

KIC 011968008

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})
011968008-02	OBS	No	527.451484	460.586666	287.9	15.000	14.6	-1.0	1.77	5324	2.95	1.56
011968008-03	OBS	No	388.372258	251.321837	643.0	5.288	14.2	7.6	1.77	5324	4.71	2.35
011968008-04	OBS	No	630.844076	309.876026	560.7	6.104	14.1	6.3	1.77	5324	4.60	1.23
011968008-05	OBS	No	394.542972	312.918263	641.4	12.454	15.1	7.1	1.77	5324	5.51	2.30
011968008-06	OBS	No	635.876981	174.861069	638.4	5.324	14.5	7.3	1.77	5324	4.52	1.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011968008-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
011968008-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—HALO_GHOST
011968008-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
011968008-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011968008-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS

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

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

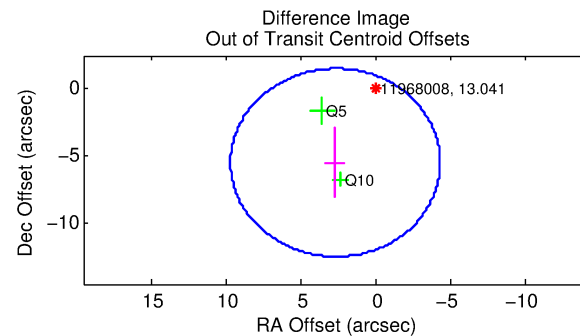
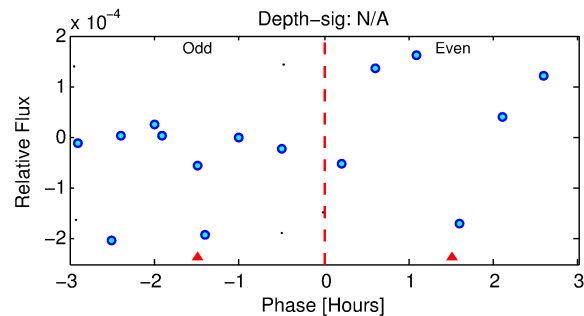
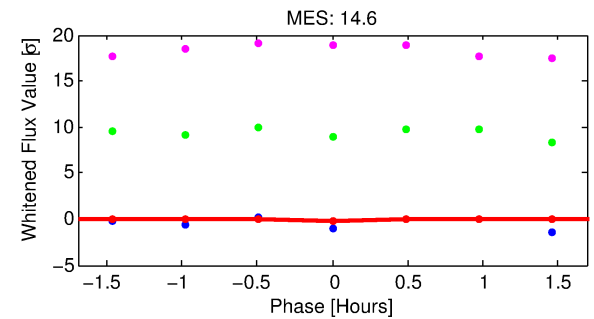
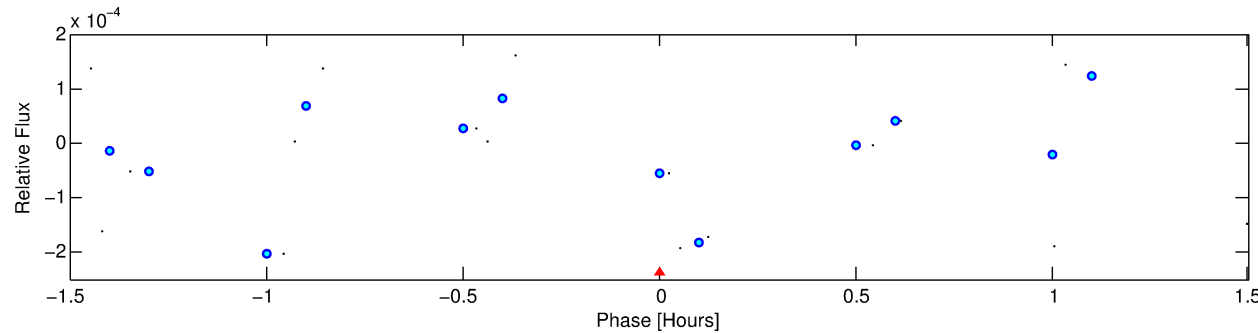
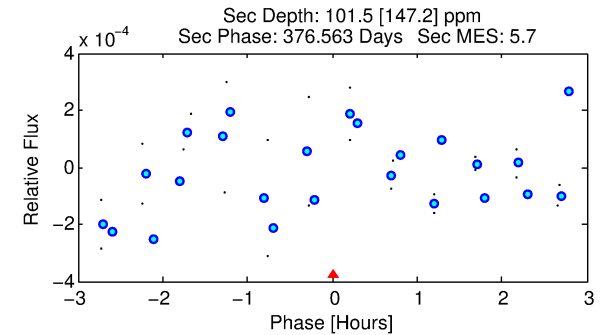
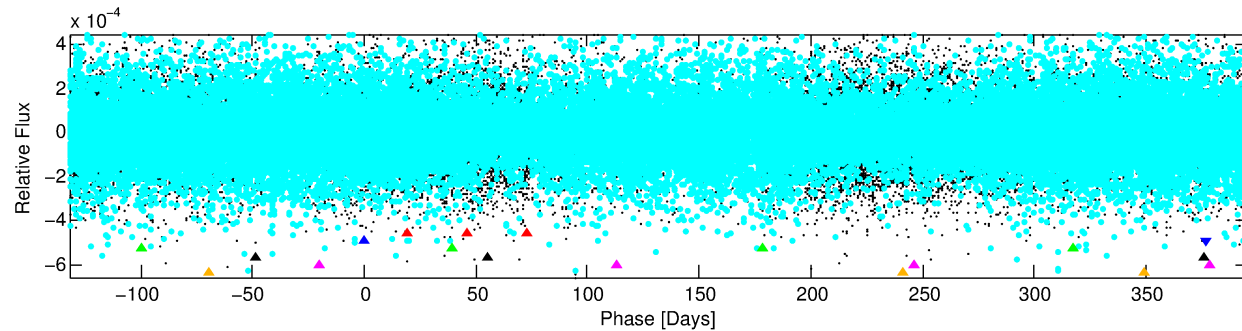
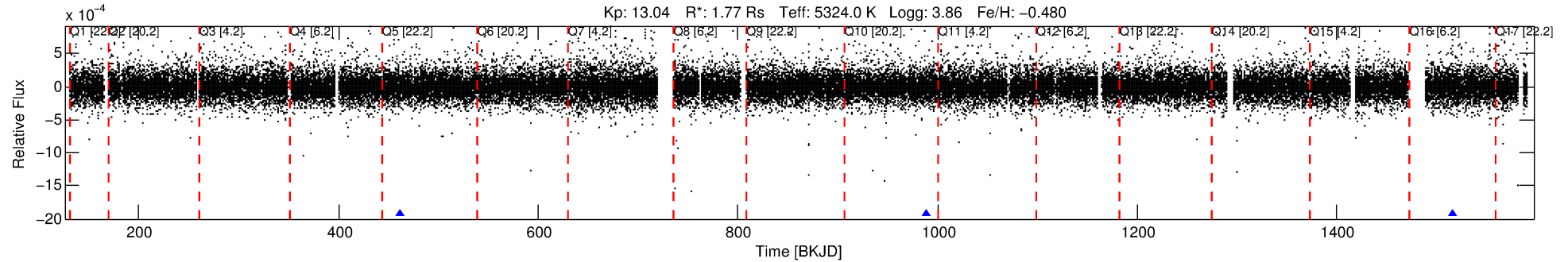
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011968008-02

No Significant Match Found

DV One-Page Summary

KIC: 11968008 Candidate: 2 of 6 Period: 527.451 d



TPS TCE Results:

Period = 527.45148 d
Epoch = 460.5867 BKJD

DV fit results are unavailable

DV Diagnostic Results:

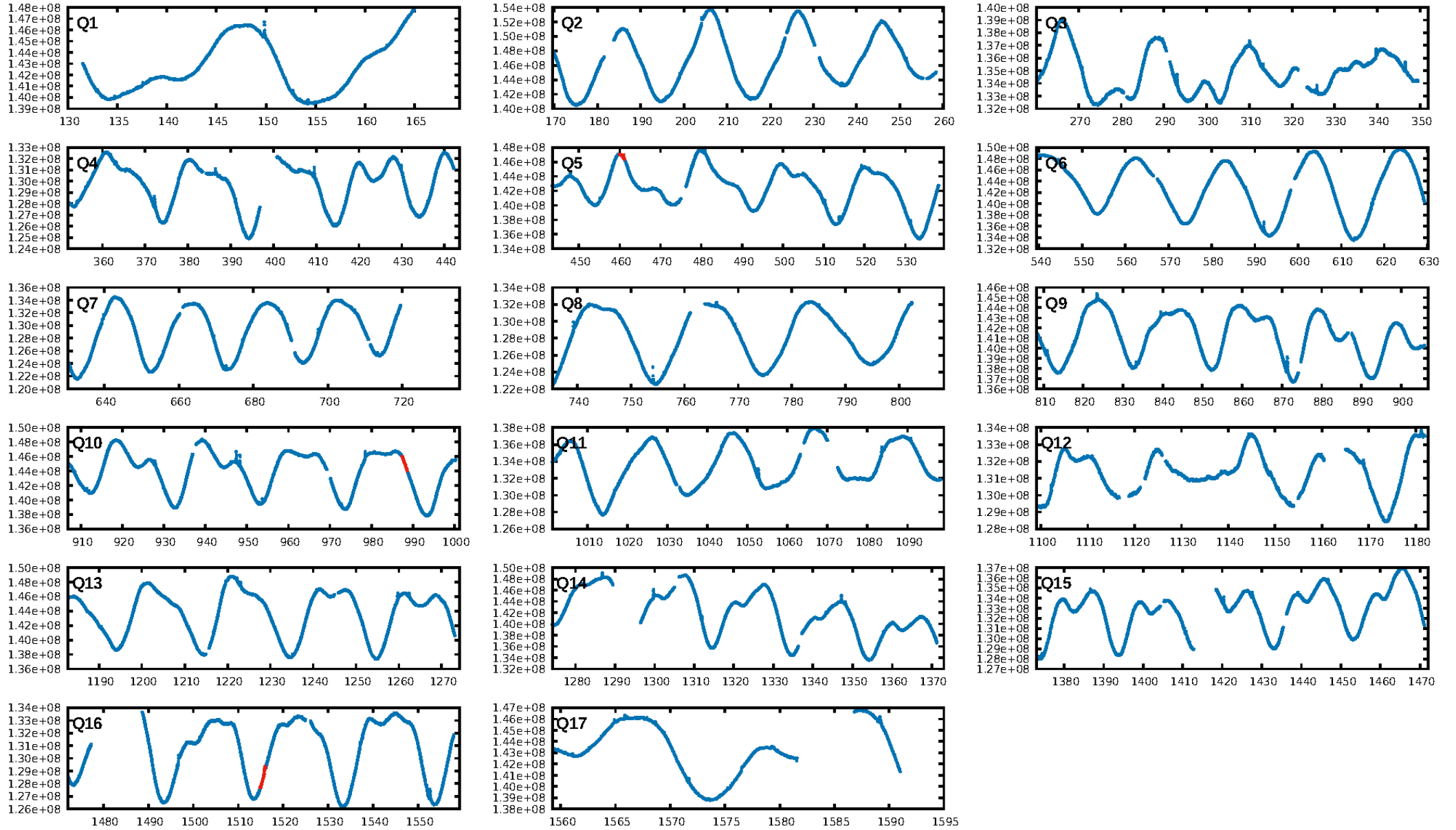
ShortPeriod-sig: 100.0% [163.61σ]
LongPeriod-sig: 100.0% [40.95σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.245

Centroid-sig: 6.9%
Centroid-so: 41.380 arcsec [1.08σ]
OotOffset-rm: 6.073 arcsec [2.60σ]
KicOffset-rm: 5.844 arcsec [2.51σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [3/3]

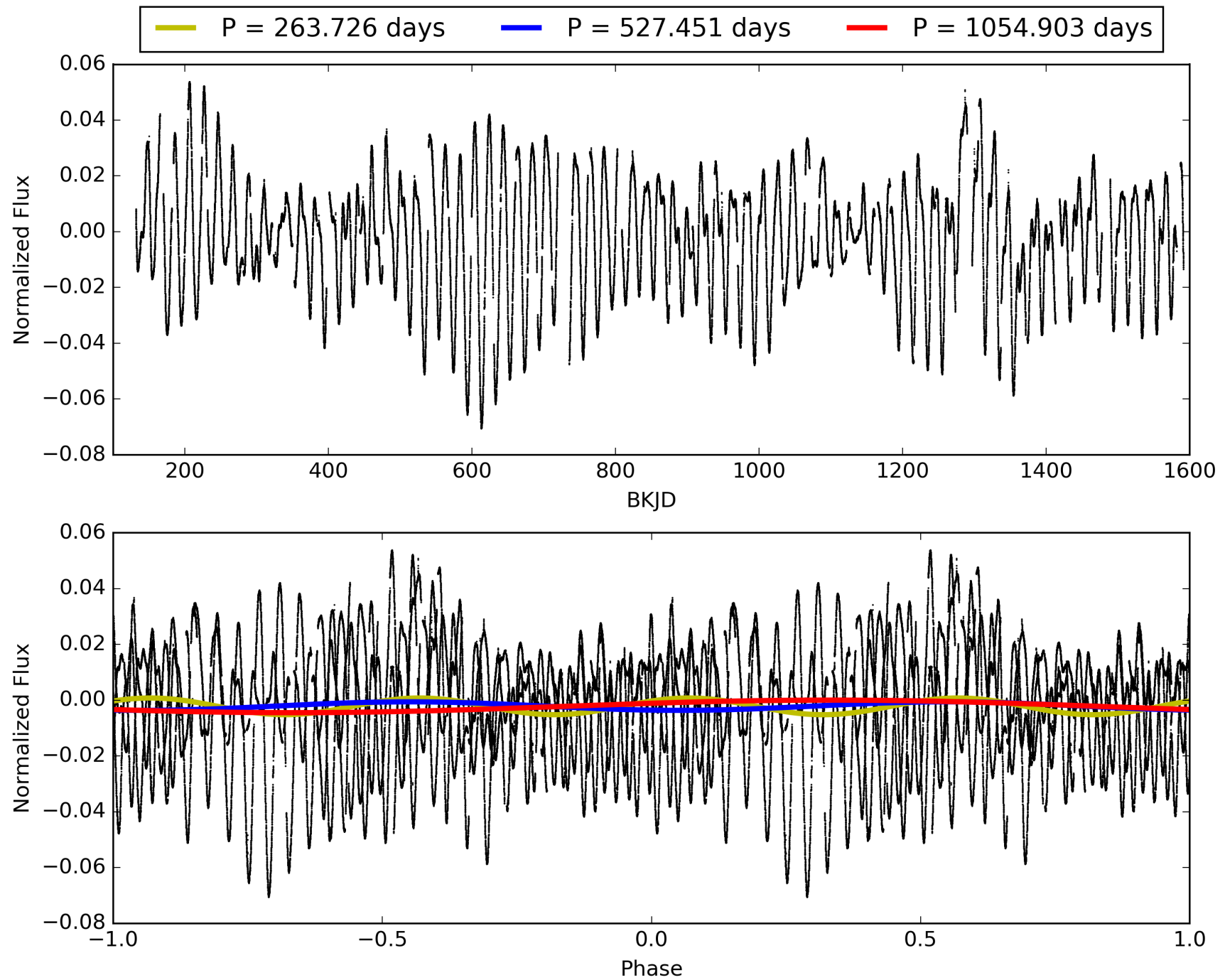
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:03:01 Z

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

TCE 011968008-02, PDC Light Curves

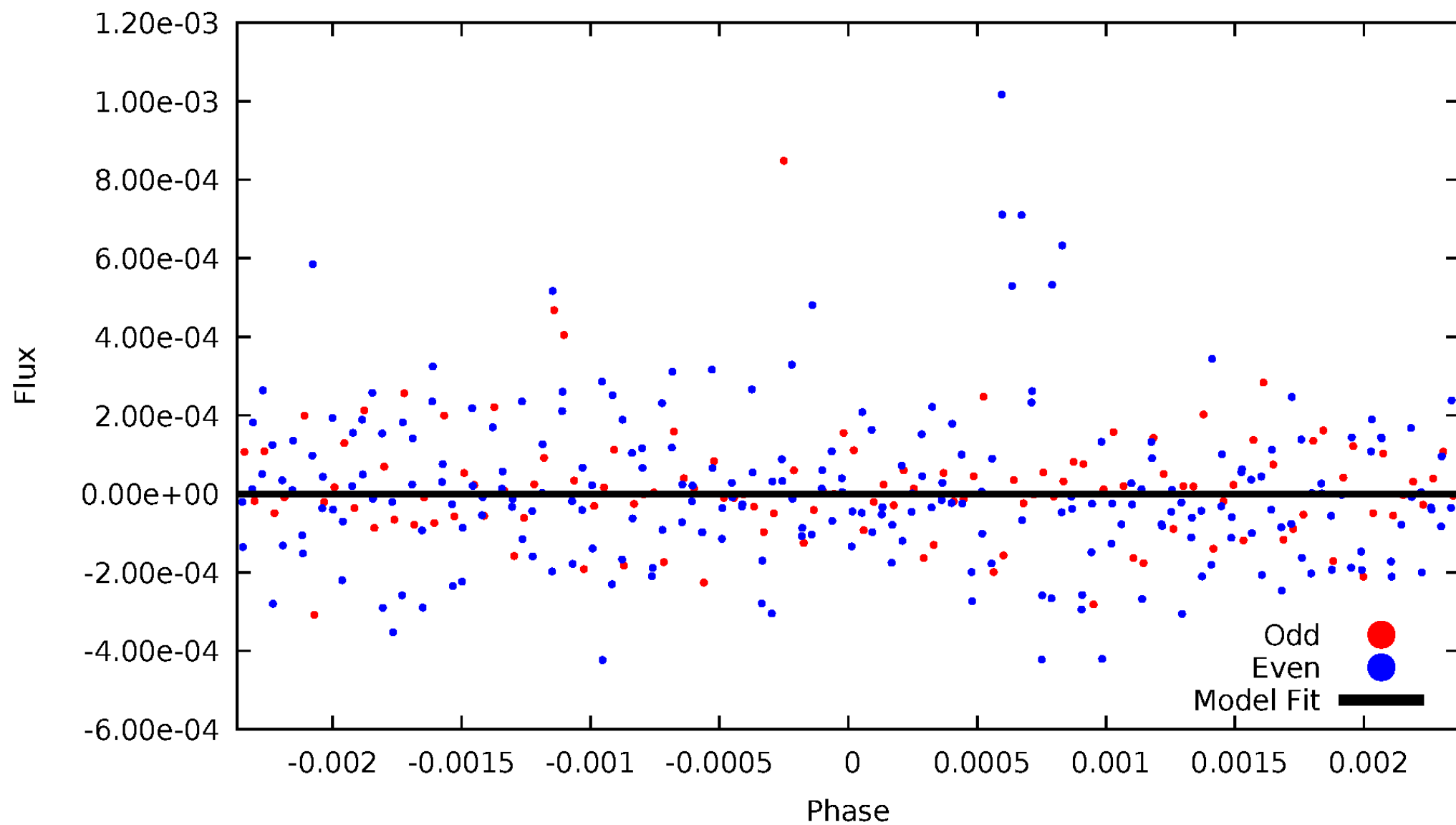


TCE 011968008-02



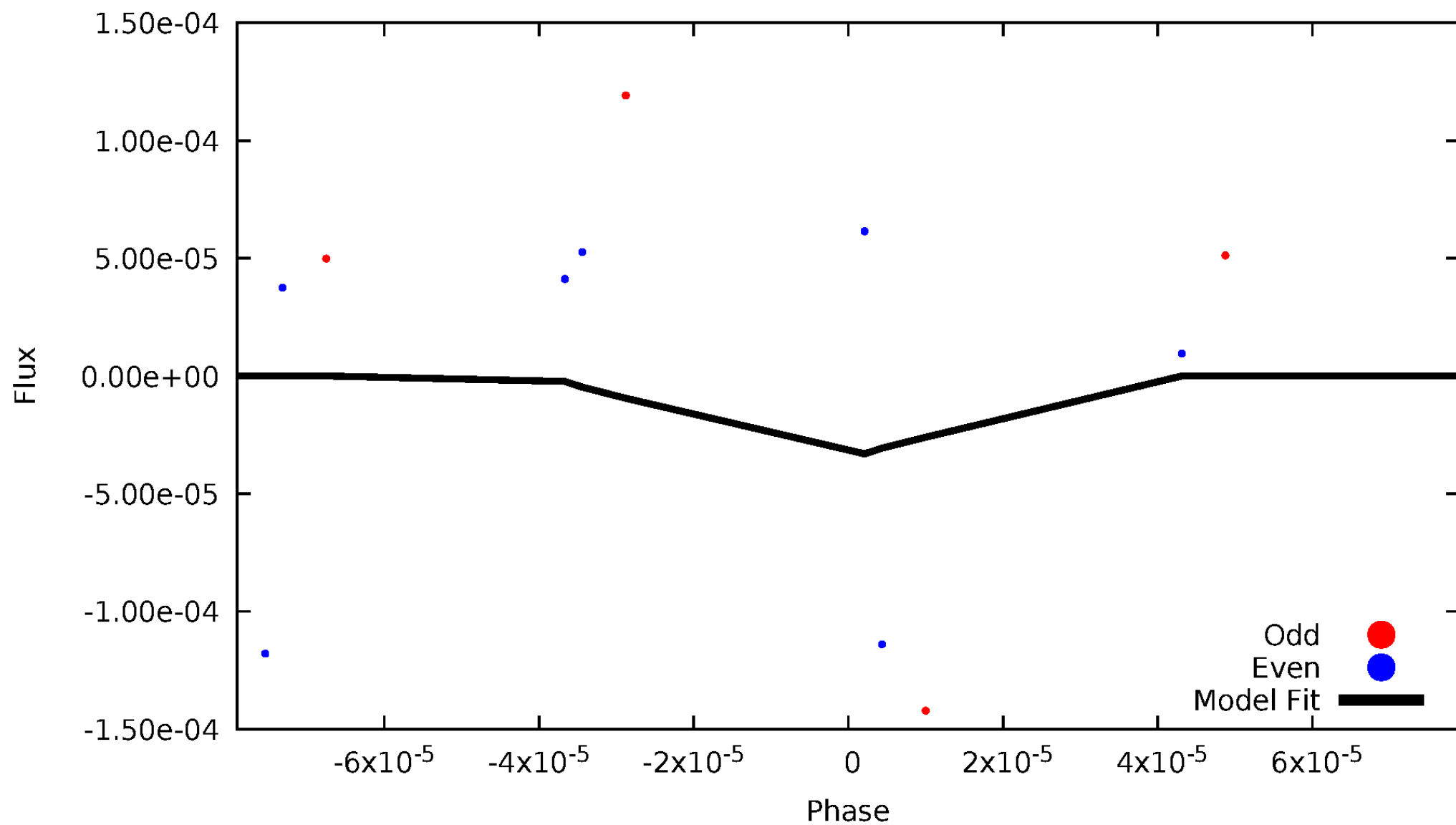
DV Odd/Even

TCE 011968008-02



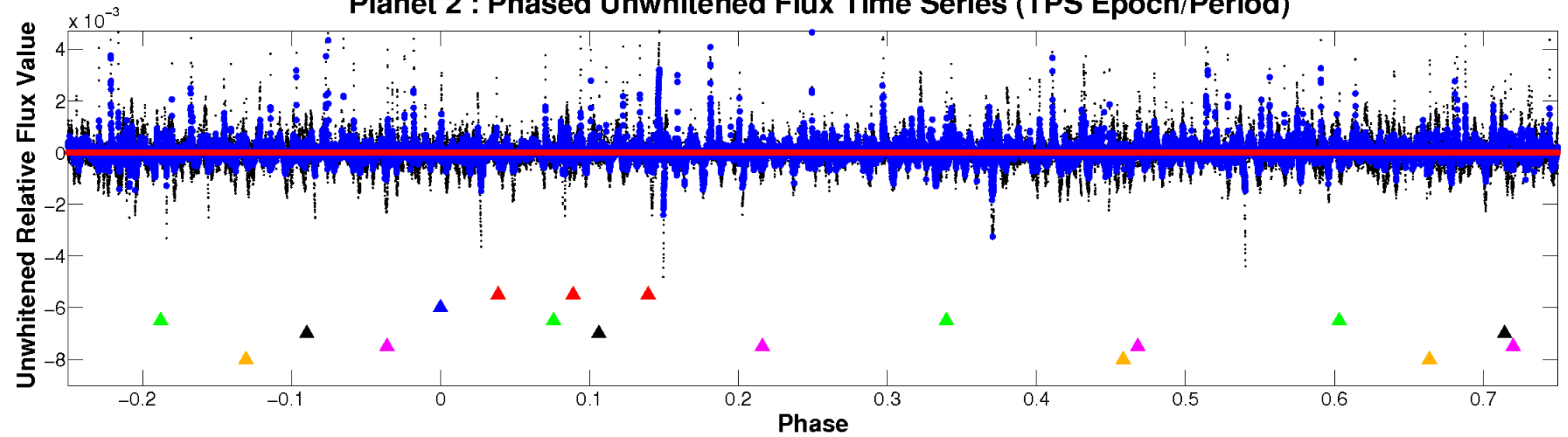
ALT Odd/Even

TCE 011968008-02



Non-Whitened Vs. Whitened Light Curve

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

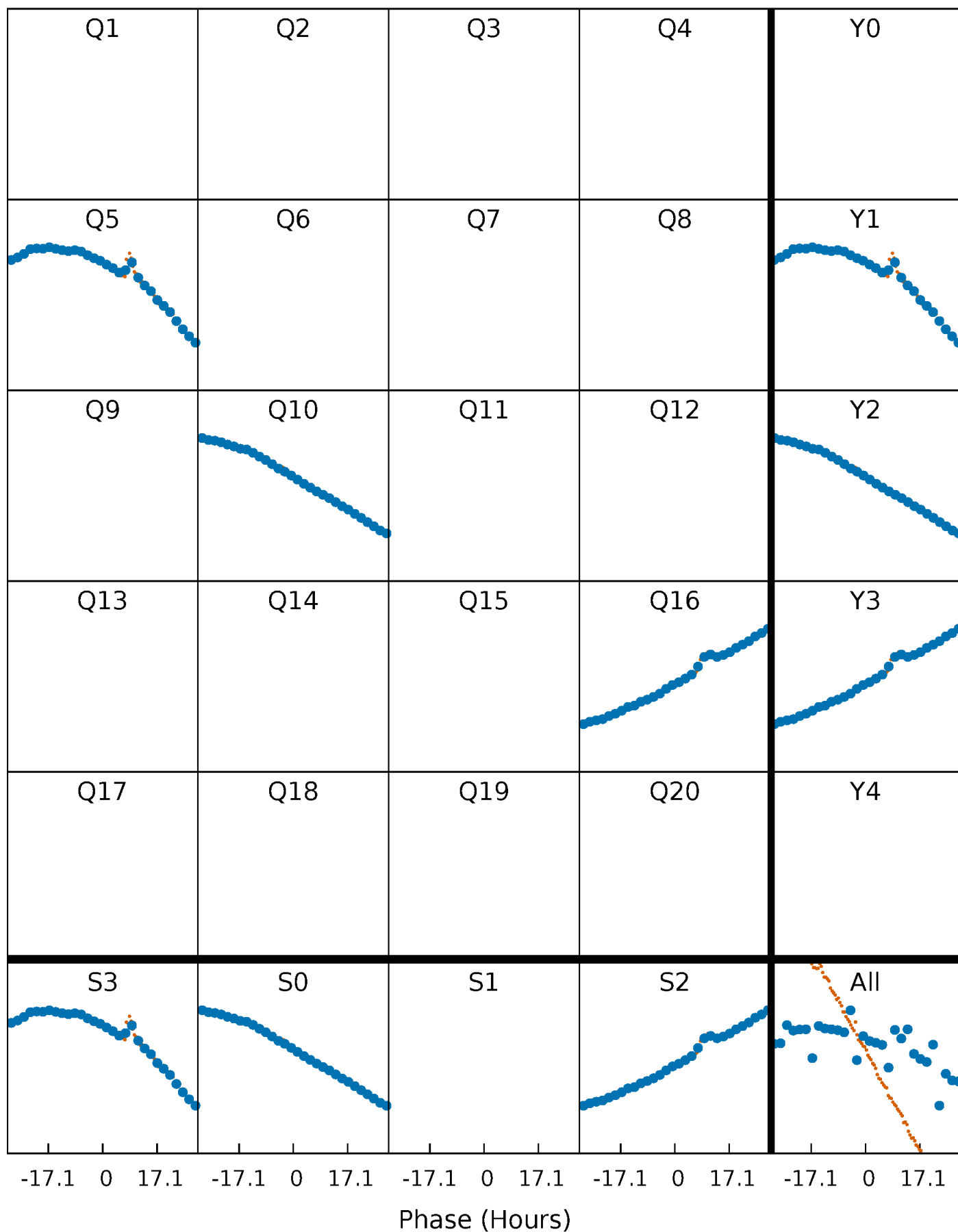


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



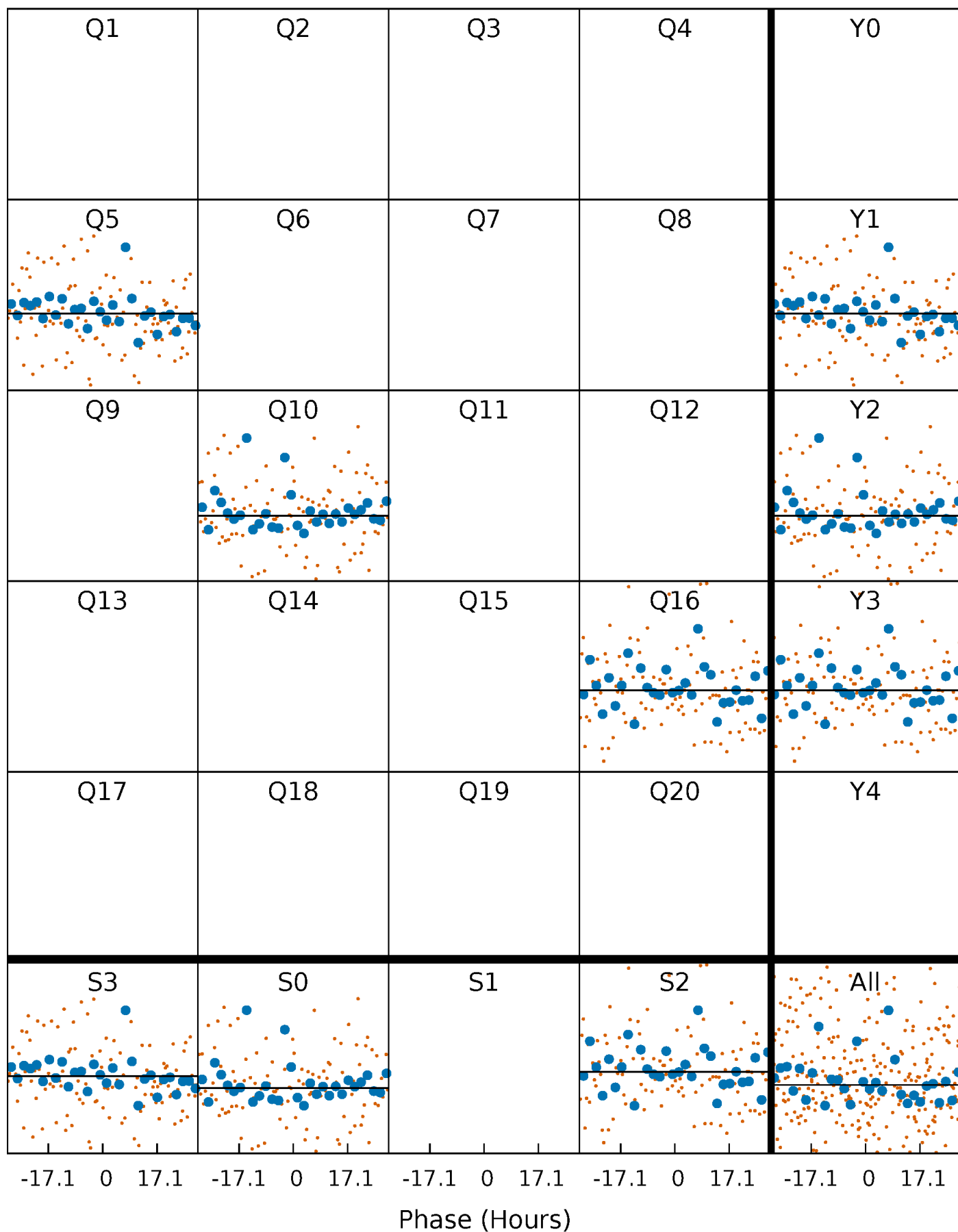
PDC Quarter-Phased Transit Curves

TCE 011968008-02 $P=527.451484$ Days $T_0=460.586666$ (BKJD)



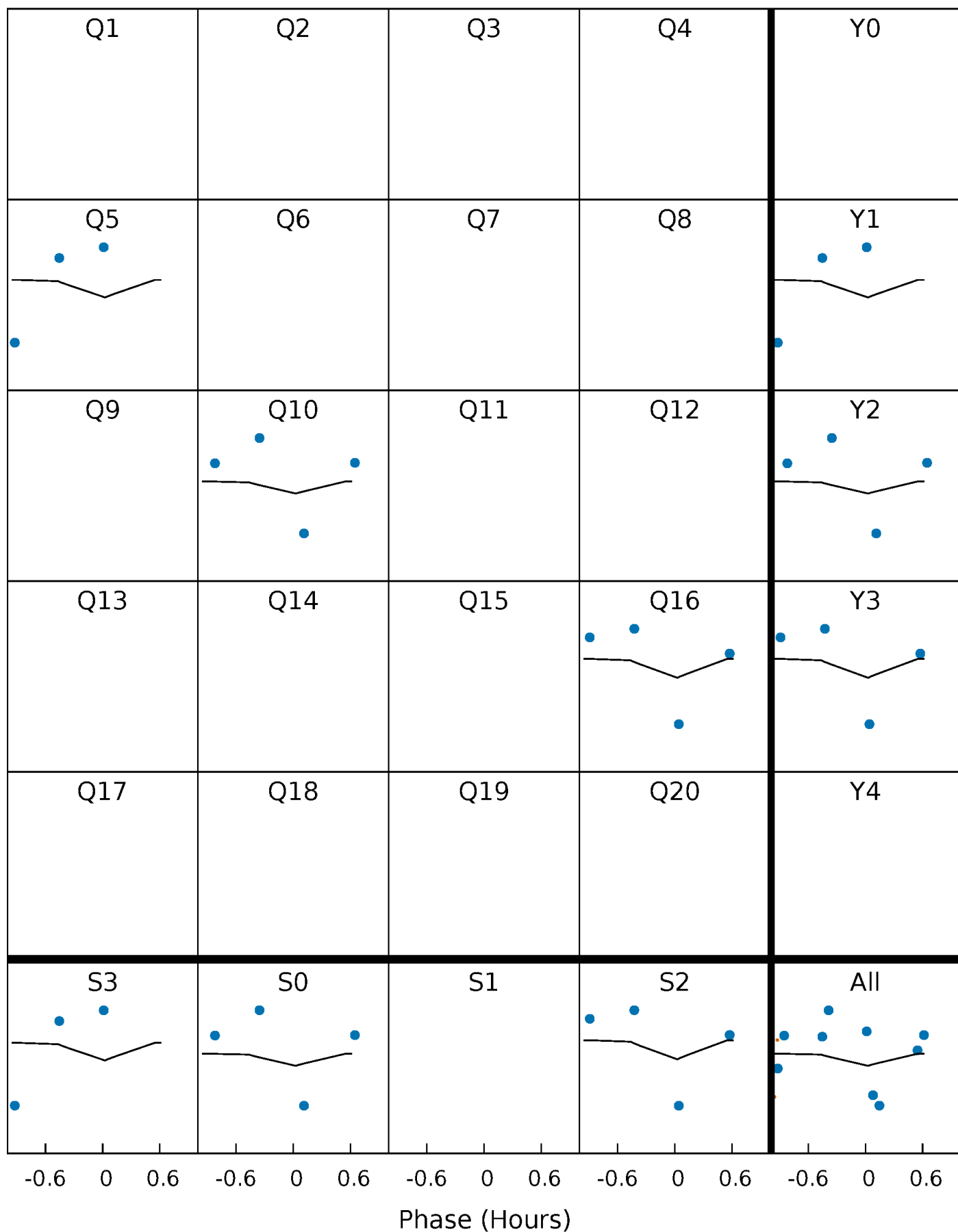
DV Quarter-Phased Transit Curves

TCE 011968008-02 $P=527.451484$ Days $T_0=460.586666$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

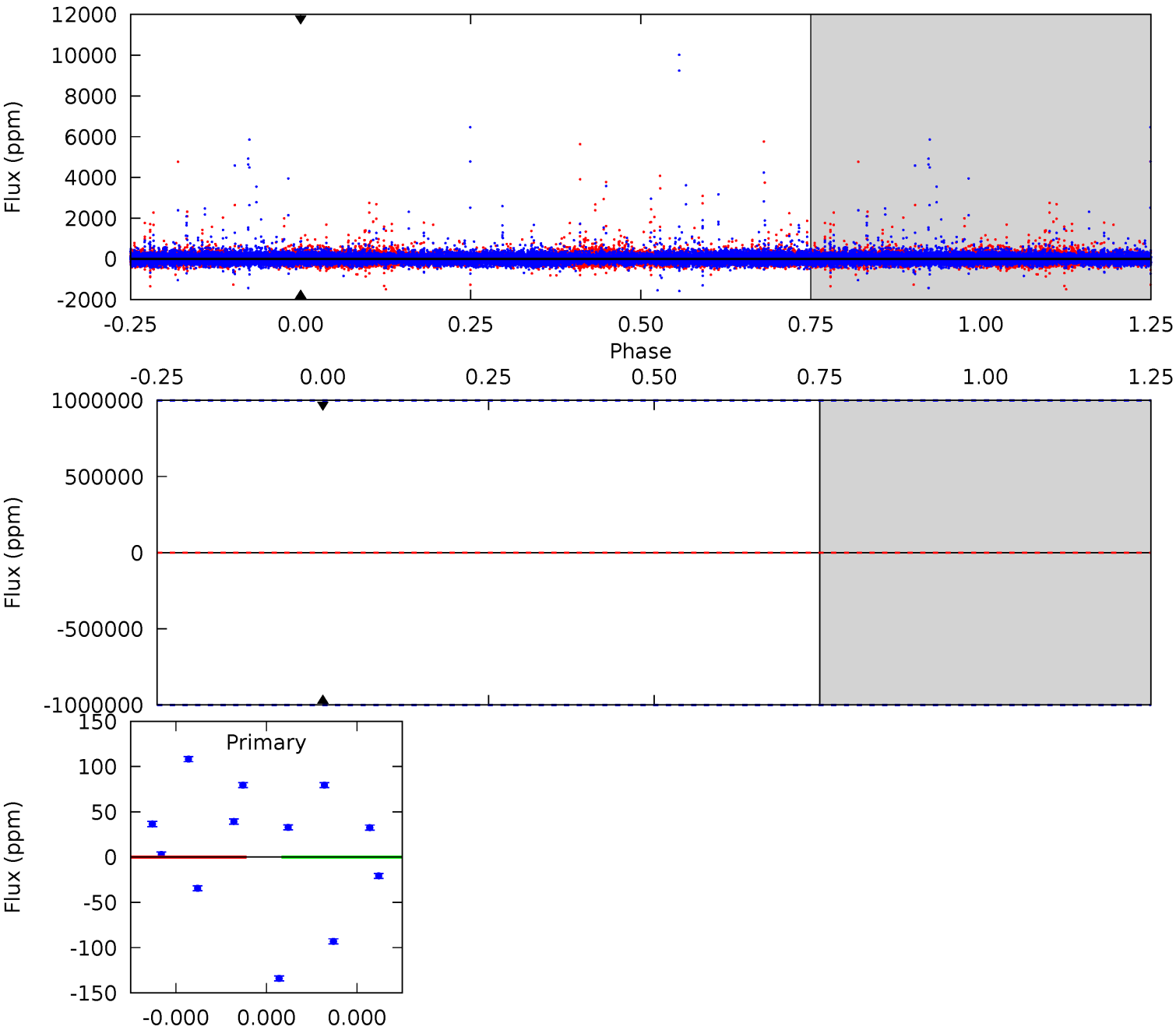
TCE 011968008-02 P=527.451484 Days $T_0=461.573345$ (BKJD)



DV Model-Shift Uniqueness Test

011968008-02, P = 527.451484 Days, E = 460.586666 Days

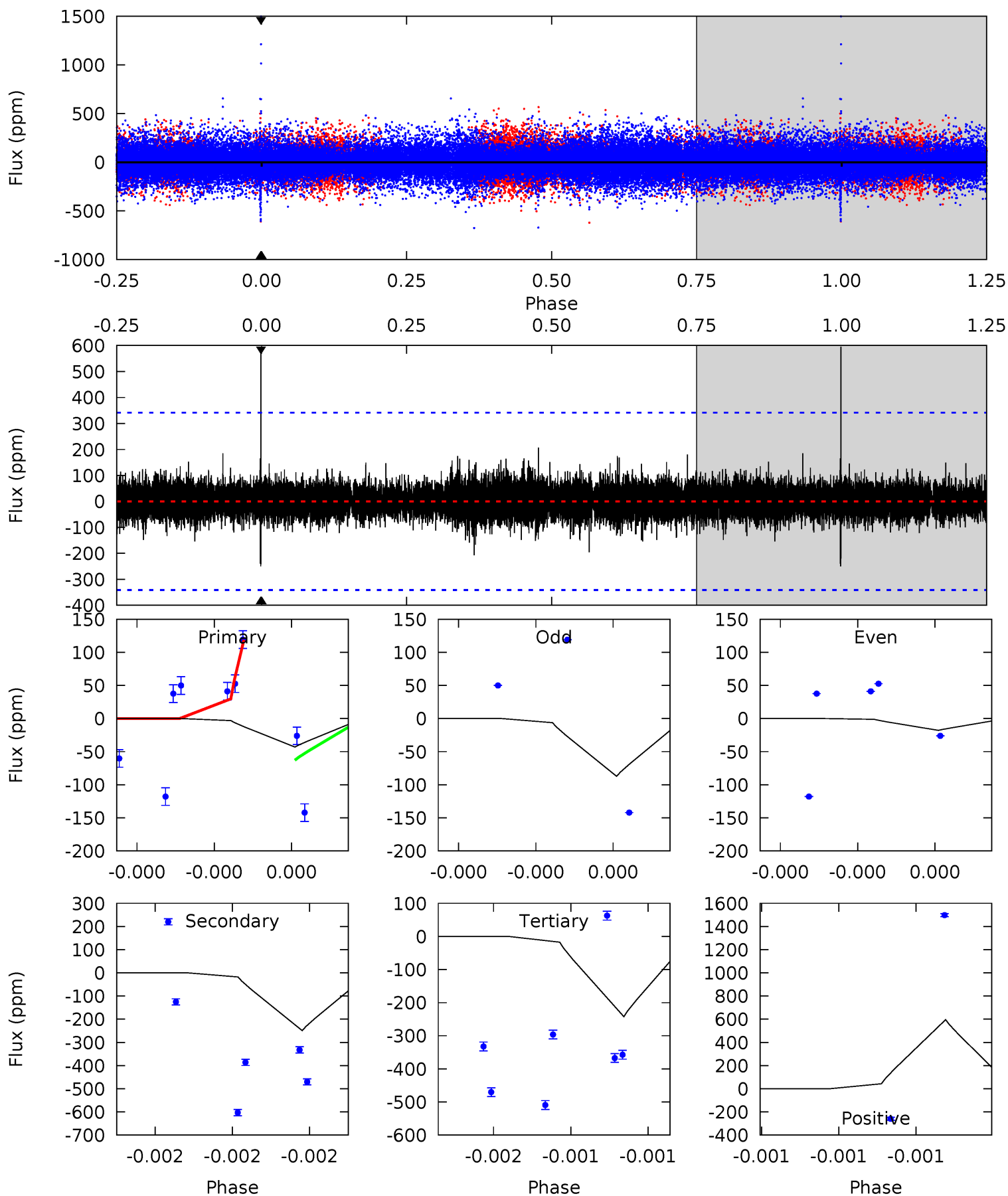
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011968008-02, P = 527.451484 Days, E = 461.573345 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.75	4.36	4.24	10.4	5.97	4.07	0.61	-3.49	-9.67	0.12	-6.06	0.52	0.48	0.71	0.49



