

KIC 006717216

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})
006717216-01	OBS	No	488.661435	287.654049	1976.1	8.133	16.2	8.9	0.64	4159	5.68	0.10
006717216-02	OBS	No	403.508663	510.187294	915.2	3.703	18.8	5.7	0.64	4159	2.06	0.13
006717216-03	OBS	No	485.381537	424.554069	1369.5	9.692	15.5	6.1	0.64	4159	2.27	0.10
006717216-04	OBS	No	474.350127	418.806718	1417.8	6.796	15.3	8.3	0.64	4159	2.50	0.10
006717216-05	OBS	No	526.290680	228.033915	1317.4	5.787	14.4	7.7	0.64	4159	2.56	0.09
006717216-06	OBS	No	298.443968	198.167962	957.6	5.692	14.3	5.8	0.64	4159	2.53	0.20
006717216-08	OBS	No	333.611378	448.424961	1968.7	8.865	13.0	12.4	0.64	4159	2.94	0.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006717216-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006717216-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006717216-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
006717216-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—CENT_NOFITS—HALO_GHOST

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

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

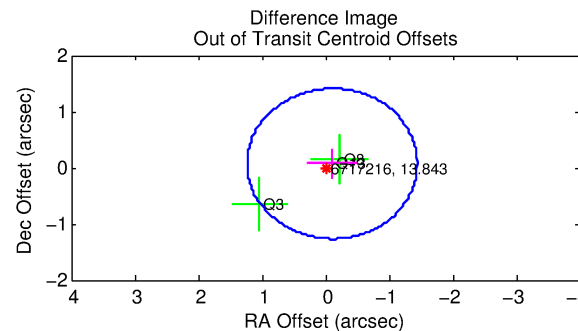
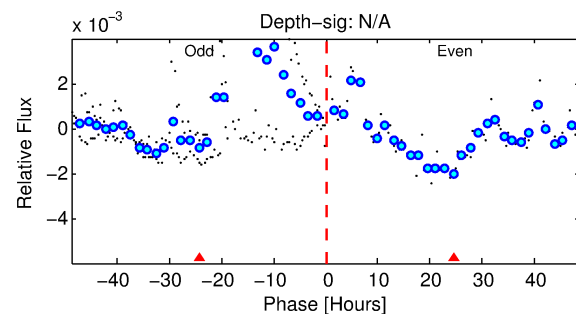
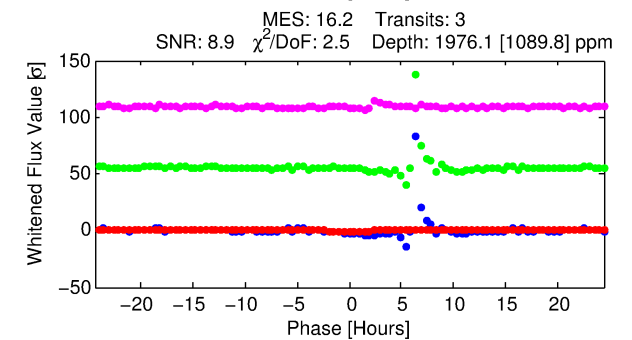
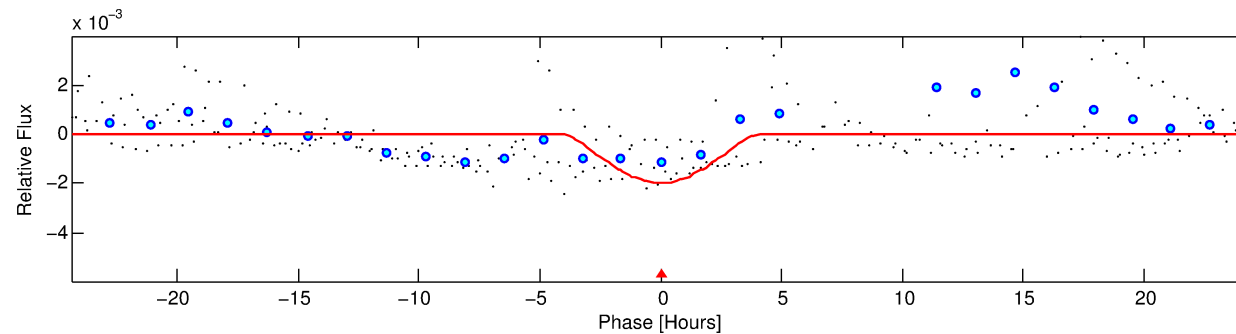
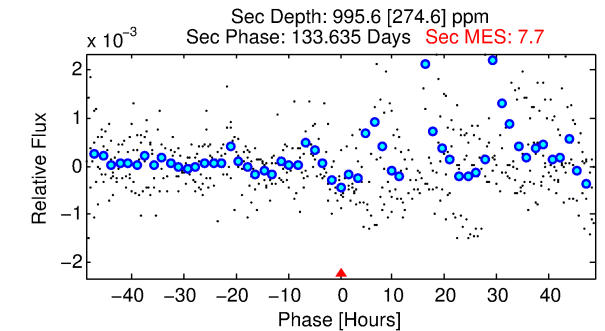
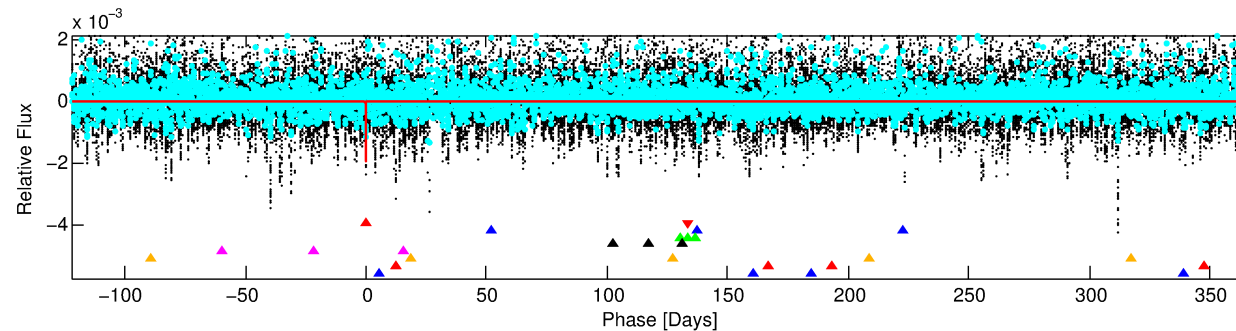
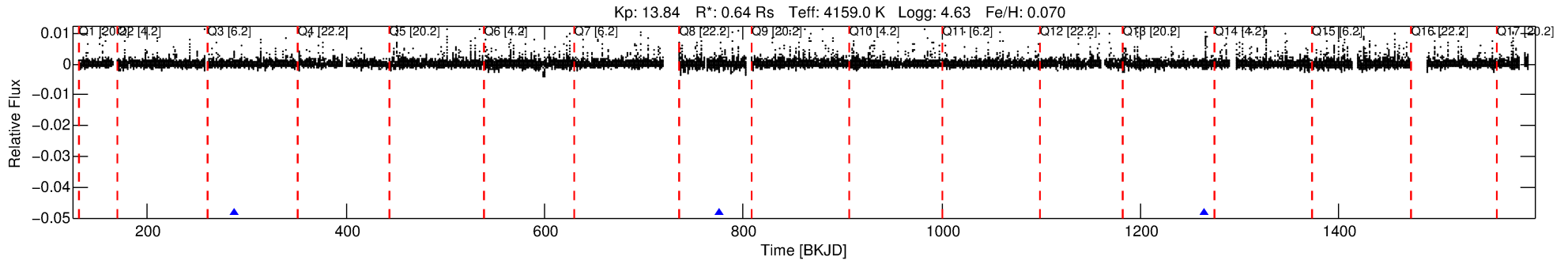
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006717216-01

No Significant Match Found

DV One-Page Summary

KIC: 6717216 Candidate: 1 of 8 Period: 488.661 d



DV Fit Results:

Period = 488.66143 [0.03840] d
Epoch = 287.6540 [0.0523] BKJD
Rp/R* = 0.0813 [0.8771]
a/R* = 189.50 [418.19]
b = 1.00 [1.23]
Seff = 0.10 [0.02]
Teq = 144 [6] K
Rp = 5.68 [61.26] Re
a = 1.0427 [0.0778] AU
Ag = 18471.17 [398602.04] [0.05σ]
Teffp = 2591 [13978] K [0.18σ]

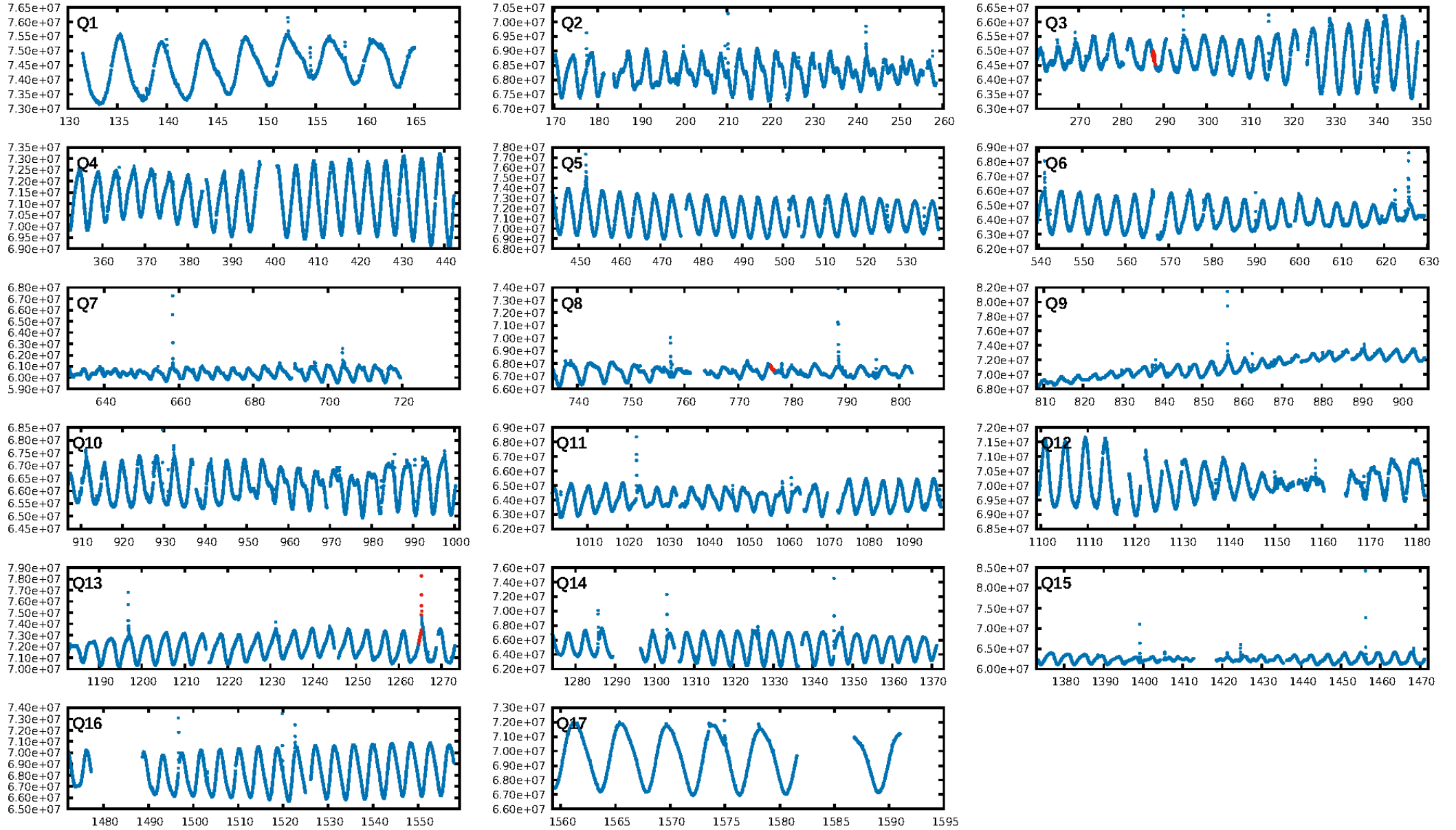
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [6.22σ]
LongPeriod-sig: 100.0% [90.47σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 13.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 23.62
Centroid-sig: 77.1%
Centroid-so: 0.040 arcsec [0.13σ]
OotOffset-rm: 0.126 arcsec [0.28σ]
KicOffset-rm: 0.141 arcsec [0.64σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

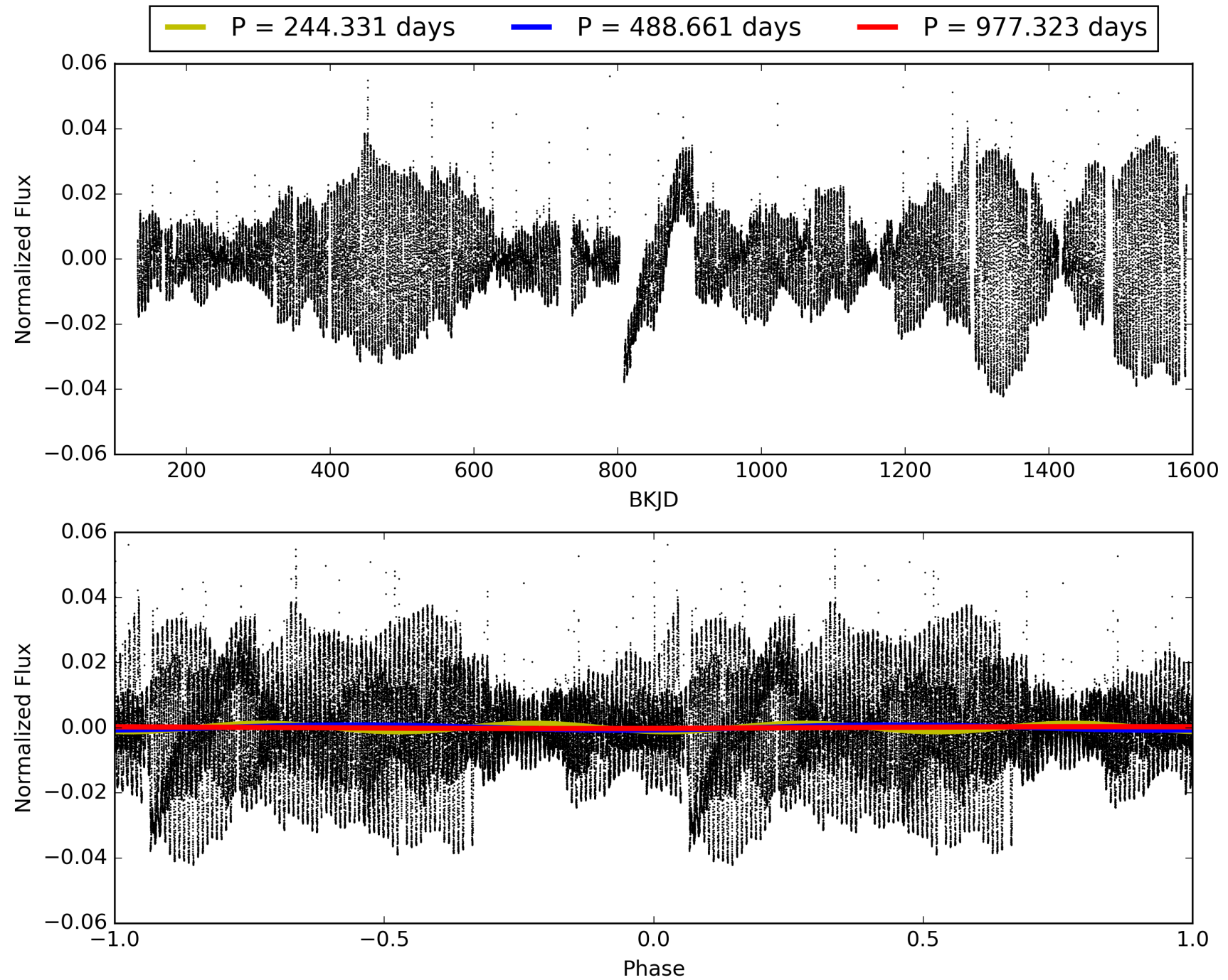
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:53:27 Z

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

TCE 006717216-01, PDC Light Curves

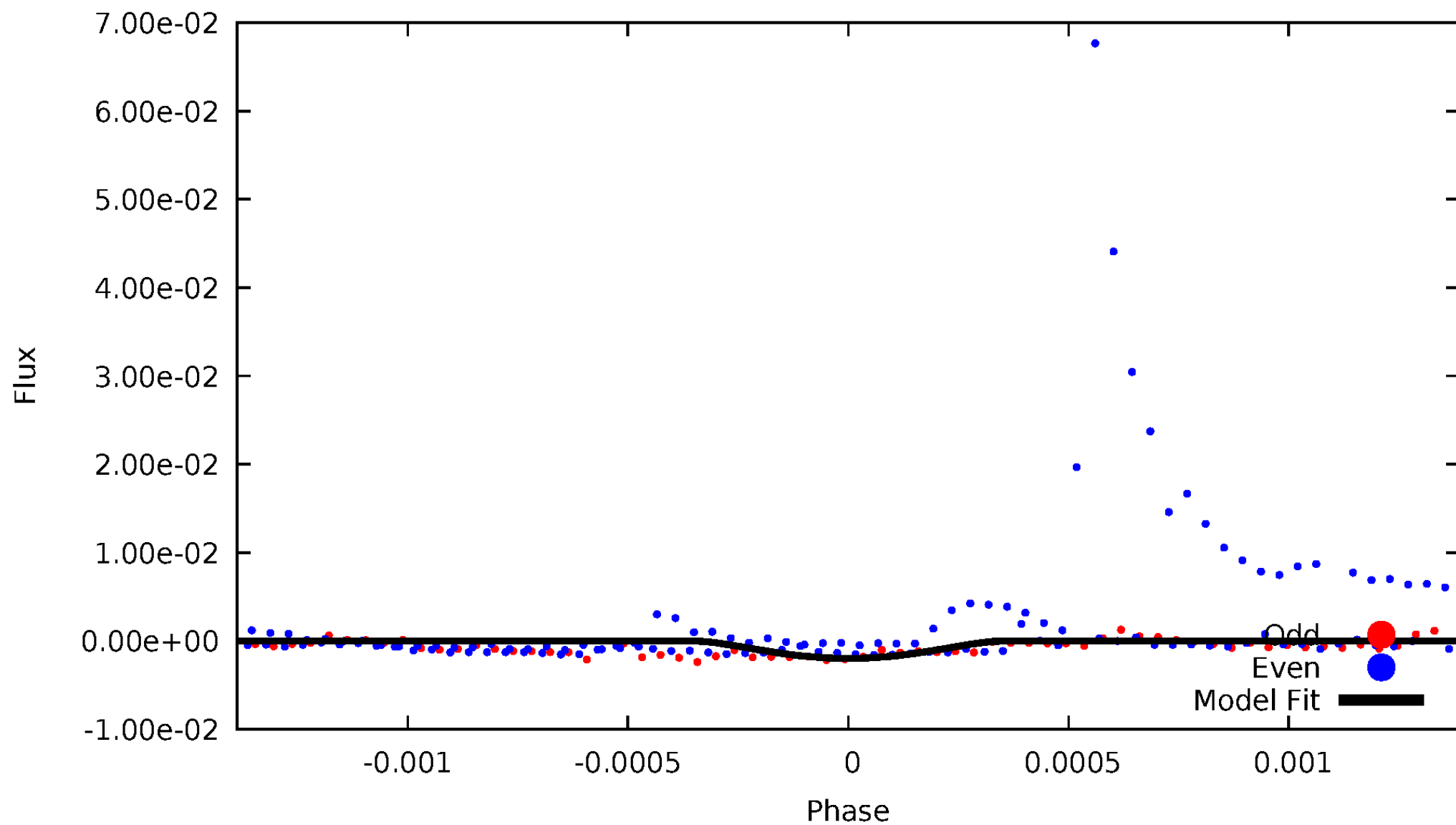


TCE 006717216-01



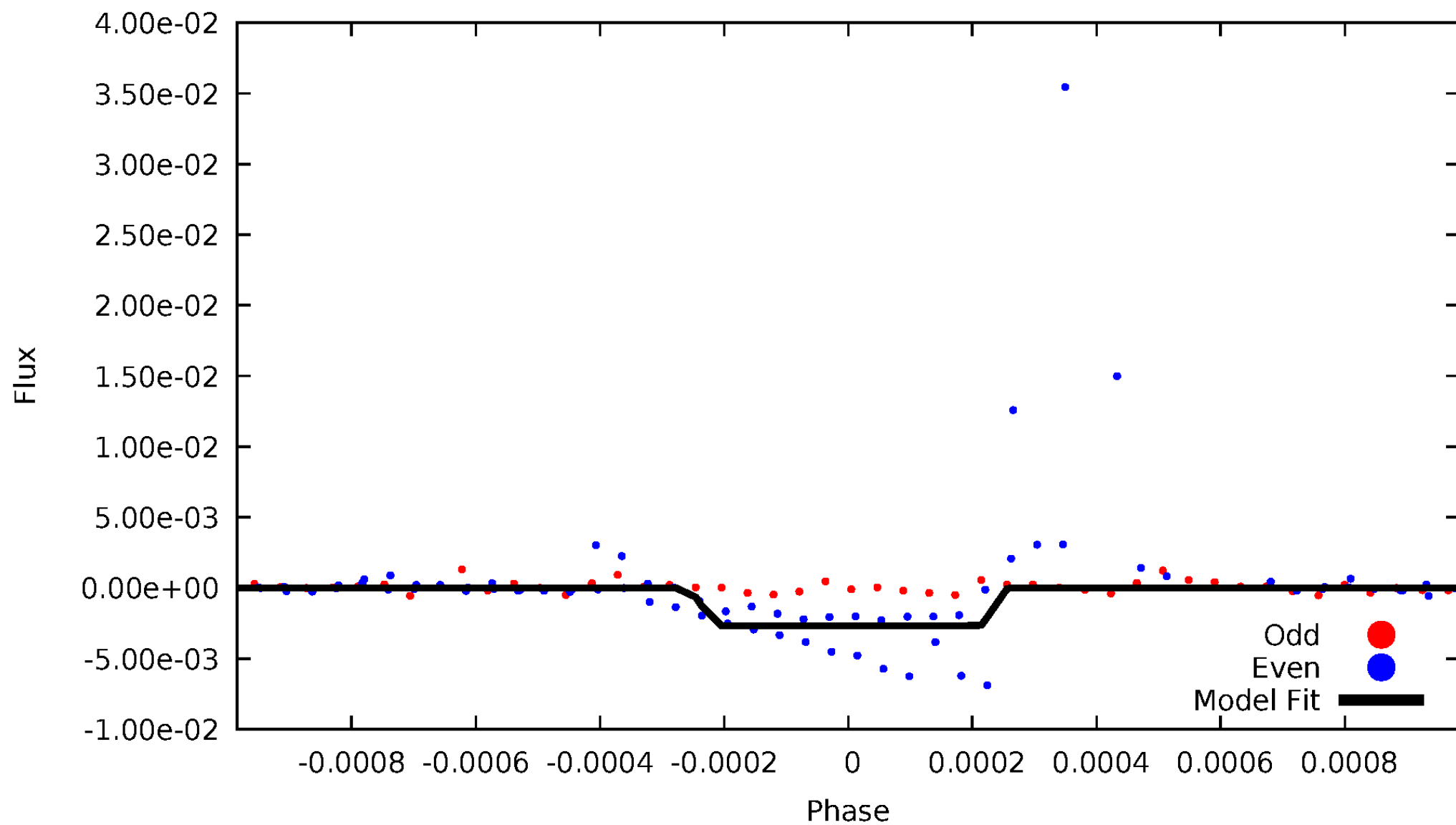
DV Odd/Even

TCE 006717216-01



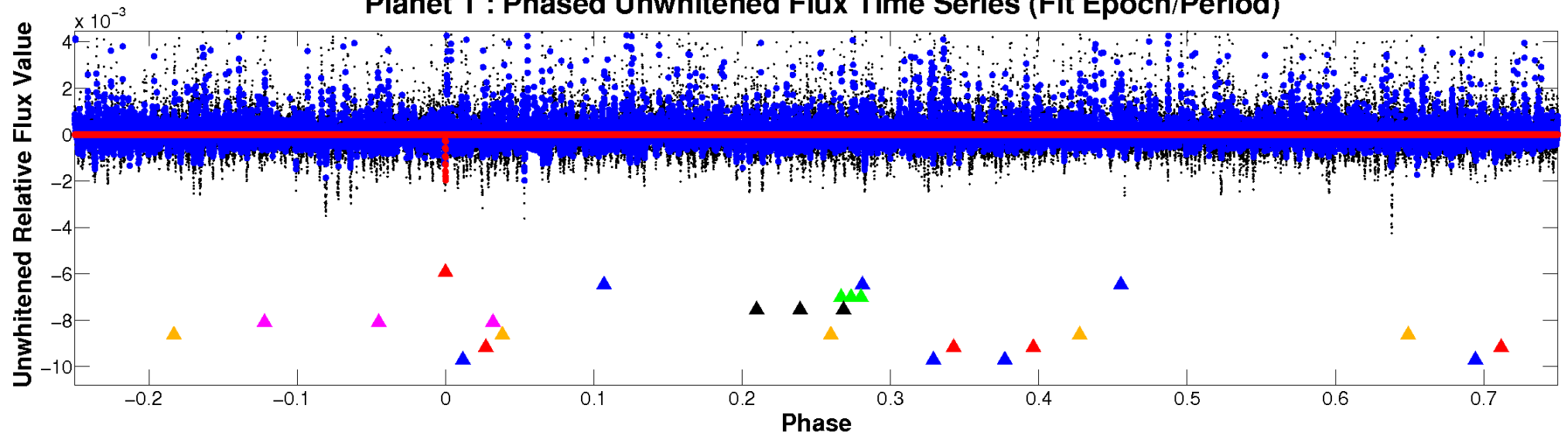
ALT Odd/Even

TCE 006717216-01

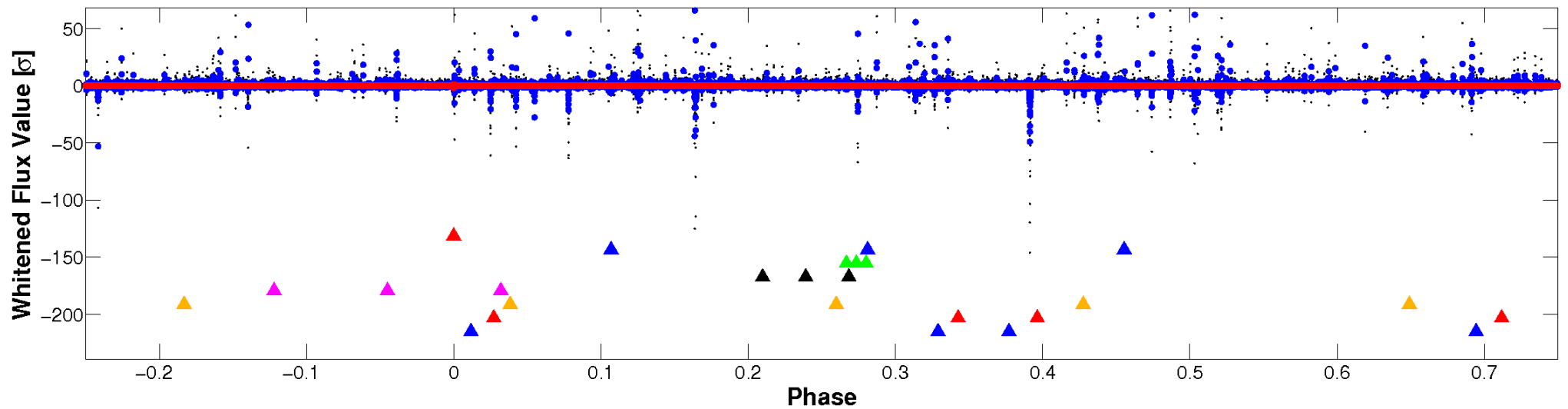


Non-Whitened Vs. Whitened Light Curve

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

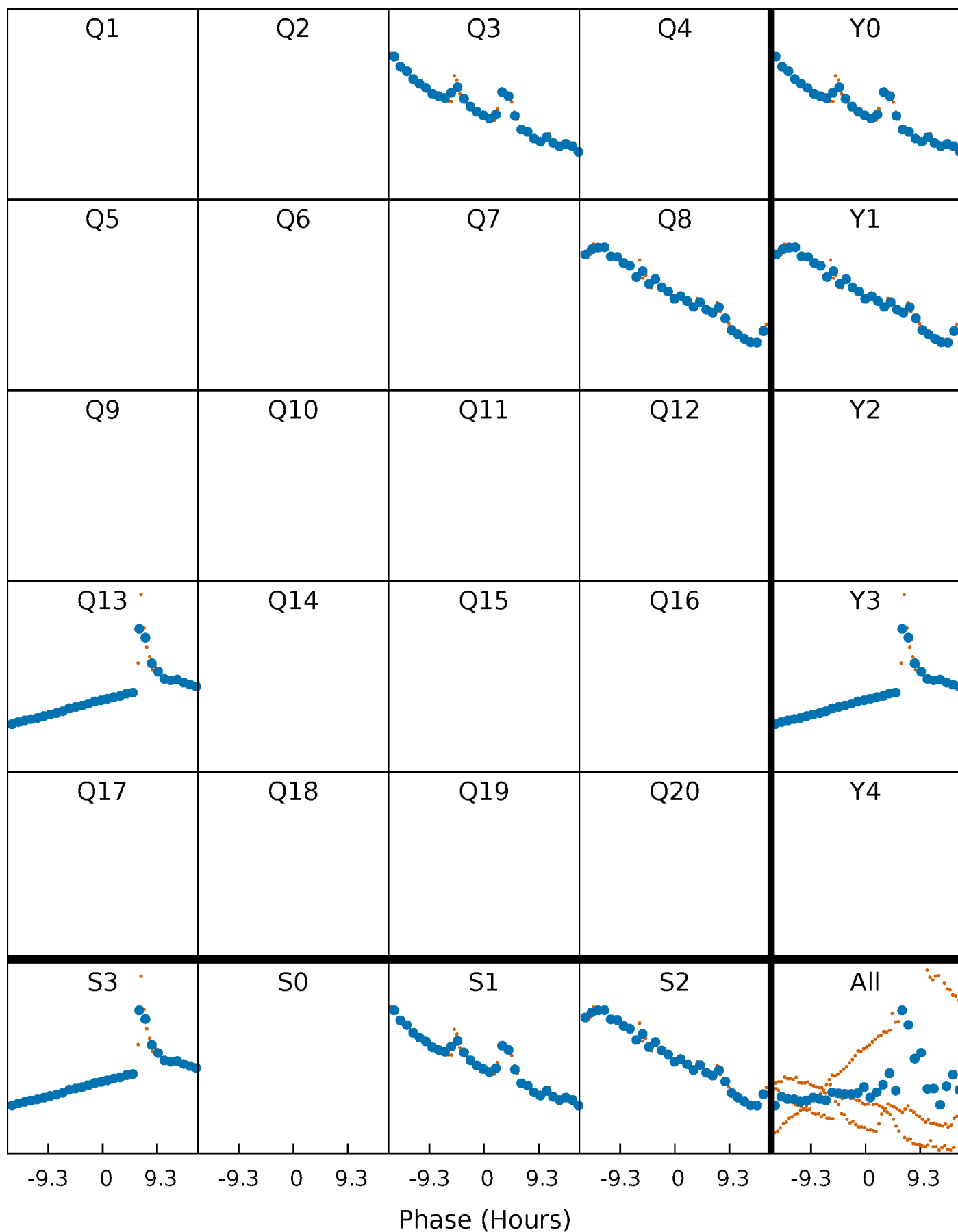


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



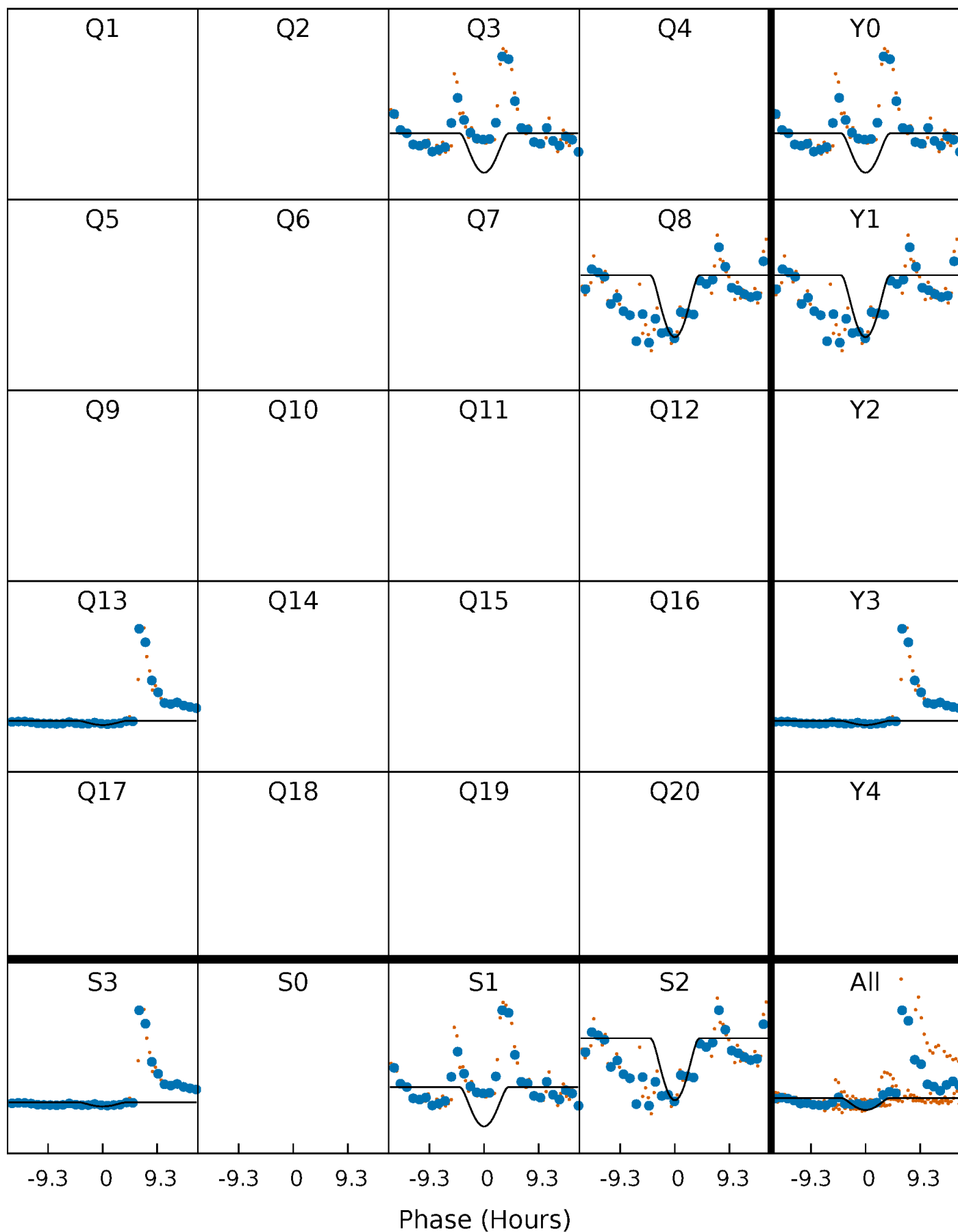
PDC Quarter-Phased Transit Curves

TCE 006717216-01 P=488.661435 Days $T_0=287.654049$ (BKJD)



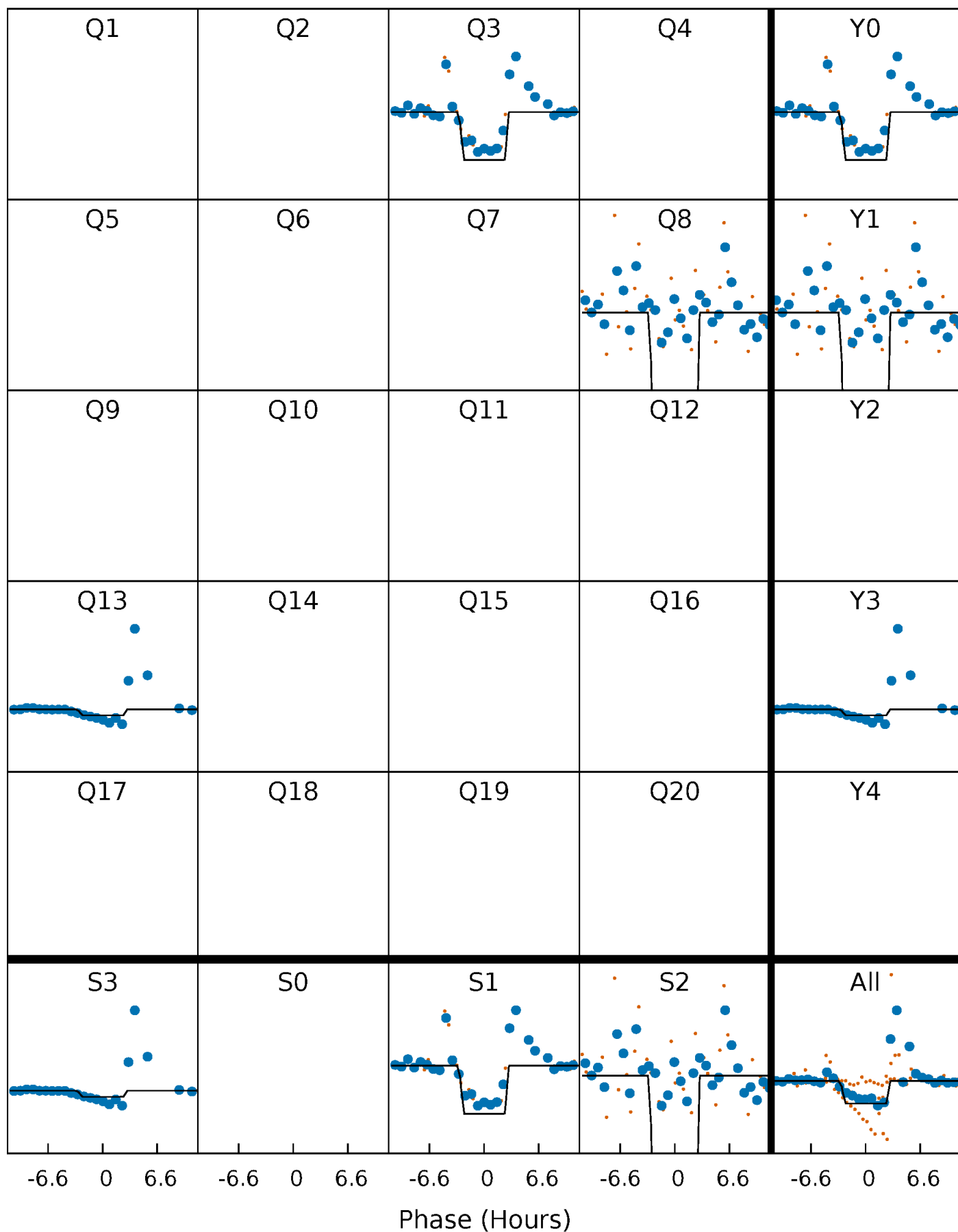
DV Quarter-Phased Transit Curves

TCE 006717216-01 P=488.661435 Days $T_0=287.654049$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

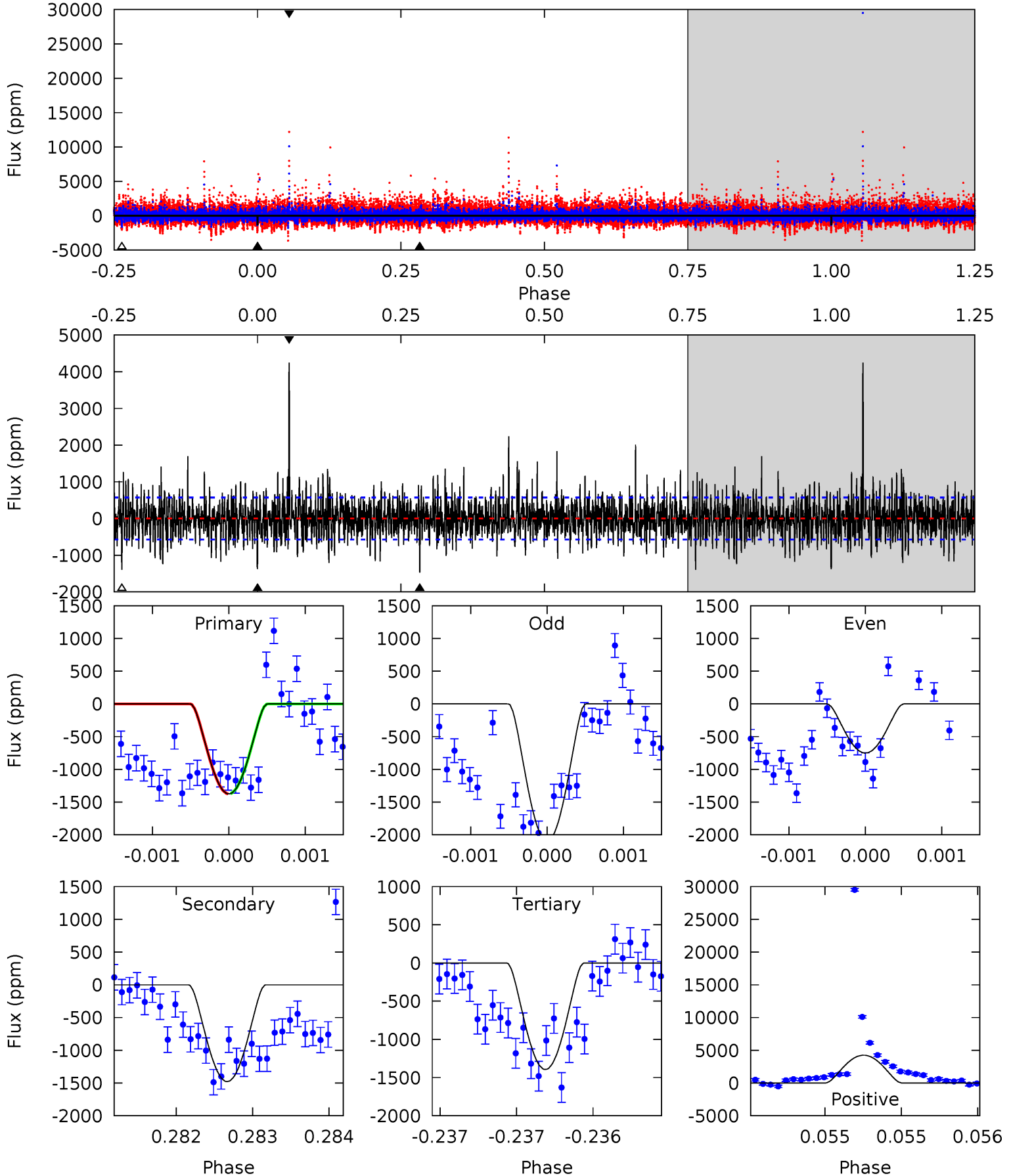
TCE 006717216-01 P=488.729888 Days $T_0=287.640620$ (BKJD)



DV Model-Shift Uniqueness Test

006717216-01, P = 488.661435 Days, E = 287.654049 Days

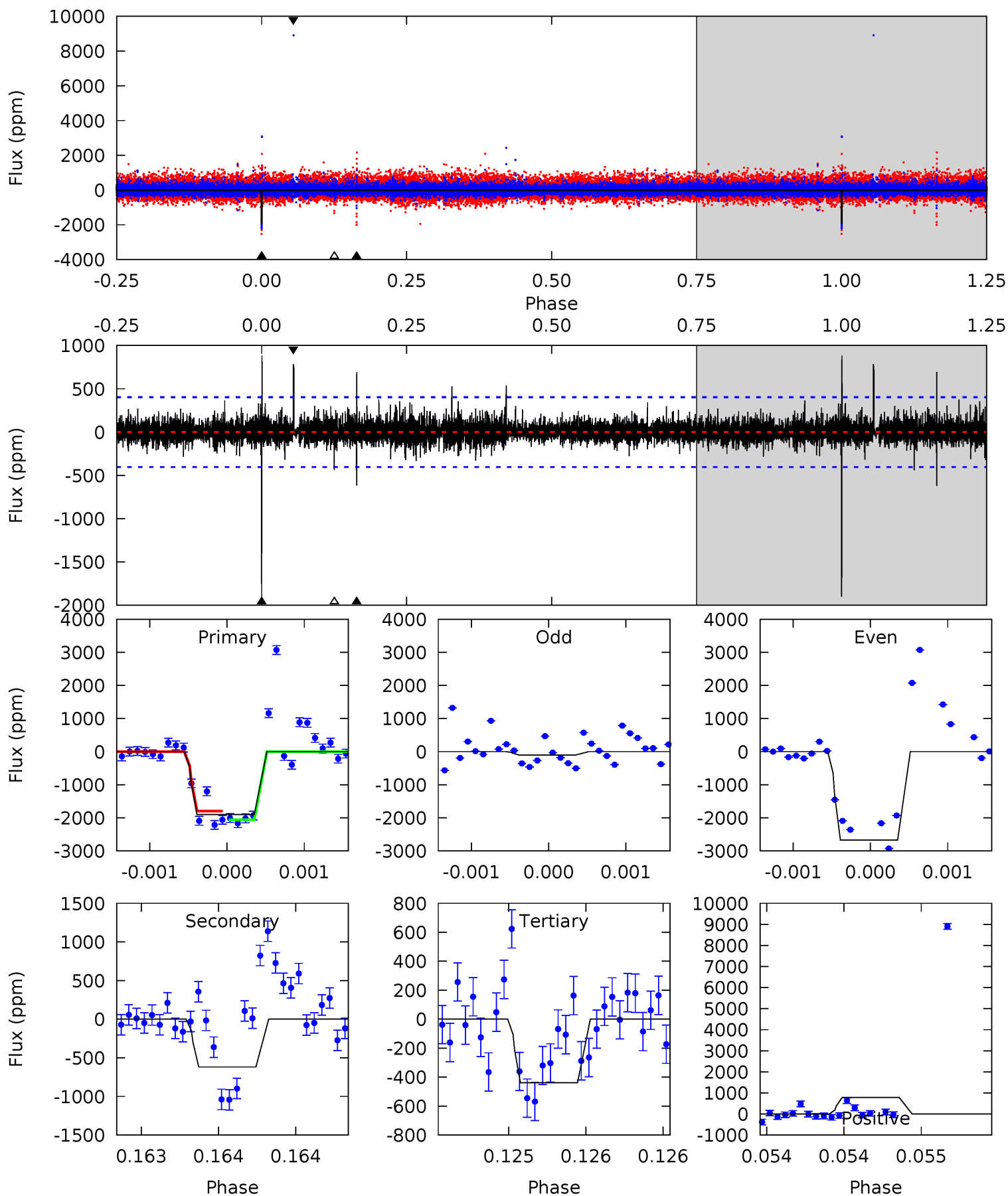
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.2	14.2	13.4	40.8	5.51	3.39	3.85	-0.19	-27.6	0.81	-26.6	3.35	0.72	0.74	0.02



Alt Model-Shift Uniqueness Test

006717216-01, P = 488.729888 Days, E = 287.640620 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.3	8.56	6.07	10.8	5.57	3.48	1.01	20.2	15.5	2.49	-2.28	22.7	1.20	0.32	0



Stellar Parameters For KIC 006717216

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4159^{+126}_{-139}	$4.627^{+0.053}_{-0.018}$	$0.070^{+0.250}_{-0.300}$	$0.640^{+0.035}_{-0.060}$	$0.633^{+0.054}_{-0.054}$	$3.396^{+0.793}_{-0.292}$
	+3%/-3%	+1%/-0%	+357%/-429%	+5%/-9%	+9%/-9%	+23%/-9%
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 006717216-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1478 ± 104	$41.77^{+47.31}_{-28.56}$	199^{+7}_{-7}	1978^{+573}_{-260}	519^{+4544}_{-405}
Alt.	-618 ± 72	$41.66^{+45.94}_{-28.86}$	199^{+7}_{-7}	1819^{+504}_{-225}	213^{+2036}_{-165}

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

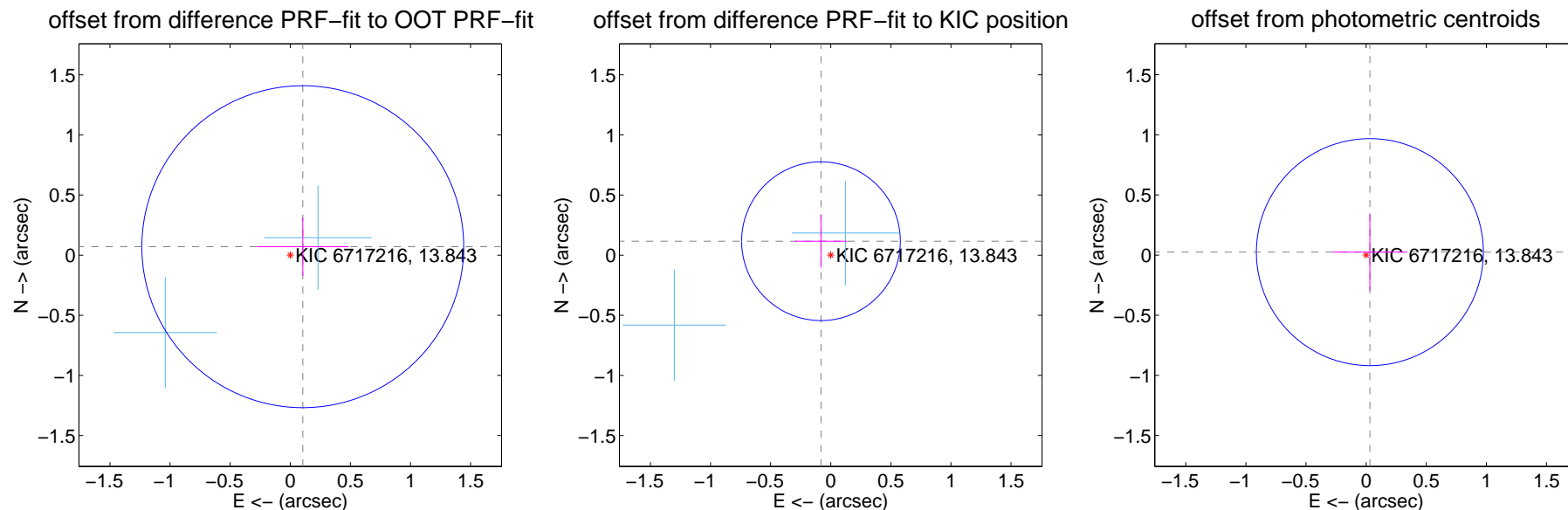
DV Centroid Data

Supplemental centroid analysis for 006717216-01. Kepler magnitude: 13.84. Transit SNR 8.89

There are 3 quarters with good PRF difference image offsets

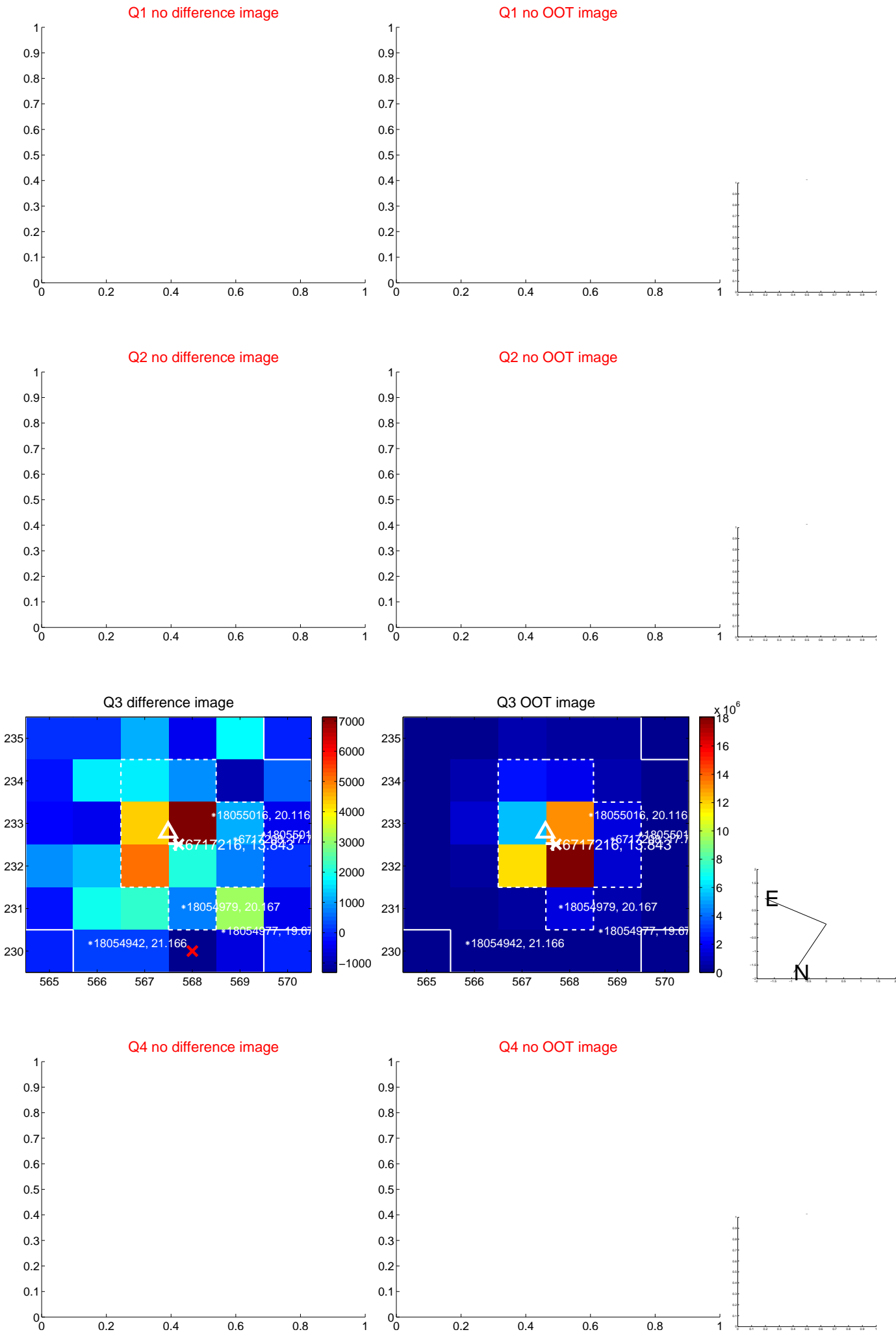
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.126 ± 0.446	0.28	-0.104 ± 0.381	0.070 ± 0.243
PRF-fit source offset from KIC position	0.141 ± 0.220	0.64	0.081 ± 0.217	0.116 ± 0.222
photometric centroid source offset	0.04 ± 0.31	0.13	-0.03 ± 0.31	0.02 ± 0.32

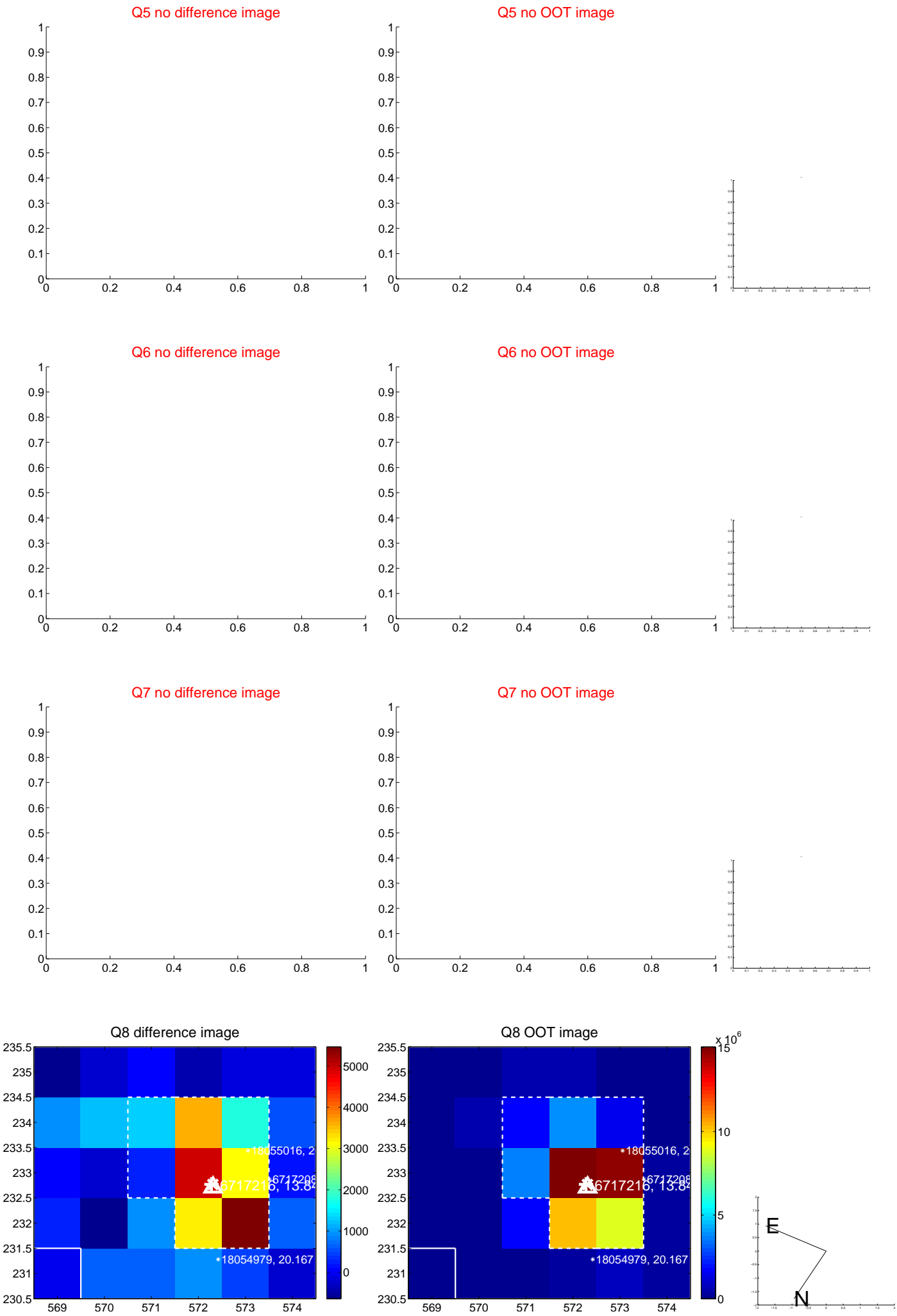


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

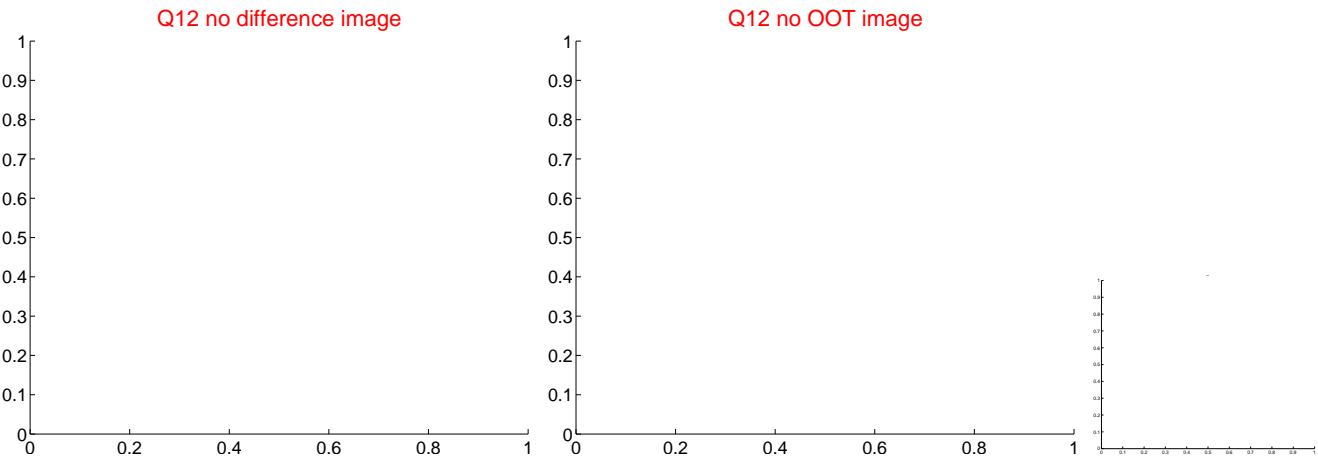
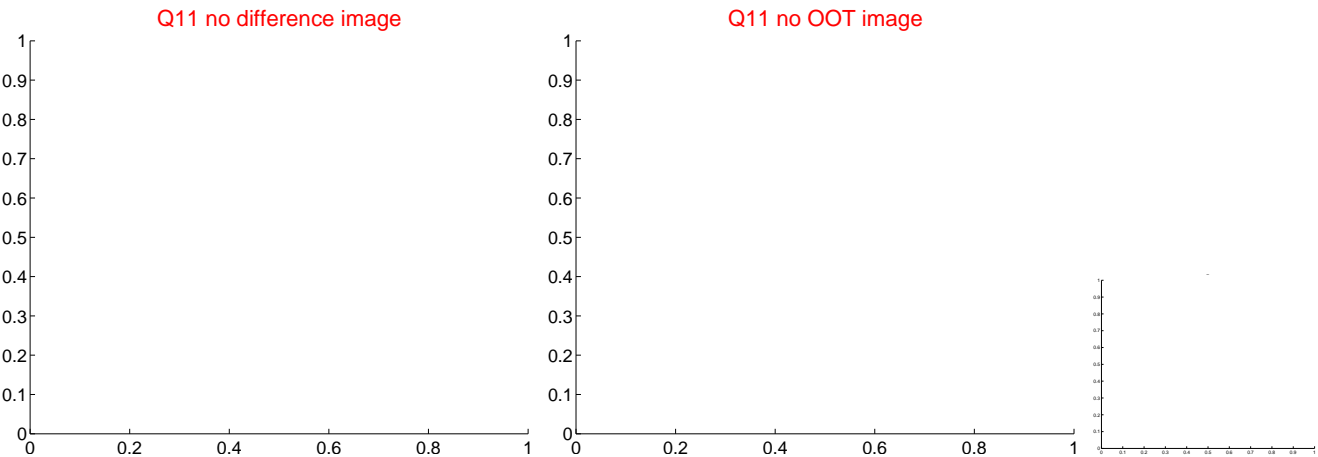
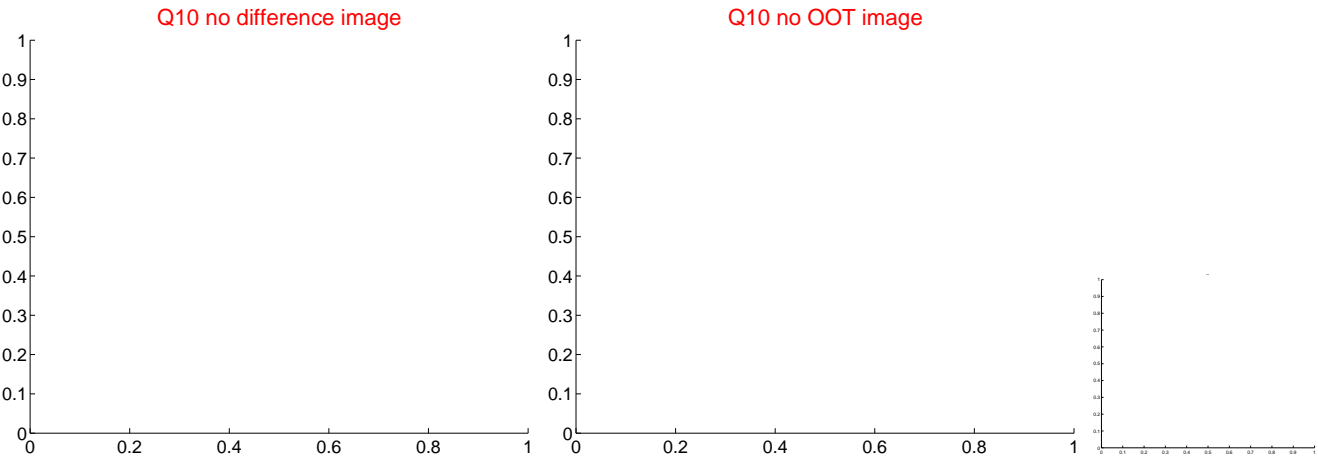
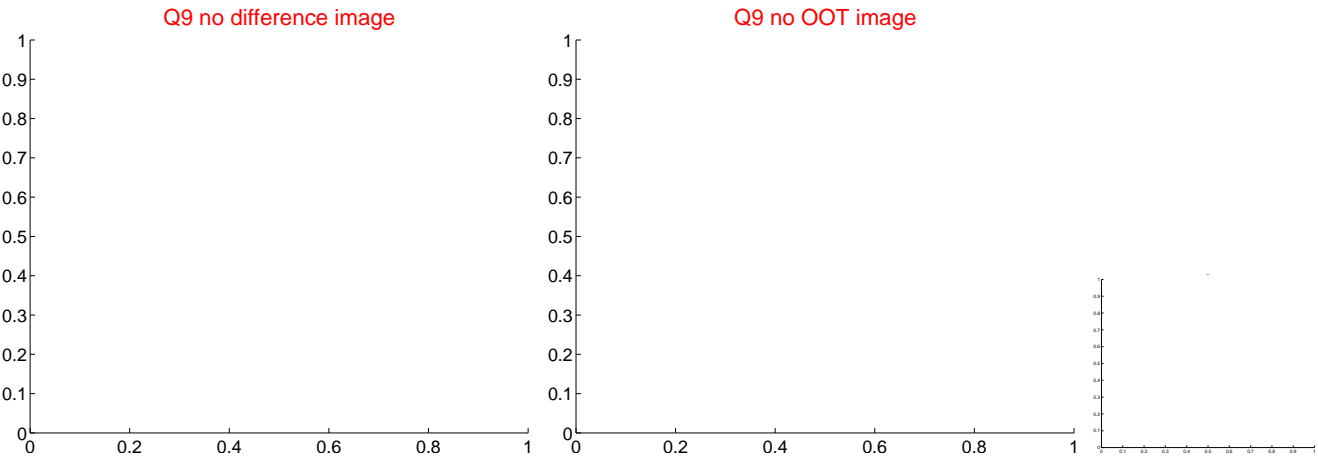
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



