

KIC 009673338

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})
009673338-01	OBS	No	1.450943	131.674153	0.0	5.709	11.7	0.0	4.16	6241	0.00	25757.12
009673338-02	OBS	No	399.478089	377.197580	617.3	7.381	12.1	11.2	4.16	6241	10.72	14.38
009673338-03	OBS	No	1.453106	132.117764	9.5	10.296	11.7	4.4	4.16	6241	1.32	25706.01
009673338-04	OBS	No	9.584975	135.987275	287.9	1.350	12.1	11.1	4.16	6241	7.10	2077.99
009673338-05	OBS	No	18.977727	146.671085	224.1	2.281	11.0	9.1	4.16	6241	6.40	835.81
009673338-06	OBS	No	11.097720	139.371899	228.6	1.663	9.6	8.4	4.16	6241	7.27	1709.17
009673338-07	OBS	No	13.396447	132.848813	210.8	3.141	9.6	10.8	4.16	6241	6.06	1329.78
009673338-08	OBS	No	29.760323	145.204337	254.1	2.470	9.4	10.3	4.16	6241	7.73	458.75
009673338-09	OBS	No	178.767059	279.521486	348.8	5.000	9.1	-1.0	4.16	6241	7.78	42.01
009673338-10	OBS	No	13.594499	135.993905	249.7	1.534	8.7	9.2	4.16	6241	6.74	1304.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009673338-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
009673338-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009673338-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
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009673338-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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

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

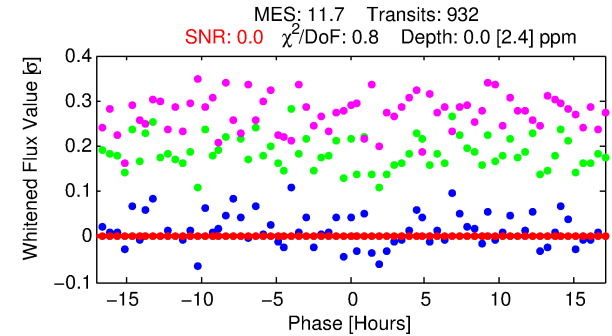
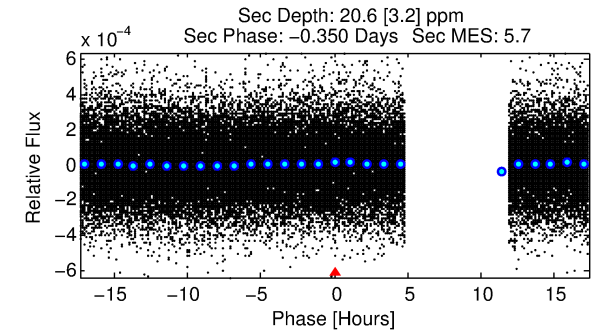
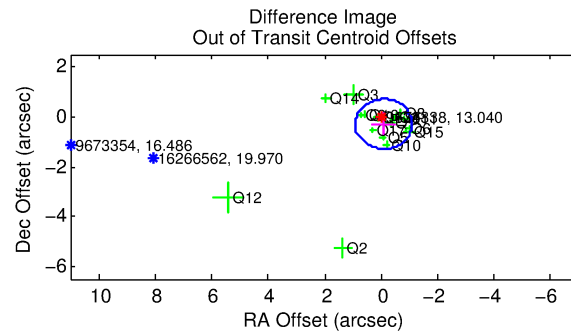
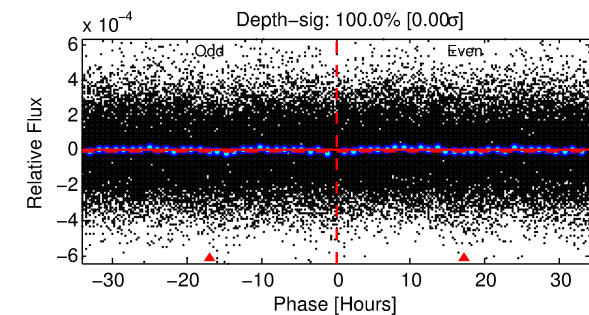
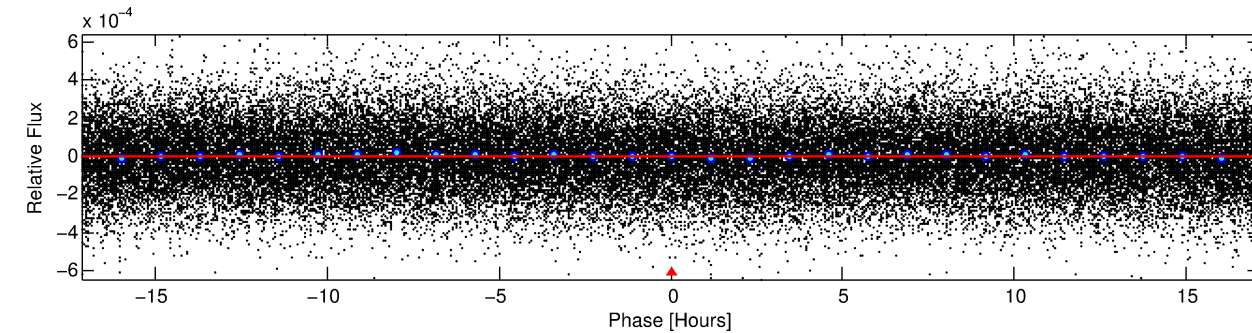
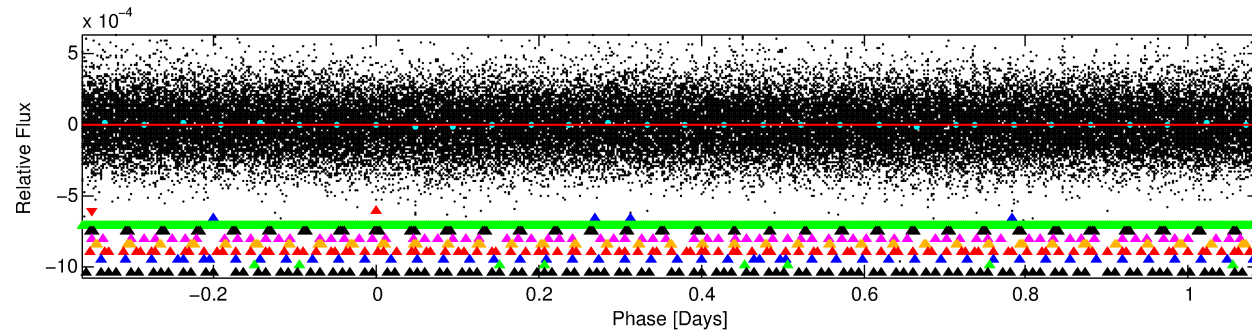
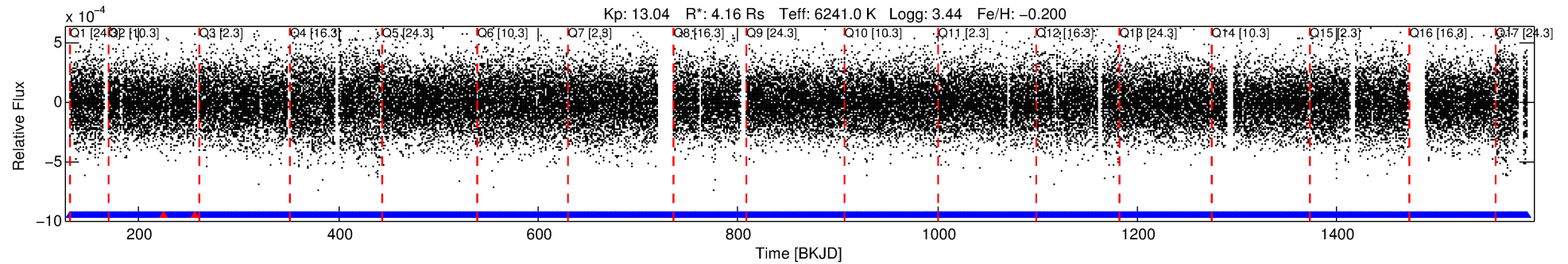
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009673338-01

No Significant Match Found

DV One-Page Summary

KIC: 9673338 Candidate: 1 of 10 Period: 1.451 d



DV Fit Results:

Period = 1.45094 [100.48138] d
Epoch = 131.6742 [27243.2987] BKJD
Rp/R* = 0.0000 [0.7254]
a/R* = 1.12 [5672.67]
b = 0.96 [12467.16]
Seff = 25757.12 [2378389.96]
Teq = 3230 [74572] K
Rp = 0.00 [329.05] Re
a = 0.0302 [1.3943] AU
Ag = 9668039.28 [6147286817297.74] [10.000]
Teffp = 278500 [44272336738] K [0.000]

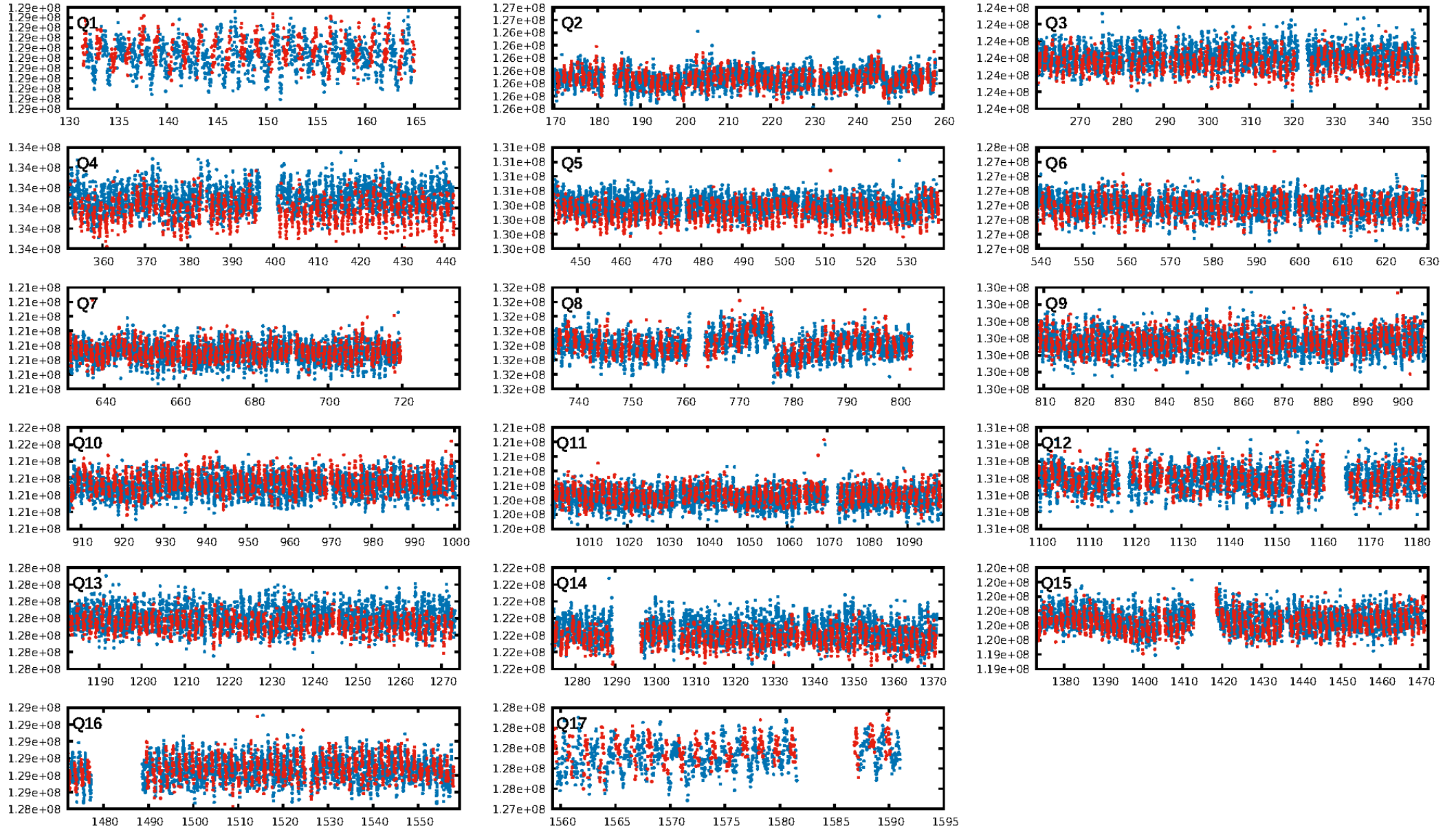
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.4% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.52e-17
RollingBand-fgt: 1.00 [887/889]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OutOffset-rm: 0.301 arcsec [0.90σ]
InOffset-rm: 0.351 arcsec [0.87σ]
OutOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.50 [8/16]
DiffImageOverlap-fno: 0.12 [2/17]

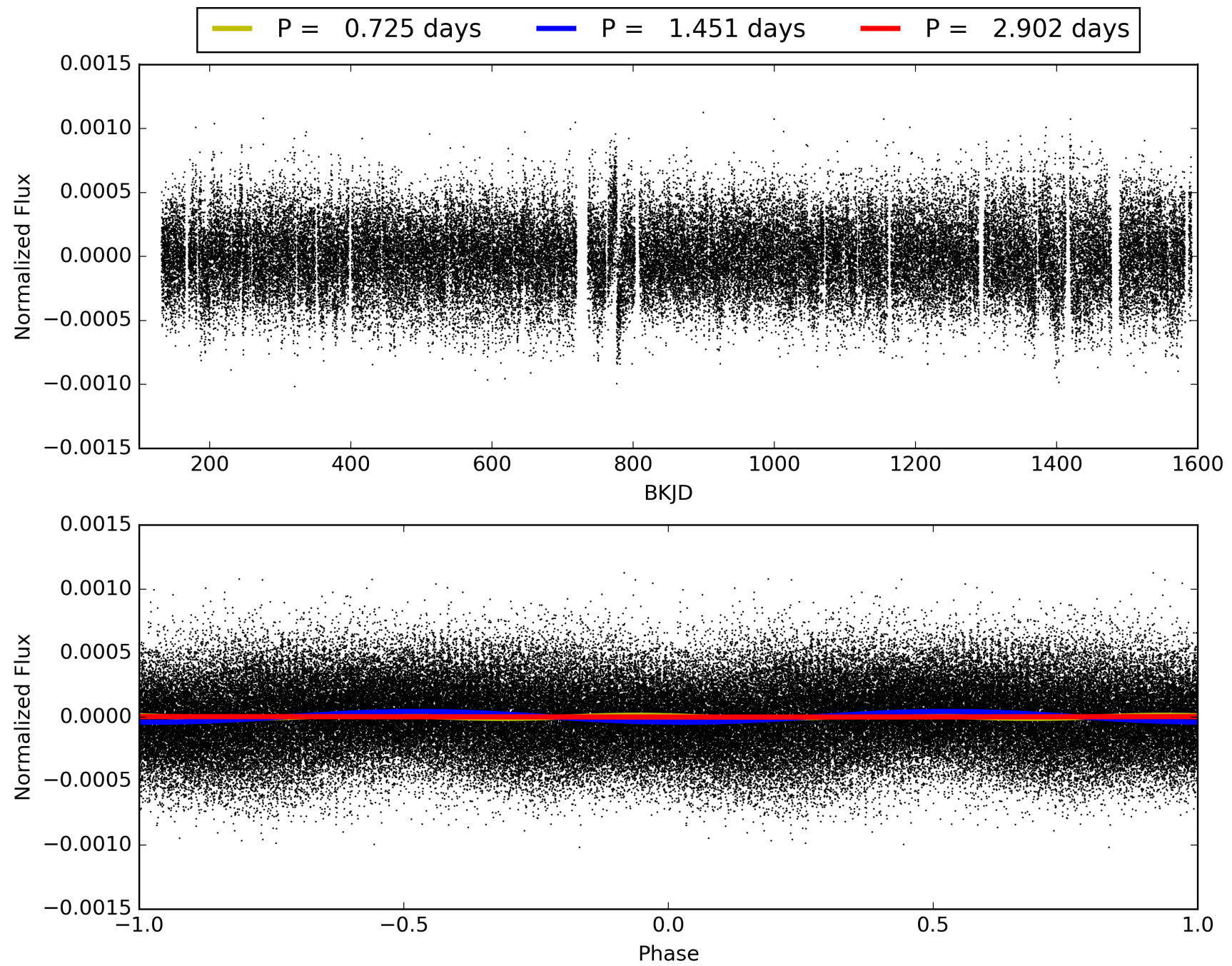
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 11:14:34 Z

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

TCE 009673338-01, PDC Light Curves

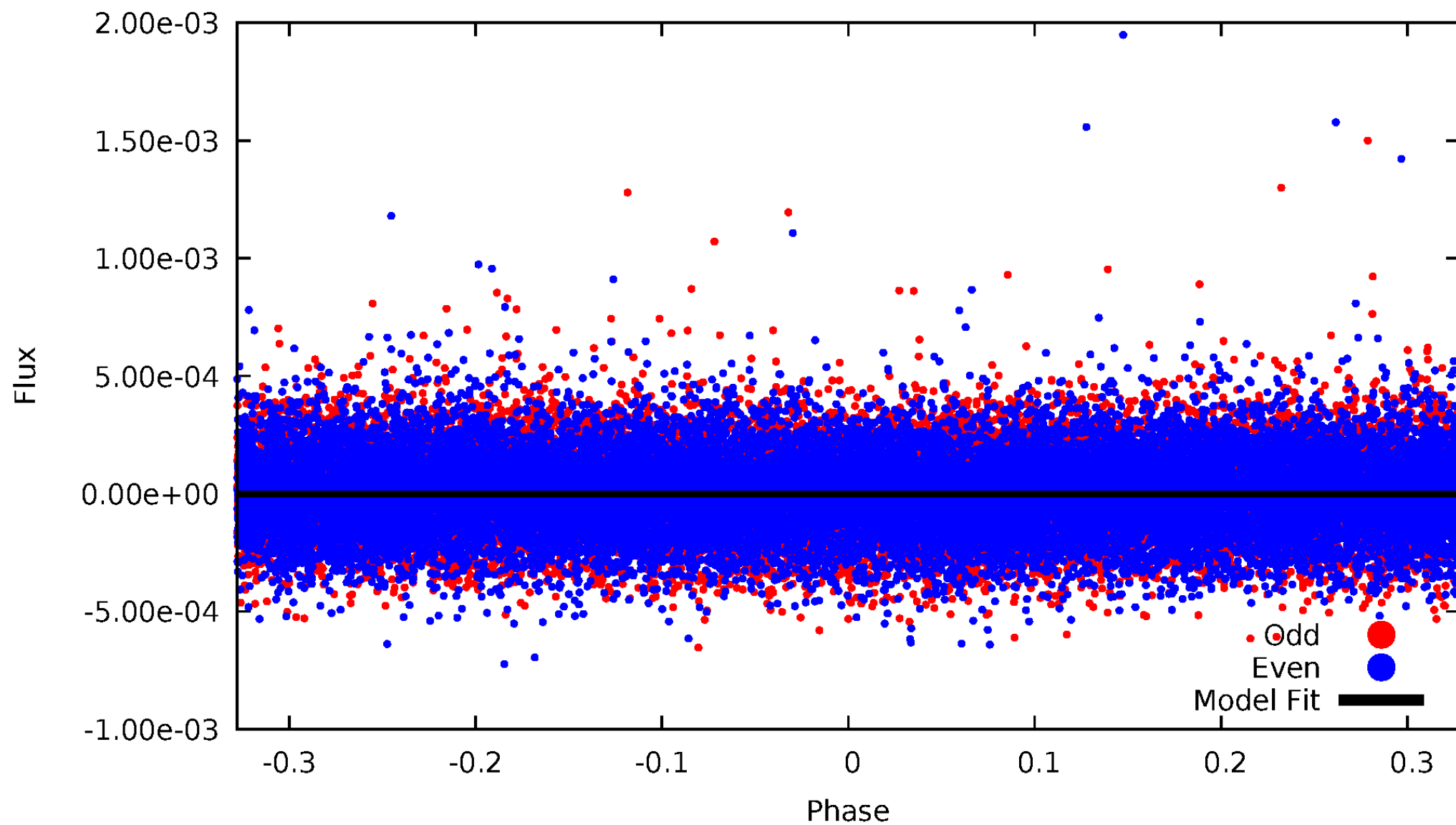


TCE 009673338-01



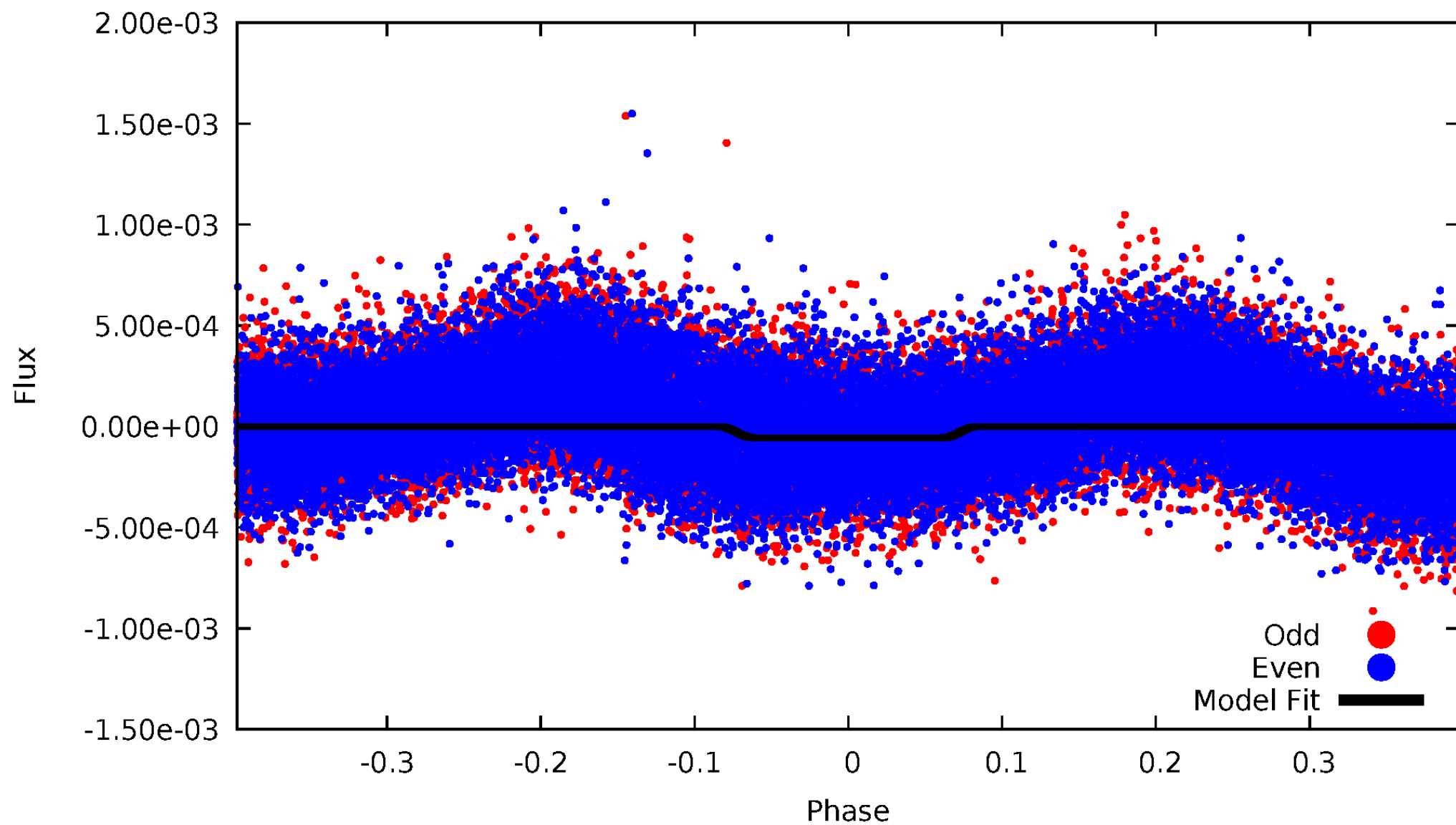
DV Odd/Even

TCE 009673338-01



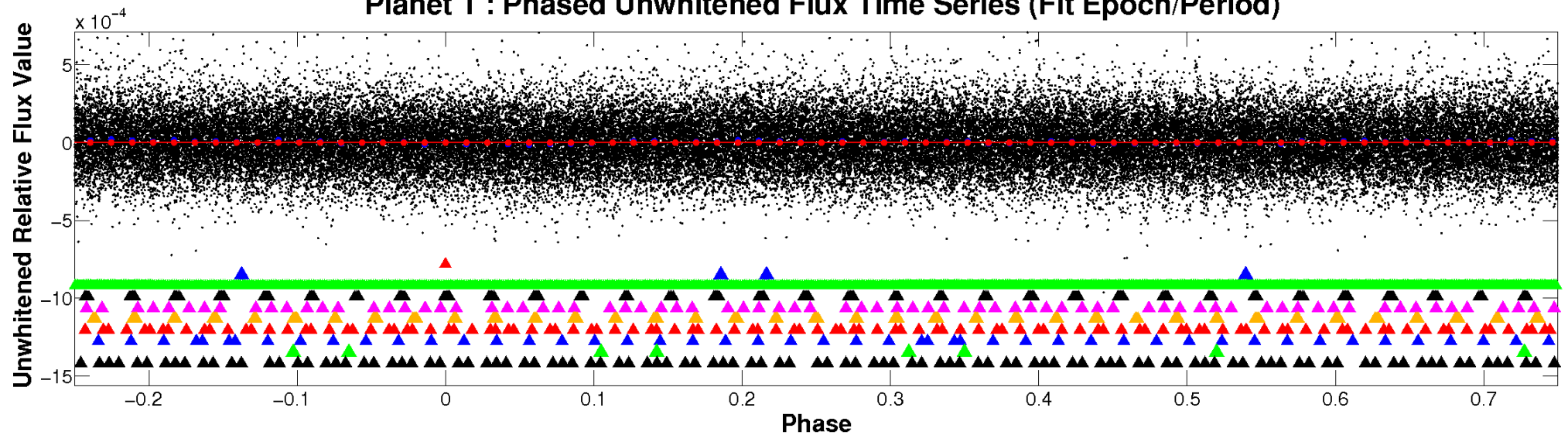
ALT Odd/Even

TCE 009673338-01

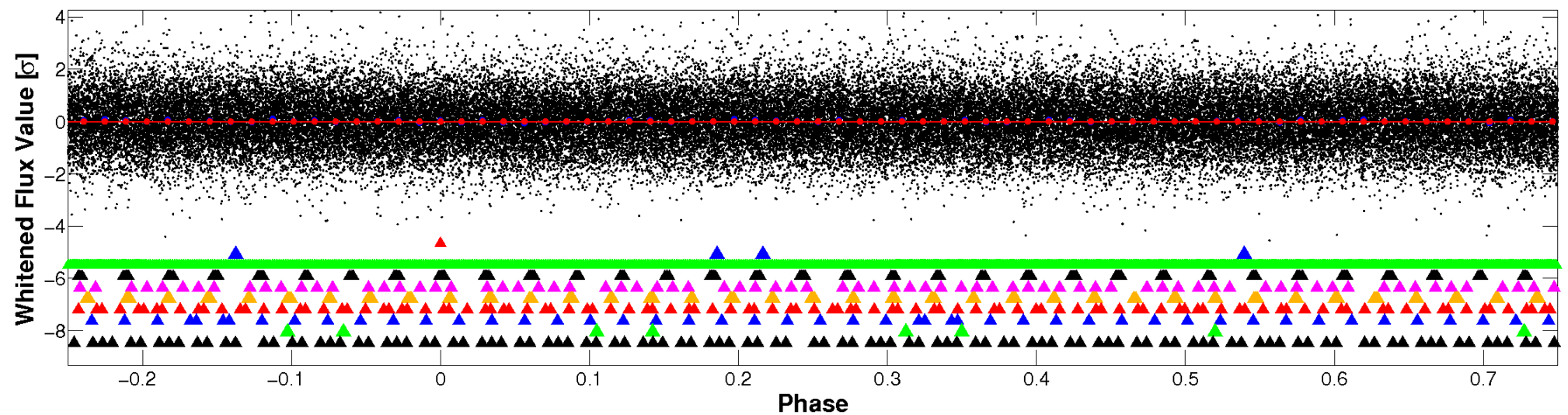


Non-Whitened Vs. Whitened Light Curve

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

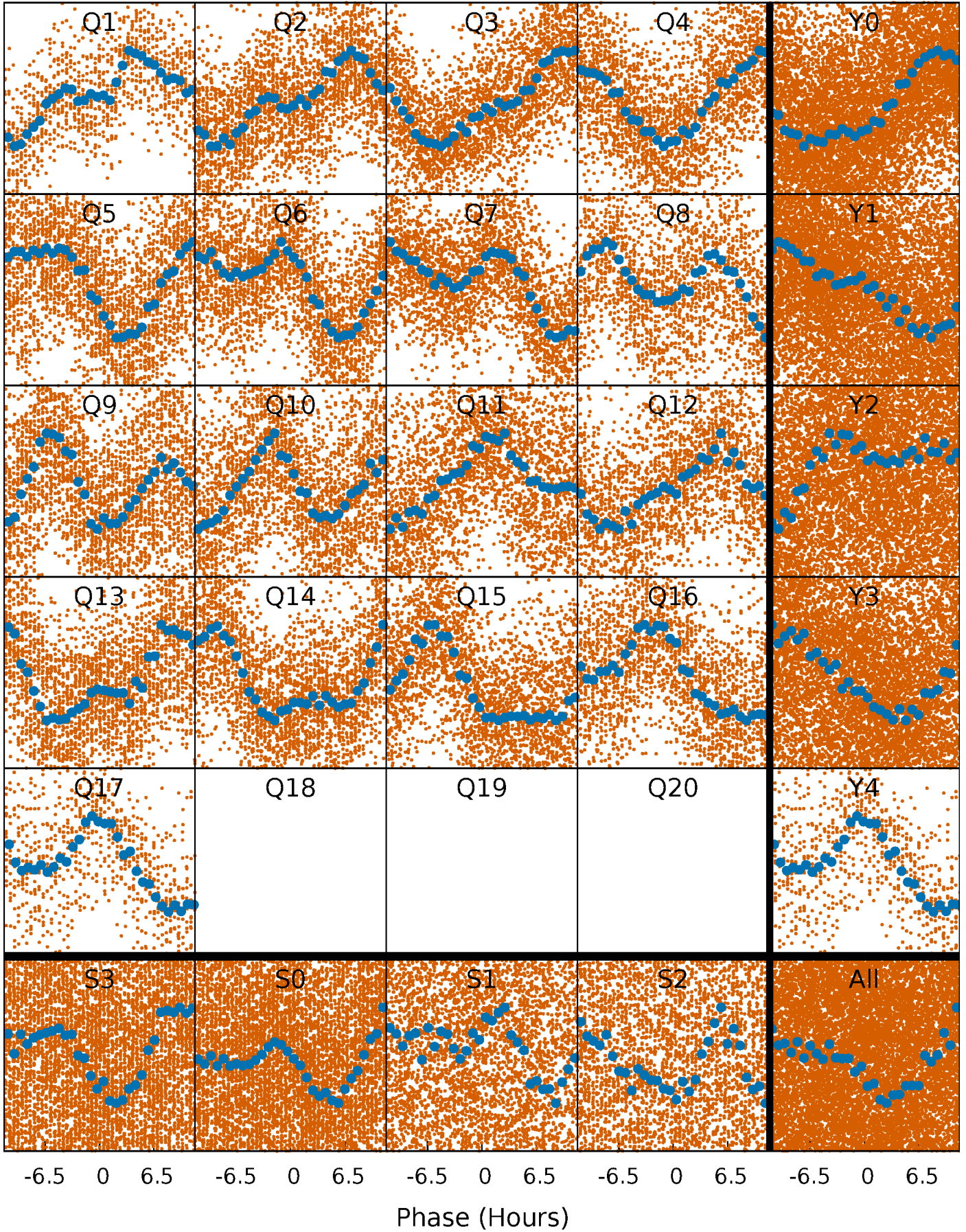


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



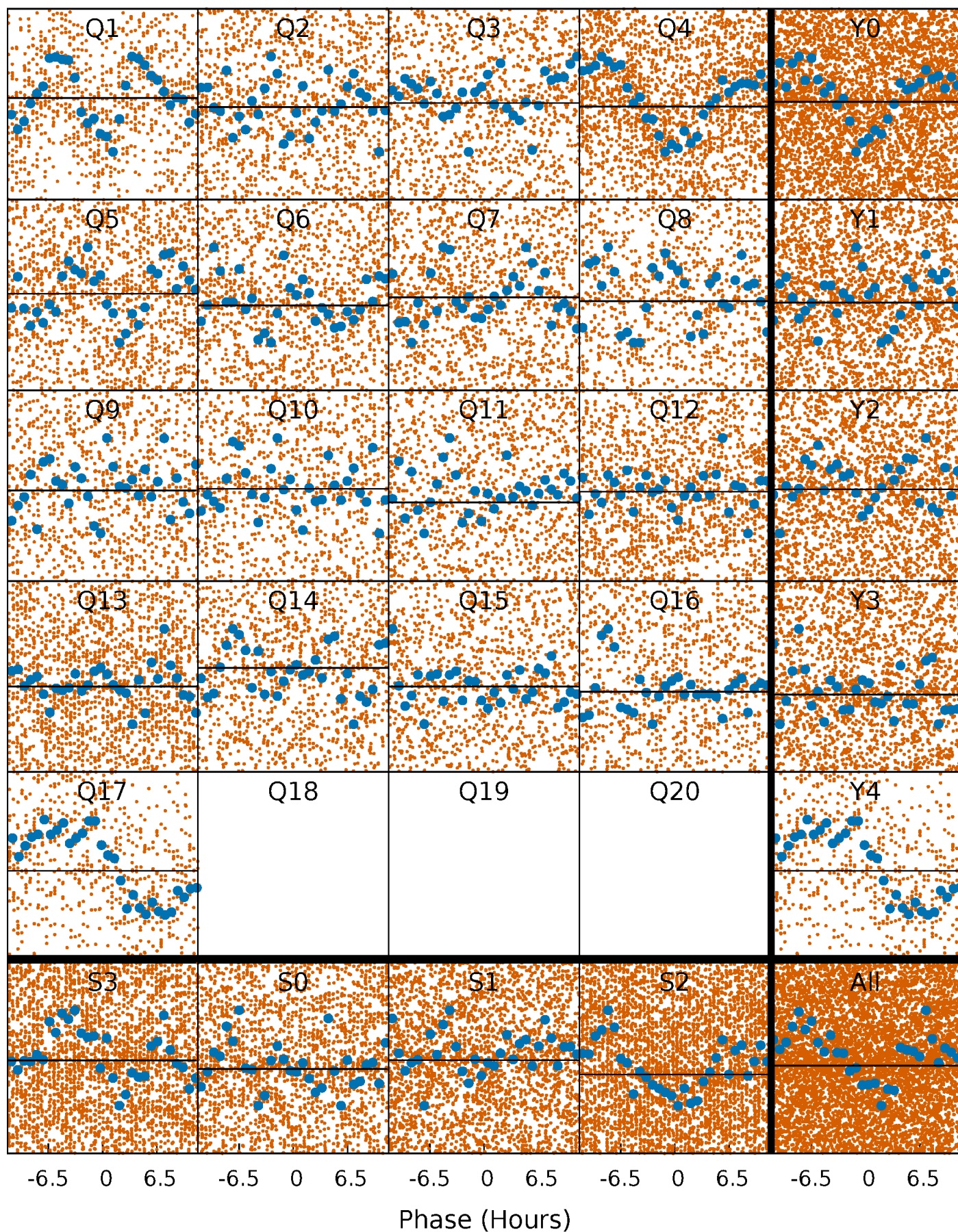
PDC Quarter-Phased Transit Curves

TCE 009673338-01 P= 1.450943 Days $T_0=131.674153$ (BKJD)



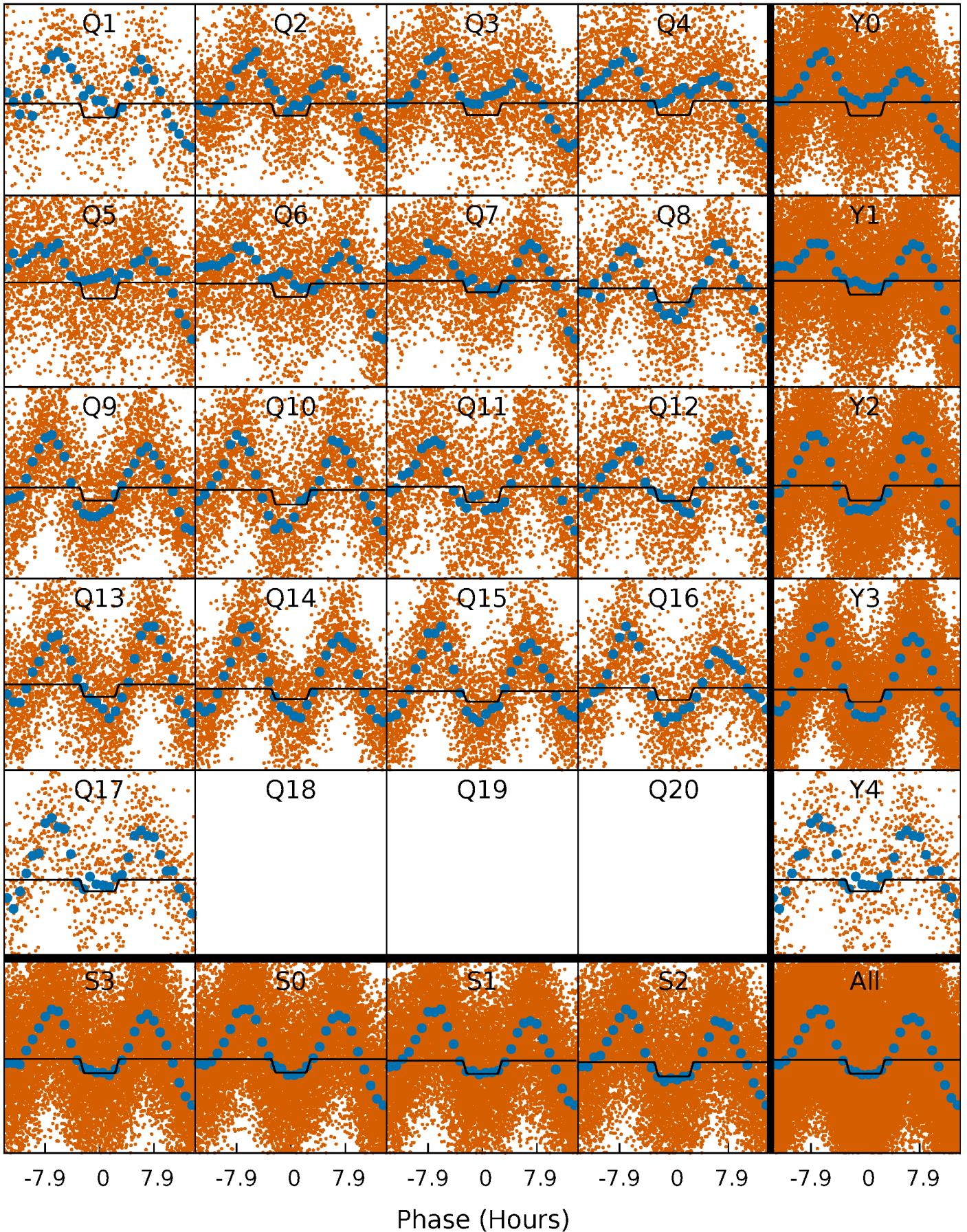
DV Quarter-Phased Transit Curves

TCE 009673338-01 P= 1.450943 Days $T_0=131.674153$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

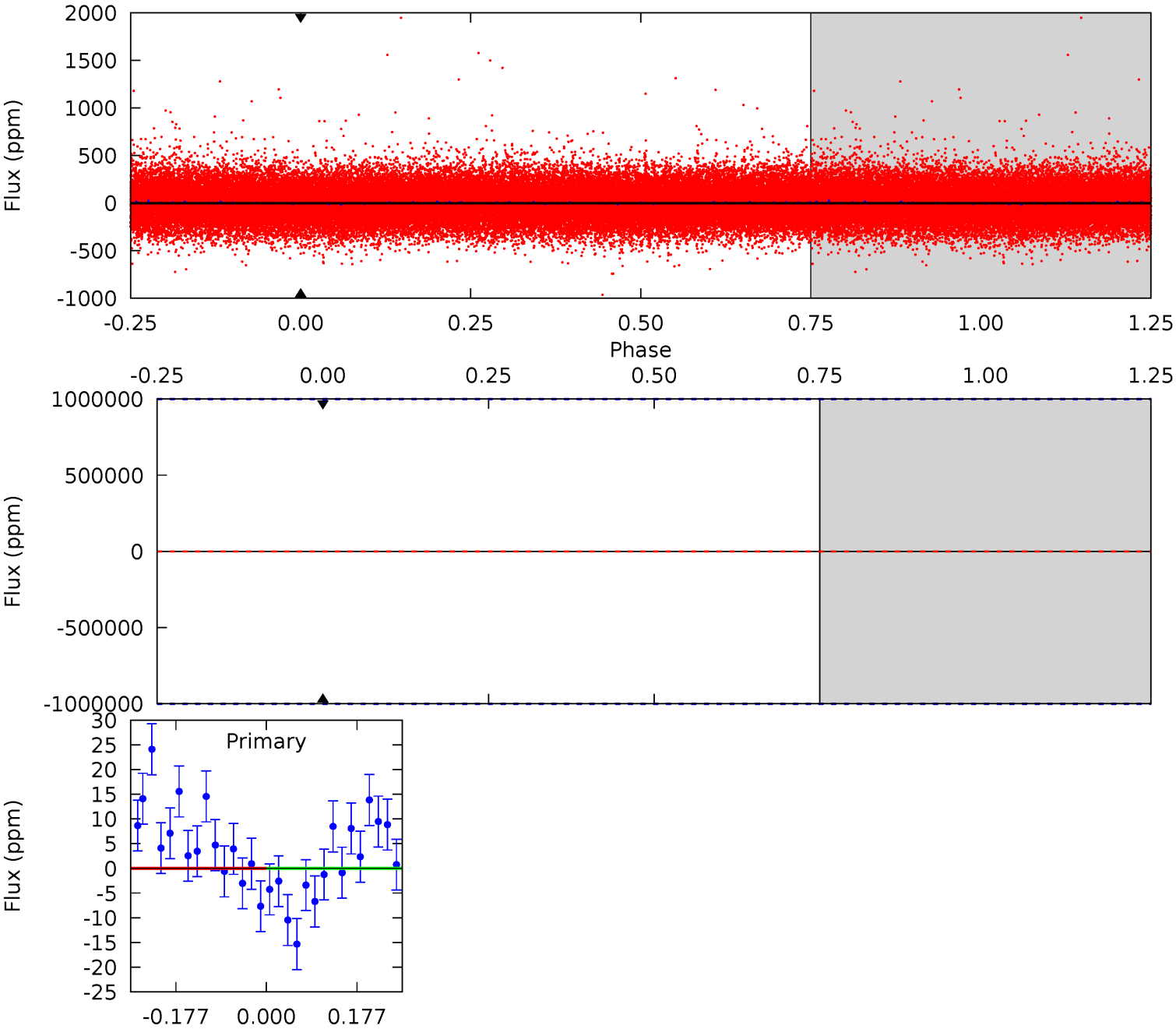
TCE 009673338-01 P= 1.453170 Days $T_0=132.084499$ (BKJD)



DV Model-Shift Uniqueness Test

009673338-01, P = 1.450943 Days, E = 130.223210 Days

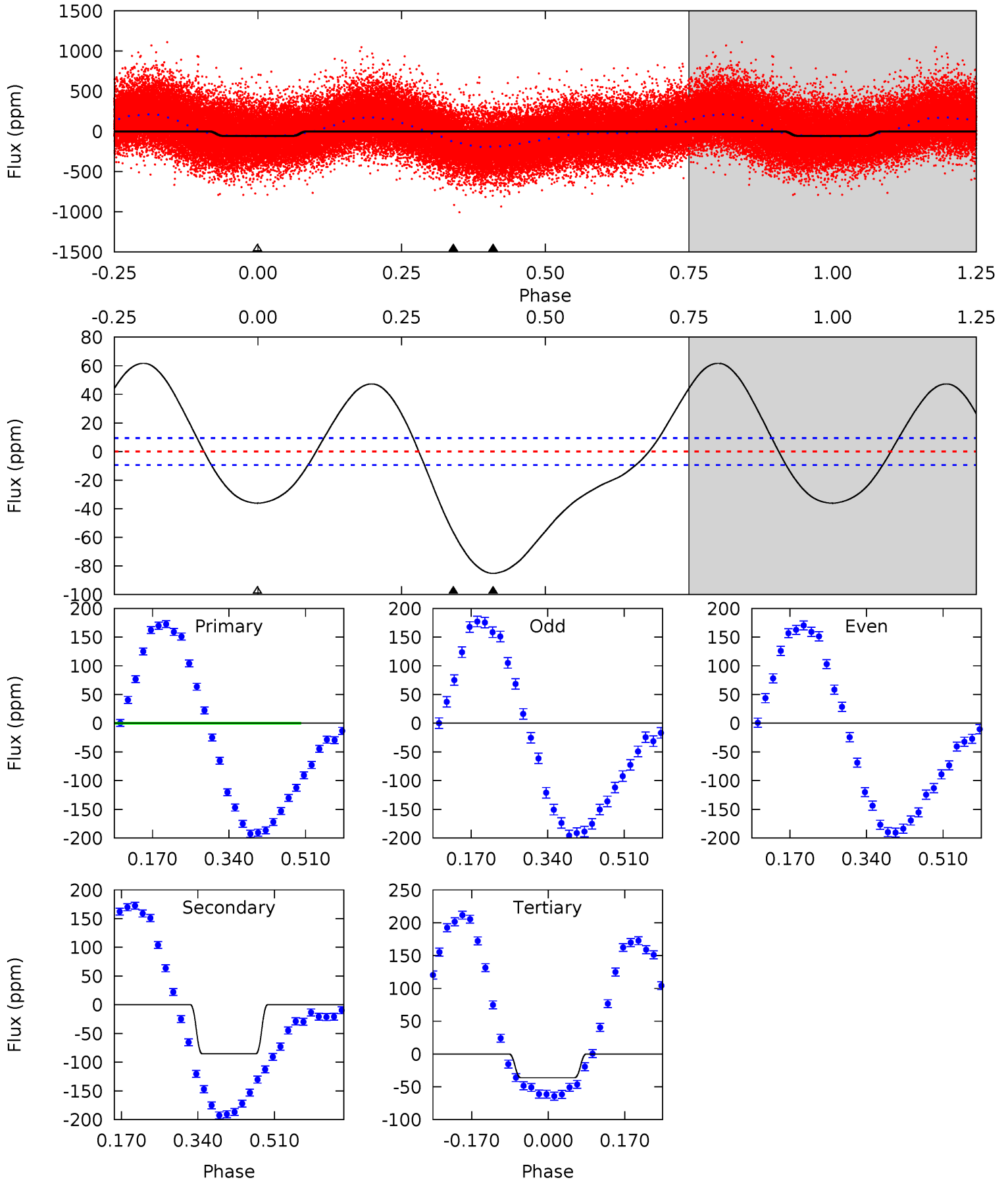
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

009673338-01, P = 1.453170 Days, E = 130.631329 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.7	40.3	17.1	0	4.45	1.37	14.9	9.64	26.7	23.3	40.3	1.25	0.98	0.42	0.42



Stellar Parameters For KIC 009673338

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6241^{+190}_{-171}	$3.442^{+0.392}_{-0.098}$	$-0.200^{+0.350}_{-0.300}$	$4.157^{+0.611}_{-1.834}$	$1.746^{+0.155}_{-0.465}$	$0.034^{+0.127}_{-0.010}$
	+3%/-3%	+11%/-3%	+175%/-150%	+15%/-44%	+9%/-27%	+369%/-30%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009673338-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$213.45^{+212.51}_{-152.15}$	1219^{+564}_{-278}	-2507^{+8281}_{-3161}	$0.007^{+372.923}_{-338.001}$
Alt.	-85 ± 2	$197.71^{+232.62}_{-142.28}$	1202^{+581}_{-283}	-1765^{+4168}_{-520}	$0.161^{+2.611}_{-0.143}$

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 $A_{obs} \gg 1.0$

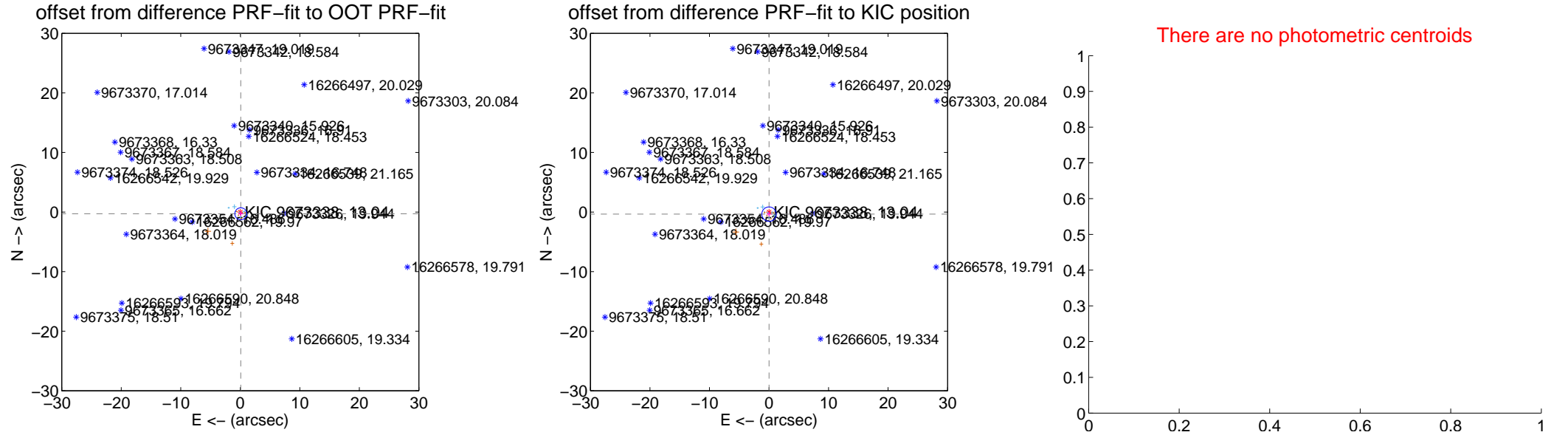
DV Centroid Data

Supplemental centroid analysis for 009673338-01. Kepler magnitude: 13.04. Transit SNR 0.00

There are 8 quarters with good PRF difference image offsets

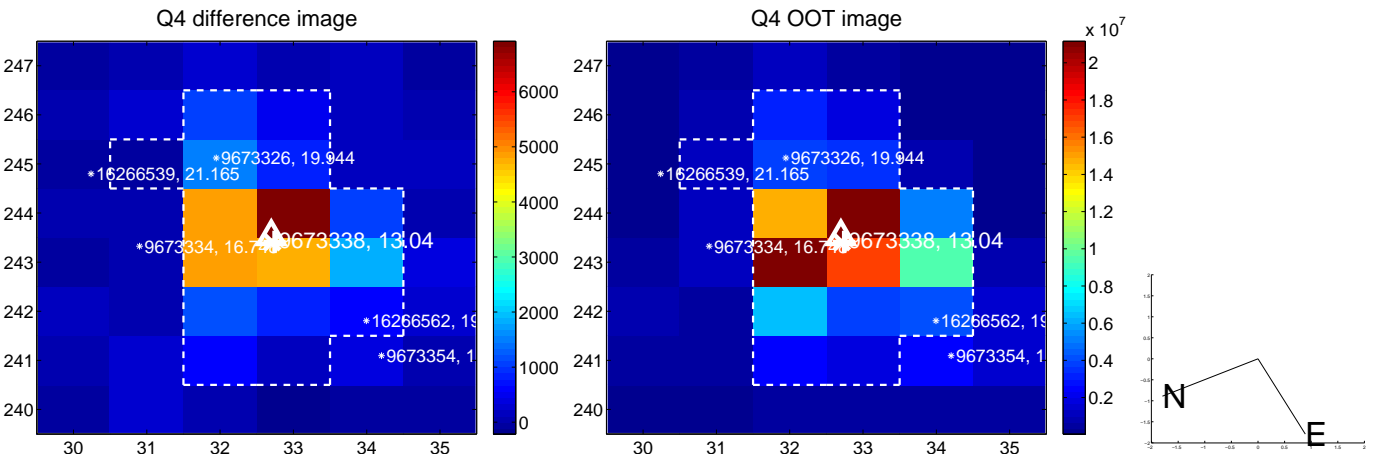
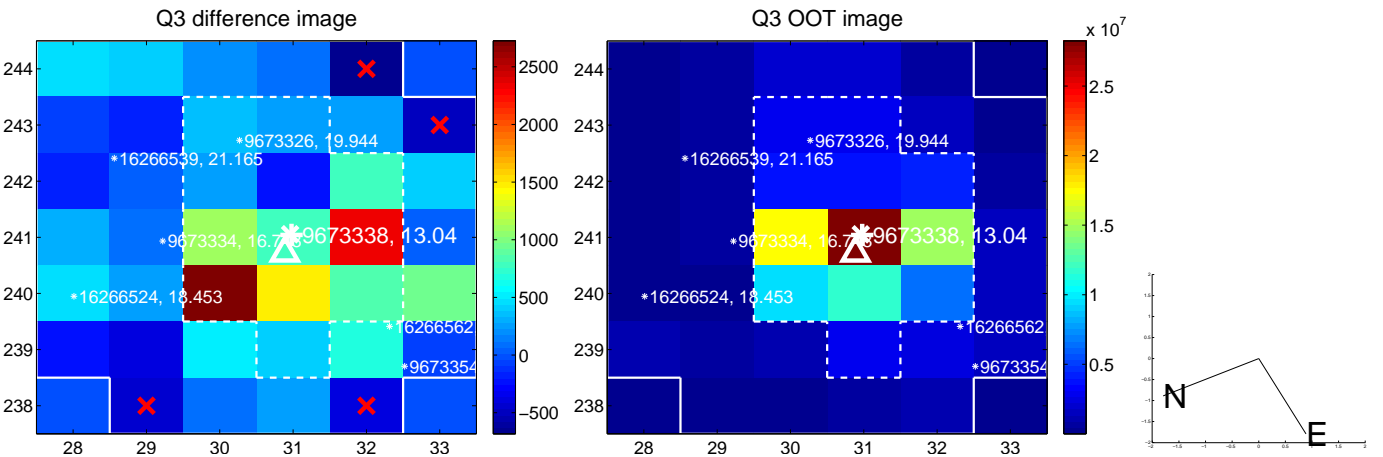
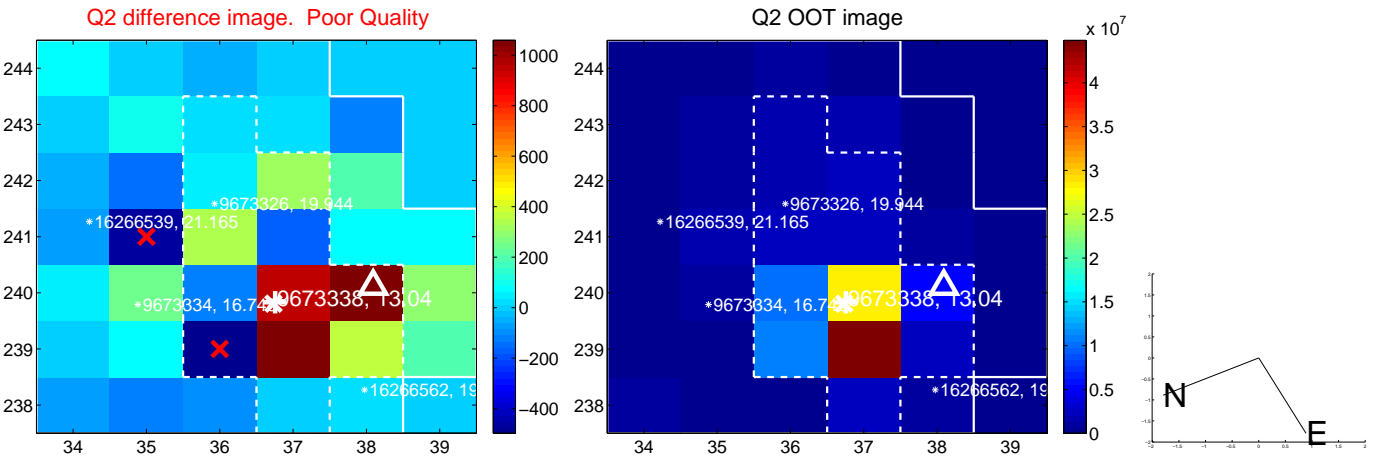
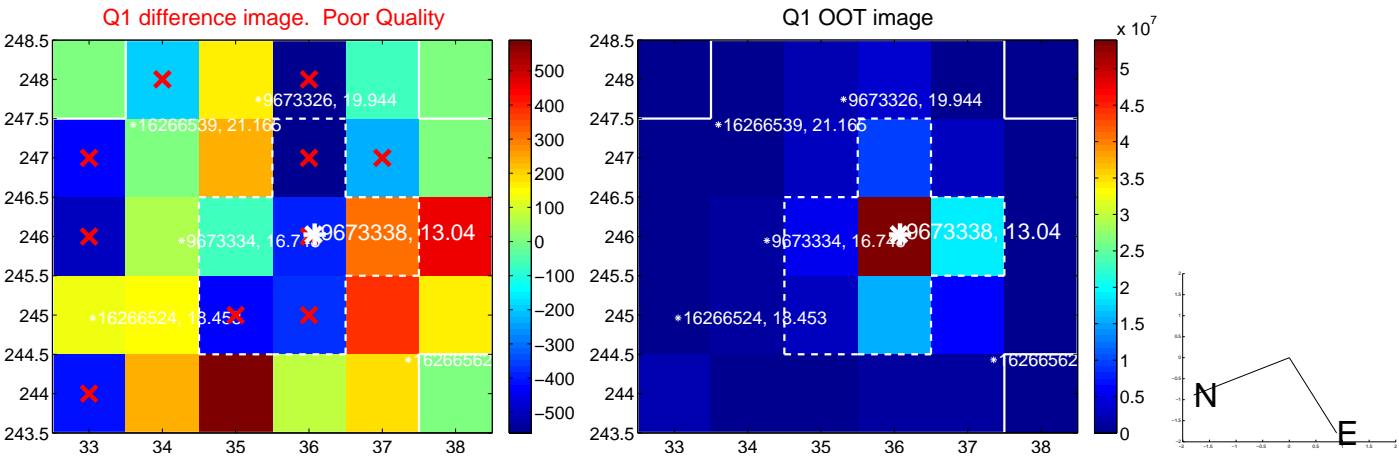
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.301 ± 0.334	0.90	-0.083 ± 0.404	-0.289 ± 0.390
PRF-fit source offset from KIC position	0.351 ± 0.404	0.87	-0.005 ± 0.413	-0.351 ± 0.406
photometric centroid source offset	—	—	—	—

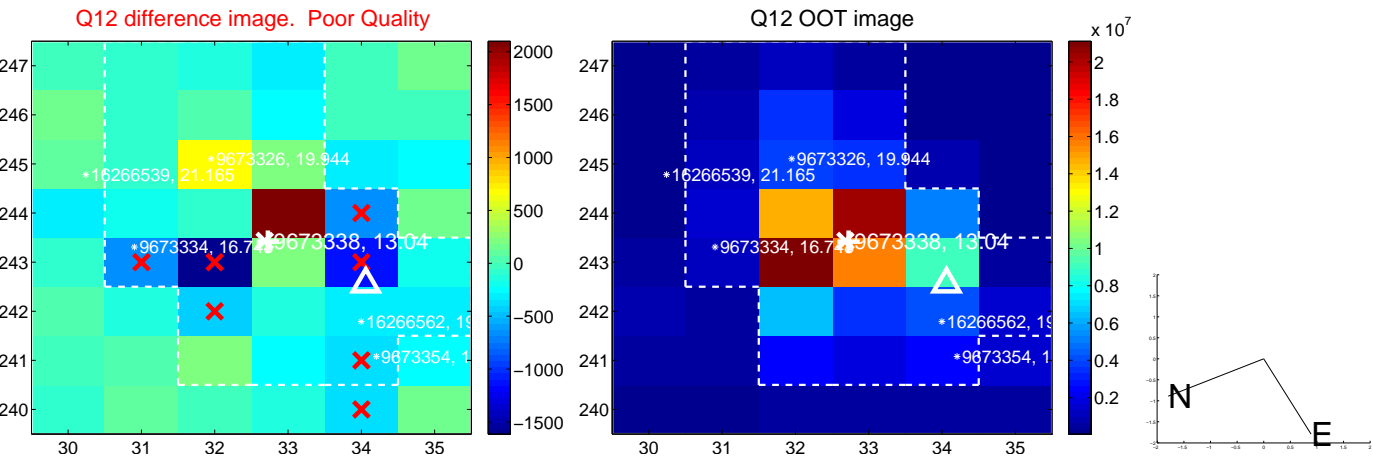
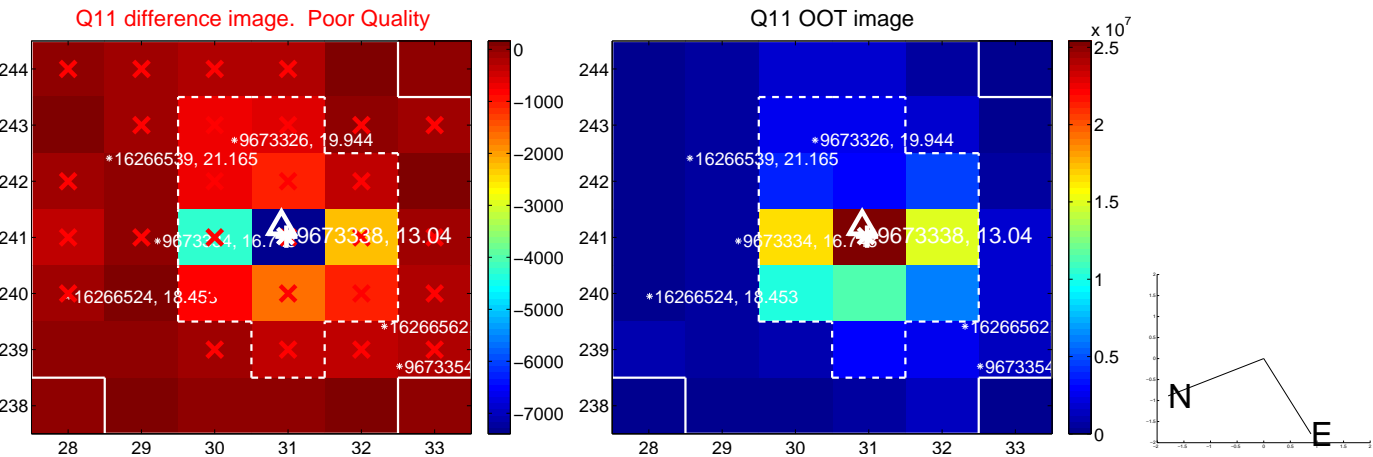
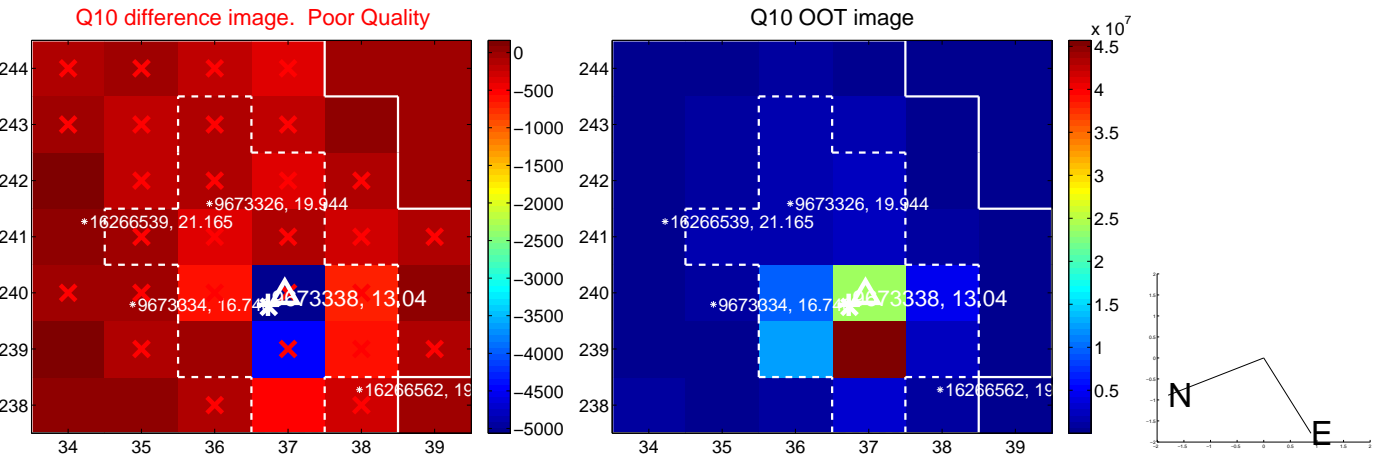
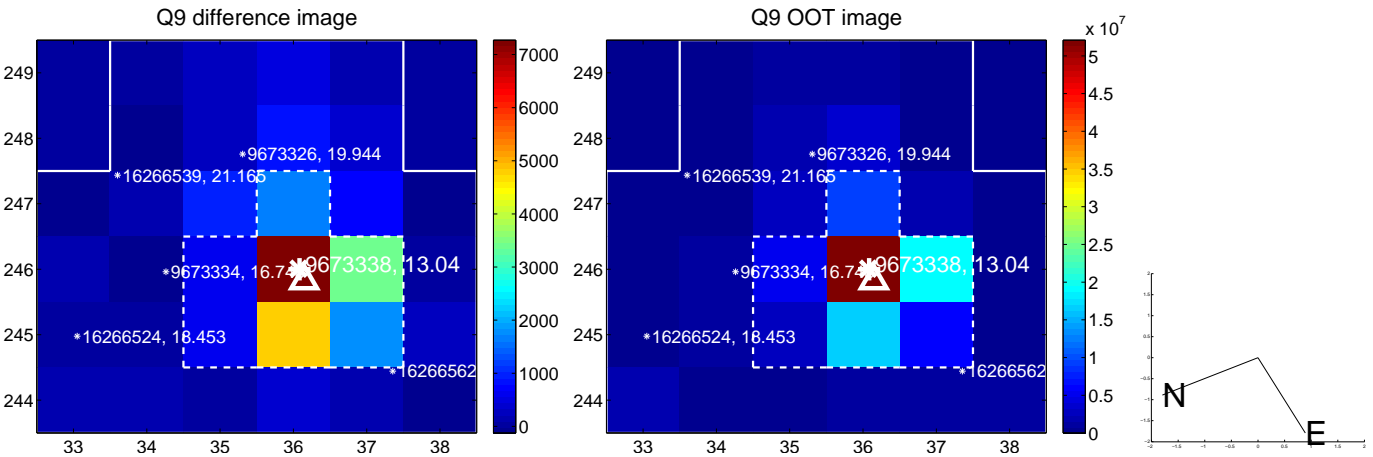


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

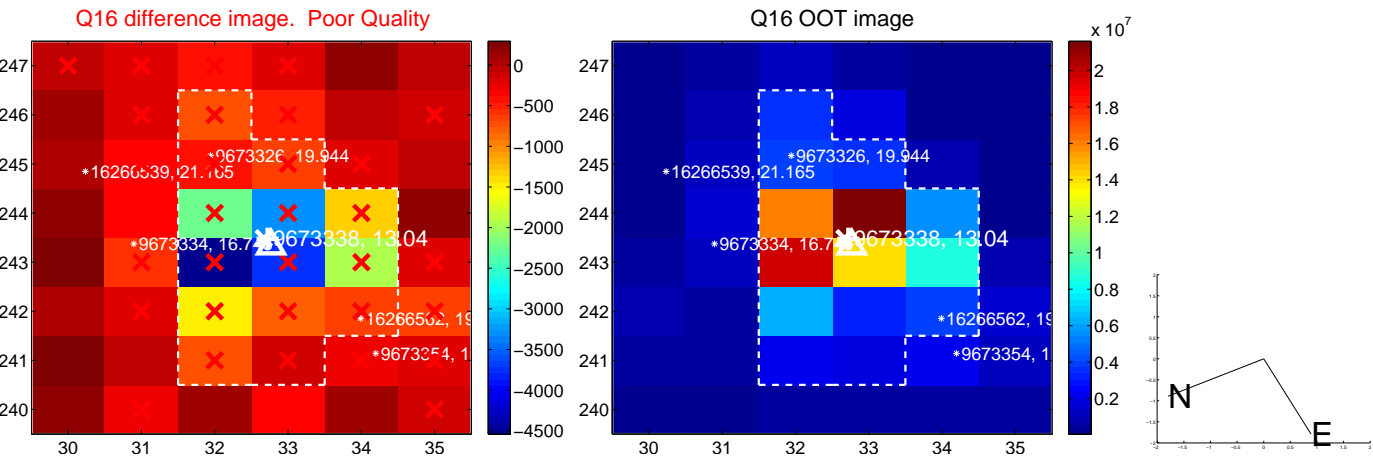
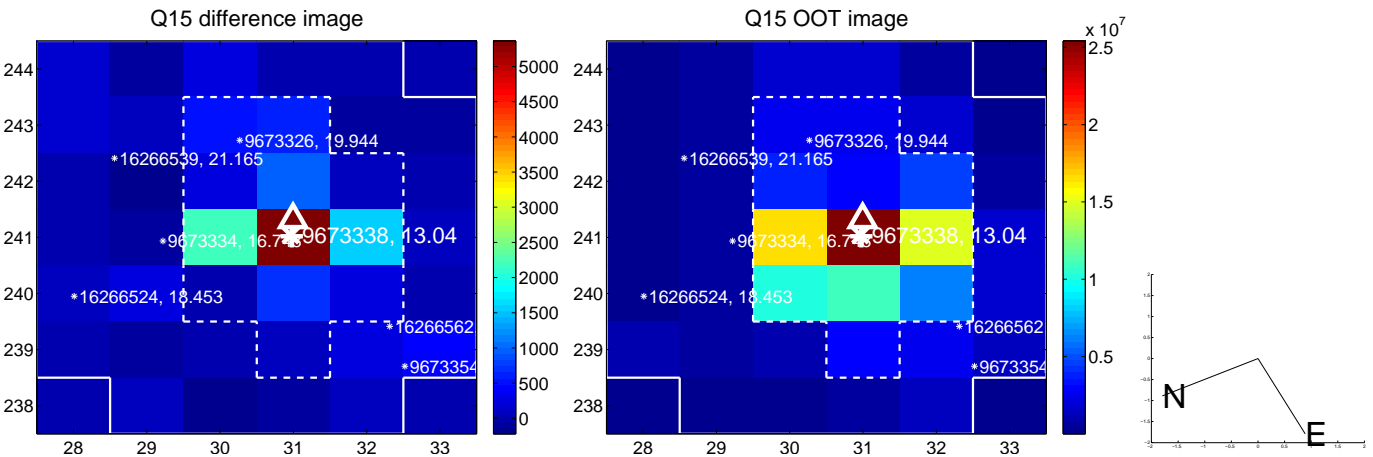
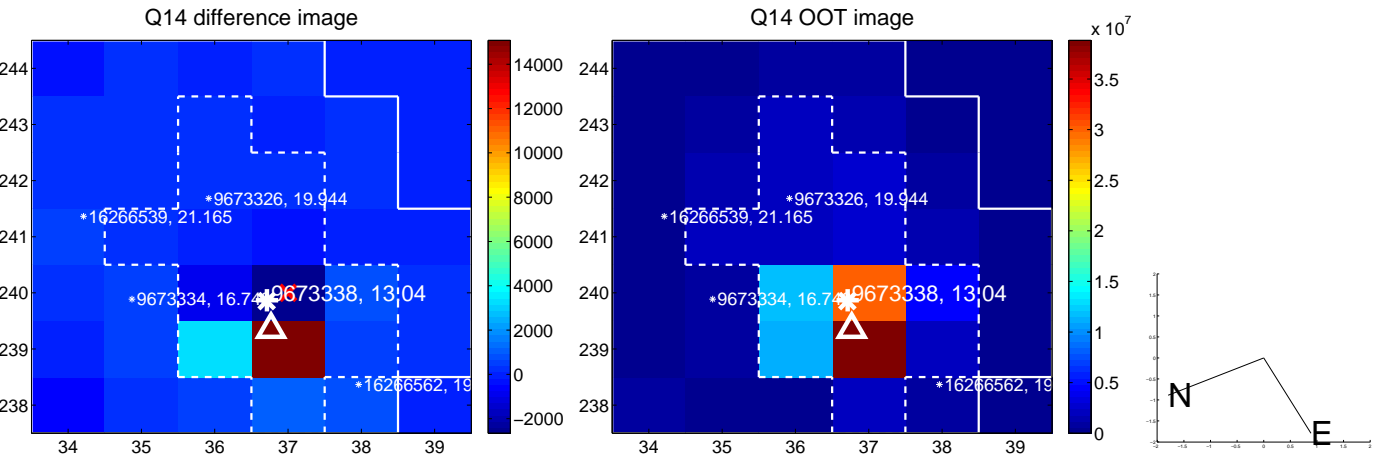
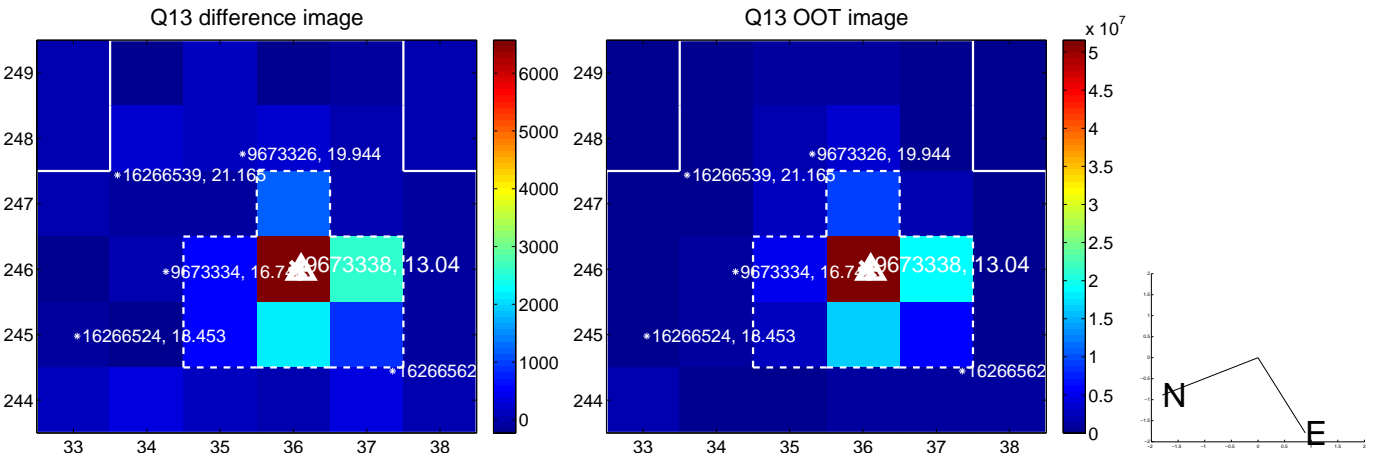
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



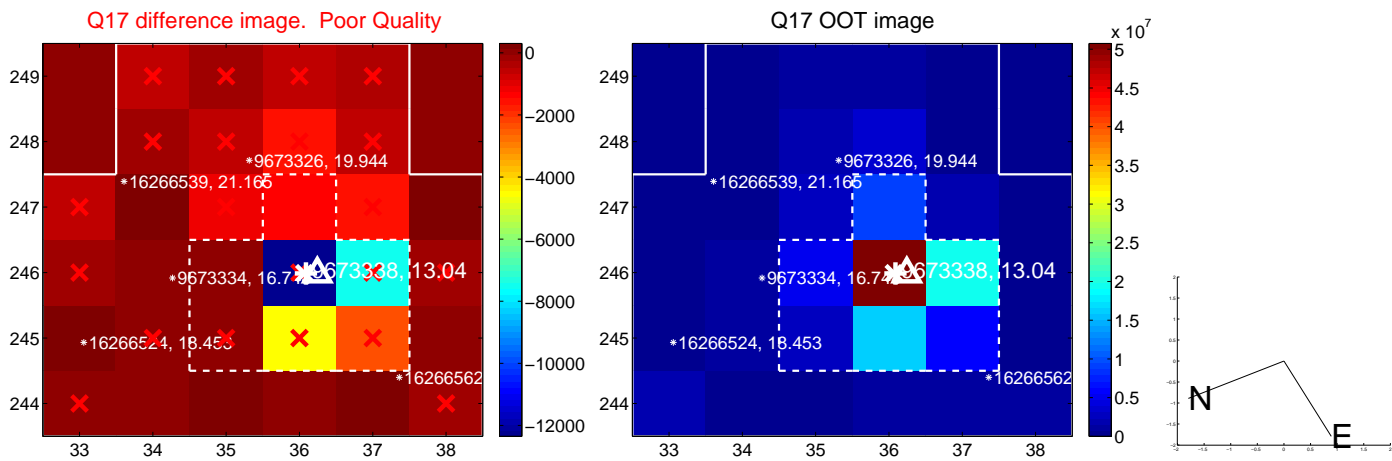
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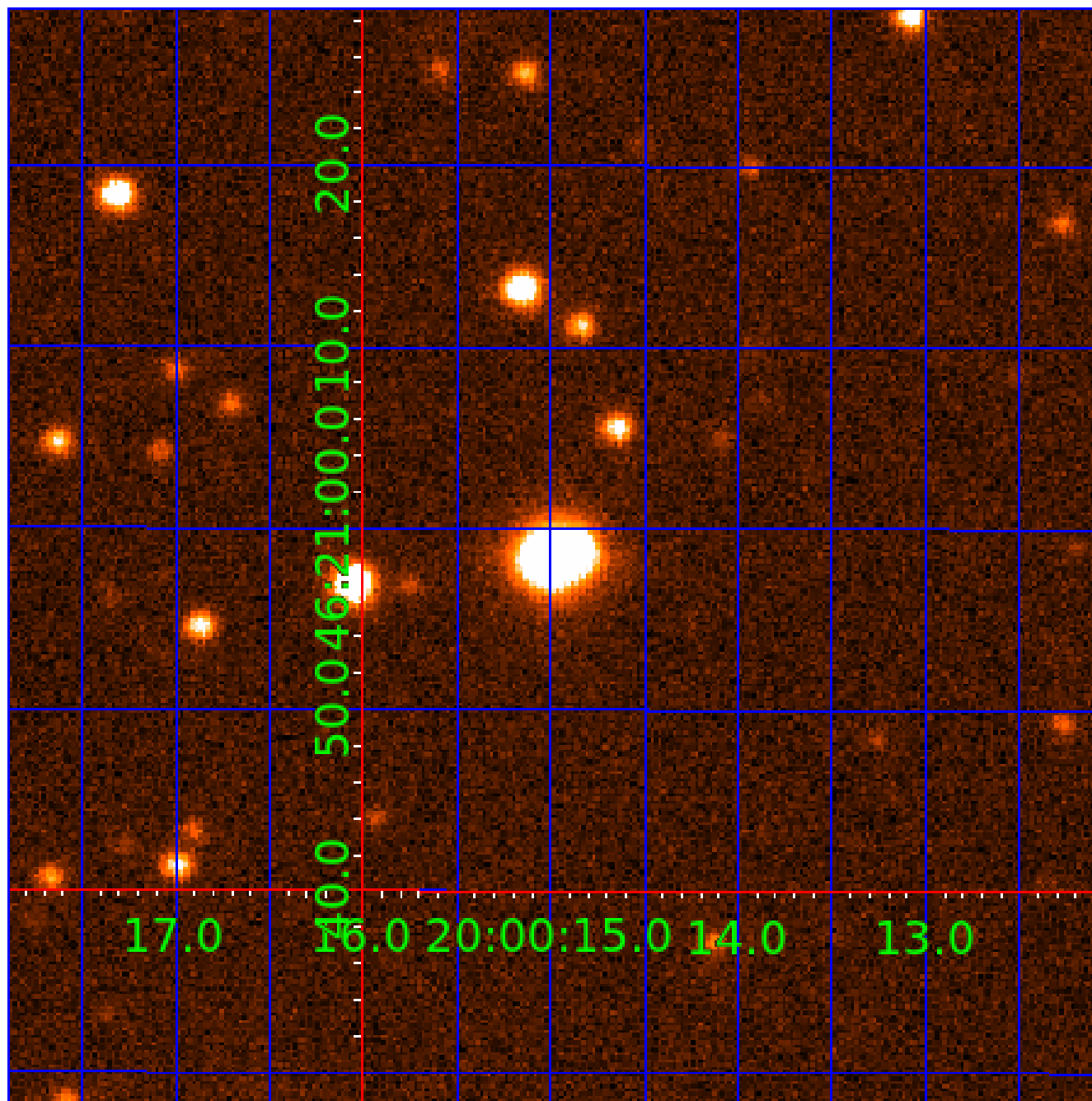
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folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 009673338

Q1-17 DR25 TCE Parameters

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009673338-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
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009673338-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—NO_FITS—INCONSISTENT_TRANS—CENT_NOFITS
009673338-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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

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

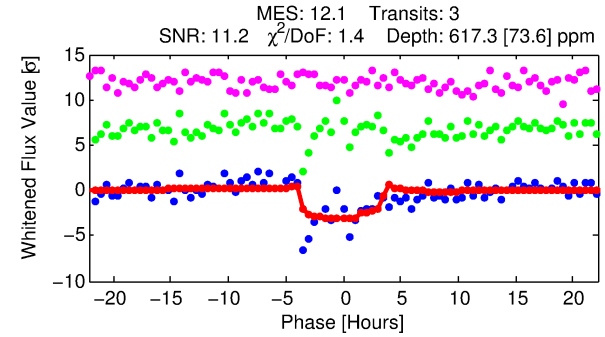
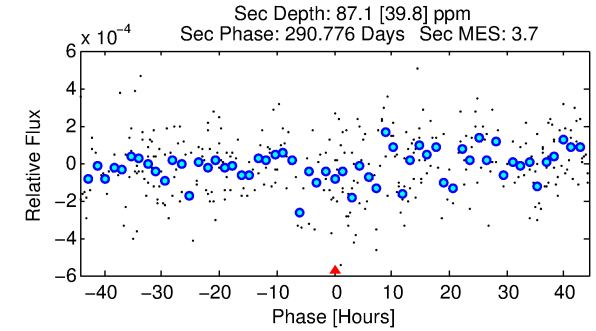
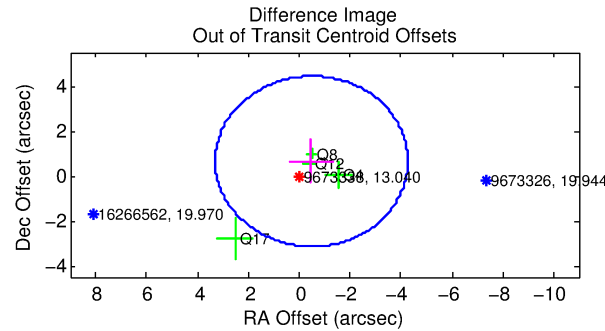
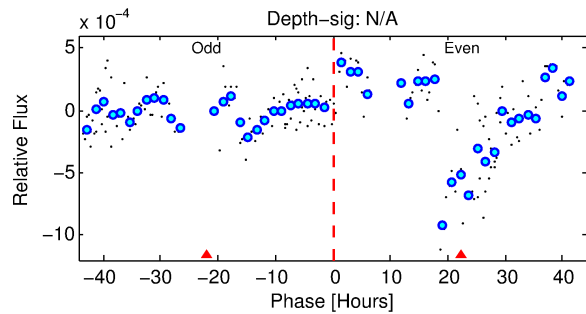
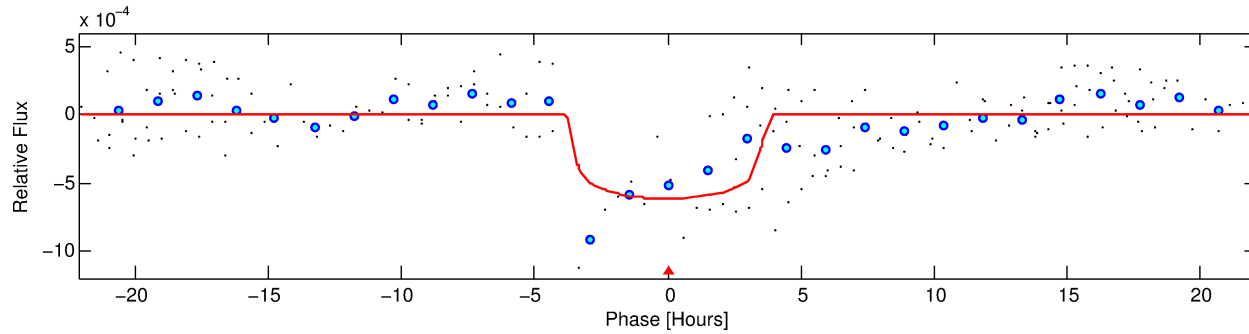
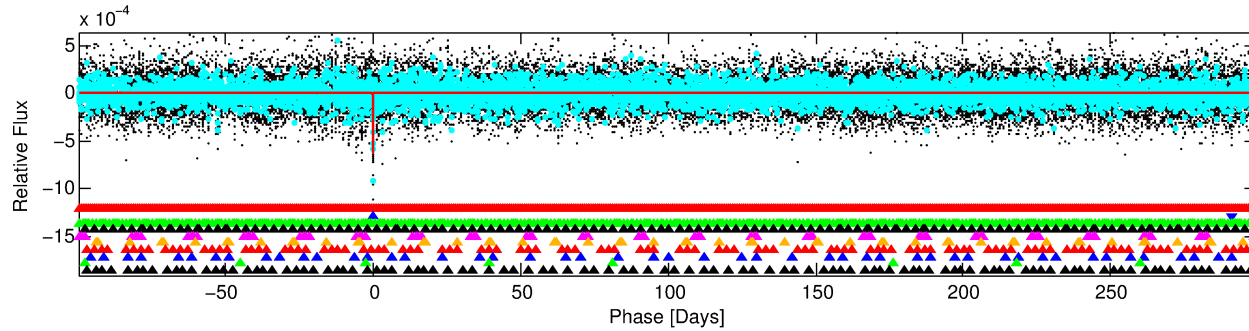
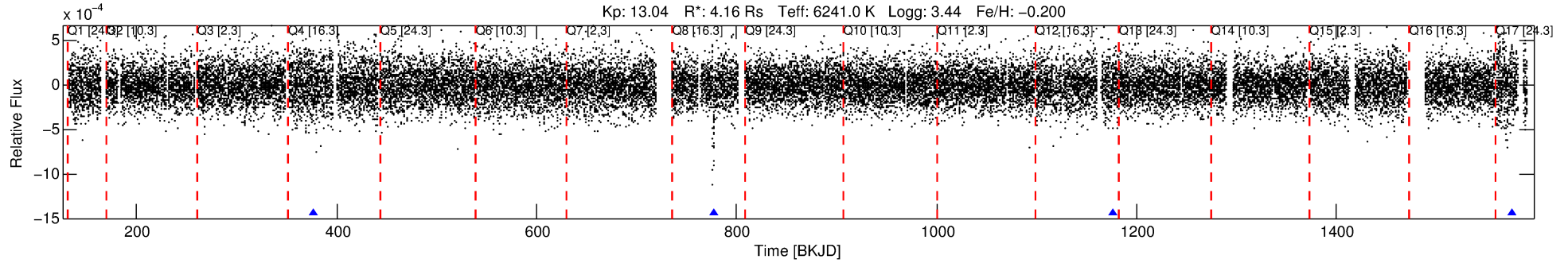
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009673338-02

No Significant Match Found

DV One-Page Summary

KIC: 9673338 Candidate: 2 of 10 Period: 399.478 d



DV Fit Results:

Period = 399.47809 [0.00508] d
Epoch = 377.1976 [0.0090] BKJD
Rp/R* = 0.0236 [0.0190]
a/R* = 357.62 [1491.51]
b = 0.55 [5.35]
Seff = 14.38 [9.79]
Teq = 497 [85] K
Rp = 10.72 [9.83] Re
a = 1.2780 [0.5377] AU
Ag = 681.84 [1228.80] [0.55] σ
Teffp = 3923 [1645] K [2.08] σ

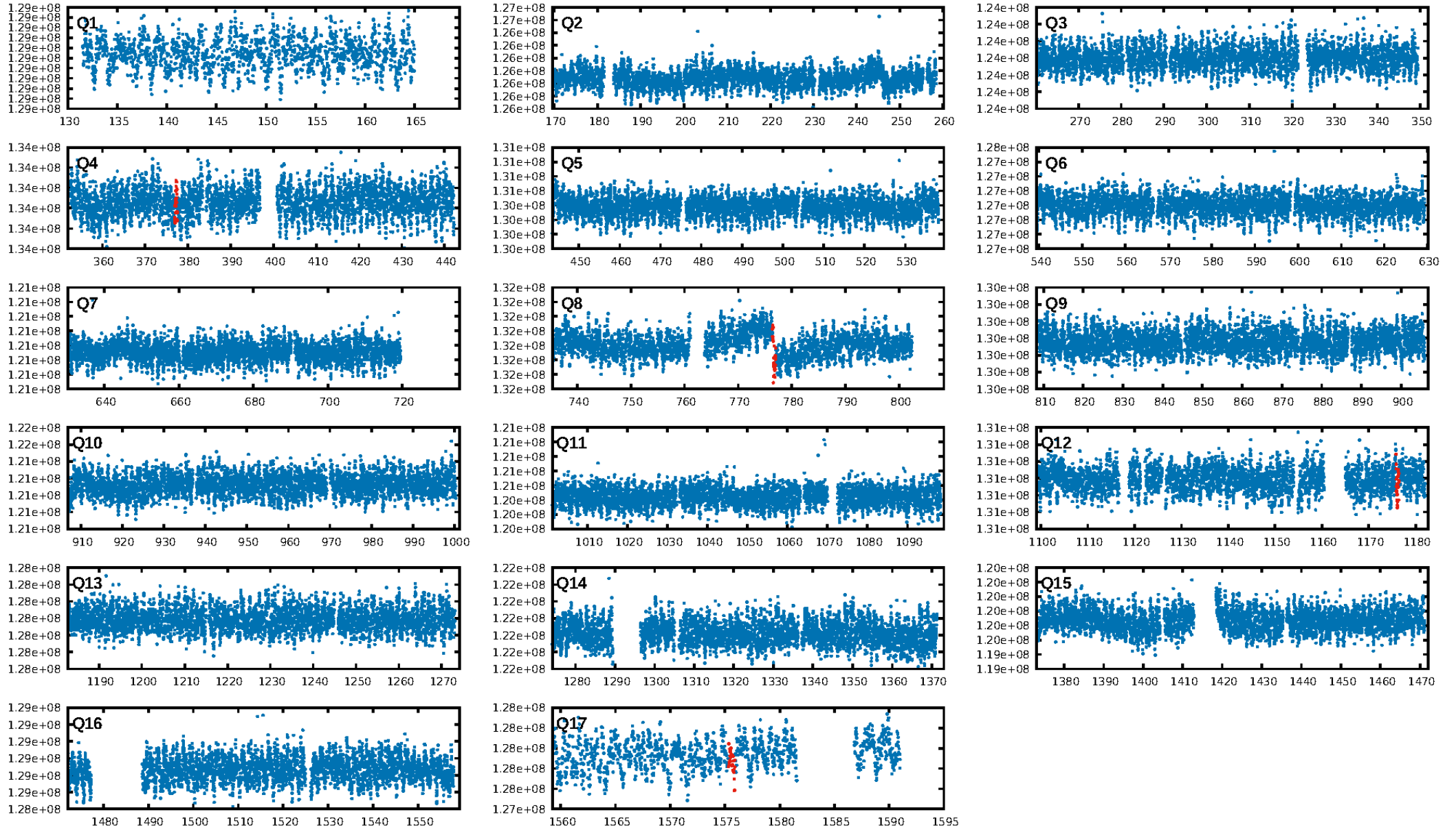
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [594.15] σ
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.4%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 1.71e-16
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 10.06
Centroid-sig: 16.9%
Centroid-so: 0.606 arcsec [0.97] σ
OotOffset-rm: 0.808 arcsec [0.64] σ
KicOffset-rm: 0.657 arcsec [0.65] σ
OotOffset-st: 0/0/3/1 [4]
KicOffset-st: 0/0/3/1 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 0.00 [0/4]

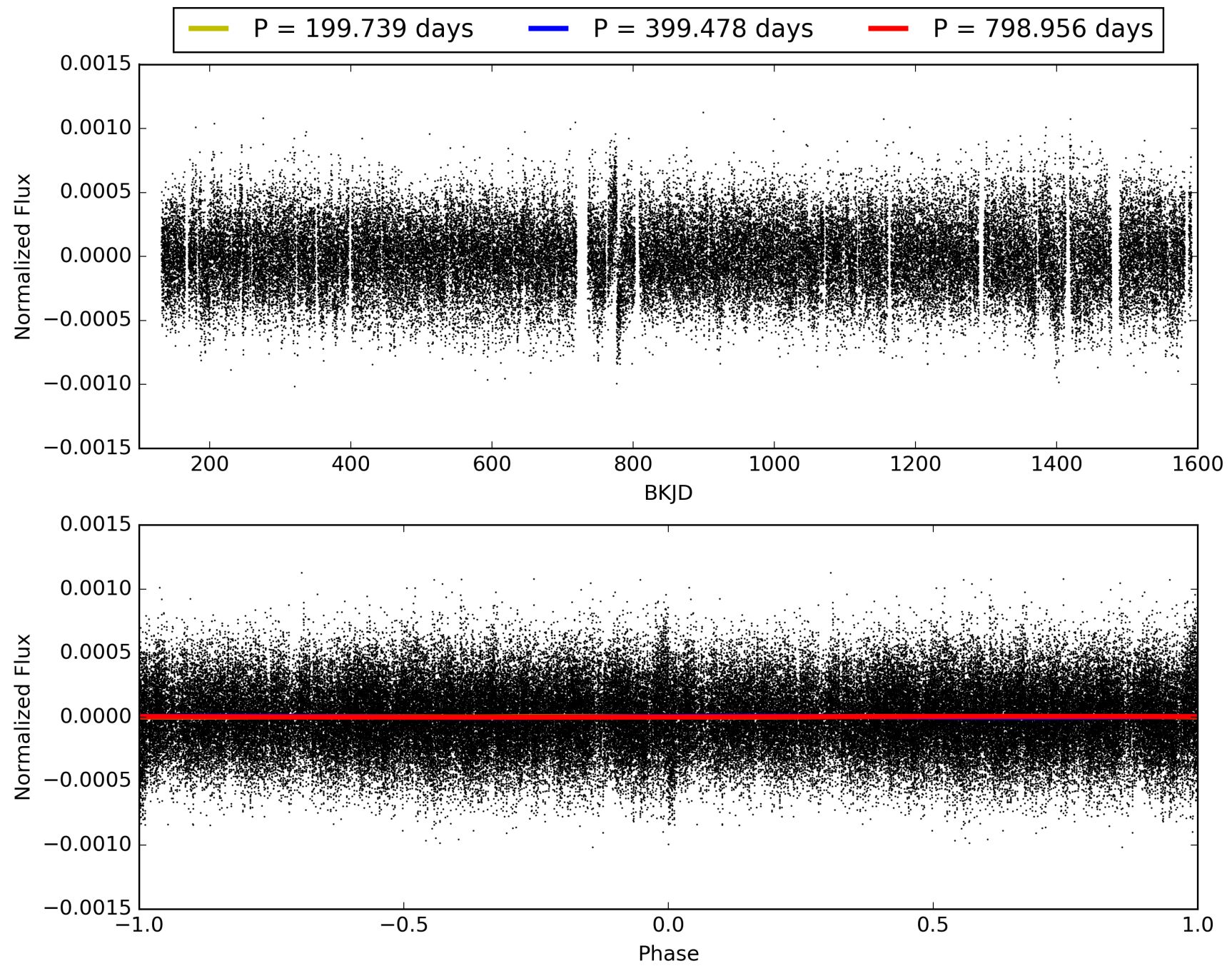
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 11:14:47 Z

