

KIC 010292238

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})
010292238-01	OBS	3526.01	143.119259	245.539172	244088.3	11.404	1980.3	1779.9	0.85	5713	44.39	2.50
010292238-02	OBS	No	143.116654	266.365679	258286.5	10.500	1931.8	-1.0	0.85	5713	26.78	2.50
010292238-03	OBS	No	428.281232	413.785450	1761.1	19.957	14.2	11.4	0.85	5713	3.54	0.58
010292238-05	OBS	No	296.170278	255.519217	1254.0	0.985	14.0	4.4	0.85	5713	3.27	0.95
010292238-06	OBS	No	282.998240	268.571716	1316.9	4.092	18.8	5.0	0.85	5713	3.29	1.01
010292238-07	OBS	No	143.138625	261.775867	2921.0	78.572	12.7	17.0	0.85	5713	7.40	2.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010292238-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
010292238-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
010292238-03	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
010292238-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010292238-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010292238-07	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—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.

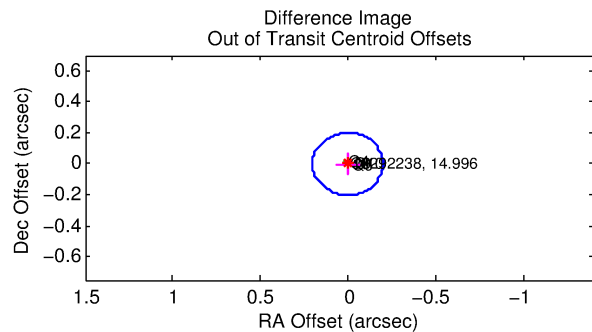
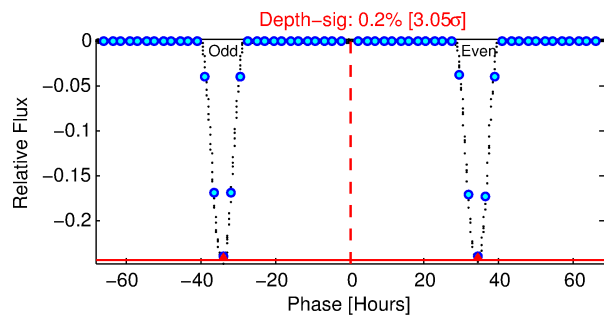
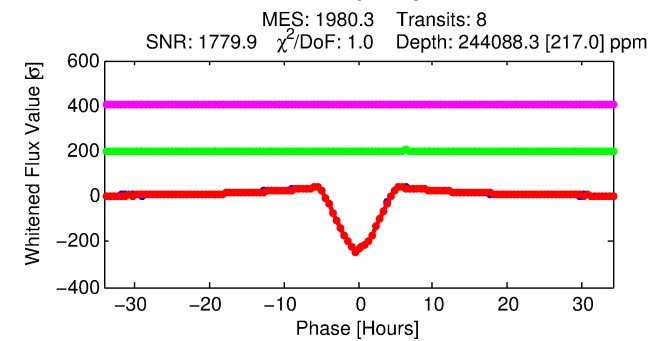
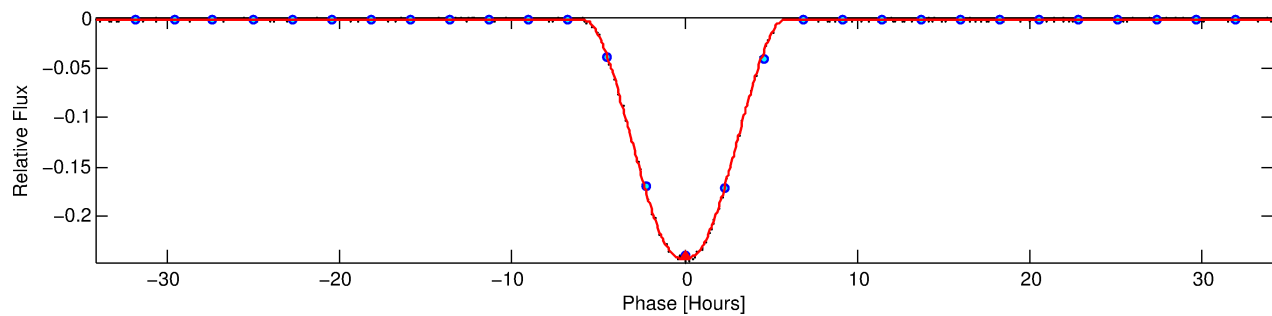
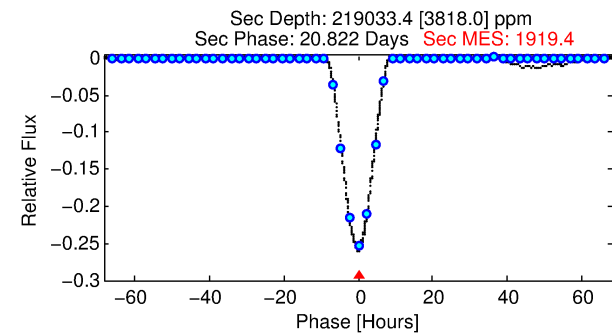
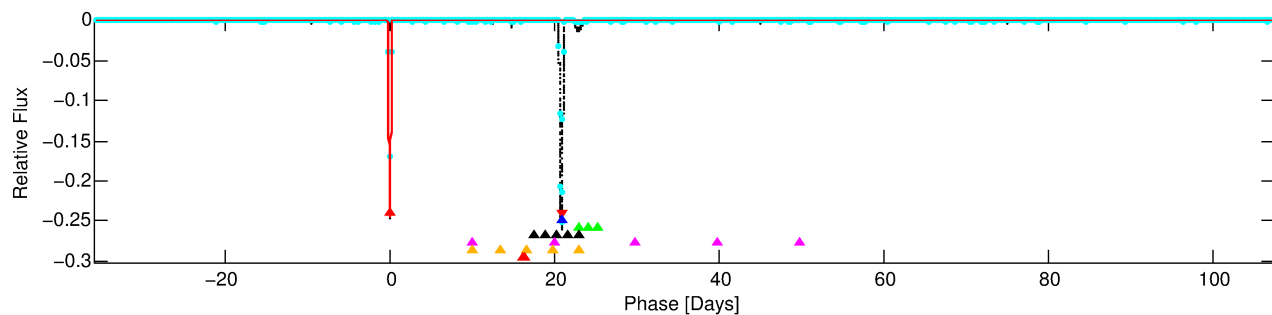
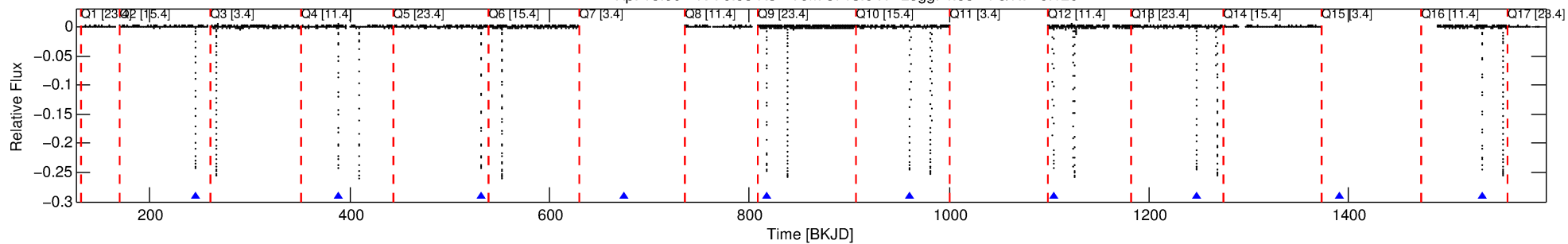
Ephemeris Match Information For 010292238-01

No Significant Match Found

DV One-Page Summary

KIC: 10292238 Candidate: 1 of 7 Period: 143.119 d
KOI: K03526 Corr: No Ephemeris Match

Kp: 15.00 R*: 0.85 Rs Teff: 5713.0 K Logg: 4.55 Fe/H: -0.120



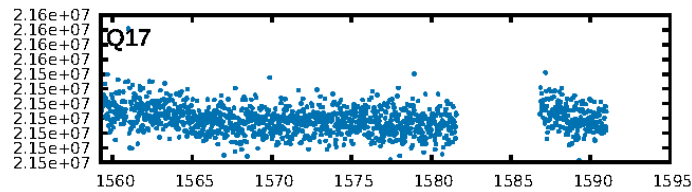
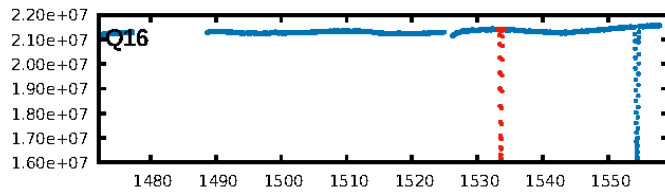
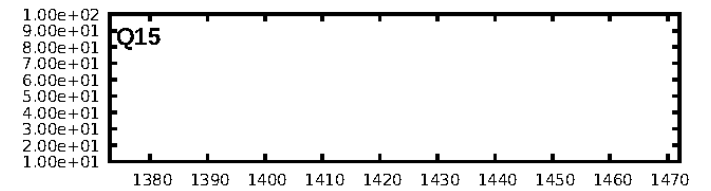
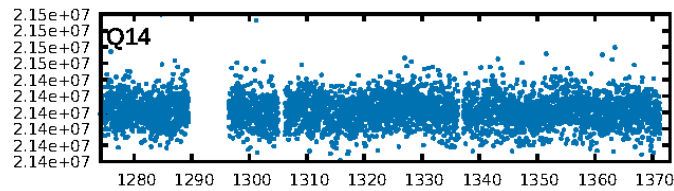
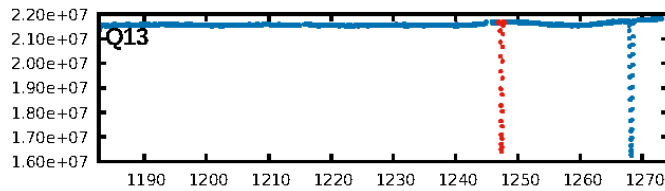
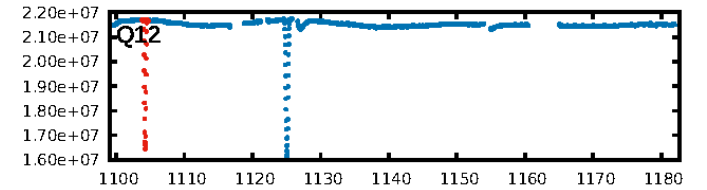
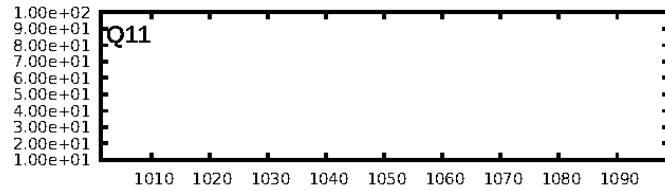
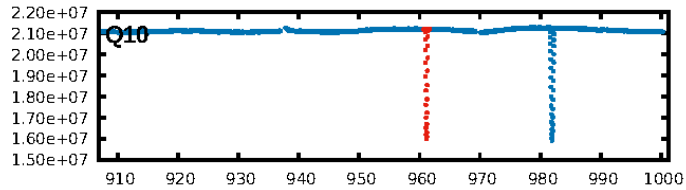
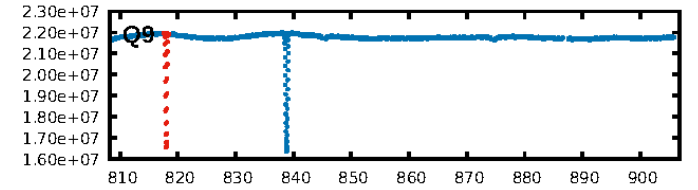
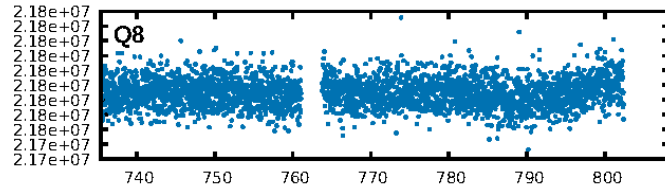
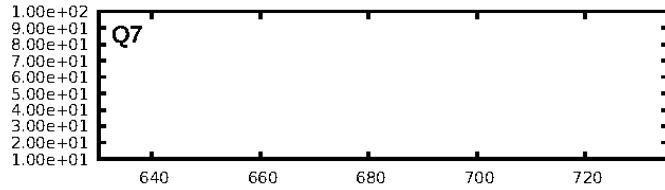
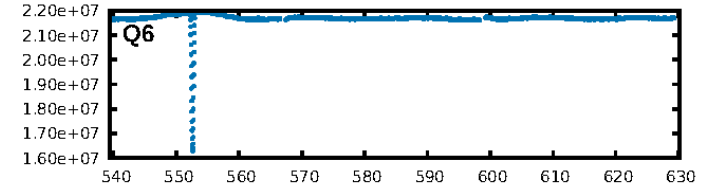
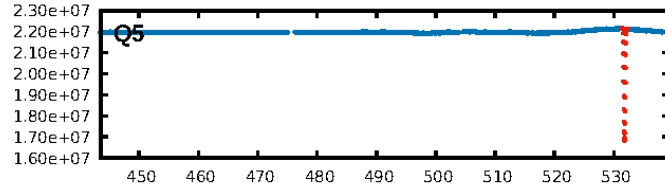
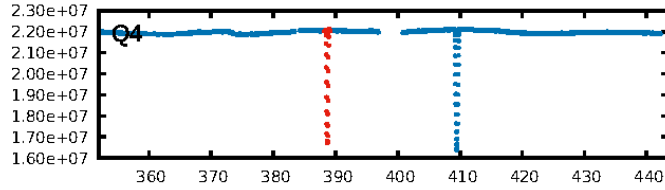
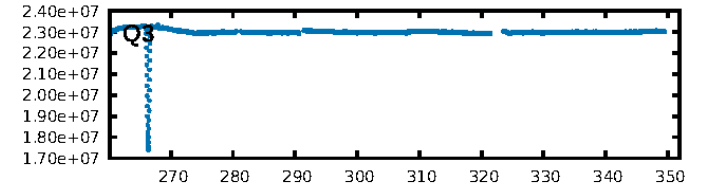
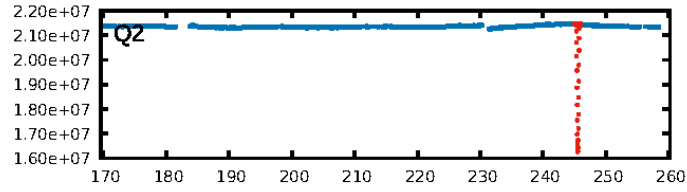
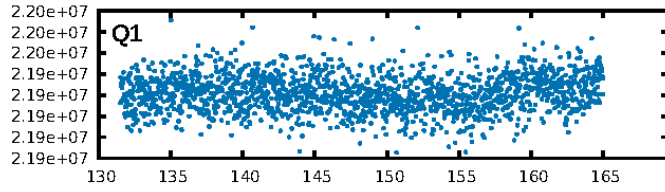
DV Fit Results:

Period = 143.11926 [0.00002] d
Epoch = 245.5392 [0.0001] BKJD
Rp/R* = 0.4780 [0.0004]
a/R* = 132.67 [0.08]
b = 0.52 [0.00]
Seff = 2.50 [0.82]
Teq = 321 [26] K
Rp = 44.39 [10.69] Re
a = 0.5258 [0.1083] AU
Ag = 16906.72 [5144.88] [3.29sigma]
Teffp = 5653 [169] K [31.17sigma]

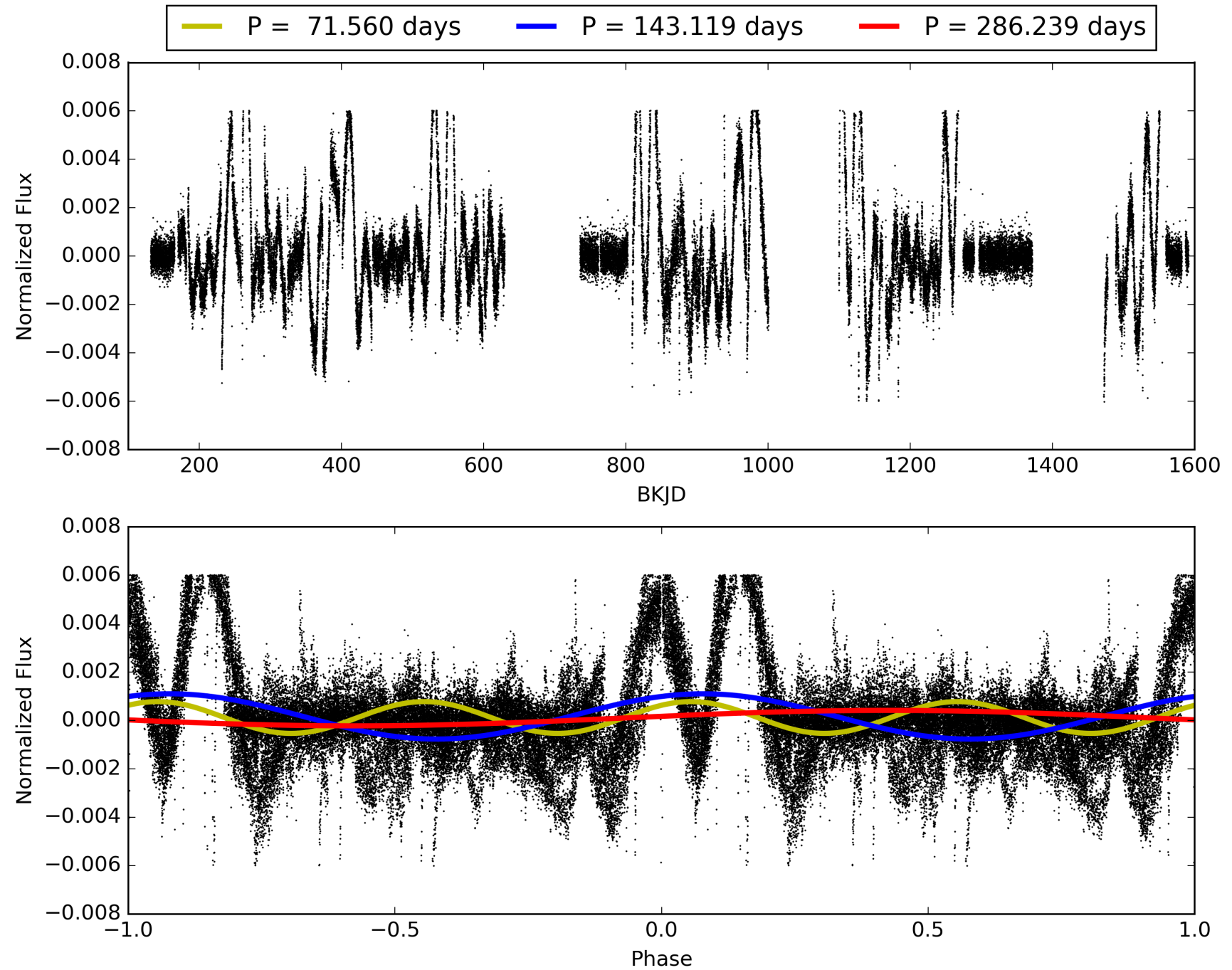
DV Diagnostic Results:

ShortPeriod-sig: 0.3% [0.00sigma]
LongPeriod-sig: 0.5% [0.01sigma]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 5.654
Centroid-sig: 0.0%
Centroid-so: 0.073 arcsec [19.74sigma]
OotOffset-rm: 0.004 arcsec [0.06sigma]
OotOffset-st: 1/0/1/2 [4]
KicOffset-rm: 0.072 arcsec [0.84sigma]
KicOffset-st: 1/0/1/2 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 010292238-01, PDC Light Curves

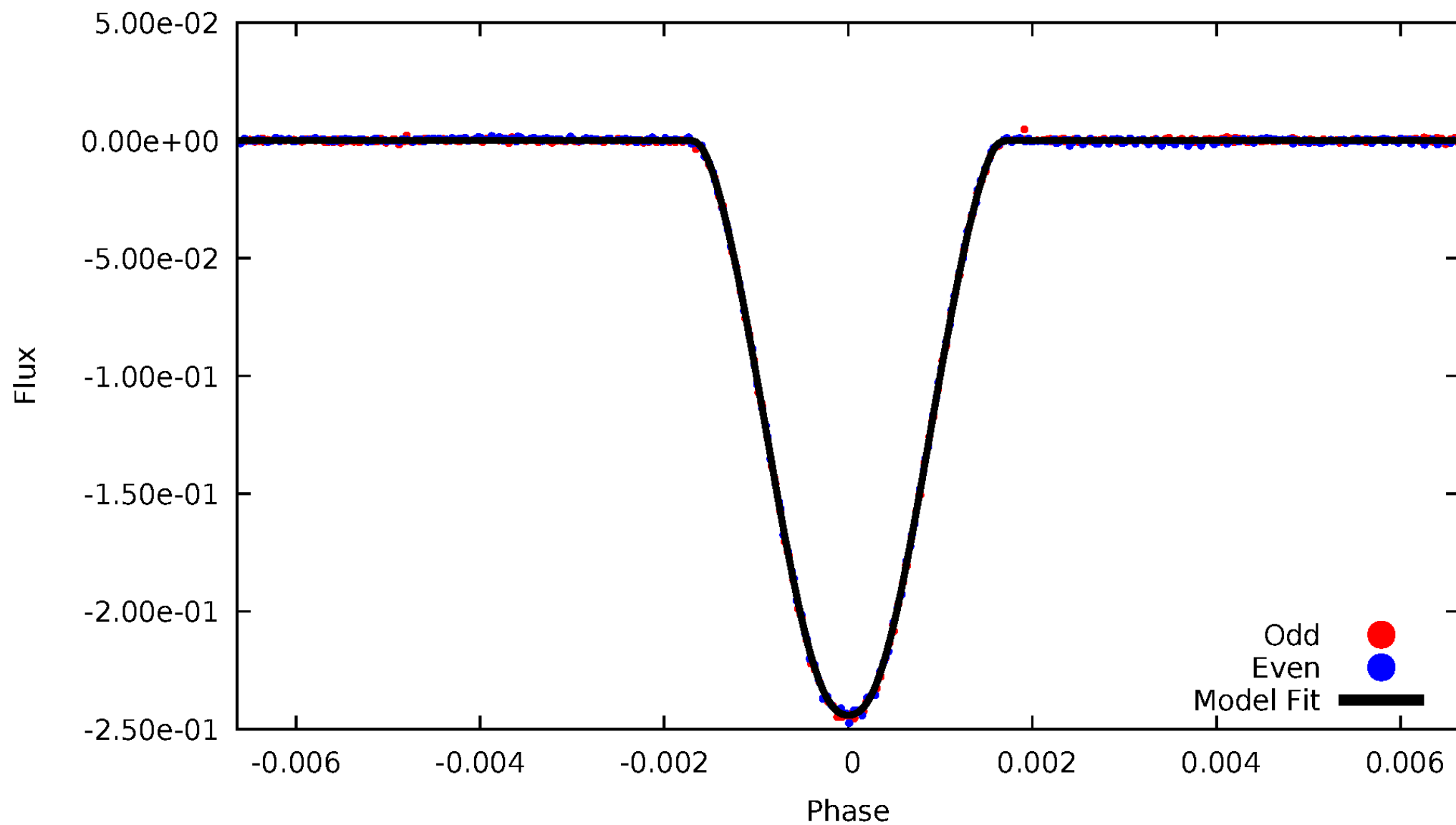


TCE 010292238-01



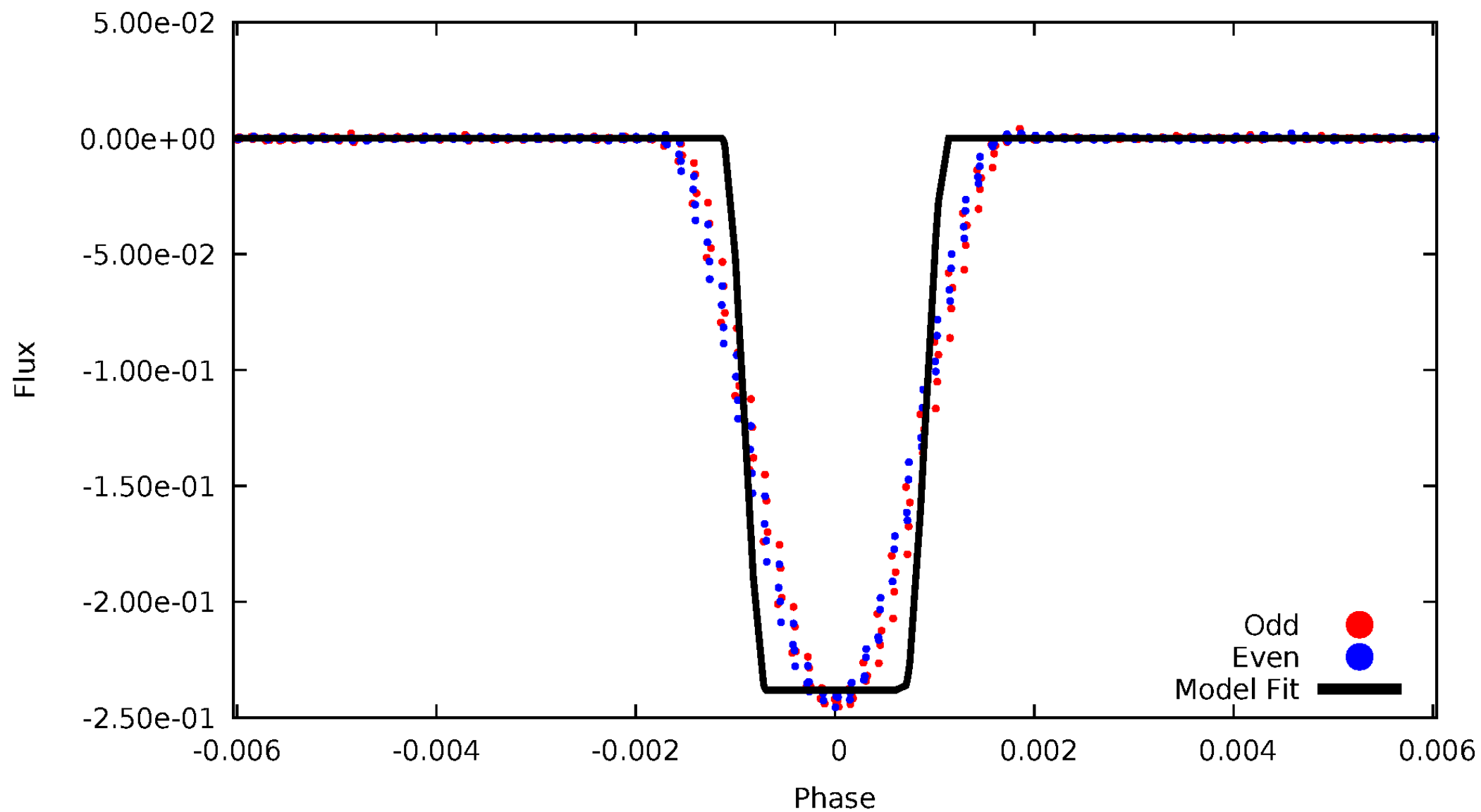
DV Odd/Even

TCE 010292238-01



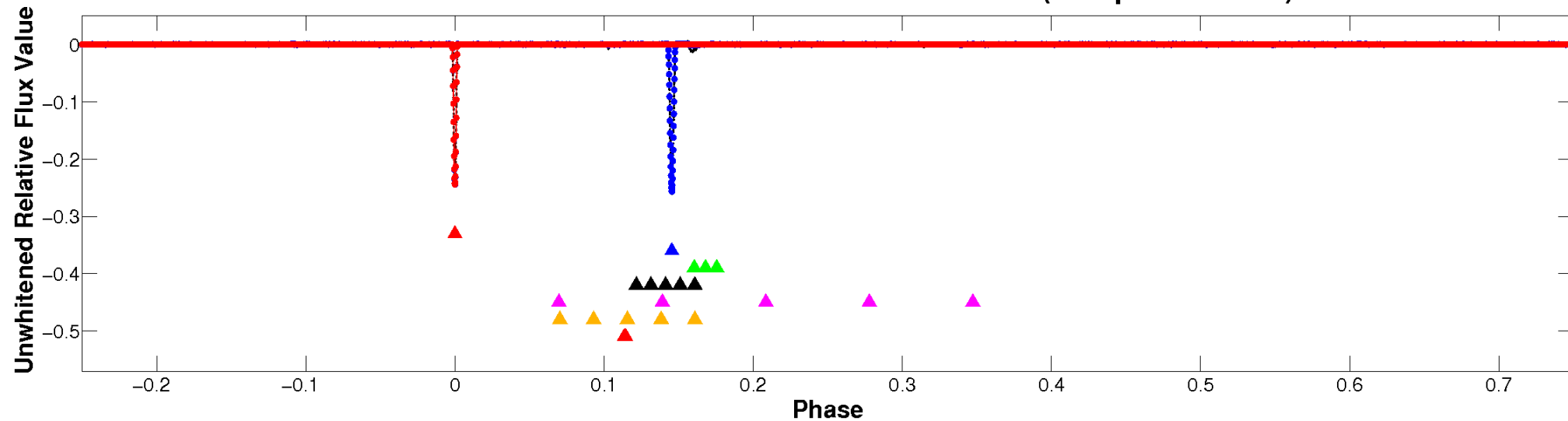
ALT Odd/Even

TCE 010292238-01

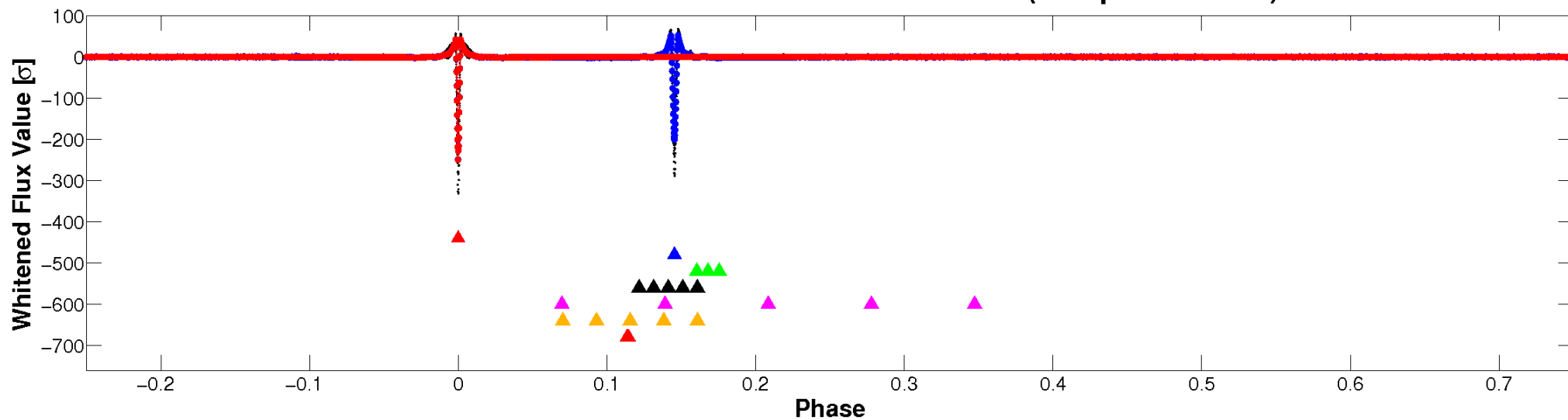


Non-Whitened Vs. Whitened Light Curve

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

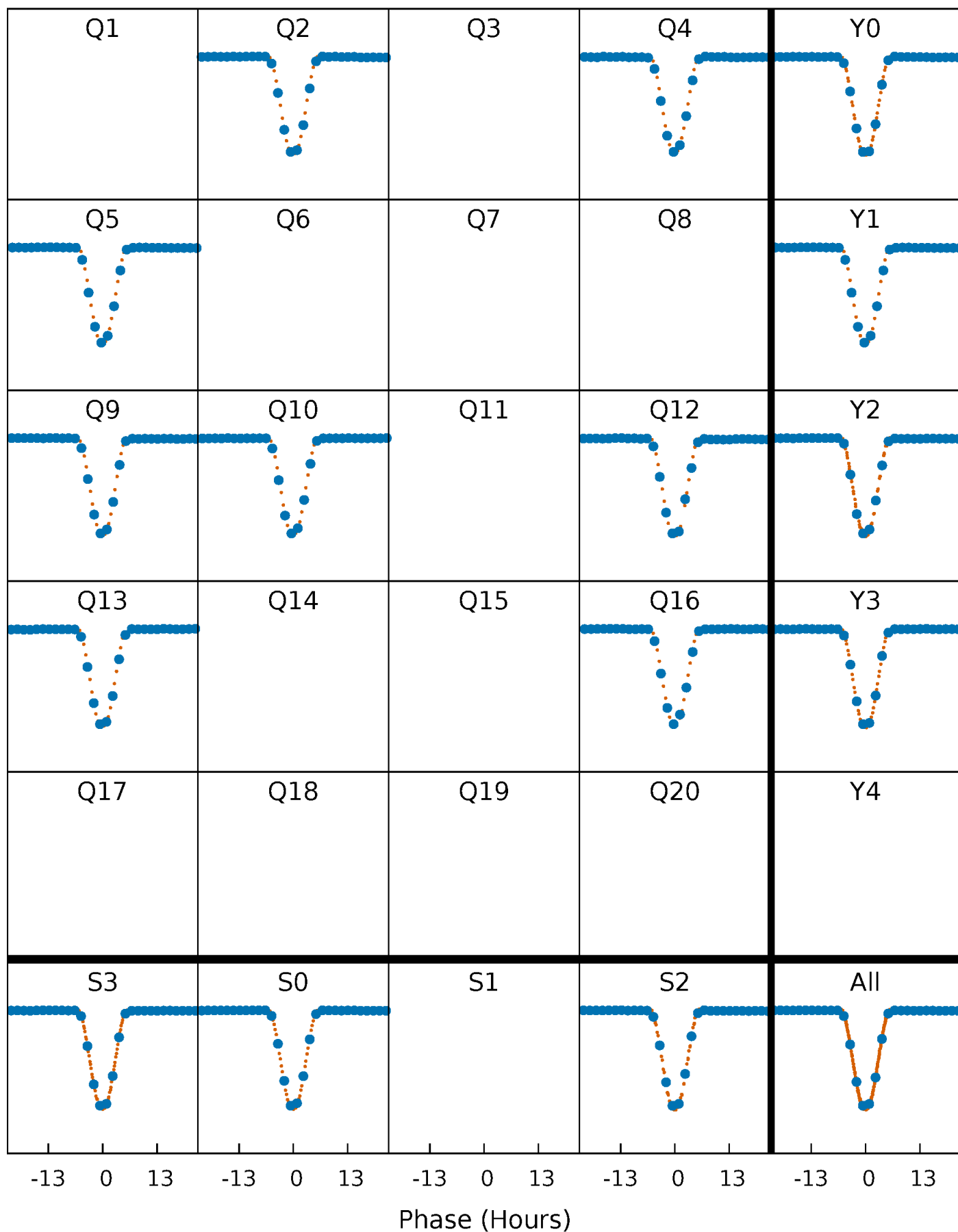


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



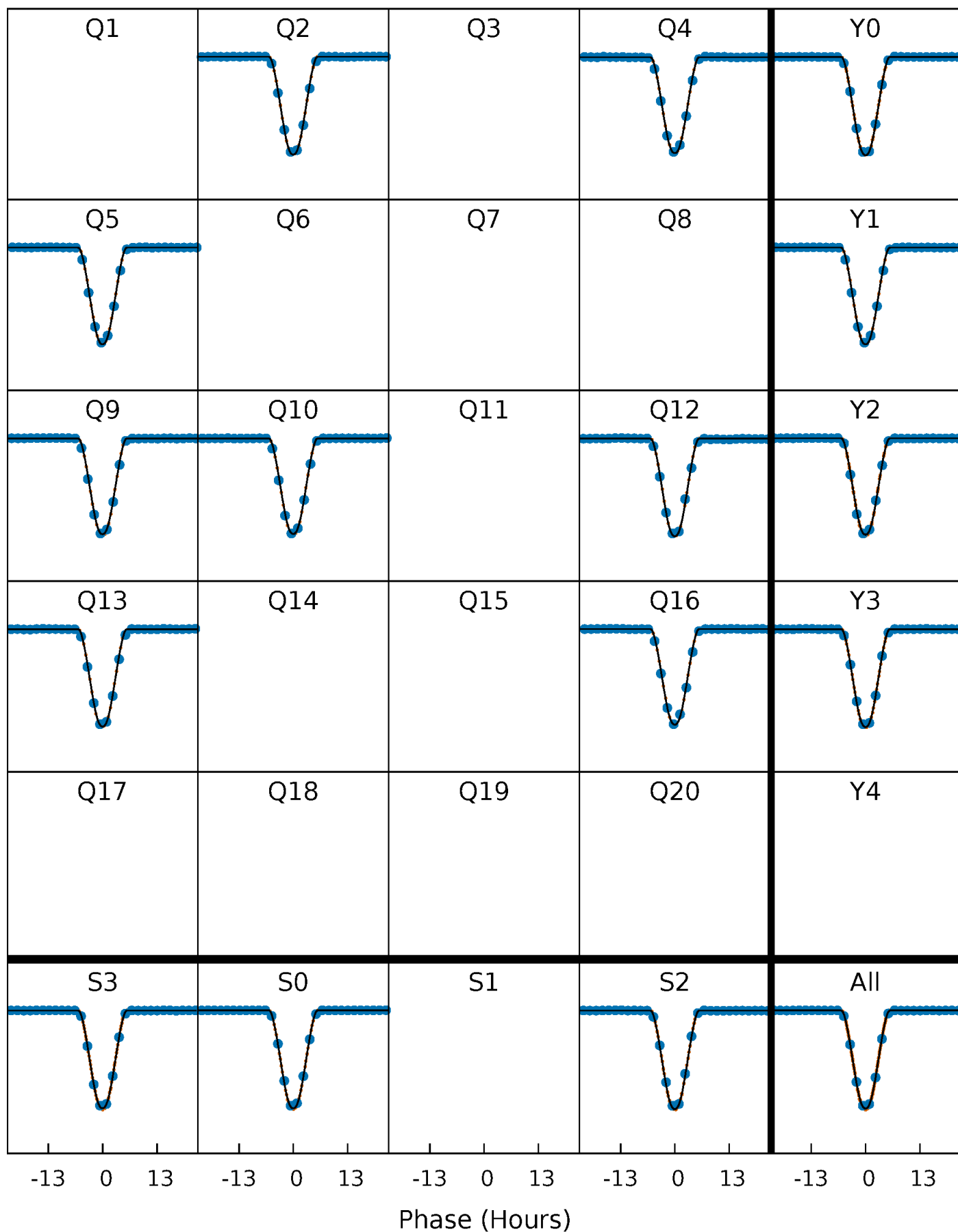
PDC Quarter-Phased Transit Curves

TCE 010292238-01 P=143.119259 Days $T_0=245.539172$ (BKJD)



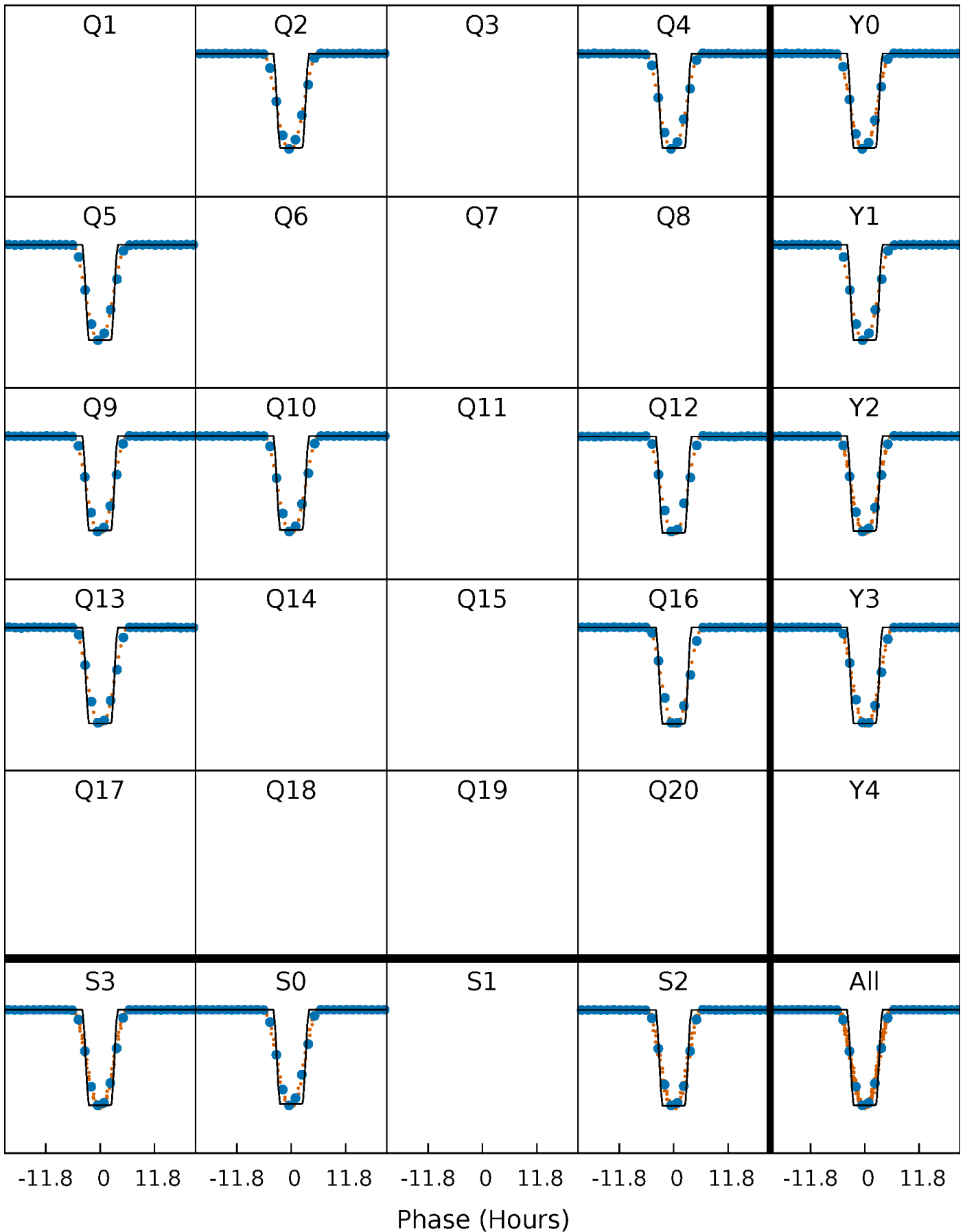
DV Quarter-Phased Transit Curves

TCE 010292238-01 P=143.119259 Days $T_0=245.539172$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

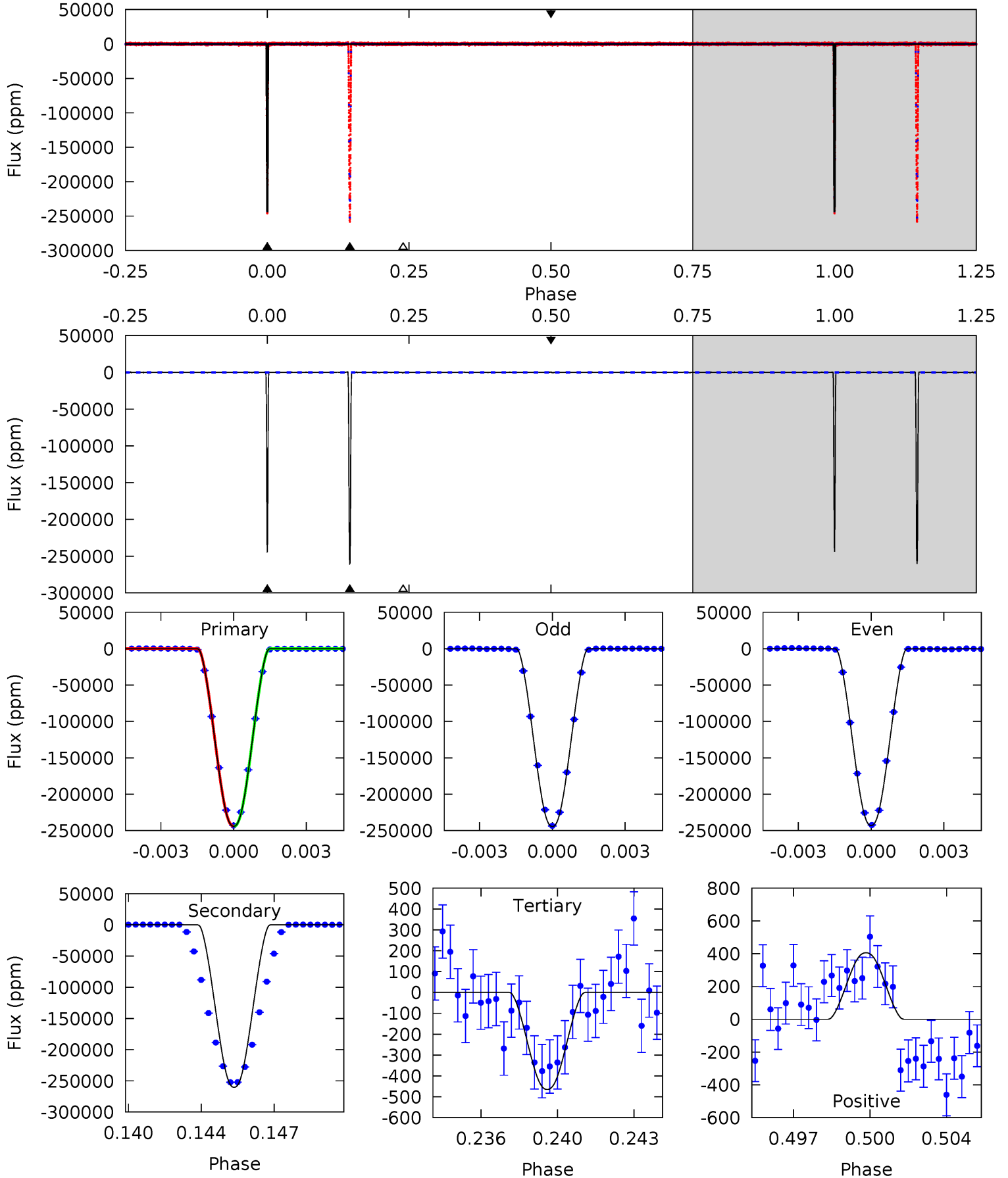
TCE 010292238-01 P=143.116654 Days $T_0=245.549941$ (BKJD)



DV Model-Shift Uniqueness Test

010292238-01, P = 143.119259 Days, E = 102.419913 Days

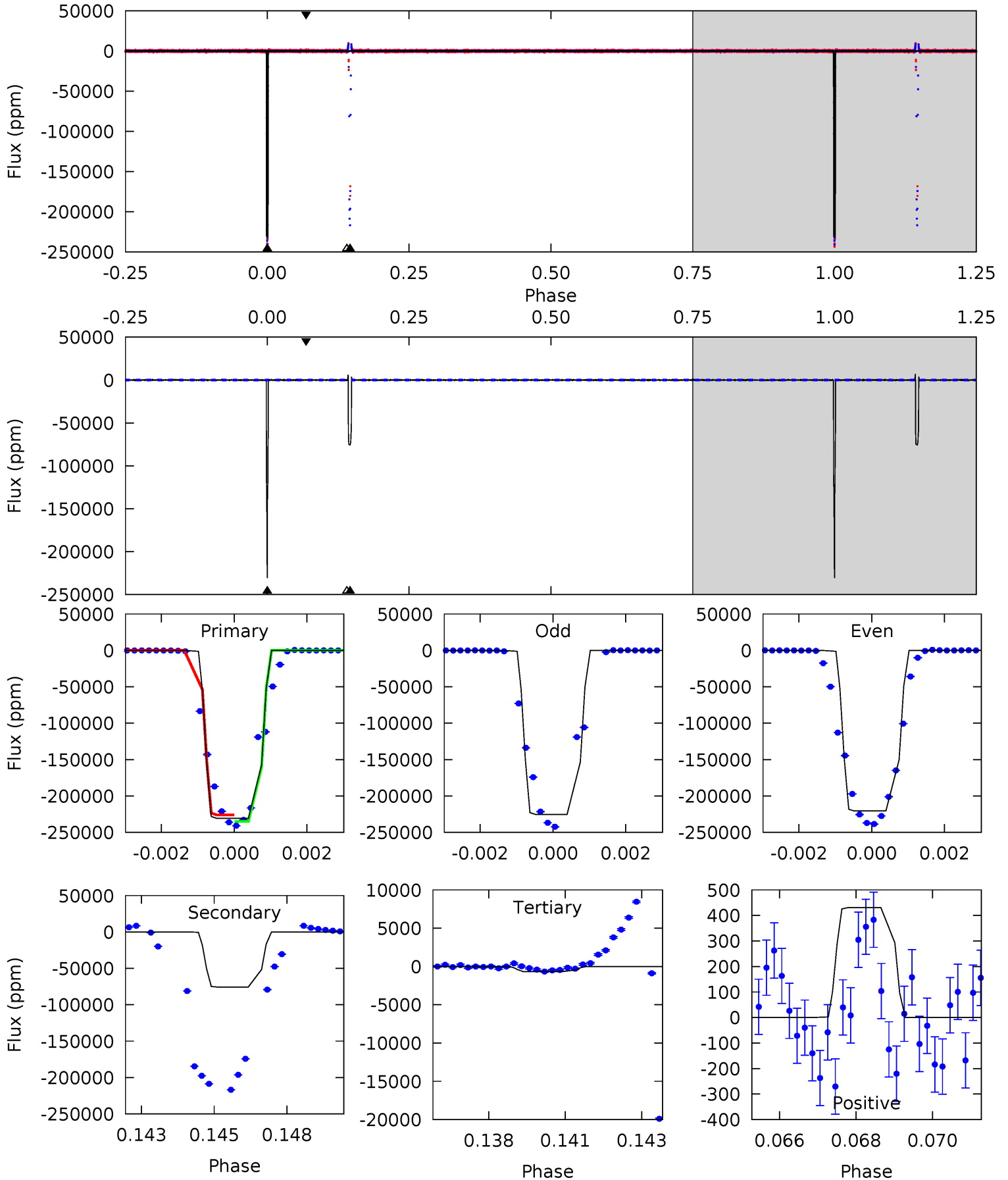
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5746	6132	10.9	9.55	5.23	2.93	3.09	5735	5736	6121	6122	16.1	1.00	0.00	4.27



Alt Model-Shift Uniqueness Test

010292238-01, P = 143.116654 Days, E = 102.433287 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2291	751.0	6.63	4.27	5.30	3.05	9.19	2285	2287	744.4	746.7	9.87	1.00	0.03	9.90



Stellar Parameters For KIC 010292238

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5713^{+152}_{-169}	$4.554^{+0.042}_{-0.168}$	$-0.120^{+0.300}_{-0.300}$	$0.851^{+0.205}_{-0.073}$	$0.948^{+0.094}_{-0.115}$	$2.164^{+0.371}_{-0.973}$
	+3%/-3%	+1%/-4%	+250%/-250%	+24%/-9%	+10%/-12%	+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 010292238-01 / KOI 3526.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-260429 ± 42	$44.89^{+6.46}_{-2.51}$	457^{+27}_{-19}	6369^{+179}_{-213}	25592^{+3047}_{-5038}
Alt.	-75592 ± 101	$46.21^{+5.94}_{-2.95}$	456^{+27}_{-20}	4540^{+108}_{-105}	5733^{+628}_{-1089}

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

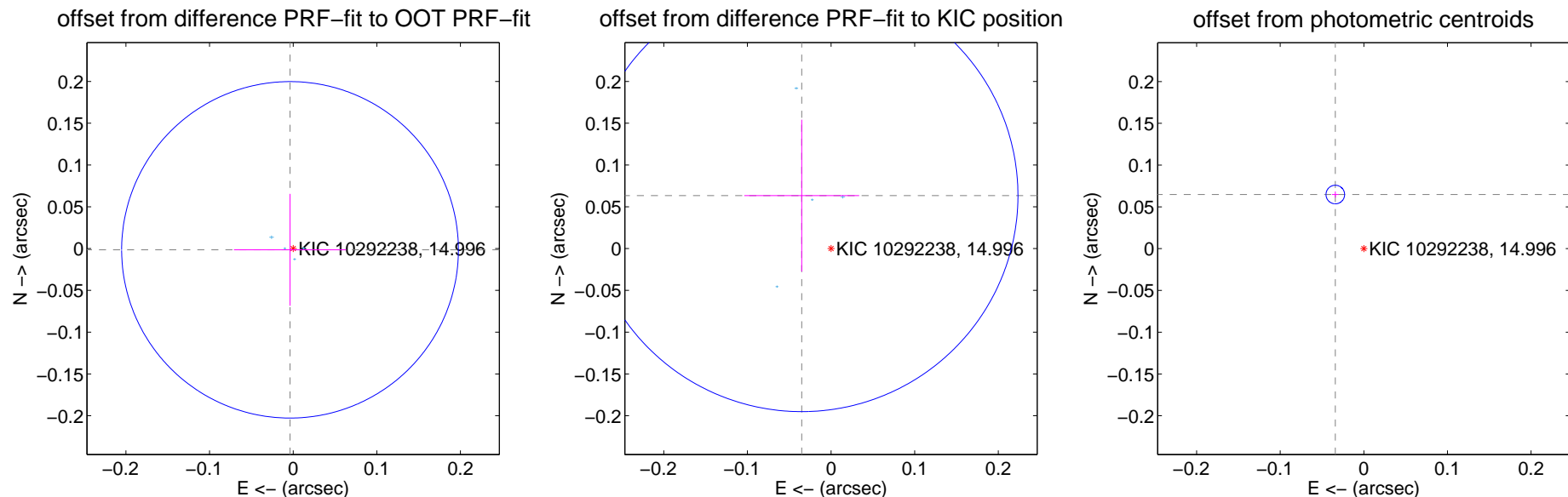
DV Centroid Data

Supplemental centroid analysis for 010292238-01. Kepler magnitude: 15.00. Transit SNR 1779.93

There are 4 quarters with good PRF difference image offsets

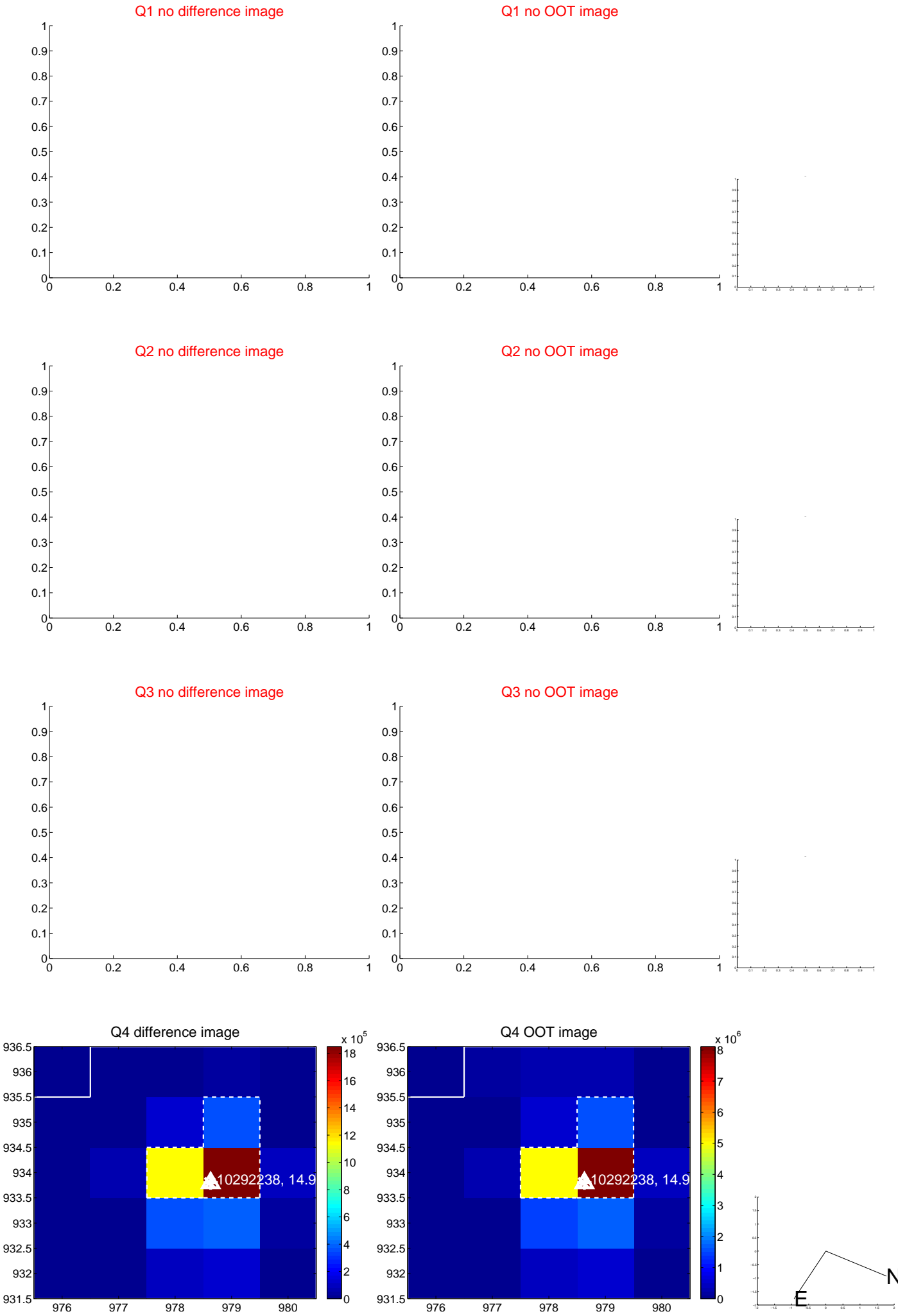
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.004 ± 0.067	0.06	0.004 ± 0.067	-0.001 ± 0.067
PRF-fit source offset from KIC position	0.072 ± 0.086	0.84	0.035 ± 0.069	0.063 ± 0.091
photometric centroid source offset	0.07 ± 0.00	19.74	0.03 ± 0.00	0.06 ± 0.00

