

KIC 010992733

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})
010992733-01	OBS	7399.01	18.526048	144.186612	454735.2	3.500	12773.5	-1.0	0.89	5492	48.40	34.62
010992733-02	OBS	No	18.525897	138.959026	278068.3	5.000	9021.1	-1.0	0.89	5492	43.06	34.62
010992733-03	OBS	No	6.175457	131.585917	34048.1	15.000	995.1	-1.0	0.89	5492	16.07	149.81
010992733-04	OBS	No	18.525946	136.804658	2667.2	41.377	75.6	30.8	0.89	5492	8.80	34.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010992733-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
010992733-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
010992733-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—RESIDUAL_TCE—CENT_NOFITS
010992733-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—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.

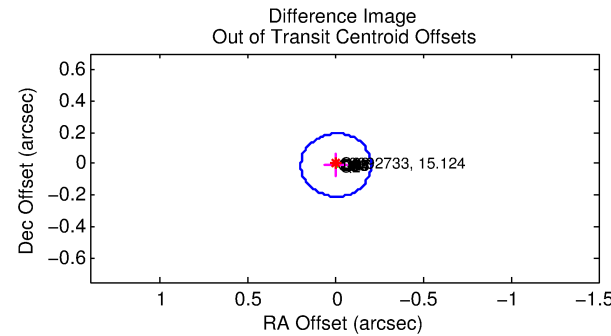
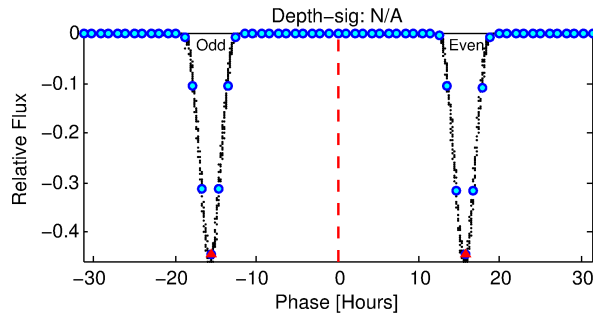
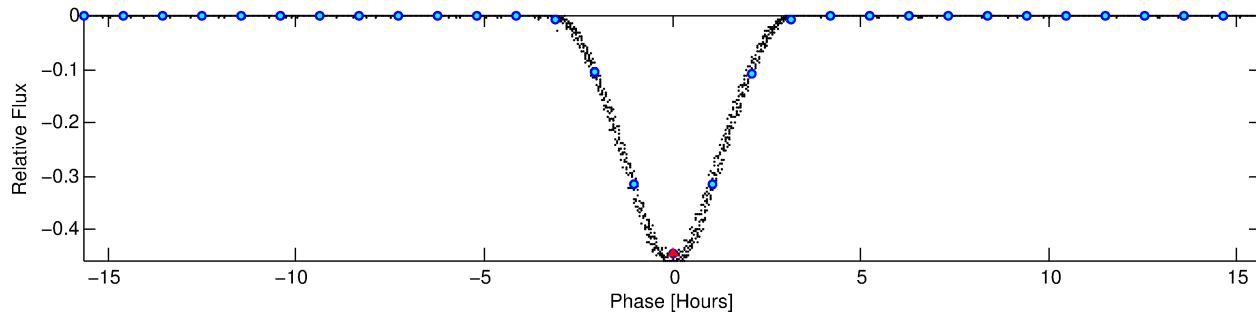
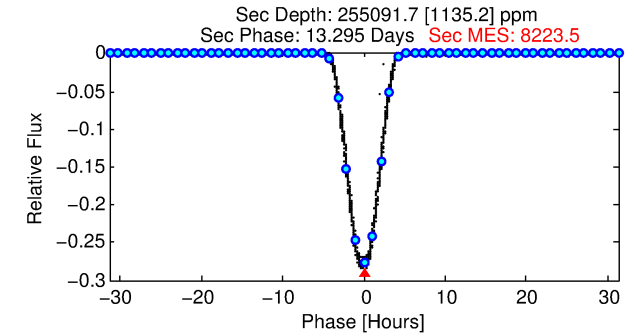
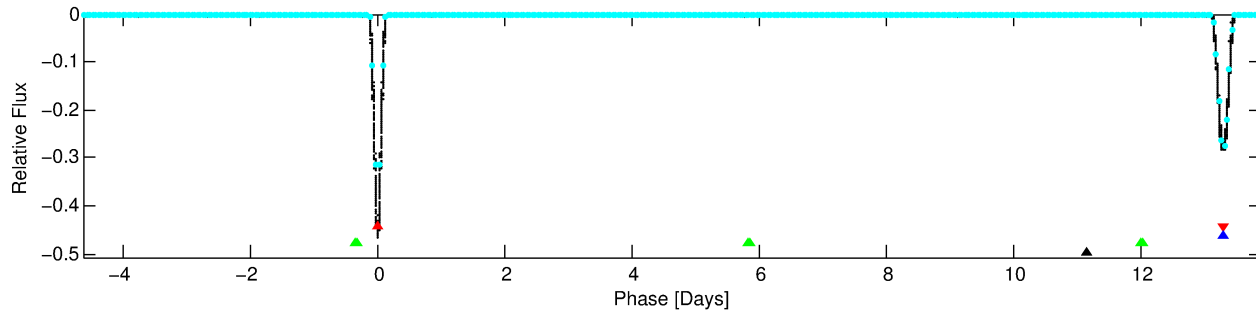
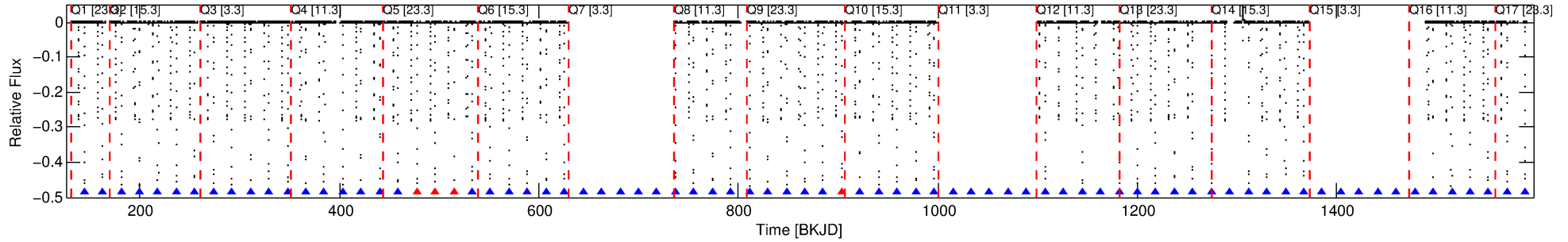
Ephemeris Match Information For 010992733-01

No Significant Match Found

DV One-Page Summary

KIC: 10992733 Candidate: 1 of 4 Period: 18.526 d
KOI: K07399.01 Corr: 0.769

Kp: 15.12 R*: 0.89 Rs Teff: 5492.0 K Logg: 4.53 Fe/H: 0.200



TPS TCE Results:

Period = 18.52605 d
Epoch = 144.1866 BKJD

DV fit results are unavailable

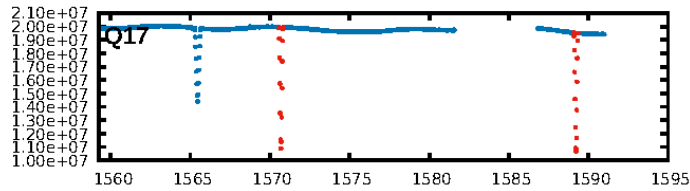
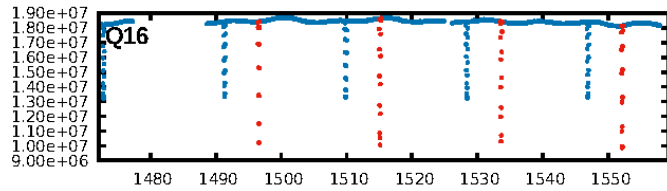
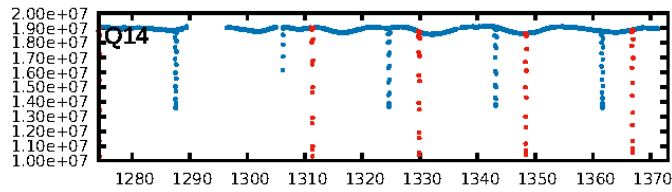
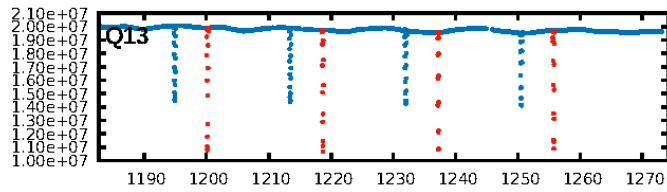
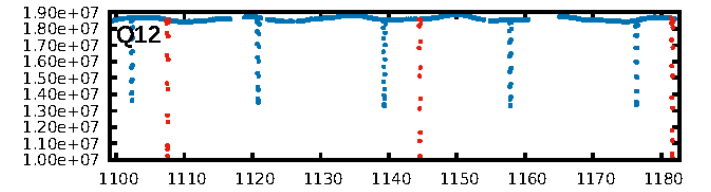
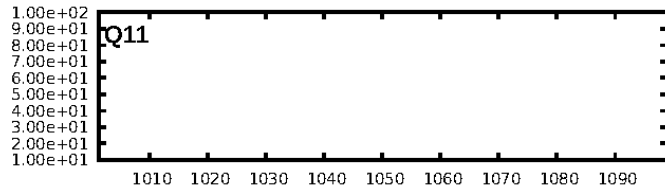
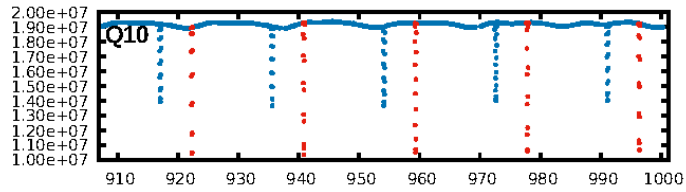
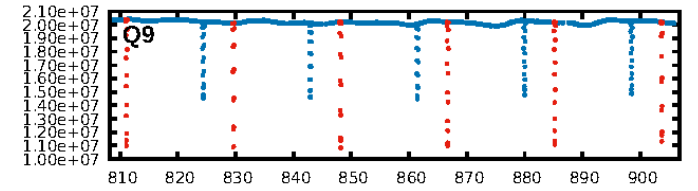
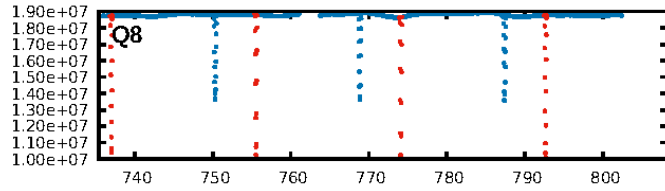
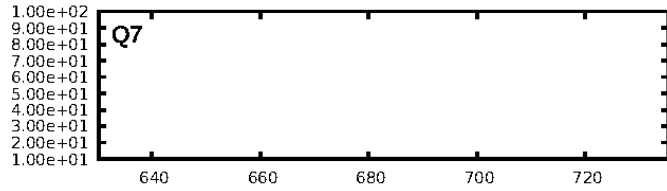
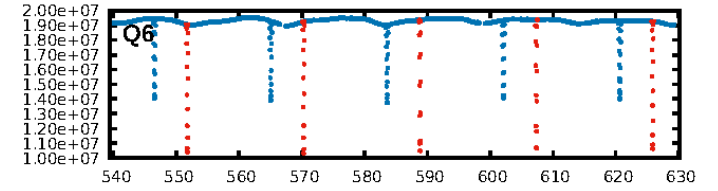
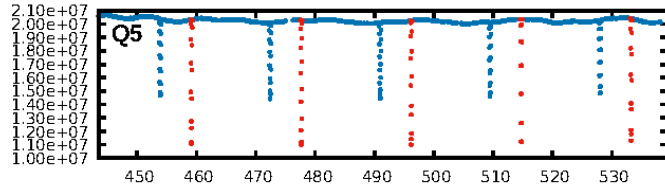
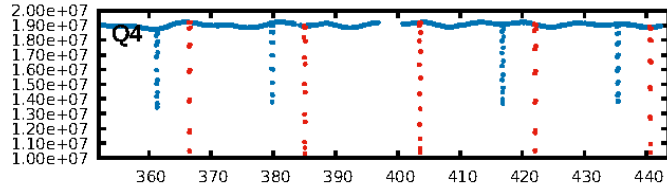
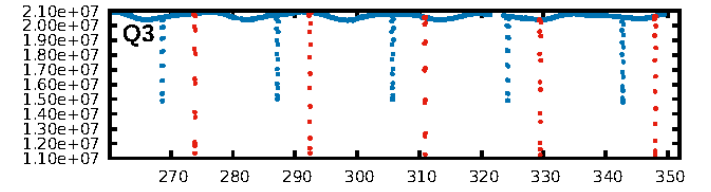
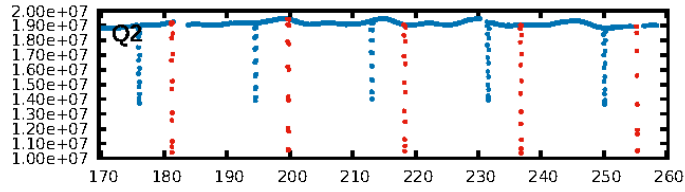
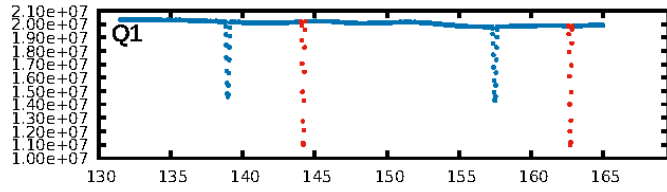
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.93 [52/56]
GhostDiagnostic-chr: 1.26
Centroid-sig: N/A
Centroid-so: 0.369 arcsec [364.34 σ]
OotOffset-rm: 0.008 arcsec [0.13 σ]
KicOffset-rm: 0.029 arcsec [0.42 σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 0.00 [0/14]

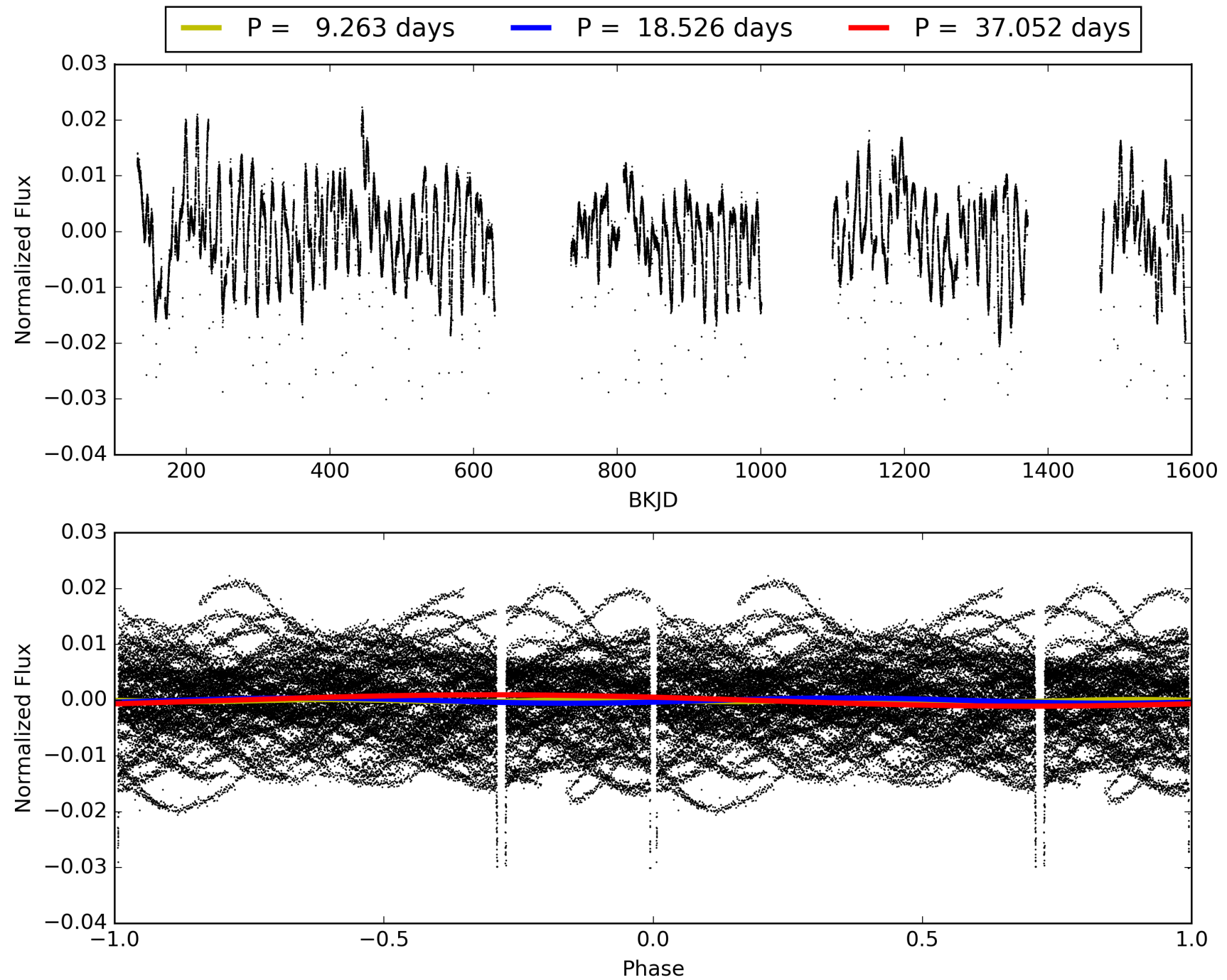
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 010992733-01, PDC Light Curves

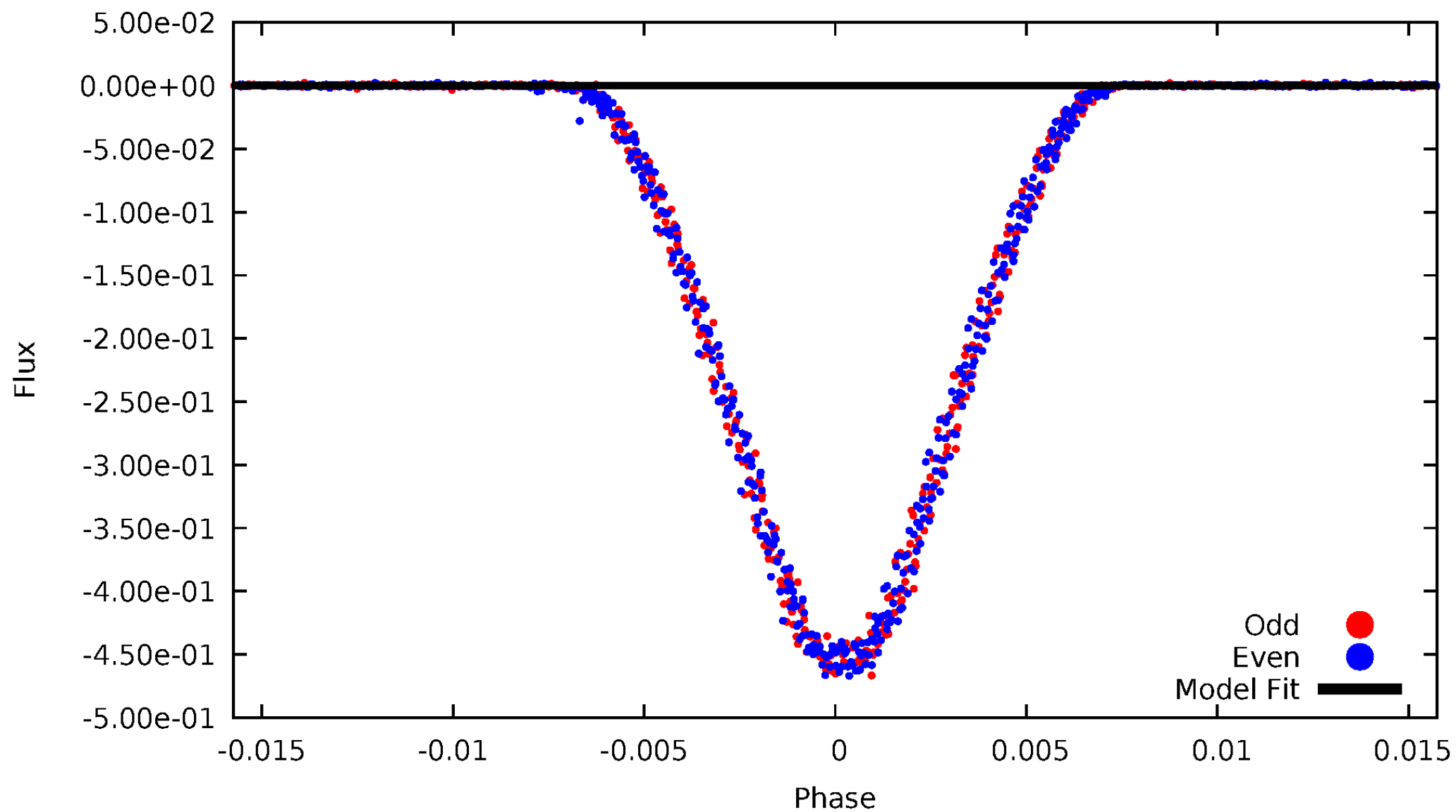


TCE 010992733-01



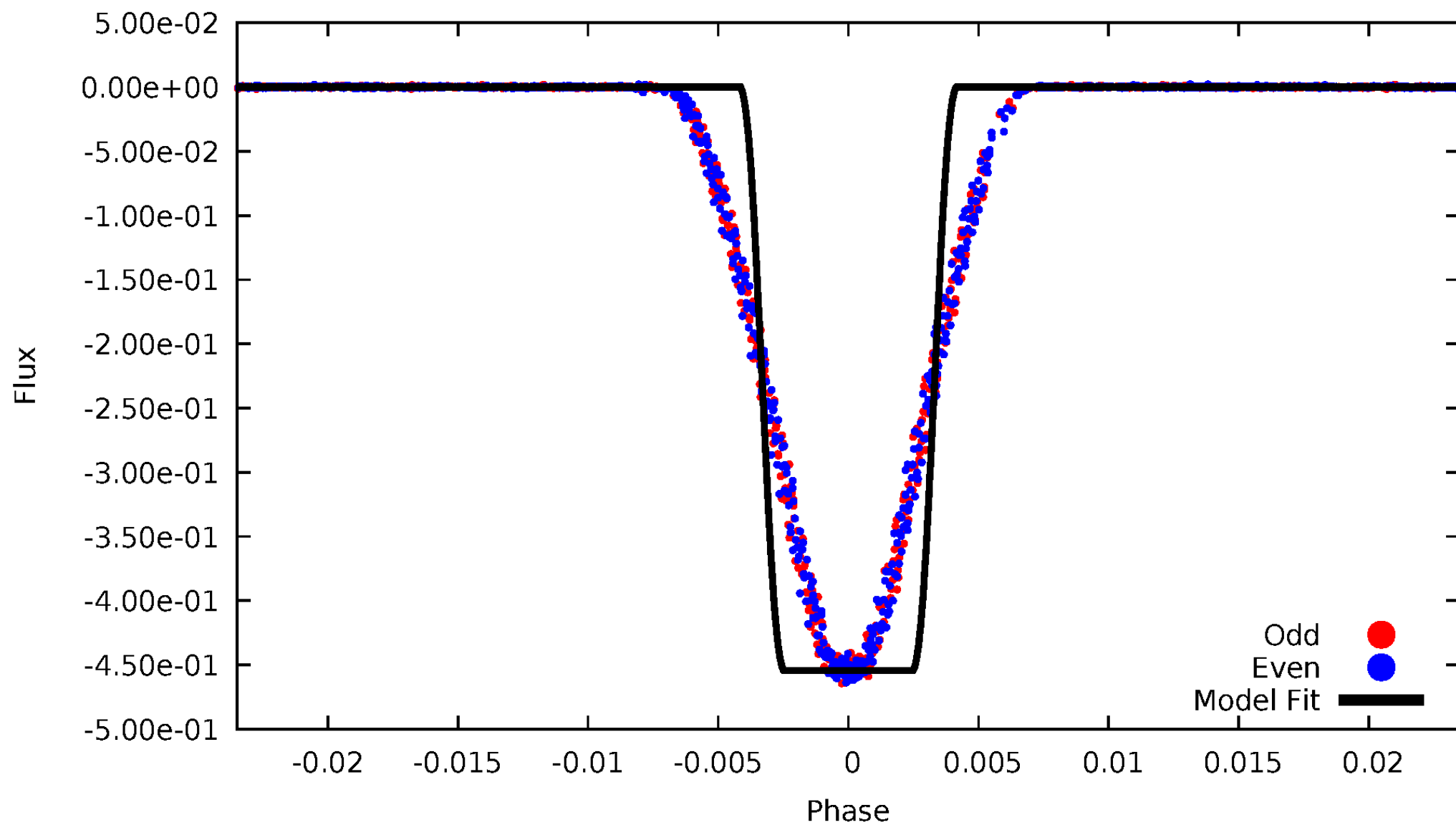
DV Odd/Even

TCE 010992733-01



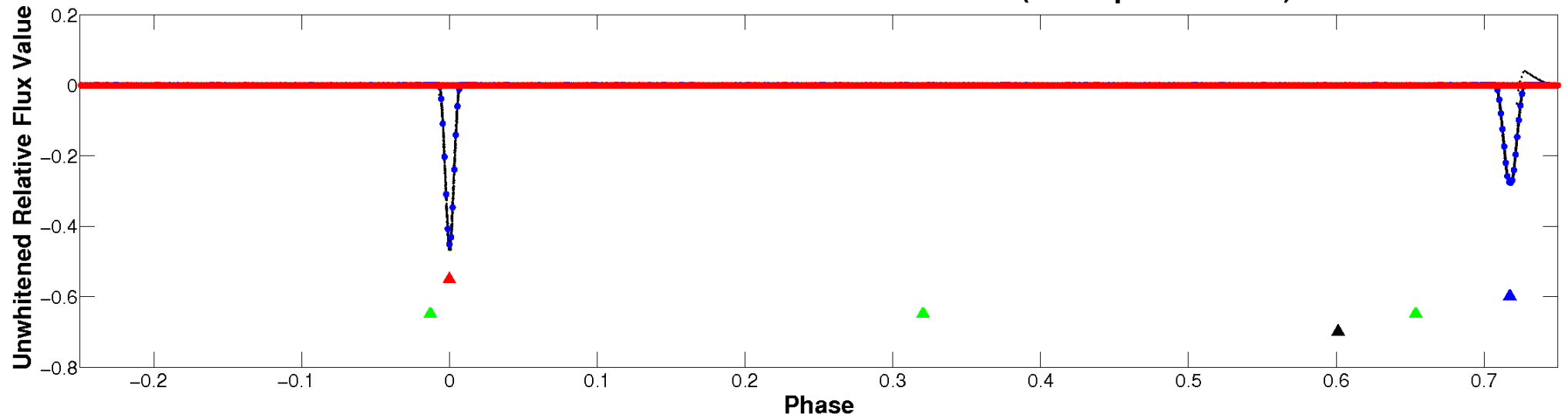
ALT Odd/Even

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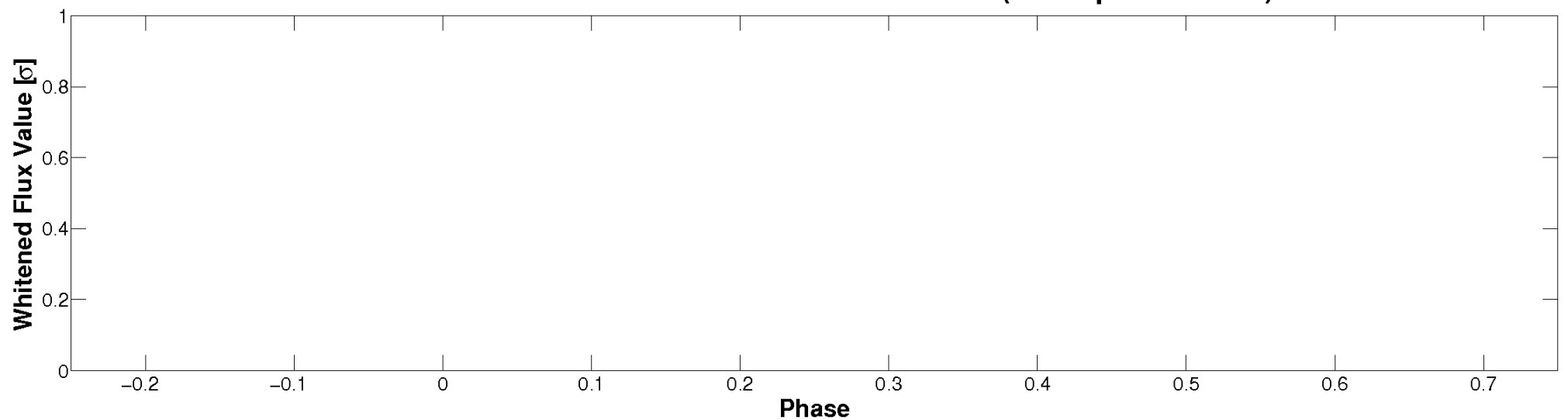


Non-Whitened Vs. Whitened Light Curve

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

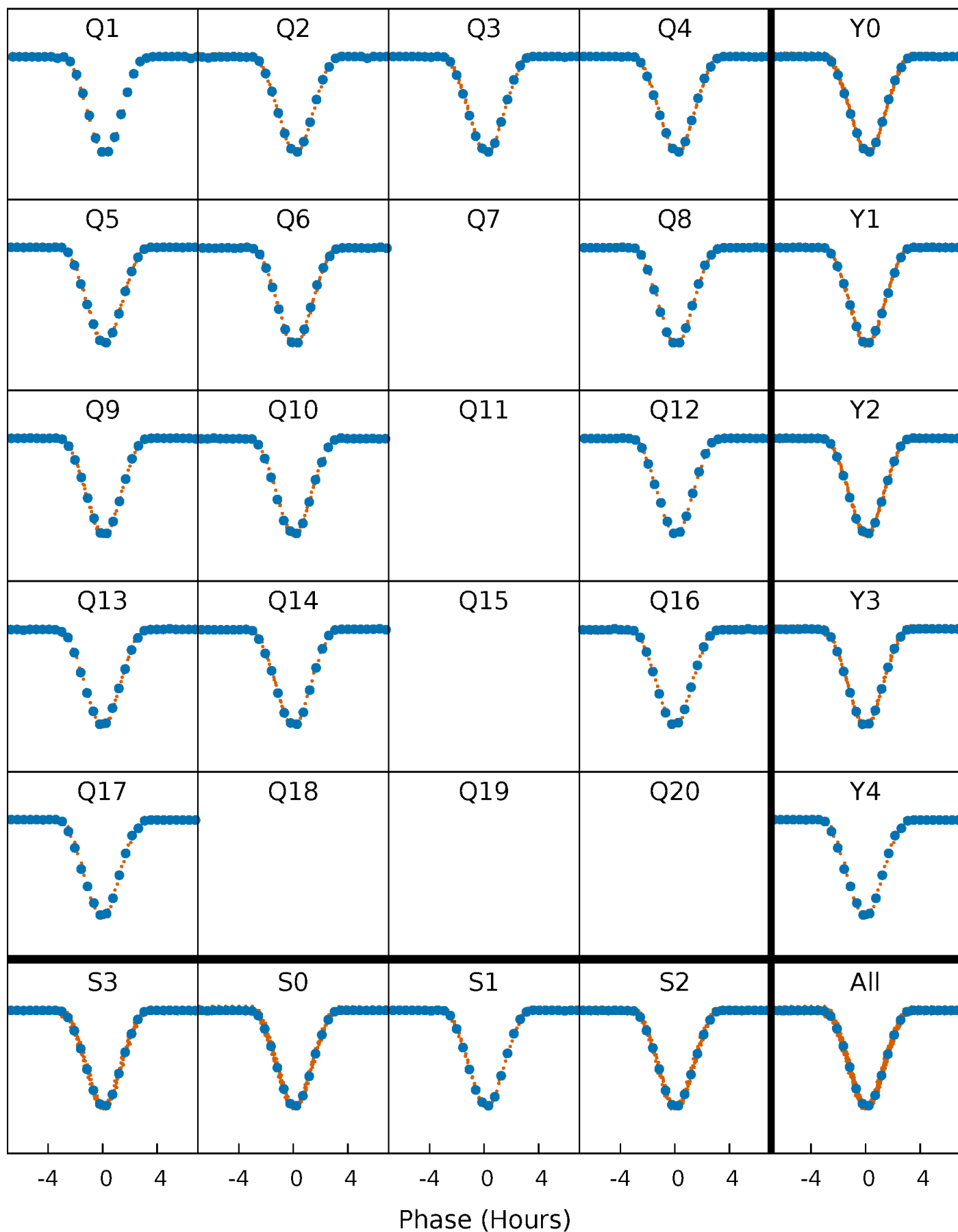


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



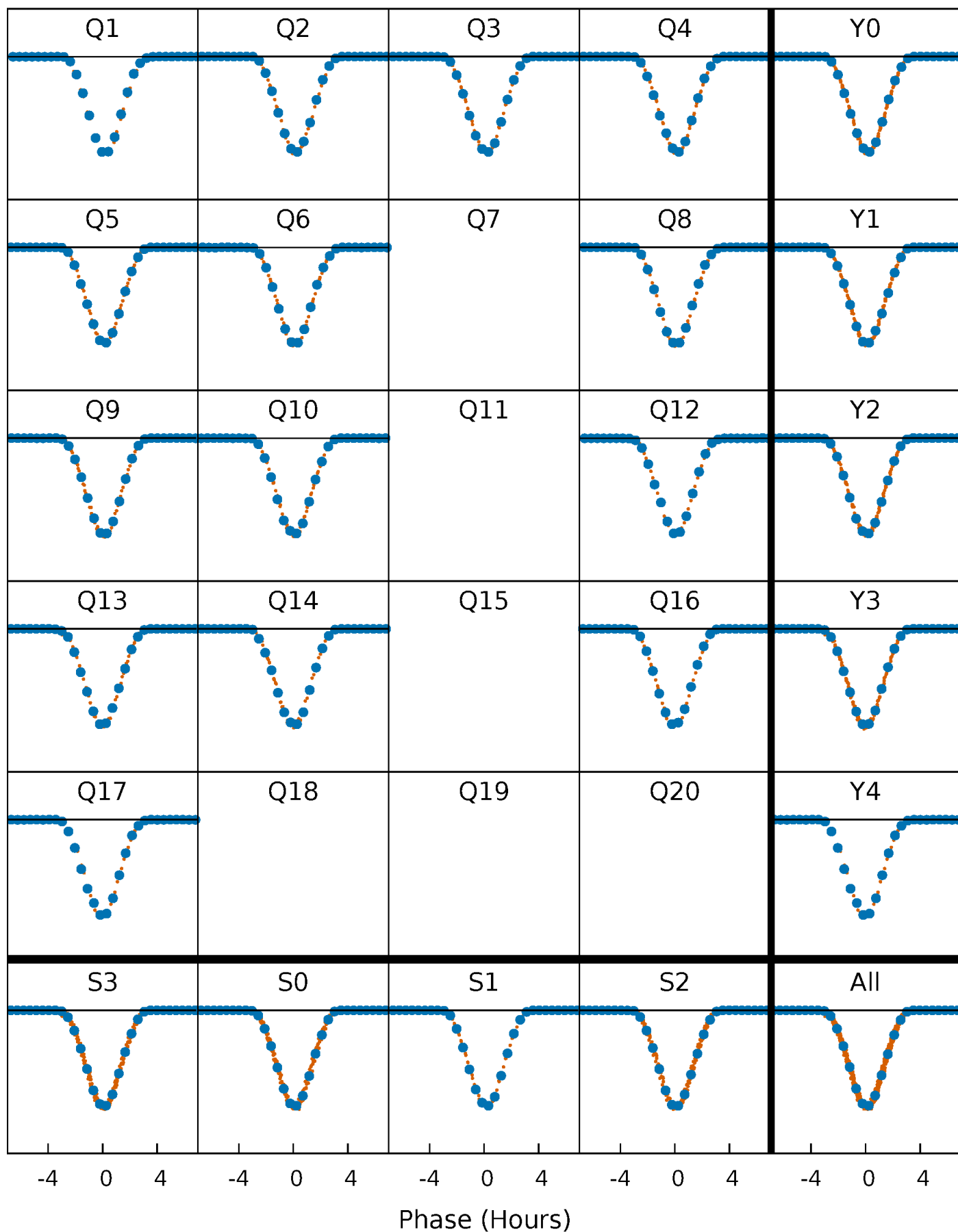
PDC Quarter-Phased Transit Curves

TCE 010992733-01 P= 18.526048 Days $T_0=144.186612$ (BKJD)



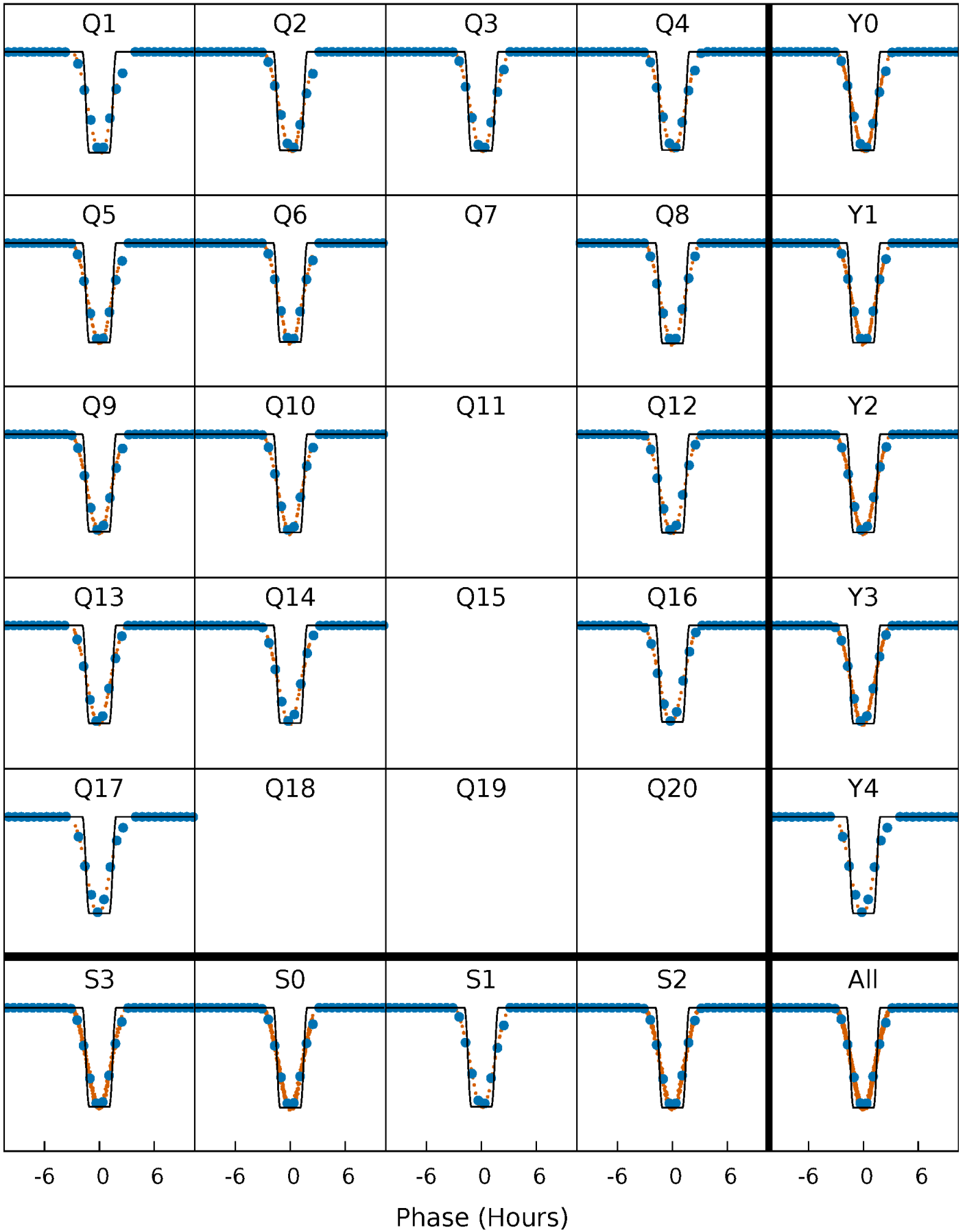
DV Quarter-Phased Transit Curves

TCE 010992733-01 P= 18.526048 Days $T_0=144.186612$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

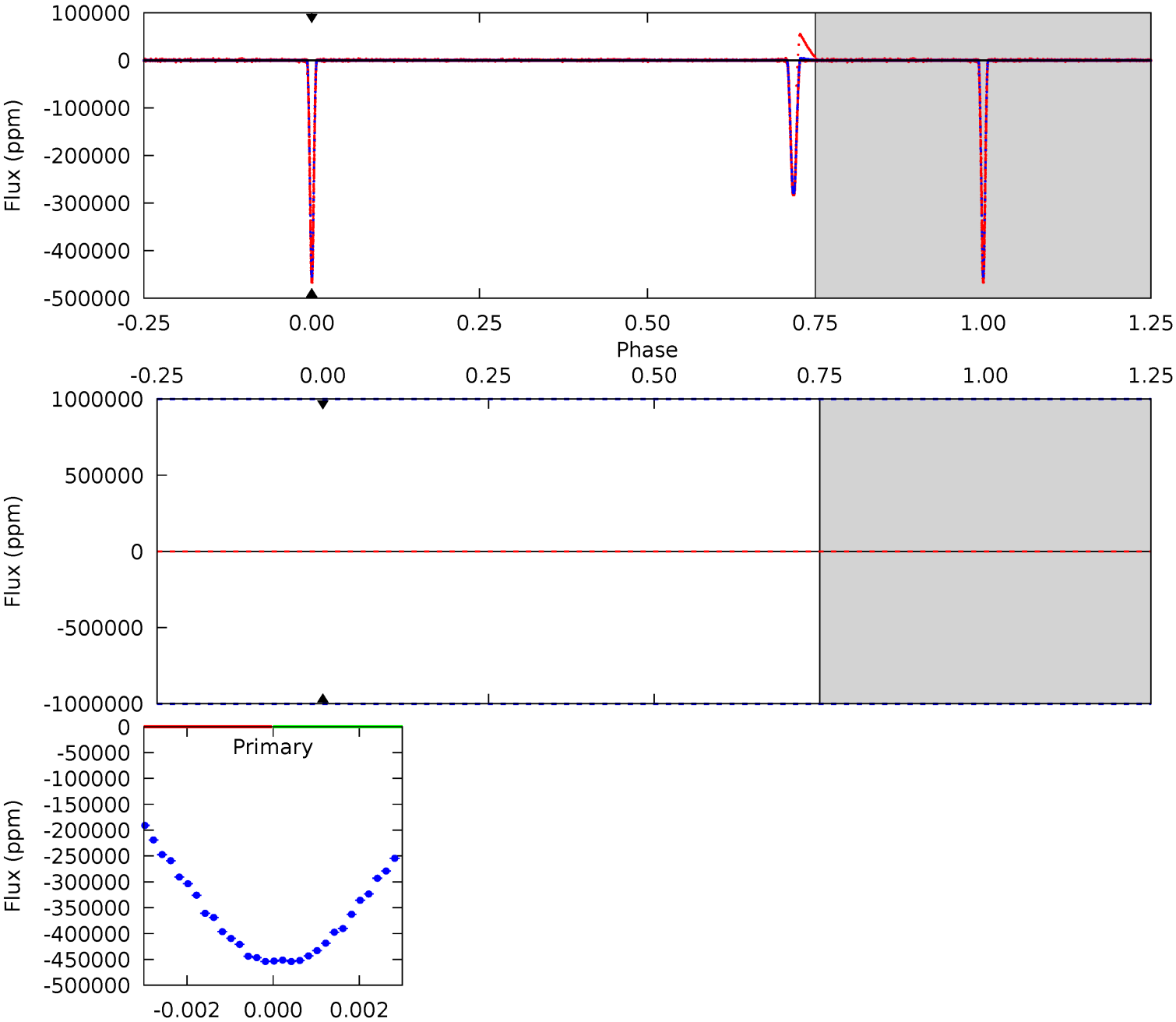
TCE 010992733-01 P= 18.526048 Days $T_0=144.190024$ (BKJD)