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

TCE 009673338-02, PDC Light Curves

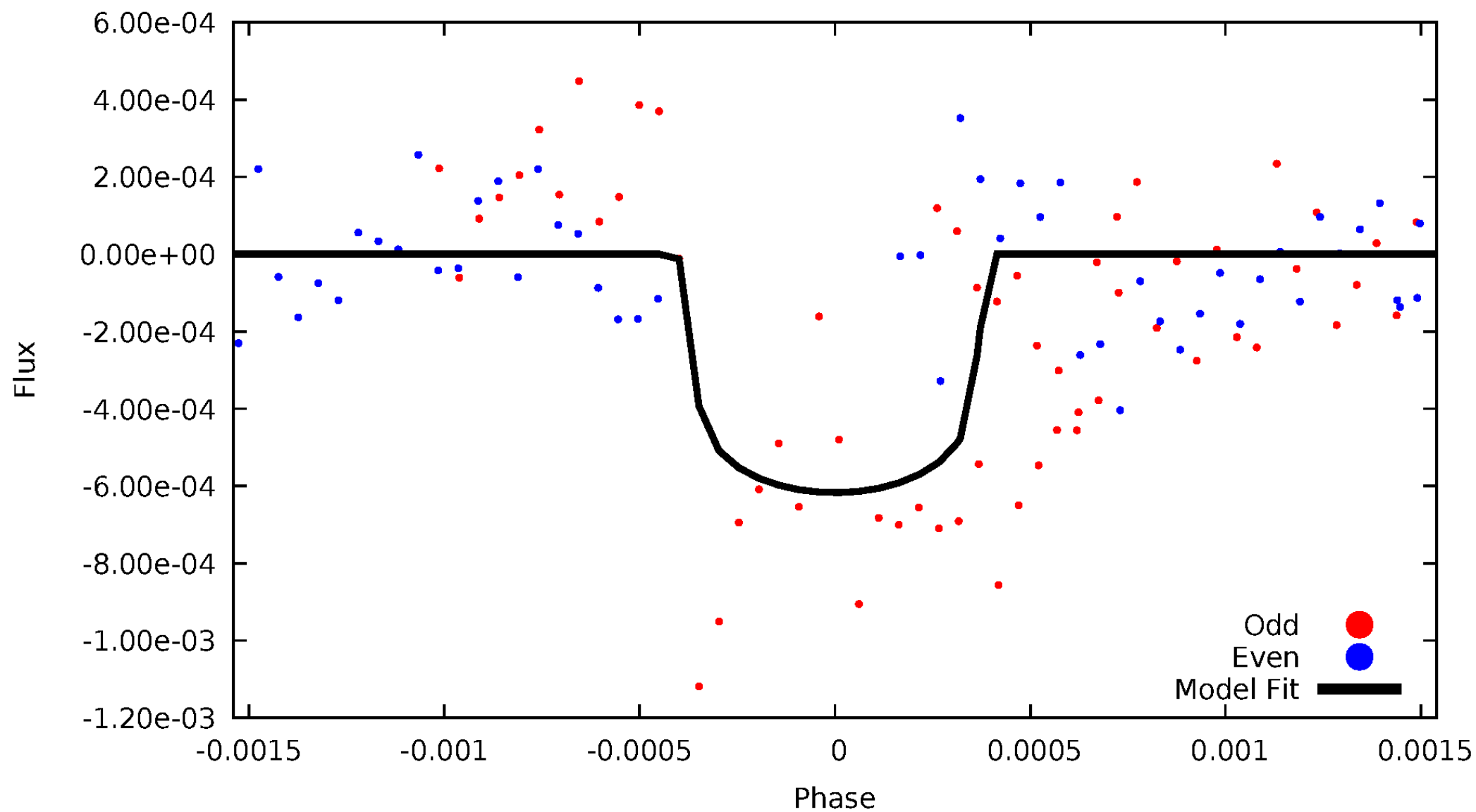


TCE 009673338-02



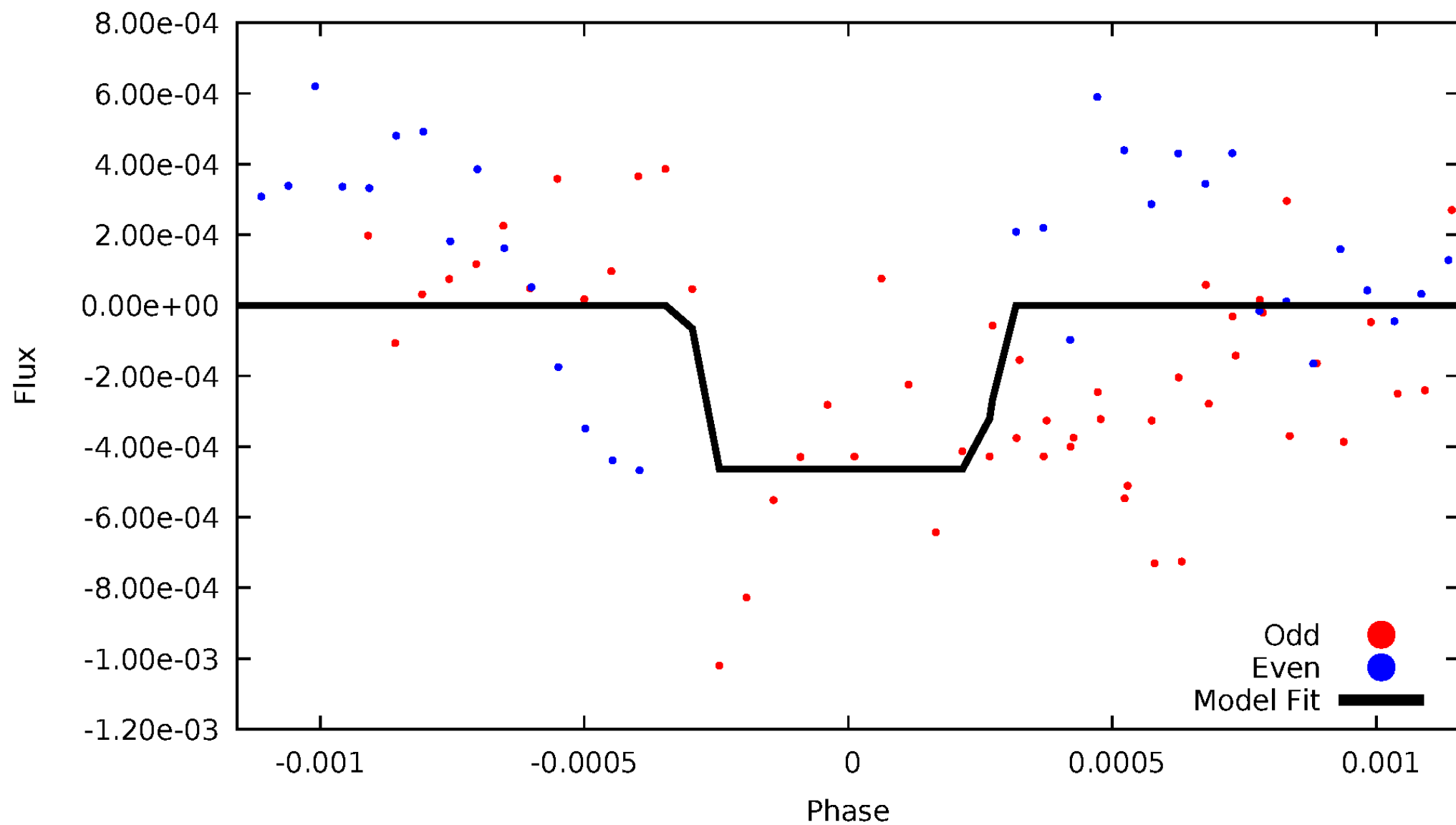
DV Odd/Even

TCE 009673338-02



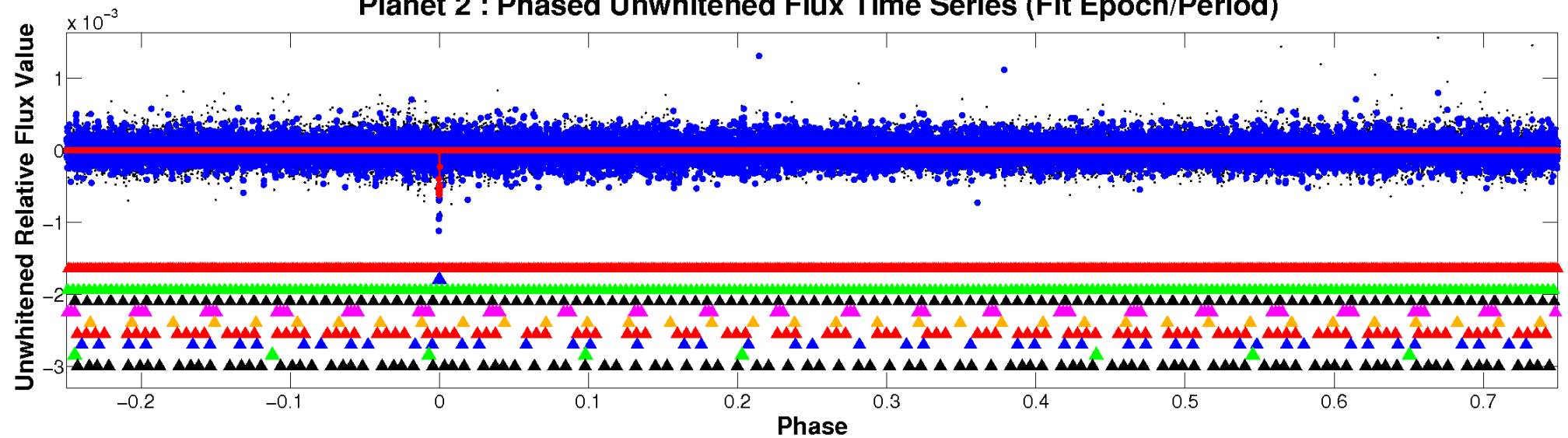
ALT Odd/Even

TCE 009673338-02

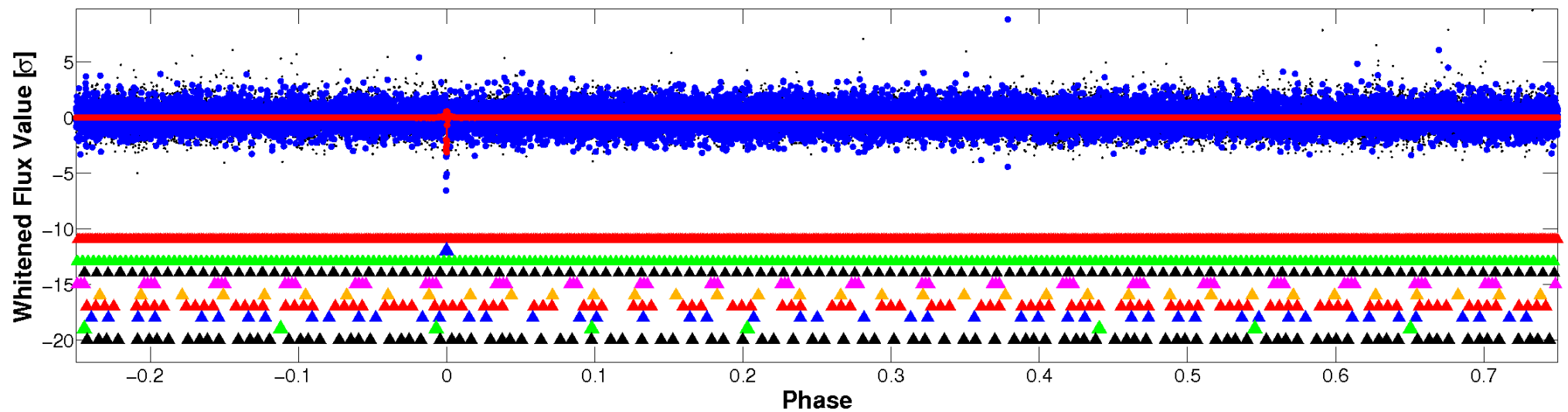


Non-Whitened Vs. Whitened Light Curve

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

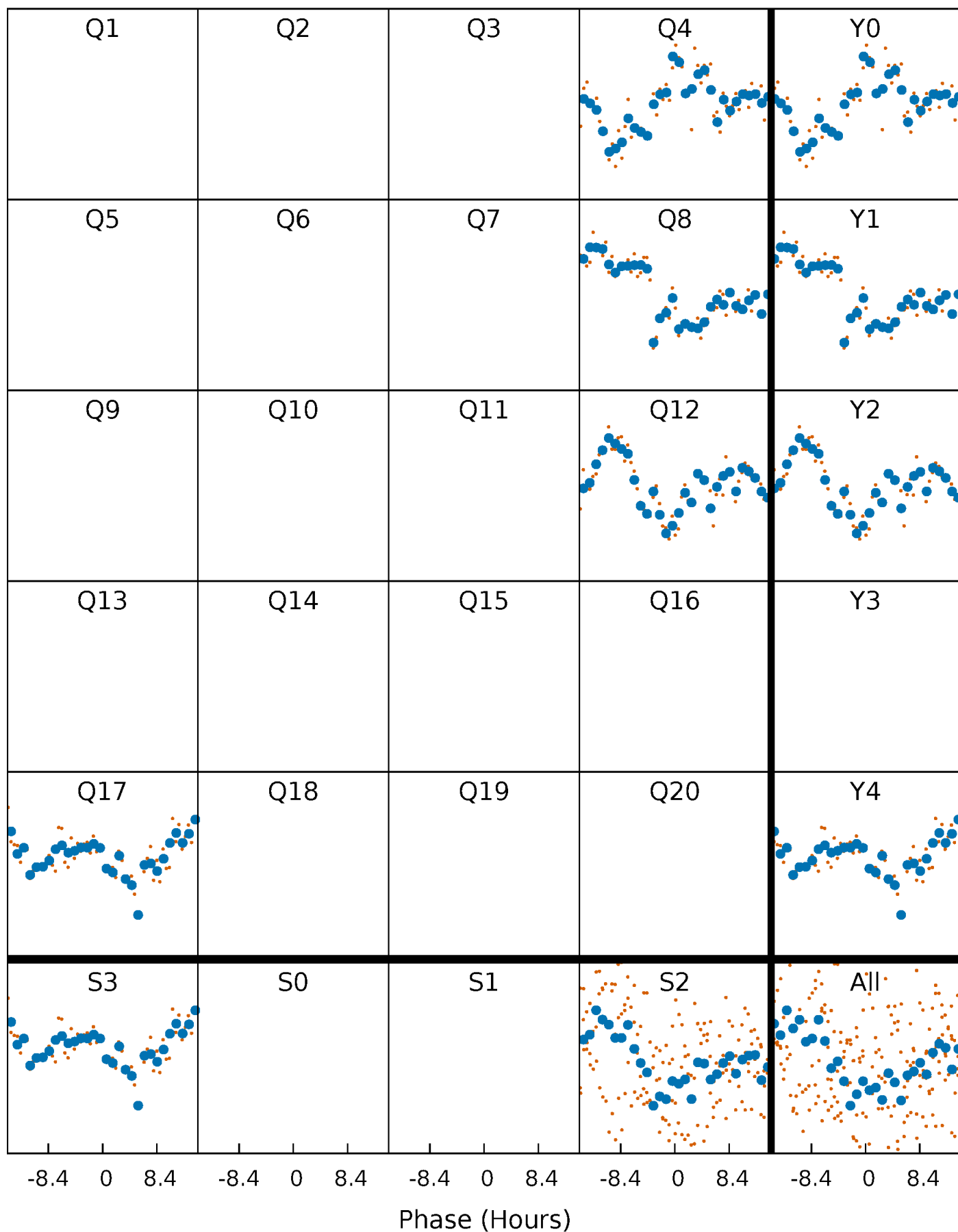


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



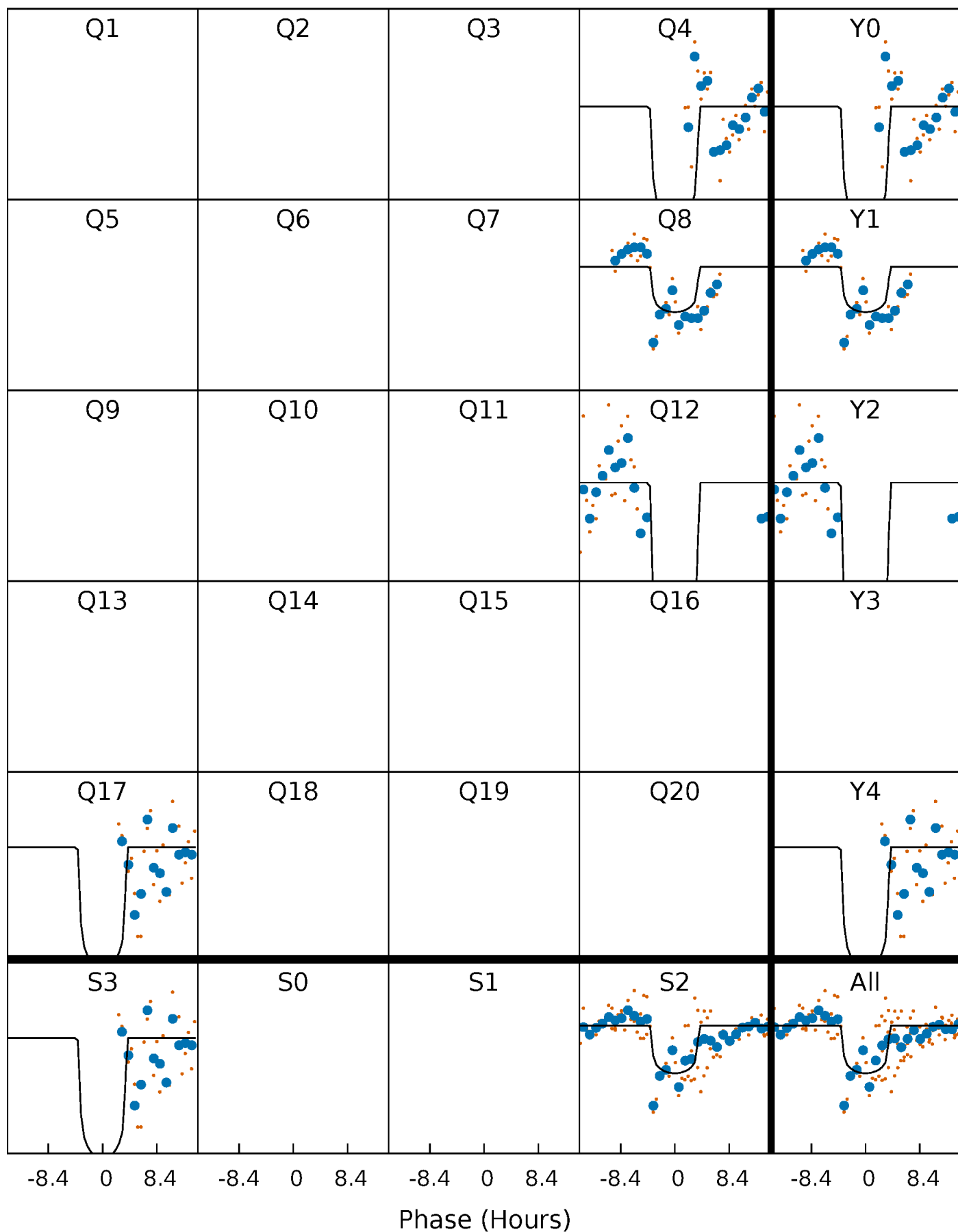
PDC Quarter-Phased Transit Curves

TCE 009673338-02 $P=399.478089$ Days $T_0=377.197580$ (BKJD)



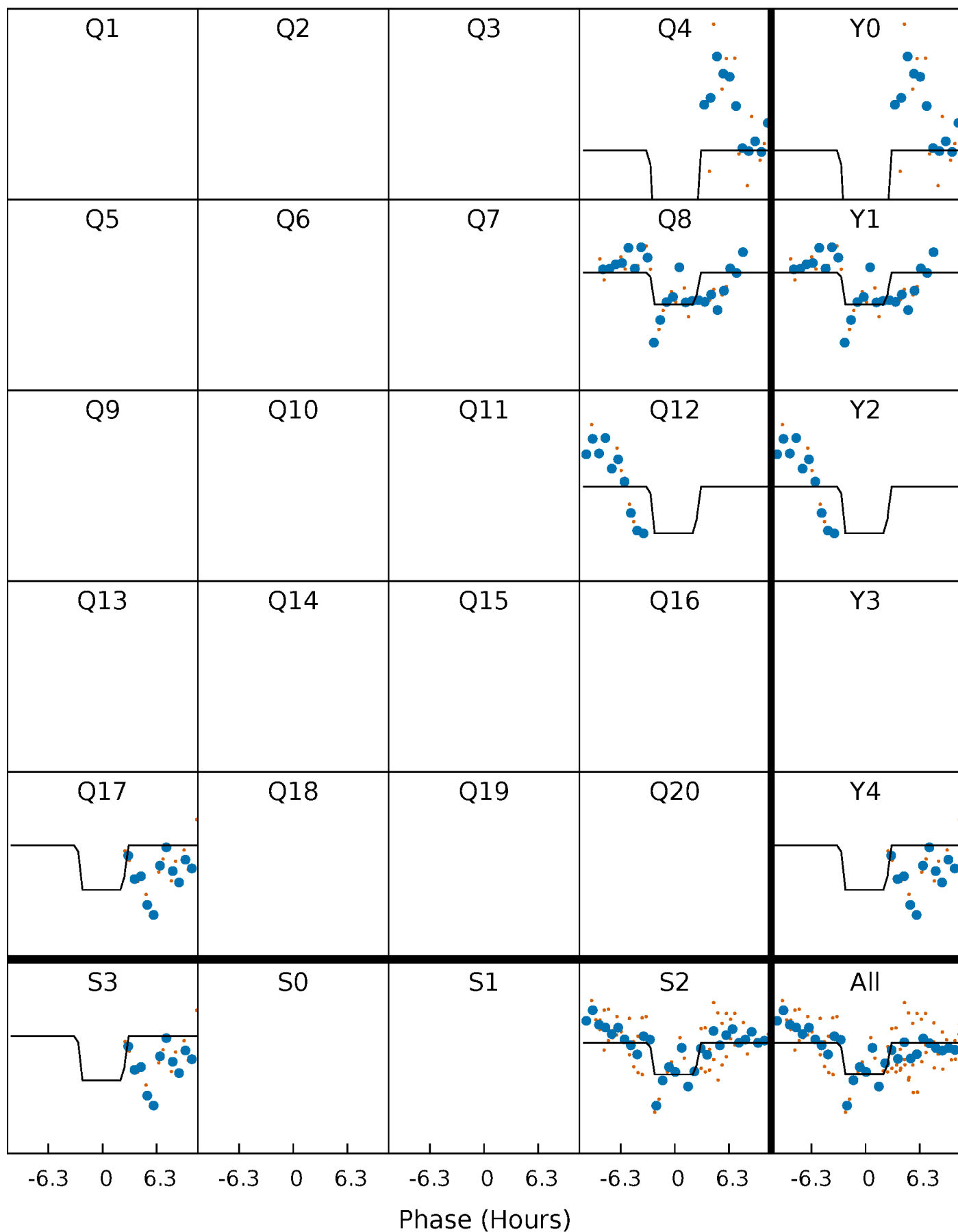
DV Quarter-Phased Transit Curves

TCE 009673338-02 $P=399.478089$ Days $T_0=377.197580$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

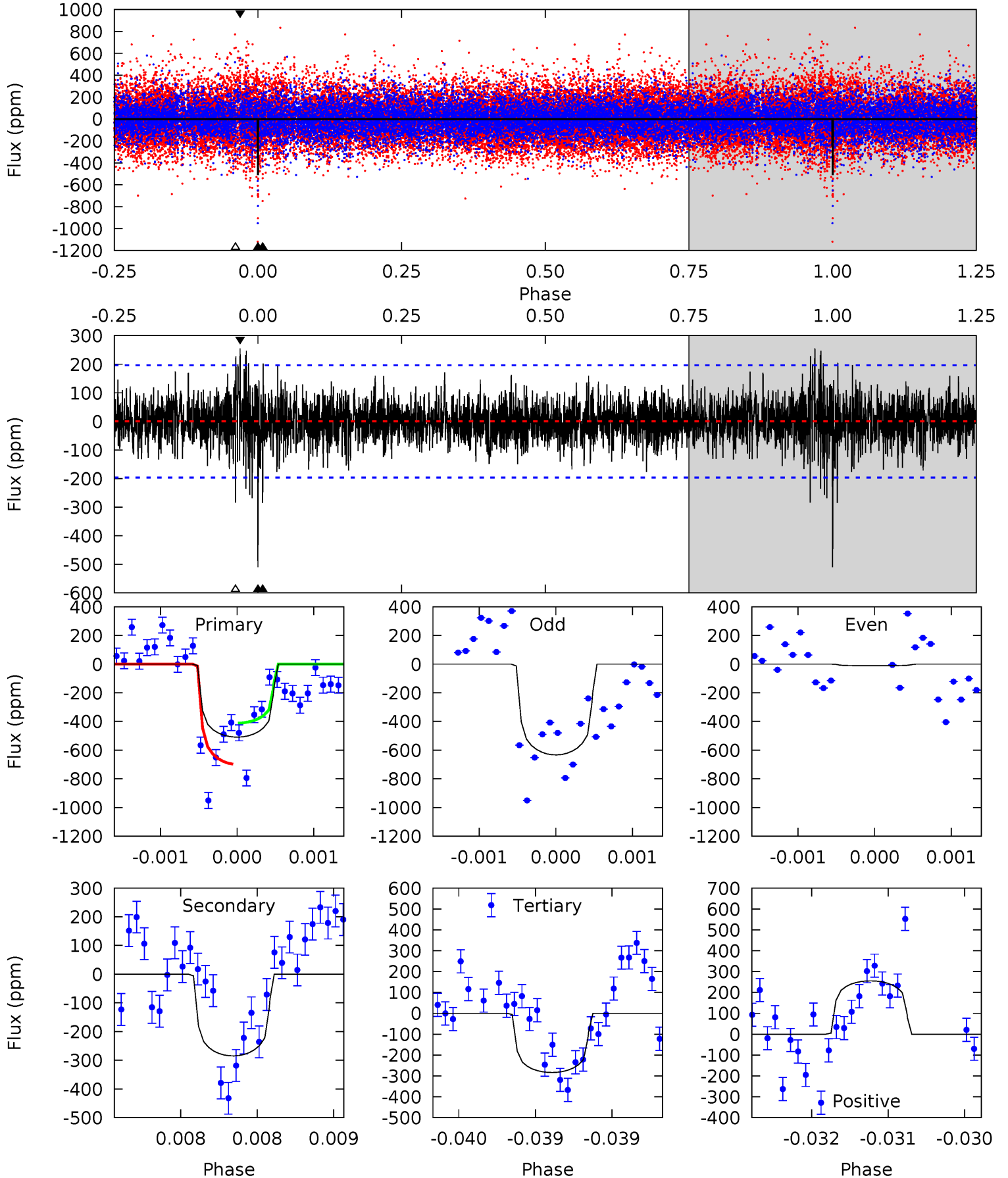
TCE 009673338-02 $P=399.496532$ Days $T_0=377.137660$ (BKJD)



DV Model-Shift Uniqueness Test

009673338-02, P = 399.478089 Days, E = 377.197580 Days

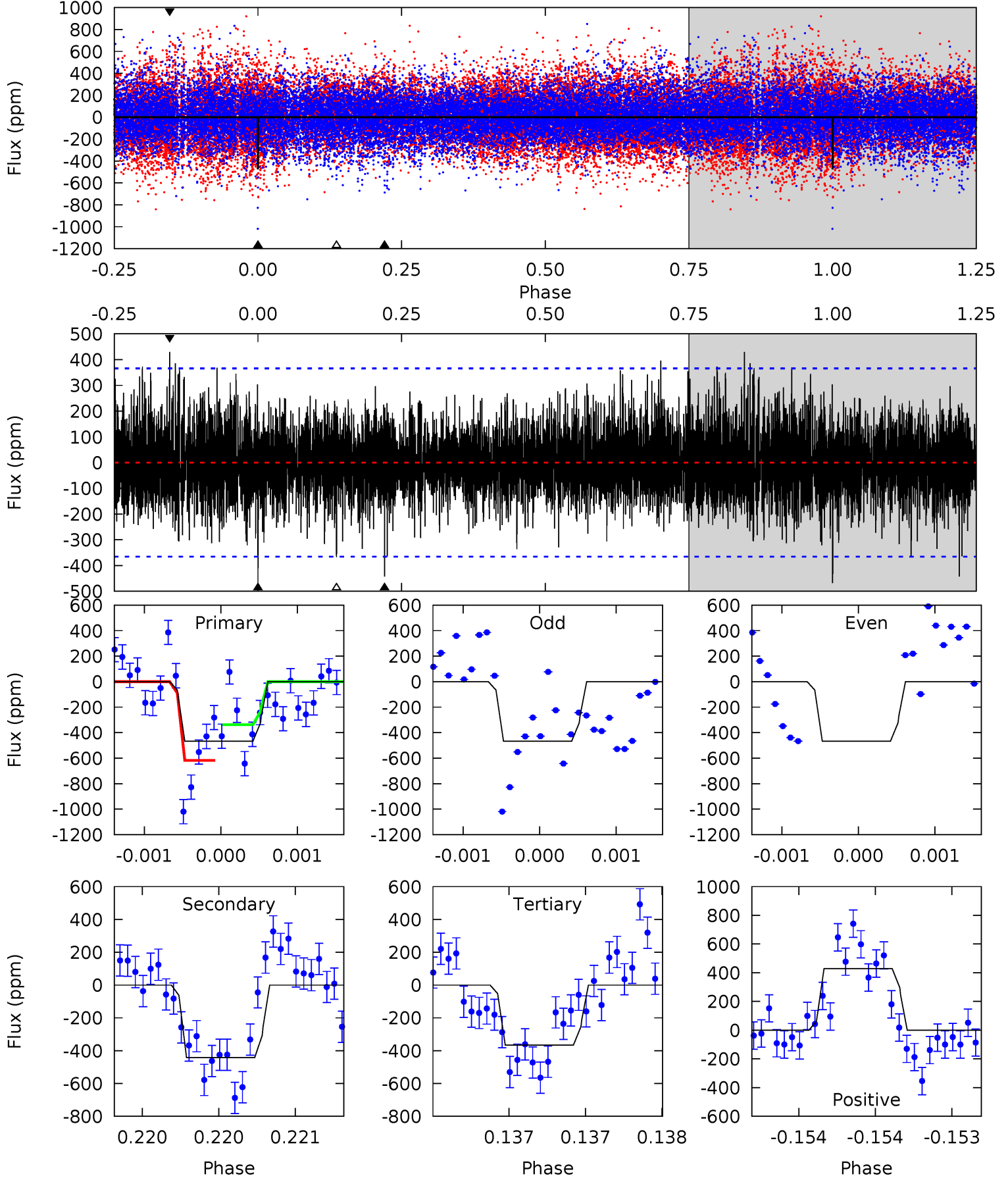
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	7.98	7.95	7.15	5.50	3.36	1.51	6.32	7.11	0.03	0.82	6.72	-17.4	0.33	3.72



Alt Model-Shift Uniqueness Test

009673338-02, P = 399.496532 Days, E = 377.137660 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.13	6.75	5.59	6.54	5.57	3.47	1.50	1.54	0.58	1.16	0.21	0	1.00	0.48	2.08



Stellar Parameters For KIC 009673338

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6241^{+190}_{-171}	$3.442^{+0.392}_{-0.098}$	$-0.200^{+0.350}_{-0.300}$	$4.157^{+0.611}_{-1.834}$	$1.746^{+0.155}_{-0.465}$	$0.034^{+0.127}_{-0.010}$
	+3%/-3%	+11%/-3%	+175%/-150%	+15%/-44%	+9%/-27%	+369%/-30%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009673338-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-285 ± 36	$10.79^{+7.92}_{-6.78}$	680^{+45}_{-72}	5080^{+3122}_{-942}	2136^{+12539}_{-1410}
Alt.	-443 ± 66	$10.24^{+7.96}_{-6.20}$	681^{+42}_{-75}	5664^{+3909}_{-1117}	3547^{+19845}_{-2374}

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 $A_{obs} \gg 1.0$

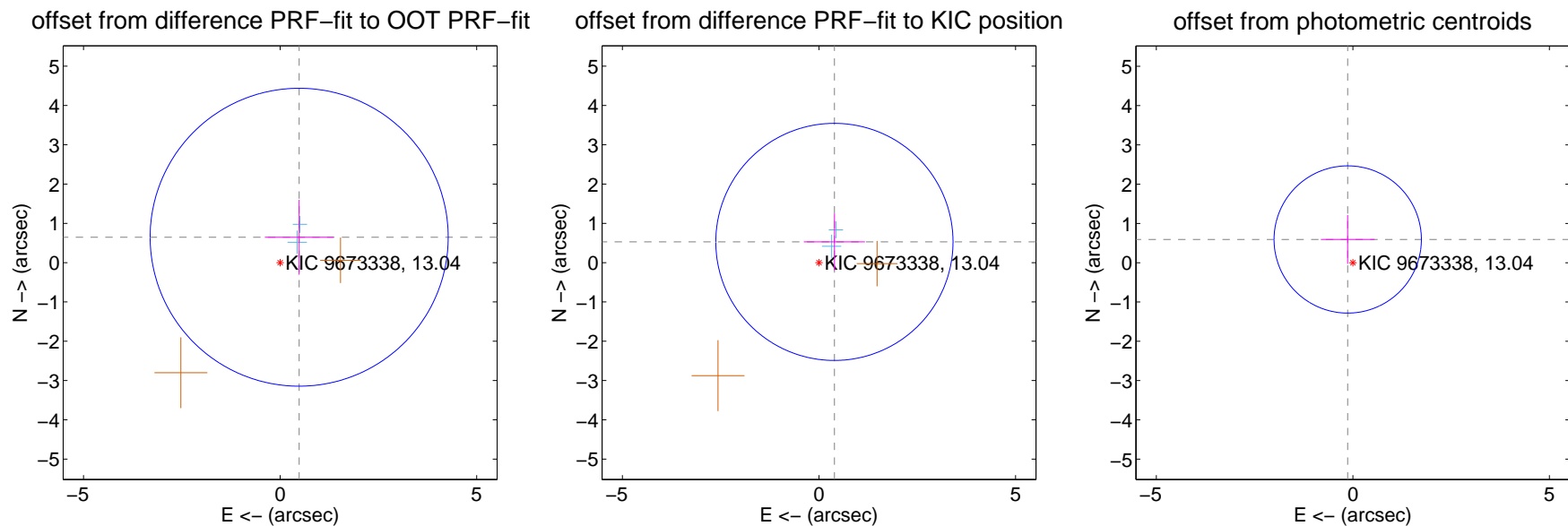
DV Centroid Data

Supplemental centroid analysis for 009673338-02. Kepler magnitude: 13.04. Transit SNR 11.16

There are 2 quarters with good PRF difference image offsets

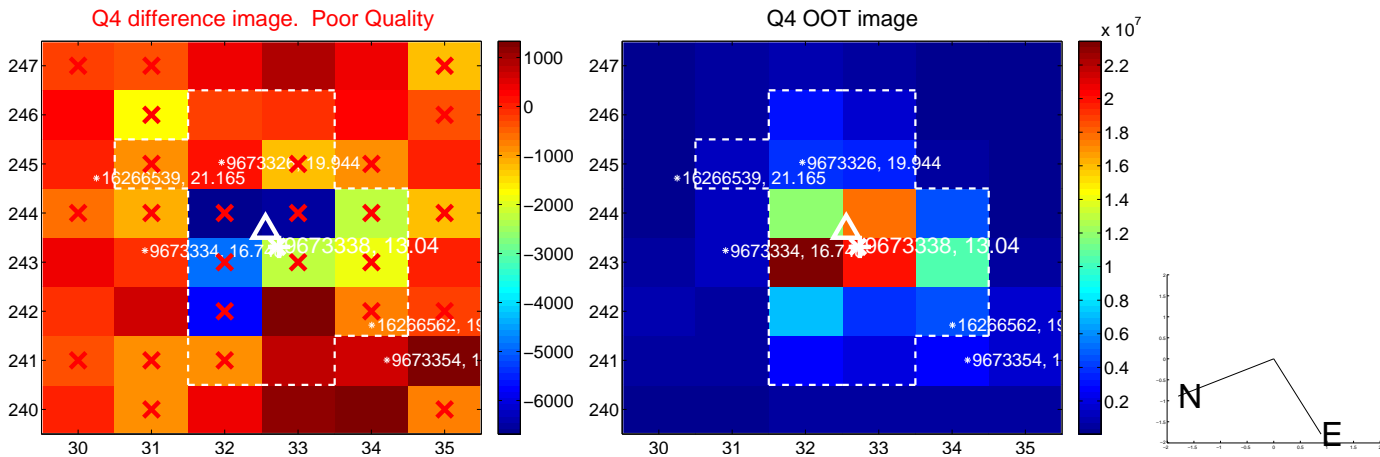
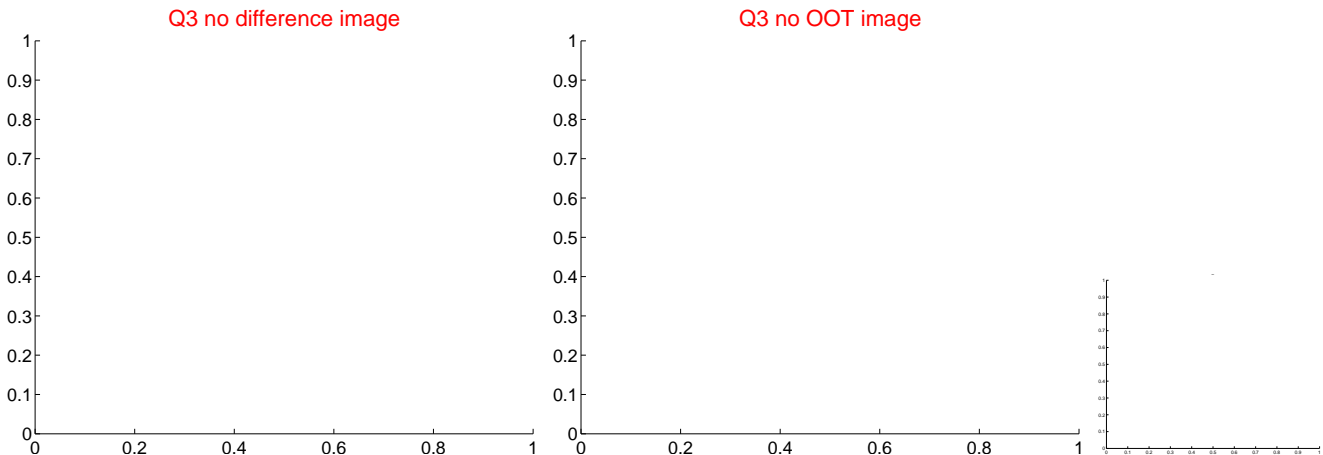
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.808 ± 1.263	0.64	-0.485 ± 0.872	0.647 ± 0.954
PRF-fit source offset from KIC position	0.657 ± 1.005	0.65	-0.392 ± 0.777	0.528 ± 0.723
photometric centroid source offset	0.61 ± 0.62	0.97	0.13 ± 0.68	0.59 ± 0.62

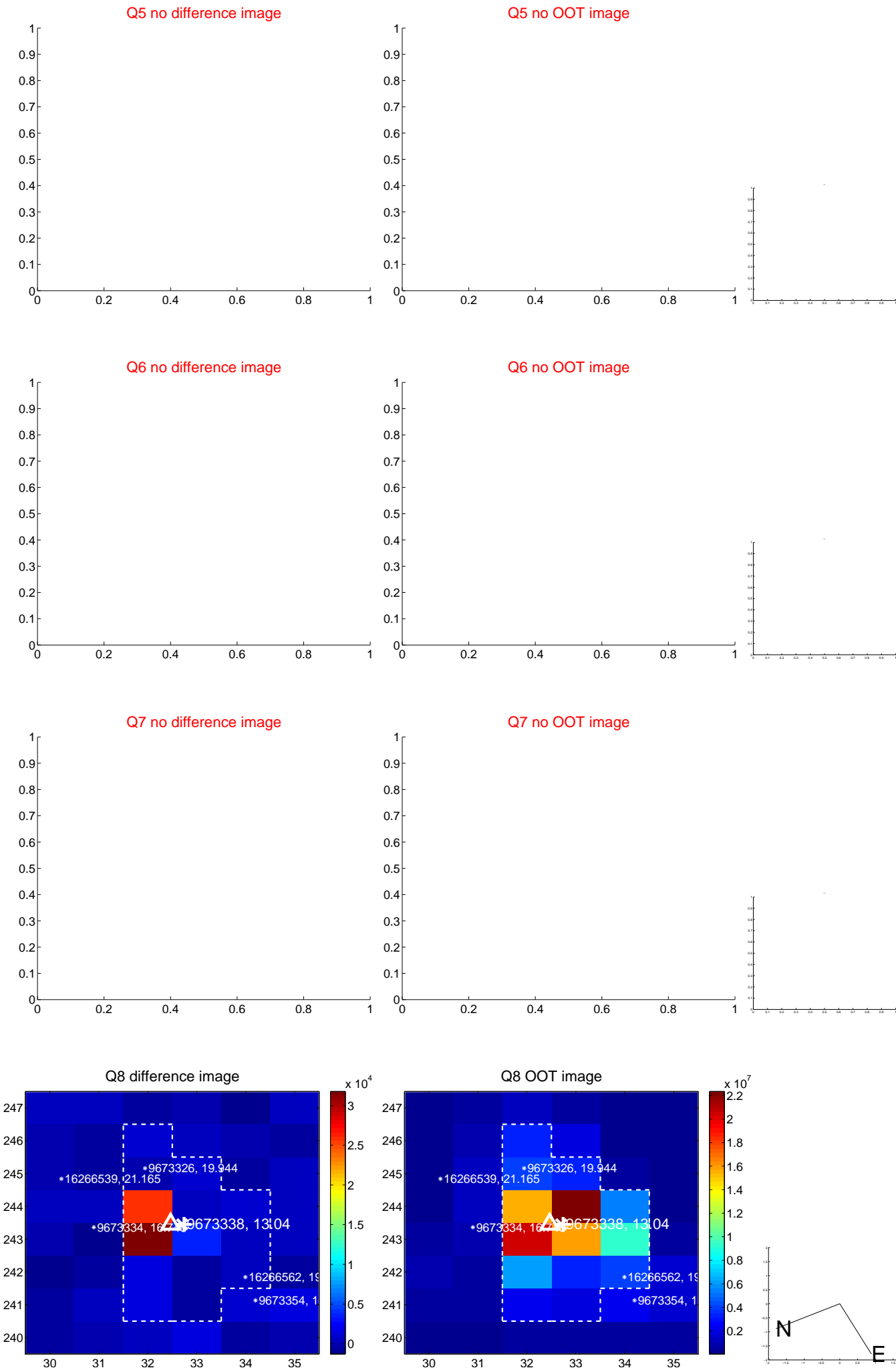


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

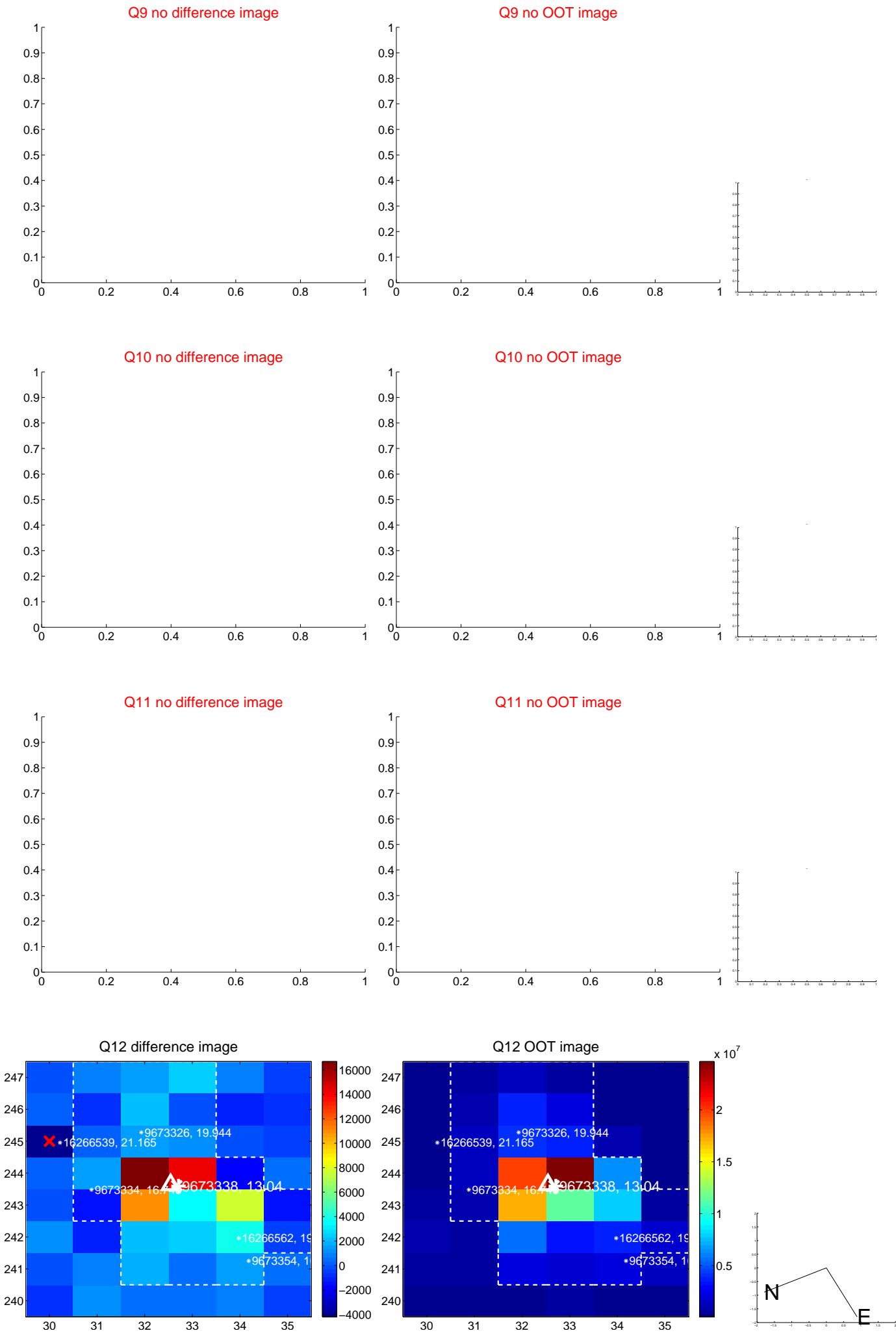
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



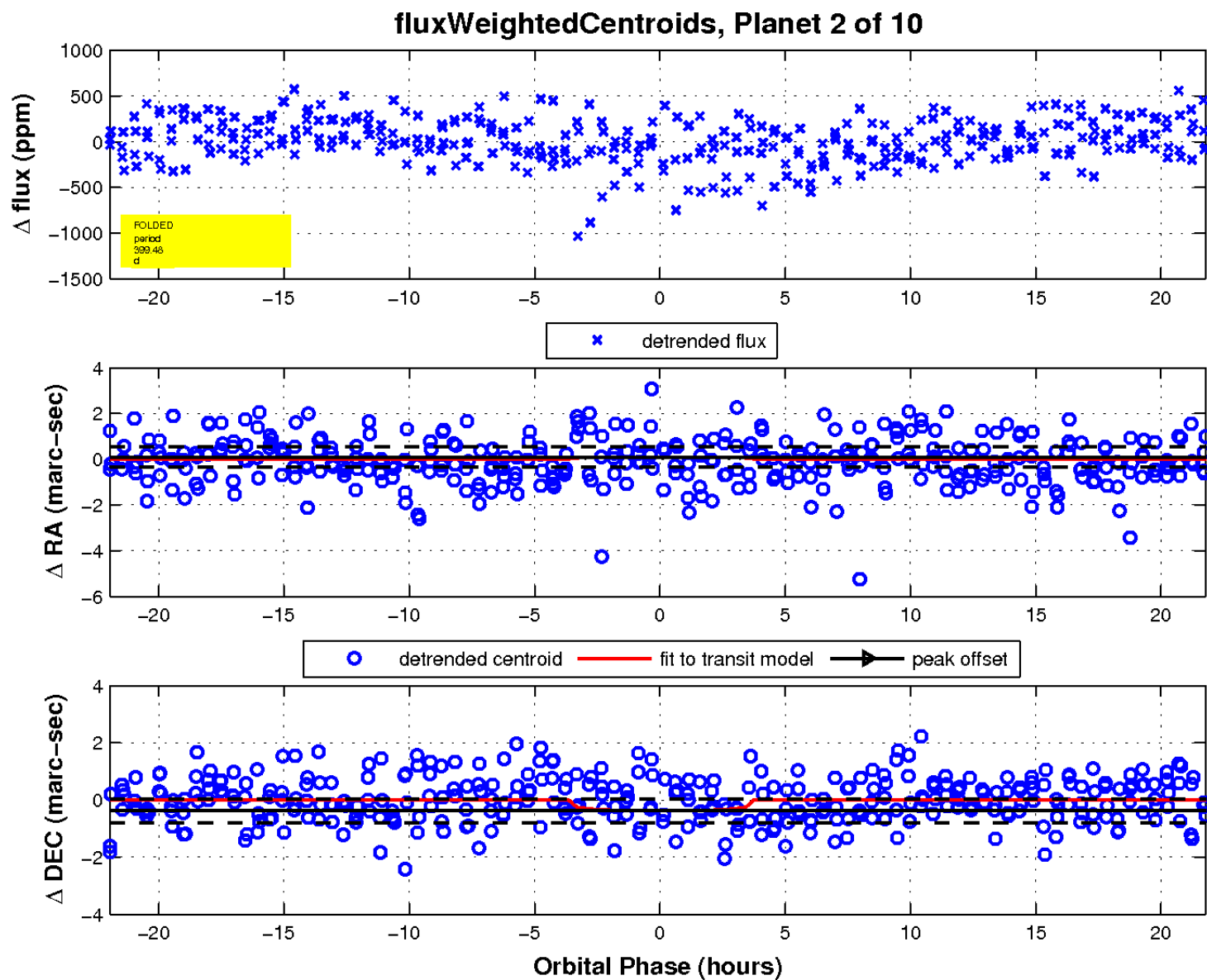
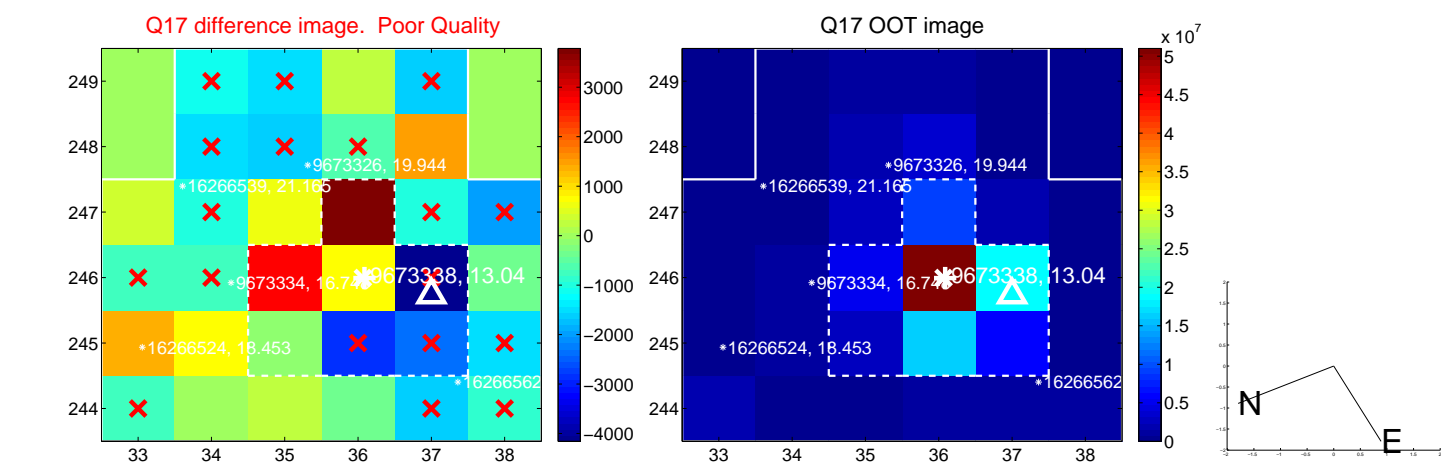
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

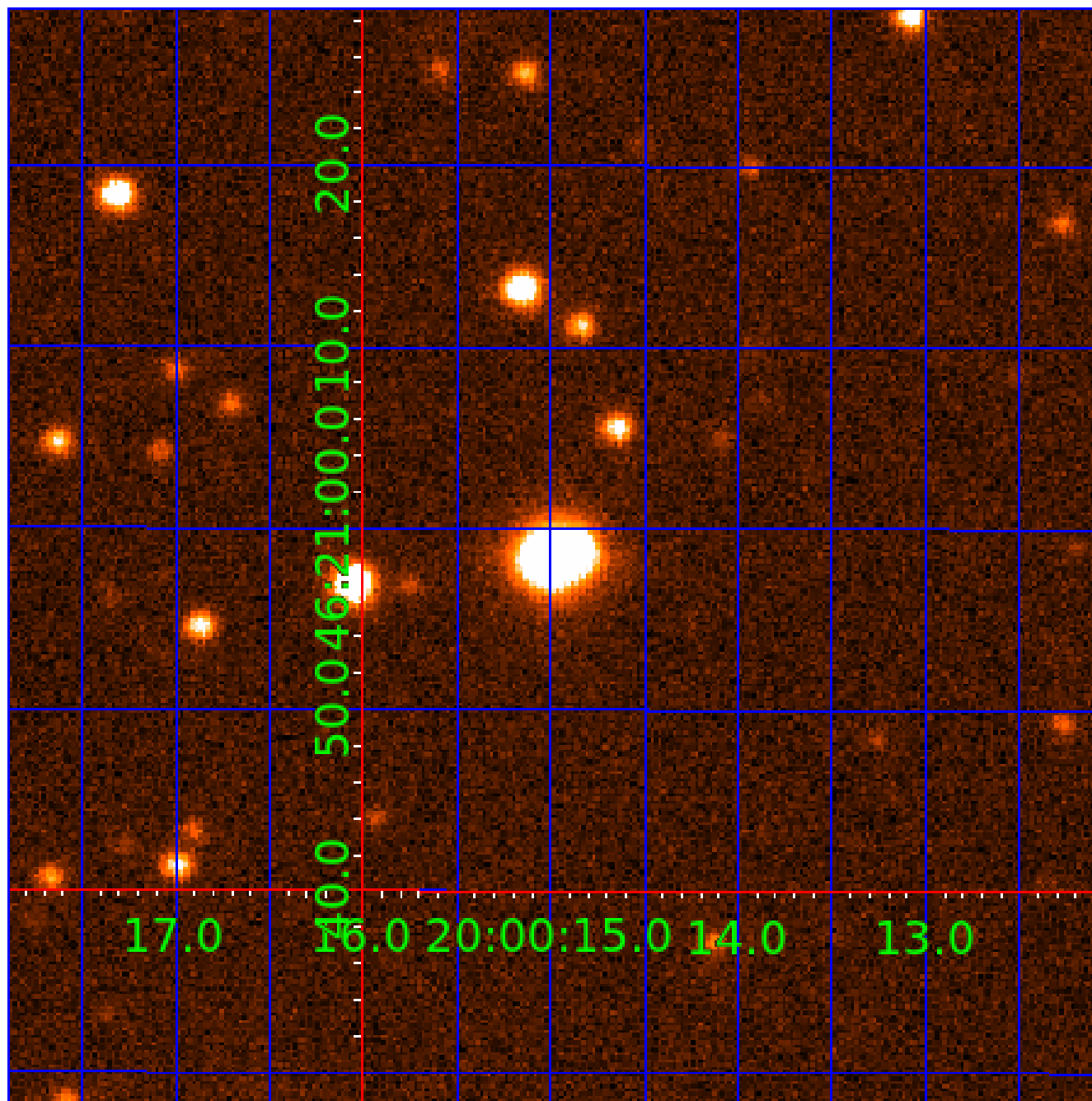


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009673338

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})
009673338-01	OBS	No	1.450943	131.674153	0.0	5.709	11.7	0.0	4.16	6241	0.00	25757.12
009673338-02	OBS	No	399.478089	377.197580	617.3	7.381	12.1	11.2	4.16	6241	10.72	14.38
009673338-03	OBS	No	1.453106	132.117764	9.5	10.296	11.7	4.4	4.16	6241	1.32	25706.01
009673338-04	OBS	No	9.584975	135.987275	287.9	1.350	12.1	11.1	4.16	6241	7.10	2077.99
009673338-05	OBS	No	18.977727	146.671085	224.1	2.281	11.0	9.1	4.16	6241	6.40	835.81
009673338-06	OBS	No	11.097720	139.371899	228.6	1.663	9.6	8.4	4.16	6241	7.27	1709.17
009673338-07	OBS	No	13.396447	132.848813	210.8	3.141	9.6	10.8	4.16	6241	6.06	1329.78
009673338-08	OBS	No	29.760323	145.204337	254.1	2.470	9.4	10.3	4.16	6241	7.73	458.75
009673338-09	OBS	No	178.767059	279.521486	348.8	5.000	9.1	-1.0	4.16	6241	7.78	42.01
009673338-10	OBS	No	13.594499	135.993905	249.7	1.534	8.7	9.2	4.16	6241	6.74	1304.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009673338-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
009673338-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009673338-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
009673338-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
009673338-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—NO_FITS—INCONSISTENT_TRANS—CENT_NOFITS
009673338-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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

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

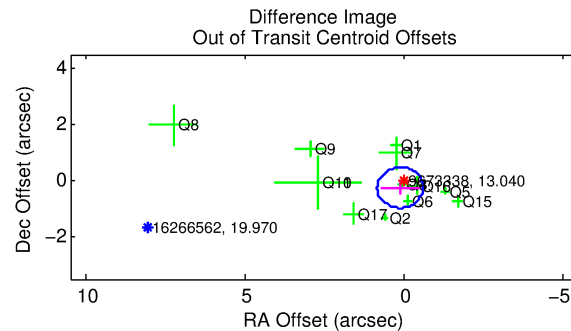
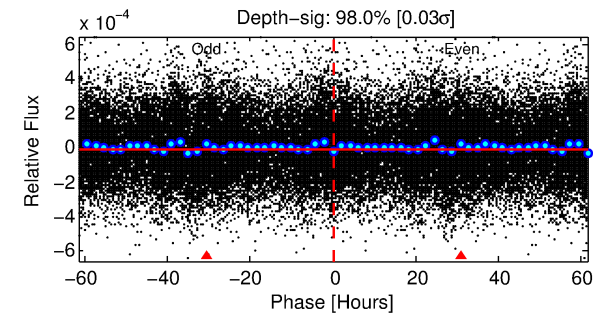
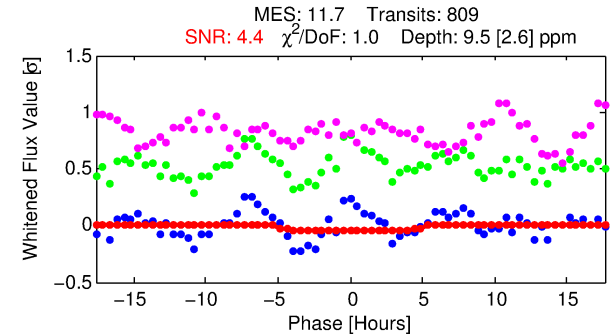
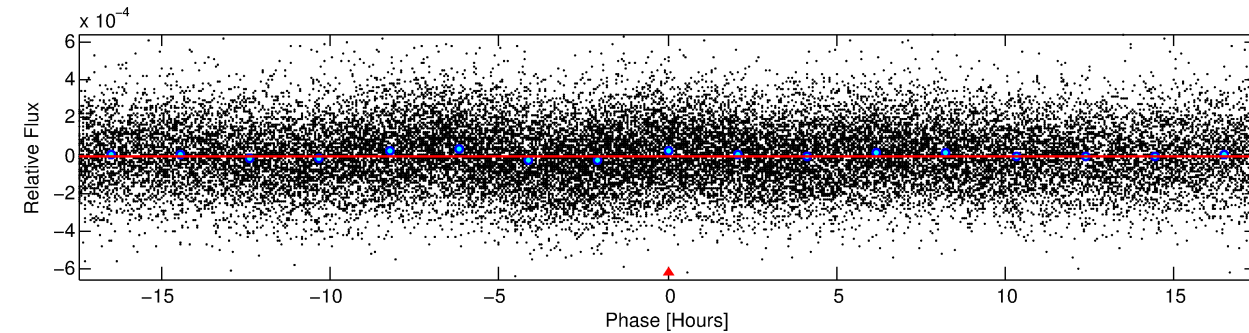
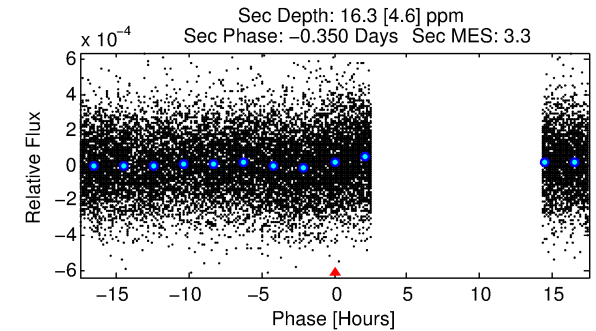
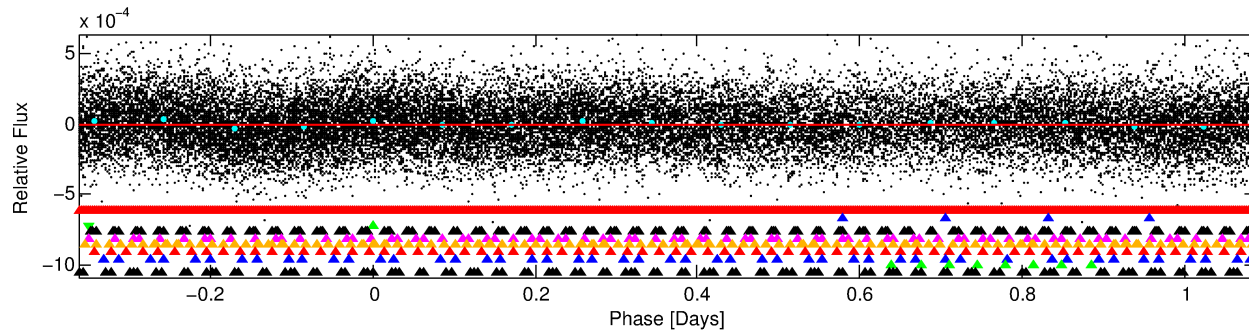
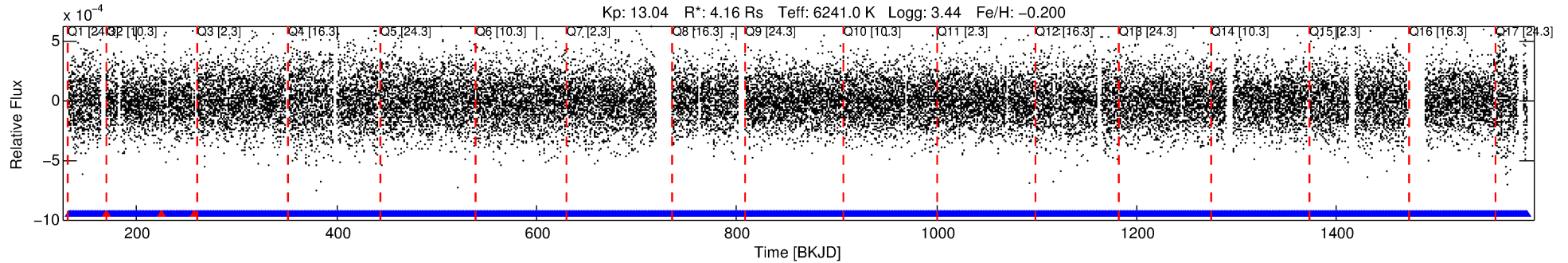
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009673338-03

No Significant Match Found

DV One-Page Summary

KIC: 9673338 Candidate: 3 of 10 Period: 1.453 d



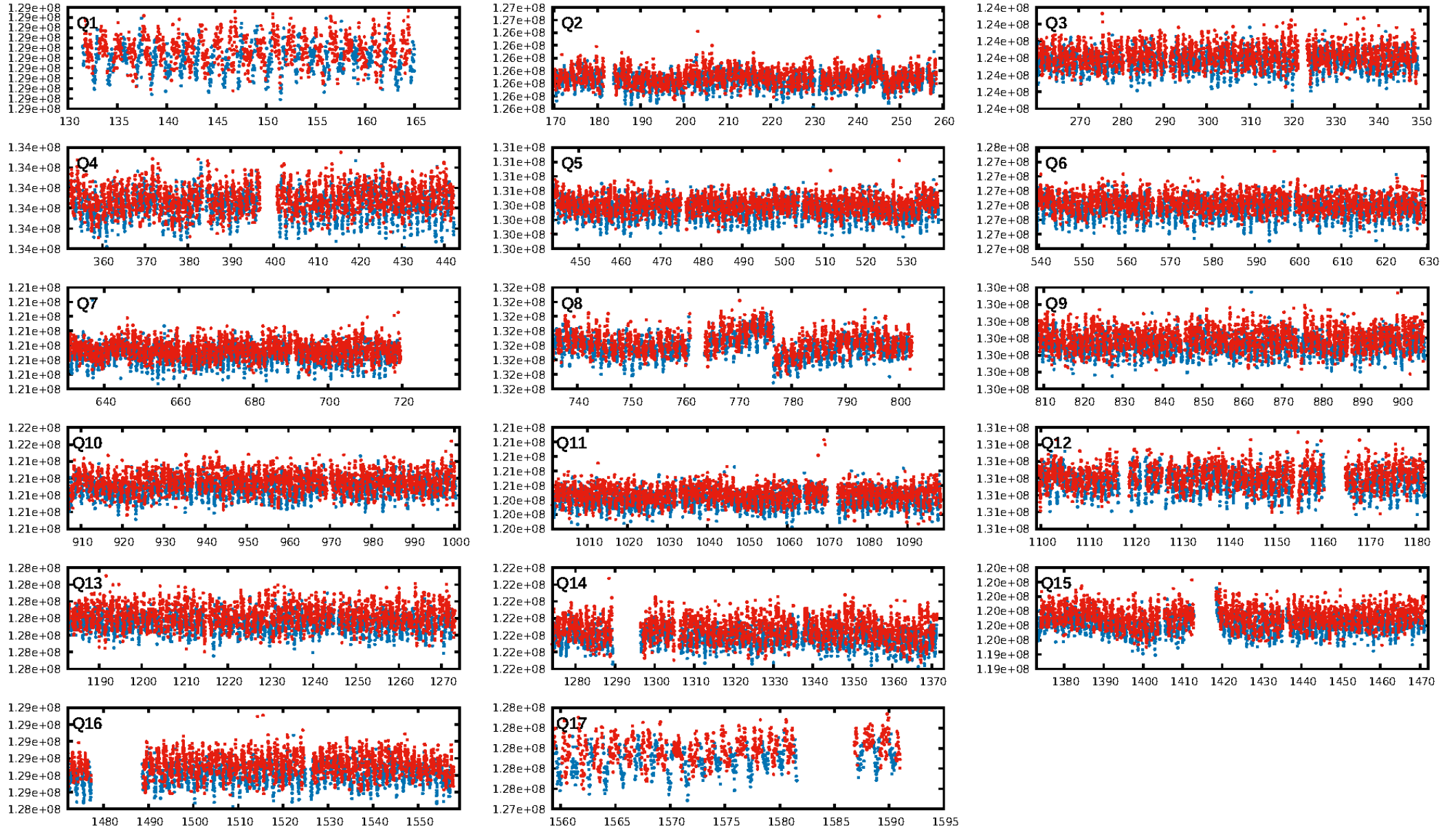
DV Fit Results:

Period = 1.45311 [0.00006] d
Epoch = 132.1178 [0.0190] BKJD
Rp/R* = 0.0029 [0.0051]
a/R* = 1.19 [3.20]
b = 0.51 [13.20]
Seff = 25706.00 [17499.56]
Teq = 3229 [549] K
Rp = 1.32 [2.37] Re
a = 0.0302 [0.0127] AU
Ag = 4.72 [16.79] [0.22σ]
Teffp = 7359 [6425] K [0.64σ]

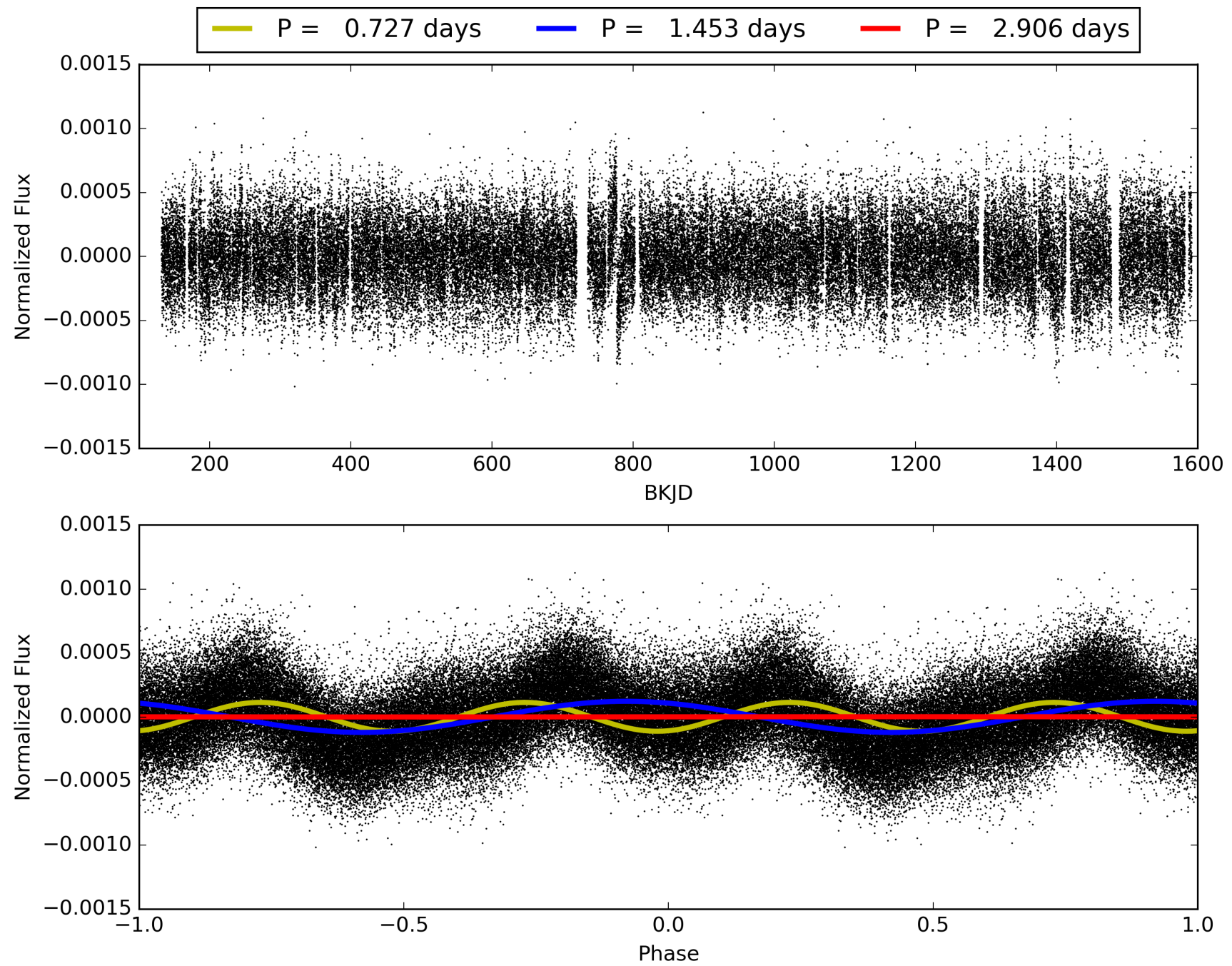
DV Diagnostic Results:

ShortPeriod-sig: 0.4% [0.00σ]
LongPeriod-sig: 100.0% [18.79σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.13e-17
RollingBand-fgt: 1.00 [765/768]
GhostDiagnostic-chr: -1.302
Centroid-sig: 0.2%
Centroid-so: 5.955 arcsec [2.53σ]
OotOffset-rm: 0.281 arcsec [1.17σ]
KicOffset-rm: 0.324 arcsec [1.48σ]
OotOffset-st: 3/4/3/4 [14]
KicOffset-st: 3/4/3/4 [14]
DiffImageQuality-fgm: 0.14 [2/14]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 009673338-03, PDC Light Curves

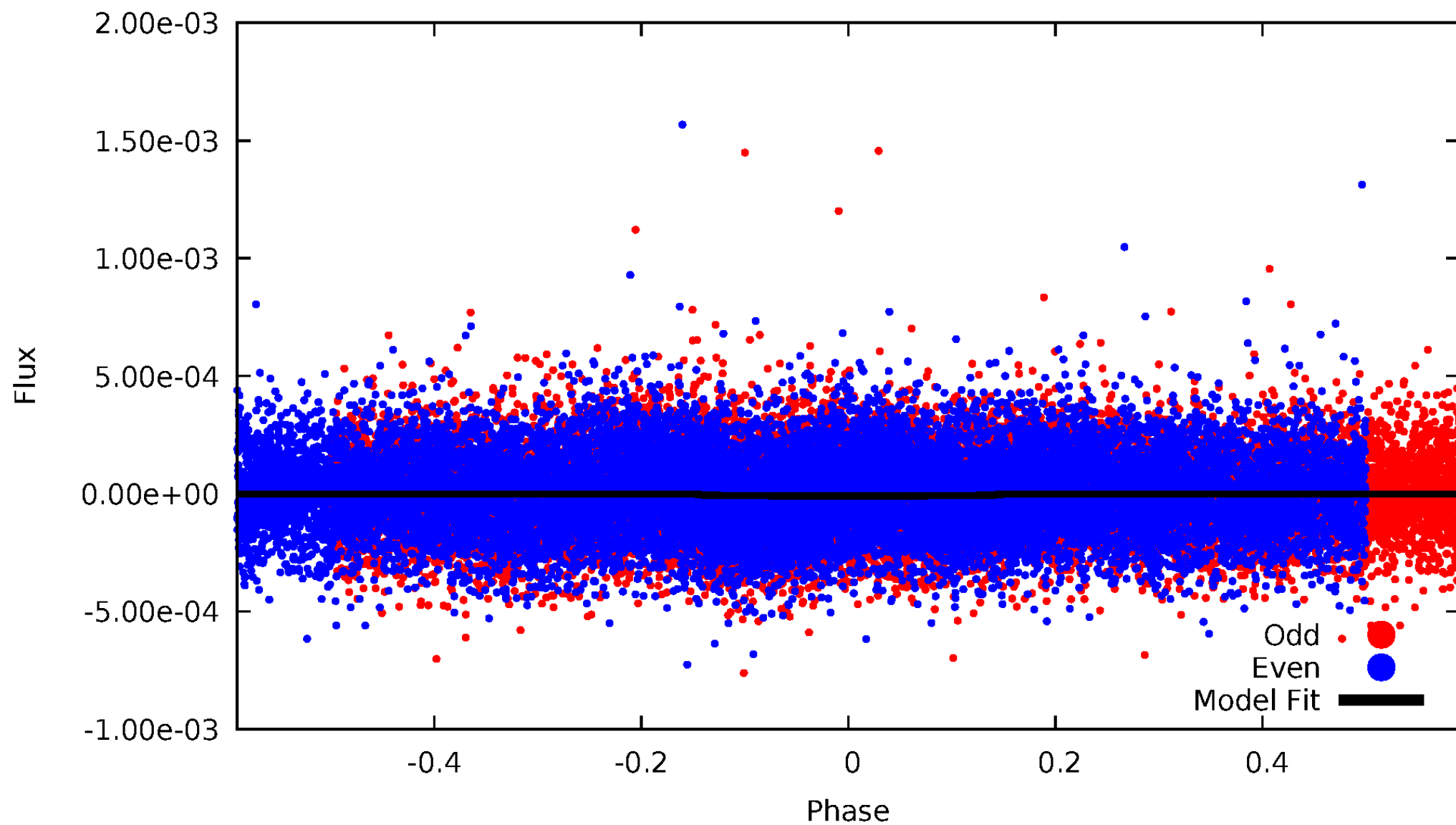


TCE 009673338-03



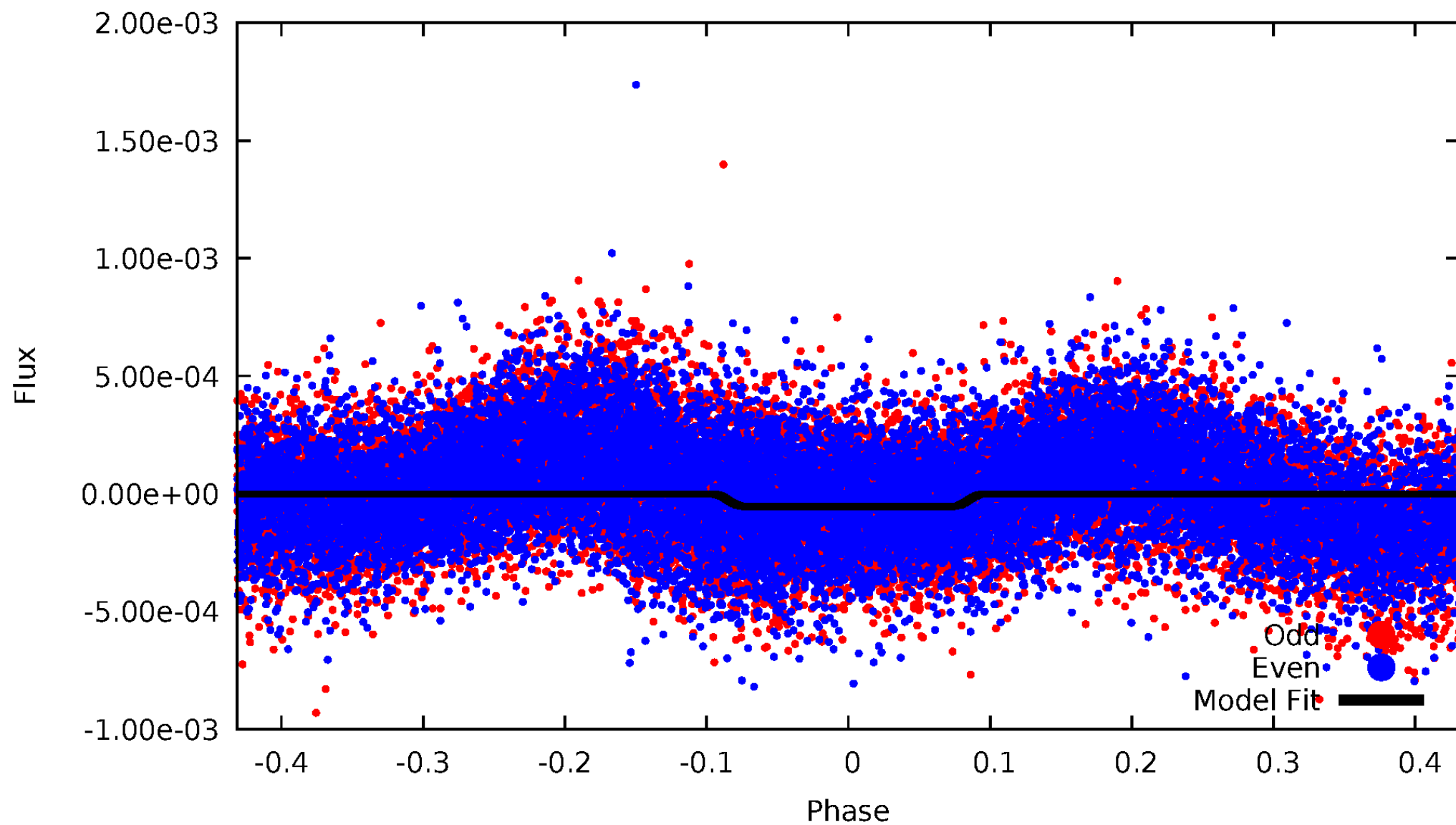
DV Odd/Even

TCE 009673338-03



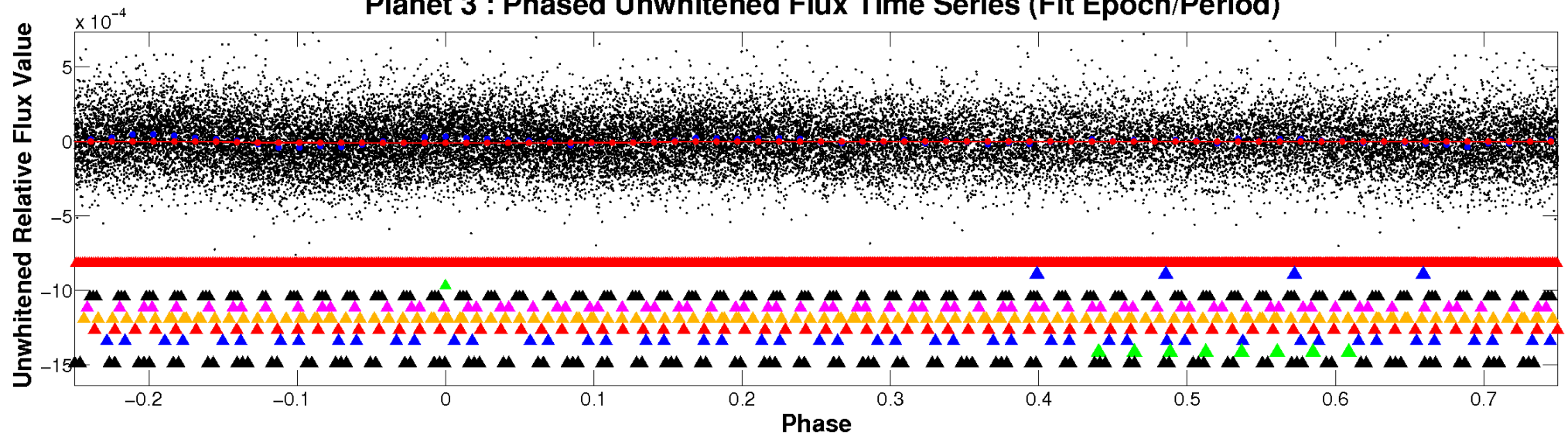
ALT Odd/Even

TCE 009673338-03

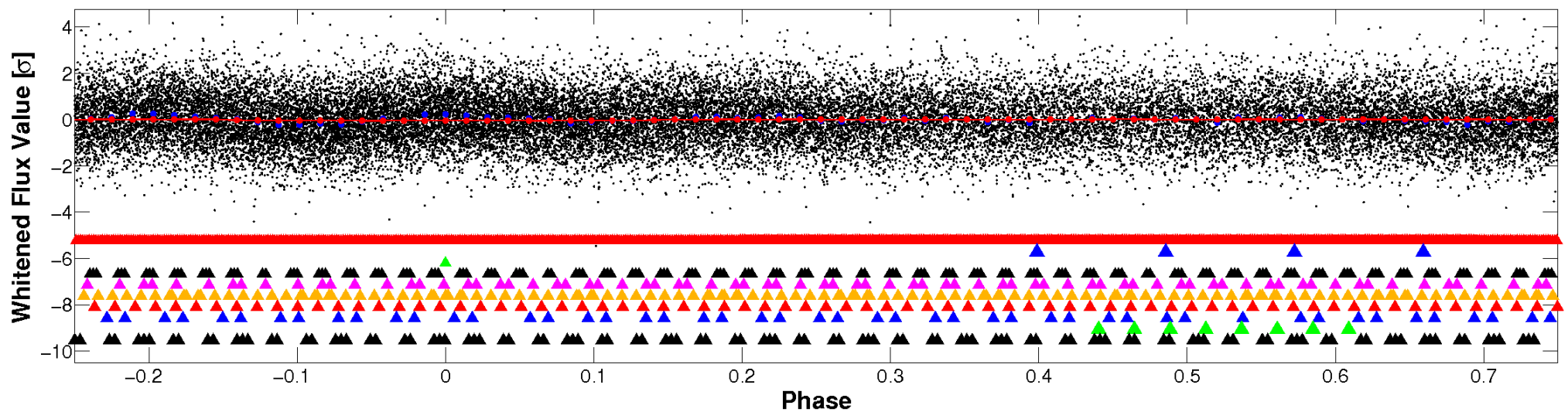


Non-Whitened Vs. Whitened Light Curve

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

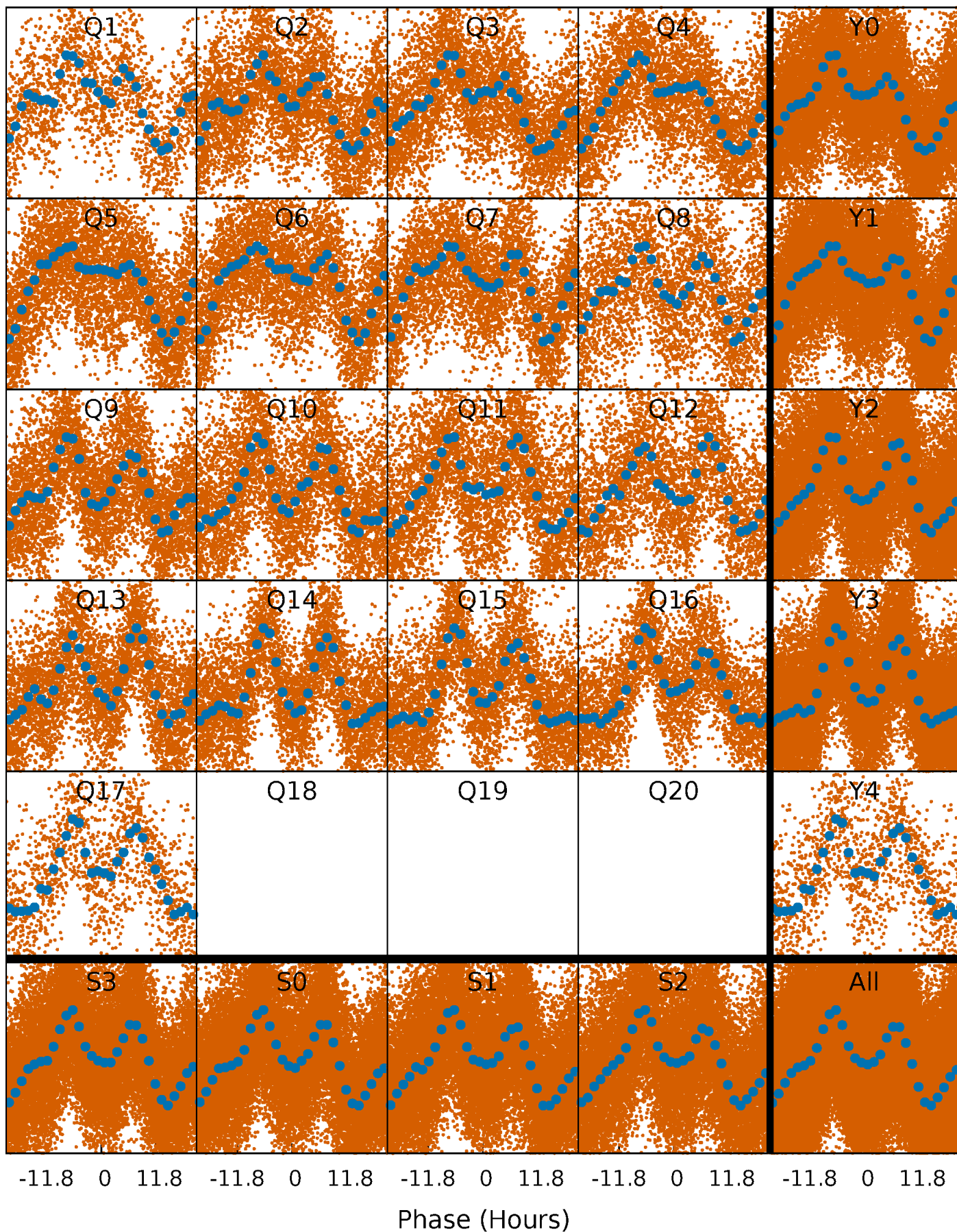


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



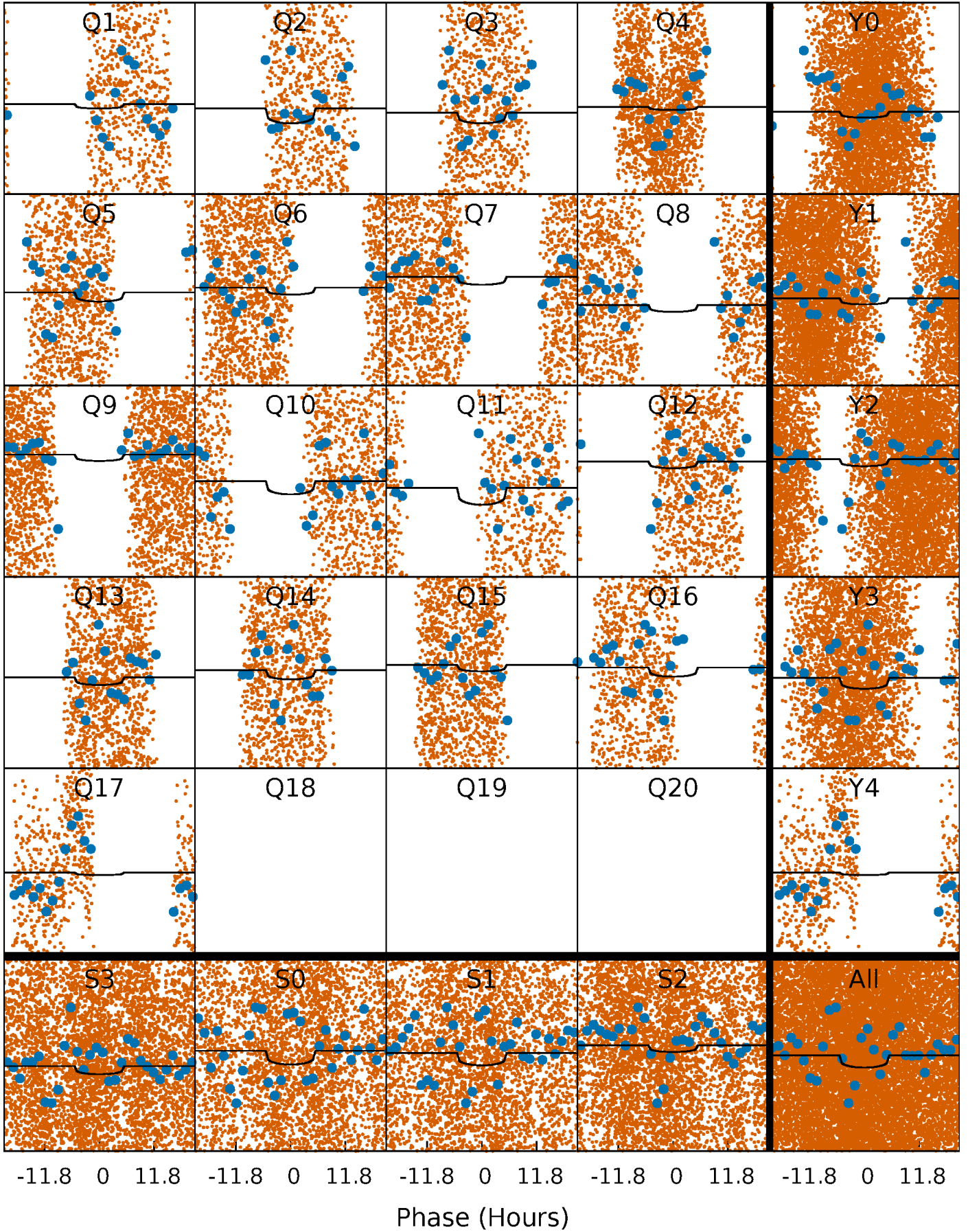
PDC Quarter-Phased Transit Curves

TCE 009673338-03 P= 1.453106 Days $T_0=132.117764$ (BKJD)



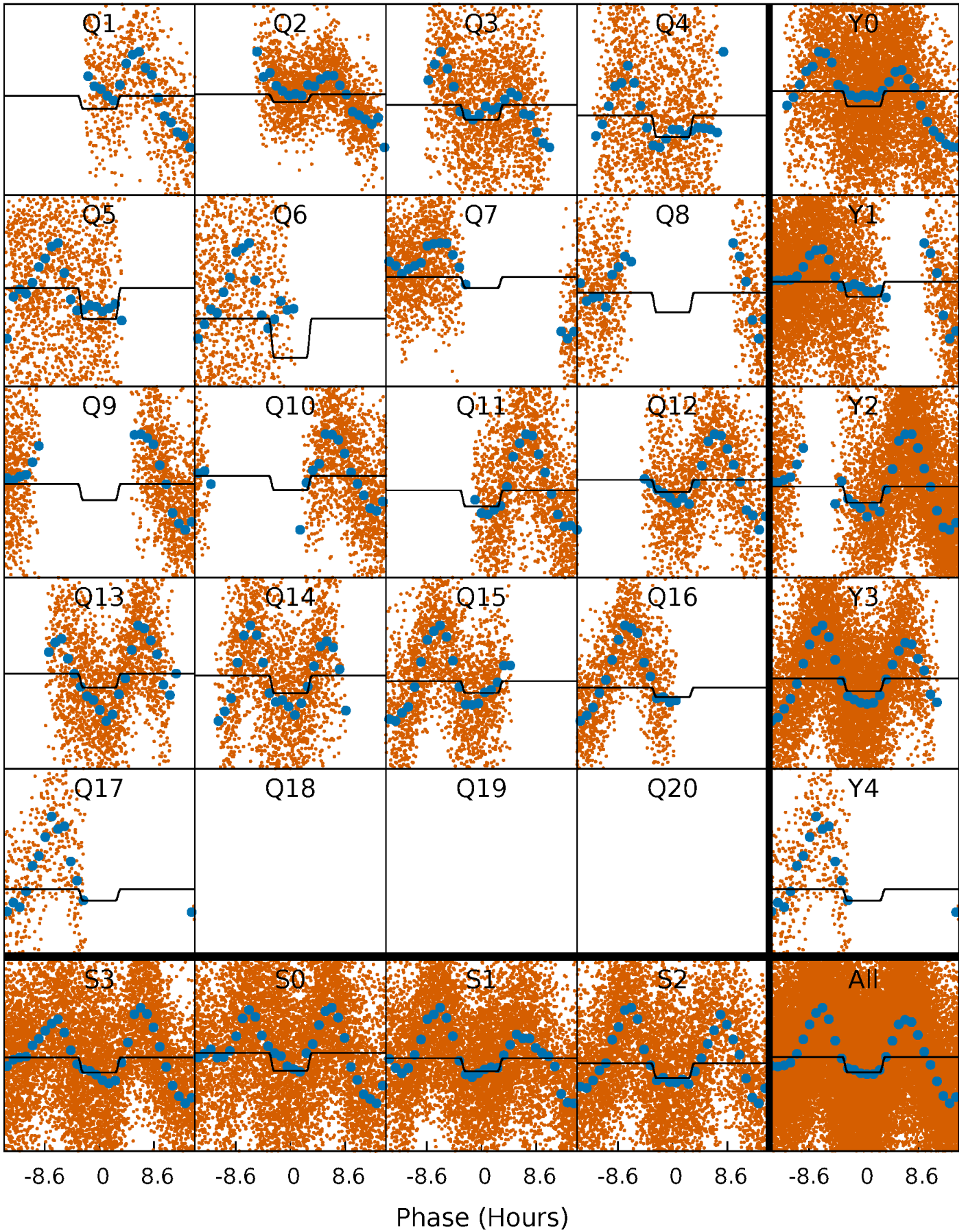
DV Quarter-Phased Transit Curves

TCE 009673338-03 P= 1.453106 Days $T_0=132.117764$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