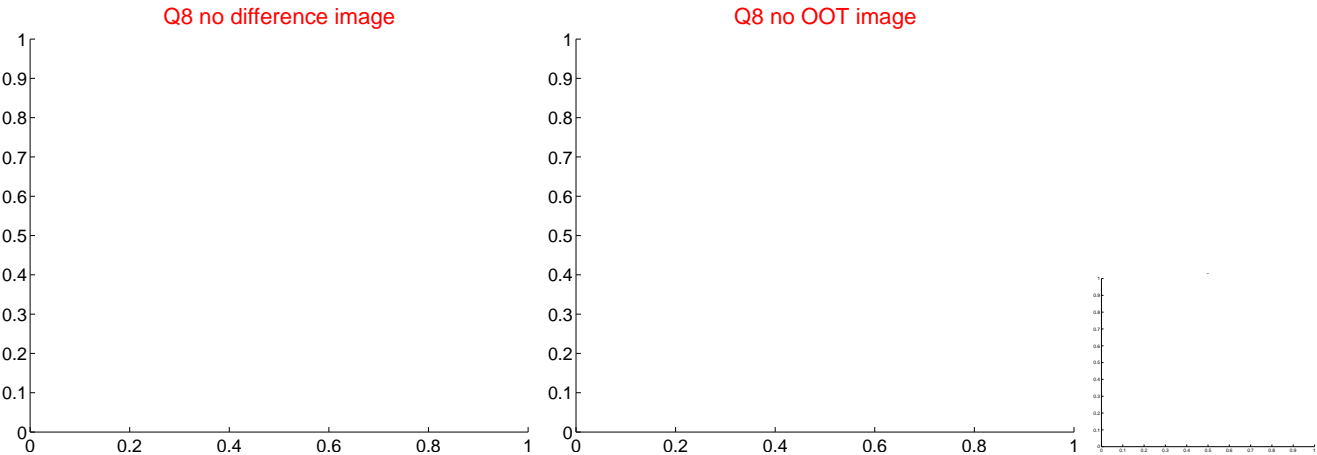
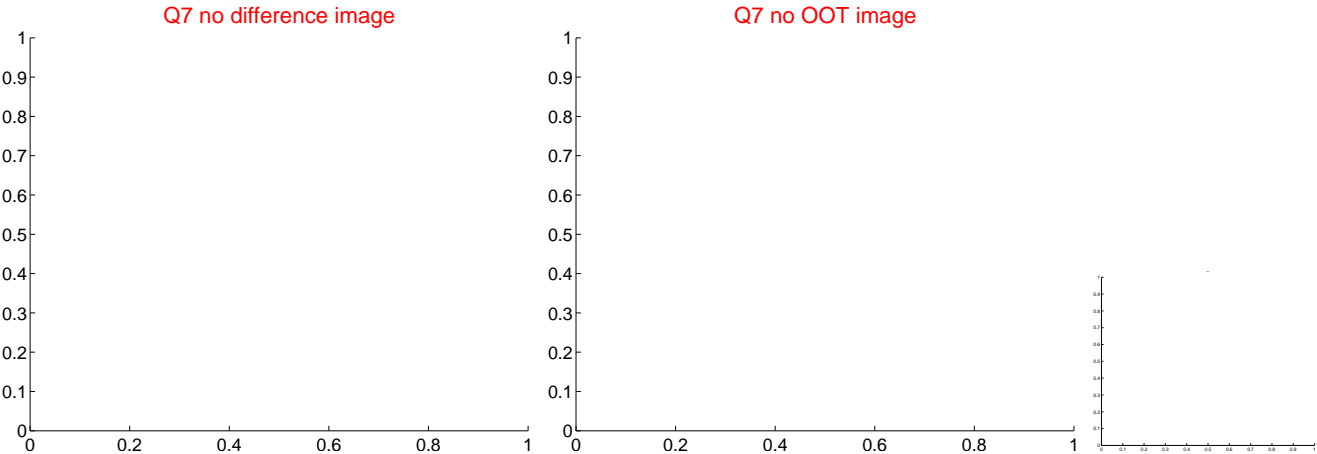
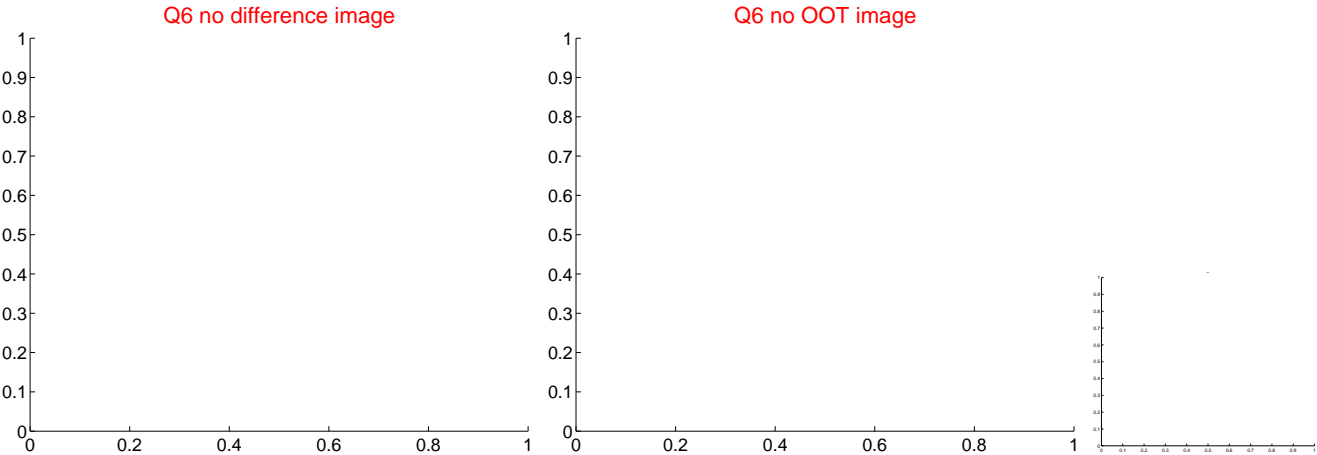
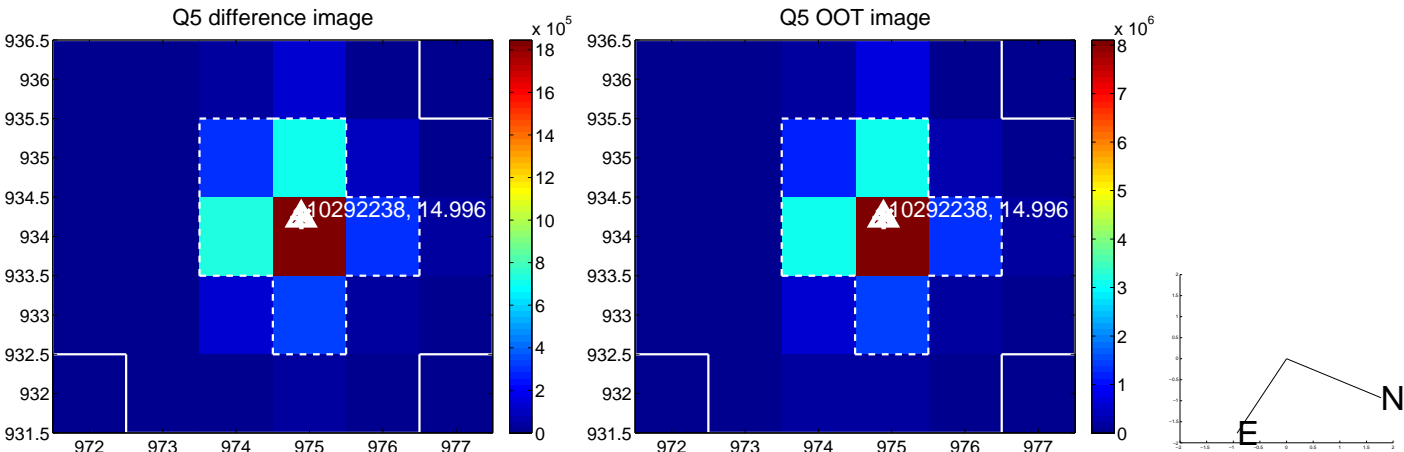


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

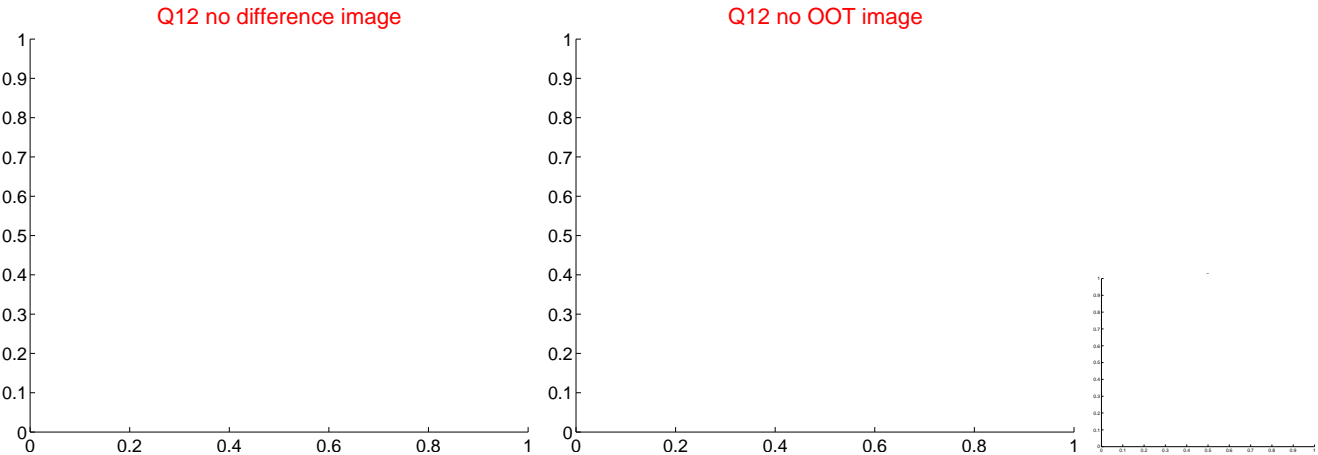
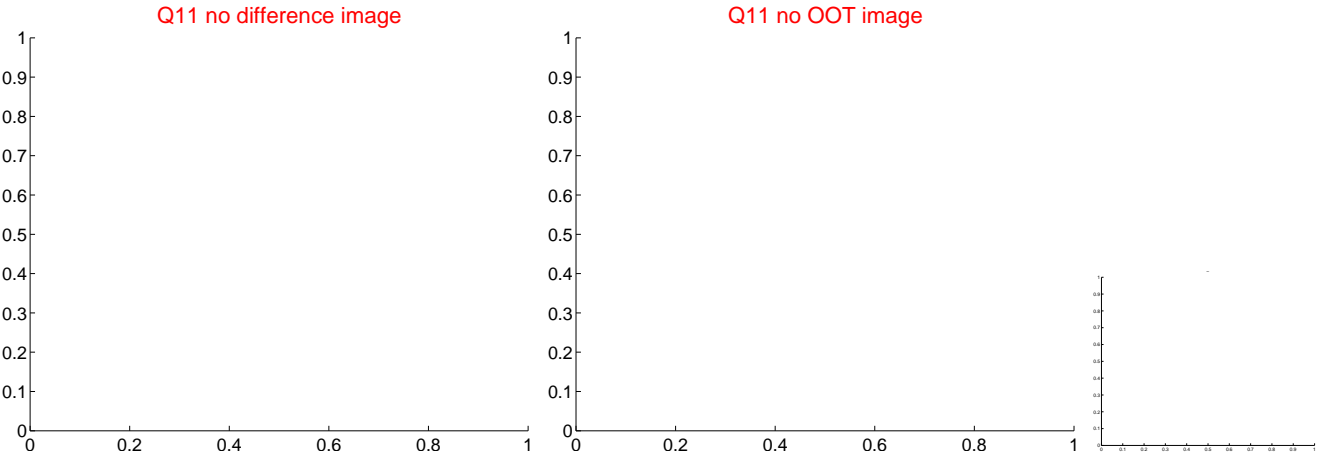
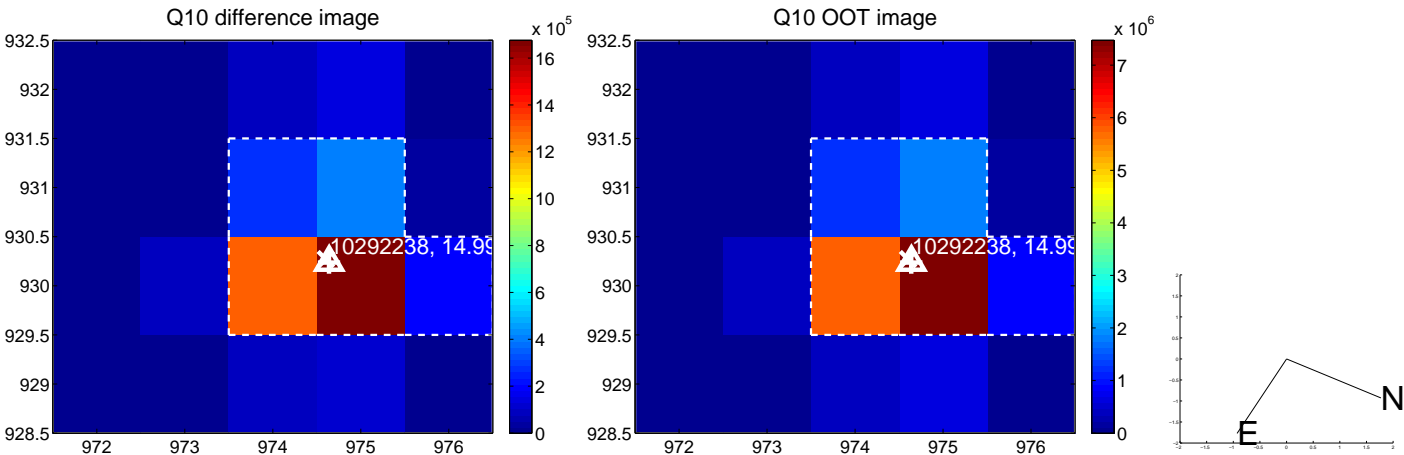
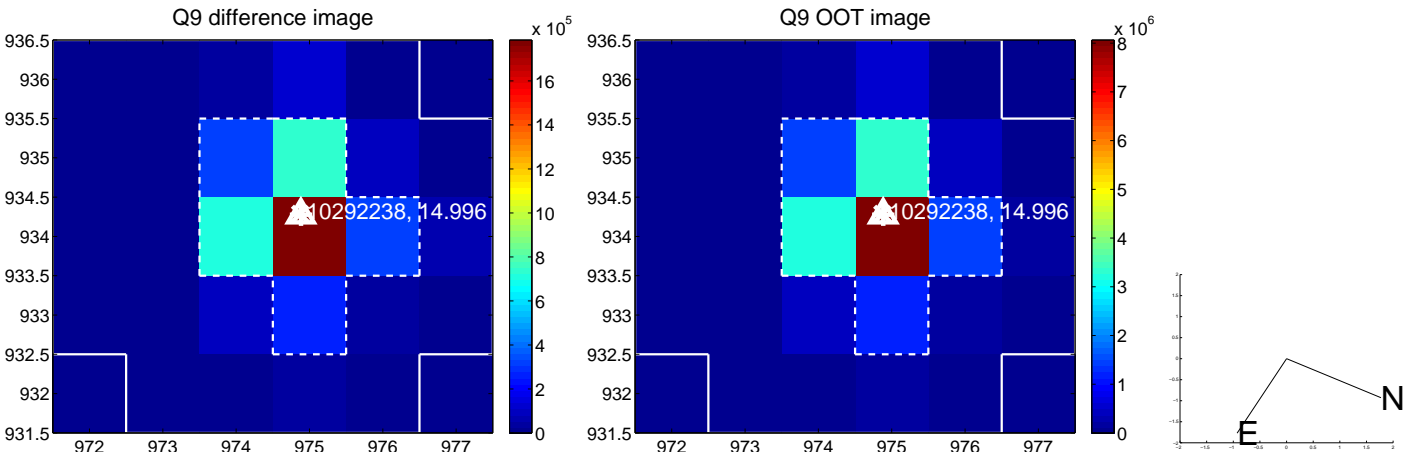
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



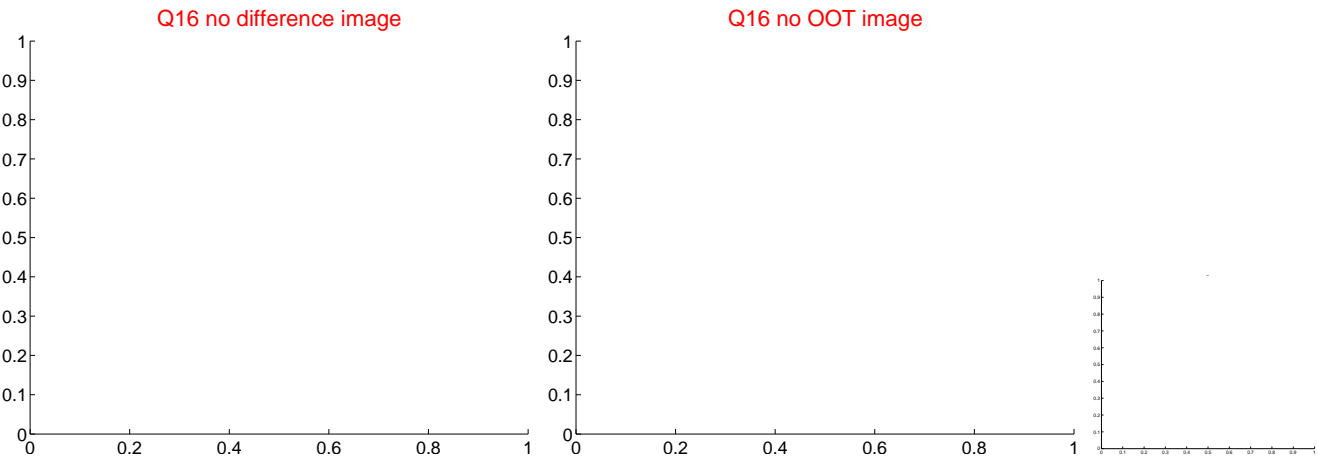
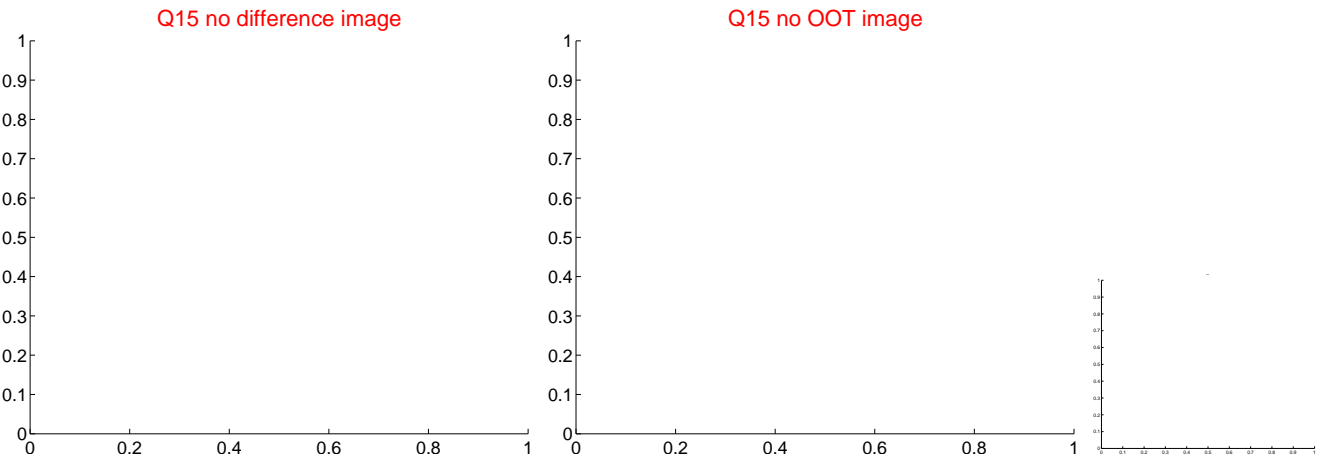
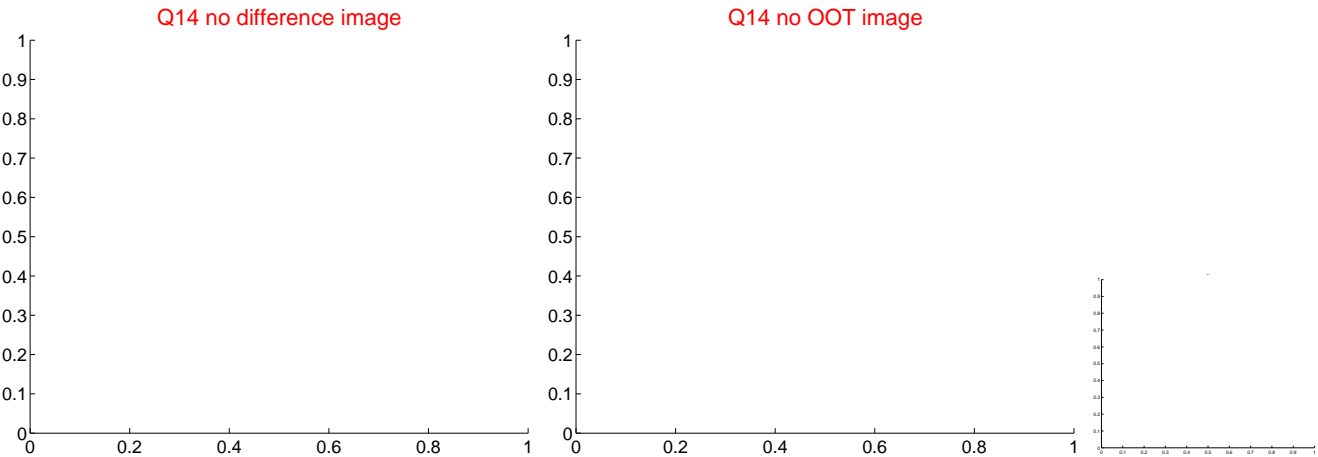
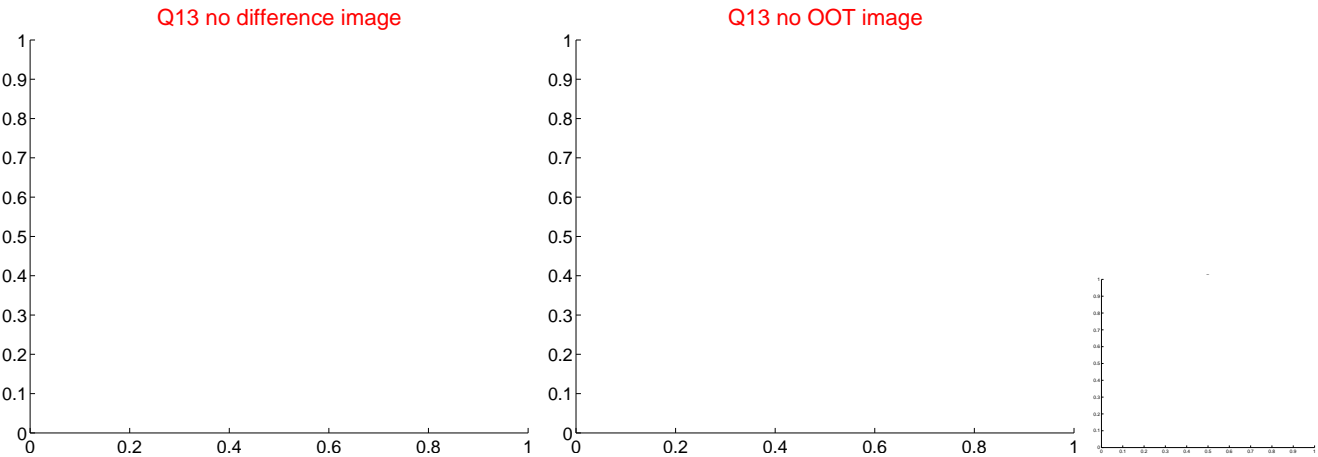
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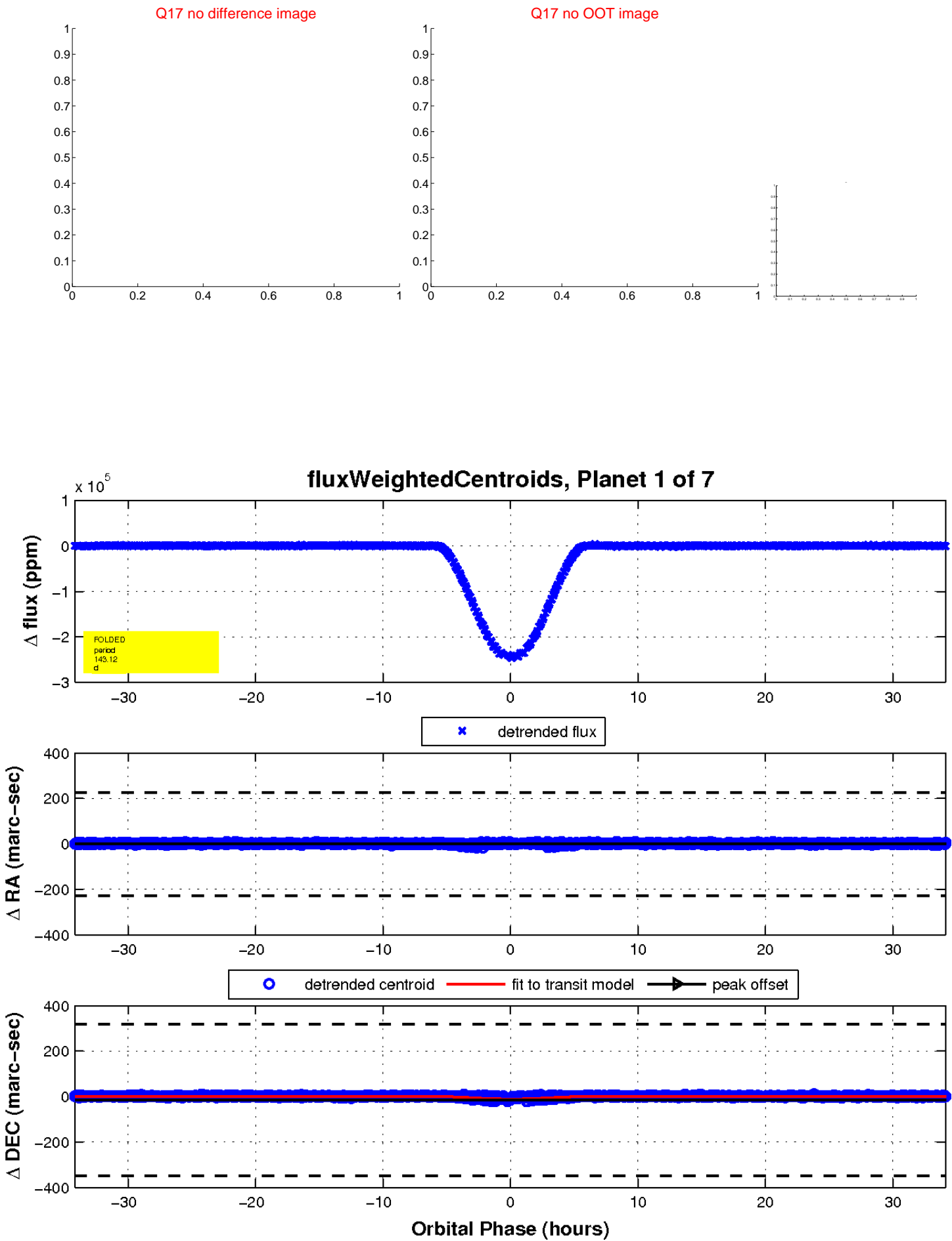
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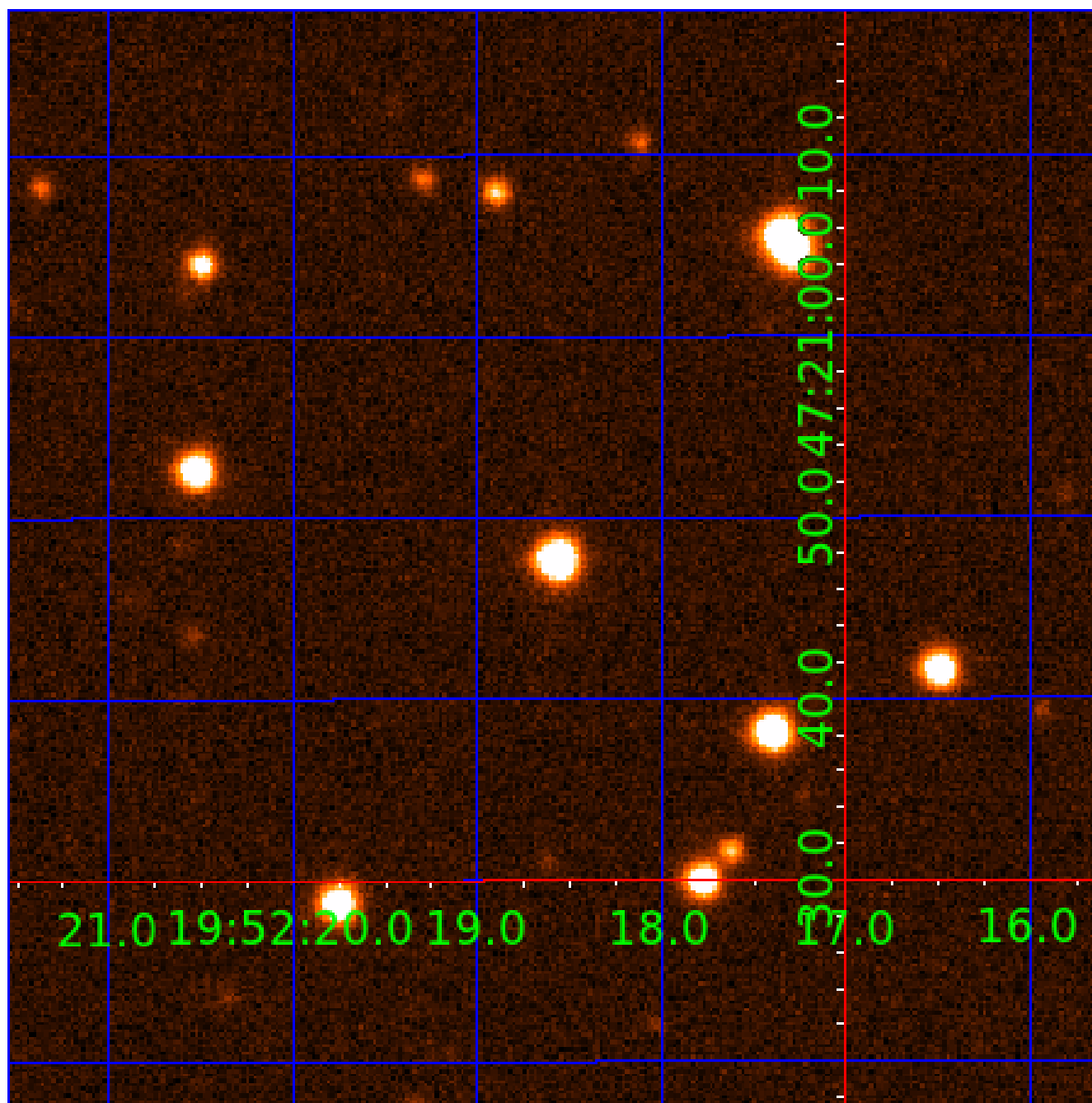


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UKIRT Image

Declination



KIC 010292238

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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.

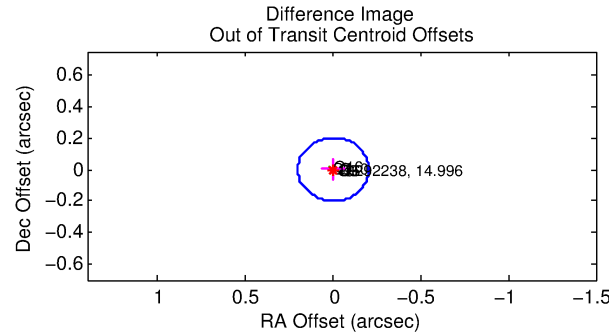
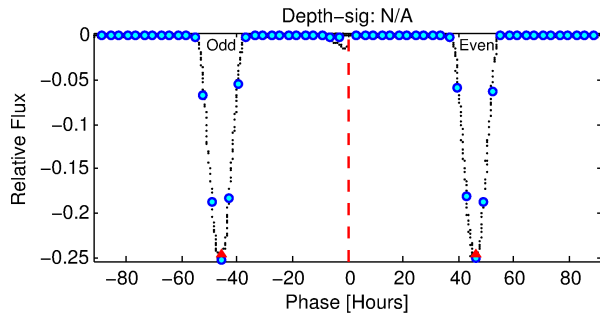
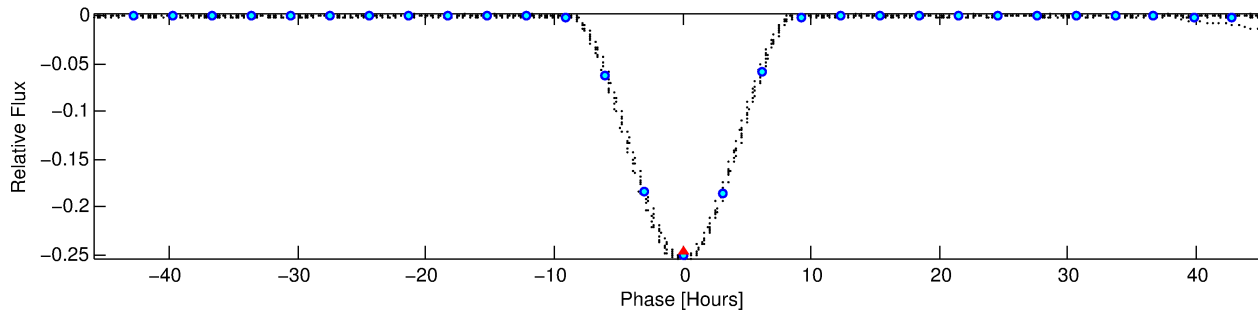
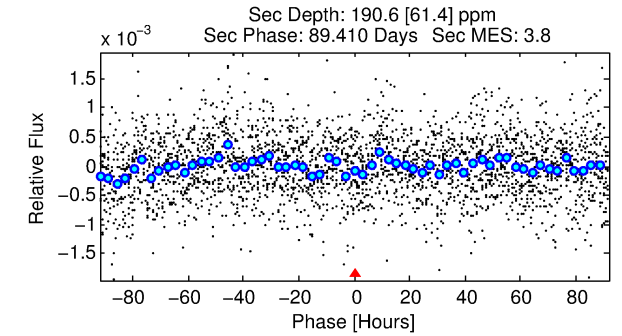
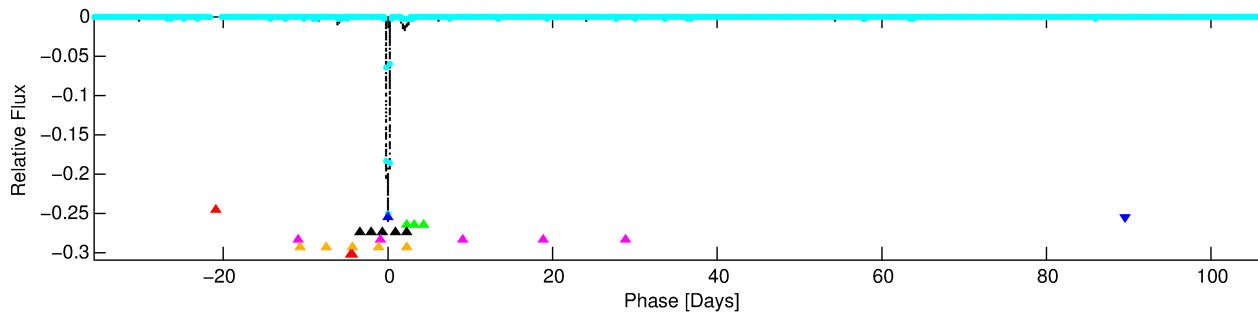
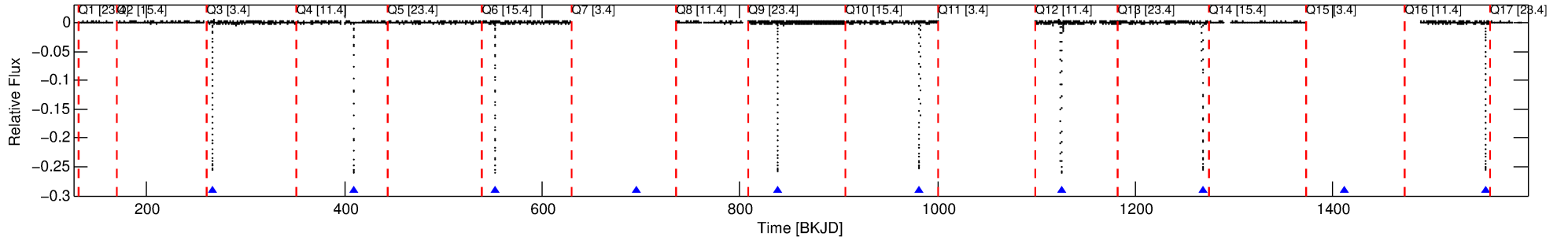
Ephemeris Match Information For 010292238-02

No Significant Match Found

DV One-Page Summary

KIC: 10292238 Candidate: 2 of 7 Period: 143.117 d
KOI: K03526.01 Corr: 0.789

Kp: 15.00 R*: 0.85 Rs Teff: 5713.0 K Logg: 4.55 Fe/H: -0.120



TPS TCE Results:

Period = 143.11665 d
Epoch = 266.3657 BKJD

DV fit results are unavailable

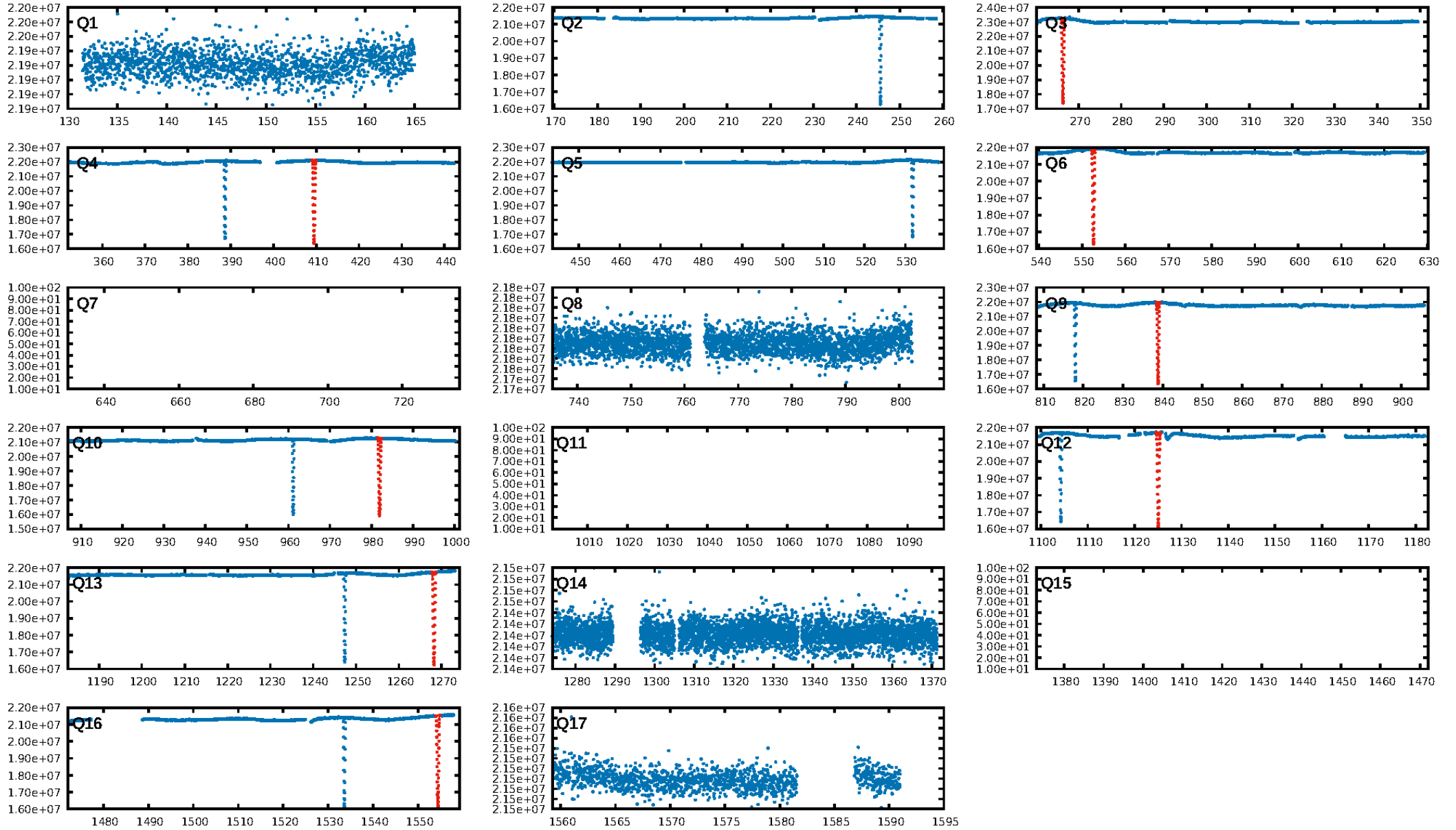
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.3% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: 5.47
Centroid-sig: 0.0%
Centroid-so: 0.098 arcsec [35.03σ]
OotOffset-rm: 0.003 arcsec [0.04σ]
KicOffset-rm: 0.094 arcsec [1.16σ]
OotOffset-st: 2/1/2/1 [6]
KicOffset-st: 2/1/2/1 [6]
DiffImageQuality-fgm: 1.00 [6/6]
DiffImageOverlap-fno: 0.67 [4/6]

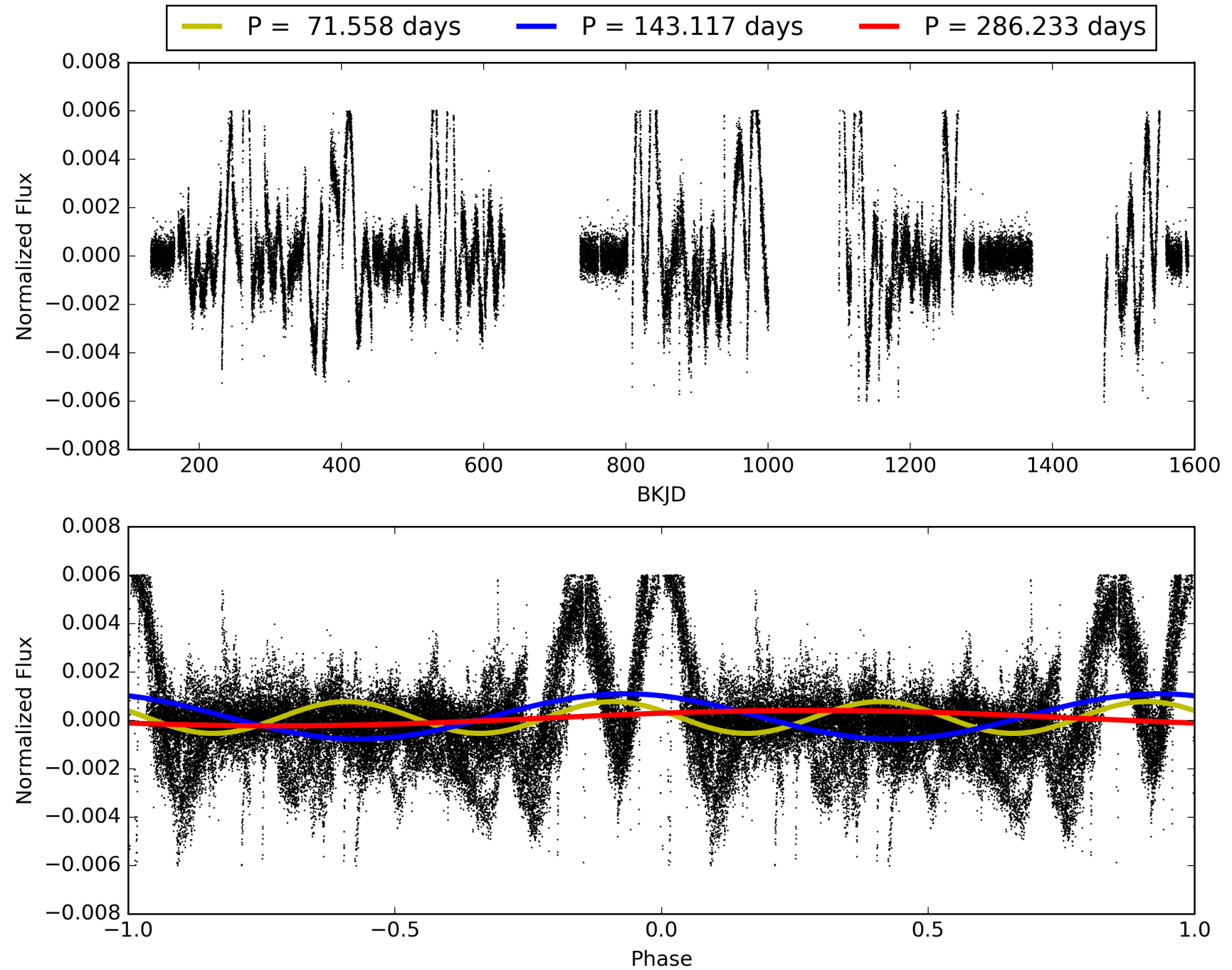
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 17:03:21 Z

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

TCE 010292238-02, PDC Light Curves

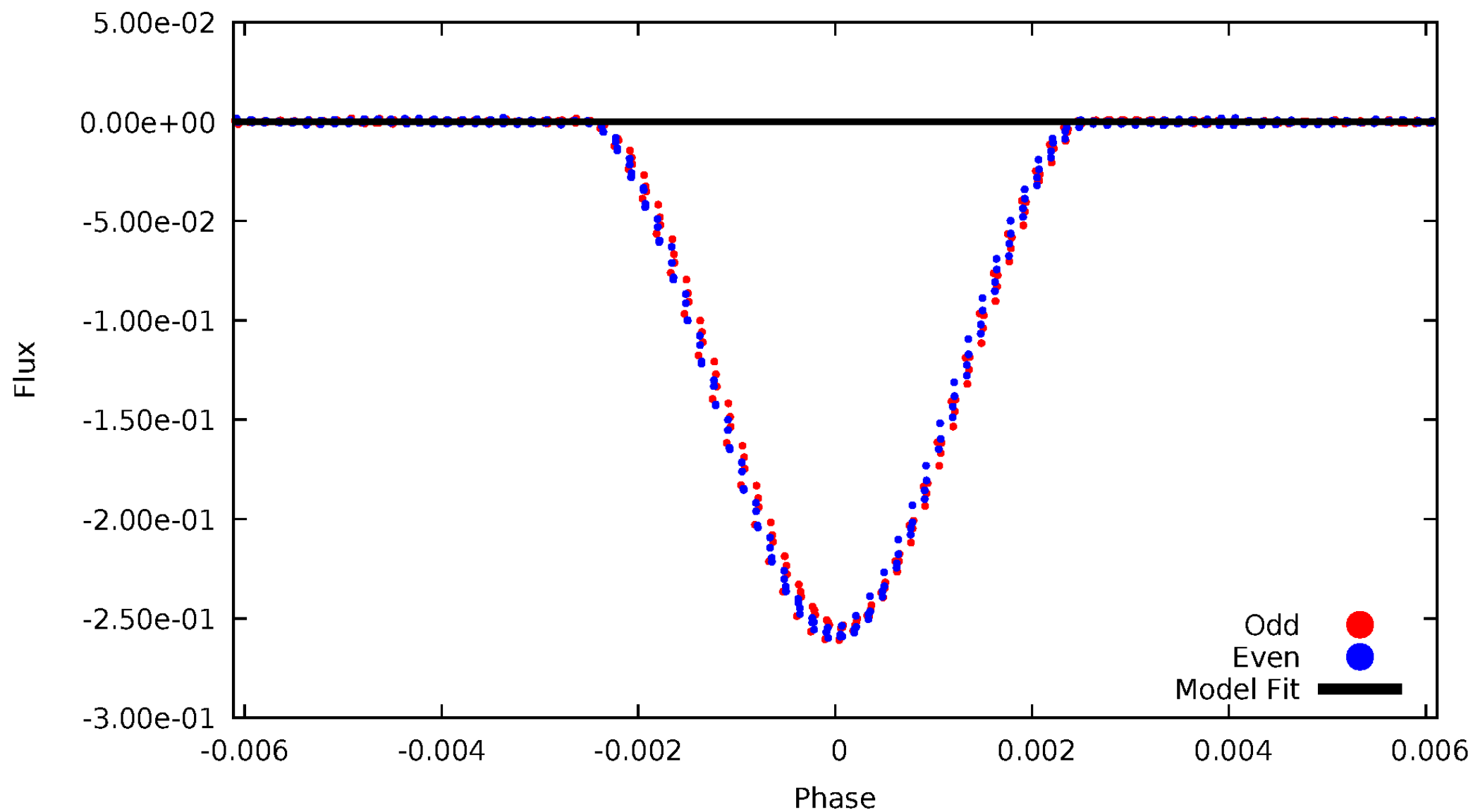


TCE 010292238-02



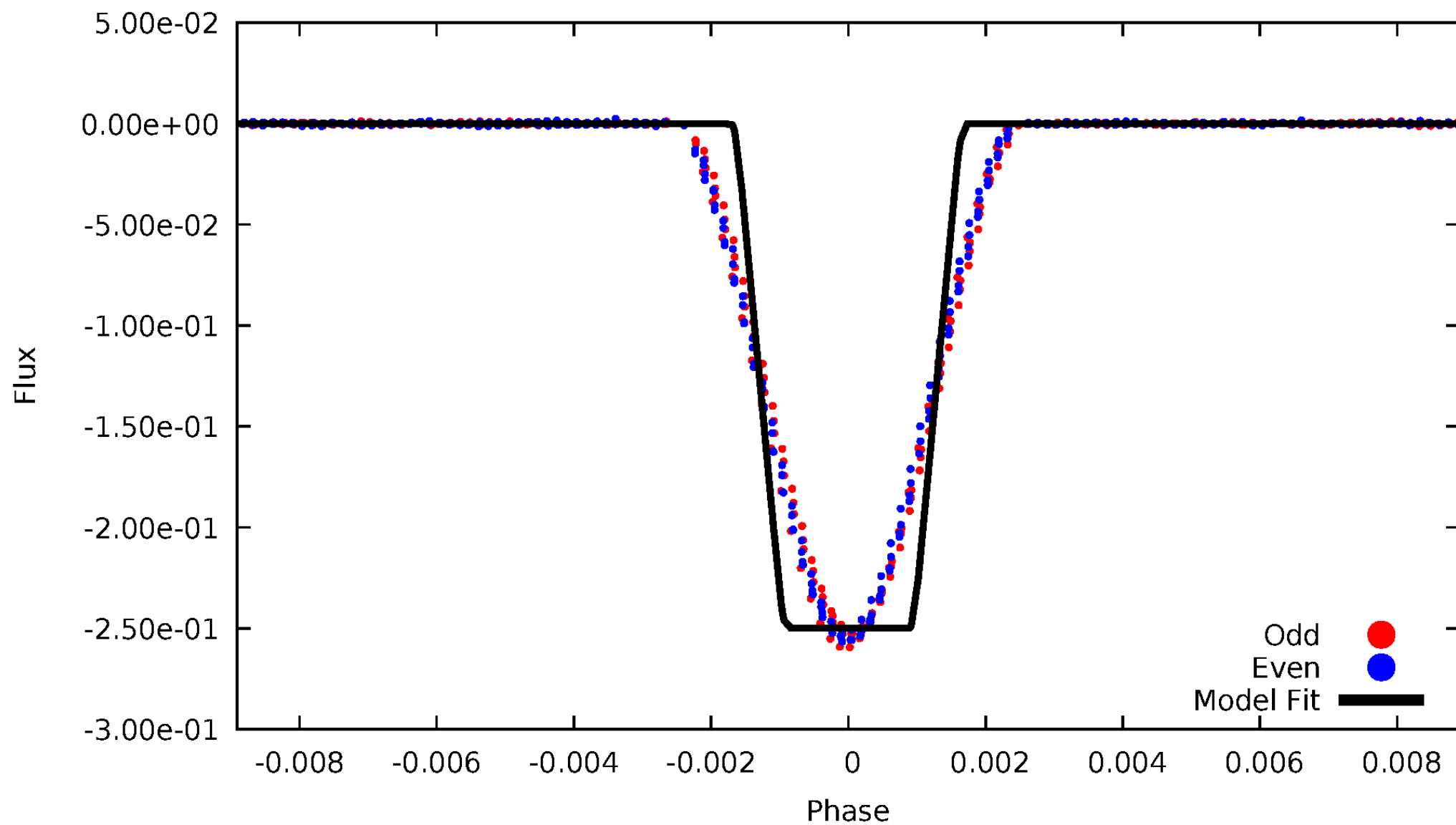
DV Odd/Even

TCE 010292238-02



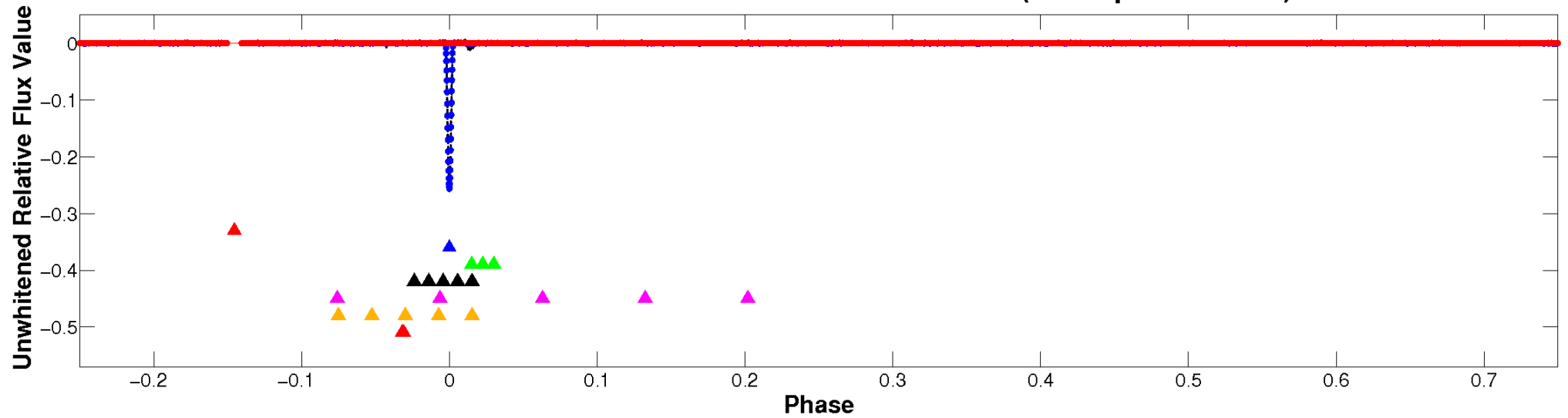
ALT Odd/Even

TCE 010292238-02

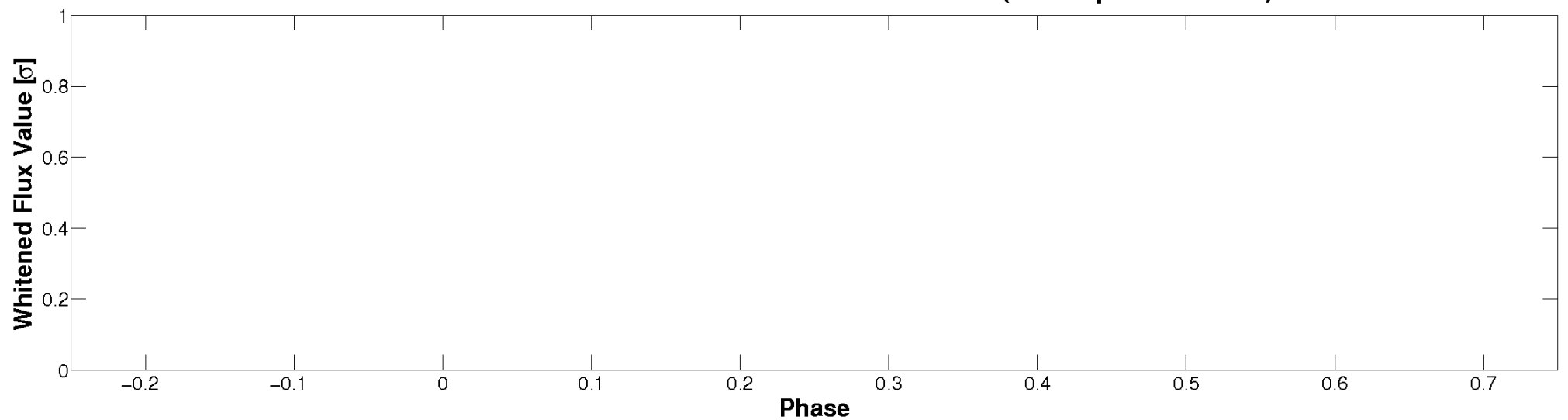


Non-Whitened Vs. Whitened Light Curve

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

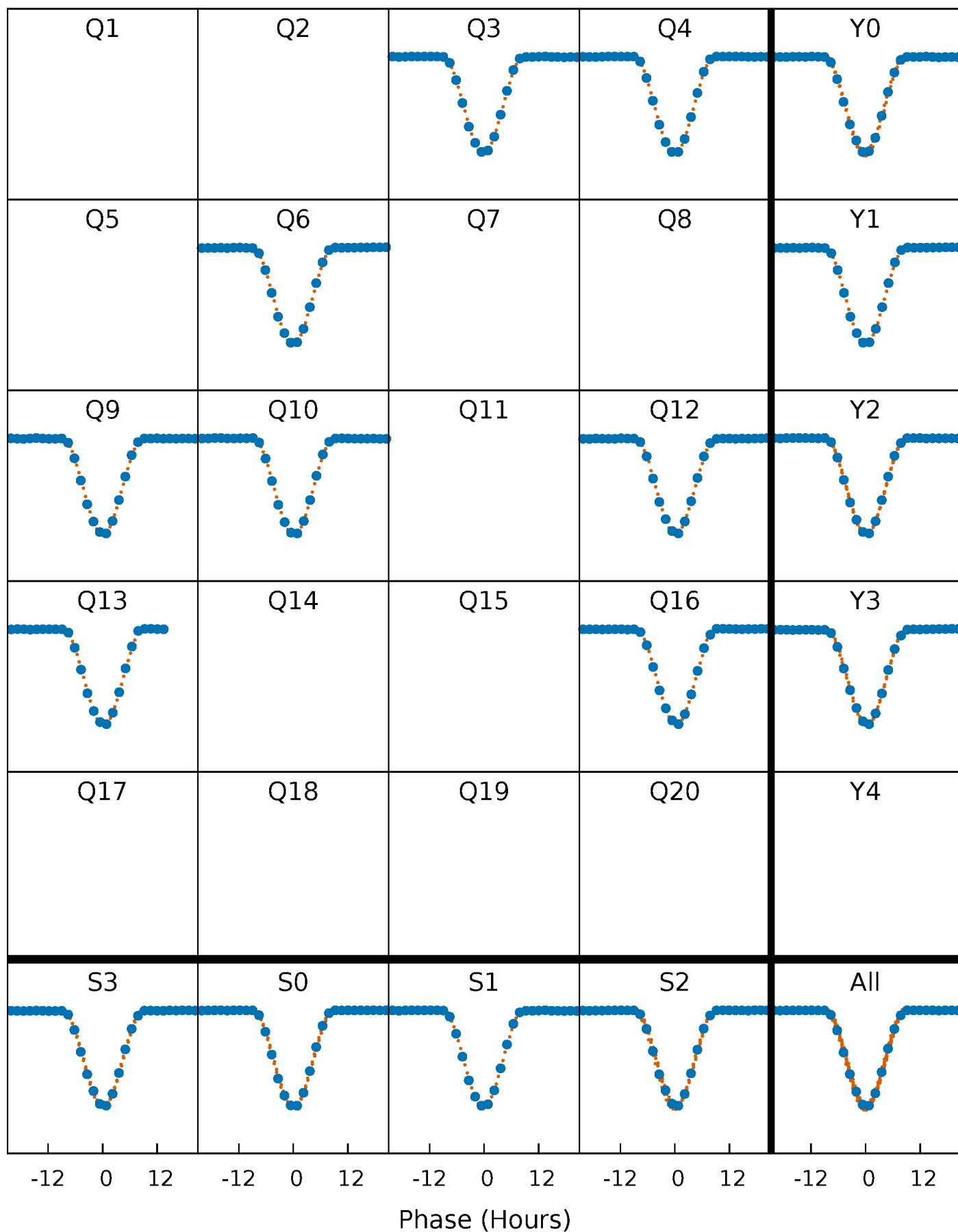


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



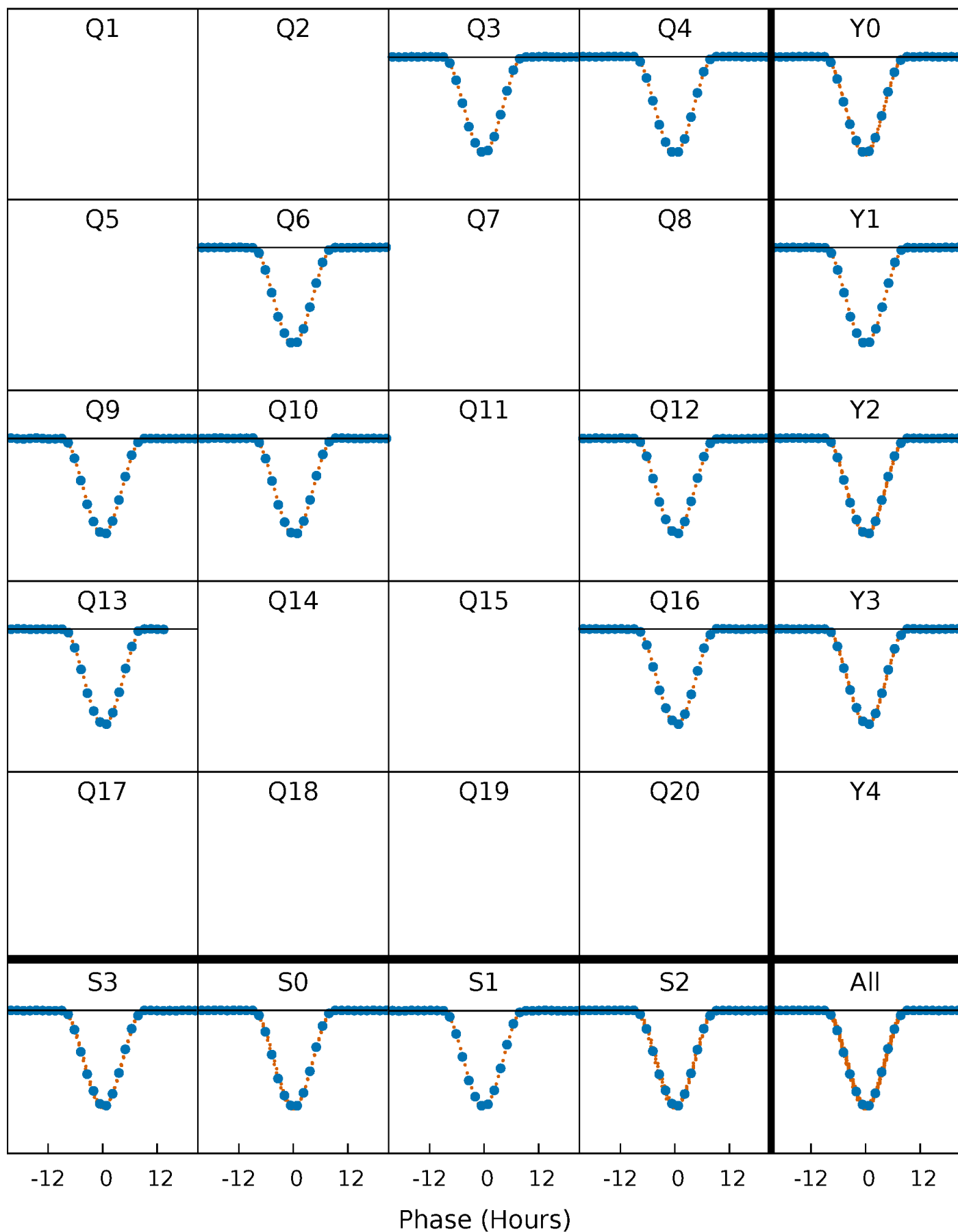
PDC Quarter-Phased Transit Curves

TCE 010292238-02 P=143.116654 Days $T_0=266.365679$ (BKJD)



