

KIC 002969638

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})
002969638-01	OBS	6298.01	1.973586	131.945047	115.7	5.541	14.5	15.9	1.25	5870	1.59	1775.20
002969638-02	OBS	No	530.496085	224.136321	582.9	15.000	12.6	-1.0	1.25	5870	2.99	1.02
002969638-03	OBS	No	256.275163	259.293018	1055.2	7.392	9.9	6.4	1.25	5870	4.24	2.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002969638-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
002969638-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS
002969638-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—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.

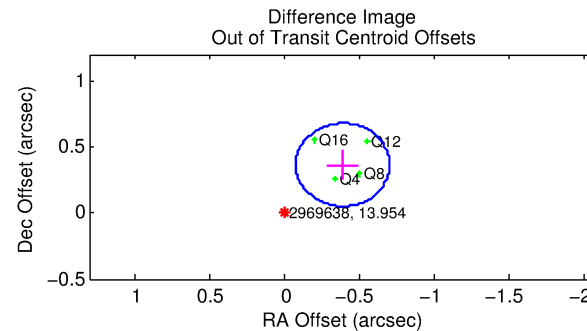
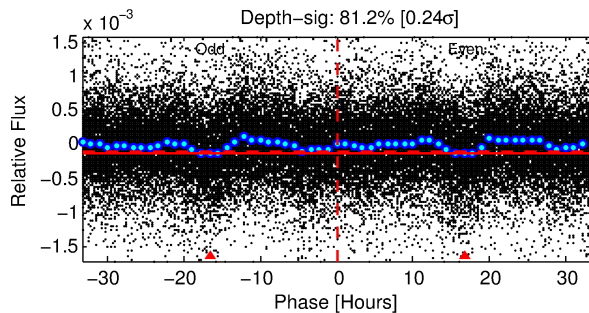
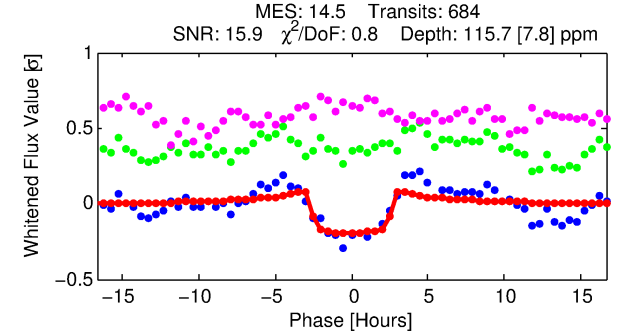
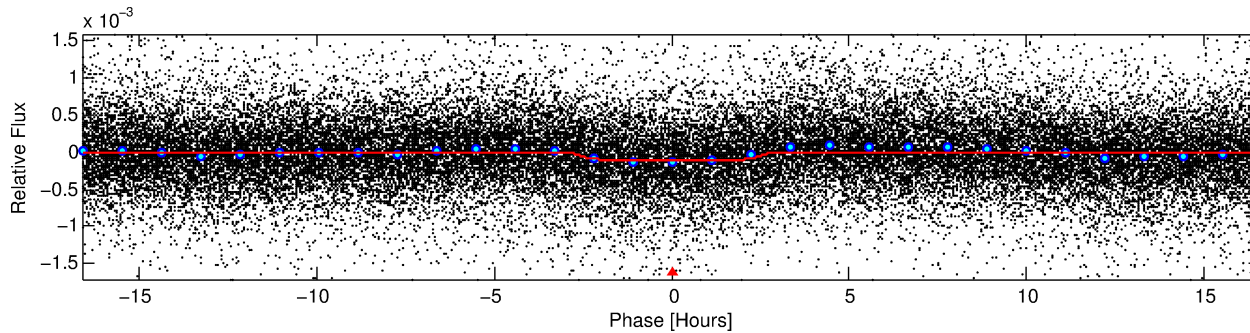
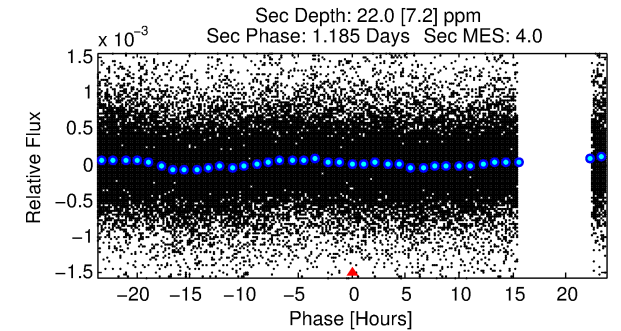
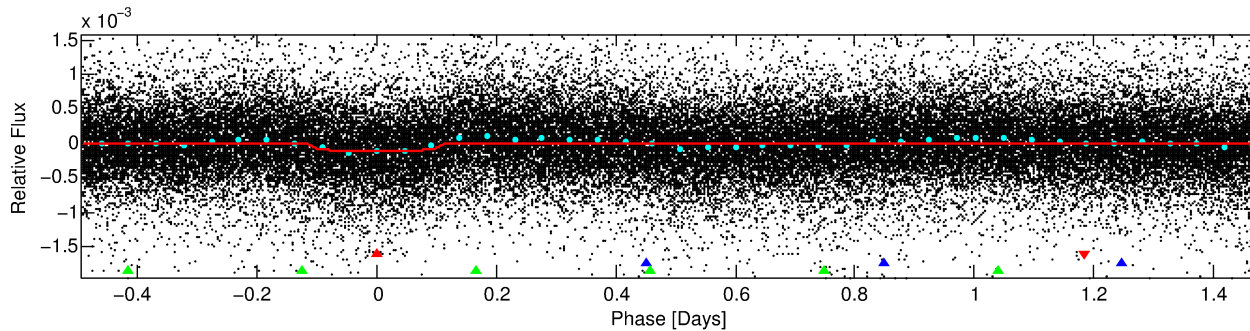
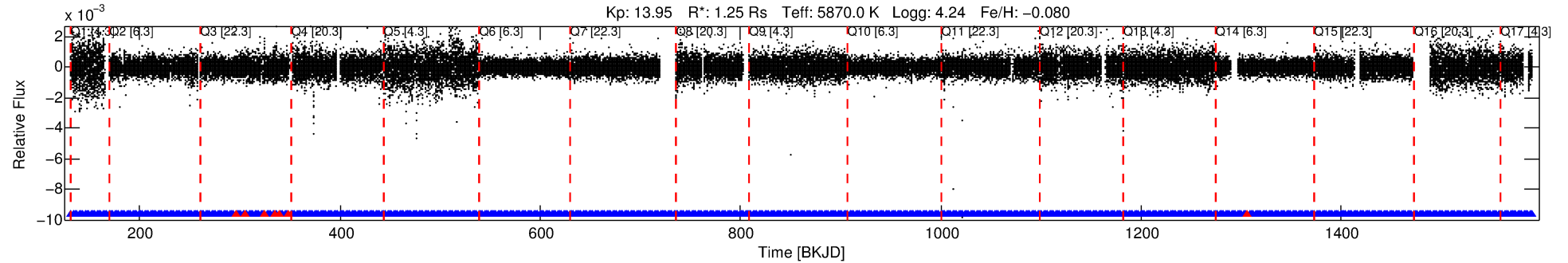
Ephemeris Match Information For 002969638-01

No Significant Match Found

DV One-Page Summary

KIC: 2969638 Candidate: 1 of 3 Period: 1.974 d

KOI: K06298.01 Corr: 0.882



DV Fit Results:

Period = 1.97359 [0.00001] d
Epoch = 131.9450 [0.0031] BKJD
Rp/R* = 0.0117 [0.0020]
a/R* = 1.55 [0.78]
b = 0.90 [0.18]
Seff = 1775.21 [707.74]
Teq = 1655 [165] K
Rp = 1.59 [0.50] Re
a = 0.0305 [0.0074] AU
Ag = 4.45 [2.72] [1.27 σ]
Teffp = 3717 [458] K [4.24 σ]

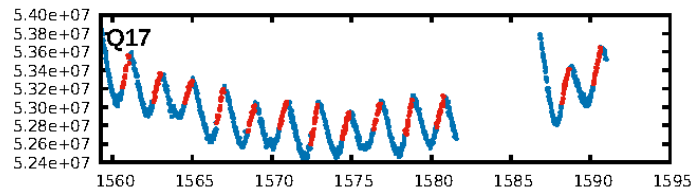
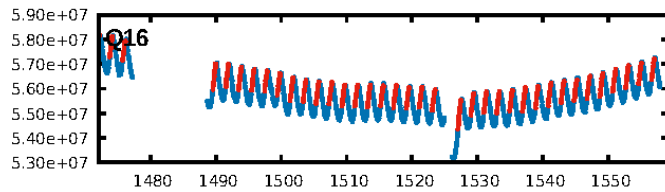
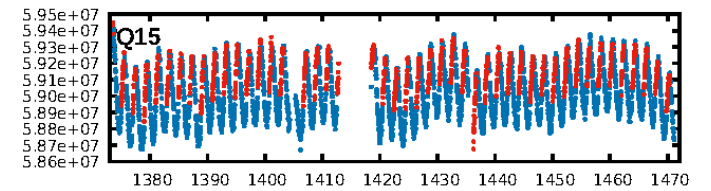
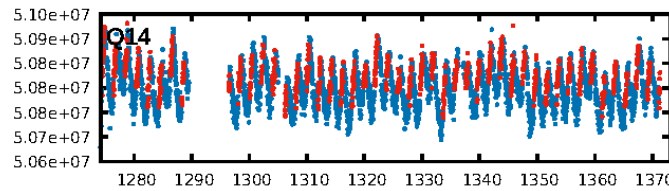
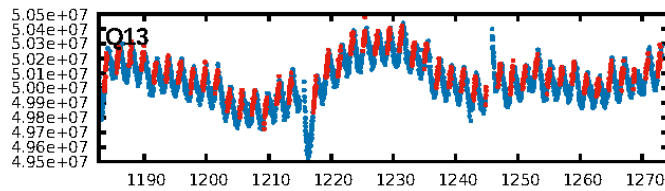
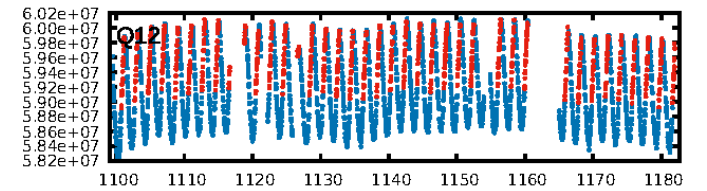
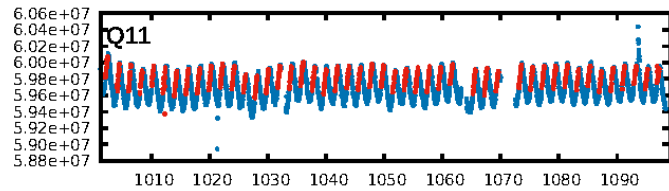
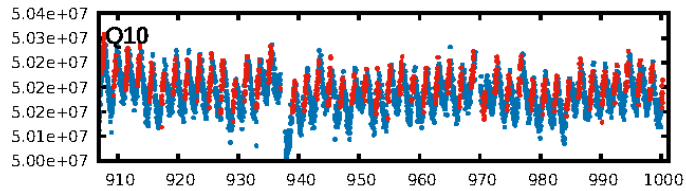
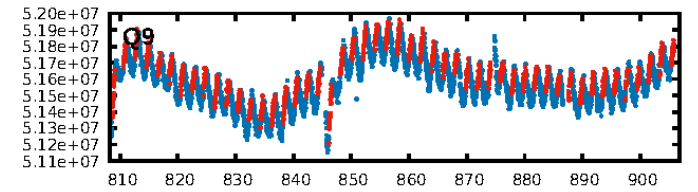
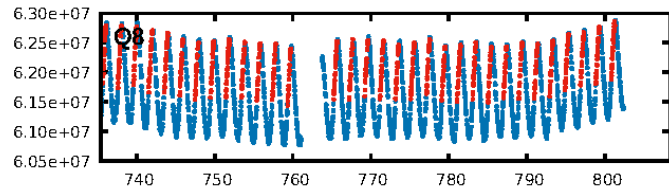
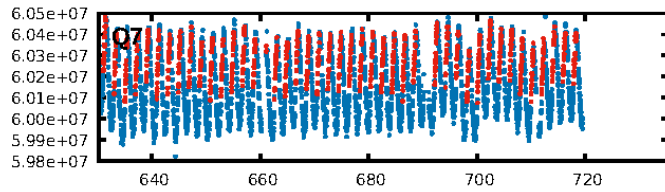
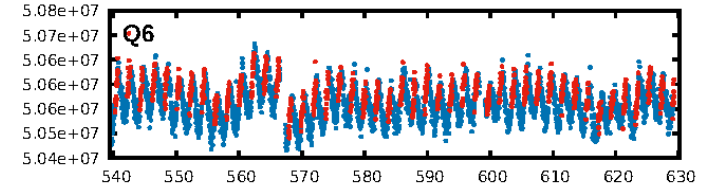
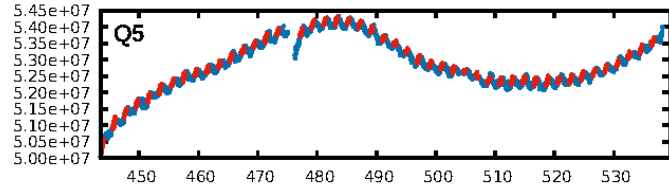
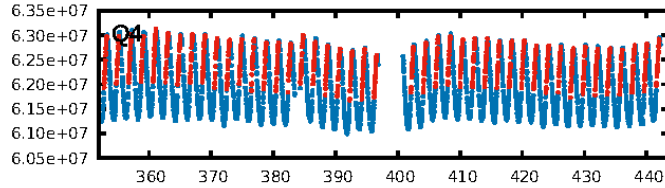
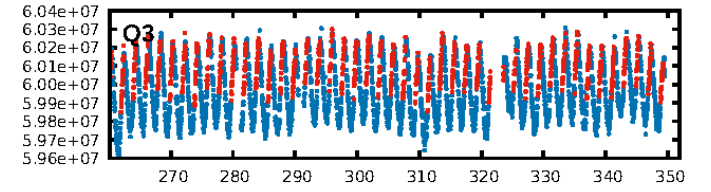
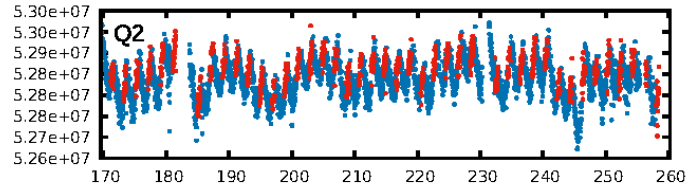
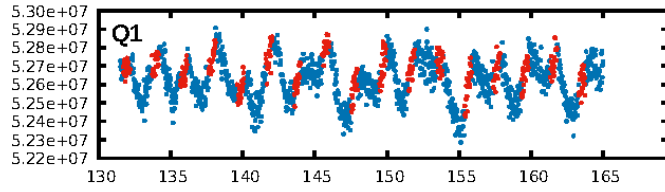
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [660.67 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.67e-37
RollingBand-fgt: 0.99 [647/654]
GhostDiagnostic-chr: -0.8089
Centroid-sig: 0.0%
Centroid-so: 4.616 arcsec [25.33 σ]
OotOffset-rm: 0.536 arcsec [5.11 σ]
KicOffset-rm: 5.739 arcsec [57.96 σ]
OotOffset-st: 0/0/4/0 [4]
KicOffset-st: 0/0/4/0 [4]
DiffImageQuality-fgm: 0.00 [0/4]
DiffImageOverlap-fno: 1.00 [17/17]

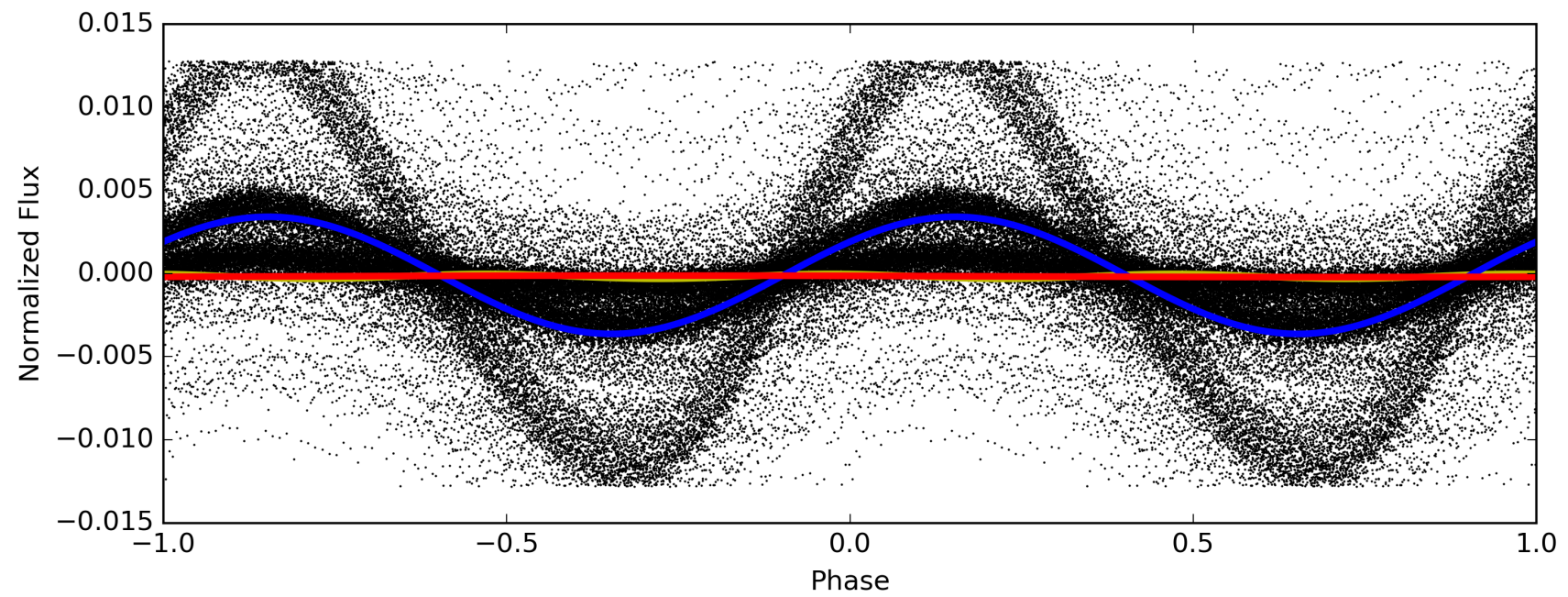
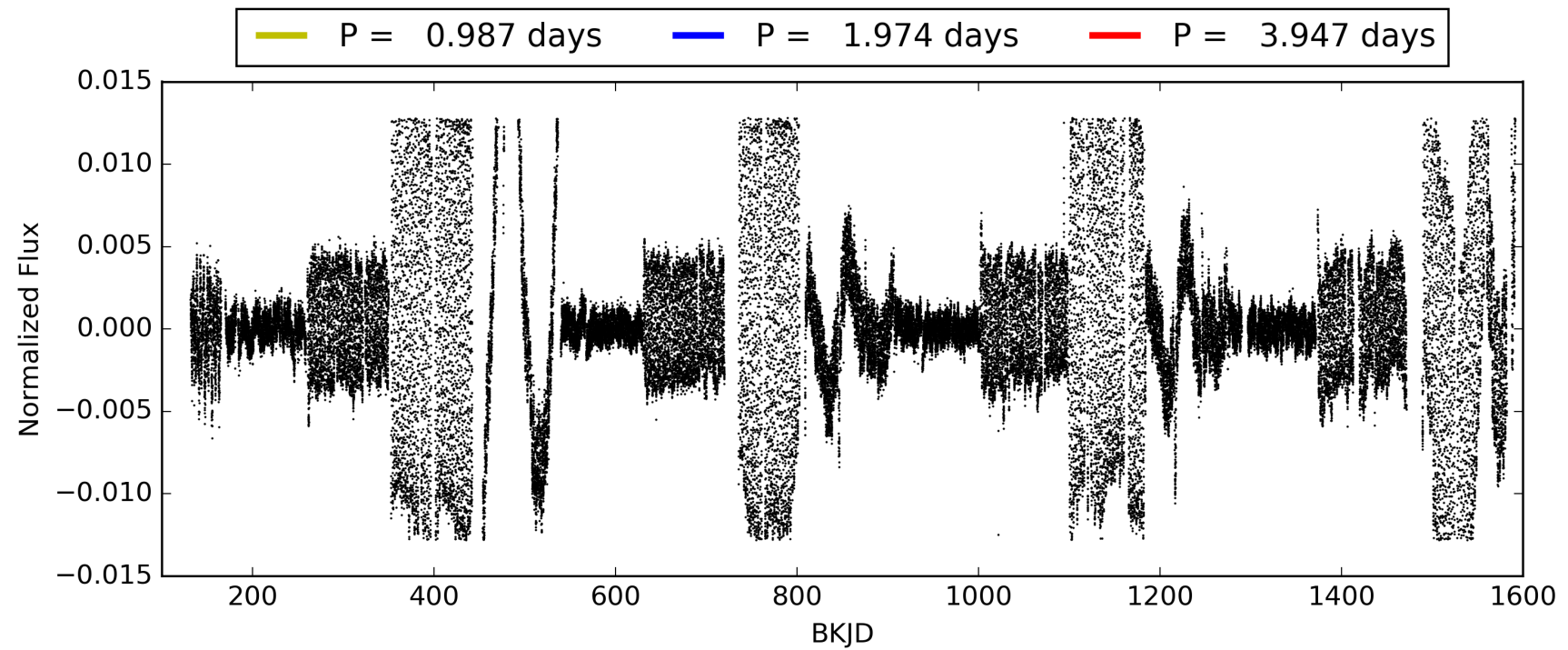
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 08:58:18 Z

