

KIC 011957046

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})
011957046-01	OBS	No	530.187690	301.455493	1765.7	3.490	19.5	9.7	0.93	5855	7.45	0.60
011957046-02	OBS	No	484.240119	342.344114	1018.2	5.051	19.7	5.5	0.93	5855	2.98	0.68
011957046-03	OBS	No	460.735679	377.538353	1969.7	9.301	18.4	9.0	0.93	5855	4.14	0.72
011957046-04	OBS	No	383.933176	407.255607	544.1	1.365	18.6	3.3	0.93	5855	2.55	0.93
011957046-05	OBS	No	340.533620	450.854512	1110.8	5.342	18.4	6.7	0.93	5855	3.13	1.08
011957046-06	OBS	No	527.354515	452.120802	1638.1	9.059	16.4	8.4	0.93	5855	3.89	0.61
011957046-07	OBS	No	308.471833	388.183752	757.3	12.500	15.5	-1.0	0.93	5855	2.55	1.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011957046-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
011957046-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-03	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
011957046-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—HALO_GHOST
011957046-07	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

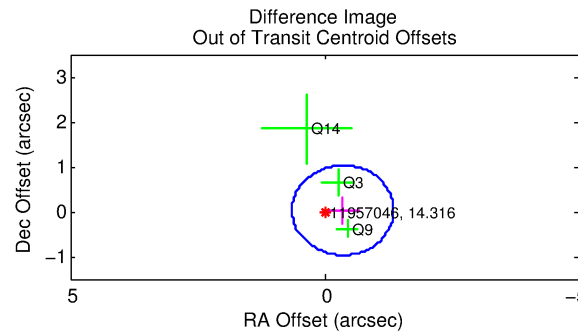
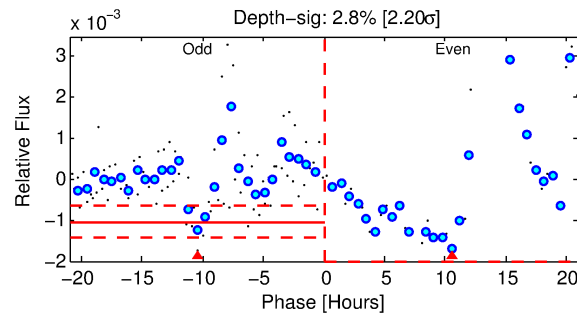
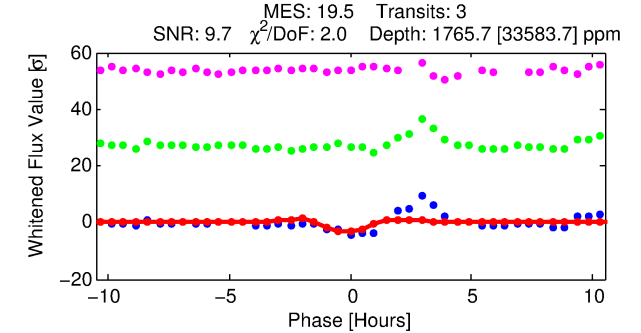
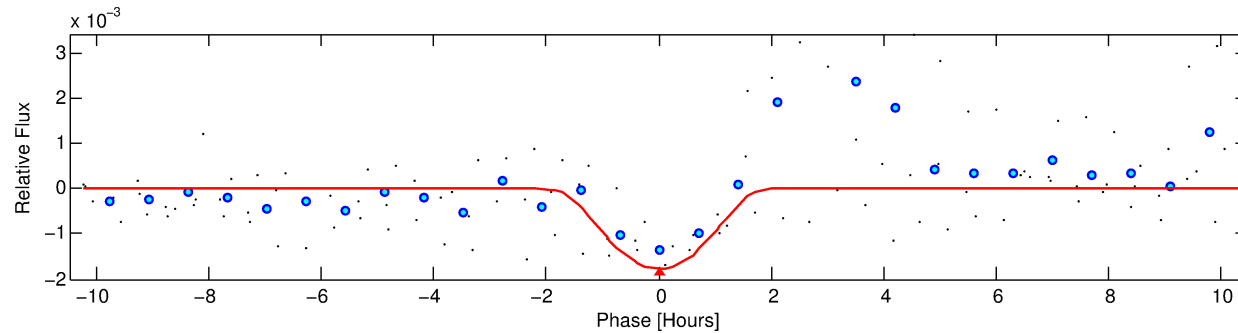
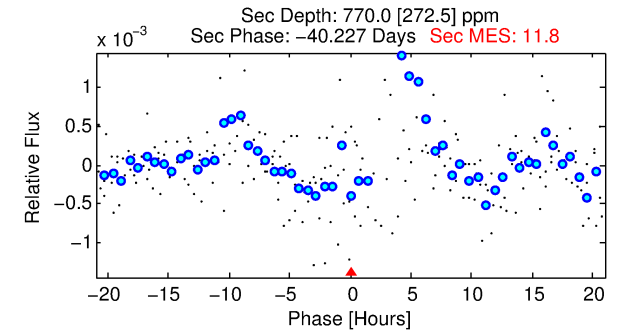
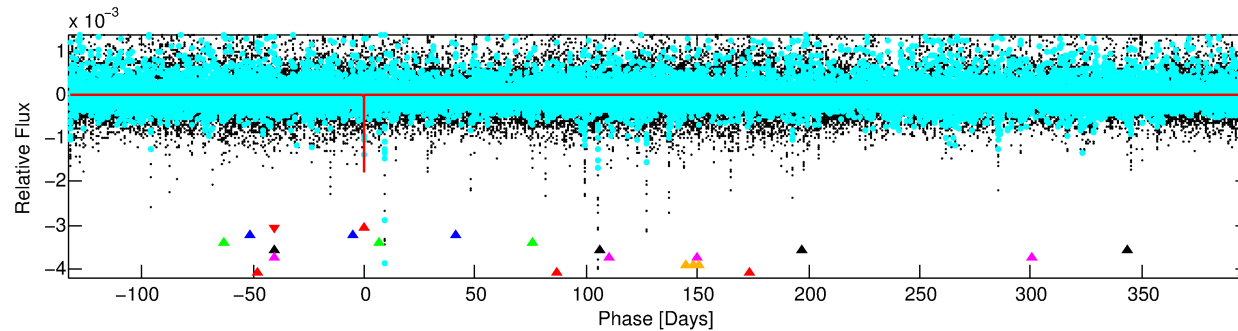
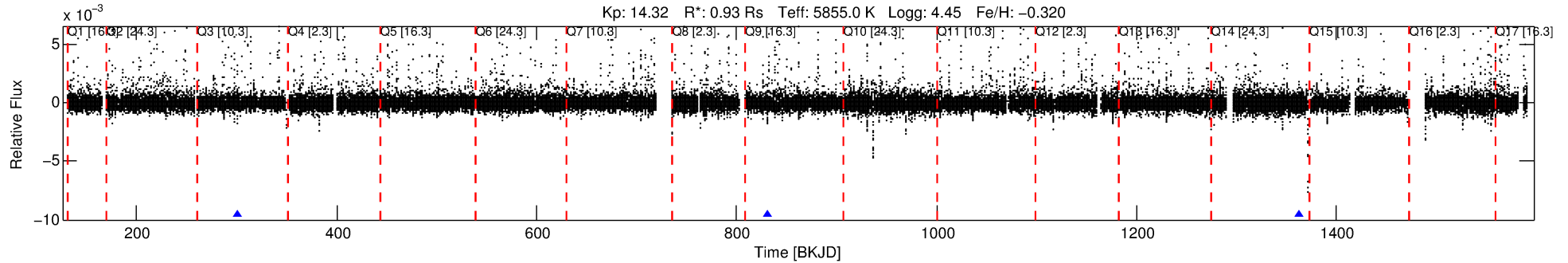
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011957046-01

No Significant Match Found

DV One-Page Summary

KIC: 11957046 Candidate: 1 of 7 Period: 530.188 d



DV Fit Results:

Period = 530.18769 [0.00728] d
Epoch = 301.4555 [0.0070] BKJD
Rp/R* = 0.0733 [0.3922]
a/R* = 452.39 [542.58]
b = 1.00 [0.37]
Seff = 0.60 [0.21]
Teq = 225 [20] K
Rp = 7.45 [39.90] Re
a = 1.2320 [0.2832] AU
Ag = 11598.70 [124284.00] [0.09 σ]
Teffp = 3603 [9647] K [0.35 σ]

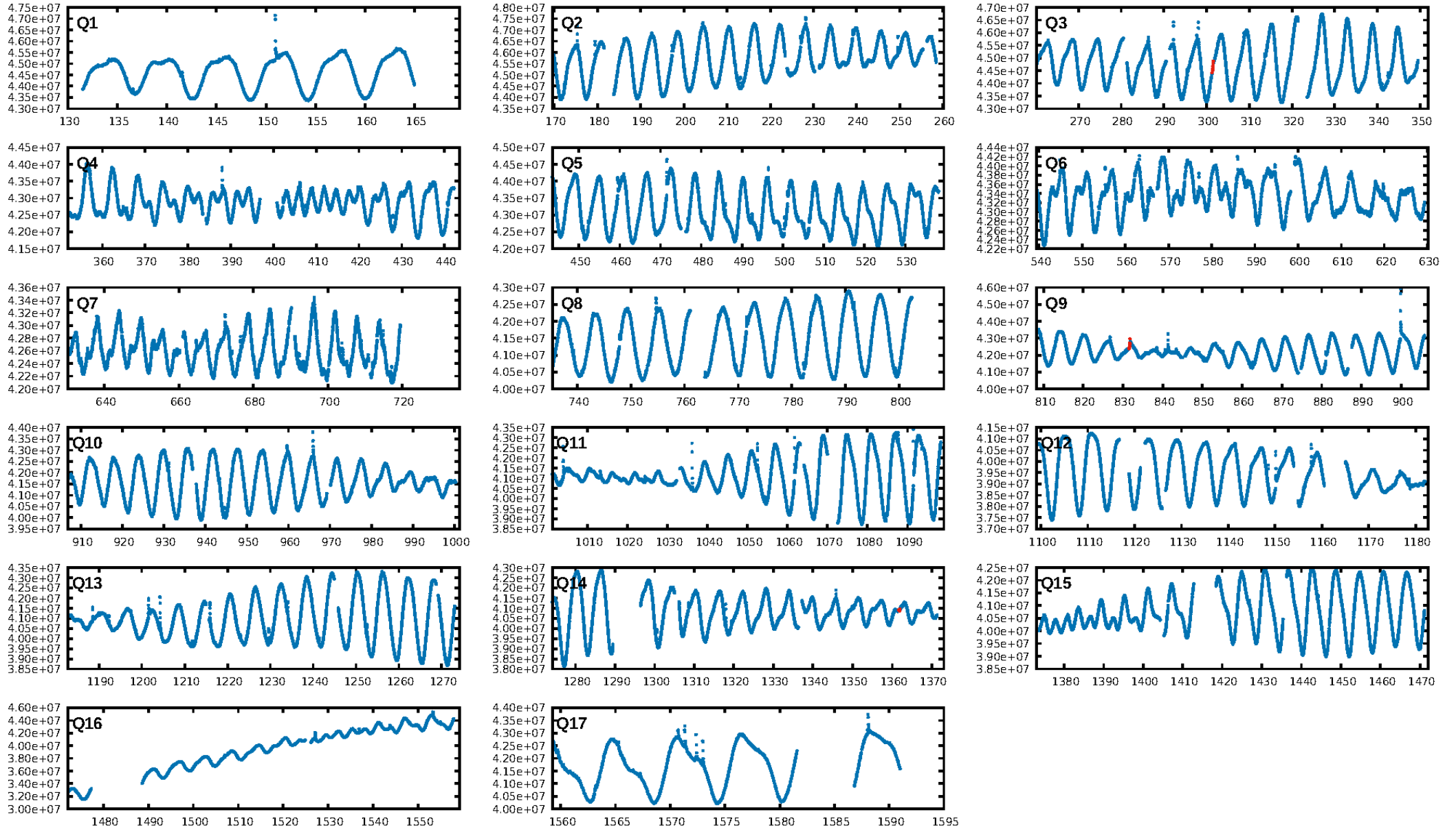
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [7.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 8.7%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.5473
Centroid-sig: 89.9%
Centroid-so: 0.324 arcsec [0.40 σ]
OotOffset-rm: 0.358 arcsec [1.08 σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-rm: 0.387 arcsec [1.20 σ]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

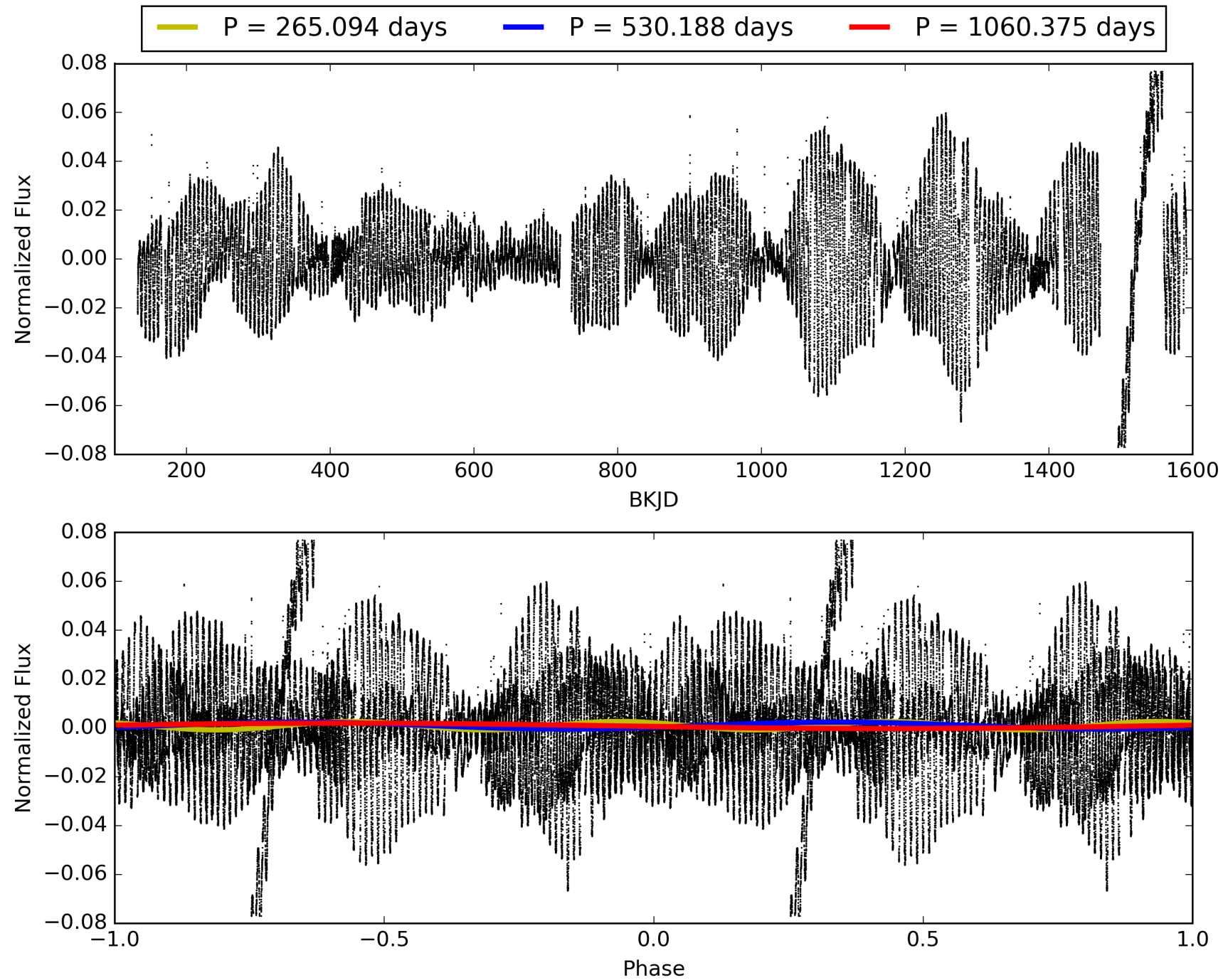
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:19:00 Z

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

TCE 011957046-01, PDC Light Curves

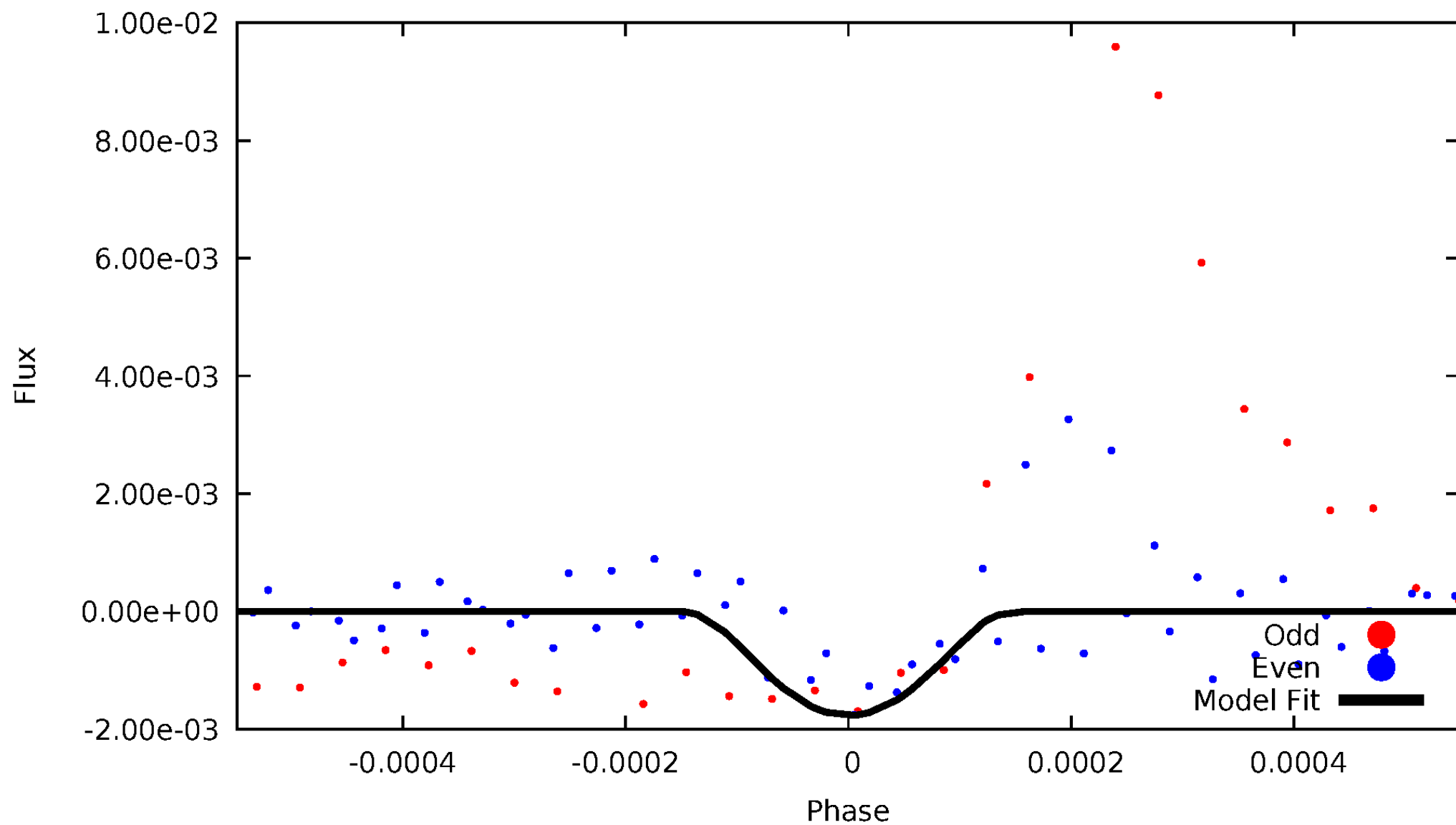


TCE 011957046-01



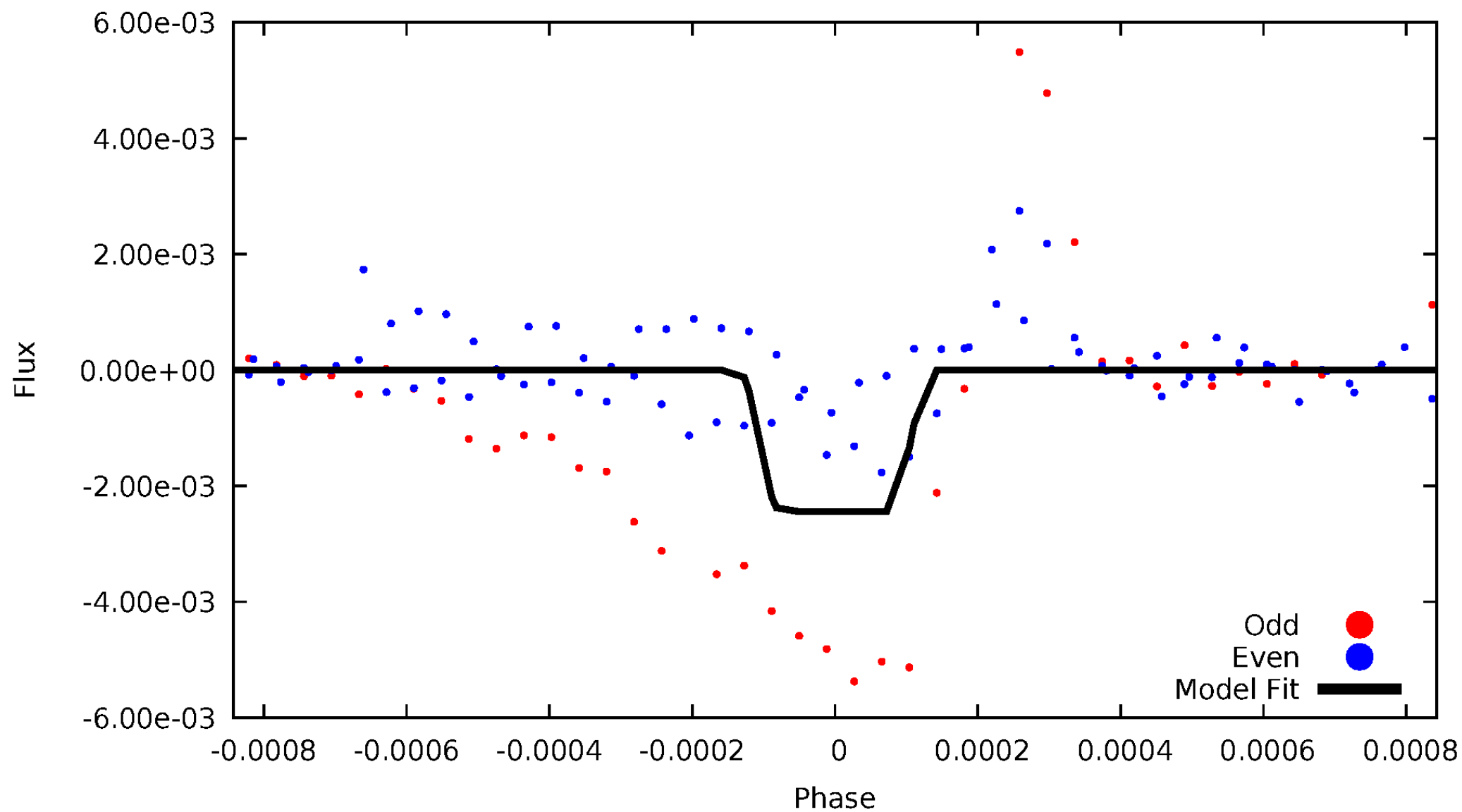
DV Odd/Even

TCE 011957046-01



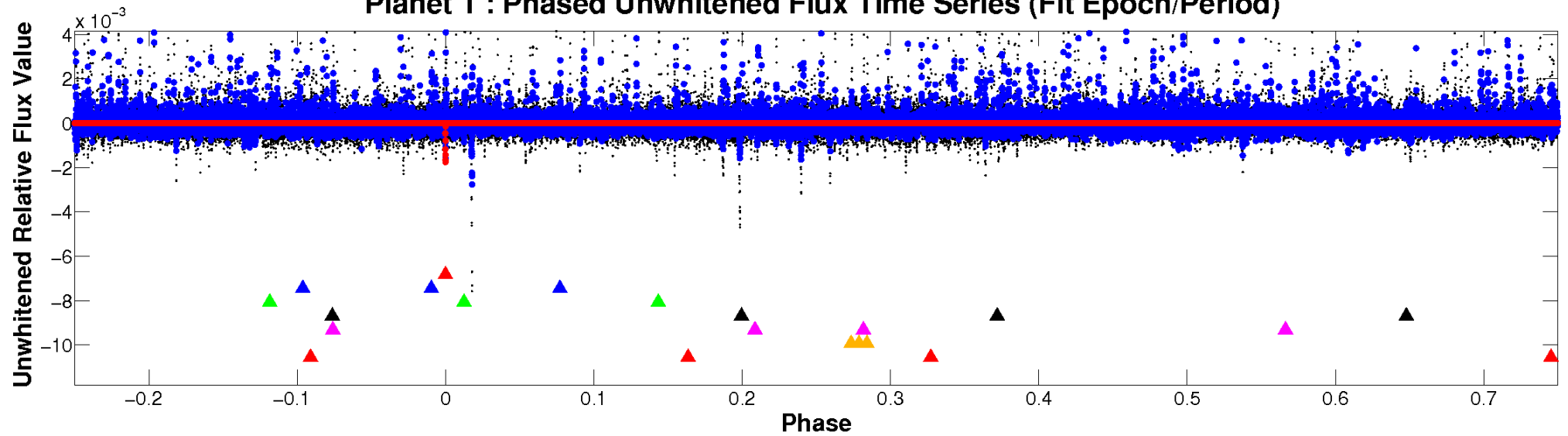
ALT Odd/Even

TCE 011957046-01

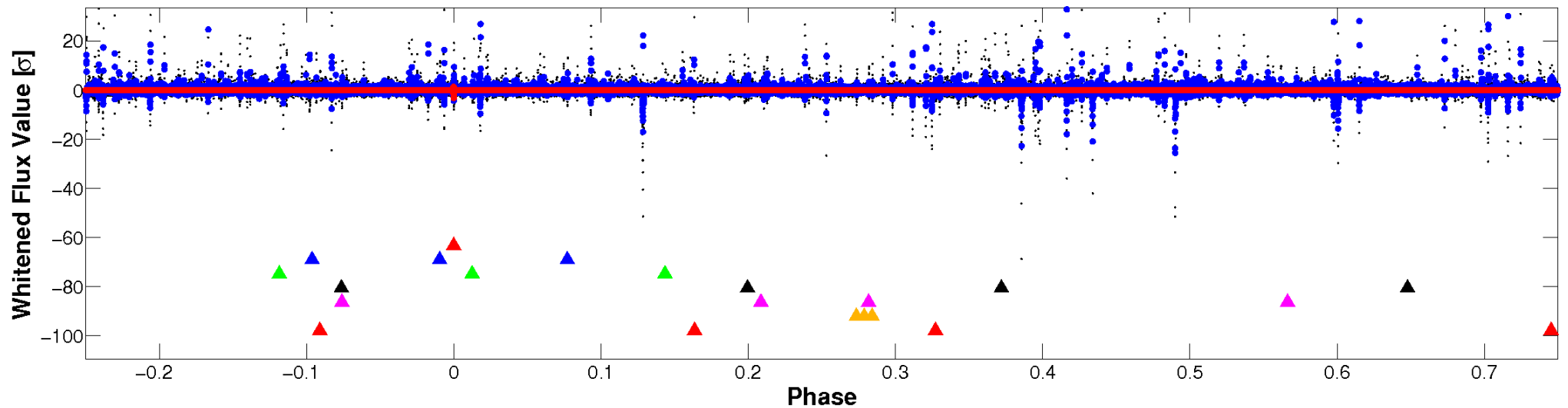


Non-Whitened Vs. Whitened Light Curve

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

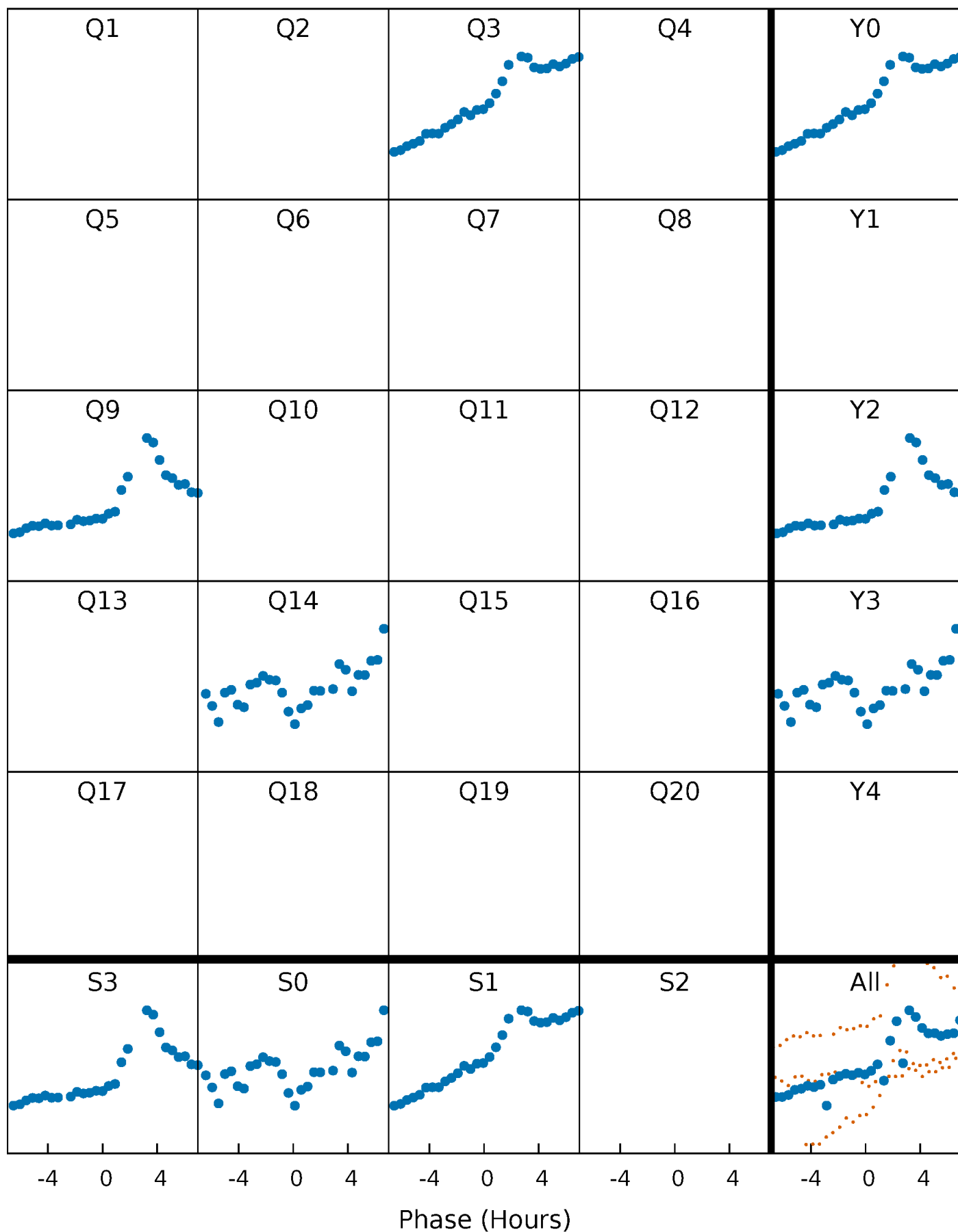


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



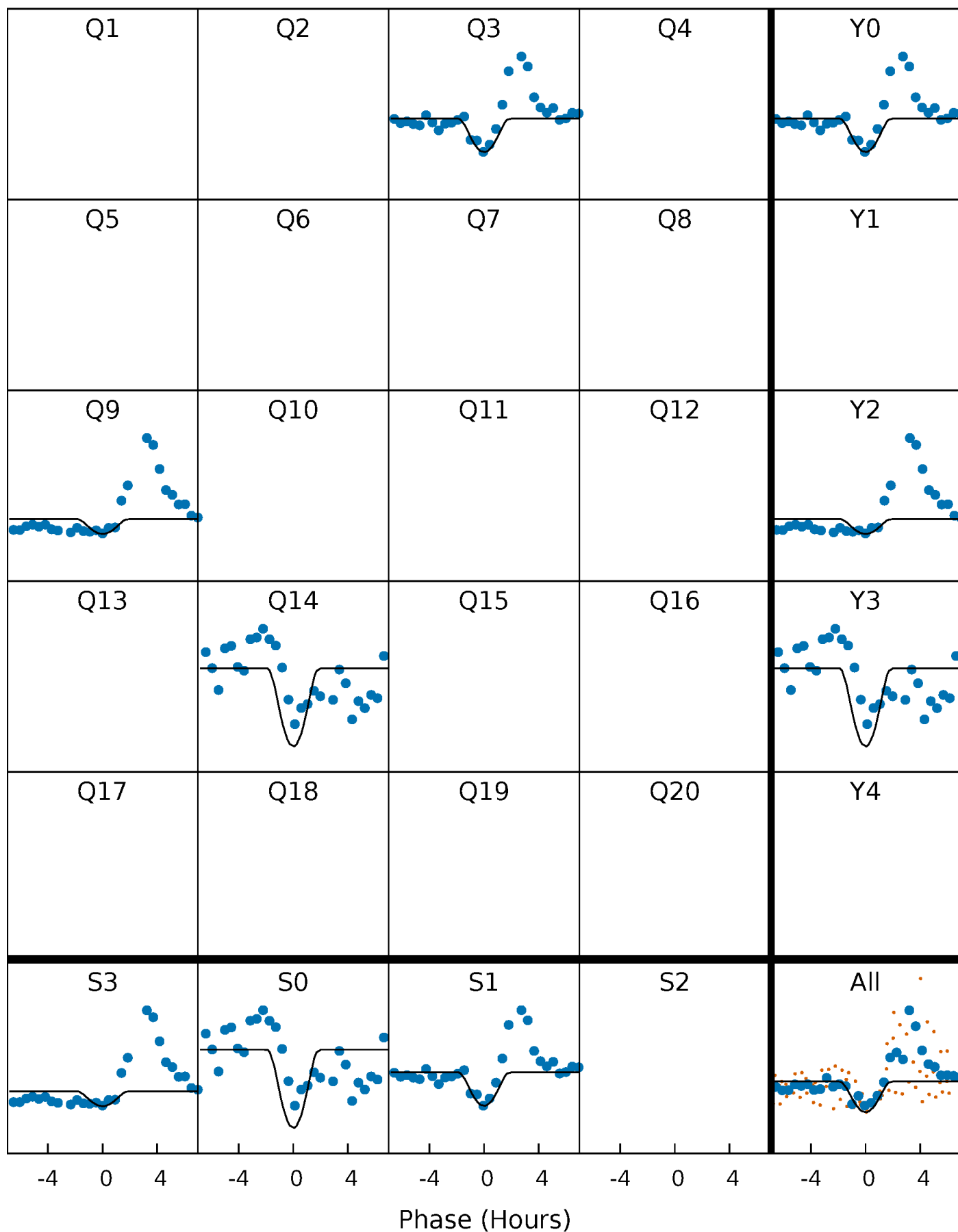
PDC Quarter-Phased Transit Curves

TCE 011957046-01 P=530.187690 Days $T_0=301.455493$ (BKJD)



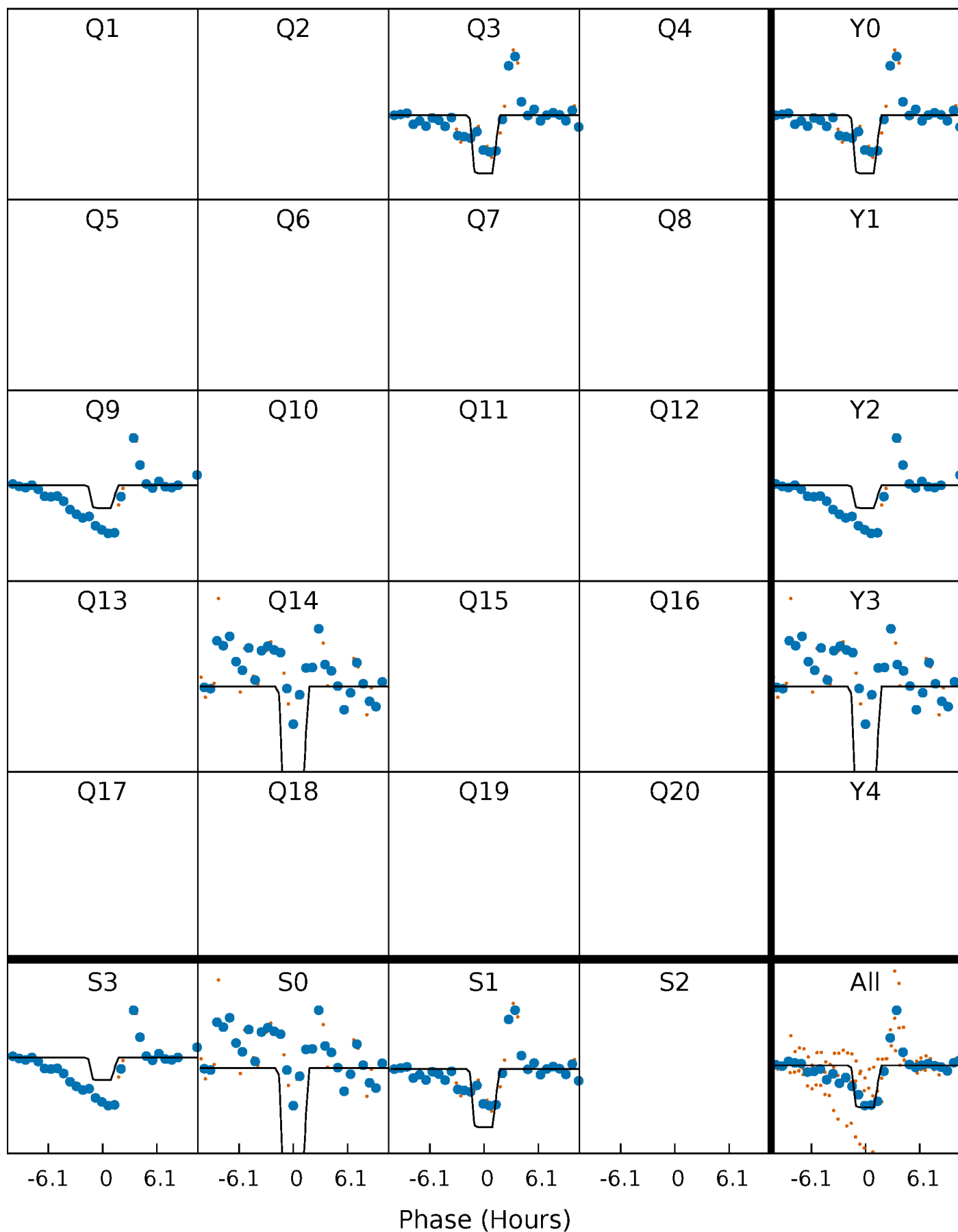
DV Quarter-Phased Transit Curves

TCE 011957046-01 P=530.187690 Days $T_0=301.455493$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

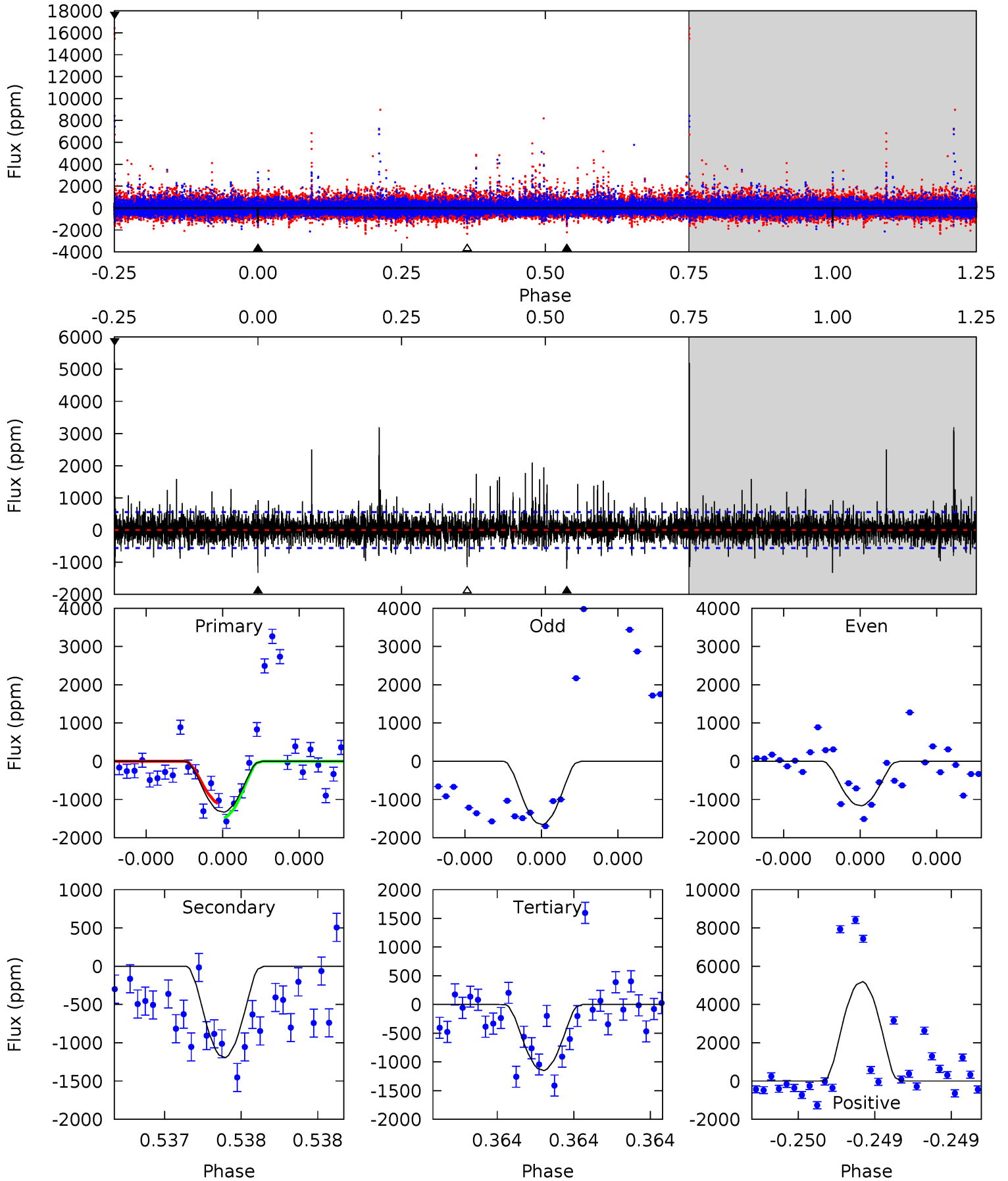
TCE 011957046-01 P=530.210015 Days $T_0=301.423438$ (BKJD)



DV Model-Shift Uniqueness Test

011957046-01, P = 530.187690 Days, E = 301.455493 Days

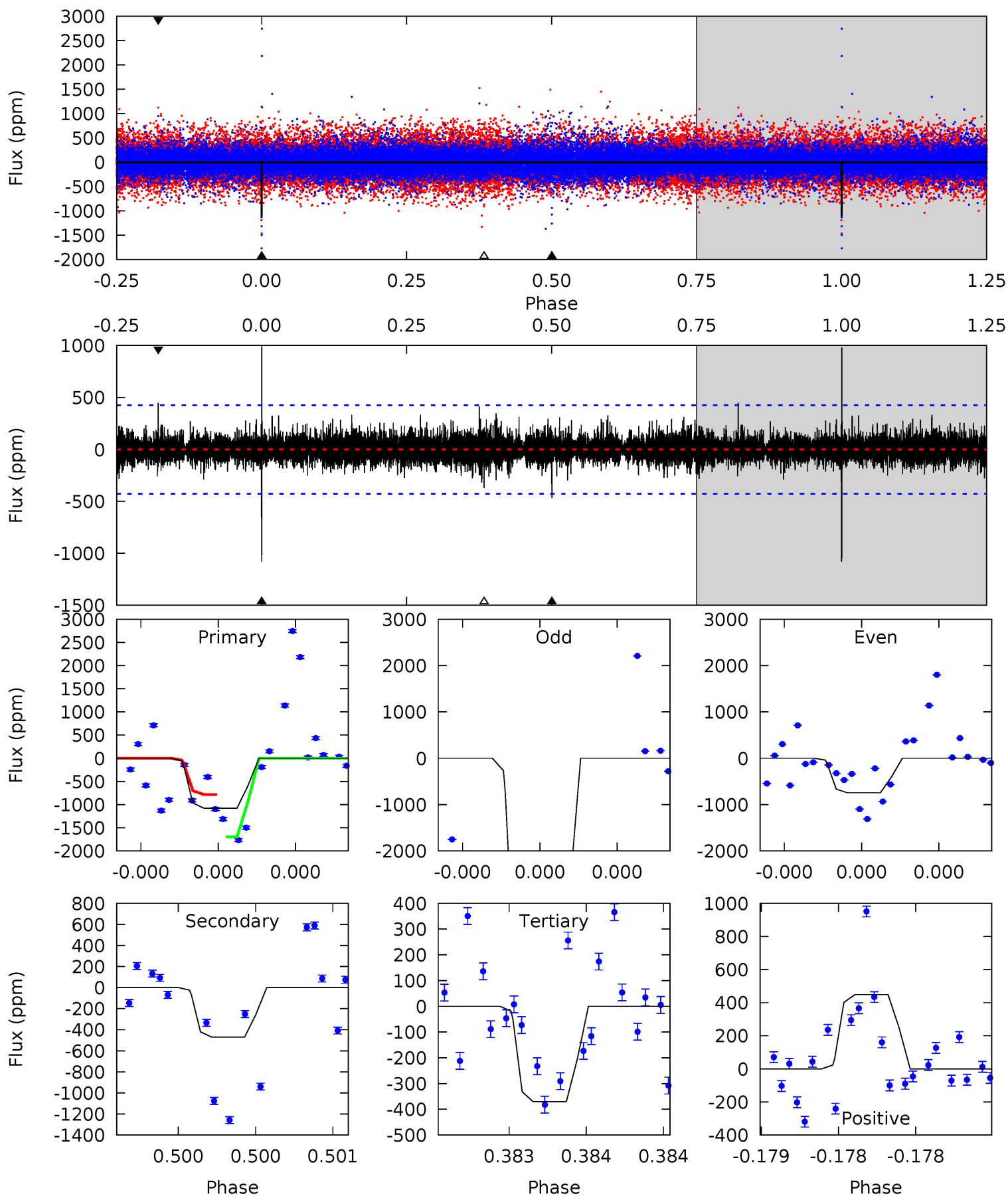
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	12.0	11.6	52.3	5.66	3.61	2.55	1.81	-38.9	0.44	-40.3	1.03	0.89	0.80	1.88



Alt Model-Shift Uniqueness Test

011957046-01, P = 530.210015 Days, E = 301.423438 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	6.26	4.94	5.98	5.68	3.64	0.89	9.42	8.39	1.32	0.28	36.3	1.70	0.48	5.58



Stellar Parameters For KIC 011957046

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5855^{+158}_{-158}	$4.448^{+0.098}_{-0.182}$	$-0.320^{+0.300}_{-0.300}$	$0.931^{+0.255}_{-0.127}$	$0.886^{+0.119}_{-0.079}$	$1.546^{+0.665}_{-0.746}$
	+3%/-3%	+2%/-4%	+94%/-94%	+27%/-14%	+13%/-9%	+43%/-48%
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 011957046-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1194 ± 99	$31.46^{+35.00}_{-21.72}$	318^{+22}_{-16}	2748^{+1150}_{-459}	1014^{+9122}_{-790}
Alt.	-470 ± 75	$30.25^{+31.31}_{-21.82}$	317^{+20}_{-16}	2476^{+1034}_{-367}	417^{+4823}_{-317}

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

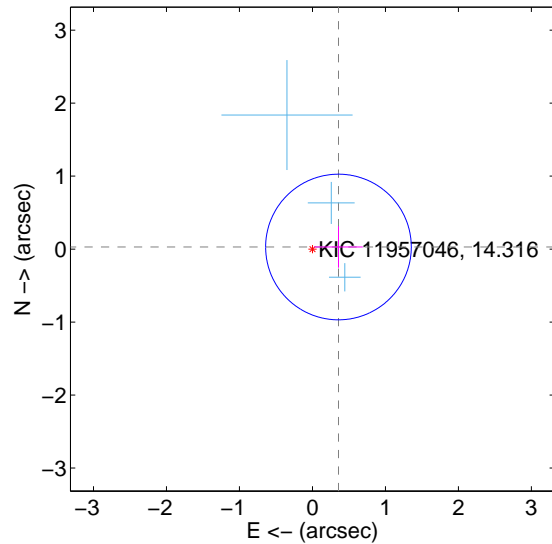
Supplemental centroid analysis for 011957046-01. Kepler magnitude: 14.32. Transit SNR 9.66

There are 3 quarters with good PRF difference image offsets

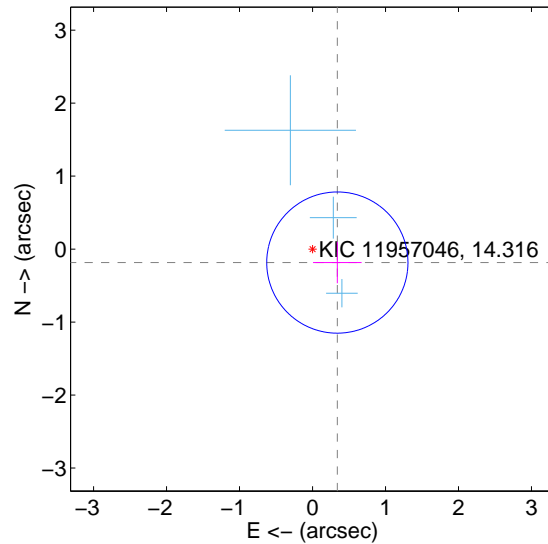
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.358 ± 0.333	1.08	-0.357 ± 0.333	0.029 ± 0.284
PRF-fit source offset from KIC position	0.387 ± 0.323	1.20	-0.340 ± 0.333	-0.185 ± 0.284
photometric centroid source offset	0.32 ± 0.81	0.40	-0.26 ± 0.77	-0.19 ± 0.89

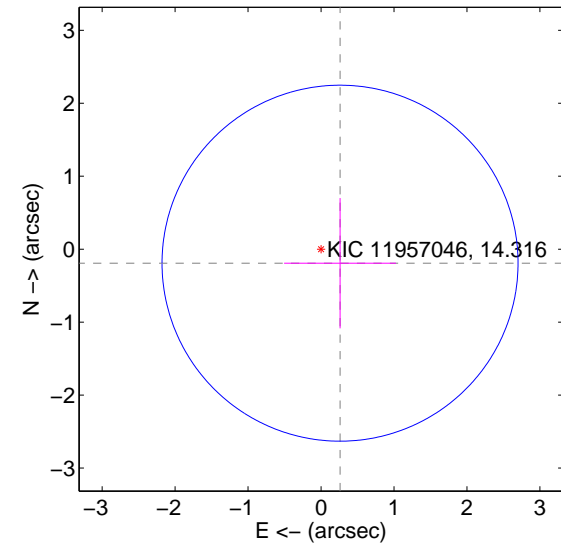
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

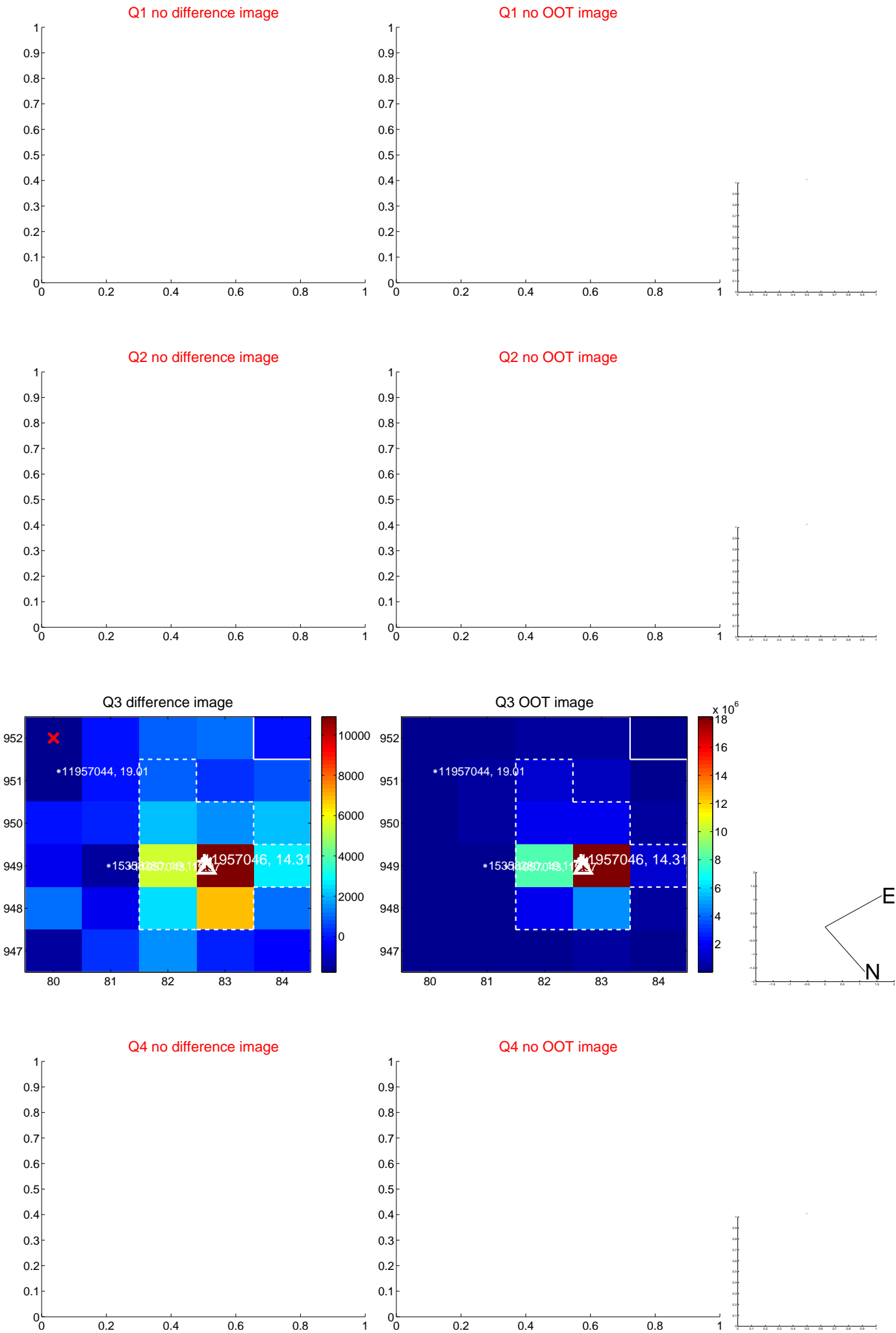


offset from photometric centroids



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.

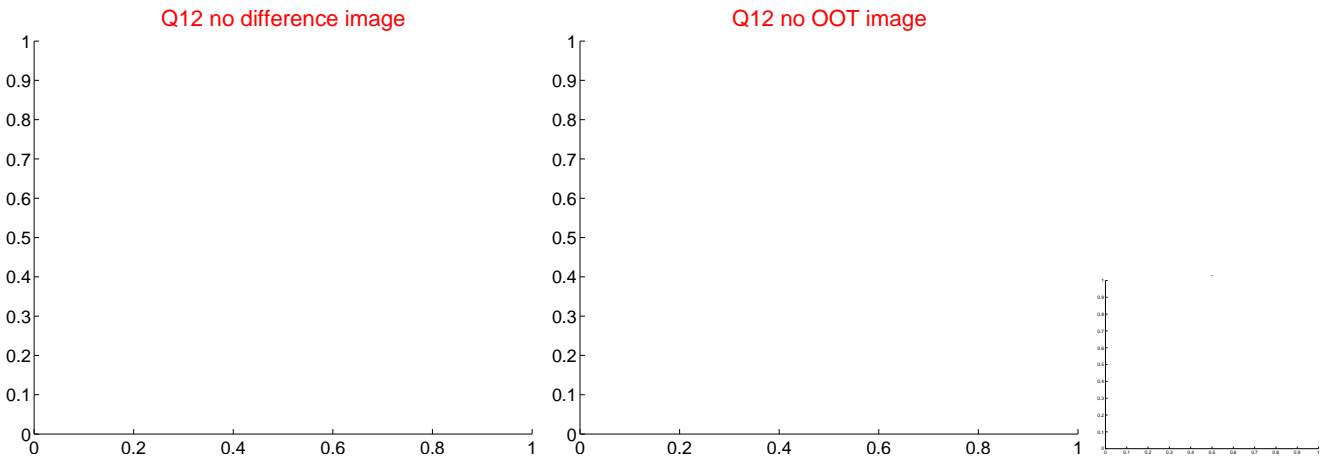
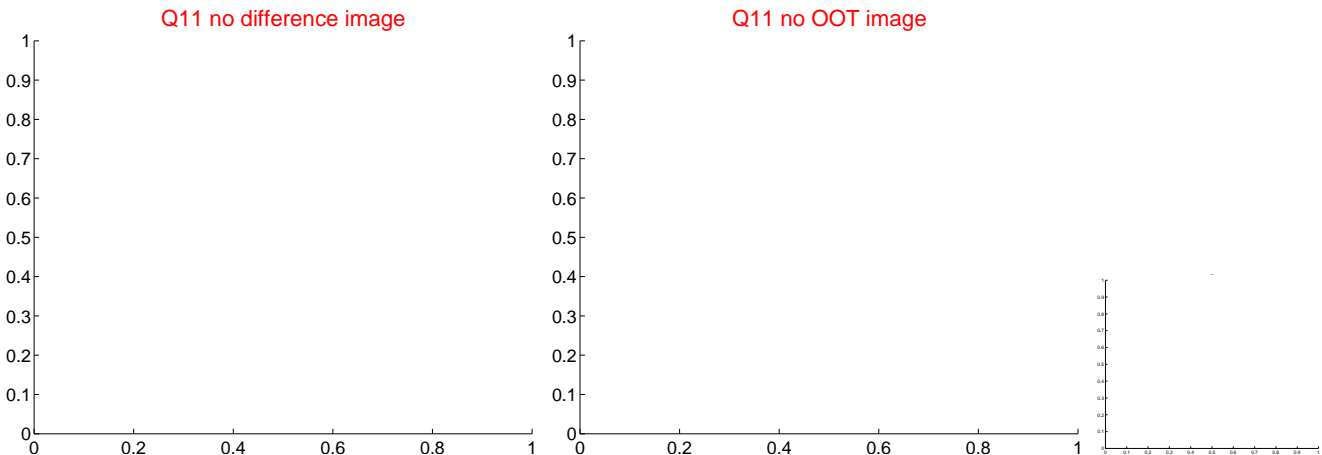
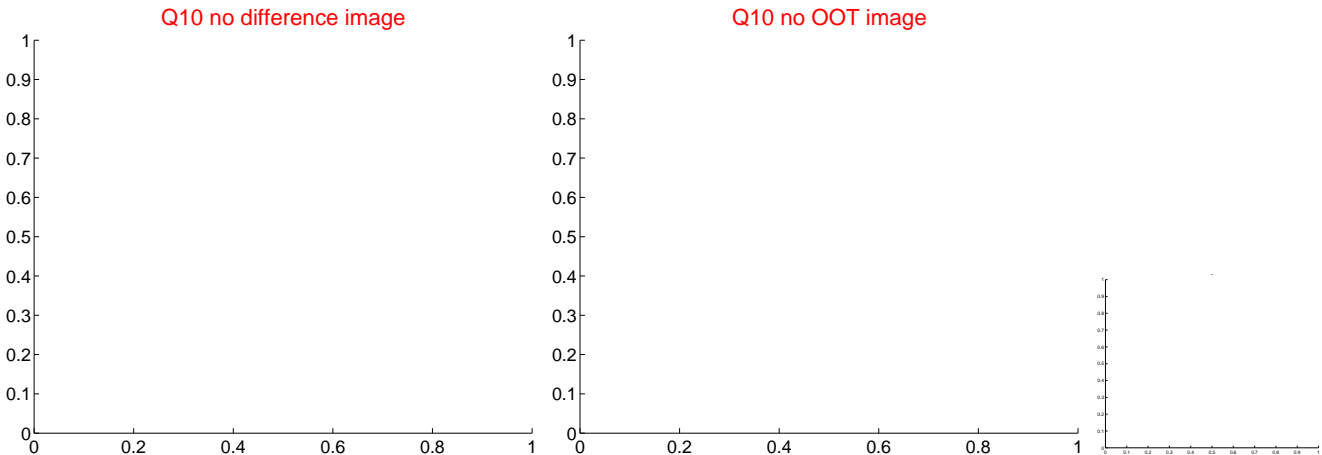
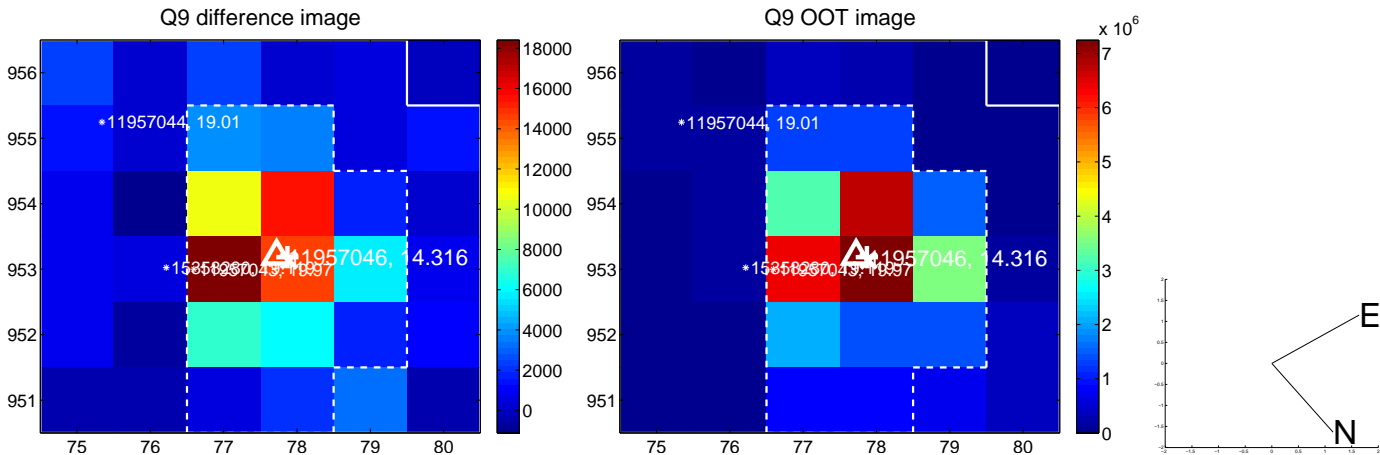
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