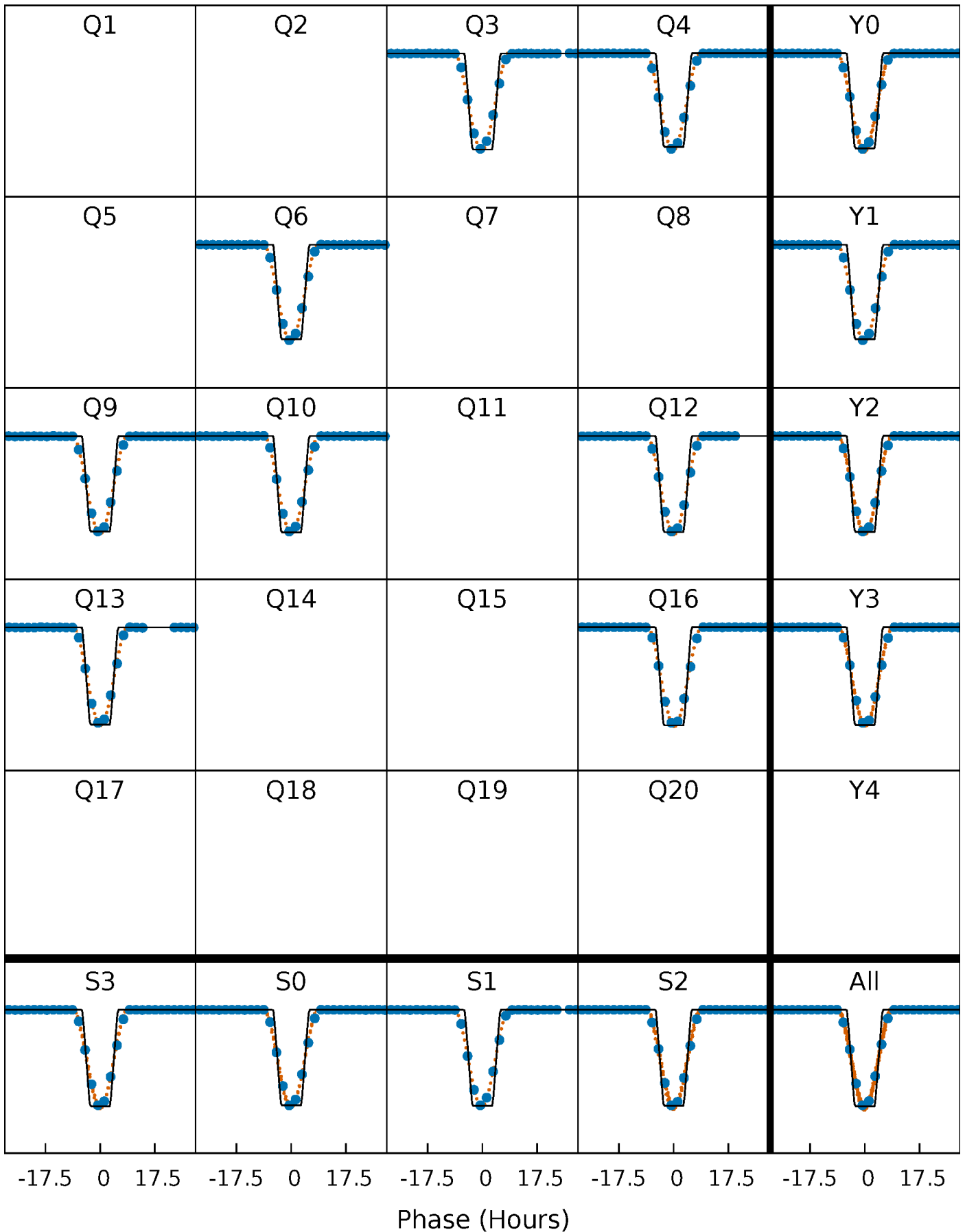
DV Quarter-Phased Transit Curves

TCE 010292238-02 P=143.116654 Days $T_0=266.365679$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

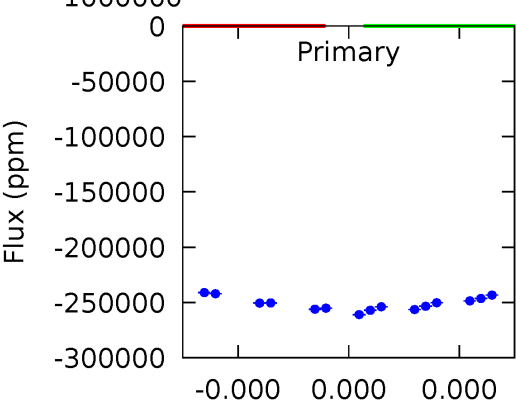
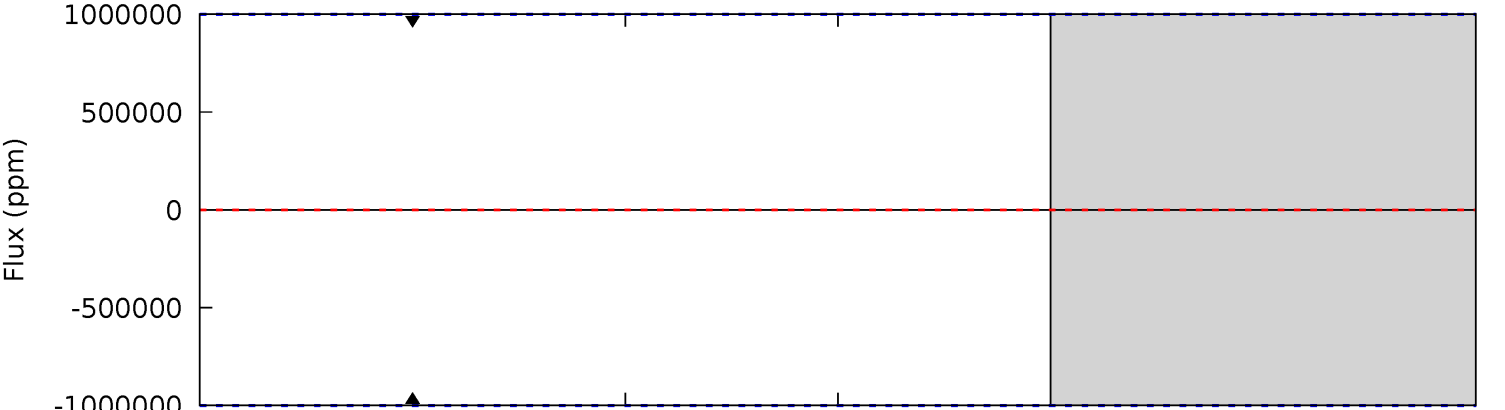
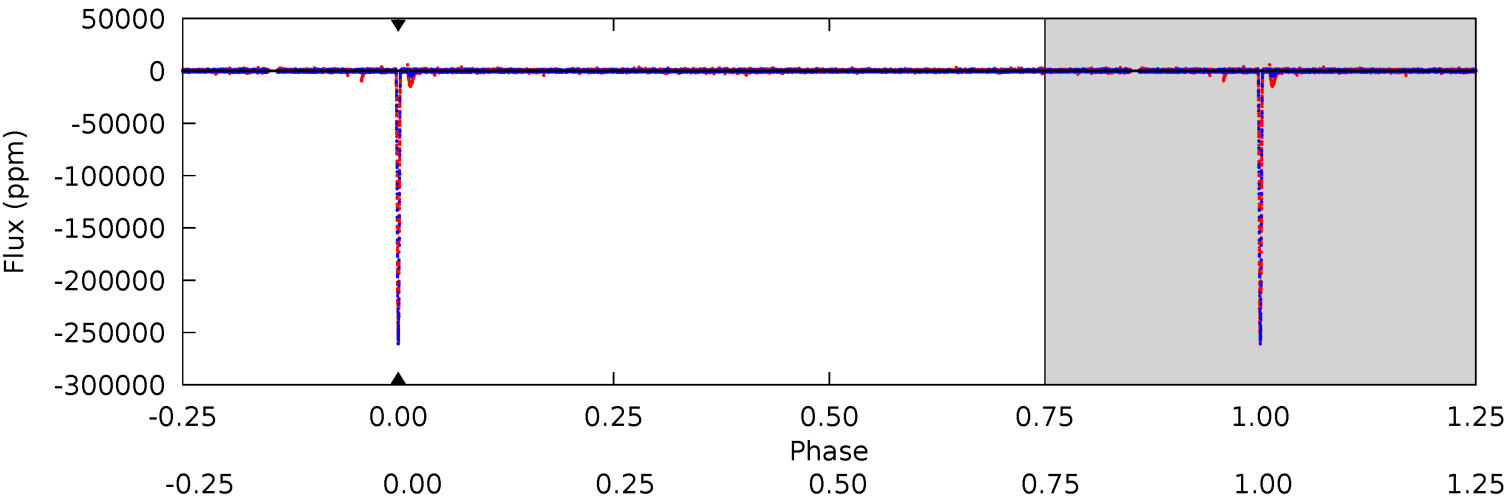
TCE 010292238-02 P=143.116654 Days $T_0=266.368331$ (BKJD)



DV Model-Shift Uniqueness Test

010292238-02, P = 143.116654 Days, E = 123.249025 Days

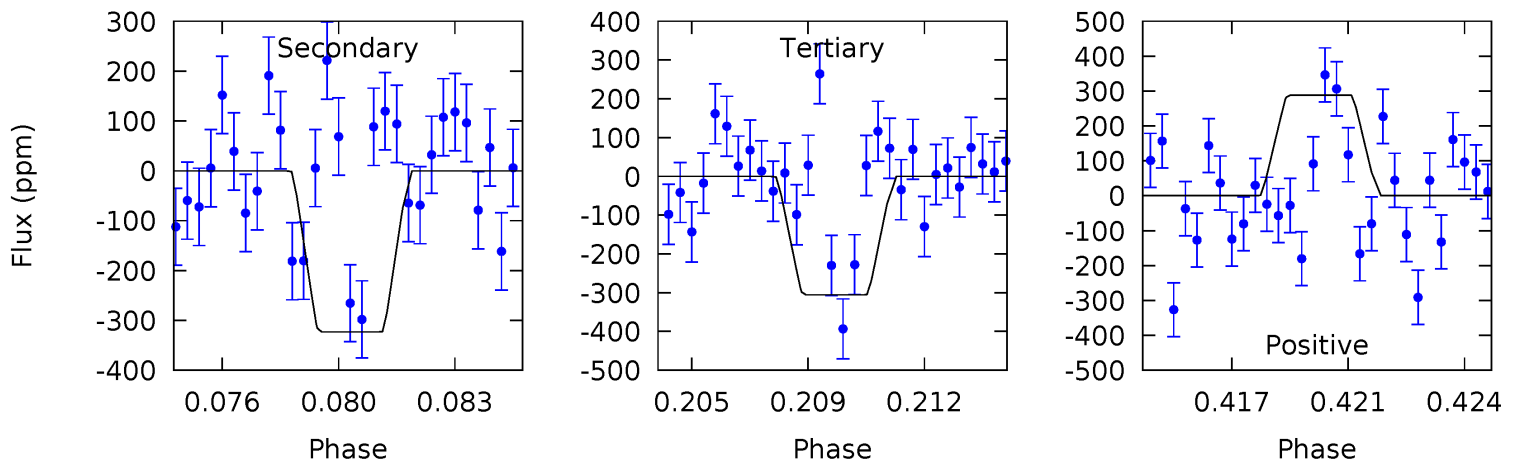
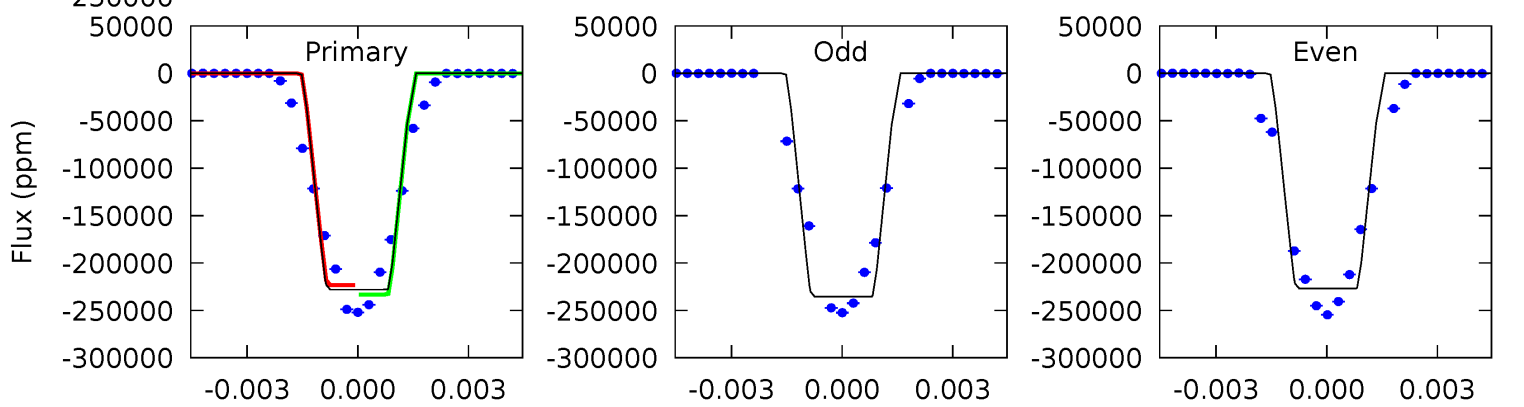
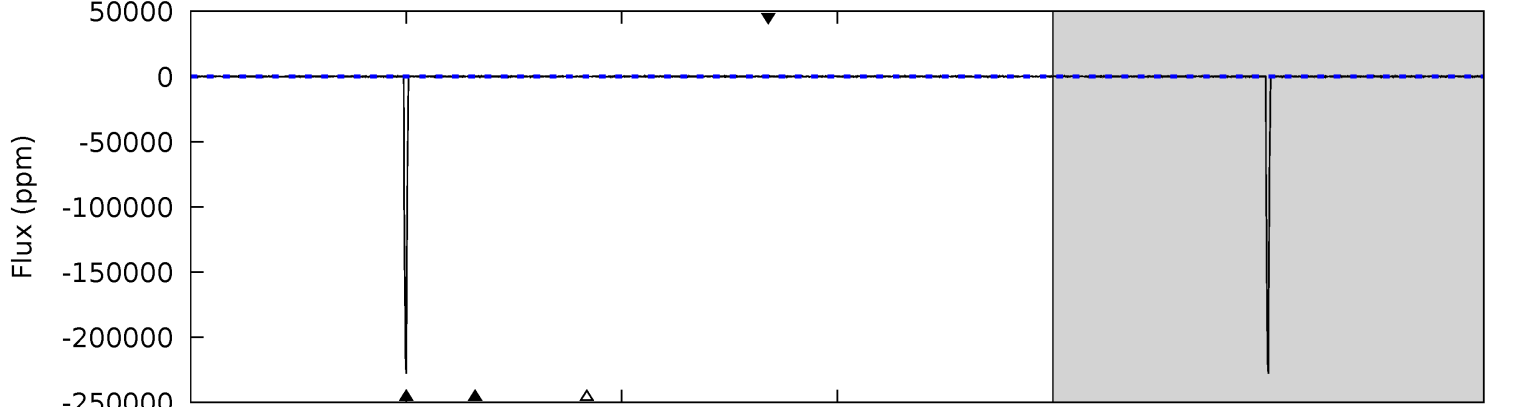
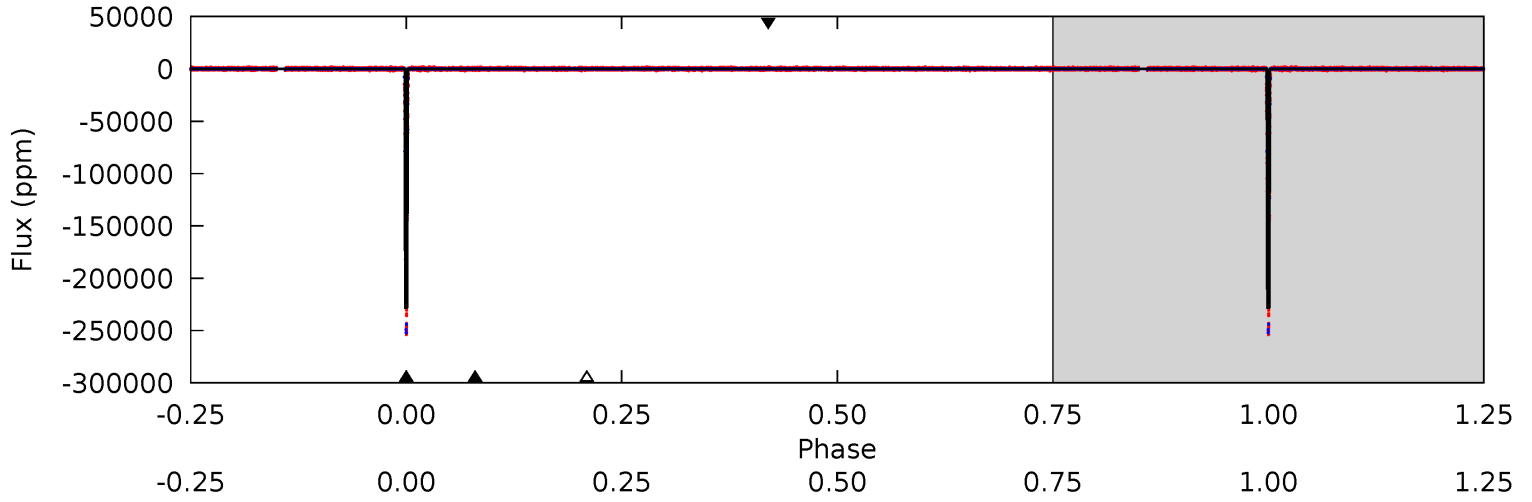
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010292238-02, P = 143.116654 Days, E = 123.251677 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3649	5.17	4.89	4.62	5.23	2.94	1.24	3644	3644	0.28	0.55	81.6	1.00	0.00	73.4



Stellar Parameters For KIC 010292238

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5713^{+152}_{-169}	$4.554^{+0.042}_{-0.168}$	$-0.120^{+0.300}_{-0.300}$	$0.851^{+0.205}_{-0.073}$	$0.948^{+0.094}_{-0.115}$	$2.164^{+0.371}_{-0.973}$
	+3%/-3%	+1%/-4%	+250%/-250%	+24%/-9%	+10%/-12%	+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 010292238-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$27.71^{+10.17}_{-9.76}$	456^{+27}_{-18}	-2819^{+9177}_{-3434}	$-227.089^{+25194.575}_{-22311.159}$
Alt.	-323 ± 62	$47.86^{+11.27}_{-10.60}$	456^{+24}_{-20}	2066^{+121}_{-91}	21^{+15}_{-8}

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

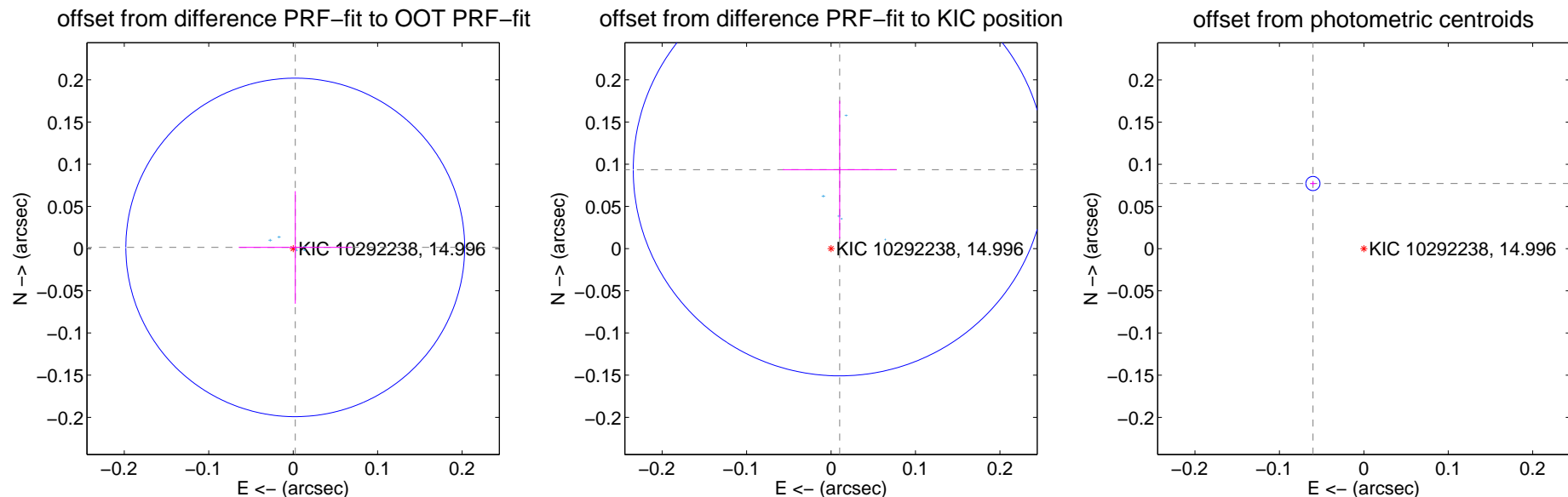
DV Centroid Data

Supplemental centroid analysis for 010292238-02. Kepler magnitude: 15.00. Transit SNR -1.00

There are 6 quarters with good PRF difference image offsets

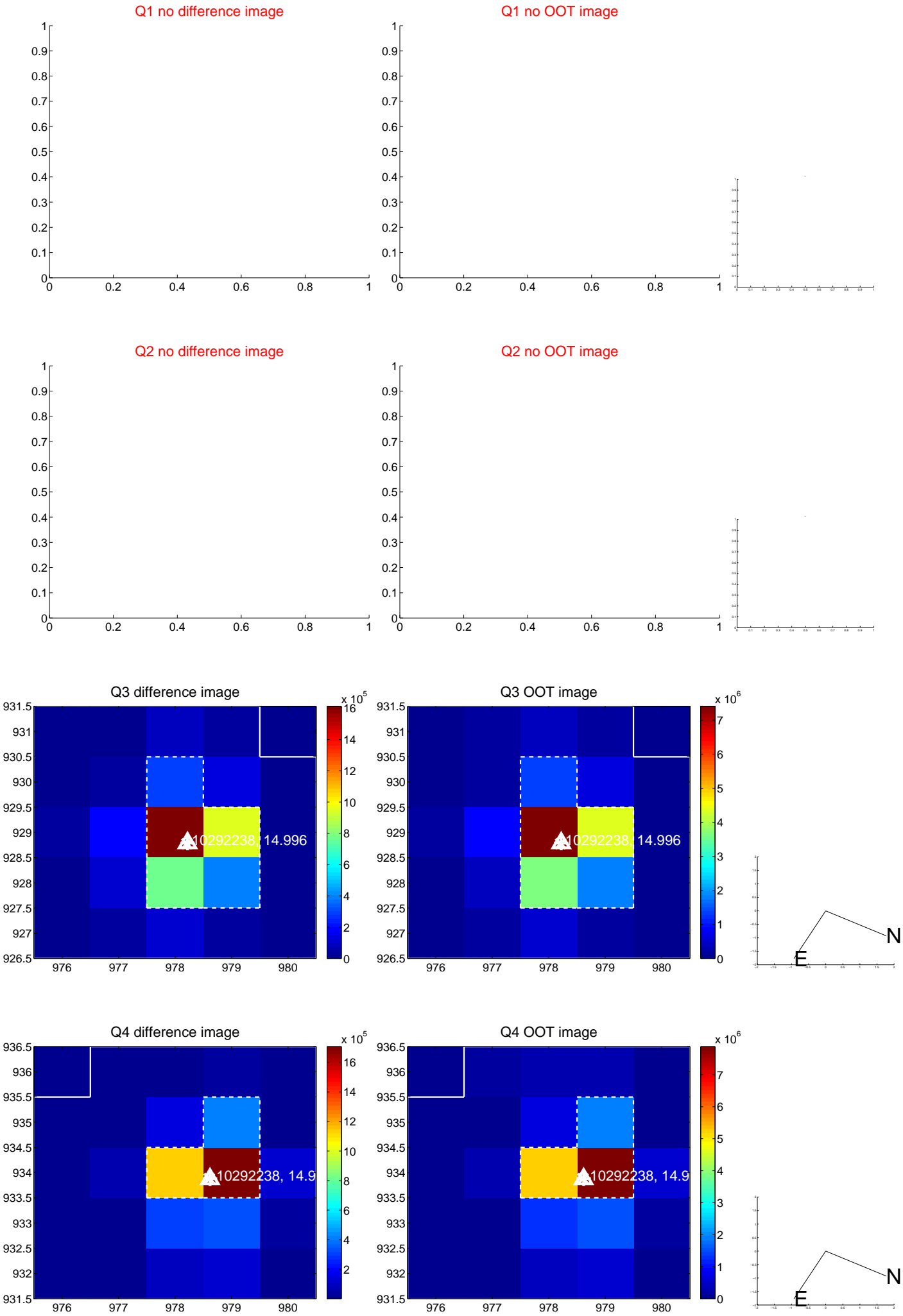
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.003 ± 0.067	0.04	-0.002 ± 0.067	0.001 ± 0.067
PRF-fit source offset from KIC position	0.094 ± 0.081	1.16	-0.010 ± 0.067	0.094 ± 0.082
photometric centroid source offset	0.10 ± 0.00	35.03	0.06 ± 0.00	0.08 ± 0.00

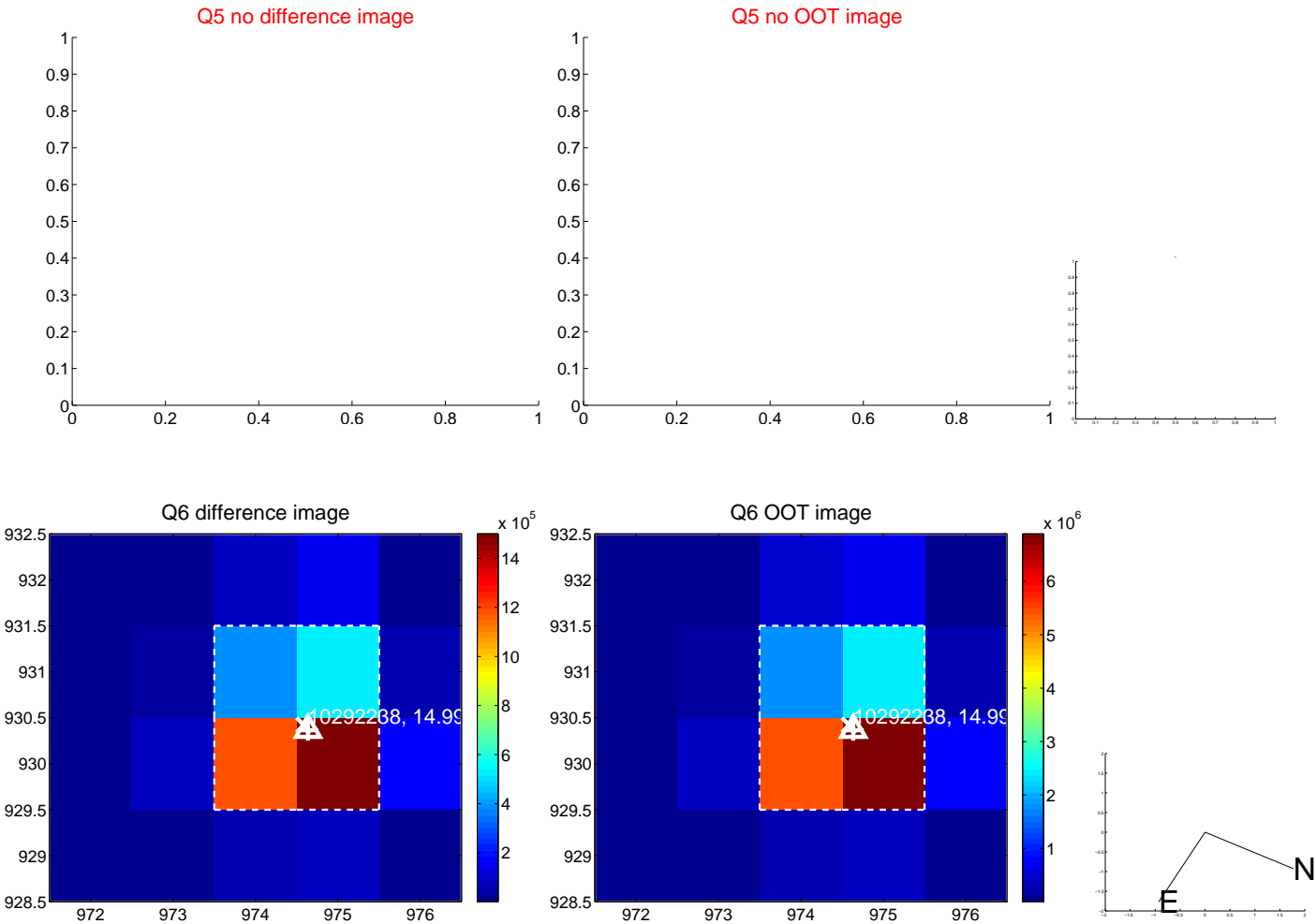


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

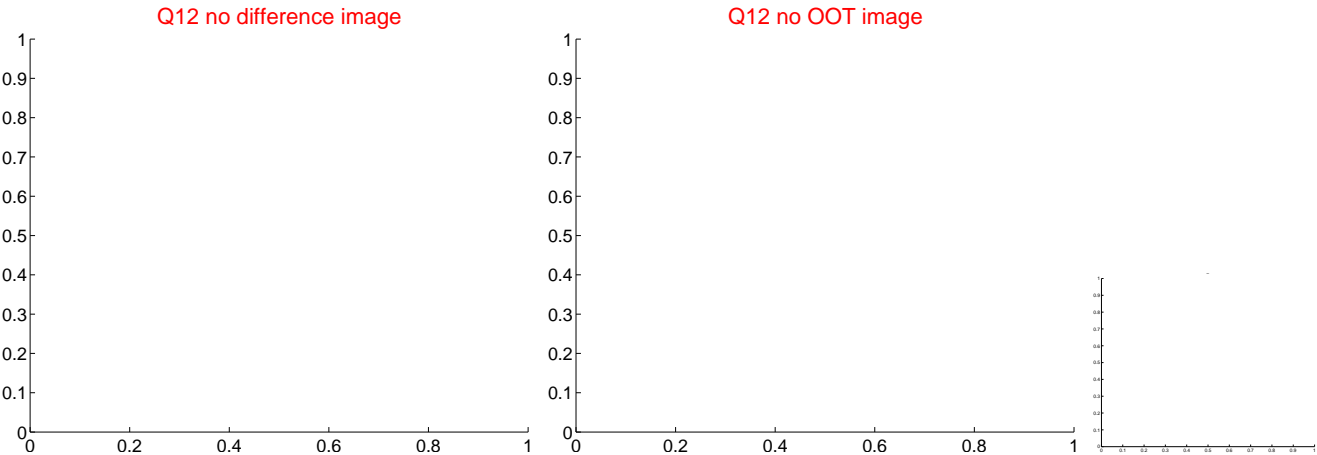
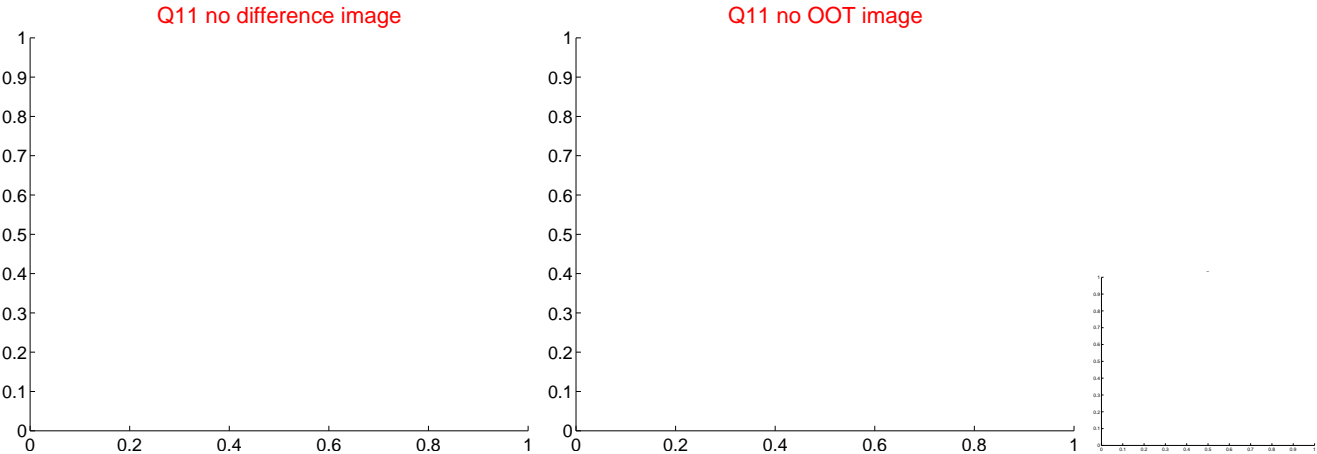
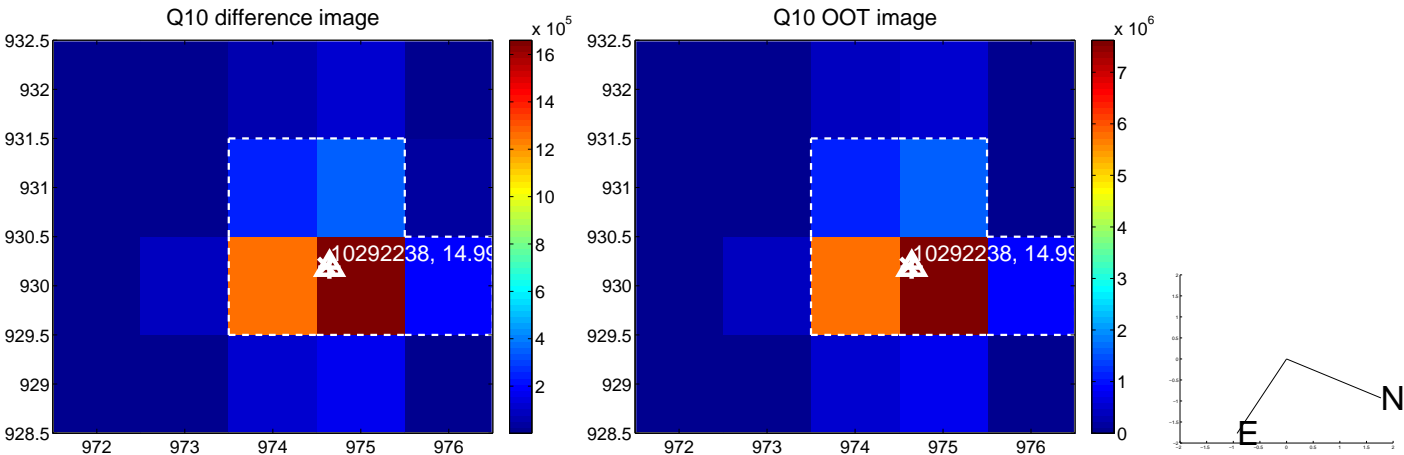
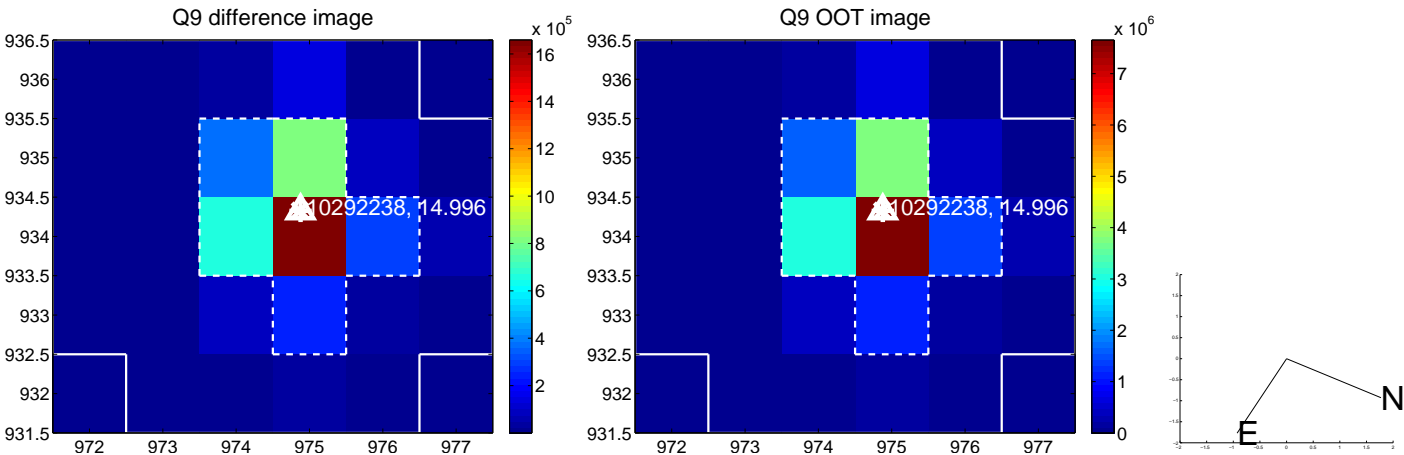
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



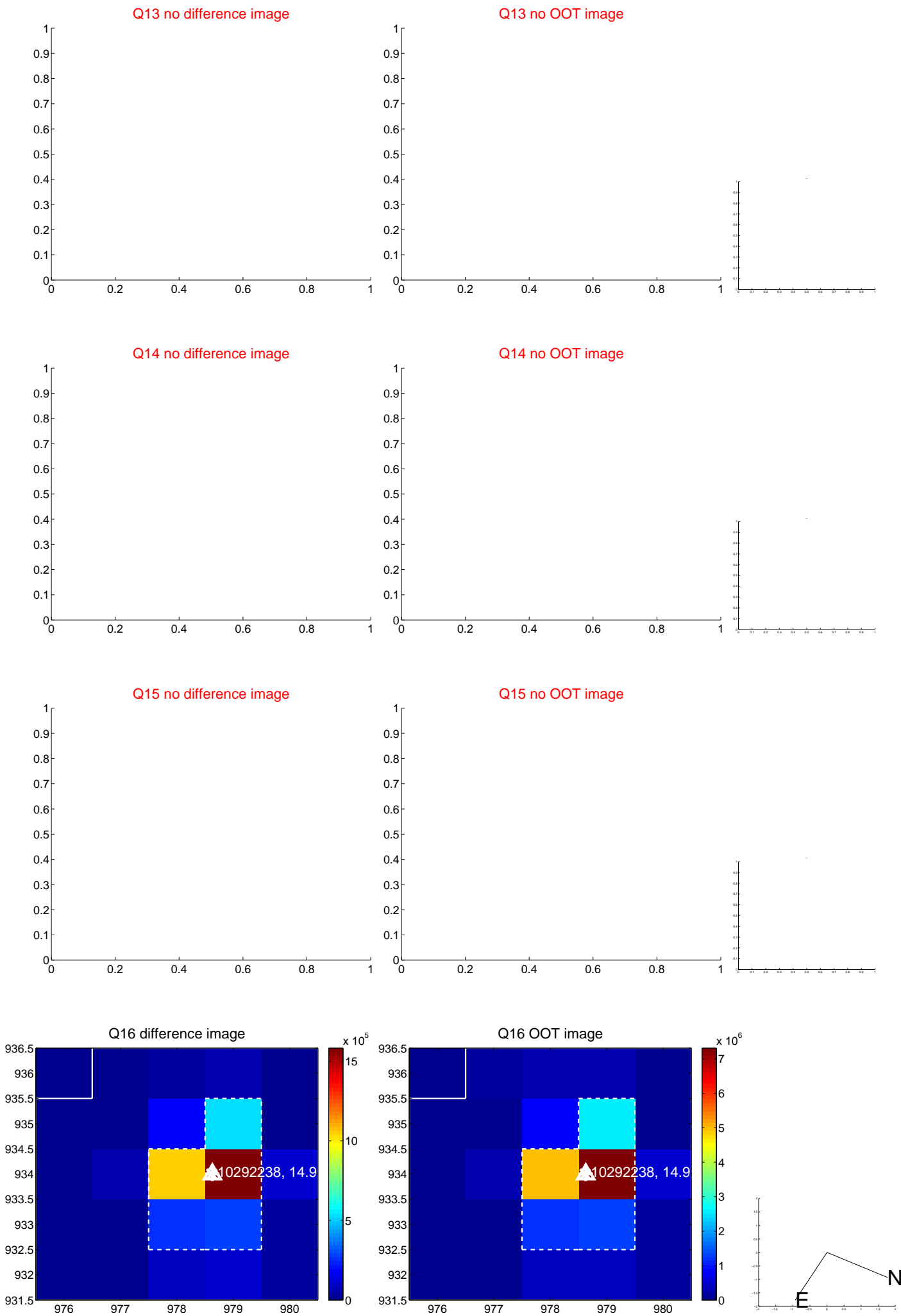
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



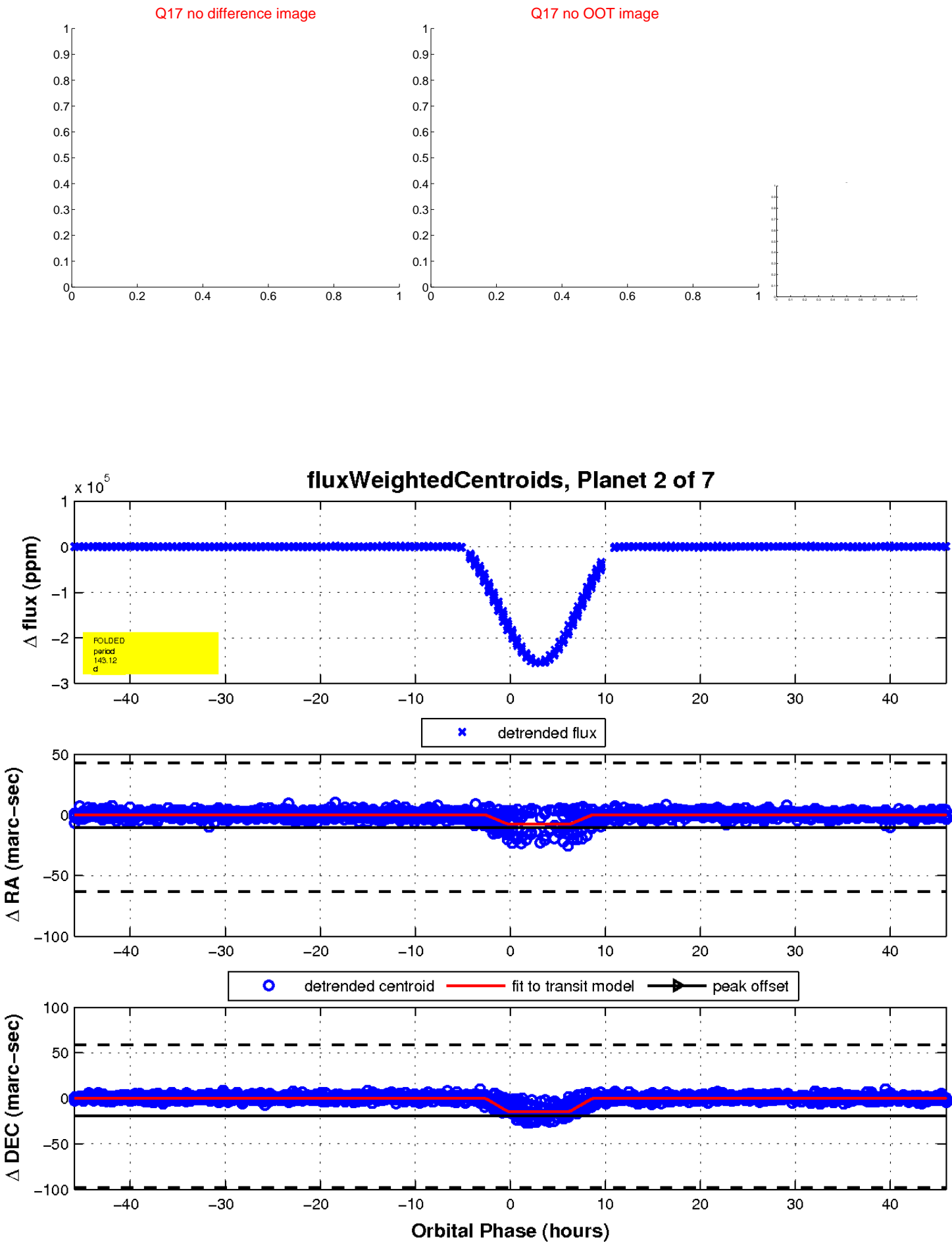
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

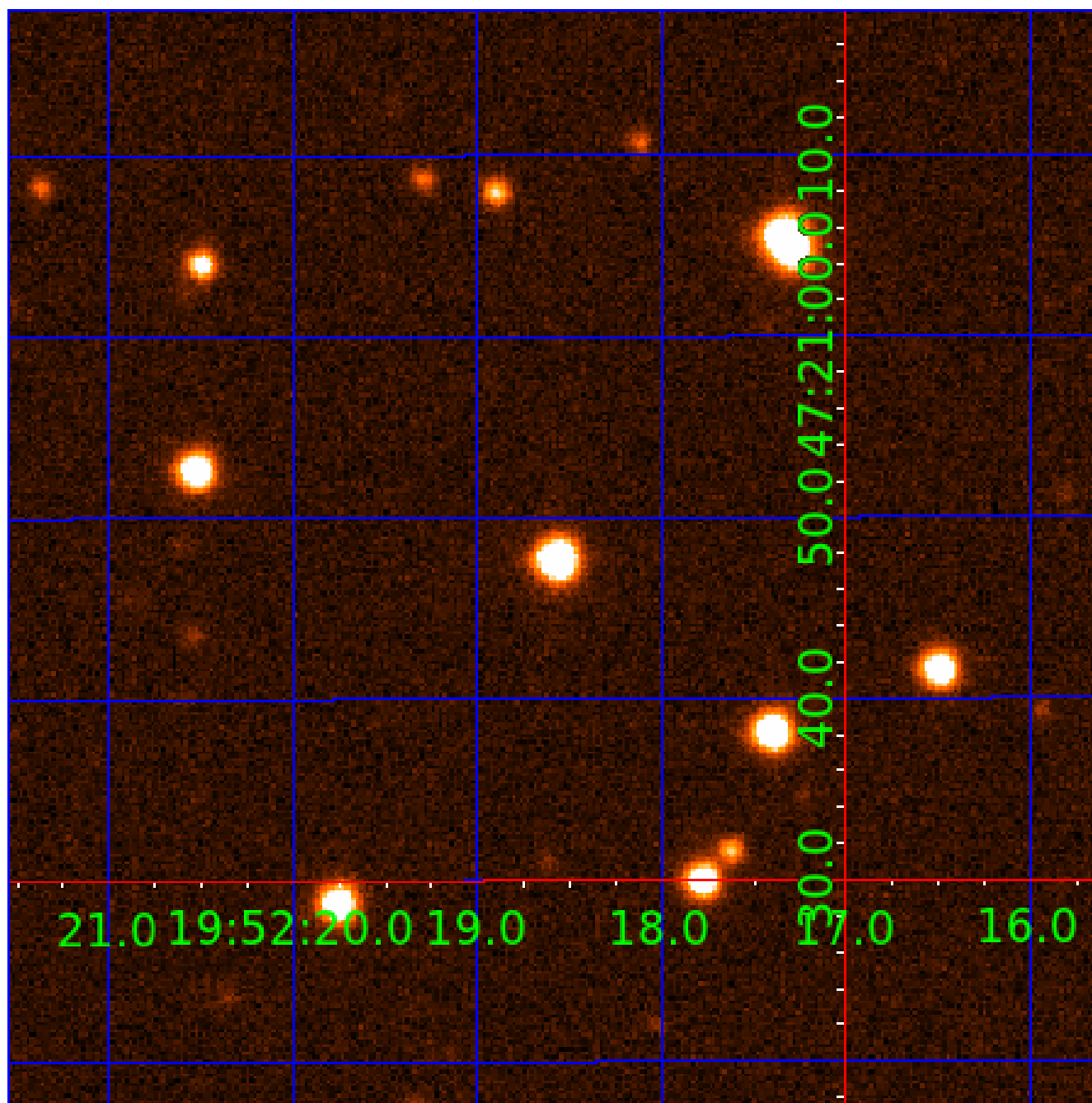


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010292238

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})
010292238-01	OBS	3526.01	143.119259	245.539172	244088.3	11.404	1980.3	1779.9	0.85	5713	44.39	2.50
010292238-02	OBS	No	143.116654	266.365679	258286.5	10.500	1931.8	-1.0	0.85	5713	26.78	2.50
010292238-03	OBS	No	428.281232	413.785450	1761.1	19.957	14.2	11.4	0.85	5713	3.54	0.58
010292238-05	OBS	No	296.170278	255.519217	1254.0	0.985	14.0	4.4	0.85	5713	3.27	0.95
010292238-06	OBS	No	282.998240	268.571716	1316.9	4.092	18.8	5.0	0.85	5713	3.29	1.01
010292238-07	OBS	No	143.138625	261.775867	2921.0	78.572	12.7	17.0	0.85	5713	7.40	2.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010292238-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
010292238-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
010292238-03	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
010292238-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010292238-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010292238-07	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—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.

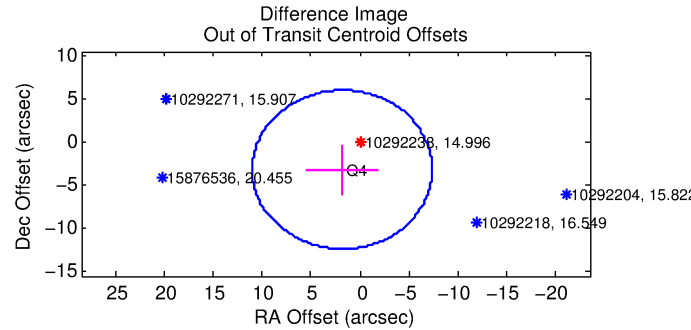
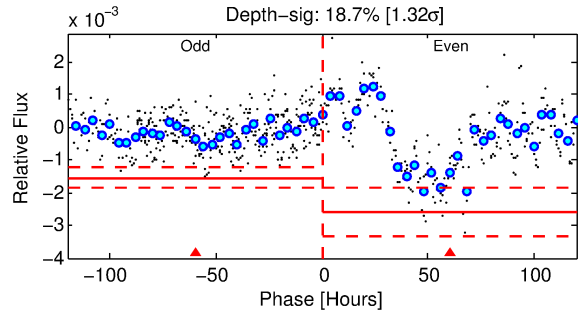
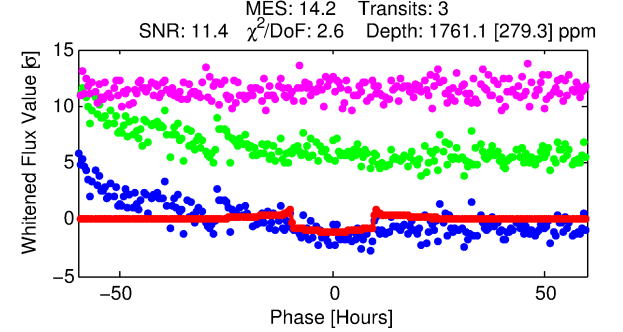
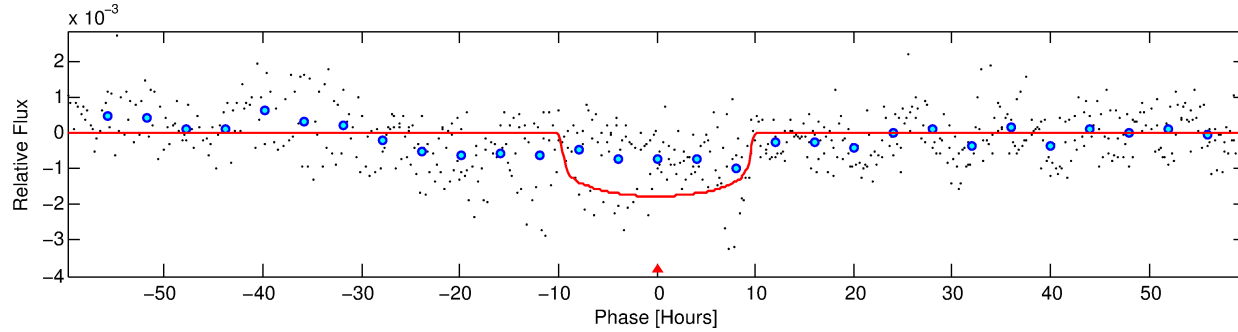
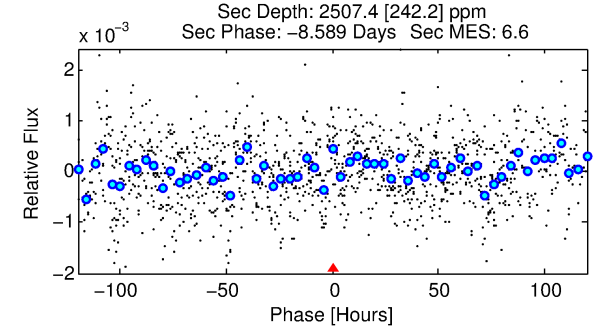
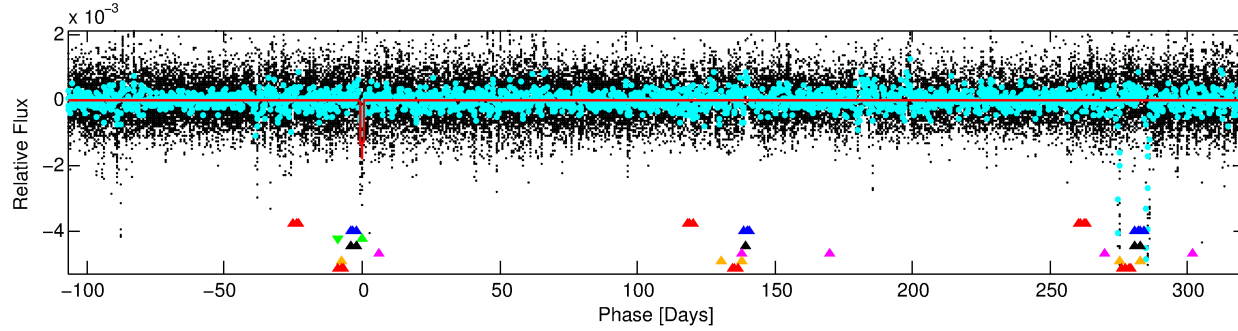
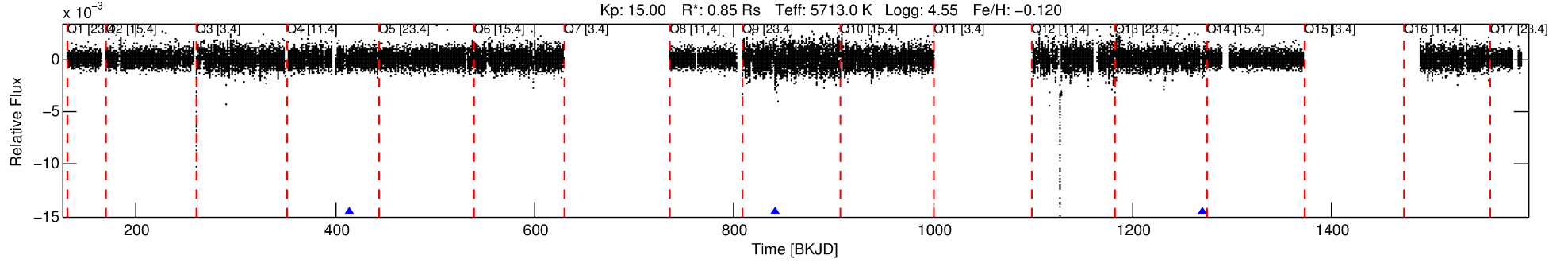
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010292238-03

No Significant Match Found

DV One-Page Summary

KIC: 10292238 Candidate: 3 of 7 Period: 428.281 d
KOI: K03526 Corr: No Ephemeris Match



DV Fit Results:

Period = 428.28123 [0.01150] d
Epoch = 413.7854 [0.0158] BKJD
Rp/R* = 0.0381 [0.0097]
a/R* = 168.01 [171.60]
b = 0.17 [5.99]
Seff = 0.58 [0.19]
Teff = 223 [18] K
Rp = 3.54 [1.24] Re
a = 1.0918 [0.2249] AU
Ag = 131028.07 [78496.13] [1.67σ]
Teffp = 6545 [867] K [7.29σ]

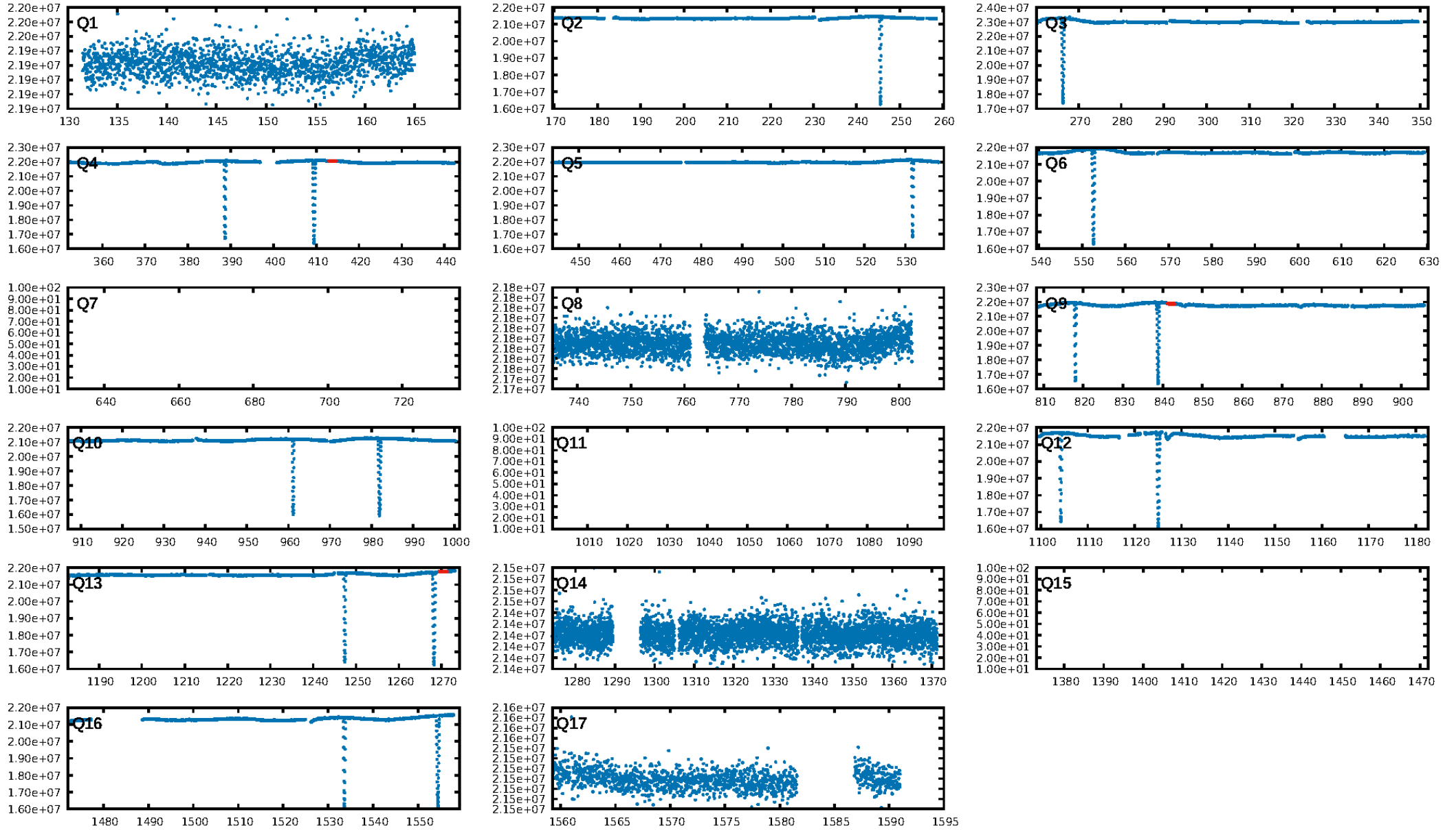
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [158.68σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.6%
ModelChiSquareGof-sig: 41.9%
Bootstrap-pfa: 4.12e-23
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.4227
Centroid-sig: 38.0%
Centroid-so: 0.487 arcsec [1.04σ]
OotOffset-rm: 3.675 arcsec [1.20σ]
KicOffset-rm: 3.620 arcsec [1.18σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [2/2]