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

TCE 002969638-01, PDC Light Curves

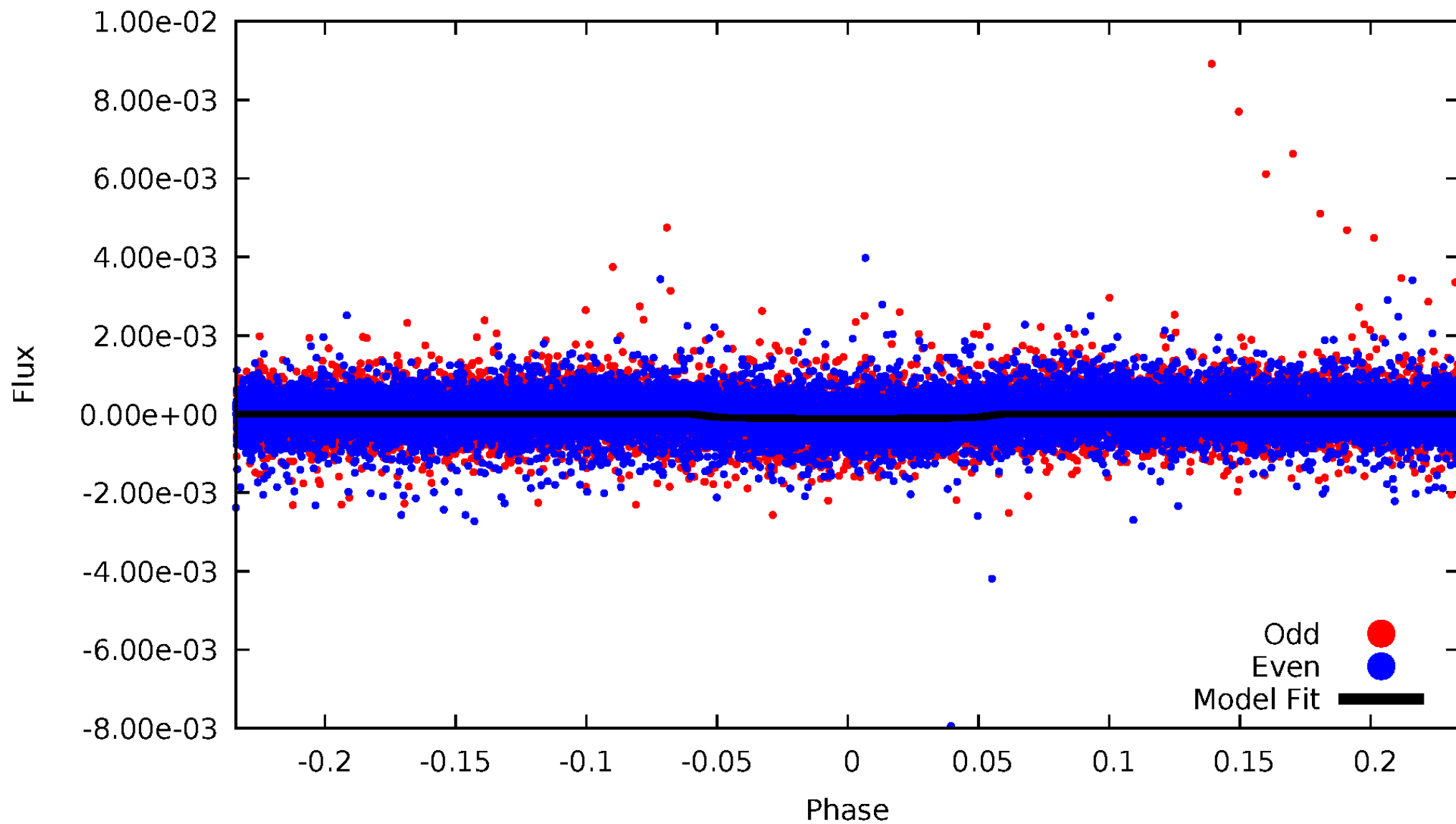


TCE 002969638-01



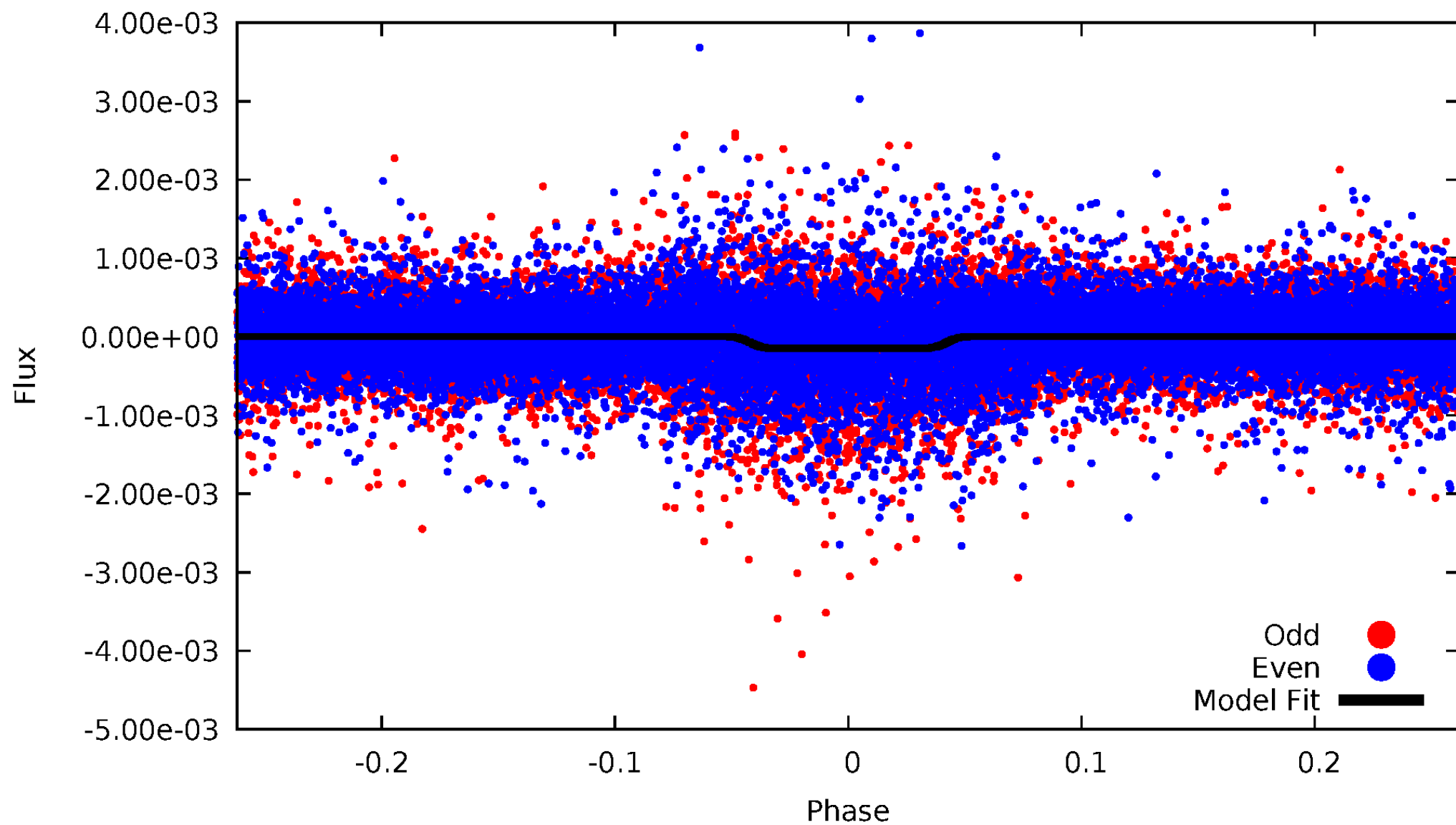
DV Odd/Even

TCE 002969638-01



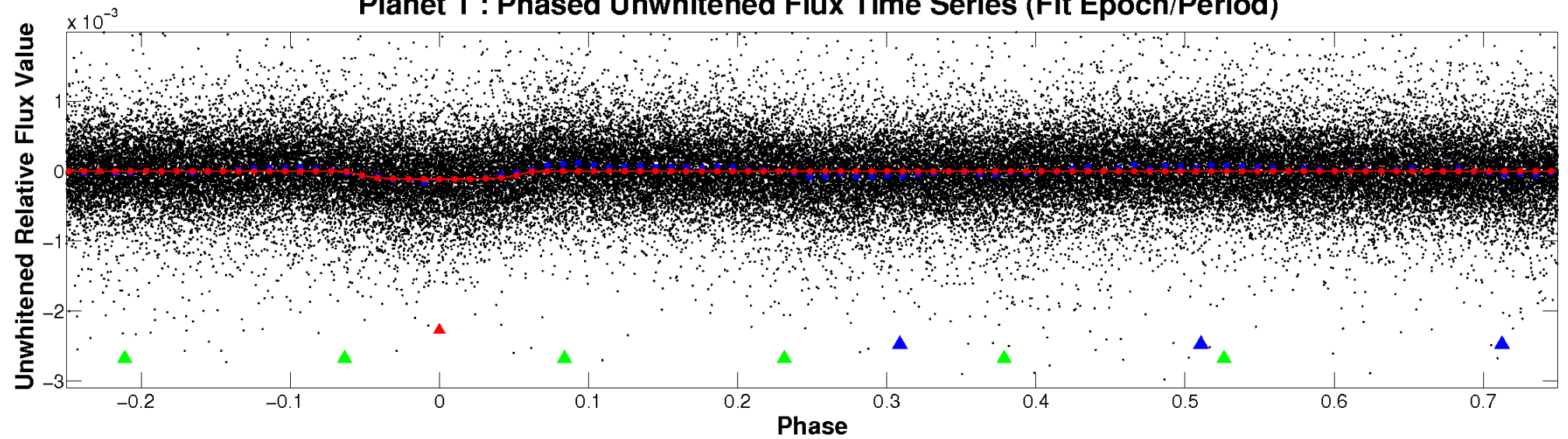
ALT Odd/Even

TCE 002969638-01

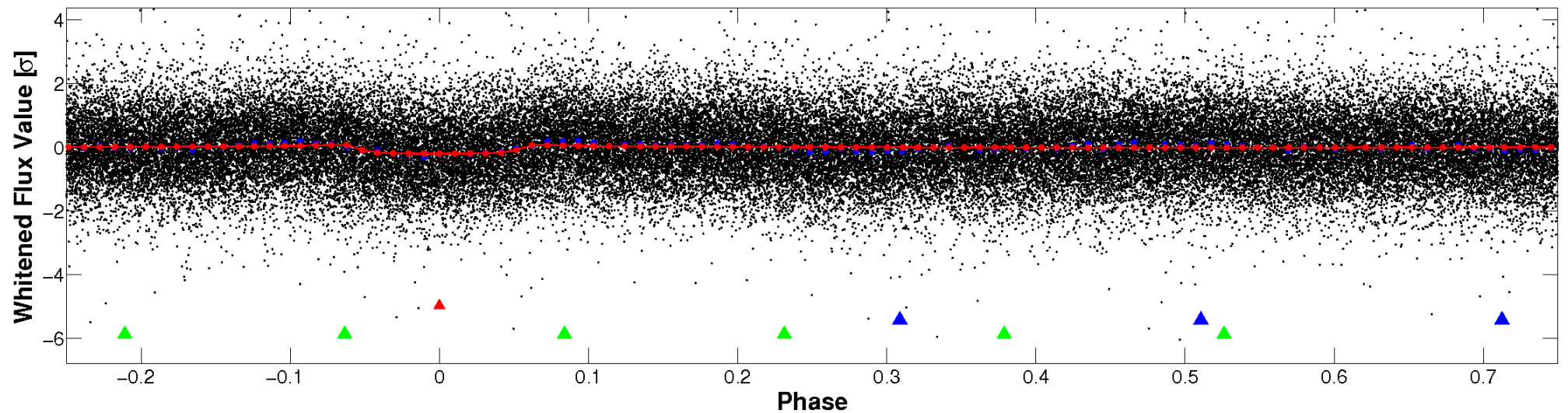


Non-Whitened Vs. Whitened Light Curve

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

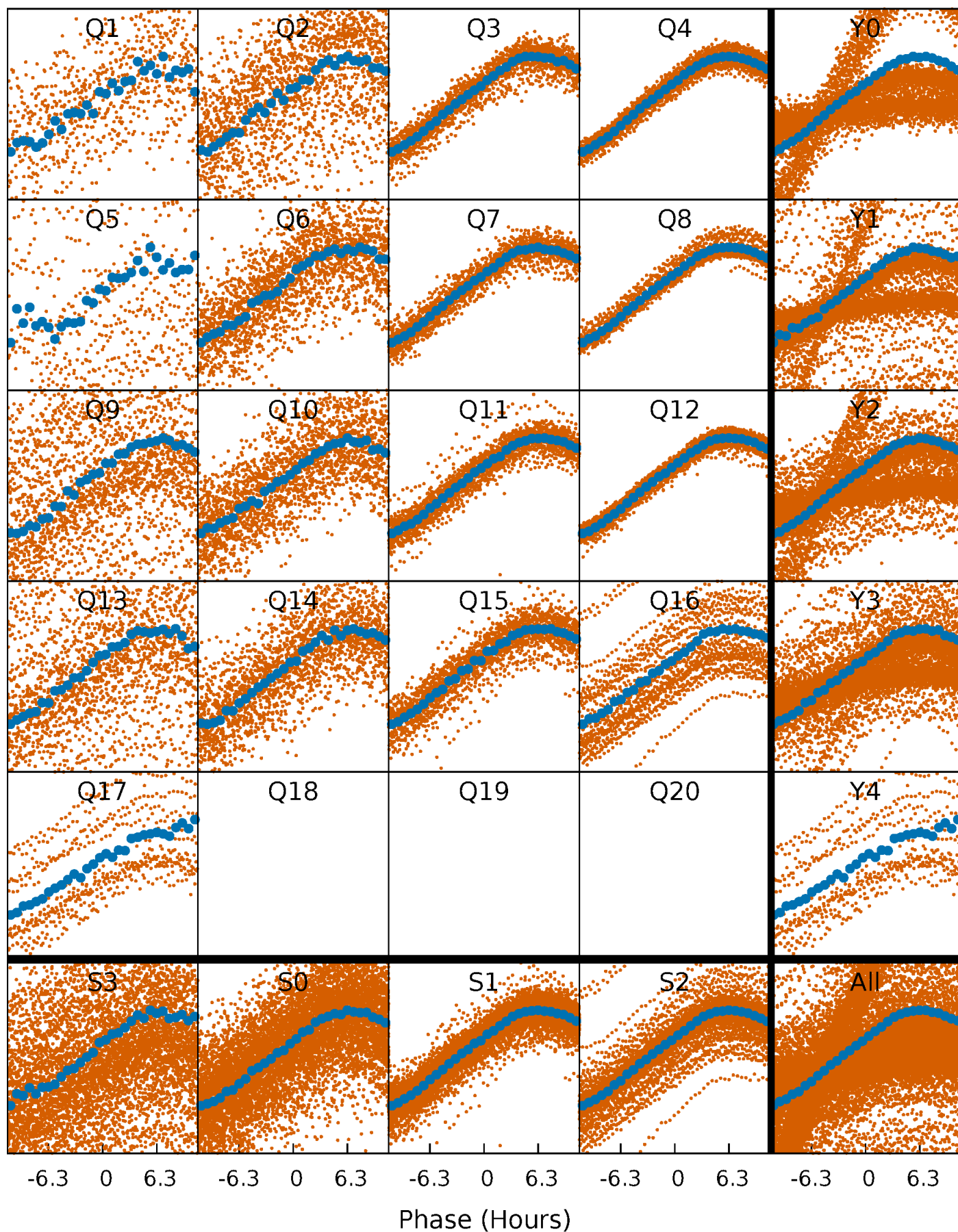


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



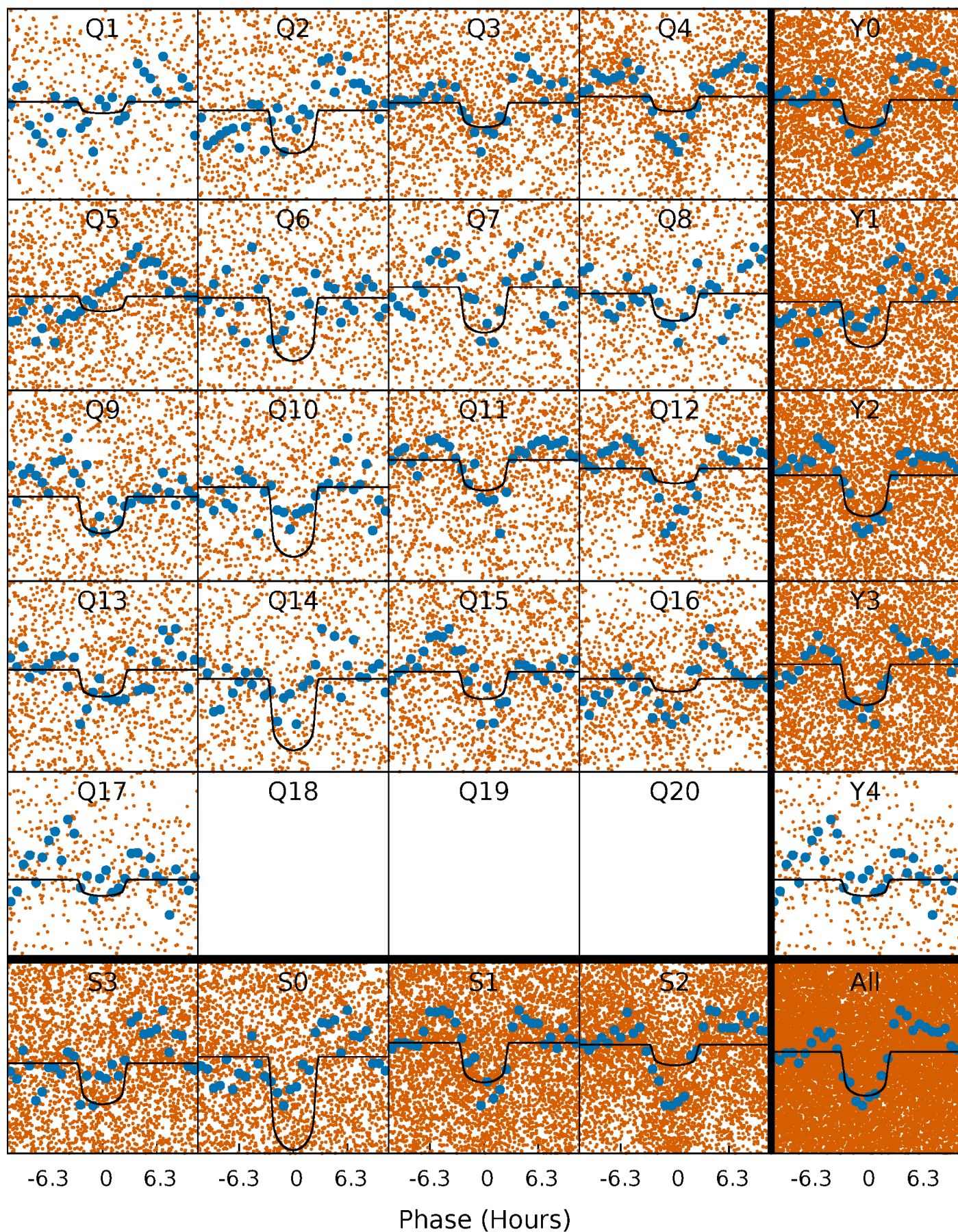
PDC Quarter-Phased Transit Curves

TCE 002969638-01 P= 1.973586 Days $T_0=131.945047$ (BKJD)



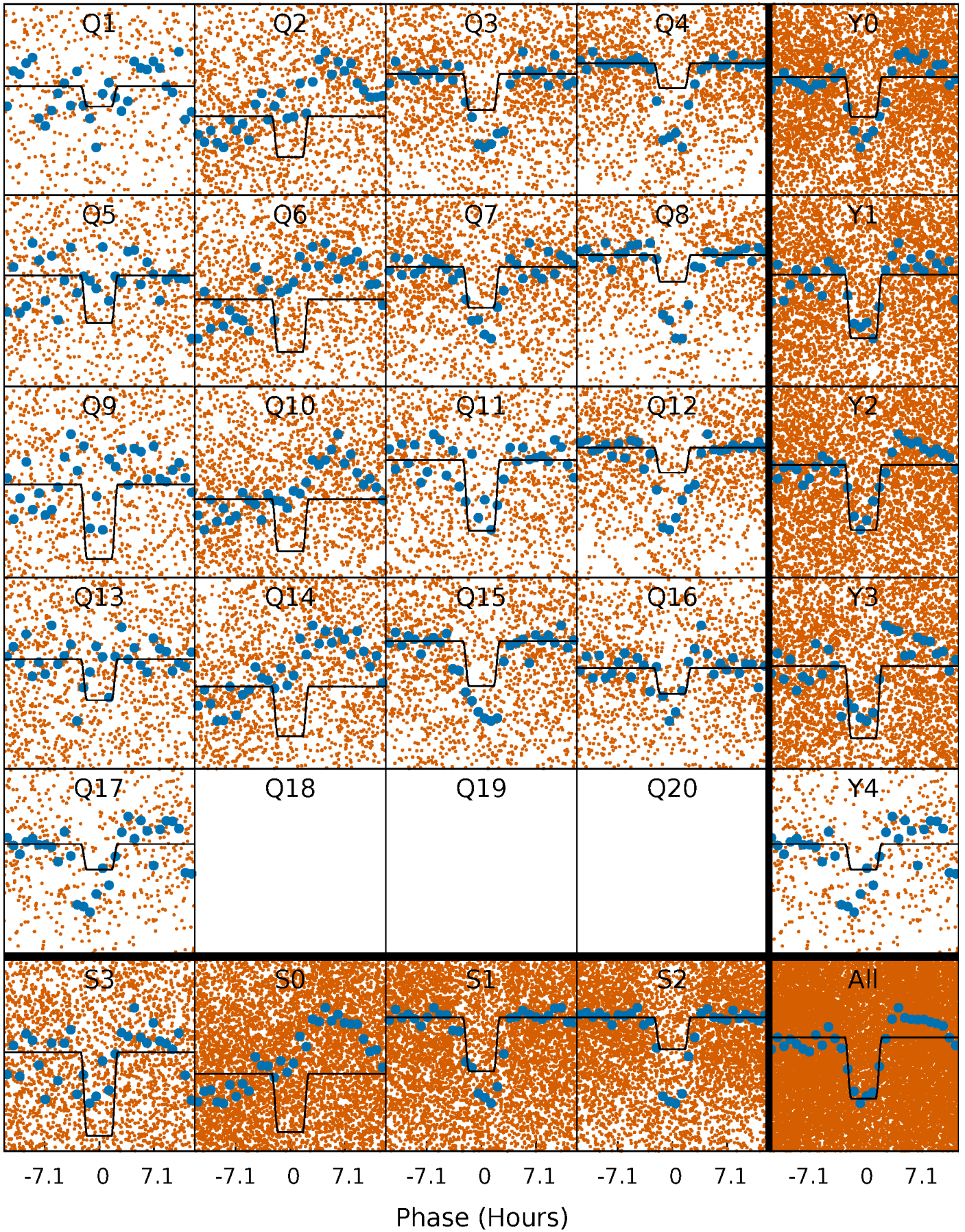
DV Quarter-Phased Transit Curves

TCE 002969638-01 P= 1.973586 Days $T_0=131.945047$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

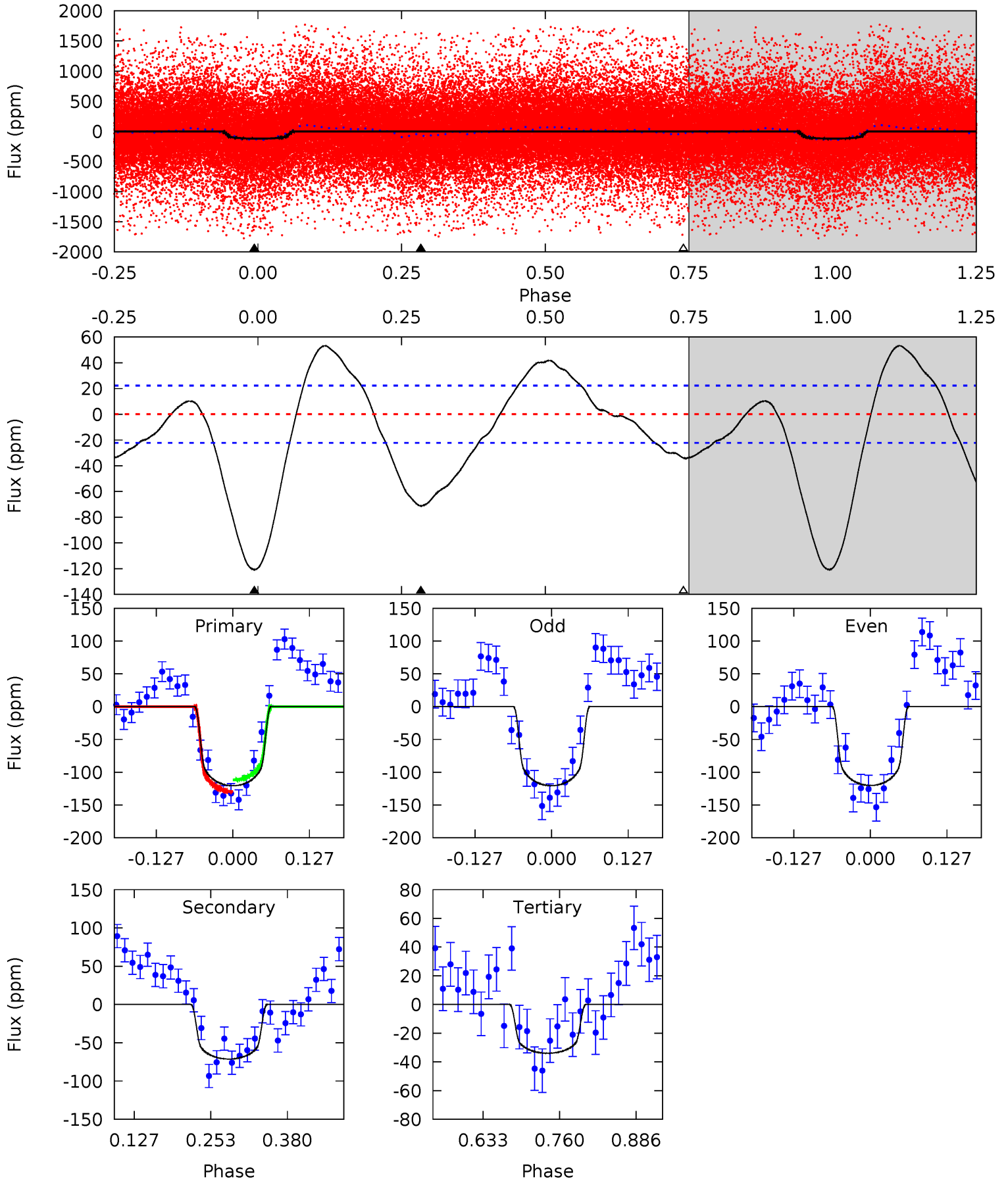
TCE 002969638-01 P= 1.973641 Days $T_0=131.922722$ (BKJD)



DV Model-Shift Uniqueness Test

002969638-01, P = 1.973586 Days, E = 129.971461 Days

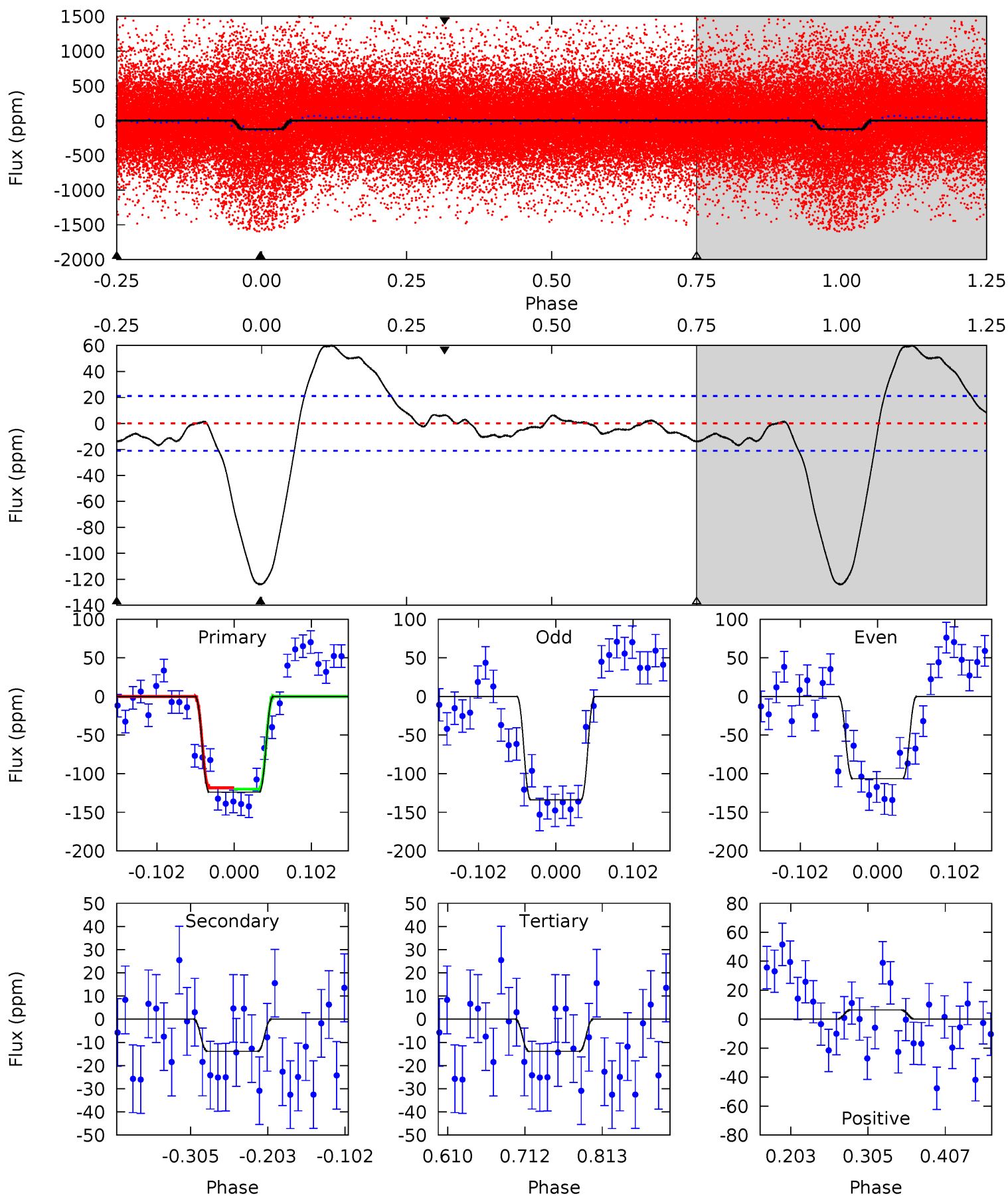
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.5	14.4	6.88	0	4.52	1.53	5.17	17.6	24.5	7.56	14.4	0.04	1.17	0.31	1.82



Alt Model-Shift Uniqueness Test

002969638-01, P = 1.973641 Days, E = 129.949081 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.8	3.01	3.01	1.38	4.56	1.64	4.37	23.8	25.5	0.00	1.62	2.99	1.93	0.33	0.19



Stellar Parameters For KIC 002969638

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5870^{+158}_{-176}	$4.235^{+0.220}_{-0.180}$	$-0.080^{+0.300}_{-0.300}$	$1.248^{+0.327}_{-0.294}$	$0.977^{+0.140}_{-0.115}$	$0.708^{+0.881}_{-0.346}$
	+3%/-3%	+5%/-4%	+375%/-375%	+26%/-24%	+14%/-12%	+124%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 002969638-01 / KOI 6298.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-71 ± 5	$1.58^{+0.39}_{-0.35}$	2300^{+178}_{-166}	5031^{+478}_{-373}	15^{+8}_{-5}
Alt.	-14 ± 5	$1.62^{+0.38}_{-0.34}$	2303^{+187}_{-164}	3622^{+363}_{-343}	$2.707^{+2.318}_{-1.204}$