Stellar Parameters For KIC 011968008

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5324^{+159}_{-143}	$3.862^{+0.749}_{-0.321}$	$-0.480^{+0.350}_{-0.250}$	$1.768^{+1.074}_{-1.074}$	$0.830^{+0.127}_{-0.114}$	$0.212^{+2.693}_{-0.134}$
	+3%/-3%	+19%/-8%	+73%/-52%	+61%/-61%	+15%/-14%	+1272%/-63%
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 011968008-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$12.78^{+16.22}_{-9.04}$	390^{+55}_{-68}	3900^{+14665}_{-21728}	$3038^{+1012695}_{-899669}$
Alt.	-249 ± 57	$13.03^{+14.62}_{-9.08}$	396^{+58}_{-73}	3092^{+1480}_{-522}	1112^{+10830}_{-871}

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 $A_{obs} \gg 1.0$

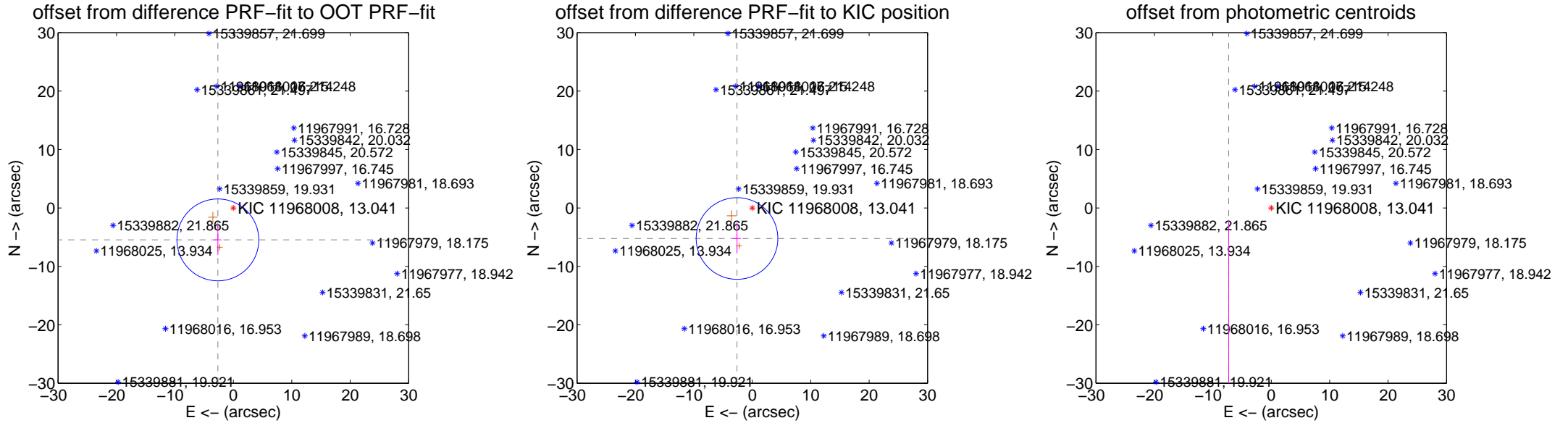
DV Centroid Data

Supplemental centroid analysis for 011968008-02. 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 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.073 ± 2.335	2.60	2.648 ± 0.625	-5.466 ± 2.577
PRF-fit source offset from KIC position	5.844 ± 2.329	2.51	2.615 ± 0.682	-5.227 ± 2.582
photometric centroid source offset	41.38 ± 38.41	1.08	7.28 ± 28.20	-40.73 ± 38.69

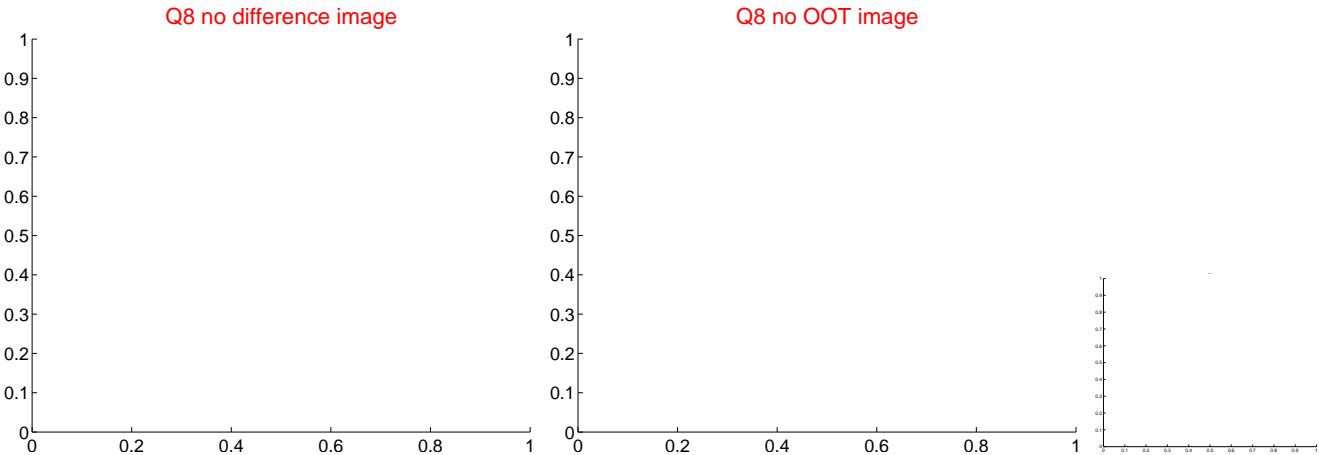
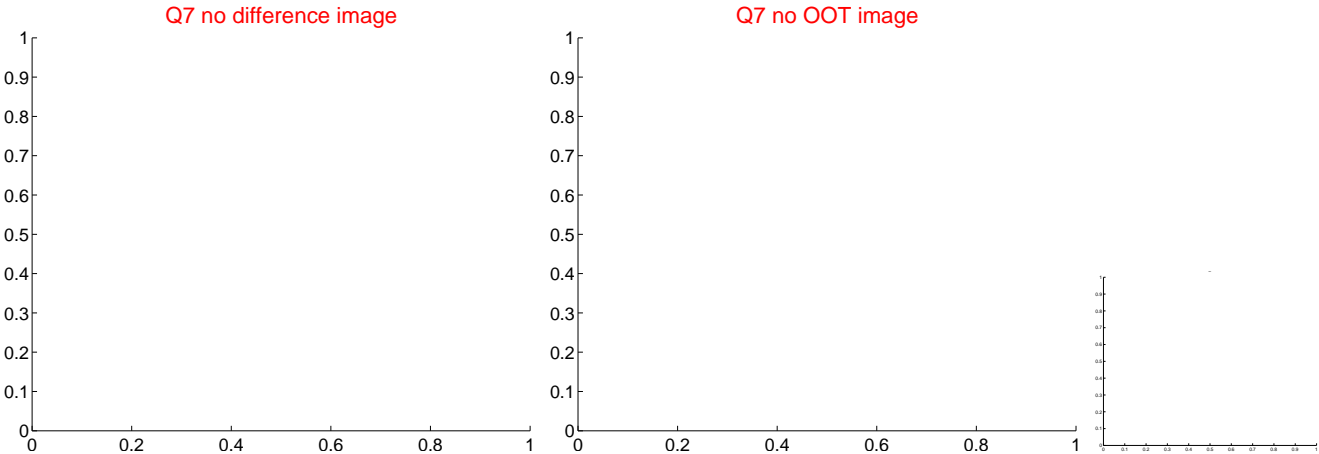
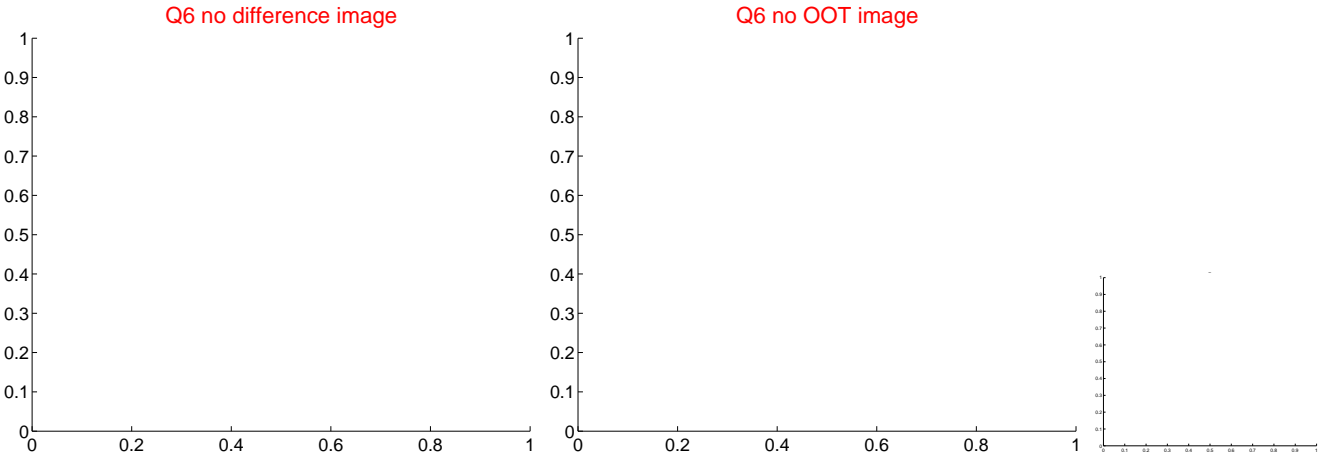
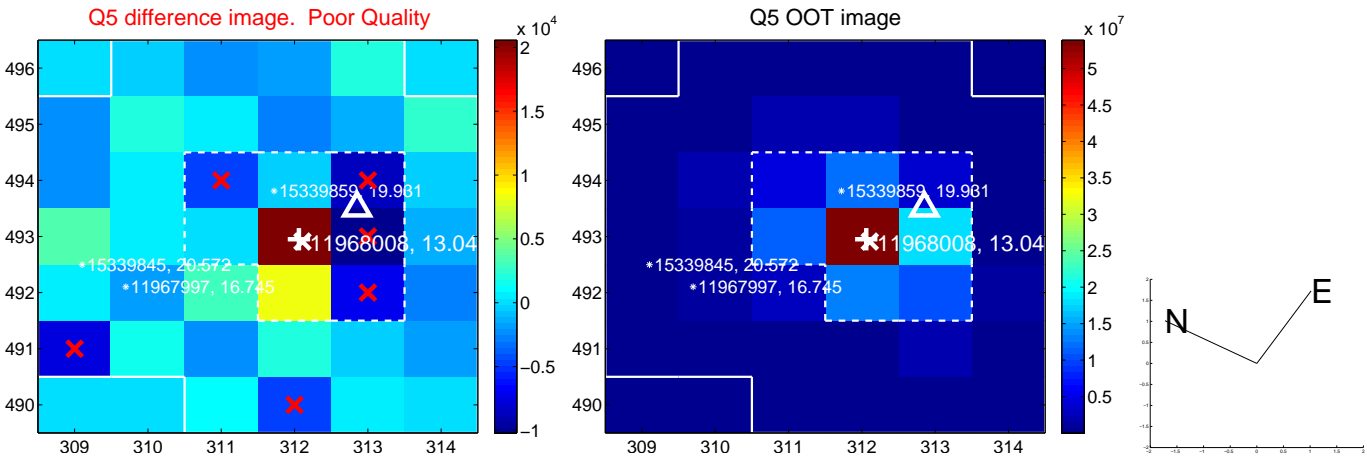


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

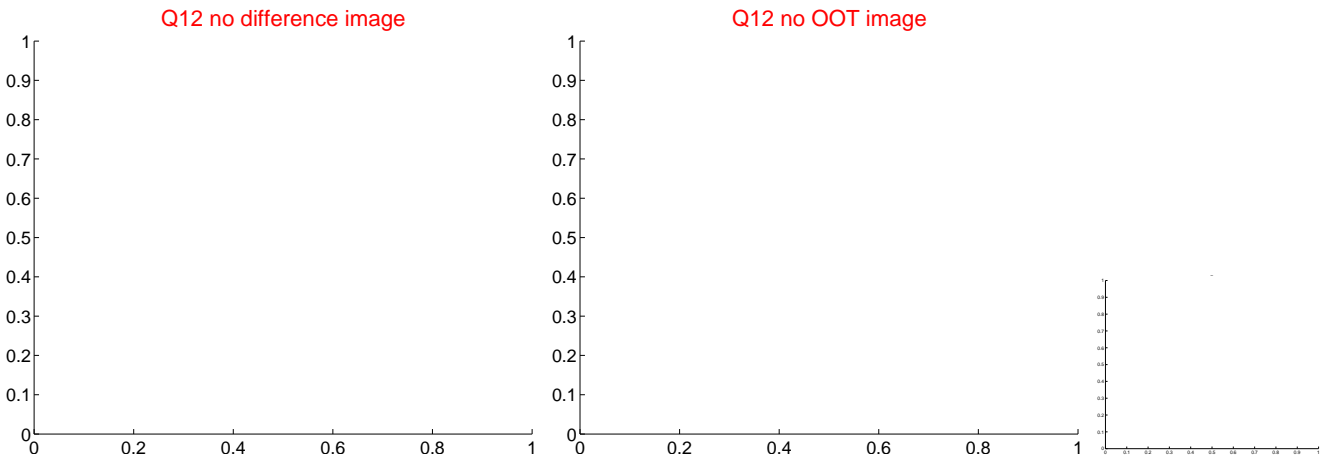
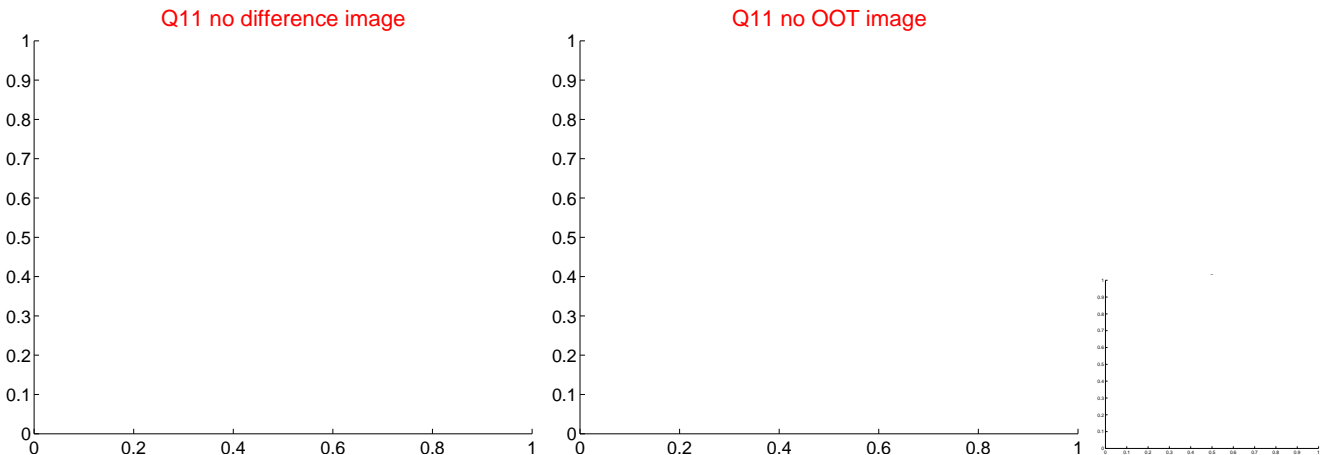
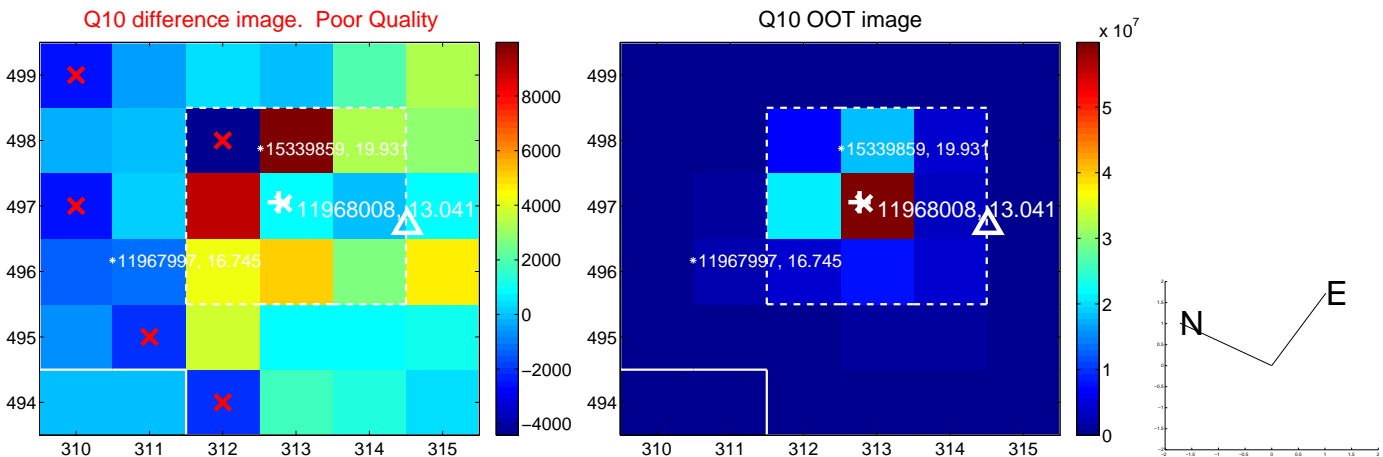
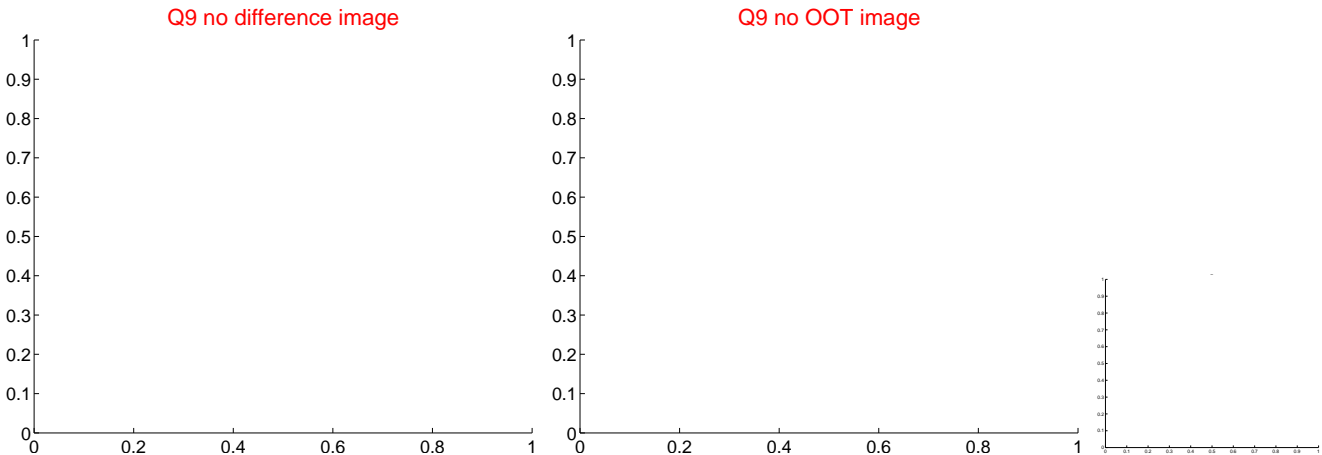
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



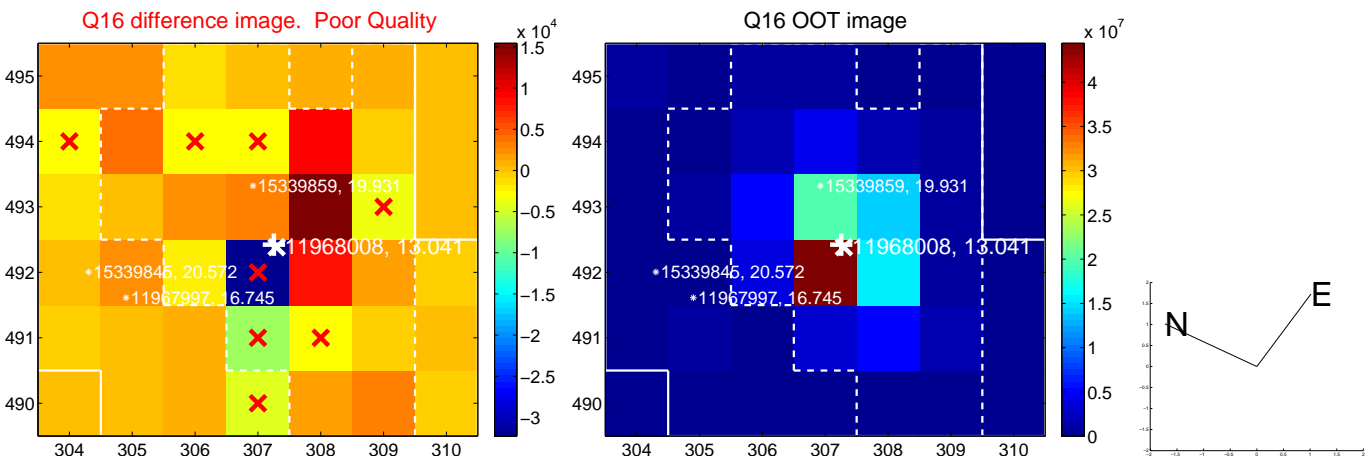
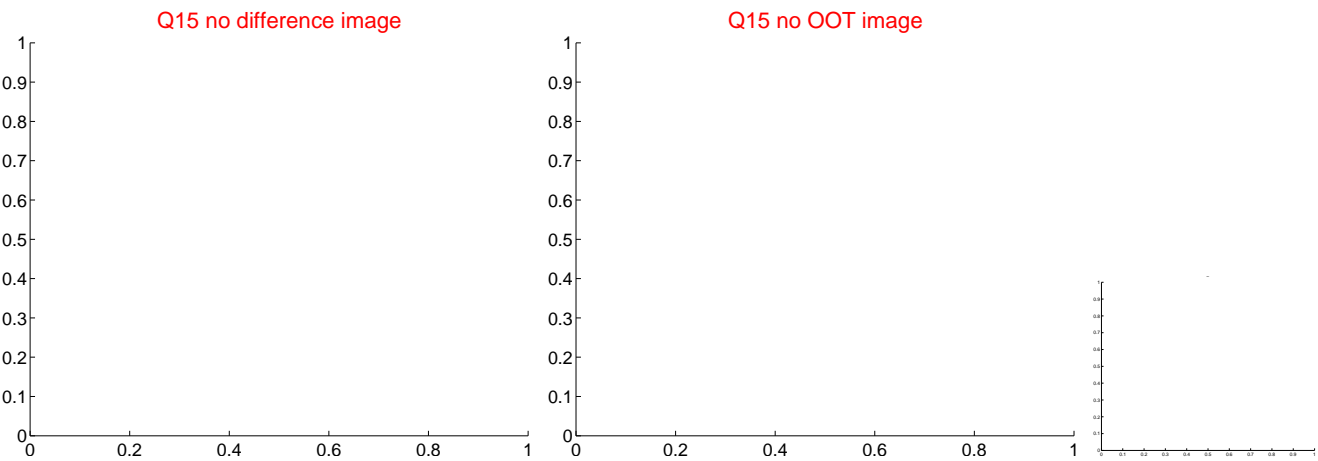
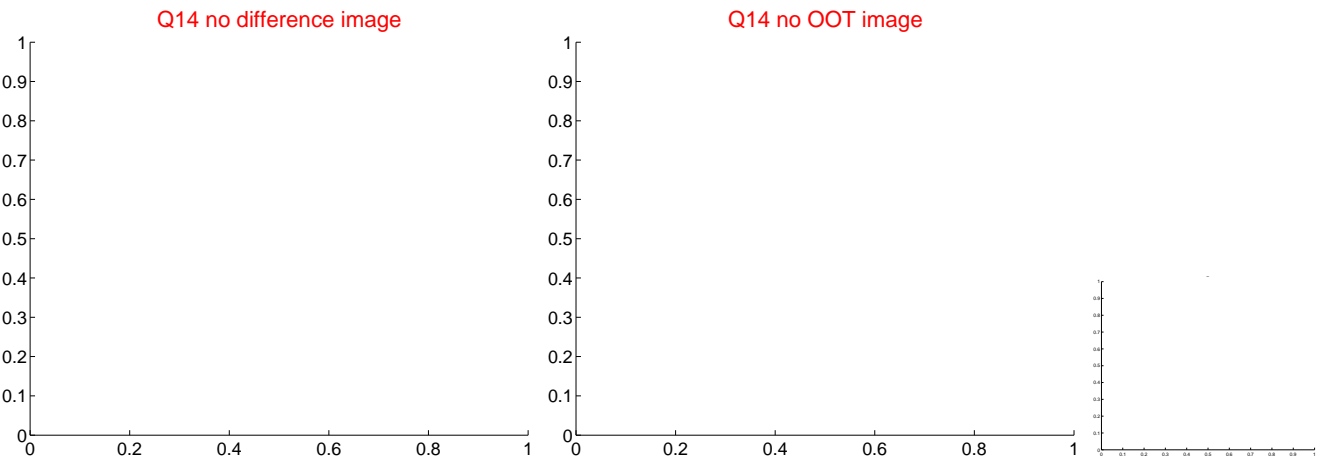
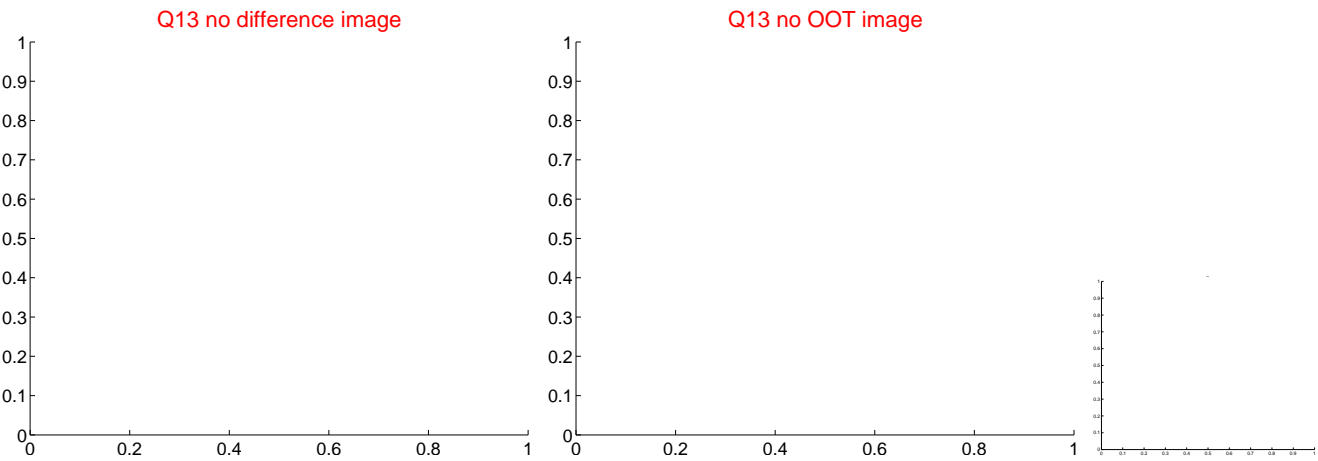
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



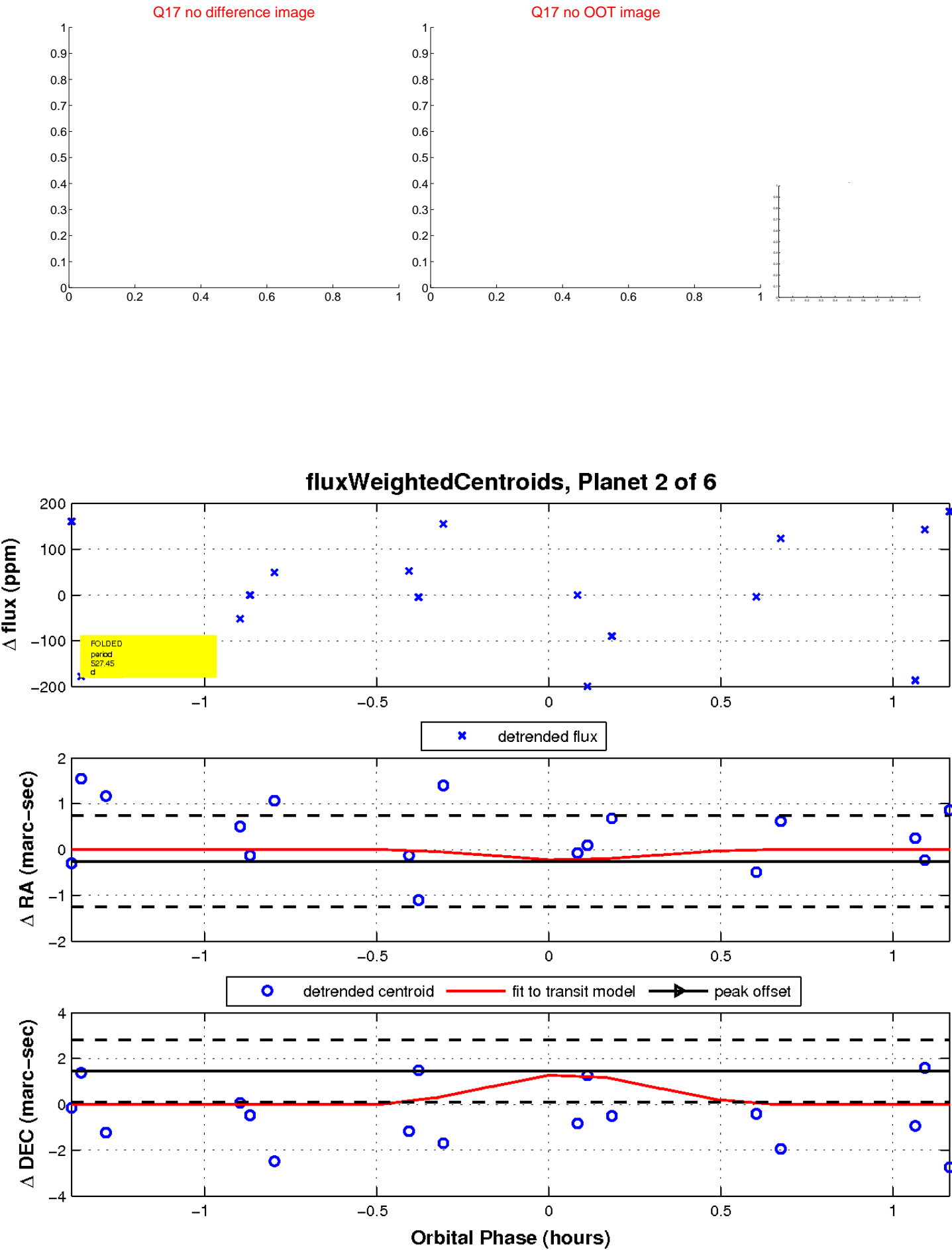
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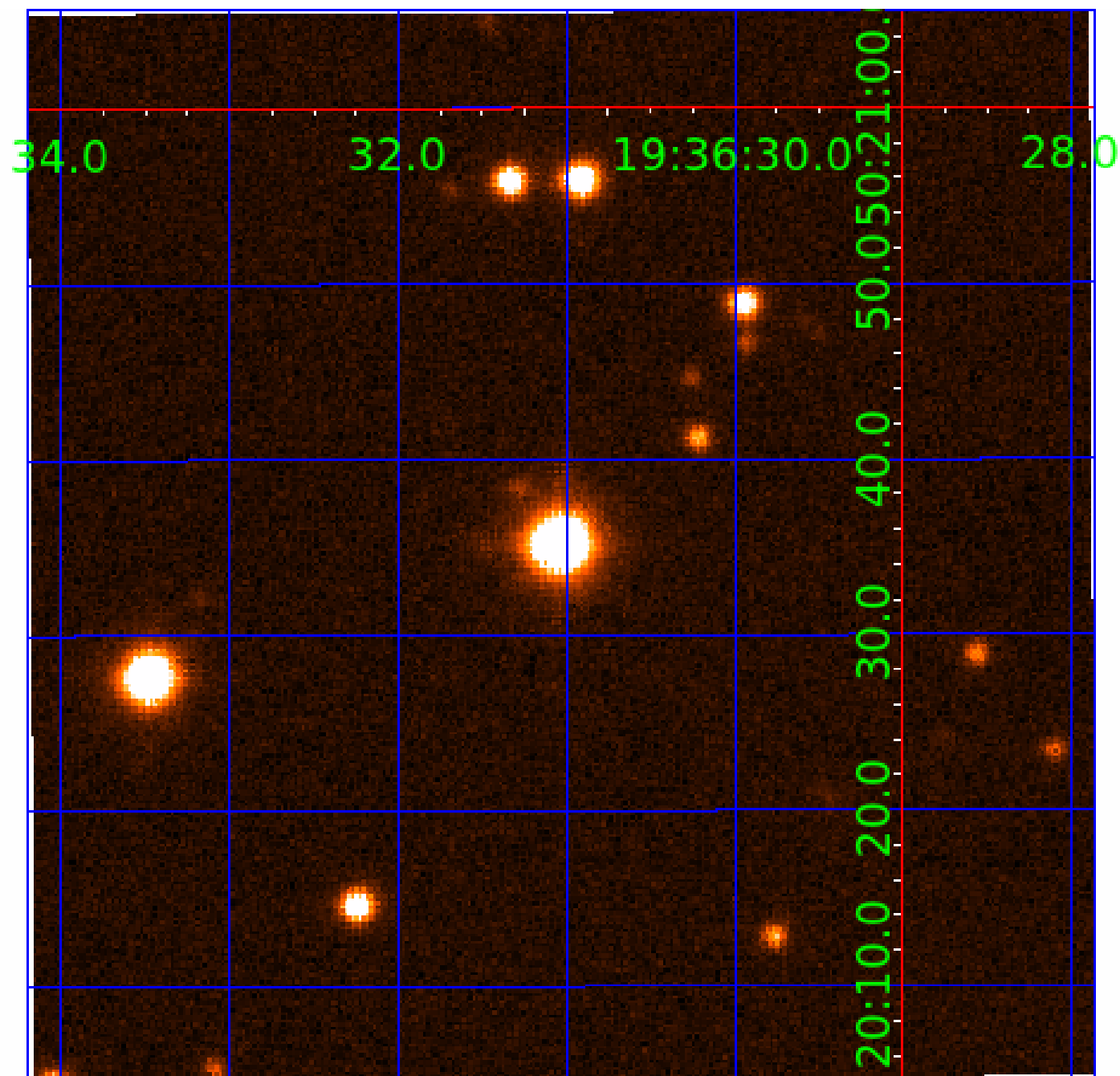


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011968008

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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011968008-05	OBS	No	394.542972	312.918263	641.4	12.454	15.1	7.1	1.77	5324	5.51	2.30
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011968008-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
011968008-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—HALO_GHOST
011968008-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
011968008-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011968008-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS

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

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

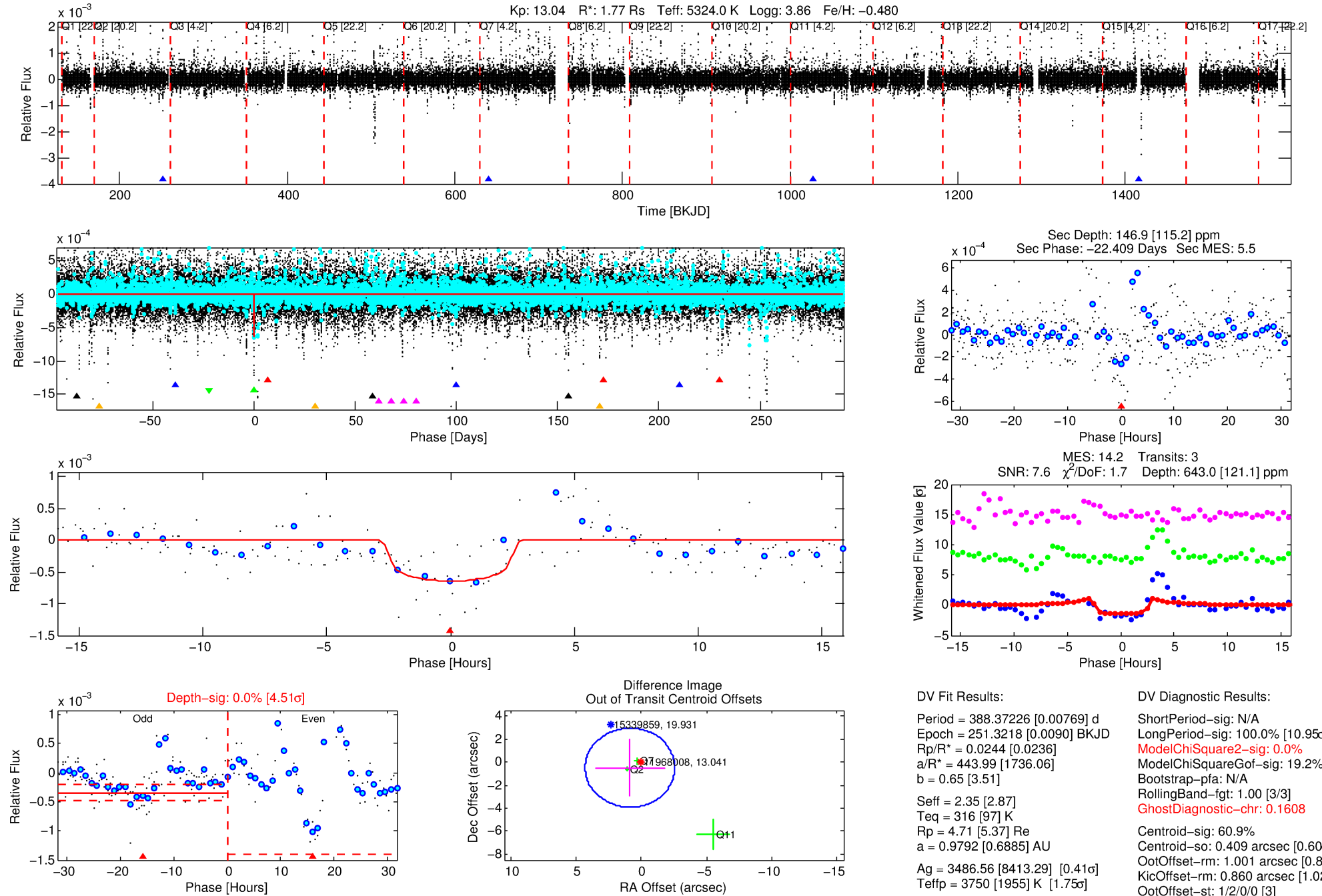
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011968008-03

No Significant Match Found

DV One-Page Summary

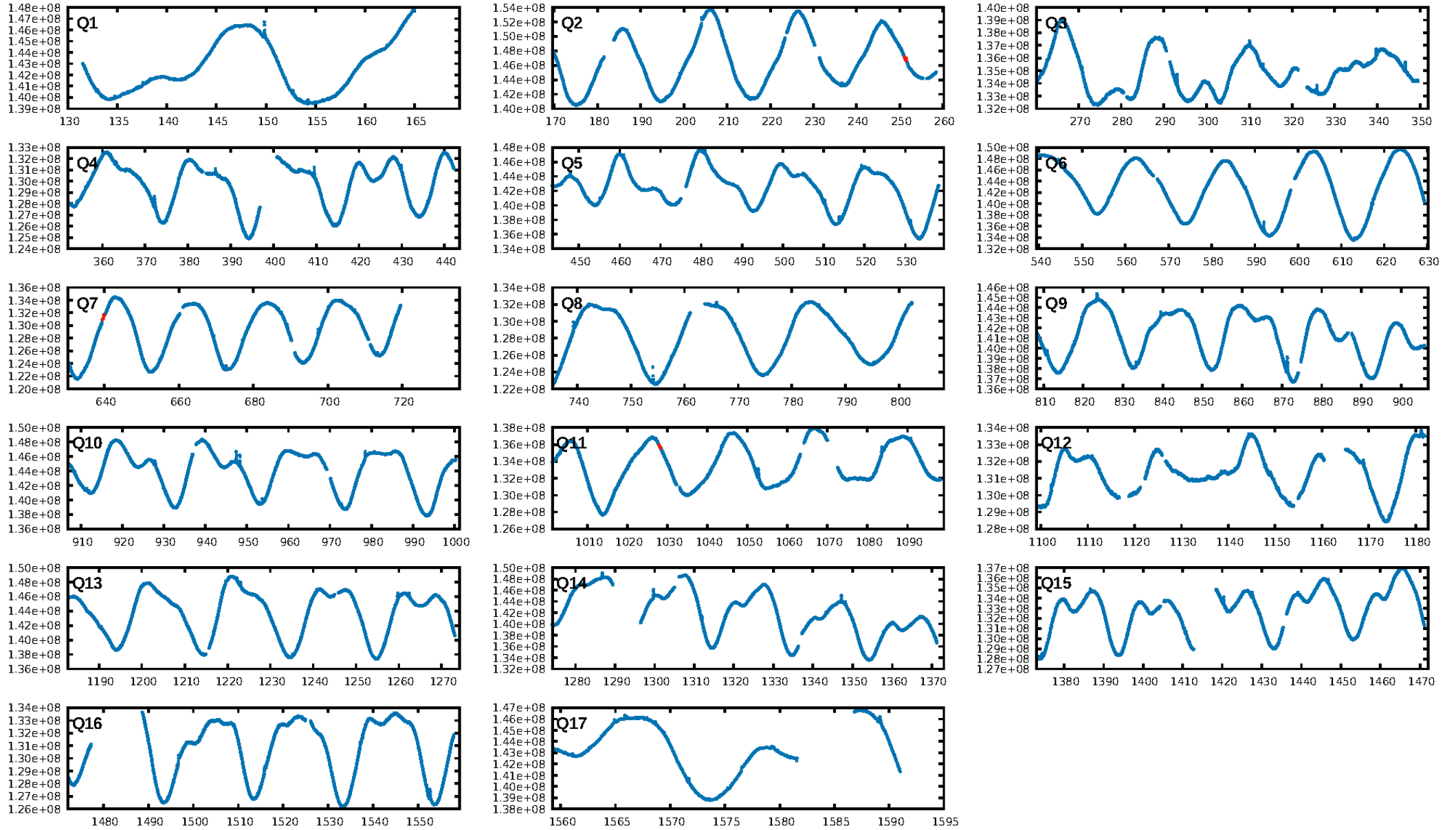
KIC: 11968008 Candidate: 3 of 6 Period: 388.372 d