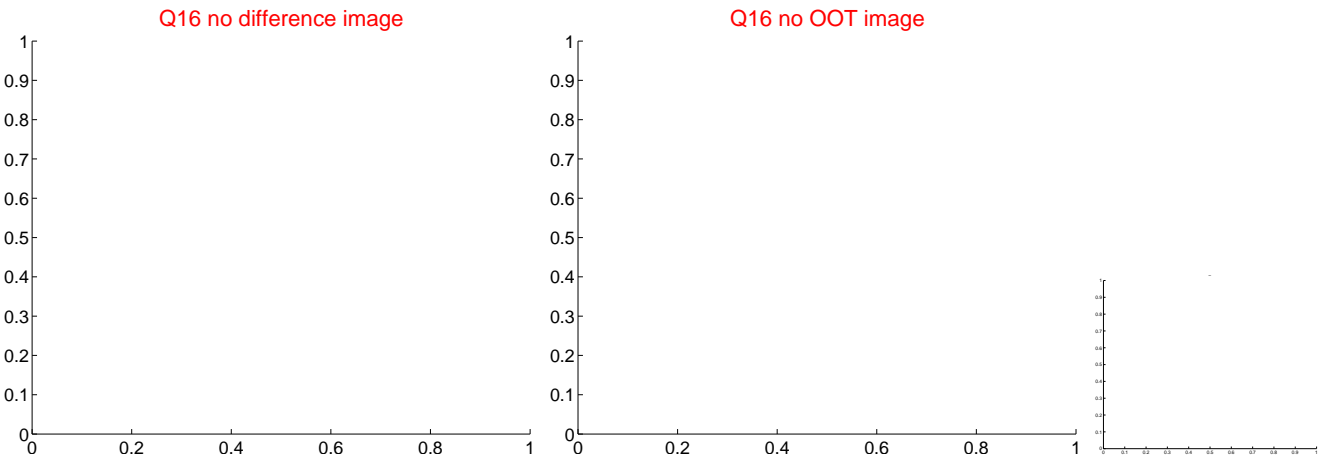
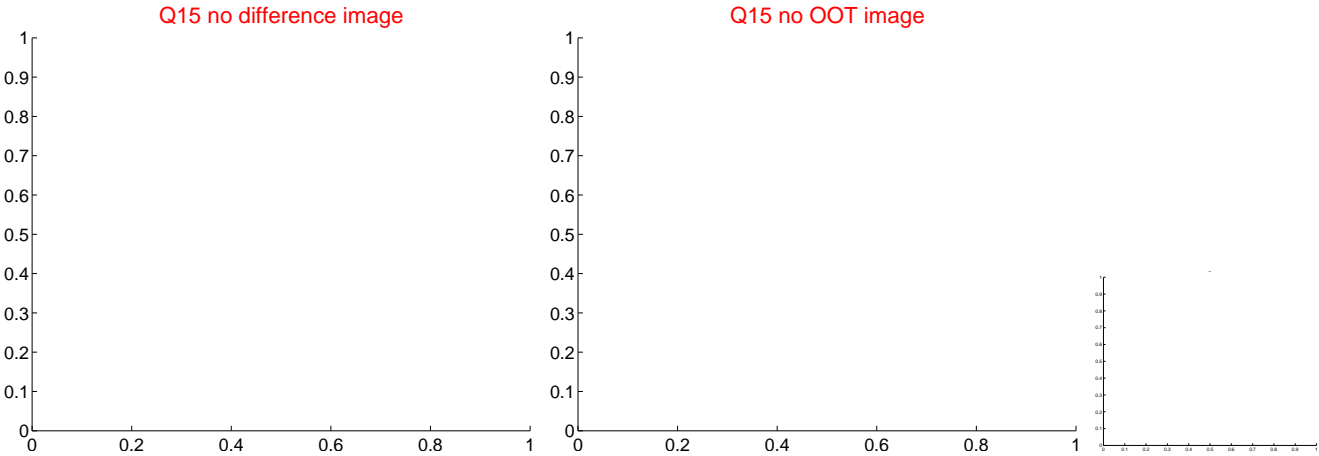
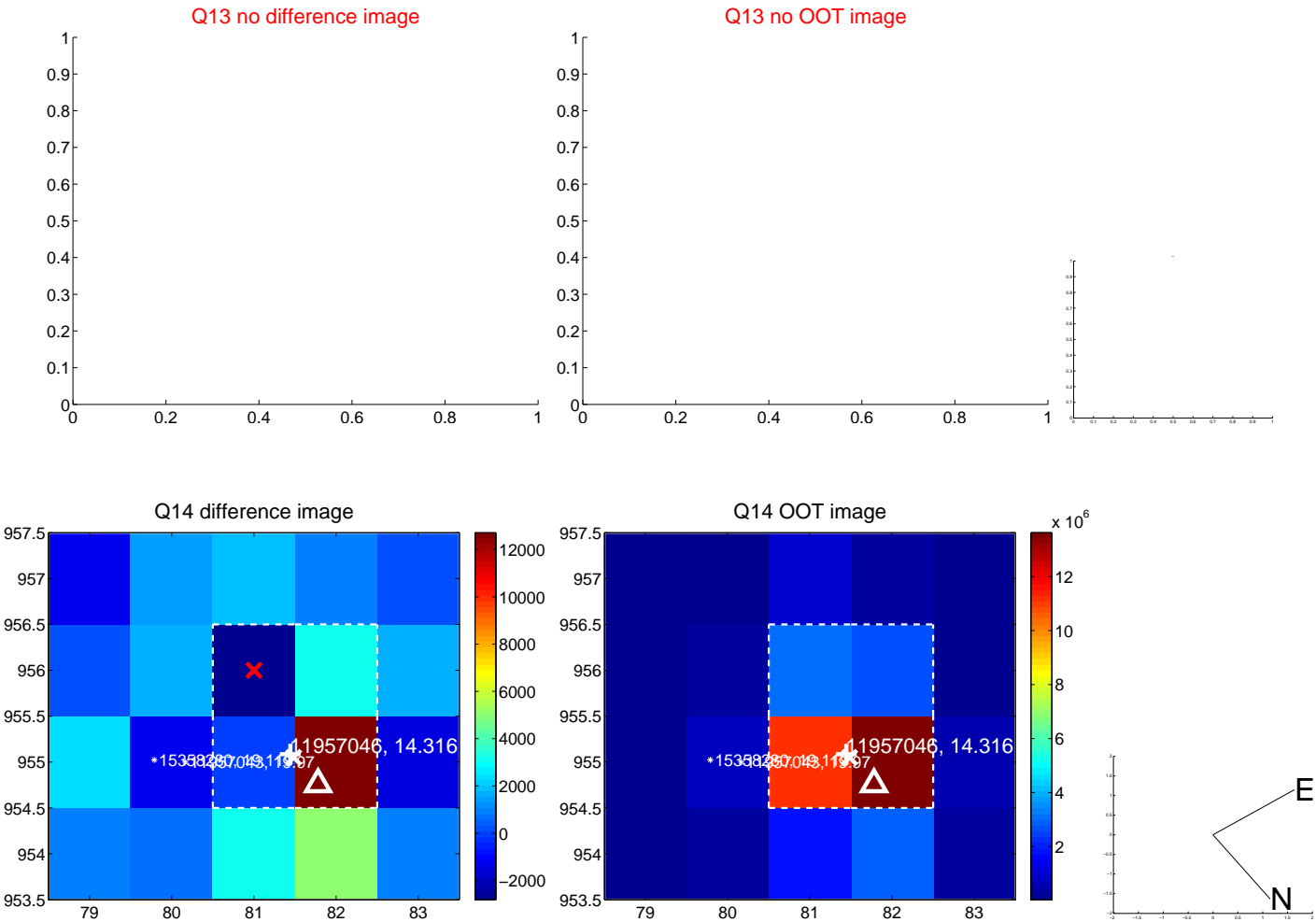
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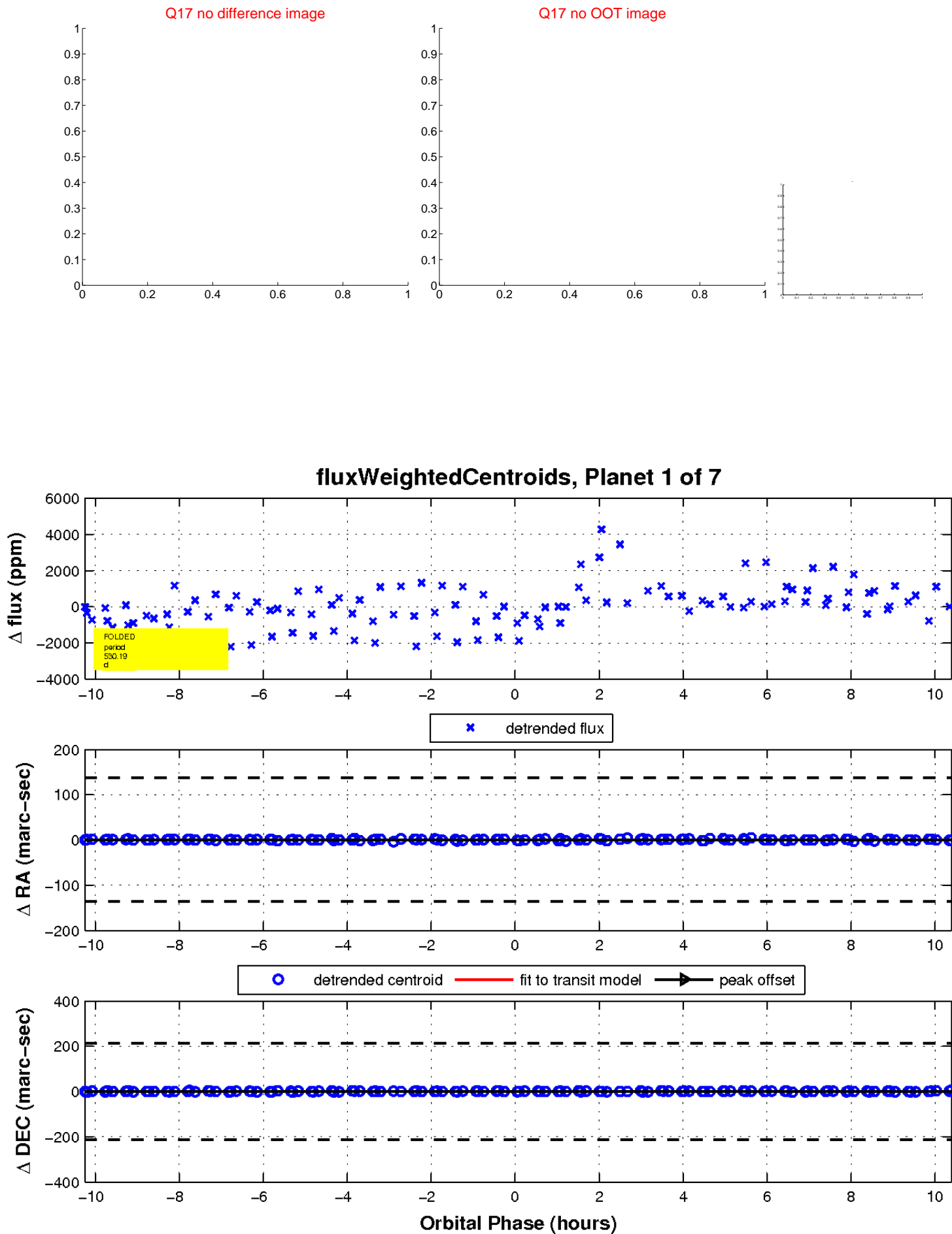
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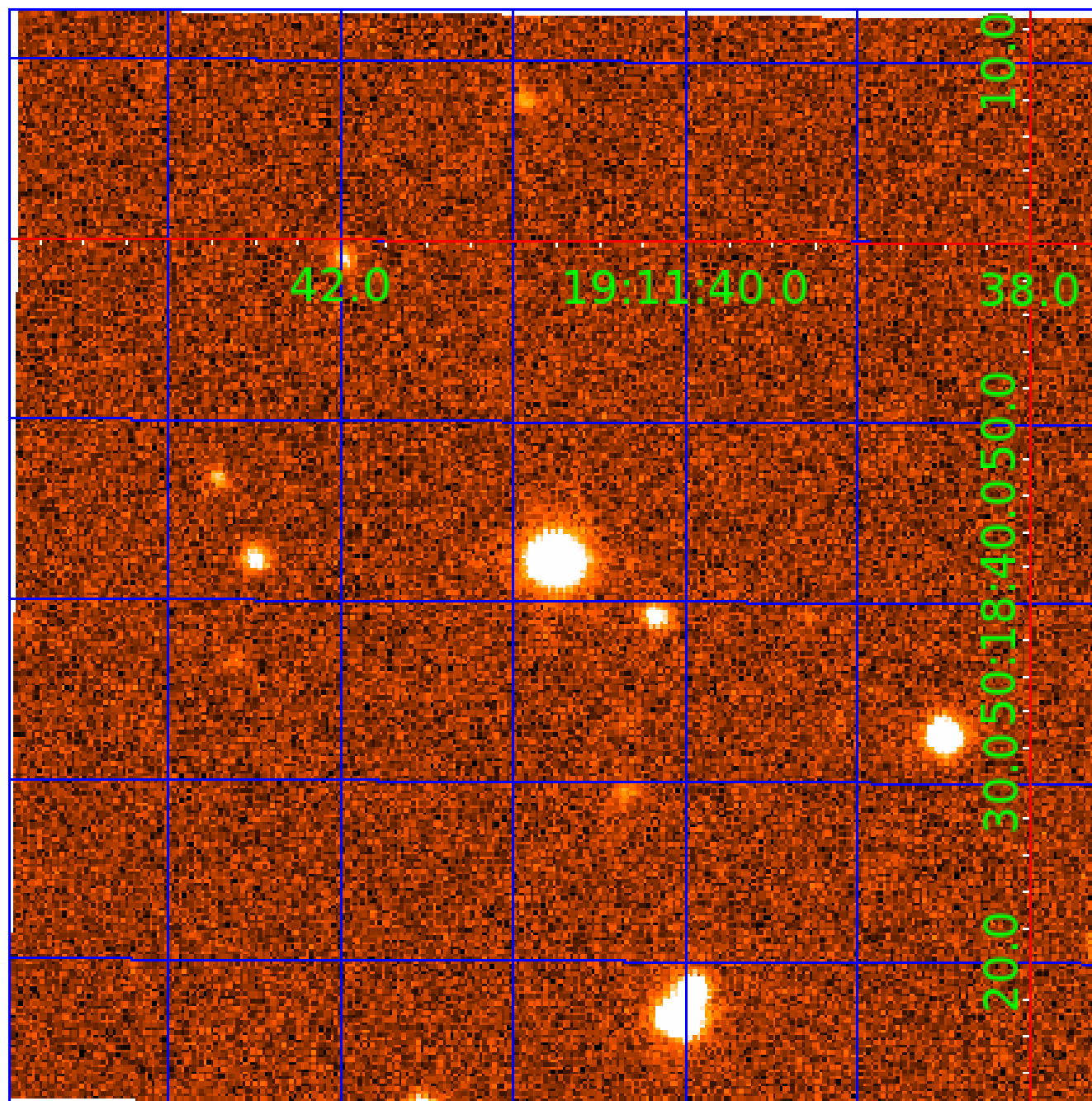


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011957046

Q1-17 DR25 TCE Parameters

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011957046-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-03	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
011957046-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—HALO_GHOST
011957046-07	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

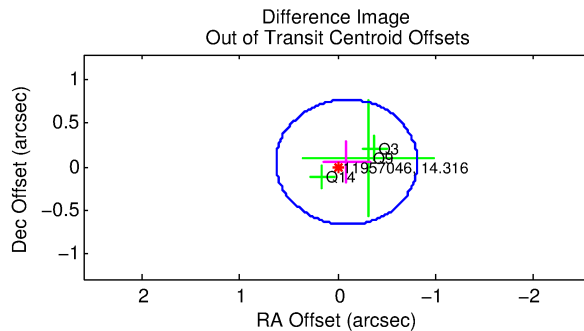
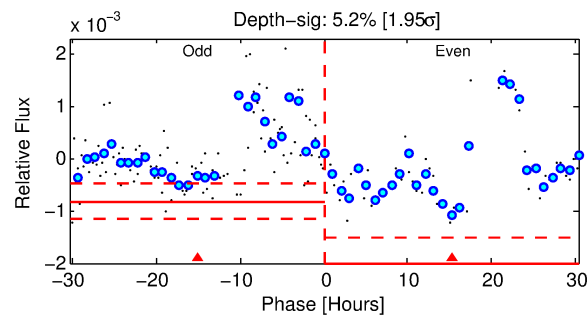
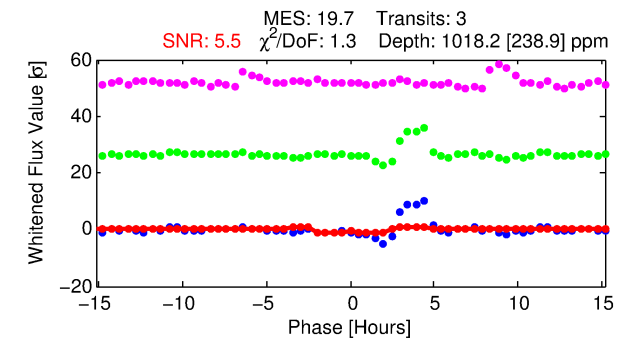
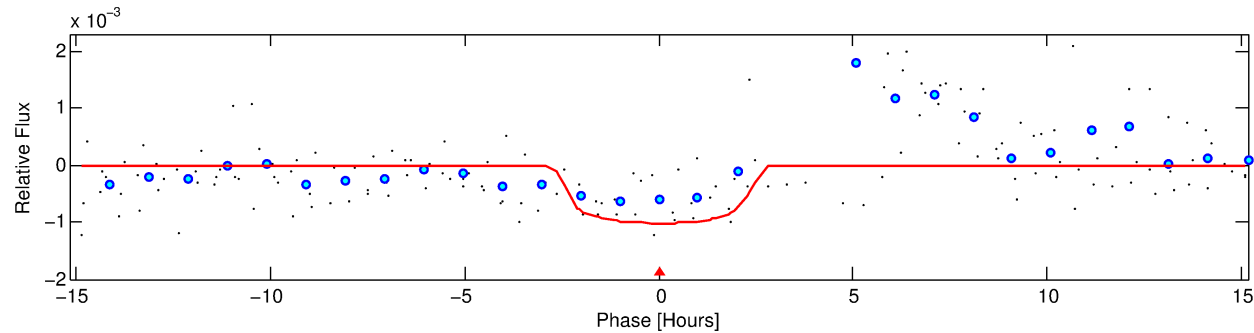
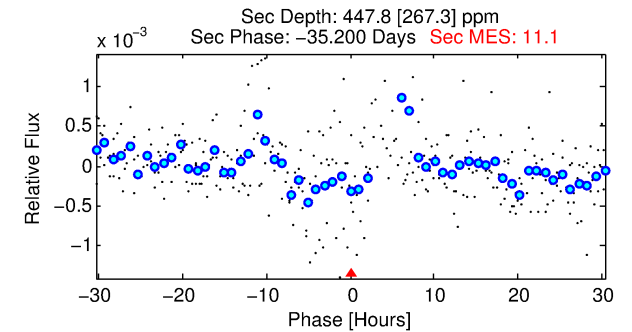
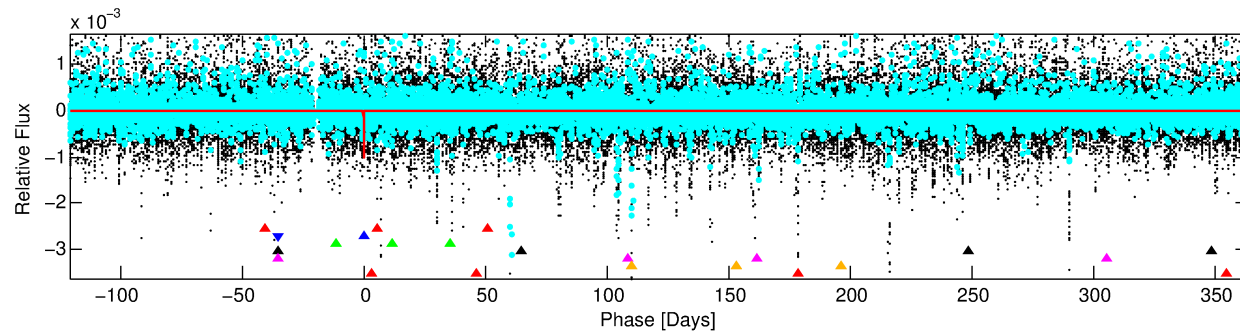
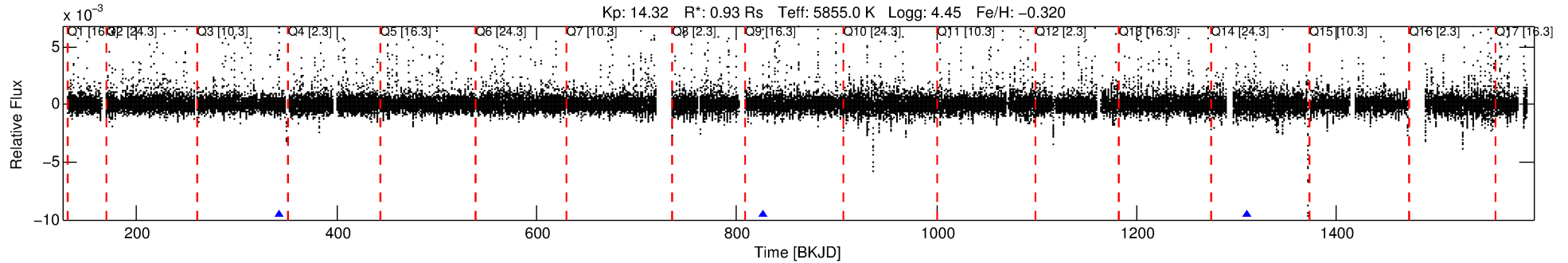
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011957046-02

No Significant Match Found

DV One-Page Summary

KIC: 11957046 Candidate: 2 of 7 Period: 484.240 d



DV Fit Results:

Period = 484.24012 [0.00694] d
Epoch = 342.3441 [0.0085] BKJD
Rp/R* = 0.0294 [0.1707]
a/R* = 724.85 [19951.92]
b = 0.28 [90.05]
Seff = 0.68 [0.24]
Teq = 231 [20] K
Rp = 2.98 [17.36] Re
a = 1.1598 [0.2666] AU
Ag = 37239.45 [433683.36] [0.09 σ]
Teffp = 4971 [14466] K [0.33 σ]

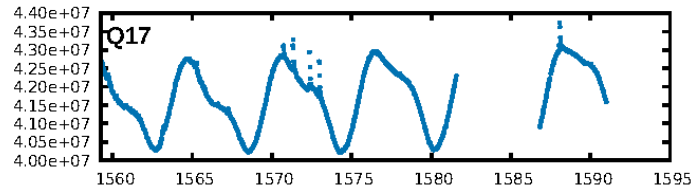
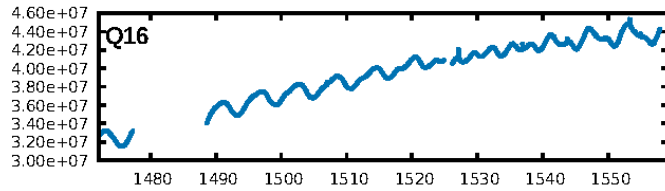
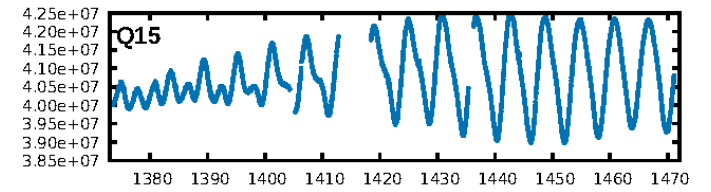
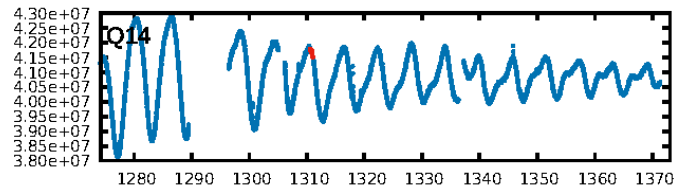
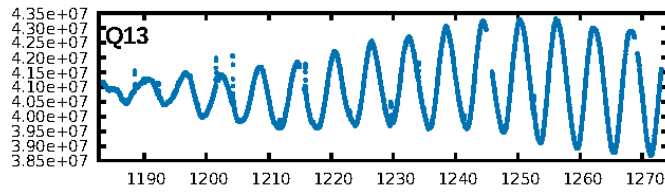
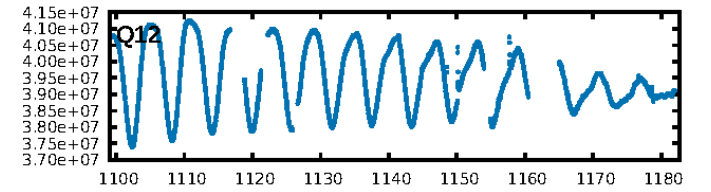
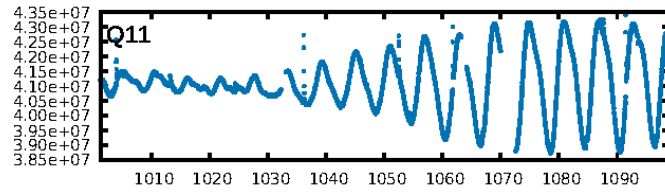
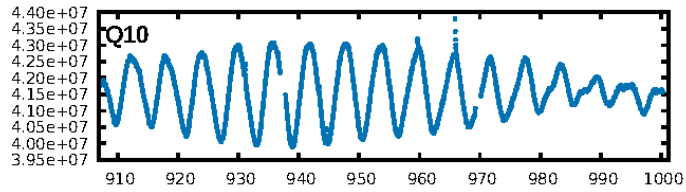
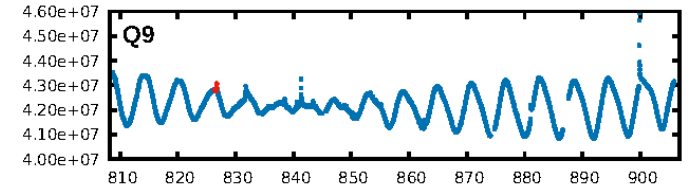
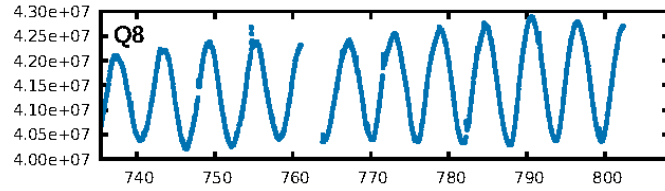
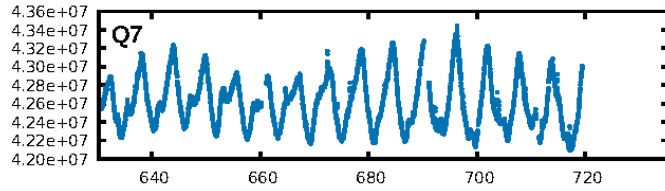
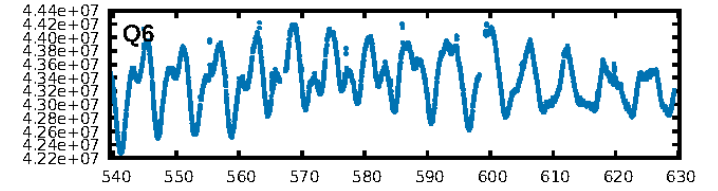
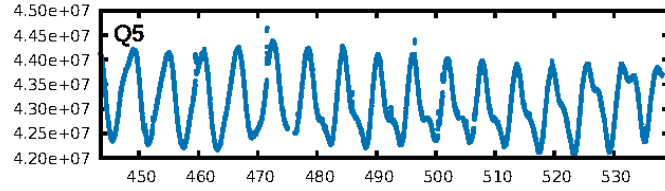
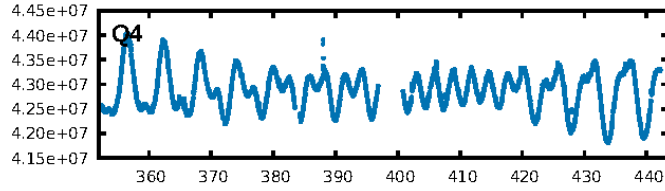
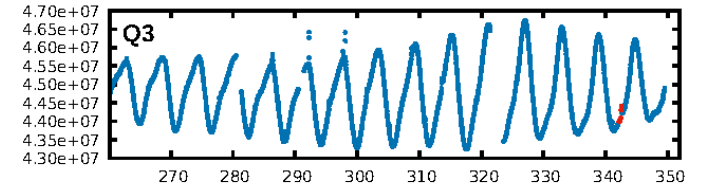
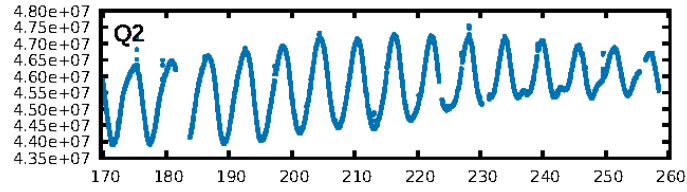
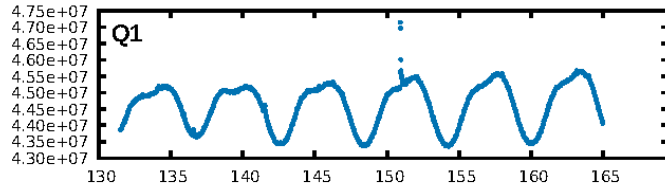
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [53.30 σ]
LongPeriod-sig: 100.0% [99.76 σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 75.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -4.236
Centroid-sig: 40.9%
Centroid-so: 0.505 arcsec [0.49 σ]
OotOffset-rm: 0.107 arcsec [0.44 σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-rm: 0.155 arcsec [0.64 σ]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

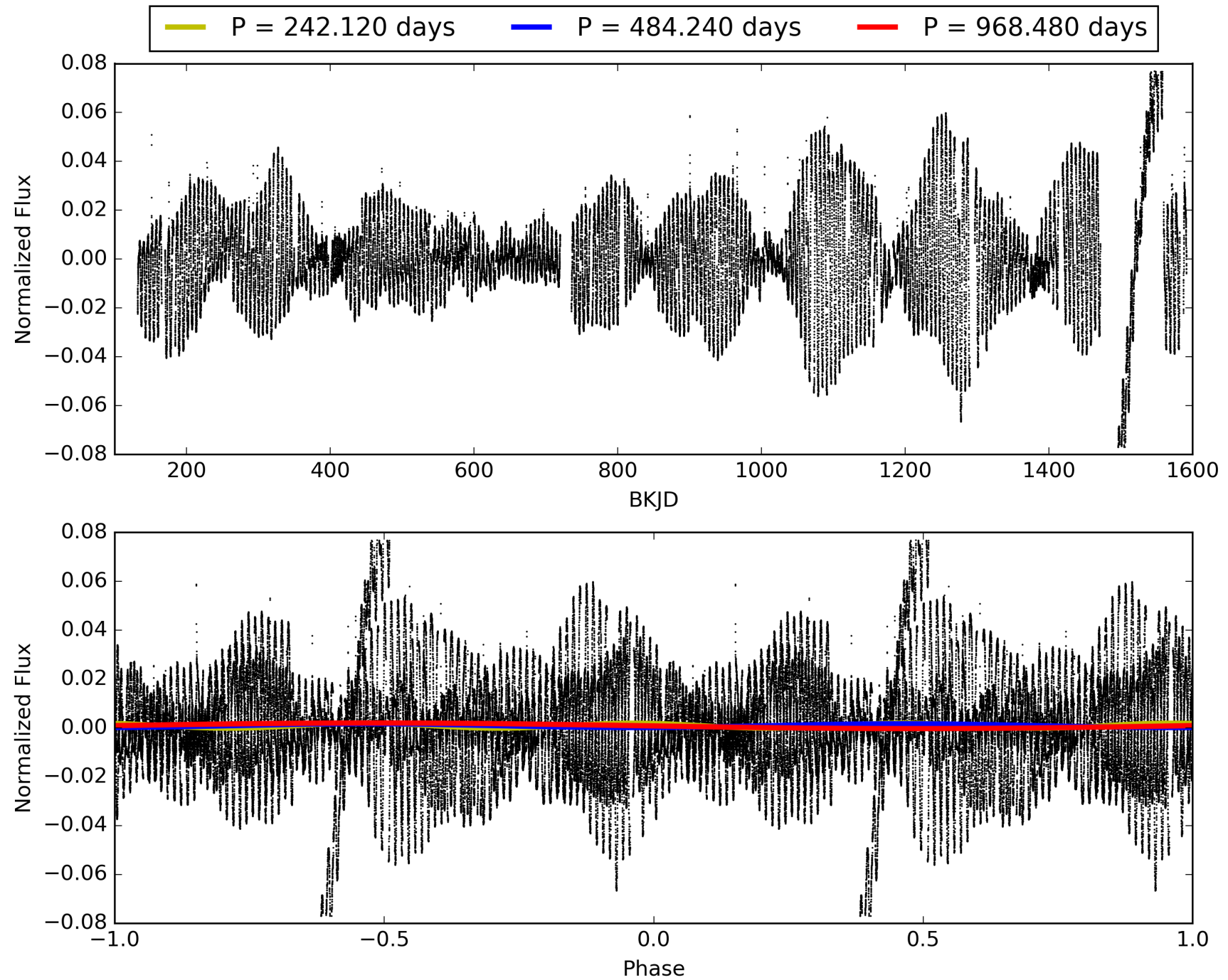
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:19:16 Z

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

TCE 011957046-02, PDC Light Curves

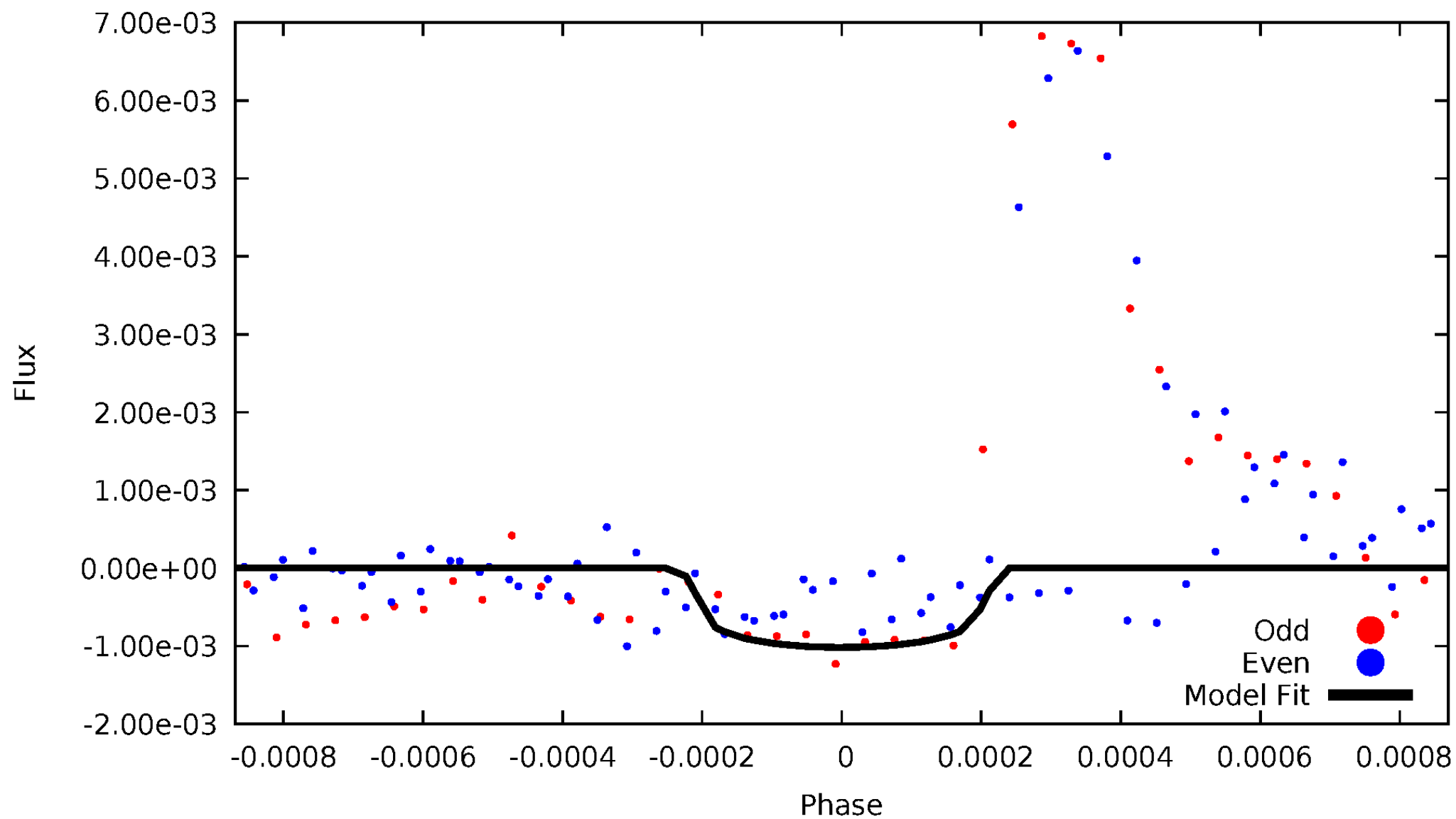


TCE 011957046-02



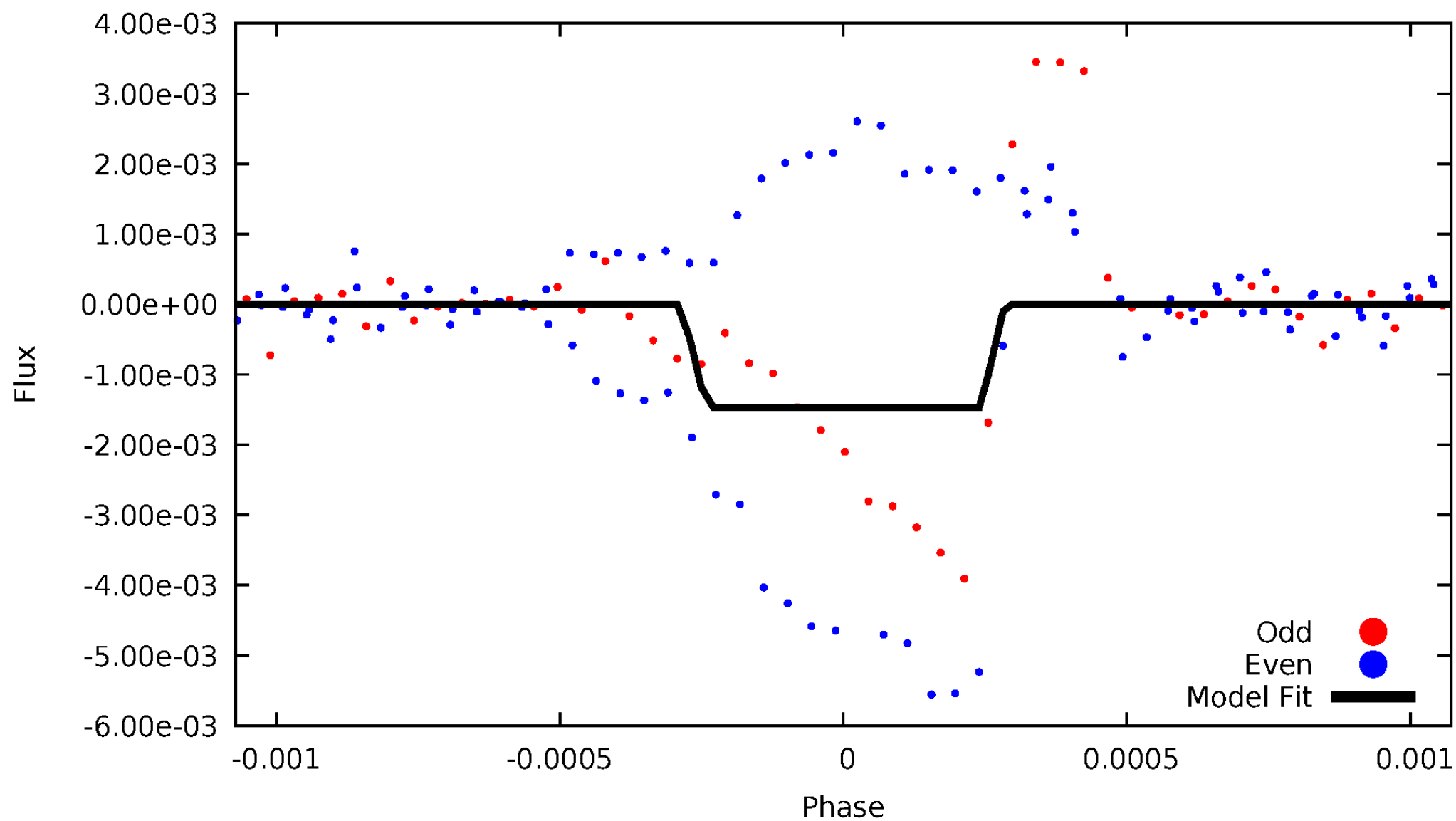
DV Odd/Even

TCE 011957046-02



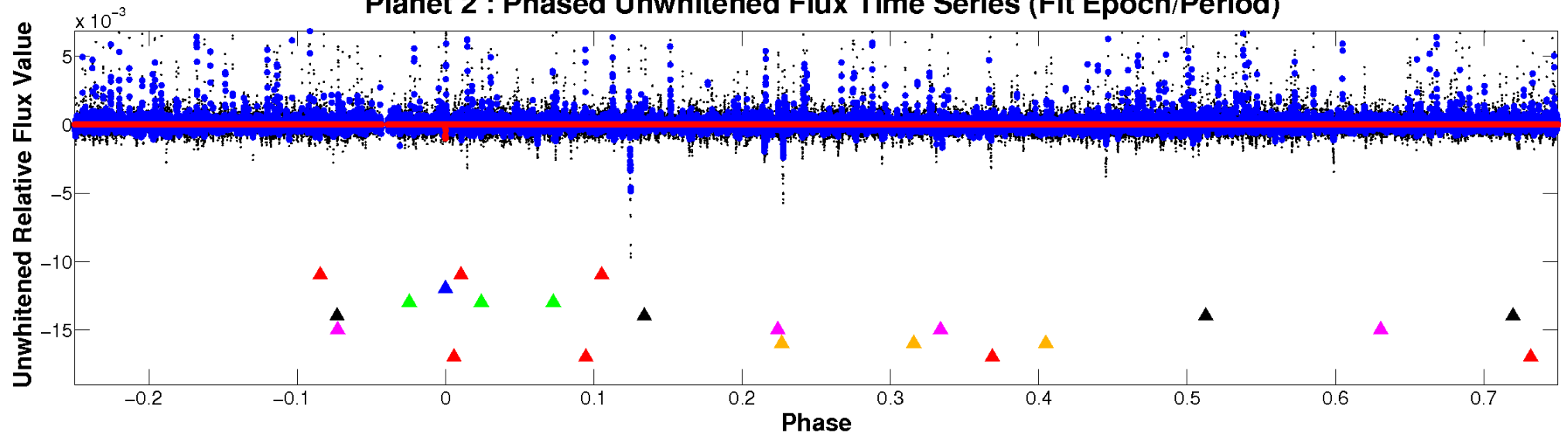
ALT Odd/Even

TCE 011957046-02

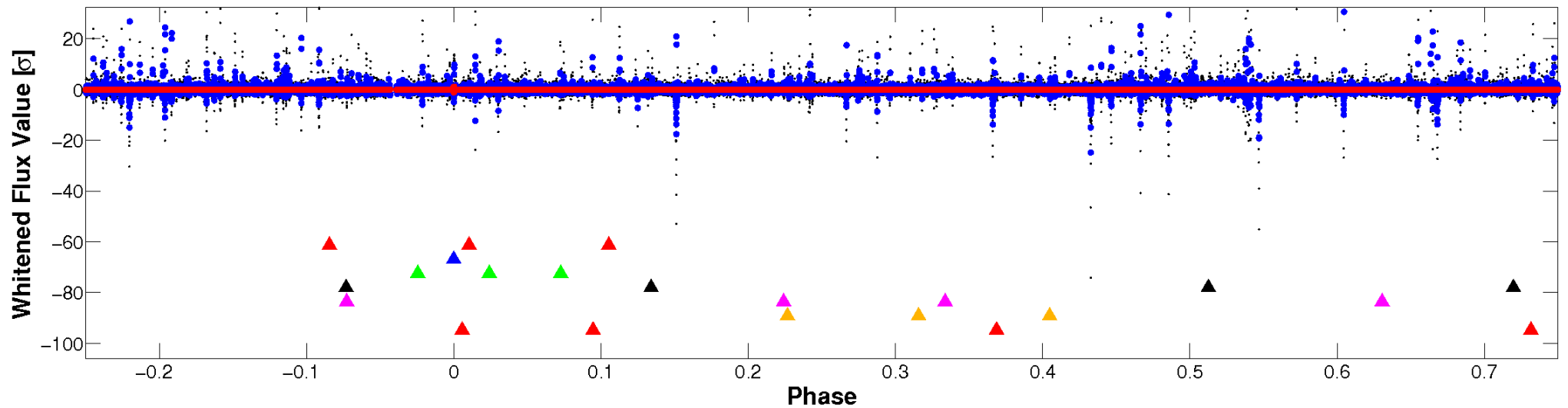


Non-Whitened Vs. Whitened Light Curve

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

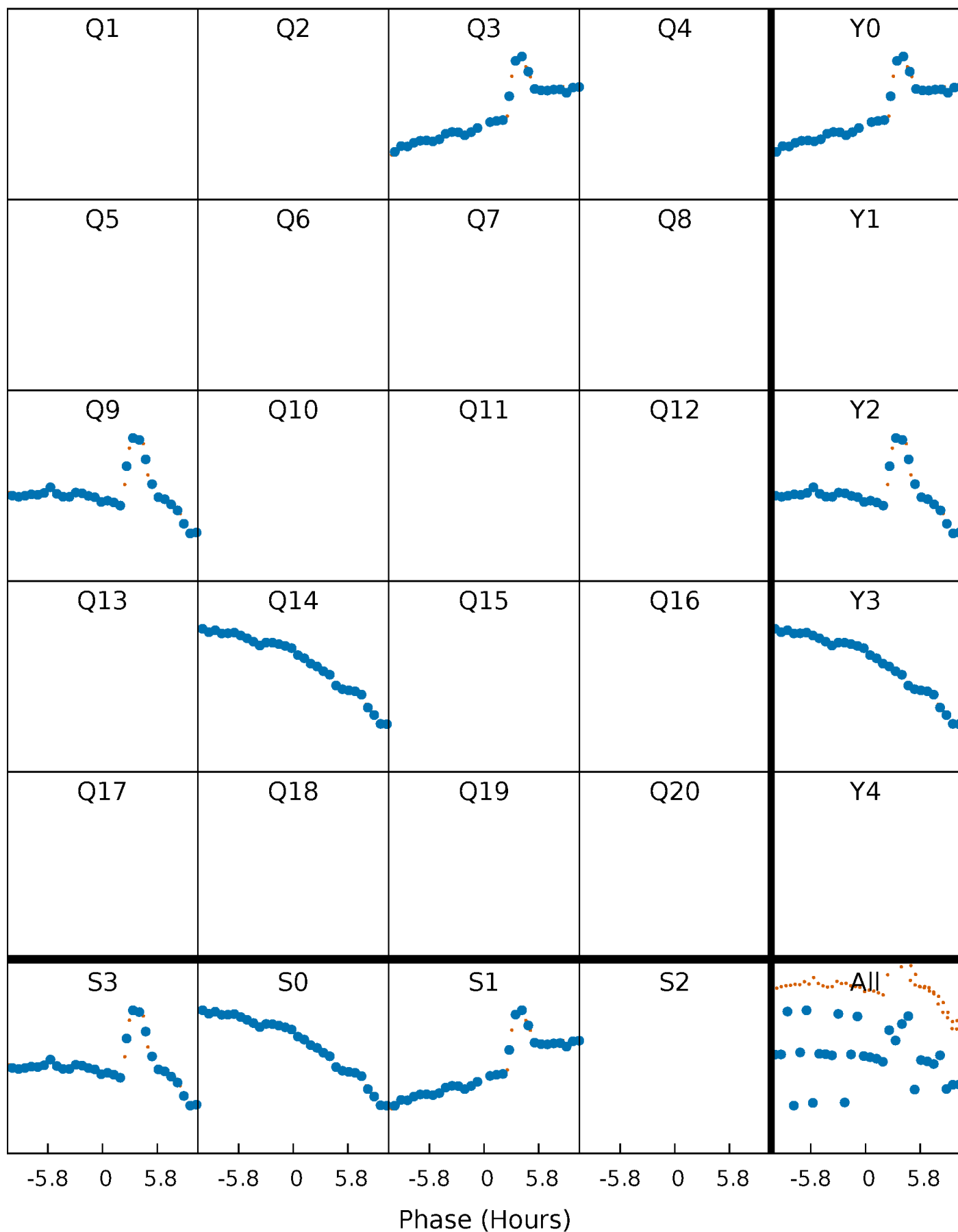


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



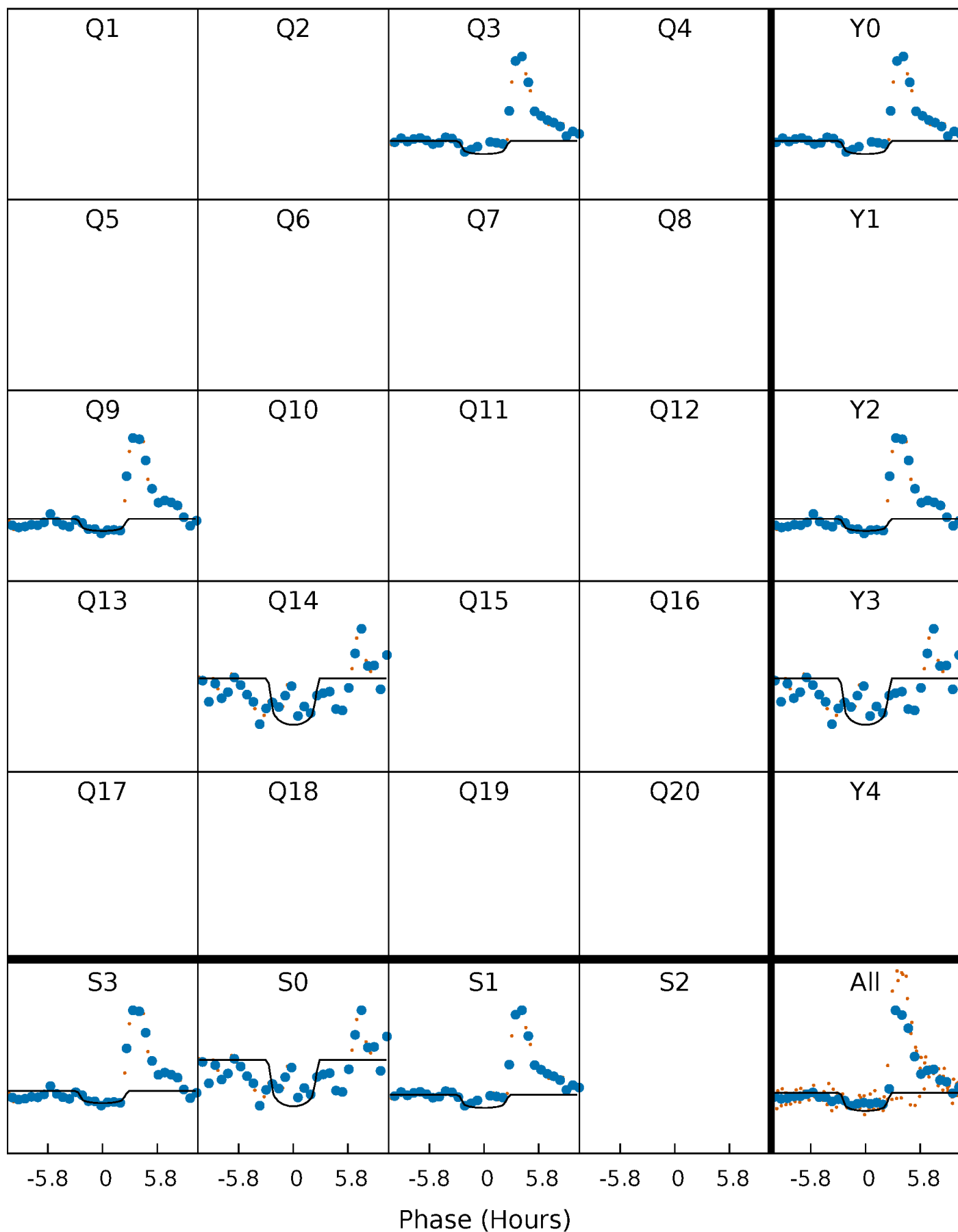
PDC Quarter-Phased Transit Curves

TCE 011957046-02 P=484.240119 Days $T_0=342.344114$ (BKJD)



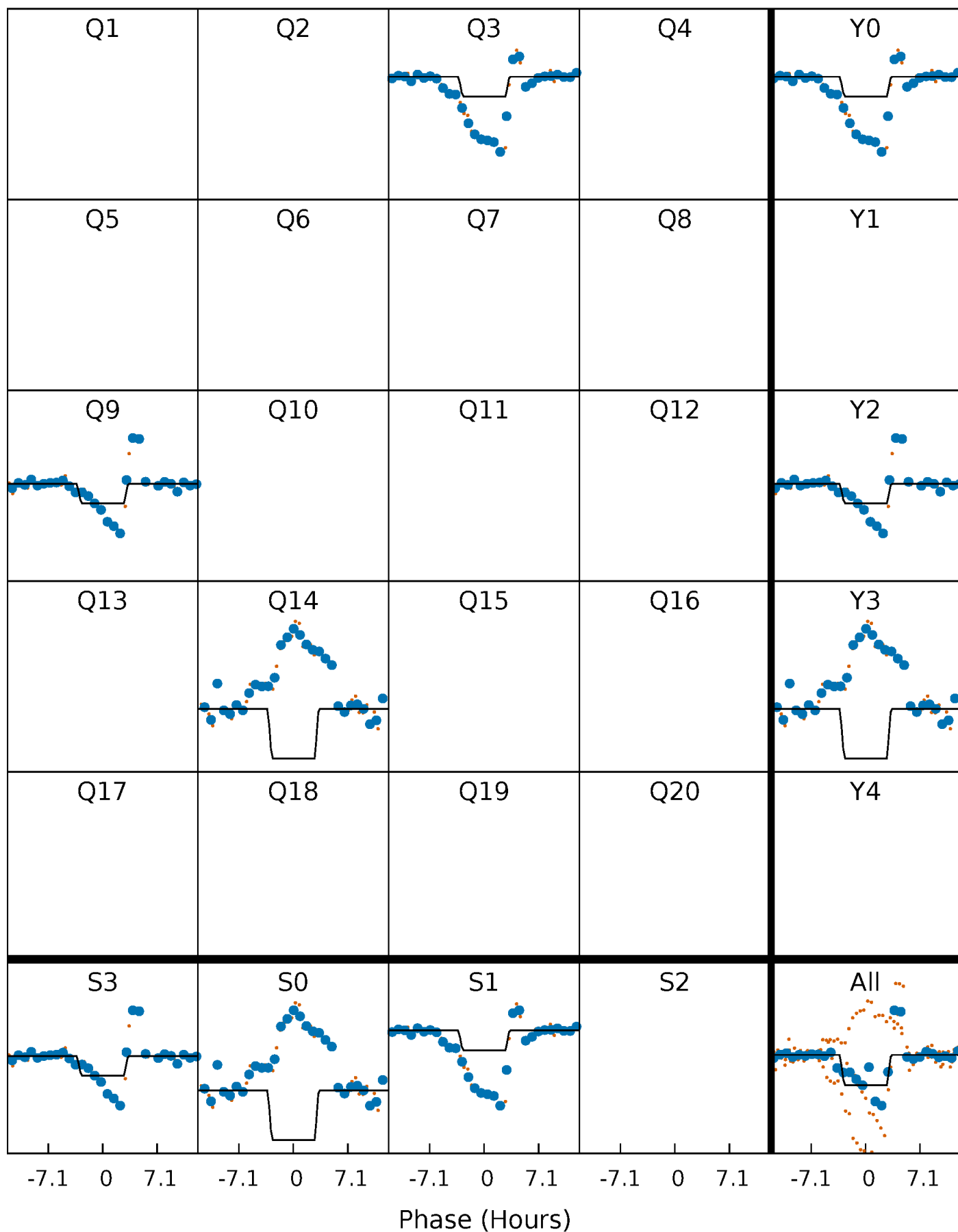
DV Quarter-Phased Transit Curves

TCE 011957046-02 $P=484.240119$ Days $T_0=342.344114$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

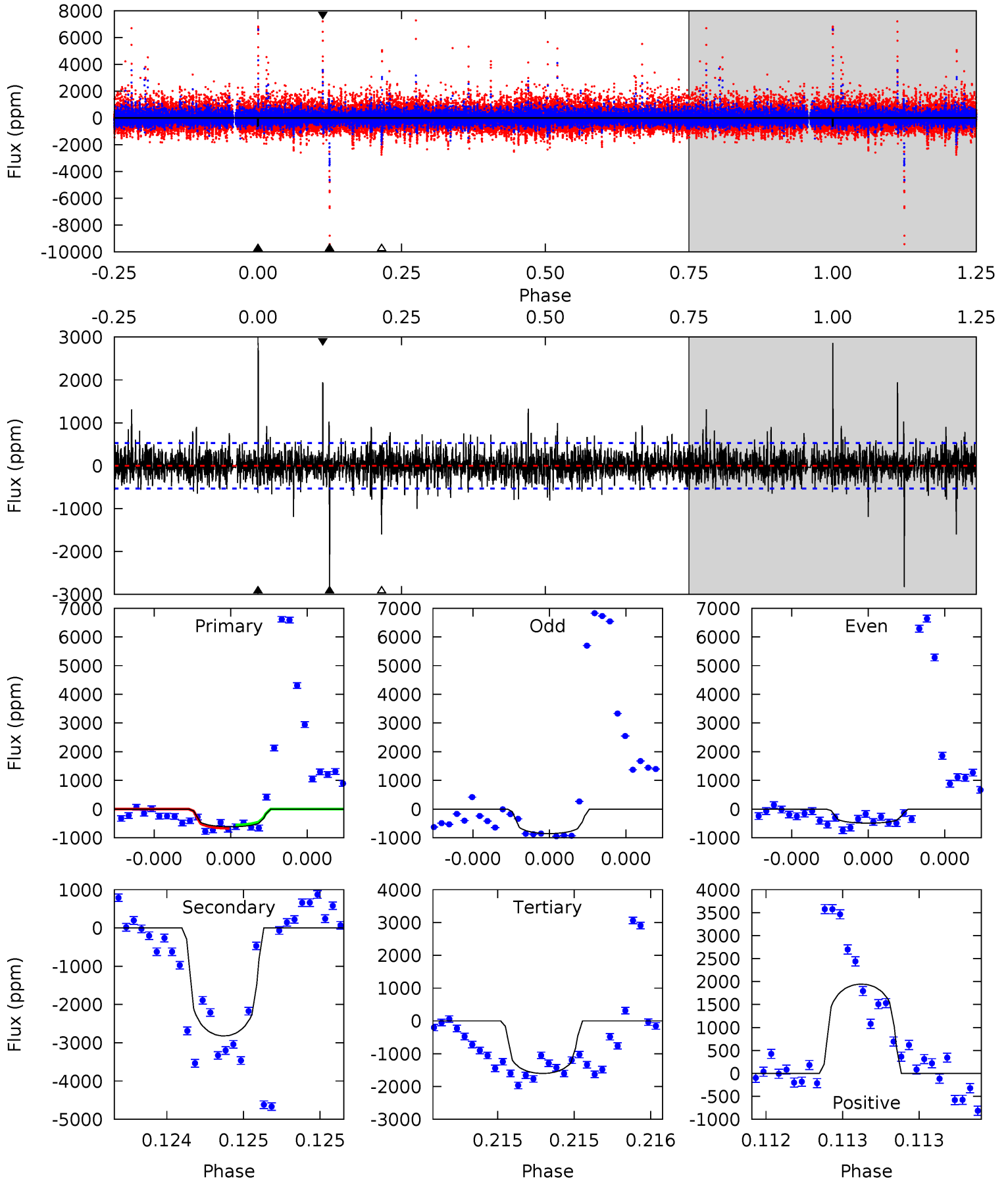
TCE 011957046-02 $P=484.227694$ Days $T_0=342.330749$ (BKJD)



DV Model-Shift Uniqueness Test

011957046-02, P = 484.240119 Days, E = 342.344114 Days

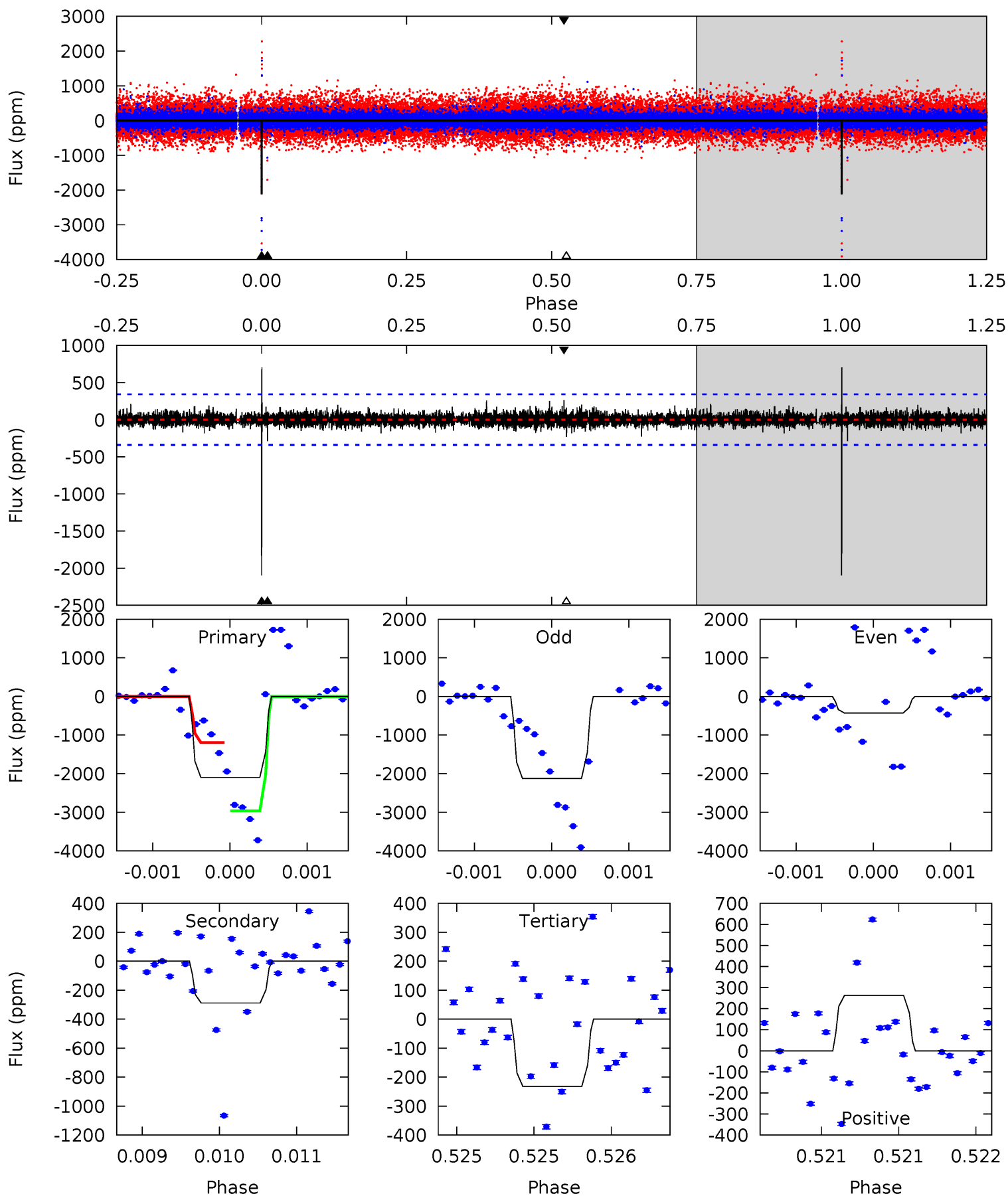
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.50	29.7	16.9	20.5	5.59	3.50	2.43	-10.4	-14.0	12.8	9.25	0.88	1.03	0.50	0.59



Alt Model-Shift Uniqueness Test

011957046-02, P = 484.227694 Days, E = 342.330749 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.1	4.69	3.78	4.29	5.56	3.45	0.70	30.3	29.8	0.91	0.40	19.6	0.74	0.25	0



Stellar Parameters For KIC 011957046

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5855^{+158}_{-158}	$4.448^{+0.098}_{-0.182}$	$-0.320^{+0.300}_{-0.300}$	$0.931^{+0.255}_{-0.127}$	$0.886^{+0.119}_{-0.079}$	$1.546^{+0.665}_{-0.746}$
	+3%/-3%	+2%/-4%	+94%/-94%	+27%/-14%	+13%/-9%	+43%/-48%
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 011957046-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2822 ± 95	$13.03^{+12.99}_{-8.99}$	328^{+21}_{-17}	4156^{+2746}_{-855}	$12487^{+117301}_{-9397}$
Alt.	-288 ± 61	$13.61^{+14.26}_{-9.46}$	326^{+20}_{-17}	2831^{+1209}_{-472}	1125^{+11128}_{-868}

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

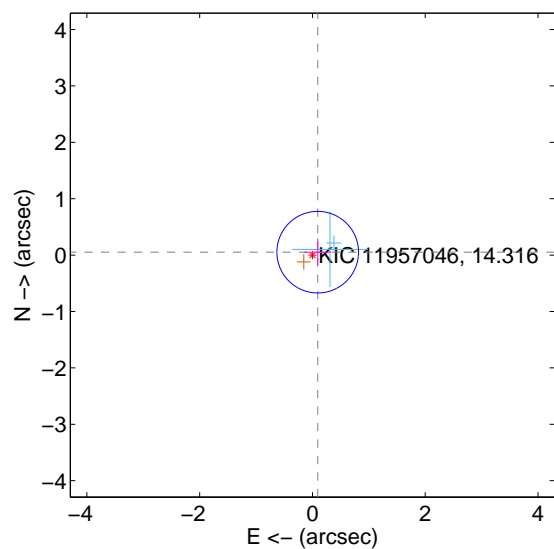
Supplemental centroid analysis for 011957046-02. Kepler magnitude: 14.32. Transit SNR 5.53

There are 2 quarters with good PRF difference image offsets

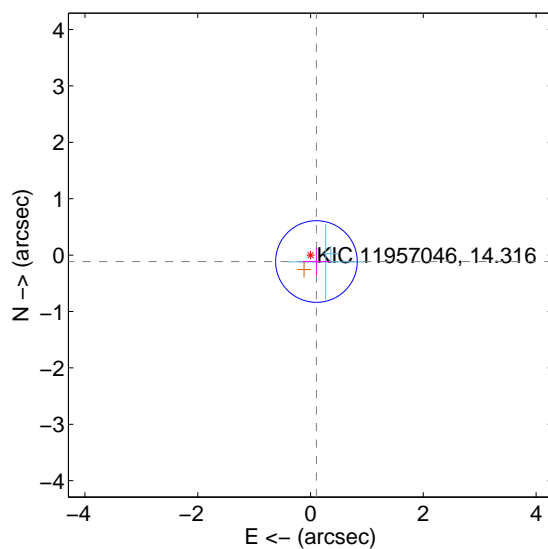
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.107 ± 0.241	0.44	-0.093 ± 0.241	0.052 ± 0.241
PRF-fit source offset from KIC position	0.155 ± 0.241	0.64	-0.105 ± 0.241	-0.114 ± 0.241
photometric centroid source offset	0.51 ± 1.02	0.49	0.13 ± 0.88	0.49 ± 1.03

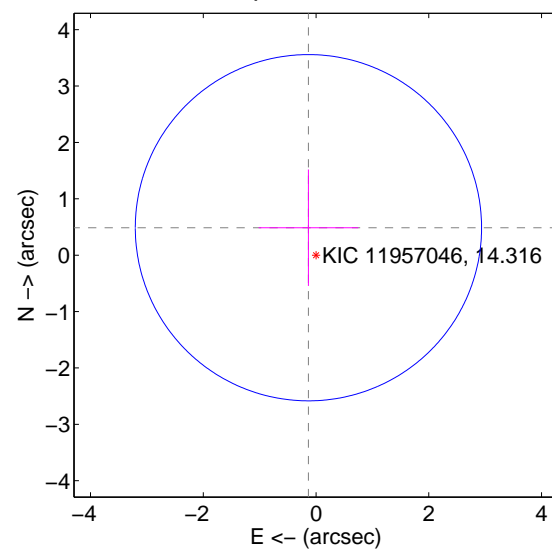
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

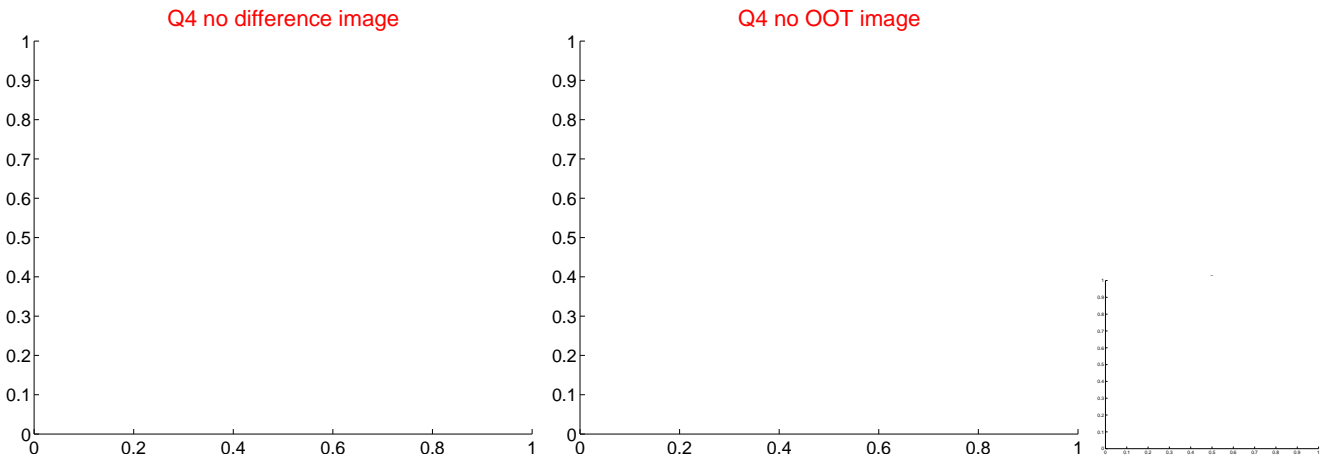
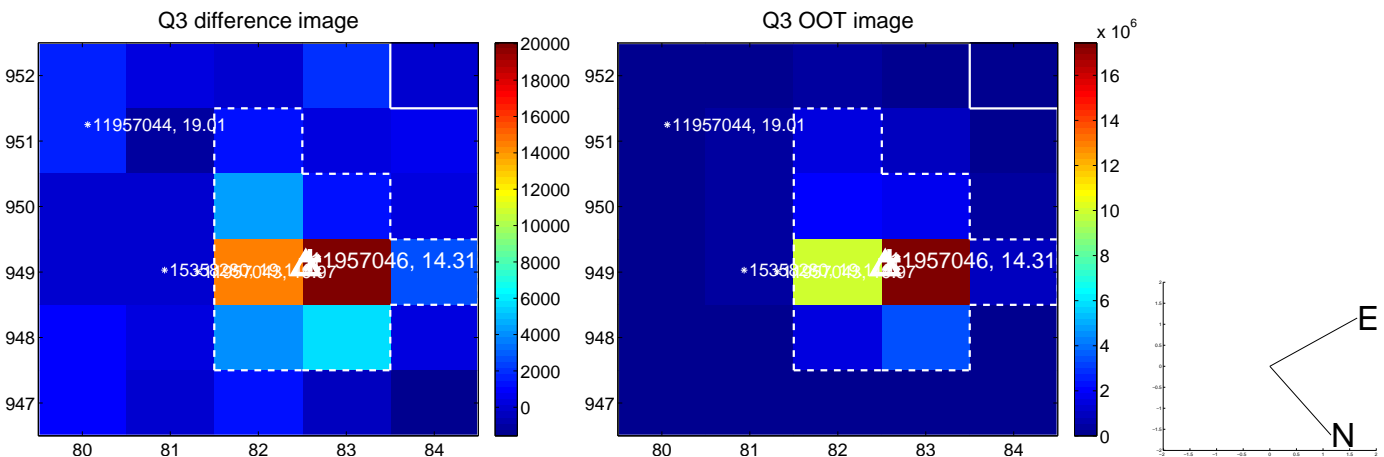
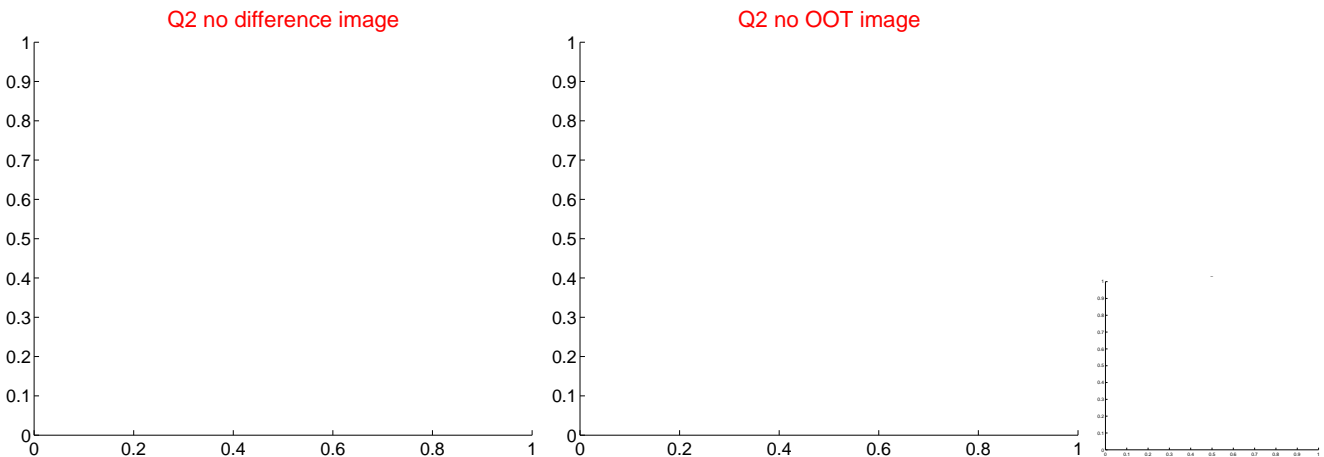
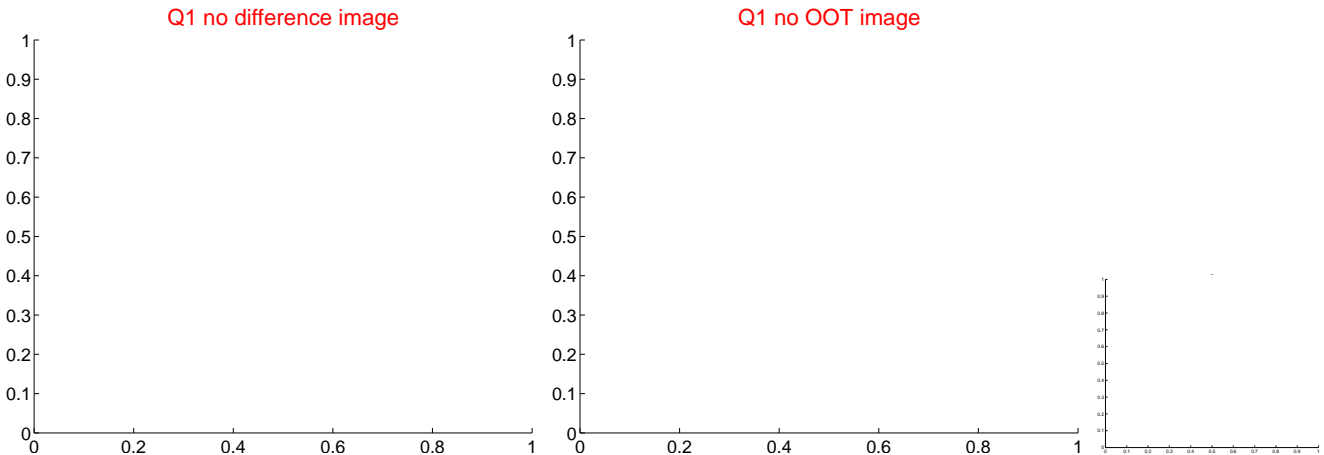


offset from photometric centroids



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.