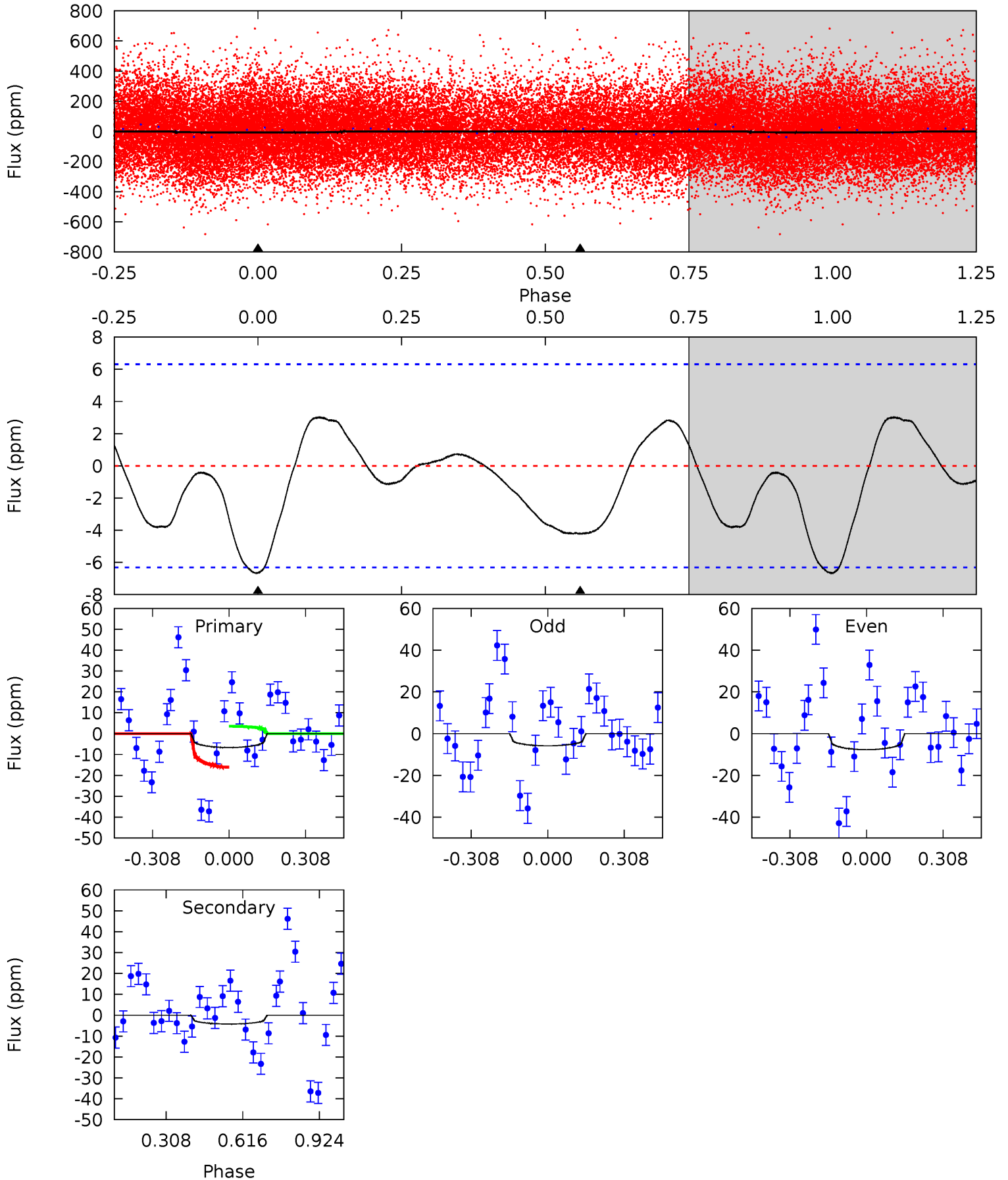
TCE 009673338-03 P= 1.453170 Days $T_0=132.097516$ (BKJD)



DV Model-Shift Uniqueness Test

009673338-03, P = 1.453106 Days, E = 130.664658 Days

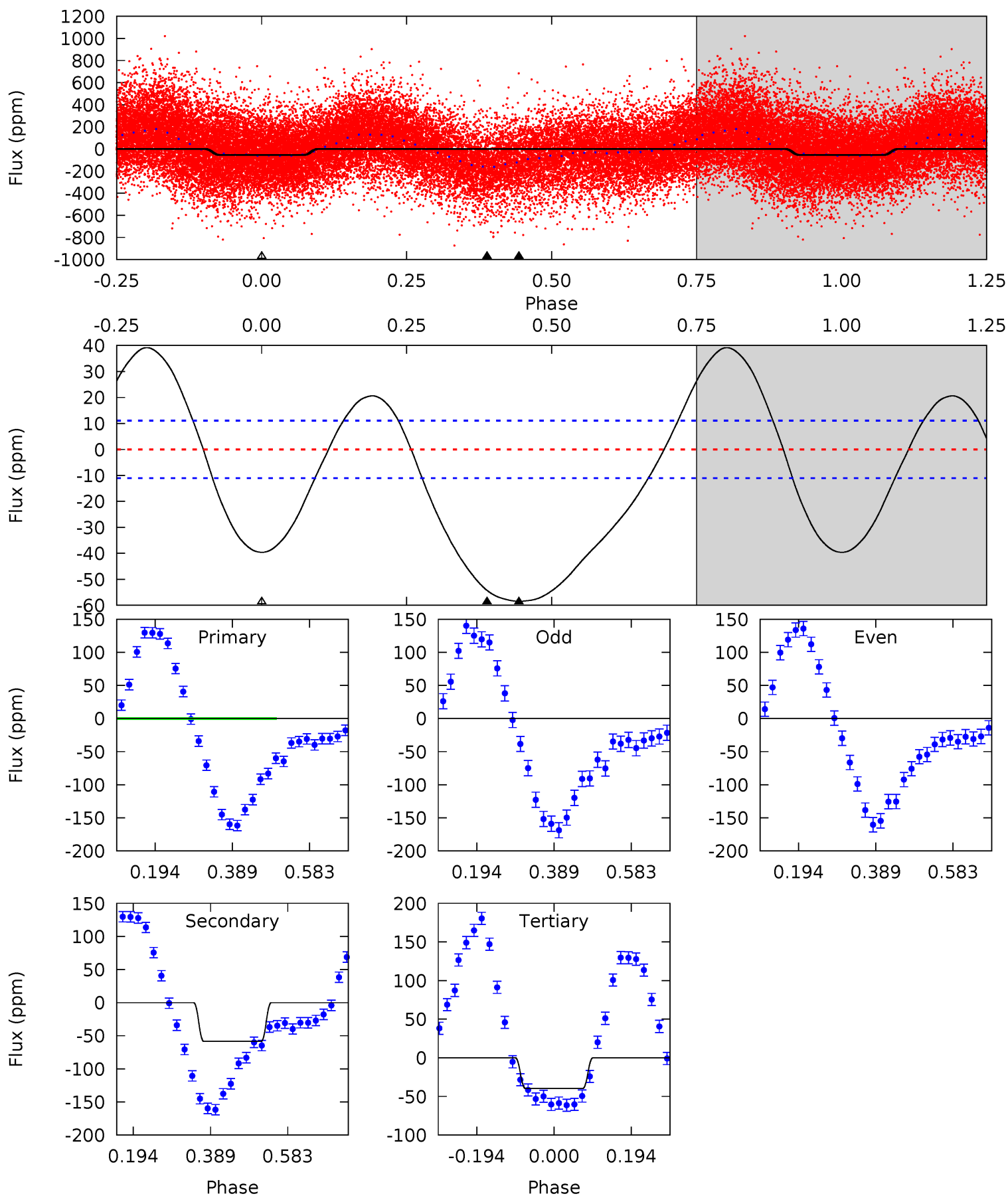
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.56	2.89	0	0	4.32	1.02	0.40	4.56	4.56	2.89	2.89	0.63	0.69	0.31	4.14



Alt Model-Shift Uniqueness Test

009673338-03, P = 1.453170 Days, E = 130.644346 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.7	23.4	15.8	0	4.42	1.30	10.2	5.86	21.7	7.54	23.4	1.50	0.90	0.40	1.72



Stellar Parameters For KIC 009673338

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6241^{+190}_{-171}	$3.442^{+0.392}_{-0.098}$	$-0.200^{+0.350}_{-0.300}$	$4.157^{+0.611}_{-1.834}$	$1.746^{+0.155}_{-0.465}$	$0.034^{+0.127}_{-0.010}$
	+3%/-3%	+11%/-3%	+175%/-150%	+15%/-44%	+9%/-27%	+369%/-30%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009673338-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-4 ± 1	$1.97^{+1.87}_{-1.29}$	4390^{+304}_{-464}	3672^{+2804}_{-7228}	$0.513^{+3.705}_{-0.378}$
Alt.	-58 ± 3	$3.12^{+2.31}_{-1.86}$	4448^{+262}_{-430}	6177^{+4654}_{-1574}	$2.912^{+15.226}_{-1.923}$

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 $A_{obs} \gg 1.0$

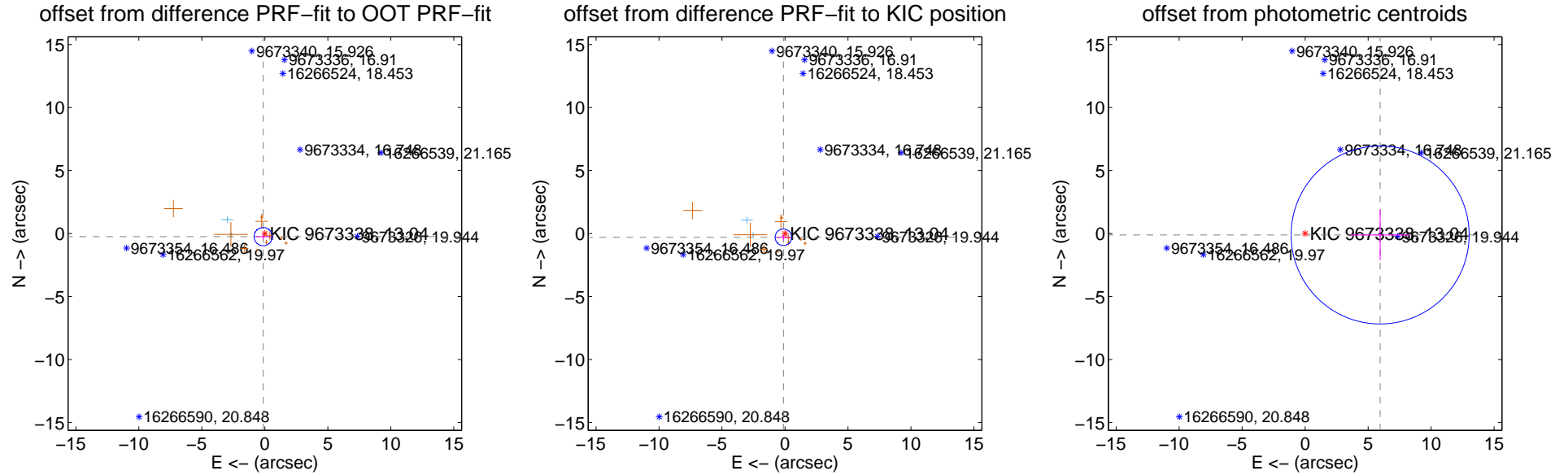
DV Centroid Data

Supplemental centroid analysis for 009673338-03. Kepler magnitude: 13.04. Transit SNR 4.40

There are 2 quarters with good PRF difference image offsets

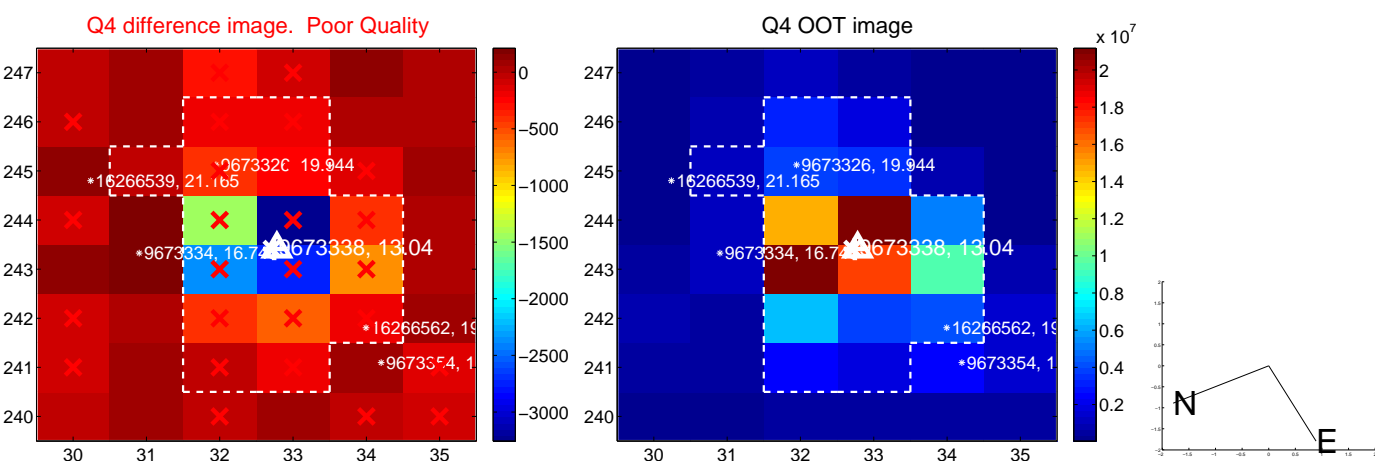
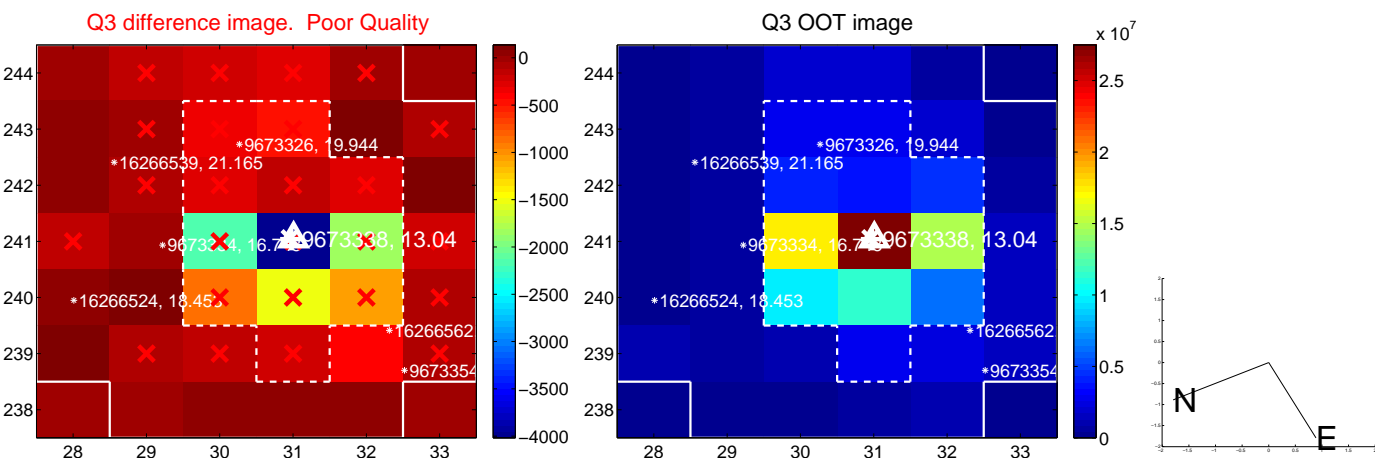
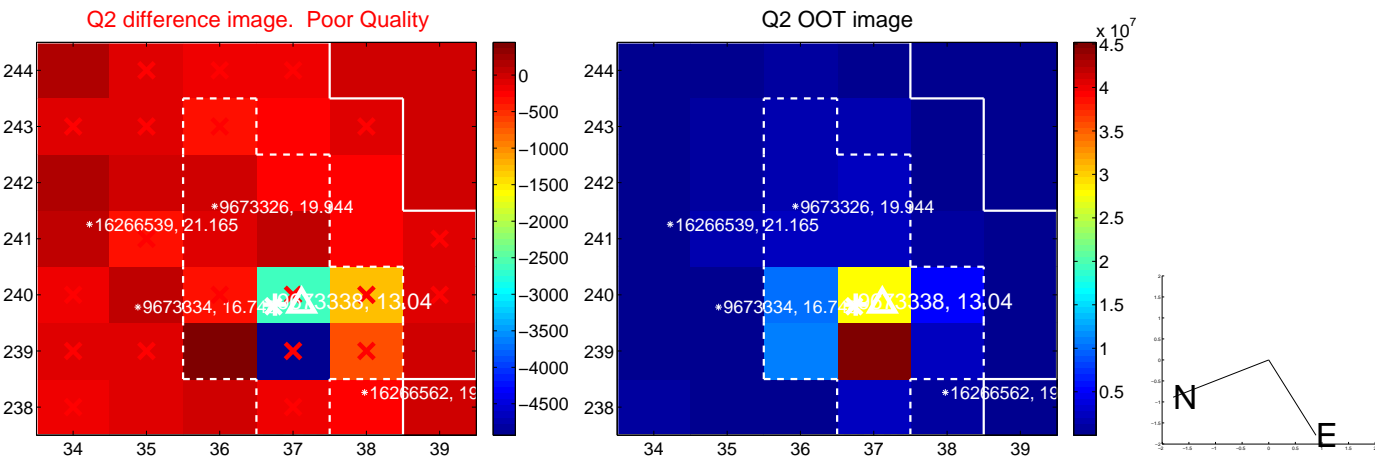
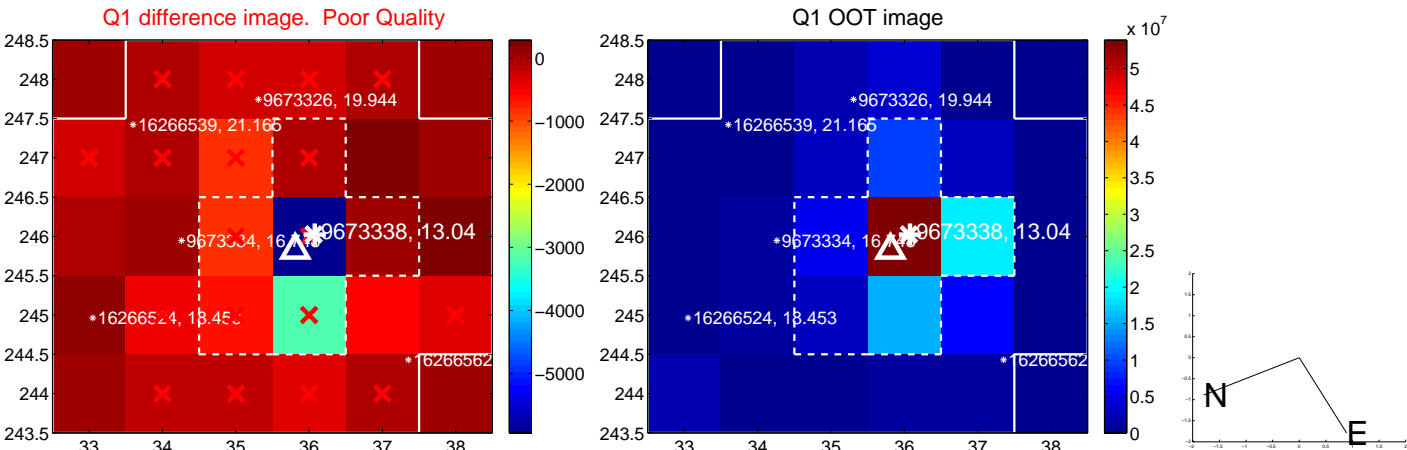
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.281 ± 0.241	1.17	0.131 ± 0.590	-0.248 ± 0.243
PRF-fit source offset from KIC position	0.324 ± 0.218	1.48	0.125 ± 0.551	-0.299 ± 0.242
photometric centroid source offset	5.95 ± 2.35	2.53	-5.95 ± 2.36	-0.11 ± 2.00

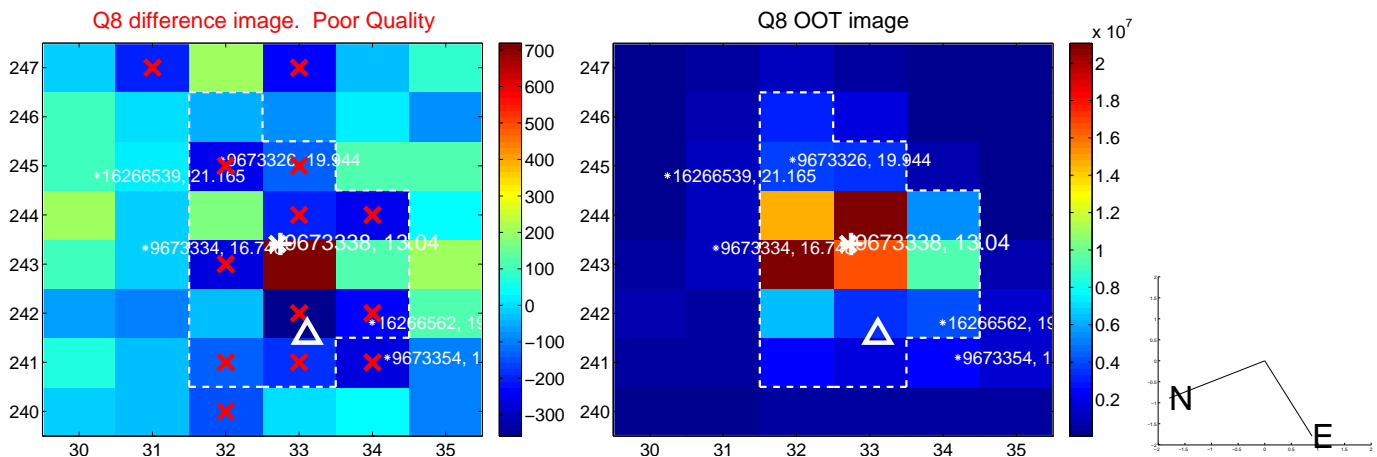
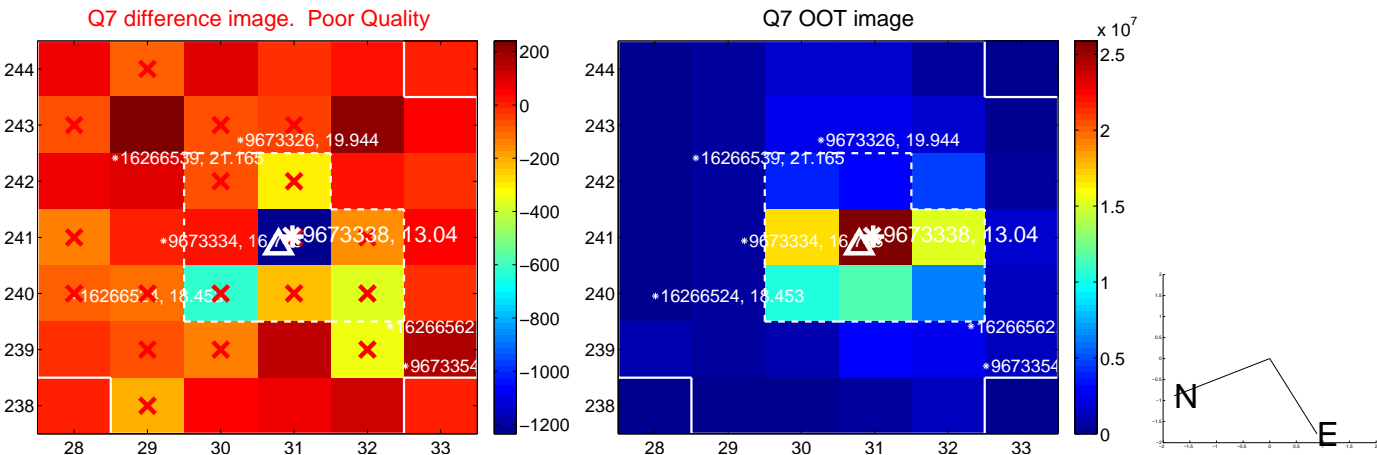
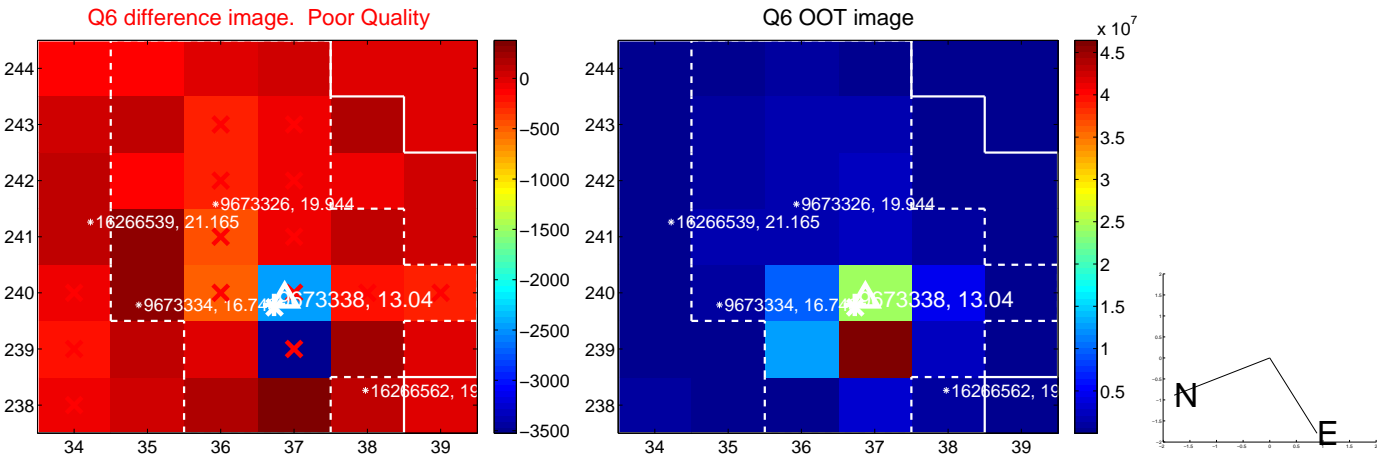
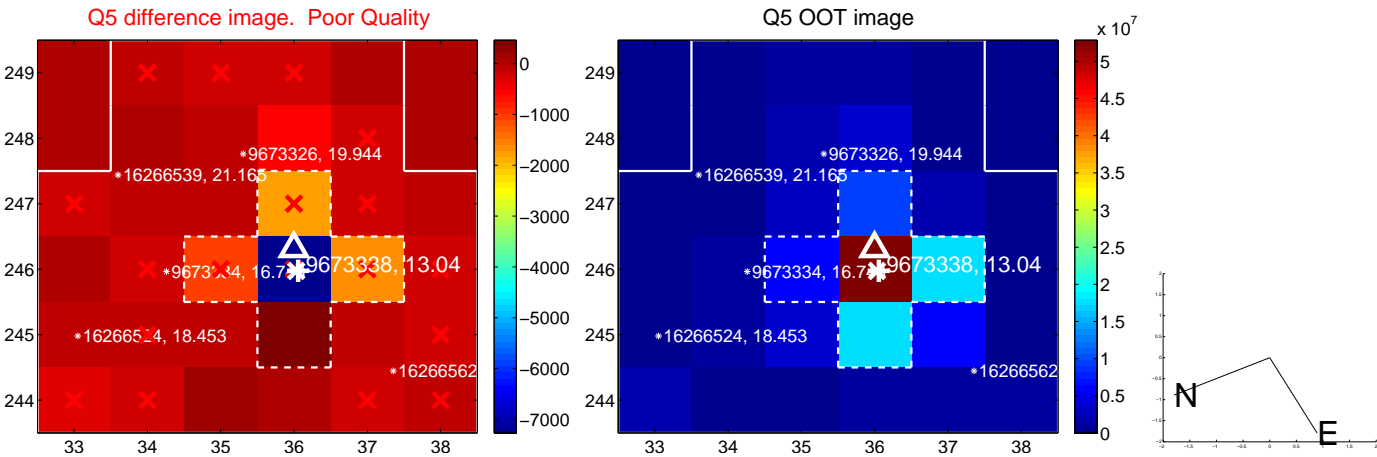


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

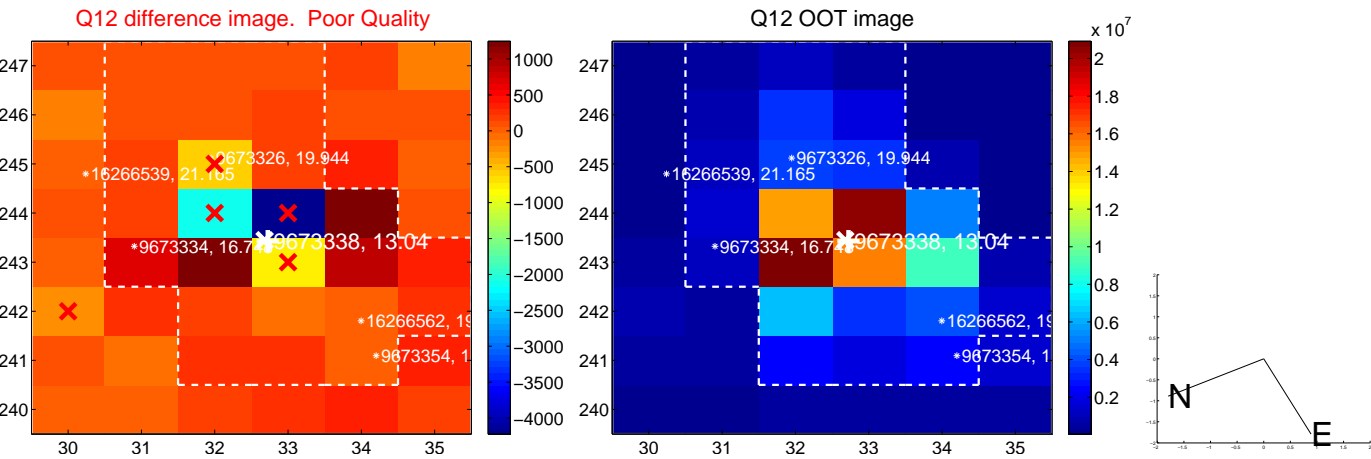
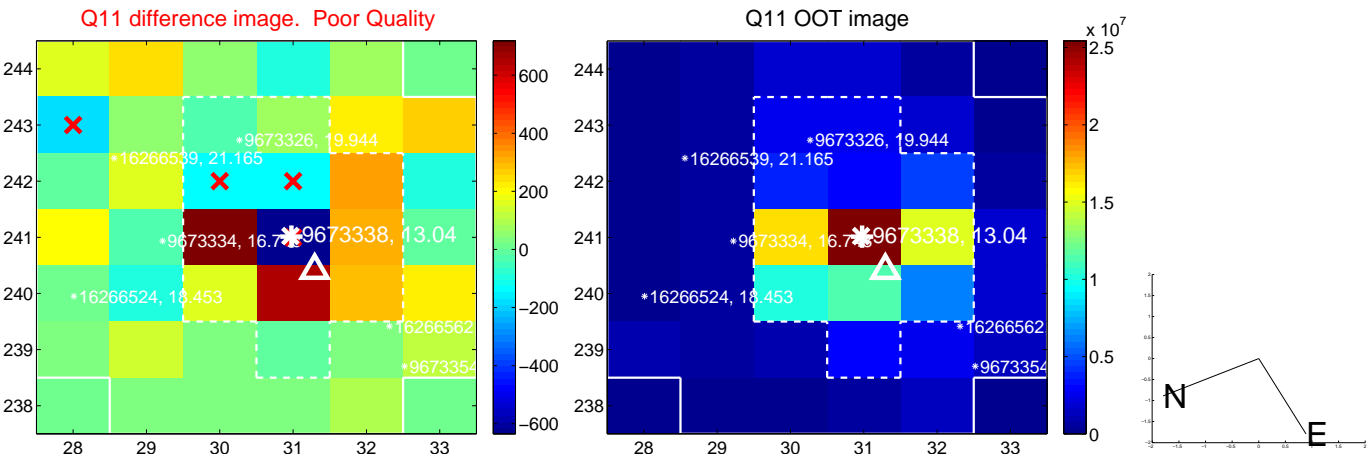
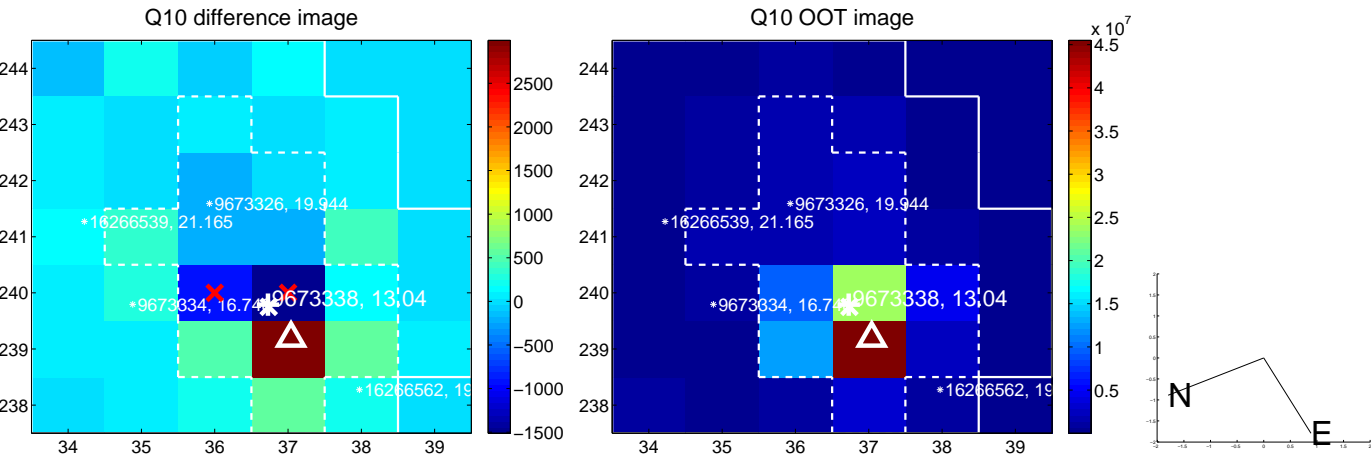
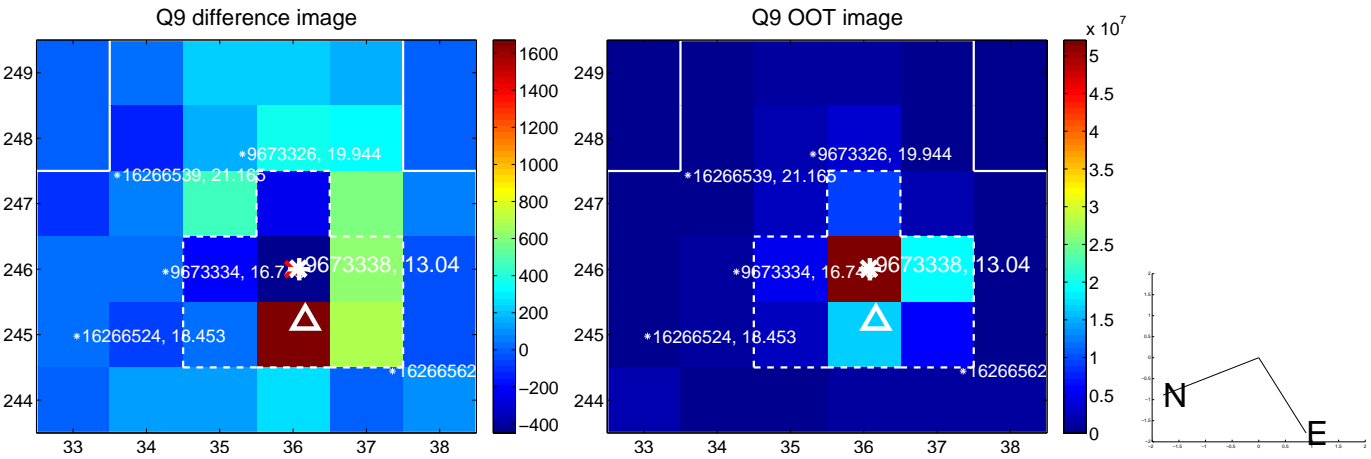
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



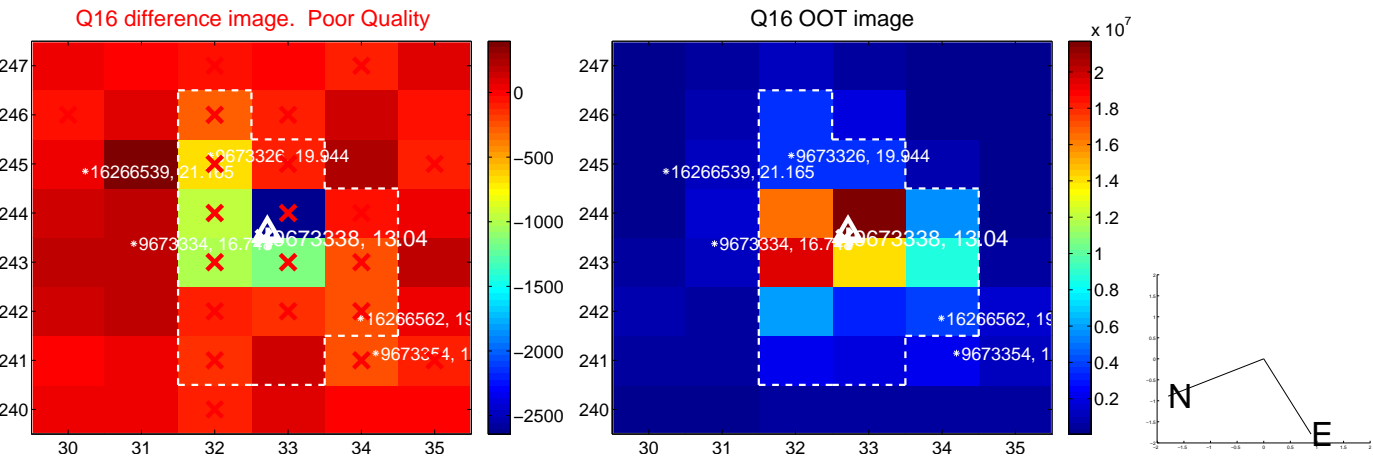
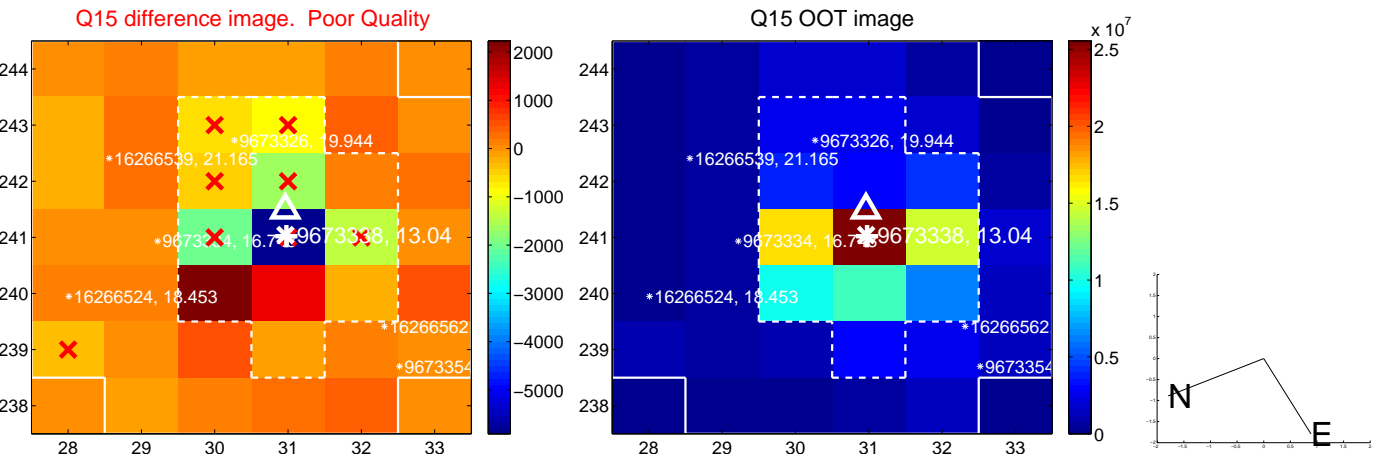
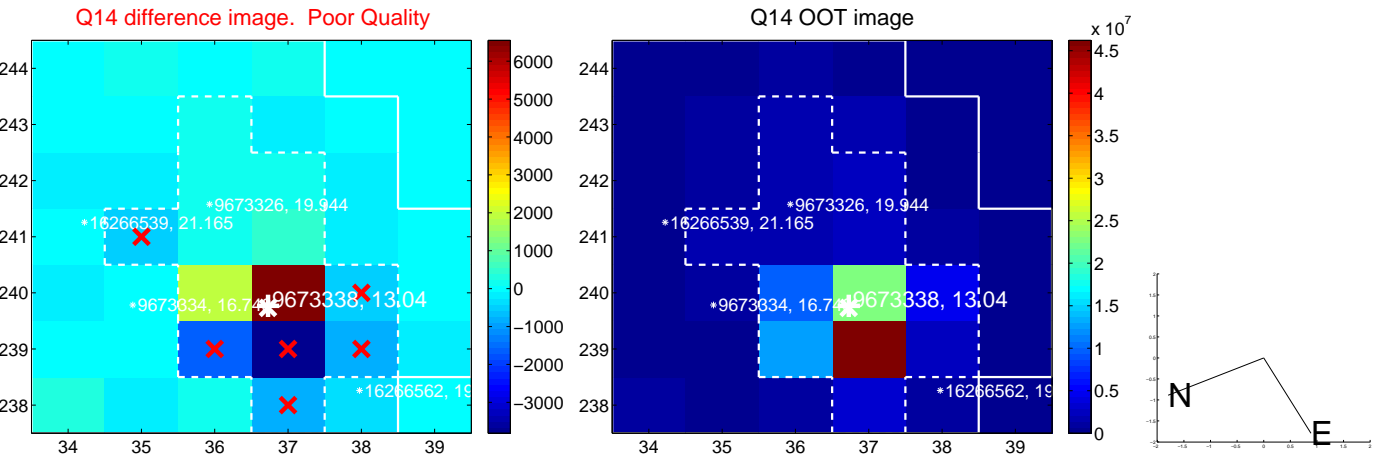
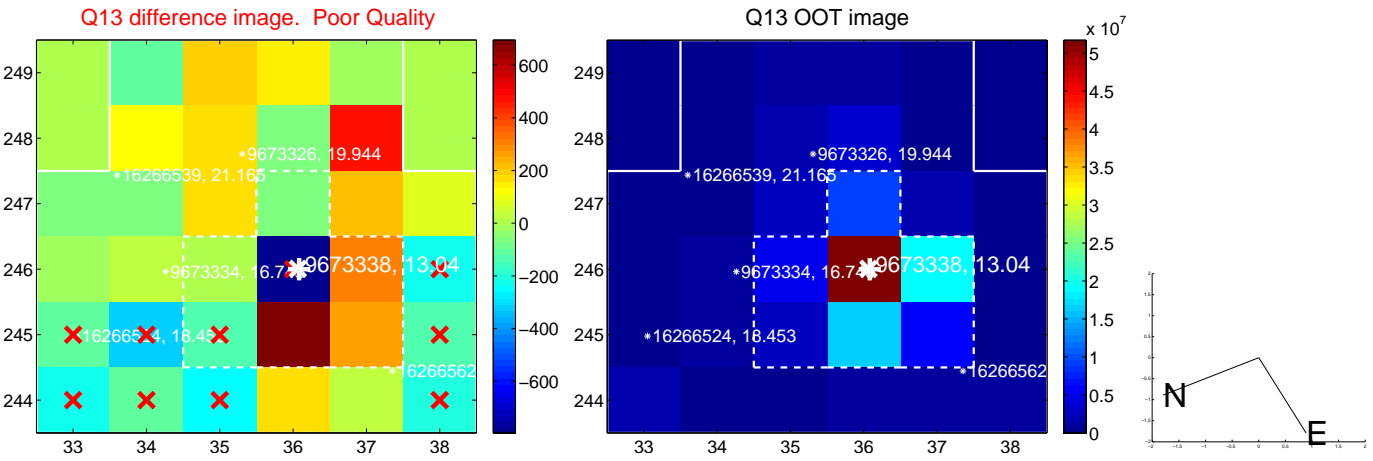
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



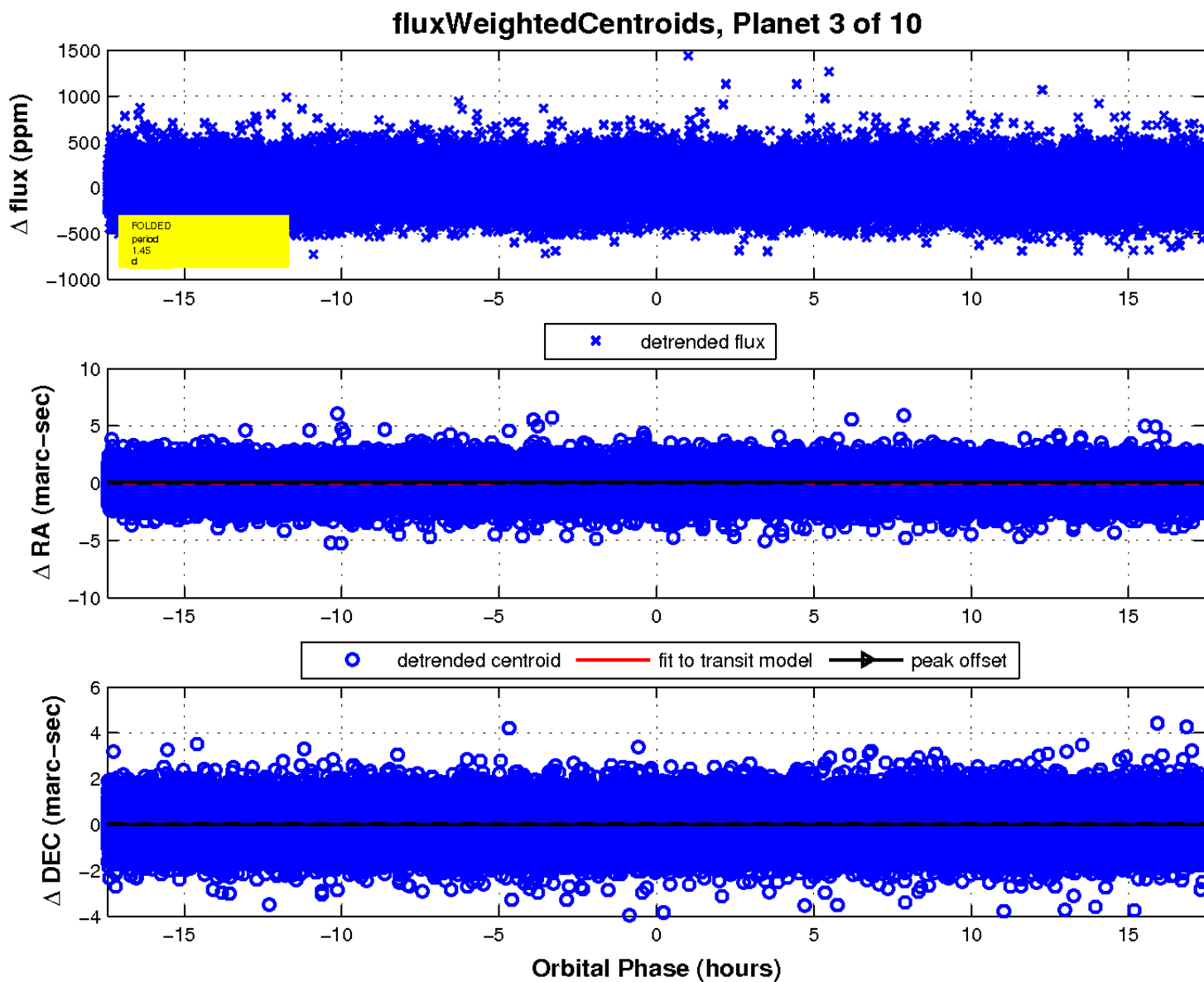
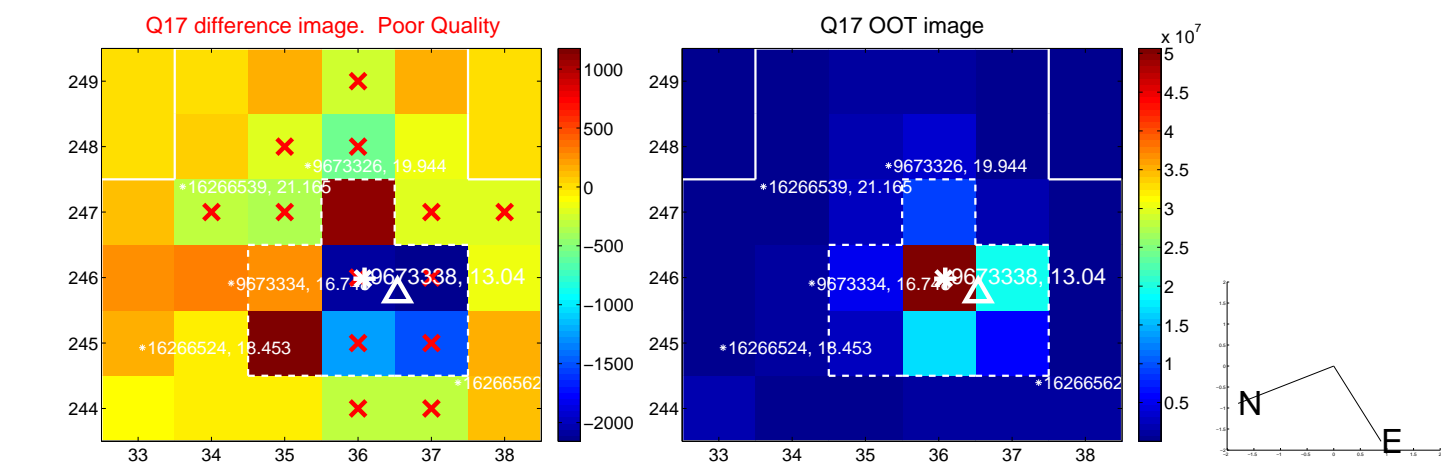
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

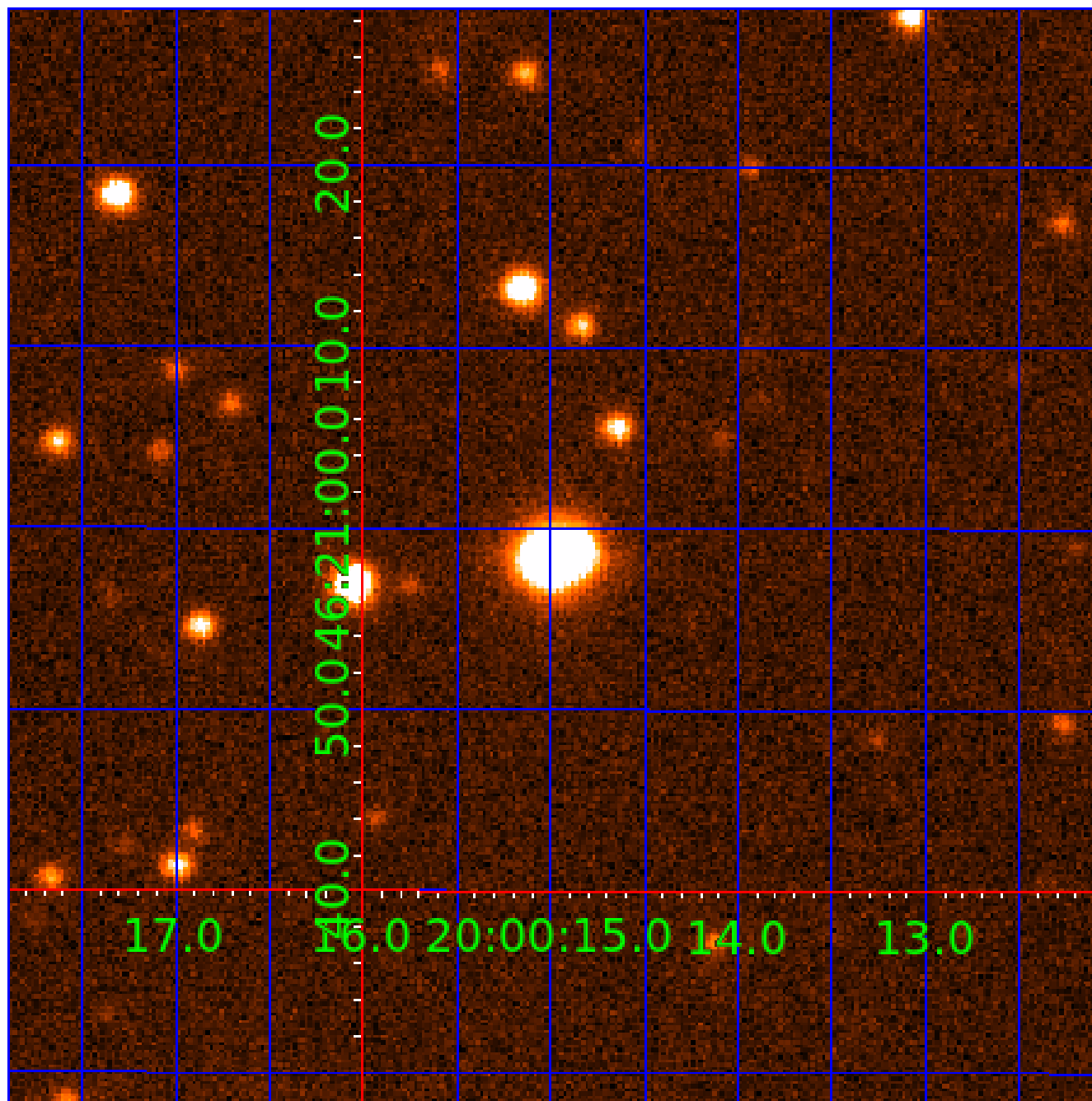


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009673338

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})
009673338-01	OBS	No	1.450943	131.674153	0.0	5.709	11.7	0.0	4.16	6241	0.00	25757.12
009673338-02	OBS	No	399.478089	377.197580	617.3	7.381	12.1	11.2	4.16	6241	10.72	14.38
009673338-03	OBS	No	1.453106	132.117764	9.5	10.296	11.7	4.4	4.16	6241	1.32	25706.01
009673338-04	OBS	No	9.584975	135.987275	287.9	1.350	12.1	11.1	4.16	6241	7.10	2077.99
009673338-05	OBS	No	18.977727	146.671085	224.1	2.281	11.0	9.1	4.16	6241	6.40	835.81
009673338-06	OBS	No	11.097720	139.371899	228.6	1.663	9.6	8.4	4.16	6241	7.27	1709.17
009673338-07	OBS	No	13.396447	132.848813	210.8	3.141	9.6	10.8	4.16	6241	6.06	1329.78
009673338-08	OBS	No	29.760323	145.204337	254.1	2.470	9.4	10.3	4.16	6241	7.73	458.75
009673338-09	OBS	No	178.767059	279.521486	348.8	5.000	9.1	-1.0	4.16	6241	7.78	42.01
009673338-10	OBS	No	13.594499	135.993905	249.7	1.534	8.7	9.2	4.16	6241	6.74	1304.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009673338-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
009673338-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009673338-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
009673338-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
009673338-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—NO_FITS—INCONSISTENT_TRANS—CENT_NOFITS
009673338-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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

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

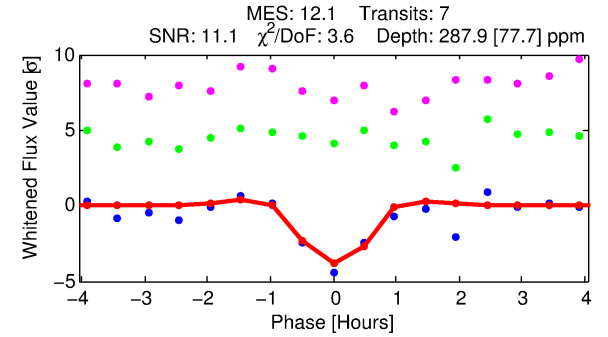
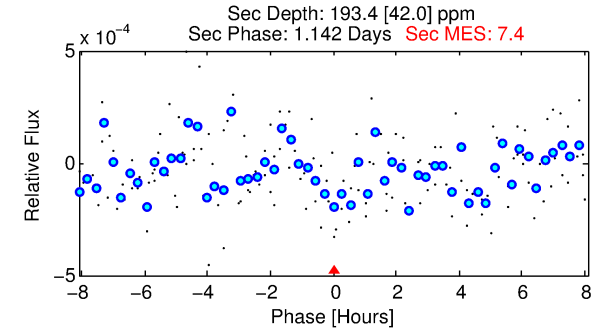
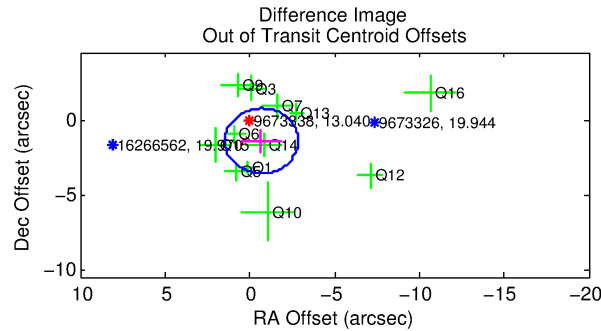
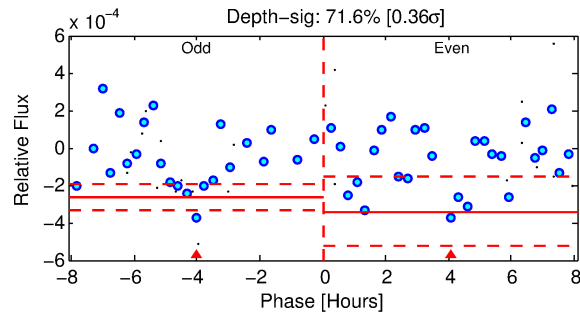
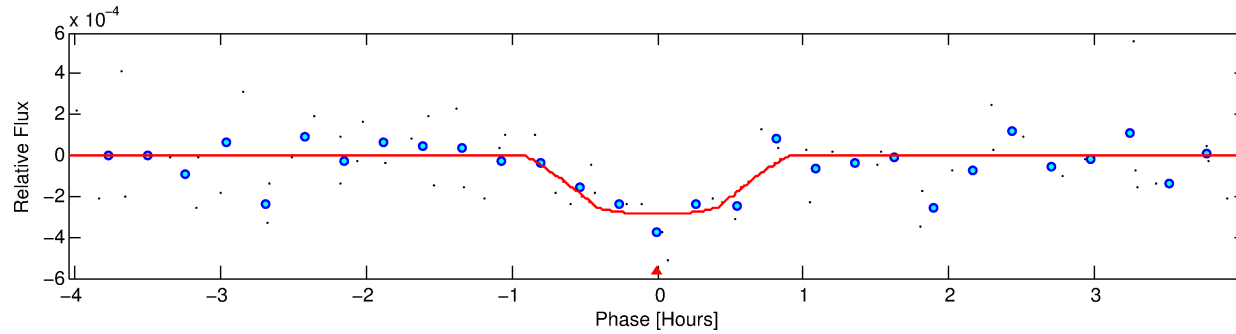
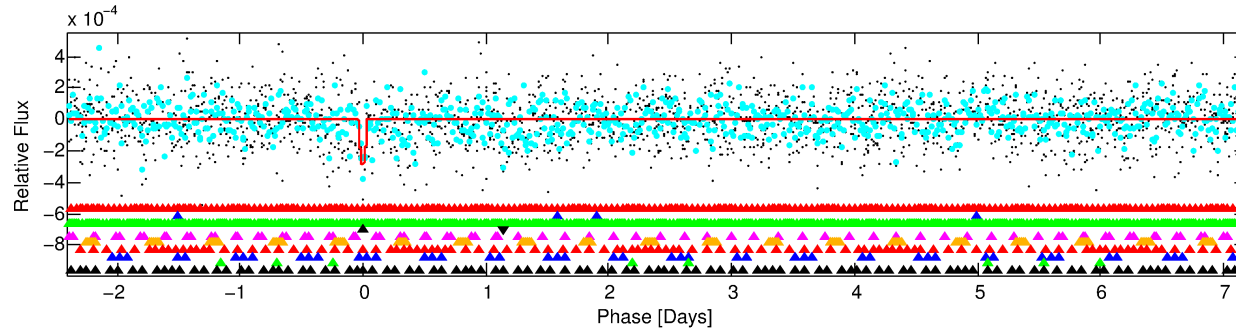
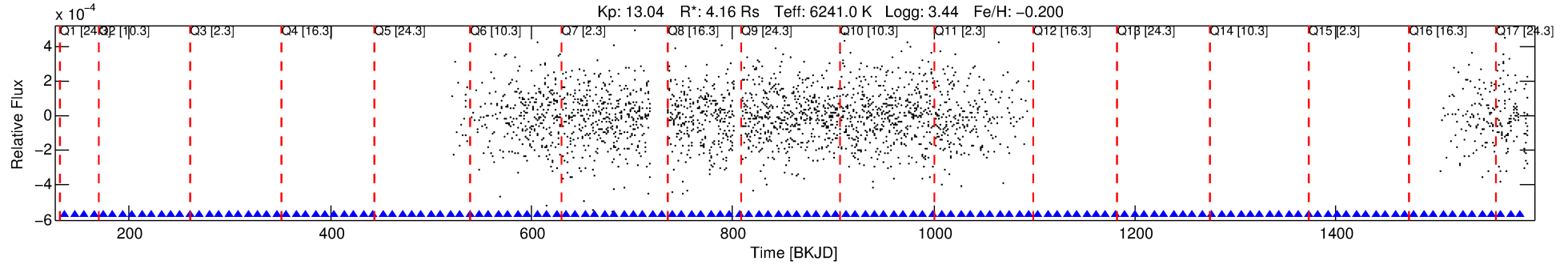
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009673338-04

No Significant Match Found

DV One-Page Summary

KIC: 9673338 Candidate: 4 of 10 Period: 9.585 d



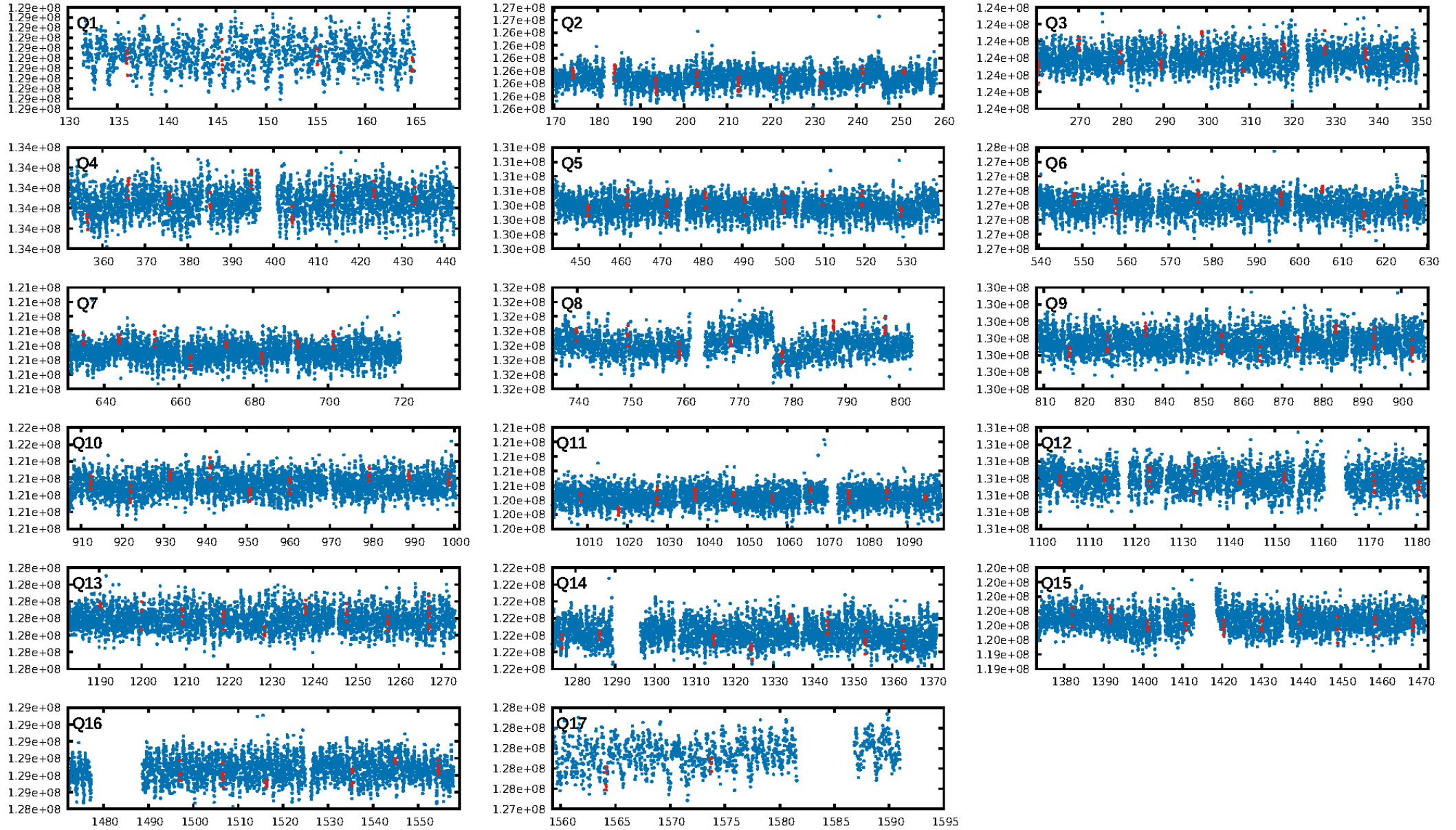
DV Fit Results:

Period = 9.58498 [0.00011] d
Epoch = 135.9873 [0.0109] BKJD
Rp/R* = 0.0157 [0.0409]
a/R* = 54.76 [723.64]
b = 0.11 [115.47]
Seff = 2077.99 [1414.61]
Teq = 1722 [293] K
Rp = 7.10 [18.81] Re
a = 0.1063 [0.0447] AU
Ag = 23.84 [125.56] [0.18 σ]
Teffp = 5881 [7685] K [0.54 σ]

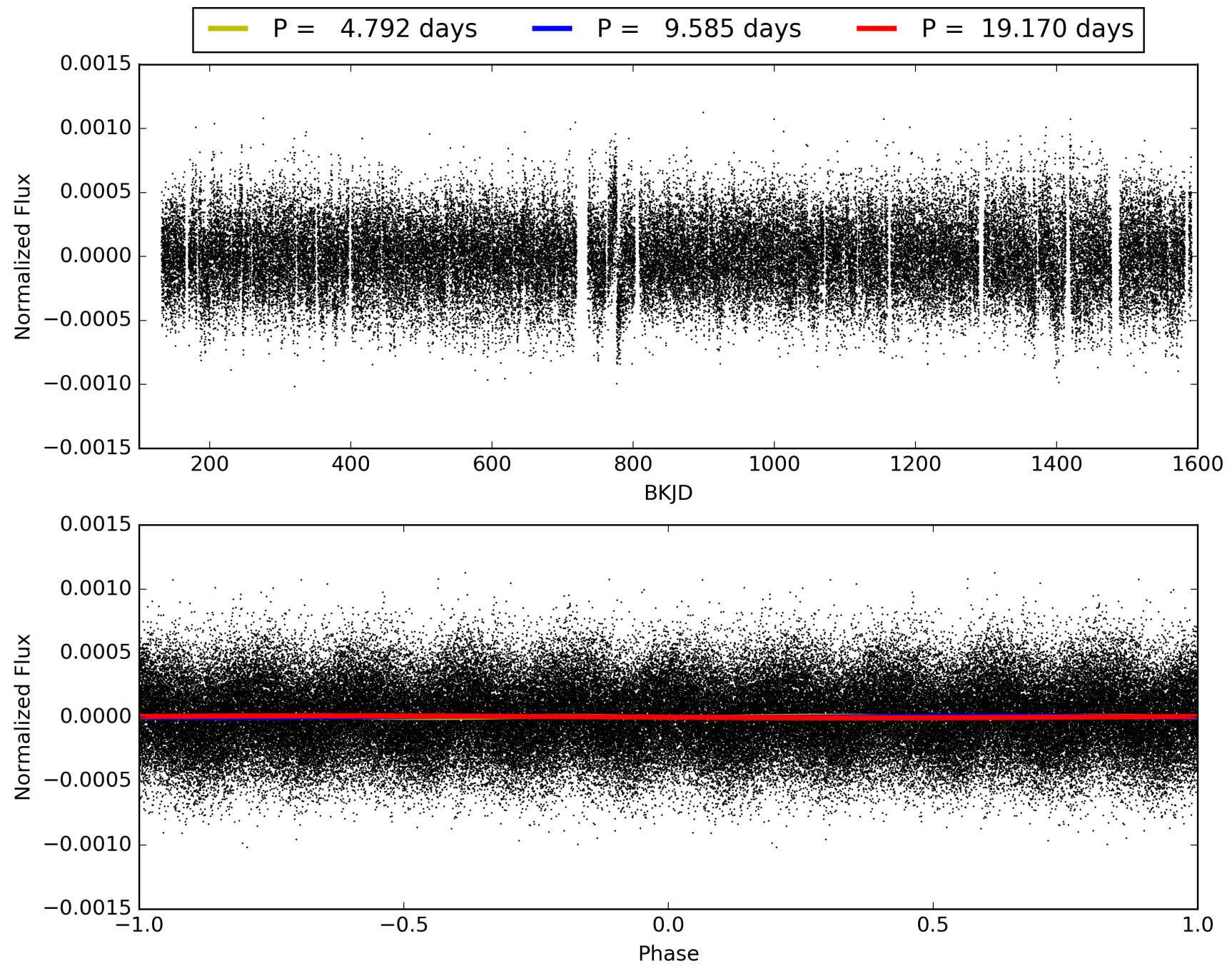
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [18.79 σ]
LongPeriod-sig: 100.0% [16.95 σ]
ModelChiSquare2-sig: 6.4%
ModelChiSquareGof-sig: 57.5%
Bootstrap-pfa: 4.07e-12
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 3.093
Centroid-sig: 37.0%
Centroid-so: 0.417 arcsec [0.89 σ]
OotOffset-rm: 1.572 arcsec [2.18 σ]
KicOffset-rm: 1.578 arcsec [2.19 σ]
OotOffset-st: 3/3/2/4 [12]
KicOffset-st: 3/3/2/4 [12]
DiffImageQuality-fgm: 0.33 [4/12]
DiffImageOverlap-fno: 0.47 [8/17]

TCE 009673338-04, PDC Light Curves

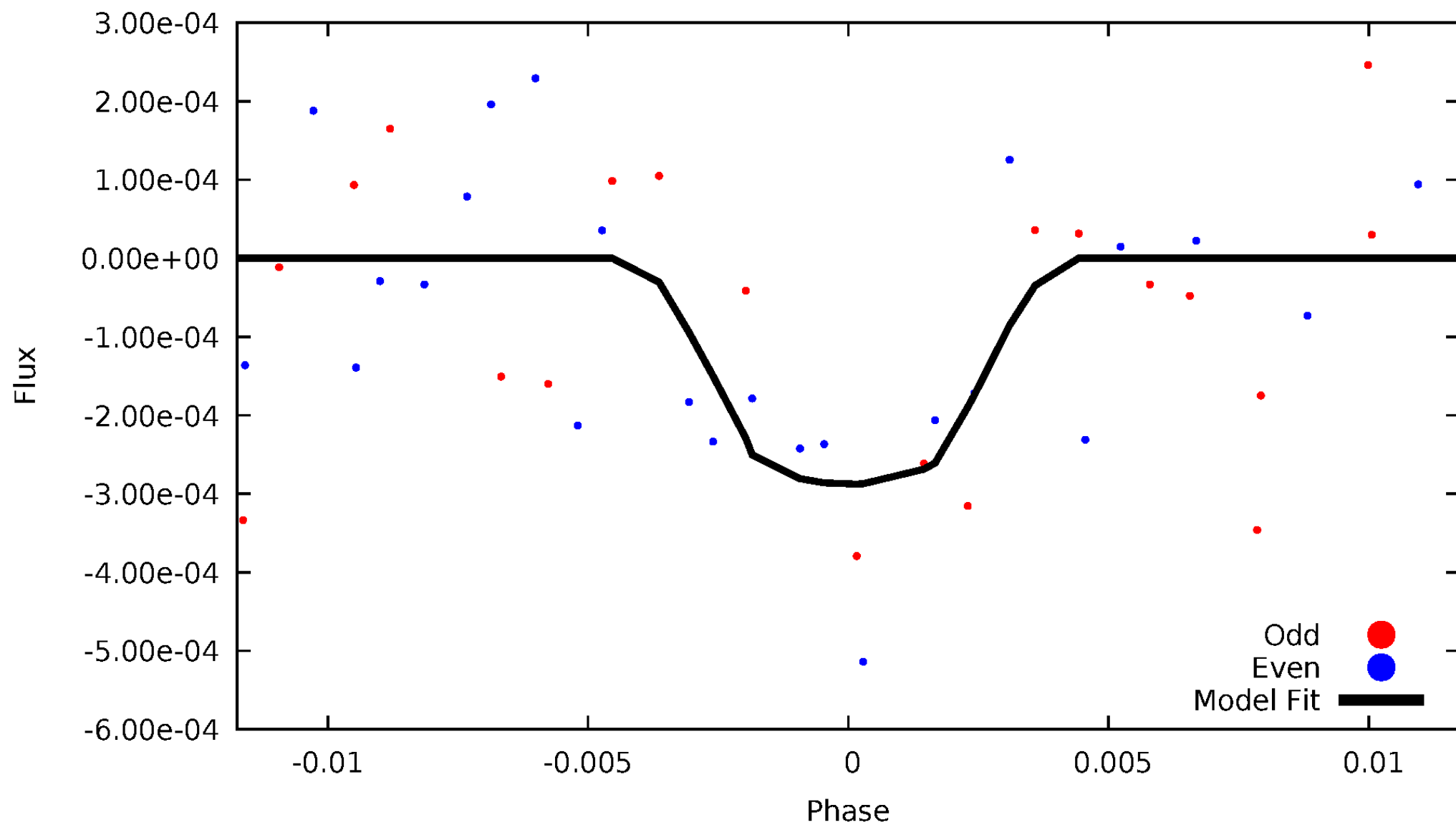


TCE 009673338-04



DV Odd/Even

TCE 009673338-04

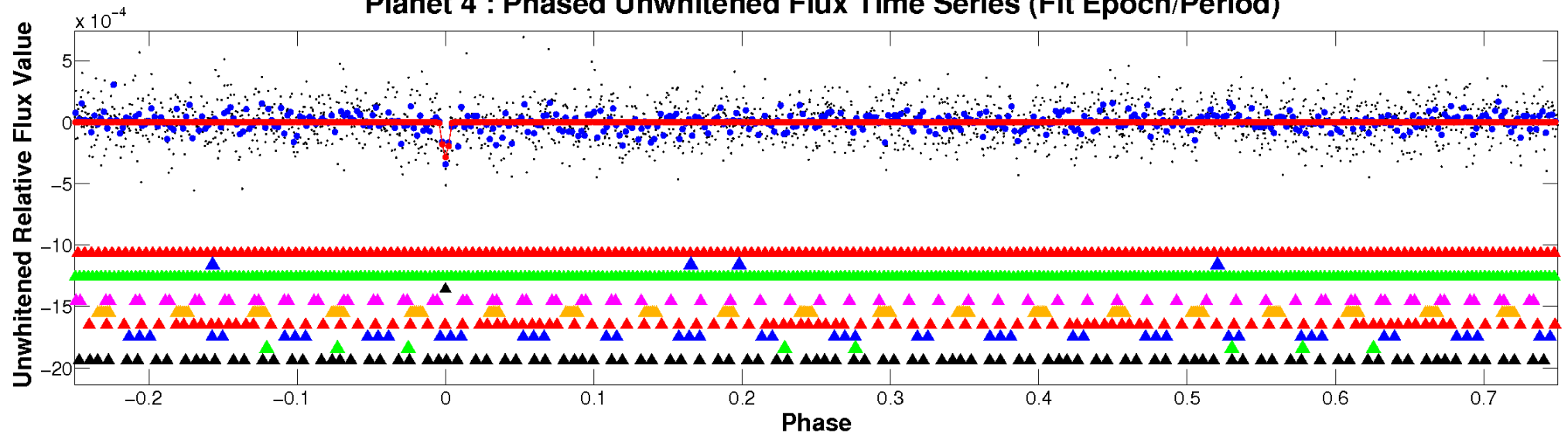


ALT Odd/Even

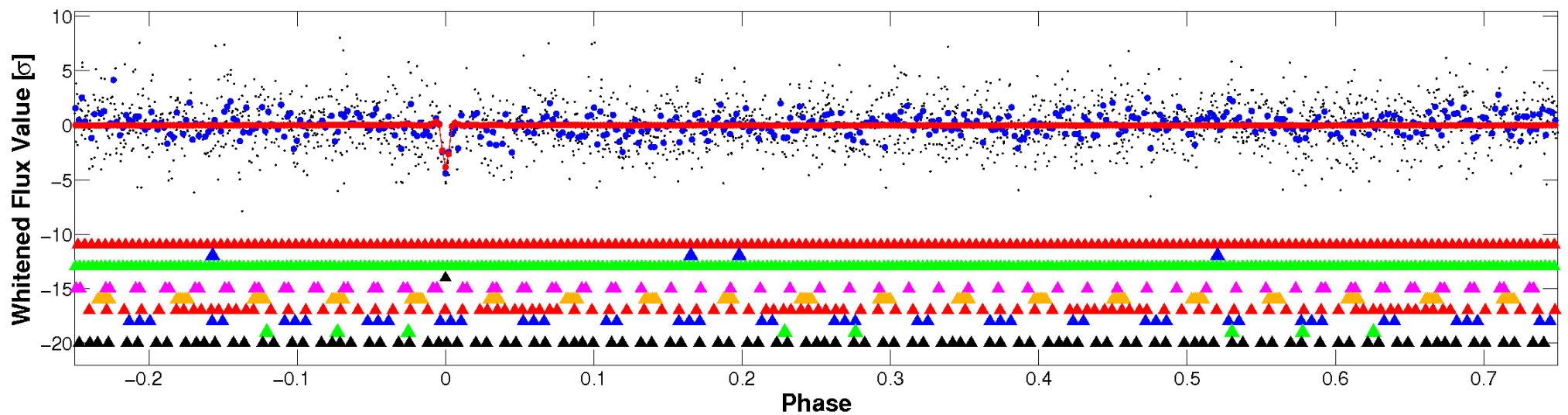
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

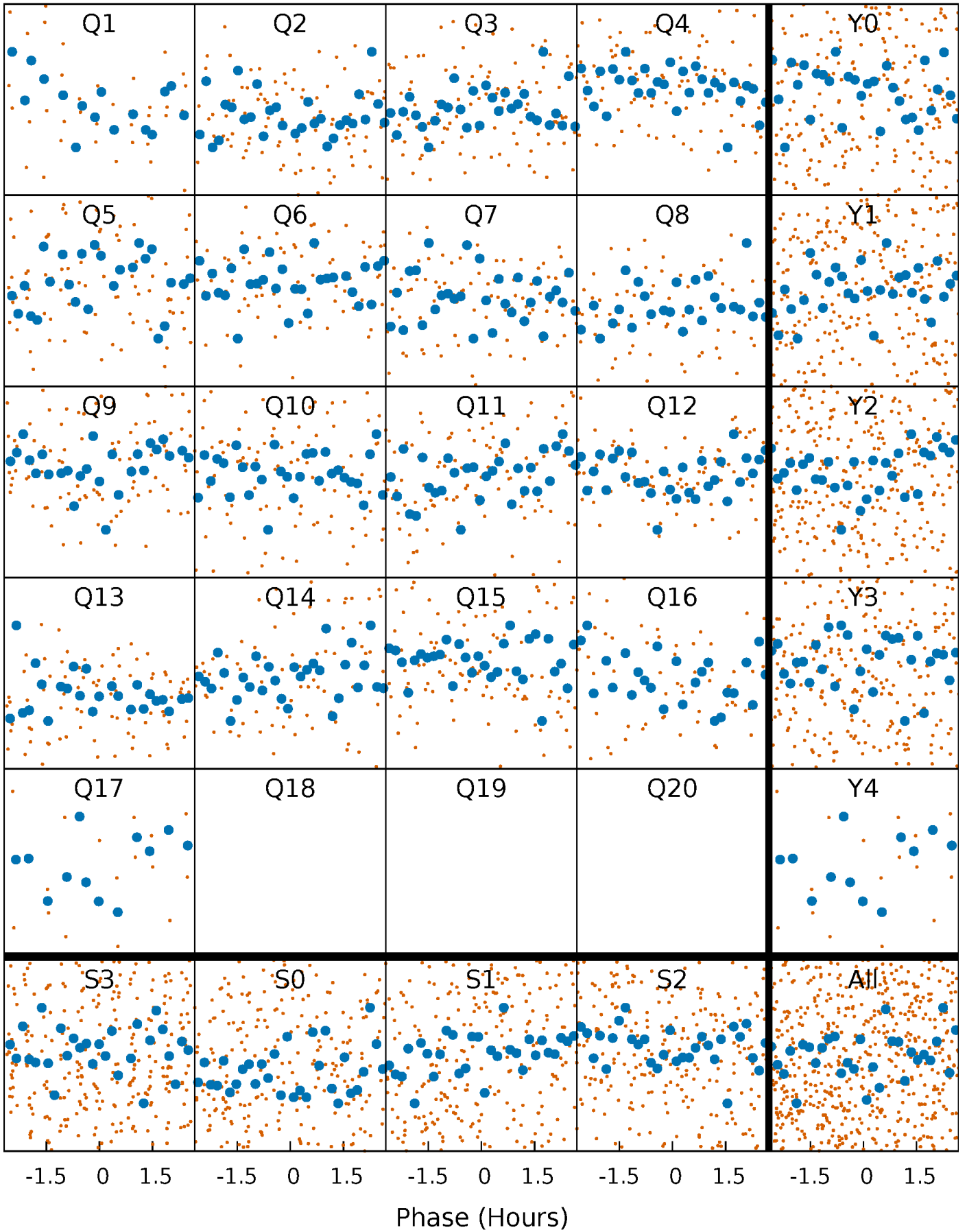


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



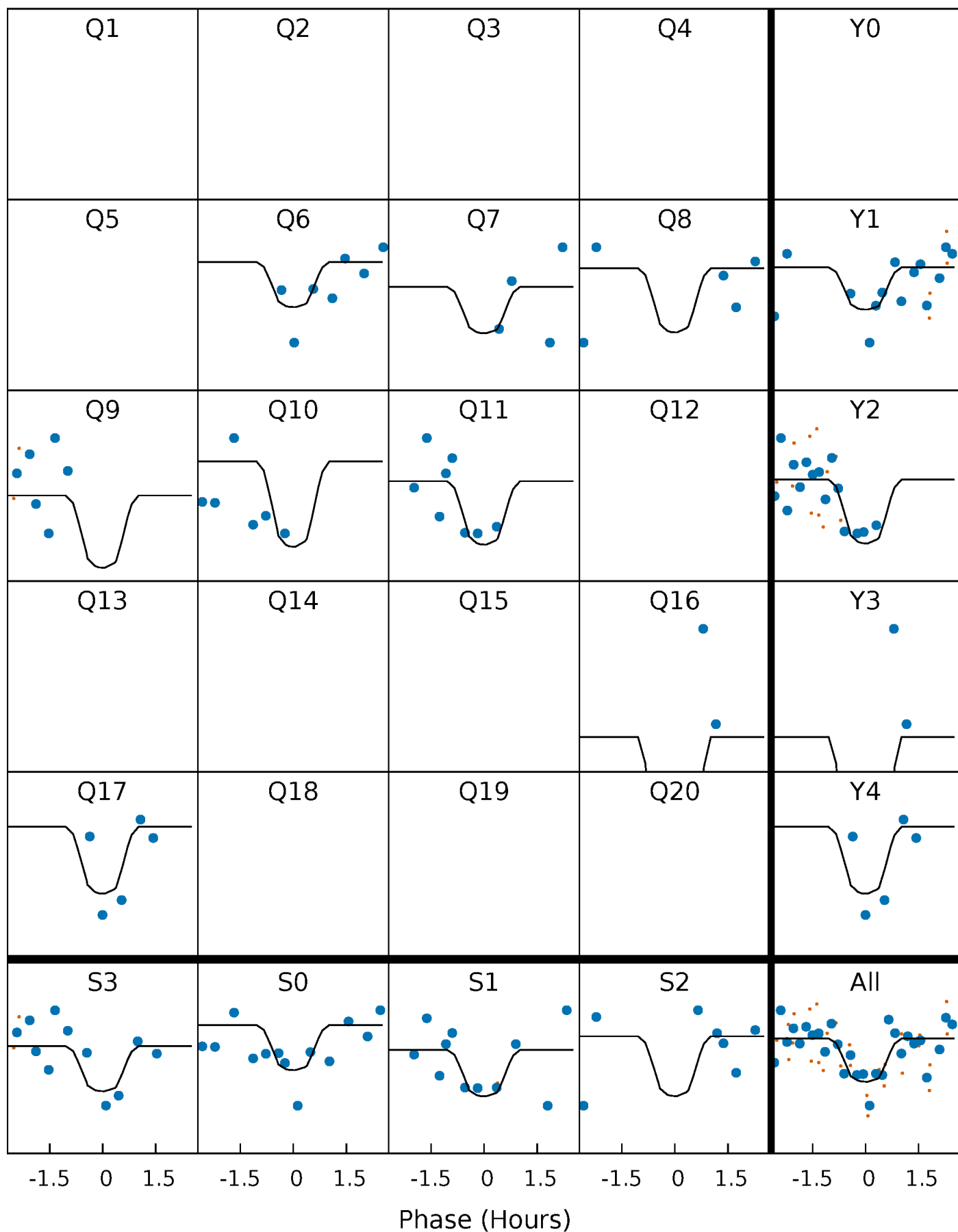
PDC Quarter-Phased Transit Curves

TCE 009673338-04 P= 9.584975 Days $T_0=135.987275$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009673338-04 $P = 9.584975$ Days $T_0 = 135.987275$ (BKJD)

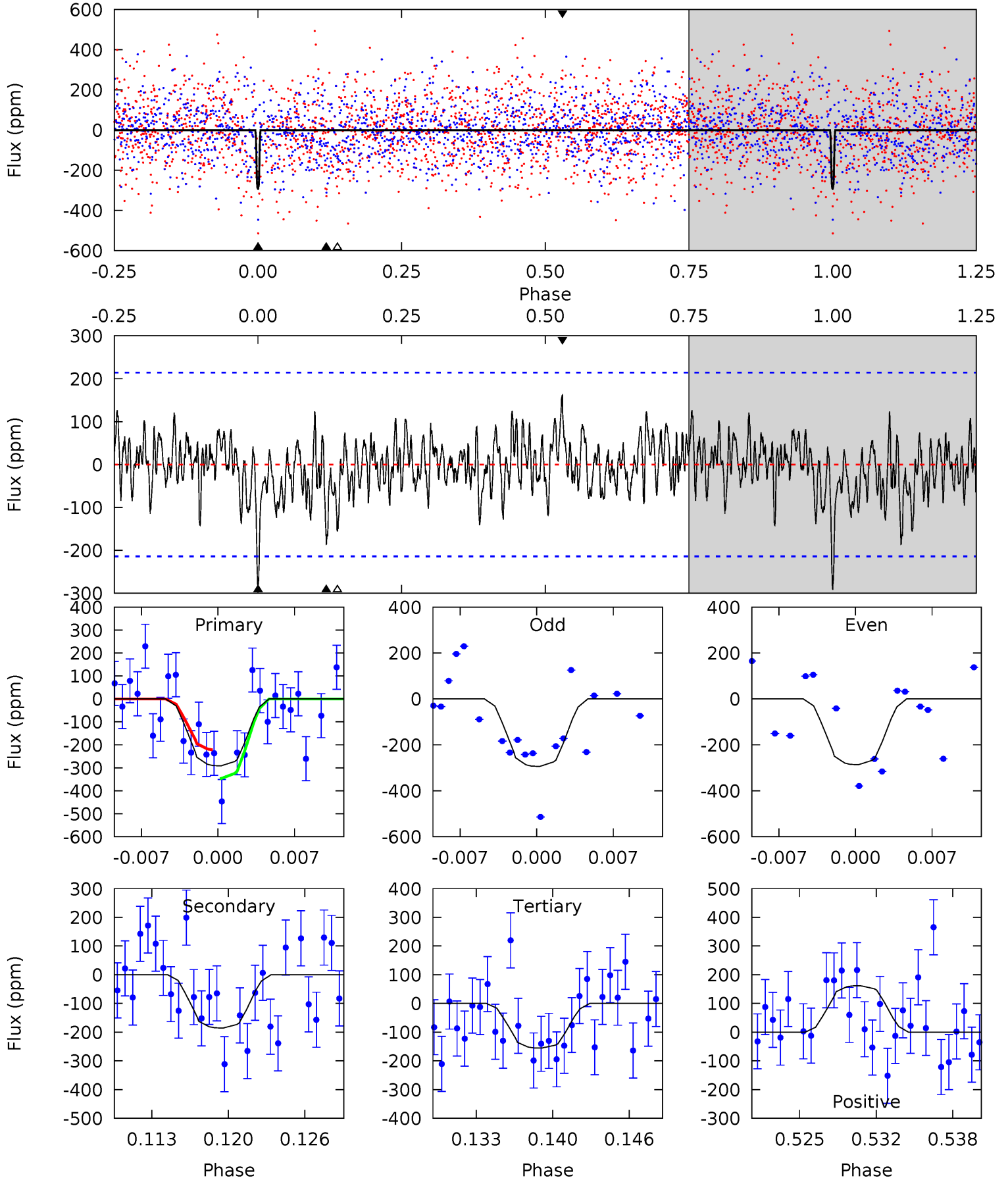


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

009673338-04, P = 9.584975 Days, E = 135.987275 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.95	4.43	3.71	3.86	5.10	2.71	1.24	3.24	3.09	0.72	0.57	0.09	1.05	0.36	1.48



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 009673338

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6241^{+190}_{-171}	$3.442^{+0.392}_{-0.098}$	$-0.200^{+0.350}_{-0.300}$	$4.157^{+0.611}_{-1.834}$	$1.746^{+0.155}_{-0.465}$	$0.034^{+0.127}_{-0.010}$
	+3%/-3%	+11%/-3%	+175%/-150%	+15%/-44%	+9%/-27%	+369%/-30%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009673338-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-186 ± 42	$14.02^{+15.31}_{-9.80}$	2370^{+149}_{-236}	4153^{+2855}_{-953}	$5.585^{+51.176}_{-4.333}$
Alt.	N/A	N/A	N/A	N/A	N/A

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

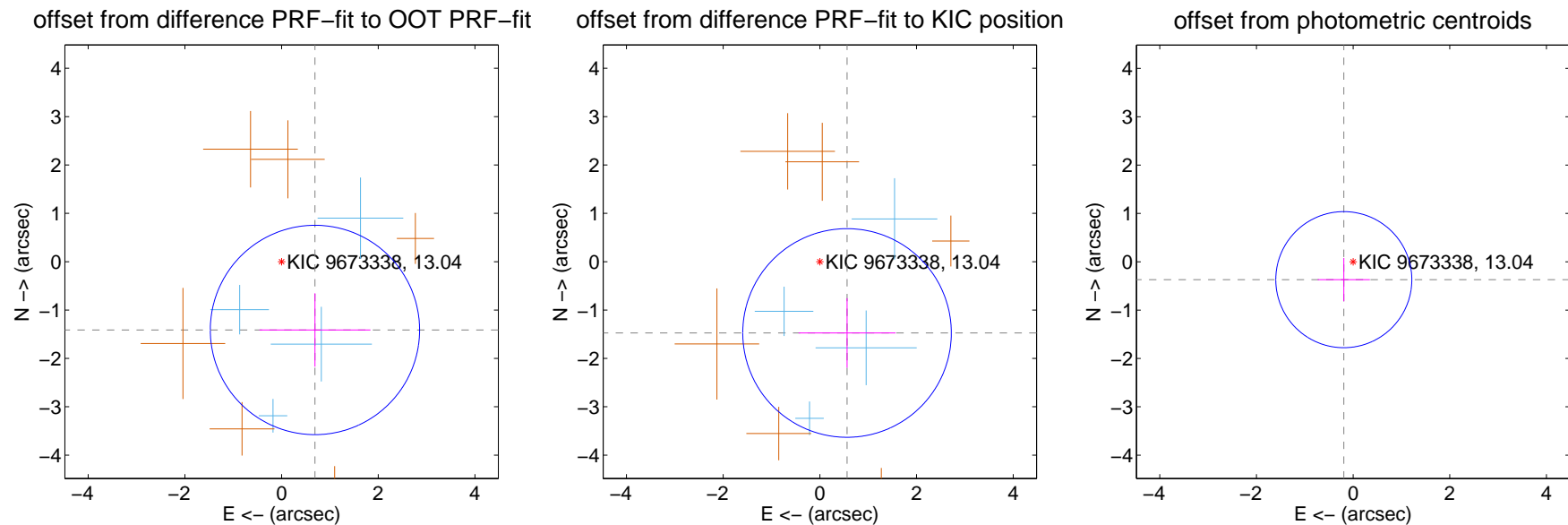
DV Centroid Data

Supplemental centroid analysis for 009673338-04. Kepler magnitude: 13.04. Transit SNR 11.14