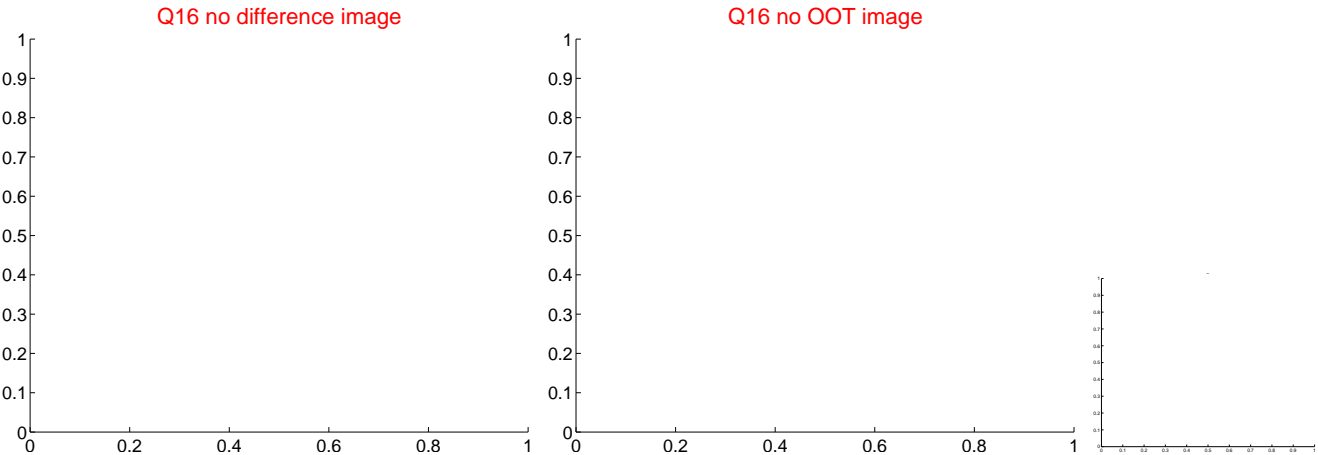
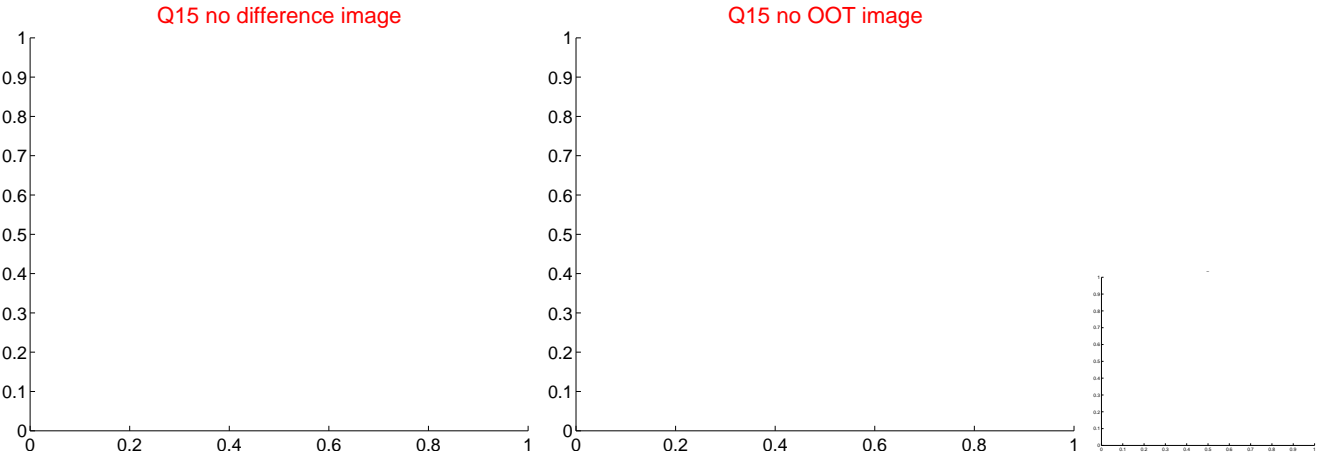
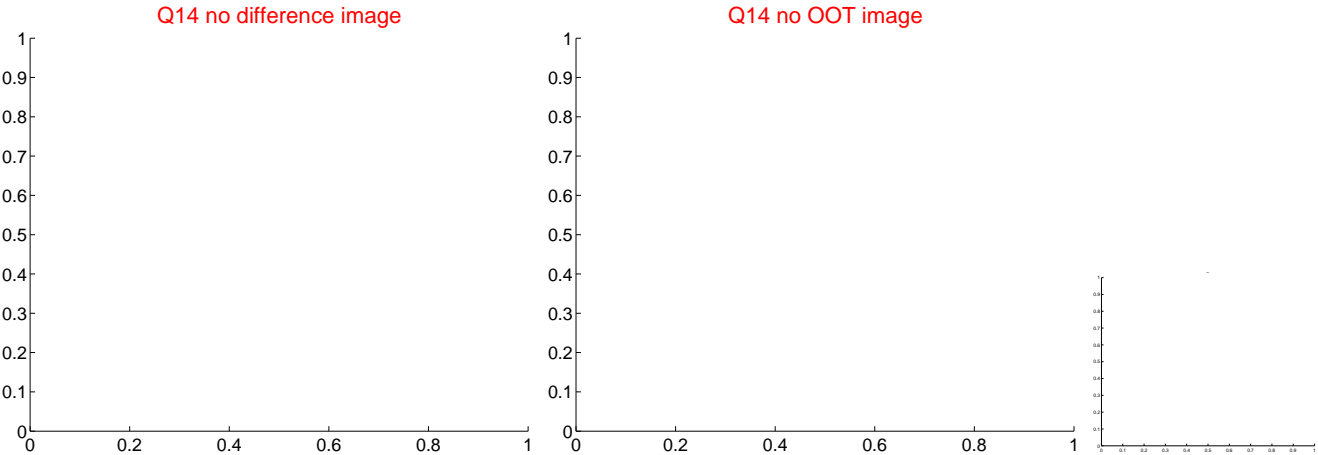
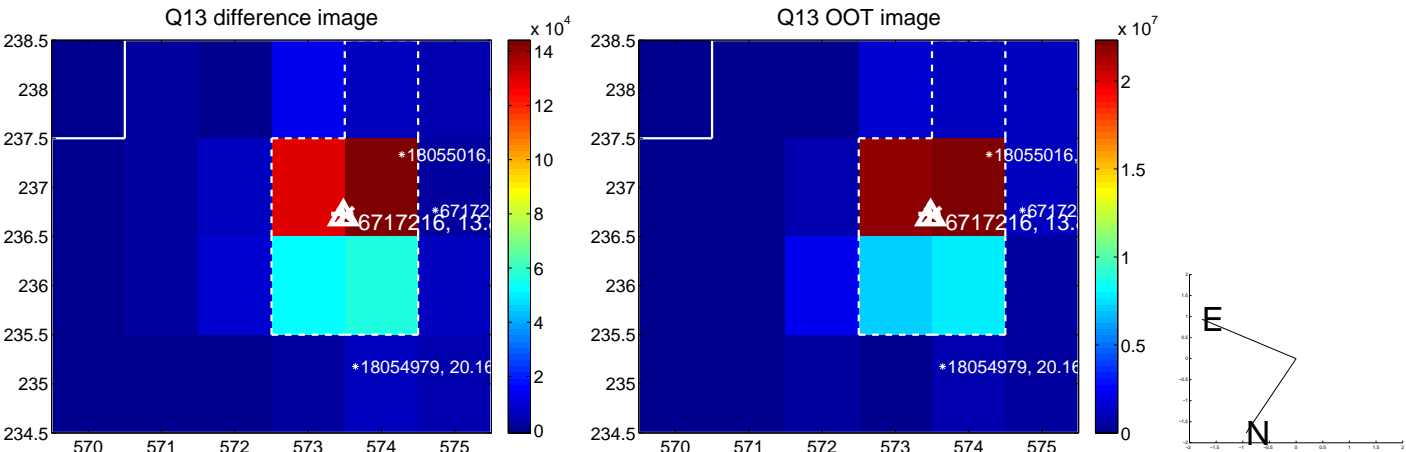
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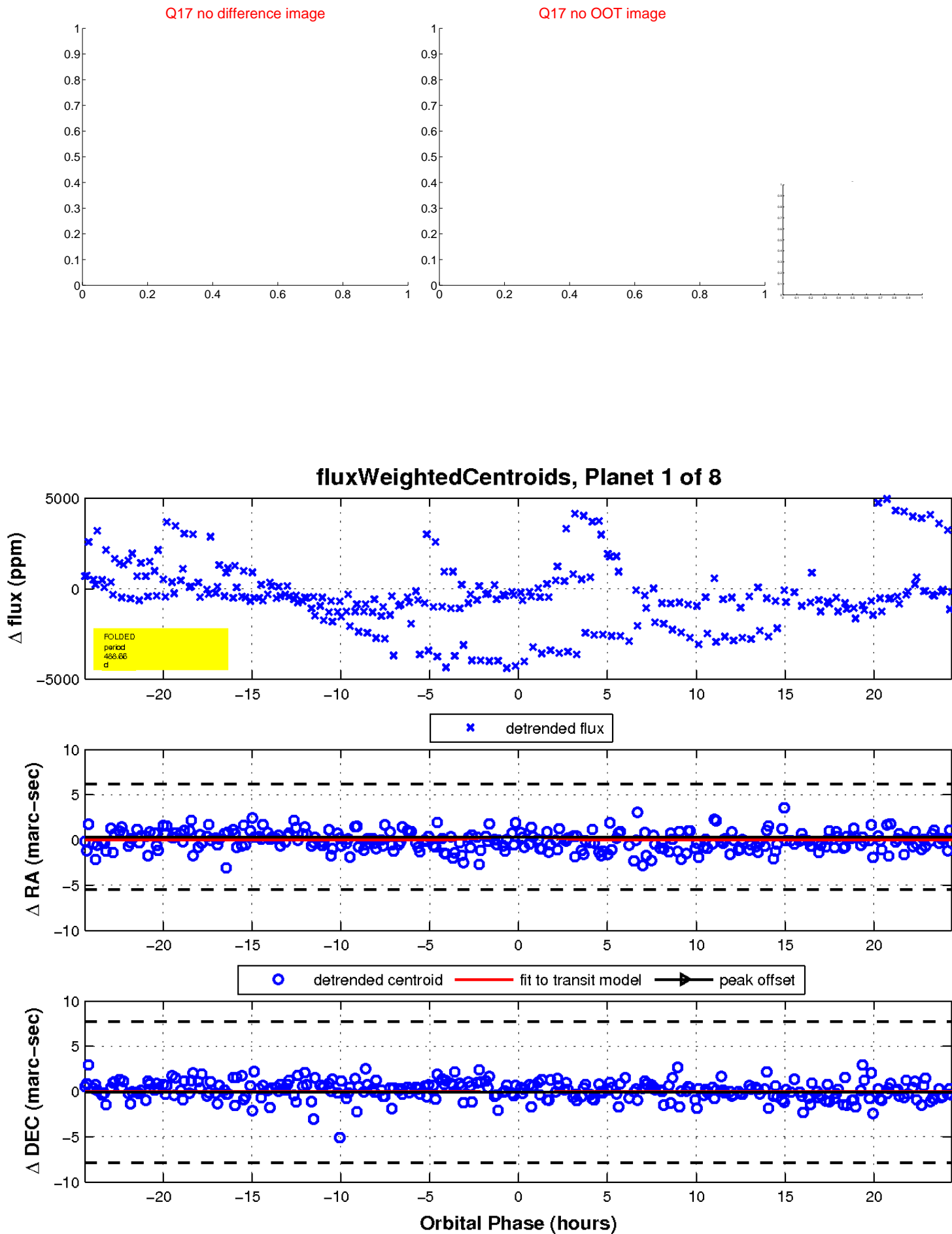
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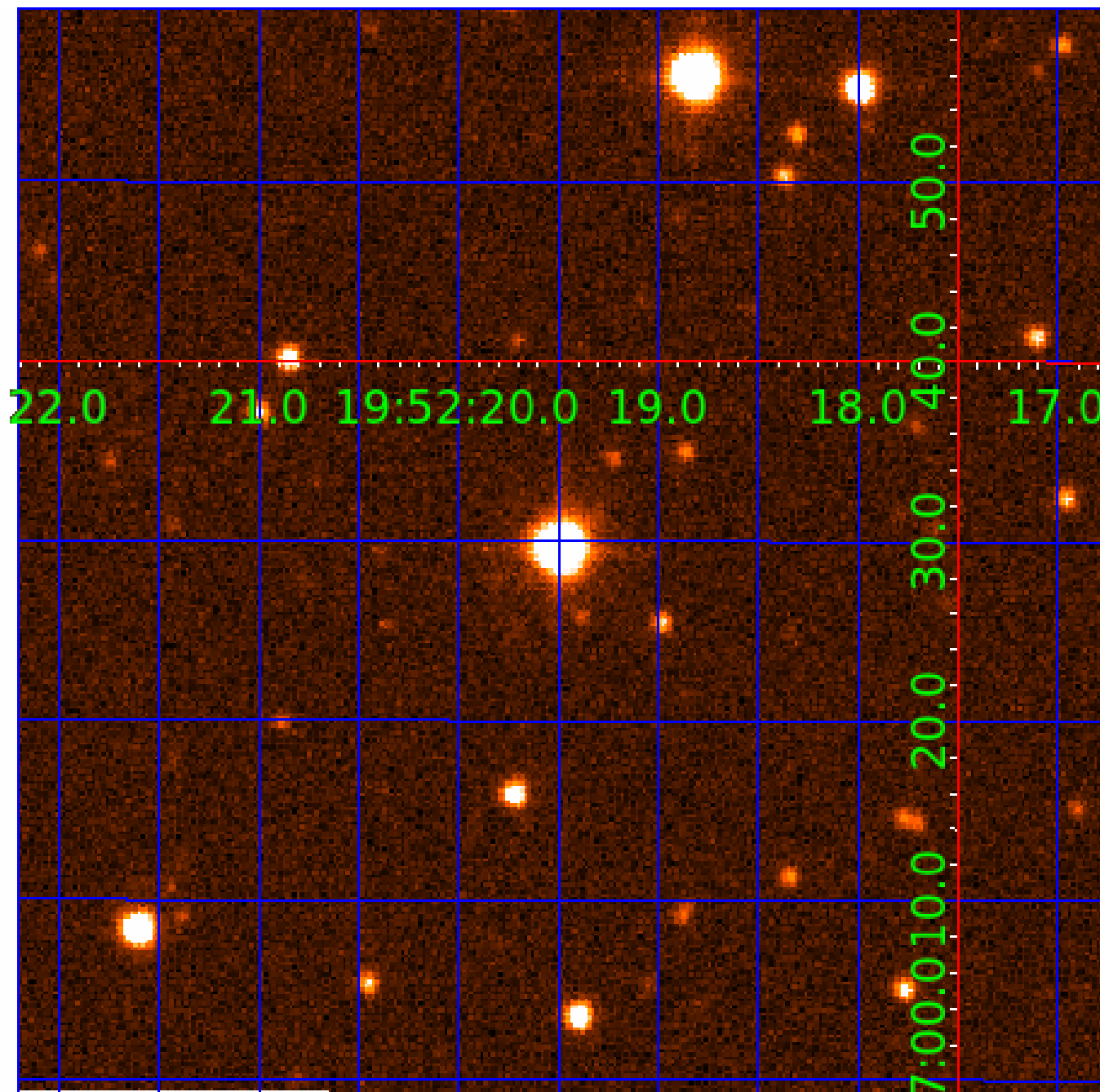


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006717216

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
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006717216-05	OBS	No	526.290680	228.033915	1317.4	5.787	14.4	7.7	0.64	4159	2.56	0.09
006717216-06	OBS	No	298.443968	198.167962	957.6	5.692	14.3	5.8	0.64	4159	2.53	0.20
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006717216-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006717216-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
006717216-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—CENT_NOFITS—HALO_GHOST

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

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

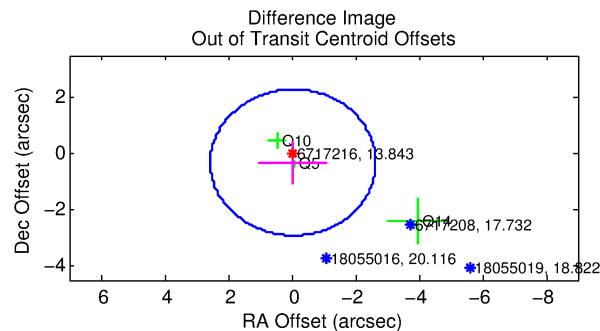
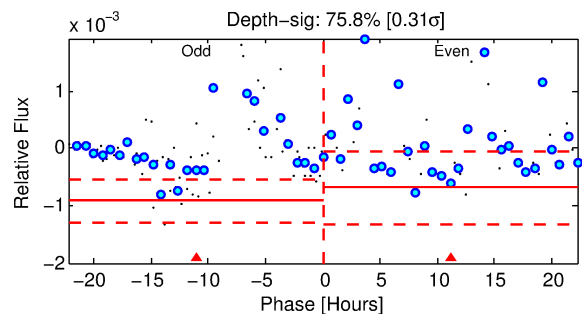
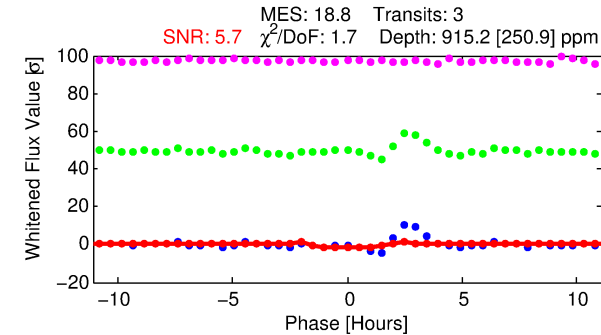
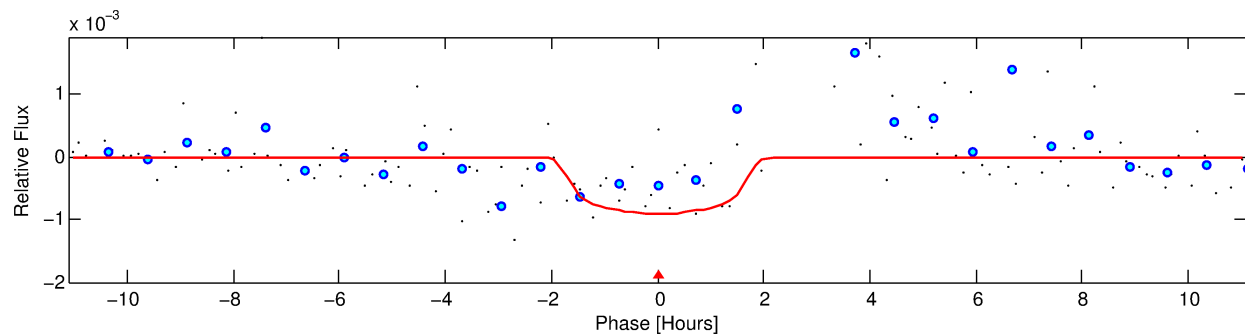
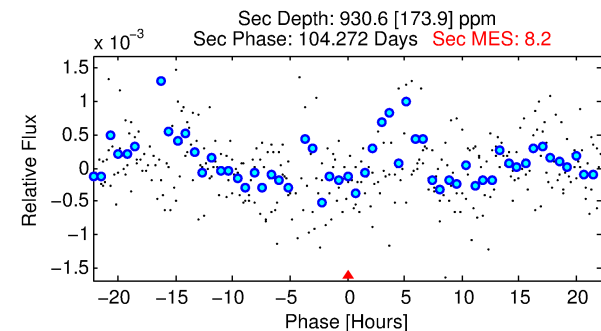
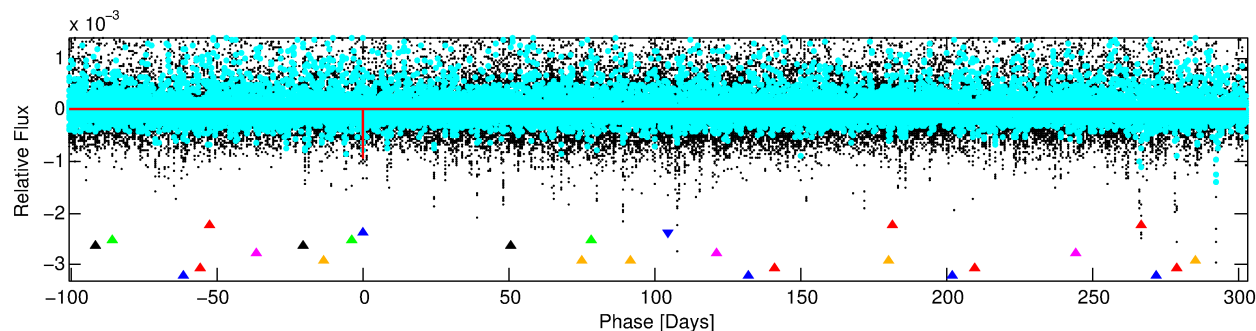
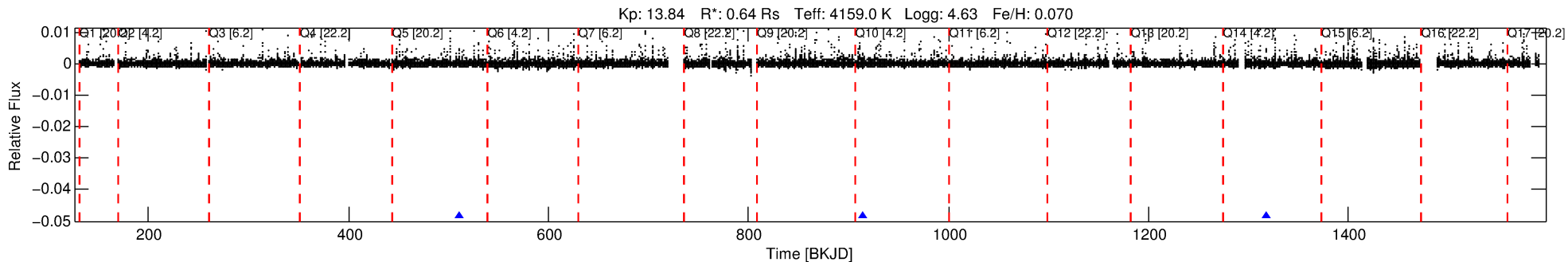
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006717216-02

No Significant Match Found

DV One-Page Summary

KIC: 6717216 Candidate: 2 of 8 Period: 403.509 d



DV Fit Results:

Period = 403.50866 [0.00856] d
Epoch = 510.1873 [0.0139] BKJD
Rp/R* = 0.0295 [0.0573]
a/R* = 634.80 [4021.83]
b = 0.69 [4.91]
Seff = 0.13 [0.02]
Teq = 153 [6] K
Rp = 2.06 [4.01] Re
a = 0.9177 [0.0684] AU
Ag = 101615.37 [395298.36] [0.26σ]
Teffp = 4230 [4114] K [0.99σ]

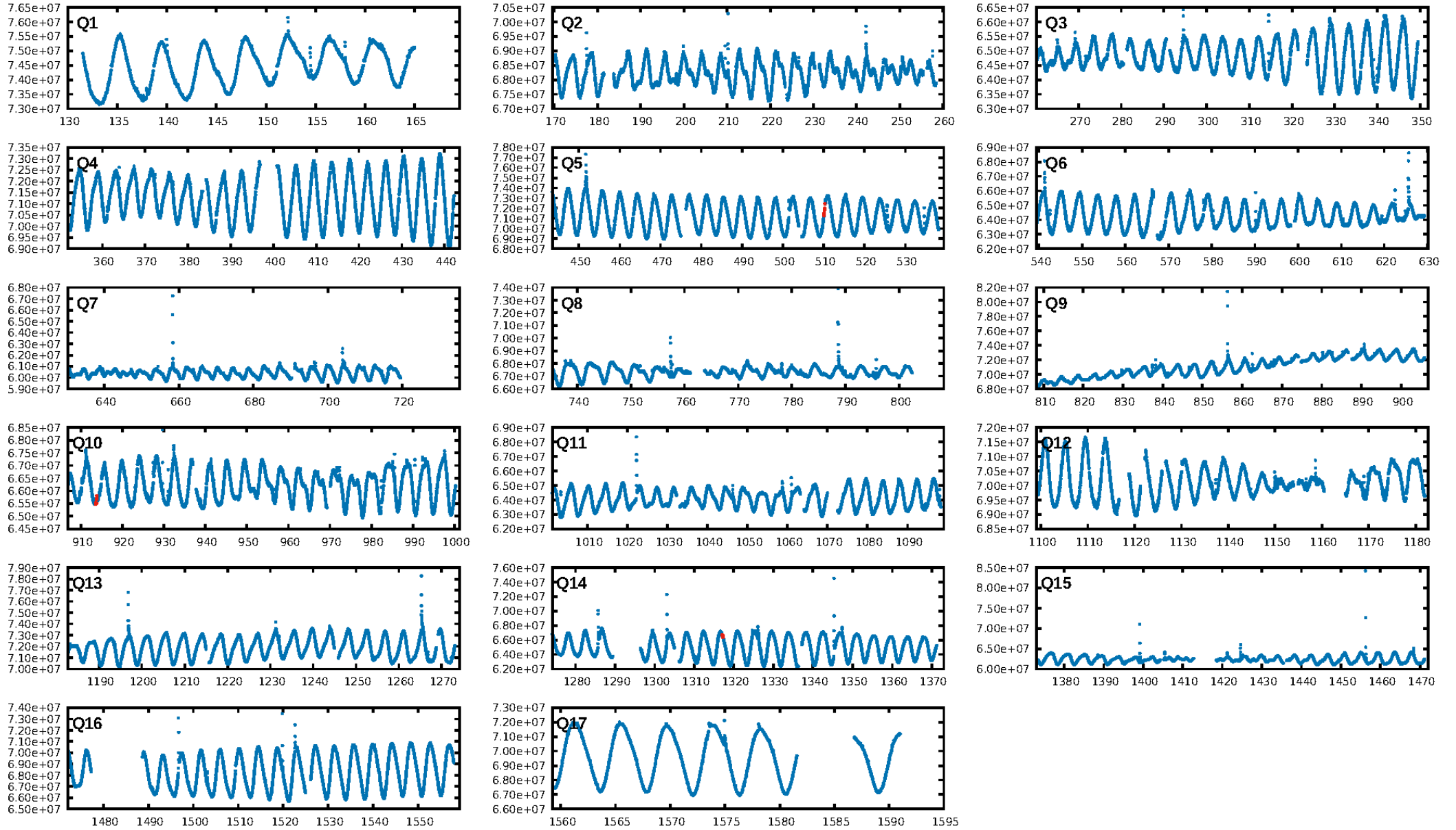
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [131.83σ]
LongPeriod-sig: 100.0% [219.68σ]
ModelChiSquare2-sig: 30.2%
ModelChiSquareGof-sig: 60.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.226
Centroid-sig: 77.8%
Centroid-so: 0.410 arcsec [0.52σ]
OotOffset-rm: 0.319 arcsec [0.37σ]
OotOffset-st: 2/0/0/1 [3]
KicOffset-rm: 0.271 arcsec [0.75σ]
KicOffset-st: 2/0/0/1 [3]
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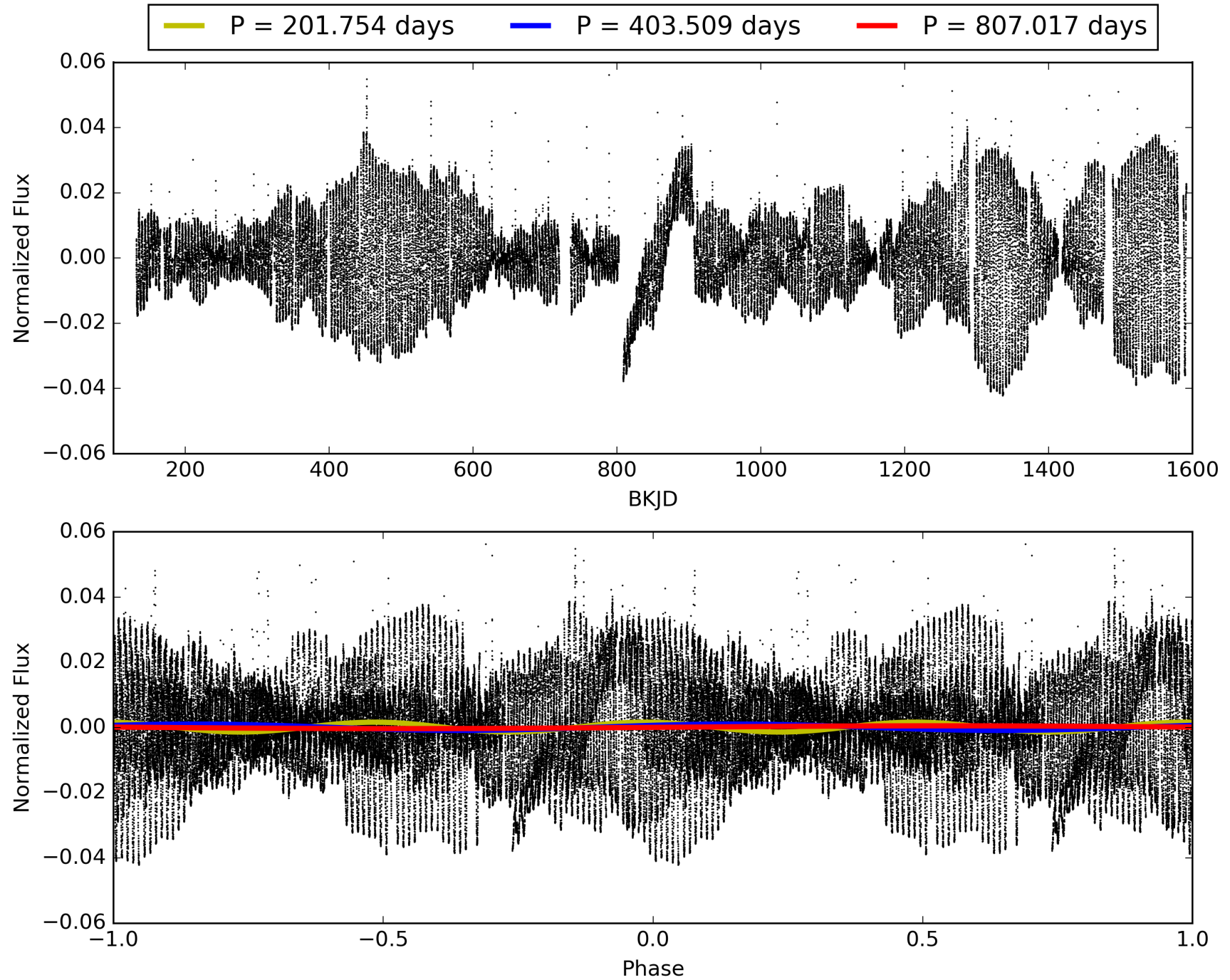
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:53:43 Z

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

TCE 006717216-02, PDC Light Curves

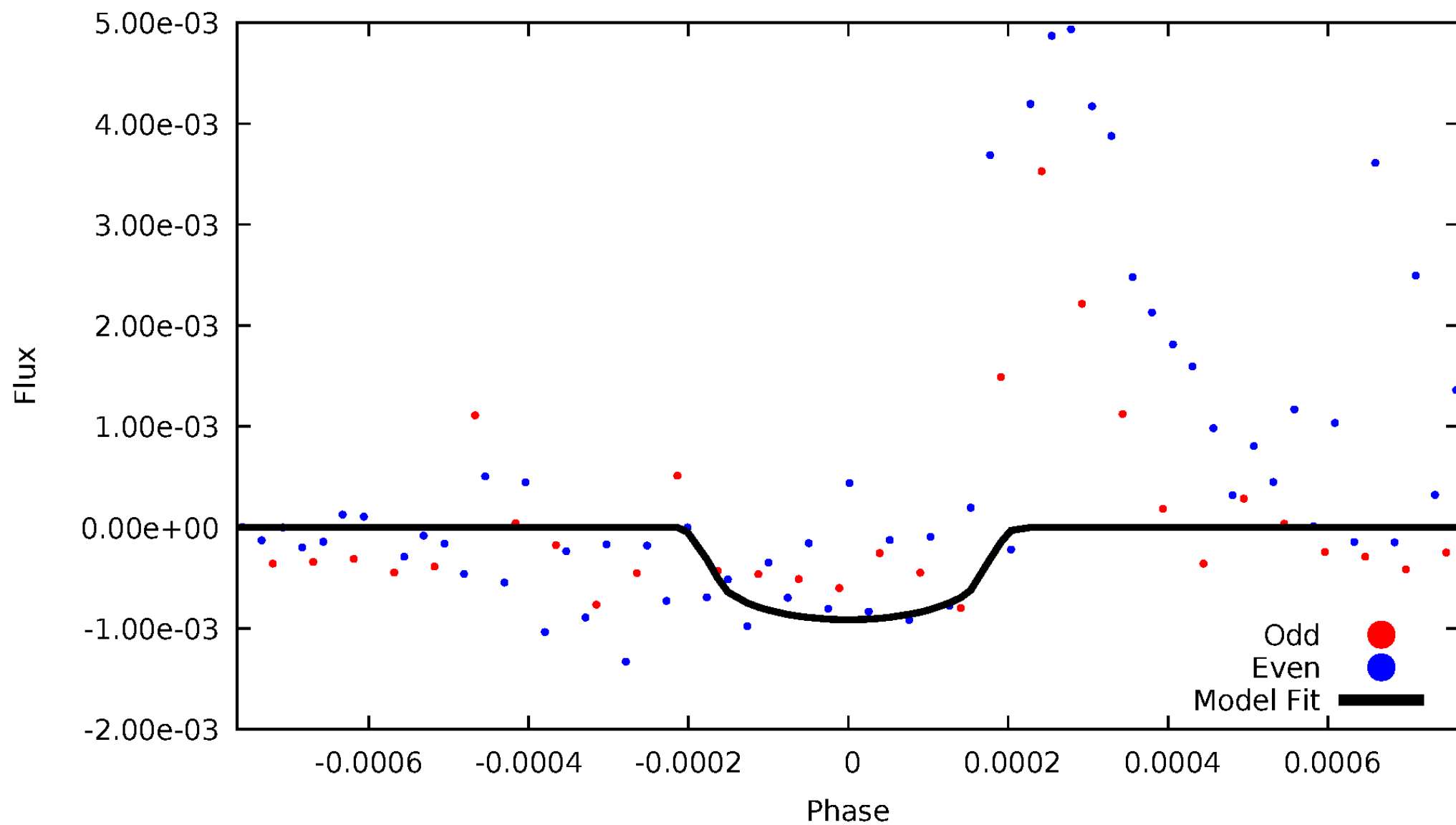


TCE 006717216-02



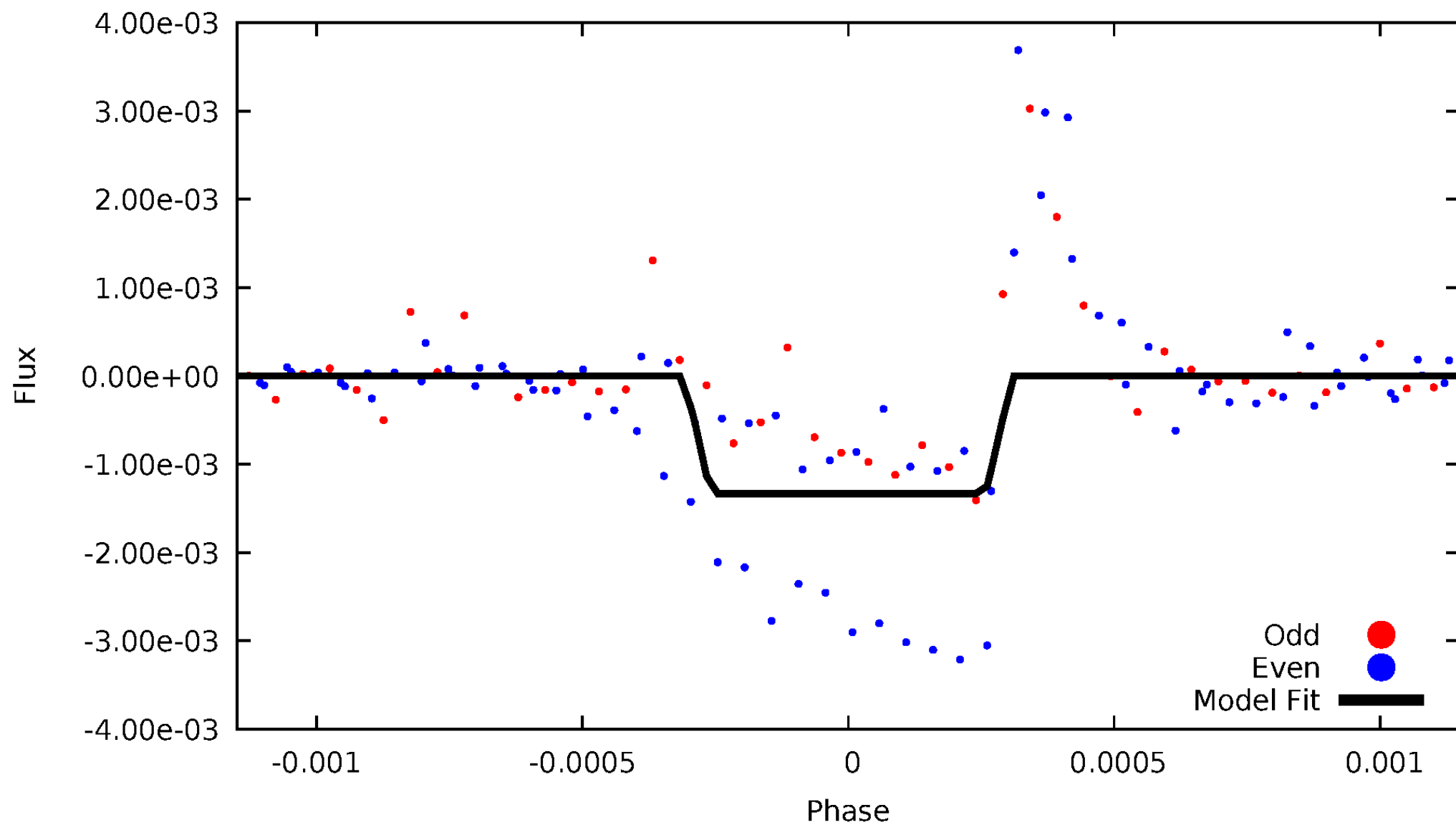
DV Odd/Even

TCE 006717216-02



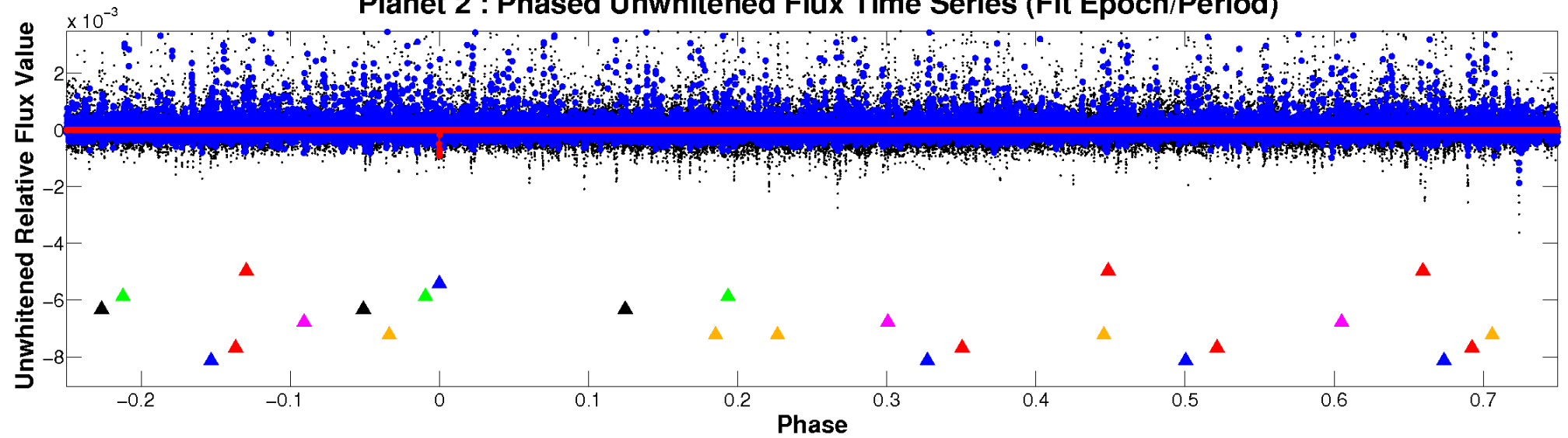
ALT Odd/Even

TCE 006717216-02

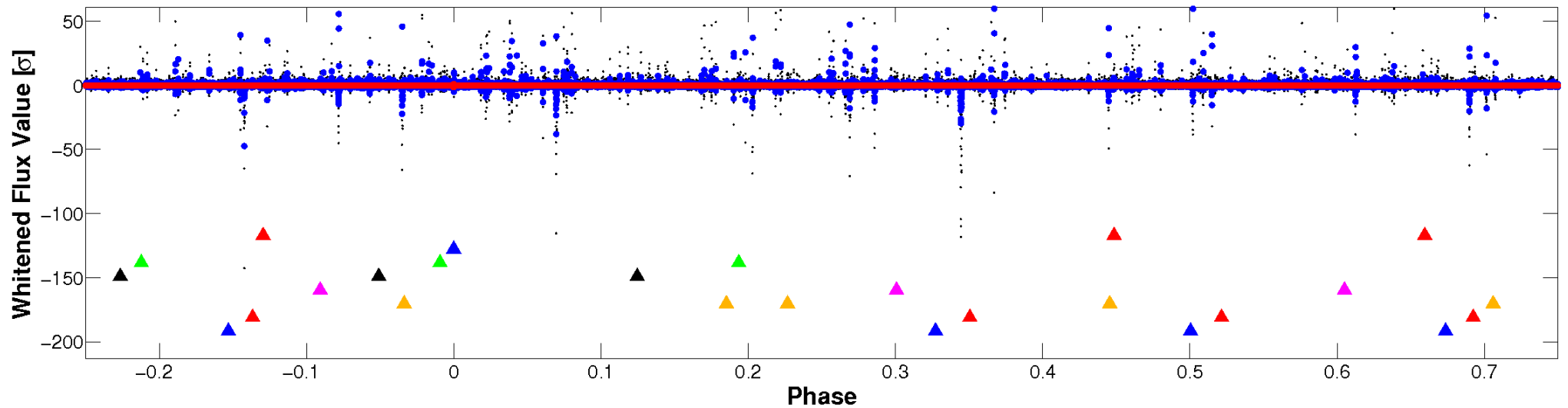


Non-Whitened Vs. Whitened Light Curve

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

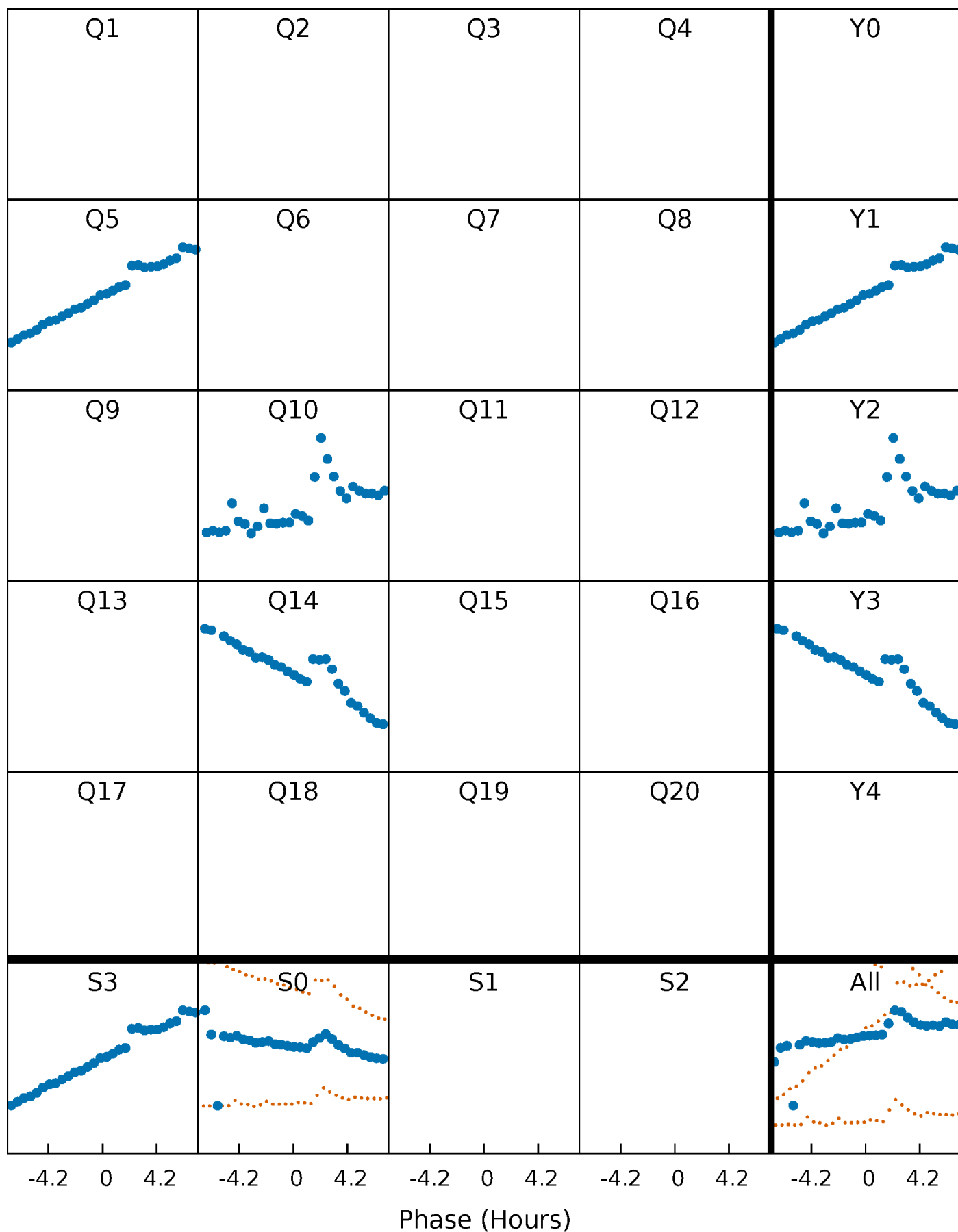


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



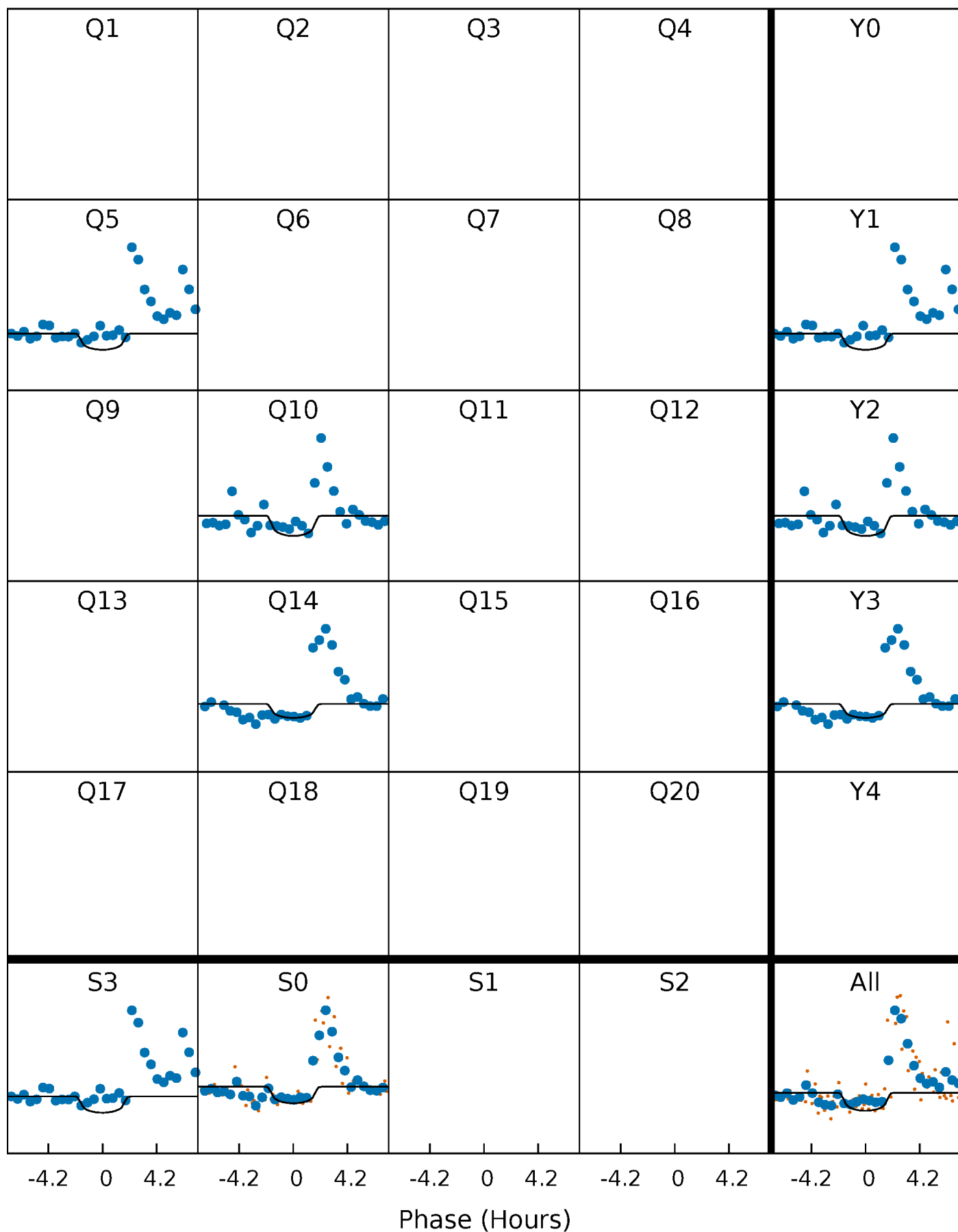
PDC Quarter-Phased Transit Curves

TCE 006717216-02 P=403.508663 Days $T_0=510.187294$ (BKJD)



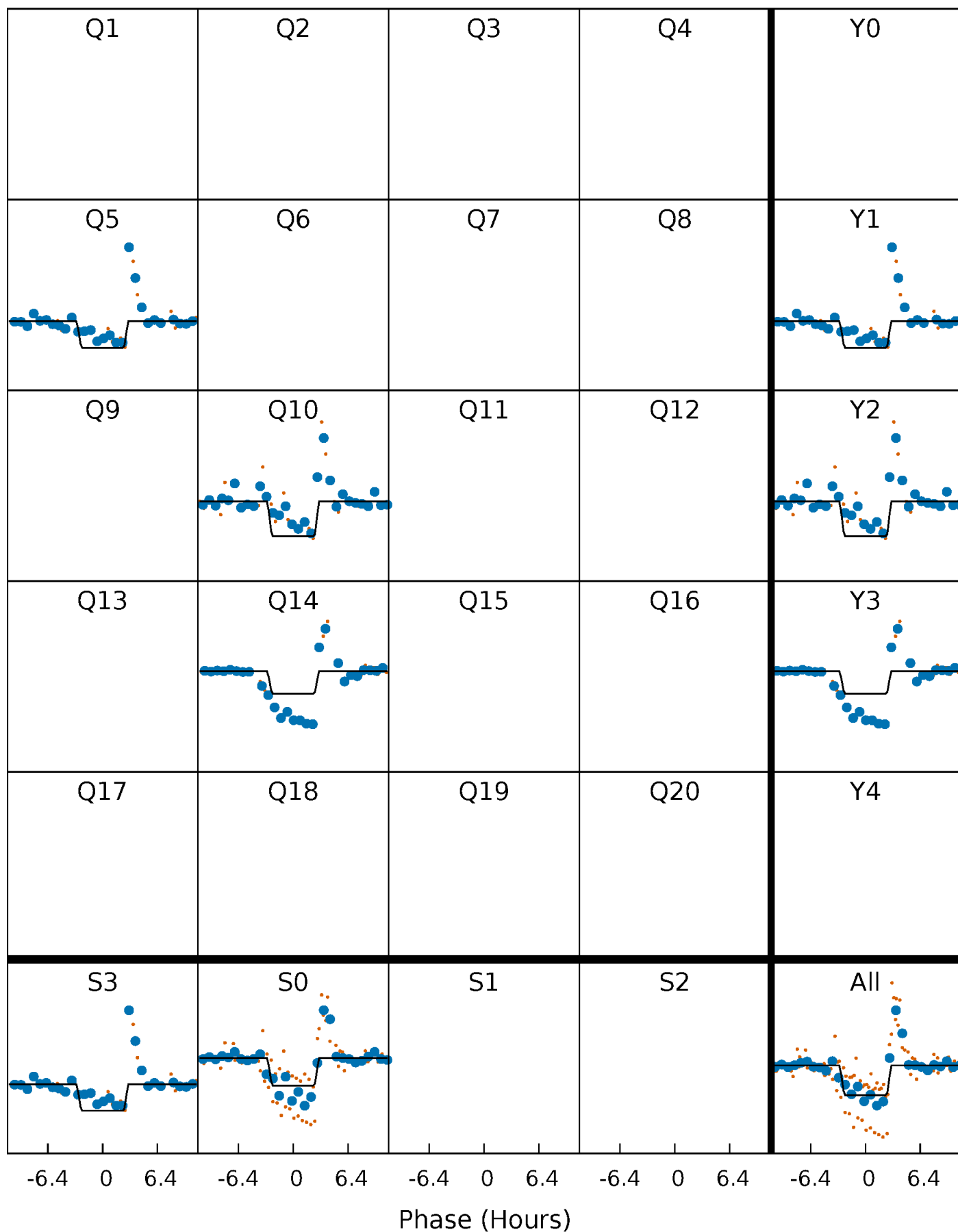
DV Quarter-Phased Transit Curves

TCE 006717216-02 P=403.508663 Days $T_0=510.187294$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

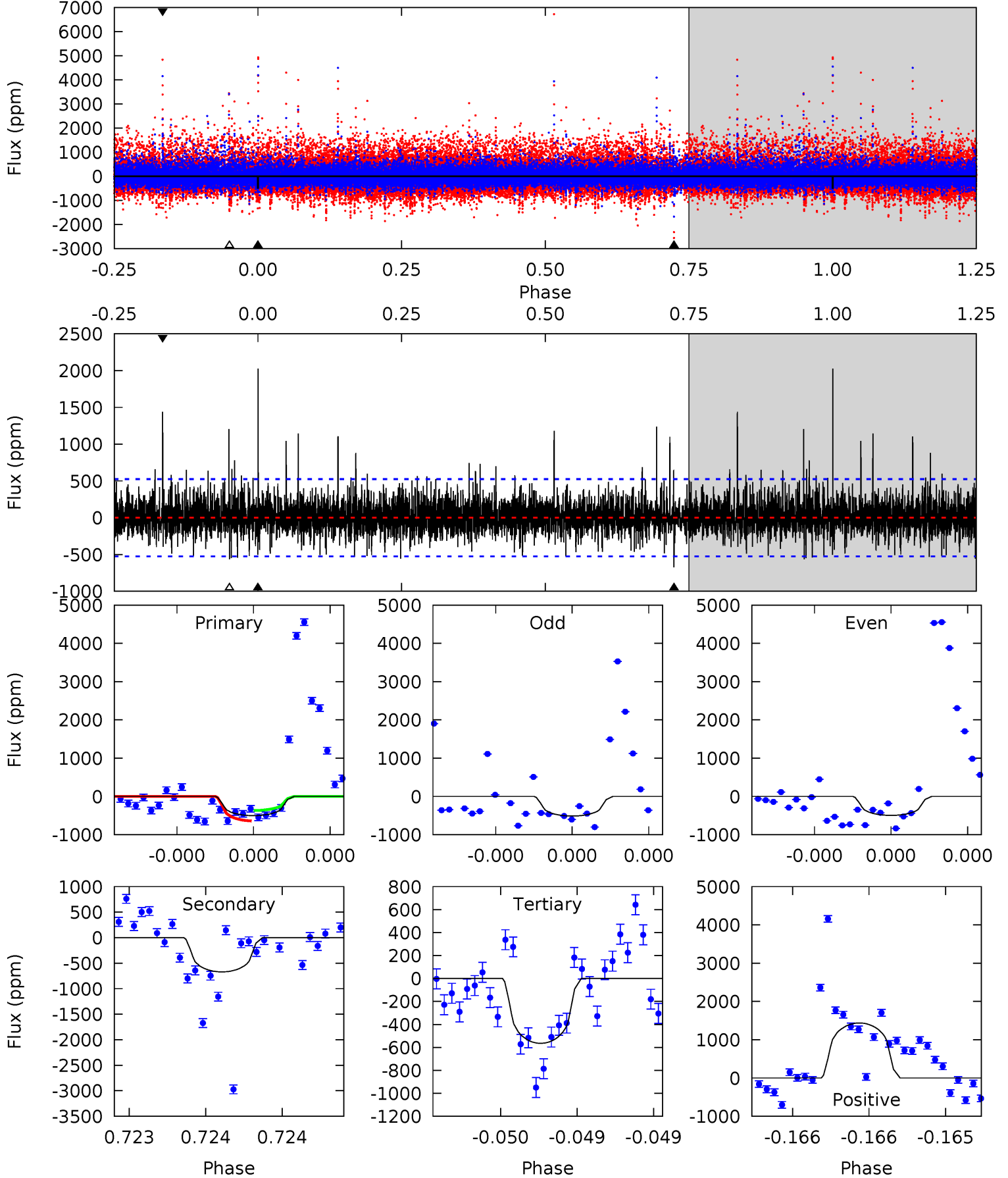
TCE 006717216-02 P=403.494698 Days $T_0=510.161110$ (BKJD)



DV Model-Shift Uniqueness Test

006717216-02, P = 403.508663 Days, E = 106.678631 Days

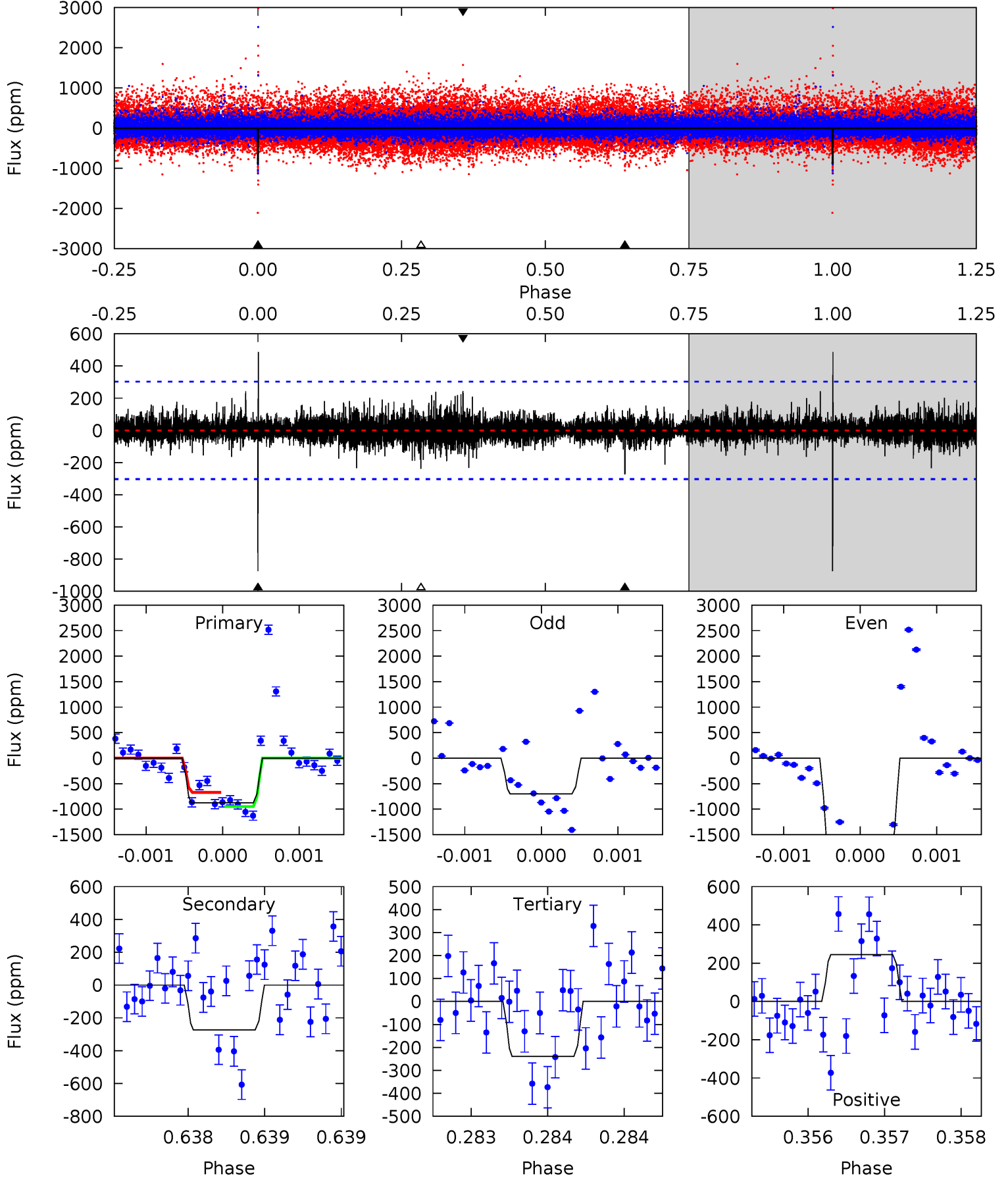
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.35	7.16	6.03	15.3	5.60	3.52	1.82	-0.67	-9.98	1.13	-8.17	0.04	0.82	0.75	1.48



Alt Model-Shift Uniqueness Test

006717216-02, P = 403.494698 Days, E = 106.666412 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	4.99	4.37	4.48	5.54	3.43	0.86	11.6	11.5	0.62	0.51	9.79	1.73	0.36	2.51



Stellar Parameters For KIC 006717216

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4159^{+126}_{-139}	$4.627^{+0.053}_{-0.018}$	$0.070^{+0.250}_{-0.300}$	$0.640^{+0.035}_{-0.060}$	$0.633^{+0.054}_{-0.054}$	$3.396^{+0.793}_{-0.292}$
	+3%/-3%	+1%/-0%	+357%/-429%	+5%/-9%	+9%/-9%	+23%/-9%
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 006717216-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-671 ± 94	$3.58^{+3.31}_{-2.38}$	213^{+7}_{-8}	3301^{+1537}_{-549}	$24237^{+192477}_{-17755}$
Alt.	-273 ± 55	$3.85^{+3.85}_{-2.52}$	212^{+7}_{-8}	2825^{+1058}_{-447}	8445^{+63714}_{-6418}

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

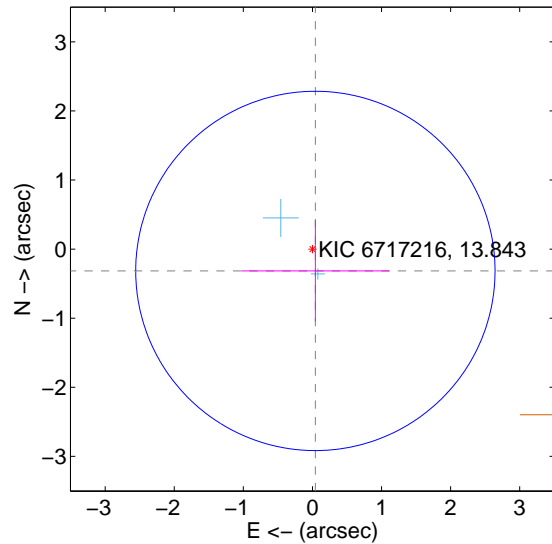
Supplemental centroid analysis for 006717216-02. Kepler magnitude: 13.84. Transit SNR 5.67

There are 2 quarters with good PRF difference image offsets

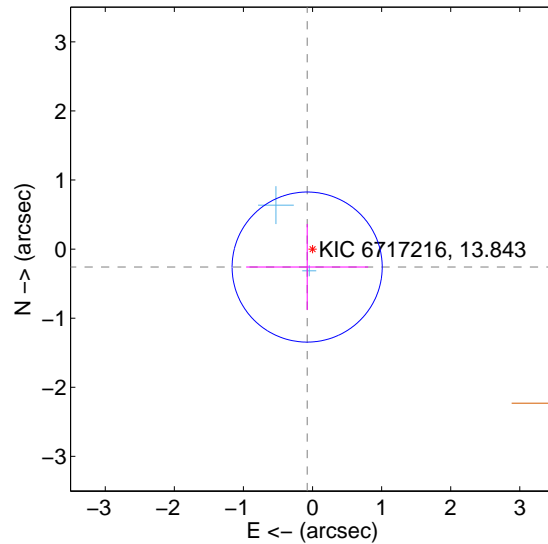
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.319 ± 0.867	0.37	-0.042 ± 1.072	-0.316 ± 0.733
PRF-fit source offset from KIC position	0.271 ± 0.362	0.75	0.078 ± 0.883	-0.260 ± 0.622
photometric centroid source offset	0.41 ± 0.79	0.52	0.32 ± 0.82	0.25 ± 0.74

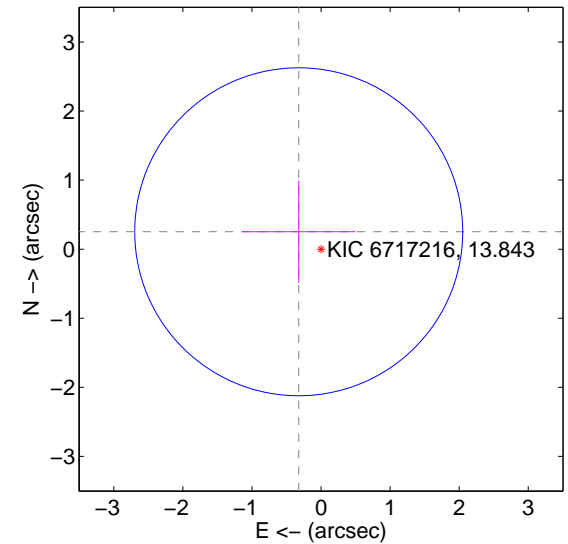
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

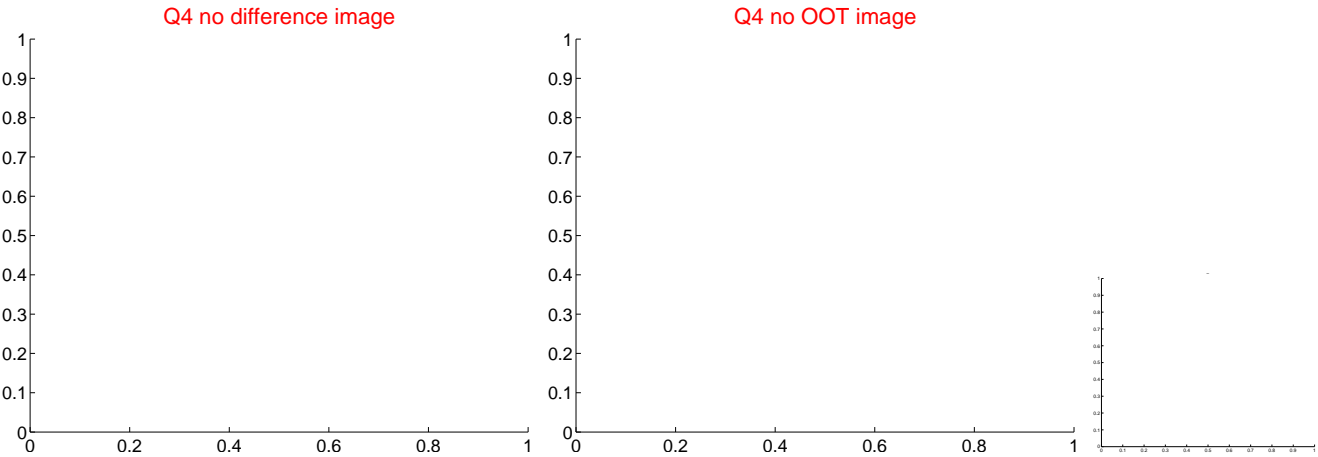
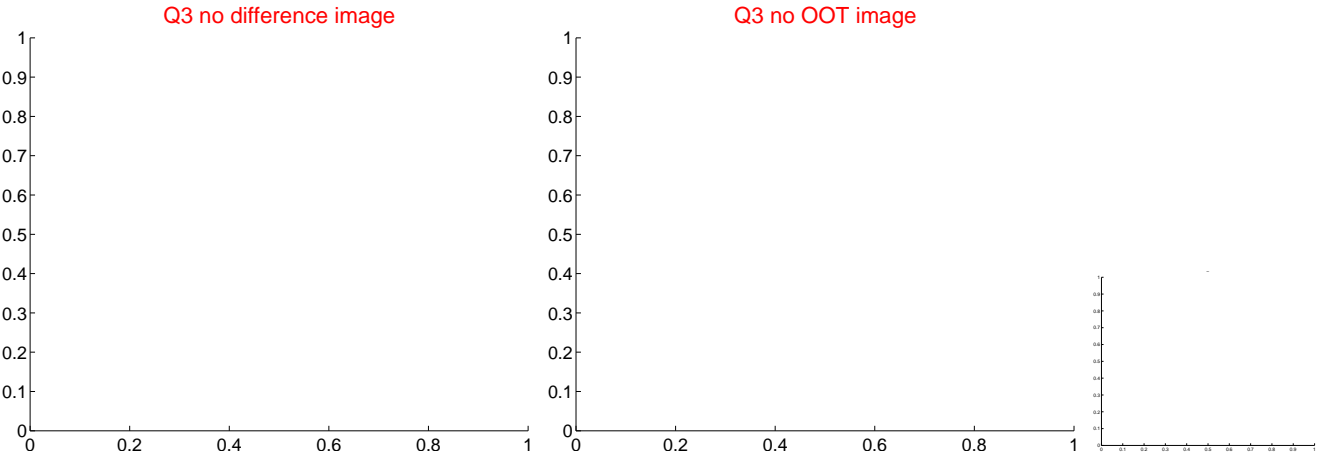
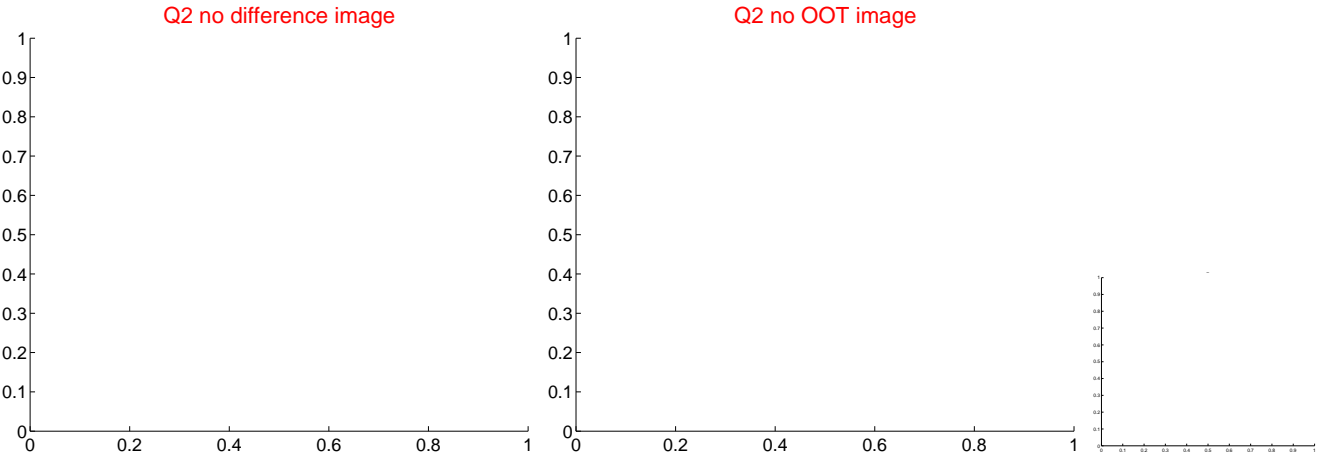
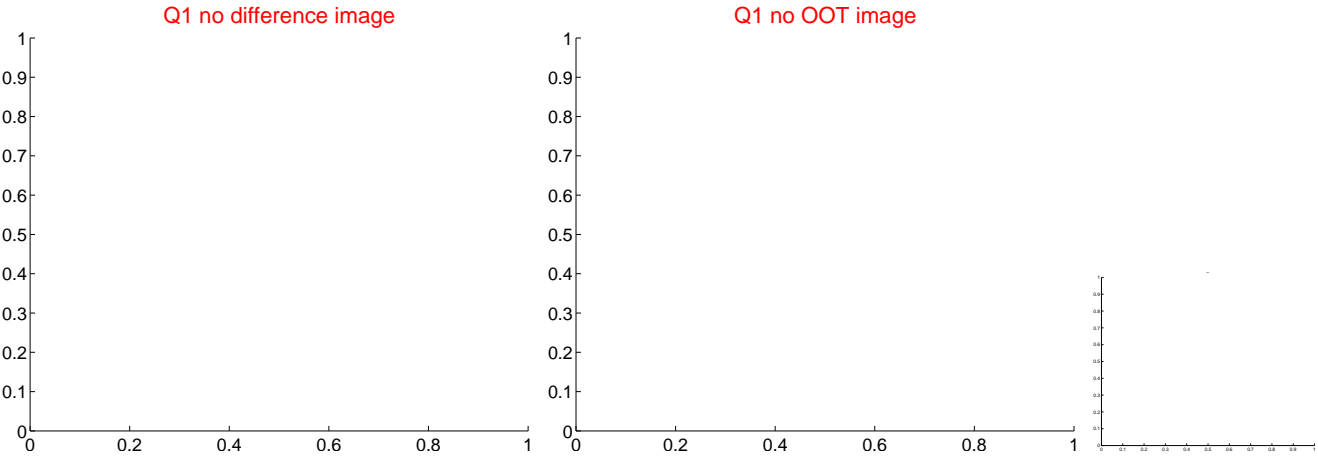


offset from photometric centroids

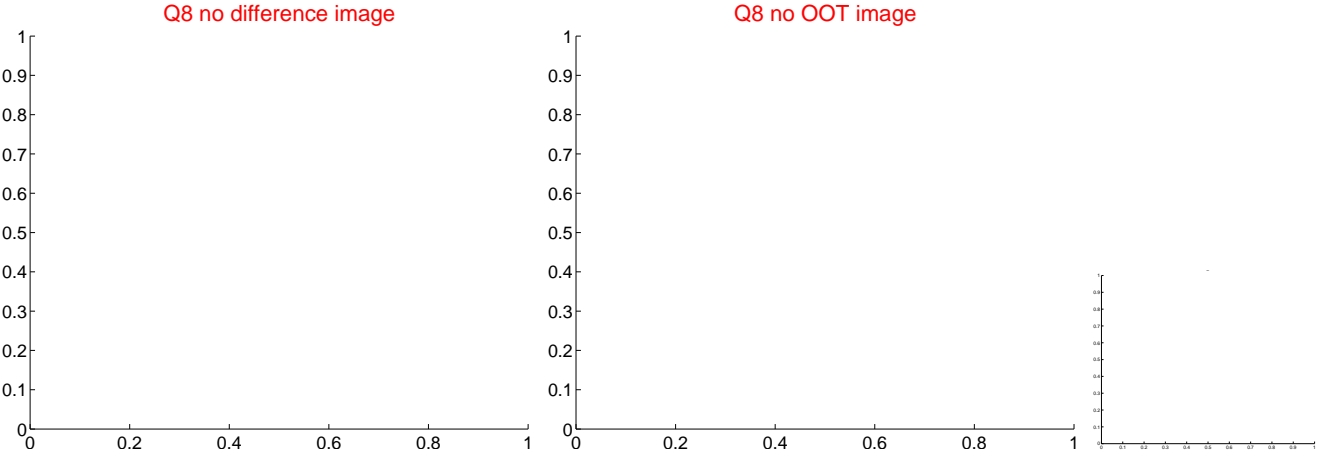
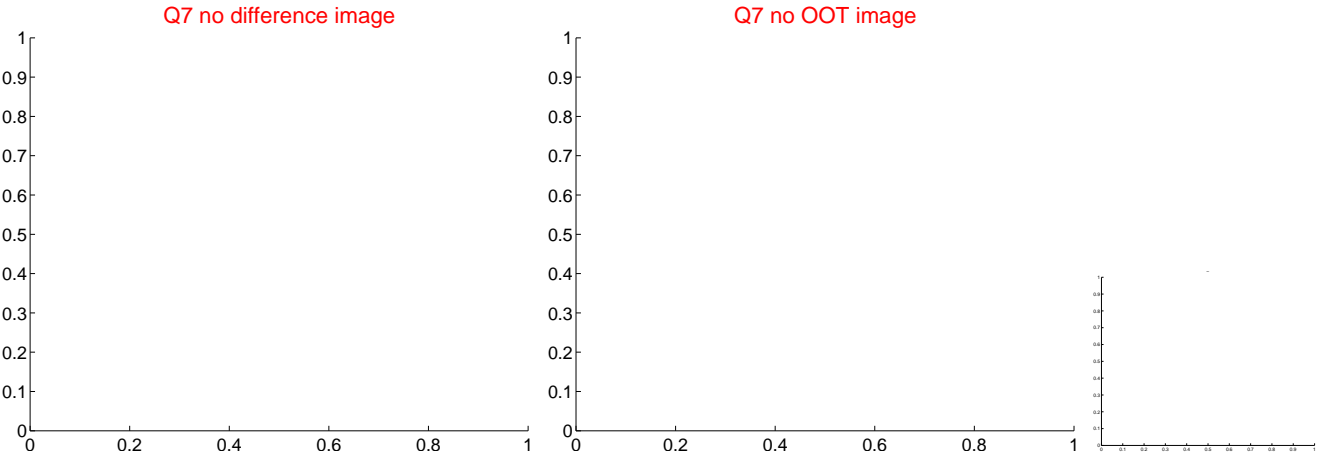
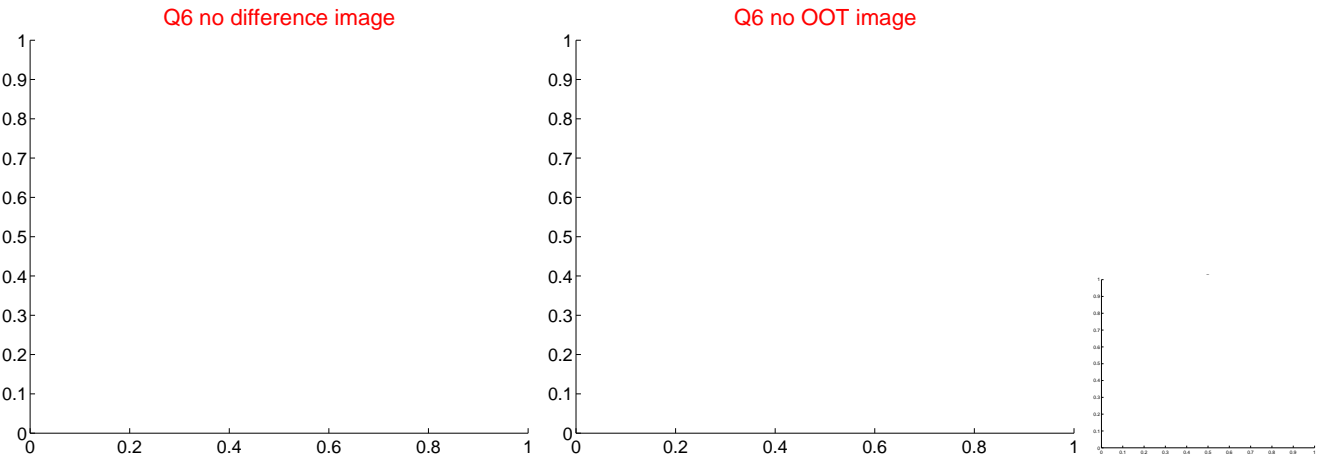
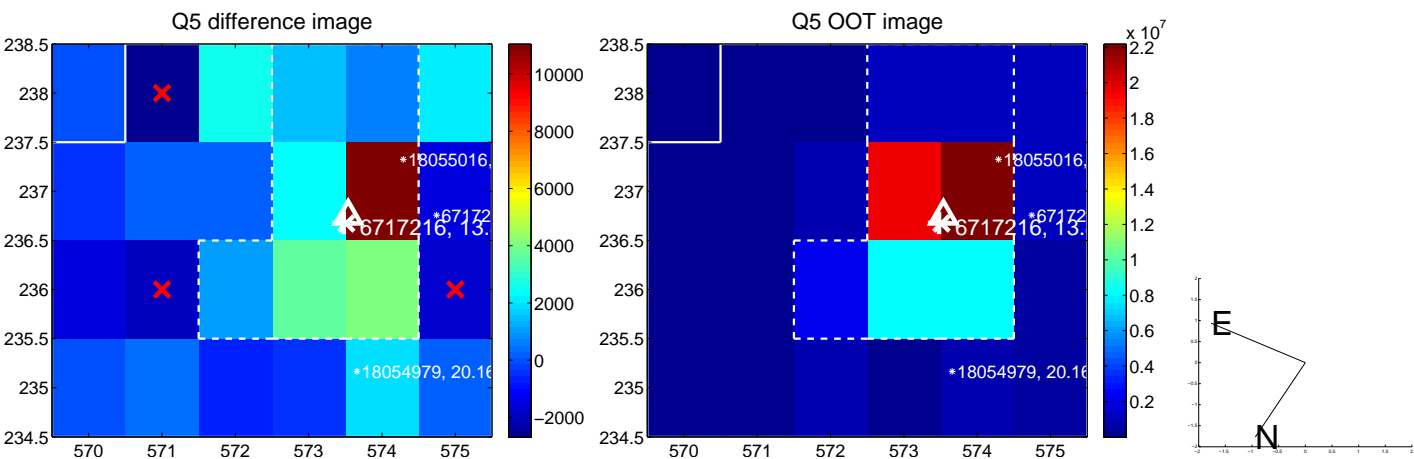