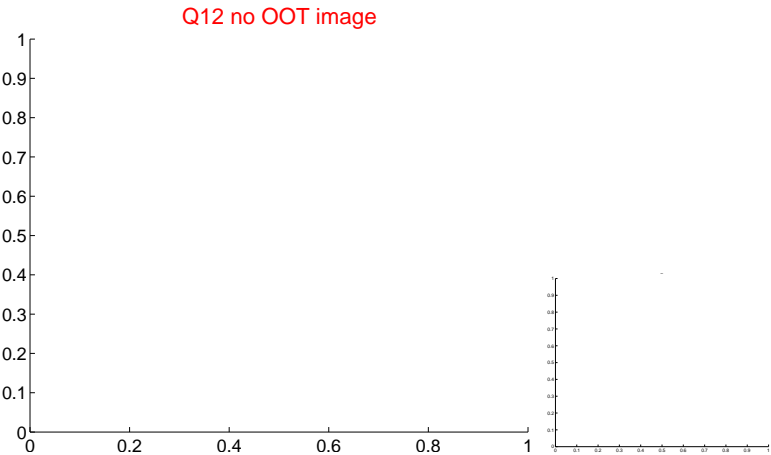
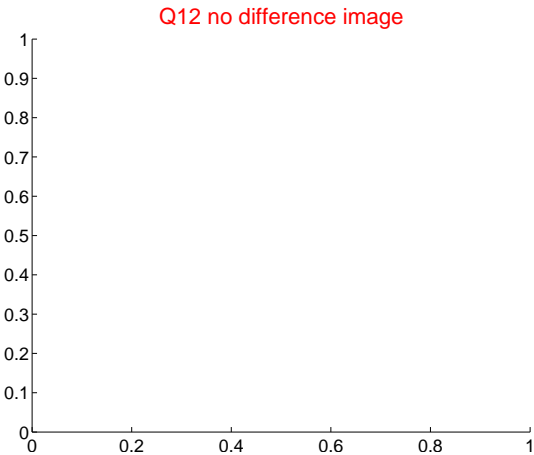
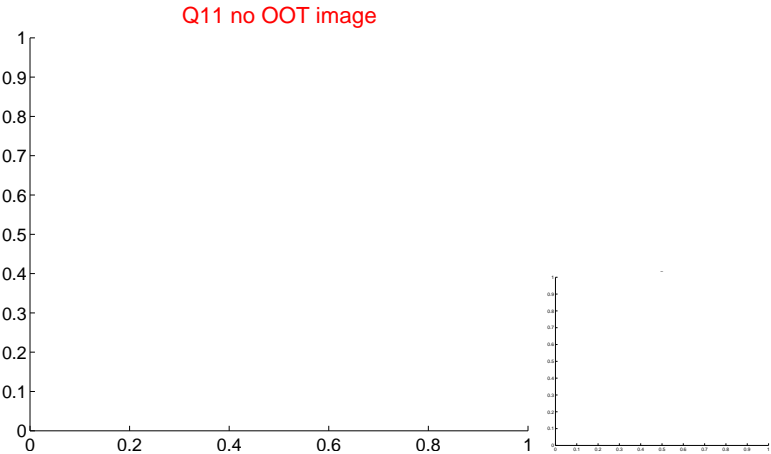
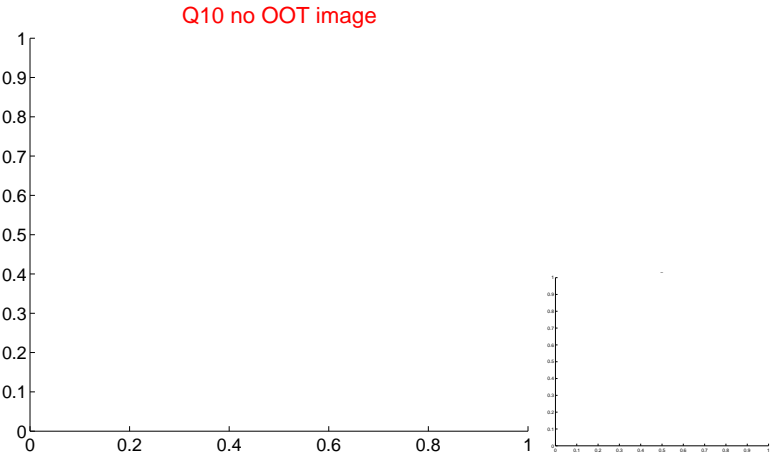
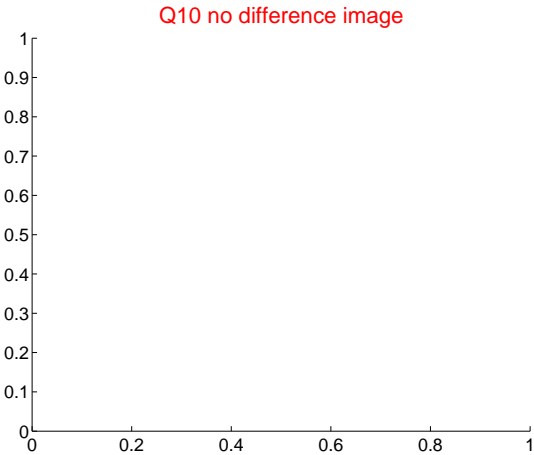
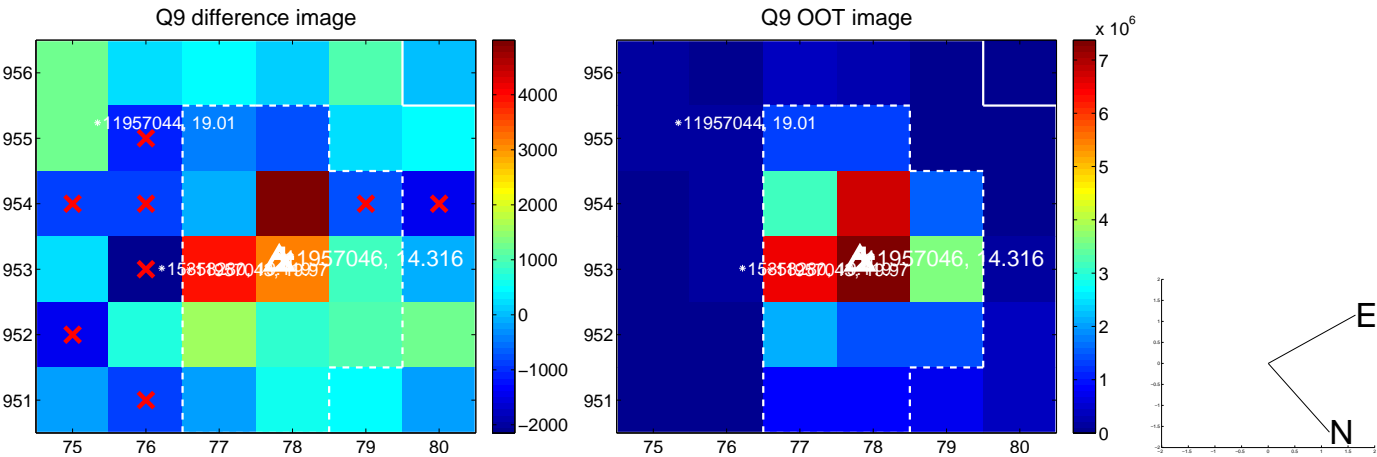
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



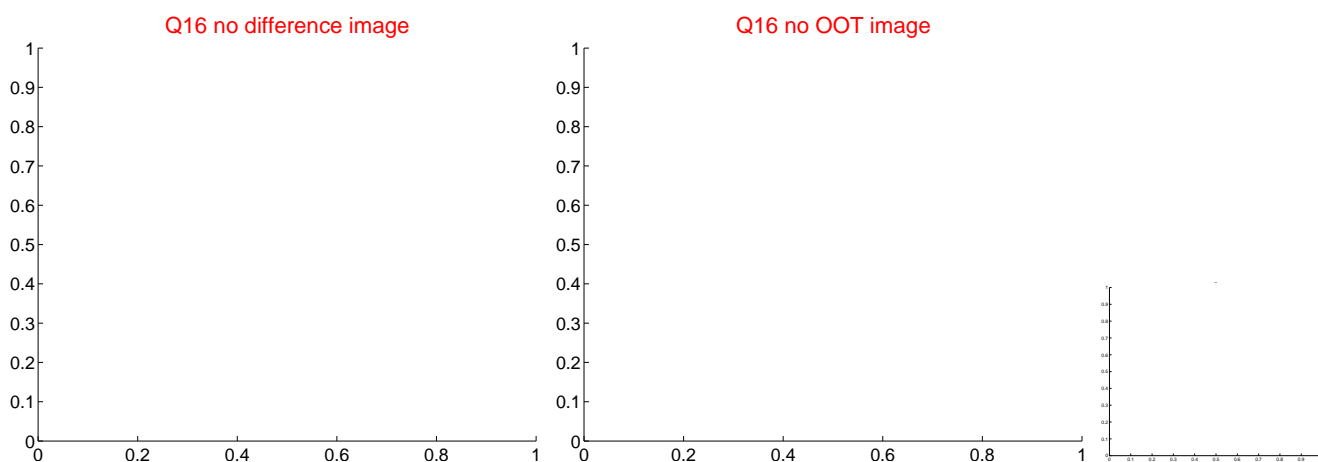
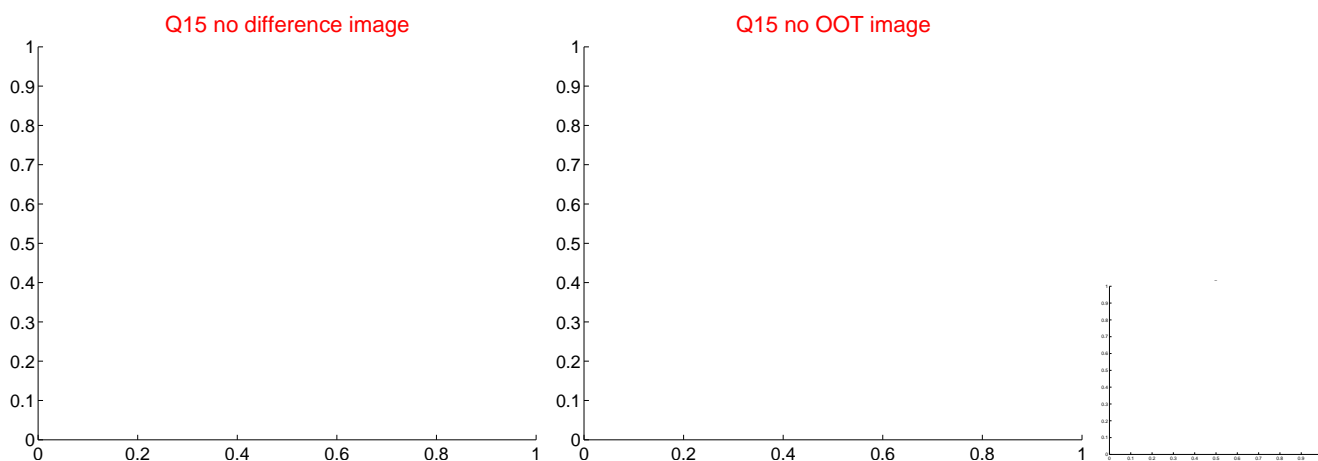
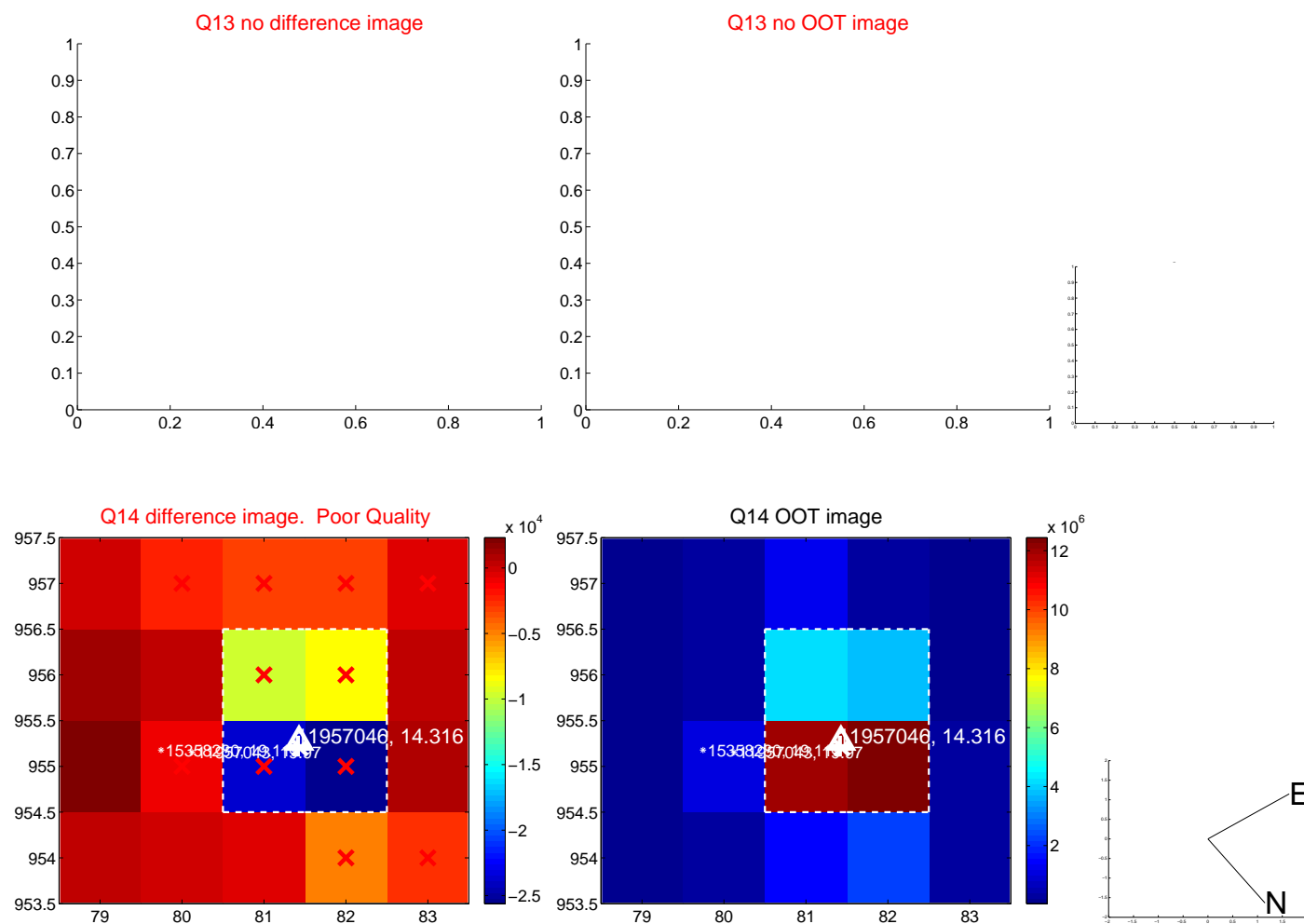
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



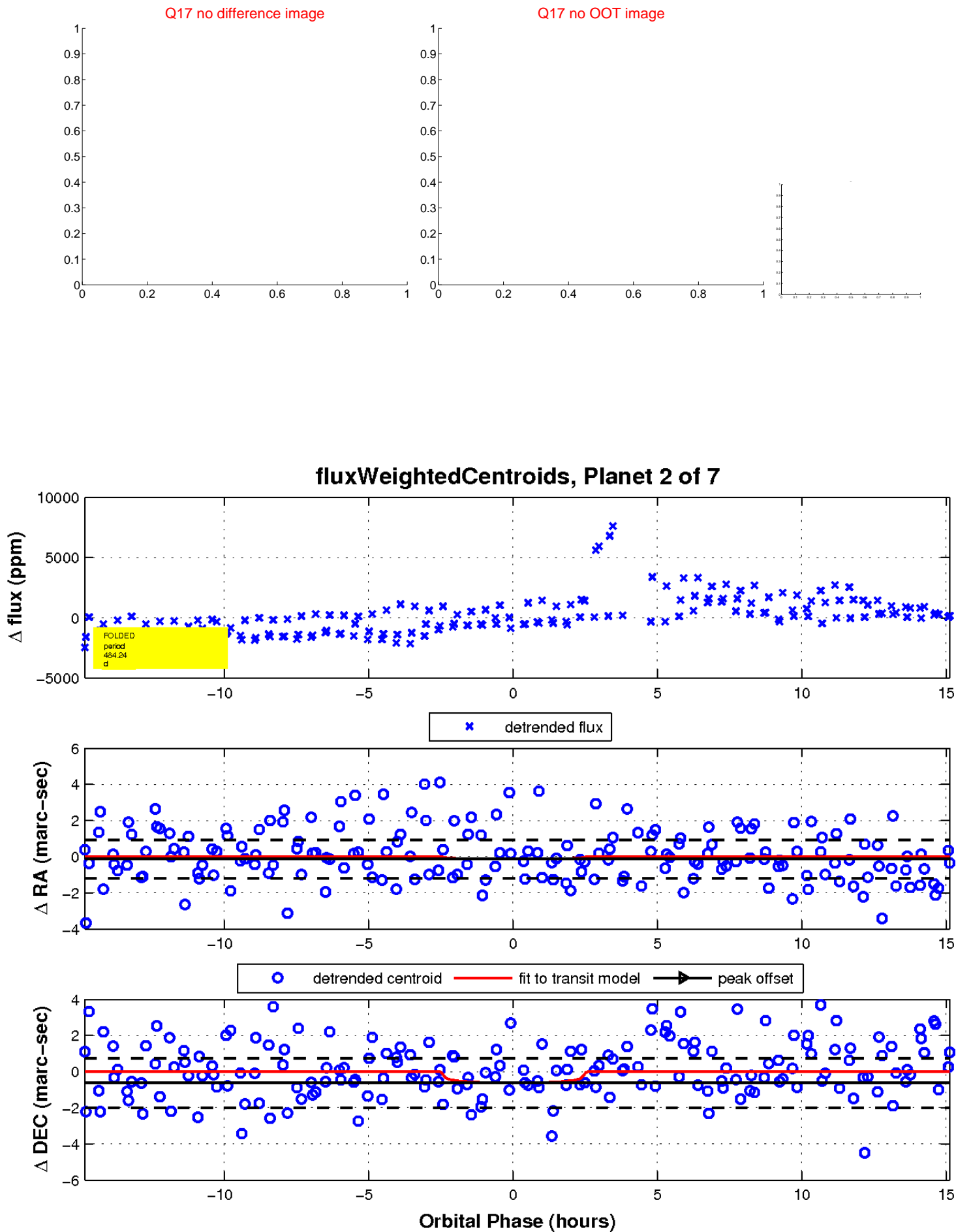
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

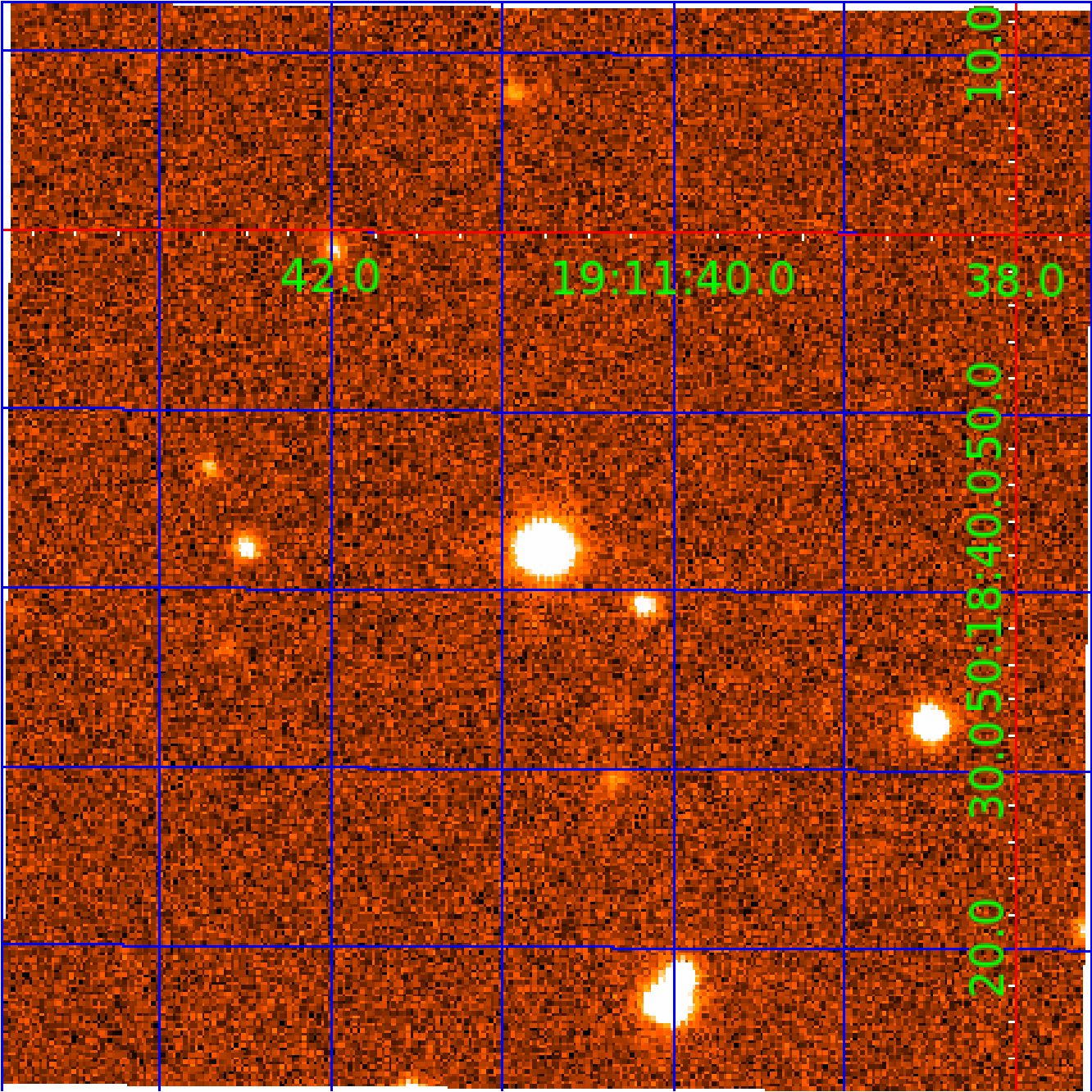


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011957046

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})
011957046-01	OBS	No	530.187690	301.455493	1765.7	3.490	19.5	9.7	0.93	5855	7.45	0.60
011957046-02	OBS	No	484.240119	342.344114	1018.2	5.051	19.7	5.5	0.93	5855	2.98	0.68
011957046-03	OBS	No	460.735679	377.538353	1969.7	9.301	18.4	9.0	0.93	5855	4.14	0.72
011957046-04	OBS	No	383.933176	407.255607	544.1	1.365	18.6	3.3	0.93	5855	2.55	0.93
011957046-05	OBS	No	340.533620	450.854512	1110.8	5.342	18.4	6.7	0.93	5855	3.13	1.08
011957046-06	OBS	No	527.354515	452.120802	1638.1	9.059	16.4	8.4	0.93	5855	3.89	0.61
011957046-07	OBS	No	308.471833	388.183752	757.3	12.500	15.5	-1.0	0.93	5855	2.55	1.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011957046-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
011957046-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-03	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
011957046-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—HALO_GHOST
011957046-07	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

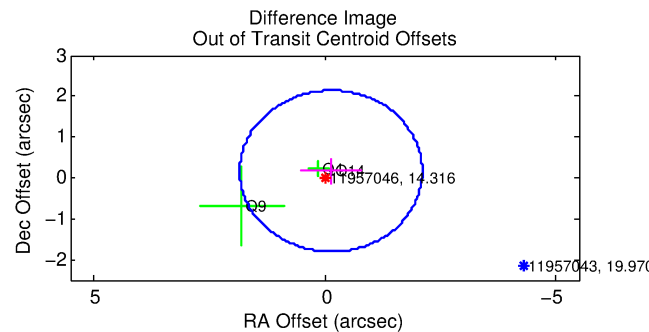
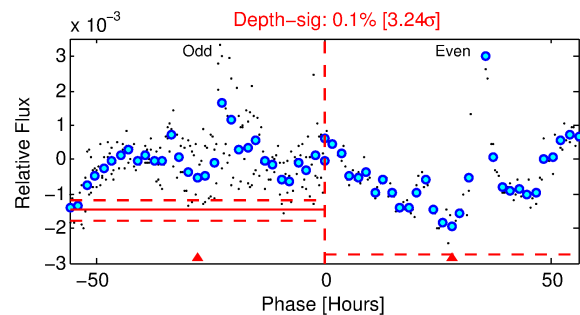
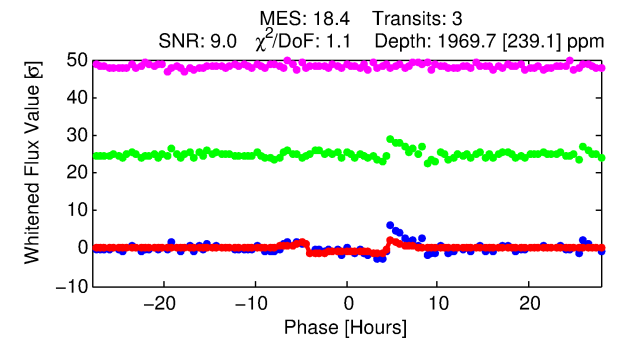
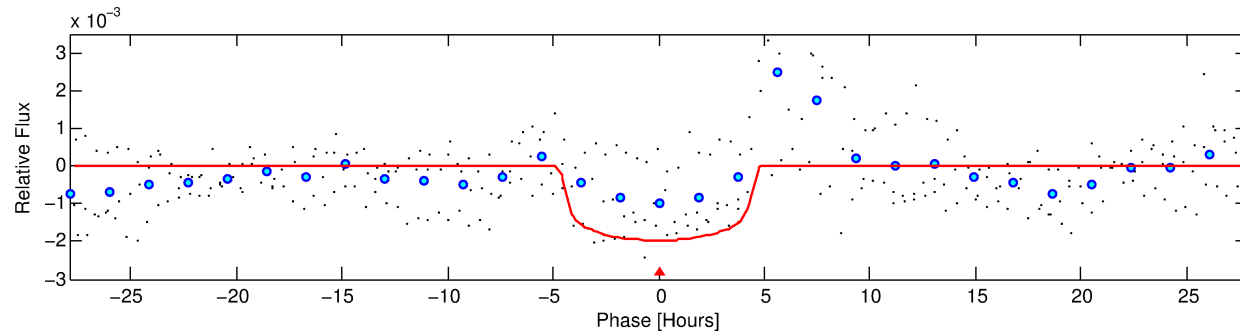
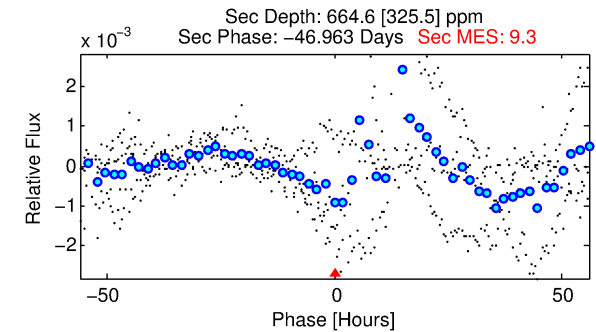
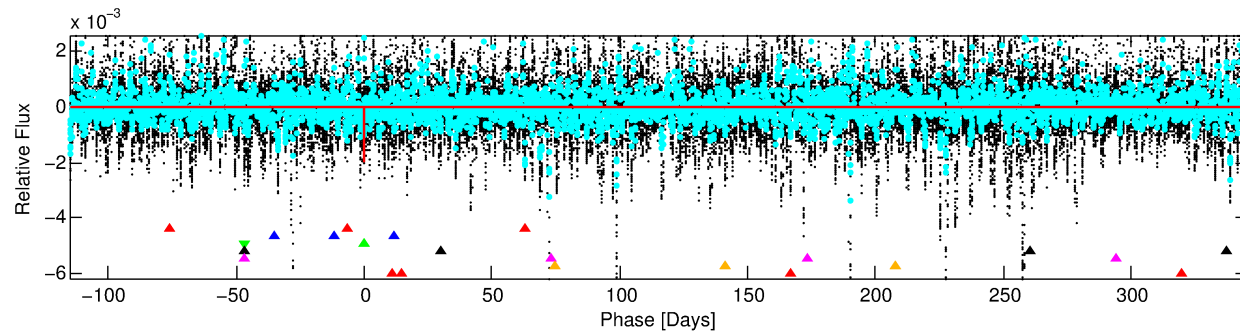
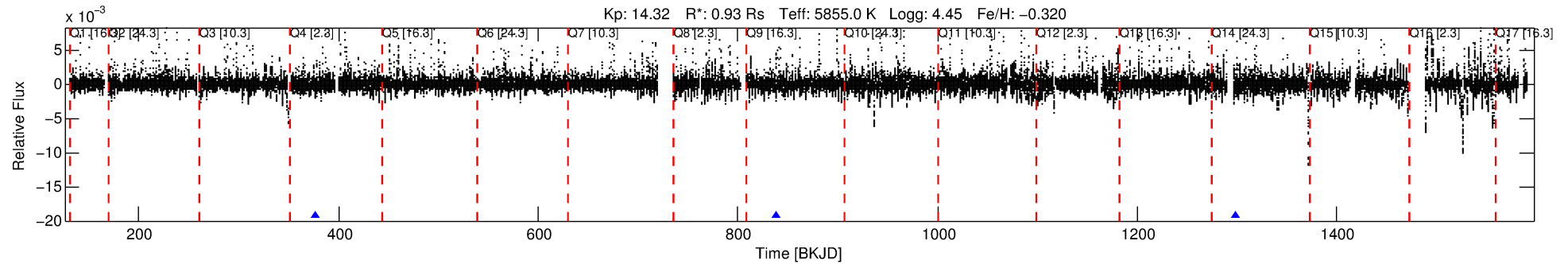
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011957046-03

No Significant Match Found

DV One-Page Summary

KIC: 11957046 Candidate: 3 of 7 Period: 460.736 d



DV Fit Results:

Period = 460.73568 [0.00424] d
Epoch = 377.5384 [0.0063] BKJD
Rp/R* = 0.0408 [0.0103]
a/R* = 382.23 [410.23]
b = 0.25 [4.02]
Seff = 0.73 [0.25]
Teq = 235 [21] K
Rp = 4.14 [1.54] Re
a = 1.1219 [0.2579] AU
Ag = 26845.42 [20908.65] [1.28 σ]
Teffp = 4657 [829] K [5.33 σ]

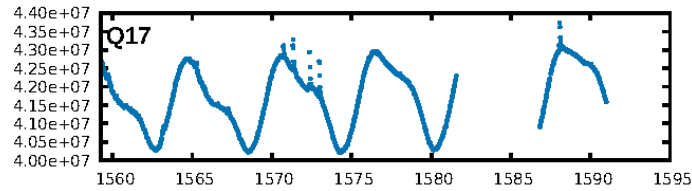
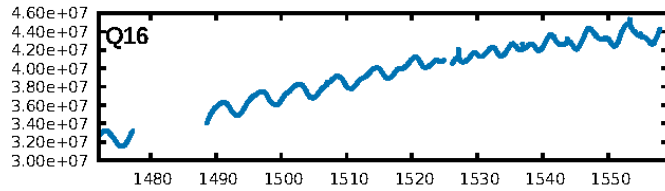
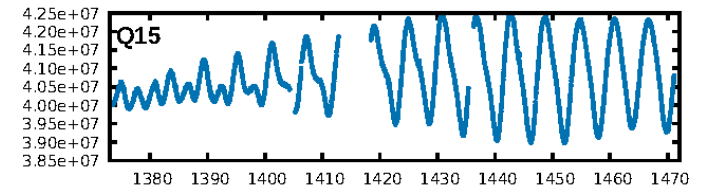
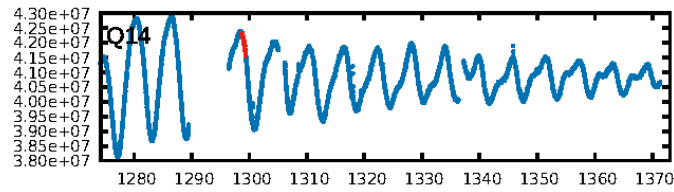
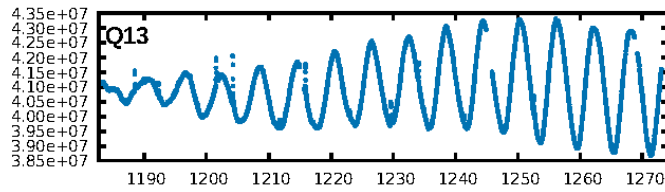
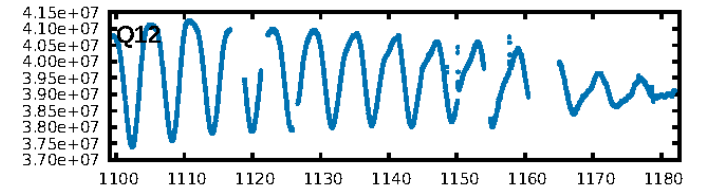
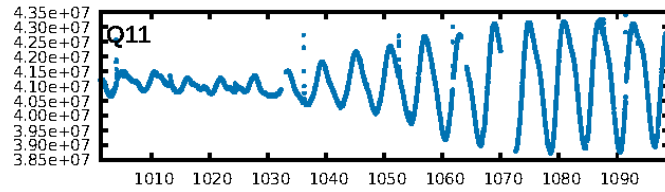
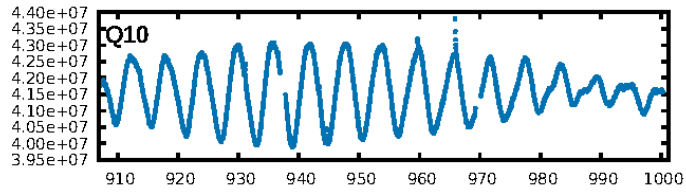
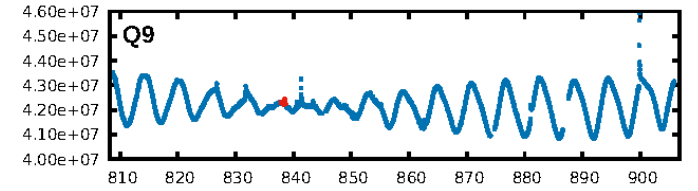
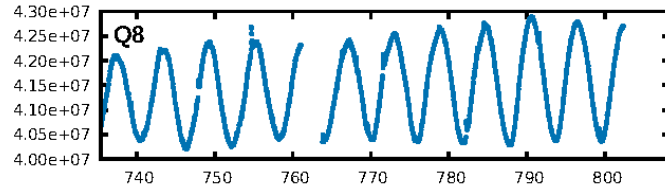
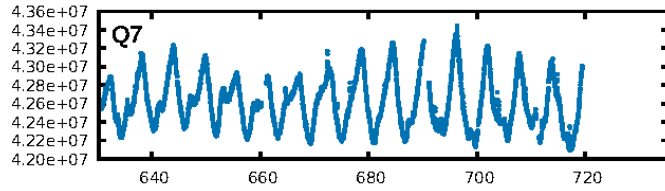
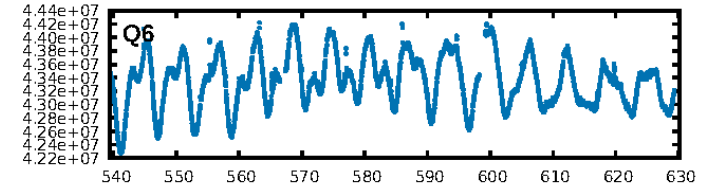
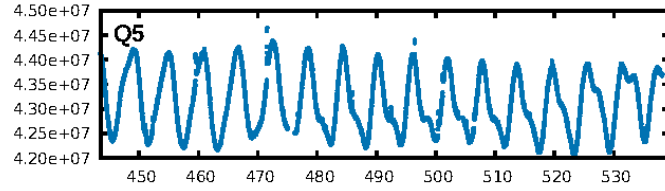
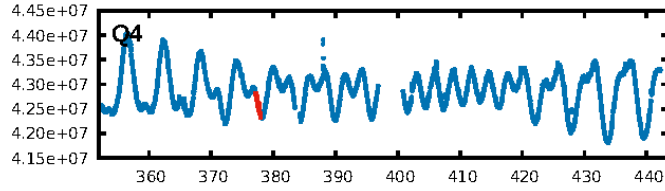
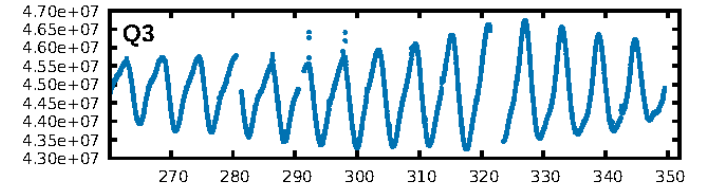
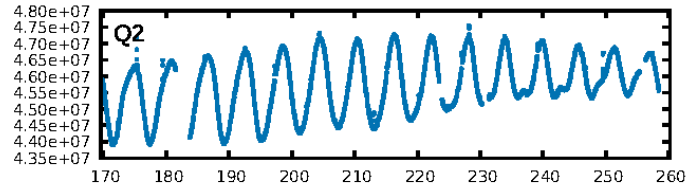
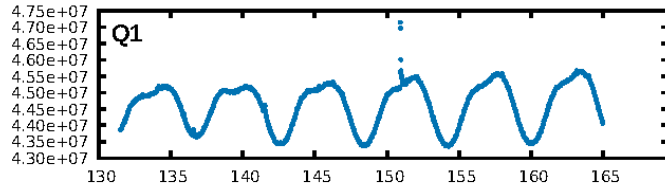
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [196.09 σ]
LongPeriod-sig: 100.0% [53.30 σ]
ModelChiSquare2-sig: 9.3%
ModelChiSquareGof-sig: 97.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.6392
Centroid-sig: 52.9%
Centroid-so: 0.382 arcsec [0.94 σ]
OotOffset-rm: 0.215 arcsec [0.33 σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-rm: 0.175 arcsec [0.39 σ]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

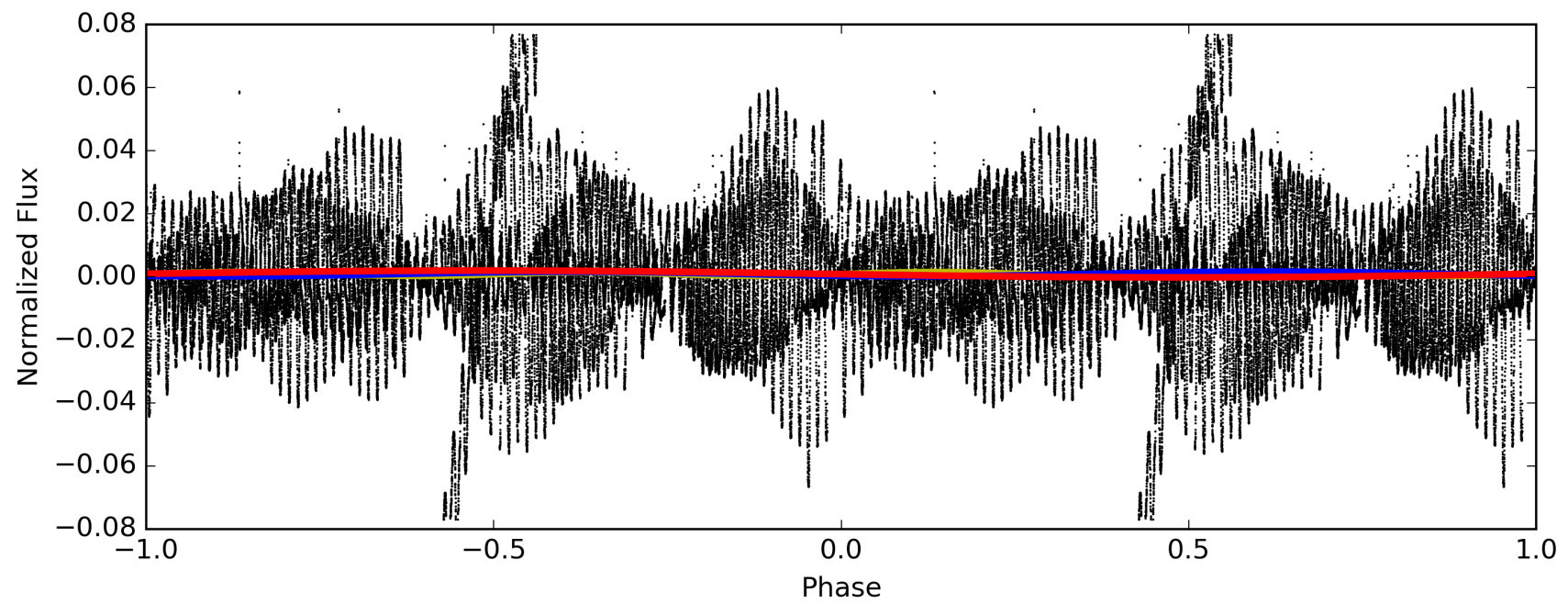
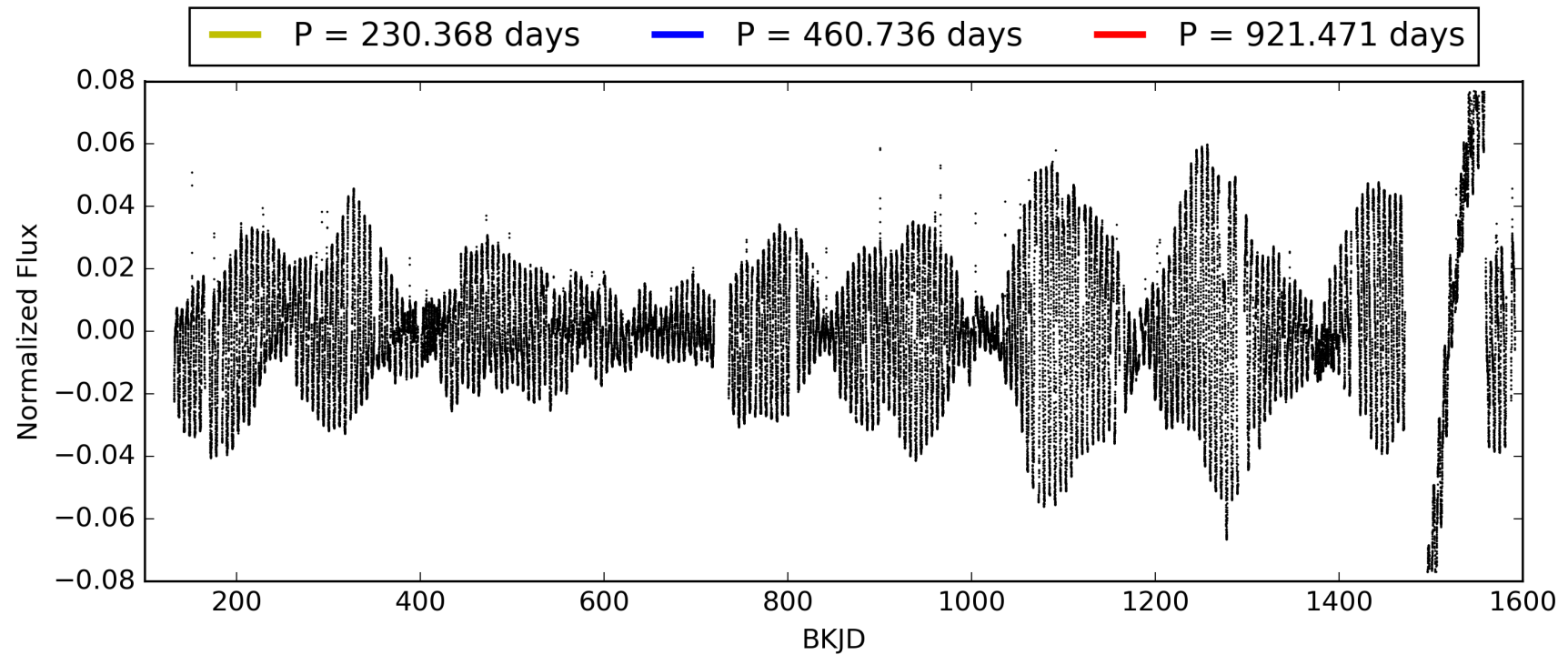
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:19:27 Z

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

TCE 011957046-03, PDC Light Curves

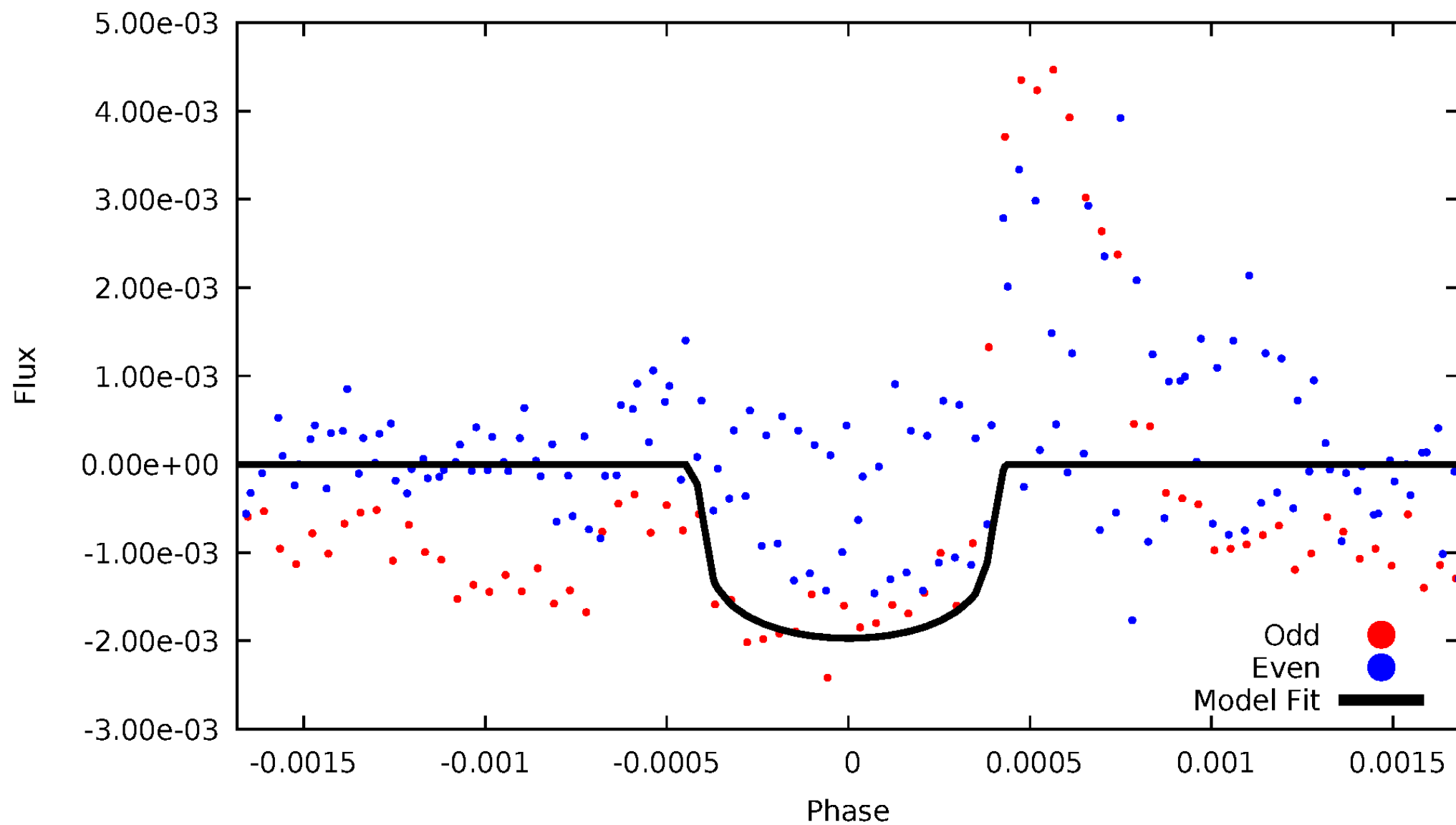


TCE 011957046-03



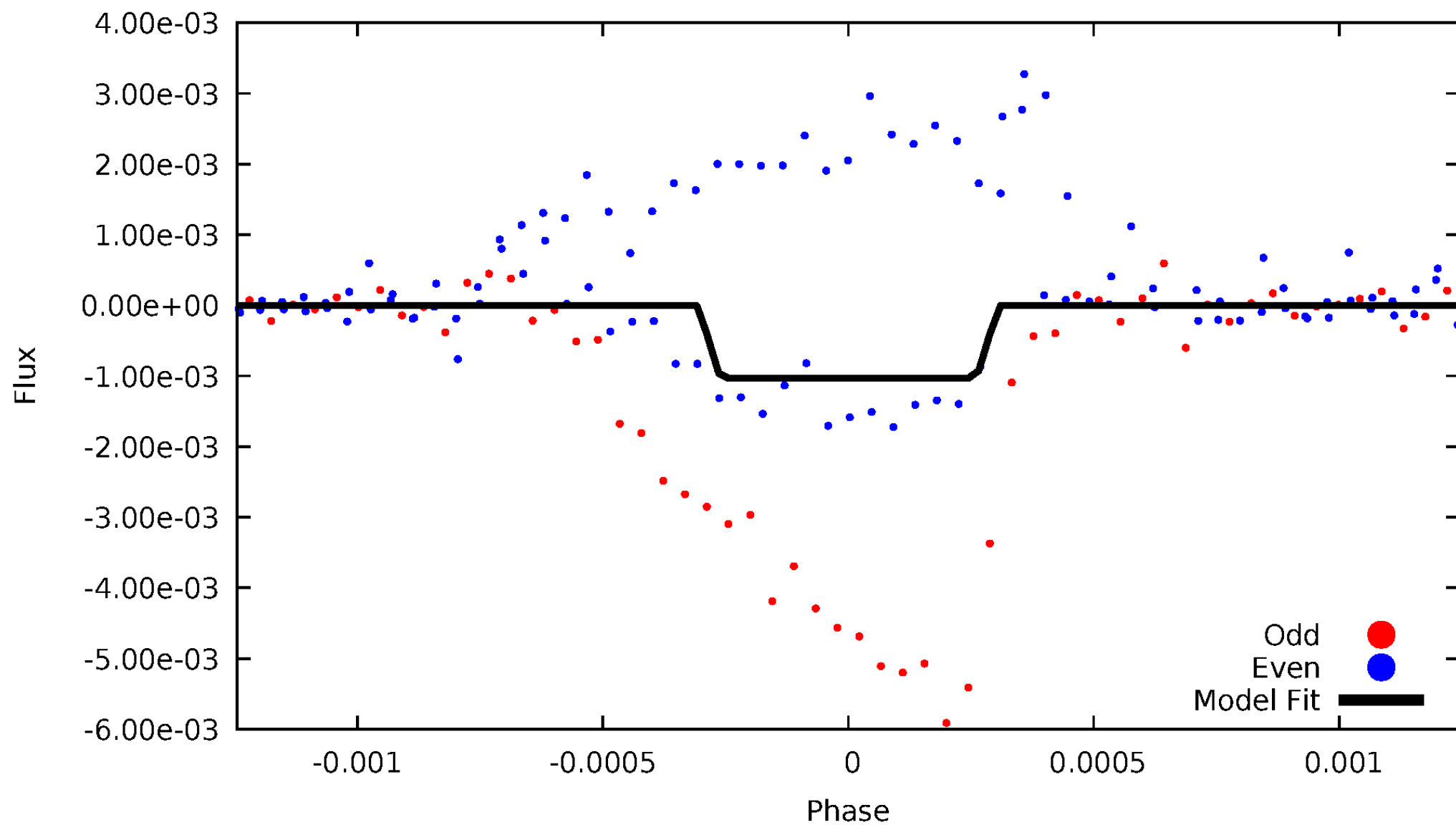
DV Odd/Even

TCE 011957046-03



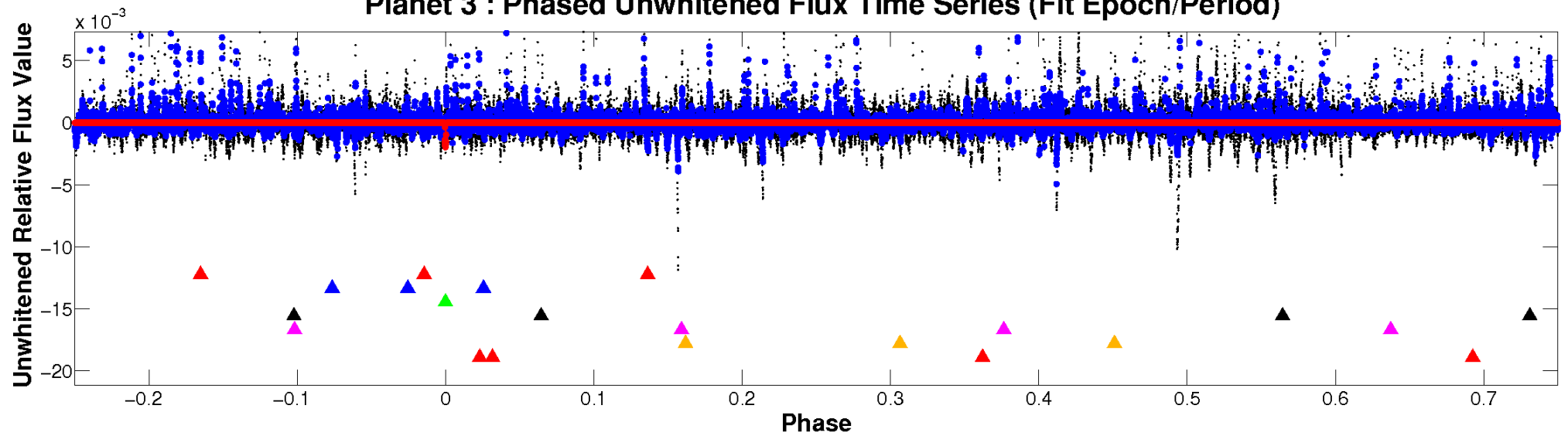
ALT Odd/Even

TCE 011957046-03

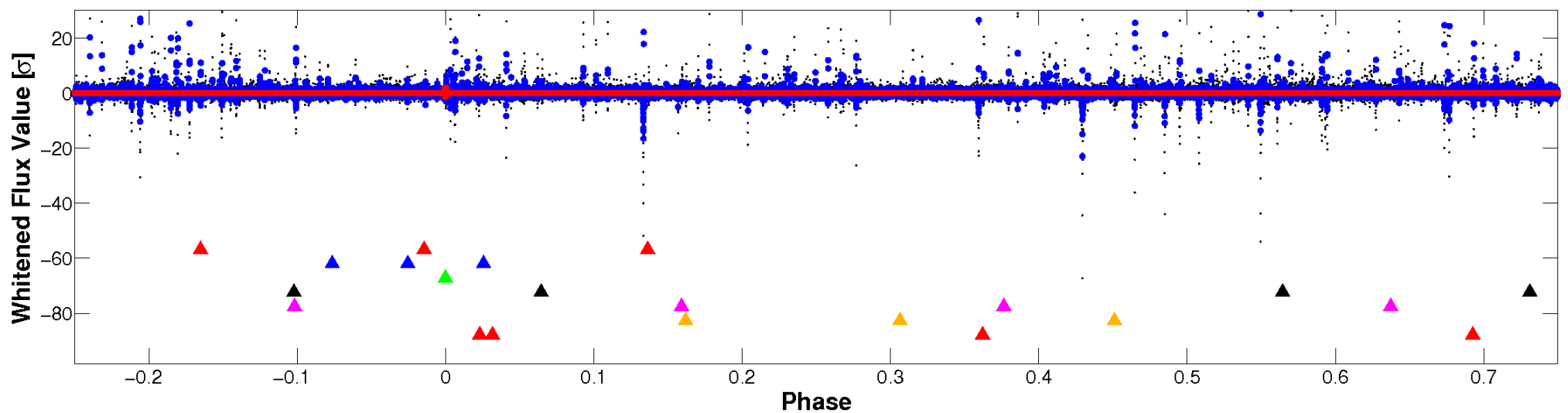


Non-Whitened Vs. Whitened Light Curve

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

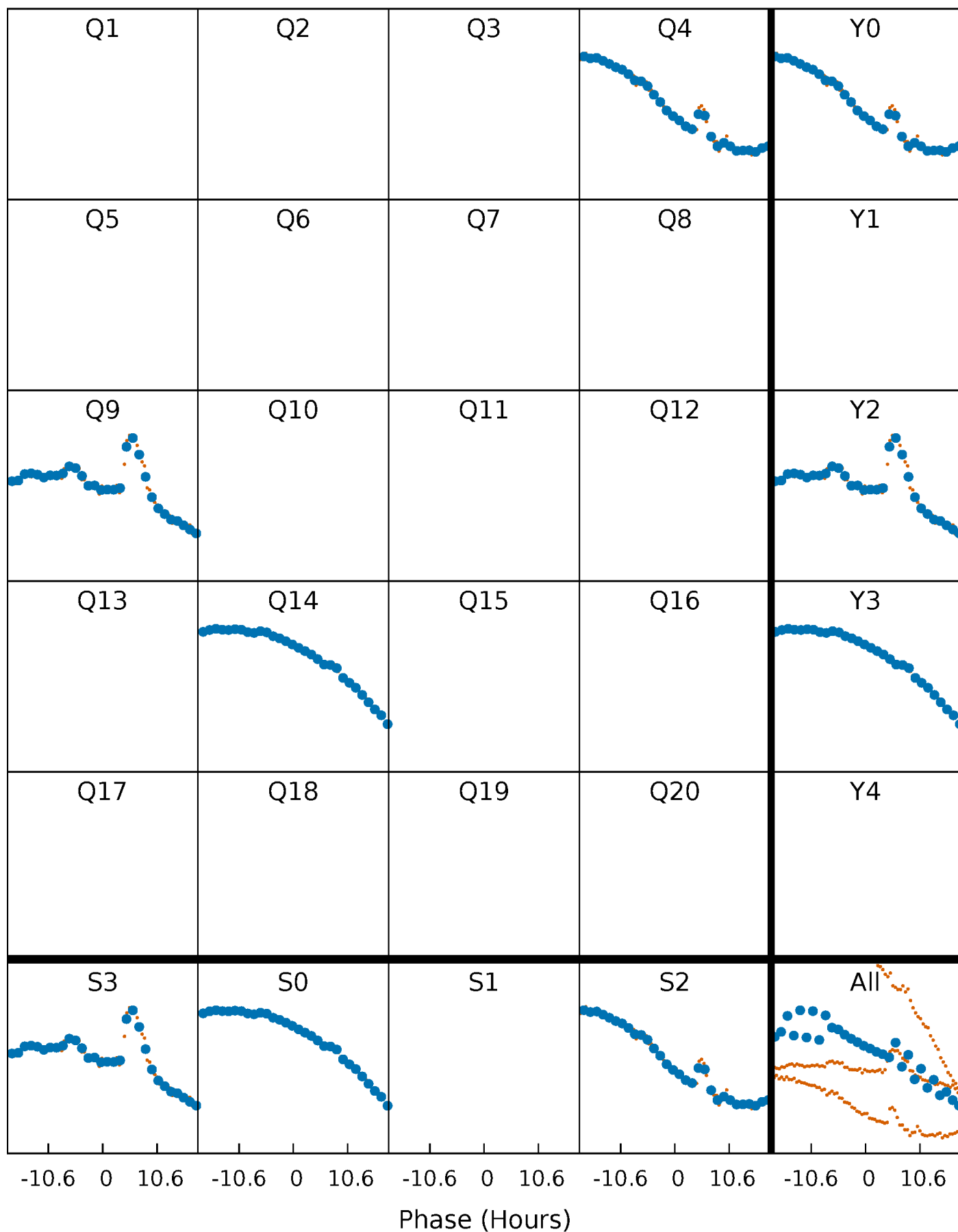


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



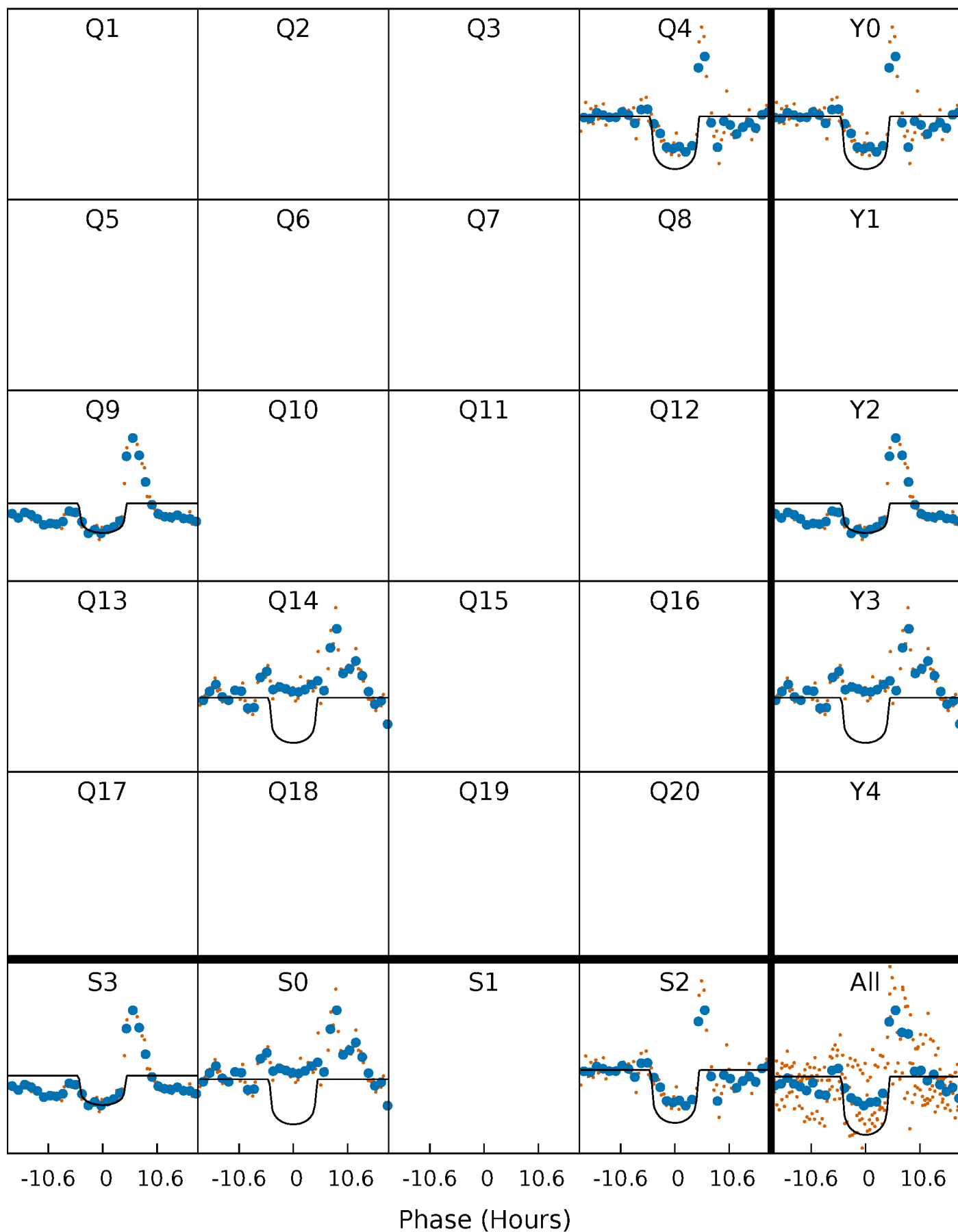
PDC Quarter-Phased Transit Curves

TCE 011957046-03 $P=460.735679$ Days $T_0=377.538353$ (BKJD)