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

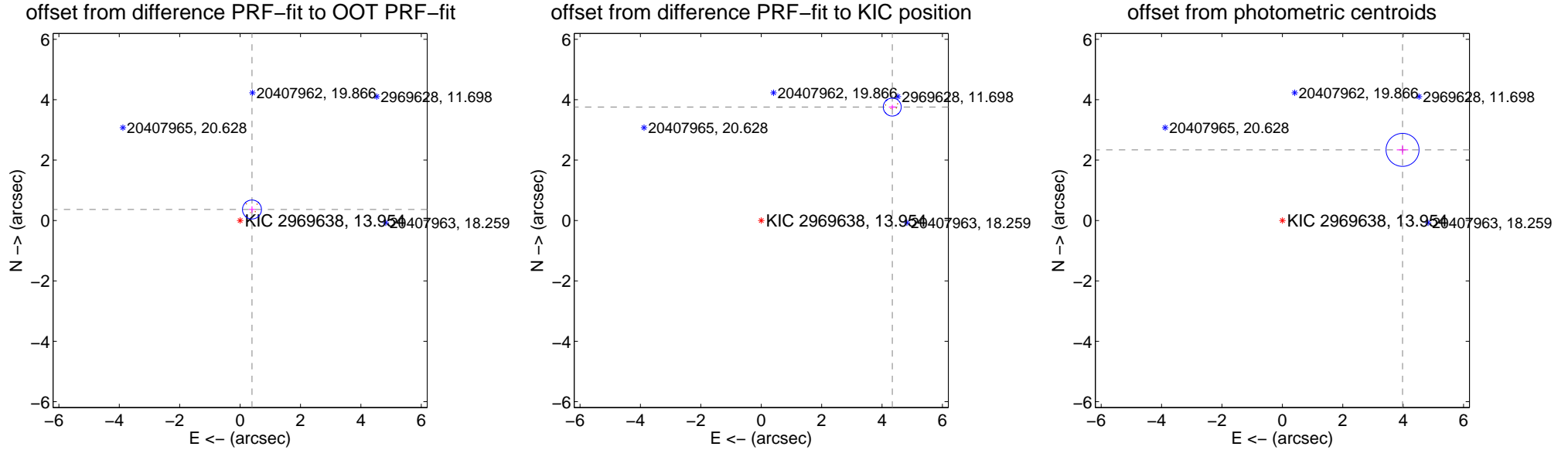
DV Centroid Data

Supplemental centroid analysis for 002969638-01. Kepler magnitude: 13.95. Transit SNR 15.91

There are 0 quarters with good PRF difference image offsets

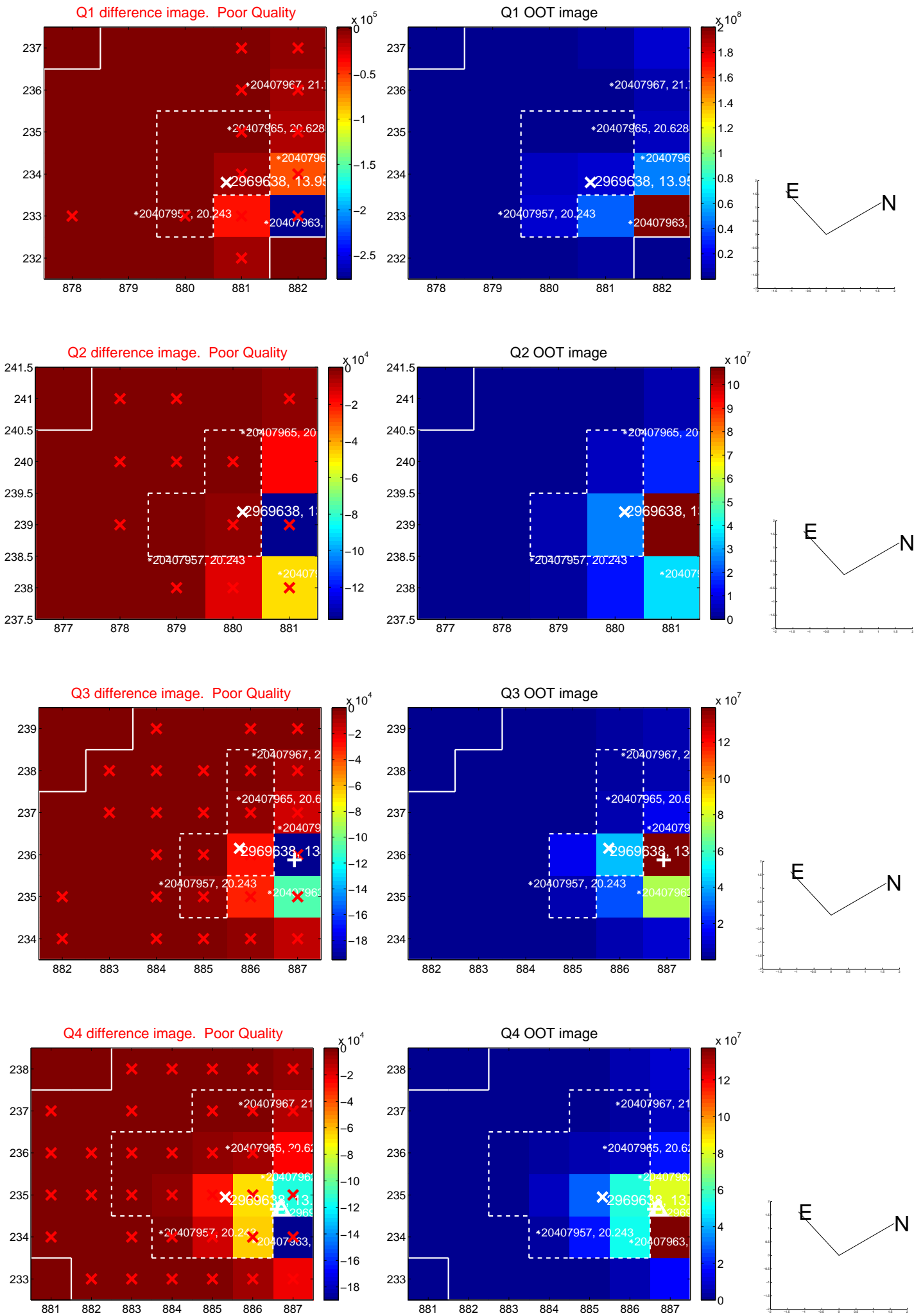
The OOT PRF centroid is offset from the target star catalog position by about 5.10 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.536 ± 0.105	5.11	-0.393 ± 0.103	0.364 ± 0.107
PRF-fit source offset from KIC position	5.739 ± 0.099	57.96	-4.339 ± 0.112	3.756 ± 0.078
photometric centroid source offset	4.62 ± 0.18	25.33	-3.98 ± 0.19	2.34 ± 0.16

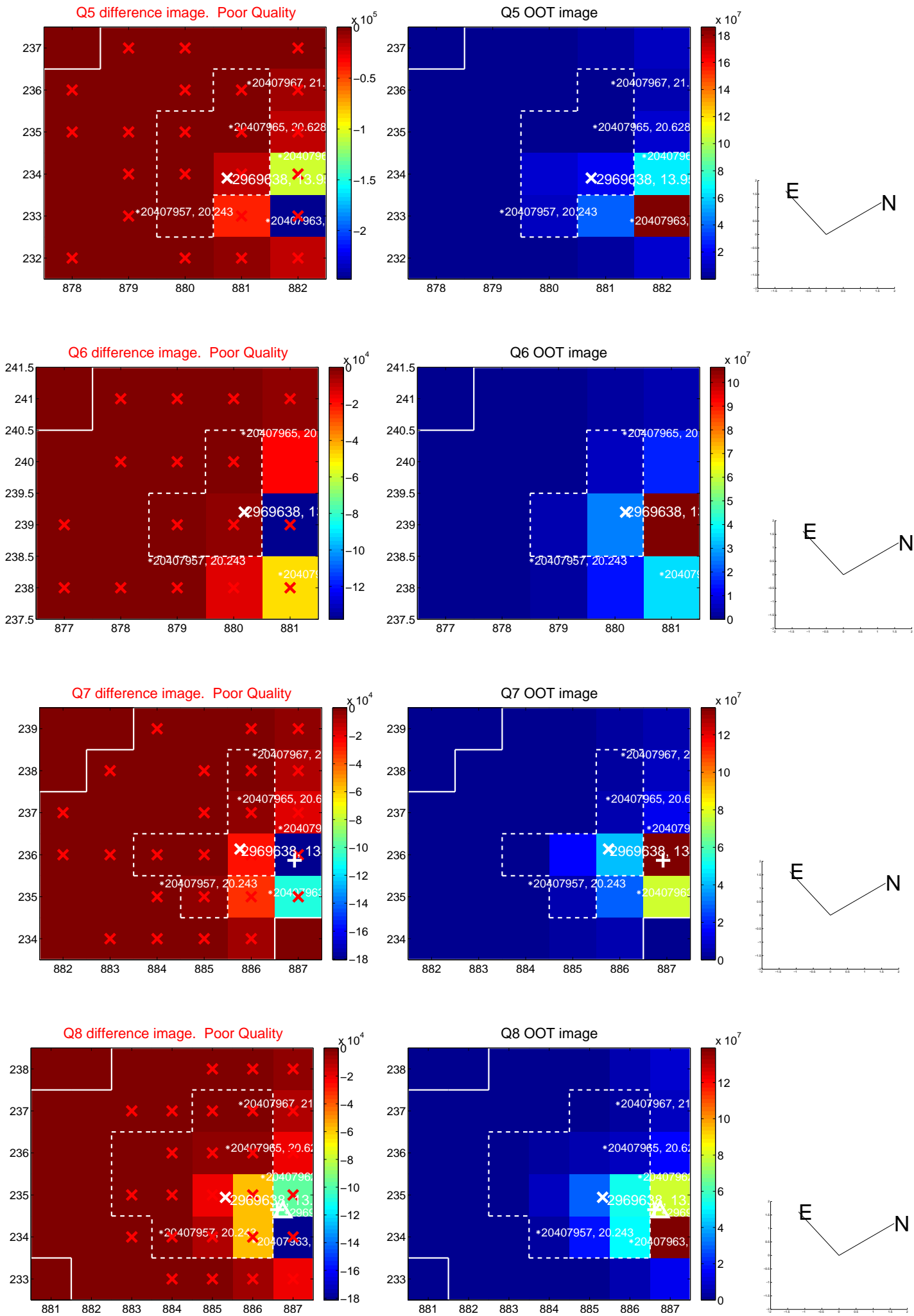


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

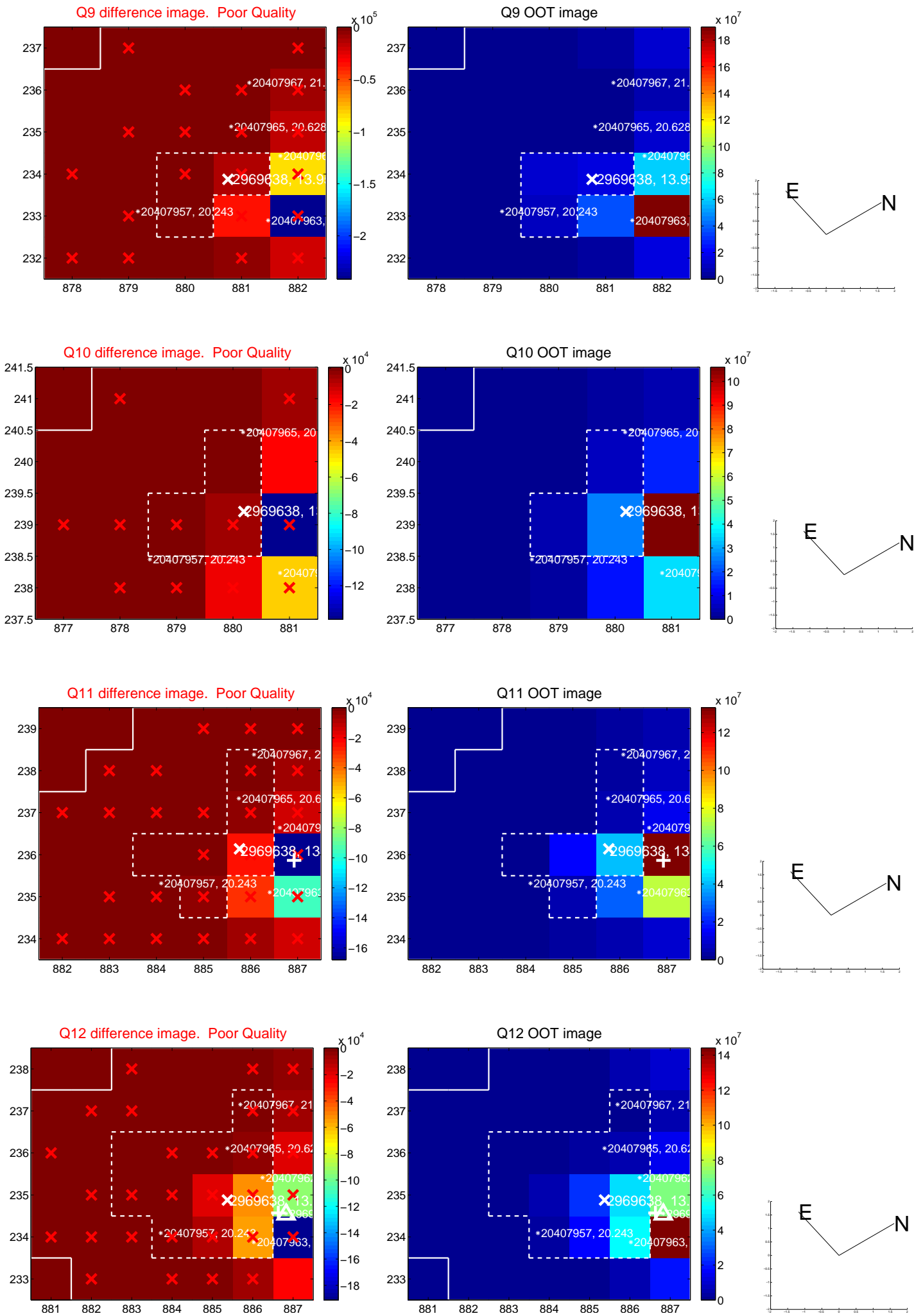
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



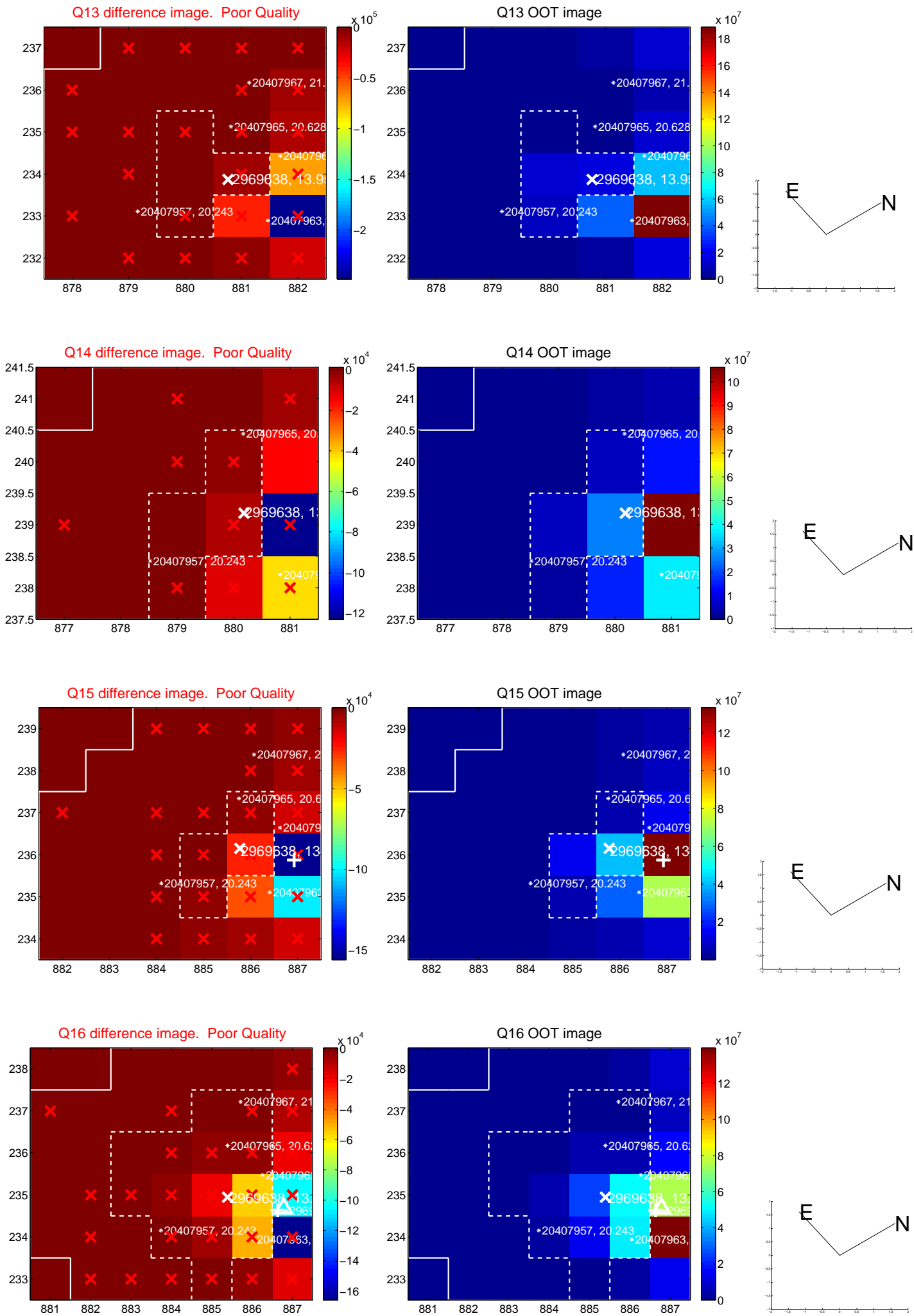
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



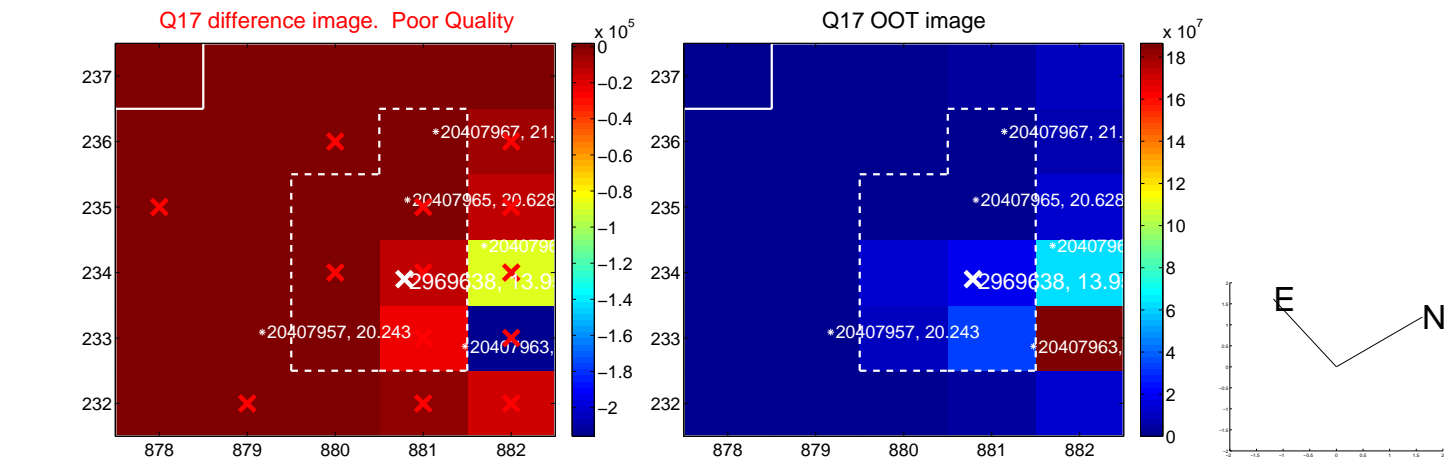
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



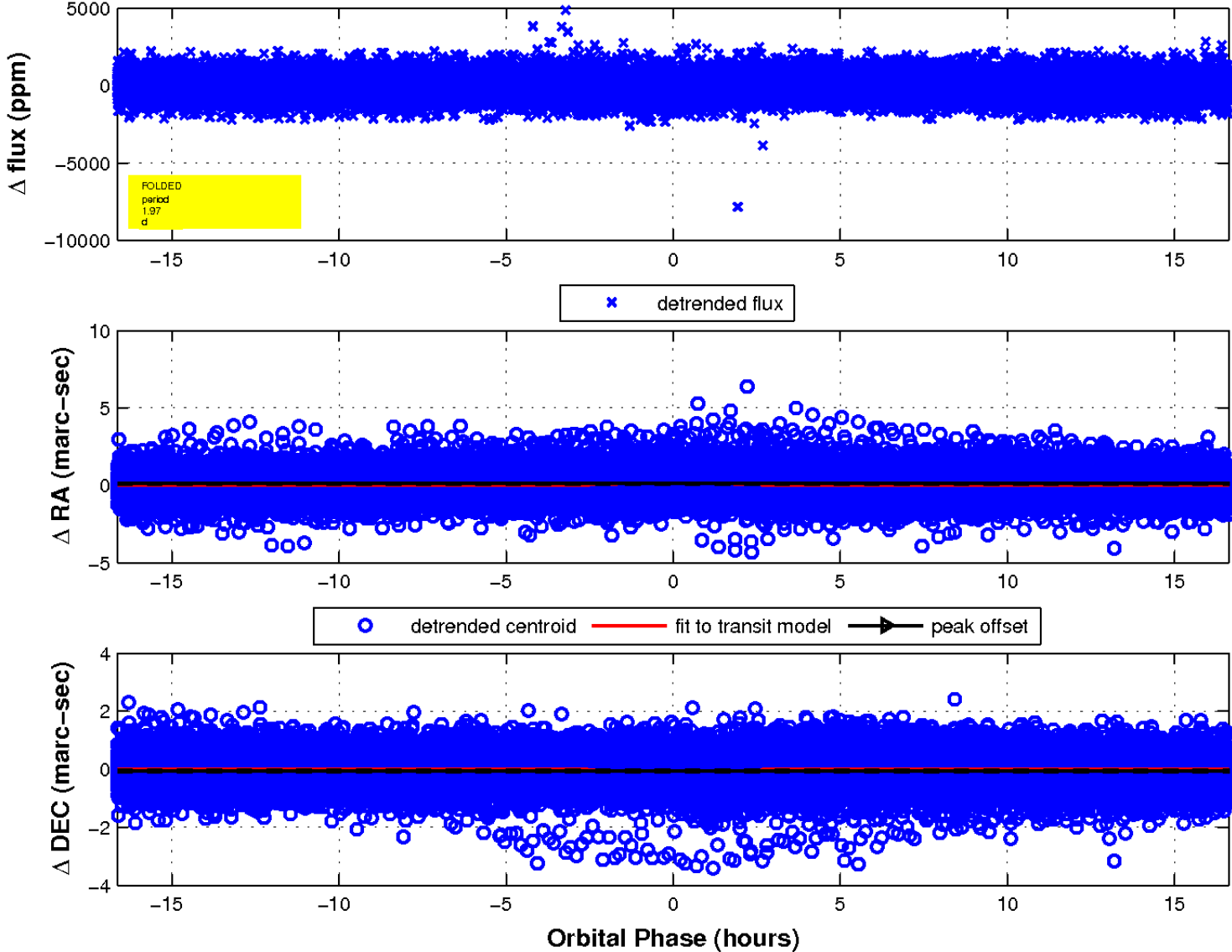
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

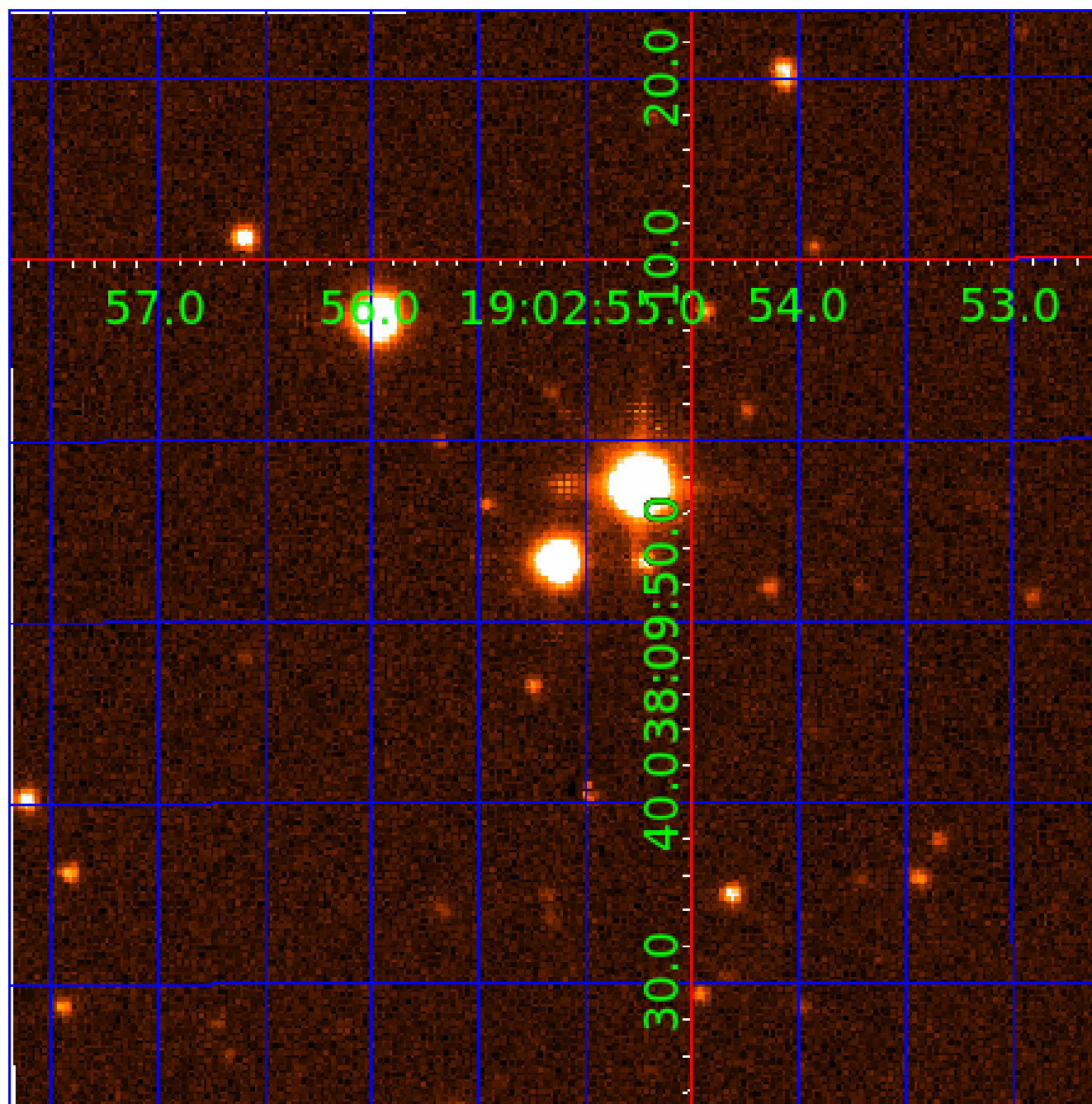


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 002969638

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
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TCE	Run Type	Disp	Score	N	S	C	E	Comments
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002969638-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS
002969638-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—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 002969638-02

