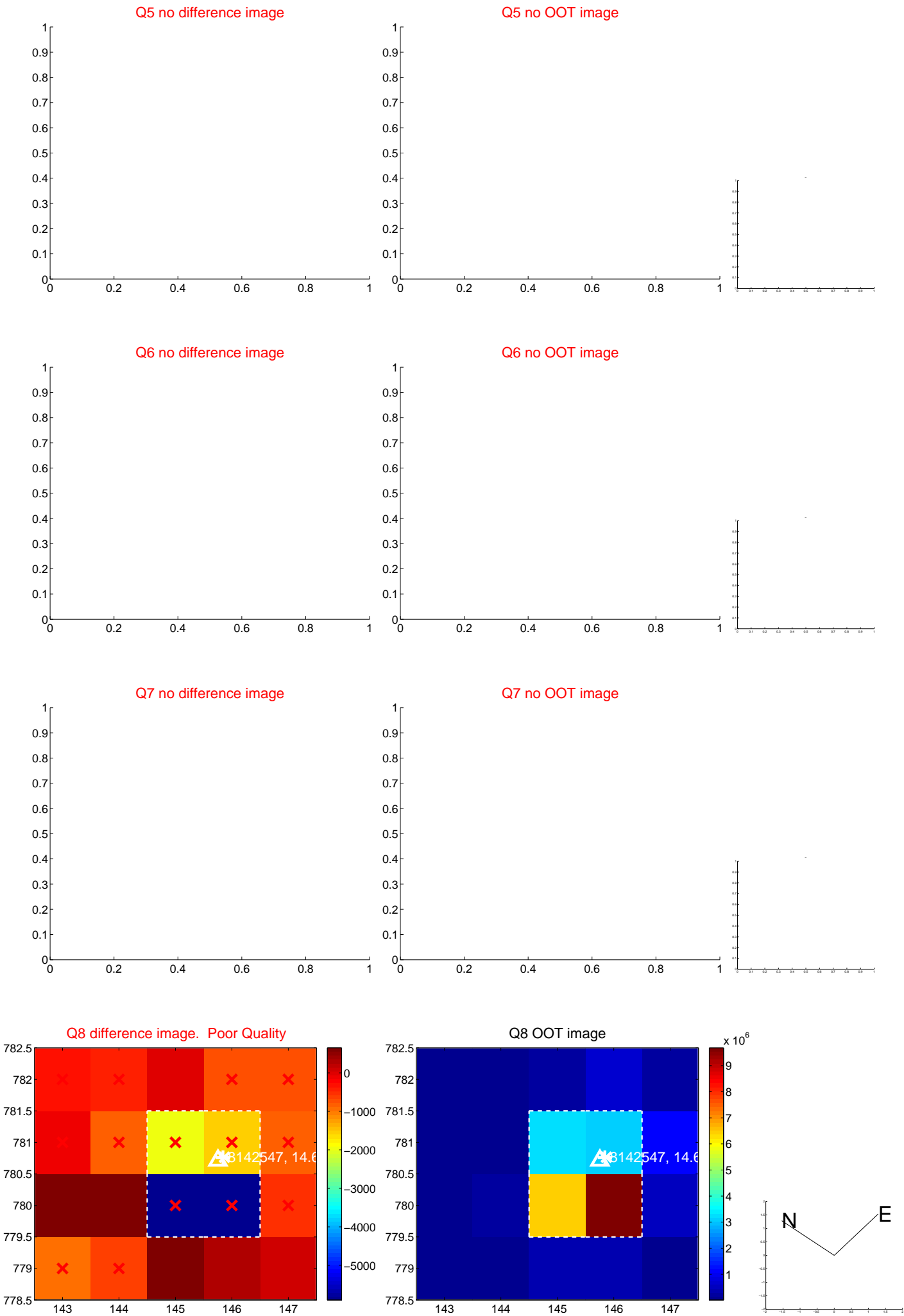
Q4 no difference image



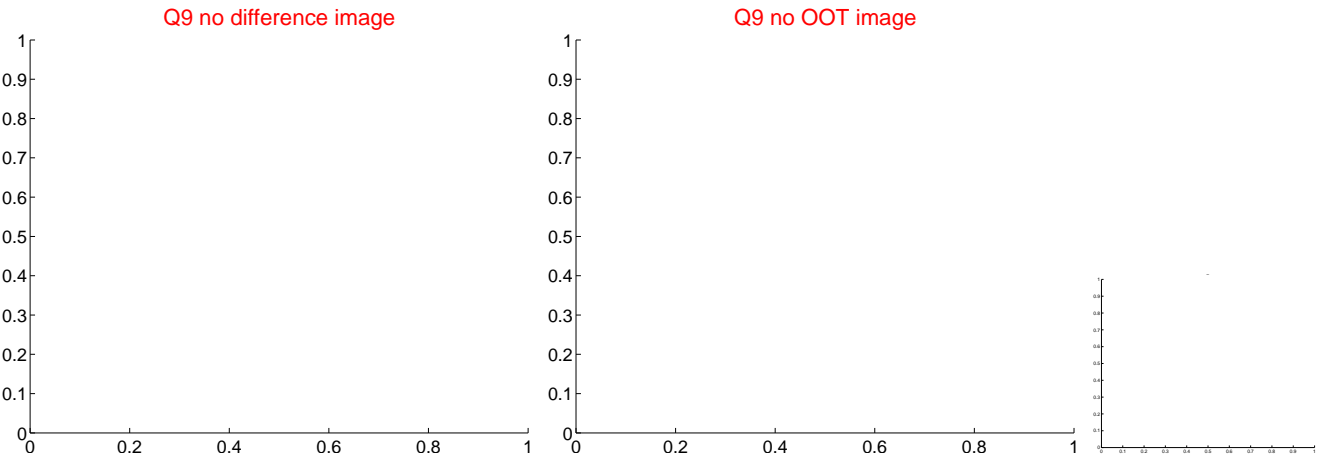
Q4 no OOT image



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

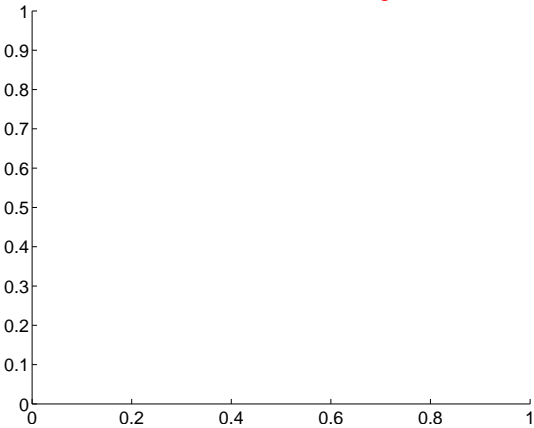