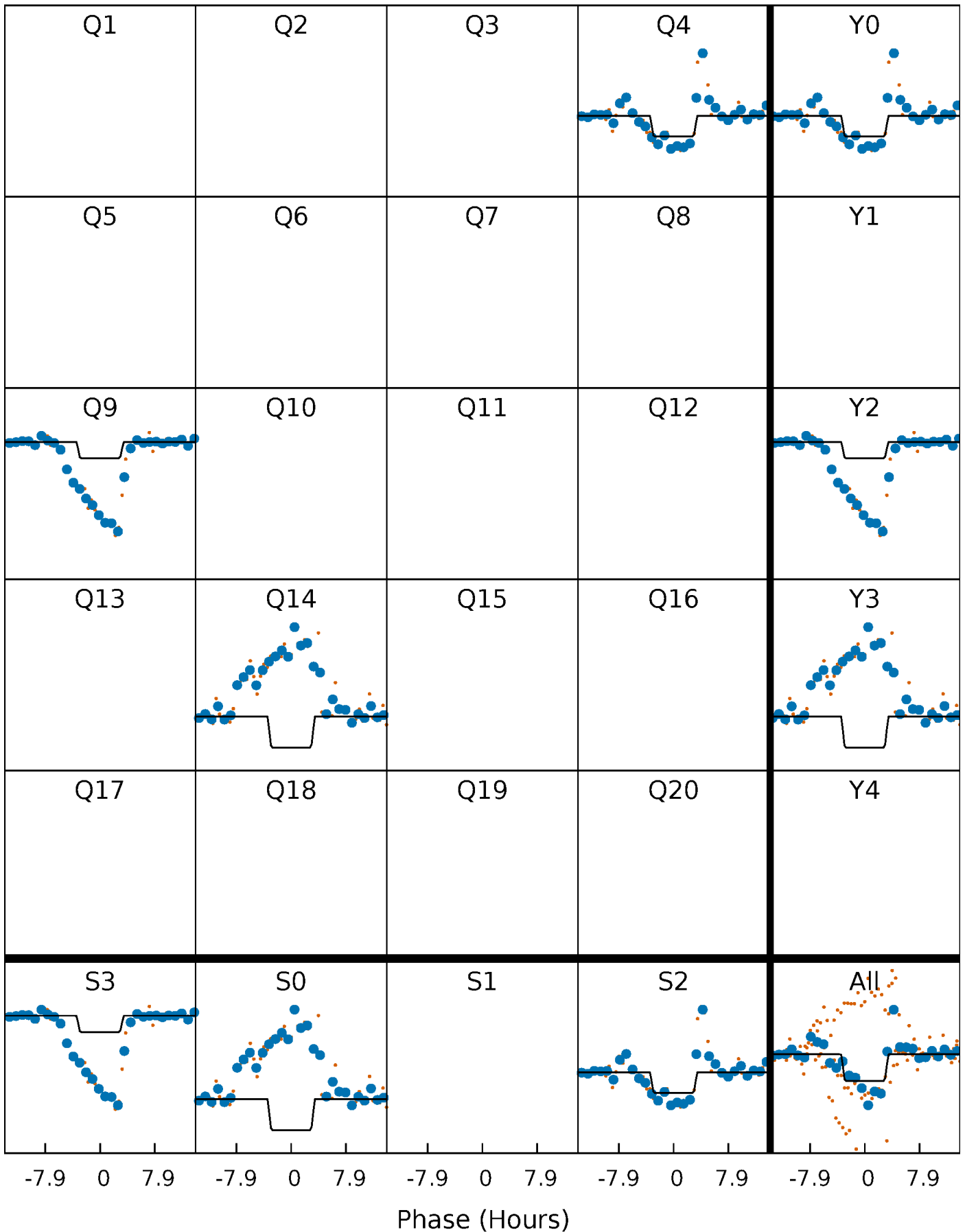
DV Quarter-Phased Transit Curves

TCE 011957046-03 $P=460.735679$ Days $T_0=377.538353$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

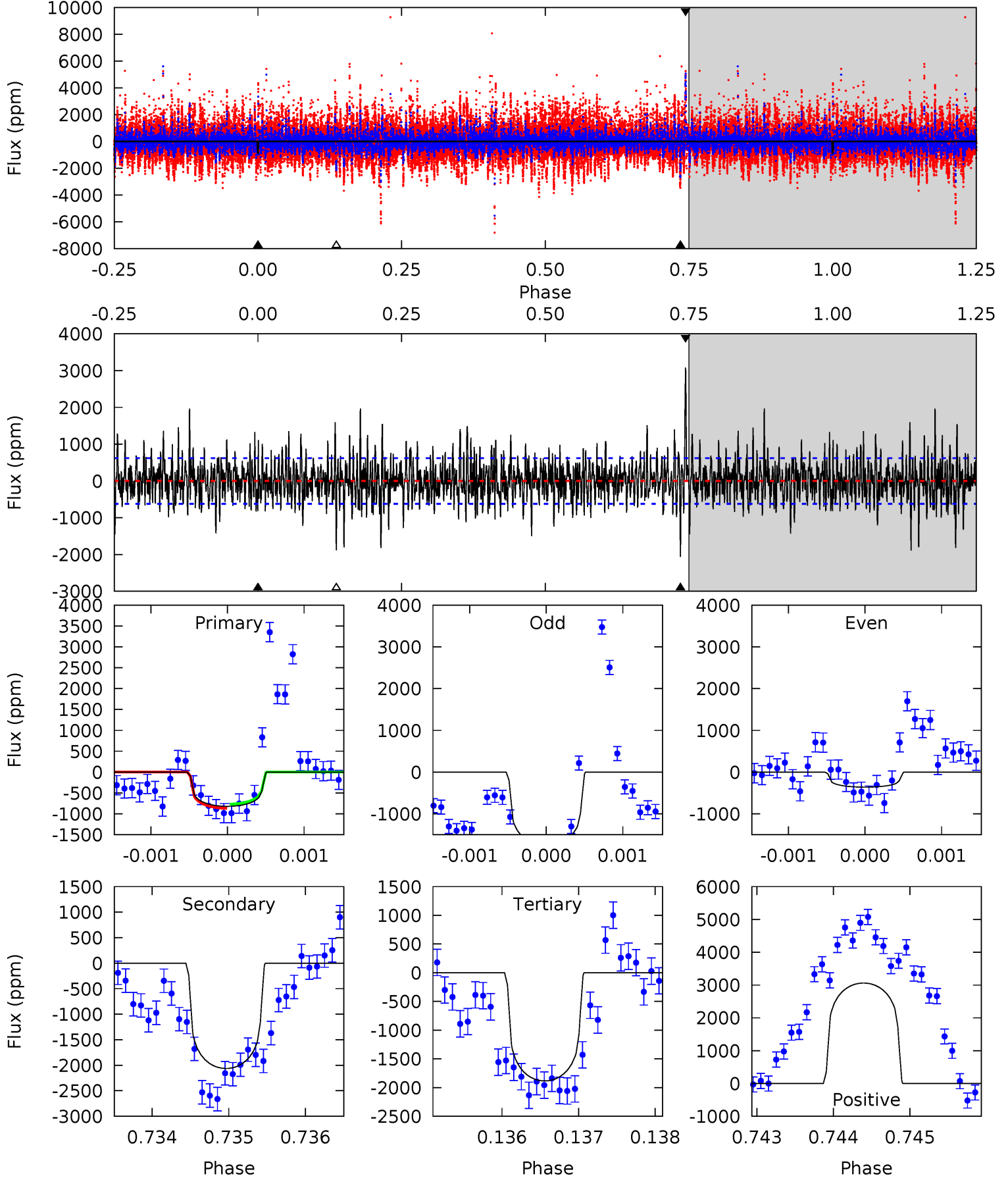
TCE 011957046-03 P=460.729100 Days $T_0=377.590398$ (BKJD)



DV Model-Shift Uniqueness Test

011957046-03, P = 460.735679 Days, E = 377.538353 Days

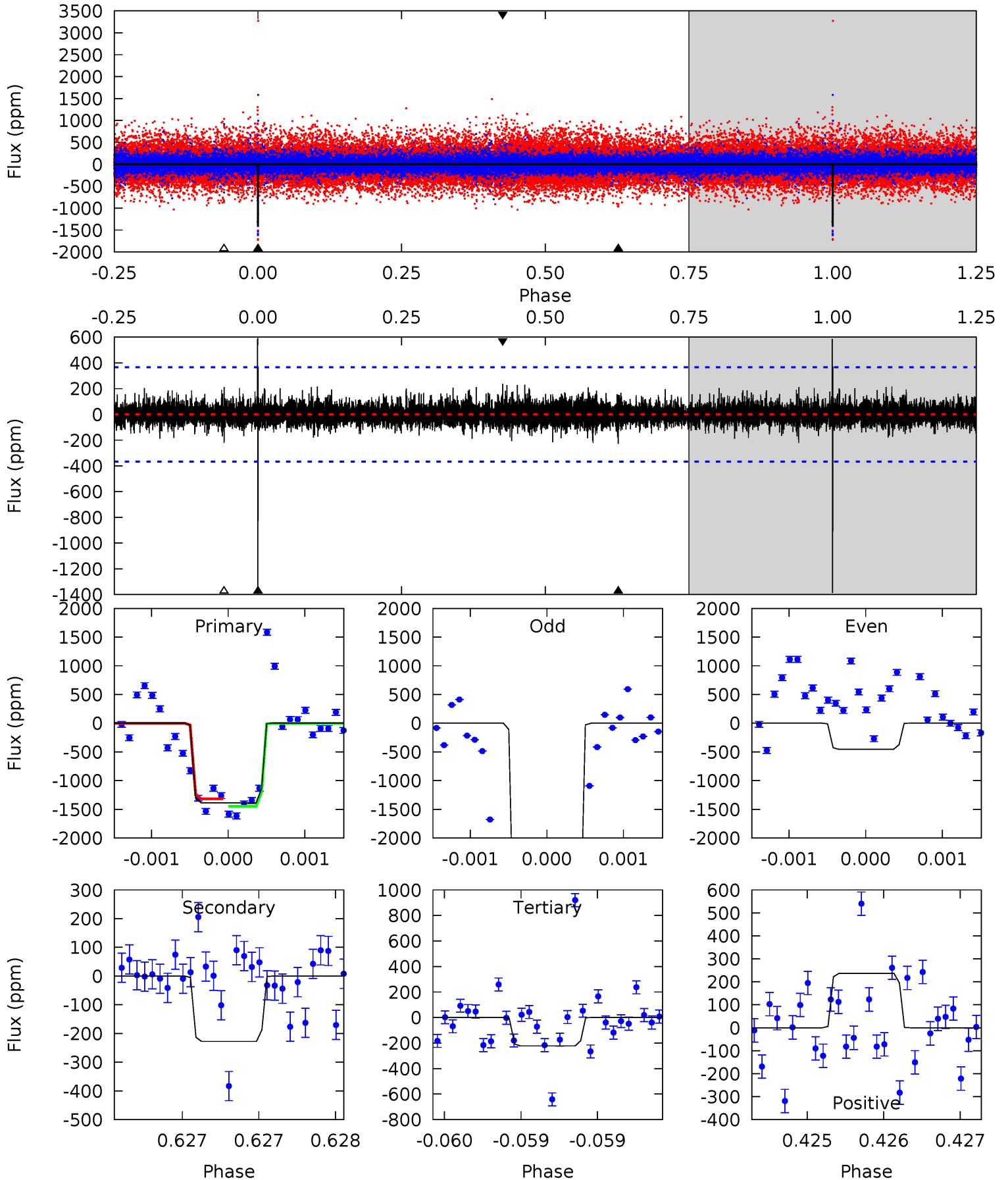
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.23	18.2	16.6	27.0	5.48	3.33	3.96	-9.39	-19.8	1.58	-8.81	3.87	0.73	0.60	0.44



Alt Model-Shift Uniqueness Test

011957046-03, P = 460.729100 Days, E = 377.590398 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.0	3.44	3.35	3.58	5.54	3.42	0.72	17.6	17.4	0.08	-0.14	51.1	0.90	0.30	0



Stellar Parameters For KIC 011957046

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5855^{+158}_{-158}	$4.448^{+0.098}_{-0.182}$	$-0.320^{+0.300}_{-0.300}$	$0.931^{+0.255}_{-0.127}$	$0.886^{+0.119}_{-0.079}$	$1.546^{+0.665}_{-0.746}$
	+3%/-3%	+2%/-4%	+94%/-94%	+27%/-14%	+13%/-9%	+43%/-48%
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 011957046-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2063 ± 113	$4.14^{+1.31}_{-1.02}$	331^{+25}_{-17}	6197^{+1103}_{-615}	82606^{+67133}_{-33779}
Alt.	-227 ± 66	$3.34^{+1.22}_{-1.09}$	332^{+21}_{-17}	4239^{+708}_{-501}	14014^{+17753}_{-7400}

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

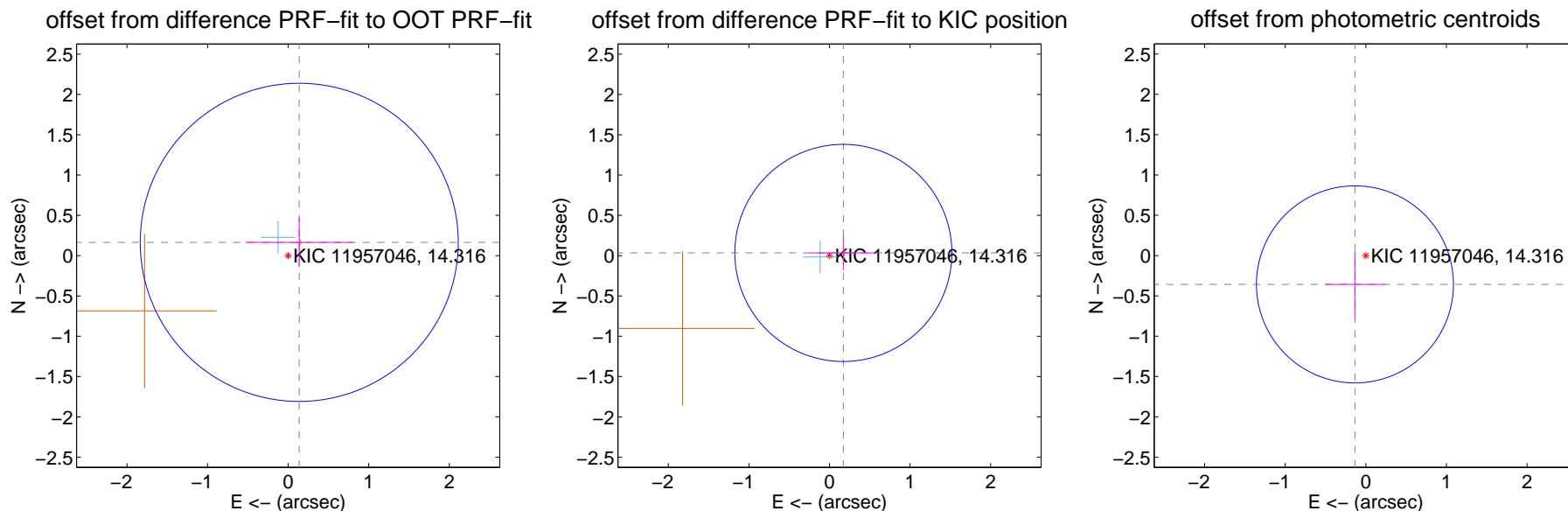
DV Centroid Data

Supplemental centroid analysis for 011957046-03. Kepler magnitude: 14.32. Transit SNR 8.98

There are 1 quarters with good PRF difference image offsets

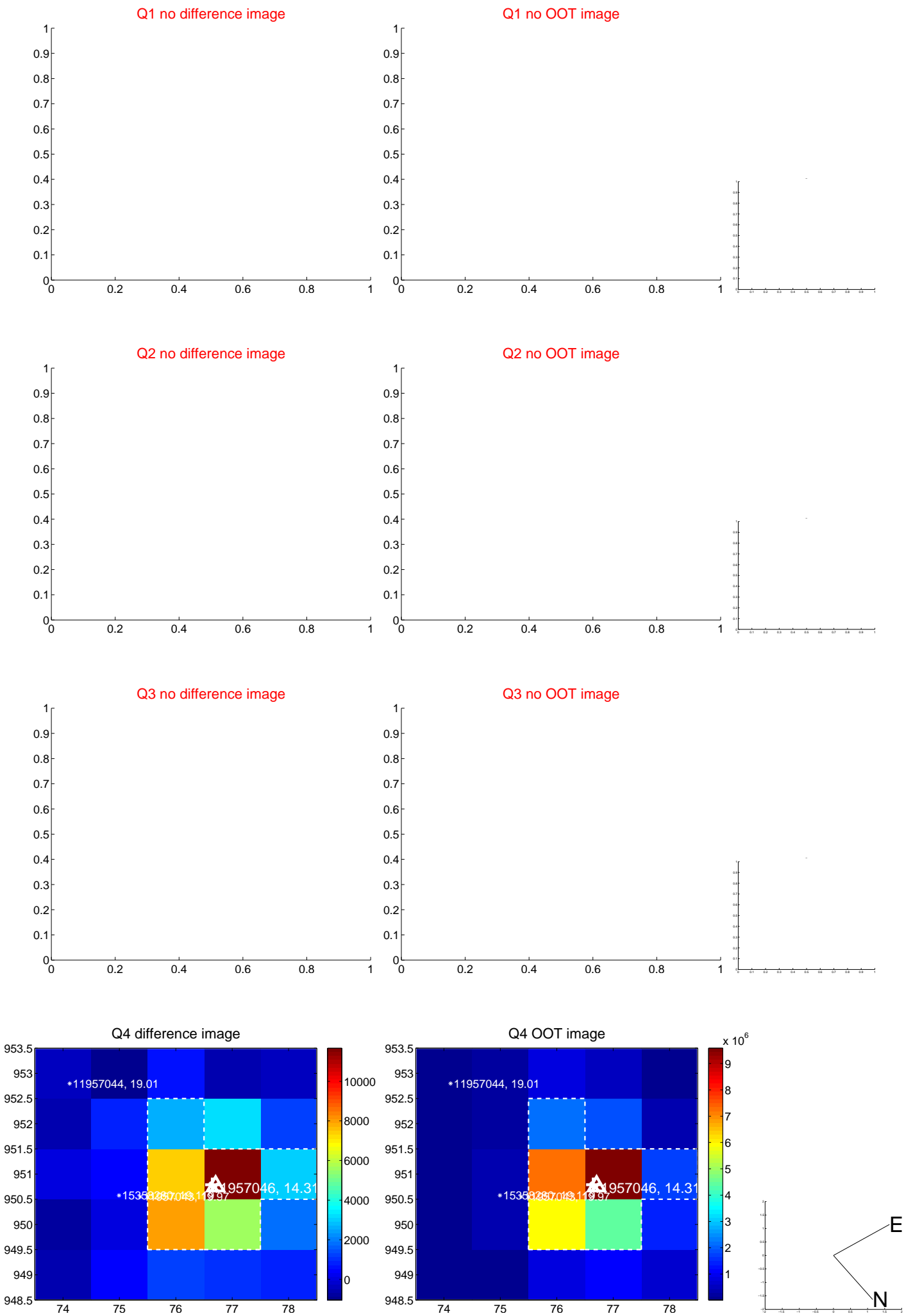
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.215 ± 0.658	0.33	-0.138 ± 0.662	0.165 ± 0.310
PRF-fit source offset from KIC position	0.175 ± 0.449	0.39	-0.172 ± 0.418	0.034 ± 0.213
photometric centroid source offset	0.38 ± 0.41	0.94	0.13 ± 0.37	-0.36 ± 0.41



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

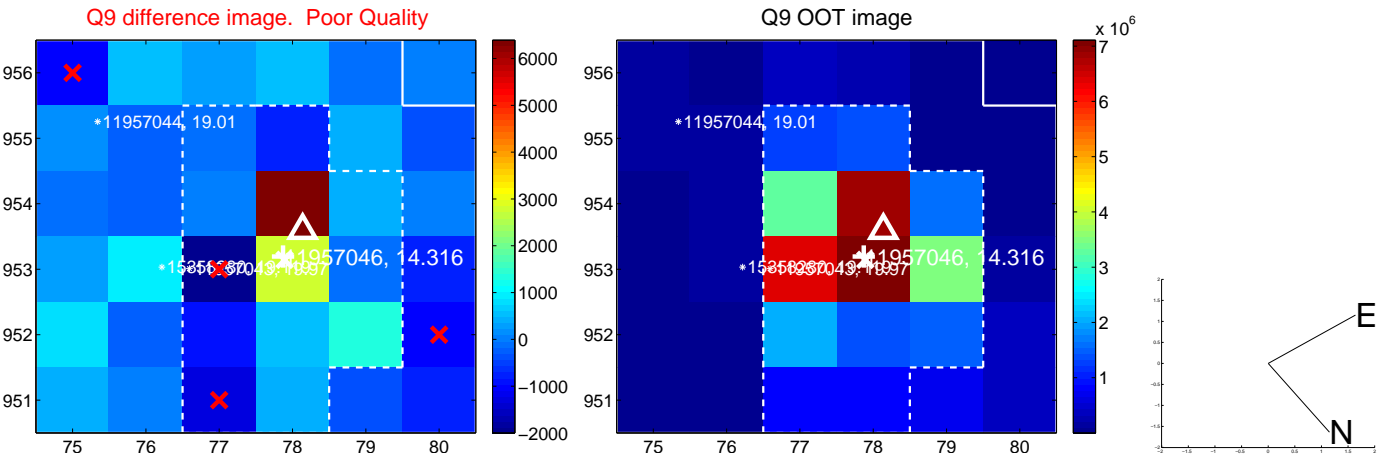
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



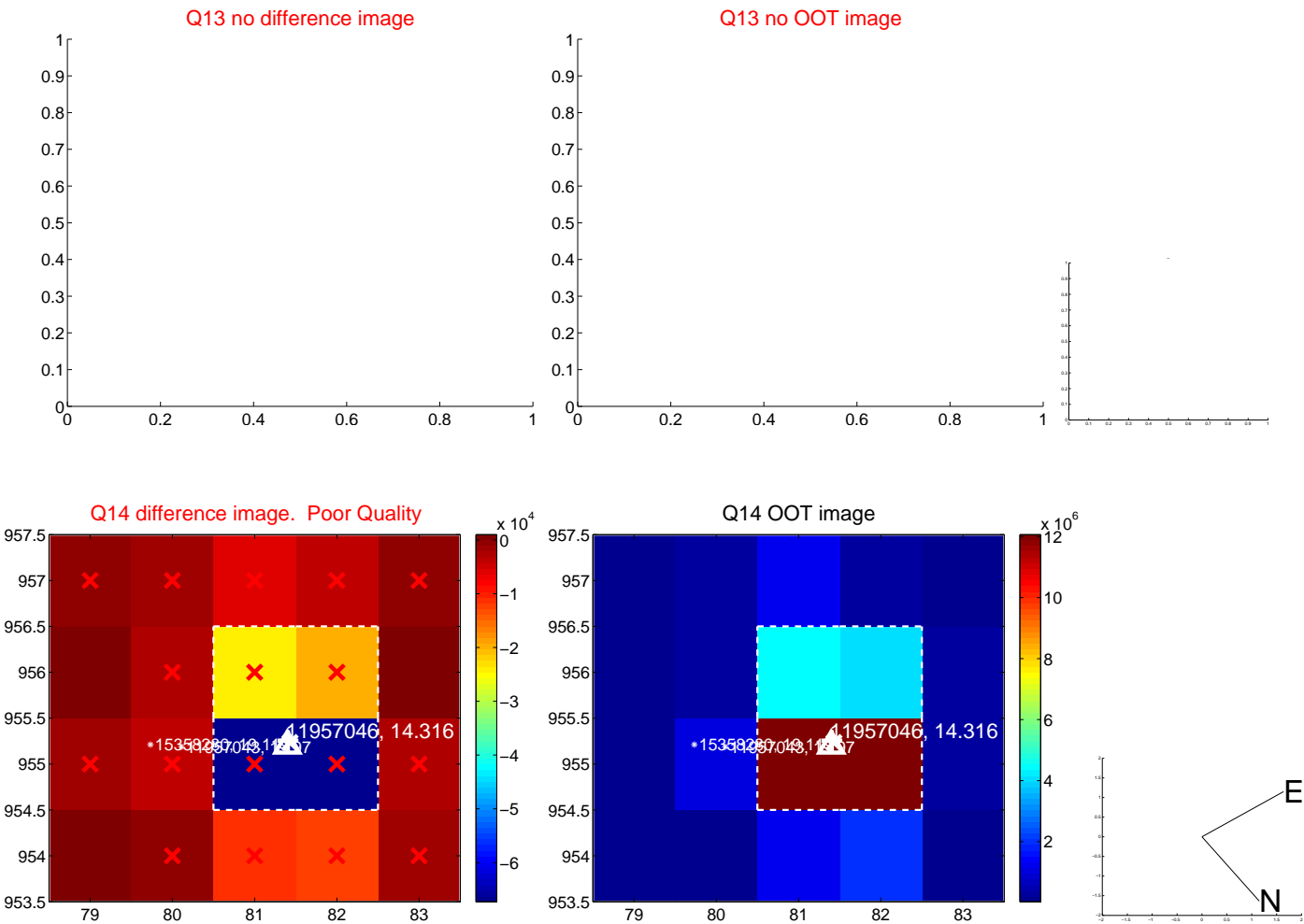
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



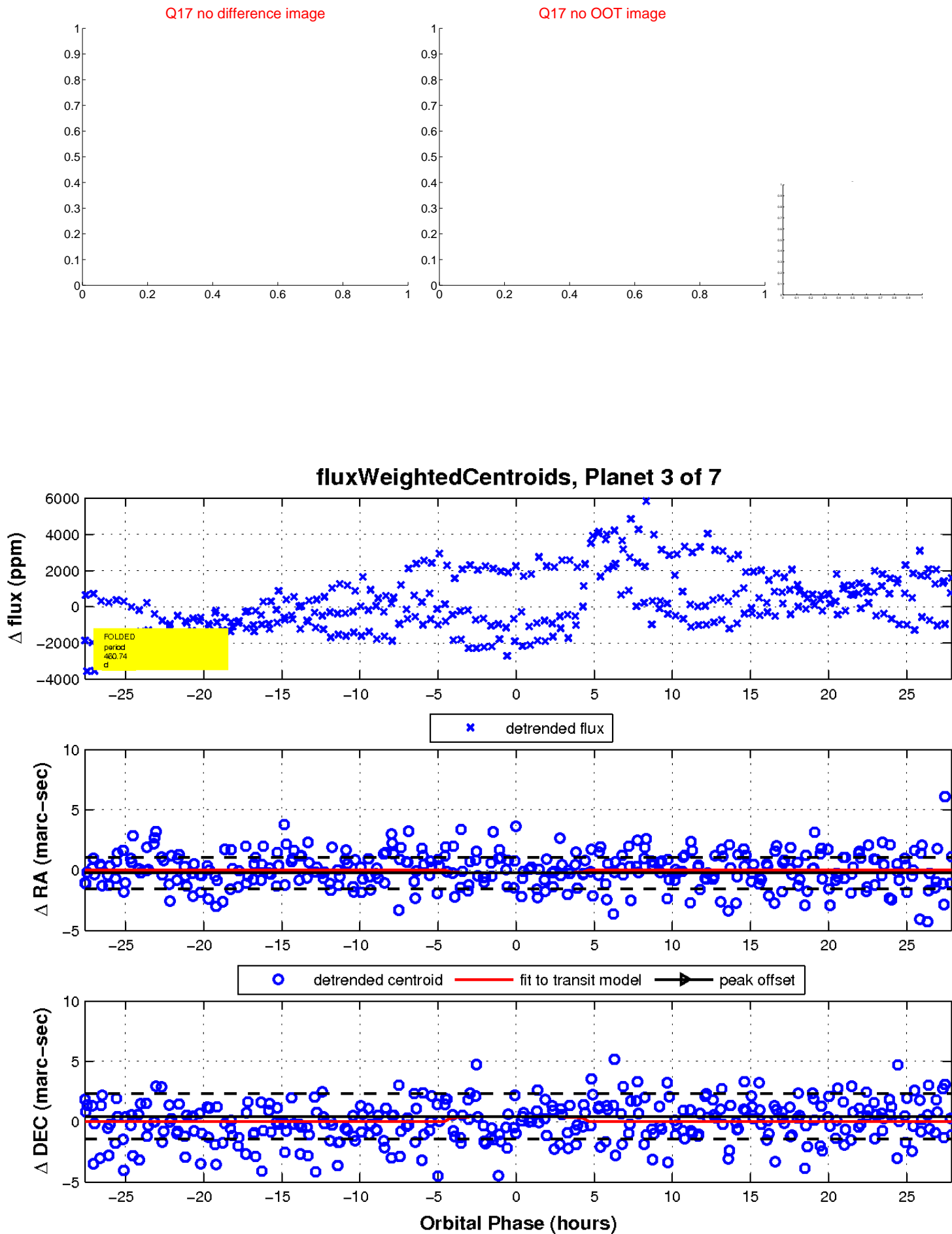
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

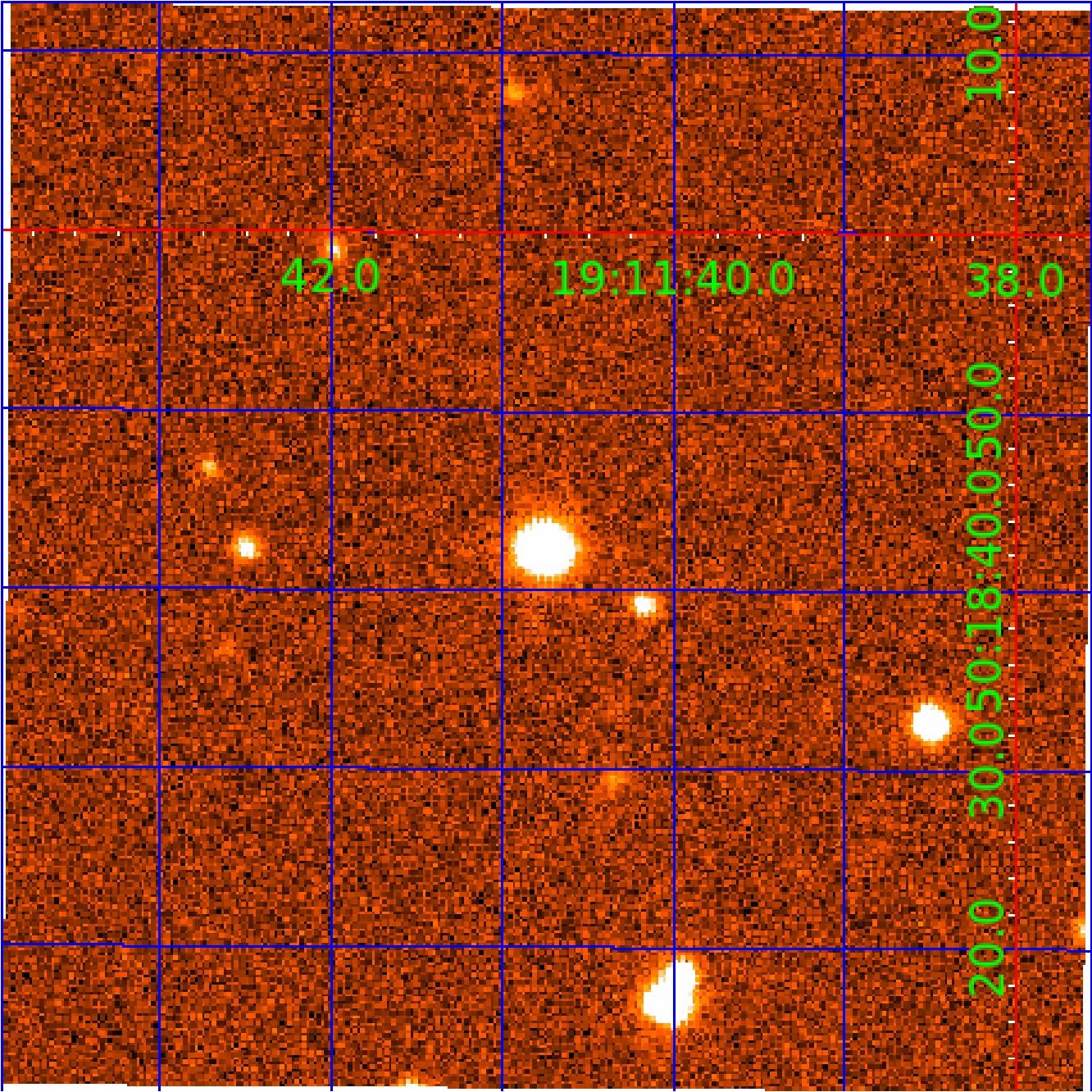


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011957046

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})
011957046-01	OBS	No	530.187690	301.455493	1765.7	3.490	19.5	9.7	0.93	5855	7.45	0.60
011957046-02	OBS	No	484.240119	342.344114	1018.2	5.051	19.7	5.5	0.93	5855	2.98	0.68
011957046-03	OBS	No	460.735679	377.538353	1969.7	9.301	18.4	9.0	0.93	5855	4.14	0.72
011957046-04	OBS	No	383.933176	407.255607	544.1	1.365	18.6	3.3	0.93	5855	2.55	0.93
011957046-05	OBS	No	340.533620	450.854512	1110.8	5.342	18.4	6.7	0.93	5855	3.13	1.08
011957046-06	OBS	No	527.354515	452.120802	1638.1	9.059	16.4	8.4	0.93	5855	3.89	0.61
011957046-07	OBS	No	308.471833	388.183752	757.3	12.500	15.5	-1.0	0.93	5855	2.55	1.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011957046-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
011957046-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-03	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
011957046-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—HALO_GHOST
011957046-07	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

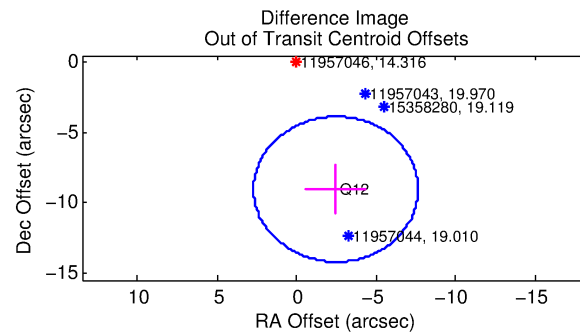
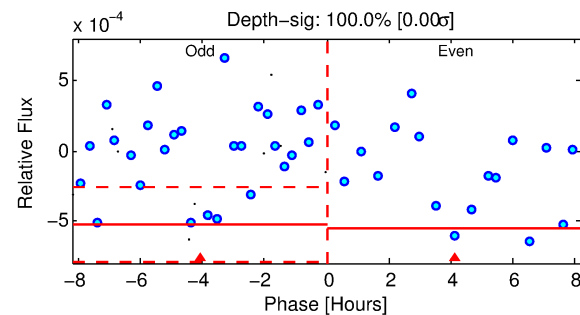
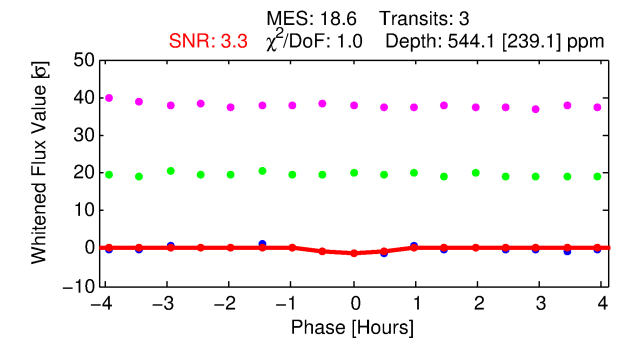
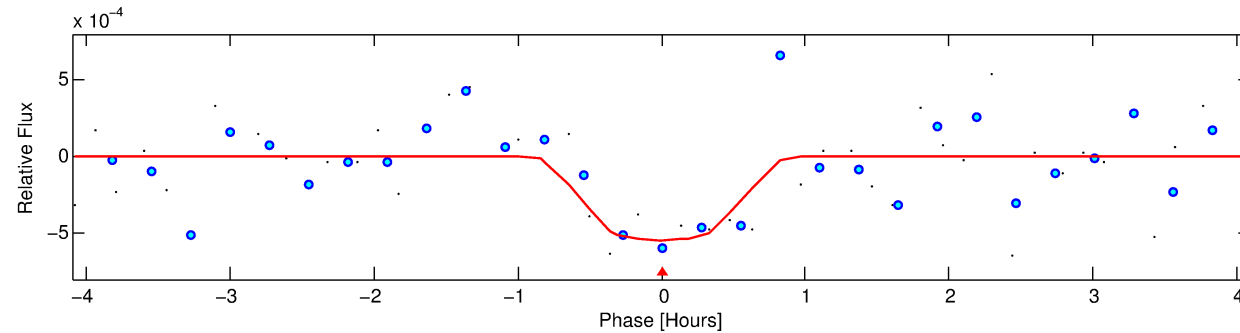
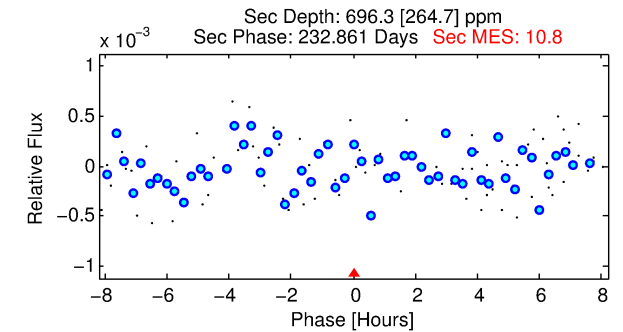
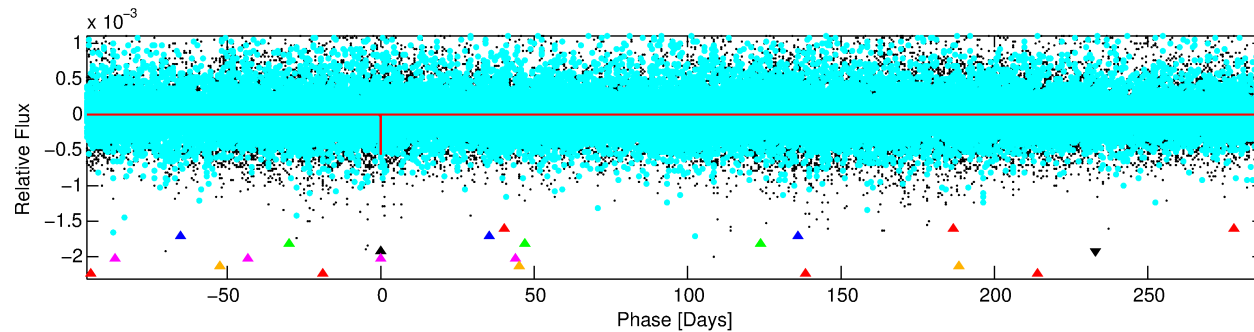
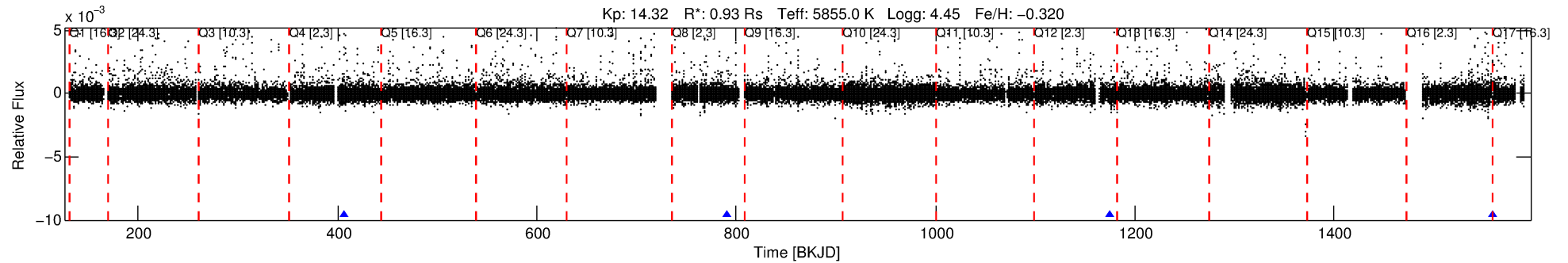
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011957046-04

No Significant Match Found

DV One-Page Summary

KIC: 11957046 Candidate: 4 of 7 Period: 383.933 d



DV Fit Results:

Period = 383.93318 [0.00885] d
Epoch = 407.2556 [0.0108] BKJD
Rp/R* = 0.0251 [0.0471]
a/R* = 1097.46 [9787.92]
b = 0.89 [2.16]
Seff = 0.92 [0.32]
Teq = 250 [22] K
Rp = 2.55 [4.84] Re
a = 0.9935 [0.2284] AU
Ag = 58013.96 [219643.63] [0.26σ]
Teffp = 6000 [5659] K [1.02σ]

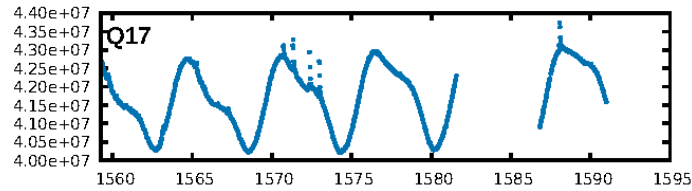
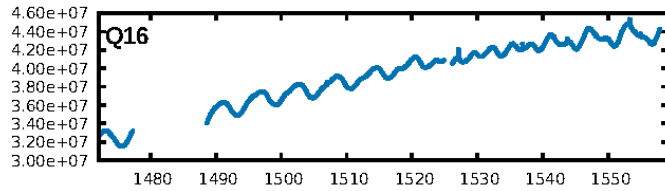
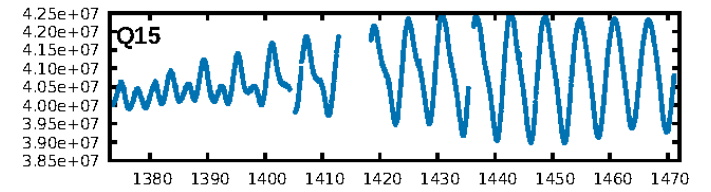
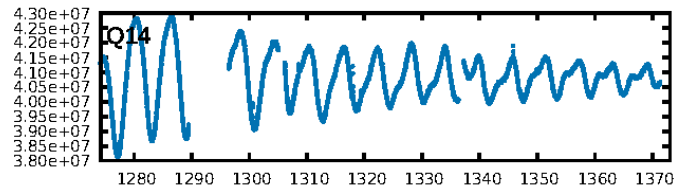
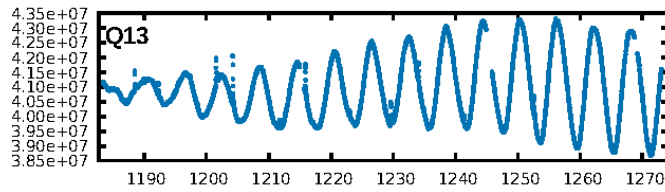
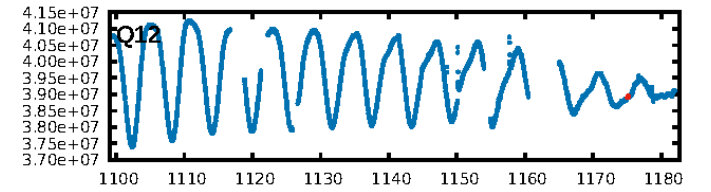
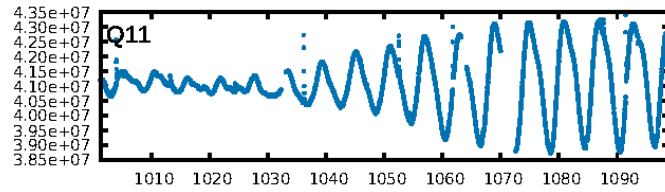
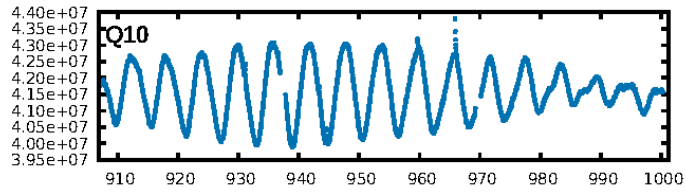
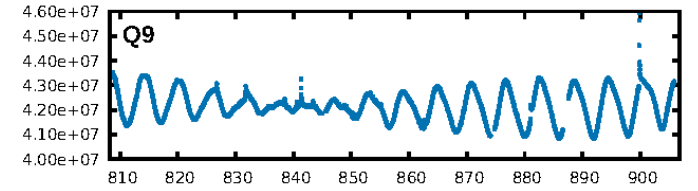
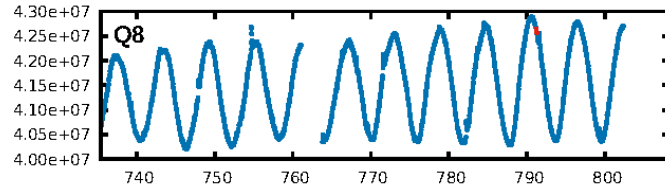
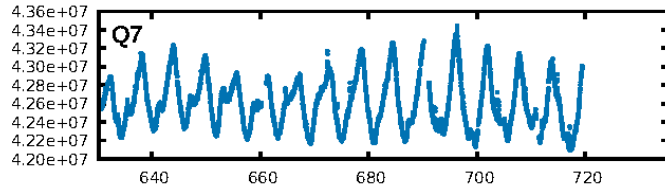
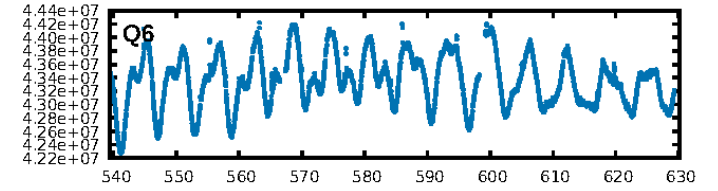
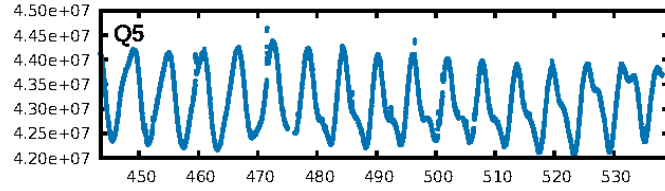
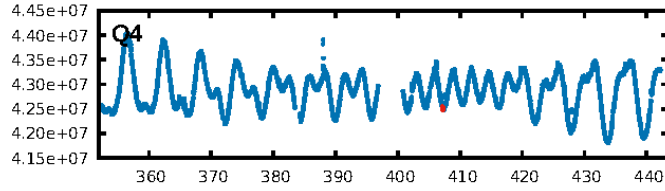
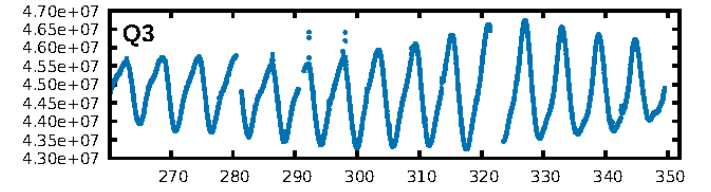
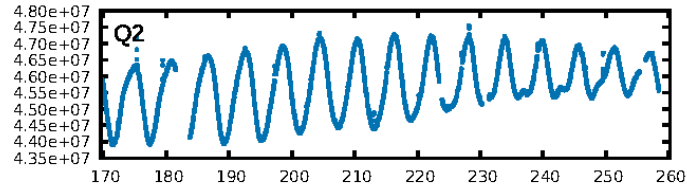
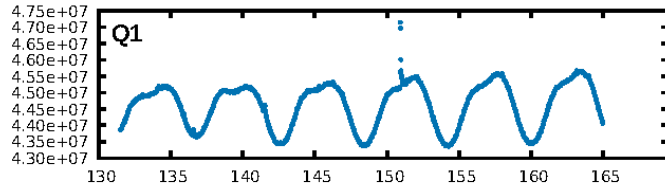
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [188.92σ]
LongPeriod-sig: 100.0% [196.09σ]
ModelChiSquare2-sig: 40.4%
ModelChiSquareGof-sig: 76.4%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.2867
Centroid-sig: 50.4%
Centroid-so: 2.502 arcsec [0.66σ]
OotOffset-rm: 9.368 arcsec [5.43σ]
KicOffset-rm: 9.546 arcsec [5.54σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 0.67 [2/3]

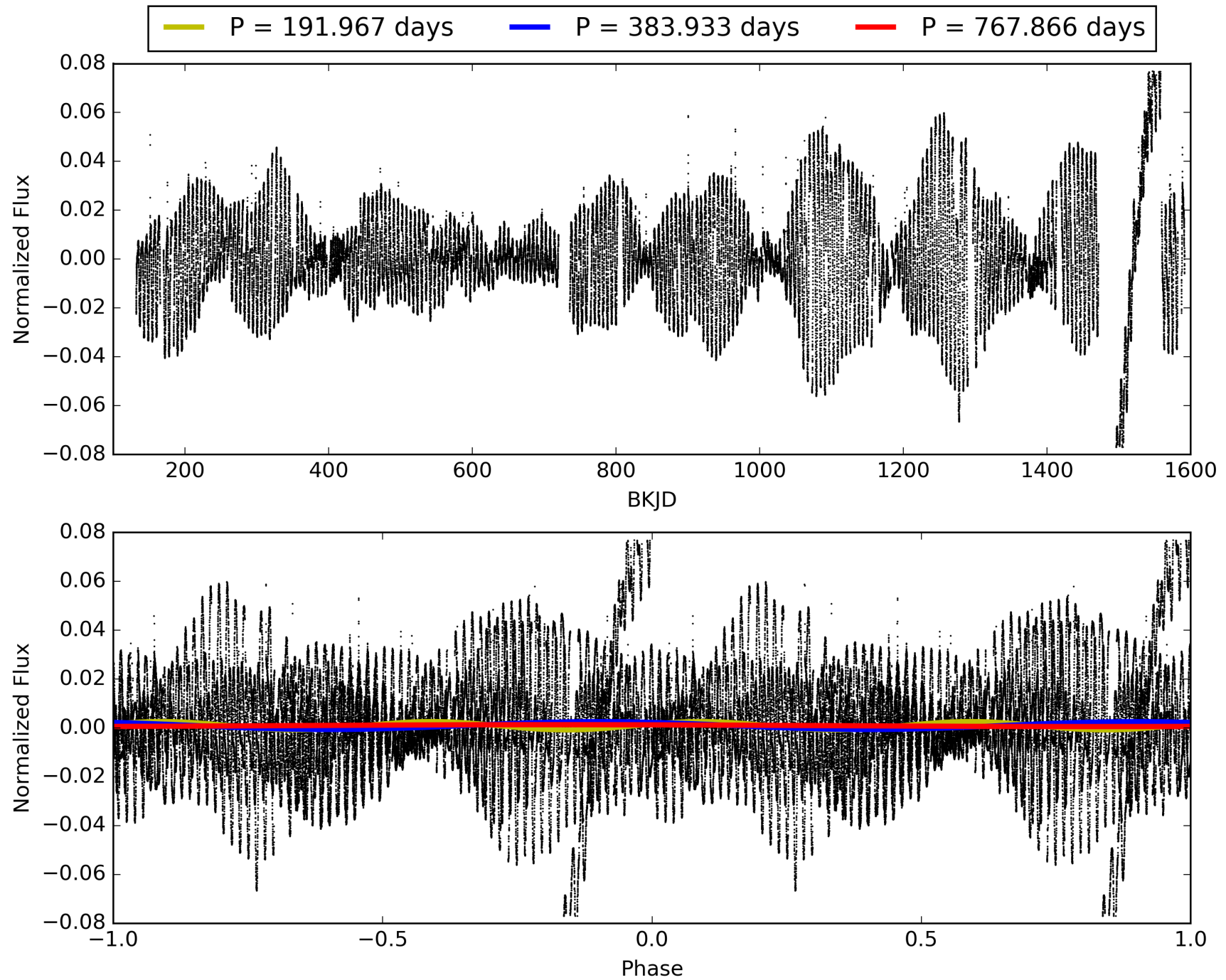
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:20:00 Z