DV Model-Shift Uniqueness Test

010992733-01, P = 18.526048 Days, E = 125.660564 Days

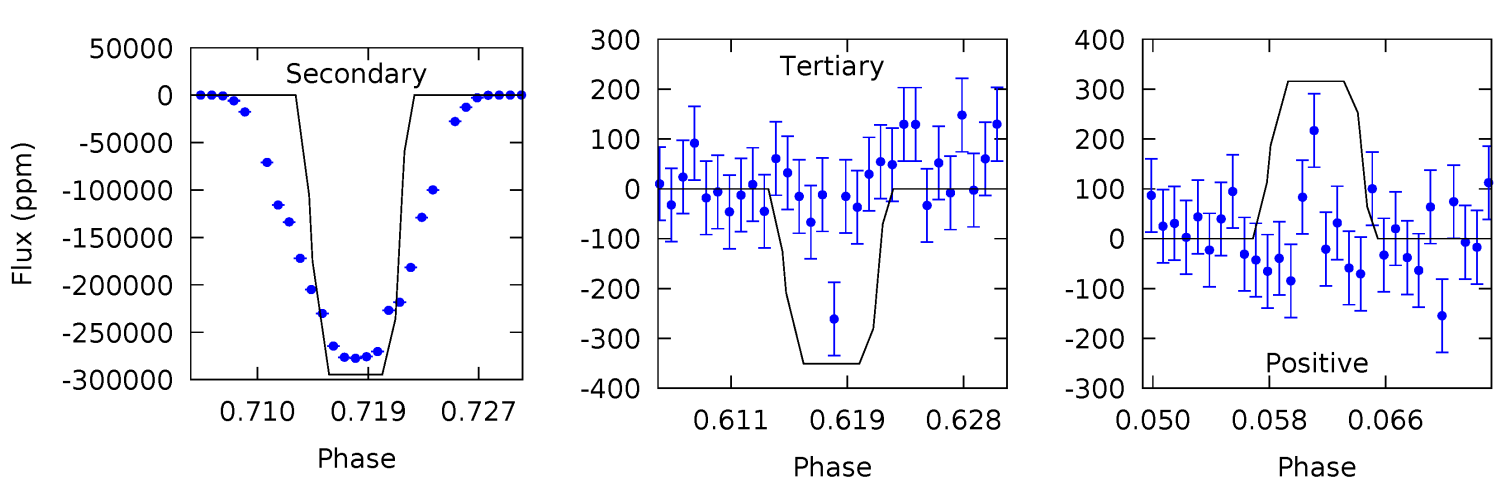
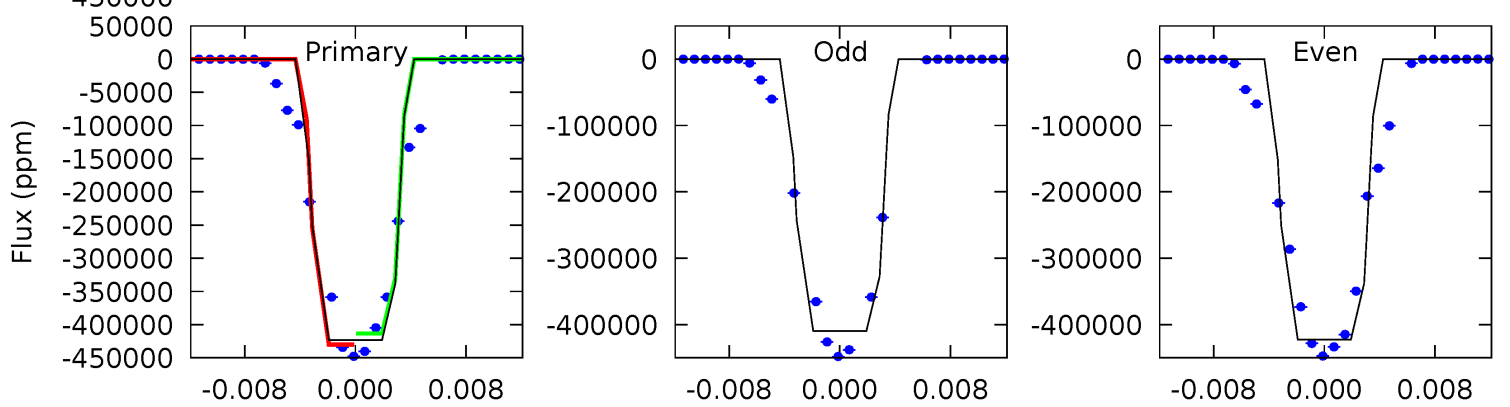
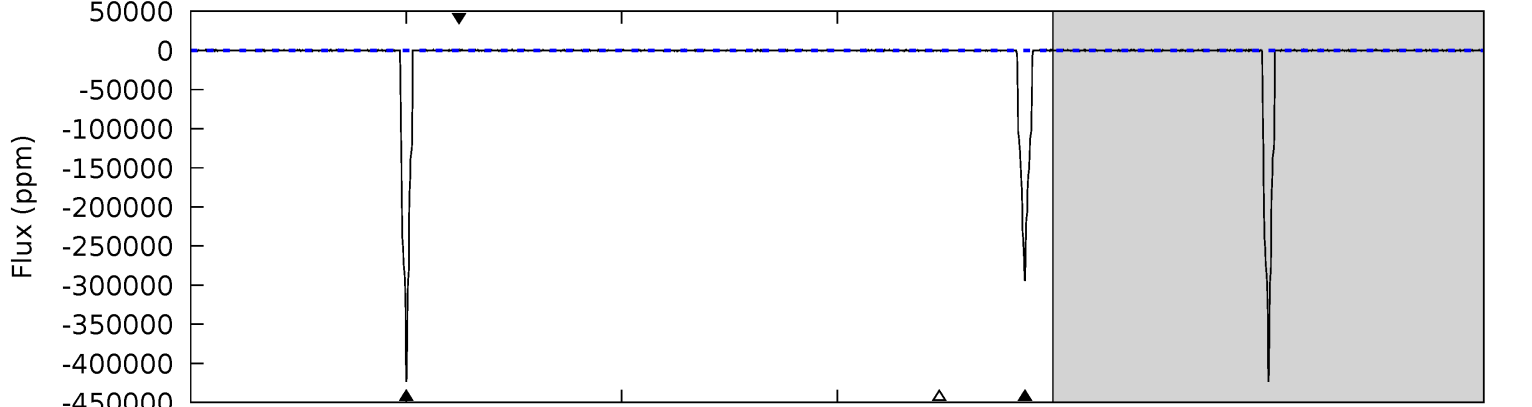
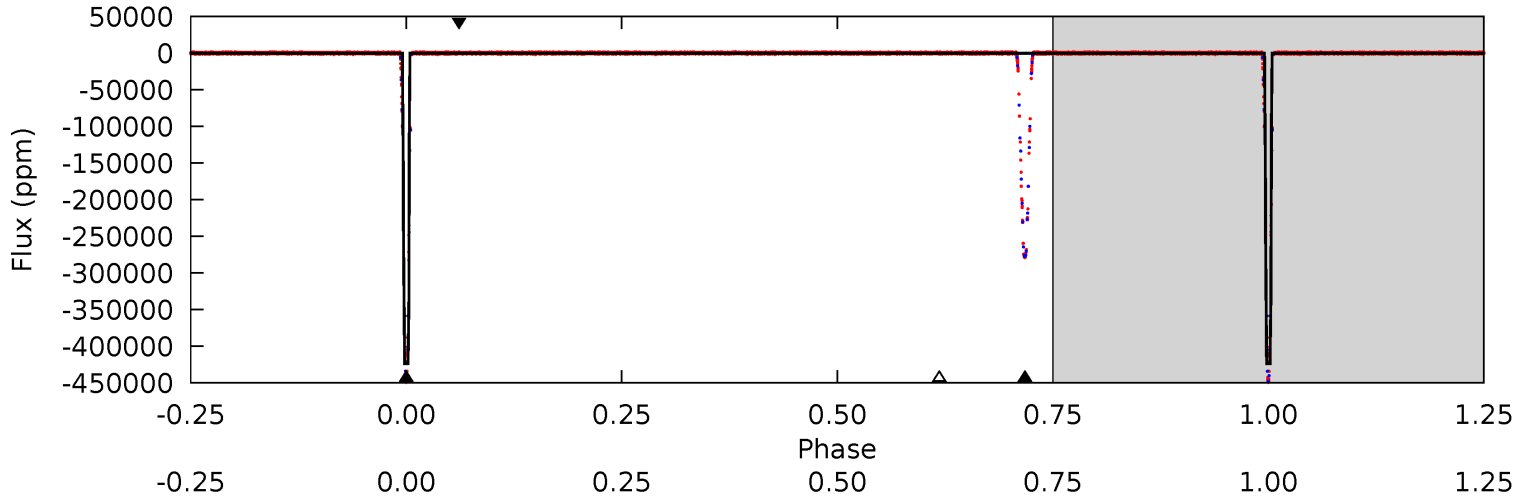
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010992733-01, P = 18.526048 Days, E = 125.663976 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4831	3361	4.00	3.60	5.06	2.64	7.55	4827	4828	3357	3357	80.7	1.00	0.00	0



Stellar Parameters For KIC 010992733

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5492^{+180}_{-164}	$4.533^{+0.044}_{-0.176}$	$0.200^{+0.200}_{-0.300}$	$0.887^{+0.213}_{-0.076}$	$0.978^{+0.074}_{-0.101}$	$1.974^{+0.341}_{-0.884}$
	+3%/-3%	+1%/-4%	+100%/-150%	+24%/-9%	+8%/-10%	+17%/-45%
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 010992733-01 / KOI 7399.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$50.34^{+10.93}_{-11.20}$	884^{+50}_{-39}	-3055^{+7710}_{-1527}	$-32.266^{+476.753}_{-384.861}$
Alt.	-294660 ± 88	$67.97^{+12.67}_{-11.76}$	882^{+57}_{-41}	5418^{+415}_{-389}	904^{+396}_{-257}

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

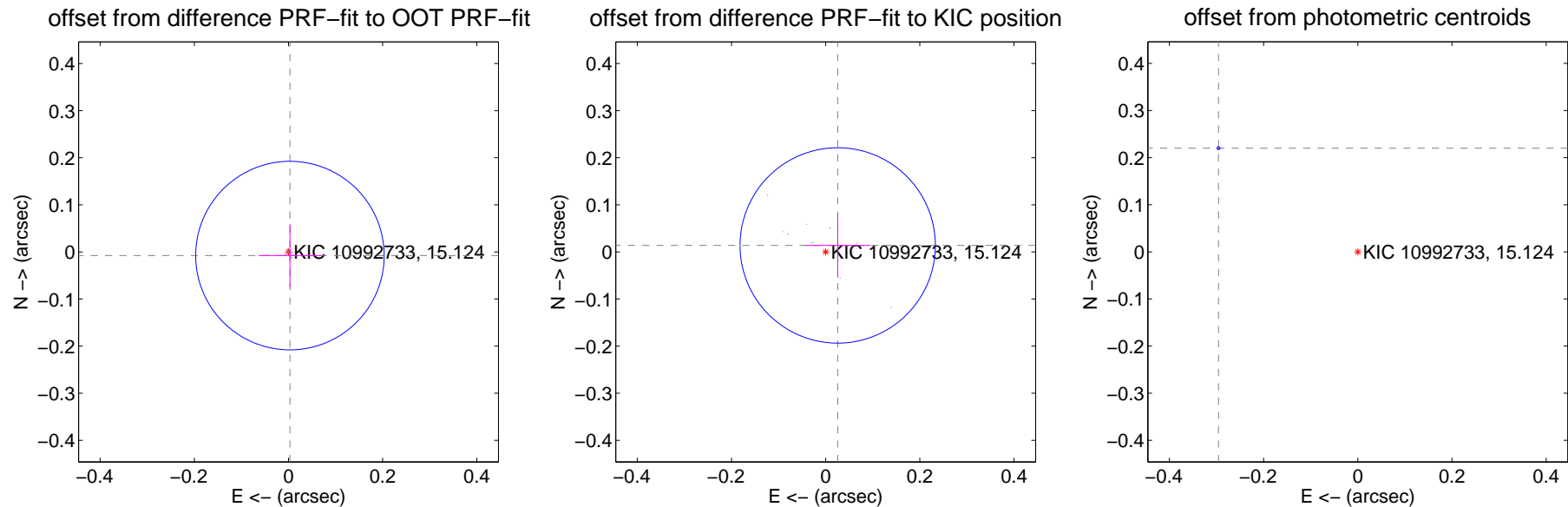
DV Centroid Data

Supplemental centroid analysis for 010992733-01. Kepler magnitude: 15.12. Transit SNR -1.00

There are 14 quarters with good PRF difference image offsets

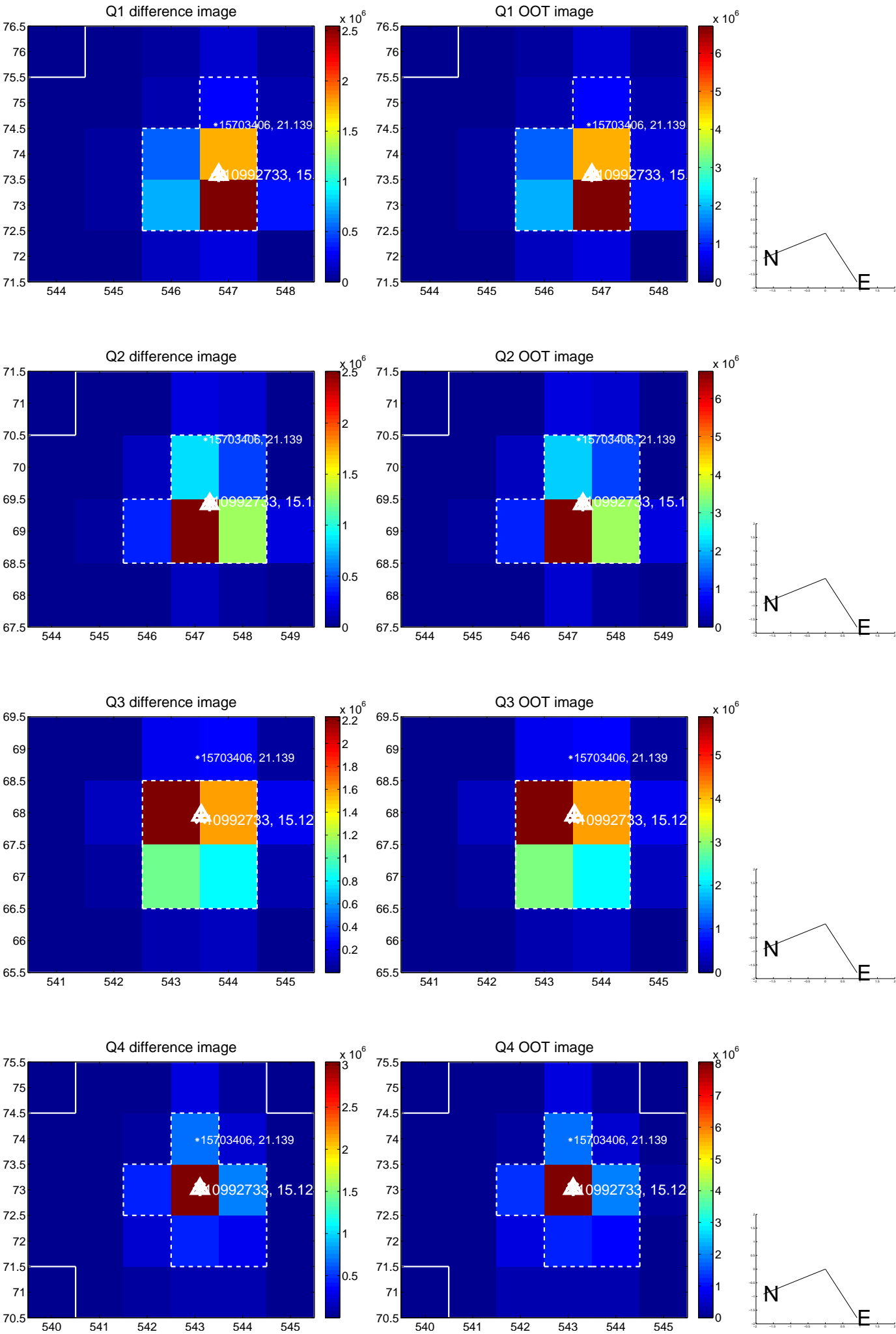
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.008 ± 0.067	0.13	-0.003 ± 0.067	-0.008 ± 0.067
PRF-fit source offset from KIC position	0.029 ± 0.069	0.42	-0.026 ± 0.069	0.014 ± 0.068
photometric centroid source offset	0.37 ± 0.00	364.34	0.30 ± 0.00	0.22 ± 0.00

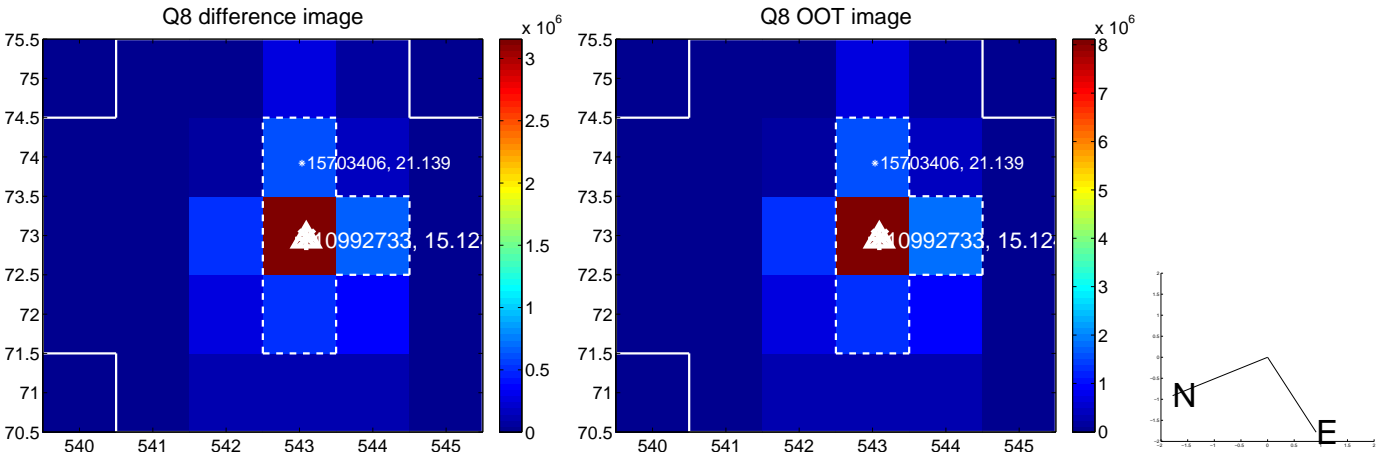
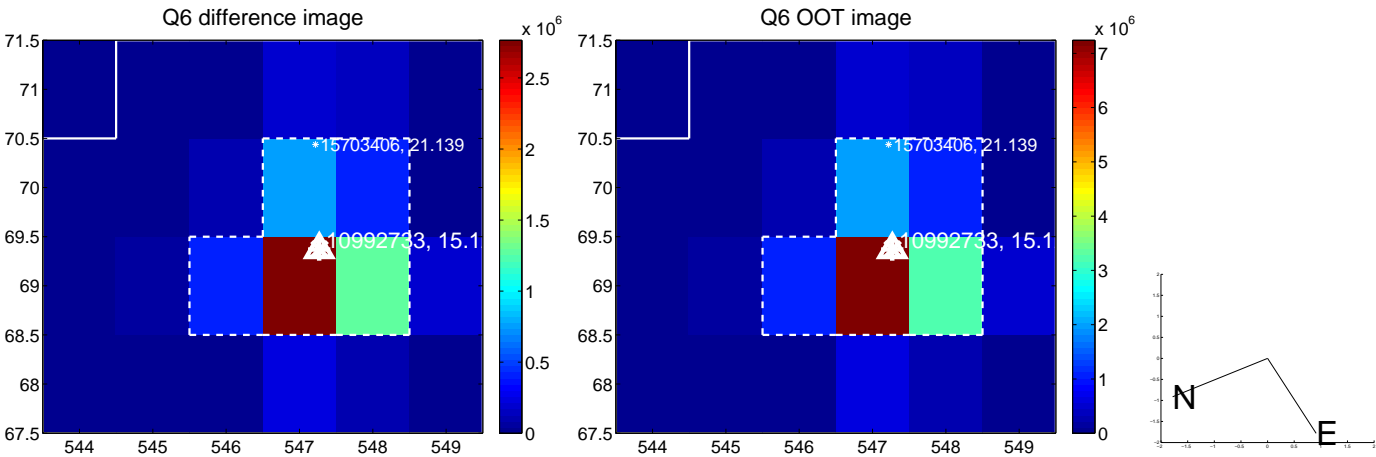
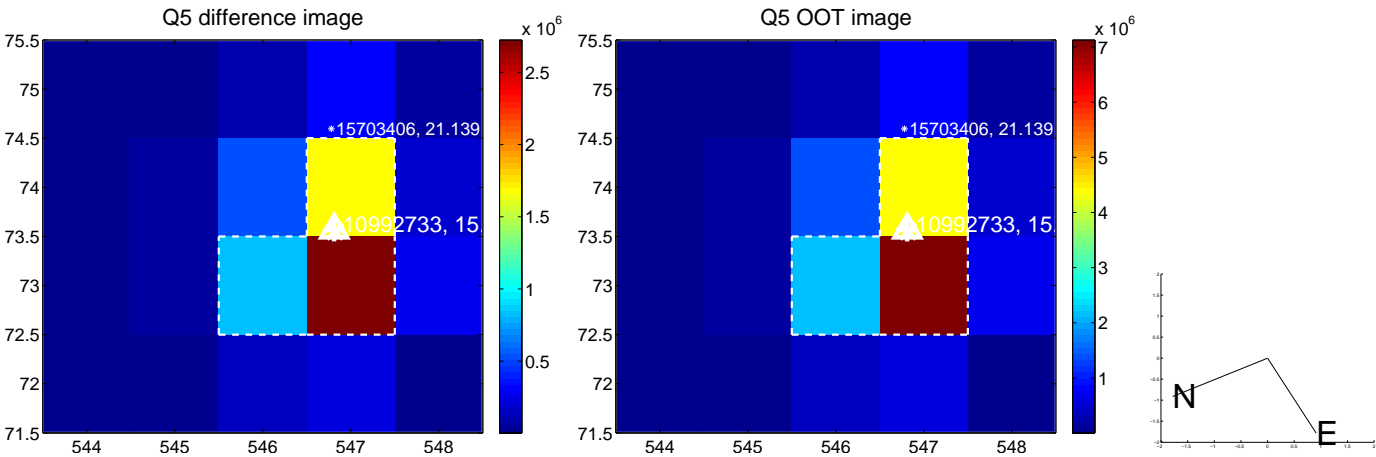


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

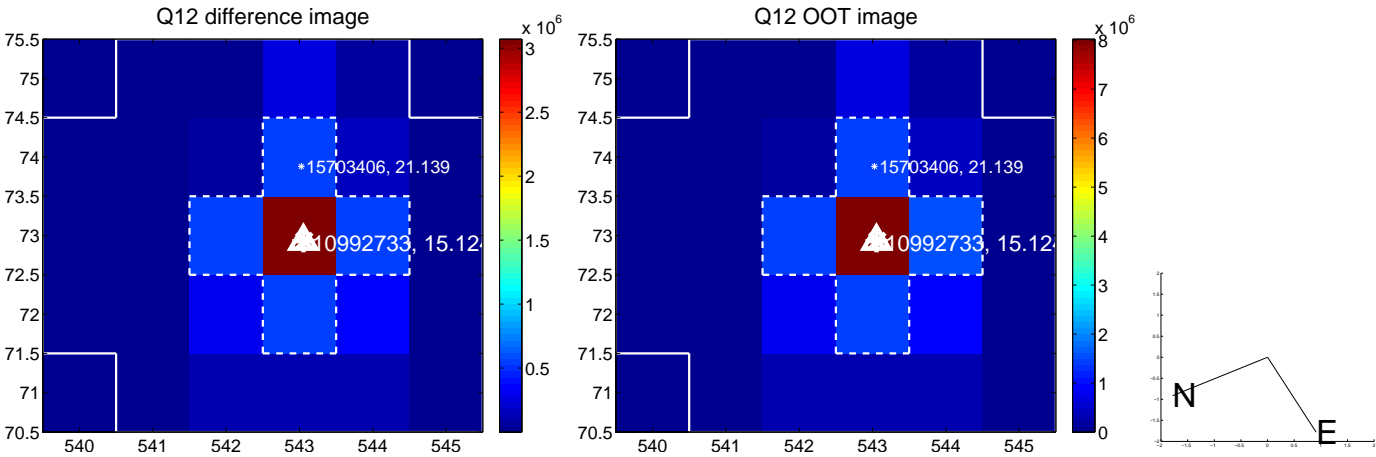
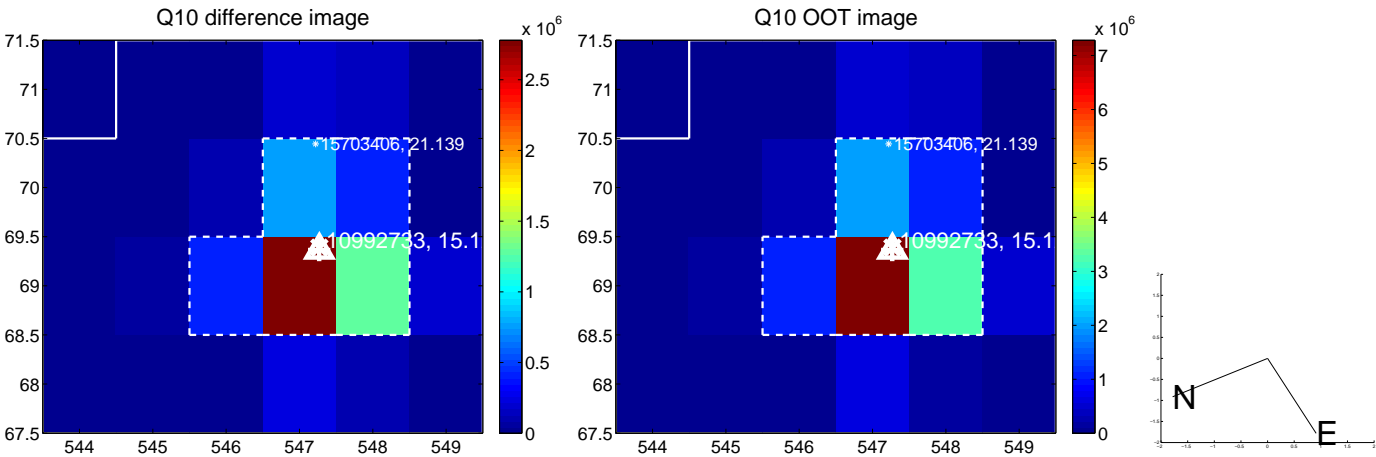
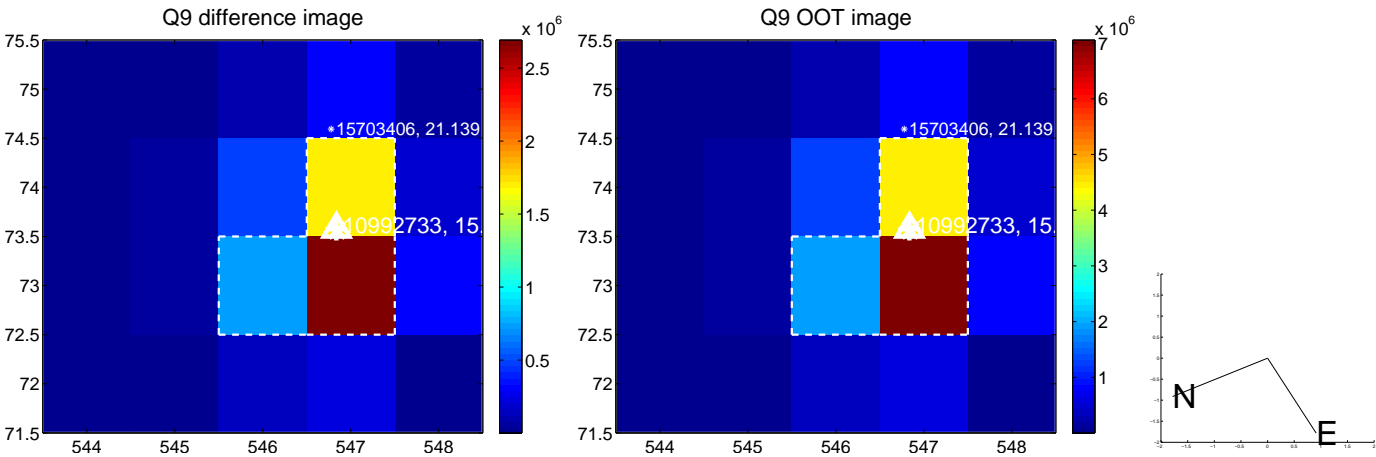
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



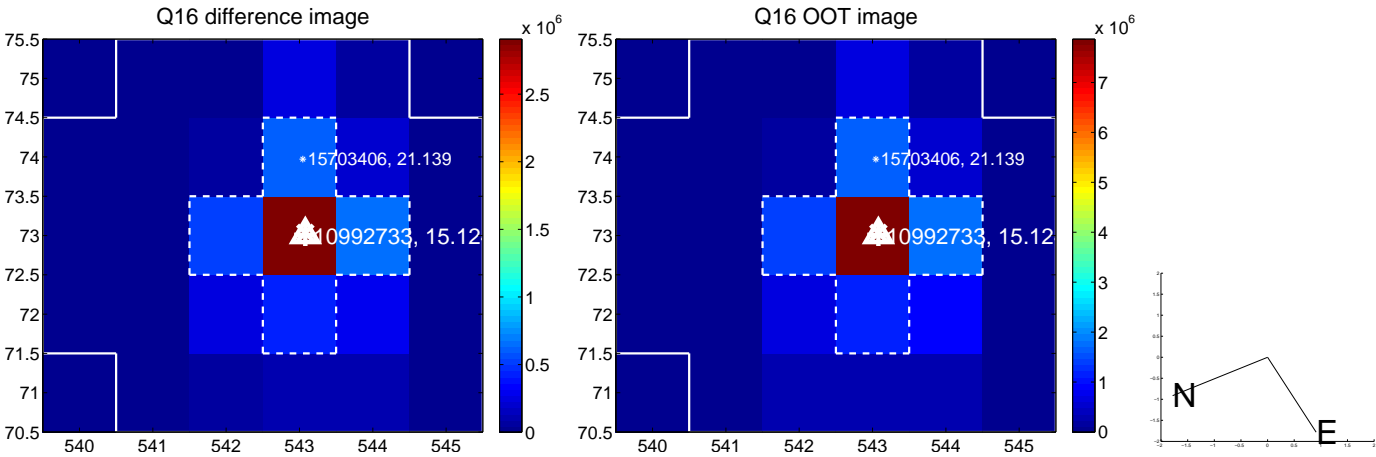
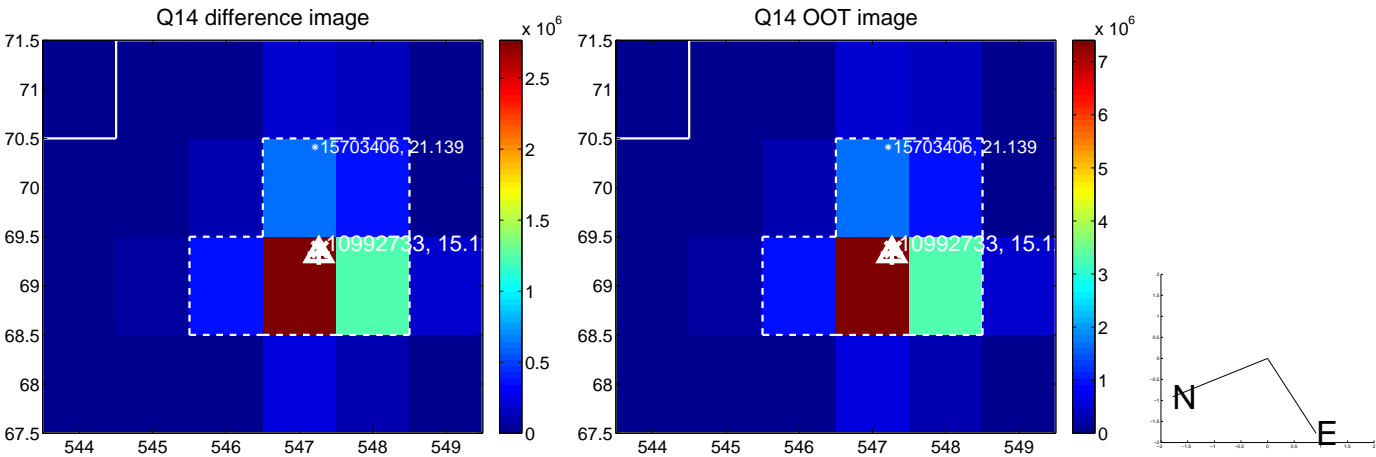
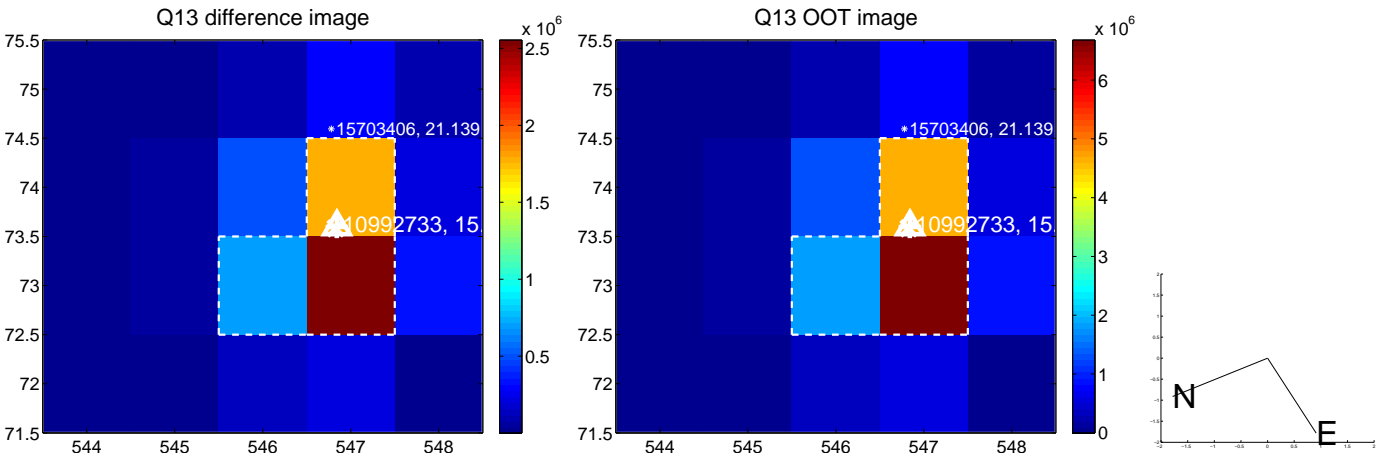
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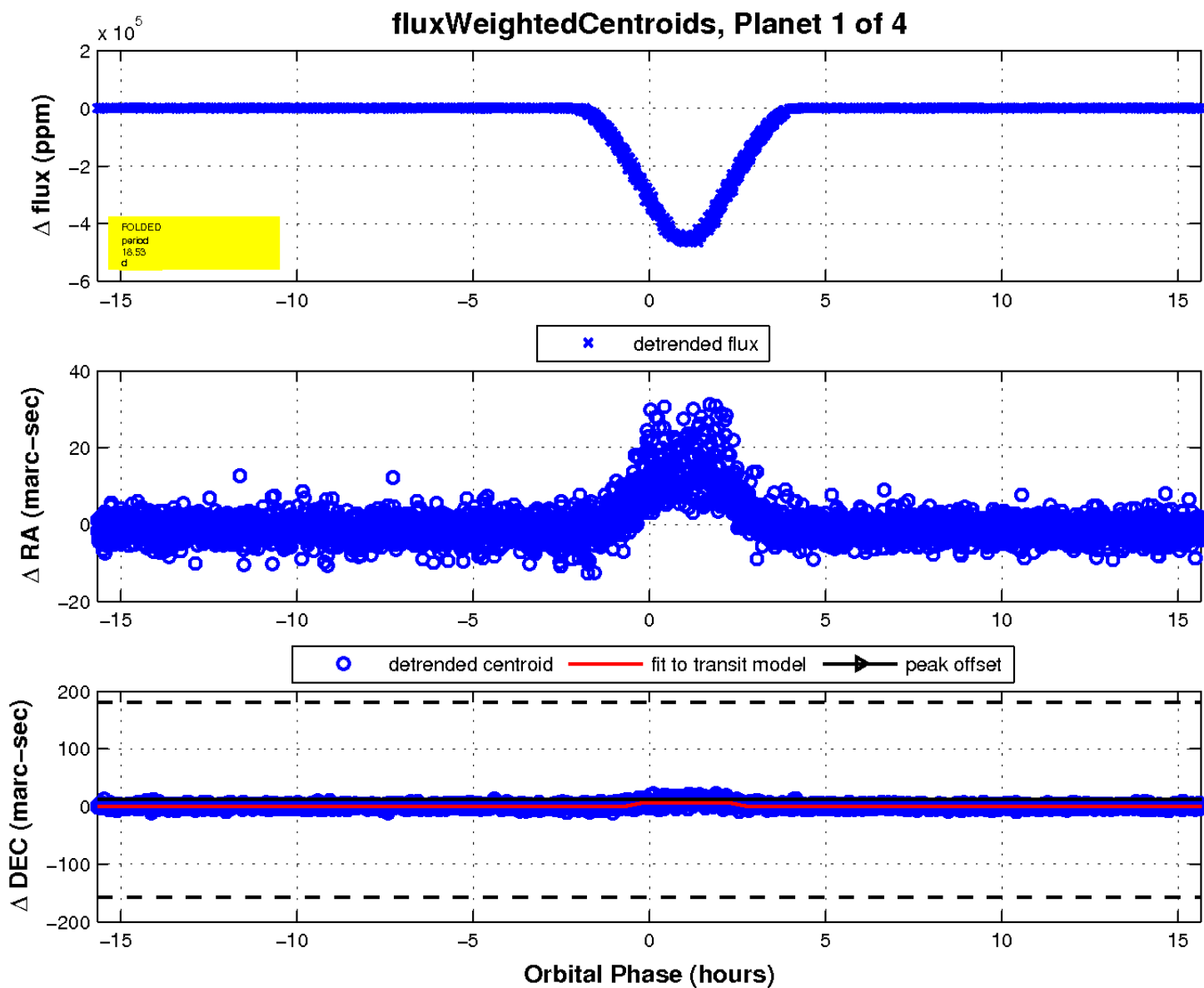
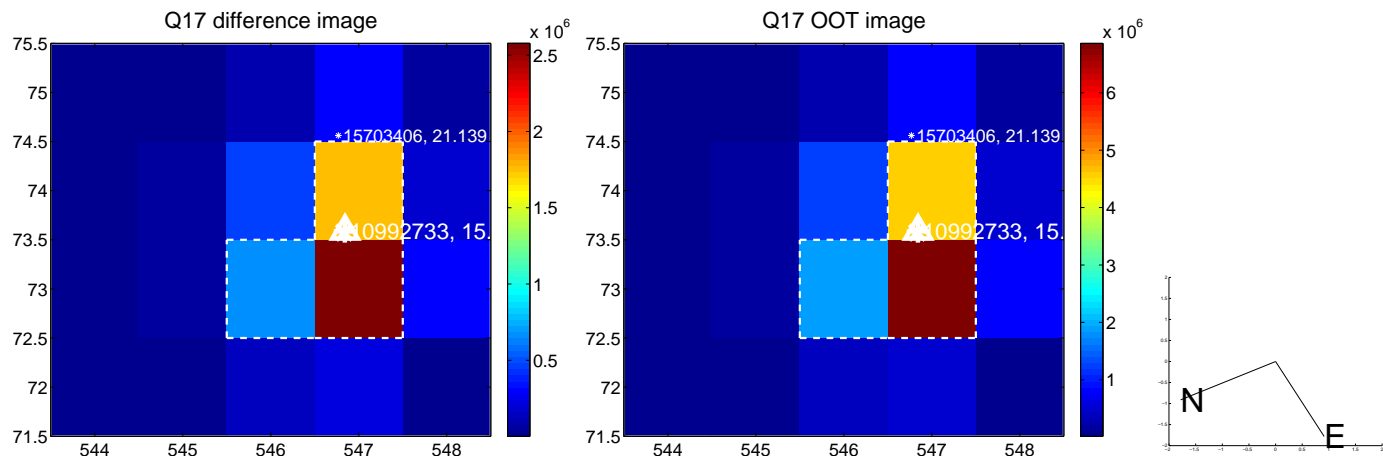
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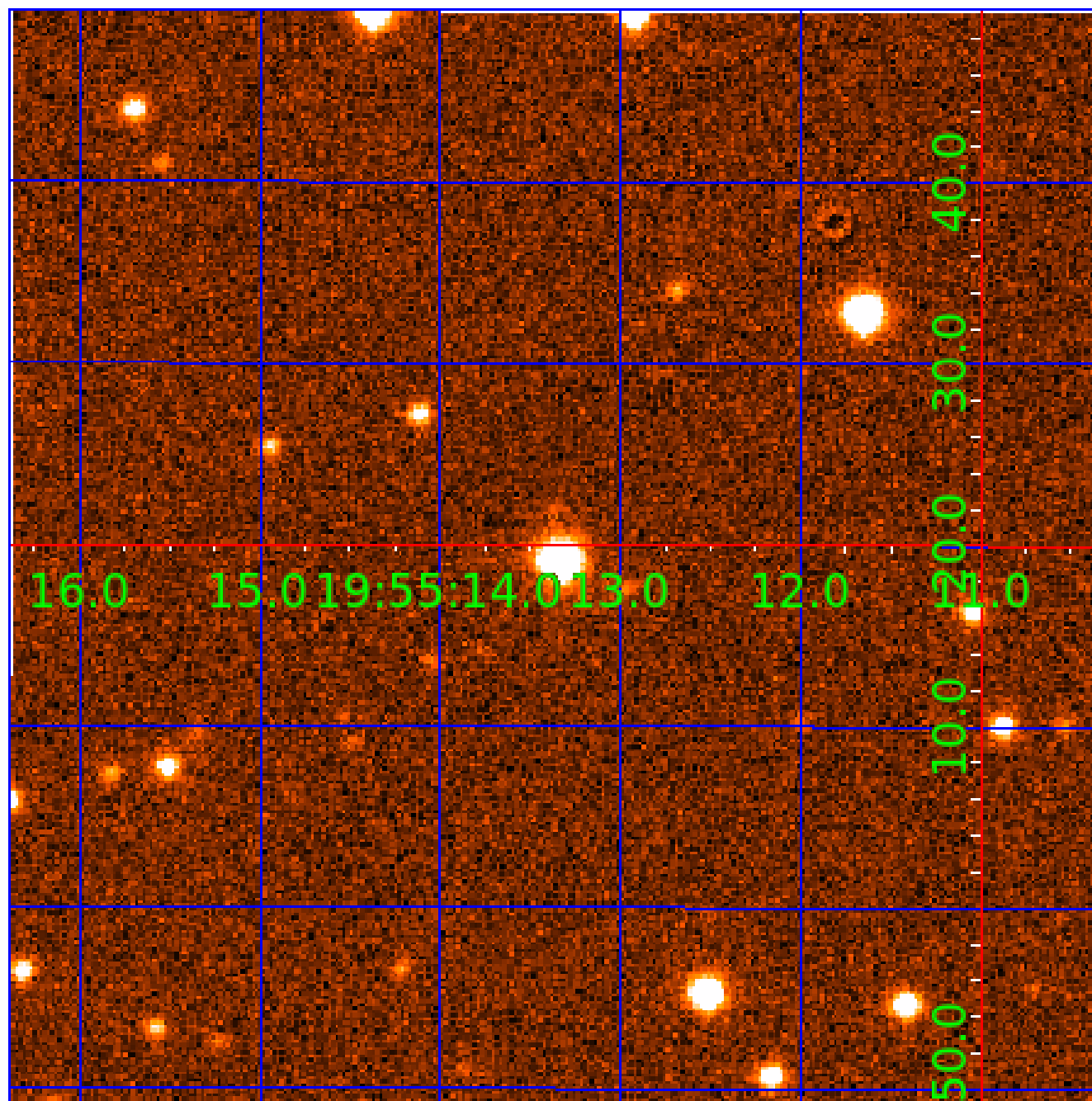