There are 4 quarters with good PRF difference image offsets

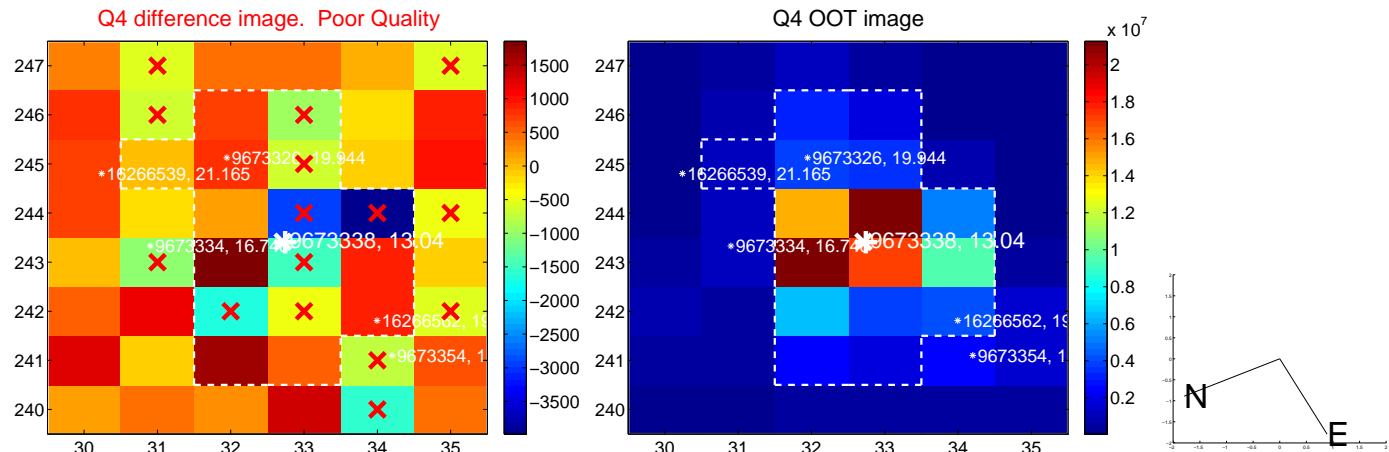
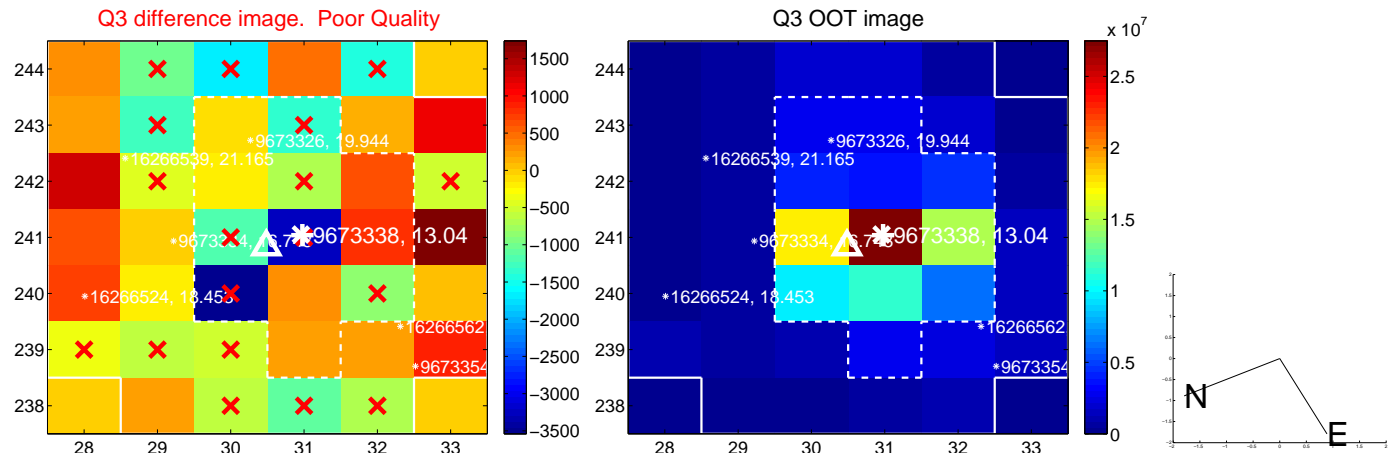
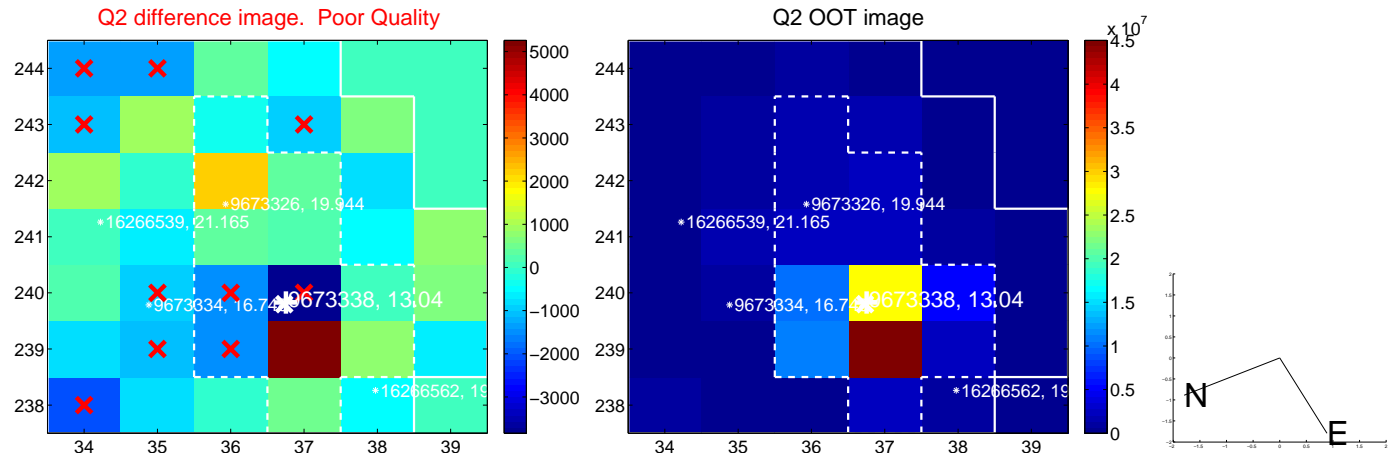
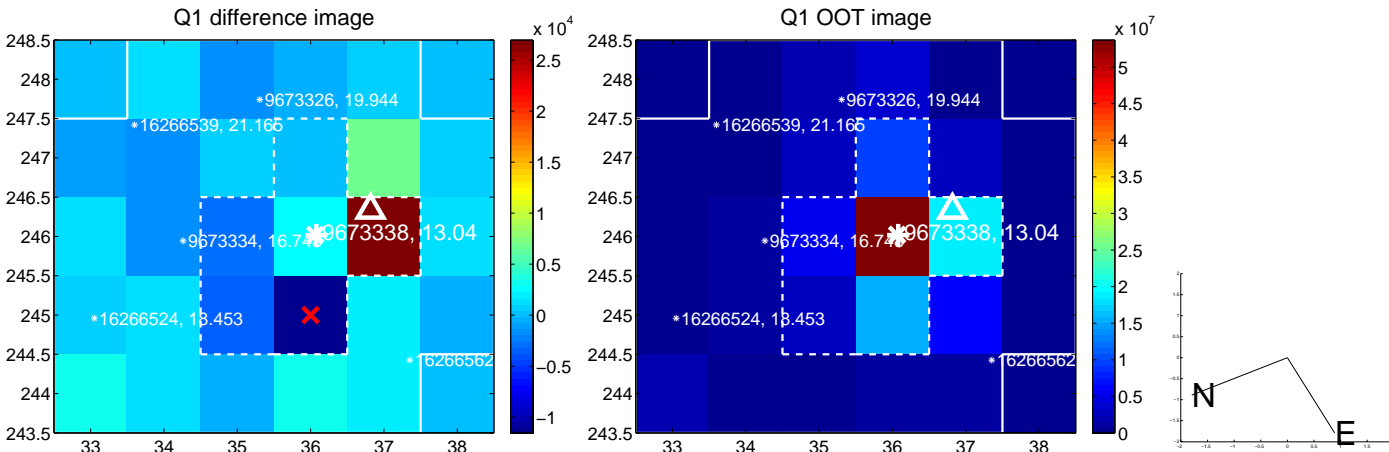
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.572 ± 0.722	2.18	-0.690 ± 1.147	-1.412 ± 0.759
PRF-fit source offset from KIC position	1.578 ± 0.719	2.19	-0.563 ± 1.003	-1.474 ± 0.719
photometric centroid source offset	0.42 ± 0.47	0.89	0.19 ± 0.54	-0.37 ± 0.45

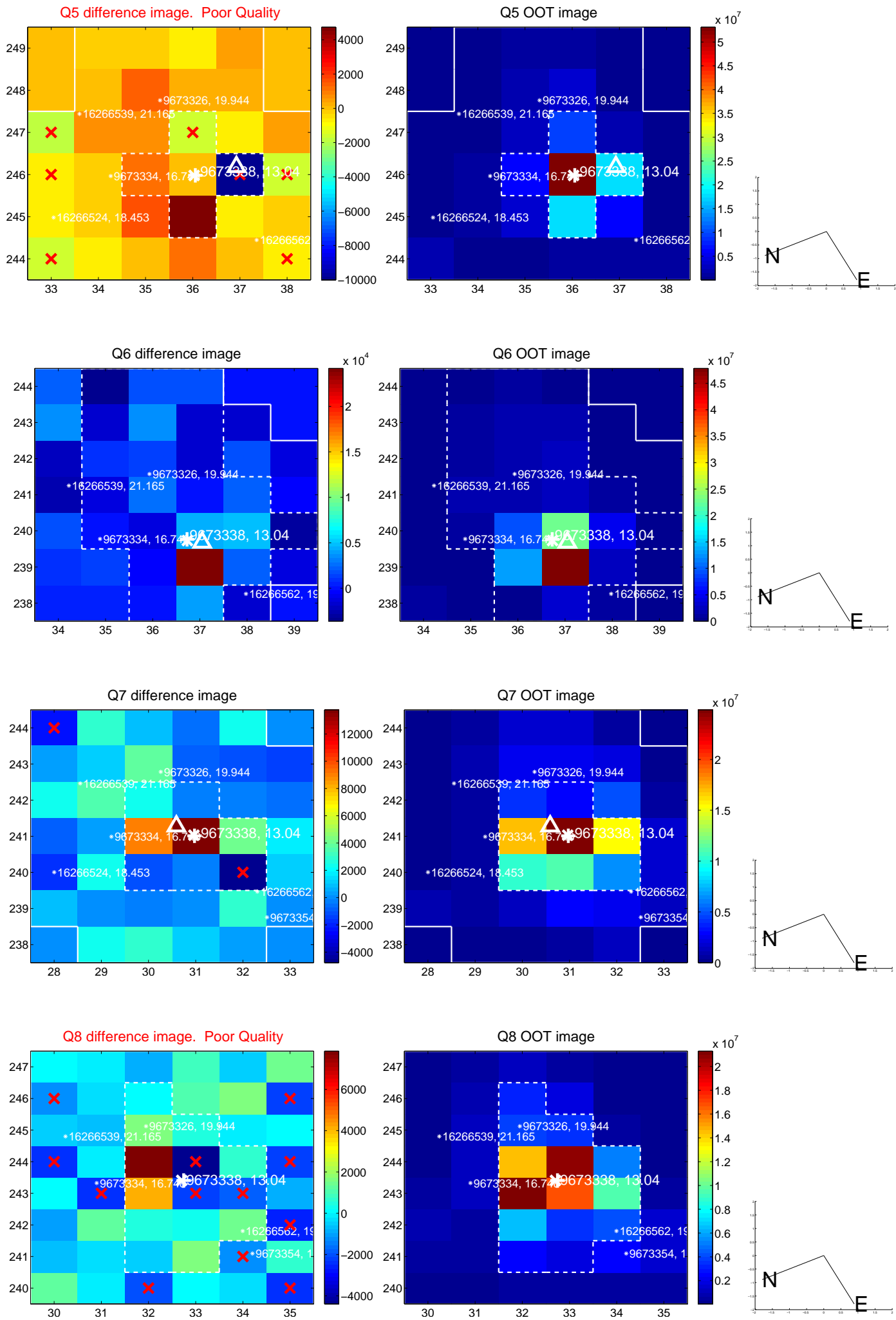


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

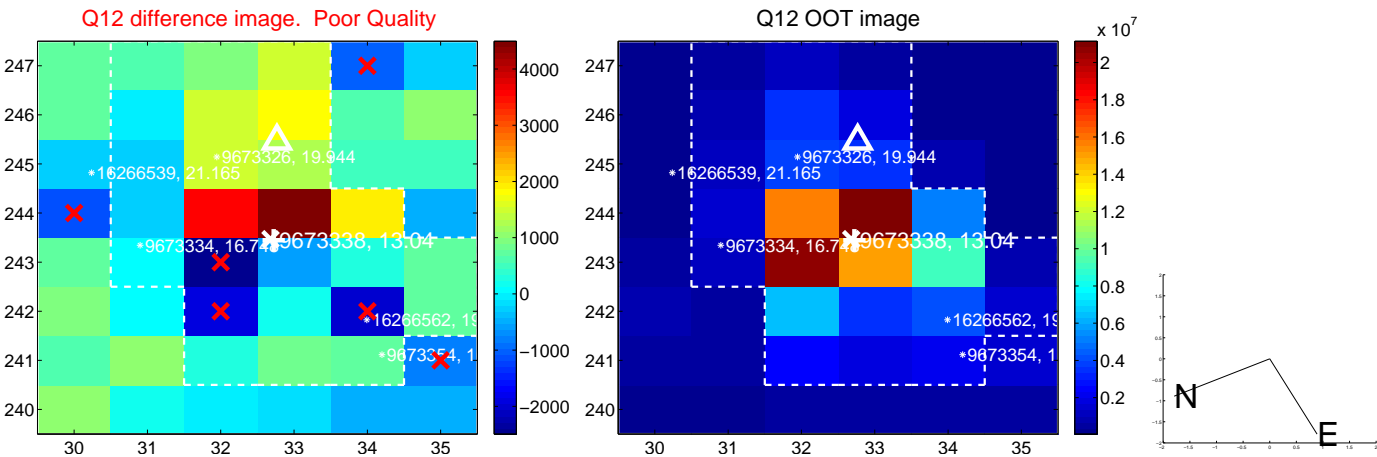
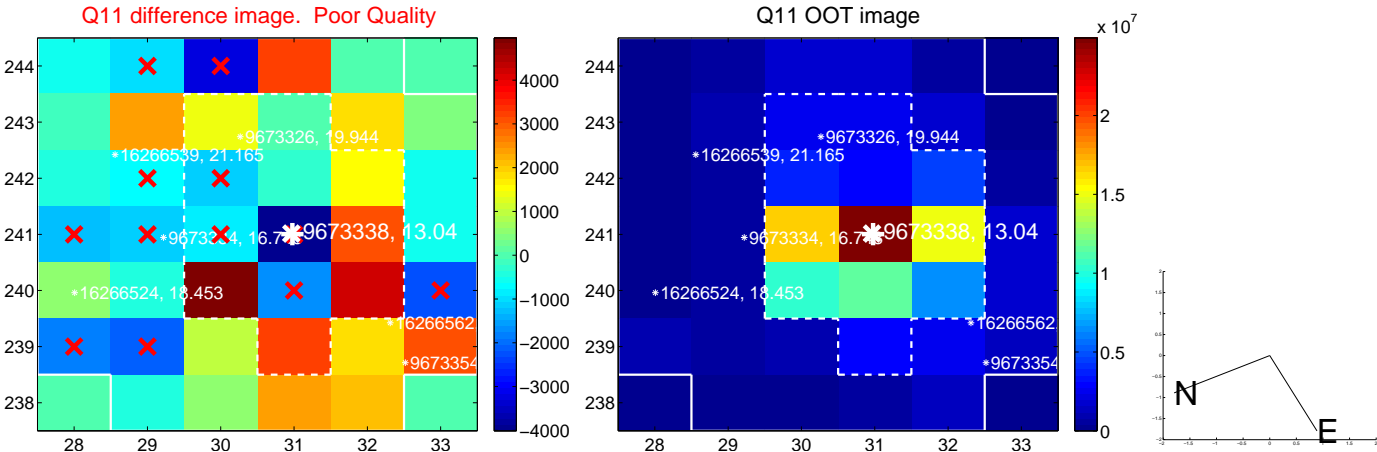
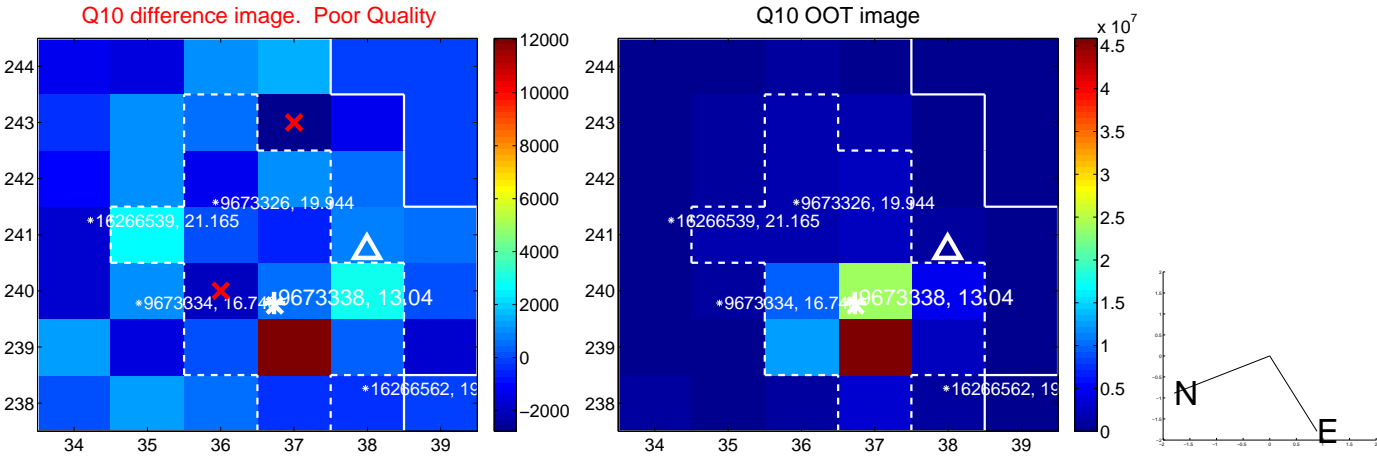
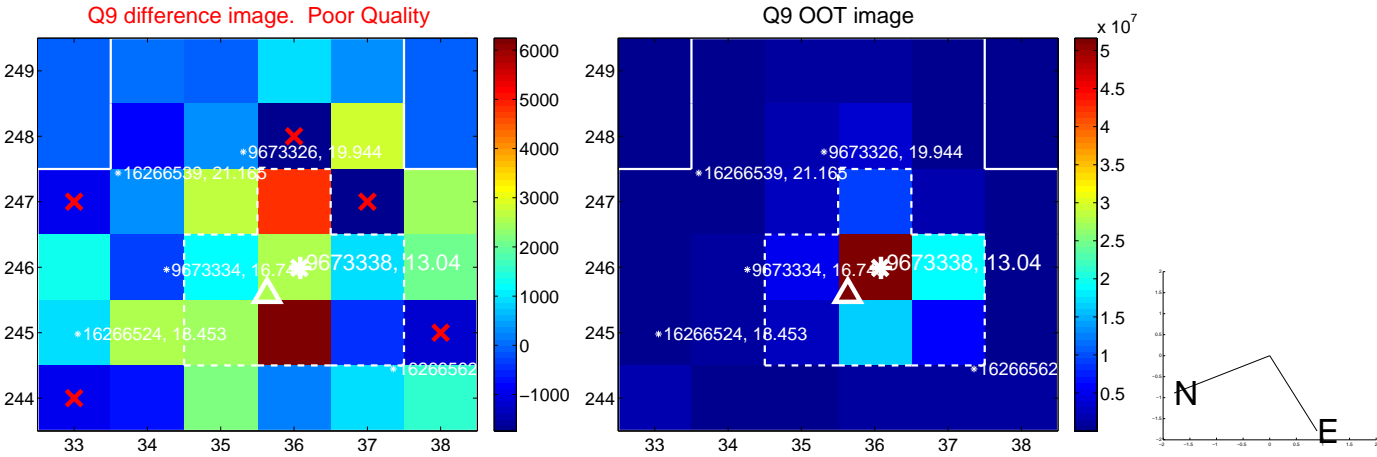
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



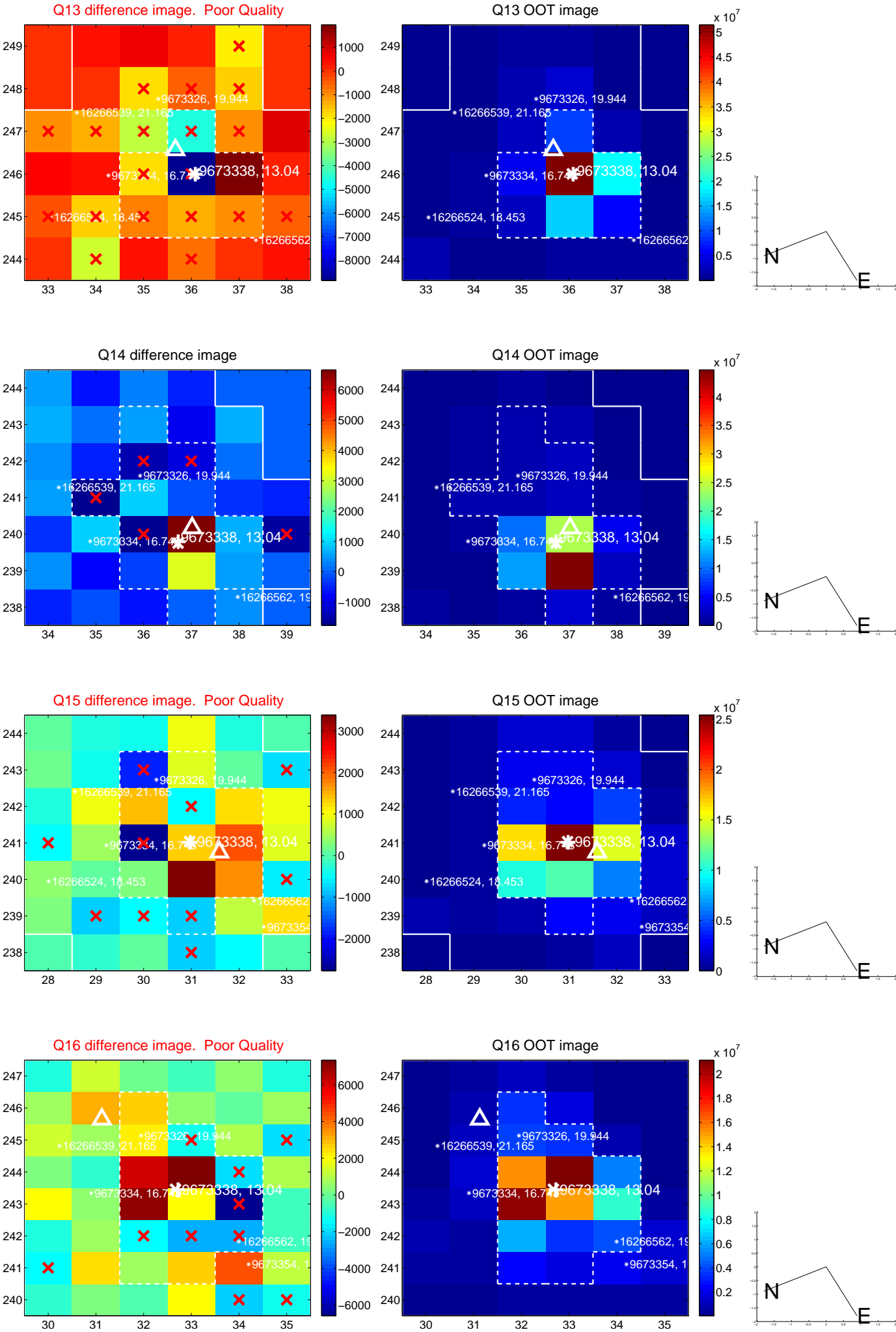
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



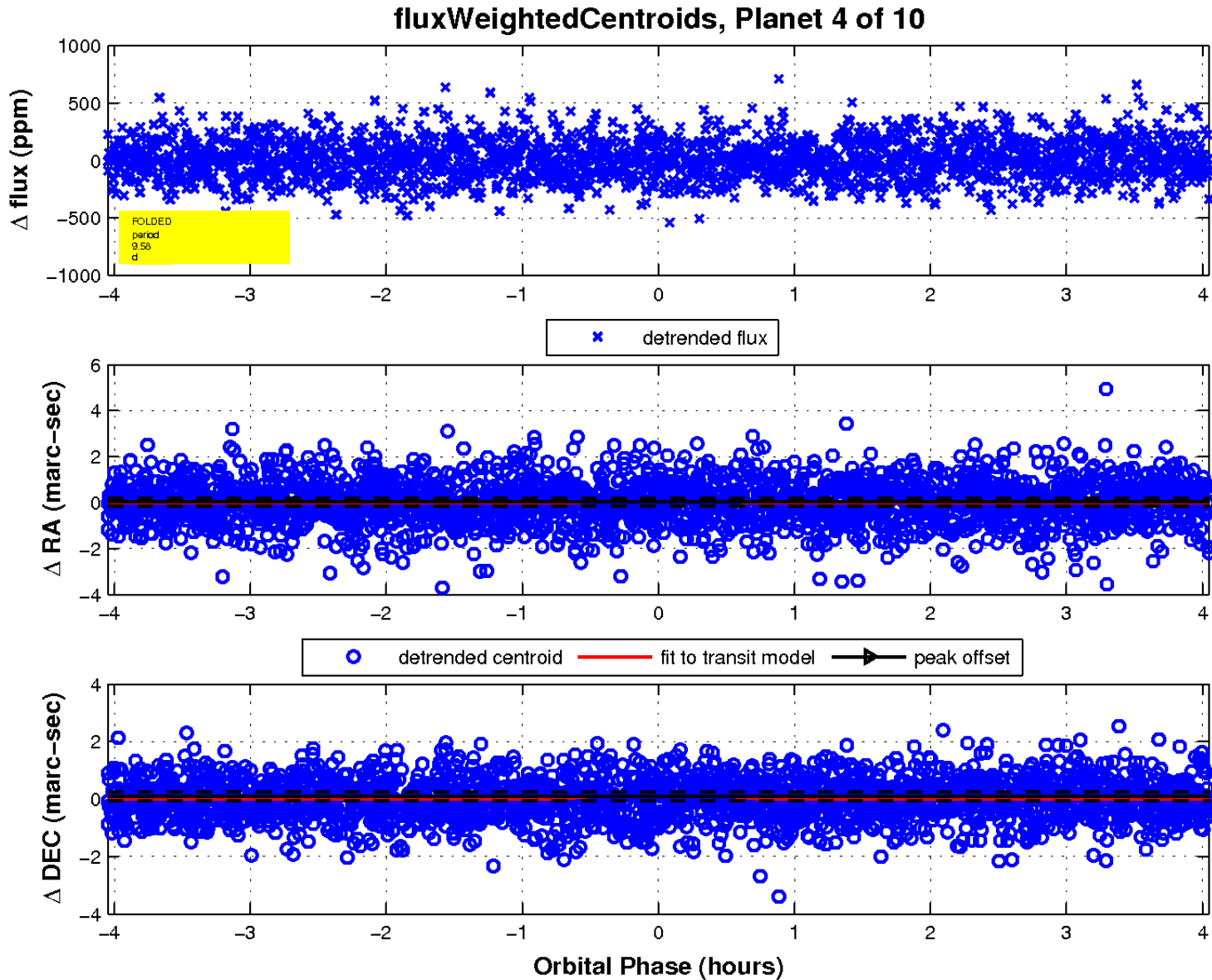
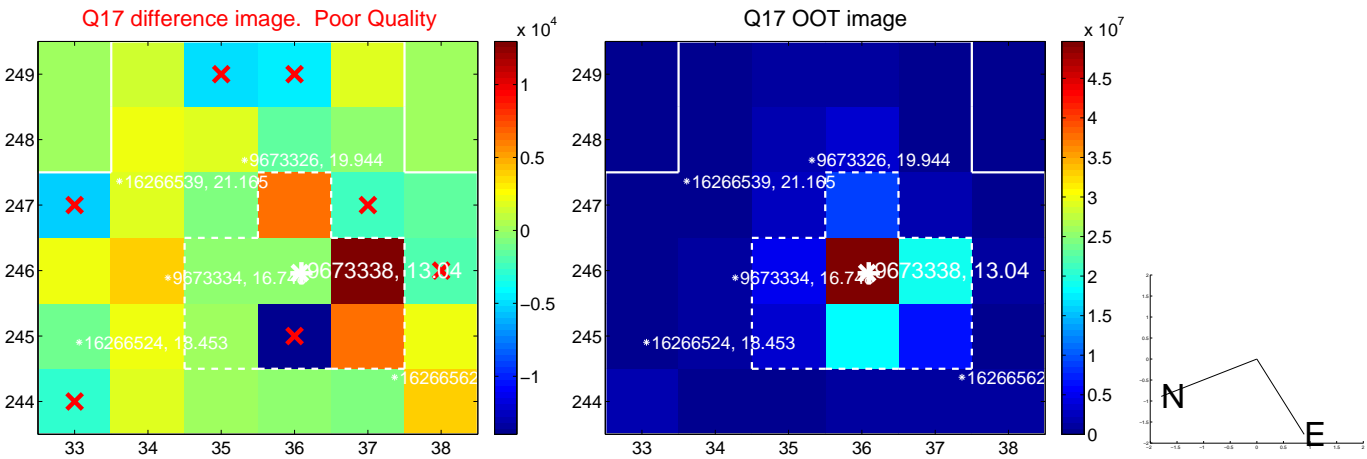
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

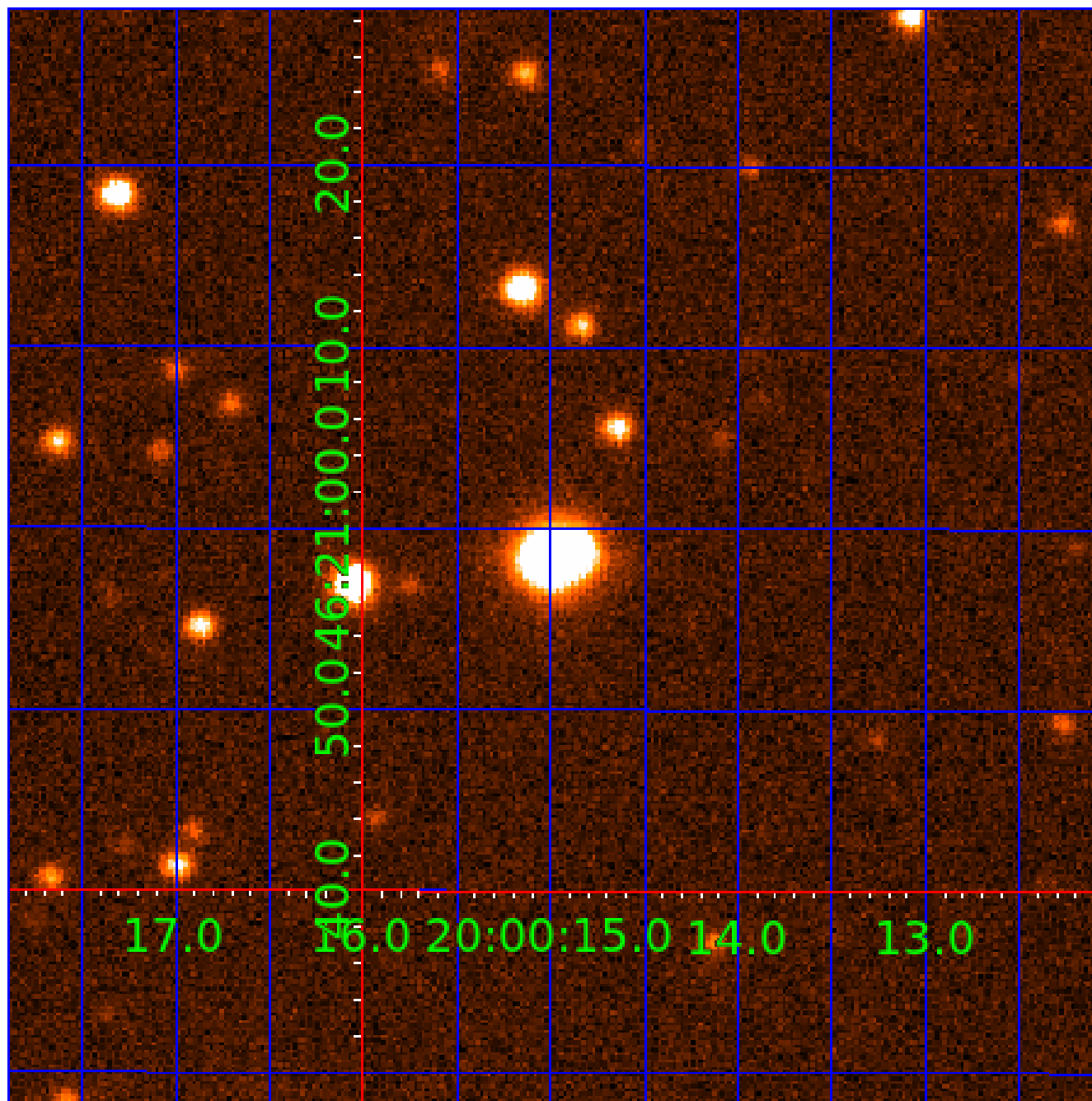


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009673338

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})
009673338-01	OBS	No	1.450943	131.674153	0.0	5.709	11.7	0.0	4.16	6241	0.00	25757.12
009673338-02	OBS	No	399.478089	377.197580	617.3	7.381	12.1	11.2	4.16	6241	10.72	14.38
009673338-03	OBS	No	1.453106	132.117764	9.5	10.296	11.7	4.4	4.16	6241	1.32	25706.01
009673338-04	OBS	No	9.584975	135.987275	287.9	1.350	12.1	11.1	4.16	6241	7.10	2077.99
009673338-05	OBS	No	18.977727	146.671085	224.1	2.281	11.0	9.1	4.16	6241	6.40	835.81
009673338-06	OBS	No	11.097720	139.371899	228.6	1.663	9.6	8.4	4.16	6241	7.27	1709.17
009673338-07	OBS	No	13.396447	132.848813	210.8	3.141	9.6	10.8	4.16	6241	6.06	1329.78
009673338-08	OBS	No	29.760323	145.204337	254.1	2.470	9.4	10.3	4.16	6241	7.73	458.75
009673338-09	OBS	No	178.767059	279.521486	348.8	5.000	9.1	-1.0	4.16	6241	7.78	42.01
009673338-10	OBS	No	13.594499	135.993905	249.7	1.534	8.7	9.2	4.16	6241	6.74	1304.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009673338-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
009673338-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009673338-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
009673338-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
009673338-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—NO_FITS—INCONSISTENT_TRANS—CENT_NOFITS
009673338-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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

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

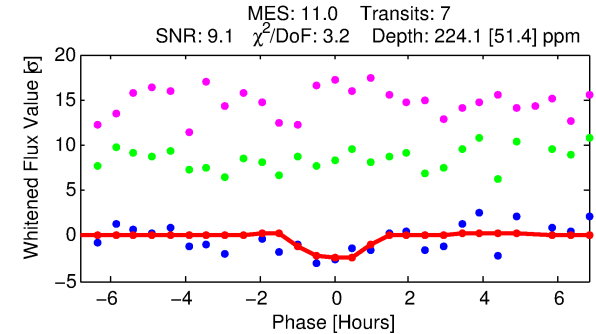
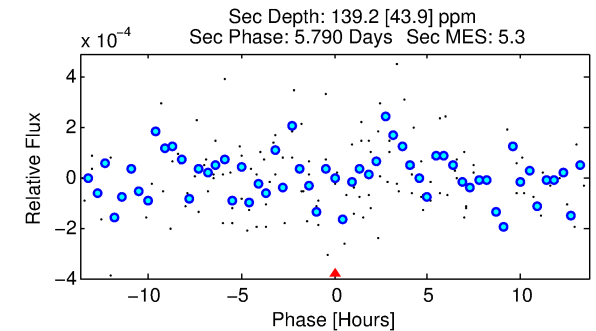
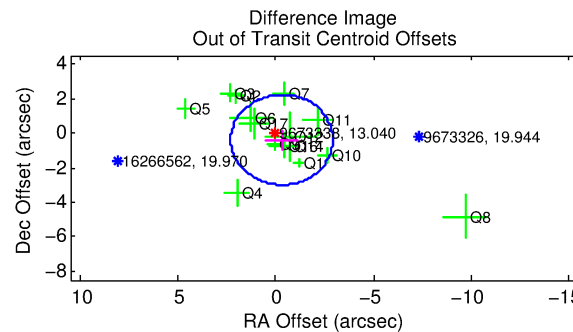
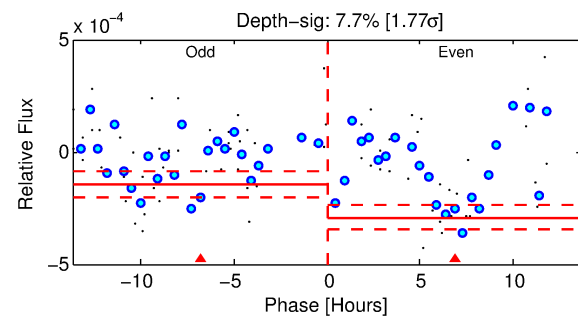
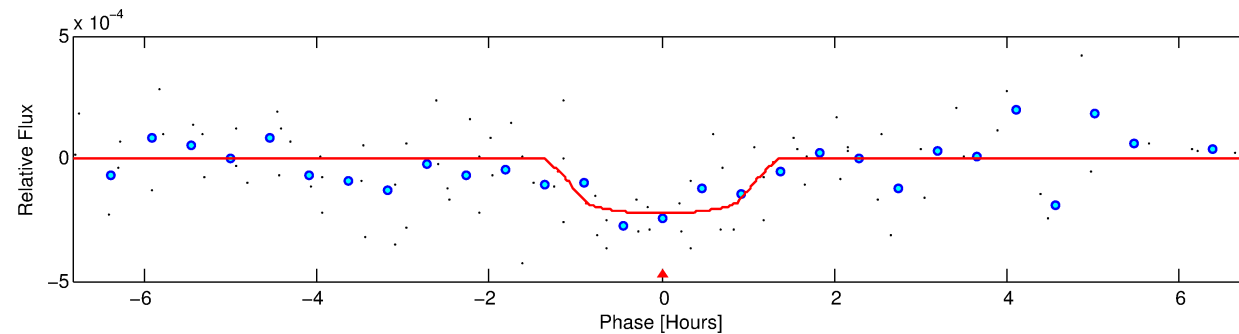
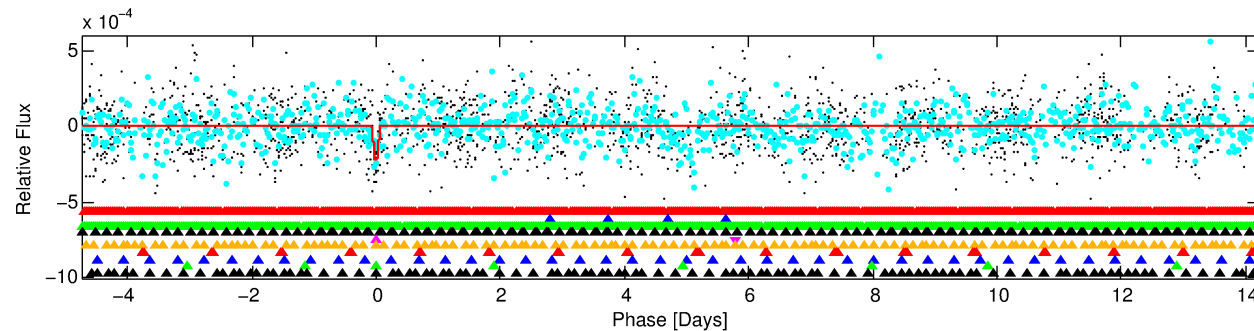
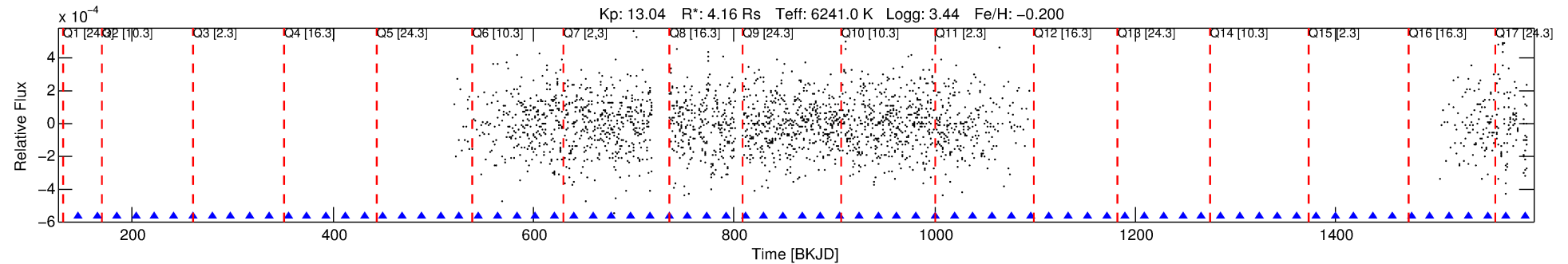
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009673338-05

No Significant Match Found

DV One-Page Summary

KIC: 9673338 Candidate: 5 of 10 Period: 18.978 d



DV Fit Results:

Period = 18.97773 [0.00034] d
Epoch = 146.6711 [0.0167] BKJD
Rp/R* = 0.0141 [0.0340]
a/R* = 56.84 [684.02]
b = 0.48 [19.84]
Seff = 835.81 [568.98]
Teq = 1371 [233] K
Rp = 6.40 [15.67] Re
a = 0.1676 [0.0705] AU
Ag = 52.48 [255.50] [0.20 σ]
Teffp = 5705 [6881] K [0.63 σ]

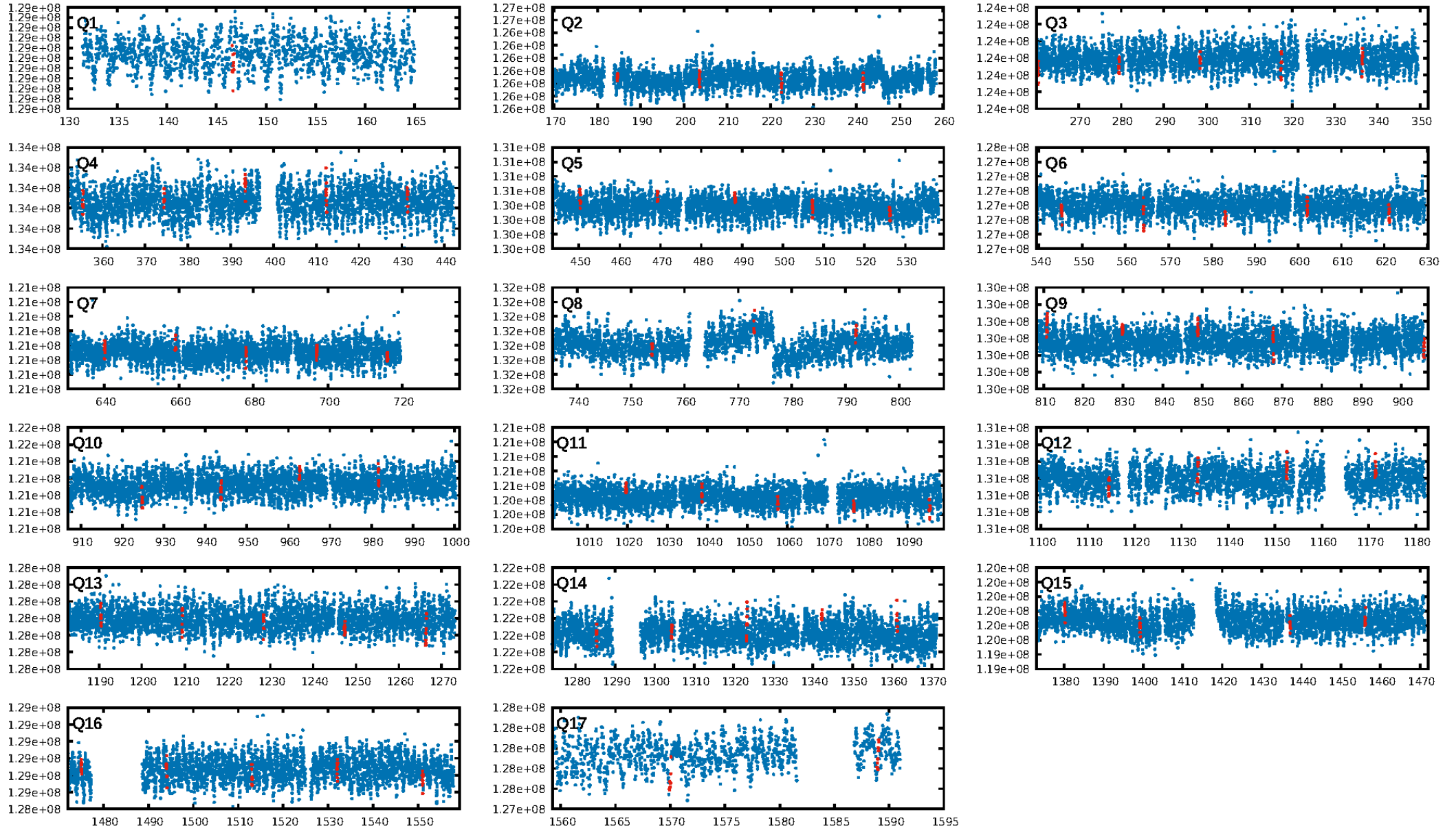
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [47.00 σ]
LongPeriod-sig: 100.0% [76.98 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 60.5%
Bootstrap-pfa: 4.55e-12
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 0.1069
Centroid-sig: 0.0%
Centroid-so: 1.376 arcsec [2.17 σ]
OotOffset-rm: 0.494 arcsec [0.57 σ]
KicOffset-rm: 0.542 arcsec [0.59 σ]
OotOffset-st: 4/3/4/4 [15]
KicOffset-st: 4/3/4/4 [15]
DiffImageQuality-fgm: 0.33 [5/15]
DiffImageOverlap-fno: 0.18 [3/17]

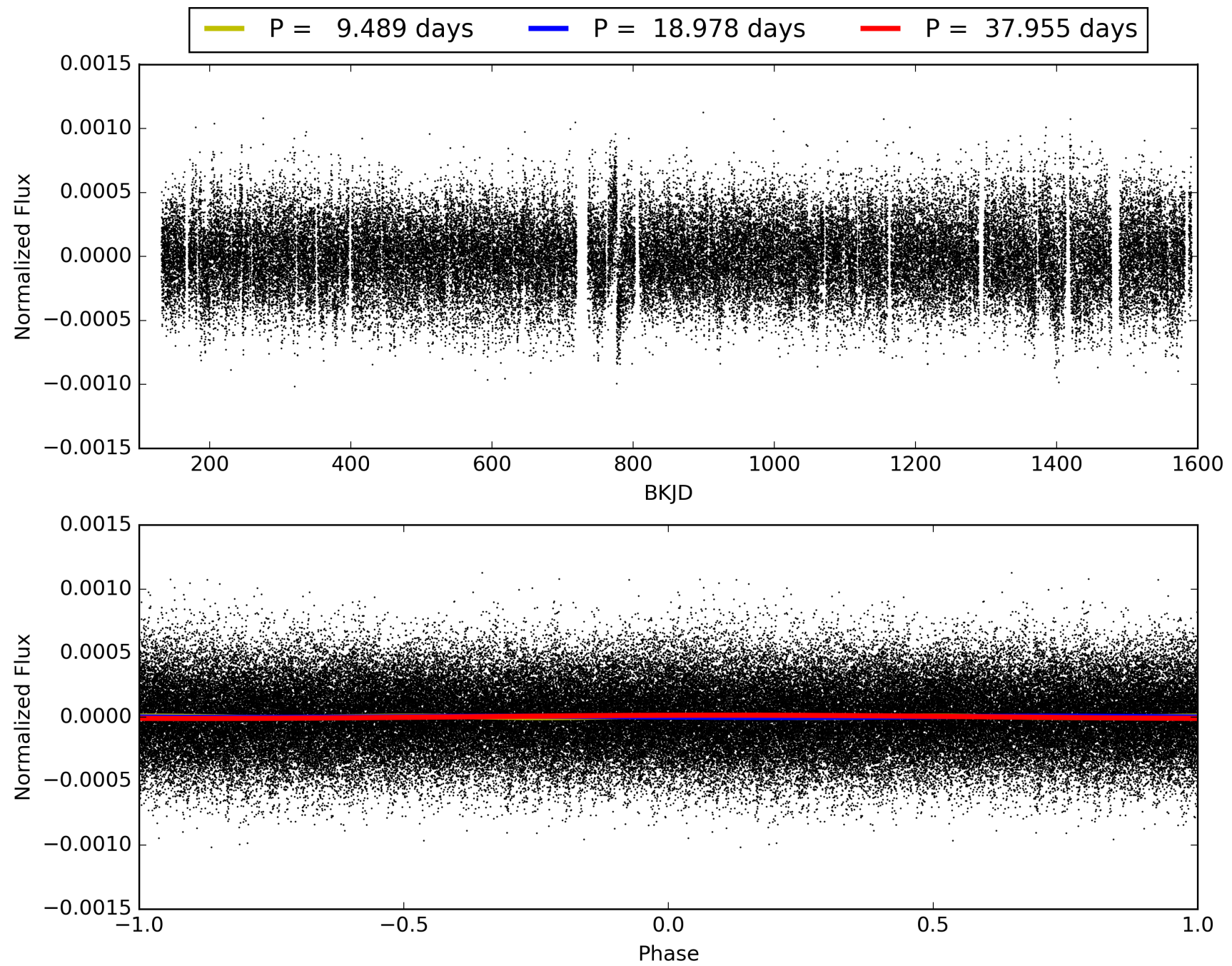
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 11:15:06 Z

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

TCE 009673338-05, PDC Light Curves

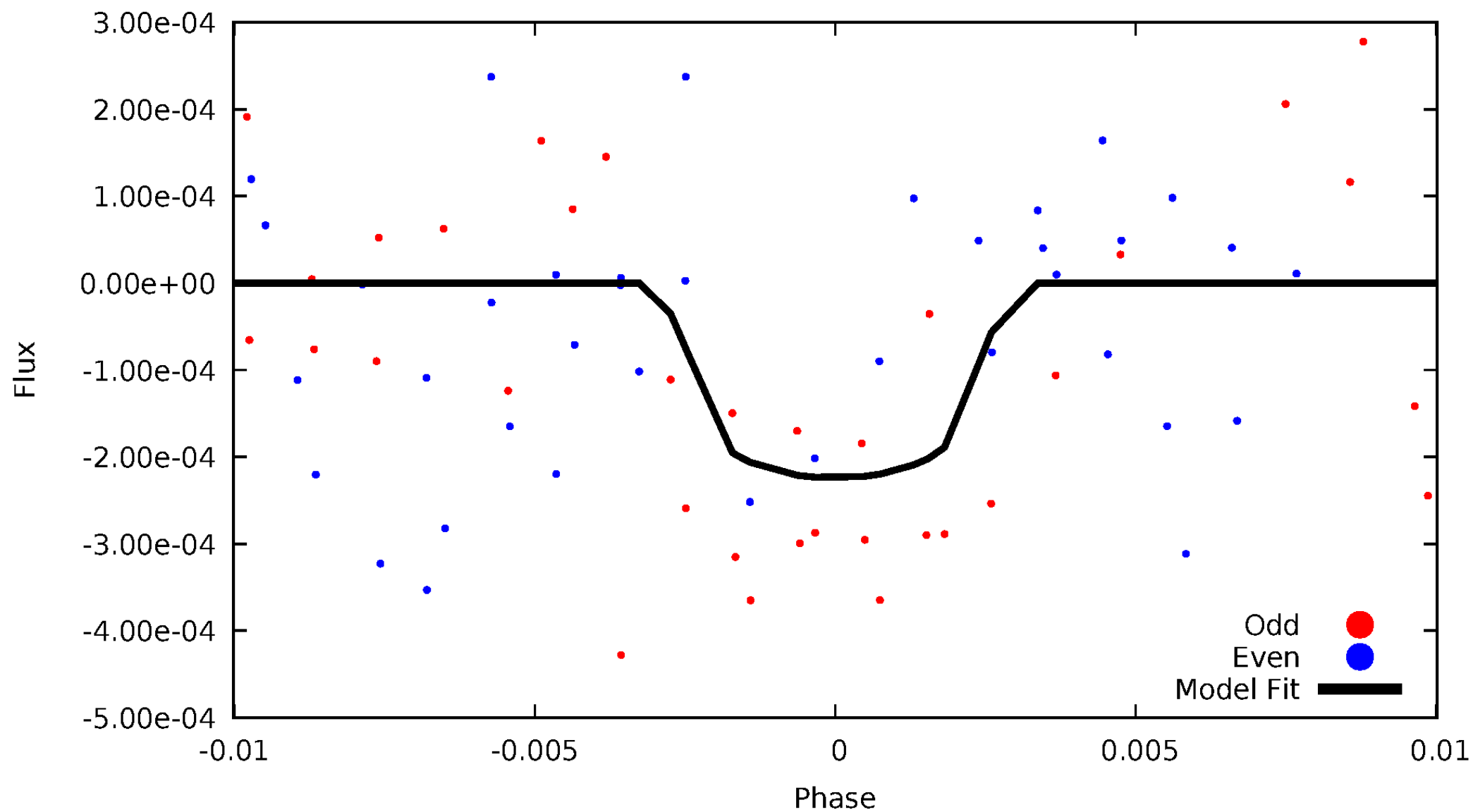


TCE 009673338-05



DV Odd/Even

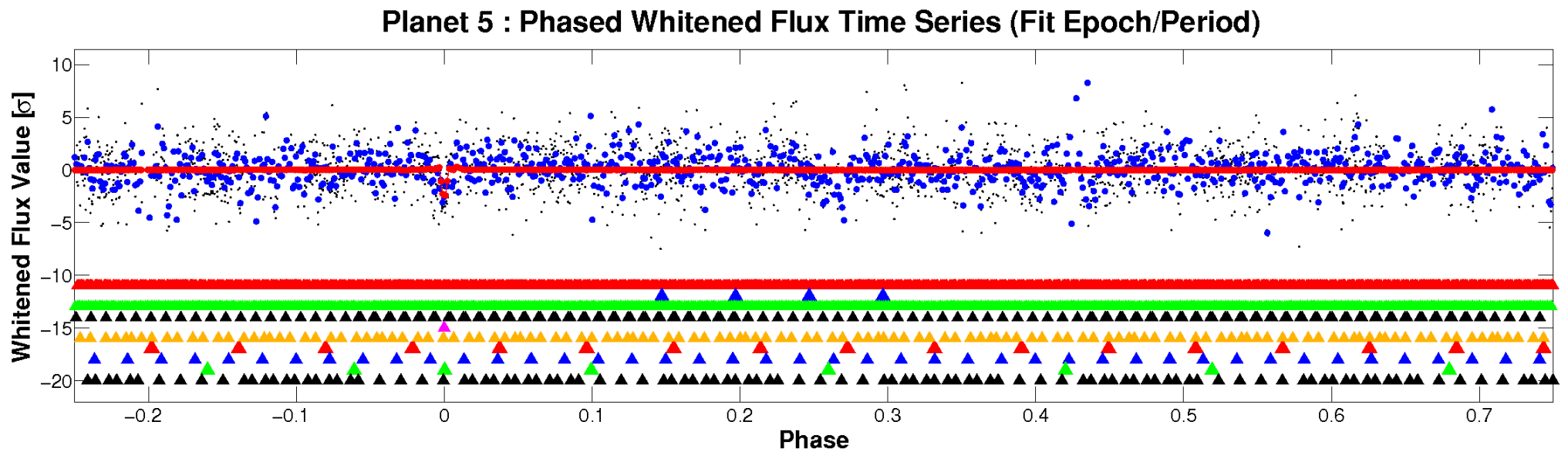
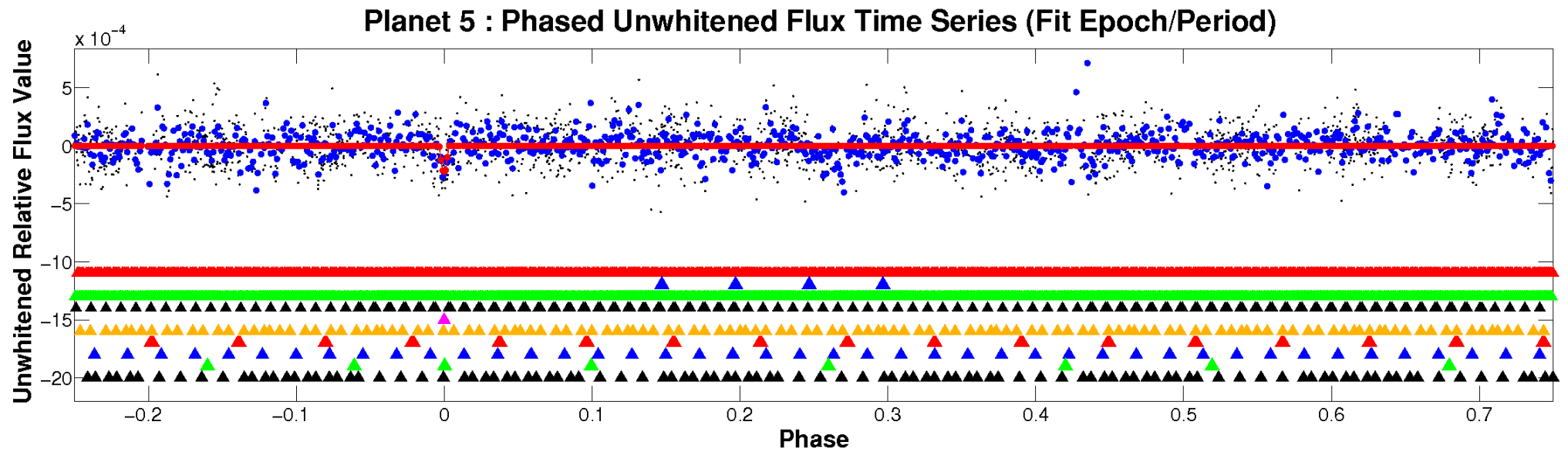
TCE 009673338-05



ALT Odd/Even

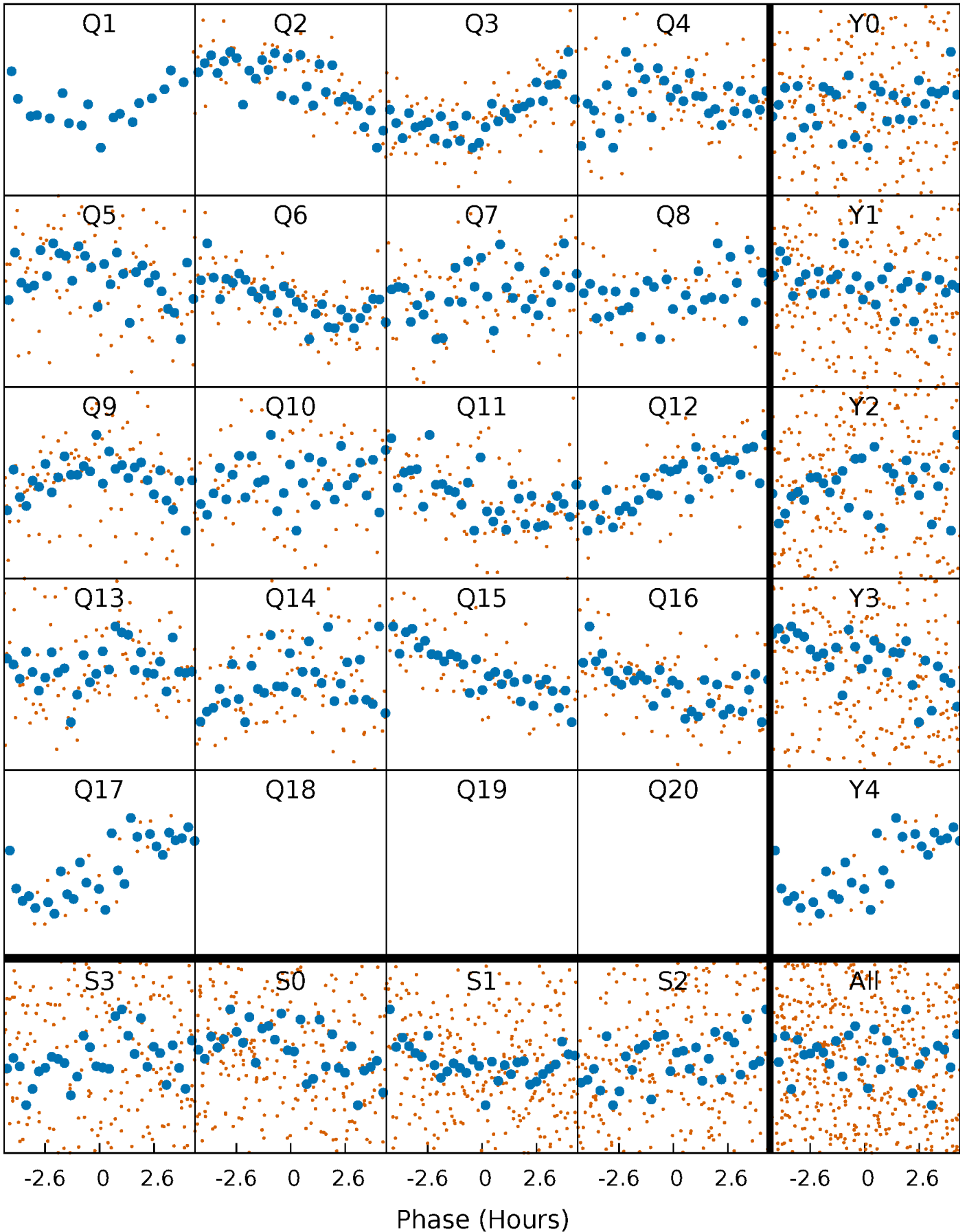
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve



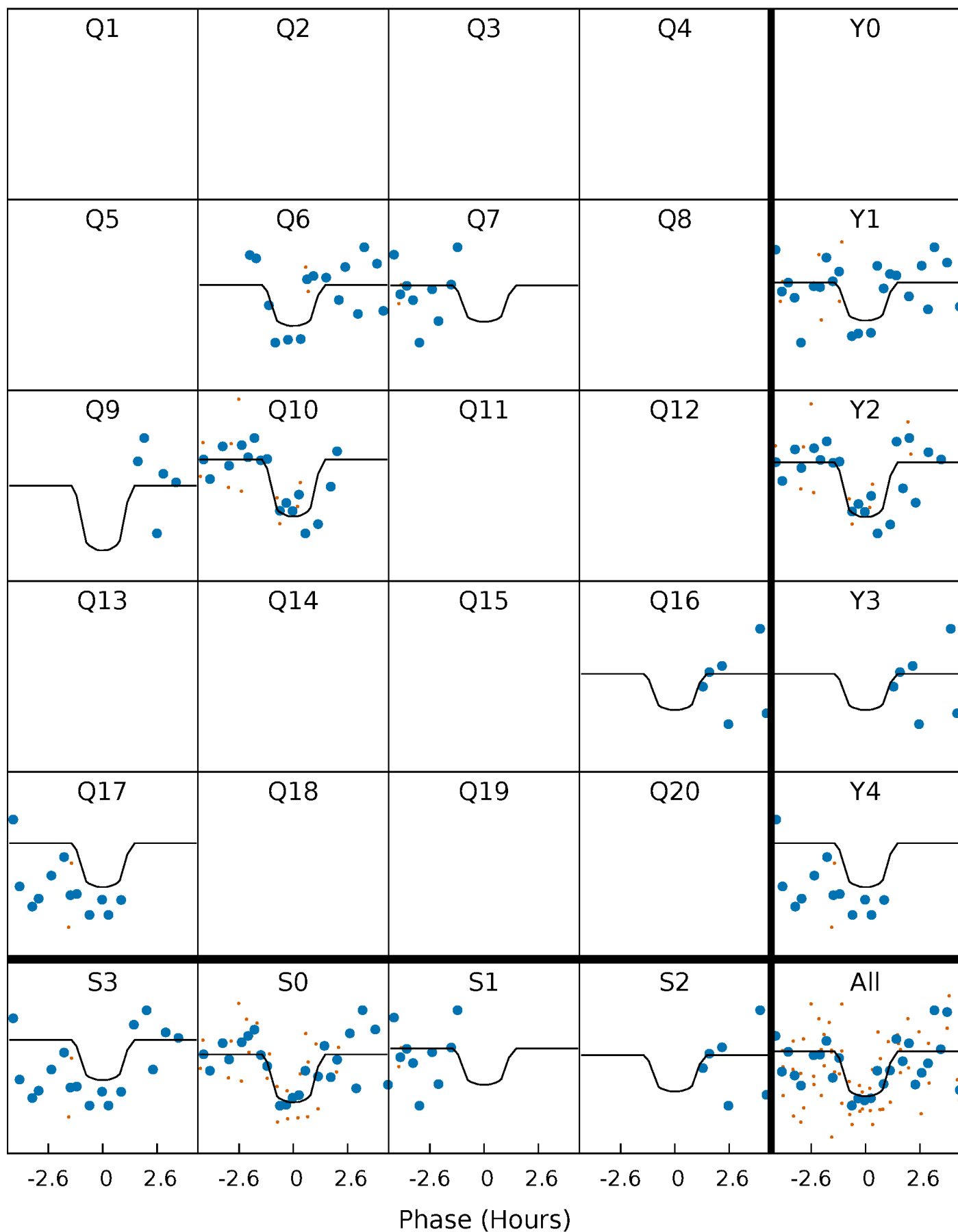
PDC Quarter-Phased Transit Curves

TCE 009673338-05 P= 18.977727 Days $T_0=146.671085$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009673338-05 P= 18.977727 Days $T_0=146.671085$ (BKJD)

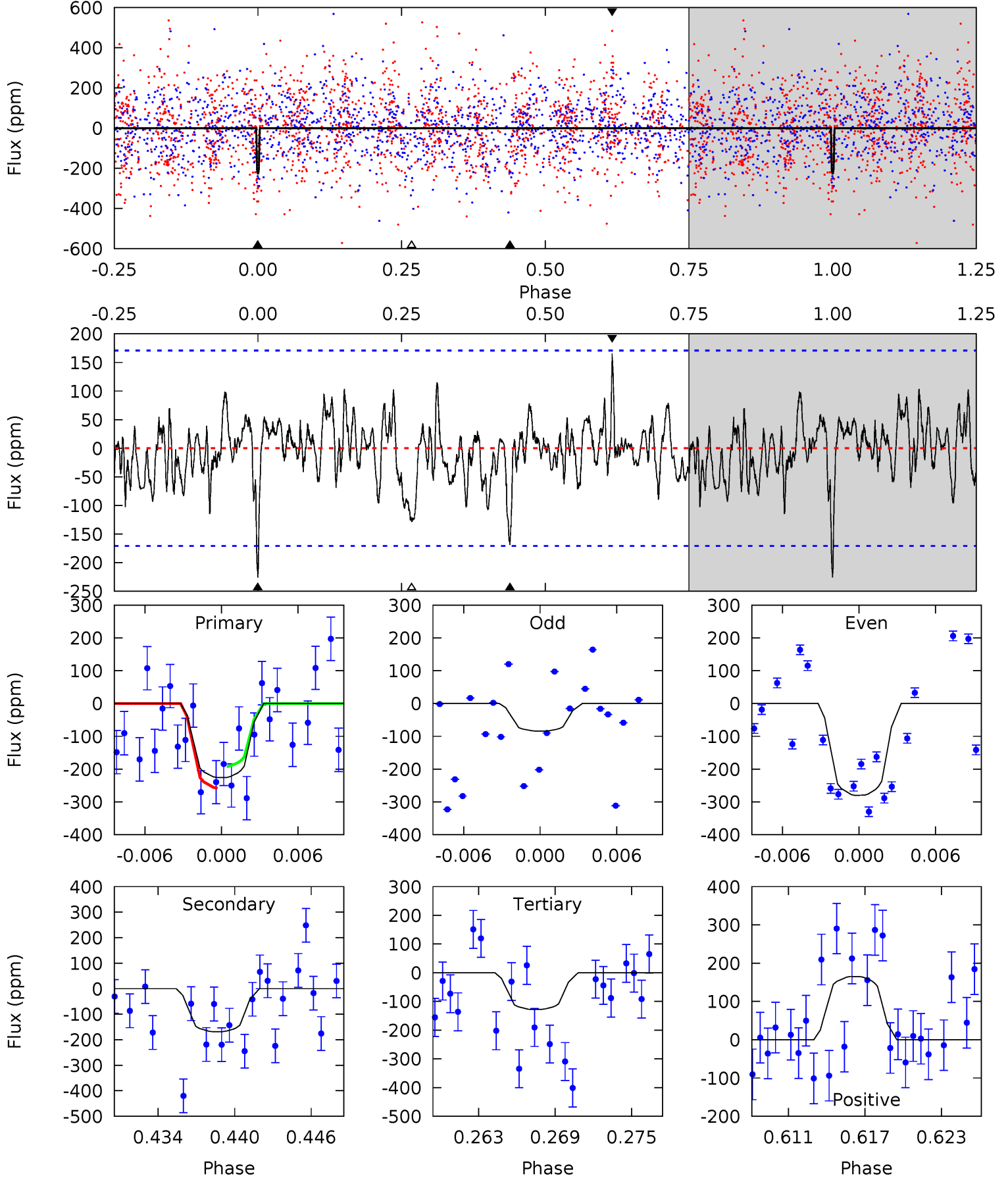


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

009673338-05, P = 18.977727 Days, E = 146.671085 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.77	5.06	3.84	4.95	5.12	2.74	1.31	2.93	1.82	1.22	0.10	2.88	0.82	0.42	1.00



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 009673338

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6241^{+190}_{-171}	$3.442^{+0.392}_{-0.098}$	$-0.200^{+0.350}_{-0.300}$	$4.157^{+0.611}_{-1.834}$	$1.746^{+0.155}_{-0.465}$	$0.034^{+0.127}_{-0.010}$
	+3%/-3%	+11%/-3%	+175%/-150%	+15%/-44%	+9%/-27%	+369%/-30%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009673338-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-169 ± 33	$10.97^{+12.72}_{-7.37}$	1880^{+126}_{-204}	4463^{+3105}_{-998}	21^{+161}_{-16}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

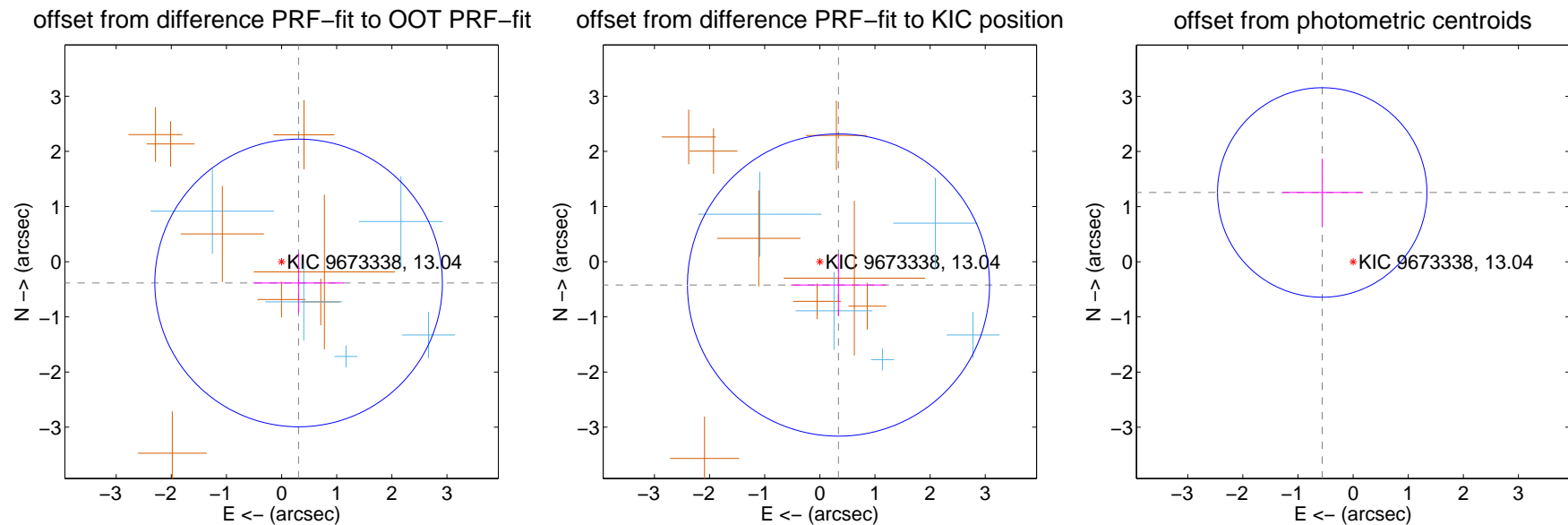
DV Centroid Data

Supplemental centroid analysis for 009673338-05. Kepler magnitude: 13.04. Transit SNR 9.06

There are 5 quarters with good PRF difference image offsets

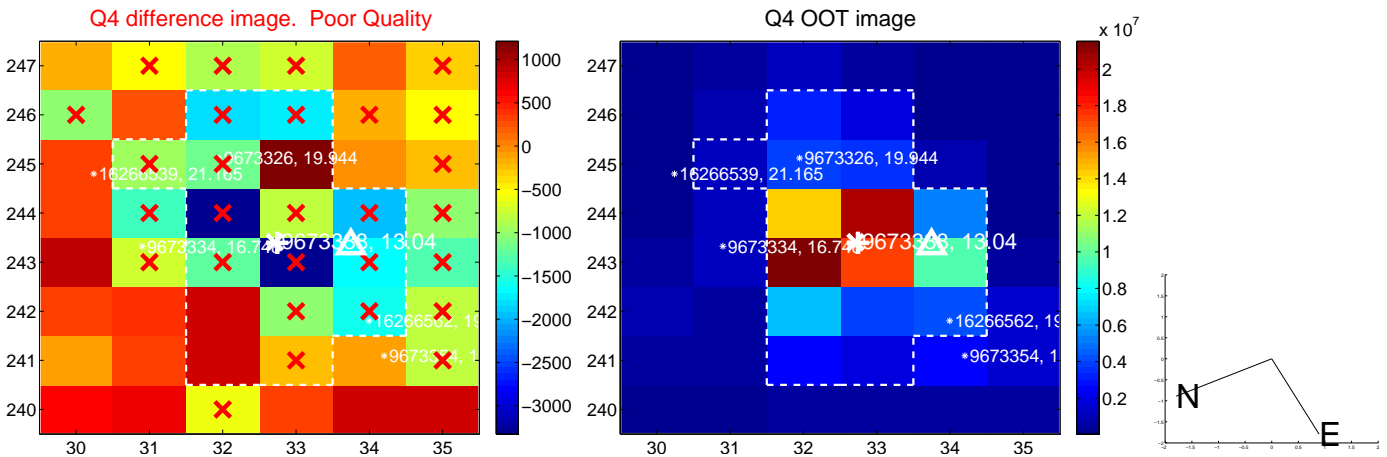
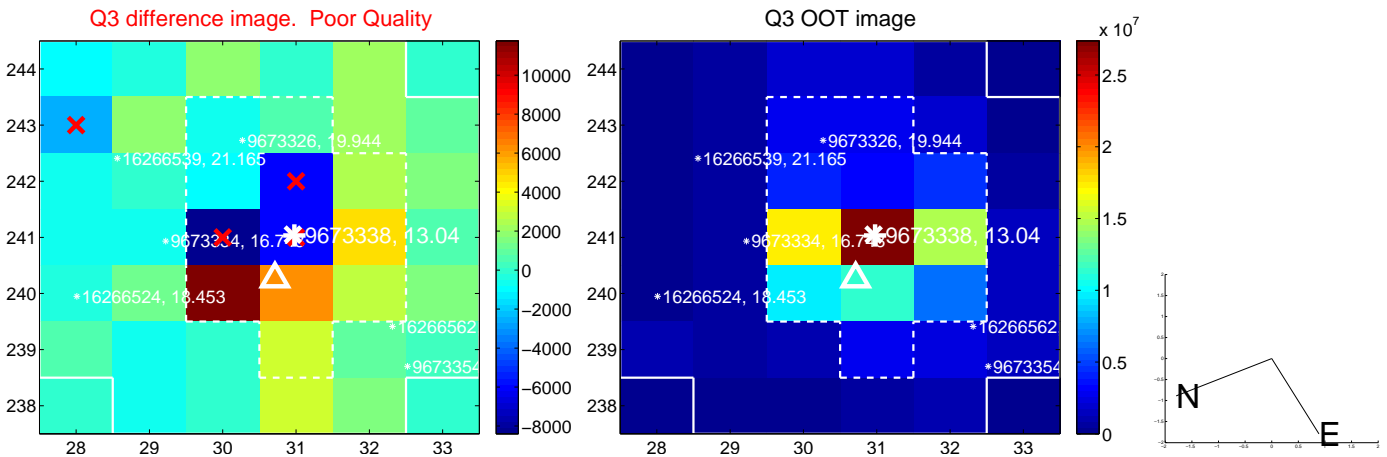
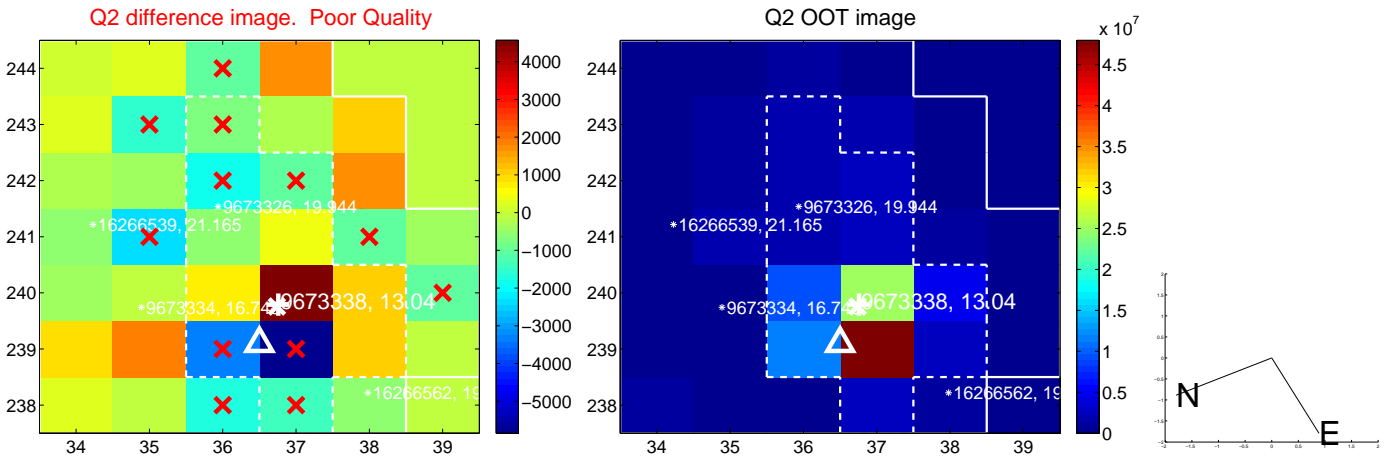
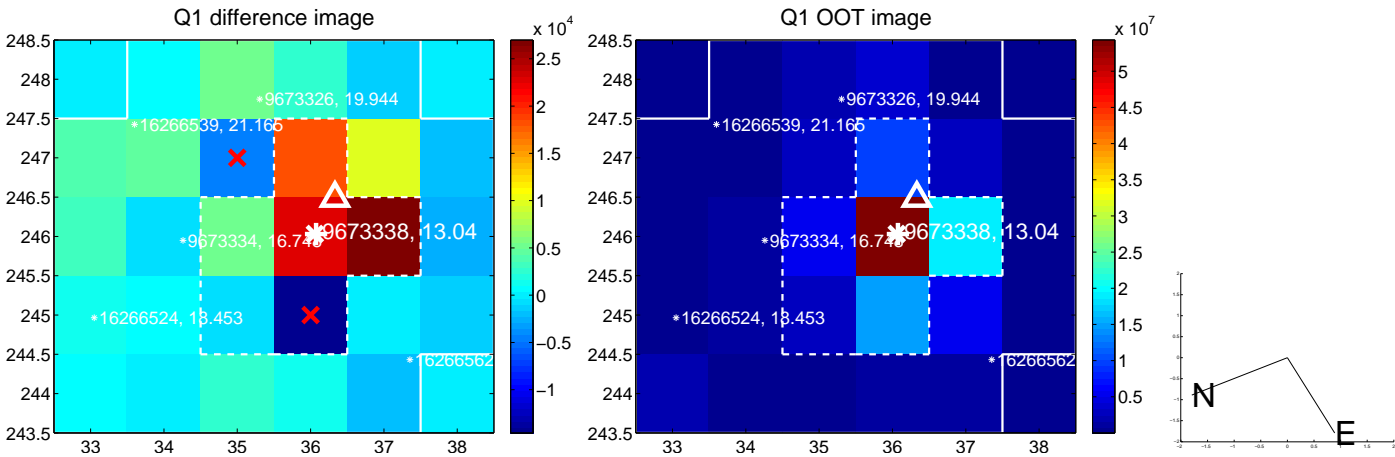
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.494 ± 0.869	0.57	-0.309 ± 0.823	-0.386 ± 0.544
PRF-fit source offset from KIC position	0.542 ± 0.913	0.59	-0.339 ± 0.863	-0.423 ± 0.561
photometric centroid source offset	1.38 ± 0.63	2.17	0.56 ± 0.73	1.26 ± 0.61

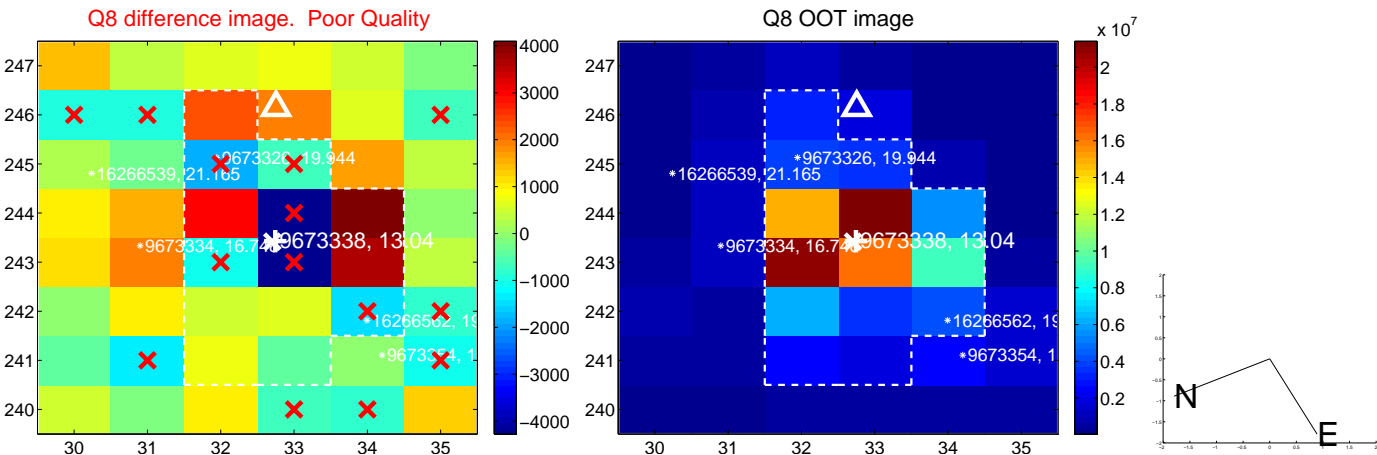
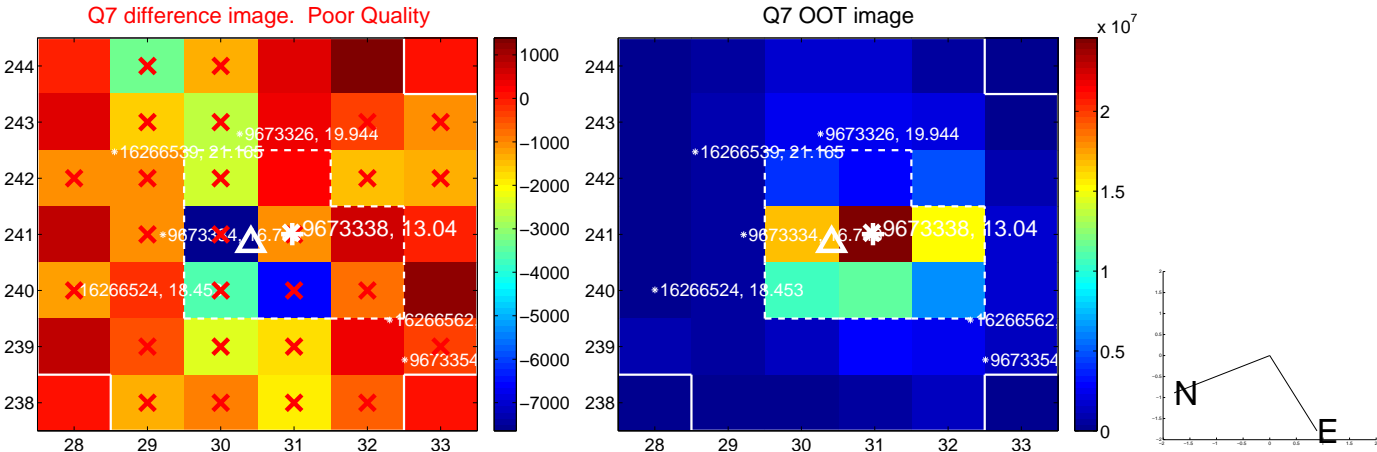
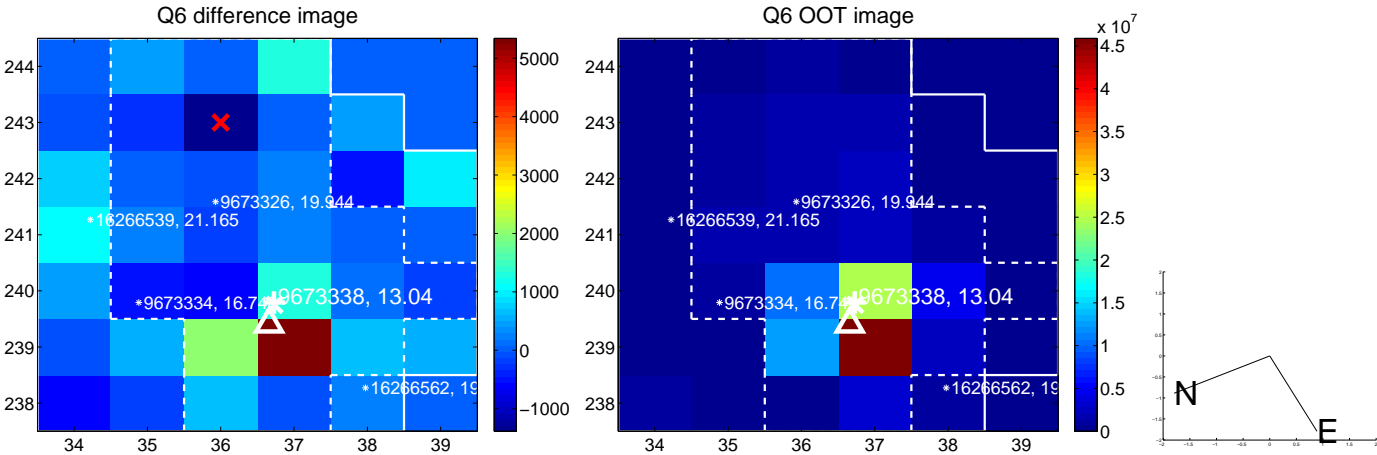
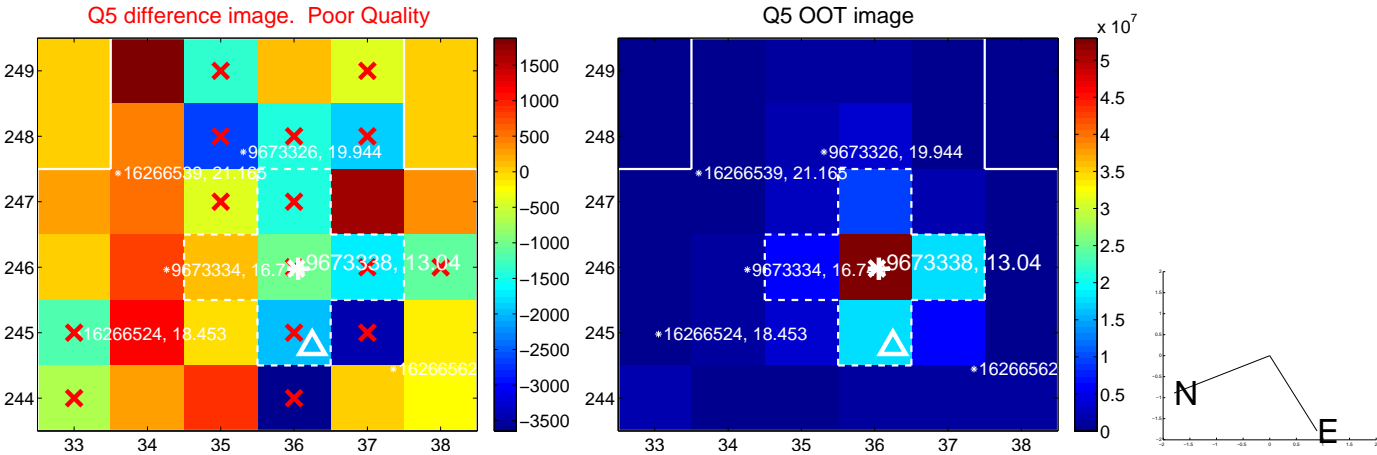


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

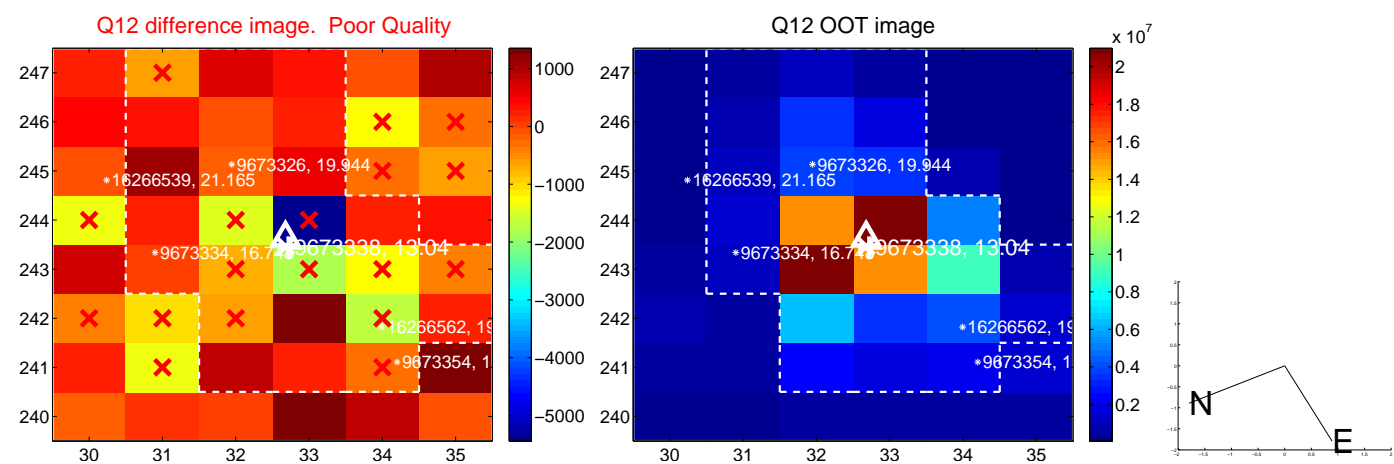
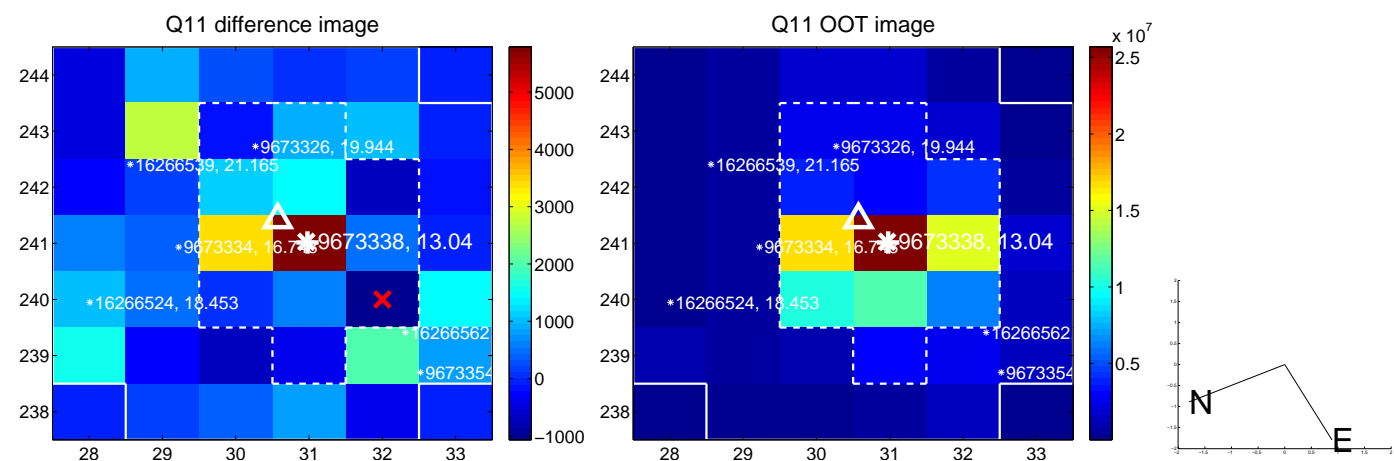
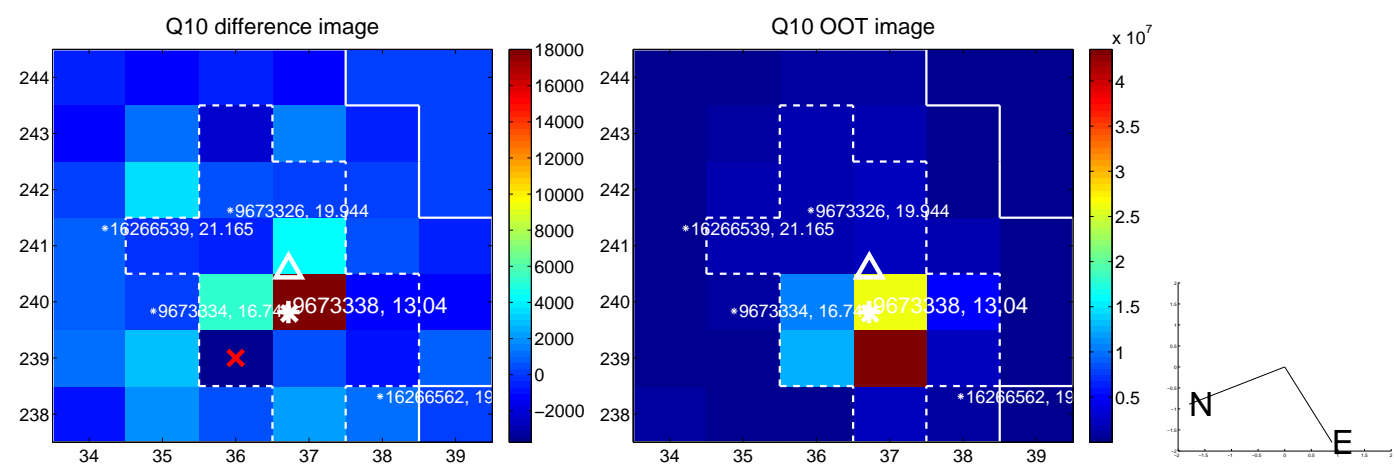
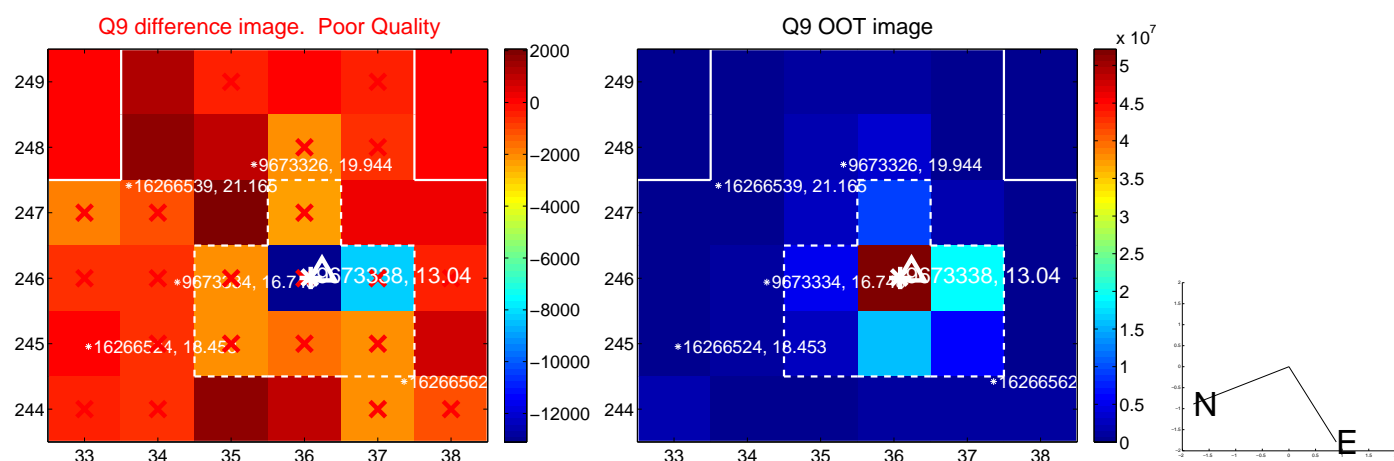
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