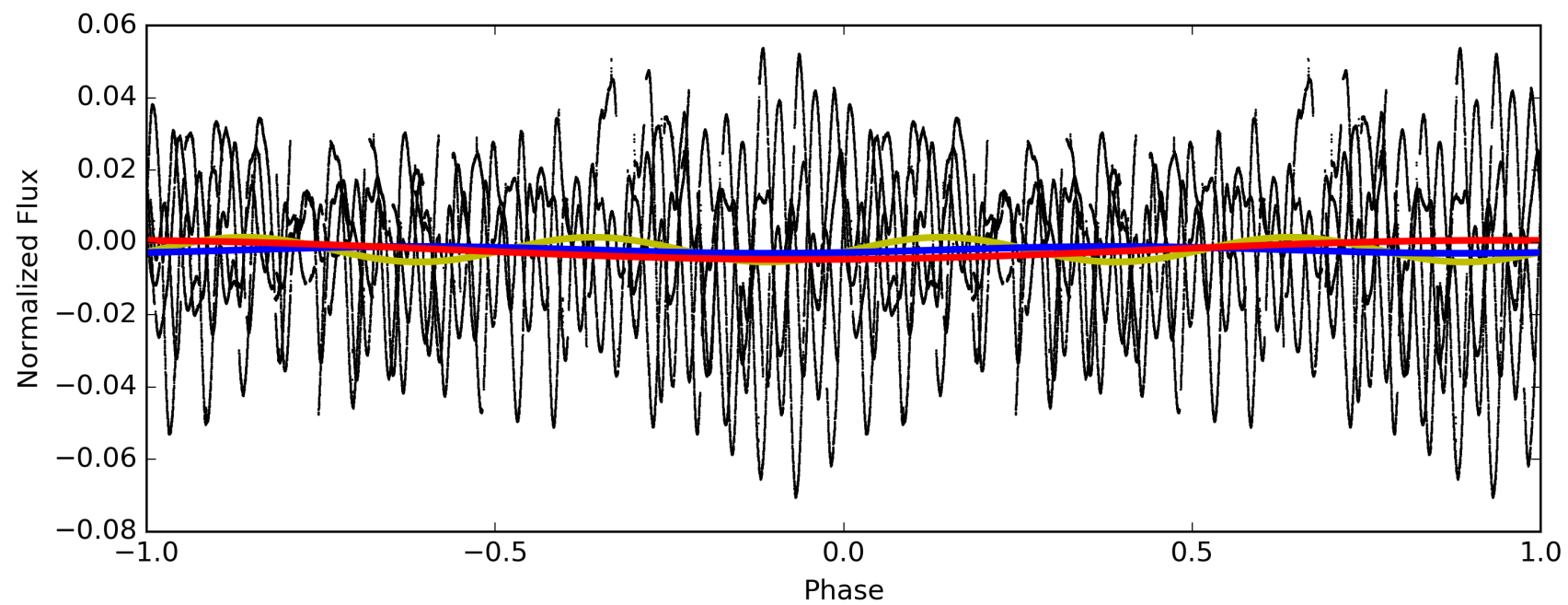
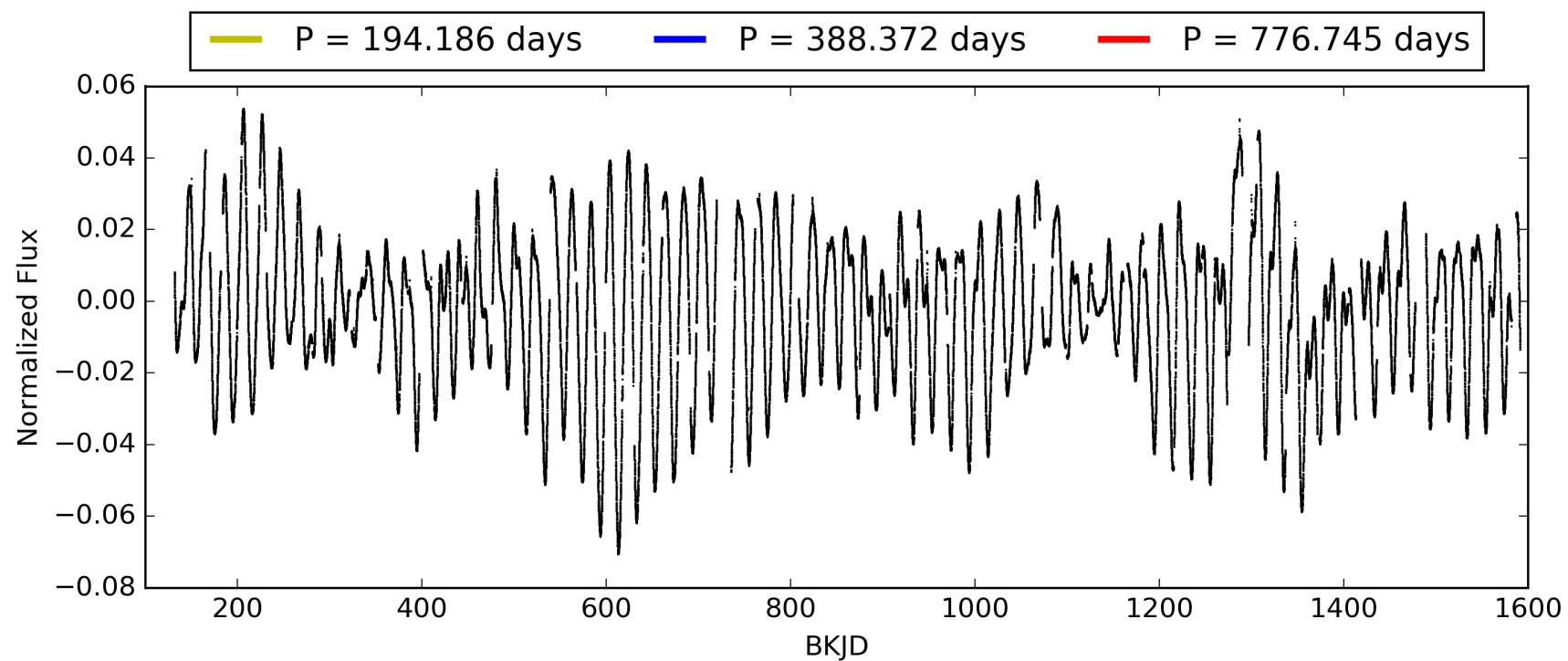
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:03:16 Z

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

TCE 011968008-03, PDC Light Curves

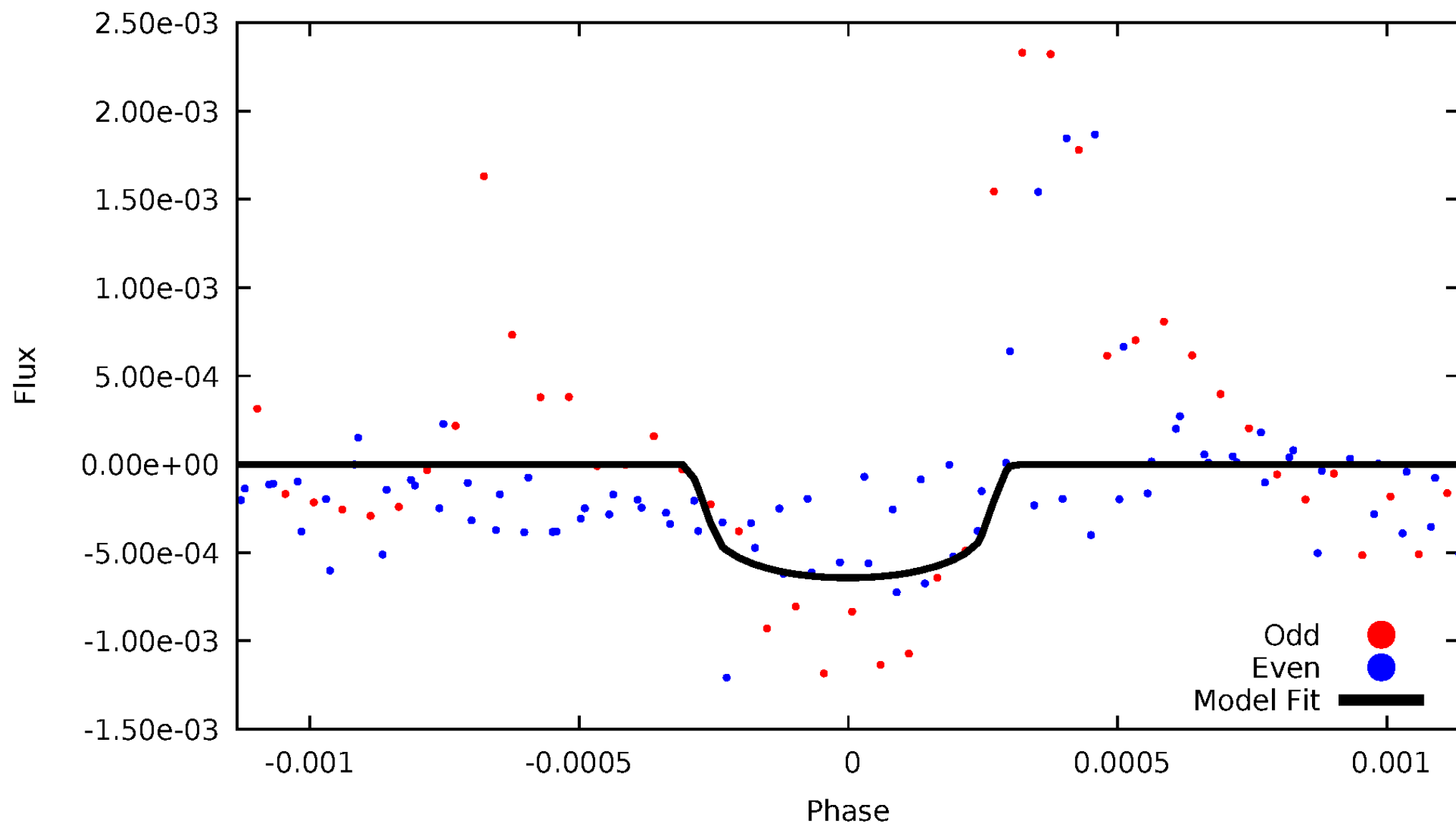


TCE 011968008-03



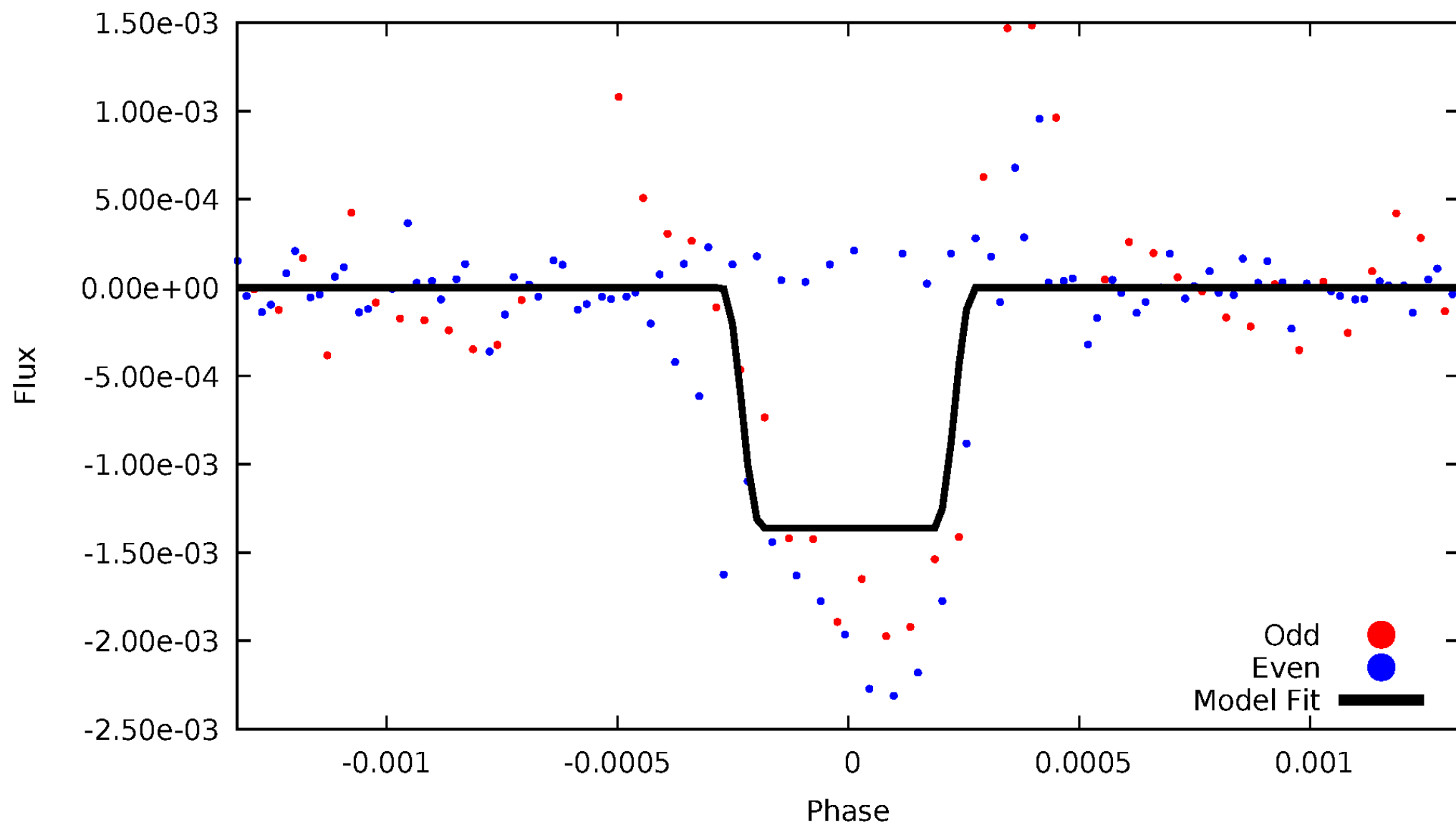
DV Odd/Even

TCE 011968008-03



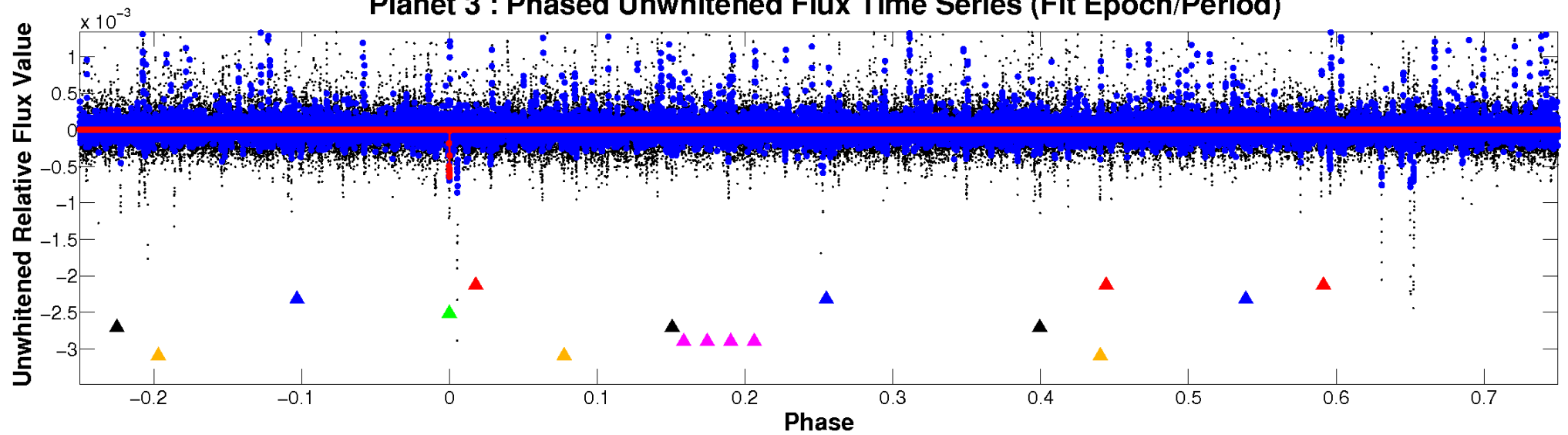
ALT Odd/Even

TCE 011968008-03

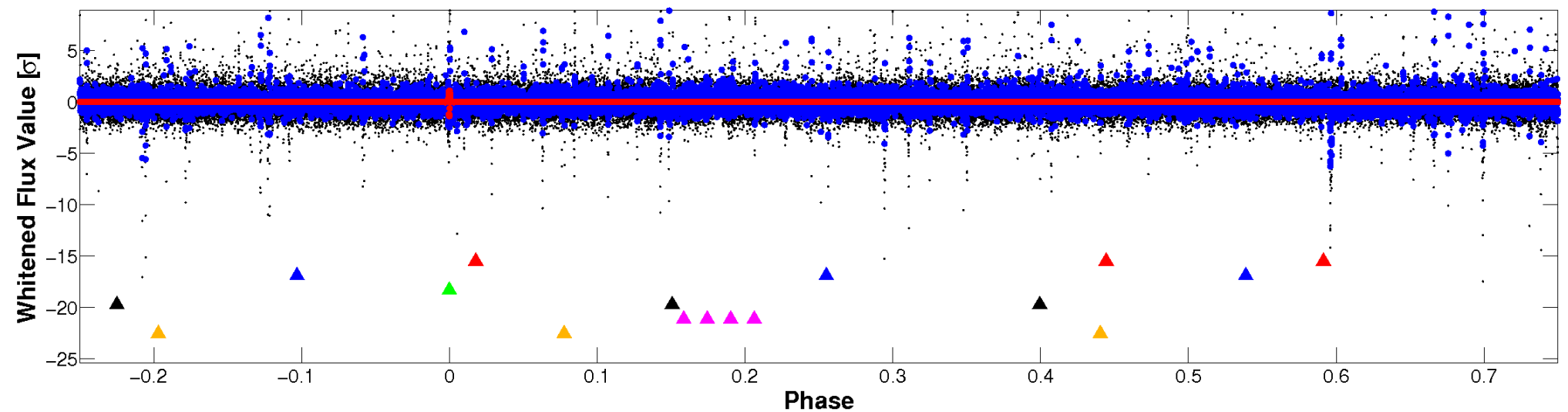


Non-Whitened Vs. Whitened Light Curve

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

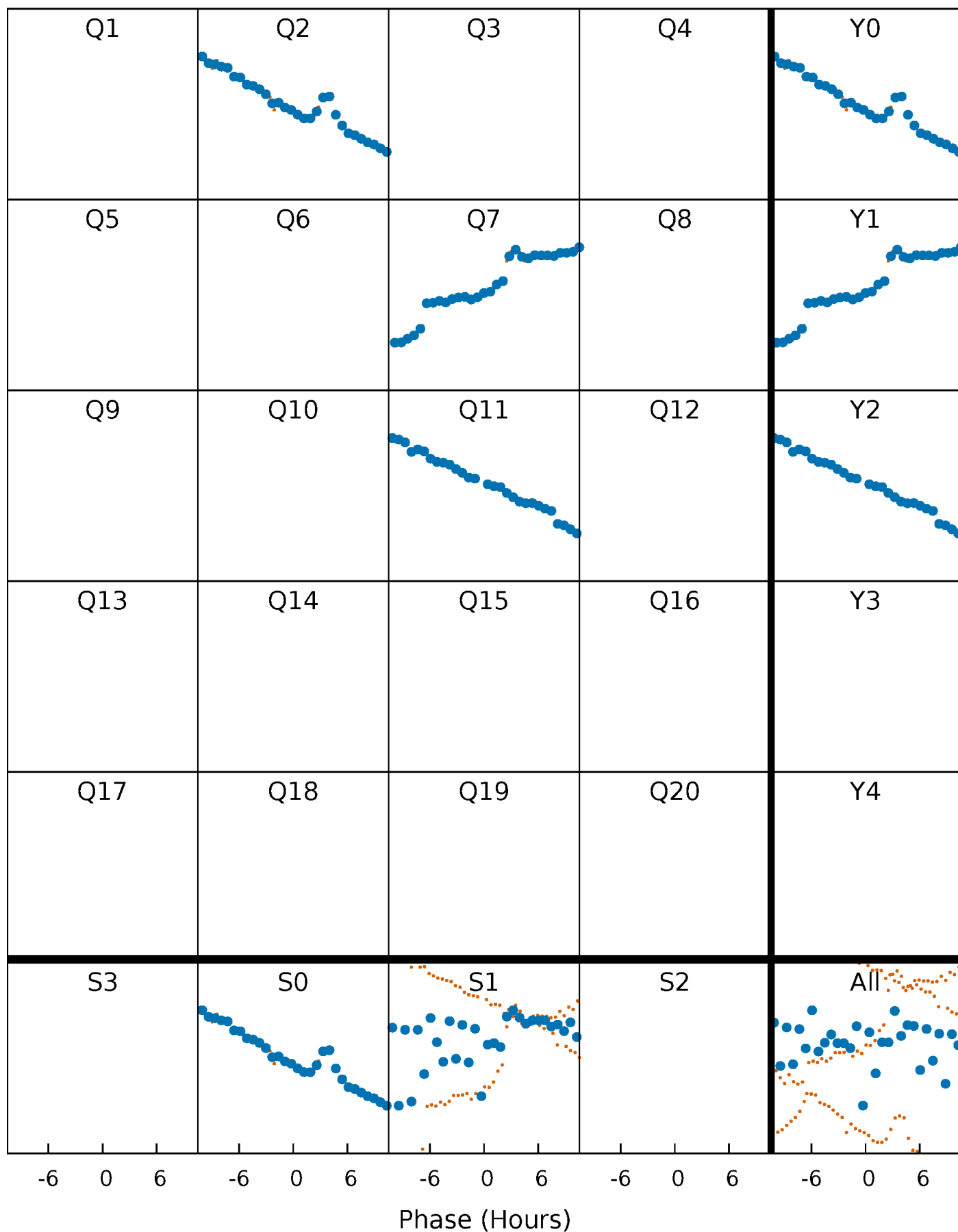


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



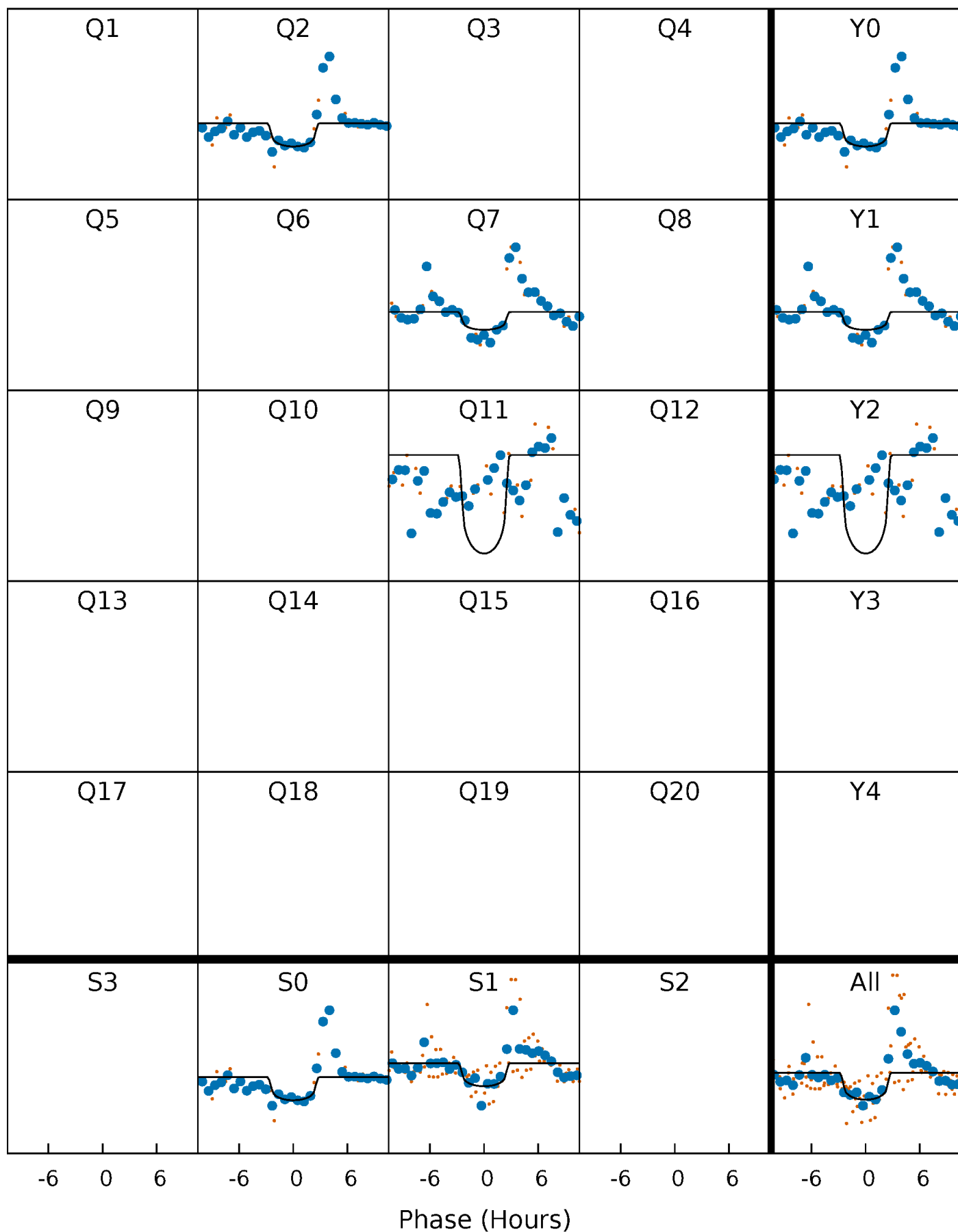
PDC Quarter-Phased Transit Curves

TCE 011968008-03 $P=388.372258$ Days $T_0=251.321837$ (BKJD)



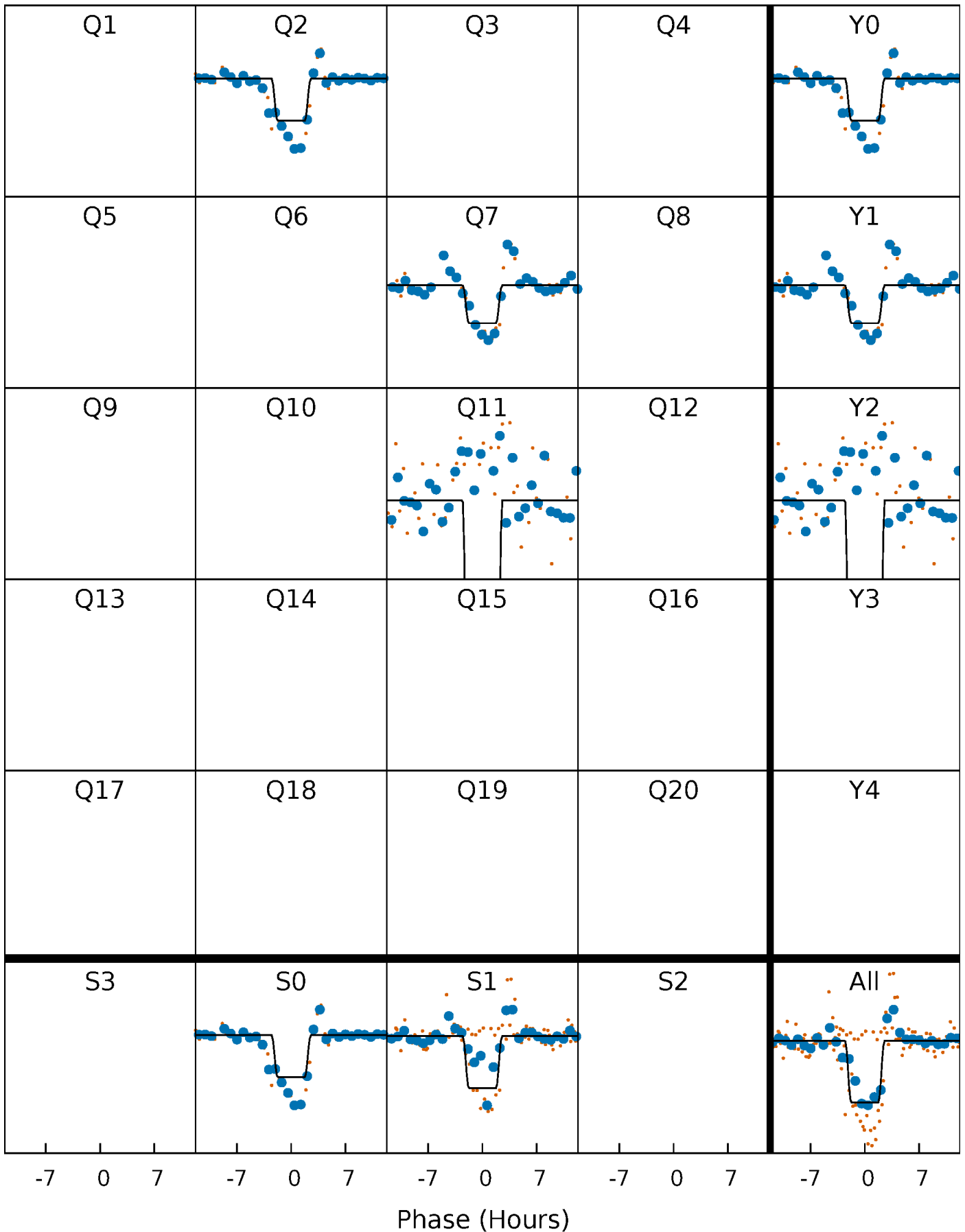
DV Quarter-Phased Transit Curves

TCE 011968008-03 $P=388.372258$ Days $T_0=251.321837$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

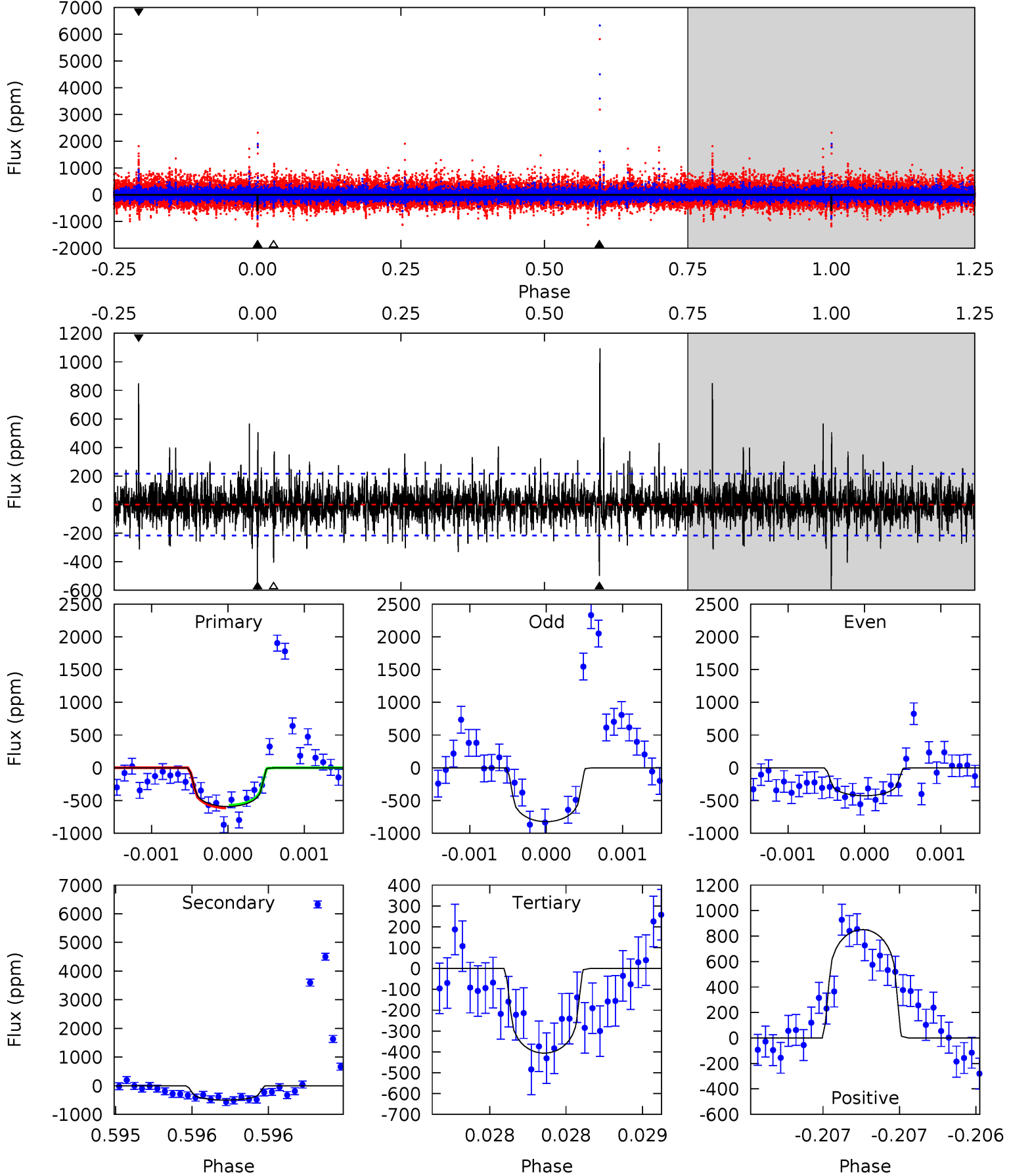
TCE 011968008-03 P=388.346619 Days $T_0=251.338946$ (BKJD)



DV Model-Shift Uniqueness Test

011968008-03, P = 388.372258 Days, E = 251.321837 Days

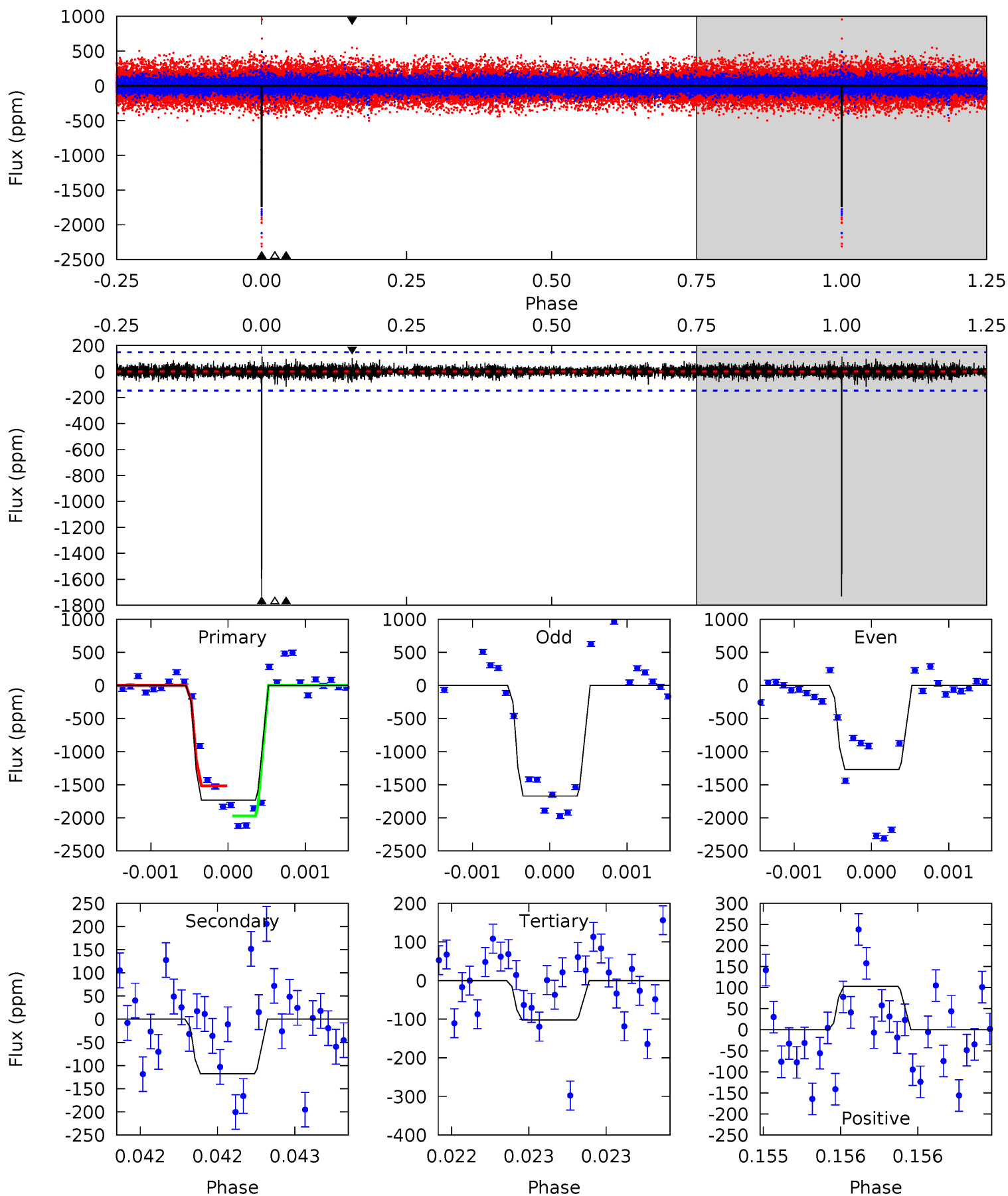
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.2	12.8	10.4	21.8	5.55	3.44	2.28	4.76	-6.66	2.38	-9.03	3.90	0.85	0.65	0.50



Alt Model-Shift Uniqueness Test

011968008-03, P = 388.346619 Days, E = 251.338946 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
65.4	4.44	3.85	3.89	5.56	3.47	0.74	61.5	61.5	0.59	0.55	7.82	0.71	0.06	8.58



Stellar Parameters For KIC 011968008

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5324^{+159}_{-143}	$3.862^{+0.749}_{-0.321}$	$-0.480^{+0.350}_{-0.250}$	$1.768^{+1.074}_{-1.074}$	$0.830^{+0.127}_{-0.114}$	$0.212^{+2.693}_{-0.134}$
	+3%/-3%	+19%/-8%	+73%/-52%	+61%/-61%	+15%/-14%	+1272%/-63%
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 011968008-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-499 ± 39	$5.10^{+4.59}_{-3.26}$	431^{+66}_{-73}	4723^{+2929}_{-853}	10019^{+68461}_{-7146}
Alt.	-118 ± 26	$6.78^{+5.18}_{-4.11}$	438^{+70}_{-82}	3383^{+1019}_{-475}	1336^{+7701}_{-924}

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

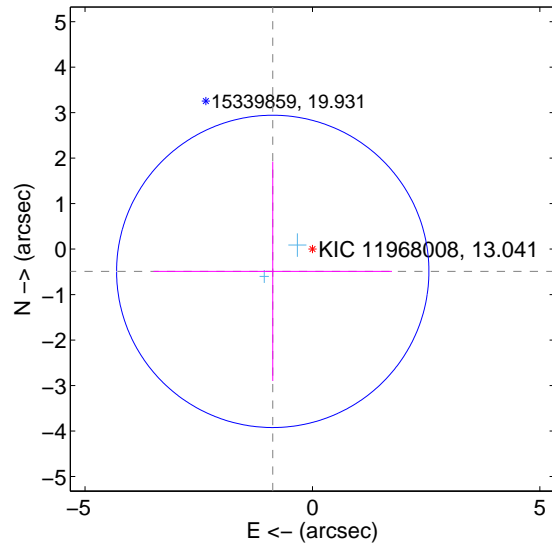
Supplemental centroid analysis for 011968008-03. Kepler magnitude: 13.04. Transit SNR 7.61

There are 2 quarters with good PRF difference image offsets

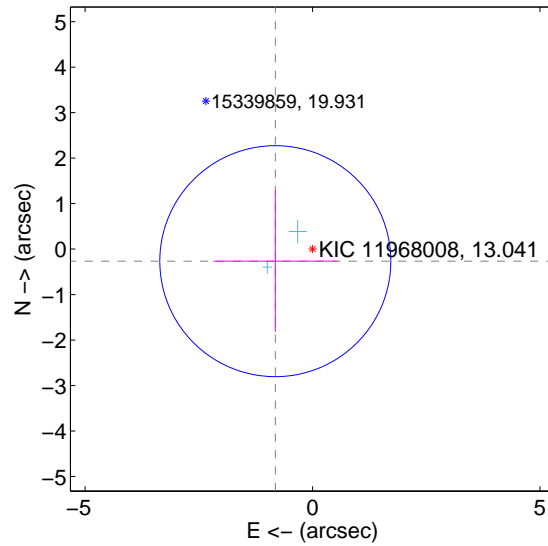
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.001 ± 1.144	0.87	0.872 ± 2.621	-0.490 ± 2.410
PRF-fit source offset from KIC position	0.860 ± 0.846	1.02	0.818 ± 1.363	-0.265 ± 1.555
photometric centroid source offset	0.41 ± 0.69	0.60	-0.41 ± 0.68	-0.05 ± 0.92

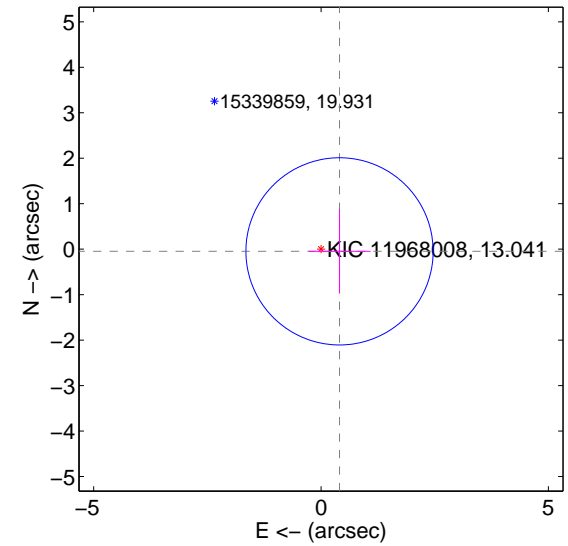
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