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010992733

Q1-17 DR25 TCE Parameters

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

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010992733-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
010992733-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
010992733-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—RESIDUAL_TCE—CENT_NOFITS
010992733-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—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 010992733-02

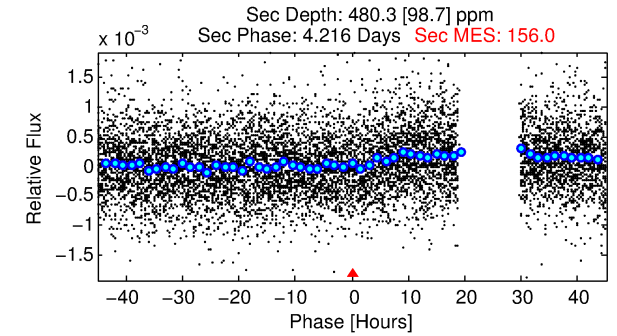
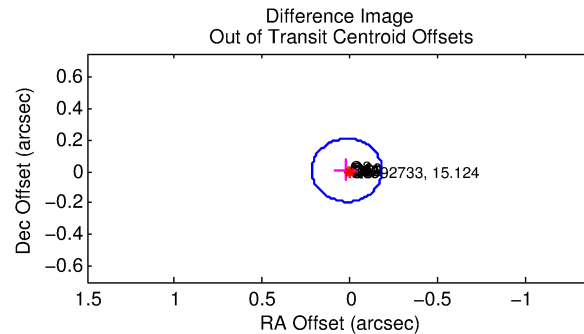
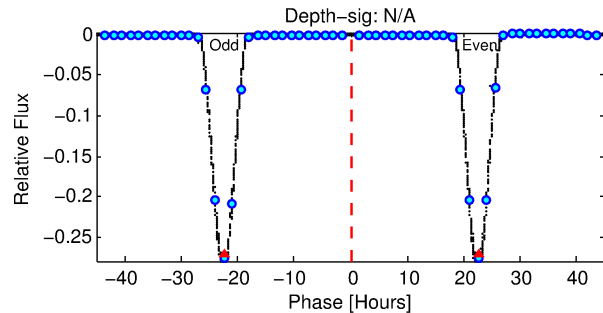
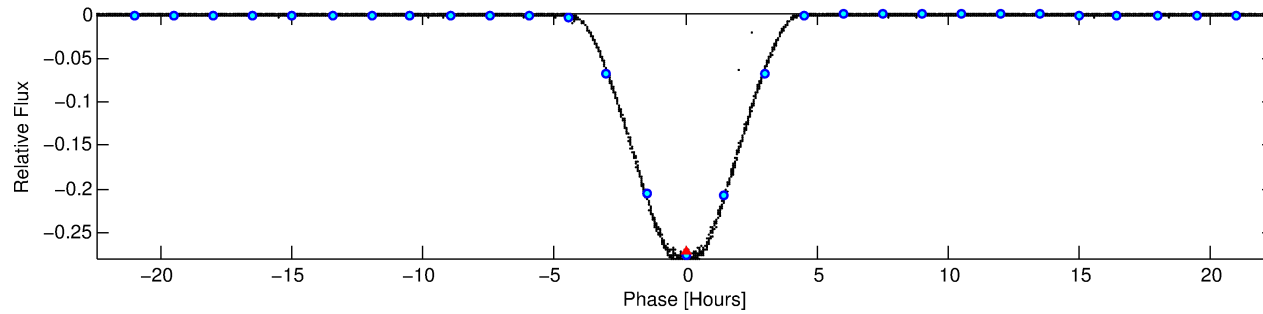
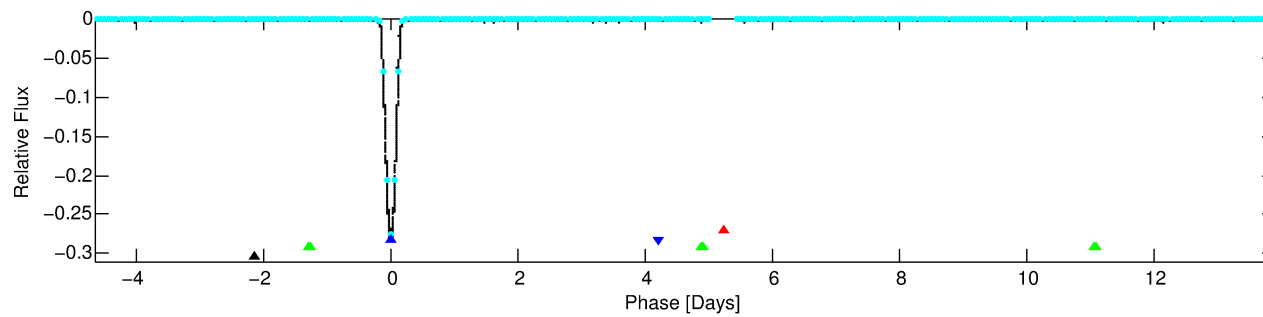
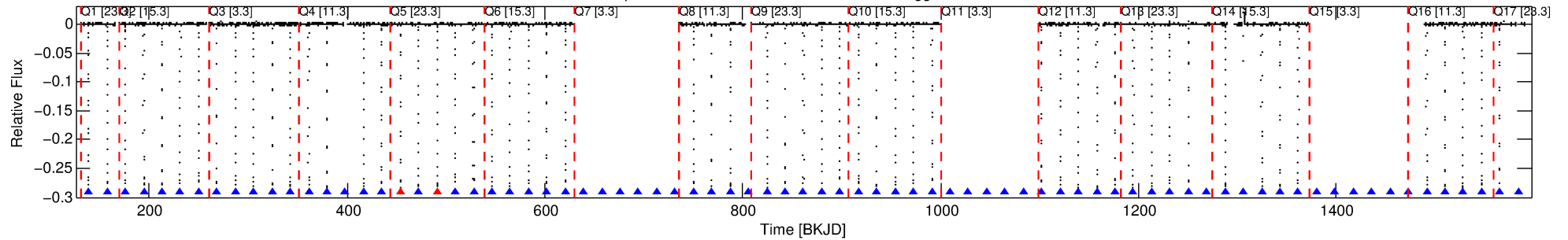
No Significant Match Found

DV One-Page Summary

KIC: 10992733 Candidate: 2 of 4 Period: 18.526 d

KOI: K07399 Corr: No Ephemeris Match

Kp: 15.12 R*: 0.89 Rs Teff: 5492.0 K Logg: 4.53 Fe/H: 0.200



TPS TCE Results:

Period = 18.52590 d
Epoch = 138.9590 BKJD

DV fit results are unavailable

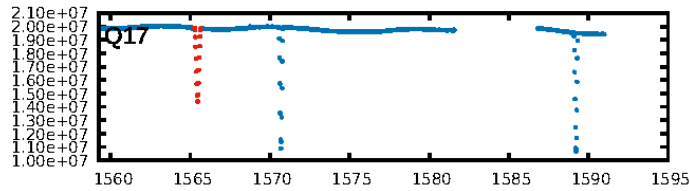
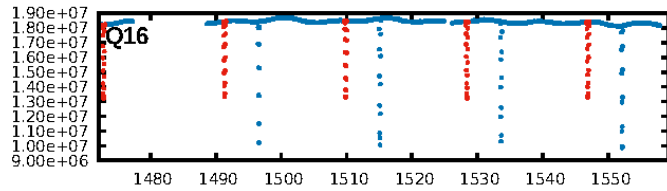
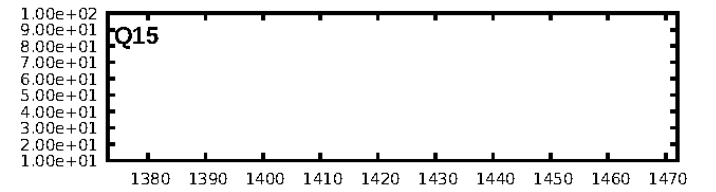
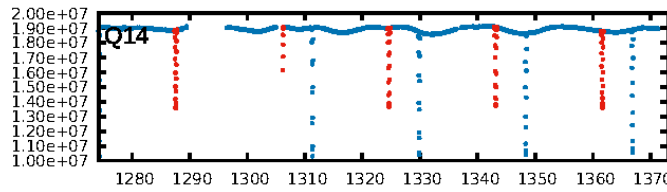
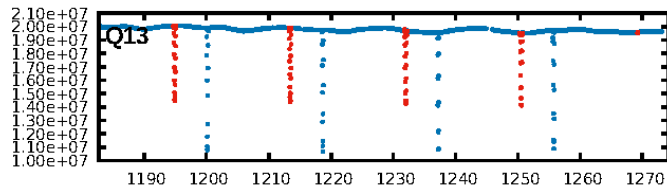
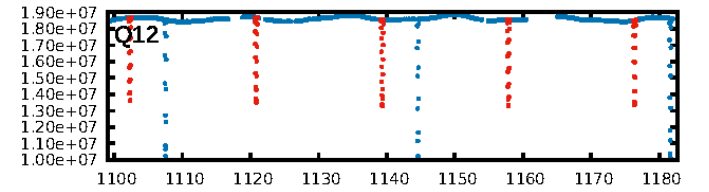
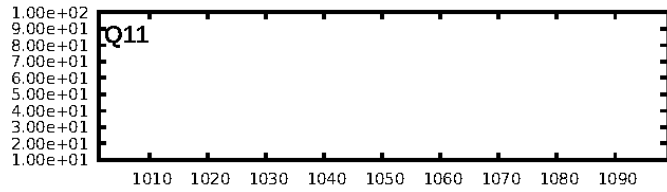
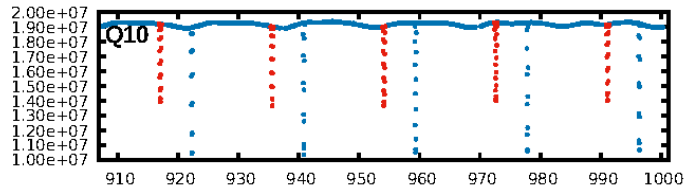
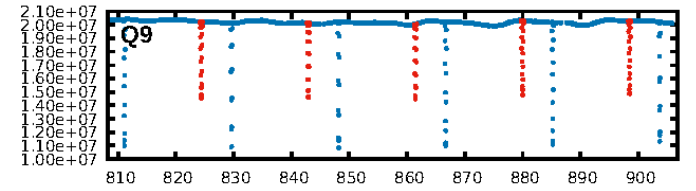
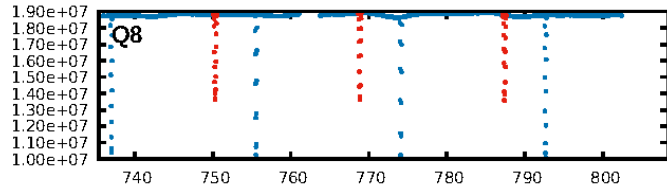
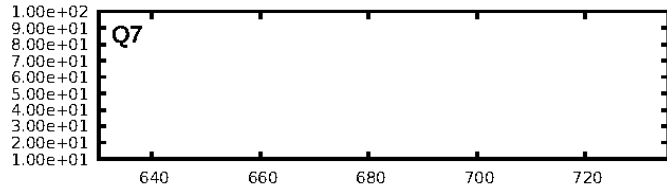
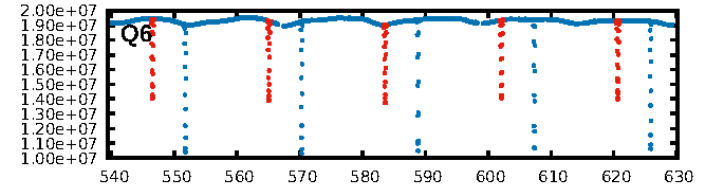
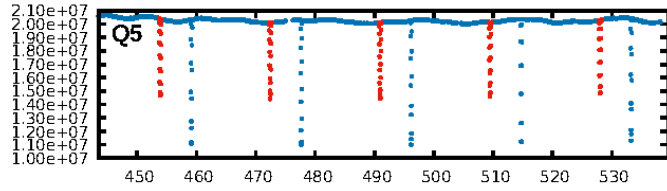
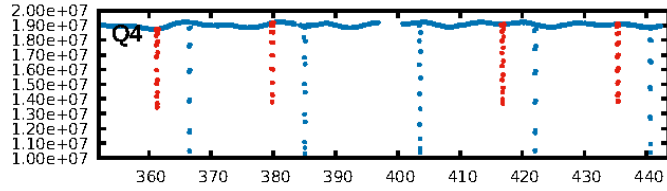
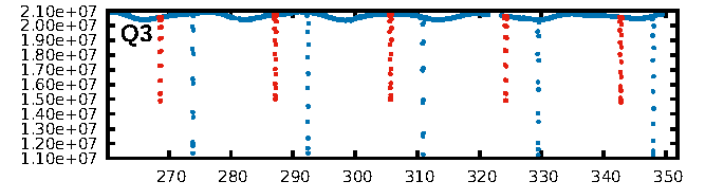
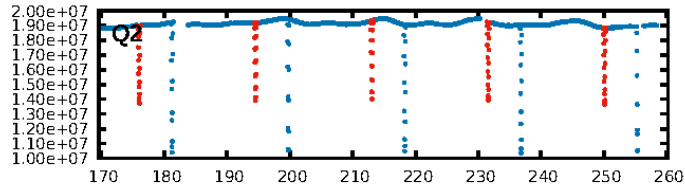
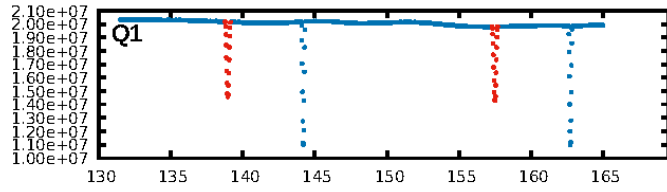
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [18.75 σ]
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.96 [53/55]
GhostDiagnostic-chr: 1.018
Centroid-sig: N/A
Centroid-so: 0.398 arcsec [296.18 σ]
OotOffset-rm: 0.022 arcsec [0.32 σ]
KicOffset-rm: 0.028 arcsec [0.41 σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

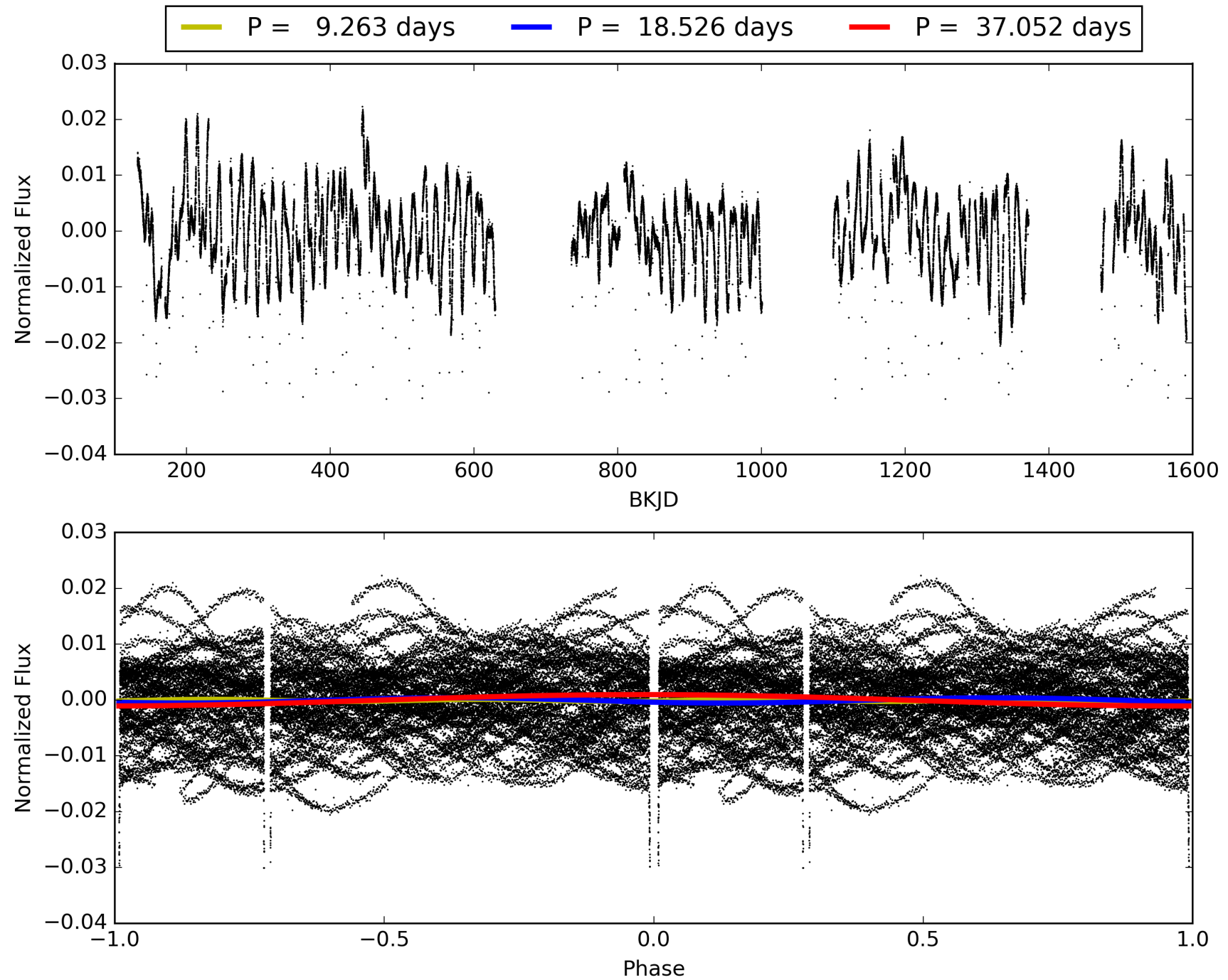
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:22:36 Z

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

TCE 010992733-02, PDC Light Curves

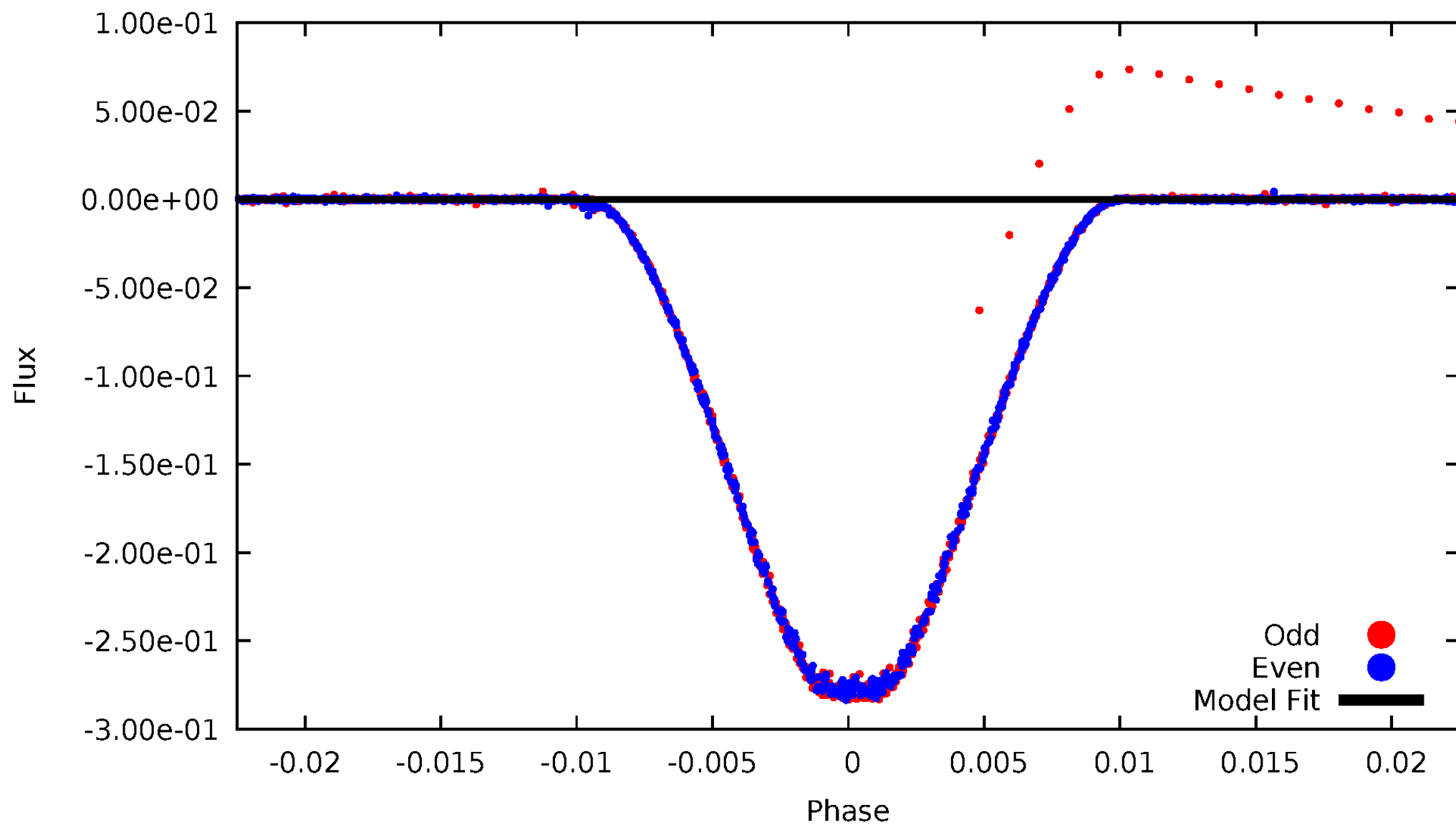


TCE 010992733-02



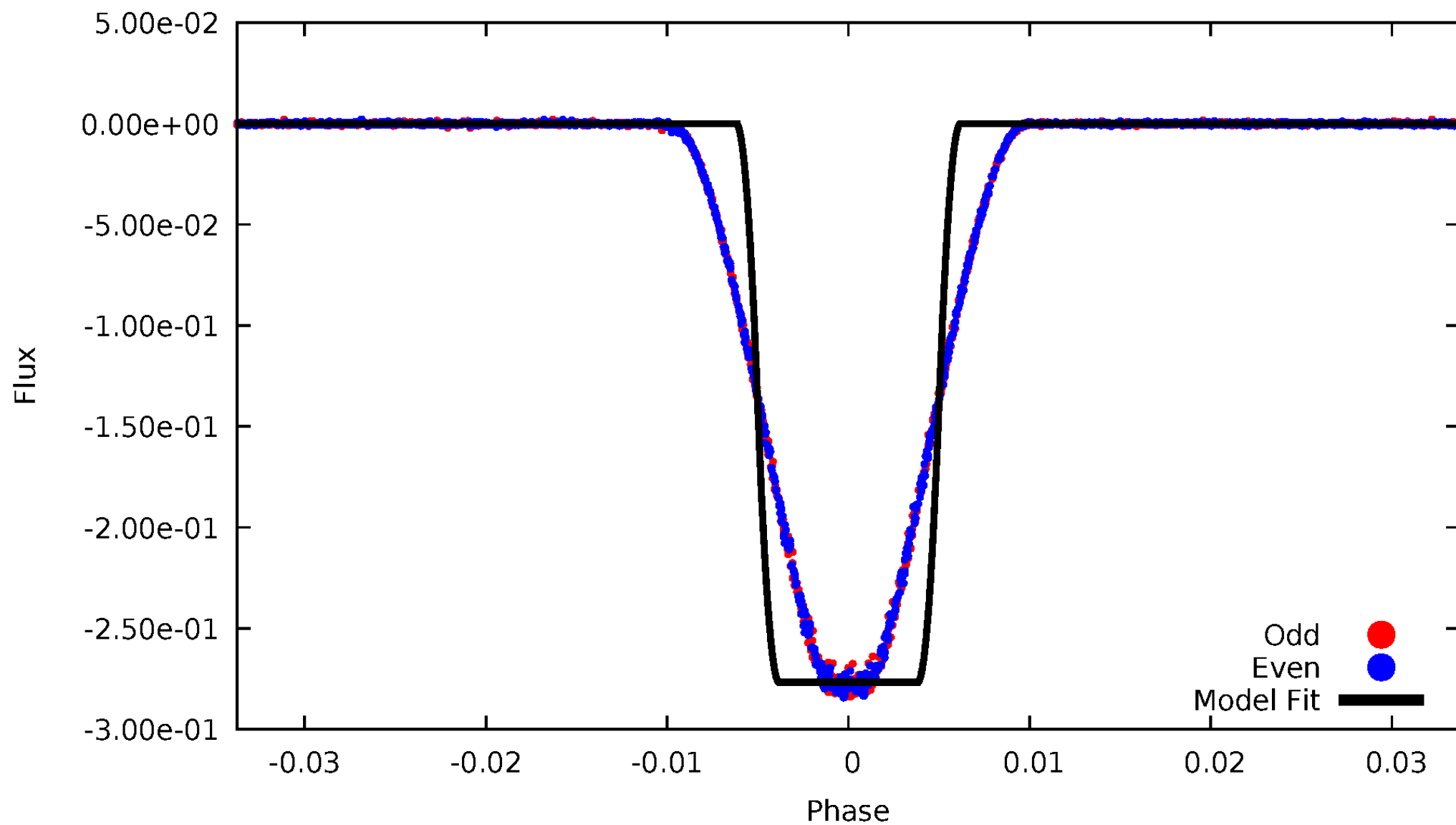
DV Odd/Even

TCE 010992733-02



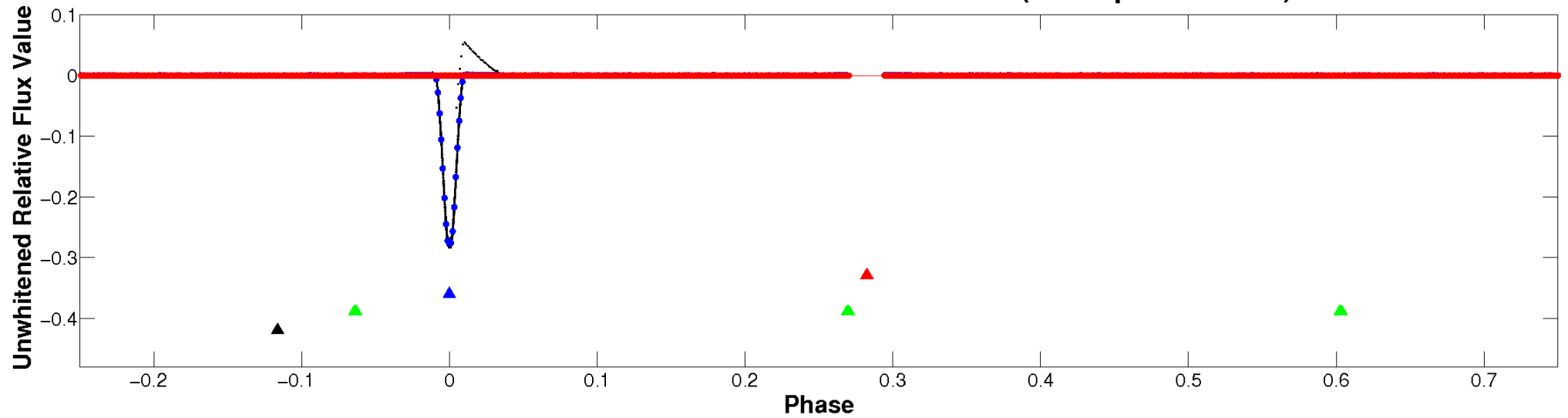
ALT Odd/Even

TCE 010992733-02

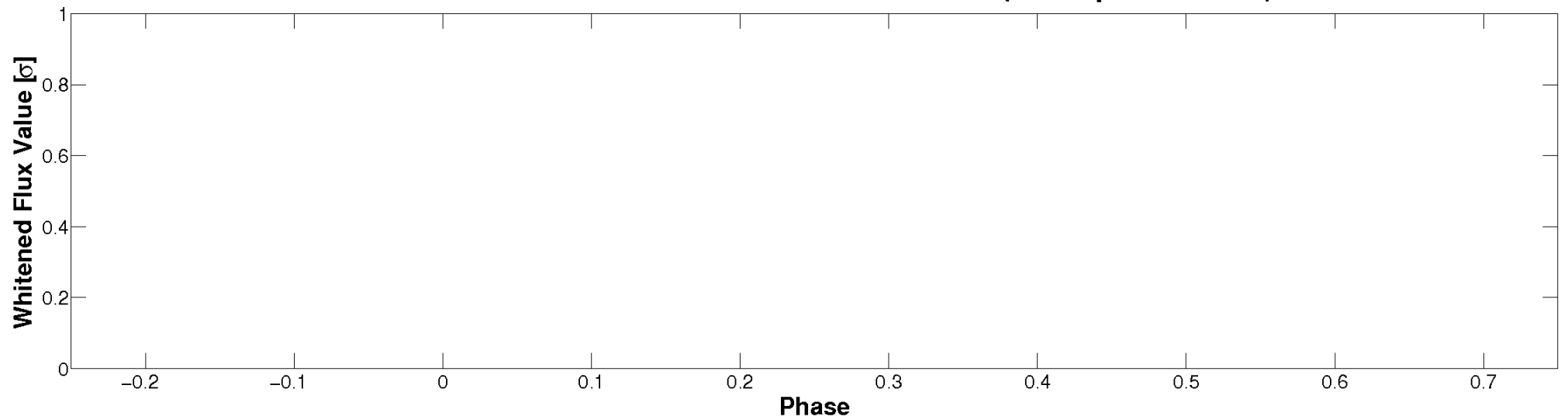


Non-Whitened Vs. Whitened Light Curve

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

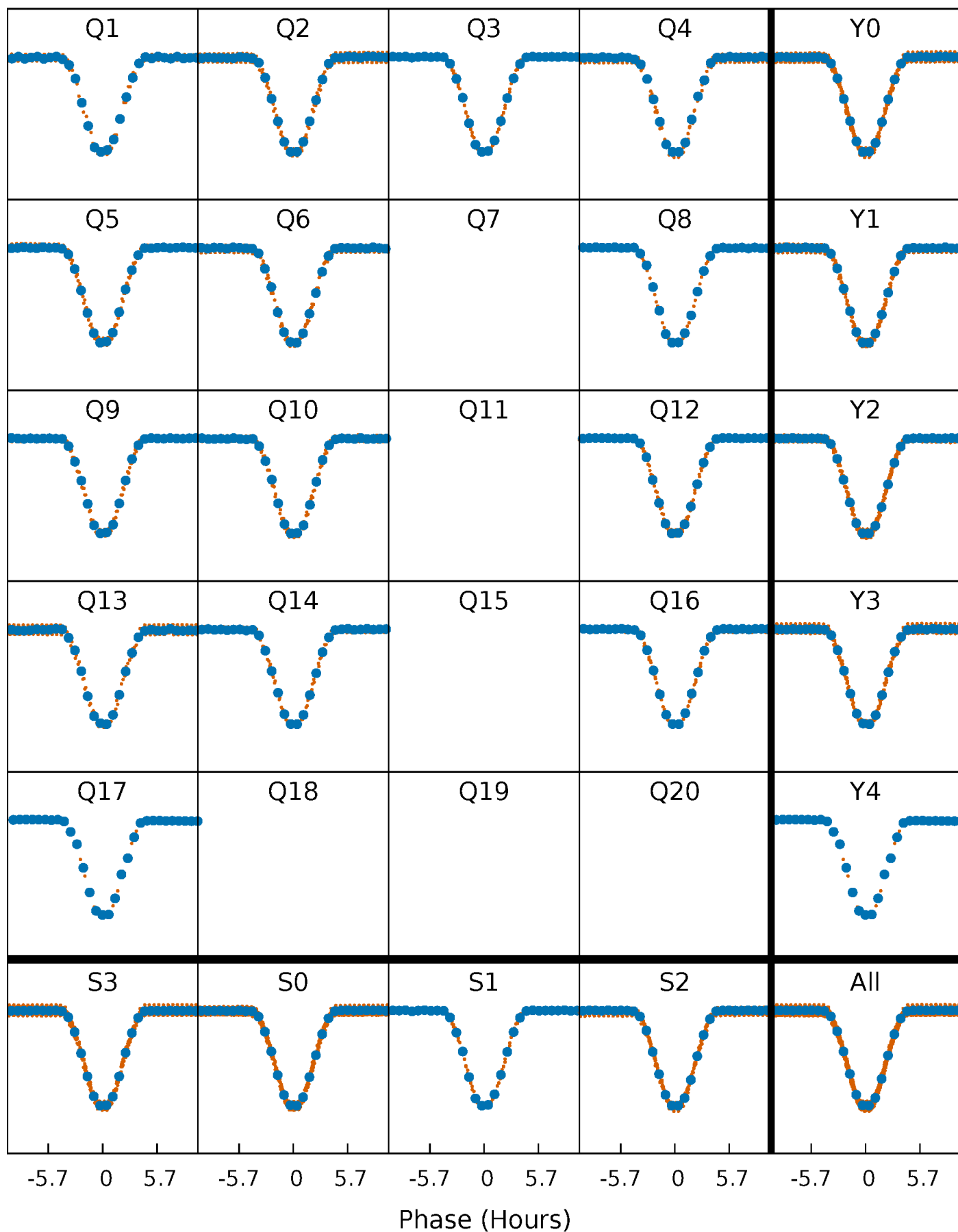


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



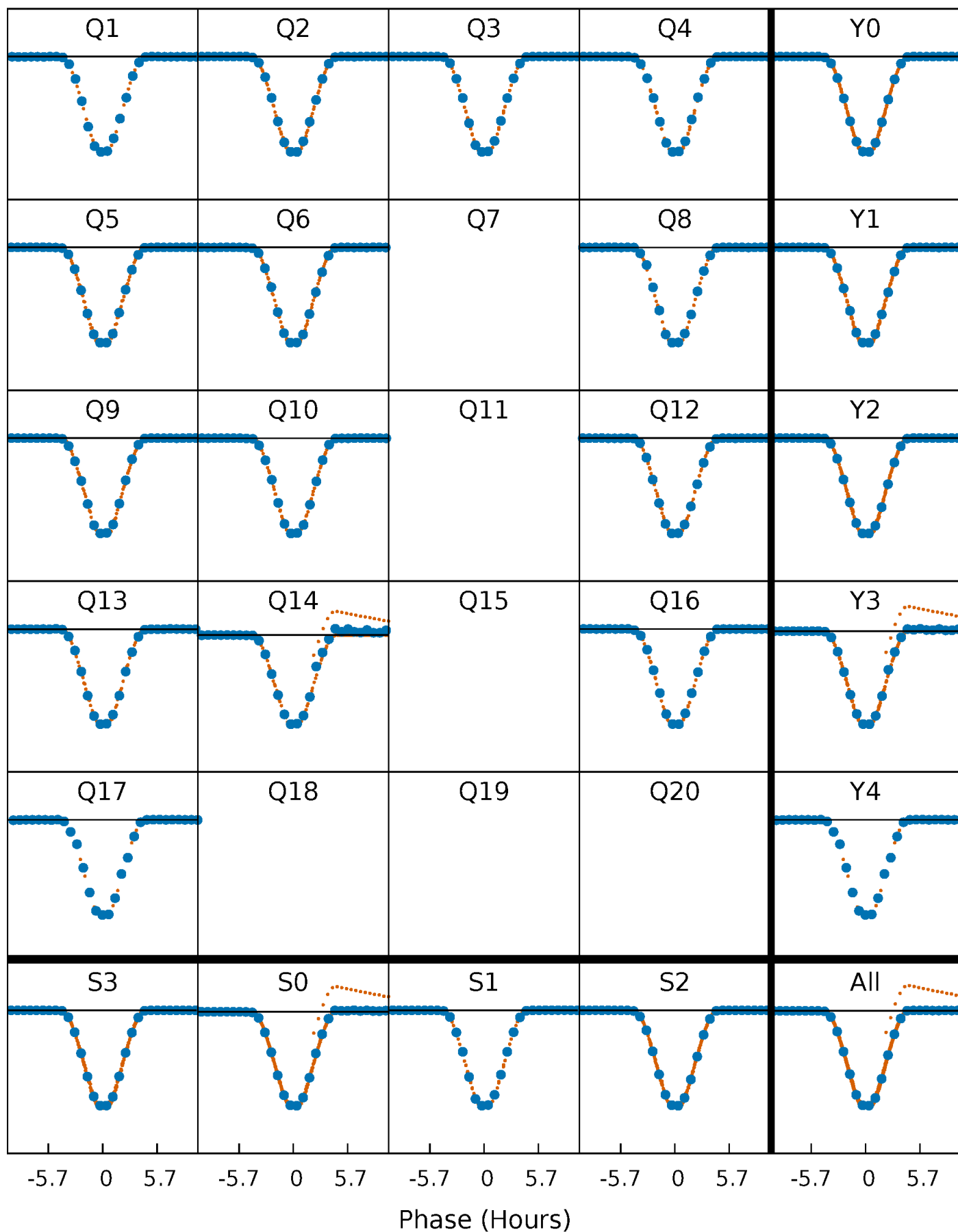
PDC Quarter-Phased Transit Curves

TCE 010992733-02 P= 18.525897 Days $T_0=138.959026$ (BKJD)



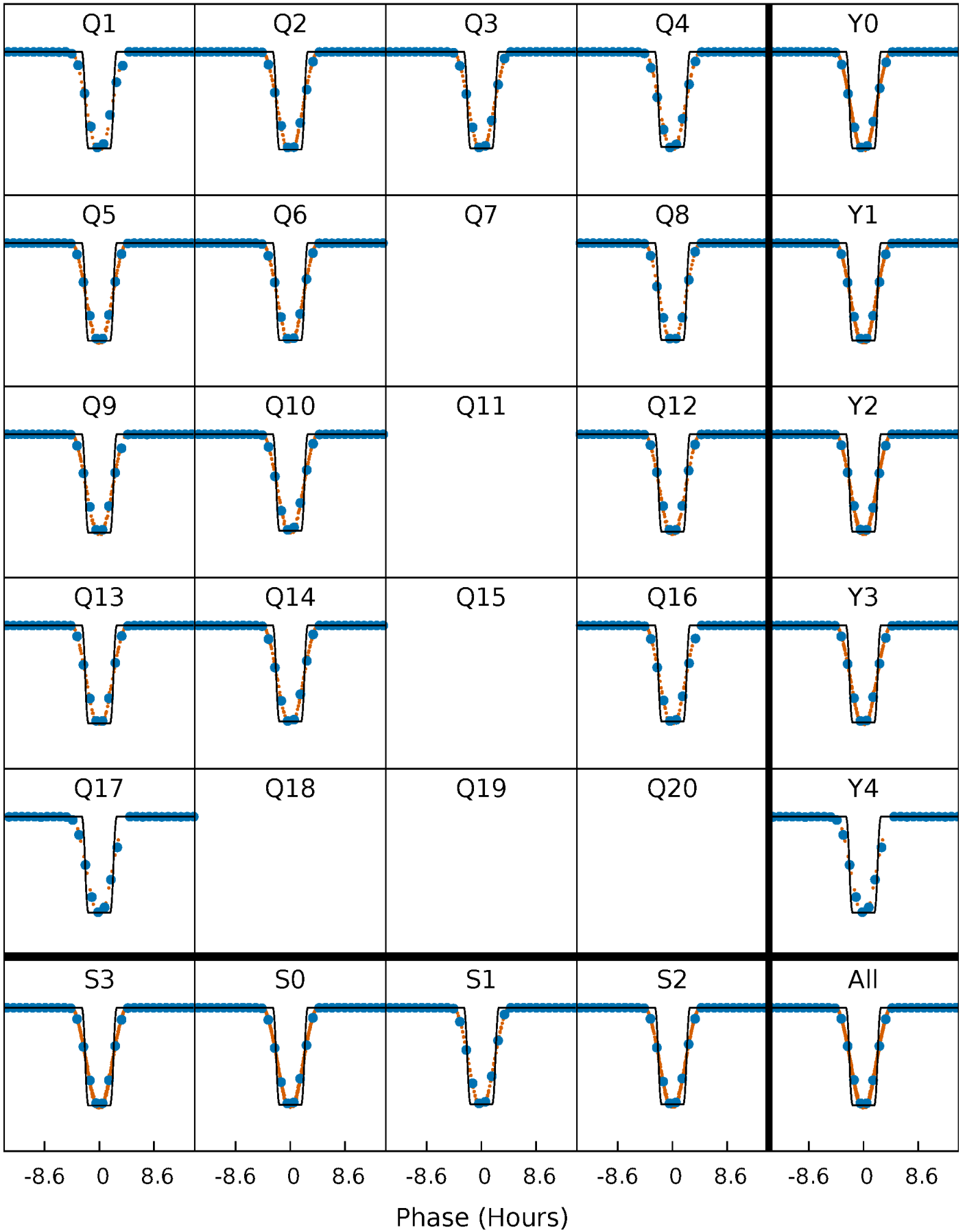
DV Quarter-Phased Transit Curves

TCE 010992733-02 P= 18.525897 Days $T_0=138.959026$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

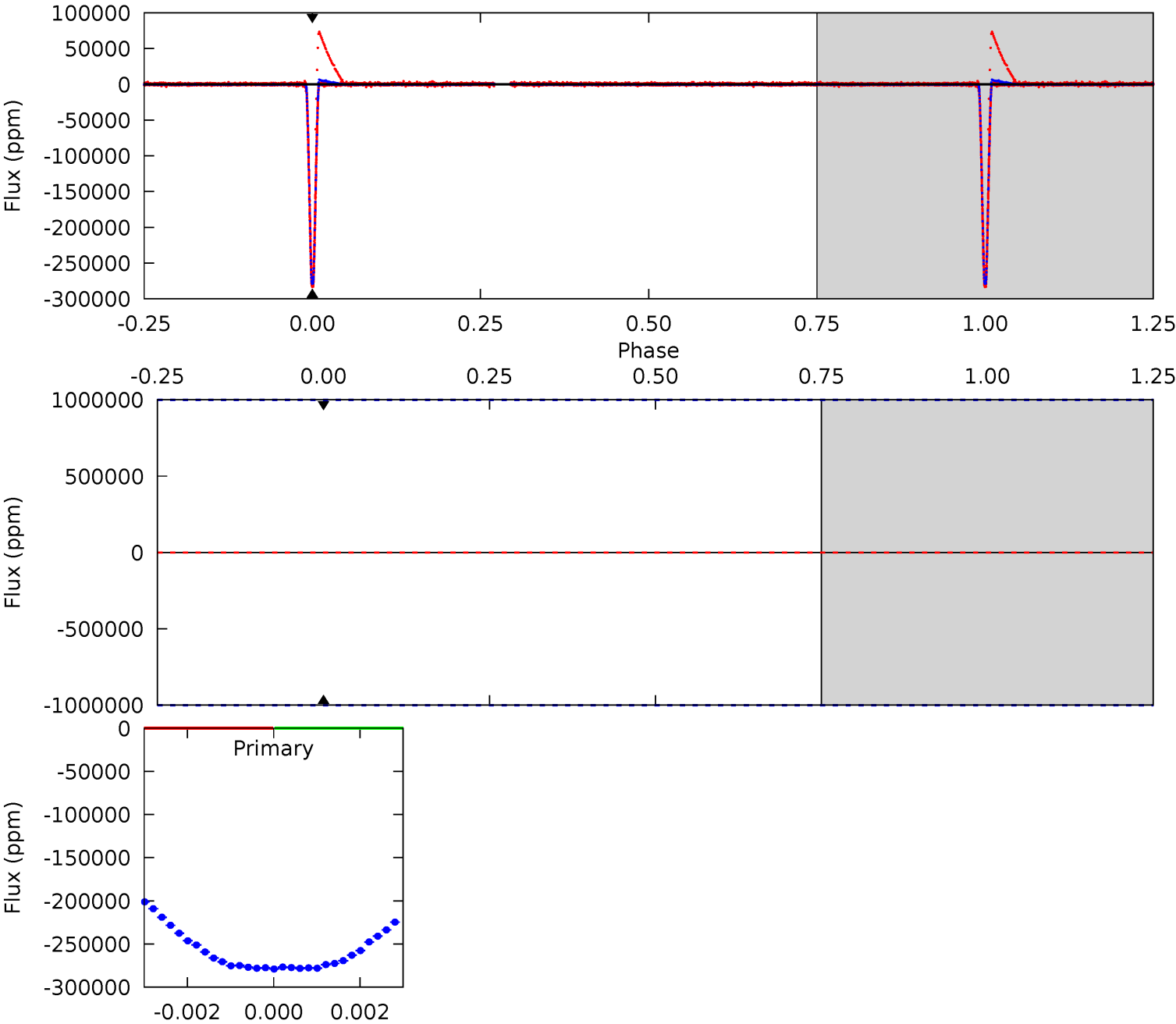
TCE 010992733-02 P= 18.525897 Days $T_0=138.962337$ (BKJD)



