

KIC 006529378

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})
006529378-01	OBS	No	536.398435	276.836699	4361.3	13.992	41.5	9.1	0.68	4484	8.07	0.13
006529378-02	OBS	No	371.848951	237.728709	754.9	14.634	58.5	2.9	0.68	4484	1.79	0.21
006529378-03	OBS	No	419.649604	501.931861	2255.4	4.087	31.4	10.4	0.68	4484	6.54	0.18
006529378-04	OBS	No	484.193638	273.108753	1863.2	10.500	50.4	-1.0	0.68	4484	2.81	0.15
006529378-06	OBS	No	547.312905	293.814761	568.9	15.000	20.2	-1.0	0.68	4484	1.55	0.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006529378-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006529378-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006529378-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006529378-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS
006529378-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_ZUMA—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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.

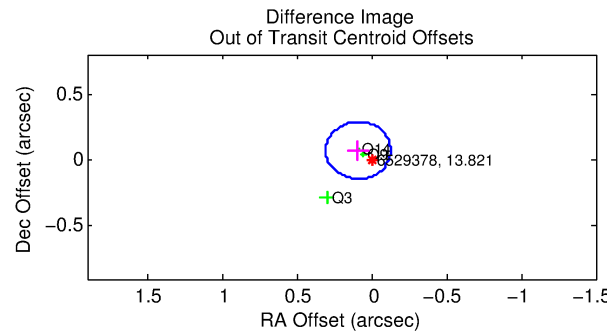
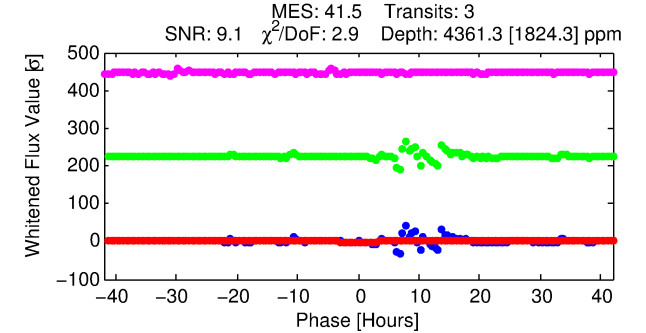
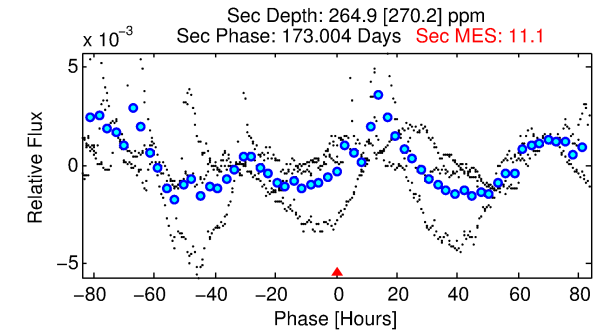
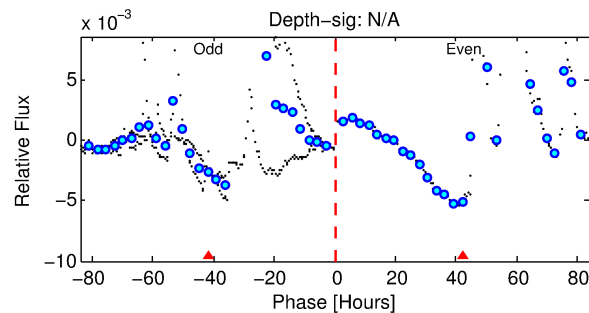
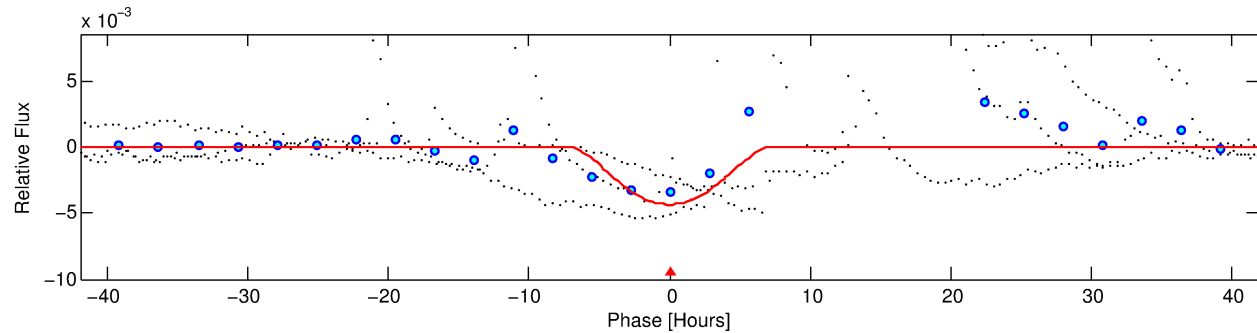
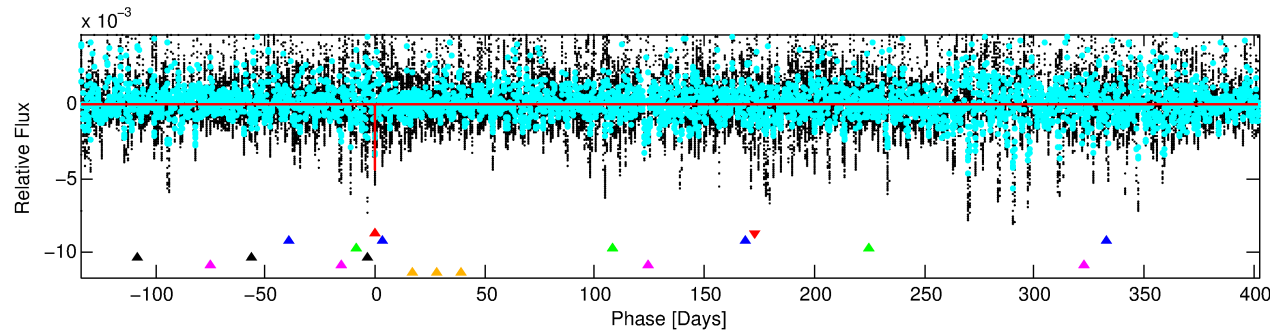
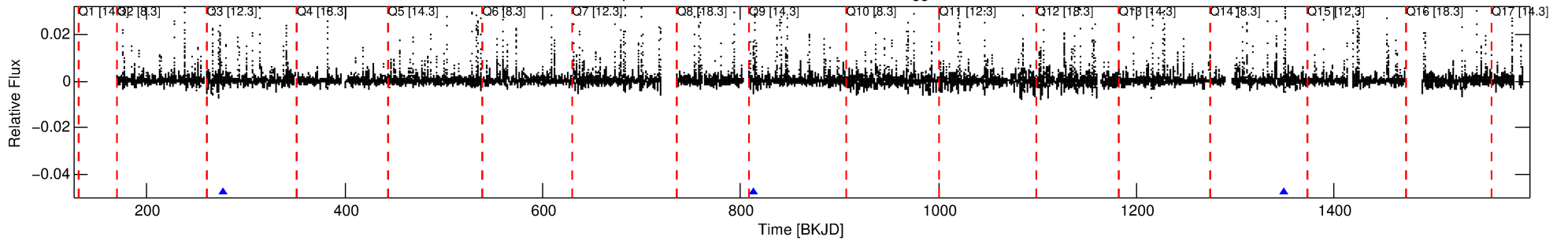
Ephemeris Match Information For 006529378-01

No Significant Match Found

DV One-Page Summary

KIC: 6529378 Candidate: 1 of 6 Period: 536.398 d

Kp: 13.82 R*: 0.68 Rs Teff: 4484.0 K Logg: 4.62 Fe/H: 0.060



DV Fit Results:

Period = 536.39843 [0.04350] d
Epoch = 276.8367 [0.0579] BKJD
Rp/R* = 0.1083 [0.3364]
a/R* = 148.69 [86.96]
b = 0.99 [0.50]
Seff = 0.13 [0.02]
Teq = 152 [6] K
Rp = 8.07 [25.08] Re
a = 1.1525 [0.0664] AU
Ag = 2971.08 [18706.00] [0.16σ]
Teffp = 1738 [2737] K [0.58σ]

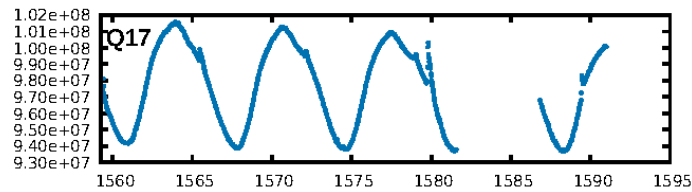
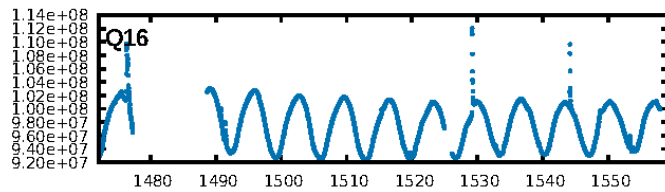
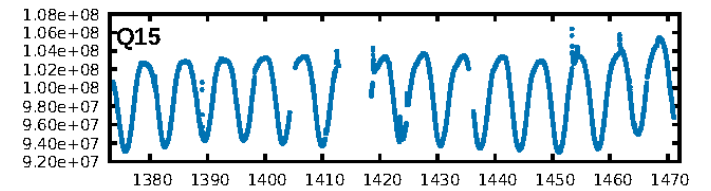
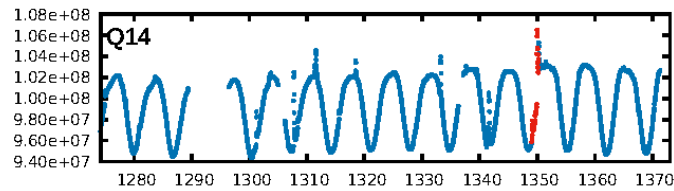
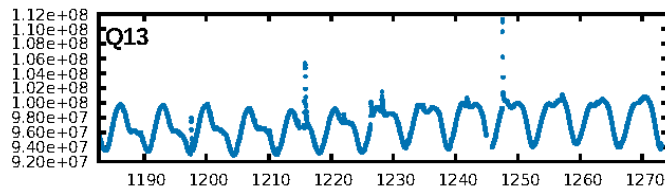
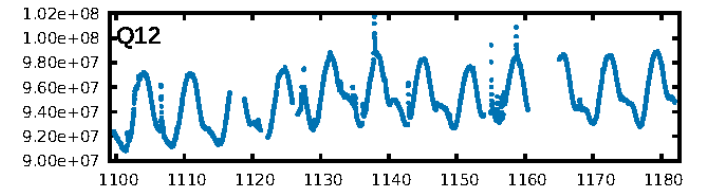
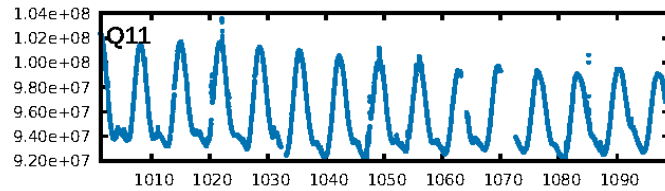
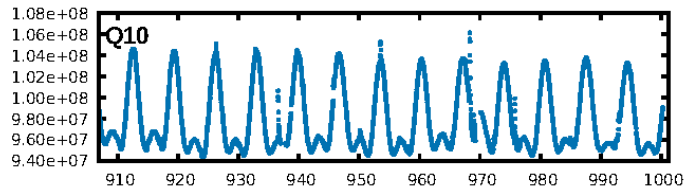
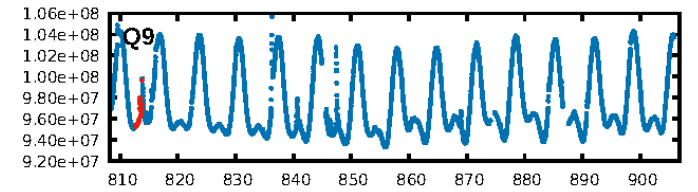
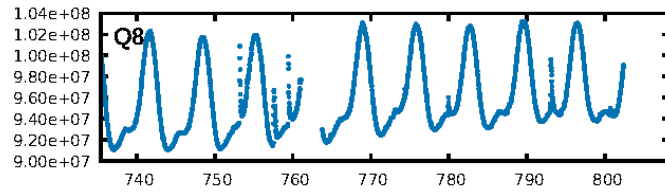
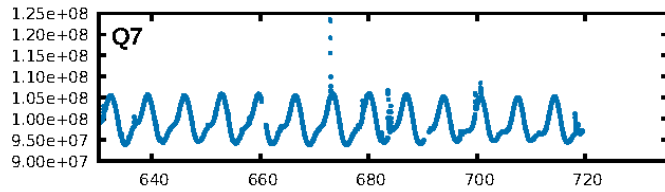
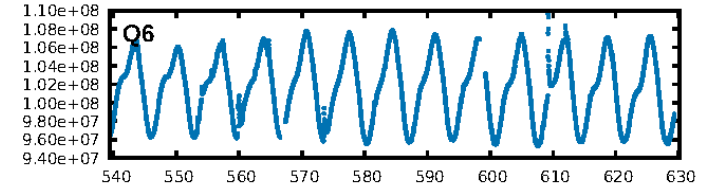
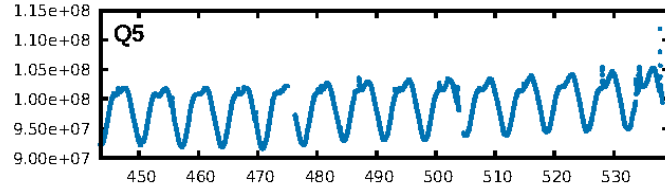
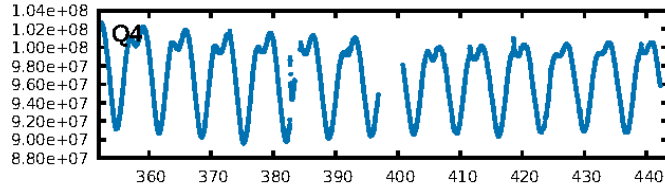
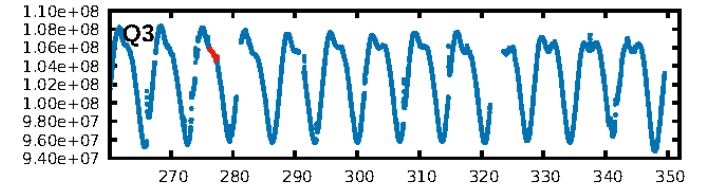
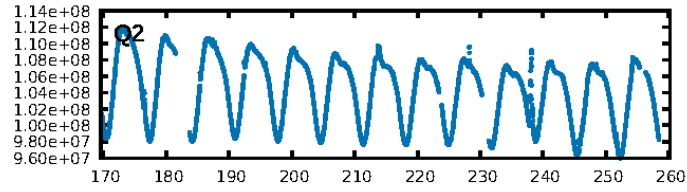
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [71.62σ]
LongPeriod-sig: 100.0% [12.77σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 10.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.775
Centroid-sig: 0.0%
Centroid-so: 0.715 arcsec [2.33σ]
OotOffset-rm: 0.116 arcsec [1.60σ]
KicOffset-rm: 0.100 arcsec [0.52σ]
OotOffset-st: 1/1/0/1 [3]
KicOffset-st: 1/1/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

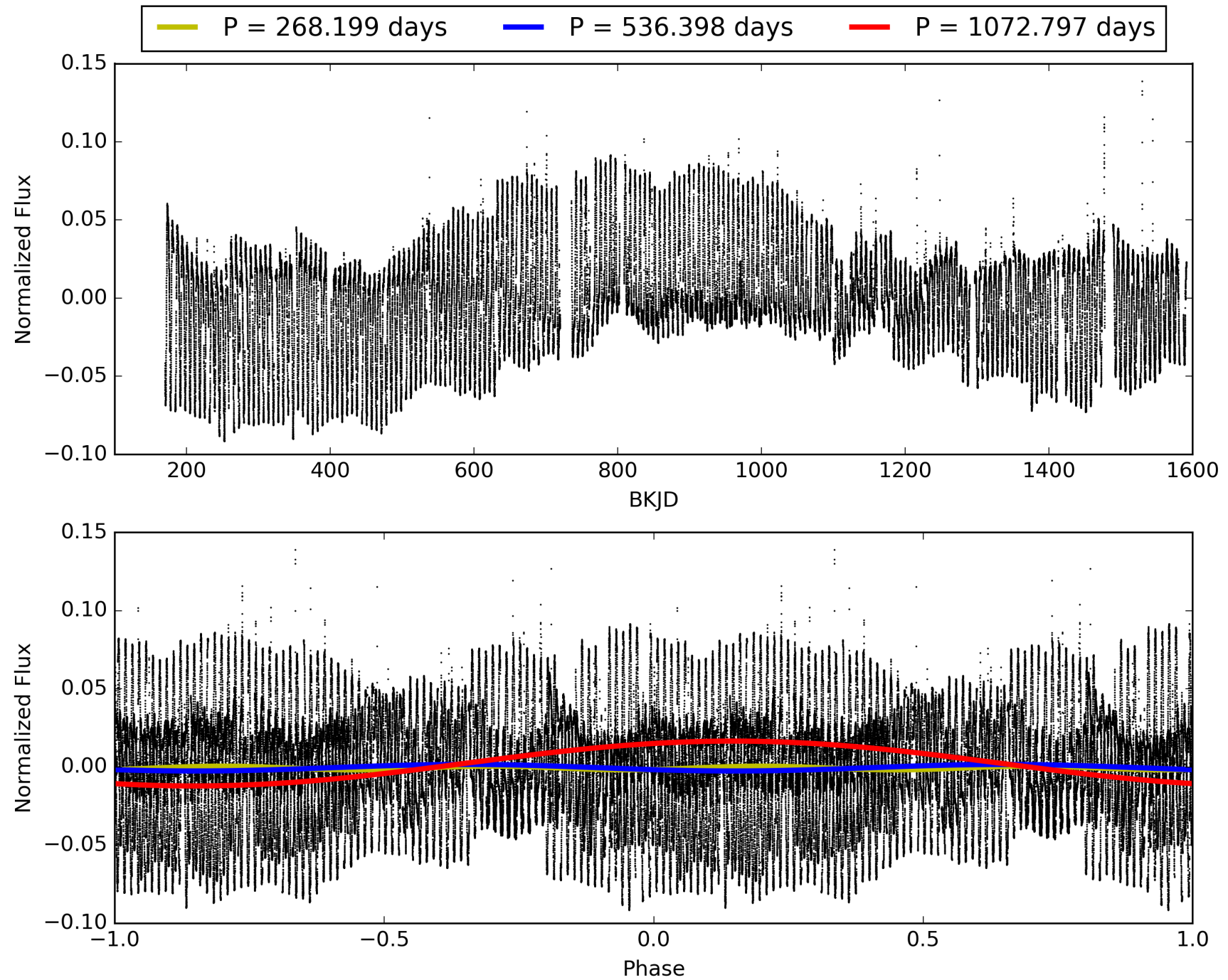
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006529378-01, PDC Light Curves

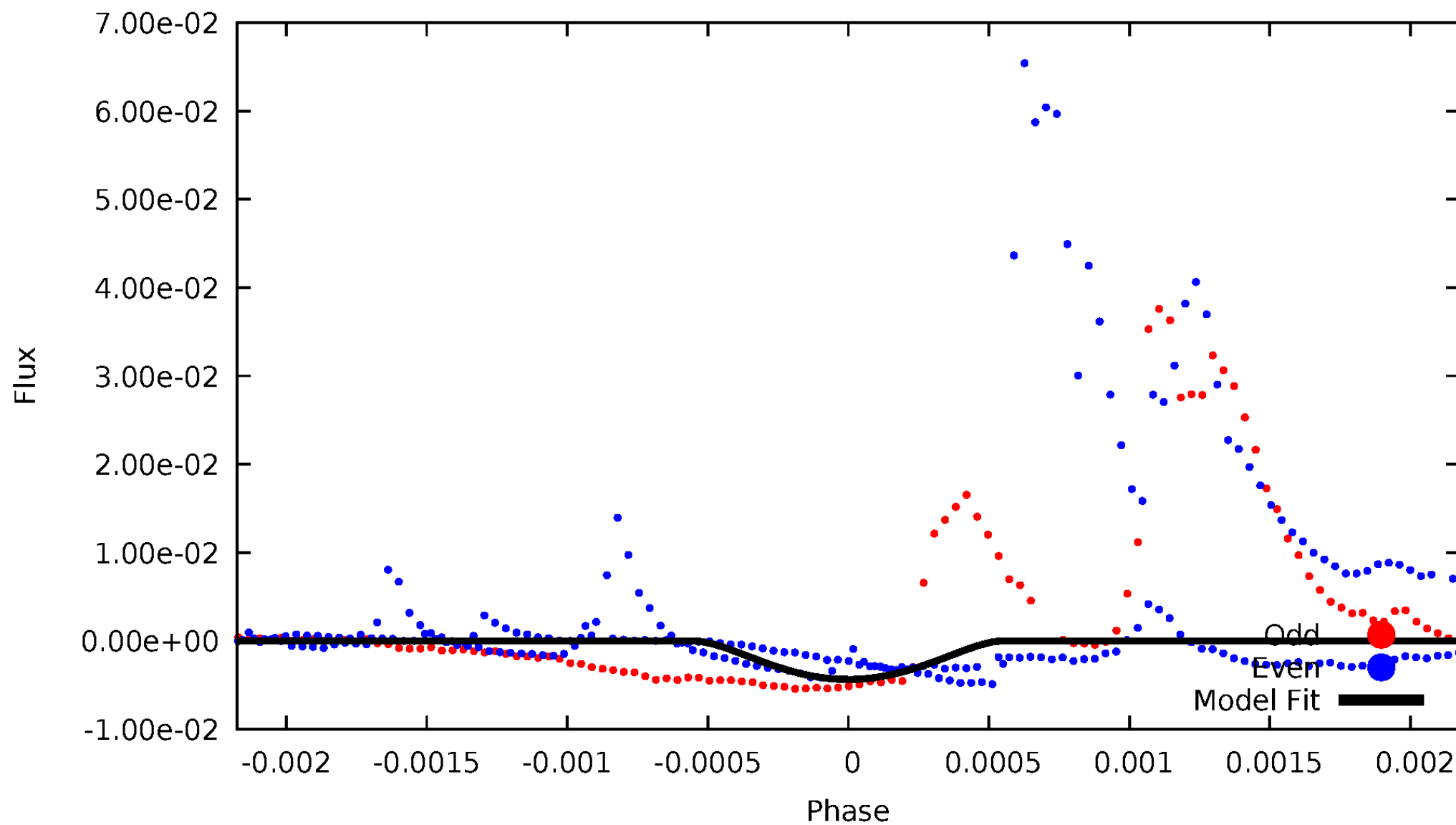


TCE 006529378-01



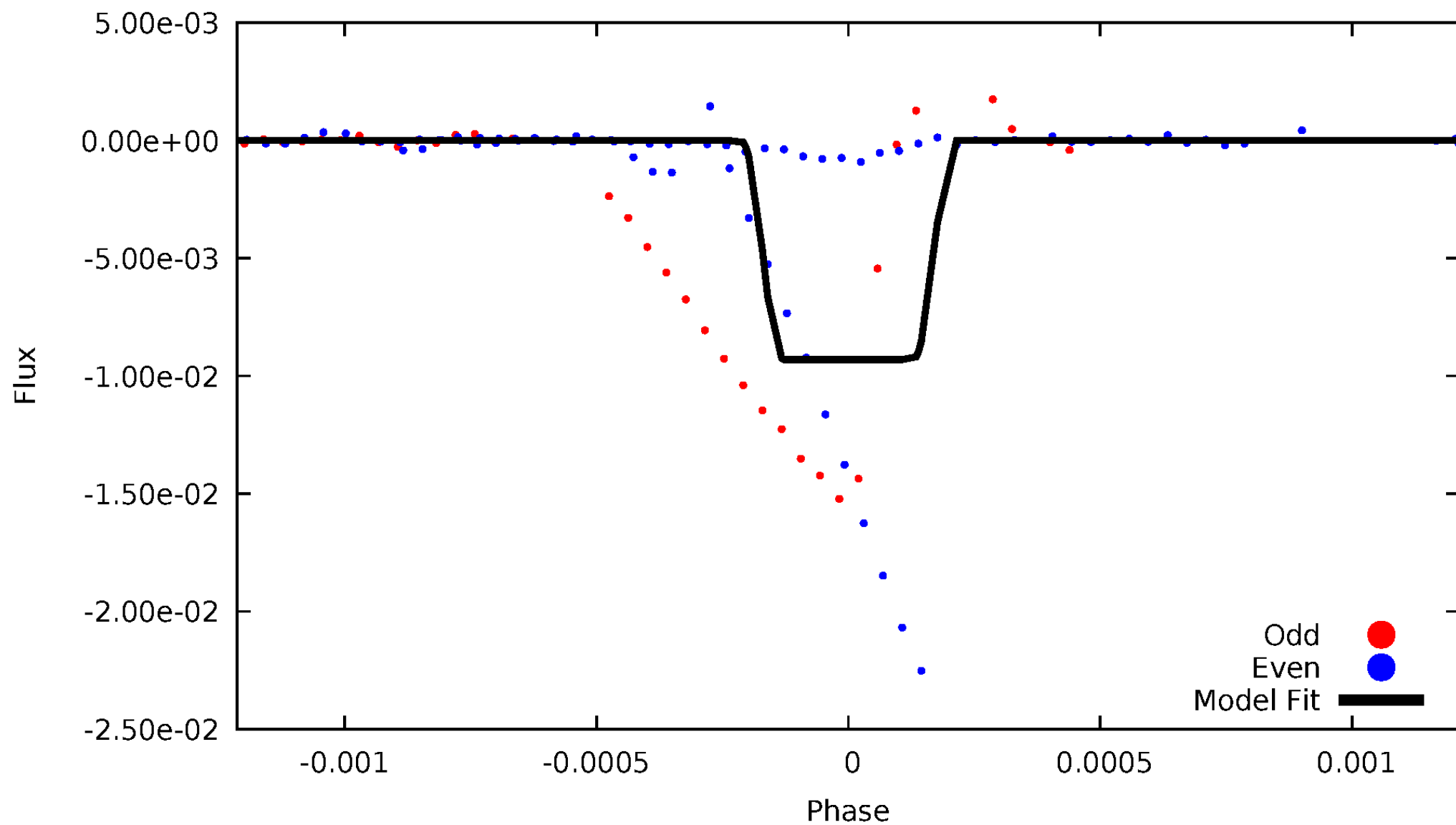
DV Odd/Even

TCE 006529378-01



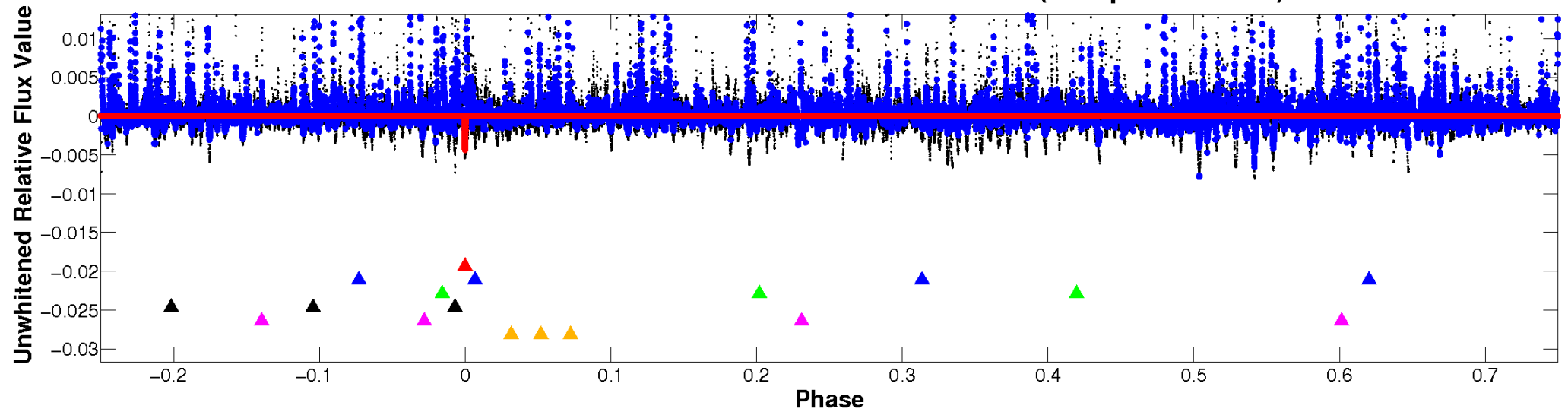
ALT Odd/Even

TCE 006529378-01

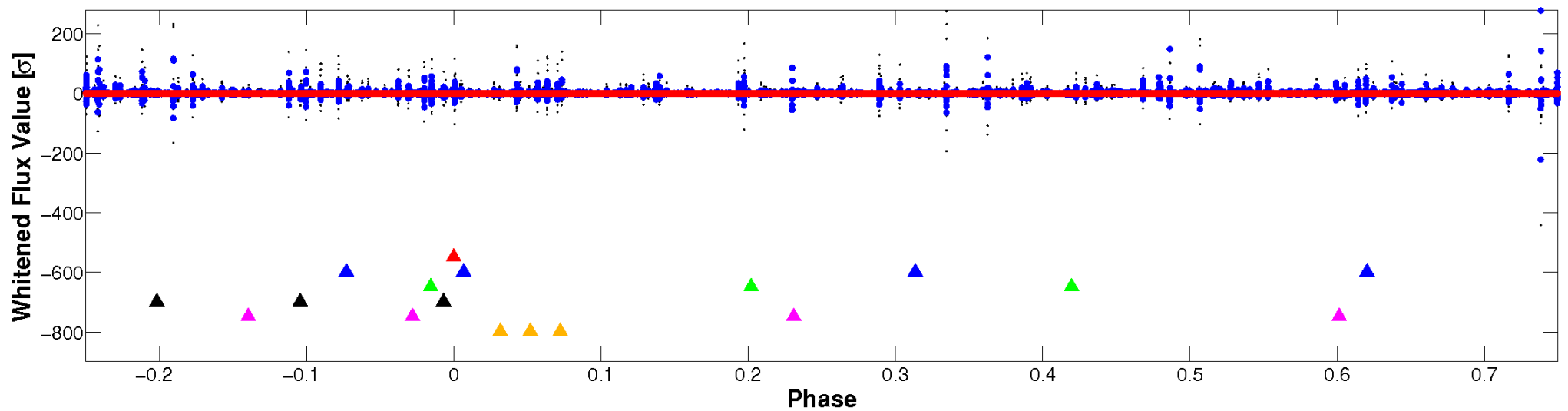


Non-Whitened Vs. Whitened Light Curve

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

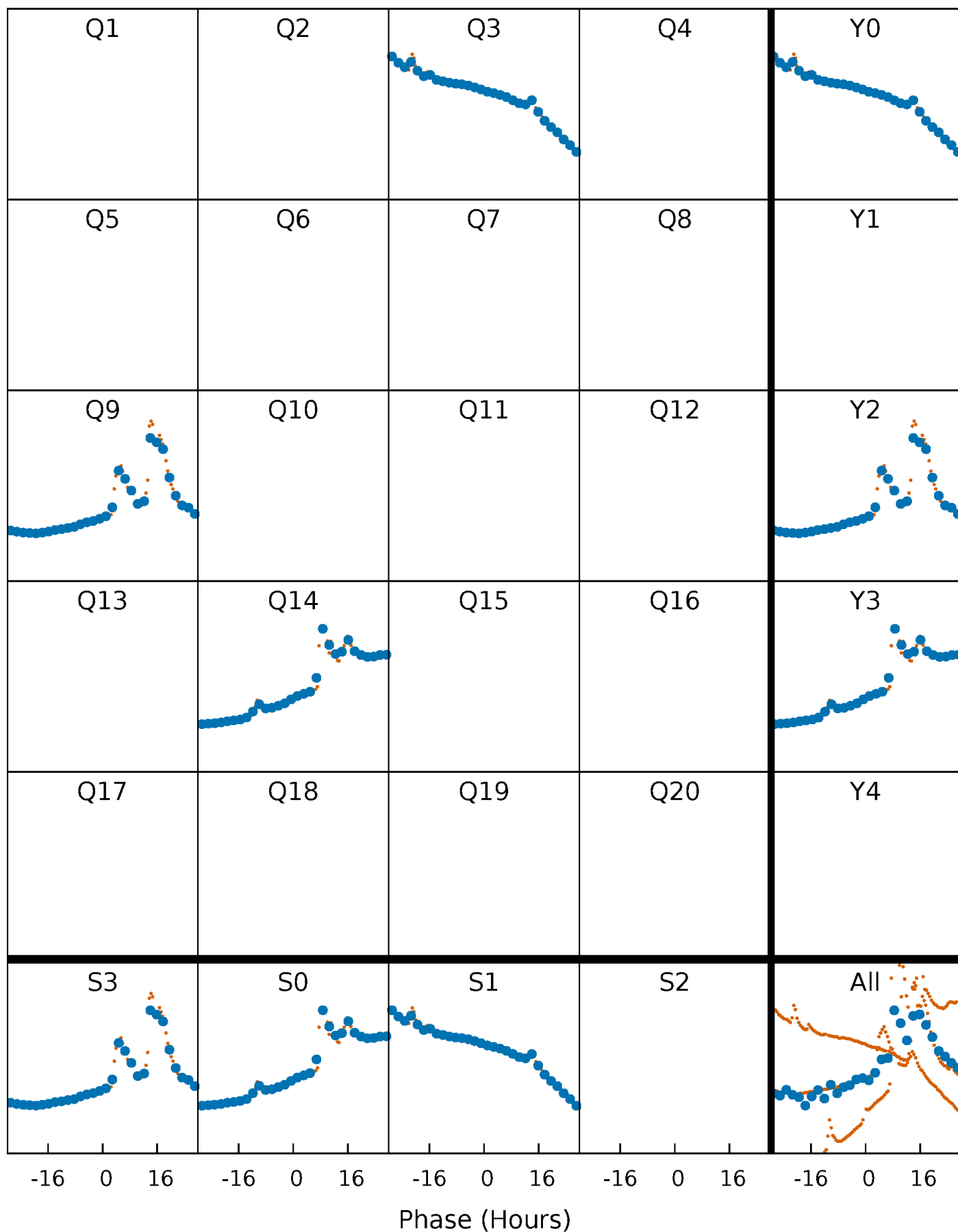


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



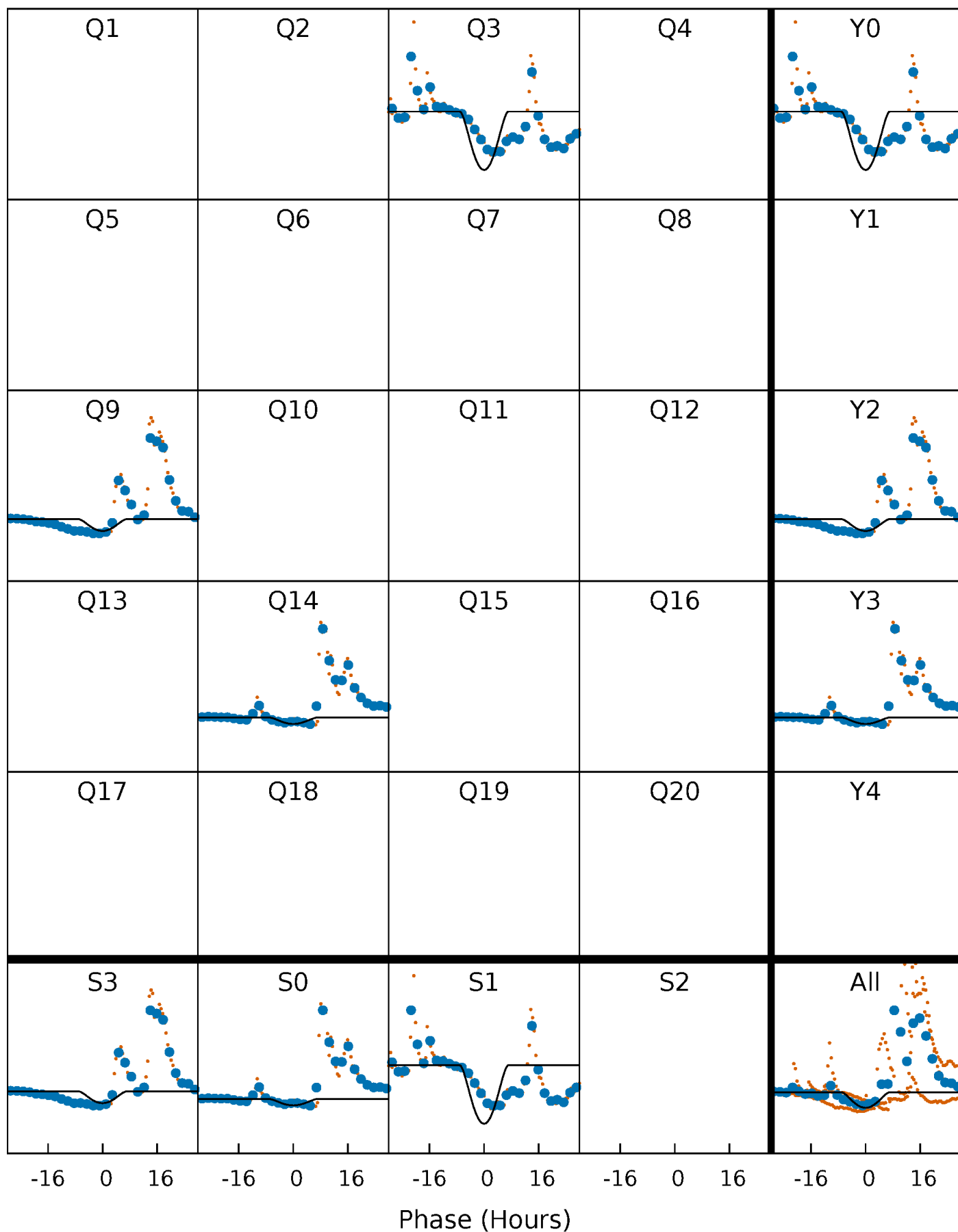
PDC Quarter-Phased Transit Curves

TCE 006529378-01 P=536.398435 Days $T_0=276.836699$ (BKJD)



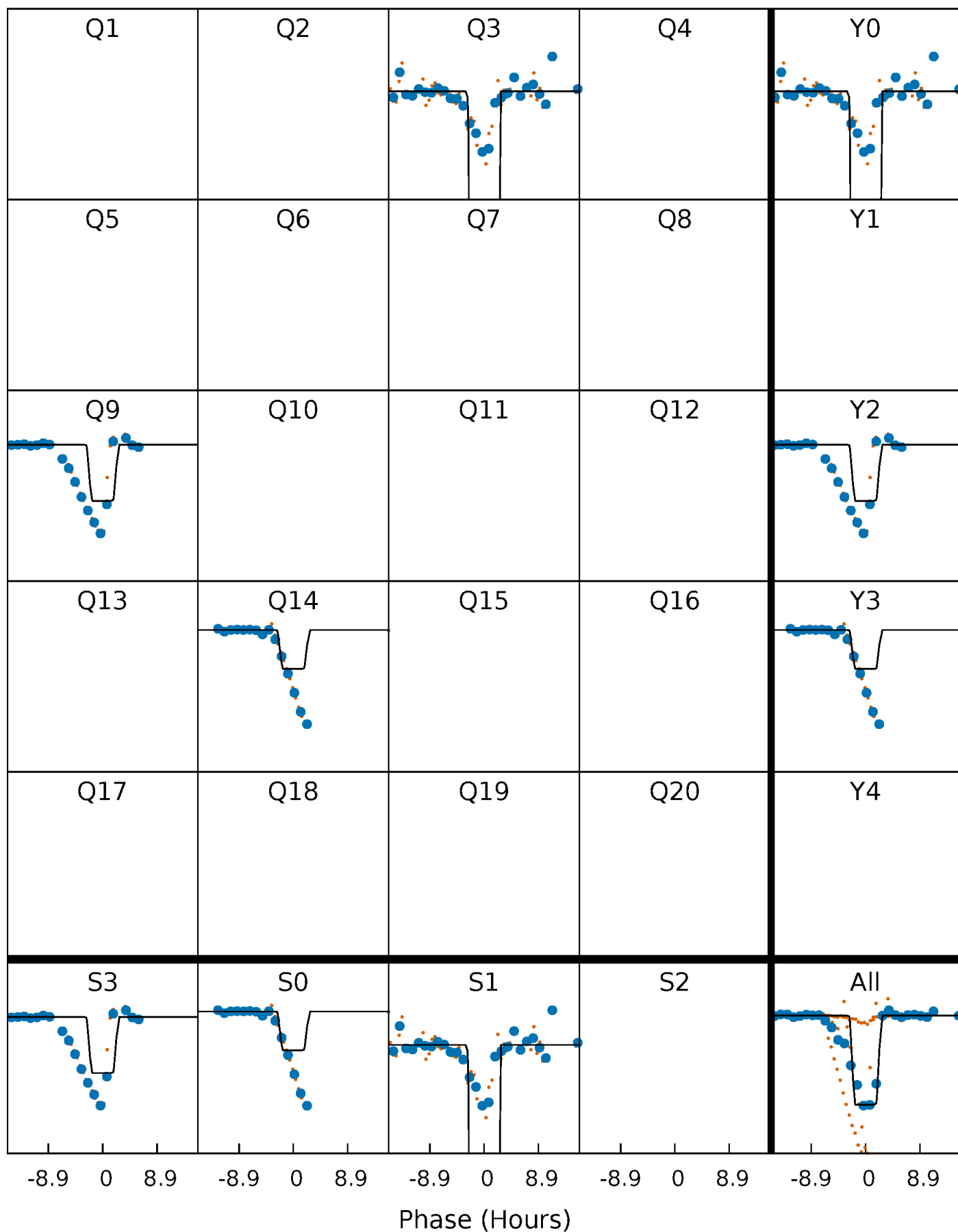
DV Quarter-Phased Transit Curves

TCE 006529378-01 P=536.398435 Days $T_0=276.836699$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