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

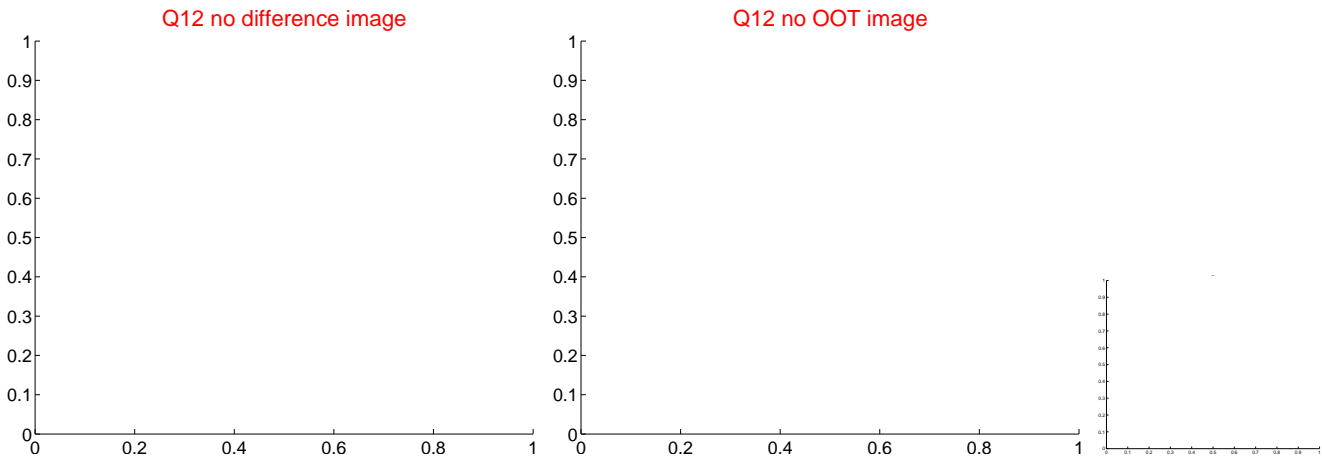
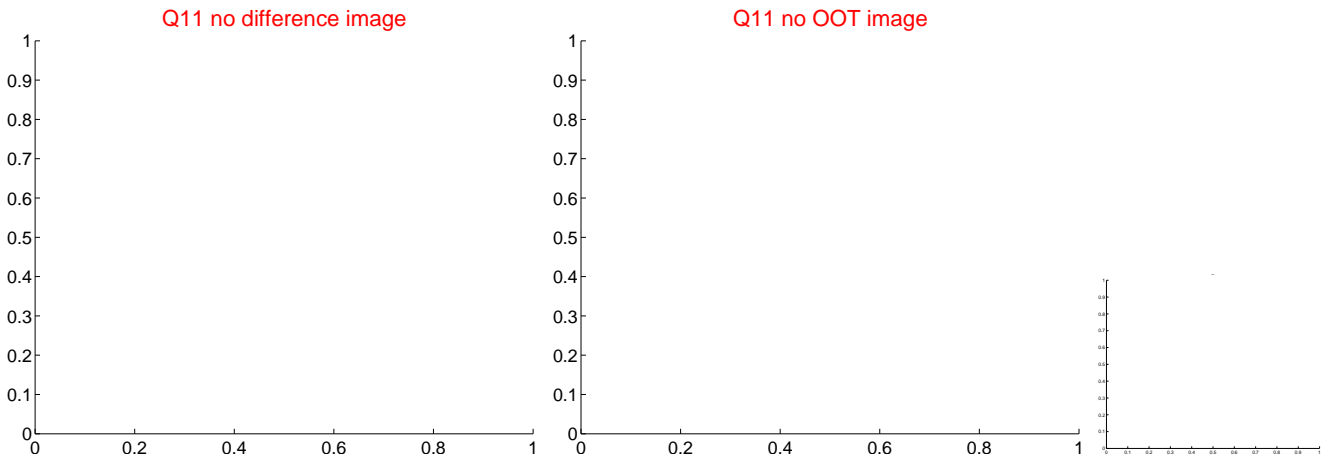
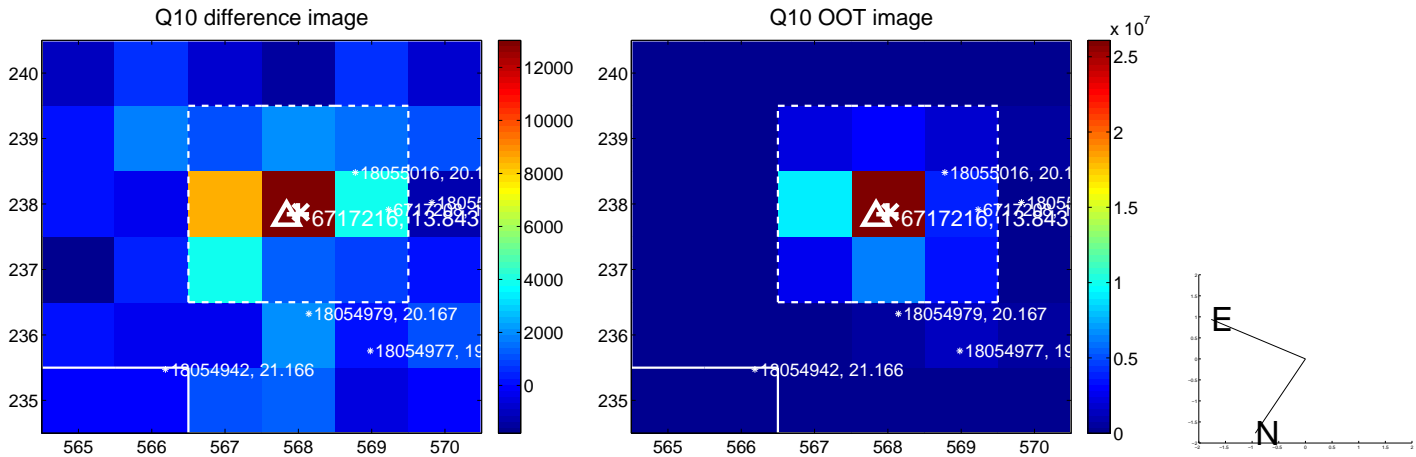
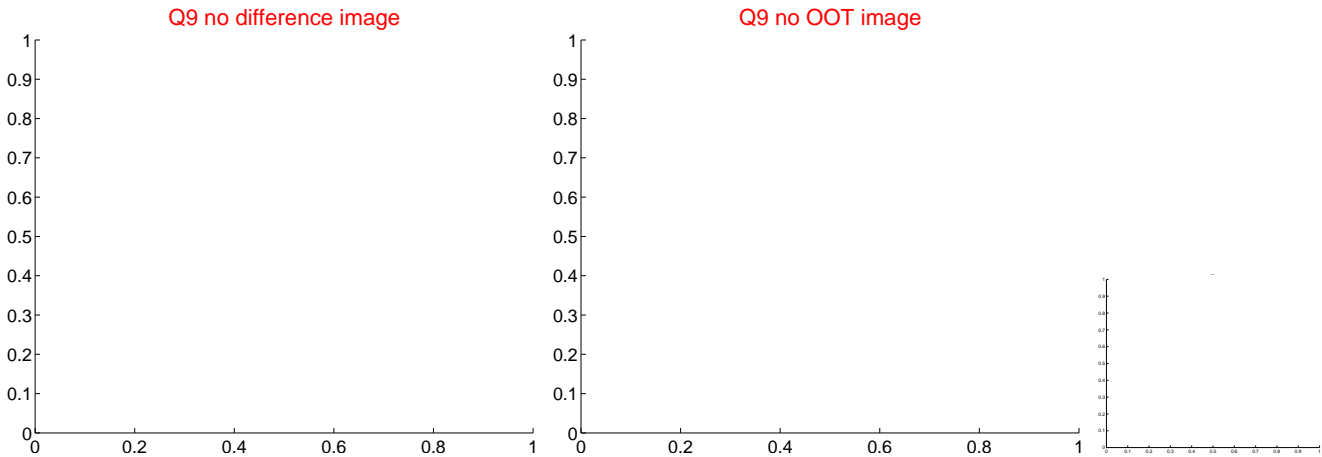
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



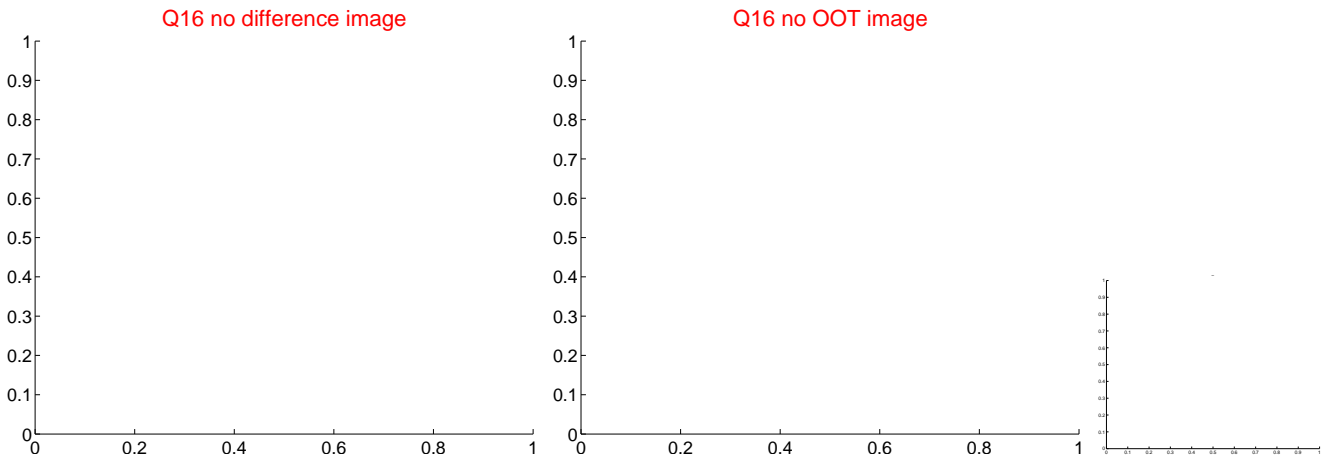
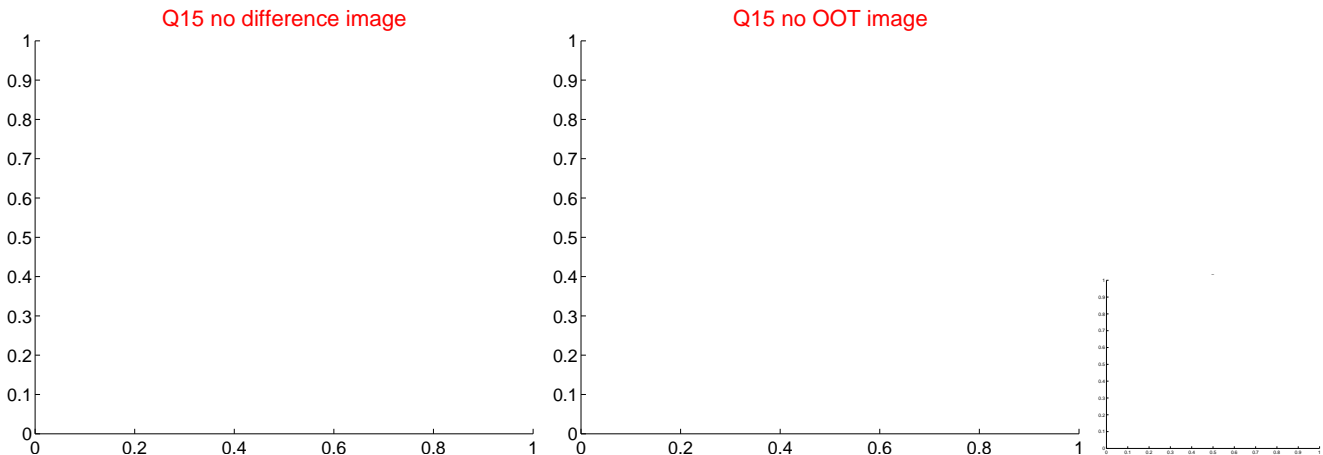
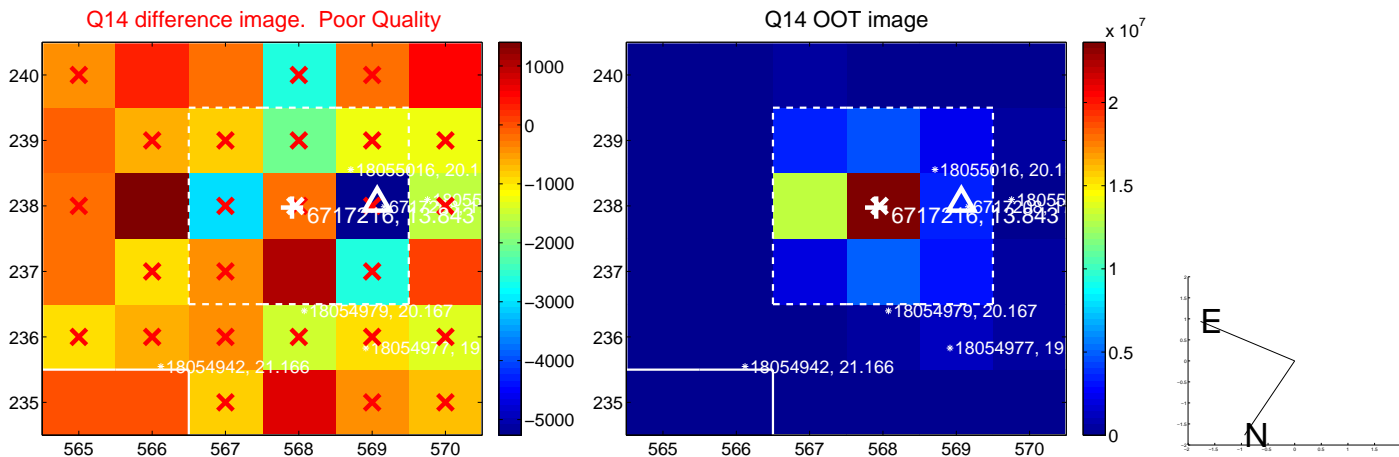
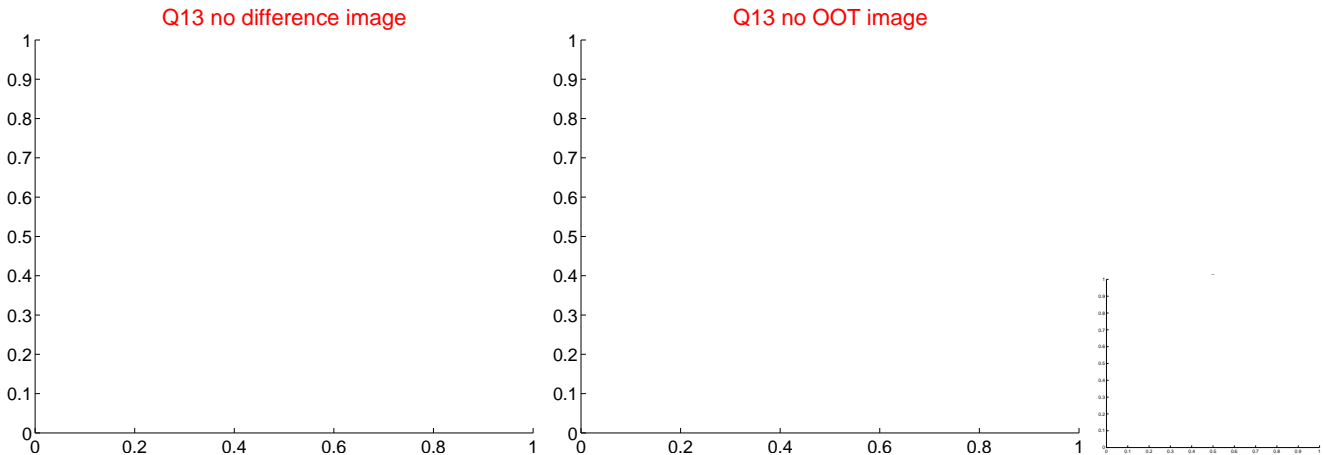
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



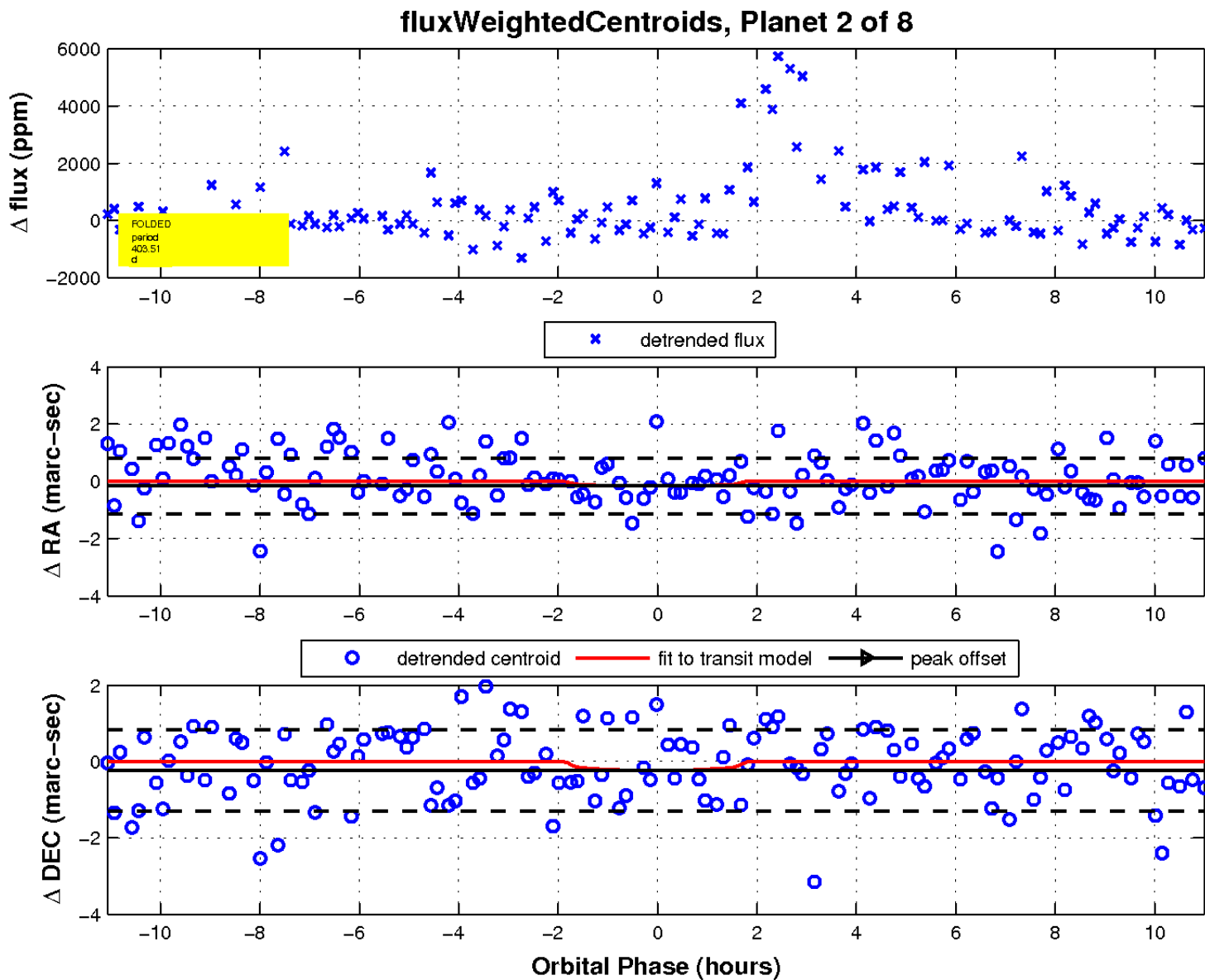
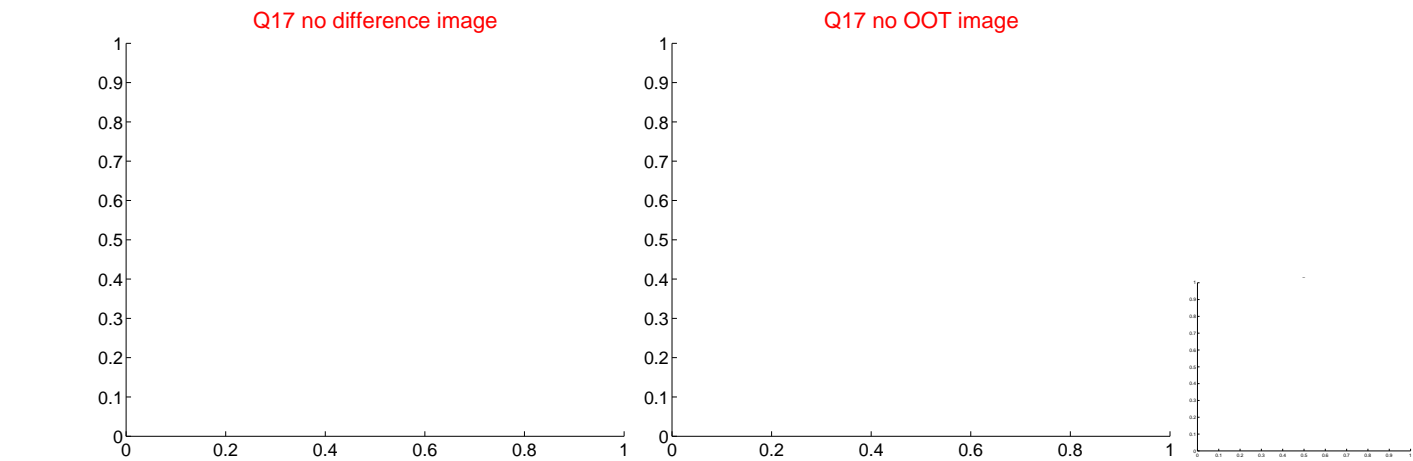
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



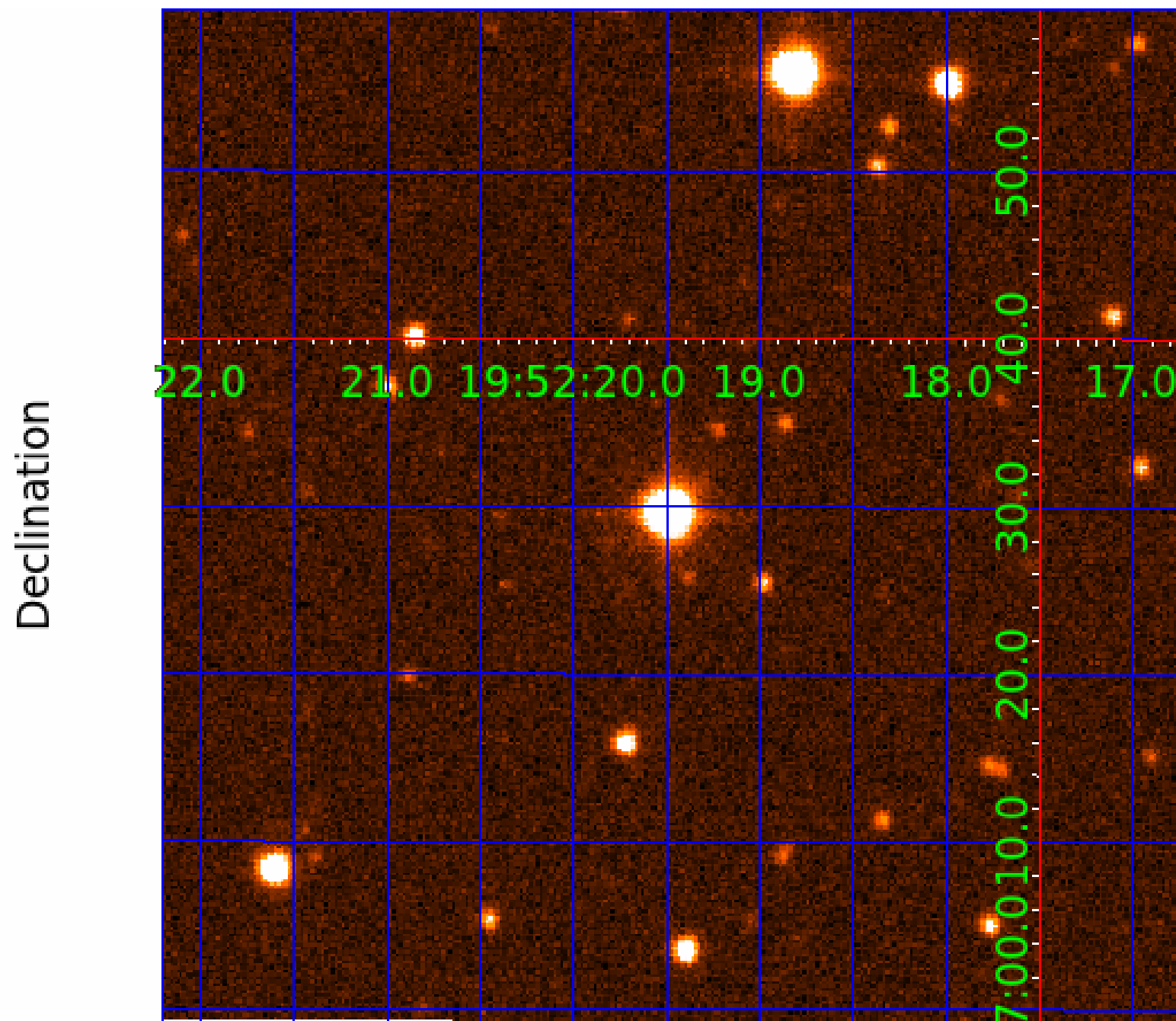
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 006717216

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})
006717216-01	OBS	No	488.661435	287.654049	1976.1	8.133	16.2	8.9	0.64	4159	5.68	0.10
006717216-02	OBS	No	403.508663	510.187294	915.2	3.703	18.8	5.7	0.64	4159	2.06	0.13
006717216-03	OBS	No	485.381537	424.554069	1369.5	9.692	15.5	6.1	0.64	4159	2.27	0.10
006717216-04	OBS	No	474.350127	418.806718	1417.8	6.796	15.3	8.3	0.64	4159	2.50	0.10
006717216-05	OBS	No	526.290680	228.033915	1317.4	5.787	14.4	7.7	0.64	4159	2.56	0.09
006717216-06	OBS	No	298.443968	198.167962	957.6	5.692	14.3	5.8	0.64	4159	2.53	0.20
006717216-08	OBS	No	333.611378	448.424961	1968.7	8.865	13.0	12.4	0.64	4159	2.94	0.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006717216-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006717216-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006717216-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
006717216-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—CENT_NOFITS—HALO_GHOST

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

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

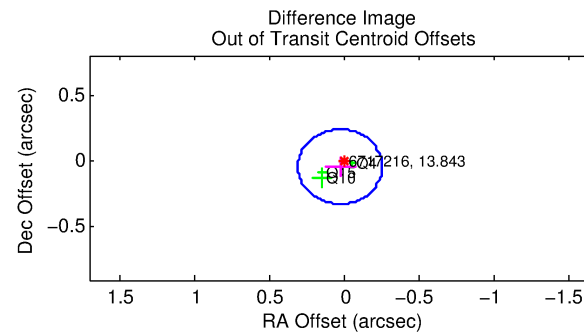
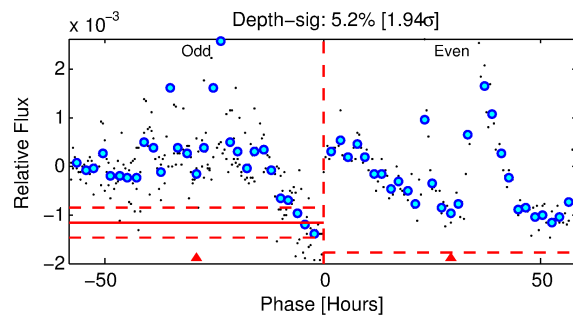
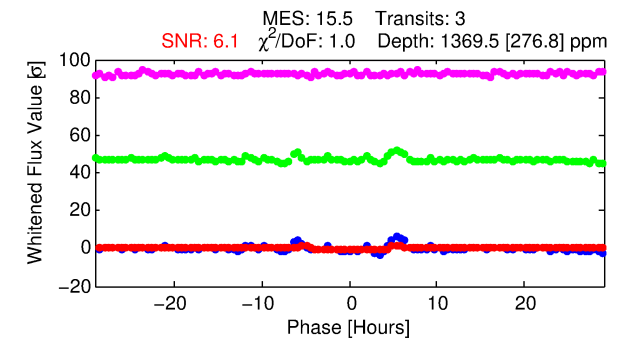
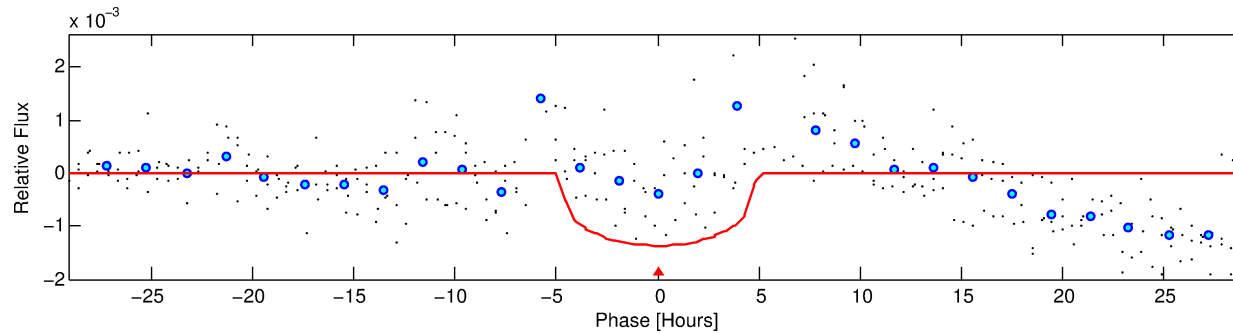
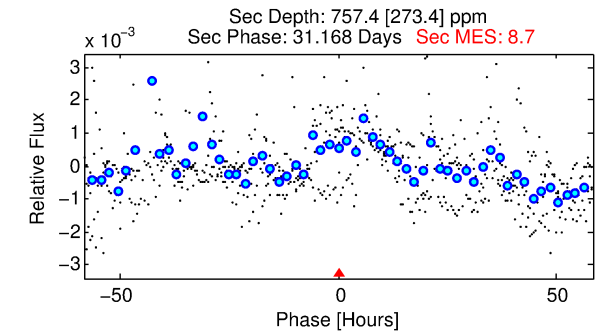
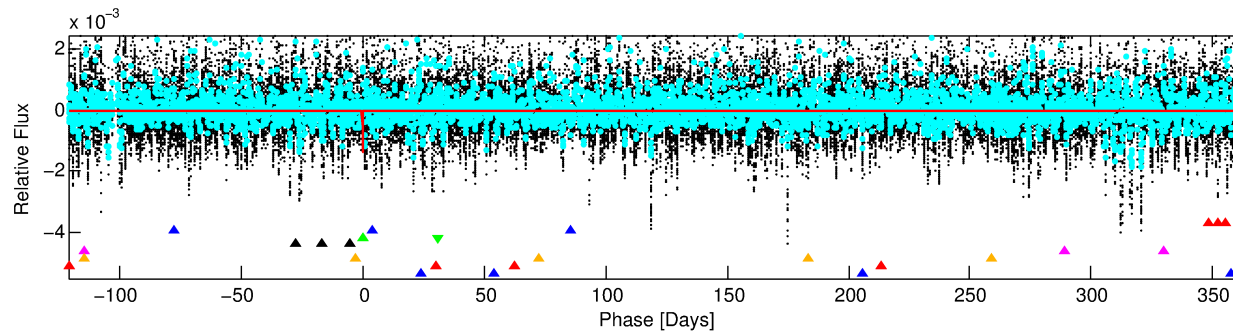
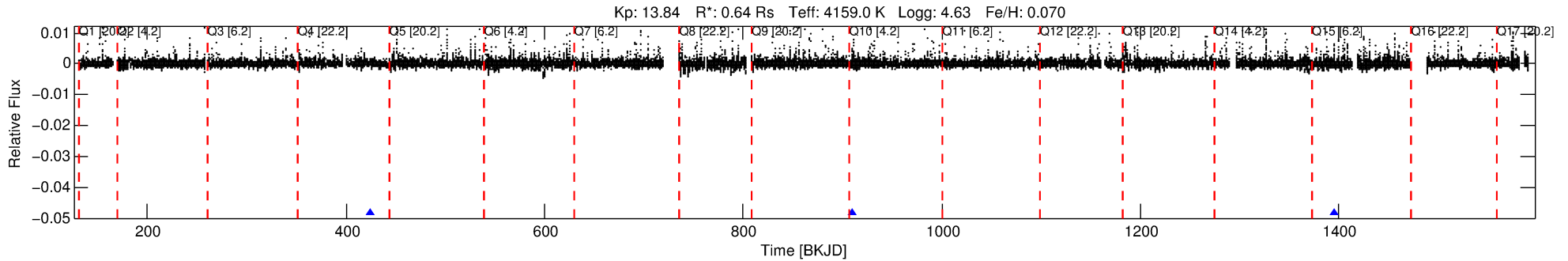
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006717216-03

No Significant Match Found

DV One-Page Summary

KIC: 6717216 Candidate: 3 of 8 Period: 485.382 d



DV Fit Results:

Period = 485.38154 [0.00617] d
Epoch = 424.5541 [0.0061] BKJD
Rp/R* = 0.0325 [0.0206]
a/R* = 395.03 [794.36]
b = 0.00 [5052.38]
Seff = 0.10 [0.02]
Teq = 144 [6] K
Rp = 2.27 [1.45] Re
a = 1.0380 [0.0774] AU
Ag = 87060.59 [115007.21] [0.76σ]
Teffp = 3826 [1266] K [2.91σ]

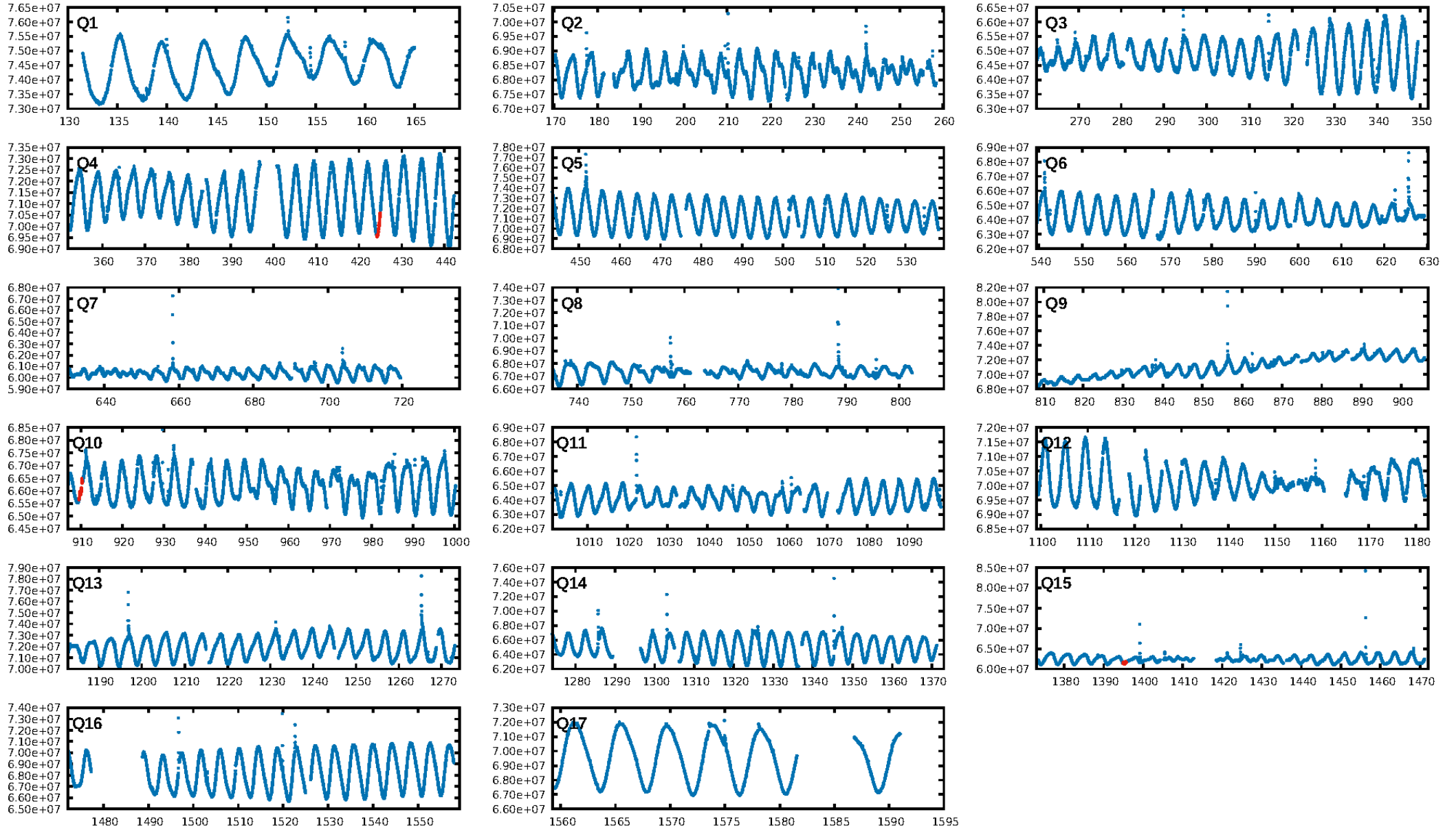
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [22.37σ]
LongPeriod-sig: 100.0% [6.22σ]
ModelChiSquare2-sig: 3.1%
ModelChiSquareGof-sig: 99.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -9.273
Centroid-sig: 73.0%
Centroid-so: 0.231 arcsec [0.55σ]
OotOffset-rm: 0.049 arcsec [0.52σ]
KicOffset-rm: 0.200 arcsec [1.25σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

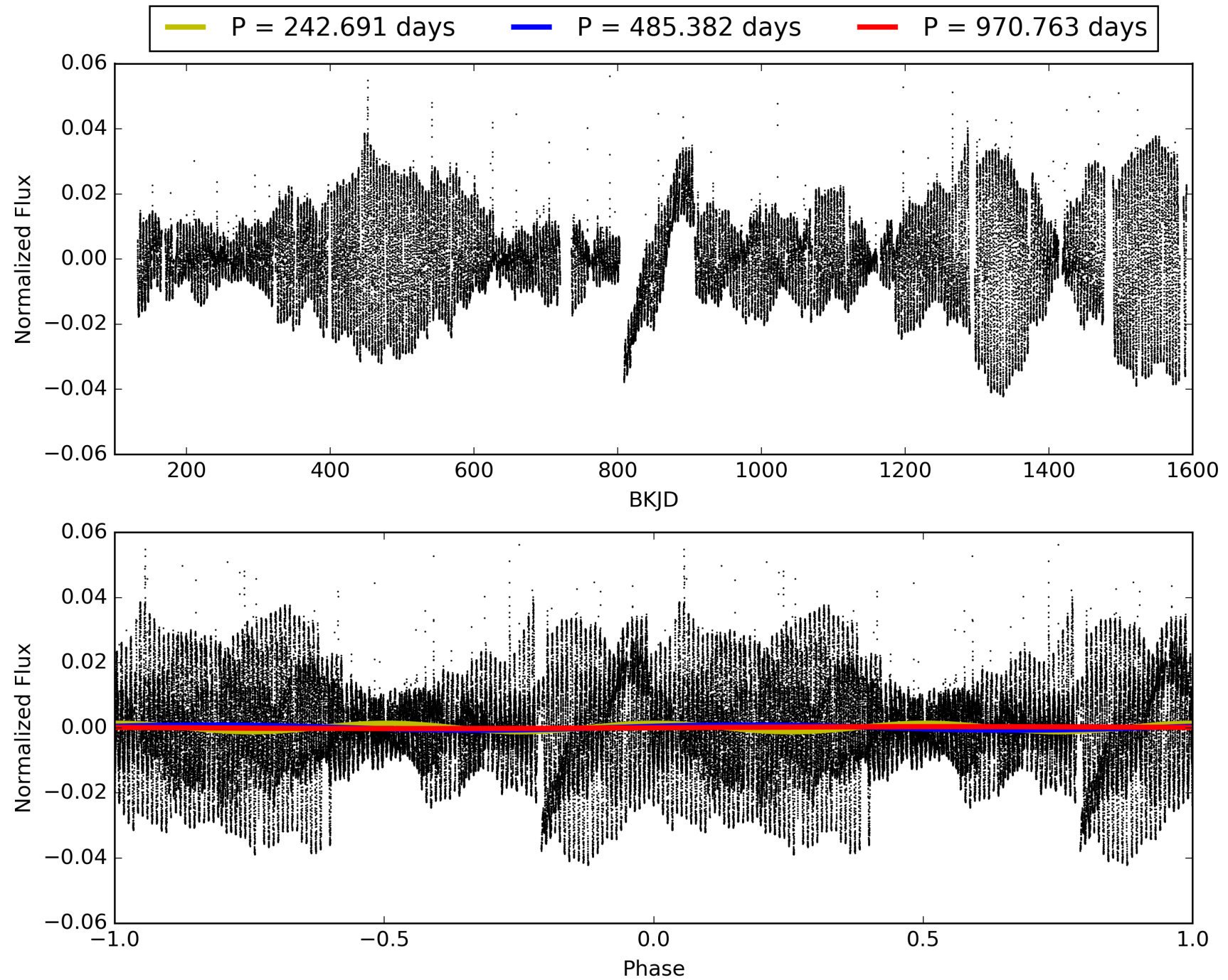
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:53:53 Z

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

TCE 006717216-03, PDC Light Curves

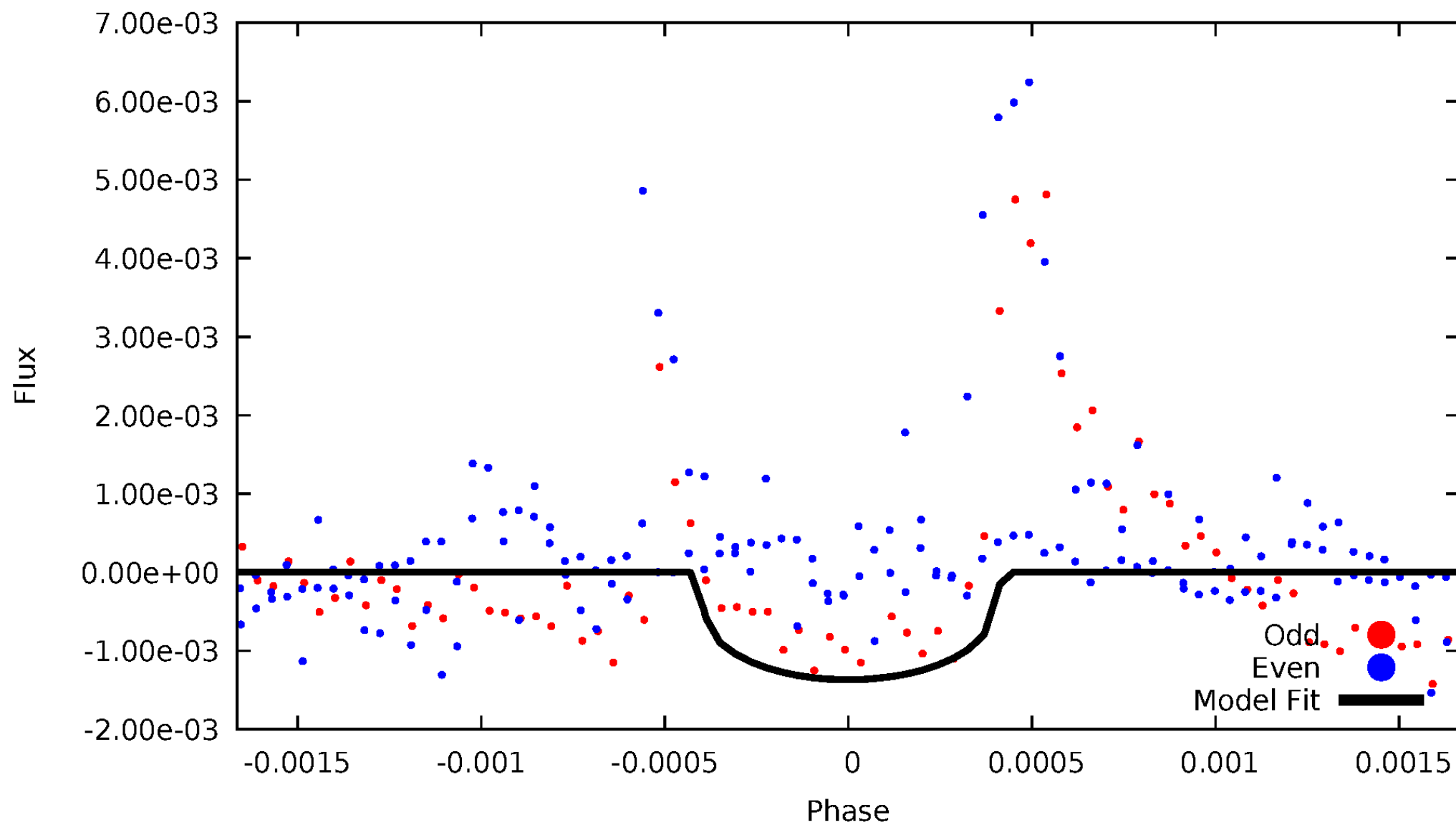


TCE 006717216-03



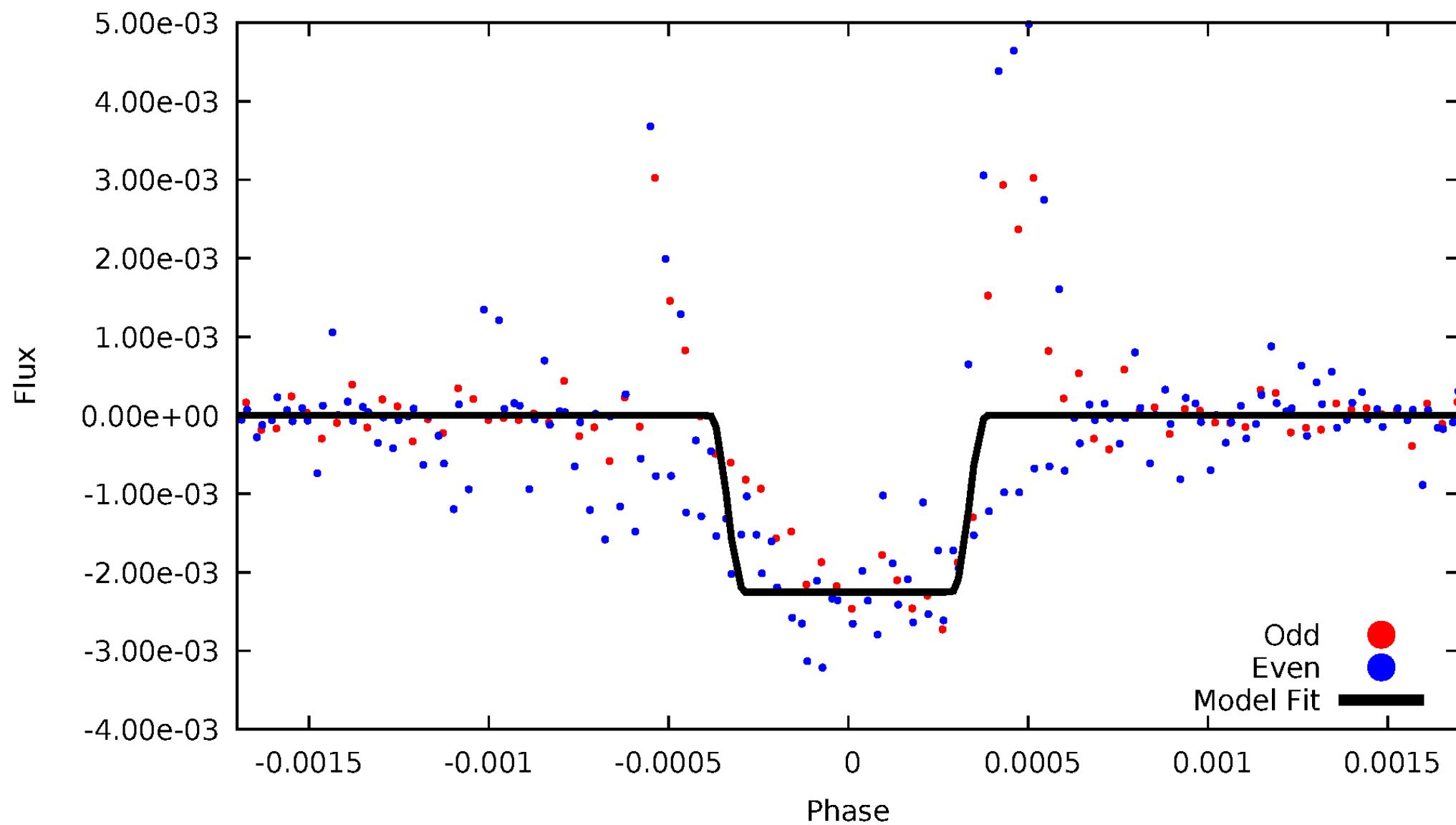
DV Odd/Even

TCE 006717216-03



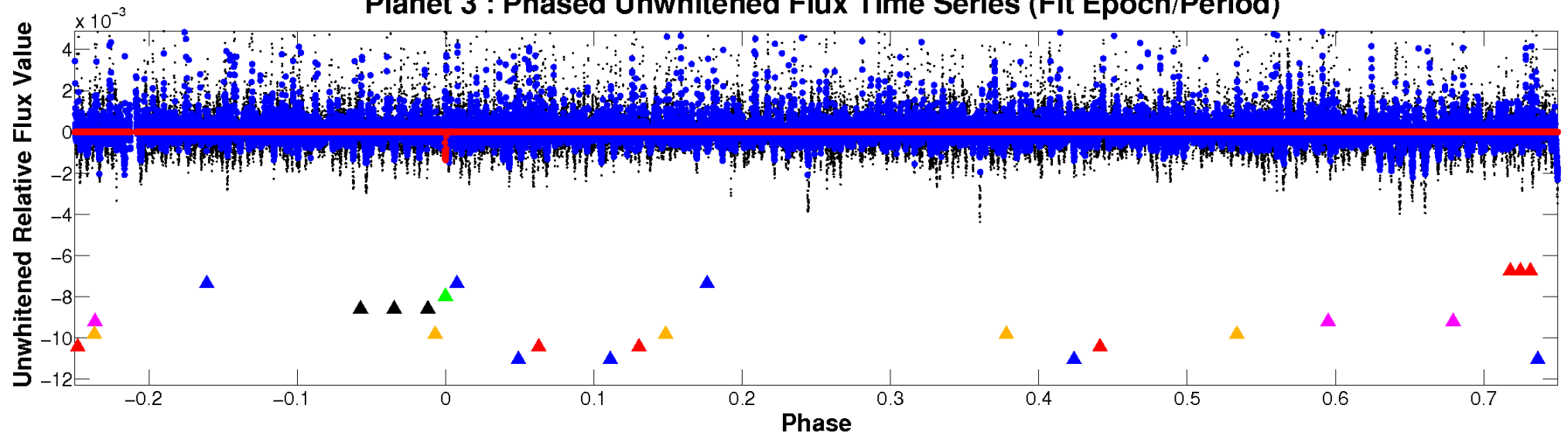
ALT Odd/Even

TCE 006717216-03

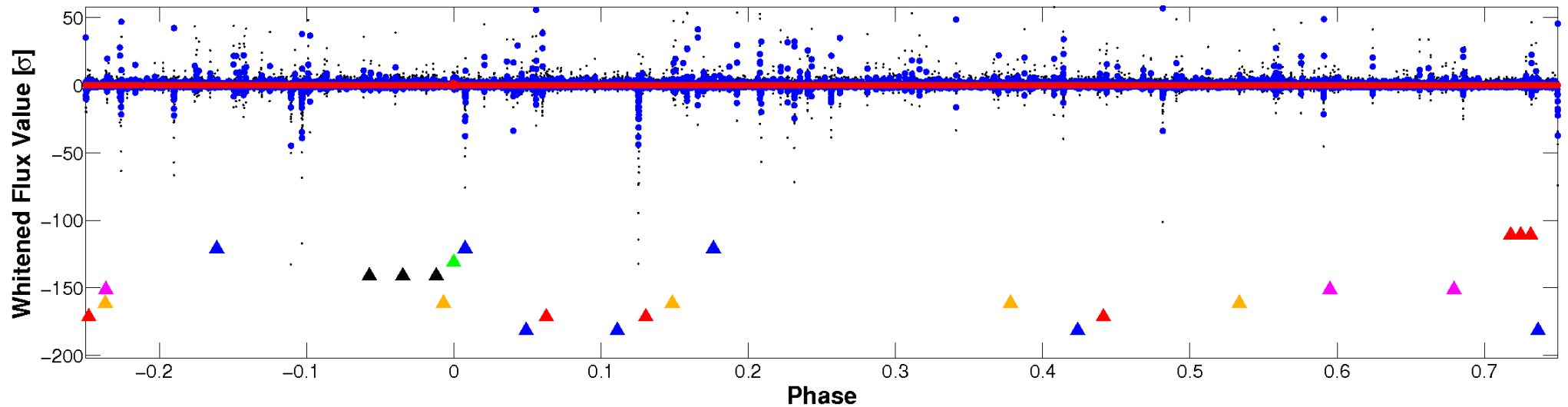


Non-Whitened Vs. Whitened Light Curve

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

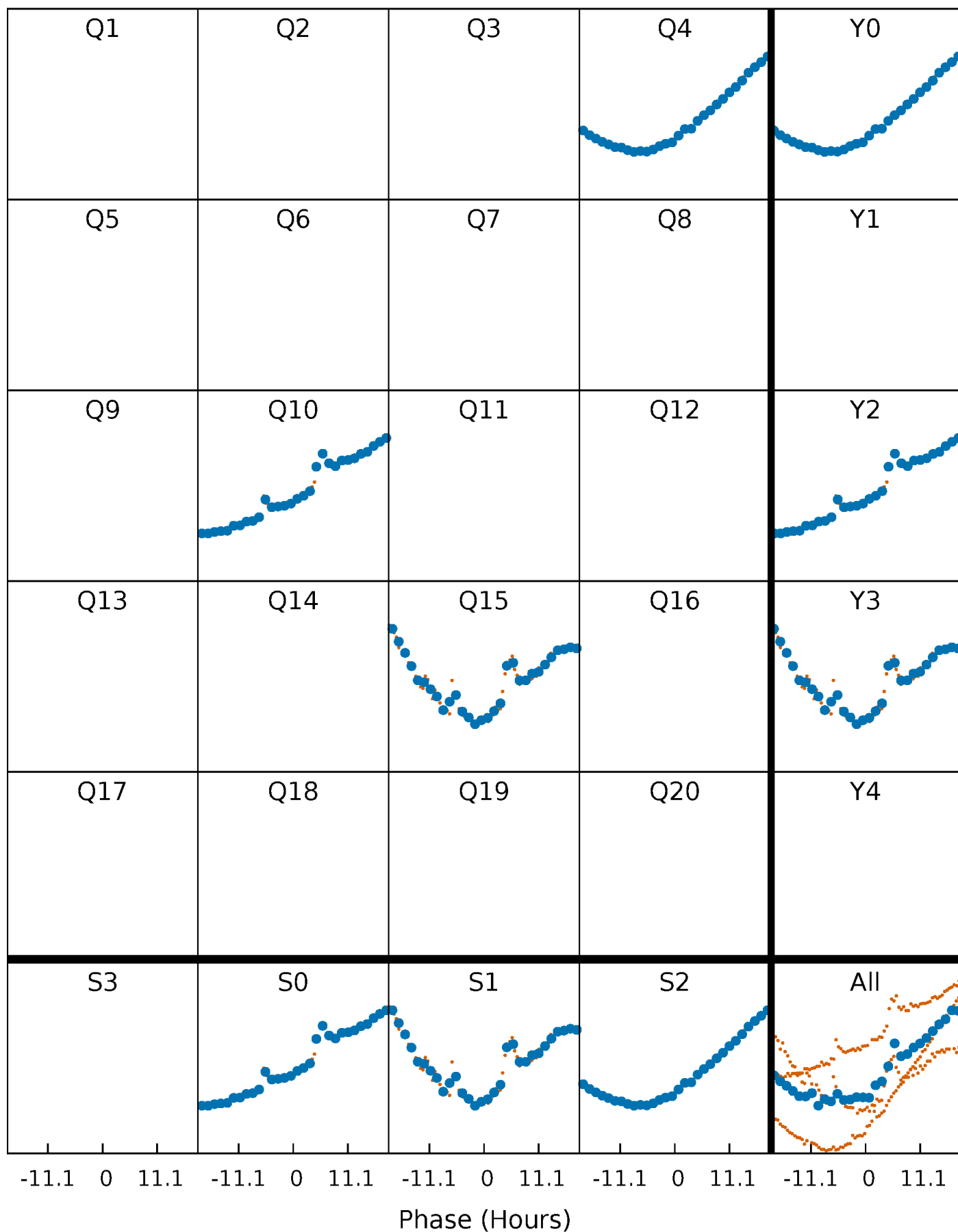


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



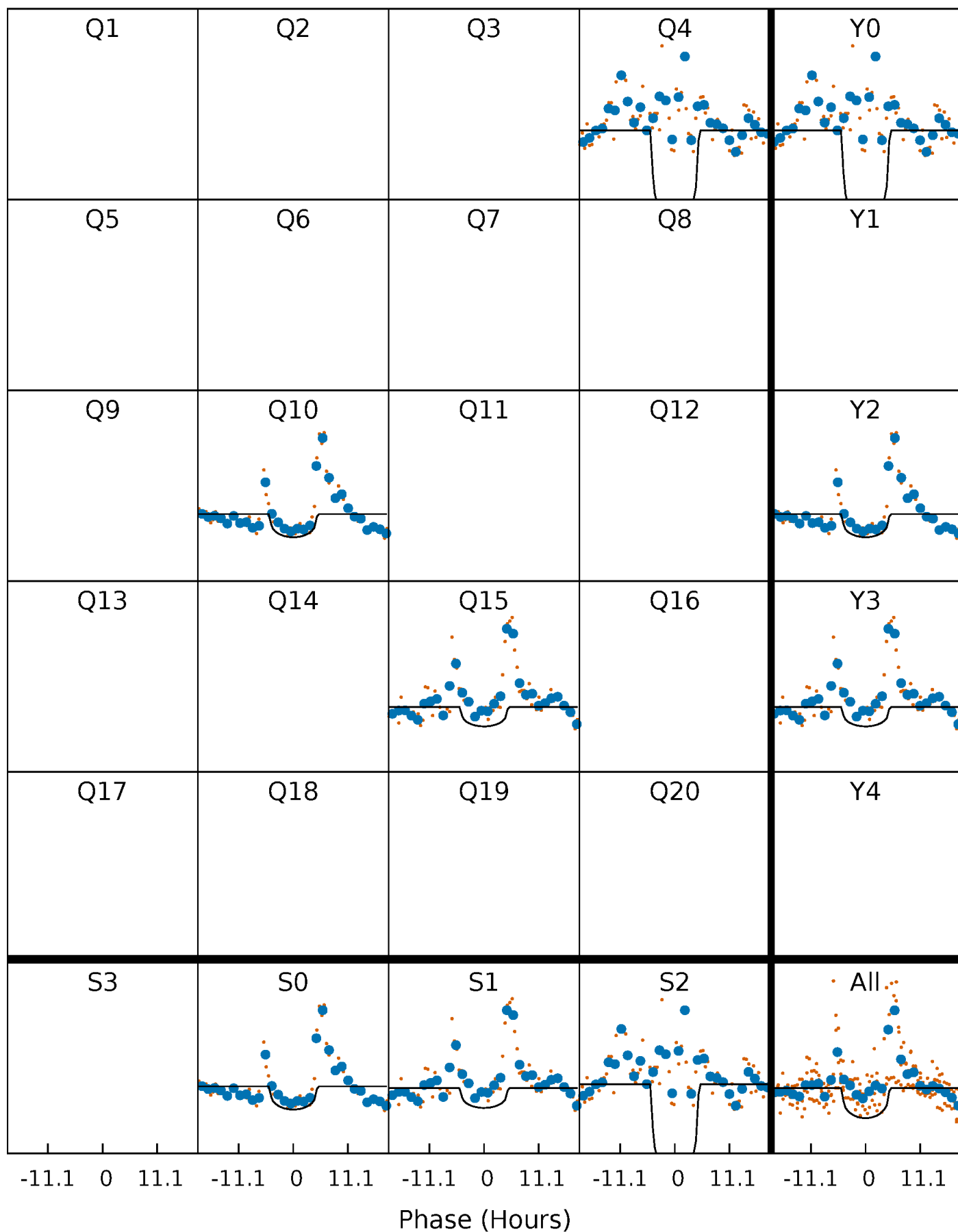
PDC Quarter-Phased Transit Curves

TCE 006717216-03 P=485.381537 Days $T_0=424.554069$ (BKJD)



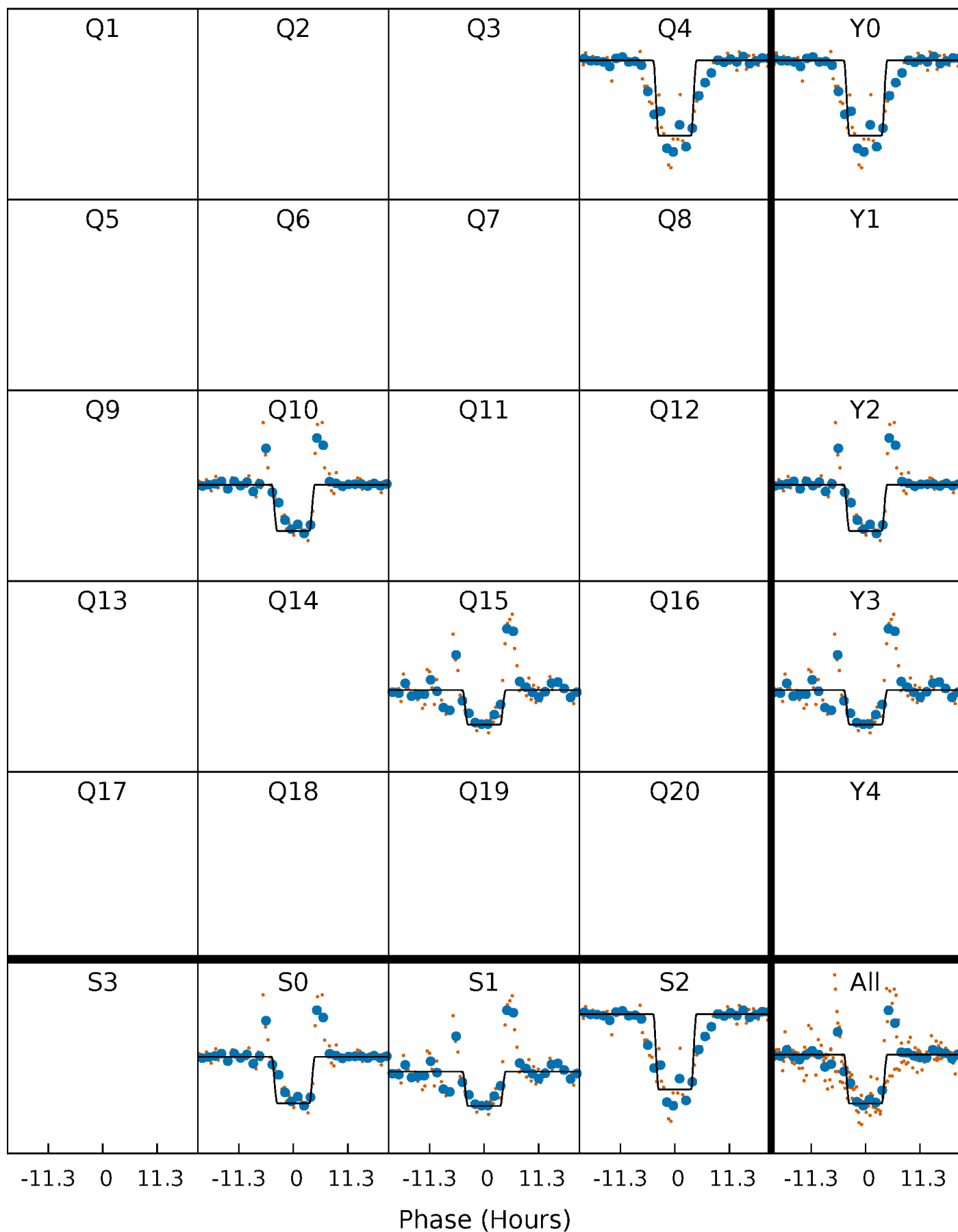
DV Quarter-Phased Transit Curves

TCE 006717216-03 P=485.381537 Days $T_0=424.554069$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

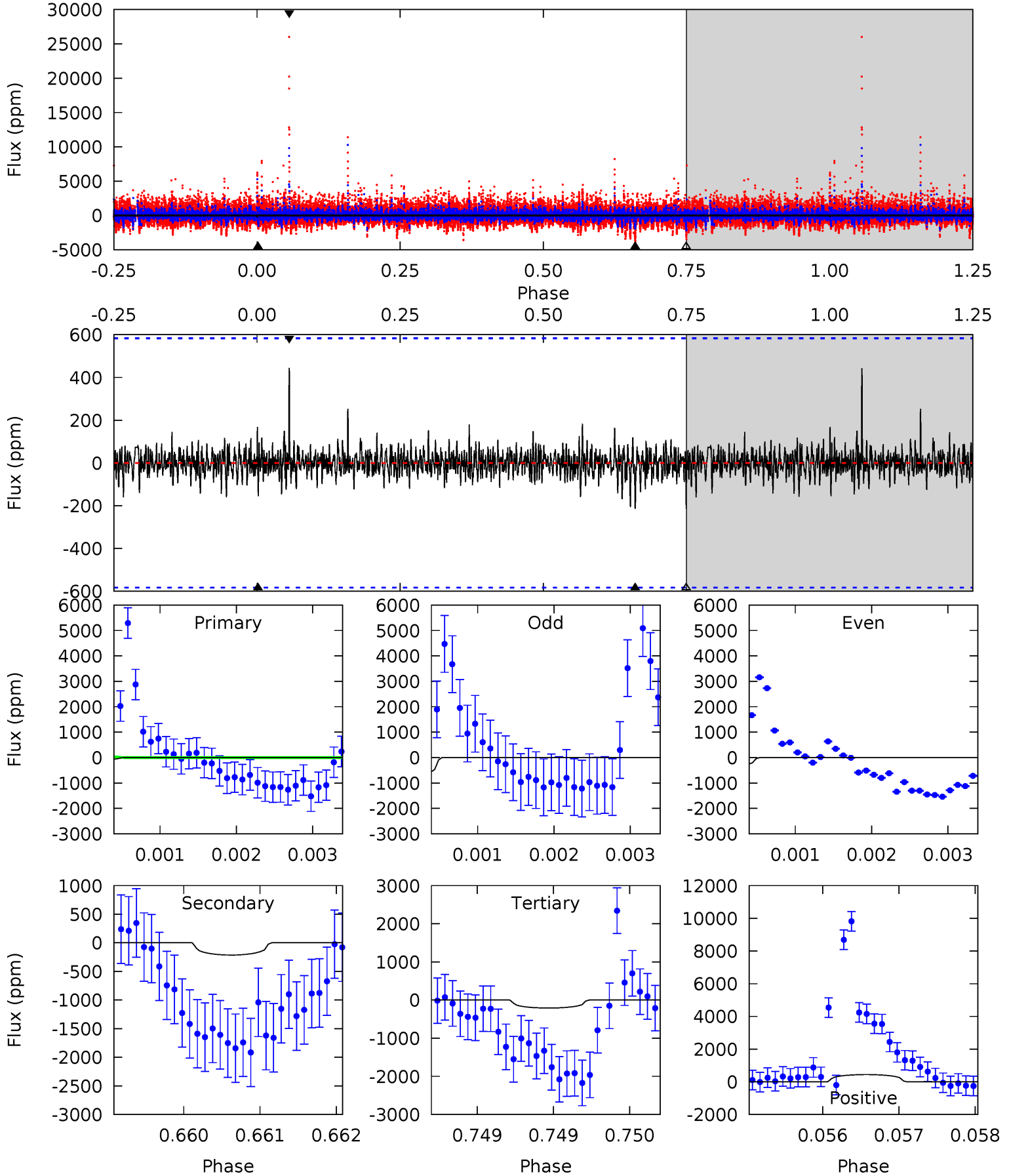
TCE 006717216-03 P=485.365162 Days $T_0=424.582159$ (BKJD)