DV Model-Shift Uniqueness Test

010992733-02, P = 18.525897 Days, E = 120.433129 Days

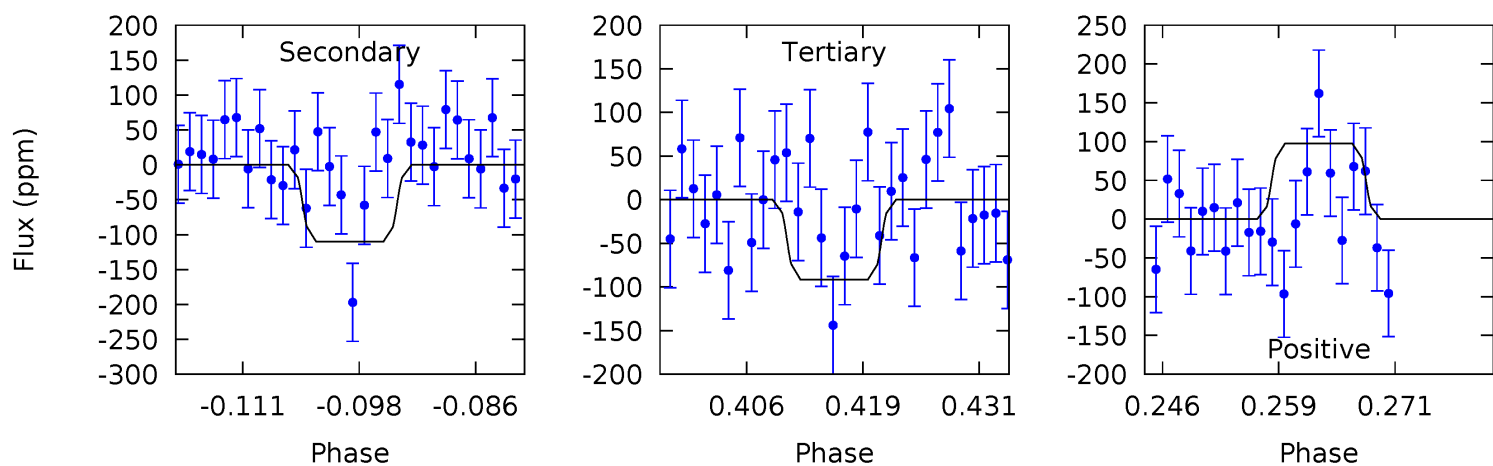
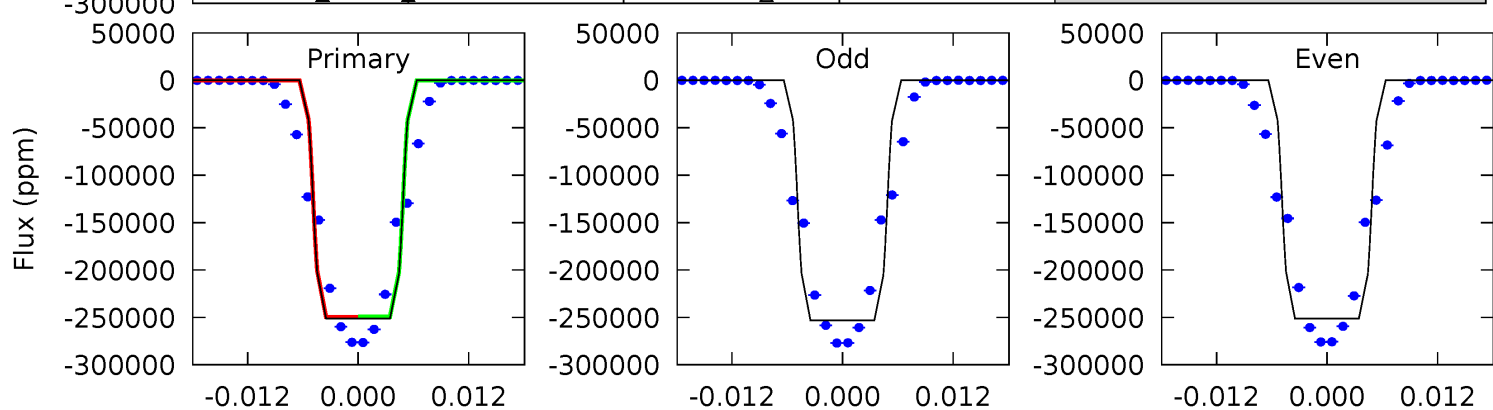
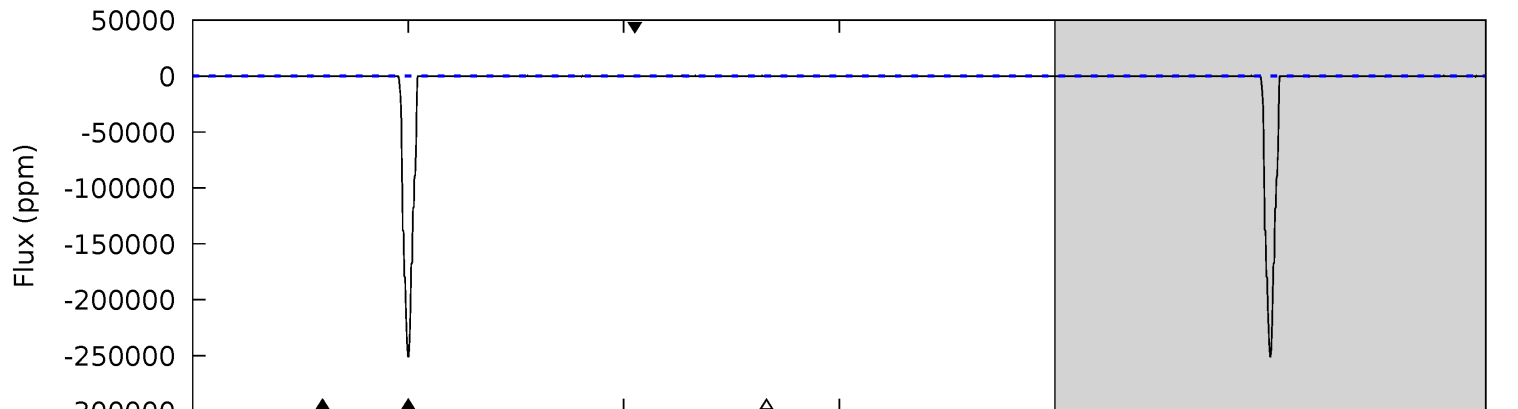
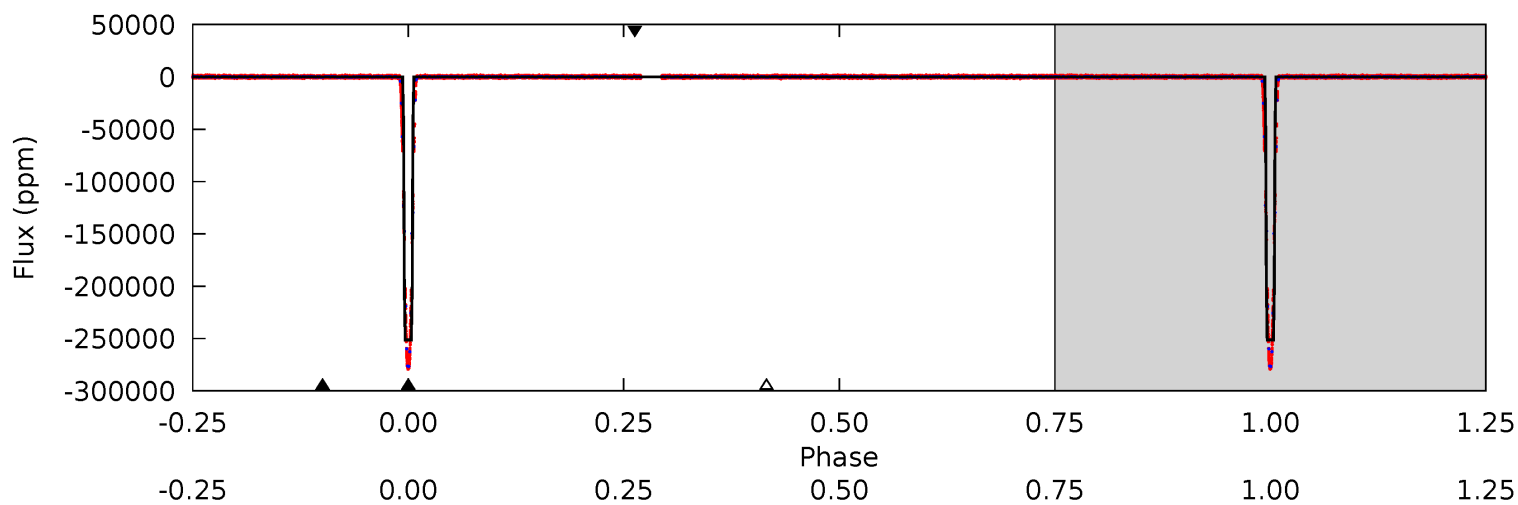
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010992733-02, P = 18.525897 Days, E = 120.436440 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8531	3.74	3.12	3.31	4.99	2.50	0.93	8528	8528	0.62	0.43	30.4	1.00	0.00	0



Stellar Parameters For KIC 010992733

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5492^{+180}_{-164}	$4.533^{+0.044}_{-0.176}$	$0.200^{+0.200}_{-0.300}$	$0.887^{+0.213}_{-0.076}$	$0.978^{+0.074}_{-0.101}$	$1.974^{+0.341}_{-0.884}$
	+3%/-3%	+1%/-4%	+100%/-150%	+24%/-9%	+8%/-10%	+17%/-45%
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 010992733-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$44.66^{+11.75}_{-9.96}$	881^{+52}_{-41}	-2122^{+7004}_{-2657}	$-2.113^{+557.748}_{-512.205}$
Alt.	-110 ± 29	$52.56^{+12.47}_{-10.38}$	882^{+50}_{-40}	1589^{+188}_{-3133}	$0.395^{+0.240}_{-0.155}$

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

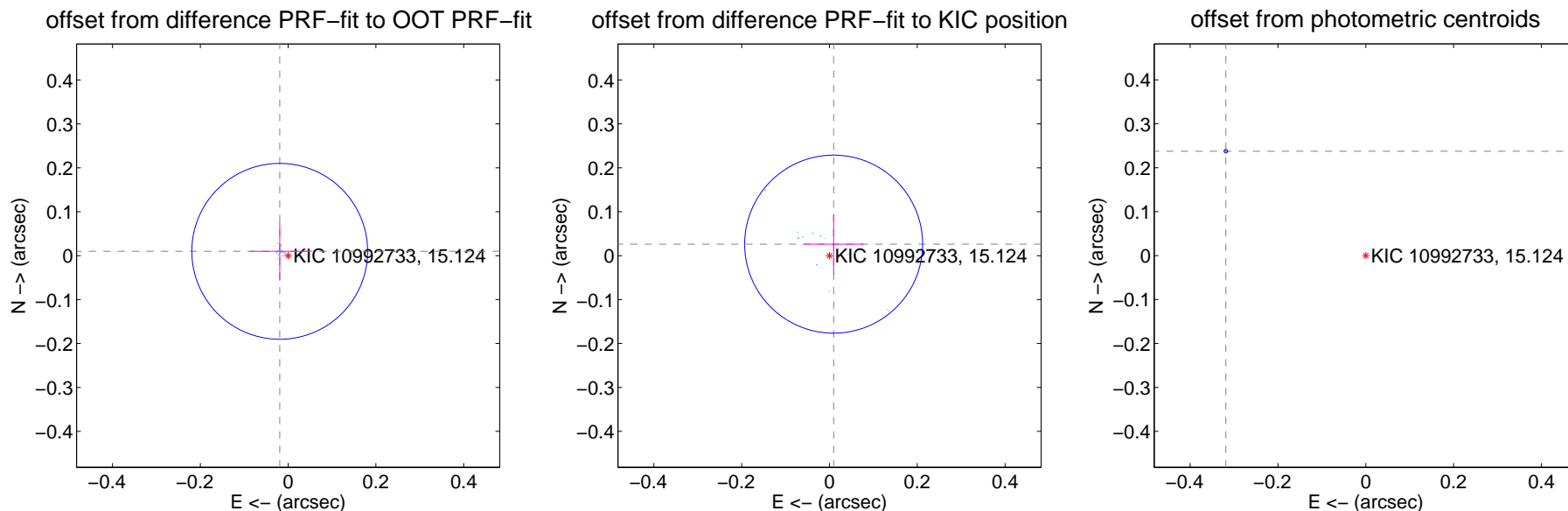
DV Centroid Data

Supplemental centroid analysis for 010992733-02. Kepler magnitude: 15.12. Transit SNR -1.00

There are 14 quarters with good PRF difference image offsets

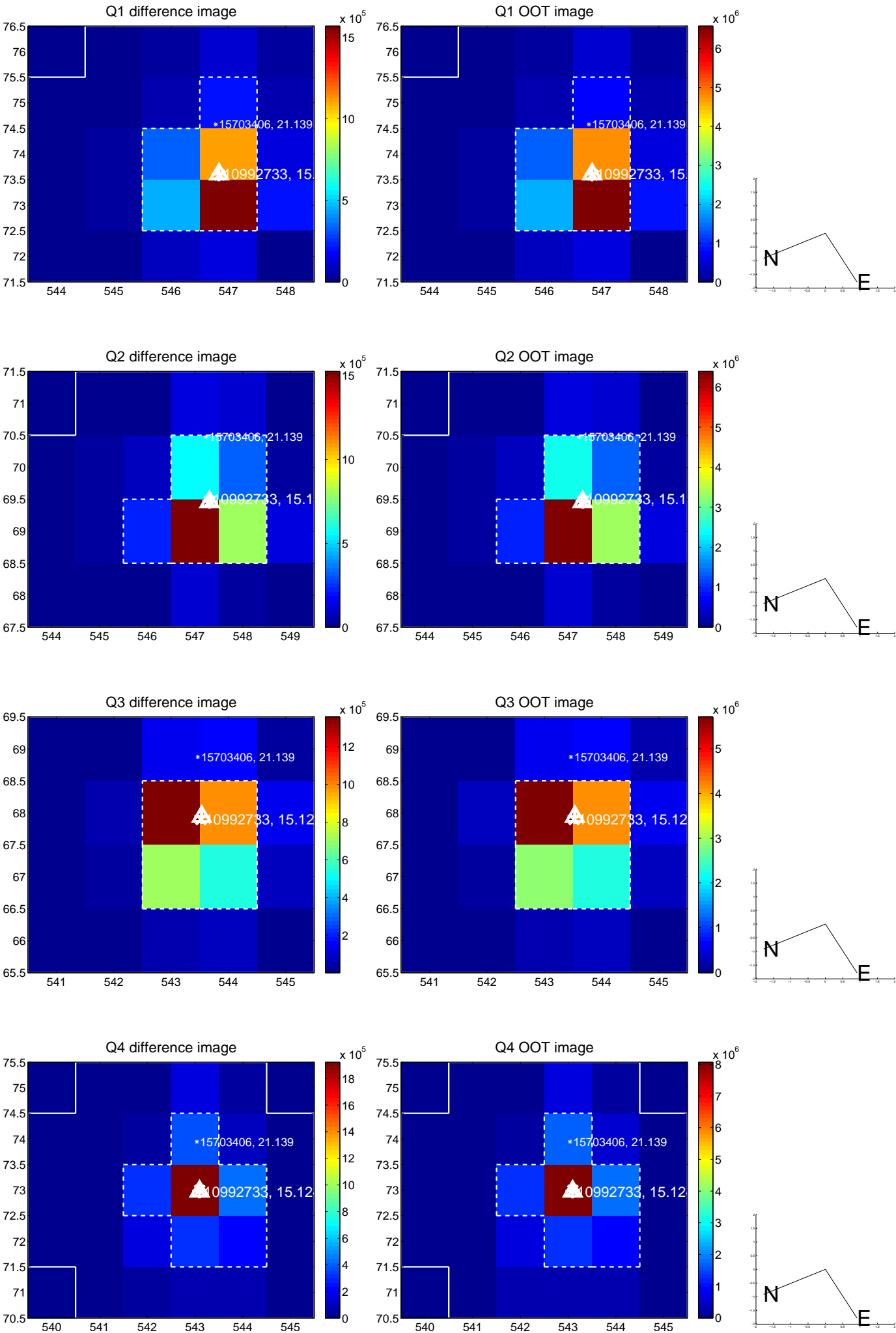
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.022 ± 0.067	0.32	0.019 ± 0.067	0.010 ± 0.067
PRF-fit source offset from KIC position	0.028 ± 0.068	0.41	-0.009 ± 0.069	0.026 ± 0.068
photometric centroid source offset	0.40 ± 0.00	296.18	0.32 ± 0.00	0.24 ± 0.00

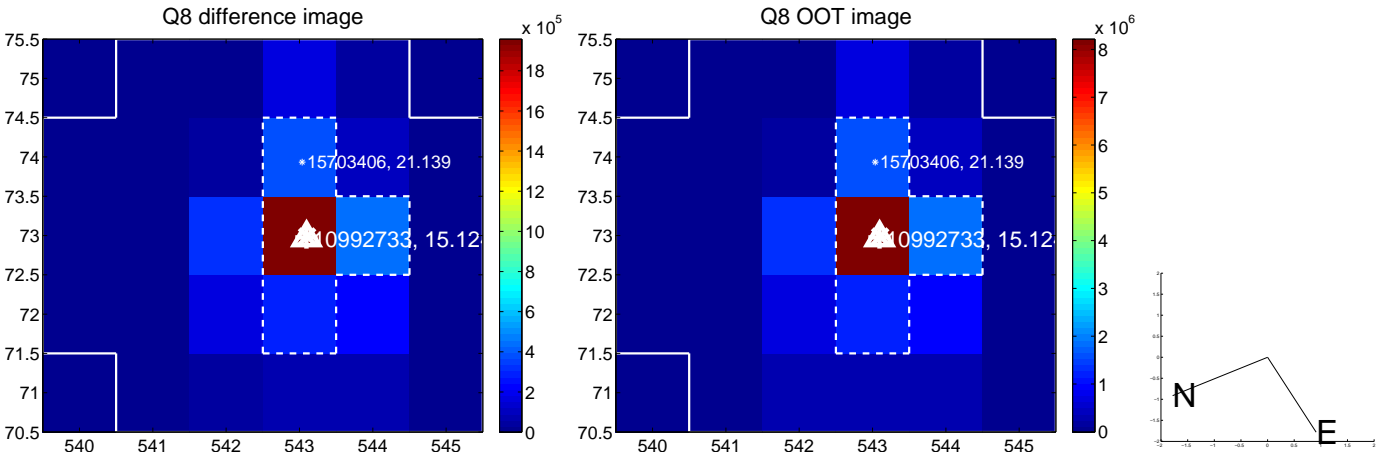
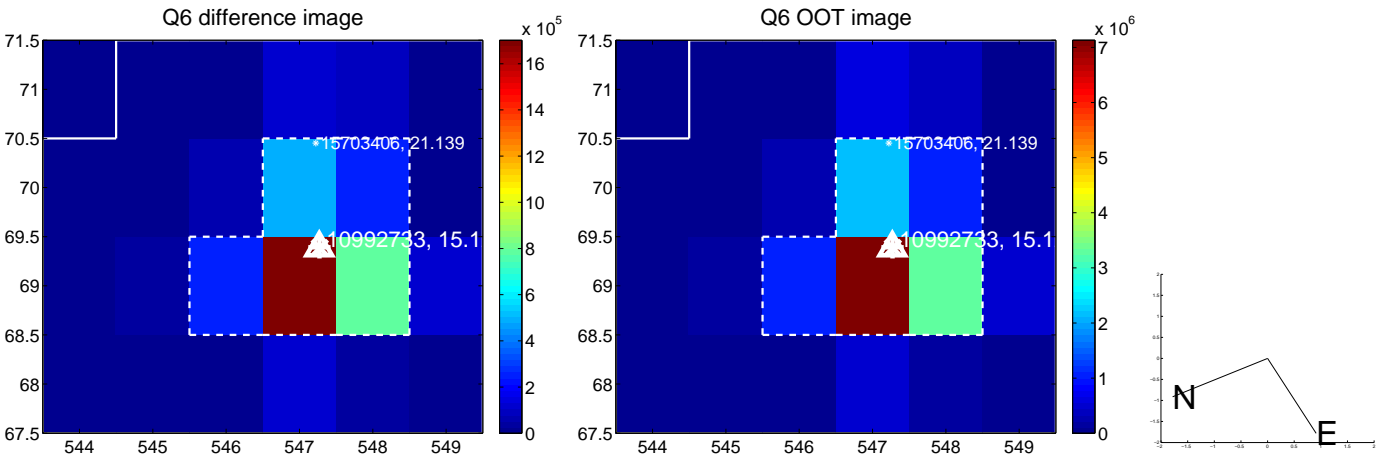
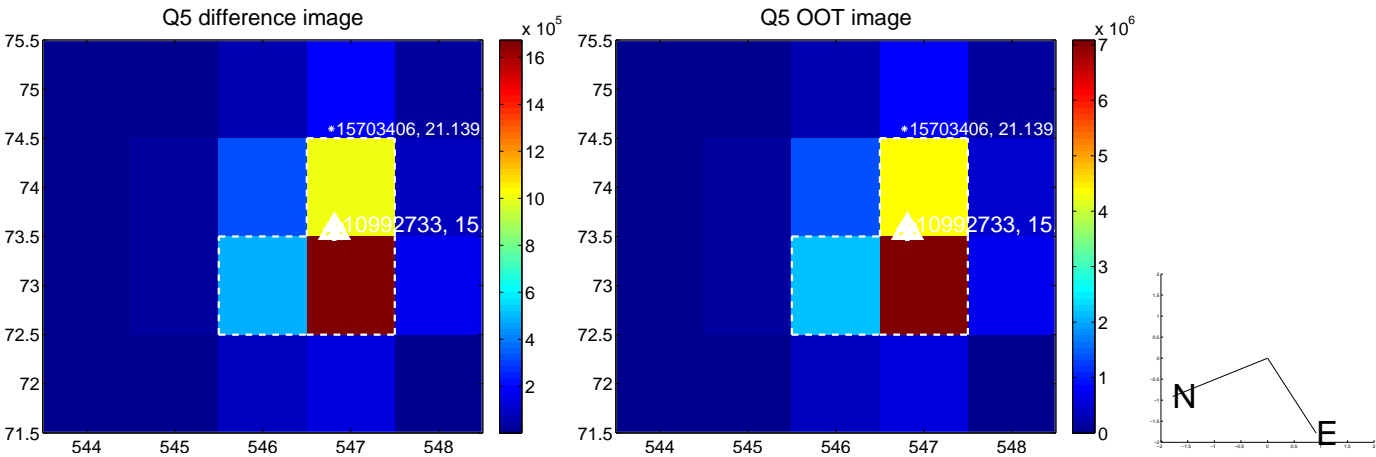


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

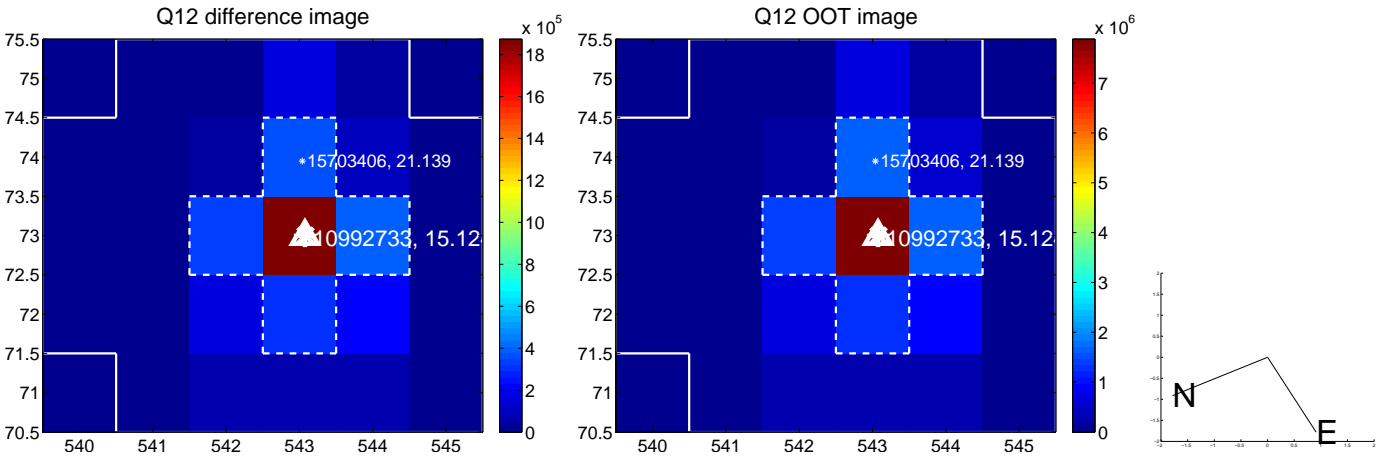
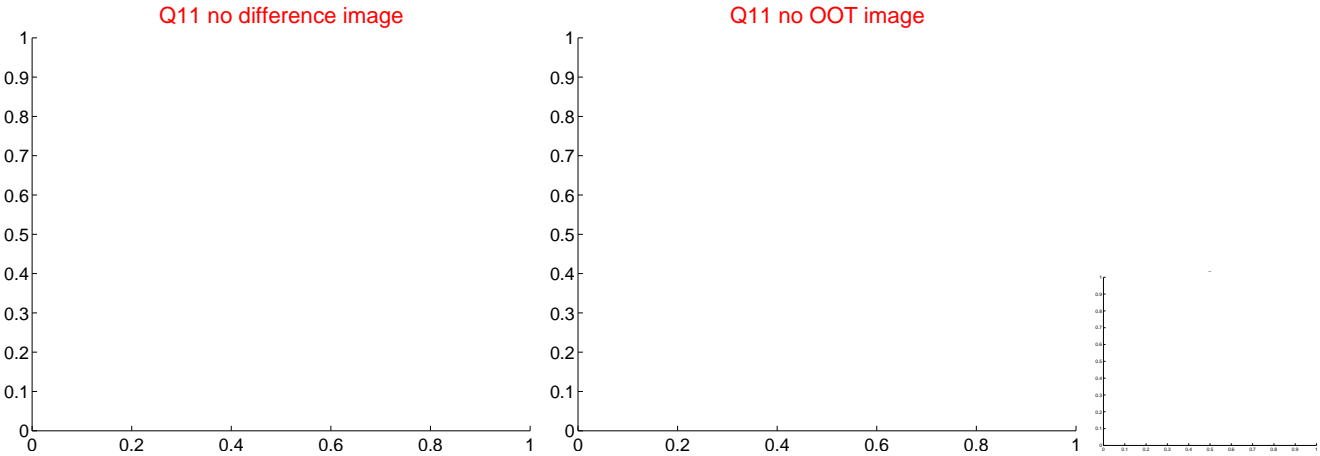
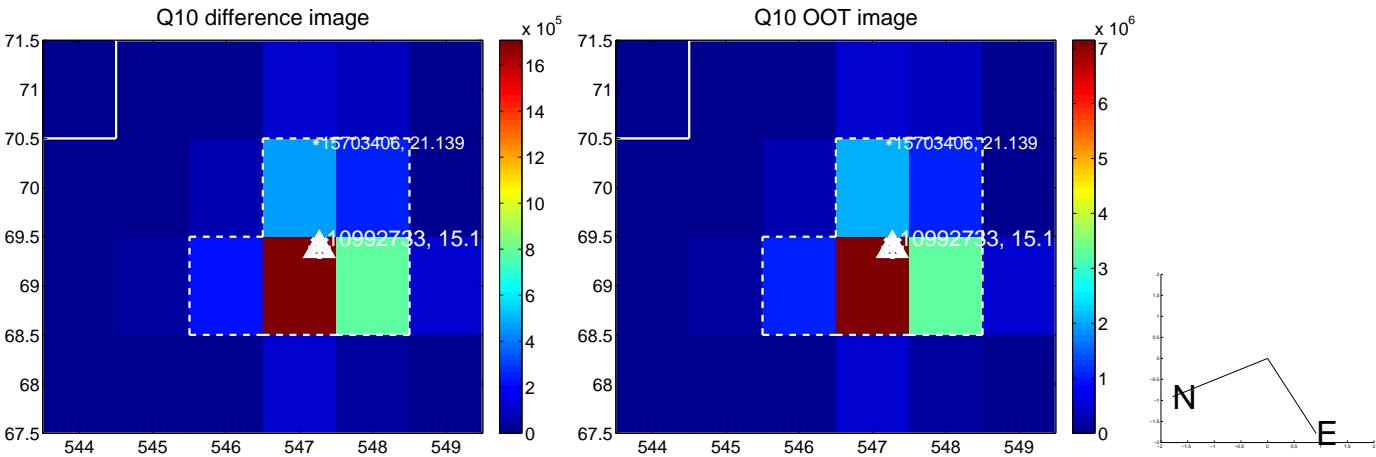
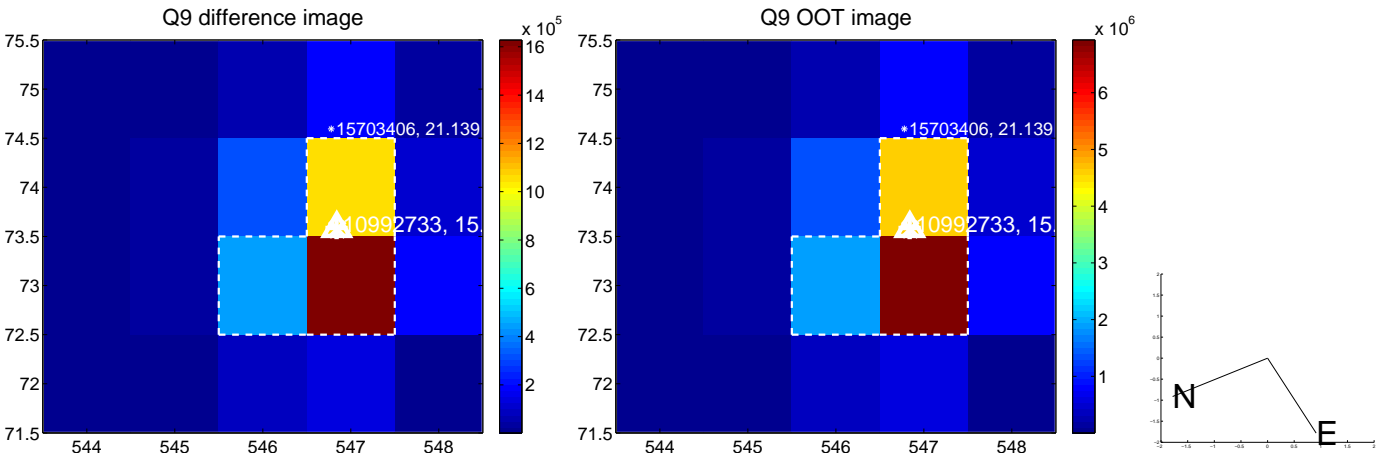
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



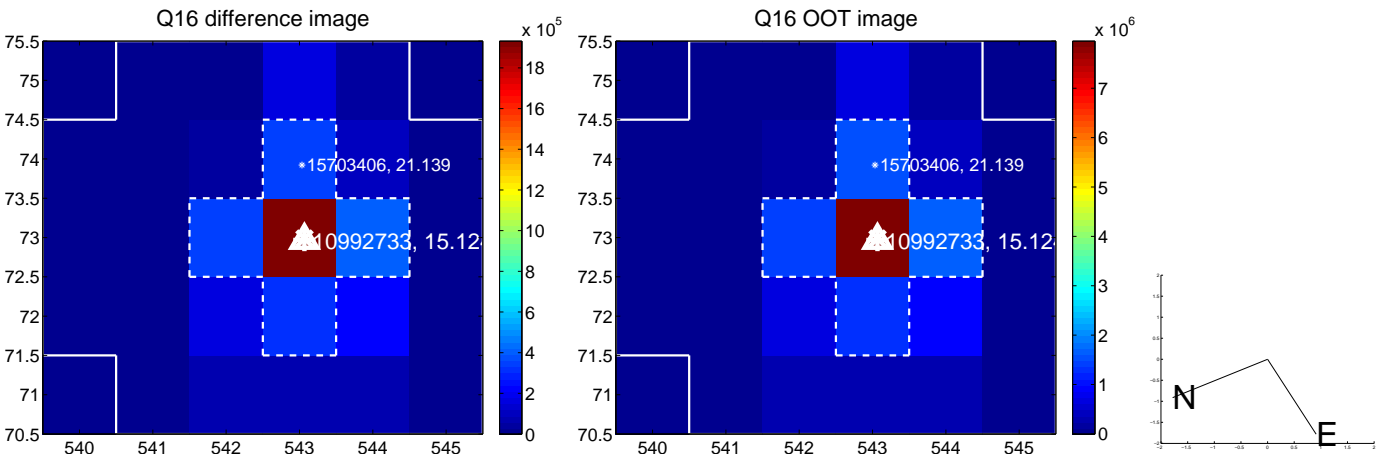
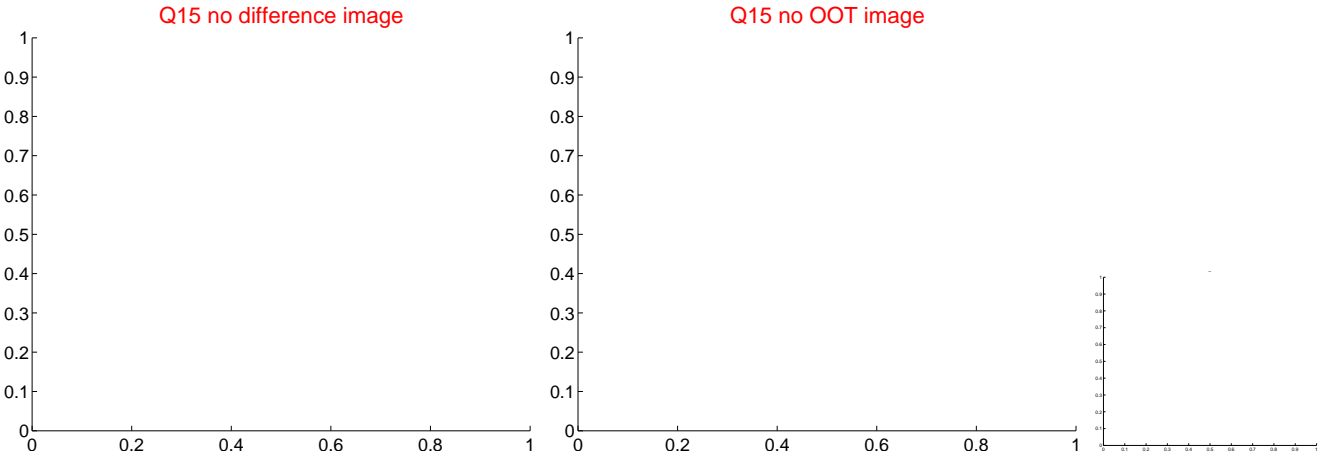
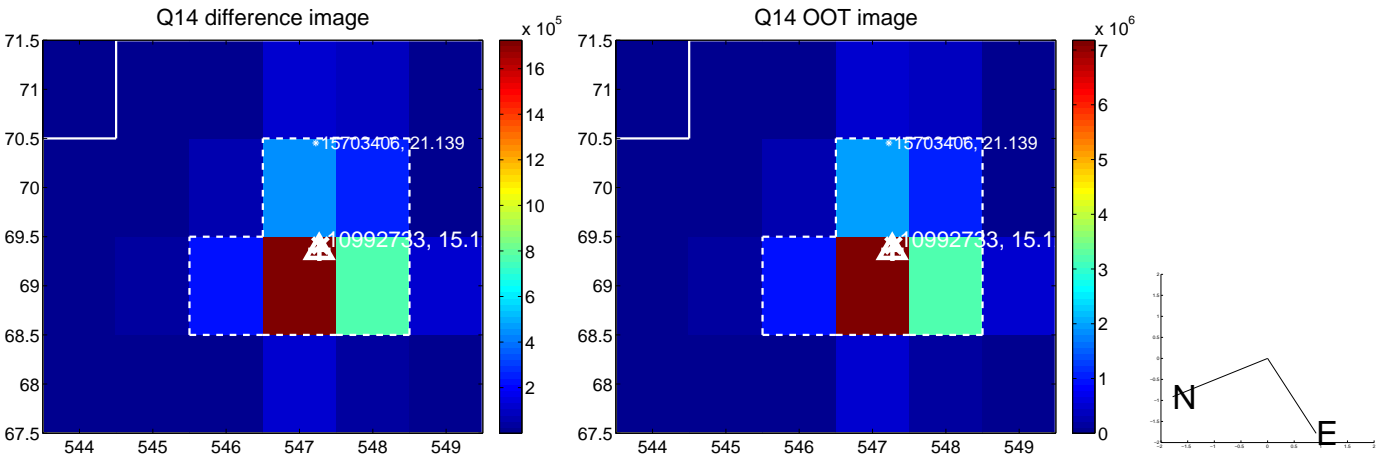
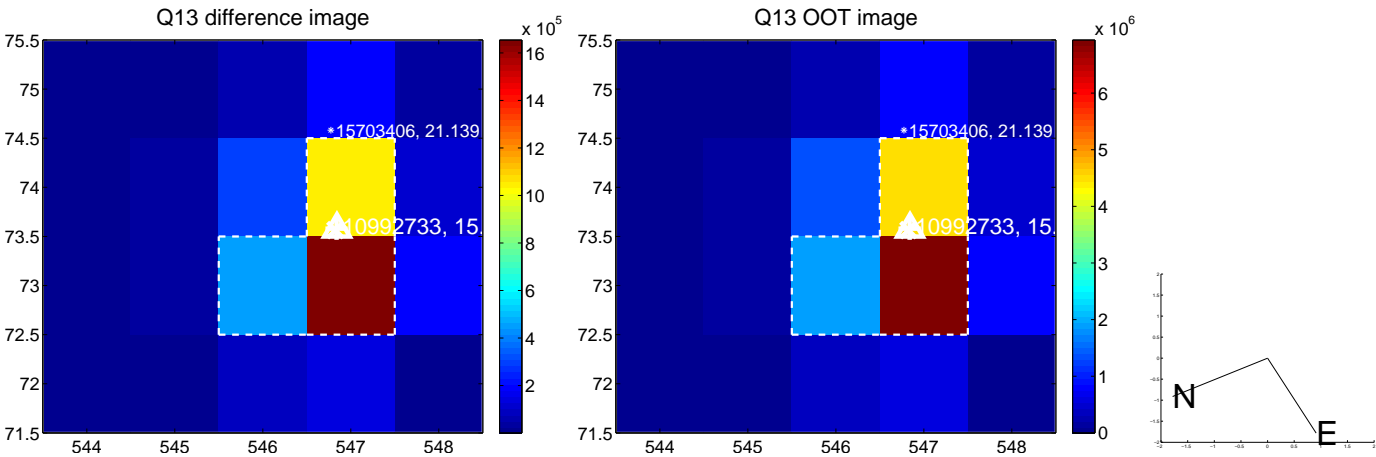
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



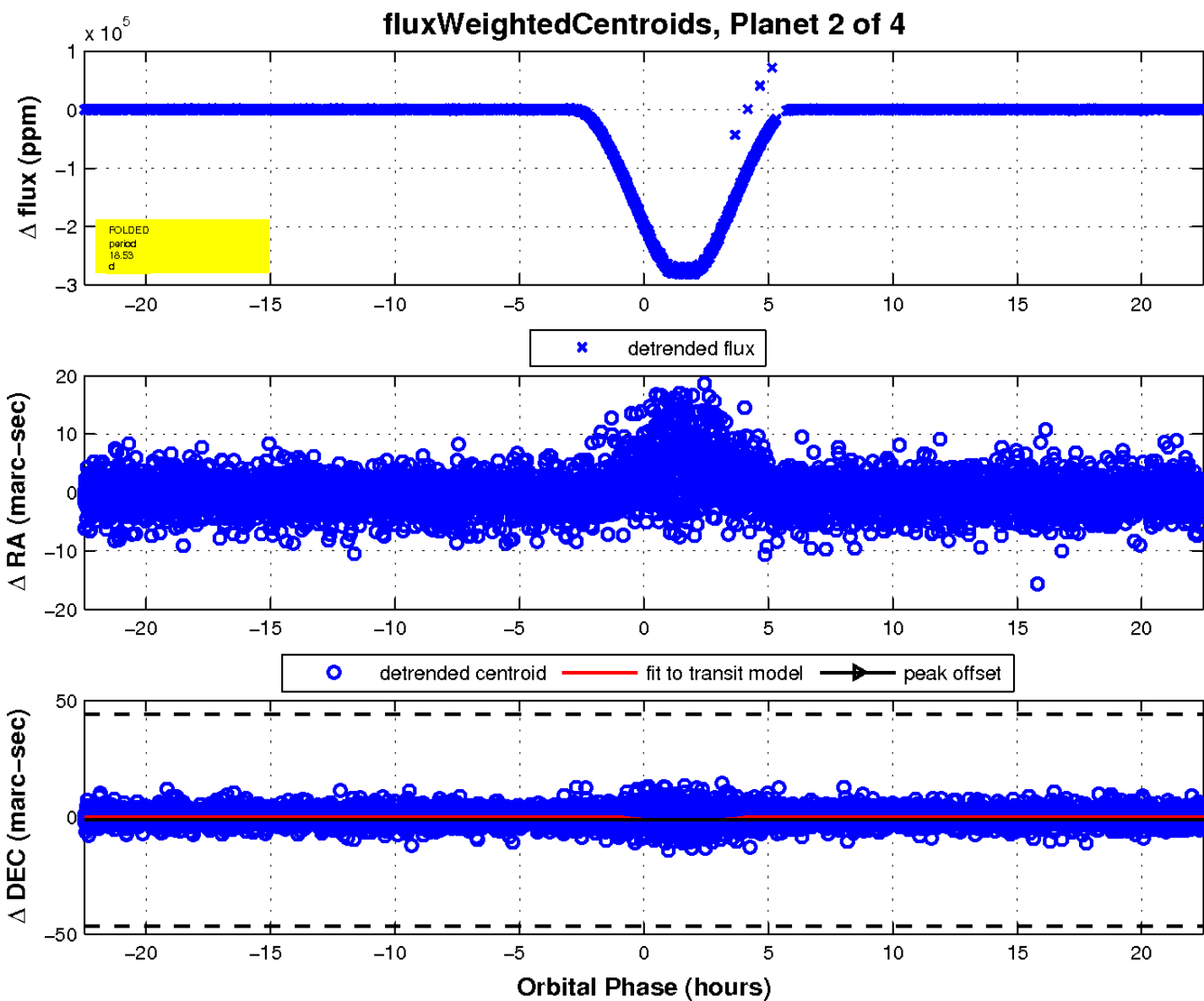
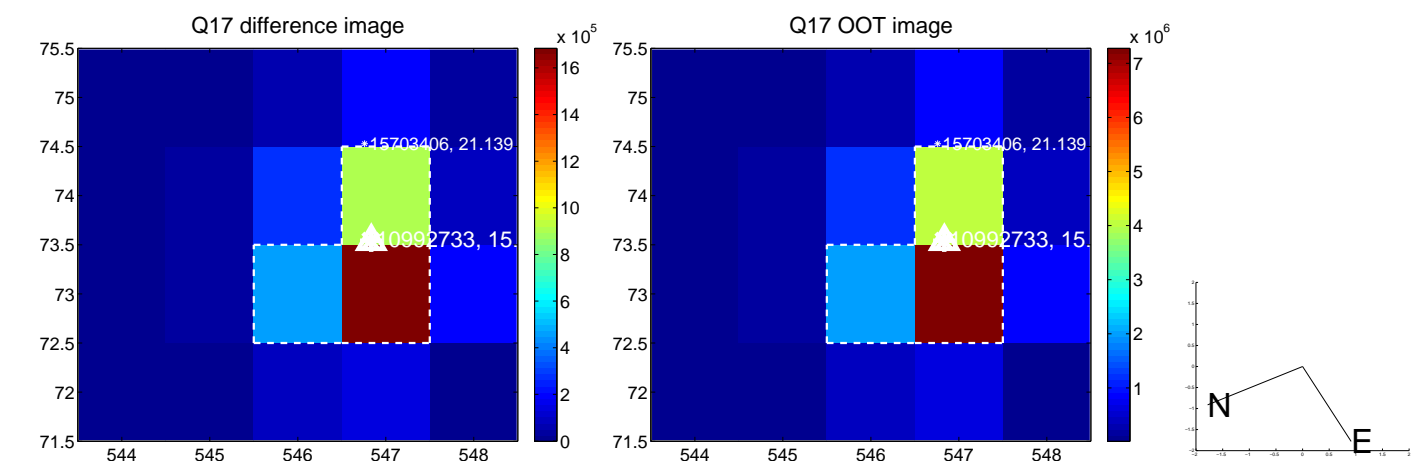
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