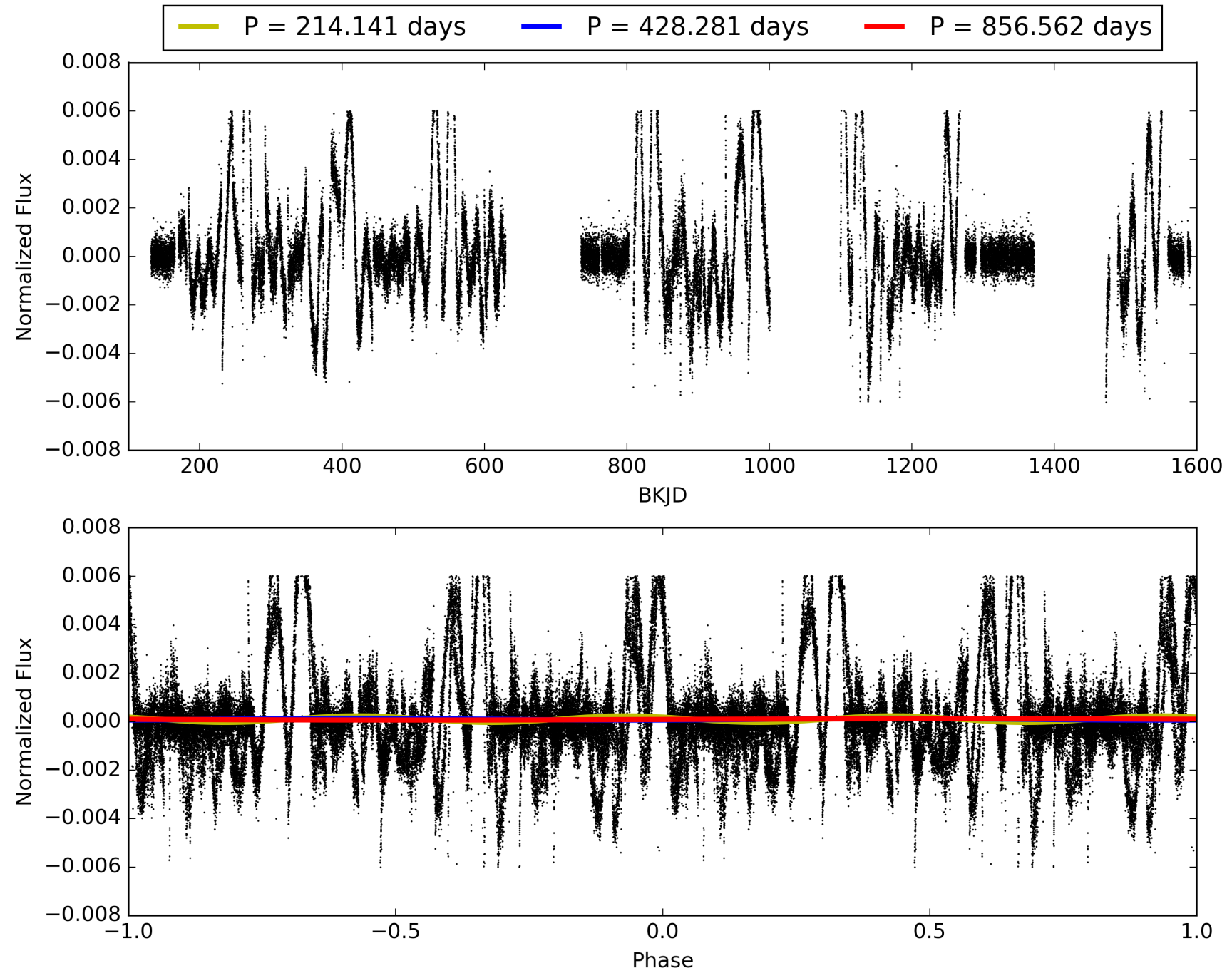
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 17:03:26 Z

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

TCE 010292238-03, PDC Light Curves

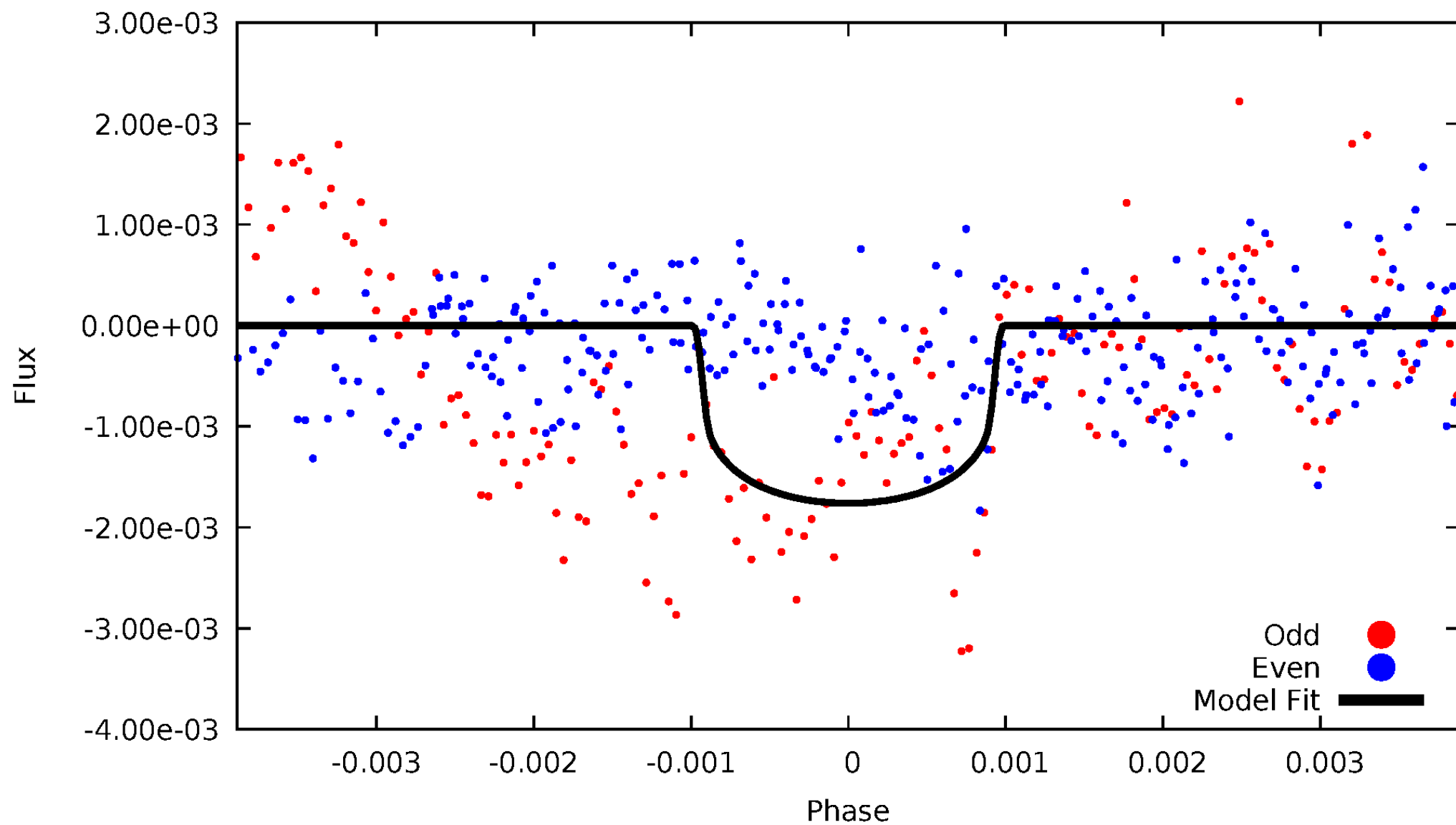


TCE 010292238-03



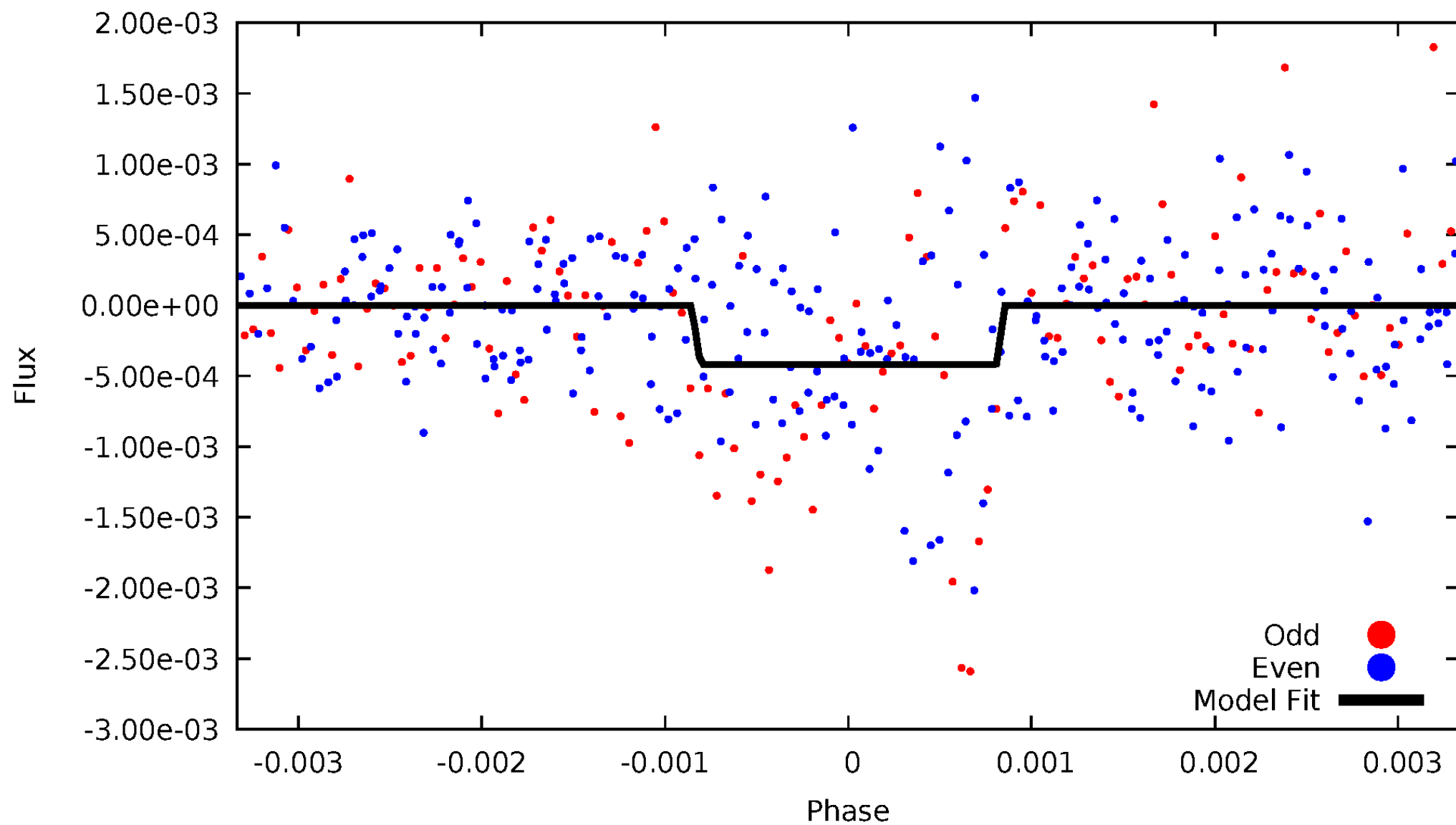
DV Odd/Even

TCE 010292238-03



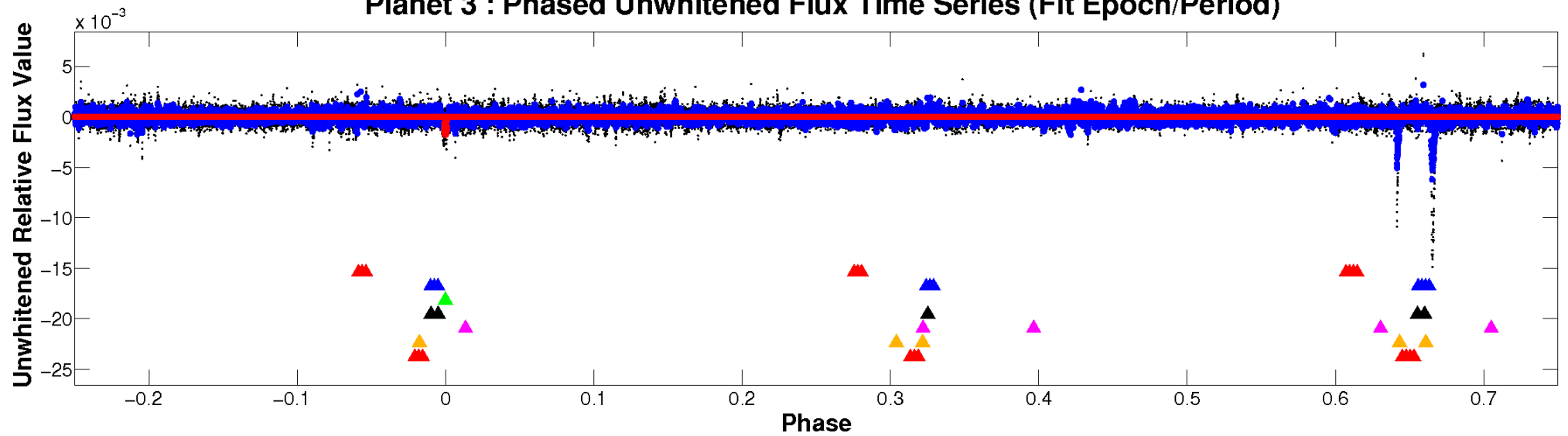
ALT Odd/Even

TCE 010292238-03

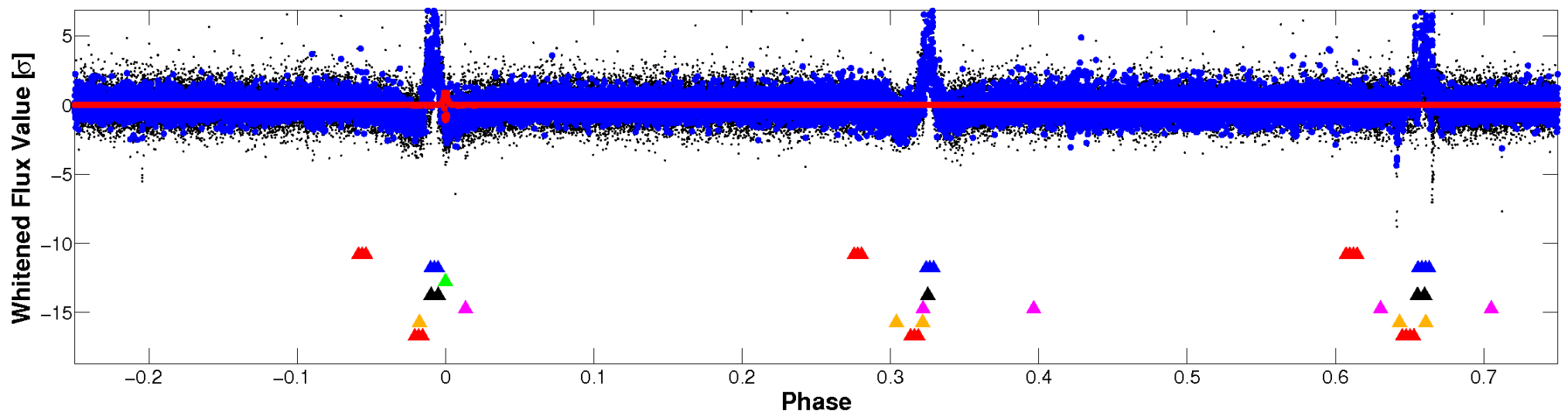


Non-Whitened Vs. Whitened Light Curve

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

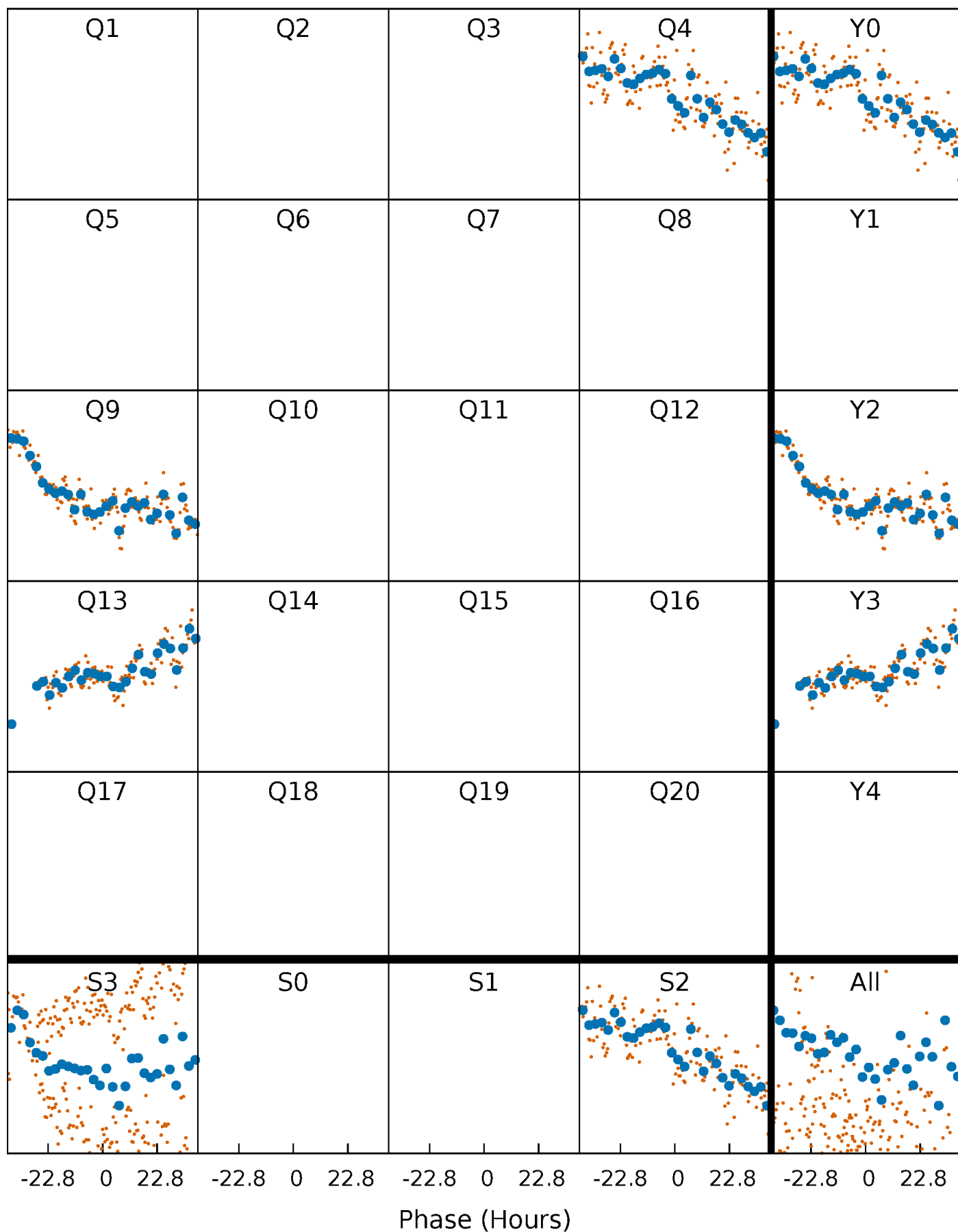


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



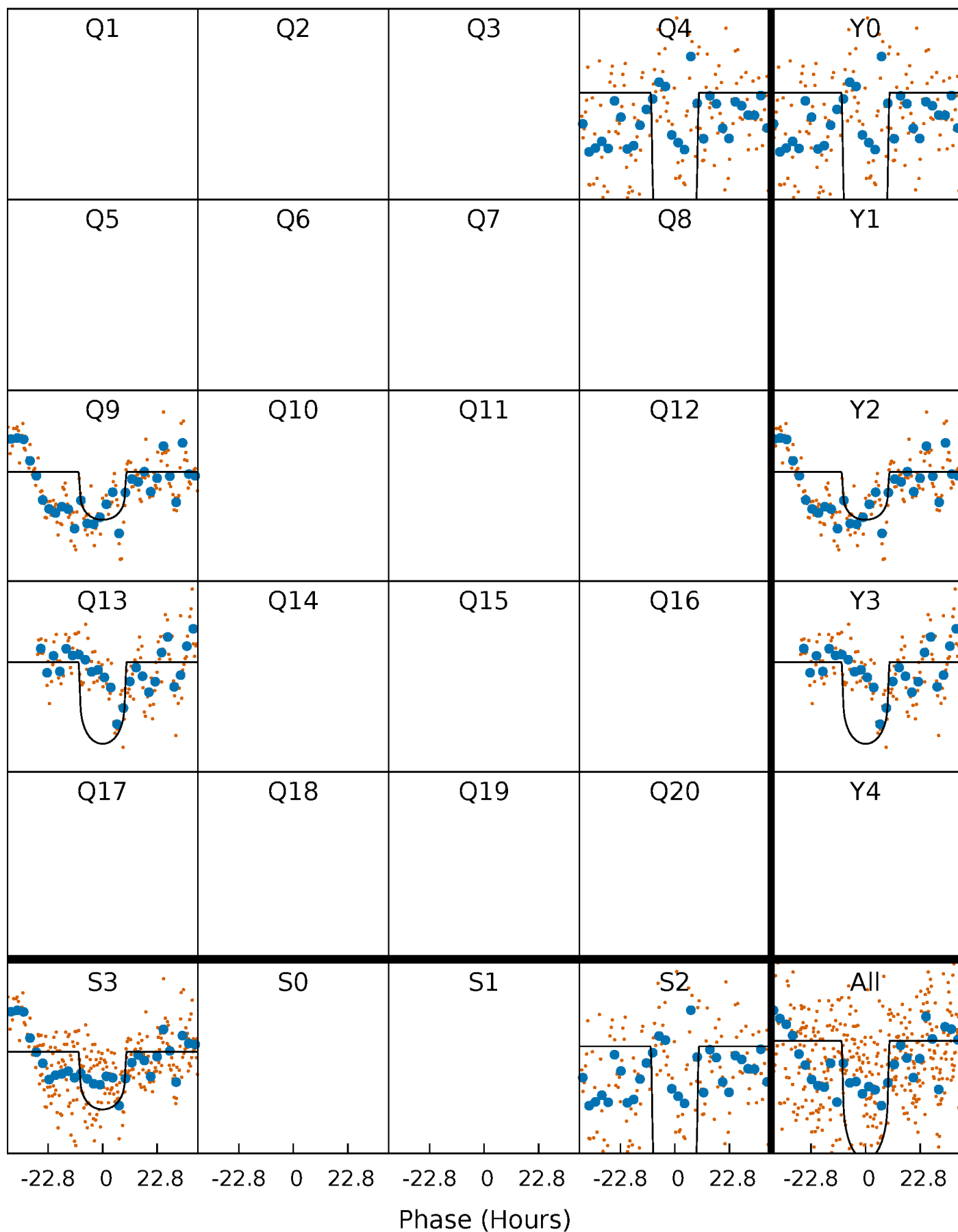
PDC Quarter-Phased Transit Curves

TCE 010292238-03 $P=428.281232$ Days $T_0=413.785450$ (BKJD)



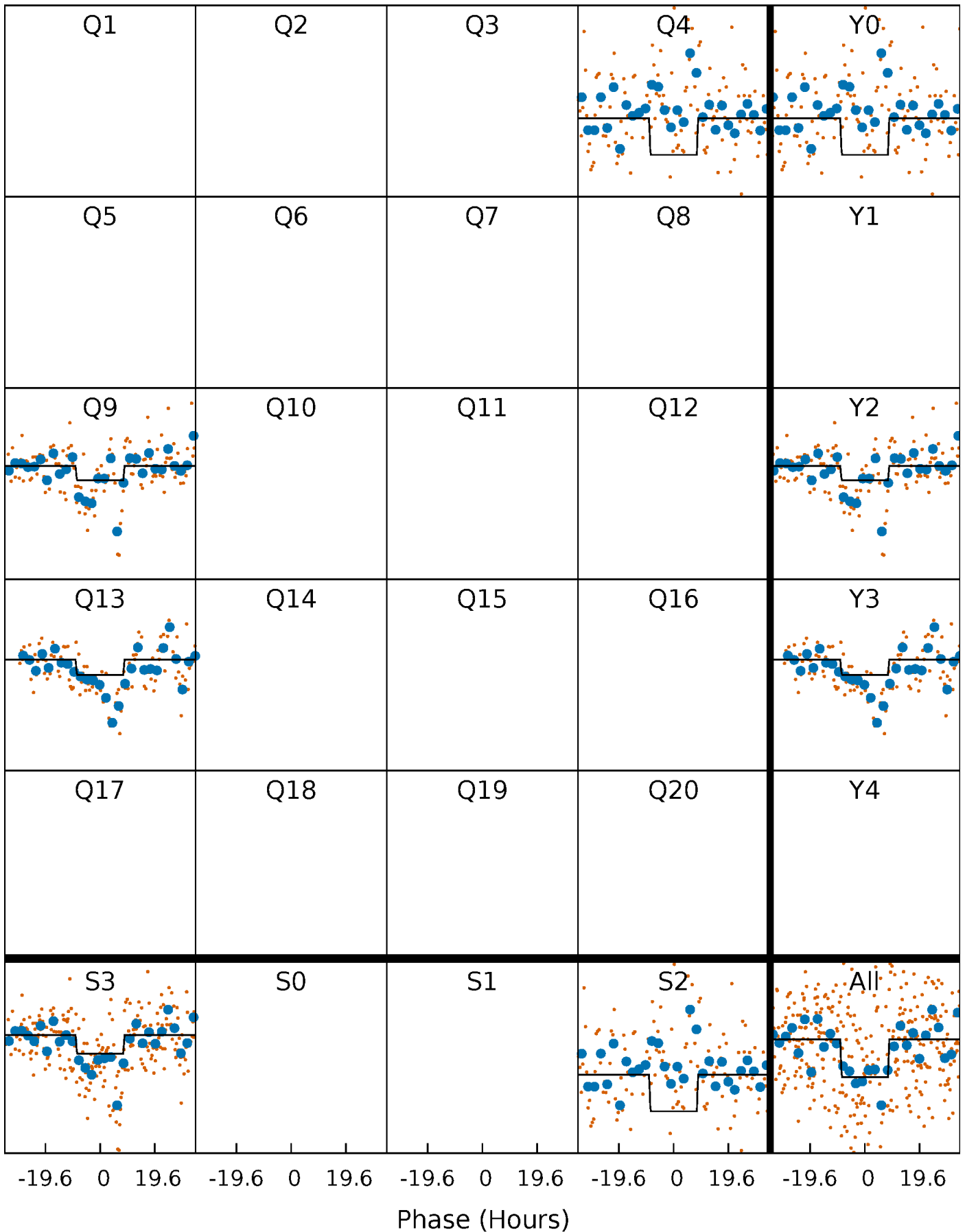
DV Quarter-Phased Transit Curves

TCE 010292238-03 $P=428.281232$ Days $T_0=413.785450$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

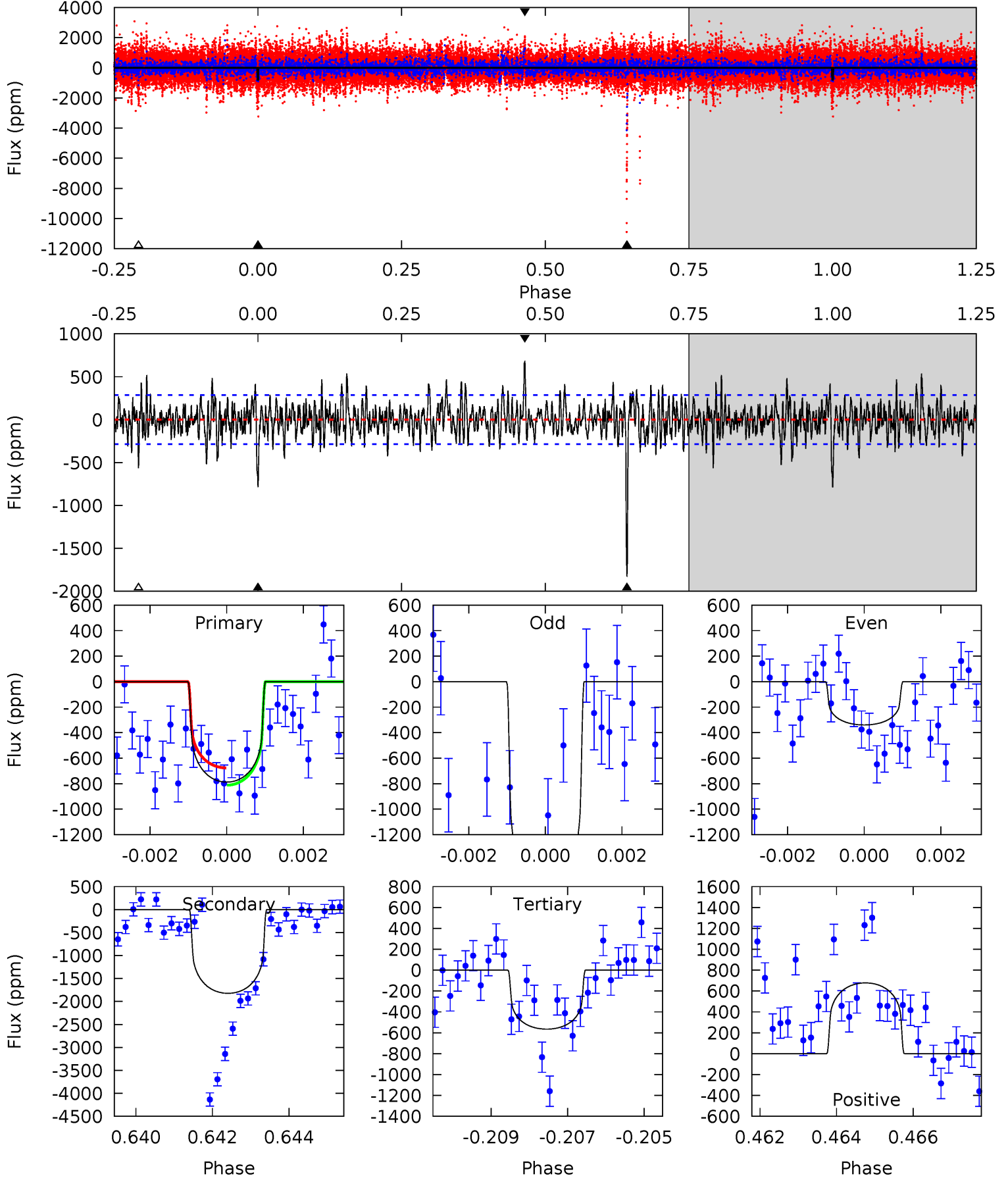
TCE 010292238-03 P=428.301040 Days $T_0=413.809528$ (BKJD)



DV Model-Shift Uniqueness Test

010292238-03, P = 428.281232 Days, E = 413.785450 Days

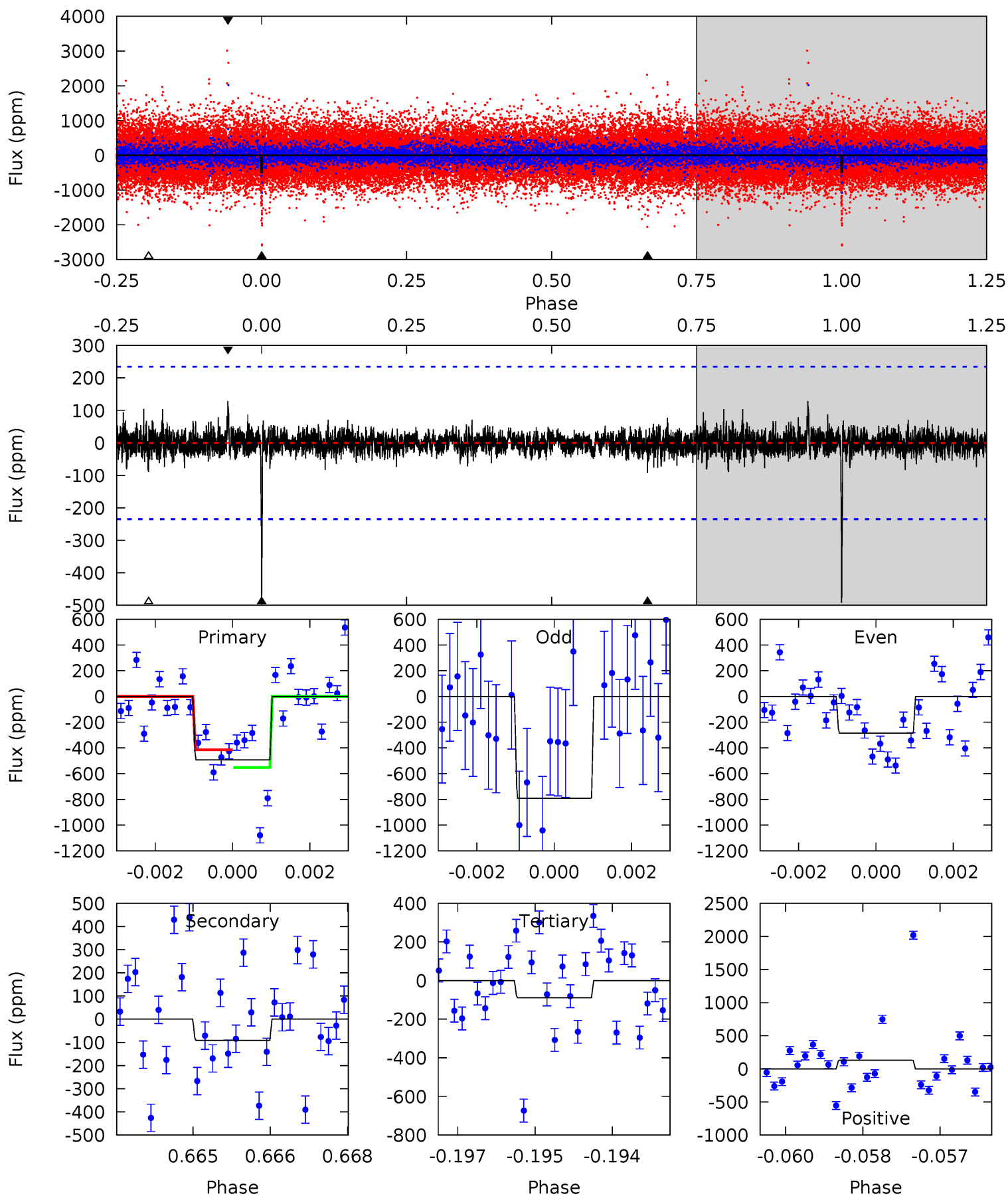
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	33.9	10.5	12.6	5.33	3.10	2.92	4.14	2.04	23.4	21.3	11.9	1.69	0.27	1.25



Alt Model-Shift Uniqueness Test

010292238-03, P = 428.301040 Days, E = 413.809528 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	2.08	2.04	2.93	5.36	3.14	0.49	9.19	8.29	0.05	-0.85	5.63	0.59	0.21	1.56



Stellar Parameters For KIC 010292238

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5713^{+152}_{-169}	$4.554^{+0.042}_{-0.168}$	$-0.120^{+0.300}_{-0.300}$	$0.851^{+0.205}_{-0.073}$	$0.948^{+0.094}_{-0.115}$	$2.164^{+0.371}_{-0.973}$
	+3%/-3%	+1%/-4%	+250%/-250%	+24%/-9%	+10%/-12%	+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 010292238-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1823 ± 54	$3.67^{+1.04}_{-1.03}$	317^{+19}_{-13}	6057^{+1094}_{-646}	88586^{+80044}_{-34720}
Alt.	-91 ± 44	$2.02^{+0.95}_{-0.92}$	316^{+18}_{-13}	4085^{+1174}_{-622}	13429^{+35782}_{-8385}

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 $A_{obs} \gg 1.0$

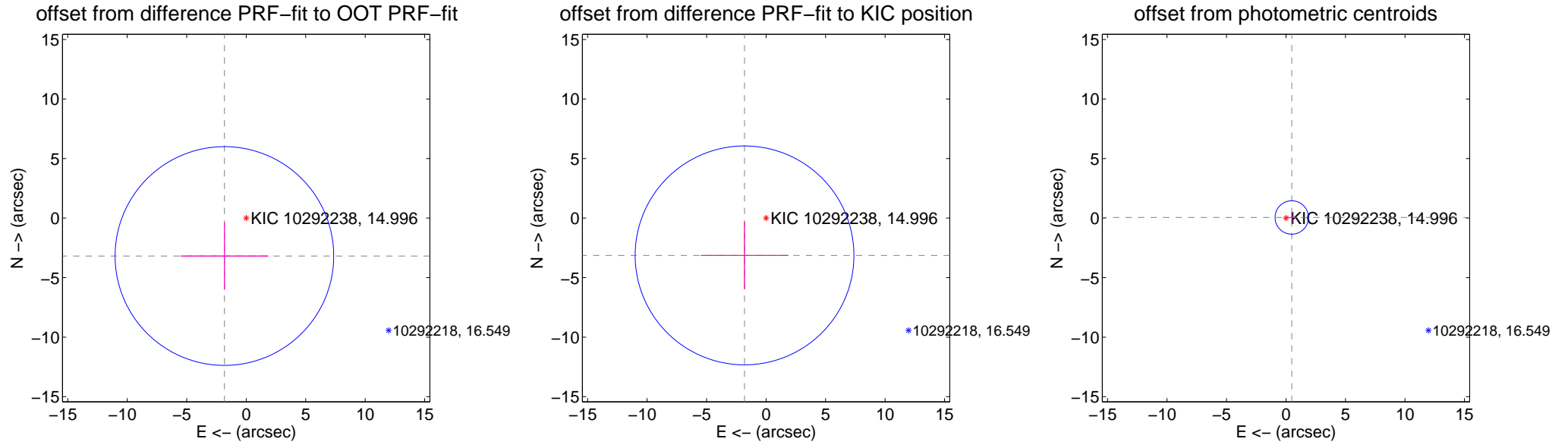
DV Centroid Data

Supplemental centroid analysis for 010292238-03. Kepler magnitude: 15.00. Transit SNR 11.40

There are 0 quarters with good PRF difference image offsets

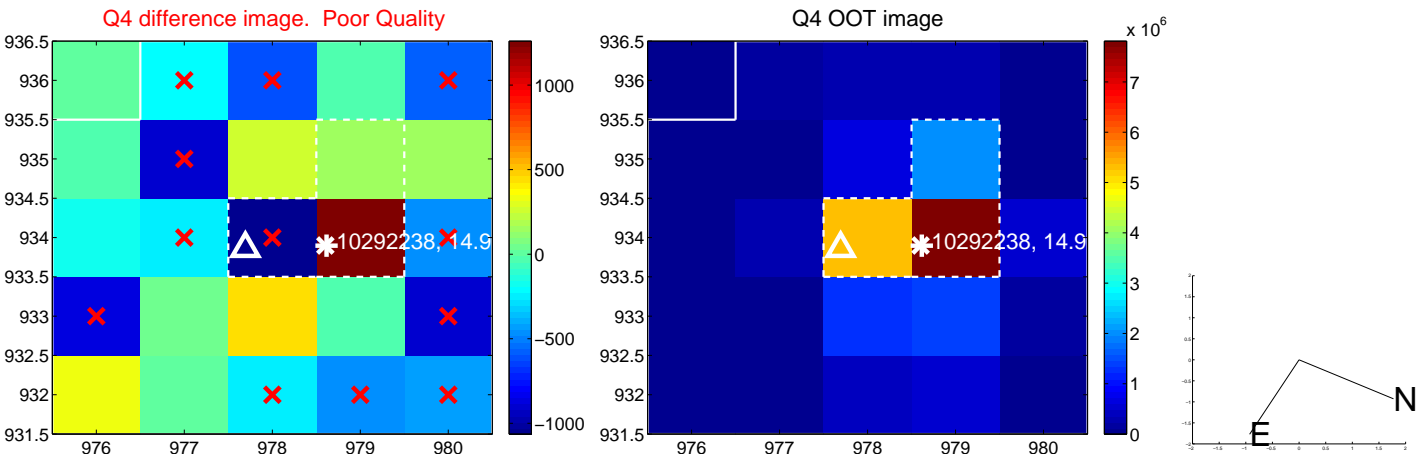
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.675 ± 3.062	1.20	1.832 ± 3.685	-3.185 ± 2.826
PRF-fit source offset from KIC position	3.620 ± 3.064	1.18	1.812 ± 3.685	-3.134 ± 2.826
photometric centroid source offset	0.49 ± 0.47	1.04	-0.48 ± 0.47	0.05 ± 0.45



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

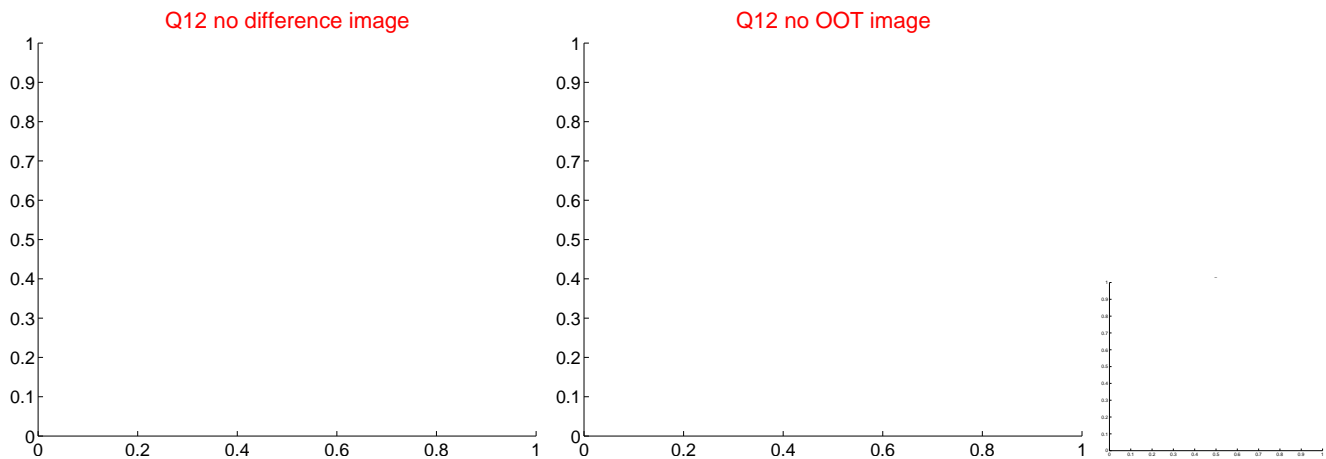
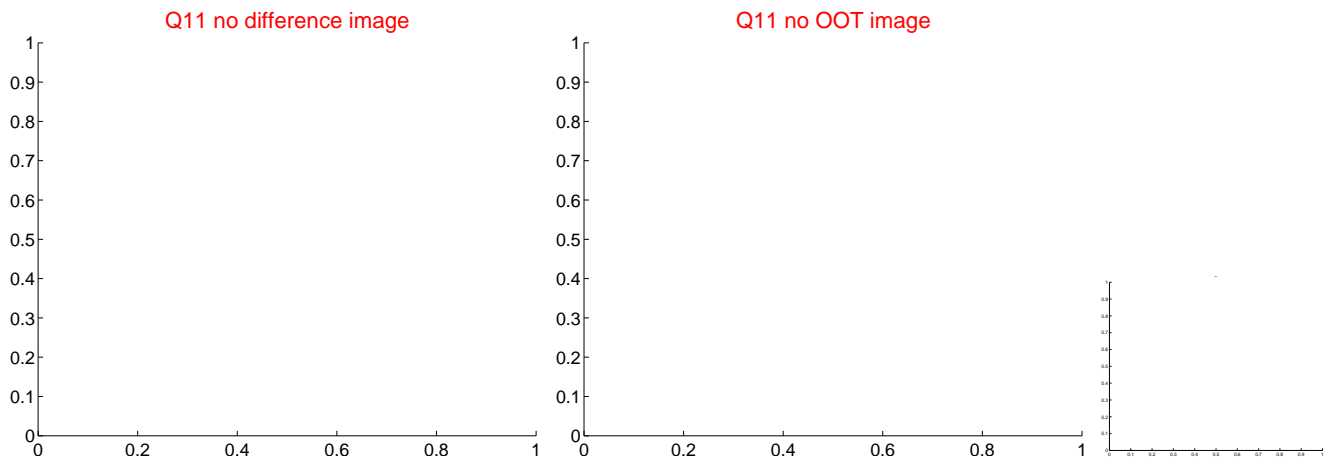
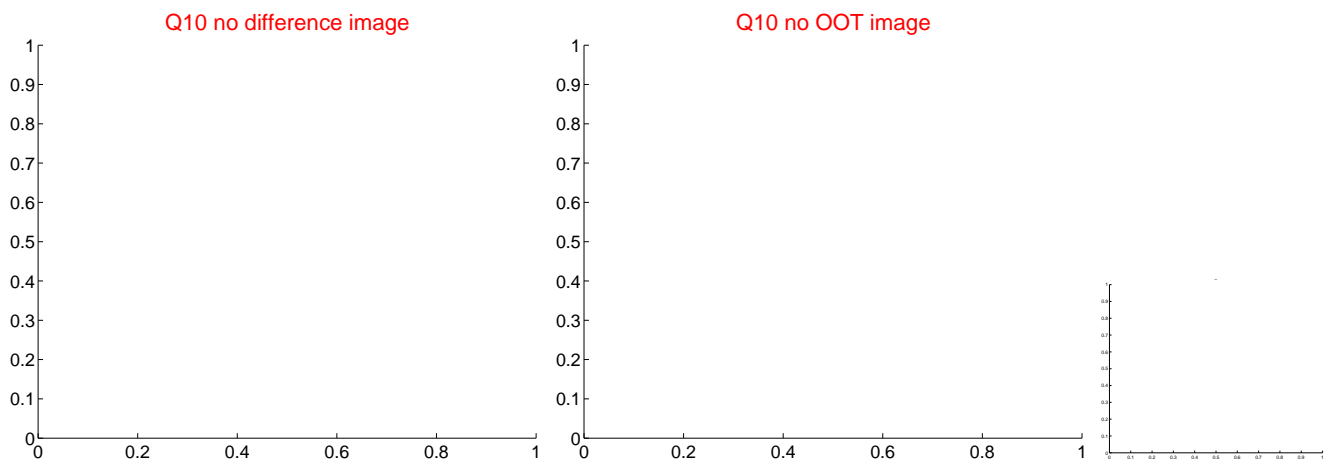
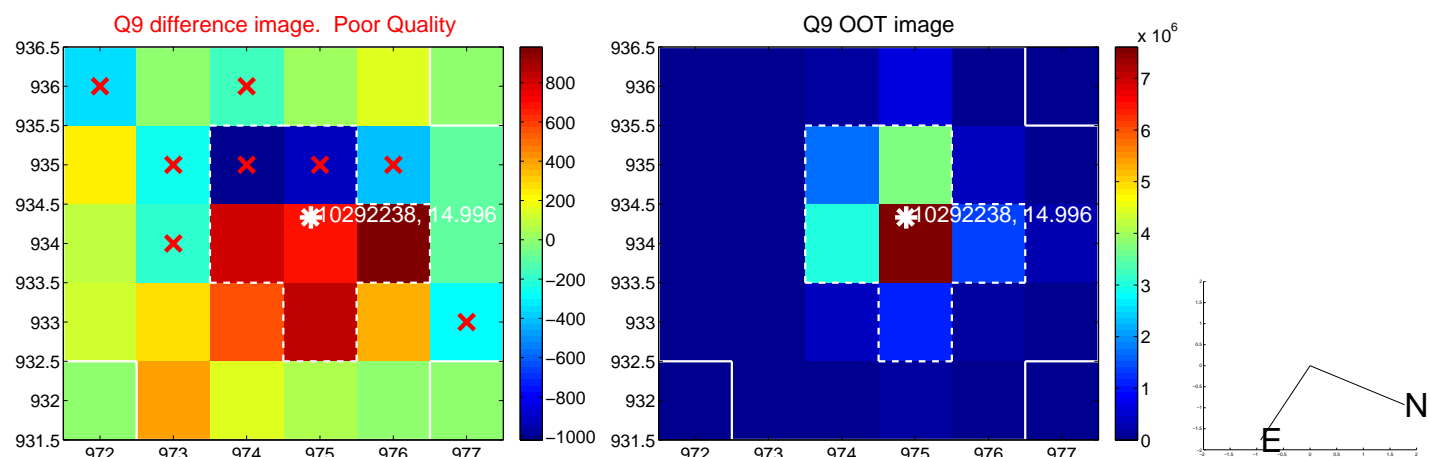
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



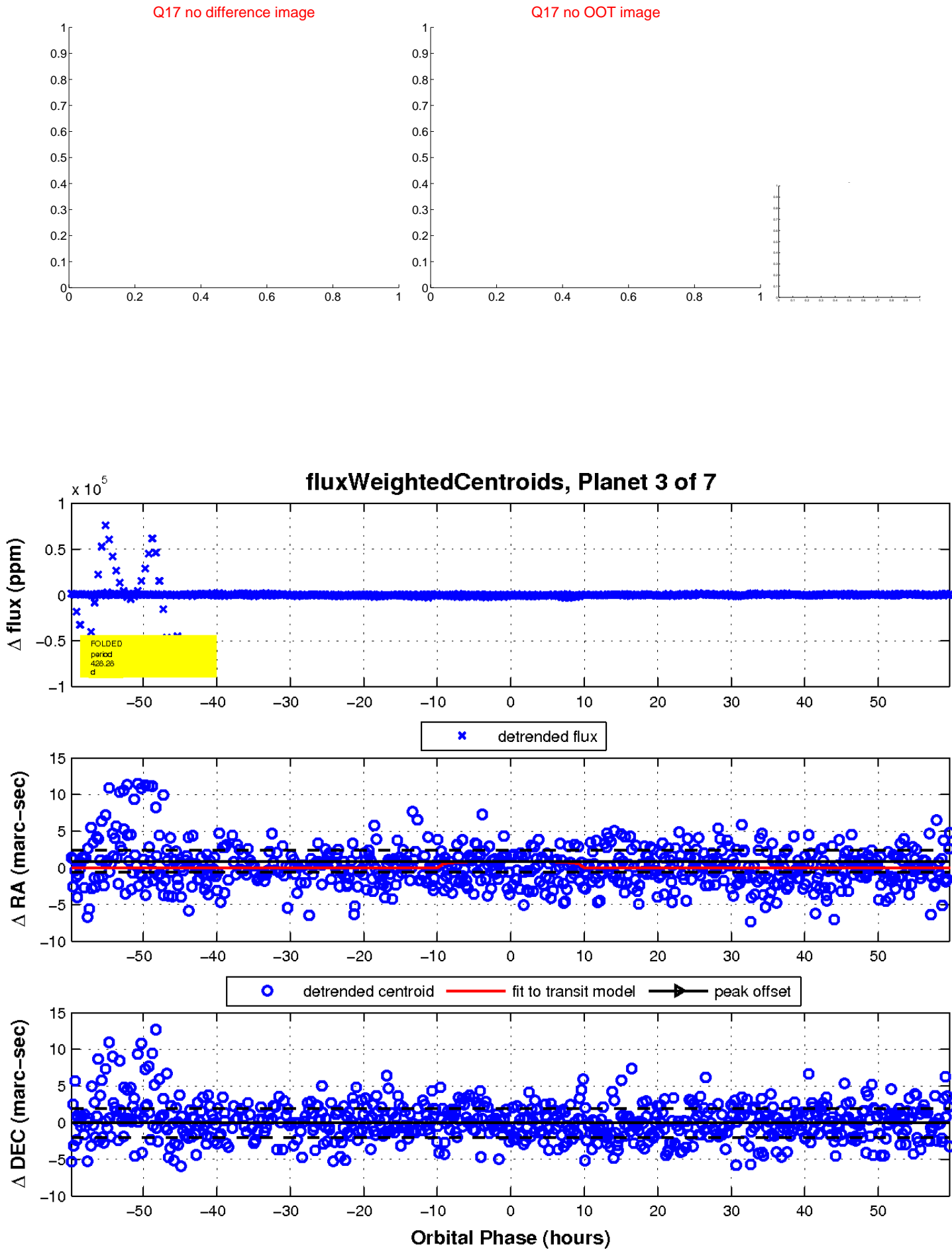
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

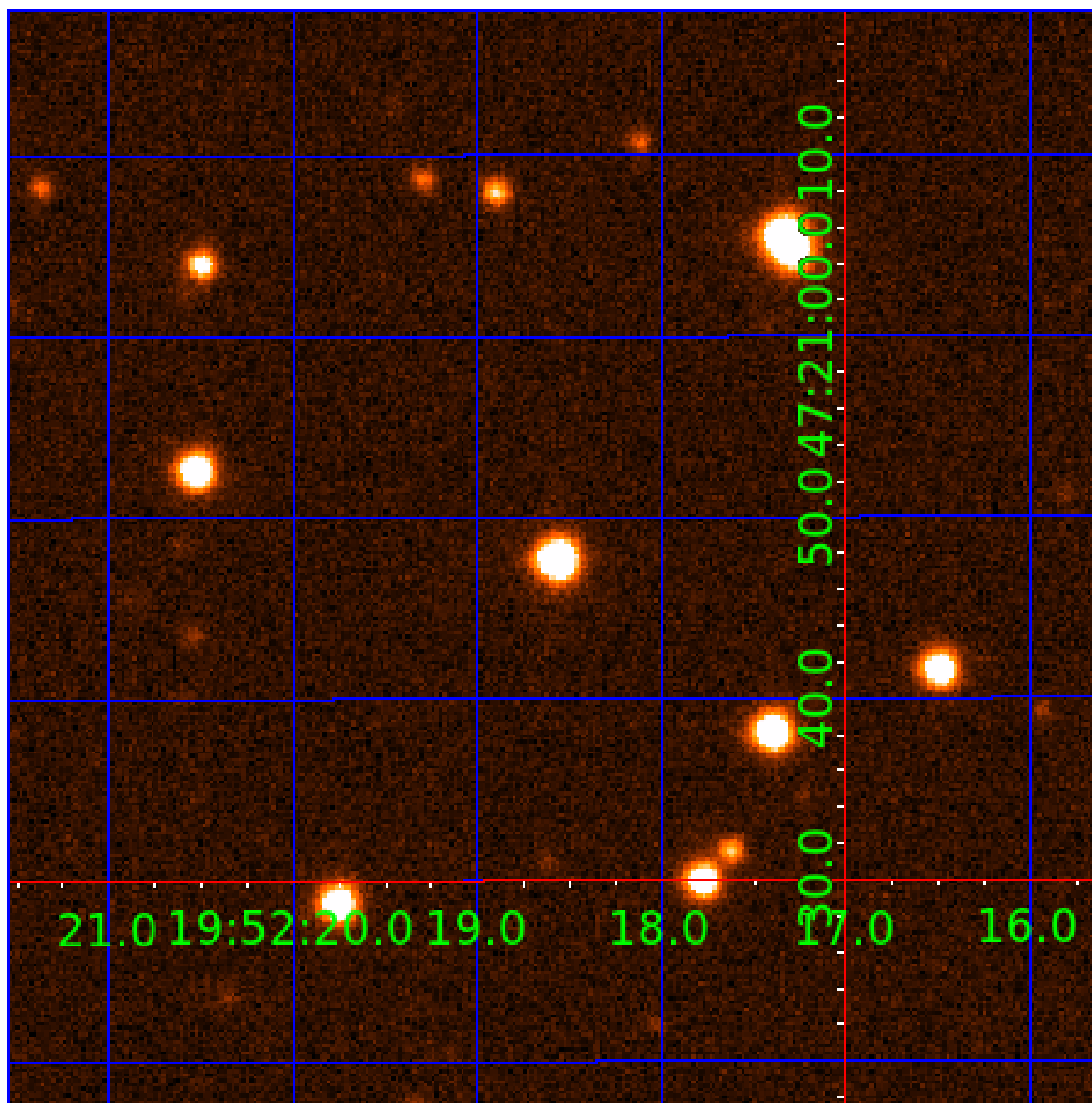


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010292238

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})
010292238-01	OBS	3526.01	143.119259	245.539172	244088.3	11.404	1980.3	1779.9	0.85	5713	44.39	2.50
010292238-02	OBS	No	143.116654	266.365679	258286.5	10.500	1931.8	-1.0	0.85	5713	26.78	2.50
010292238-03	OBS	No	428.281232	413.785450	1761.1	19.957	14.2	11.4	0.85	5713	3.54	0.58
010292238-05	OBS	No	296.170278	255.519217	1254.0	0.985	14.0	4.4	0.85	5713	3.27	0.95
010292238-06	OBS	No	282.998240	268.571716	1316.9	4.092	18.8	5.0	0.85	5713	3.29	1.01
010292238-07	OBS	No	143.138625	261.775867	2921.0	78.572	12.7	17.0	0.85	5713	7.40	2.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010292238-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
010292238-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
010292238-03	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
010292238-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010292238-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010292238-07	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—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.