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

TCE 011957046-04, PDC Light Curves

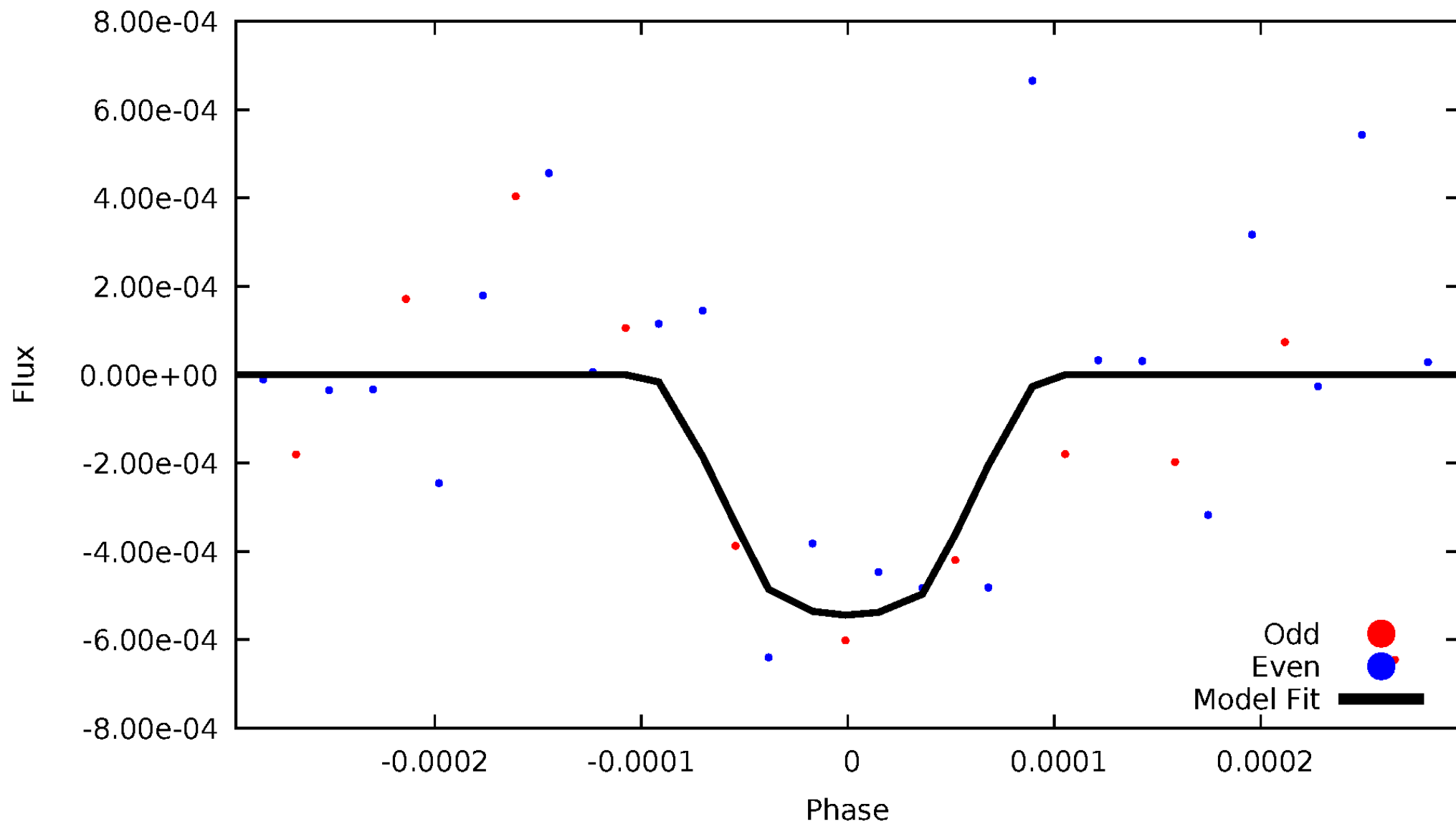


TCE 011957046-04



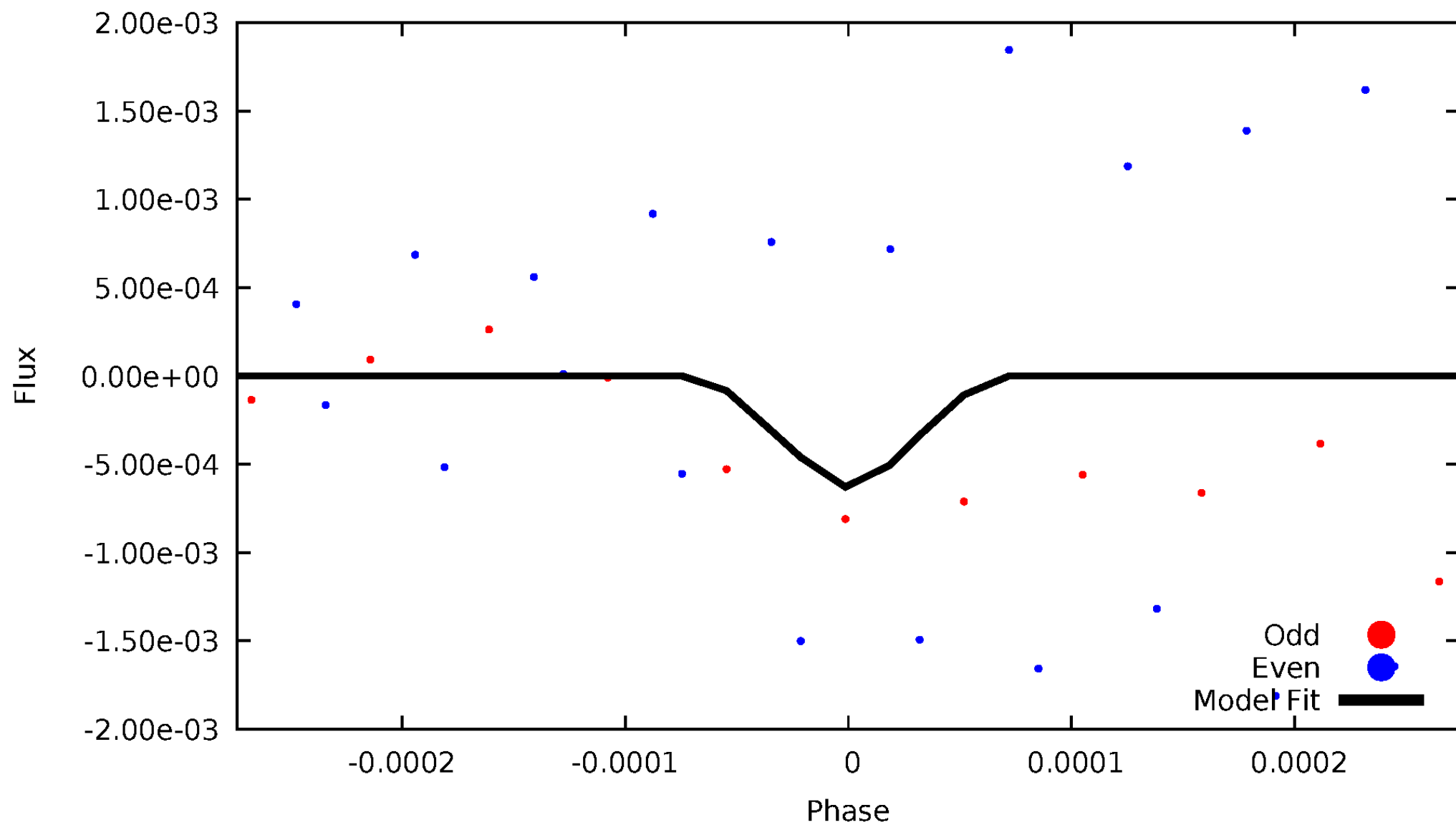
DV Odd/Even

TCE 011957046-04



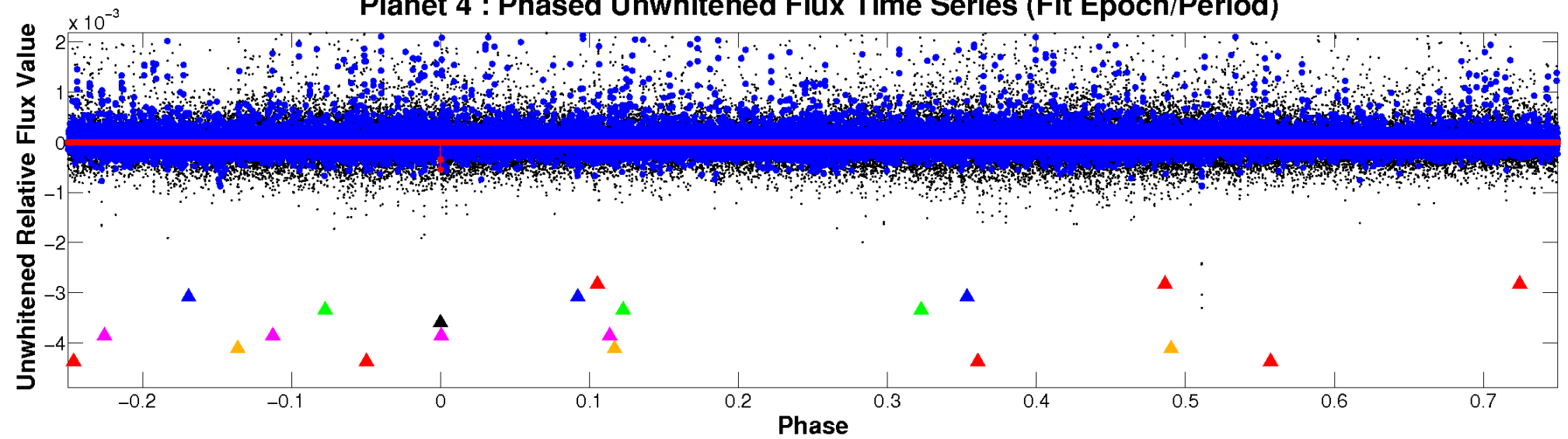
ALT Odd/Even

TCE 011957046-04

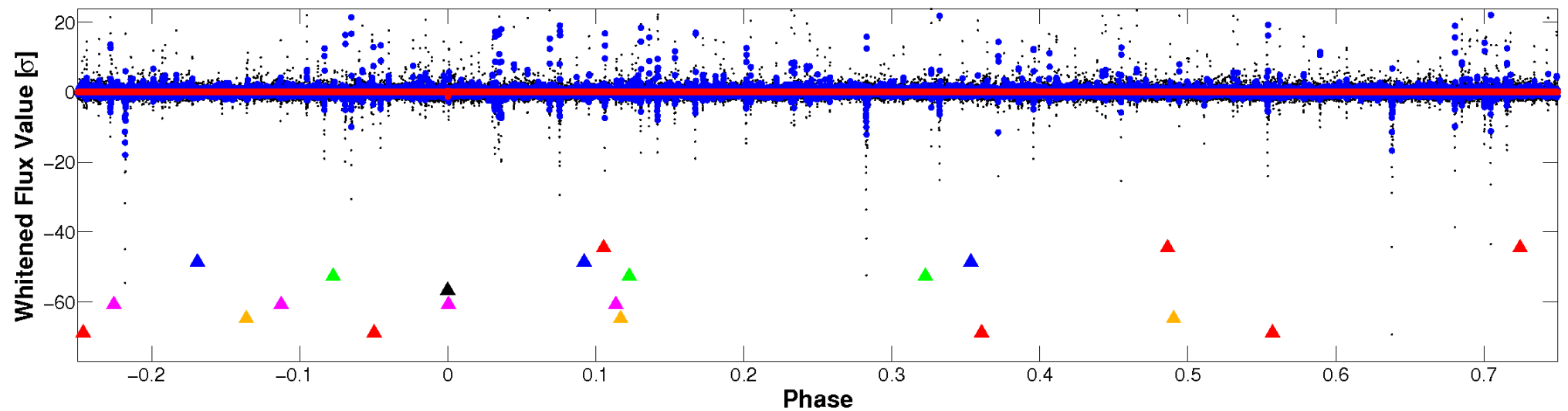


Non-Whitened Vs. Whitened Light Curve

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

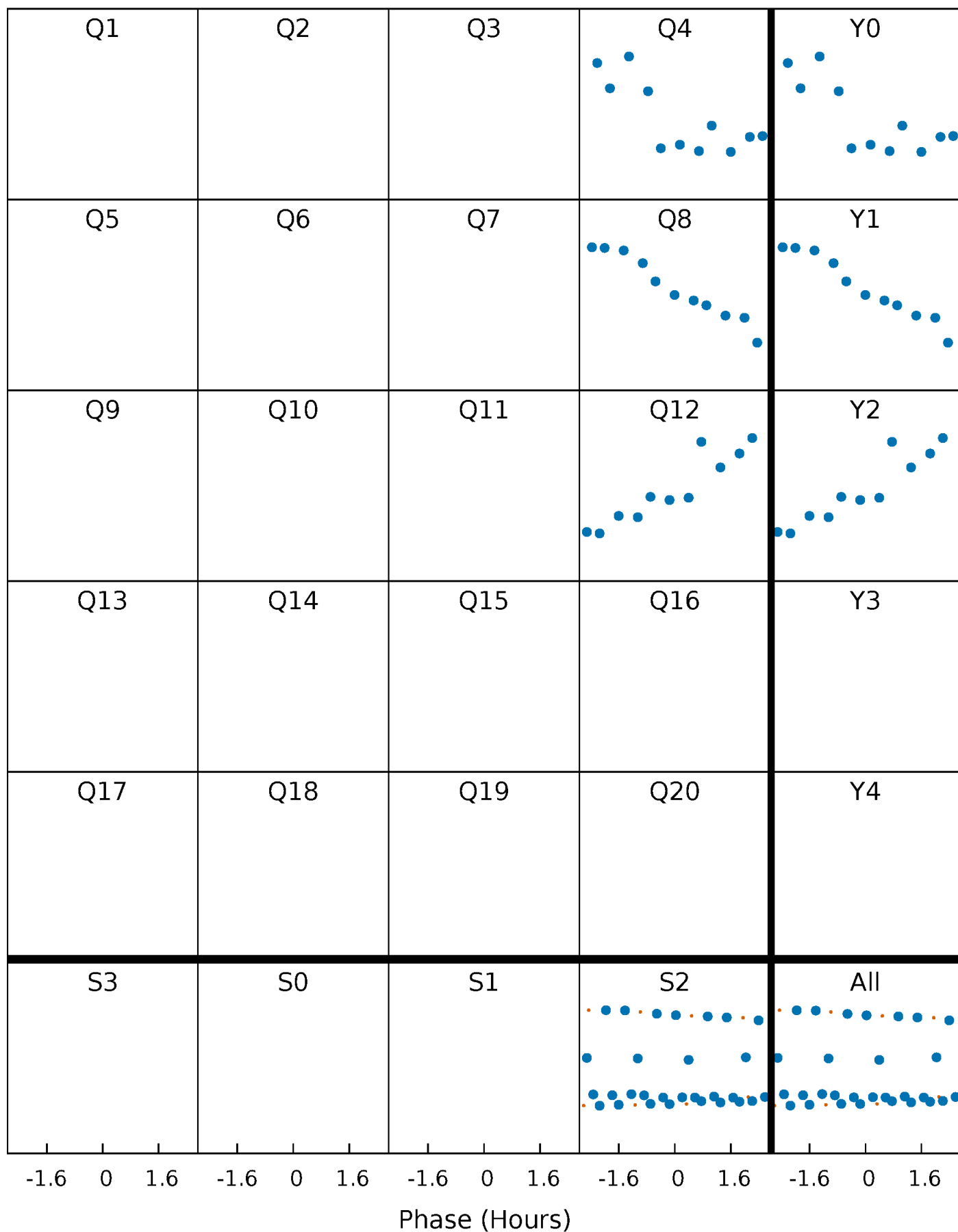


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



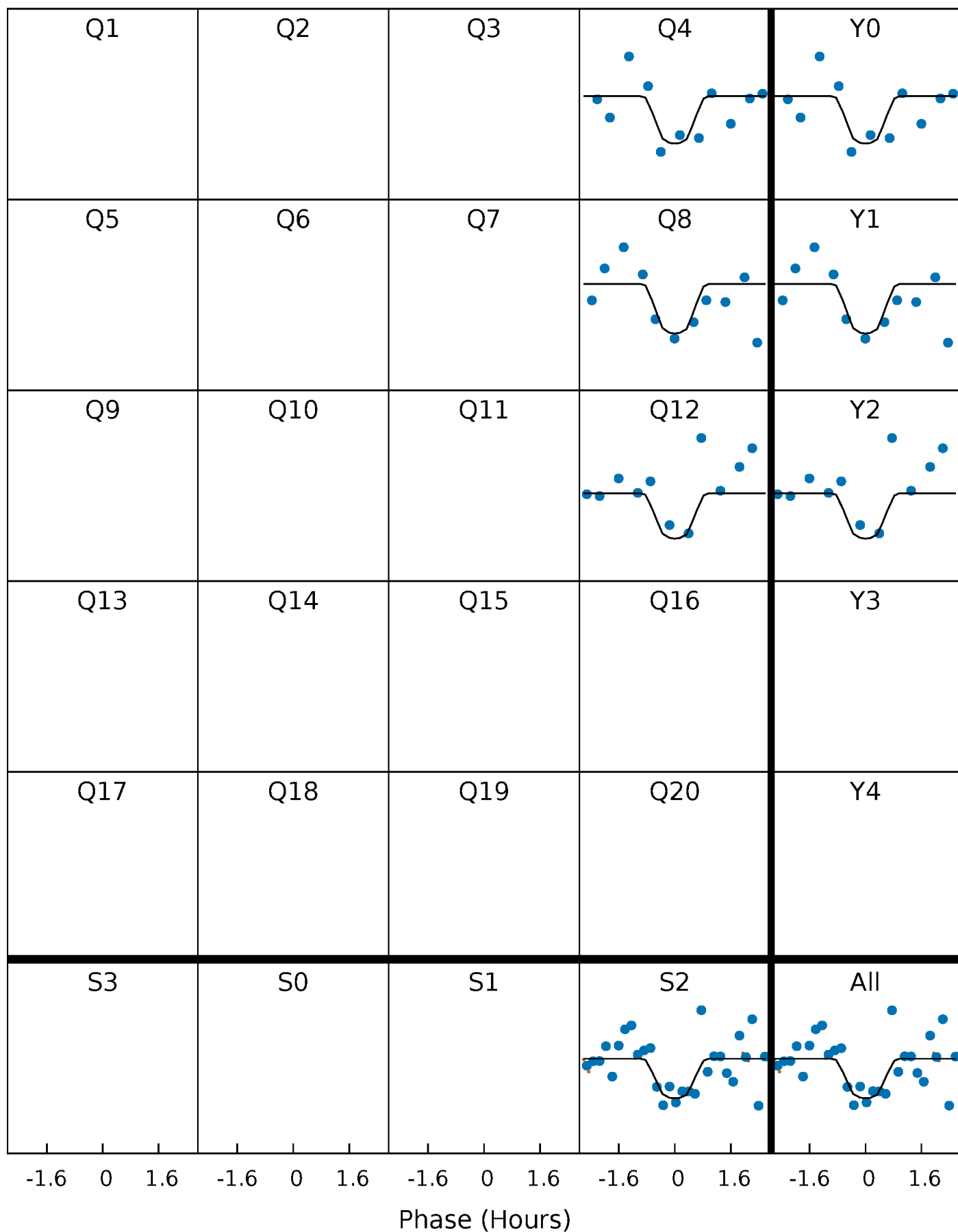
PDC Quarter-Phased Transit Curves

TCE 011957046-04 $P=383.933176$ Days $T_0=407.255607$ (BKJD)



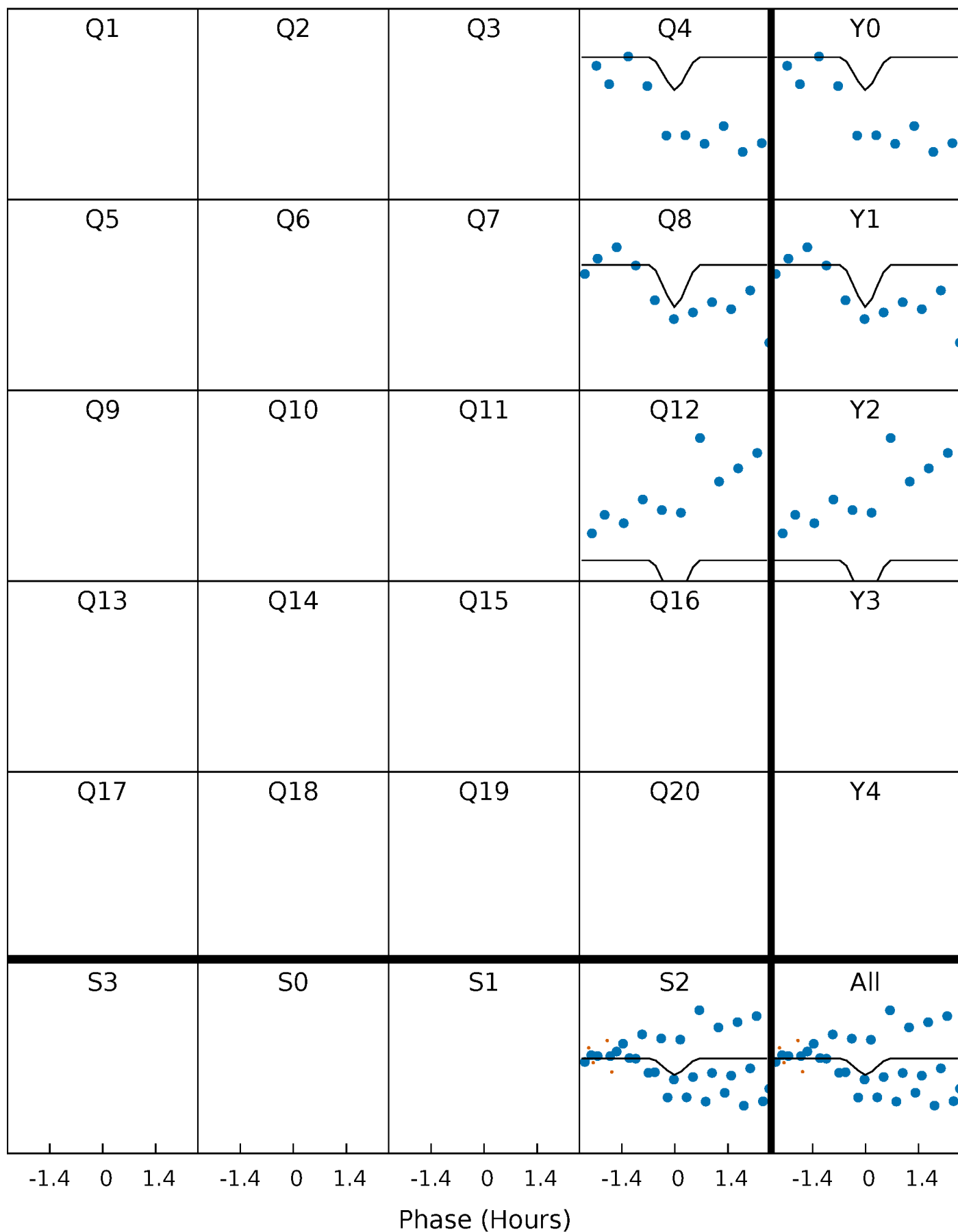
DV Quarter-Phased Transit Curves

TCE 011957046-04 $P=383.933176$ Days $T_0=407.255607$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

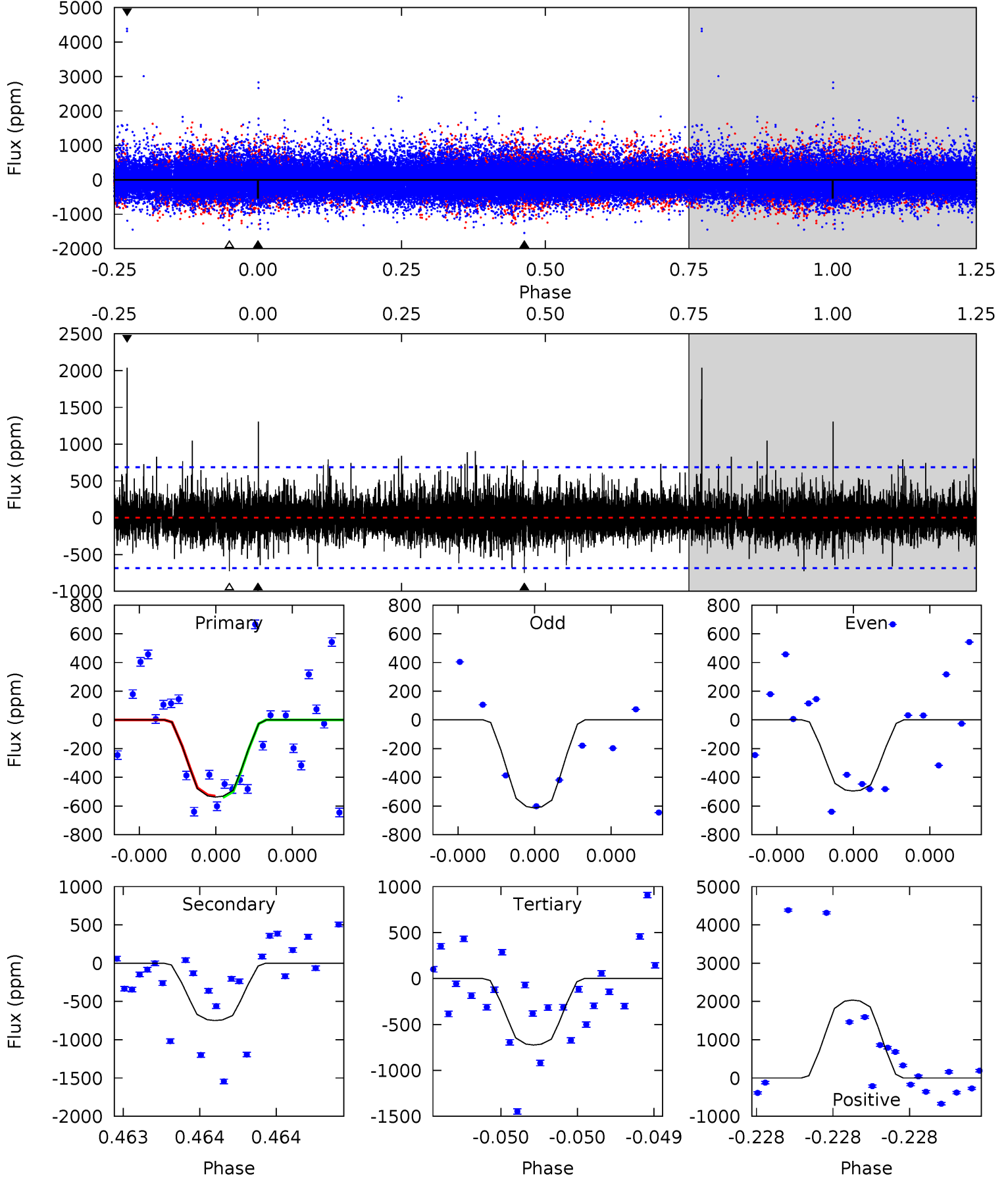
TCE 011957046-04 P=383.939781 Days $T_0=407.249084$ (BKJD)



DV Model-Shift Uniqueness Test

011957046-04, P = 383.933176 Days, E = 23.322431 Days

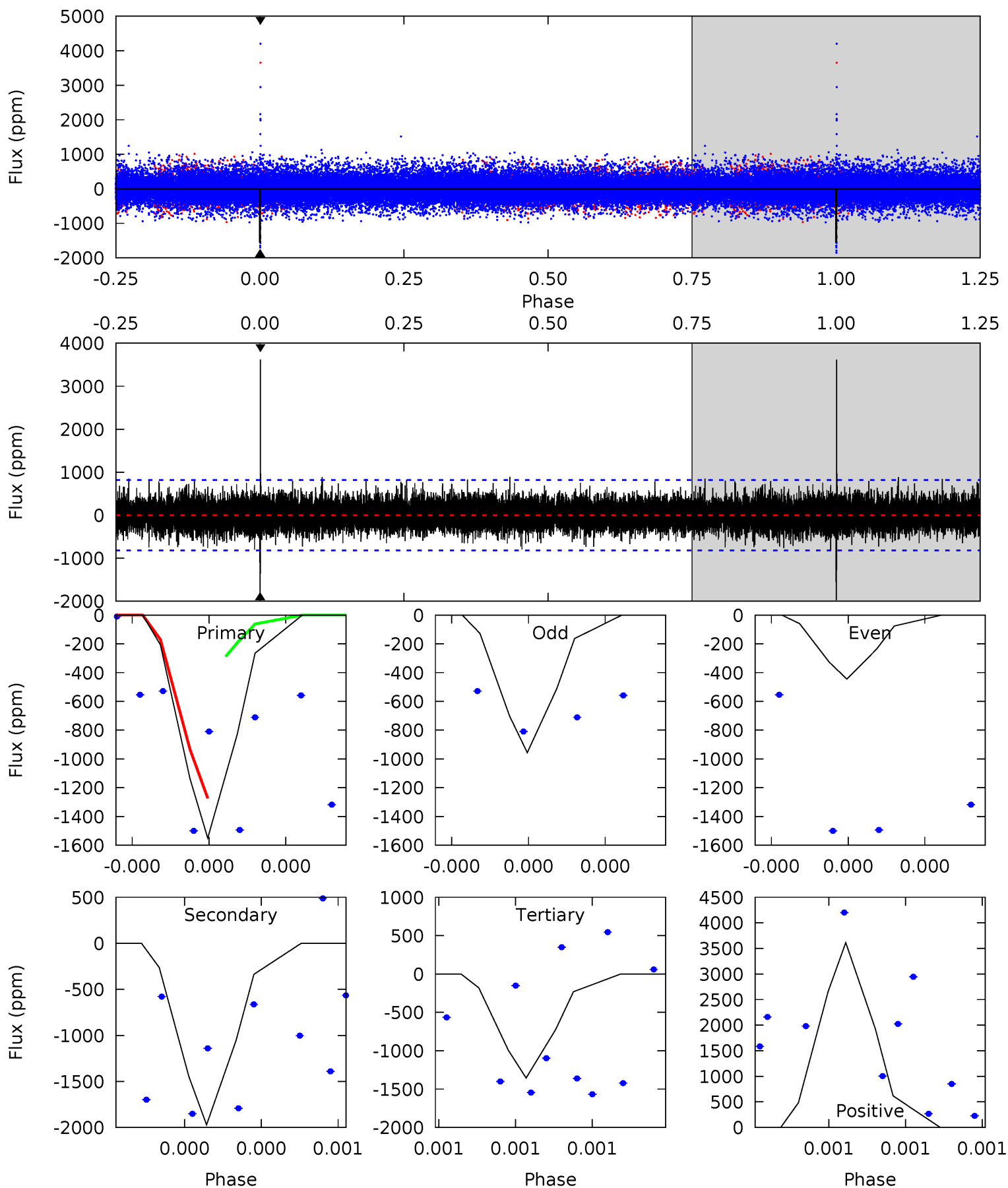
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.53	6.31	6.09	17.1	5.77	3.78	1.34	-1.57	-12.6	0.21	-10.8	0.34	0.88	0.73	0.04



Alt Model-Shift Uniqueness Test

011957046-04, P = 383.939781 Days, E = 23.309303 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	14.1	9.71	25.9	5.87	3.93	1.33	1.40	-14.8	4.41	-11.8	1.82	0.76	0.65	4.09



Stellar Parameters For KIC 011957046

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5855^{+158}_{-158}	$4.448^{+0.098}_{-0.182}$	$-0.320^{+0.300}_{-0.300}$	$0.931^{+0.255}_{-0.127}$	$0.886^{+0.119}_{-0.079}$	$1.546^{+0.665}_{-0.746}$
	+3%/-3%	+2%/-4%	+94%/-94%	+27%/-14%	+13%/-9%	+43%/-48%
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 011957046-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-749 ± 119	$4.57^{+3.93}_{-3.13}$	353^{+24}_{-18}	4732^{+3811}_{-941}	$19614^{+187814}_{-14257}$
Alt.	-1971 ± 140	$4.67^{+3.89}_{-3.06}$	352^{+23}_{-17}	5825^{+5264}_{-1291}	$48421^{+368433}_{-33987}$

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

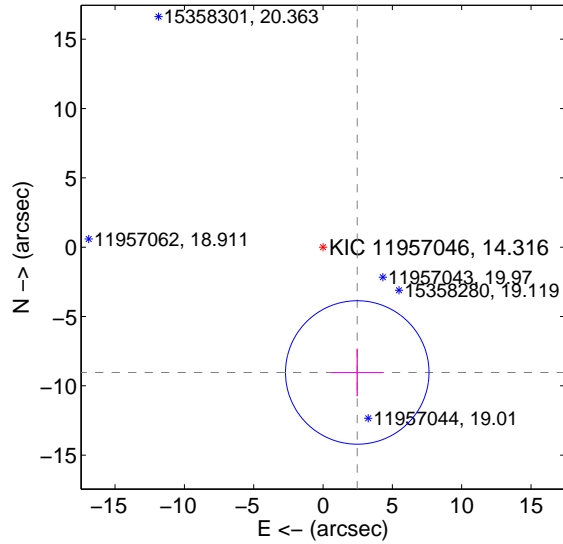
Supplemental centroid analysis for 011957046-04. Kepler magnitude: 14.32. Transit SNR 3.30

There are 0 quarters with good PRF difference image offsets

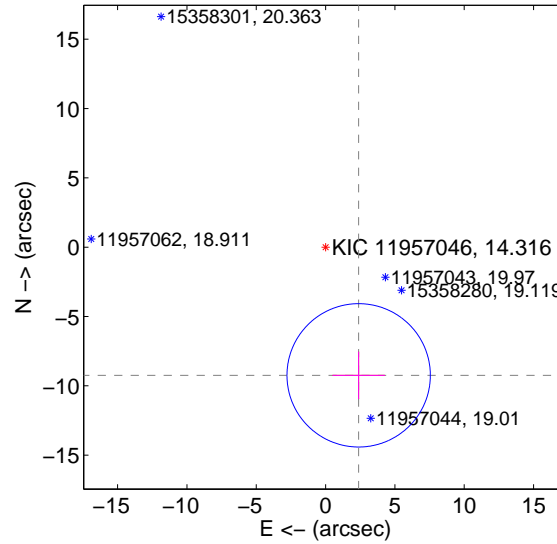
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.368 ± 1.725	5.43	-2.468 ± 1.890	-9.037 ± 1.712
PRF-fit source offset from KIC position	9.546 ± 1.723	5.54	-2.386 ± 1.890	-9.243 ± 1.712
photometric centroid source offset	2.50 ± 3.81	0.66	0.89 ± 3.17	-2.34 ± 3.90

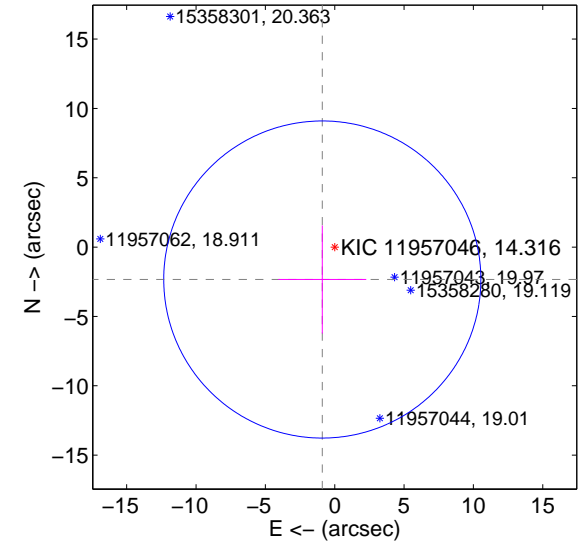
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

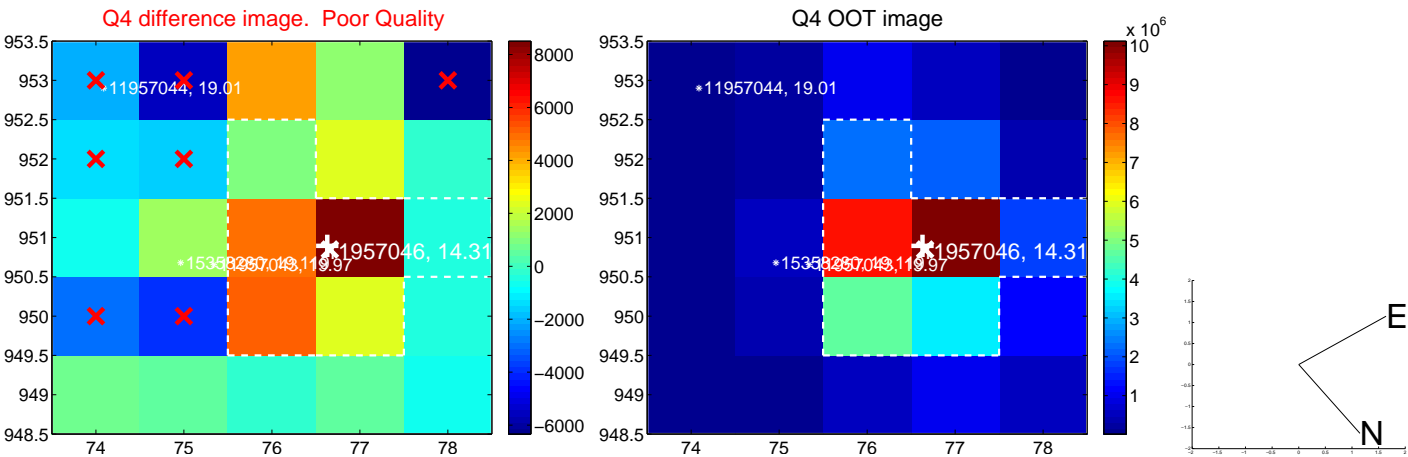


offset from photometric centroids

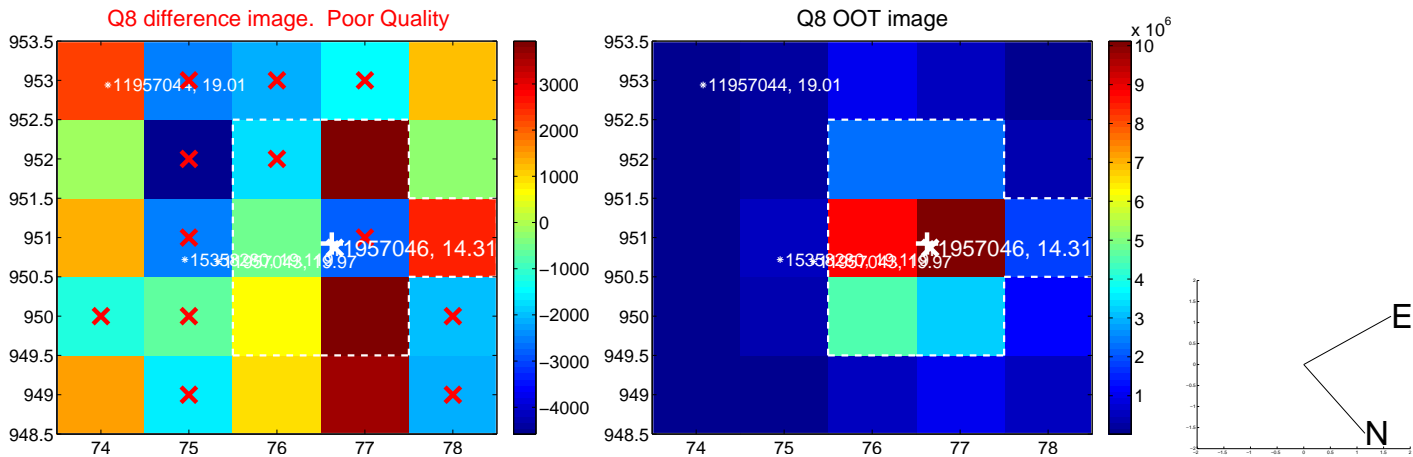
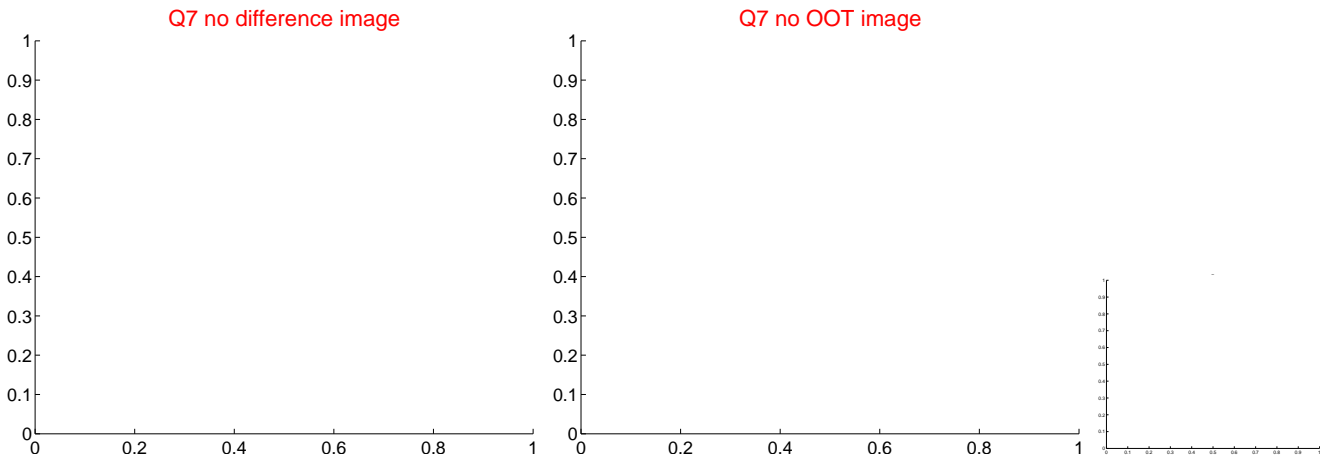
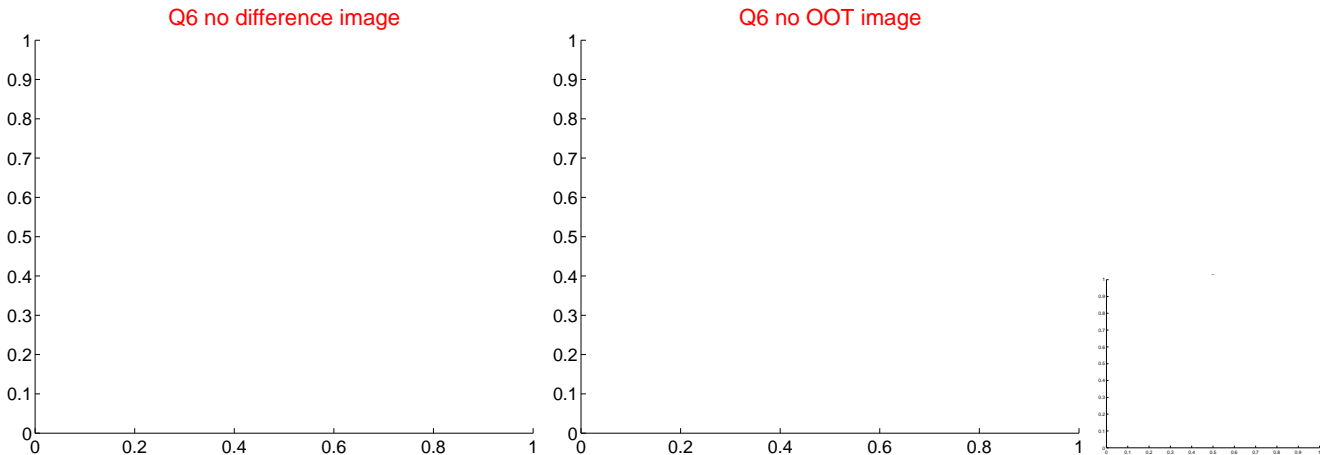
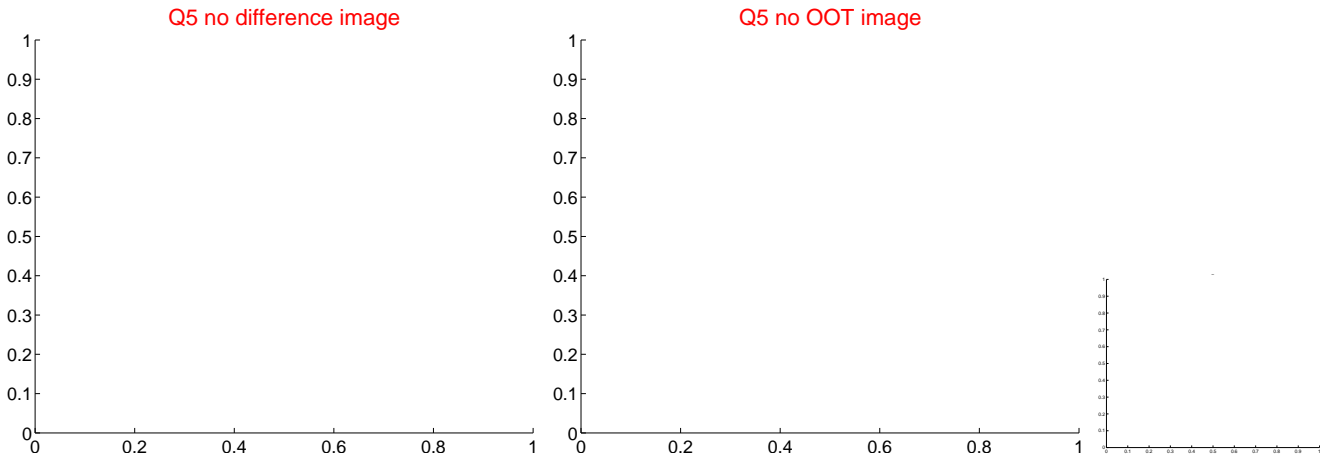


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

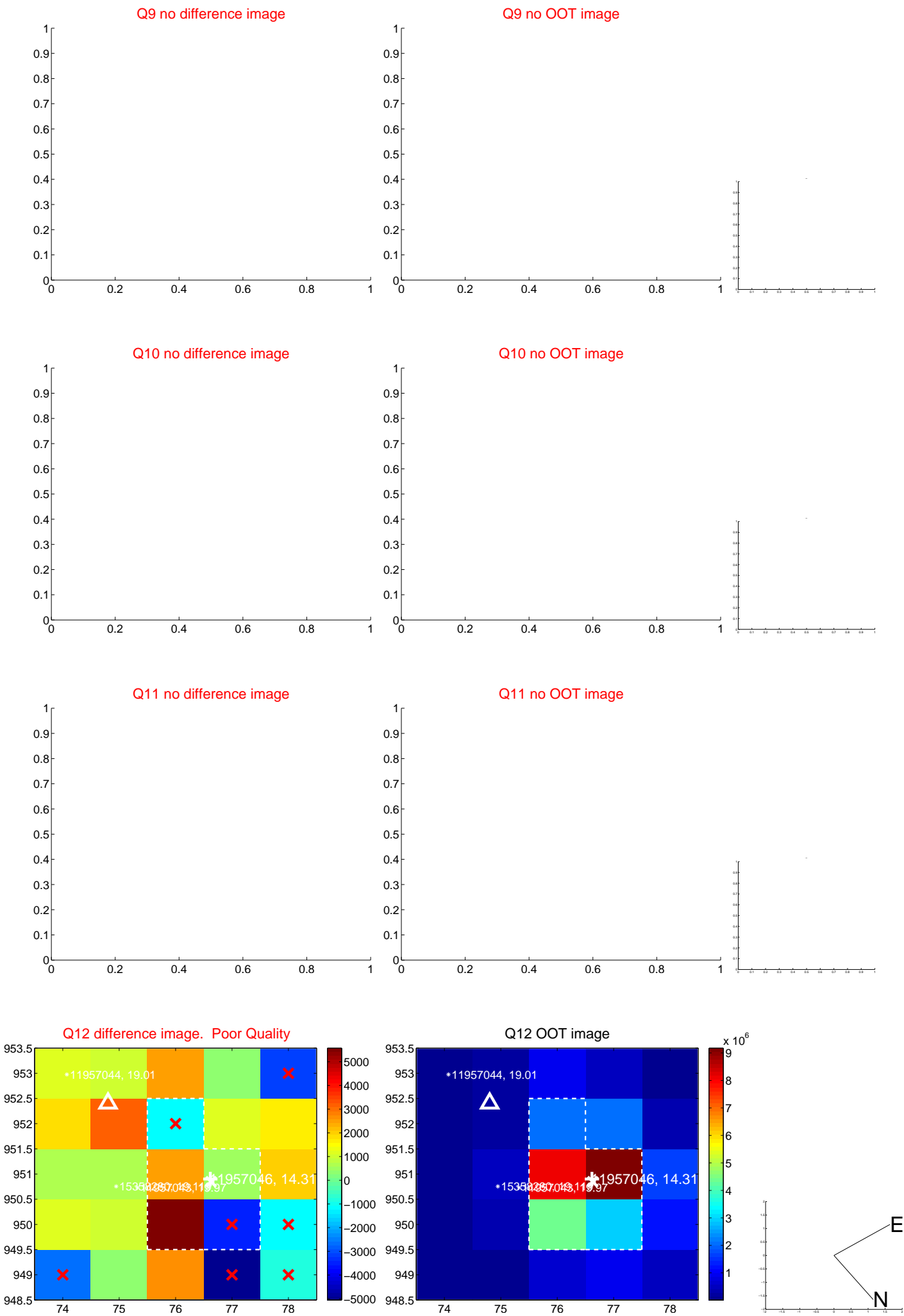
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



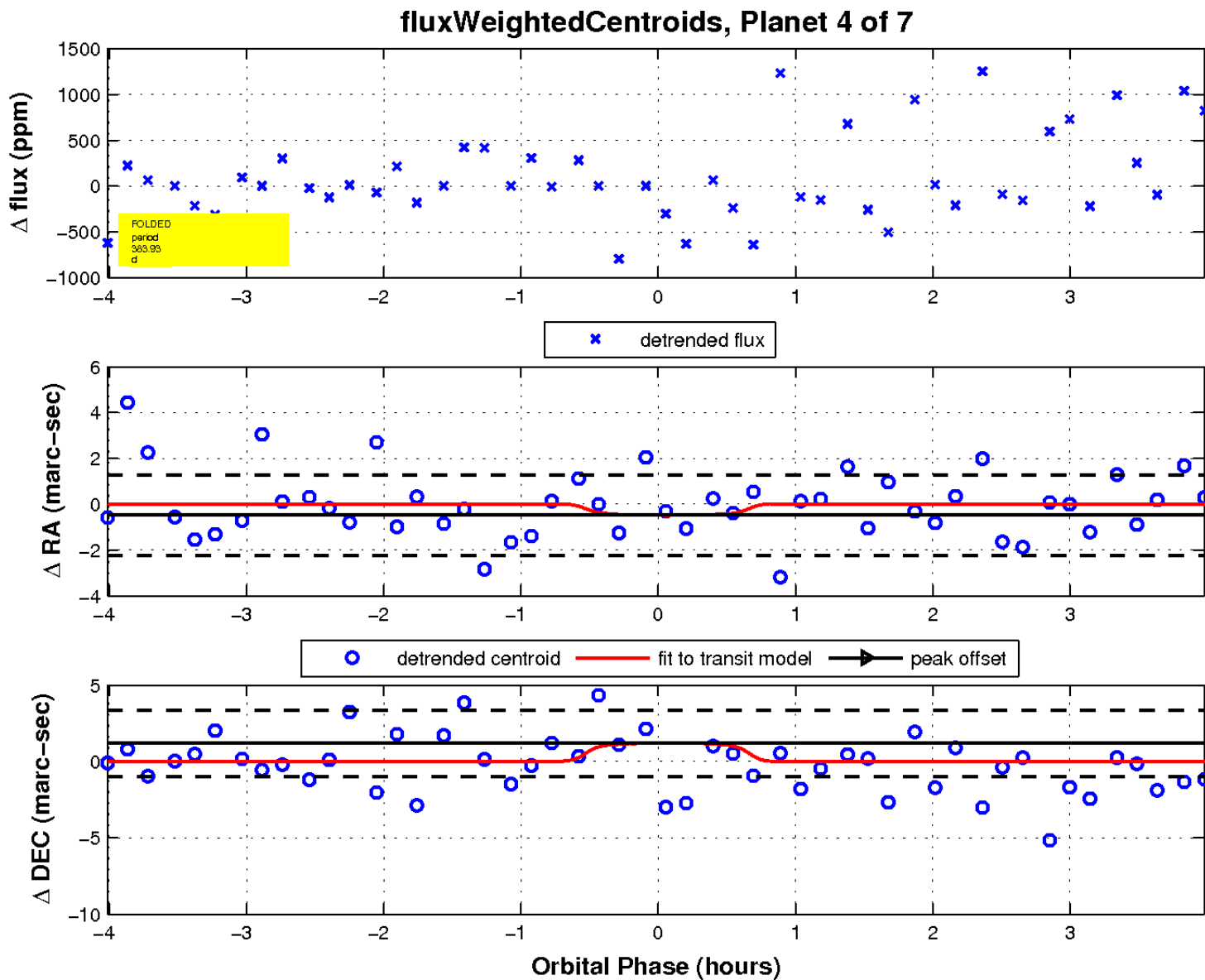
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

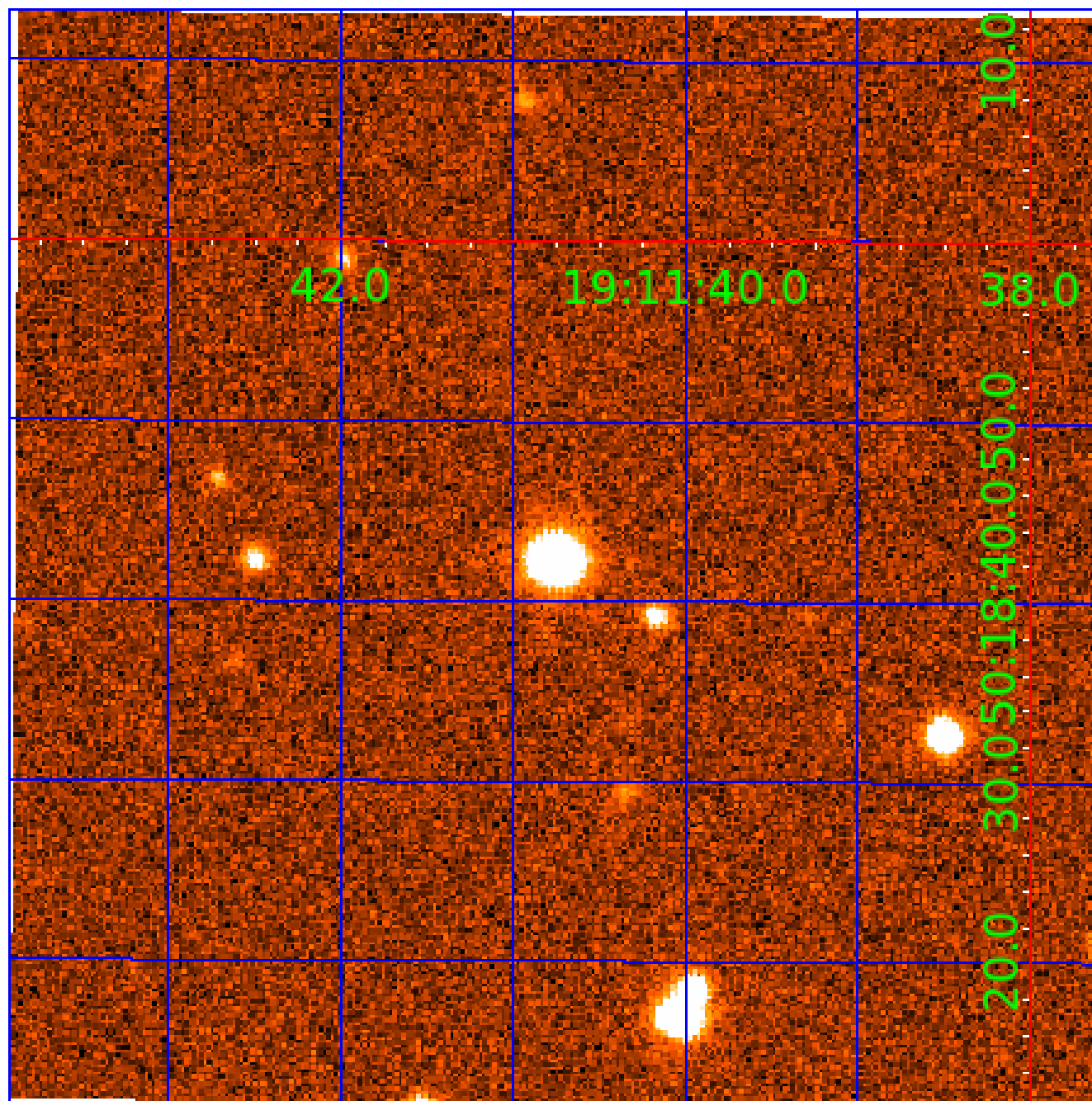


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011957046

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})
011957046-01	OBS	No	530.187690	301.455493	1765.7	3.490	19.5	9.7	0.93	5855	7.45	0.60
011957046-02	OBS	No	484.240119	342.344114	1018.2	5.051	19.7	5.5	0.93	5855	2.98	0.68
011957046-03	OBS	No	460.735679	377.538353	1969.7	9.301	18.4	9.0	0.93	5855	4.14	0.72
011957046-04	OBS	No	383.933176	407.255607	544.1	1.365	18.6	3.3	0.93	5855	2.55	0.93
011957046-05	OBS	No	340.533620	450.854512	1110.8	5.342	18.4	6.7	0.93	5855	3.13	1.08
011957046-06	OBS	No	527.354515	452.120802	1638.1	9.059	16.4	8.4	0.93	5855	3.89	0.61
011957046-07	OBS	No	308.471833	388.183752	757.3	12.500	15.5	-1.0	0.93	5855	2.55	1.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011957046-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
011957046-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-03	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
011957046-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—HALO_GHOST
011957046-07	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

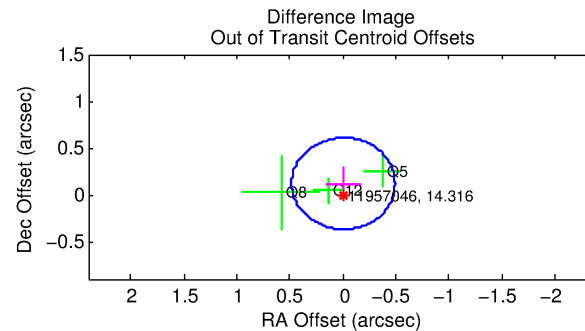
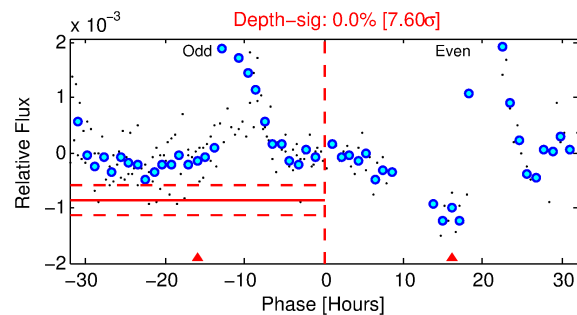
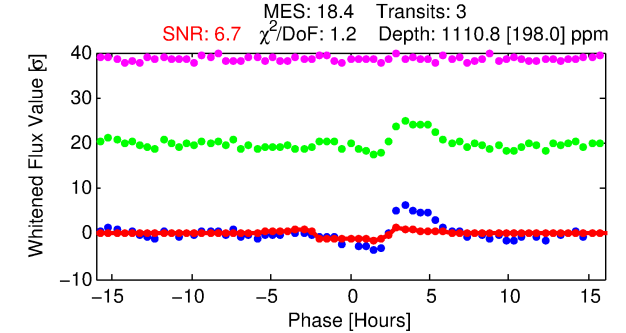
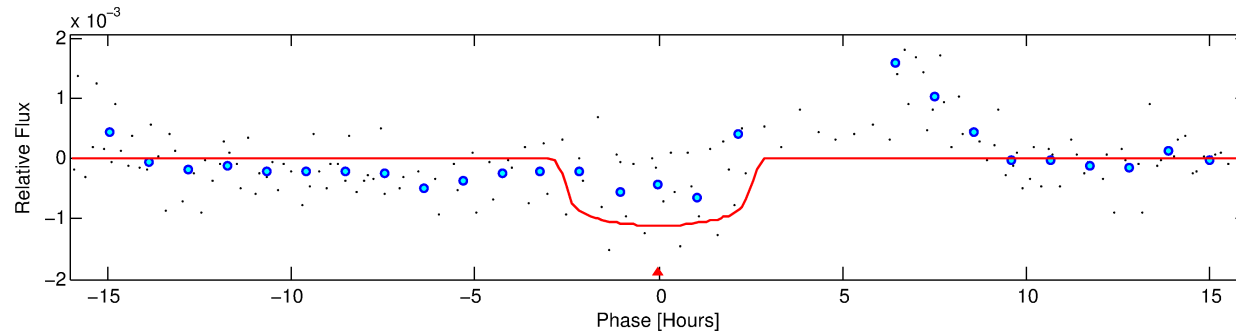
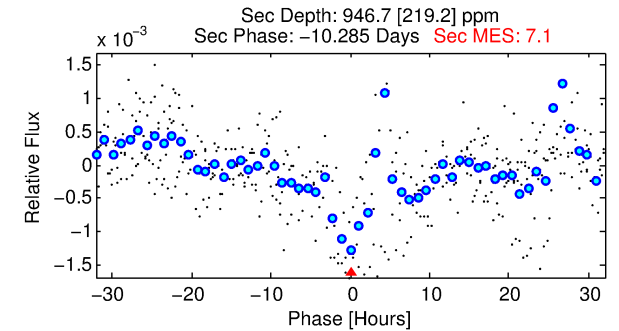
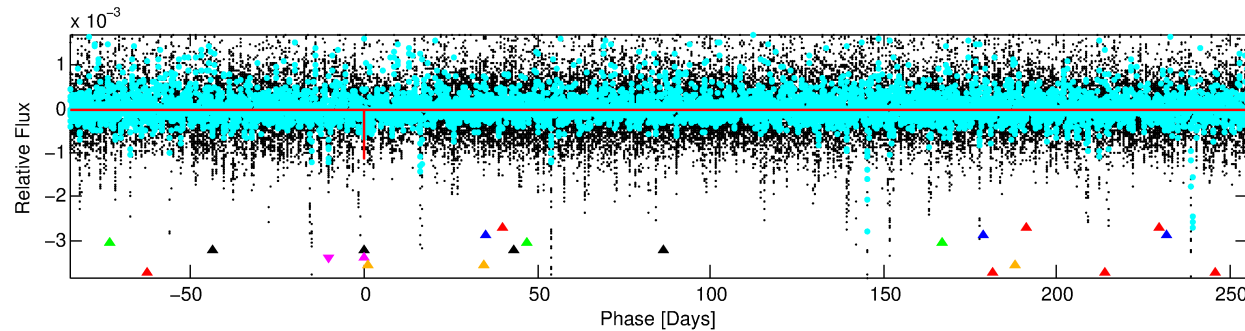
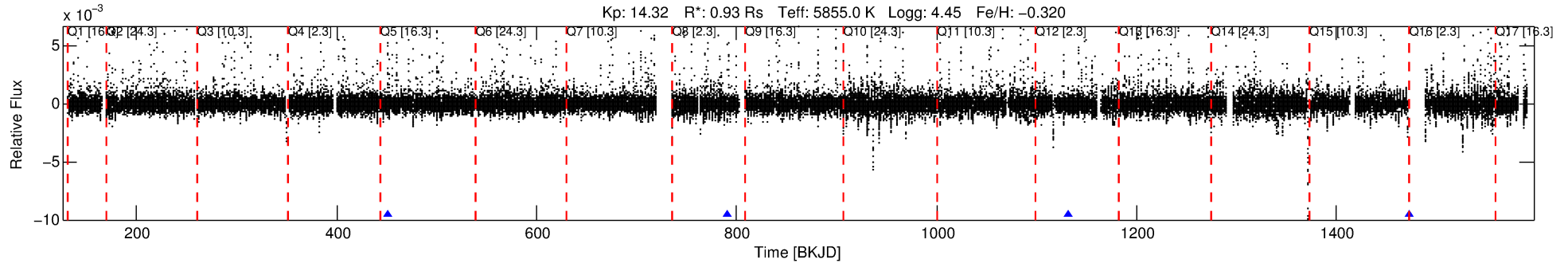
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011957046-05

No Significant Match Found

DV One-Page Summary

KIC: 11957046 Candidate: 5 of 7 Period: 340.534 d



DV Fit Results:

Period = 340.53362 [0.00799] d
Epoch = 450.8545 [0.0096] BKJD
Rp/R* = 0.0308 [0.0675]
a/R* = 471.46 [4827.07]
b = 0.35 [25.46]
Seff = 1.08 [0.38]
Teq = 260 [23] K
Rp = 3.13 [6.91] Re
a = 0.9171 [0.2109] AU
Ag = 44640.52 [196326.39] [0.23 σ]
Teffp = 5849 [6414] K [0.87 σ]

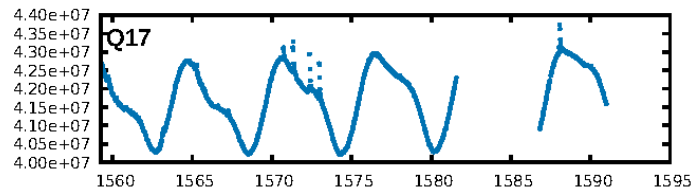
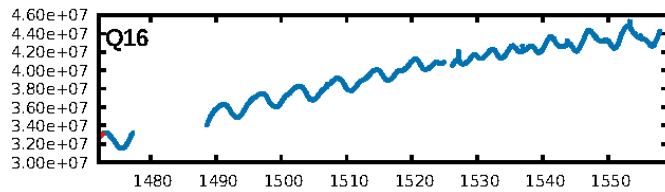
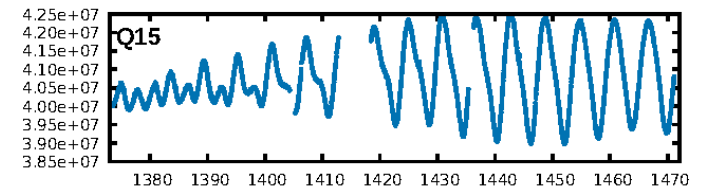
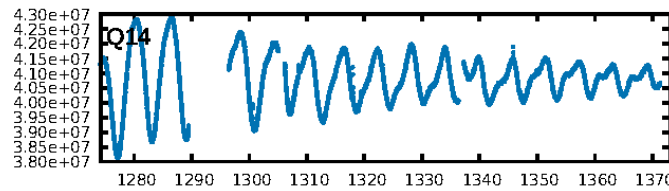
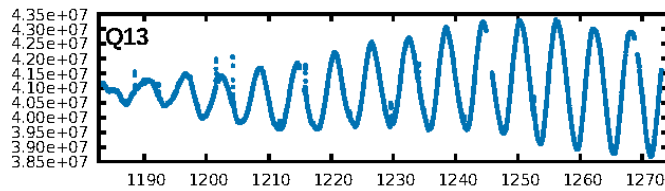
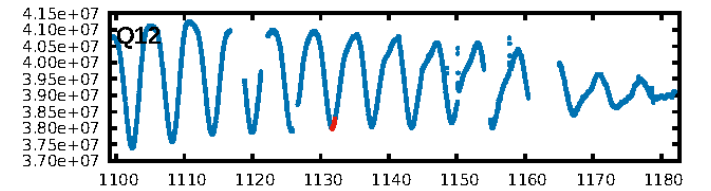
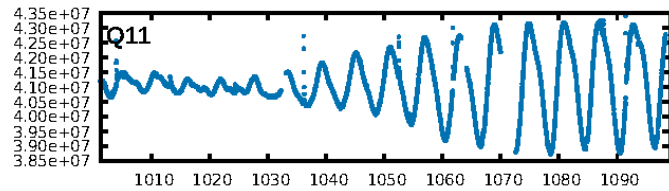
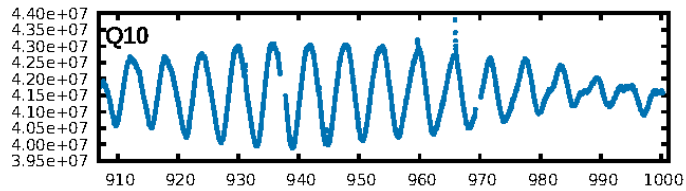
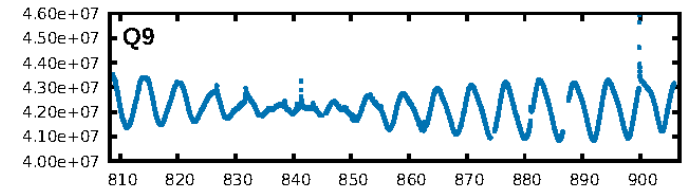
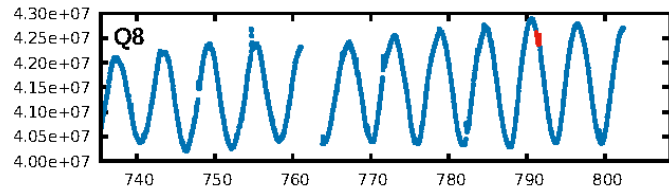
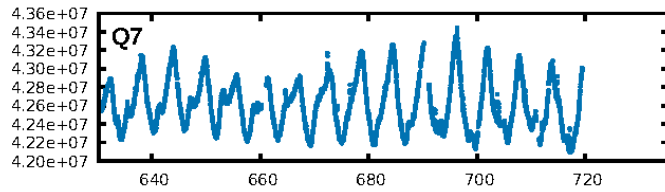
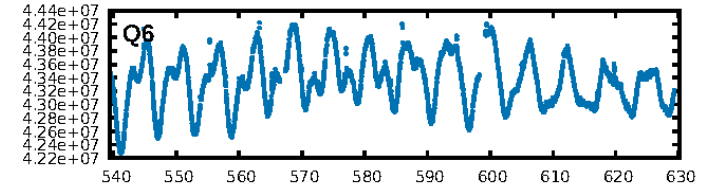
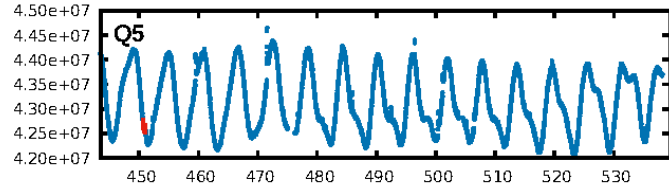
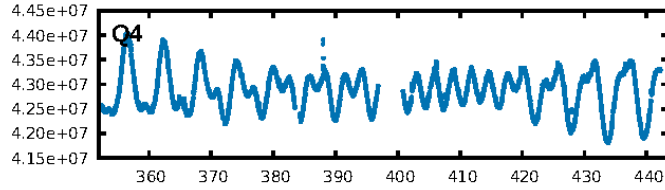
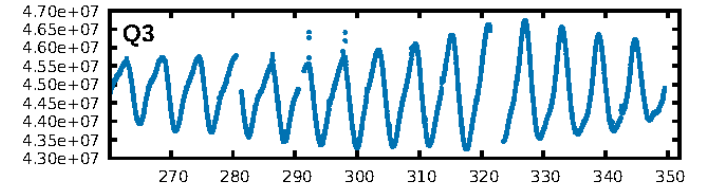
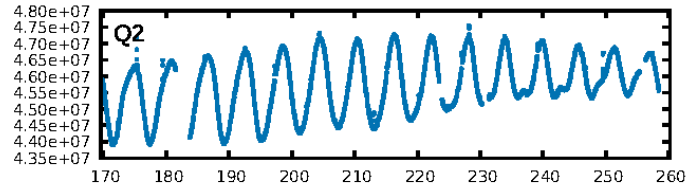
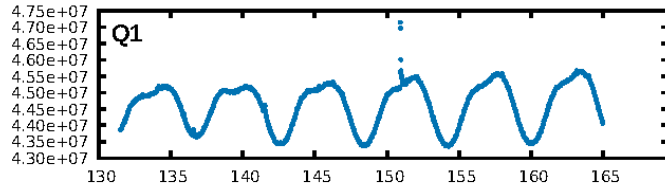
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [56.61 σ]
LongPeriod-sig: 100.0% [188.92 σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 92.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.3355
Centroid-sig: 31.6%
Centroid-so: 0.924 arcsec [1.08 σ]
OotOffset-rm: 0.119 arcsec [0.73 σ]
OotOffset-st: 0/0/2/1 [3]
KicOffset-rm: 0.131 arcsec [0.74 σ]
KicOffset-st: 0/0/2/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 0.67 [2/3]