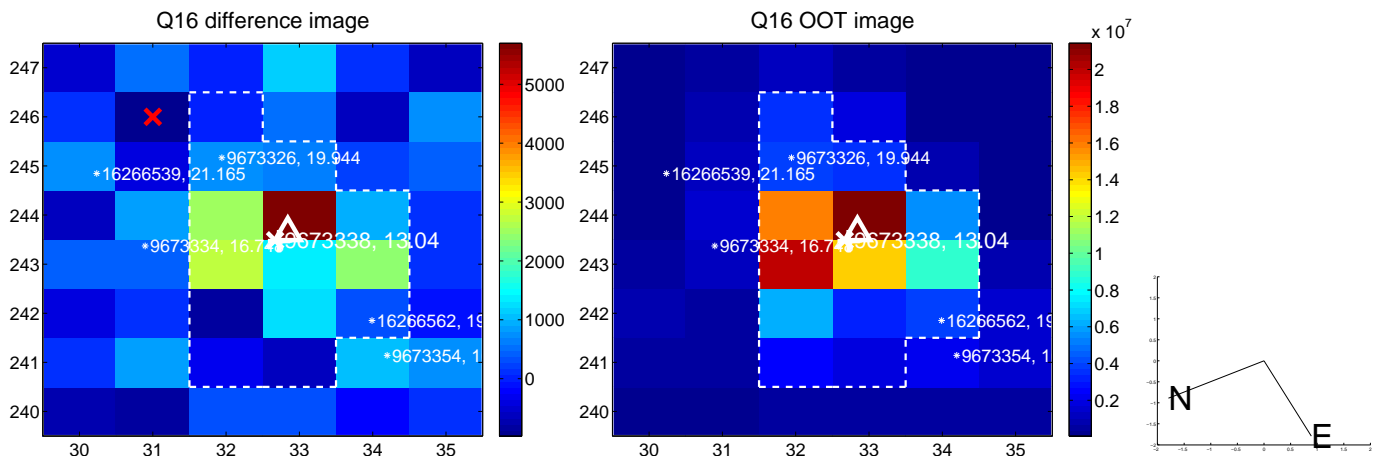
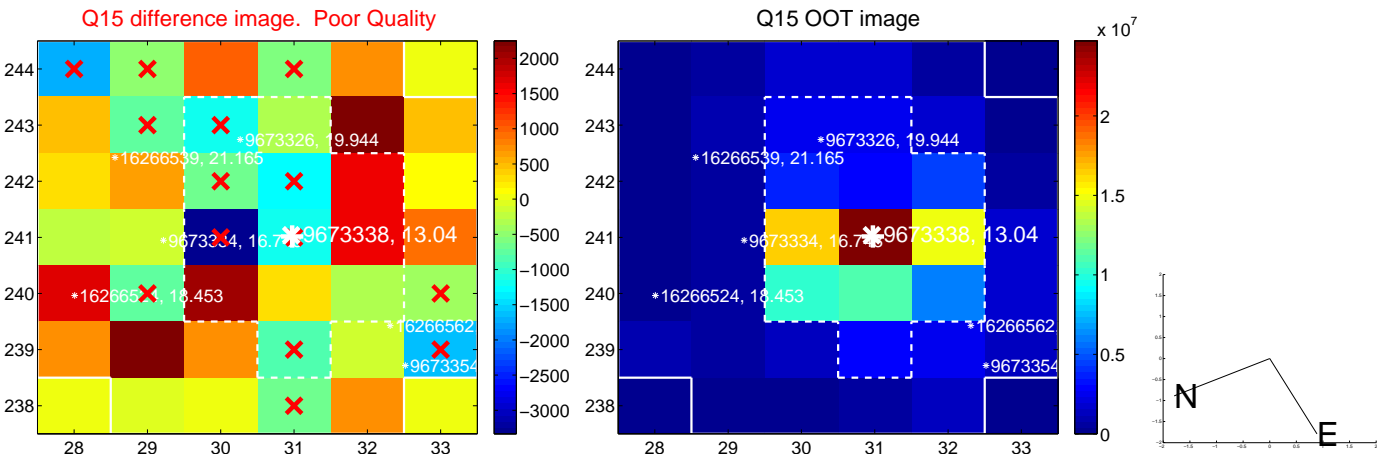
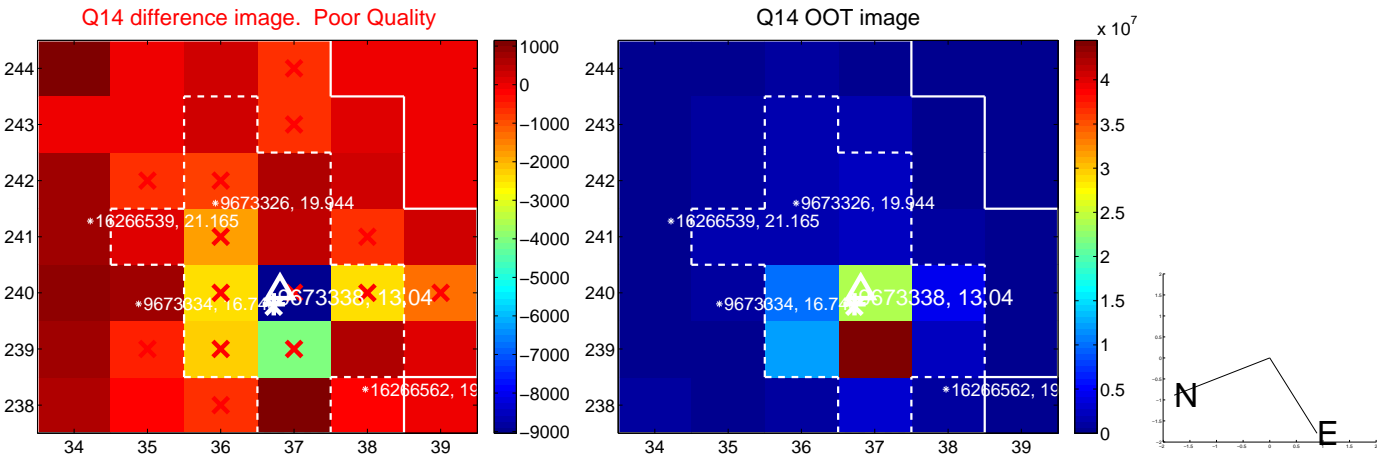
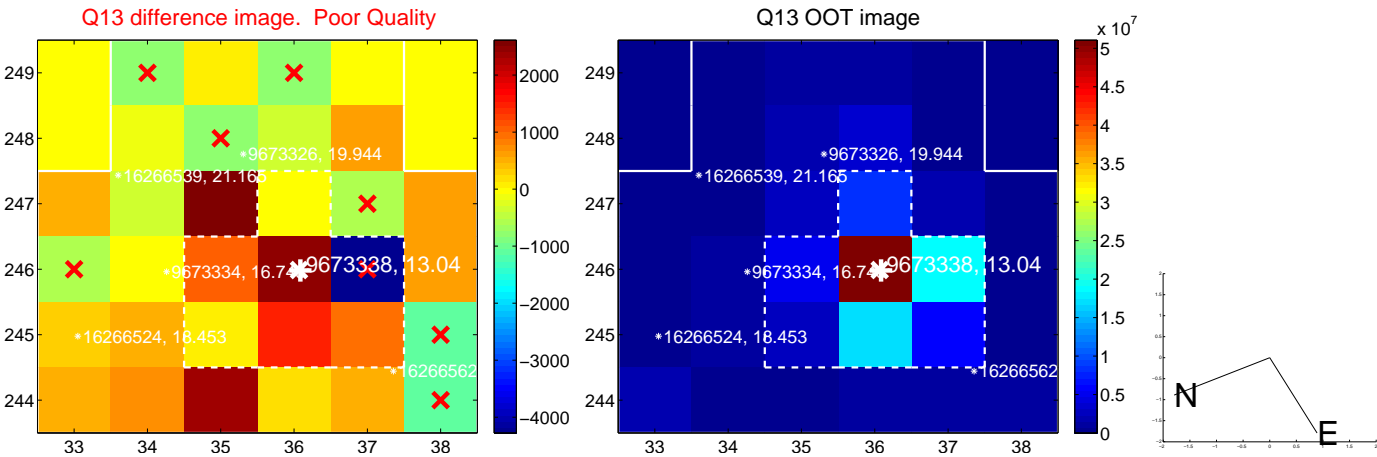
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



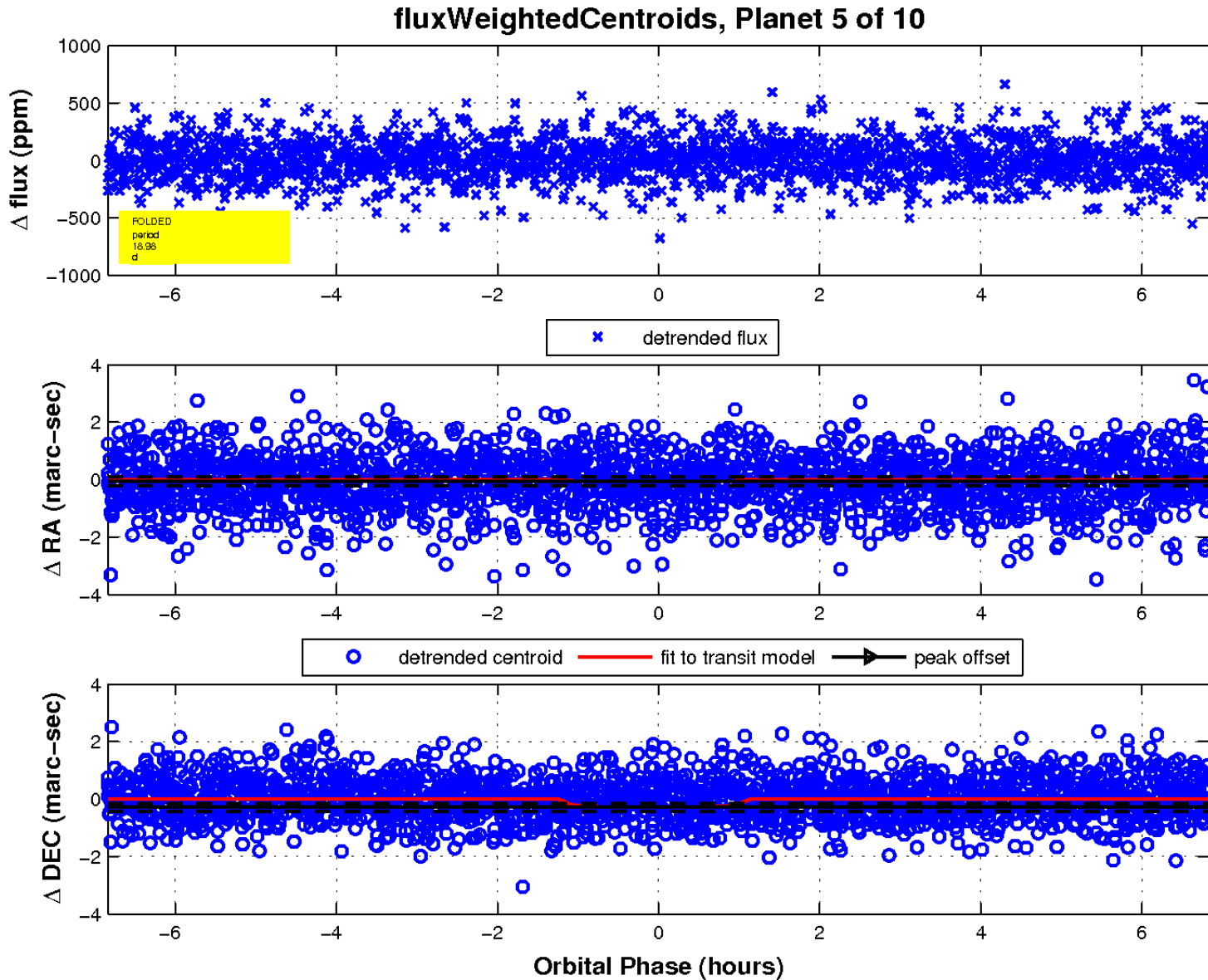
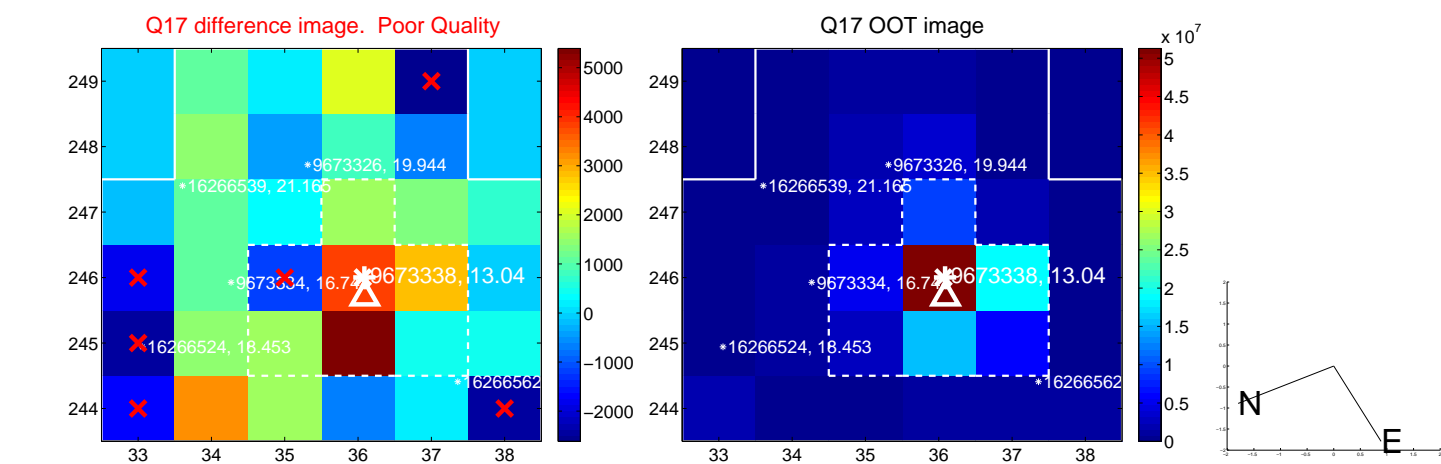
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

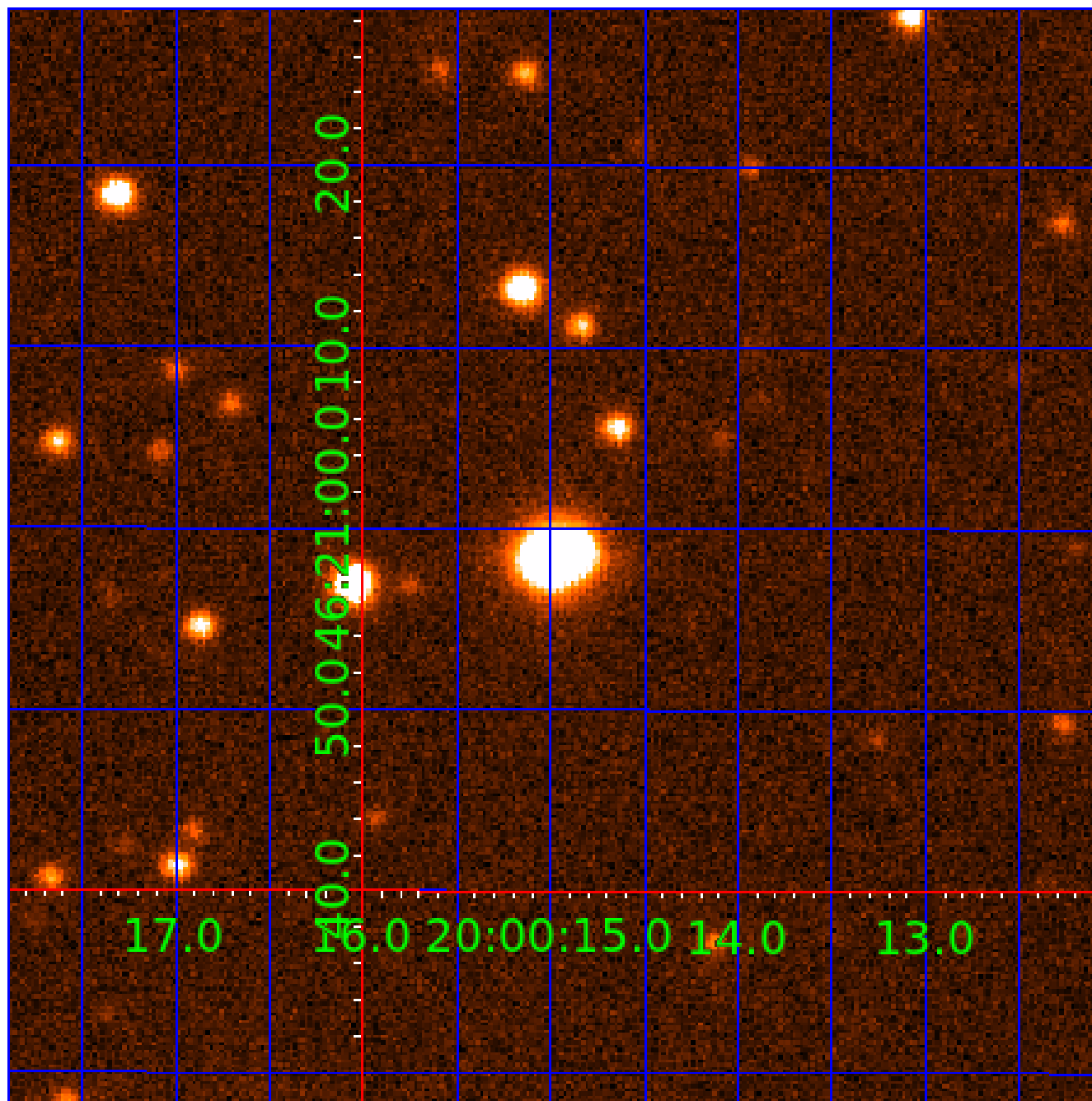


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009673338

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})
009673338-01	OBS	No	1.450943	131.674153	0.0	5.709	11.7	0.0	4.16	6241	0.00	25757.12
009673338-02	OBS	No	399.478089	377.197580	617.3	7.381	12.1	11.2	4.16	6241	10.72	14.38
009673338-03	OBS	No	1.453106	132.117764	9.5	10.296	11.7	4.4	4.16	6241	1.32	25706.01
009673338-04	OBS	No	9.584975	135.987275	287.9	1.350	12.1	11.1	4.16	6241	7.10	2077.99
009673338-05	OBS	No	18.977727	146.671085	224.1	2.281	11.0	9.1	4.16	6241	6.40	835.81
009673338-06	OBS	No	11.097720	139.371899	228.6	1.663	9.6	8.4	4.16	6241	7.27	1709.17
009673338-07	OBS	No	13.396447	132.848813	210.8	3.141	9.6	10.8	4.16	6241	6.06	1329.78
009673338-08	OBS	No	29.760323	145.204337	254.1	2.470	9.4	10.3	4.16	6241	7.73	458.75
009673338-09	OBS	No	178.767059	279.521486	348.8	5.000	9.1	-1.0	4.16	6241	7.78	42.01
009673338-10	OBS	No	13.594499	135.993905	249.7	1.534	8.7	9.2	4.16	6241	6.74	1304.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009673338-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
009673338-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009673338-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
009673338-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
009673338-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—NO_FITS—INCONSISTENT_TRANS—CENT_NOFITS
009673338-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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

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

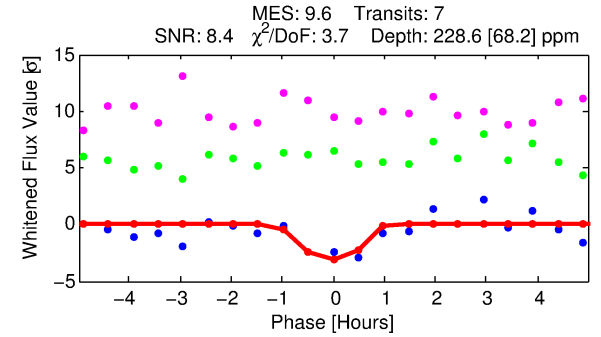
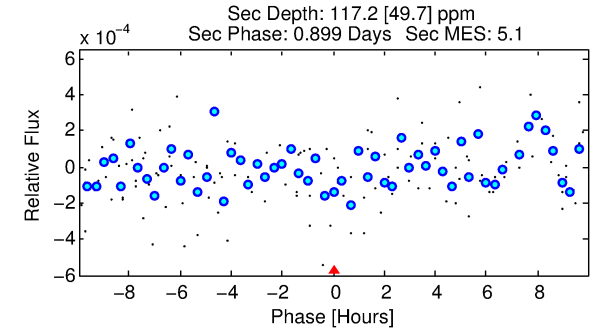
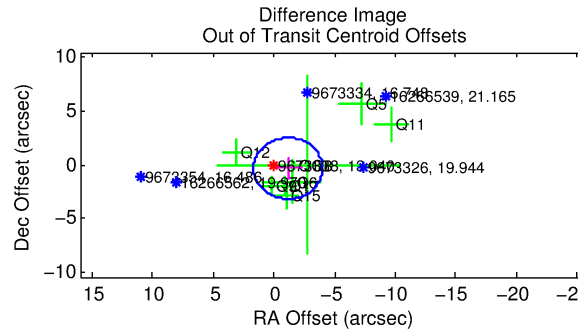
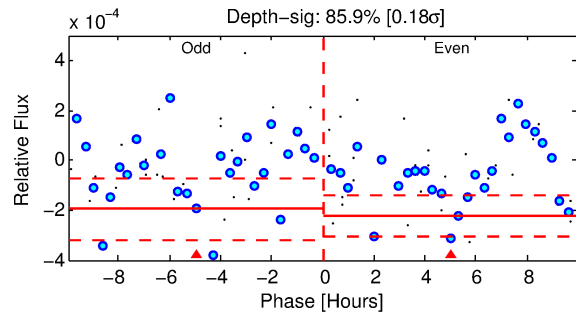
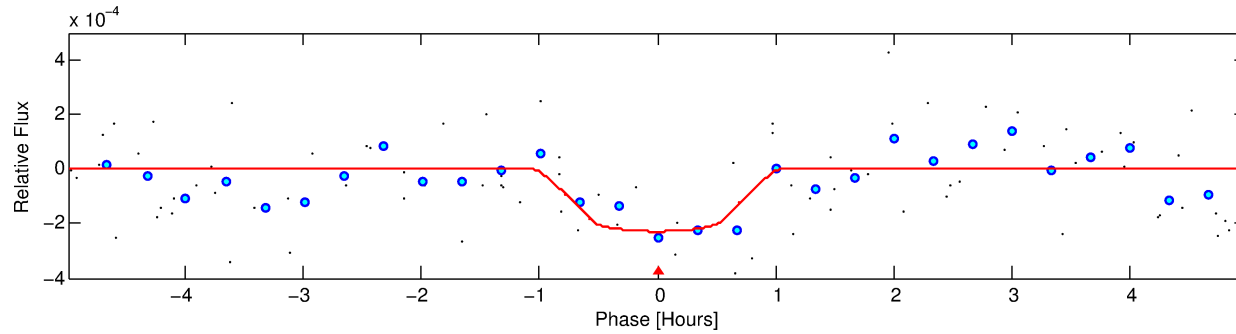
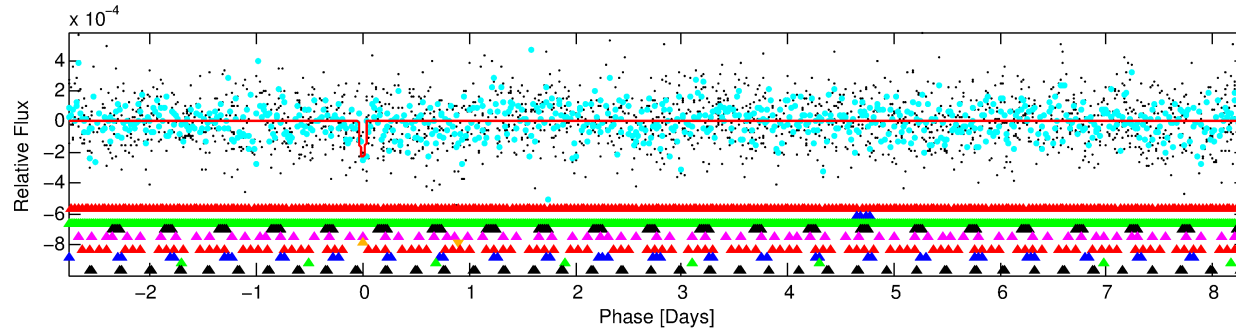
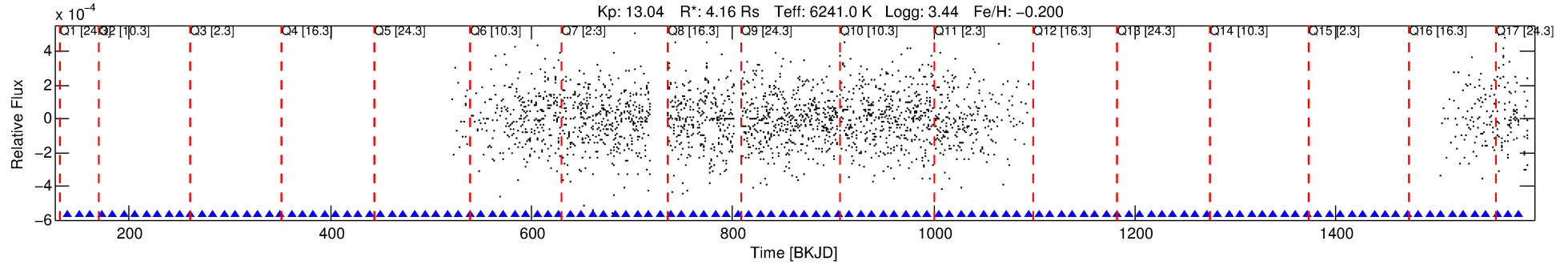
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009673338-06

No Significant Match Found

DV One-Page Summary

KIC: 9673338 Candidate: 6 of 10 Period: 11.098 d



DV Fit Results:

Period = 11.09772 [0.00026] d
Epoch = 139.3719 [0.0167] BKJD
Rp/R* = 0.0160 [0.0371]
a/R* = 26.00 [331.93]
b = 0.88 [3.36]
Seff = 1709.17 [1163.53]
Teq = 1640 [279] K
Rp = 7.27 [17.14] Re
a = 0.1172 [0.0493] AU
Ag = 16.77 [78.86] [0.20 σ]
Teffp = 5130 [5971] K [0.58 σ]

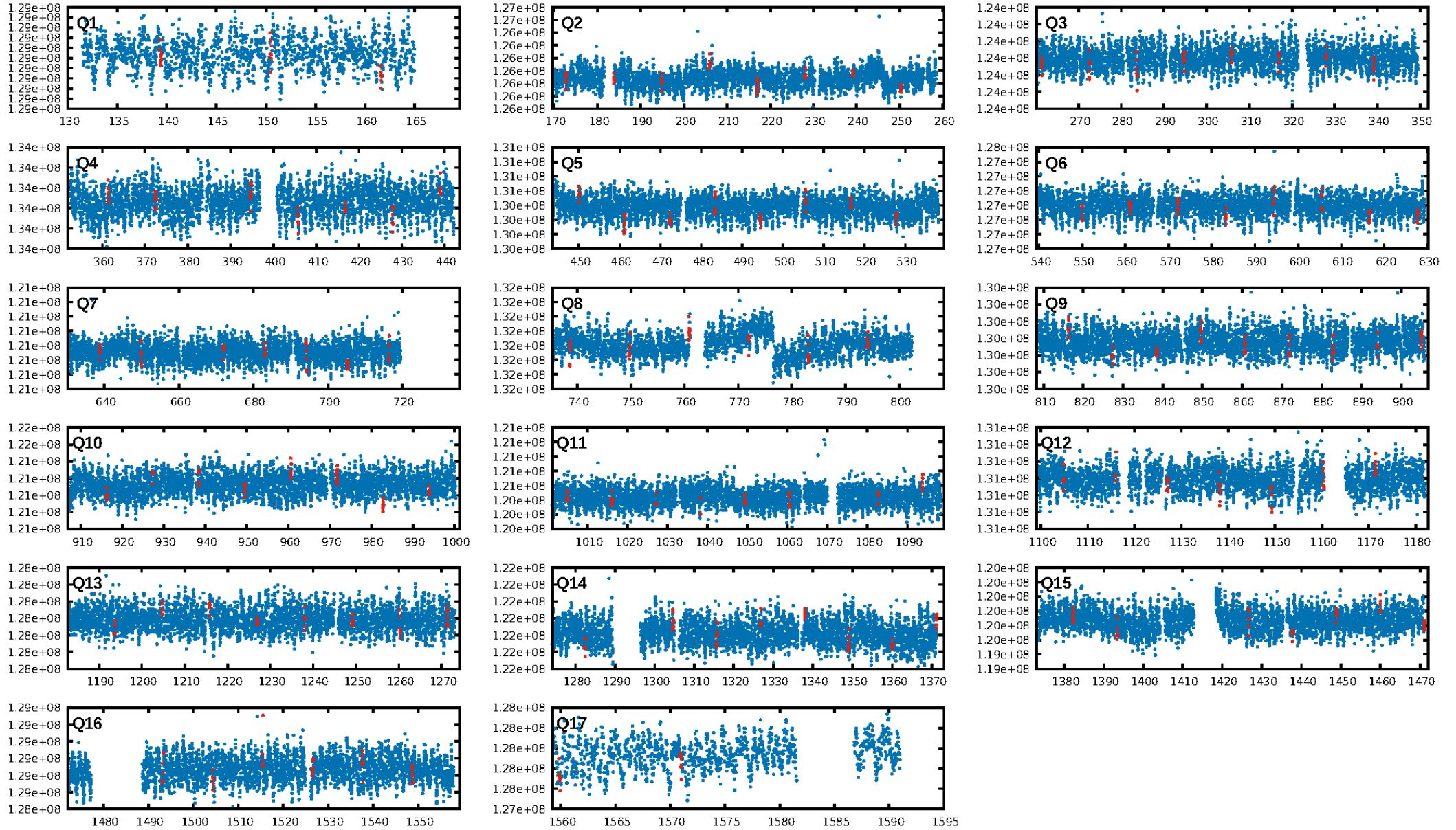
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [16.95 σ]
LongPeriod-sig: 100.0% [15.52 σ]
ModelChiSquare2-sig: 6.1%
ModelChiSquareGof-sig: 15.3%
Bootstrap-pfa: 2.13e-09
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 1.079
Centroid-sig: 3.4%
Centroid-so: 0.816 arcsec [1.34 σ]
OotOffset-rm: 1.206 arcsec [1.27 σ]
KicOffset-rm: 1.385 arcsec [1.42 σ]
OotOffset-st: 2/2/2/3 [9]
KicOffset-st: 2/2/2/3 [9]
DiffImageQuality-fgm: 0.22 [2/9]
DiffImageOverlap-fno: 0.41 [7/17]

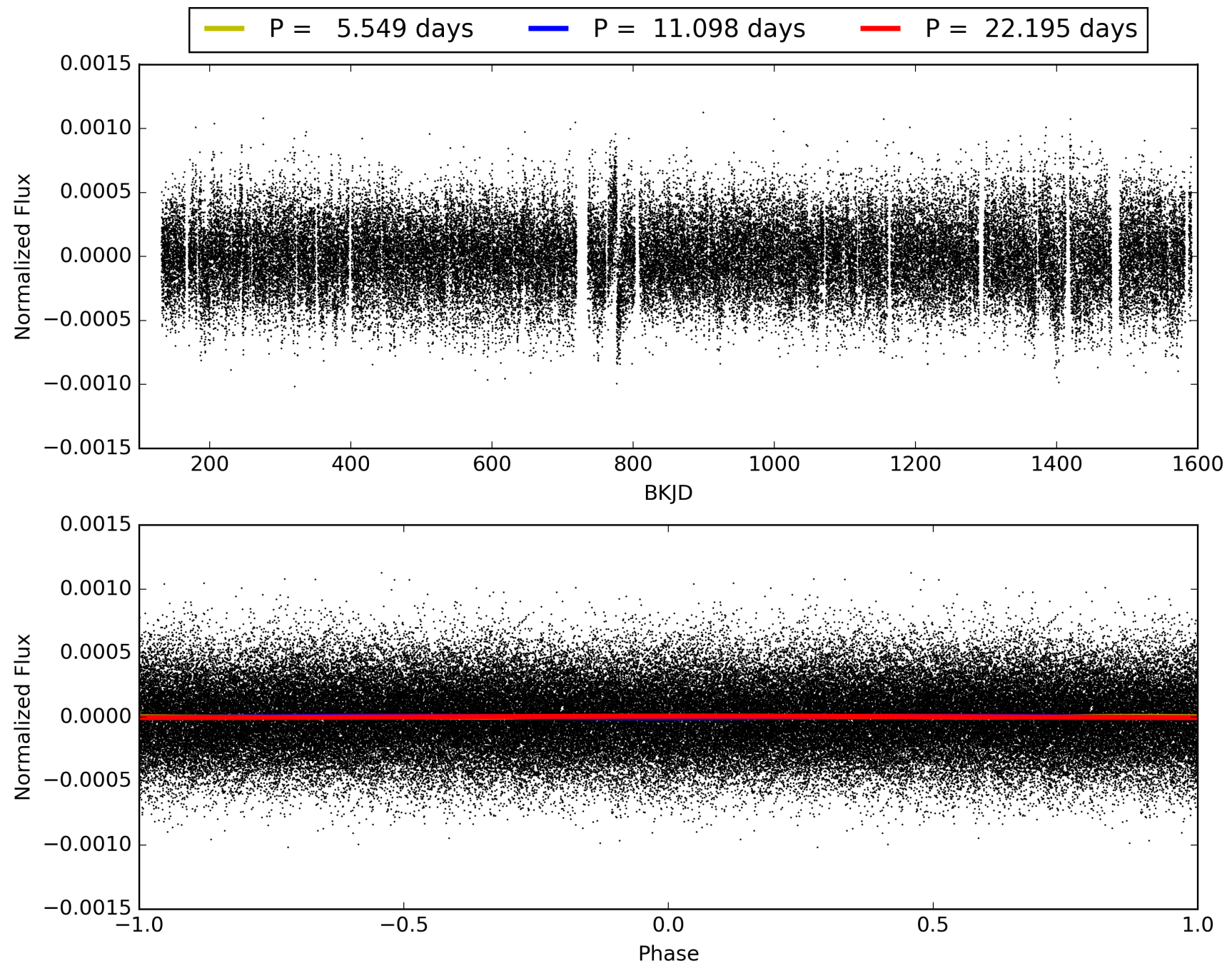
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 11:15:09 Z

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

TCE 009673338-06, PDC Light Curves

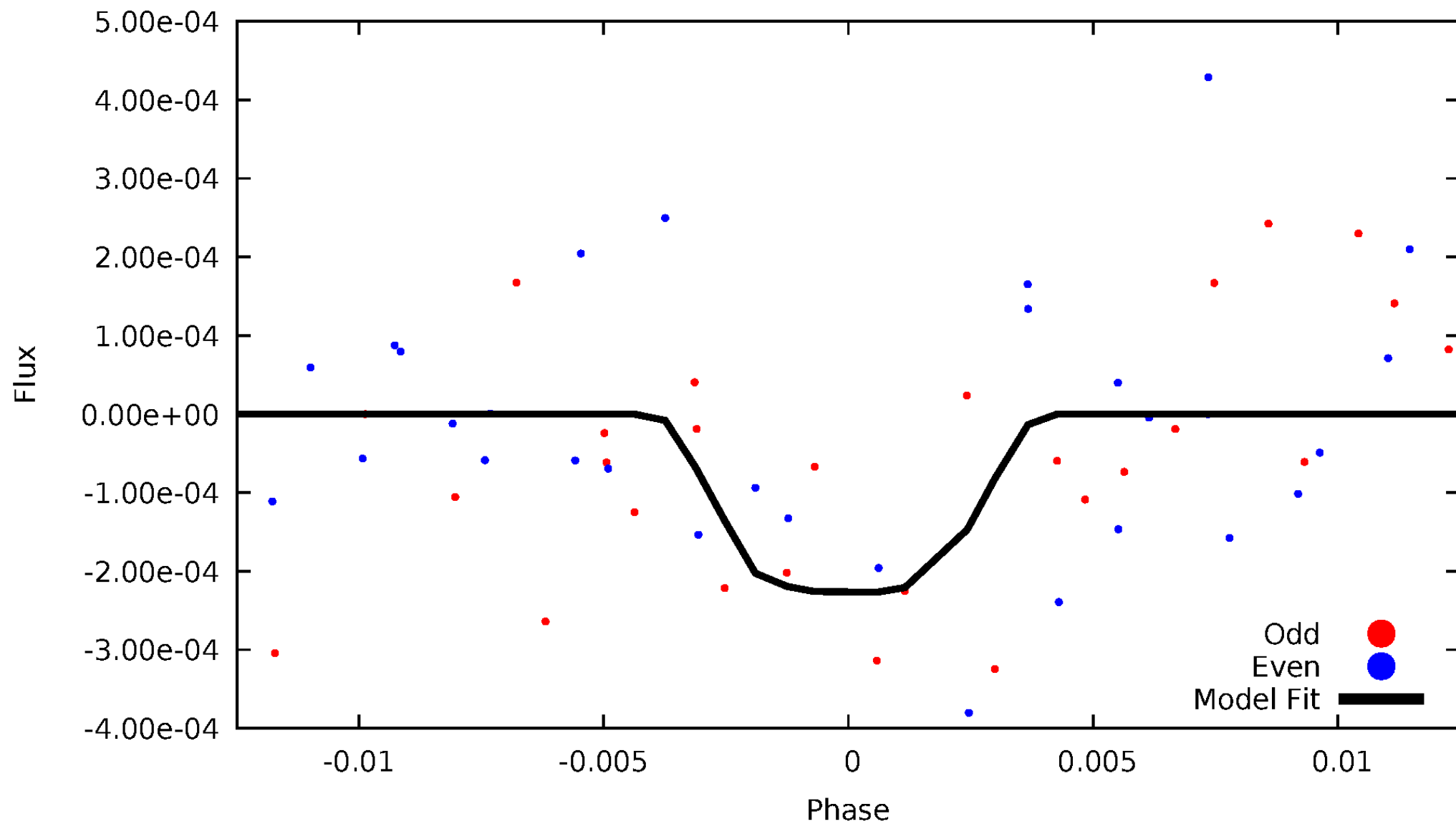


TCE 009673338-06



DV Odd/Even

TCE 009673338-06

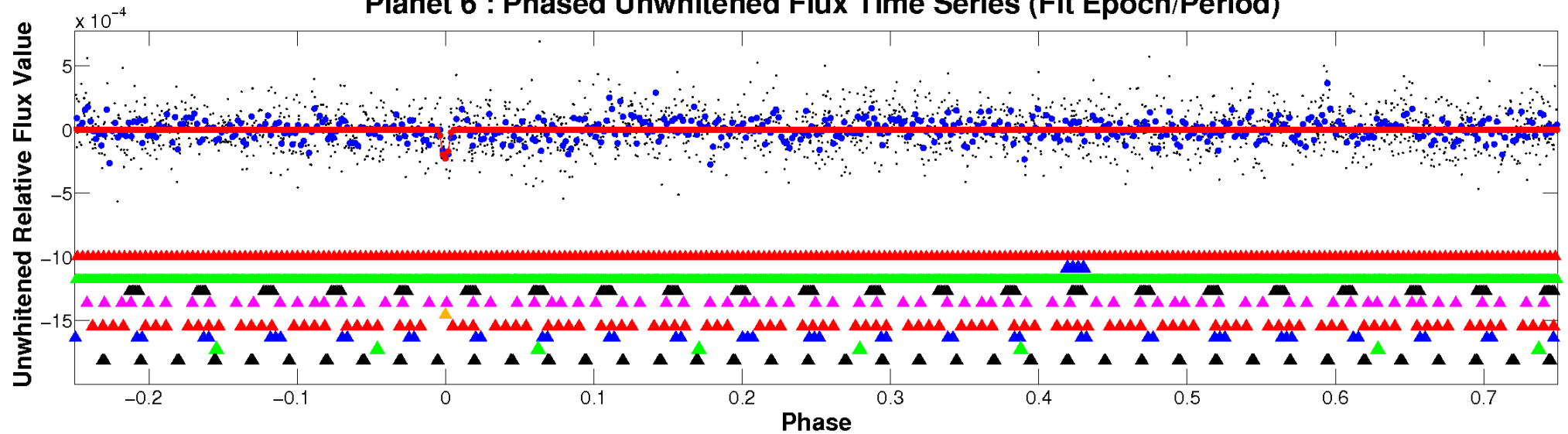


ALT Odd/Even

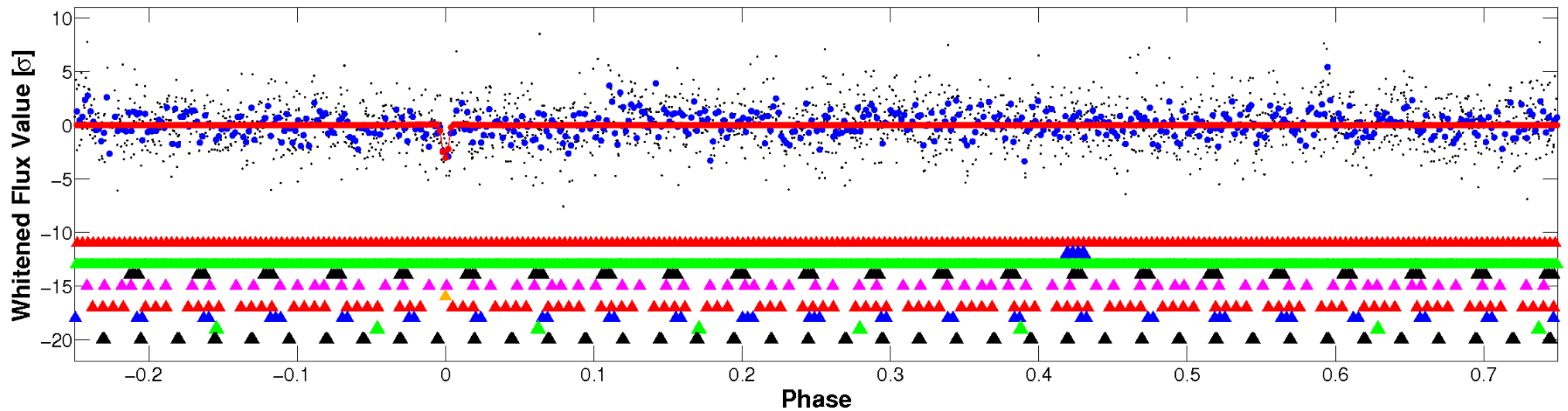
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

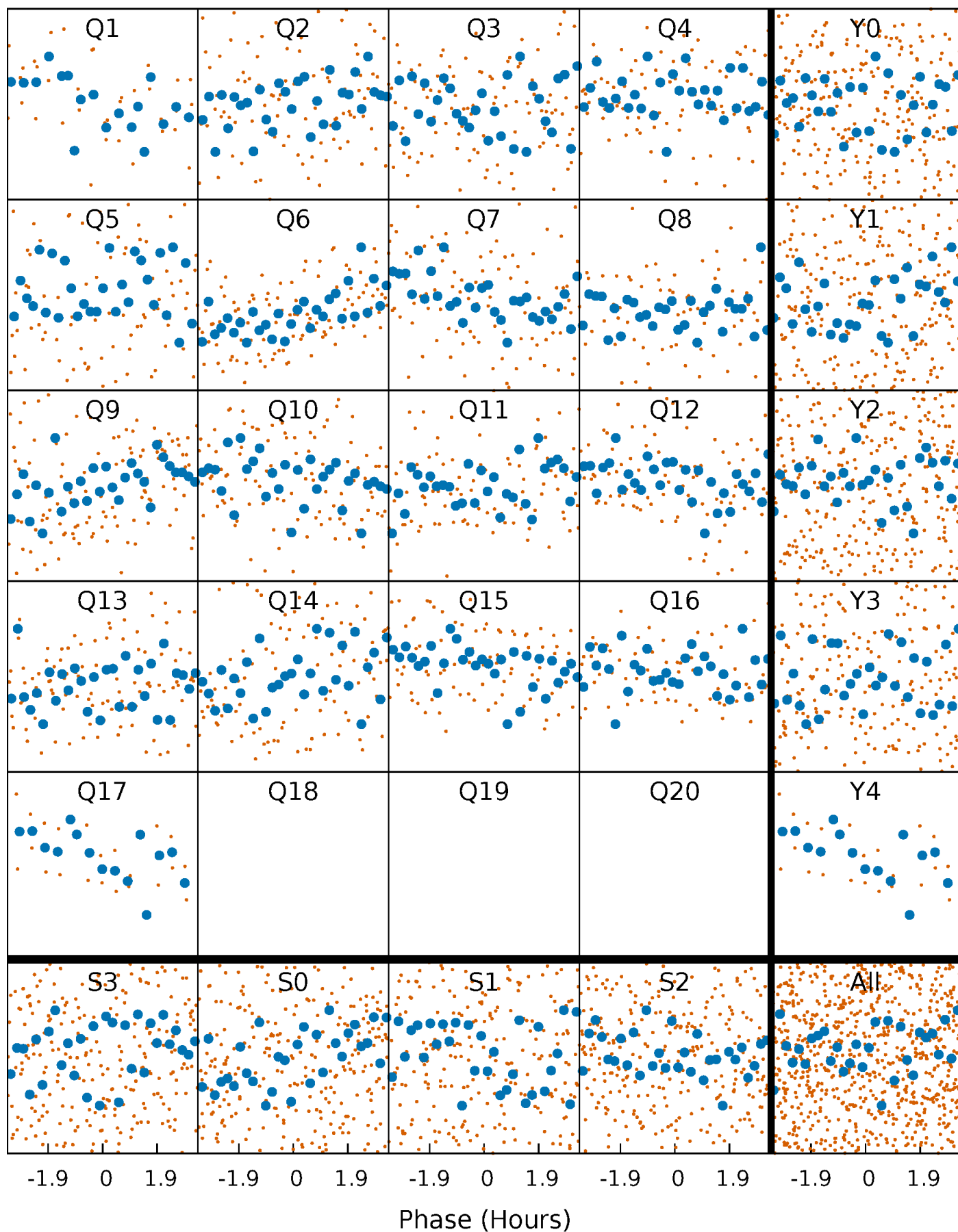


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



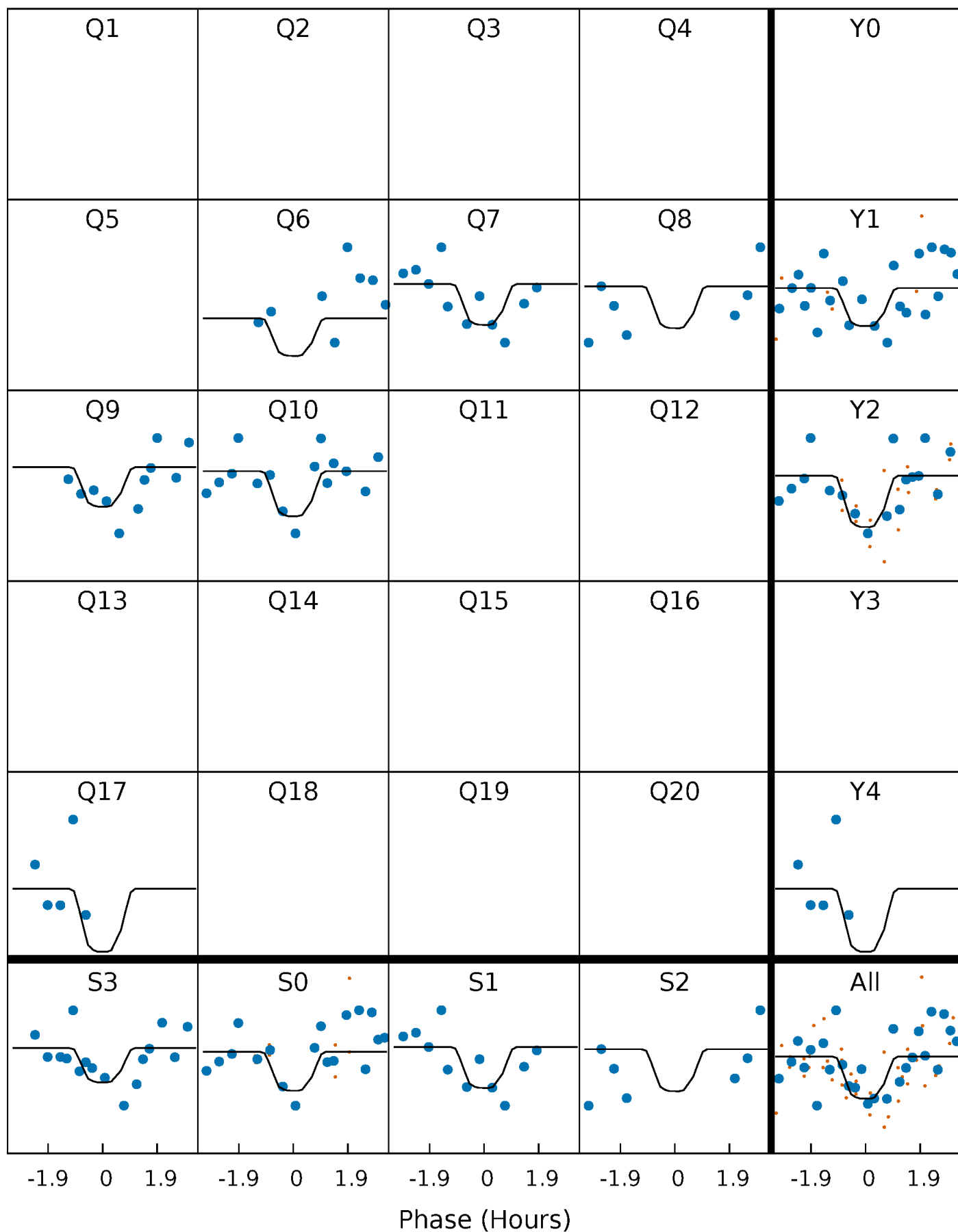
PDC Quarter-Phased Transit Curves

TCE 009673338-06 P= 11.097720 Days $T_0=139.371899$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009673338-06 P= 11.097720 Days $T_0=139.371899$ (BKJD)

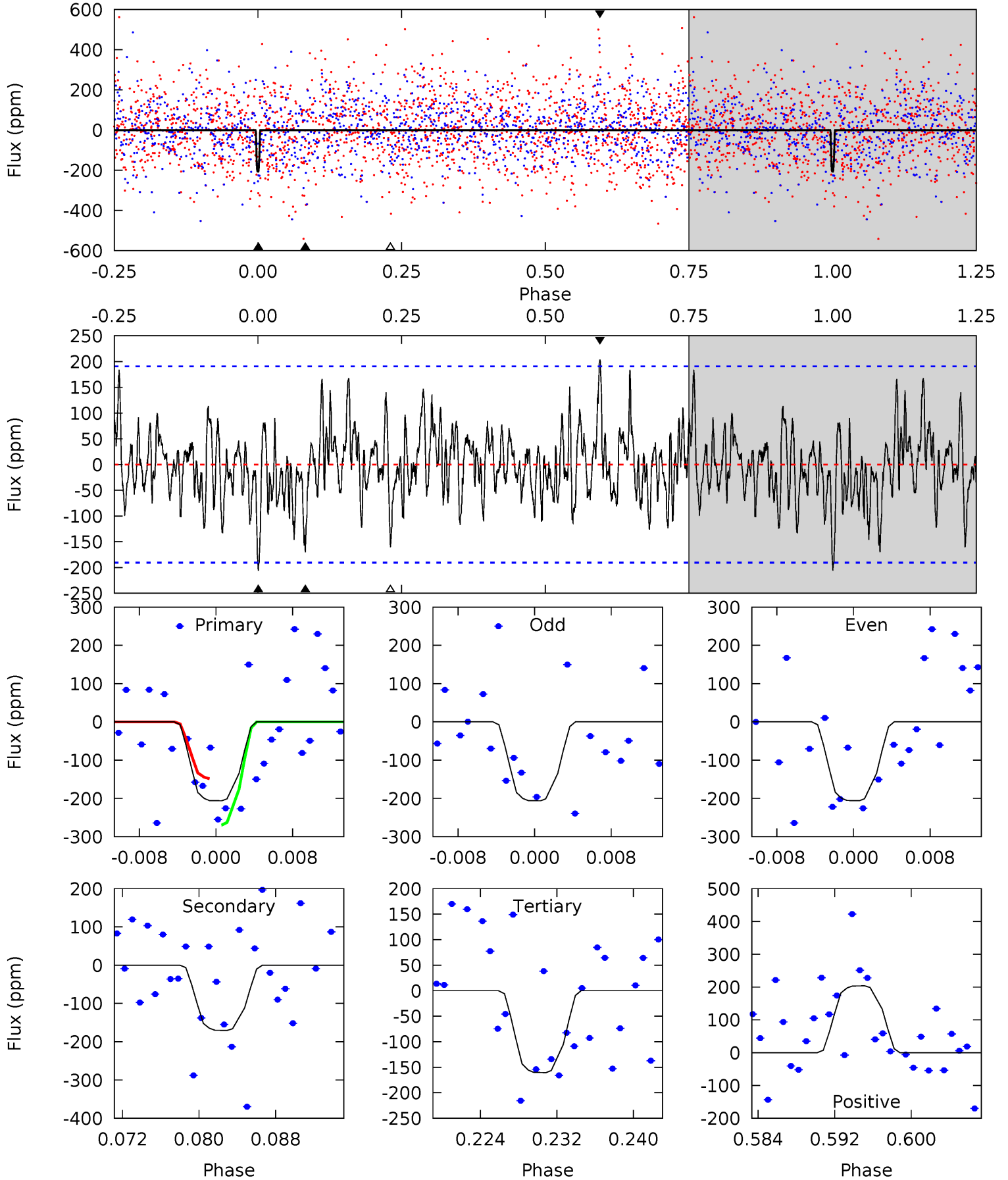


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

009673338-06, P = 11.097720 Days, E = 139.371899 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.49	4.53	4.27	5.42	5.07	2.65	1.55	1.22	0.07	0.26	-0.89	0.00	0.91	0.50	1.62



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 009673338

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6241^{+190}_{-171}	$3.442^{+0.392}_{-0.098}$	$-0.200^{+0.350}_{-0.300}$	$4.157^{+0.611}_{-1.834}$	$1.746^{+0.155}_{-0.465}$	$0.034^{+0.127}_{-0.010}$
	+3%/-3%	+11%/-3%	+175%/-150%	+15%/-44%	+9%/-27%	+369%/-30%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009673338-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-170 ± 38	$14.18^{+13.54}_{-9.82}$	2258^{+126}_{-226}	4064^{+2838}_{-805}	$6.307^{+60.720}_{-4.601}$
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

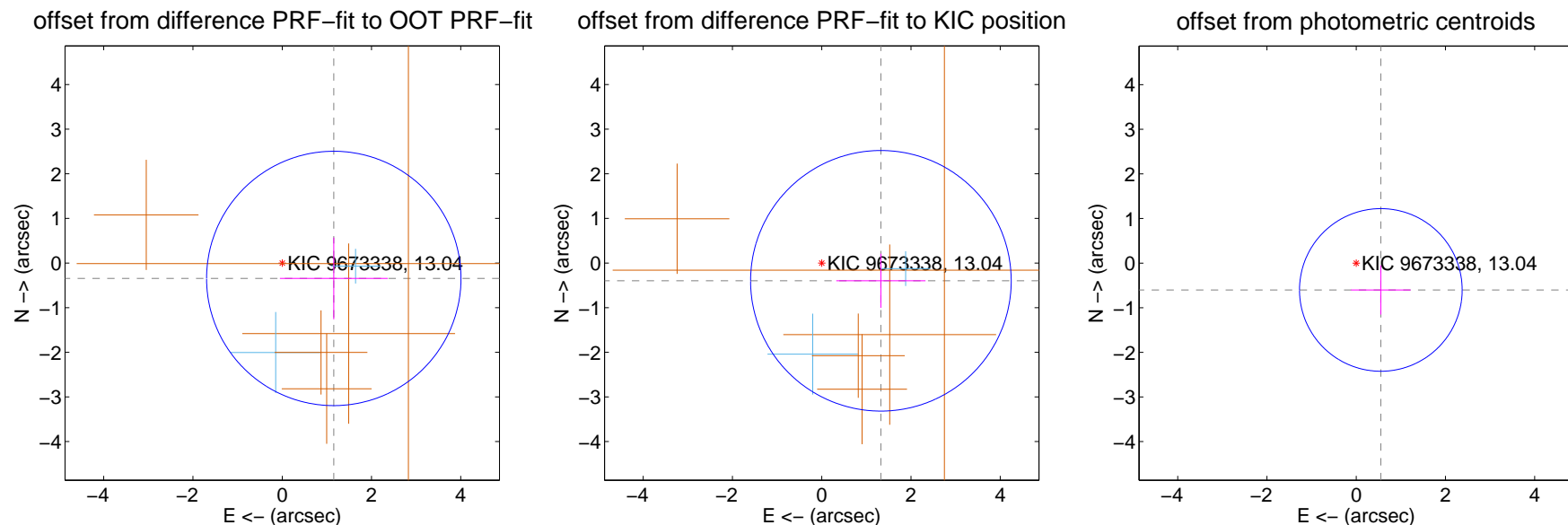
DV Centroid Data

Supplemental centroid analysis for 009673338-06. Kepler magnitude: 13.04. Transit SNR 8.40

There are 2 quarters with good PRF difference image offsets

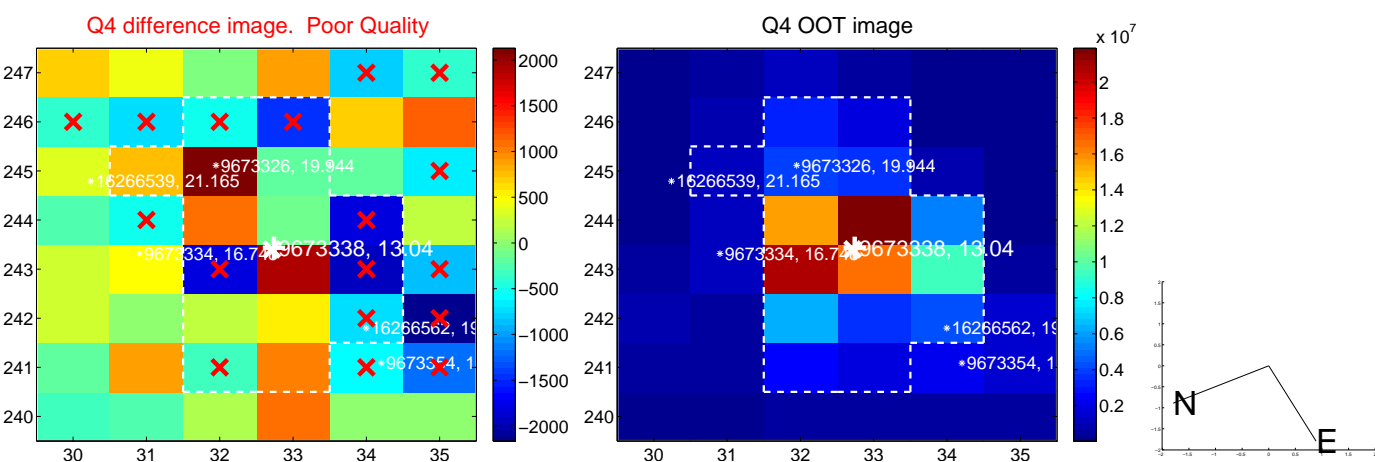
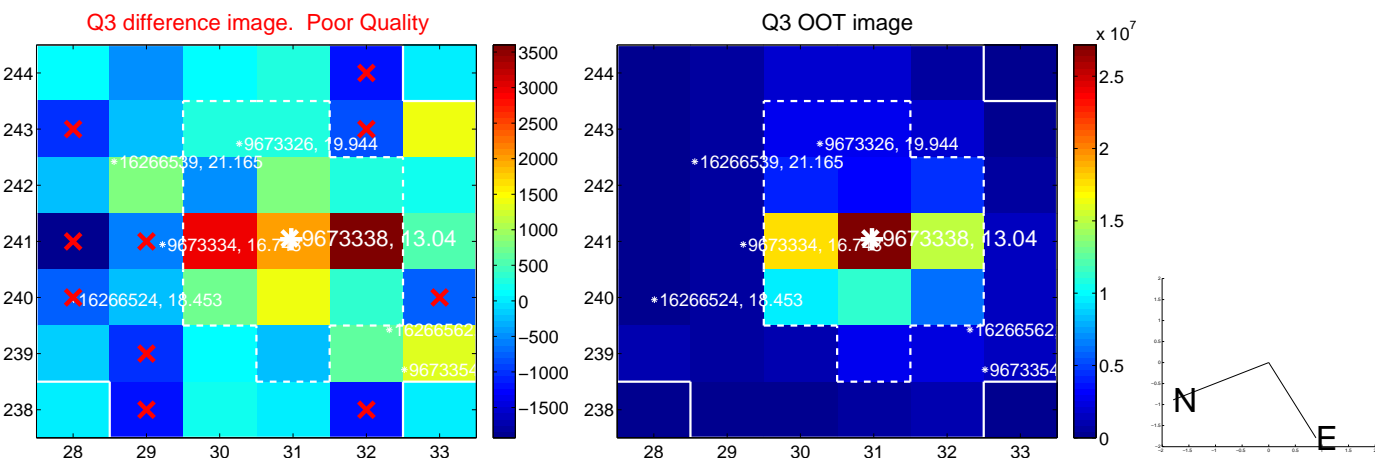
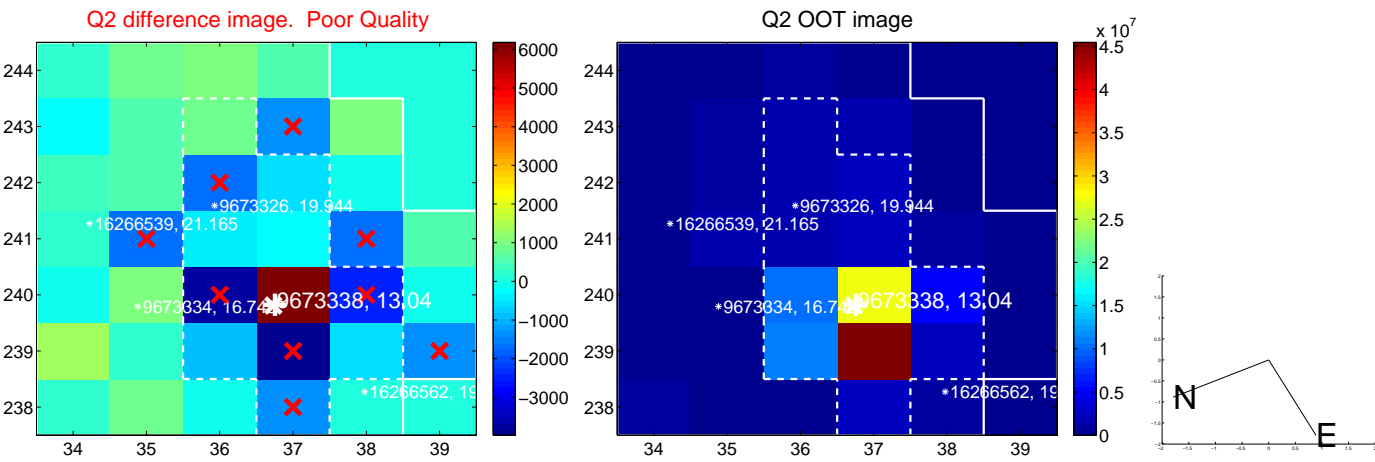
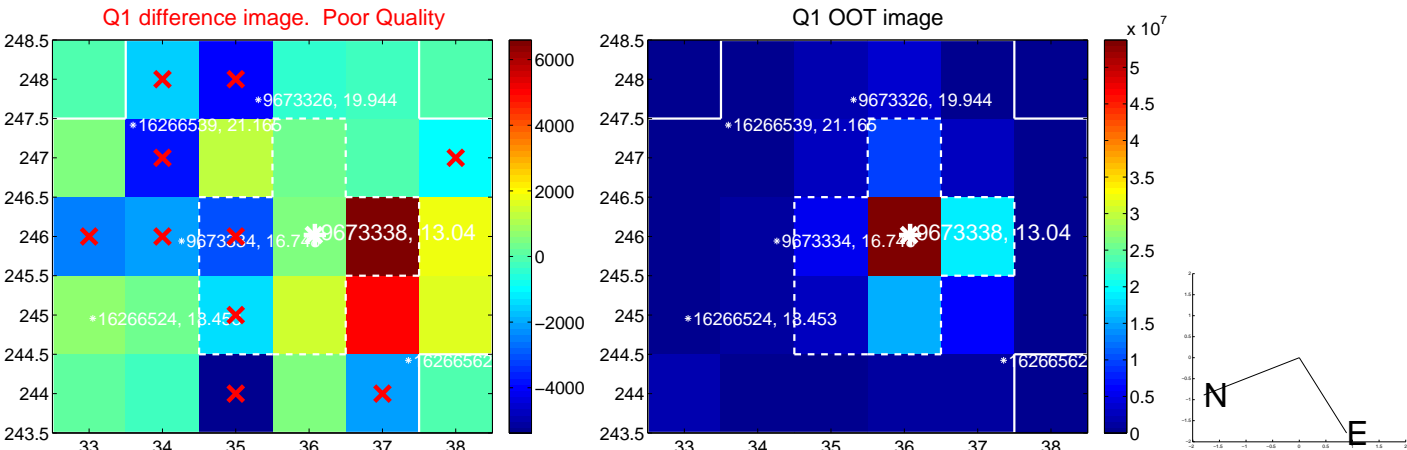
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.206 ± 0.950	1.27	-1.156 ± 1.209	-0.345 ± 0.915
PRF-fit source offset from KIC position	1.385 ± 0.973	1.42	-1.326 ± 1.000	-0.398 ± 0.606
photometric centroid source offset	0.82 ± 0.61	1.34	-0.55 ± 0.67	-0.60 ± 0.55

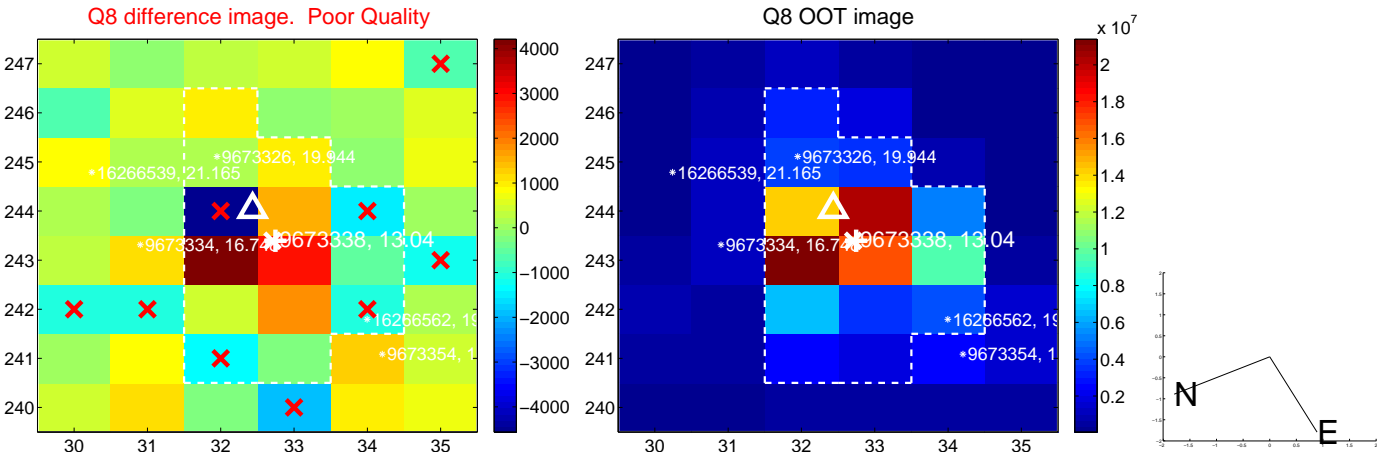
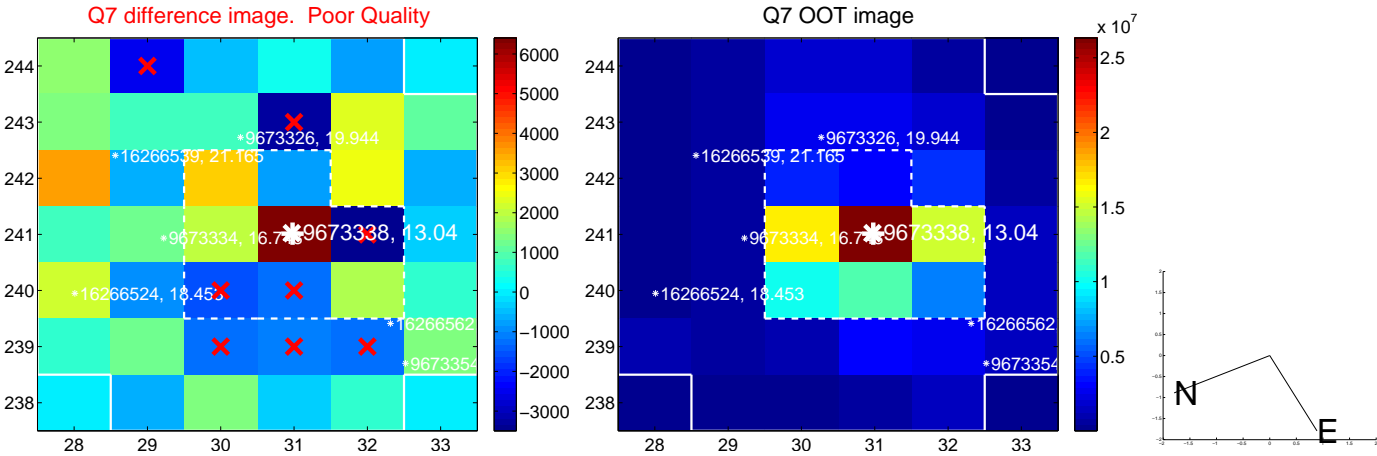
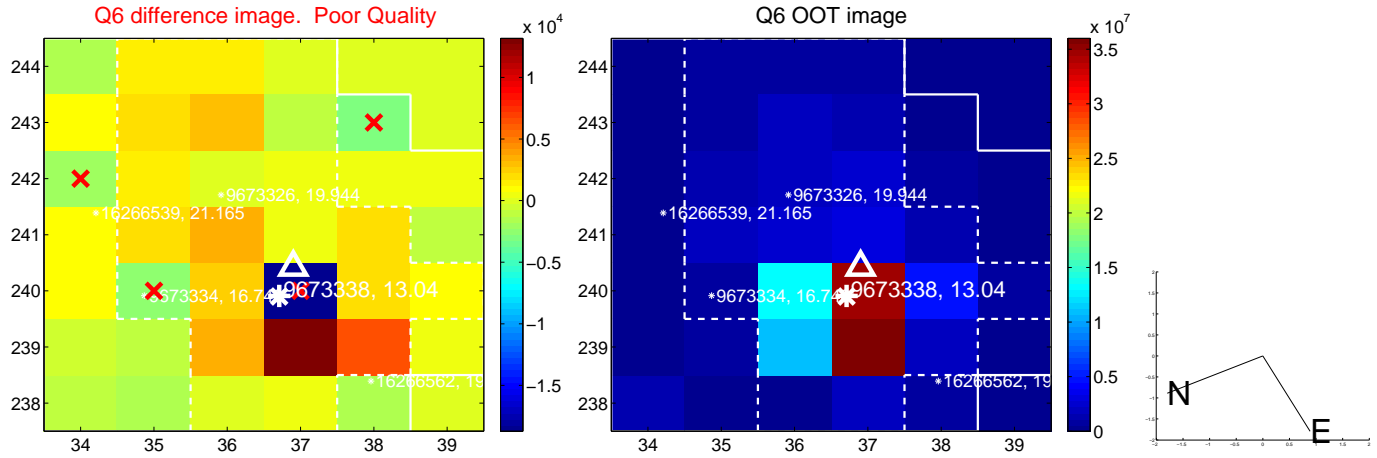
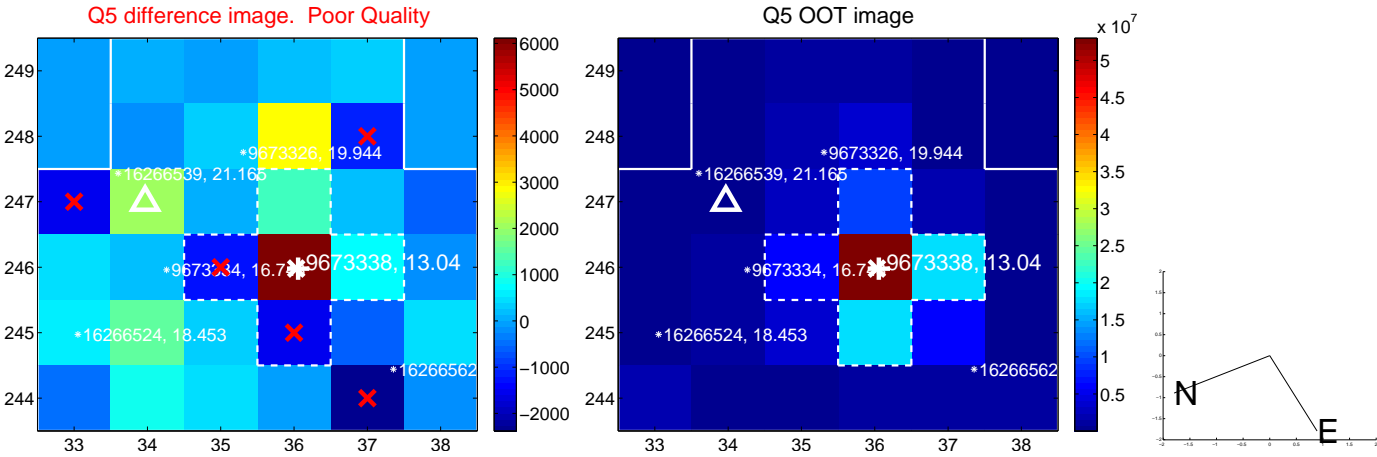


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

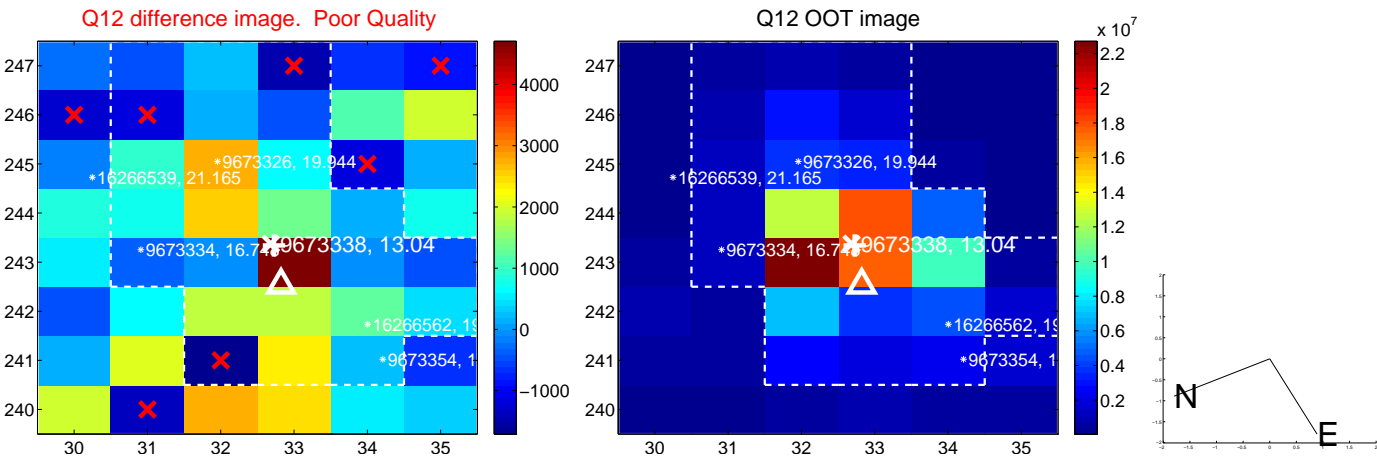
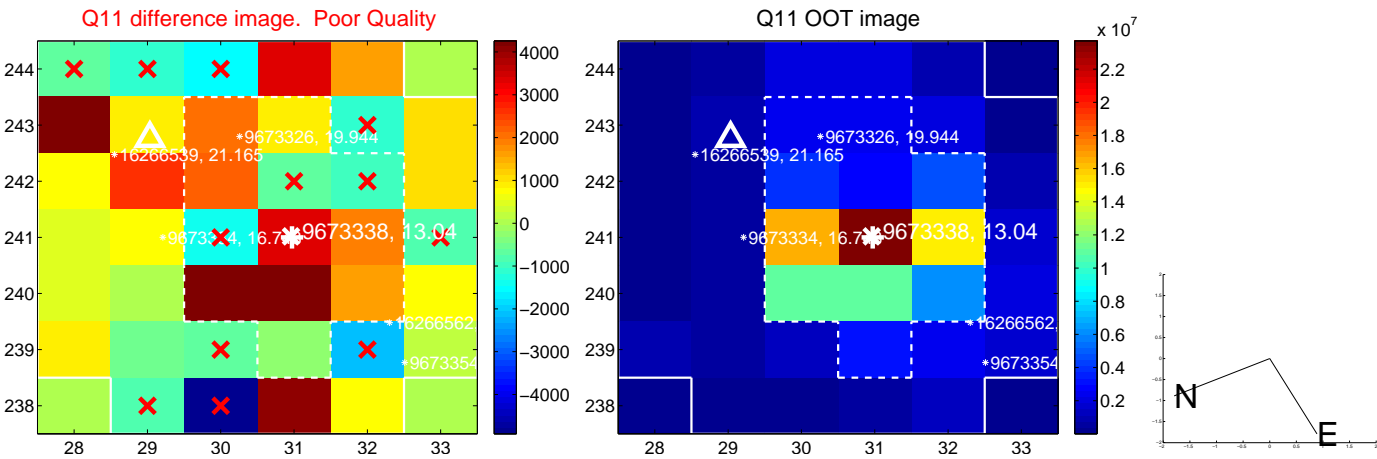
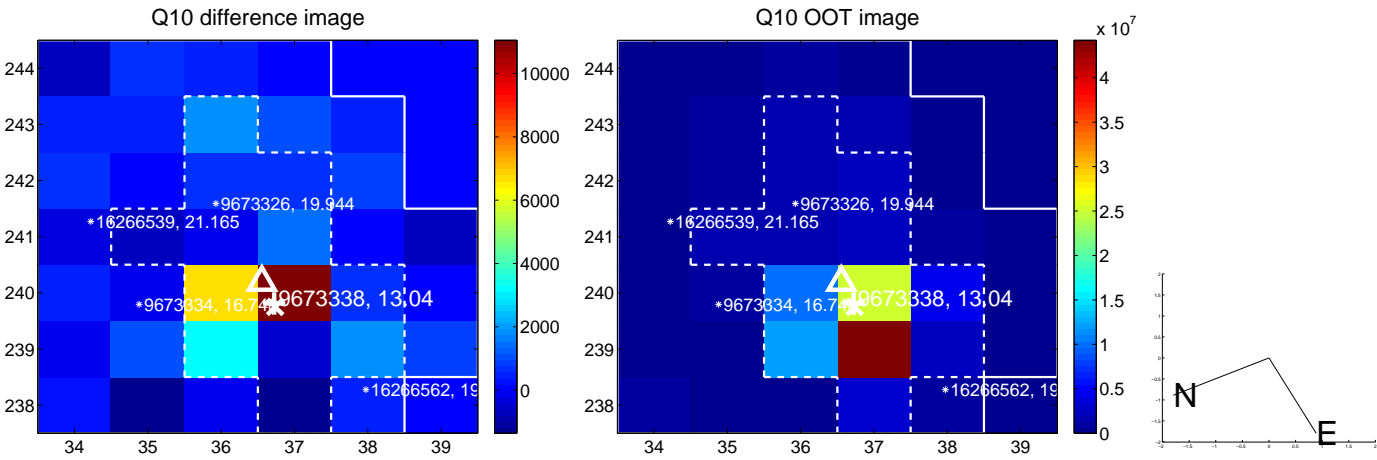
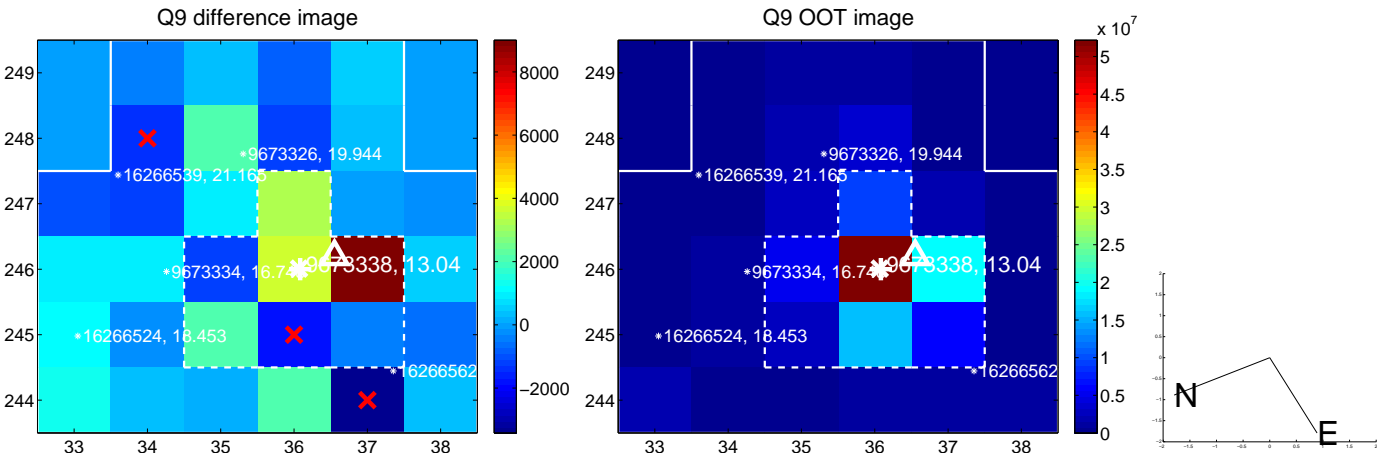
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



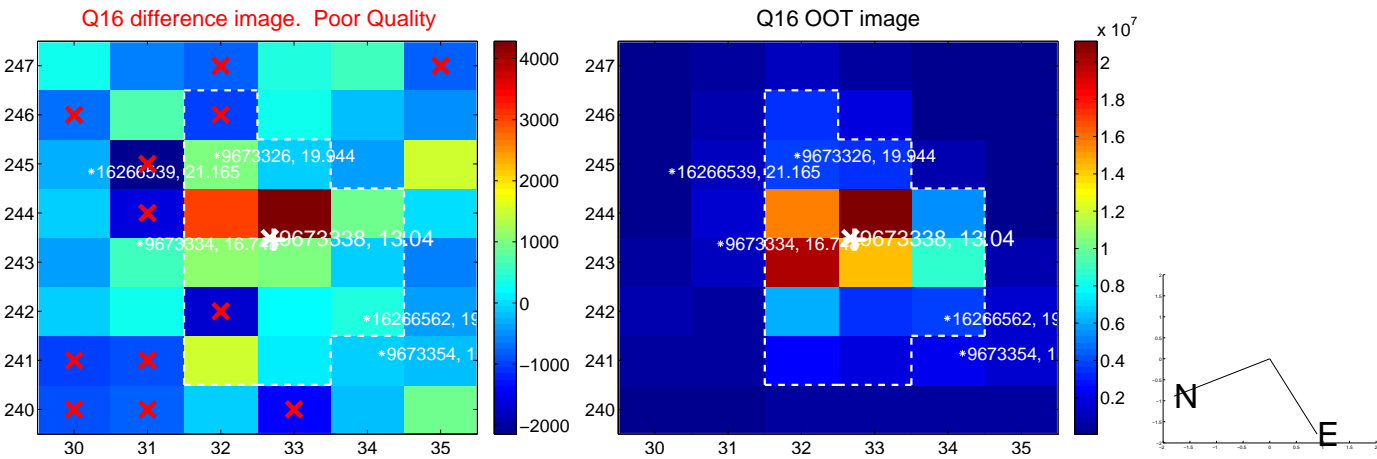
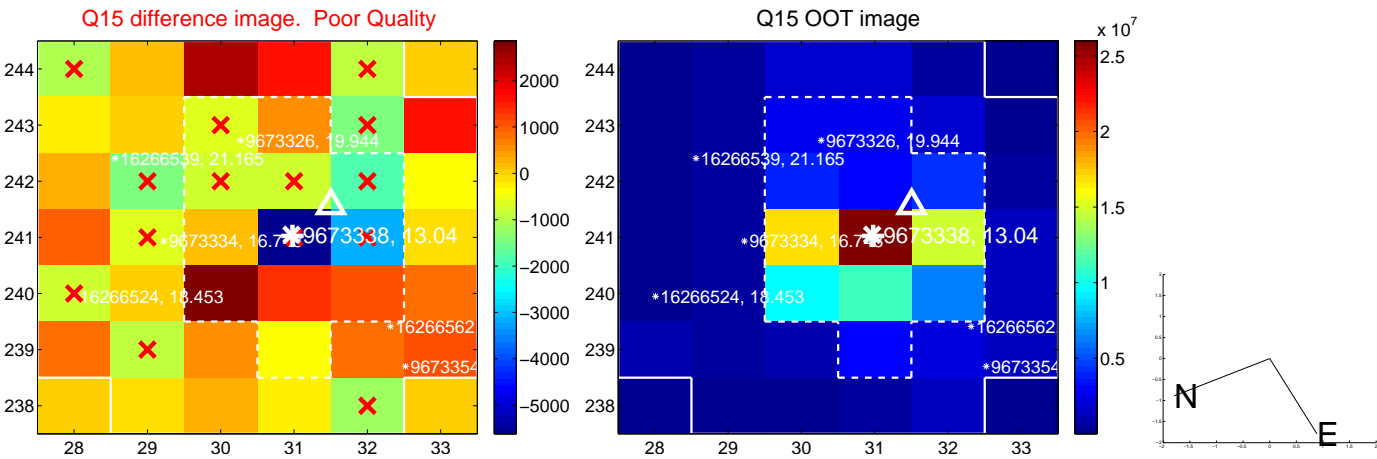
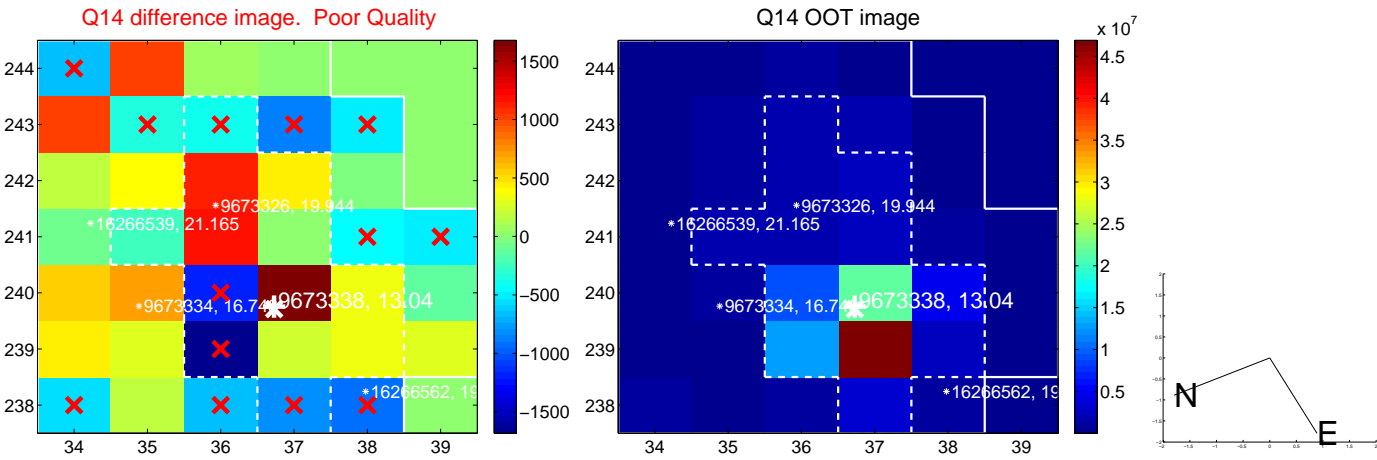
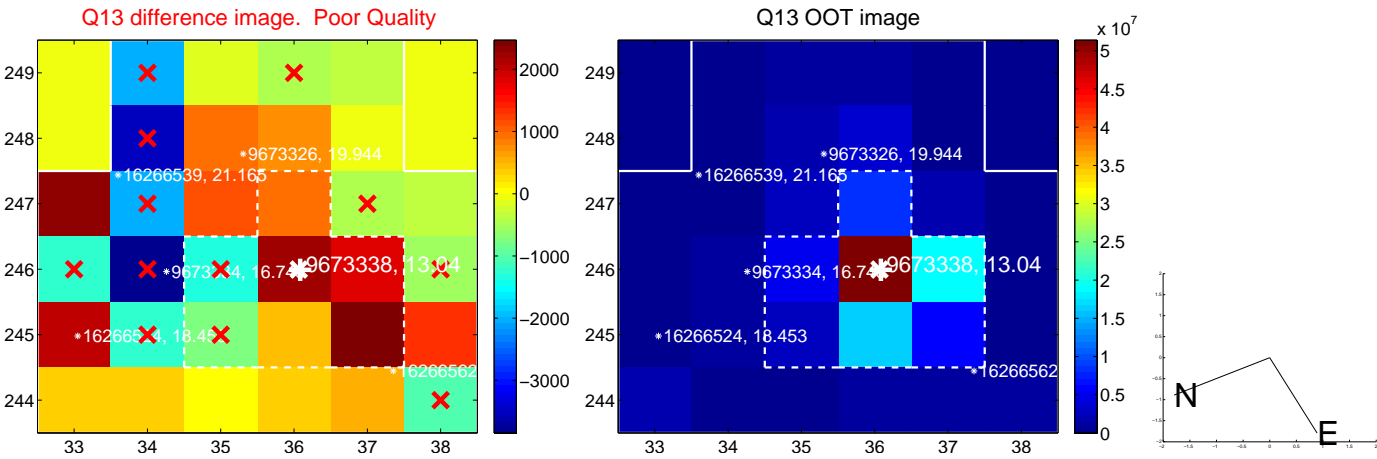
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



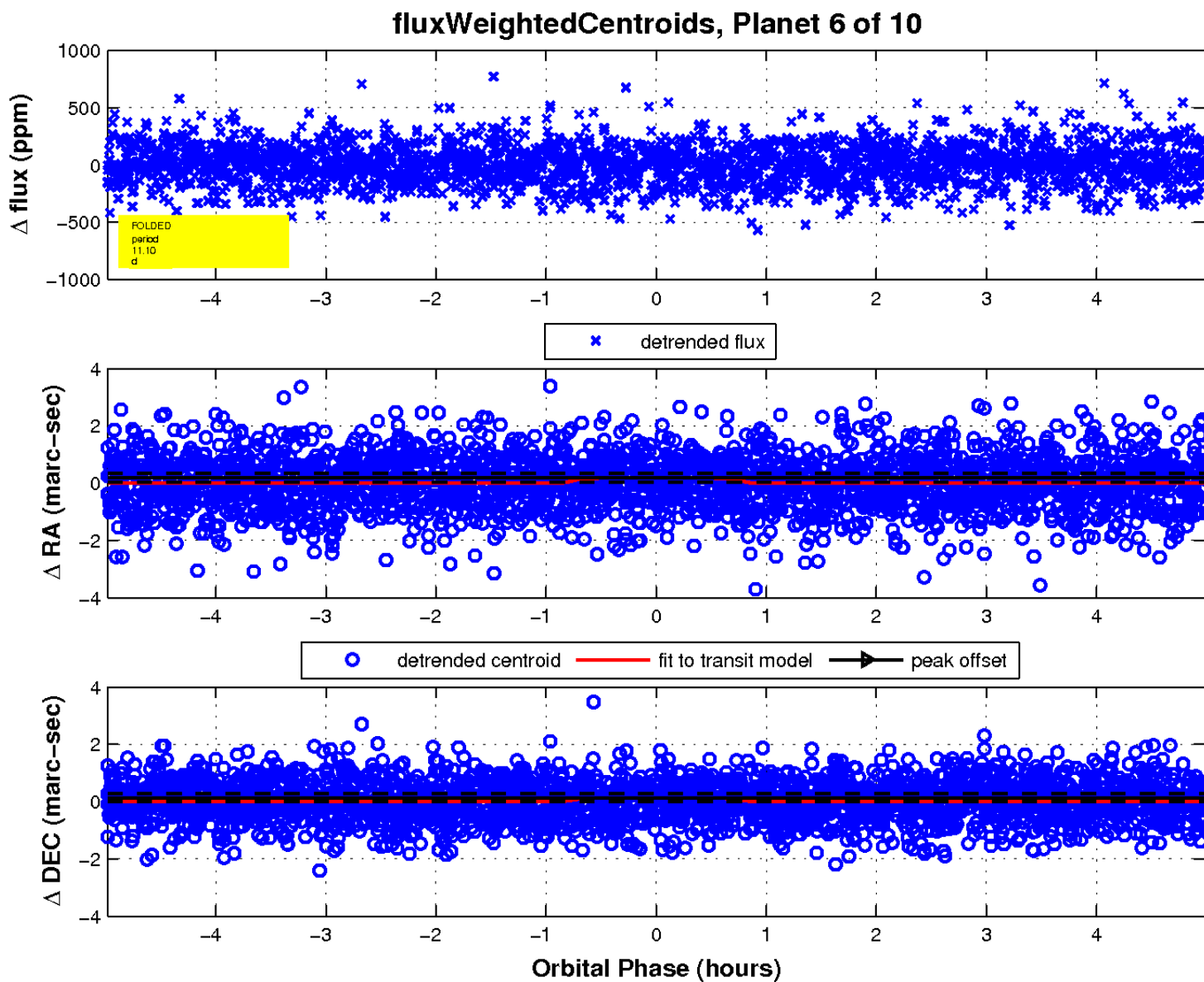
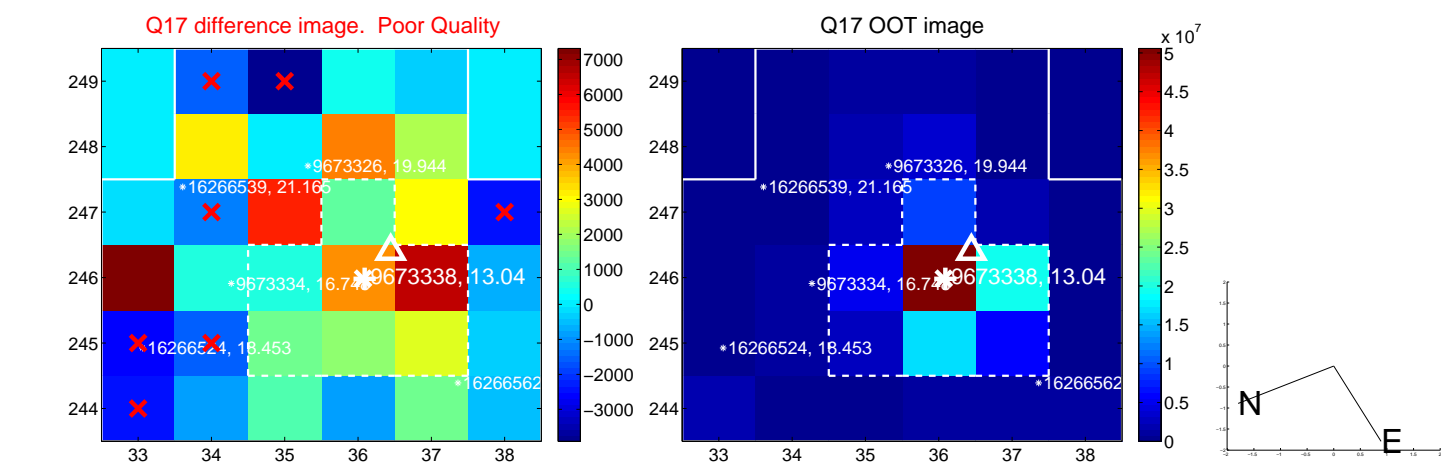
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