DV Model-Shift Uniqueness Test

006717216-03, P = 485.381537 Days, E = 424.554069 Days

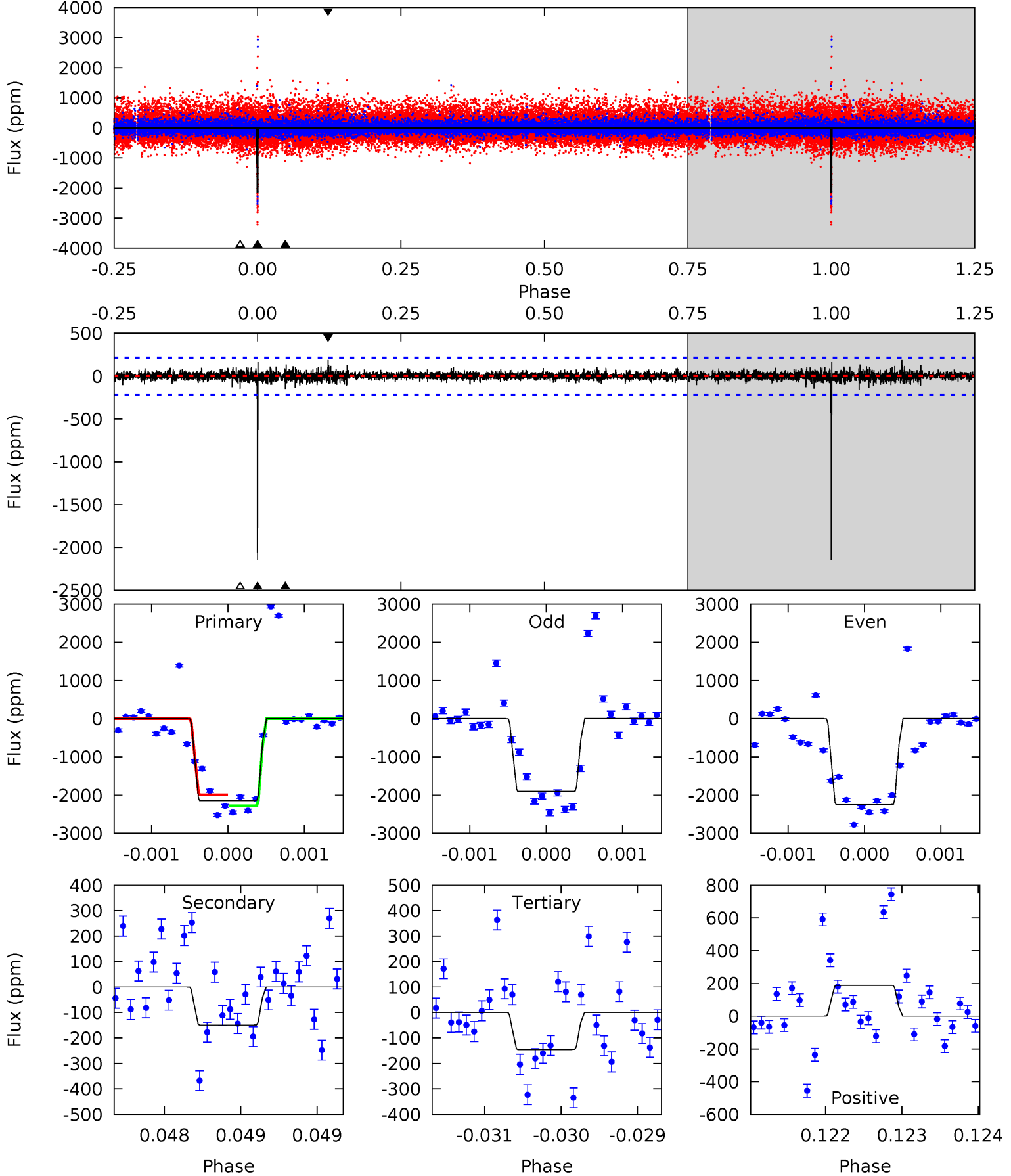
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.80	2.01	1.97	4.16	5.48	3.34	0.46	-1.17	-3.36	0.04	-2.15	1.21	-0.08	0.67	0.77



Alt Model-Shift Uniqueness Test

006717216-03, P = 485.365162 Days, E = 424.582159 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
54.6	3.80	3.70	4.78	5.50	3.36	0.69	50.9	49.8	0.10	-0.98	3.68	1.08	0.08	3.66



Stellar Parameters For KIC 006717216

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4159^{+126}_{-139}	$4.627^{+0.053}_{-0.018}$	$0.070^{+0.250}_{-0.300}$	$0.640^{+0.035}_{-0.060}$	$0.633^{+0.054}_{-0.054}$	$3.396^{+0.793}_{-0.292}$
	+3%/-3%	+1%/-0%	+357%/-429%	+5%/-9%	+9%/-9%	+23%/-9%
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 006717216-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-214 ± 106	$2.35^{+1.26}_{-1.28}$	200^{+7}_{-7}	3146^{+938}_{-476}	22655^{+85012}_{-15770}
Alt.	-149 ± 39	$3.40^{+1.28}_{-1.43}$	200^{+7}_{-7}	2730^{+428}_{-261}	7962^{+14303}_{-4138}

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 $A_{obs} \gg 1.0$

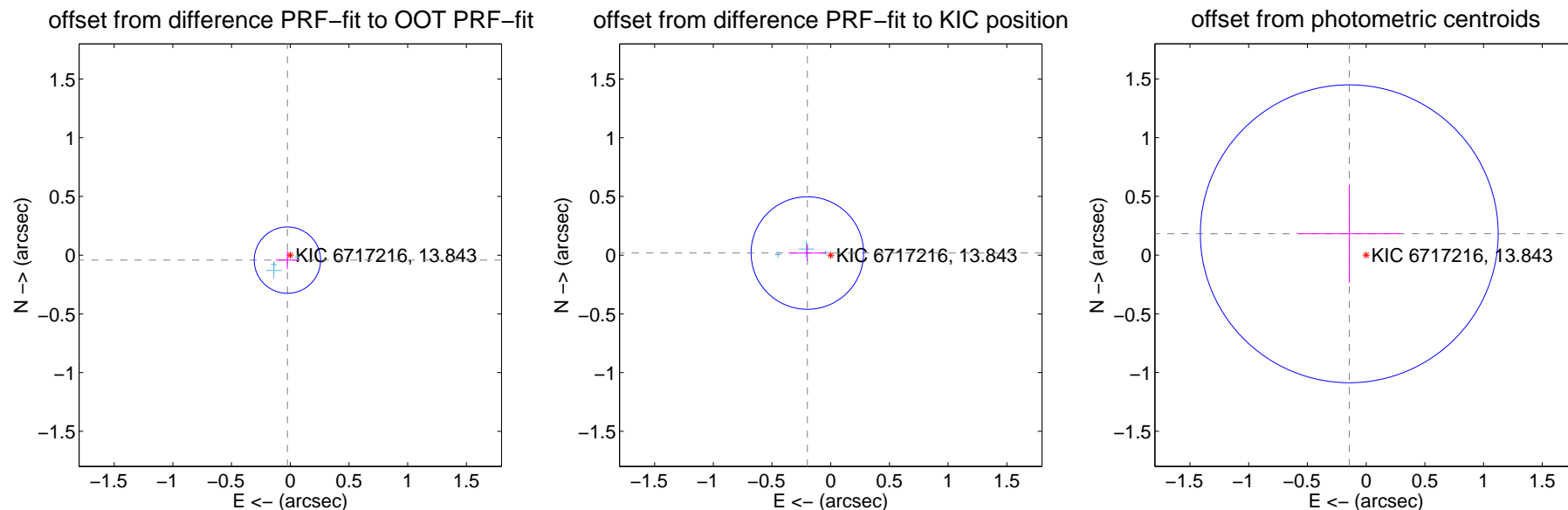
DV Centroid Data

Supplemental centroid analysis for 006717216-03. Kepler magnitude: 13.84. Transit SNR 6.11

There are 3 quarters with good PRF difference image offsets

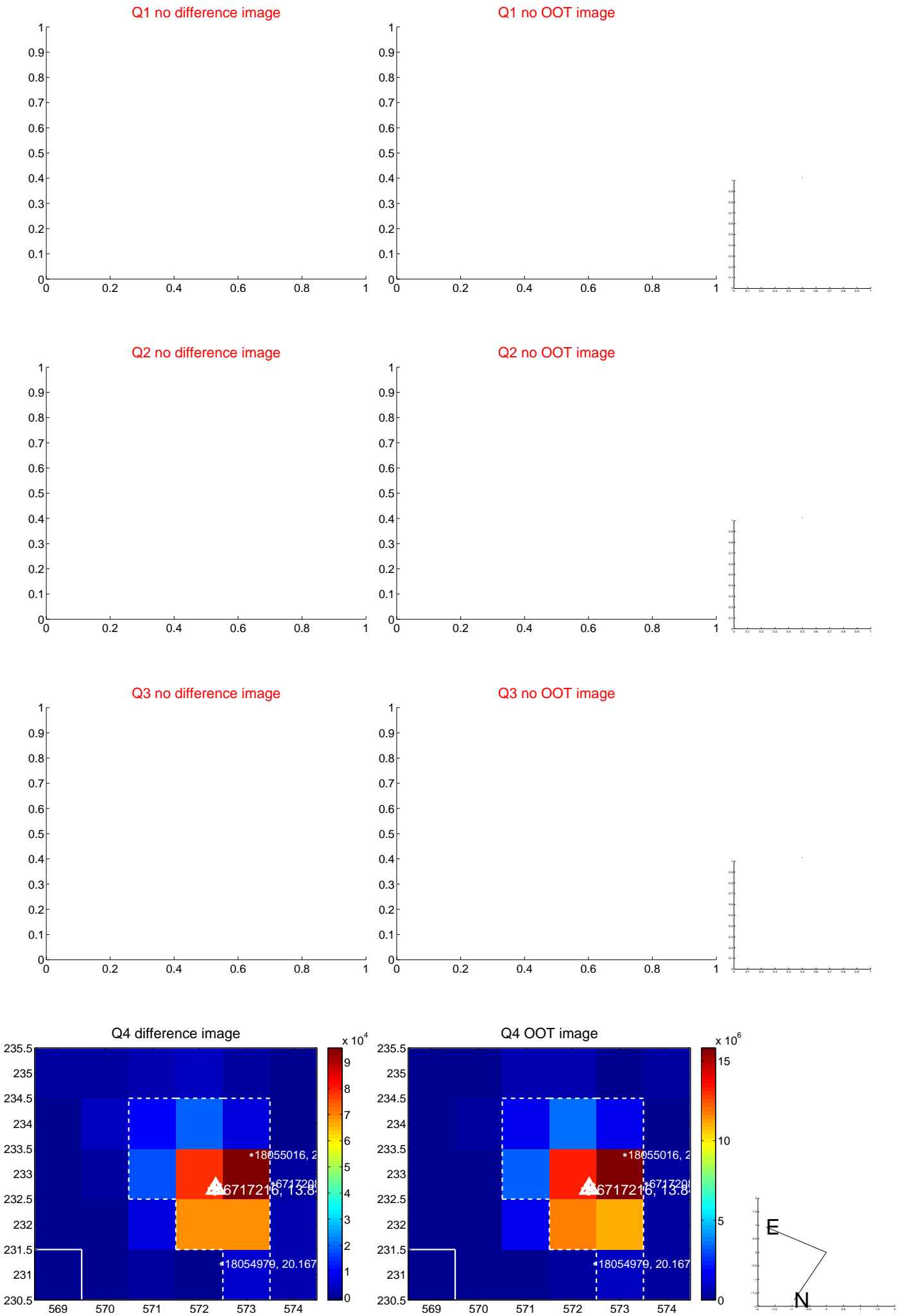
The direct PRF centroid is offset from the target star catalog position by about 0.32 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.049 ± 0.094	0.52	0.024 ± 0.100	-0.042 ± 0.075
PRF-fit source offset from KIC position	0.200 ± 0.160	1.25	0.199 ± 0.160	0.018 ± 0.067
photometric centroid source offset	0.23 ± 0.42	0.55	0.14 ± 0.43	0.18 ± 0.42



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

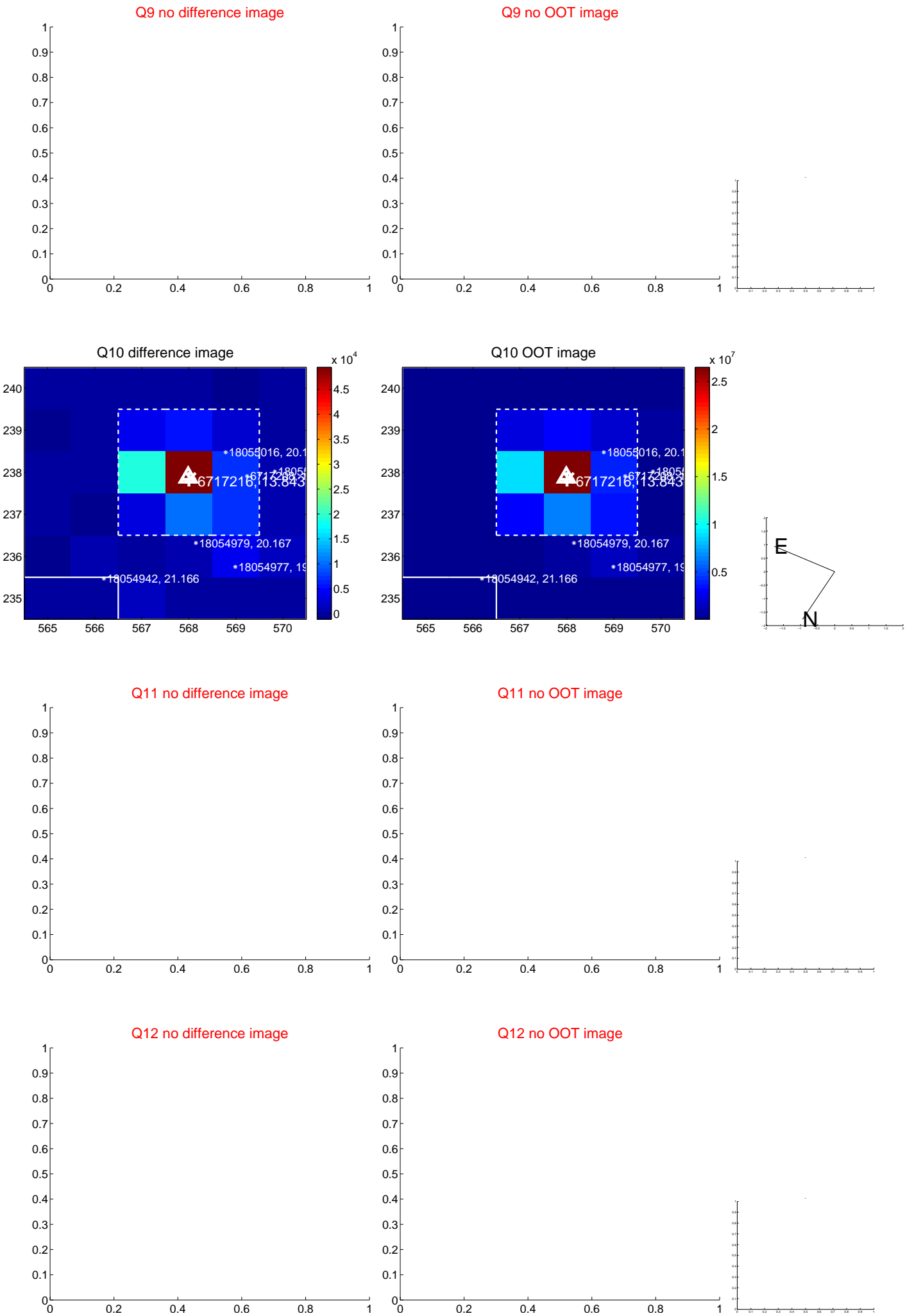
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



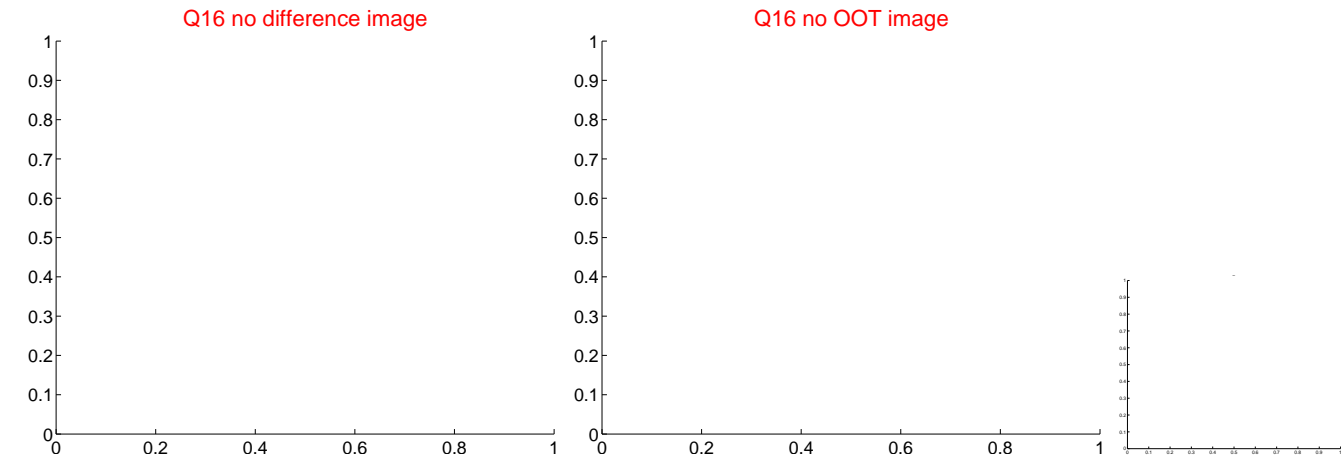
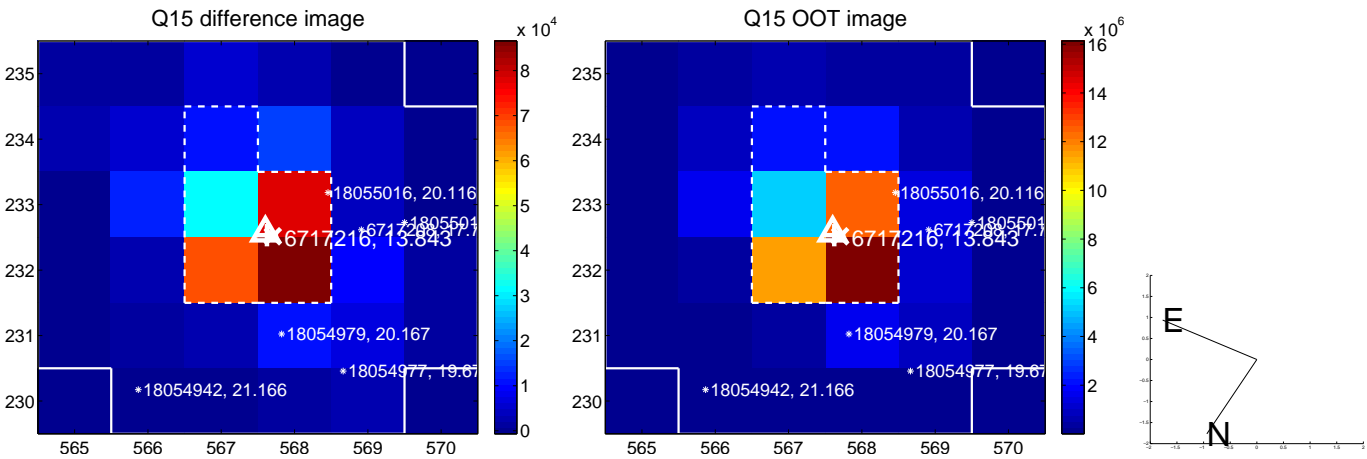
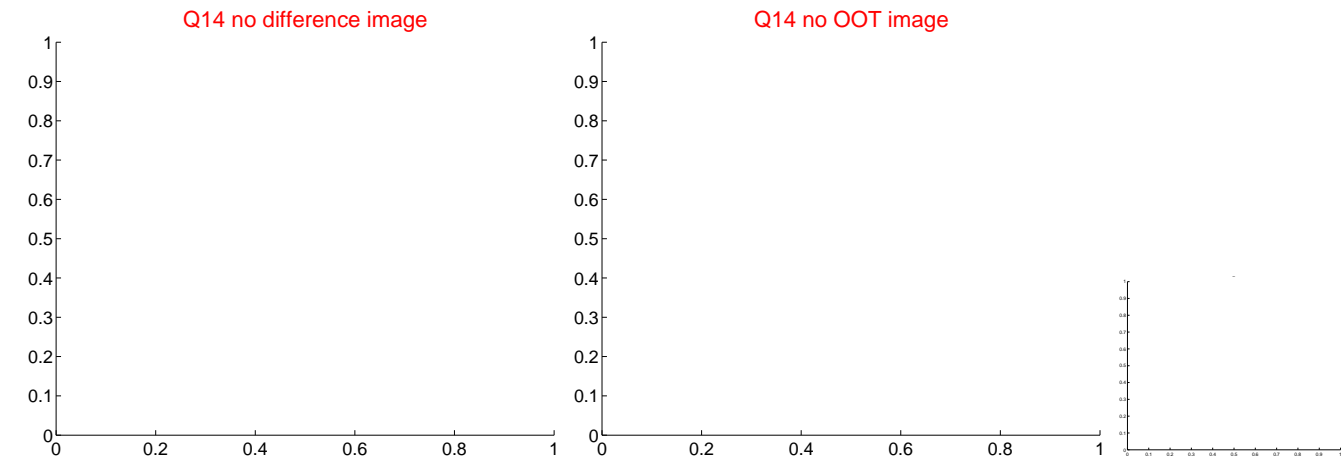
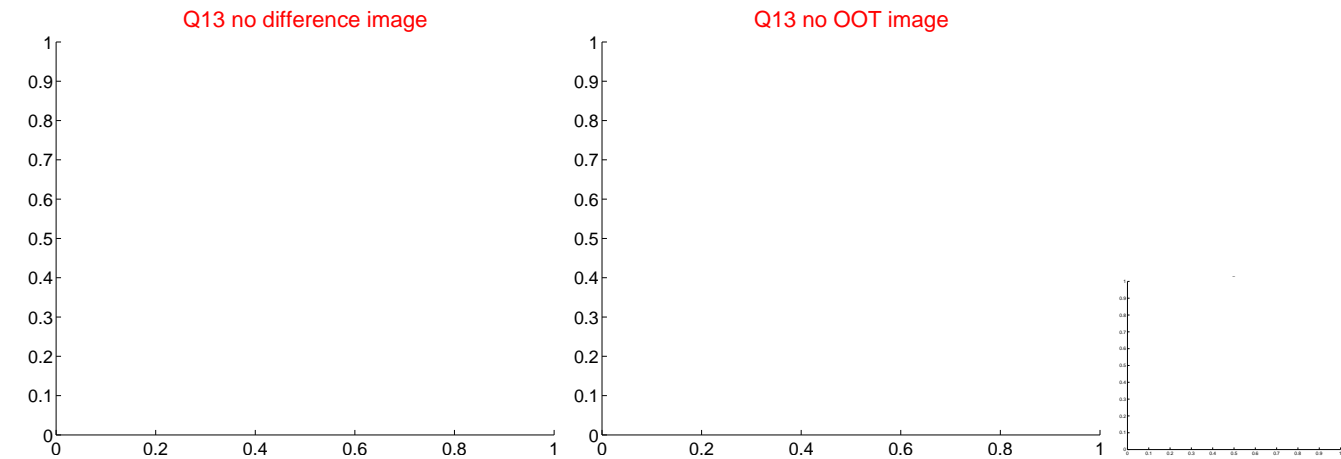
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



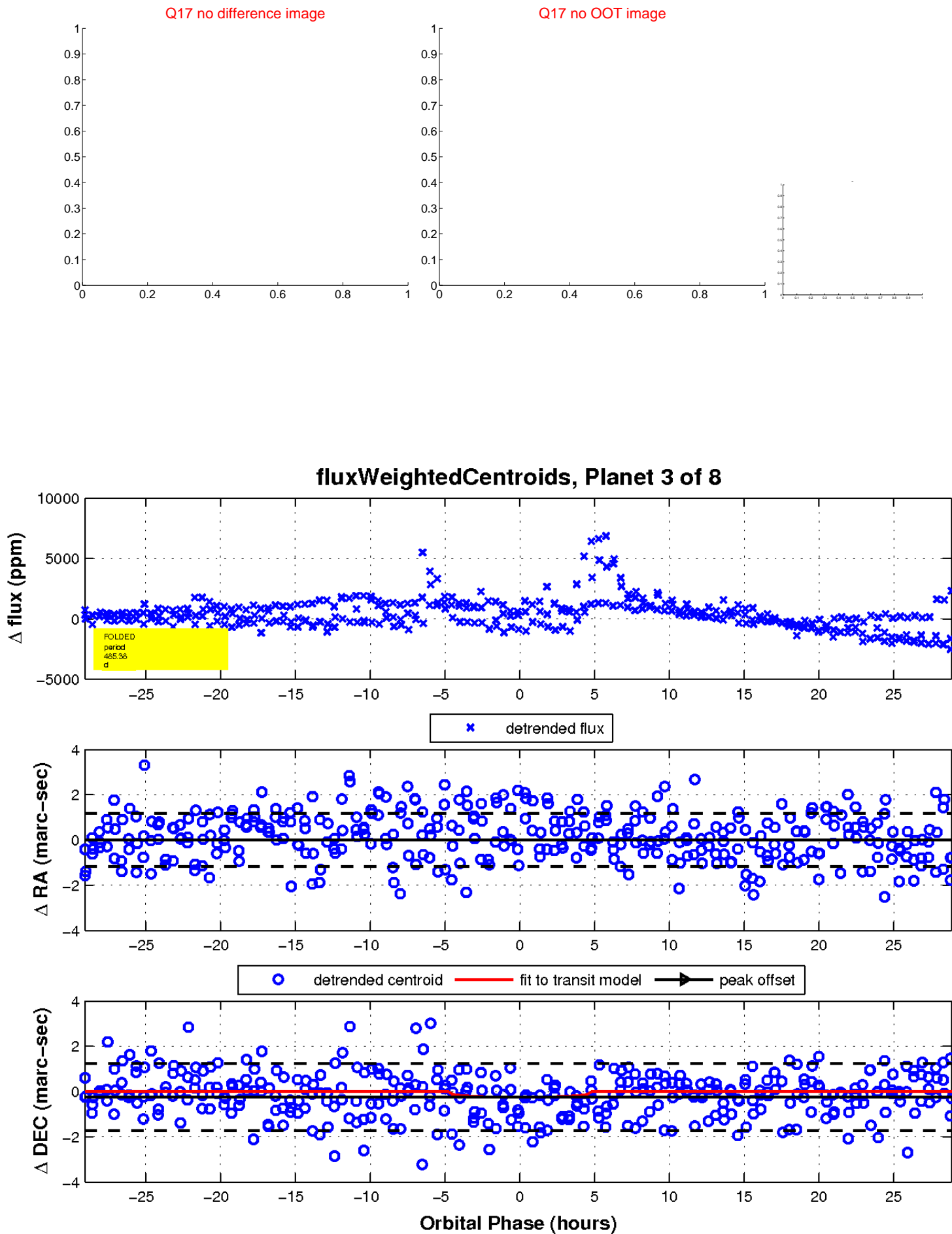
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

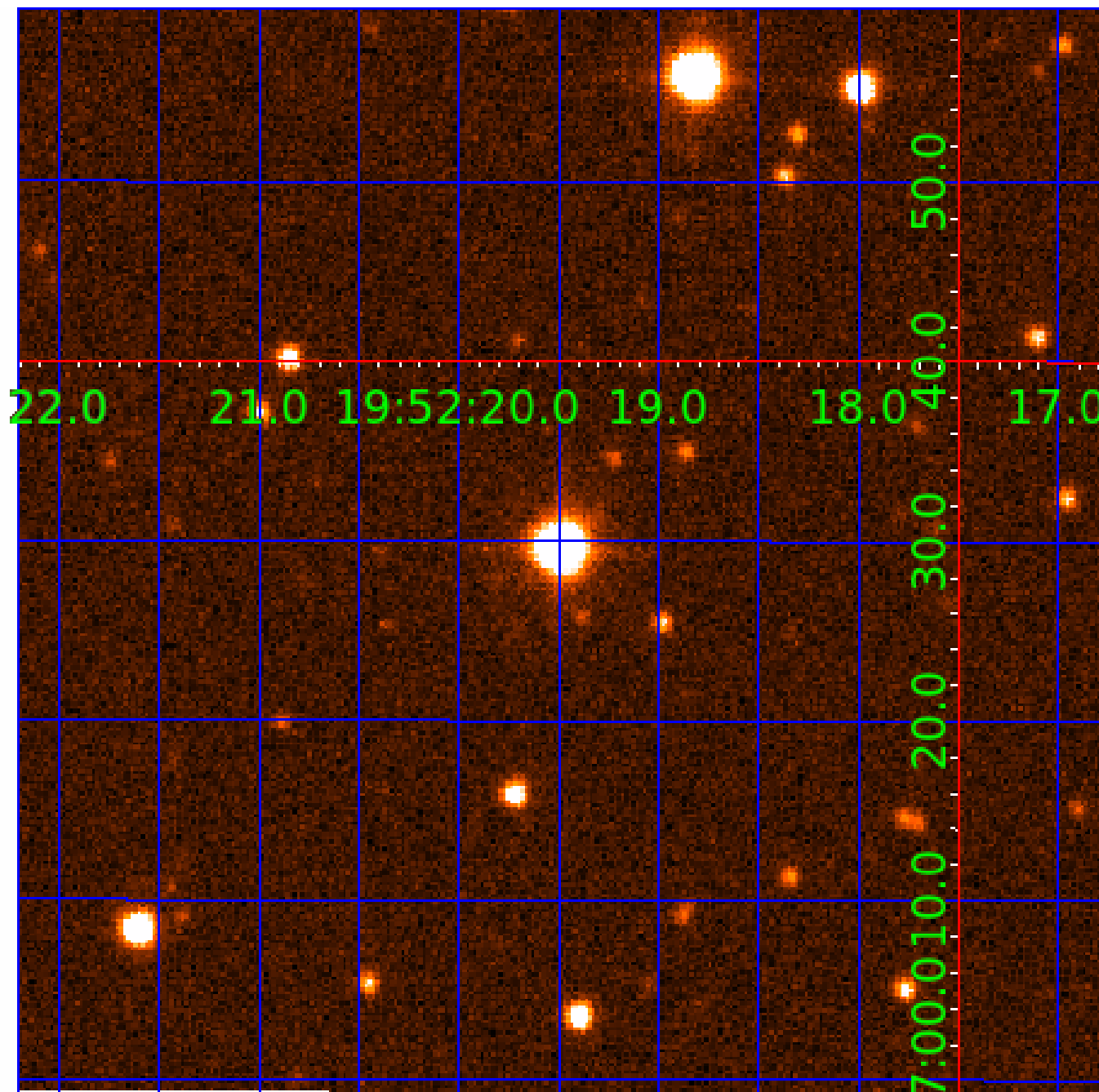


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006717216

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})
006717216-01	OBS	No	488.661435	287.654049	1976.1	8.133	16.2	8.9	0.64	4159	5.68	0.10
006717216-02	OBS	No	403.508663	510.187294	915.2	3.703	18.8	5.7	0.64	4159	2.06	0.13
006717216-03	OBS	No	485.381537	424.554069	1369.5	9.692	15.5	6.1	0.64	4159	2.27	0.10
006717216-04	OBS	No	474.350127	418.806718	1417.8	6.796	15.3	8.3	0.64	4159	2.50	0.10
006717216-05	OBS	No	526.290680	228.033915	1317.4	5.787	14.4	7.7	0.64	4159	2.56	0.09
006717216-06	OBS	No	298.443968	198.167962	957.6	5.692	14.3	5.8	0.64	4159	2.53	0.20
006717216-08	OBS	No	333.611378	448.424961	1968.7	8.865	13.0	12.4	0.64	4159	2.94	0.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006717216-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006717216-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006717216-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
006717216-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—CENT_NOFITS—HALO_GHOST

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

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

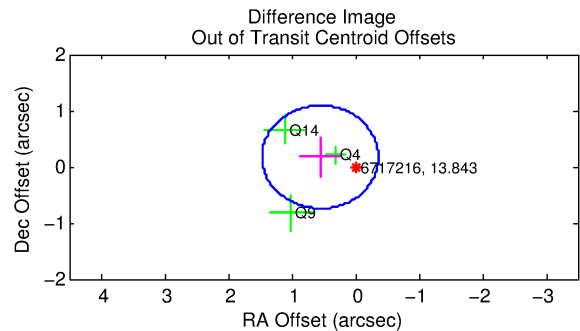
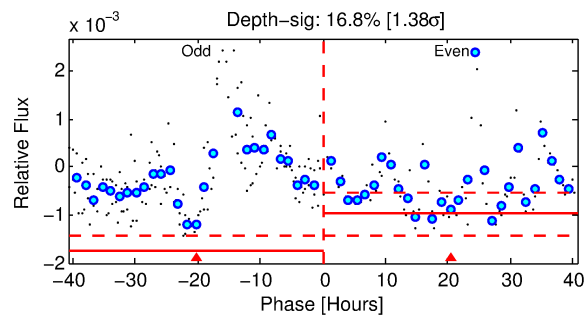
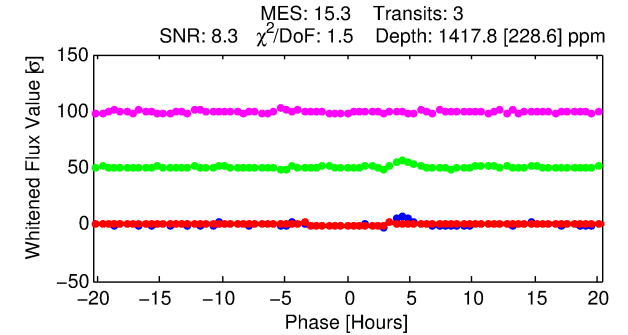
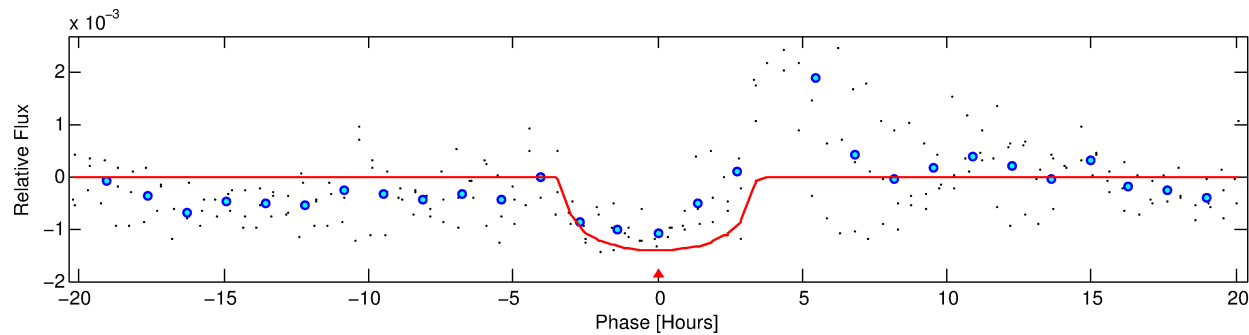
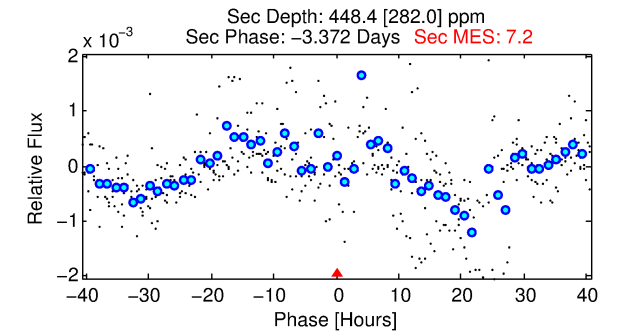
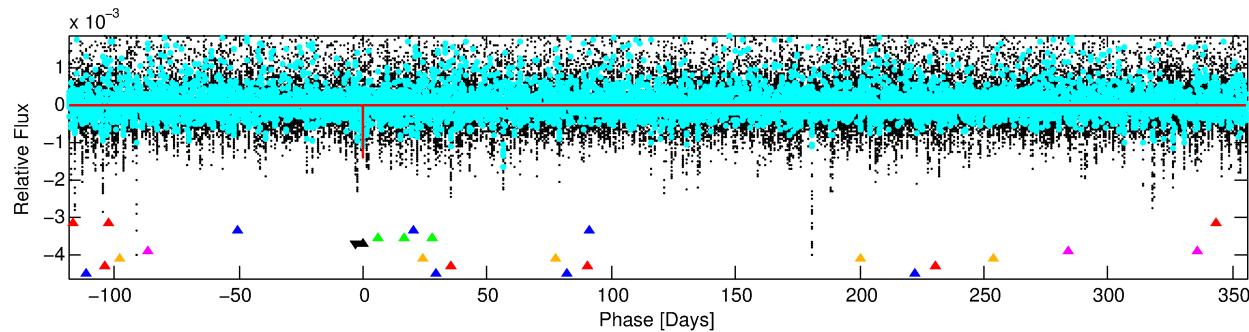
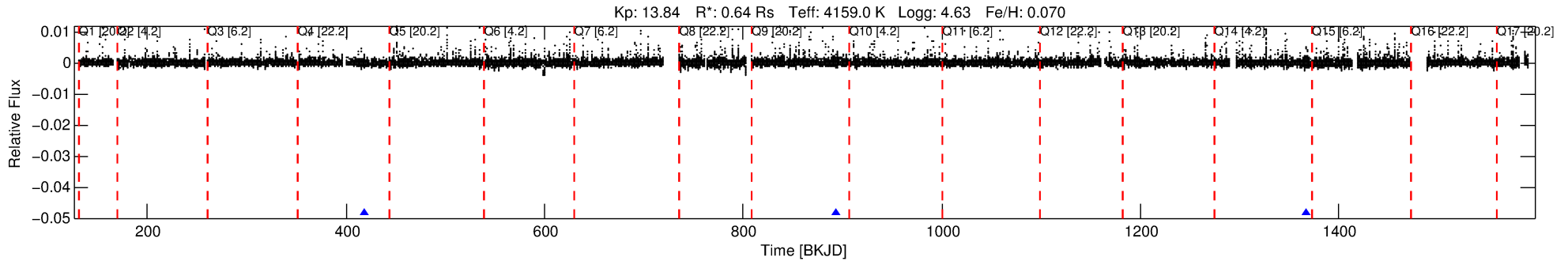
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006717216-04

No Significant Match Found

DV One-Page Summary

KIC: 6717216 Candidate: 4 of 8 Period: 474.350 d



DV Fit Results:

Period = 474.35013 [0.00668] d
Epoch = 418.8067 [0.0092] BKJD
Rp/R* = 0.0358 [0.0168]
a/R* = 442.79 [642.21]
b = 0.62 [1.47]
Seff = 0.11 [0.02]
Teq = 145 [6] K
Rp = 2.50 [1.20] Re
a = 1.0222 [0.0762] AU
Ag = 41331.51 [46924.44] [0.88σ]
Teffp = 3200 [911] K [3.35σ]

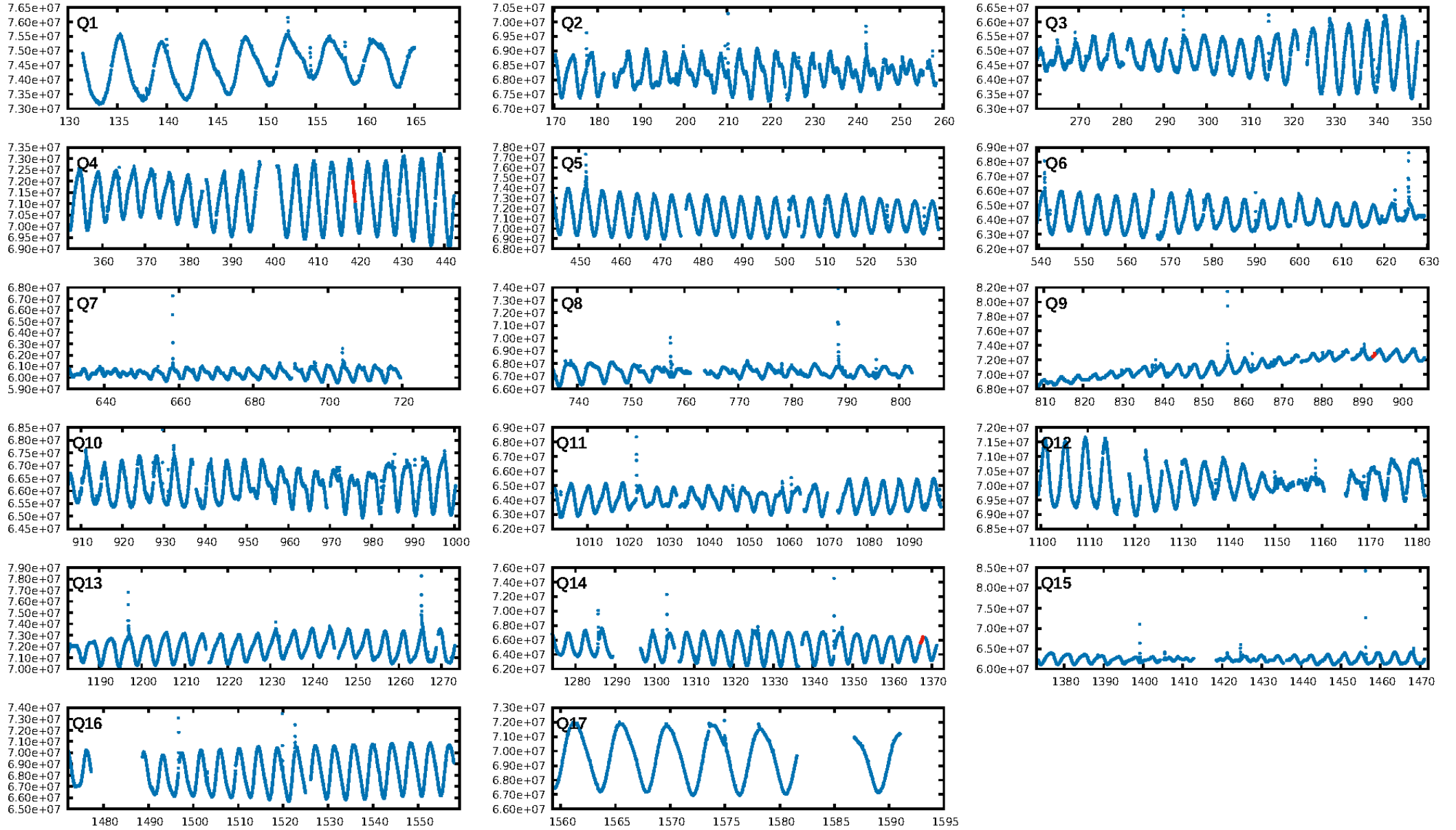
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [219.68σ]
LongPeriod-sig: 100.0% [22.37σ]
ModelChiSquare2-sig: 25.9%
ModelChiSquareGof-sig: 38.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.2658
Centroid-sig: 1.0%
Centroid-so: 0.616 arcsec [1.49σ]
OotOffset-rm: 0.580 arcsec [1.90σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-rm: 0.711 arcsec [2.14σ]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

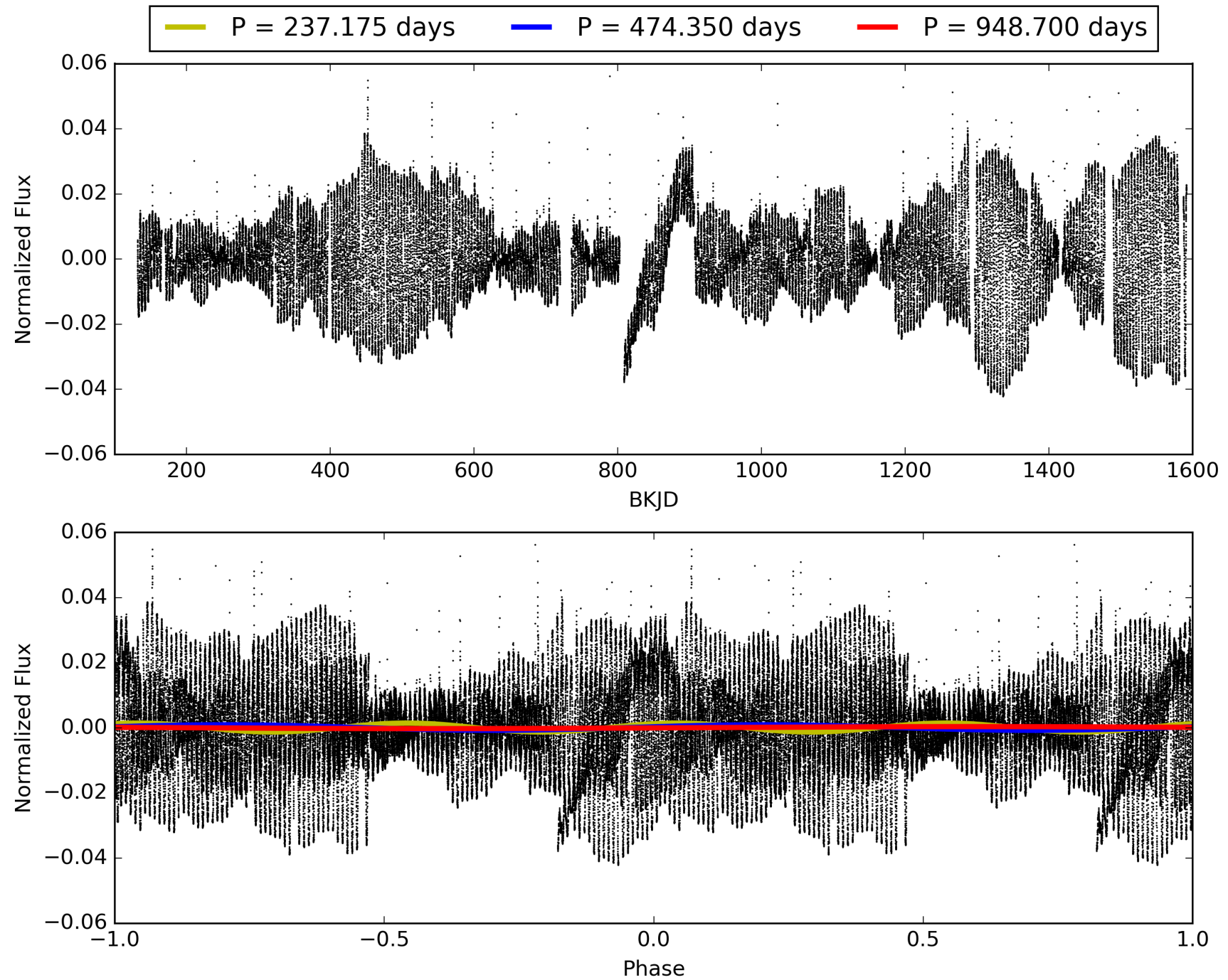
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:54:05 Z

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

TCE 006717216-04, PDC Light Curves

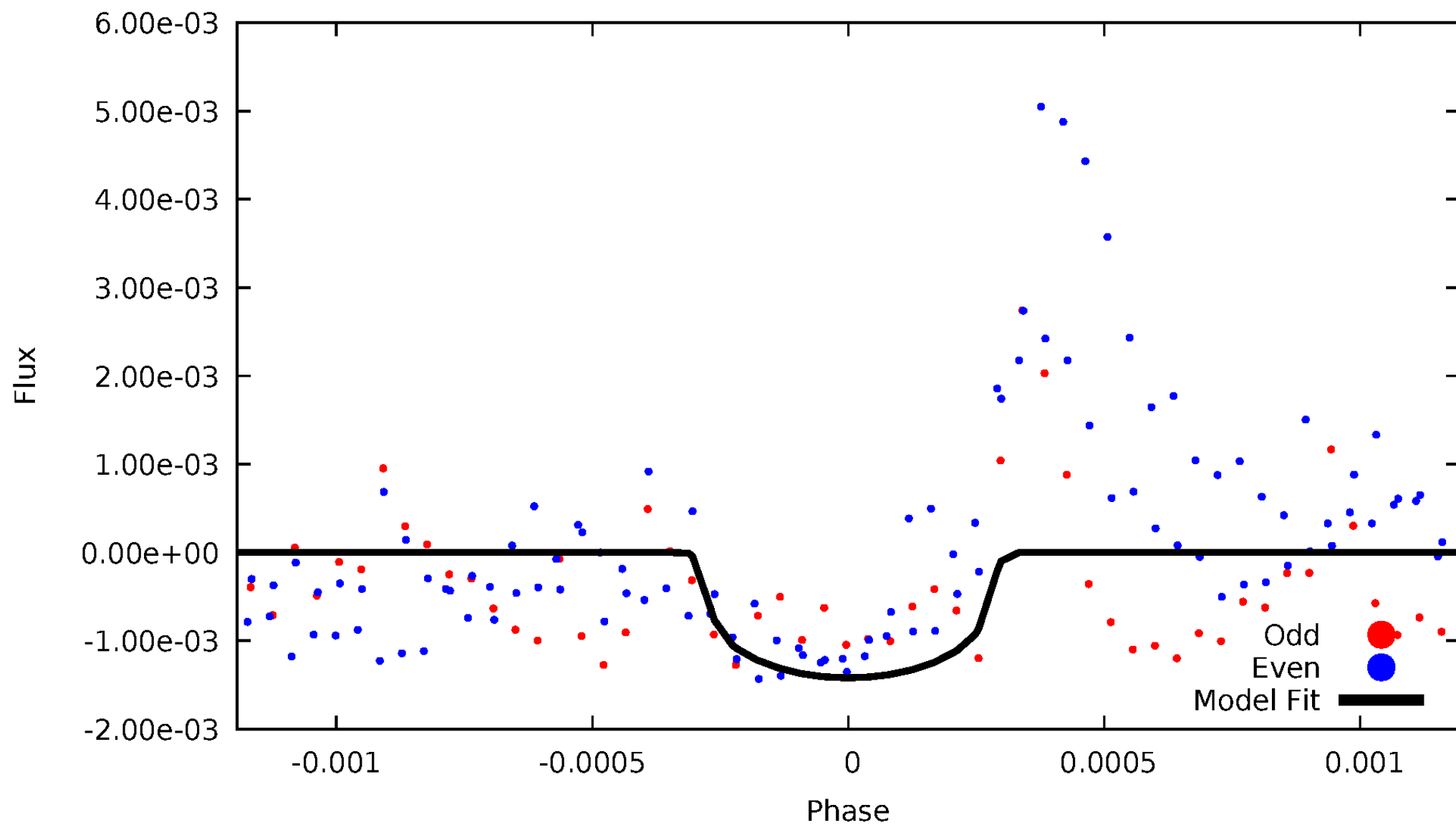


TCE 006717216-04



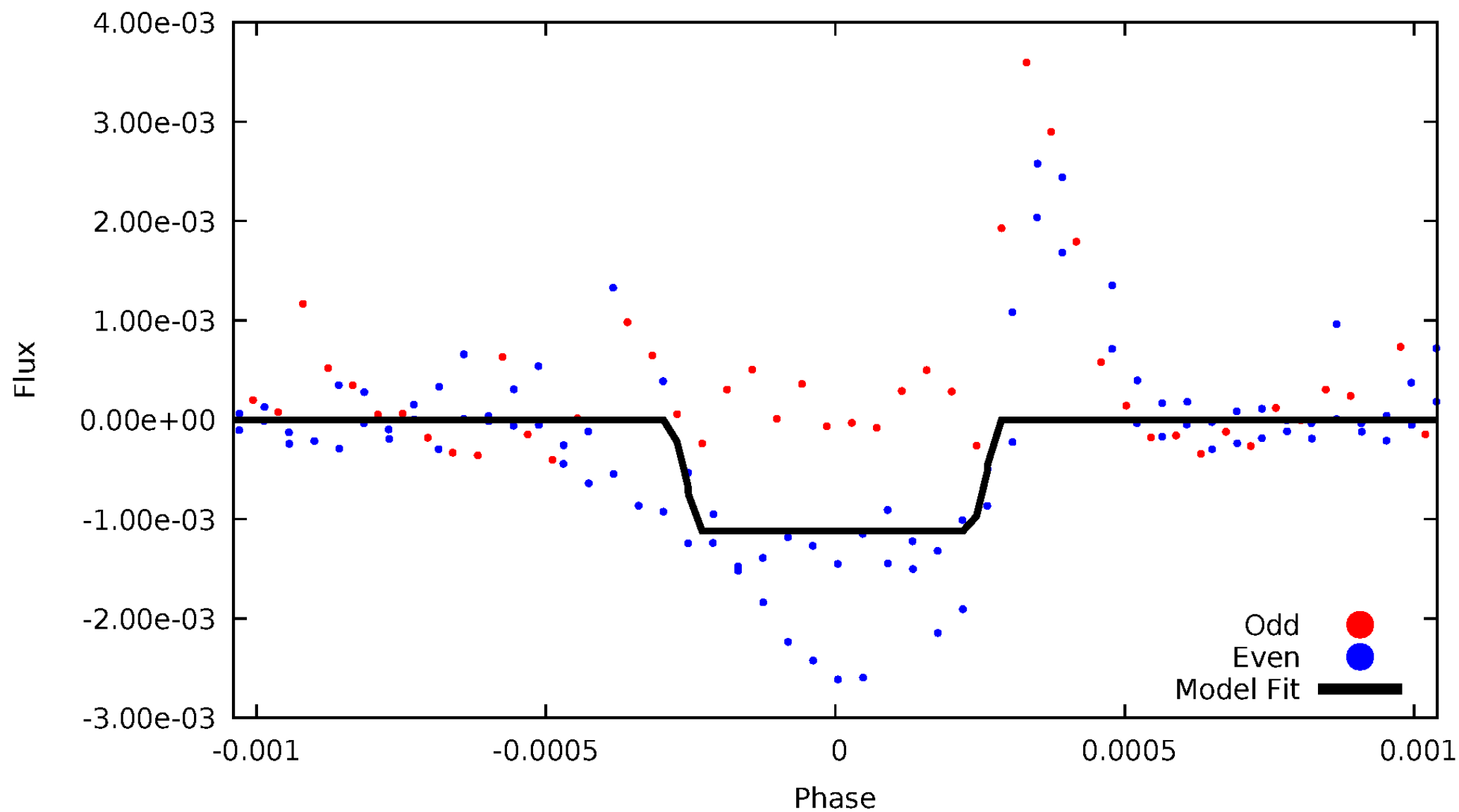
DV Odd/Even

TCE 006717216-04



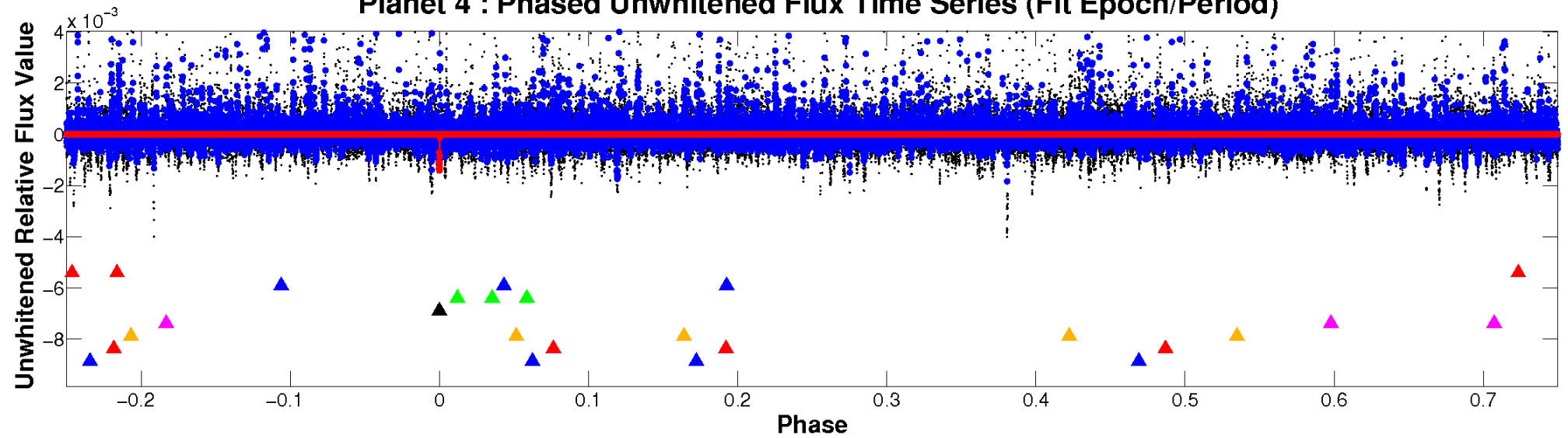
ALT Odd/Even

TCE 006717216-04

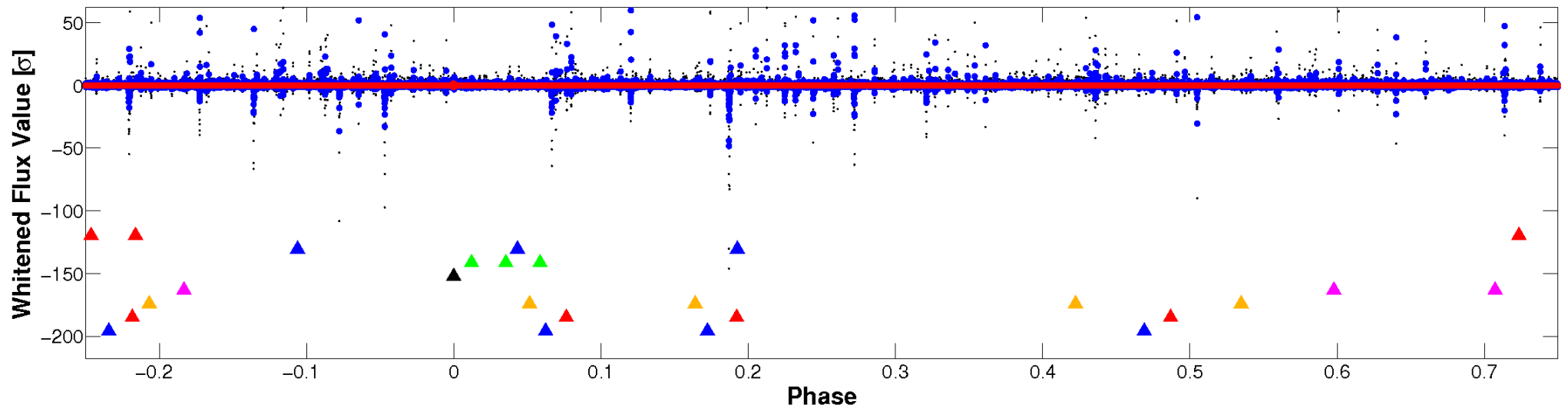


Non-Whitened Vs. Whitened Light Curve

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

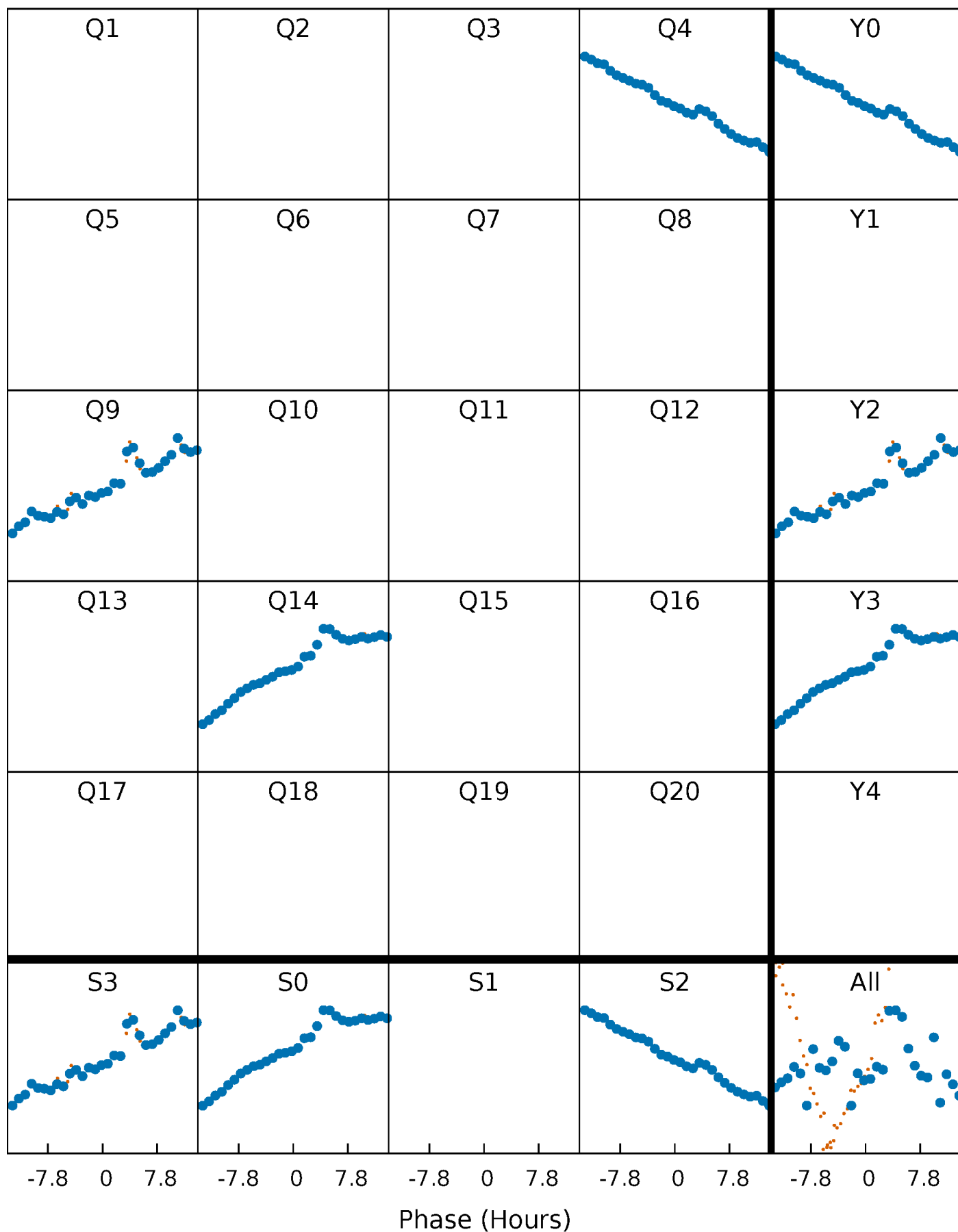


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



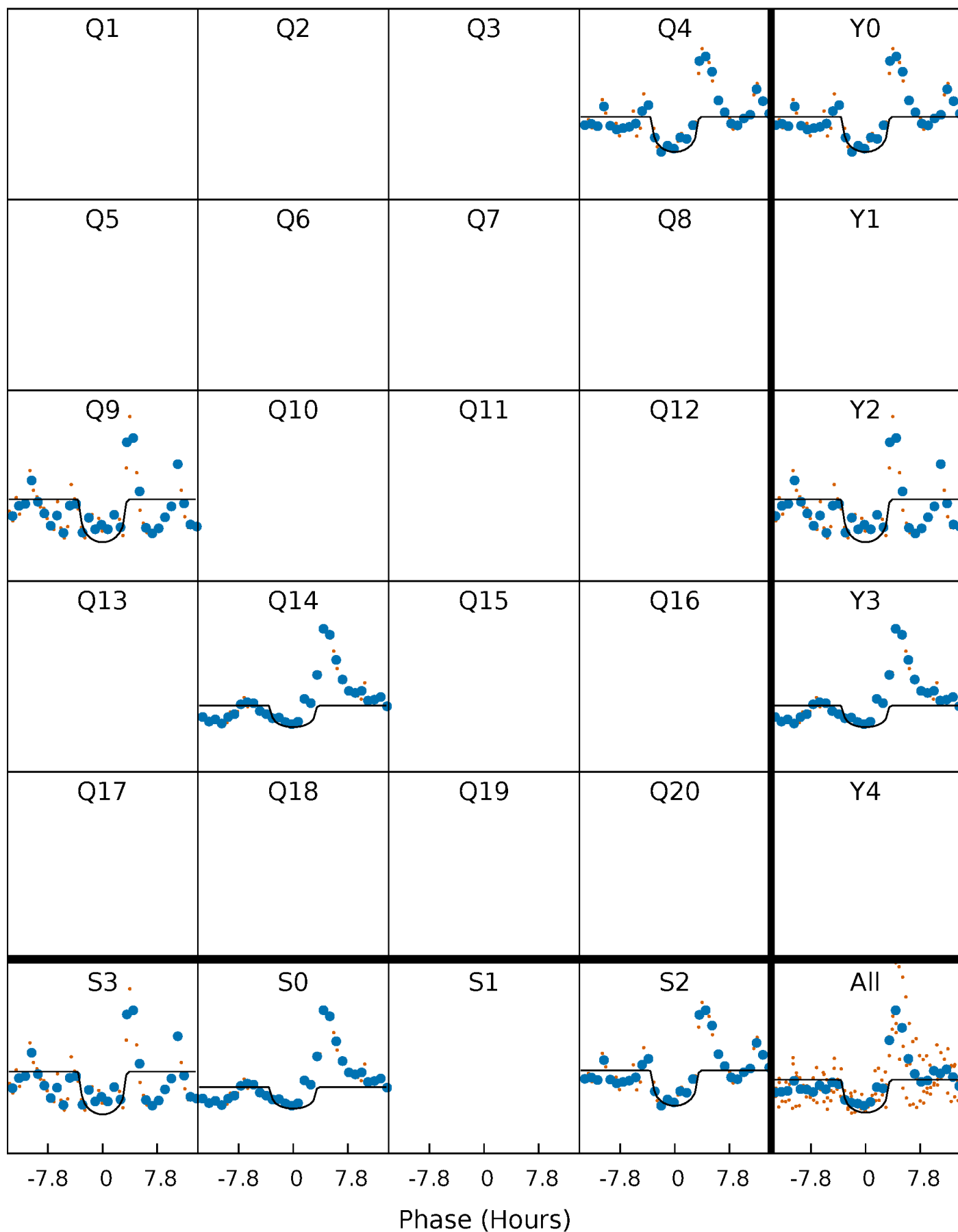
PDC Quarter-Phased Transit Curves

TCE 006717216-04 P=474.350127 Days $T_0=418.806718$ (BKJD)



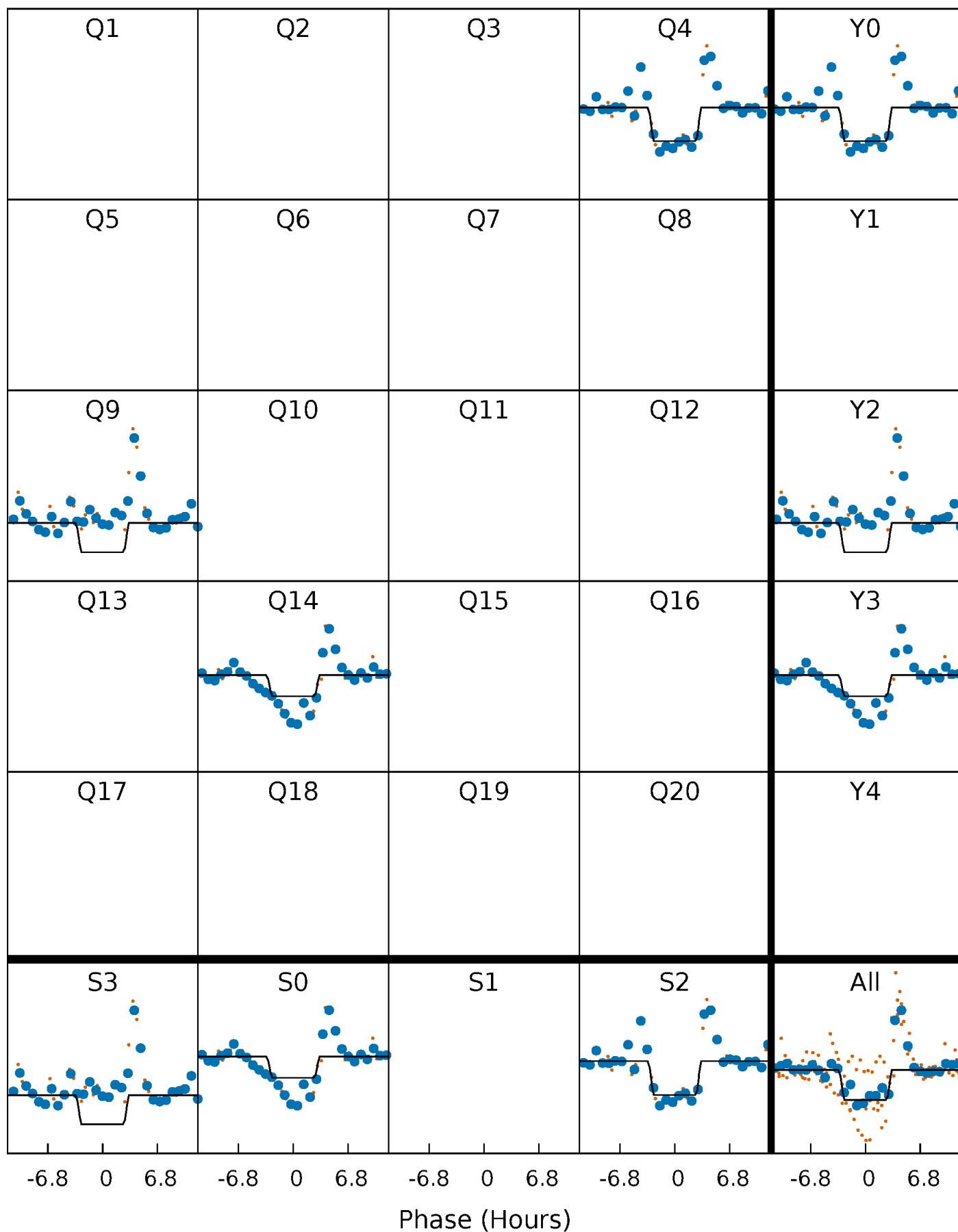
DV Quarter-Phased Transit Curves

TCE 006717216-04 P=474.350127 Days $T_0=418.806718$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

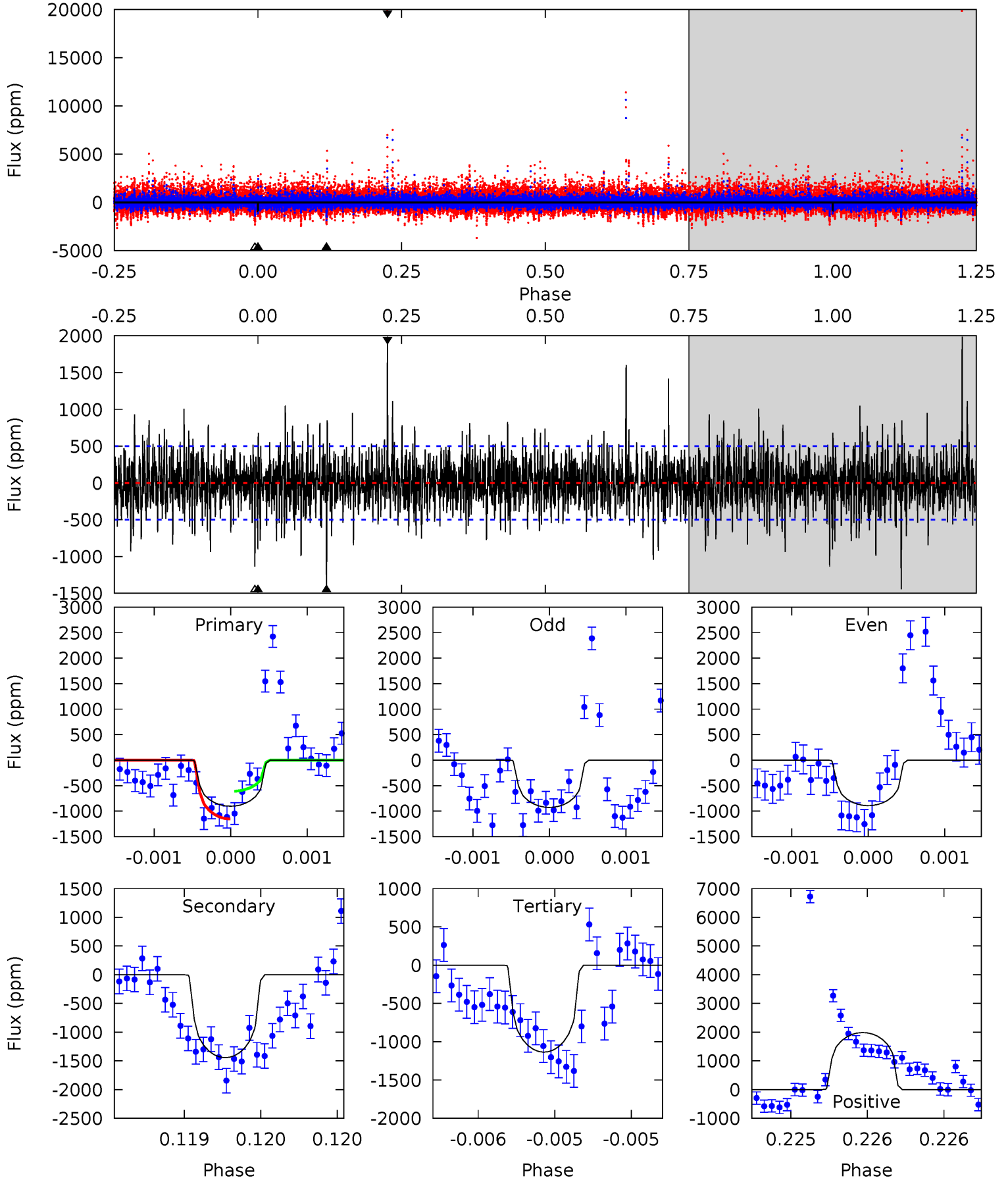
TCE 006717216-04 P=474.358284 Days $T_0=418.803441$ (BKJD)