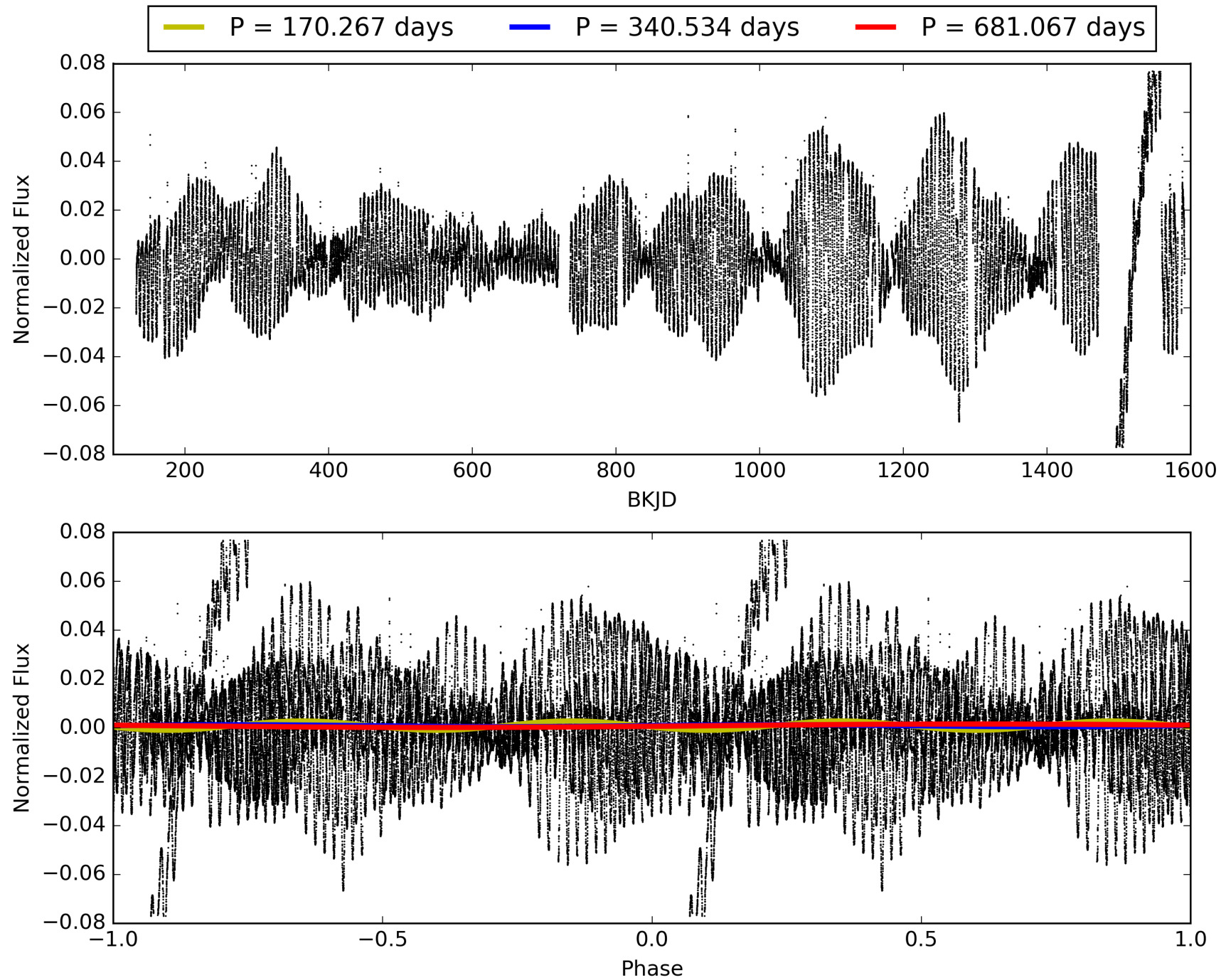
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:20:13 Z

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

TCE 011957046-05, PDC Light Curves

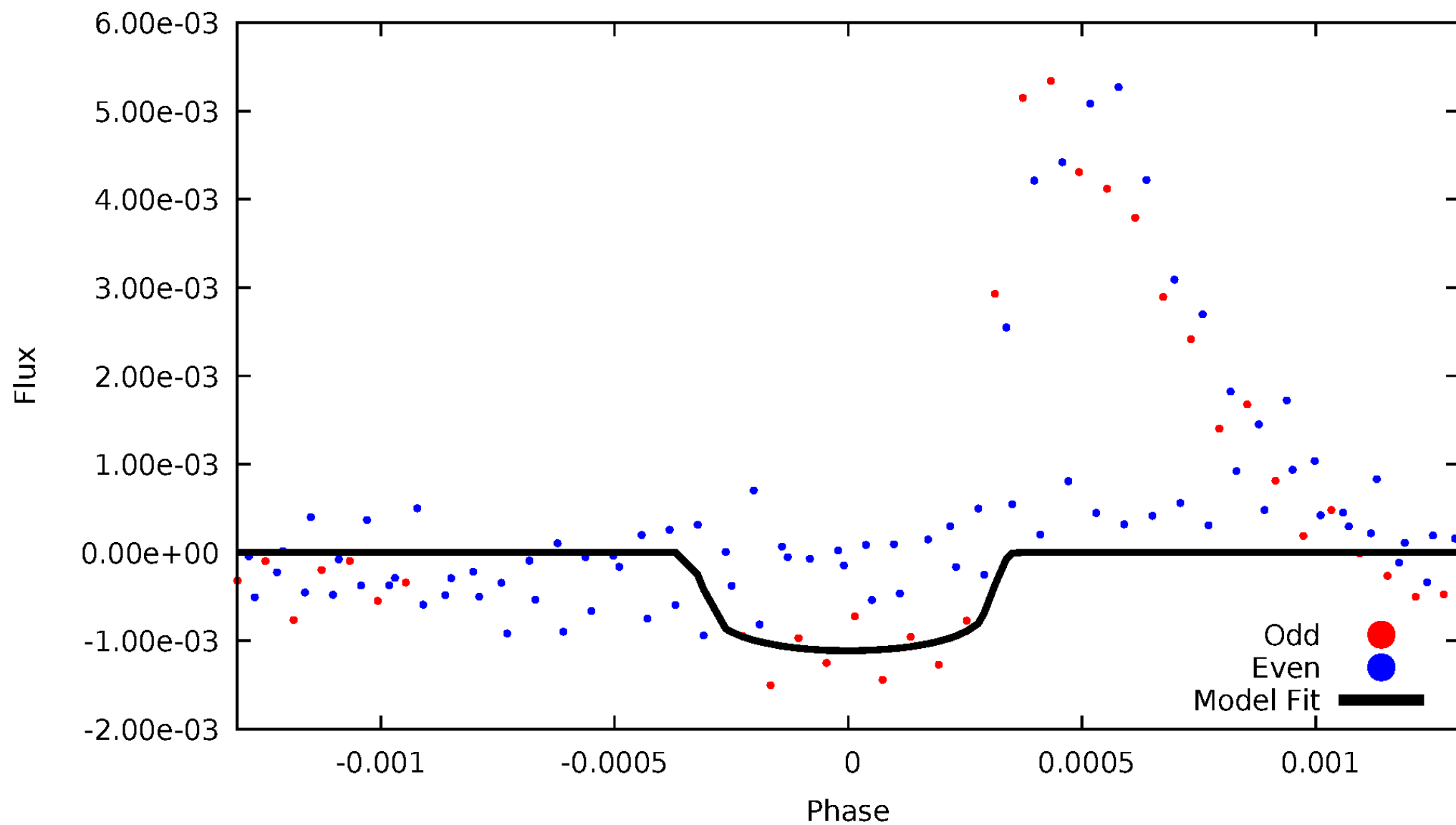


TCE 011957046-05



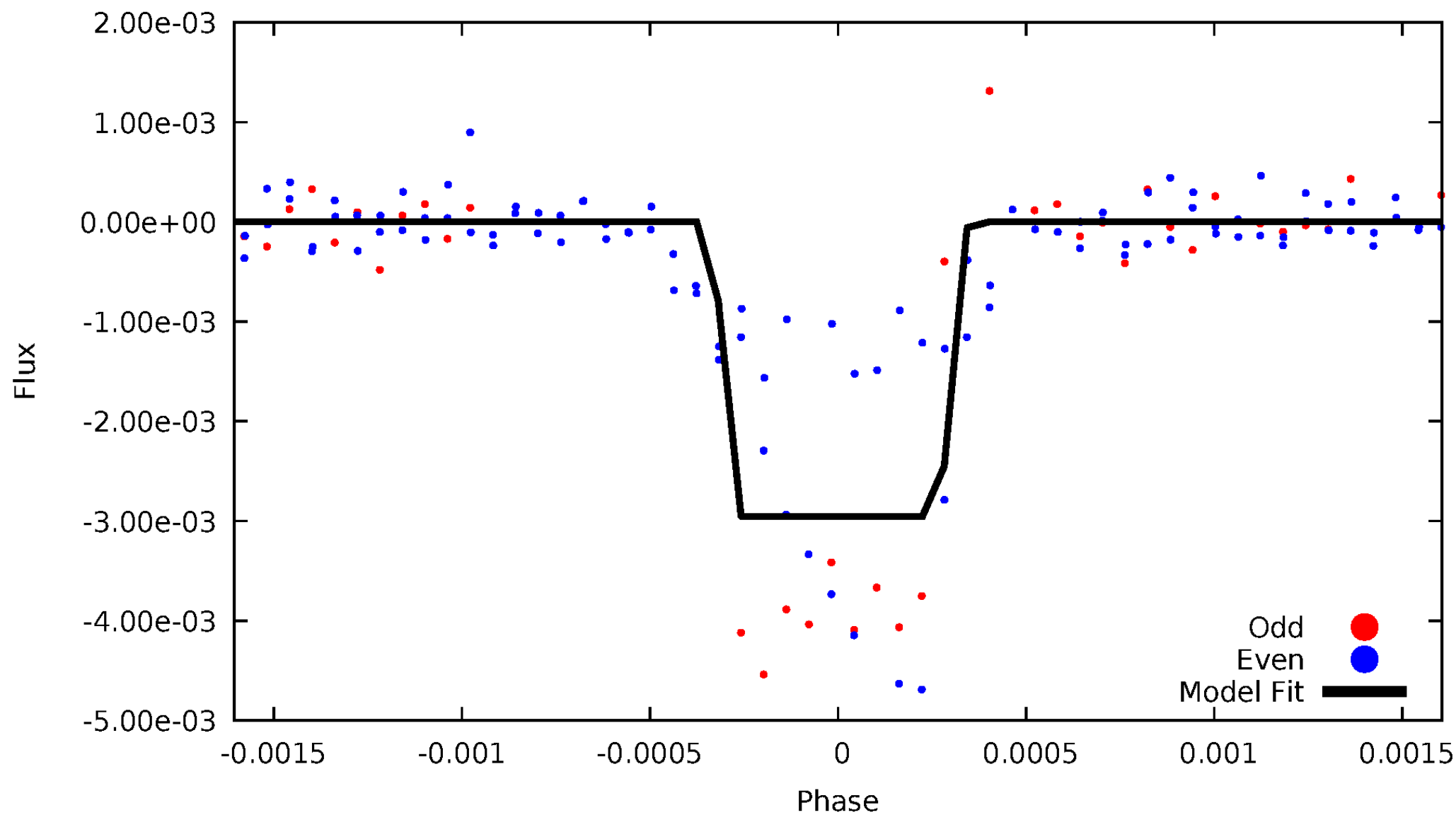
DV Odd/Even

TCE 011957046-05



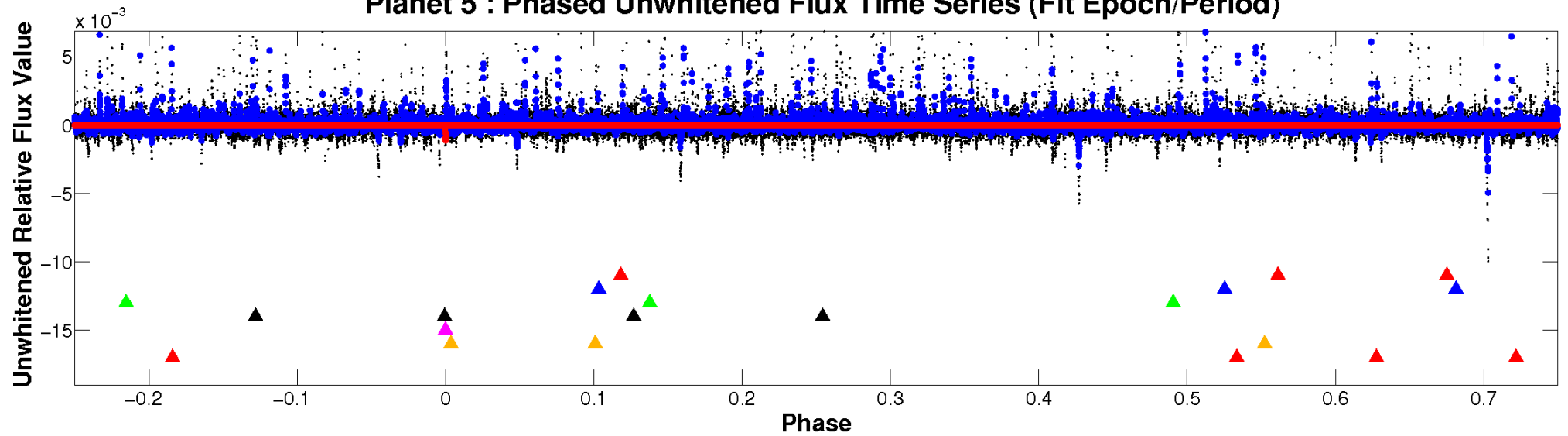
ALT Odd/Even

TCE 011957046-05

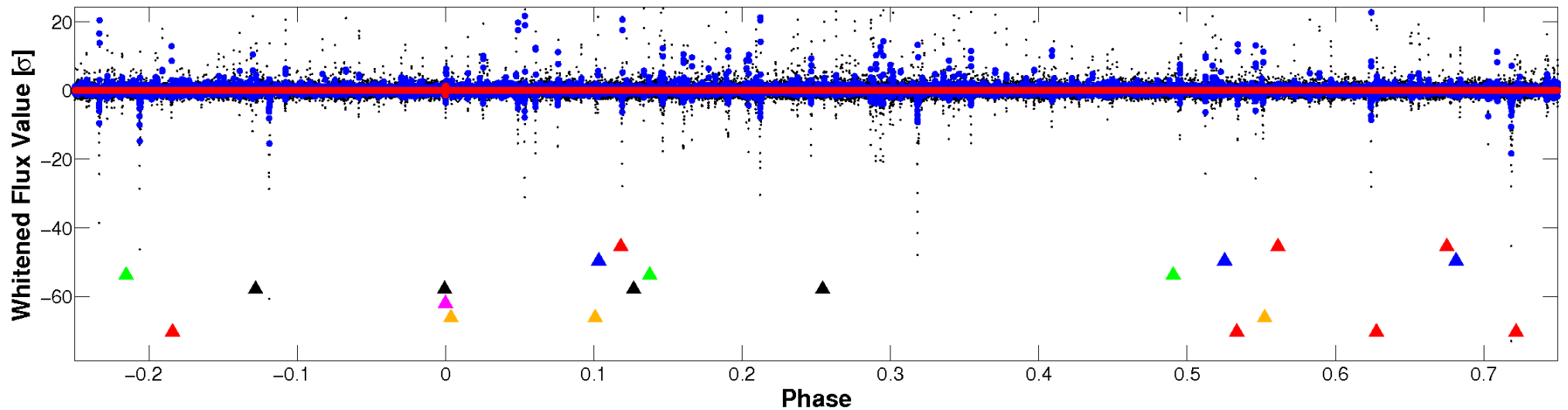


Non-Whitened Vs. Whitened Light Curve

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

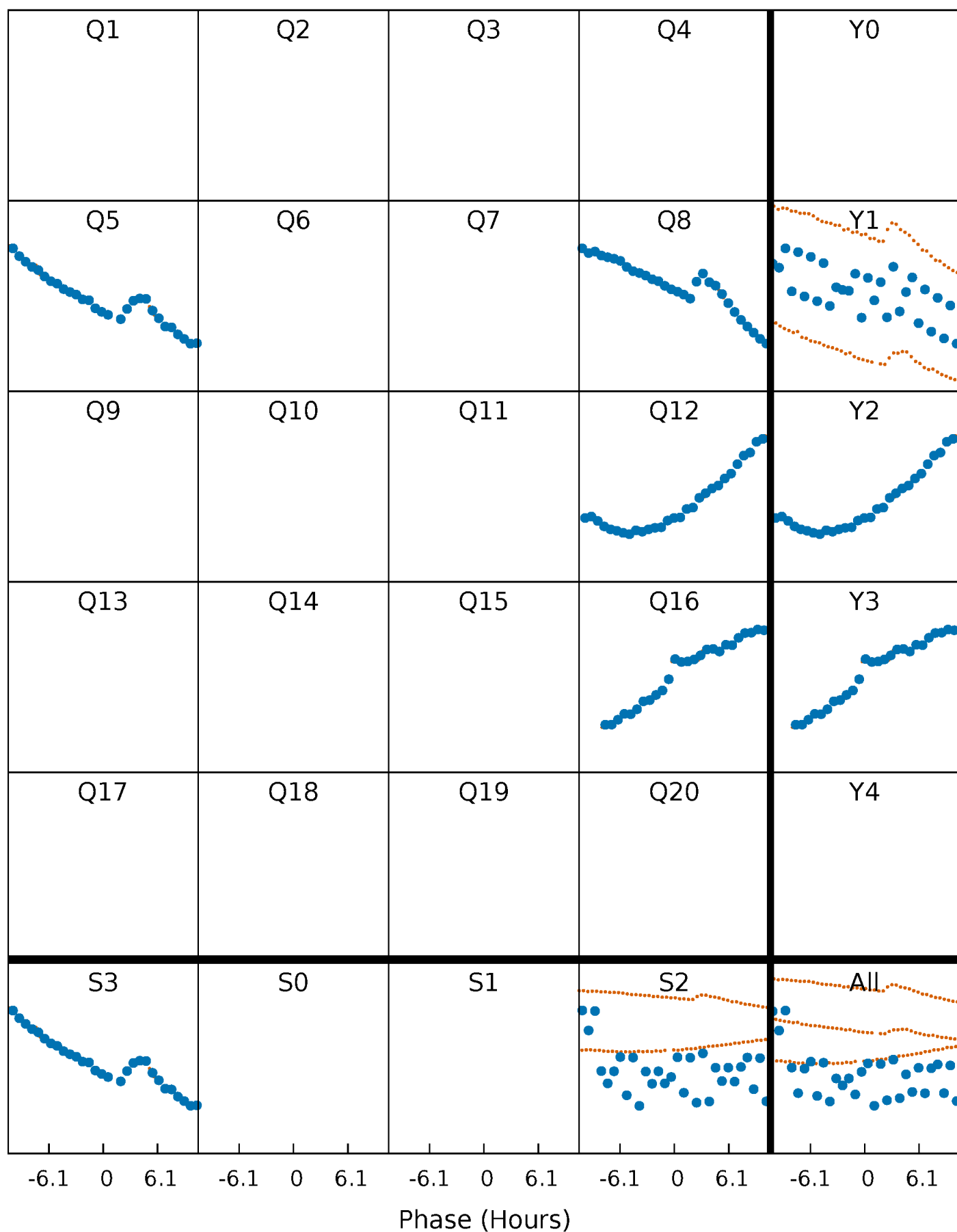


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



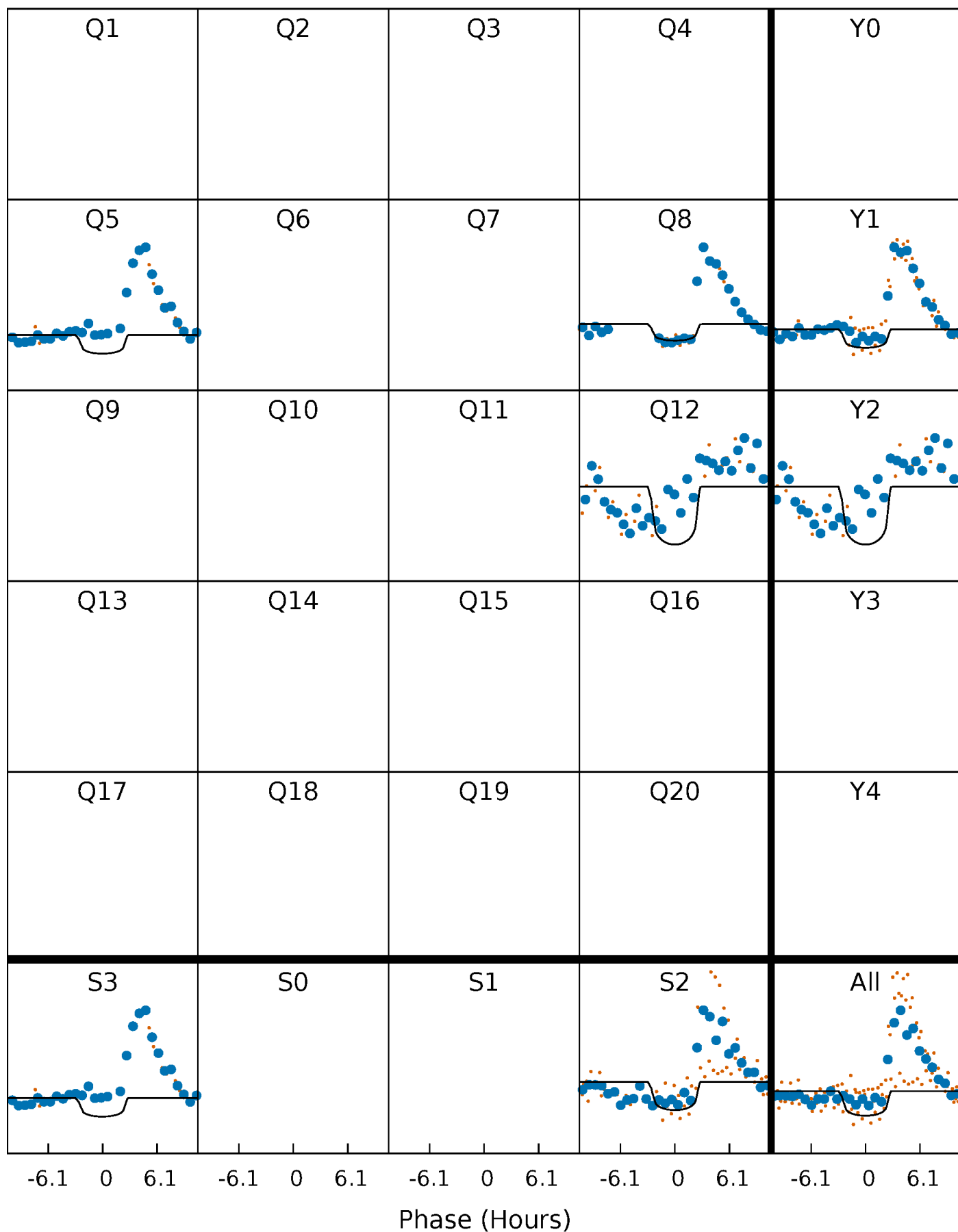
PDC Quarter-Phased Transit Curves

TCE 011957046-05 $P=340.533620$ Days $T_0=450.854512$ (BKJD)



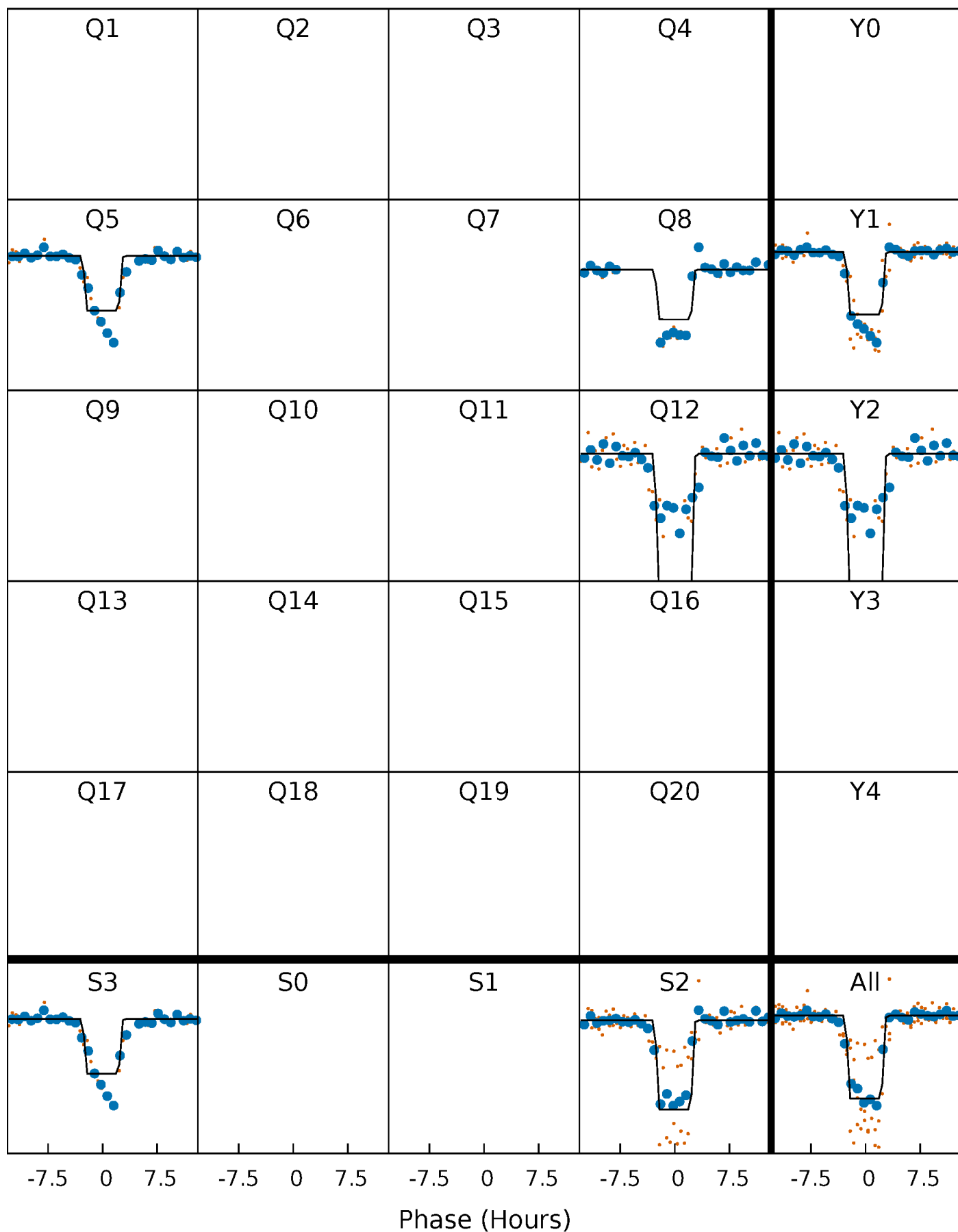
DV Quarter-Phased Transit Curves

TCE 011957046-05 $P=340.533620$ Days $T_0=450.854512$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

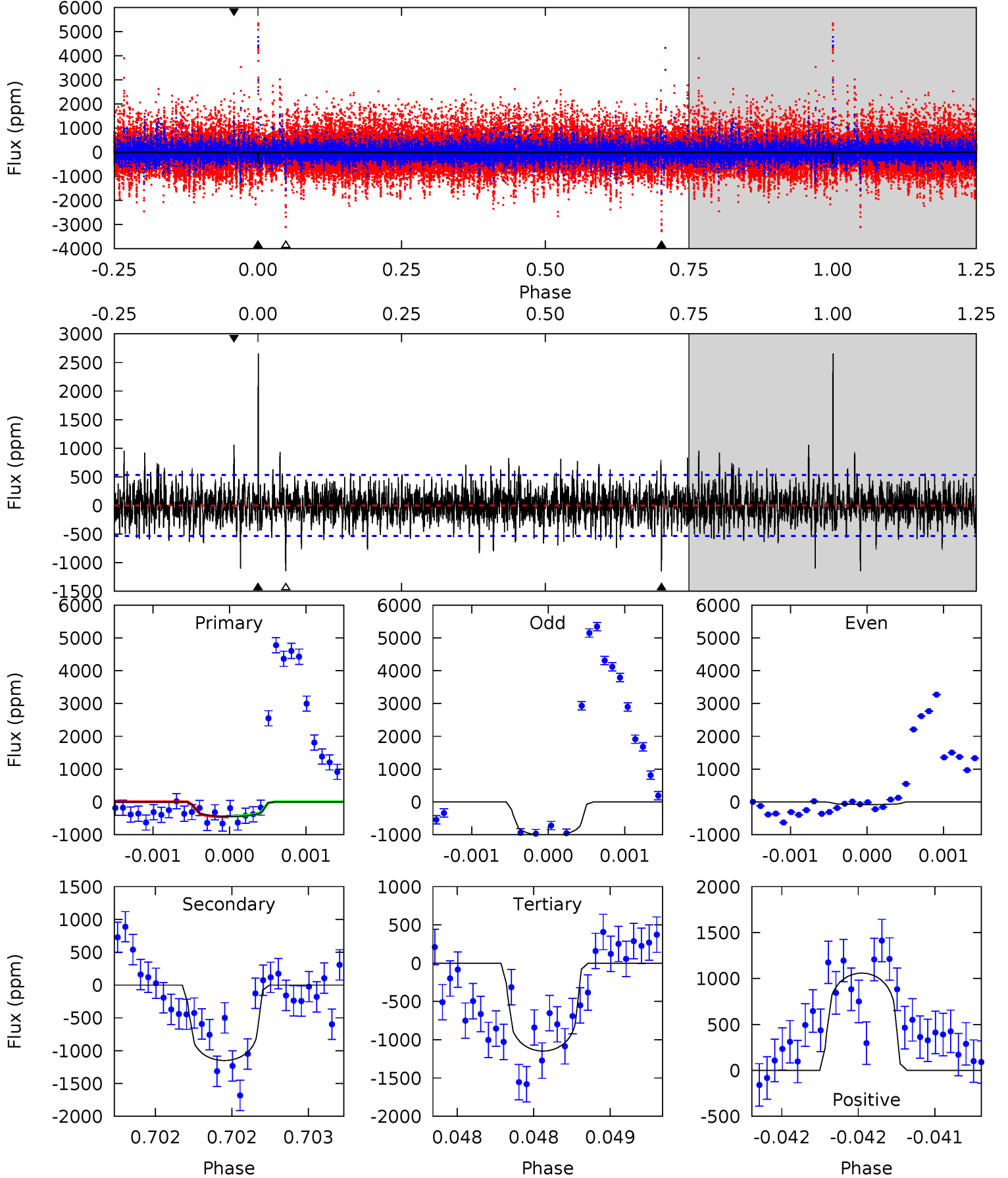
TCE 011957046-05 $P=340.525277$ Days $T_0=450.873383$ (BKJD)



DV Model-Shift Uniqueness Test

011957046-05, P = 340.533620 Days, E = 110.320892 Days

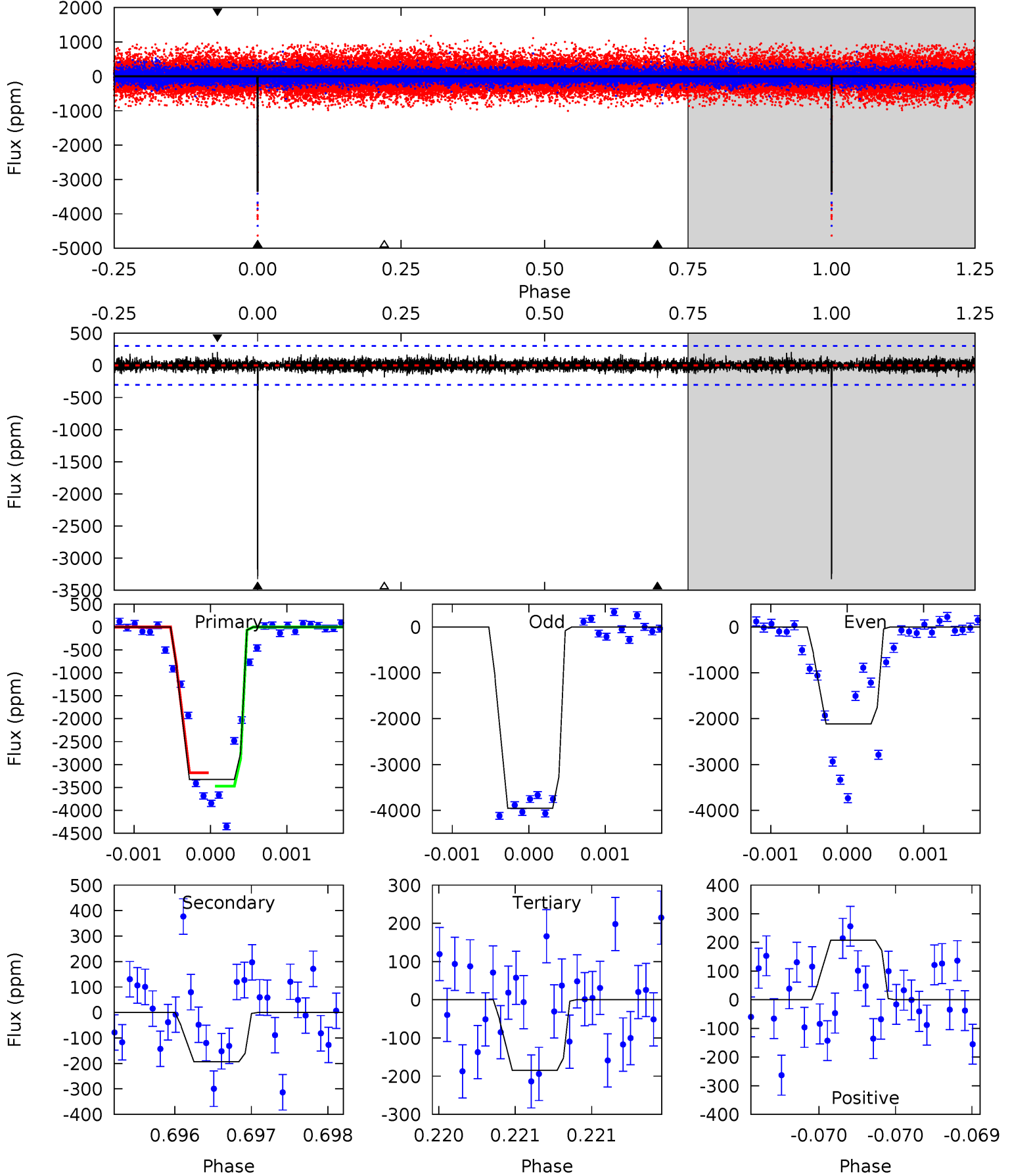
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.64	11.9	11.9	11.0	5.52	3.40	2.26	-7.26	-6.33	0.02	0.95	3.86	1.07	0.70	0.14



Alt Model-Shift Uniqueness Test

011957046-05, P = 340.525277 Days, E = 110.348106 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
60.6	3.53	3.36	3.78	5.51	3.38	0.74	57.3	56.8	0.16	-0.25	17.6	0.82	0.06	0



Stellar Parameters For KIC 011957046

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5855^{+158}_{-158}	$4.448^{+0.098}_{-0.182}$	$-0.320^{+0.300}_{-0.300}$	$0.931^{+0.255}_{-0.127}$	$0.886^{+0.119}_{-0.079}$	$1.546^{+0.665}_{-0.746}$
	+3%/-3%	+2%/-4%	+94%/-94%	+27%/-14%	+13%/-9%	+43%/-48%
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 011957046-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1150 ± 96	$6.31^{+6.41}_{-4.31}$	367^{+24}_{-17}	4560^{+3313}_{-972}	$12980^{+122403}_{-9620}$
Alt.	-194 ± 55	$7.39^{+6.08}_{-4.59}$	367^{+25}_{-17}	3196^{+1254}_{-513}	1623^{+10133}_{-1187}

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

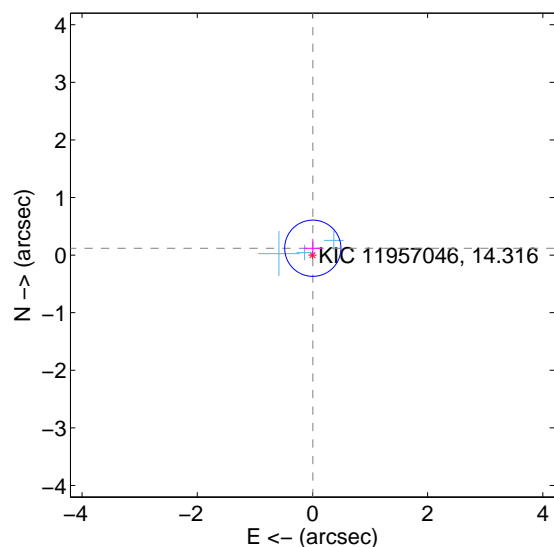
Supplemental centroid analysis for 011957046-05. Kepler magnitude: 14.32. Transit SNR 6.69

There are 3 quarters with good PRF difference image offsets

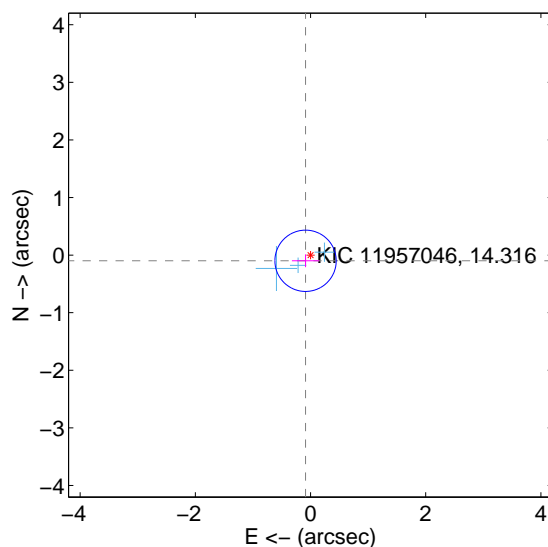
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.119 ± 0.163	0.73	-0.006 ± 0.156	0.119 ± 0.163
PRF-fit source offset from KIC position	0.131 ± 0.177	0.74	0.086 ± 0.238	-0.099 ± 0.111
photometric centroid source offset	0.92 ± 0.86	1.08	-0.86 ± 0.84	0.34 ± 0.99

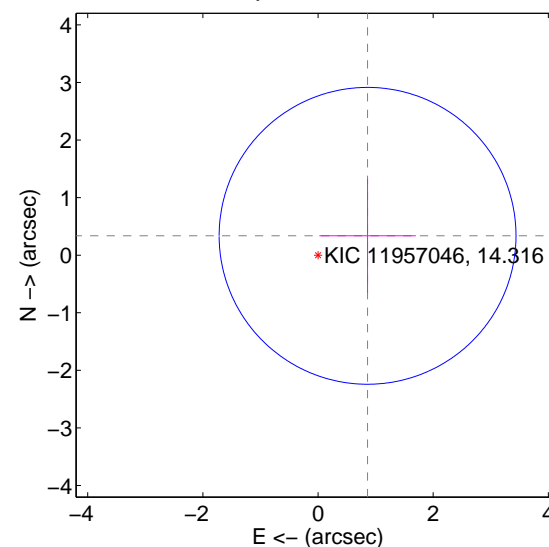
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

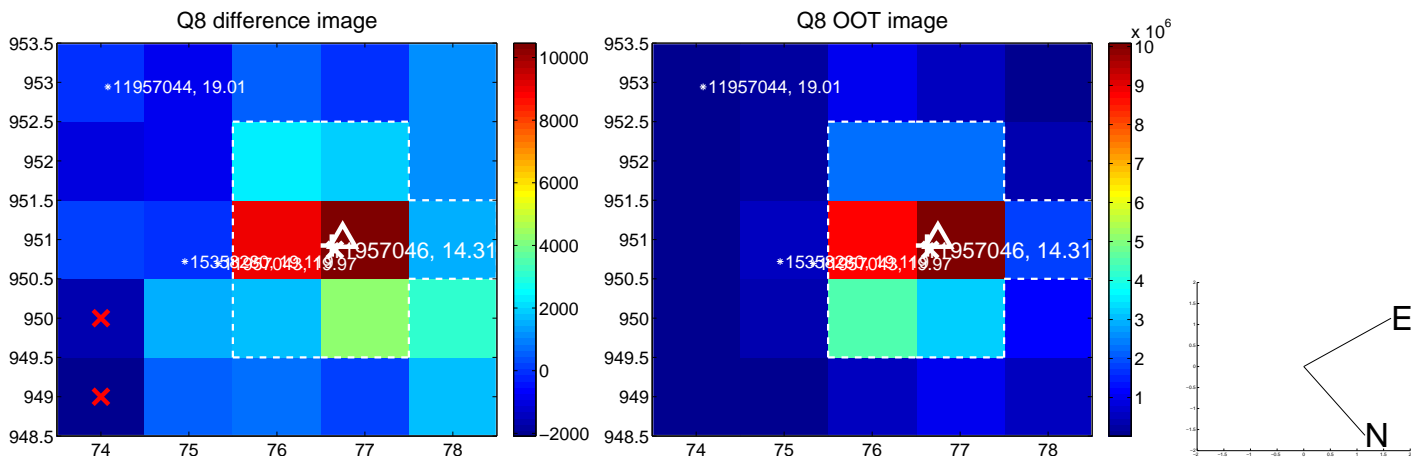
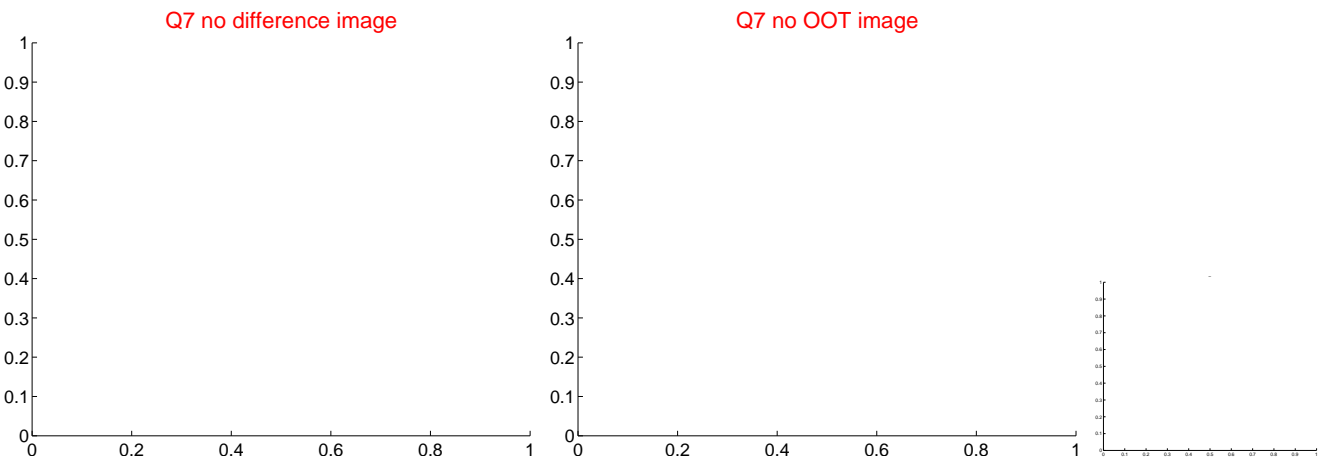
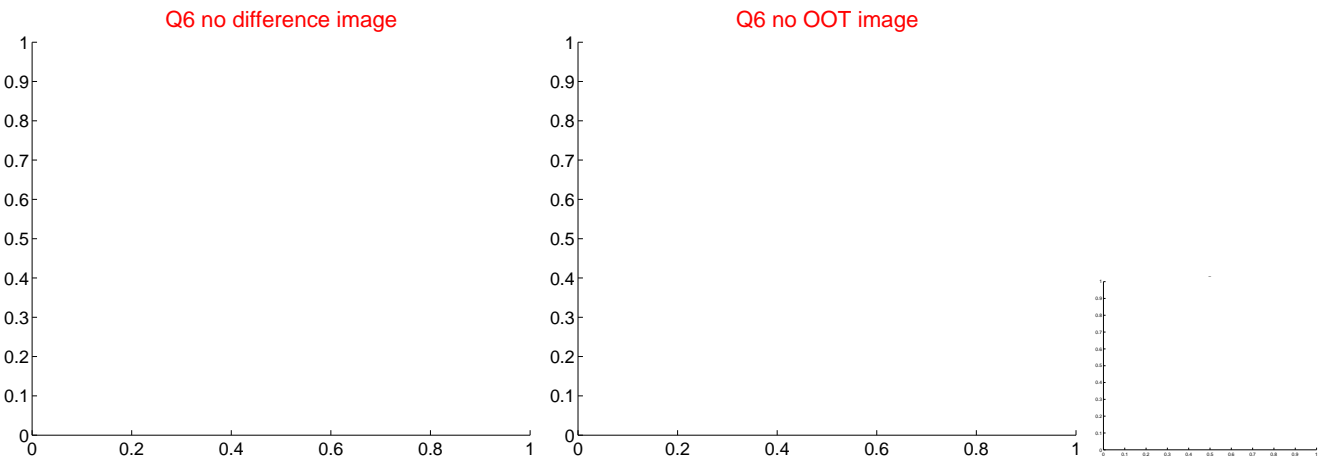
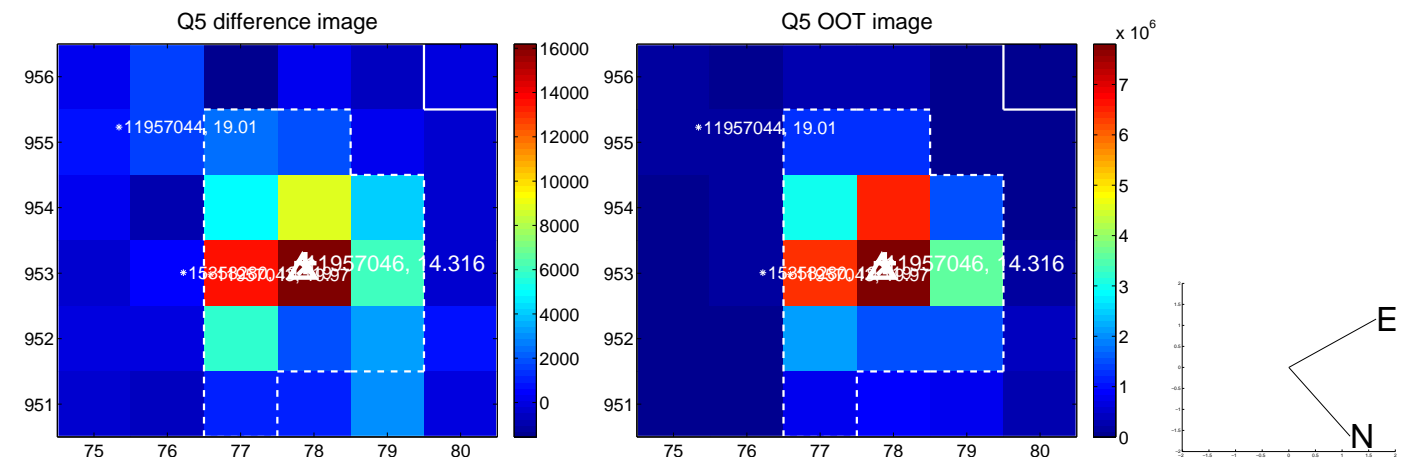


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

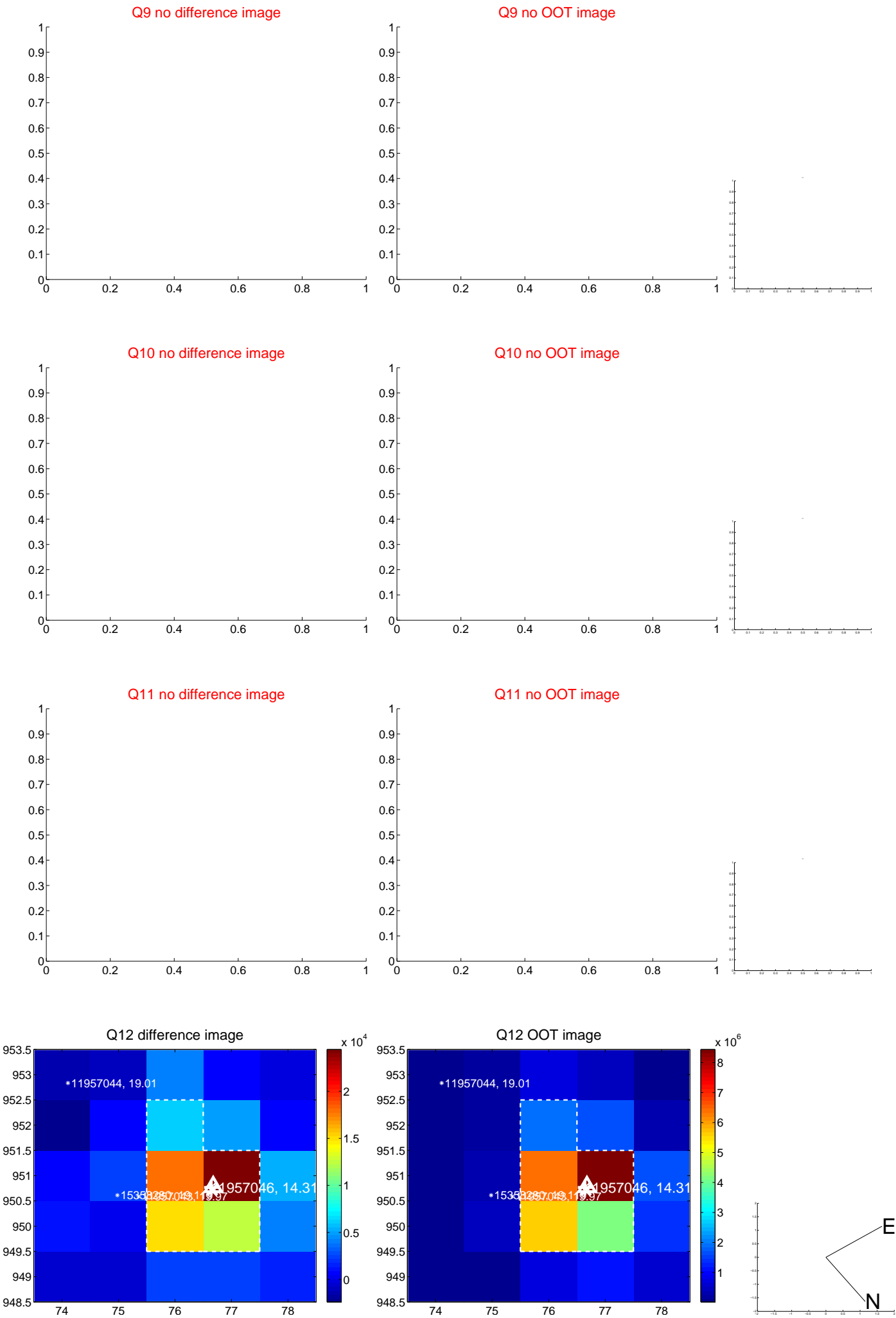
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



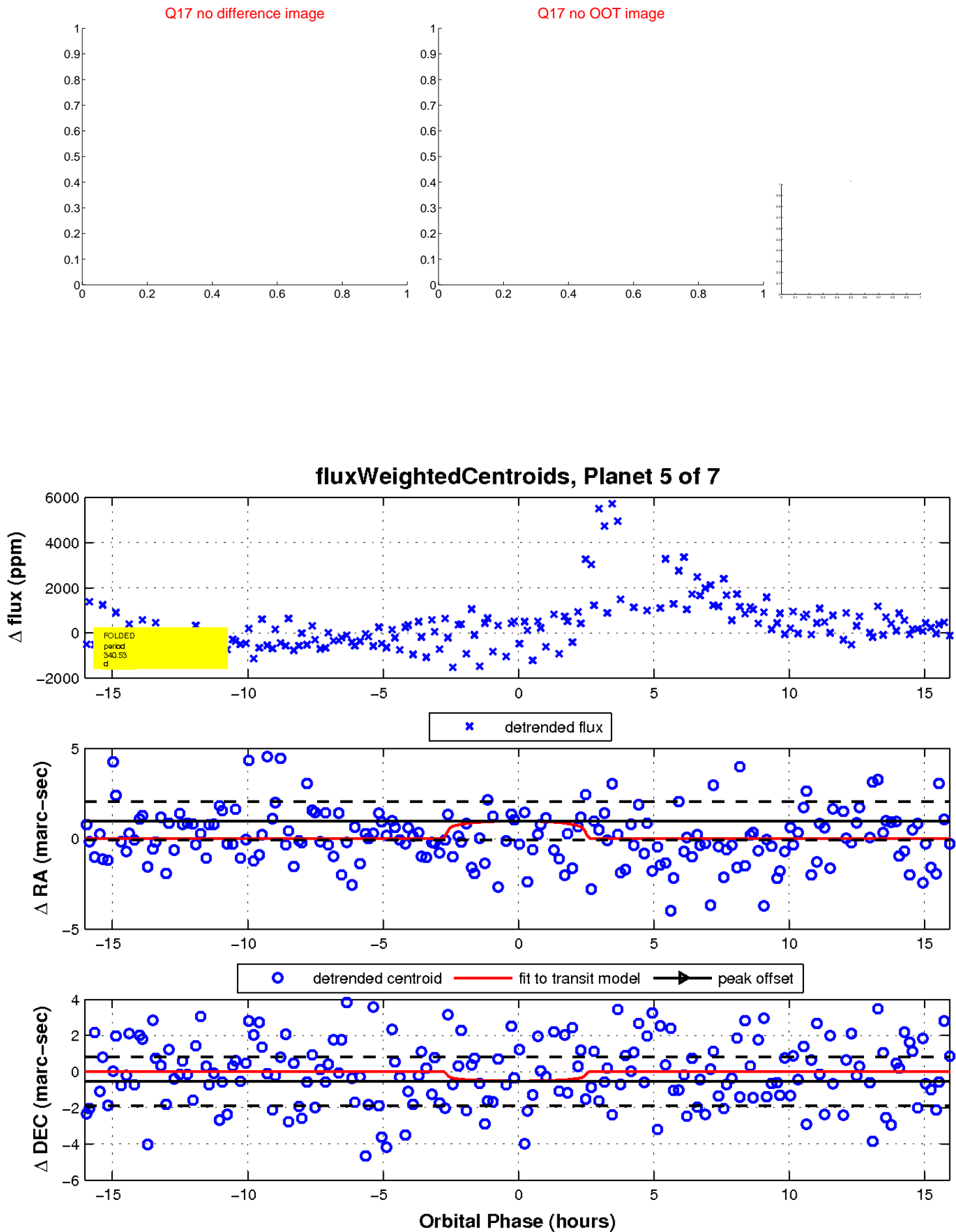
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

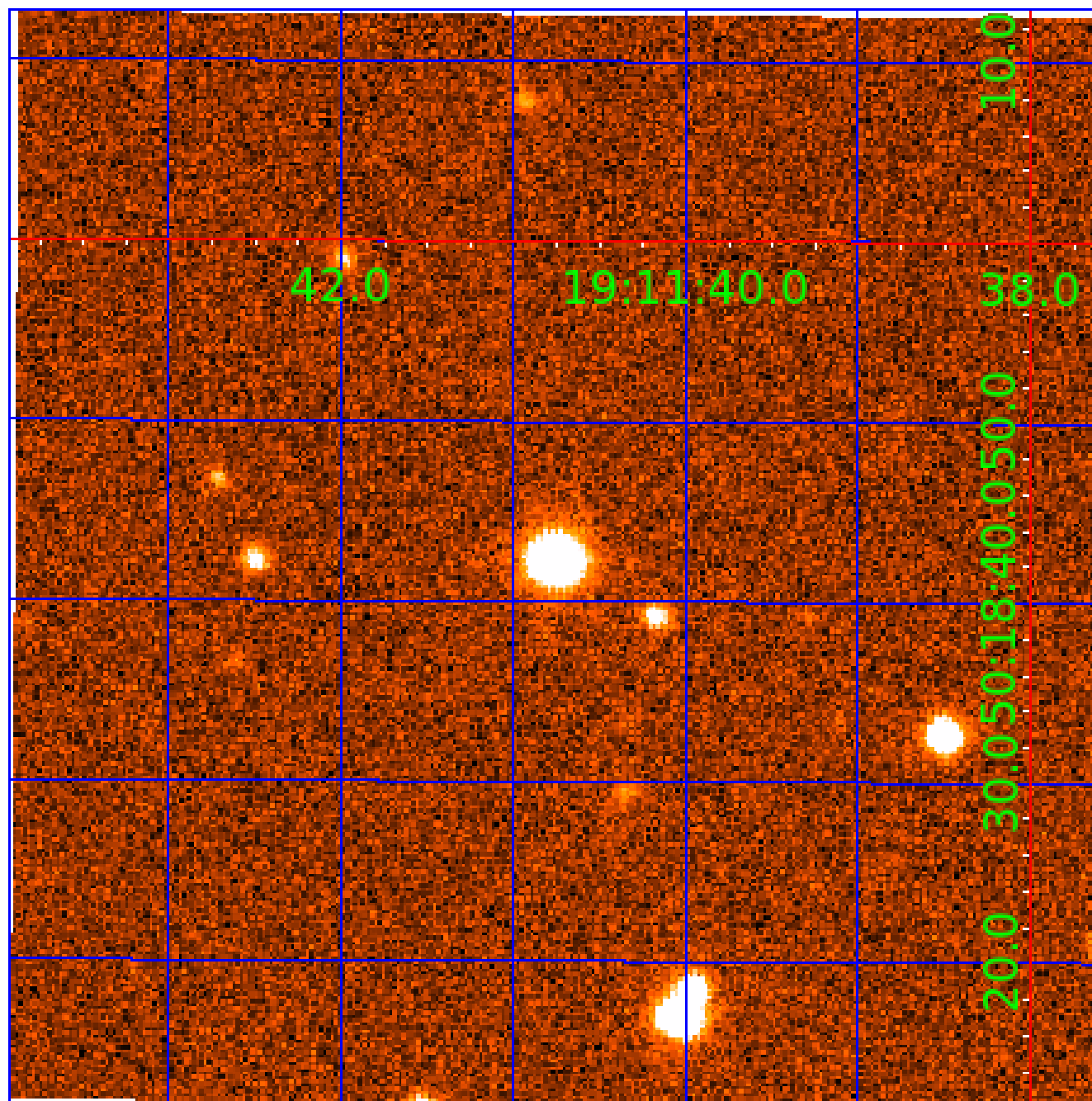


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011957046

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})
011957046-01	OBS	No	530.187690	301.455493	1765.7	3.490	19.5	9.7	0.93	5855	7.45	0.60
011957046-02	OBS	No	484.240119	342.344114	1018.2	5.051	19.7	5.5	0.93	5855	2.98	0.68
011957046-03	OBS	No	460.735679	377.538353	1969.7	9.301	18.4	9.0	0.93	5855	4.14	0.72
011957046-04	OBS	No	383.933176	407.255607	544.1	1.365	18.6	3.3	0.93	5855	2.55	0.93
011957046-05	OBS	No	340.533620	450.854512	1110.8	5.342	18.4	6.7	0.93	5855	3.13	1.08
011957046-06	OBS	No	527.354515	452.120802	1638.1	9.059	16.4	8.4	0.93	5855	3.89	0.61
011957046-07	OBS	No	308.471833	388.183752	757.3	12.500	15.5	-1.0	0.93	5855	2.55	1.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011957046-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
011957046-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-03	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
011957046-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—HALO_GHOST
011957046-07	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

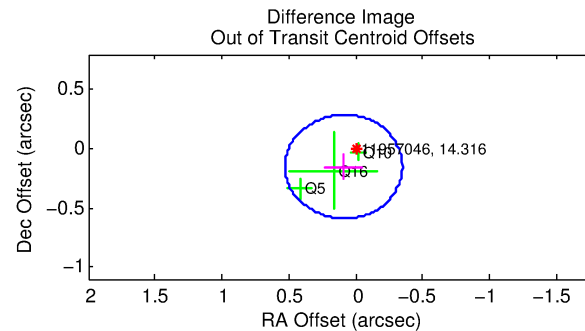
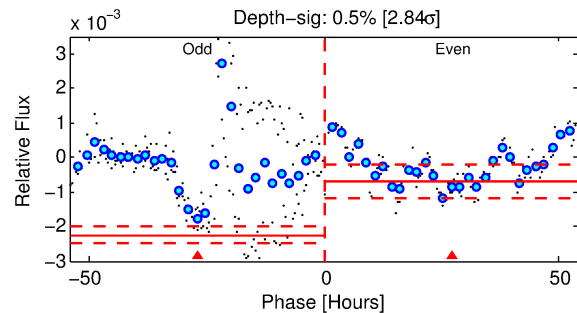
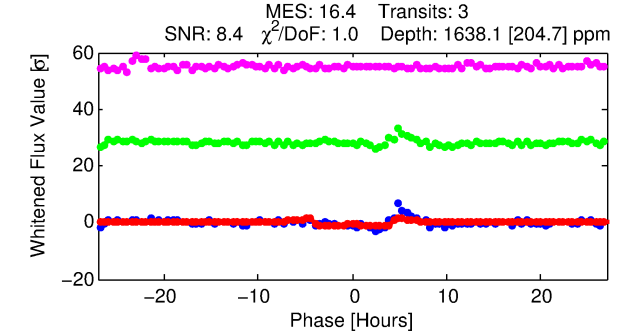
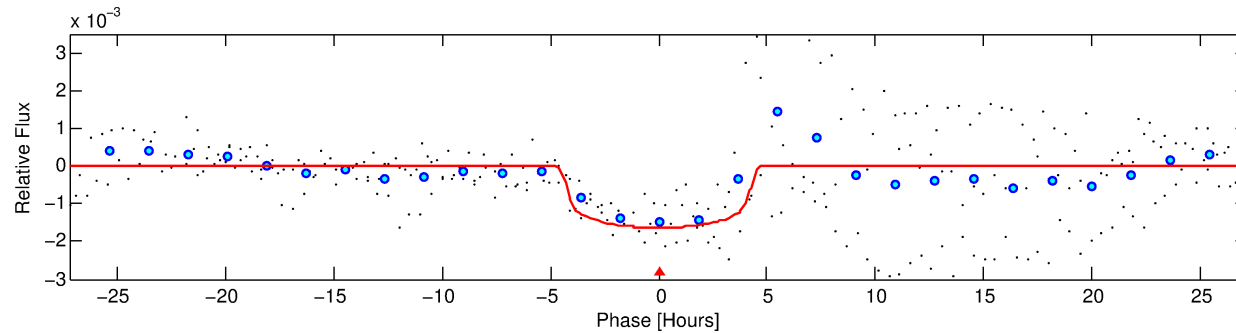
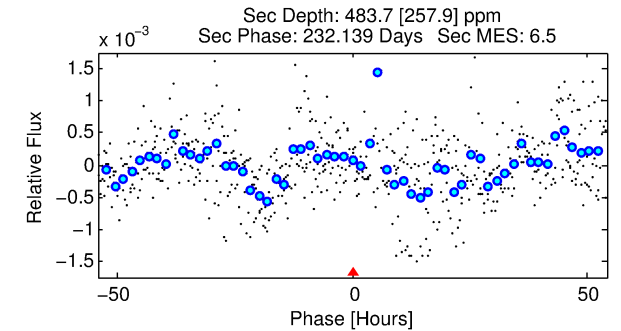
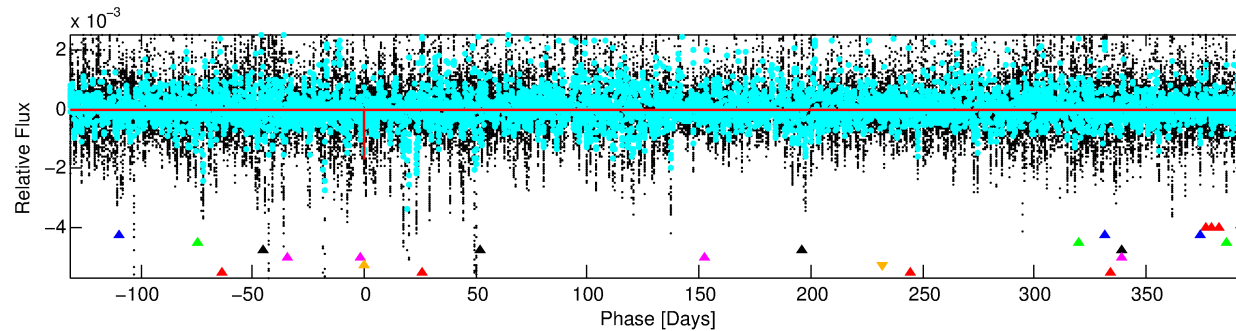
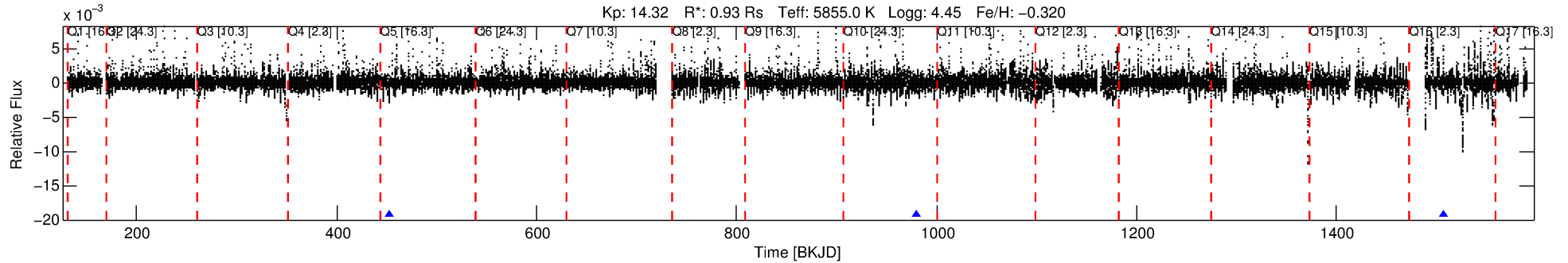
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011957046-06