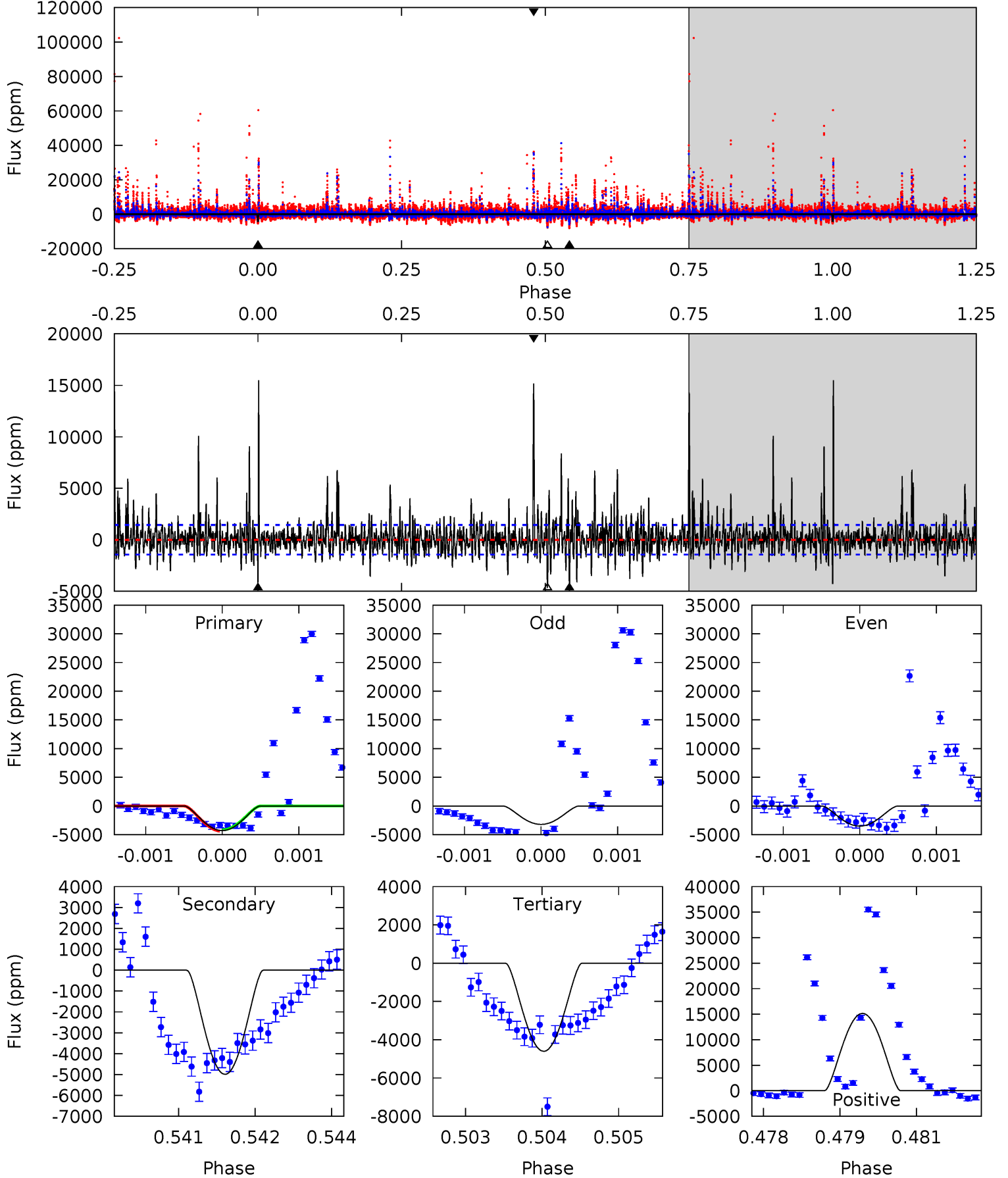
TCE 006529378-01 P=536.442251 Days $T_0=276.905530$ (BKJD)



DV Model-Shift Uniqueness Test

006529378-01, P = 536.398435 Days, E = 276.836699 Days

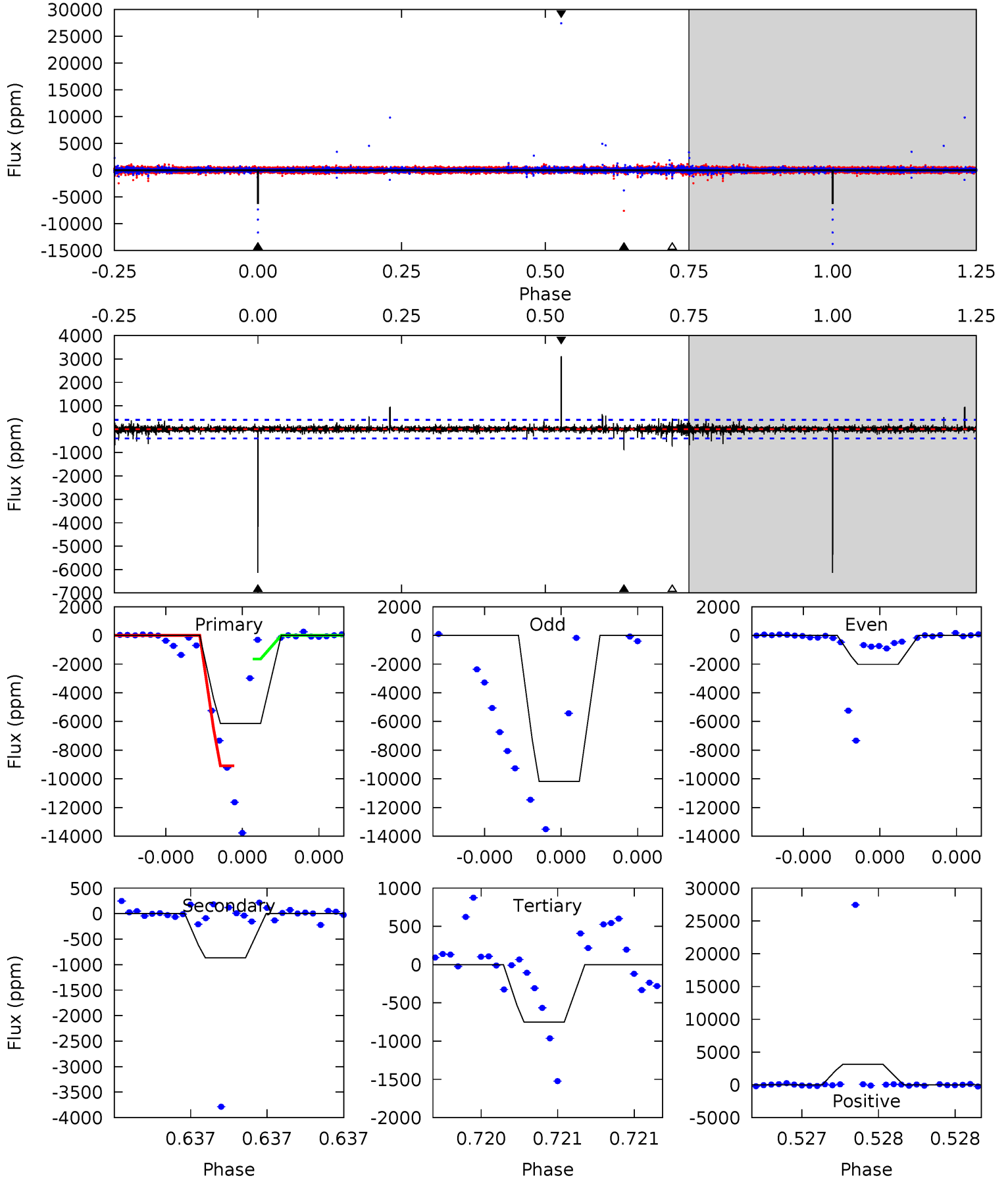
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.2	18.9	17.4	57.4	5.43	3.26	5.31	-1.23	-41.2	1.46	-38.5	0.32	1.07	0.76	0.44



Alt Model-Shift Uniqueness Test

006529378-01, P = 536.442251 Days, E = 276.905530 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
86.4	12.2	10.6	43.8	5.60	3.52	0.96	75.9	42.6	1.63	-31.6	40.6	0.85	0.34	0



Stellar Parameters For KIC 006529378

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4484^{+156}_{-156}	$4.620^{+0.033}_{-0.033}$	$0.060^{+0.250}_{-0.300}$	$0.683^{+0.043}_{-0.053}$	$0.709^{+0.052}_{-0.063}$	$3.137^{+0.558}_{-0.393}$
	+3%/-3%	+1%/-1%	+417%/-500%	+6%/-8%	+7%/-9%	+18%/-13%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006529378-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-4992 ± 264	$20.34^{+20.69}_{-14.23}$	213^{+8}_{-9}	2890^{+1364}_{-465}	8655^{+87228}_{-6489}
Alt.	-866 ± 71	$19.01^{+21.45}_{-12.81}$	213^{+8}_{-8}	2353^{+817}_{-354}	1771^{+14753}_{-1386}

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 $A_{obs} \gg 1.0$

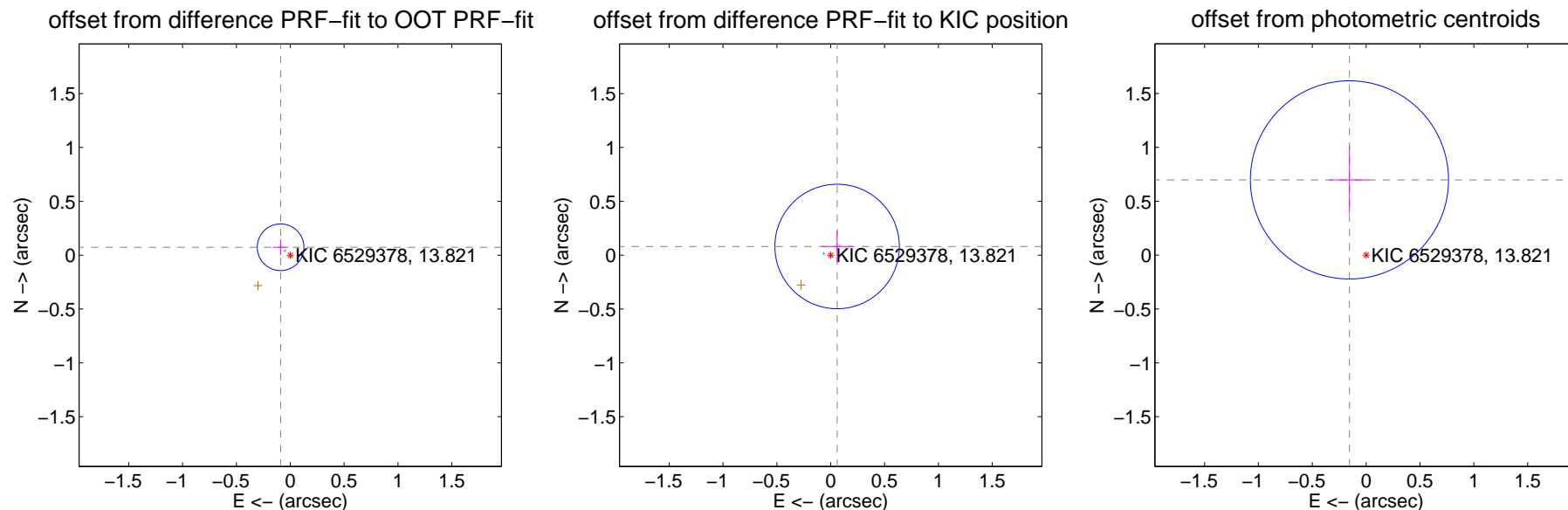
DV Centroid Data

Supplemental centroid analysis for 006529378-01. Kepler magnitude: 13.82. Transit SNR 9.11

There are 2 quarters with good PRF difference image offsets

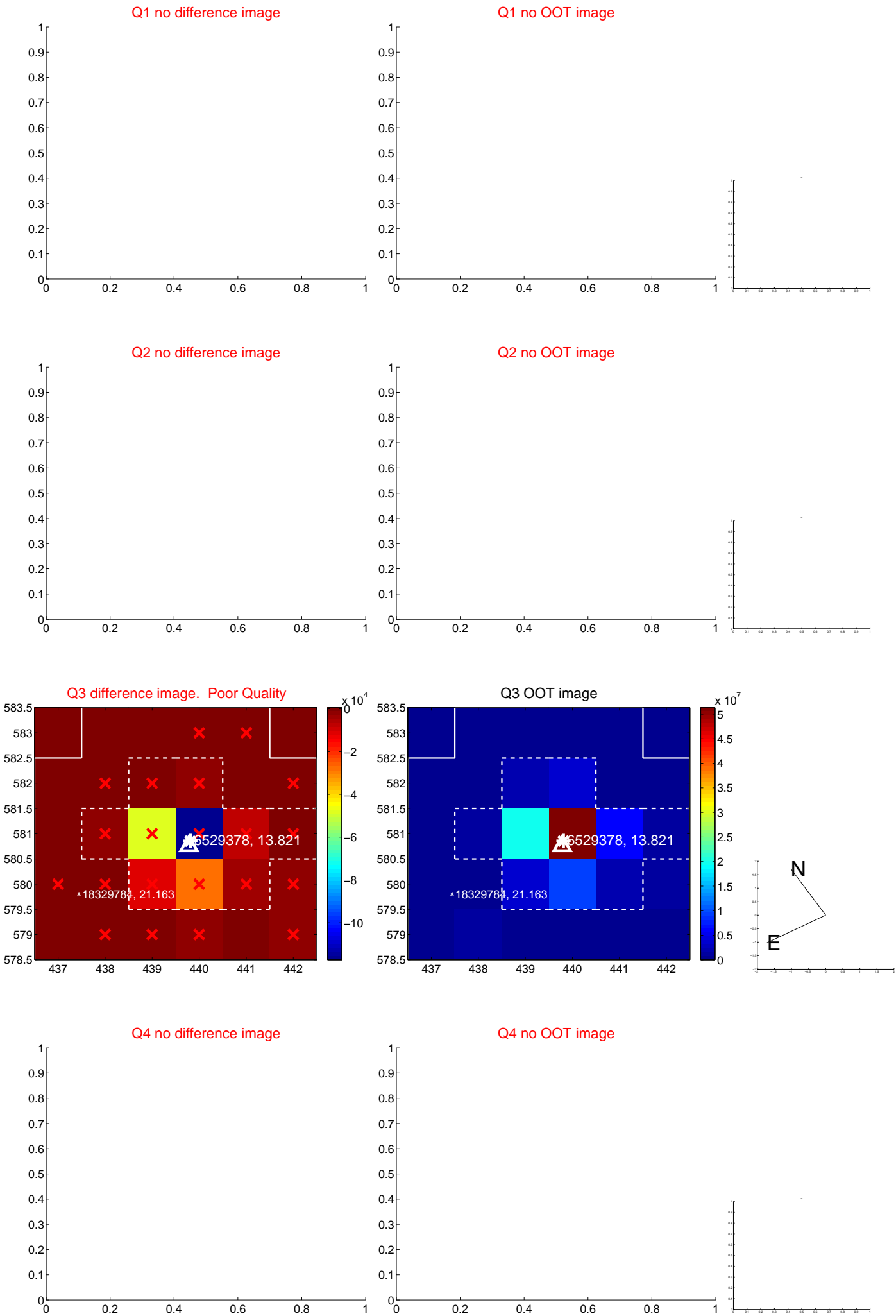
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.116 ± 0.072	1.60	0.090 ± 0.071	0.073 ± 0.074
PRF-fit source offset from KIC position	0.100 ± 0.193	0.52	-0.059 ± 0.144	0.081 ± 0.148
photometric centroid source offset	0.71 ± 0.31	2.33	0.15 ± 0.19	0.70 ± 0.31



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

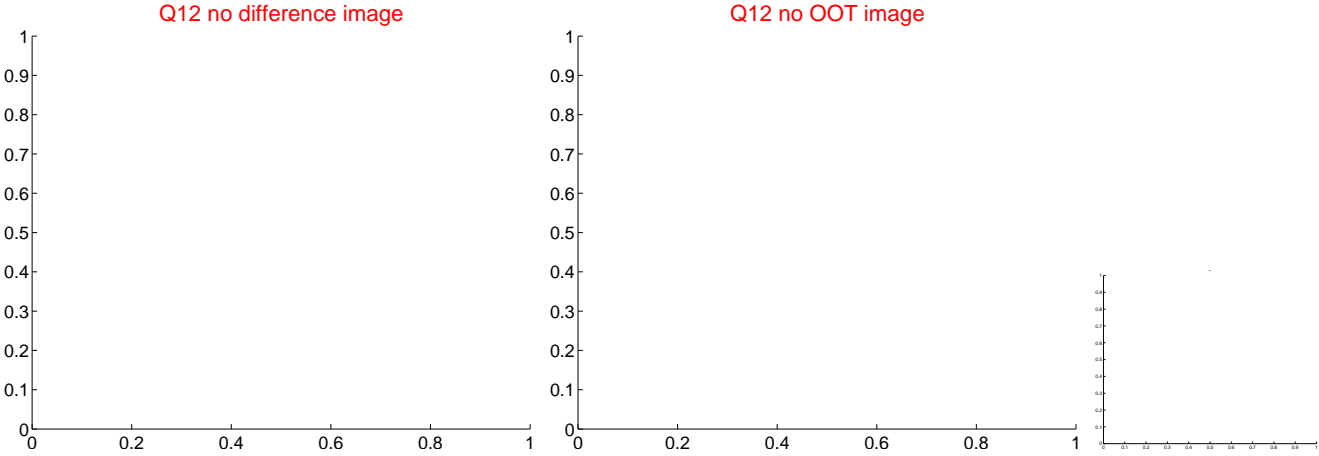
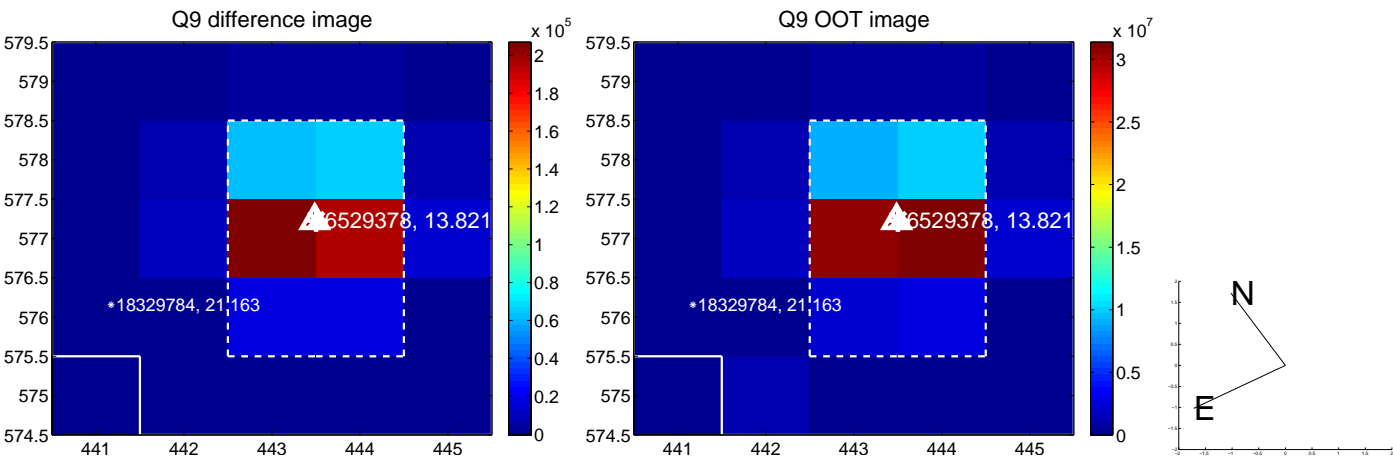
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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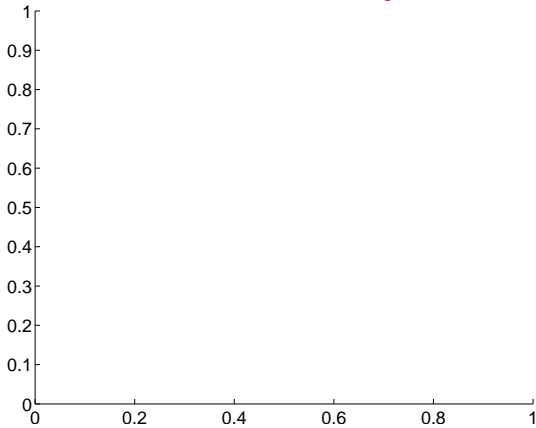


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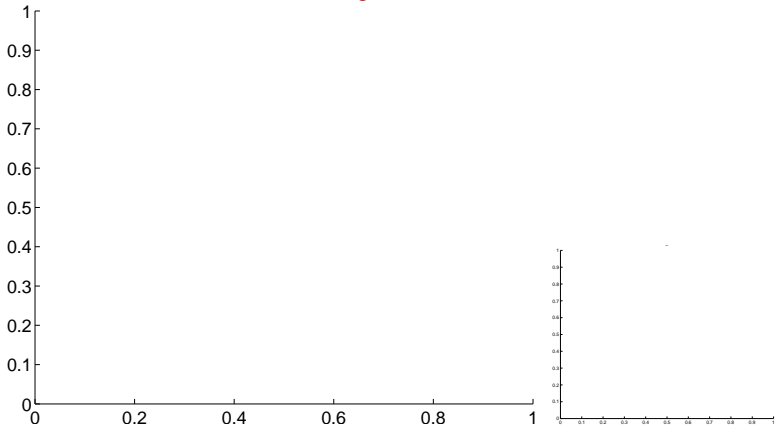


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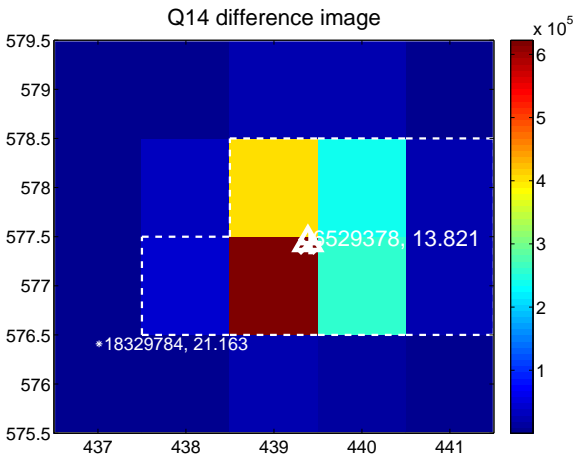
Q13 no difference image



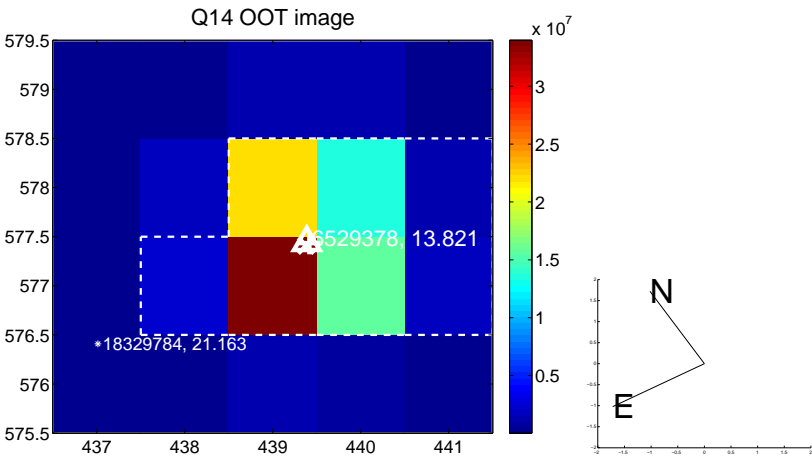
Q13 no OOT image



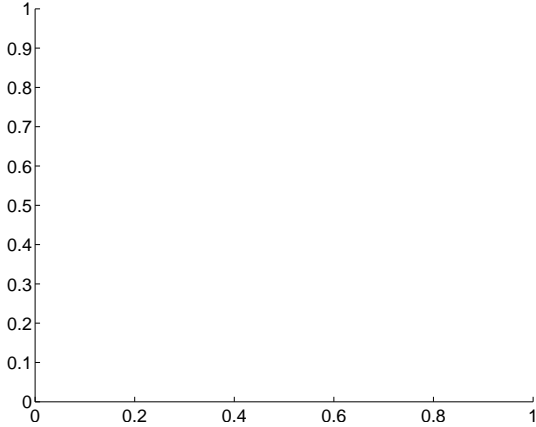
Q14 difference image



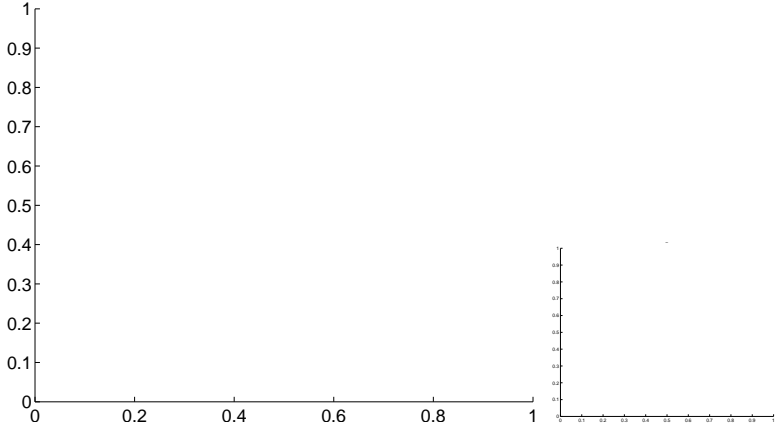
Q14 OOT image



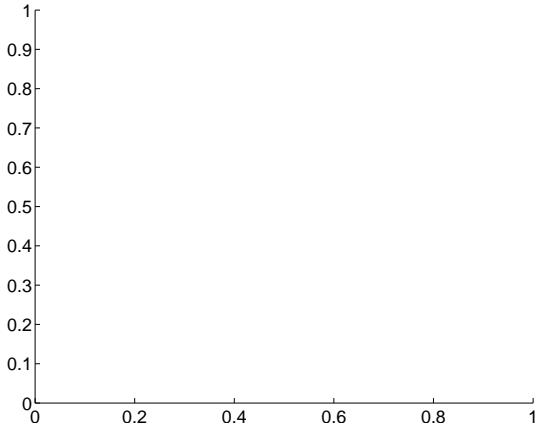
Q15 no difference image



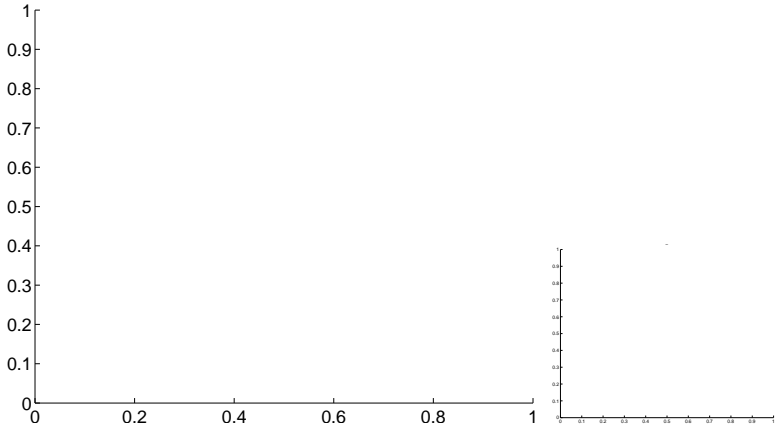
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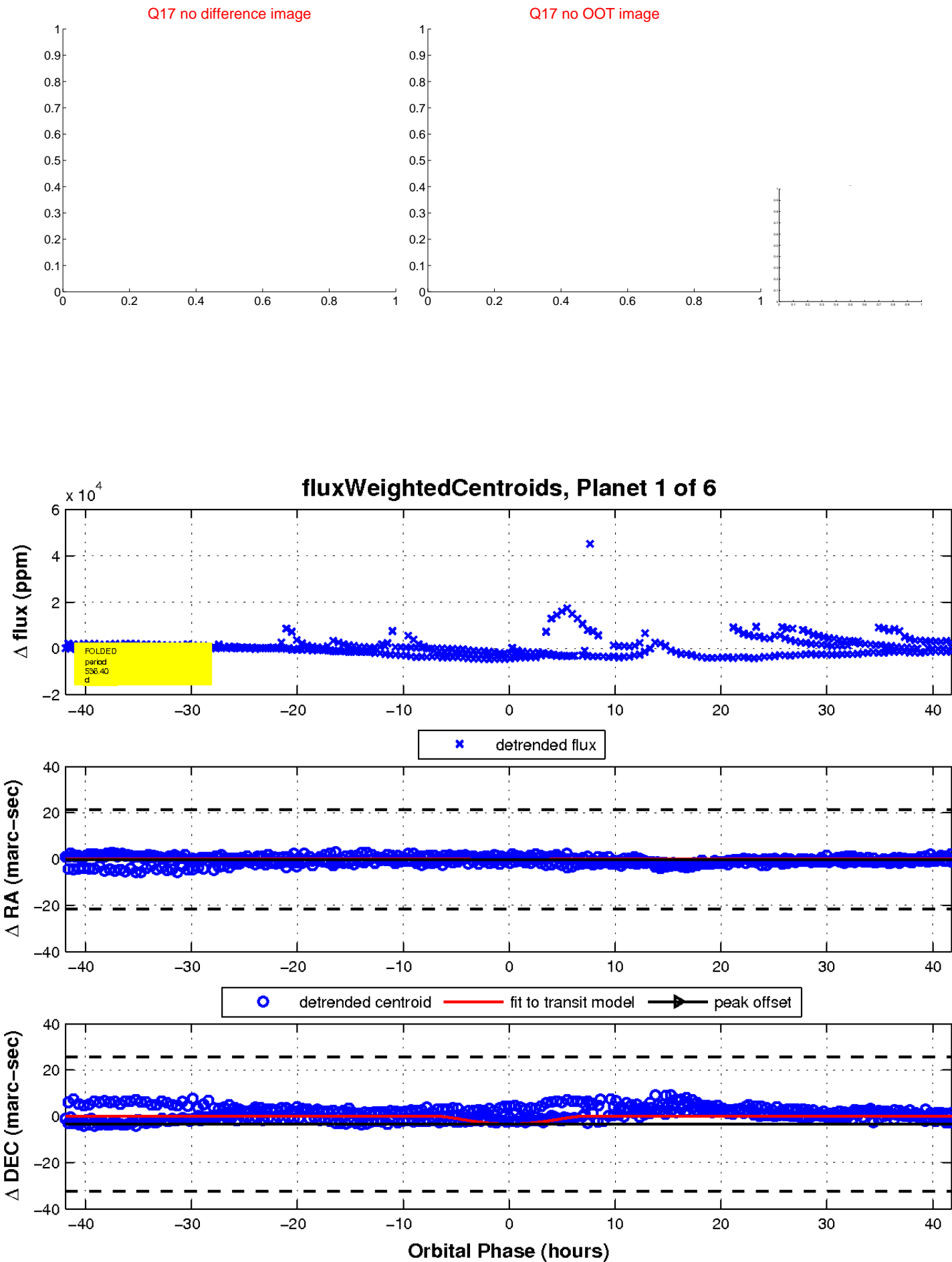
Q16 no difference image



Q16 no OOT image

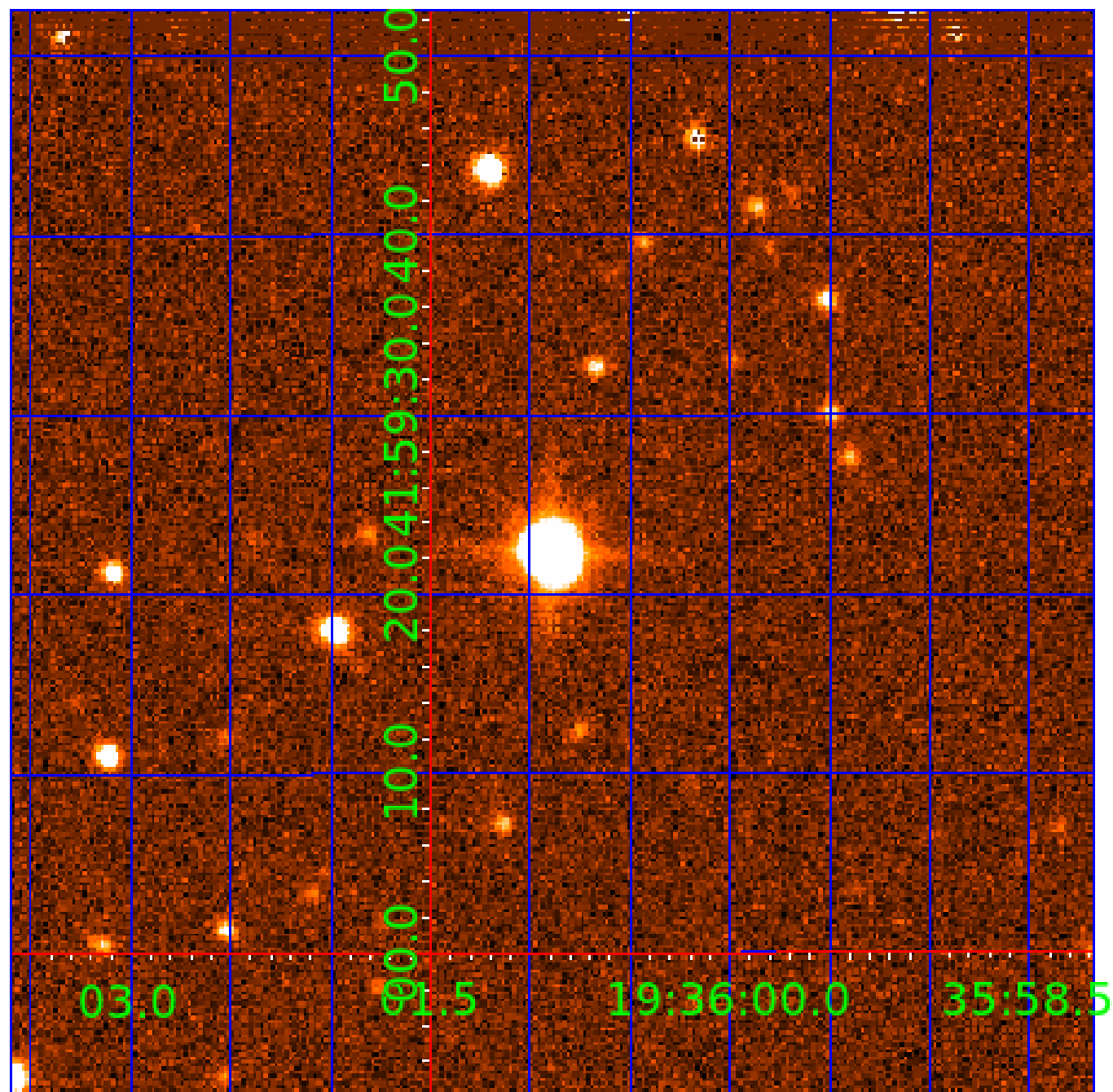


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UKIRT Image

Declination



KIC 006529378

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

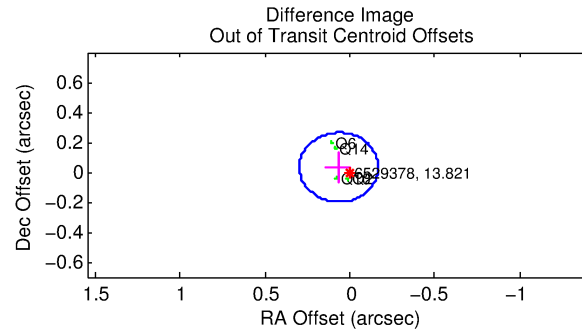
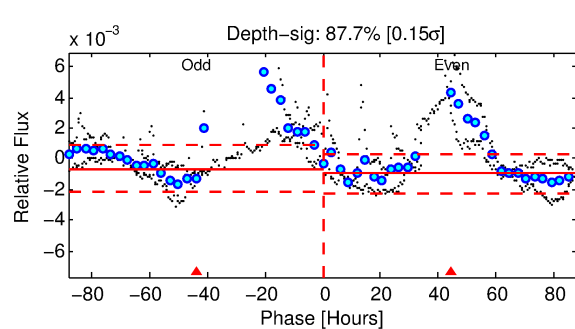
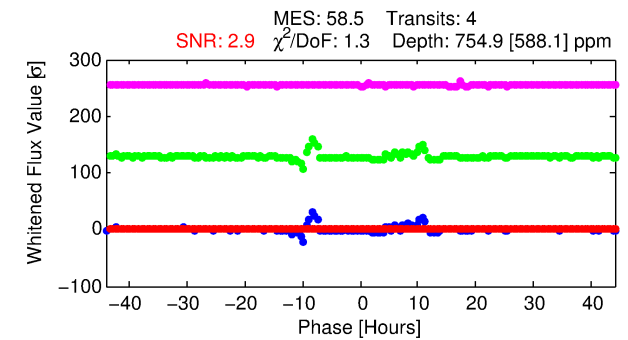
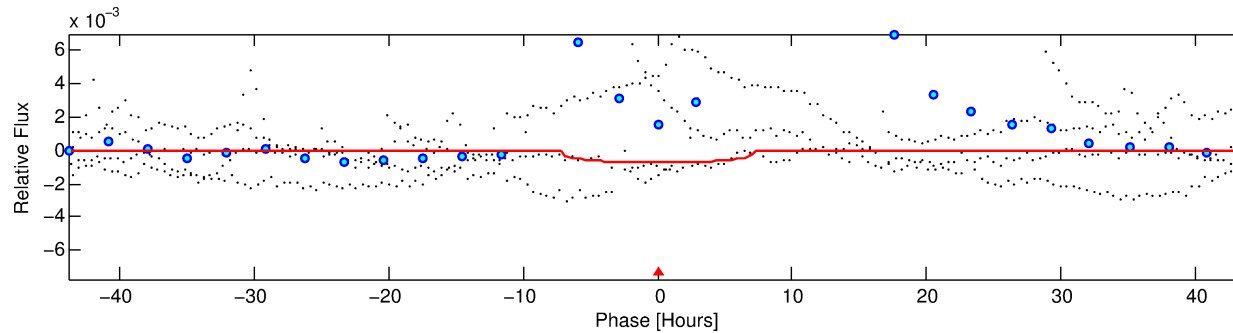
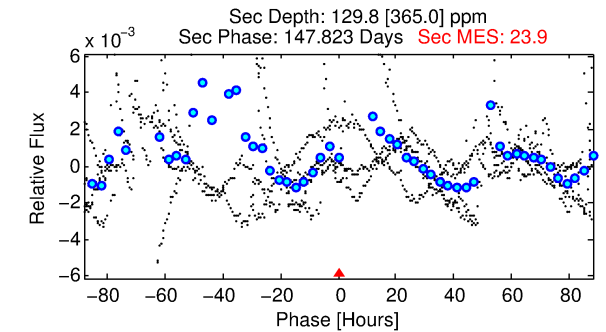
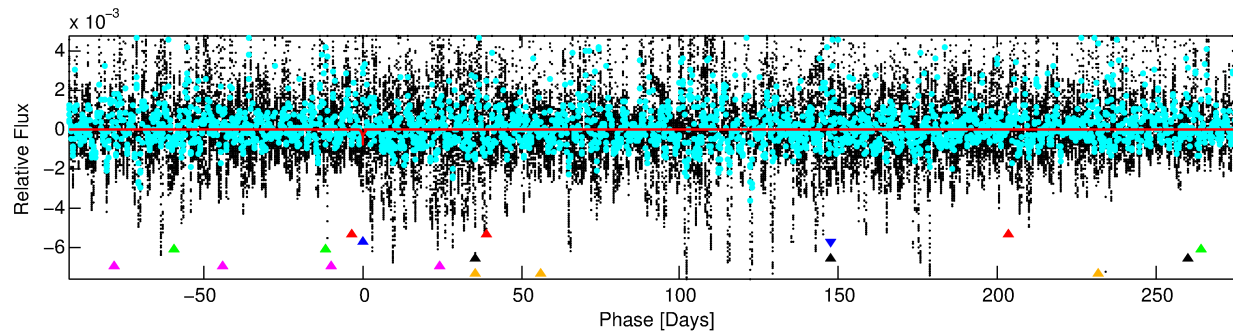
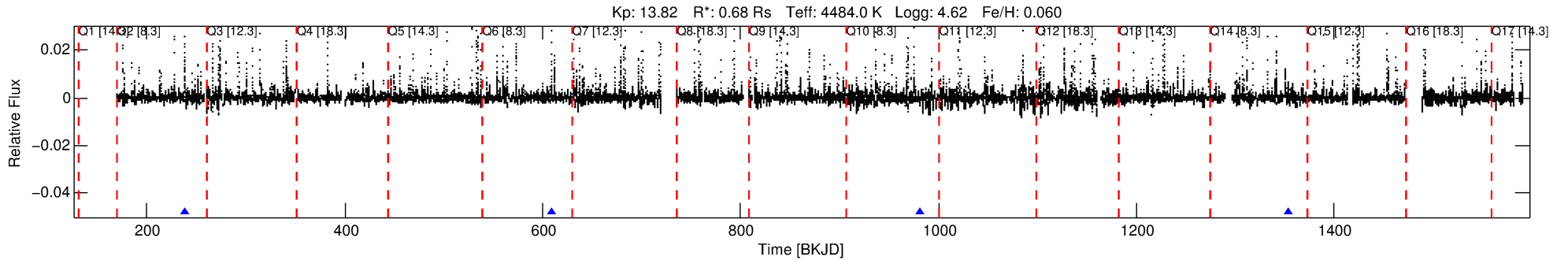
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006529378-02