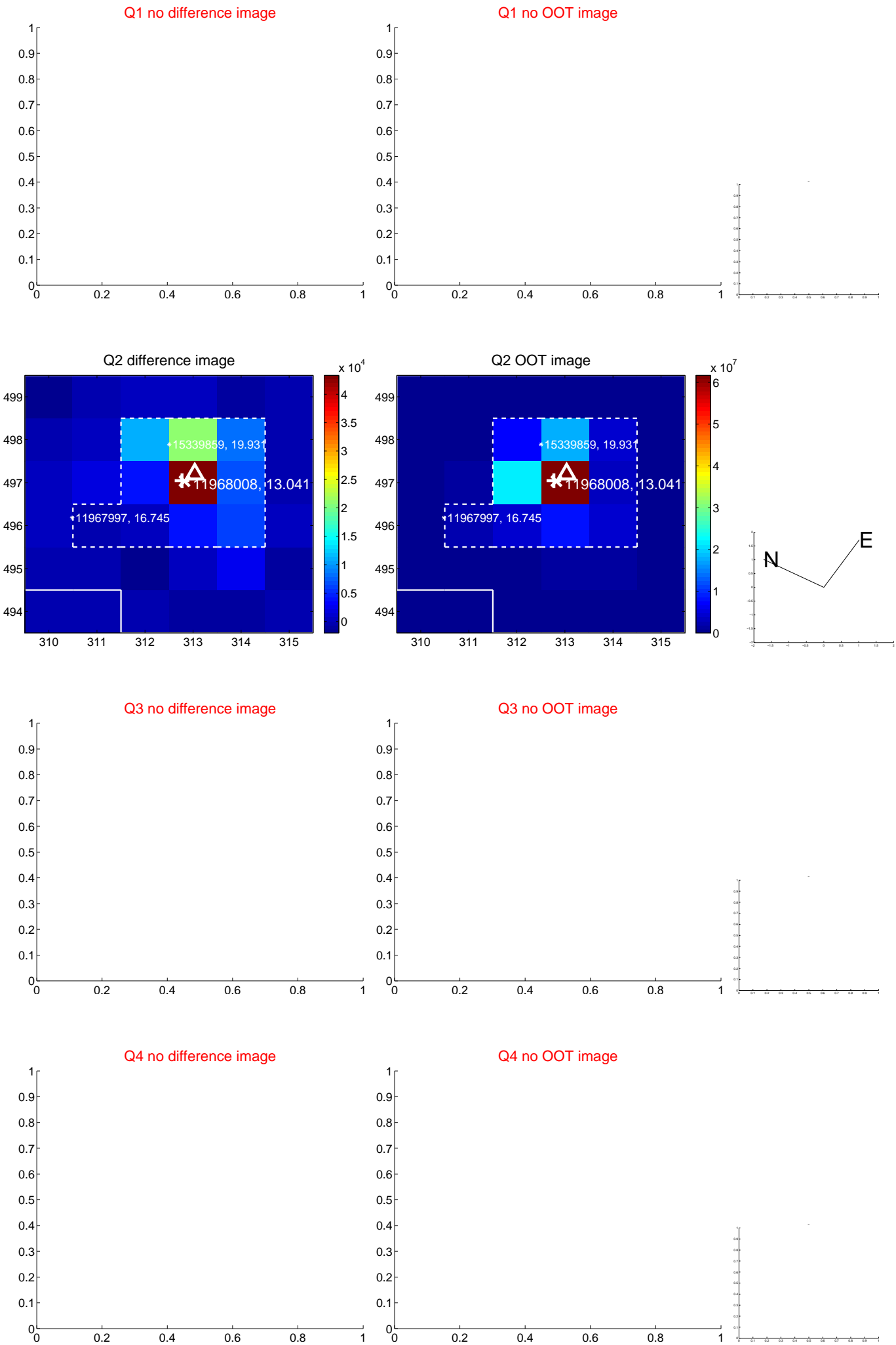


offset from photometric centroids

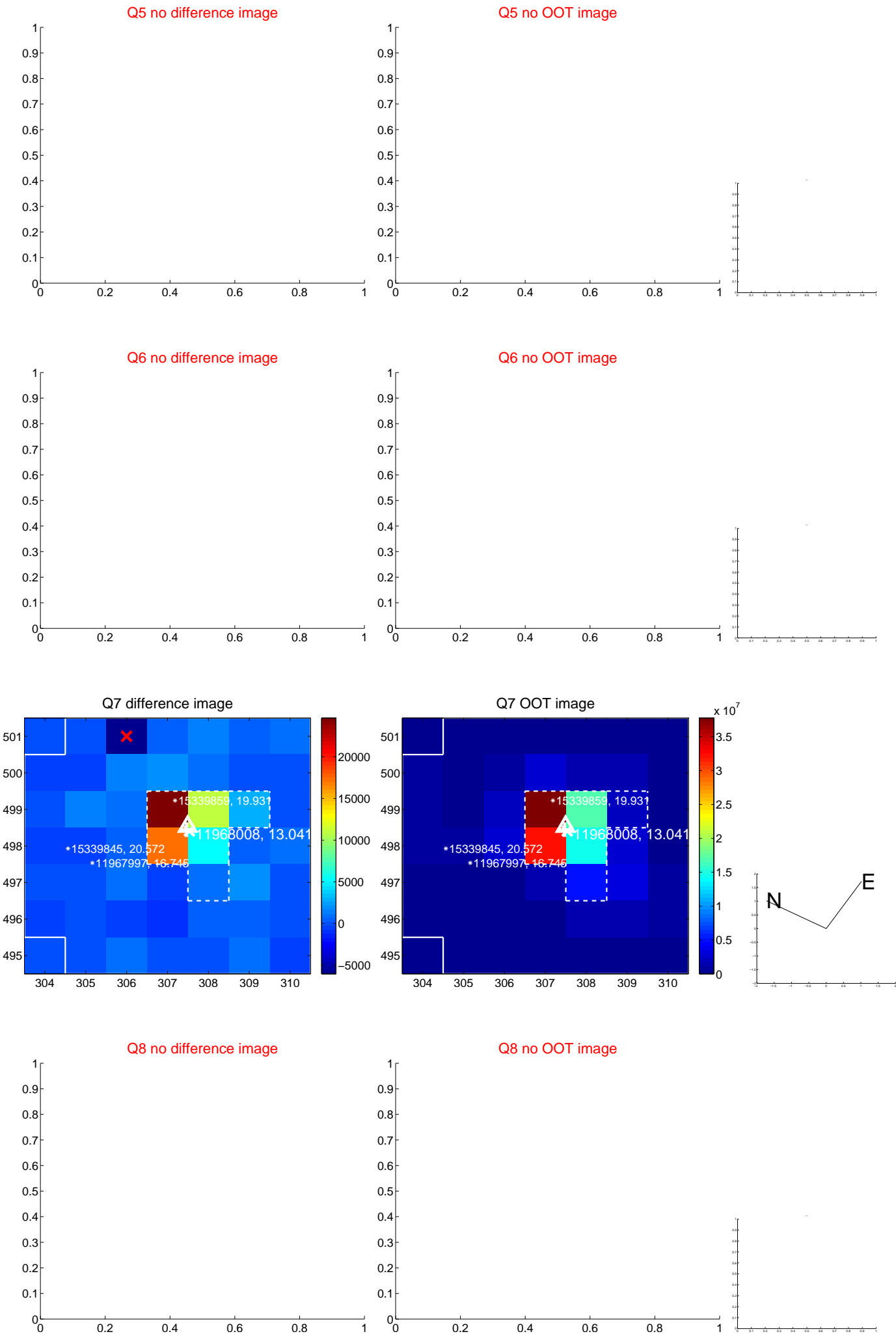


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

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



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



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

Q9 no difference image



Q9 no OOT image



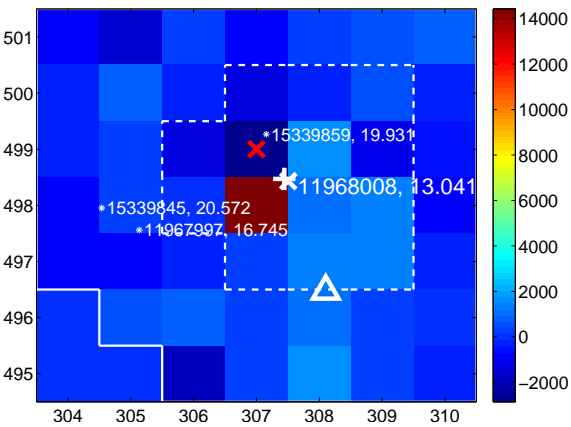
Q10 no difference image



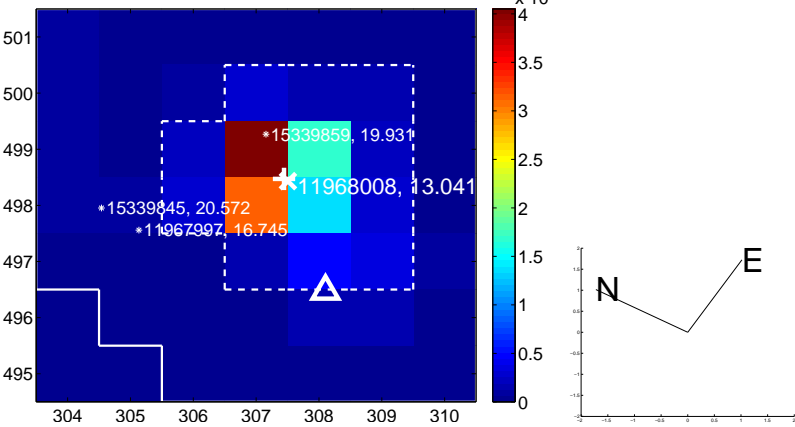
Q10 no OOT image



Q11 difference image. Poor Quality



Q11 OOT image



Q12 no difference image



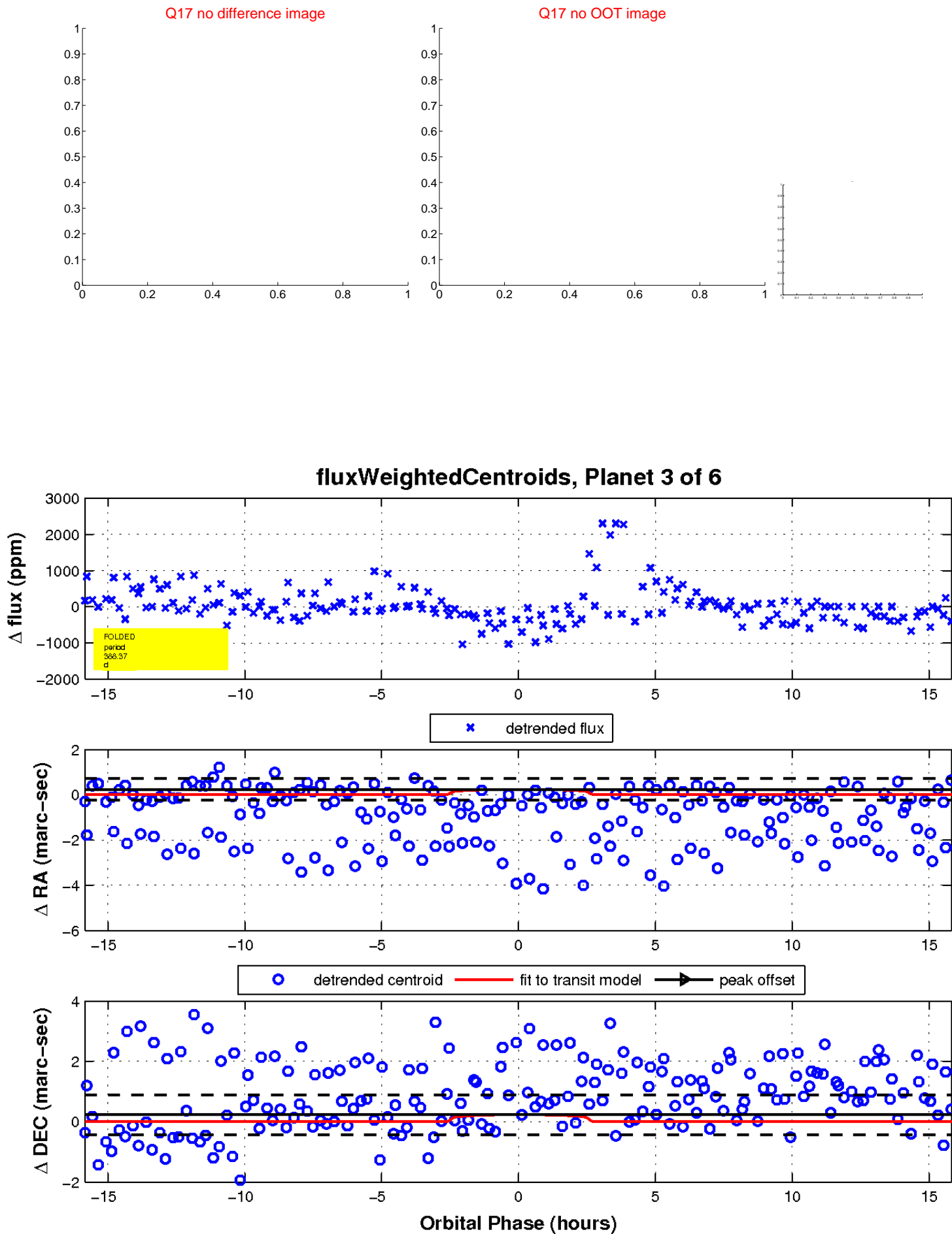
Q12 no OOT image



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

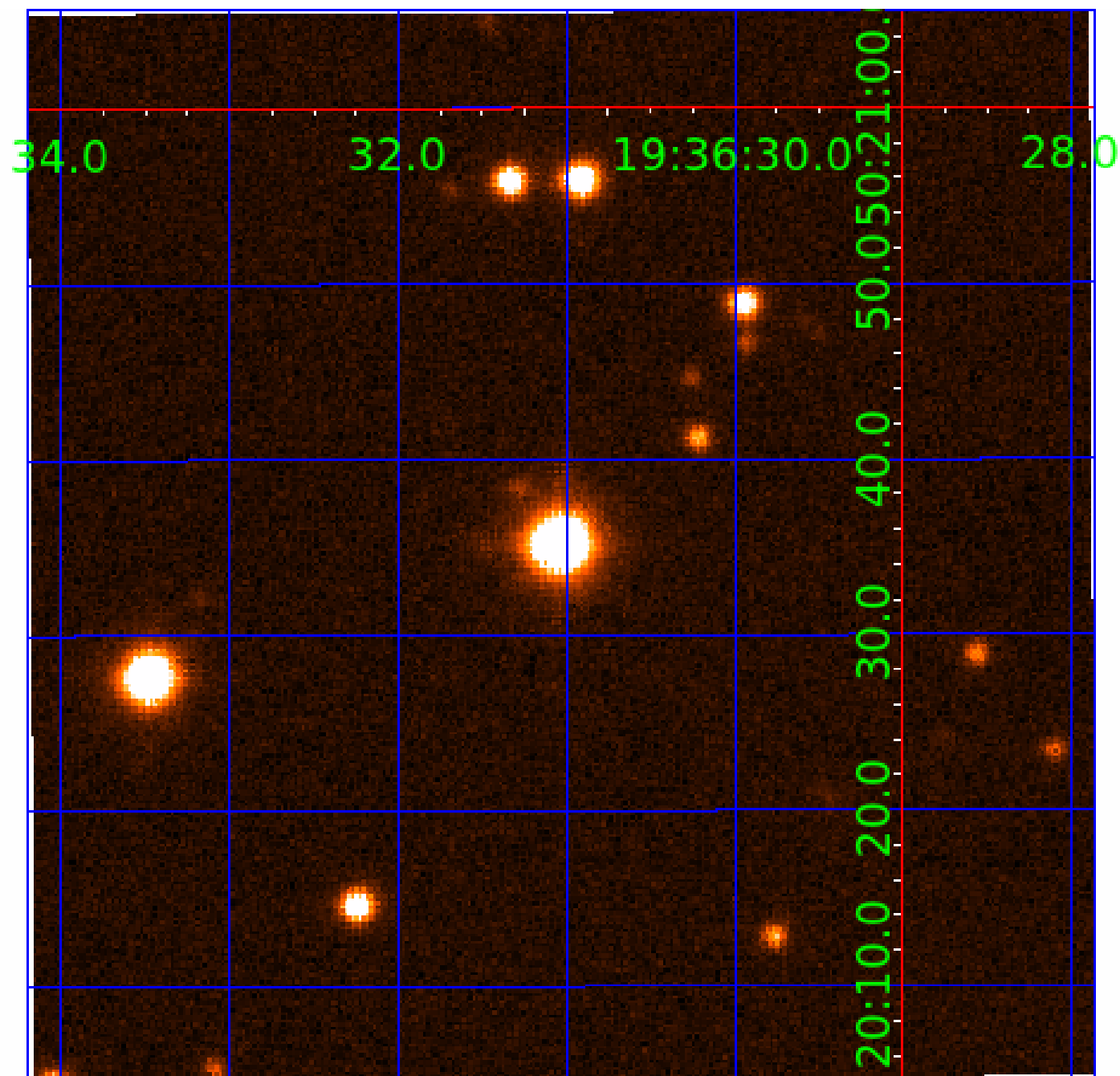


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011968008

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})
011968008-02	OBS	No	527.451484	460.586666	287.9	15.000	14.6	-1.0	1.77	5324	2.95	1.56
011968008-03	OBS	No	388.372258	251.321837	643.0	5.288	14.2	7.6	1.77	5324	4.71	2.35
011968008-04	OBS	No	630.844076	309.876026	560.7	6.104	14.1	6.3	1.77	5324	4.60	1.23
011968008-05	OBS	No	394.542972	312.918263	641.4	12.454	15.1	7.1	1.77	5324	5.51	2.30
011968008-06	OBS	No	635.876981	174.861069	638.4	5.324	14.5	7.3	1.77	5324	4.52	1.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011968008-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
011968008-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—HALO_GHOST
011968008-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
011968008-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011968008-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS

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

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

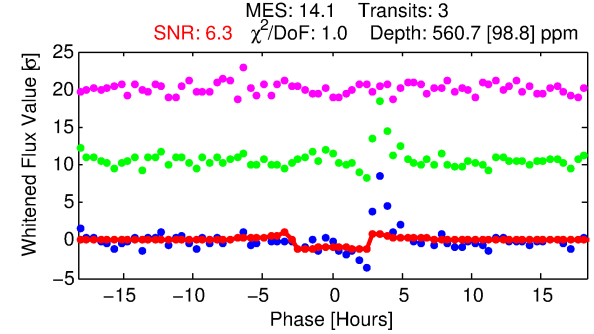
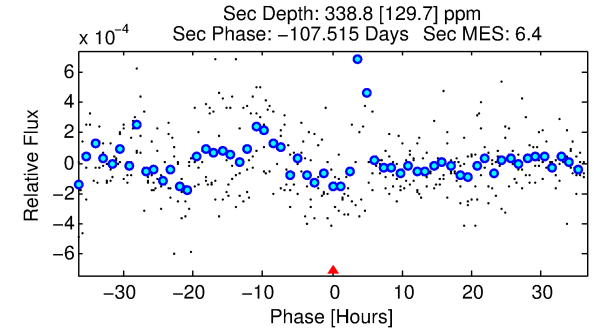
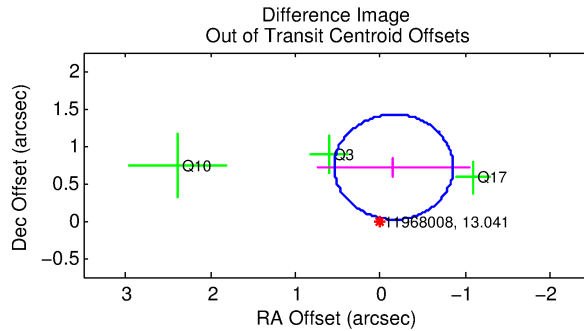
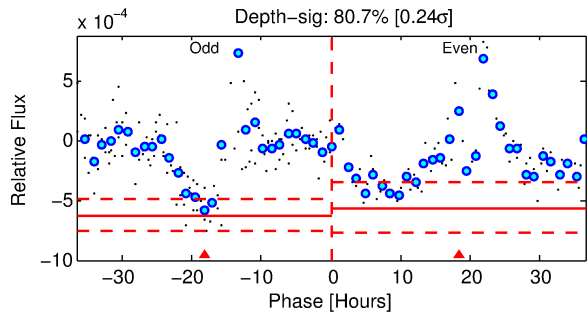
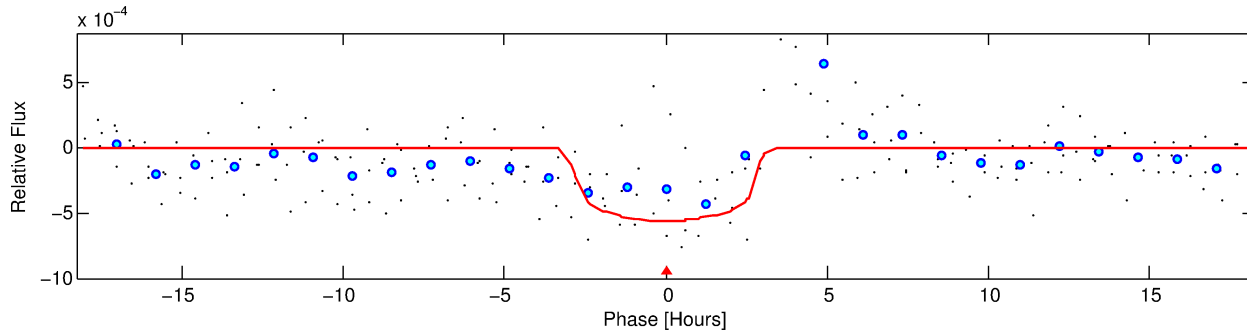
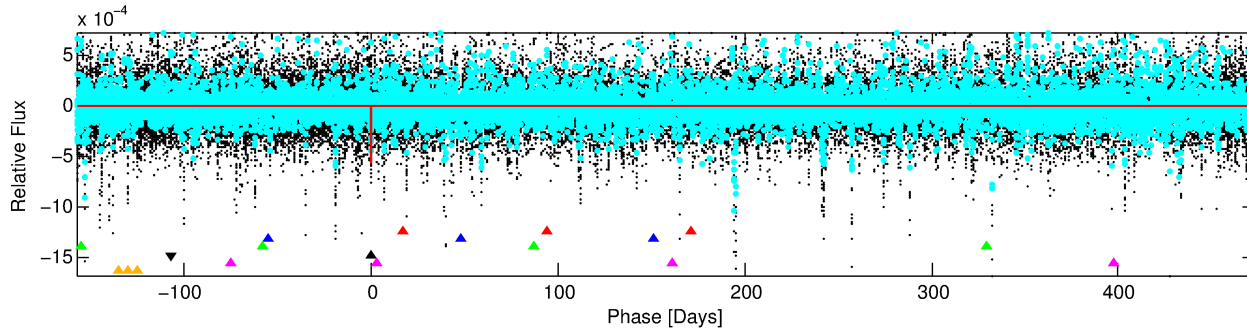
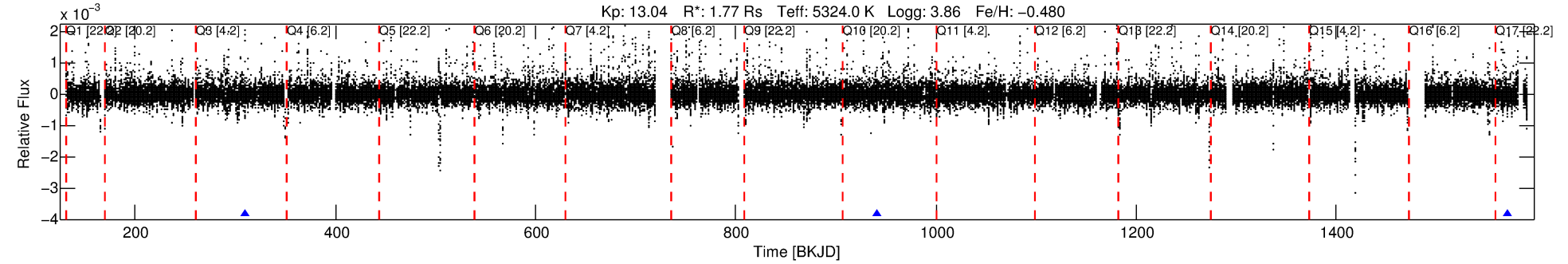
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011968008-04

No Significant Match Found

DV One-Page Summary

KIC: 11968008 Candidate: 4 of 6 Period: 630.844 d



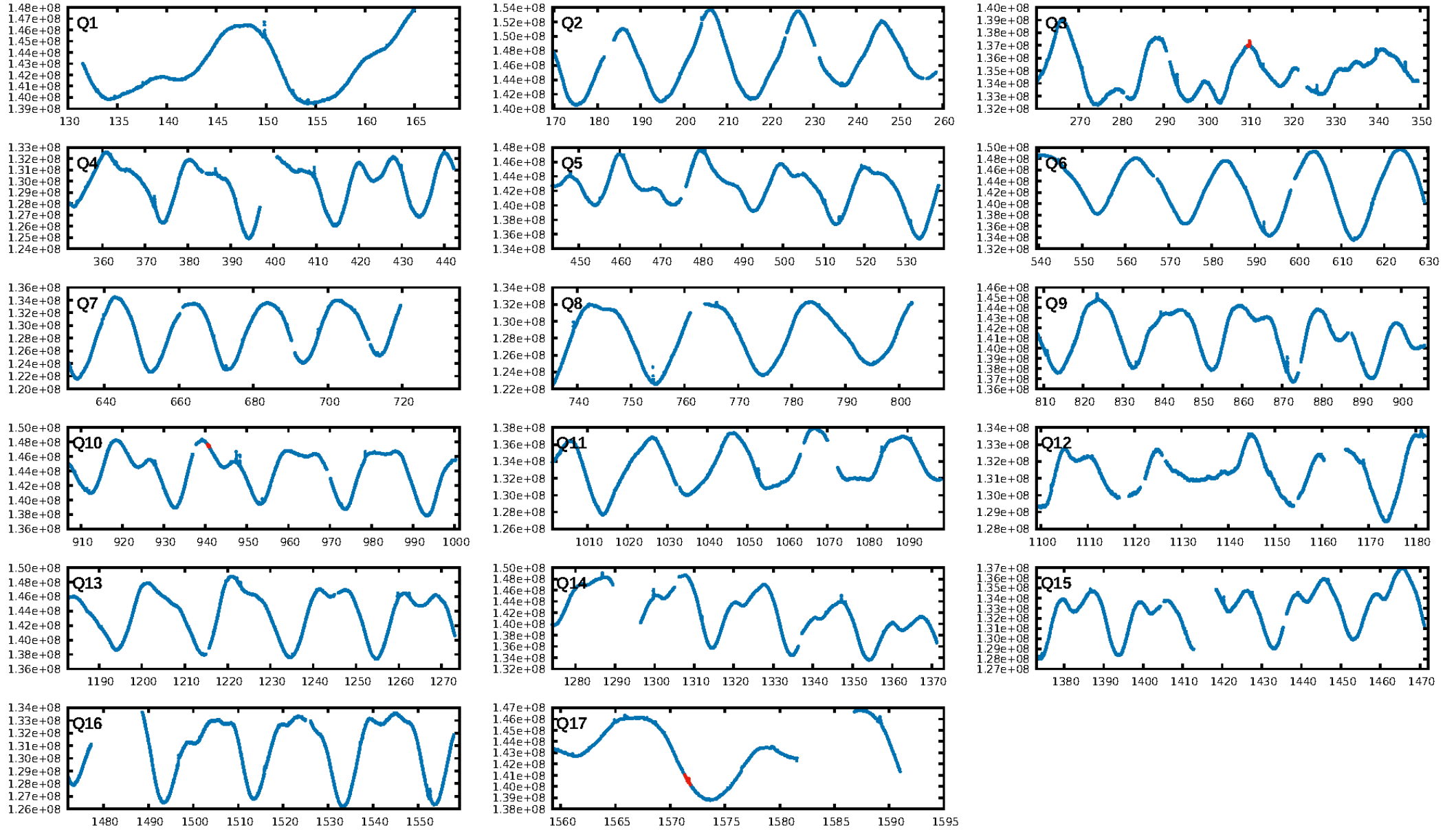
DV Fit Results:

Period = 630.84408 [0.00577] d
Epoch = 309.8760 [0.0081] BKJD
Rp/R* = 0.0238 [0.0113]
a/R* = 527.75 [1012.60]
b = 0.78 [1.01]
Seff = 1.23 [1.51]
Teq = 268 [82] K
Rp = 4.60 [3.55] Re
a = 1.3530 [0.9514] AU
Ag = 16125.89 [25671.23] [0.63 σ]
Teffp = 4678 [1205] K [3.65 σ]

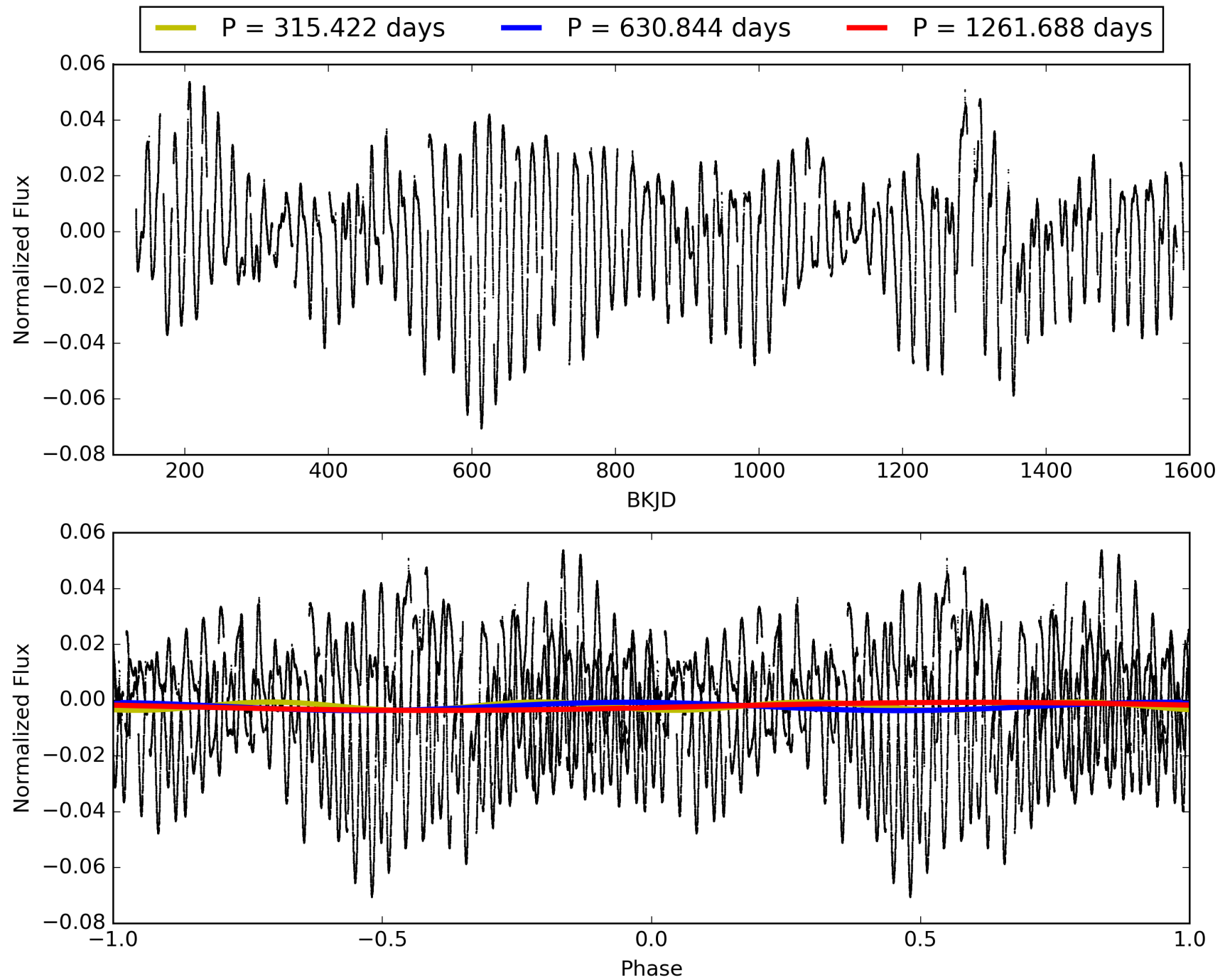
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [249.72 σ]
LongPeriod-sig: 100.0% [14.91 σ]
ModelChiSquare2-sig: 51.0%
ModelChiSquareGof-sig: 99.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -0.03291
Centroid-sig: 73.4%
Centroid-so: 0.089 arcsec [0.12 σ]
OotOffset-rm: 0.736 arcsec [3.15 σ]
KicOffset-rm: 0.957 arcsec [4.98 σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 011968008-04, PDC Light Curves