No Significant Match Found

DV One-Page Summary

KIC: 11957046 Candidate: 6 of 7 Period: 527.355 d



DV Fit Results:

Period = 527.35452 [0.00460] d
Epoch = 452.1208 [0.0058] BKJD
Rp/R* = 0.0383 [0.0084]
a/R* = 393.65 [365.54]
b = 0.54 [1.21]
Seff = 0.61 [0.21]
Teff = 225 [20] K
Rp = 3.89 [1.36] Re
a = 1.2276 [0.2822] AU
Ag = 26492.93 [20307.81] [1.30σ]
Teffp = 4437 [775] K [5.43σ]

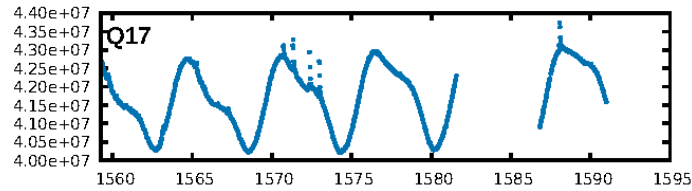
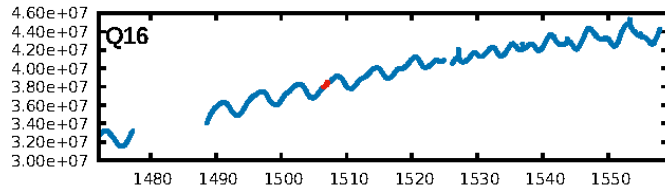
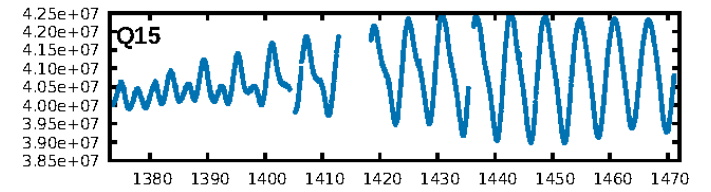
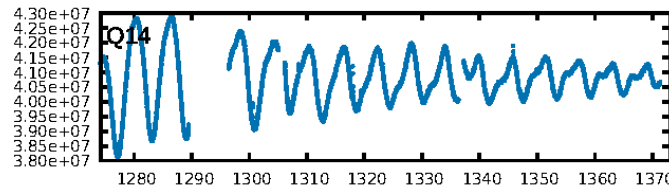
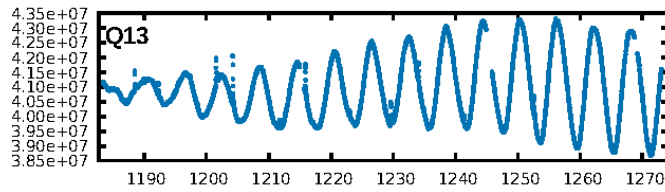
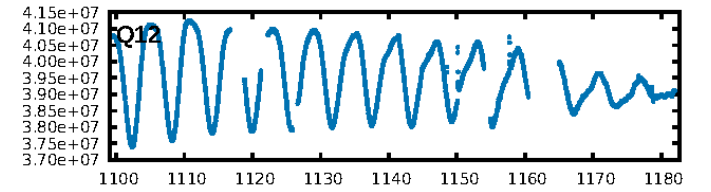
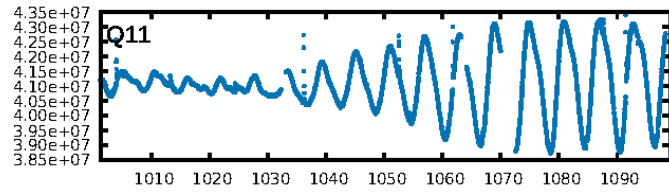
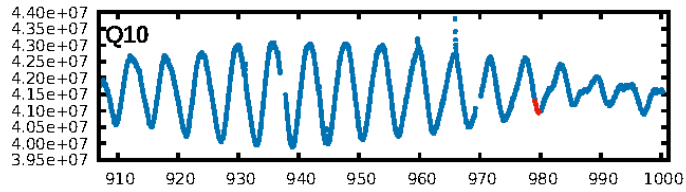
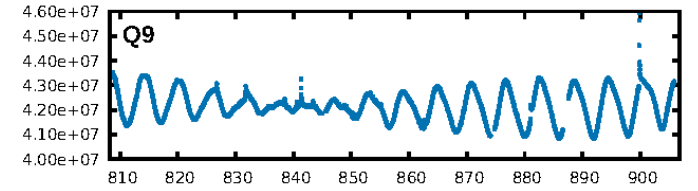
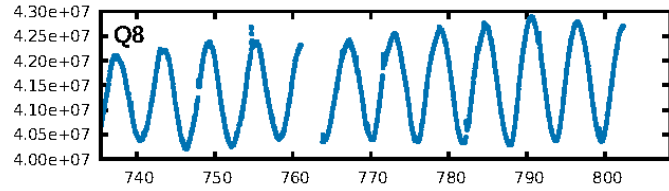
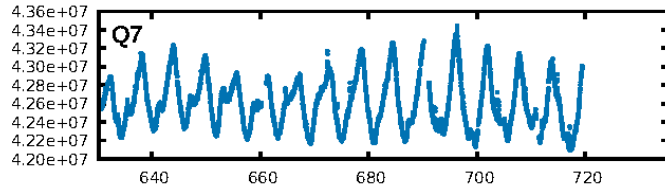
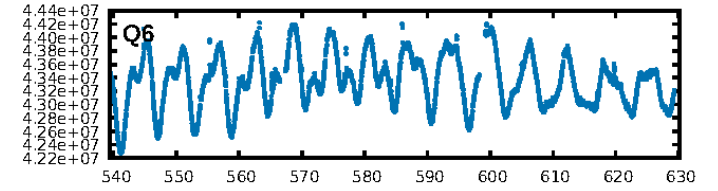
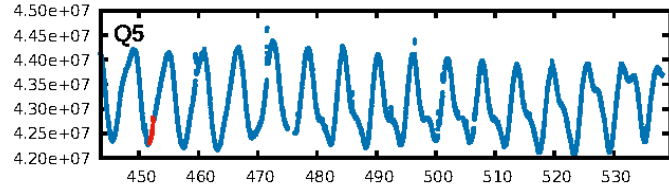
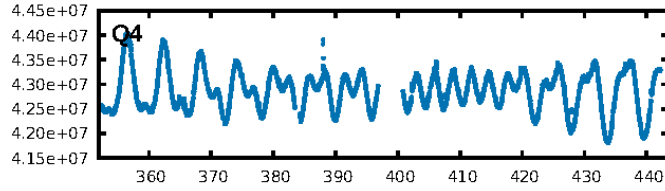
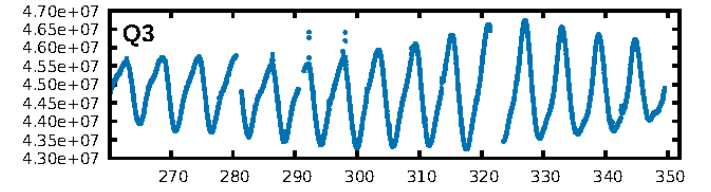
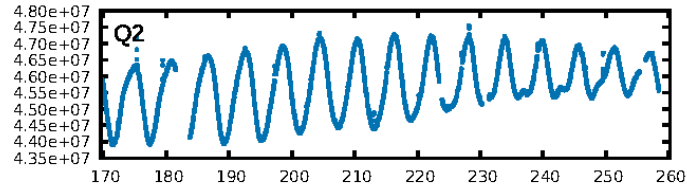
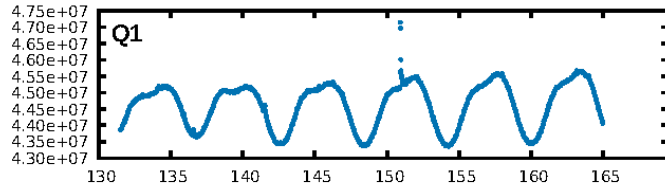
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [99.76σ]
LongPeriod-sig: 100.0% [7.00σ]
ModelChiSquare2-sig: 0.7%
ModelChiSquareGof-sig: 95.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.04808
Centroid-sig: 0.0%
Centroid-so: 1.188 arcsec [2.80σ]
OotOffset-rm: 0.176 arcsec [1.20σ]
KicOffset-rm: 0.389 arcsec [2.93σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

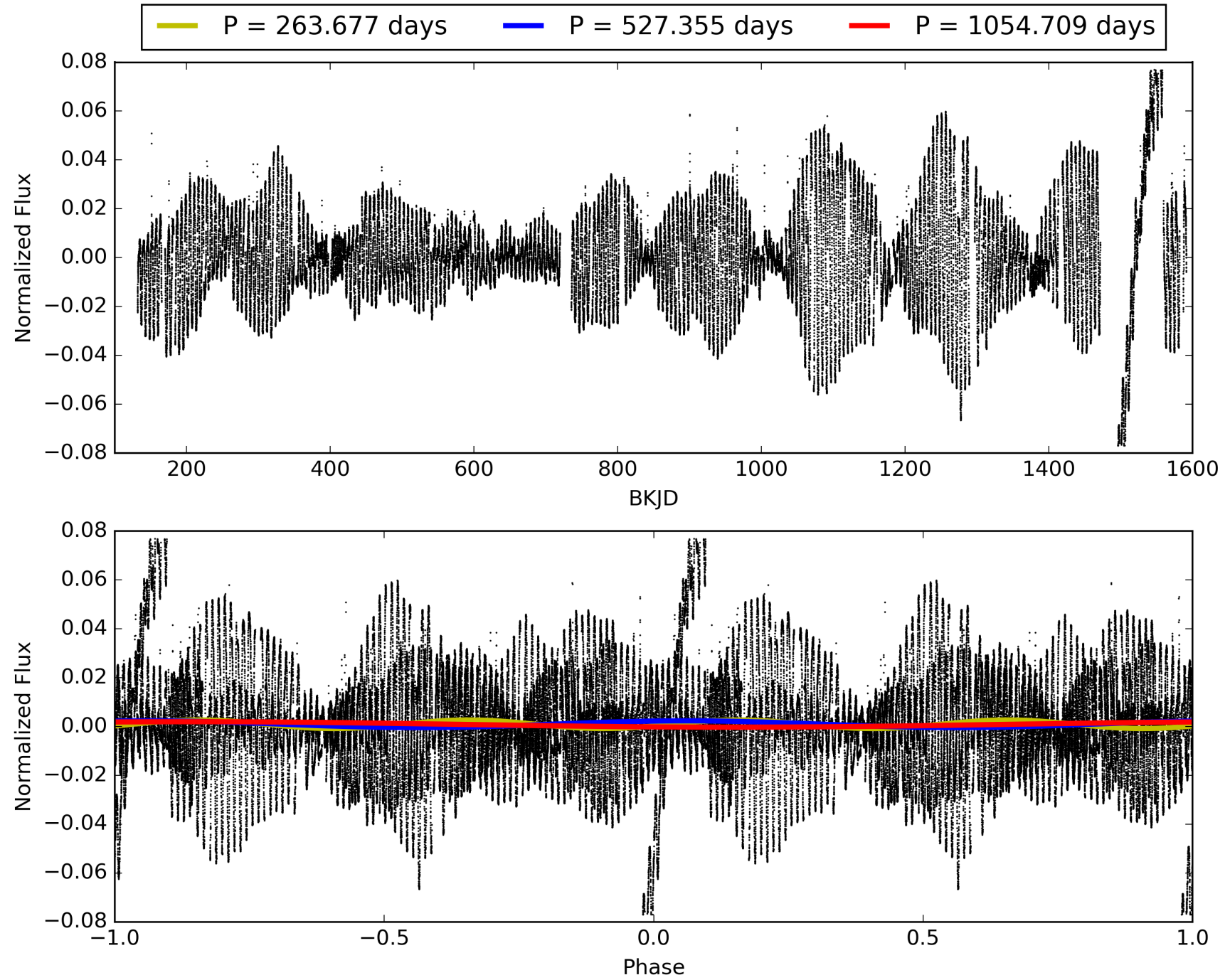
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:20:24 Z

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

TCE 011957046-06, PDC Light Curves

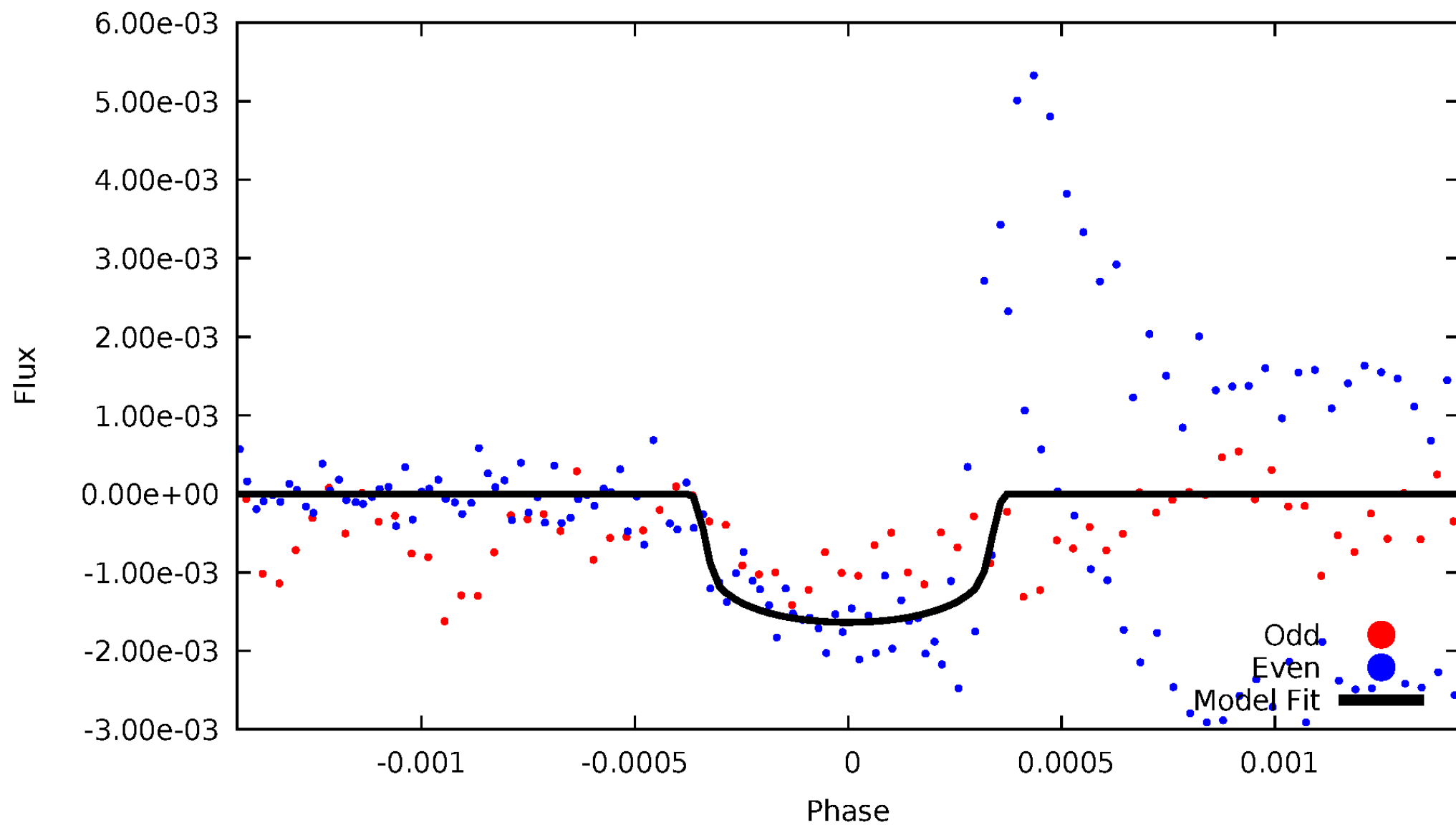


TCE 011957046-06



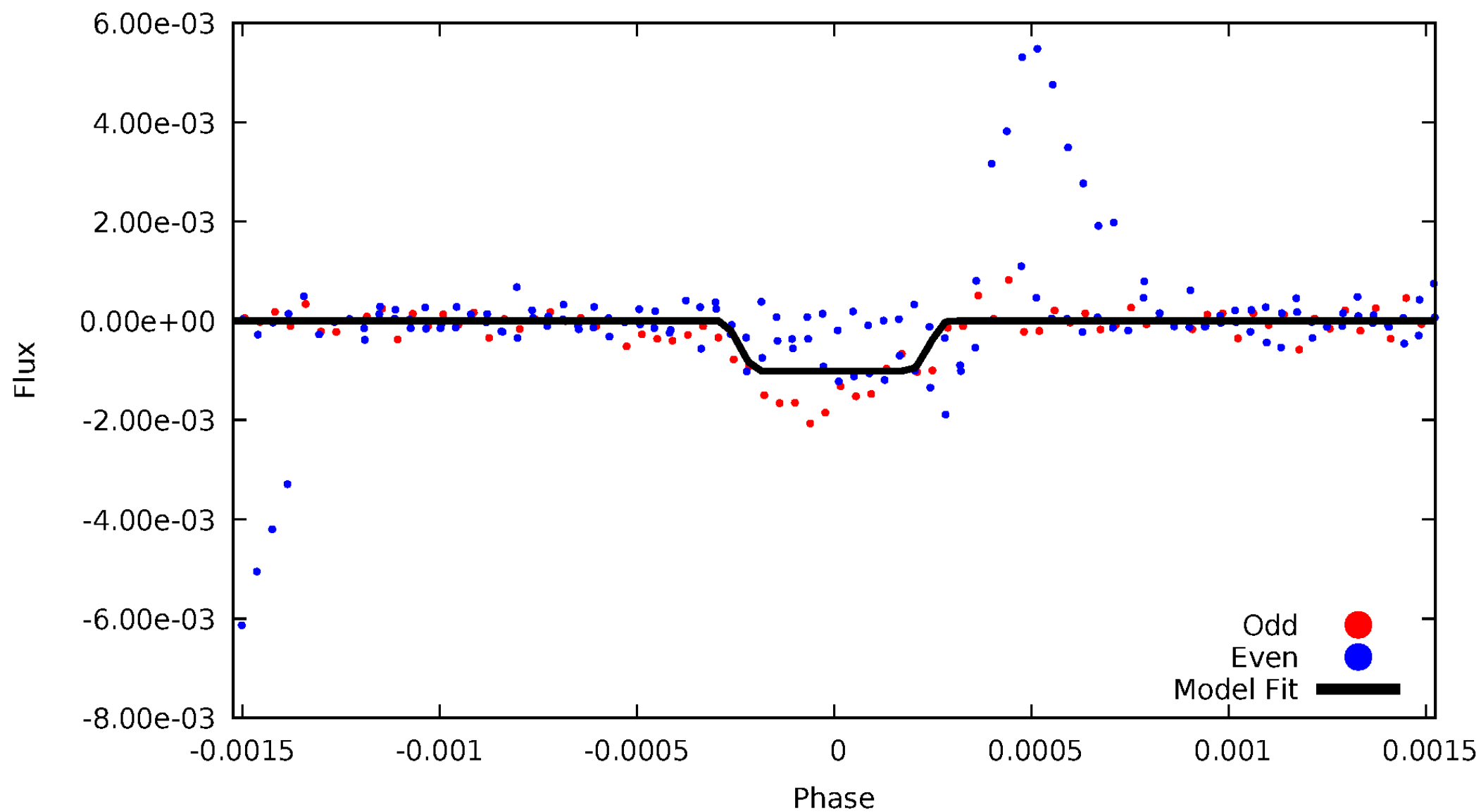
DV Odd/Even

TCE 011957046-06



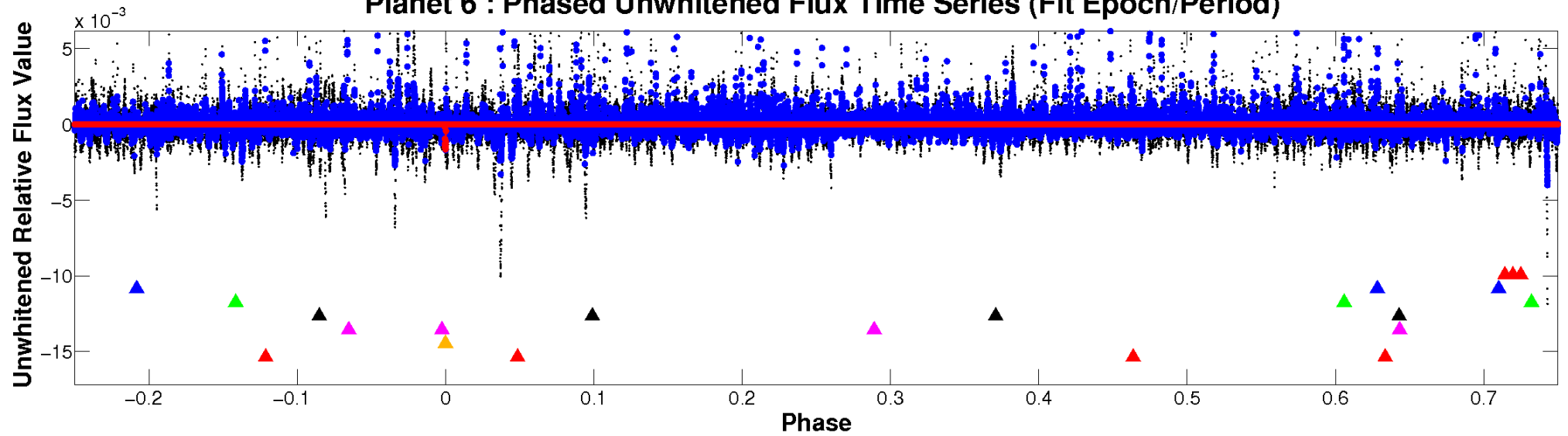
ALT Odd/Even

TCE 011957046-06

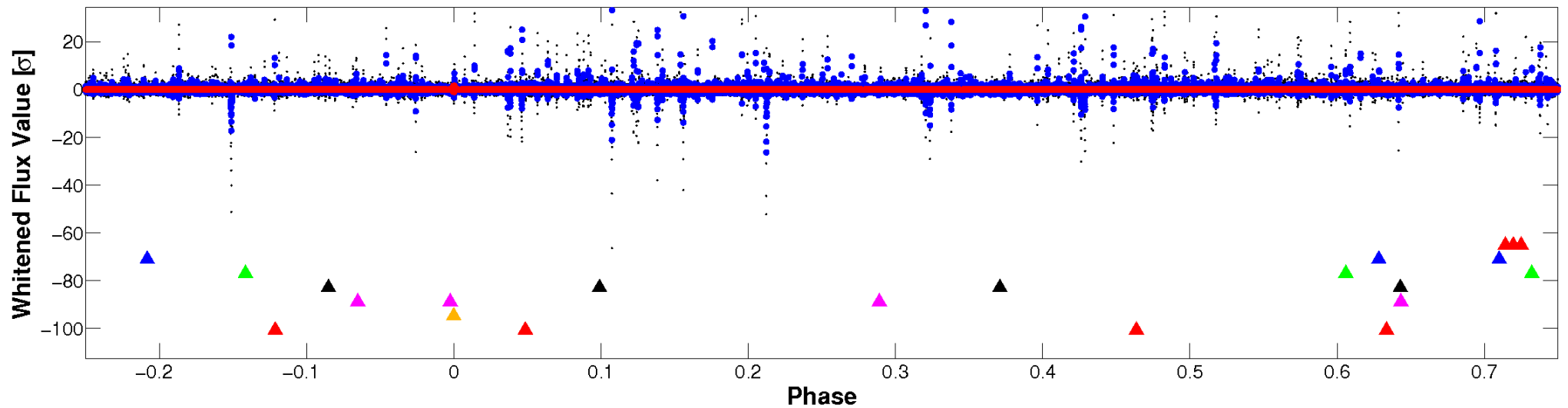


Non-Whitened Vs. Whitened Light Curve

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

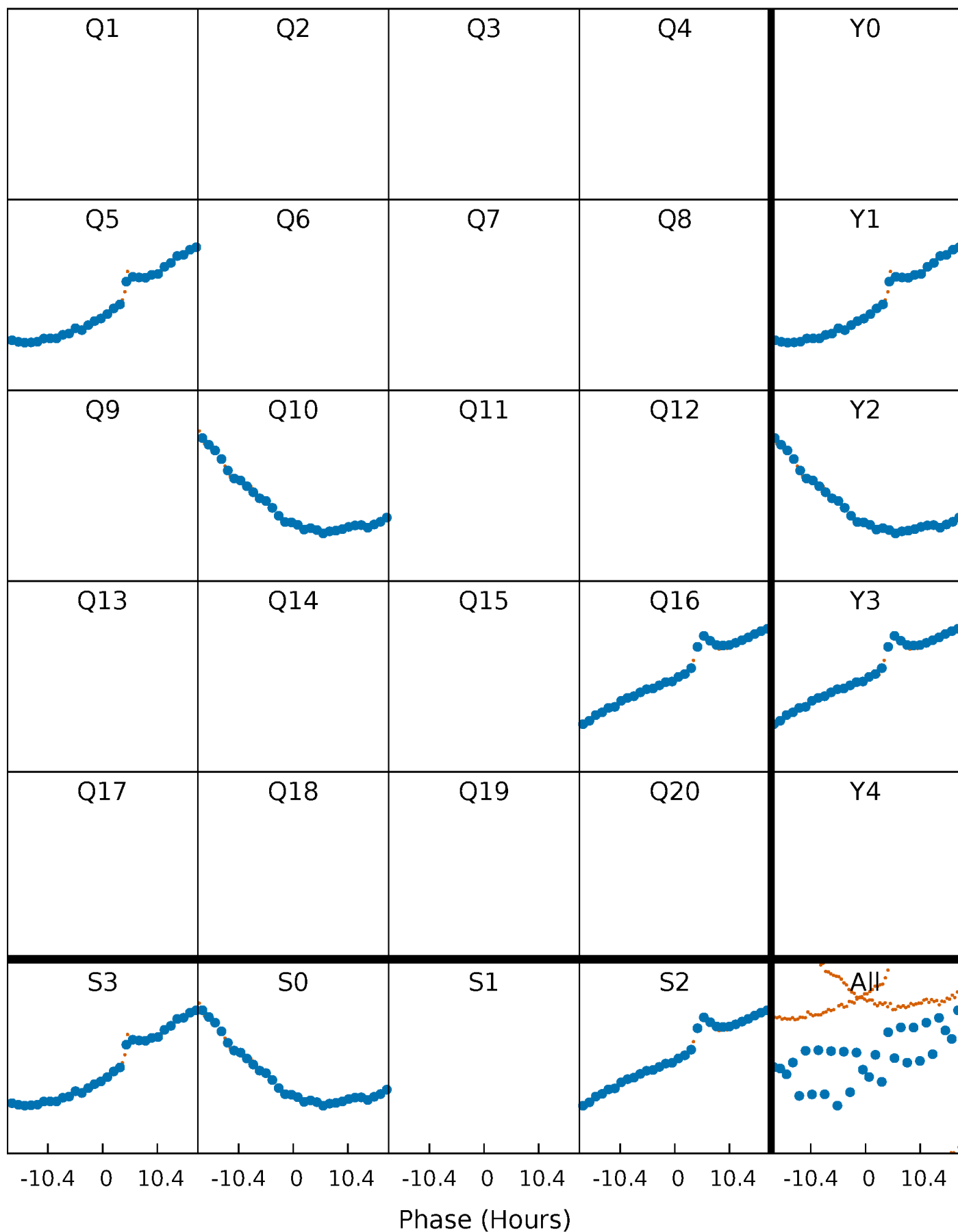


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



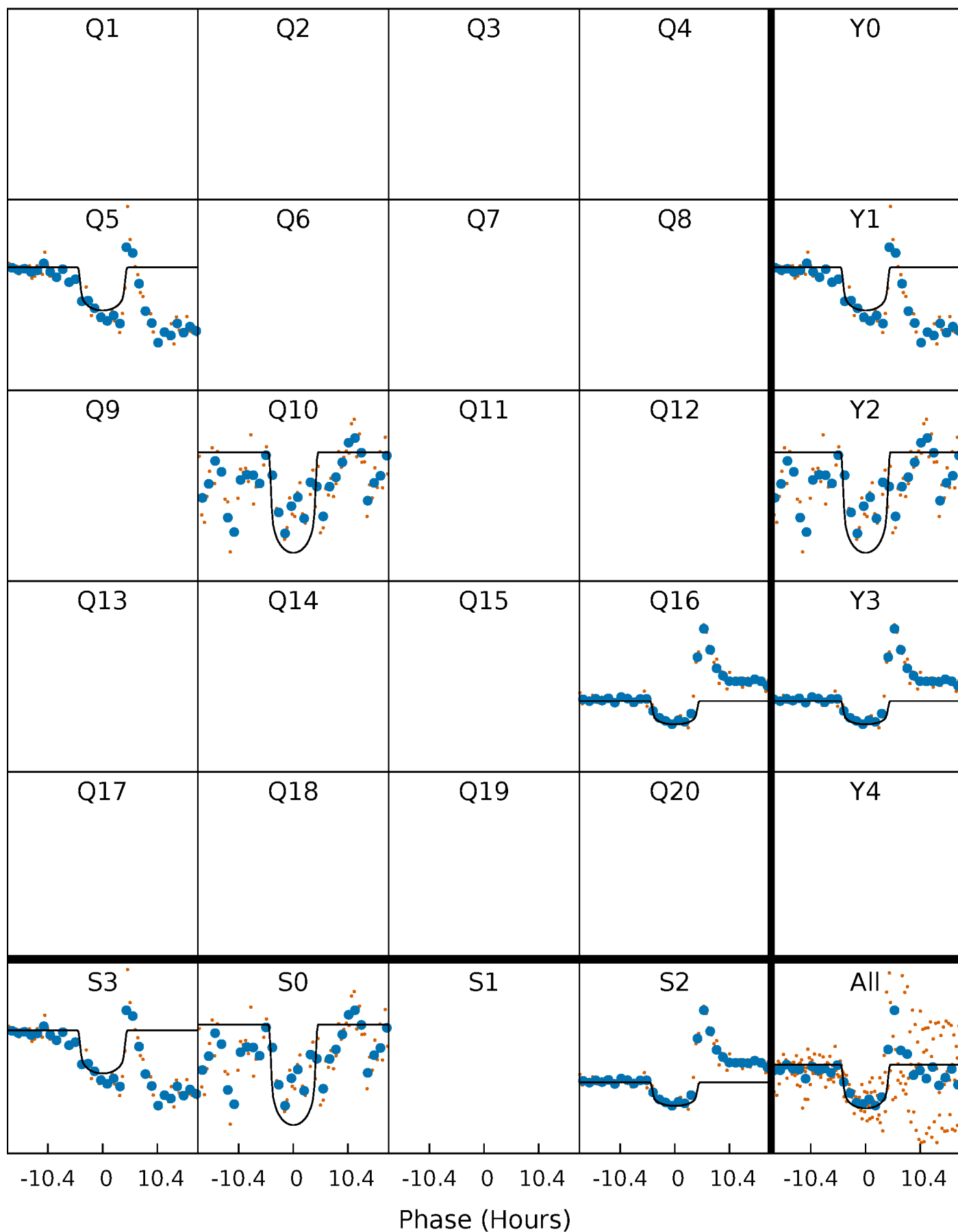
PDC Quarter-Phased Transit Curves

TCE 011957046-06 P=527.354515 Days $T_0=452.120802$ (BKJD)



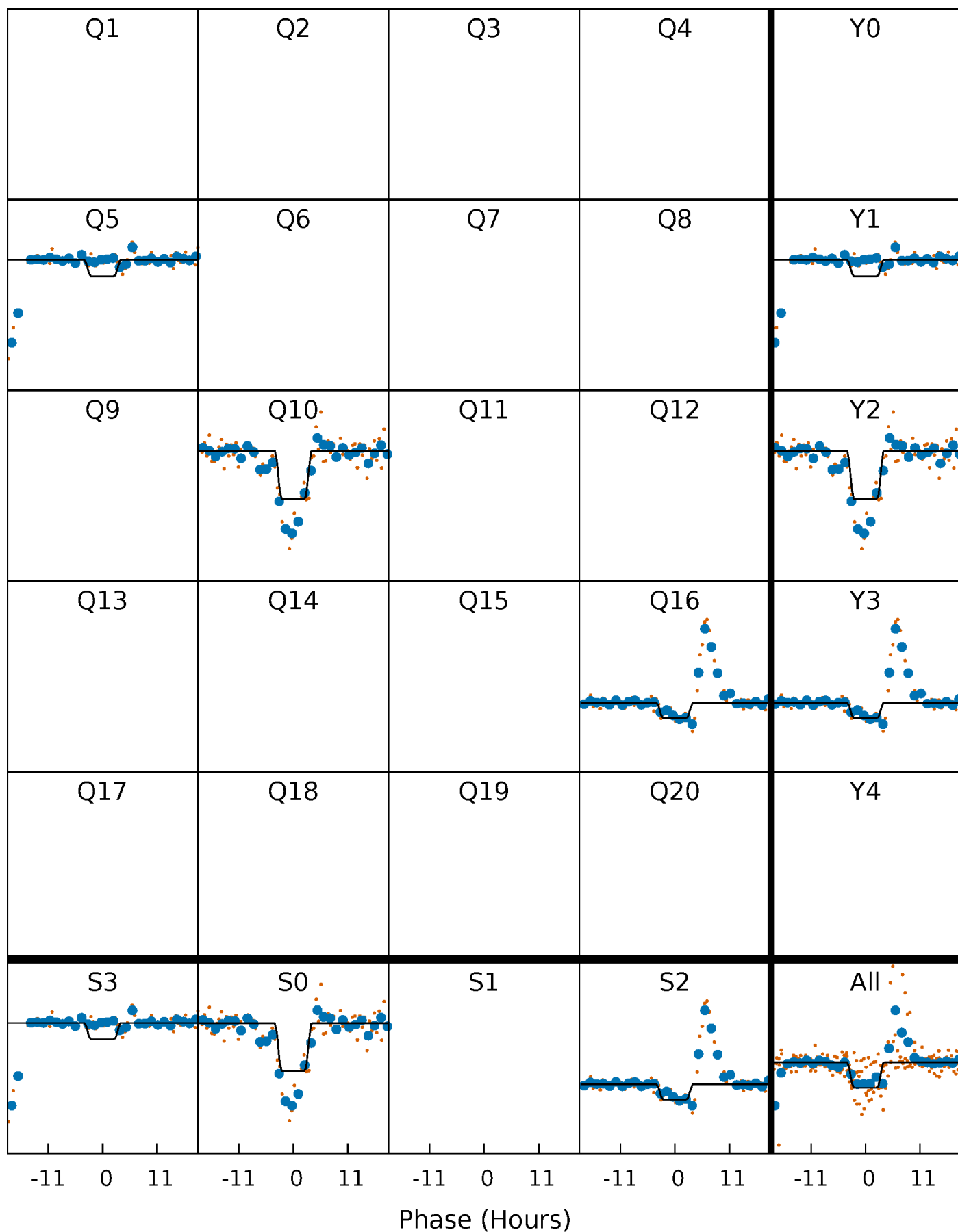
DV Quarter-Phased Transit Curves

TCE 011957046-06 $P=527.354515$ Days $T_0=452.120802$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

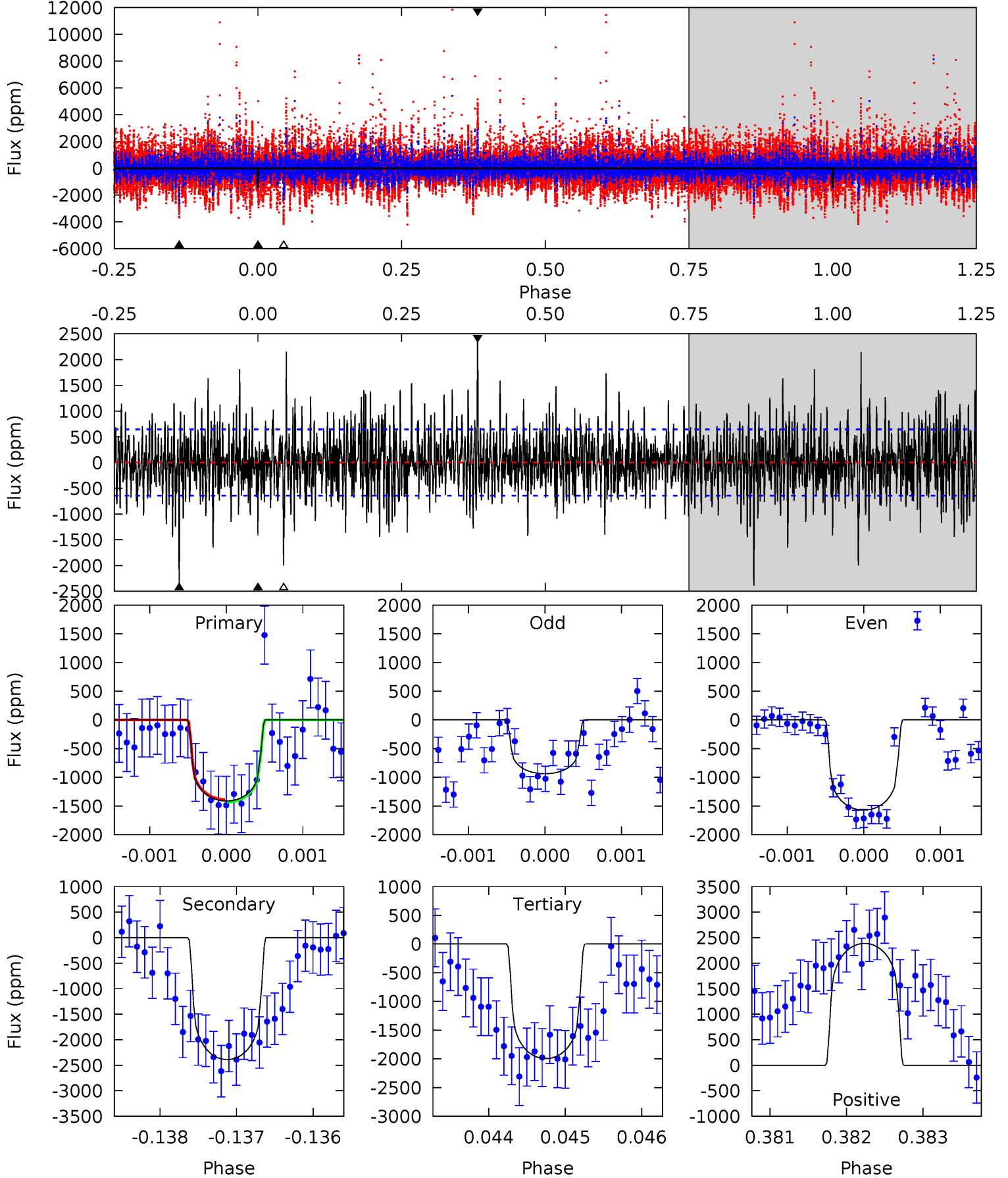
TCE 011957046-06 P=527.349316 Days $T_0=452.088587$ (BKJD)



DV Model-Shift Uniqueness Test

011957046-06, P = 527.354515 Days, E = 452.120802 Days

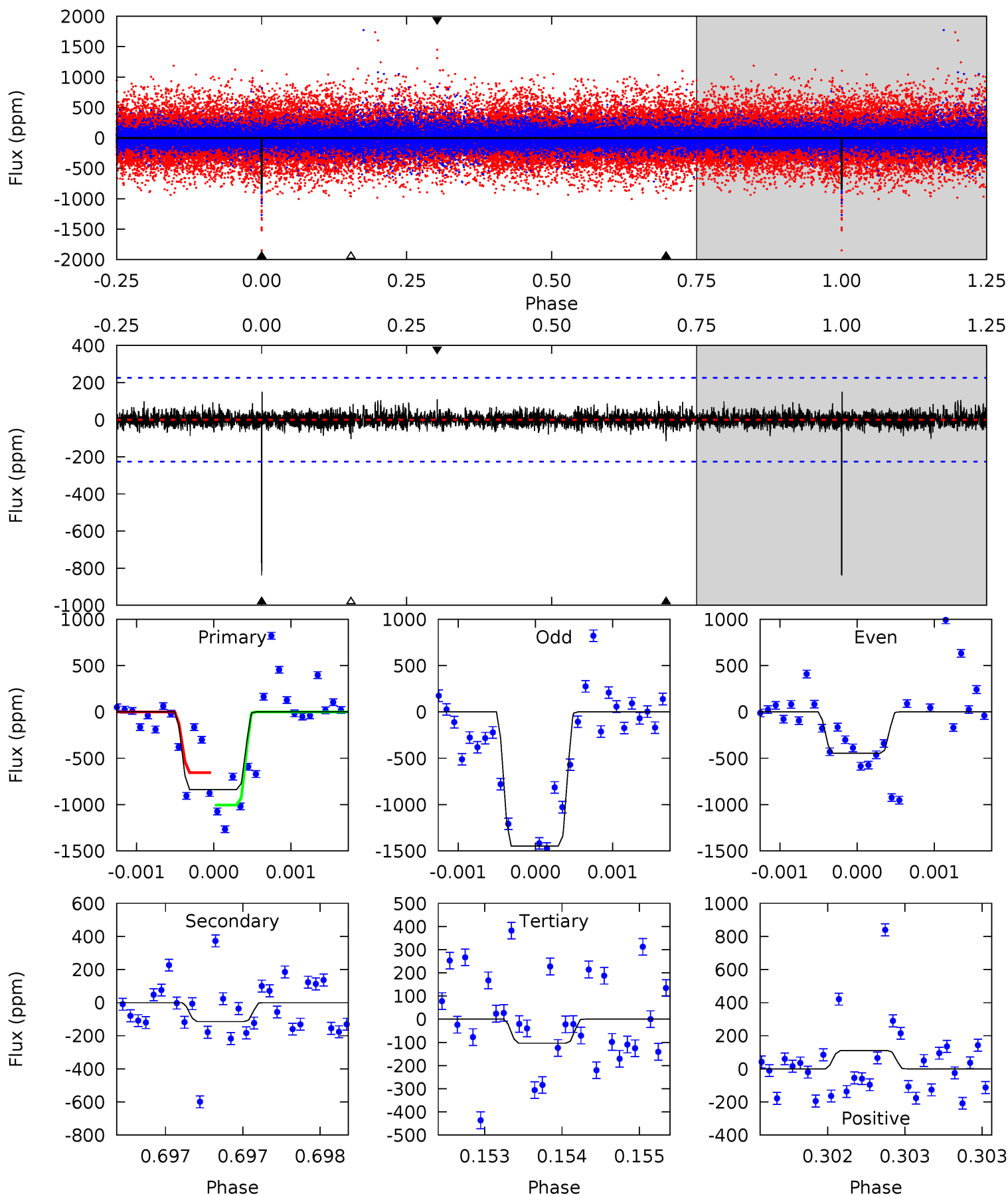
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.1	20.5	17.1	20.4	5.51	3.38	3.92	-4.99	-8.34	3.36	0.01	1.67	1.11	0.50	0.19



Alt Model-Shift Uniqueness Test

011957046-06, P = 527.349316 Days, E = 452.088587 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	2.81	2.54	2.72	5.55	3.44	0.54	18.0	17.9	0.27	0.09	12.5	0.86	0.15	4.32



Stellar Parameters For KIC 011957046

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5855^{+158}_{-158}	$4.448^{+0.098}_{-0.182}$	$-0.320^{+0.300}_{-0.300}$	$0.931^{+0.255}_{-0.127}$	$0.886^{+0.119}_{-0.079}$	$1.546^{+0.665}_{-0.746}$
	+3%/-3%	+2%/-4%	+94%/-94%	+27%/-14%	+13%/-9%	+43%/-48%
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 011957046-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2388 ± 117	$3.91^{+1.07}_{-0.93}$	316^{+23}_{-15}	6690^{+1055}_{-698}	131374^{+91892}_{-49860}
Alt.	-114 ± 41	$3.35^{+1.04}_{-0.90}$	316^{+22}_{-16}	3751^{+475}_{-365}	8224^{+8903}_{-4050}

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

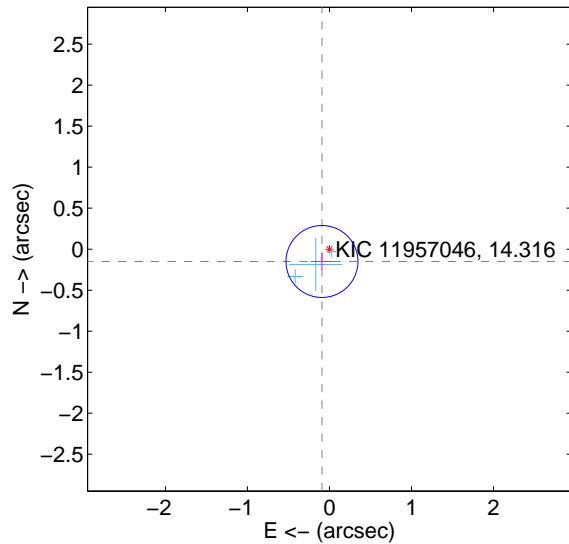
Supplemental centroid analysis for 011957046-06. Kepler magnitude: 14.32. Transit SNR 8.38

There are 3 quarters with good PRF difference image offsets

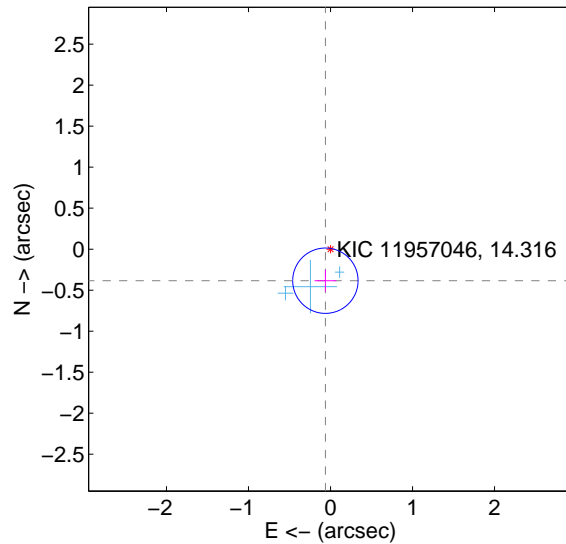
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.176 ± 0.146	1.20	0.091 ± 0.137	-0.150 ± 0.104
PRF-fit source offset from KIC position	0.389 ± 0.133	2.93	0.063 ± 0.132	-0.384 ± 0.133
photometric centroid source offset	1.19 ± 0.42	2.80	0.61 ± 0.42	-1.02 ± 0.42

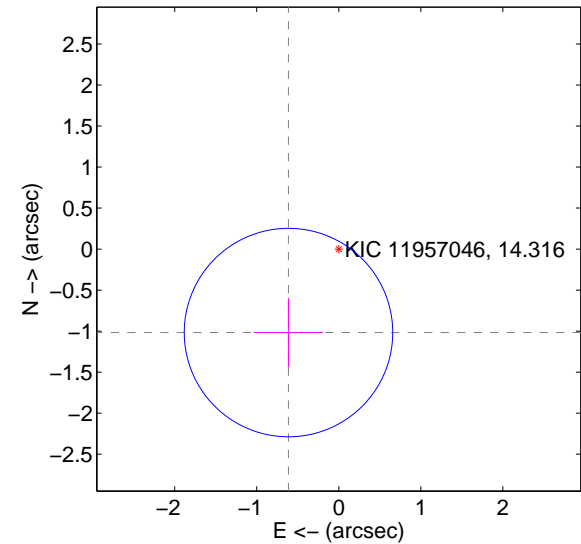
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

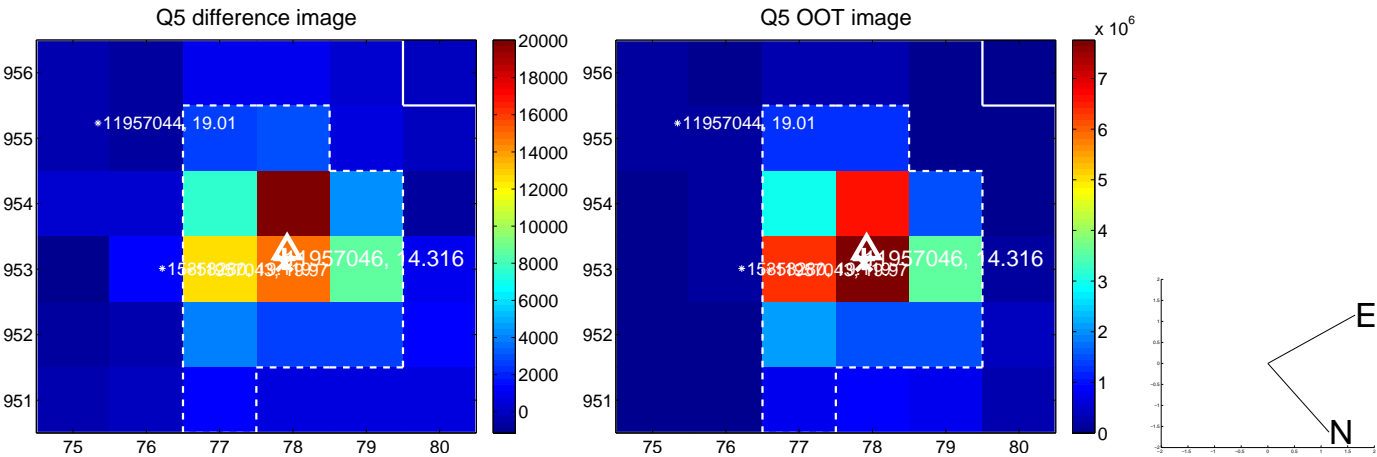


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

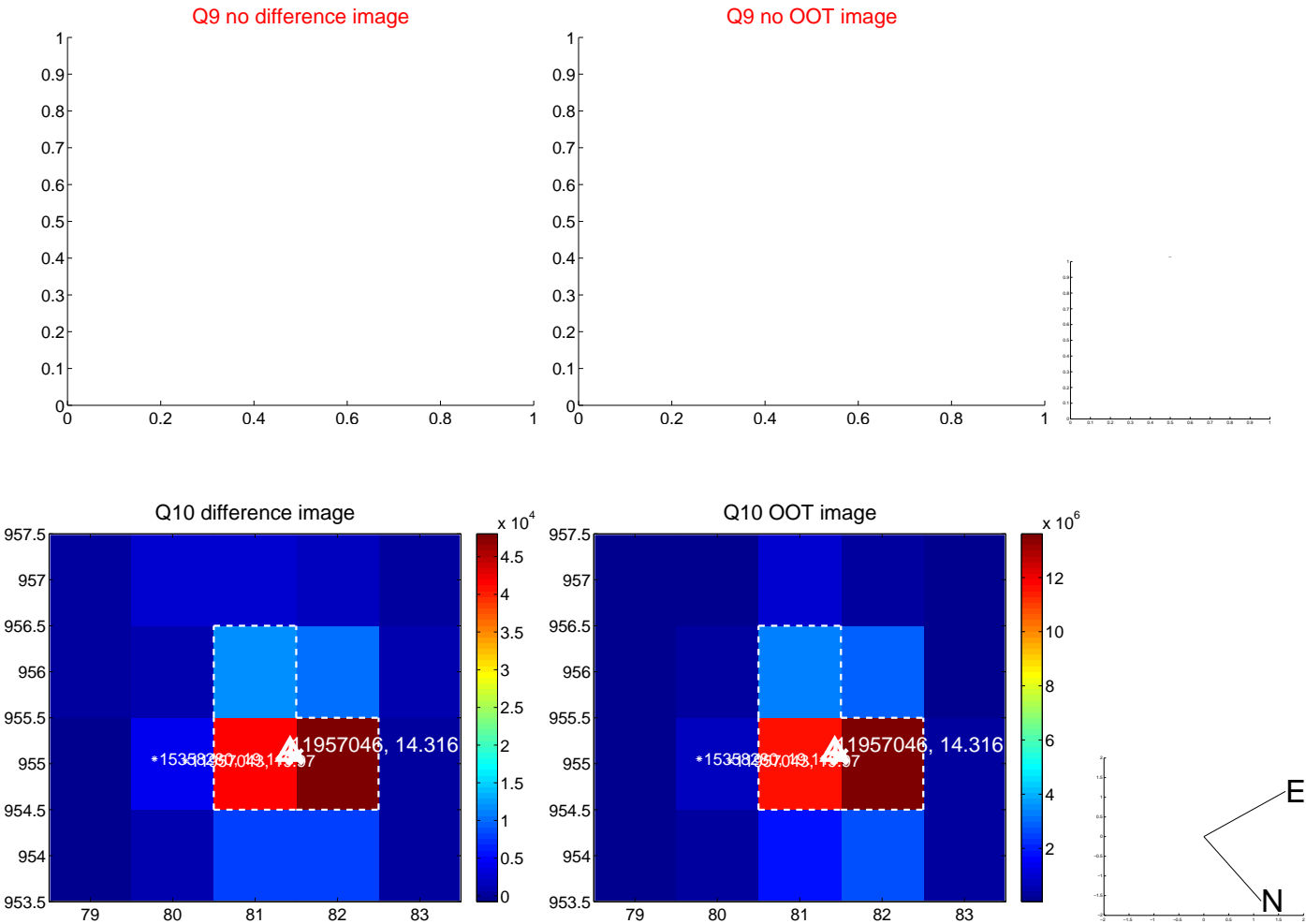
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



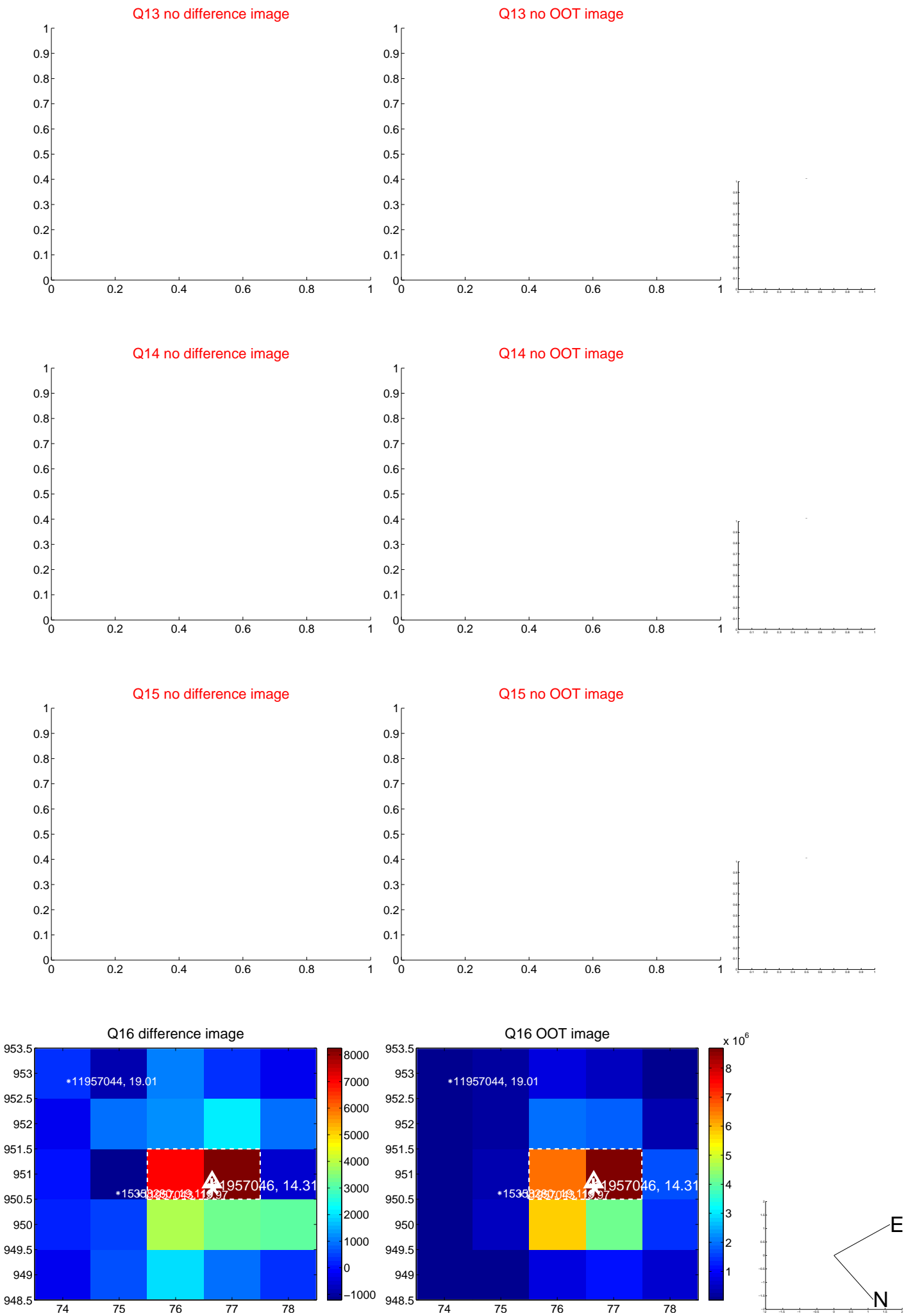
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



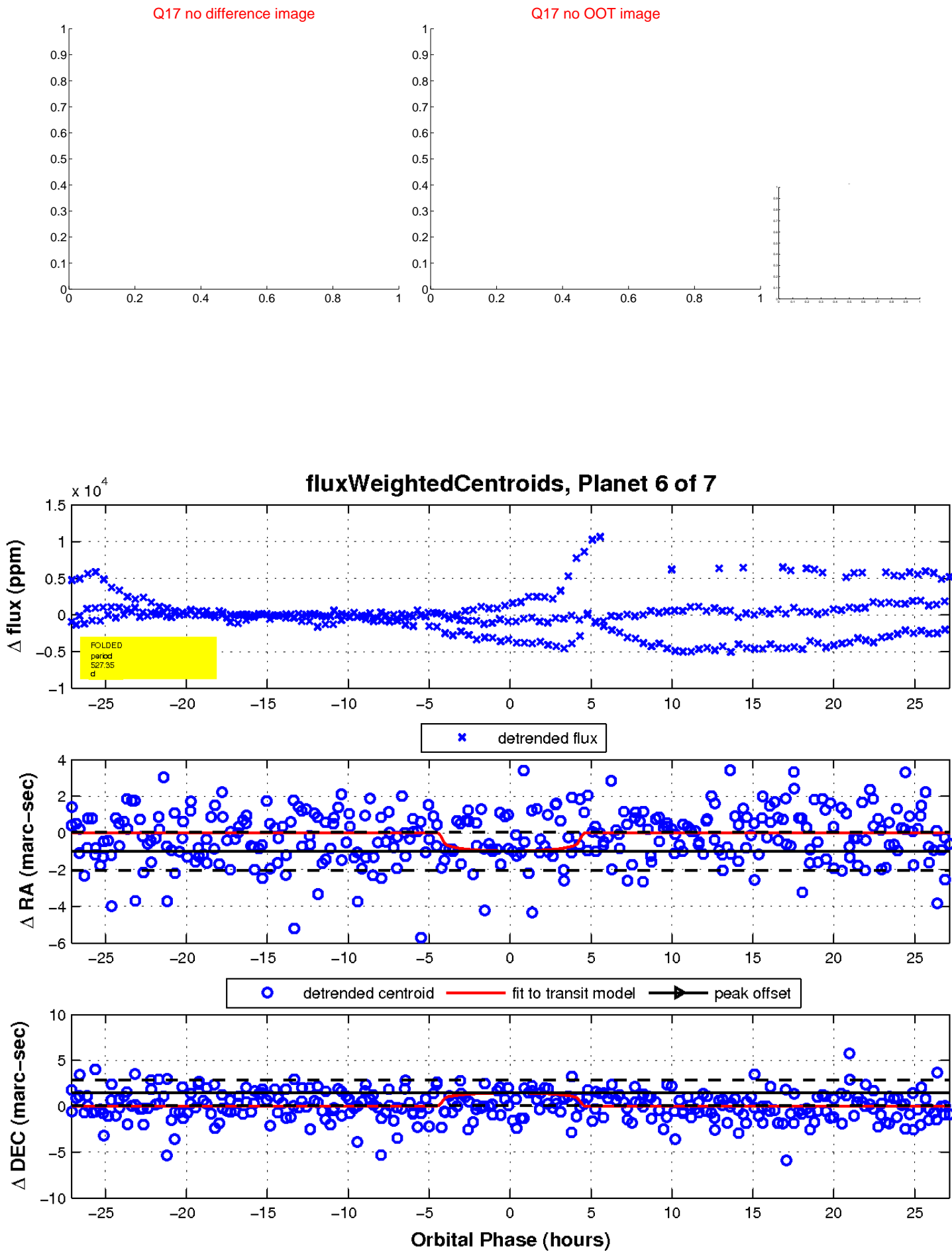
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

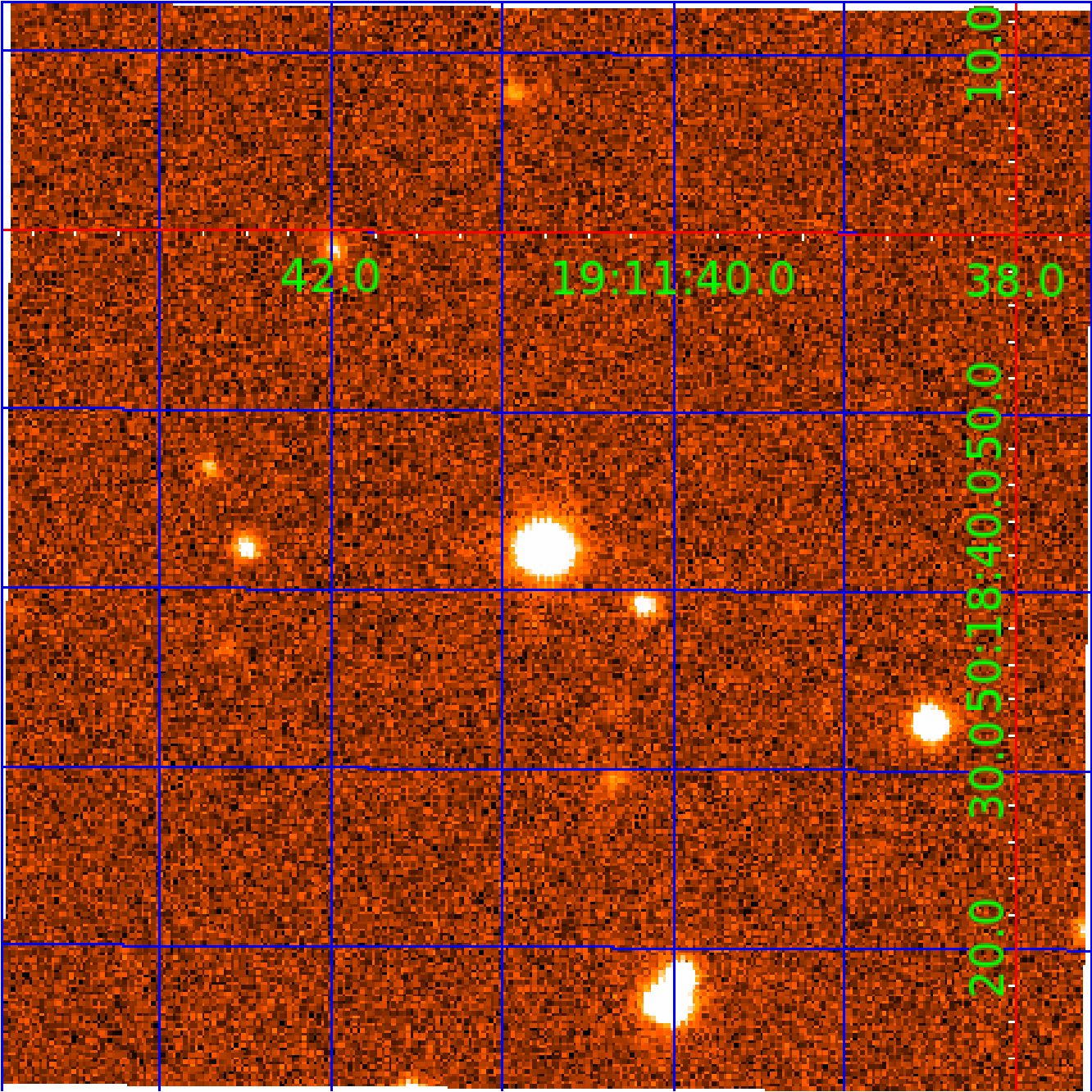


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011957046

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})
011957046-01	OBS	No	530.187690	301.455493	1765.7	3.490	19.5	9.7	0.93	5855	7.45	0.60
011957046-02	OBS	No	484.240119	342.344114	1018.2	5.051	19.7	5.5	0.93	5855	2.98	0.68
011957046-03	OBS	No	460.735679	377.538353	1969.7	9.301	18.4	9.0	0.93	5855	4.14	0.72
011957046-04	OBS	No	383.933176	407.255607	544.1	1.365	18.6	3.3	0.93	5855	2.55	0.93
011957046-05	OBS	No	340.533620	450.854512	1110.8	5.342	18.4	6.7	0.93	5855	3.13	1.08
011957046-06	OBS	No	527.354515	452.120802	1638.1	9.059	16.4	8.4	0.93	5855	3.89	0.61
011957046-07	OBS	No	308.471833	388.183752	757.3	12.500	15.5	-1.0	0.93	5855	2.55	1.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011957046-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS
011957046-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-03	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011957046-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
011957046-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—HALO_GHOST
011957046-07	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