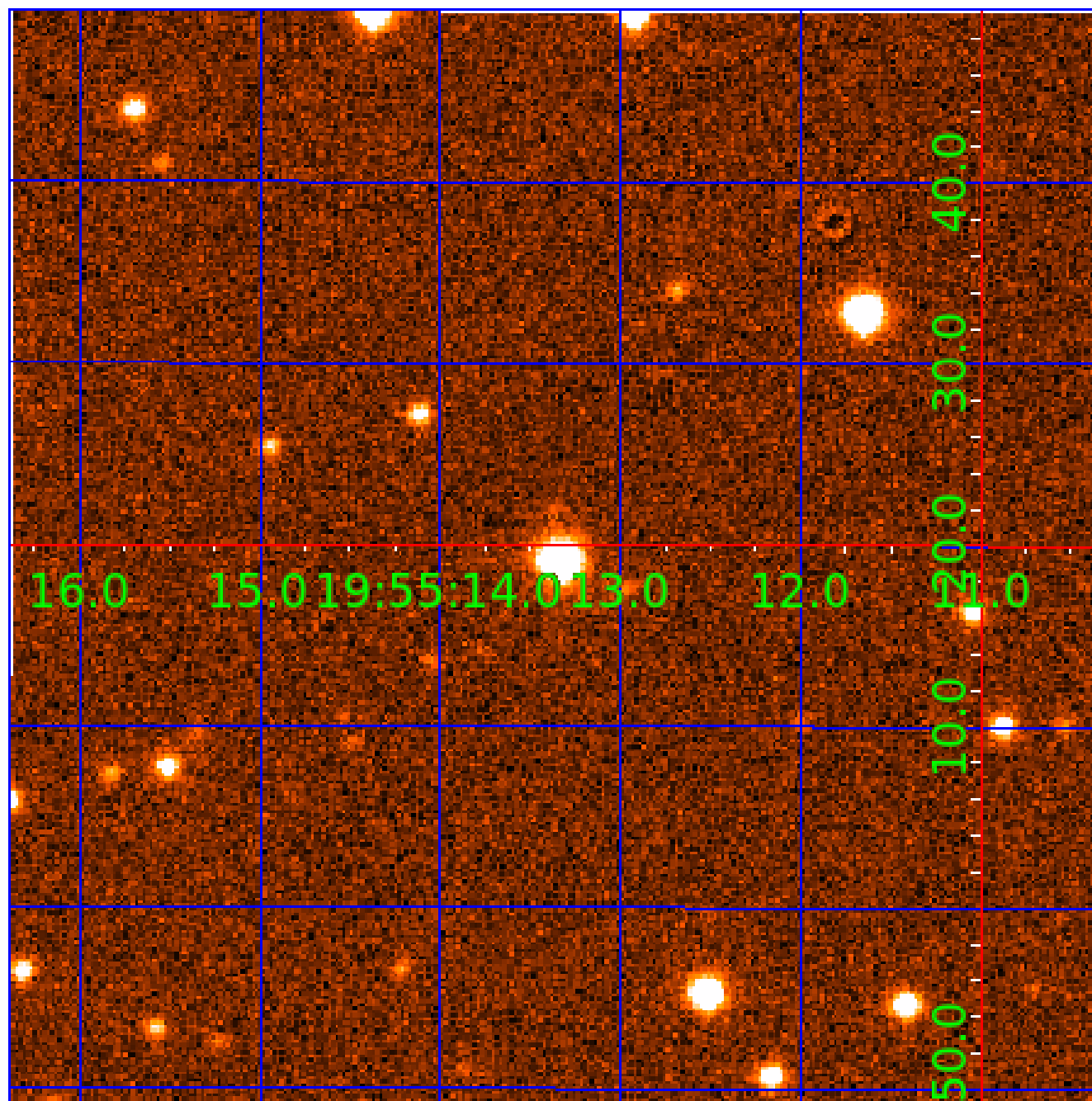


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010992733

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})
010992733-01	OBS	7399.01	18.526048	144.186612	454735.2	3.500	12773.5	-1.0	0.89	5492	48.40	34.62
010992733-02	OBS	No	18.525897	138.959026	278068.3	5.000	9021.1	-1.0	0.89	5492	43.06	34.62
010992733-03	OBS	No	6.175457	131.585917	34048.1	15.000	995.1	-1.0	0.89	5492	16.07	149.81
010992733-04	OBS	No	18.525946	136.804658	2667.2	41.377	75.6	30.8	0.89	5492	8.80	34.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010992733-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
010992733-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
010992733-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—RESIDUAL_TCE—CENT_NOFITS
010992733-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—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 010992733-03

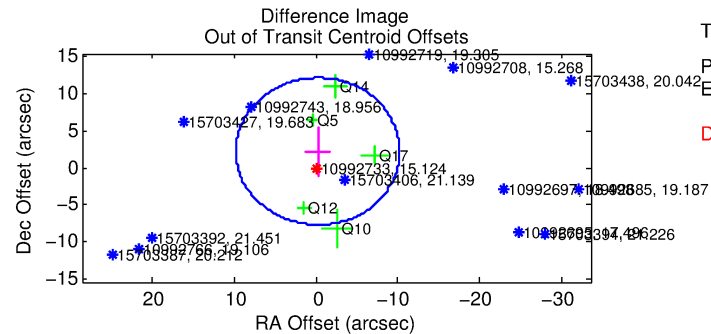
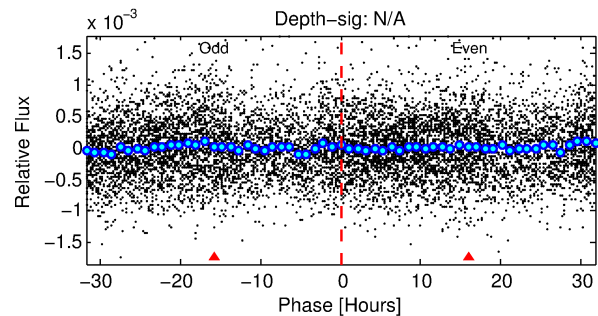
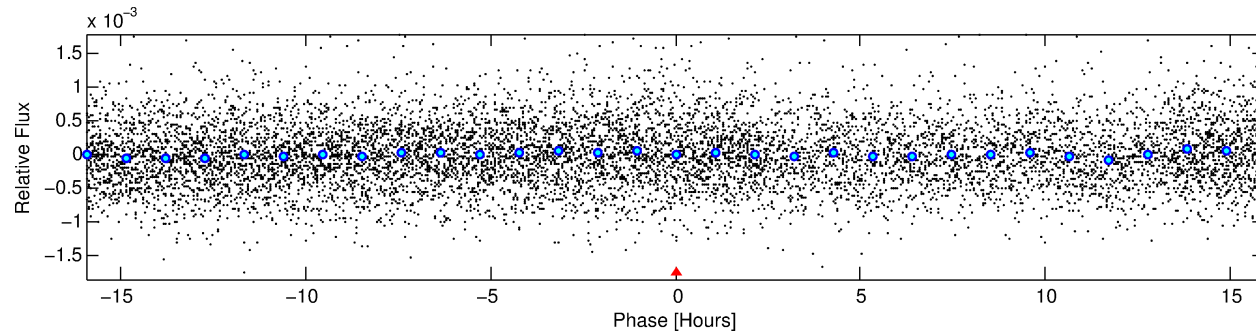
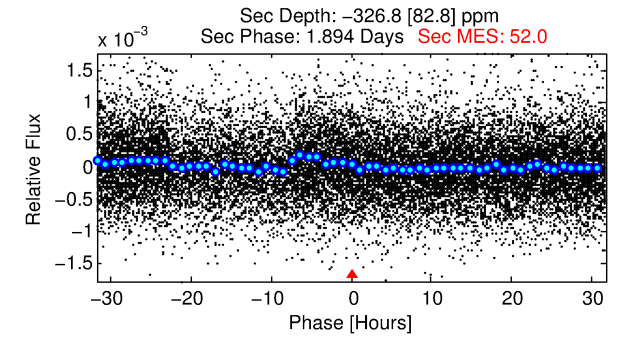
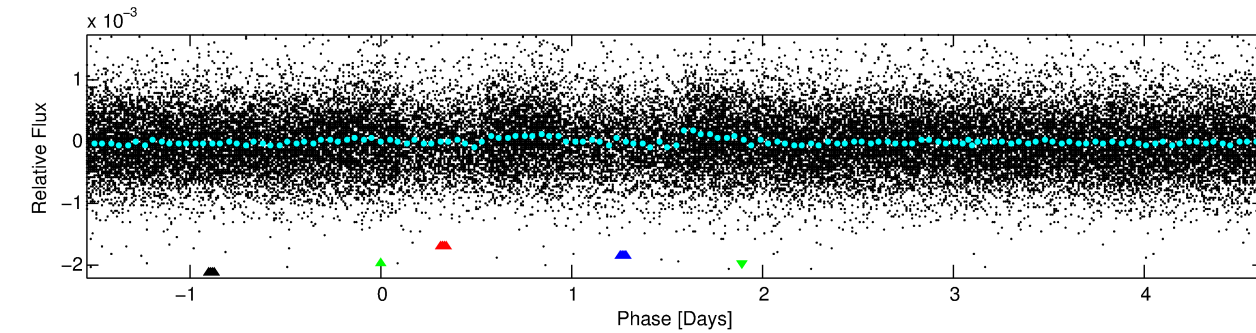
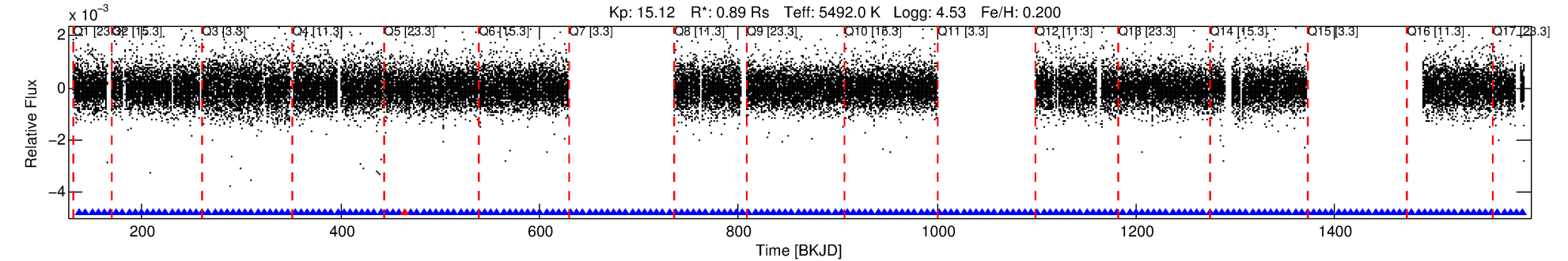
No Significant Match Found

DV One-Page Summary

KIC: 10992733 Candidate: 3 of 4 Period: 6.175 d

KOI: K07399 Corr: No Ephemeris Match

Kp: 15.12 R*: 0.89 Rs Teff: 5492.0 K Logg: 4.53 Fe/H: 0.200



TPS TCE Results:

Period = 6.17546 d
Epoch = 131.5859 BKJD

DV fit results are unavailable

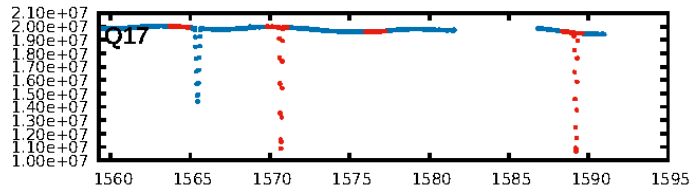
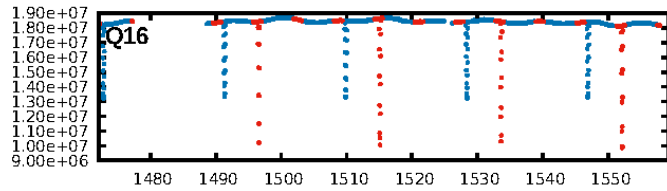
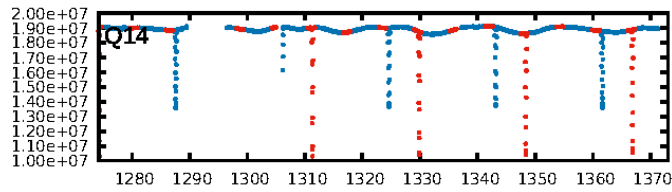
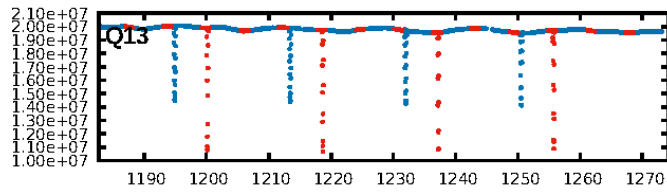
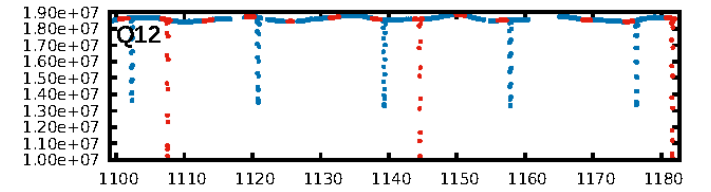
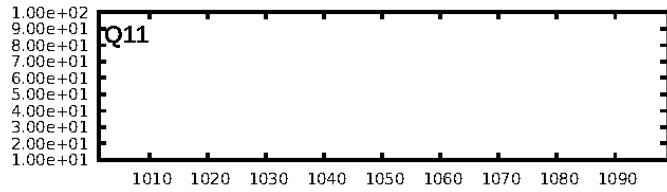
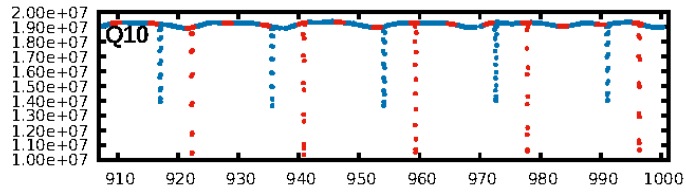
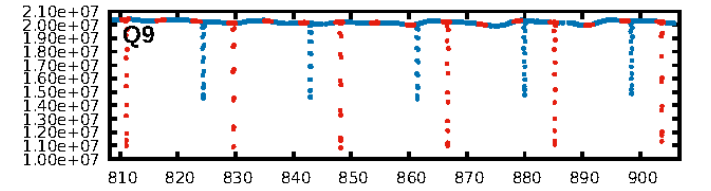
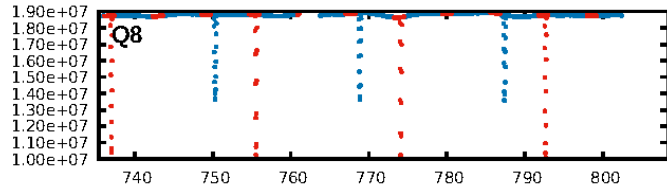
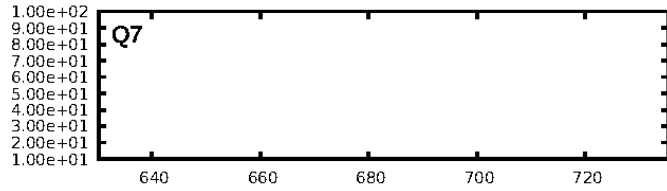
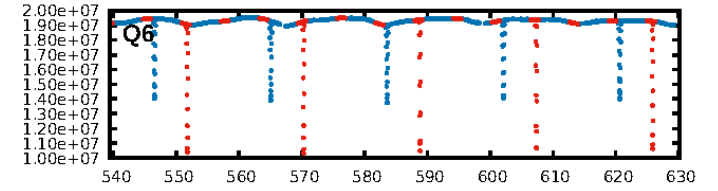
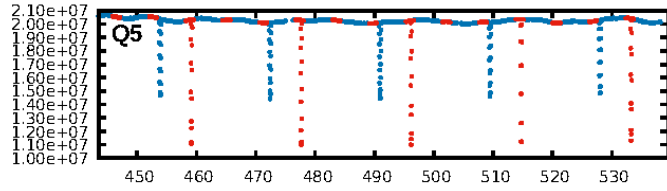
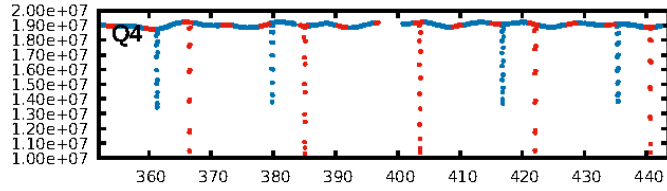
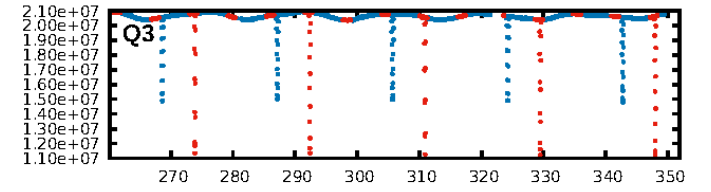
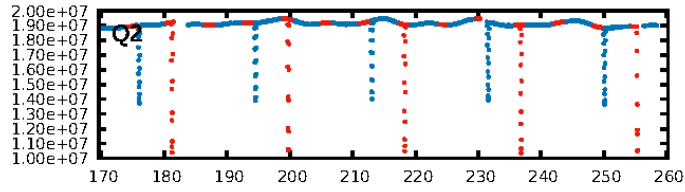
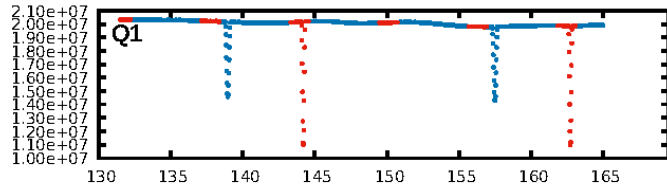
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [18.75σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.99 [164/165]
GhostDiagnostic-chr: 1.805
Centroid-sig: N/A
Centroid-so: 3.219 arcsec [0.84σ]
OotOffset-rm: 2.246 arcsec [0.68σ]
KicOffset-rm: 2.264 arcsec [0.56σ]
OotOffset-st: 2/0/1/2 [5]
KicOffset-st: 2/0/1/2 [5]
DiffImageQuality-fgm: 0.00 [0/5]
DiffImageOverlap-fno: 1.00 [14/14]

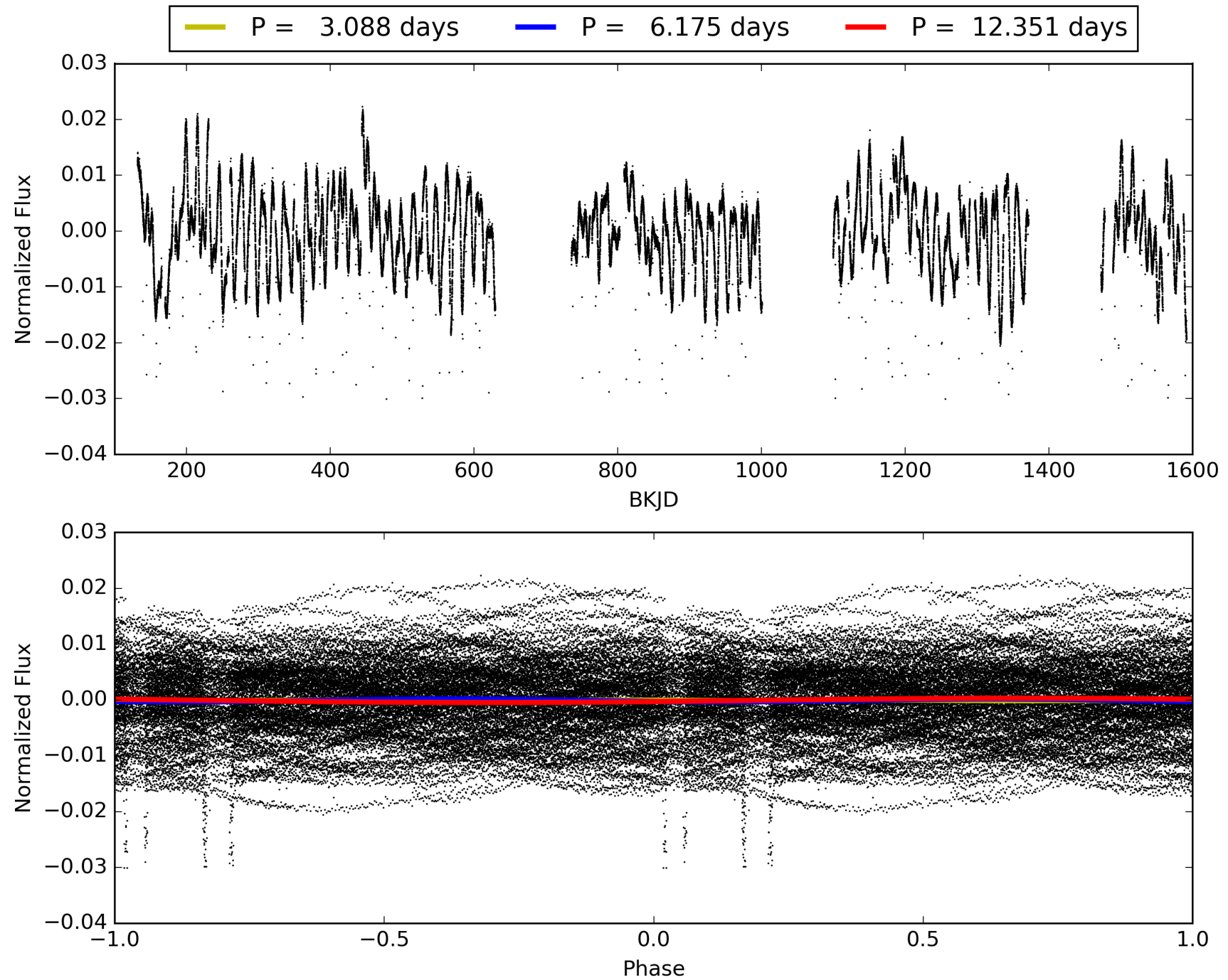
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:22:41 Z

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

TCE 010992733-03, PDC Light Curves

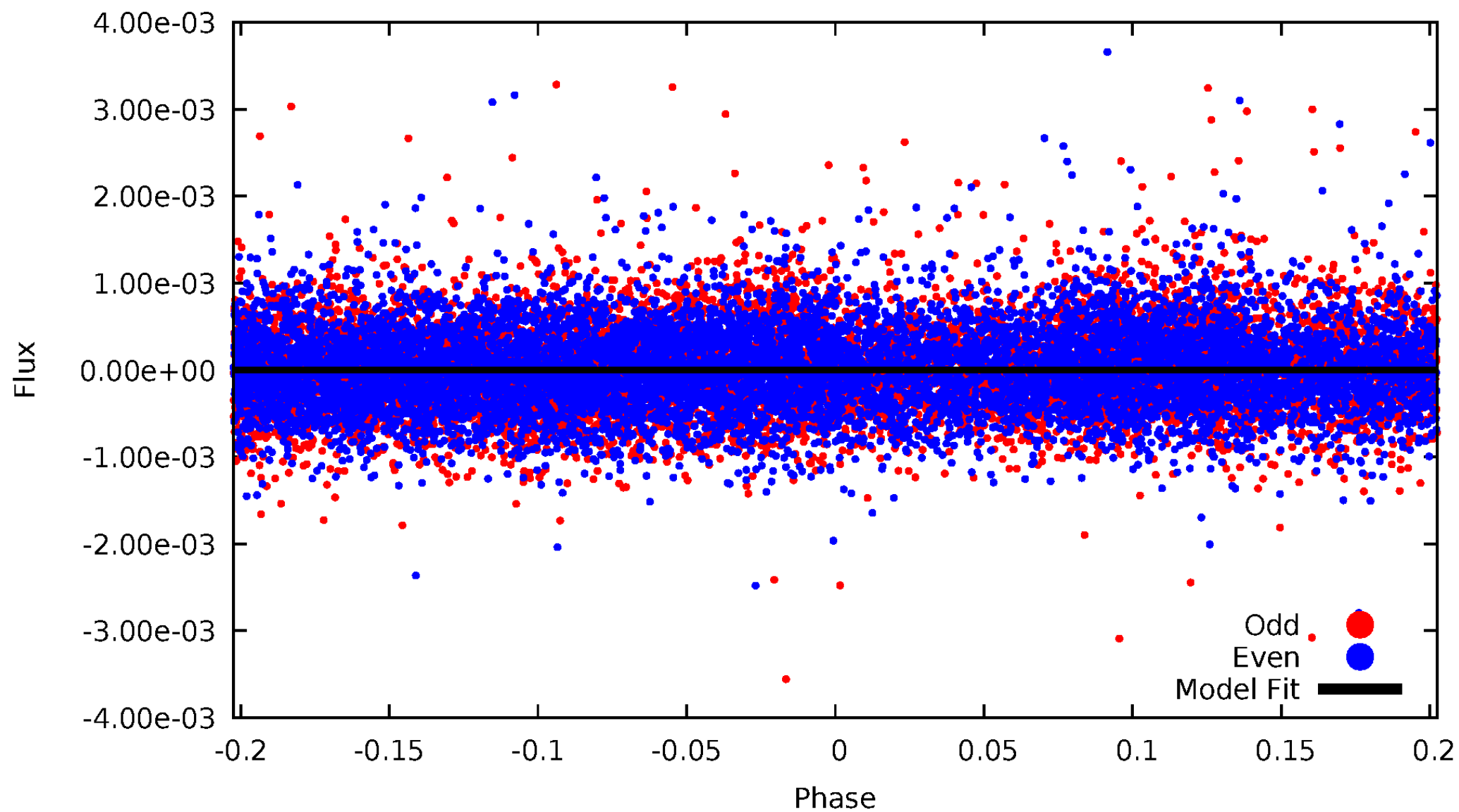


TCE 010992733-03



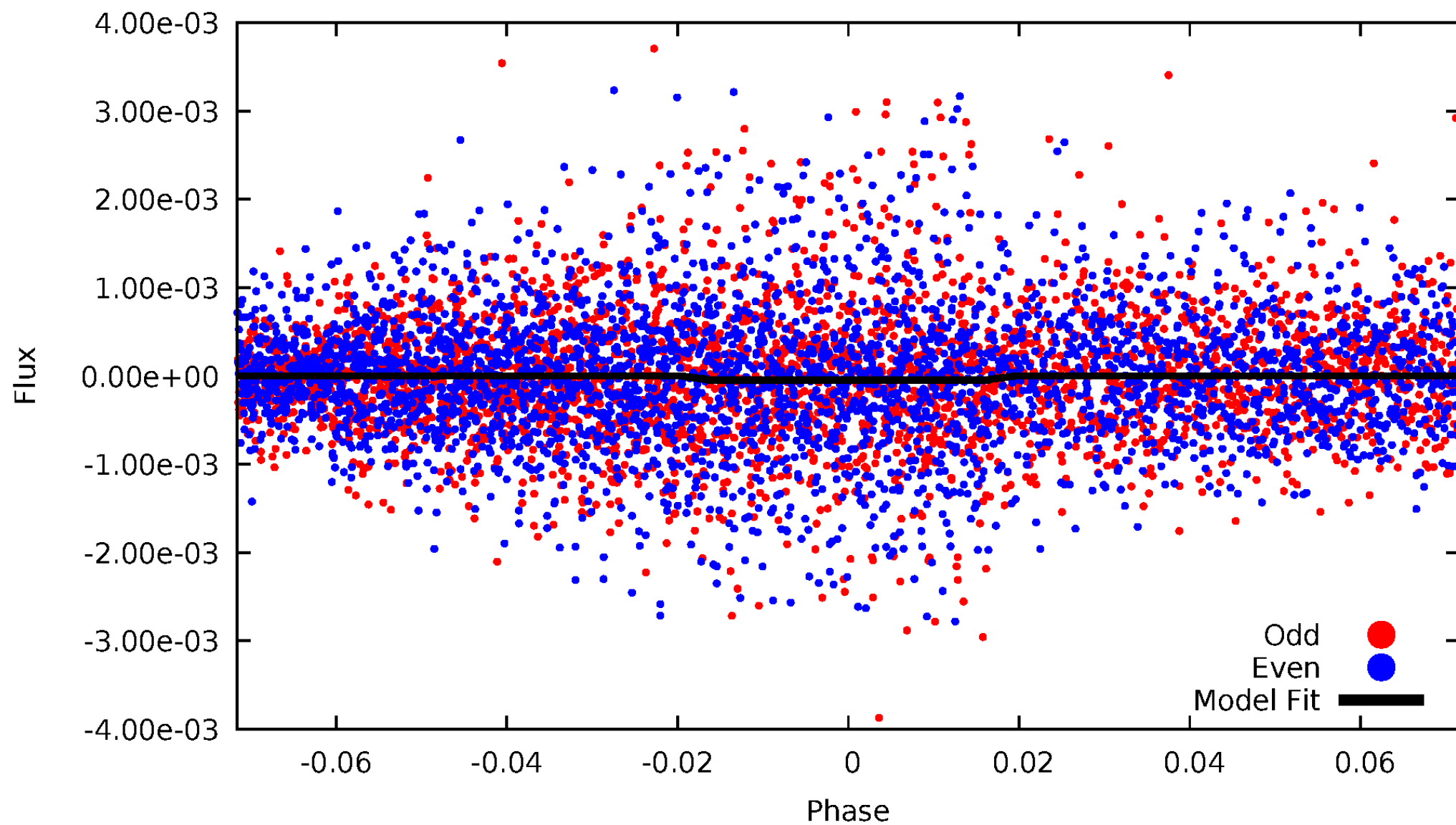
DV Odd/Even

TCE 010992733-03

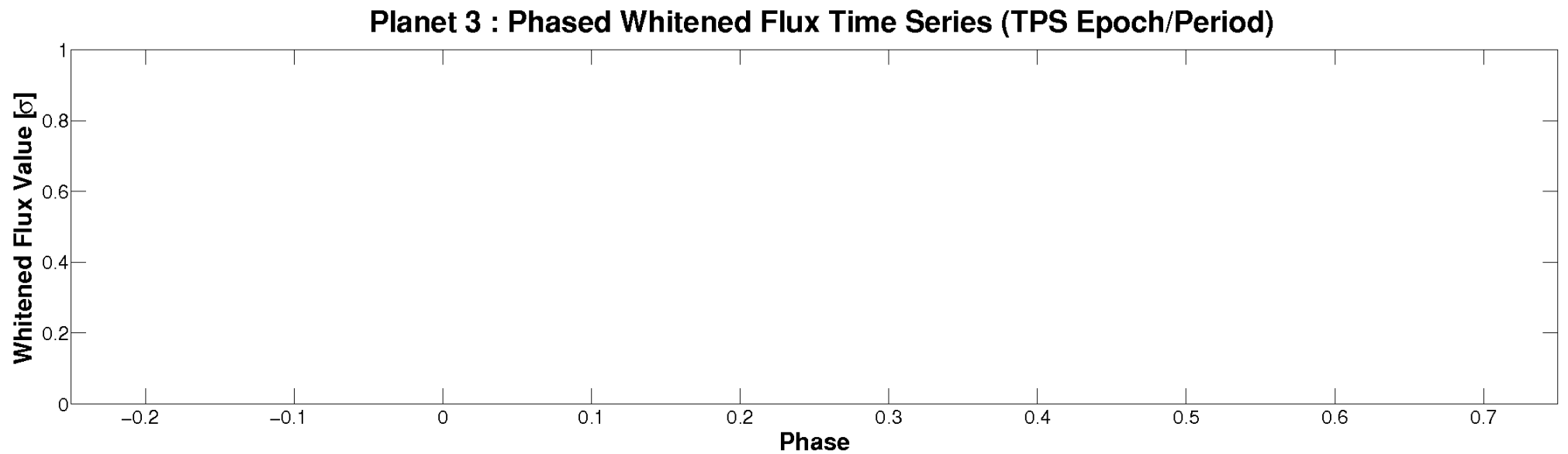
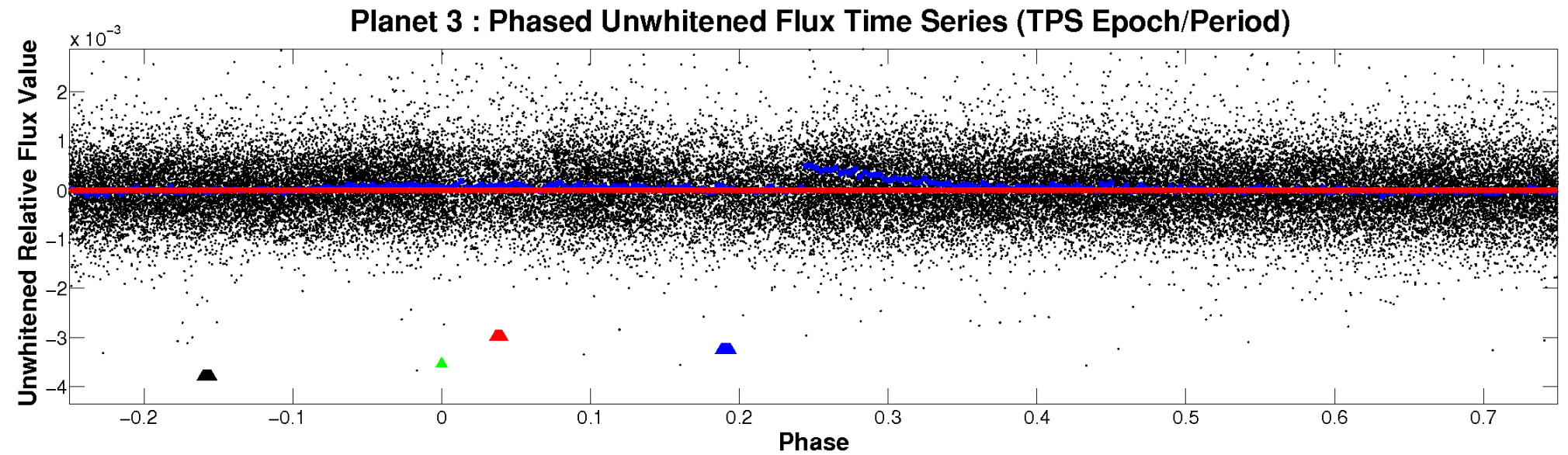


ALT Odd/Even

TCE 010992733-03

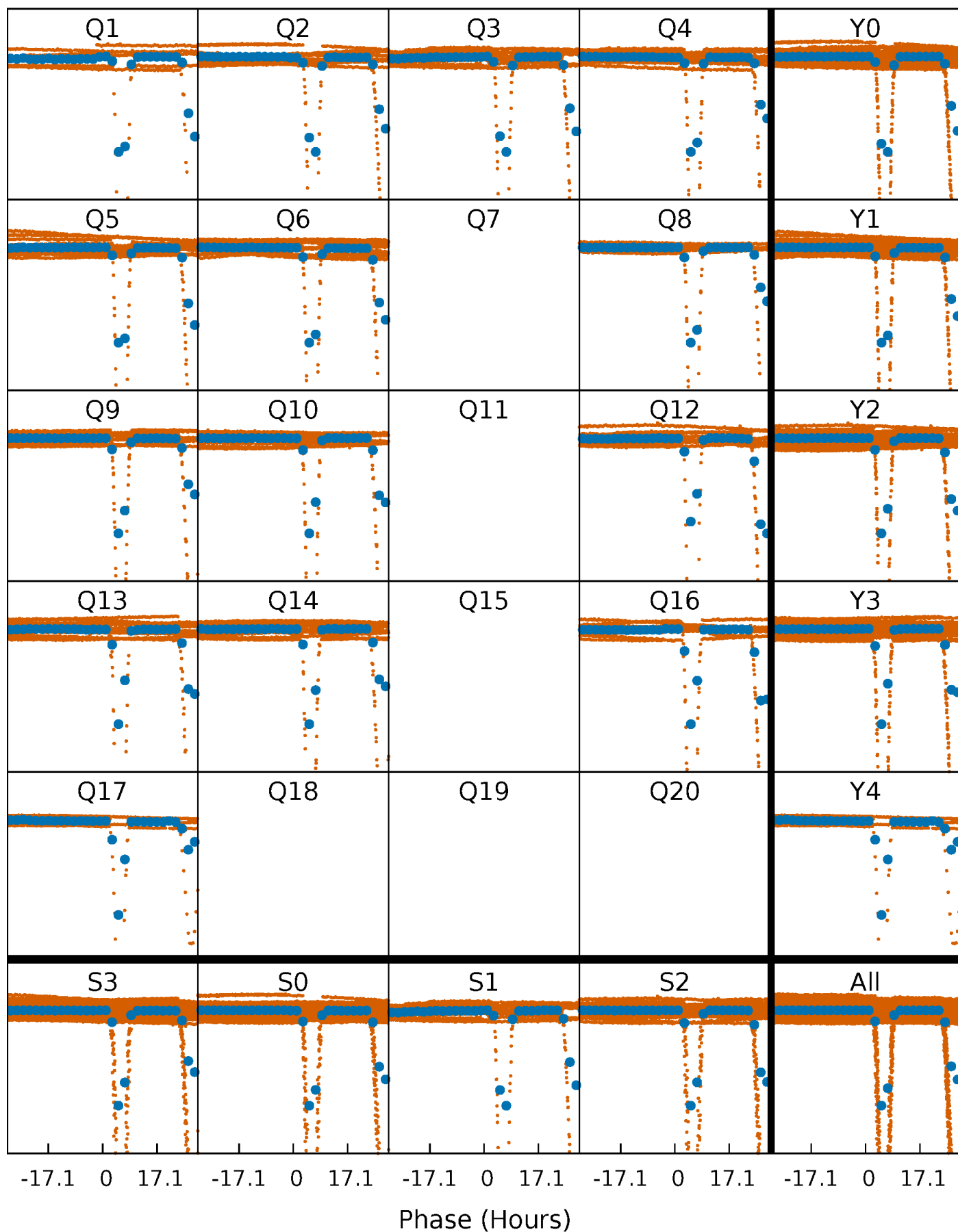


Non-Whitened Vs. Whitened Light Curve



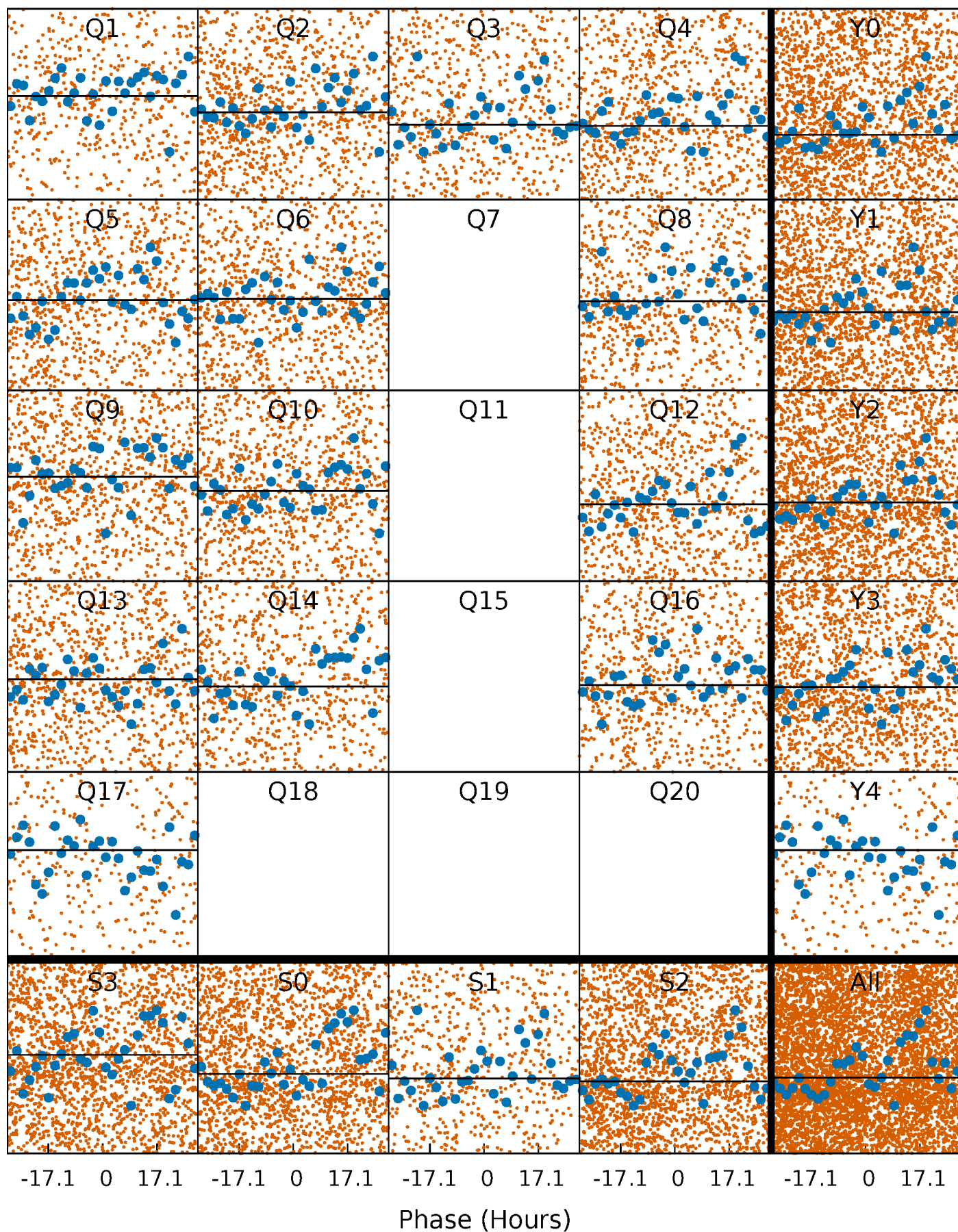
PDC Quarter-Phased Transit Curves

TCE 010992733-03 P= 6.175457 Days $T_0=131.585917$ (BKJD)