DV Model-Shift Uniqueness Test

006717216-04, P = 474.350127 Days, E = 418.806718 Days

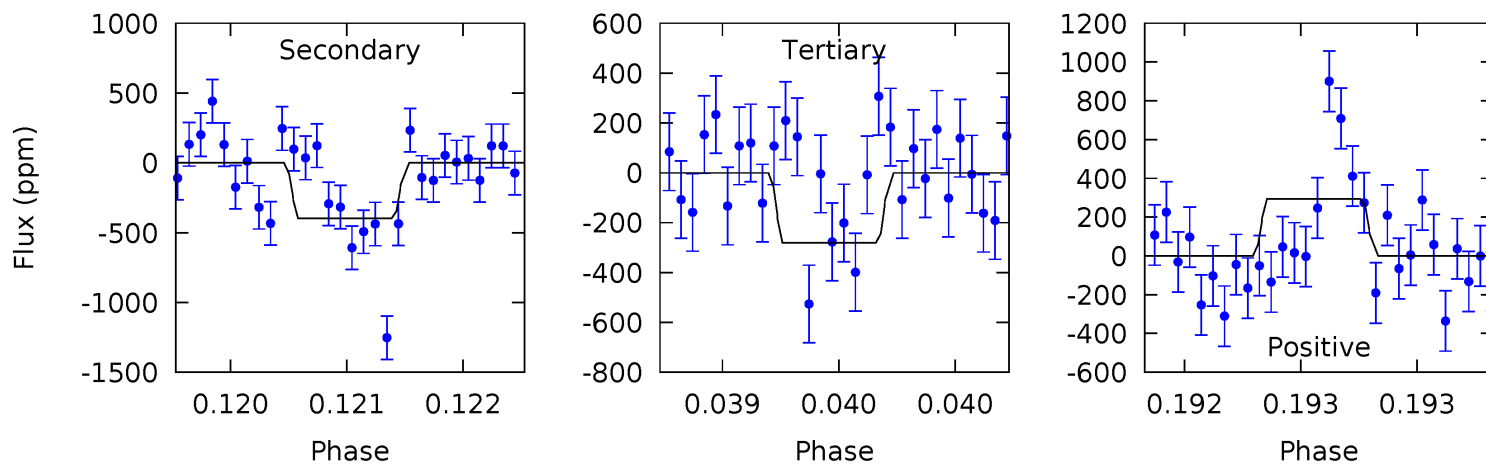
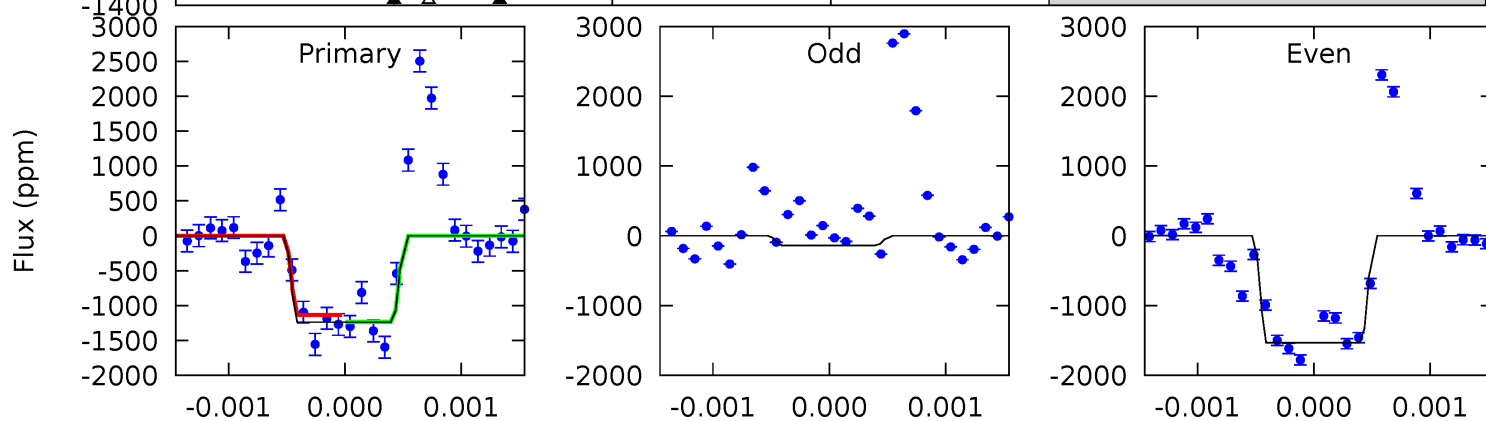
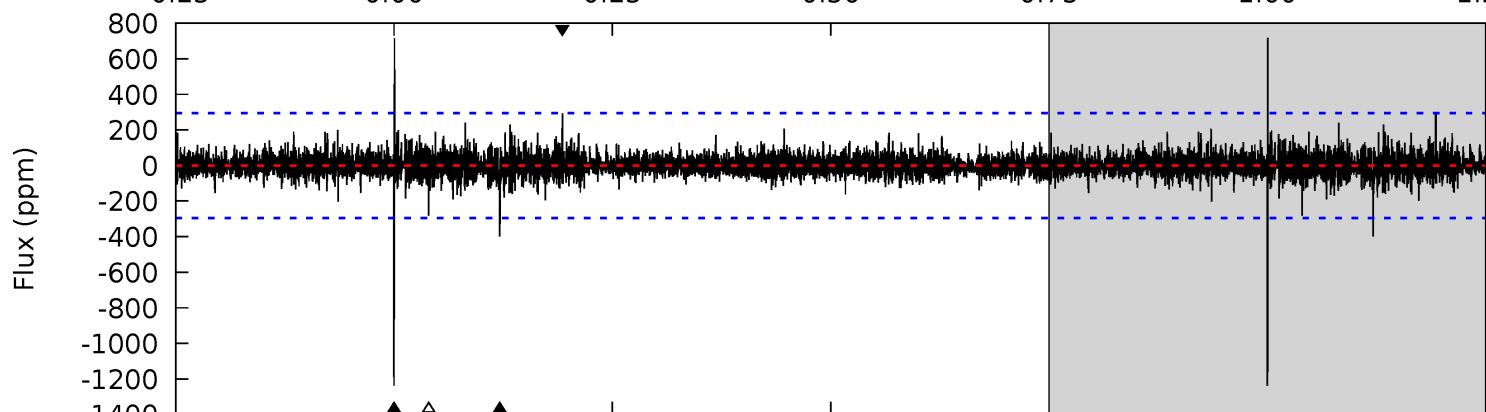
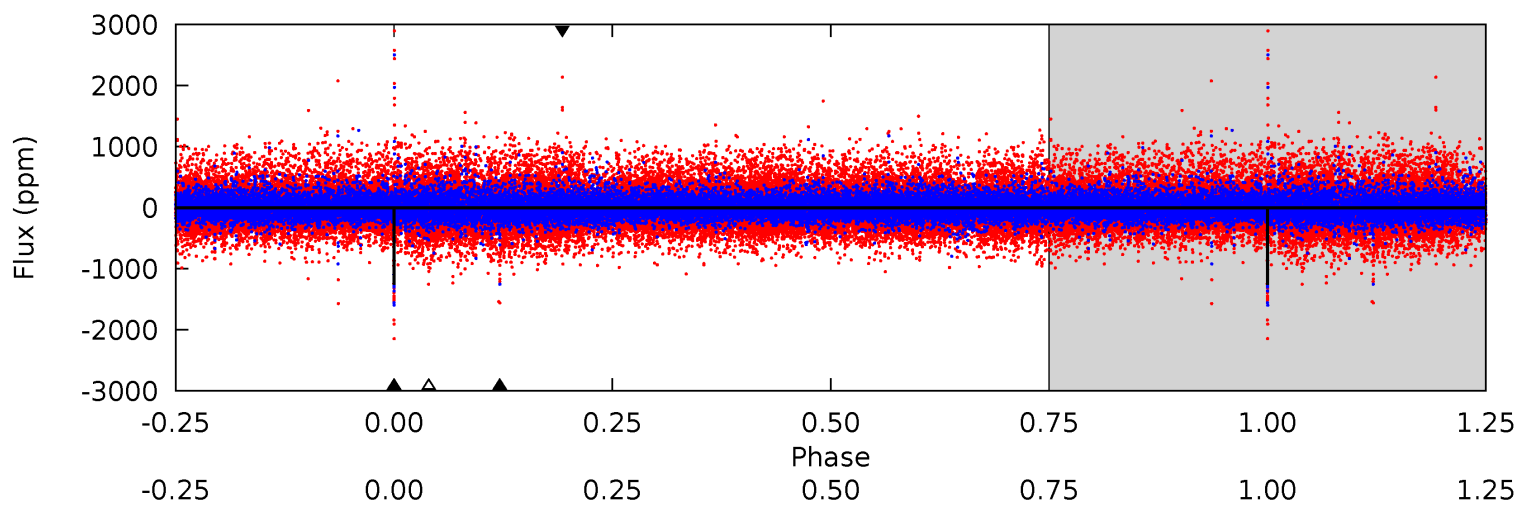
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.99	16.0	12.6	22.0	5.53	3.41	2.96	-2.57	-12.0	3.40	-6.00	0.08	0.97	0.58	3.03



Alt Model-Shift Uniqueness Test

006717216-04, P = 474.358284 Days, E = 418.803441 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.3	7.50	5.28	5.52	5.55	3.45	0.83	18.0	17.8	2.21	1.97	13.4	0.81	0.37	0.96



Stellar Parameters For KIC 006717216

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4159^{+126}_{-139}	$4.627^{+0.053}_{-0.018}$	$0.070^{+0.250}_{-0.300}$	$0.640^{+0.035}_{-0.060}$	$0.633^{+0.054}_{-0.054}$	$3.396^{+0.793}_{-0.292}$
	+3%/-3%	+1%/-0%	+357%/-429%	+5%/-9%	+9%/-9%	+23%/-9%
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 006717216-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1443 ± 90	$2.46^{+1.16}_{-1.09}$	201^{+7}_{-8}	4245^{+1133}_{-550}	$137681^{+294359}_{-73319}$
Alt.	-398 ± 53	$2.34^{+1.08}_{-1.09}$	201^{+7}_{-7}	3477^{+856}_{-398}	$43110^{+105149}_{-23391}$

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

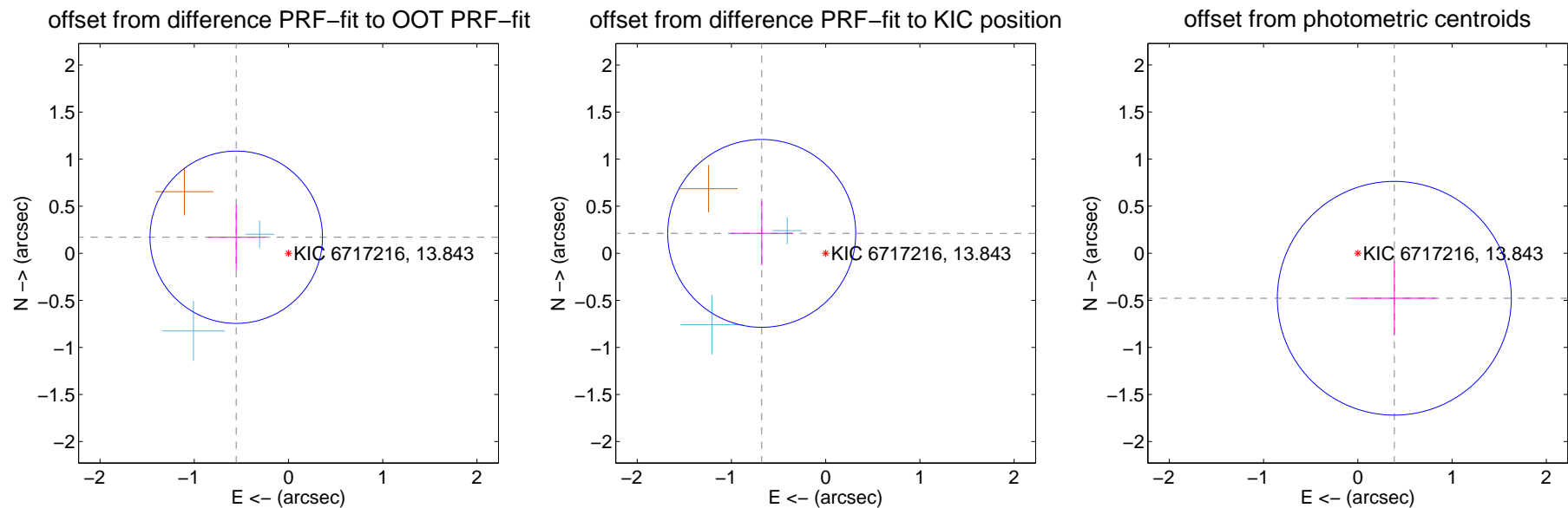
DV Centroid Data

Supplemental centroid analysis for 006717216-04. Kepler magnitude: 13.84. Transit SNR 8.32

There are 2 quarters with good PRF difference image offsets

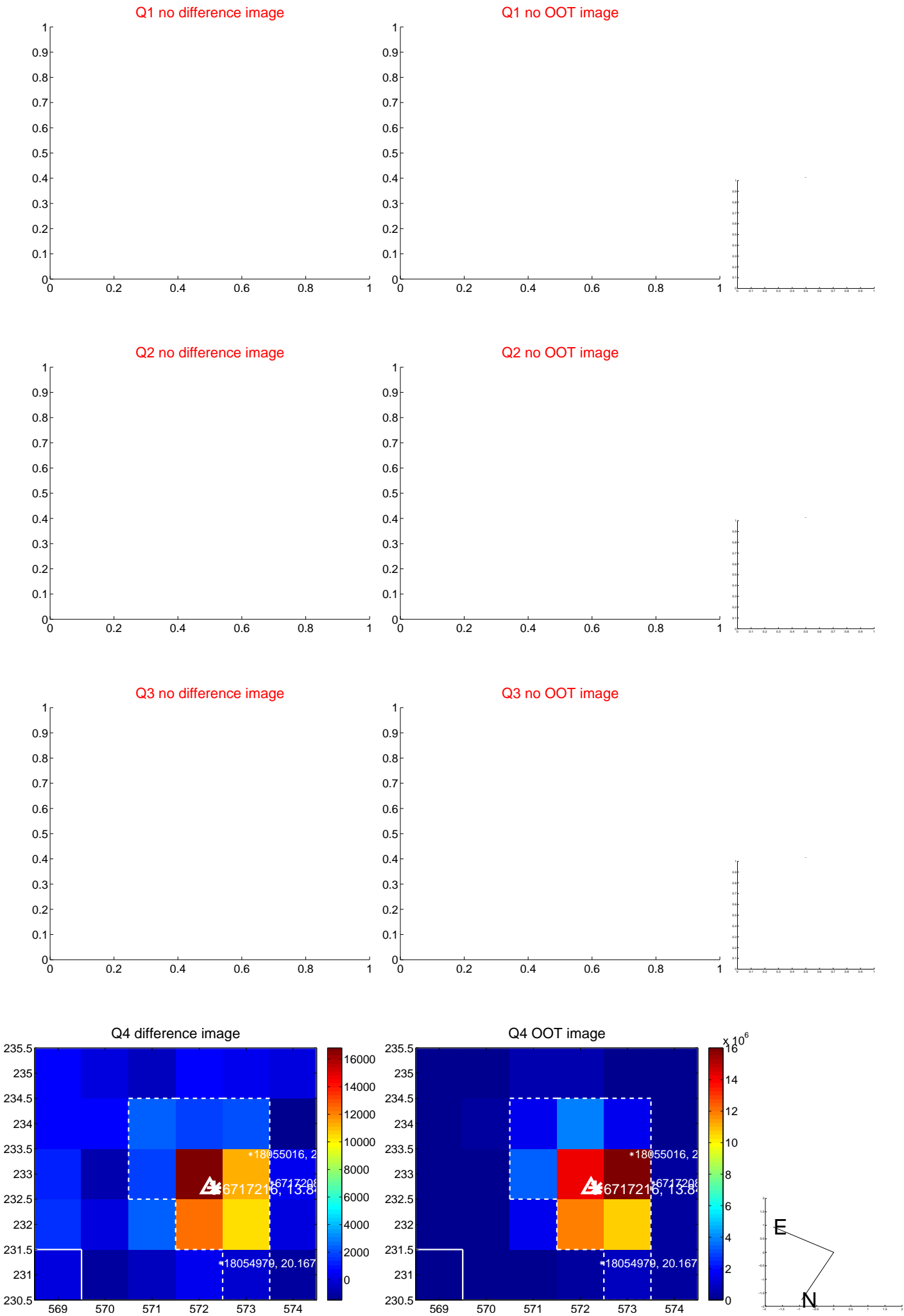
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.580 ± 0.305	1.90	0.555 ± 0.301	0.170 ± 0.347
PRF-fit source offset from KIC position	0.711 ± 0.333	2.14	0.679 ± 0.332	0.211 ± 0.338
photometric centroid source offset	0.62 ± 0.41	1.49	-0.39 ± 0.44	-0.48 ± 0.39

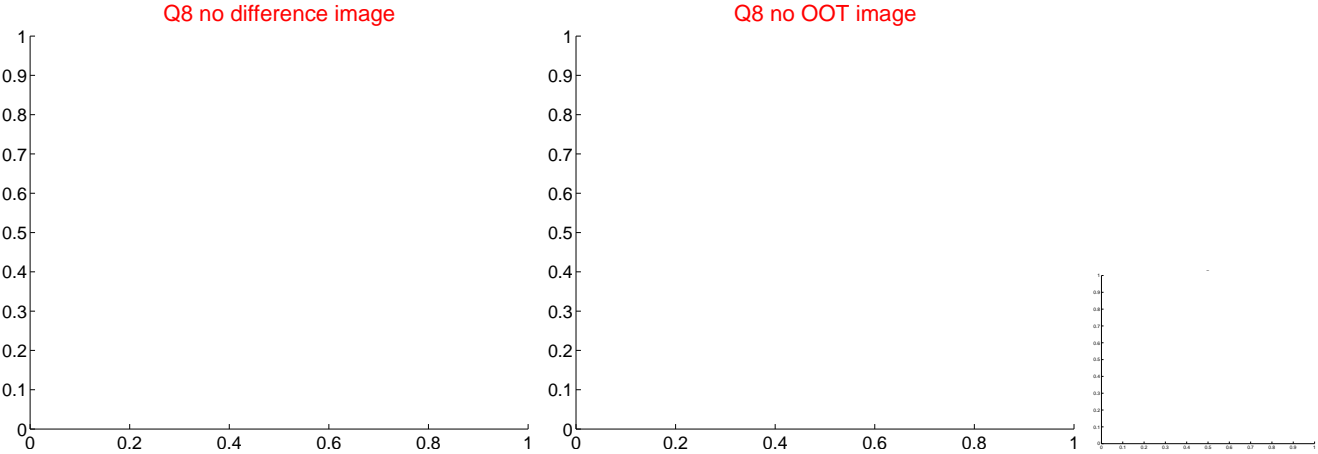
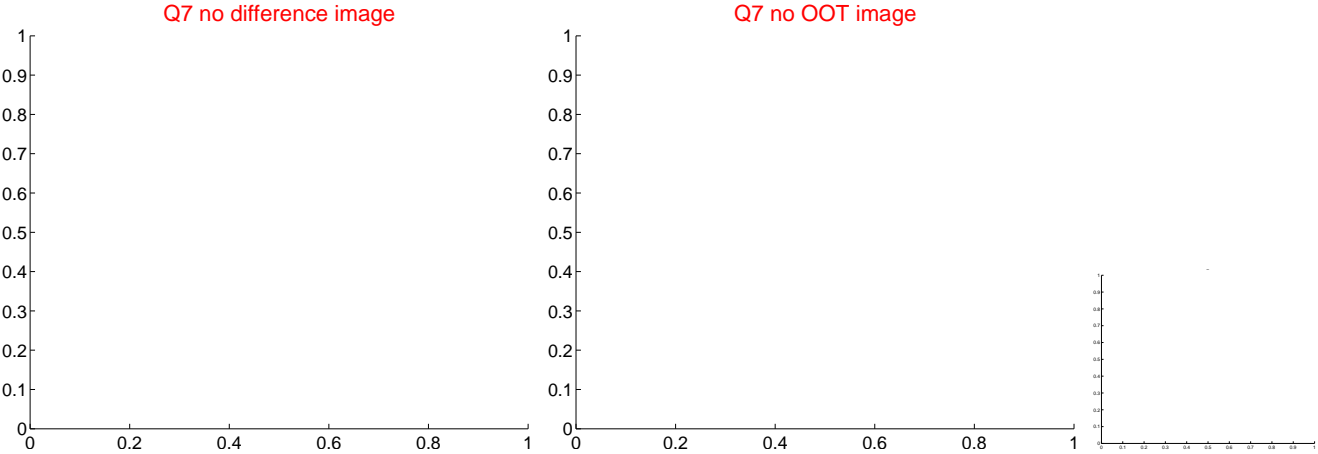
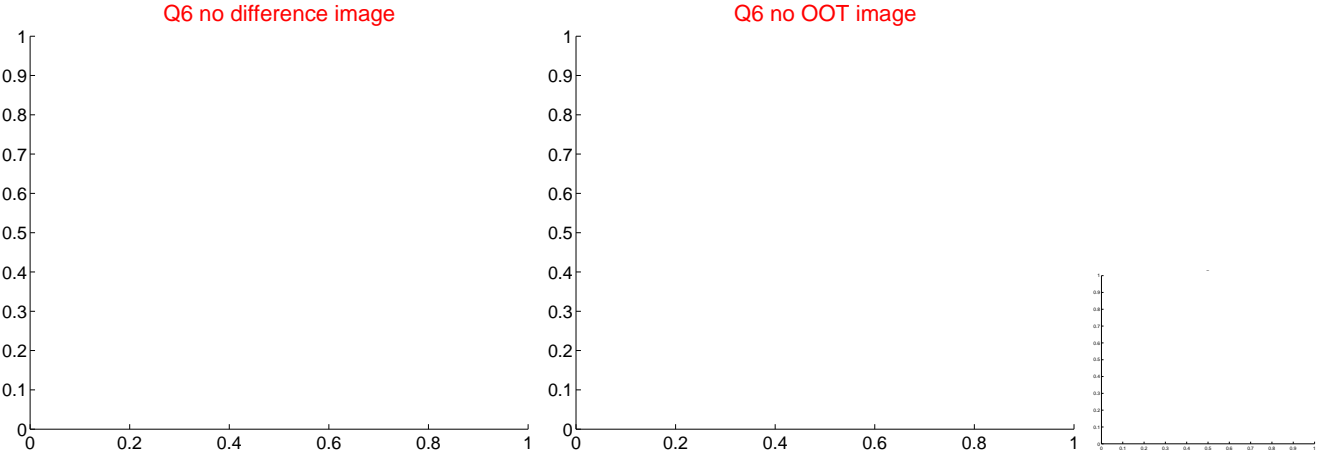
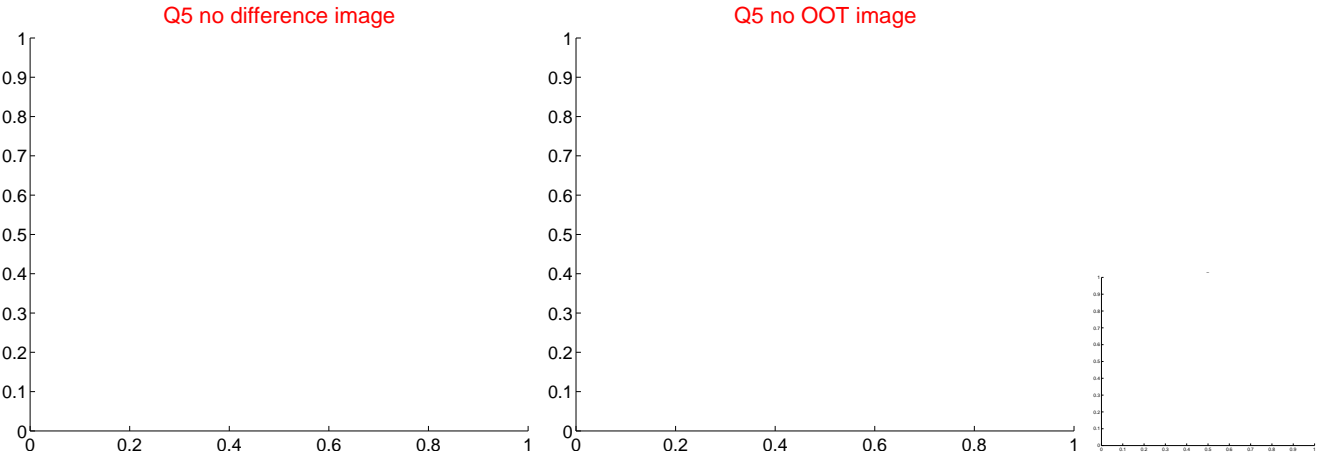


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

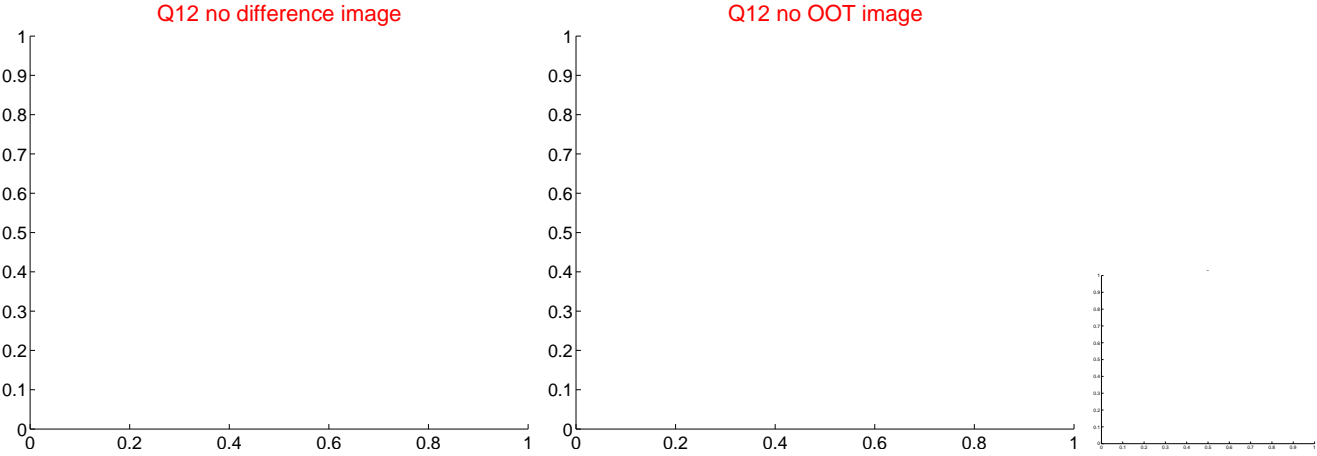
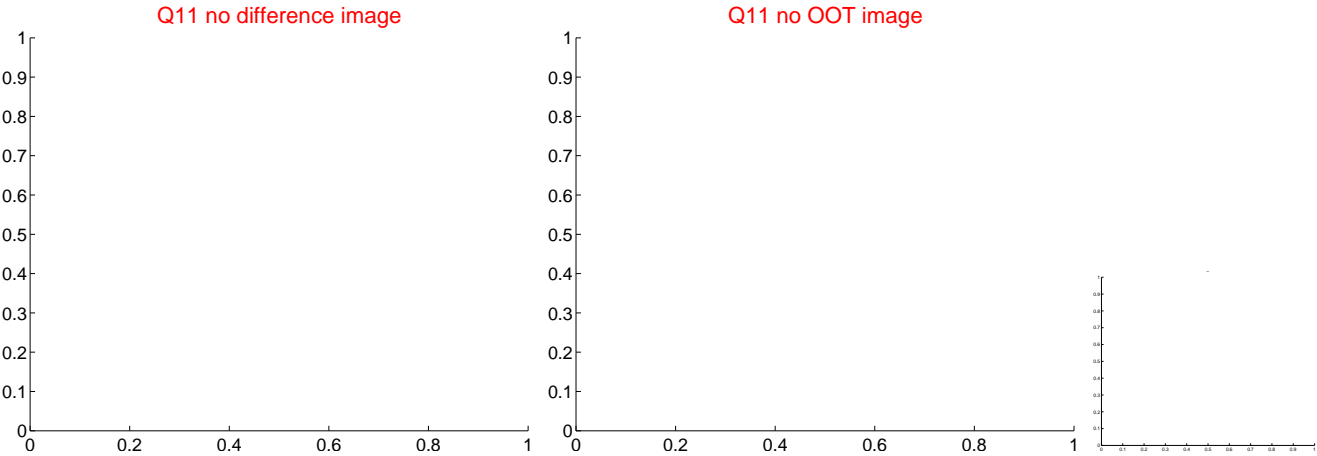
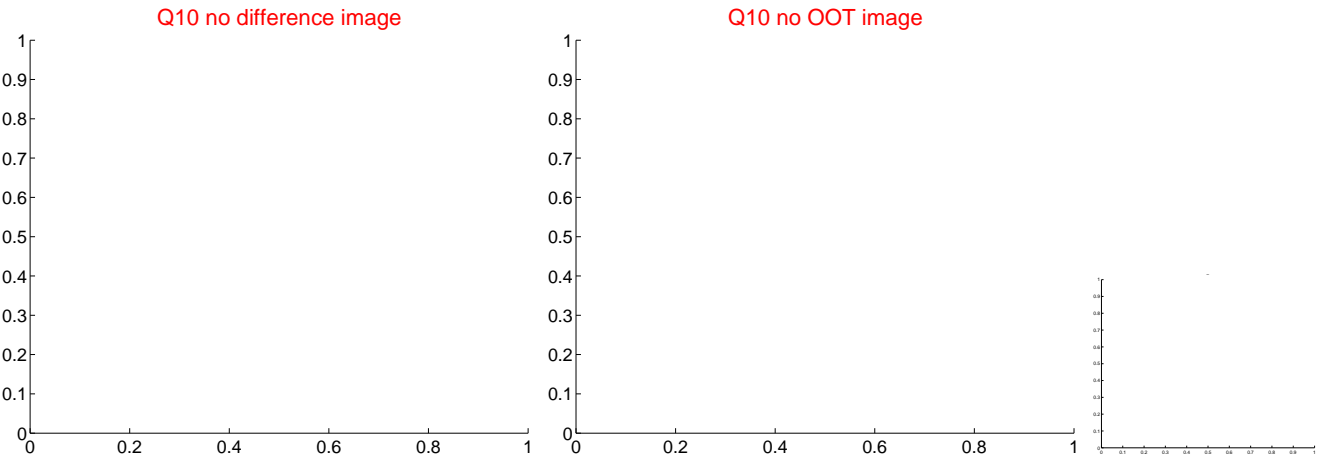
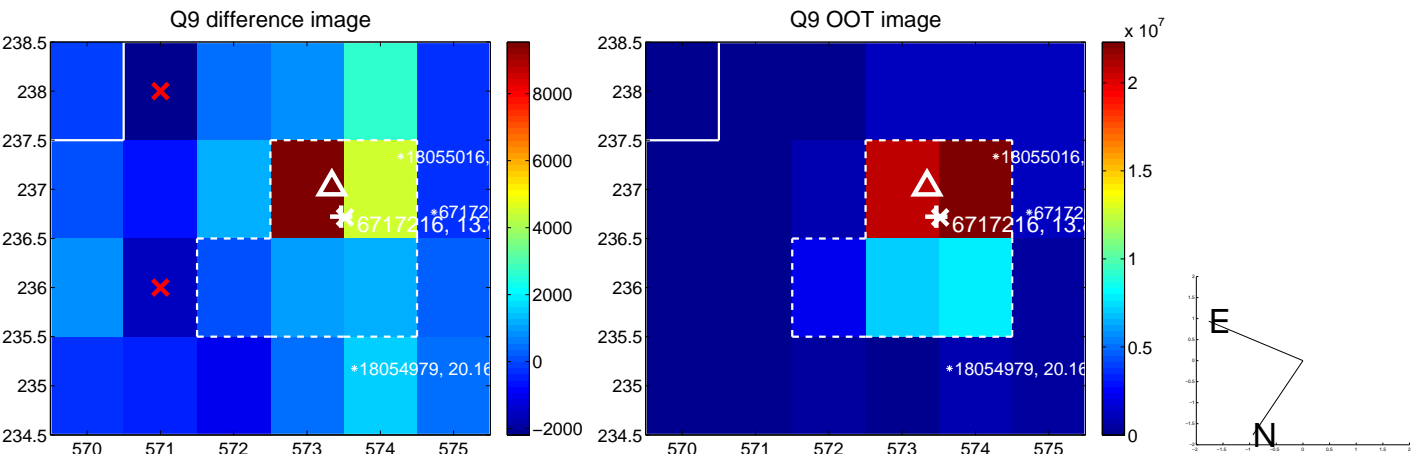
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



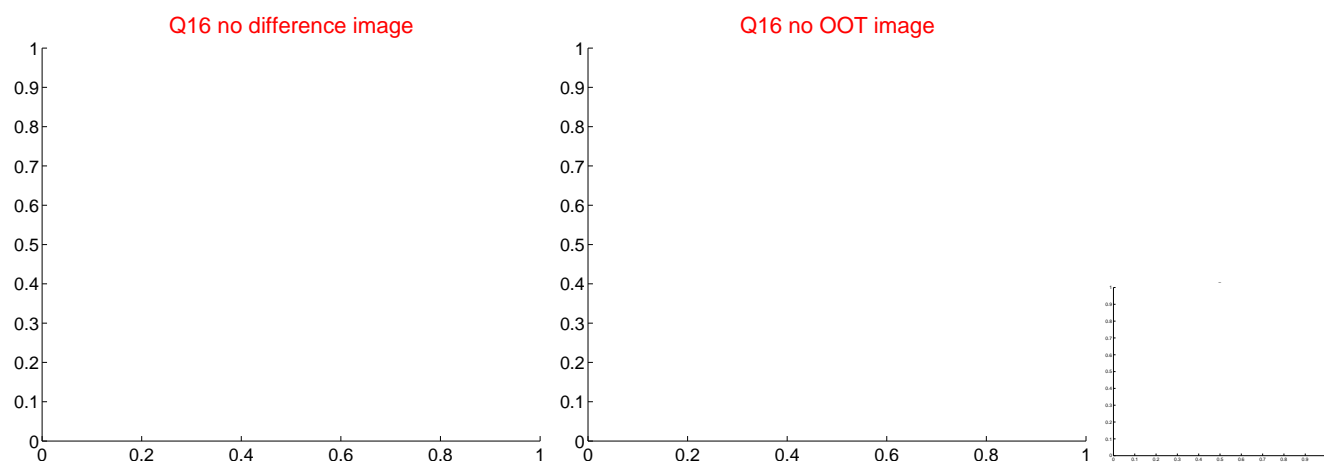
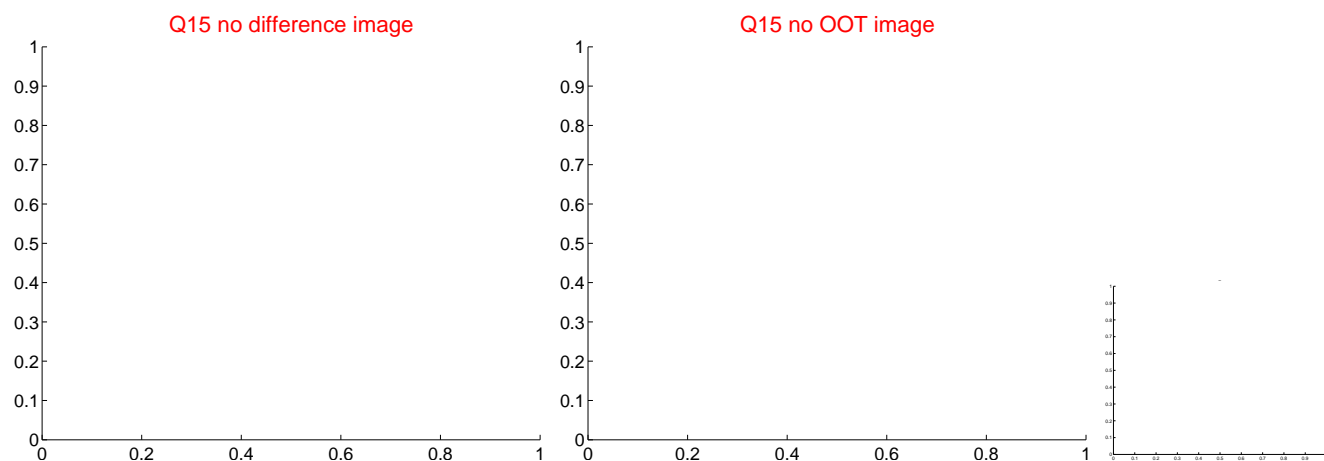
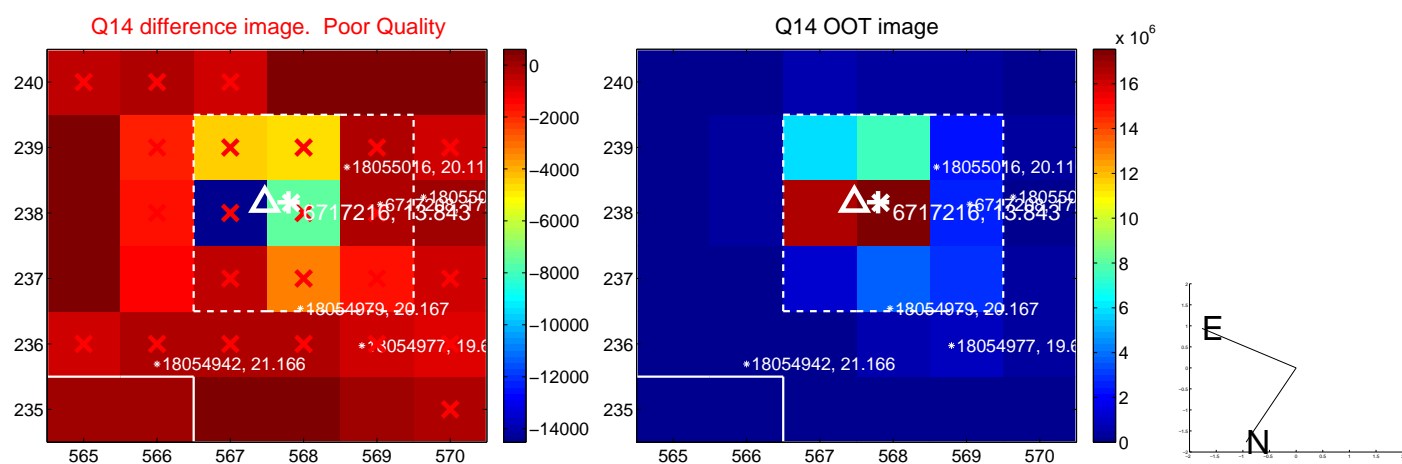
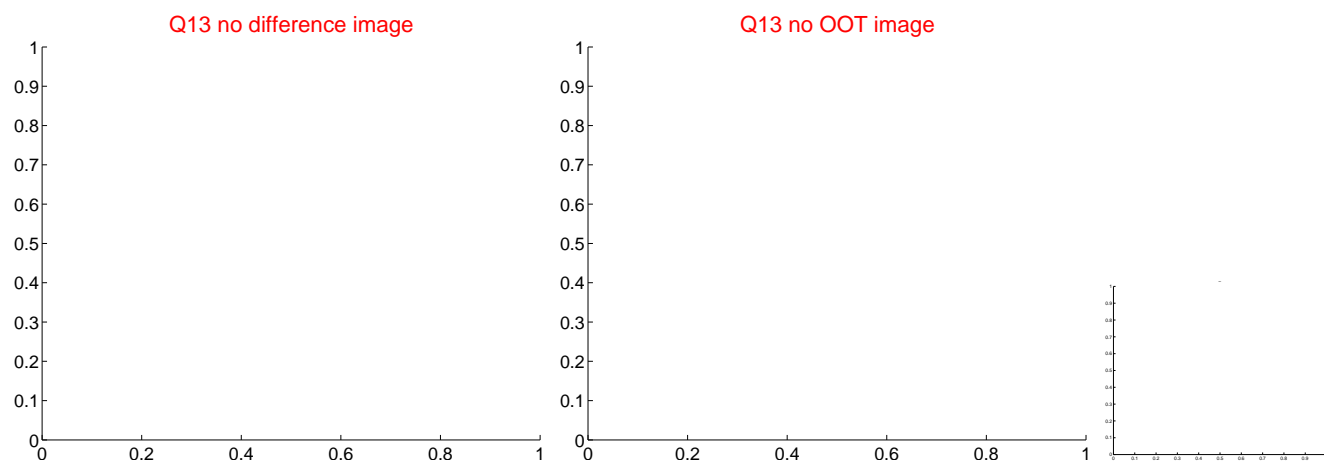
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



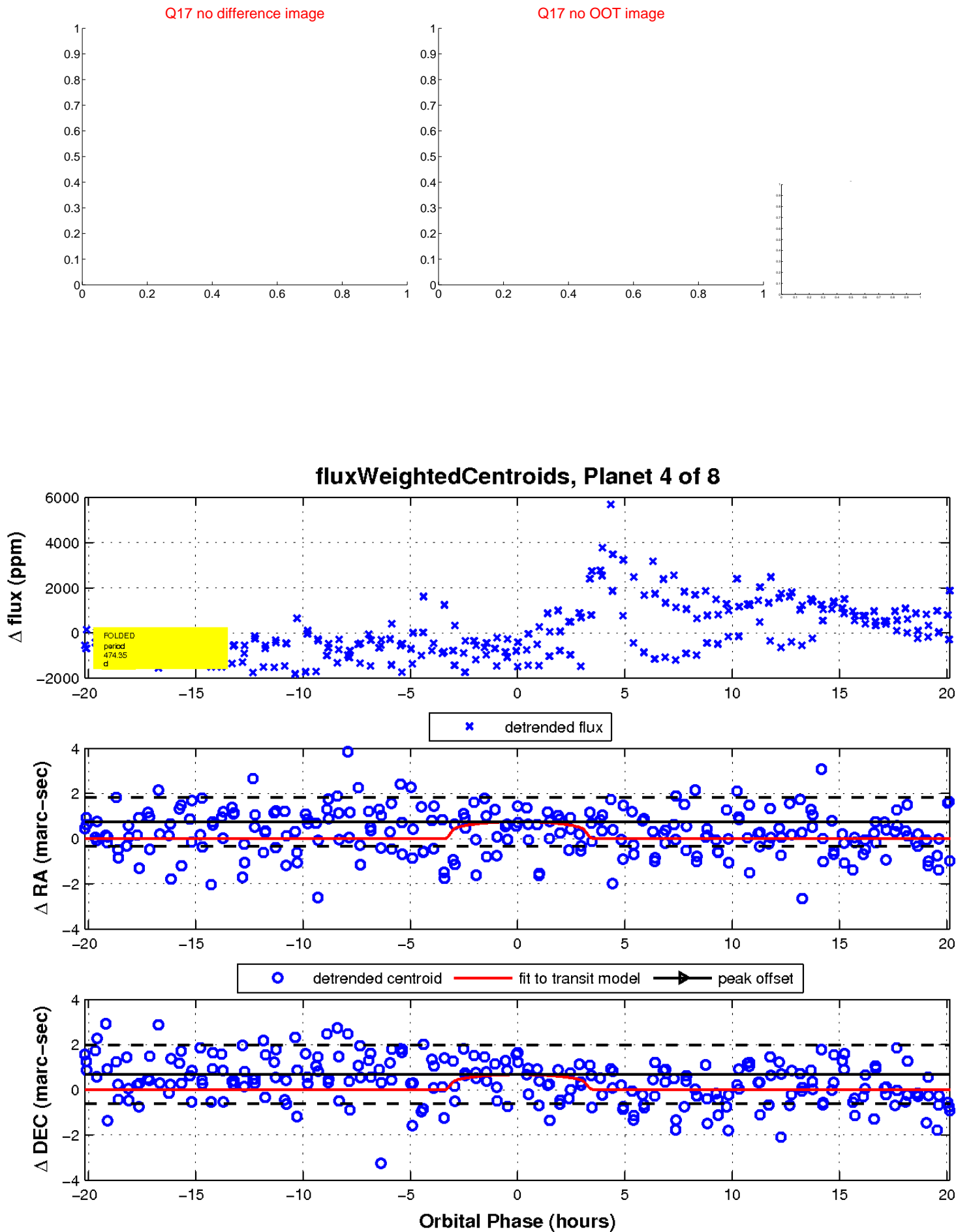
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

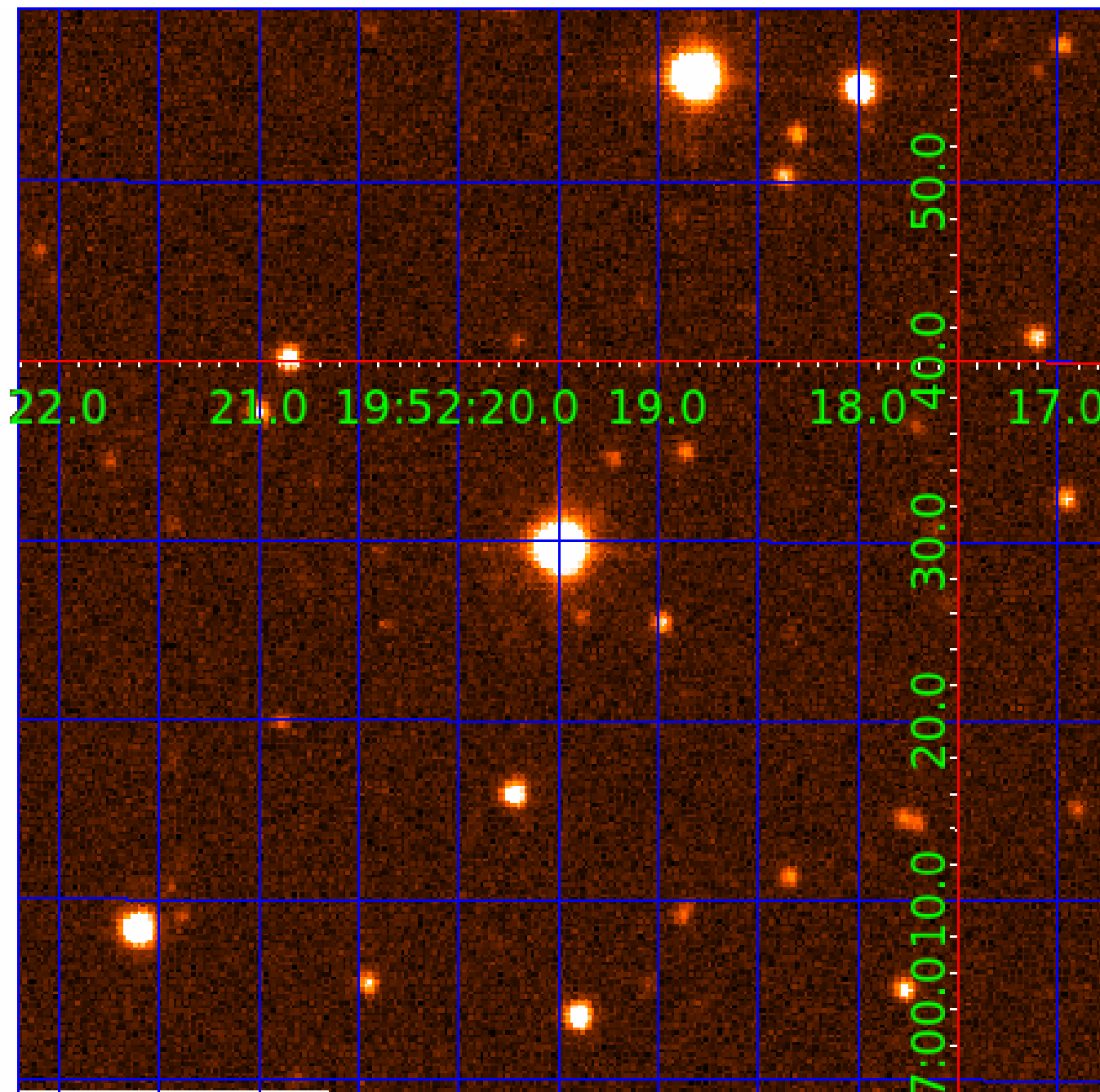


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006717216

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})
006717216-01	OBS	No	488.661435	287.654049	1976.1	8.133	16.2	8.9	0.64	4159	5.68	0.10
006717216-02	OBS	No	403.508663	510.187294	915.2	3.703	18.8	5.7	0.64	4159	2.06	0.13
006717216-03	OBS	No	485.381537	424.554069	1369.5	9.692	15.5	6.1	0.64	4159	2.27	0.10
006717216-04	OBS	No	474.350127	418.806718	1417.8	6.796	15.3	8.3	0.64	4159	2.50	0.10
006717216-05	OBS	No	526.290680	228.033915	1317.4	5.787	14.4	7.7	0.64	4159	2.56	0.09
006717216-06	OBS	No	298.443968	198.167962	957.6	5.692	14.3	5.8	0.64	4159	2.53	0.20
006717216-08	OBS	No	333.611378	448.424961	1968.7	8.865	13.0	12.4	0.64	4159	2.94	0.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006717216-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006717216-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006717216-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
006717216-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—CENT_NOFITS—HALO_GHOST

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

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

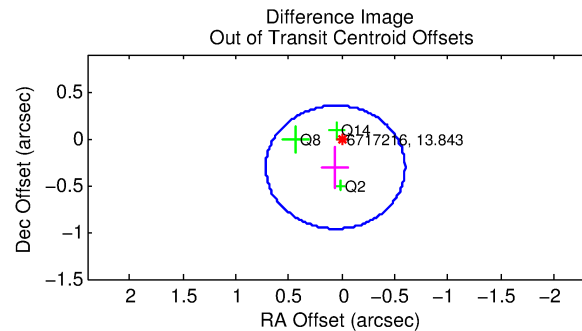
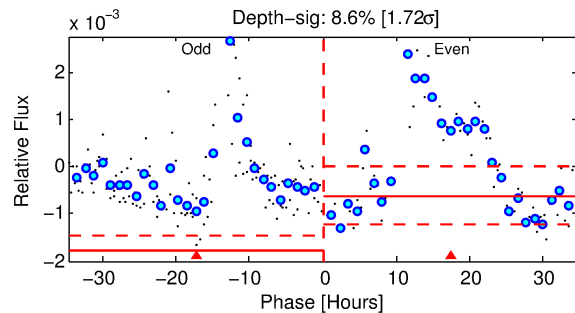
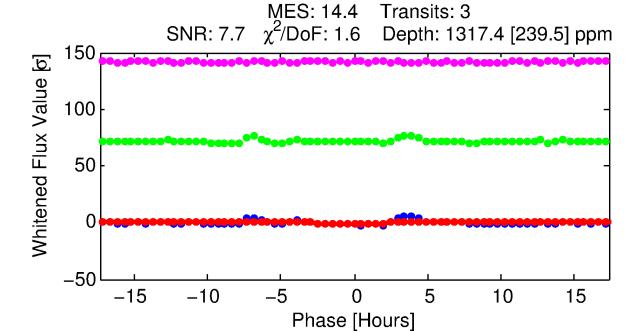
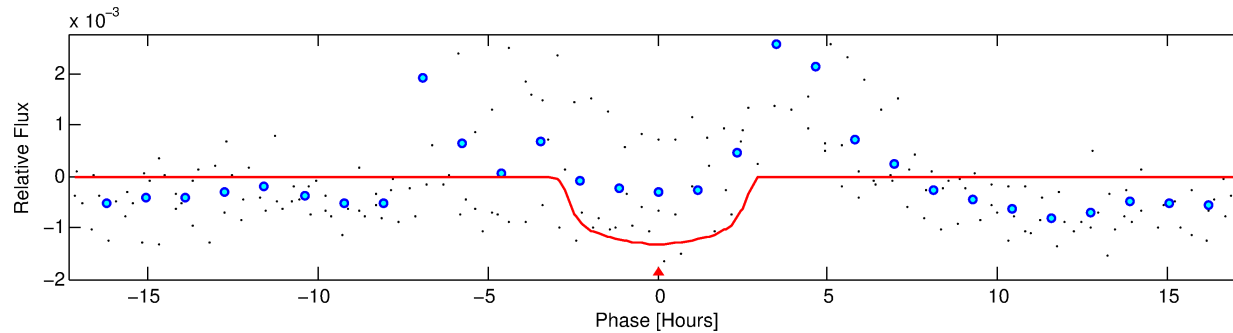
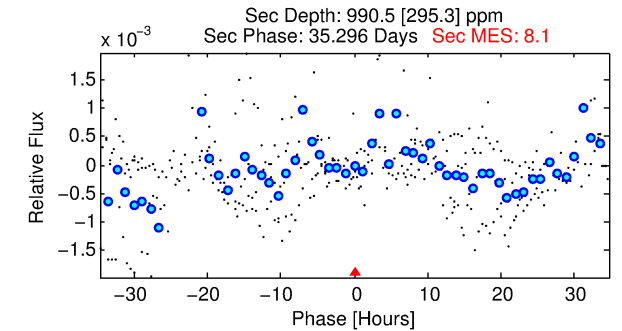
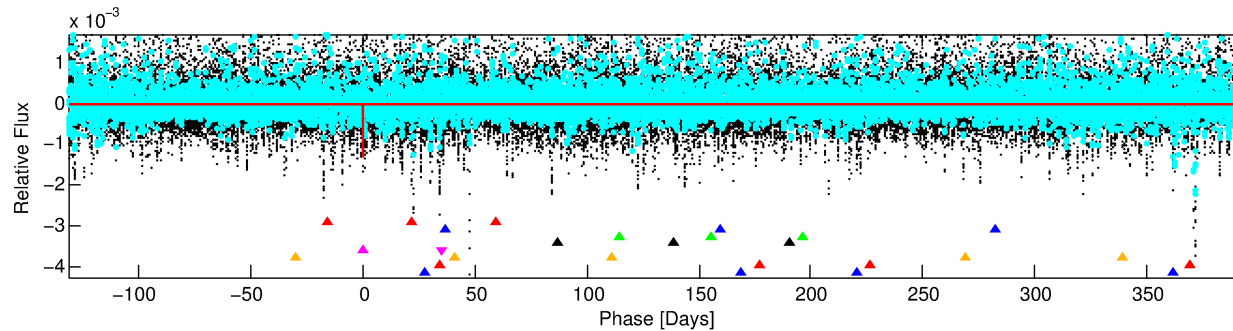
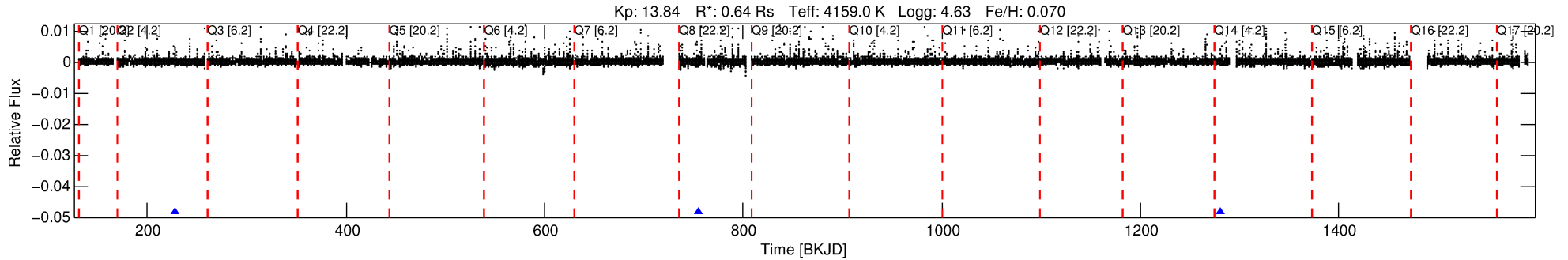
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006717216-05

No Significant Match Found

DV One-Page Summary

KIC: 6717216 Candidate: 5 of 8 Period: 526.291 d



DV Fit Results:

Period = 526.29068 [0.00679] d
Epoch = 228.0339 [0.0089] BKJD
Rp/R* = 0.0367 [0.0143]
a/R* = 482.62 [598.25]
b = 0.77 [0.67]
Seff = 0.09 [0.02]
Teq = 140 [6] K
Rp = 2.56 [1.03] Re
a = 1.0956 [0.0817] AU
Ag = 99562.12 [83760.03] [1.19σ]
Teffp = 3851 [814] K [4.56σ]

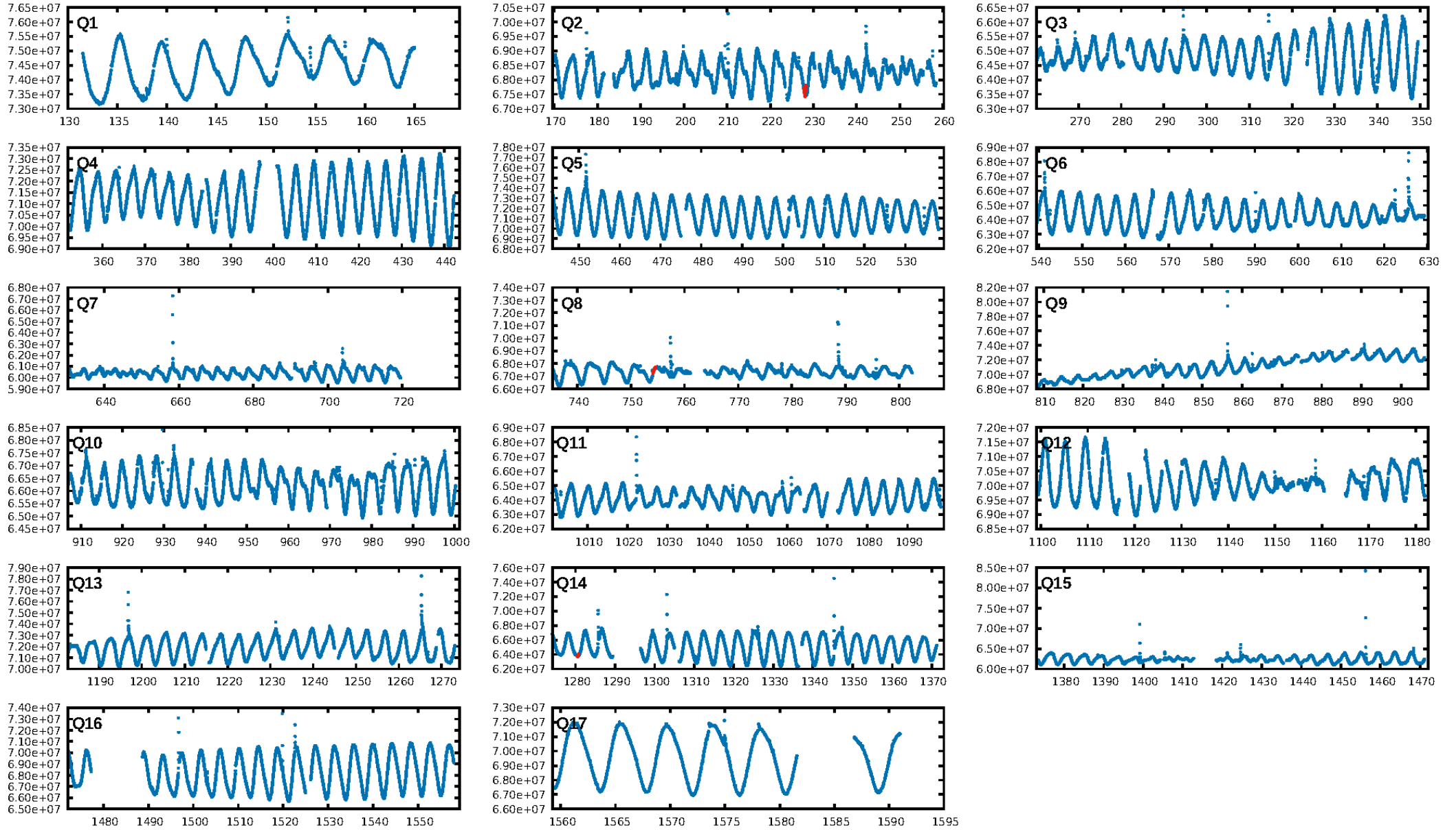
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [90.47σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 50.4%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.4675
Centroid-sig: 54.2%
Centroid-so: 0.306 arcsec [0.62σ]
OotOffset-rm: 0.312 arcsec [1.42σ]
OotOffset-st: 2/0/1/0 [3]
KicOffset-rm: 0.266 arcsec [1.40σ]
KicOffset-st: 2/0/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

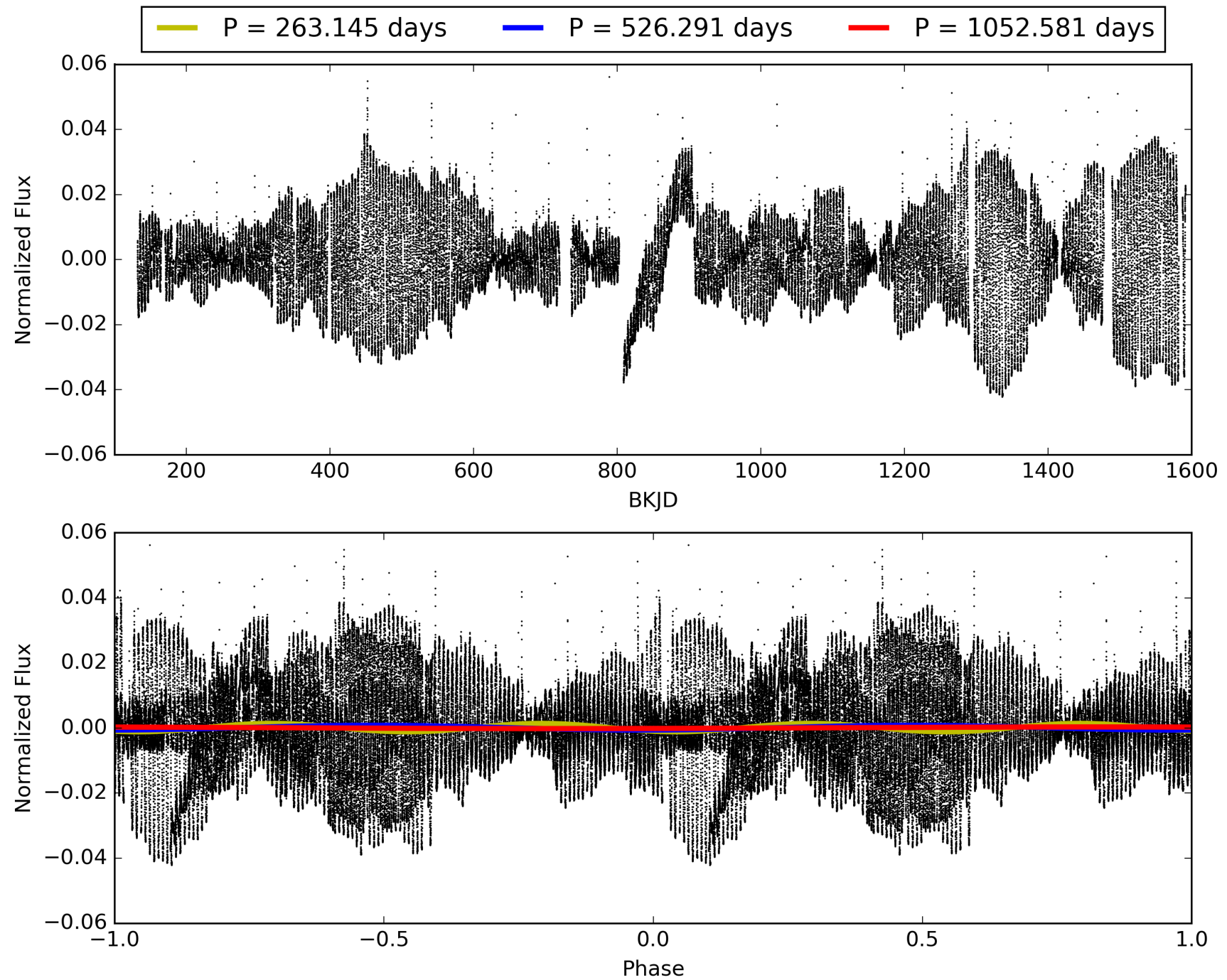
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:54:20 Z