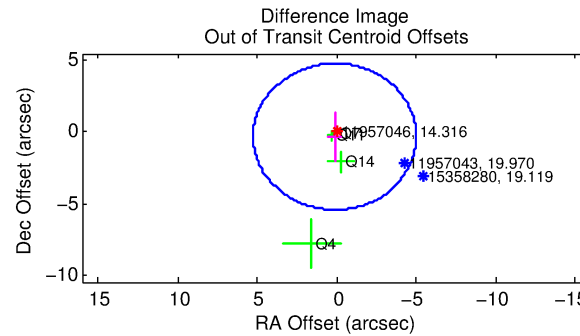
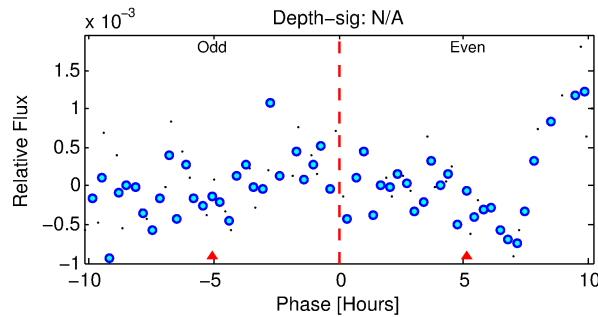
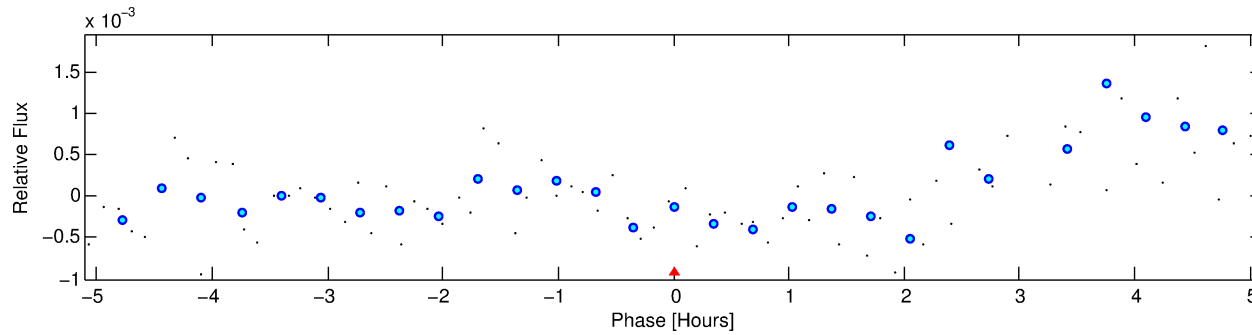
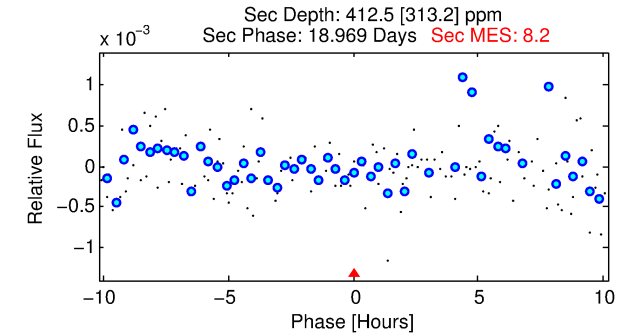
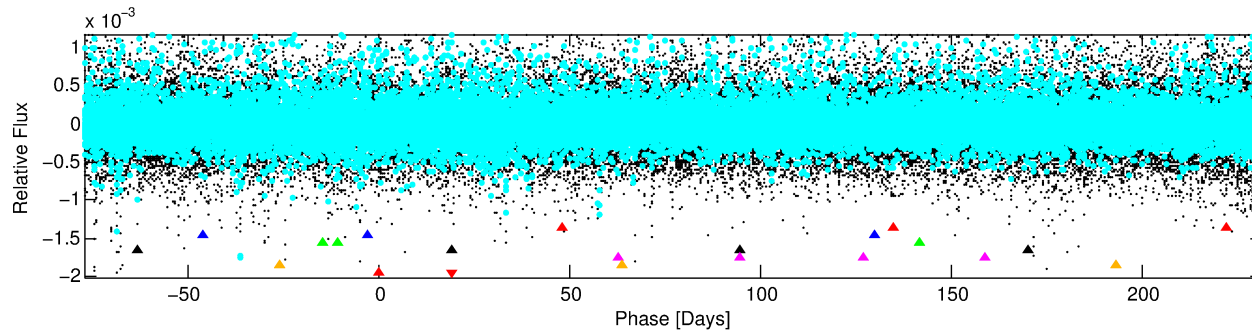
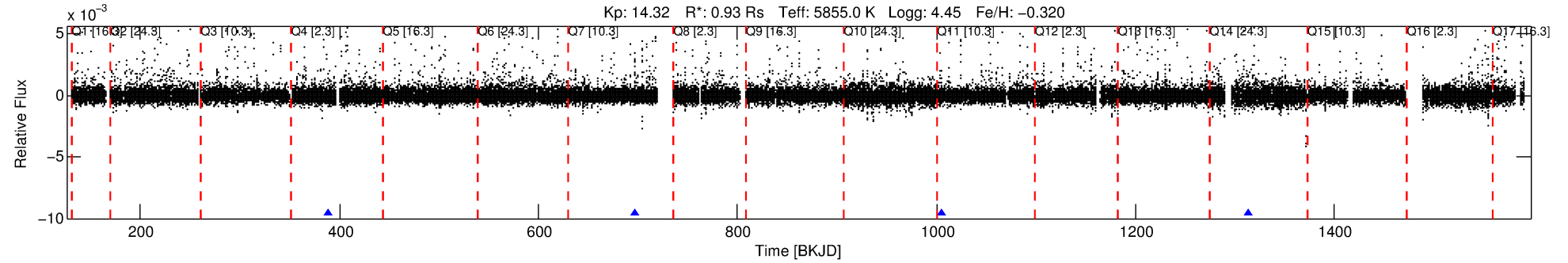
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011957046-07

No Significant Match Found

DV One-Page Summary

KIC: 11957046 Candidate: 7 of 7 Period: 308.472 d



TPS TCE Results:

Period = 308.47183 d
Epoch = 388.1838 BKJD

DV fit results are unavailable

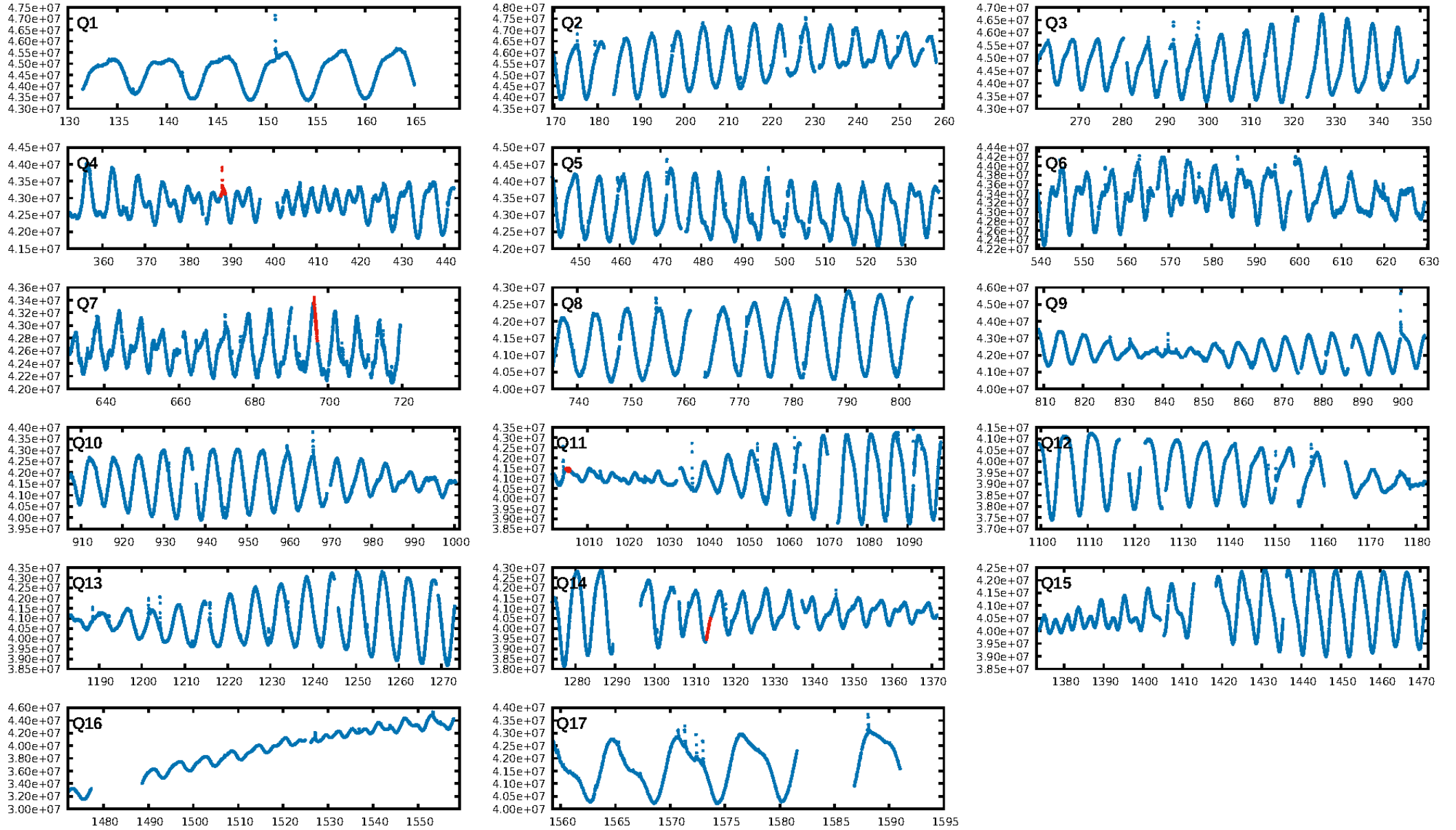
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [56.61σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -1.992
Centroid-sig: 17.0%
Centroid-so: 6.848 arcsec [1.01σ]
OotOffset-rm: 0.341 arcsec [0.20σ]
KicOffset-rm: 0.531 arcsec [0.40σ]
OotOffset-st: 1/2/1/0 [4]
KicOffset-st: 1/2/1/0 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [4/4]

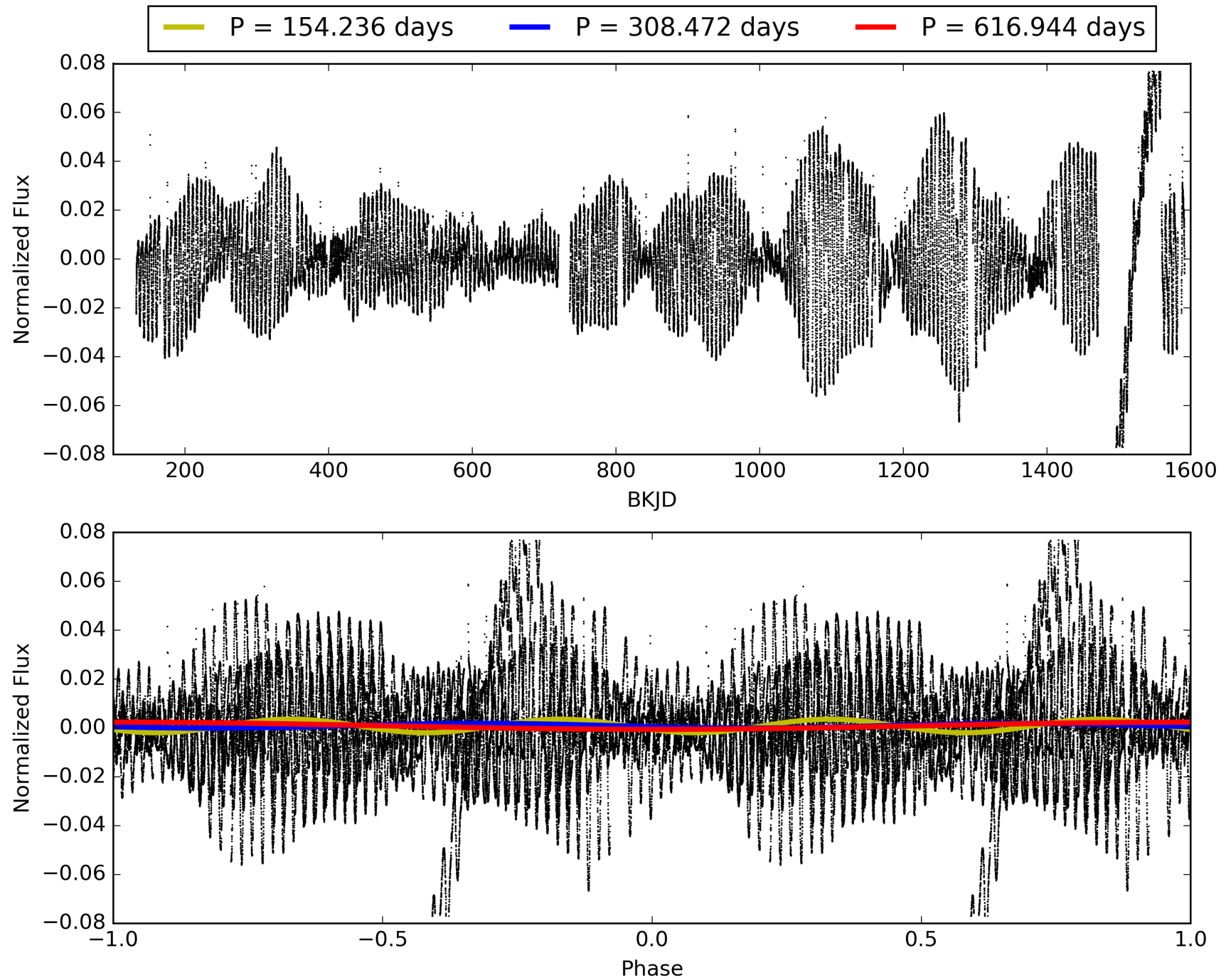
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 05:20:47 Z

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

TCE 011957046-07, PDC Light Curves

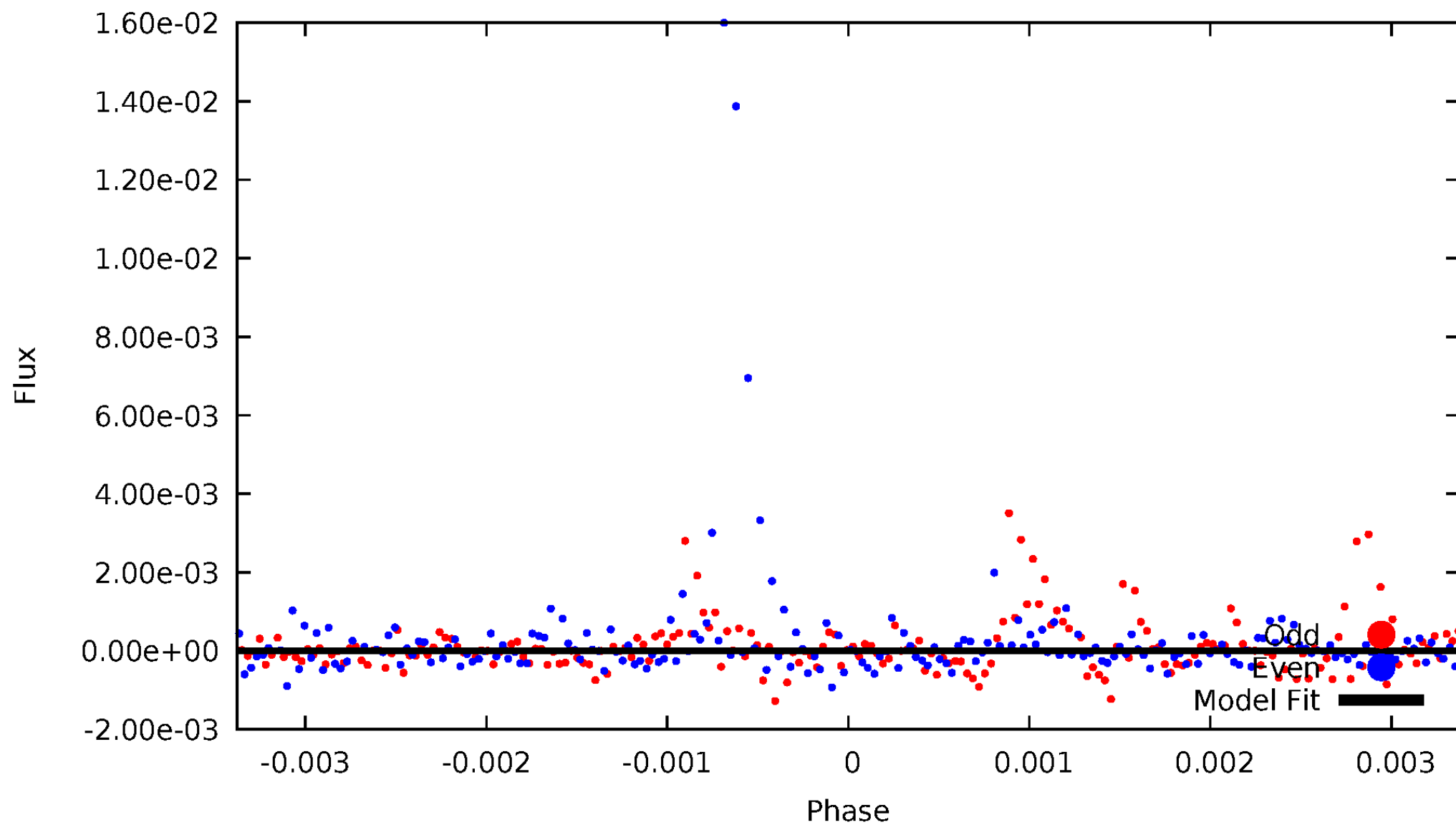


TCE 011957046-07



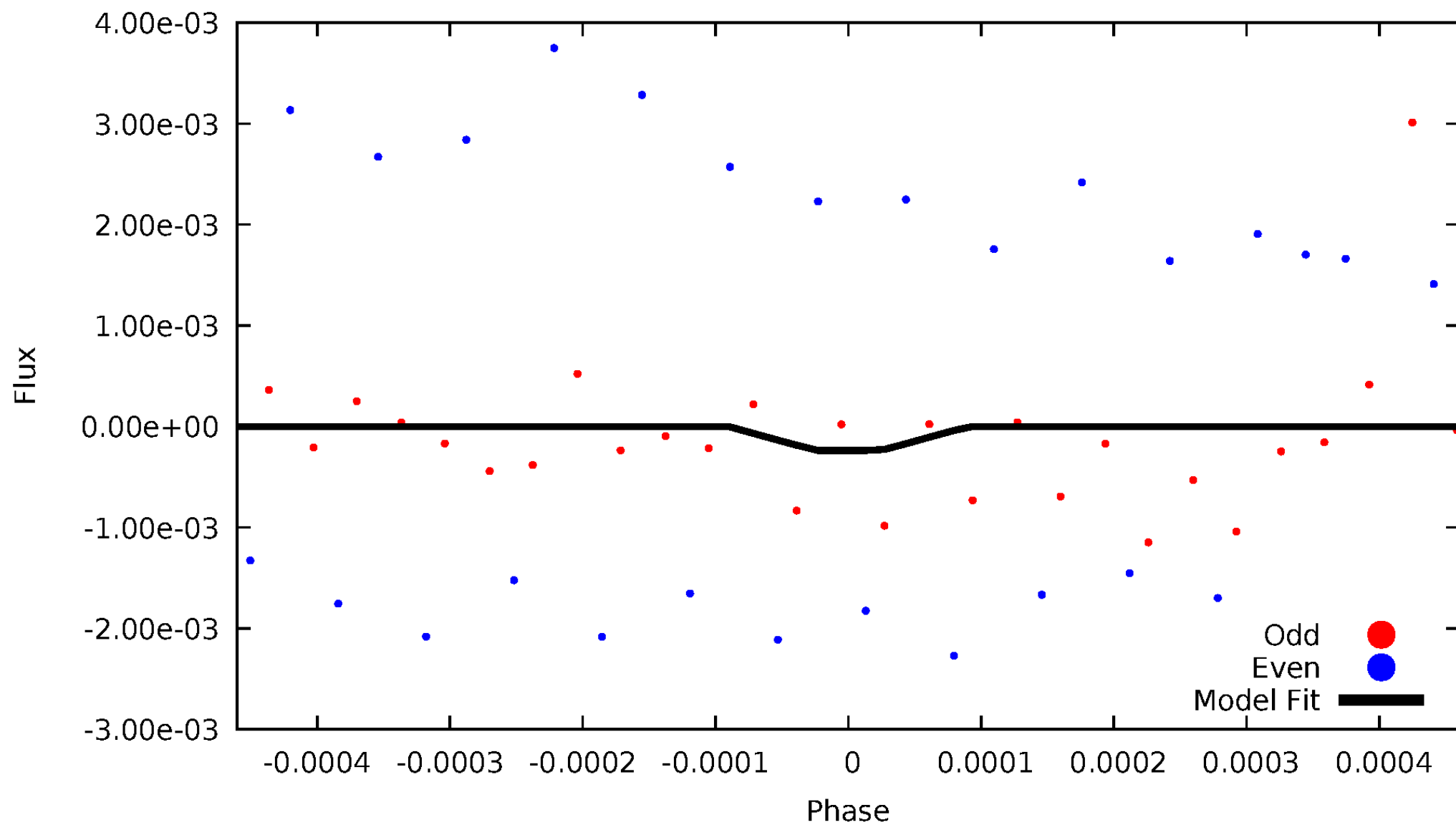
DV Odd/Even

TCE 011957046-07

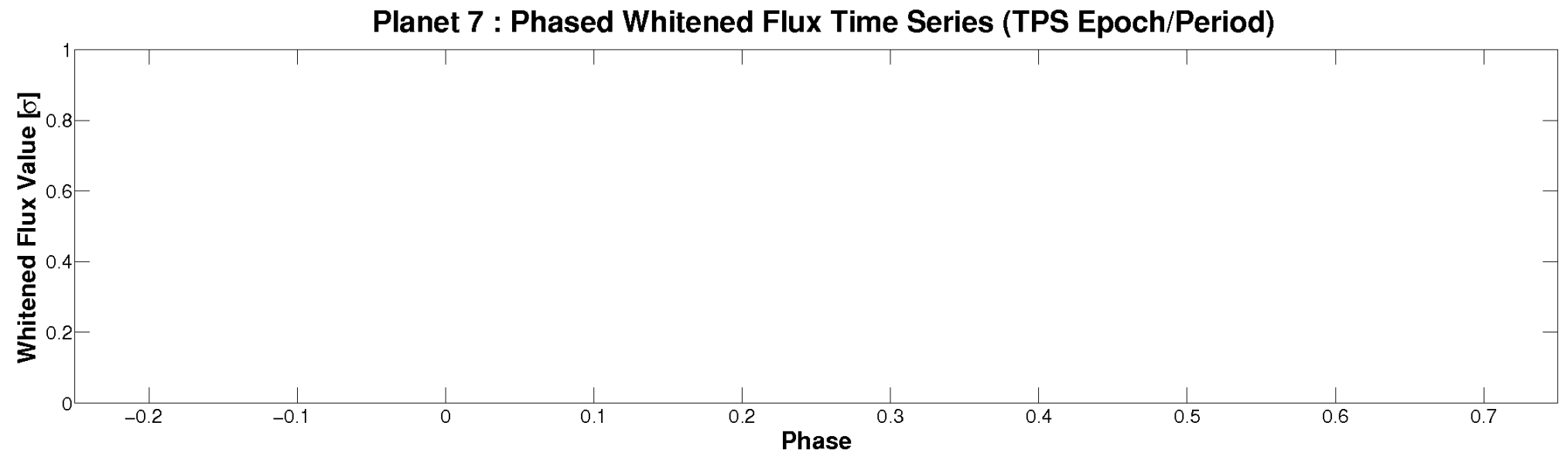
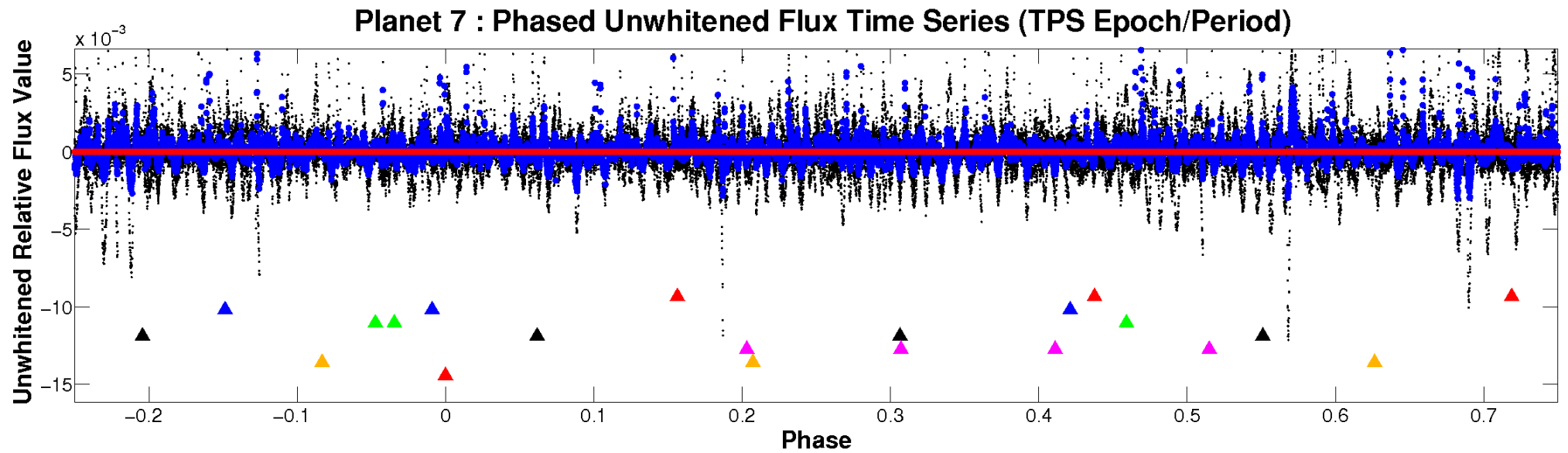


ALT Odd/Even

TCE 011957046-07

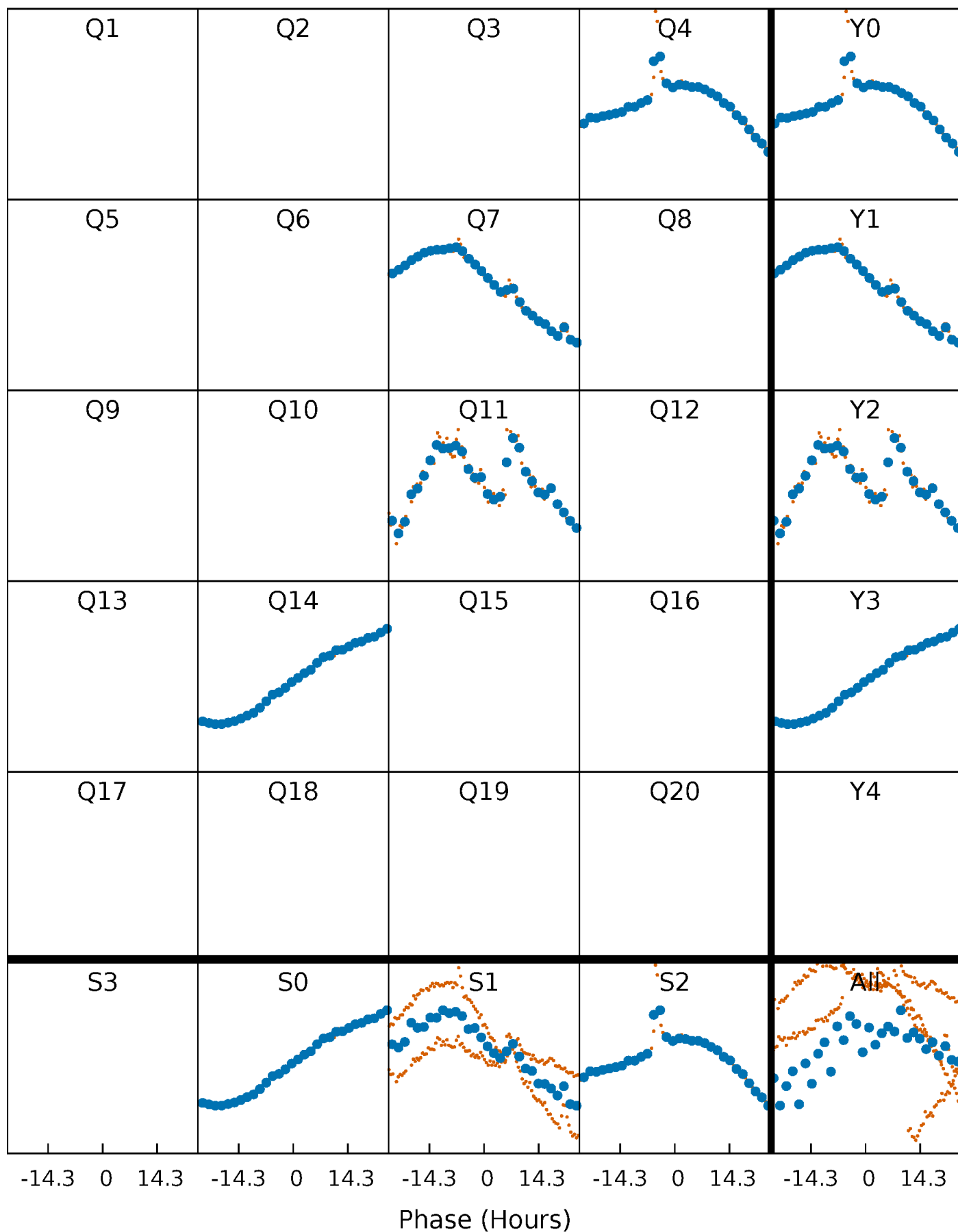


Non-Whitened Vs. Whitened Light Curve



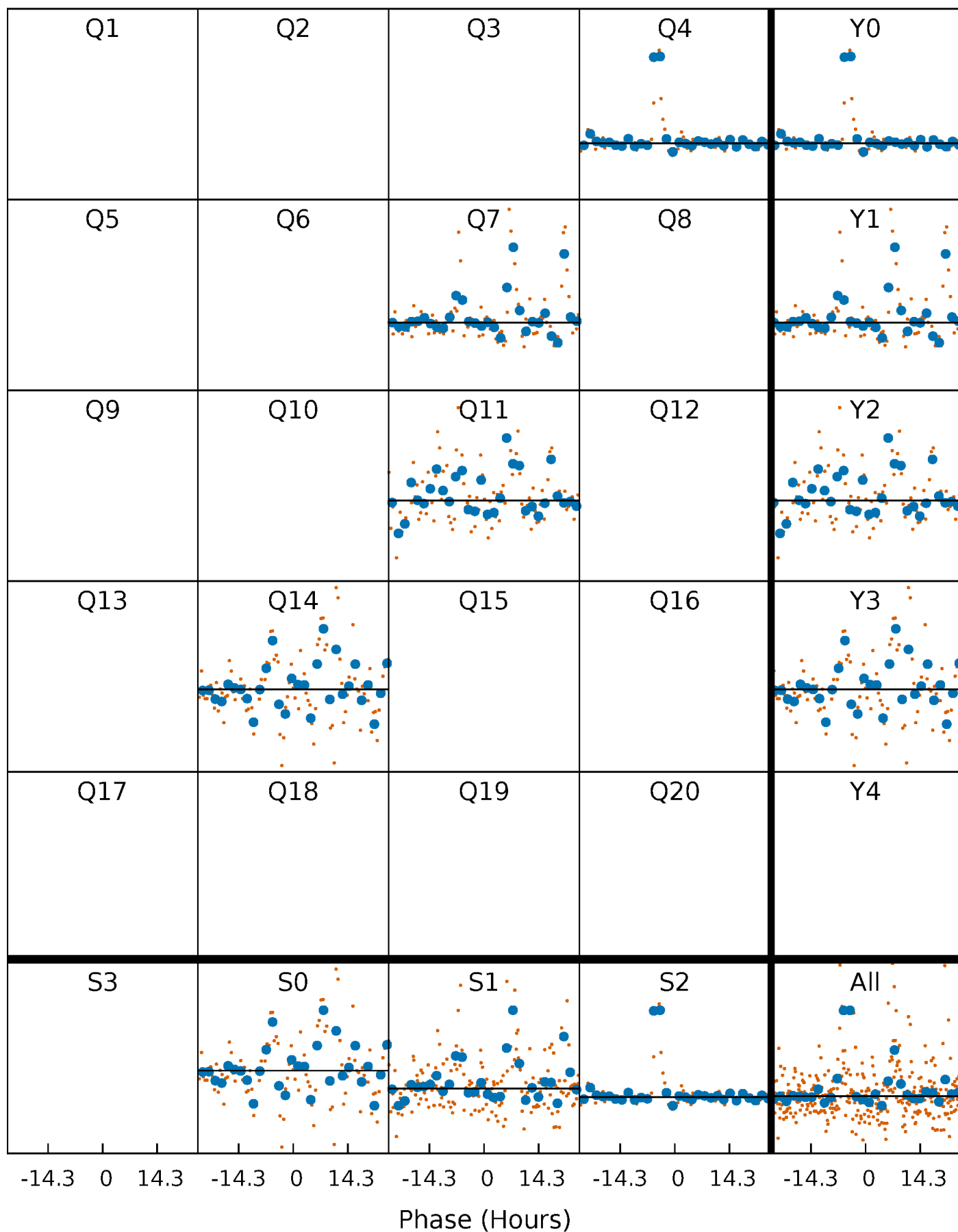
PDC Quarter-Phased Transit Curves

TCE 011957046-07 $P=308.471833$ Days $T_0=388.183752$ (BKJD)



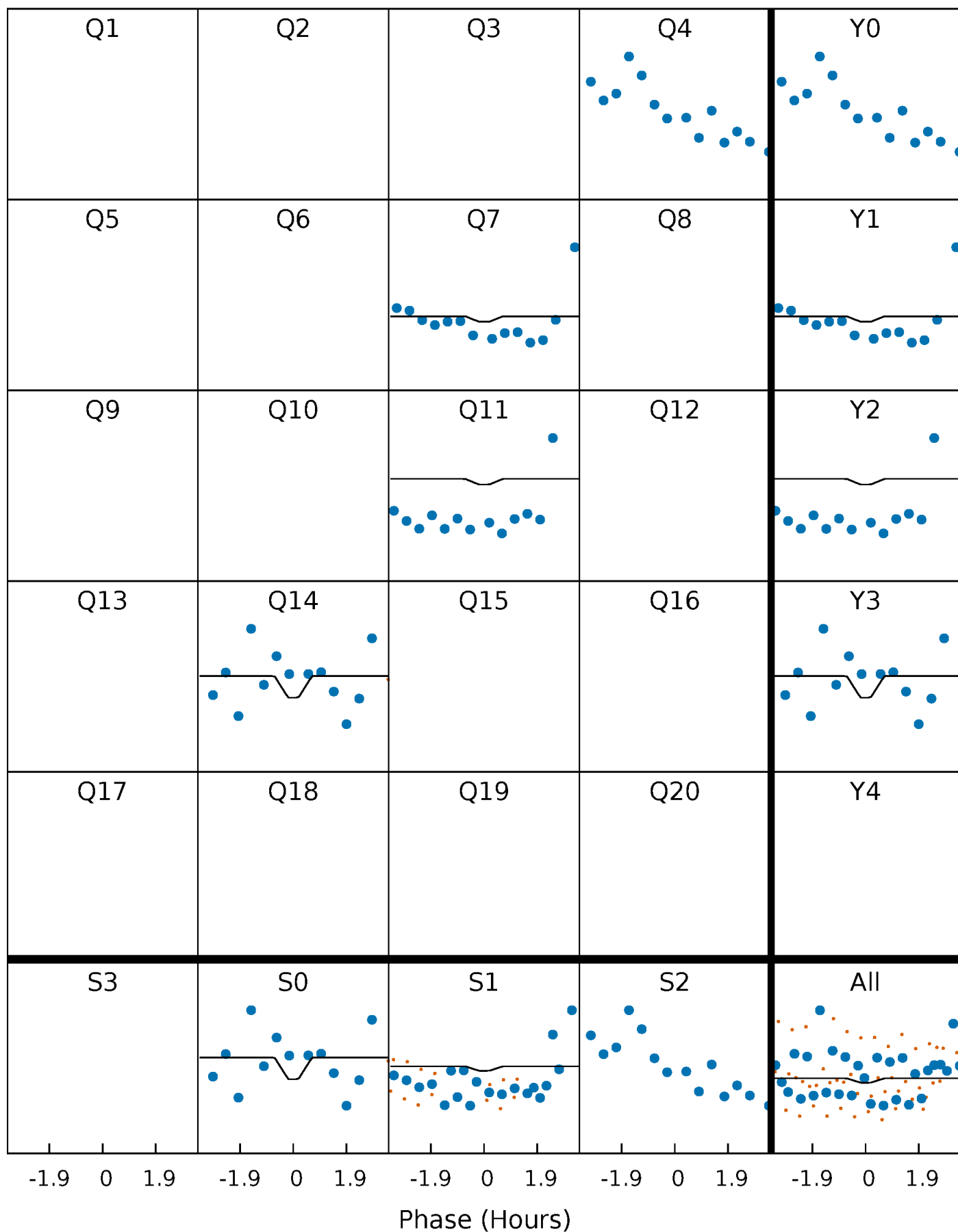
DV Quarter-Phased Transit Curves

TCE 011957046-07 $P=308.471833$ Days $T_0=388.183752$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

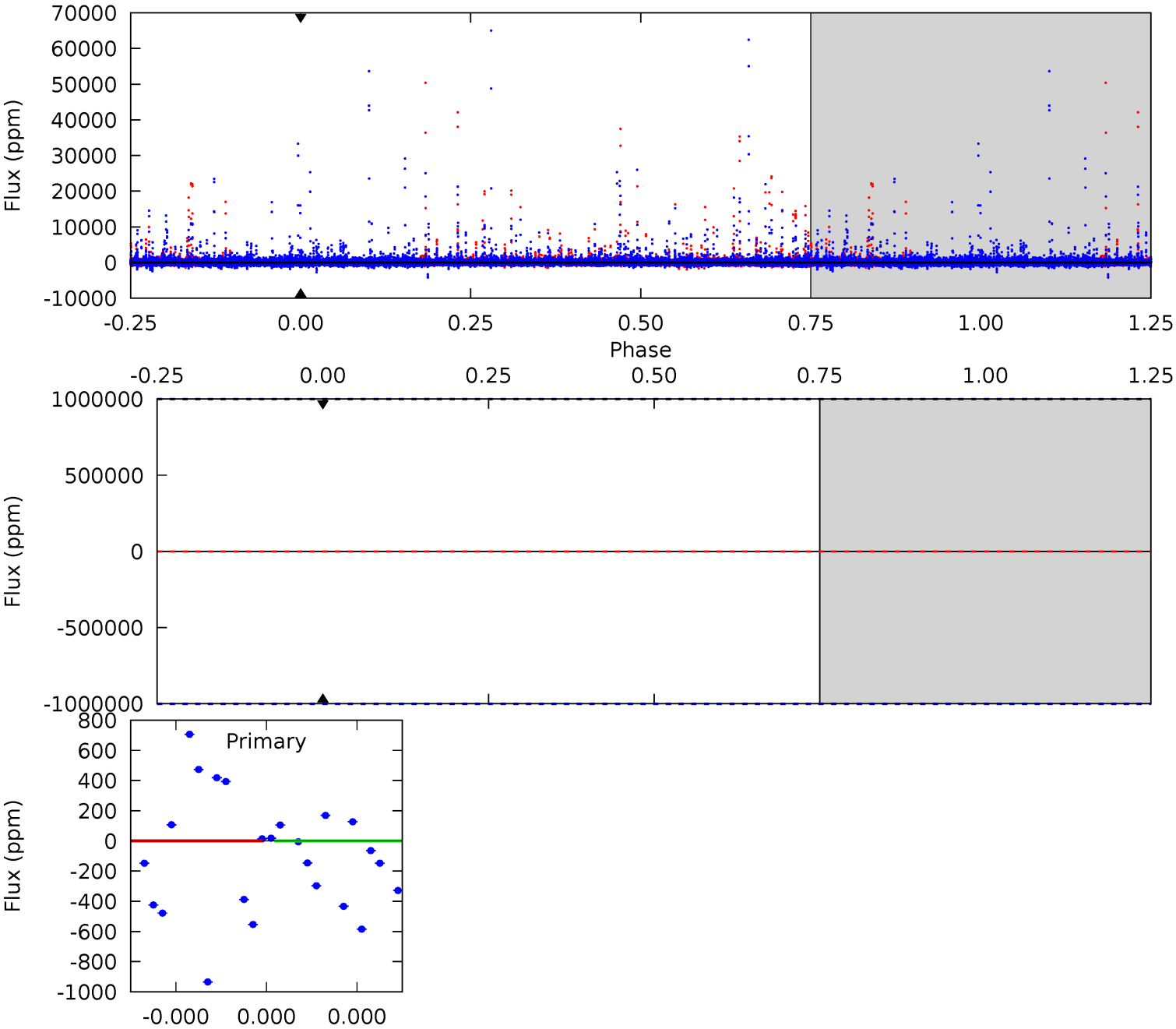
TCE 011957046-07 P=308.471833 Days $T_0=388.326420$ (BKJD)



DV Model-Shift Uniqueness Test

011957046-07, P = 308.471833 Days, E = 79.711919 Days

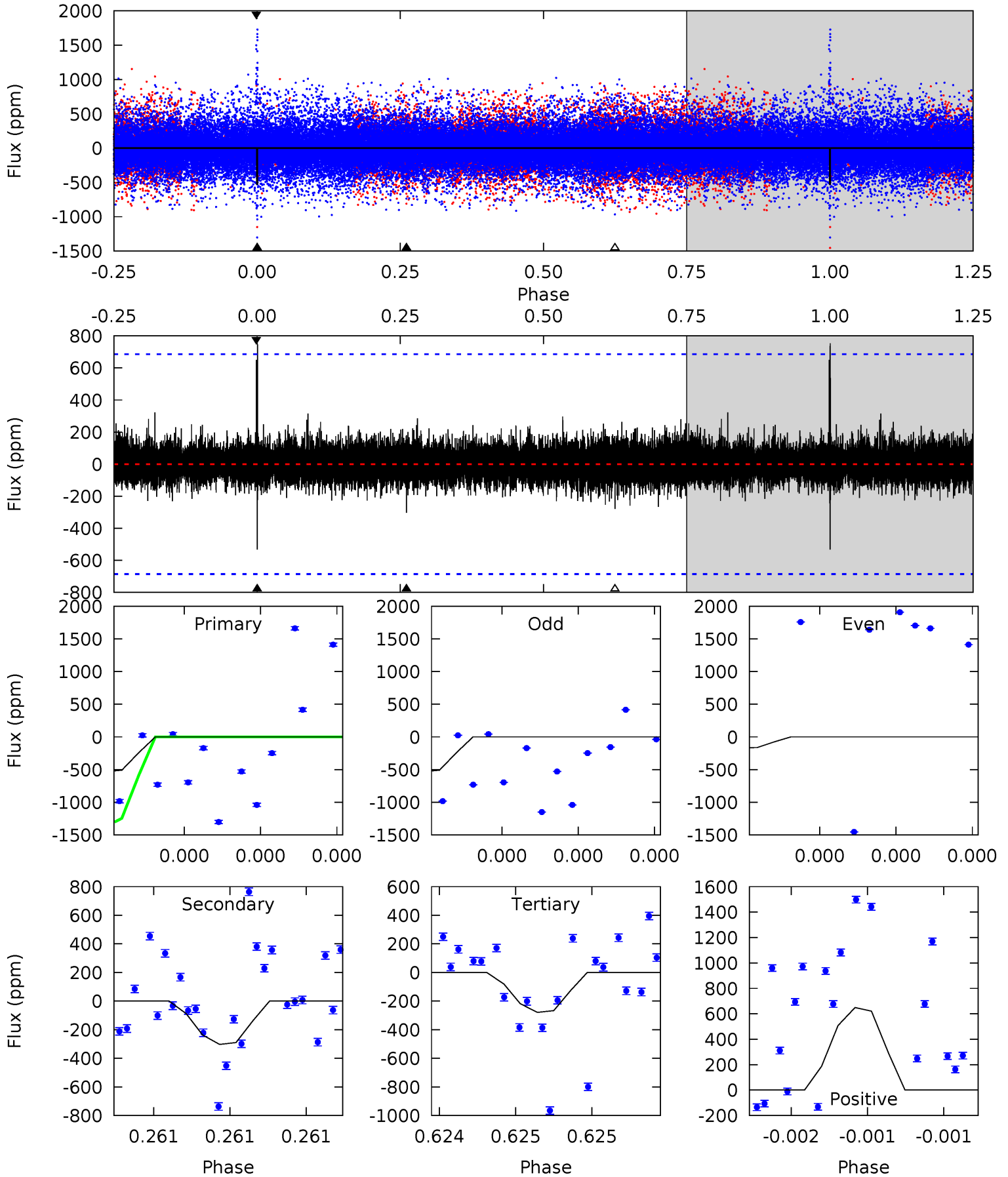
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011957046-07, P = 308.471833 Days, E = 79.854587 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.49	2.55	2.35	5.47	5.78	3.79	0.54	2.14	-0.98	0.20	-2.92	2.20	0.47	0.59	4.48



Stellar Parameters For KIC 011957046

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5855^{+158}_{-158}	$4.448^{+0.098}_{-0.182}$	$-0.320^{+0.300}_{-0.300}$	$0.931^{+0.255}_{-0.127}$	$0.886^{+0.119}_{-0.079}$	$1.546^{+0.665}_{-0.746}$
	+3%/-3%	+2%/-4%	+94%/-94%	+27%/-14%	+13%/-9%	+43%/-48%
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 011957046-07 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$8.32^{+8.43}_{-5.63}$	379^{+26}_{-19}	4979^{+16495}_{-23923}	$17096^{+1106809}_{-952430}$
Alt.	-303 ± 119	$7.70^{+8.09}_{-5.19}$	380^{+25}_{-19}	3338^{+1692}_{-616}	1955^{+17056}_{-1517}

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 $A_{obs} \gg 1.0$

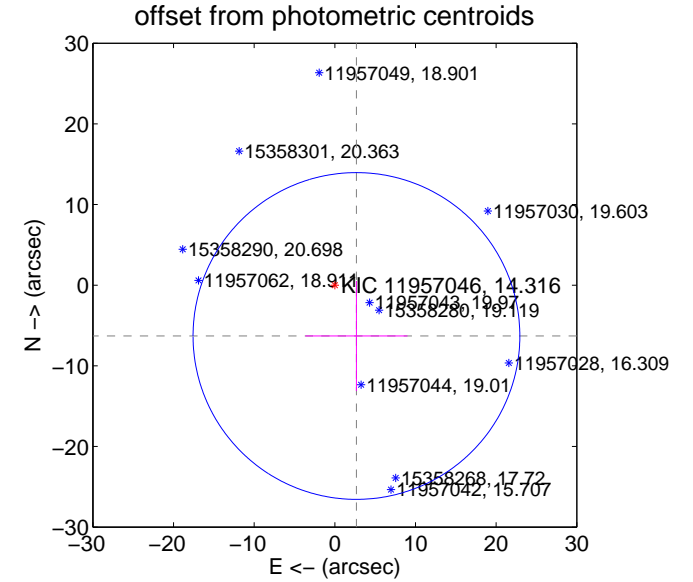
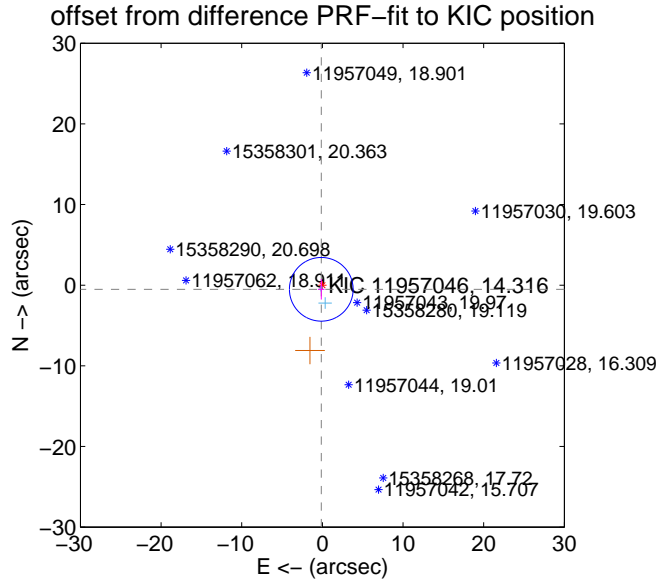
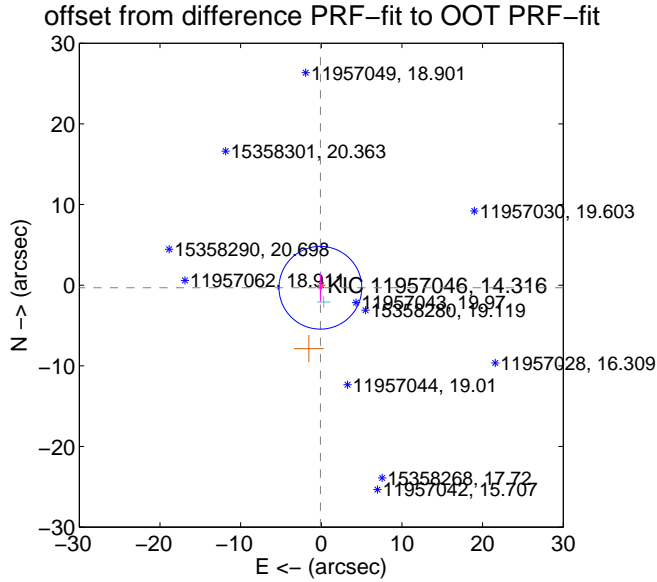
DV Centroid Data

Supplemental centroid analysis for 011957046-07. Kepler magnitude: 14.32. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

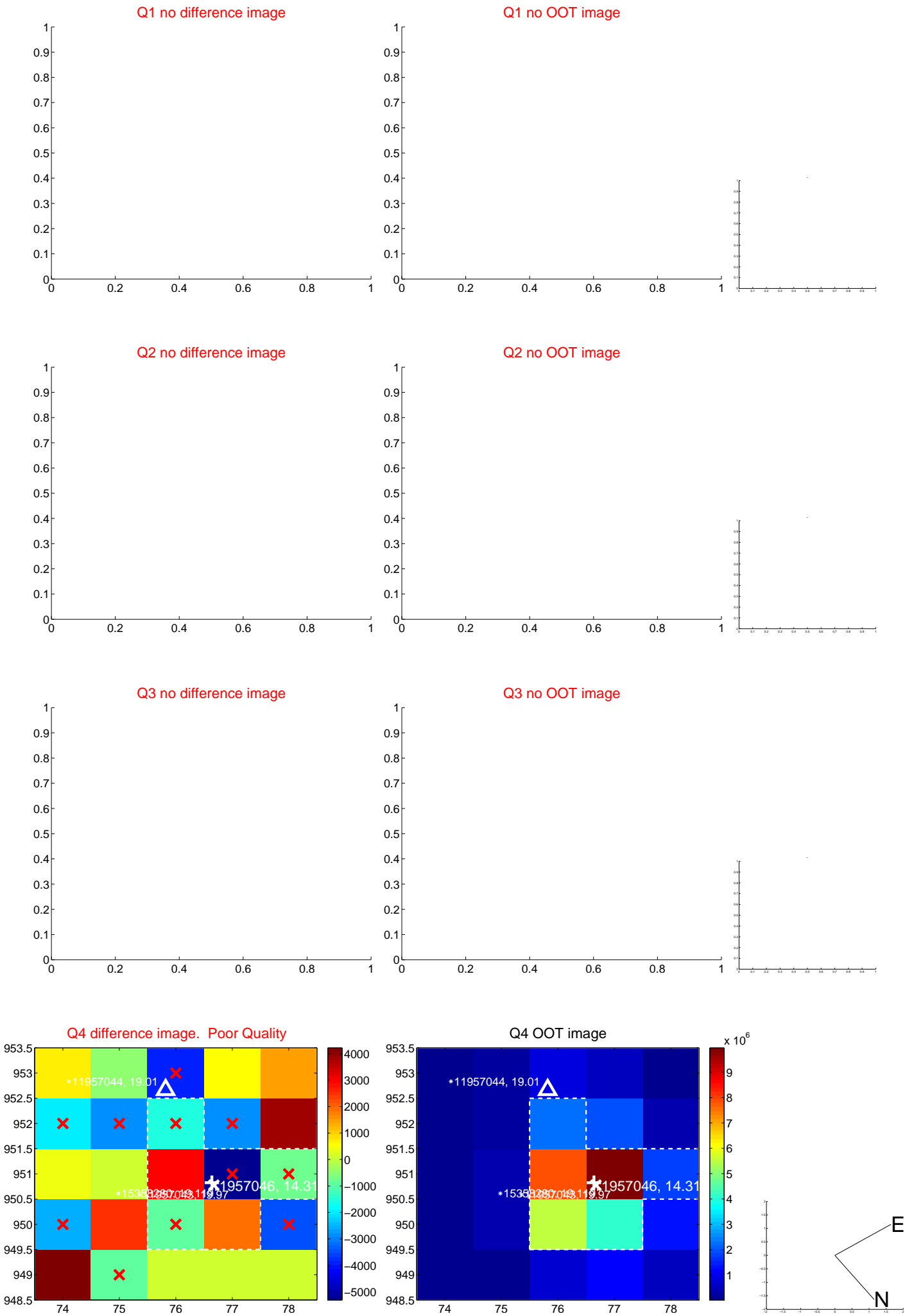
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.341 ± 1.710	0.20	0.113 ± 0.393	-0.322 ± 1.702
PRF-fit source offset from KIC position	0.531 ± 1.316	0.40	0.137 ± 0.404	-0.513 ± 1.274
photometric centroid source offset	6.85 ± 6.75	1.01	-2.68 ± 6.33	-6.30 ± 6.83

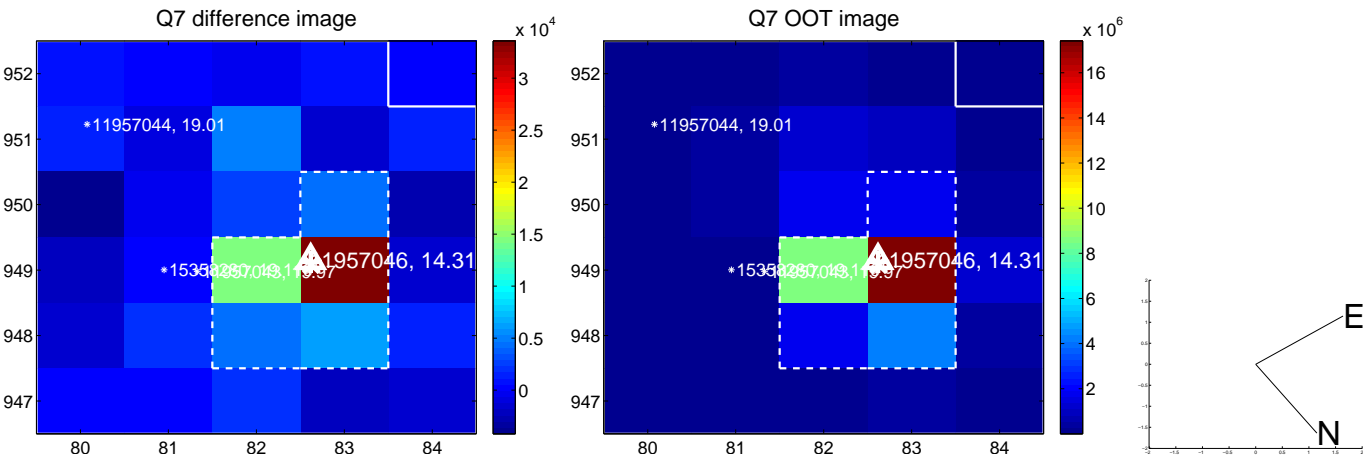


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

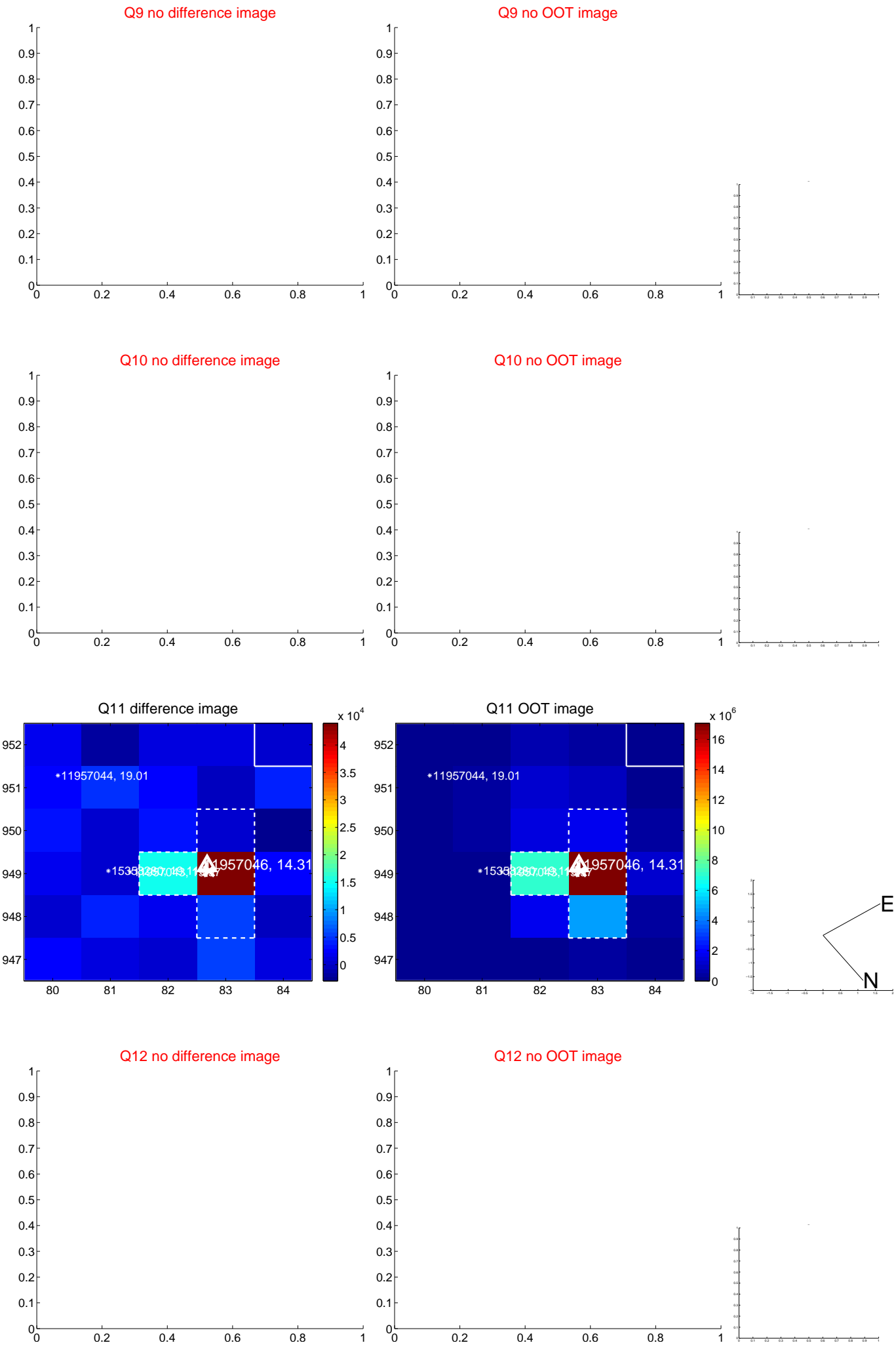
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.

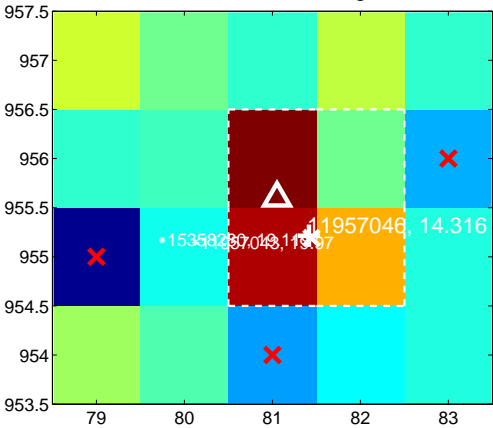
Q13 no difference image



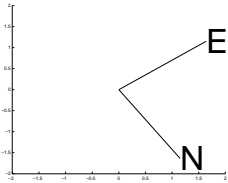
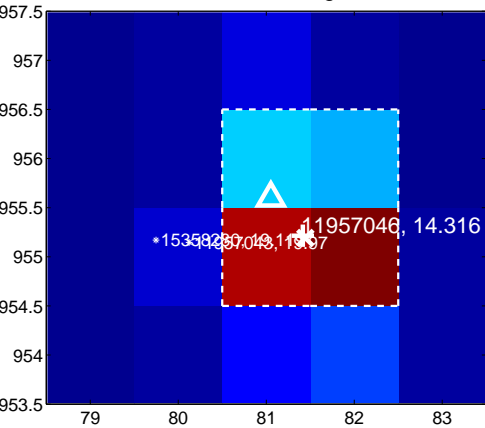
Q13 no OOT image



Q14 difference image



Q14 OOT image



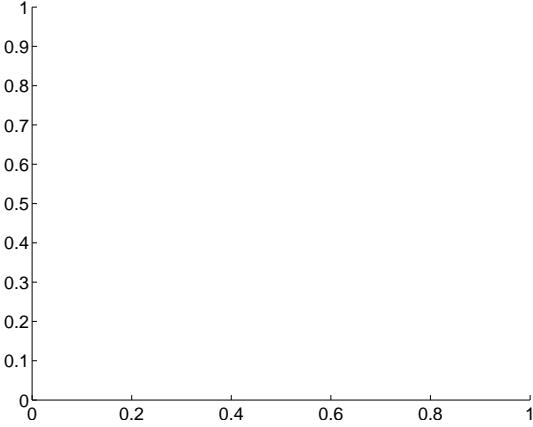
Q15 no difference image



Q15 no OOT image



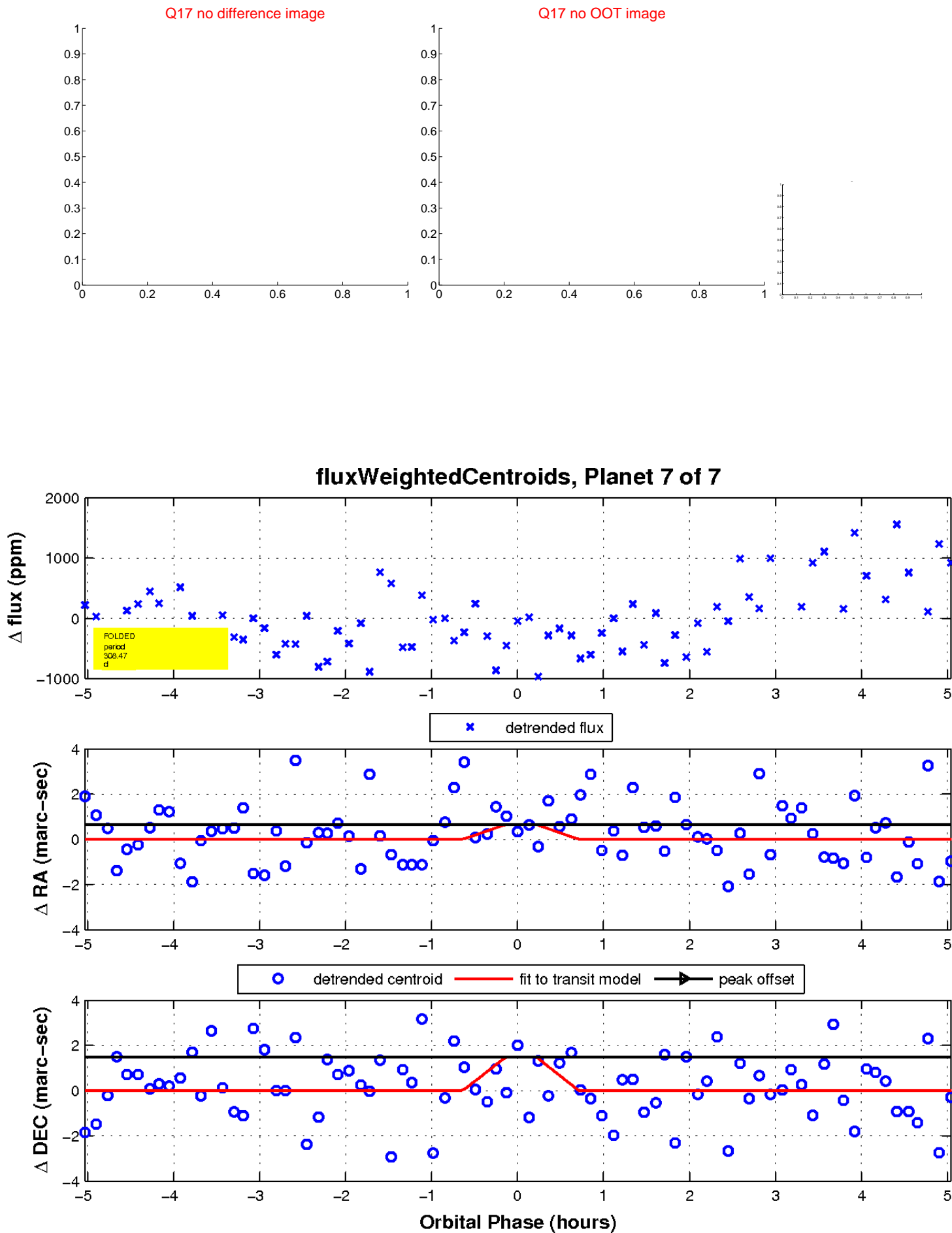
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