No Significant Match Found

DV One-Page Summary

KIC: 6529378 Candidate: 2 of 6 Period: 371.849 d



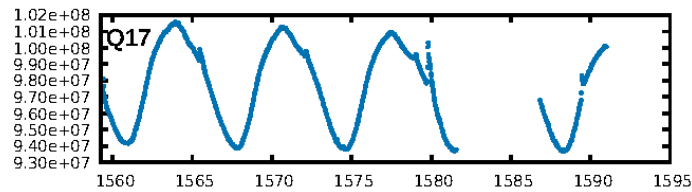
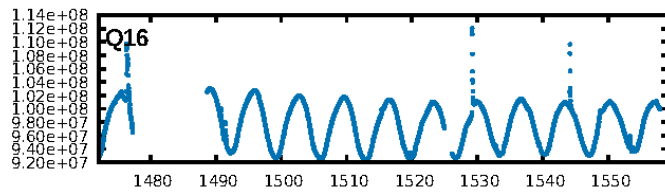
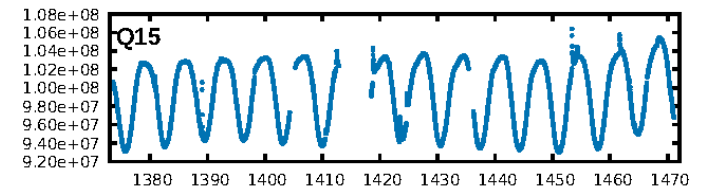
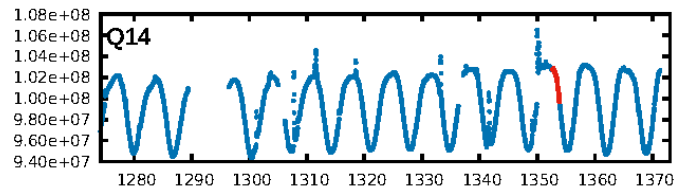
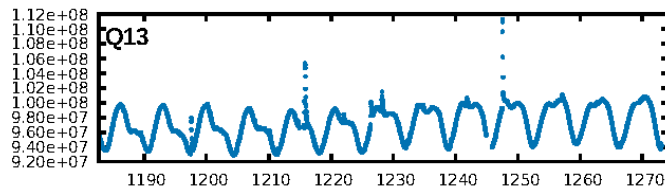
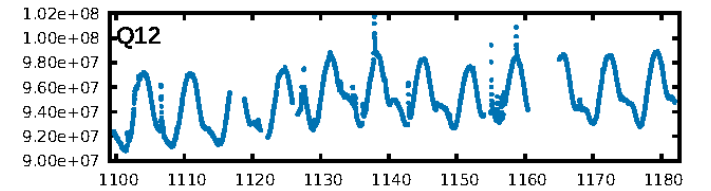
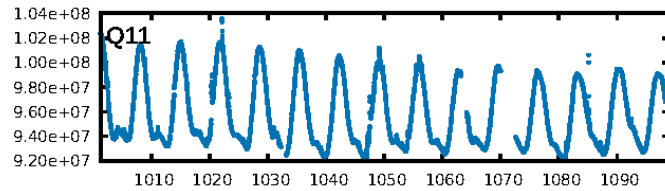
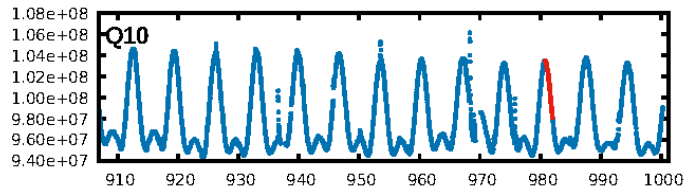
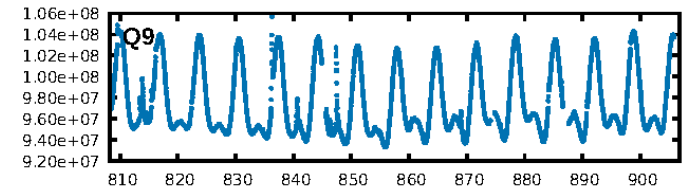
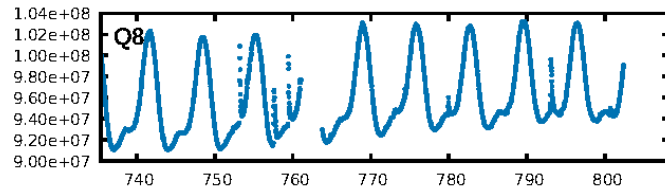
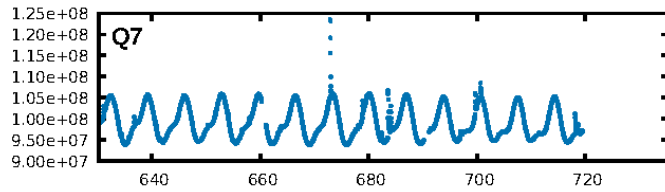
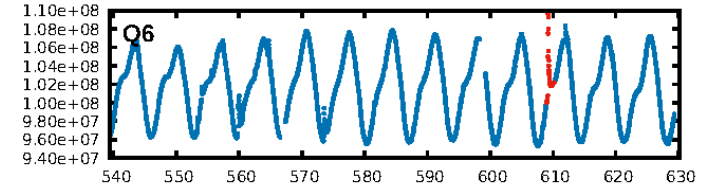
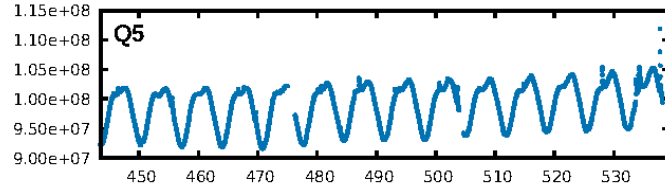
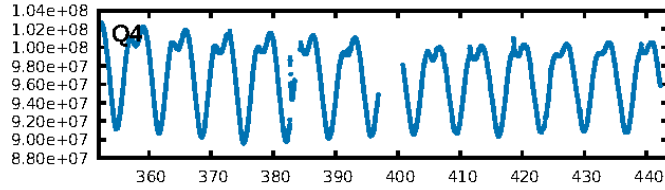
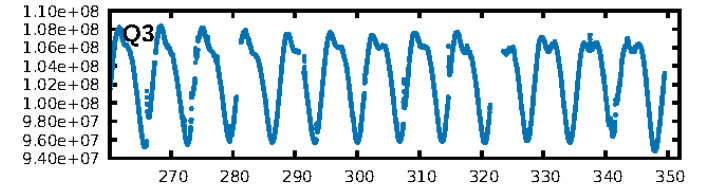
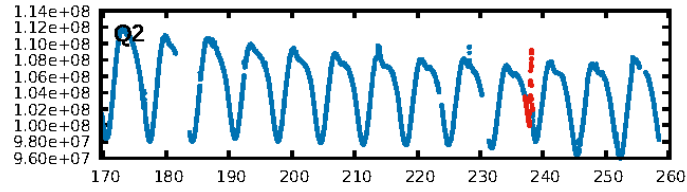
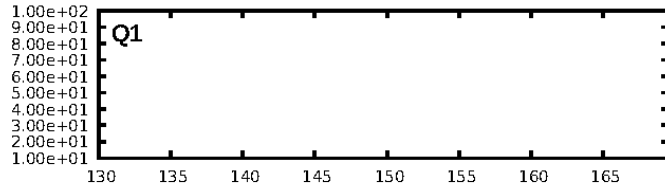
DV Fit Results:

Period = 371.84895 [0.01414] d
Epoch = 237.7287 [0.0331] BKJD
Rp/R* = 0.0240 [0.0368]
a/R* = 198.77 [915.42]
b = 0.00 [1591.28]
Seff = 0.21 [0.03]
Teq = 172 [7] K
Rp = 1.79 [2.75] Re
a = 0.9027 [0.0520] AU
Ag = 18219.99 [75872.05] [0.24σ]
Teffp = 3091 [3219] K [0.91σ]

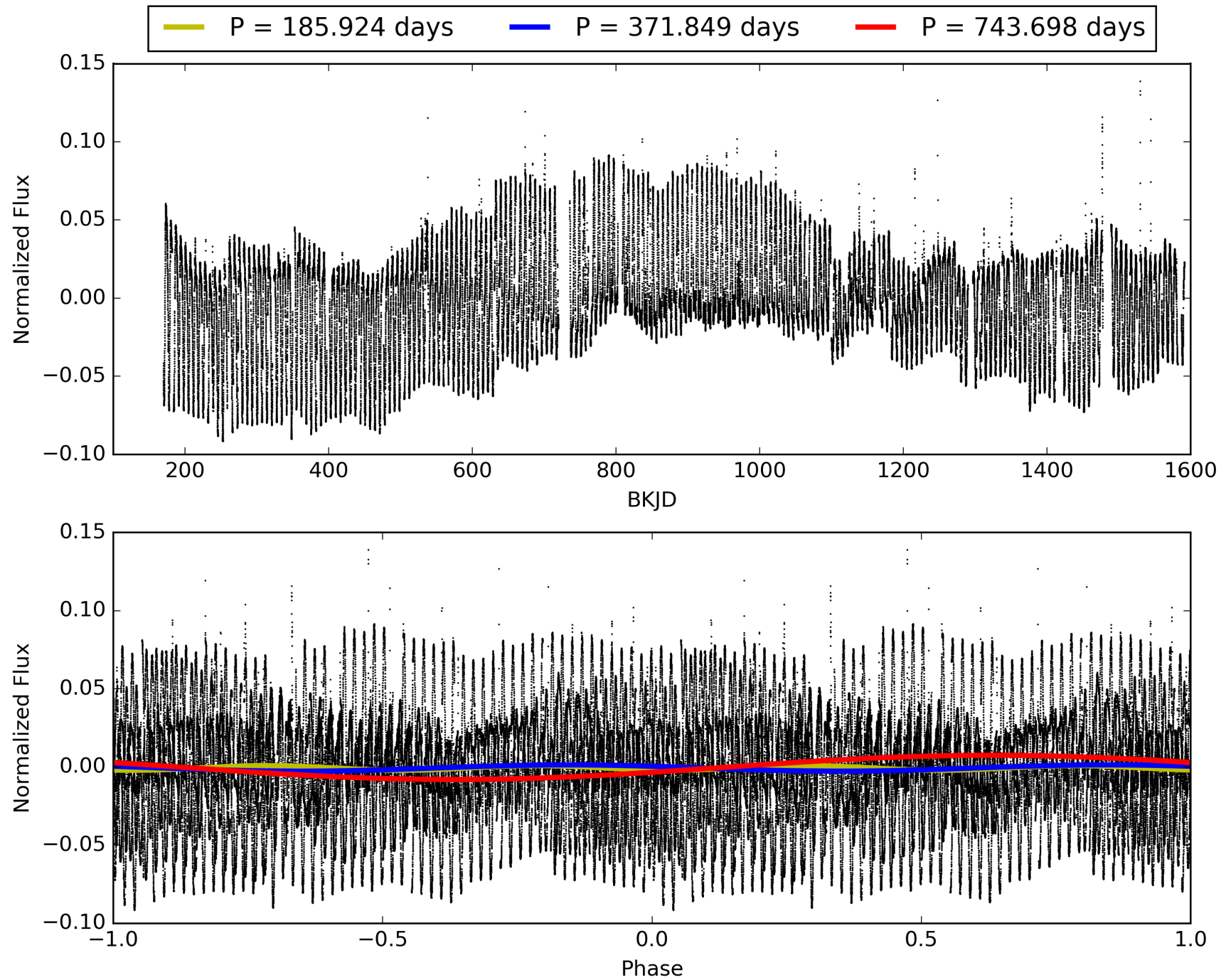
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [54.67σ]
LongPeriod-sig: 100.0% [75.51σ]
ModelChiSquare2-sig: 1.9%
ModelChiSquareGof-sig: 99.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.1691
Centroid-sig: 2.2%
Centroid-so: 1.696 arcsec [1.66σ]
OotOffset-rm: 0.075 arcsec [0.97σ]
KicOffset-rm: 0.093 arcsec [1.21σ]
OotOffset-st: 4/0/0/0 [4]
KicOffset-st: 4/0/0/0 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 006529378-02, PDC Light Curves

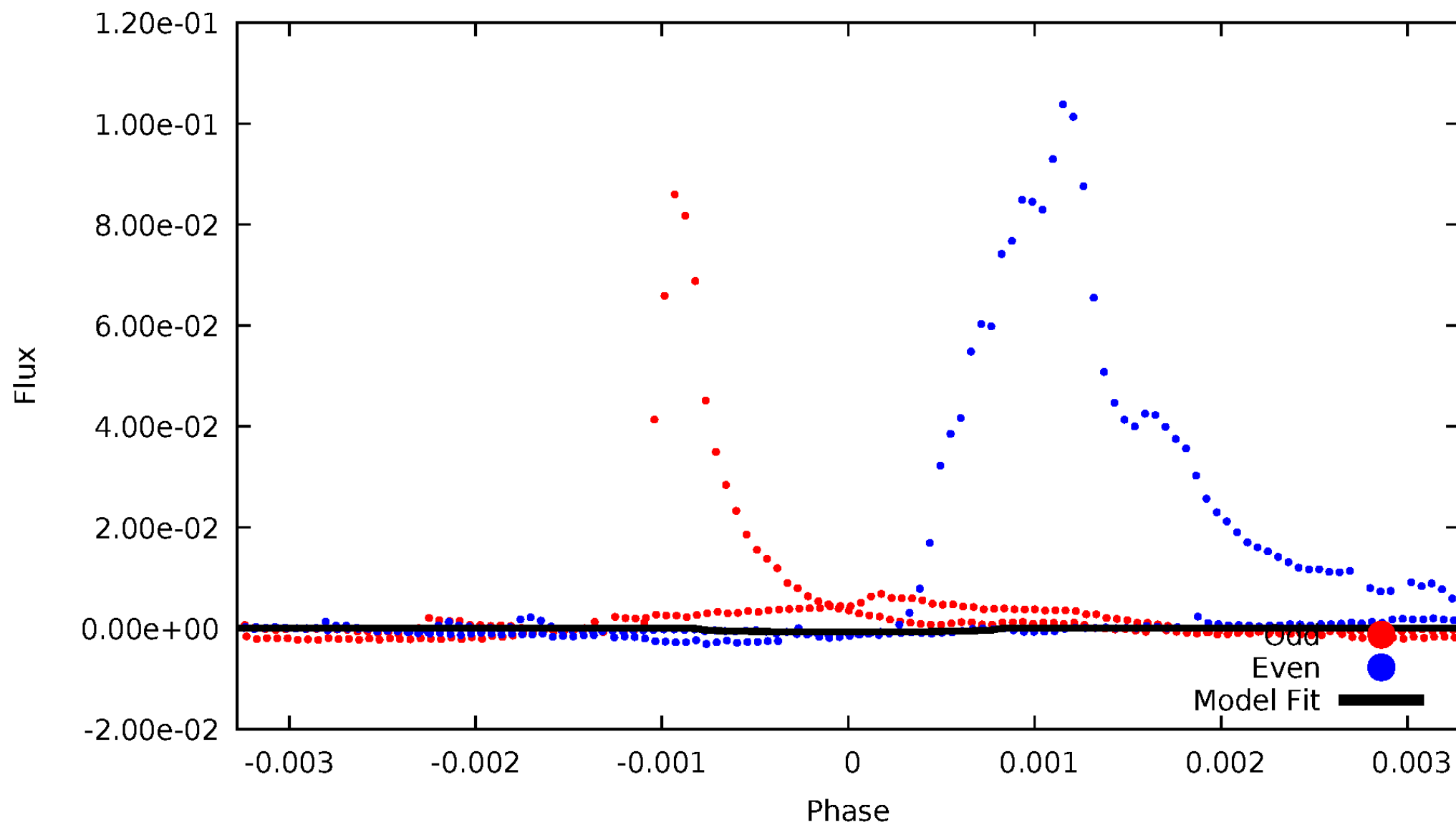


TCE 006529378-02



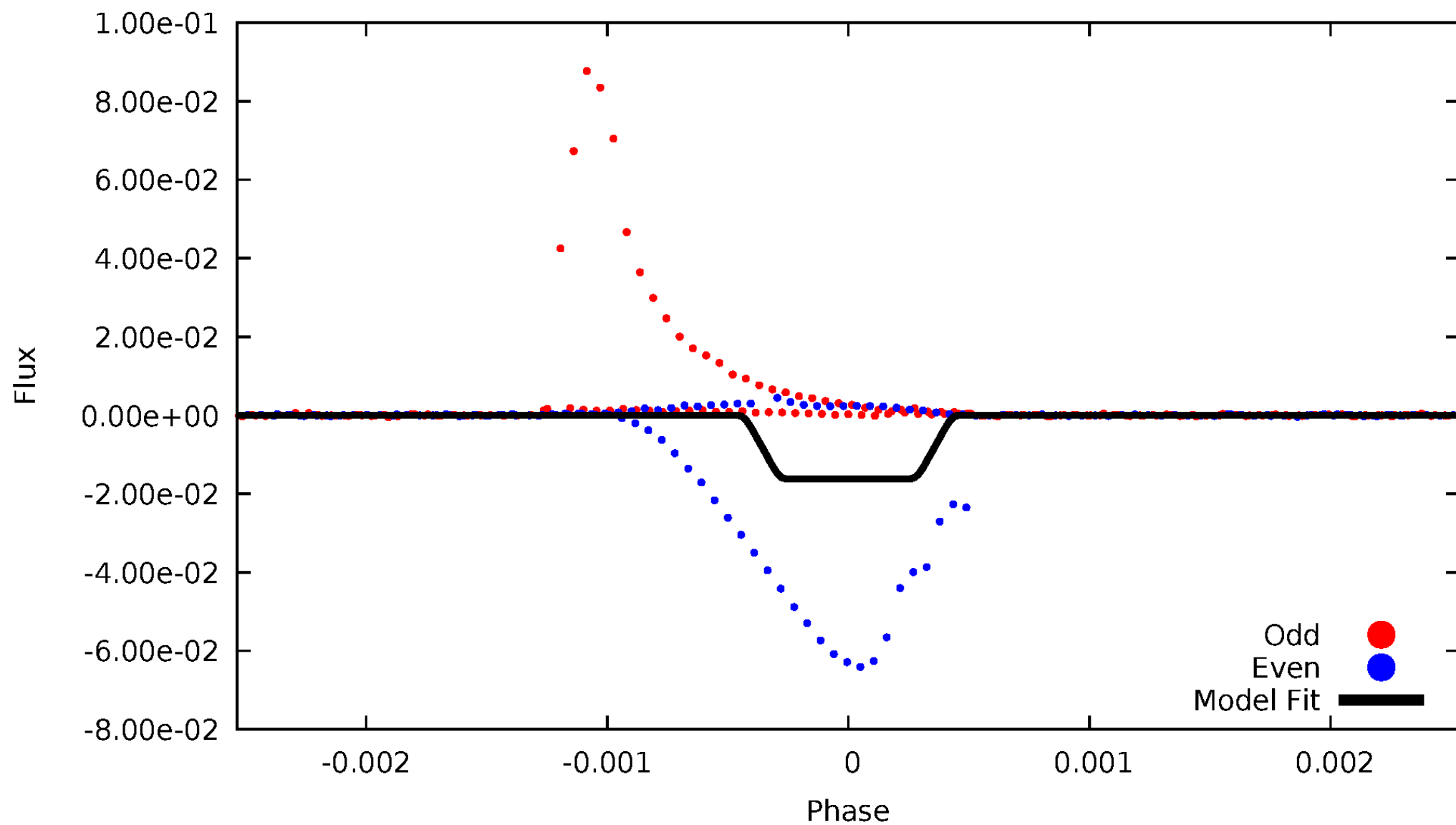
DV Odd/Even

TCE 006529378-02



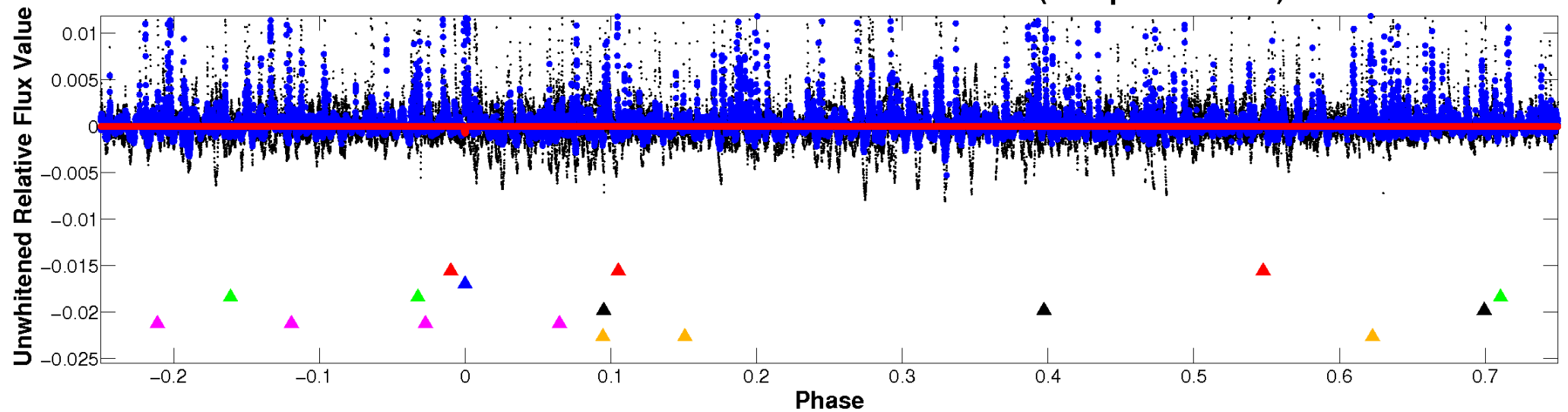
ALT Odd/Even

TCE 006529378-02

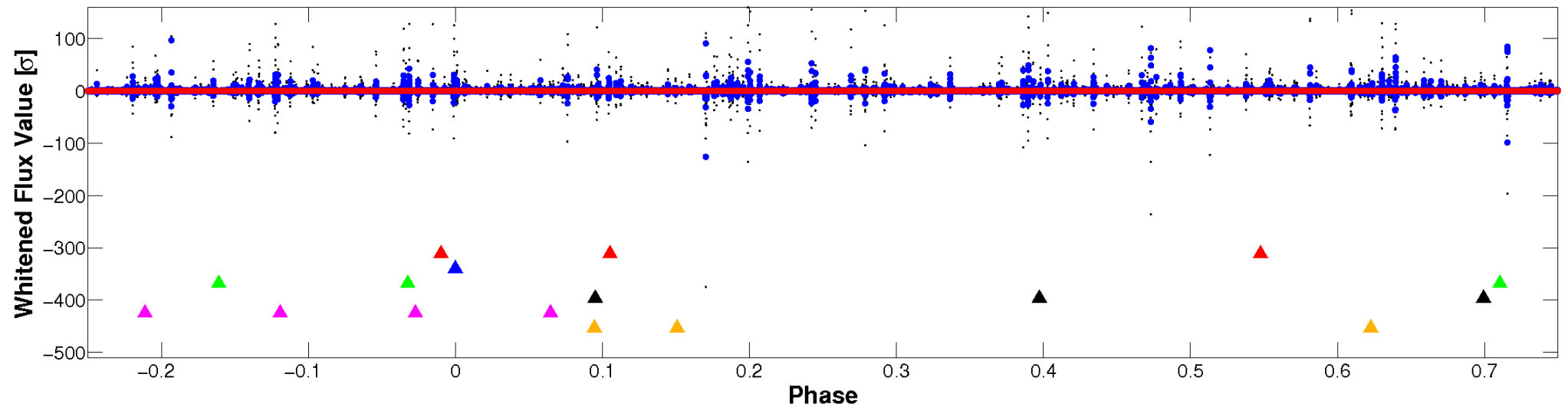


Non-Whitened Vs. Whitened Light Curve

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

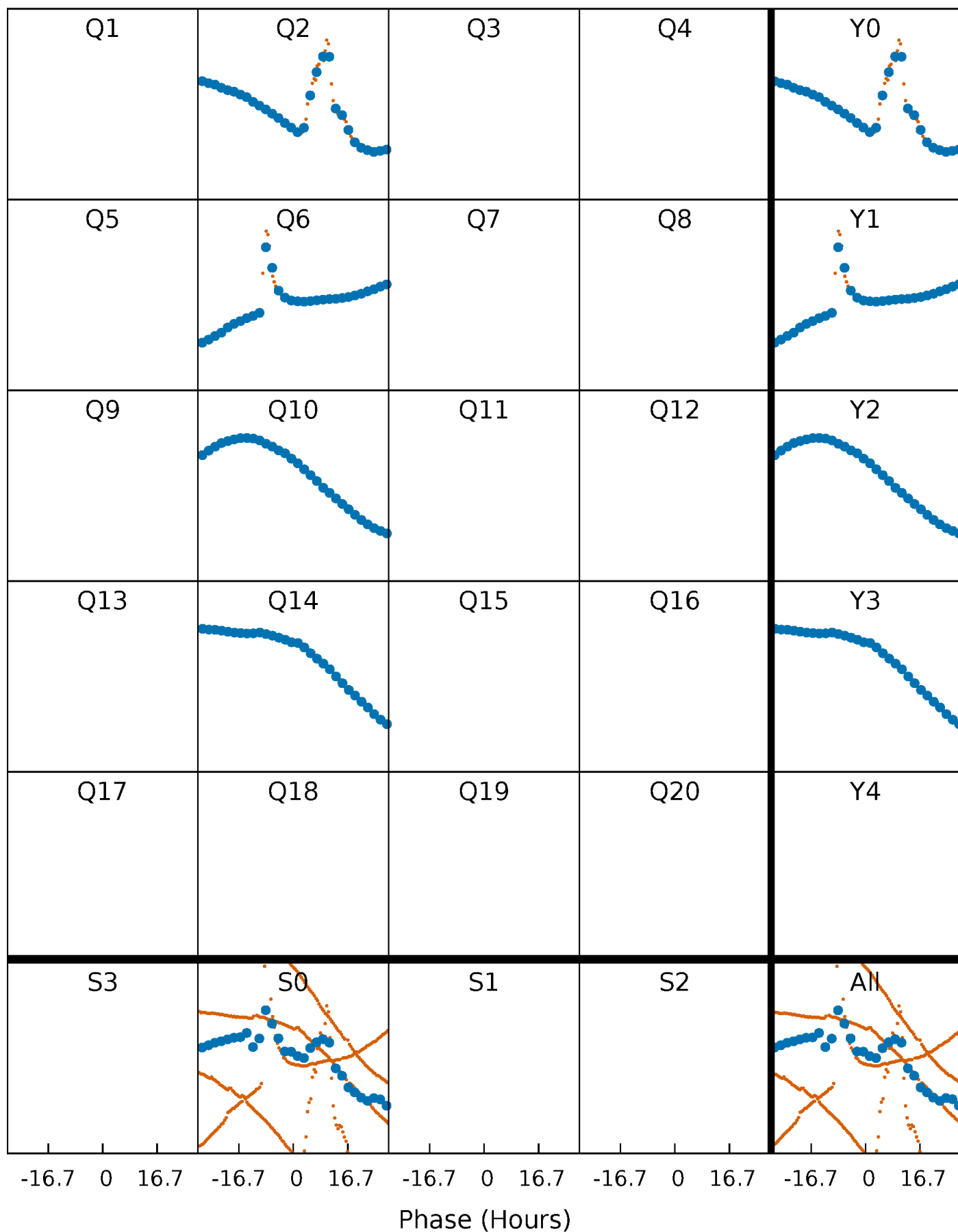


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



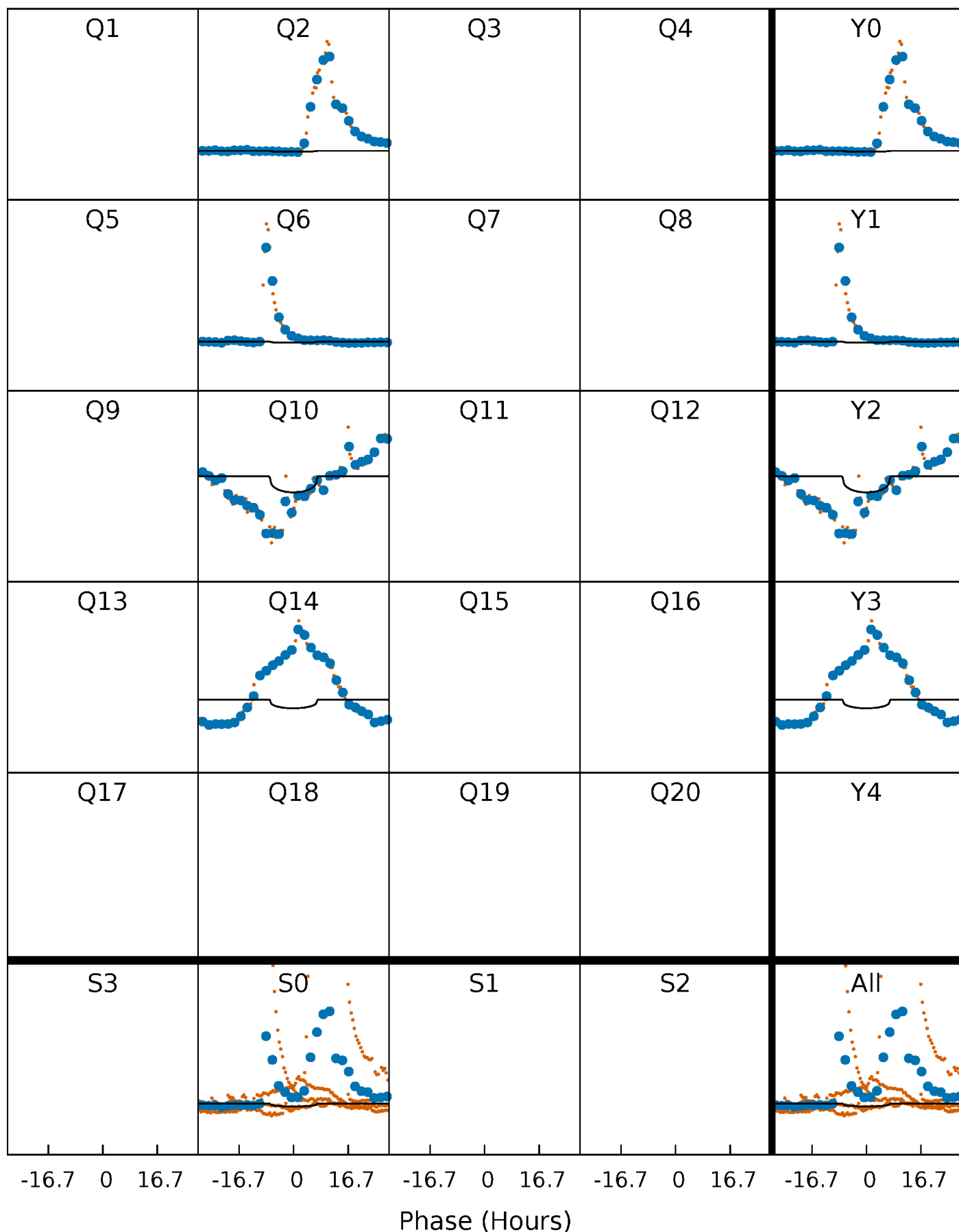
PDC Quarter-Phased Transit Curves

TCE 006529378-02 P=371.848951 Days $T_0=237.728709$ (BKJD)



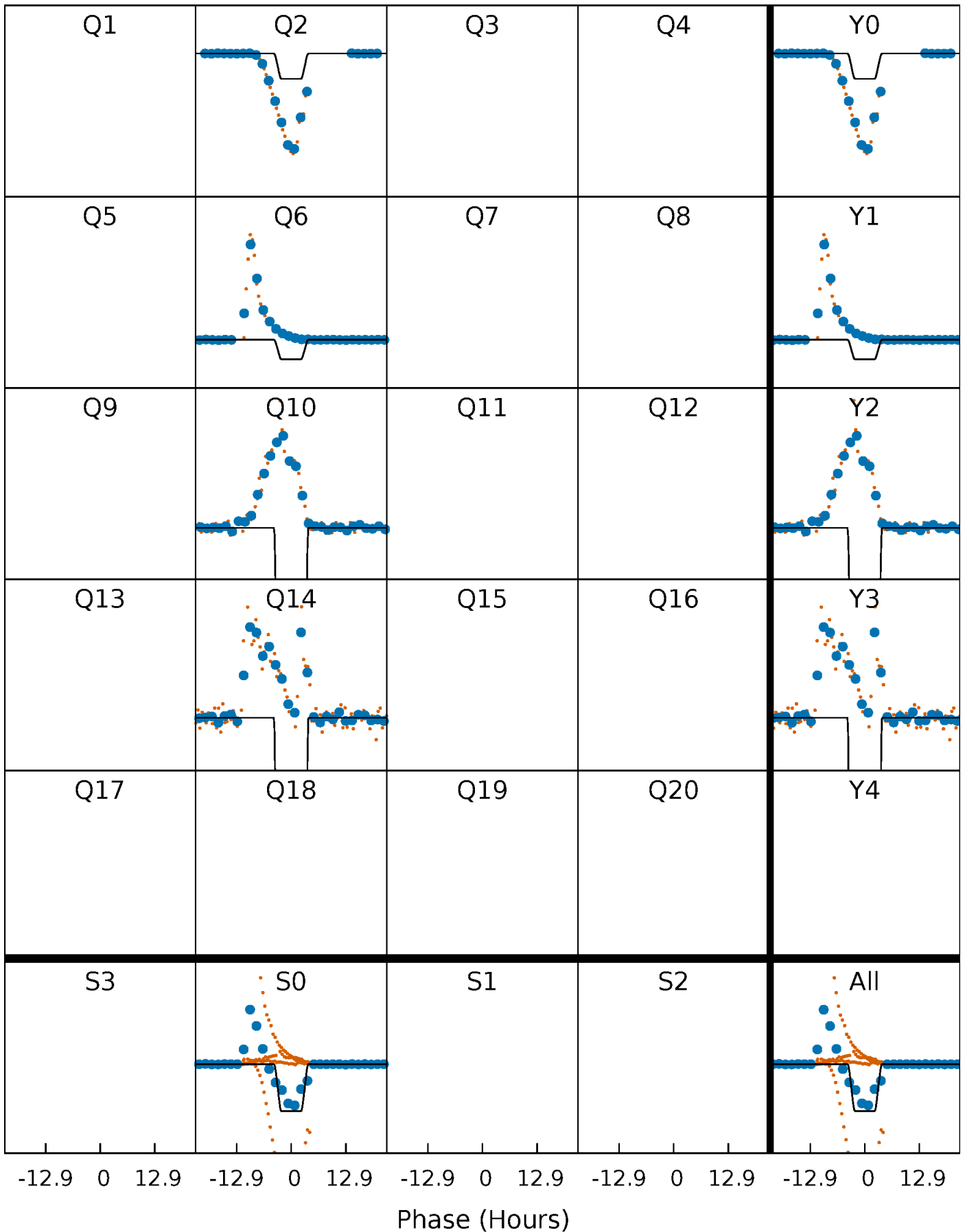
DV Quarter-Phased Transit Curves

TCE 006529378-02 P=371.848951 Days $T_0=237.728709$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

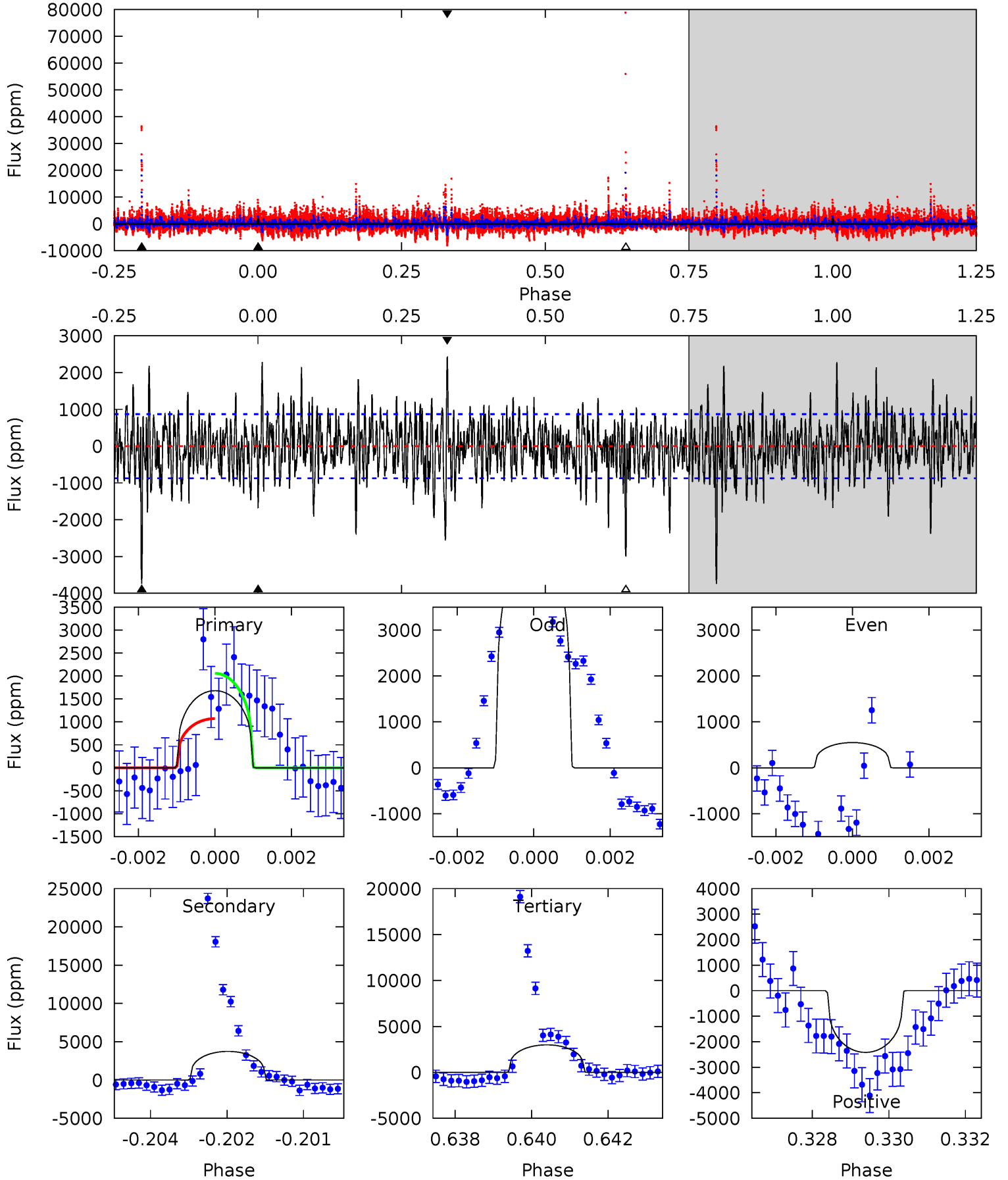
TCE 006529378-02 P=371.802247 Days $T_0=237.832358$ (BKJD)