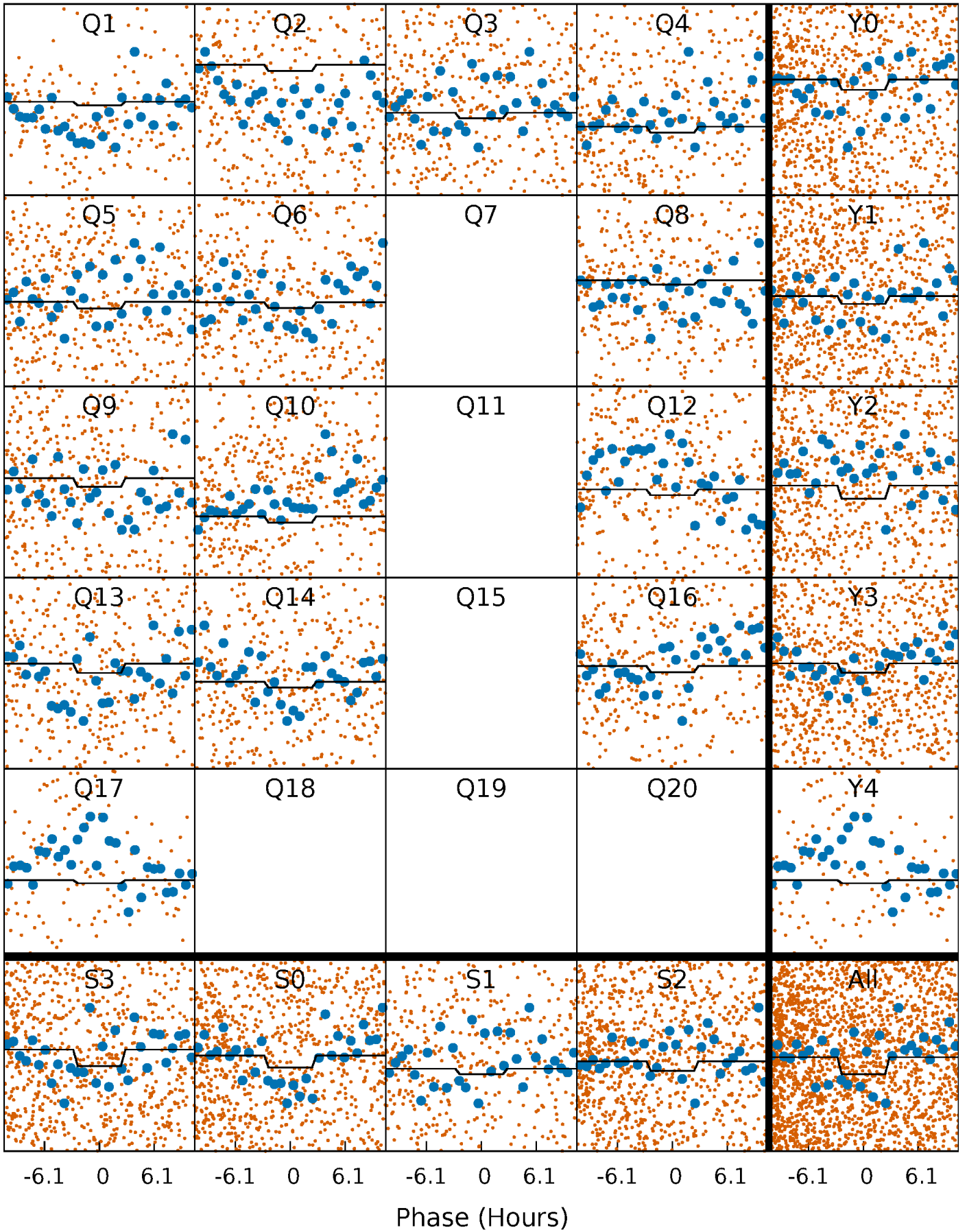
DV Quarter-Phased Transit Curves

TCE 010992733-03 P= 6.175457 Days $T_0=131.585917$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

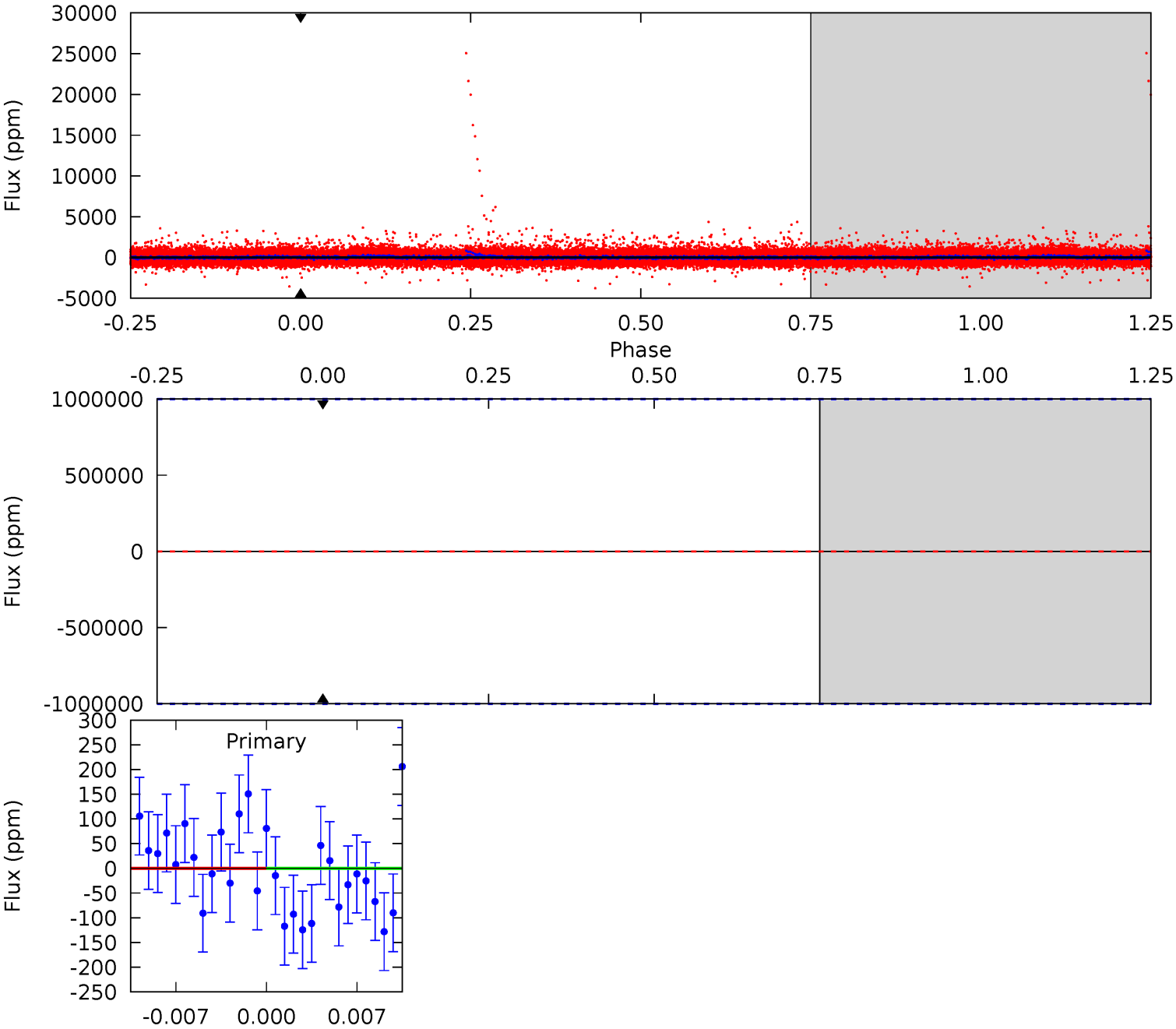
TCE 010992733-03 P= 6.175457 Days $T_0=137.673951$ (BKJD)



DV Model-Shift Uniqueness Test

010992733-03, P = 6.175457 Days, E = 125.410460 Days

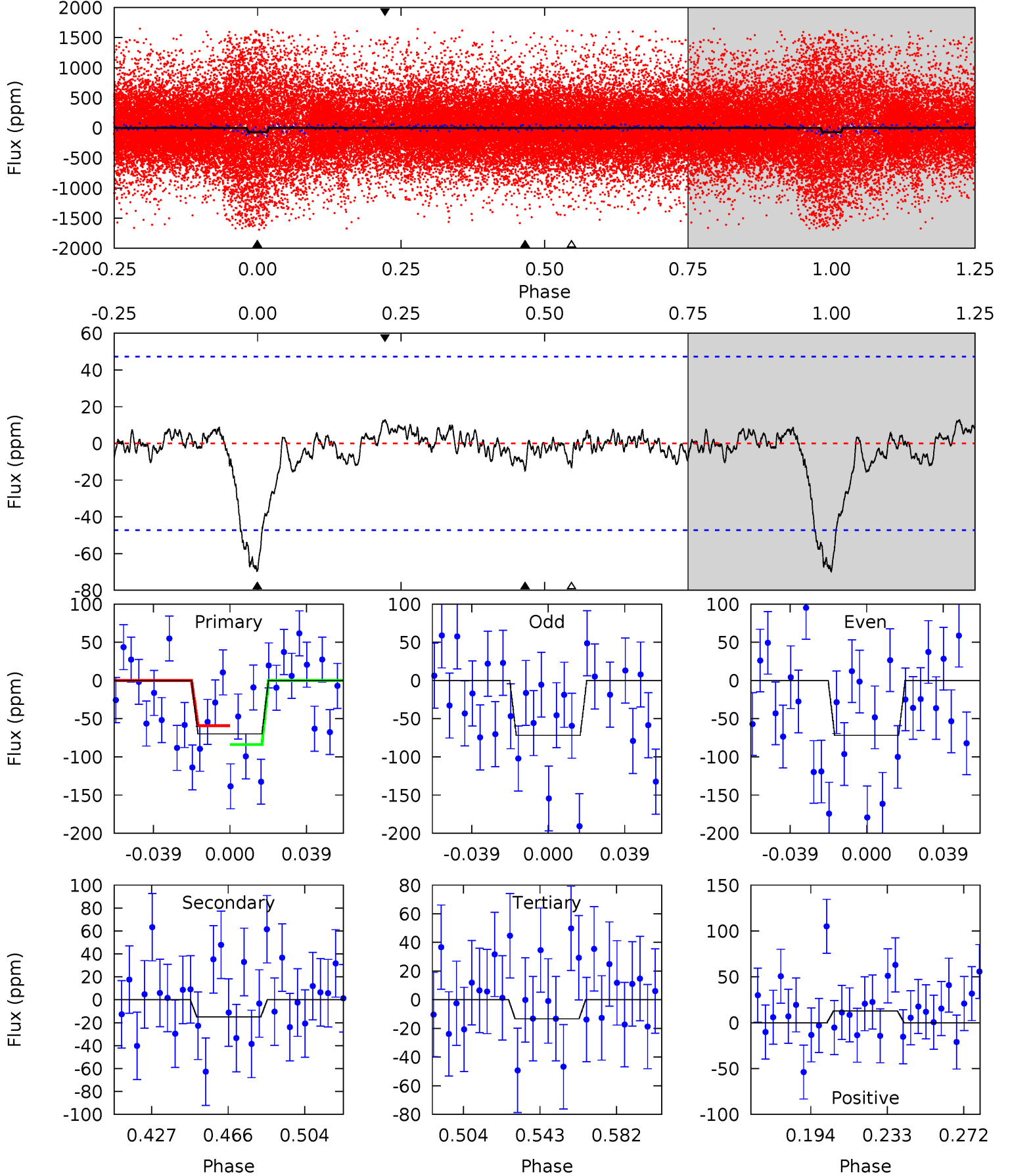
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010992733-03, P = 6.175457 Days, E = 131.498494 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.03	1.50	1.34	1.29	4.76	2.07	0.53	5.69	5.75	0.16	0.22	0.00	0.45	0.15	1.25



Stellar Parameters For KIC 010992733

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5492^{+180}_{-164}	$4.533^{+0.044}_{-0.176}$	$0.200^{+0.200}_{-0.300}$	$0.887^{+0.213}_{-0.076}$	$0.978^{+0.074}_{-0.101}$	$1.974^{+0.341}_{-0.884}$
	+3%/-3%	+1%/-4%	+100%/-150%	+24%/-9%	+8%/-10%	+17%/-45%
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 010992733-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$17.04^{+10.72}_{-8.98}$	1274^{+76}_{-59}	3039^{+5884}_{-10829}	$7.430^{+1262.817}_{-871.982}$
Alt.	-15 ± 10	$6.73^{+7.42}_{-4.55}$	1269^{+78}_{-54}	2068^{+873}_{-4017}	$0.643^{+6.090}_{-0.538}$

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 $A_{obs} \gg 1.0$

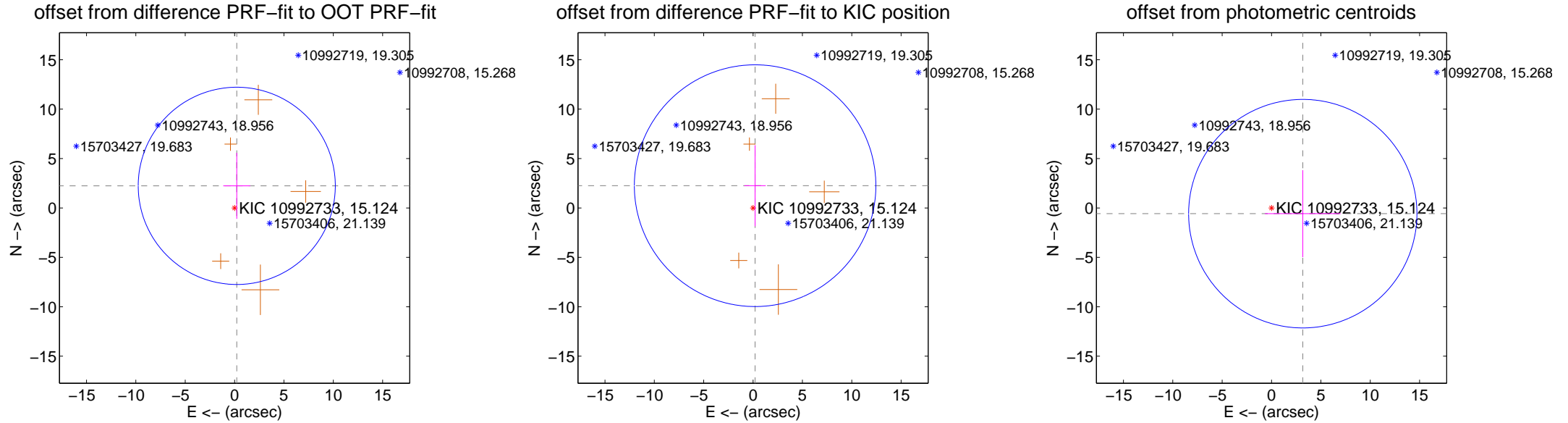
DV Centroid Data

Supplemental centroid analysis for 010992733-03. Kepler magnitude: 15.12. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

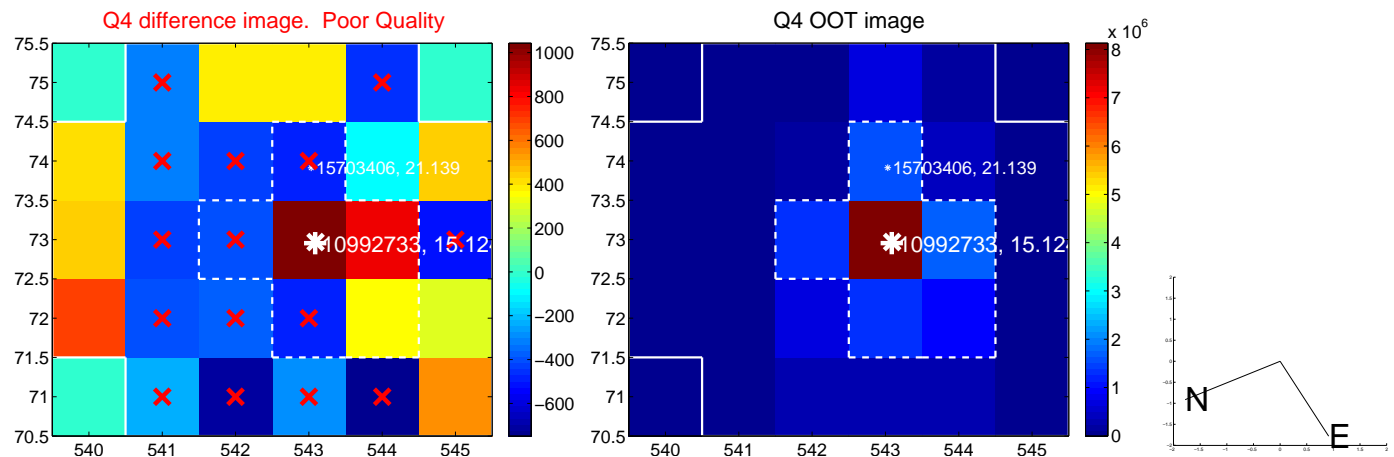
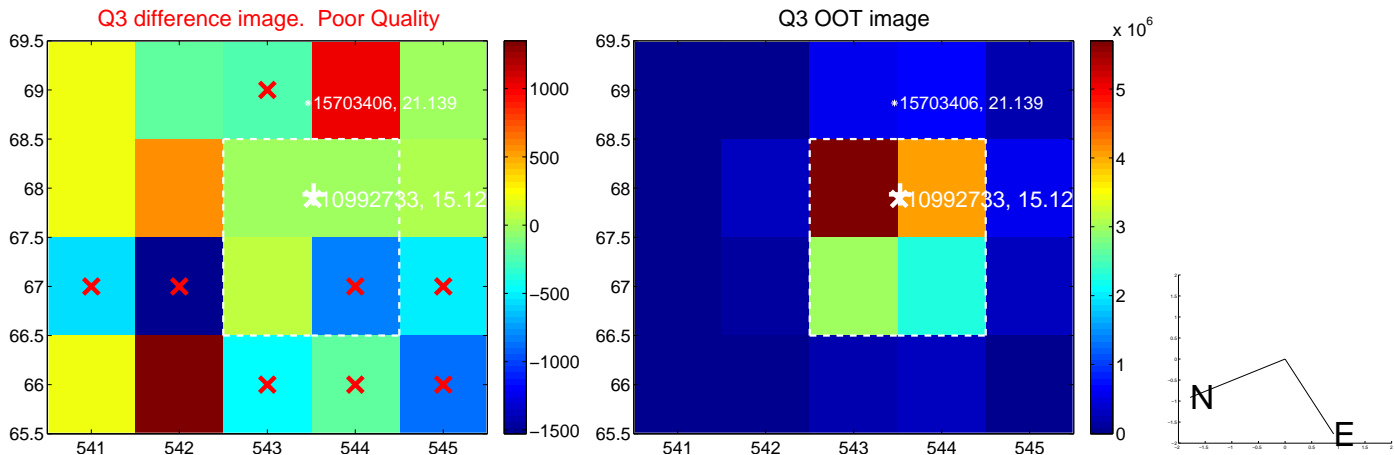
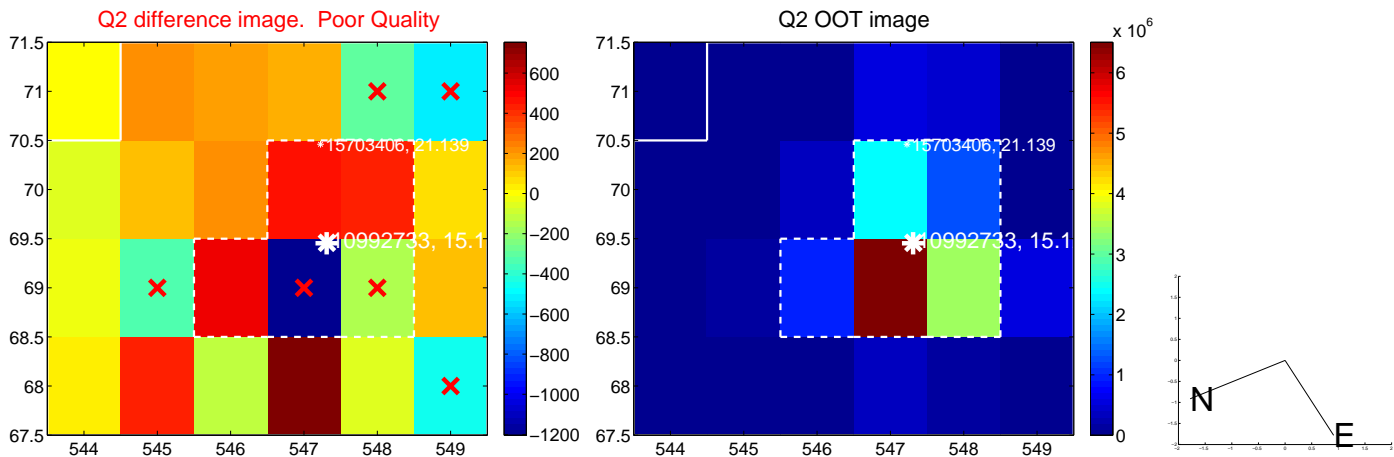
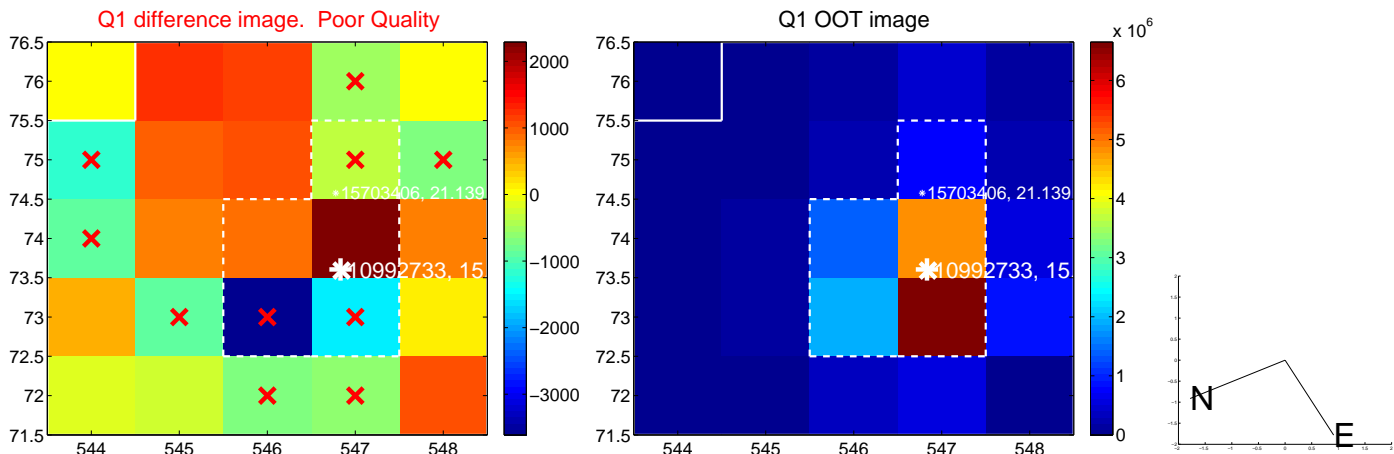
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.246 ± 3.327	0.68	-0.221 ± 1.369	2.235 ± 3.340
PRF-fit source offset from KIC position	2.264 ± 4.077	0.56	-0.208 ± 1.083	2.254 ± 4.093
photometric centroid source offset	3.22 ± 3.85	0.84	-3.17 ± 3.83	-0.58 ± 4.41

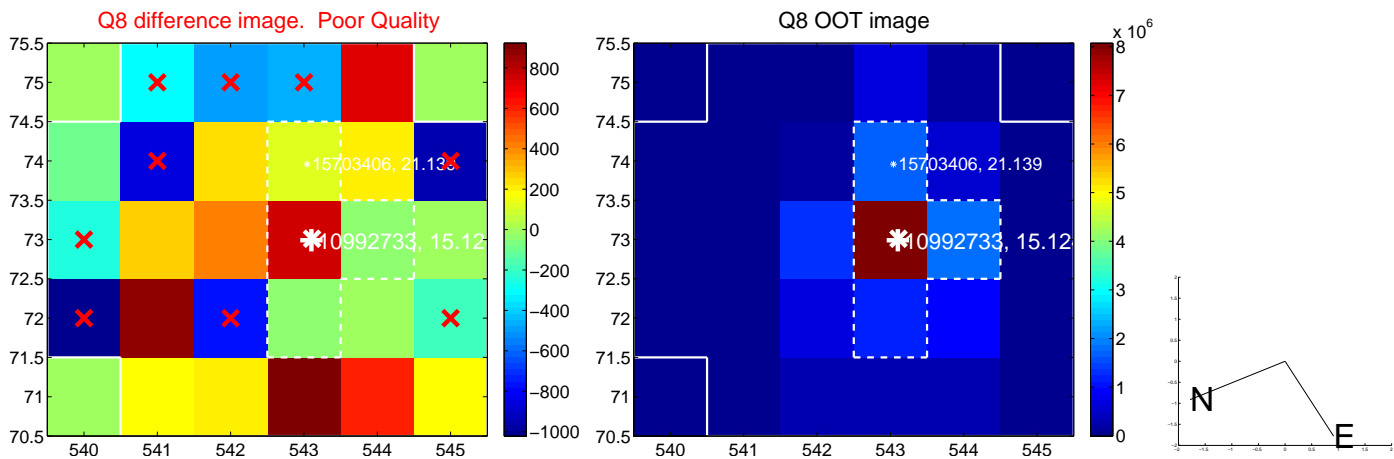
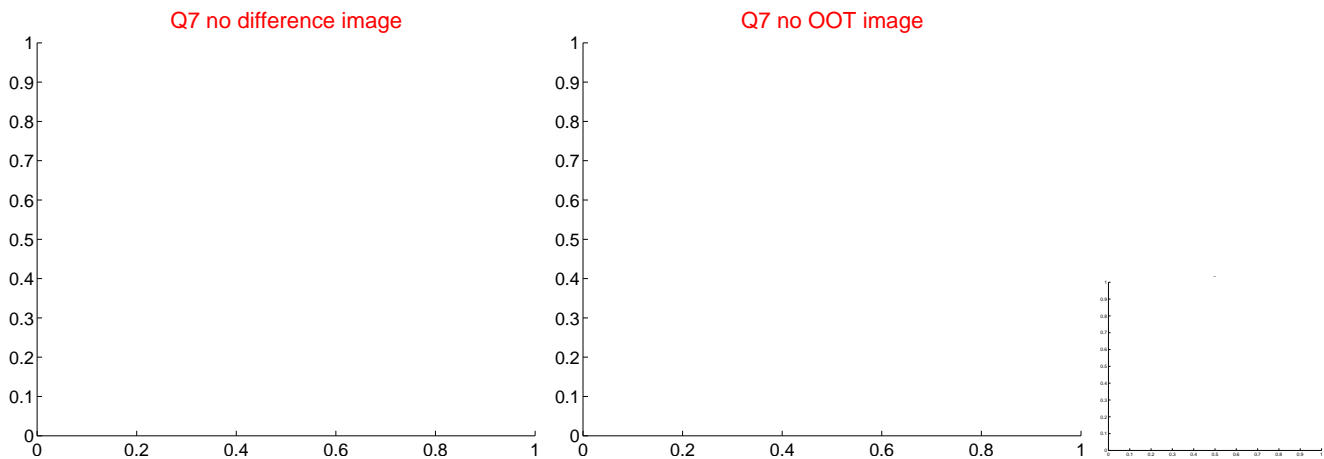
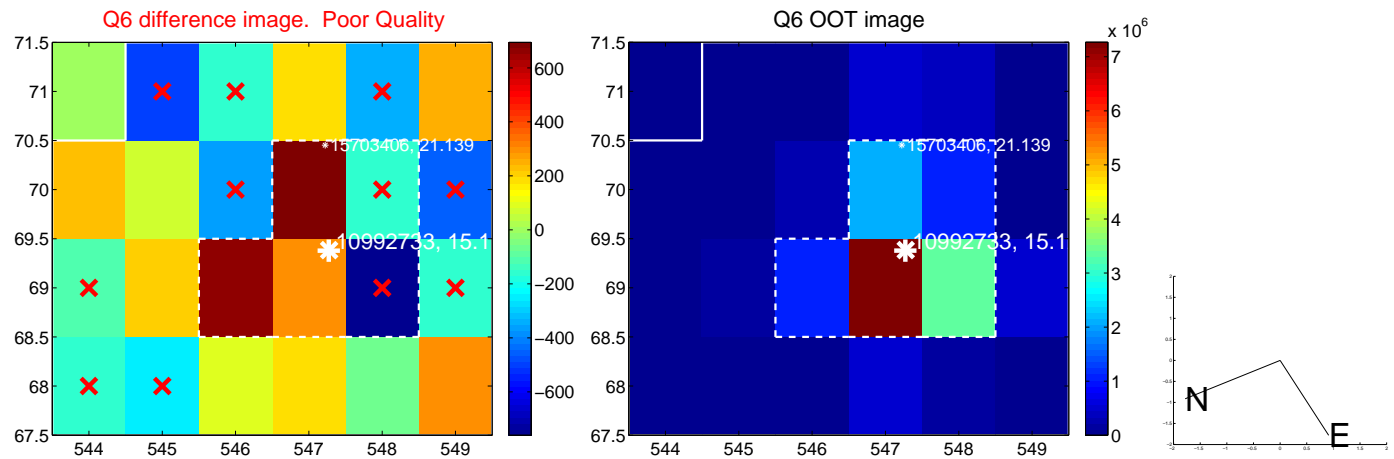
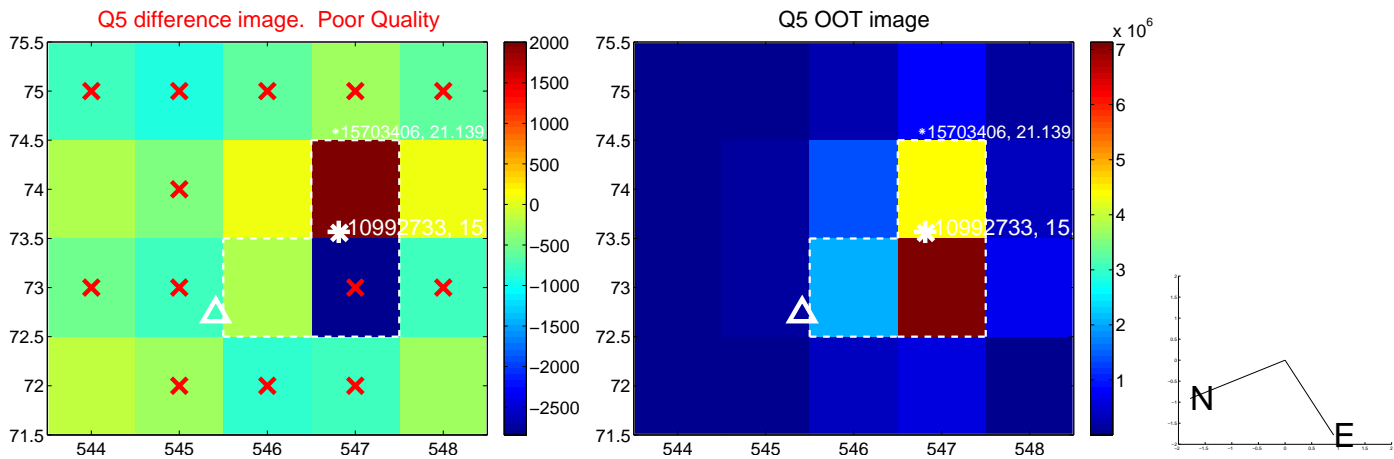


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

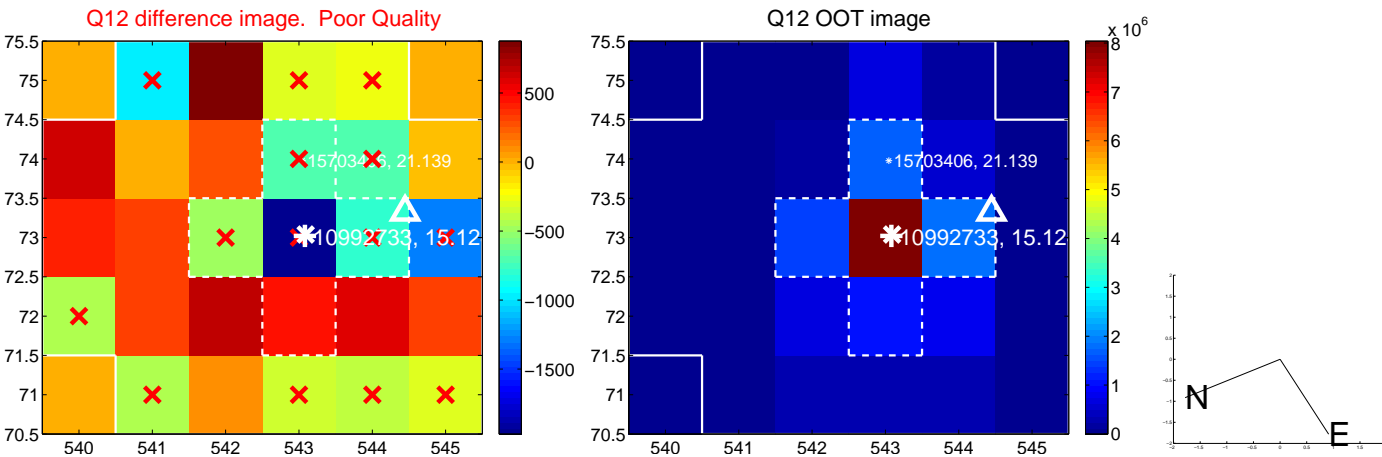
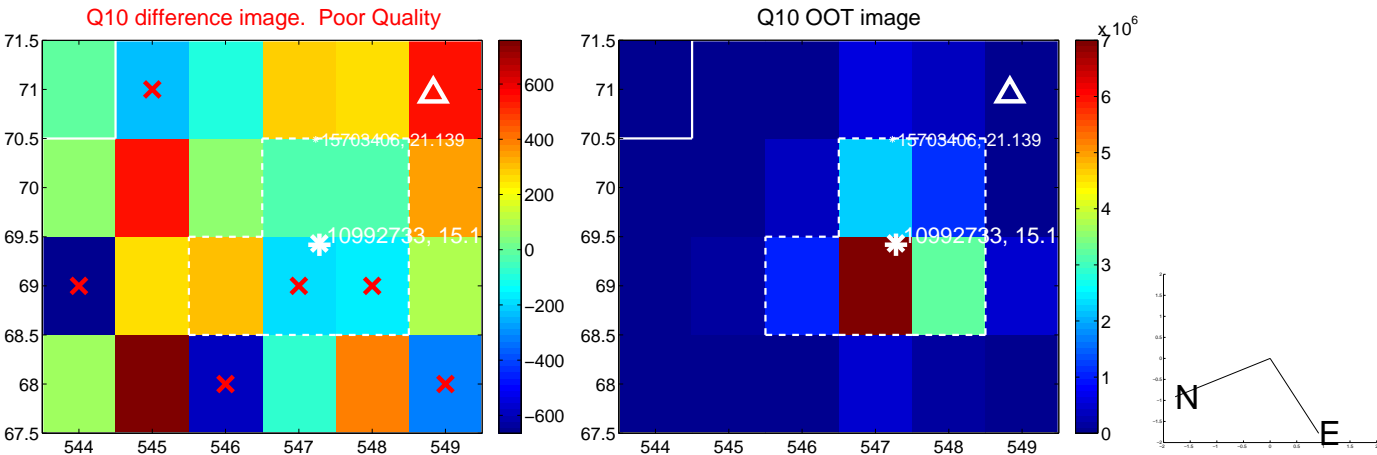
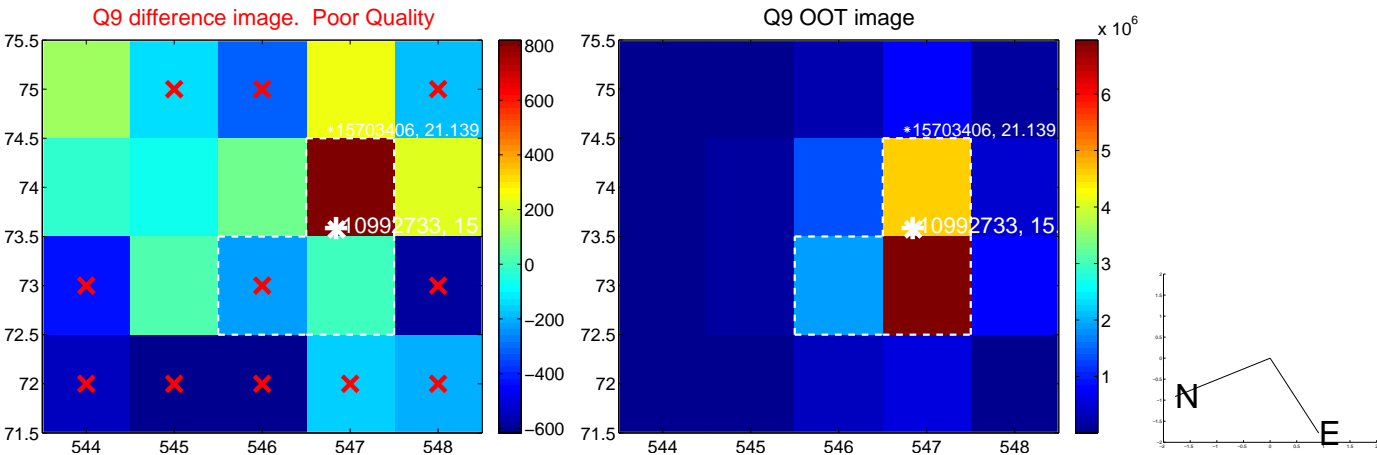
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



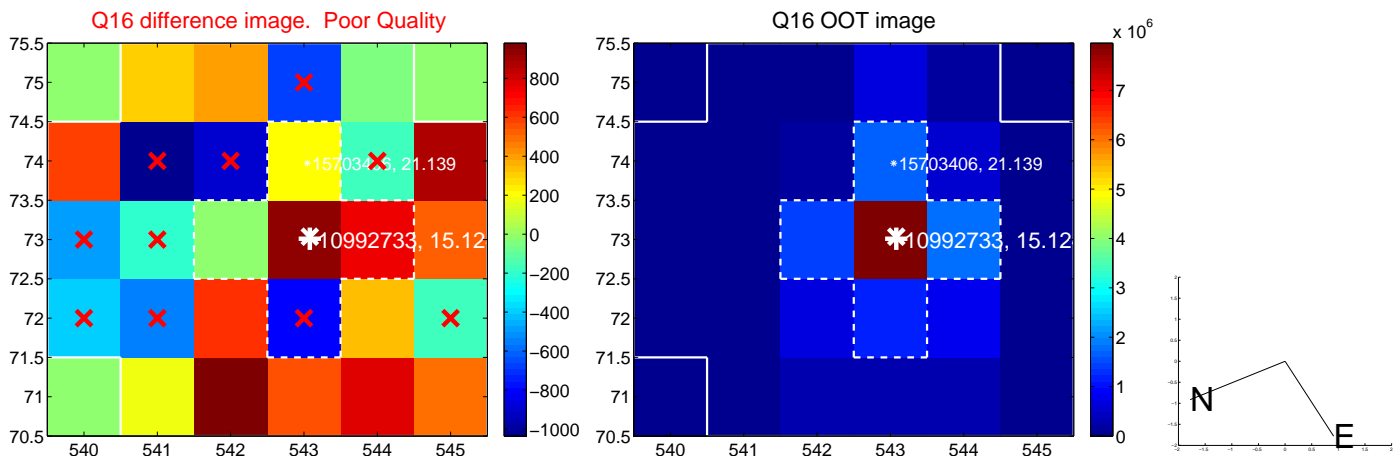
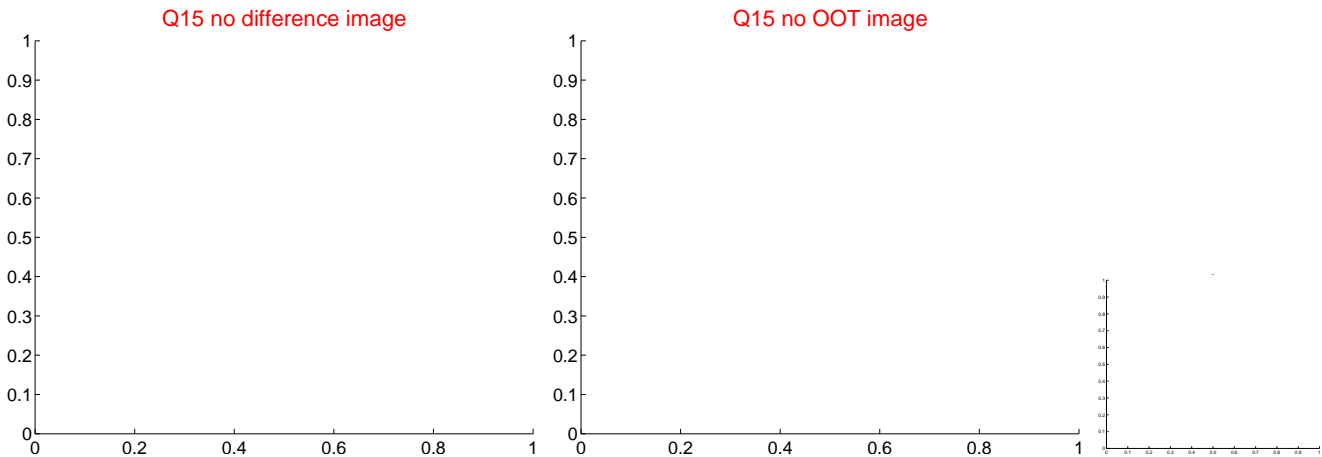
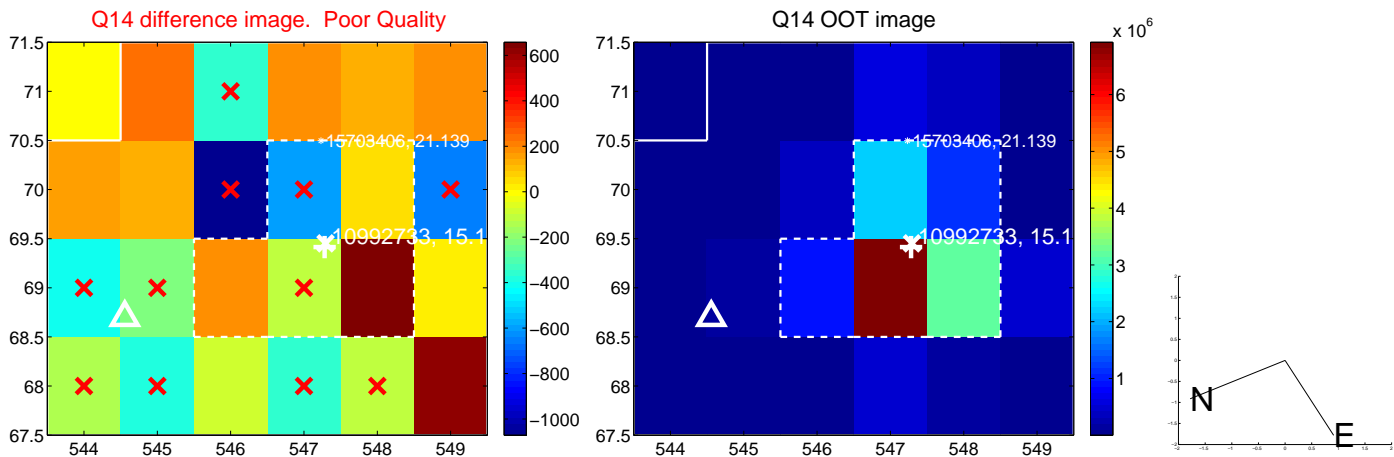
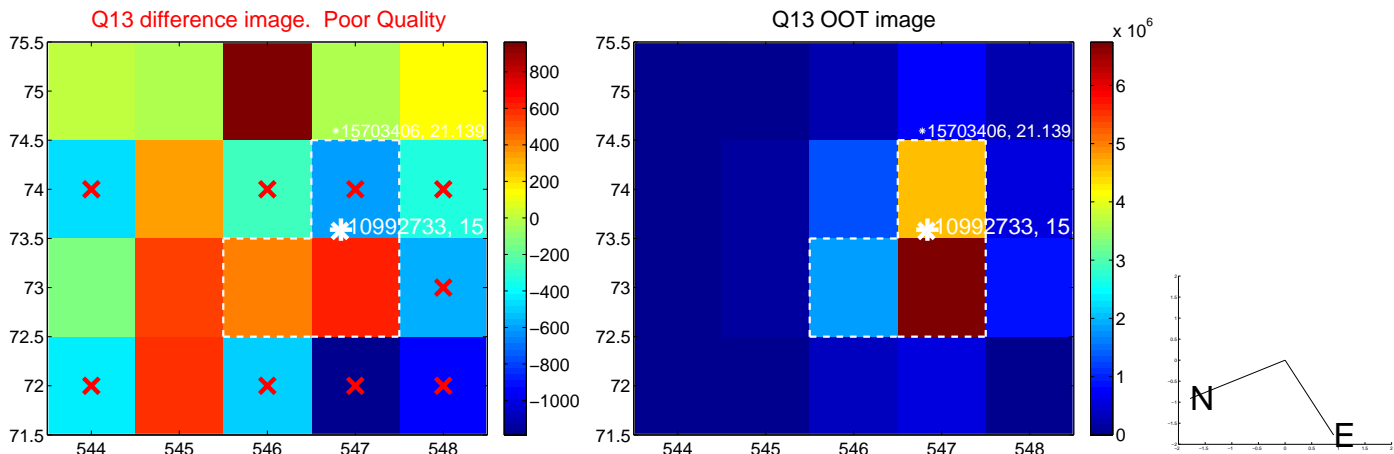
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