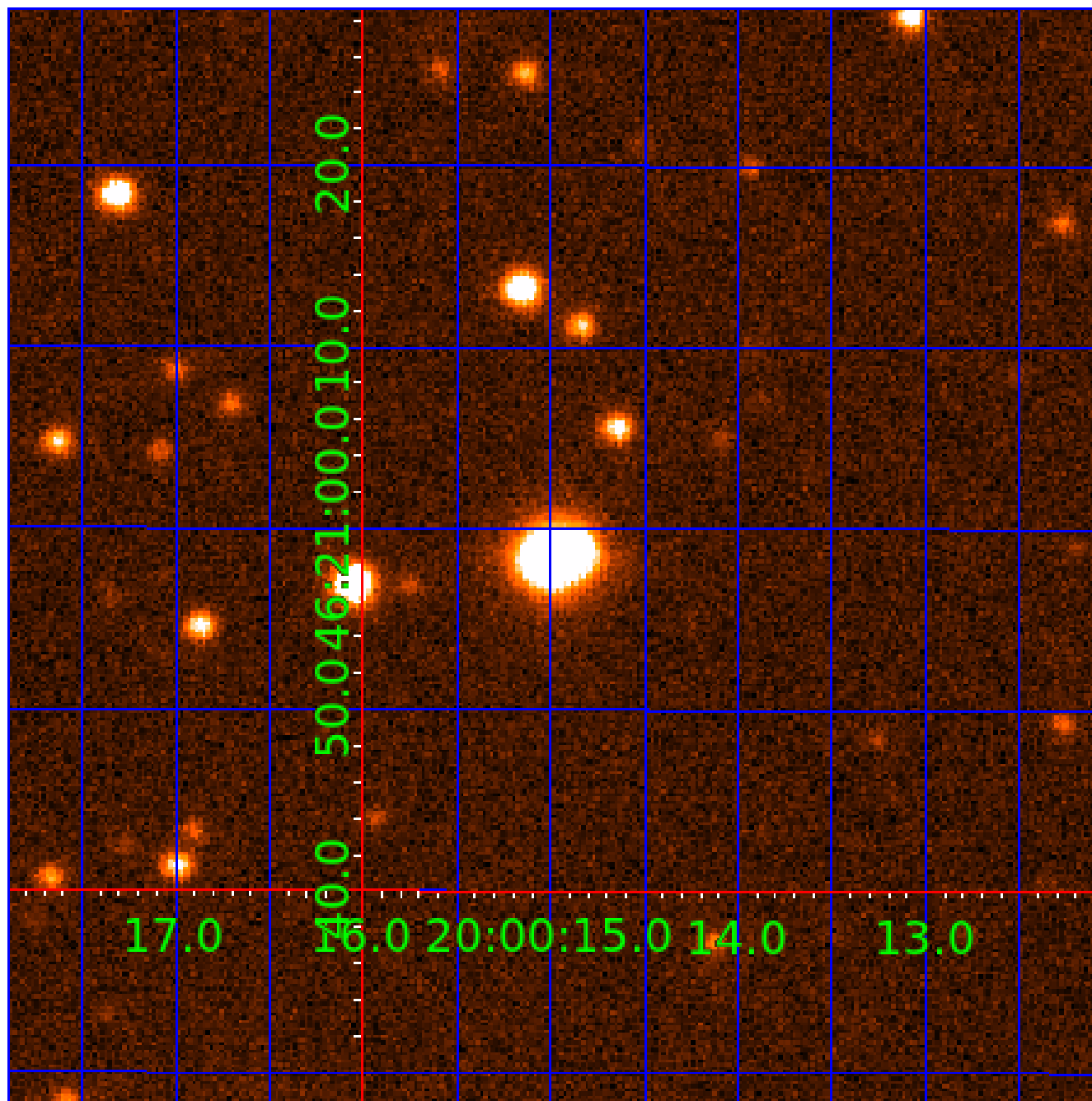


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009673338

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})
009673338-01	OBS	No	1.450943	131.674153	0.0	5.709	11.7	0.0	4.16	6241	0.00	25757.12
009673338-02	OBS	No	399.478089	377.197580	617.3	7.381	12.1	11.2	4.16	6241	10.72	14.38
009673338-03	OBS	No	1.453106	132.117764	9.5	10.296	11.7	4.4	4.16	6241	1.32	25706.01
009673338-04	OBS	No	9.584975	135.987275	287.9	1.350	12.1	11.1	4.16	6241	7.10	2077.99
009673338-05	OBS	No	18.977727	146.671085	224.1	2.281	11.0	9.1	4.16	6241	6.40	835.81
009673338-06	OBS	No	11.097720	139.371899	228.6	1.663	9.6	8.4	4.16	6241	7.27	1709.17
009673338-07	OBS	No	13.396447	132.848813	210.8	3.141	9.6	10.8	4.16	6241	6.06	1329.78
009673338-08	OBS	No	29.760323	145.204337	254.1	2.470	9.4	10.3	4.16	6241	7.73	458.75
009673338-09	OBS	No	178.767059	279.521486	348.8	5.000	9.1	-1.0	4.16	6241	7.78	42.01
009673338-10	OBS	No	13.594499	135.993905	249.7	1.534	8.7	9.2	4.16	6241	6.74	1304.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009673338-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
009673338-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009673338-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
009673338-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
009673338-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—NO_FITS—INCONSISTENT_TRANS—CENT_NOFITS
009673338-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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

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

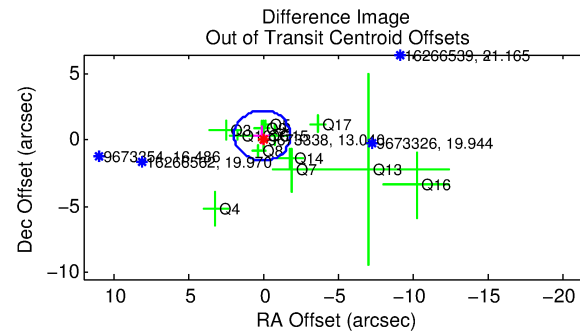
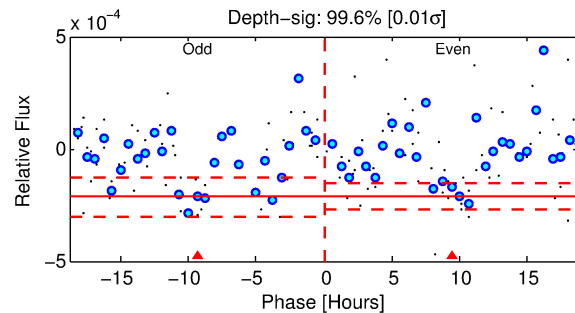
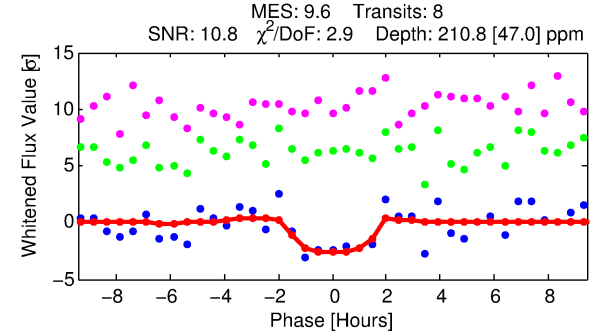
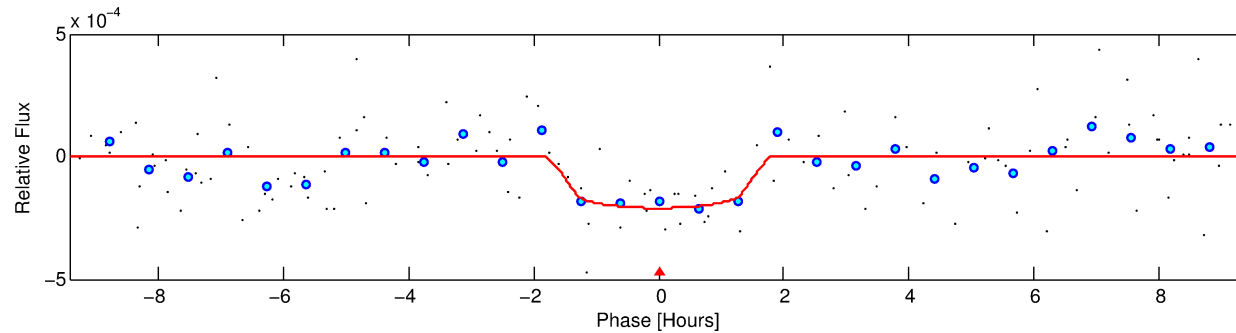
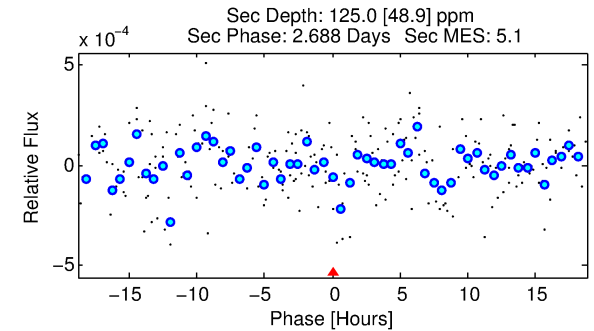
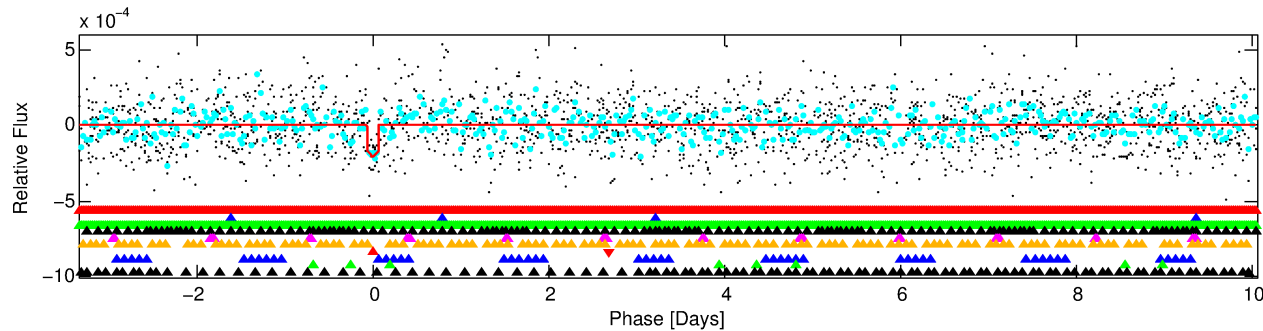
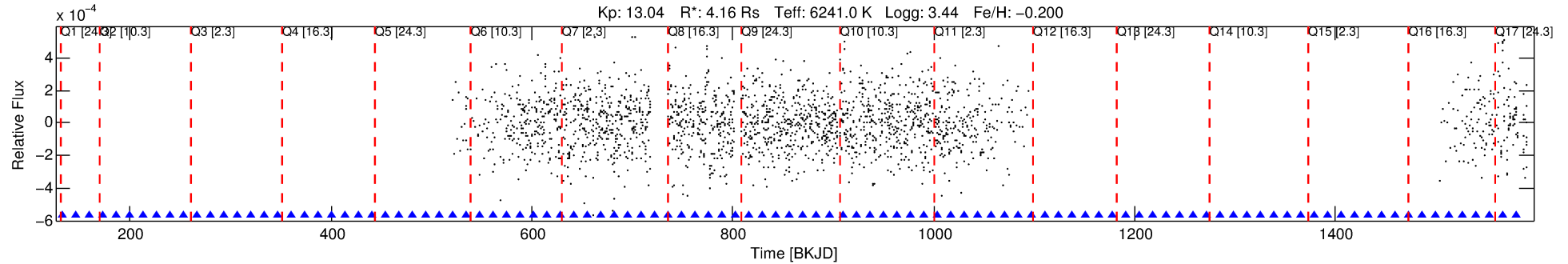
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009673338-07

No Significant Match Found

DV One-Page Summary

KIC: 9673338 Candidate: 7 of 10 Period: 13.396 d



DV Fit Results:

Period = 13.39645 [0.00086] d
Epoch = 132.8488 [0.0463] BKJD
Rp/R* = 0.0134 [0.0420]
a/R* = 32.65 [504.88]
b = 0.15 [100.87]
Seff = 1329.78 [905.25]
Teq = 1540 [262] K
Rp = 6.06 [19.22] Re
a = 0.1329 [0.0559] AU
Ag = 33.08 [209.38] [0.15σ]
Teffp = 5710 [8985] K [0.46σ]

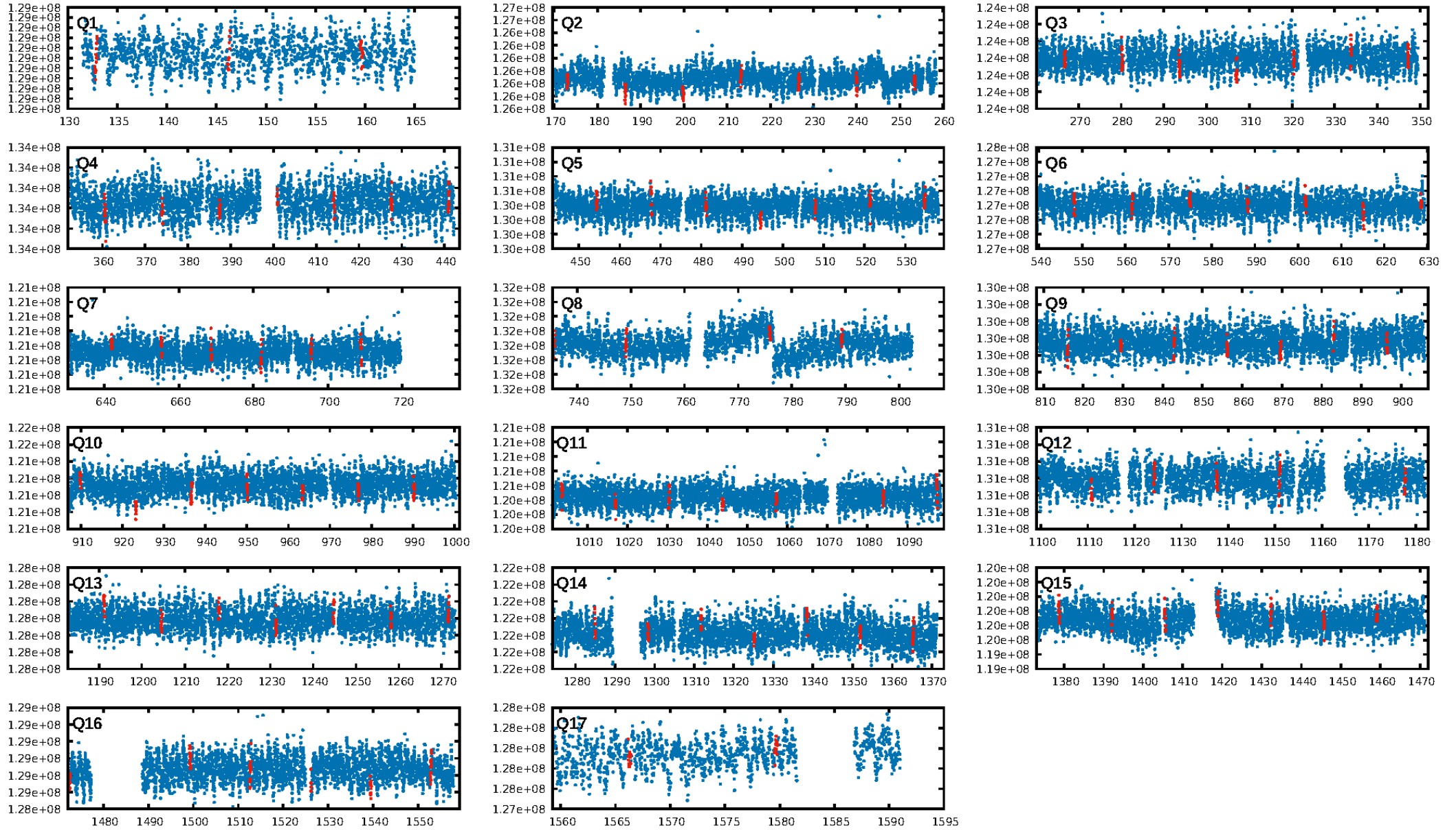
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [15.52σ]
LongPeriod-sig: 82.6% [1.36σ]
ModelChiSquare2-sig: 20.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.52e-10
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 1.227
Centroid-sig: 4.0%
Centroid-so: 0.722 arcsec [1.37σ]
OotOffset-rm: 0.352 arcsec [0.56σ]
KicOffset-rm: 0.311 arcsec [0.45σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 0.38 [5/13]
DiffImageOverlap-fno: 0.24 [4/17]

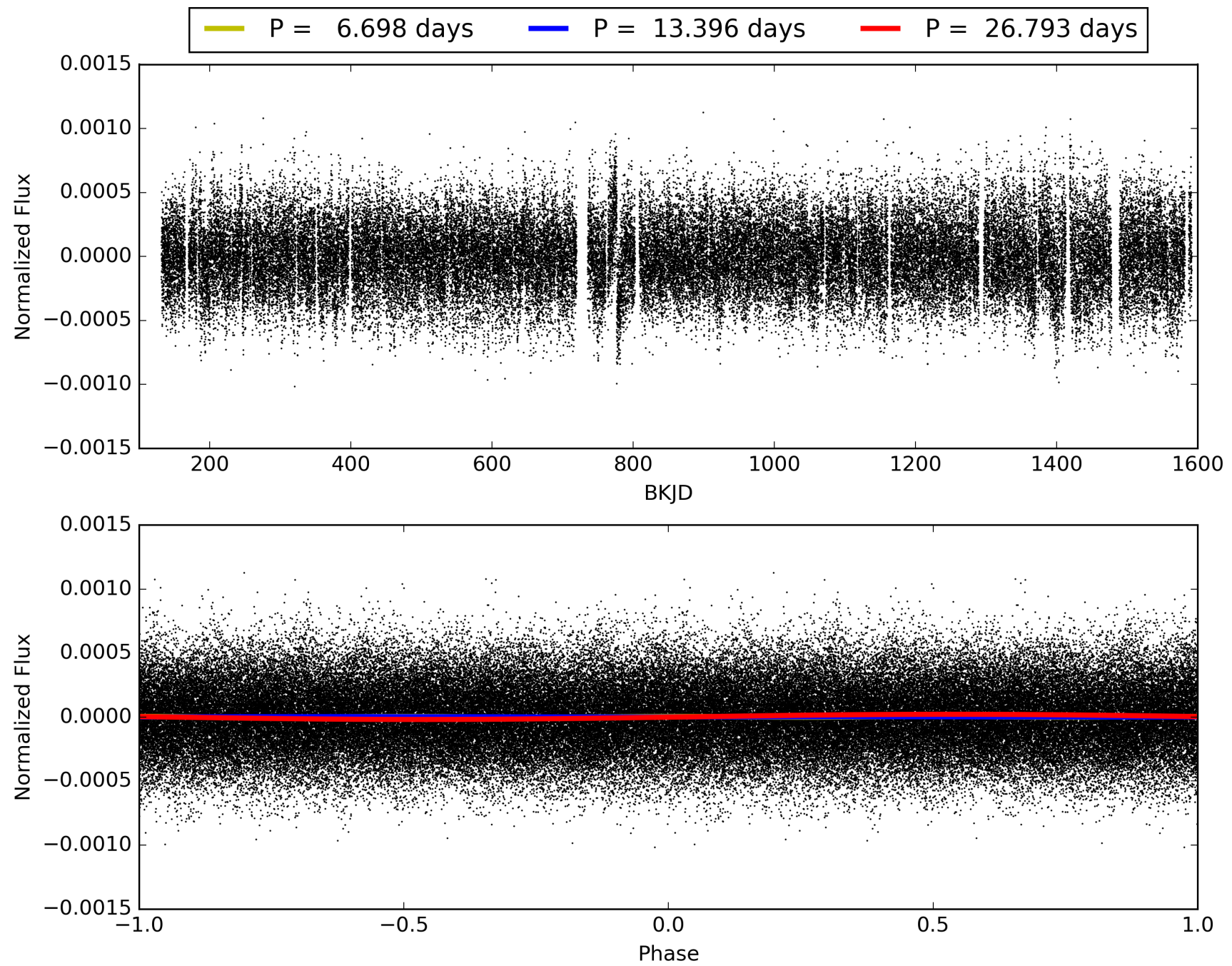
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 11:15:12 Z

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

TCE 009673338-07, PDC Light Curves

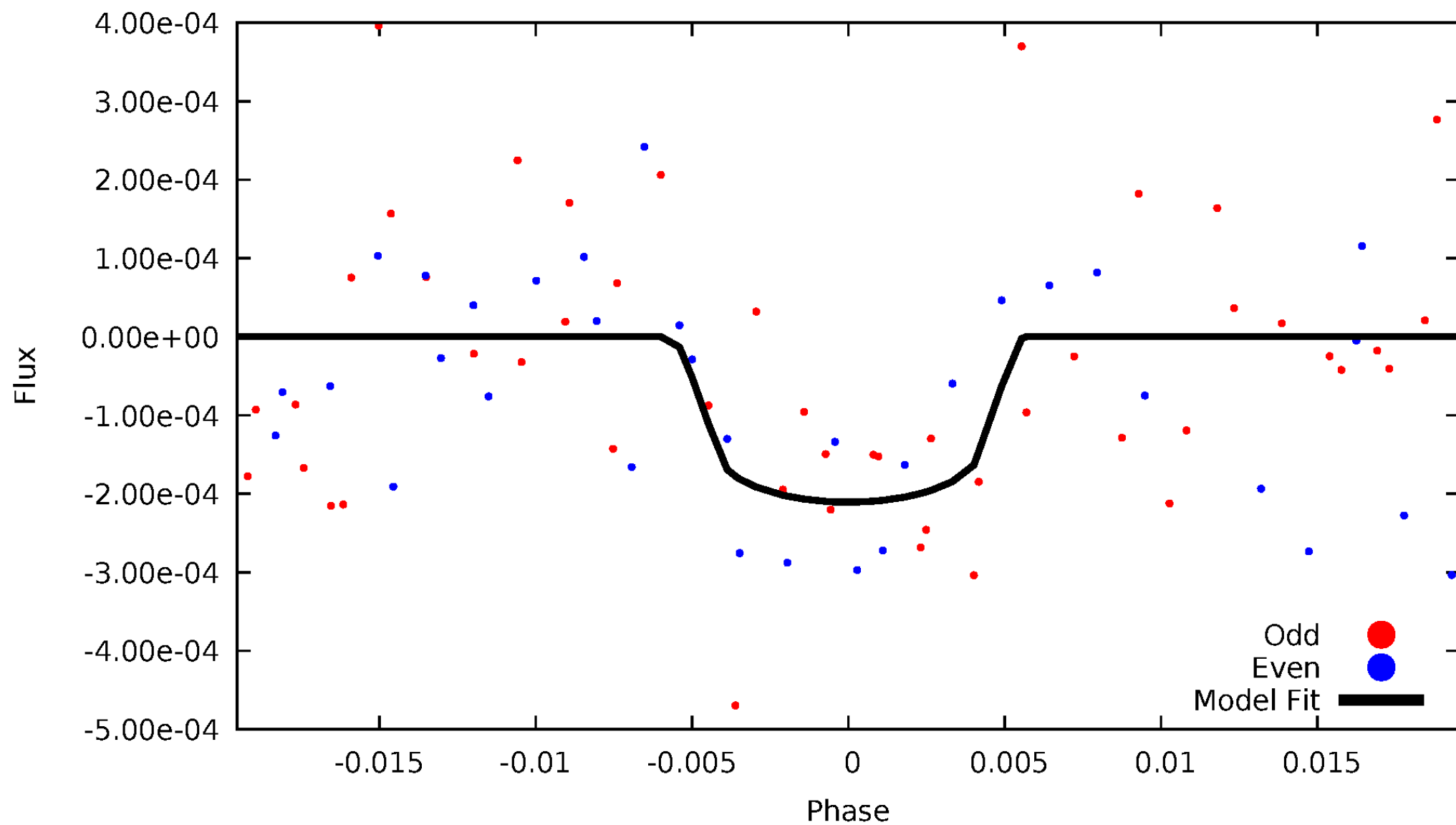


TCE 009673338-07



DV Odd/Even

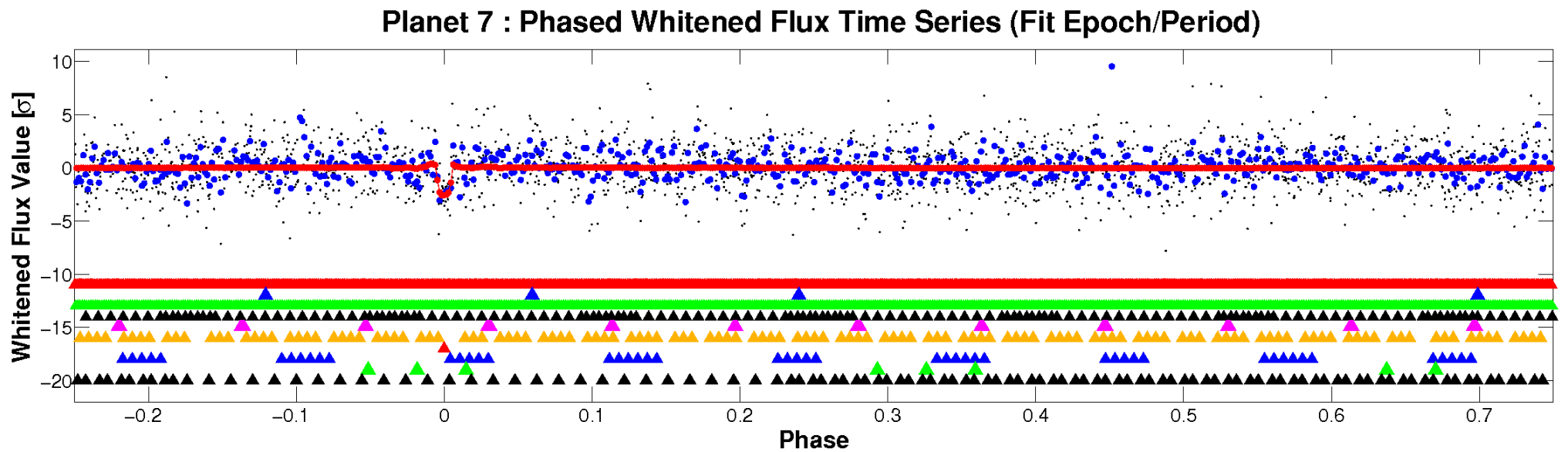
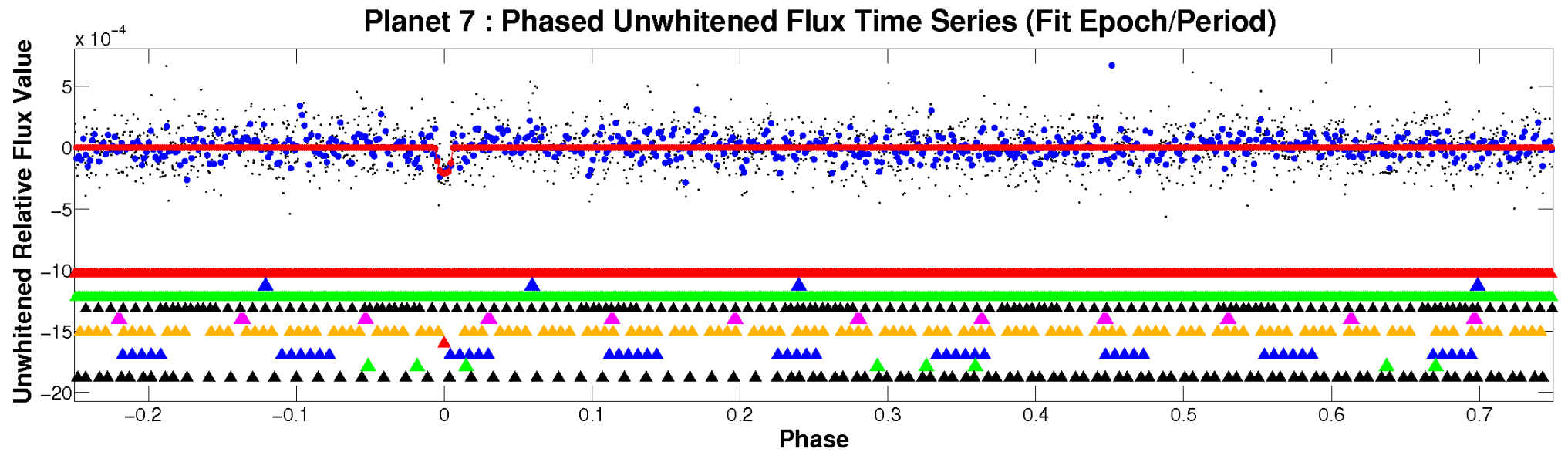
TCE 009673338-07



ALT Odd/Even

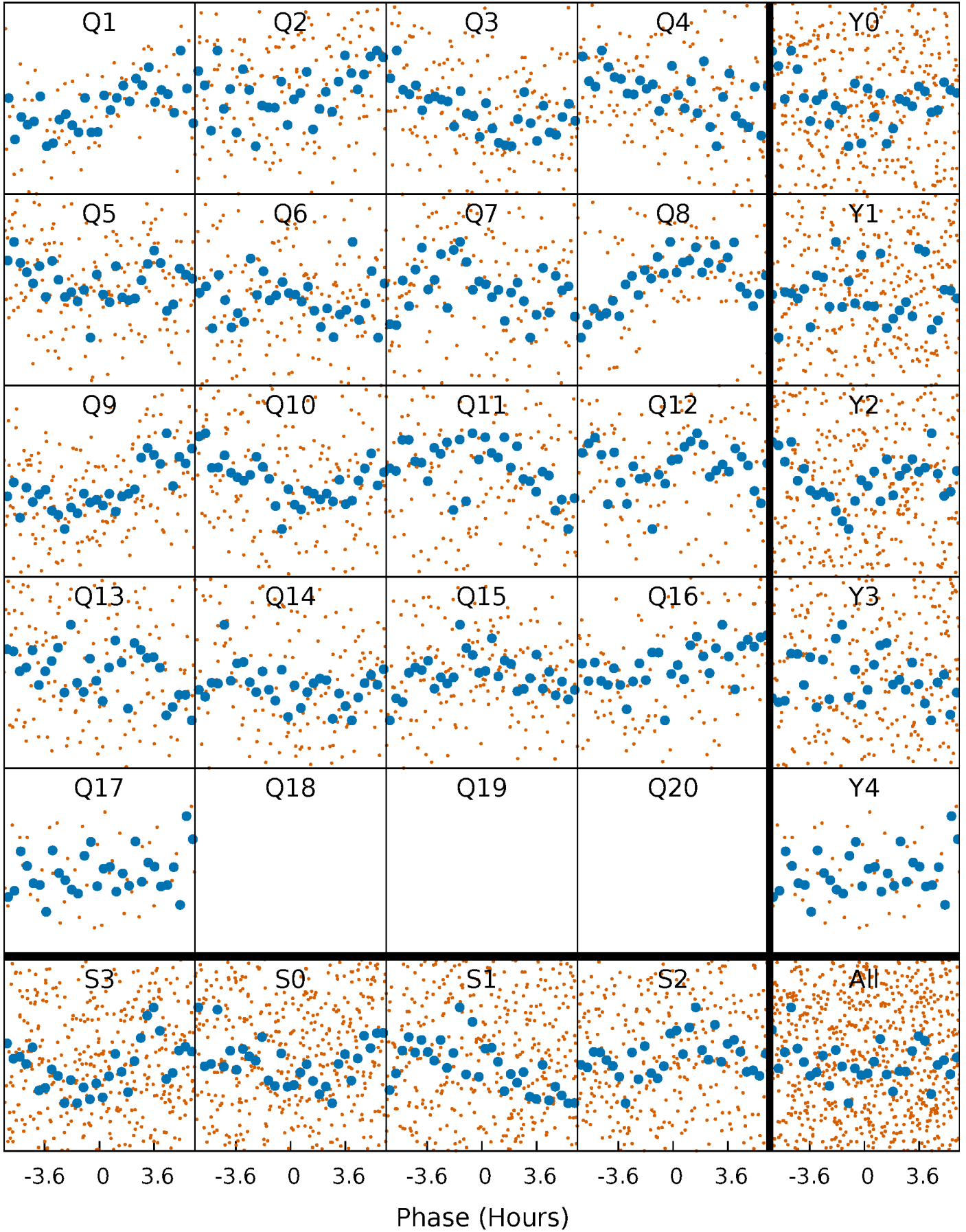
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve



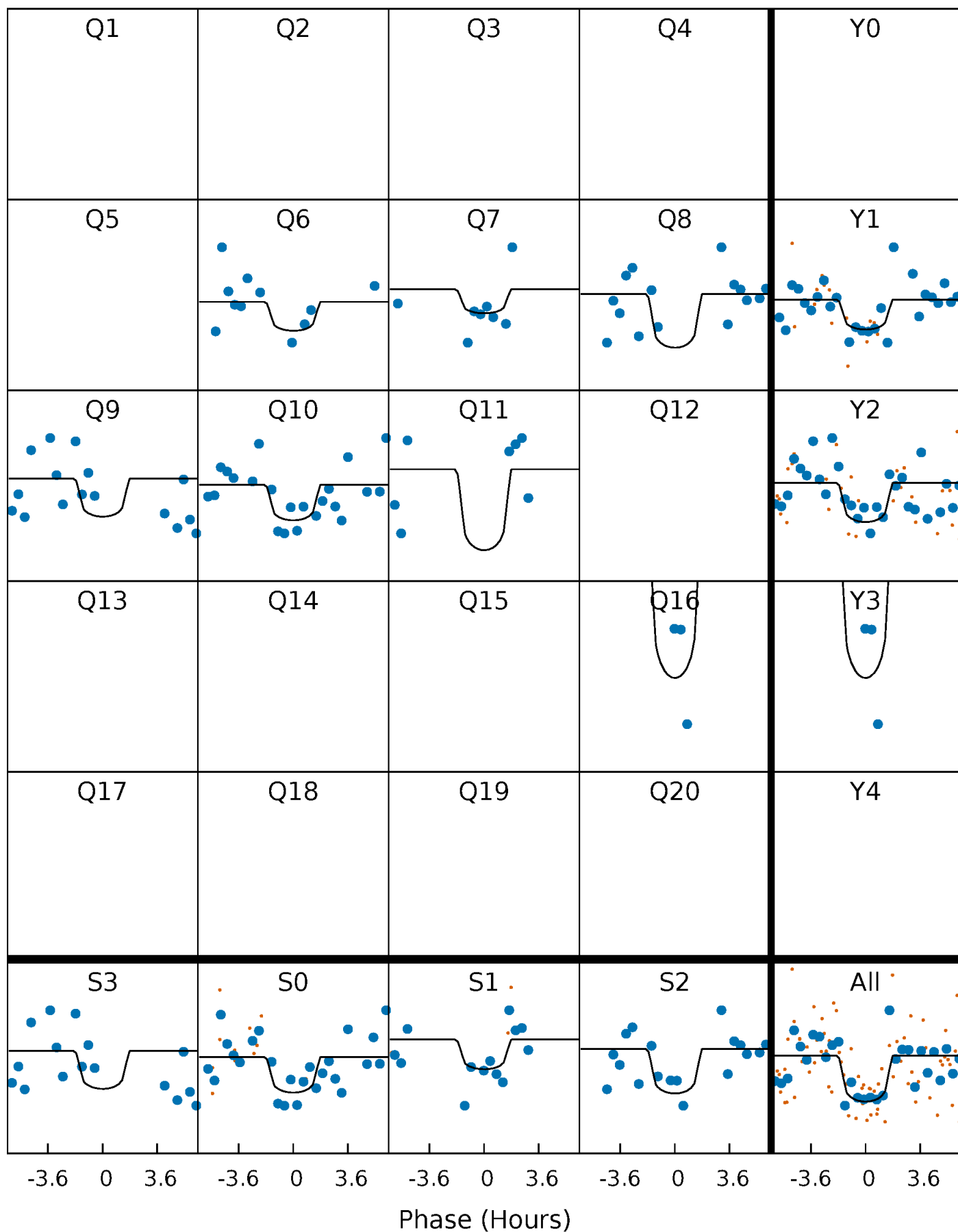
PDC Quarter-Phased Transit Curves

TCE 009673338-07 P= 13.396447 Days $T_0=132.848813$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009673338-07 P= 13.396447 Days $T_0=132.848813$ (BKJD)

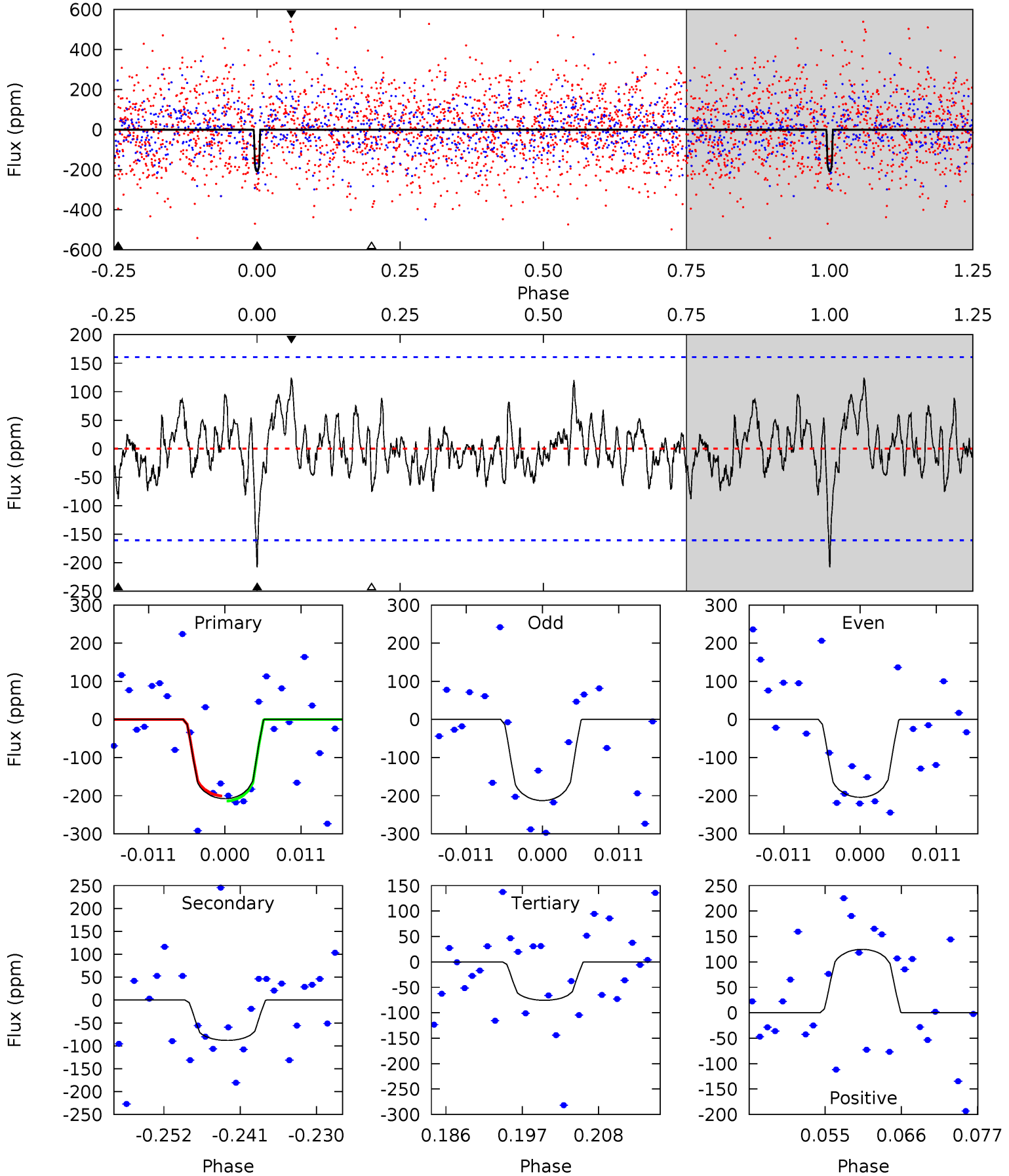


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

009673338-07, P = 13.396447 Days, E = 132.848813 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.47	2.75	2.35	3.88	5.01	2.54	1.15	4.12	2.59	0.40	-1.14	0.13	0.99	0.37	0.21



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 009673338

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6241^{+190}_{-171}	$3.442^{+0.392}_{-0.098}$	$-0.200^{+0.350}_{-0.300}$	$4.157^{+0.611}_{-1.834}$	$1.746^{+0.155}_{-0.465}$	$0.034^{+0.127}_{-0.010}$
	+3%/-3%	+11%/-3%	+175%/-150%	+15%/-44%	+9%/-27%	+369%/-30%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009673338-07 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-88 ± 32	$12.78^{+15.45}_{-8.31}$	2106^{+129}_{-241}	3675^{+1972}_{-870}	$4.618^{+30.967}_{-3.652}$
Alt.	N/A	N/A	N/A	N/A	N/A

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

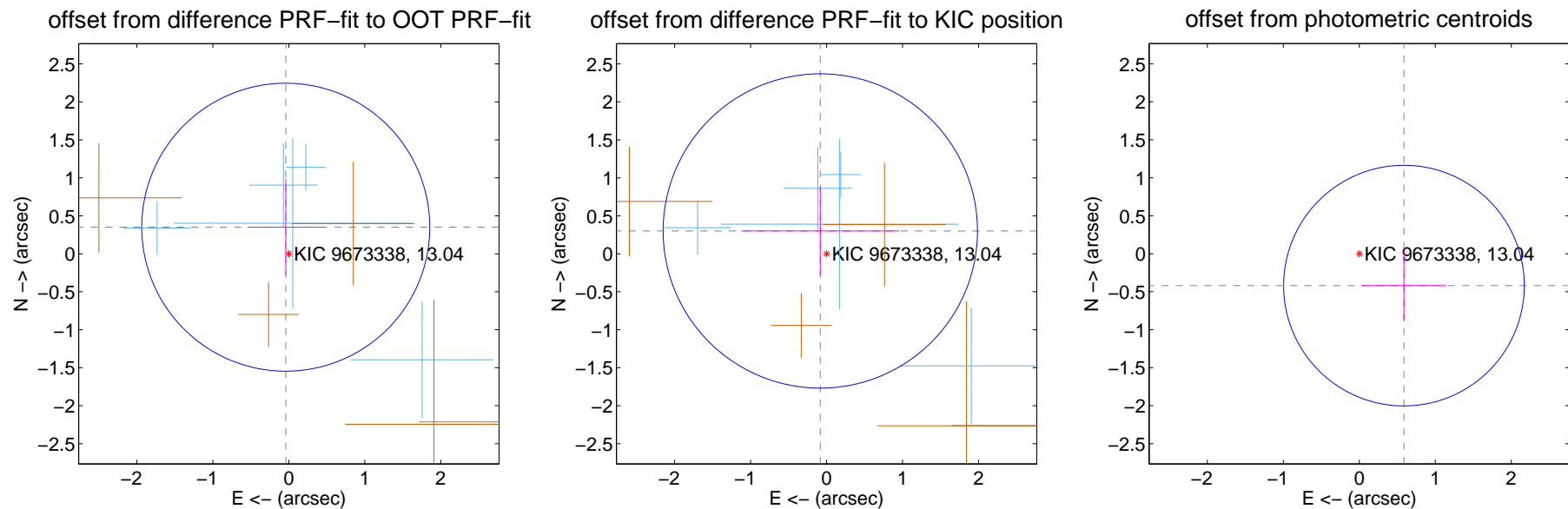
DV Centroid Data

Supplemental centroid analysis for 009673338-07. Kepler magnitude: 13.04. Transit SNR 10.81

There are 5 quarters with good PRF difference image offsets

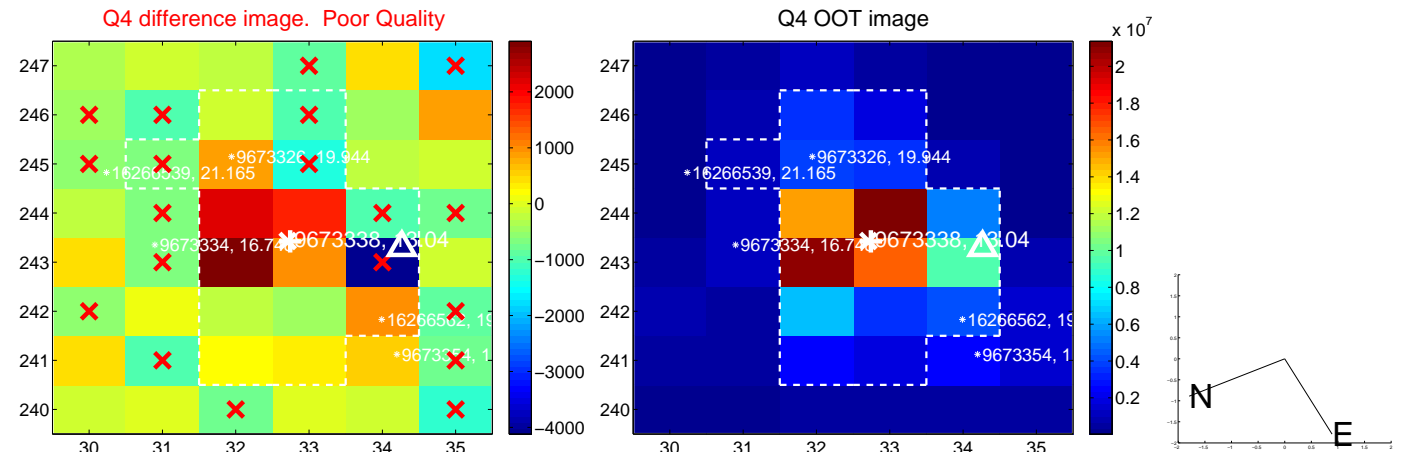
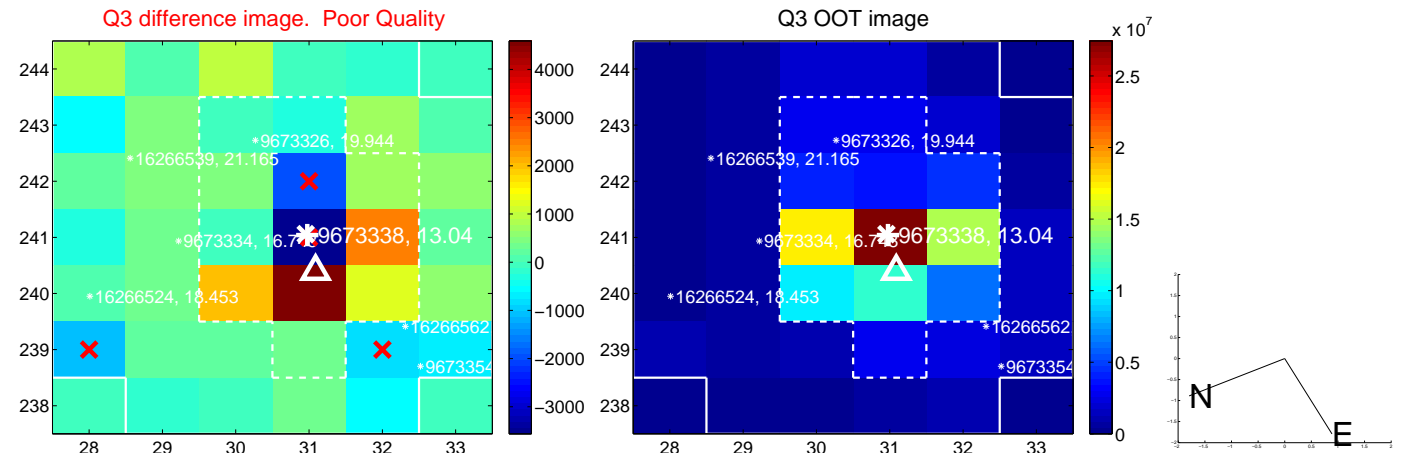
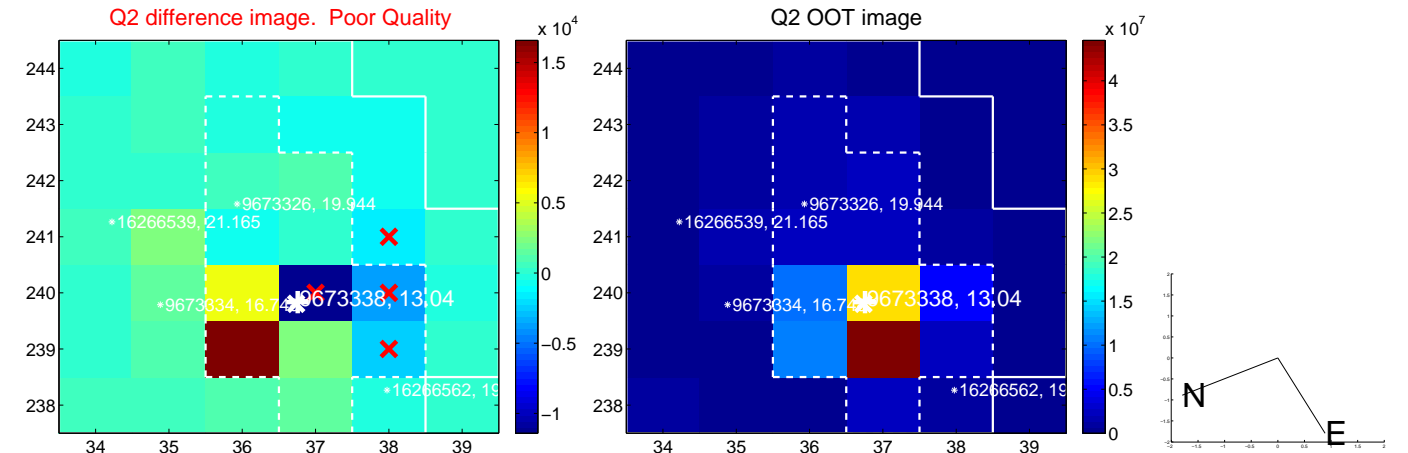
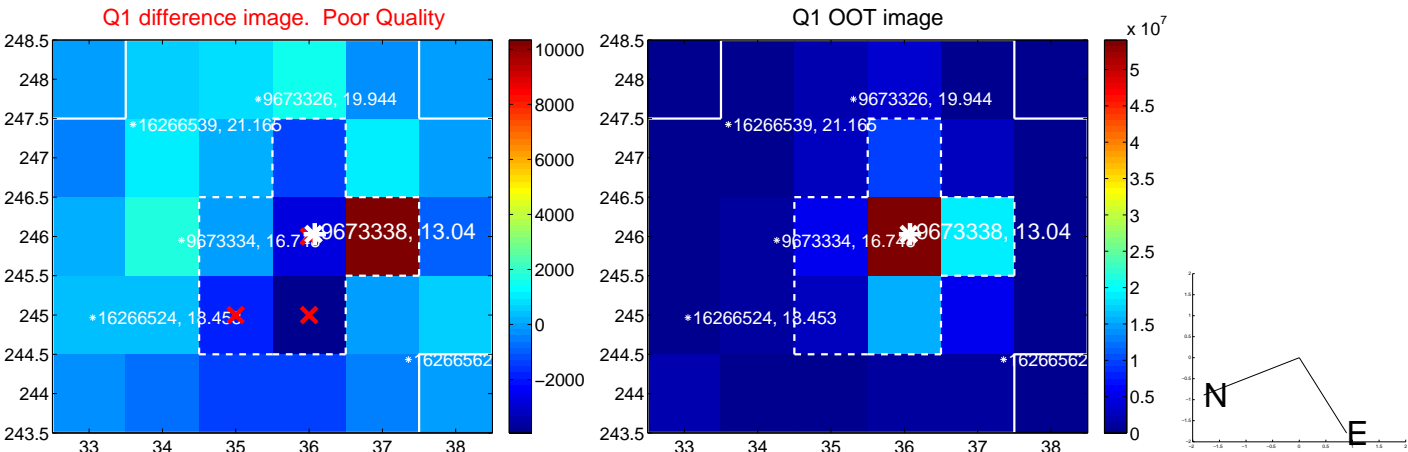
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.352 ± 0.632	0.56	0.040 ± 0.498	0.350 ± 0.633
PRF-fit source offset from KIC position	0.311 ± 0.689	0.45	0.083 ± 1.041	0.300 ± 0.582
photometric centroid source offset	0.72 ± 0.53	1.37	-0.59 ± 0.56	-0.42 ± 0.46

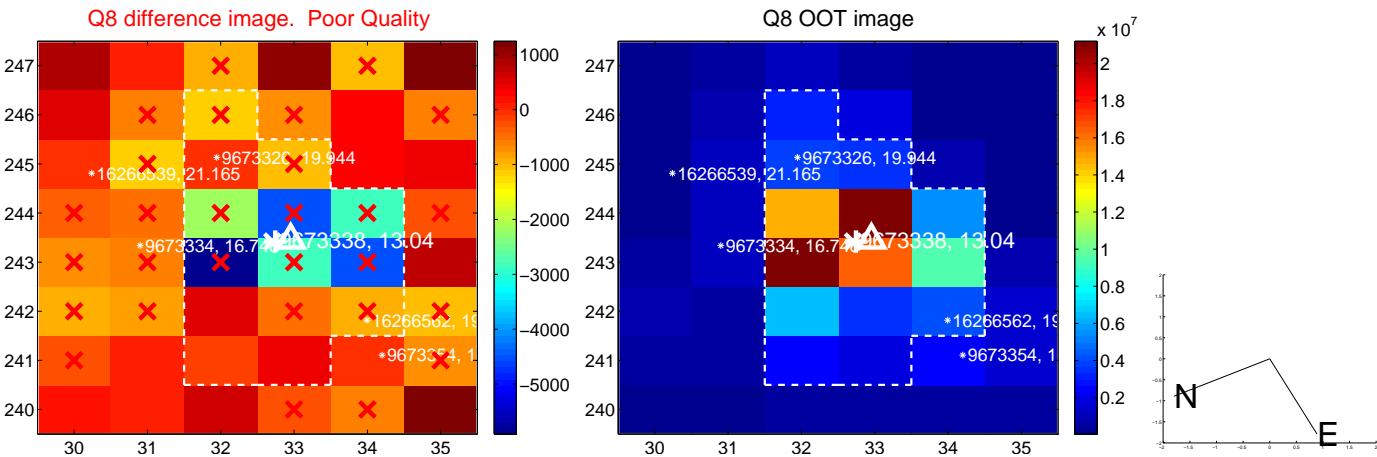
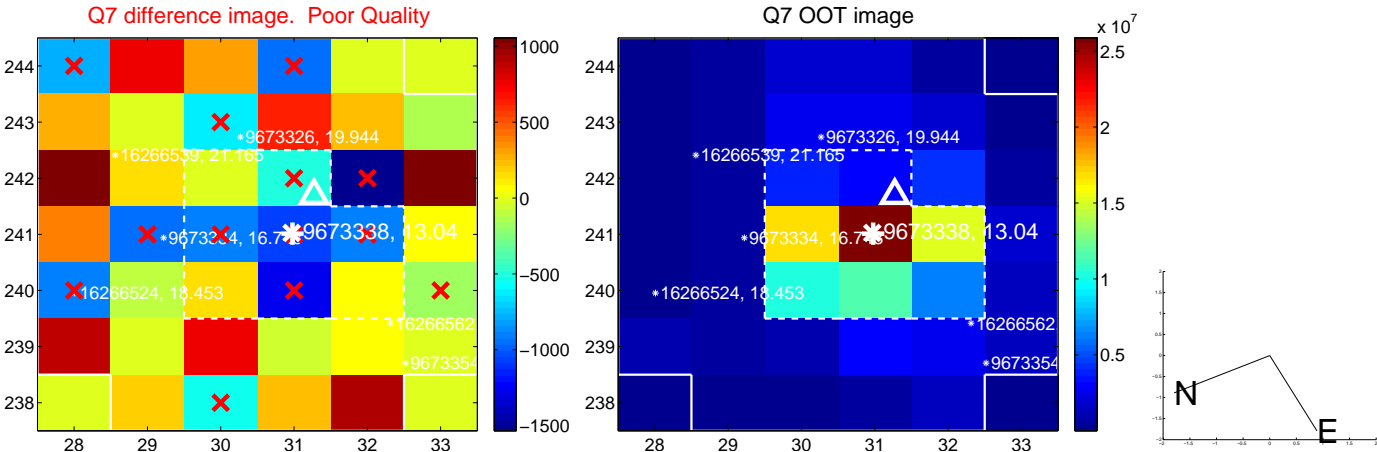
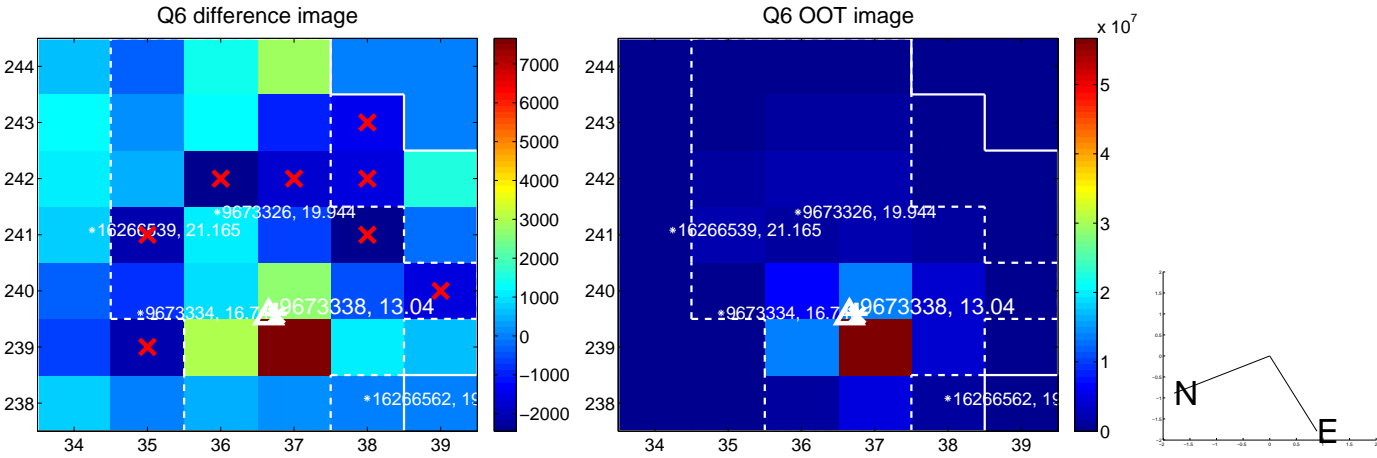
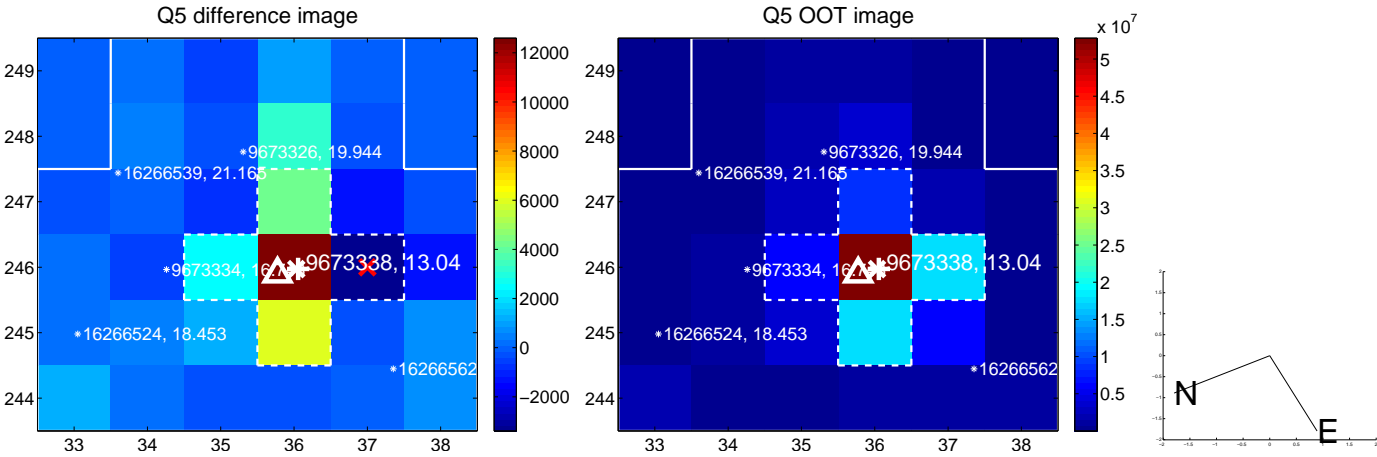


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

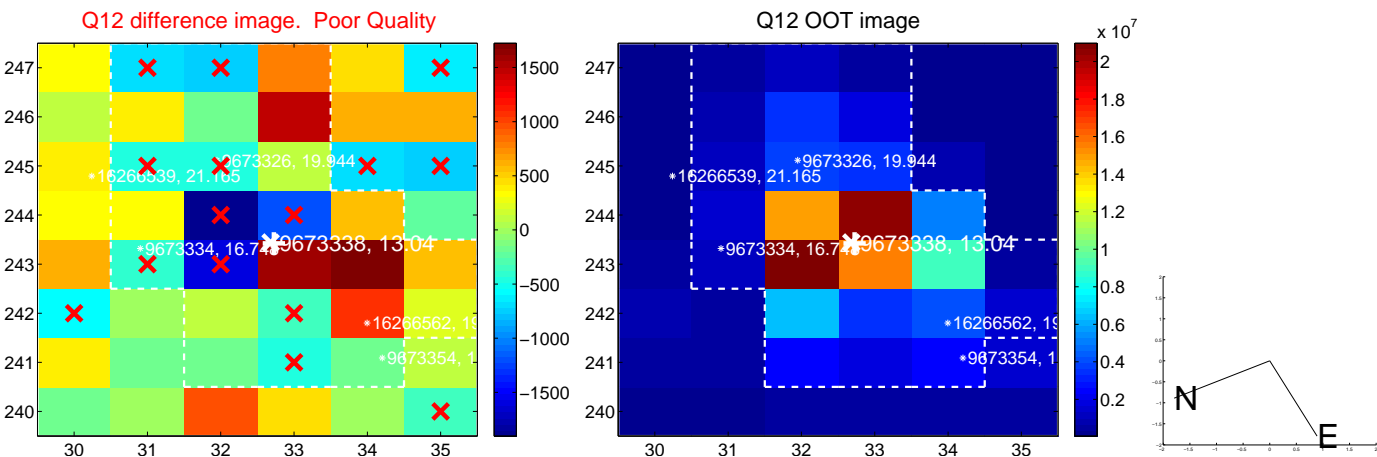
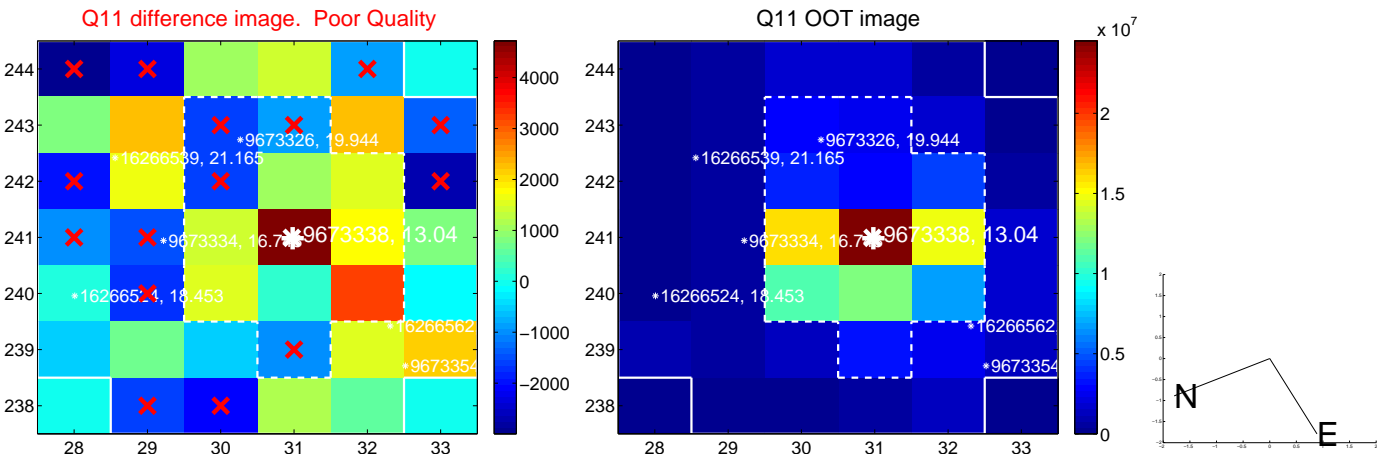
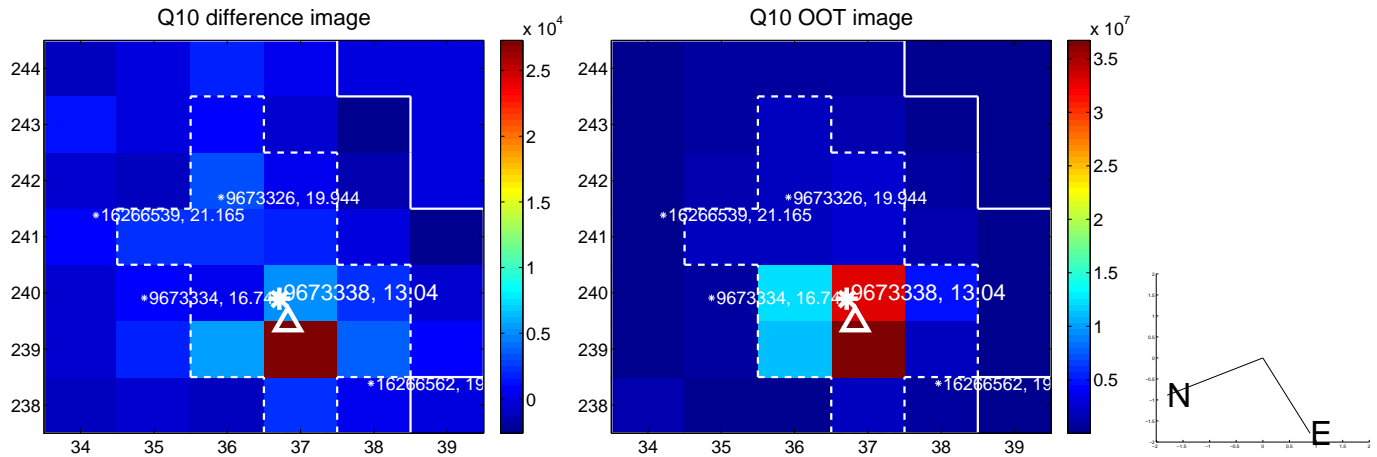
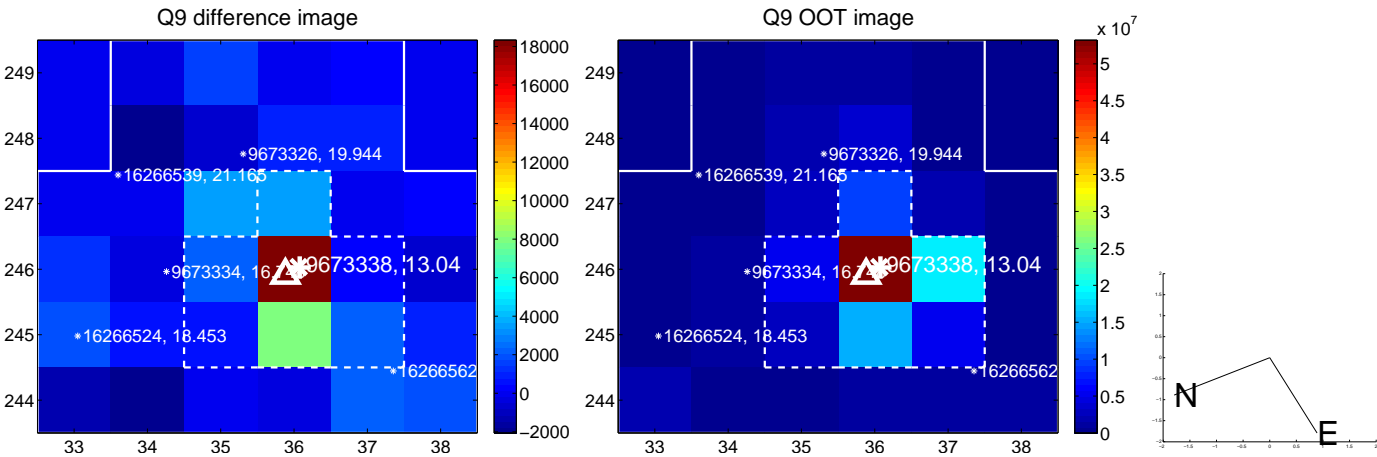
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



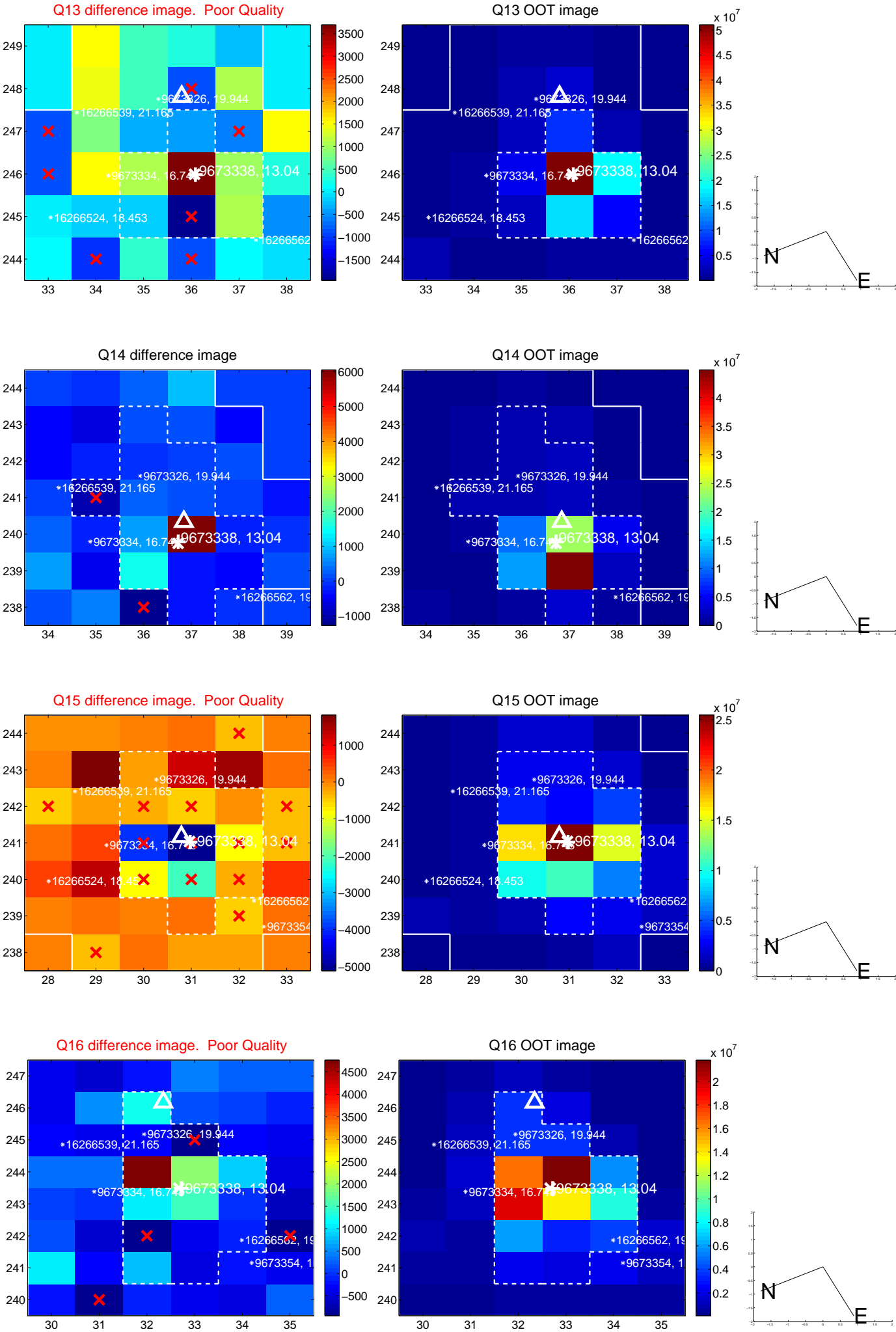
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



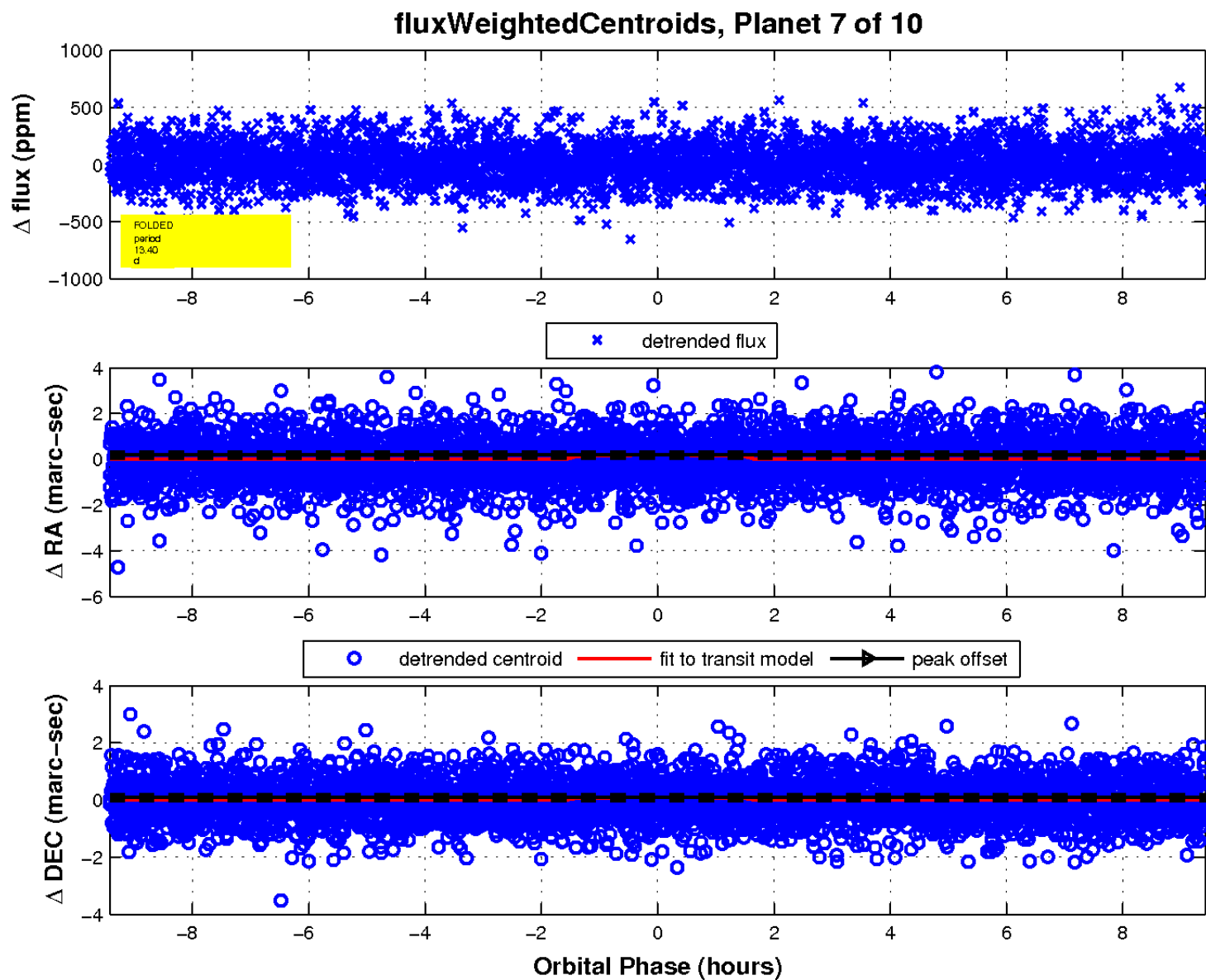
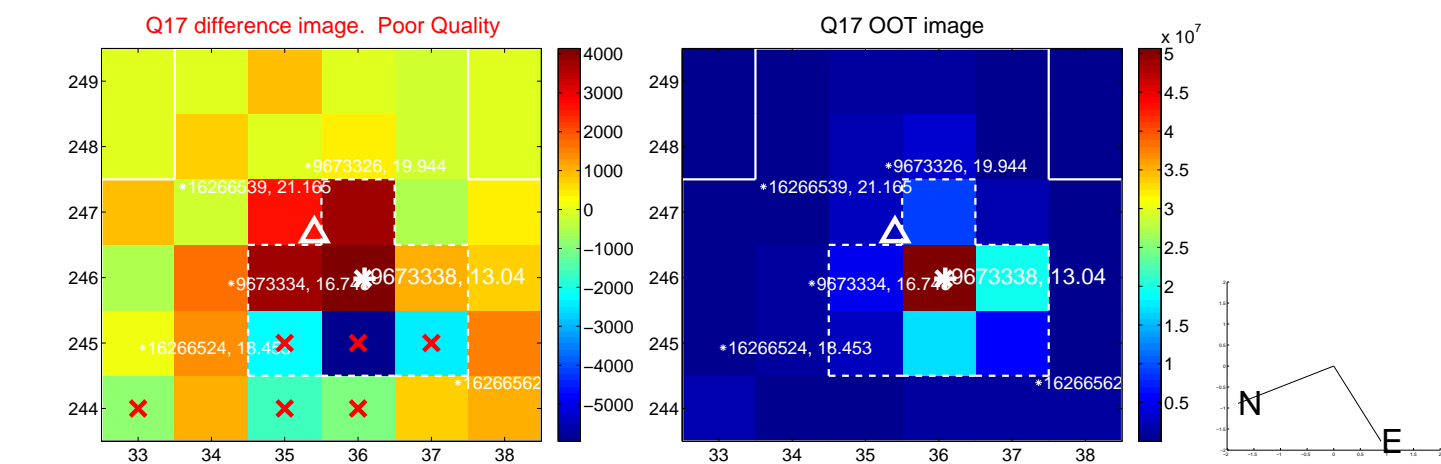
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

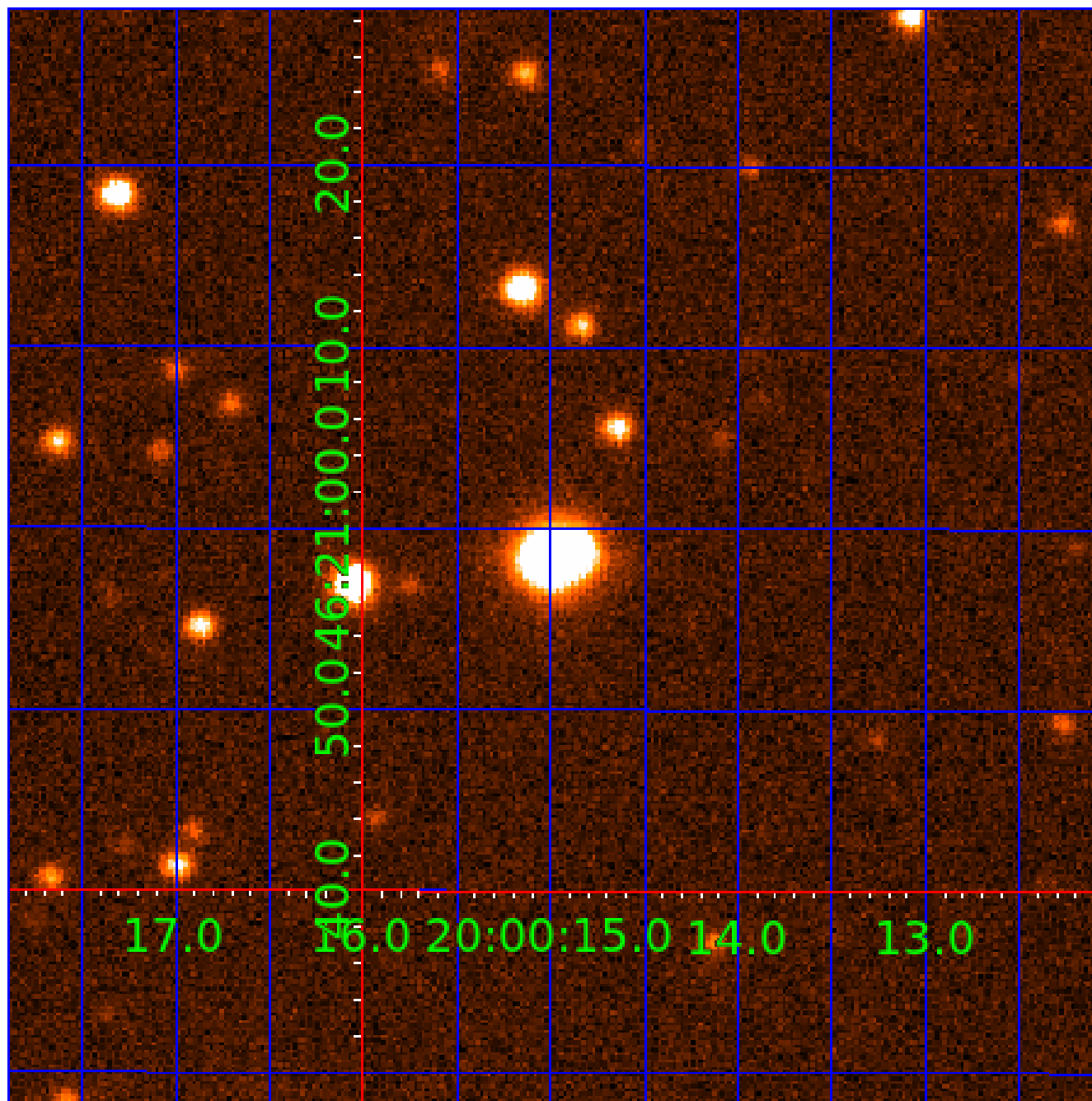


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009673338

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})
009673338-01	OBS	No	1.450943	131.674153	0.0	5.709	11.7	0.0	4.16	6241	0.00	25757.12
009673338-02	OBS	No	399.478089	377.197580	617.3	7.381	12.1	11.2	4.16	6241	10.72	14.38
009673338-03	OBS	No	1.453106	132.117764	9.5	10.296	11.7	4.4	4.16	6241	1.32	25706.01
009673338-04	OBS	No	9.584975	135.987275	287.9	1.350	12.1	11.1	4.16	6241	7.10	2077.99
009673338-05	OBS	No	18.977727	146.671085	224.1	2.281	11.0	9.1	4.16	6241	6.40	835.81
009673338-06	OBS	No	11.097720	139.371899	228.6	1.663	9.6	8.4	4.16	6241	7.27	1709.17
009673338-07	OBS	No	13.396447	132.848813	210.8	3.141	9.6	10.8	4.16	6241	6.06	1329.78
009673338-08	OBS	No	29.760323	145.204337	254.1	2.470	9.4	10.3	4.16	6241	7.73	458.75
009673338-09	OBS	No	178.767059	279.521486	348.8	5.000	9.1	-1.0	4.16	6241	7.78	42.01
009673338-10	OBS	No	13.594499	135.993905	249.7	1.534	8.7	9.2	4.16	6241	6.74	1304.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009673338-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
009673338-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009673338-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
009673338-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
009673338-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—NO_FITS—INCONSISTENT_TRANS—CENT_NOFITS
009673338-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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

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

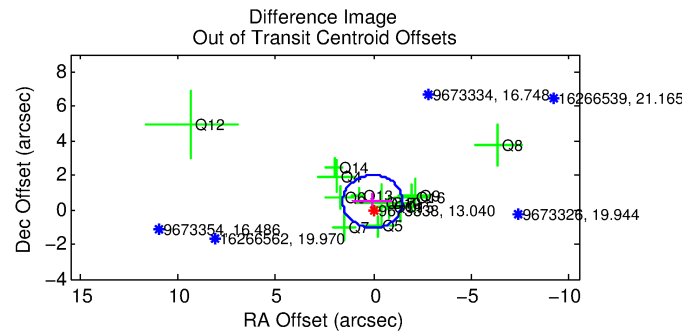
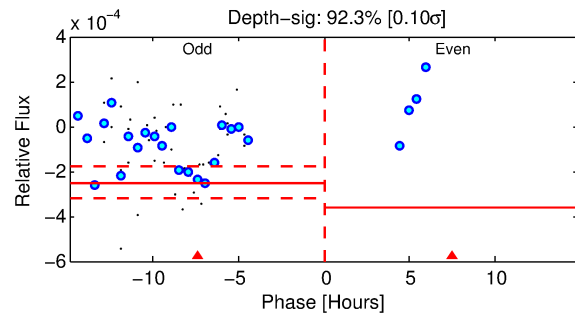
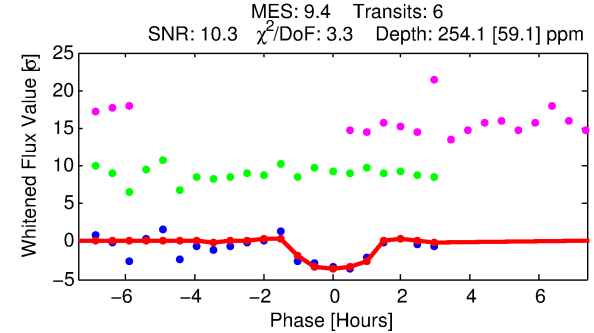
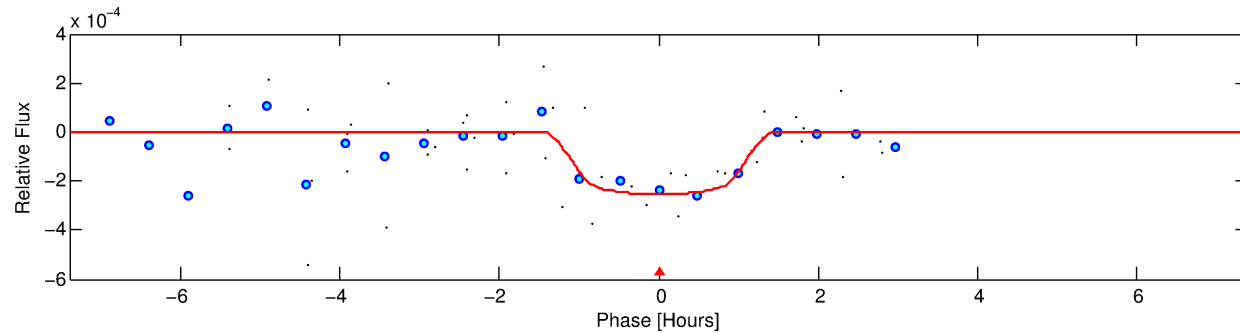
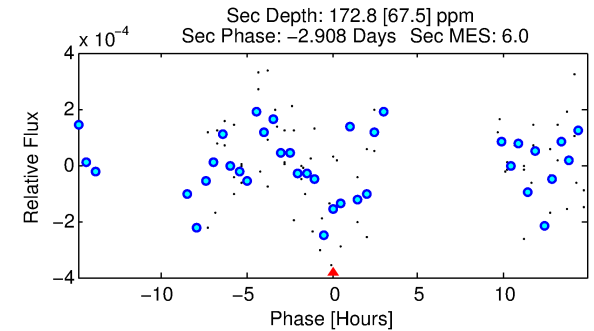
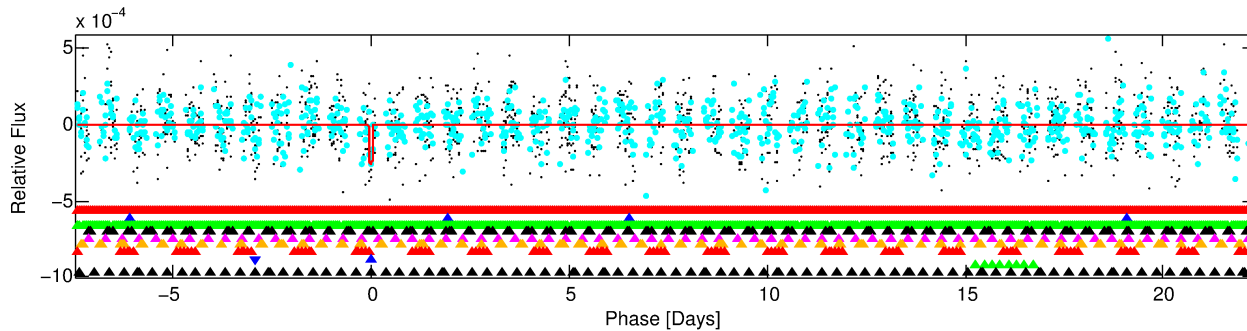
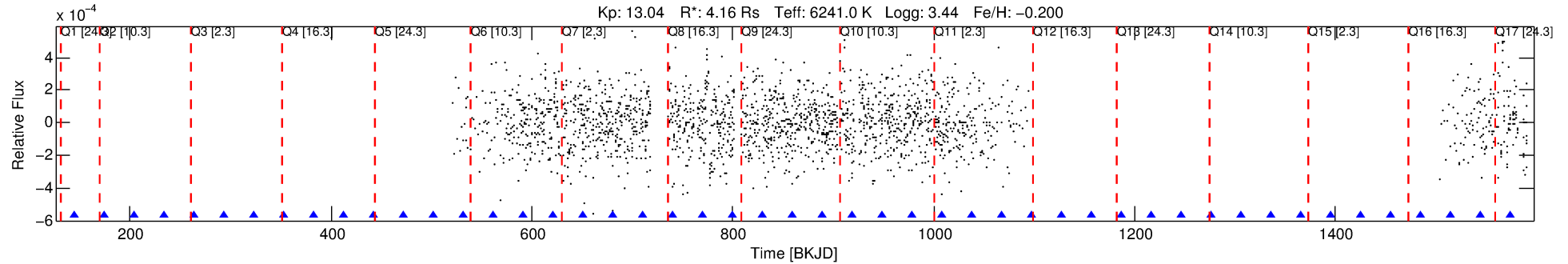
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009673338-08

No Significant Match Found

DV One-Page Summary

KIC: 9673338 Candidate: 8 of 10 Period: 29.760 d



DV Fit Results:

Period = 29.76032 [0.00229] d
Epoch = 145.2043 [0.0596] BKJD
Rp/R* = 0.0170 [0.0163]
a/R* = 44.68 [230.33]
b = 0.89 [1.19]
Seff = 458.76 [312.30]
Teq = 1180 [201] K
Rp = 7.73 [8.16] Re
a = 0.2263 [0.0952] AU
Ag = 81.38 [168.34] [0.48σ]
Teffp = 5480 [2687] K [1.60σ]

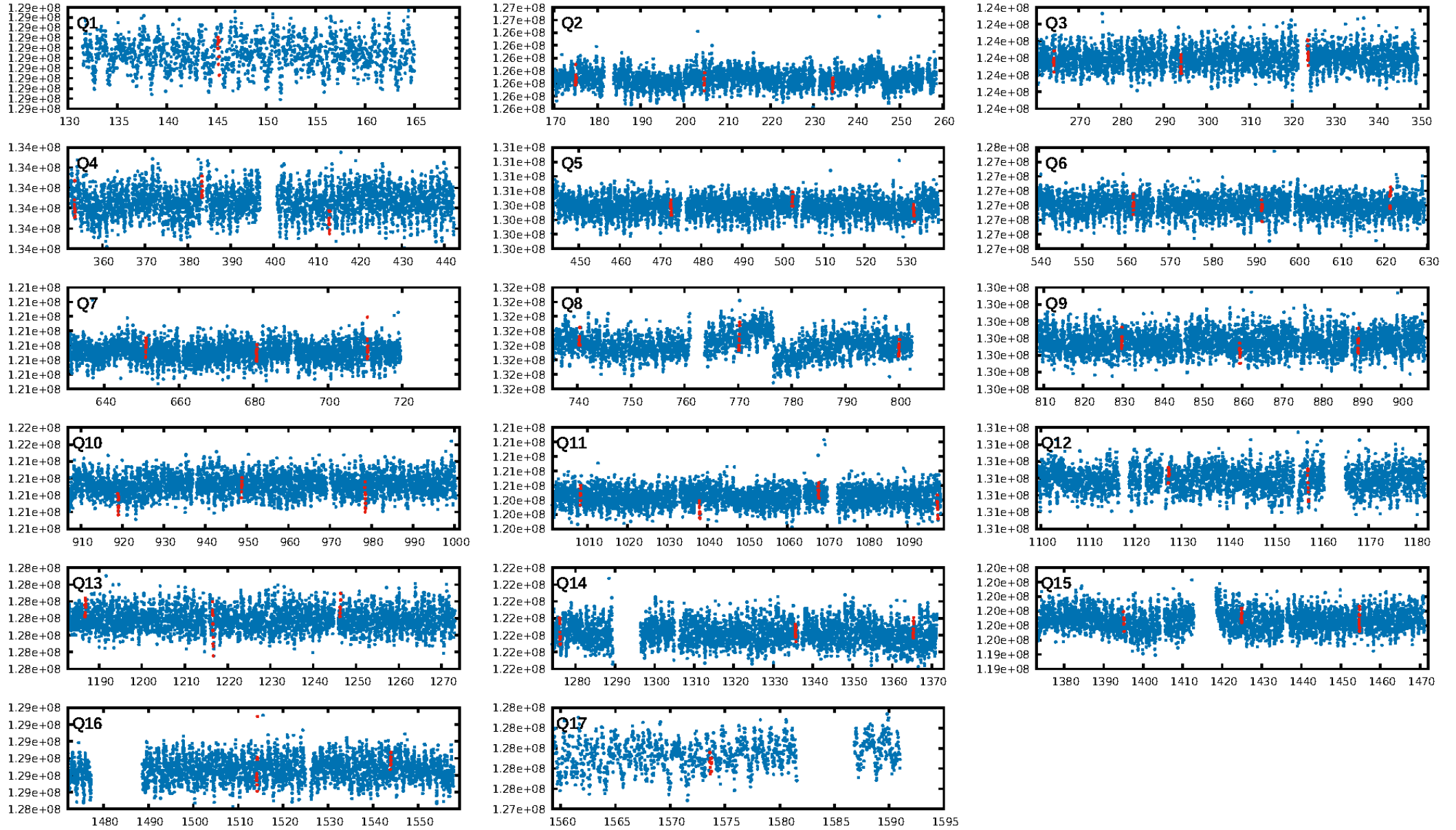
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [76.98σ]
LongPeriod-sig: 100.0% [641.26σ]
ModelChiSquare2-sig: 0.4%
ModelChiSquareGof-sig: 75.3%
Bootstrap-pfa: 1.12e-07
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -12.48
Centroid-sig: 55.0%
Centroid-so: 0.419 arcsec [0.54σ]
OotOffset-rm: 0.487 arcsec [0.96σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-rm: 0.443 arcsec [0.98σ]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.36 [5/14]
DiffImageOverlap-fno: 0.29 [5/17]