DV Model-Shift Uniqueness Test

006529378-02, P = 371.848951 Days, E = 237.728709 Days

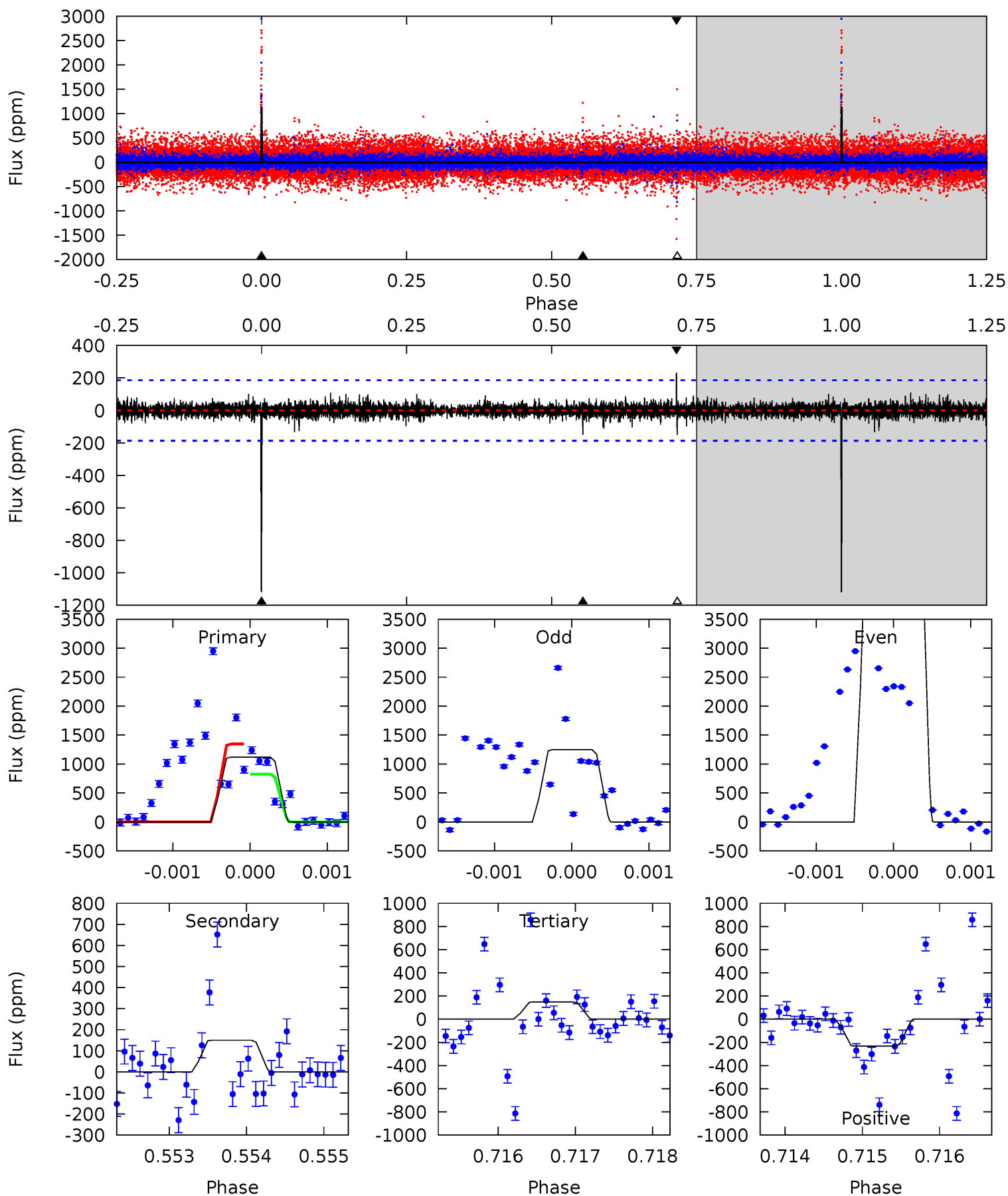
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	23.0	18.4	14.9	5.36	3.15	3.84	-8.07	-4.53	4.57	8.11	9.38	0.78	0.39	3.12



Alt Model-Shift Uniqueness Test

006529378-02, P = 371.802247 Days, E = 237.832358 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.8	4.41	4.37	6.81	5.47	3.32	0.64	28.5	26.0	0.04	-2.40	55.4	-7.91	0.17	0



Stellar Parameters For KIC 006529378

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4484^{+156}_{-156}	$4.620^{+0.033}_{-0.033}$	$0.060^{+0.250}_{-0.300}$	$0.683^{+0.043}_{-0.053}$	$0.709^{+0.052}_{-0.063}$	$3.137^{+0.558}_{-0.393}$
	+3%/-3%	+1%/-1%	+417%/-500%	+6%/-8%	+7%/-9%	+18%/-13%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006529378-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3738 ± 163	$2.57^{+2.37}_{-1.67}$	240^{+9}_{-8}	5703^{+4966}_{-1377}	$257126^{+1756012}_{-188372}$
Alt.	-150 ± 34	$9.65^{+2.61}_{-2.80}$	241^{+9}_{-10}	2270^{+191}_{-145}	734^{+709}_{-311}

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

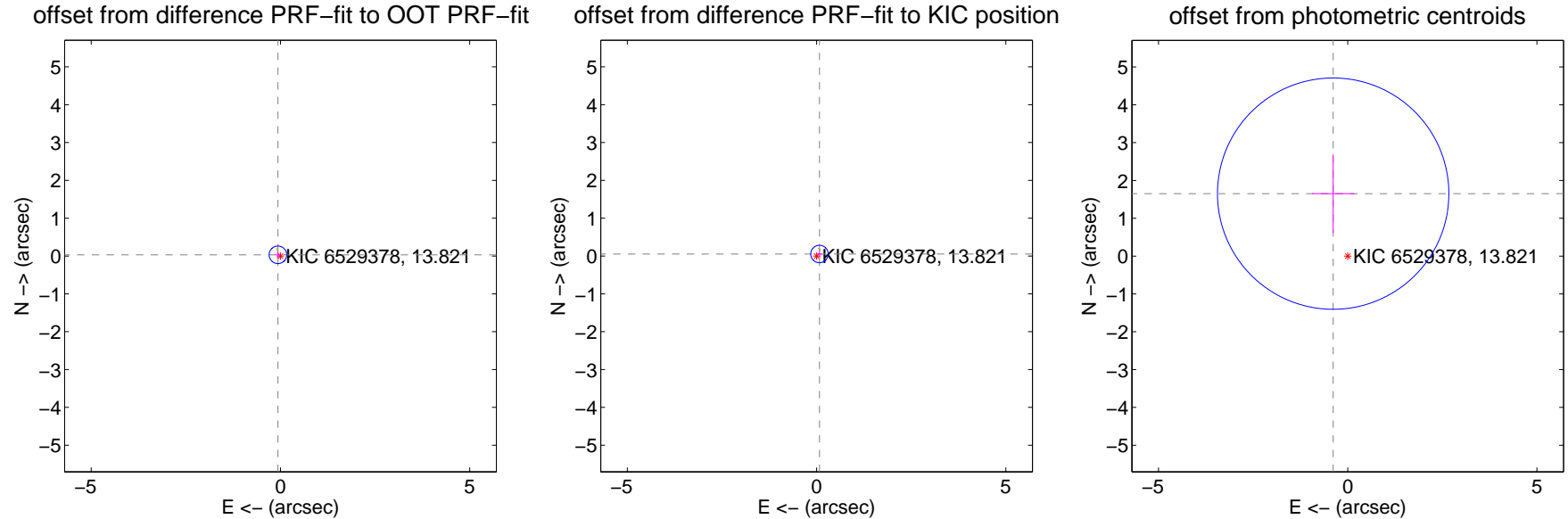
DV Centroid Data

Supplemental centroid analysis for 006529378-02. Kepler magnitude: 13.82. Transit SNR 2.92

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.075 ± 0.077	0.97	0.067 ± 0.072	0.032 ± 0.097
PRF-fit source offset from KIC position	0.093 ± 0.077	1.21	-0.076 ± 0.067	0.053 ± 0.093
photometric centroid source offset	1.70 ± 1.02	1.66	0.38 ± 0.56	1.65 ± 1.04



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

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

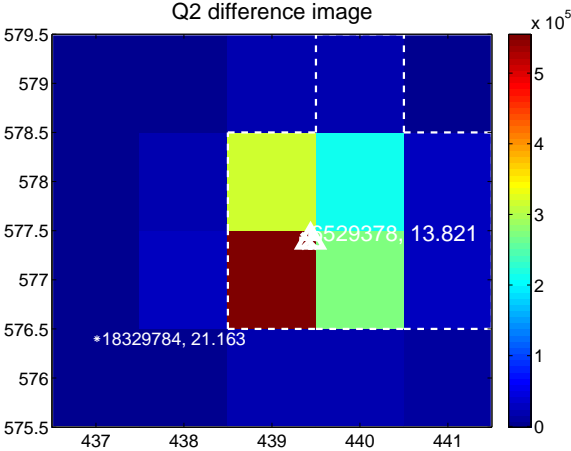
Q1 no difference image



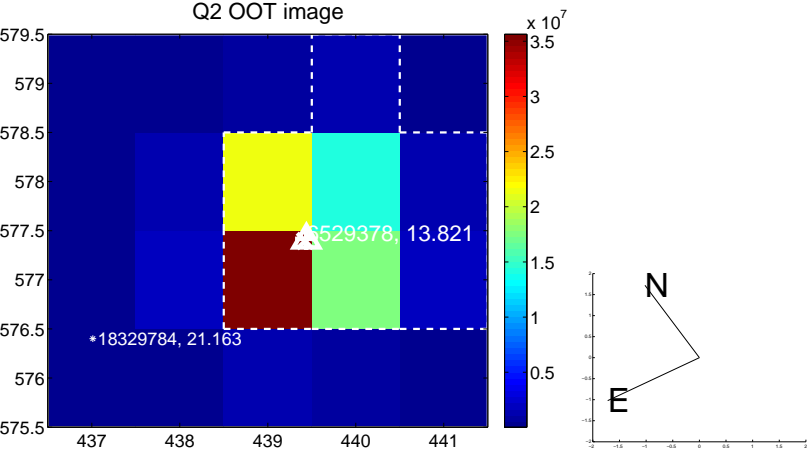
Q1 no OOT image



Q2 difference image



Q2 OOT image



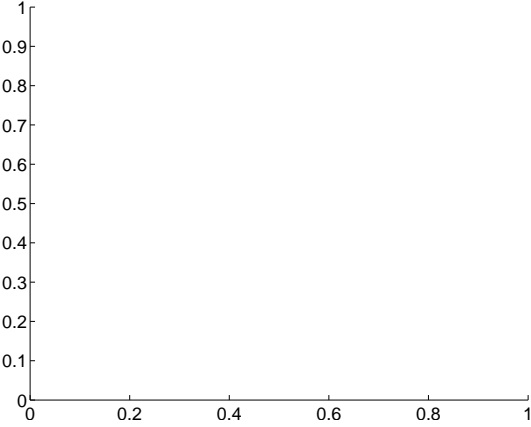
Q3 no difference image



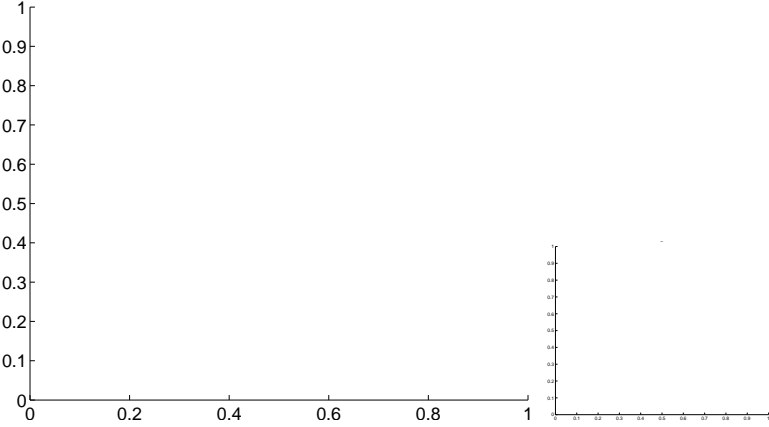
Q3 no OOT image



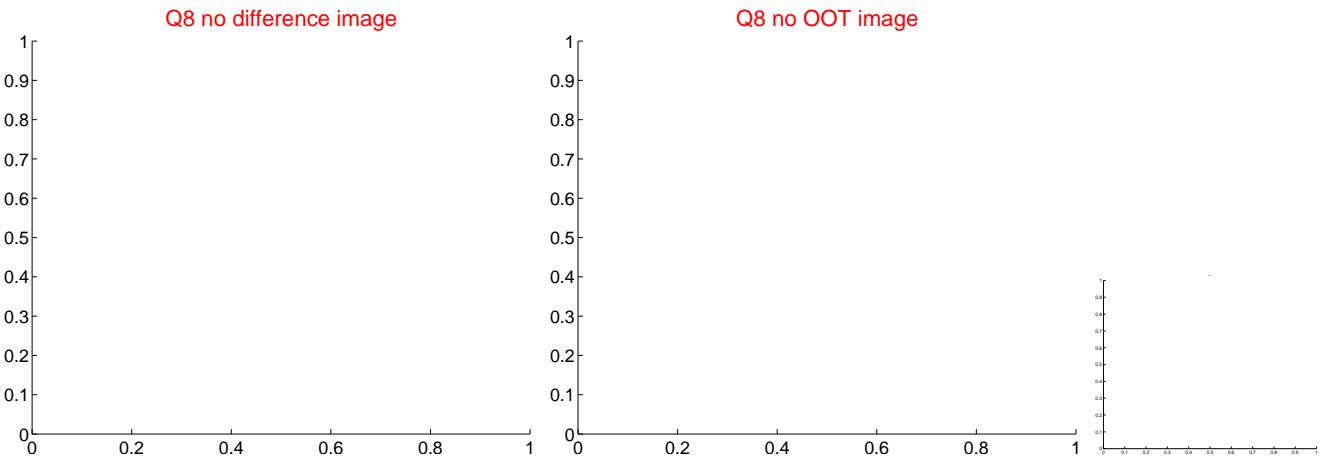
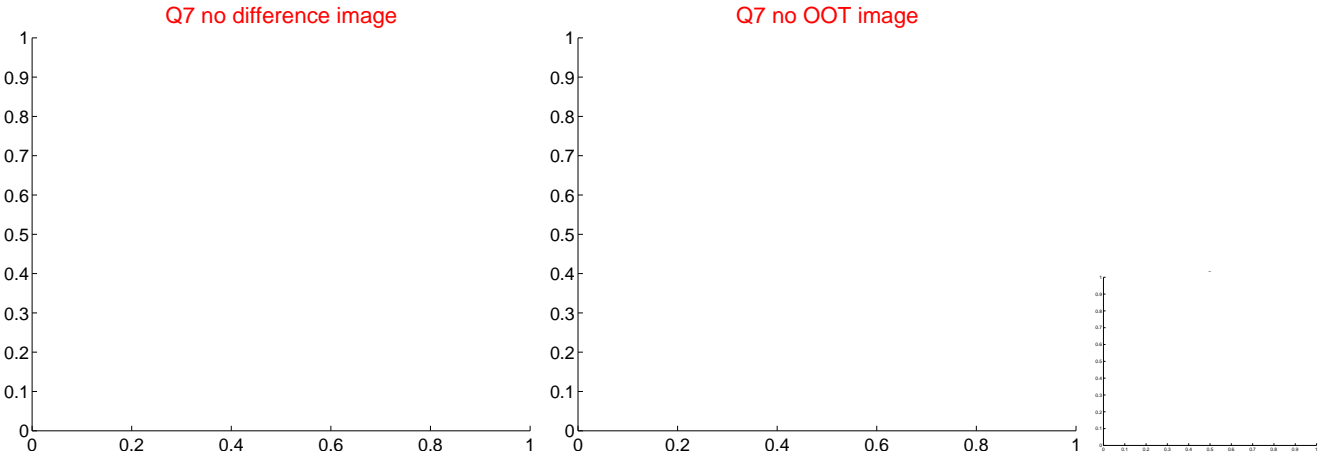
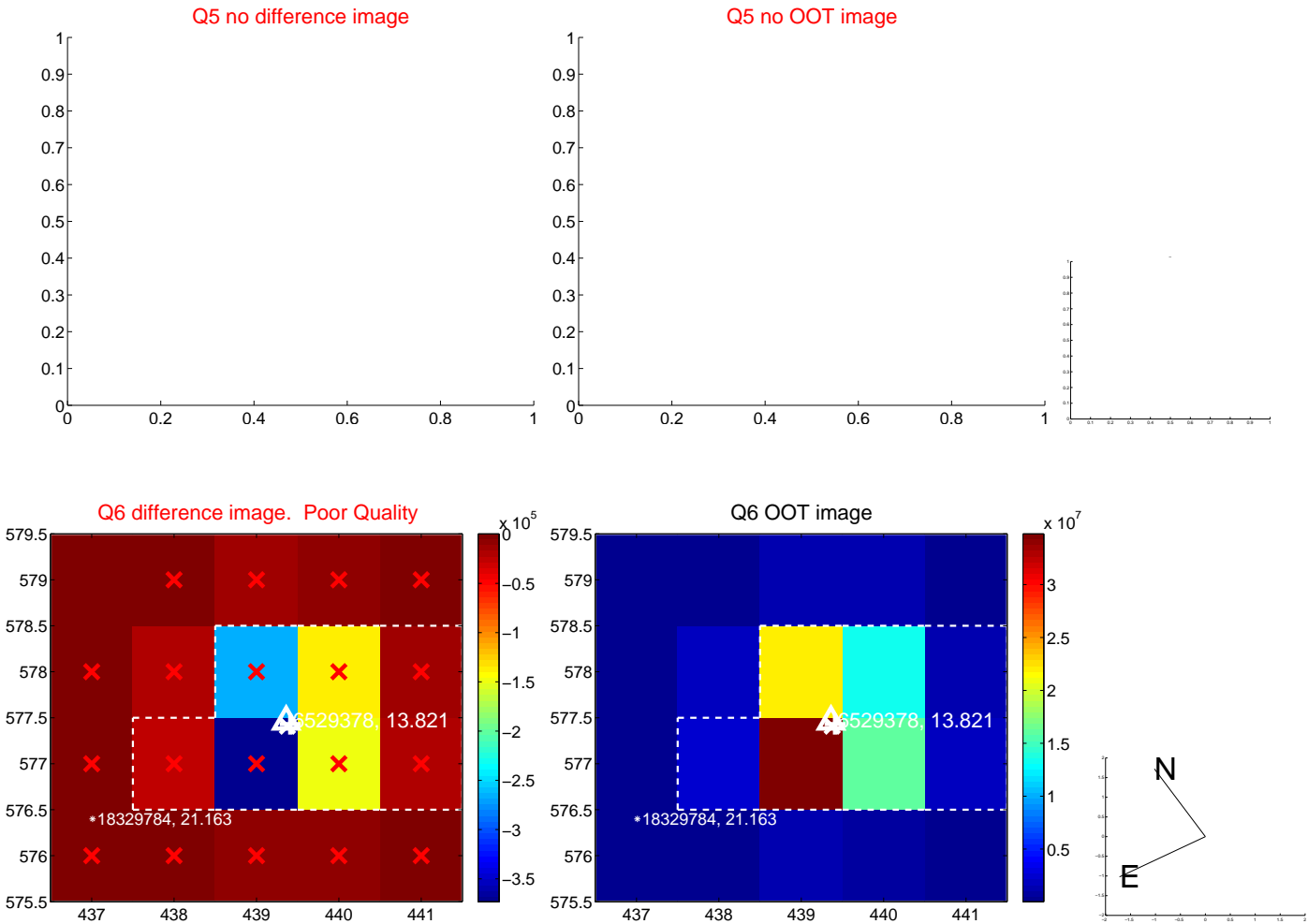
Q4 no difference image



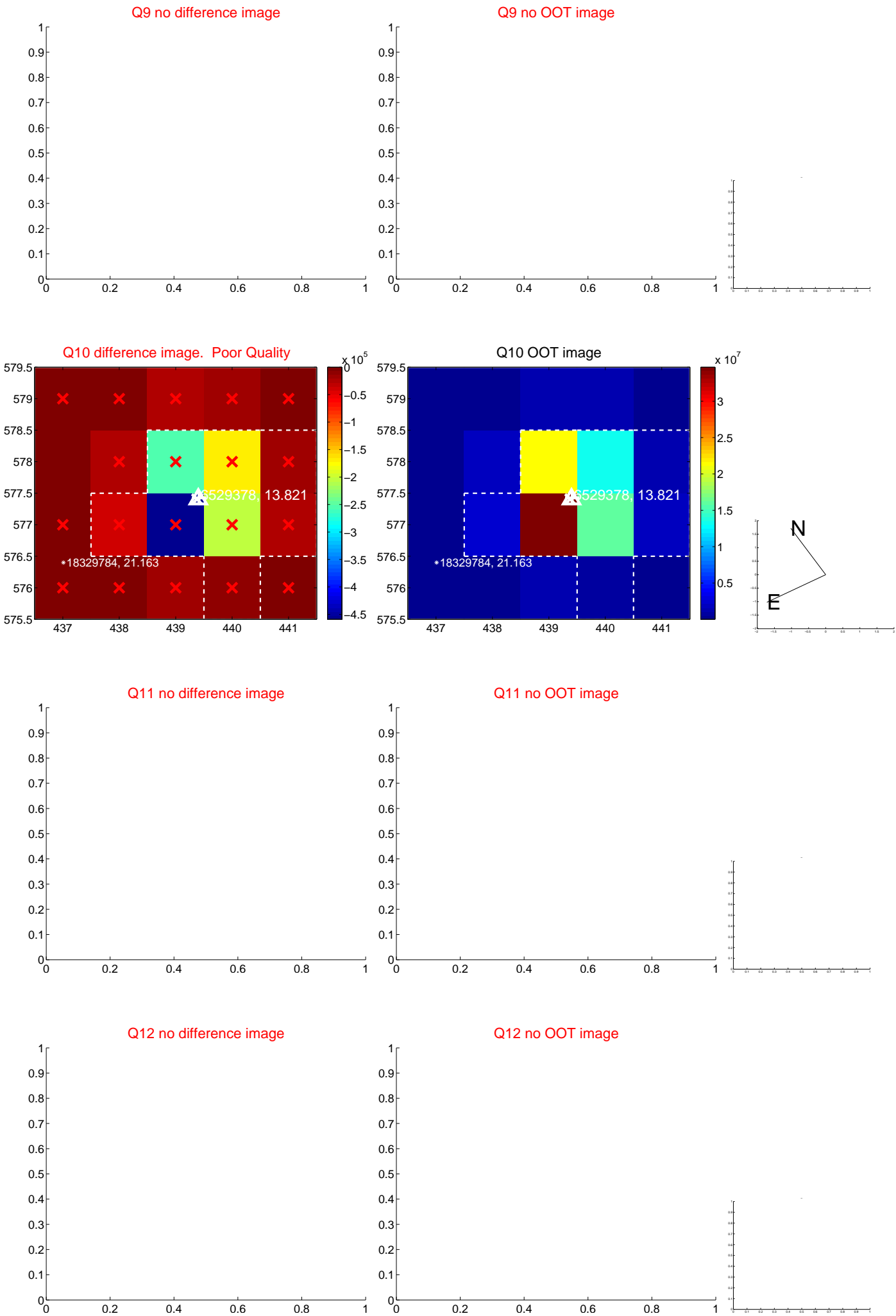
Q4 no OOT image



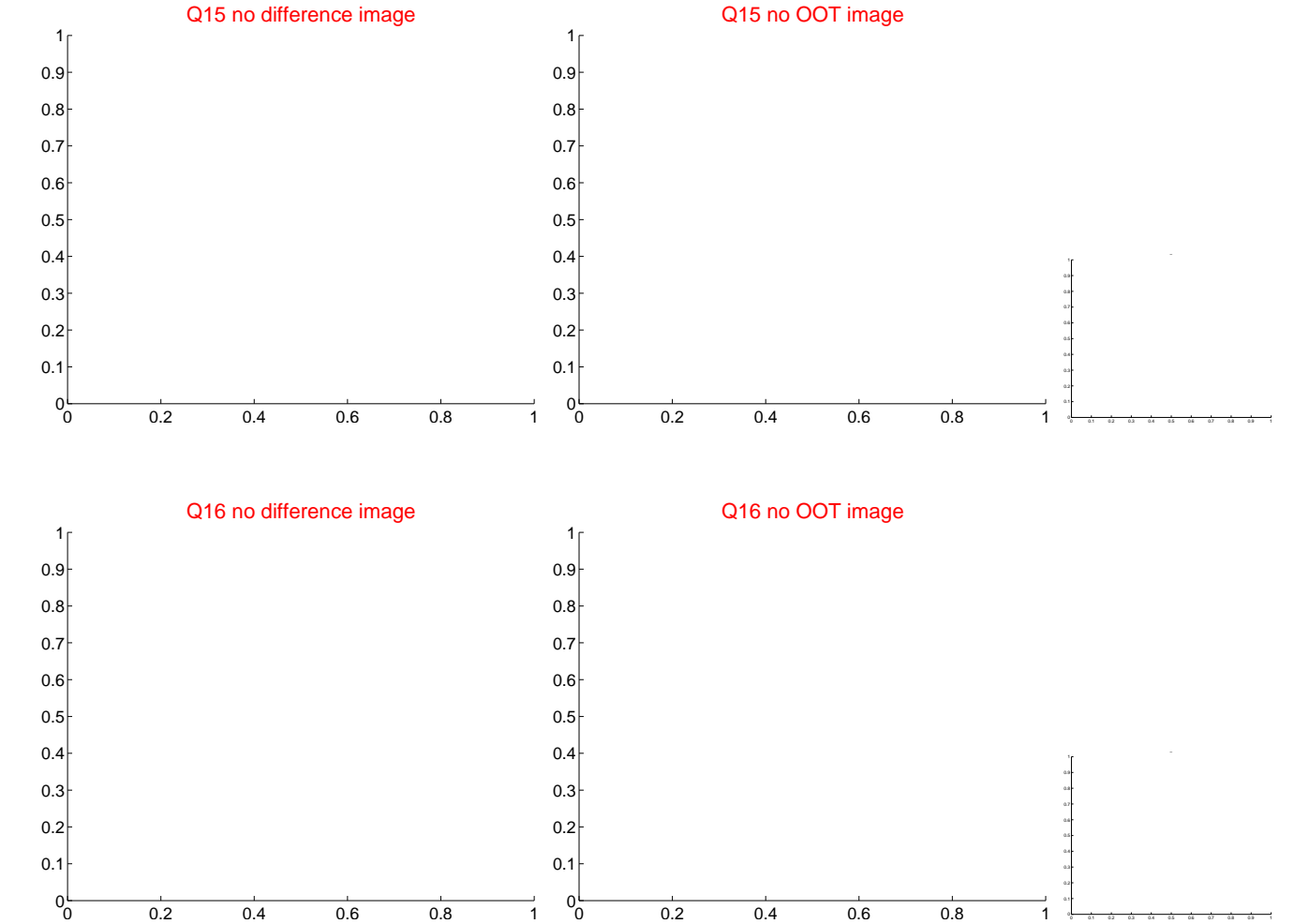
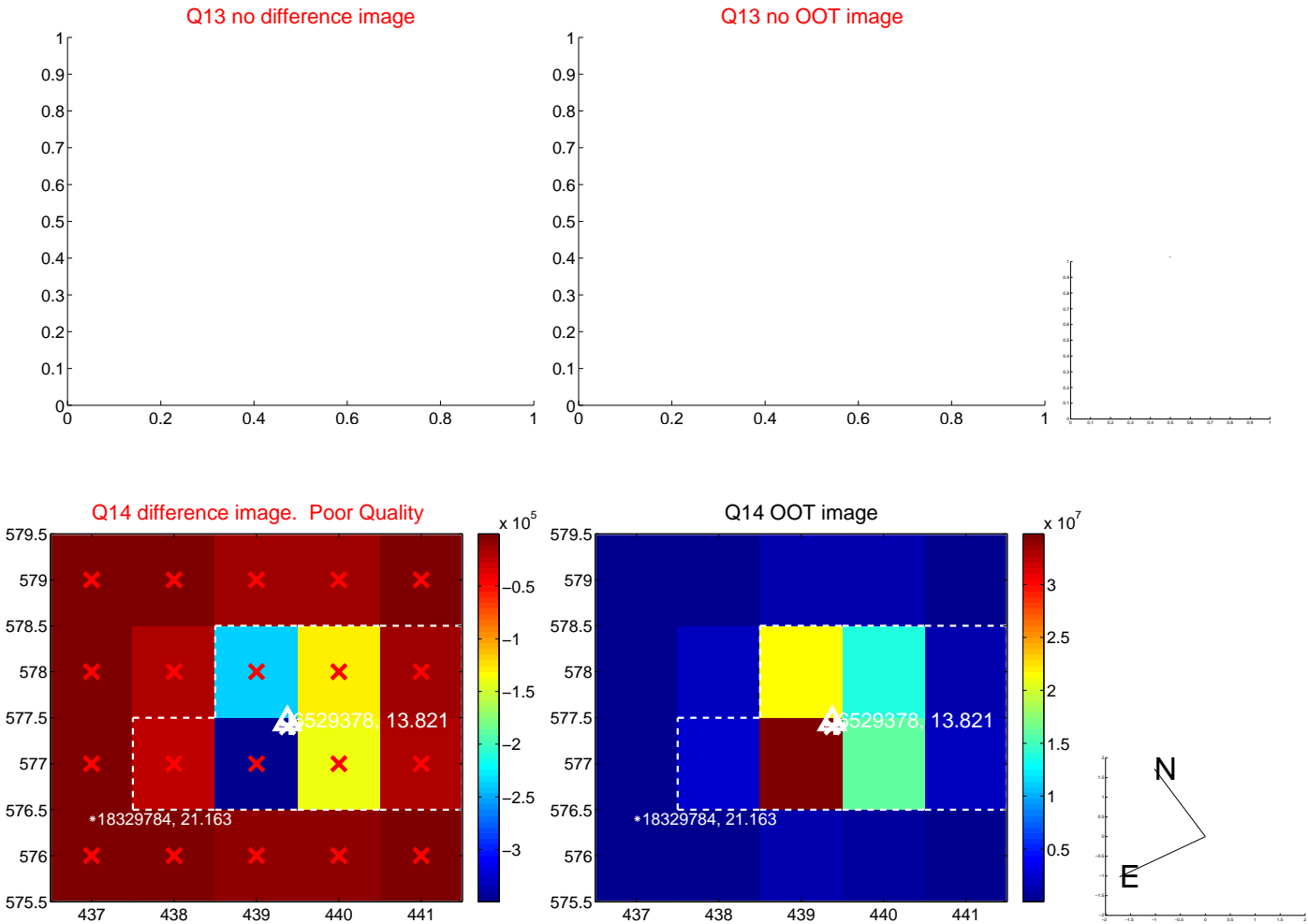
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



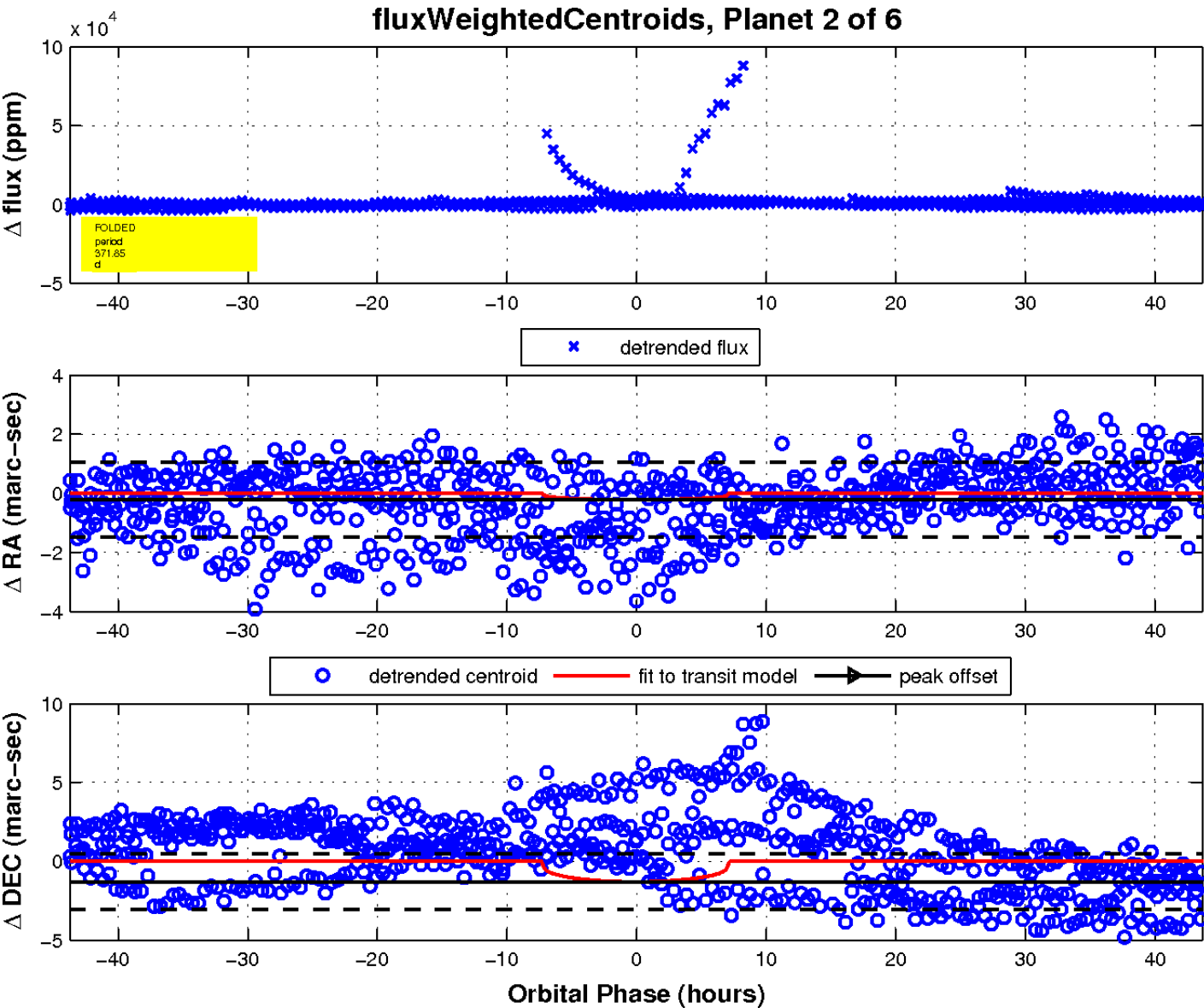
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

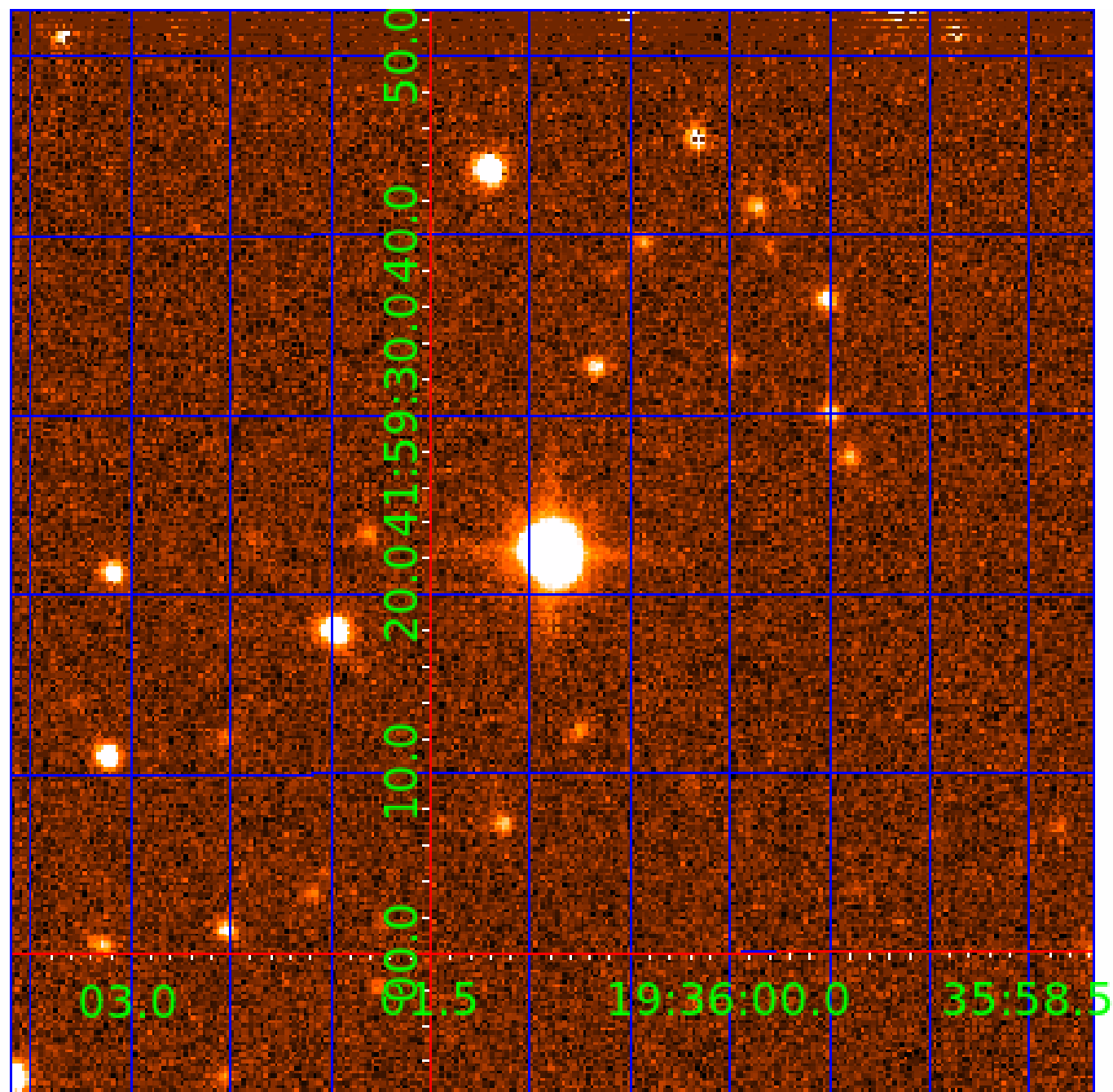


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006529378

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})
006529378-01	OBS	No	536.398435	276.836699	4361.3	13.992	41.5	9.1	0.68	4484	8.07	0.13
006529378-02	OBS	No	371.848951	237.728709	754.9	14.634	58.5	2.9	0.68	4484	1.79	0.21
006529378-03	OBS	No	419.649604	501.931861	2255.4	4.087	31.4	10.4	0.68	4484	6.54	0.18
006529378-04	OBS	No	484.193638	273.108753	1863.2	10.500	50.4	-1.0	0.68	4484	2.81	0.15
006529378-06	OBS	No	547.312905	293.814761	568.9	15.000	20.2	-1.0	0.68	4484	1.55	0.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006529378-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006529378-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006529378-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006529378-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS
006529378-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_ZUMA—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