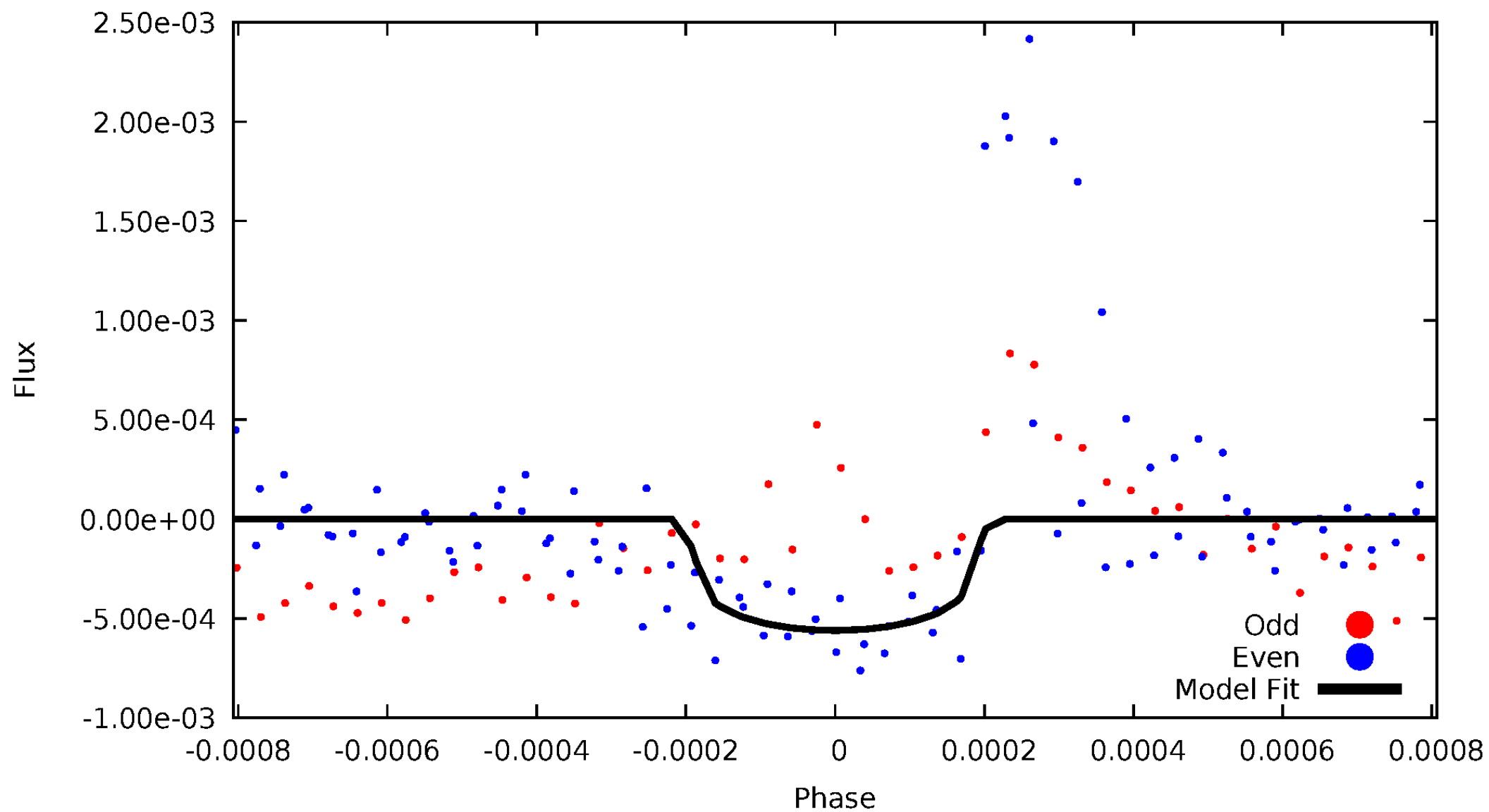


TCE 011968008-04



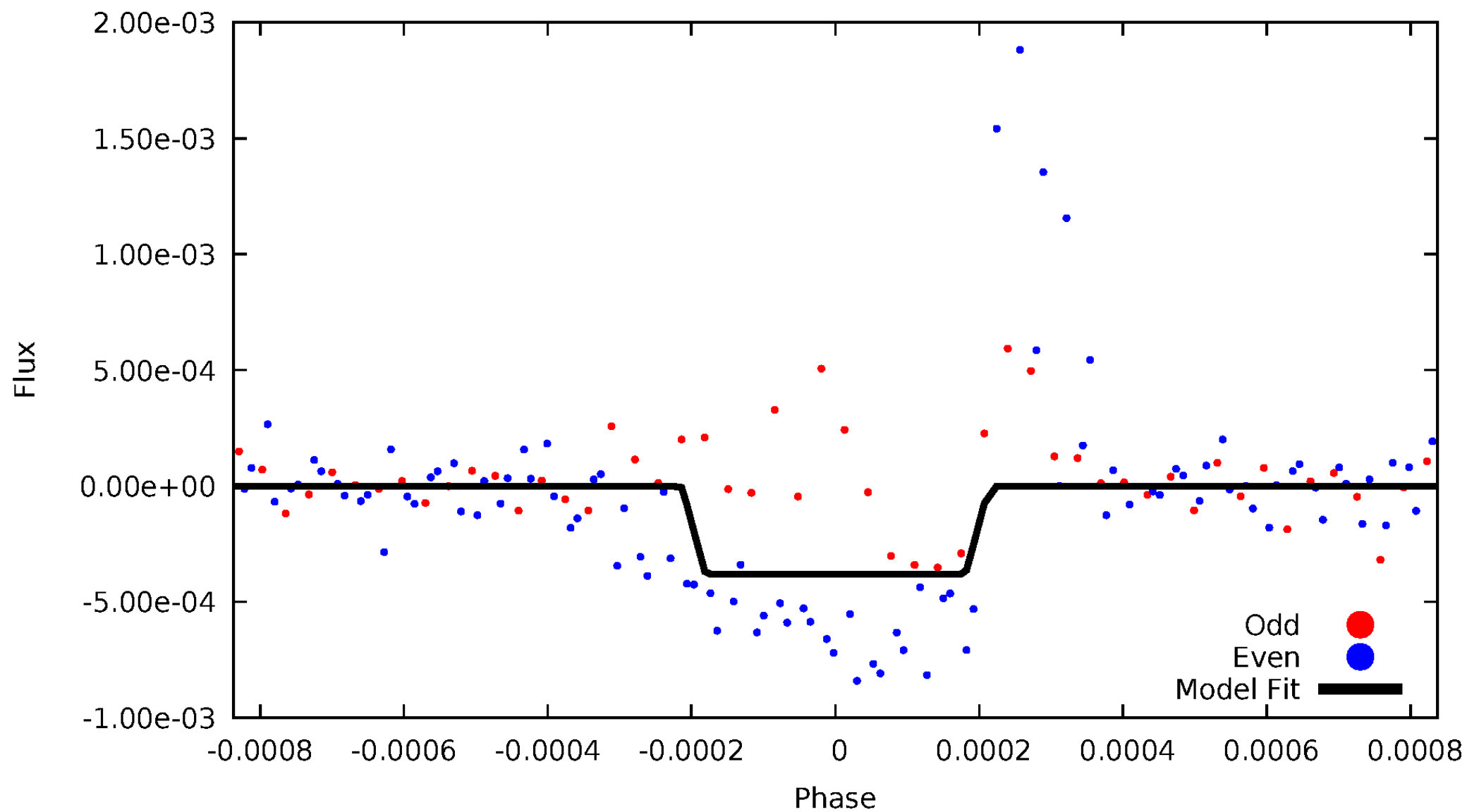
DV Odd/Even

TCE 011968008-04



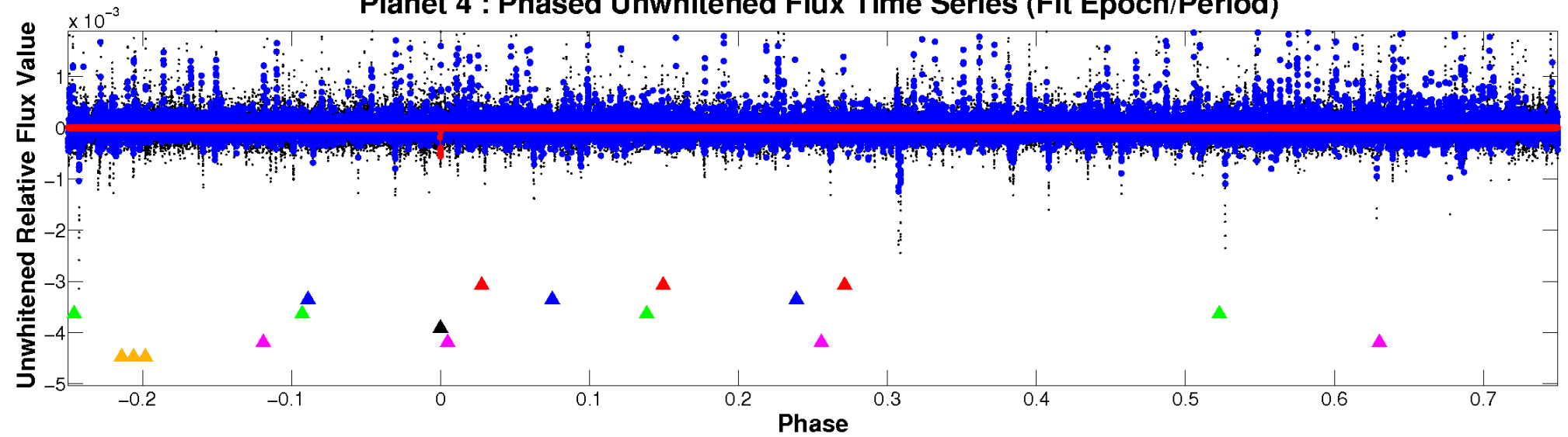
ALT Odd/Even

TCE 011968008-04

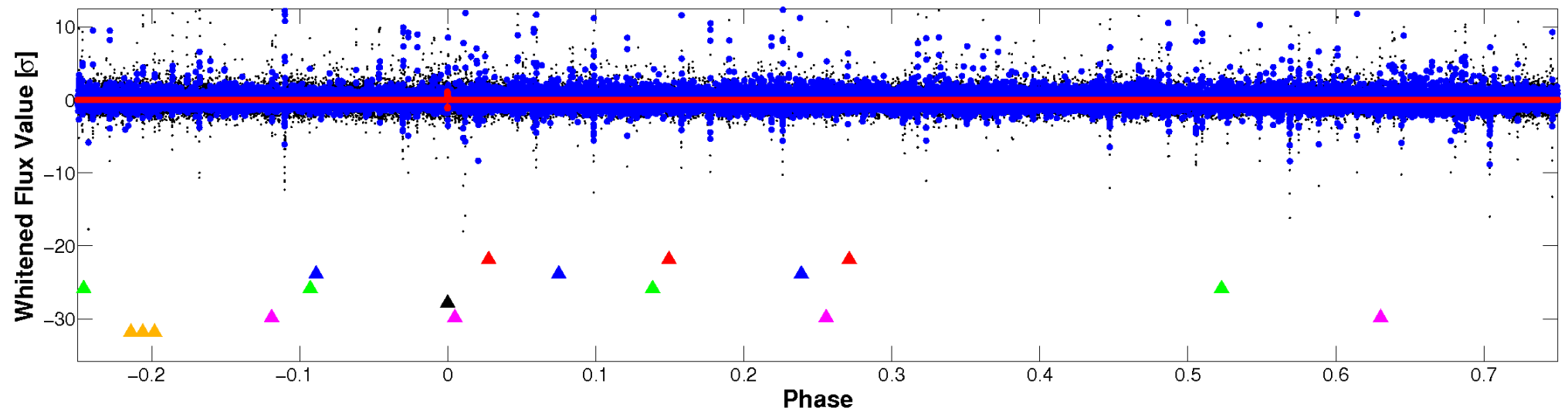


Non-Whitened Vs. Whitened Light Curve

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

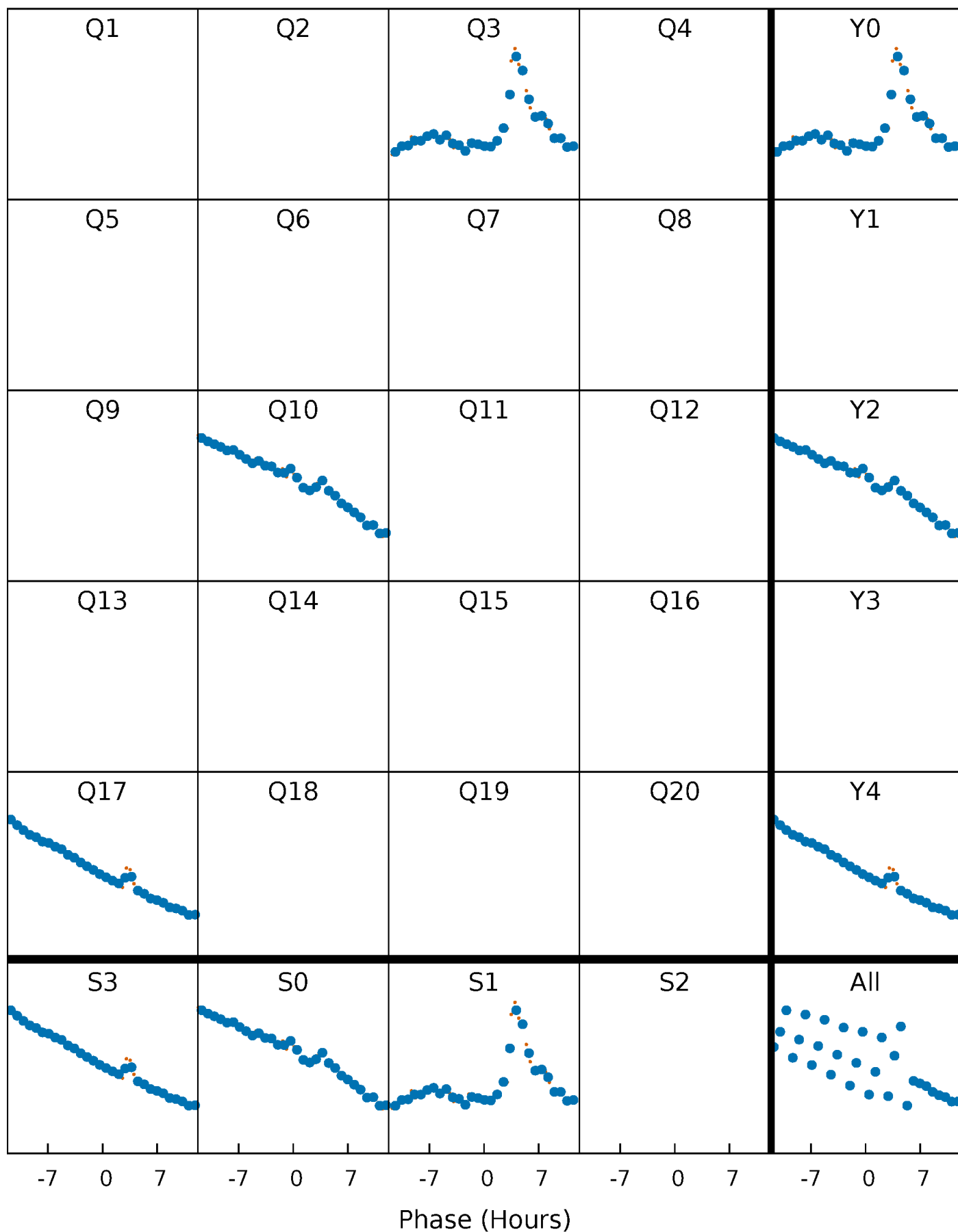


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



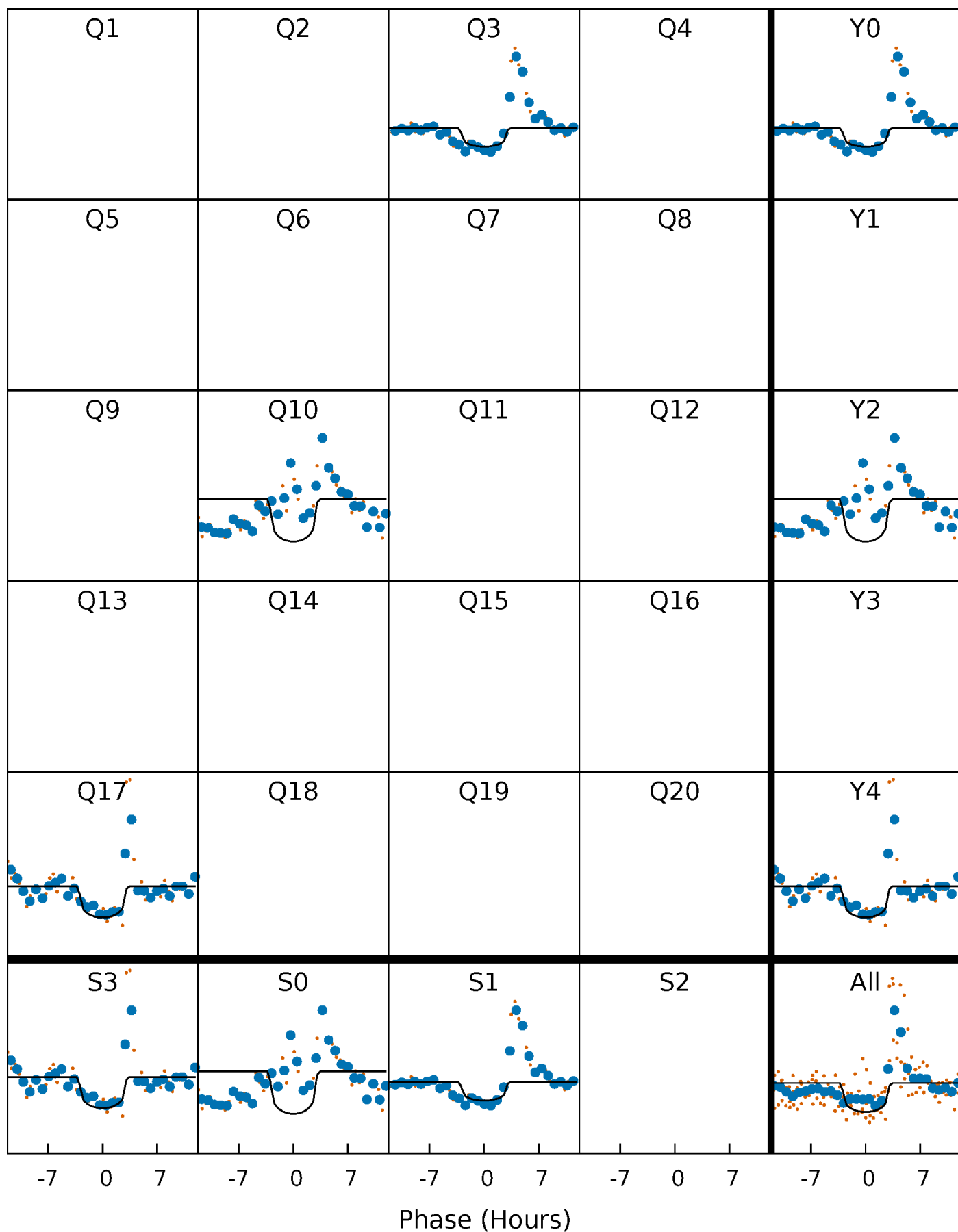
PDC Quarter-Phased Transit Curves

TCE 011968008-04 $P=630.844076$ Days $T_0=309.876026$ (BKJD)



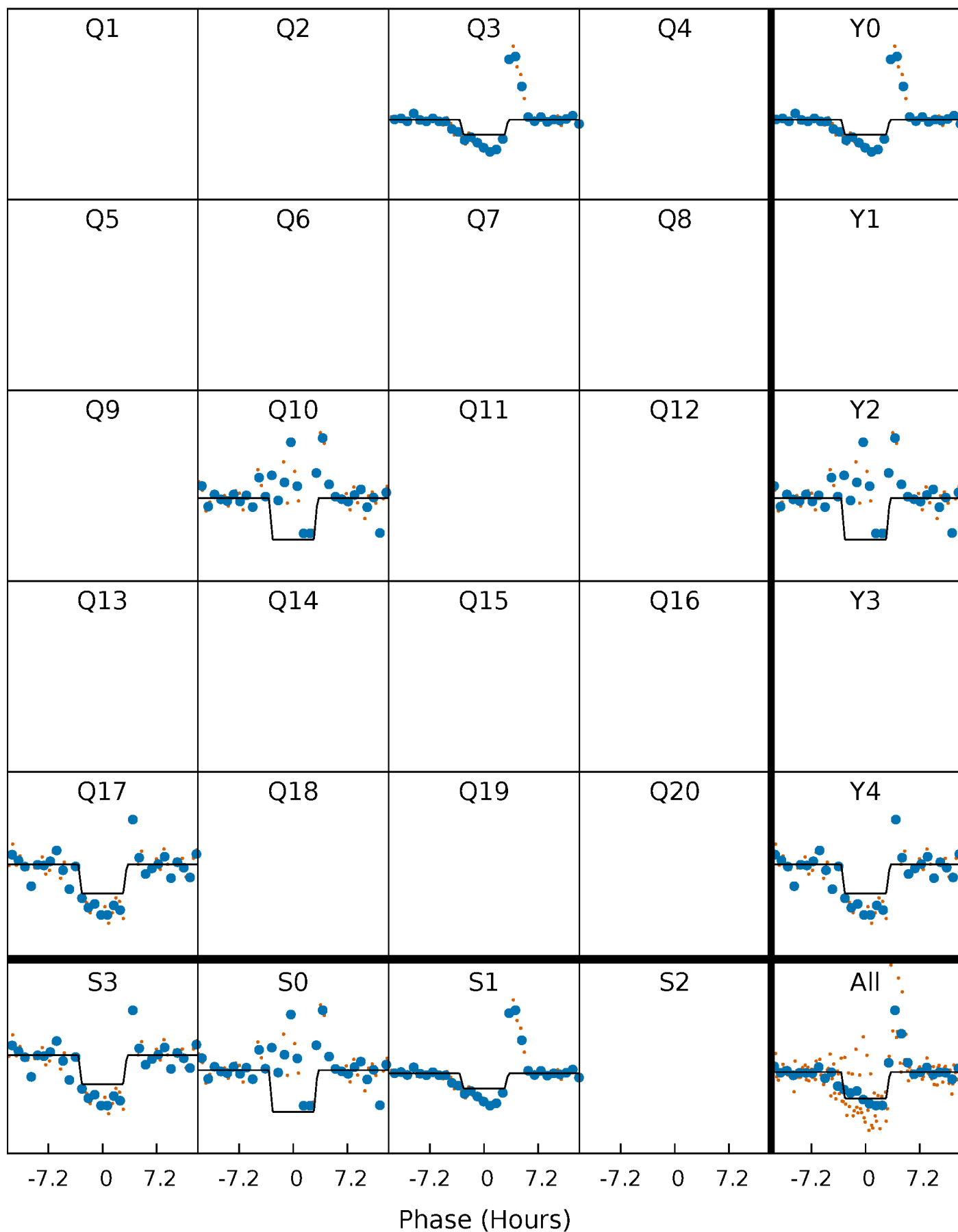
DV Quarter-Phased Transit Curves

TCE 011968008-04 $P=630.844076$ Days $T_0=309.876026$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

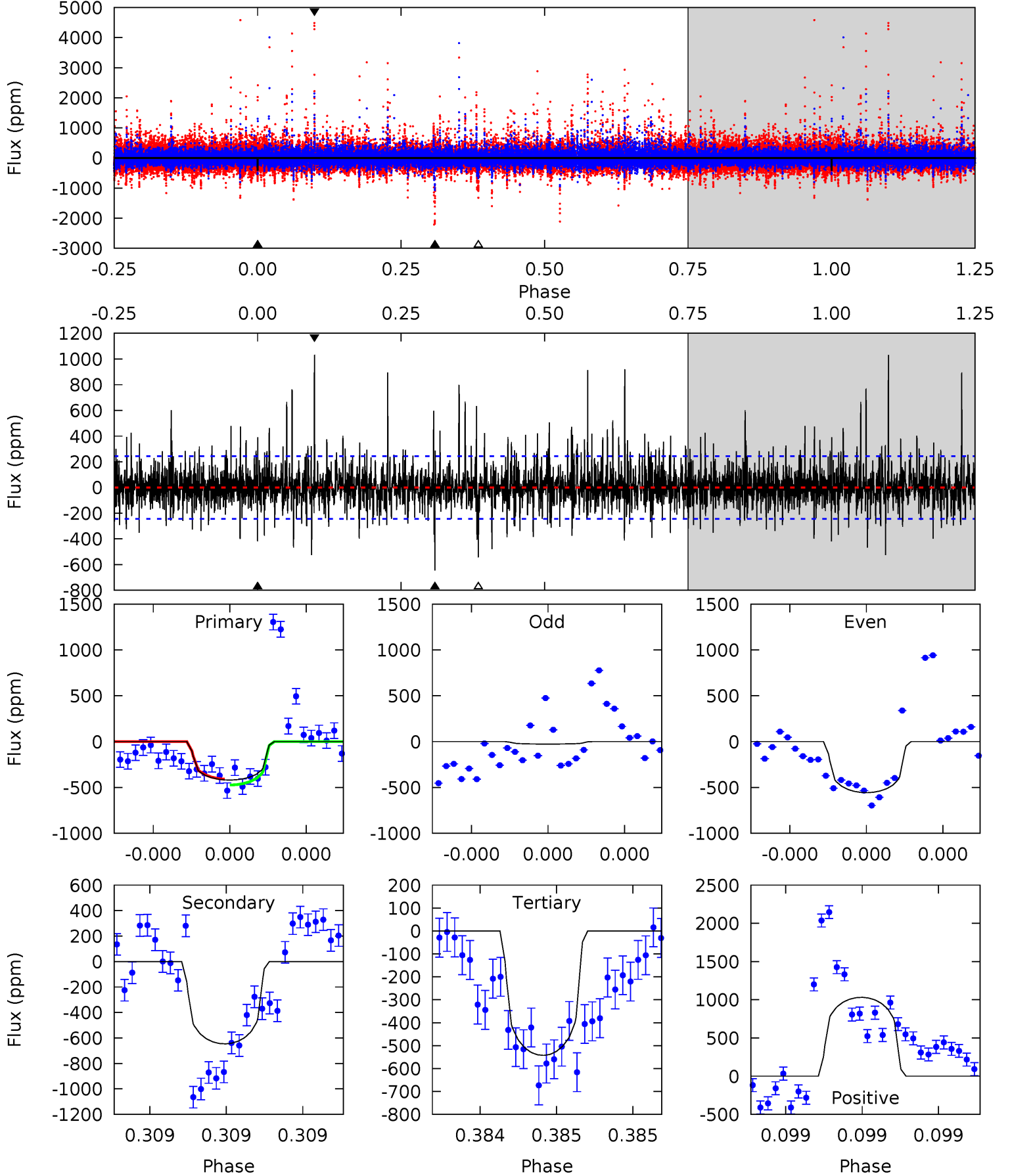
TCE 011968008-04 P=630.838487 Days $T_0=309.878429$ (BKJD)



DV Model-Shift Uniqueness Test

011968008-04, P = 630.844076 Days, E = 309.876026 Days

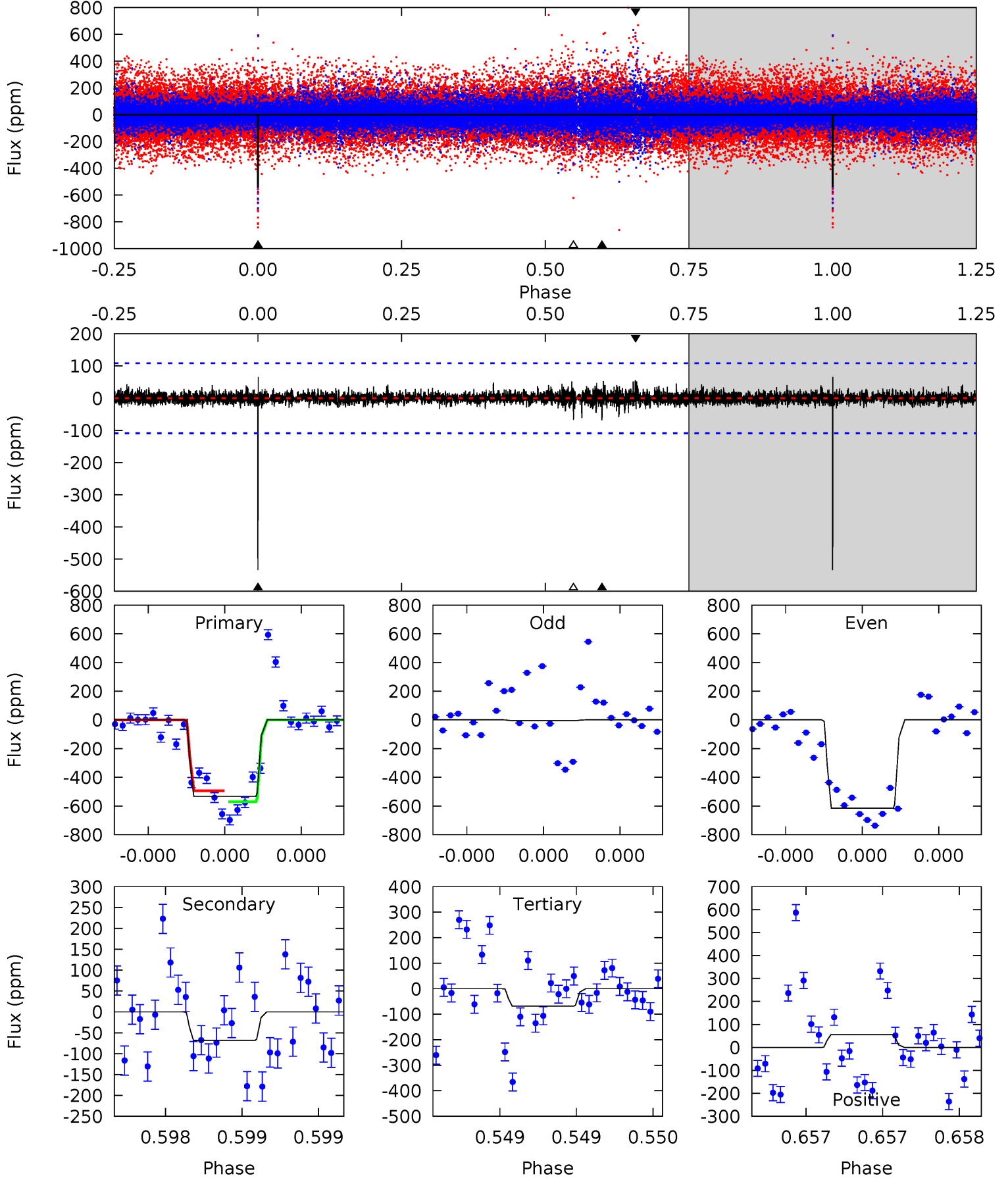
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.65	14.9	12.5	23.8	5.62	3.55	2.72	-2.84	-14.1	2.38	-8.88	4.04	0.79	0.61	0



Alt Model-Shift Uniqueness Test

011968008-04, P = 630.838487 Days, E = 309.878429 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
27.4	3.50	3.49	2.85	5.60	3.52	0.51	24.0	24.6	0.01	0.66	15.9	0.71	0.11	2.00



Stellar Parameters For KIC 011968008

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5324^{+159}_{-143}	$3.862^{+0.749}_{-0.321}$	$-0.480^{+0.350}_{-0.250}$	$1.768^{+1.074}_{-1.074}$	$0.830^{+0.127}_{-0.114}$	$0.212^{+2.693}_{-0.134}$
	+3%/-3%	+19%/-8%	+73%/-52%	+61%/-61%	+15%/-14%	+1272%/-63%
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 011968008-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-646 ± 43	$4.27^{+2.92}_{-2.23}$	367^{+53}_{-64}	5441^{+2020}_{-882}	$36124^{+120856}_{-23286}$
Alt.	-68 ± 19	$3.53^{+2.66}_{-1.95}$	367^{+60}_{-63}	3787^{+1080}_{-544}	5367^{+23847}_{-3720}

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 $A_{obs} \gg 1.0$

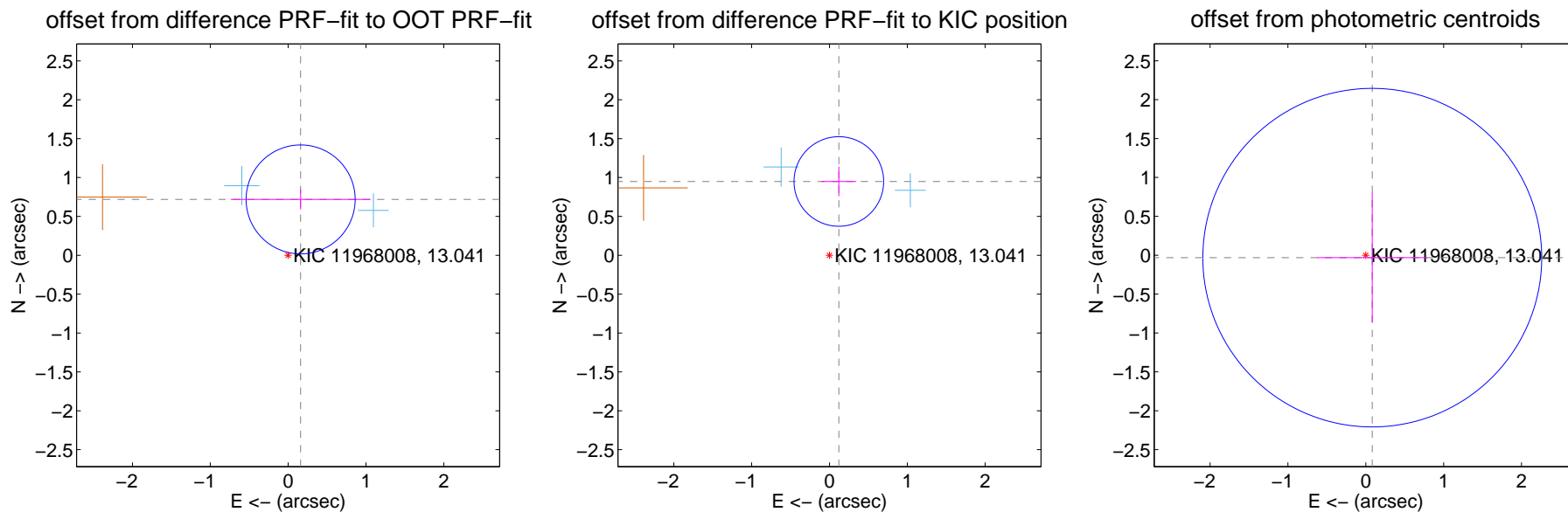
DV Centroid Data

Supplemental centroid analysis for 011968008-04. Kepler magnitude: 13.04. Transit SNR 6.33

There are 2 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.736 ± 0.234	3.15	-0.161 ± 0.897	0.719 ± 0.130
PRF-fit source offset from KIC position	0.957 ± 0.192	4.98	-0.120 ± 0.224	0.950 ± 0.191
photometric centroid source offset	0.09 ± 0.73	0.12	-0.08 ± 0.71	-0.03 ± 0.84



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

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

Q1 no difference image



Q1 no OOT image



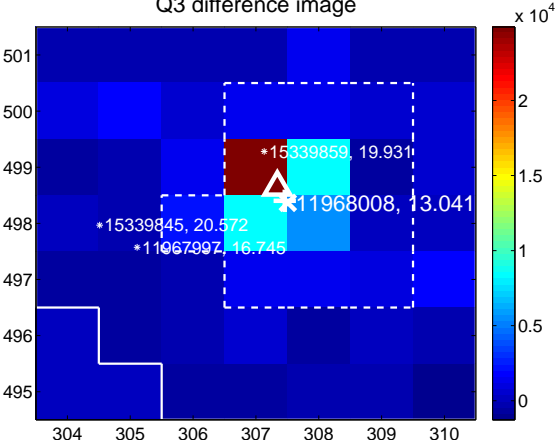
Q2 no difference image



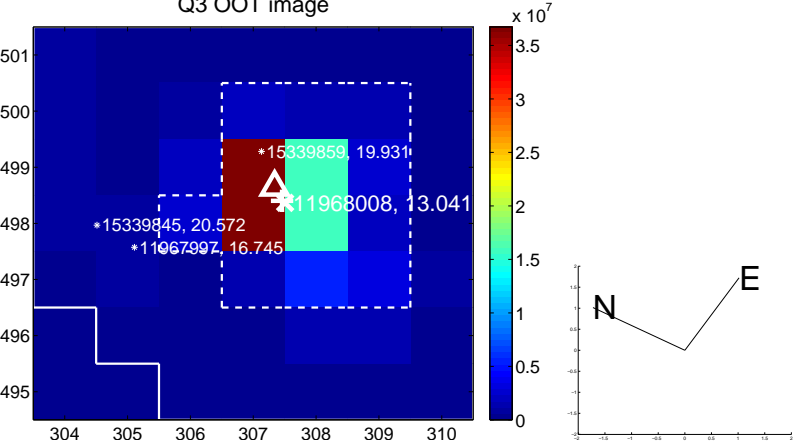
Q2 no OOT image



Q3 difference image



Q3 OOT image



Q4 no difference image



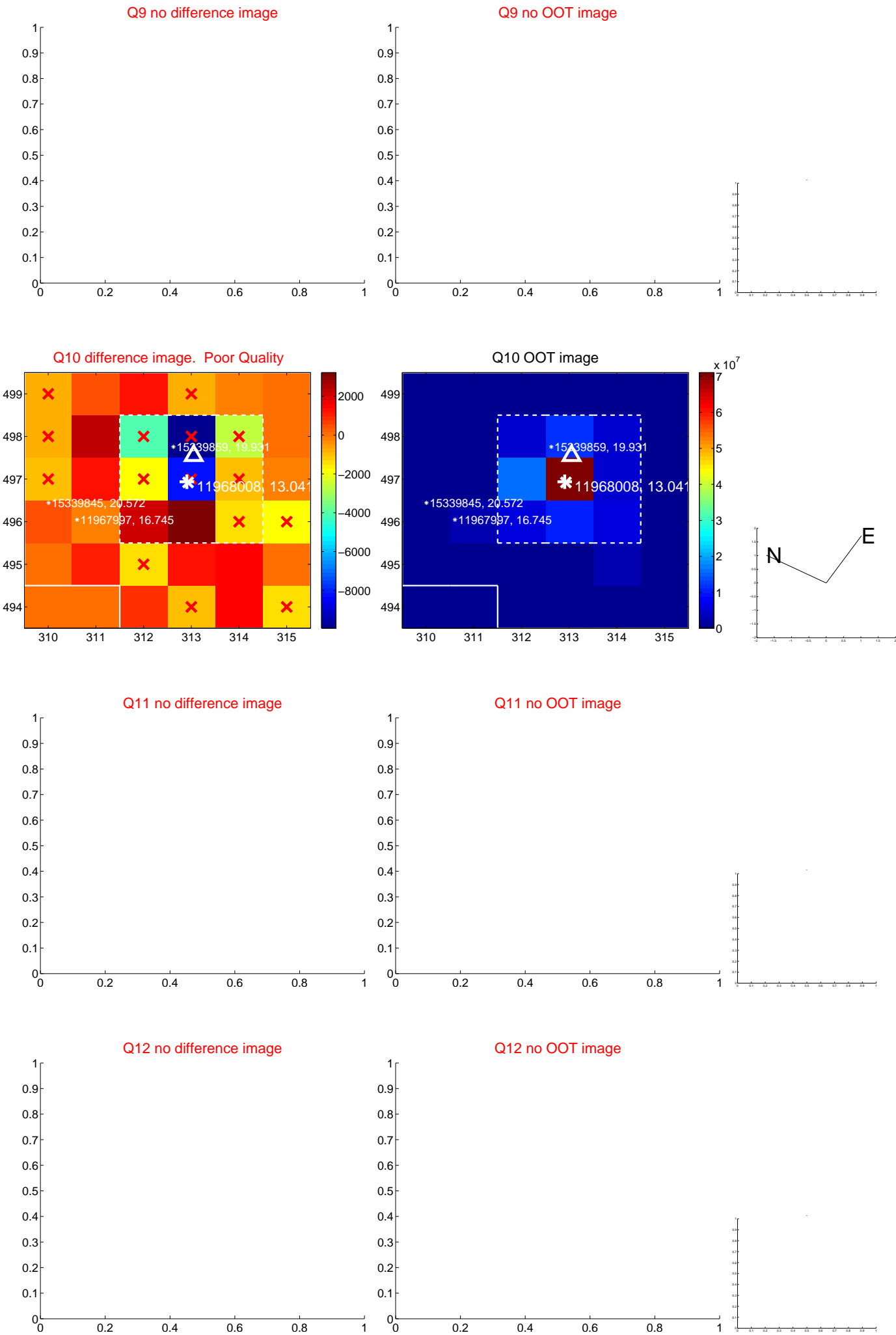
Q4 no OOT image



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



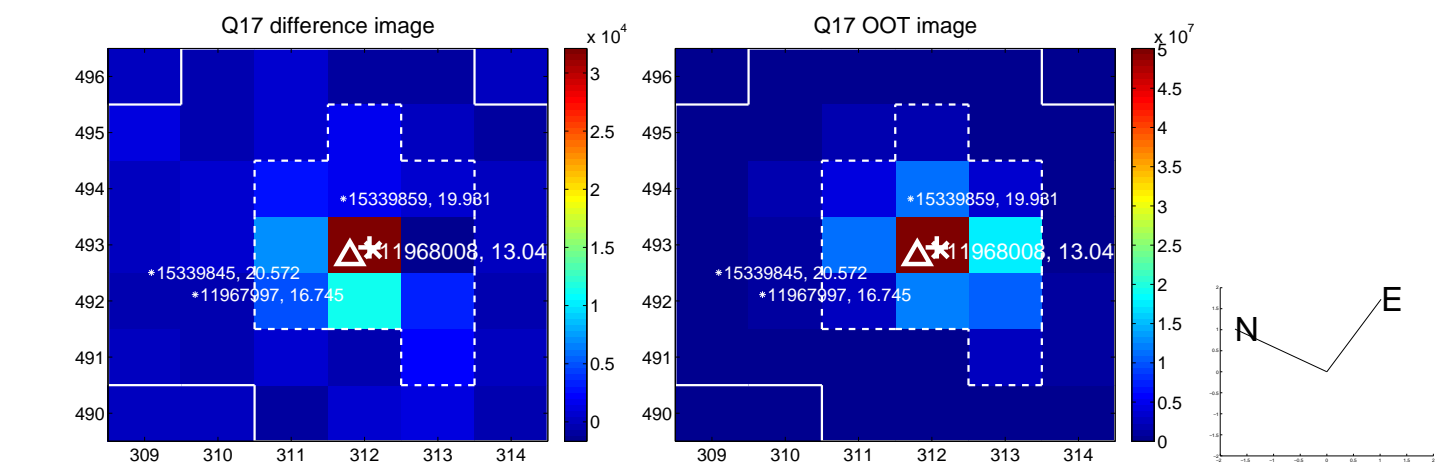
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



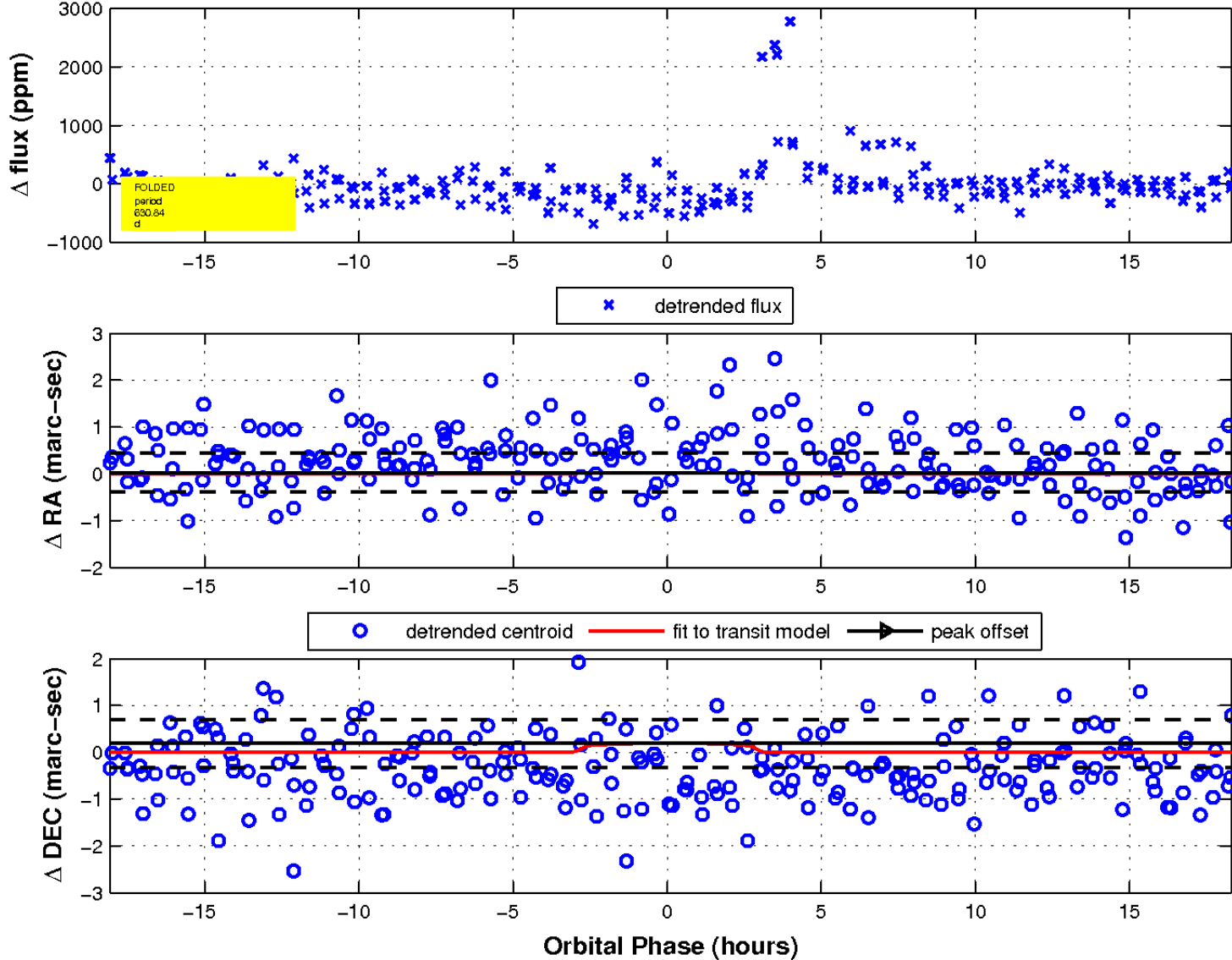
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

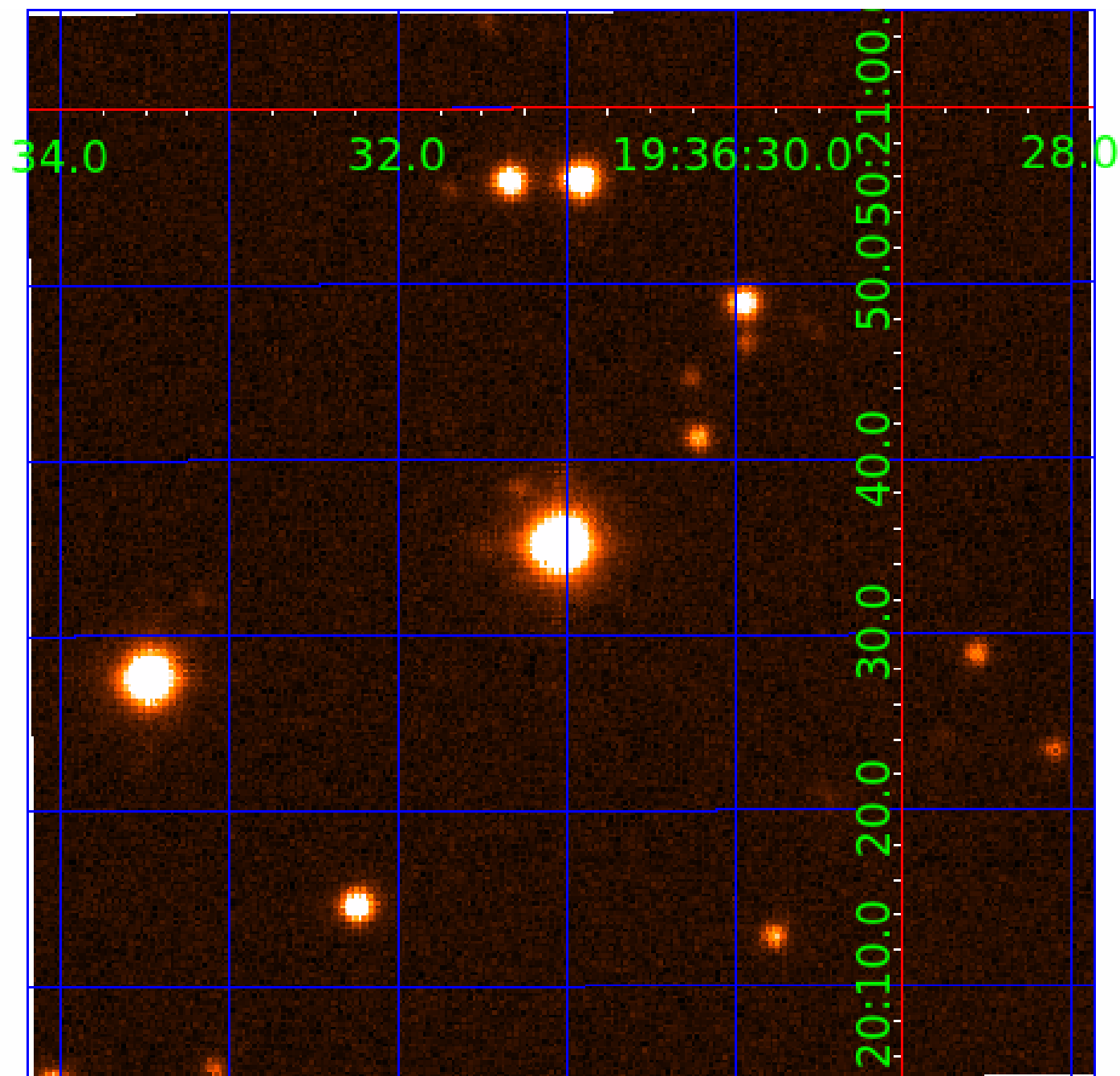


fluxWeightedCentroids, Planet 4 of 6



UKIRT Image

Declination



KIC 011968008

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})
011968008-02	OBS	No	527.451484	460.586666	287.9	15.000	14.6	-1.0	1.77	5324	2.95	1.56
011968008-03	OBS	No	388.372258	251.321837	643.0	5.288	14.2	7.6	1.77	5324	4.71	2.35
011968008-04	OBS	No	630.844076	309.876026	560.7	6.104	14.1	6.3	1.77	5324	4.60	1.23
011968008-05	OBS	No	394.542972	312.918263	641.4	12.454	15.1	7.1	1.77	5324	5.51	2.30
011968008-06	OBS	No	635.876981	174.861069	638.4	5.324	14.5	7.3	1.77	5324	4.52	1.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011968008-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
011968008-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—HALO_GHOST
011968008-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
011968008-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011968008-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS

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

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

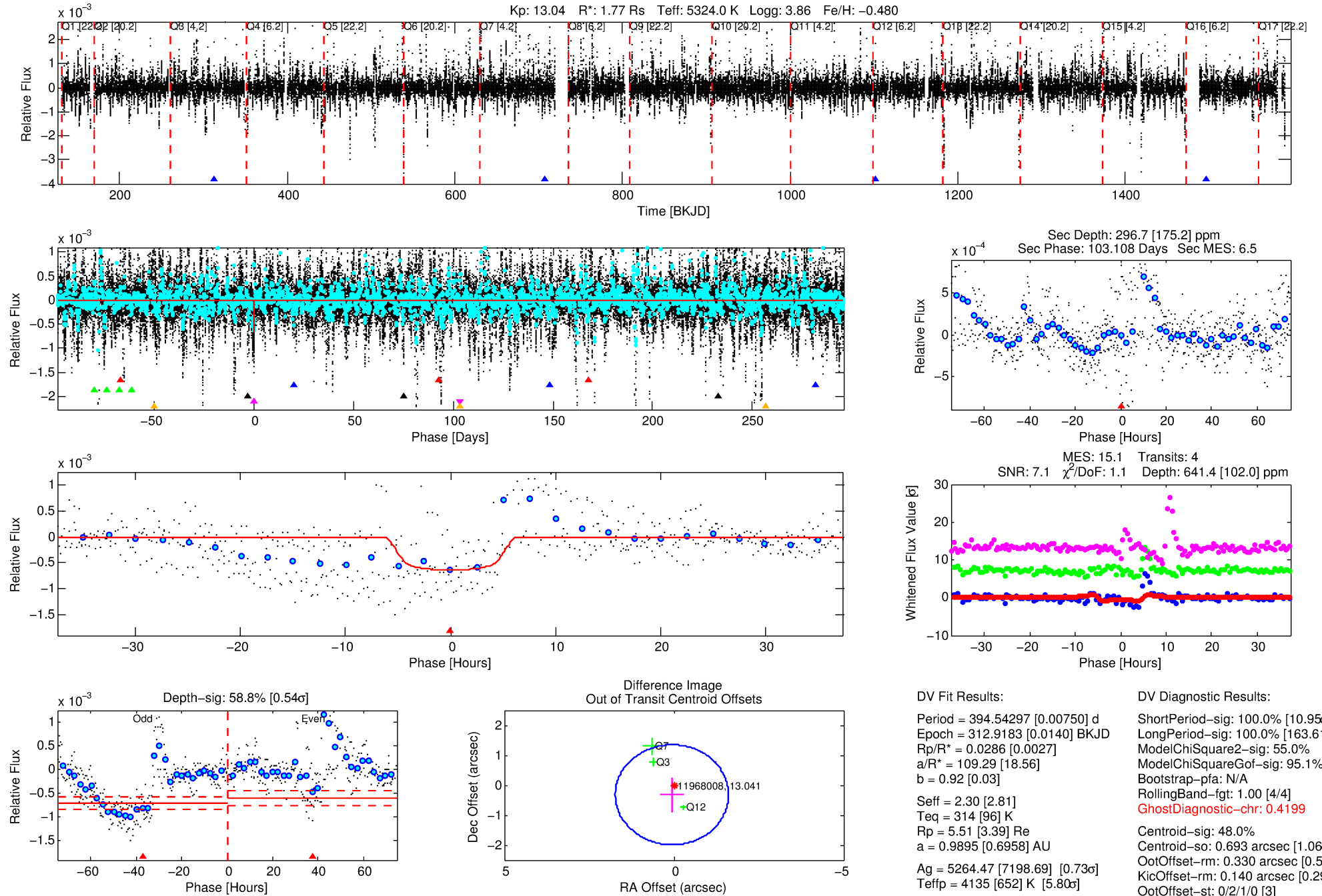
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011968008-05