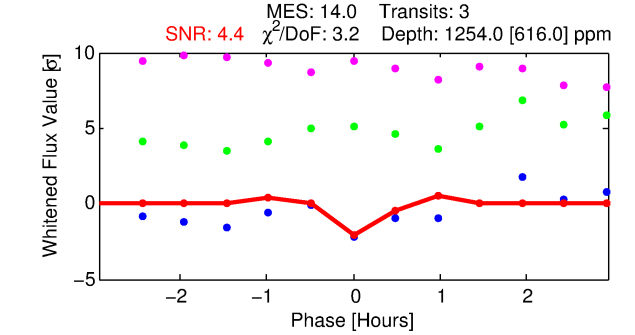
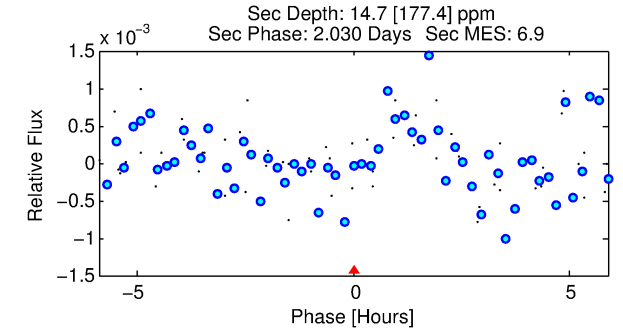
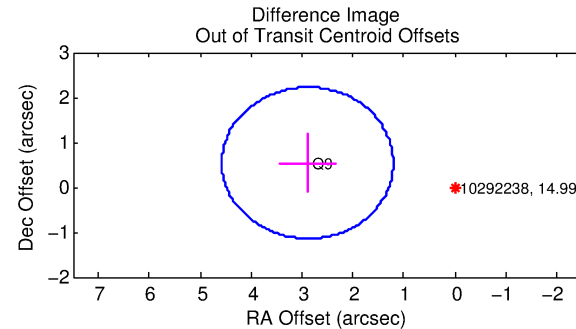
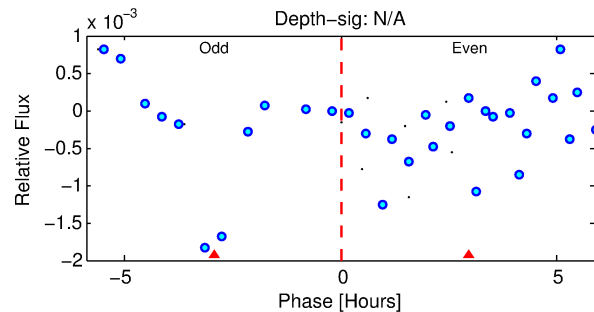
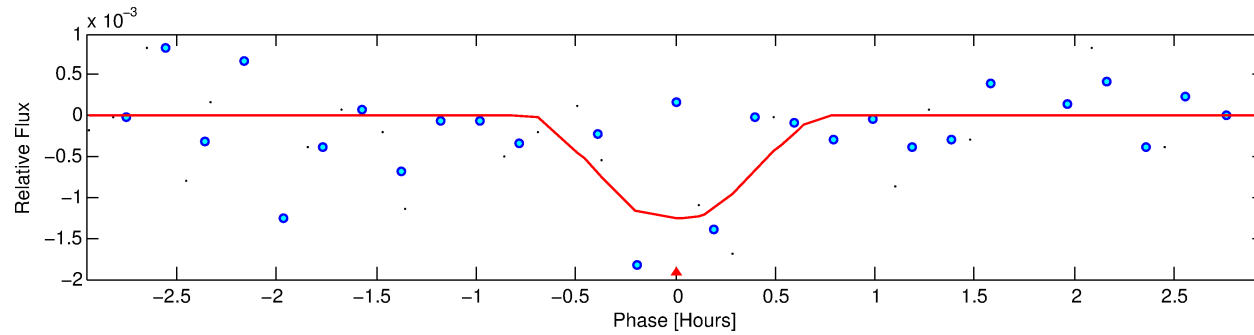
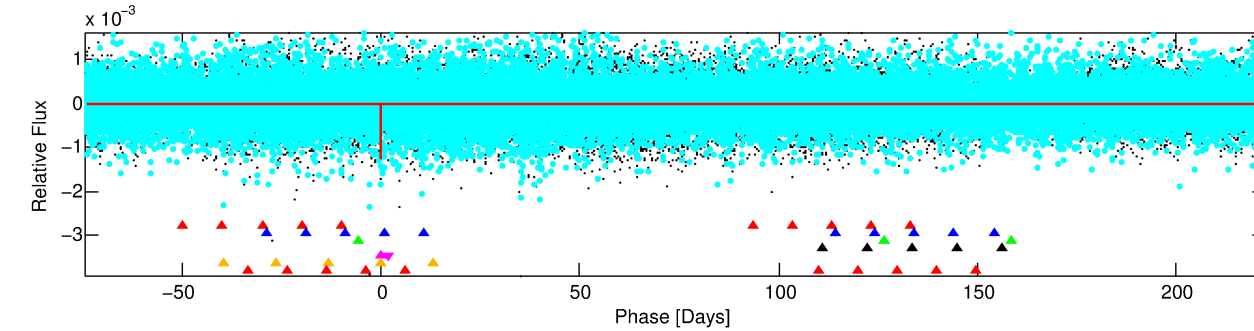
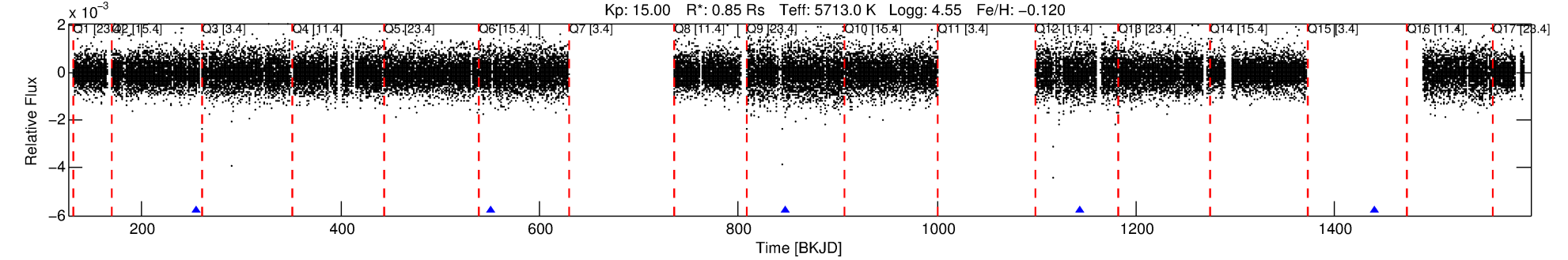
Ephemeris Match Information For 010292238-05

No Significant Match Found

DV One-Page Summary

KIC: 10292238 Candidate: 5 of 7 Period: 296.170 d
KOI: K03526 Corr: No Ephemeris Match

Kp: 15.00 R*: 0.85 Rs Teff: 5713.0 K Logg: 4.55 Fe/H: -0.120



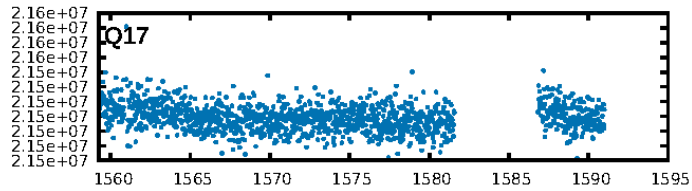
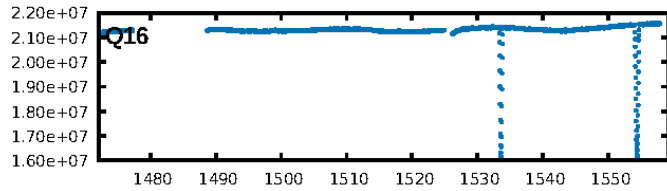
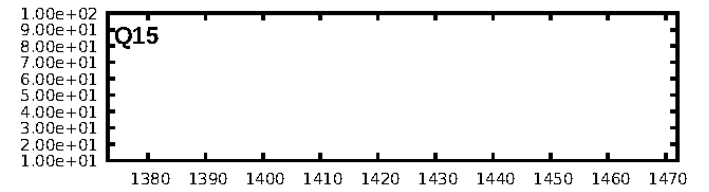
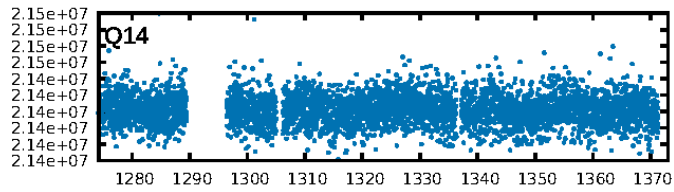
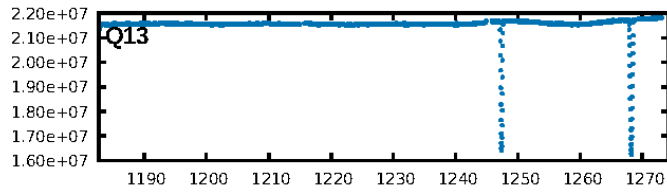
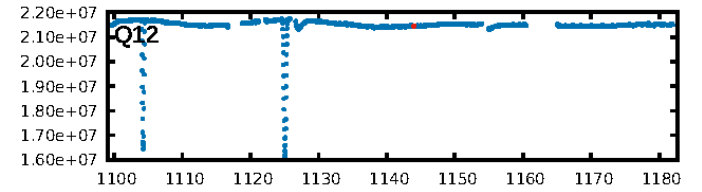
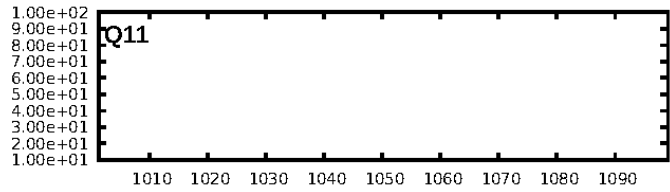
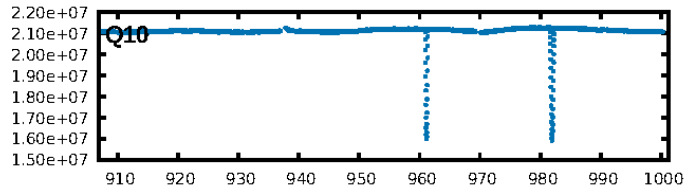
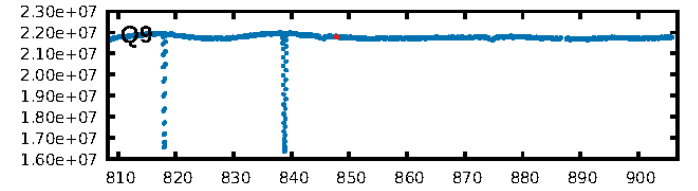
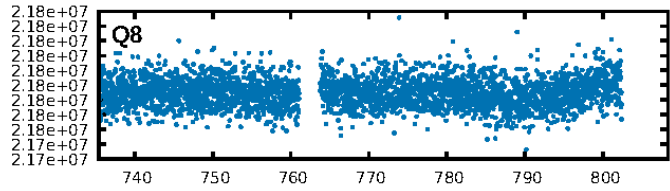
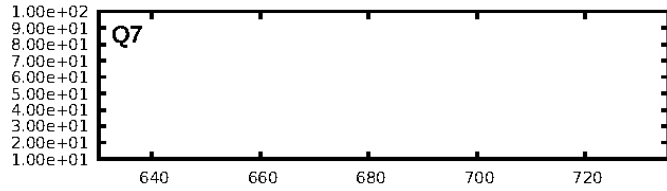
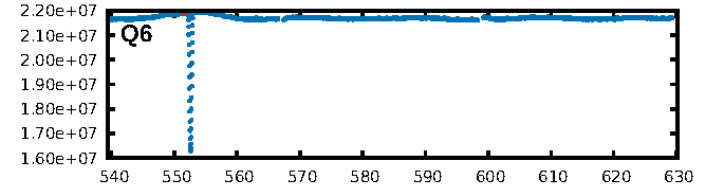
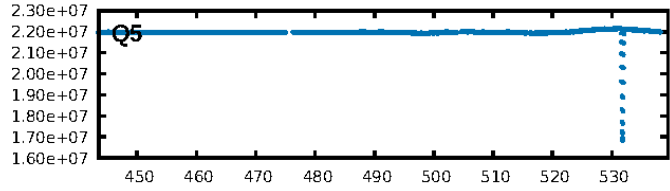
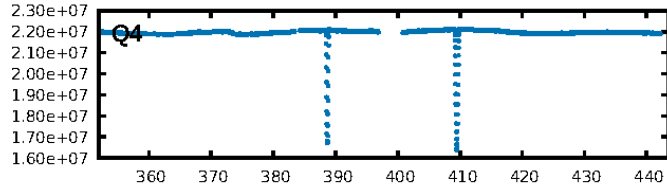
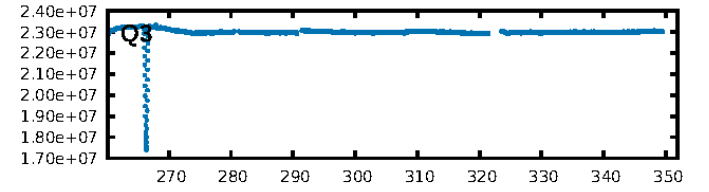
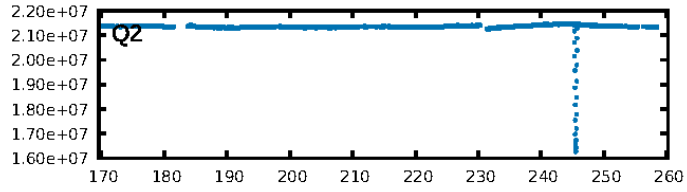
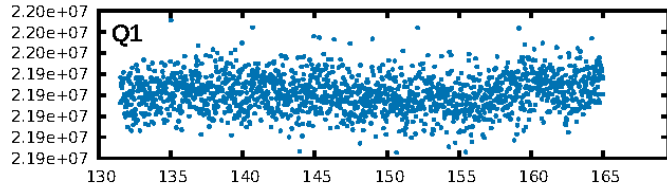
DV Fit Results:

Period = 296.17028 [0.00792] d
Epoch = 255.5192 [0.0184] BKJD
Rp/R* = 0.0352 [0.2379]
a/R* = 1720.31 [50744.14]
b = 0.72 [20.64]
Seff = 0.95 [0.31]
Teff = 252 [21] K
Rp = 3.27 [22.10] Re
a = 0.8538 [0.1758] AU
Ag = 550.43 [9979.61] [0.06σ]
Teffp = 1884 [8540] K [0.19σ]

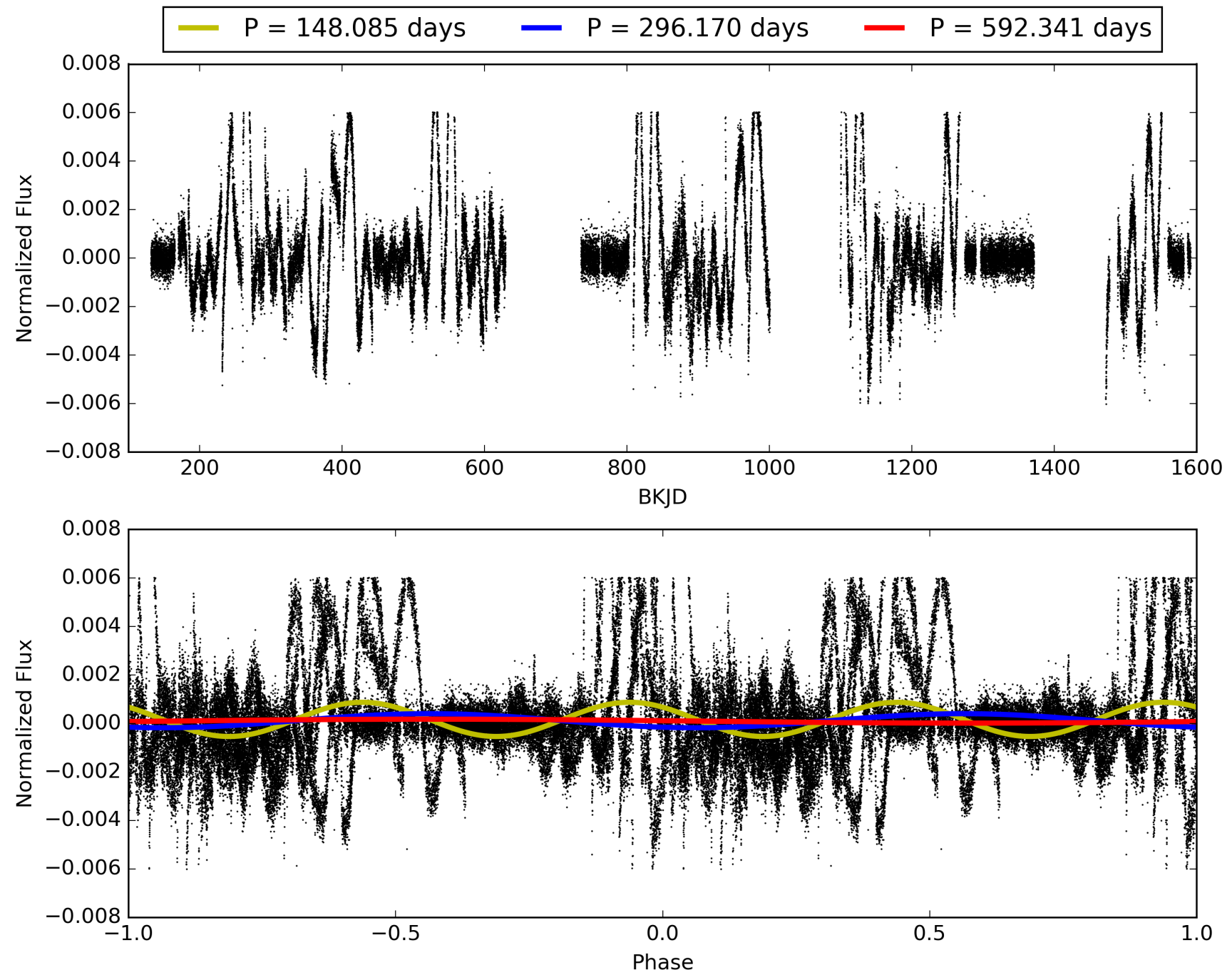
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [191.29σ]
LongPeriod-sig: 100.0% [158.68σ]
ModelChiSquare2-sig: 31.6%
ModelChiSquareGof-sig: 57.6%
Bootstrap-pfa: 1.55e-26
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -3.222
Centroid-sig: 26.4%
Centroid-so: 2.913 arcsec [1.04σ]
OotOffset-rm: 2.939 arcsec [5.23σ]
KicOffset-rm: 2.933 arcsec [5.22σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 0.67 [2/3]

TCE 010292238-05, PDC Light Curves

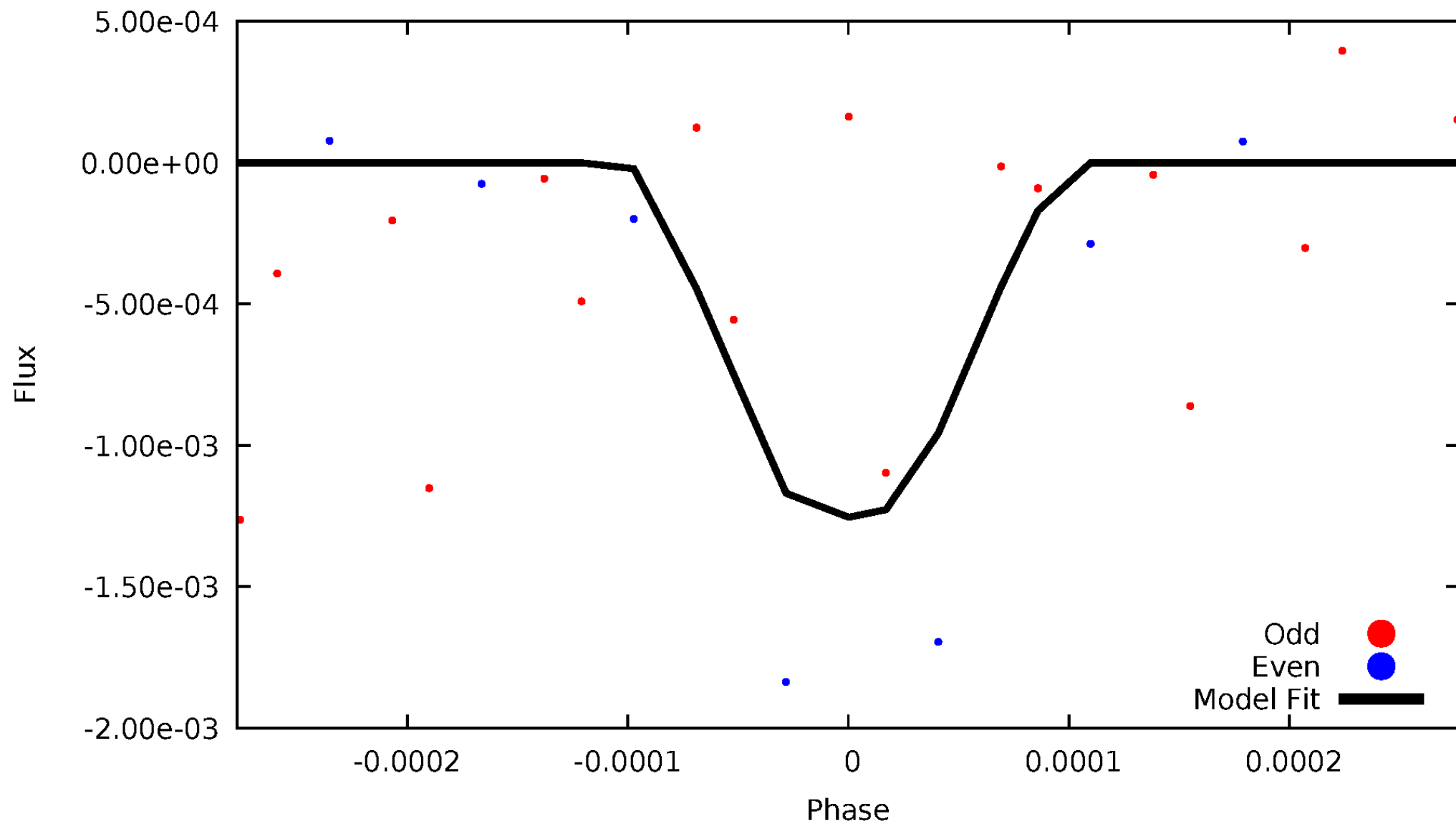


TCE 010292238-05



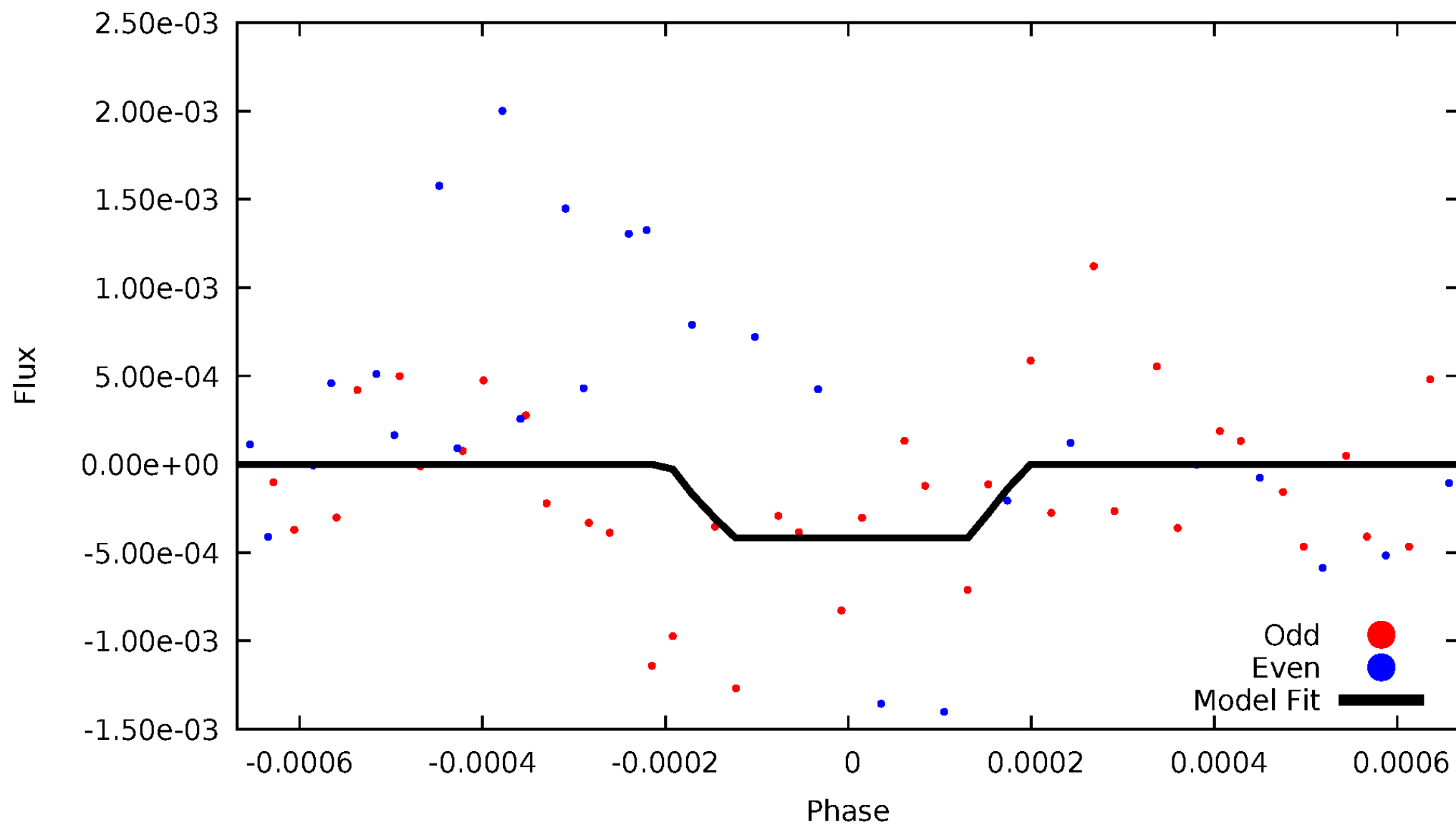
DV Odd/Even

TCE 010292238-05



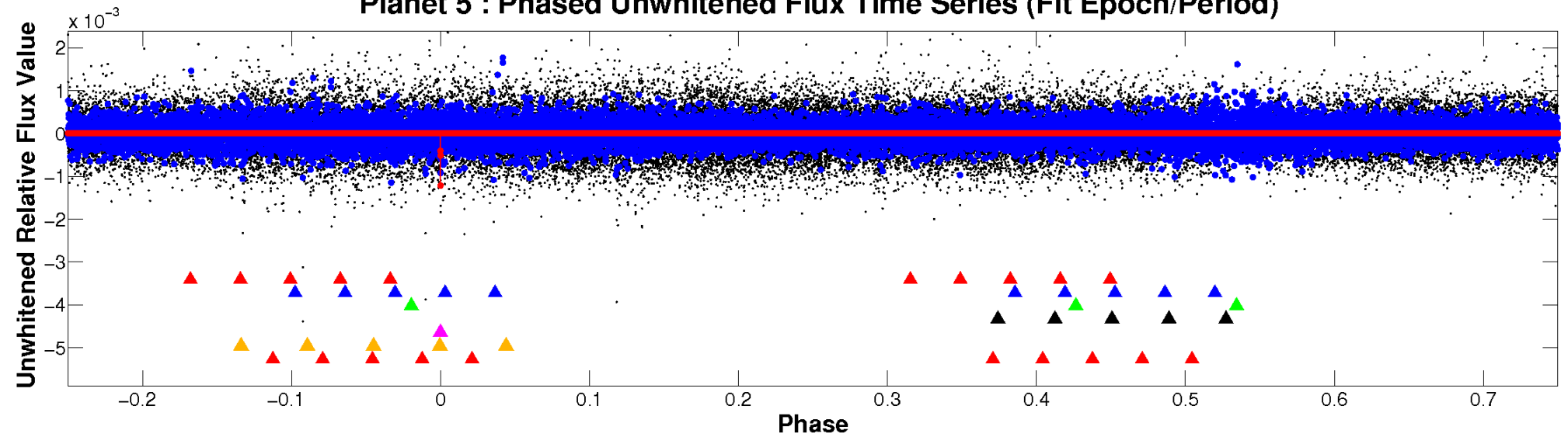
ALT Odd/Even

TCE 010292238-05

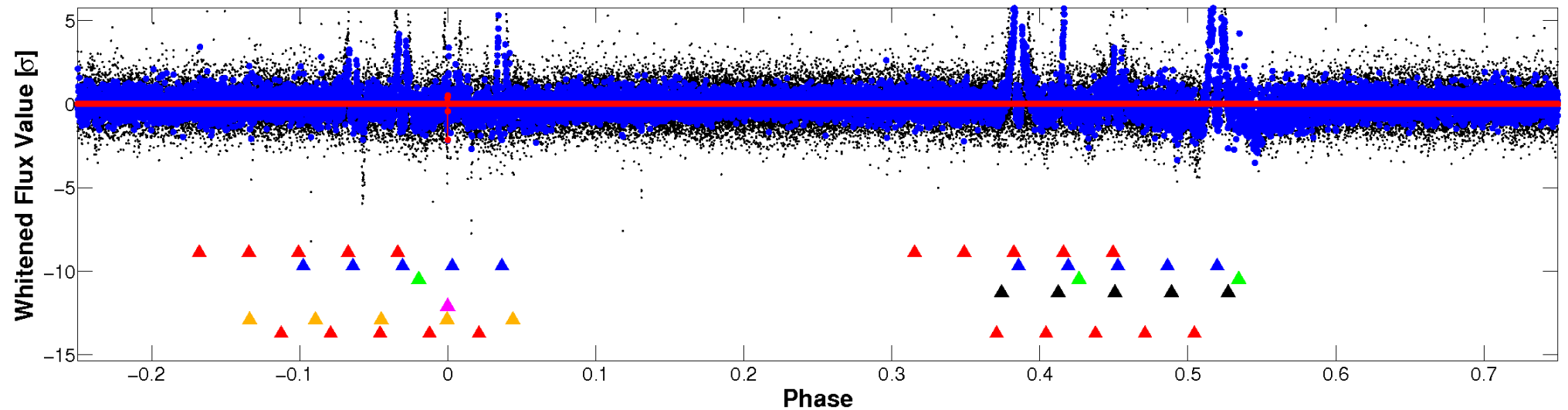


Non-Whitened Vs. Whitened Light Curve

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

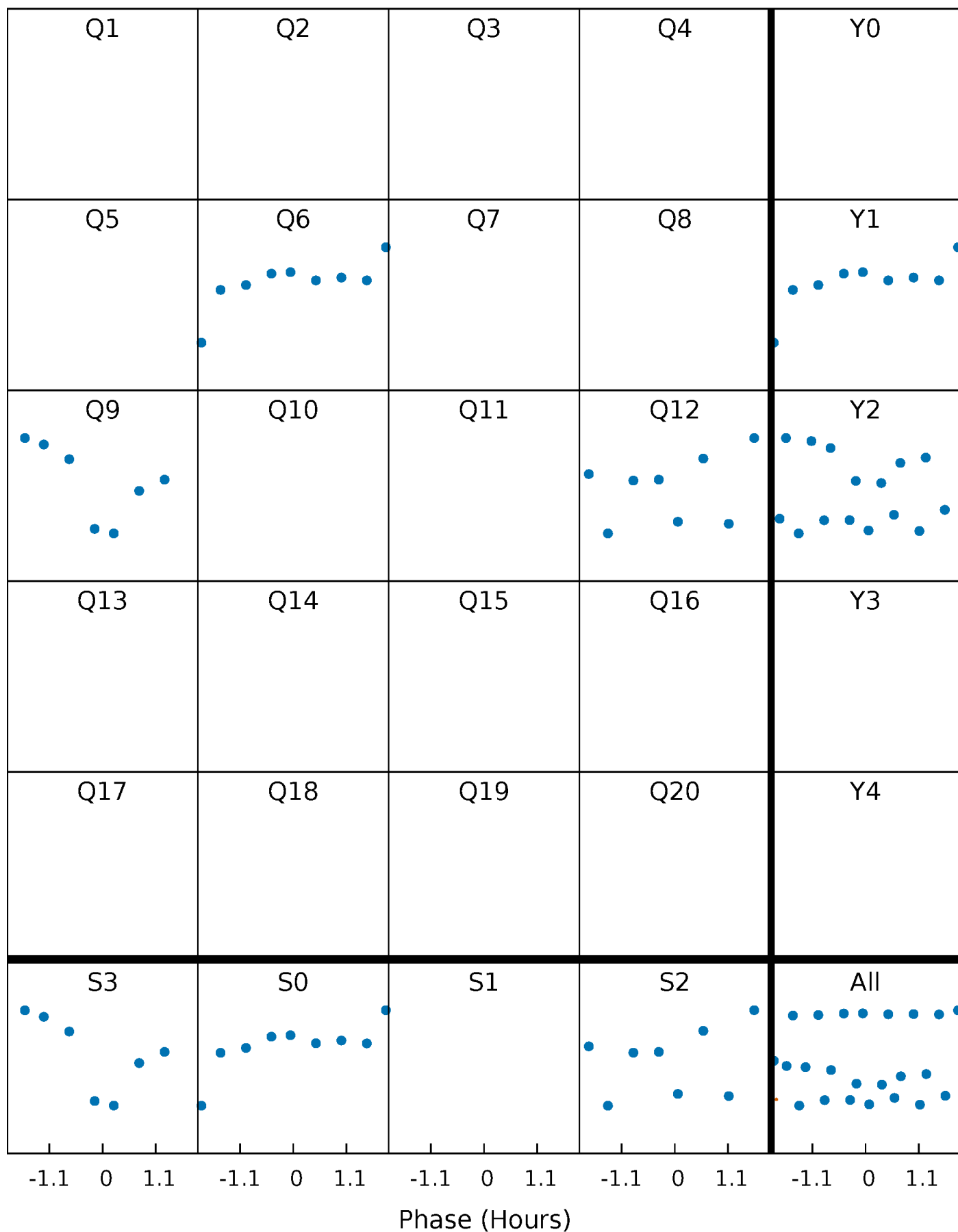


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



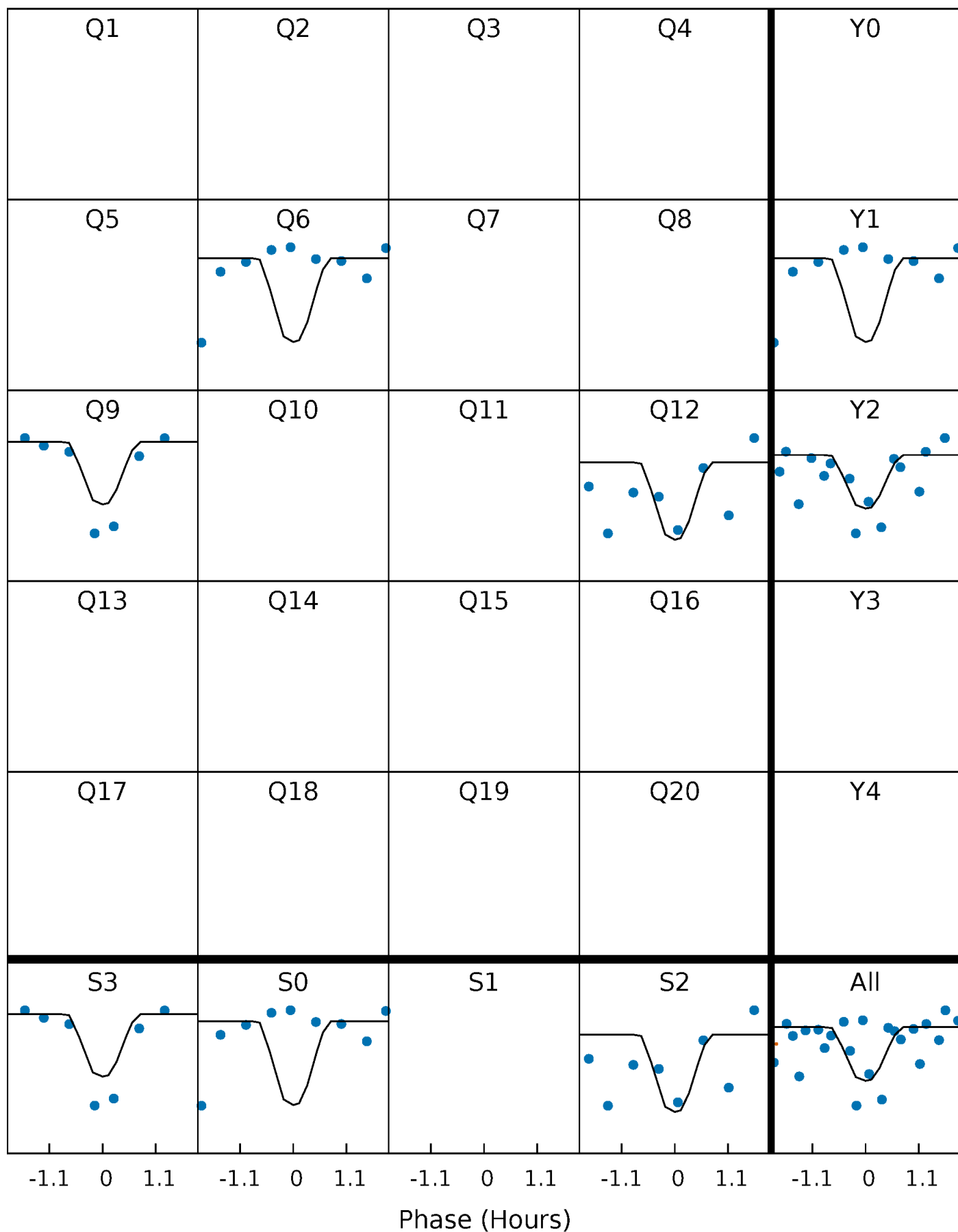
PDC Quarter-Phased Transit Curves

TCE 010292238-05 $P=296.170278$ Days $T_0=255.519217$ (BKJD)



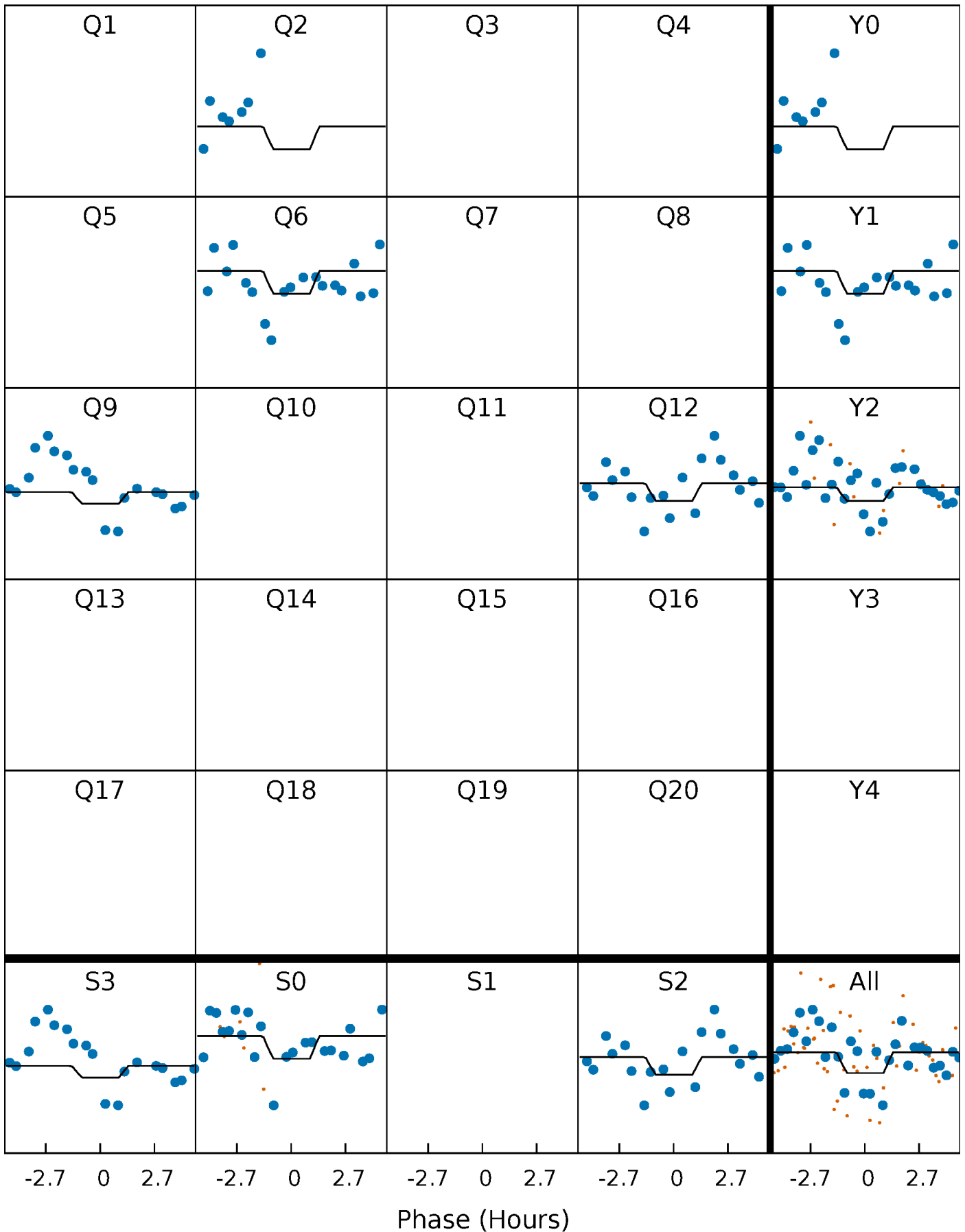
DV Quarter-Phased Transit Curves

TCE 010292238-05 $P=296.170278$ Days $T_0=255.519217$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

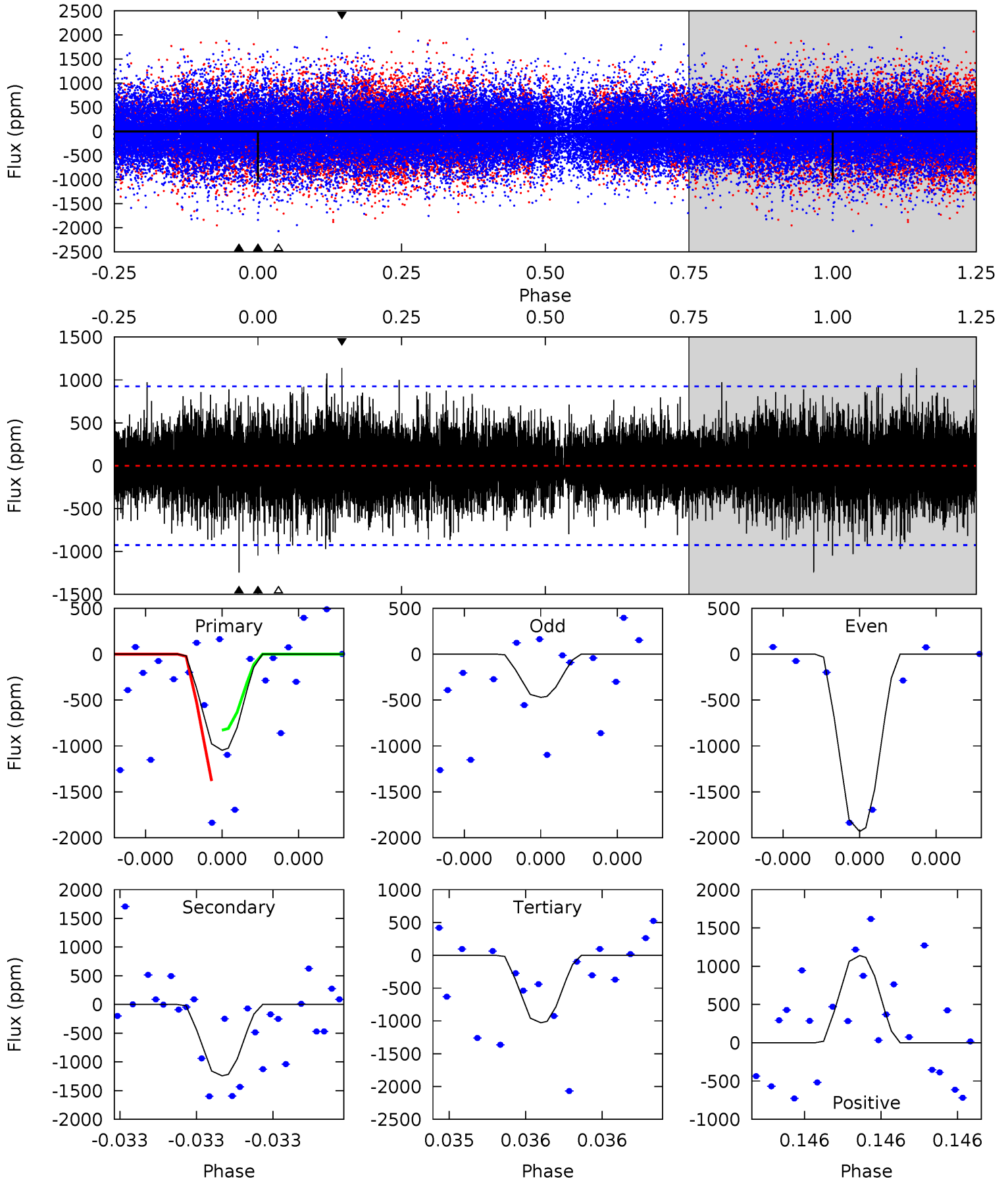
TCE 010292238-05 $P=296.196564$ Days $T_0=255.447676$ (BKJD)



DV Model-Shift Uniqueness Test

010292238-05, P = 296.170278 Days, E = 255.519217 Days

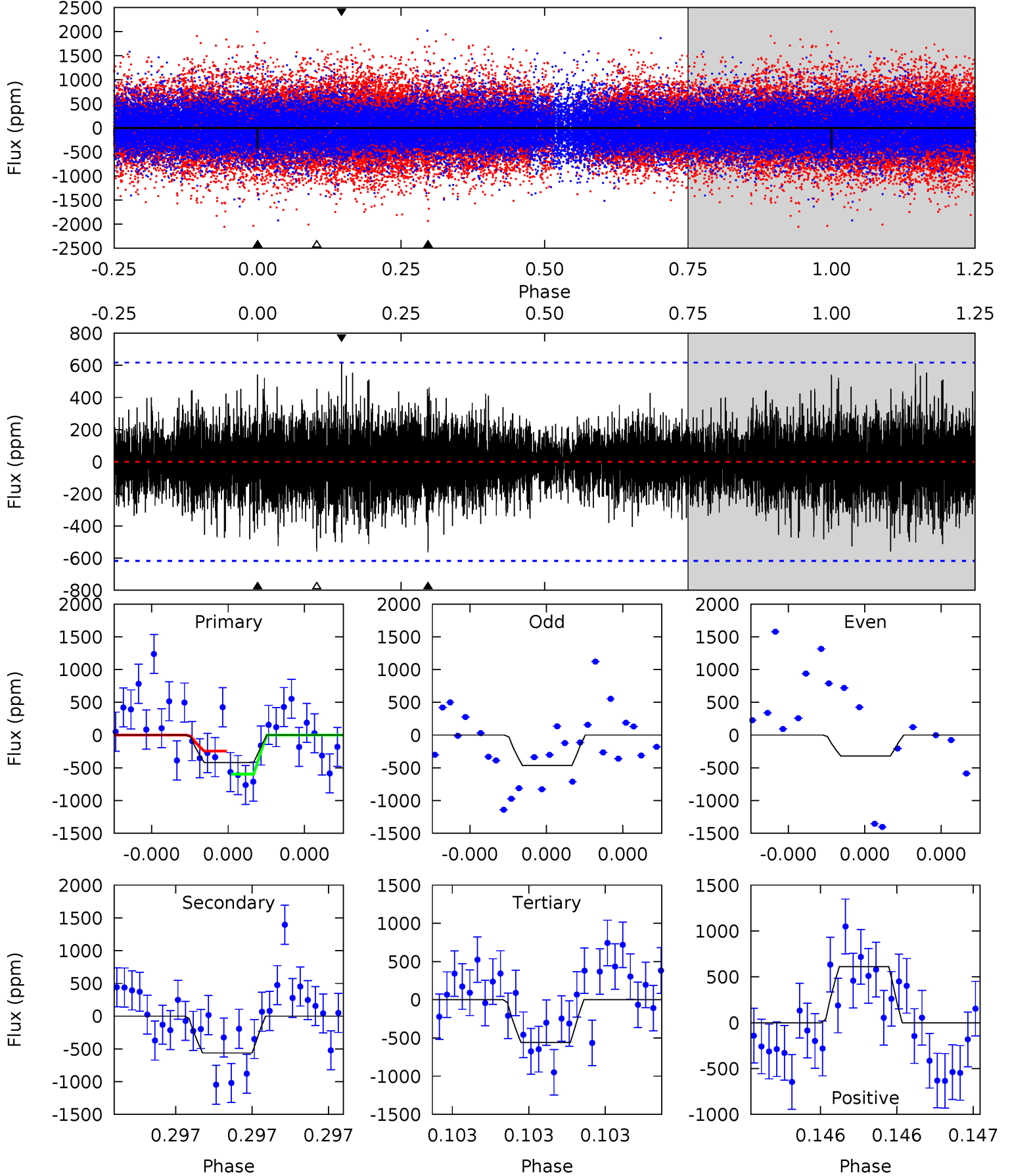
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.48	7.69	6.37	7.05	5.72	3.71	1.51	0.11	-0.57	1.32	0.64	3.91	0.93	0.48	1.68



Alt Model-Shift Uniqueness Test

010292238-05, P = 296.196564 Days, E = 255.447676 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.80	5.11	5.07	5.55	5.62	3.55	1.22	-1.27	-1.75	0.04	-0.44	0.64	0.97	0.52	1.60



Stellar Parameters For KIC 010292238

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5713^{+152}_{-169}	$4.554^{+0.042}_{-0.168}$	$-0.120^{+0.300}_{-0.300}$	$0.851^{+0.205}_{-0.073}$	$0.948^{+0.094}_{-0.115}$	$2.164^{+0.371}_{-0.973}$
	+3%/-3%	+1%/-4%	+250%/-250%	+24%/-9%	+10%/-12%	+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 010292238-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1243 ± 162	$16.61^{+17.98}_{-11.90}$	358^{+20}_{-14}	3178^{+1688}_{-595}	1730^{+19105}_{-1343}
Alt.	-562 ± 110	$15.90^{+17.27}_{-11.25}$	358^{+19}_{-16}	2873^{+1353}_{-483}	899^{+8529}_{-700}

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 $A_{obs} \gg 1.0$

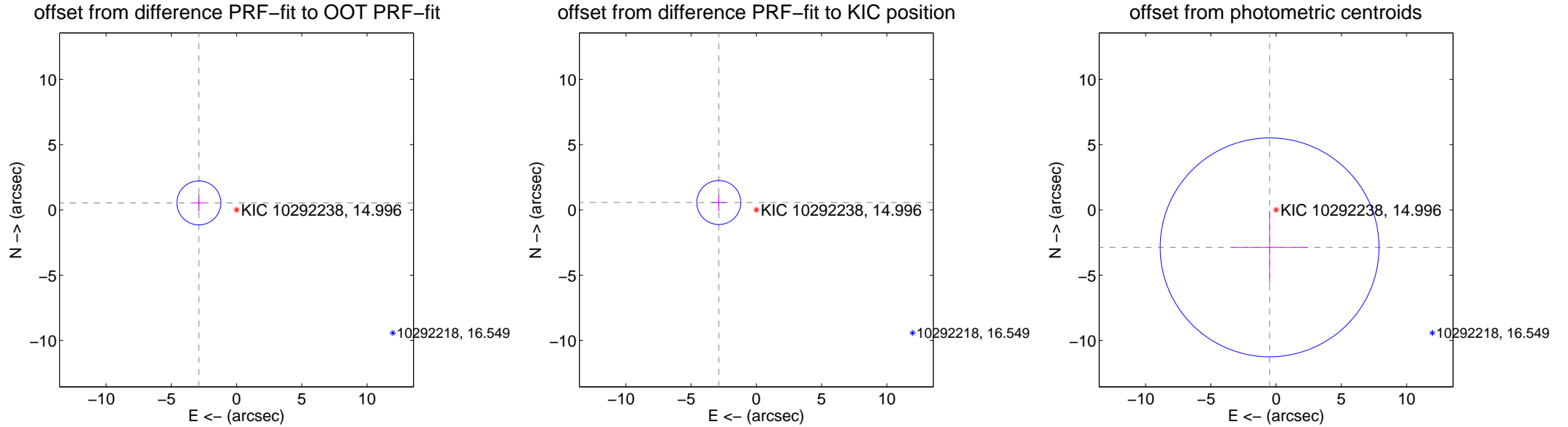
DV Centroid Data

Supplemental centroid analysis for 010292238-05. Kepler magnitude: 15.00. Transit SNR 4.43

There are 1 quarters with good PRF difference image offsets

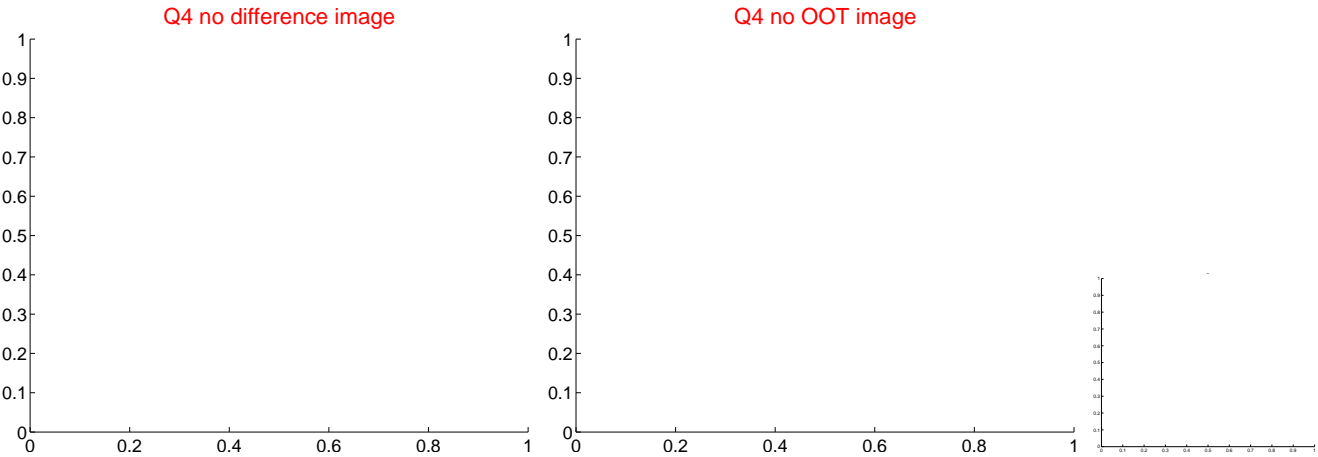
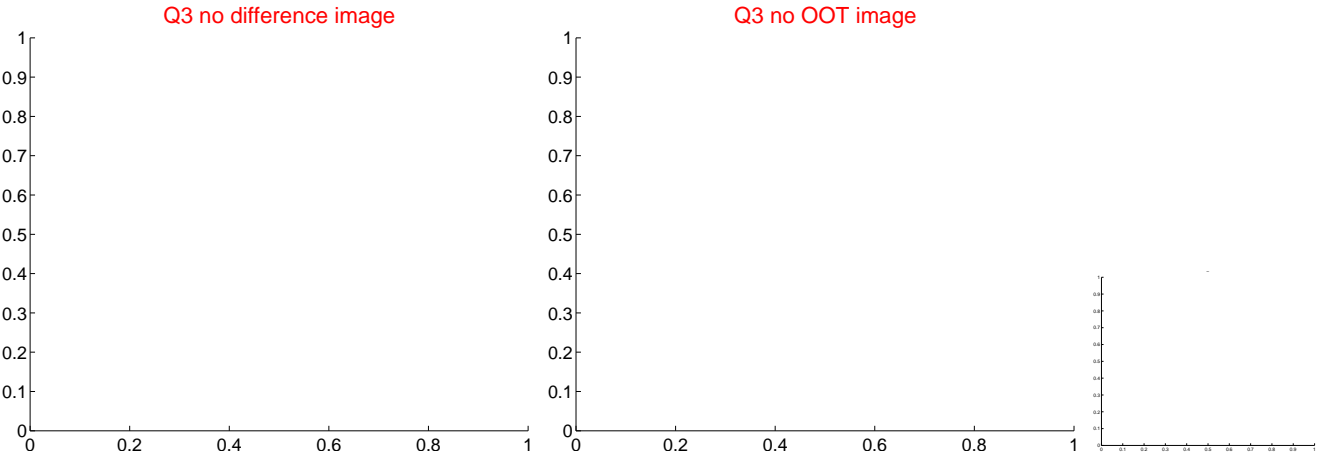
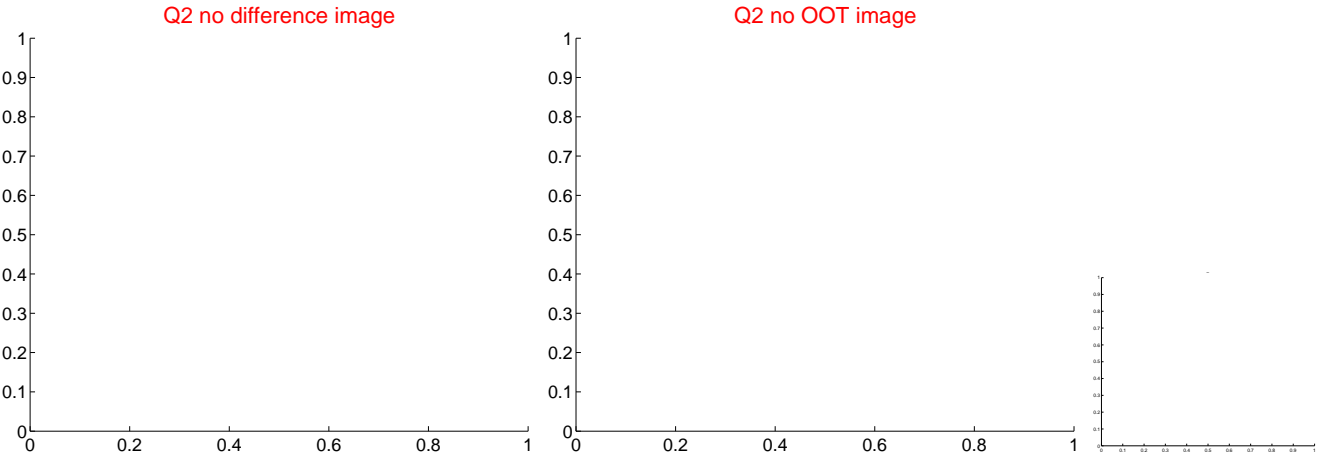
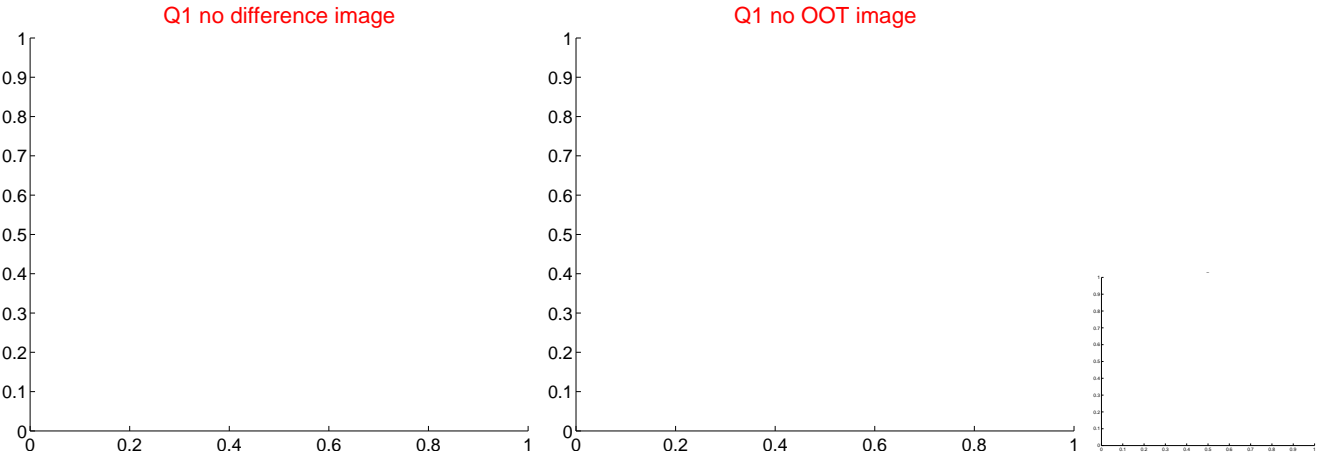
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.939 \pm 0.562	5.23	2.889 \pm 0.558	0.538 \pm 0.651
PRF-fit source offset from KIC position	2.933 \pm 0.562	5.22	2.877 \pm 0.558	0.567 \pm 0.651
photometric centroid source offset	2.91 \pm 2.80	1.04	0.50 \pm 2.90	-2.87 \pm 2.79



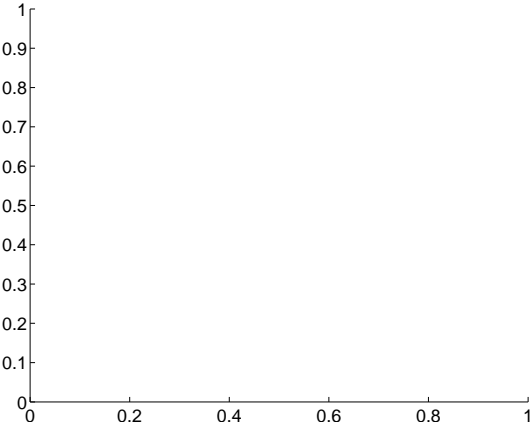
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

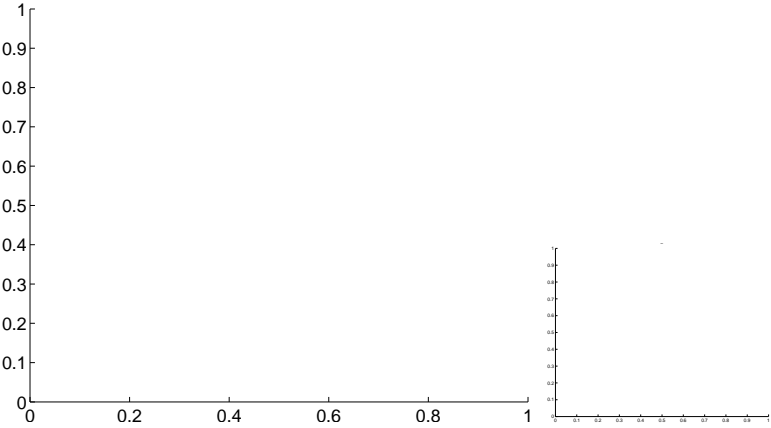


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.