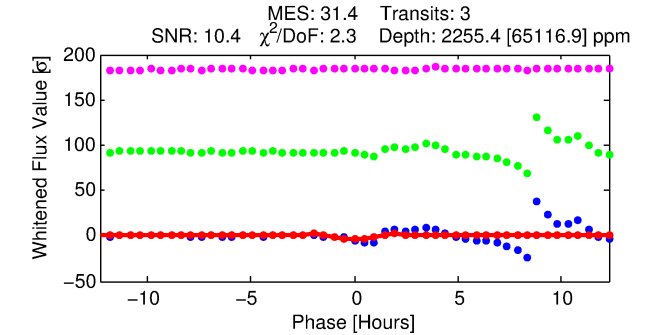
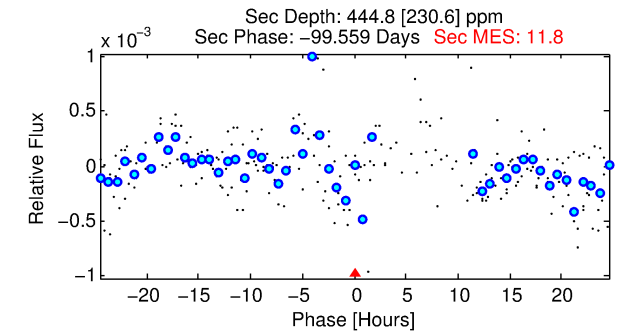
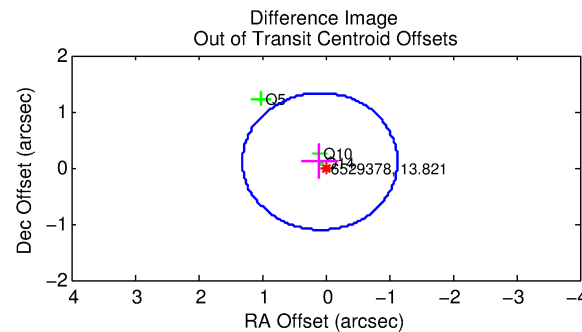
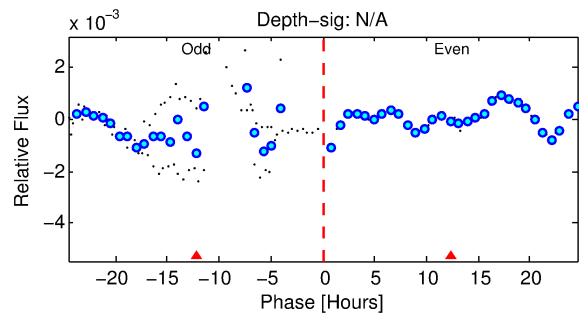
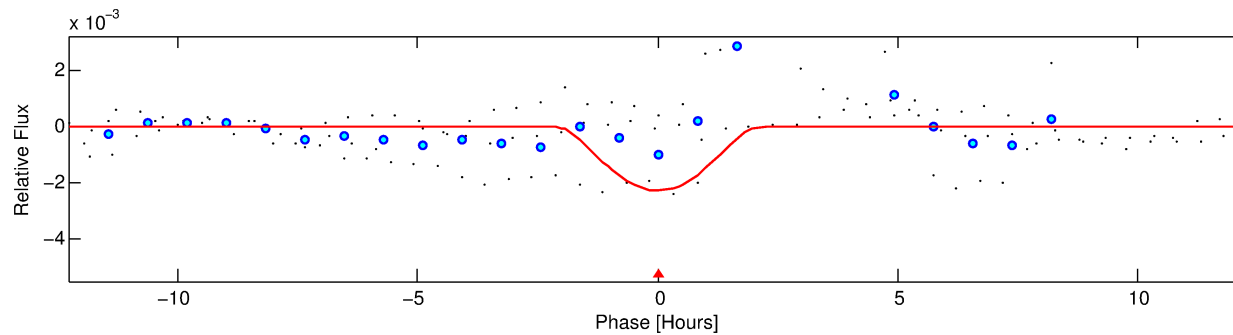
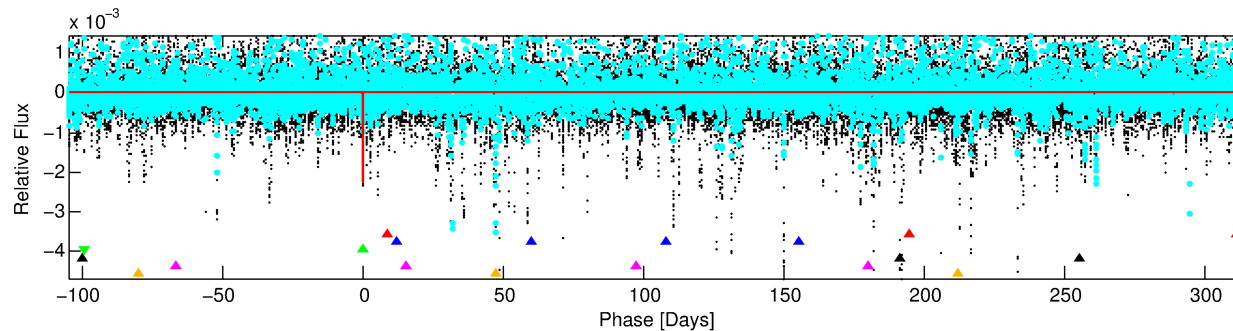
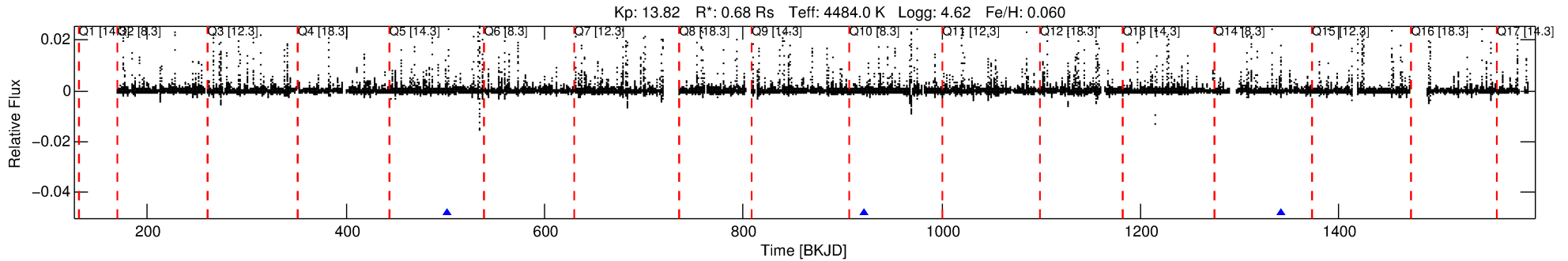
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006529378-03

No Significant Match Found

DV One-Page Summary

KIC: 6529378 Candidate: 3 of 6 Period: 419.650 d



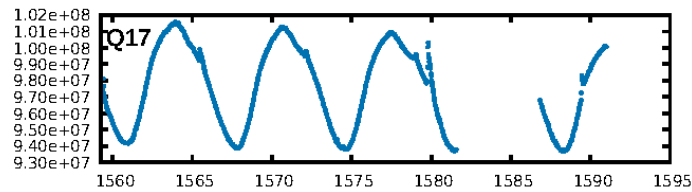
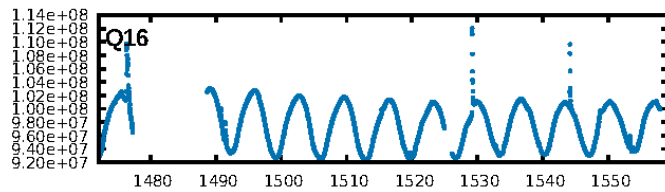
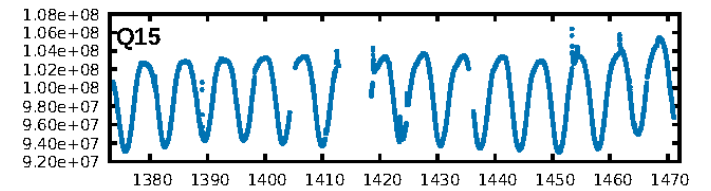
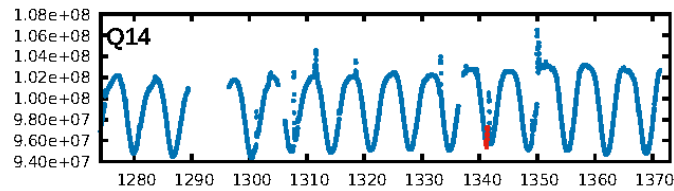
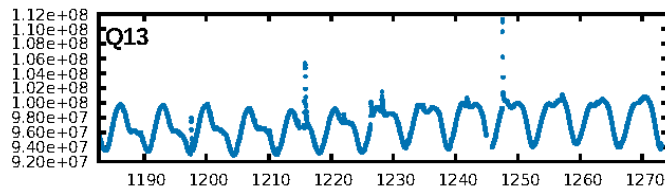
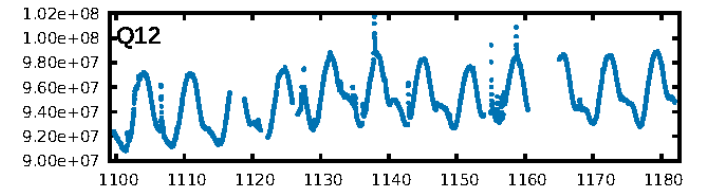
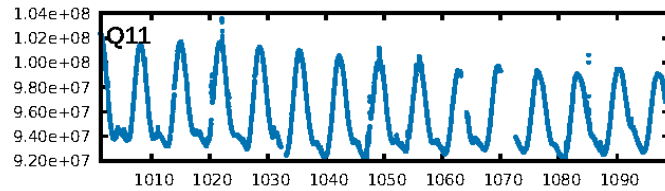
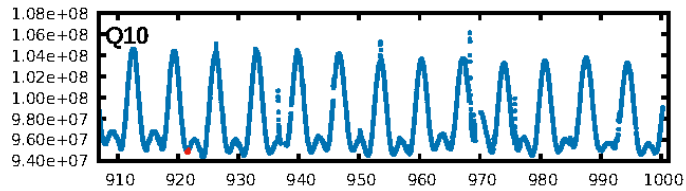
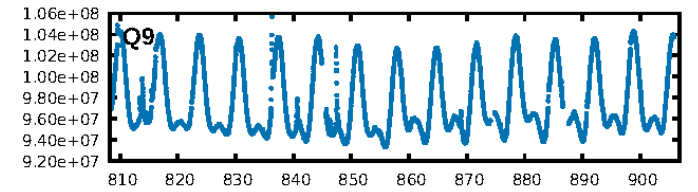
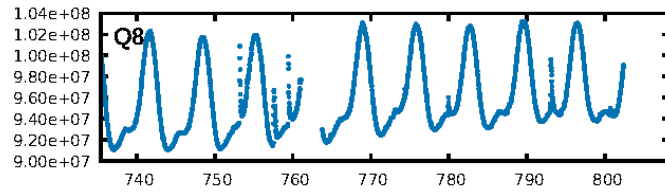
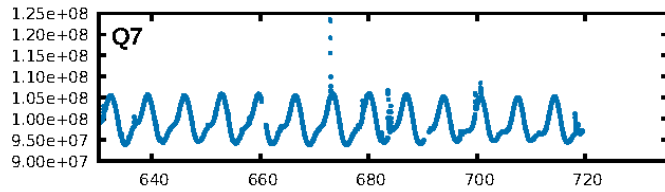
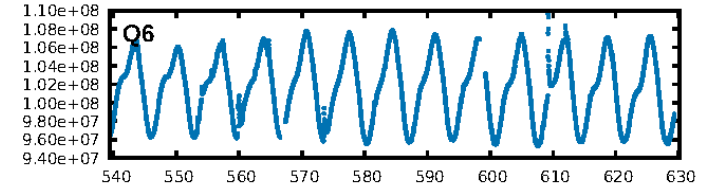
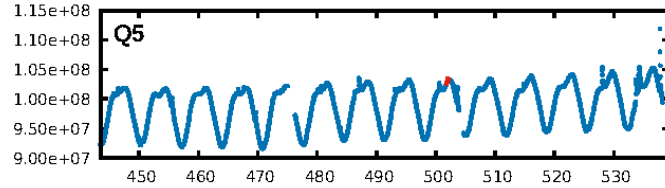
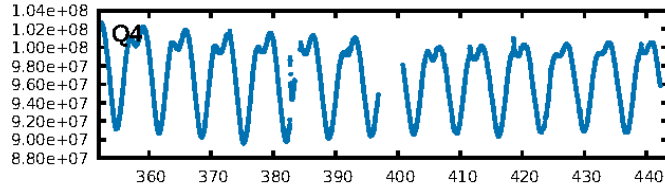
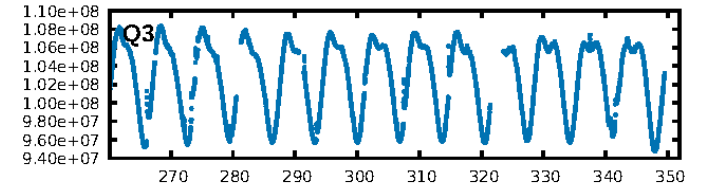
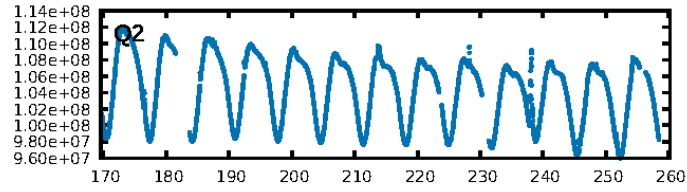
DV Fit Results:

Period = 419.64960 [0.01999] d
Epoch = 501.9319 [0.0258] BKJD
Rp/R* = 0.0878 [1.0119]
a/R* = 335.91 [779.14]
b = 1.00 [0.21]
Seff = 0.18 [0.03]
Teq = 165 [6] K
Rp = 6.55 [75.42] Re
a = 0.9785 [0.0564] AU
Ag = 5469.51 [126087.77] [0.04σ]
Teffp = 2197 [12664] K [0.16σ]

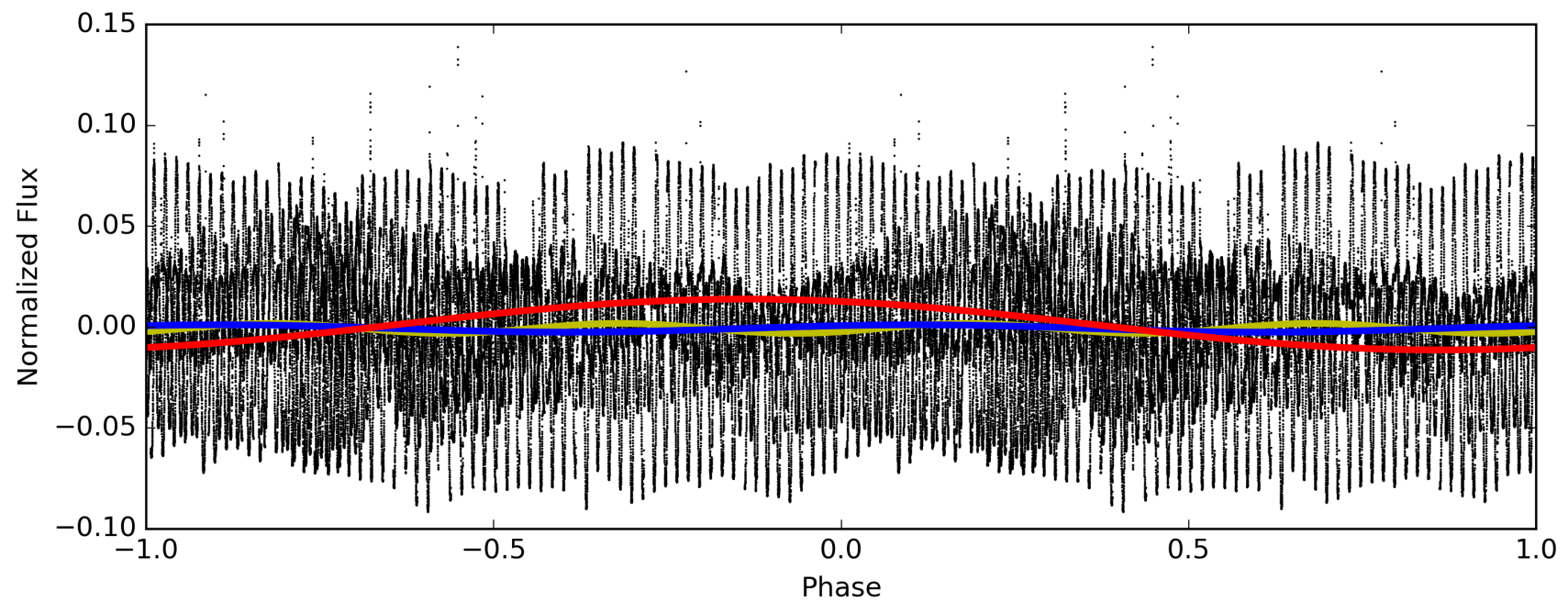
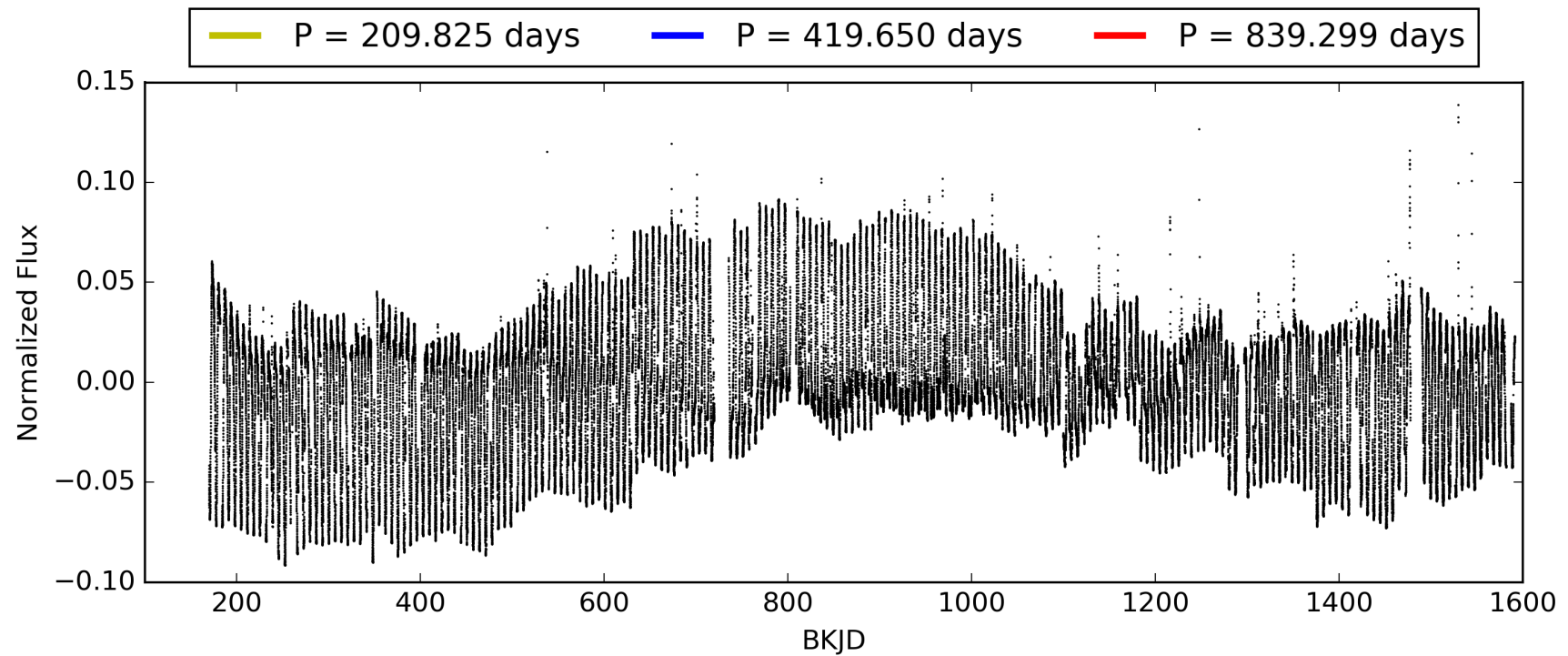
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [75.51σ]
LongPeriod-sig: 100.0% [137.48σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.9115
Centroid-sig: 71.8%
Centroid-so: 0.104 arcsec [0.31σ]
OotOffset-rm: 0.142 arcsec [0.35σ]
OotOffset-st: 2/0/0/1 [3]
KicOffset-rm: 0.134 arcsec [0.87σ]
KicOffset-st: 2/0/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 006529378-03, PDC Light Curves

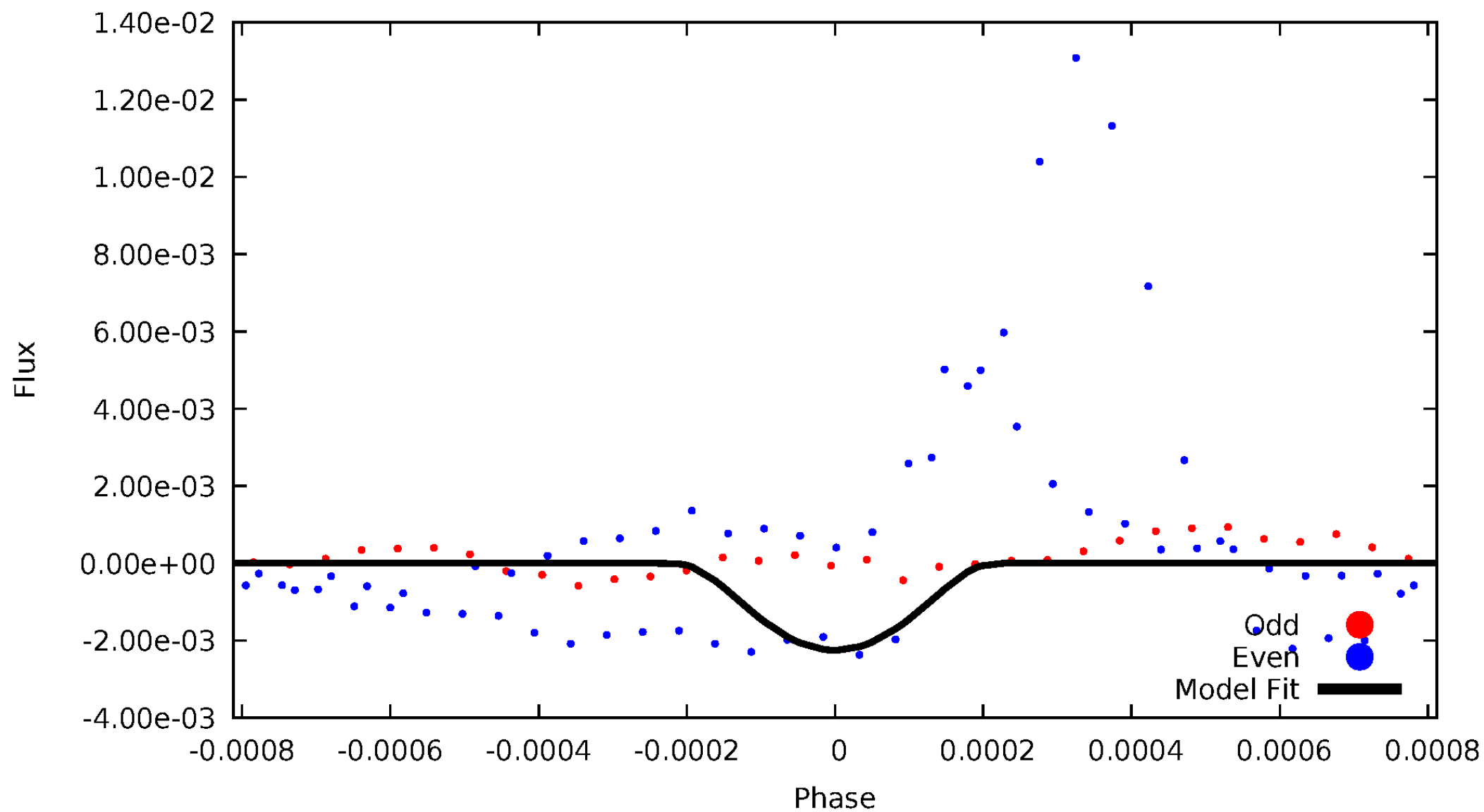


TCE 006529378-03



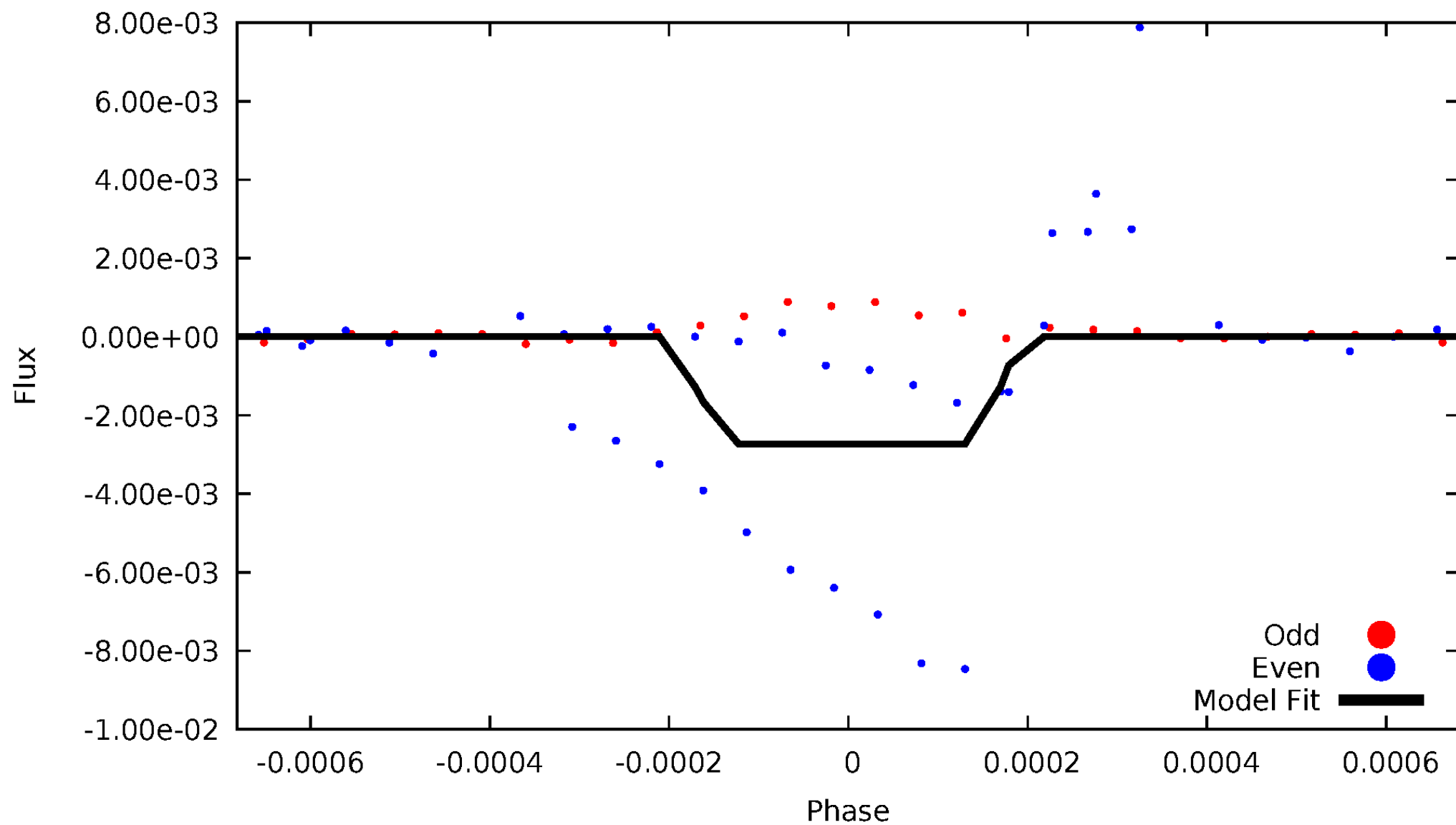
DV Odd/Even

TCE 006529378-03



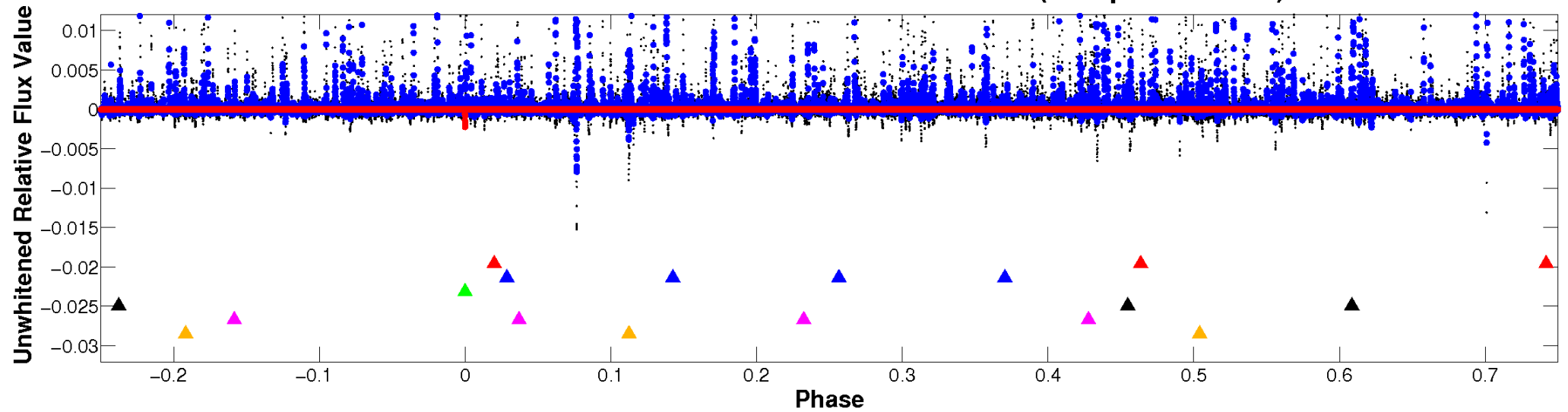
ALT Odd/Even

TCE 006529378-03

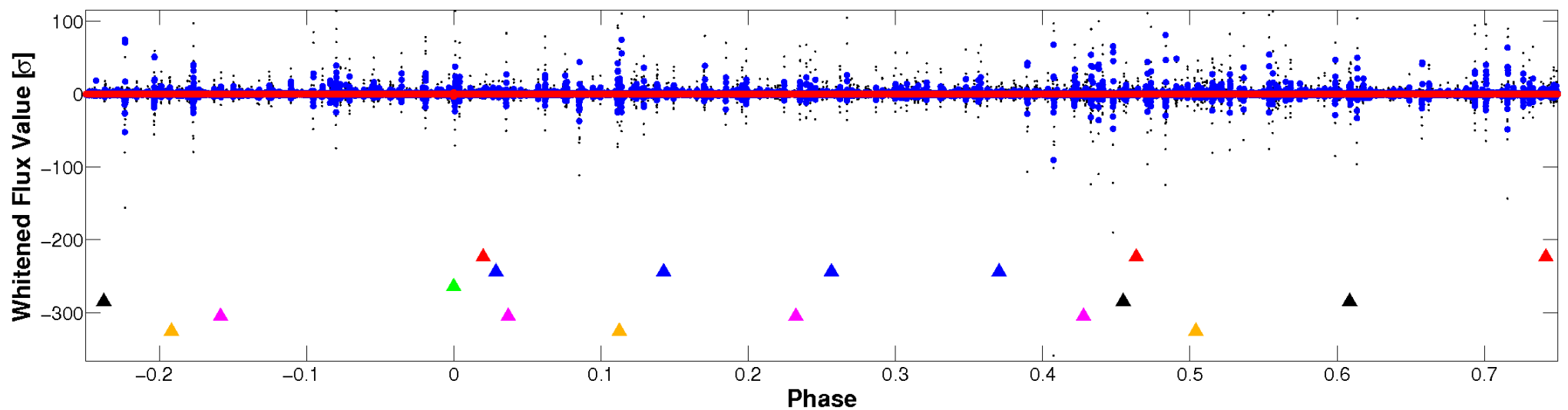


Non-Whitened Vs. Whitened Light Curve

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

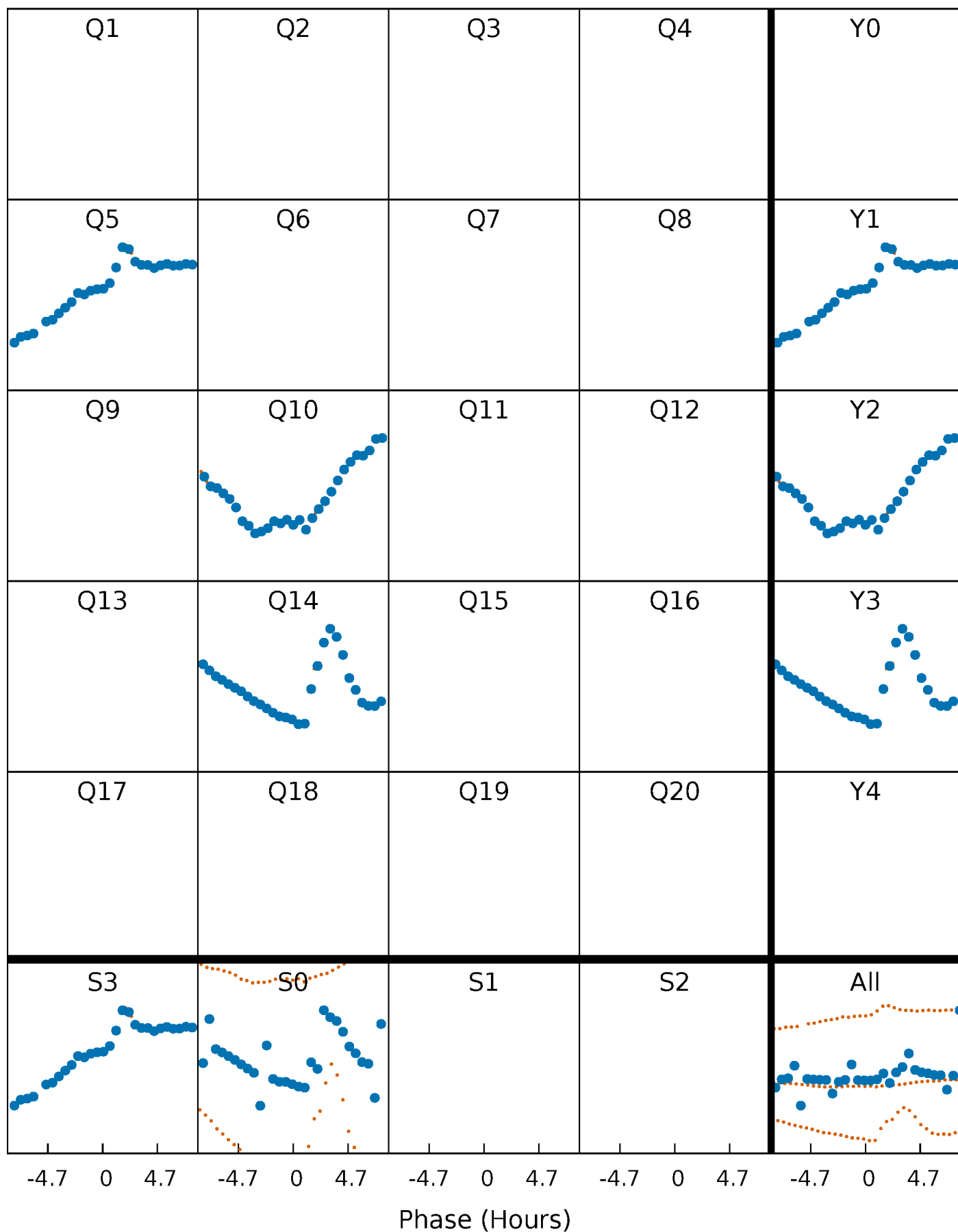


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



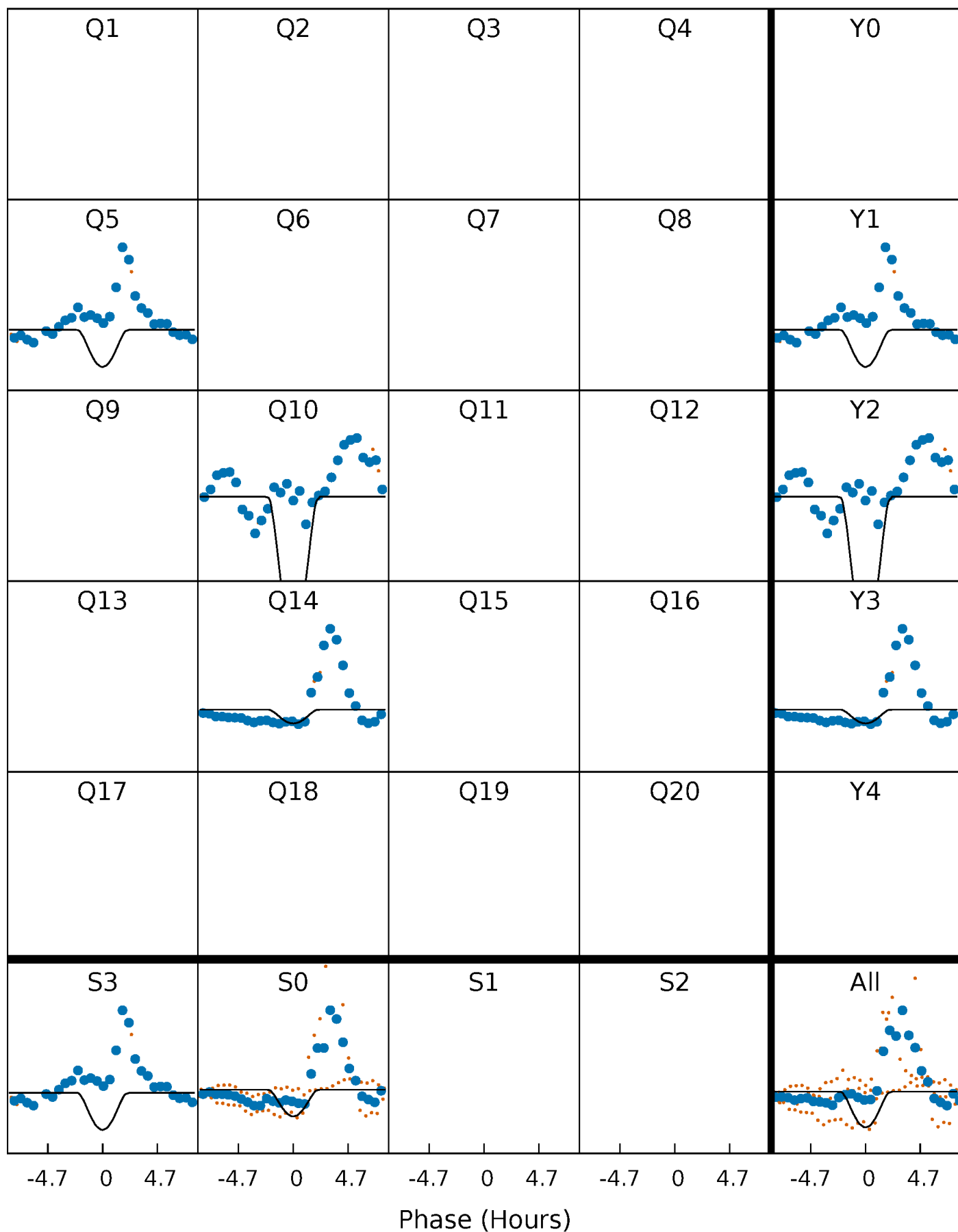
PDC Quarter-Phased Transit Curves

TCE 006529378-03 P=419.649604 Days $T_0=501.931861$ (BKJD)



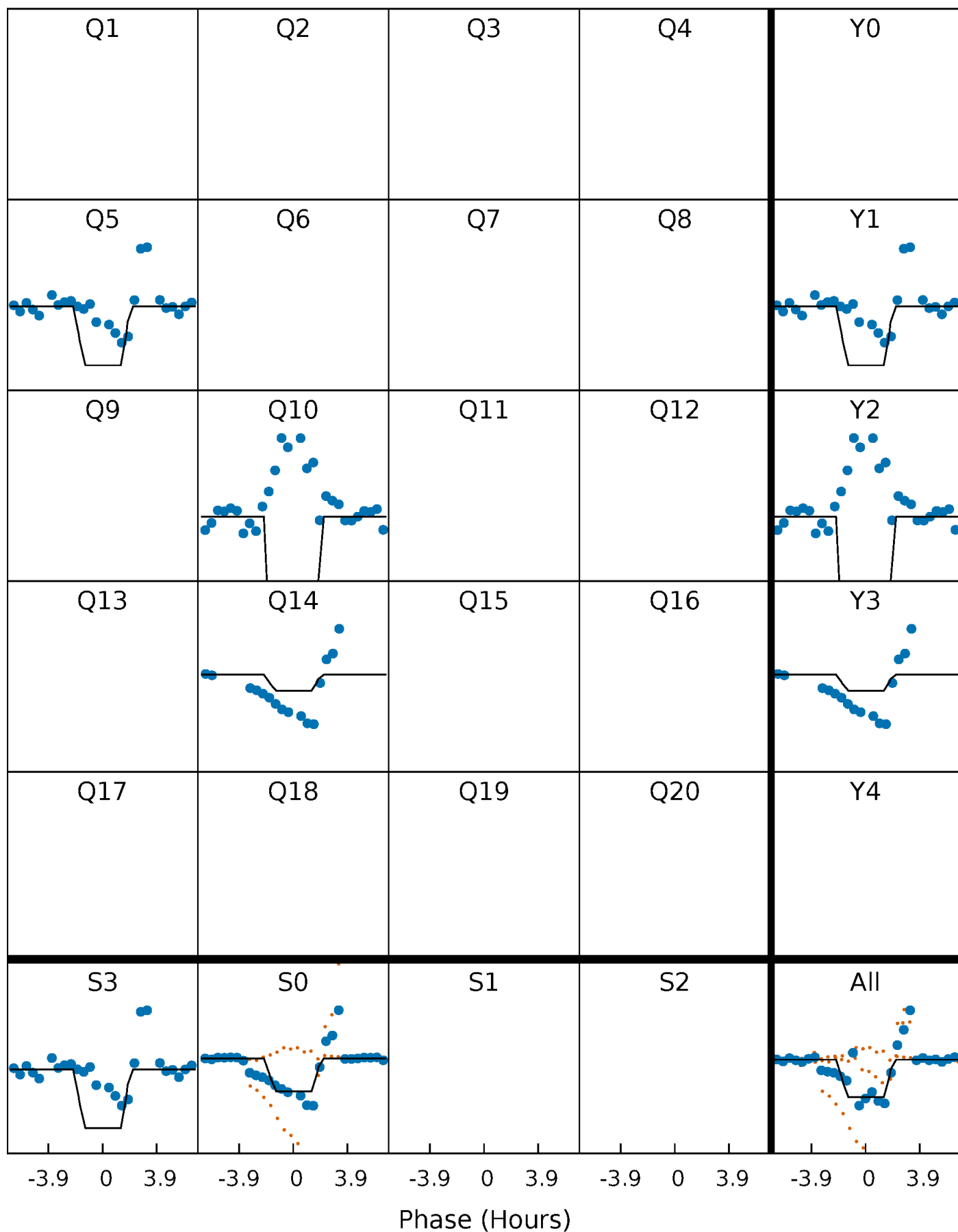
DV Quarter-Phased Transit Curves

TCE 006529378-03 $P=419.649604$ Days $T_0=501.931861$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