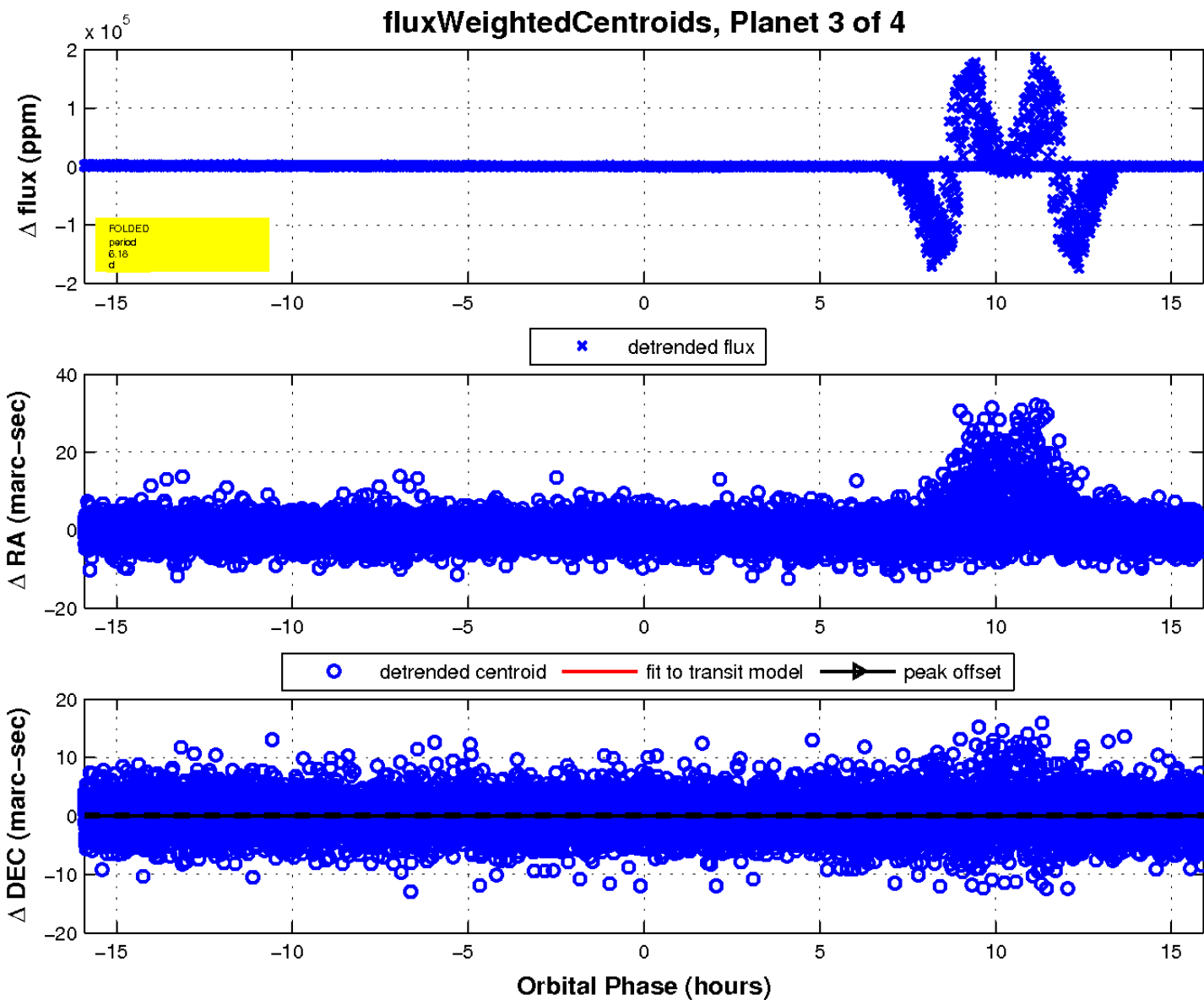
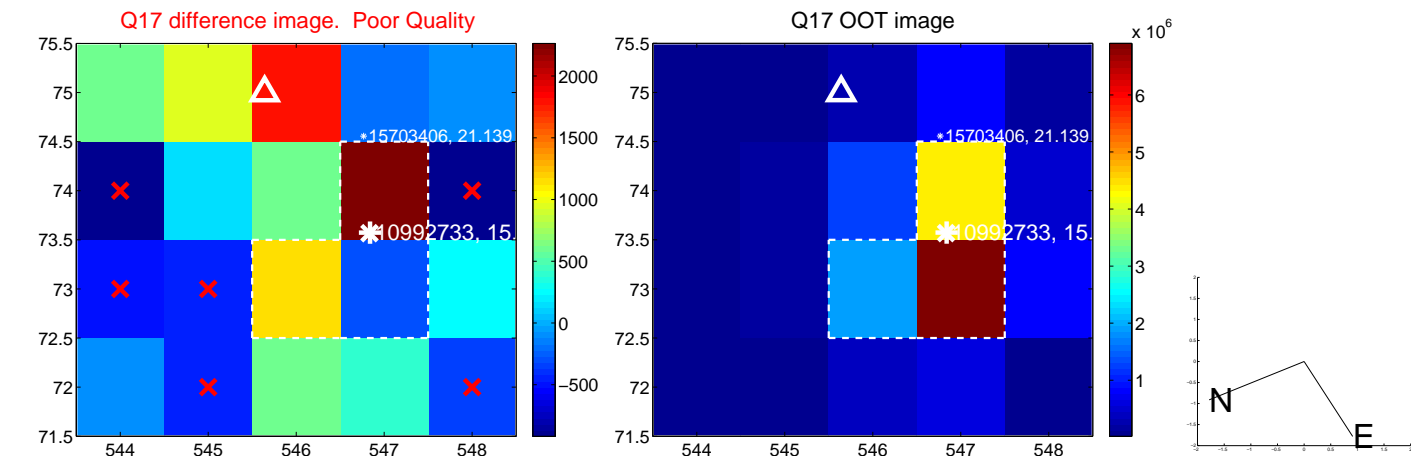
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

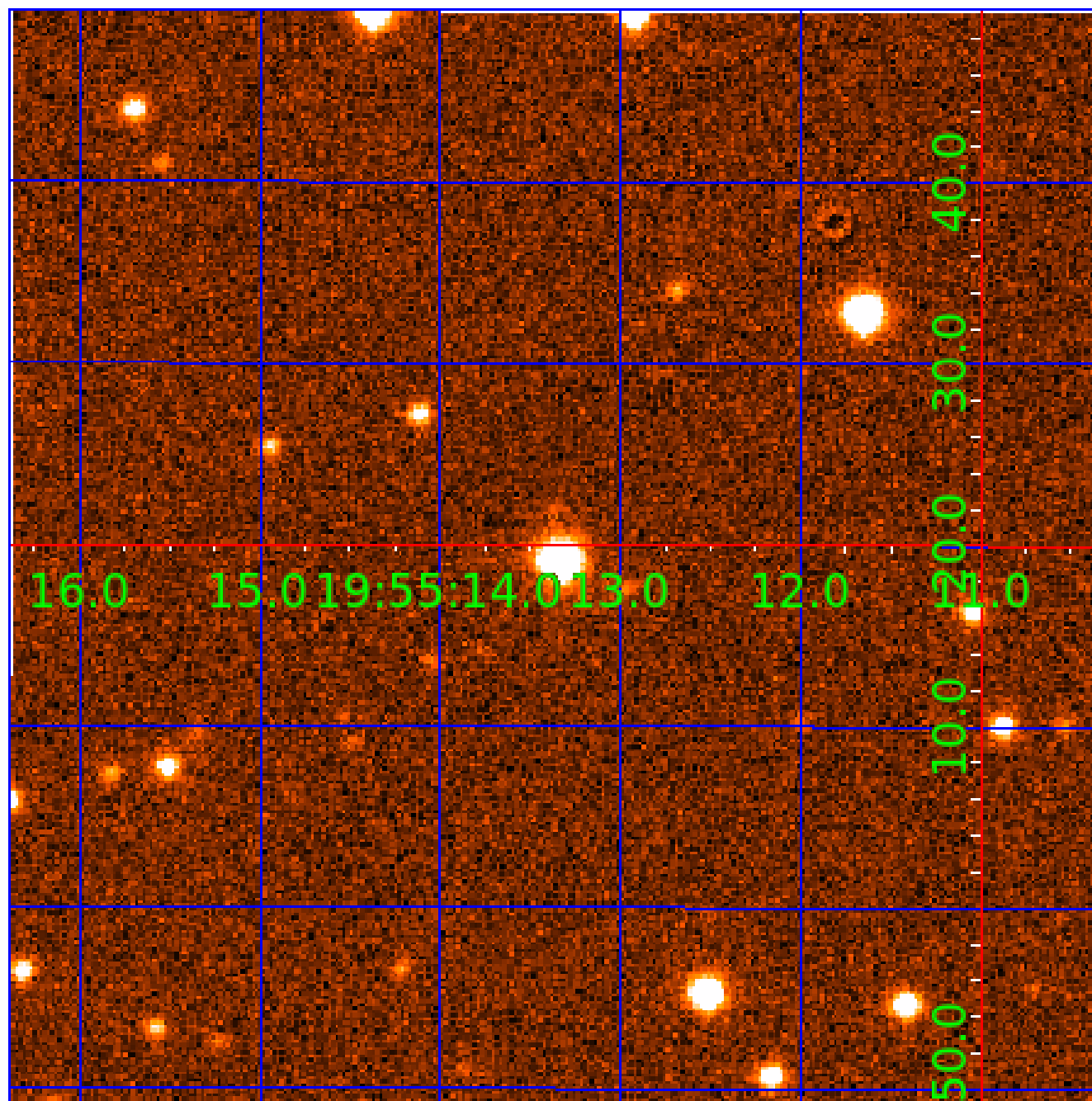


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010992733

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})
010992733-01	OBS	7399.01	18.526048	144.186612	454735.2	3.500	12773.5	-1.0	0.89	5492	48.40	34.62
010992733-02	OBS	No	18.525897	138.959026	278068.3	5.000	9021.1	-1.0	0.89	5492	43.06	34.62
010992733-03	OBS	No	6.175457	131.585917	34048.1	15.000	995.1	-1.0	0.89	5492	16.07	149.81
010992733-04	OBS	No	18.525946	136.804658	2667.2	41.377	75.6	30.8	0.89	5492	8.80	34.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010992733-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
010992733-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
010992733-03	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—RESIDUAL_TCE—CENT_NOFITS
010992733-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—LPP_DV—LPP_ALT—SAME_NTL_PERIOD—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 010992733-04

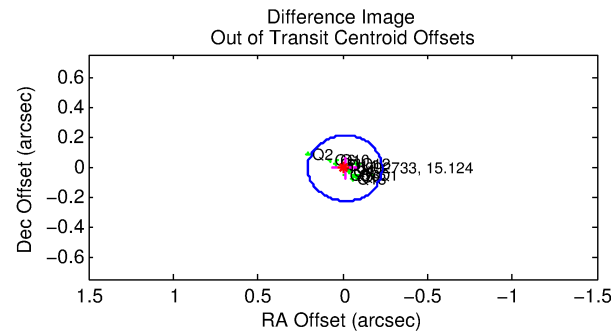
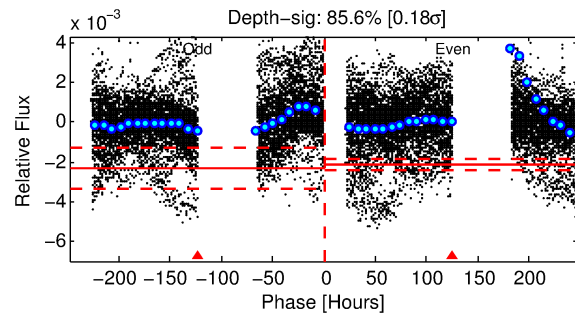
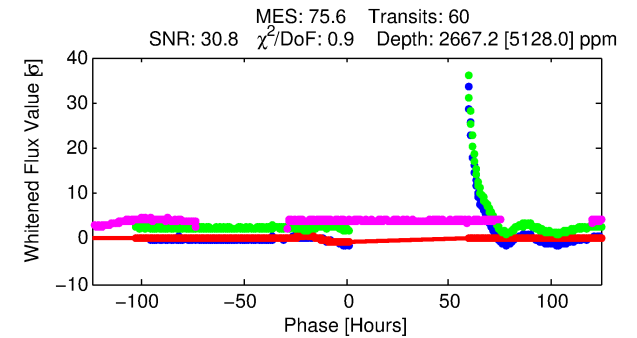
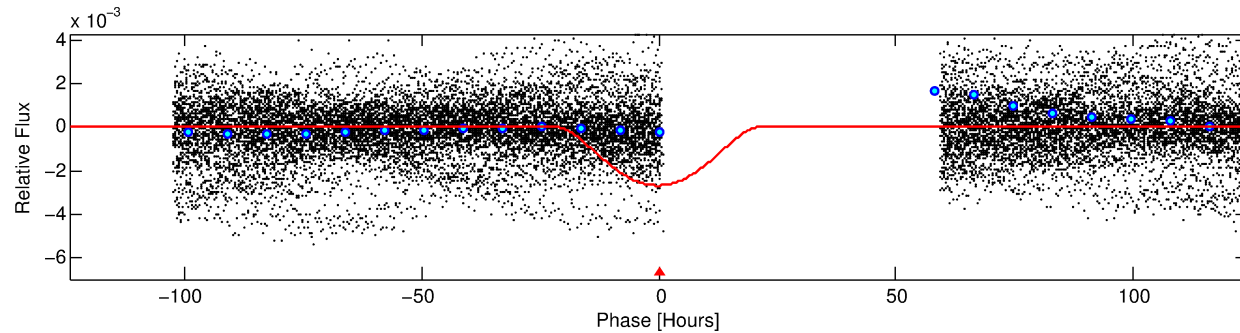
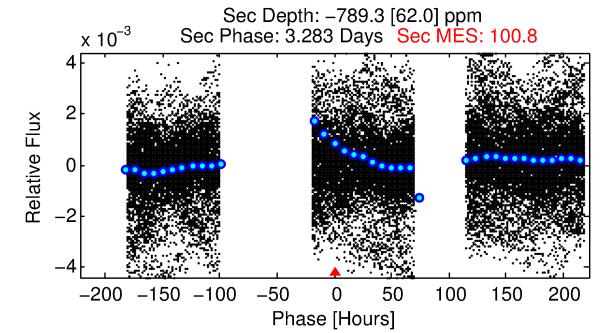
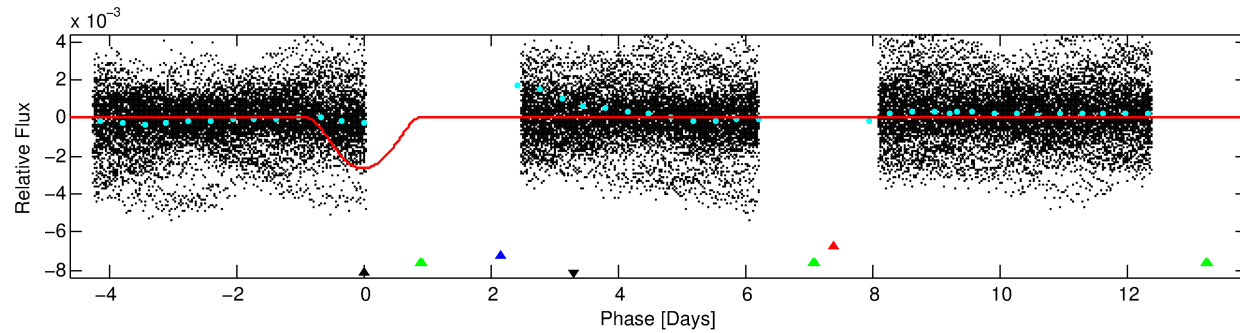
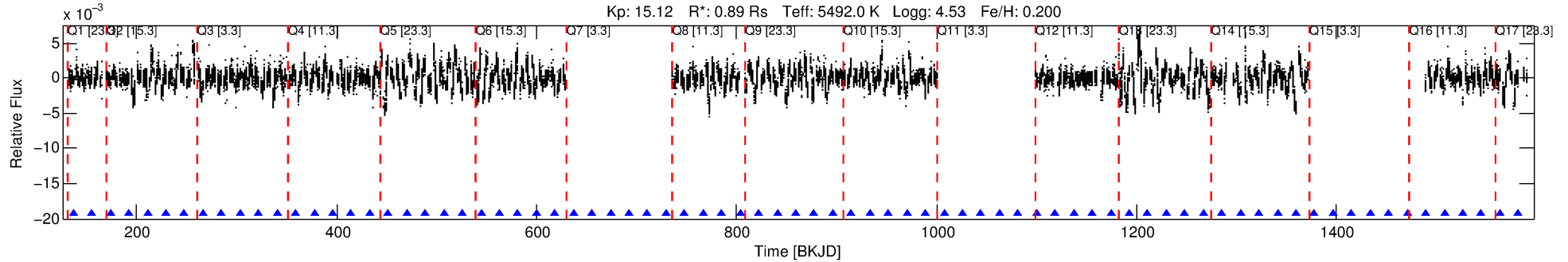
No Significant Match Found

DV One-Page Summary

KIC: 10992733 Candidate: 4 of 4 Period: 18.526 d

KOI: K07399 Corr: No Ephemeris Match

Kp: 15.12 R*: 0.89 Rs Teff: 5492.0 K Logg: 4.53 Fe/H: 0.200



DV Fit Results:

Period = 18.52595 [0.00037] d
Epoch = 136.8047 [0.0320] BKJD
Rp/R* = 0.0909 [0.0321]
a/R* = 1.81 [0.06]
b = 1.00 [0.07]
Seff = 34.63 [11.78]
Teq = 619 [53] K
Rp = 8.80 [3.76] Re
a = 0.1361 [0.0285] AU
Ag = N/A
Teffp = N/A

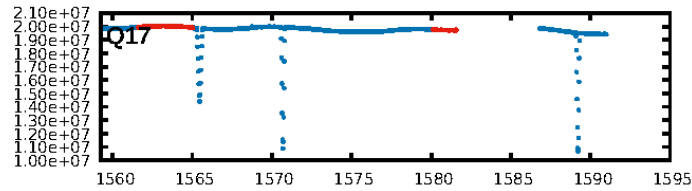
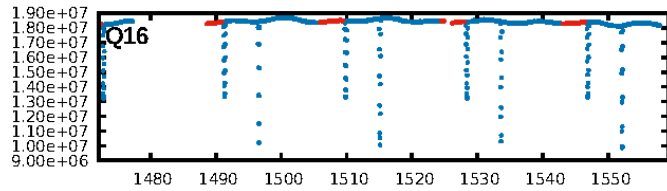
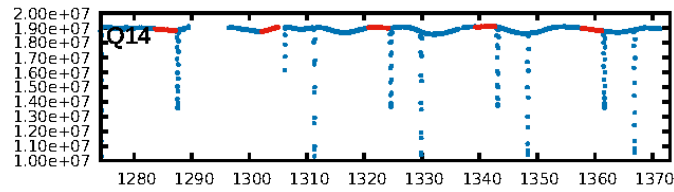
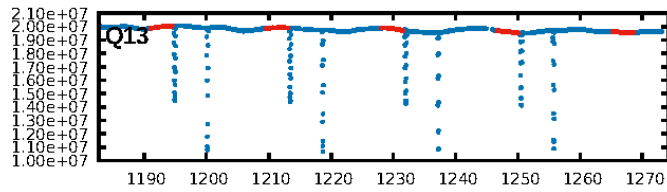
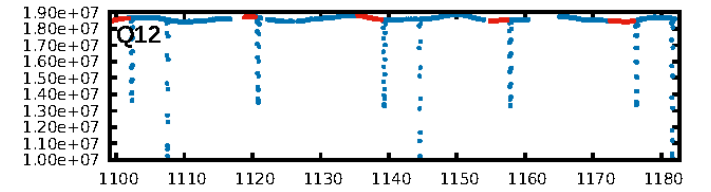
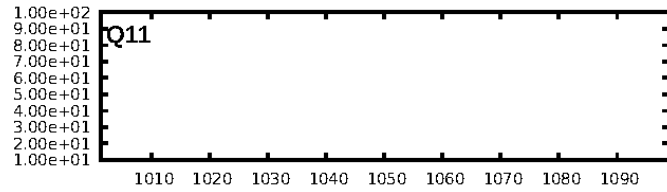
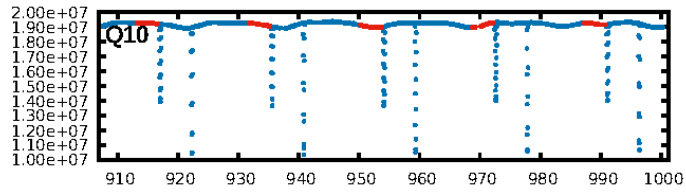
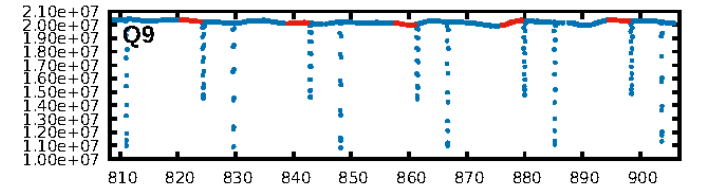
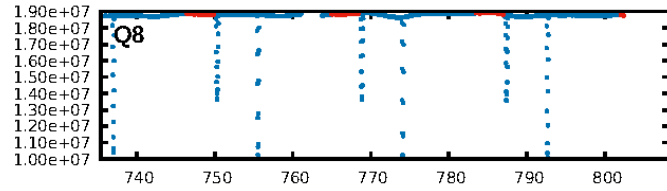
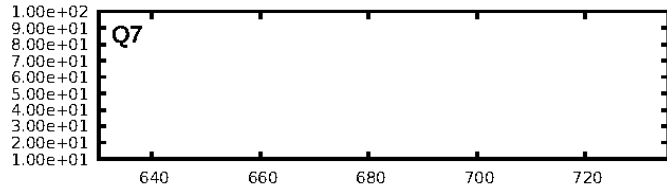
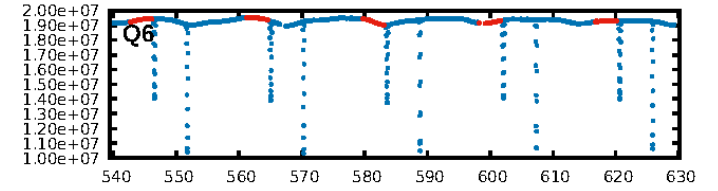
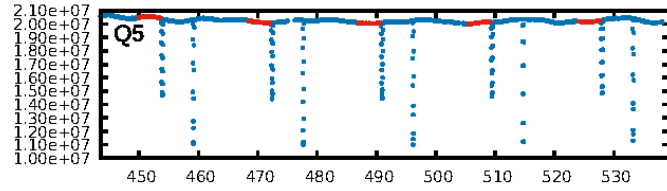
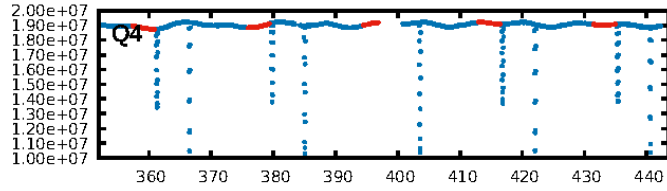
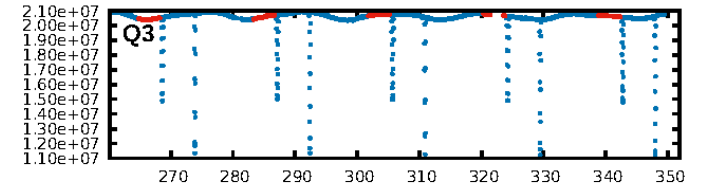
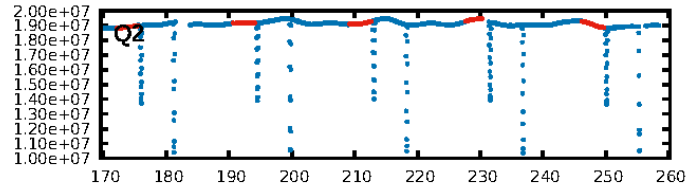
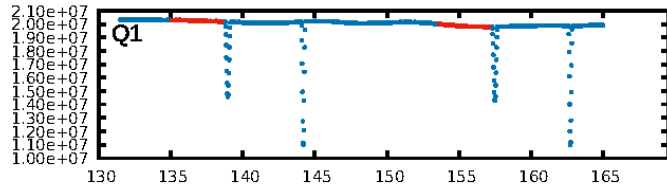
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [56/56]
GhostDiagnostic-chr: -1.612
Centroid-sig: N/A
Centroid-so: 0.464 arcsec [6.39σ]
OotOffset-rm: 0.018 arcsec [0.25σ]
KicOffset-rm: 0.048 arcsec [0.63σ]
OotOffset-st: 4/1/3/4 [12]
KicOffset-st: 4/1/3/4 [12]
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DiffImageOverlap-fno: 0.00 [0/12]

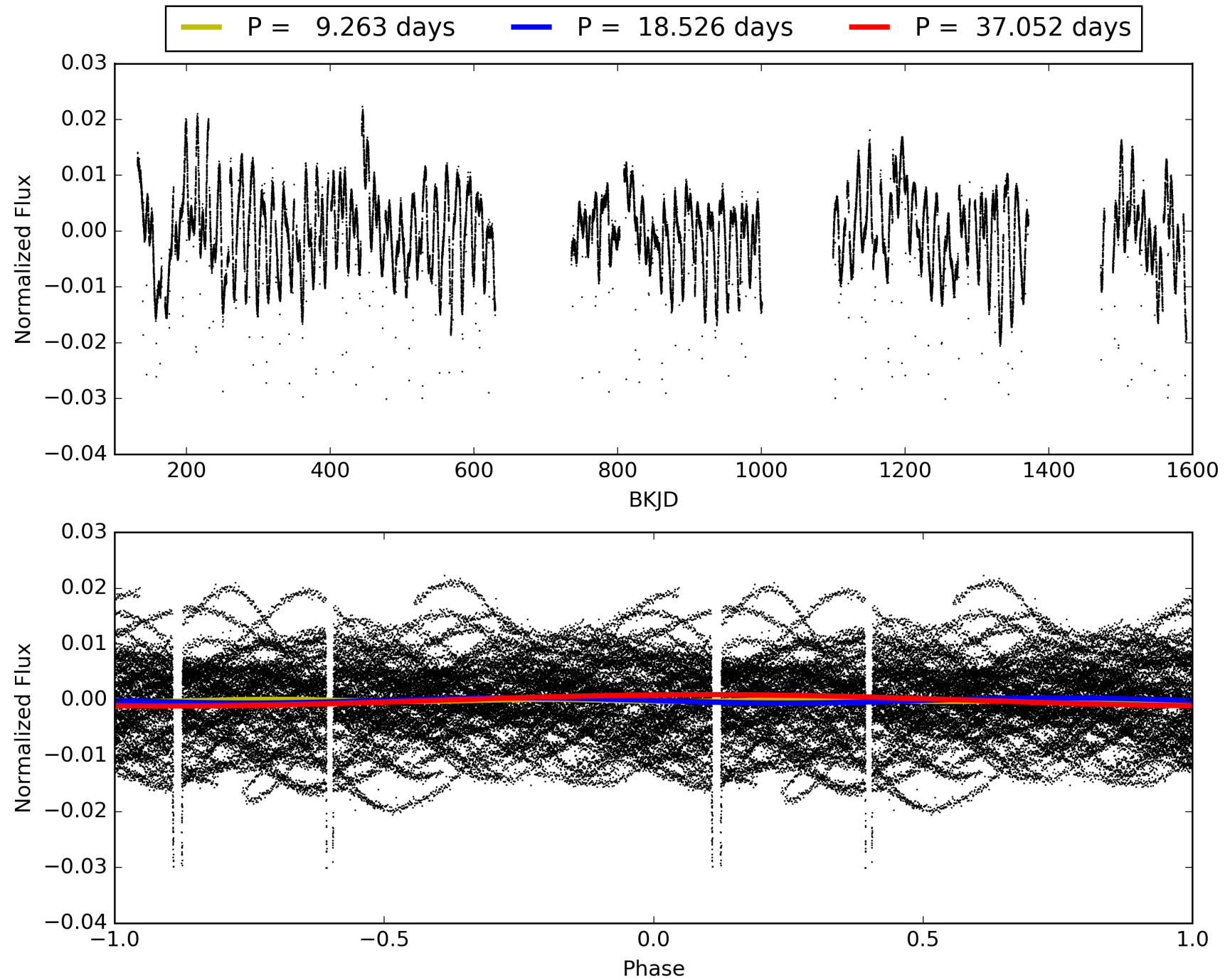
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:22:49 Z

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

TCE 010992733-04, PDC Light Curves

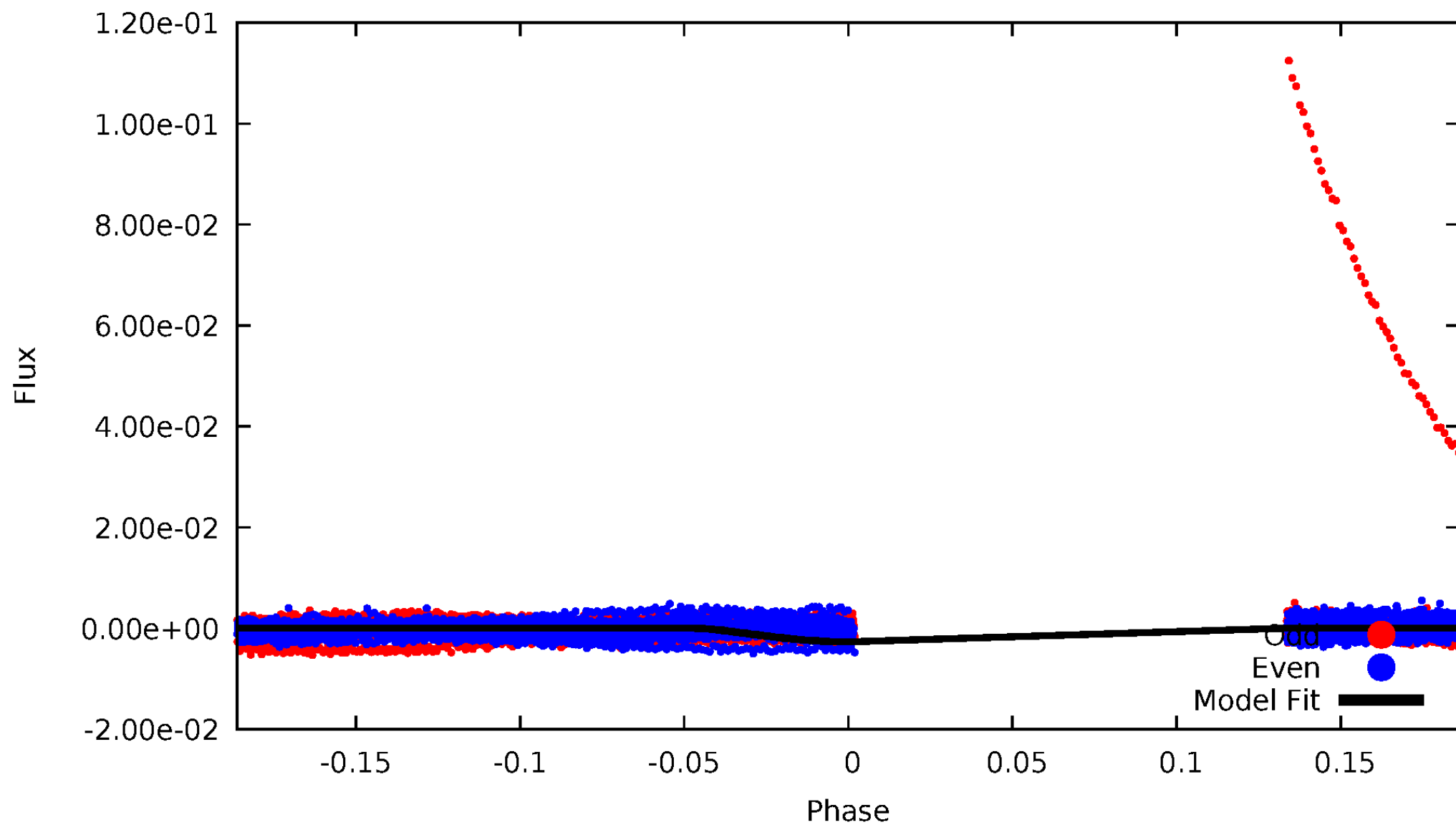


TCE 010992733-04



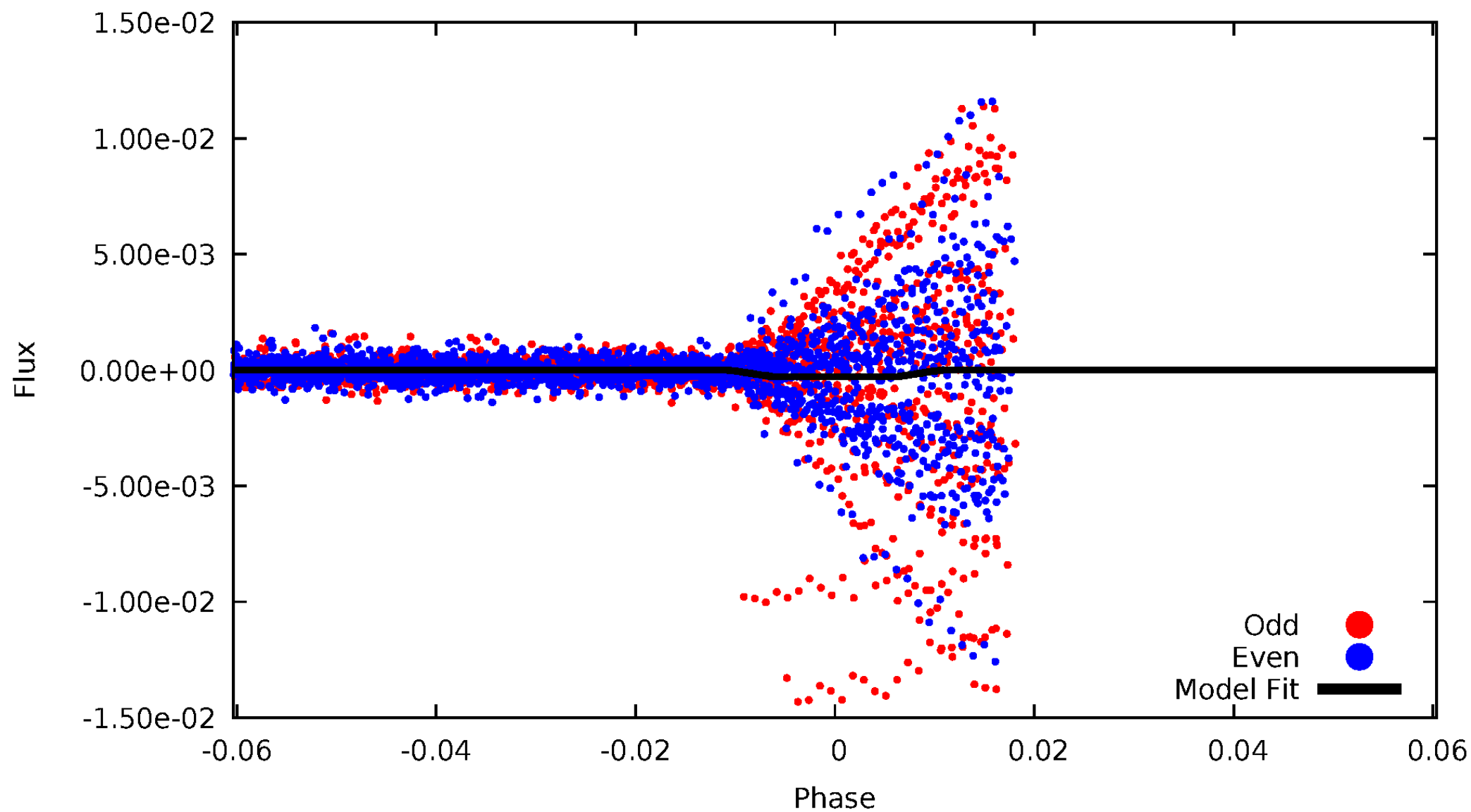
DV Odd/Even

TCE 010992733-04



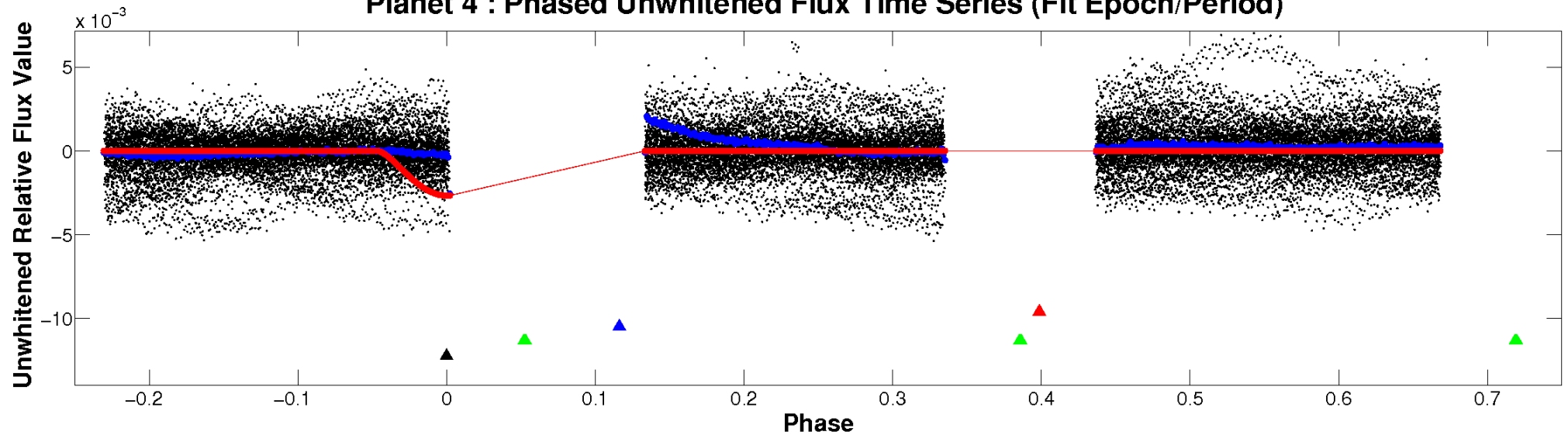
ALT Odd/Even

TCE 010992733-04

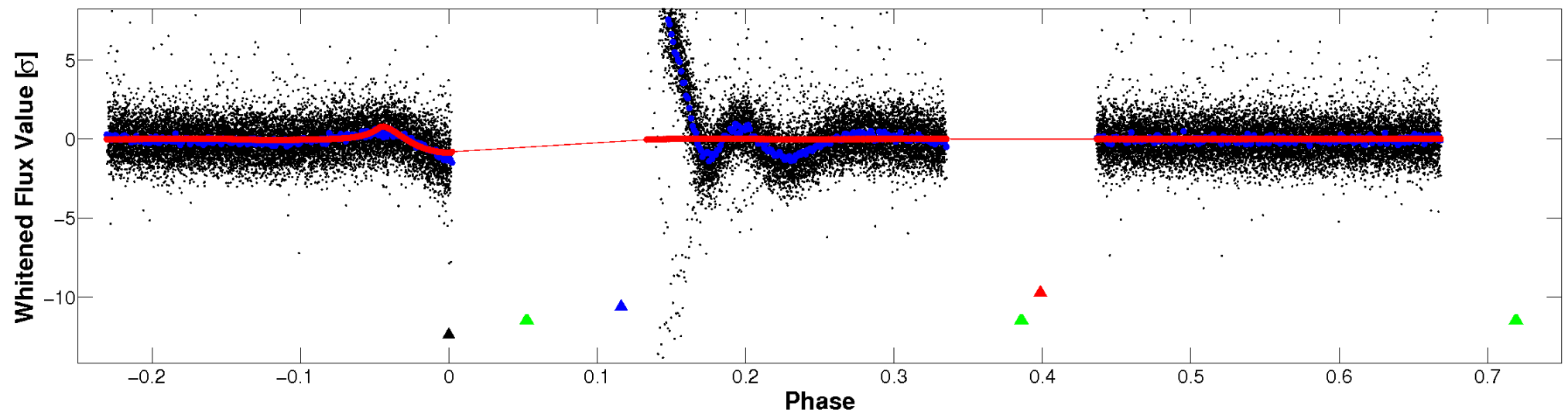


Non-Whitened Vs. Whitened Light Curve

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

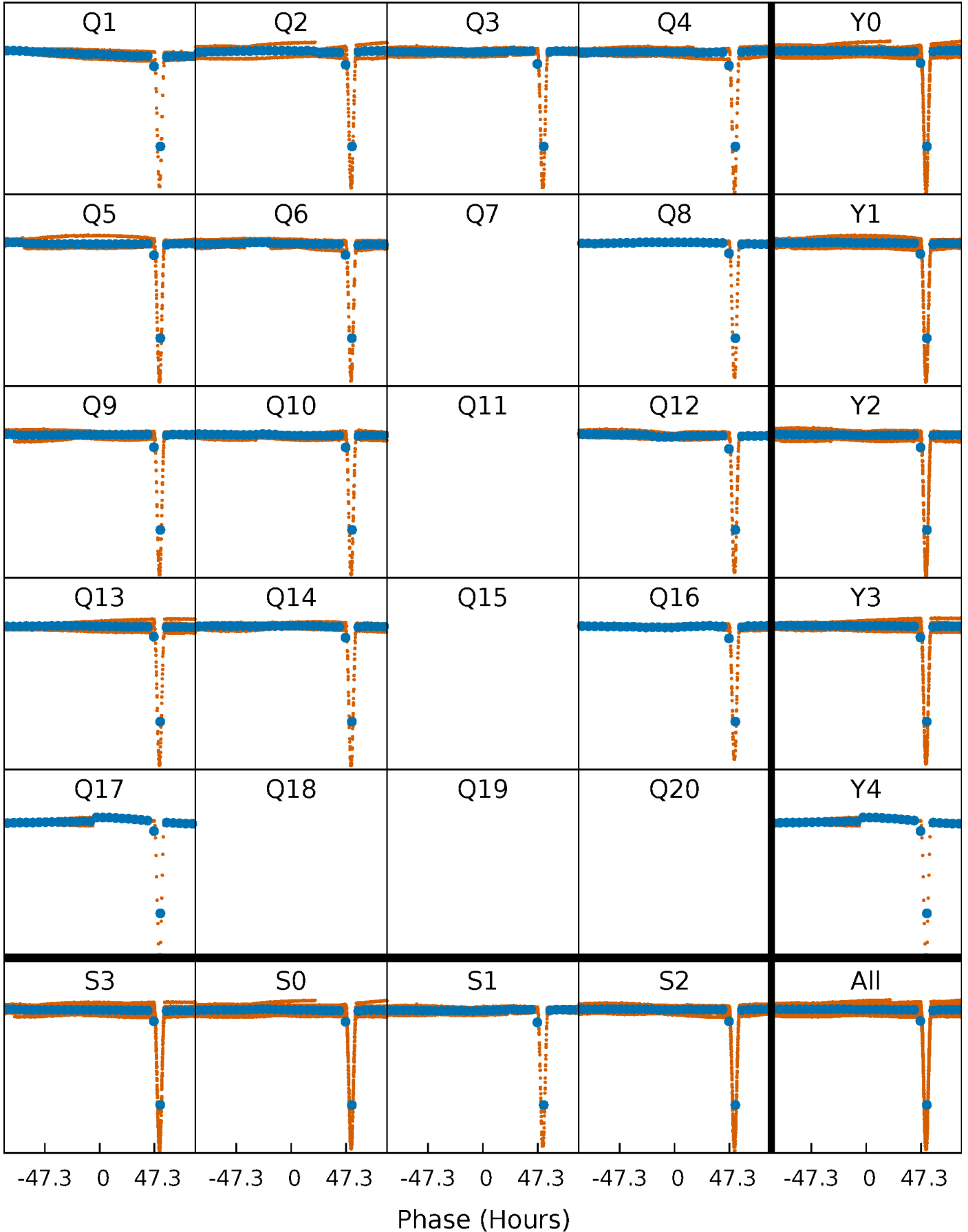


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



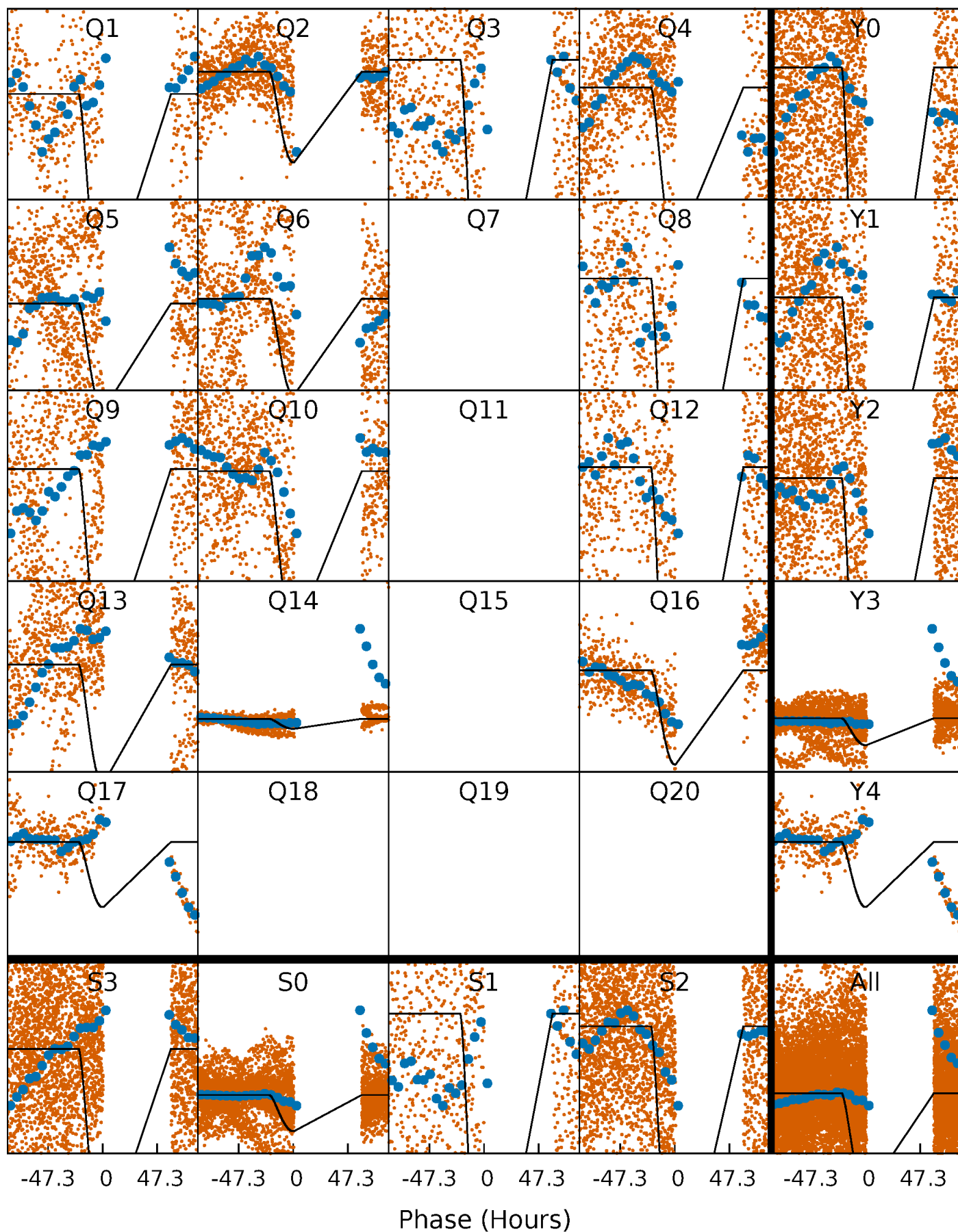
PDC Quarter-Phased Transit Curves

TCE 010992733-04 P= 18.525946 Days $T_0=136.804658$ (BKJD)