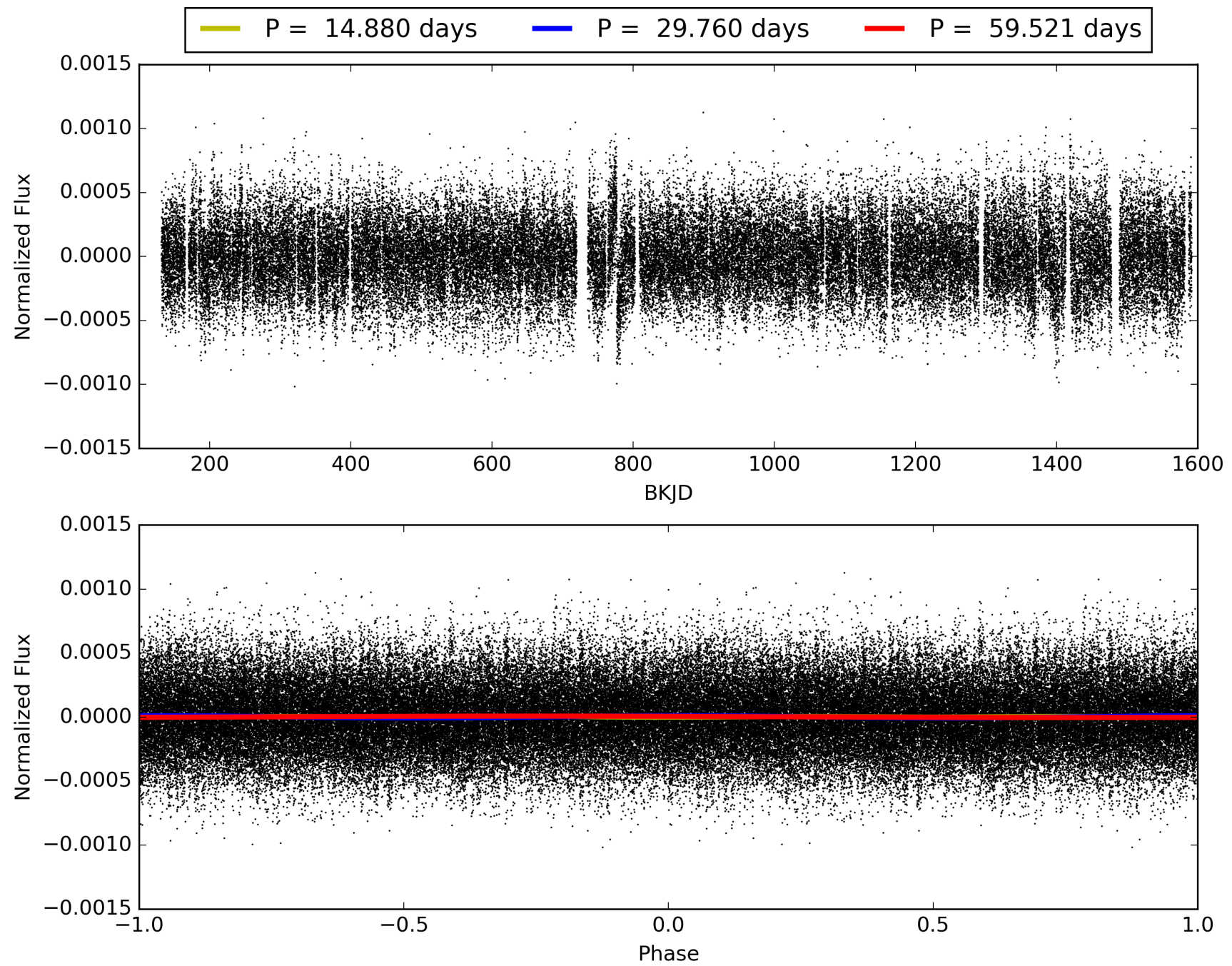
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 11:15:15 Z

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

TCE 009673338-08, PDC Light Curves

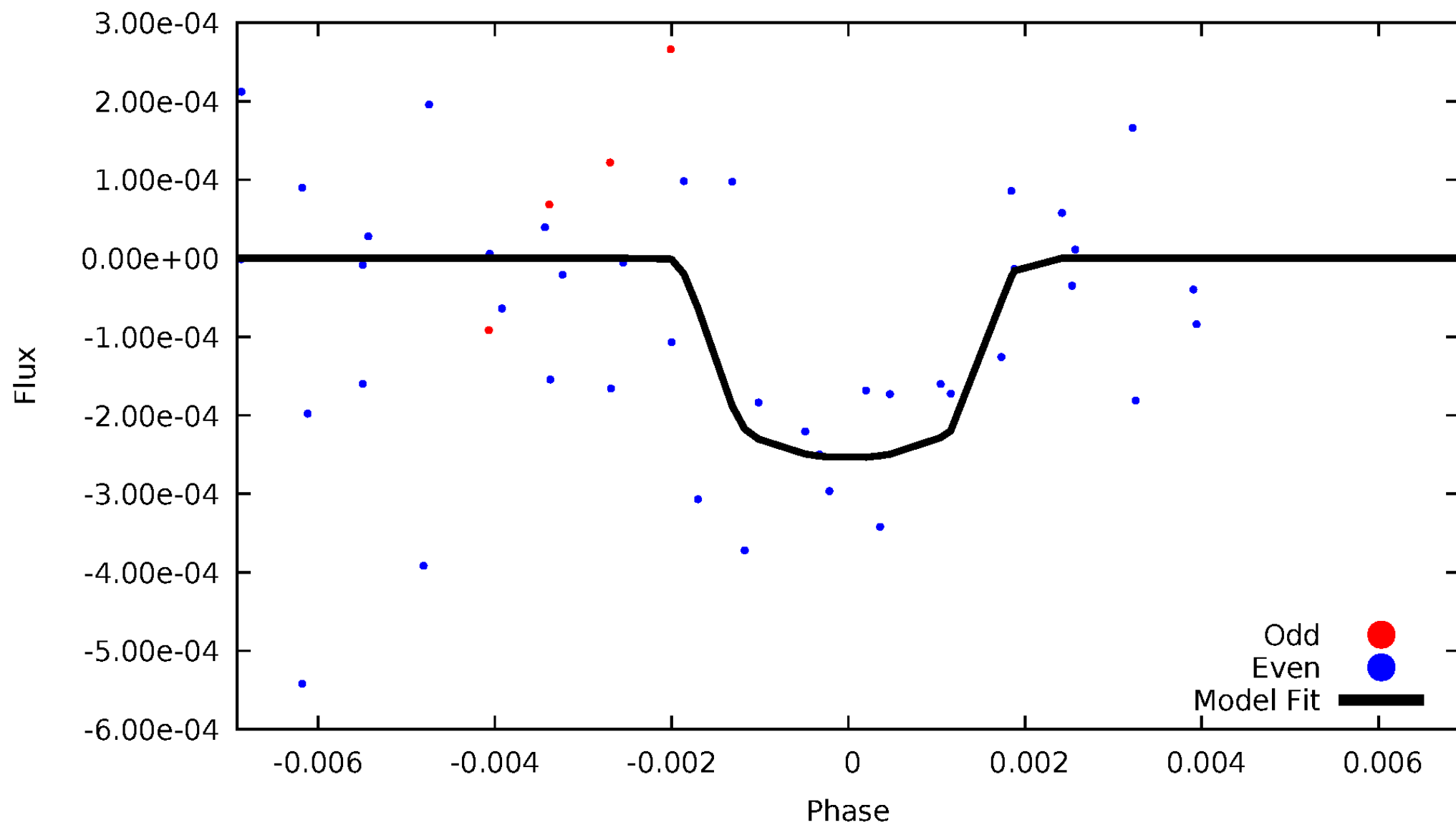


TCE 009673338-08



DV Odd/Even

TCE 009673338-08

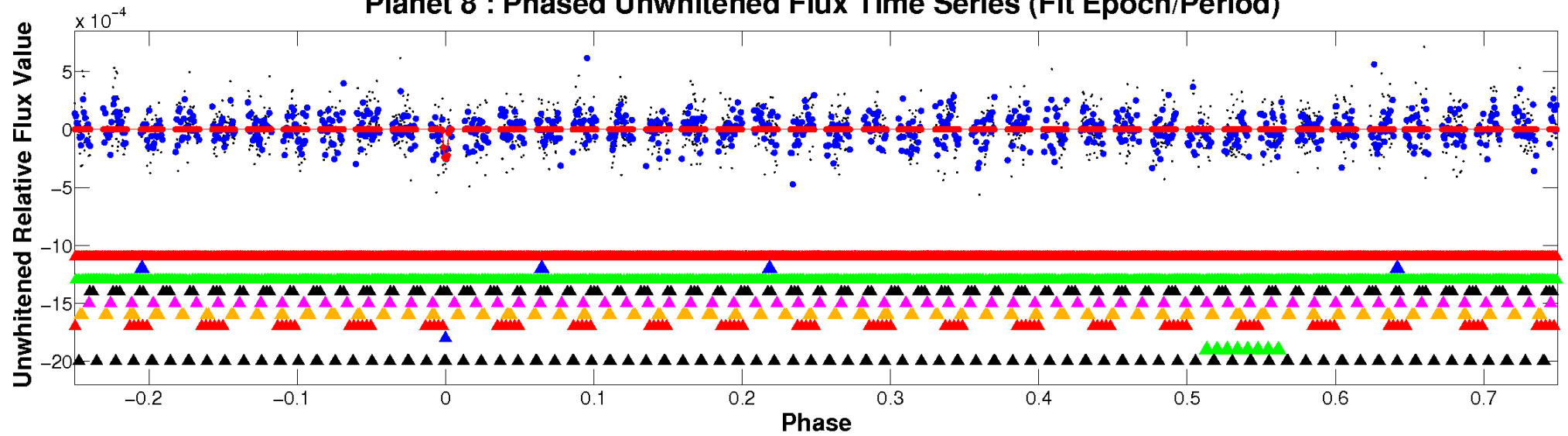


ALT Odd/Even

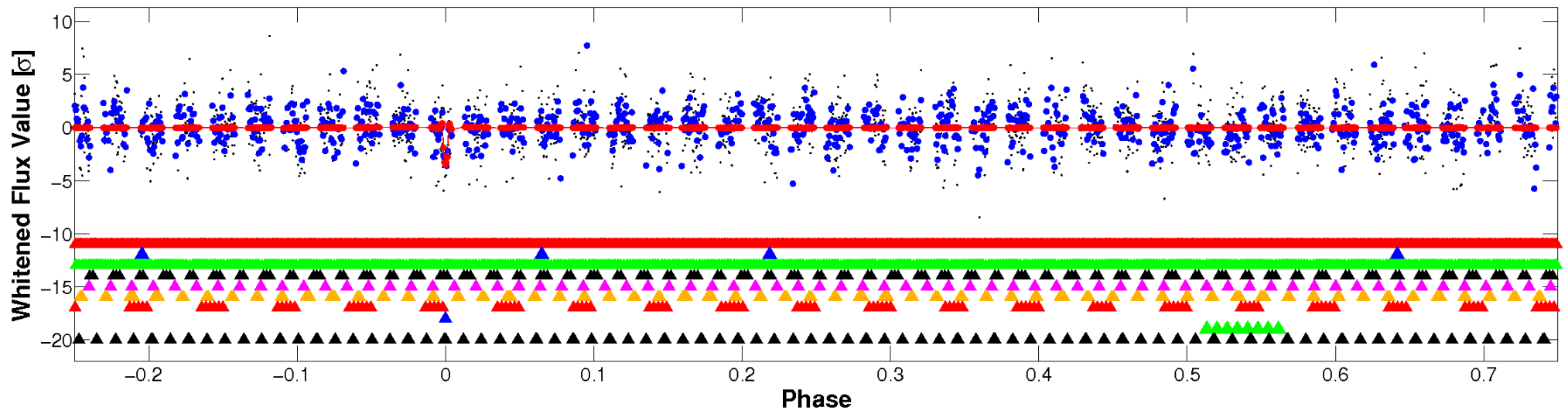
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

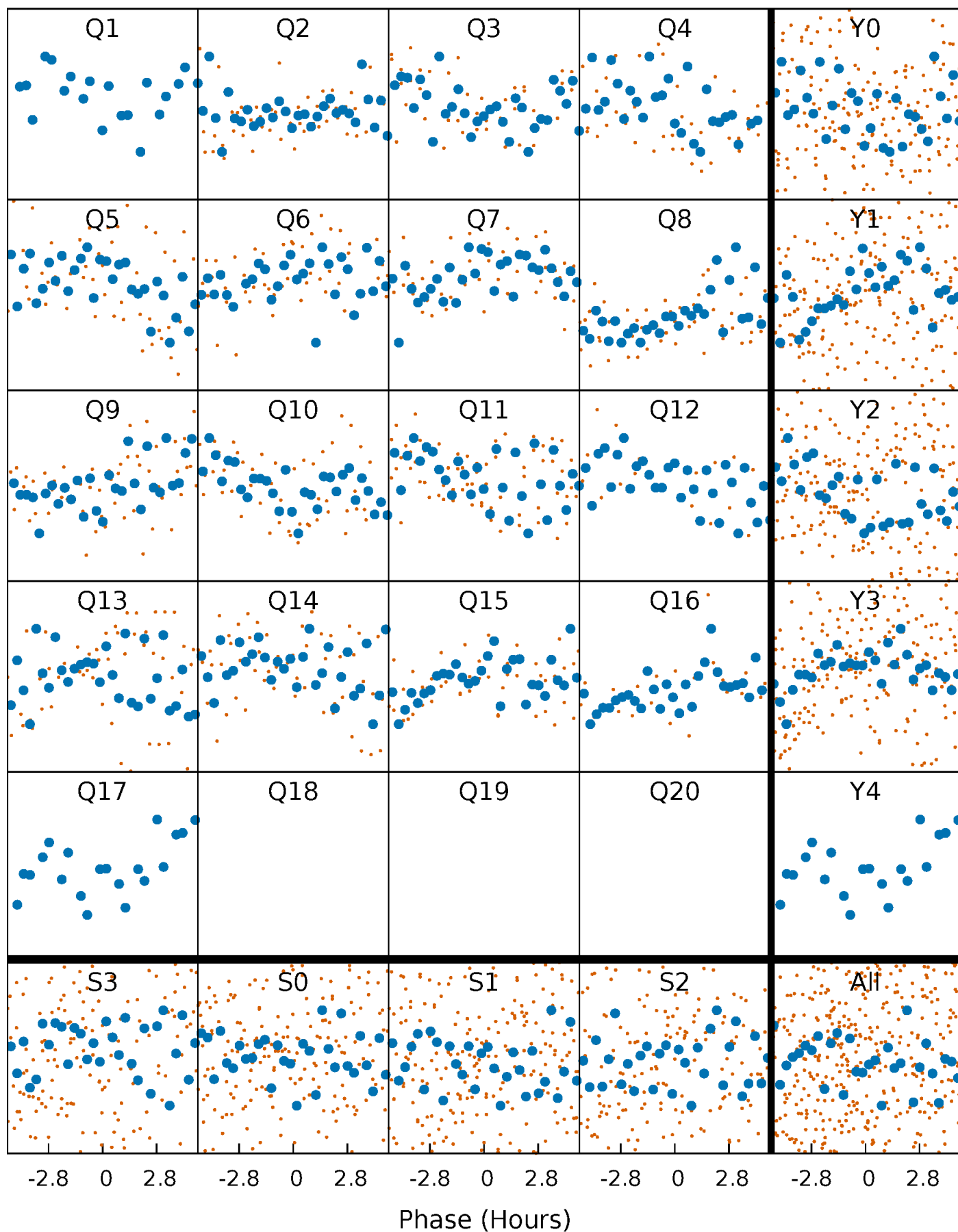


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



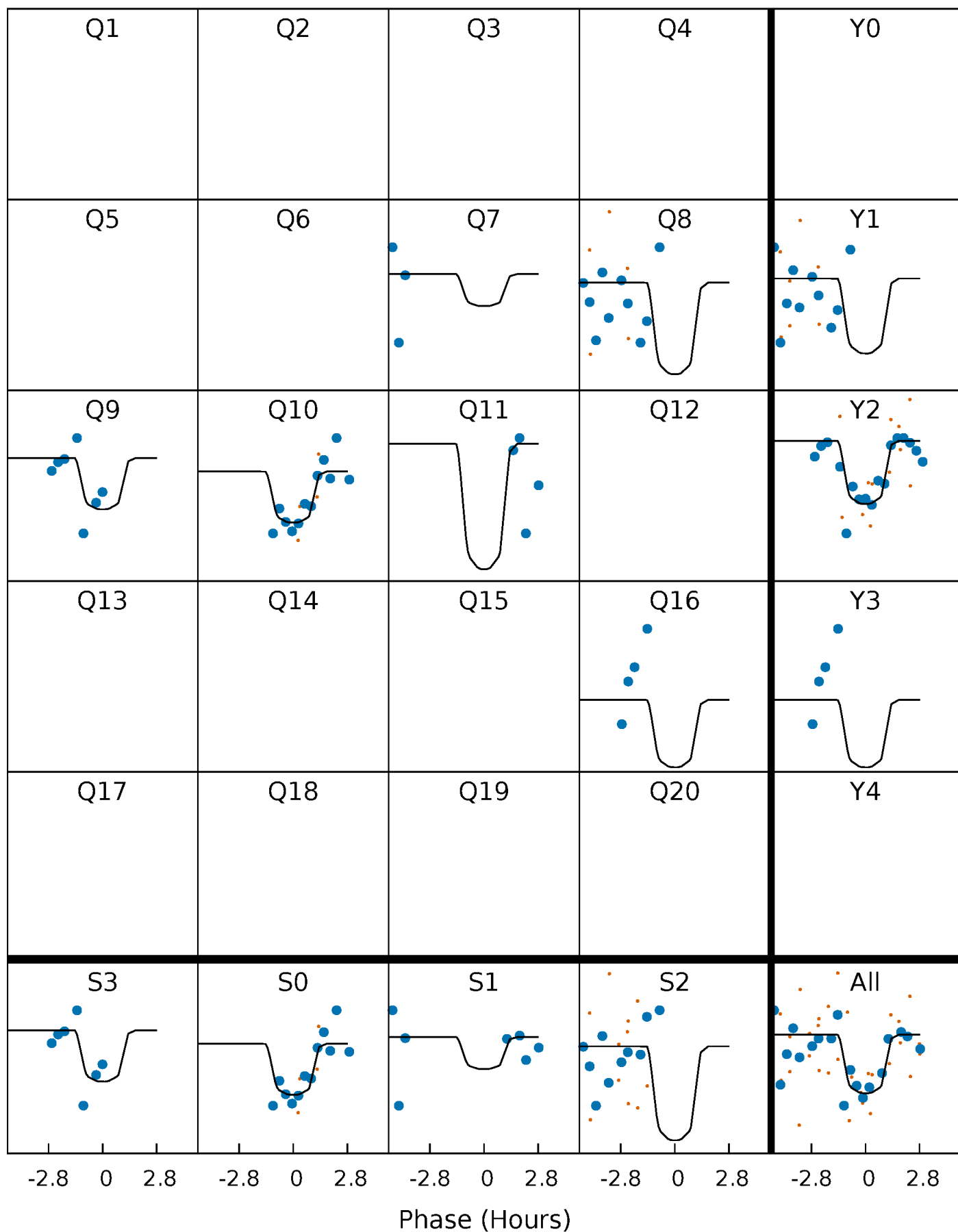
PDC Quarter-Phased Transit Curves

TCE 009673338-08 P= 29.760323 Days $T_0=145.204337$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009673338-08 $P = 29.760323$ Days $T_0 = 145.204337$ (BKJD)

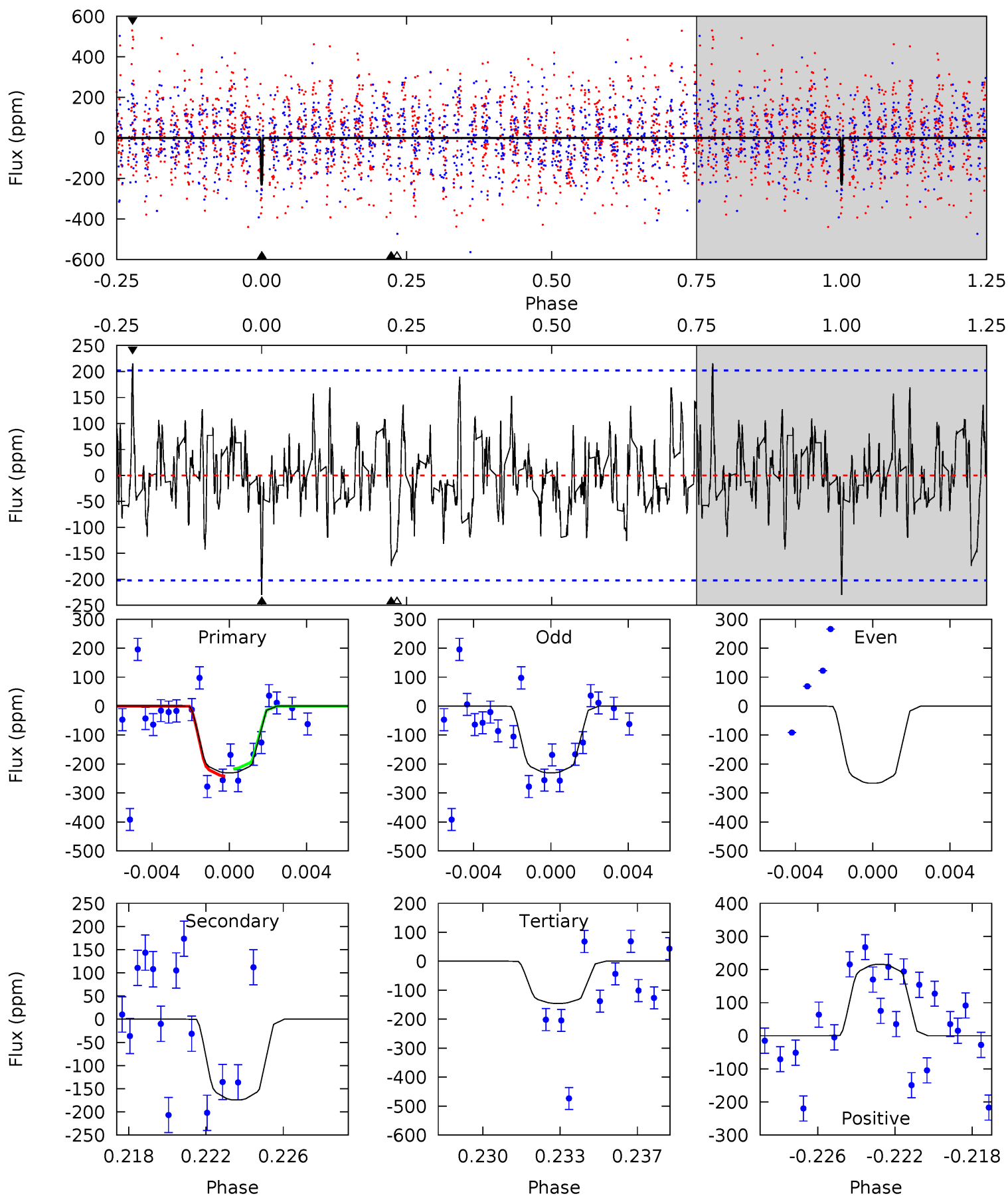


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

009673338-08, P = 29.760323 Days, E = 145.204337 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.93	4.49	3.75	5.55	5.20	2.89	1.52	2.18	0.38	0.73	-1.06	0.23	0.65	0.48	0.32



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 009673338

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6241^{+190}_{-171}	$3.442^{+0.392}_{-0.098}$	$-0.200^{+0.350}_{-0.300}$	$4.157^{+0.611}_{-1.834}$	$1.746^{+0.155}_{-0.465}$	$0.034^{+0.127}_{-0.010}$
	+3%/-3%	+11%/-3%	+175%/-150%	+15%/-44%	+9%/-27%	+369%/-30%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009673338-08 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-174 ± 39	$7.82^{+6.71}_{-4.73}$	1630^{+90}_{-177}	5162^{+3487}_{-1067}	75^{+434}_{-55}
Alt.	N/A	N/A	N/A	N/A	N/A

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

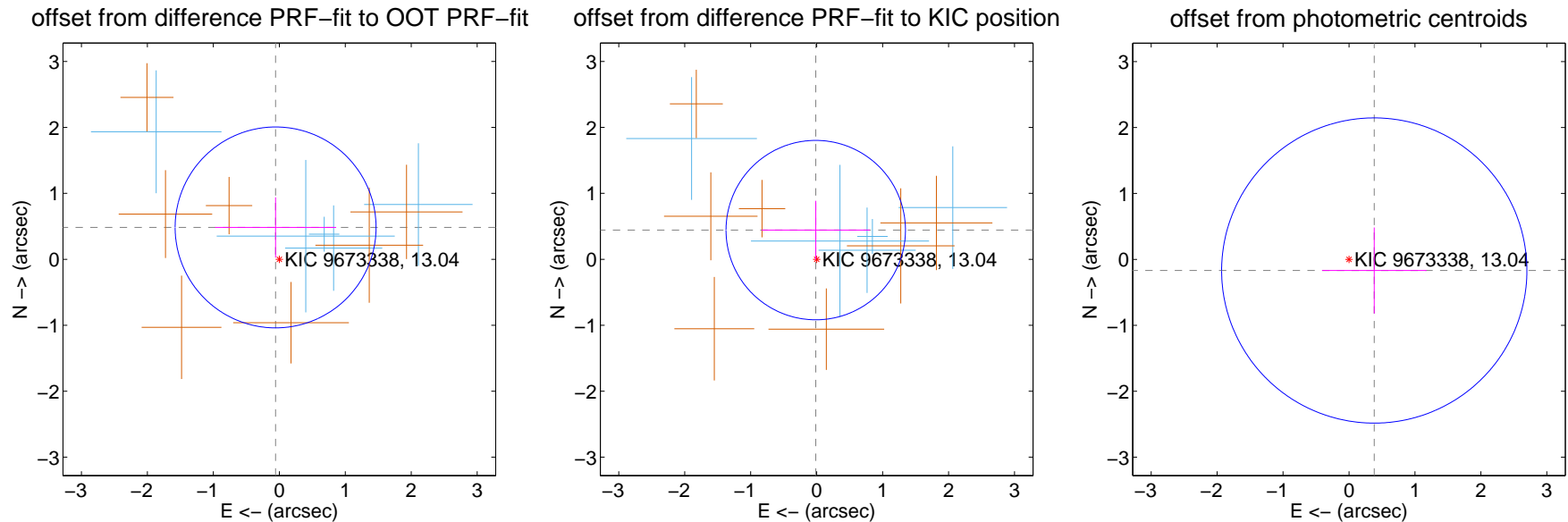
DV Centroid Data

Supplemental centroid analysis for 009673338-08. Kepler magnitude: 13.04. Transit SNR 10.29

There are 5 quarters with good PRF difference image offsets

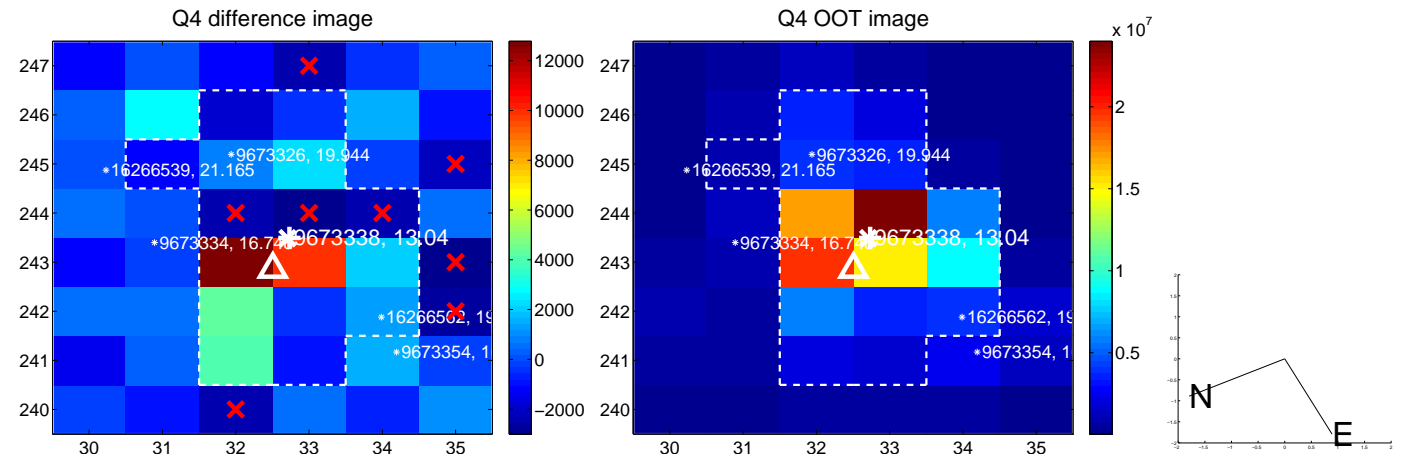
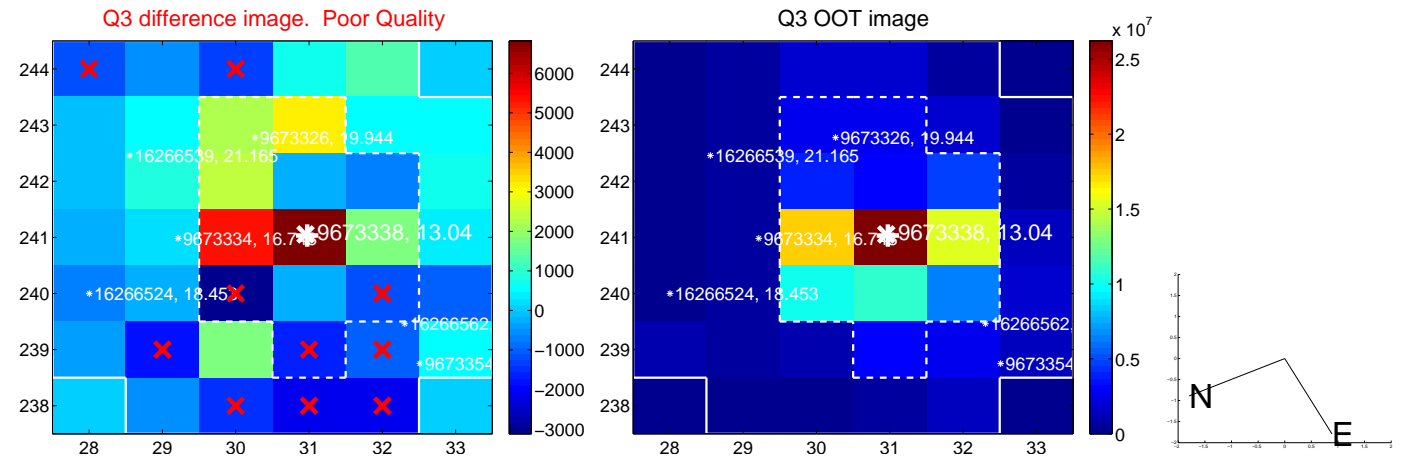
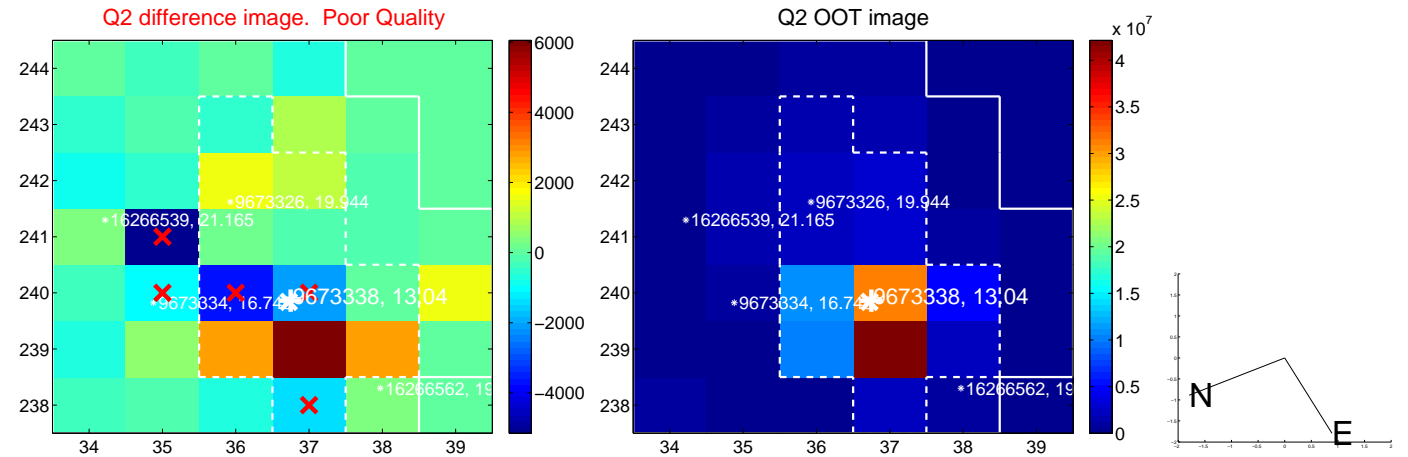
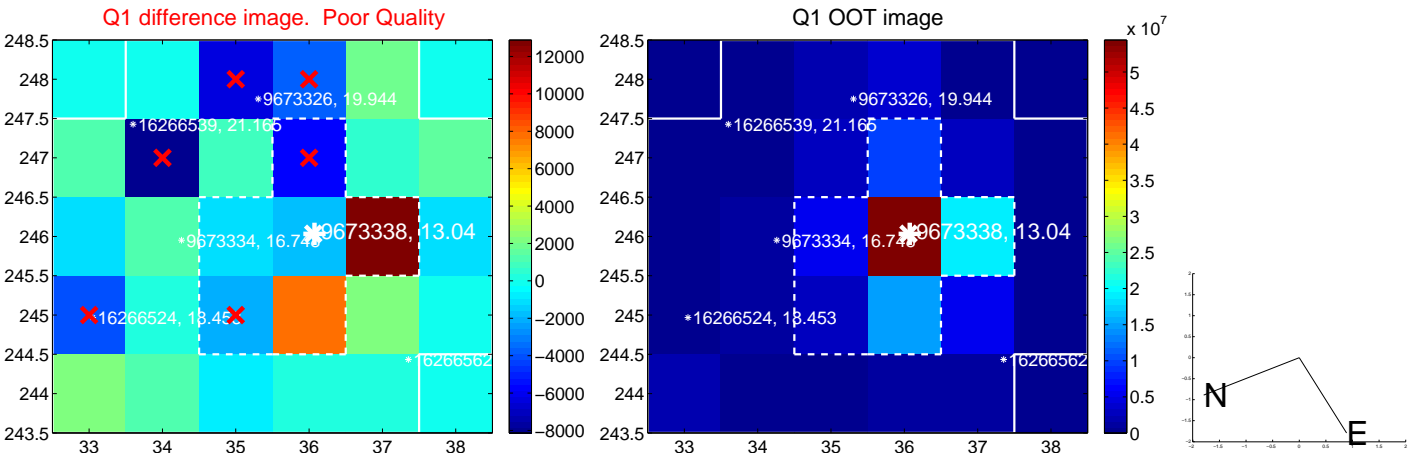
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.487 ± 0.508	0.96	0.056 ± 0.918	0.483 ± 0.457
PRF-fit source offset from KIC position	0.443 ± 0.453	0.98	0.014 ± 0.821	0.443 ± 0.444
photometric centroid source offset	0.42 ± 0.77	0.54	-0.38 ± 0.79	-0.17 ± 0.65

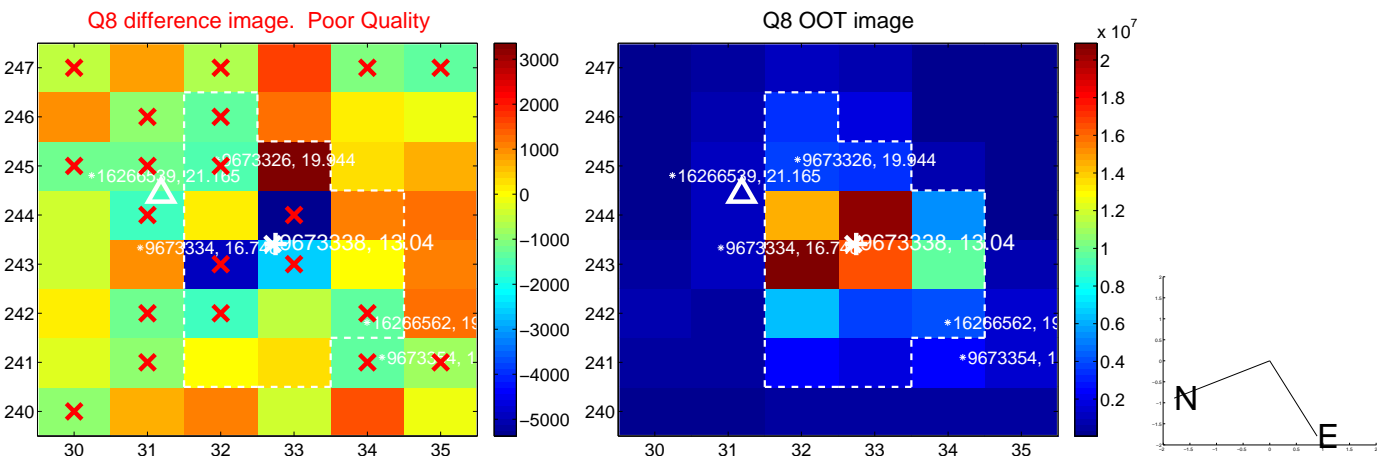
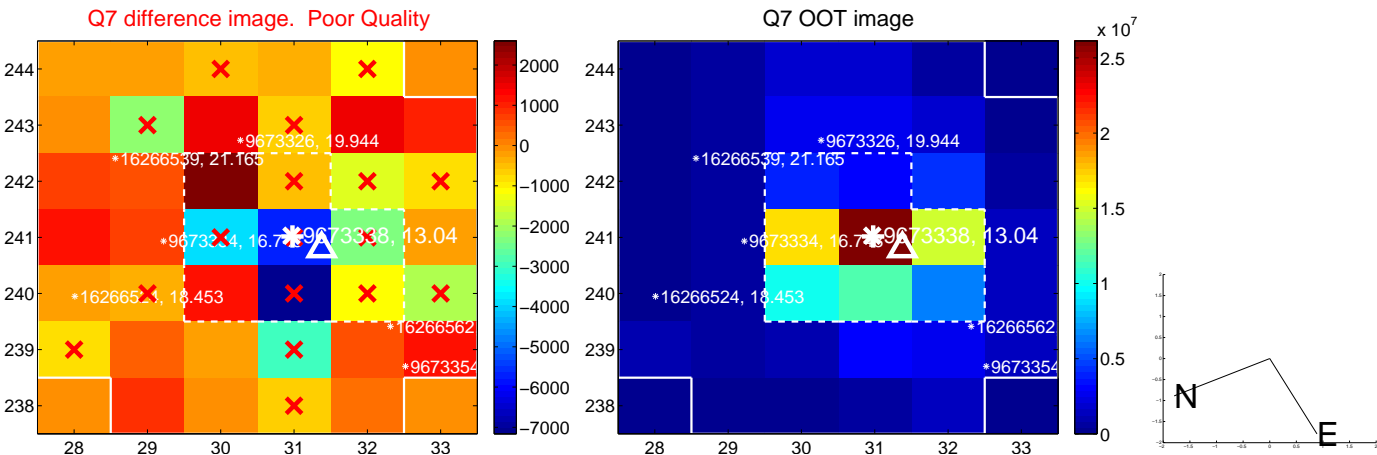
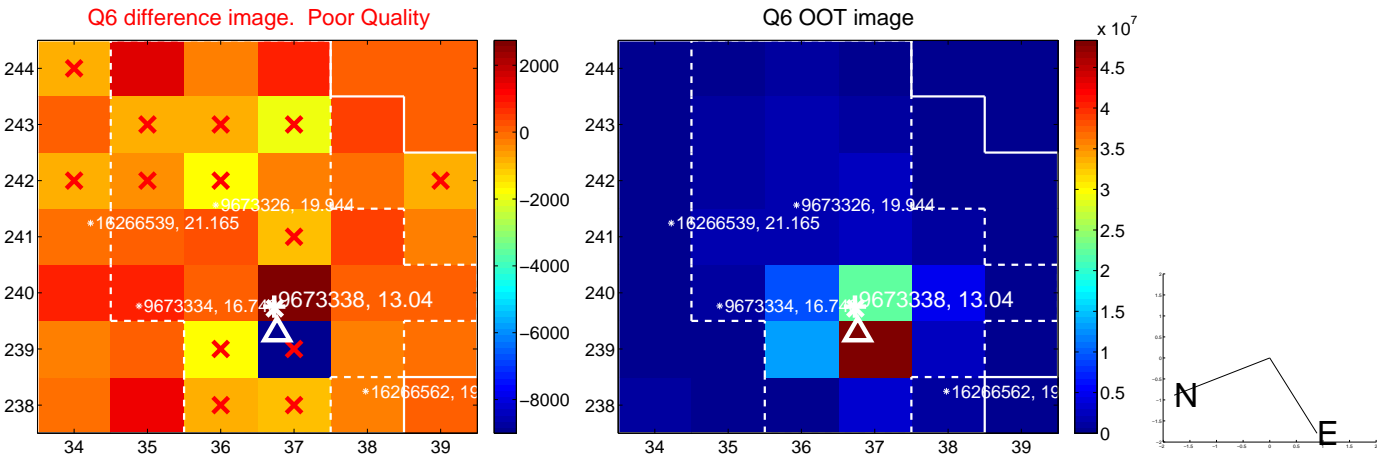
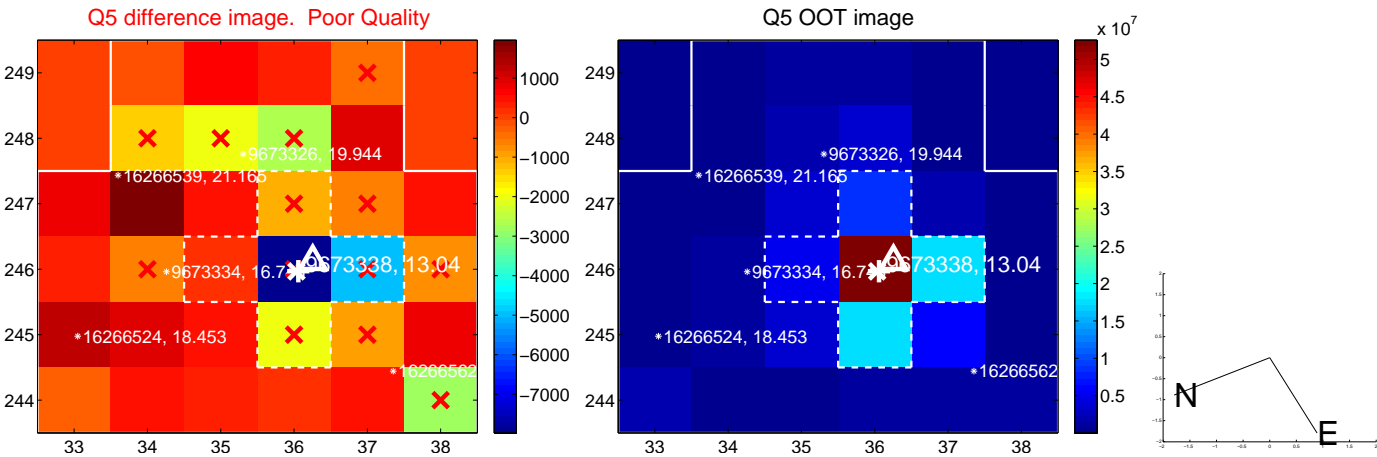


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

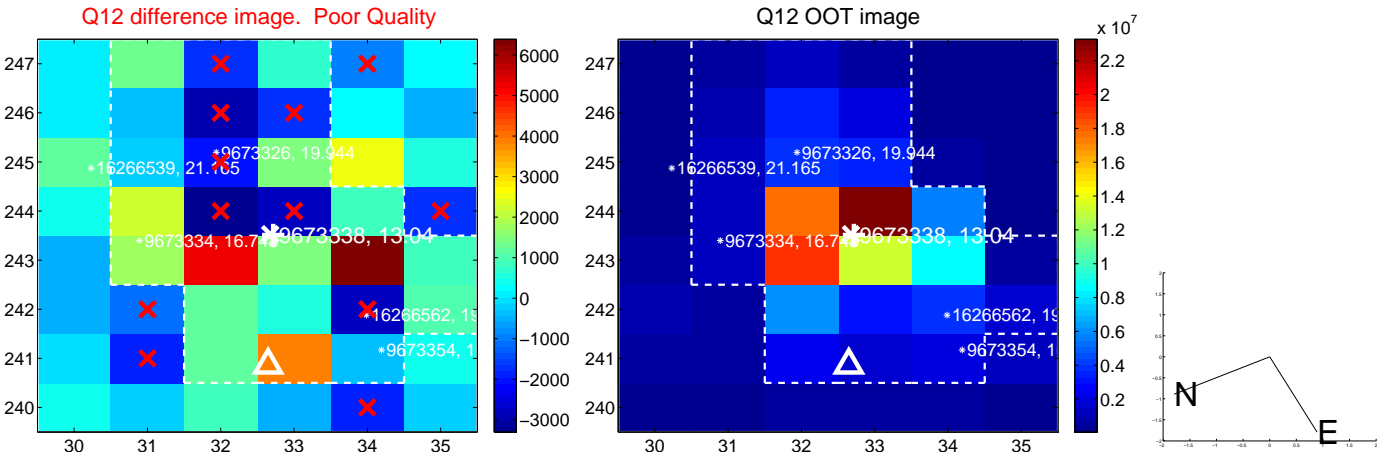
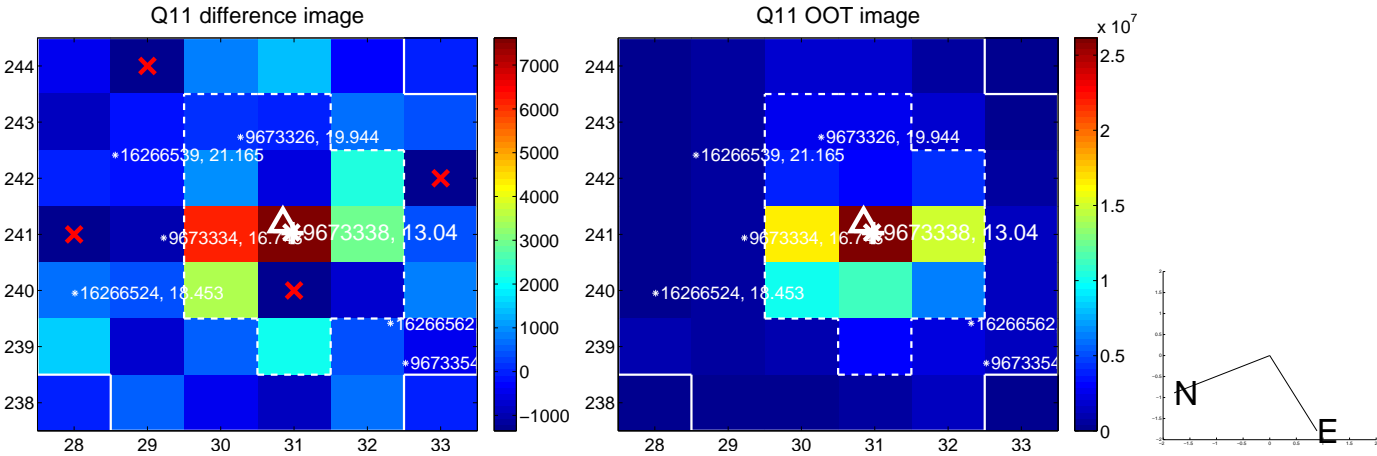
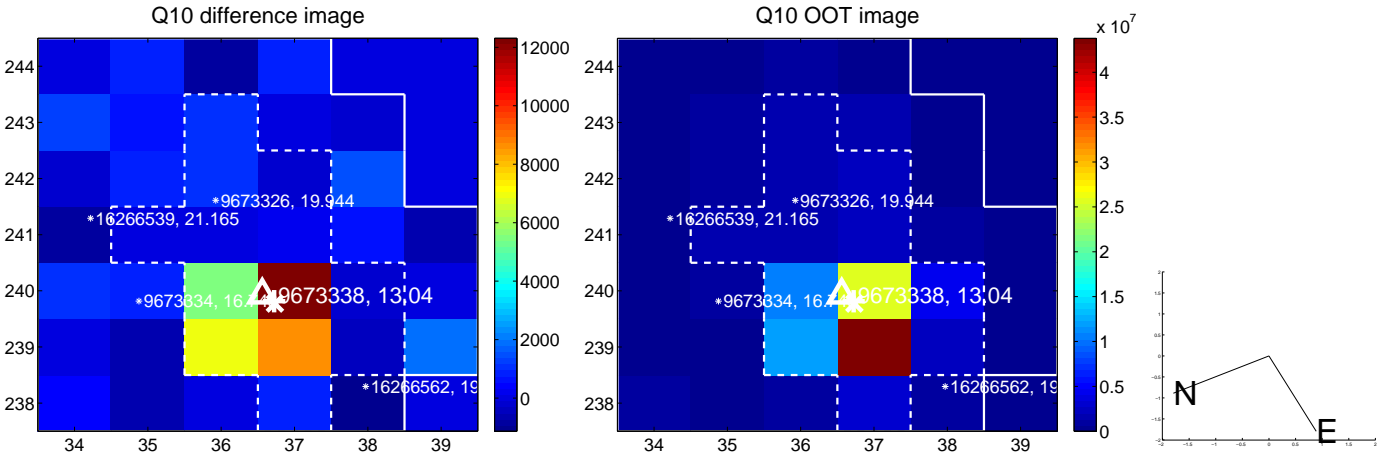
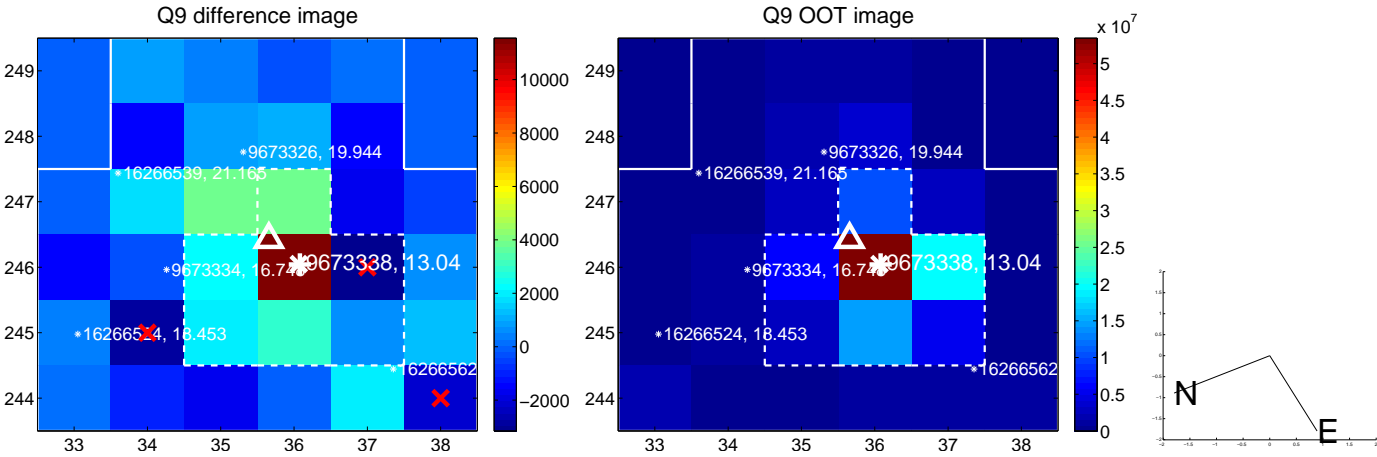
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



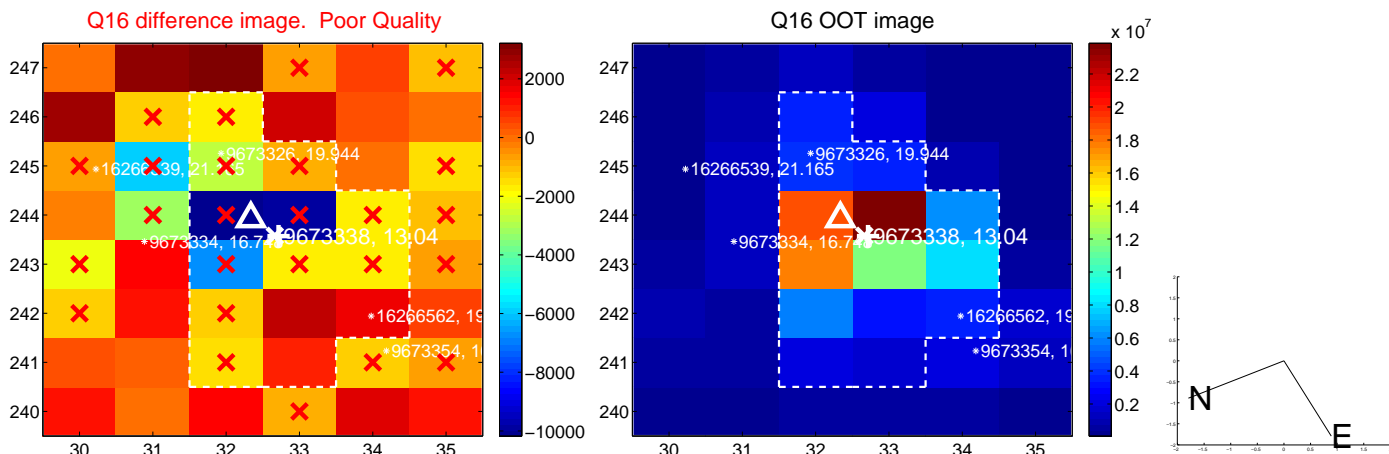
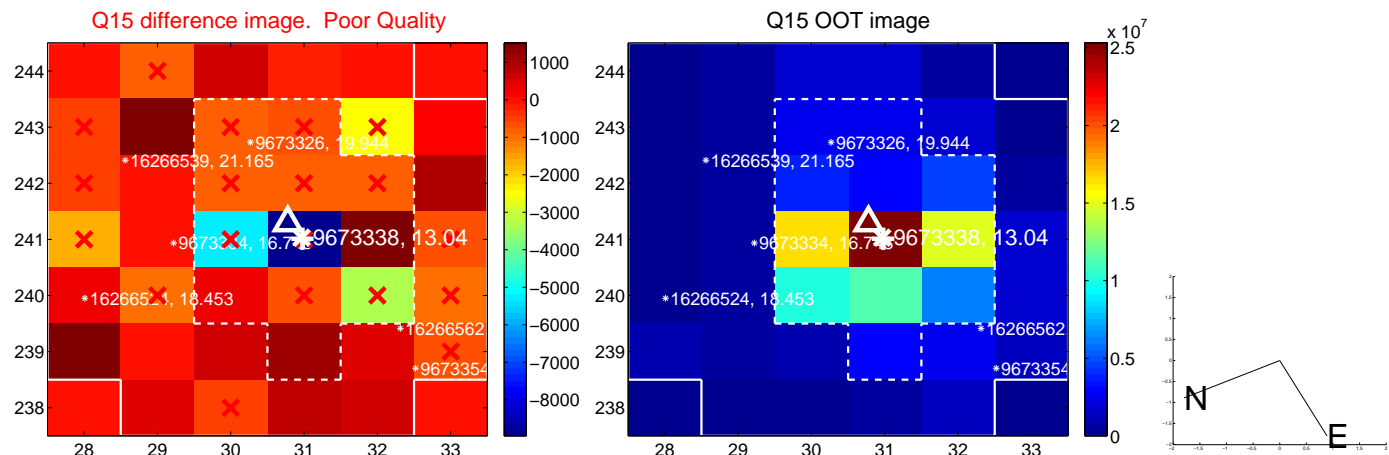
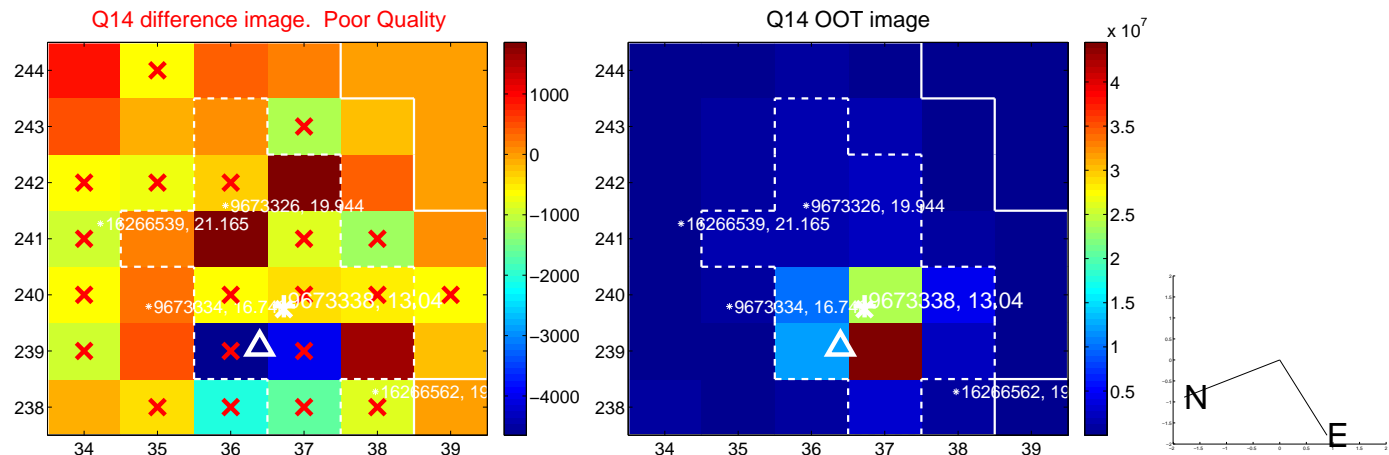
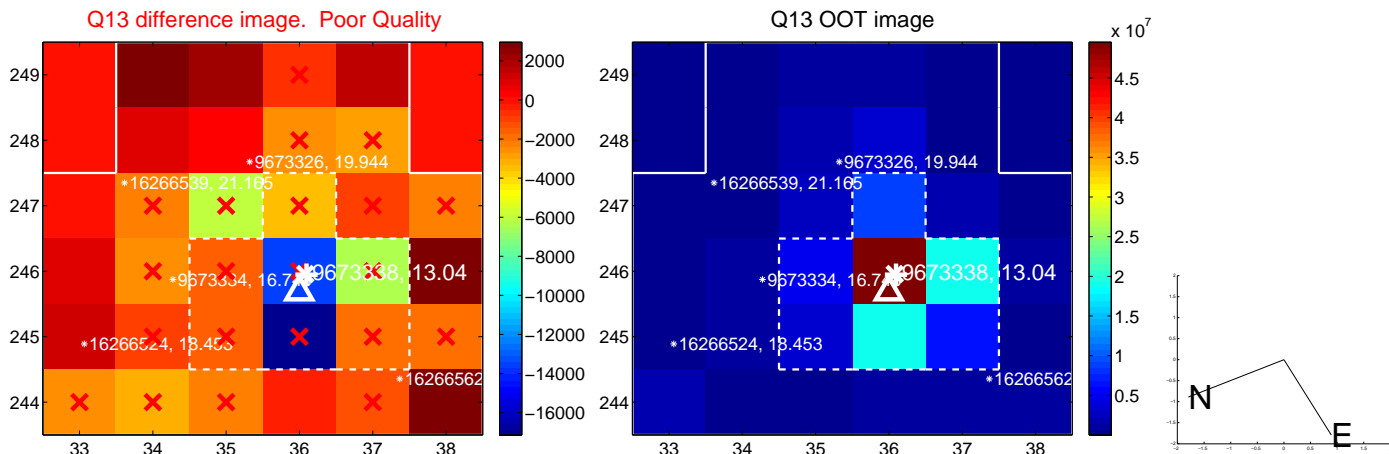
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



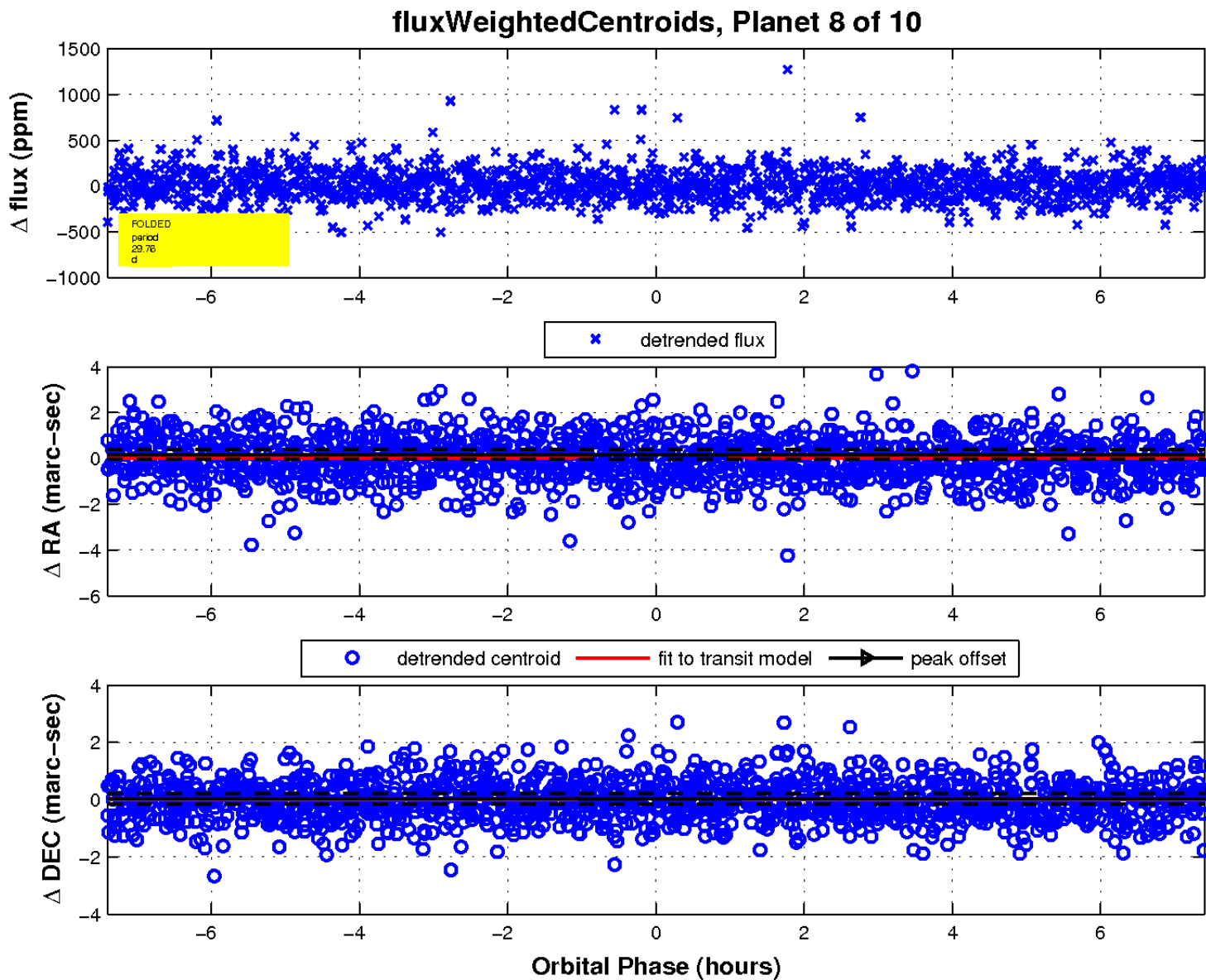
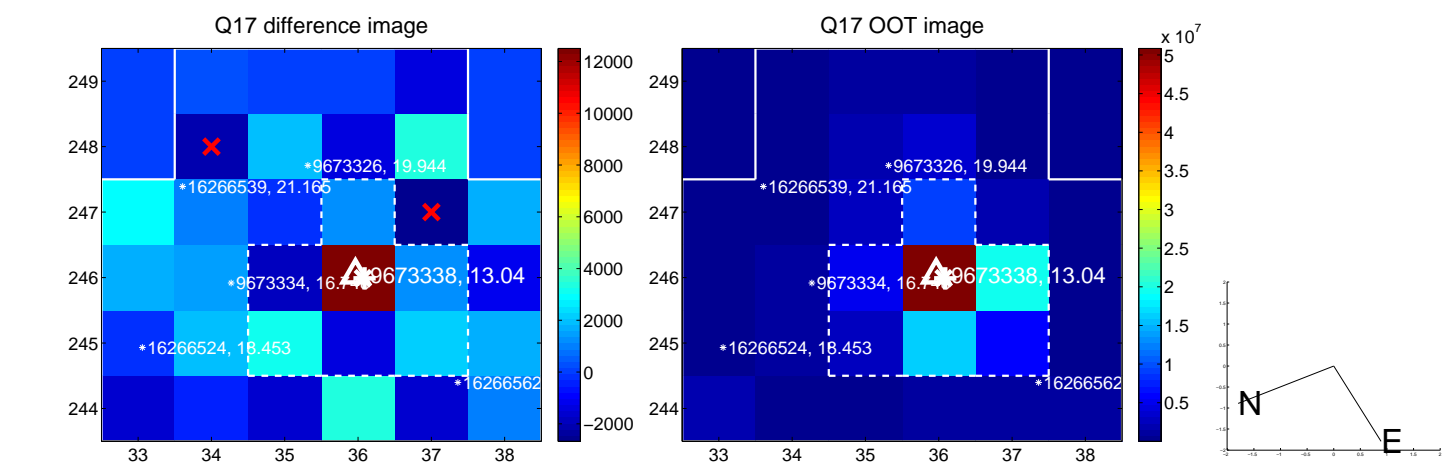
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

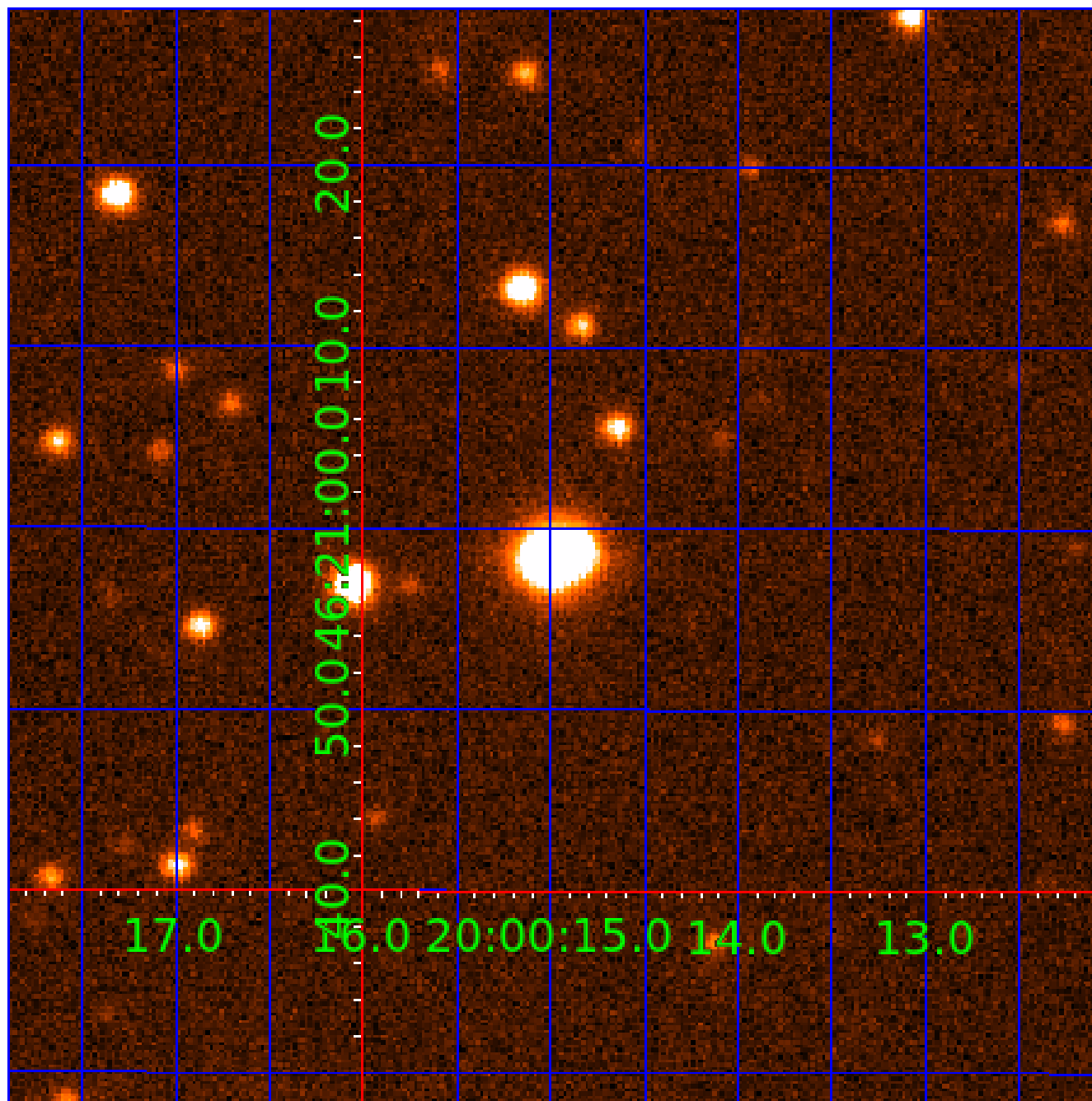


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 009673338

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})
009673338-01	OBS	No	1.450943	131.674153	0.0	5.709	11.7	0.0	4.16	6241	0.00	25757.12
009673338-02	OBS	No	399.478089	377.197580	617.3	7.381	12.1	11.2	4.16	6241	10.72	14.38
009673338-03	OBS	No	1.453106	132.117764	9.5	10.296	11.7	4.4	4.16	6241	1.32	25706.01
009673338-04	OBS	No	9.584975	135.987275	287.9	1.350	12.1	11.1	4.16	6241	7.10	2077.99
009673338-05	OBS	No	18.977727	146.671085	224.1	2.281	11.0	9.1	4.16	6241	6.40	835.81
009673338-06	OBS	No	11.097720	139.371899	228.6	1.663	9.6	8.4	4.16	6241	7.27	1709.17
009673338-07	OBS	No	13.396447	132.848813	210.8	3.141	9.6	10.8	4.16	6241	6.06	1329.78
009673338-08	OBS	No	29.760323	145.204337	254.1	2.470	9.4	10.3	4.16	6241	7.73	458.75
009673338-09	OBS	No	178.767059	279.521486	348.8	5.000	9.1	-1.0	4.16	6241	7.78	42.01
009673338-10	OBS	No	13.594499	135.993905	249.7	1.534	8.7	9.2	4.16	6241	6.74	1304.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009673338-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
009673338-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009673338-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
009673338-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
009673338-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—NO_FITS—INCONSISTENT_TRANS—CENT_NOFITS
009673338-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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

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

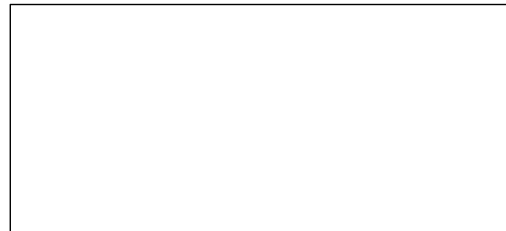
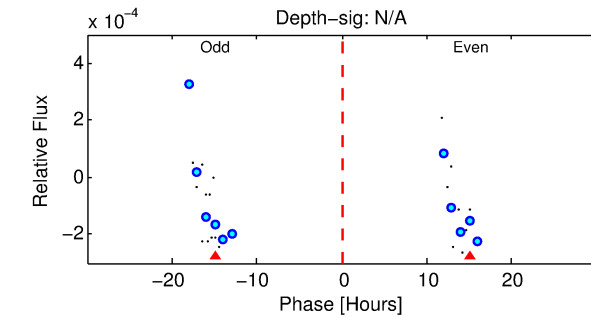
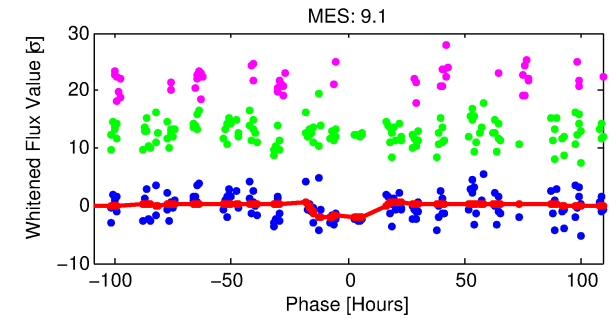
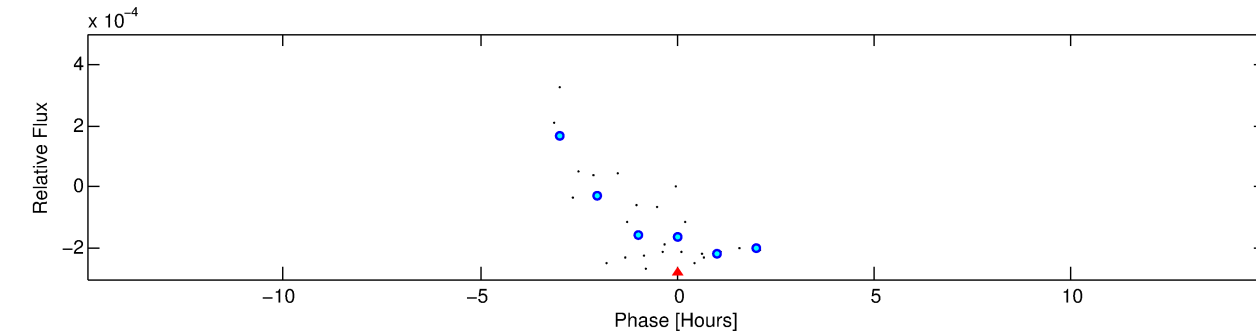
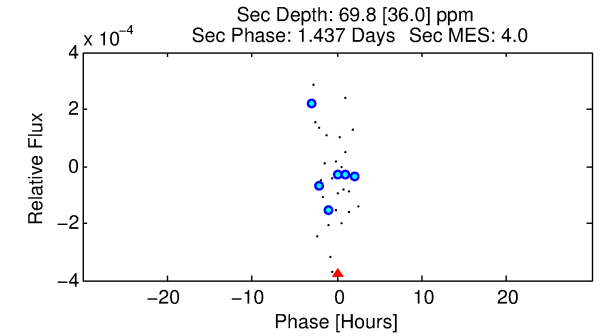
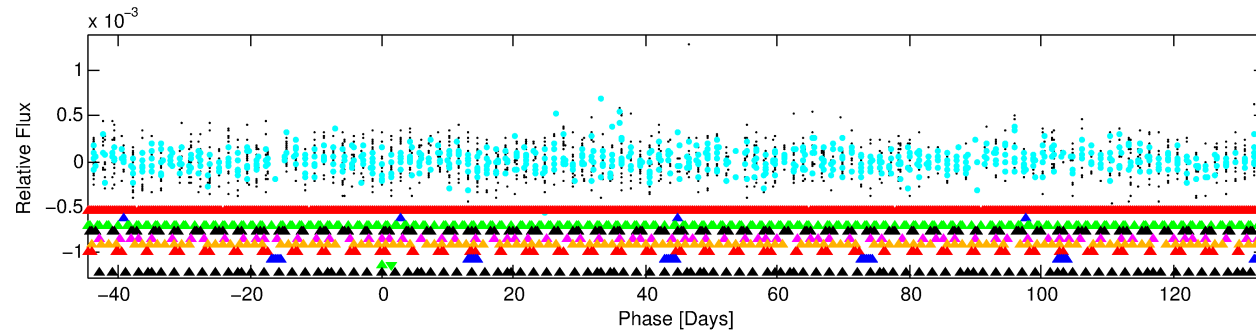
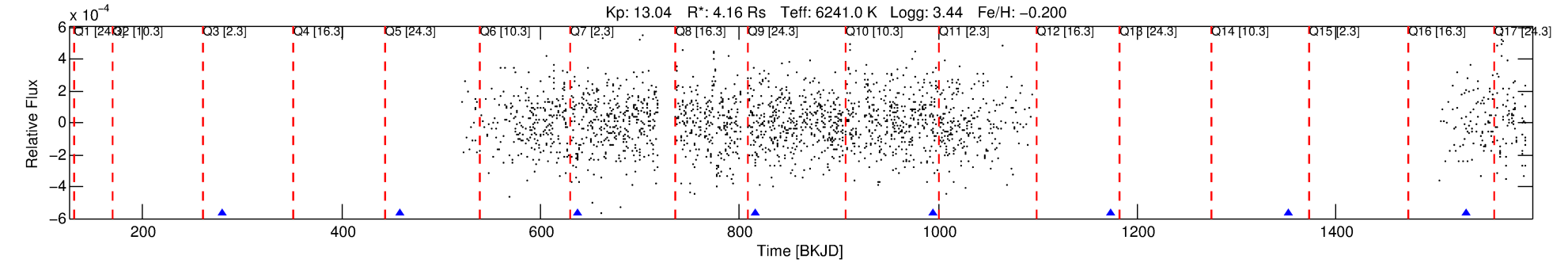
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009673338-09

No Significant Match Found

DV One-Page Summary

KIC: 9673338 Candidate: 9 of 10 Period: 178.767 d



TPS TCE Results:

Period = 178.76706 d
Epoch = 279.5215 BKJD

DV fit results are unavailable

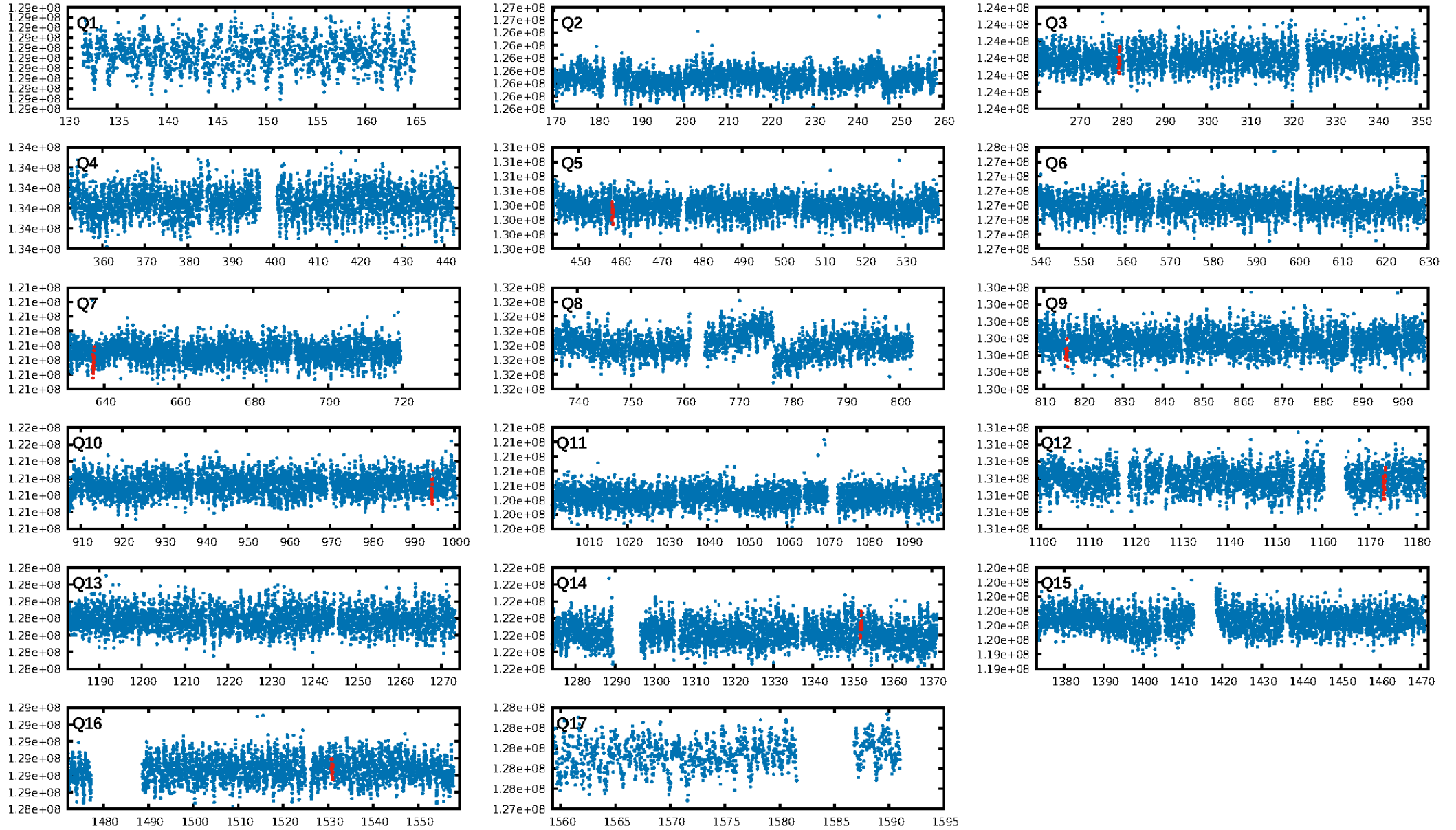
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [641.26σ]
LongPeriod-sig: 100.0% [594.15σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.63e-12
RollingBand-fgt: N/A
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: N/A

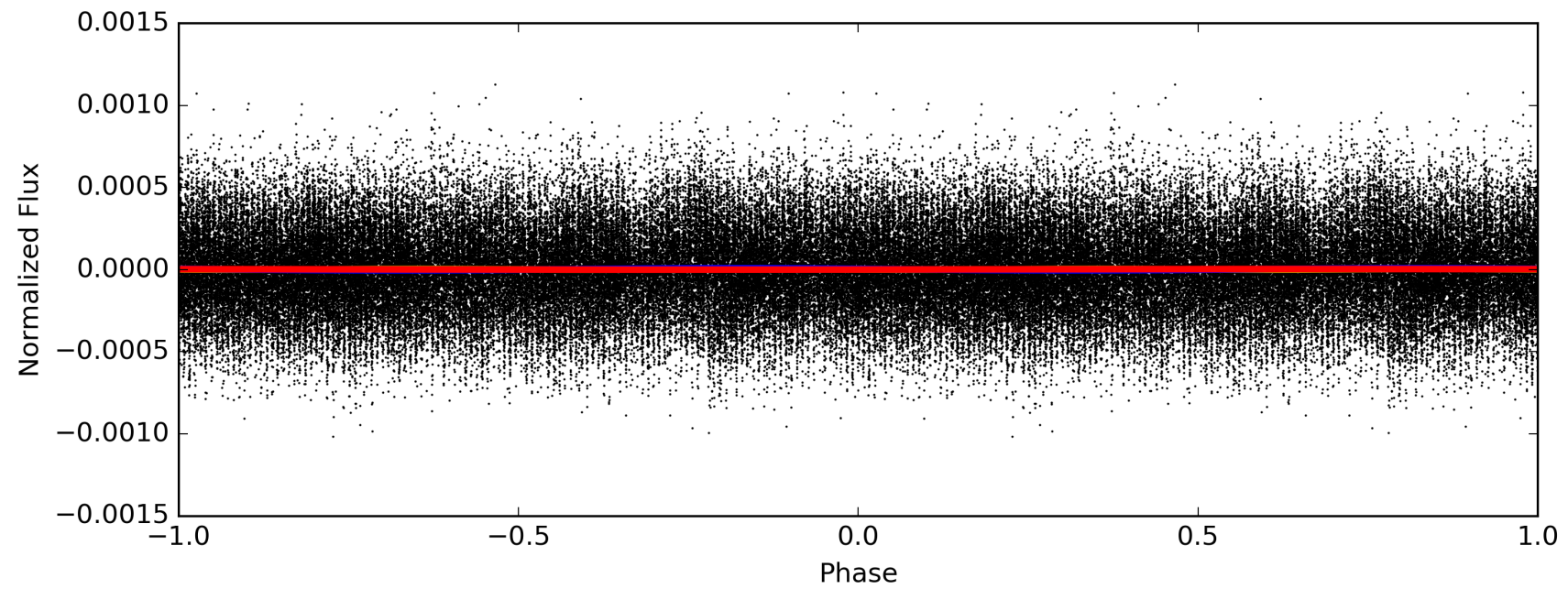
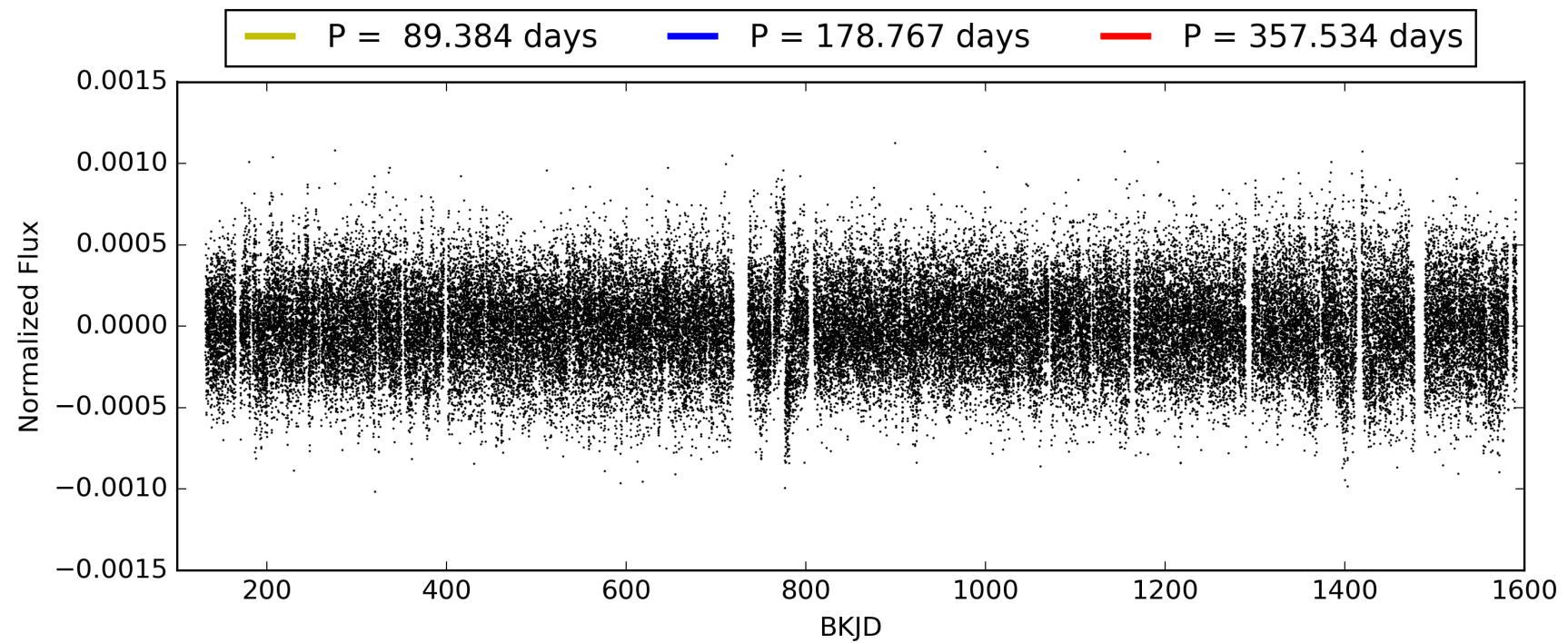
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 11:15:17 Z

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

TCE 009673338-09, PDC Light Curves

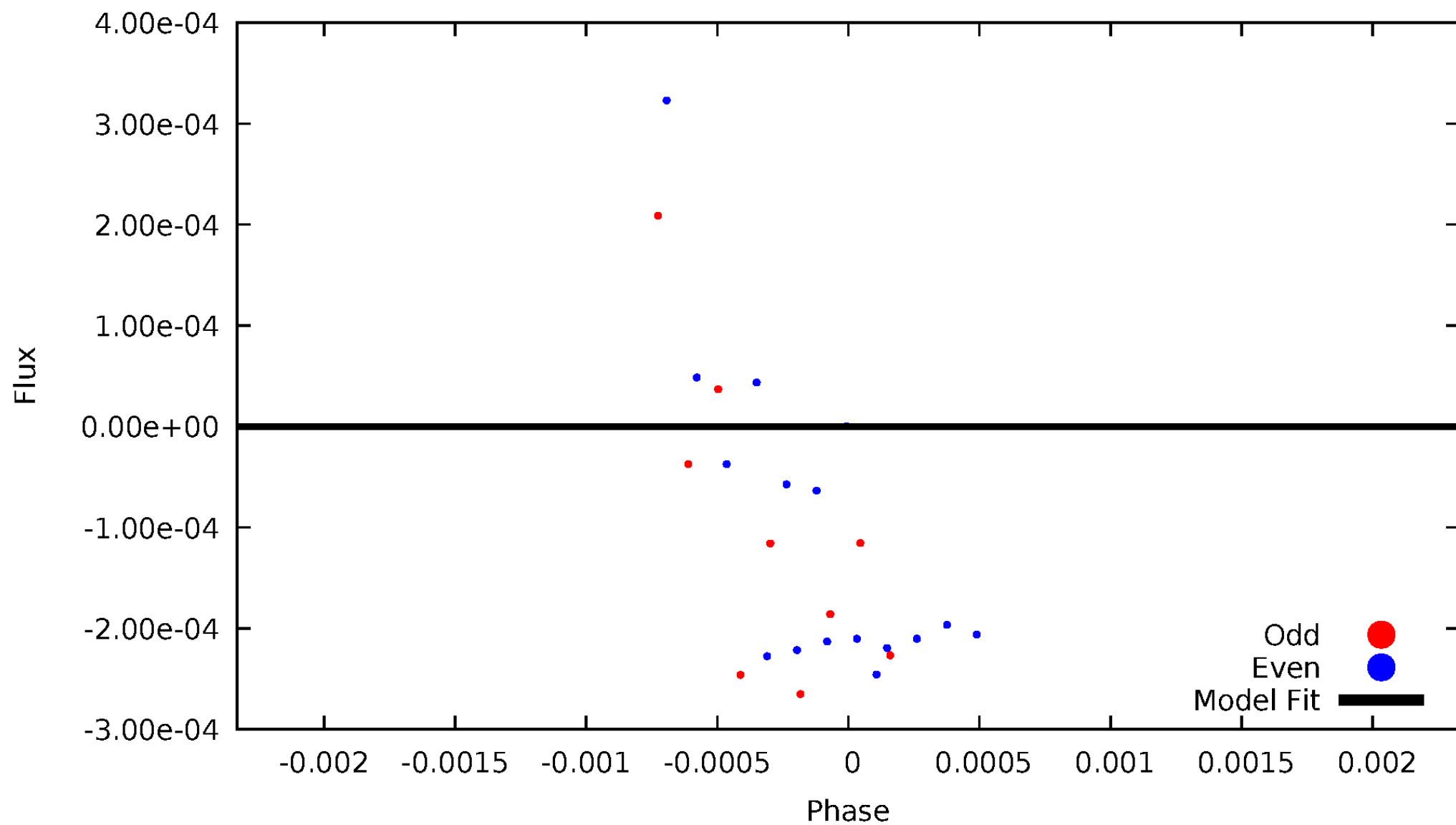


TCE 009673338-09



DV Odd/Even

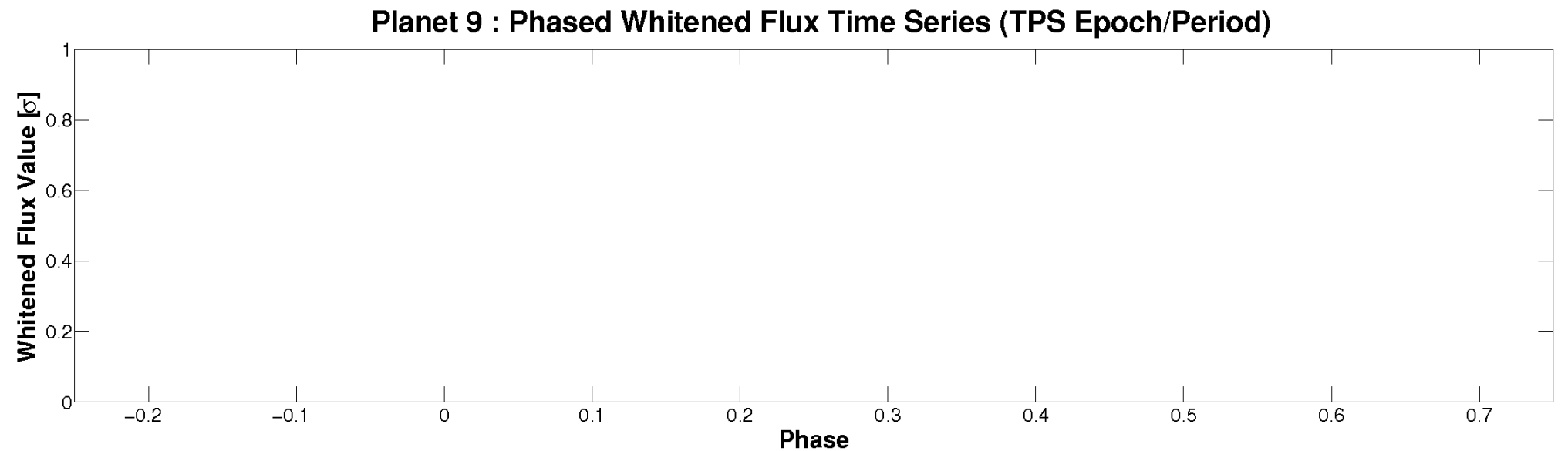
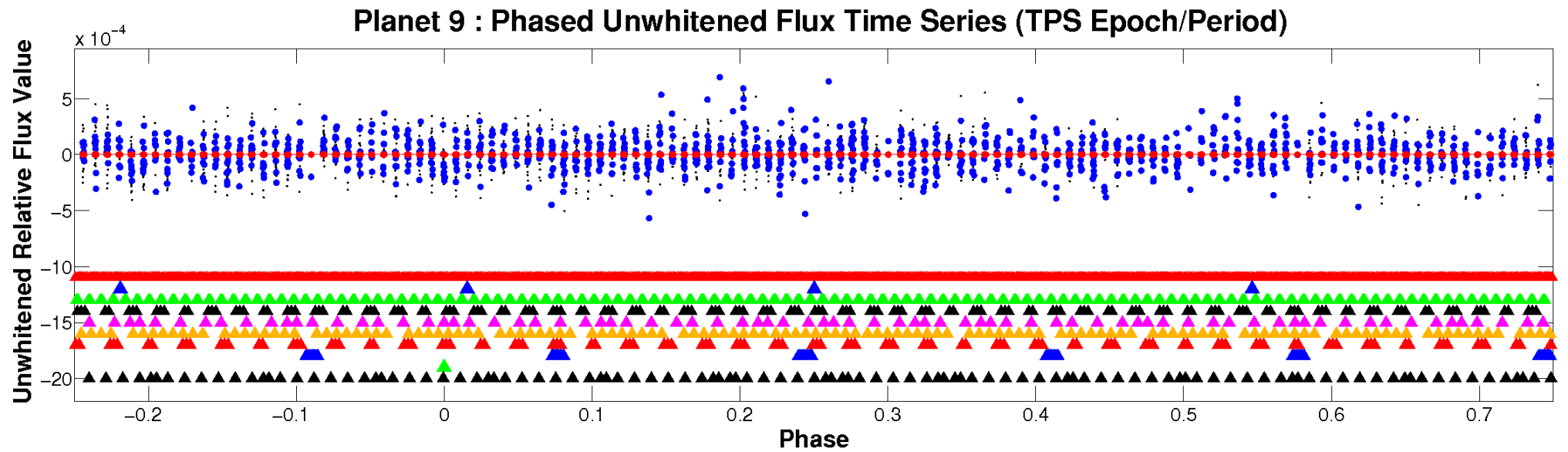
TCE 009673338-09



ALT Odd/Even

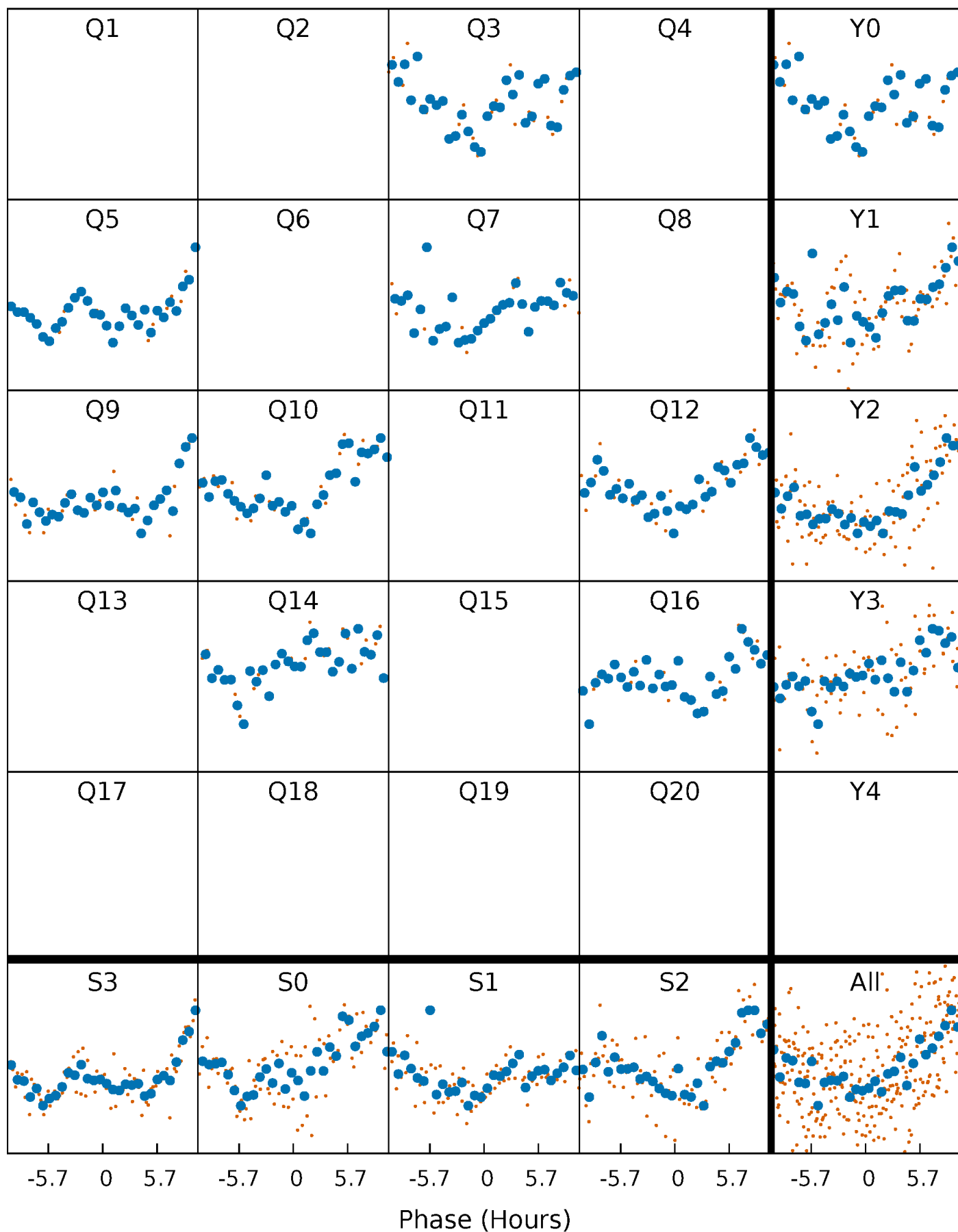
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve



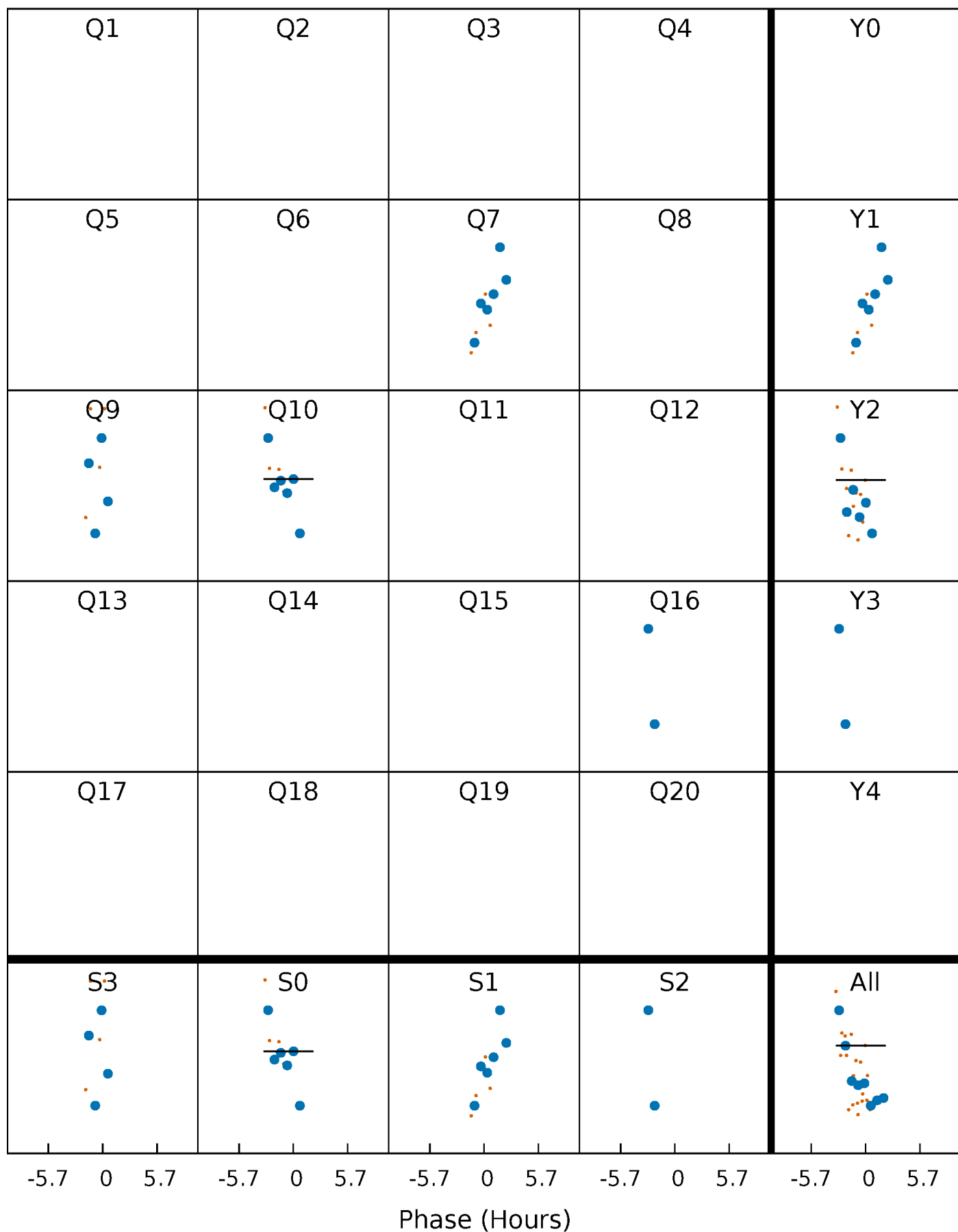
PDC Quarter-Phased Transit Curves

TCE 009673338-09 $P=178.767059$ Days $T_0=279.521486$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009673338-09 P=178.767059 Days $T_0=279.521486$ (BKJD)

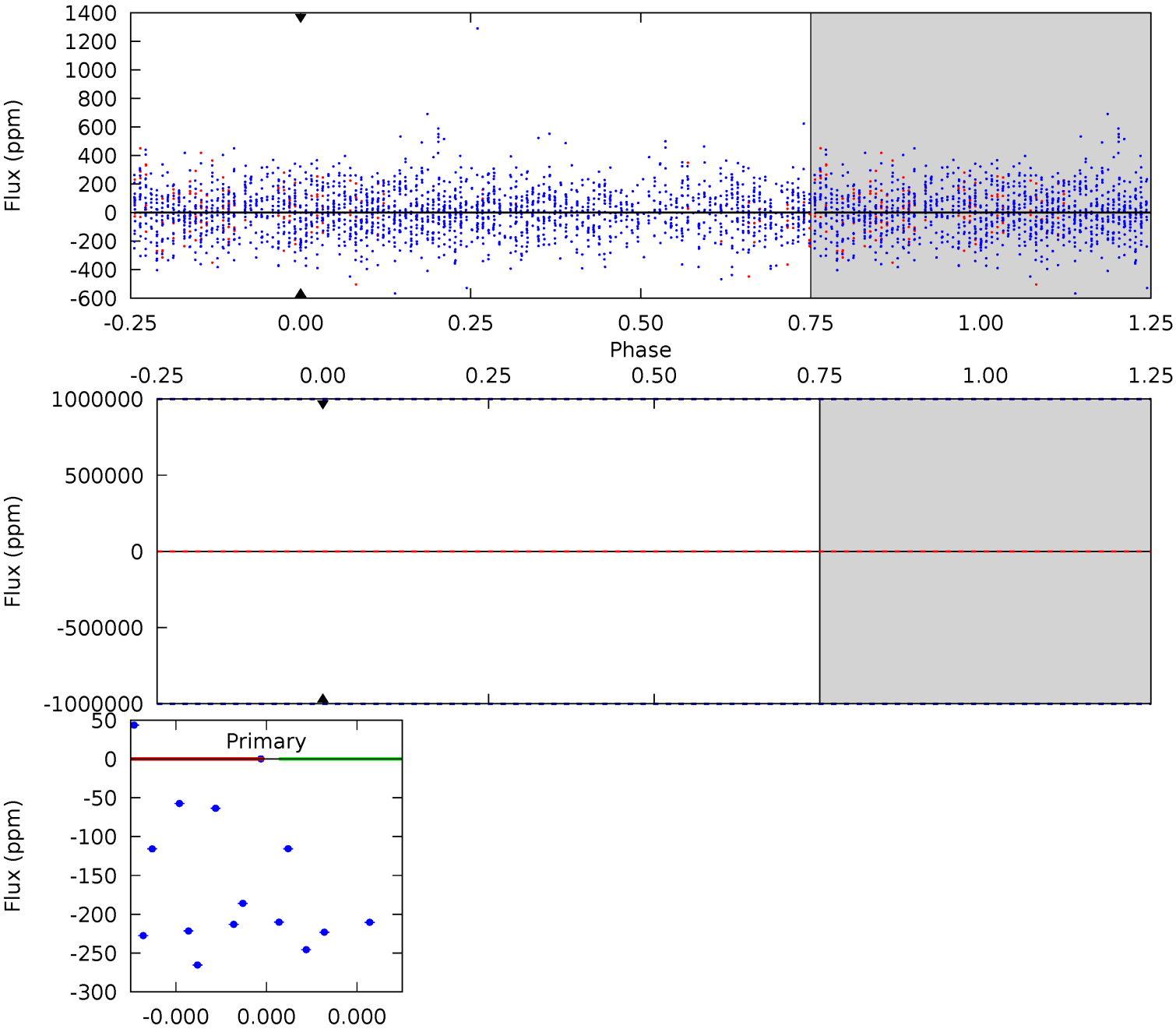


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

009673338-09, P = 178.767059 Days, E = 279.521486 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

This plot does not exist for this TCE.