No Significant Match Found

DV One-Page Summary

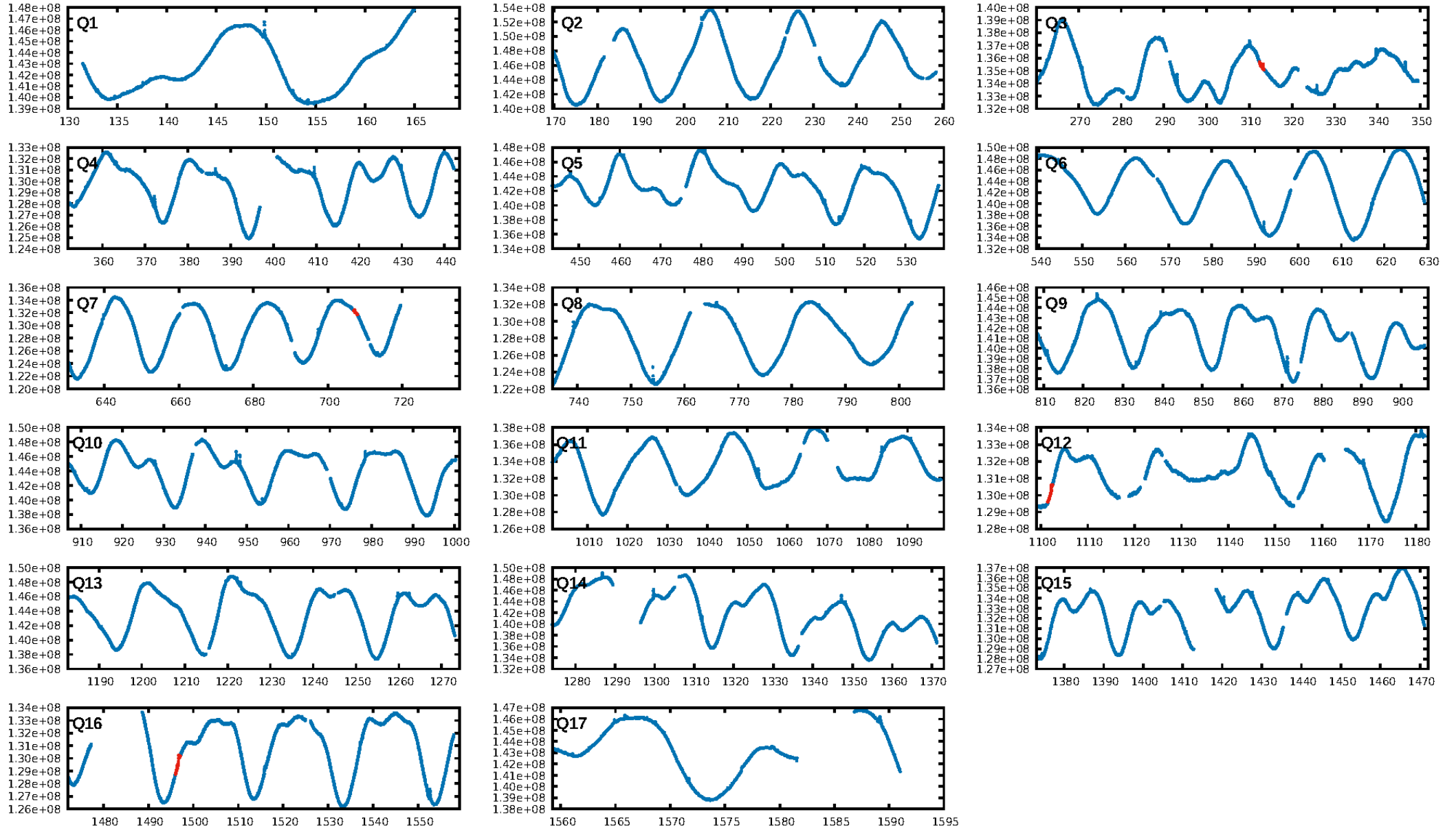
KIC: 11968008 Candidate: 5 of 6 Period: 394.543 d



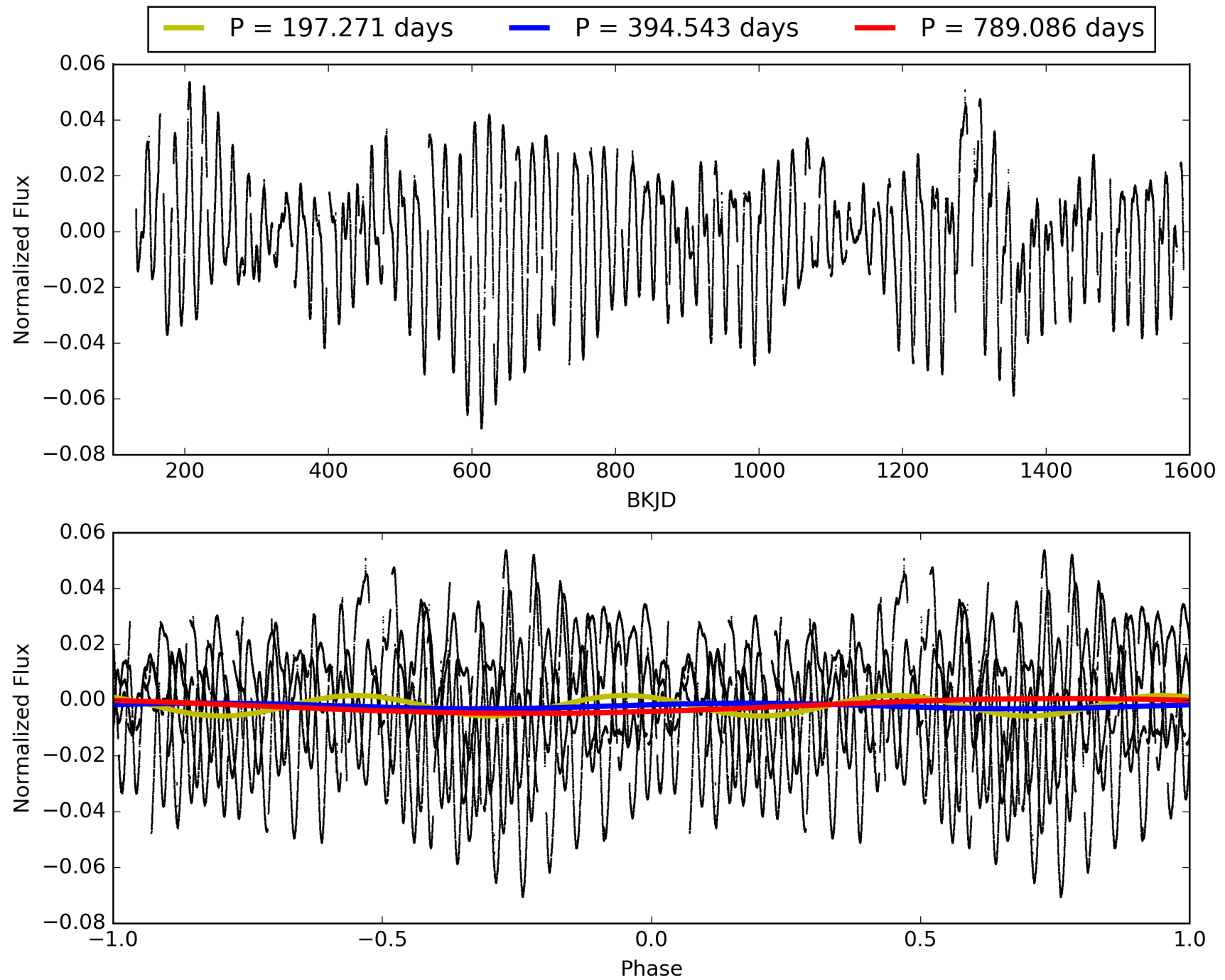
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:03:41 Z

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

TCE 011968008-05, PDC Light Curves

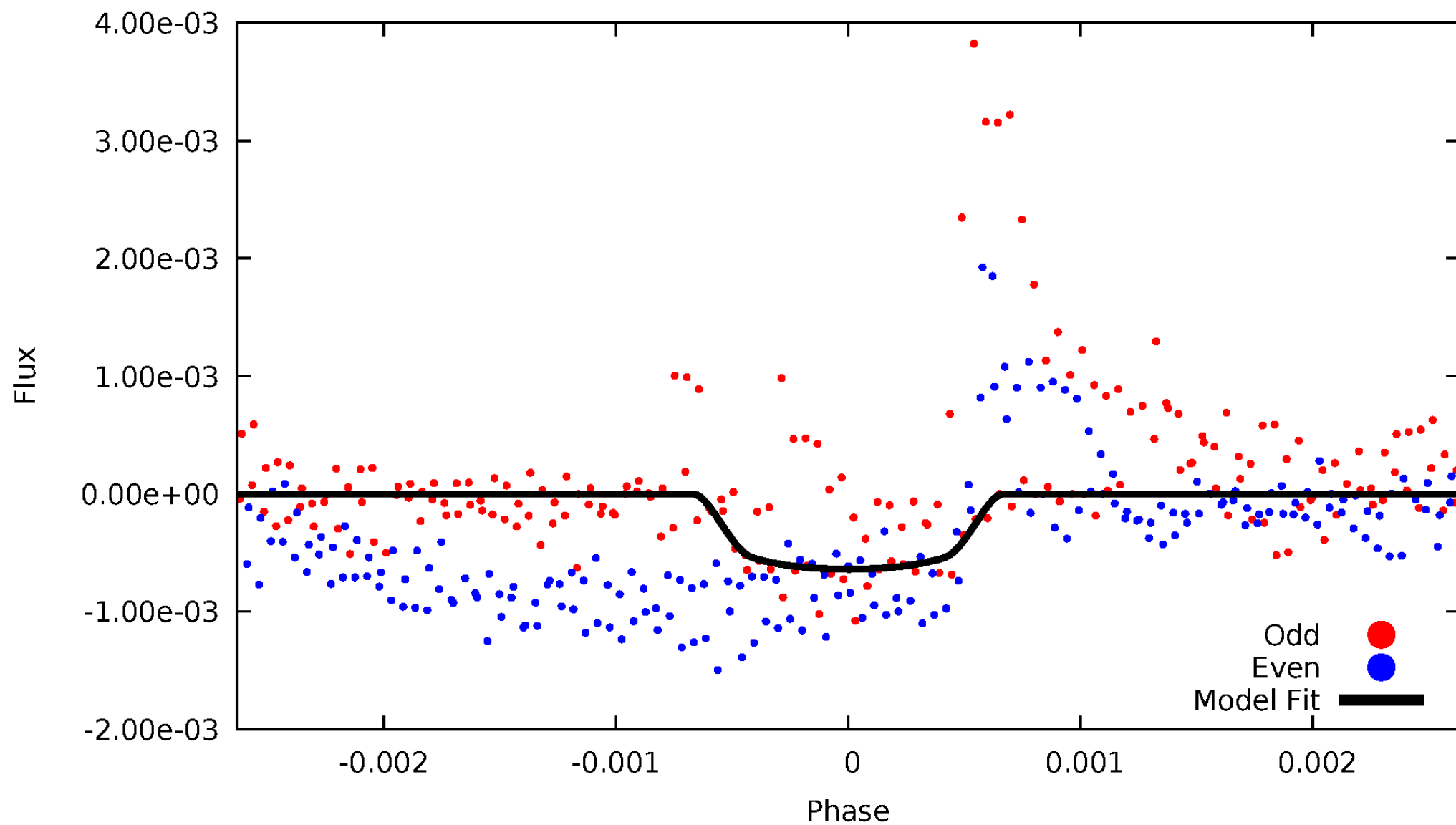


TCE 011968008-05



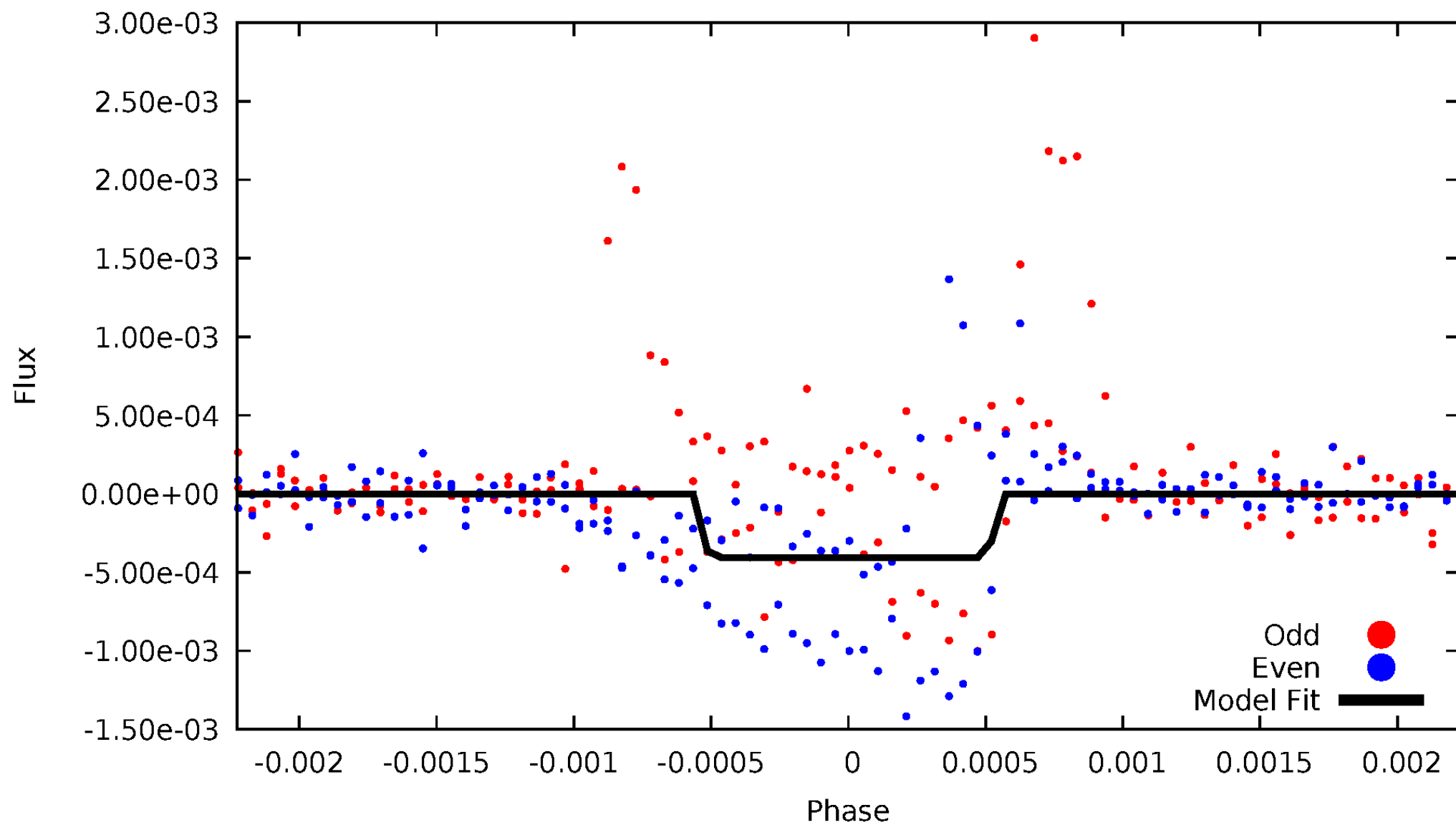
DV Odd/Even

TCE 011968008-05



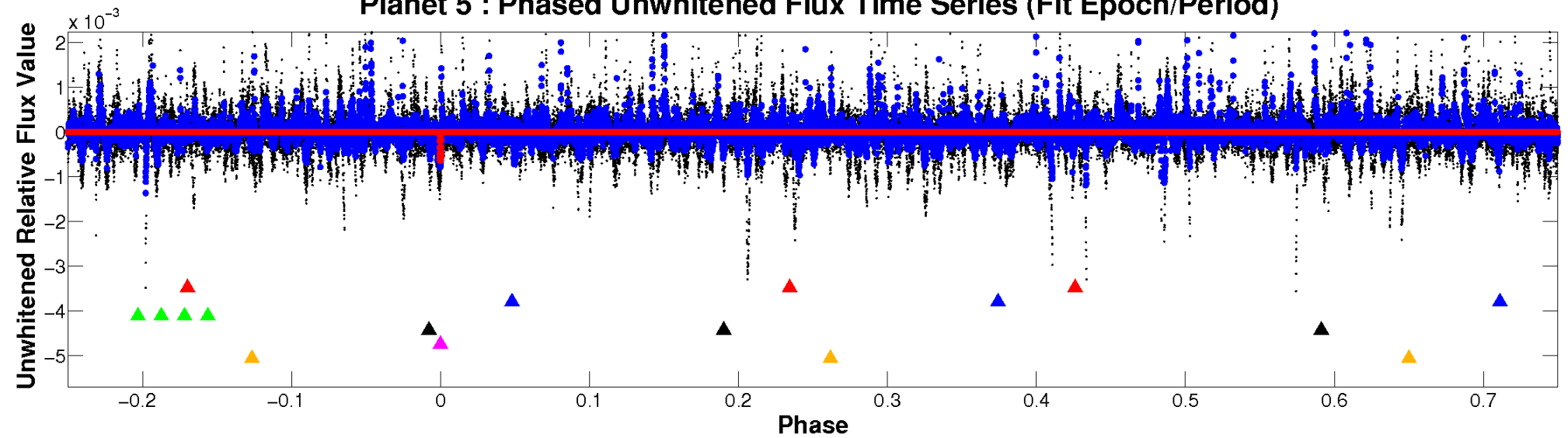
ALT Odd/Even

TCE 011968008-05

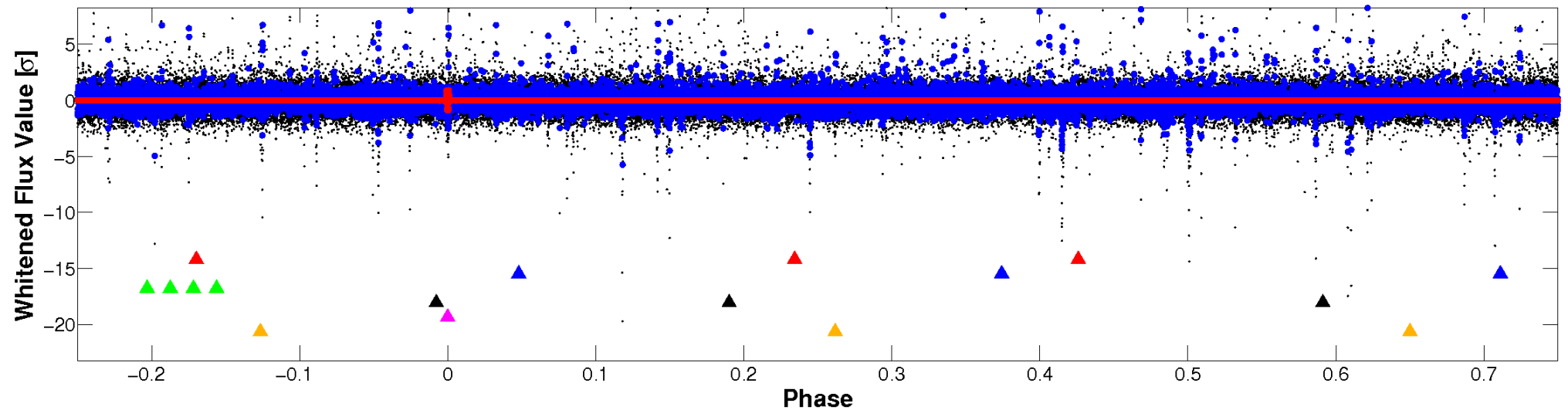


Non-Whitened Vs. Whitened Light Curve

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

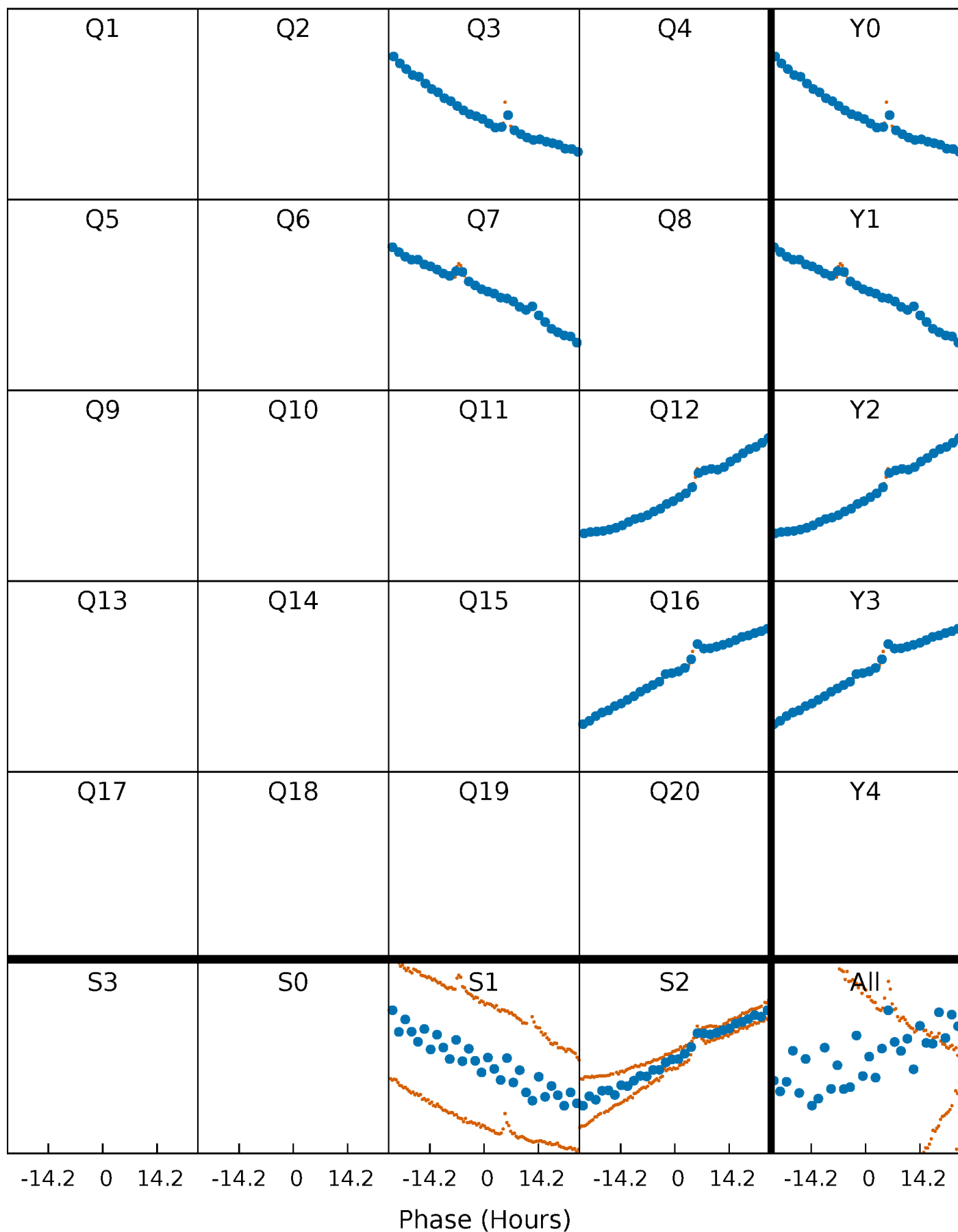


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



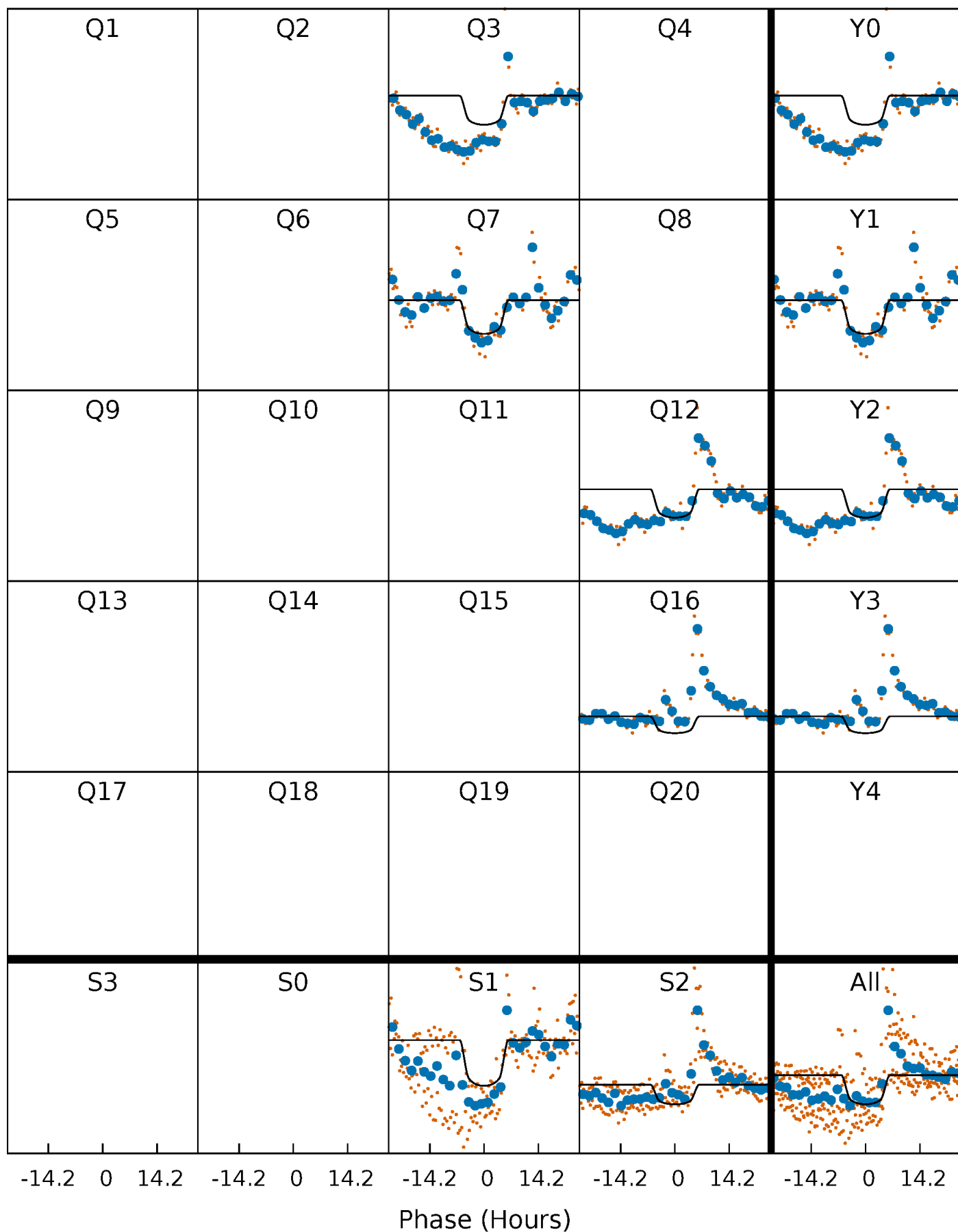
PDC Quarter-Phased Transit Curves

TCE 011968008-05 $P=394.542972$ Days $T_0=312.918263$ (BKJD)



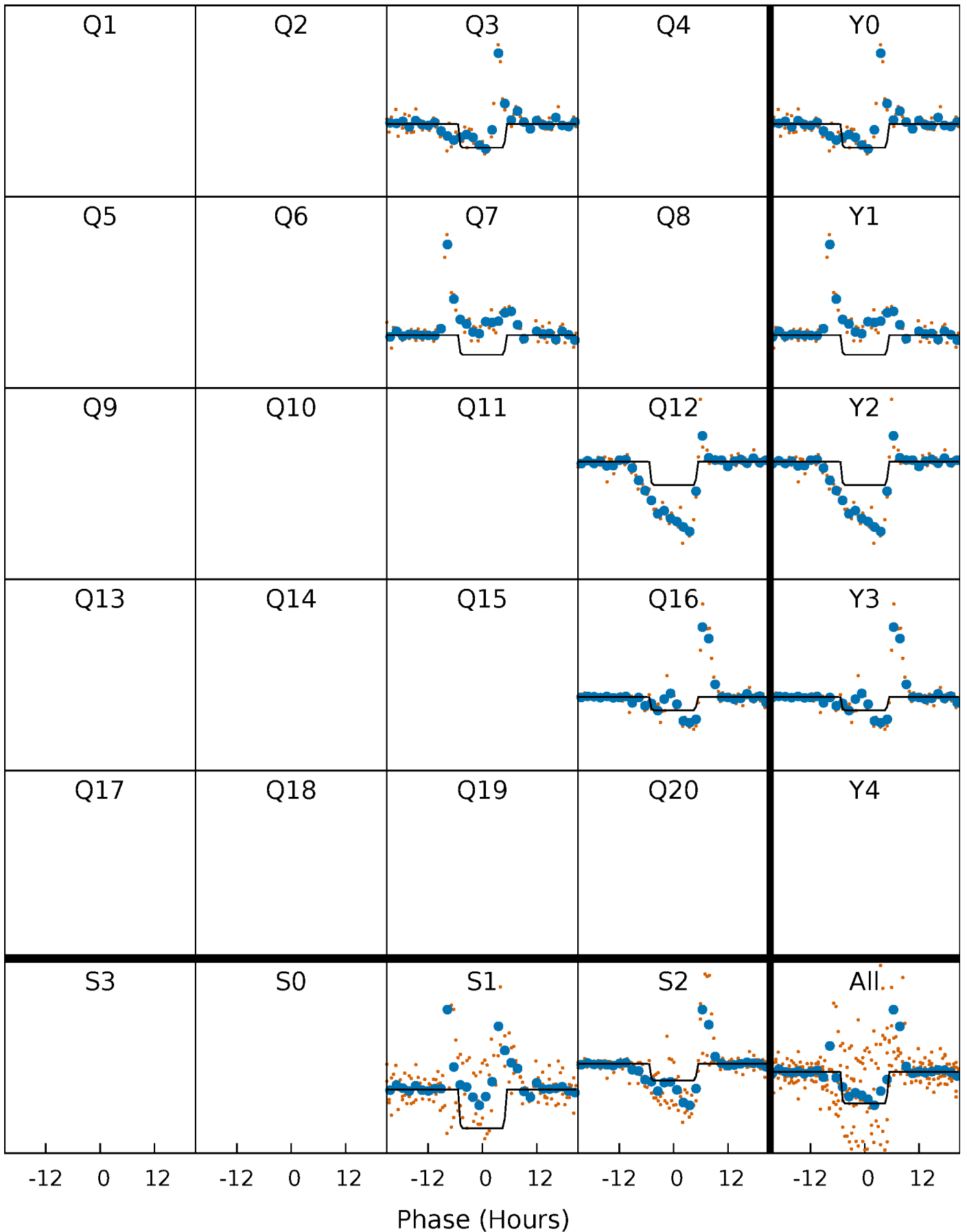
DV Quarter-Phased Transit Curves

TCE 011968008-05 $P=394.542972$ Days $T_0=312.918263$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

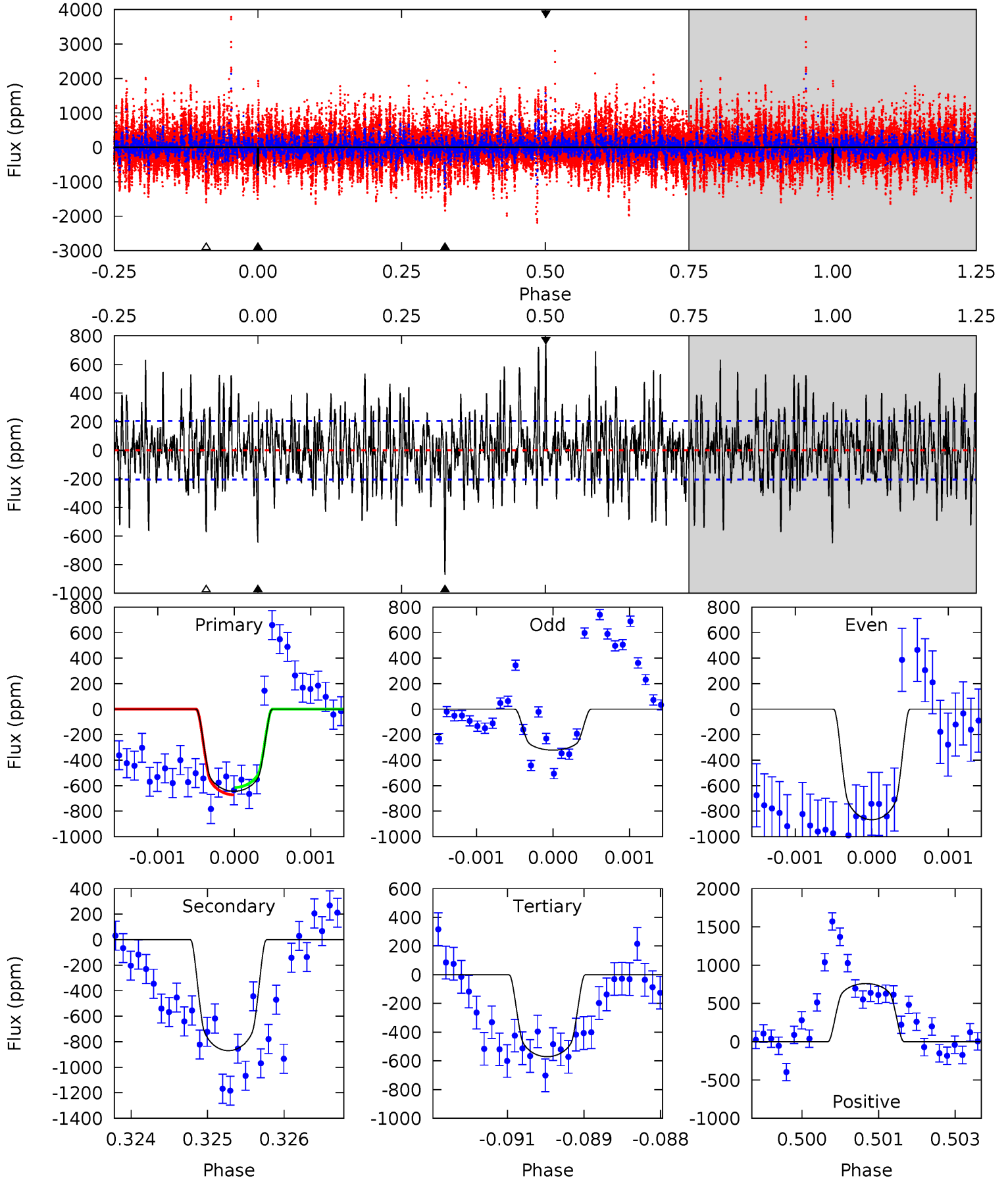
TCE 011968008-05 $P=394.490309$ Days $T_0=313.021956$ (BKJD)



DV Model-Shift Uniqueness Test

011968008-05, $P = 394.542972$ Days, $E = 312.918263$ Days

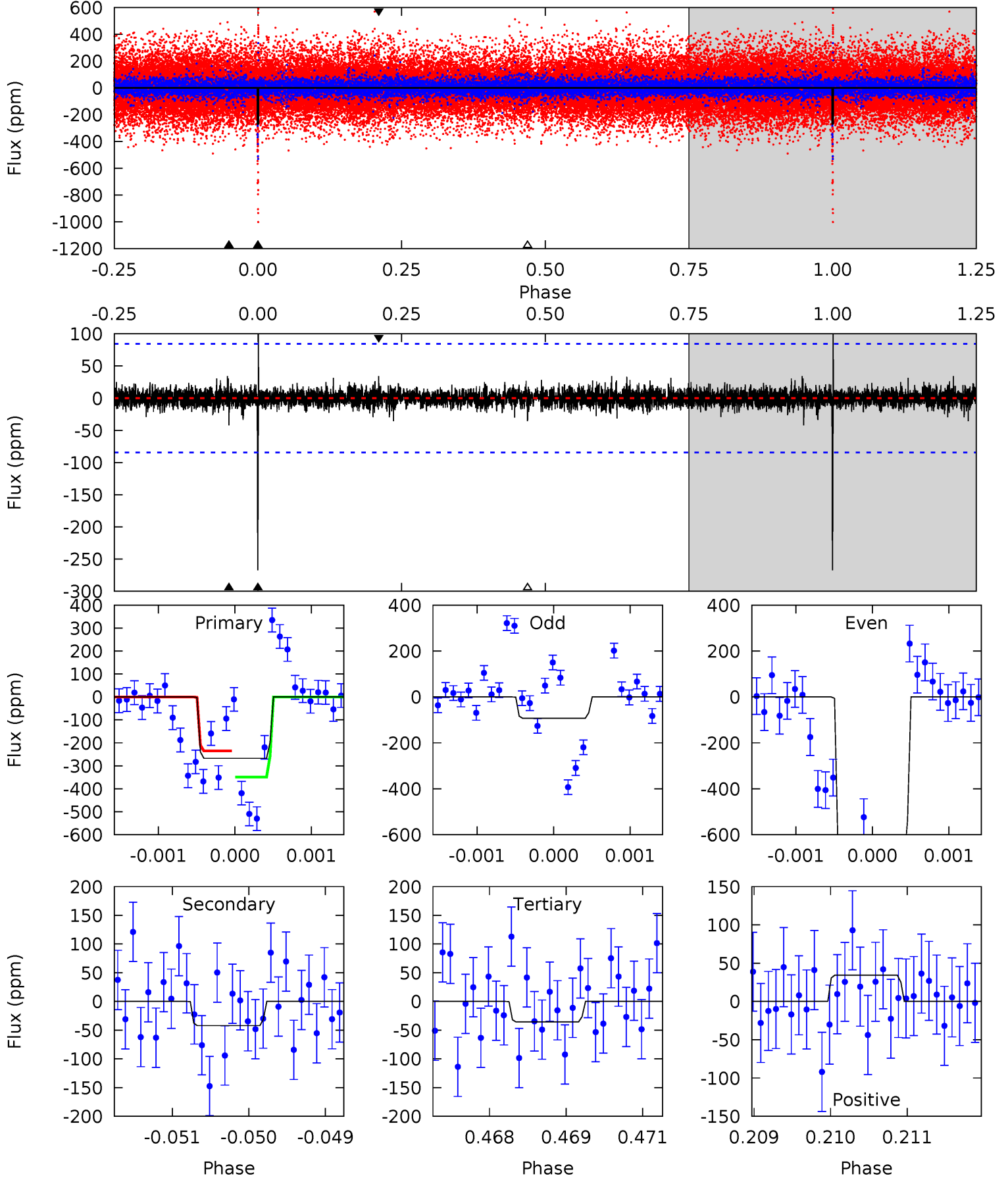
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	22.8	15.0	20.0	5.40	3.20	4.82	1.90	-3.06	7.85	2.89	6.08	0.80	0.47	0.77



Alt Model-Shift Uniqueness Test

011968008-05, P = 394.490309 Days, E = 313.021956 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	2.70	2.29	2.20	5.43	3.25	0.47	14.9	15.0	0.41	0.50	21.5	1.29	0.27	3.59



Stellar Parameters For KIC 011968008

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5324^{+159}_{-143}	$3.862^{+0.749}_{-0.321}$	$-0.480^{+0.350}_{-0.250}$	$1.768^{+1.074}_{-1.074}$	$0.830^{+0.127}_{-0.114}$	$0.212^{+2.693}_{-0.134}$
	+3%/-3%	+19%/-8%	+73%/-52%	+61%/-61%	+15%/-14%	+1272%/-63%
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 011968008-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-870 ± 38	$5.28^{+1.80}_{-1.57}$	428^{+64}_{-68}	5404^{+286}_{-265}	16642^{+17262}_{-7087}
Alt.	-42 ± 16	$3.67^{+1.44}_{-1.25}$	431^{+64}_{-80}	3462^{+285}_{-266}	1596^{+2272}_{-868}

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

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

DV Centroid Data

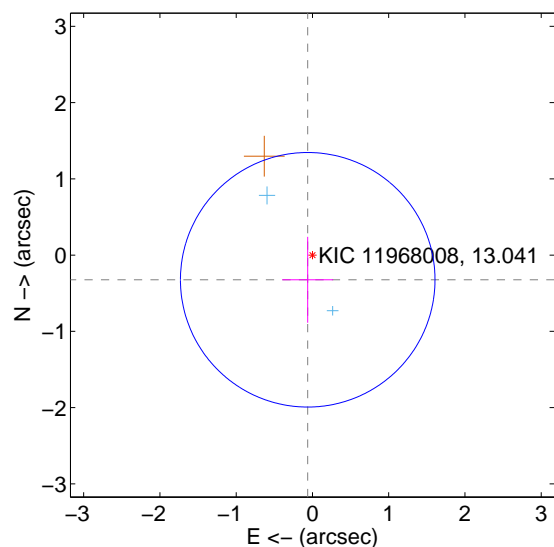
Supplemental centroid analysis for 011968008-05. Kepler magnitude: 13.04. Transit SNR 7.13