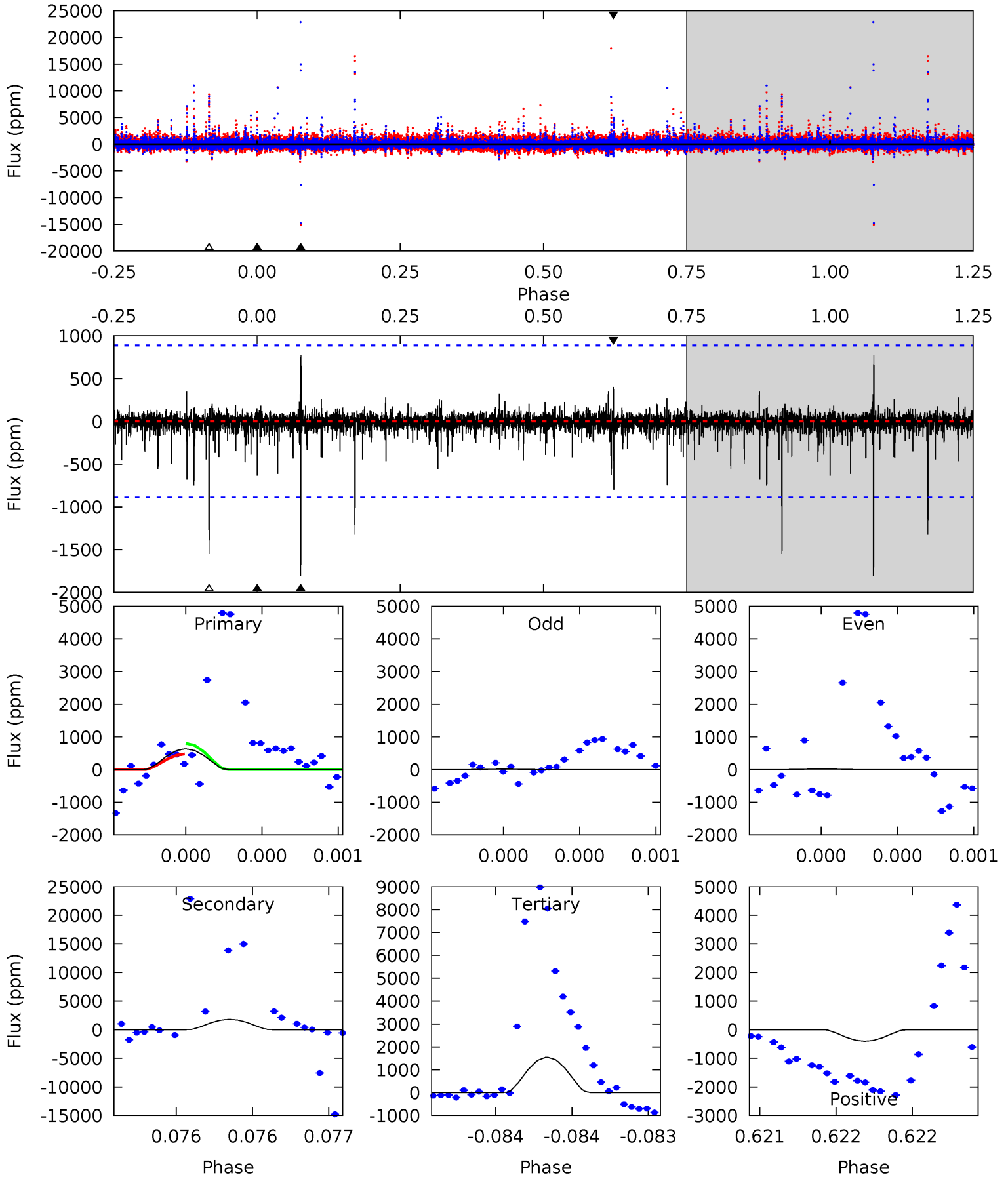
TCE 006529378-03 P=419.664455 Days $T_0=501.881723$ (BKJD)



DV Model-Shift Uniqueness Test

006529378-03, P = 419.649604 Days, E = 82.282257 Days

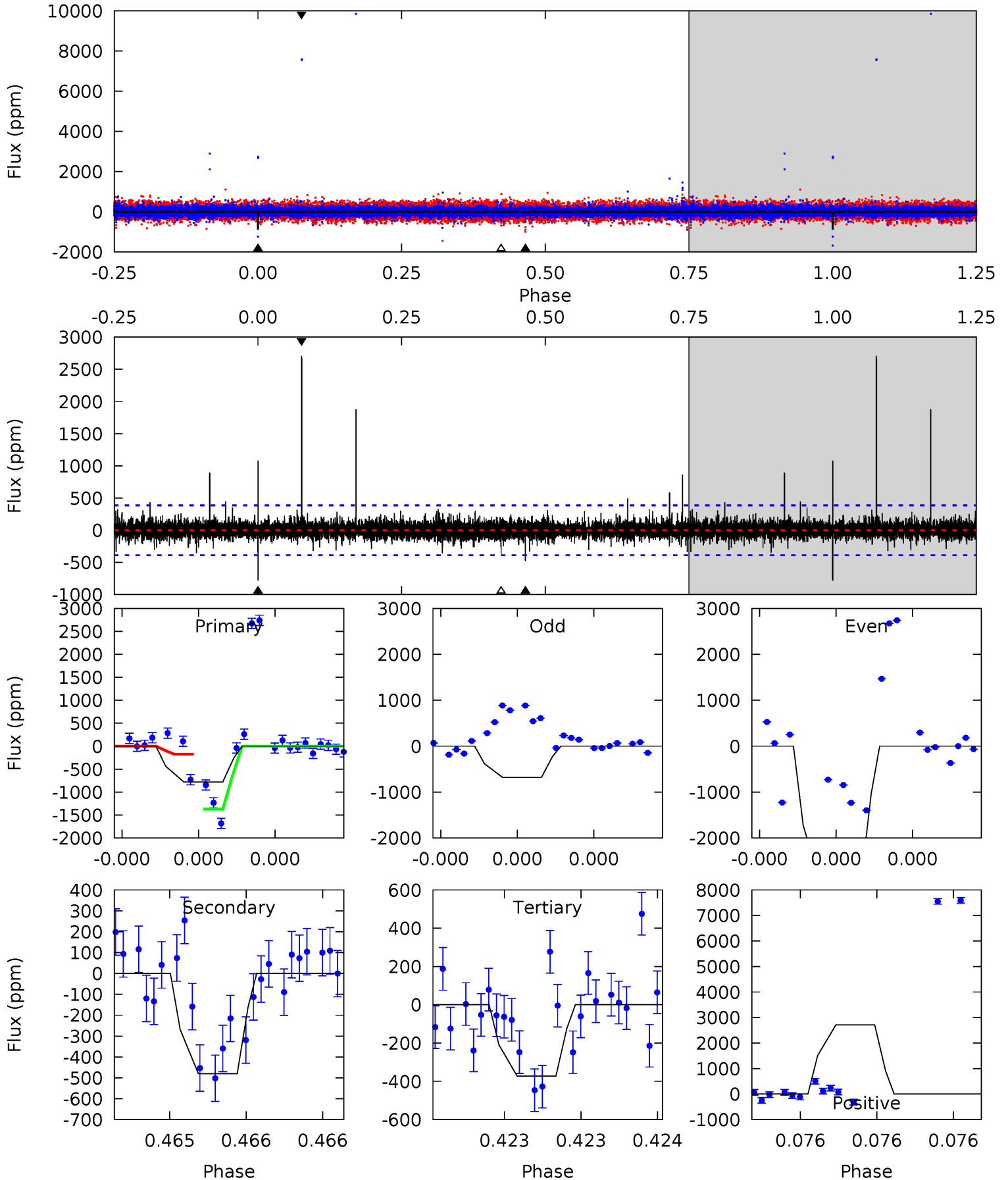
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.01	11.4	9.78	2.55	5.61	3.54	0.49	-5.78	1.45	1.65	8.88	0.00	9.36	0.30	1.04



Alt Model-Shift Uniqueness Test

006529378-03, P = 419.664455 Days, E = 82.217268 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	6.96	5.40	39.3	5.62	3.55	1.06	5.93	-27.9	1.56	-32.3	17.3	2.89	0.78	0



Stellar Parameters For KIC 006529378

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4484^{+156}_{-156}	$4.620^{+0.033}_{-0.033}$	$0.060^{+0.250}_{-0.300}$	$0.683^{+0.043}_{-0.053}$	$0.709^{+0.052}_{-0.063}$	$3.137^{+0.558}_{-0.393}$
	+3%/-3%	+1%/-1%	+417%/-500%	+6%/-8%	+7%/-9%	+18%/-13%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006529378-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1810 ± 158	$52.81^{+55.66}_{-36.90}$	231^{+9}_{-9}	2048^{+651}_{-281}	354^{+3412}_{-274}
Alt.	-480 ± 69	$55.95^{+54.59}_{-39.05}$	230^{+9}_{-8}	1771^{+483}_{-198}	82^{+812}_{-62}

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 $A_{obs} \gg 1.0$

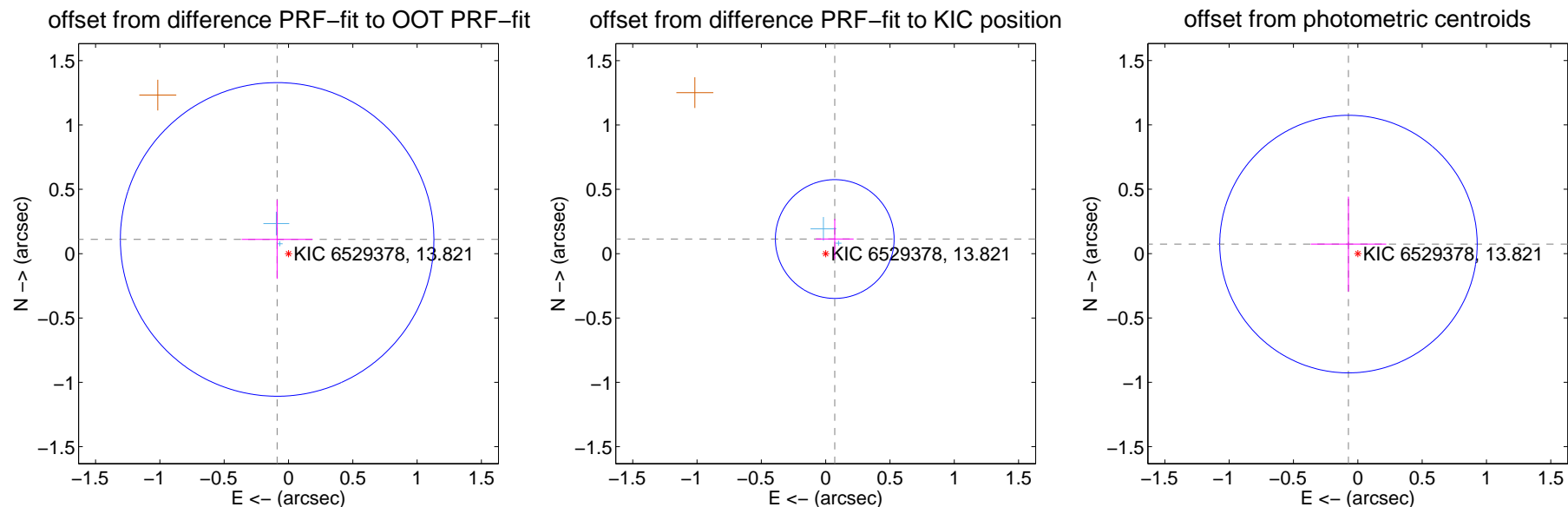
DV Centroid Data

Supplemental centroid analysis for 006529378-03. Kepler magnitude: 13.82. Transit SNR 10.43

There are 2 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.142 ± 0.406	0.35	0.088 ± 0.276	0.111 ± 0.307
PRF-fit source offset from KIC position	0.134 ± 0.154	0.87	-0.071 ± 0.147	0.114 ± 0.156
photometric centroid source offset	0.10 ± 0.33	0.31	0.07 ± 0.29	0.07 ± 0.37

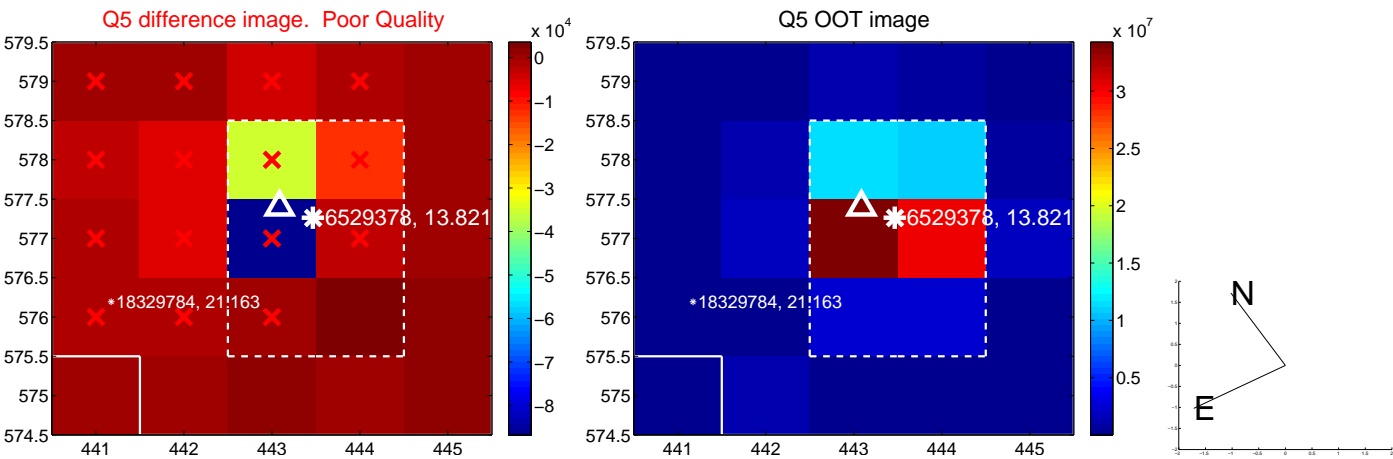


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

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



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



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

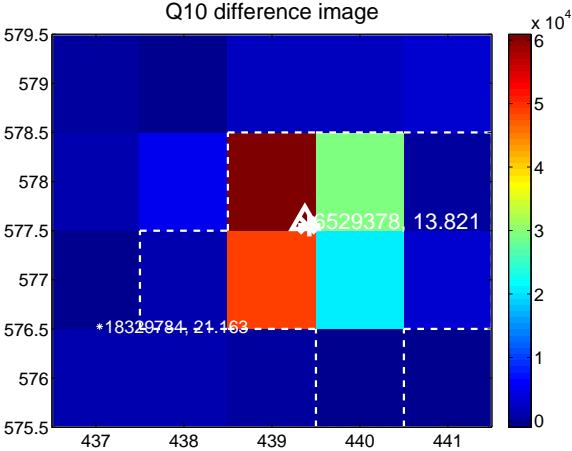
Q9 no difference image



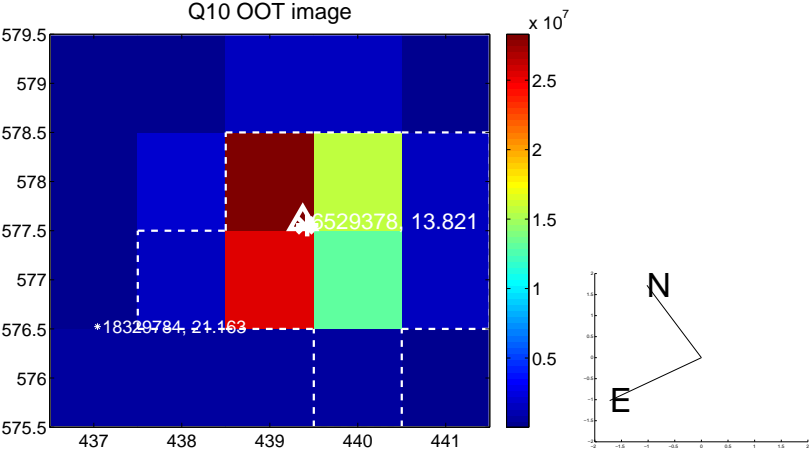
Q9 no OOT image



Q10 difference image



Q10 OOT image



Q11 no difference image



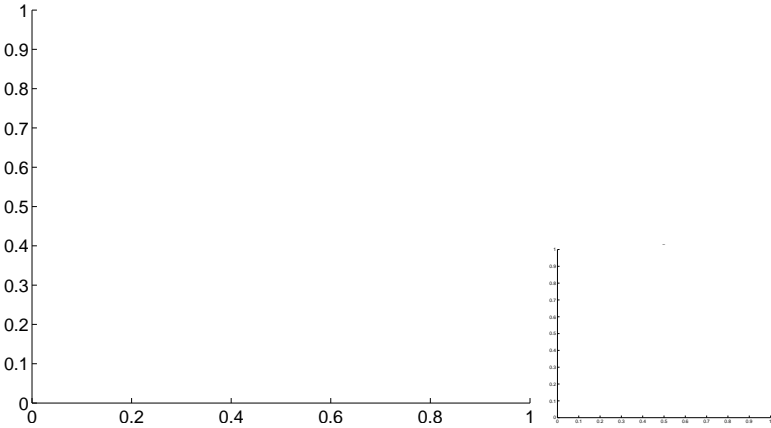
Q11 no OOT image



Q12 no difference image



Q12 no OOT image



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

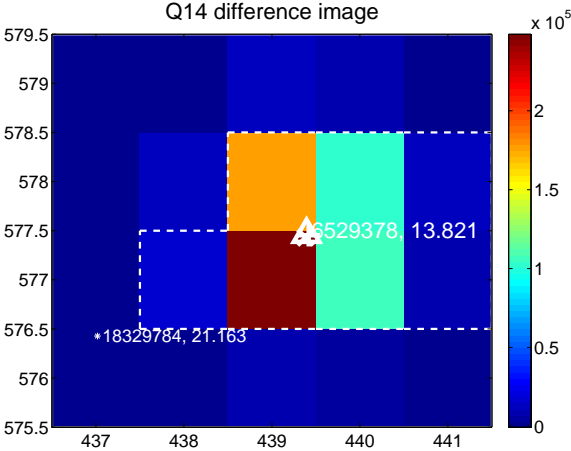
Q13 no difference image



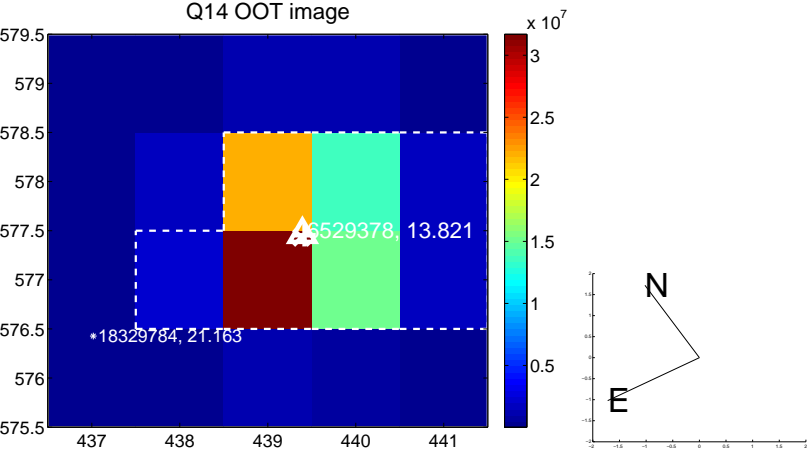
Q13 no OOT image



Q14 difference image



Q14 OOT image



Q15 no difference image



Q15 no OOT image



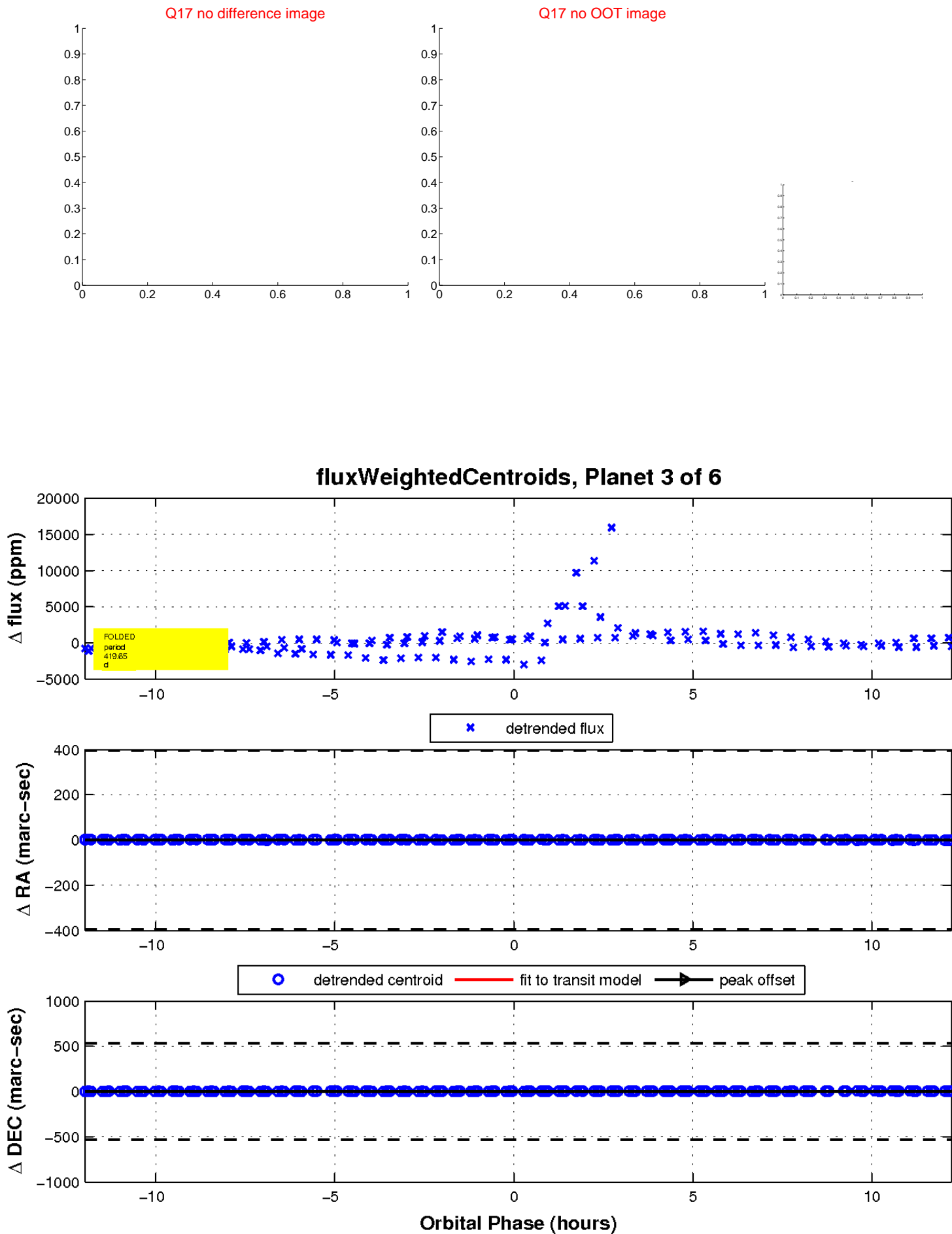
Q16 no difference image



Q16 no OOT image

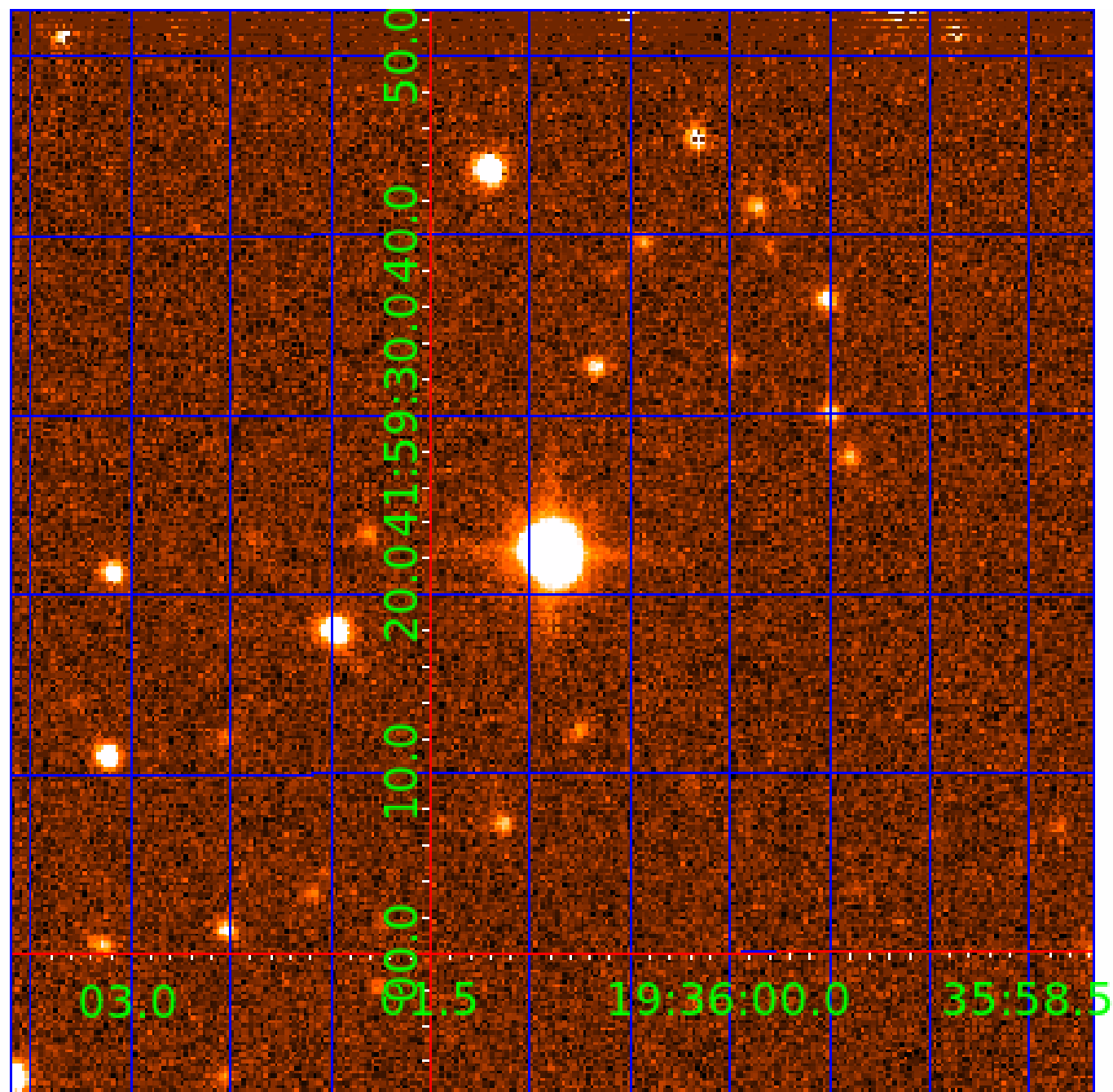


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006529378

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})
006529378-01	OBS	No	536.398435	276.836699	4361.3	13.992	41.5	9.1	0.68	4484	8.07	0.13
006529378-02	OBS	No	371.848951	237.728709	754.9	14.634	58.5	2.9	0.68	4484	1.79	0.21
006529378-03	OBS	No	419.649604	501.931861	2255.4	4.087	31.4	10.4	0.68	4484	6.54	0.18
006529378-04	OBS	No	484.193638	273.108753	1863.2	10.500	50.4	-1.0	0.68	4484	2.81	0.15
006529378-06	OBS	No	547.312905	293.814761	568.9	15.000	20.2	-1.0	0.68	4484	1.55	0.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006529378-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006529378-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006529378-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006529378-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS
006529378-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_ZUMA—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

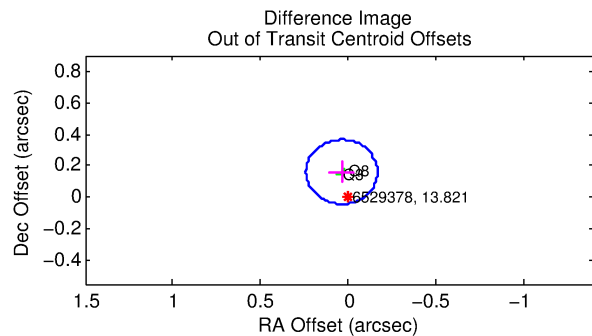
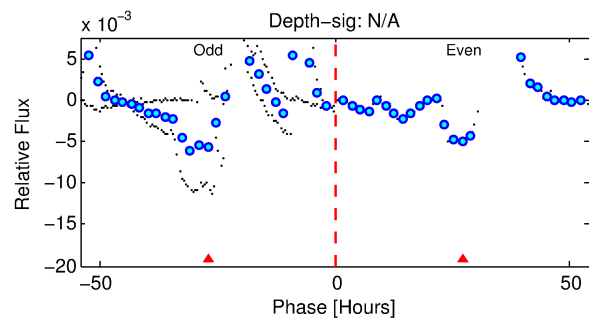
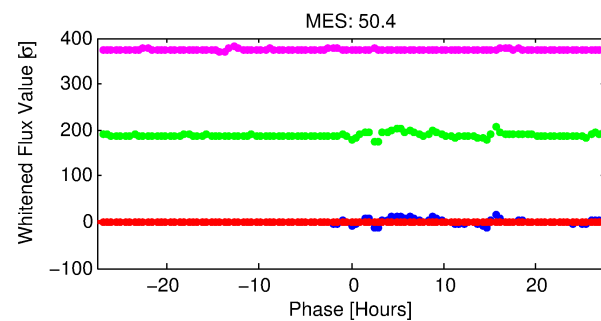
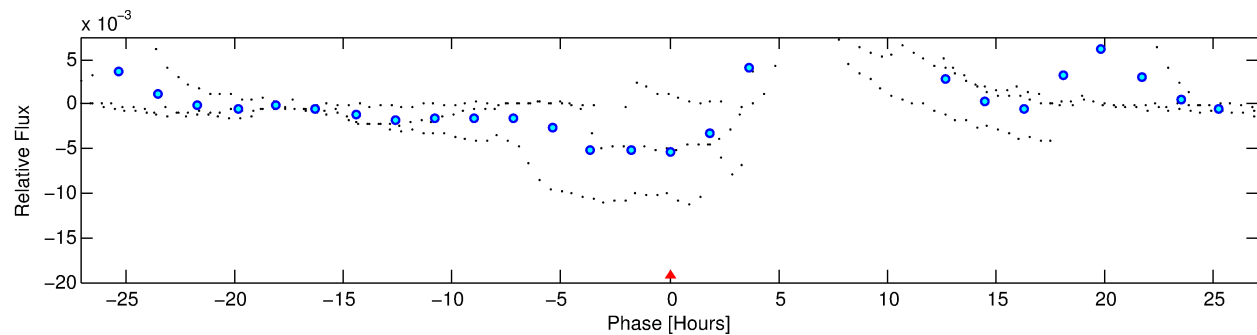
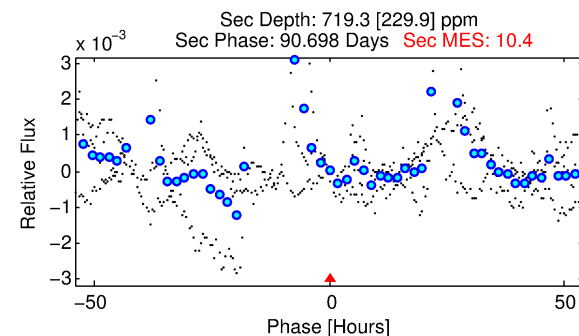
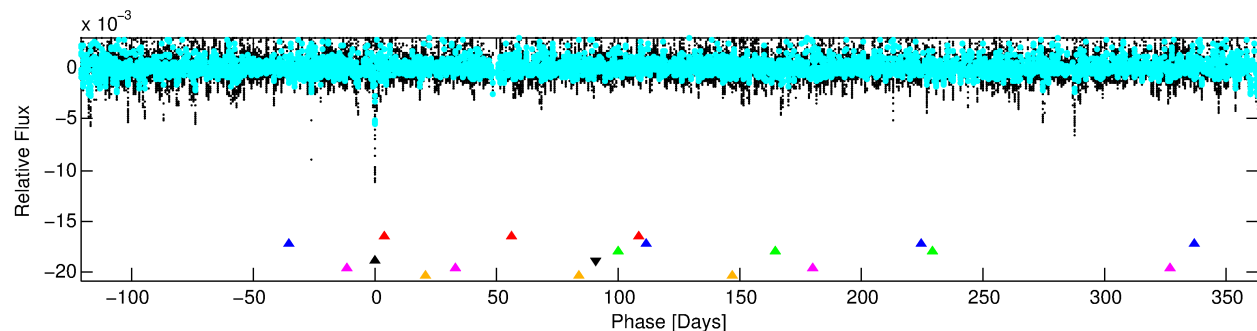
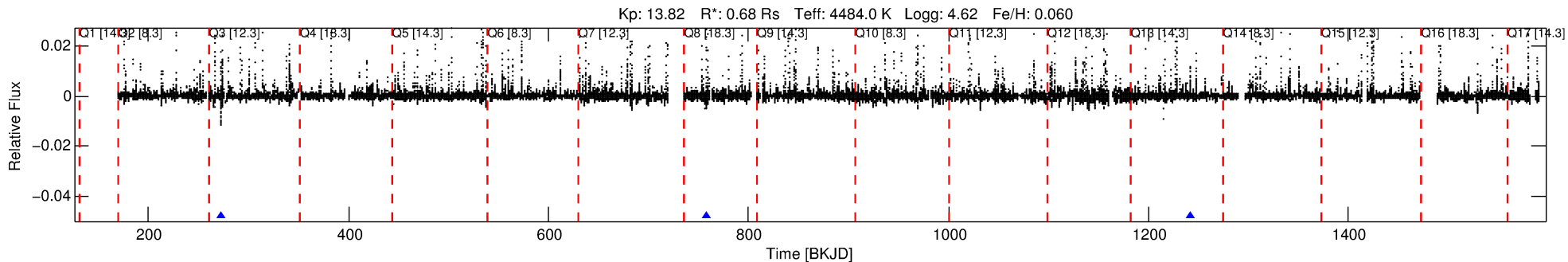
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006529378-04

No Significant Match Found

DV One-Page Summary

KIC: 6529378 Candidate: 4 of 6 Period: 484.194 d



TPS TCE Results:

Period = 484.19364 d
Epoch = 273.1088 BKJD

DV fit results are unavailable

DV Diagnostic Results:

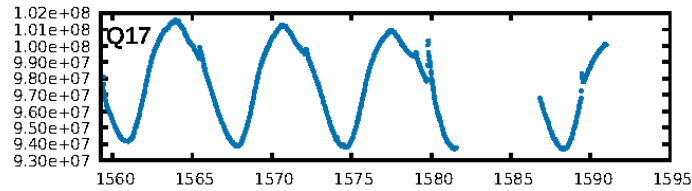
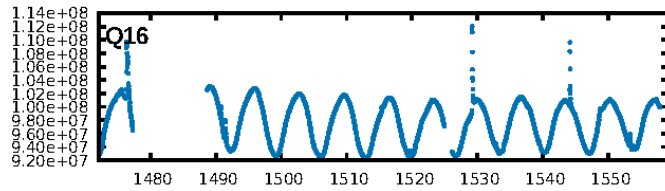
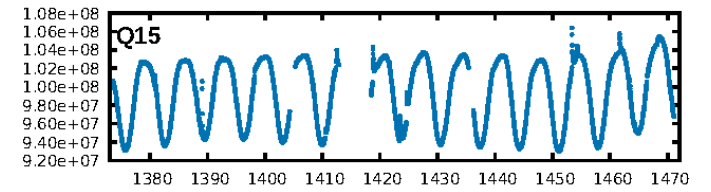
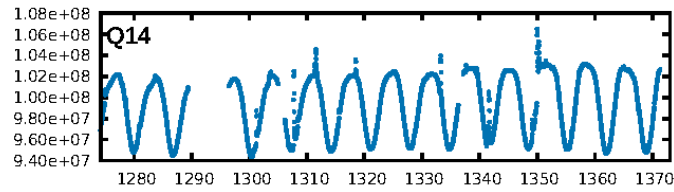
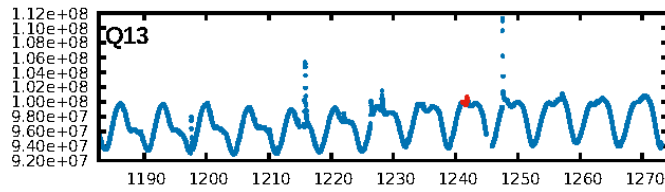
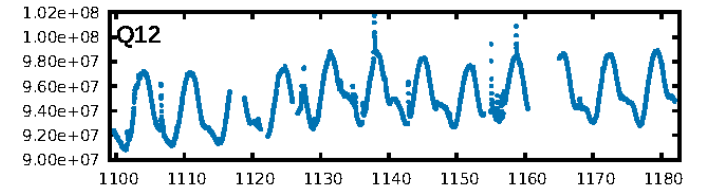
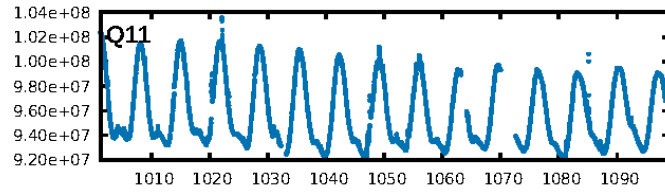
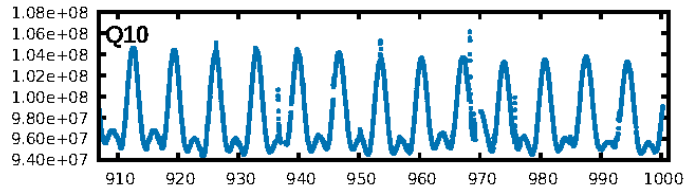
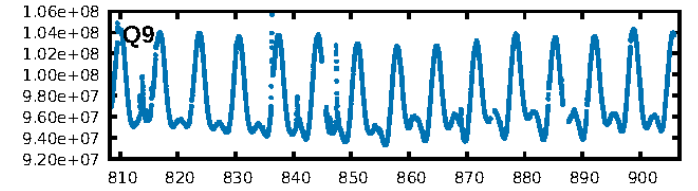
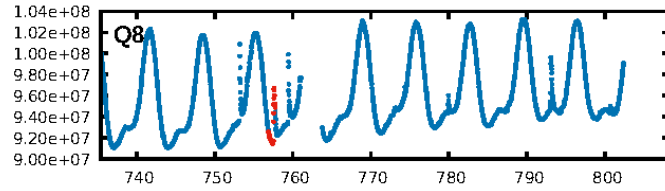
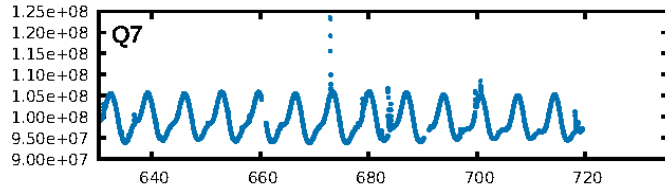
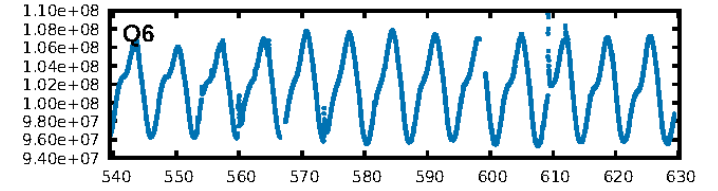
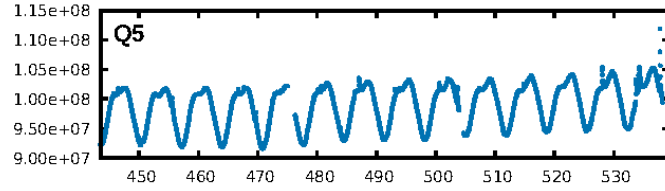
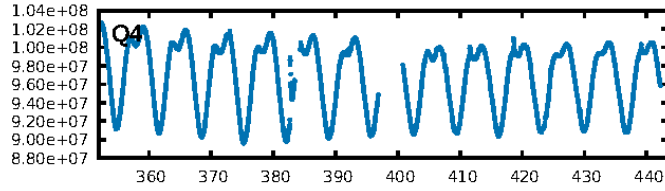
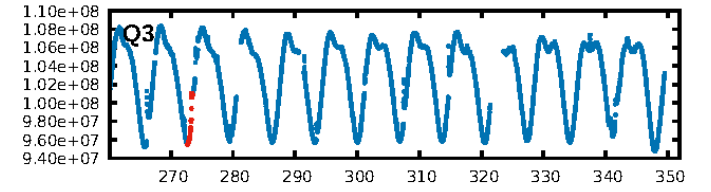
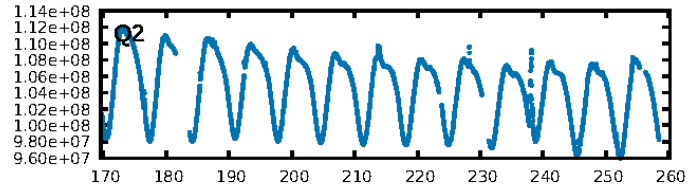
ShortPeriod-sig: 100.0% [137.48 σ]
LongPeriod-sig: 100.0% [71.62 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.8004