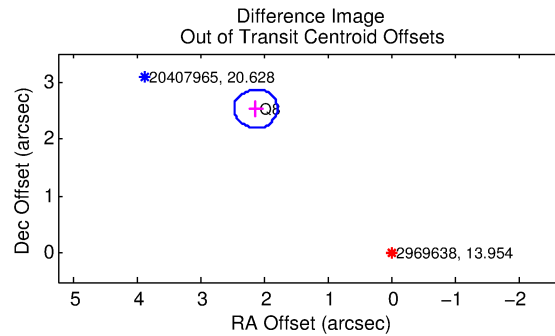
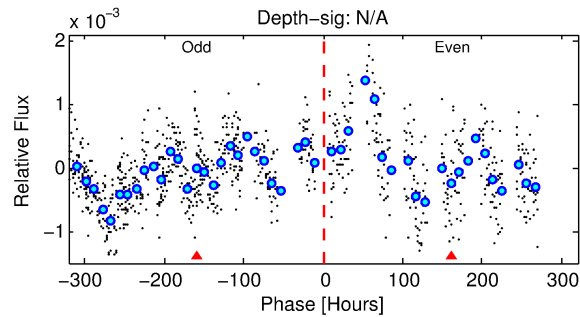
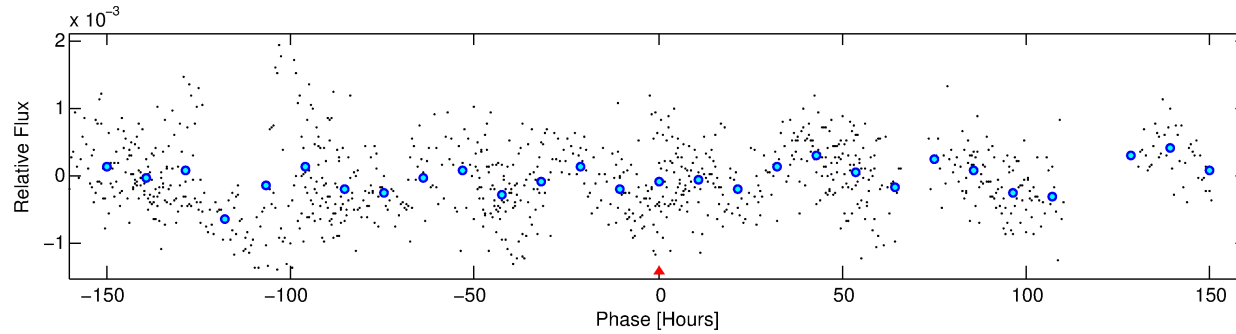
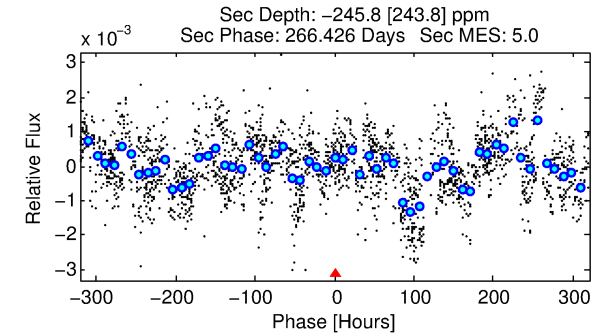
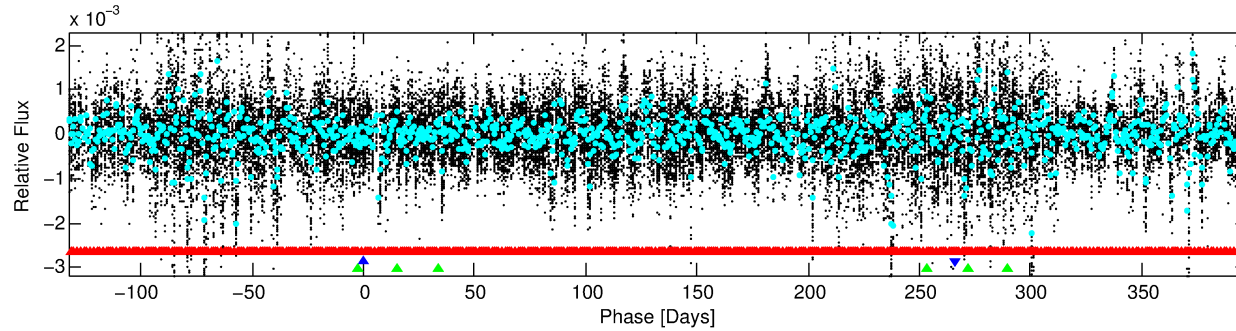
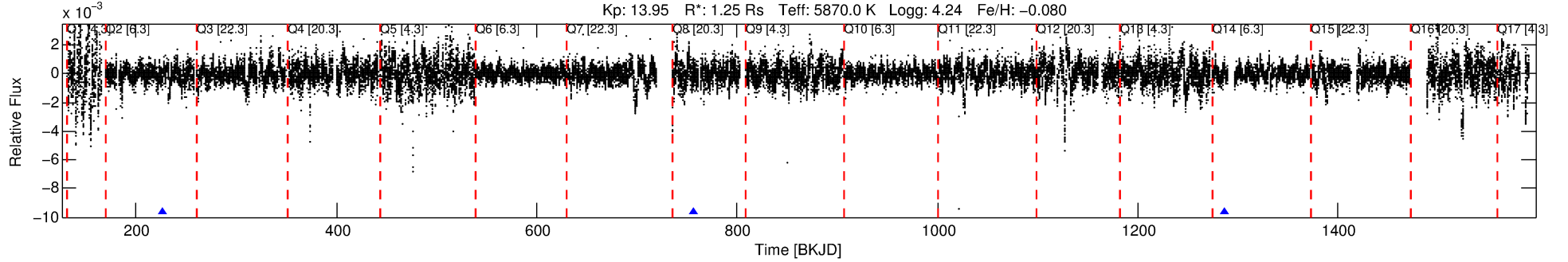
No Significant Match Found

DV One-Page Summary

KIC: 2969638 Candidate: 2 of 3 Period: 530.496 d

KOI: K06298 Corr: No Ephemeris Match

Kp: 13.95 R*: 1.25 Rs Teff: 5870.0 K Logg: 4.24 Fe/H: -0.080



TPS TCE Results:

Period = 530.49608 d
Epoch = 224.1363 BKJD

DV fit results are unavailable

DV Diagnostic Results:

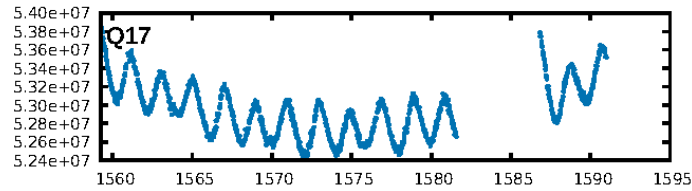
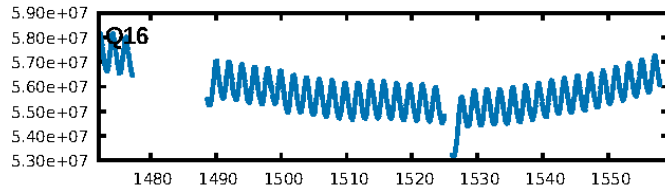
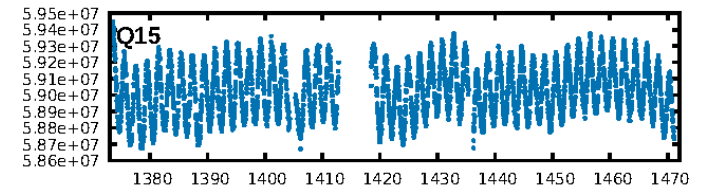
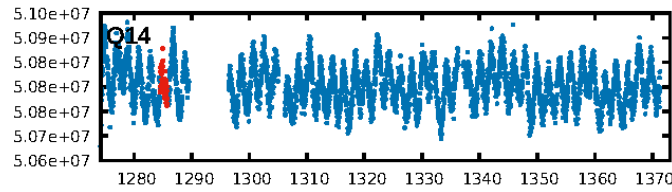
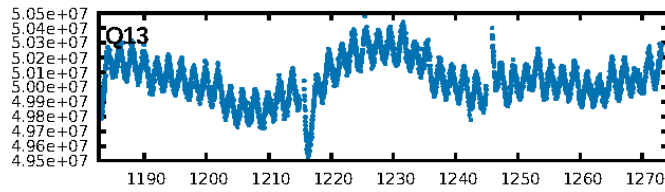
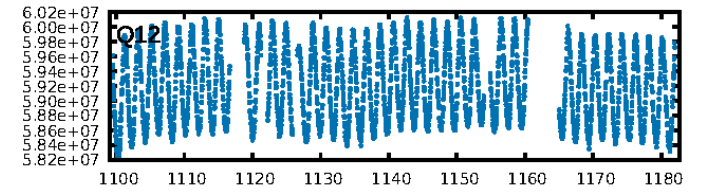
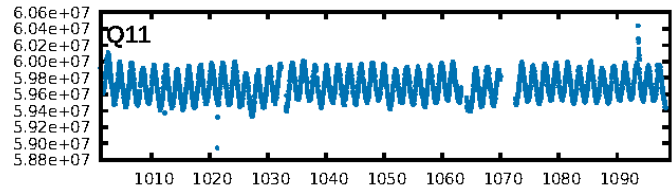
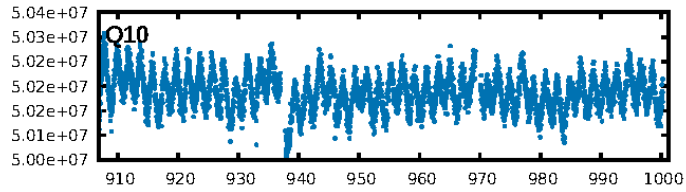
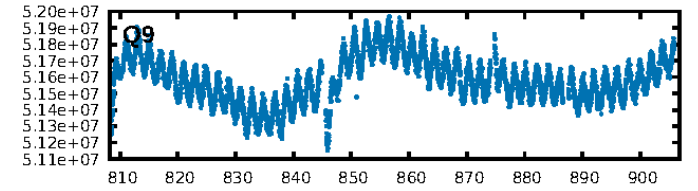
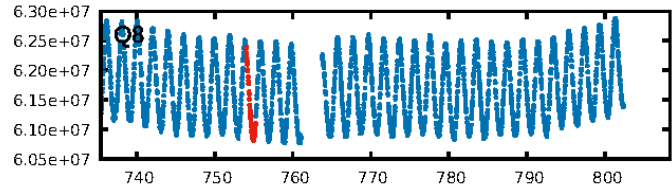
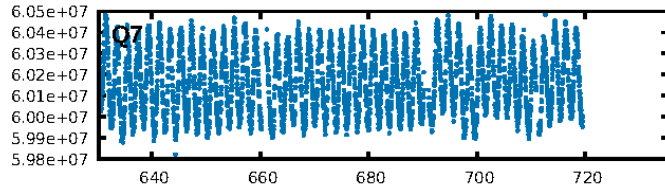
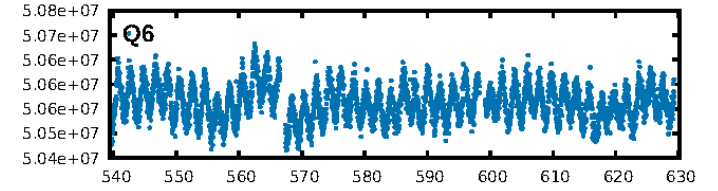
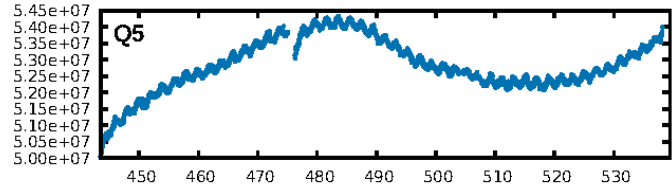
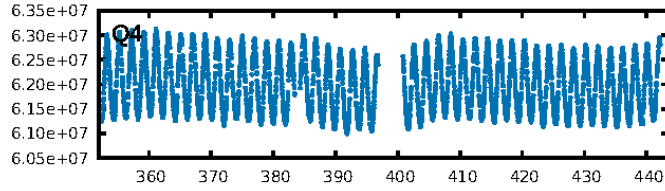
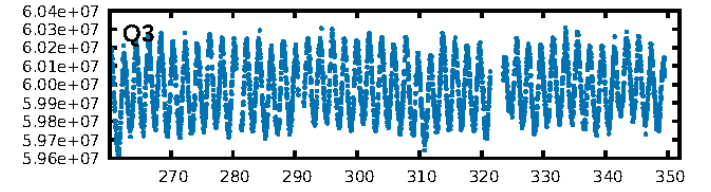
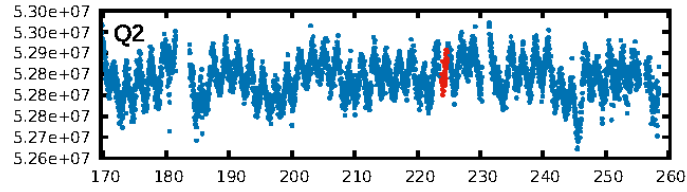
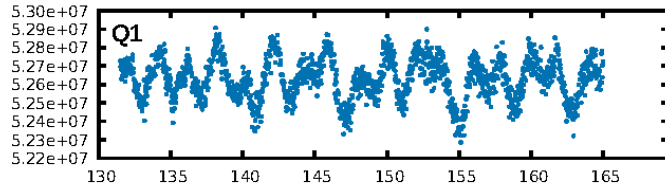
ShortPeriod-sig: 100.0% [393.56σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.58e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 55.41

Centroid-sig: 5.0%
Centroid-so: 3.999 arcsec [4.54σ]
OotOffset-rm: 3.317 arcsec [29.52σ]
KicOffset-rm: 6.316 arcsec [53.63σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 0.00 [0/1]

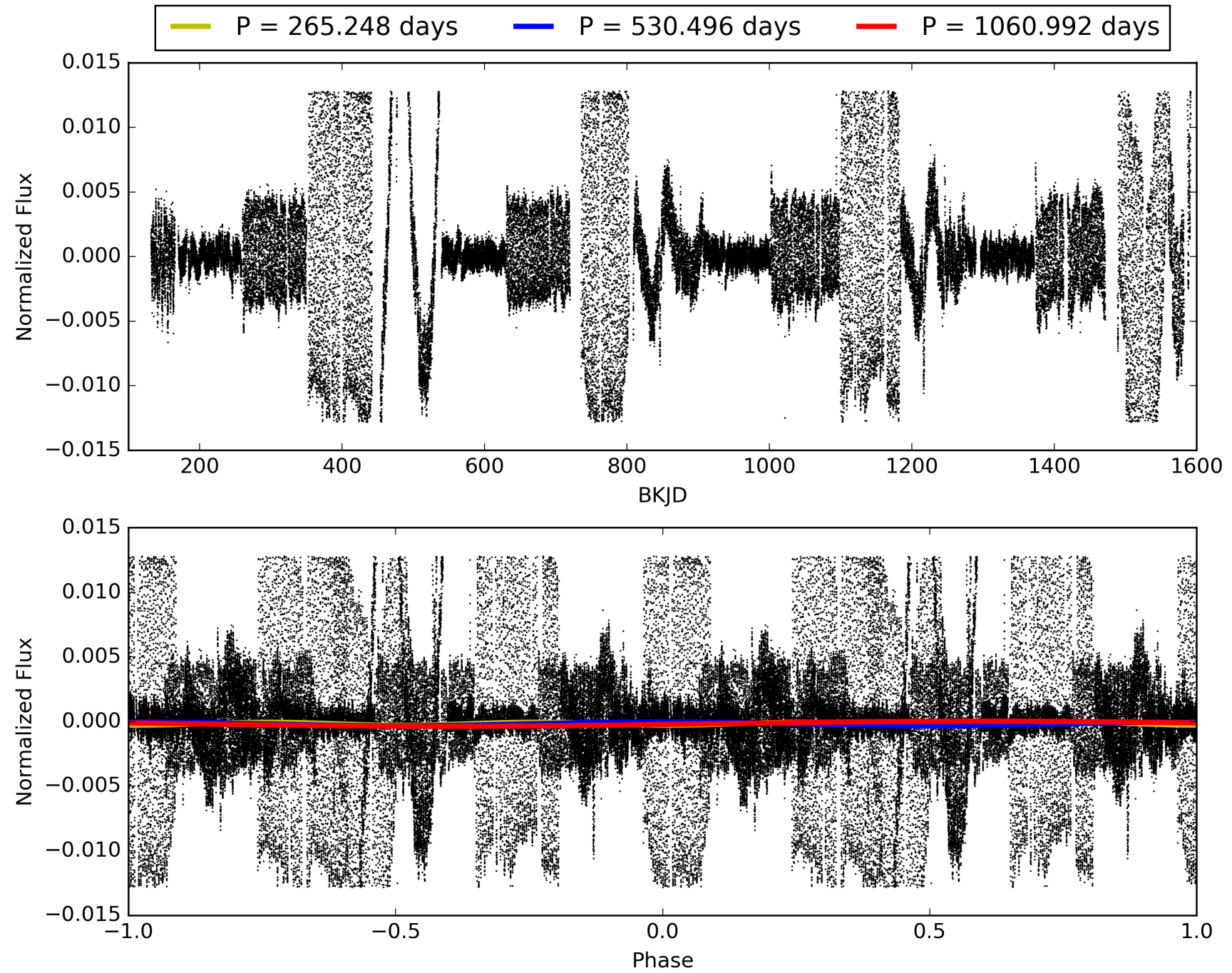
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 08:58:29 Z