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

TCE 006717216-05, PDC Light Curves

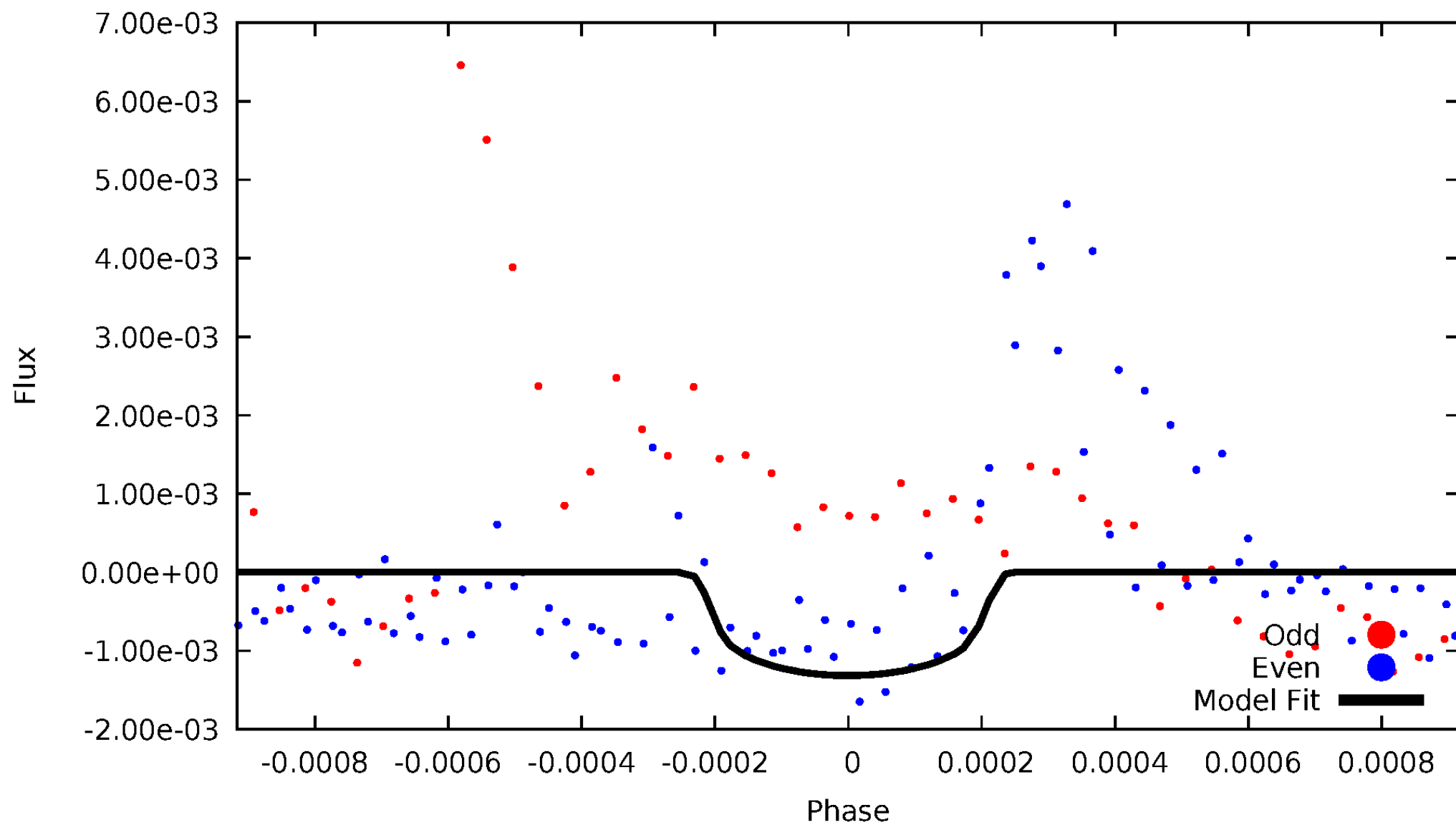


TCE 006717216-05



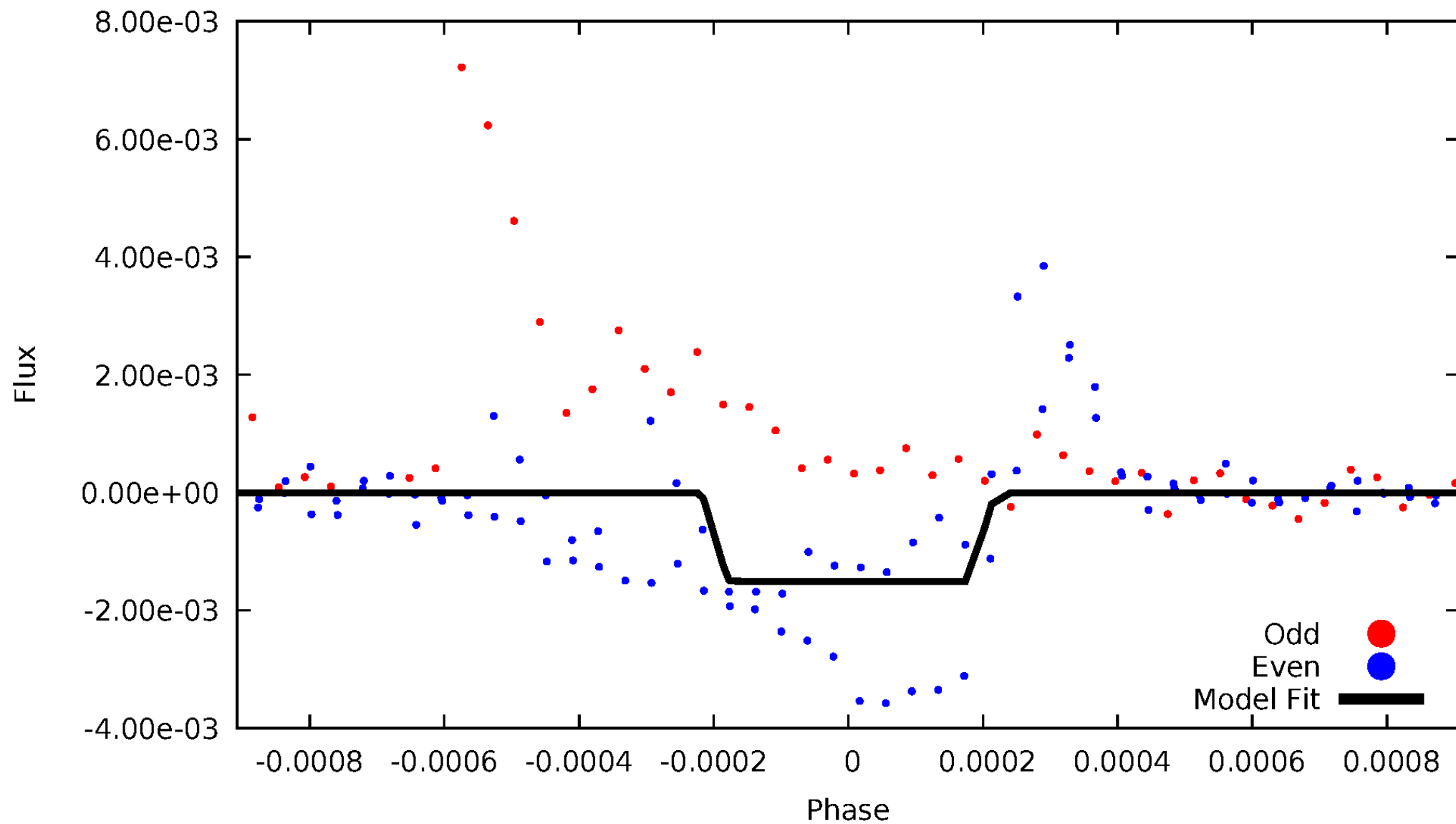
DV Odd/Even

TCE 006717216-05



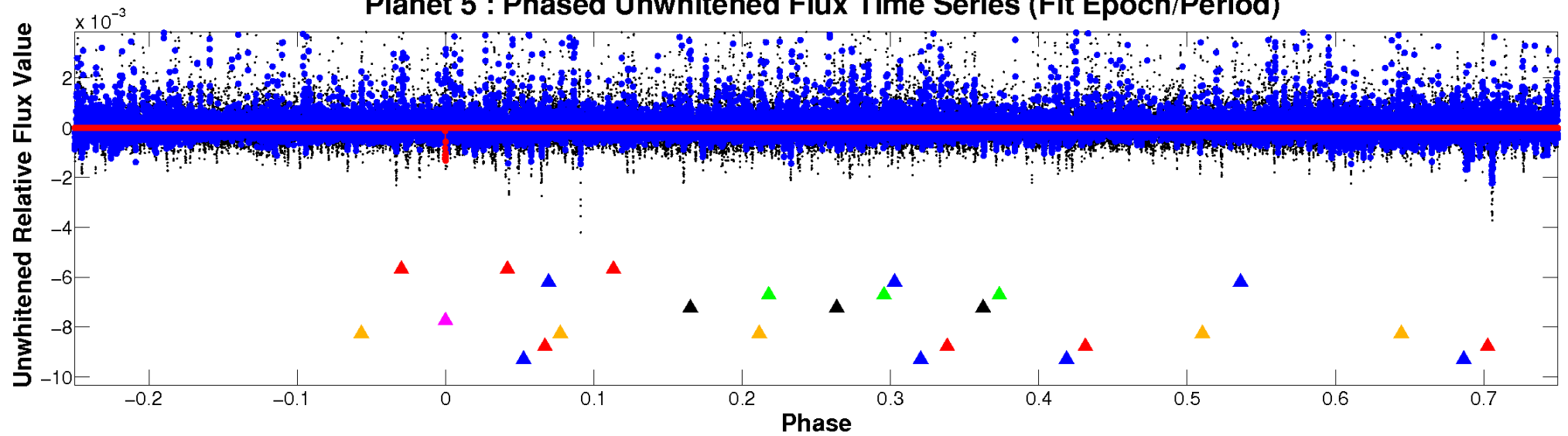
ALT Odd/Even

TCE 006717216-05

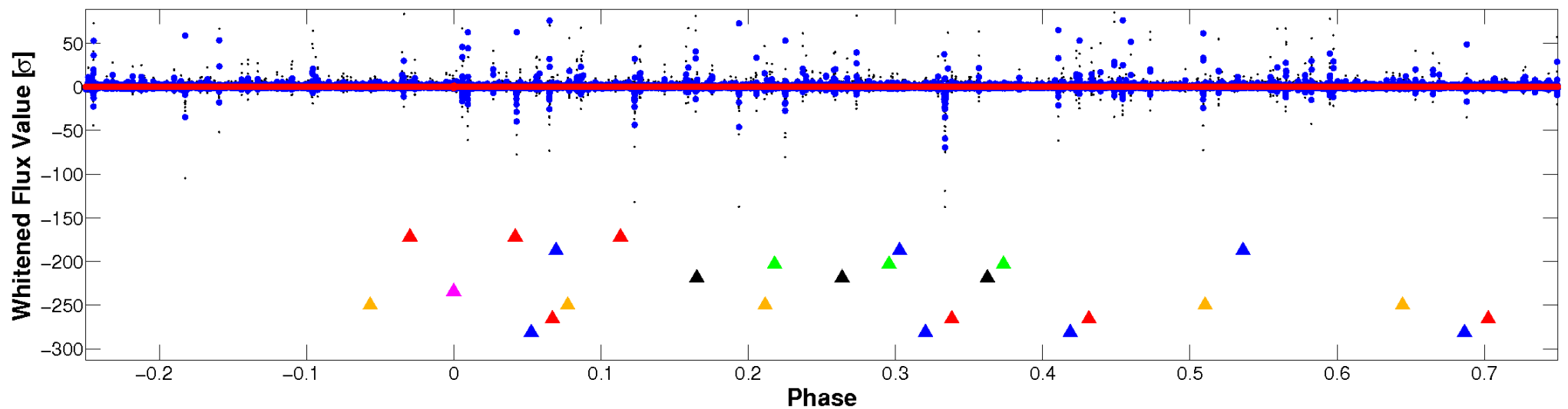


Non-Whitened Vs. Whitened Light Curve

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

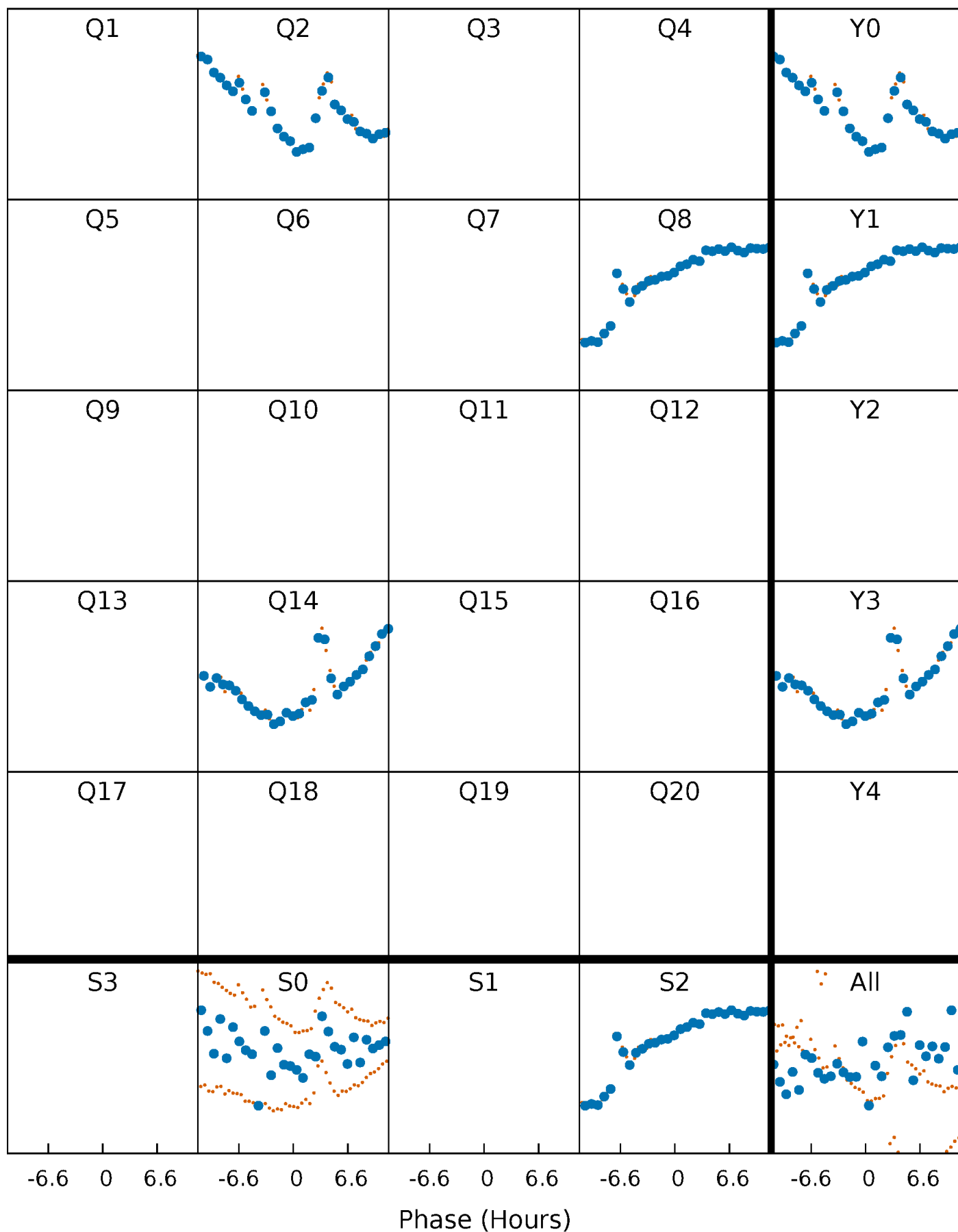


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



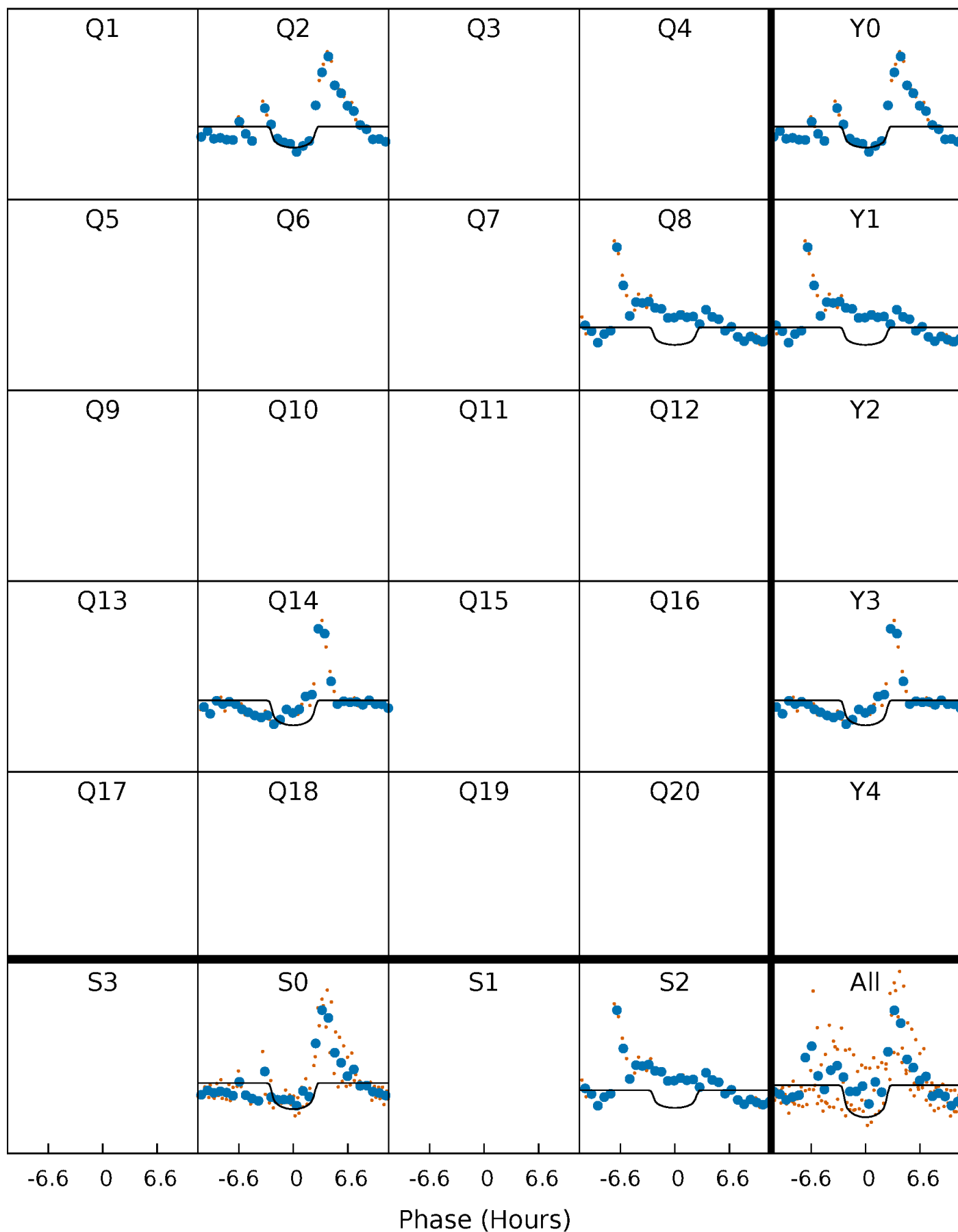
PDC Quarter-Phased Transit Curves

TCE 006717216-05 $P=526.290680$ Days $T_0=228.033915$ (BKJD)



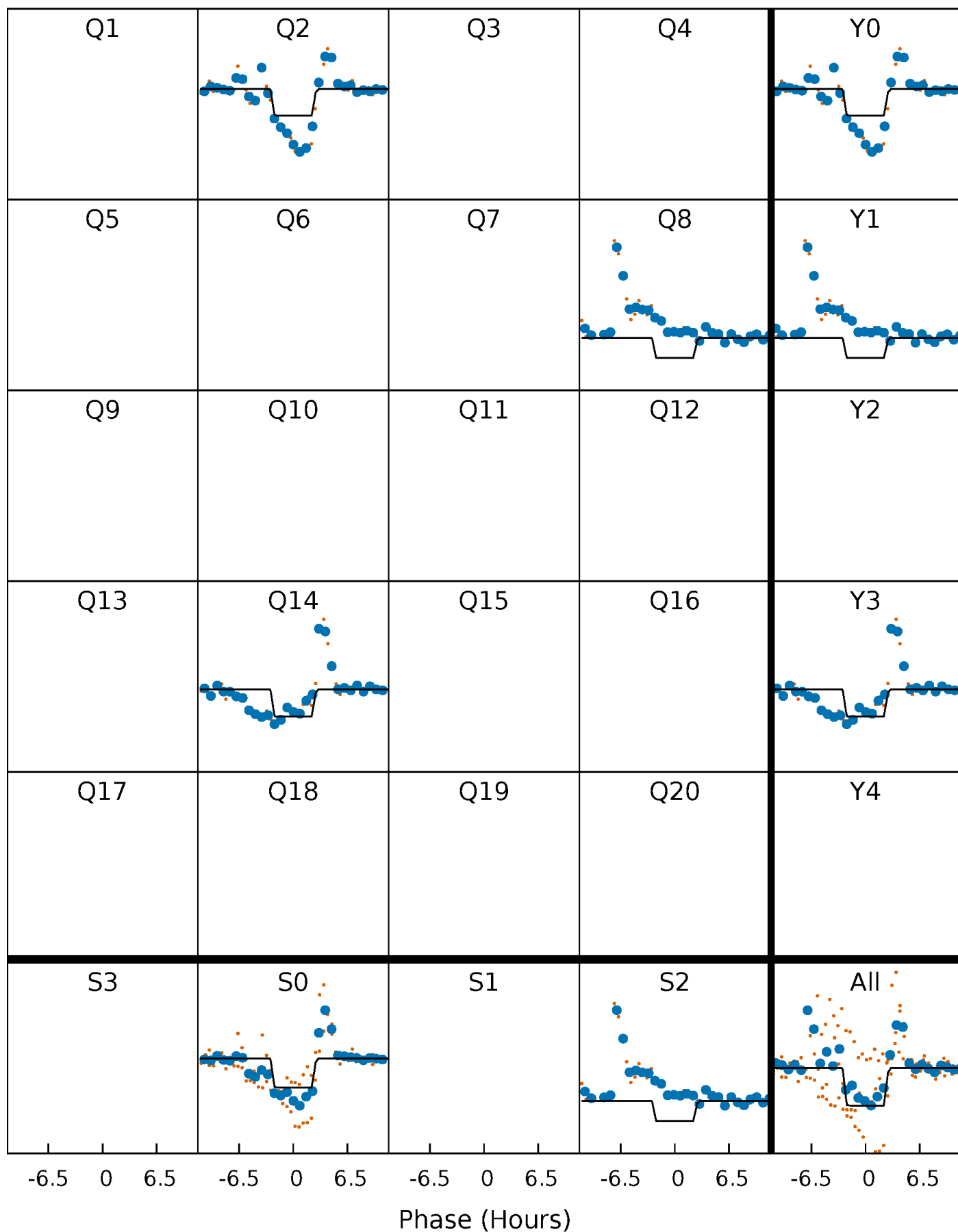
DV Quarter-Phased Transit Curves

TCE 006717216-05 $P=526.290680$ Days $T_0=228.033915$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

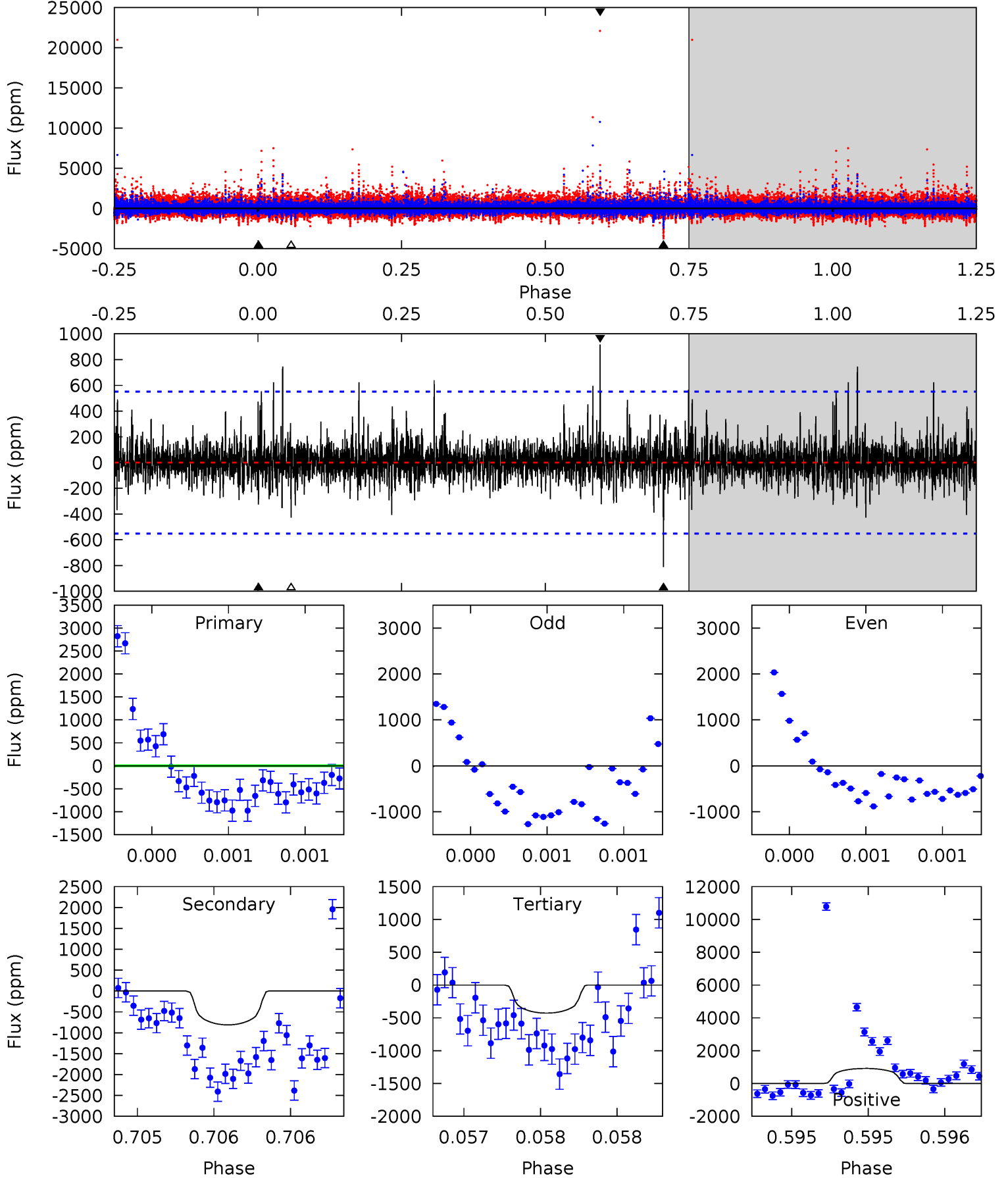
TCE 006717216-05 P=526.286771 Days $T_0=228.034091$ (BKJD)



DV Model-Shift Uniqueness Test

006717216-05, P = 526.290680 Days, E = 228.033915 Days

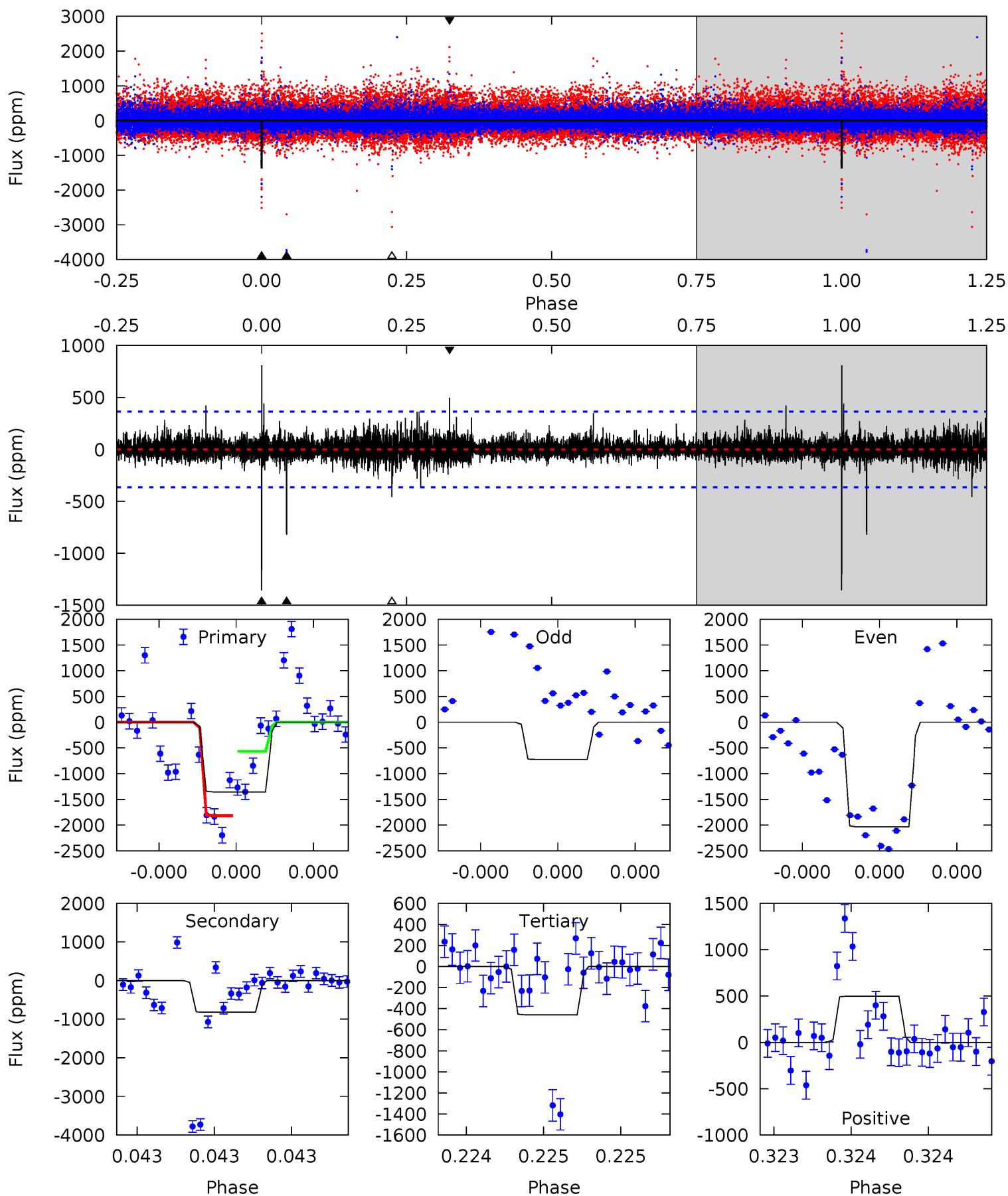
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.30	8.21	4.33	9.28	5.58	3.50	1.07	-1.02	-5.98	3.88	-1.08	0.54	0.38	0.53	1.81



Alt Model-Shift Uniqueness Test

006717216-05, P = 526.286771 Days, E = 228.034091 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.8	12.6	7.03	7.64	5.59	3.50	0.91	13.8	13.2	5.58	4.97	10.1	0.90	0.37	10.2



Stellar Parameters For KIC 006717216

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4159^{+126}_{-139}	$4.627^{+0.053}_{-0.018}$	$0.070^{+0.250}_{-0.300}$	$0.640^{+0.035}_{-0.060}$	$0.633^{+0.054}_{-0.054}$	$3.396^{+0.793}_{-0.292}$
	+3%/-3%	+1%/-0%	+357%/-429%	+5%/-9%	+9%/-9%	+23%/-9%
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 006717216-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-811 ± 99	$2.56^{+1.03}_{-0.95}$	194^{+7}_{-8}	3771^{+735}_{-405}	$83080^{+129883}_{-41436}$
Alt.	-821 ± 65	$2.69^{+1.02}_{-1.03}$	194^{+6}_{-8}	3711^{+740}_{-361}	$75494^{+128006}_{-35496}$

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

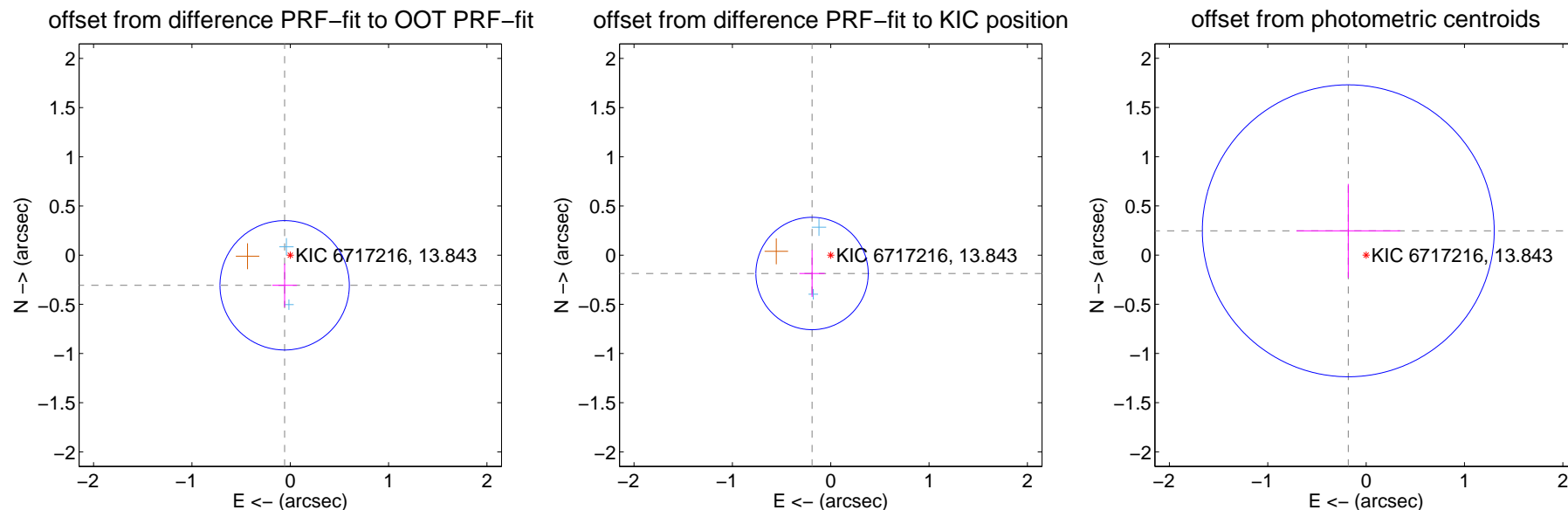
DV Centroid Data

Supplemental centroid analysis for 006717216-05. Kepler magnitude: 13.84. Transit SNR 7.67

There are 2 quarters with good PRF difference image offsets

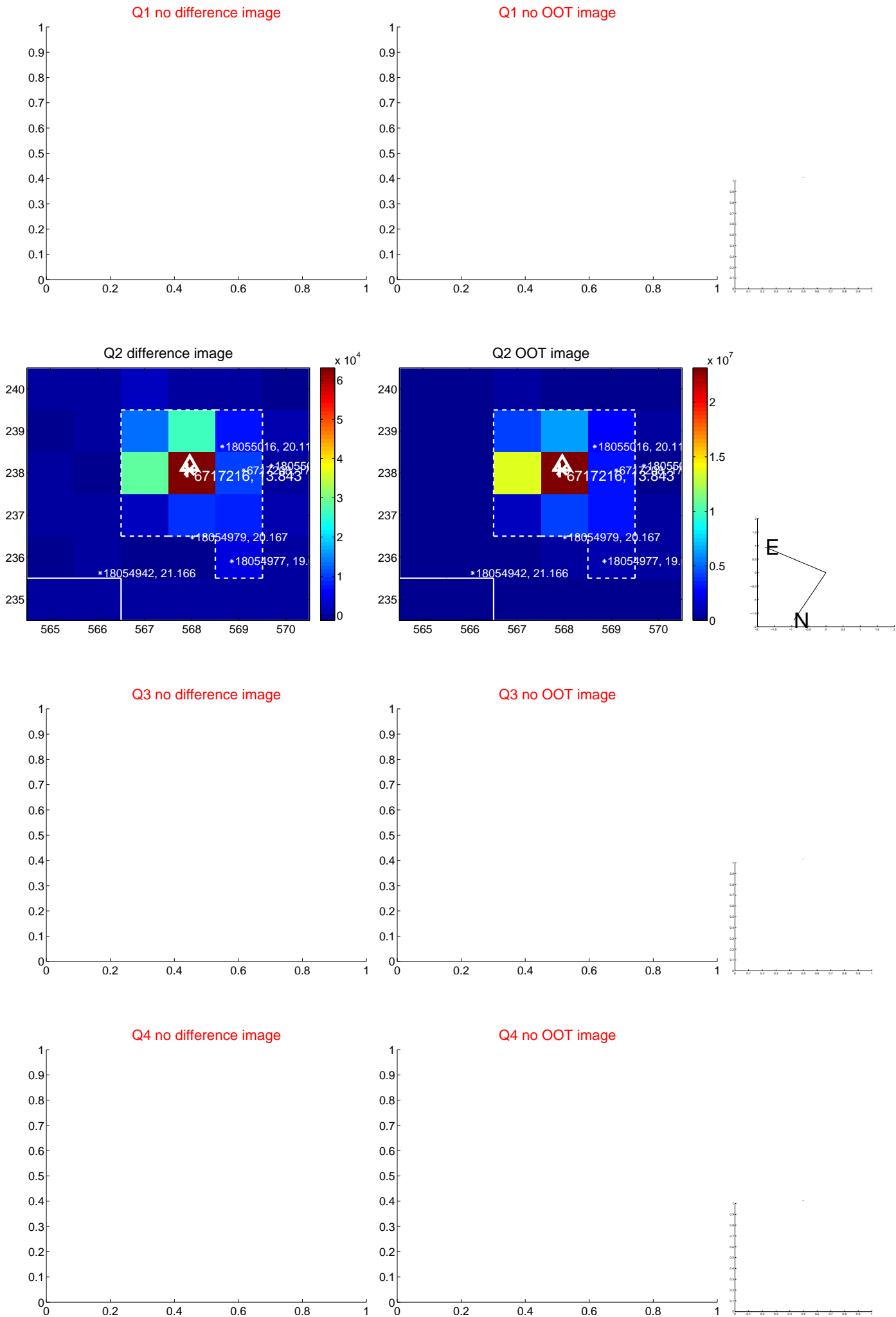
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.312 ± 0.219	1.42	0.057 ± 0.125	-0.307 ± 0.222
PRF-fit source offset from KIC position	0.266 ± 0.190	1.40	0.190 ± 0.129	-0.186 ± 0.238
photometric centroid source offset	0.31 ± 0.49	0.62	0.18 ± 0.53	0.25 ± 0.48

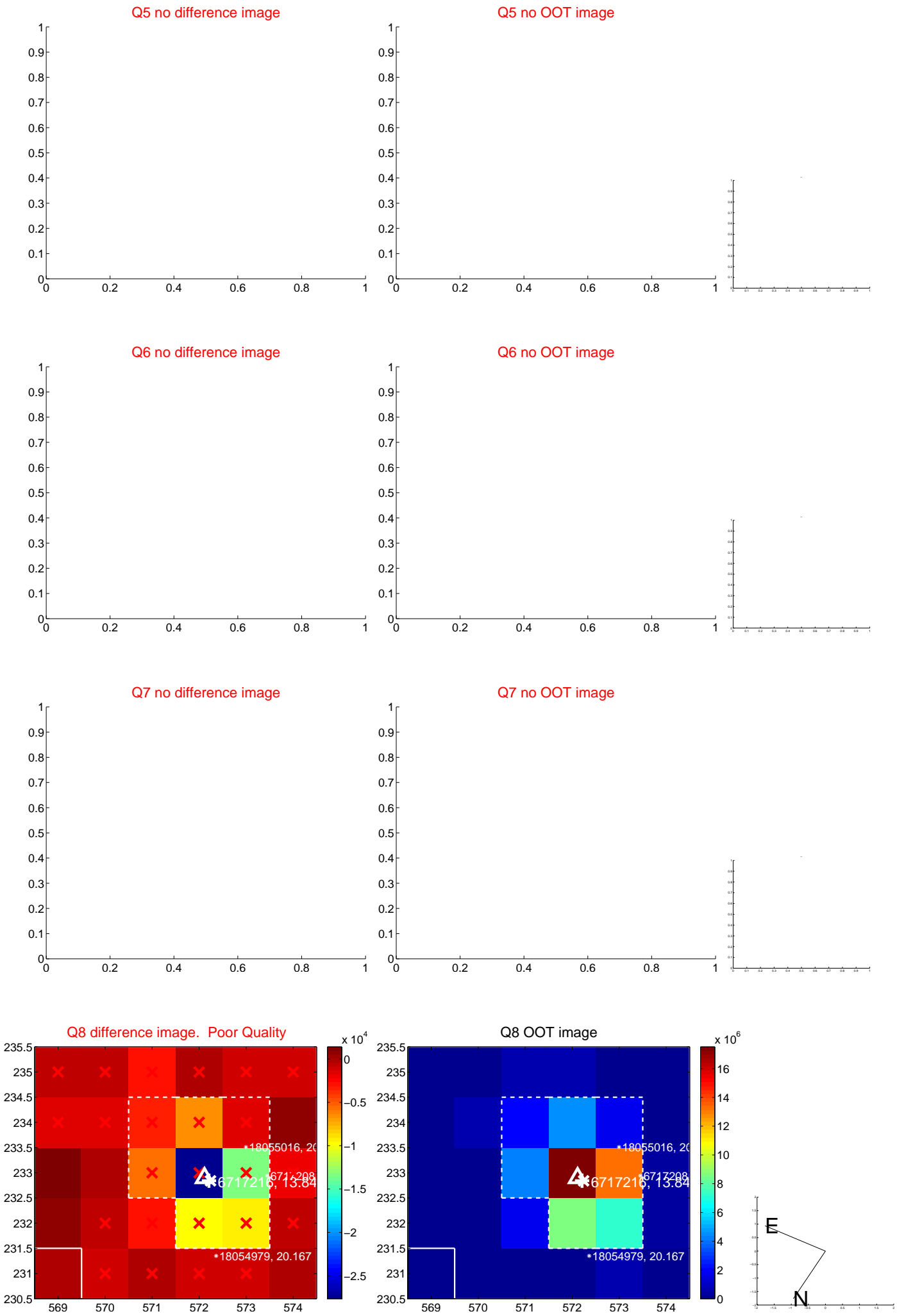


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

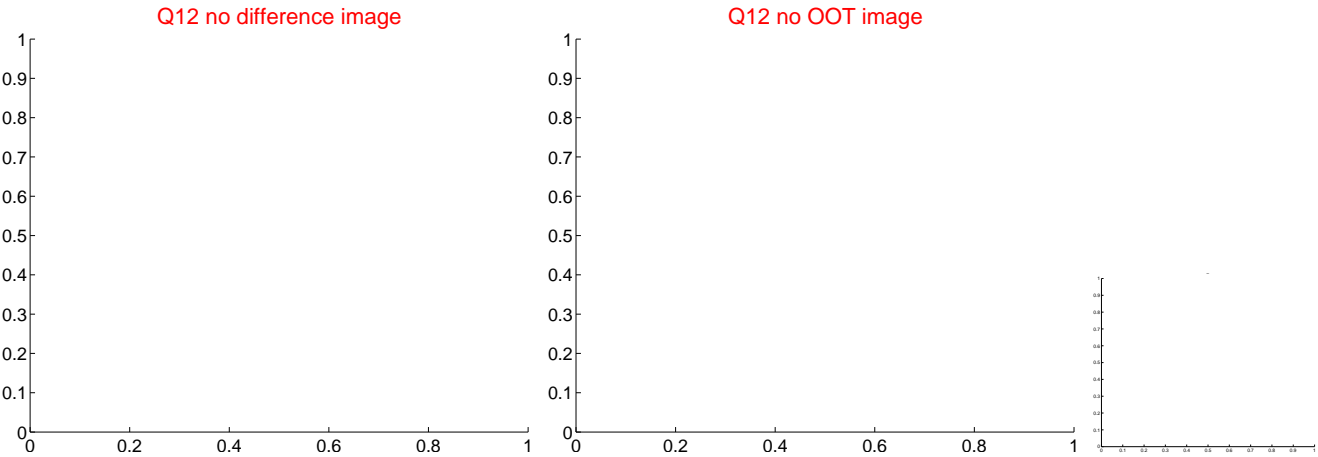
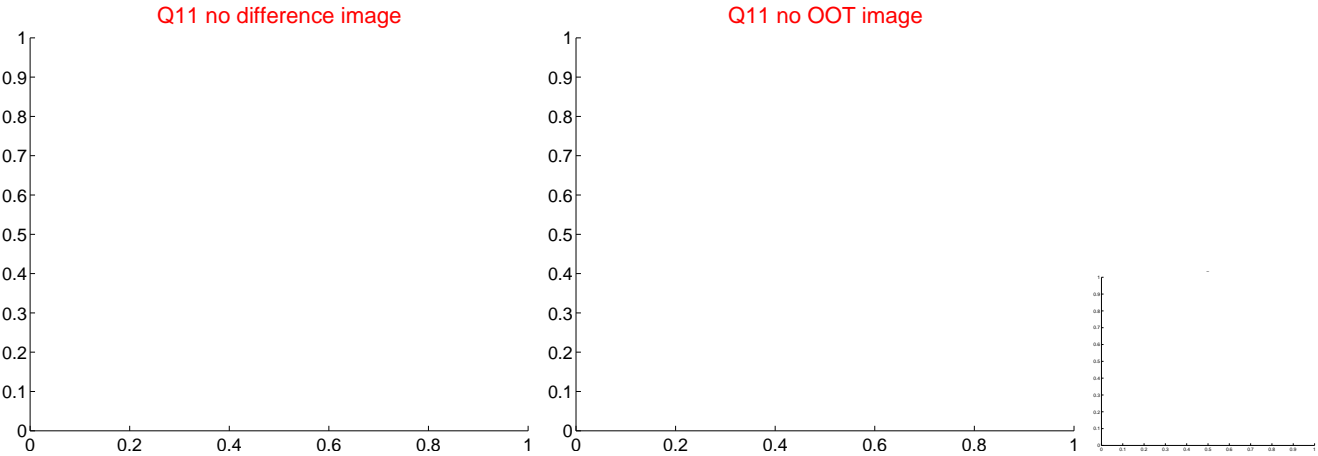
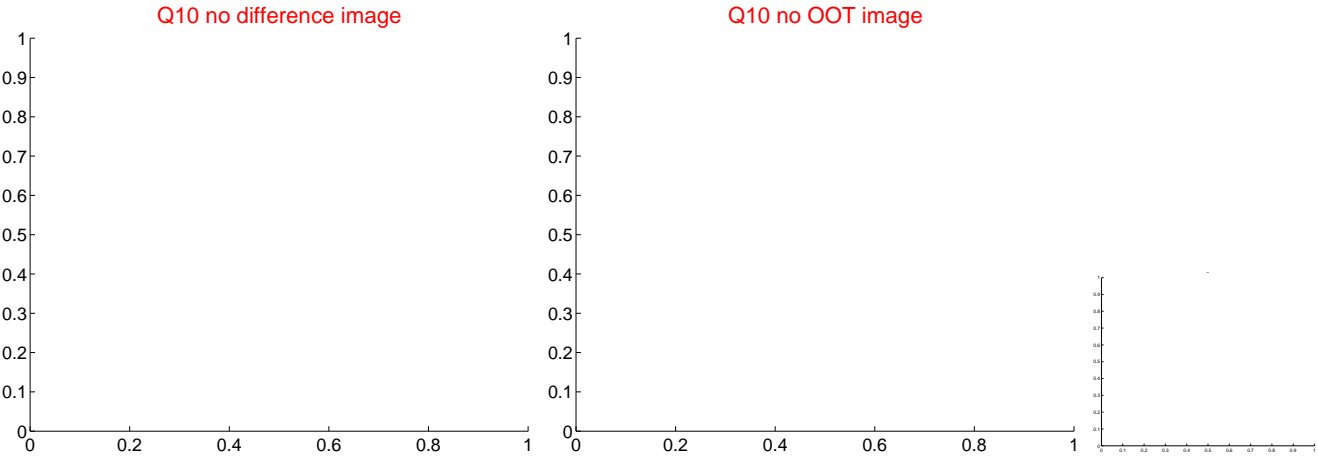
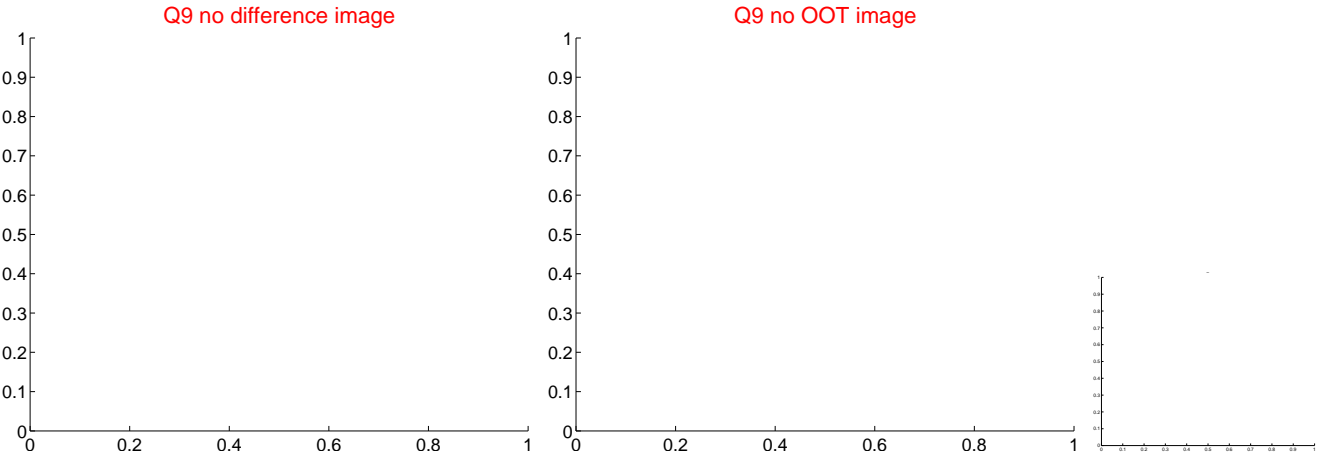
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



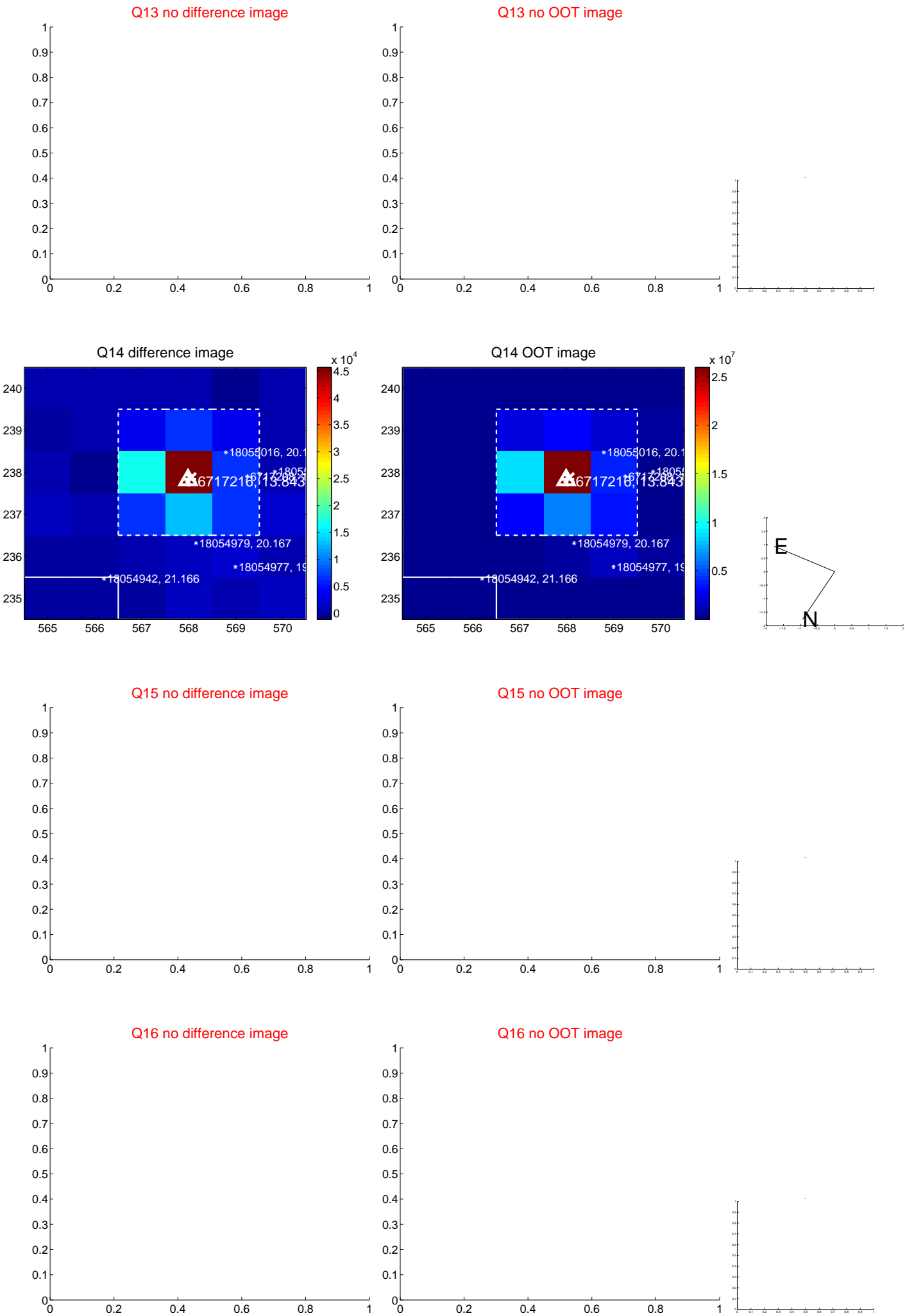
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



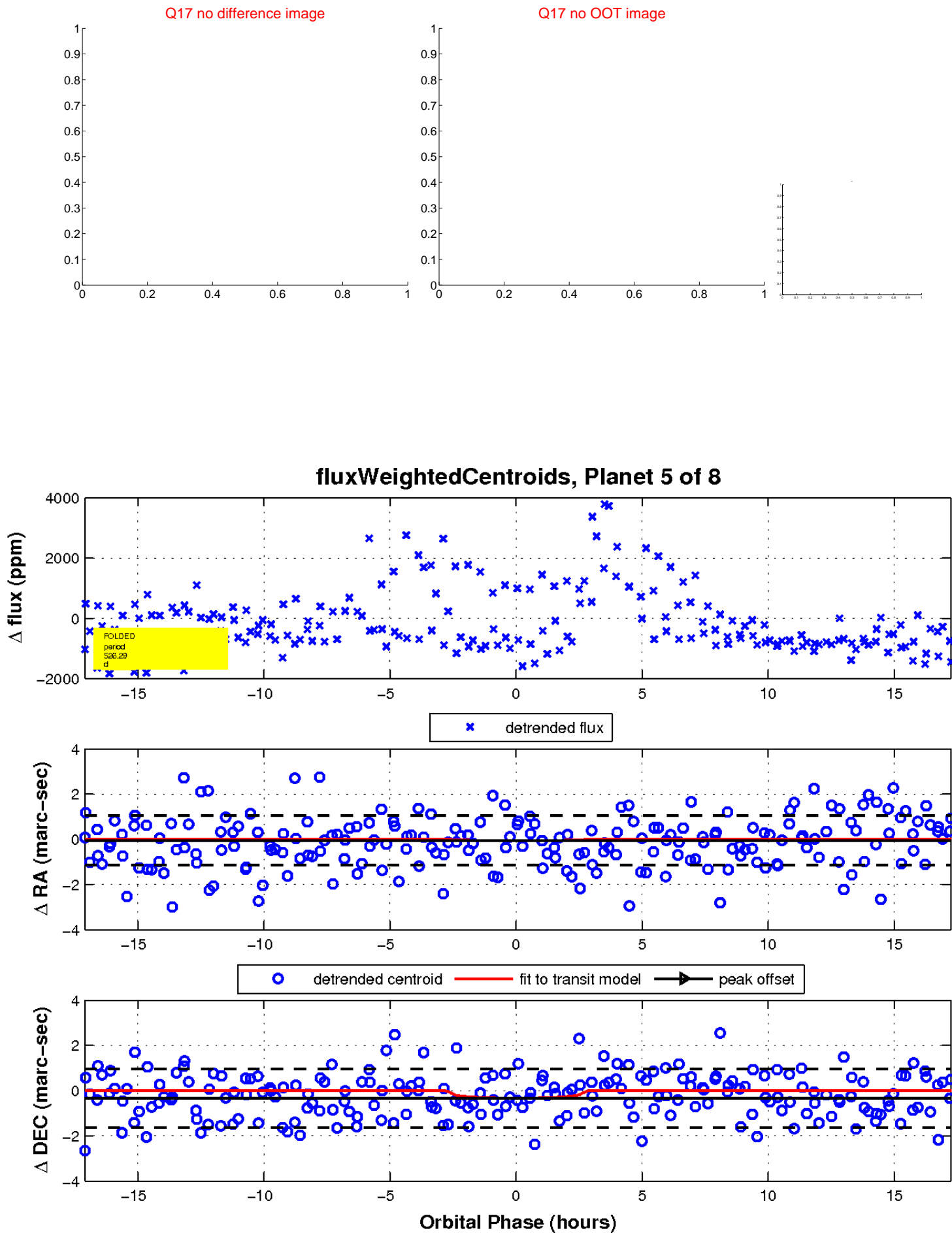
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

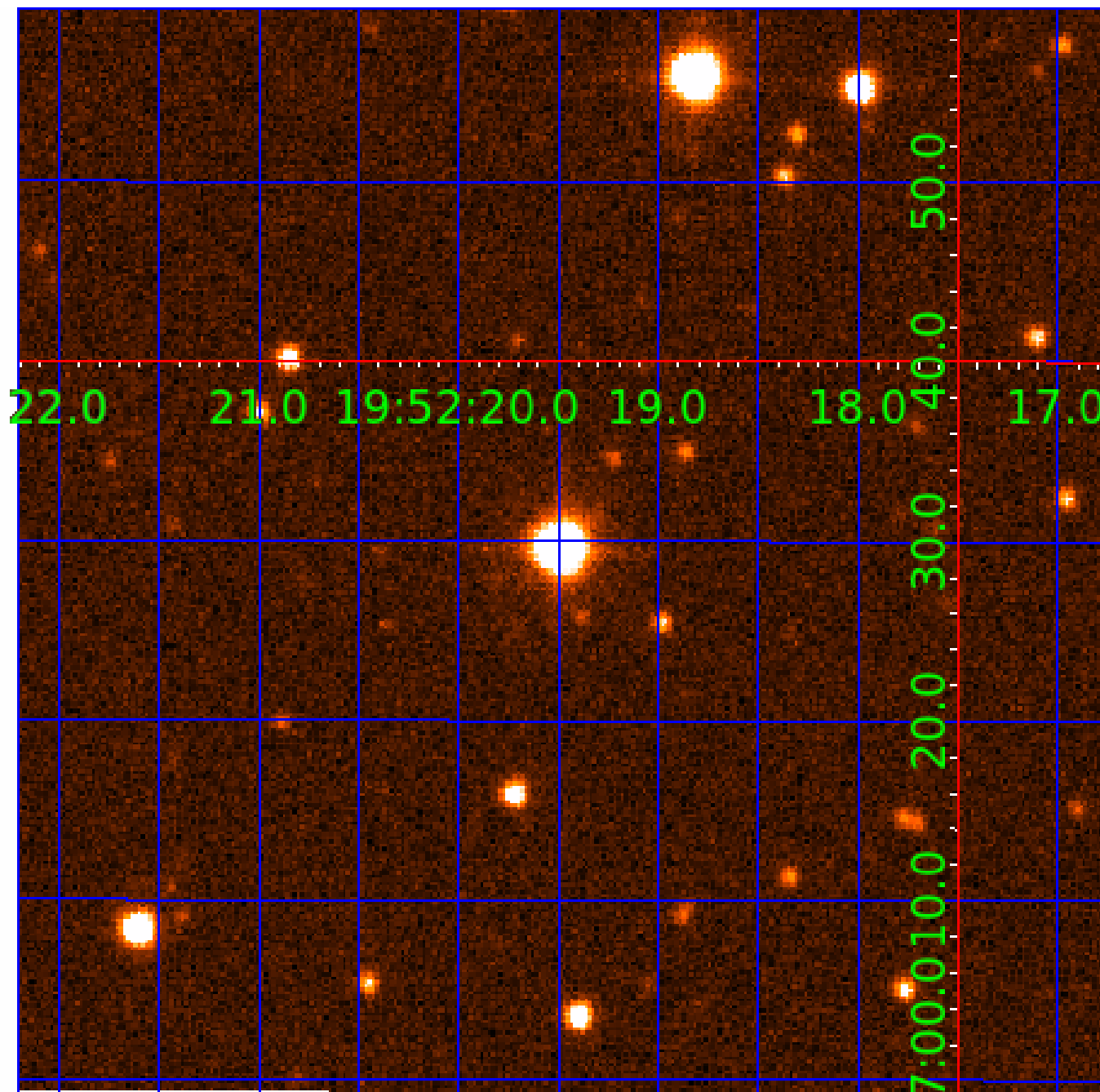


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006717216

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})
006717216-01	OBS	No	488.661435	287.654049	1976.1	8.133	16.2	8.9	0.64	4159	5.68	0.10
006717216-02	OBS	No	403.508663	510.187294	915.2	3.703	18.8	5.7	0.64	4159	2.06	0.13
006717216-03	OBS	No	485.381537	424.554069	1369.5	9.692	15.5	6.1	0.64	4159	2.27	0.10
006717216-04	OBS	No	474.350127	418.806718	1417.8	6.796	15.3	8.3	0.64	4159	2.50	0.10
006717216-05	OBS	No	526.290680	228.033915	1317.4	5.787	14.4	7.7	0.64	4159	2.56	0.09
006717216-06	OBS	No	298.443968	198.167962	957.6	5.692	14.3	5.8	0.64	4159	2.53	0.20
006717216-08	OBS	No	333.611378	448.424961	1968.7	8.865	13.0	12.4	0.64	4159	2.94	0.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006717216-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006717216-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006717216-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
006717216-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—CENT_NOFITS—HALO_GHOST

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

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

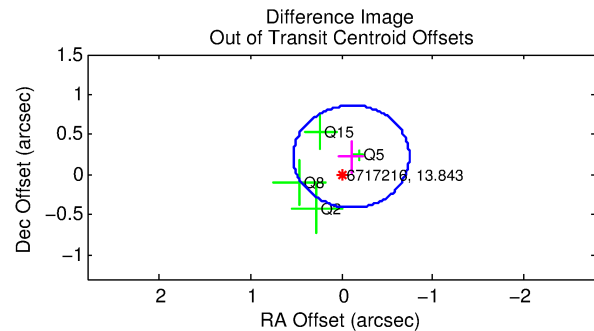
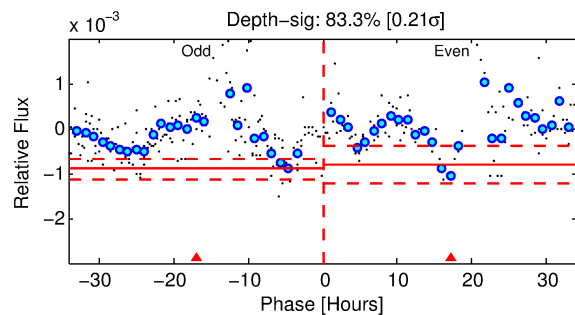
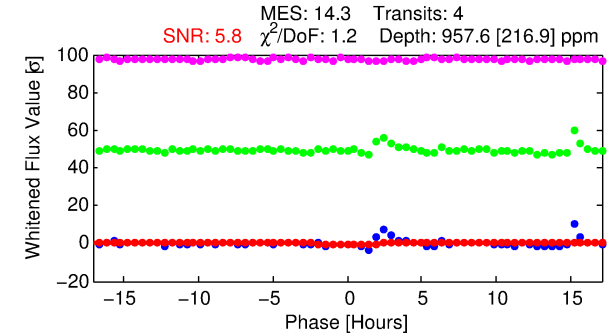
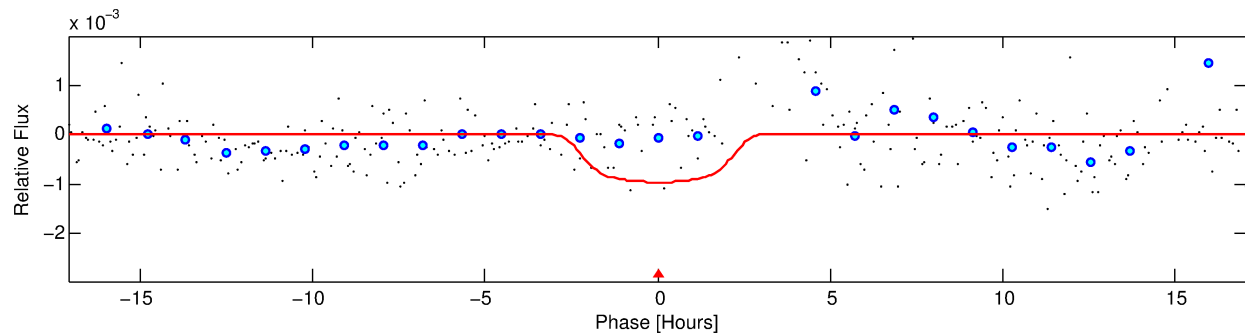
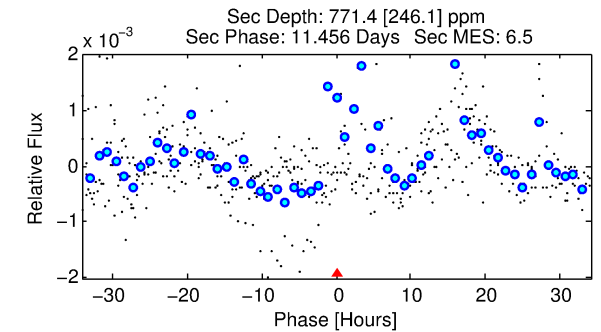
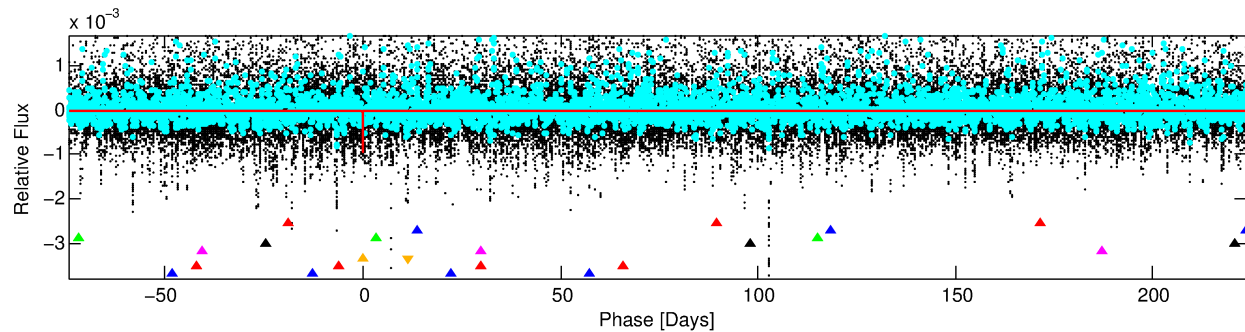
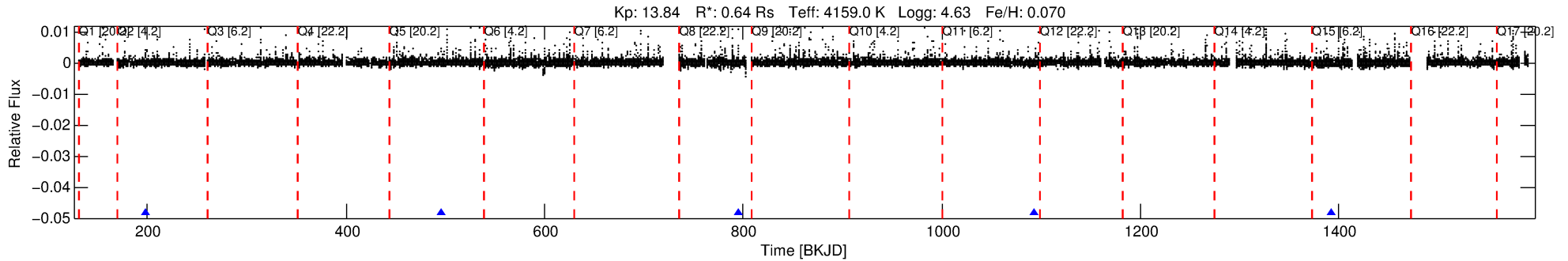
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006717216-06

No Significant Match Found

DV One-Page Summary

KIC: 6717216 Candidate: 6 of 8 Period: 298.444 d



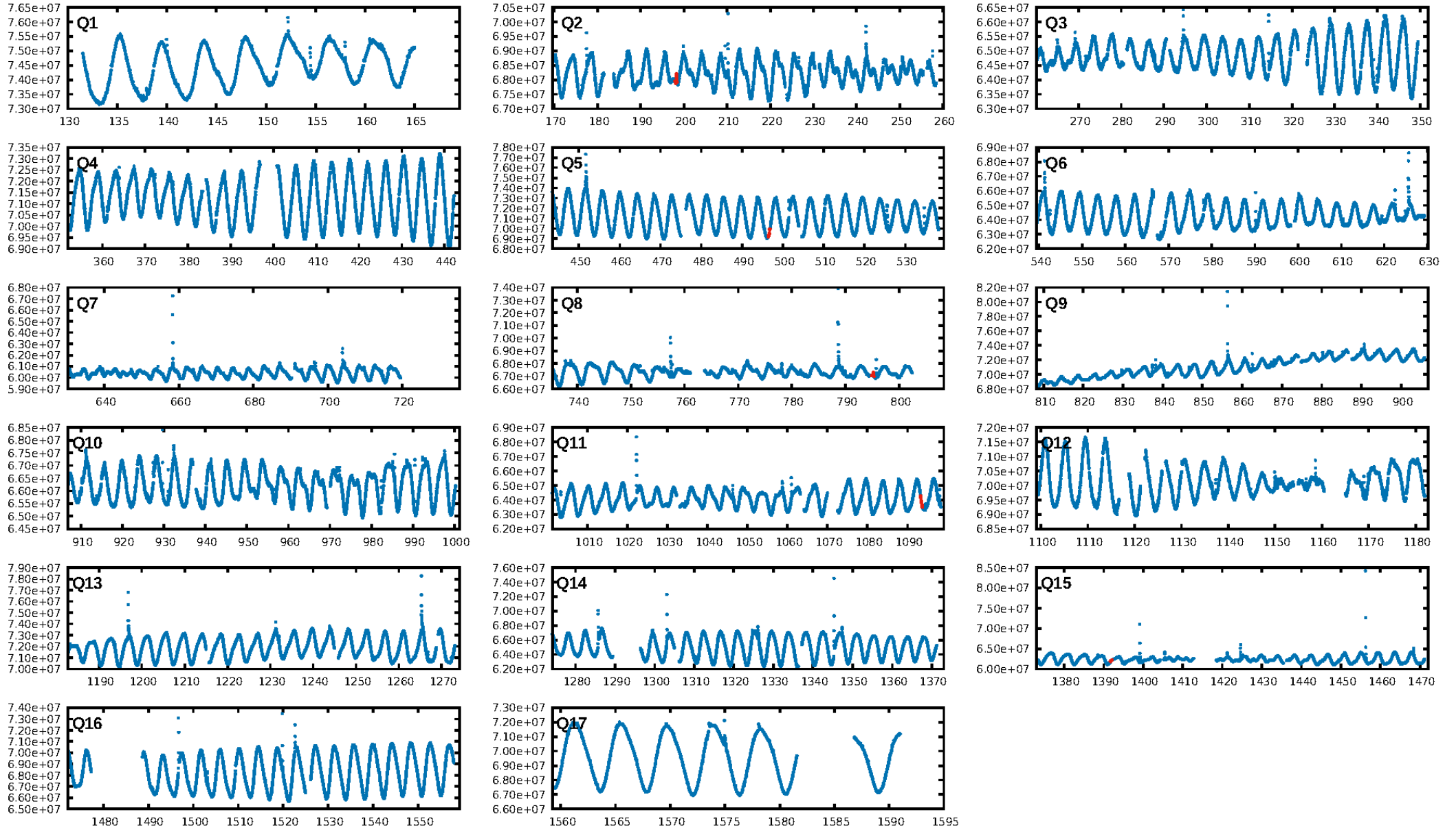
DV Fit Results:

Period = 298.44397 [0.00514] d
Epoch = 198.1680 [0.0113] BKJD
Rp/R* = 0.0362 [0.0057]
a/R* = 184.32 [59.67]
b = 0.93 [0.05]
Seff = 0.19 [0.03]
Teq = 169 [7] K
Rp = 2.53 [0.46] Re
a = 0.7506 [0.0560] AU
Ag = 37354.71 [17134.33] [2.18σ]
Teffp = 3642 [425] K [8.17σ]

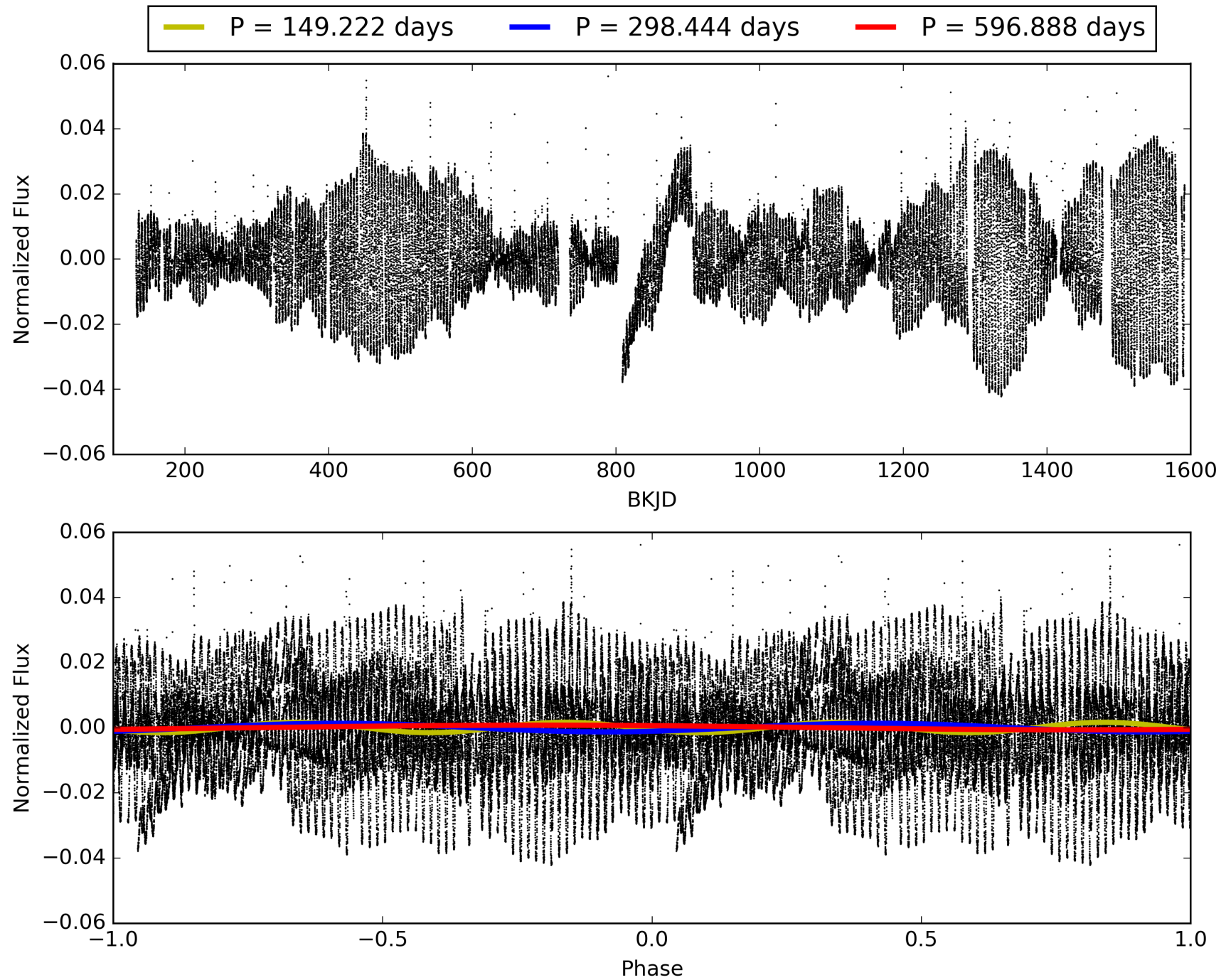
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [80.11σ]
ModelChiSquare2-sig: 51.2%
ModelChiSquareGof-sig: 92.7%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.03299
Centroid-sig: 64.6%
Centroid-so: 0.551 arcsec [0.87σ]
OotOffset-rm: 0.249 arcsec [1.17σ]
KicOffset-rm: 0.217 arcsec [1.24σ]
OotOffset-st: 1/1/1/1 [4]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 006717216-06, PDC Light Curves