There are 2 quarters with good PRF difference image offsets

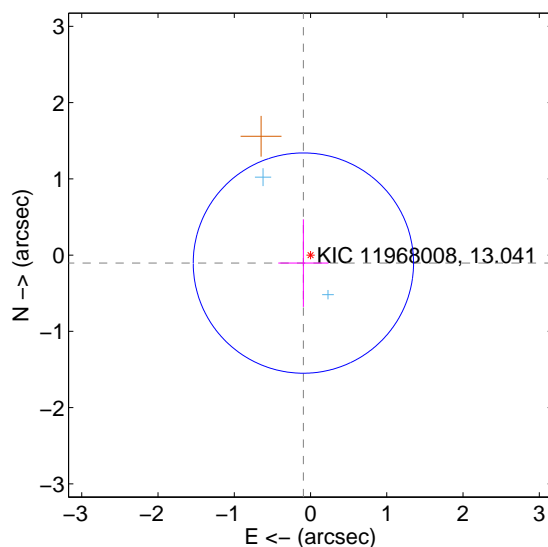
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.330 ± 0.556	0.59	0.062 ± 0.333	-0.324 ± 0.563
PRF-fit source offset from KIC position	0.140 ± 0.482	0.29	0.094 ± 0.329	-0.105 ± 0.575
photometric centroid source offset	0.69 ± 0.65	1.06	0.26 ± 0.47	0.64 ± 0.68

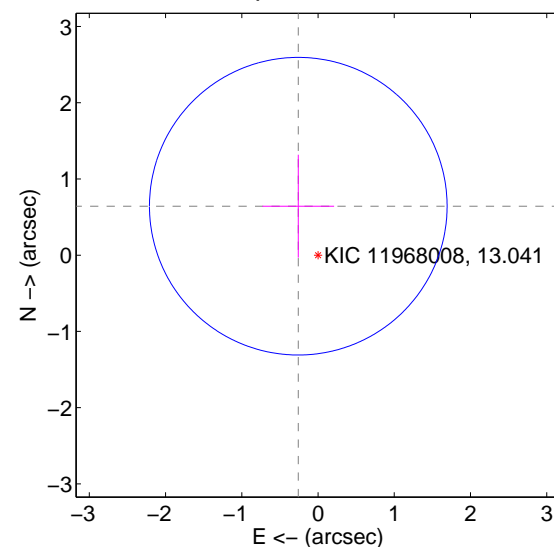
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

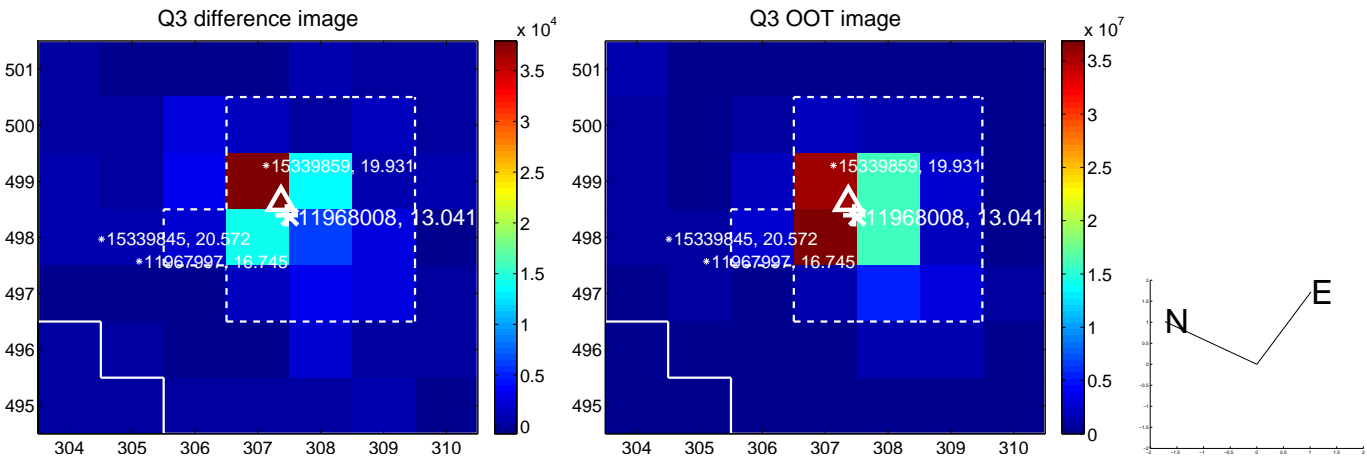


offset from photometric centroids



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

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



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

Q5 no difference image



Q5 no OOT image



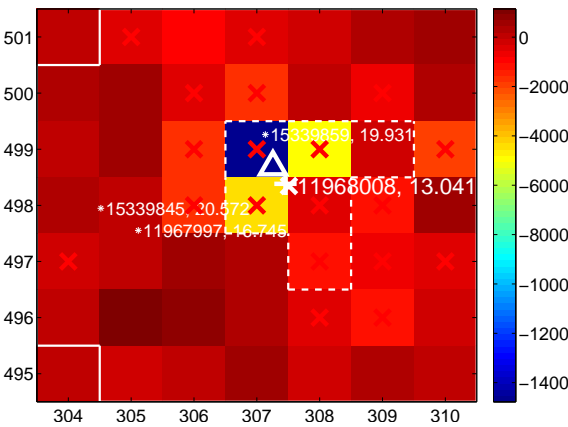
Q6 no difference image



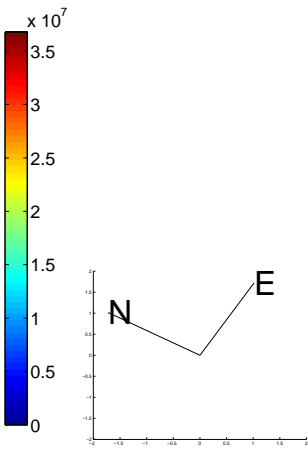
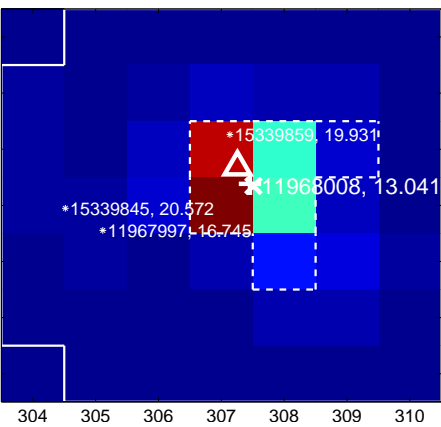
Q6 no OOT image



Q7 difference image. Poor Quality



Q7 OOT image



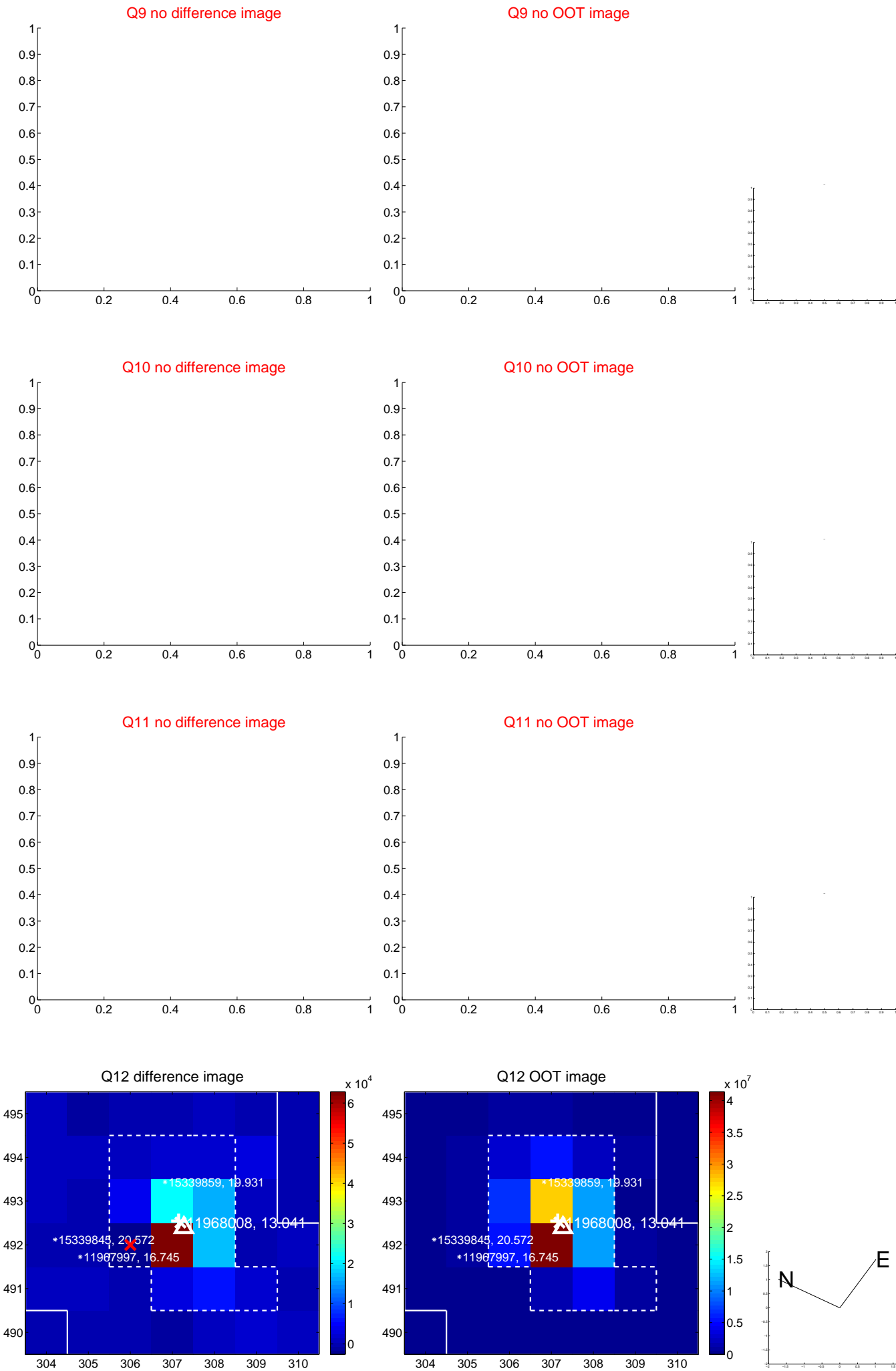
Q8 no difference image



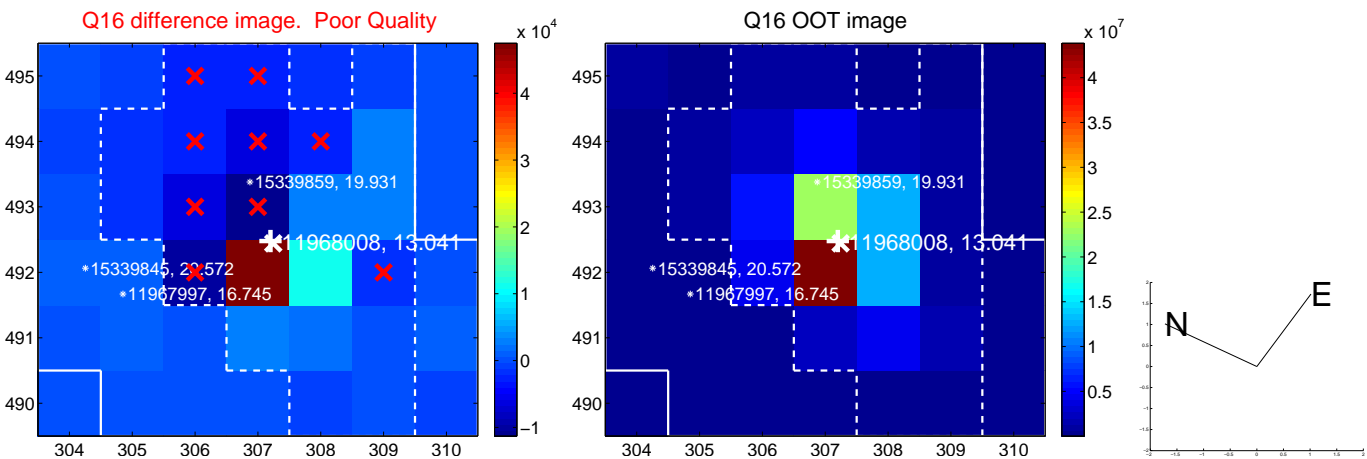
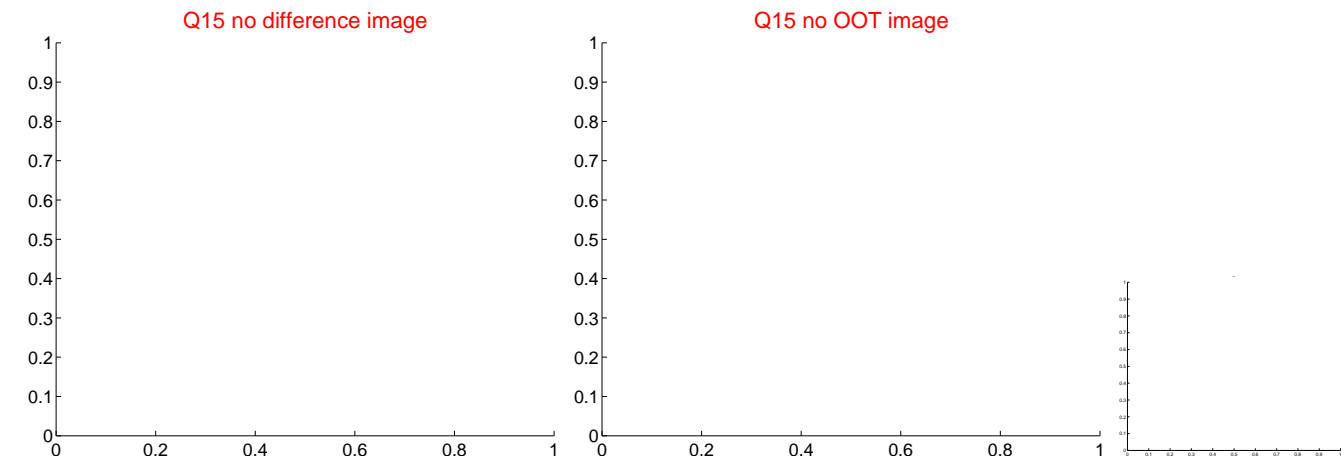
Q8 no OOT image



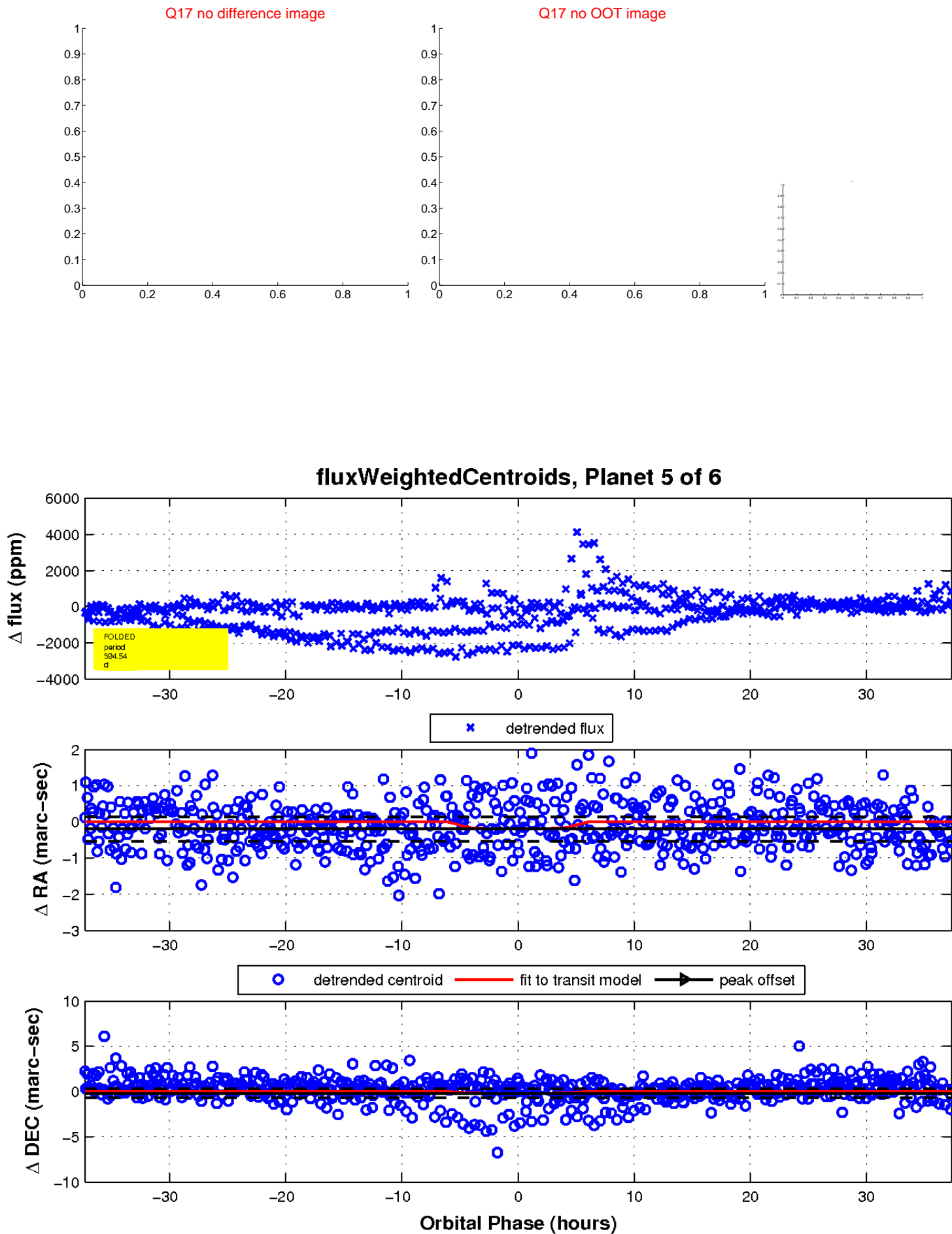
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

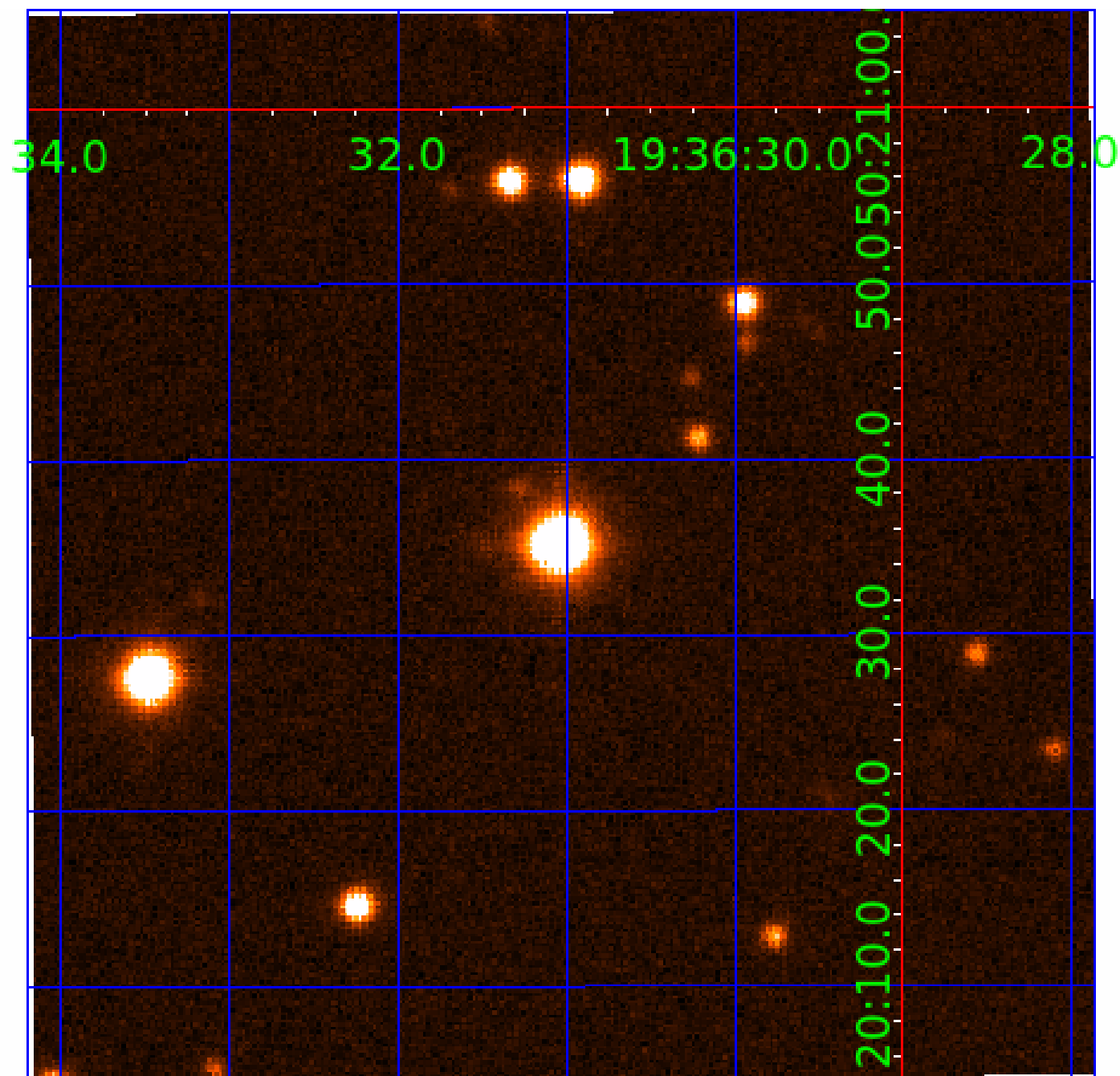


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011968008

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})
011968008-02	OBS	No	527.451484	460.586666	287.9	15.000	14.6	-1.0	1.77	5324	2.95	1.56
011968008-03	OBS	No	388.372258	251.321837	643.0	5.288	14.2	7.6	1.77	5324	4.71	2.35
011968008-04	OBS	No	630.844076	309.876026	560.7	6.104	14.1	6.3	1.77	5324	4.60	1.23
011968008-05	OBS	No	394.542972	312.918263	641.4	12.454	15.1	7.1	1.77	5324	5.51	2.30
011968008-06	OBS	No	635.876981	174.861069	638.4	5.324	14.5	7.3	1.77	5324	4.52	1.22

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011968008-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
011968008-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—HALO_GHOST
011968008-04	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
011968008-05	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011968008-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS

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

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

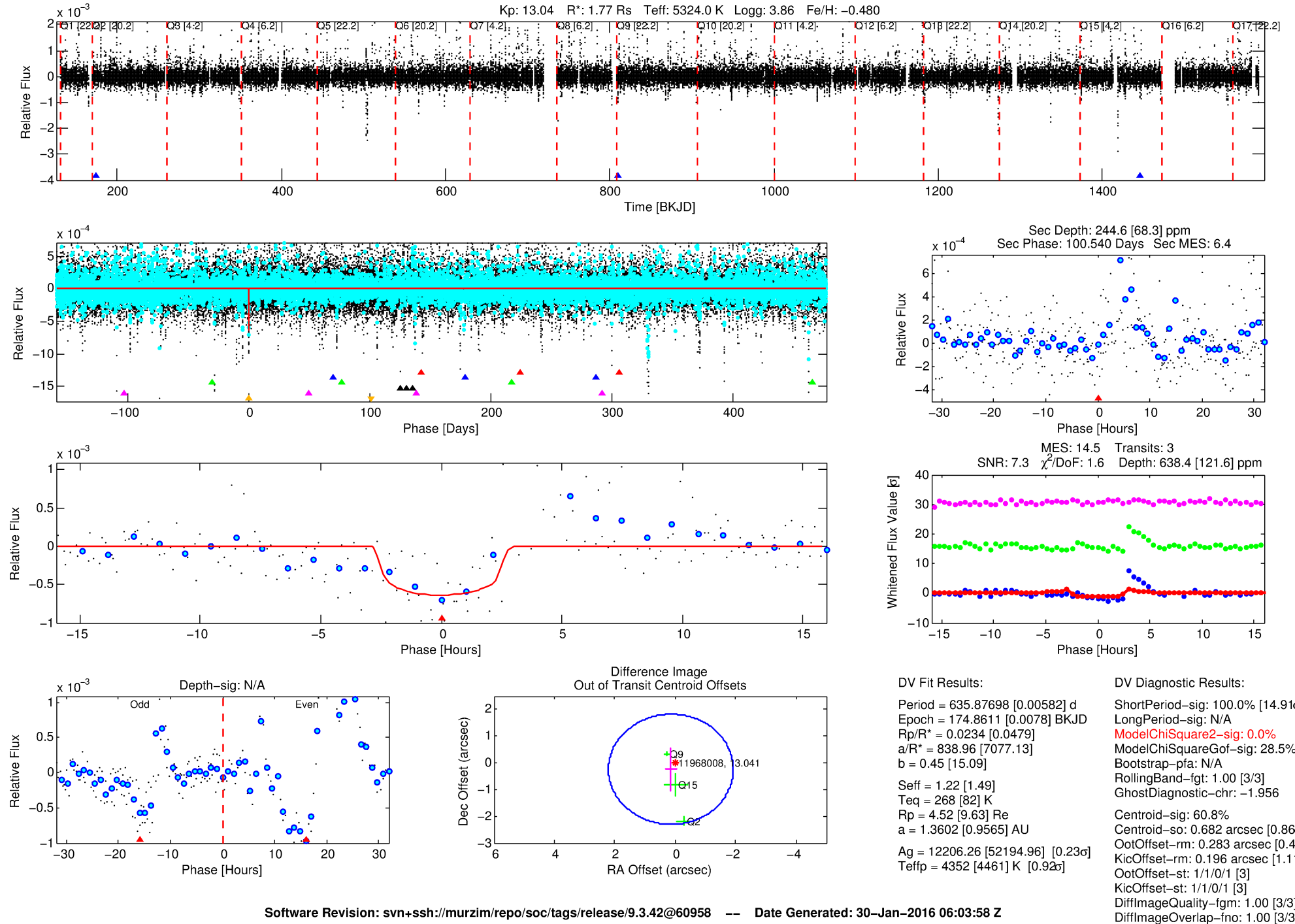
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011968008-06

No Significant Match Found

DV One-Page Summary

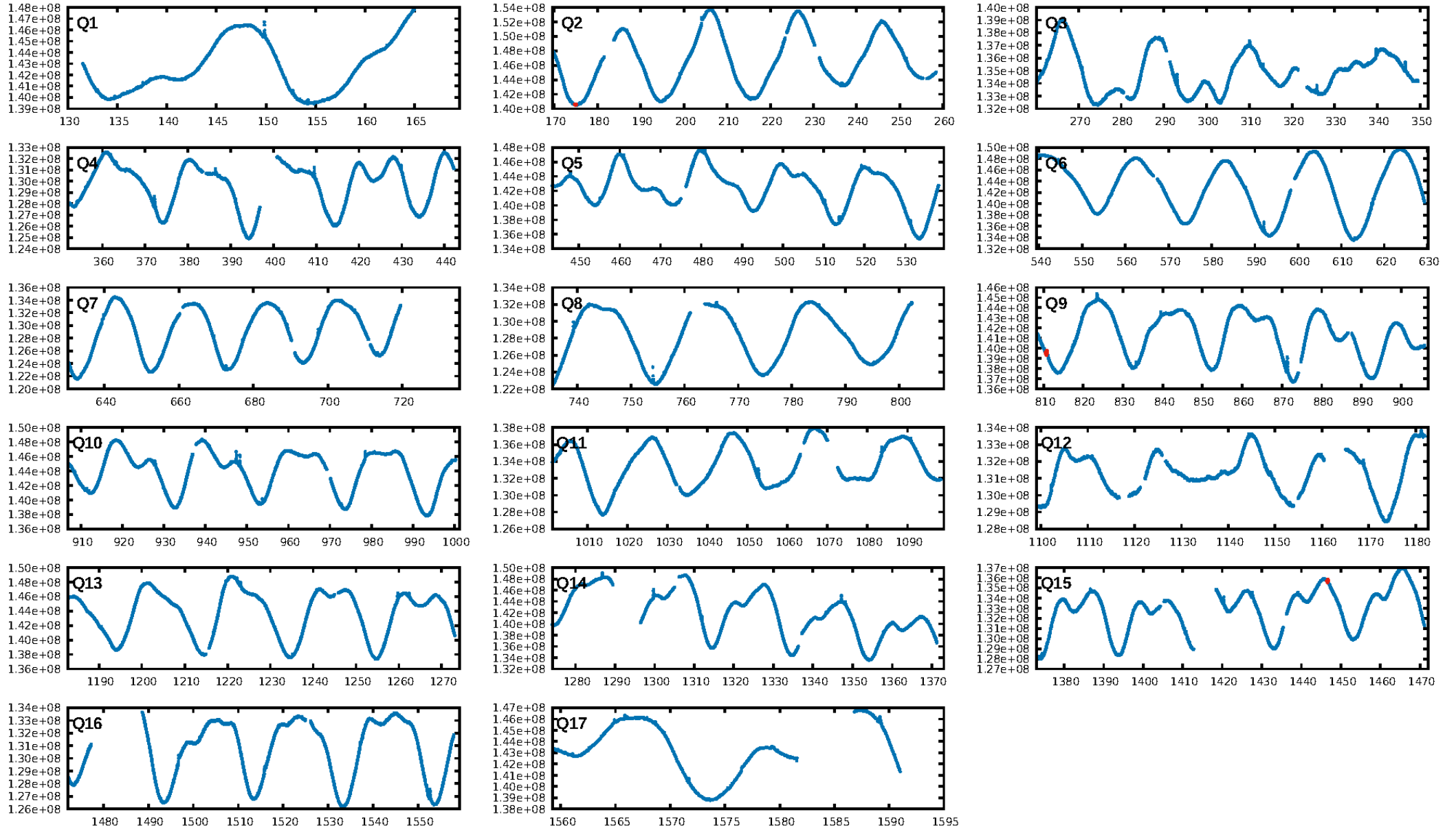
KIC: 11968008 Candidate: 6 of 6 Period: 635.877 d



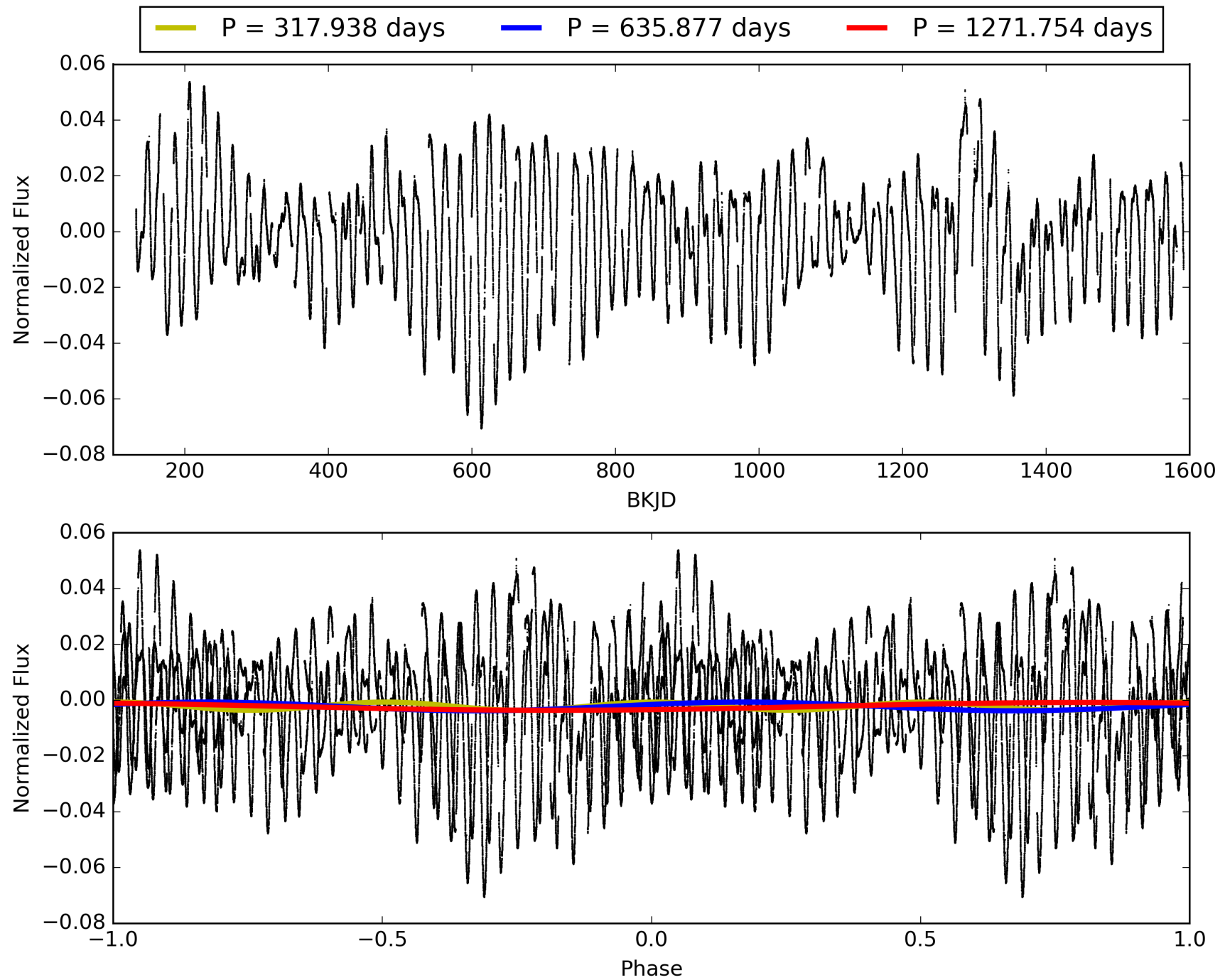
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:03:58 Z