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

TCE 002969638-02, PDC Light Curves

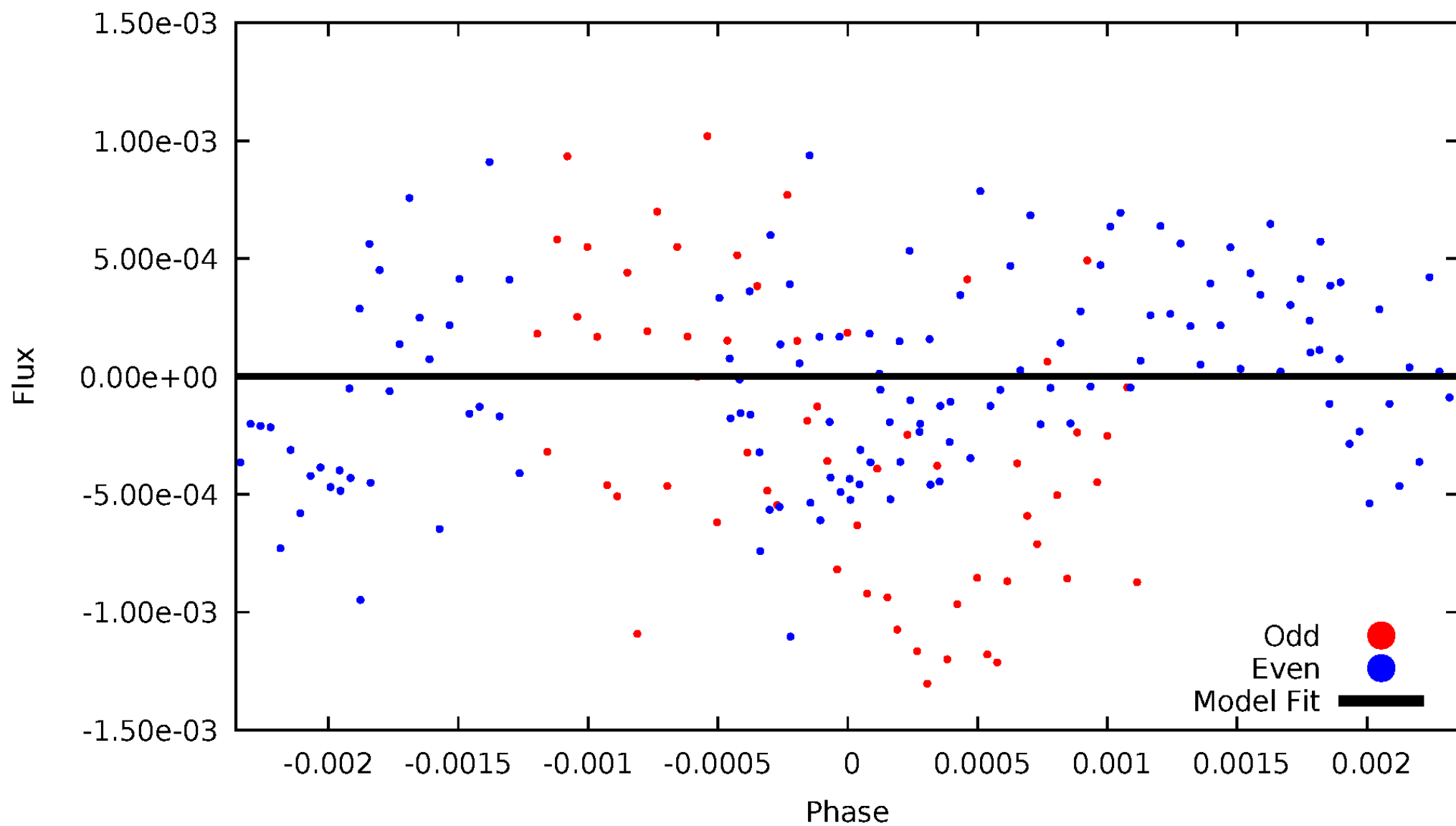


TCE 002969638-02



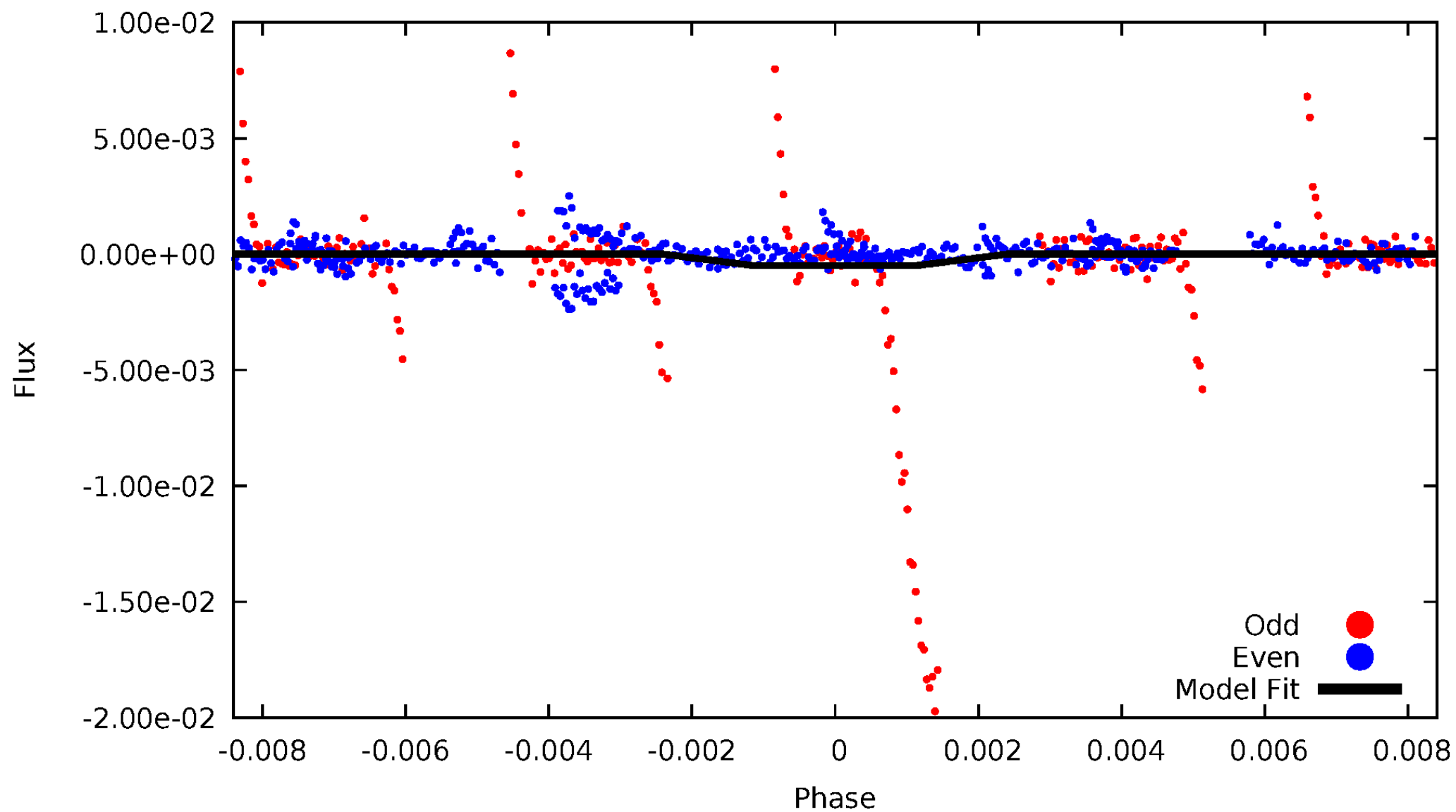
DV Odd/Even

TCE 002969638-02



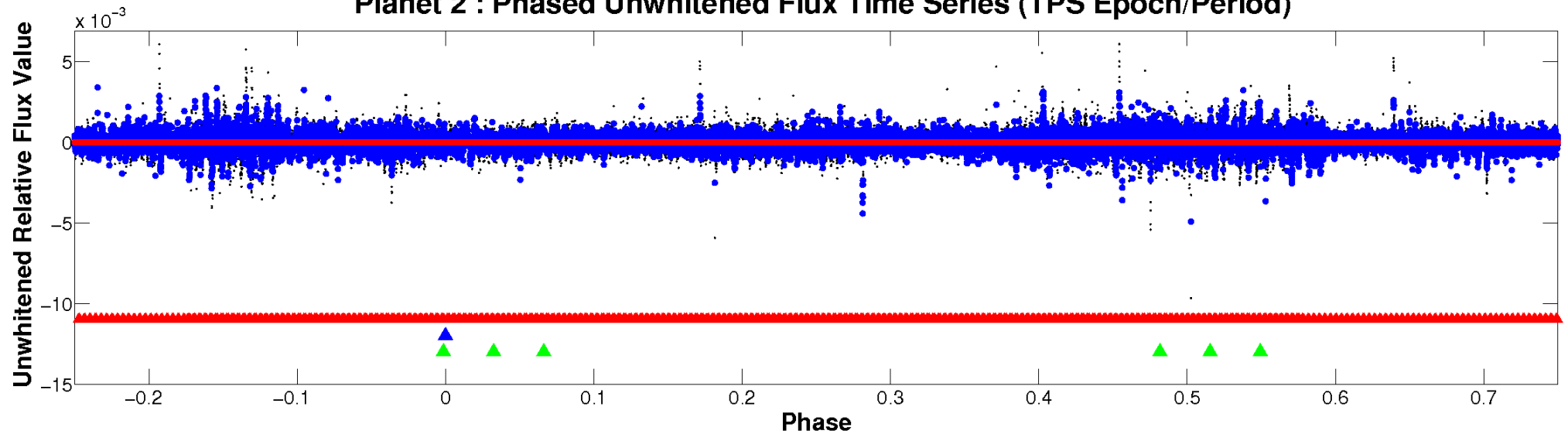
ALT Odd/Even

TCE 002969638-02



Non-Whitened Vs. Whitened Light Curve

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

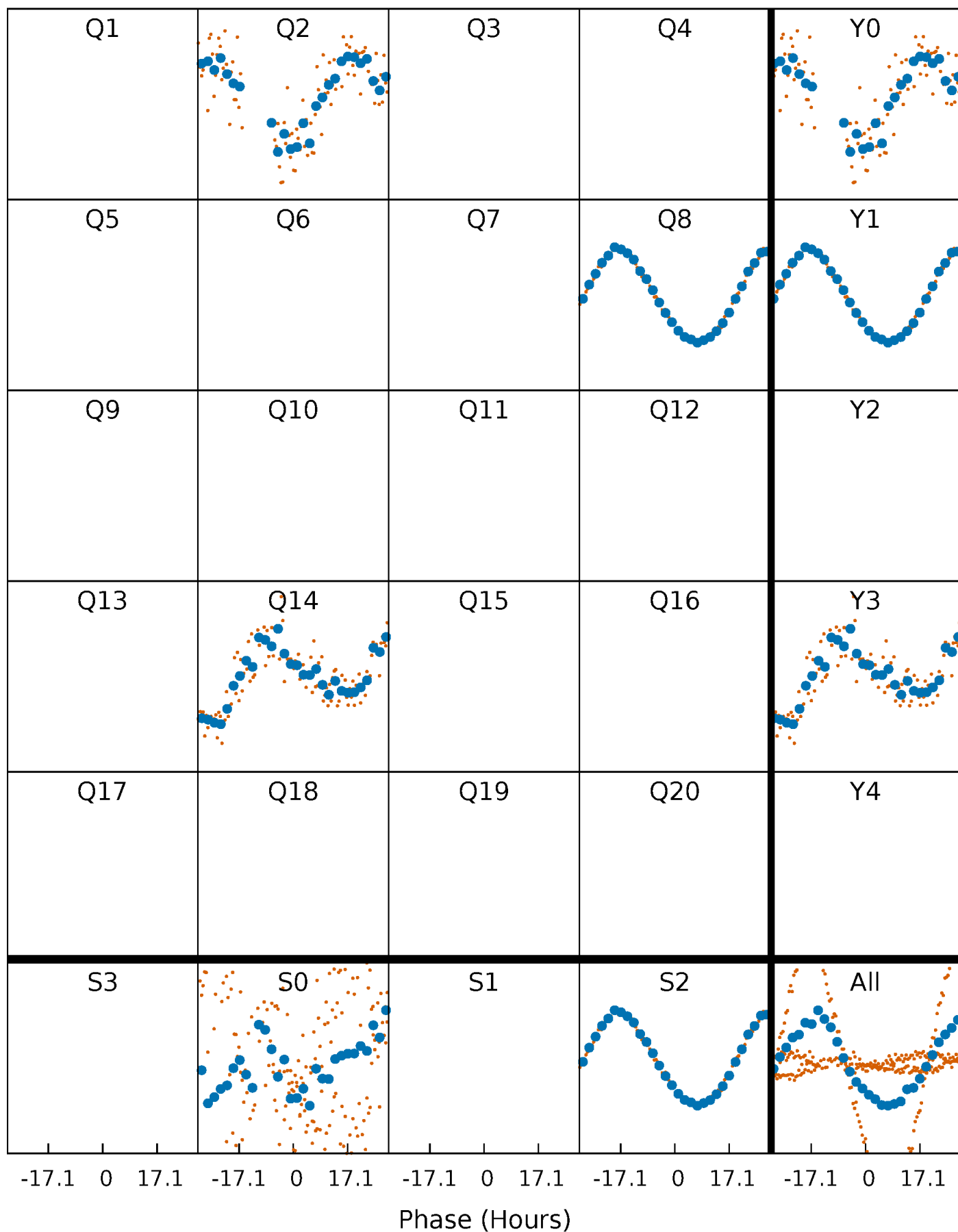


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 002969638-02 $P=530.496085$ Days $T_0=224.136321$ (BKJD)



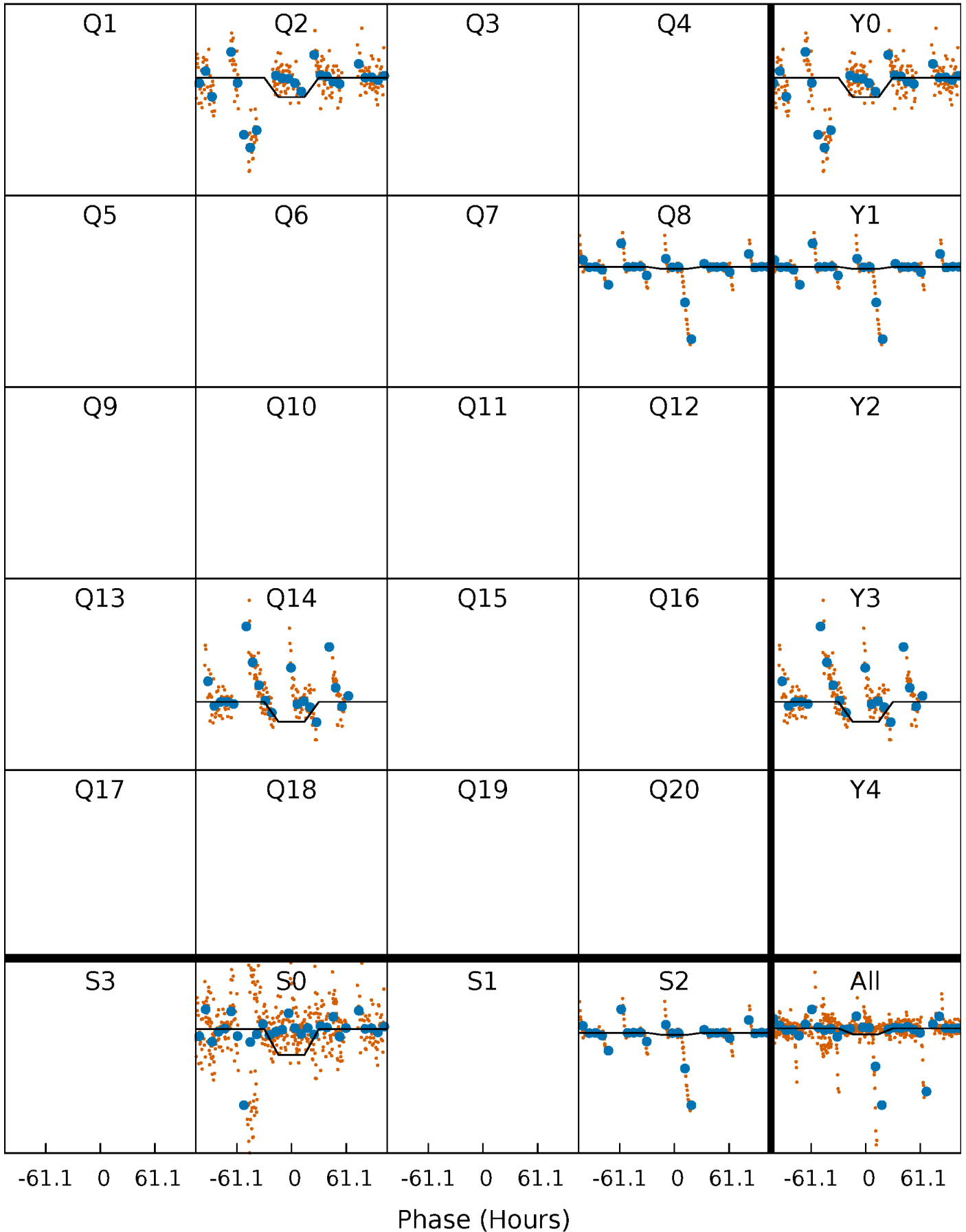
DV Quarter-Phased Transit Curves

TCE 002969638-02 P=530.496085 Days $T_0=224.136321$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

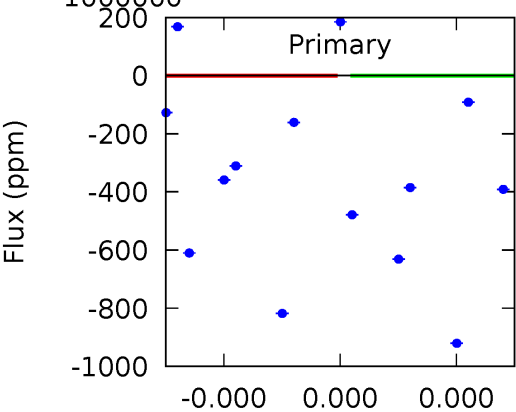
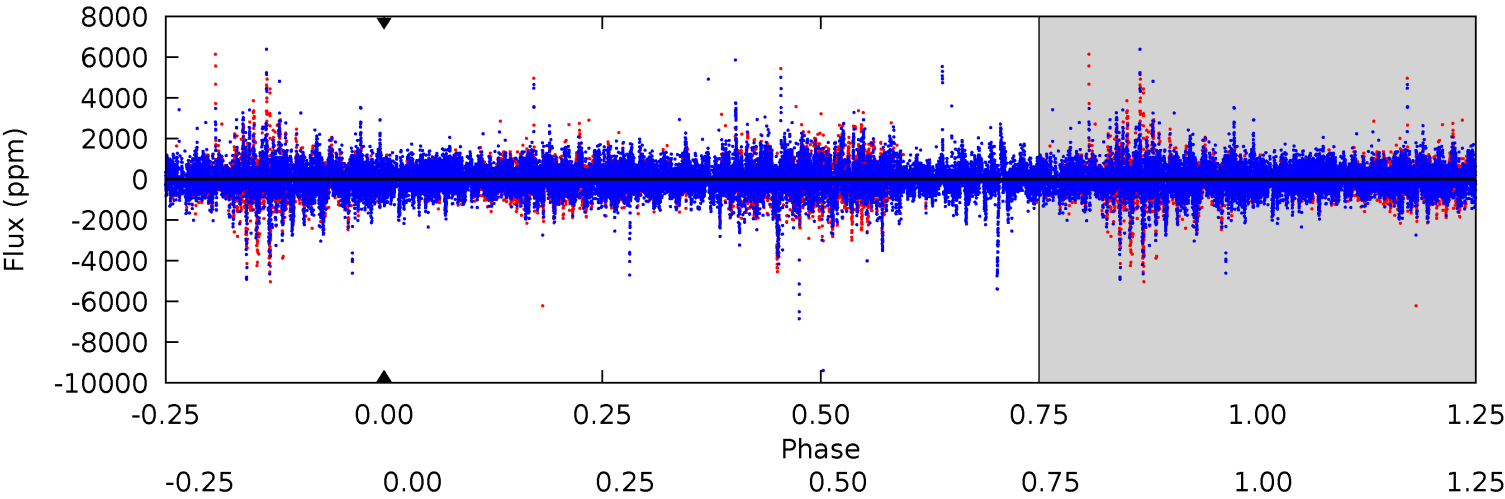
TCE 002969638-02 $P=530.496085$ Days $T_0=225.950334$ (BKJD)



DV Model-Shift Uniqueness Test

002969638-02, P = 530.496085 Days, E = 224.136321 Days

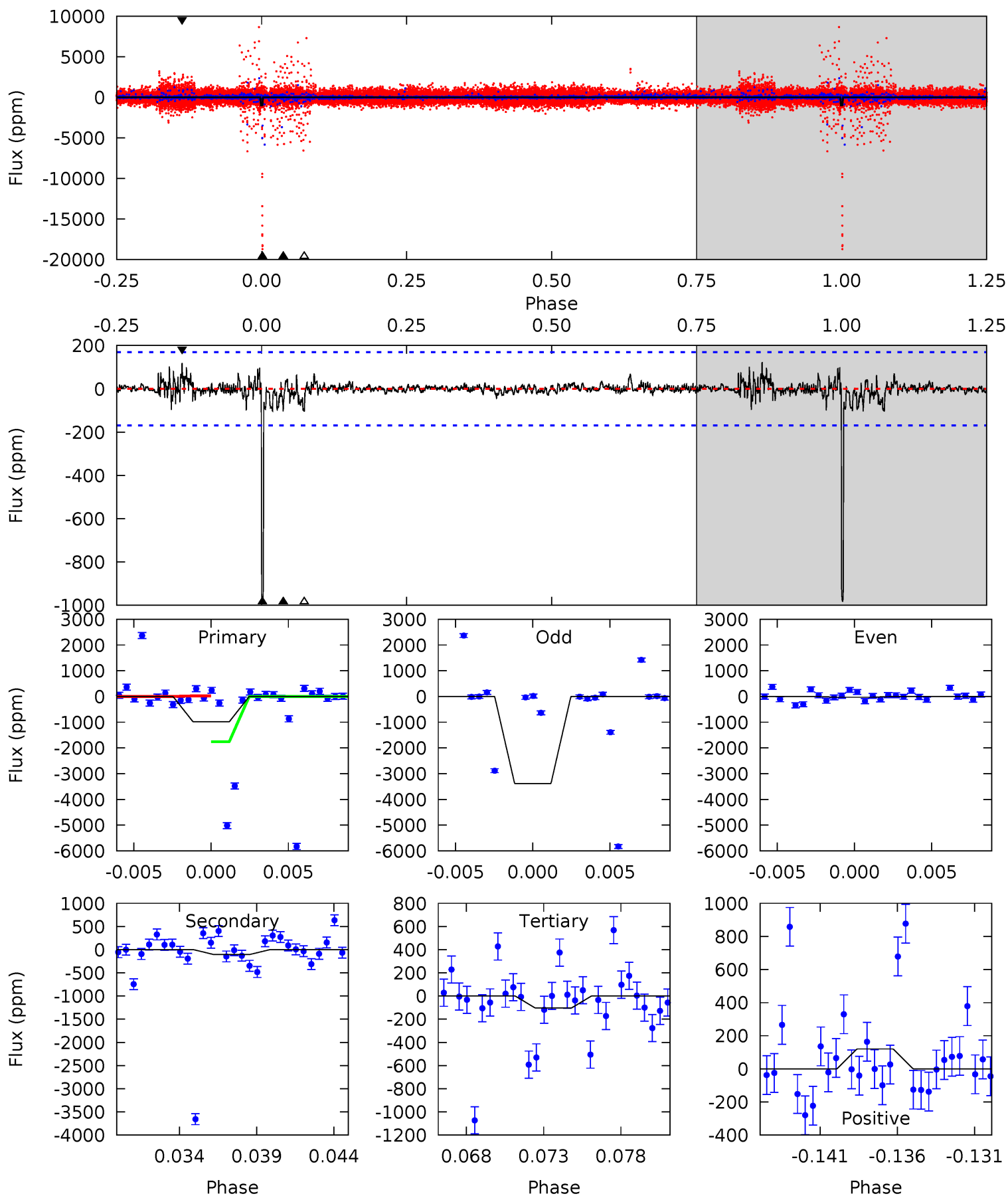
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

002969638-02, P = 530.496085 Days, E = 225.950334 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.9	3.17	3.15	3.65	5.16	2.82	0.67	26.7	26.2	0.03	-0.48	34.5	34.2	0.11	26.3



Stellar Parameters For KIC 002969638

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5870^{+158}_{-176}	$4.235^{+0.220}_{-0.180}$	$-0.080^{+0.300}_{-0.300}$	$1.248^{+0.327}_{-0.294}$	$0.977^{+0.140}_{-0.115}$	$0.708^{+0.881}_{-0.346}$
	+3%/-3%	+5%/-4%	+375%/-375%	+26%/-24%	+14%/-12%	+124%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 002969638-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$10.26^{+9.98}_{-7.39}$	358^{+25}_{-27}	3156^{+21490}_{-25501}	$1743^{+1786304}_{-1808183}$
Alt.	-104 ± 33	$10.79^{+11.03}_{-7.84}$	357^{+24}_{-26}	2828^{+1419}_{-464}	777^{+10157}_{-591}

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

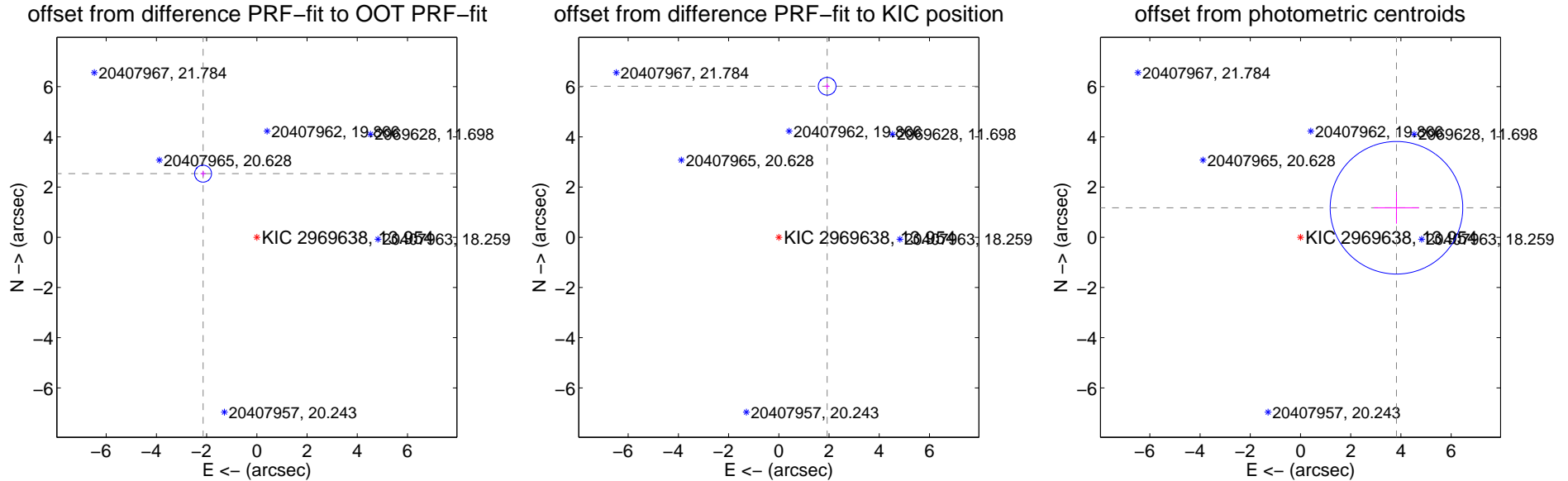
DV Centroid Data

Supplemental centroid analysis for 002969638-02. Kepler magnitude: 13.95. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 5.35 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.317 ± 0.112	29.52	2.141 ± 0.102	2.534 ± 0.119
PRF-fit source offset from KIC position	6.316 ± 0.118	53.63	-1.925 ± 0.102	6.016 ± 0.119
photometric centroid source offset	4.00 ± 0.88	4.54	-3.82 ± 0.90	1.18 ± 0.64

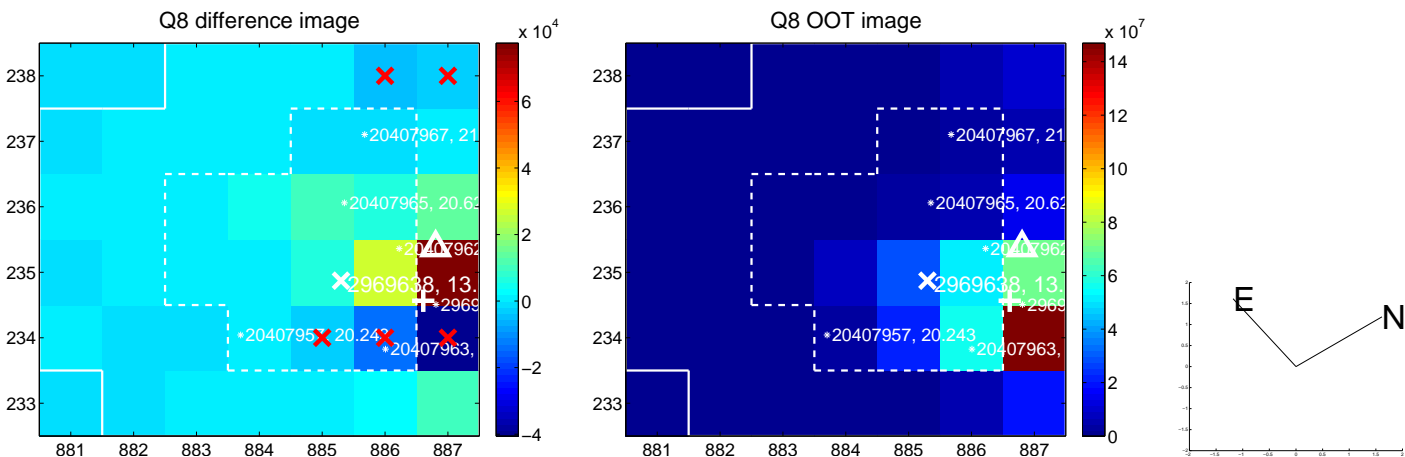
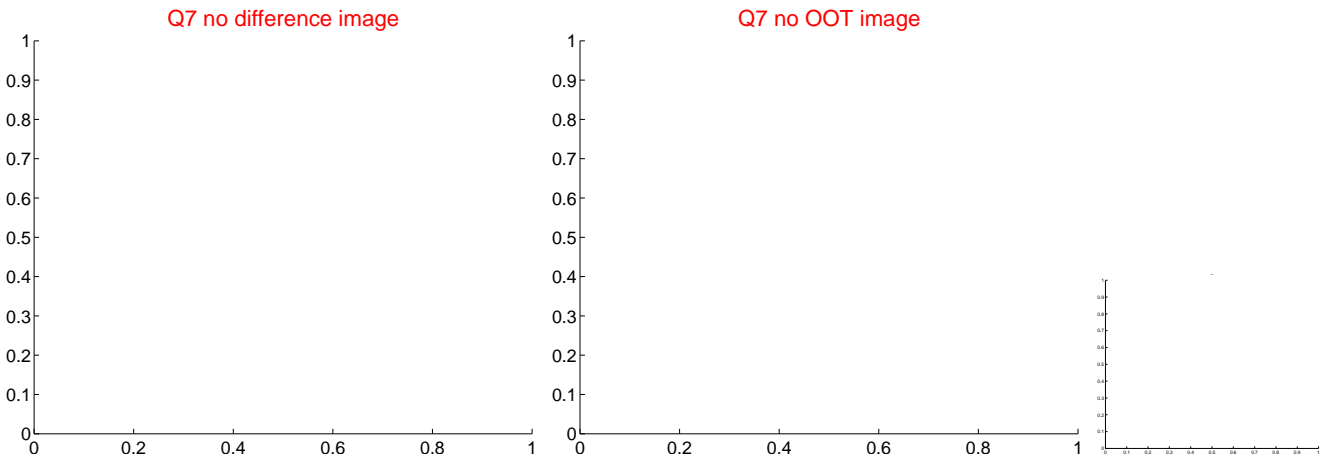
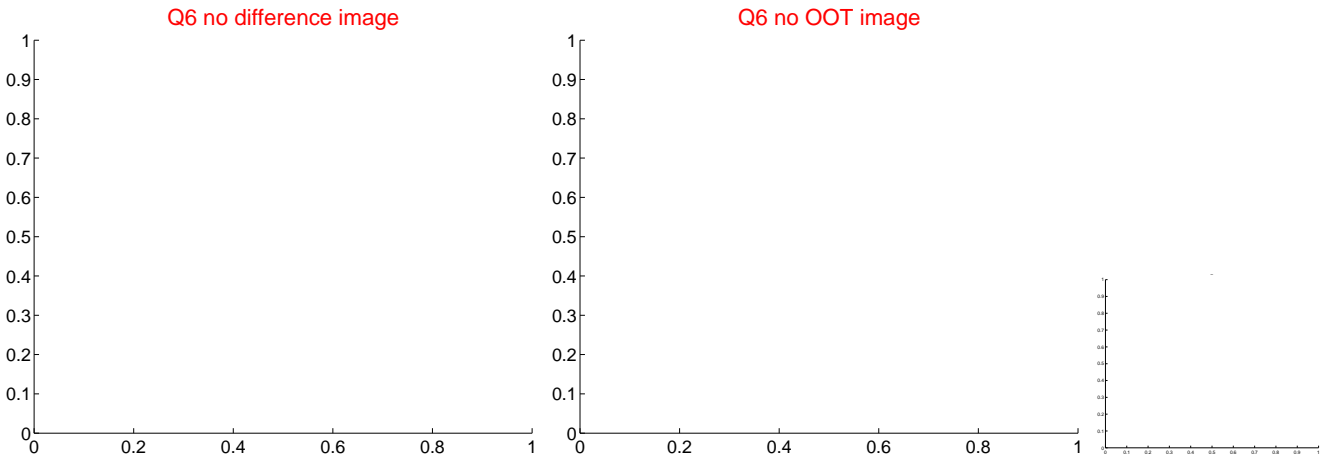
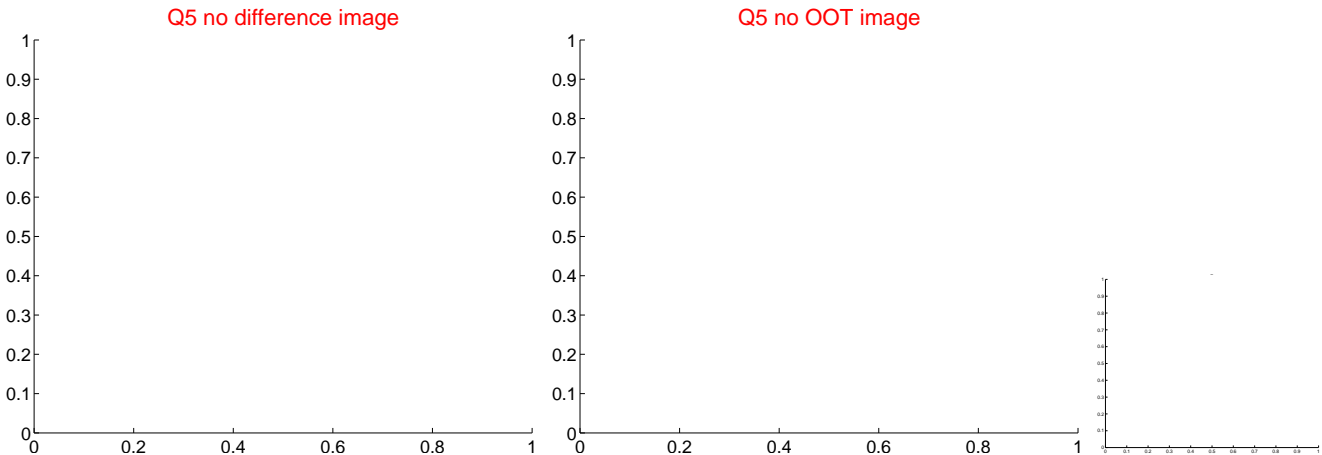