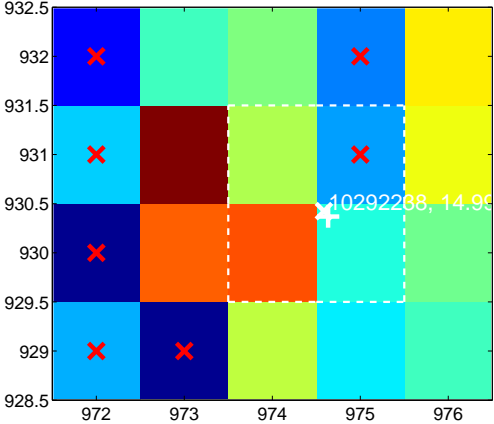
Q5 no difference image



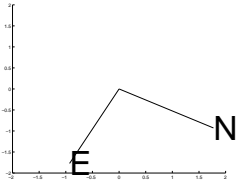
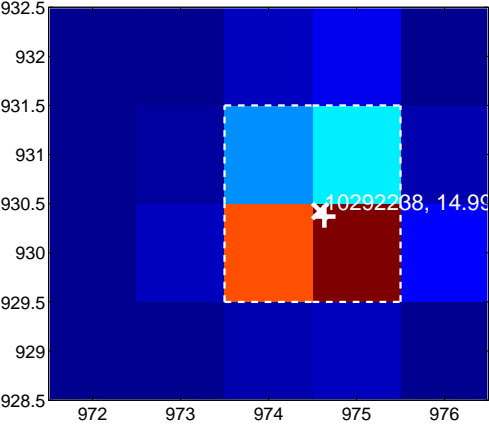
Q5 no OOT image



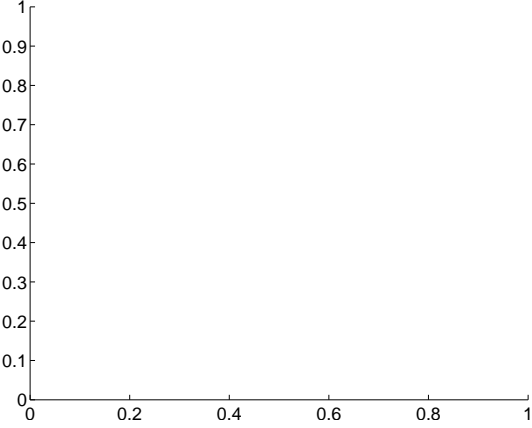
Q6 difference image. Poor Quality



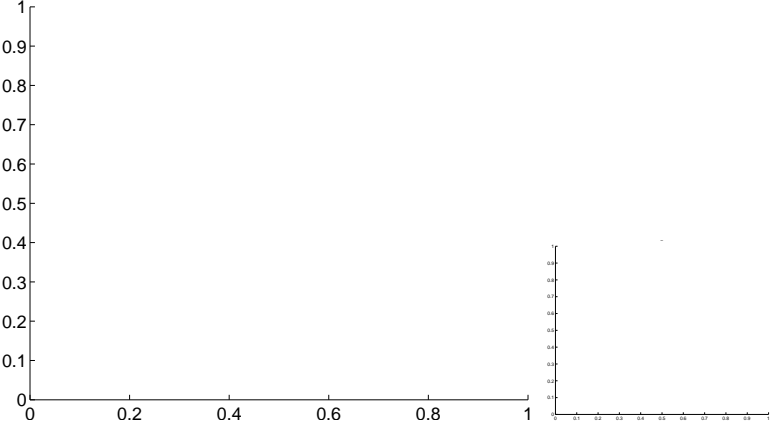
Q6 OOT image



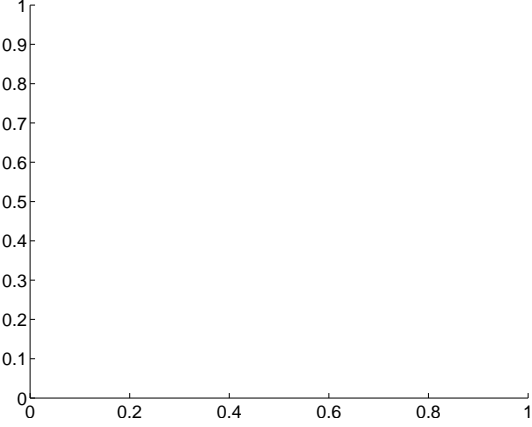
Q7 no difference image



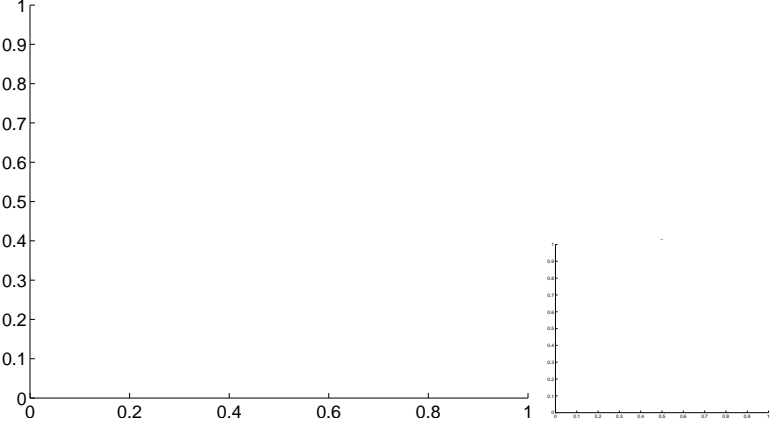
Q7 no OOT image



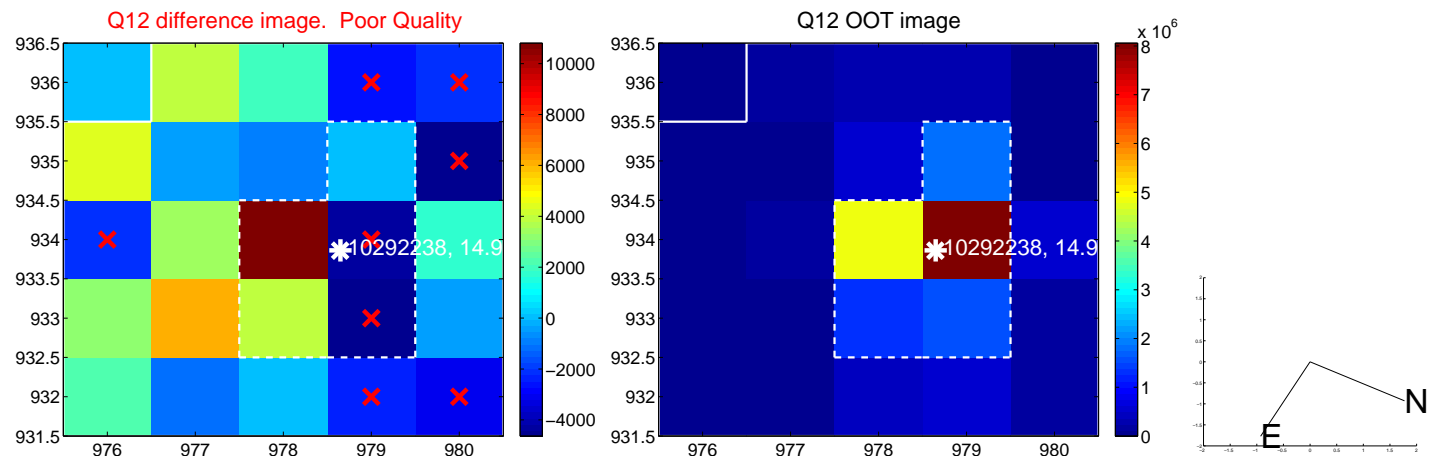
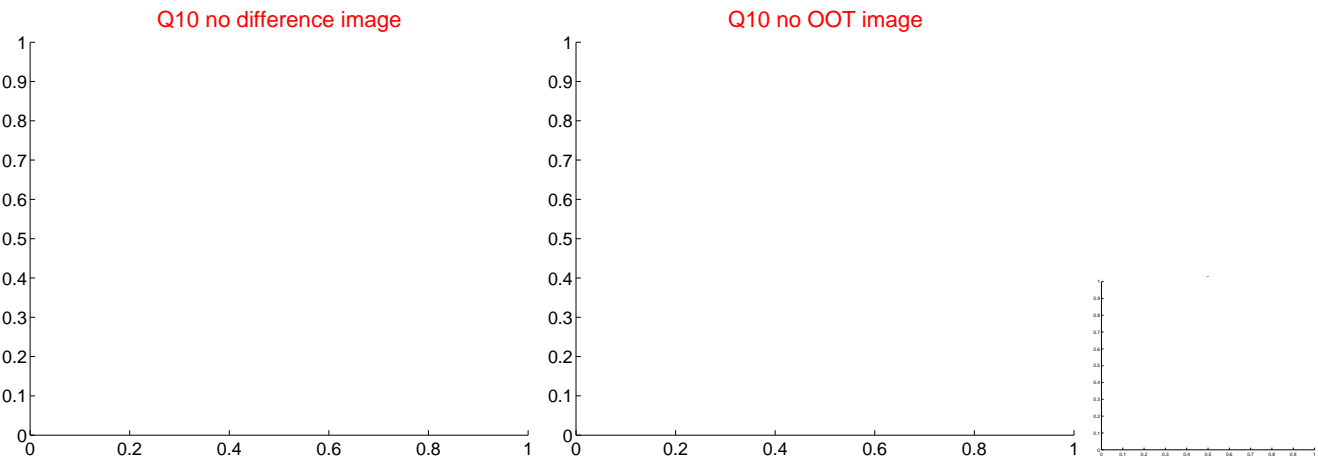
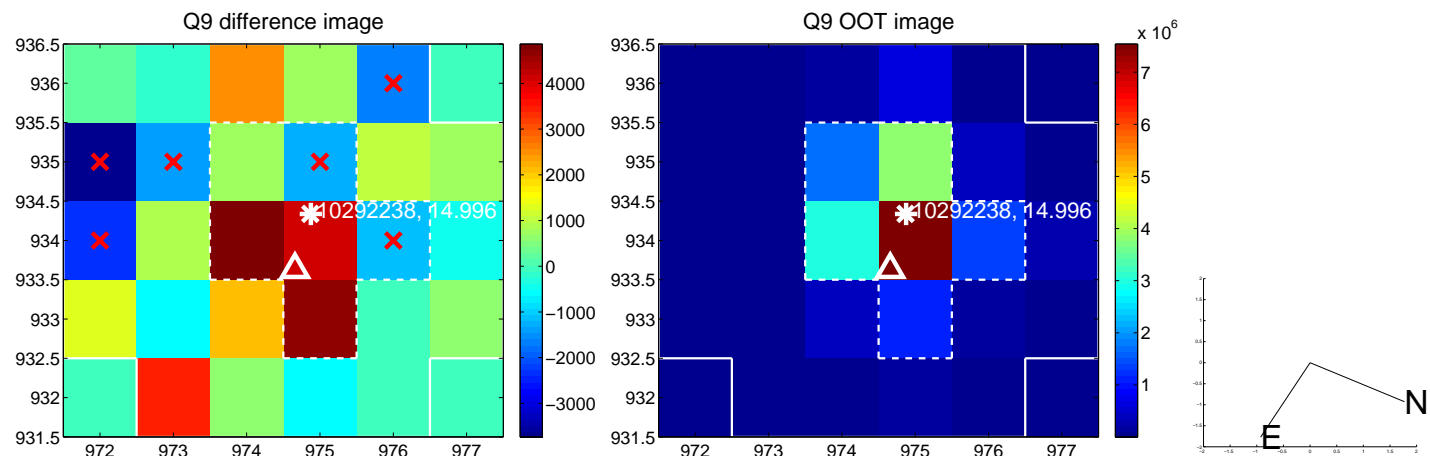
Q8 no difference image



Q8 no OOT image

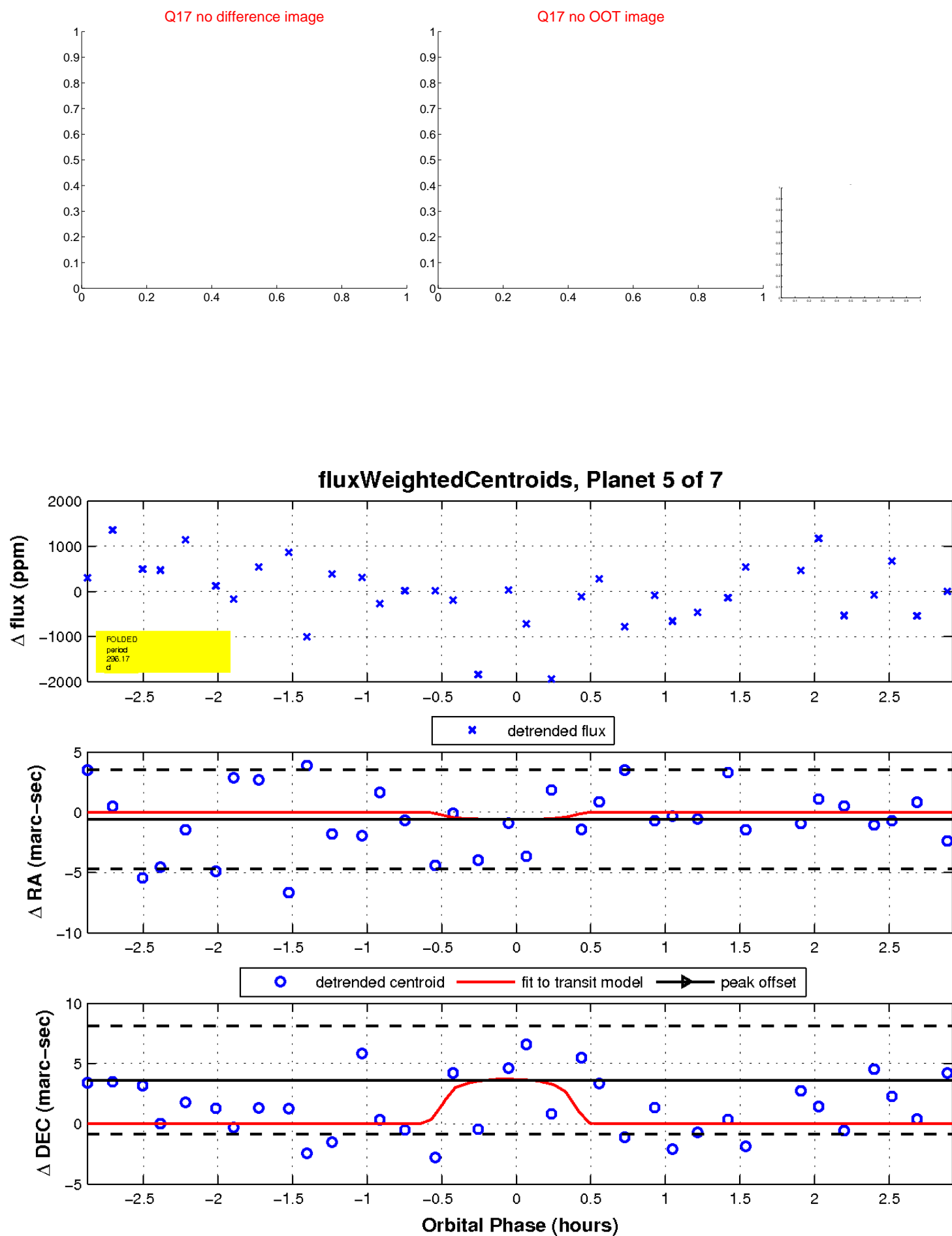


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



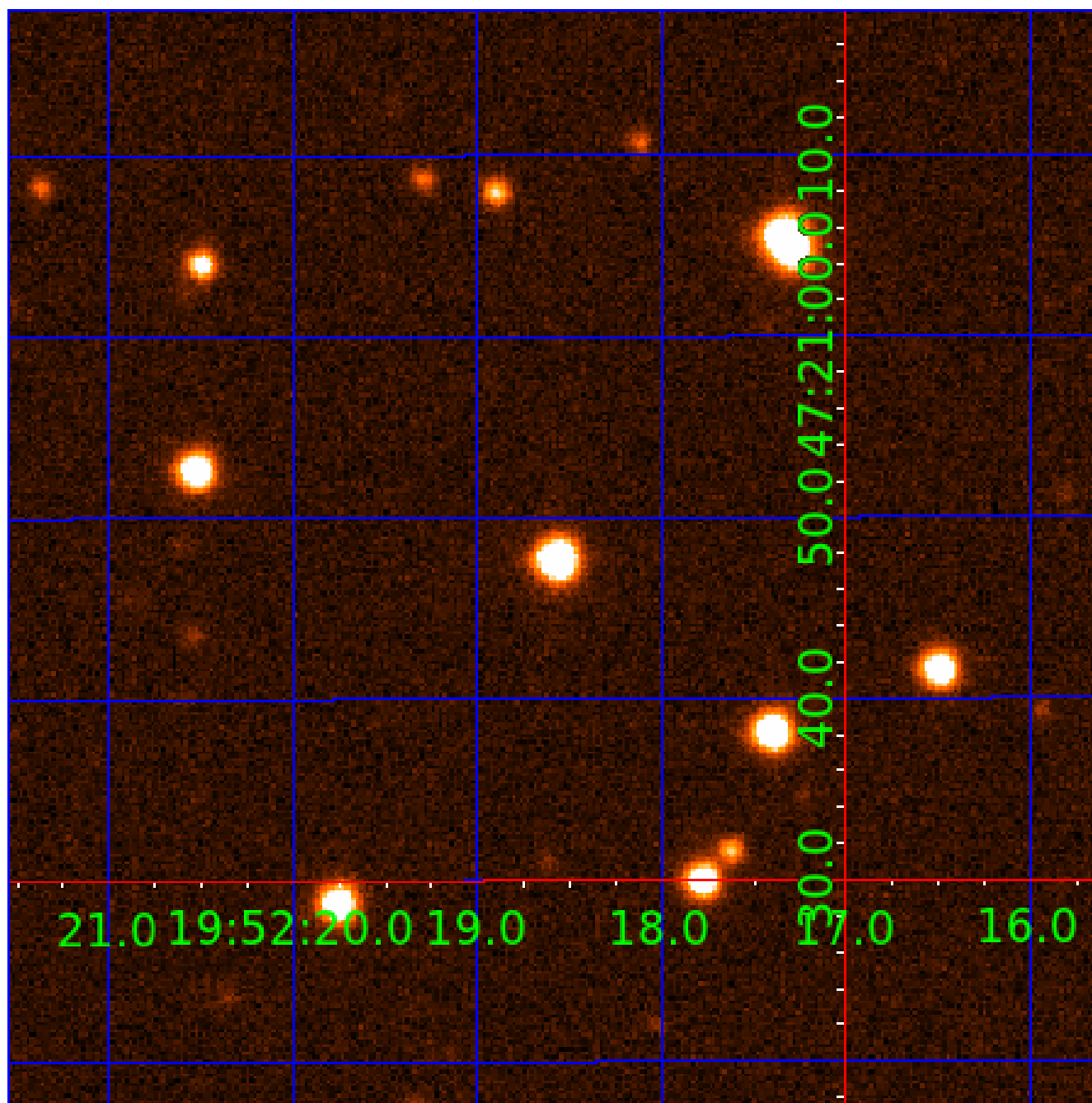
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



\mathbb{Z}_2 

UKIRT Image

Declination



KIC 010292238

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})
010292238-01	OBS	3526.01	143.119259	245.539172	244088.3	11.404	1980.3	1779.9	0.85	5713	44.39	2.50
010292238-02	OBS	No	143.116654	266.365679	258286.5	10.500	1931.8	-1.0	0.85	5713	26.78	2.50
010292238-03	OBS	No	428.281232	413.785450	1761.1	19.957	14.2	11.4	0.85	5713	3.54	0.58
010292238-05	OBS	No	296.170278	255.519217	1254.0	0.985	14.0	4.4	0.85	5713	3.27	0.95
010292238-06	OBS	No	282.998240	268.571716	1316.9	4.092	18.8	5.0	0.85	5713	3.29	1.01
010292238-07	OBS	No	143.138625	261.775867	2921.0	78.572	12.7	17.0	0.85	5713	7.40	2.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010292238-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
010292238-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
010292238-03	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
010292238-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010292238-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010292238-07	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—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.

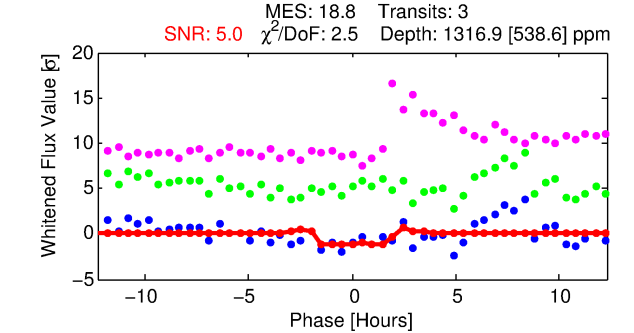
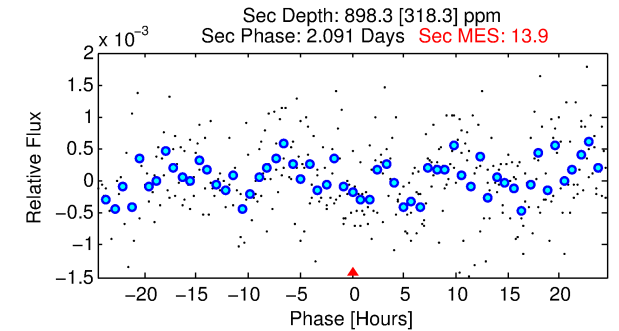
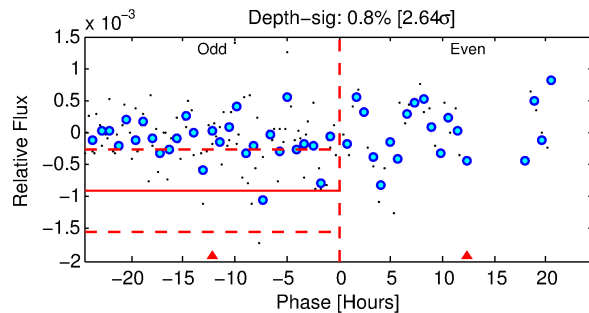
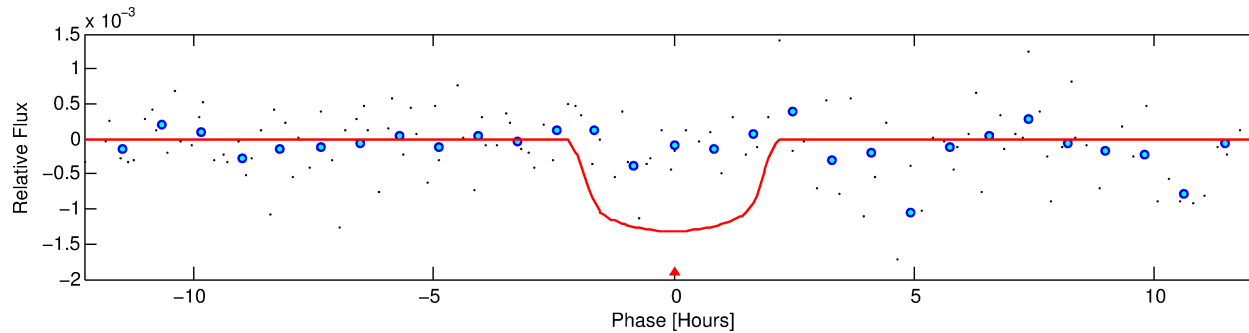
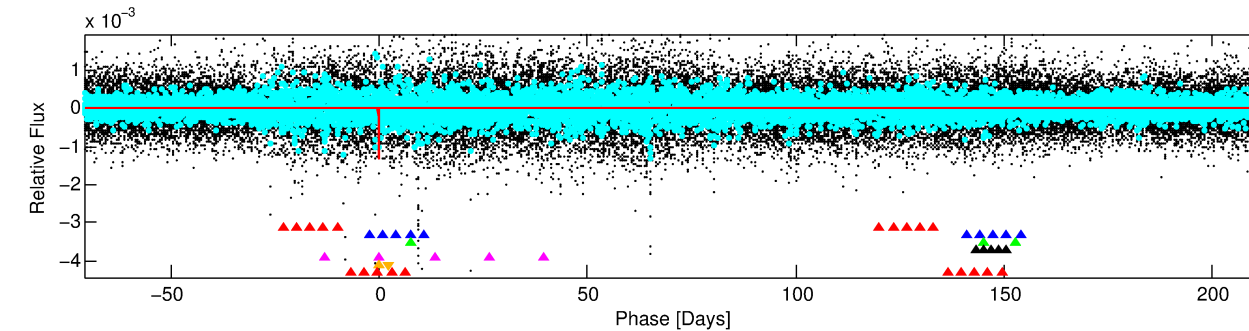
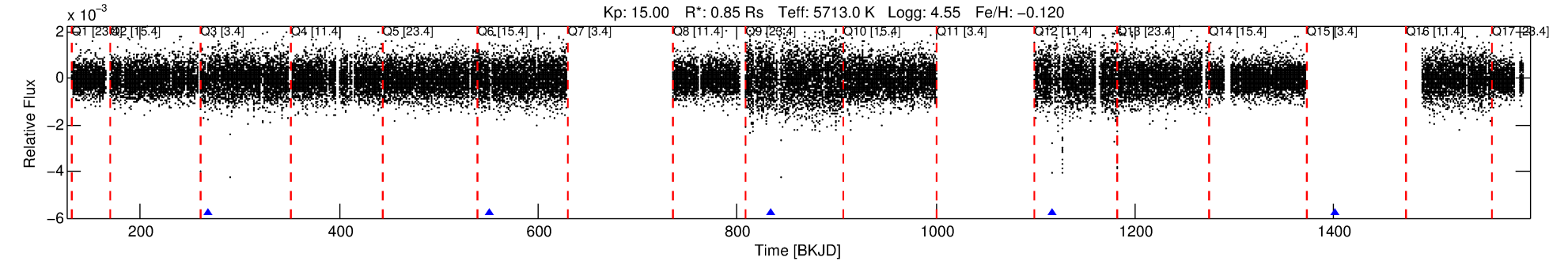
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010292238-06

No Significant Match Found

DV One-Page Summary

KIC: 10292238 Candidate: 6 of 7 Period: 282.998 d
KOI: K03526 Corr: No Ephemeris Match



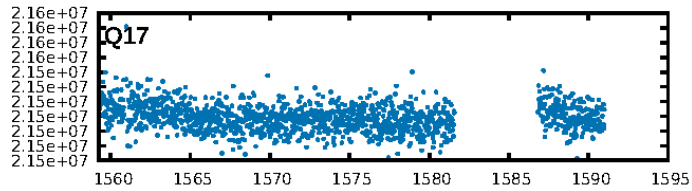
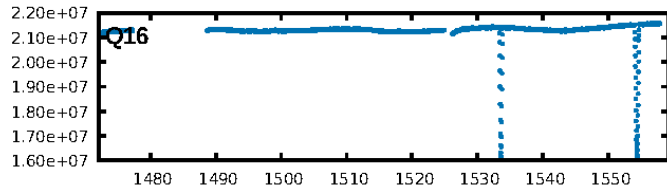
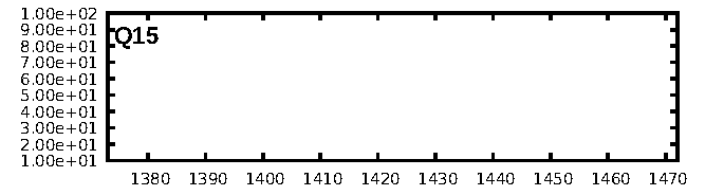
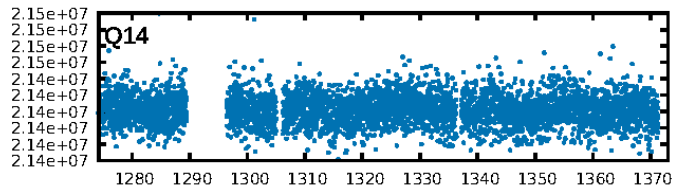
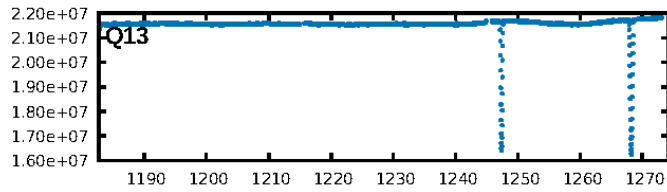
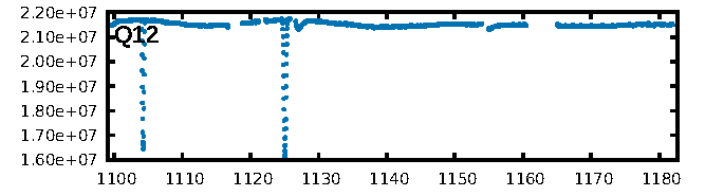
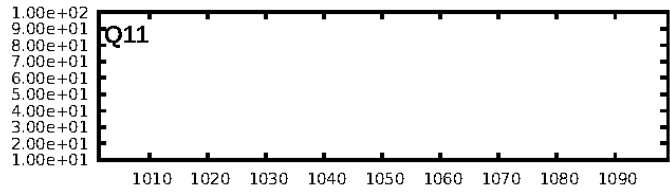
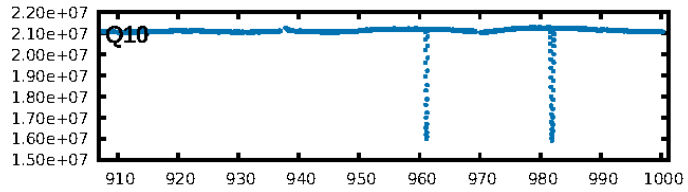
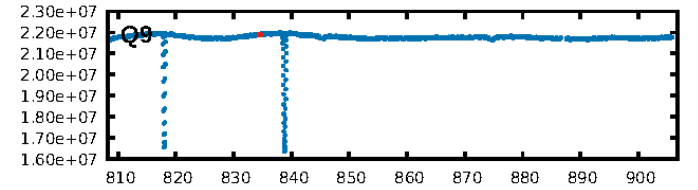
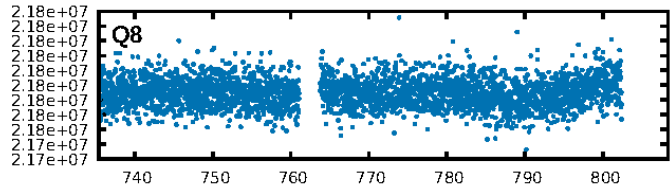
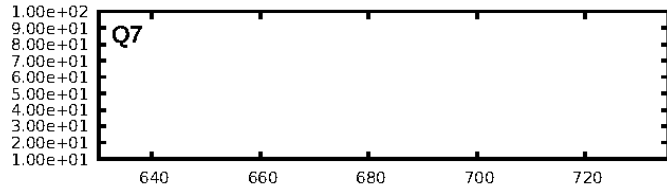
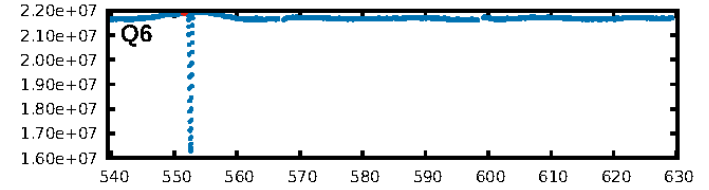
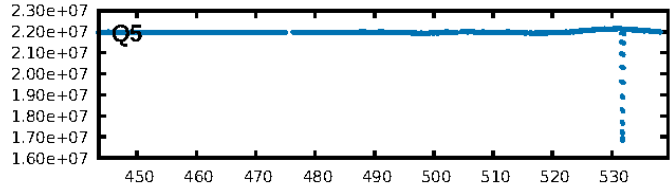
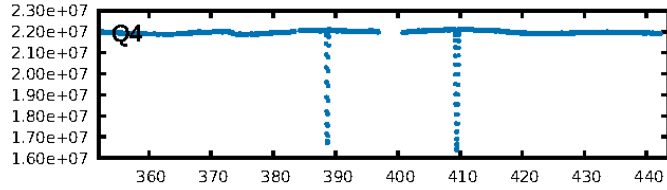
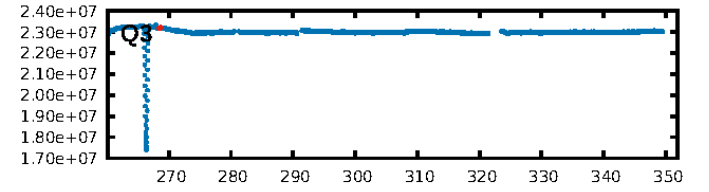
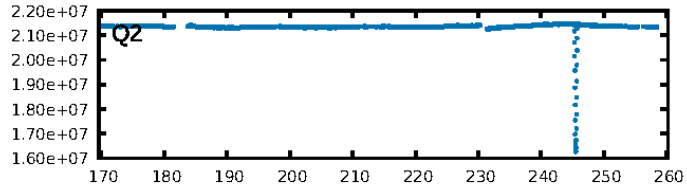
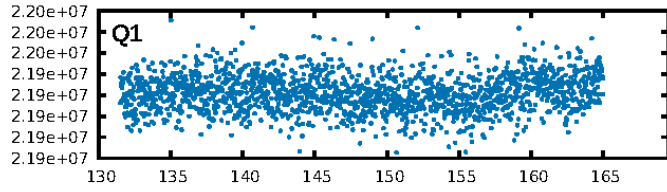
DV Fit Results:

Period = 282.99824 [0.01139] d
Epoch = 268.5717 [0.0148] BKJD
Rp/R* = 0.0355 [0.0455]
a/R* = 404.61 [2175.37]
b = 0.70 [3.98]
Seff = 1.01 [0.33]
Teq = 255 [21] K
Rp = 3.30 [4.30] Re
a = 0.8283 [0.1706] AU
Ag = 31221.45 [81413.32] [0.38 σ]
Teffp = 5250 [3403] K [1.47 σ]

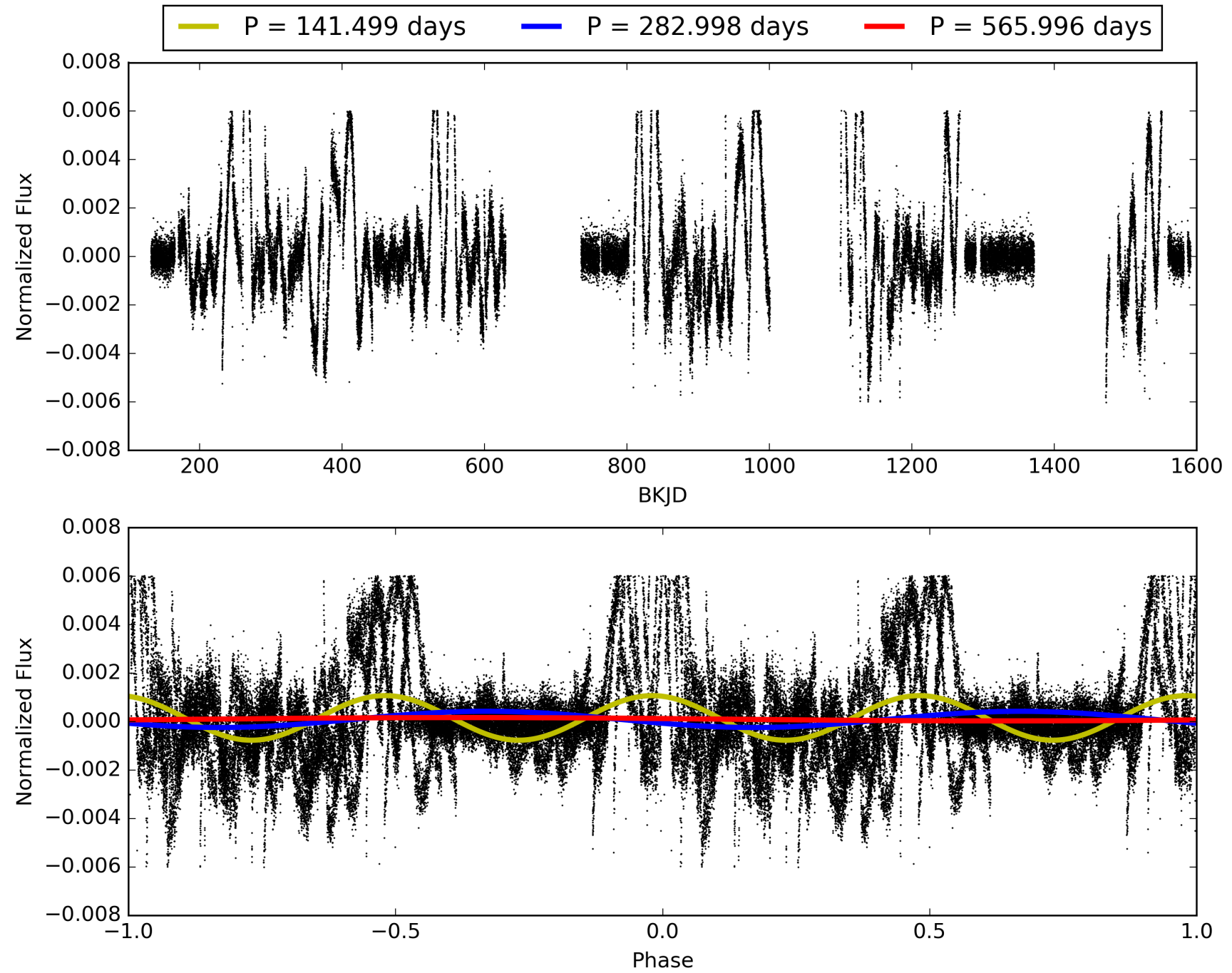
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [42.66 σ]
LongPeriod-sig: 100.0% [10.46 σ]
ModelChiSquare2-sig: 50.3%
ModelChiSquareGof-sig: 95.9%
Bootstrap-pfa: 1.65e-43
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.5412
Centroid-sig: 16.3%
Centroid-so: 1.800 arcsec [1.38 σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 0.33 [1/3]

TCE 010292238-06, PDC Light Curves

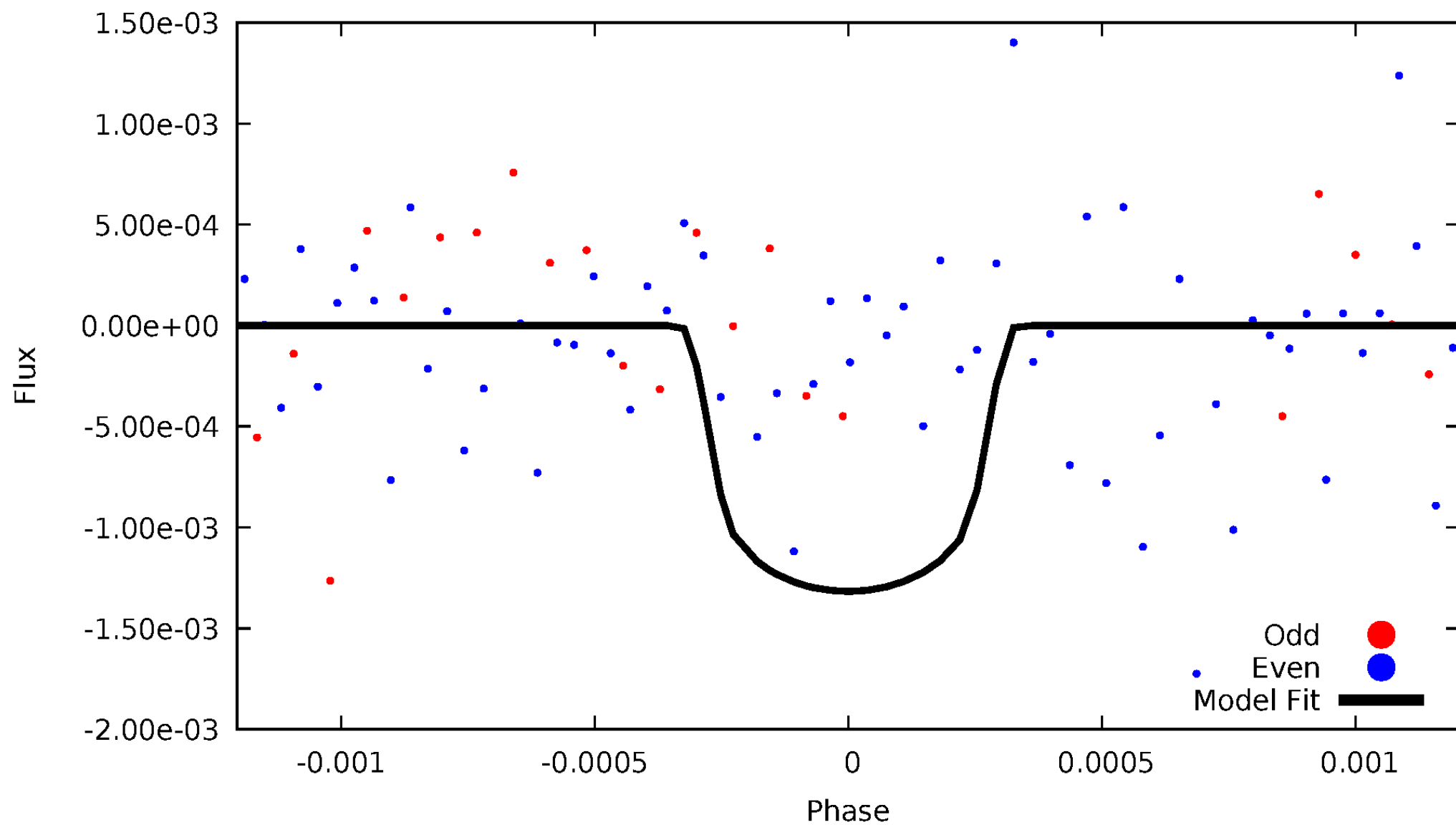


TCE 010292238-06



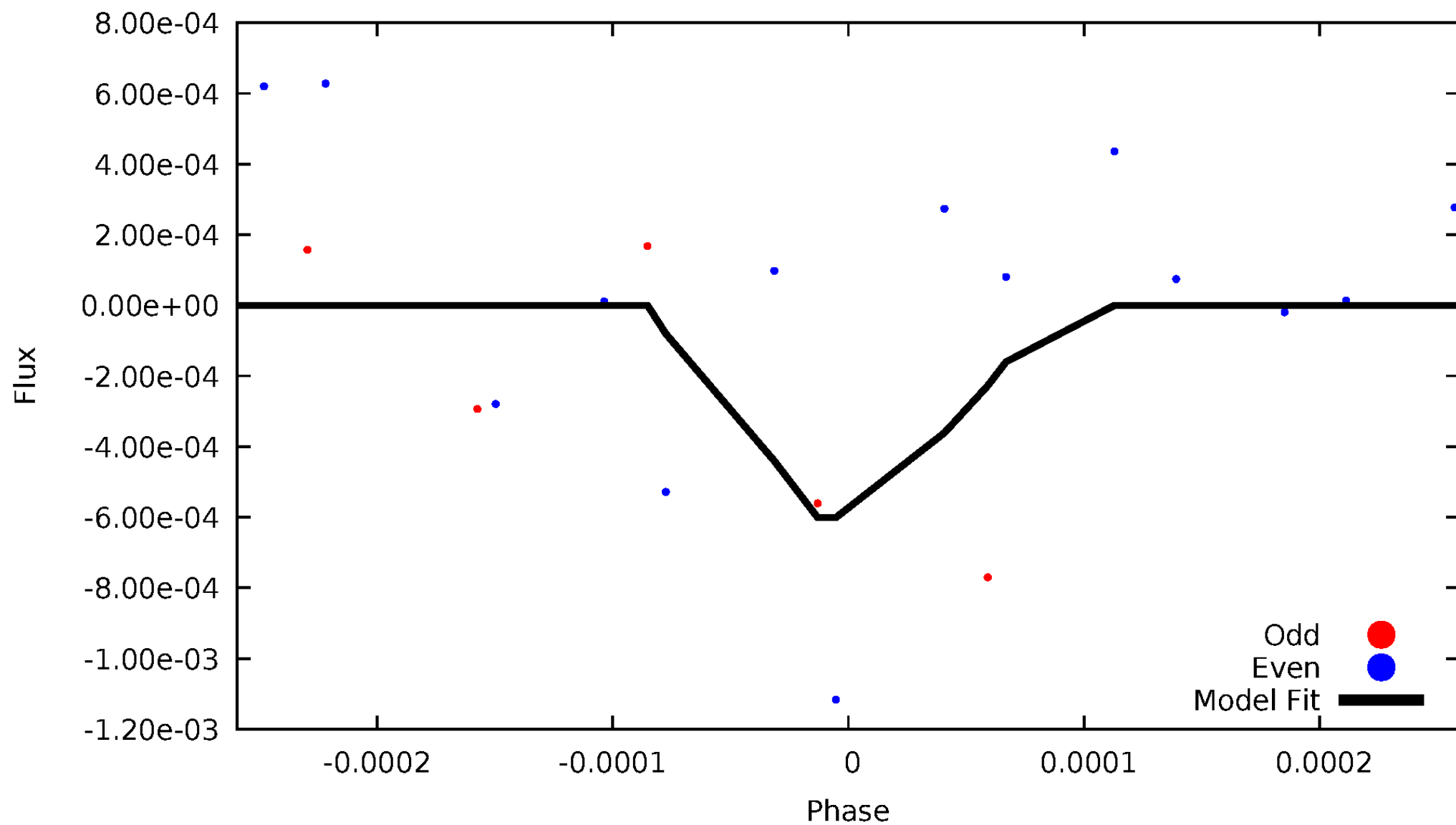
DV Odd/Even

TCE 010292238-06



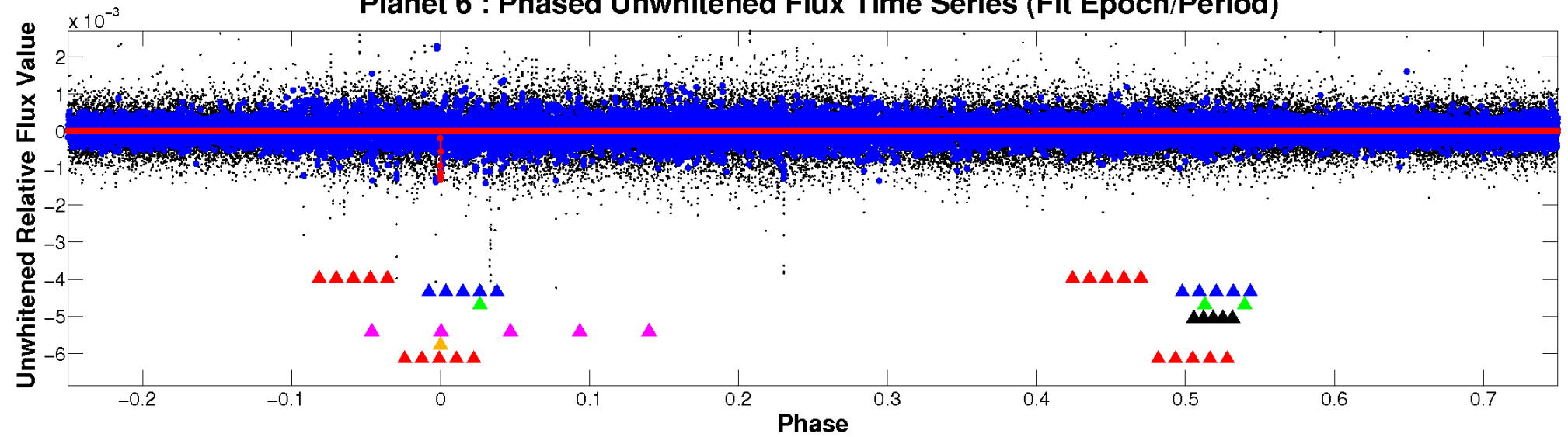
ALT Odd/Even

TCE 010292238-06

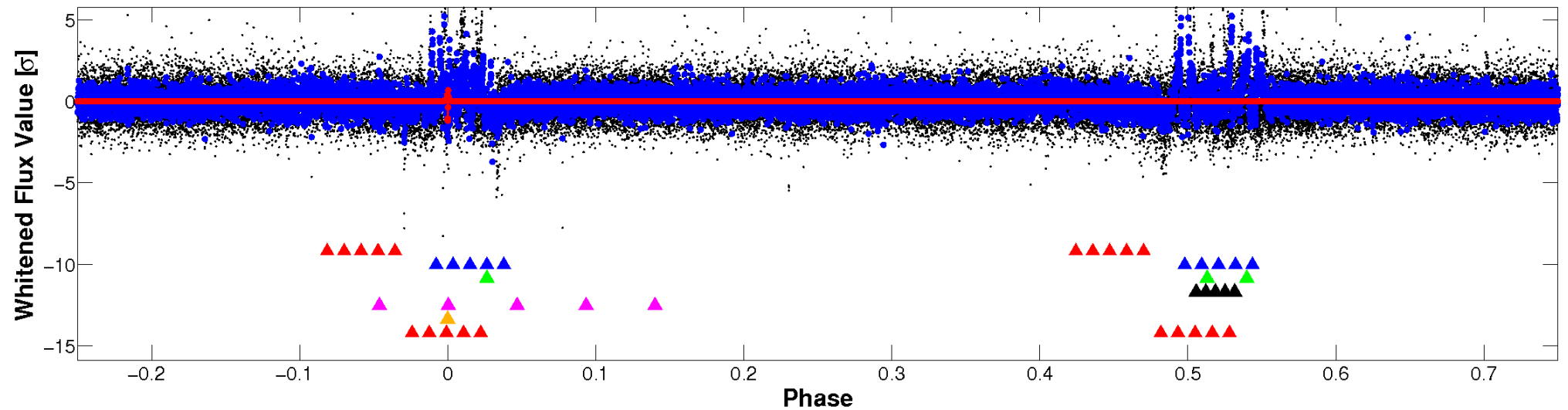


Non-Whitened Vs. Whitened Light Curve

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



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



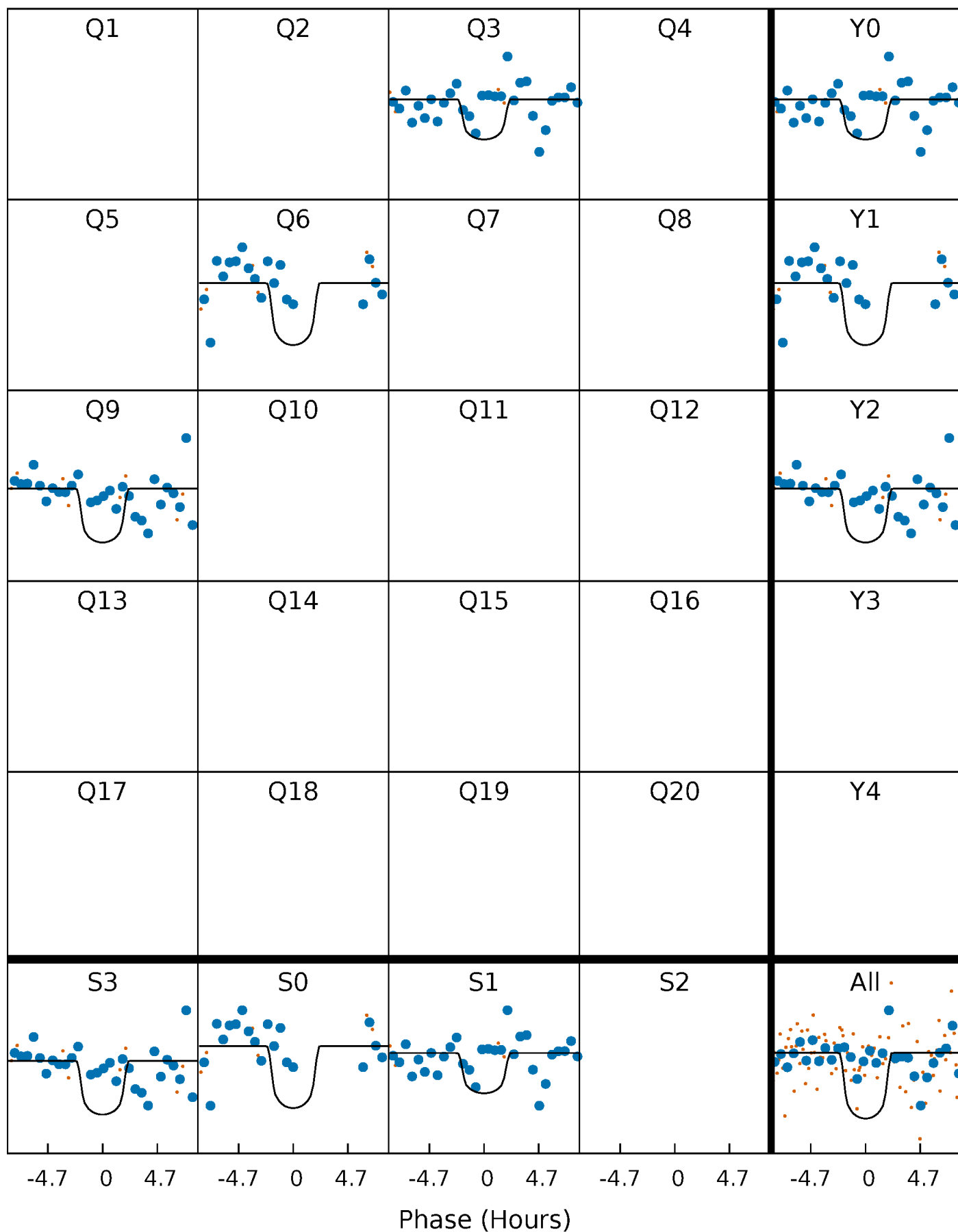
PDC Quarter-Phased Transit Curves

TCE 010292238-06 P=282.998240 Days $T_0=268.571716$ (BKJD)



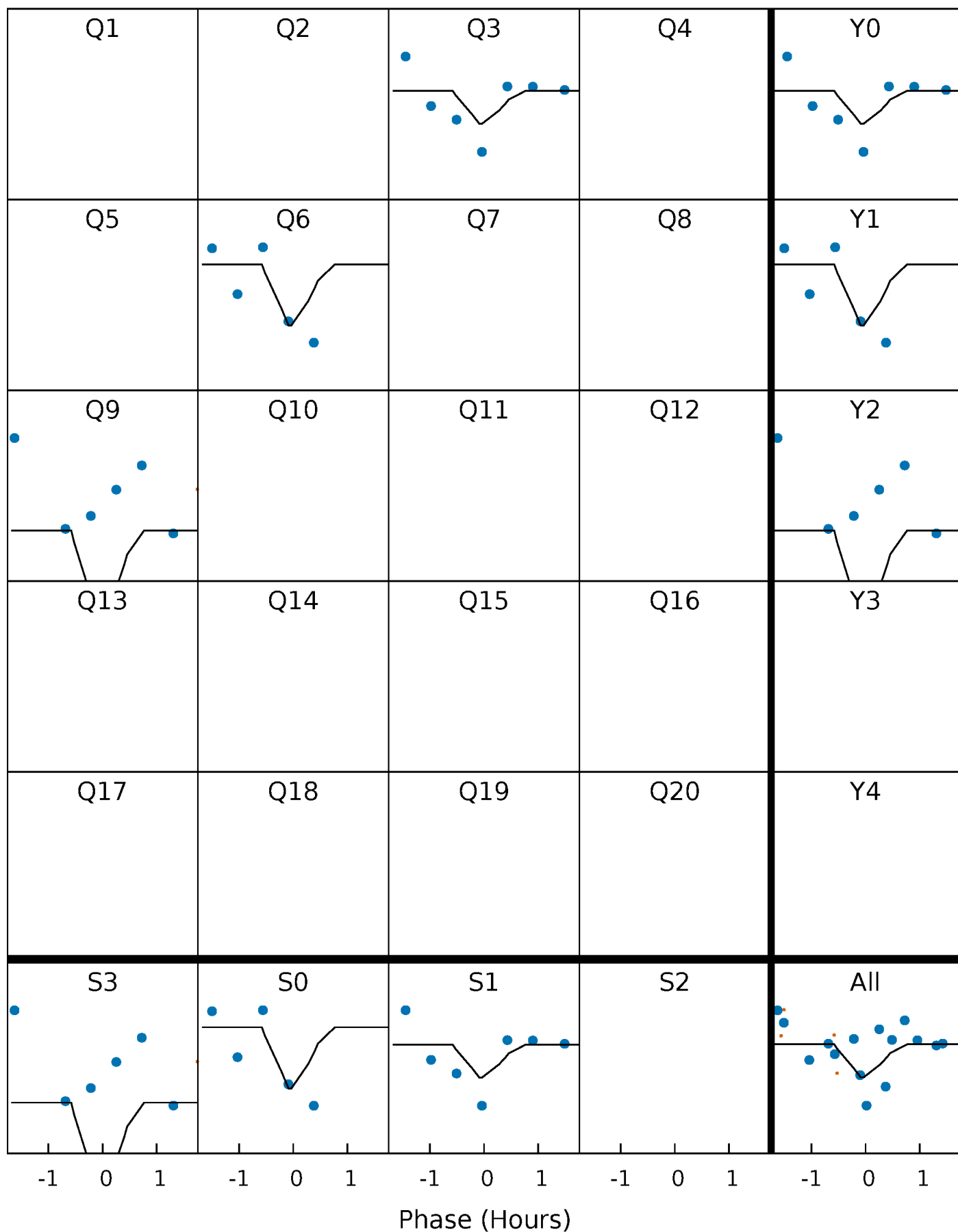
DV Quarter-Phased Transit Curves

TCE 010292238-06 $P=282.998240$ Days $T_0=268.571716$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

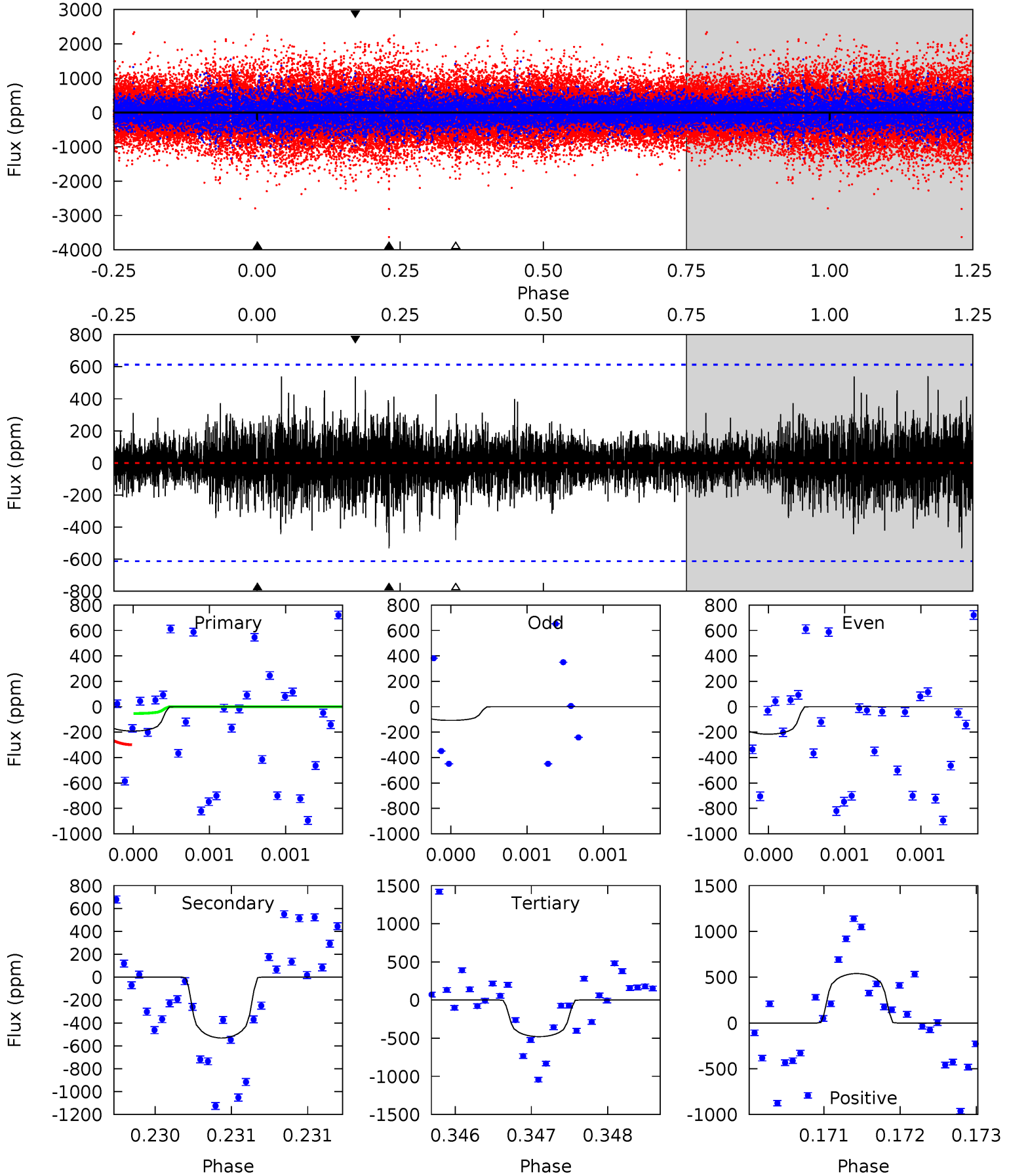
TCE 010292238-06 $P=283.007394$ Days $T_0=268.542799$ (BKJD)