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

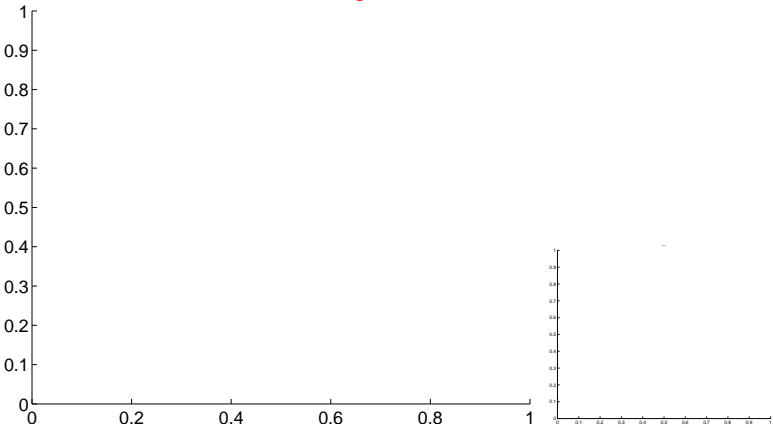


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

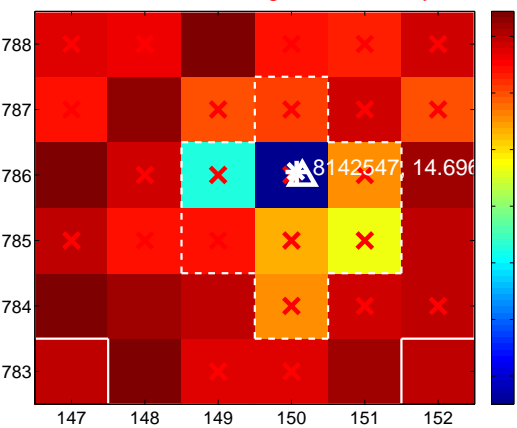
Q13 no difference image