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



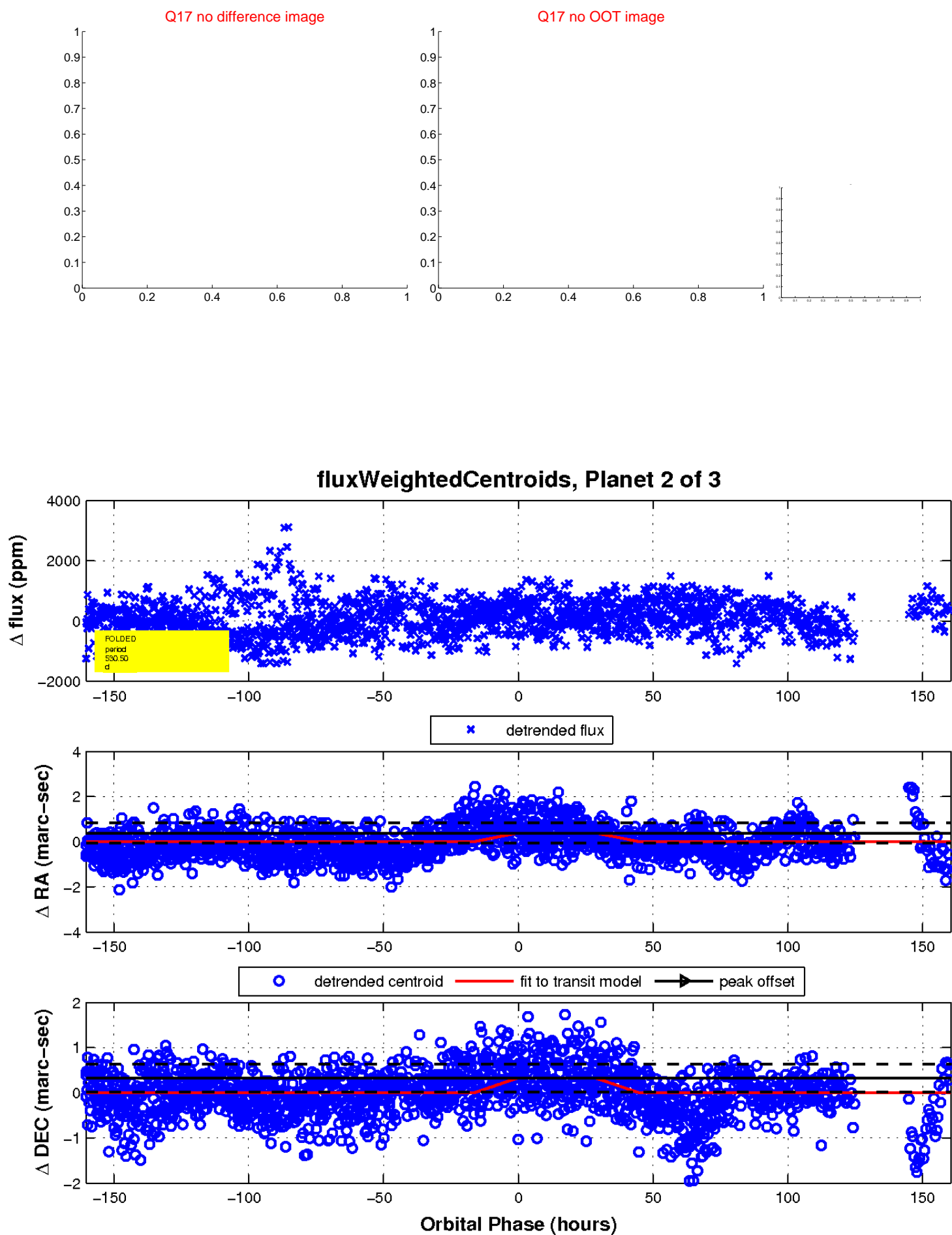
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

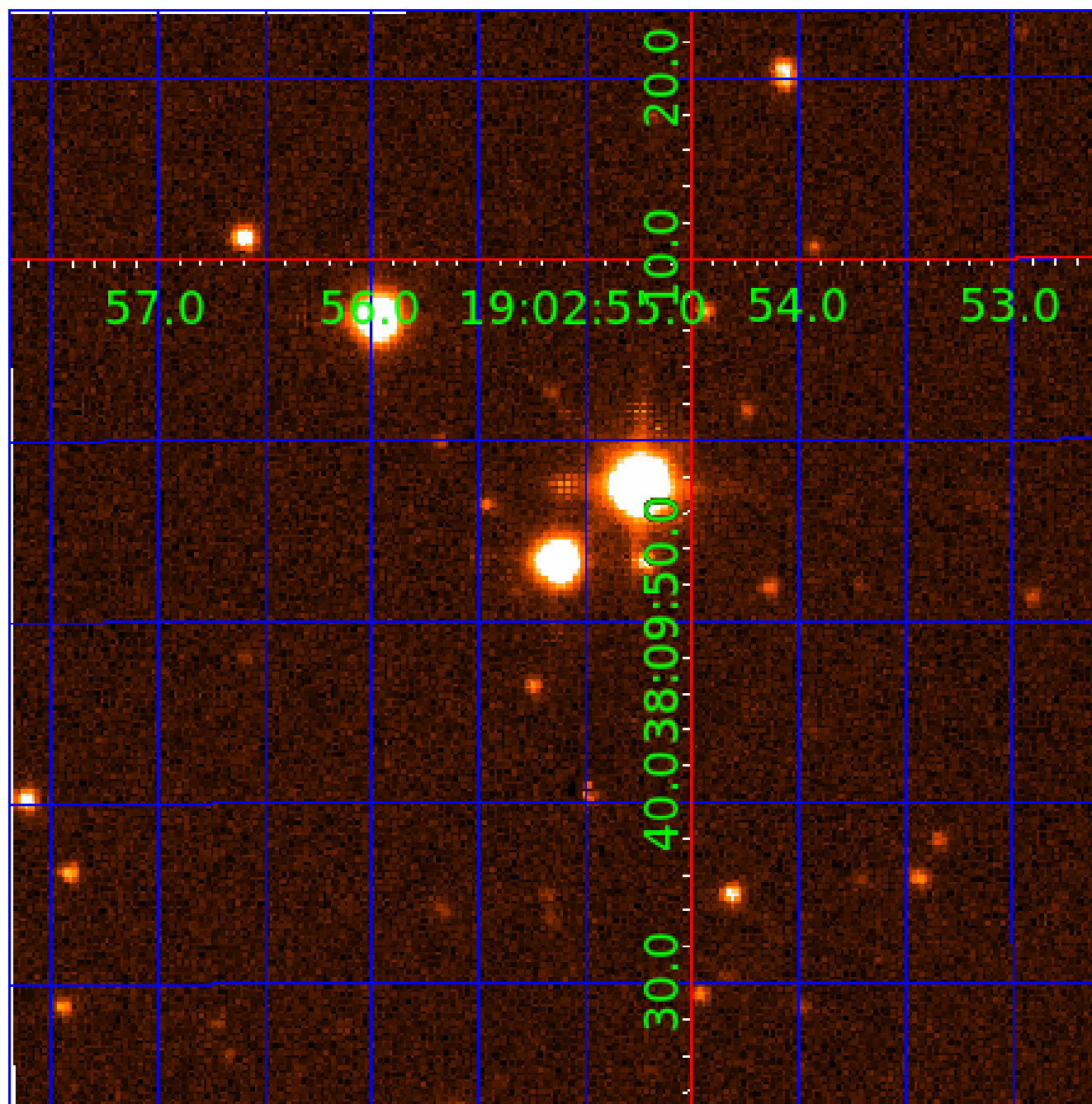


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 002969638

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})
002969638-01	OBS	6298.01	1.973586	131.945047	115.7	5.541	14.5	15.9	1.25	5870	1.59	1775.20
002969638-02	OBS	No	530.496085	224.136321	582.9	15.000	12.6	-1.0	1.25	5870	2.99	1.02
002969638-03	OBS	No	256.275163	259.293018	1055.2	7.392	9.9	6.4	1.25	5870	4.24	2.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002969638-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS
002969638-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS
002969638-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—TRANS_GAPPED—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—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 002969638-03

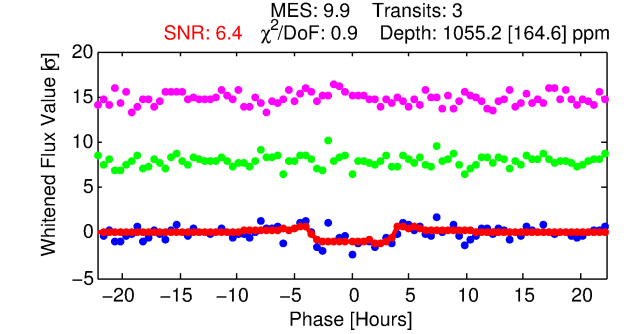
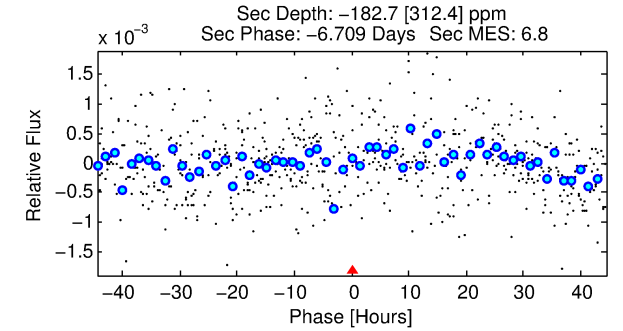
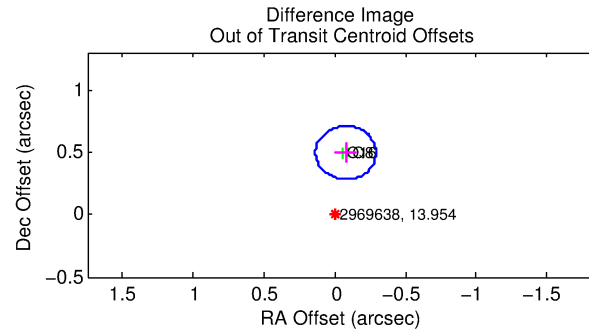
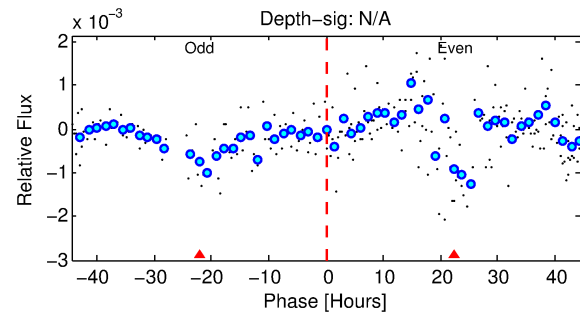
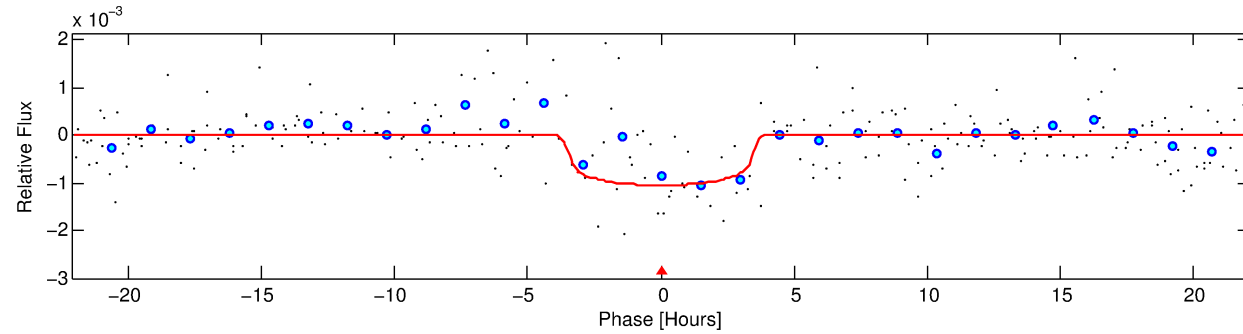
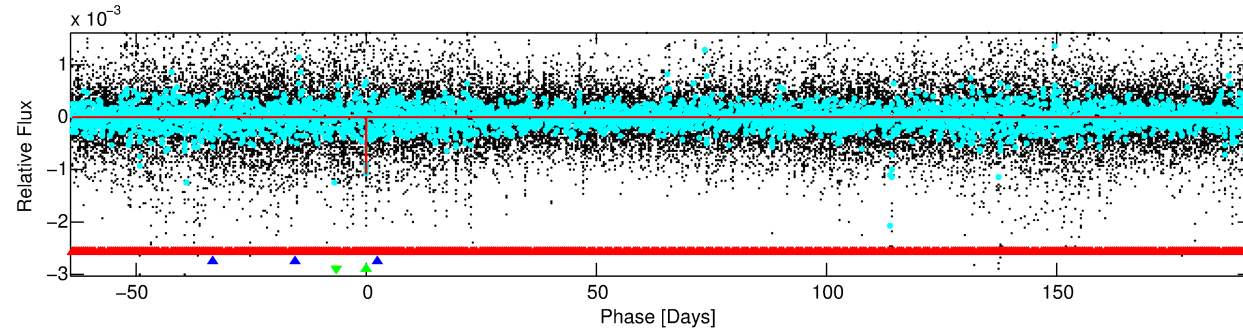
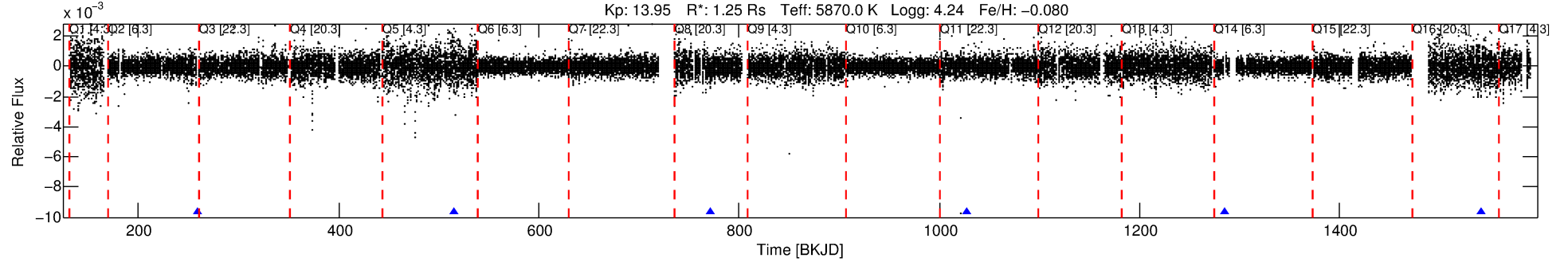
No Significant Match Found

DV One-Page Summary

KIC: 2969638 Candidate: 3 of 3 Period: 256.275 d

KOI: K06298 Corr: No Ephemeris Match

Kp: 13.95 R*: 1.25 Rs Teff: 5870.0 K Logg: 4.24 Fe/H: -0.080



DV Fit Results:

Period = 256.27516 [0.00604] d
Epoch = 259.2930 [0.0183] BKJD
Rp/R* = 0.0311 [0.0200]
a/R* = 219.52 [629.10]
b = 0.61 [2.93]
Seff = 2.70 [1.08]
Teq = 327 [33] K
Rp = 4.24 [2.94] Re
a = 0.7834 [0.1903] AU
Ag = N/A
Teffp = N/A

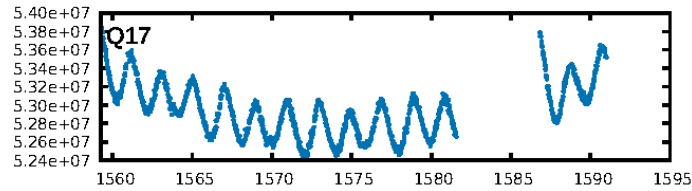
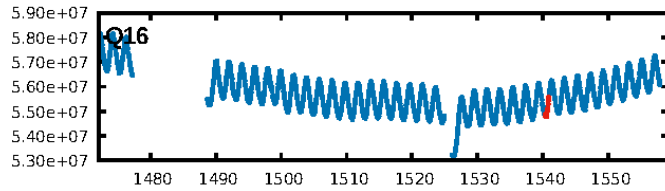
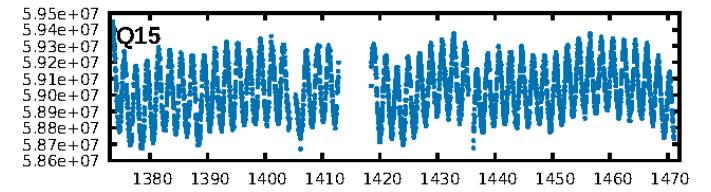
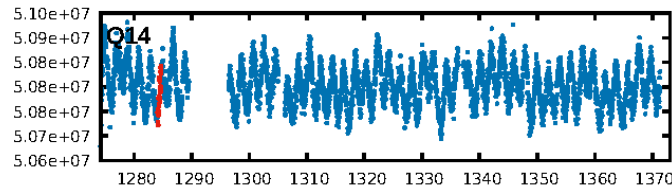
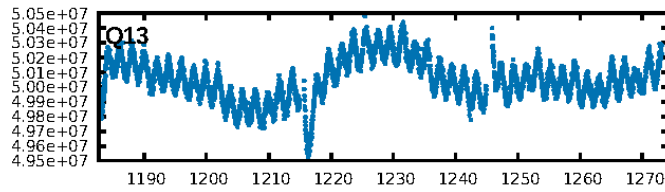
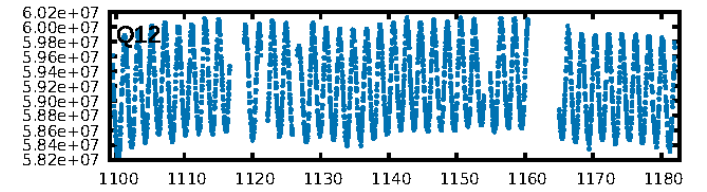
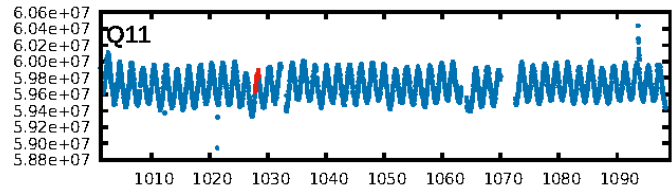
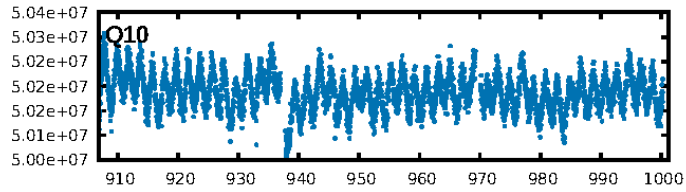
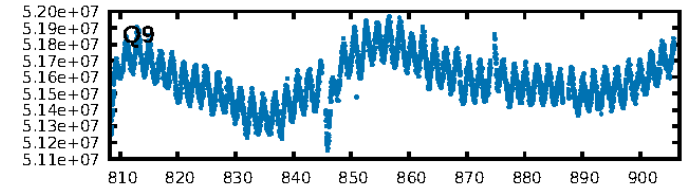
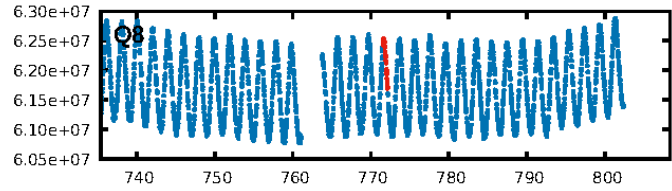
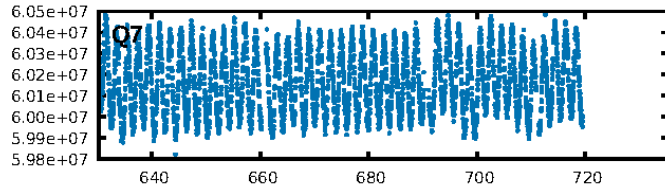
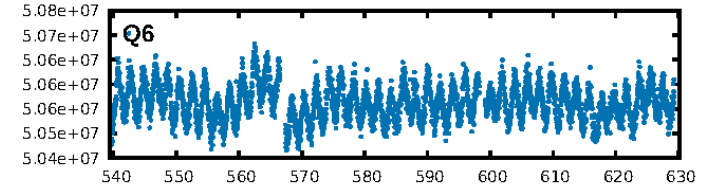
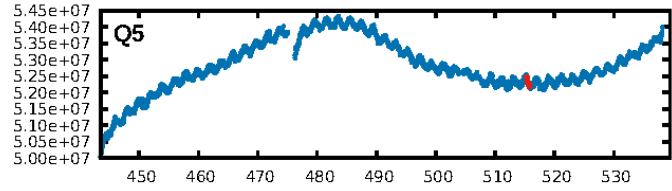
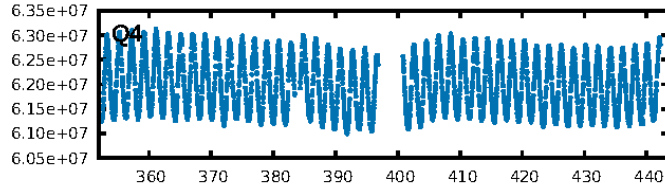
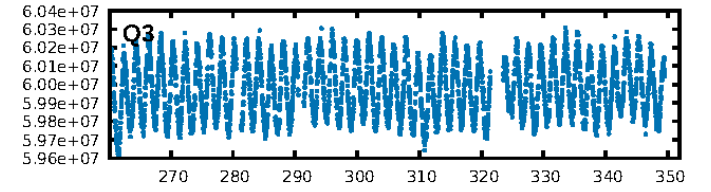
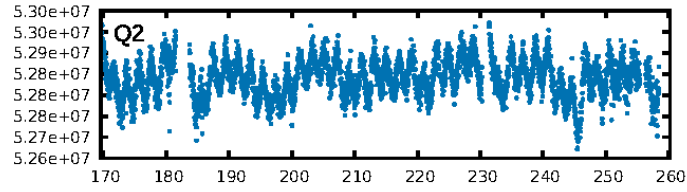
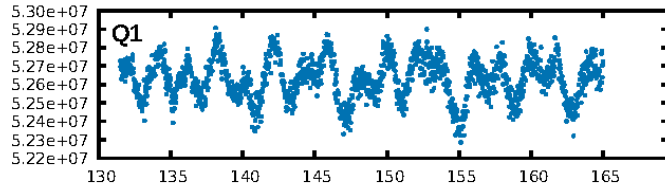
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [660.67σ]
LongPeriod-sig: 100.0% [393.56σ]
ModelChiSquare2-sig: 17.6%
ModelChiSquareGof-sig: 99.3%
Bootstrap-pfa: 2.72e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.6755
Centroid-sig: 51.4%
Centroid-so: 3.750 arcsec [13.43σ]
OotOffset-rm: 0.502 arcsec [7.03σ]
KicOffset-rm: 5.428 arcsec [15.44σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-st: 0/0/2/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.20 [1/5]

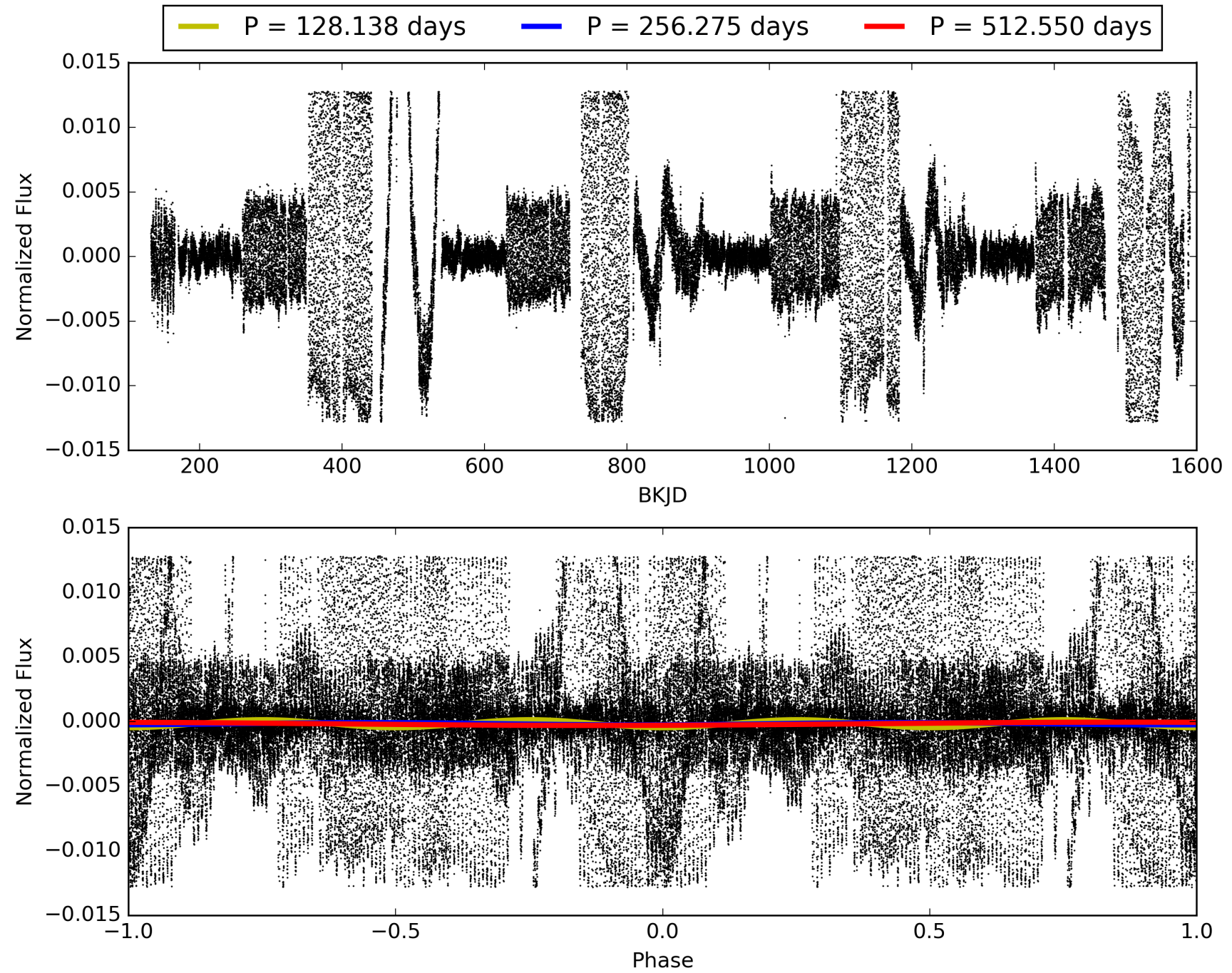
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 08:58:36 Z