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

TCE 011968008-06, PDC Light Curves

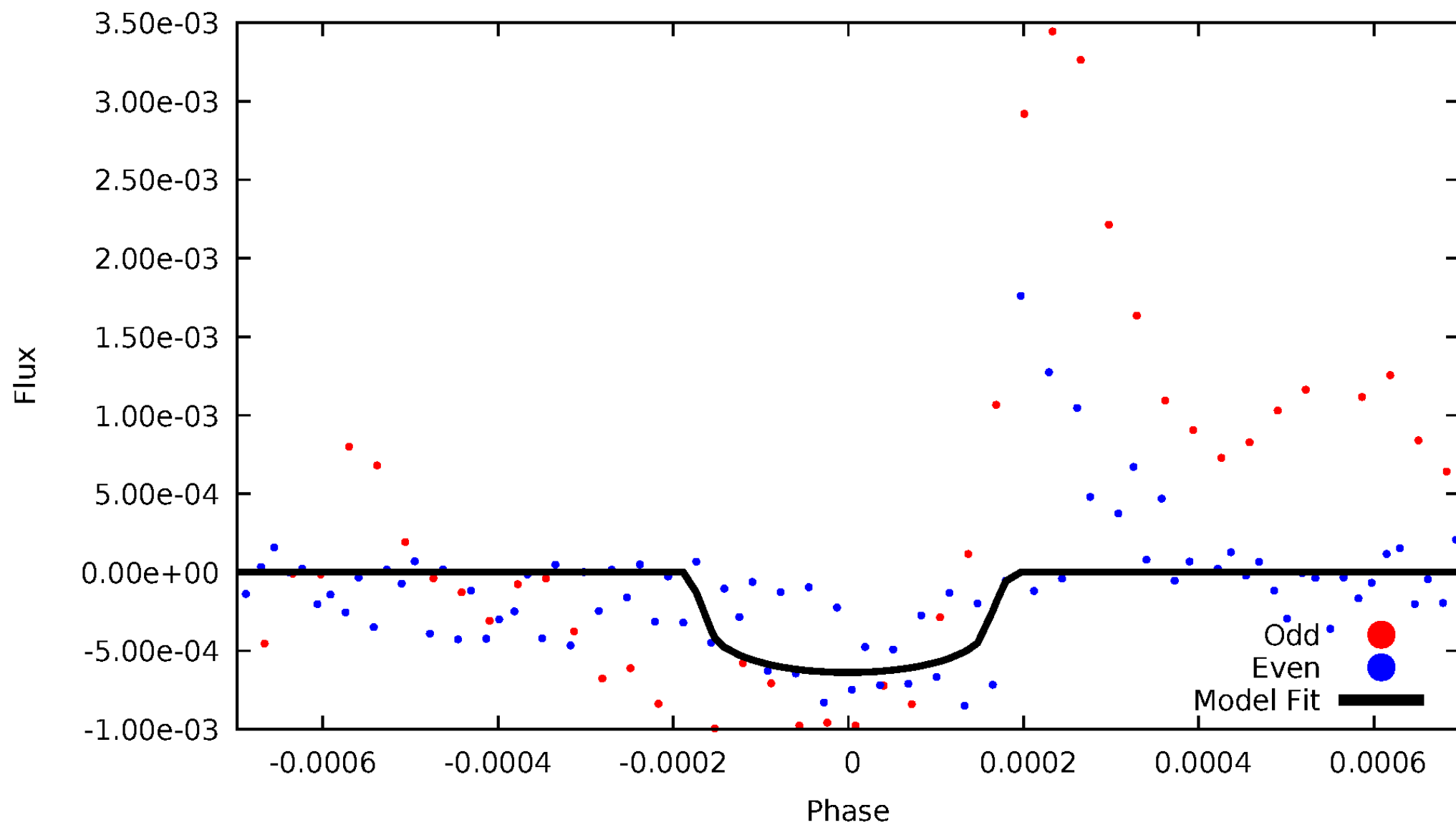


TCE 011968008-06



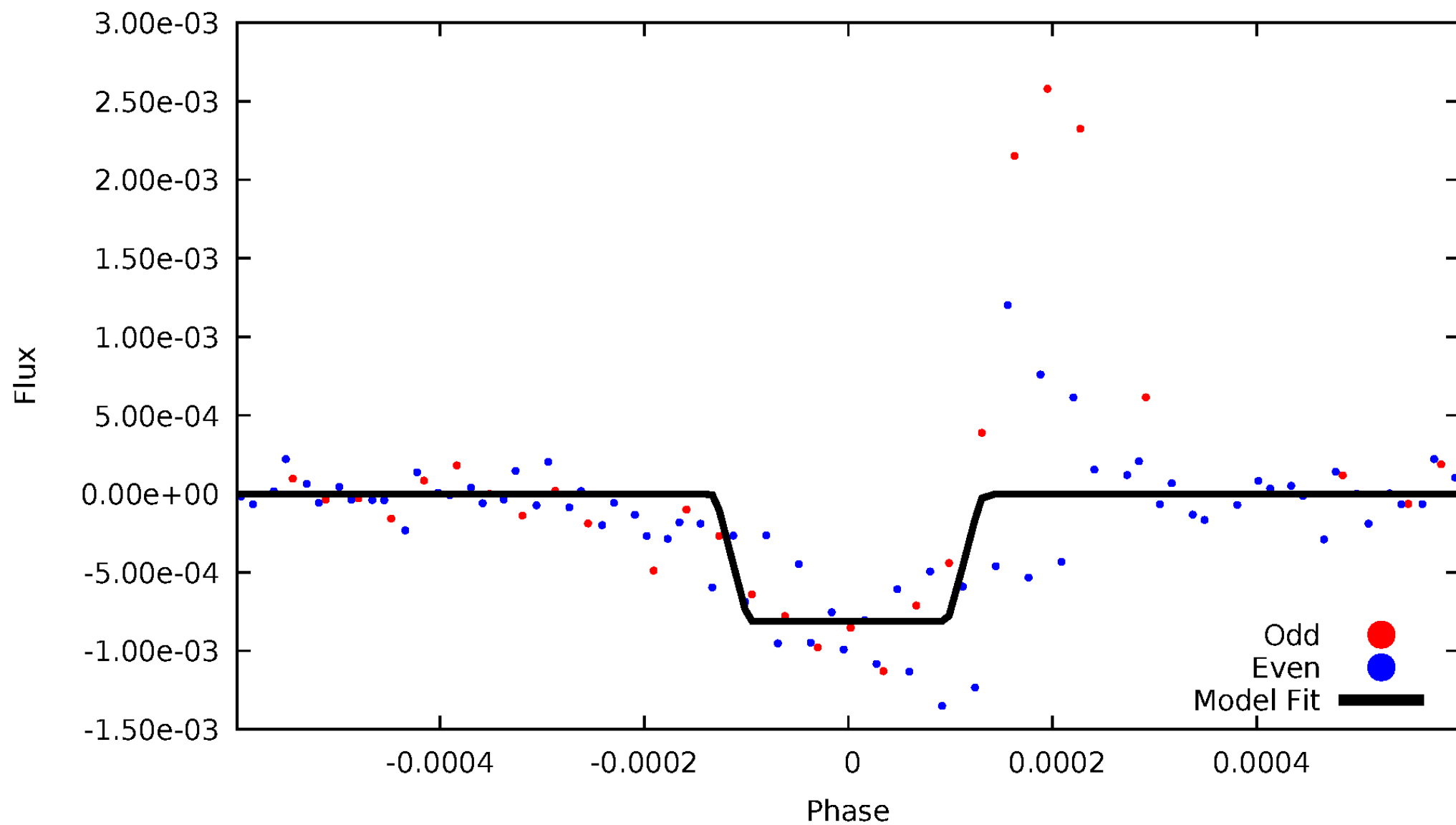
DV Odd/Even

TCE 011968008-06



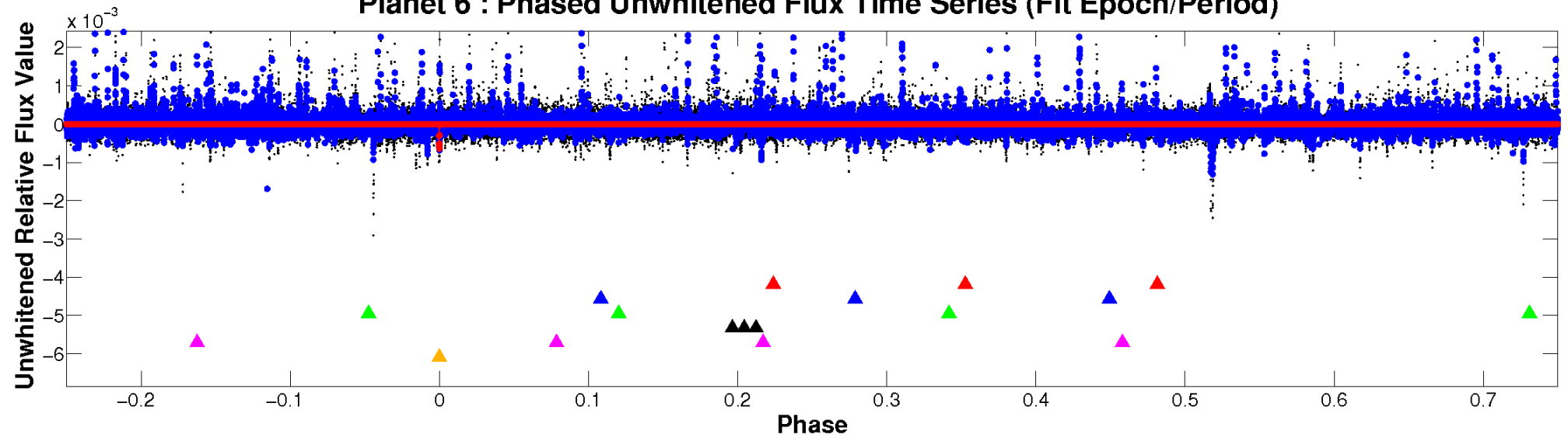
ALT Odd/Even

TCE 011968008-06

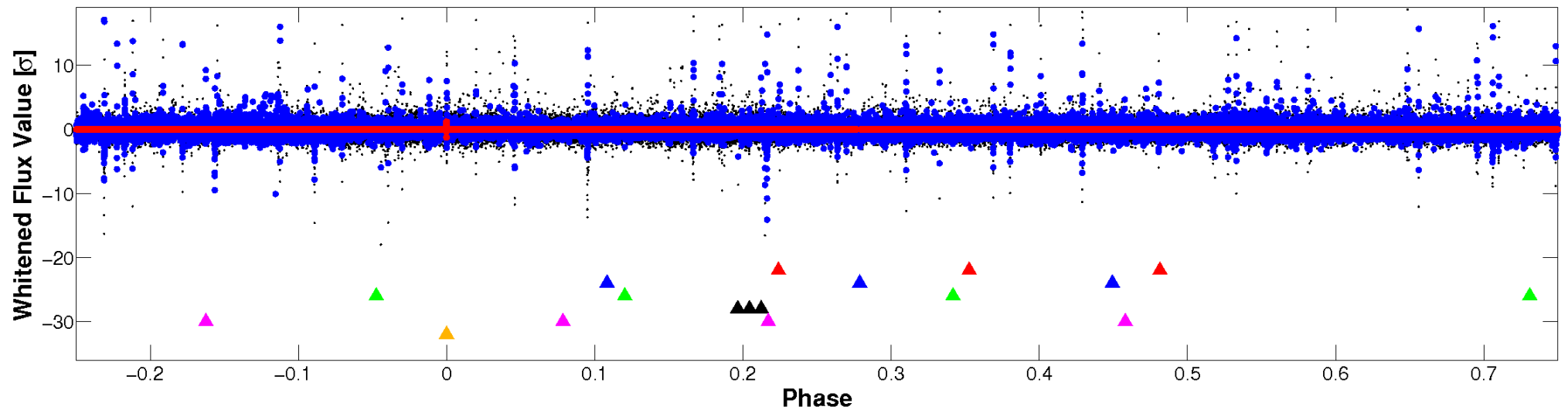


Non-Whitened Vs. Whitened Light Curve

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

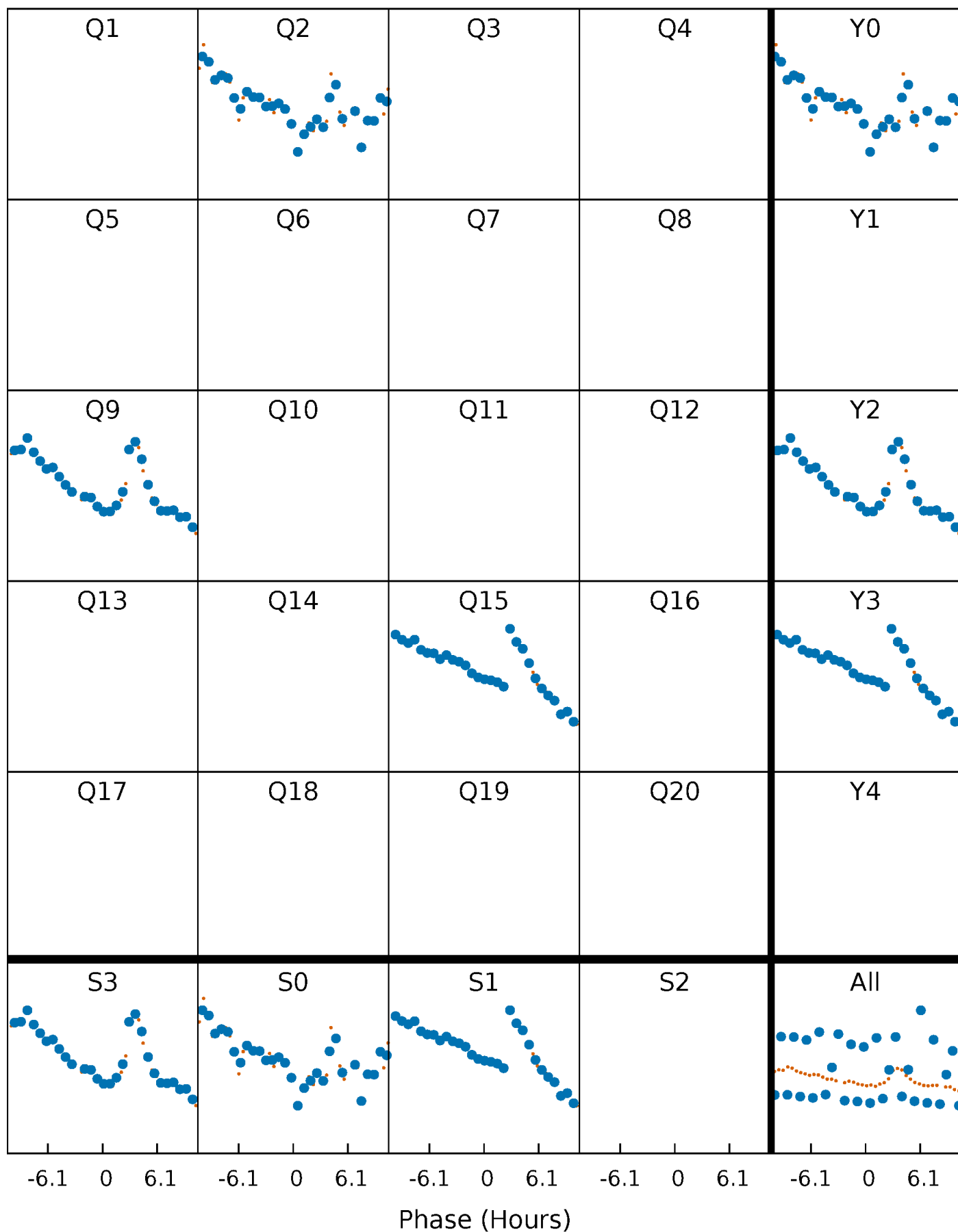


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



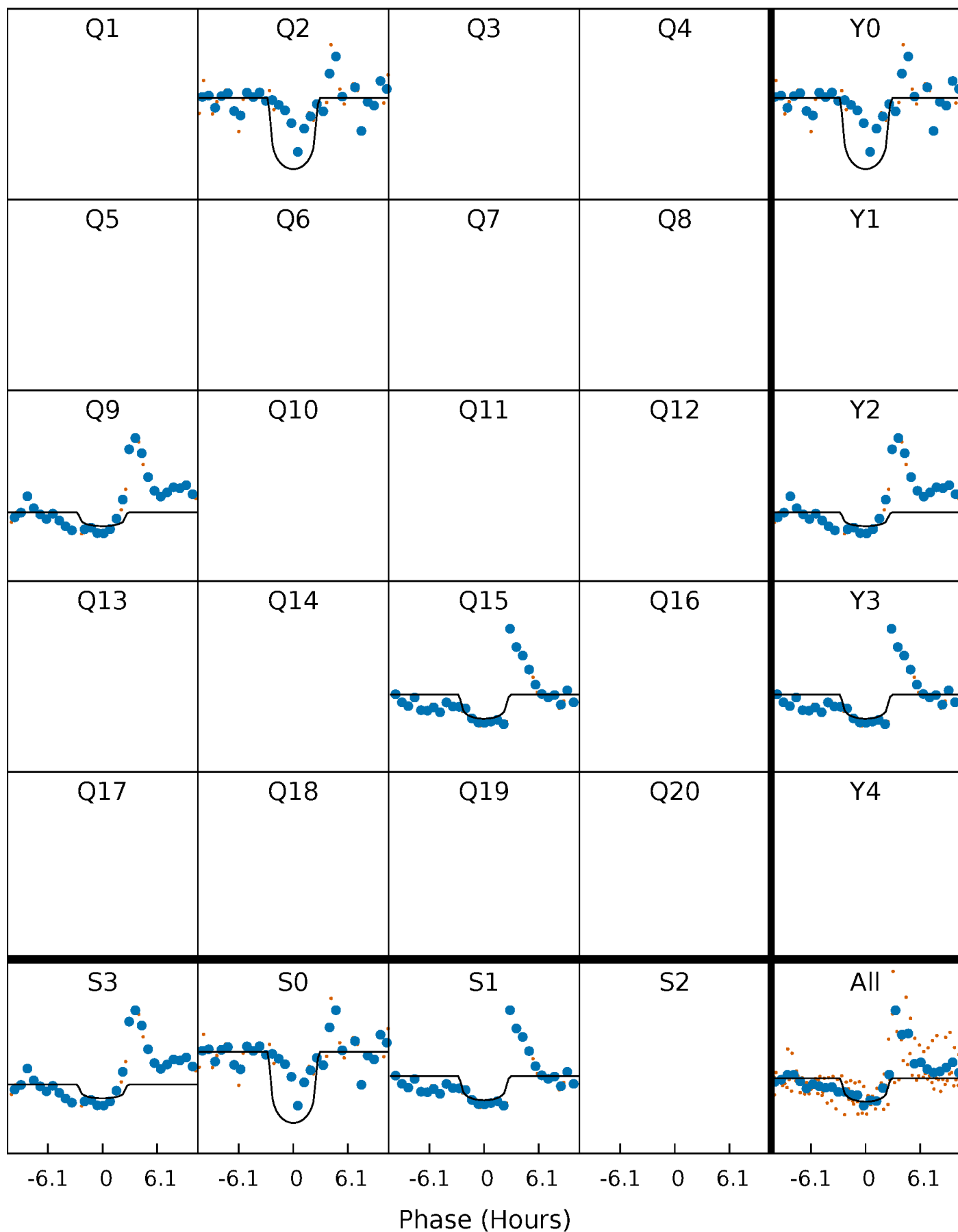
PDC Quarter-Phased Transit Curves

TCE 011968008-06 P=635.876981 Days $T_0=174.861069$ (BKJD)



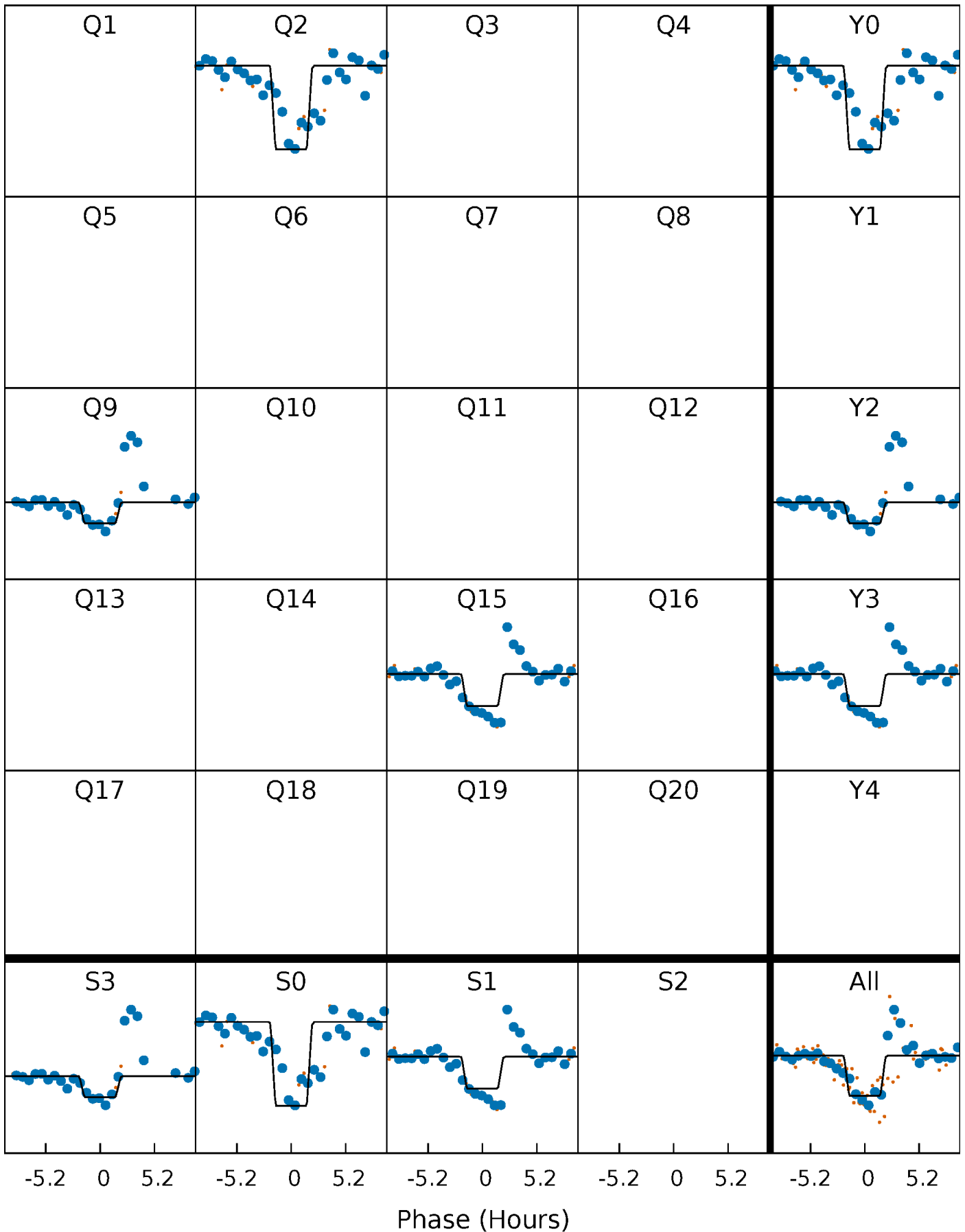
DV Quarter-Phased Transit Curves

TCE 011968008-06 P=635.876981 Days $T_0=174.861069$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

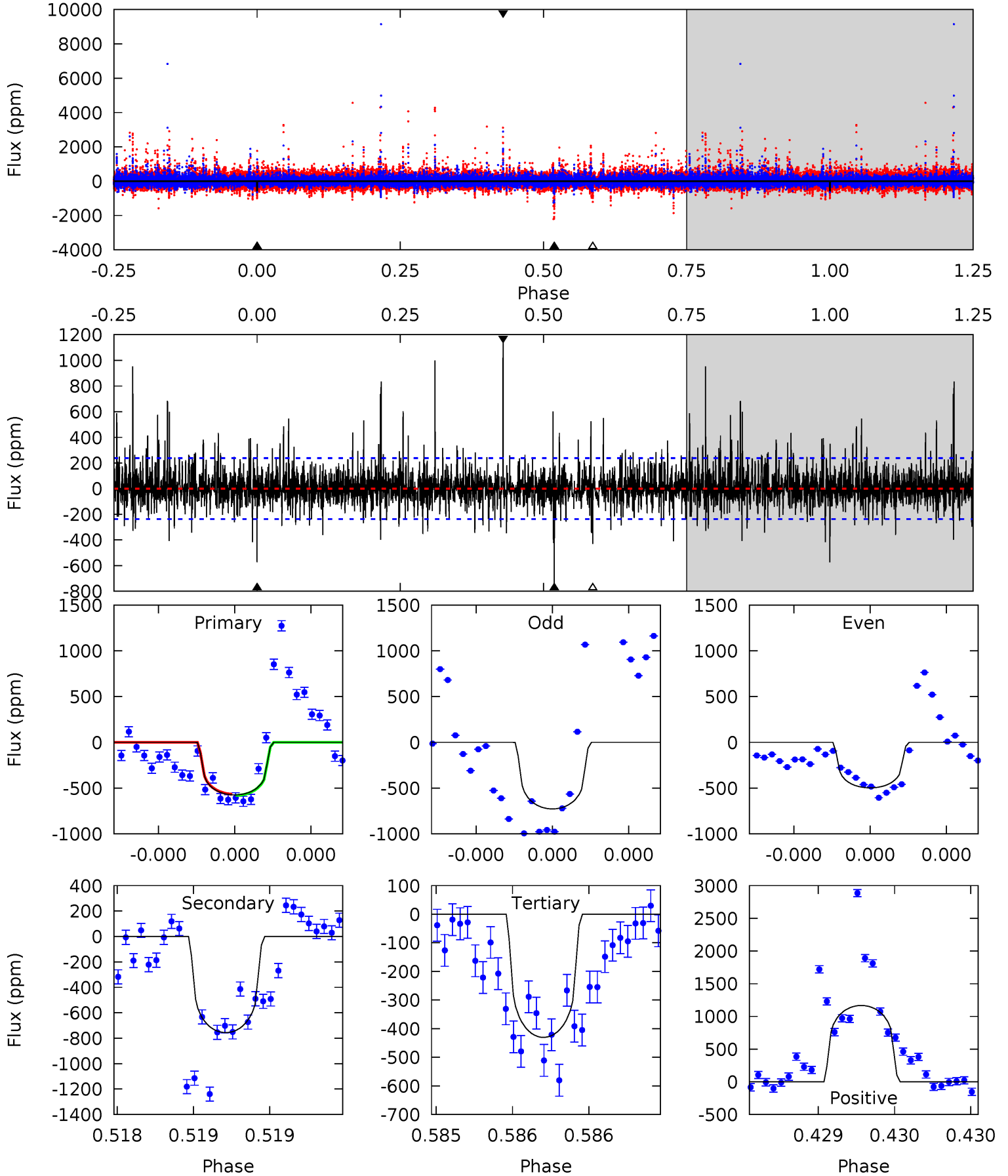
TCE 011968008-06 P=635.878765 Days $T_0=174.883549$ (BKJD)



DV Model-Shift Uniqueness Test

011968008-06, P = 635.876981 Days, E = 174.861069 Days

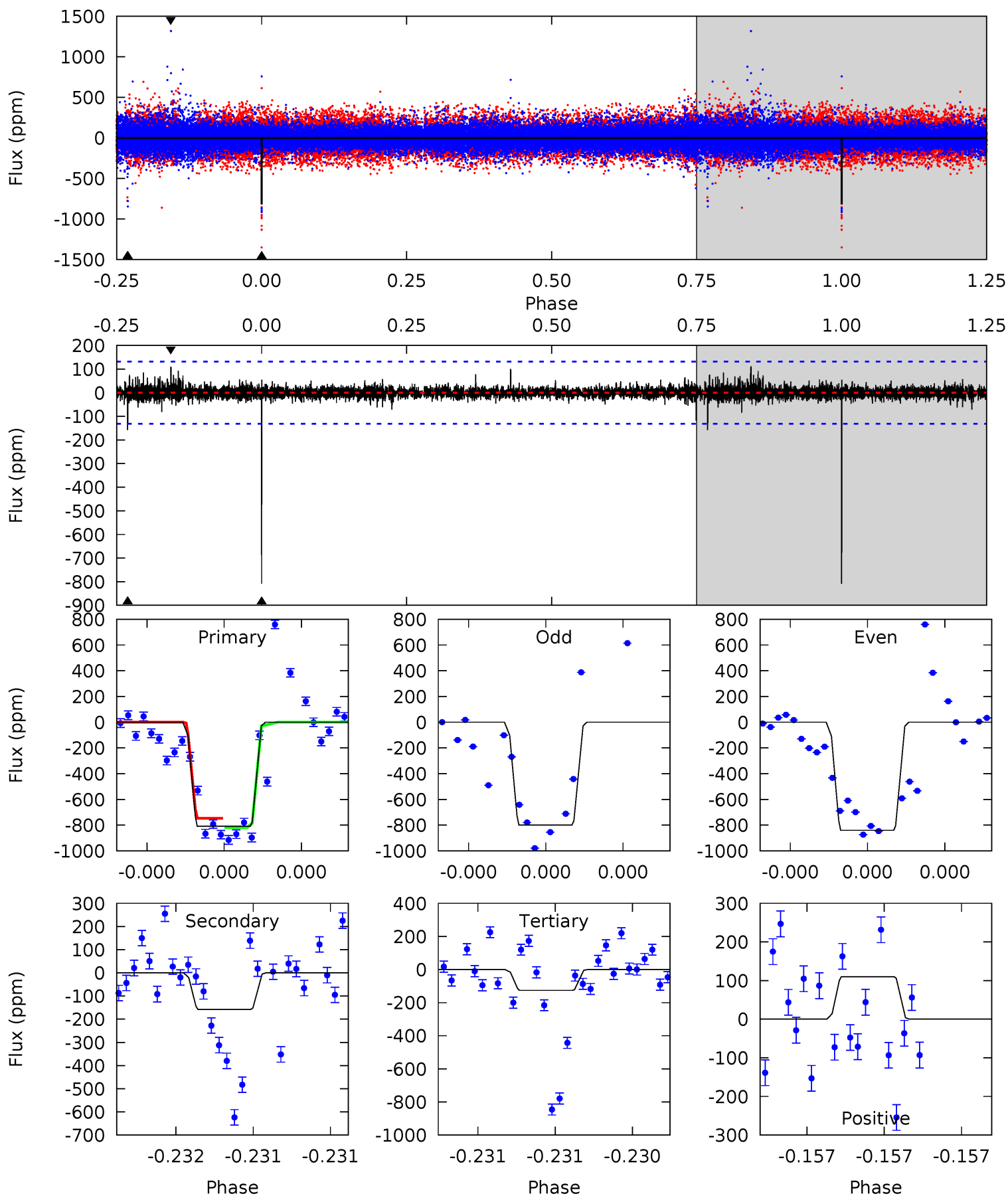
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	17.9	10.2	27.7	5.62	3.55	2.52	3.41	-14.0	7.71	-9.74	1.70	0.79	0.61	0.17



Alt Model-Shift Uniqueness Test

011968008-06, P = 635.878765 Days, E = 174.883549 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.9	6.81	5.44	4.74	5.68	3.64	0.59	29.4	30.1	1.37	2.07	0.84	1.02	0.12	1.52



Stellar Parameters For KIC 011968008

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5324^{+159}_{-143}	$3.862^{+0.749}_{-0.321}$	$-0.480^{+0.350}_{-0.250}$	$1.768^{+1.074}_{-1.074}$	$0.830^{+0.127}_{-0.114}$	$0.212^{+2.693}_{-0.134}$
	+3%/-3%	+19%/-8%	+73%/-52%	+61%/-61%	+15%/-14%	+1272%/-63%
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 011968008-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-756 ± 42	$7.54^{+9.05}_{-5.23}$	369^{+56}_{-66}	4419^{+3053}_{-910}	$13803^{+132738}_{-10949}$
Alt.	-158 ± 23	$8.21^{+8.13}_{-5.46}$	369^{+61}_{-68}	3315^{+1456}_{-532}	2486^{+19402}_{-1904}

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

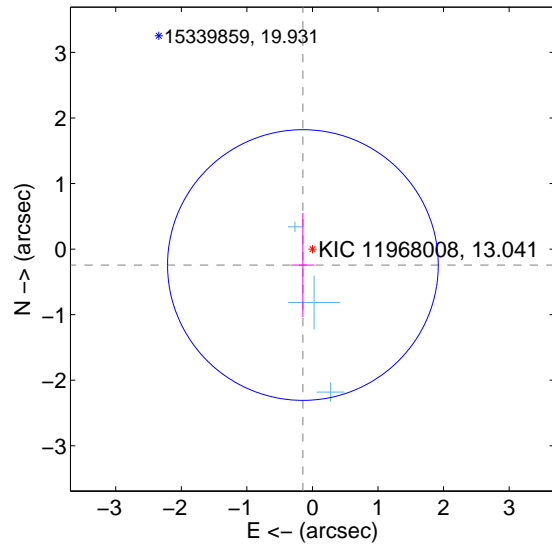
Supplemental centroid analysis for 011968008-06. Kepler magnitude: 13.04. Transit SNR 7.26

There are 3 quarters with good PRF difference image offsets

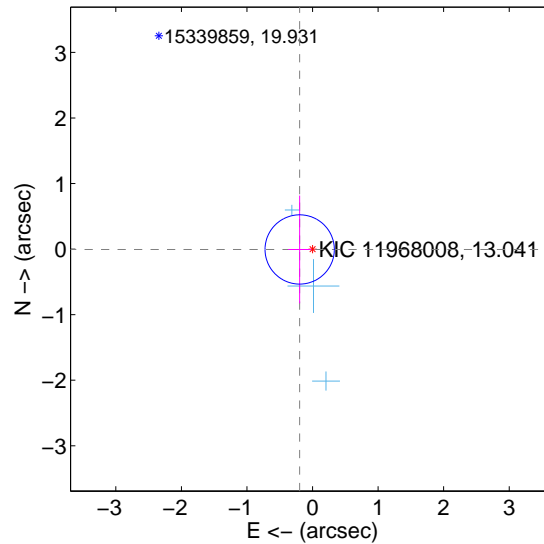
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.283 ± 0.688	0.41	0.146 ± 0.178	-0.243 ± 0.795
PRF-fit source offset from KIC position	0.196 ± 0.176	1.11	0.196 ± 0.175	-0.005 ± 0.823
photometric centroid source offset	0.68 ± 0.80	0.86	0.22 ± 0.62	0.64 ± 0.82

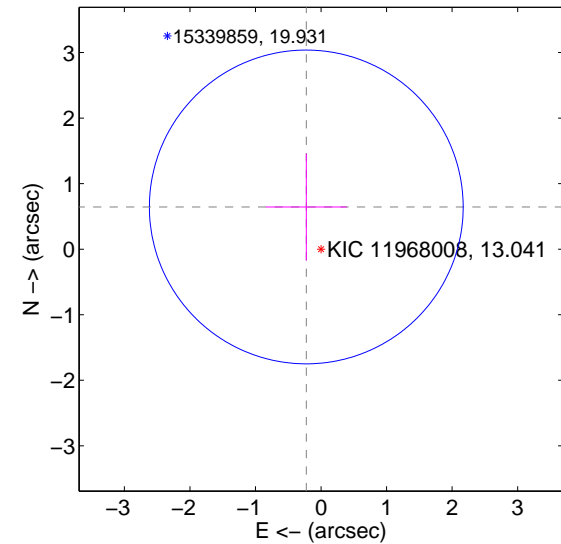
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

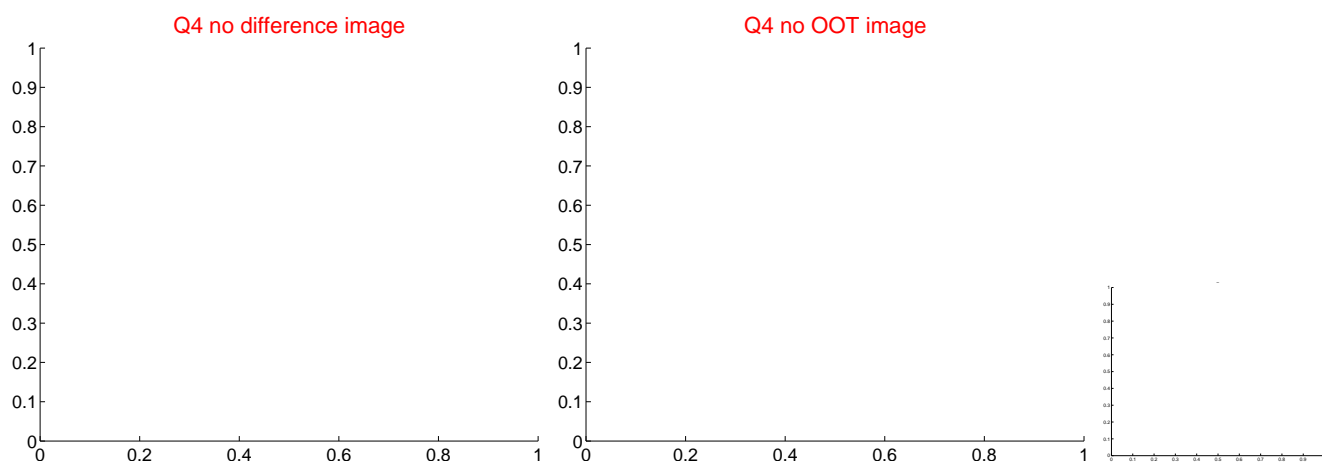
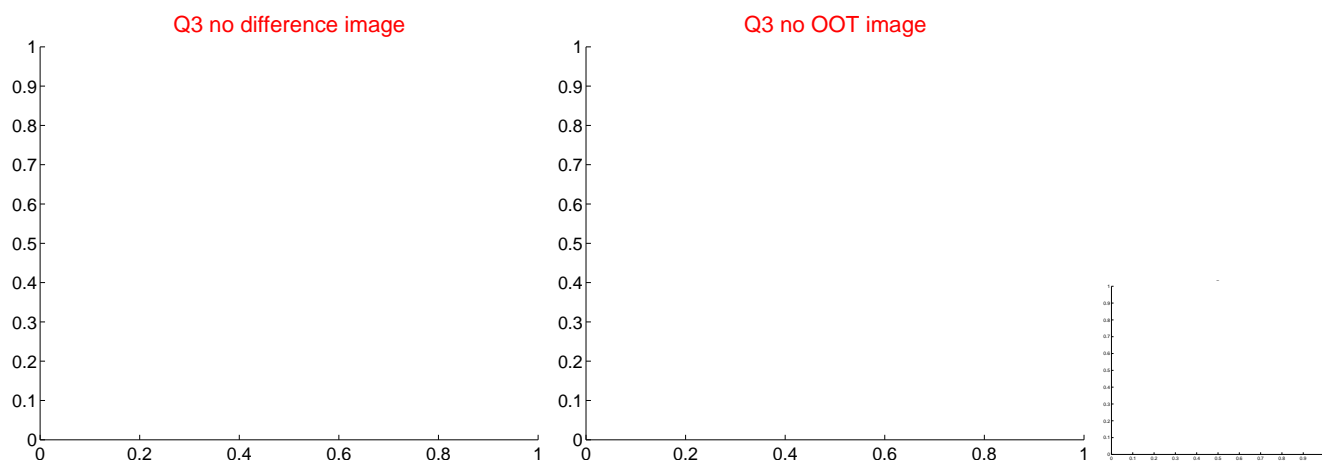
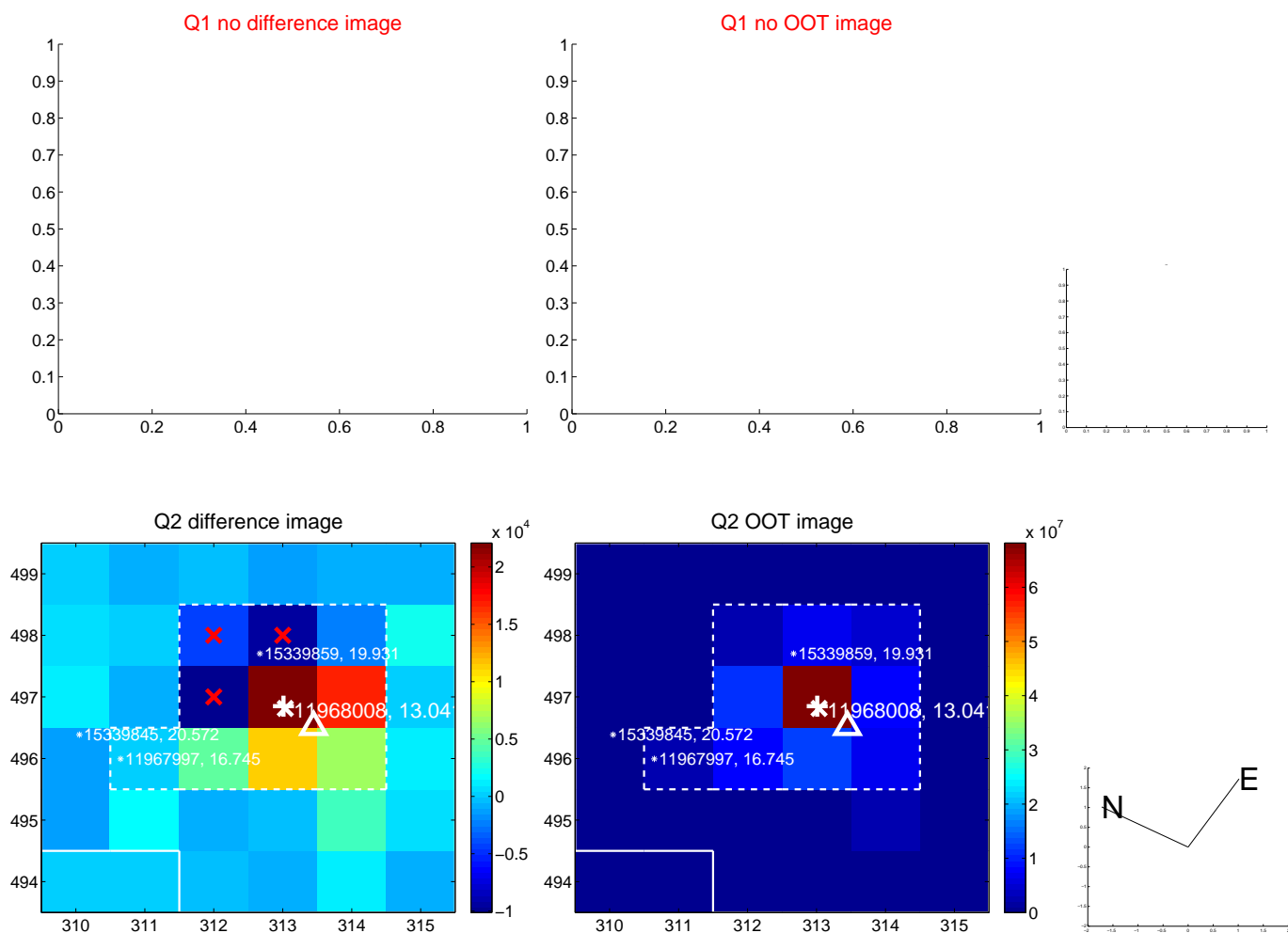


offset from photometric centroids



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

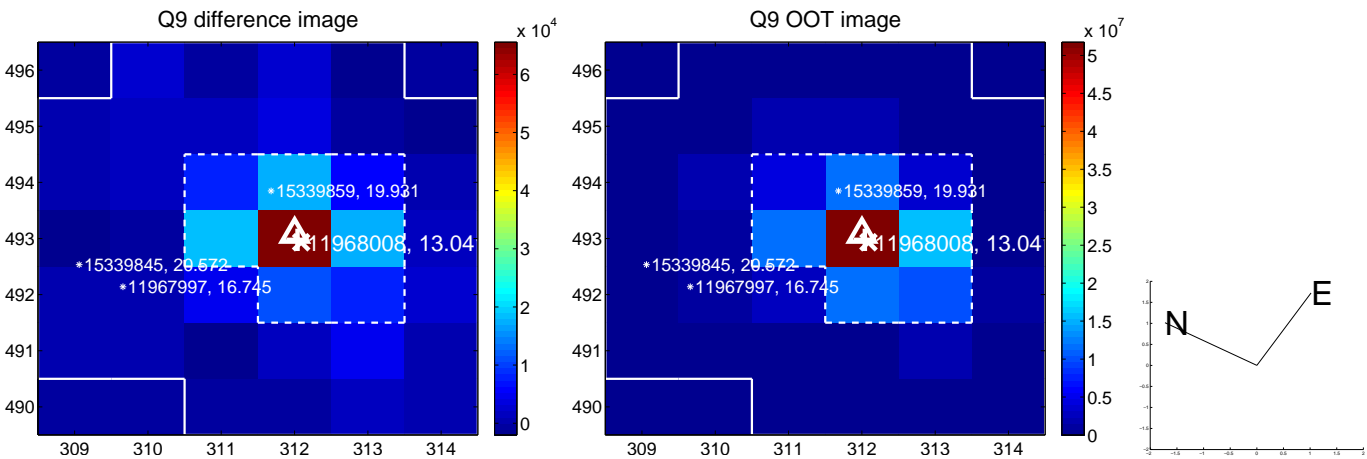
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



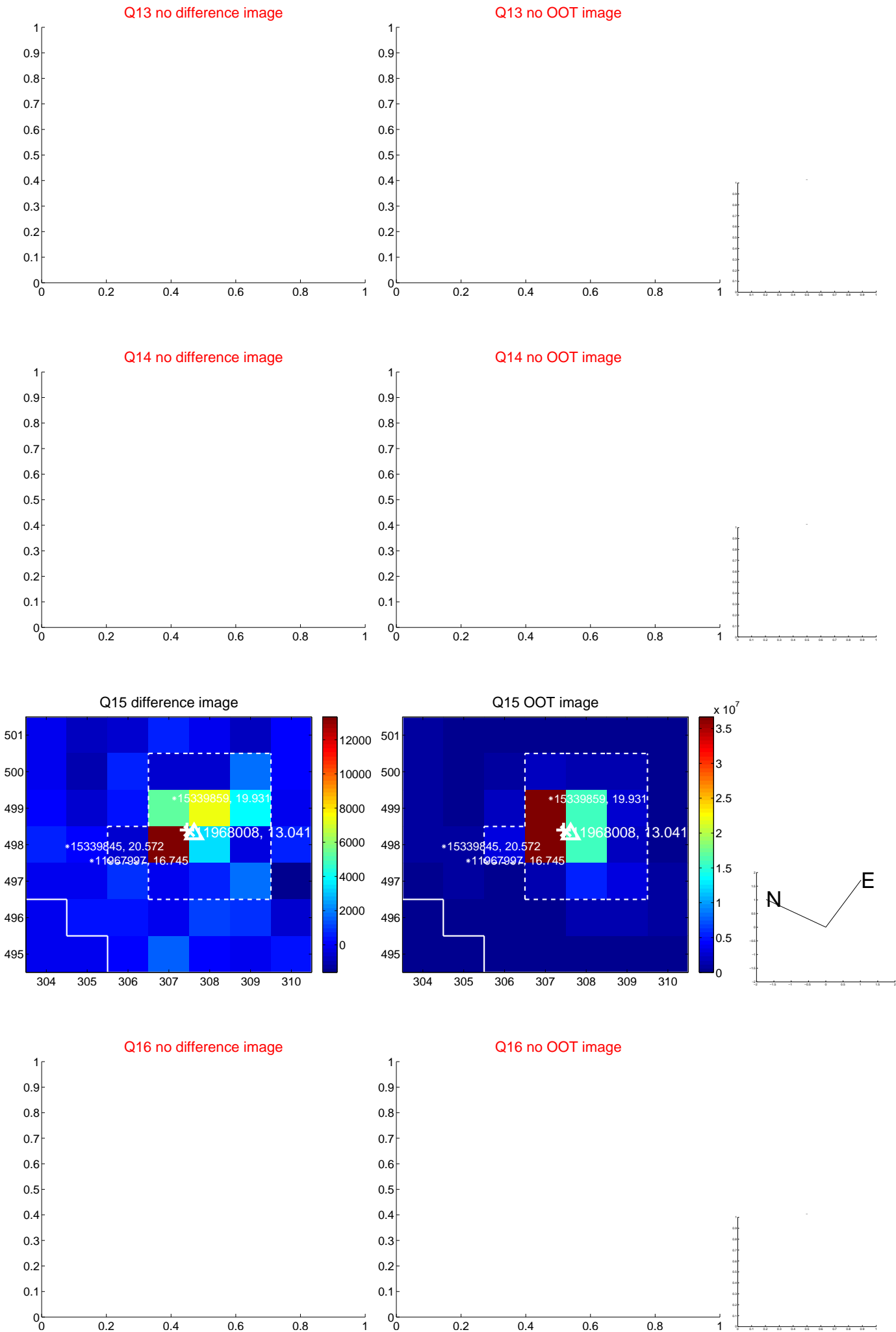
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



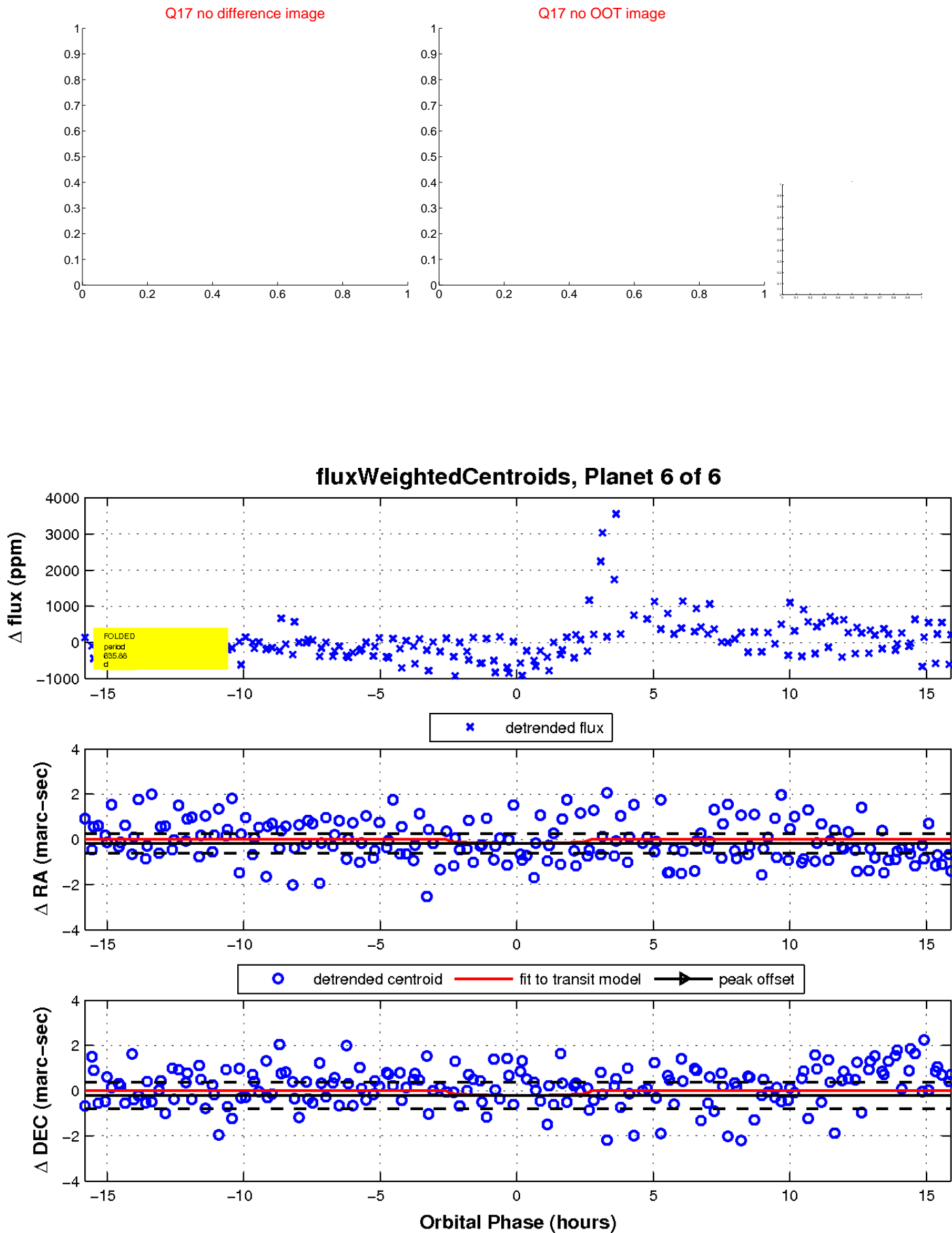
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