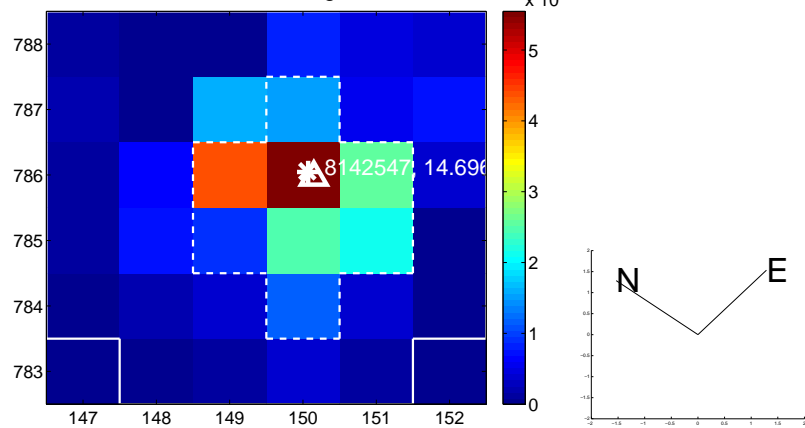
Q13 no OOT image



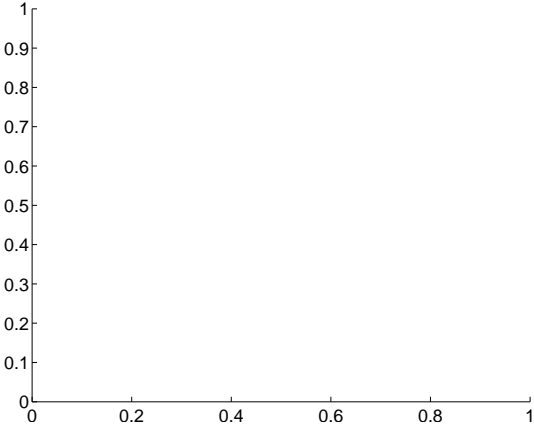
Q14 difference image. Poor Quality



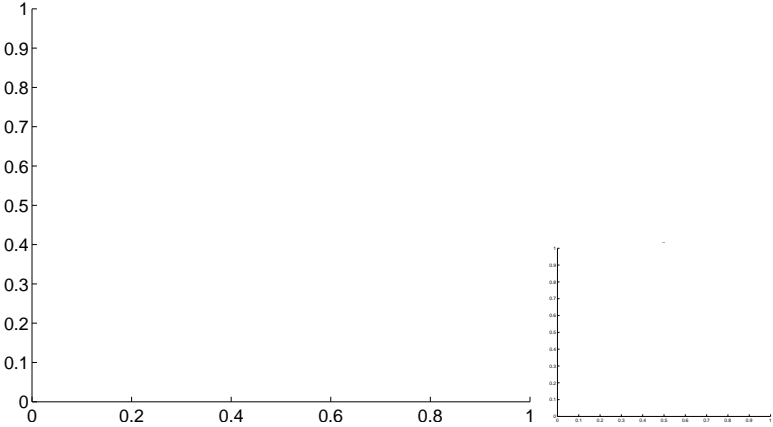
Q14 OOT image