Stellar Parameters For KIC 009673338

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6241^{+190}_{-171}	$3.442^{+0.392}_{-0.098}$	$-0.200^{+0.350}_{-0.300}$	$4.157^{+0.611}_{-1.834}$	$1.746^{+0.155}_{-0.465}$	$0.034^{+0.127}_{-0.010}$
	+3%/-3%	+11%/-3%	+175%/-150%	+15%/-44%	+9%/-27%	+369%/-30%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009673338-09 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$31.35^{+30.50}_{-22.59}$	891^{+56}_{-99}	4744^{+22000}_{-28376}	471^{+65251}_{-47119}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

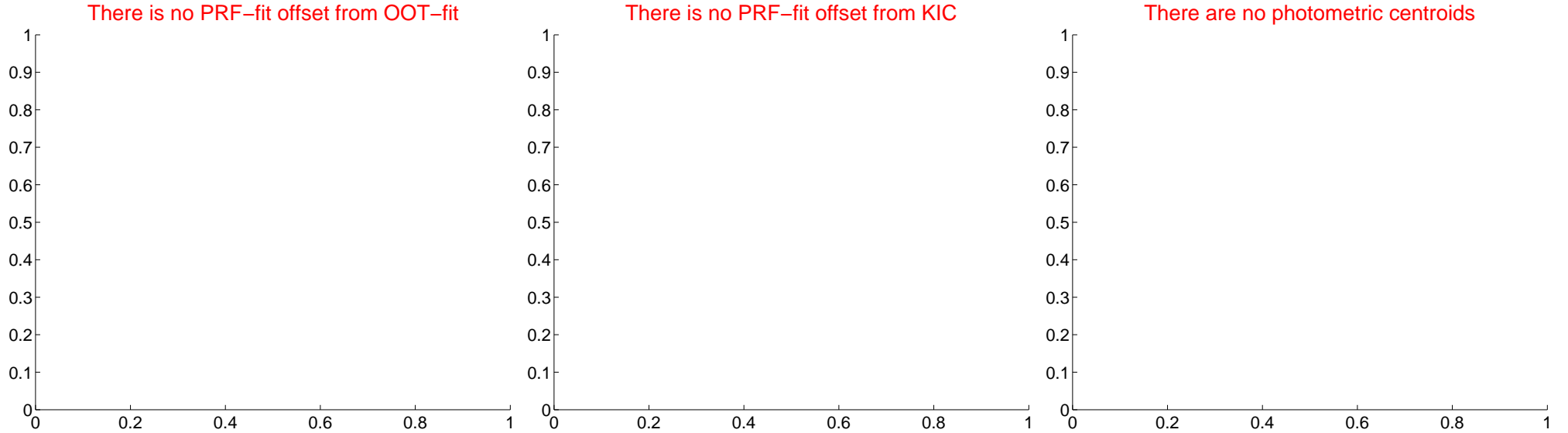
DV Centroid Data

Supplemental centroid analysis for 009673338-09. Kepler magnitude: 13.04. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	—	—	—	—



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.



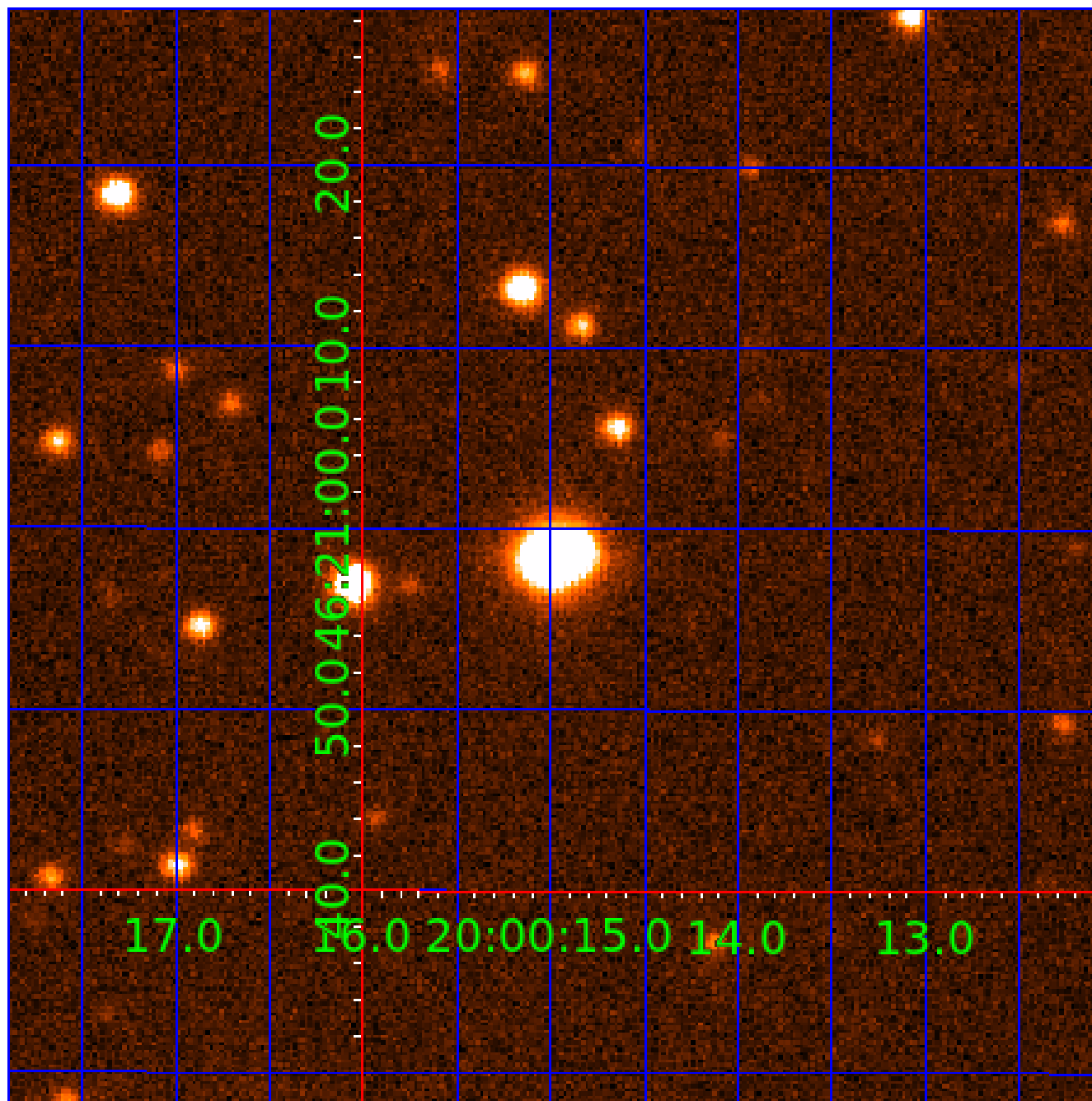
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 009673338

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})
009673338-01	OBS	No	1.450943	131.674153	0.0	5.709	11.7	0.0	4.16	6241	0.00	25757.12
009673338-02	OBS	No	399.478089	377.197580	617.3	7.381	12.1	11.2	4.16	6241	10.72	14.38
009673338-03	OBS	No	1.453106	132.117764	9.5	10.296	11.7	4.4	4.16	6241	1.32	25706.01
009673338-04	OBS	No	9.584975	135.987275	287.9	1.350	12.1	11.1	4.16	6241	7.10	2077.99
009673338-05	OBS	No	18.977727	146.671085	224.1	2.281	11.0	9.1	4.16	6241	6.40	835.81
009673338-06	OBS	No	11.097720	139.371899	228.6	1.663	9.6	8.4	4.16	6241	7.27	1709.17
009673338-07	OBS	No	13.396447	132.848813	210.8	3.141	9.6	10.8	4.16	6241	6.06	1329.78
009673338-08	OBS	No	29.760323	145.204337	254.1	2.470	9.4	10.3	4.16	6241	7.73	458.75
009673338-09	OBS	No	178.767059	279.521486	348.8	5.000	9.1	-1.0	4.16	6241	7.78	42.01
009673338-10	OBS	No	13.594499	135.993905	249.7	1.534	8.7	9.2	4.16	6241	6.74	1304.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009673338-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
009673338-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
009673338-03	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
009673338-04	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
009673338-06	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
009673338-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—NO_FITS—INCONSISTENT_TRANS—CENT_NOFITS
009673338-10	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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

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

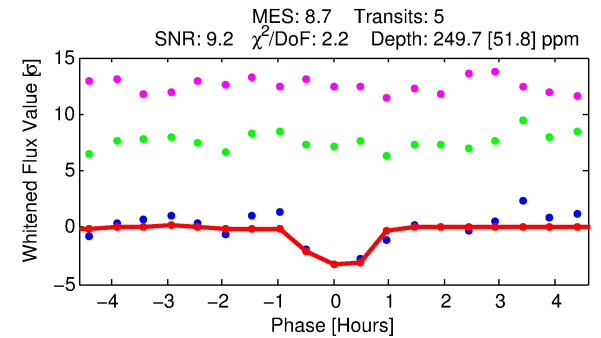
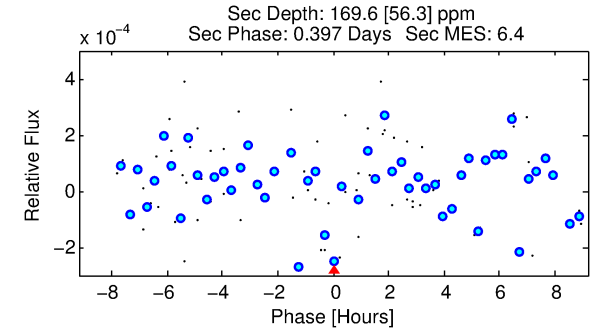
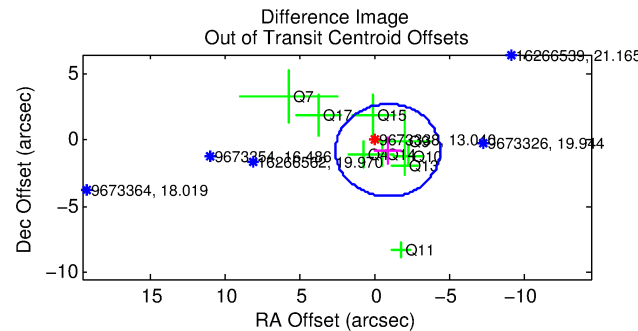
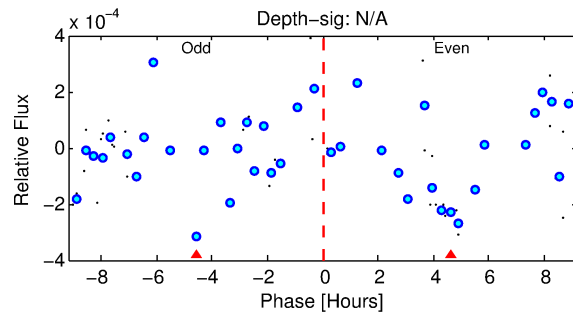
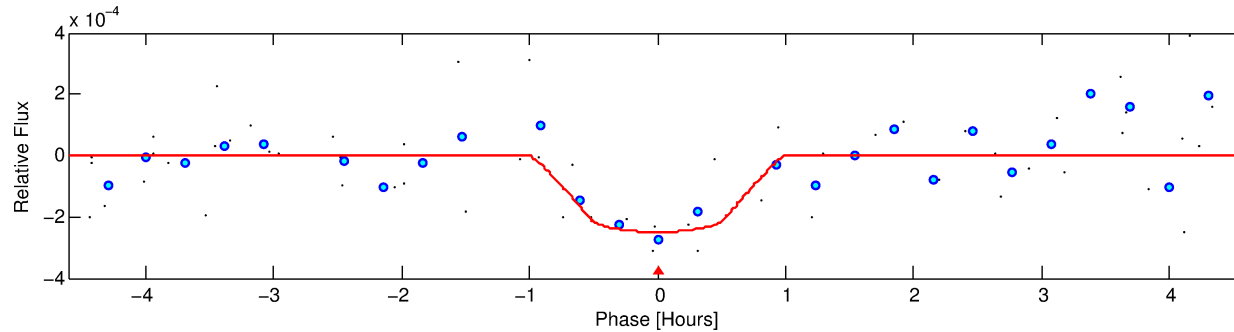
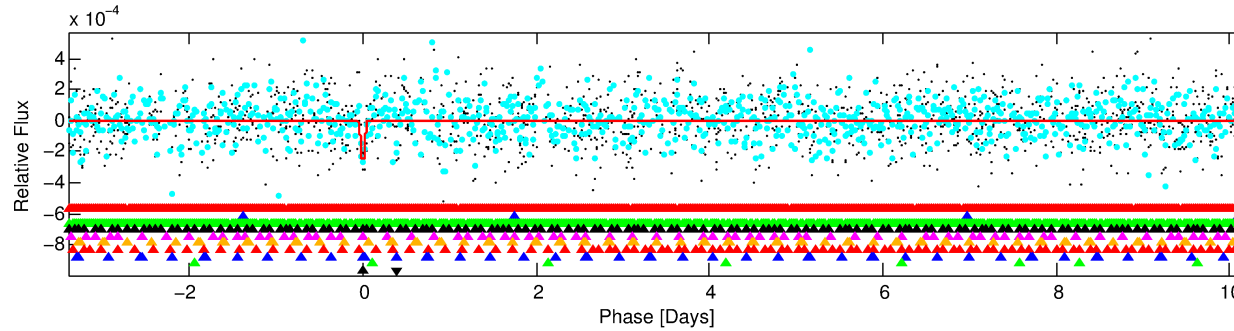
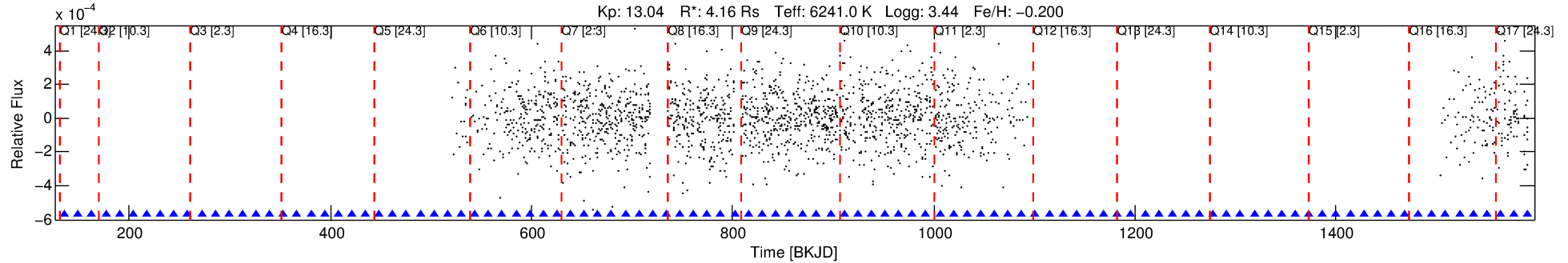
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009673338-10

No Significant Match Found

DV One-Page Summary

KIC: 9673338 Candidate: 10 of 10 Period: 13.594 d



DV Fit Results:

Period = 13.59450 [0.00043] d
Epoch = 135.9939 [0.0231] BKJD
Rp/R* = 0.0149 [0.0531]
a/R* = 62.12 [1110.59]
b = 0.43 [34.12]
Seff = 1304.01 [887.71]
Teq = 1532 [261] K
Rp = 6.74 [24.28] Re
a = 0.1342 [0.0565] AU
Ag = 37.01 [266.10] [0.14σ]
Teffp = 5844 [10459] K [0.4σ]

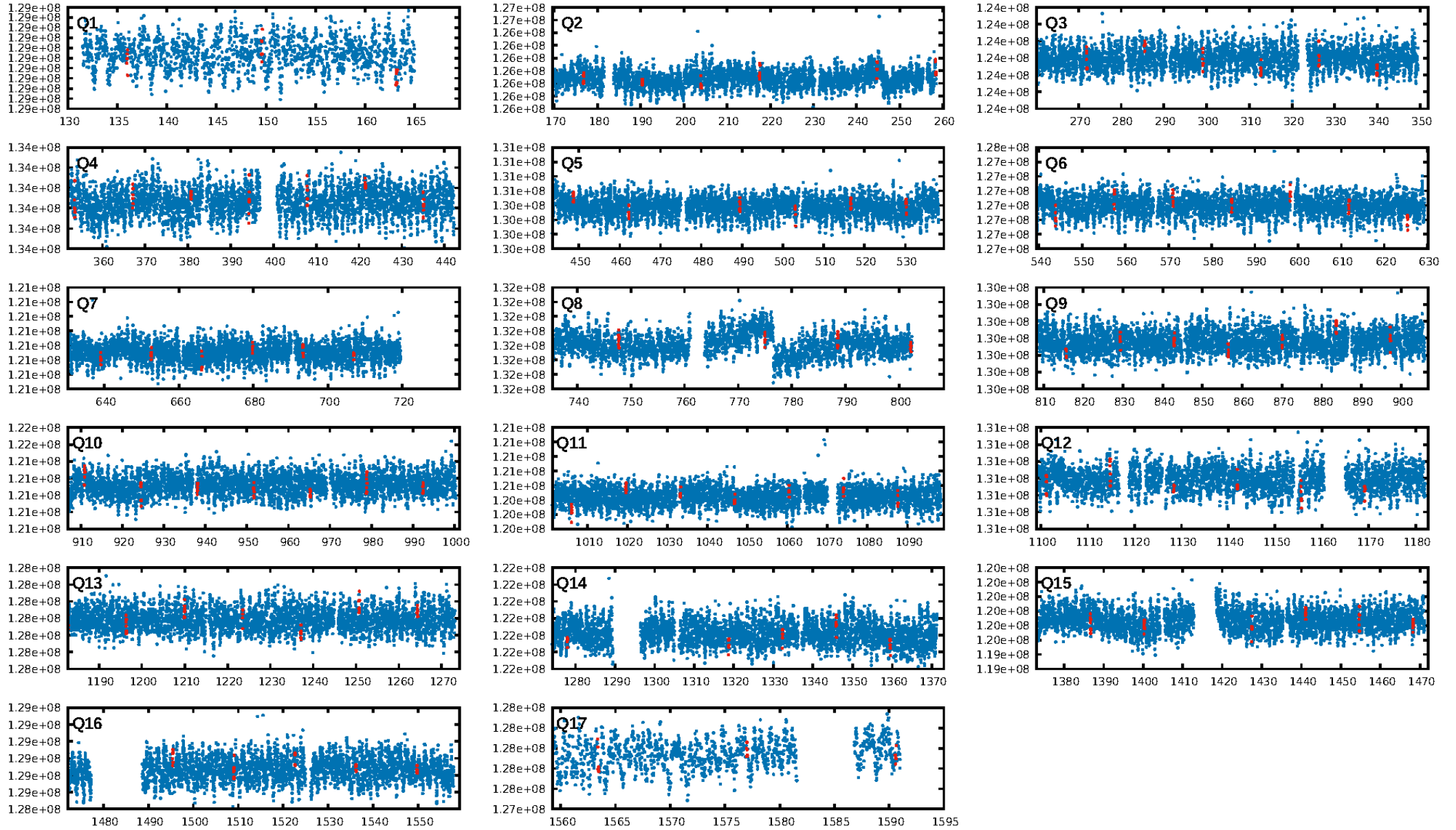
DV Diagnostic Results:

ShortPeriod-sig: 82.6% [1.36σ]
LongPeriod-sig: 100.0% [47.00σ]
ModelChiSquare2-sig: 84.3%
ModelChiSquareGof-sig: 96.1%
Bootstrap-pfa: 7.86e-07
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 35.77
Centroid-sig: 23.8%
Centroid-so: 0.806 arcsec [1.26σ]
OotOffset-rm: 1.199 arcsec [1.03σ]
OotOffset-st: 2/3/1/3 [9]
KicOffset-rm: 1.236 arcsec [1.00σ]
KicOffset-st: 2/3/1/3 [9]
DiffImageQuality-fgm: 0.33 [3/9]
DiffImageOverlap-fno: 0.47 [8/17]

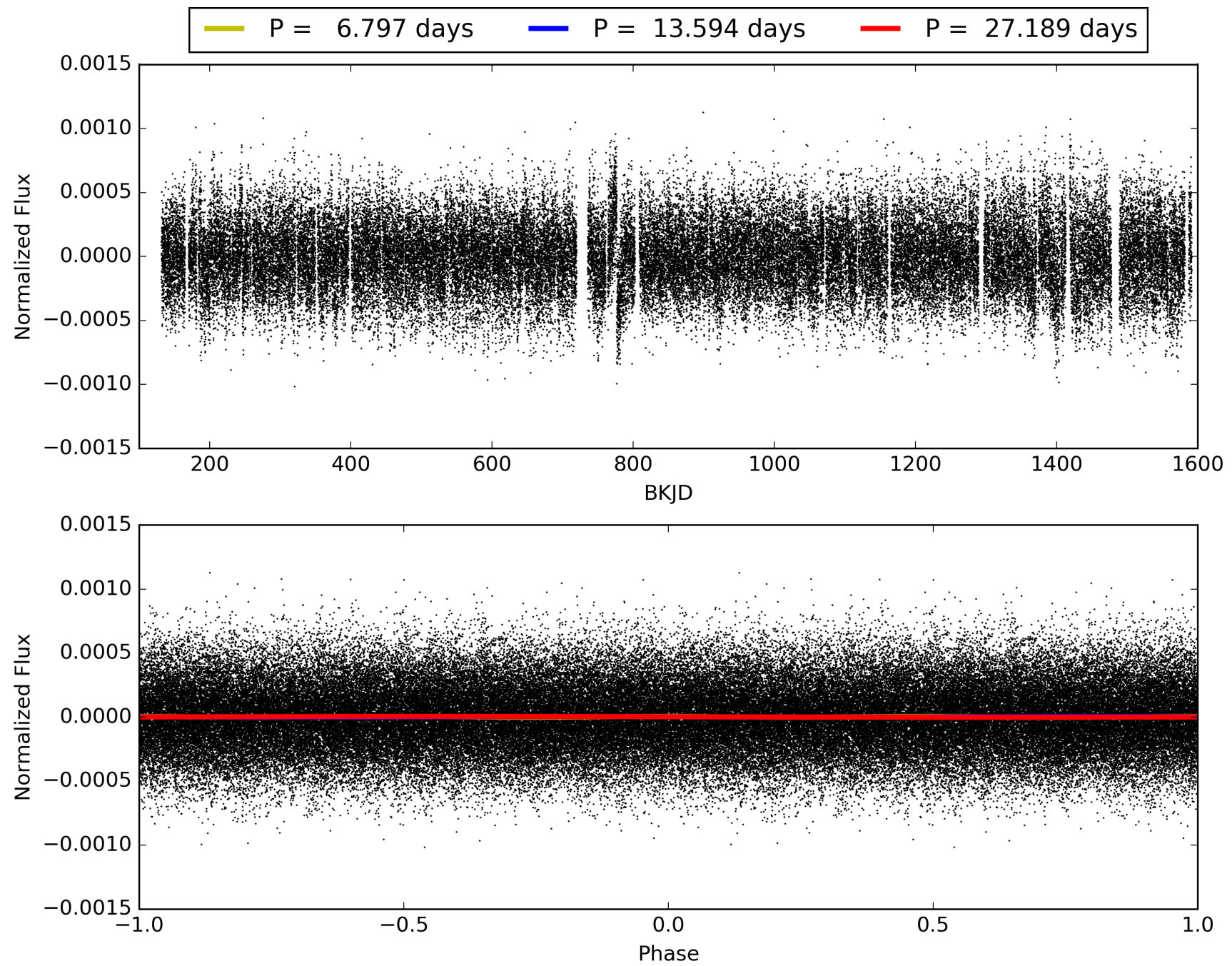
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 11:15:20 Z

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

TCE 009673338-10, PDC Light Curves

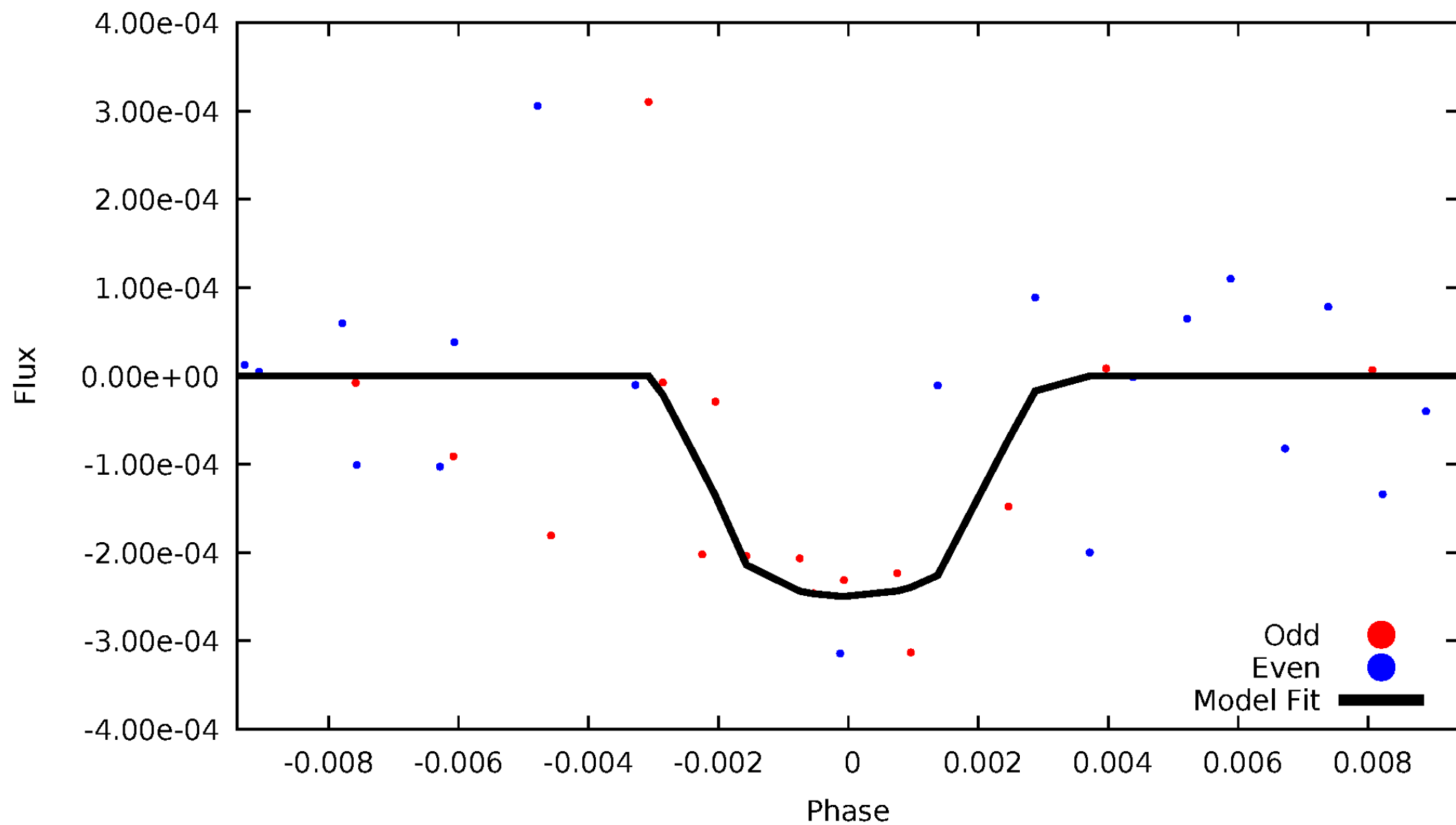


TCE 009673338-10



DV Odd/Even

TCE 009673338-10

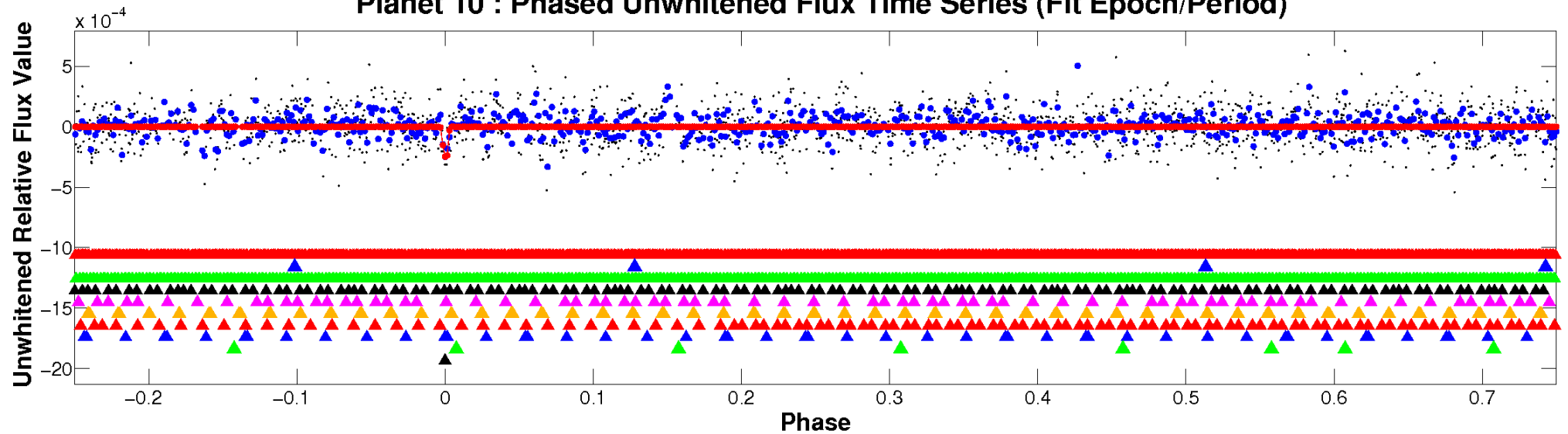


ALT Odd/Even

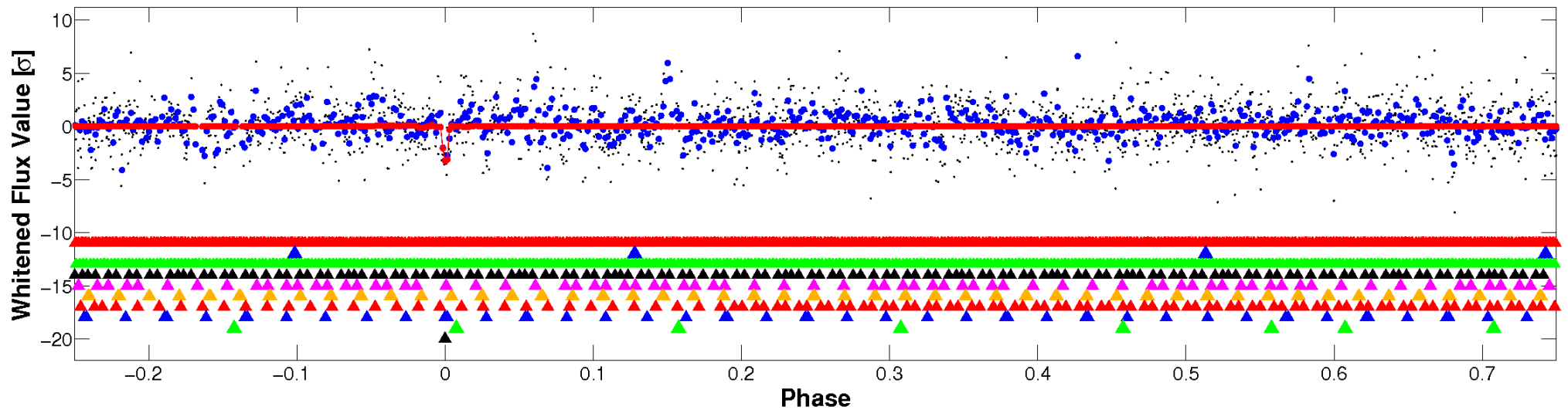
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

Planet 10 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

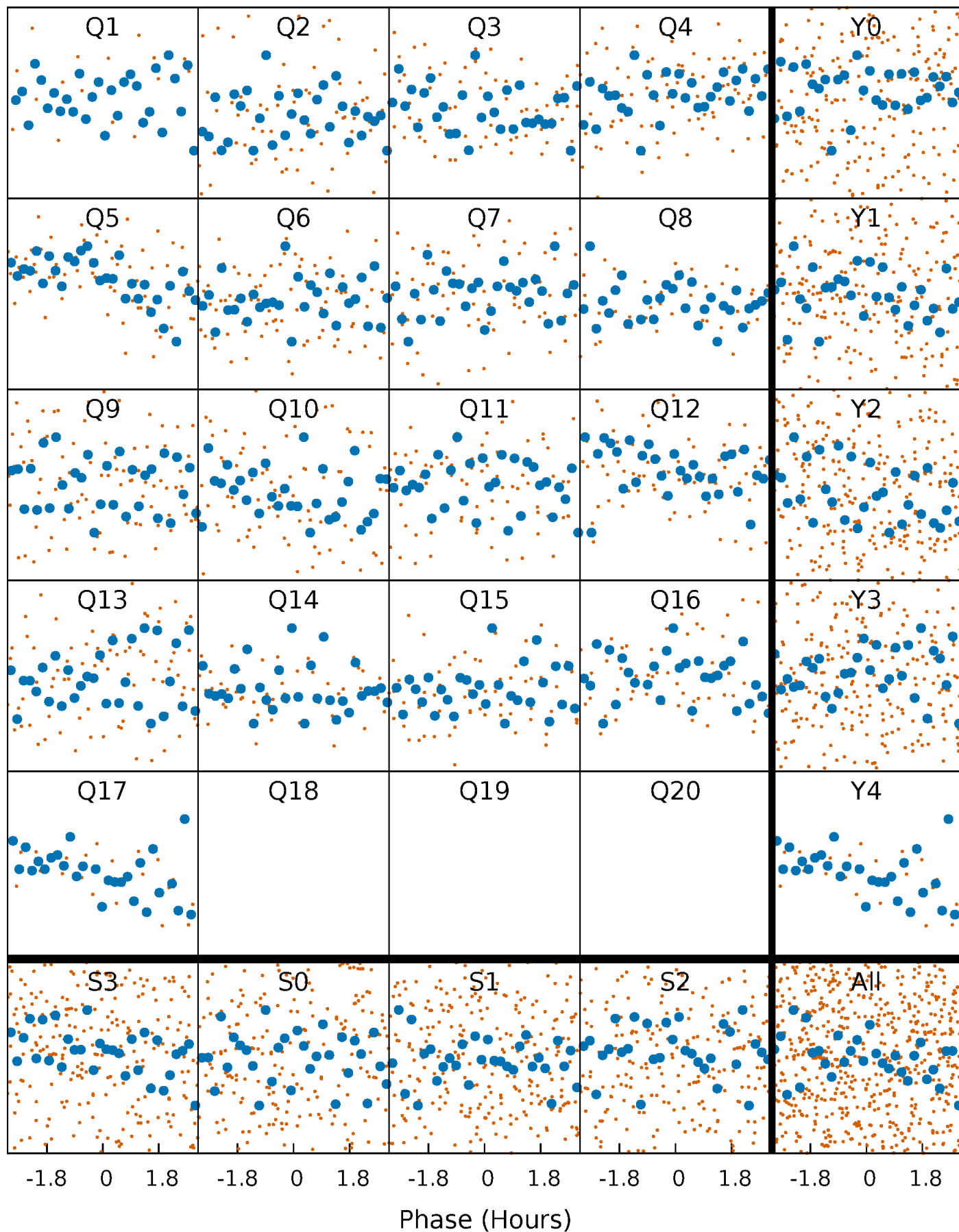


Planet 10 : Phased Whitened Flux Time Series (Fit Epoch/Period)



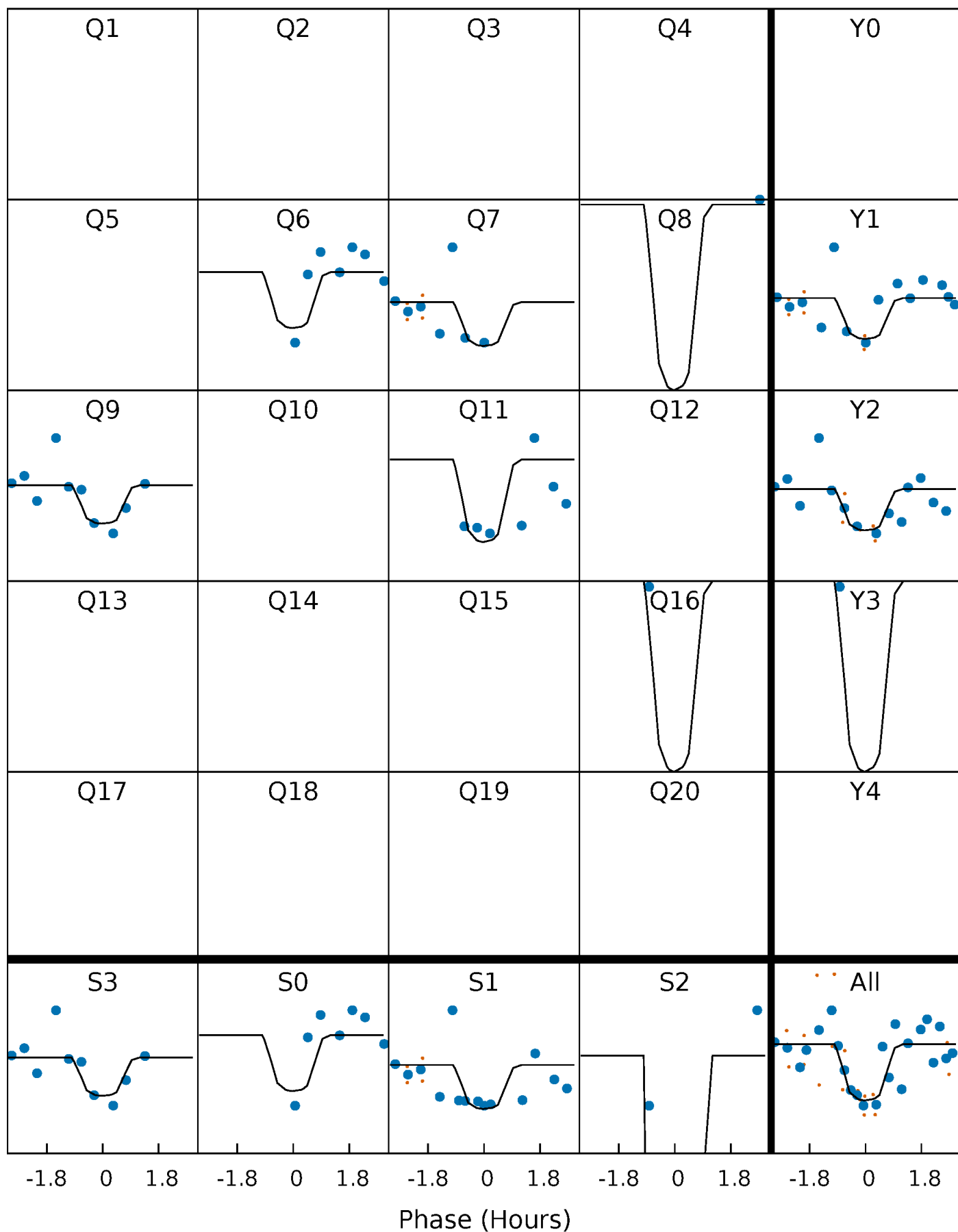
PDC Quarter-Phased Transit Curves

TCE 009673338-10 P= 13.594499 Days $T_0=135.993905$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 009673338-10 P= 13.594499 Days $T_0=135.993905$ (BKJD)

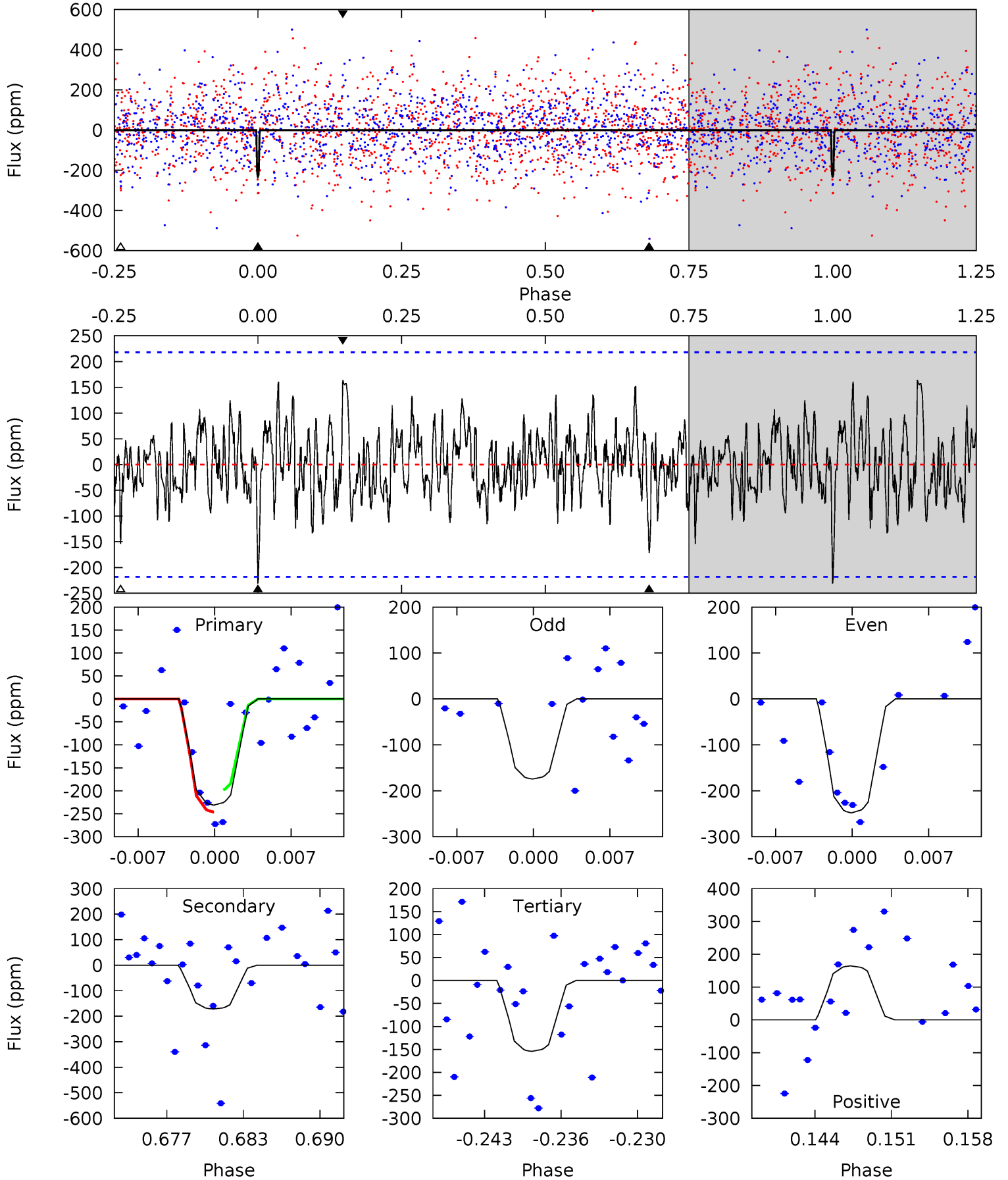


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

009673338-10, P = 13.594499 Days, E = 135.993905 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.41	4.02	3.61	3.85	5.11	2.72	1.27	1.80	1.56	0.41	0.17	0.78	0.96	0.42	0.55



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 009673338

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6241^{+190}_{-171}	$3.442^{+0.392}_{-0.098}$	$-0.200^{+0.350}_{-0.300}$	$4.157^{+0.611}_{-1.834}$	$1.746^{+0.155}_{-0.465}$	$0.034^{+0.127}_{-0.010}$
	+3%/-3%	+11%/-3%	+175%/-150%	+15%/-44%	+9%/-27%	+369%/-30%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 009673338-10 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-172 ± 43	$16.68^{+19.69}_{-11.09}$	2094^{+142}_{-219}	3819^{+2333}_{-838}	$5.689^{+47.617}_{-4.454}$
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

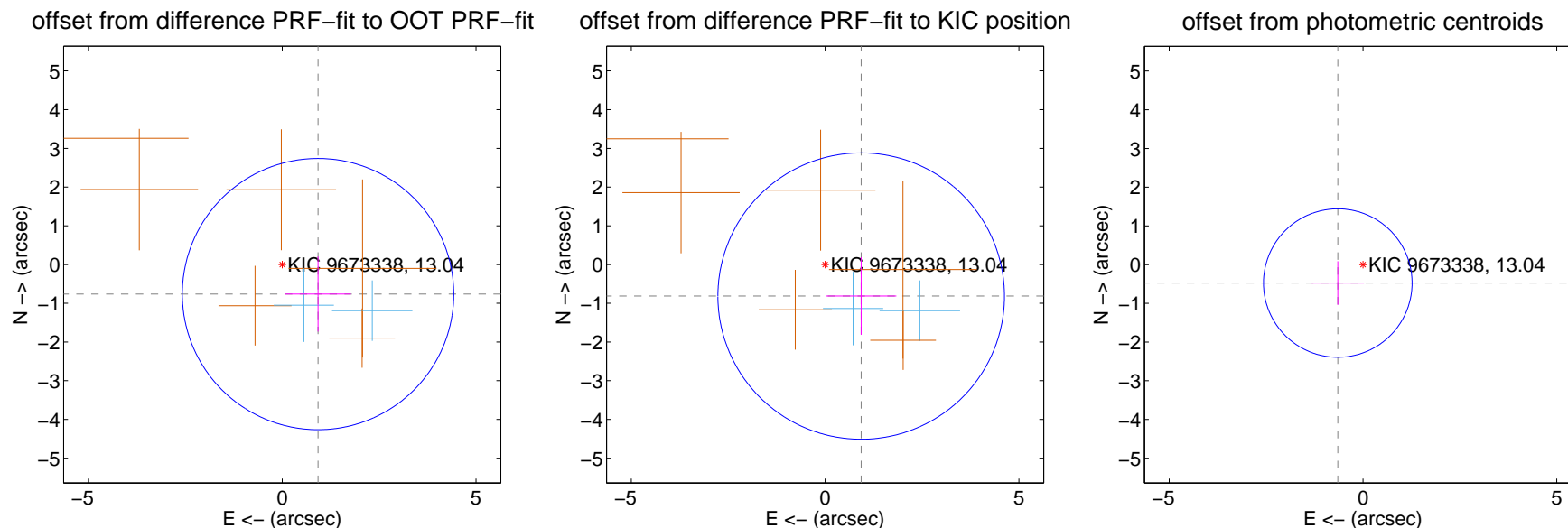
DV Centroid Data

Supplemental centroid analysis for 009673338-10. Kepler magnitude: 13.04. Transit SNR 9.16

There are 3 quarters with good PRF difference image offsets

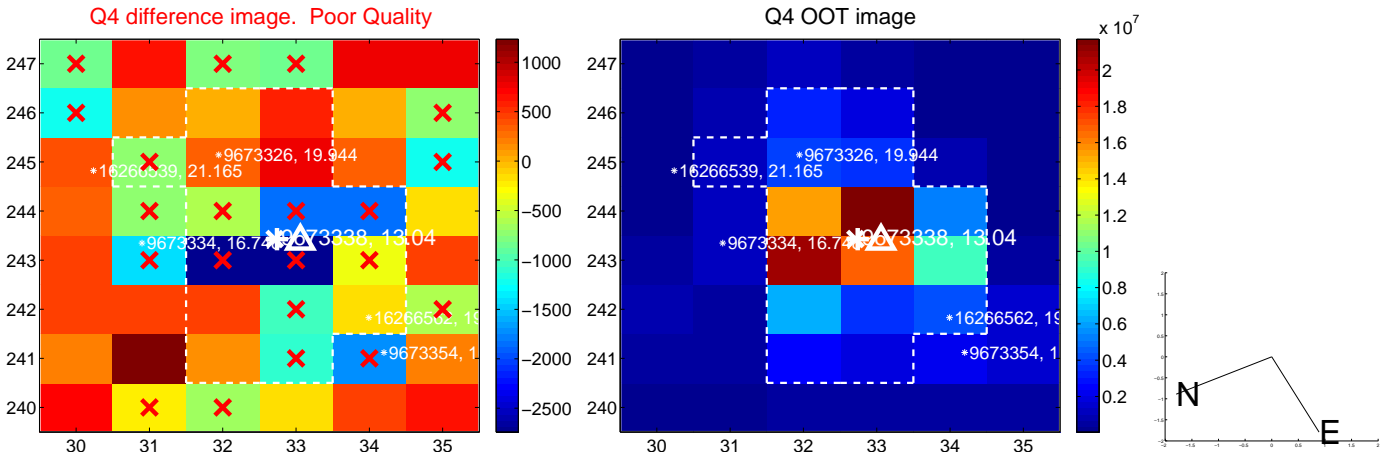
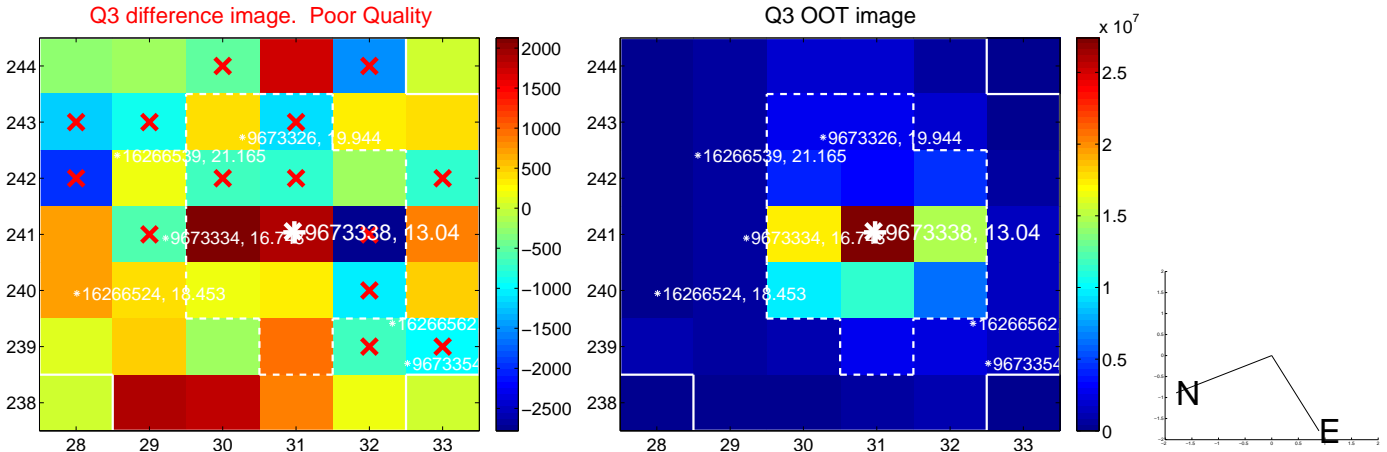
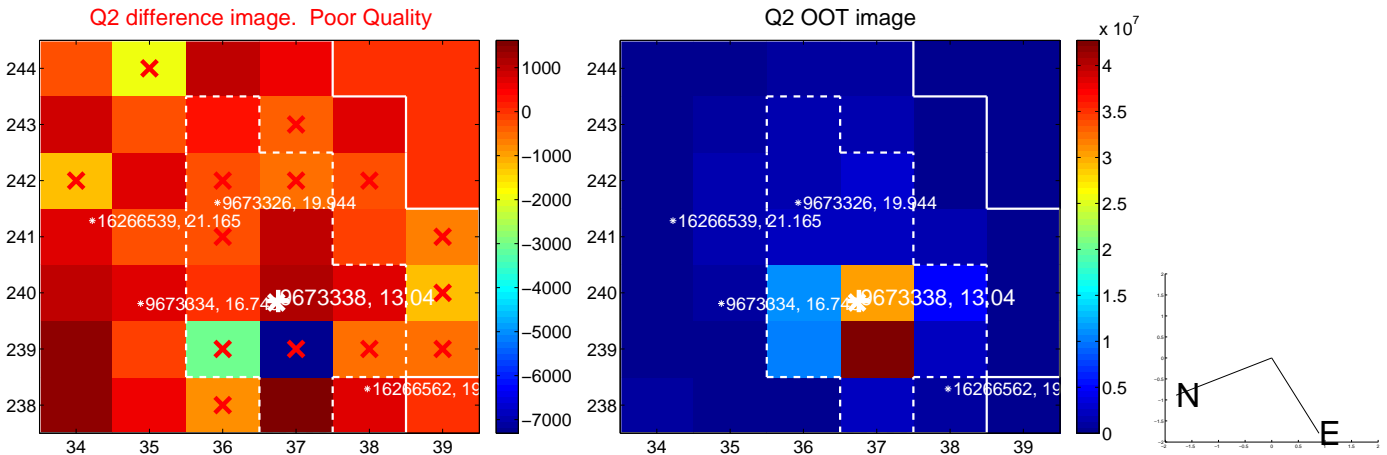
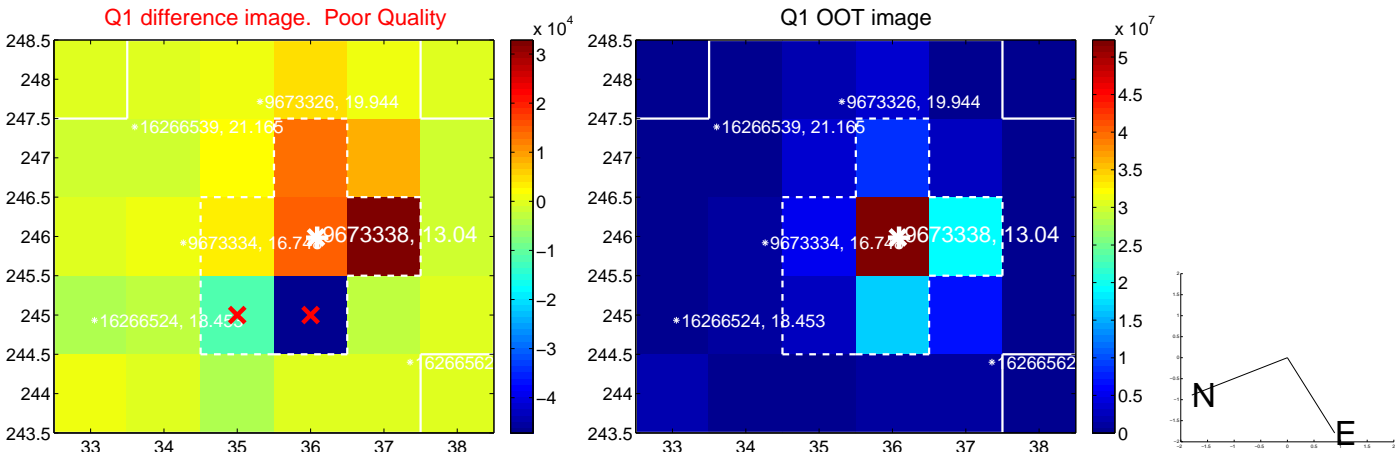
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.199 ± 1.167	1.03	-0.924 ± 0.849	-0.763 ± 0.969
PRF-fit source offset from KIC position	1.236 ± 1.232	1.00	-0.930 ± 0.906	-0.814 ± 1.003
photometric centroid source offset	0.81 ± 0.64	1.26	0.65 ± 0.68	-0.48 ± 0.56

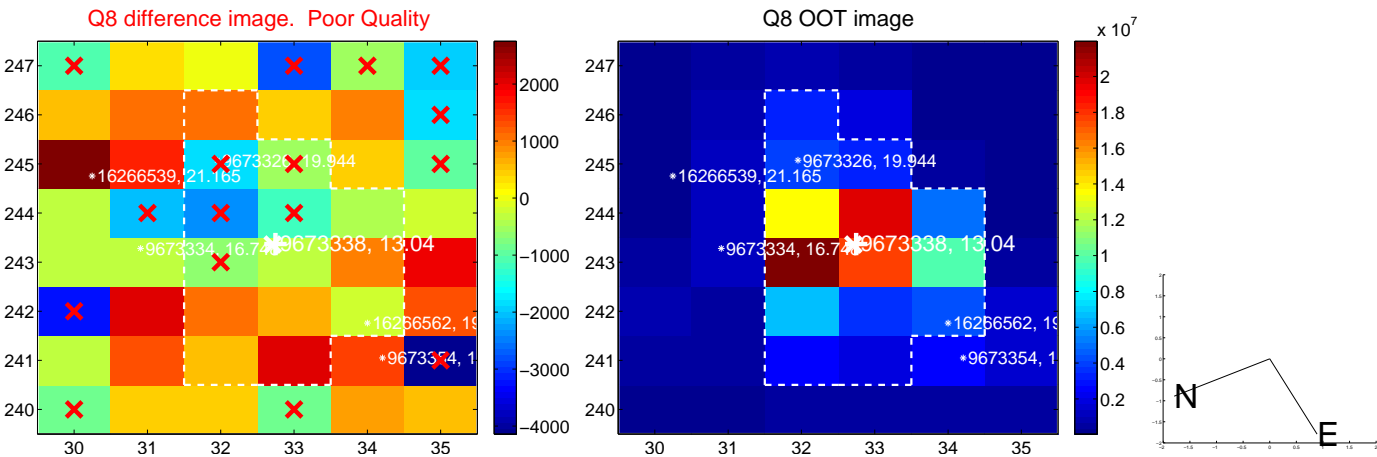
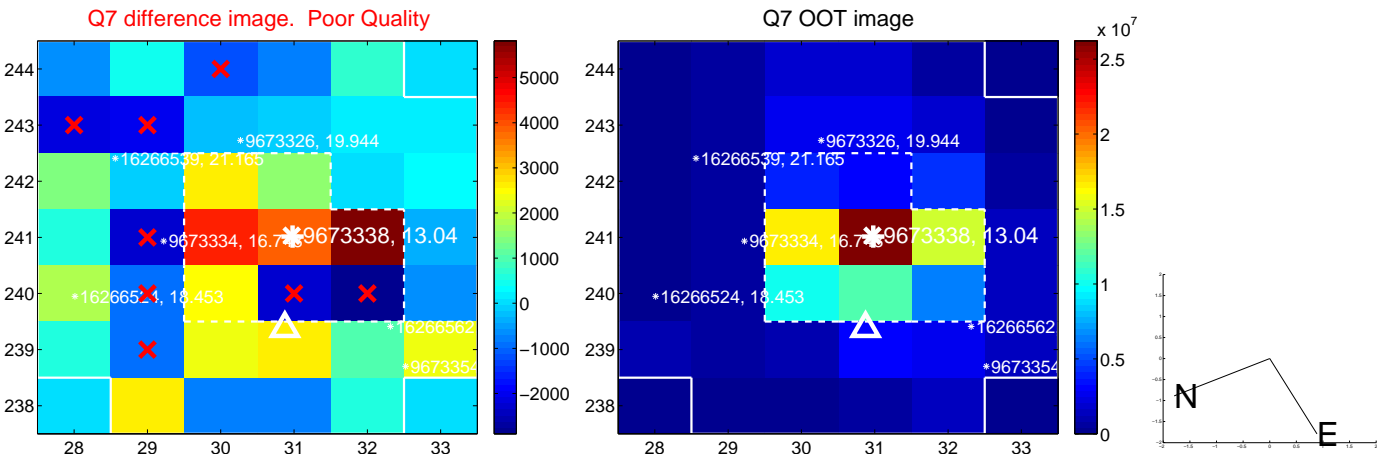
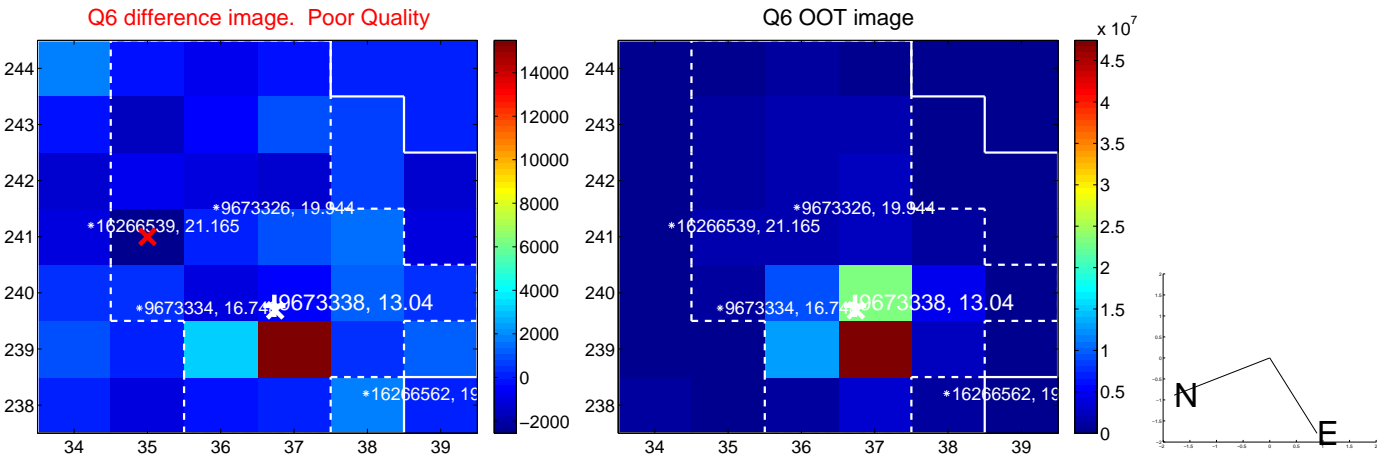
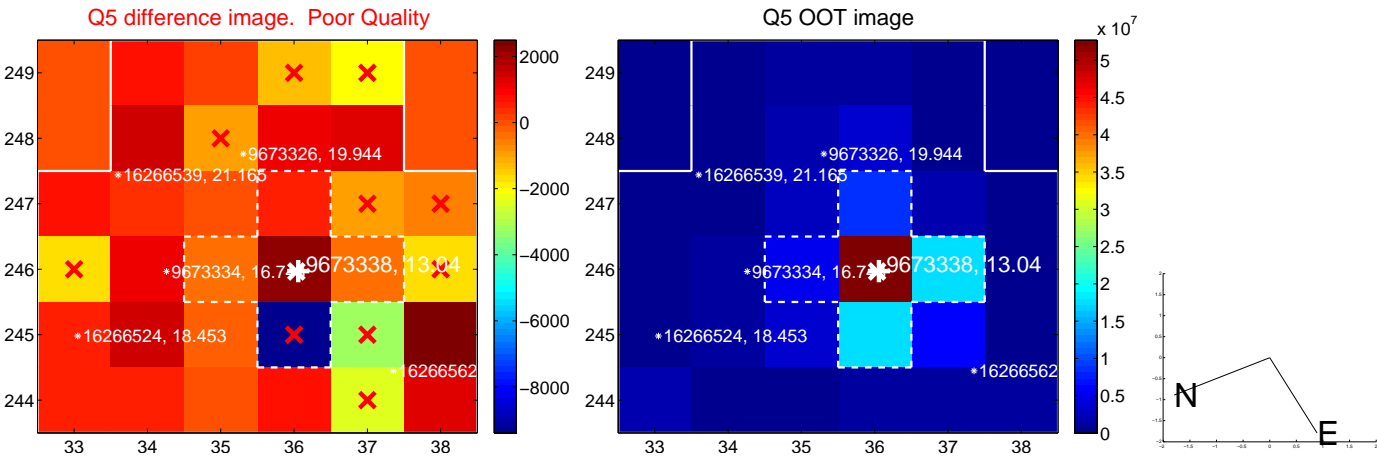


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

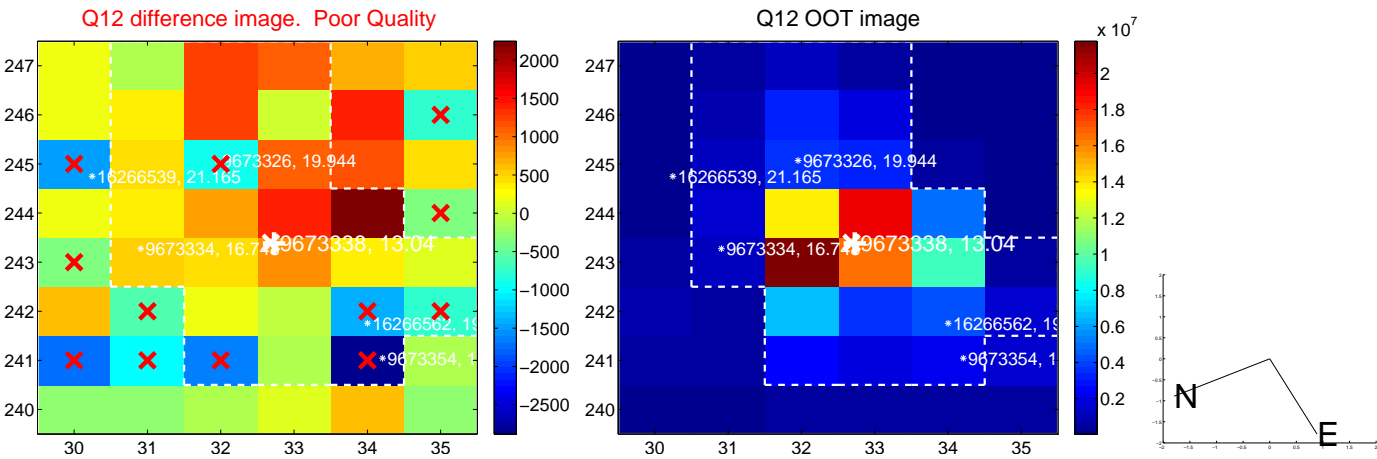
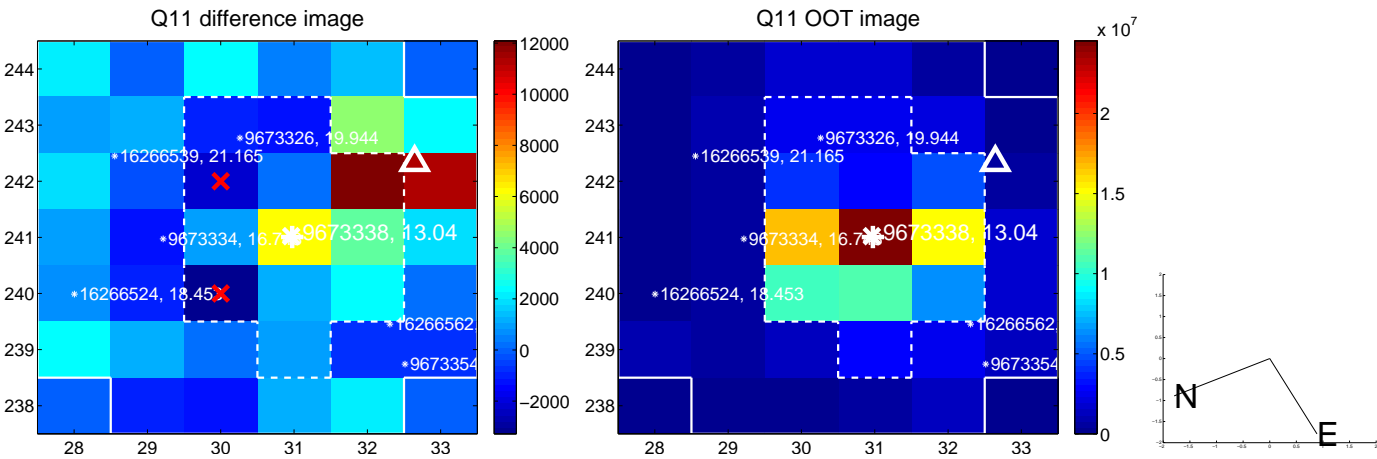
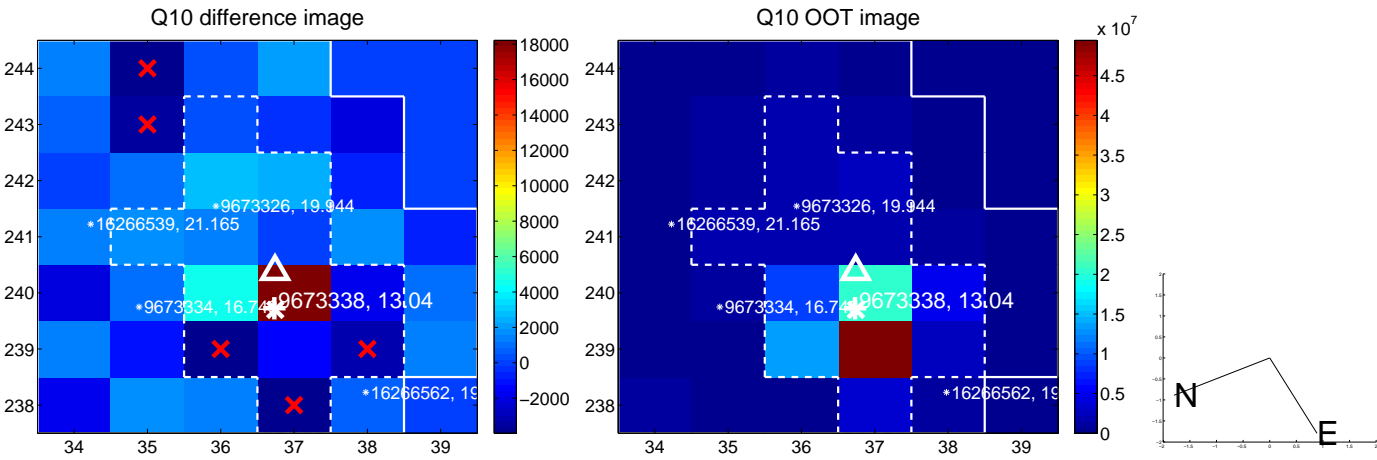
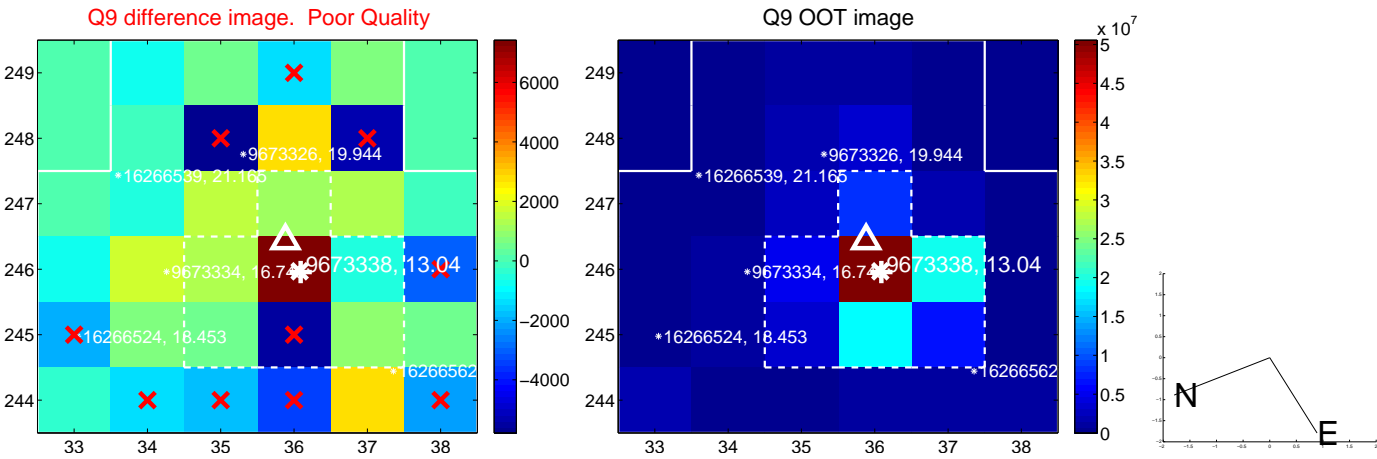
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



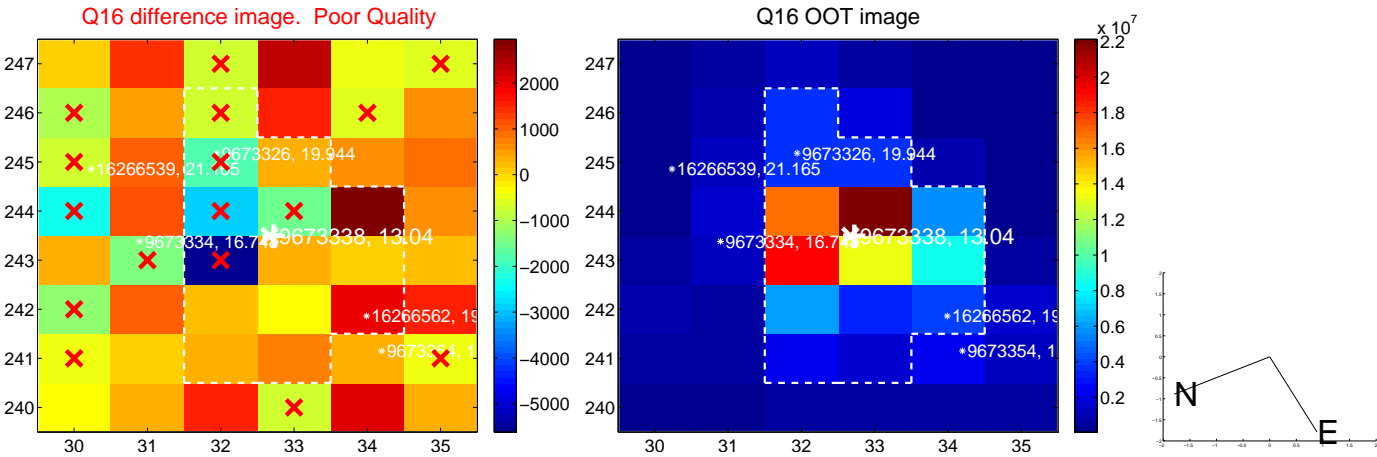
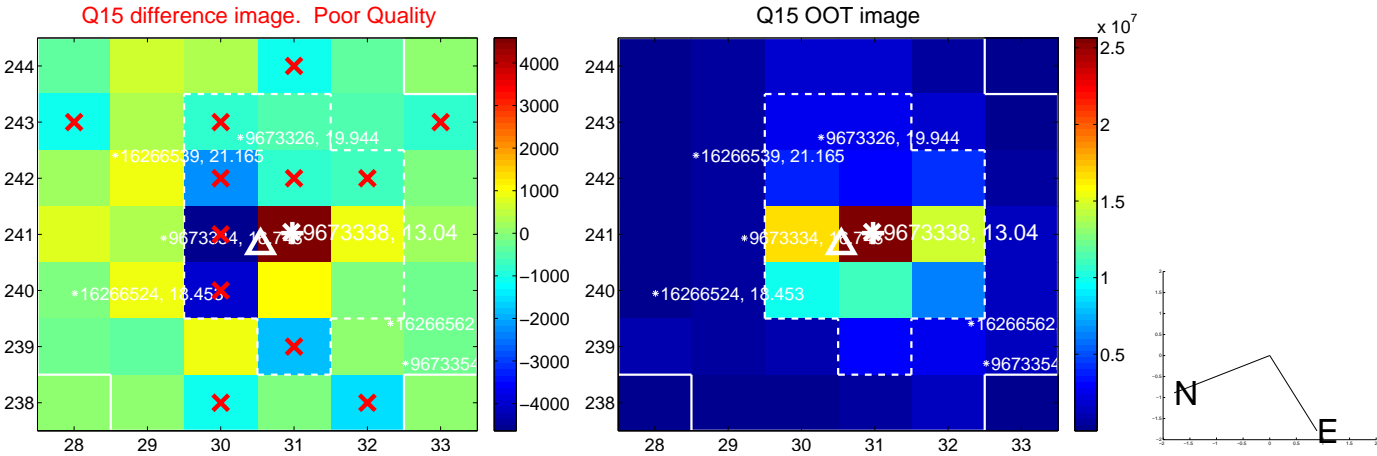
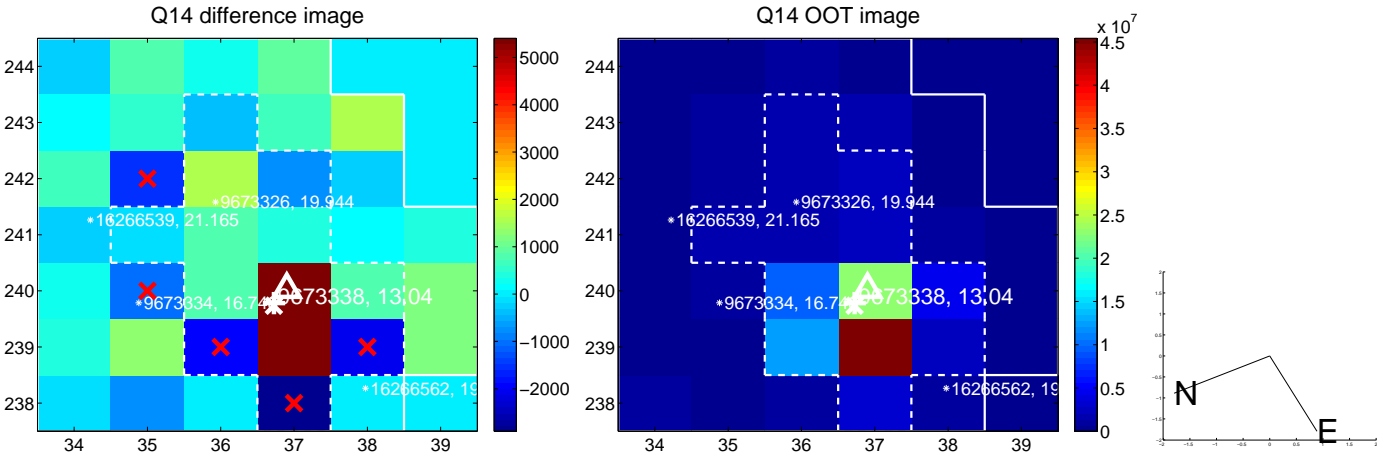
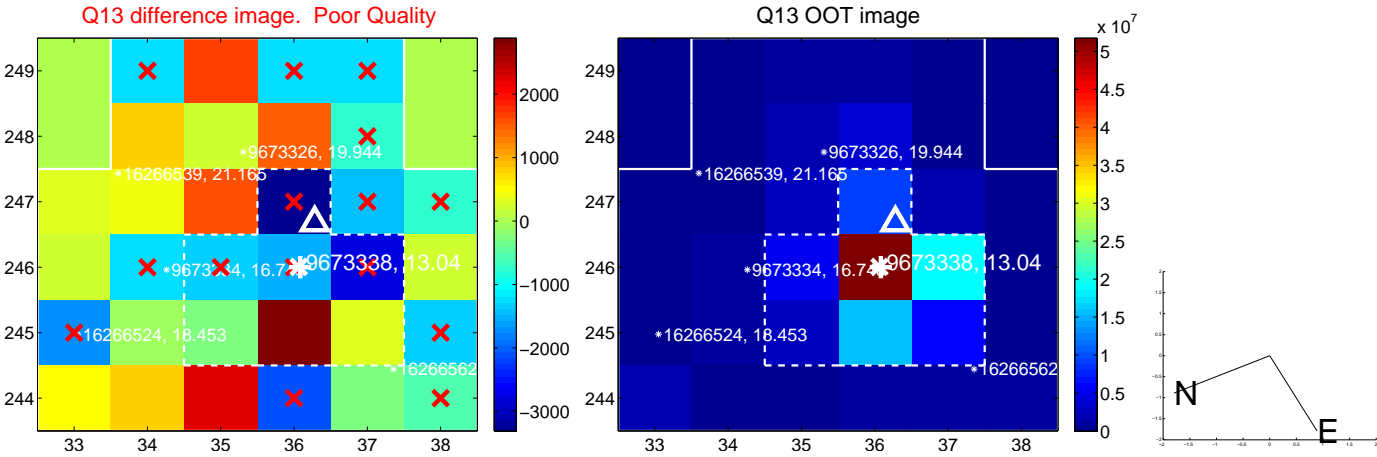
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



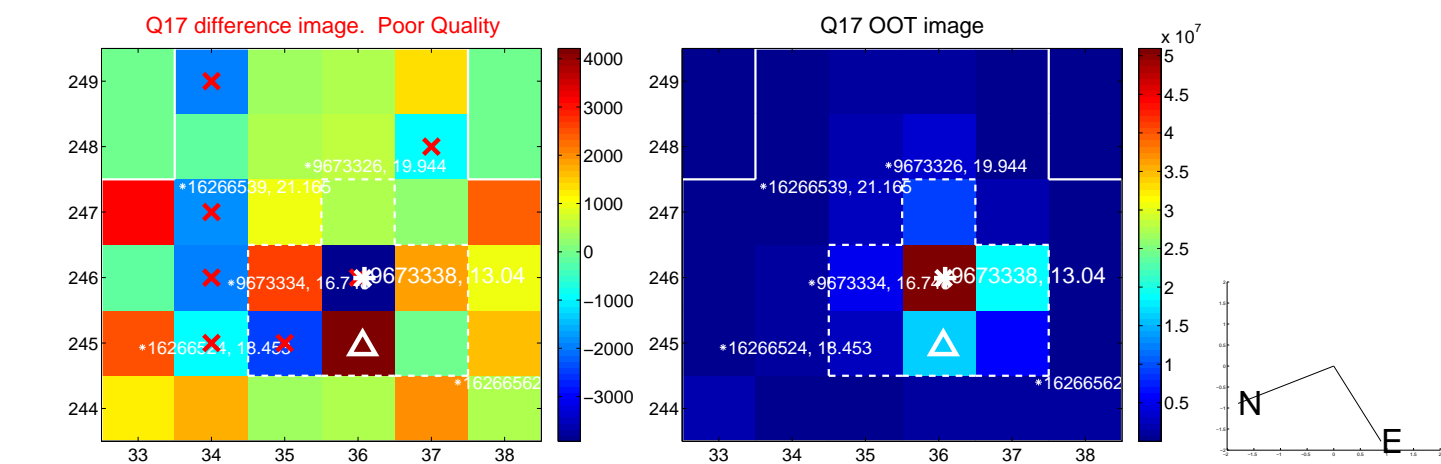
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



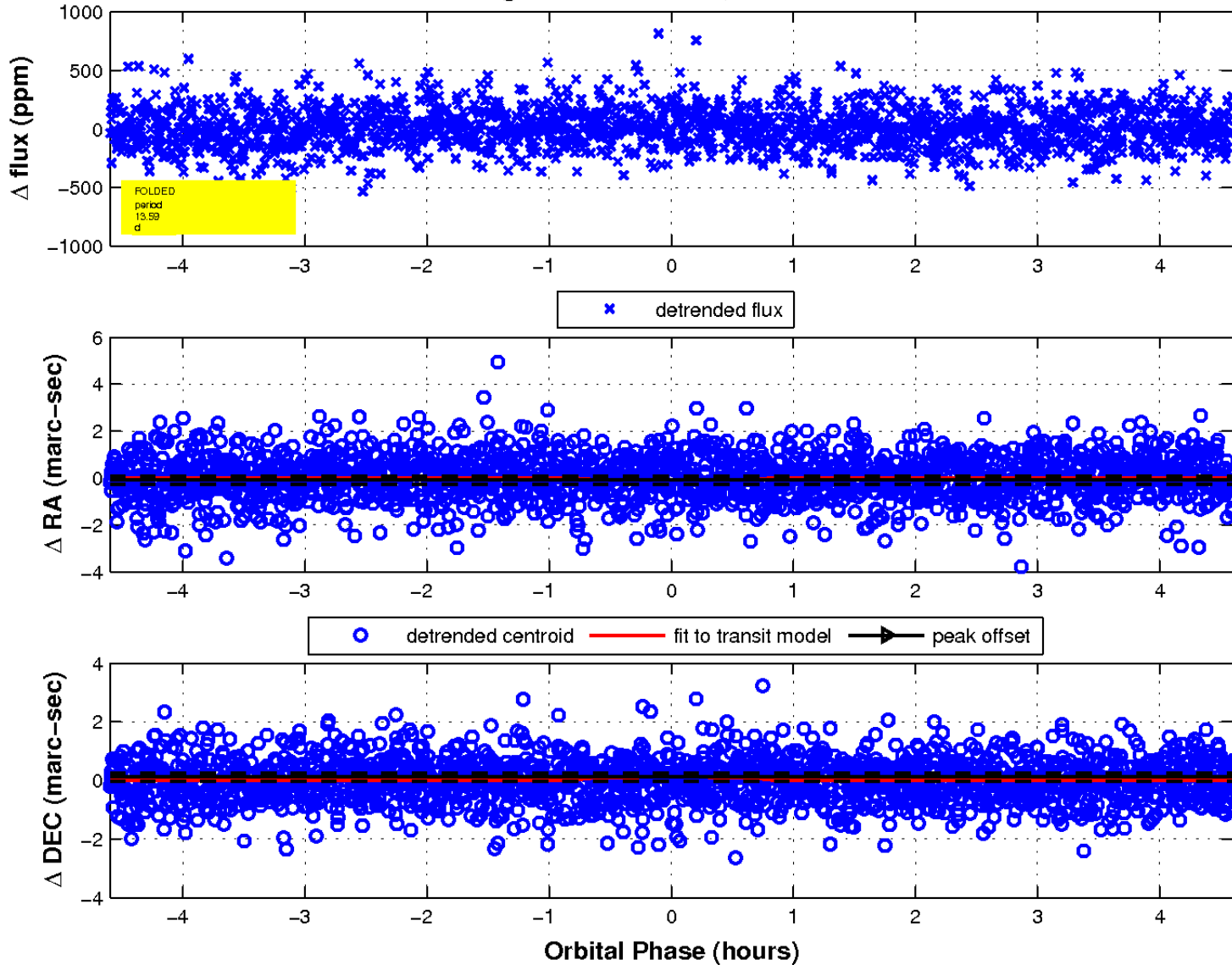
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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UKIRT Image

Declination