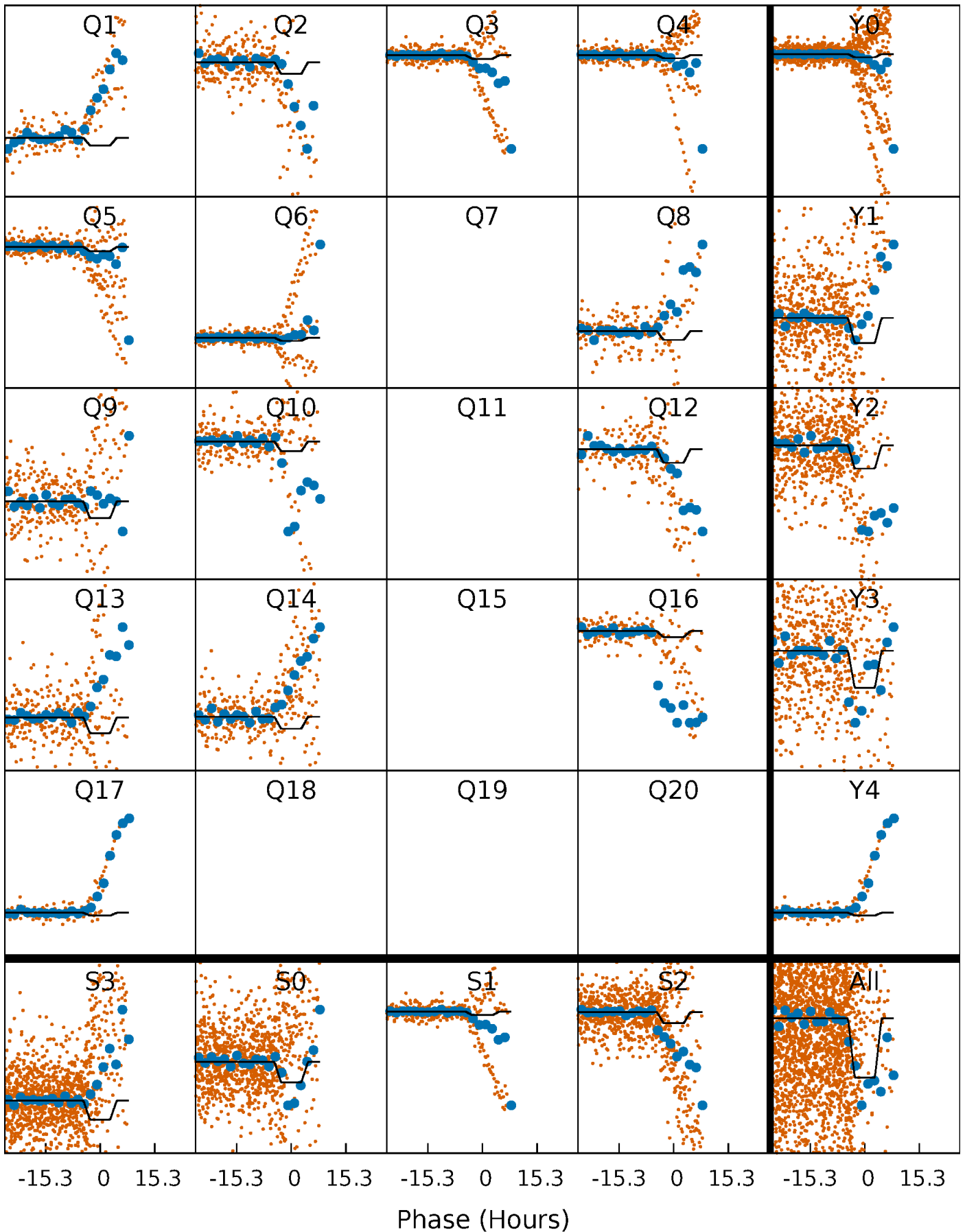
DV Quarter-Phased Transit Curves

TCE 010992733-04 P= 18.525946 Days $T_0=136.804658$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

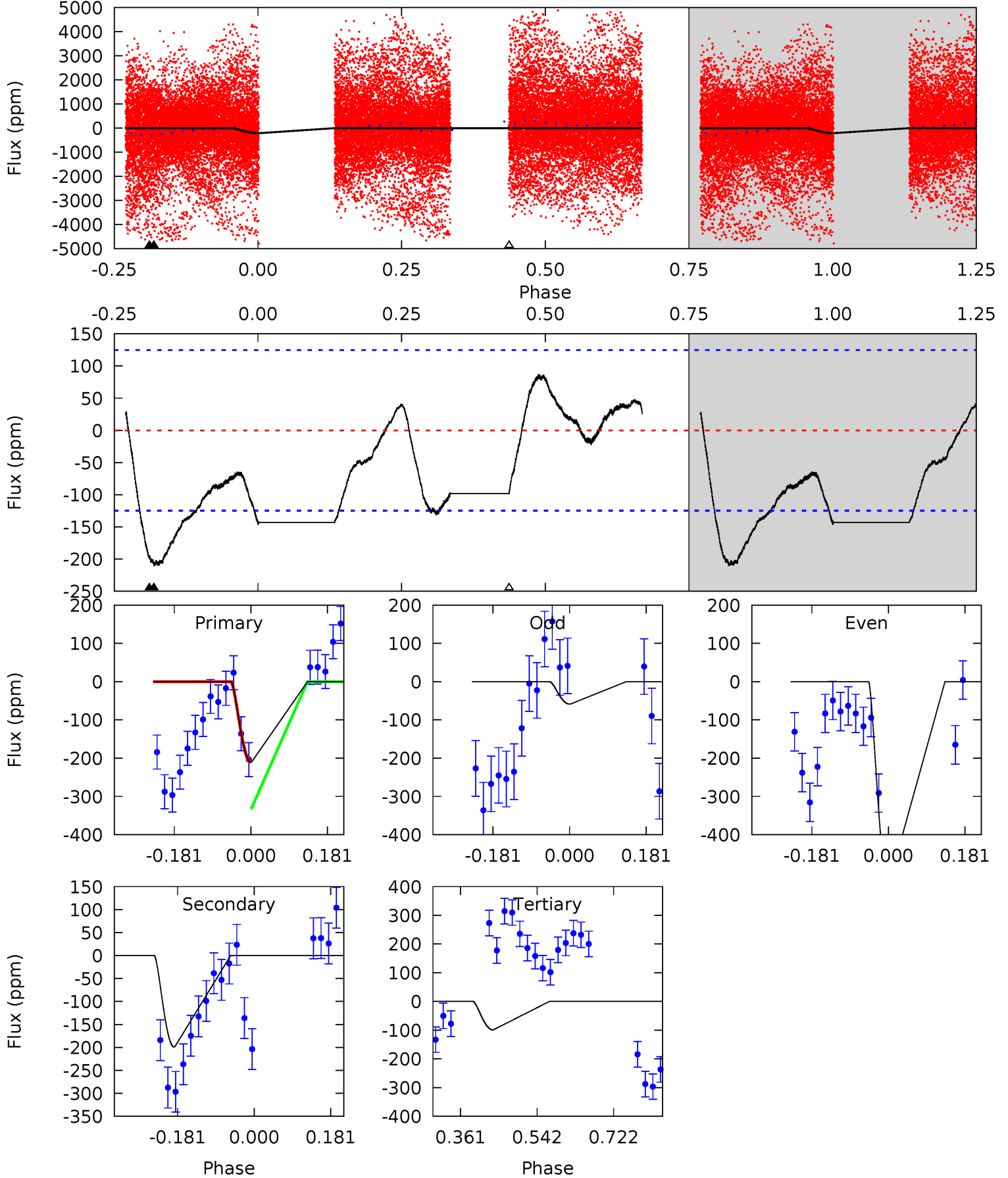
TCE 010992733-04 P= 18.525775 Days $T_0=136.517815$ (BKJD)



DV Model-Shift Uniqueness Test

010992733-04, P = 18.525946 Days, E = 118.278712 Days

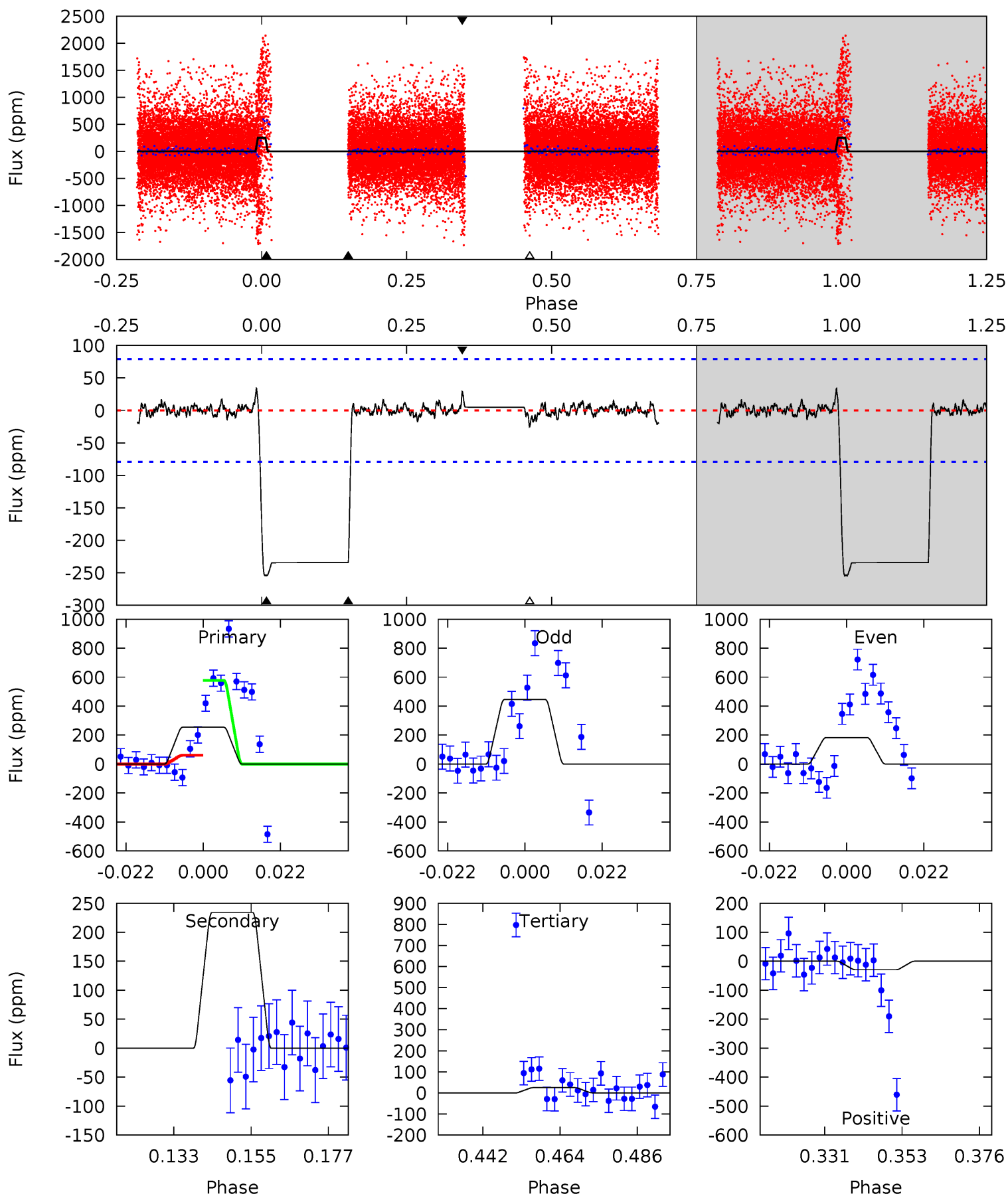
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.50	7.09	3.52	0	4.44	1.34	2.14	3.98	7.50	3.57	7.09	8.51	1.14	0.29	0.70



Alt Model-Shift Uniqueness Test

010992733-04, P = 18.525775 Days, E = 117.992040 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.7	14.4	1.55	1.79	4.87	2.29	0.42	14.1	13.9	12.9	12.6	8.01	-1.34	0.12	14.7



Stellar Parameters For KIC 010992733

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5492^{+180}_{-164}	$4.533^{+0.044}_{-0.176}$	$0.200^{+0.200}_{-0.300}$	$0.887^{+0.213}_{-0.076}$	$0.978^{+0.074}_{-0.101}$	$1.974^{+0.341}_{-0.884}$
	+3%/-3%	+1%/-4%	+100%/-150%	+24%/-9%	+8%/-10%	+17%/-45%
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 010992733-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-199 ± 28	$9.09^{+3.14}_{-3.14}$	879^{+54}_{-39}	2872^{+386}_{-231}	24^{+34}_{-11}
Alt.	-234 ± 16	$3.01^{+2.68}_{-1.96}$	880^{+55}_{-37}	4167^{+2678}_{-776}	272^{+1950}_{-198}

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

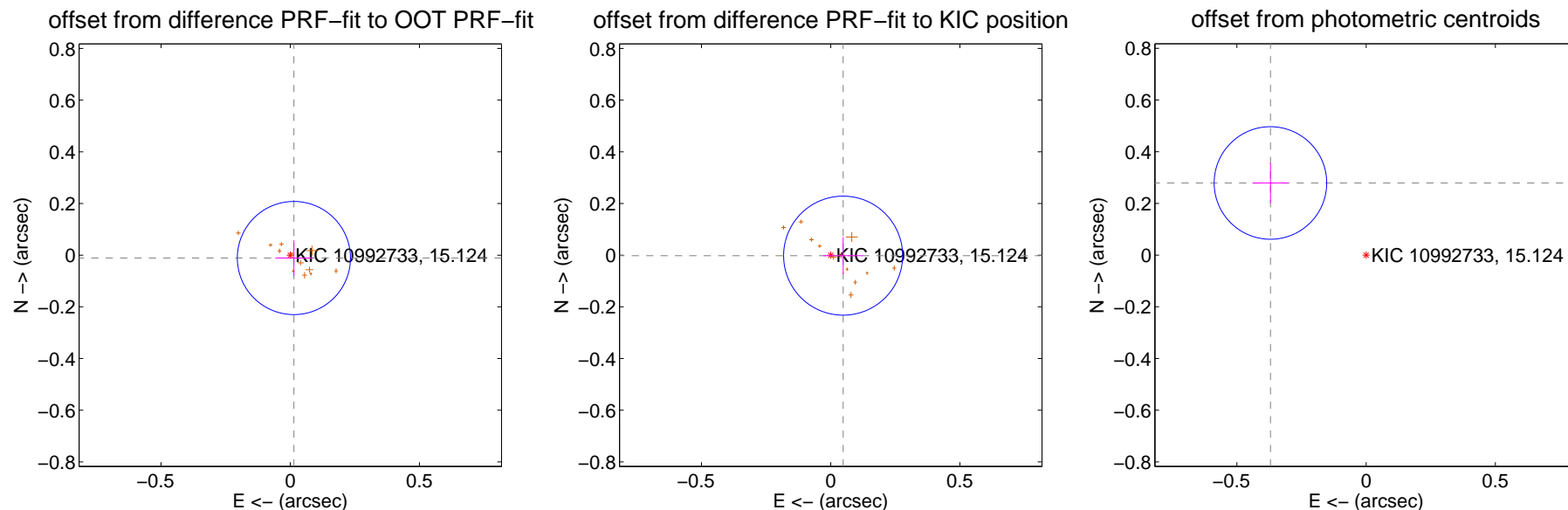
DV Centroid Data

Supplemental centroid analysis for 010992733-04. Kepler magnitude: 15.12. Transit SNR 30.81

There are 0 quarters with good PRF difference image offsets

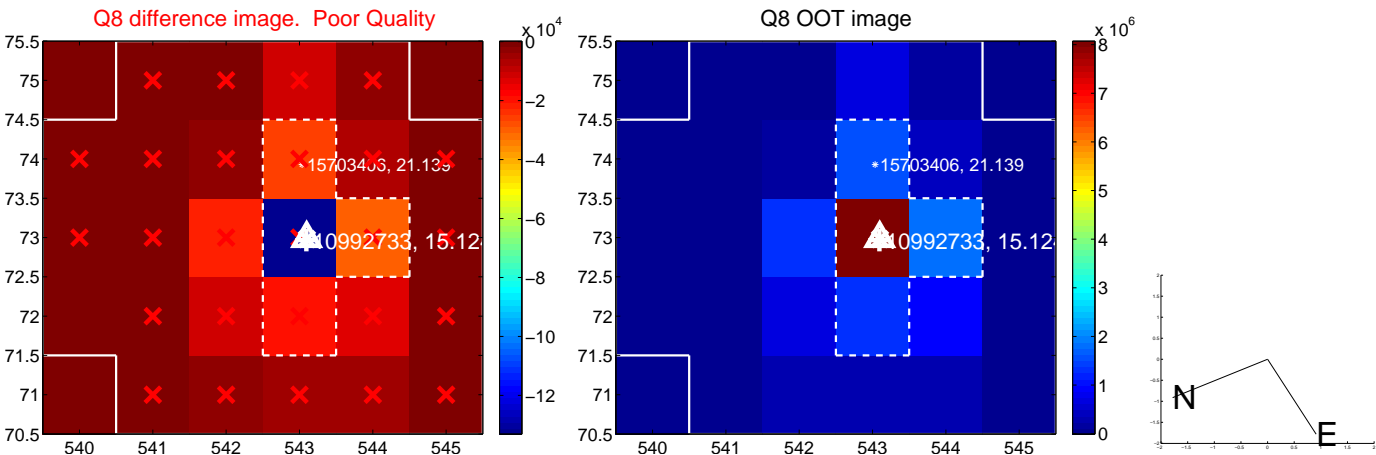
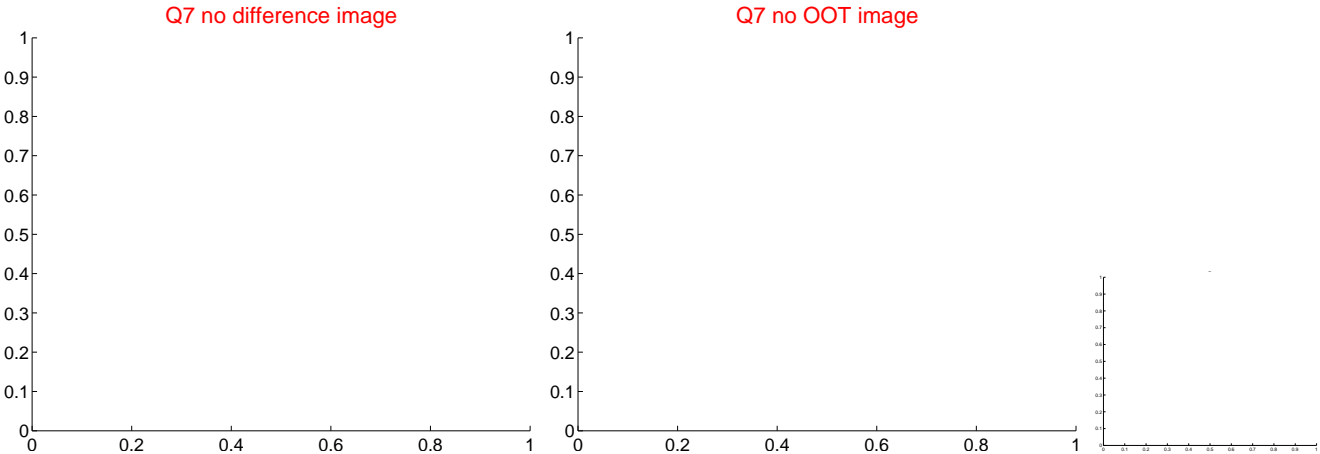
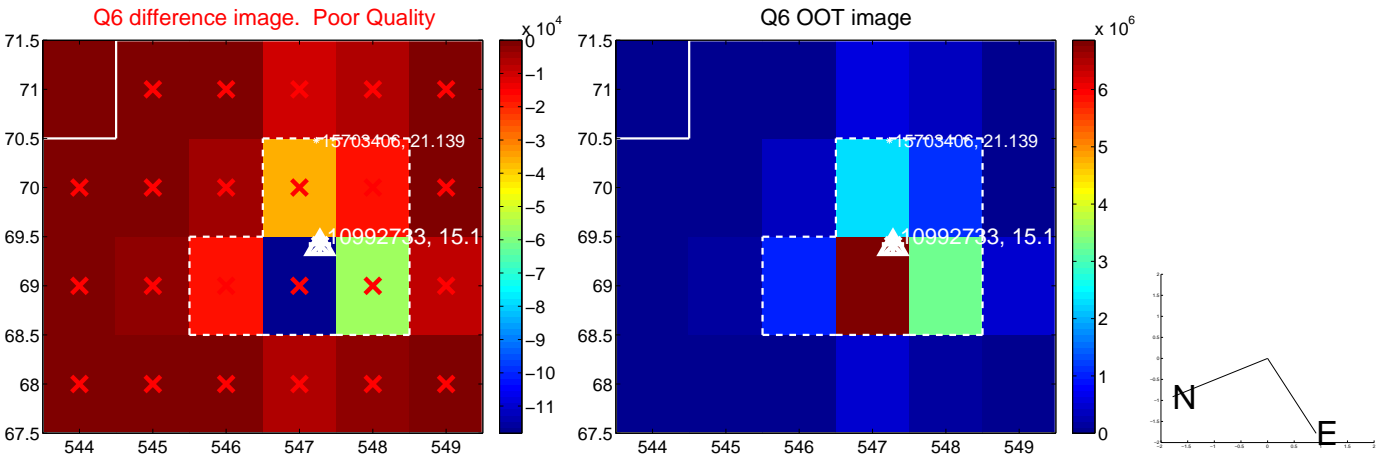
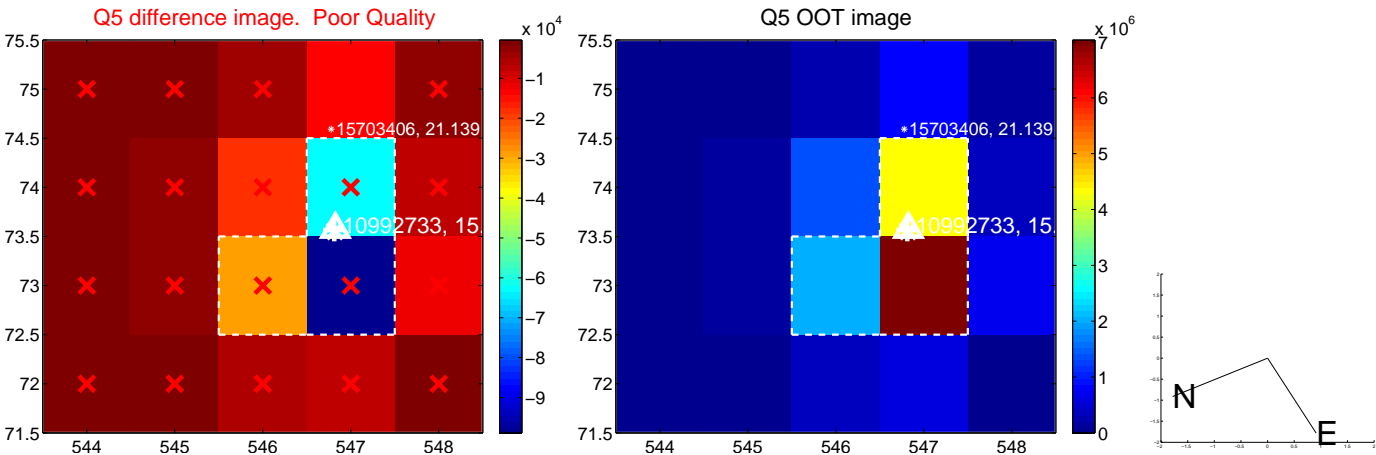
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.018 ± 0.073	0.25	-0.014 ± 0.072	-0.011 ± 0.068
PRF-fit source offset from KIC position	0.048 ± 0.077	0.63	-0.048 ± 0.077	-0.002 ± 0.072
photometric centroid source offset	0.46 ± 0.07	6.39	0.37 ± 0.07	0.28 ± 0.08

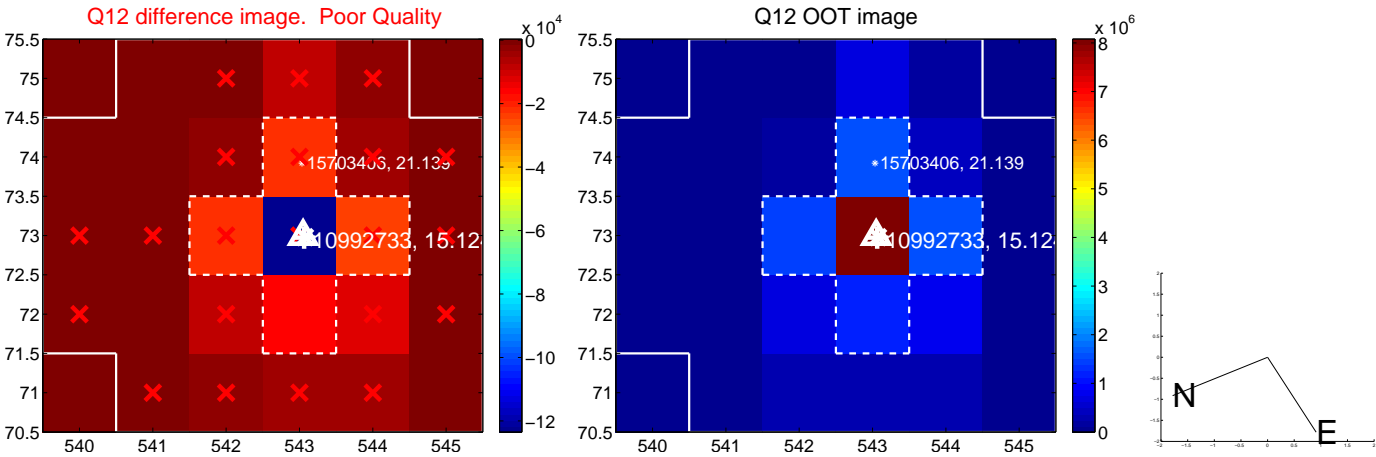
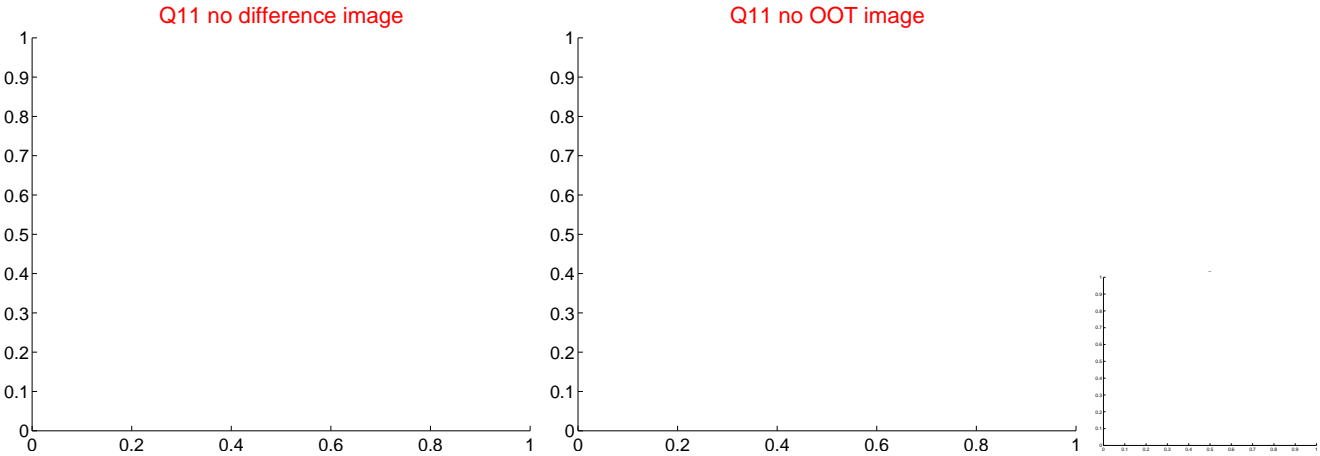
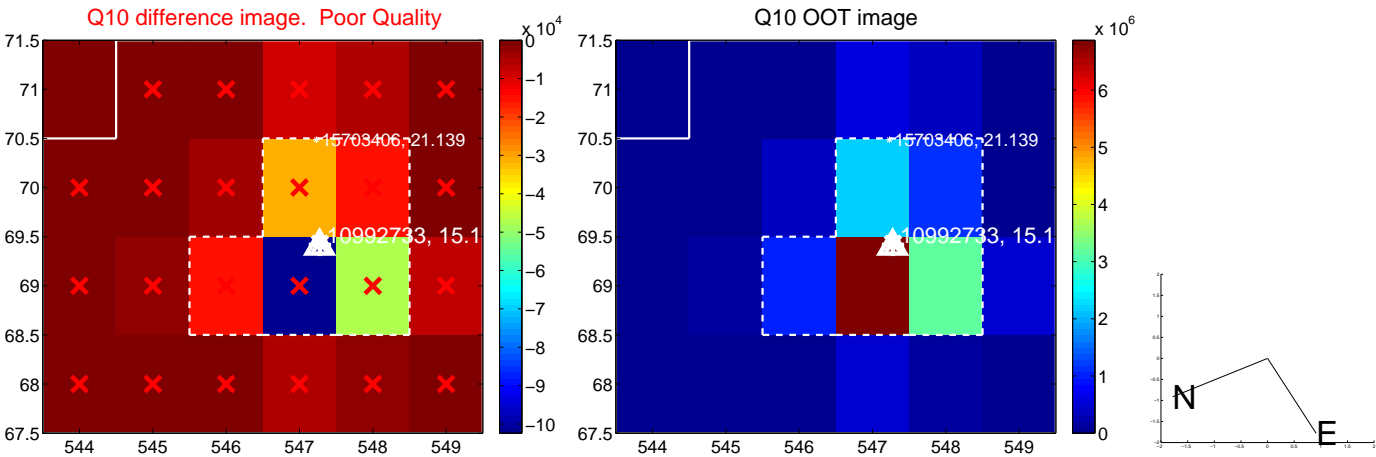
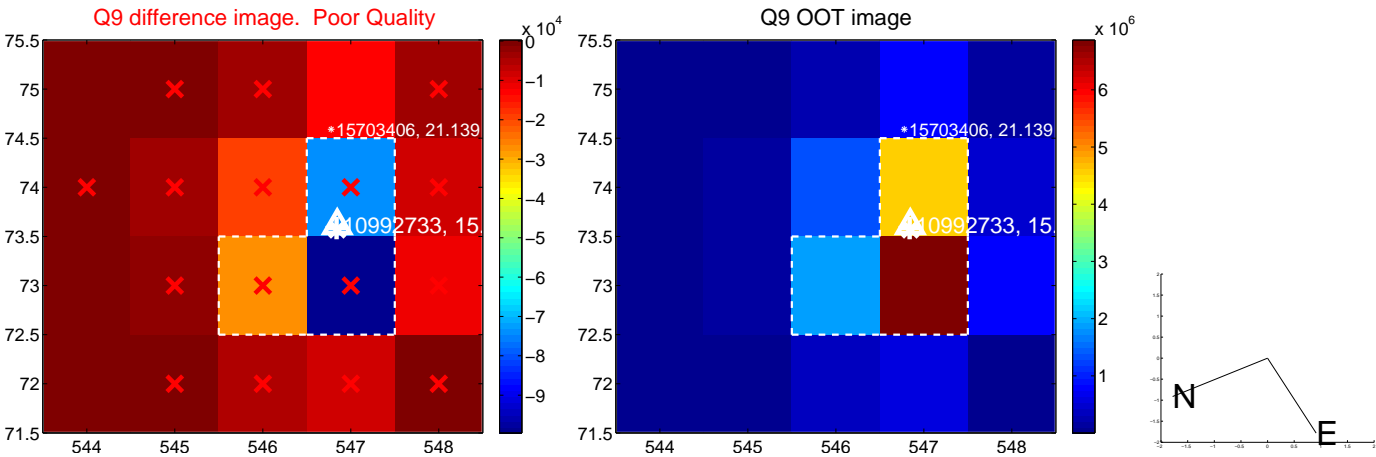


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

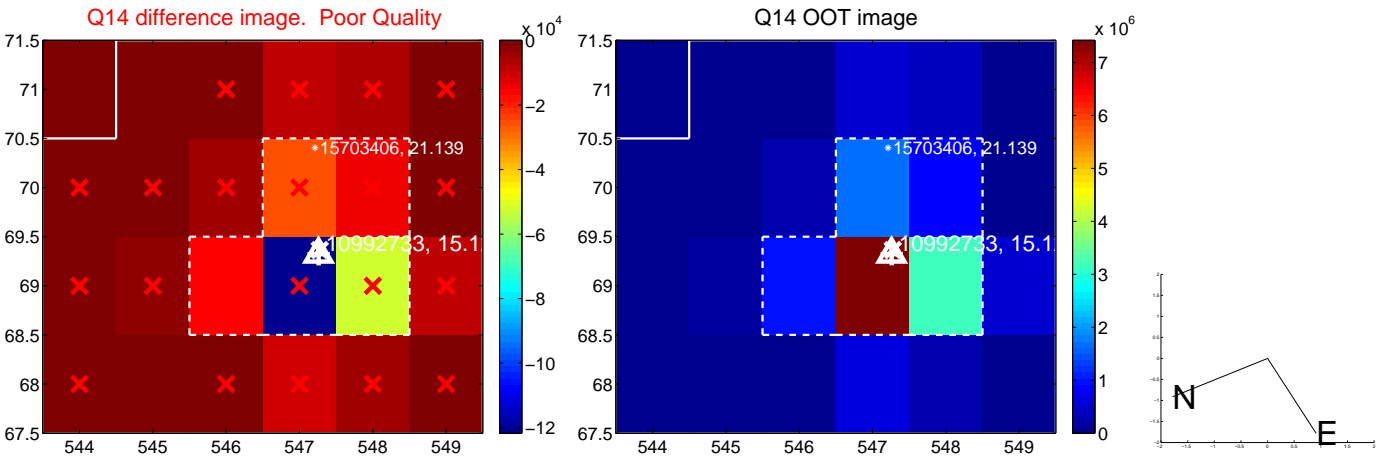
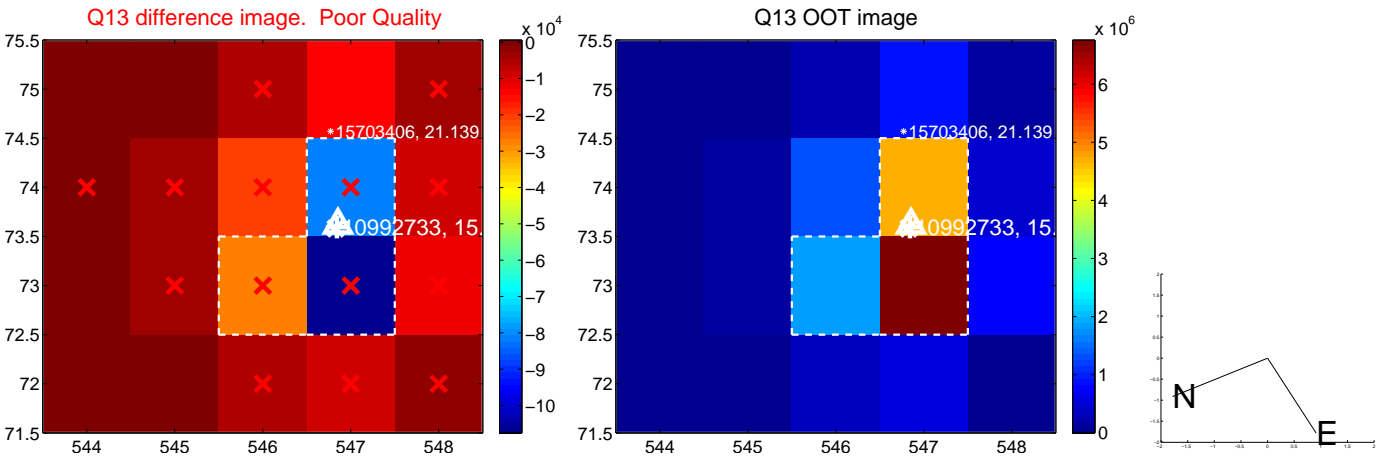
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



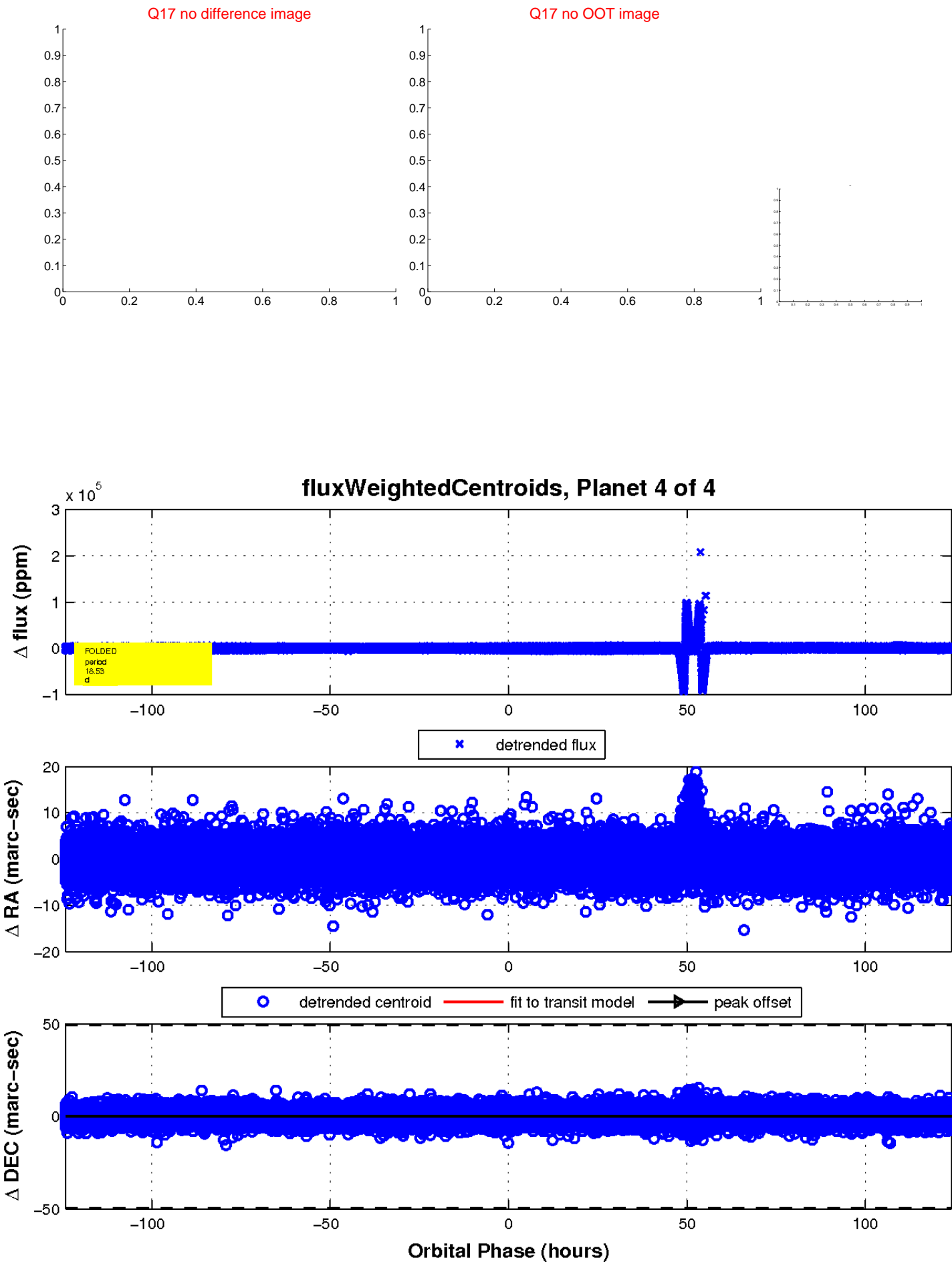
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