Centroid-sig: 7.4%
Centroid-so: 0.058 arcsec [1.01 σ]
OotOffset-rm: 0.167 arcsec [2.45 σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-rm: 0.151 arcsec [2.25 σ]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

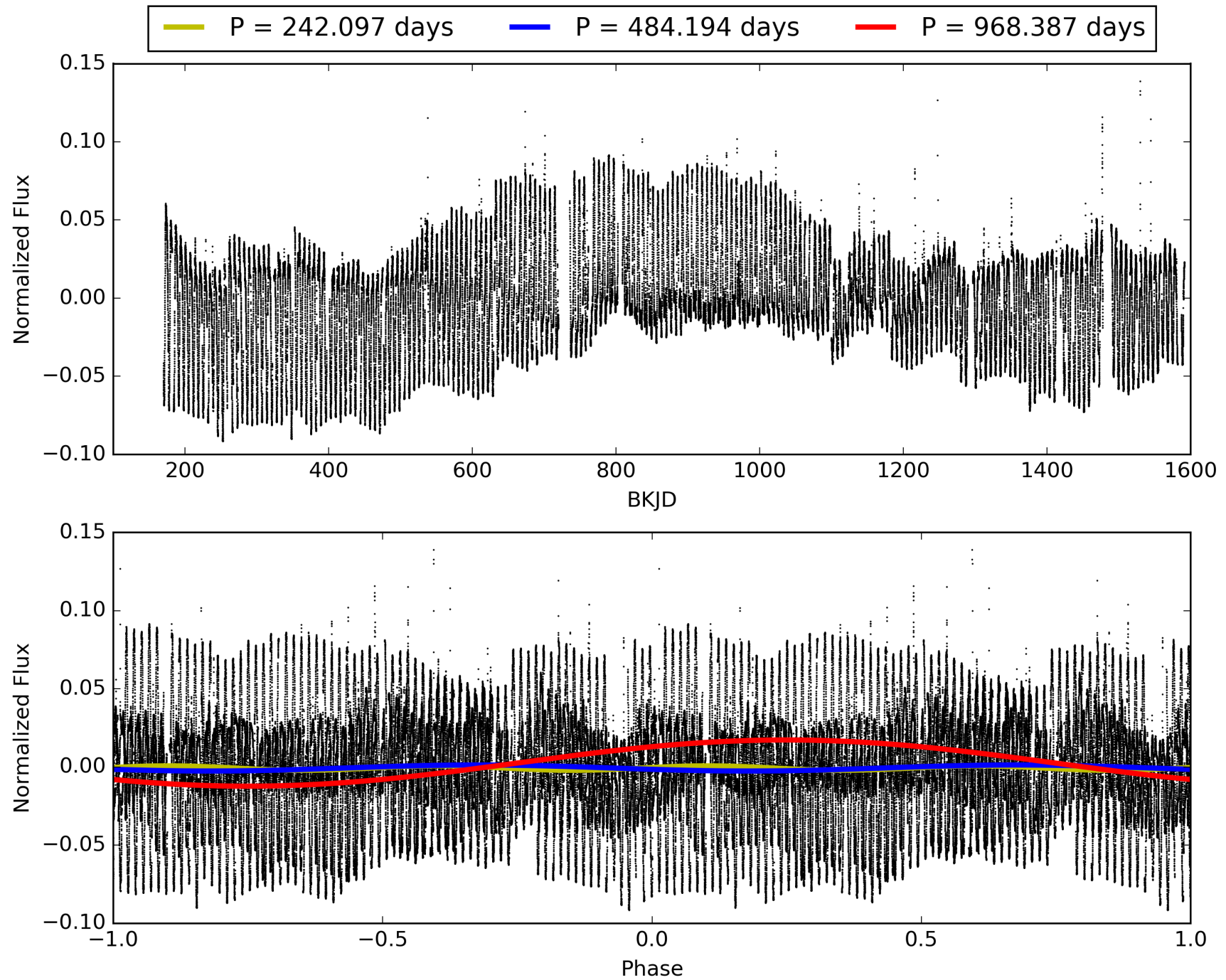
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:13:57 Z

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

TCE 006529378-04, PDC Light Curves

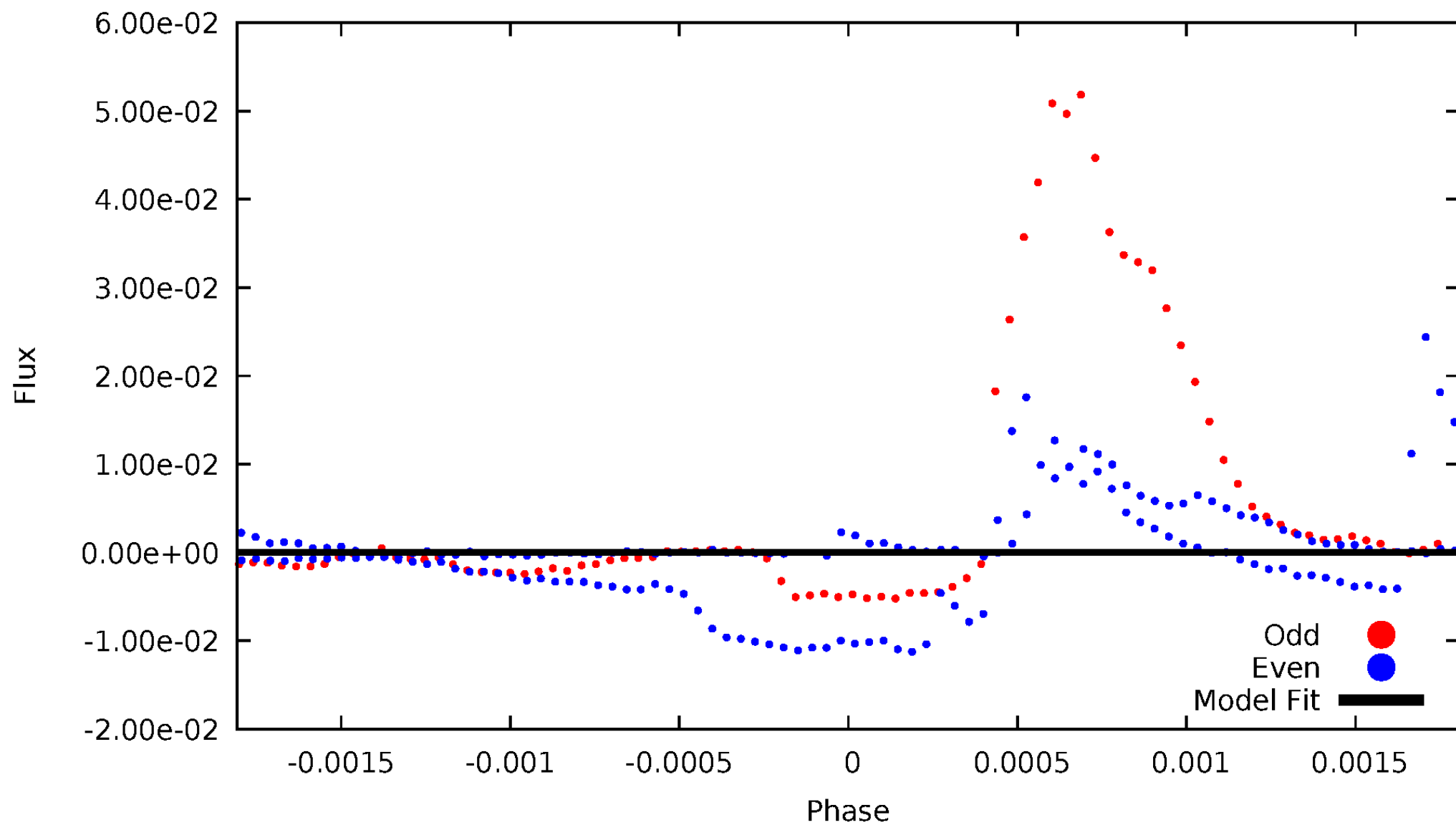


TCE 006529378-04



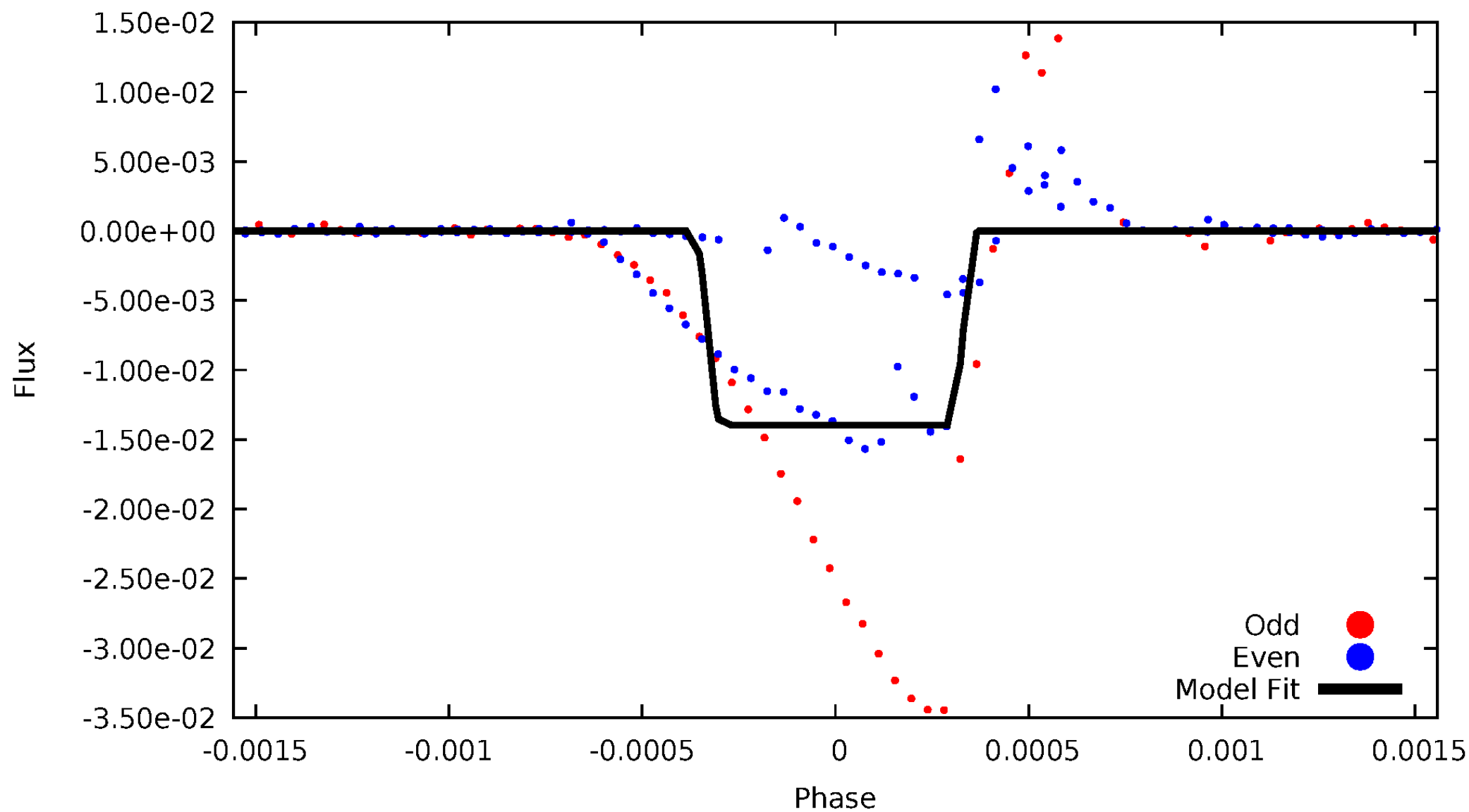
DV Odd/Even

TCE 006529378-04



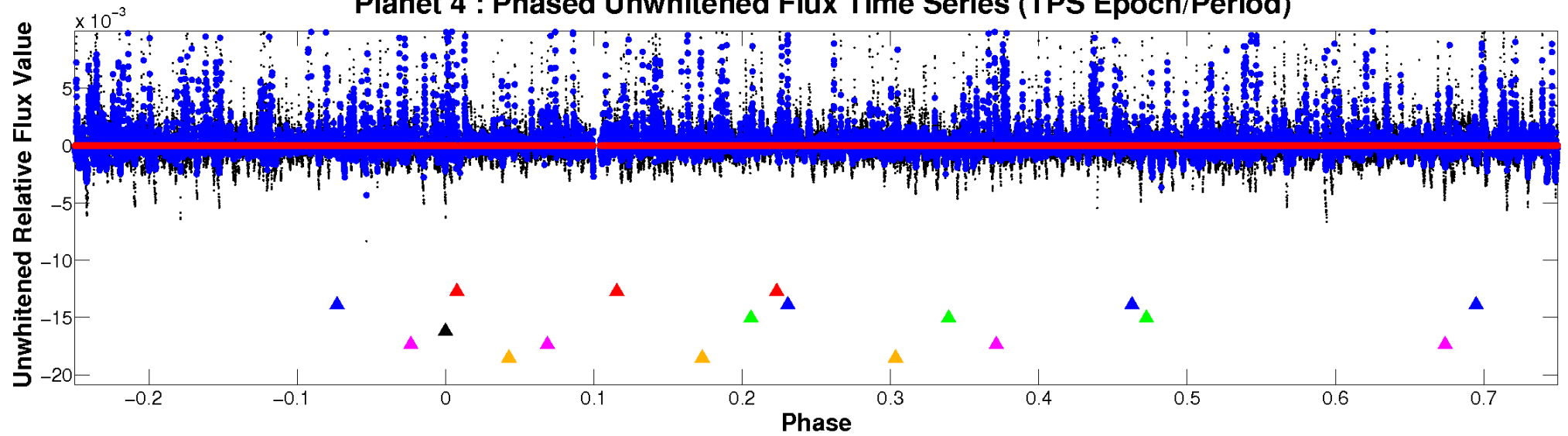
ALT Odd/Even

TCE 006529378-04



Non-Whitened Vs. Whitened Light Curve

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

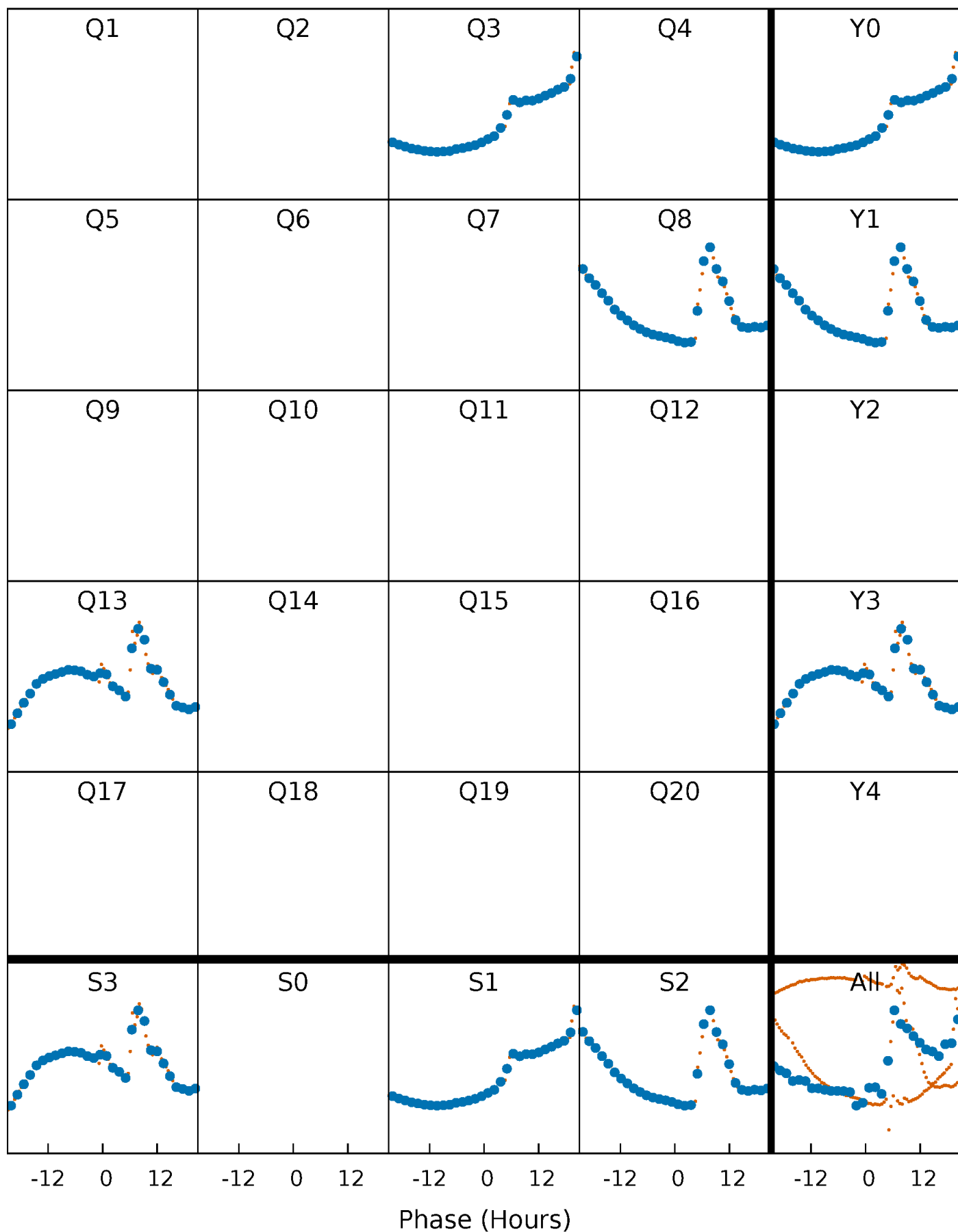


Planet 4 : Phased Whitened Flux Time Series (TPS Epoch/Period)



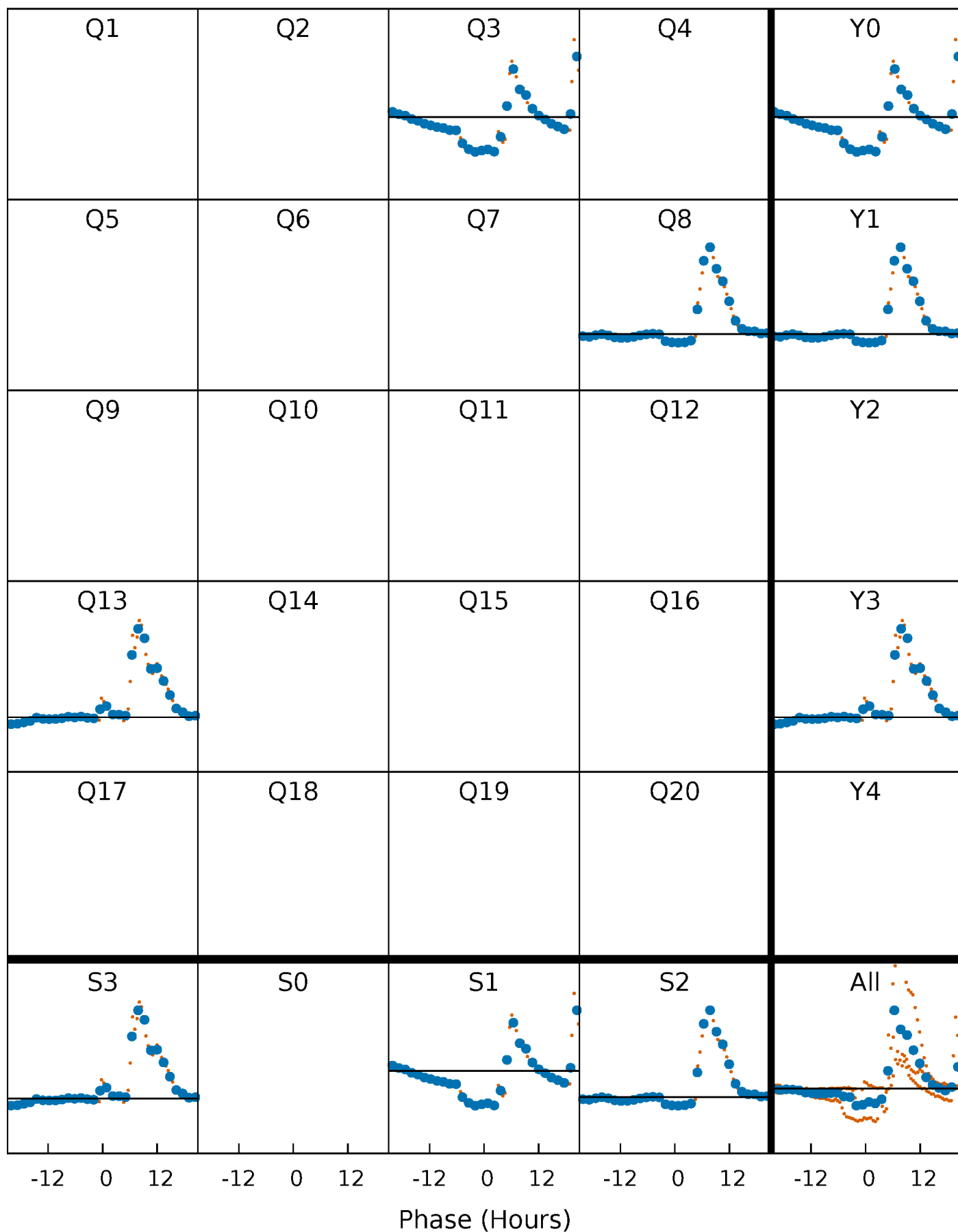
PDC Quarter-Phased Transit Curves

TCE 006529378-04 $P=484.193638$ Days $T_0=273.108753$ (BKJD)



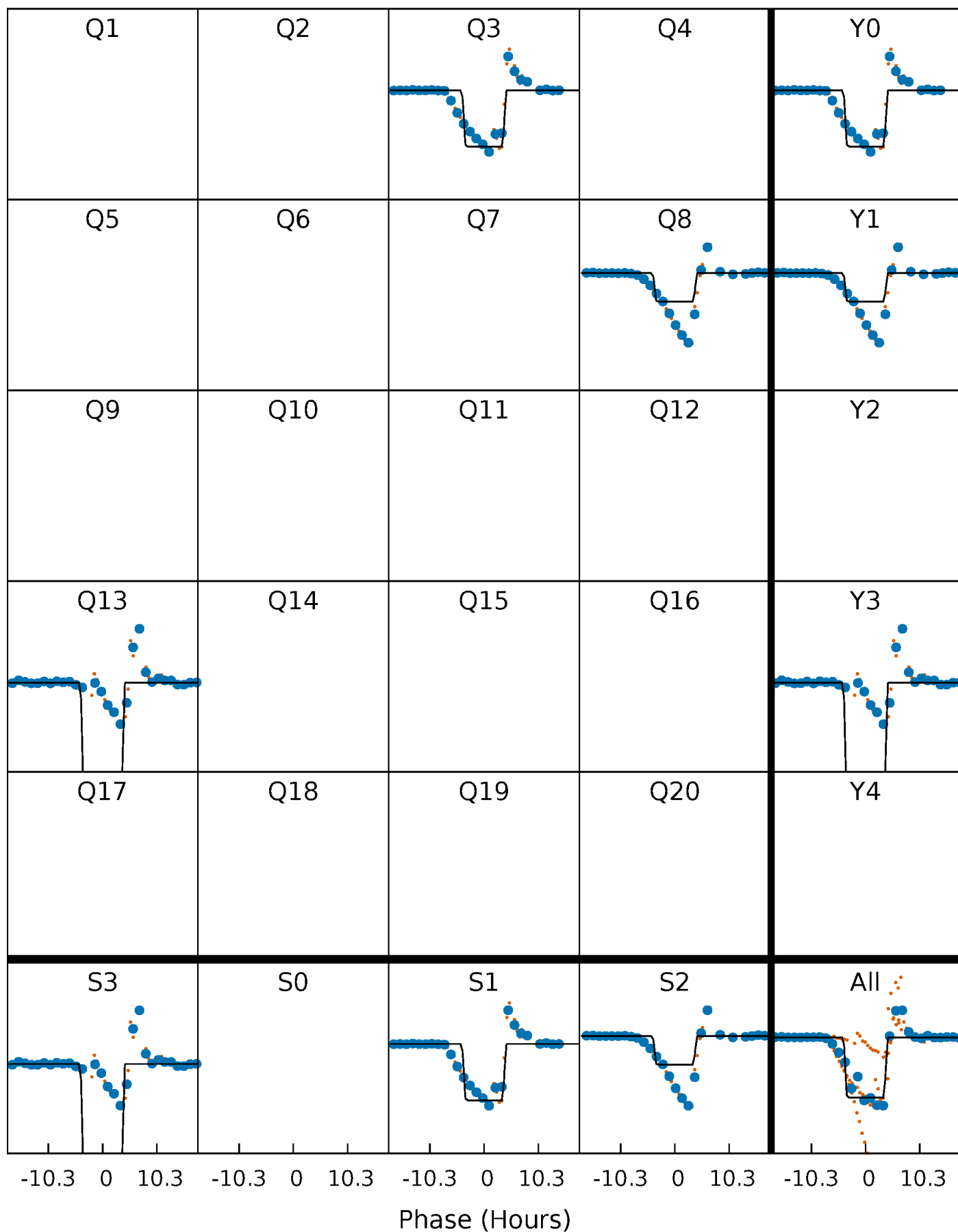
DV Quarter-Phased Transit Curves

TCE 006529378-04 $P=484.193638$ Days $T_0=273.108753$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

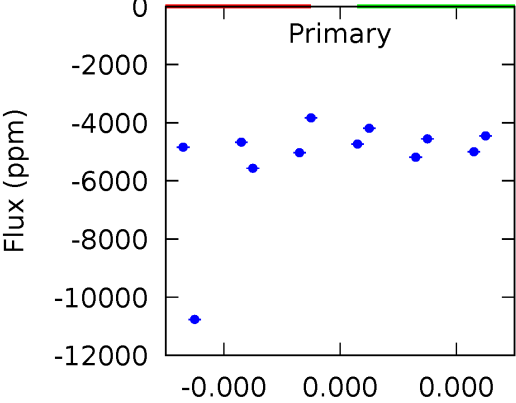
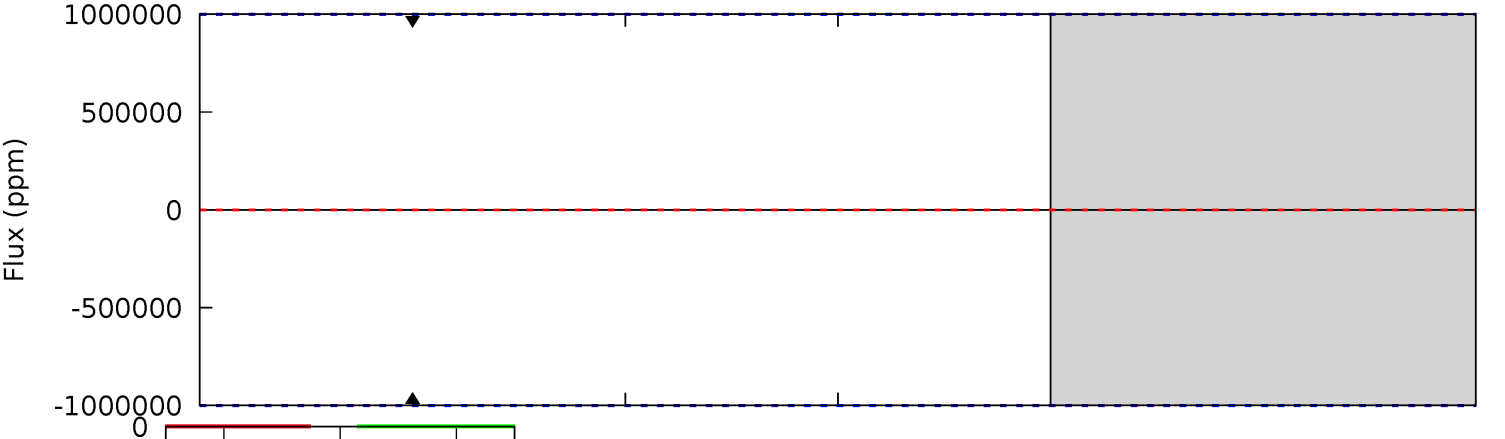
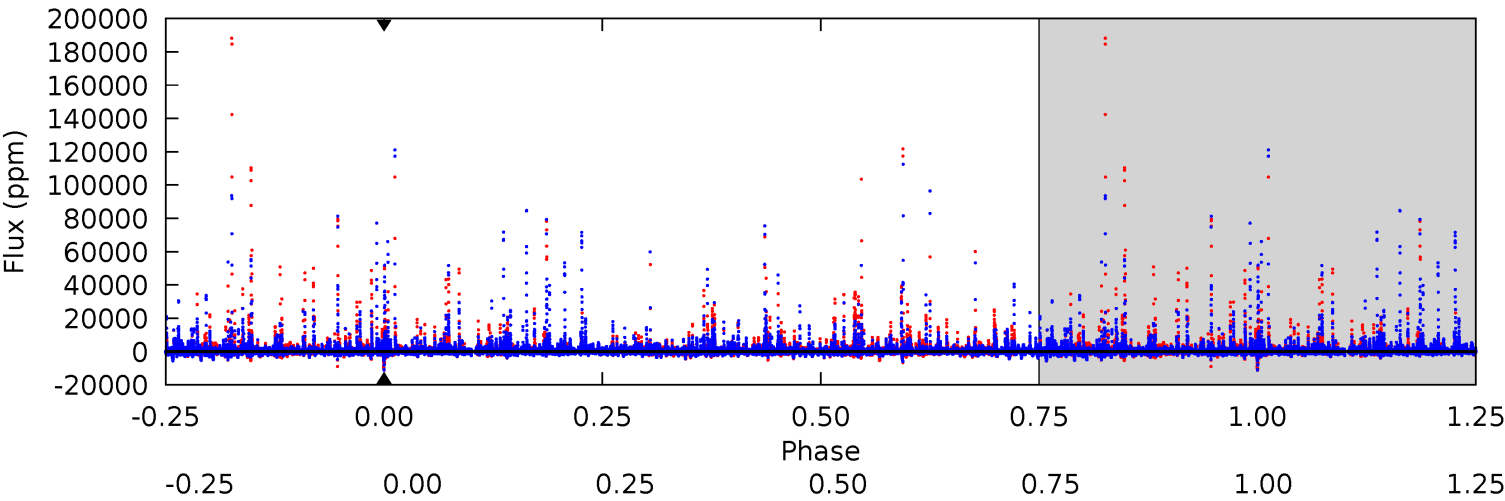
TCE 006529378-04 $P=484.193638$ Days $T_0=273.162727$ (BKJD)



DV Model-Shift Uniqueness Test

006529378-04, P = 484.193638 Days, E = 273.108753 Days

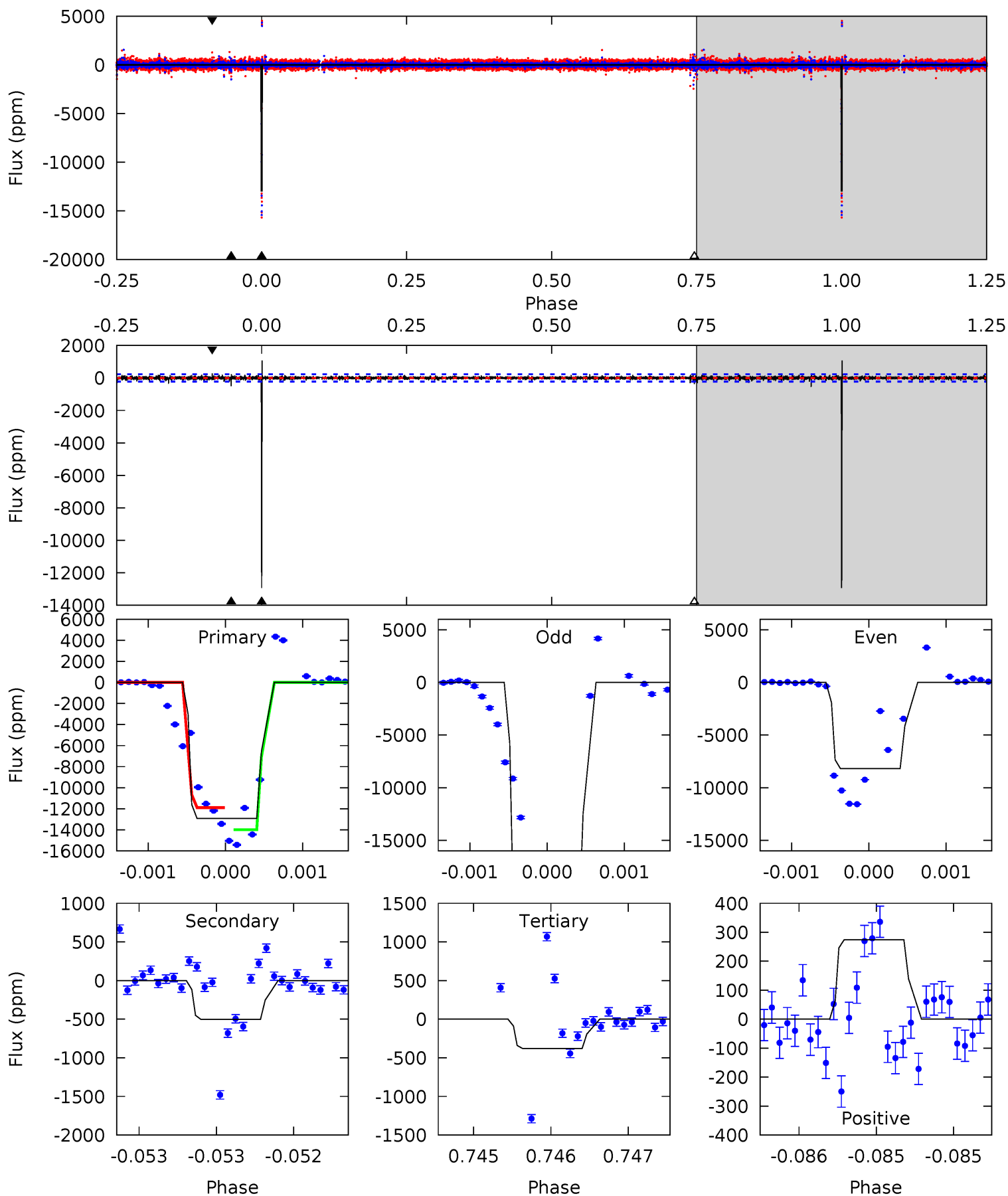
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

006529378-04, P = 484.193638 Days, E = 273.162727 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
313.9	12.2	9.20	6.66	5.51	3.39	0.91	304.7	307.2	2.98	5.52	135.0	1.01	0.08	0



Stellar Parameters For KIC 006529378

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4484^{+156}_{-156}	$4.620^{+0.033}_{-0.033}$	$0.060^{+0.250}_{-0.300}$	$0.683^{+0.043}_{-0.053}$	$0.709^{+0.052}_{-0.063}$	$3.137^{+0.558}_{-0.393}$
	+3%/-3%	+1%/-1%	+417%/-500%	+6%/-8%	+7%/-9%	+18%/-13%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006529378-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$6.56^{+5.41}_{-4.47}$	220^{+8}_{-8}	-3192^{+13636}_{-7470}	$-17799.006^{+2628227.584}_{-2924388.993}$
Alt.	-502 ± 41	$10.16^{+7.26}_{-6.17}$	220^{+8}_{-8}	2573^{+720}_{-311}	3146^{+16495}_{-2117}

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

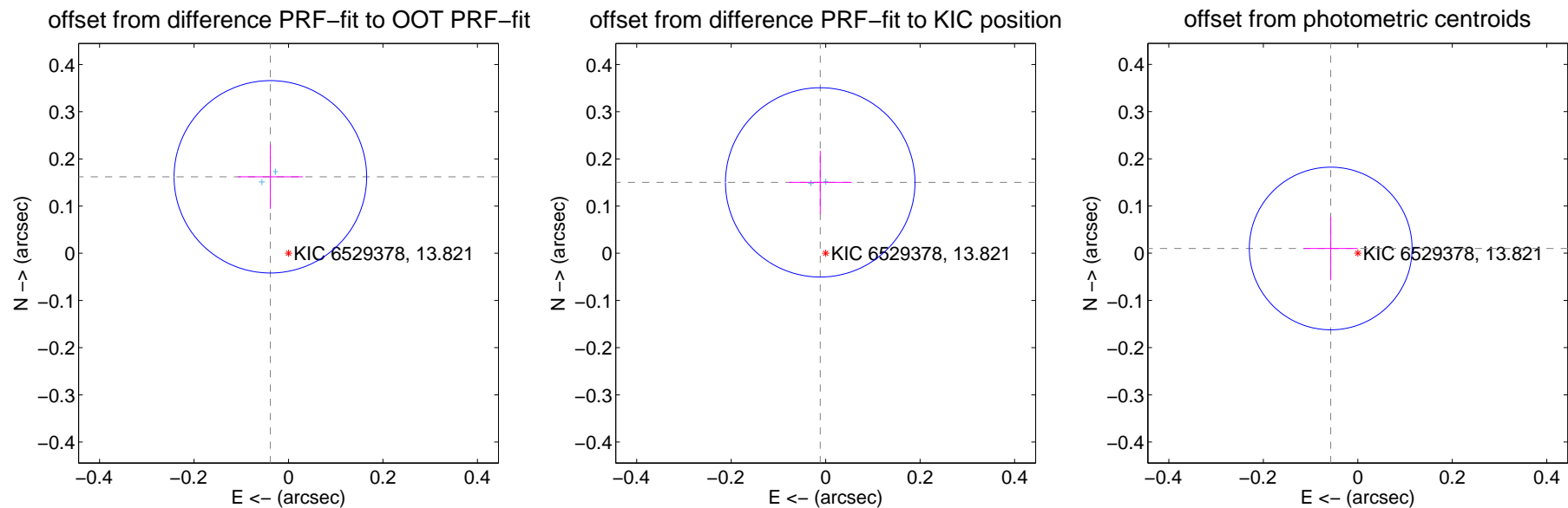
DV Centroid Data

Supplemental centroid analysis for 006529378-04. Kepler magnitude: 13.82. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.167 ± 0.068	2.45	0.038 ± 0.069	0.162 ± 0.068
PRF-fit source offset from KIC position	0.151 ± 0.067	2.25	0.012 ± 0.067	0.150 ± 0.067
photometric centroid source offset	0.06 ± 0.06	1.01	0.06 ± 0.06	0.01 ± 0.07