DV Model-Shift Uniqueness Test

010292238-06, P = 282.998240 Days, E = 268.571716 Days

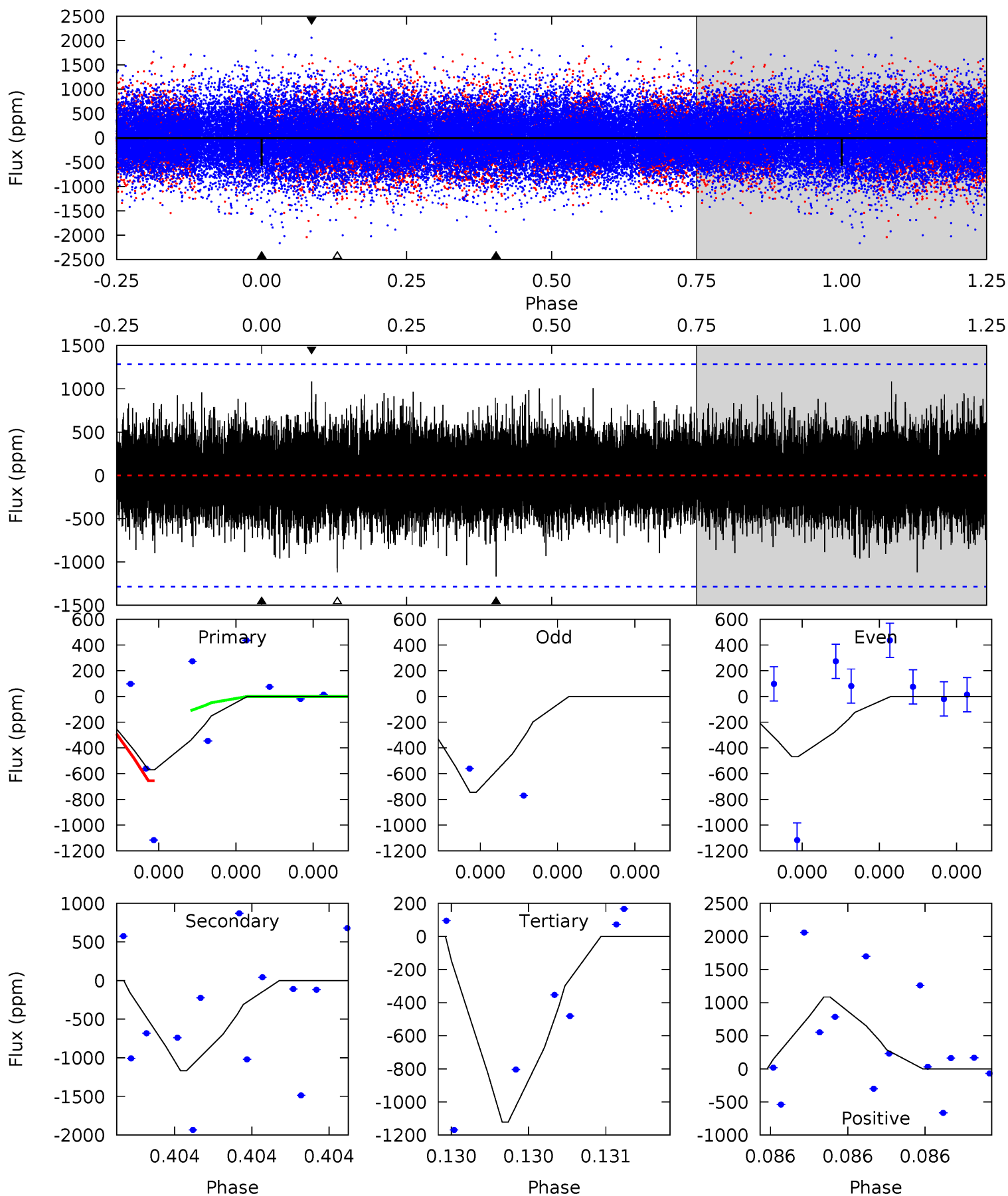
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.72	4.78	4.32	4.85	5.52	3.39	0.97	-2.60	-3.13	0.47	-0.07	0.40	0.92	0.50	1.09



Alt Model-Shift Uniqueness Test

010292238-06, P = 283.007394 Days, E = 268.542799 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.59	5.32	5.11	4.95	5.85	3.89	1.16	-2.52	-2.35	0.21	0.37	0.69	0.69	0.48	1.24



Stellar Parameters For KIC 010292238

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5713^{+152}_{-169}	$4.554^{+0.042}_{-0.168}$	$-0.120^{+0.300}_{-0.300}$	$0.851^{+0.205}_{-0.073}$	$0.948^{+0.094}_{-0.115}$	$2.164^{+0.371}_{-0.973}$
	+3%/-3%	+1%/-4%	+250%/-250%	+24%/-9%	+10%/-12%	+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 010292238-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-532 ± 111	$4.51^{+3.87}_{-2.95}$	364^{+20}_{-16}	4227^{+2611}_{-806}	9582^{+71892}_{-6960}
Alt.	-1166 ± 219	$3.99^{+3.89}_{-2.61}$	363^{+24}_{-16}	5236^{+4075}_{-1250}	$27008^{+192120}_{-20221}$

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 $A_{obs} \gg 1.0$

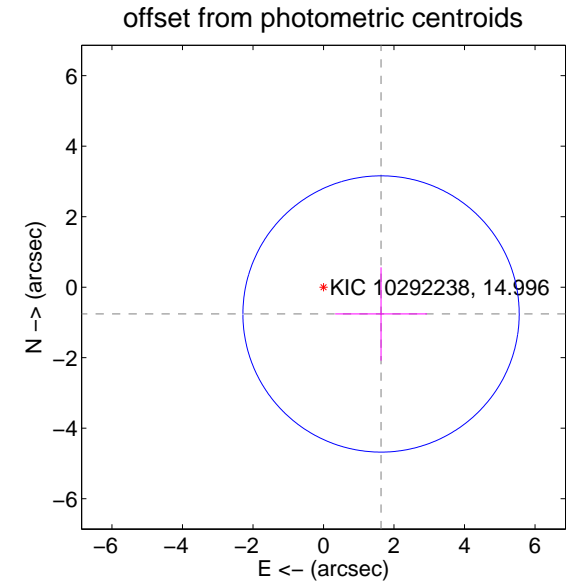
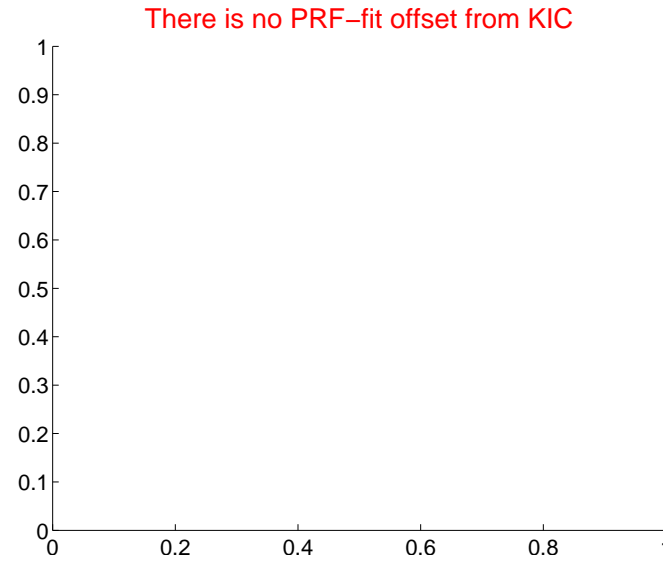
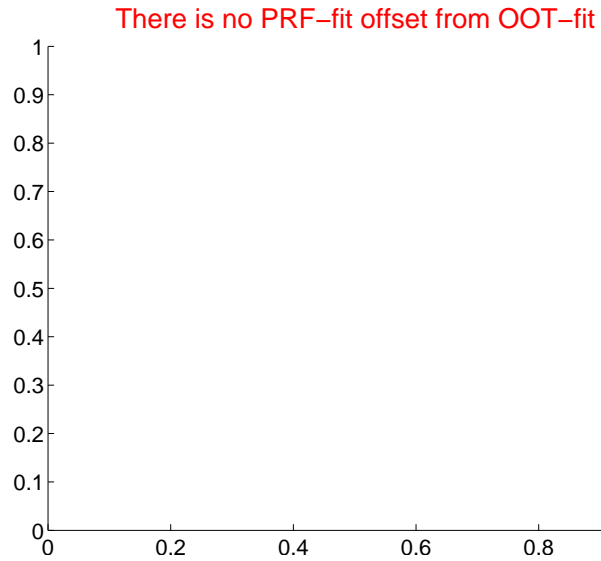
DV Centroid Data

Supplemental centroid analysis for 010292238-06. Kepler magnitude: 15.00. Transit SNR 4.95

There are 0 quarters with good PRF difference image offsets

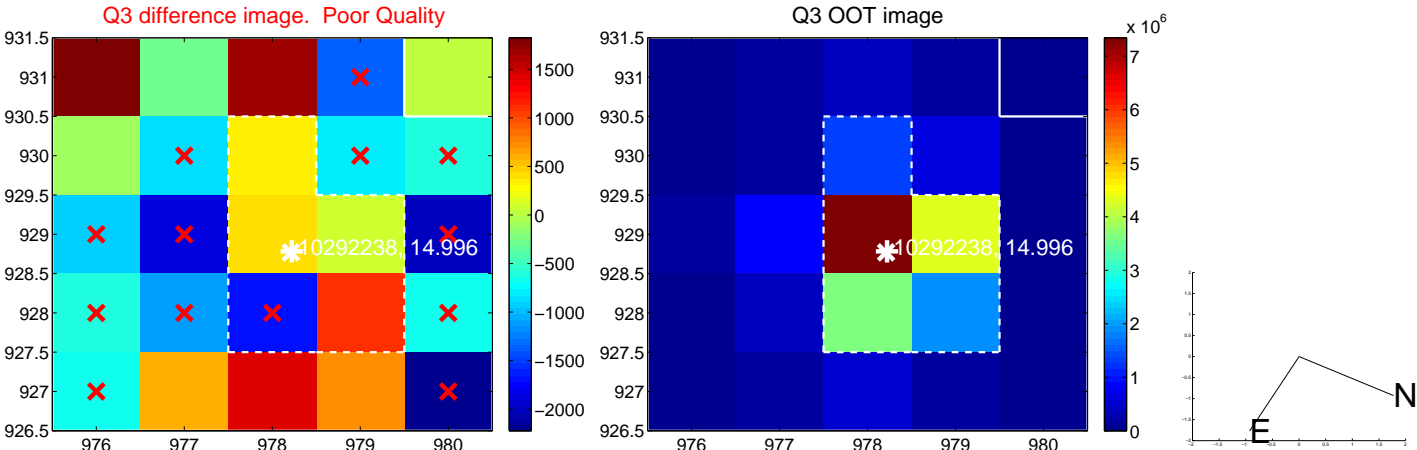
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	1.80 ± 1.31	1.38	-1.63 ± 1.30	-0.76 ± 1.32



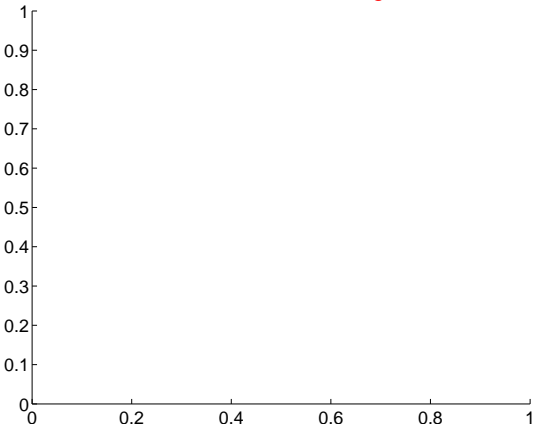
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

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

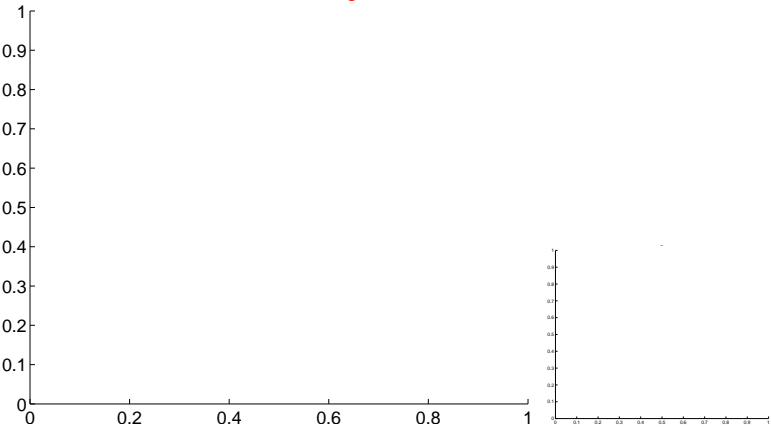


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

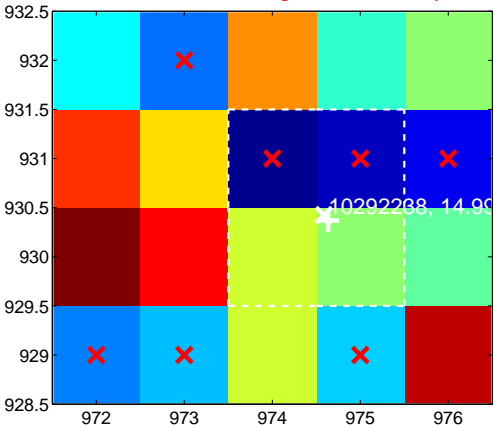
Q5 no difference image



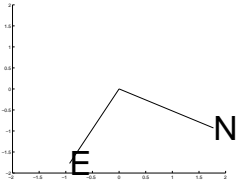
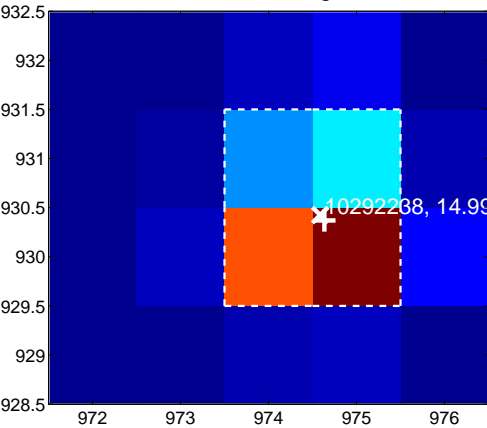
Q5 no OOT image



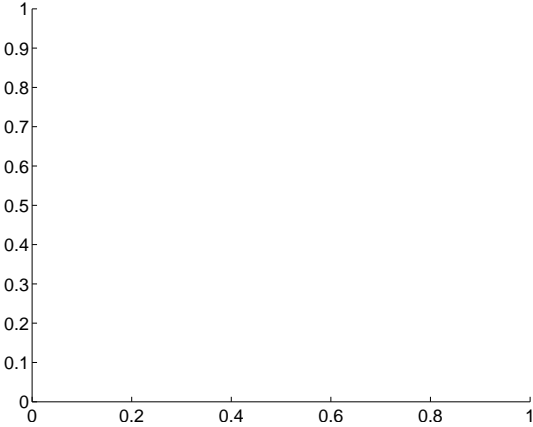
Q6 difference image. Poor Quality



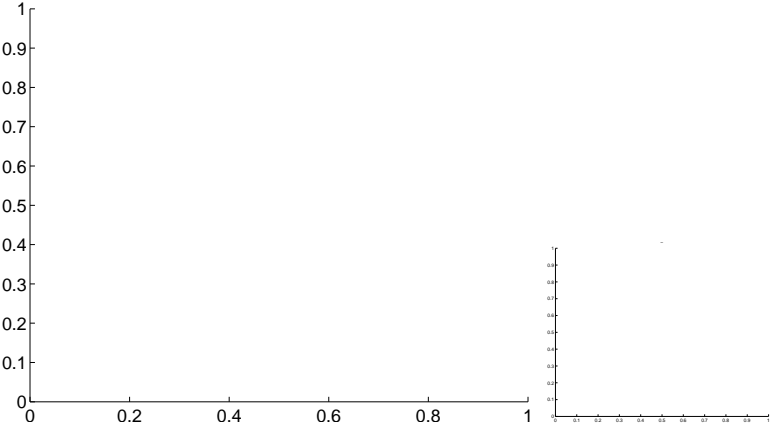
Q6 OOT image



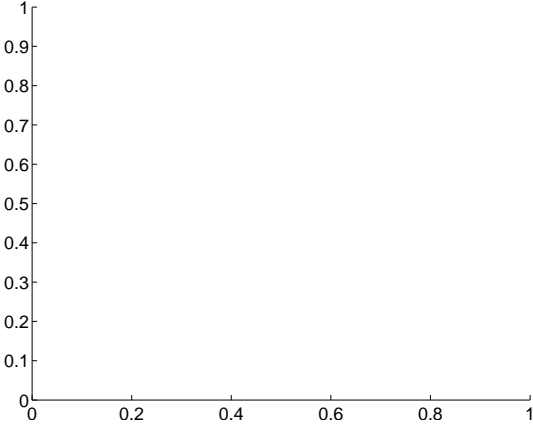
Q7 no difference image



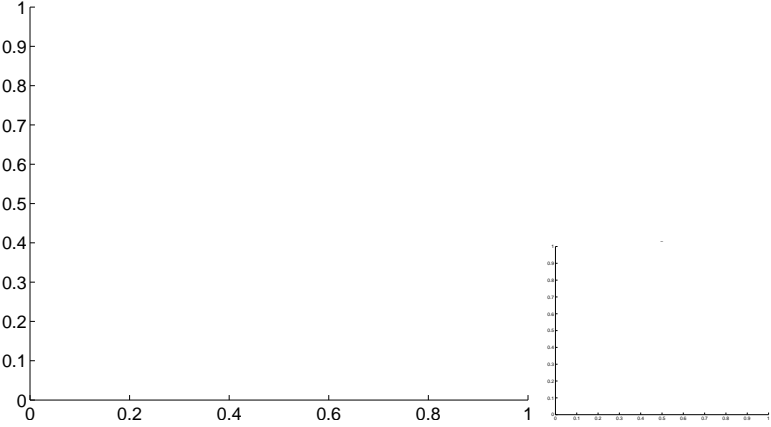
Q7 no OOT image



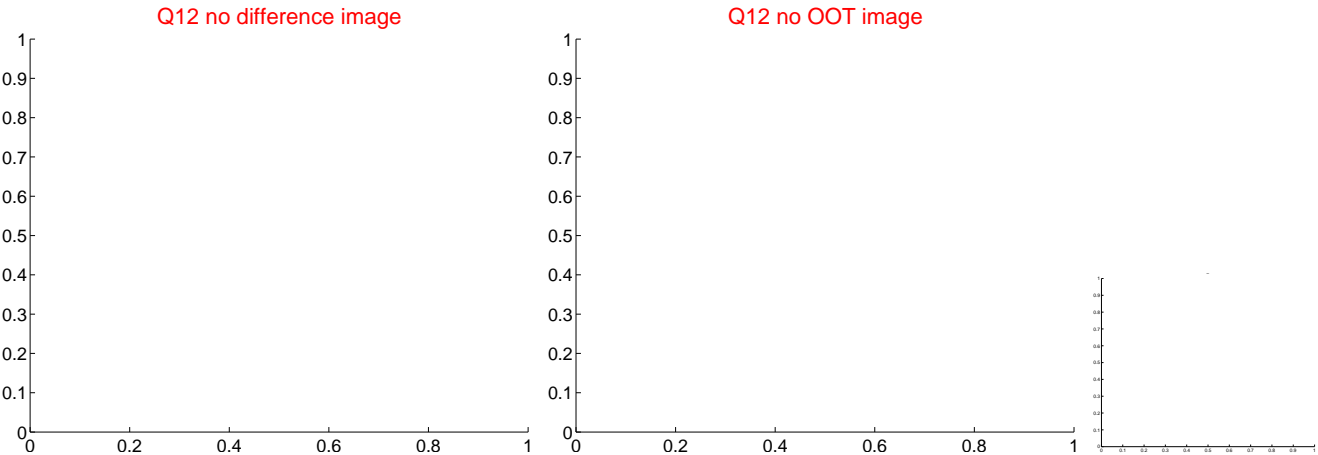
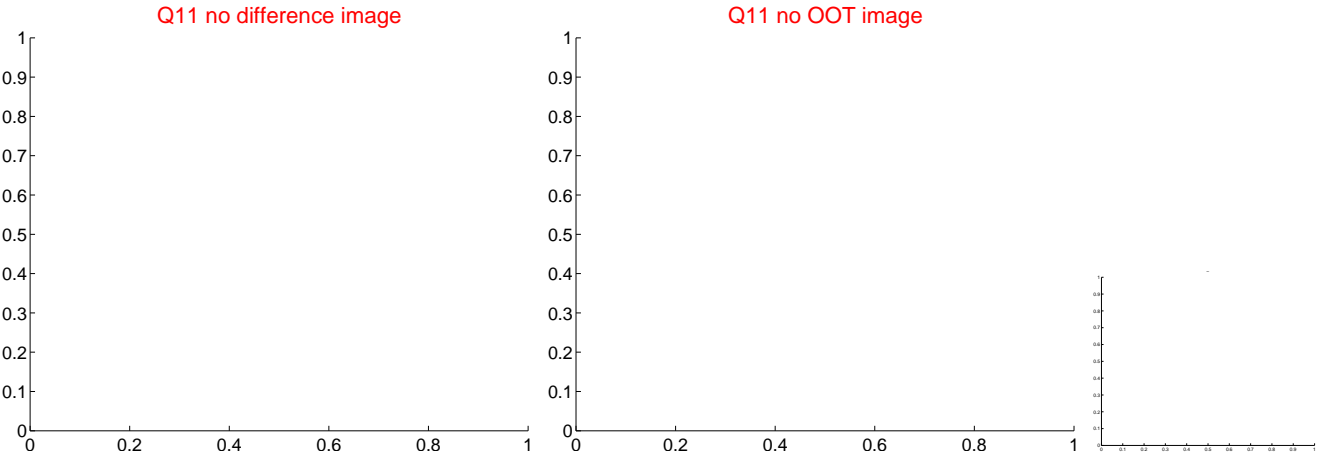
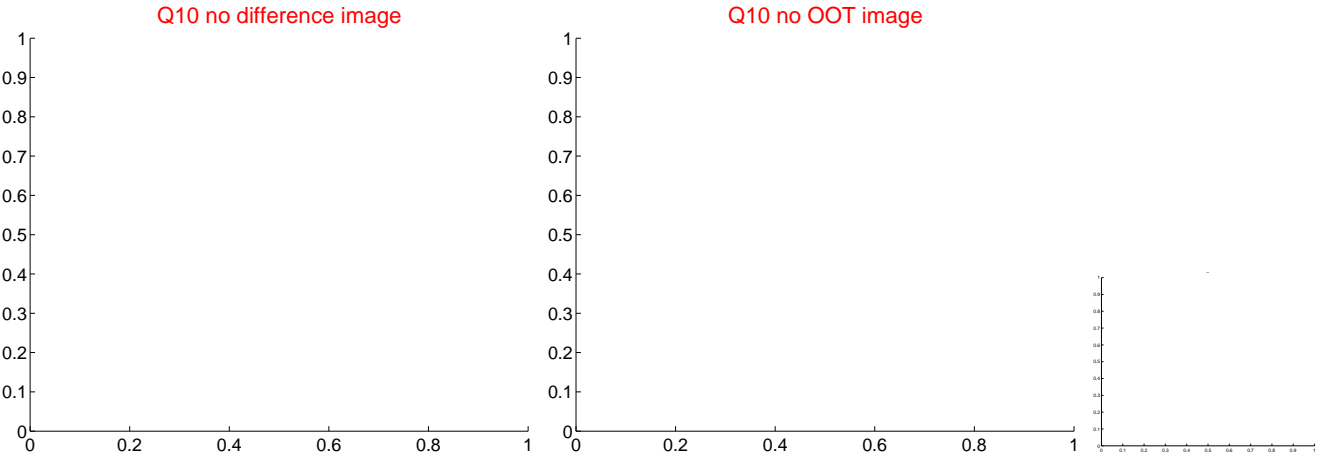
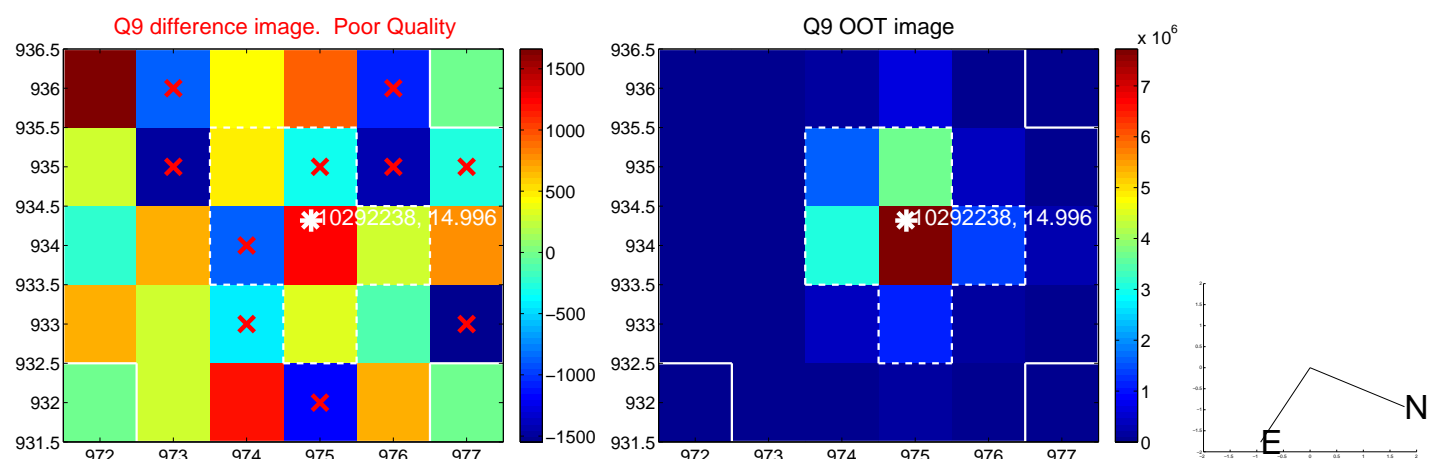
Q8 no difference image



Q8 no OOT image



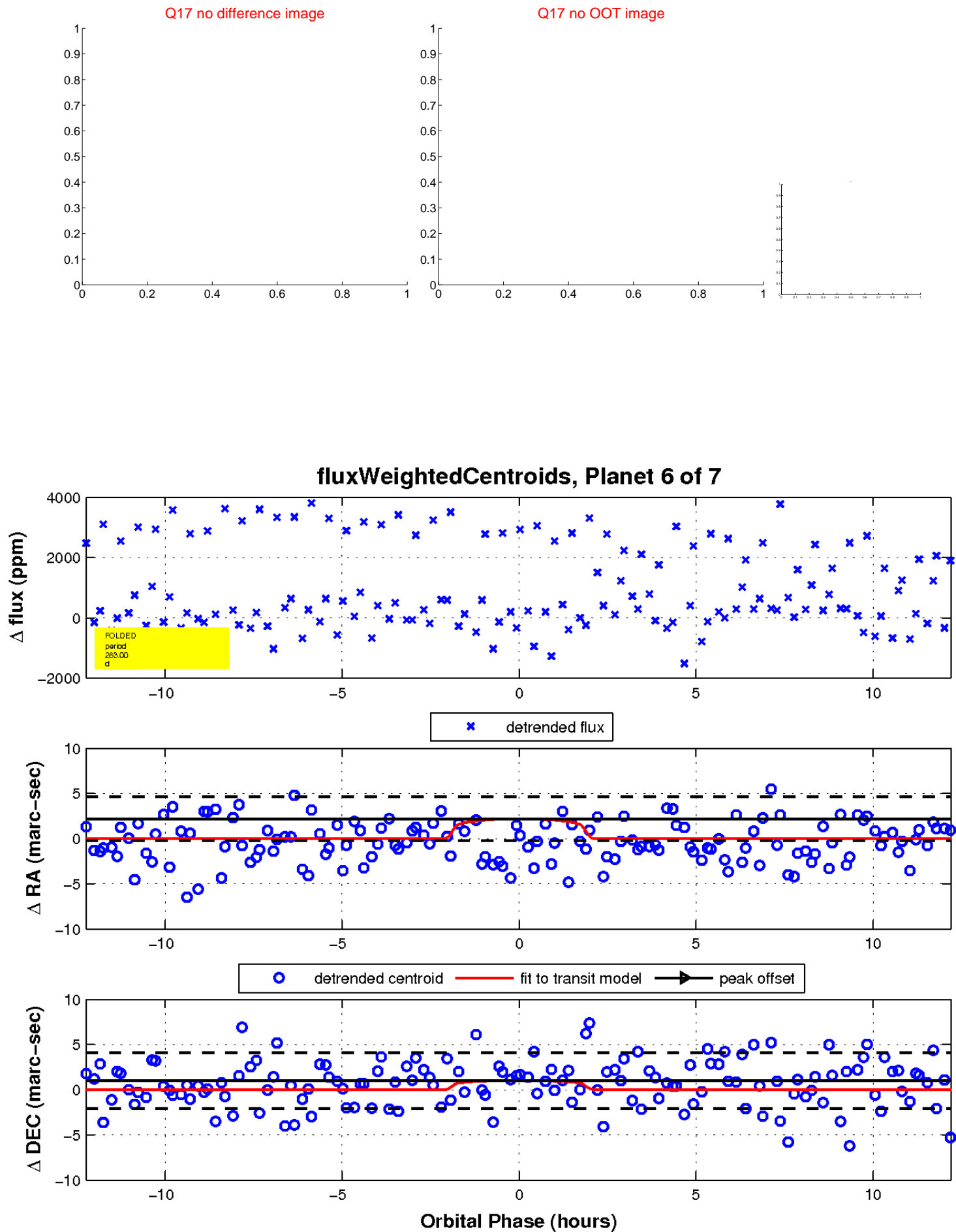
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

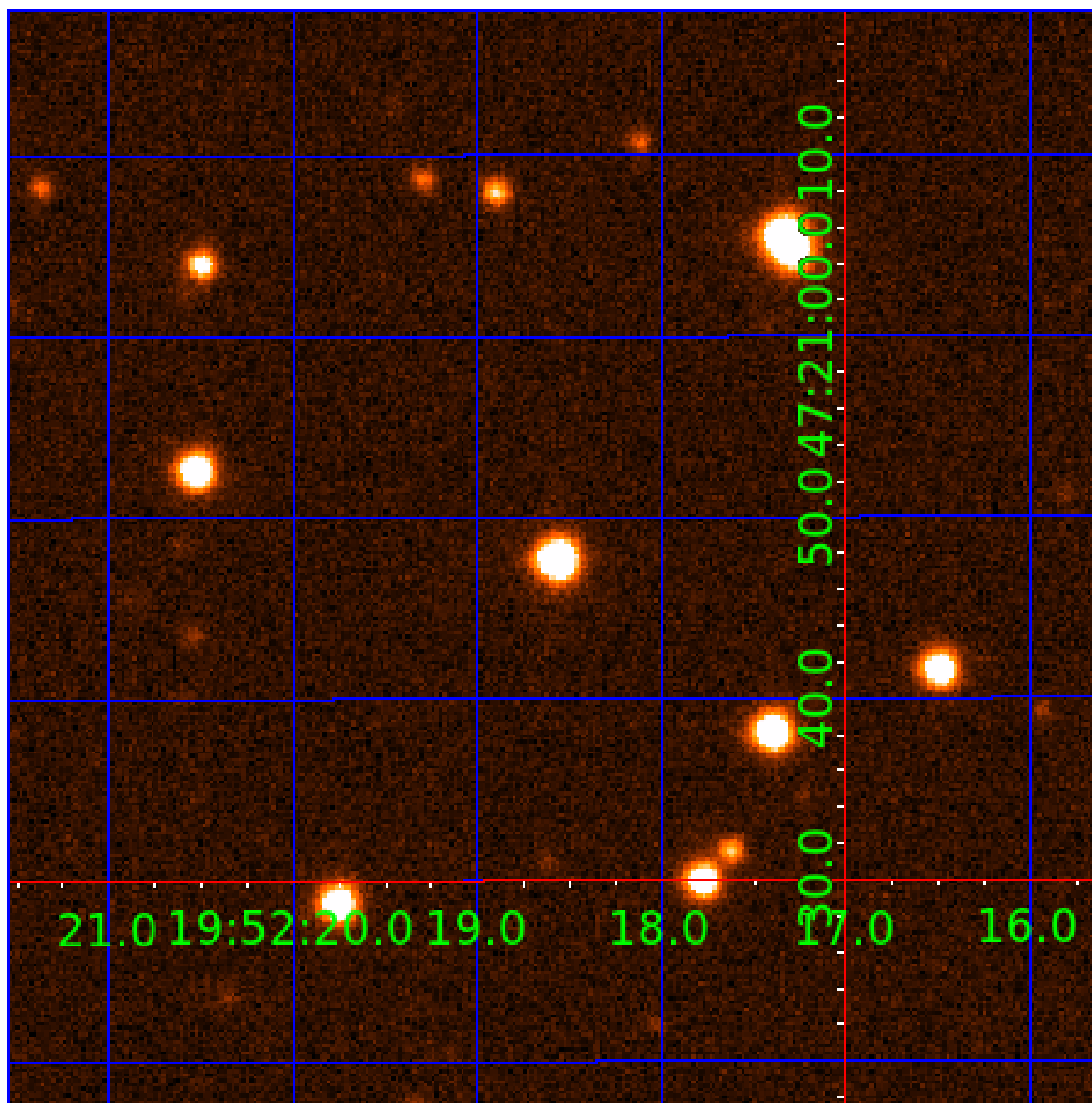


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010292238

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})
010292238-01	OBS	3526.01	143.119259	245.539172	244088.3	11.404	1980.3	1779.9	0.85	5713	44.39	2.50
010292238-02	OBS	No	143.116654	266.365679	258286.5	10.500	1931.8	-1.0	0.85	5713	26.78	2.50
010292238-03	OBS	No	428.281232	413.785450	1761.1	19.957	14.2	11.4	0.85	5713	3.54	0.58
010292238-05	OBS	No	296.170278	255.519217	1254.0	0.985	14.0	4.4	0.85	5713	3.27	0.95
010292238-06	OBS	No	282.998240	268.571716	1316.9	4.092	18.8	5.0	0.85	5713	3.29	1.01
010292238-07	OBS	No	143.138625	261.775867	2921.0	78.572	12.7	17.0	0.85	5713	7.40	2.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010292238-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT—HAS_SEC_TCE
010292238-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS
010292238-03	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
010292238-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010292238-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
010292238-07	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—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.

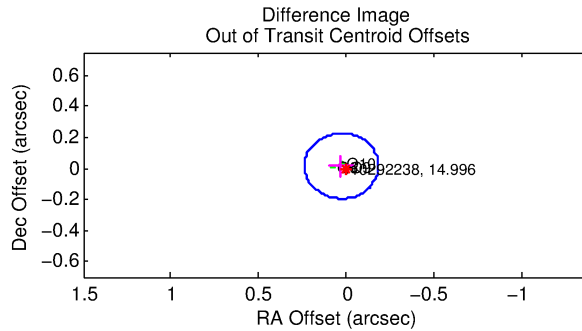
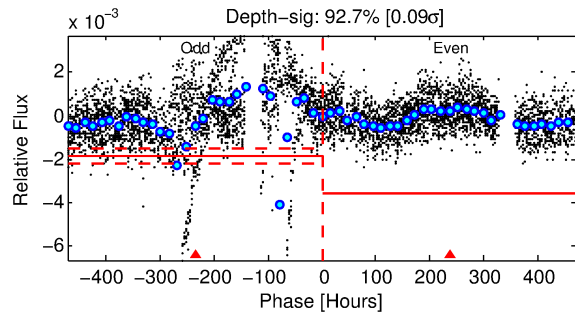
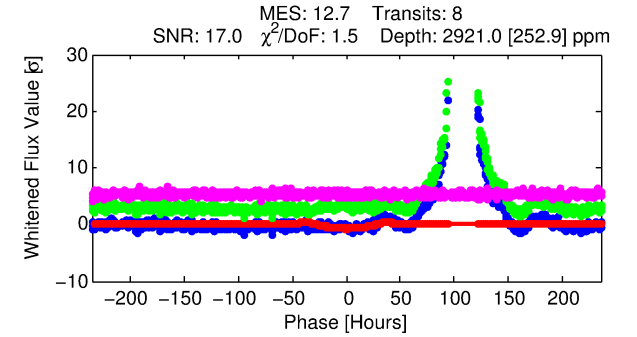
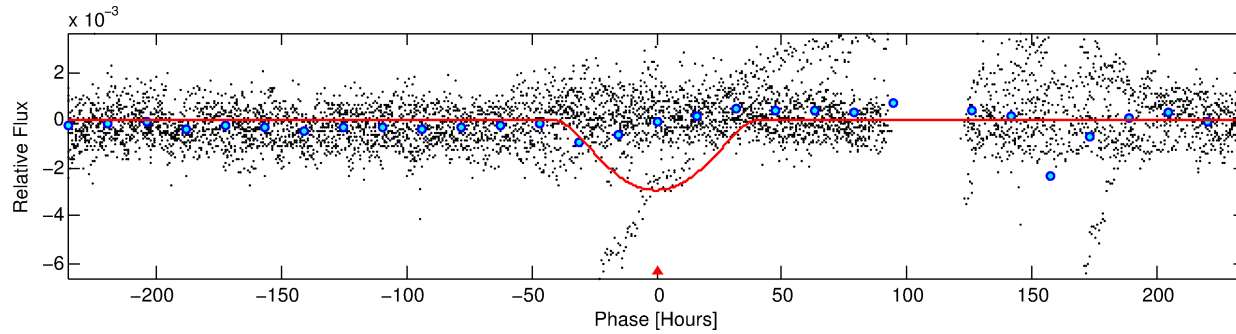
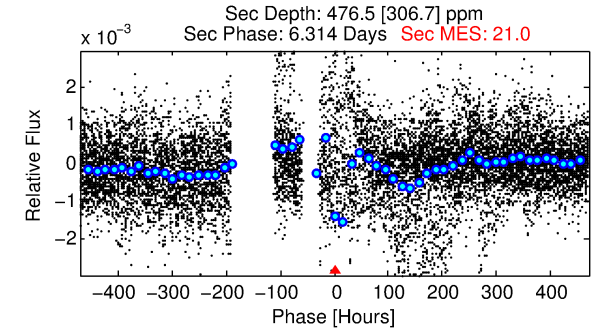
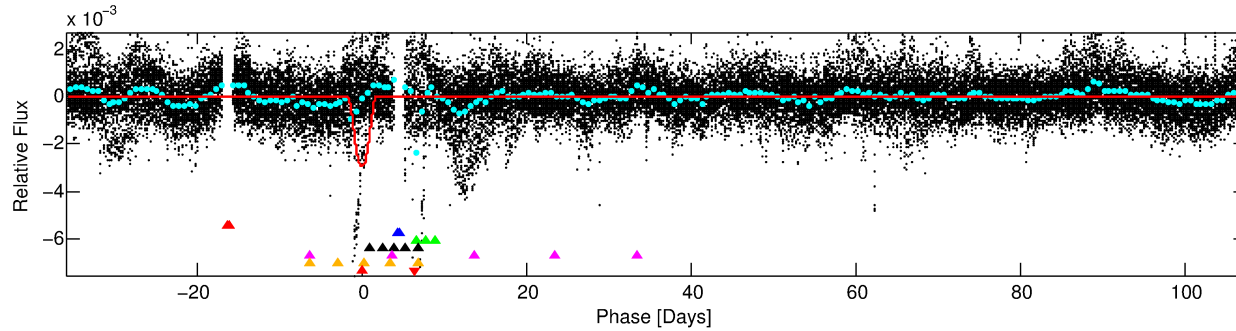
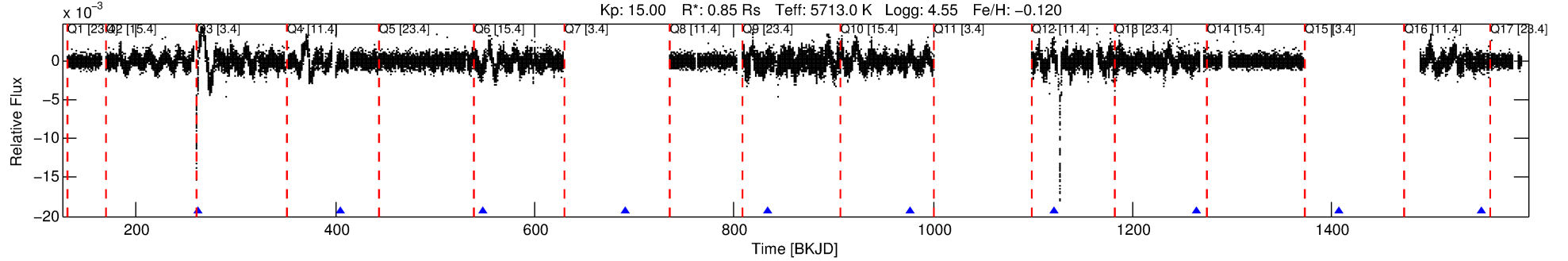
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010292238-07

No Significant Match Found

DV One-Page Summary

KIC: 10292238 Candidate: 7 of 7 Period: 143.139 d
KOI: K03526 Corr: No Ephemeris Match



DV Fit Results:

Period = 143.13863 [0.01476] d
Epoch = 261.7759 [0.0735] BKJD
Rp/R* = 0.0797 [0.0486]
a/R* = 6.42 [1.01]
b = 0.98 [0.08]
Seff = 2.50 [0.82]
Teq = 321 [26] K
Rp = 7.40 [4.85] Re
a = 0.5258 [0.1083] AU
Ag = 1323.45 [1867.71] [0.71 σ]
Teffp = 2990 [1034] K [2.58 σ]

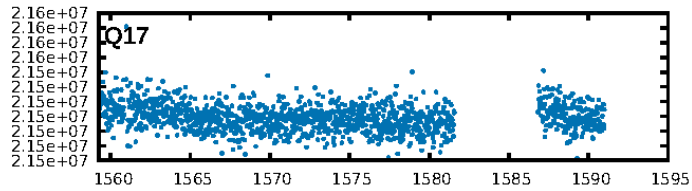
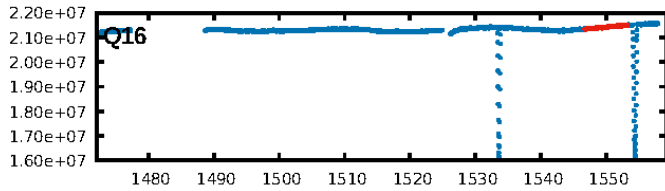
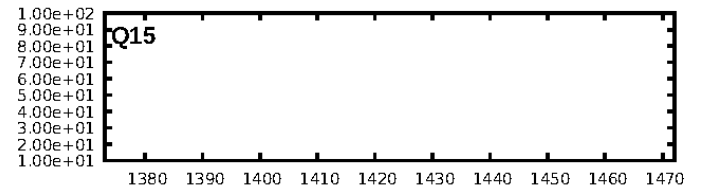
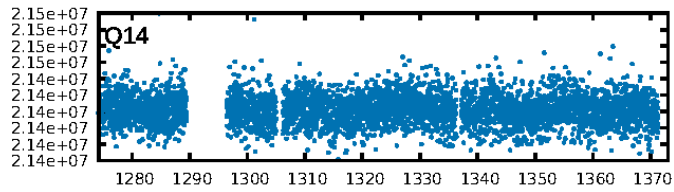
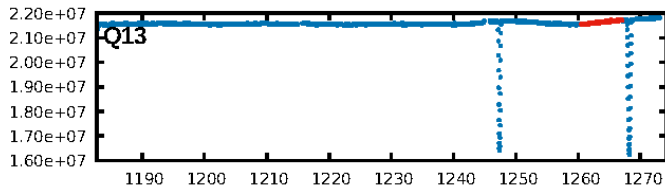
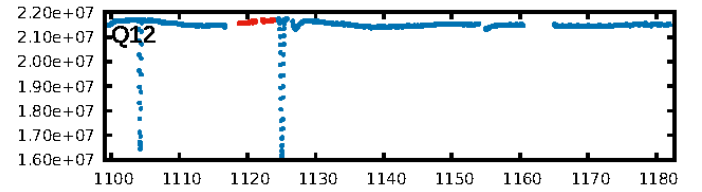
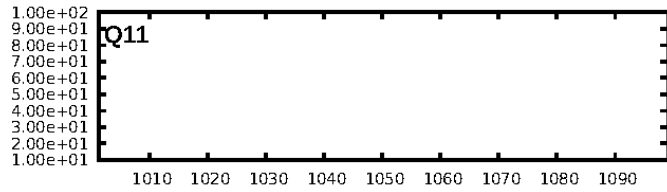
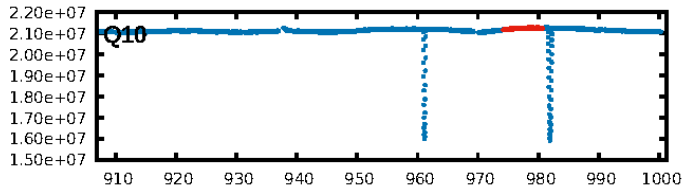
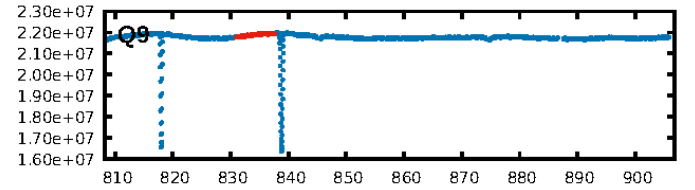
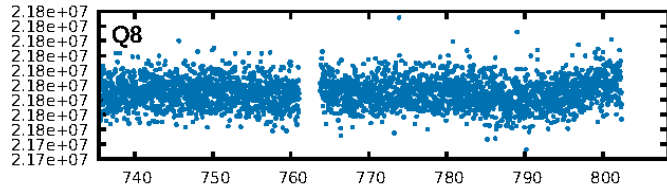
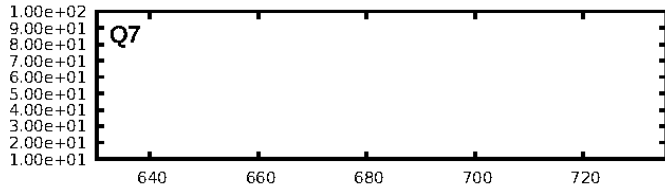
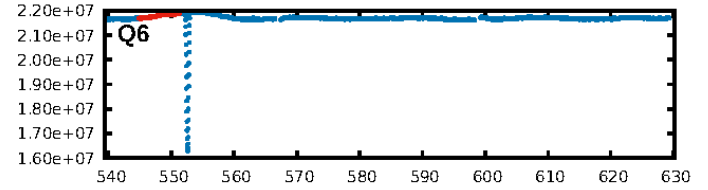
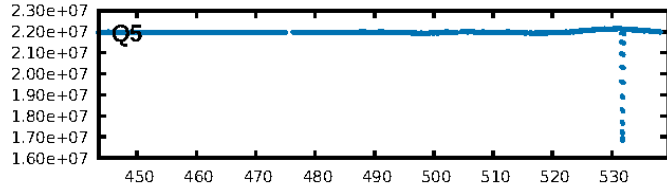
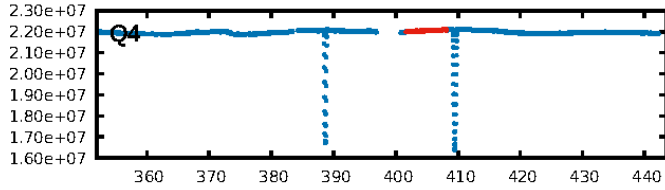
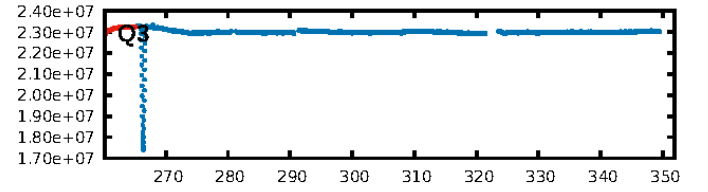
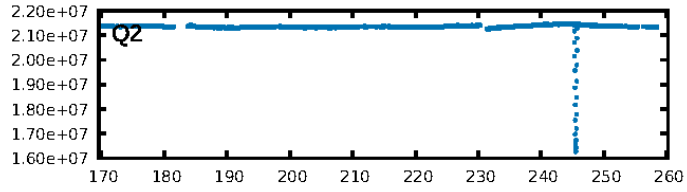
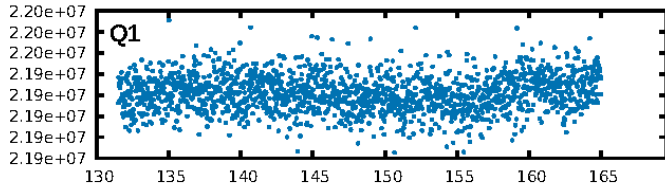
DV Diagnostic Results:

ShortPeriod-sig: 0.5% [0.01 σ]
LongPeriod-sig: 100.0% [42.66 σ]
ModelChiSquare2-sig: 0.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.40e-26
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: -1.3
Centroid-sig: 18.6%
Centroid-so: 0.145 arcsec [1.17 σ]
OotOffset-rm: 0.033 arcsec [0.47 σ]
KicOffset-rm: 0.183 arcsec [1.88 σ]
OotOffset-st: 2/0/0/1 [3]
KicOffset-st: 2/0/0/1 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 0.00 [0/3]

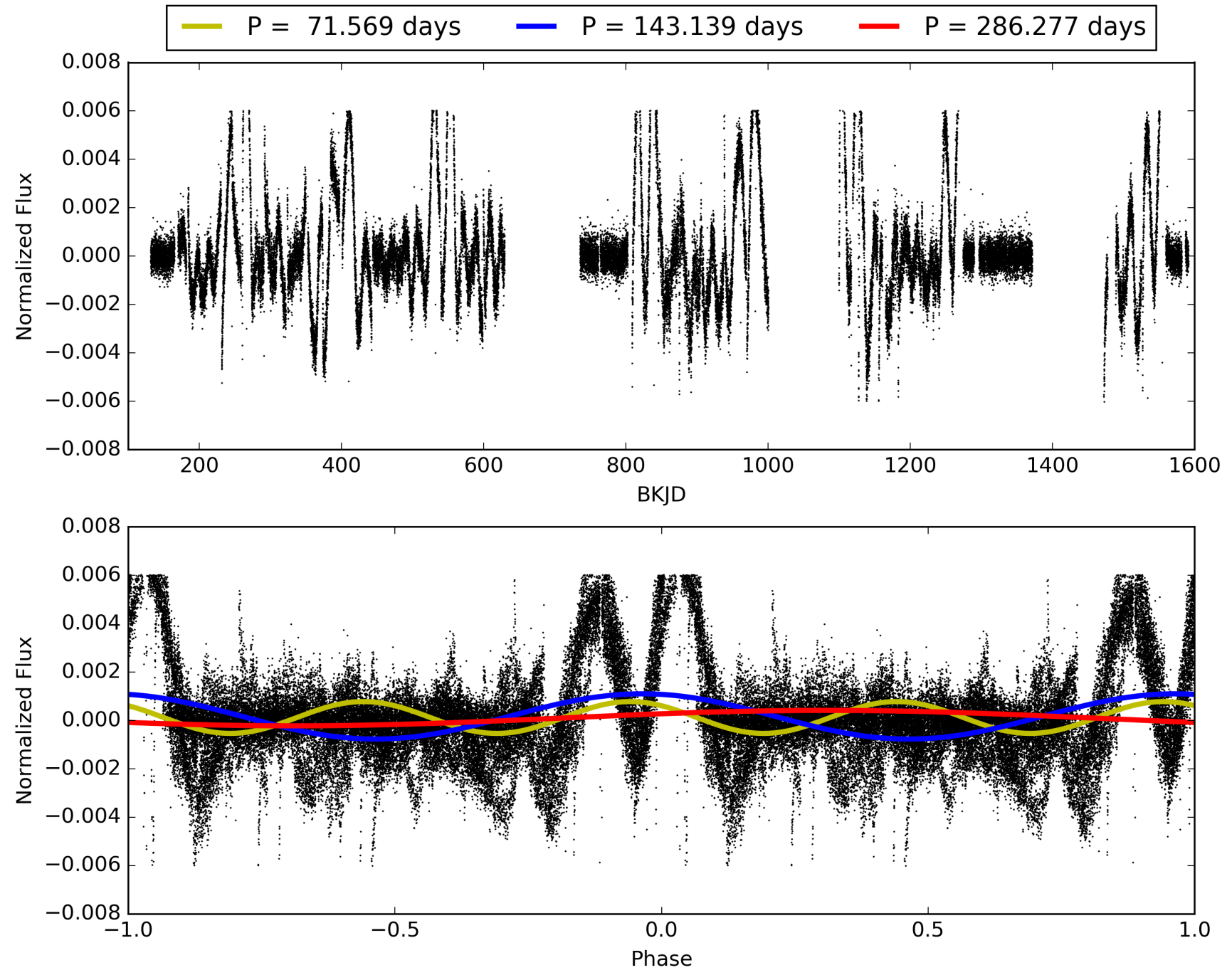
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 17:04:43 Z