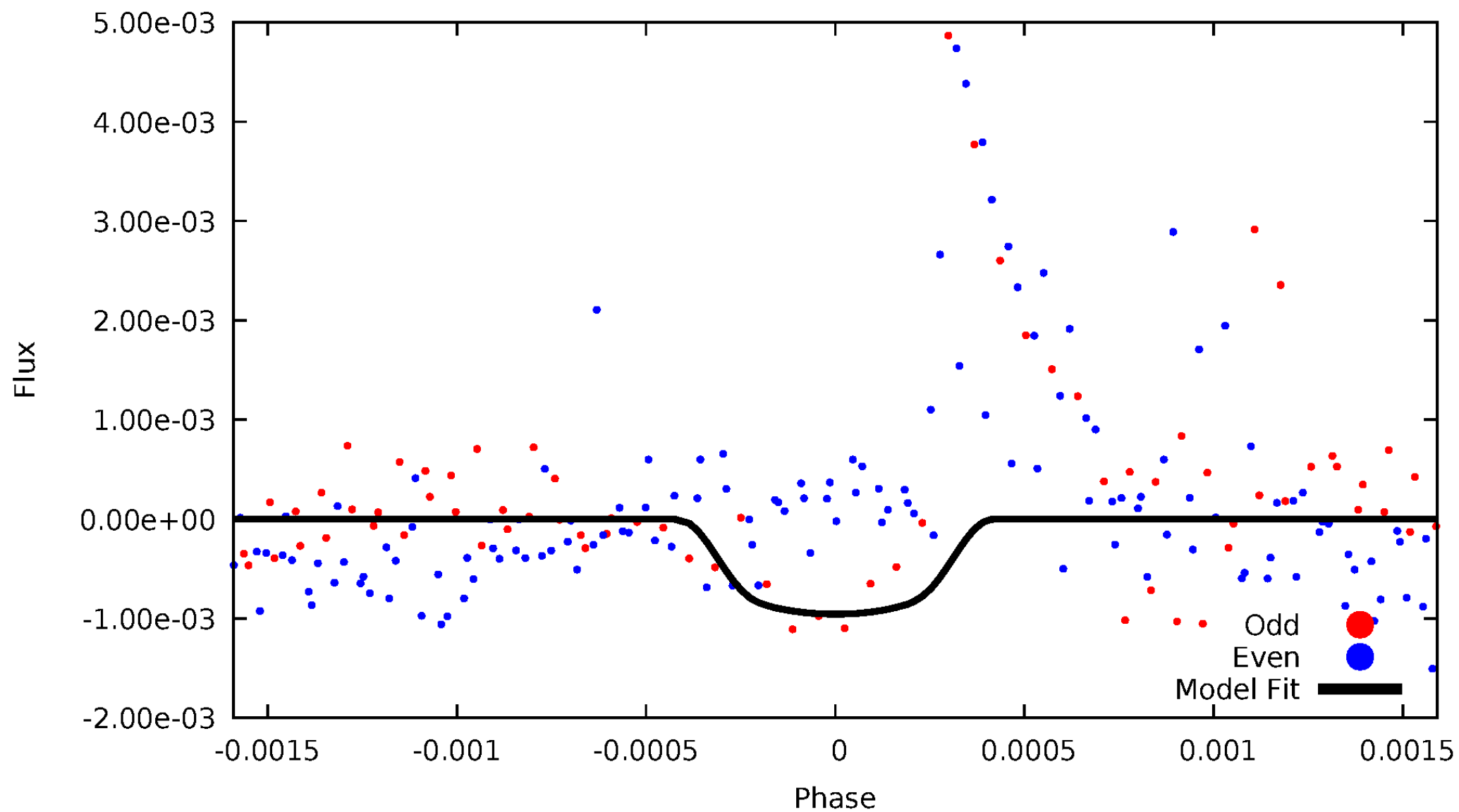


TCE 006717216-06



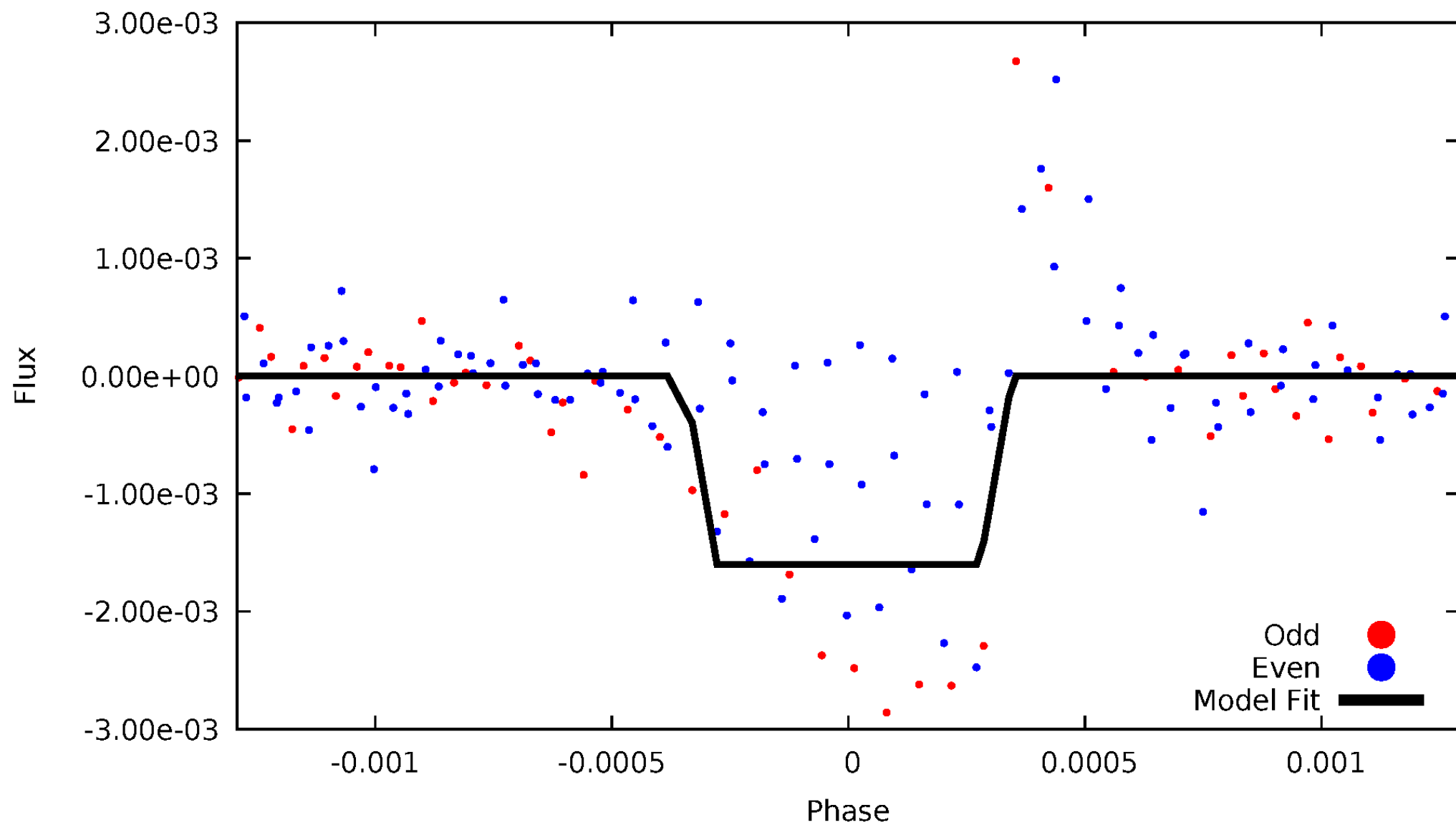
DV Odd/Even

TCE 006717216-06



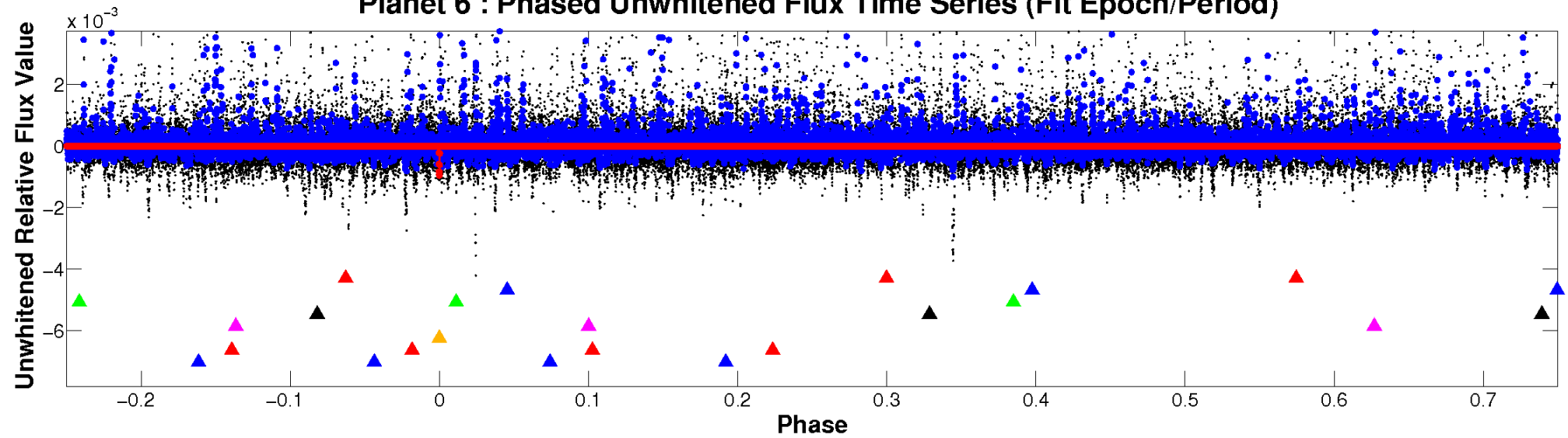
ALT Odd/Even

TCE 006717216-06

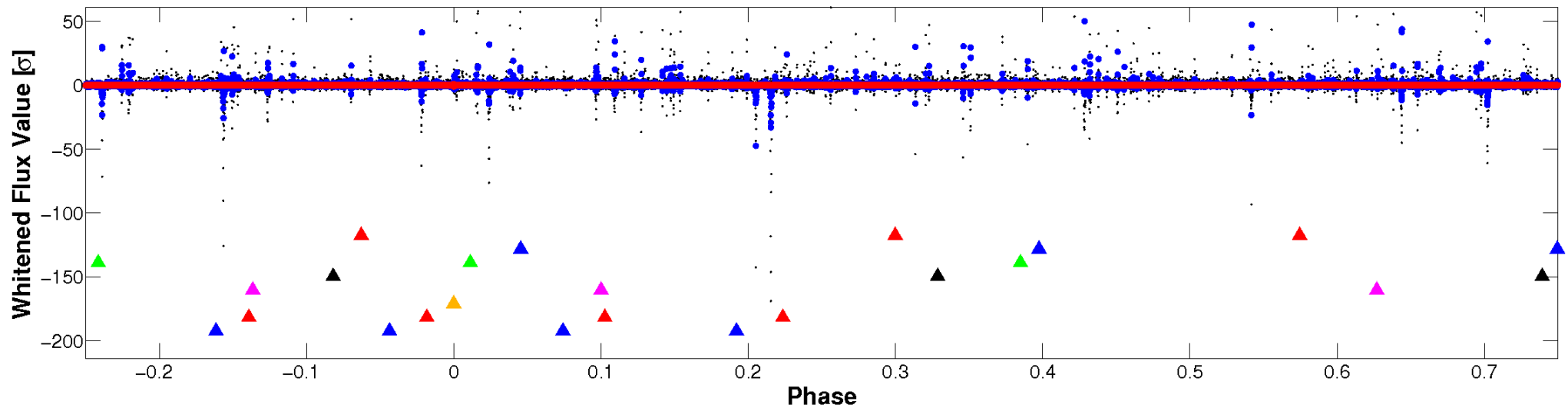


Non-Whitened Vs. Whitened Light Curve

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

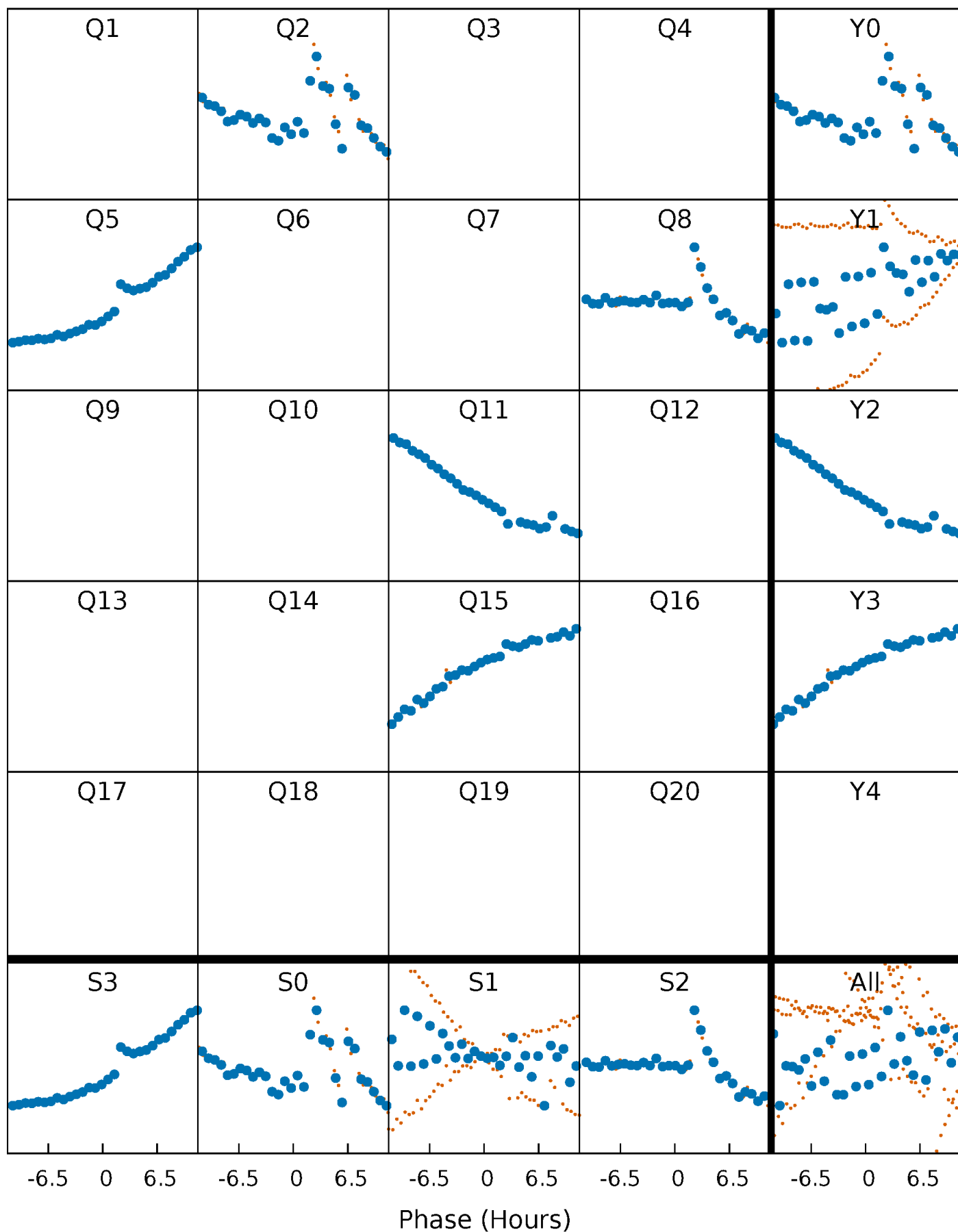


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



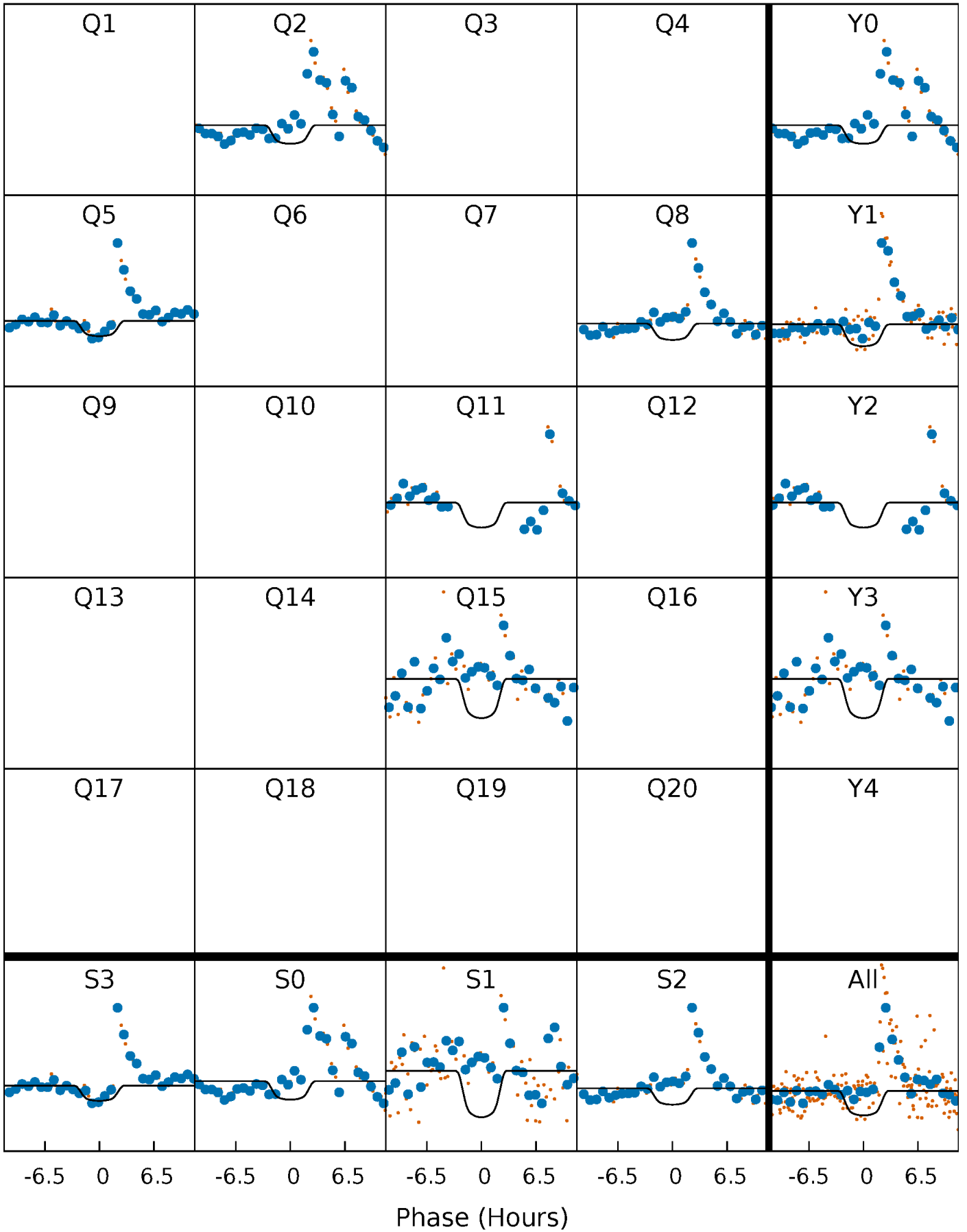
PDC Quarter-Phased Transit Curves

TCE 006717216-06 P=298.443968 Days $T_0=198.167962$ (BKJD)



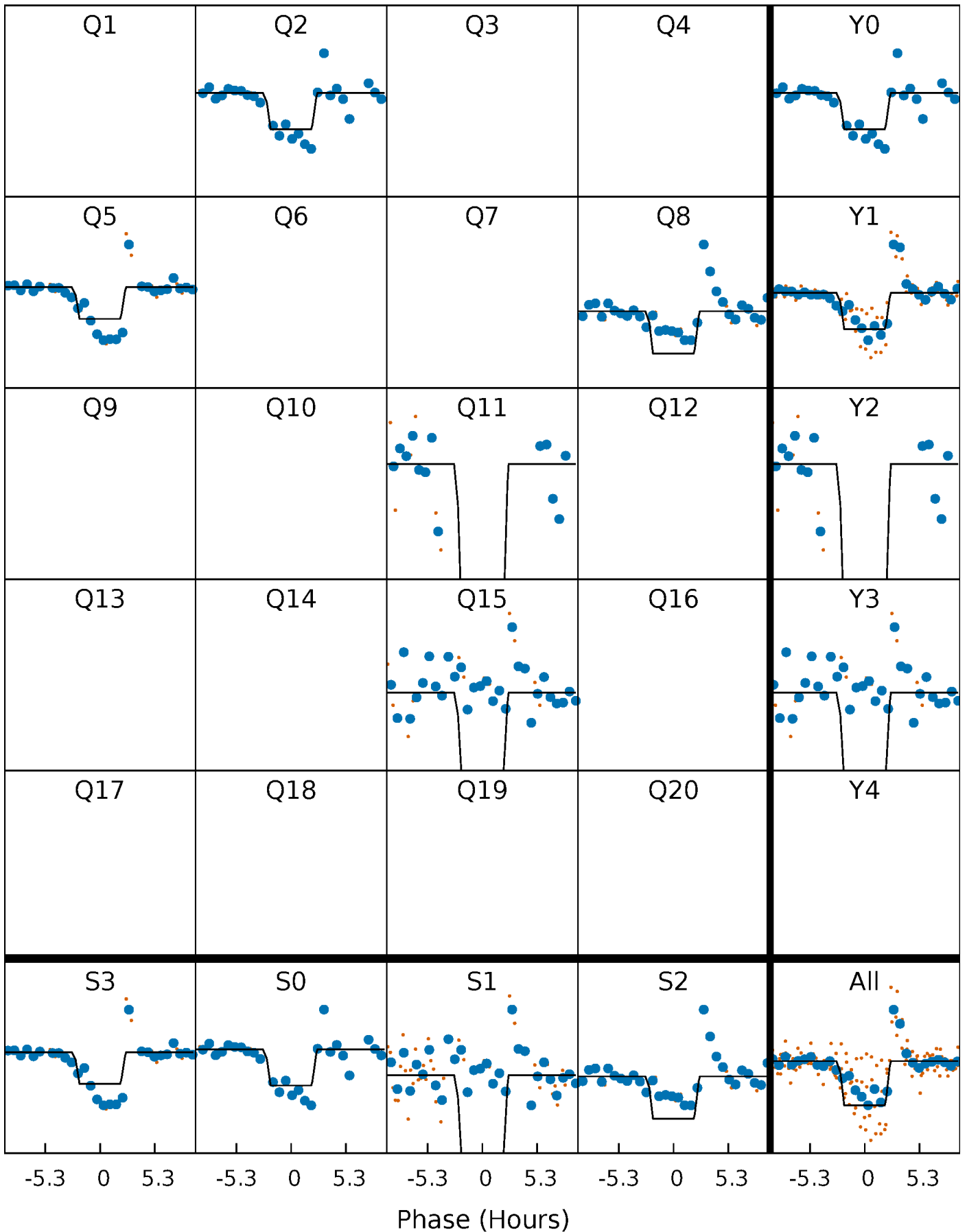
DV Quarter-Phased Transit Curves

TCE 006717216-06 $P=298.443968$ Days $T_0=198.167962$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

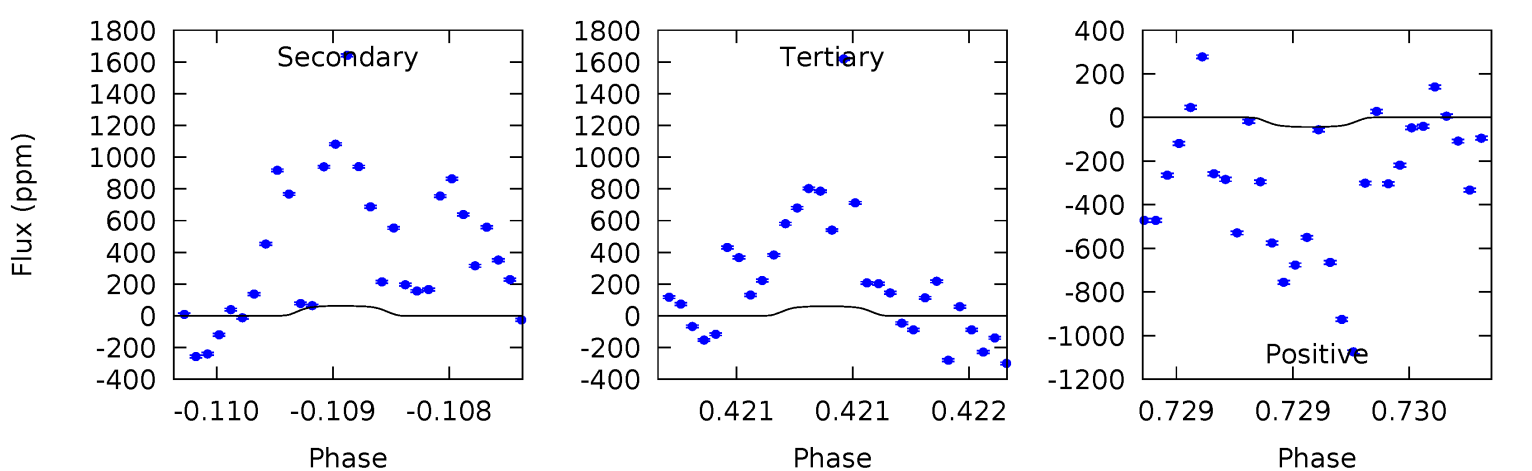
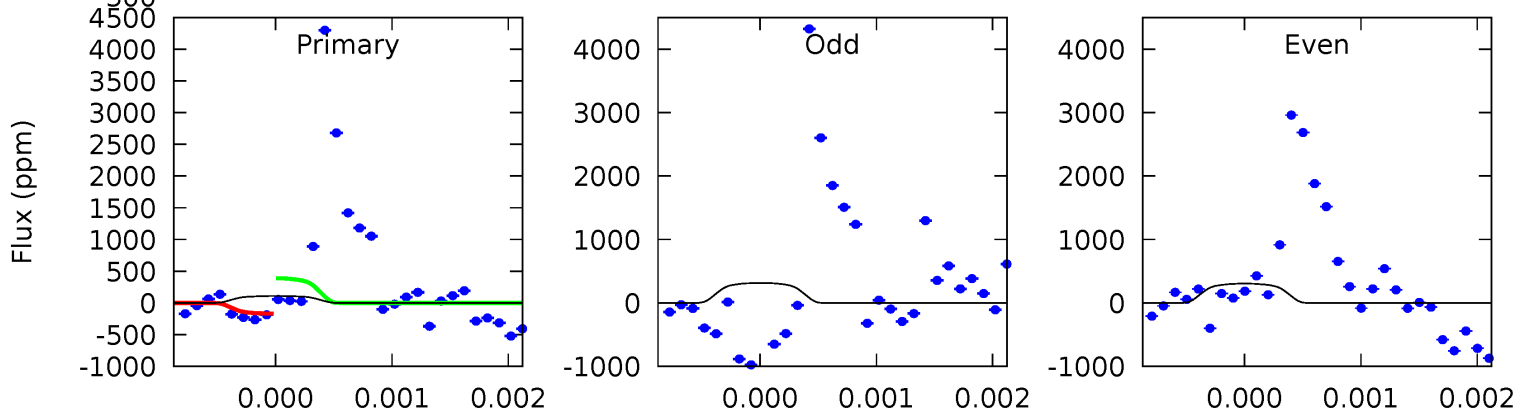
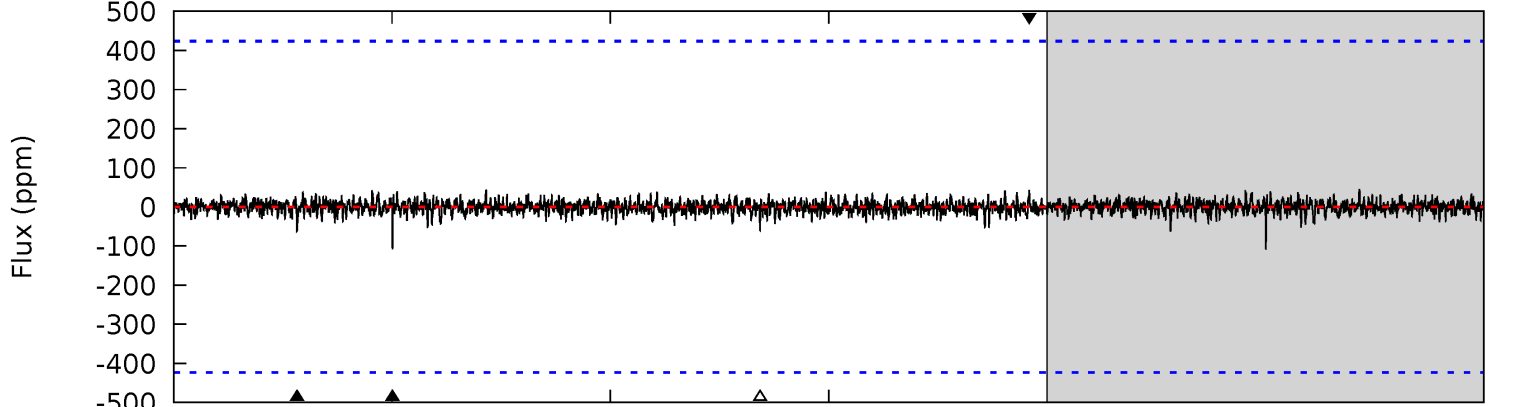
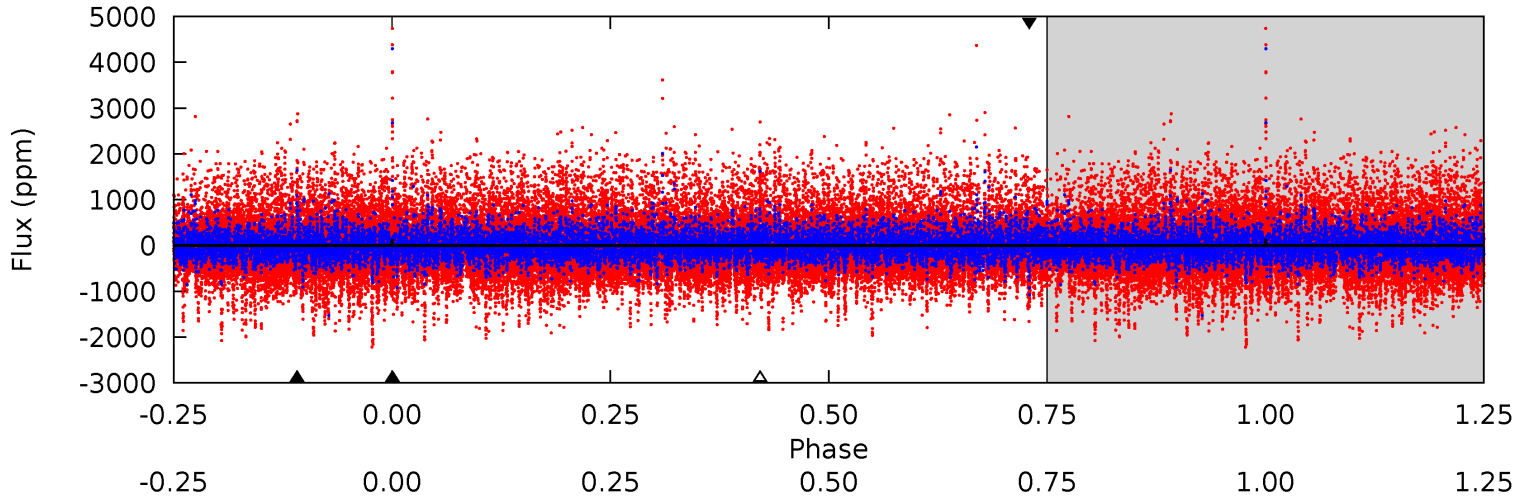
TCE 006717216-06 P=298.445766 Days $T_0=198.149319$ (BKJD)



DV Model-Shift Uniqueness Test

006717216-06, P = 298.443968 Days, E = 198.167962 Days

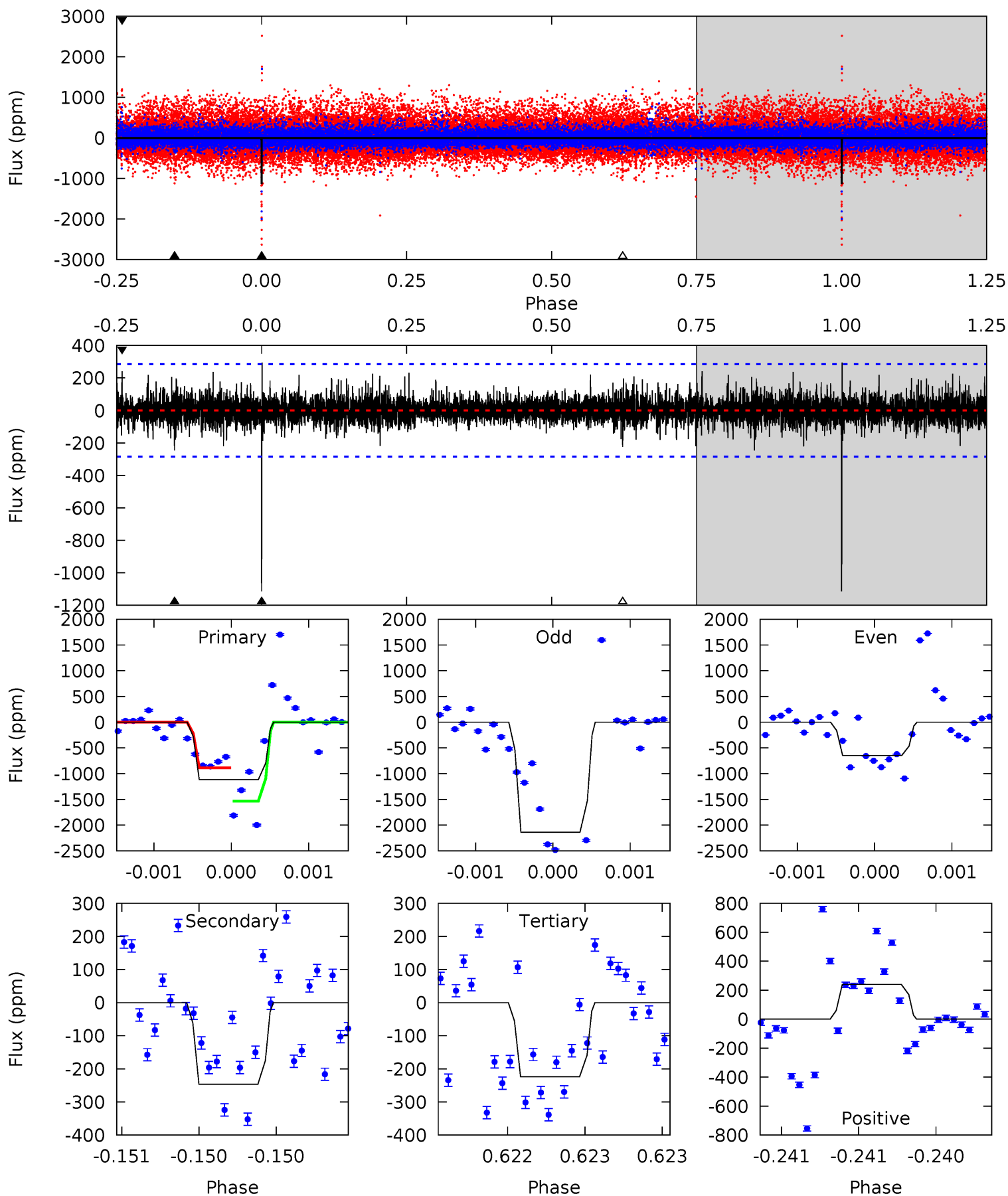
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.41	0.81	0.78	0.57	5.49	3.35	0.17	0.63	0.84	0.03	0.25	0.05	0.90	0.29	1.43



Alt Model-Shift Uniqueness Test

006717216-06, P = 298.445766 Days, E = 198.149319 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.6	4.77	4.34	4.65	5.52	3.40	0.98	17.2	16.9	0.43	0.12	14.8	0.90	0.21	6.14



Stellar Parameters For KIC 006717216

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4159^{+126}_{-139}	$4.627^{+0.053}_{-0.018}$	$0.070^{+0.250}_{-0.300}$	$0.640^{+0.035}_{-0.060}$	$0.633^{+0.054}_{-0.054}$	$3.396^{+0.793}_{-0.292}$
	+3%/-3%	+1%/-0%	+357%/-429%	+5%/-9%	+9%/-9%	+23%/-9%
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 006717216-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-63 ± 77	$2.48^{+0.44}_{-0.41}$	234^{+8}_{-8}	2620^{+354}_{-4785}	3124^{+4496}_{-3729}
Alt.	-246 ± 52	$2.78^{+0.39}_{-0.43}$	235^{+8}_{-8}	3067^{+173}_{-171}	9955^{+4516}_{-2916}

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 $A_{obs} \gg 1.0$

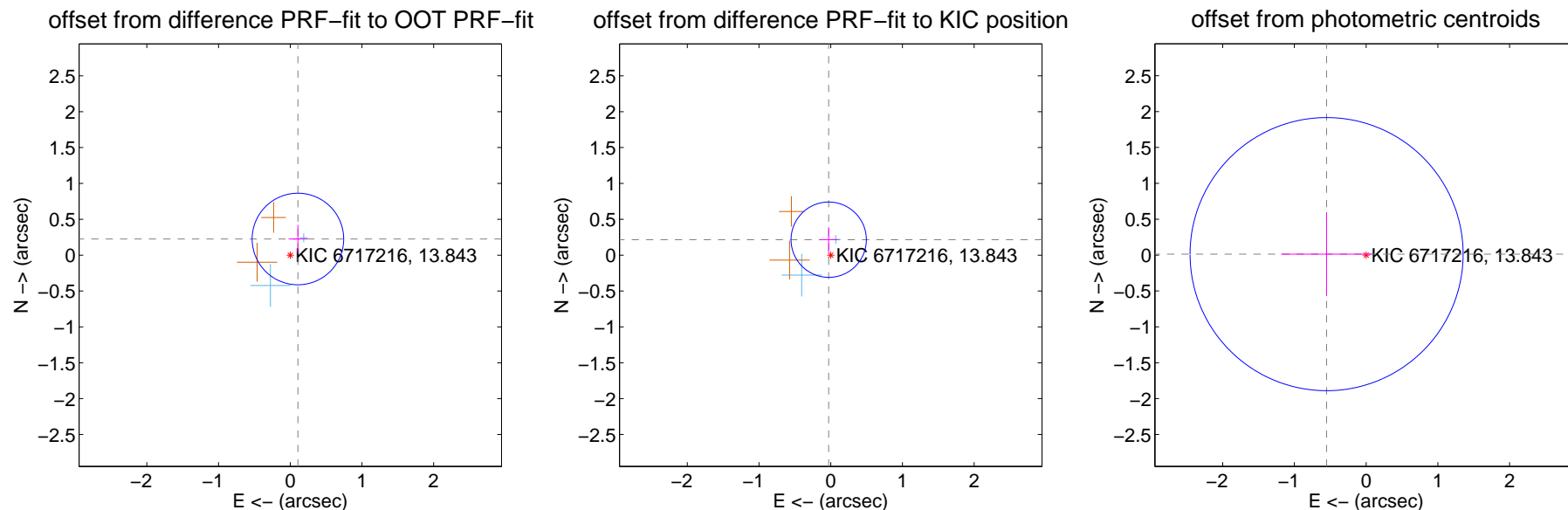
DV Centroid Data

Supplemental centroid analysis for 006717216-06. Kepler magnitude: 13.84. Transit SNR 5.80

There are 2 quarters with good PRF difference image offsets

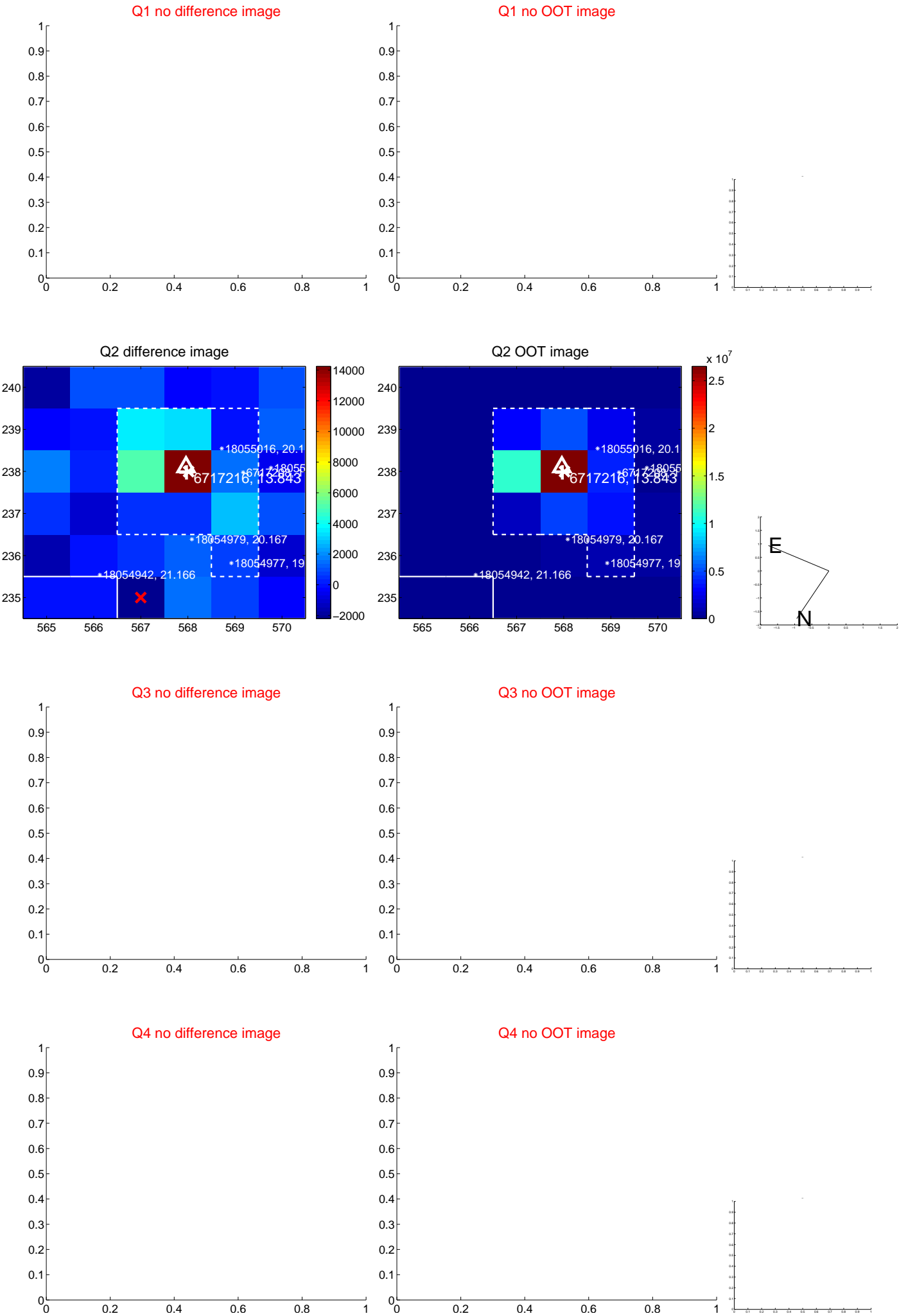
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.249 ± 0.213	1.17	-0.107 ± 0.130	0.225 ± 0.198
PRF-fit source offset from KIC position	0.217 ± 0.175	1.24	0.028 ± 0.128	0.215 ± 0.176
photometric centroid source offset	0.55 ± 0.63	0.87	0.55 ± 0.63	0.01 ± 0.58

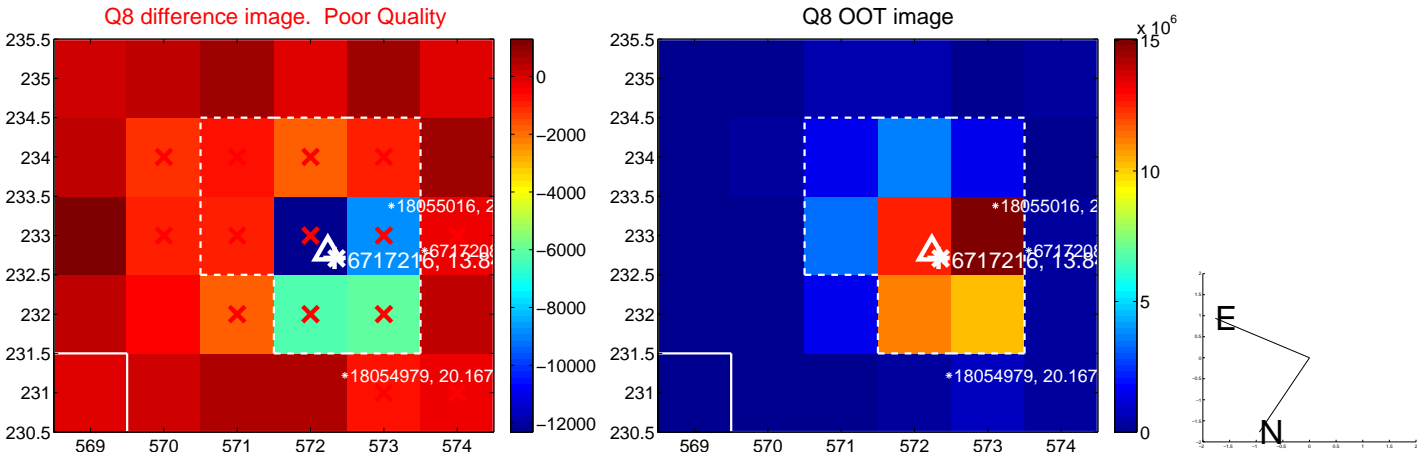
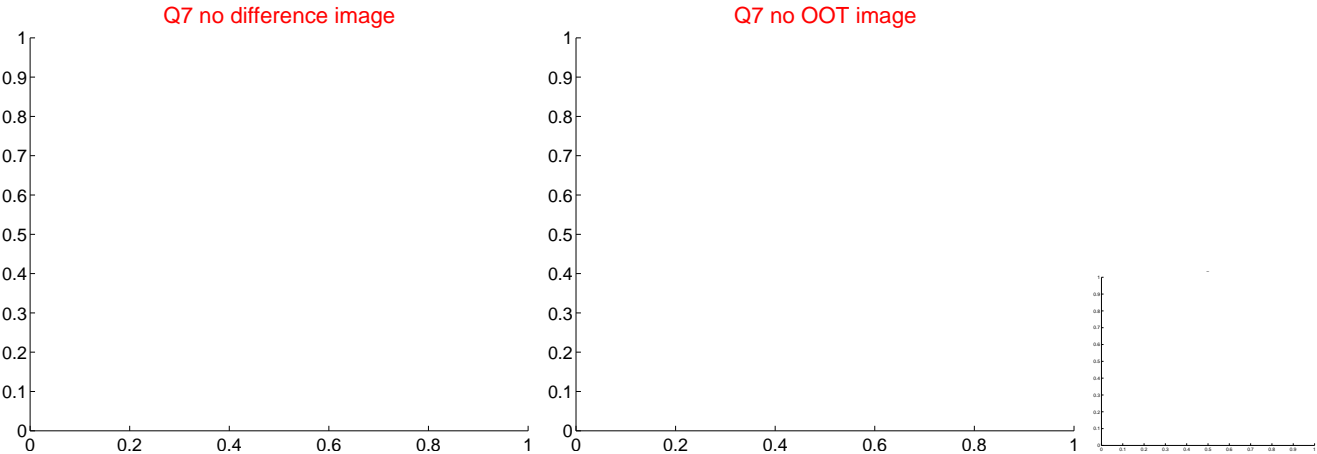
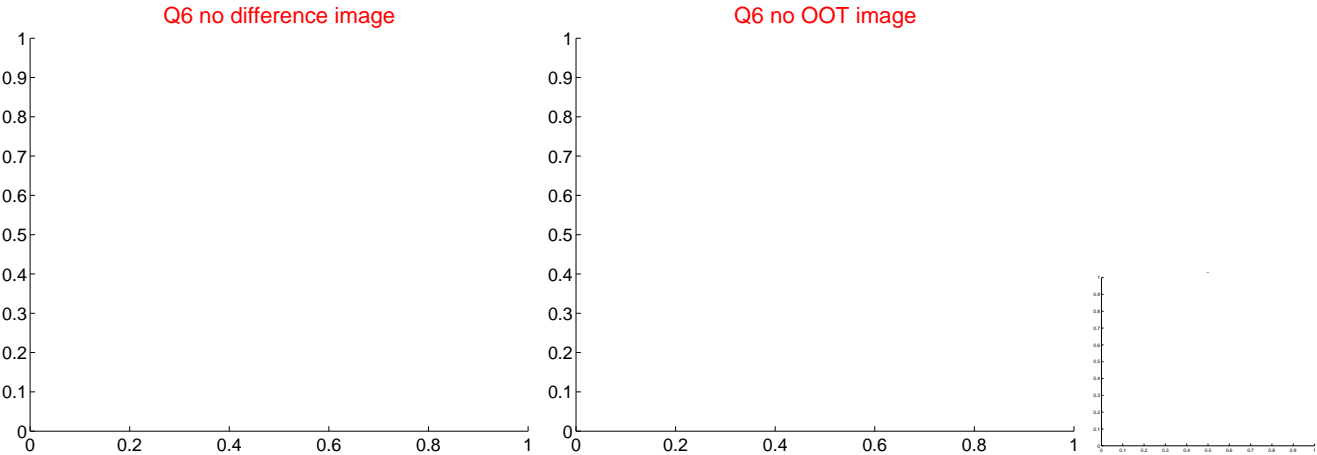
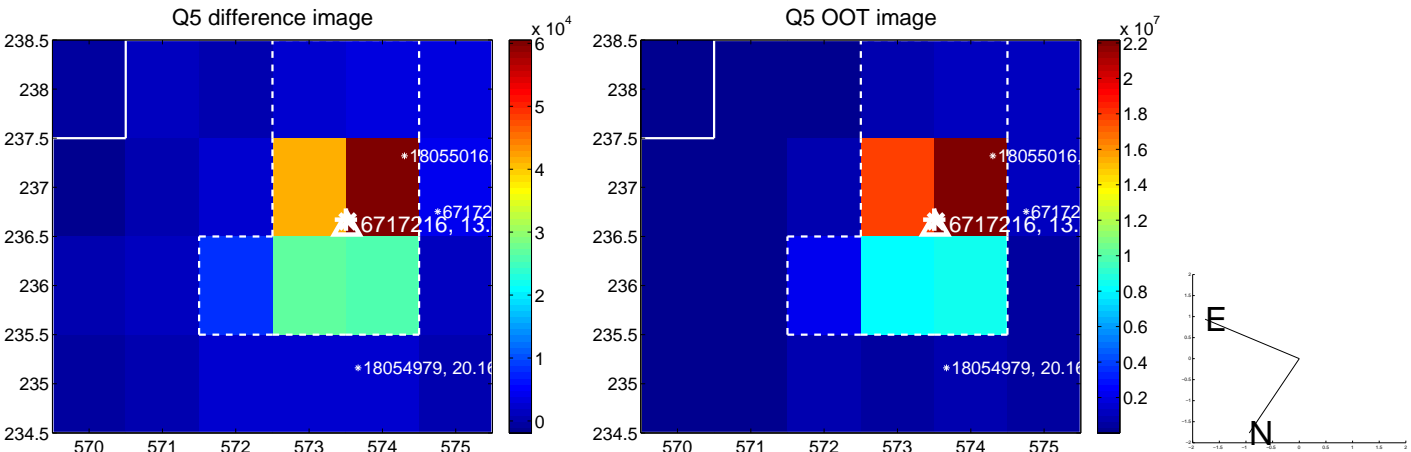


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

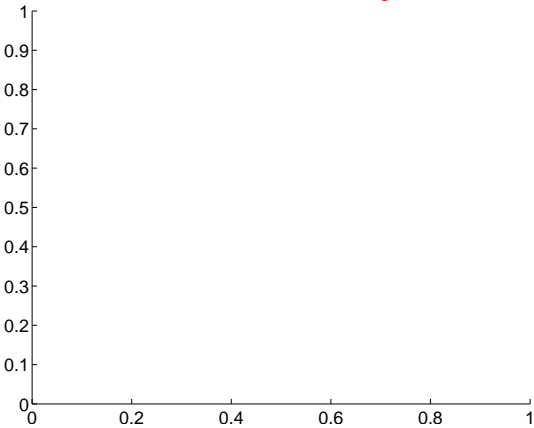


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

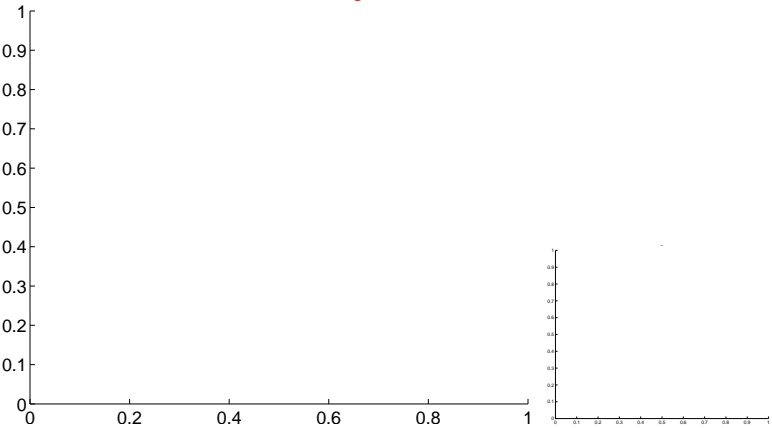


white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

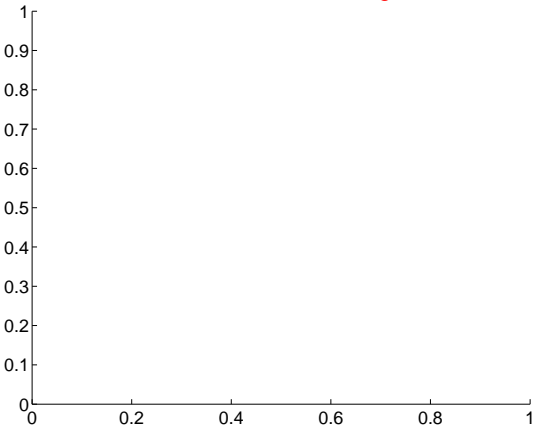
Q13 no difference image



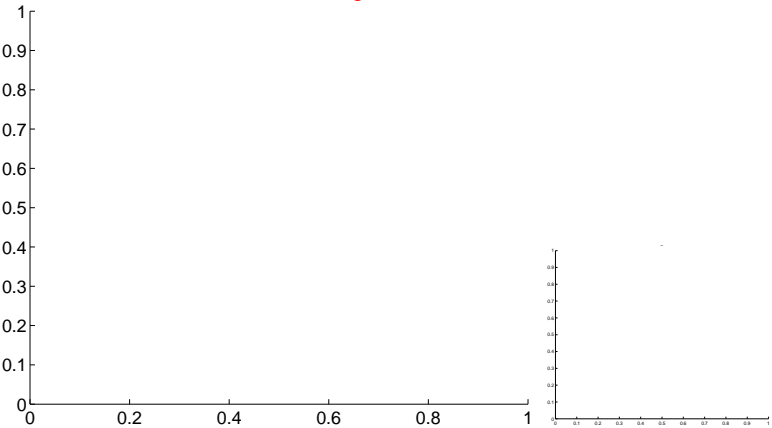
Q13 no OOT image



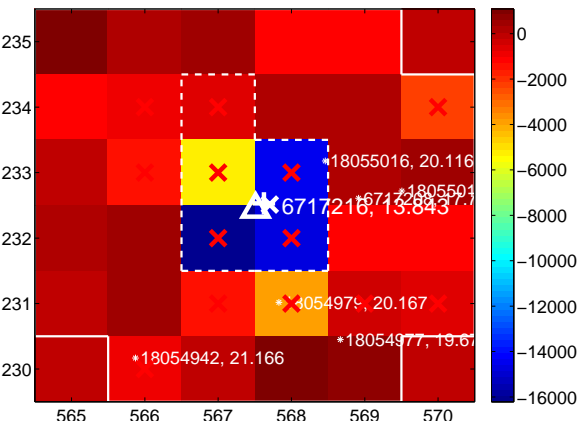
Q14 no difference image



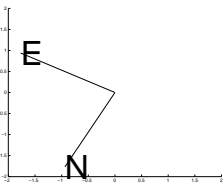
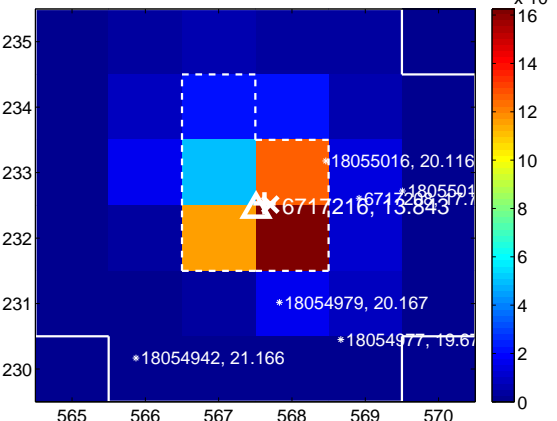
Q14 no OOT image



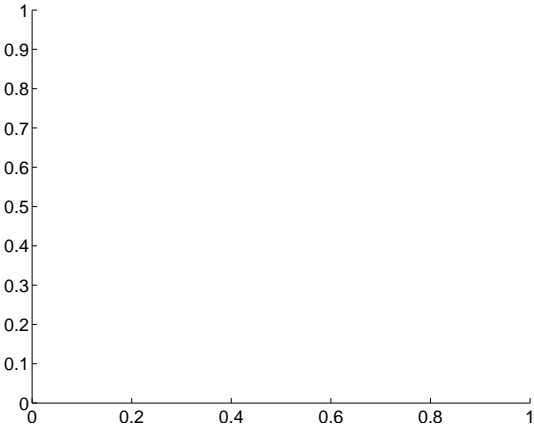
Q15 difference image. Poor Quality



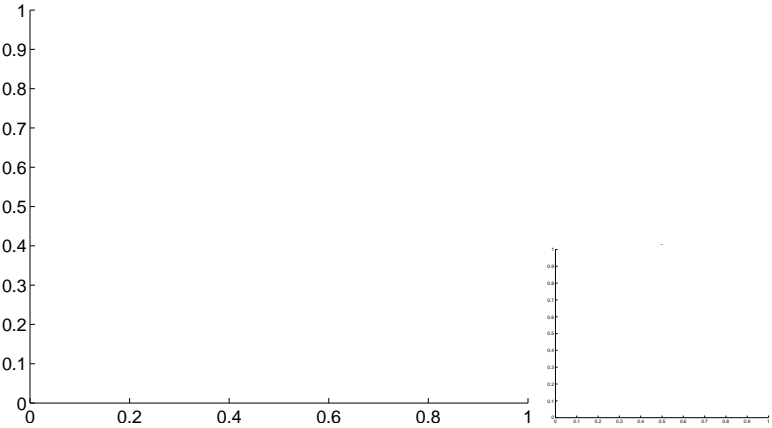
Q15 OOT image



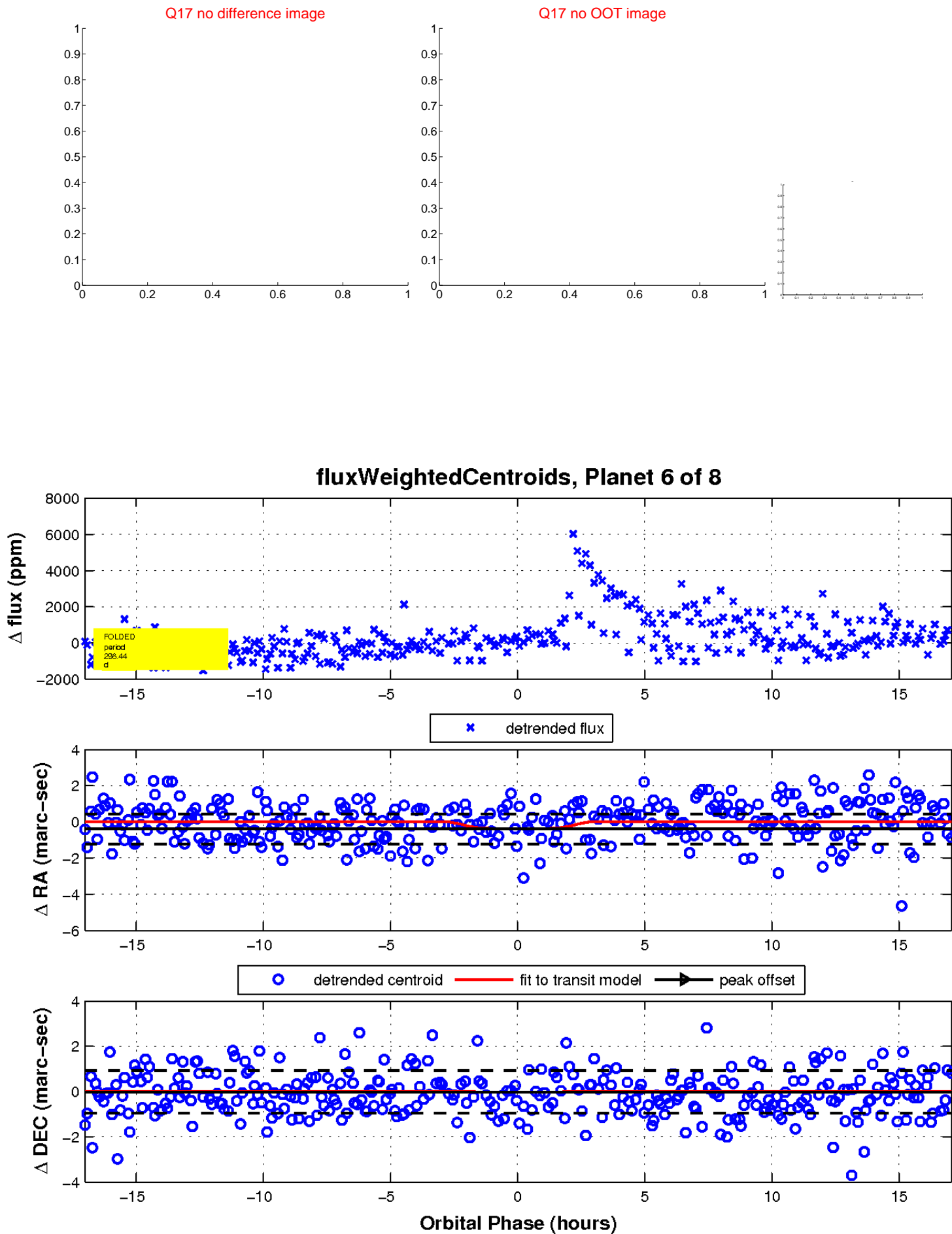
Q16 no difference image



Q16 no OOT image

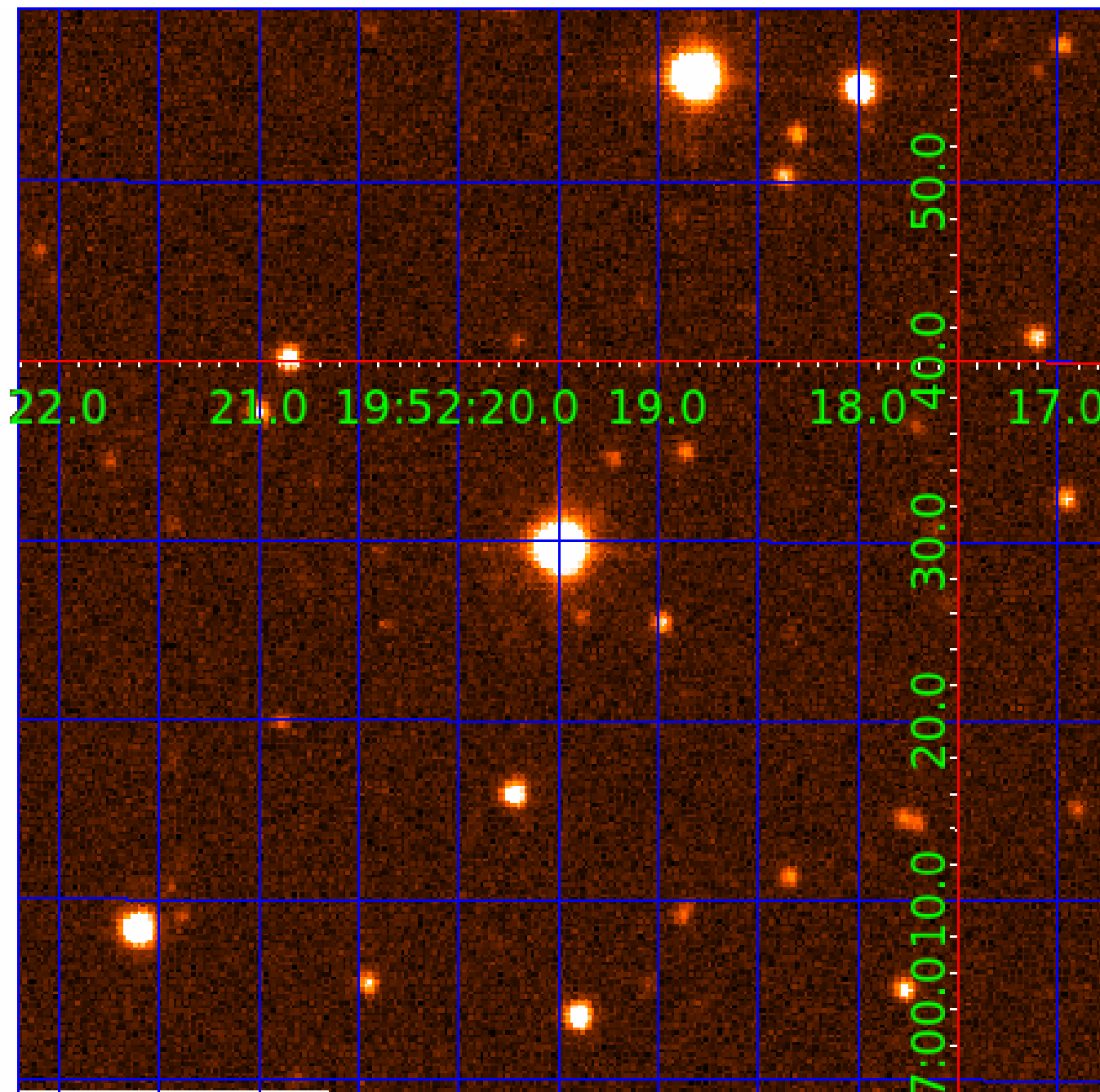


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006717216

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})
006717216-01	OBS	No	488.661435	287.654049	1976.1	8.133	16.2	8.9	0.64	4159	5.68	0.10
006717216-02	OBS	No	403.508663	510.187294	915.2	3.703	18.8	5.7	0.64	4159	2.06	0.13
006717216-03	OBS	No	485.381537	424.554069	1369.5	9.692	15.5	6.1	0.64	4159	2.27	0.10
006717216-04	OBS	No	474.350127	418.806718	1417.8	6.796	15.3	8.3	0.64	4159	2.50	0.10
006717216-05	OBS	No	526.290680	228.033915	1317.4	5.787	14.4	7.7	0.64	4159	2.56	0.09
006717216-06	OBS	No	298.443968	198.167962	957.6	5.692	14.3	5.8	0.64	4159	2.53	0.20
006717216-08	OBS	No	333.611378	448.424961	1968.7	8.865	13.0	12.4	0.64	4159	2.94	0.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006717216-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006717216-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
006717216-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
006717216-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
006717216-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—CENT_NOFITS—HALO_GHOST

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

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

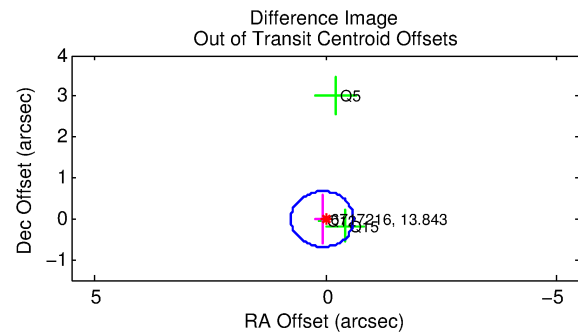
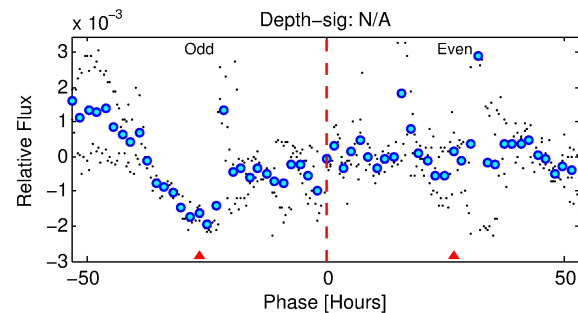
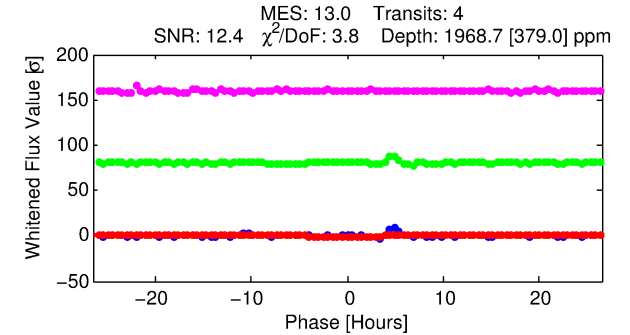
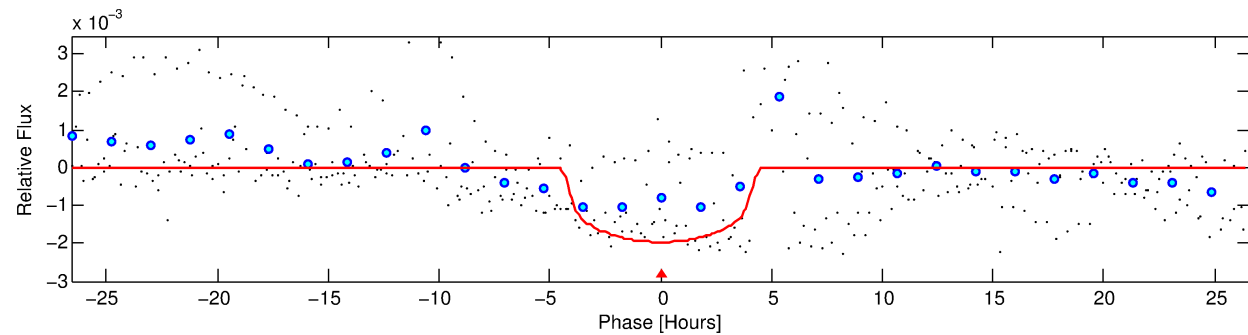
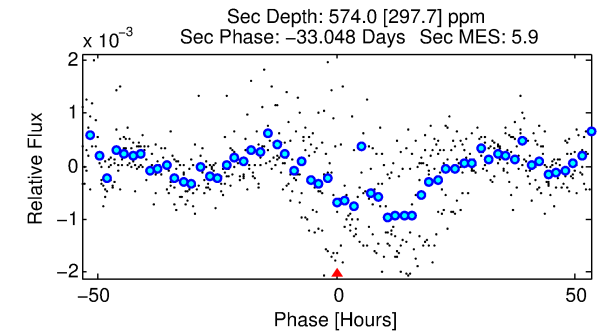
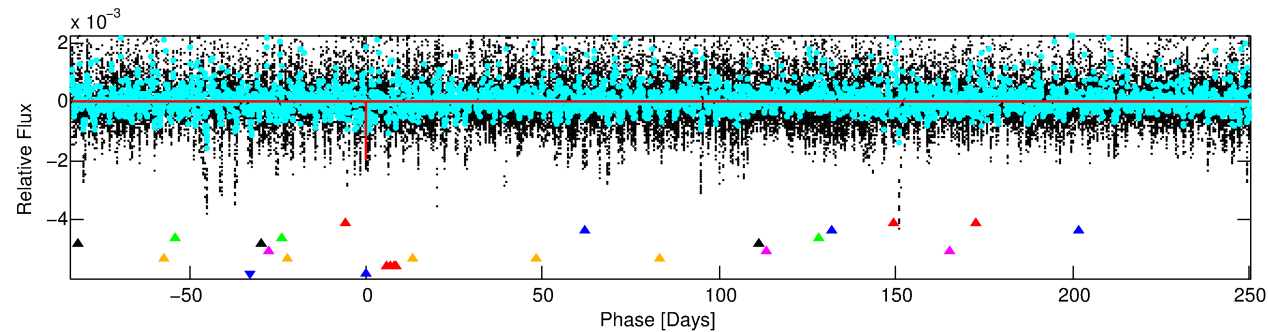
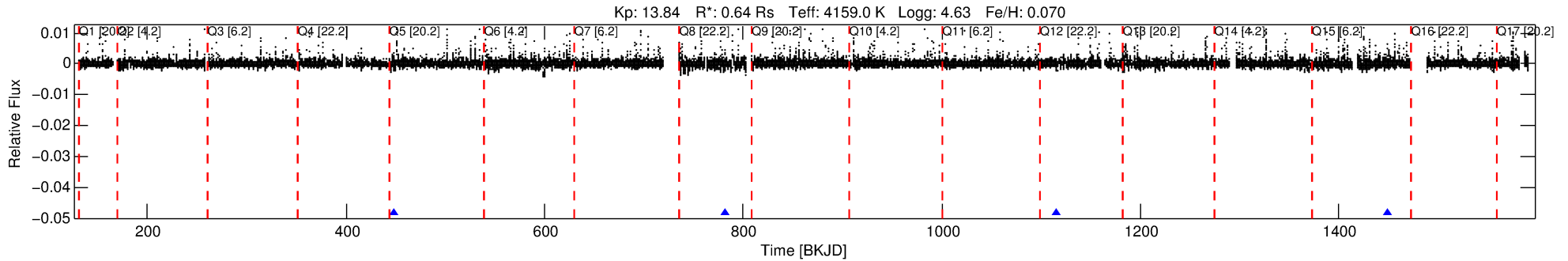
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006717216-08