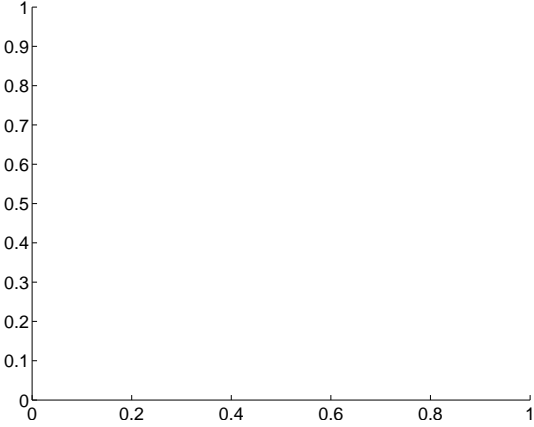
Q15 no difference image



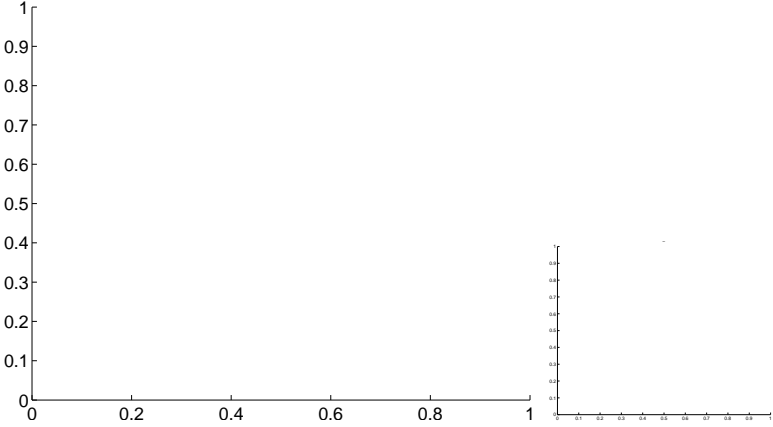
Q15 no OOT image



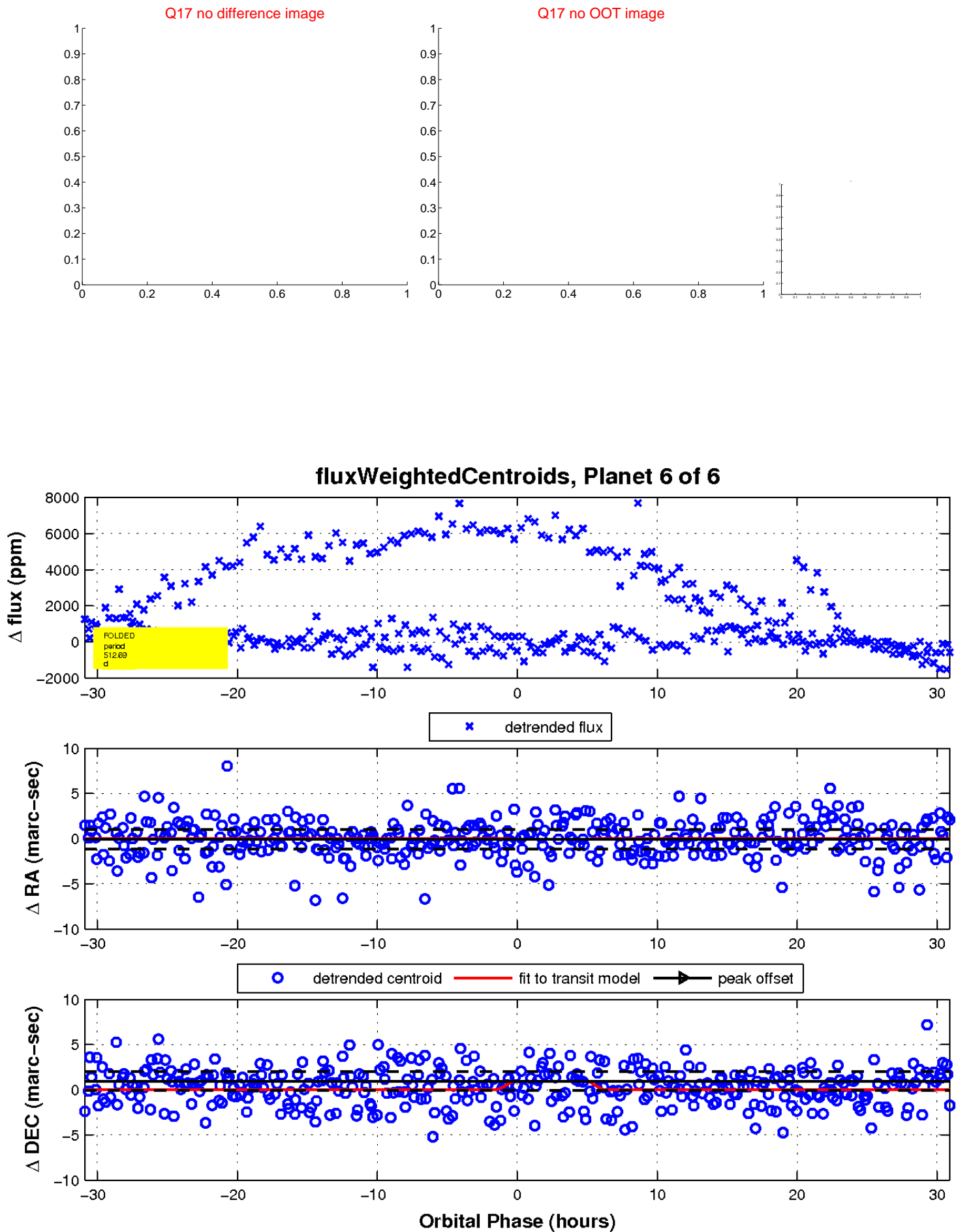
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