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

TCE 002969638-03, PDC Light Curves

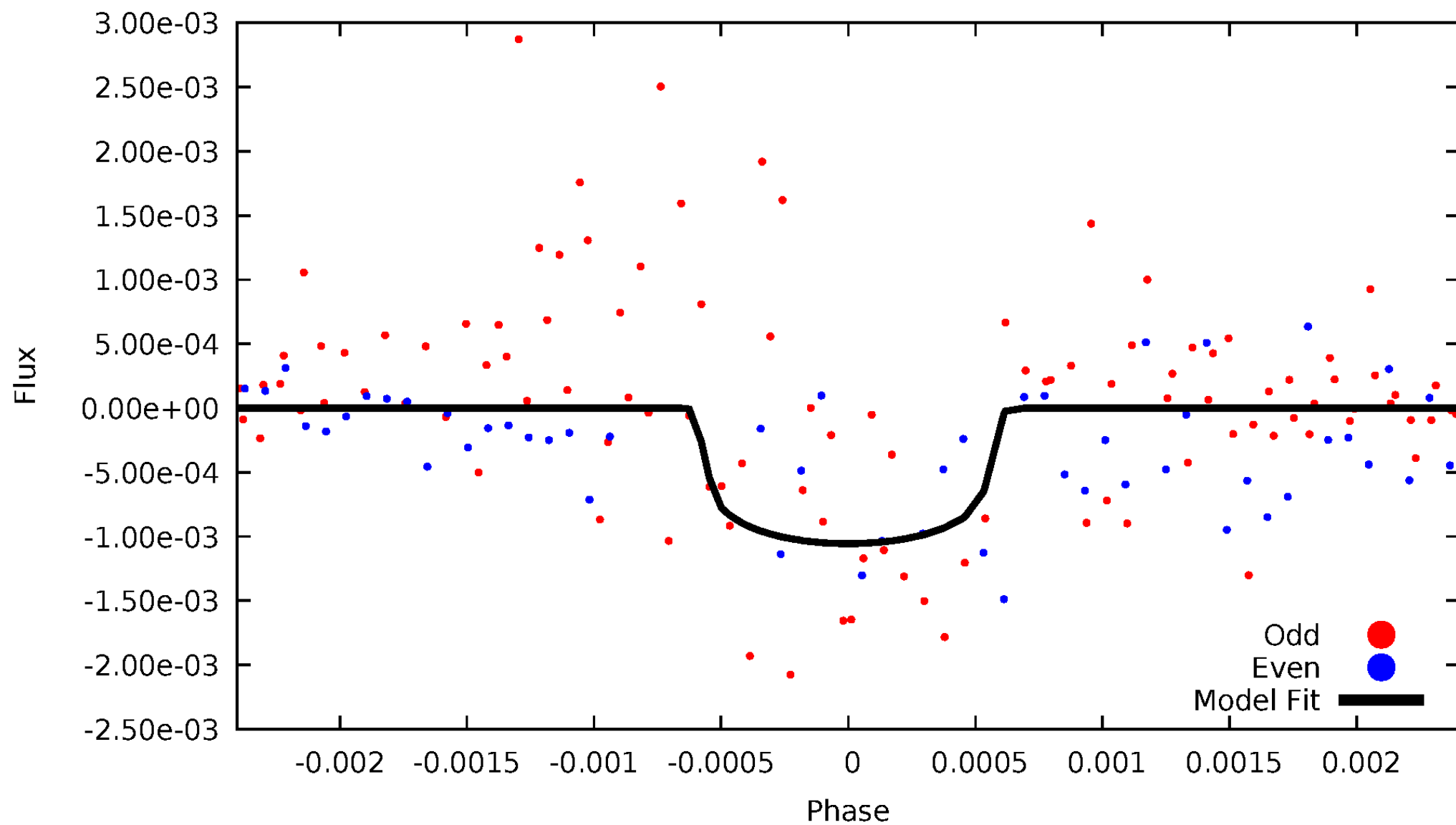


TCE 002969638-03



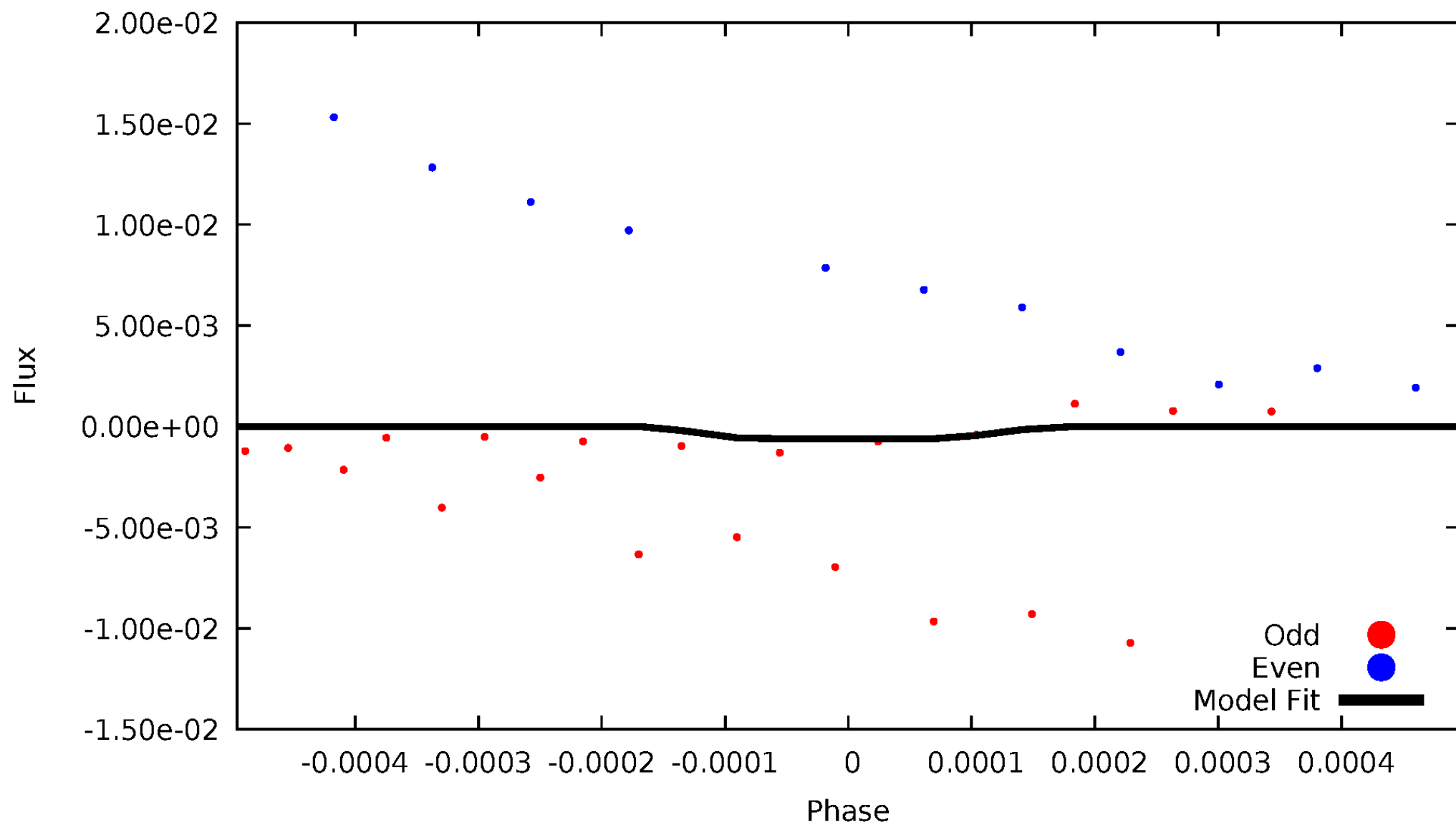
DV Odd/Even

TCE 002969638-03



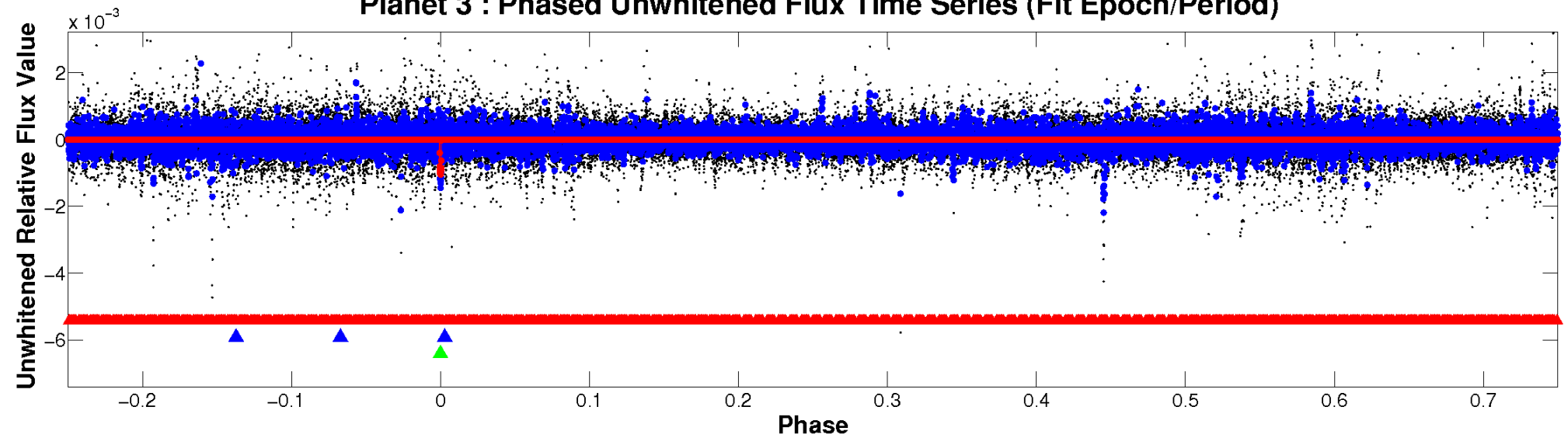
ALT Odd/Even

TCE 002969638-03

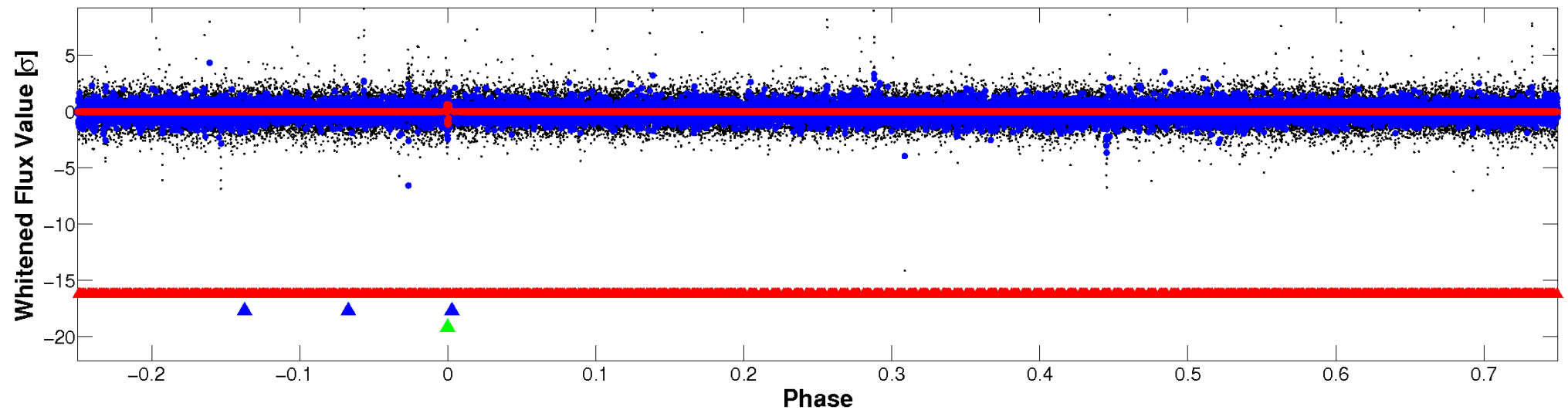


Non-Whitened Vs. Whitened Light Curve

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

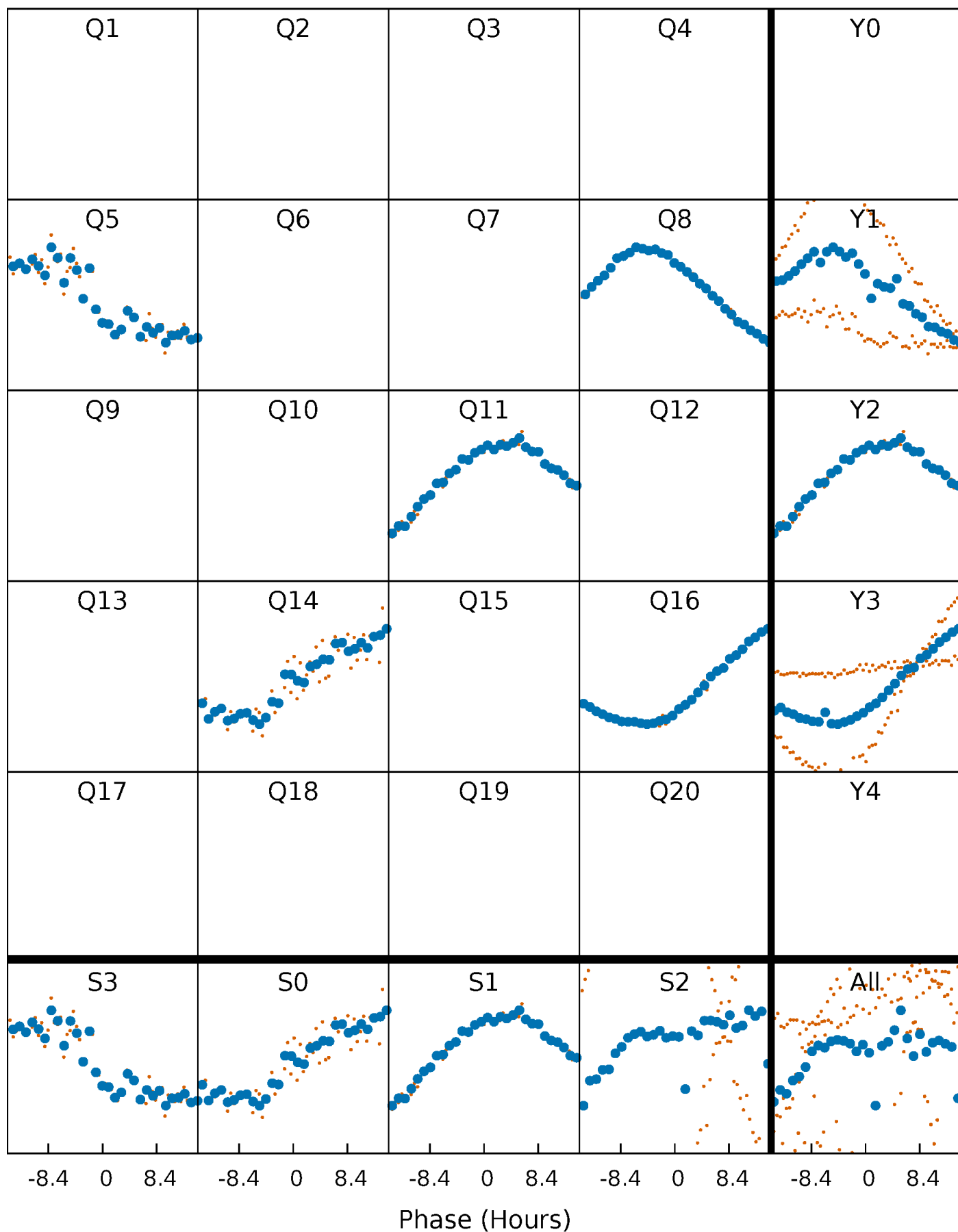


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



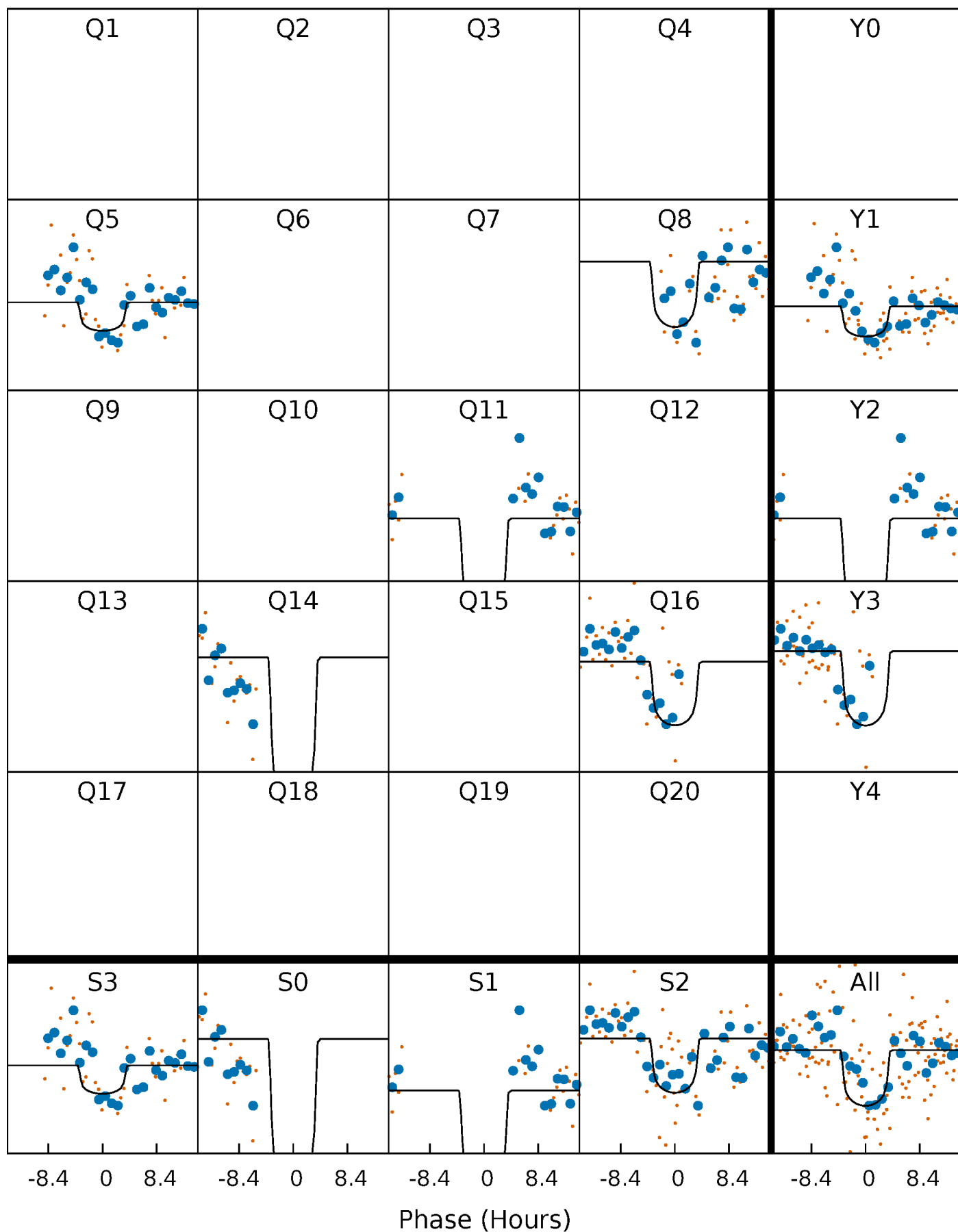
PDC Quarter-Phased Transit Curves

TCE 002969638-03 $P=256.275163$ Days $T_0=259.293018$ (BKJD)



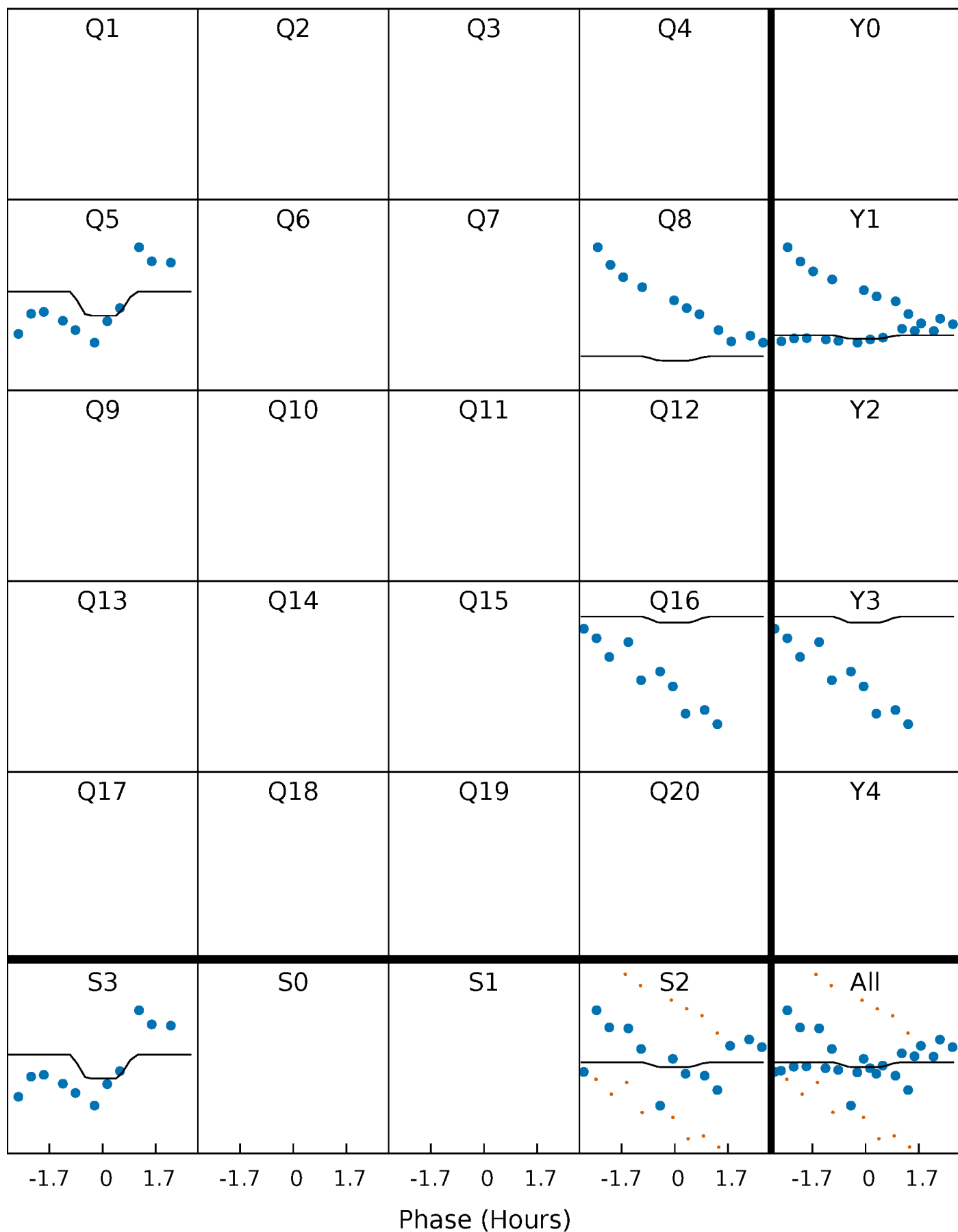
DV Quarter-Phased Transit Curves

TCE 002969638-03 P=256.275163 Days $T_0=259.293018$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

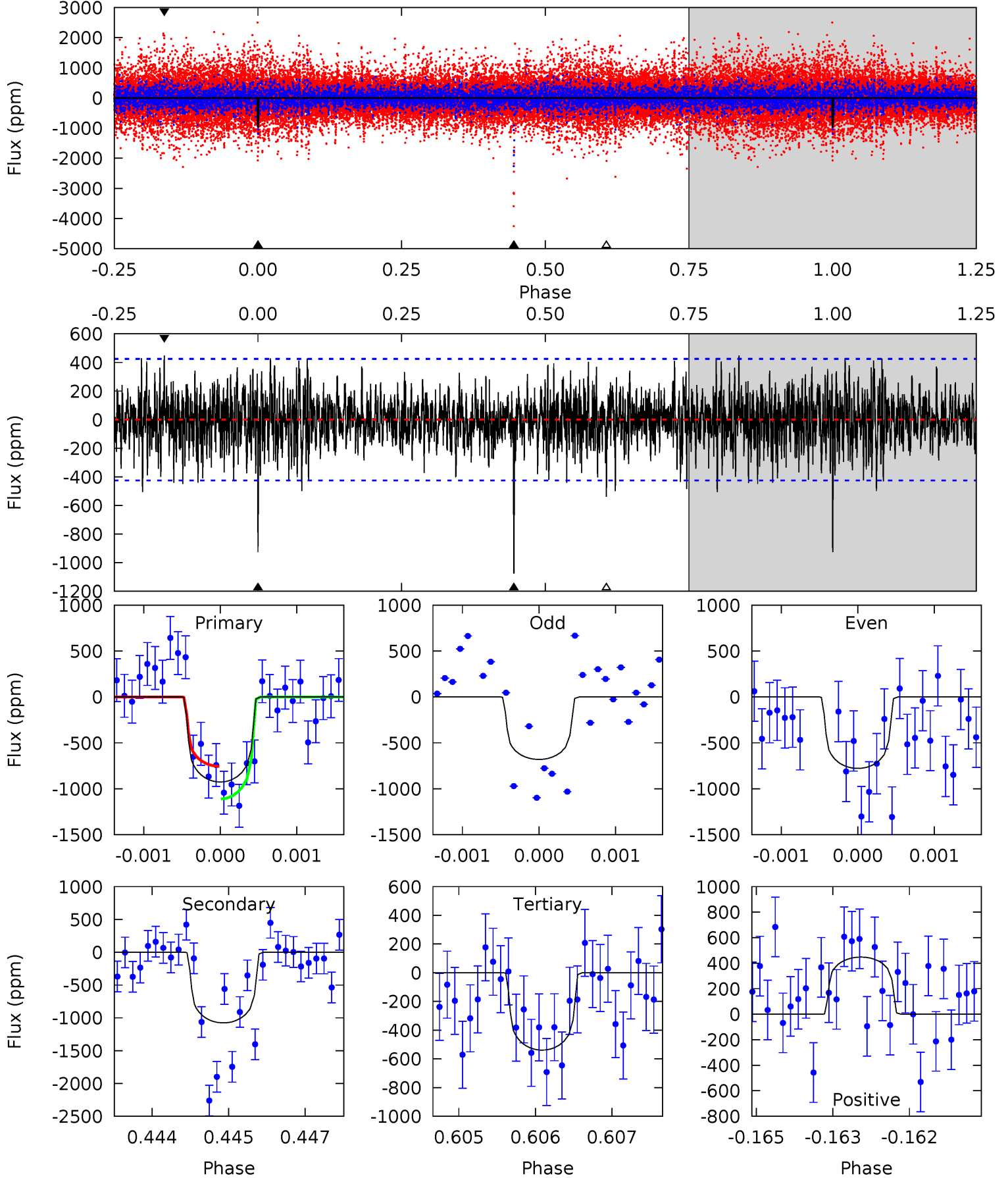
TCE 002969638-03 P=256.243654 Days $T_0=259.435833$ (BKJD)