No Significant Match Found

DV One-Page Summary

KIC: 6717216 Candidate: 8 of 8 Period: 333.611 d



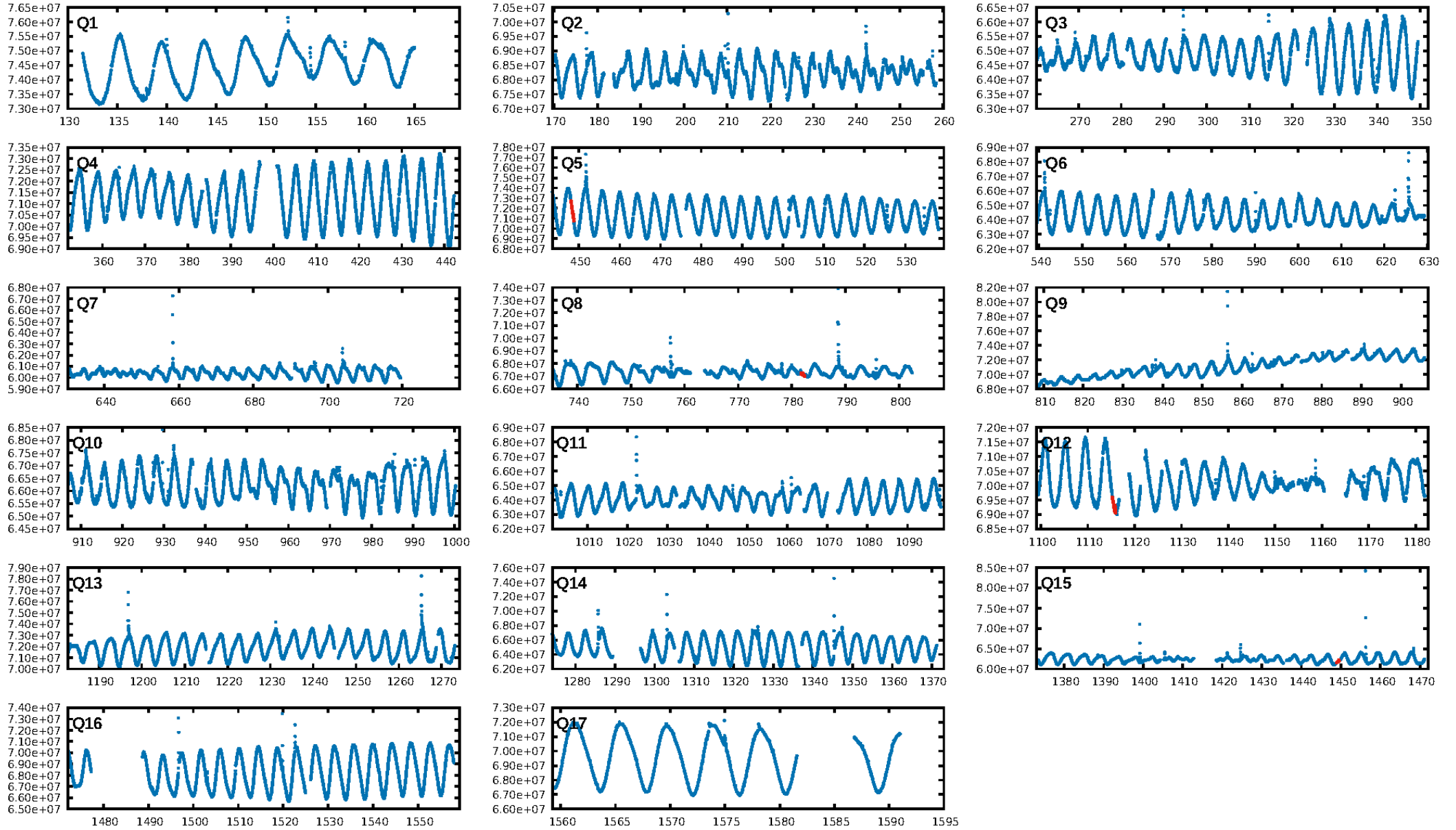
DV Fit Results:

Period = 333.61138 [0.00502] d
Epoch = 448.4250 [0.0087] BKJD
Rp/R* = 0.0421 [0.0094]
a/R* = 242.14 [139.15]
b = 0.61 [0.52]
Seff = 0.17 [0.03]
Teq = 163 [7] K
Rp = 2.94 [0.71] Re
a = 0.8084 [0.0603] AU
Ag = 23915.67 [16576.97] [1.44σ]
Teffp = 3139 [548] K [5.43σ]

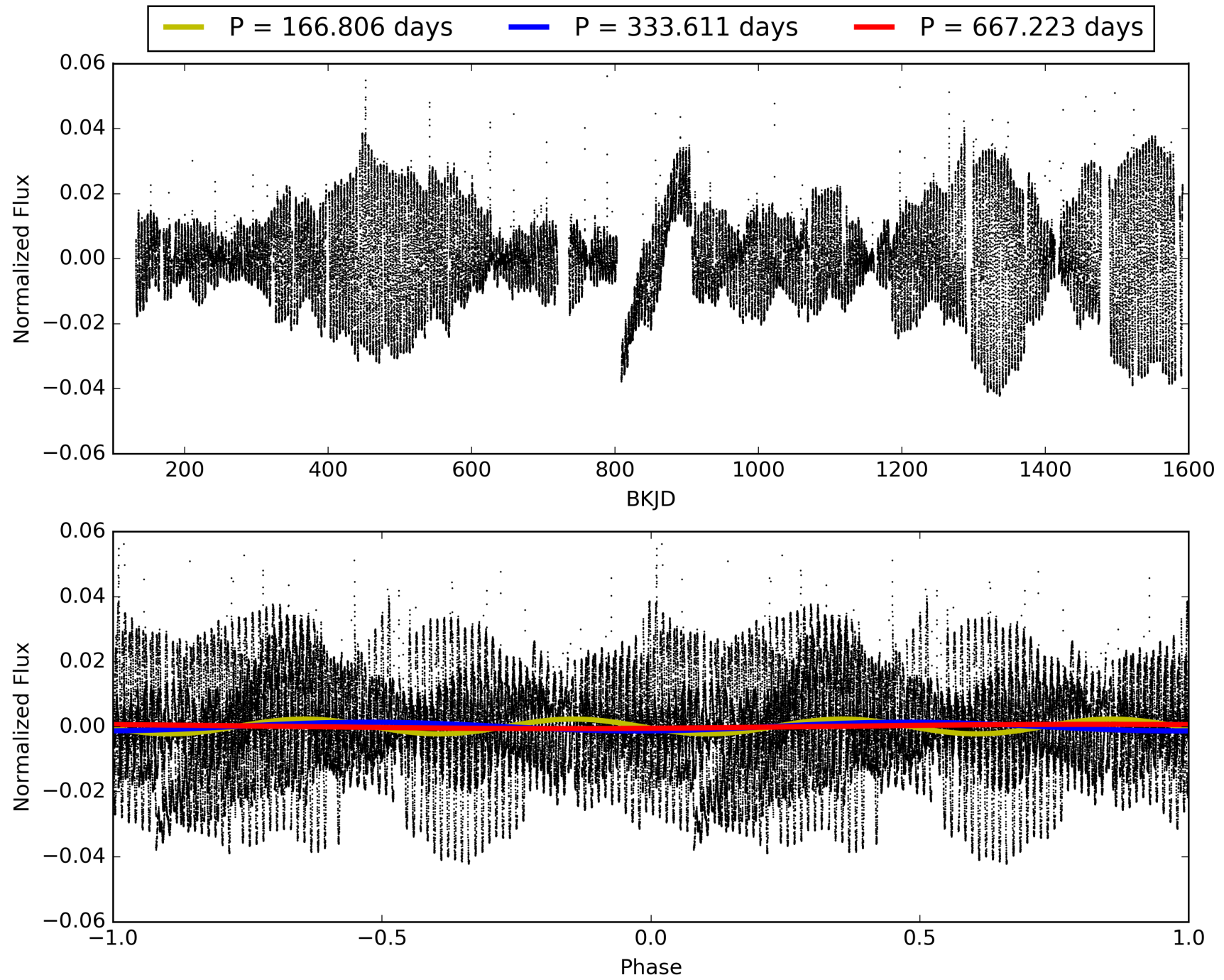
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [80.11σ]
LongPeriod-sig: 85.8% [1.47σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.1886
Centroid-sig: 12.7%
Centroid-so: 0.442 arcsec [1.90σ]
OotOffset-rm: 0.071 arcsec [0.32σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-rm: 0.180 arcsec [0.53σ]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 006717216-08, PDC Light Curves

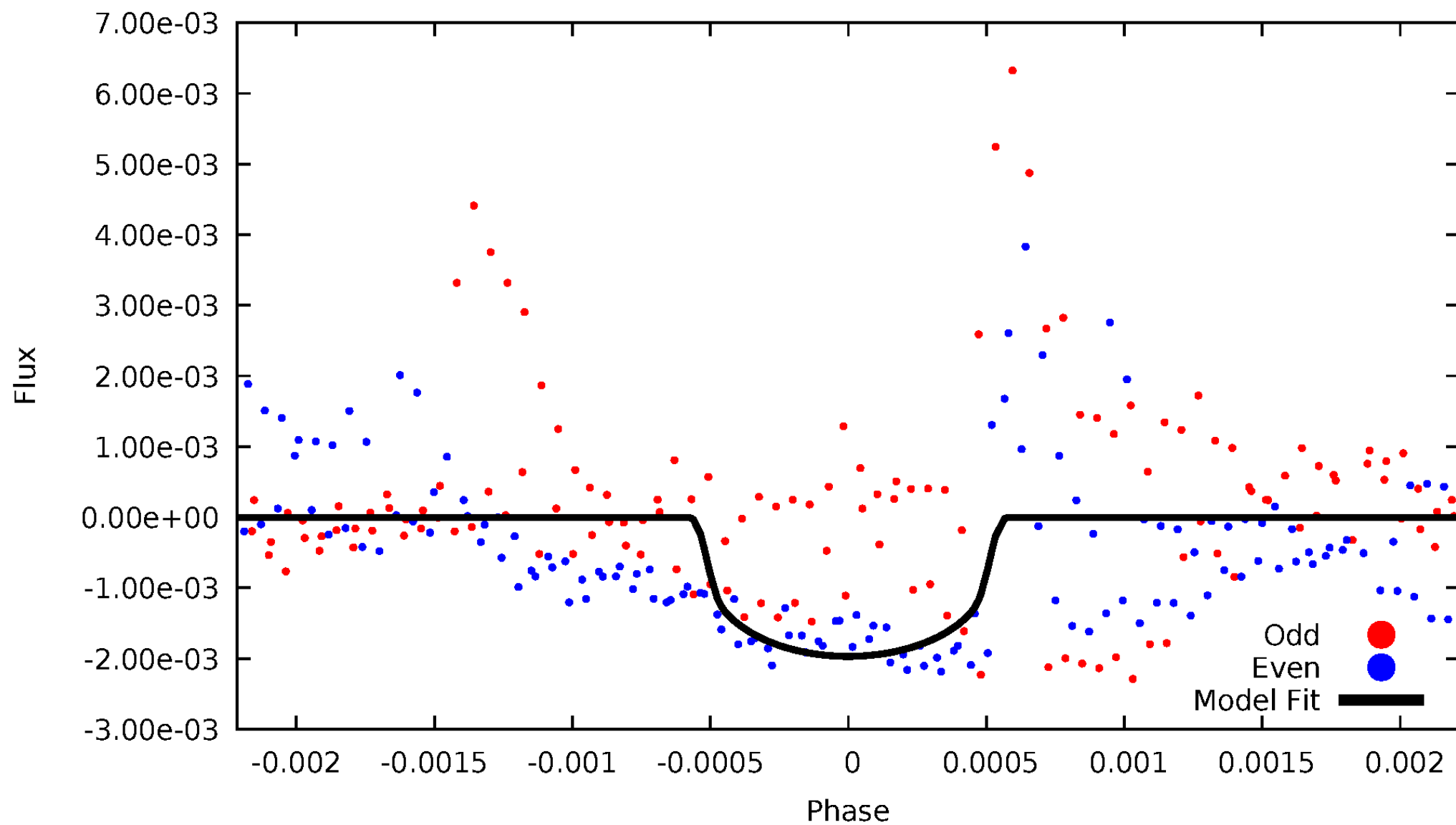


TCE 006717216-08



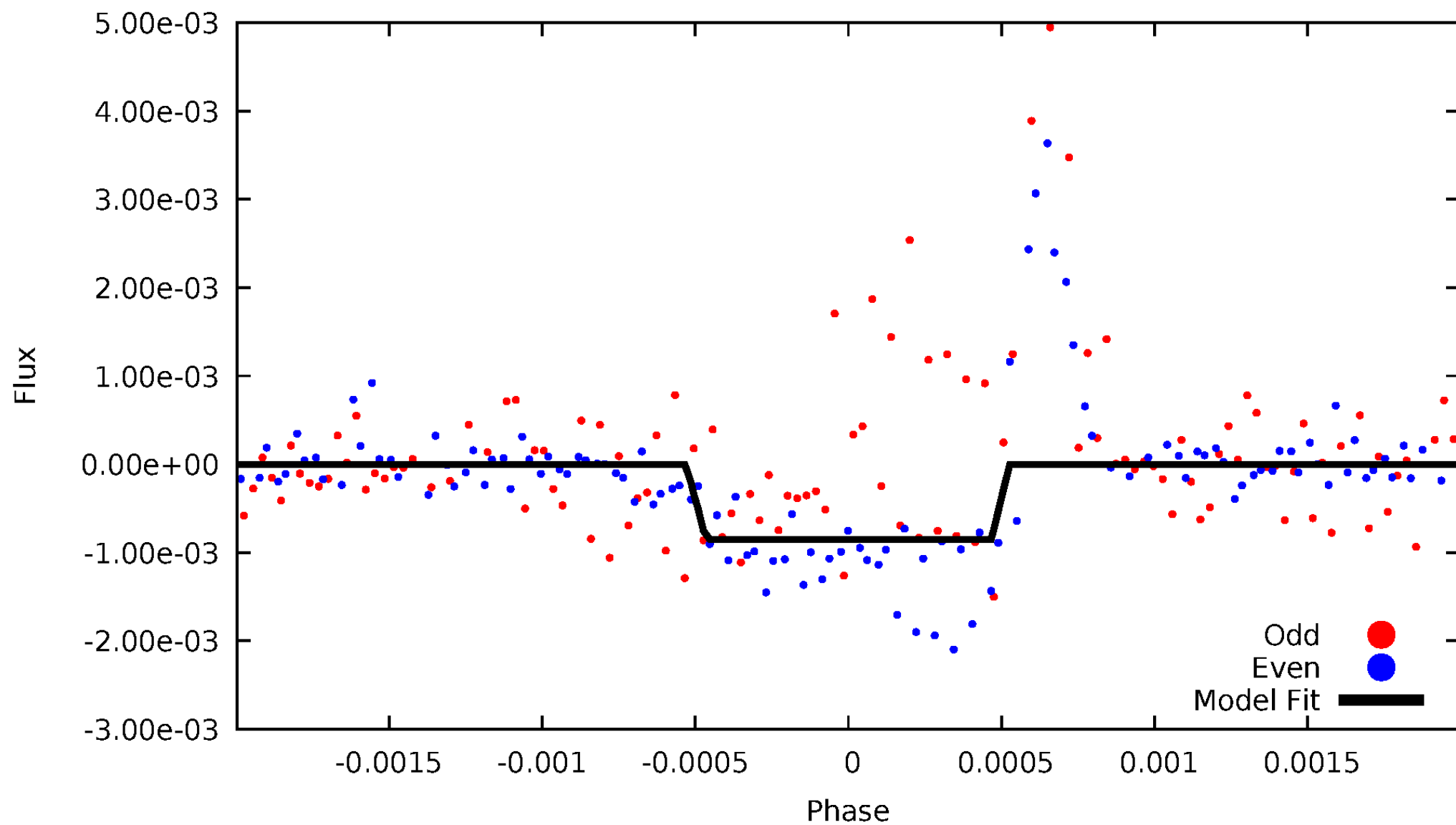
DV Odd/Even

TCE 006717216-08



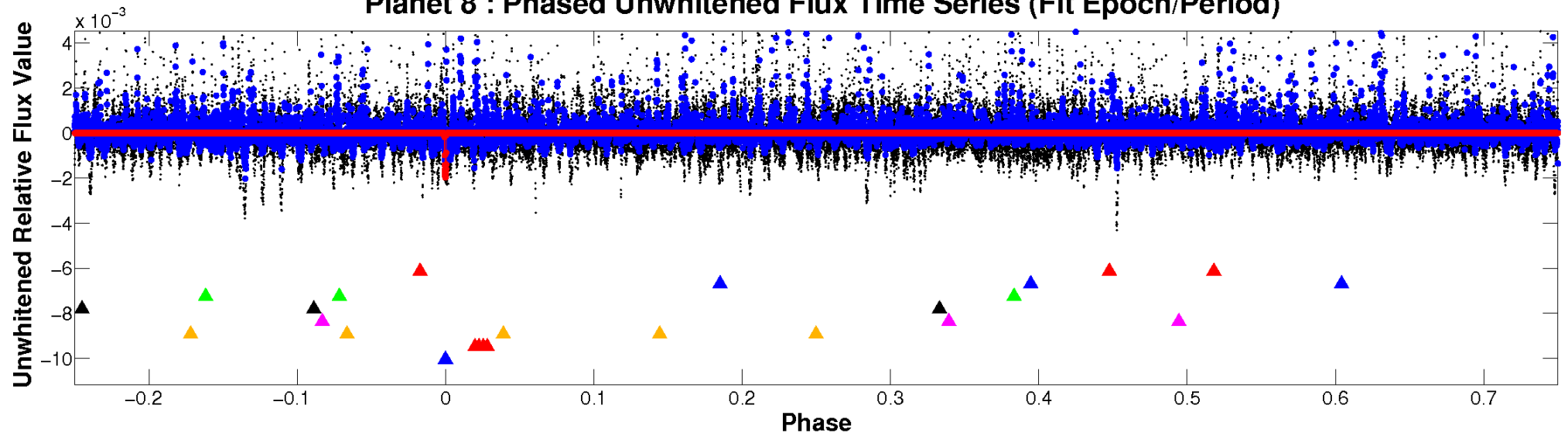
ALT Odd/Even

TCE 006717216-08

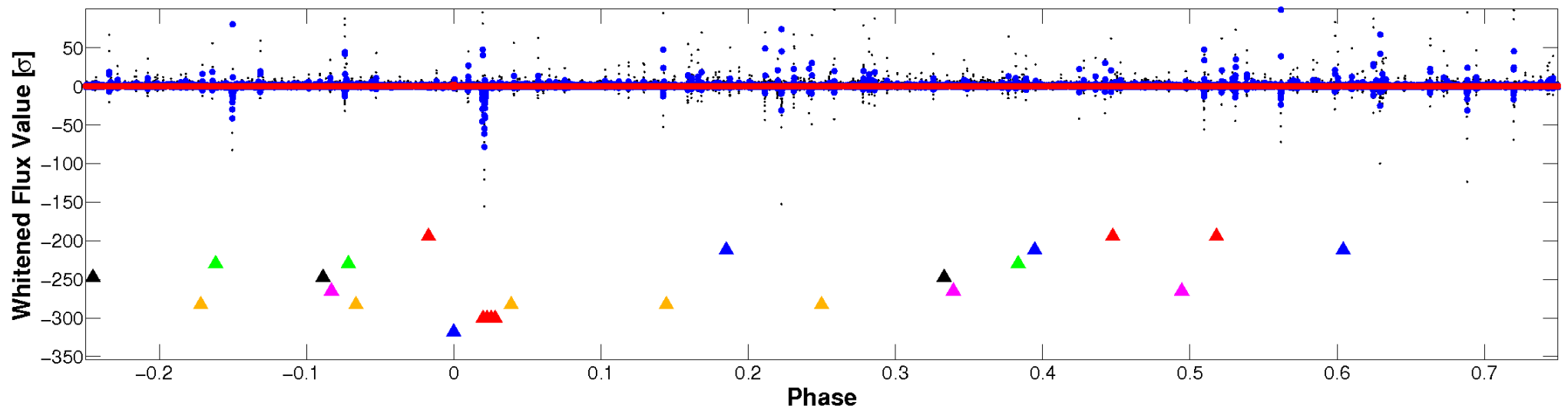


Non-Whitened Vs. Whitened Light Curve

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

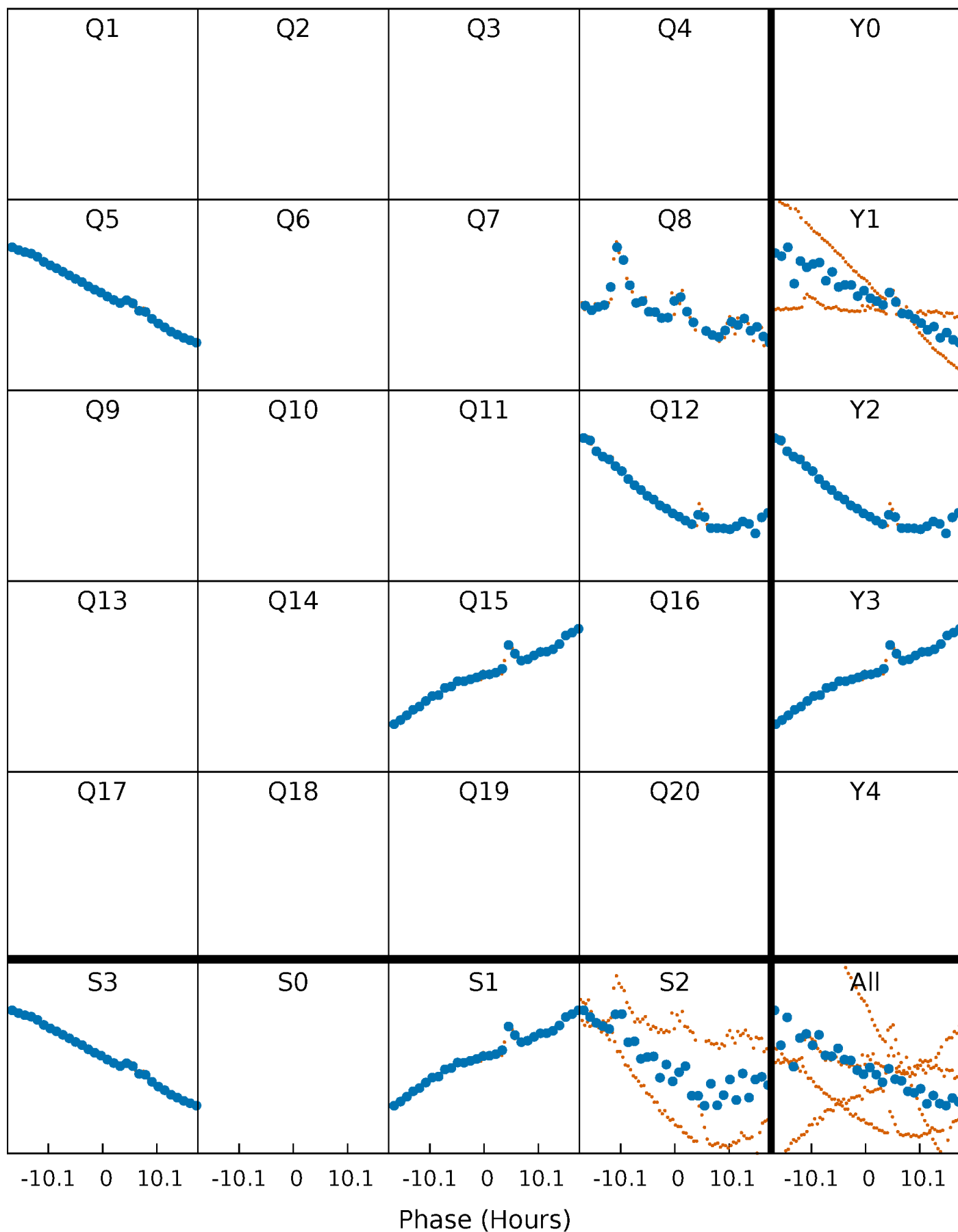


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



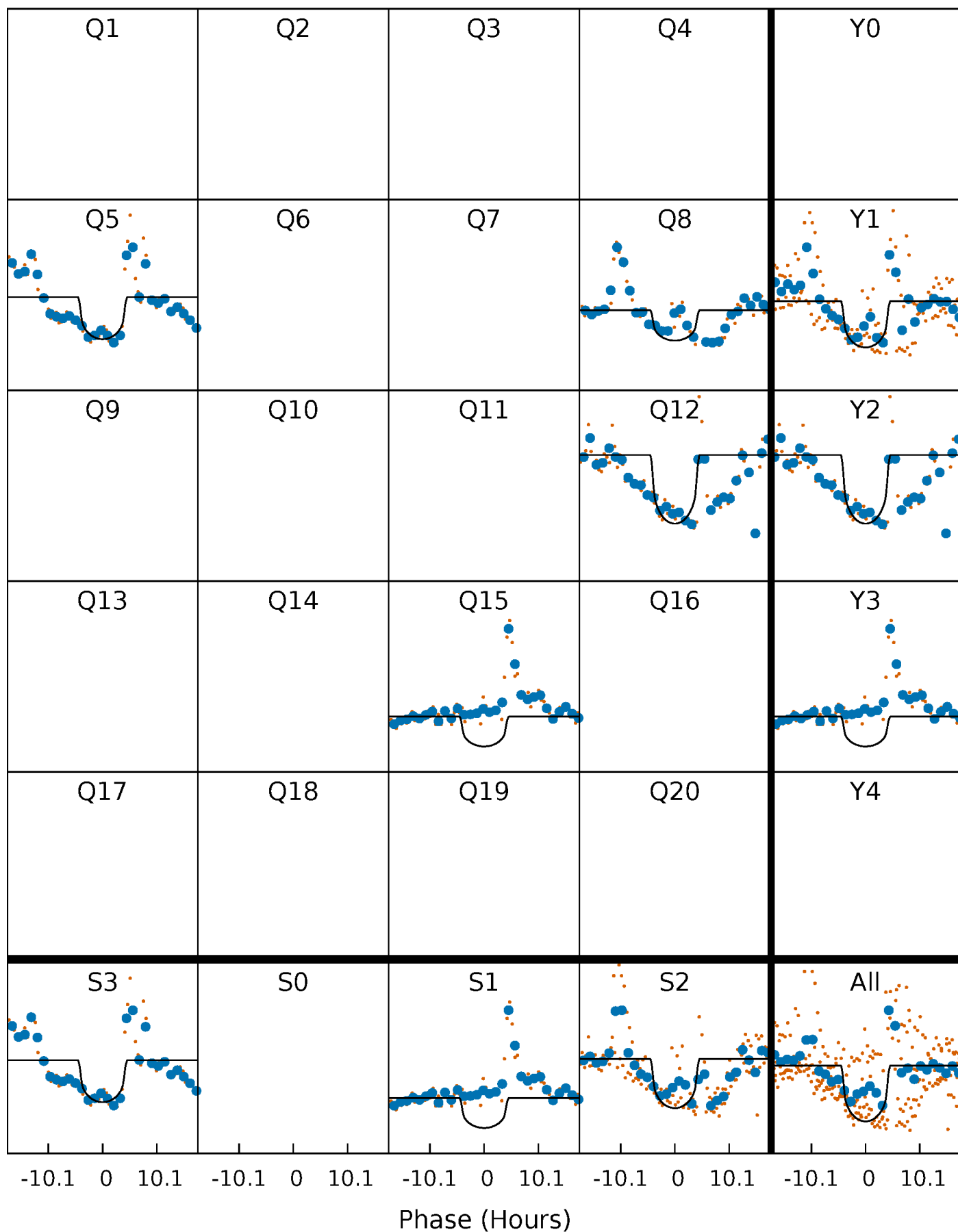
PDC Quarter-Phased Transit Curves

TCE 006717216-08 $P=333.611378$ Days $T_0=448.424961$ (BKJD)



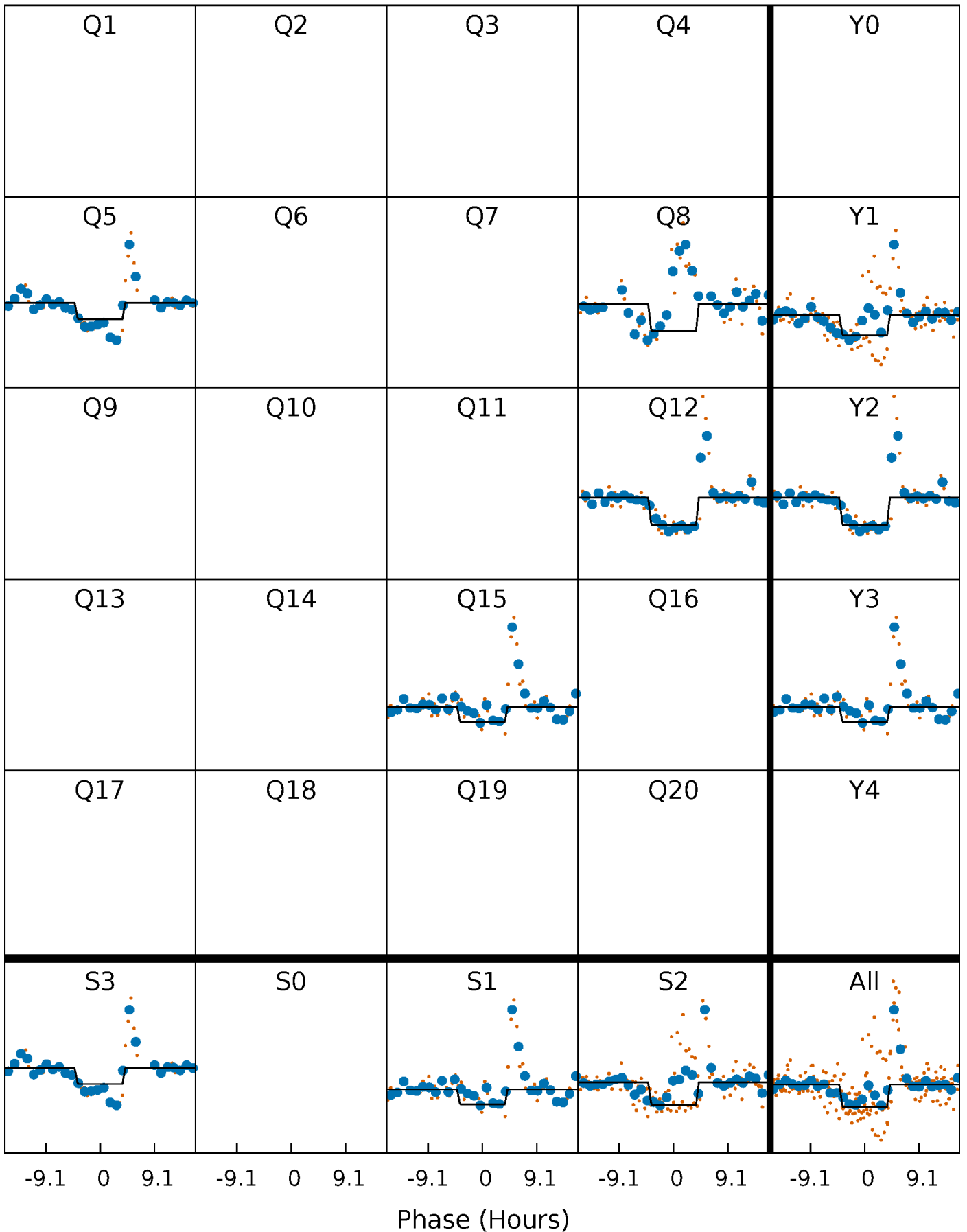
DV Quarter-Phased Transit Curves

TCE 006717216-08 $P=333.611378$ Days $T_0=448.424961$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

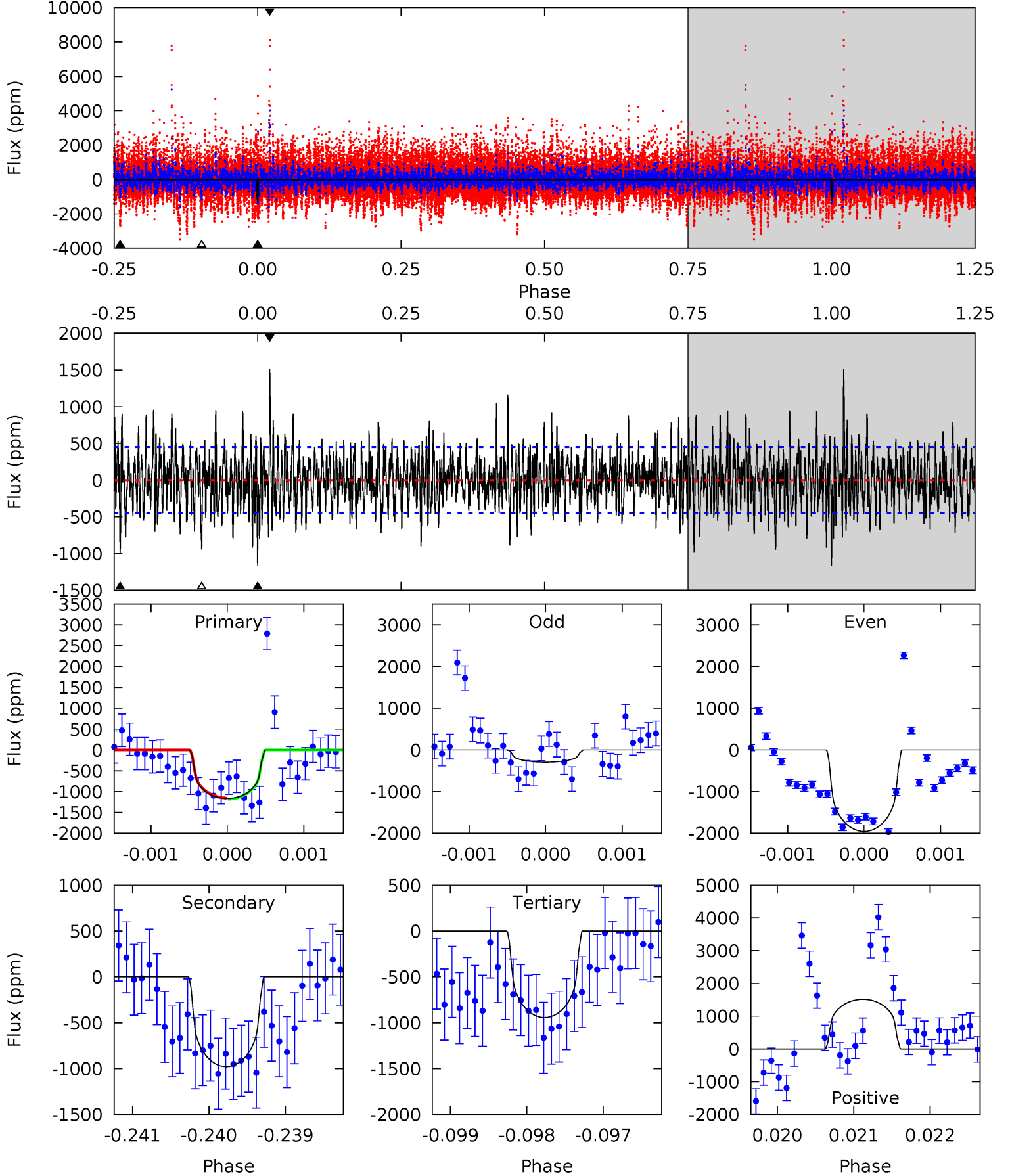
TCE 006717216-08 $P=333.605112$ Days $T_0=448.422306$ (BKJD)



DV Model-Shift Uniqueness Test

006717216-08, P = 333.611378 Days, E = 114.813583 Days

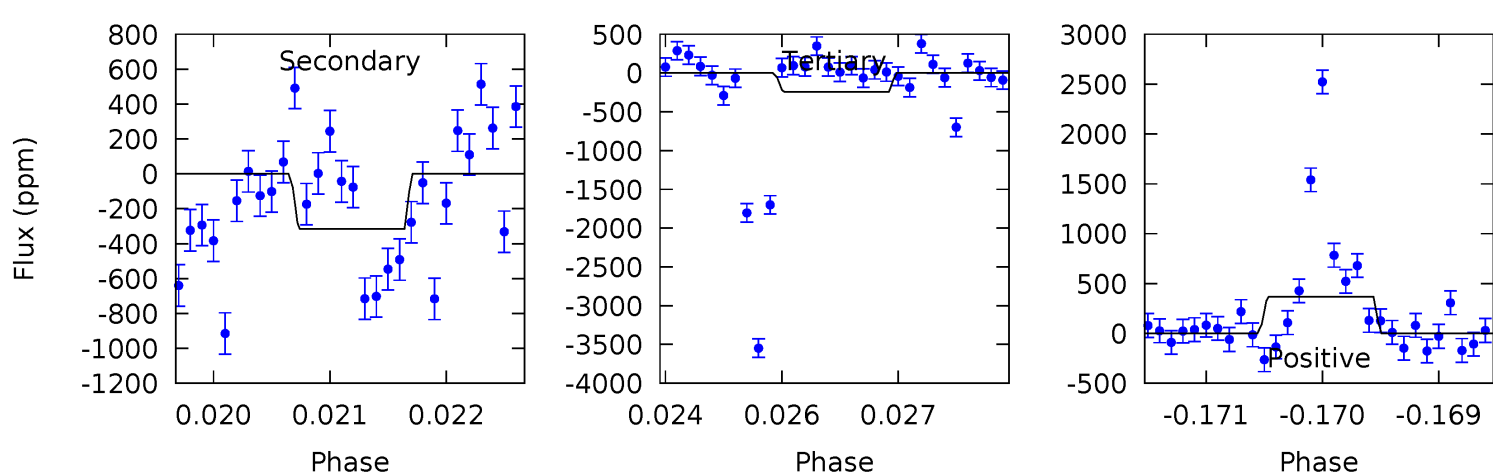
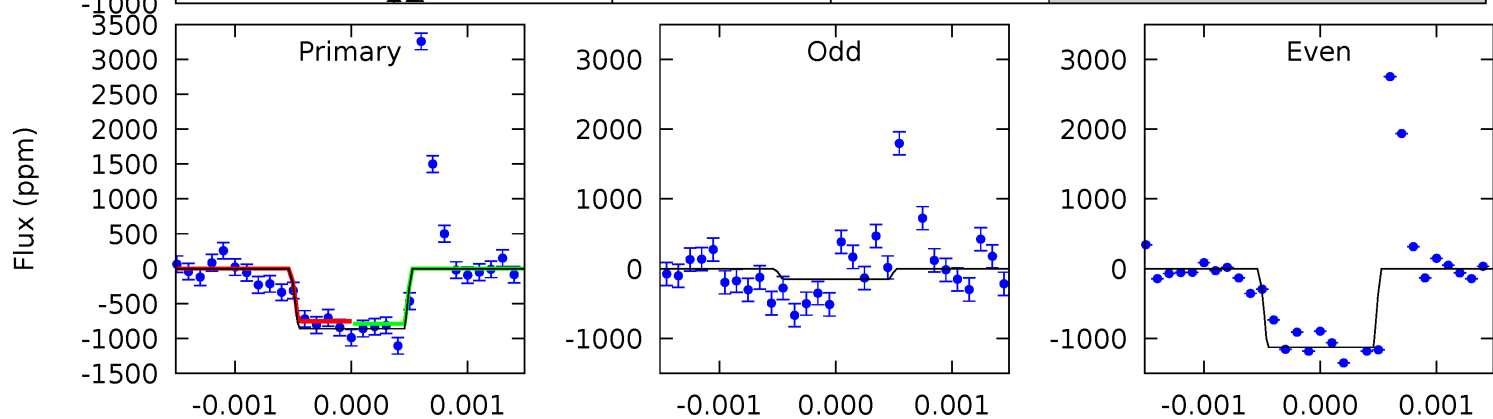
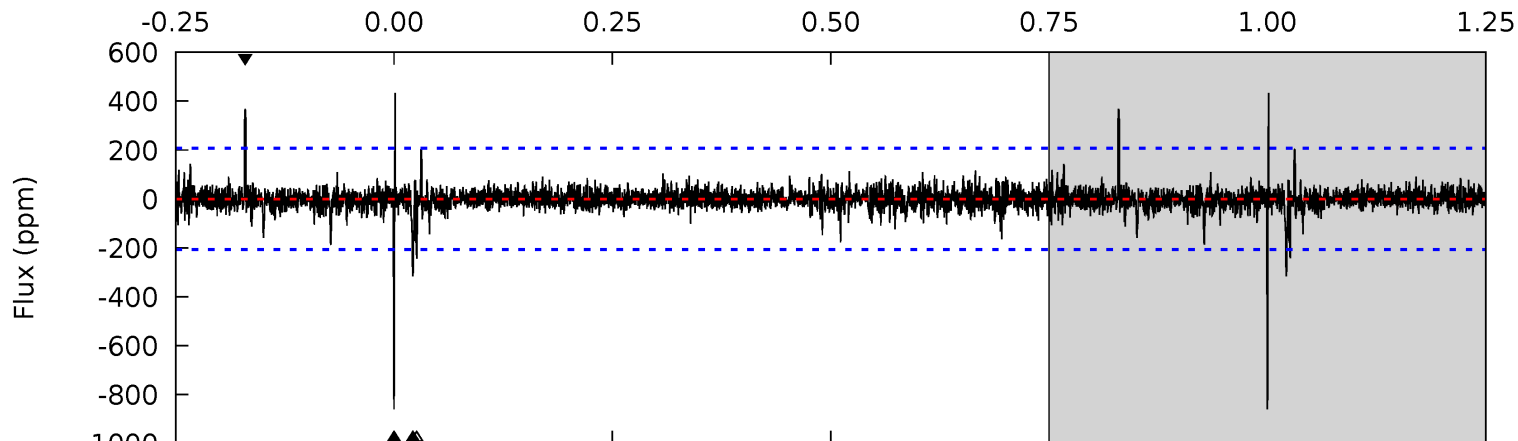
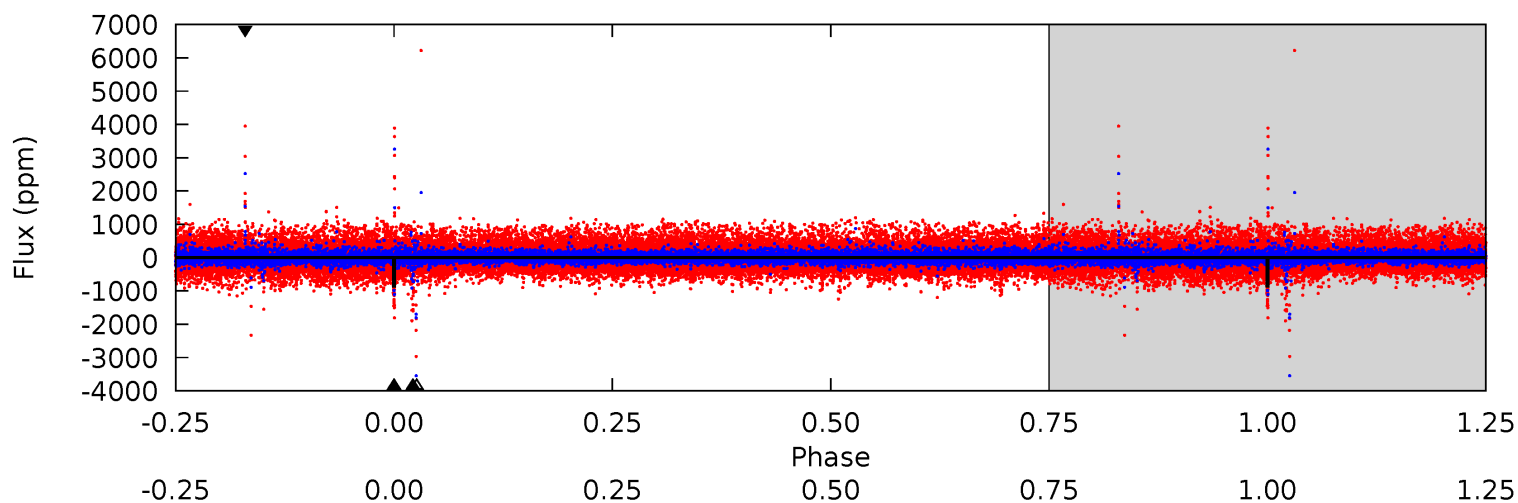
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	11.8	11.4	18.2	5.42	3.25	3.60	2.68	-4.16	0.43	-6.42	5.64	0.76	0.56	0.16



Alt Model-Shift Uniqueness Test

006717216-08, P = 333.605112 Days, E = 114.817194 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.6	8.30	6.38	9.67	5.45	3.28	0.84	16.2	12.9	1.92	-1.37	12.2	0.83	0.34	0.46



Stellar Parameters For KIC 006717216

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4159^{+126}_{-139}	$4.627^{+0.053}_{-0.018}$	$0.070^{+0.250}_{-0.300}$	$0.640^{+0.035}_{-0.060}$	$0.633^{+0.054}_{-0.054}$	$3.396^{+0.793}_{-0.292}$
	+3%/-3%	+1%/-0%	+357%/-429%	+5%/-9%	+9%/-9%	+23%/-9%
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 006717216-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-980 ± 83	$2.91^{+0.68}_{-0.65}$	226^{+8}_{-9}	3737^{+377}_{-257}	41312^{+28312}_{-13689}
Alt.	-316 ± 38	$1.98^{+0.68}_{-0.60}$	226^{+8}_{-7}	3521^{+491}_{-301}	29324^{+31885}_{-12910}

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

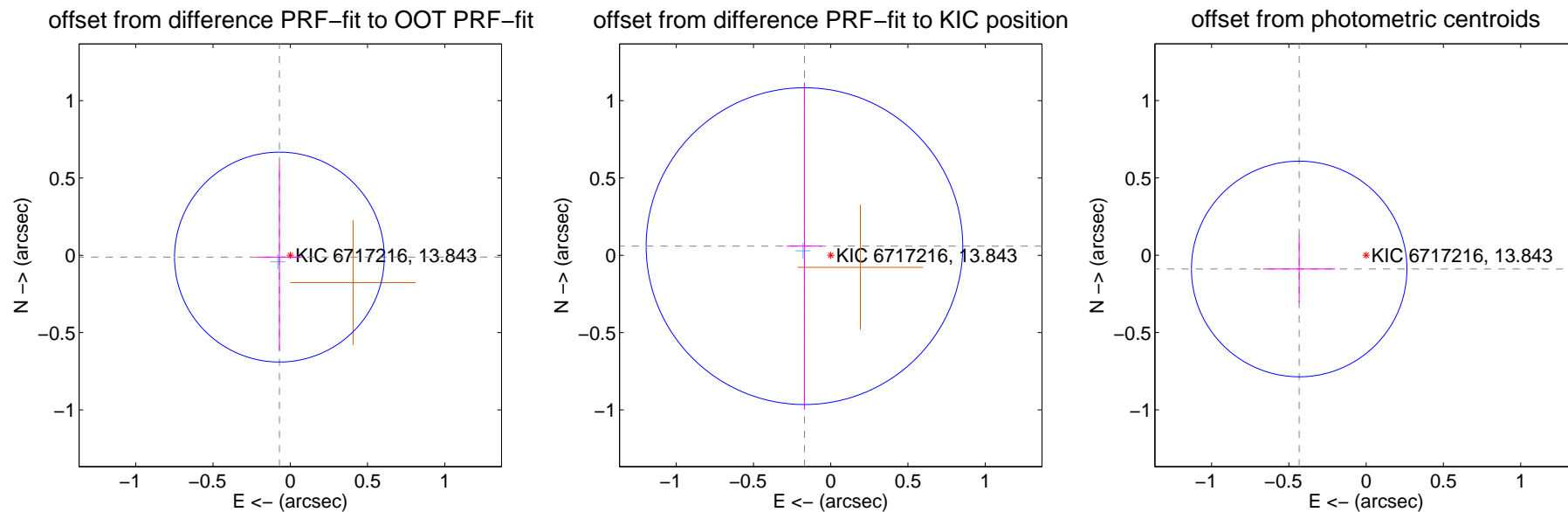
DV Centroid Data

Supplemental centroid analysis for 006717216-08. Kepler magnitude: 13.84. Transit SNR 12.42

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.071 ± 0.226	0.32	0.070 ± 0.145	-0.012 ± 0.603
PRF-fit source offset from KIC position	0.180 ± 0.342	0.53	0.170 ± 0.115	0.059 ± 1.058
photometric centroid source offset	0.44 ± 0.23	1.90	0.43 ± 0.23	-0.09 ± 0.22

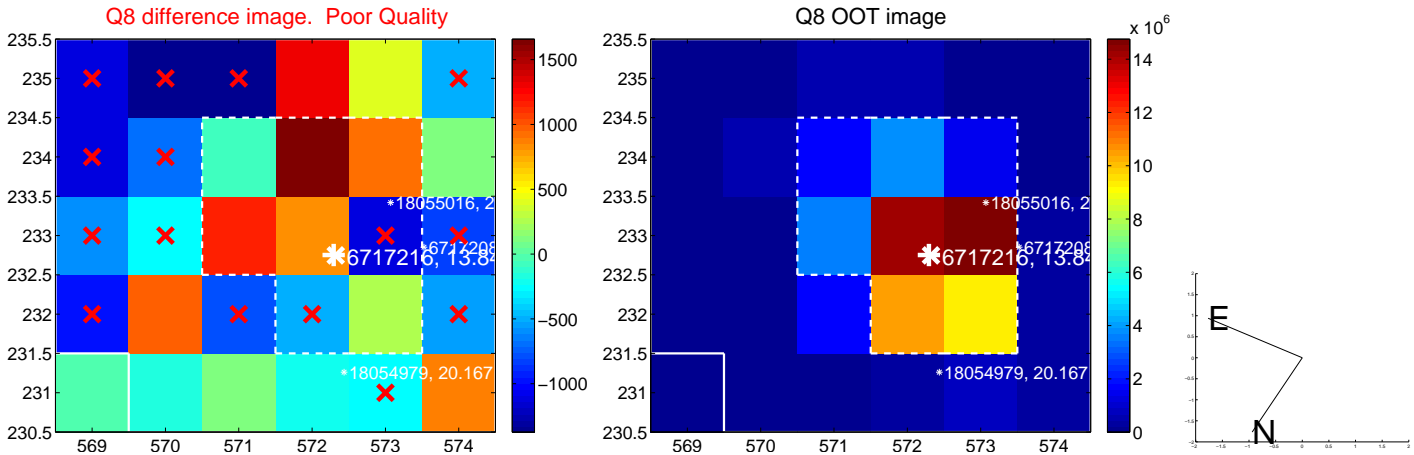
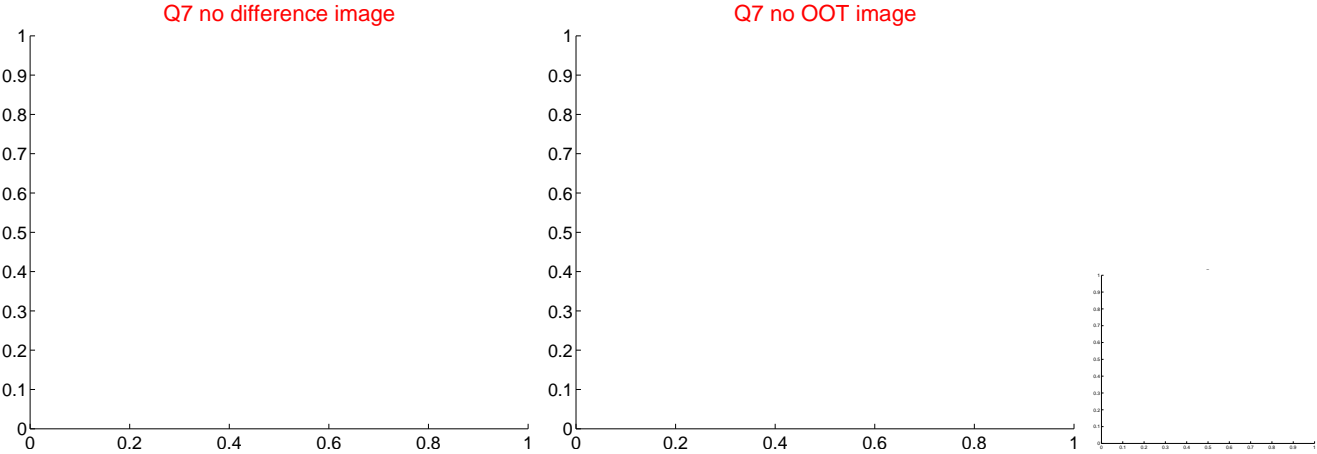
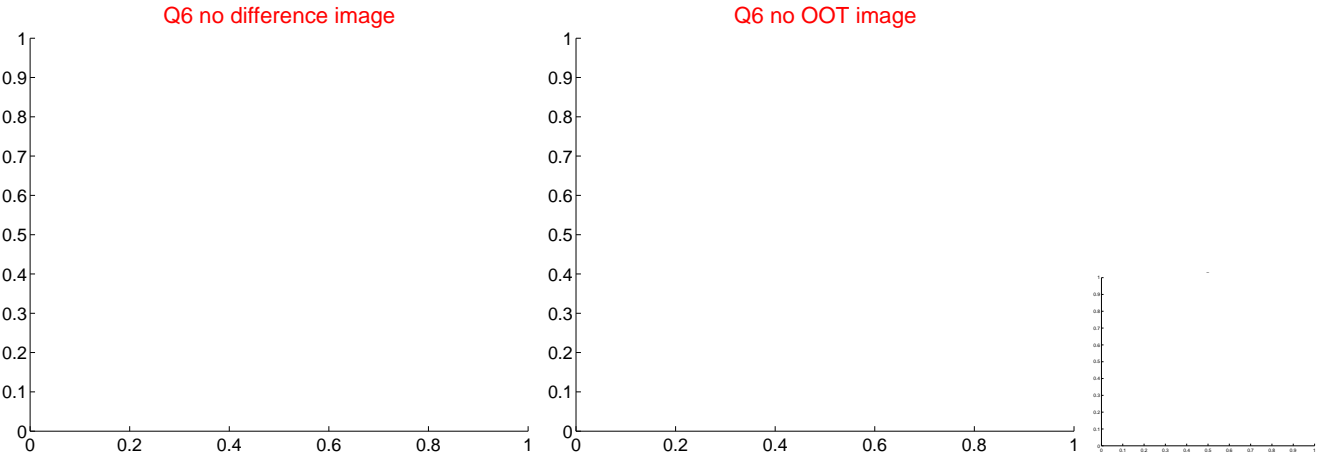
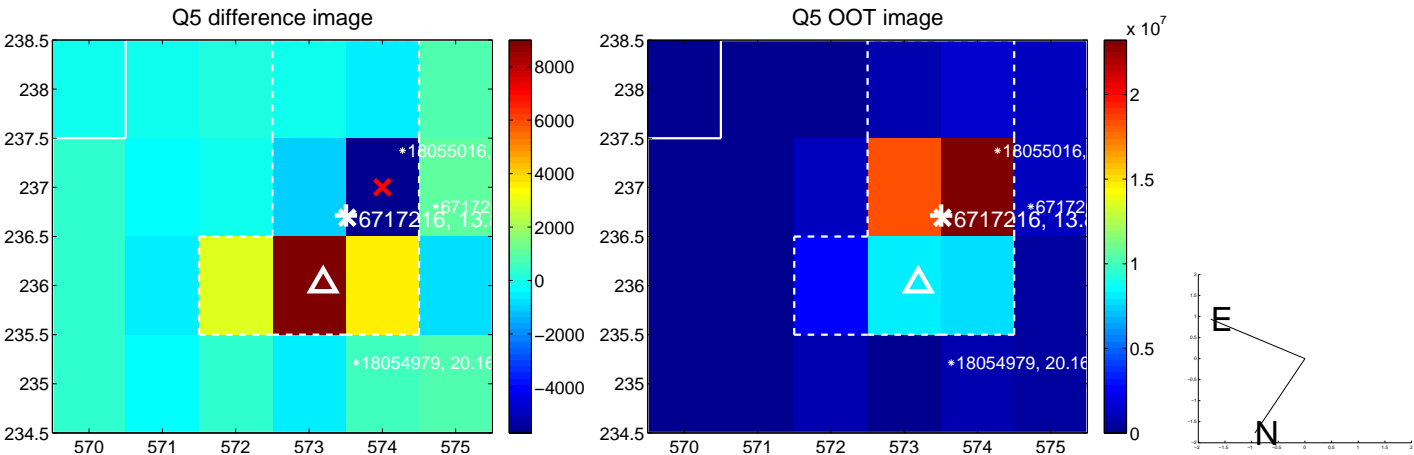


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

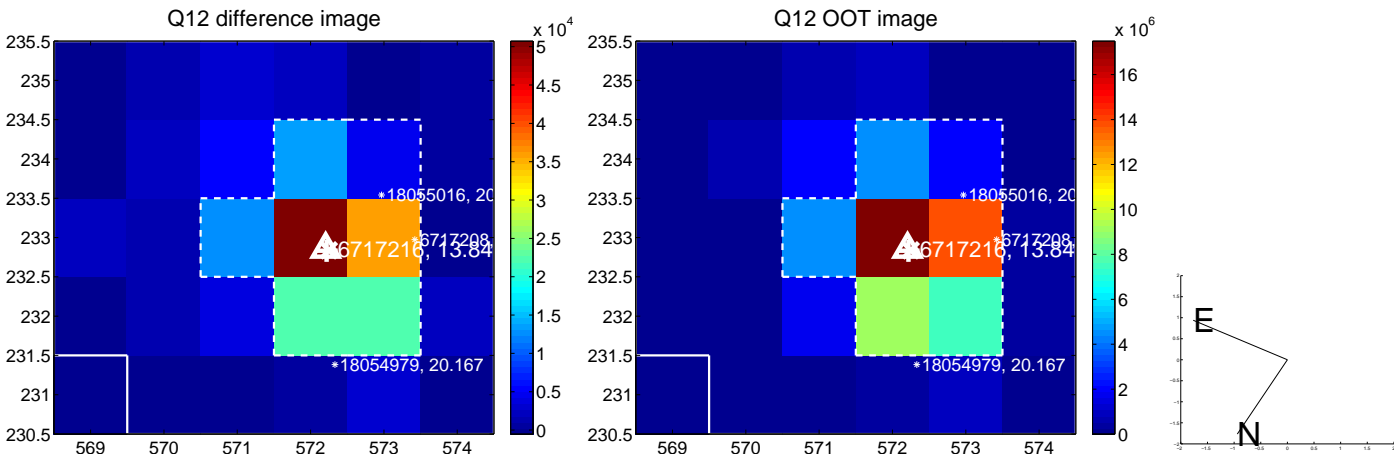
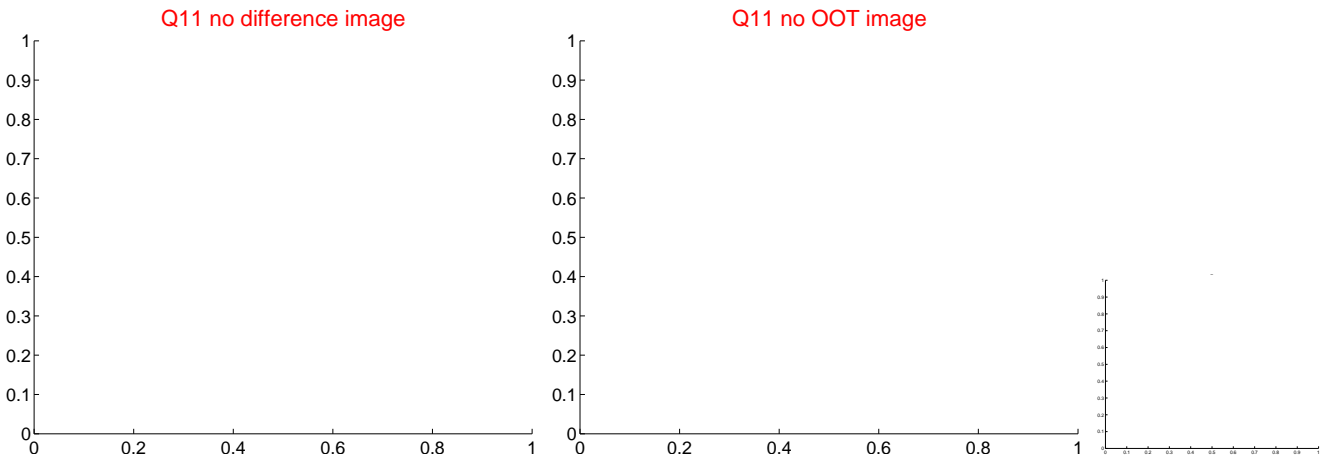
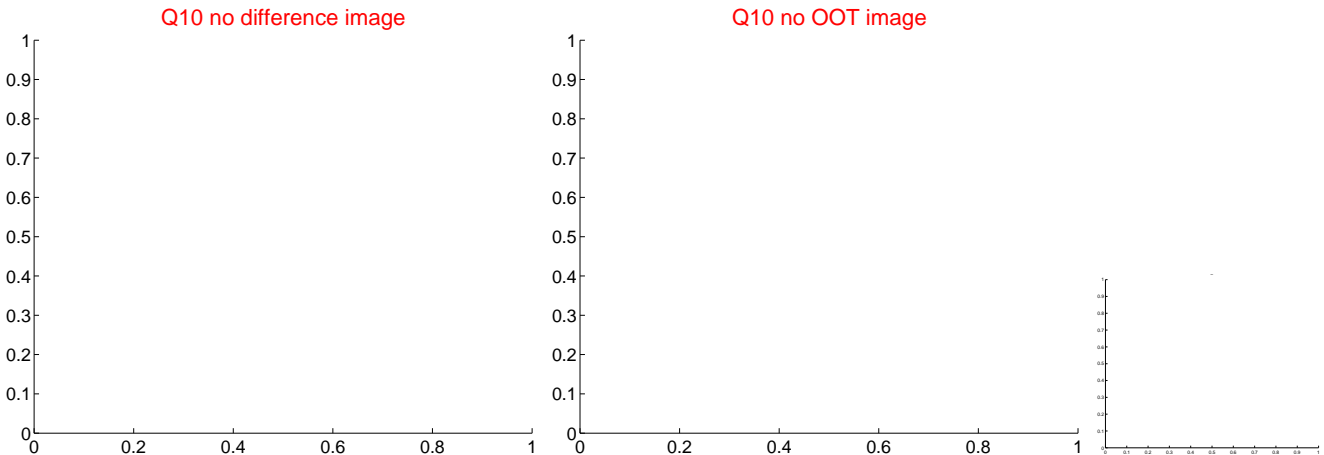
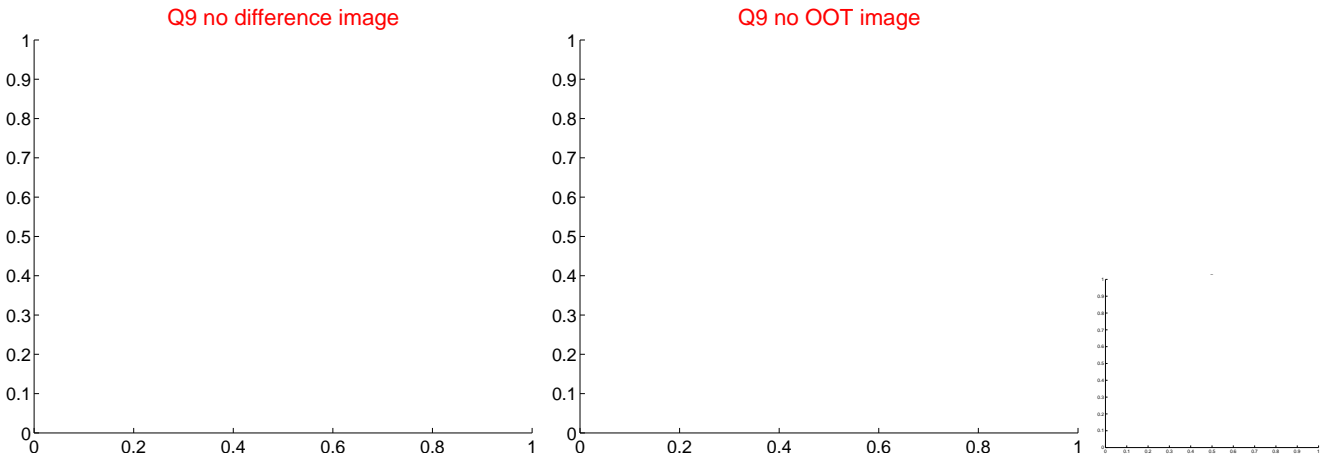
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



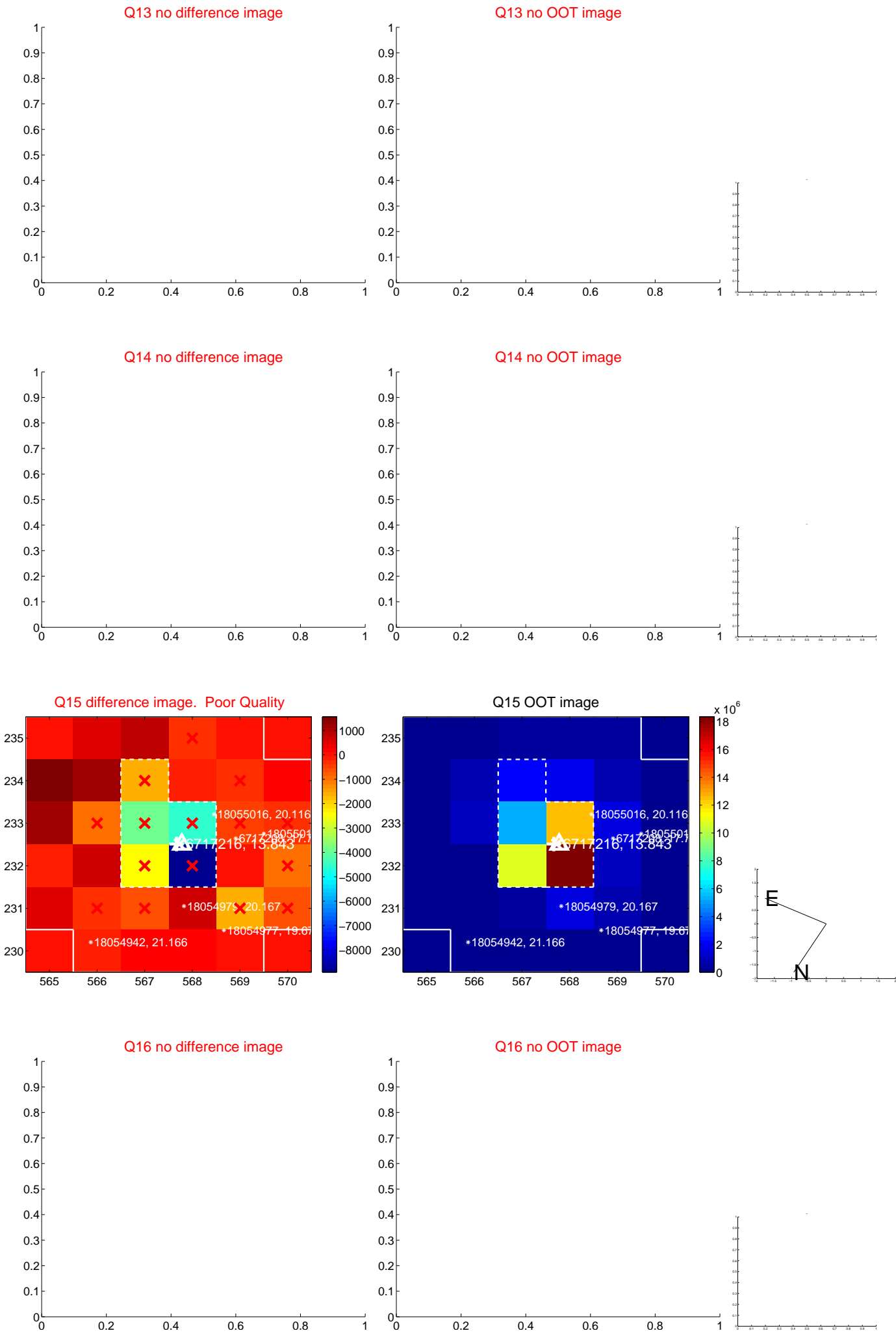
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



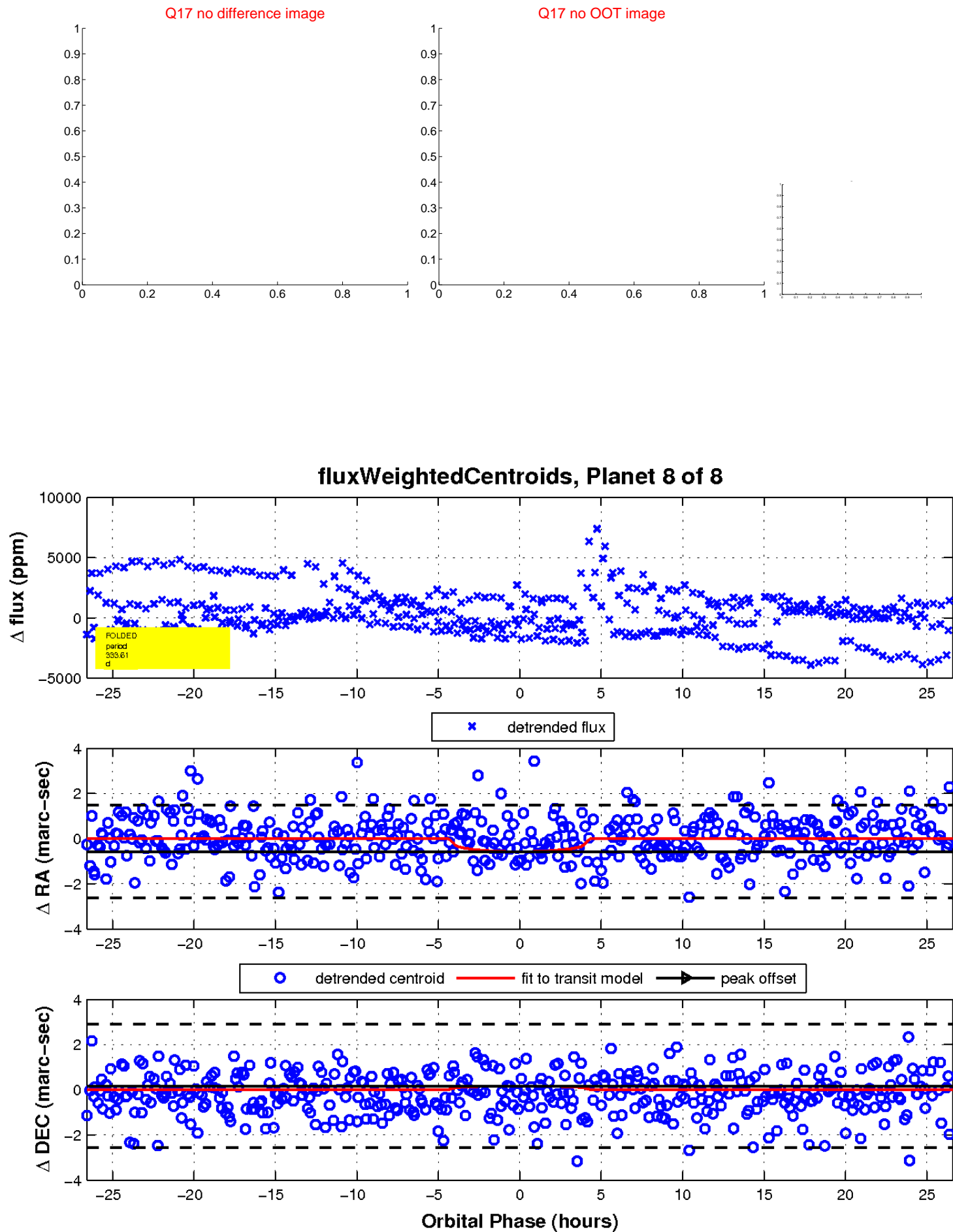
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