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

TCE 010292238-07, PDC Light Curves

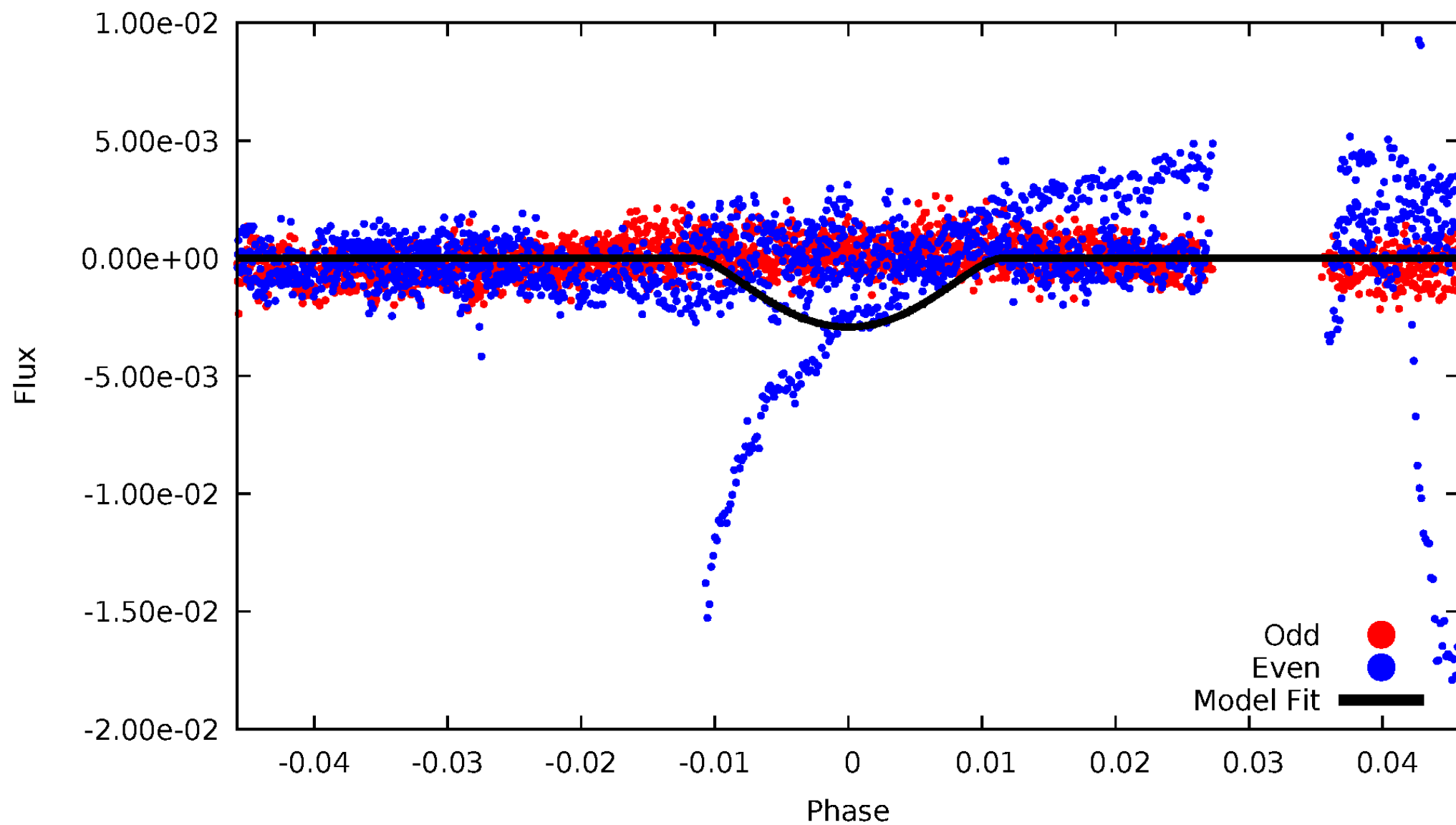


TCE 010292238-07



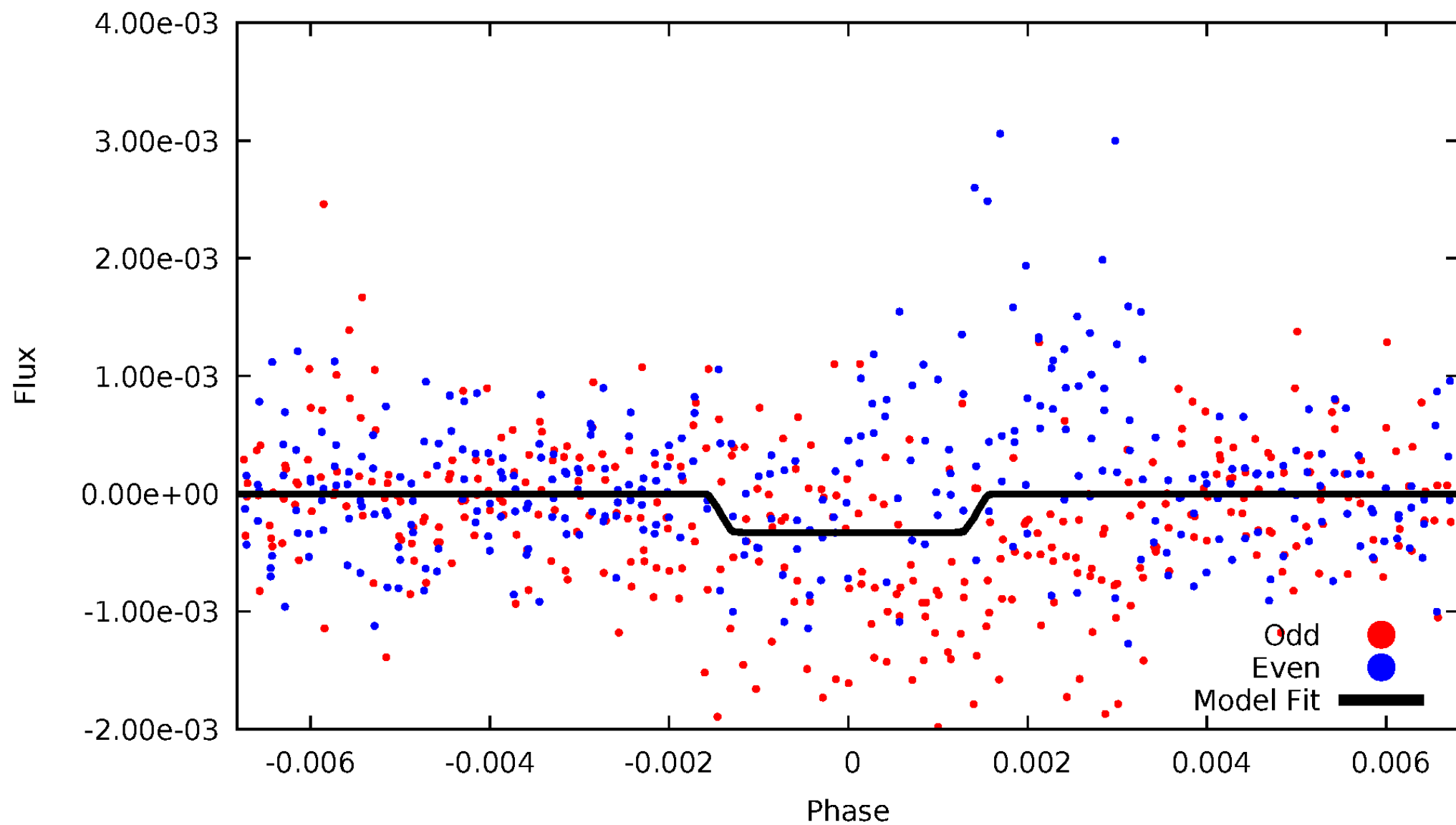
DV Odd/Even

TCE 010292238-07



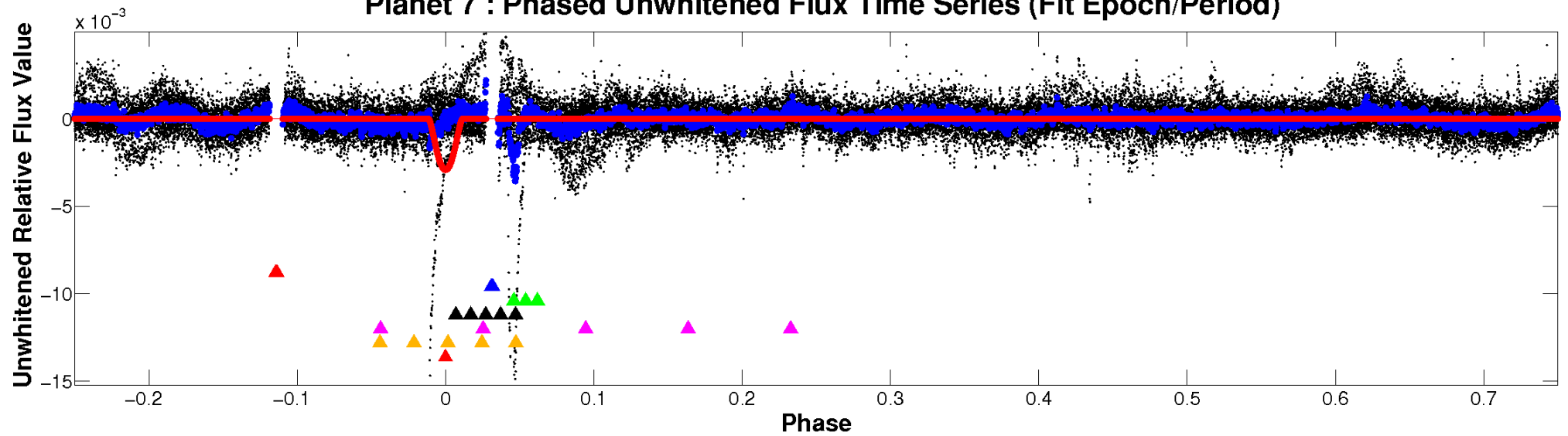
ALT Odd/Even

TCE 010292238-07

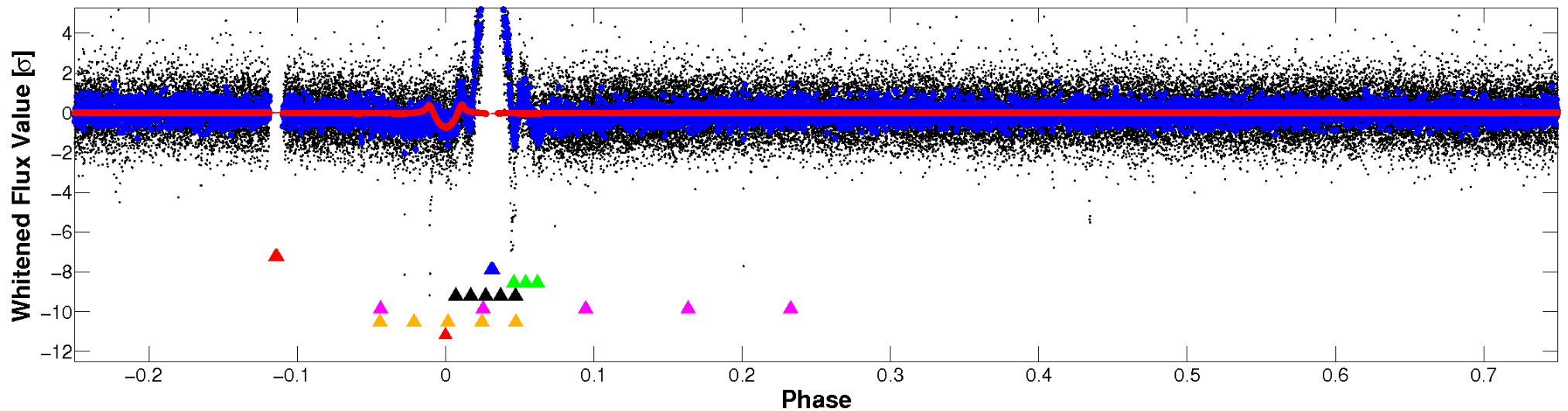


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

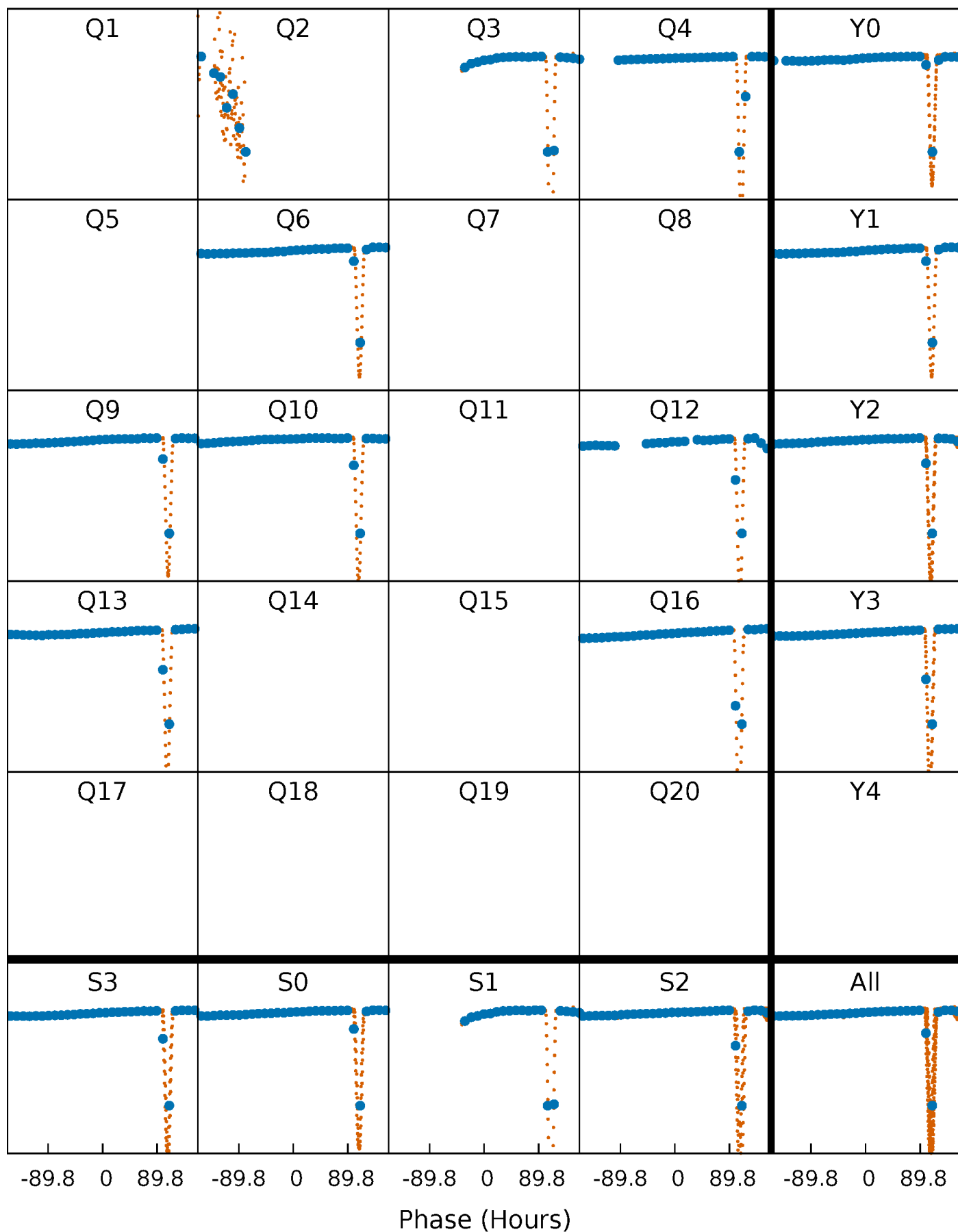


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



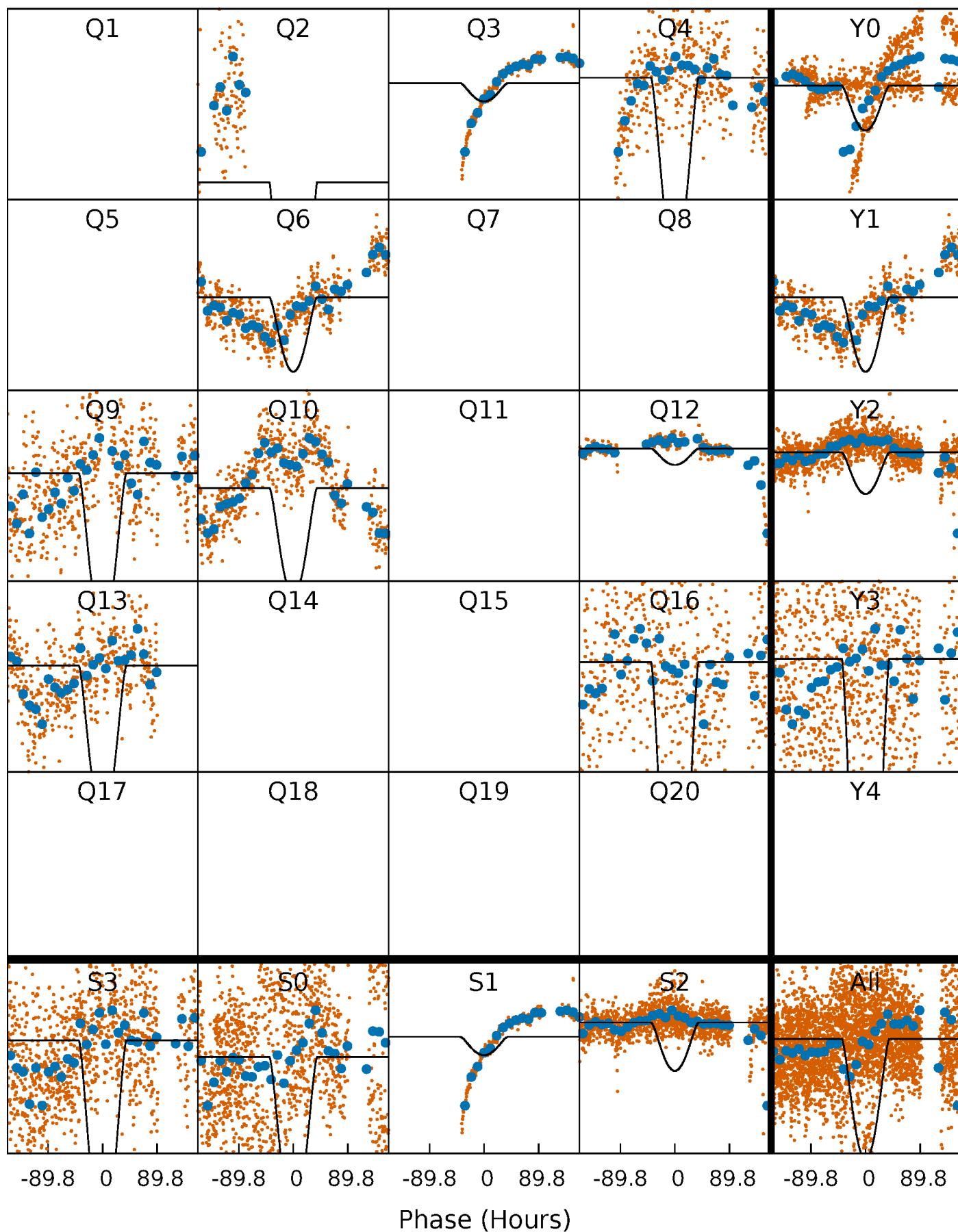
PDC Quarter-Phased Transit Curves

TCE 010292238-07 $P=143.138625$ Days $T_0=261.775867$ (BKJD)



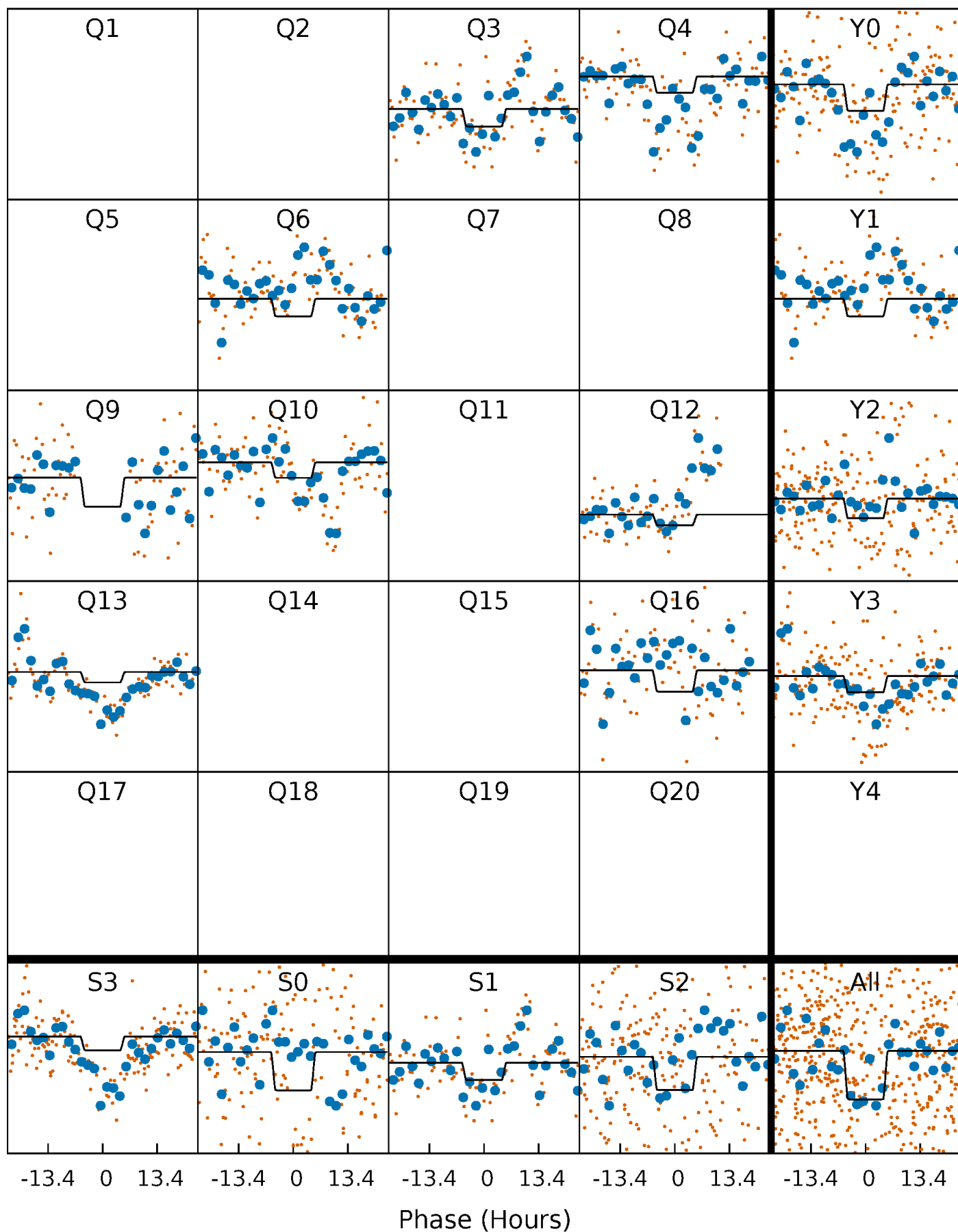
DV Quarter-Phased Transit Curves

TCE 010292238-07 $P=143.138625$ Days $T_0=261.775867$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

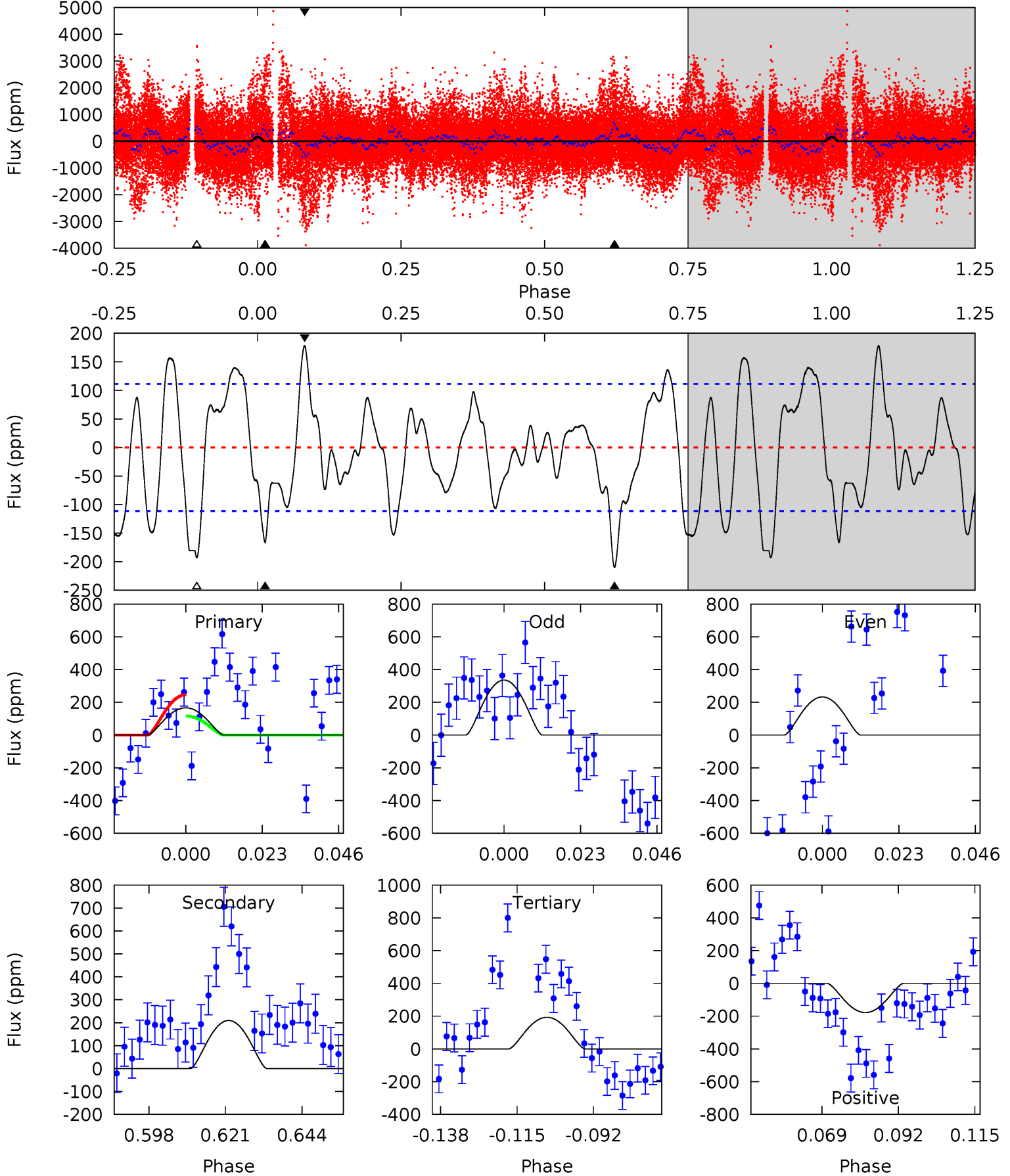
TCE 010292238-07 P=143.116654 Days $T_0=262.105198$ (BKJD)



DV Model-Shift Uniqueness Test

010292238-07, P = 143.138625 Days, E = 118.637242 Days

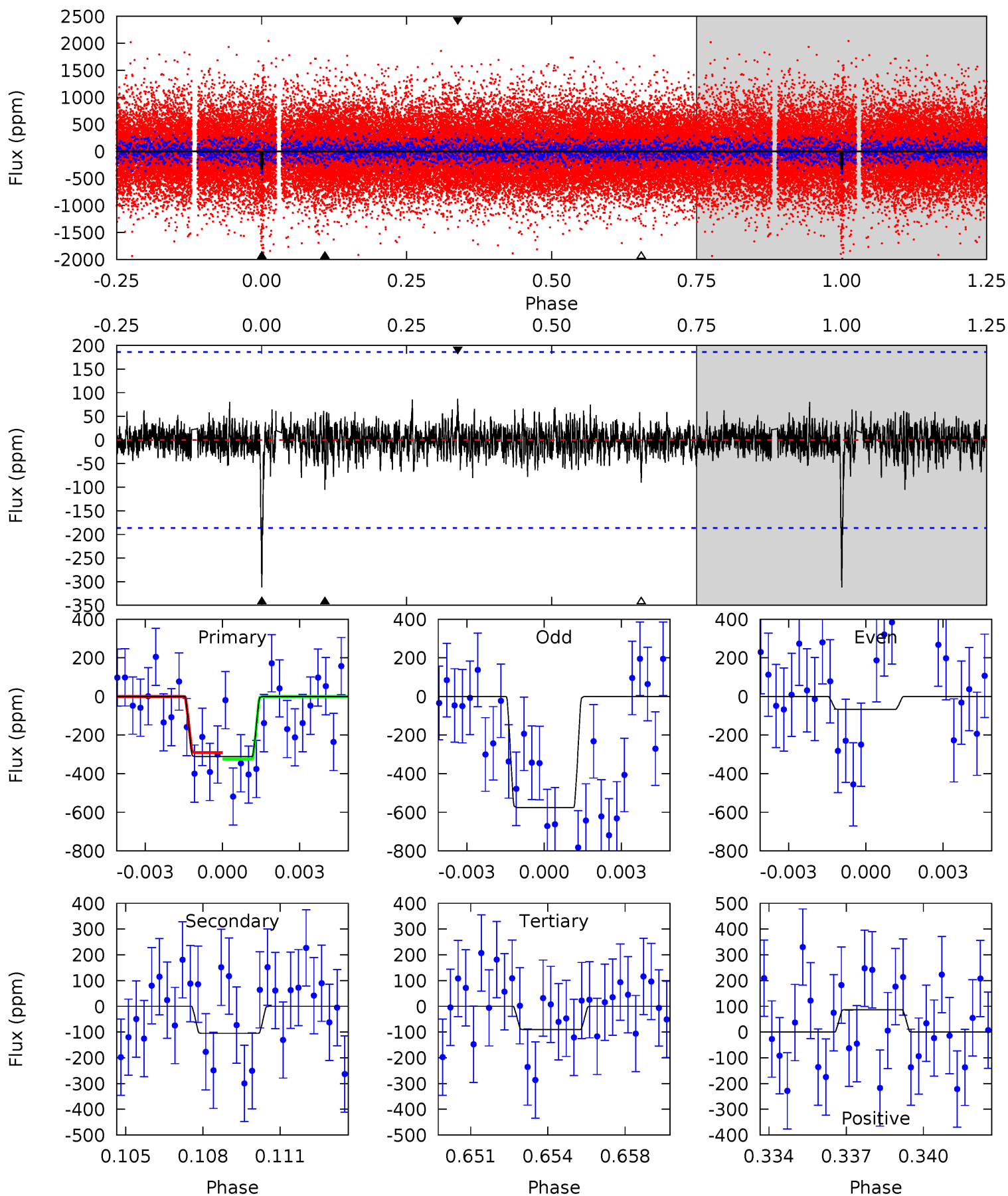
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.28	9.18	8.44	7.80	4.86	2.27	3.38	-1.17	-0.52	0.73	1.38	2.10	-1.06	0.46	2.85



Alt Model-Shift Uniqueness Test

010292238-07, P = 143.116654 Days, E = 118.988544 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.76	2.95	2.54	2.44	5.24	2.94	0.64	6.22	6.32	0.41	0.51	7.07	0.86	0.22	0.46



Stellar Parameters For KIC 010292238

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5713^{+152}_{-169}	$4.554^{+0.042}_{-0.168}$	$-0.120^{+0.300}_{-0.300}$	$0.851^{+0.205}_{-0.073}$	$0.948^{+0.094}_{-0.115}$	$2.164^{+0.371}_{-0.973}$
	+3%/-3%	+1%/-4%	+250%/-250%	+24%/-9%	+10%/-12%	+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 010292238-07 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-210 ± 23	$7.89^{+5.05}_{-4.05}$	457^{+26}_{-19}	3055^{+774}_{-390}	501^{+1630}_{-311}
Alt.	-105 ± 36	$3.95^{+4.10}_{-2.74}$	456^{+24}_{-20}	3388^{+1852}_{-649}	1024^{+10130}_{-804}

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 $A_{obs} \gg 1.0$

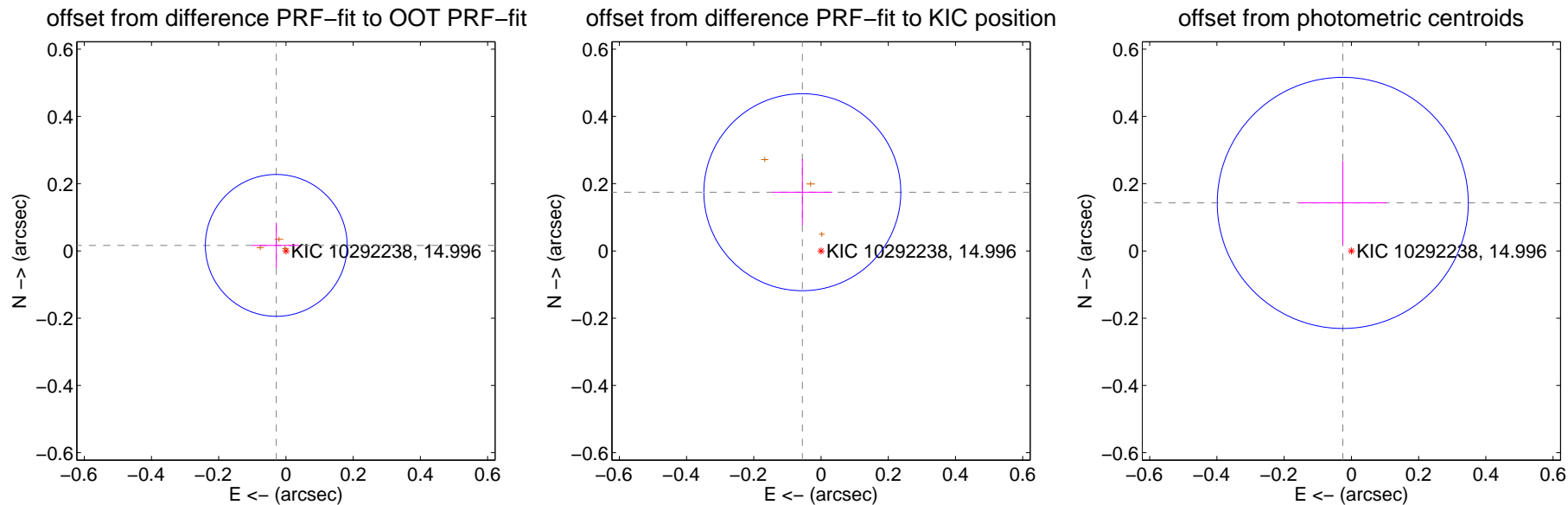
DV Centroid Data

Supplemental centroid analysis for 010292238-07. Kepler magnitude: 15.00. Transit SNR 17.04

There are 0 quarters with good PRF difference image offsets

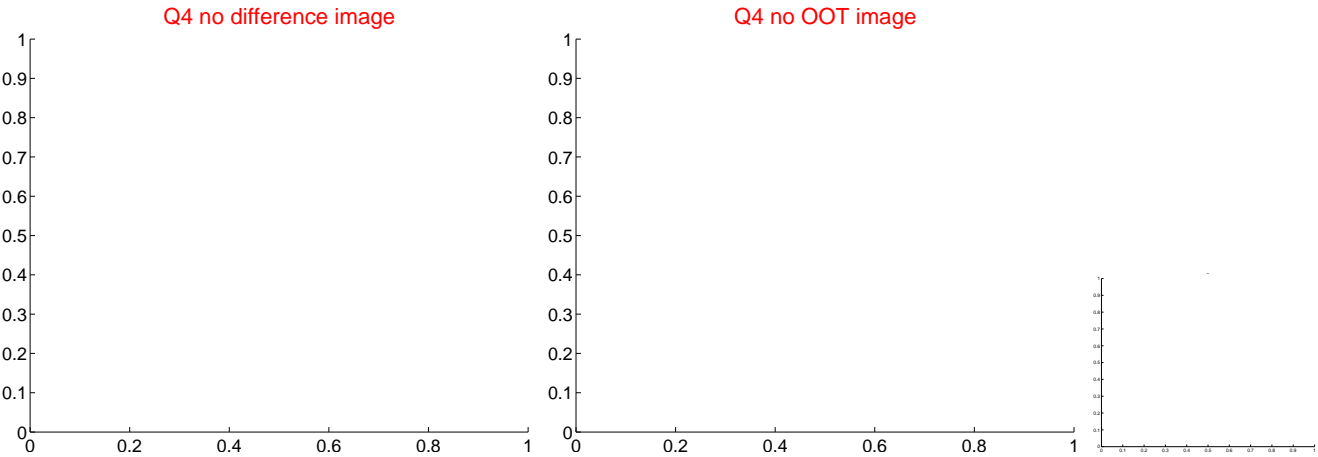
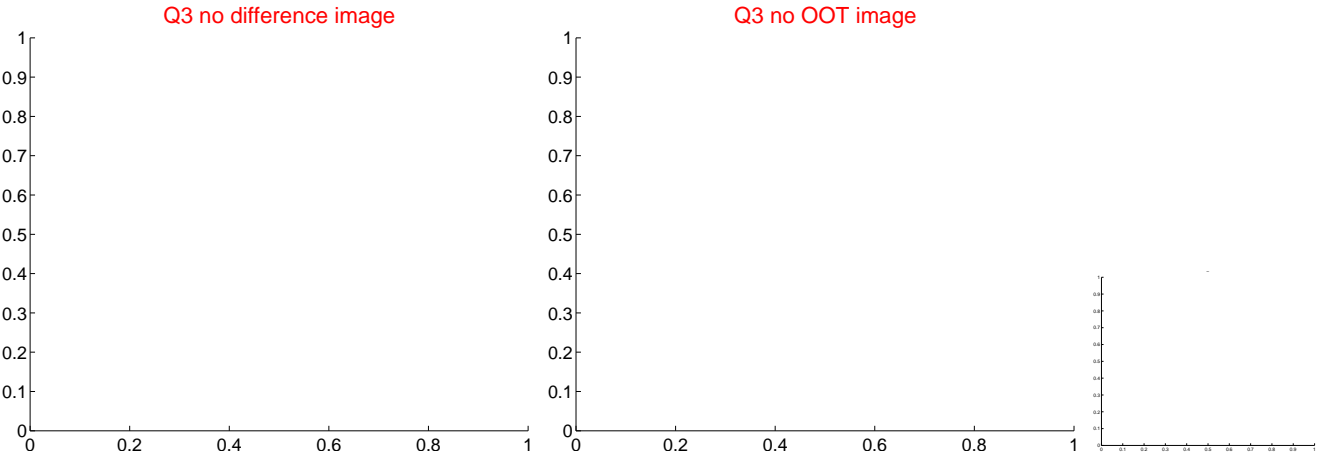
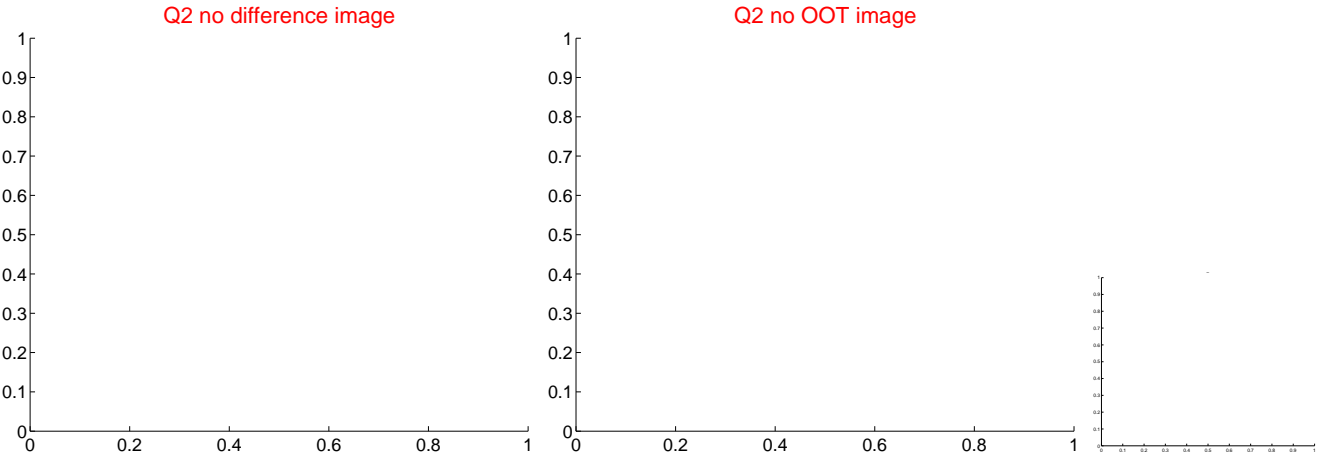
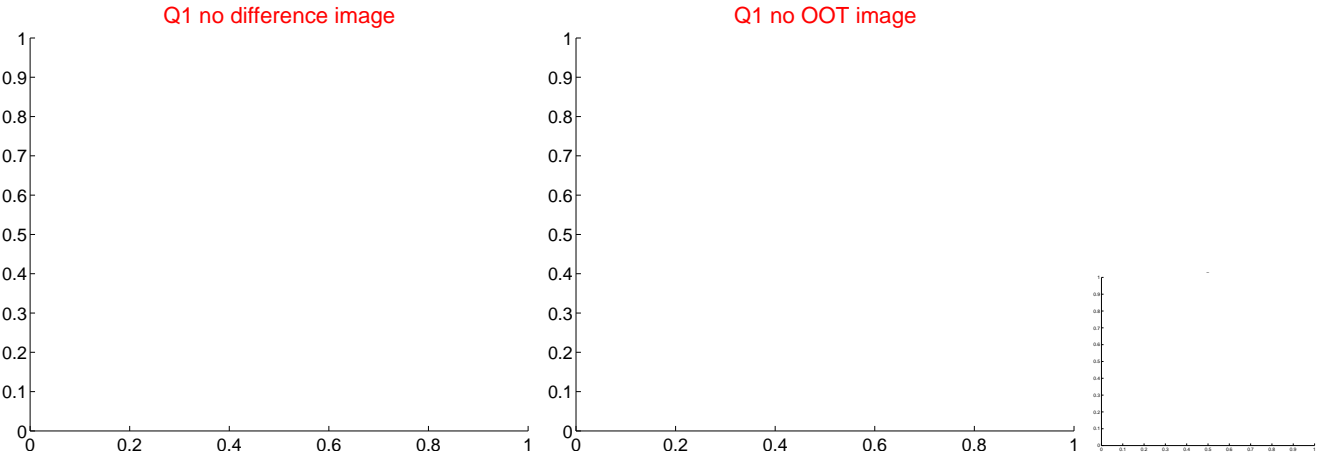
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.033 ± 0.070	0.47	0.029 ± 0.071	0.016 ± 0.068
PRF-fit source offset from KIC position	0.183 ± 0.098	1.88	0.056 ± 0.089	0.175 ± 0.099
photometric centroid source offset	0.15 ± 0.12	1.17	0.03 ± 0.13	0.14 ± 0.12

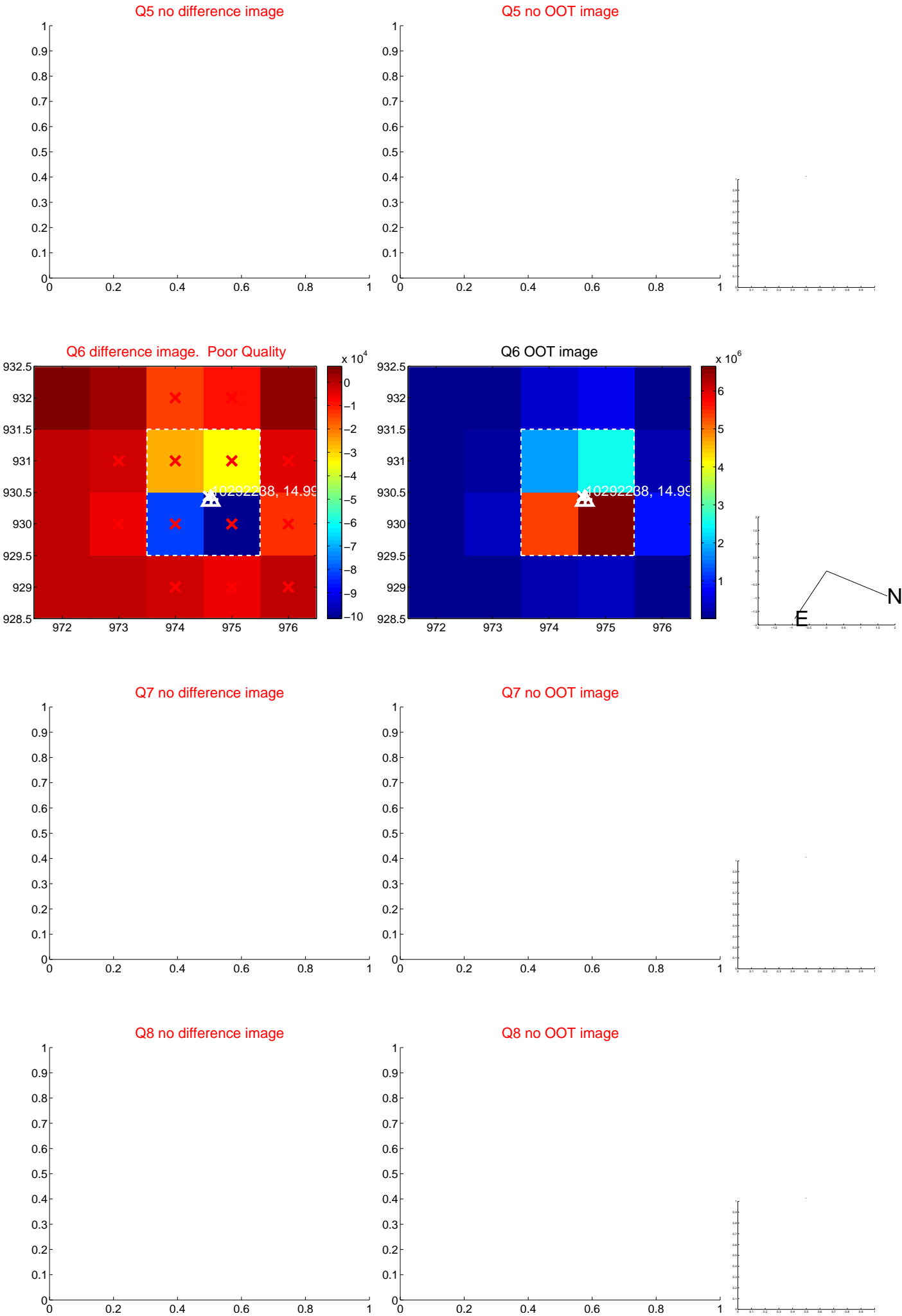


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

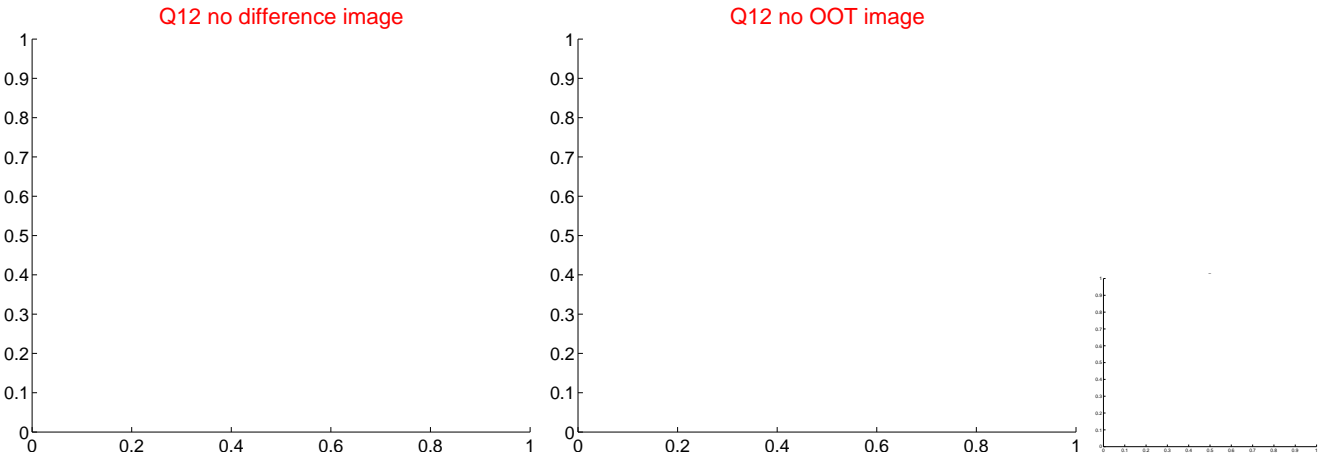
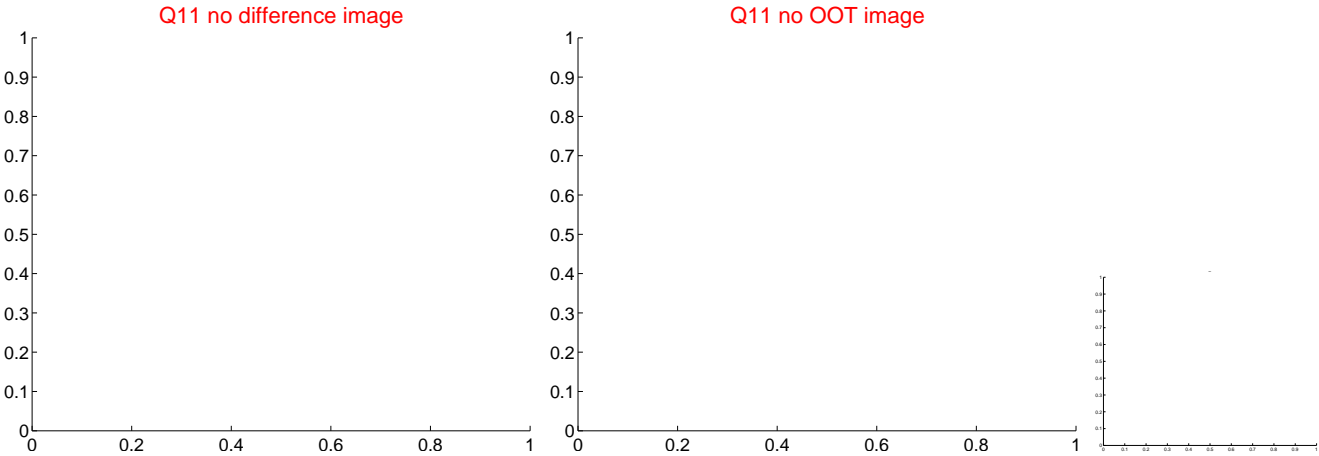
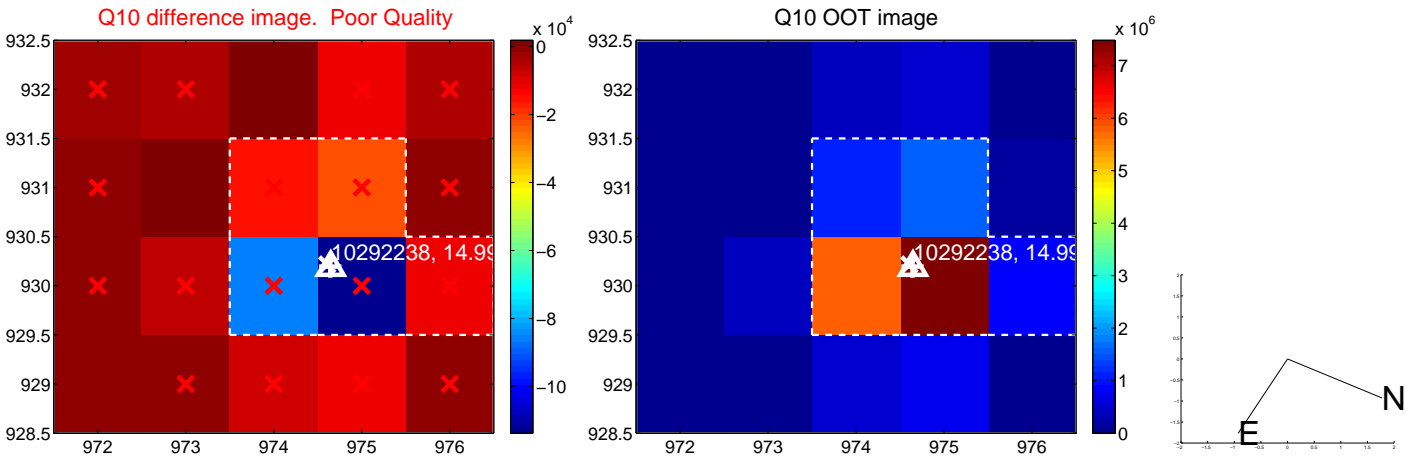
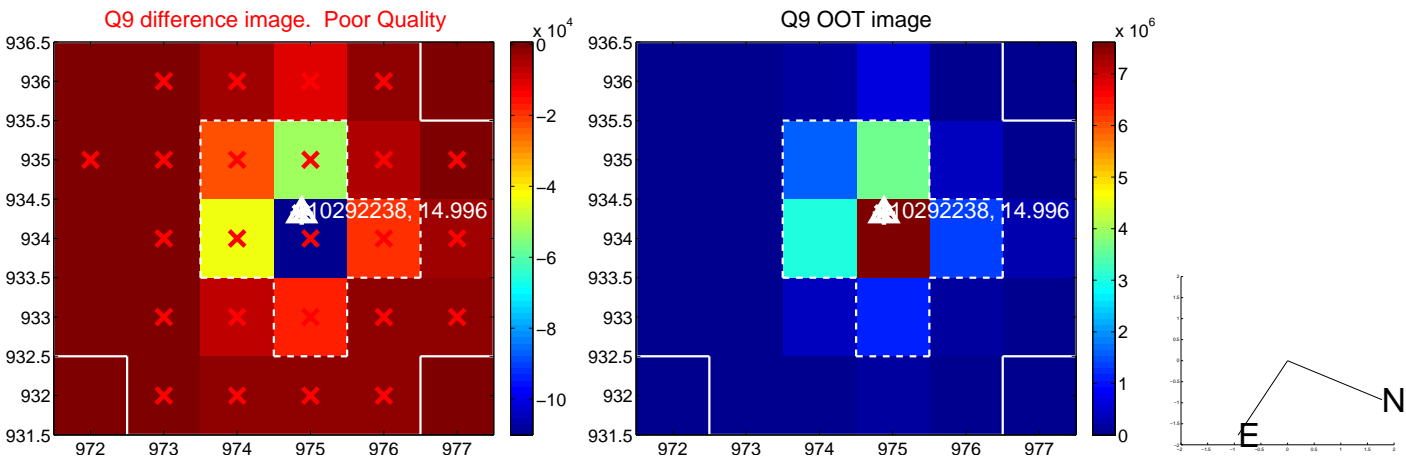
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



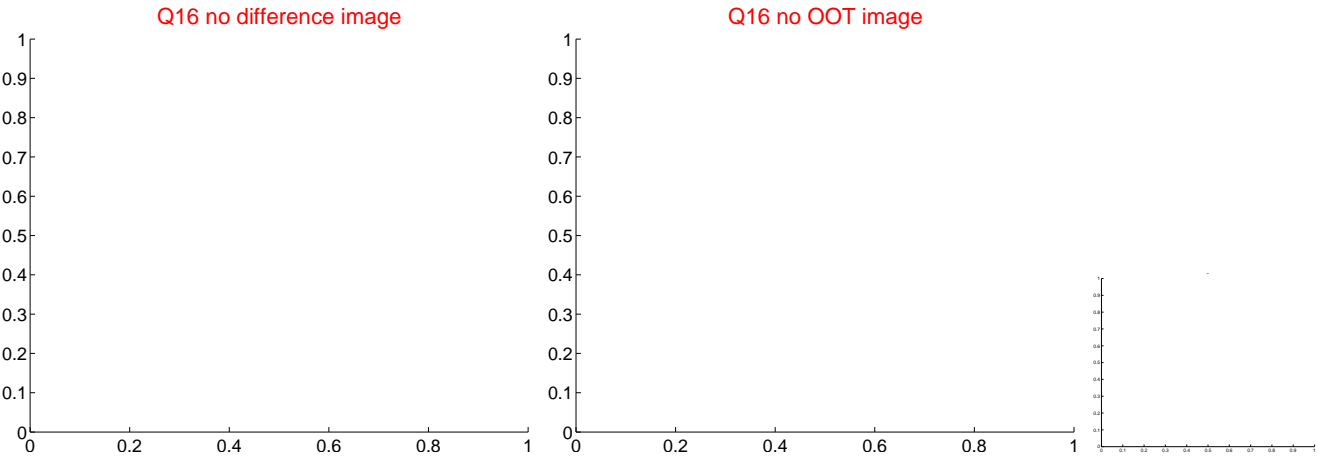
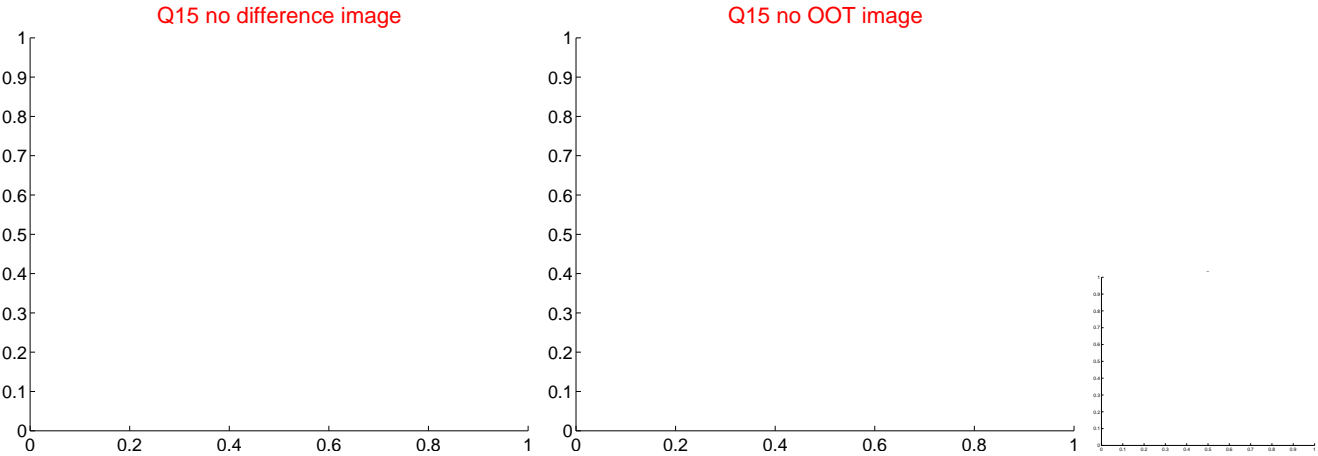
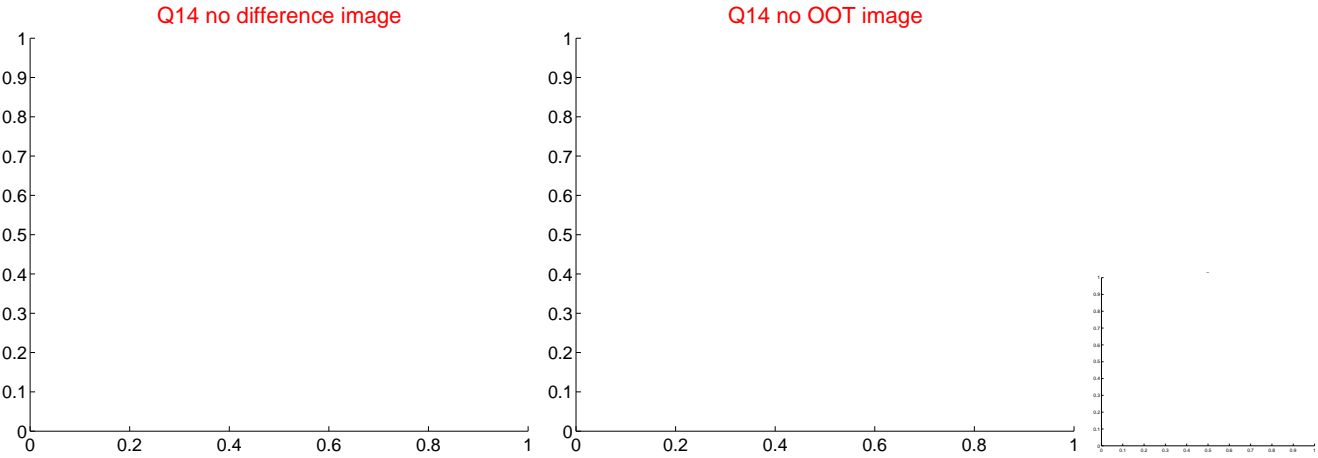
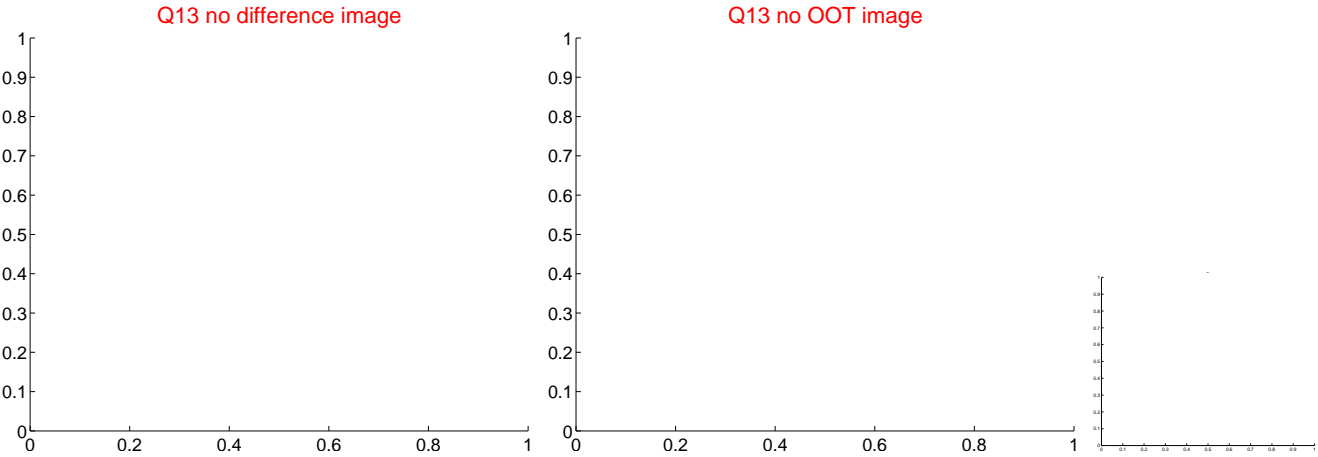
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



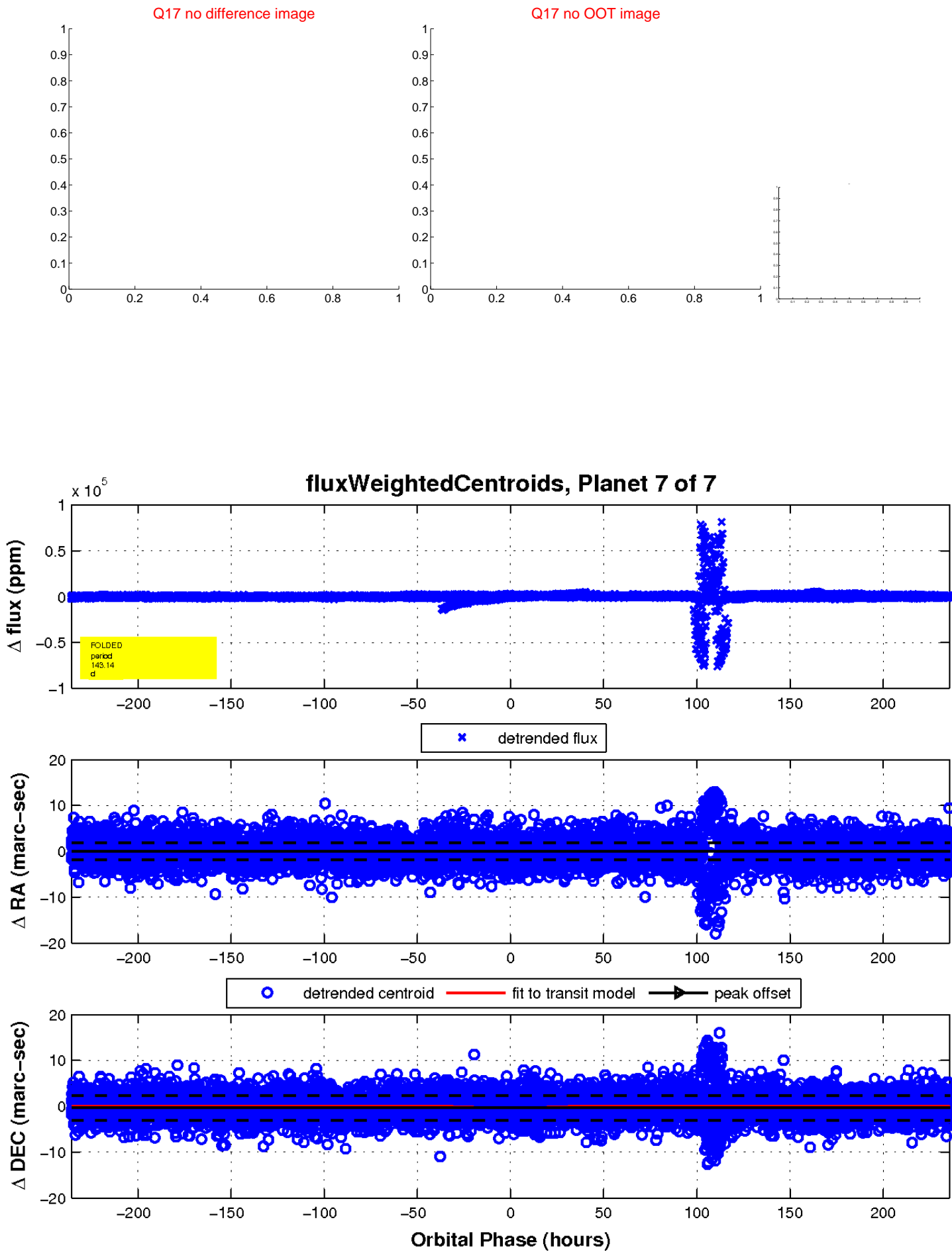
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