DV Model-Shift Uniqueness Test

002969638-03, P = 256.275163 Days, E = 3.017855 Days

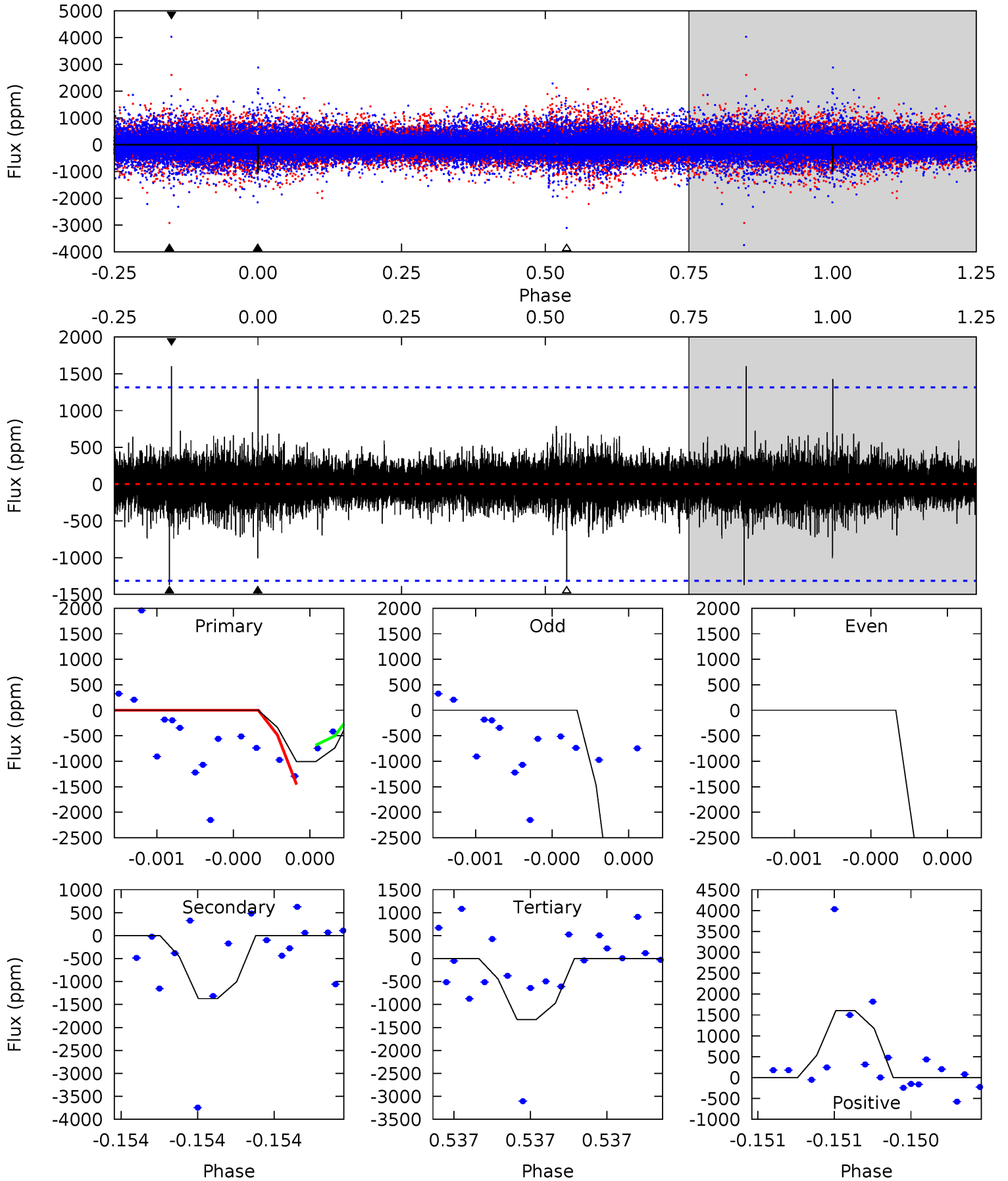
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.8	13.7	6.85	5.69	5.40	3.21	1.75	4.92	6.08	6.84	7.99	0.58	0.98	0.29	2.27



Alt Model-Shift Uniqueness Test

002969638-03, P = 256.243654 Days, E = 3.192179 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.33	5.89	5.70	6.89	5.65	3.60	0.71	-1.37	-2.56	0.19	-1.00	7.77	0.43	0.54	0



Stellar Parameters For KIC 002969638

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5870^{+158}_{-176}	$4.235^{+0.220}_{-0.180}$	$-0.080^{+0.300}_{-0.300}$	$1.248^{+0.327}_{-0.294}$	$0.977^{+0.140}_{-0.115}$	$0.708^{+0.881}_{-0.346}$
	+3%/-3%	+5%/-4%	+375%/-375%	+26%/-24%	+14%/-12%	+124%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 002969638-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1076 ± 79	$4.50^{+2.54}_{-2.43}$	456^{+33}_{-34}	5850^{+3199}_{-1079}	18381^{+68567}_{-10961}
Alt.	-1370 ± 233	$3.75^{+2.39}_{-2.01}$	454^{+33}_{-33}	6673^{+4895}_{-1384}	$33308^{+120858}_{-21289}$

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 $A_{obs} \gg 1.0$

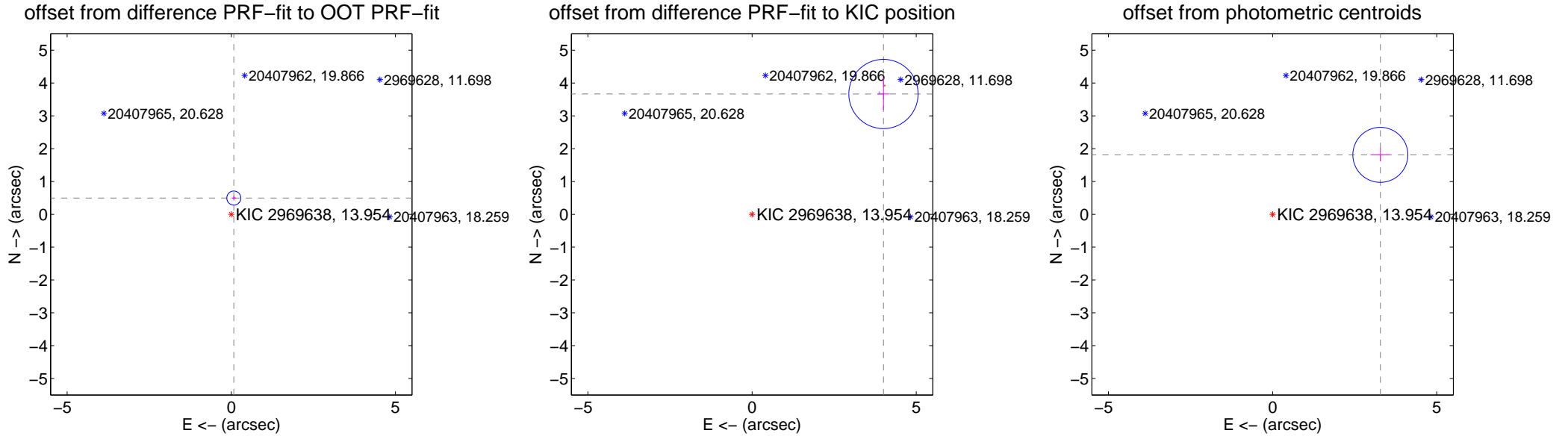
DV Centroid Data

Supplemental centroid analysis for 002969638-03. Kepler magnitude: 13.95. Transit SNR 6.41

There are 2 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 5.00 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.502 ± 0.071	7.03	-0.077 ± 0.069	0.496 ± 0.071
PRF-fit source offset from KIC position	5.428 ± 0.352	15.44	-4.002 ± 0.180	3.667 ± 0.482
photometric centroid source offset	3.75 ± 0.28	13.43	-3.28 ± 0.30	1.81 ± 0.20

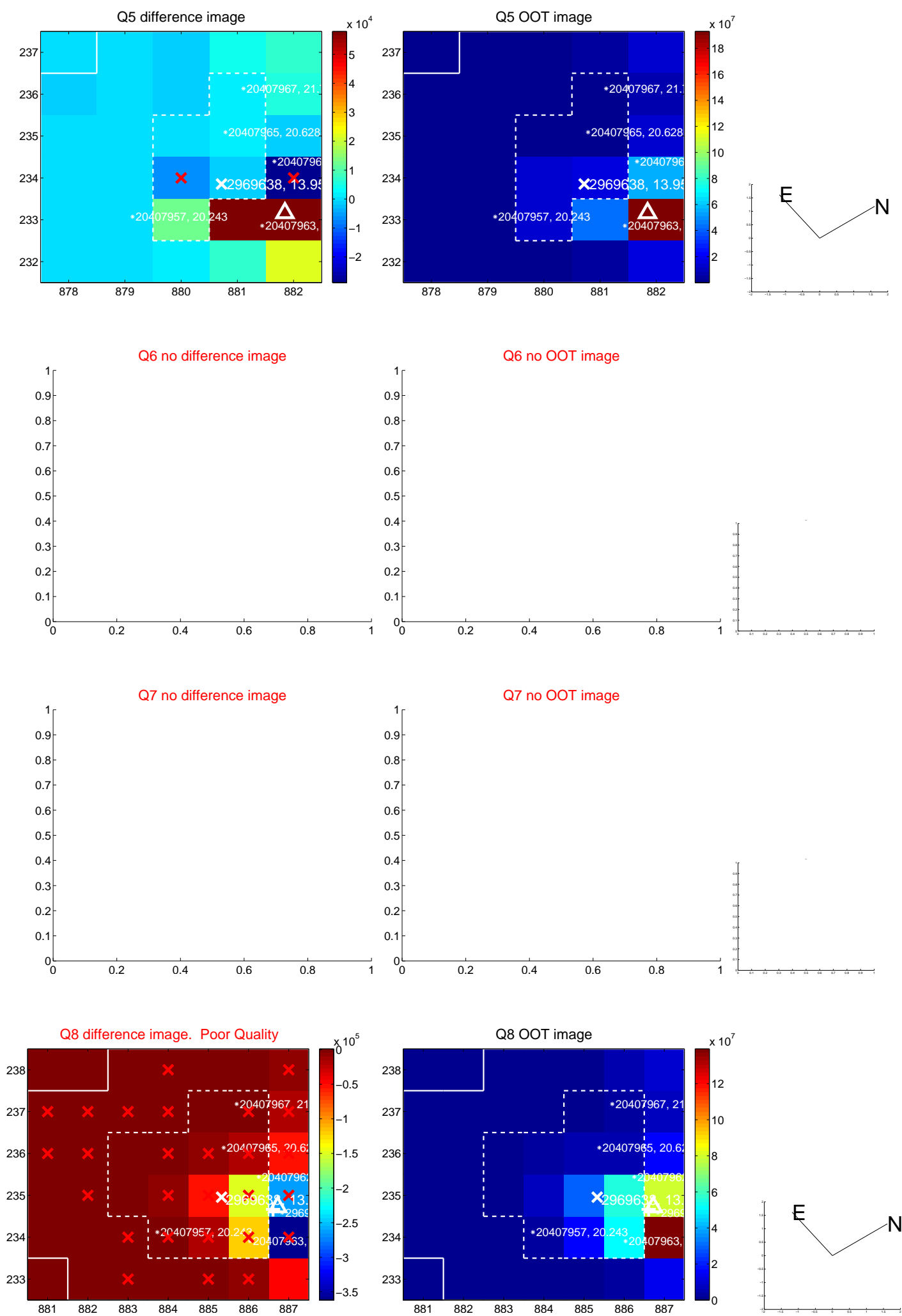


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

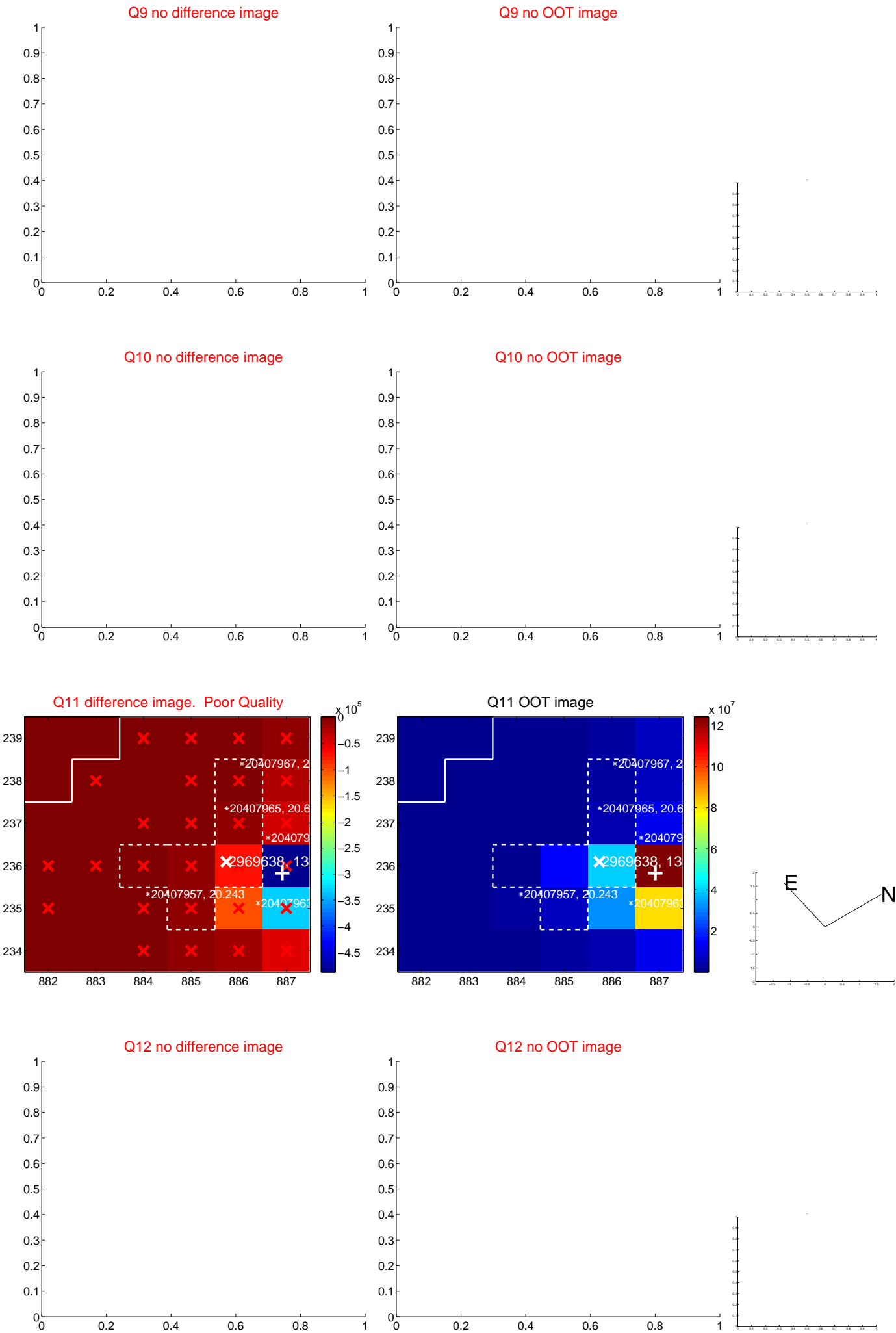
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

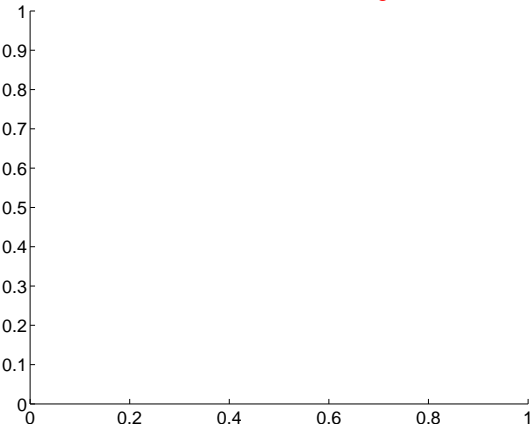


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

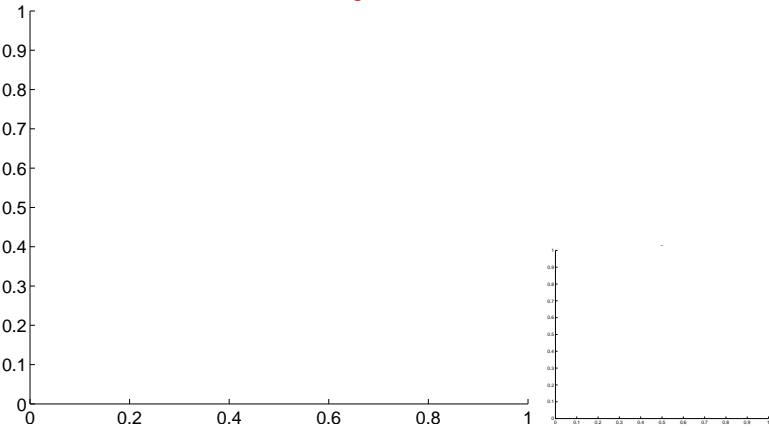


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

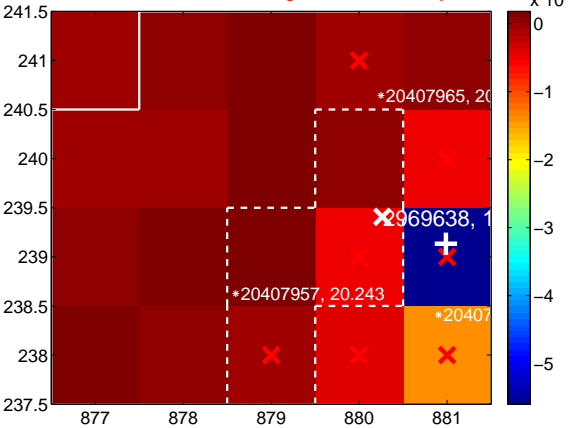
Q13 no difference image



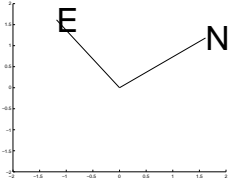
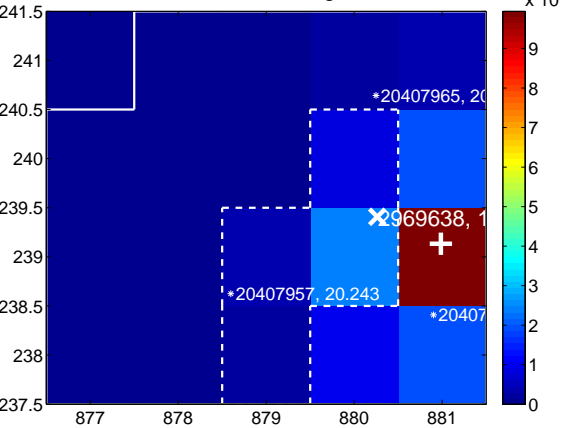
Q13 no OOT image



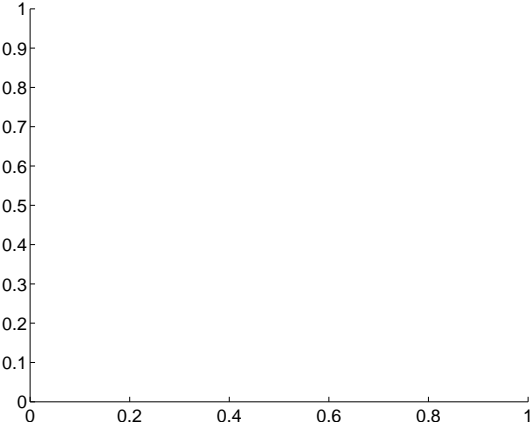
Q14 difference image. Poor Quality



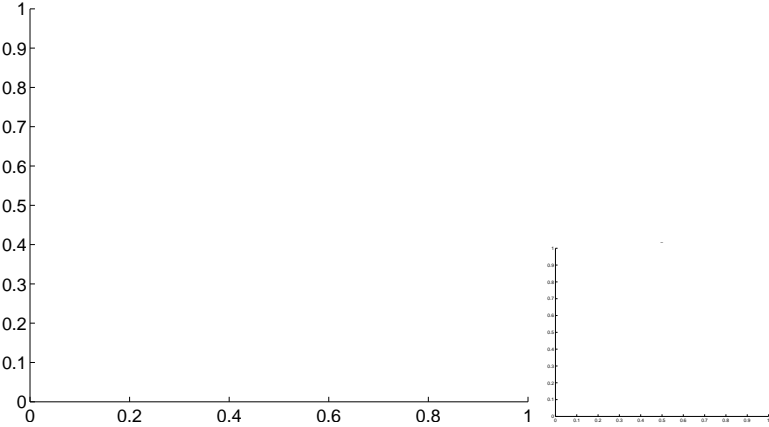
Q14 OOT image



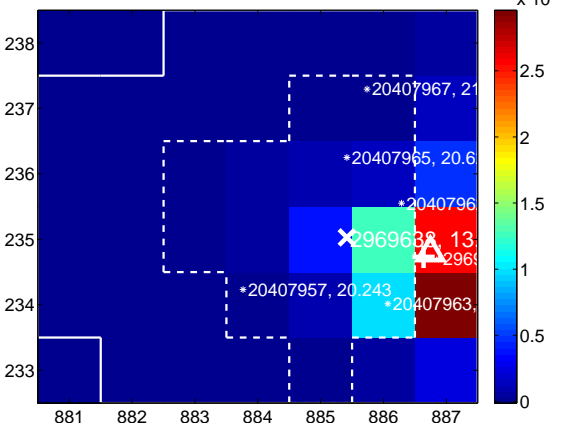
Q15 no difference image



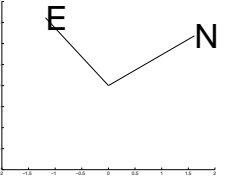
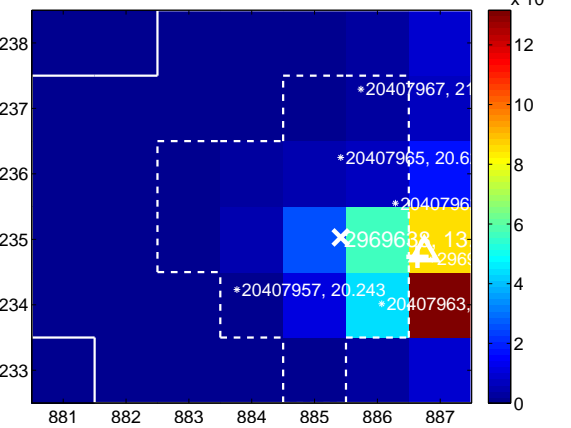
Q15 no OOT image



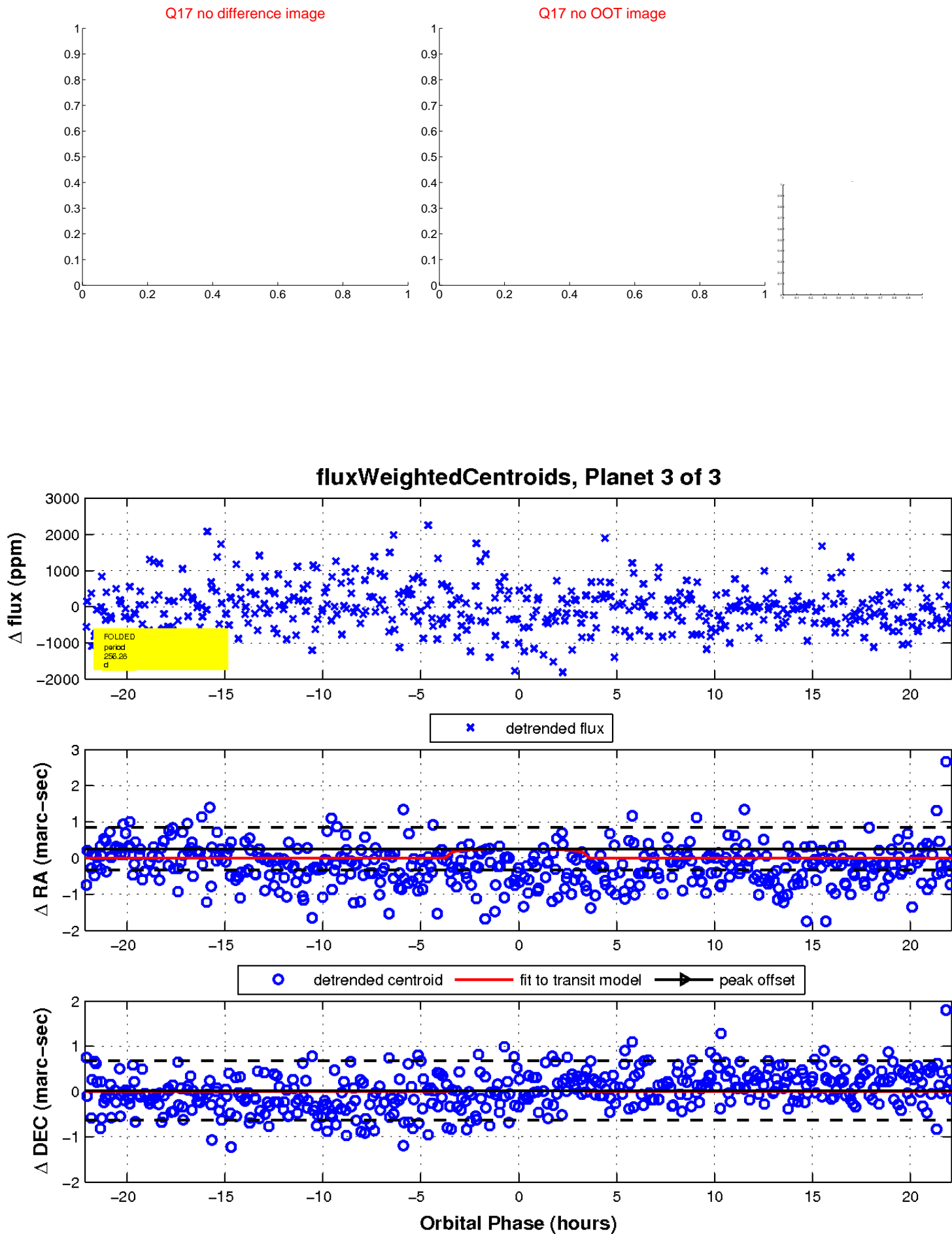
Q16 difference image



Q16 OOT image



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



UKIRT Image

Declination