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

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

Q1 no difference image



Q1 no OOT image



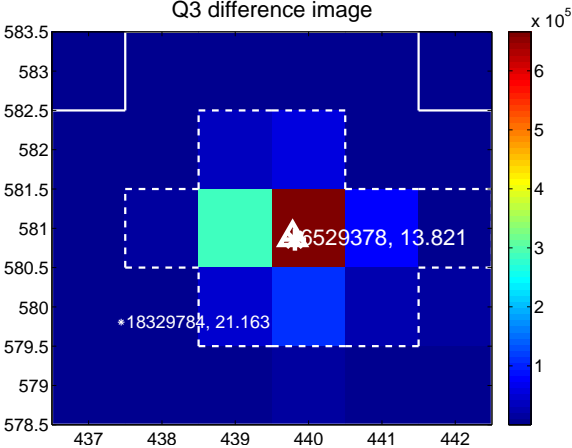
Q2 no difference image



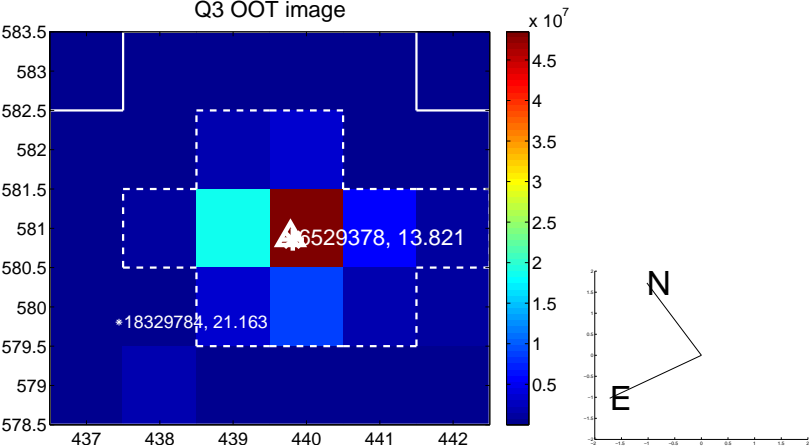
Q2 no OOT image



Q3 difference image



Q3 OOT image



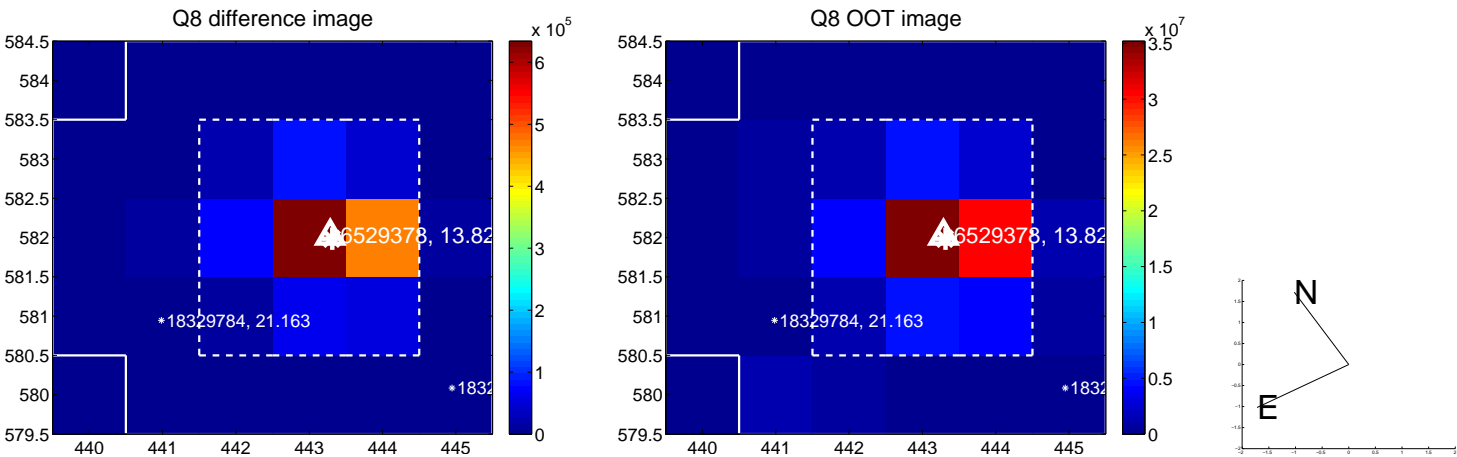
Q4 no difference image



Q4 no OOT image



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



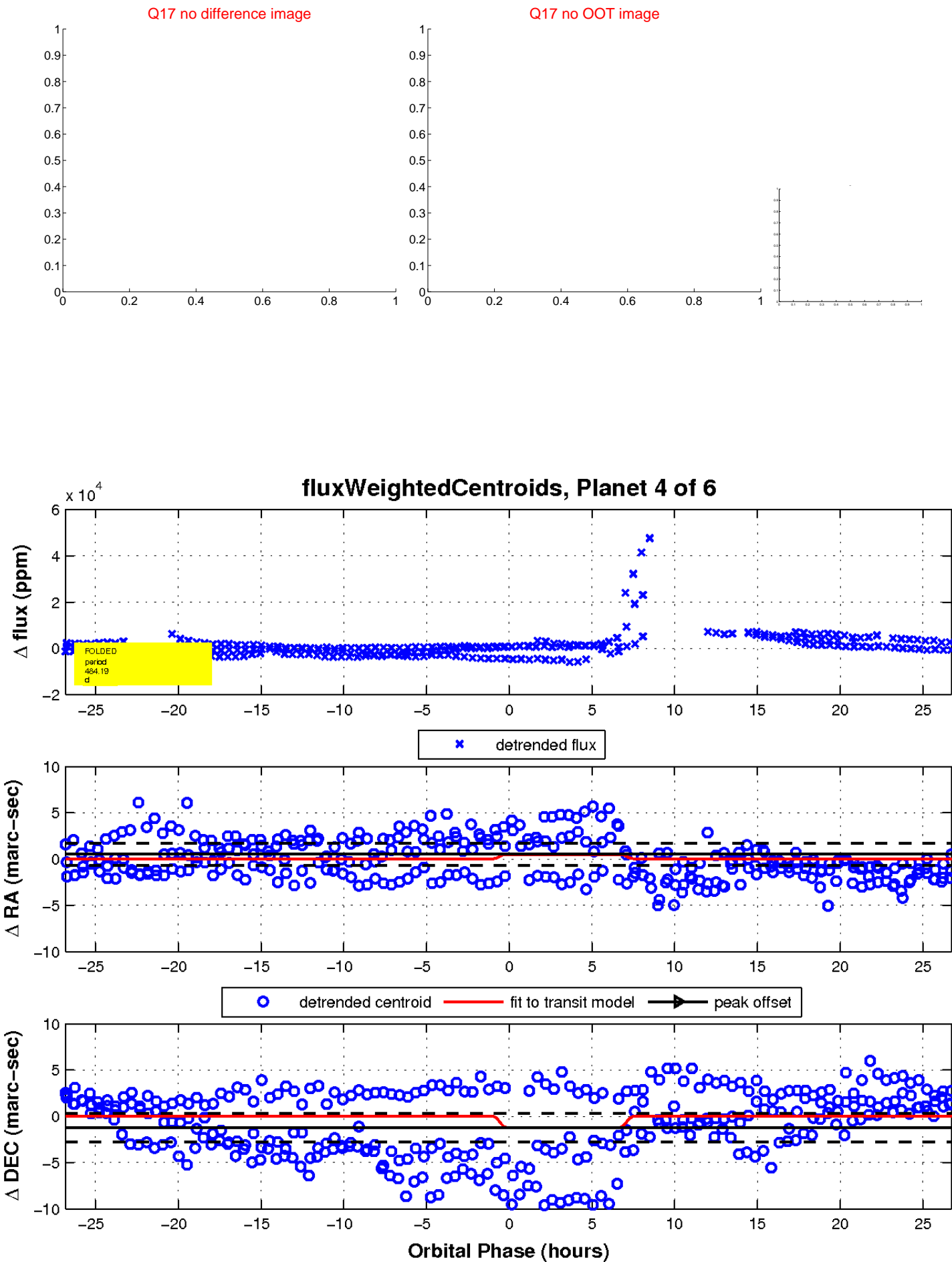
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

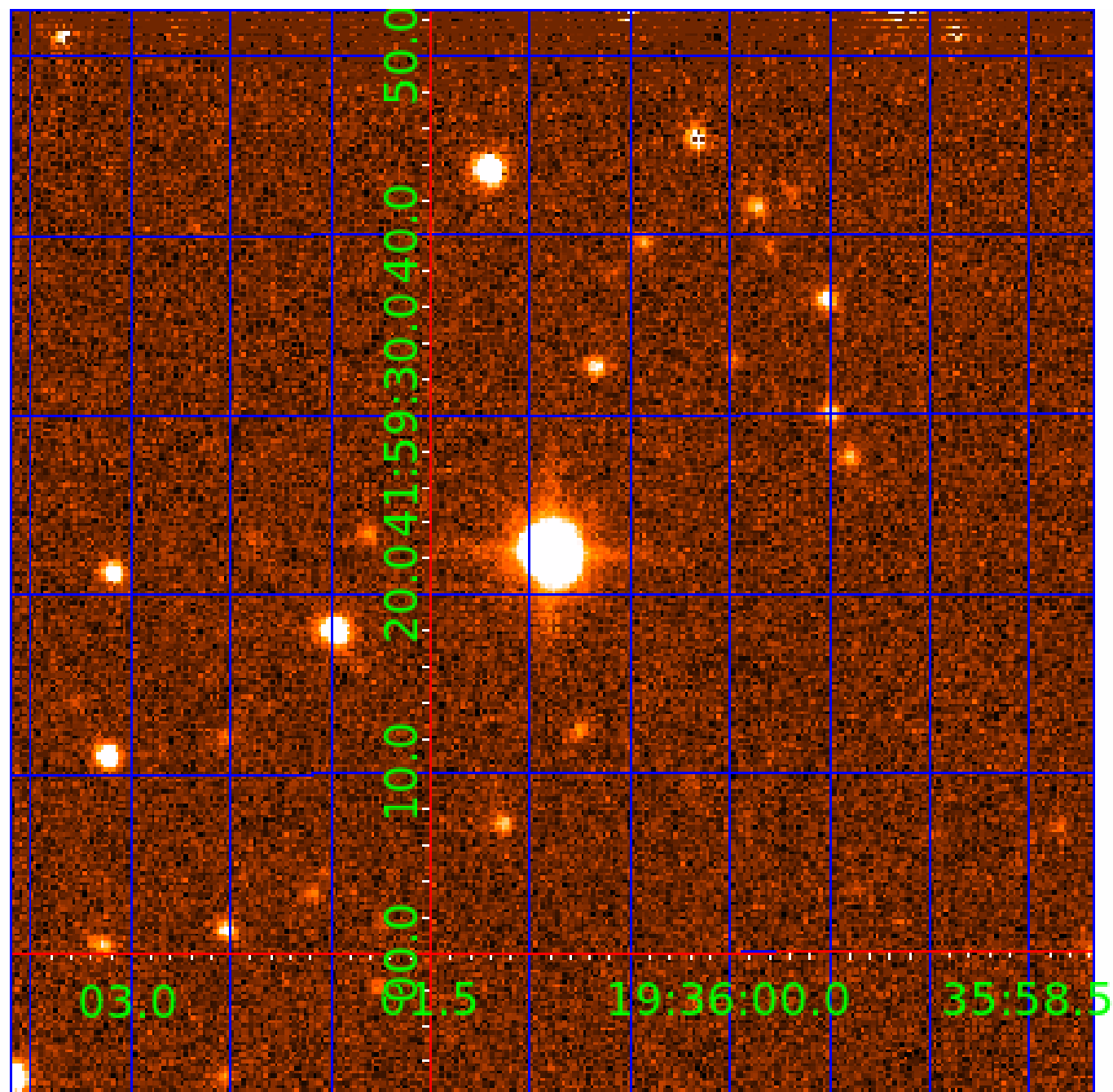


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006529378

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})
006529378-01	OBS	No	536.398435	276.836699	4361.3	13.992	41.5	9.1	0.68	4484	8.07	0.13
006529378-02	OBS	No	371.848951	237.728709	754.9	14.634	58.5	2.9	0.68	4484	1.79	0.21
006529378-03	OBS	No	419.649604	501.931861	2255.4	4.087	31.4	10.4	0.68	4484	6.54	0.18
006529378-04	OBS	No	484.193638	273.108753	1863.2	10.500	50.4	-1.0	0.68	4484	2.81	0.15
006529378-06	OBS	No	547.312905	293.814761	568.9	15.000	20.2	-1.0	0.68	4484	1.55	0.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006529378-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006529378-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST
006529378-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006529378-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS
006529378-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_ZUMA—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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.

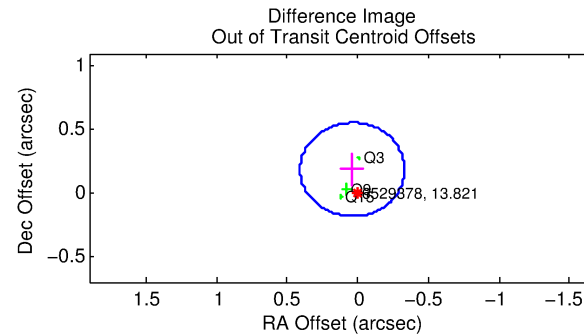
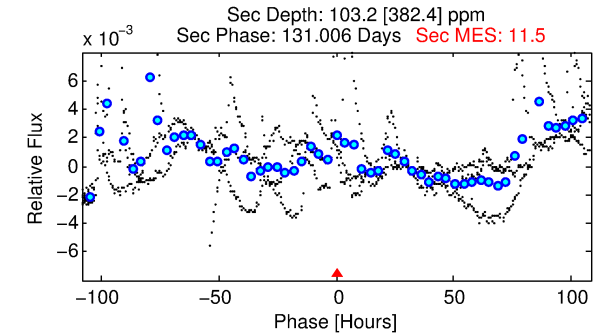
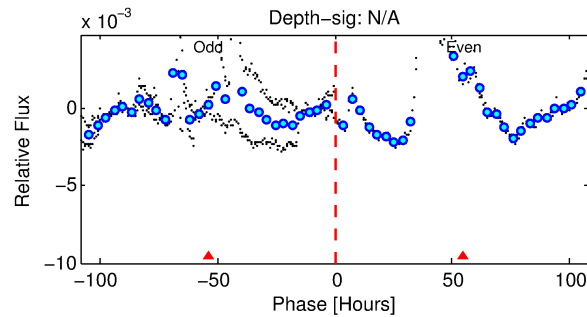
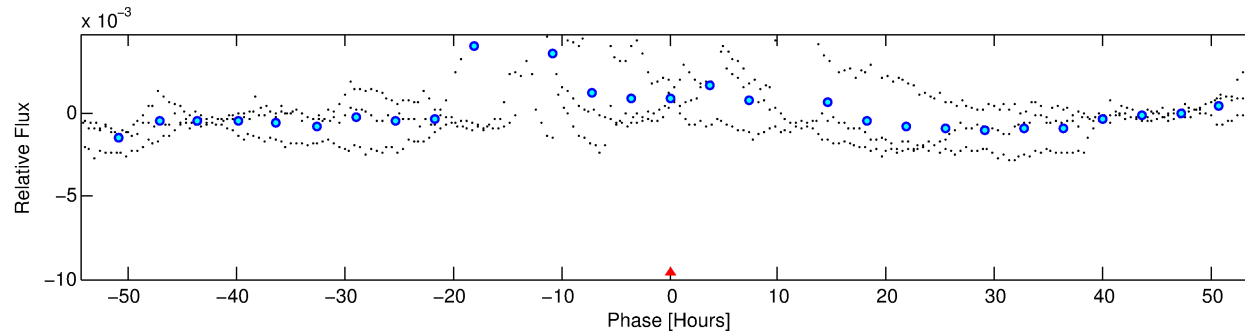
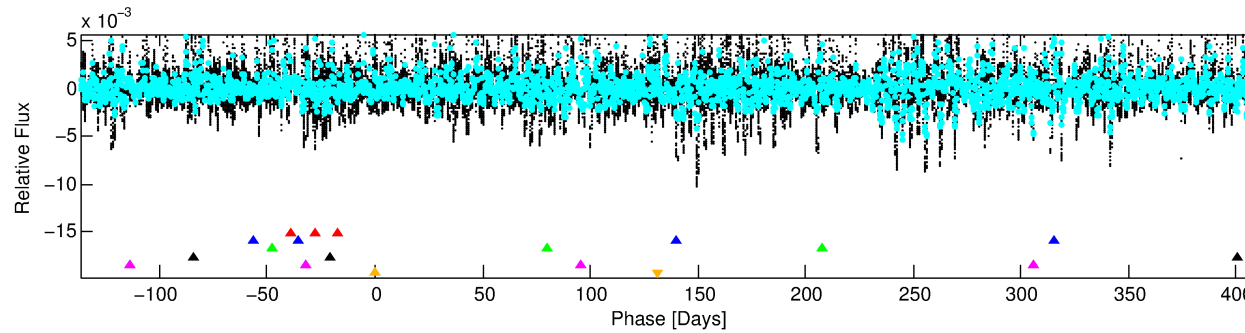
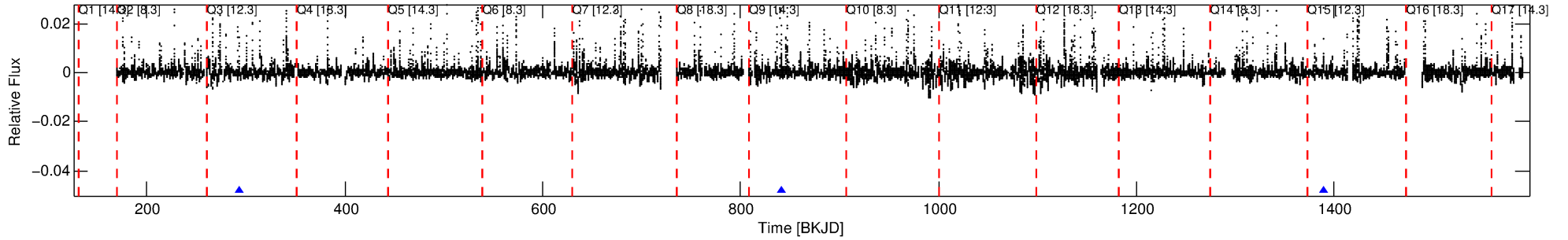
Ephemeris Match Information For 006529378-06

No Significant Match Found

DV One-Page Summary

KIC: 6529378 Candidate: 6 of 6 Period: 547.313 d

Kp: 13.82 R*: 0.68 Rs Teff: 4484.0 K Logg: 4.62 Fe/H: 0.060



TPS TCE Results:

Period = 547.31290 d
Epoch = 293.8148 BKJD

DV fit results are unavailable

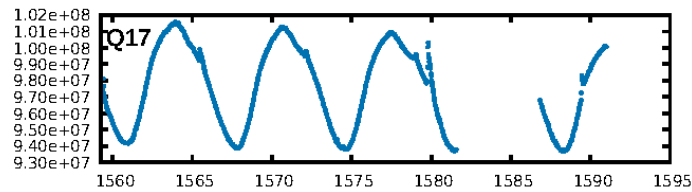
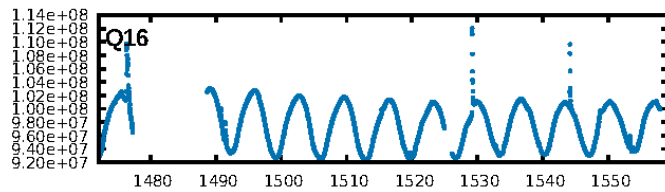
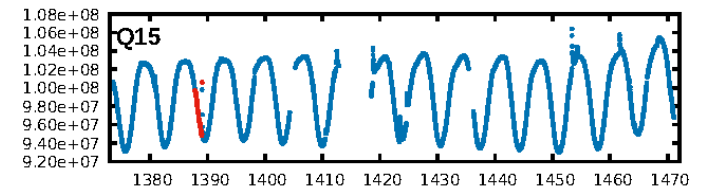
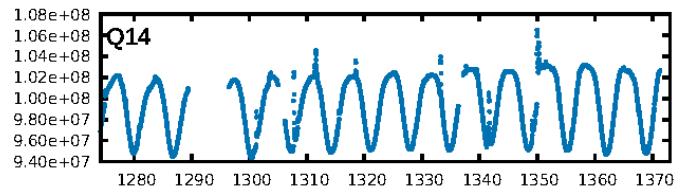
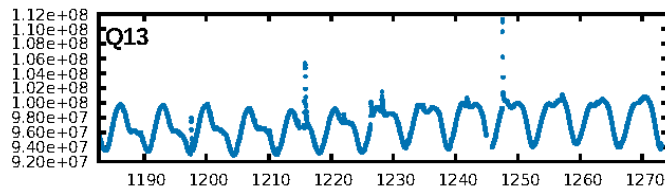
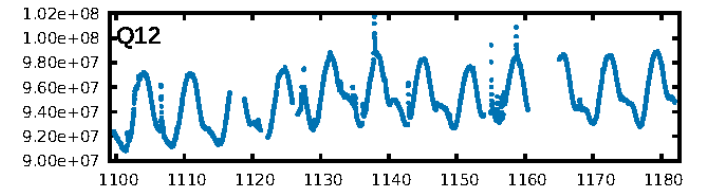
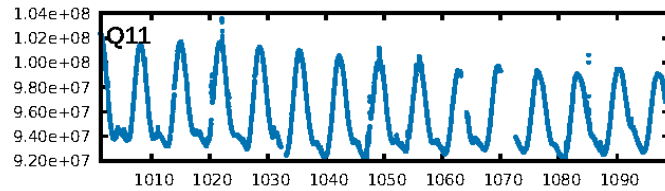
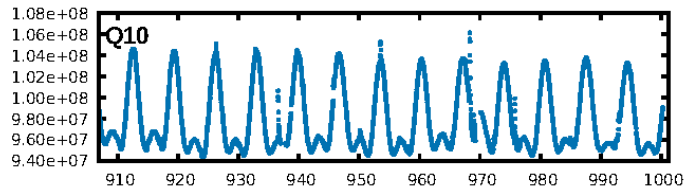
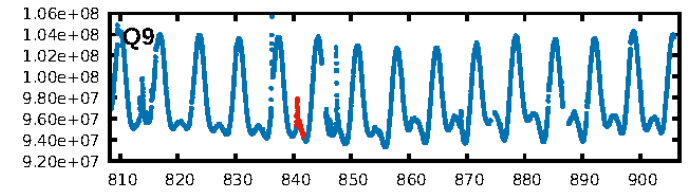
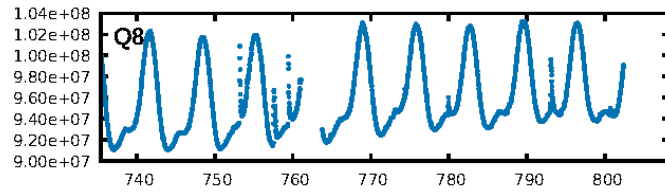
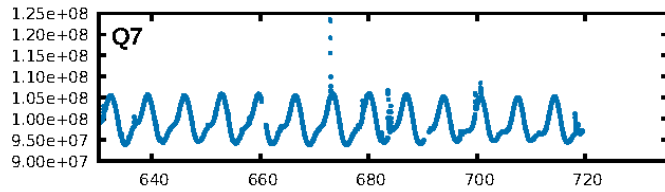
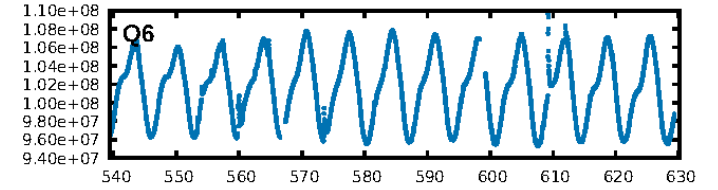
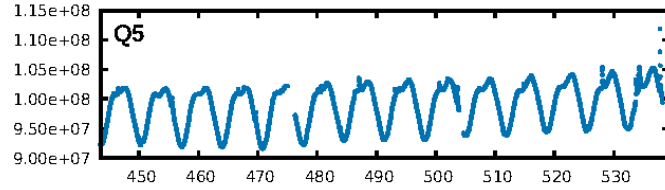
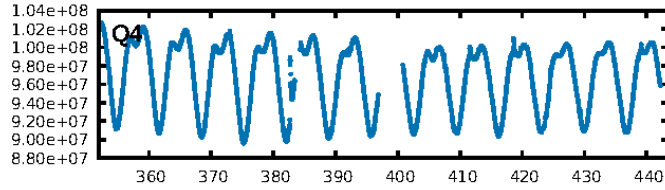
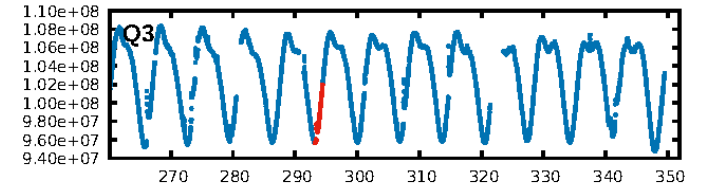
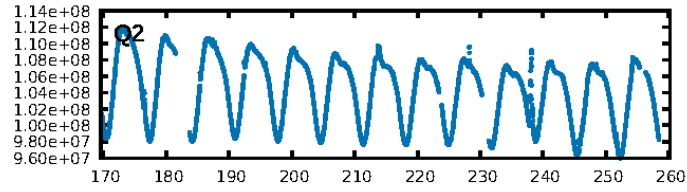
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [12.77σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 7.717
Centroid-sig: 77.2%
Centroid-so: 0.155 arcsec [1.41σ]
OotOffset-rm: 0.190 arcsec [1.54σ]
KicOffset-rm: 0.182 arcsec [1.33σ]
OotOffset-st: 0/2/0/1 [3]
KicOffset-st: 0/2/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

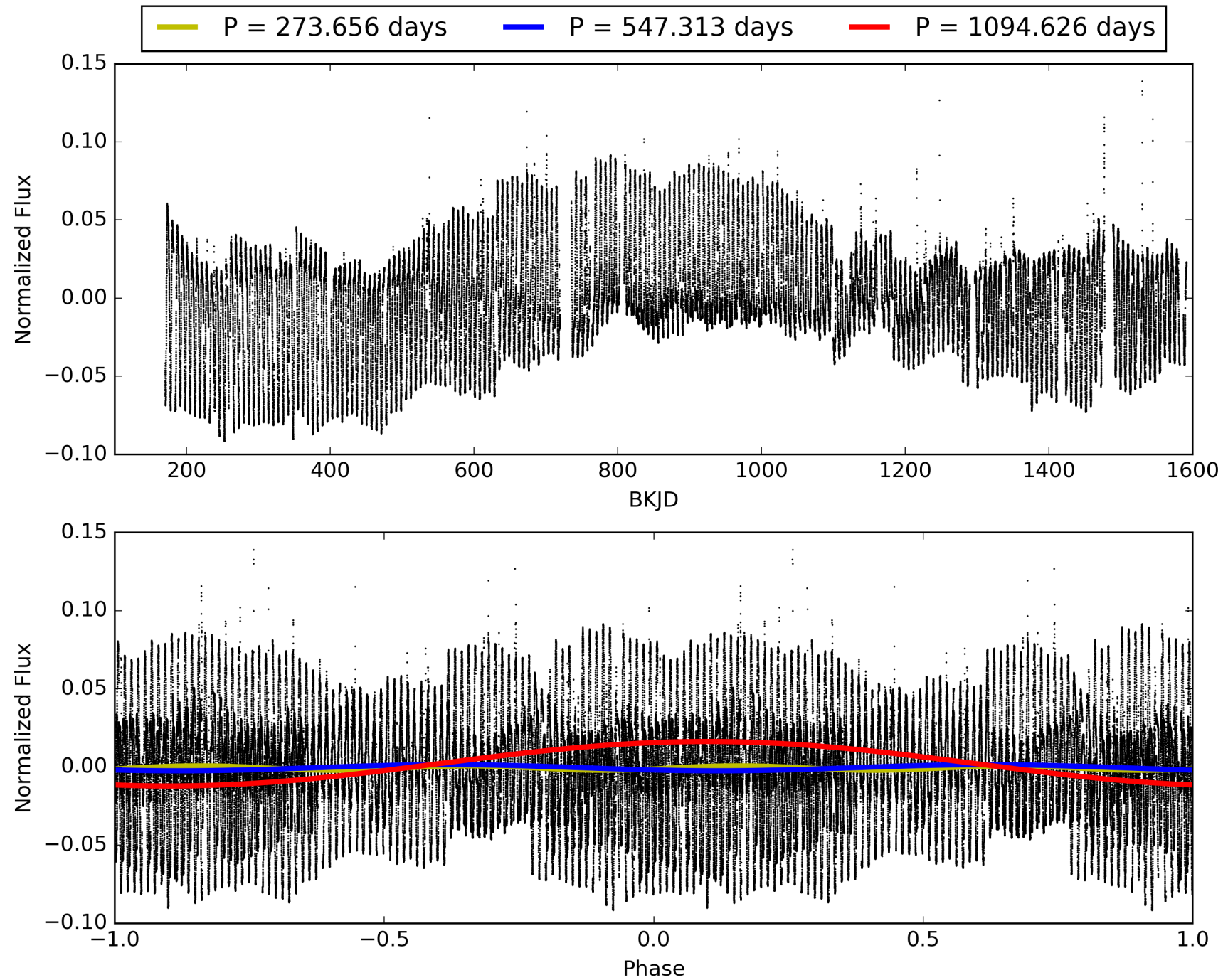
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:14:19 Z

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

TCE 006529378-06, PDC Light Curves

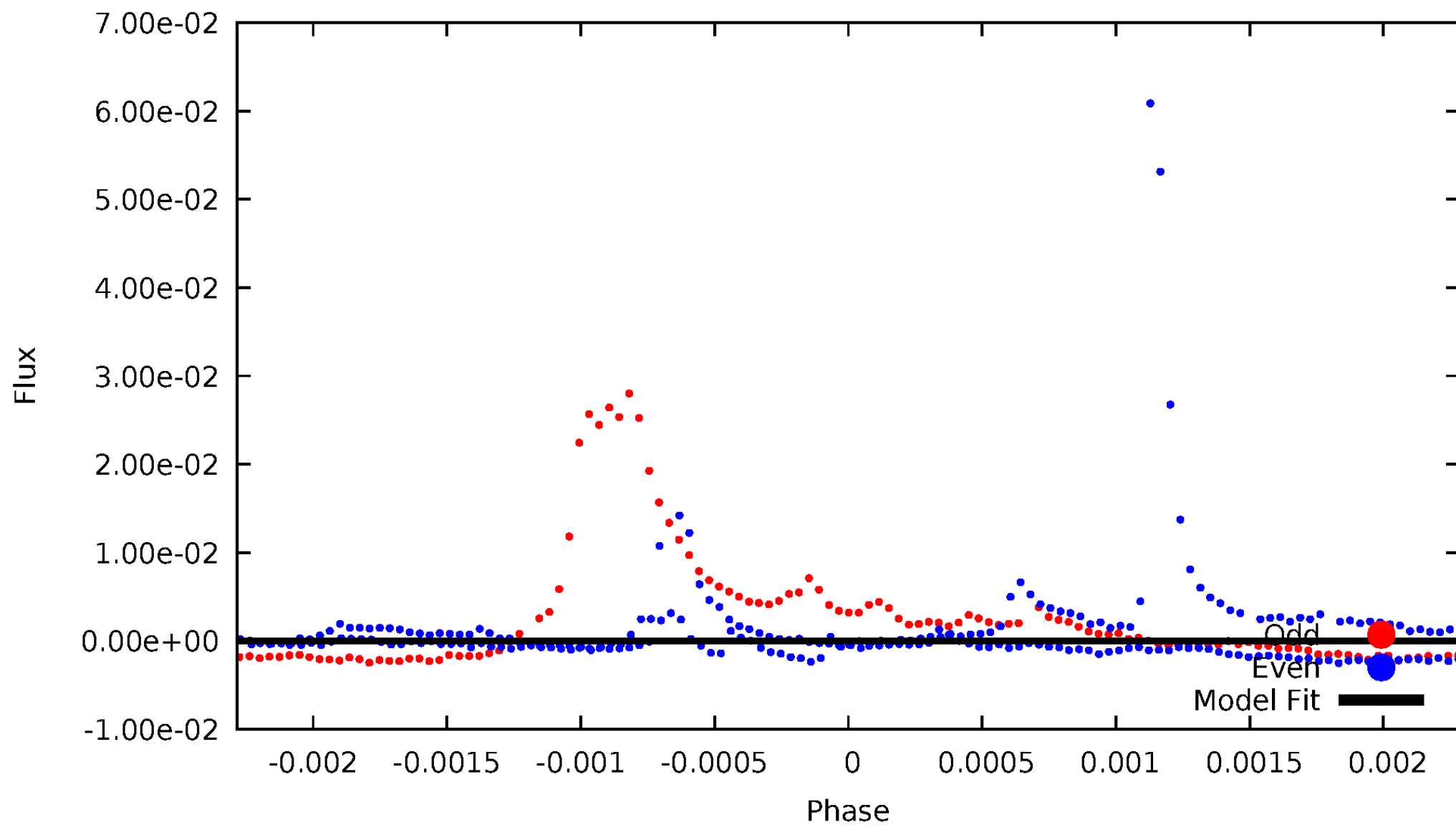


TCE 006529378-06



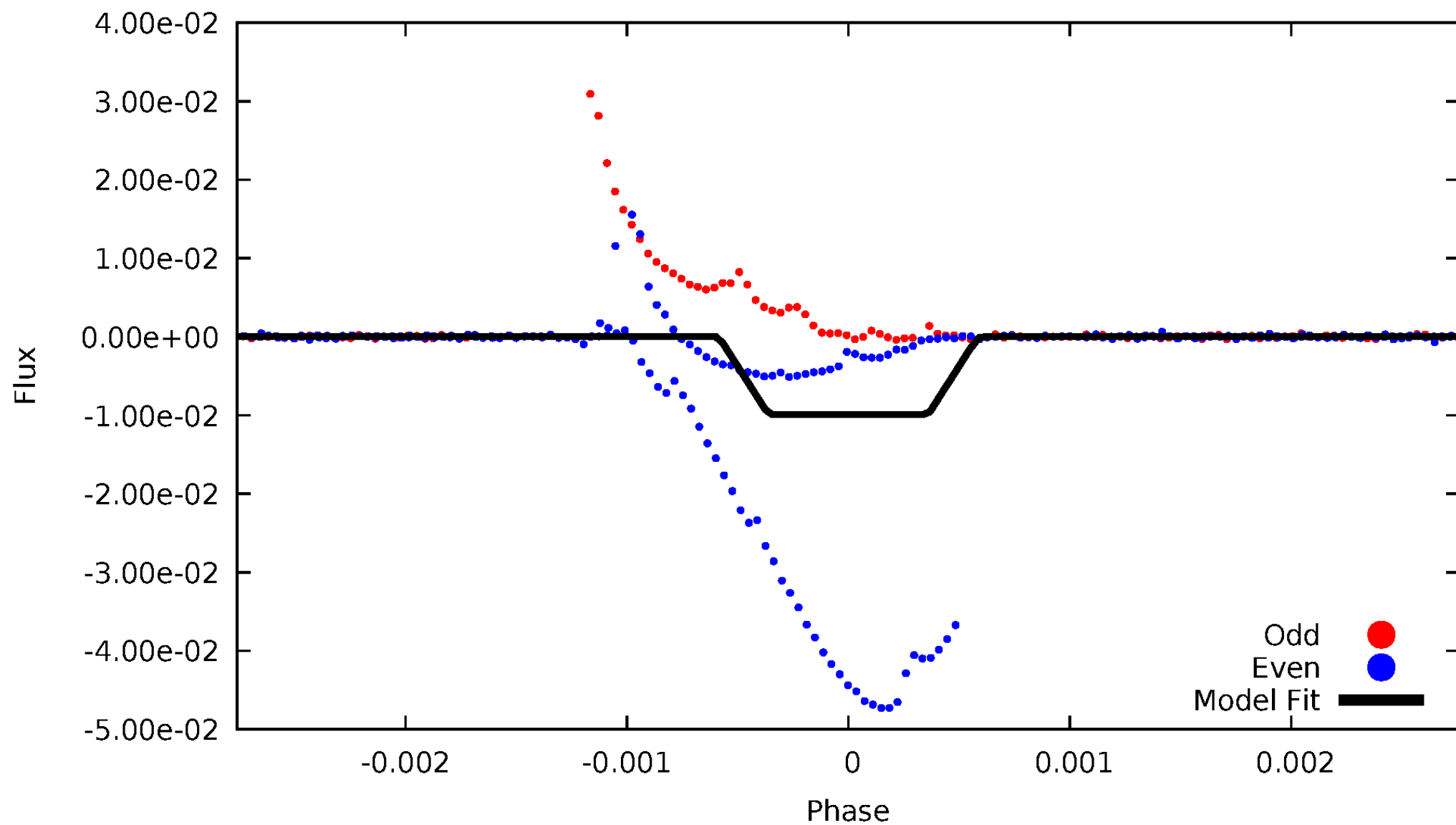
DV Odd/Even

TCE 006529378-06



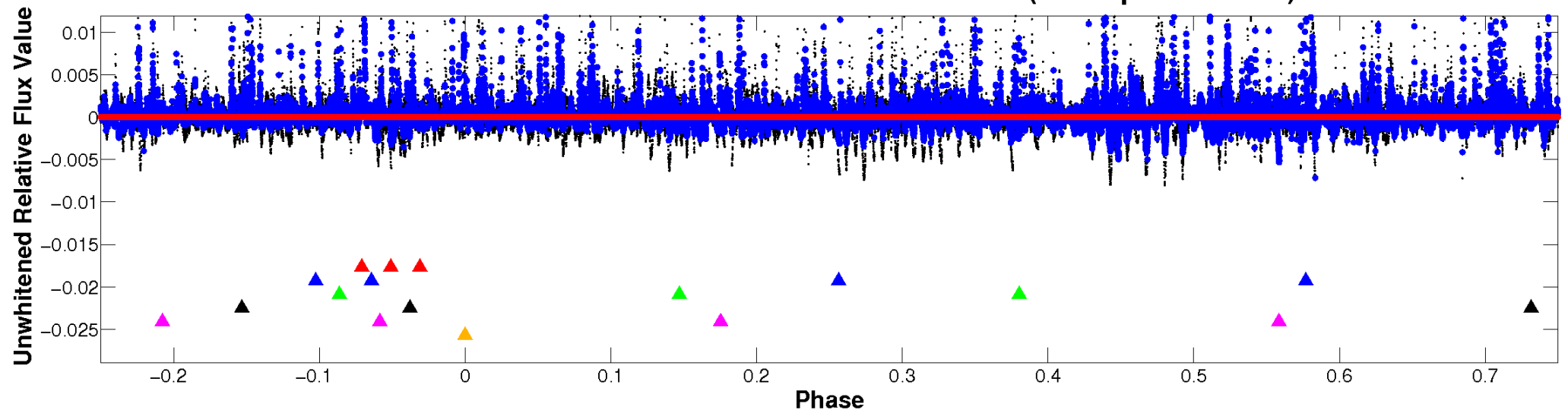
ALT Odd/Even

TCE 006529378-06

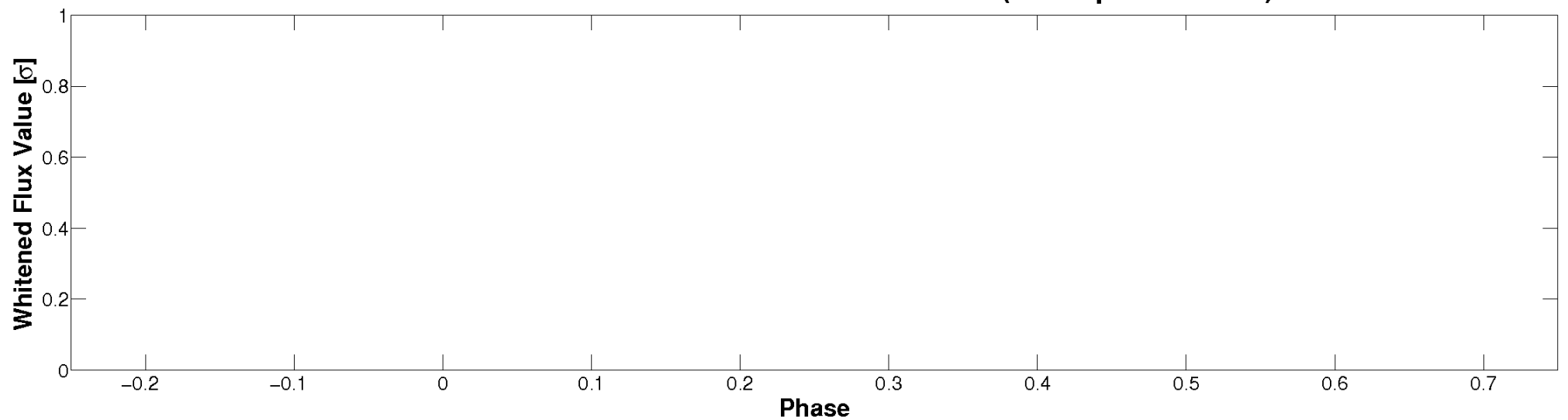


Non-Whitened Vs. Whitened Light Curve

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

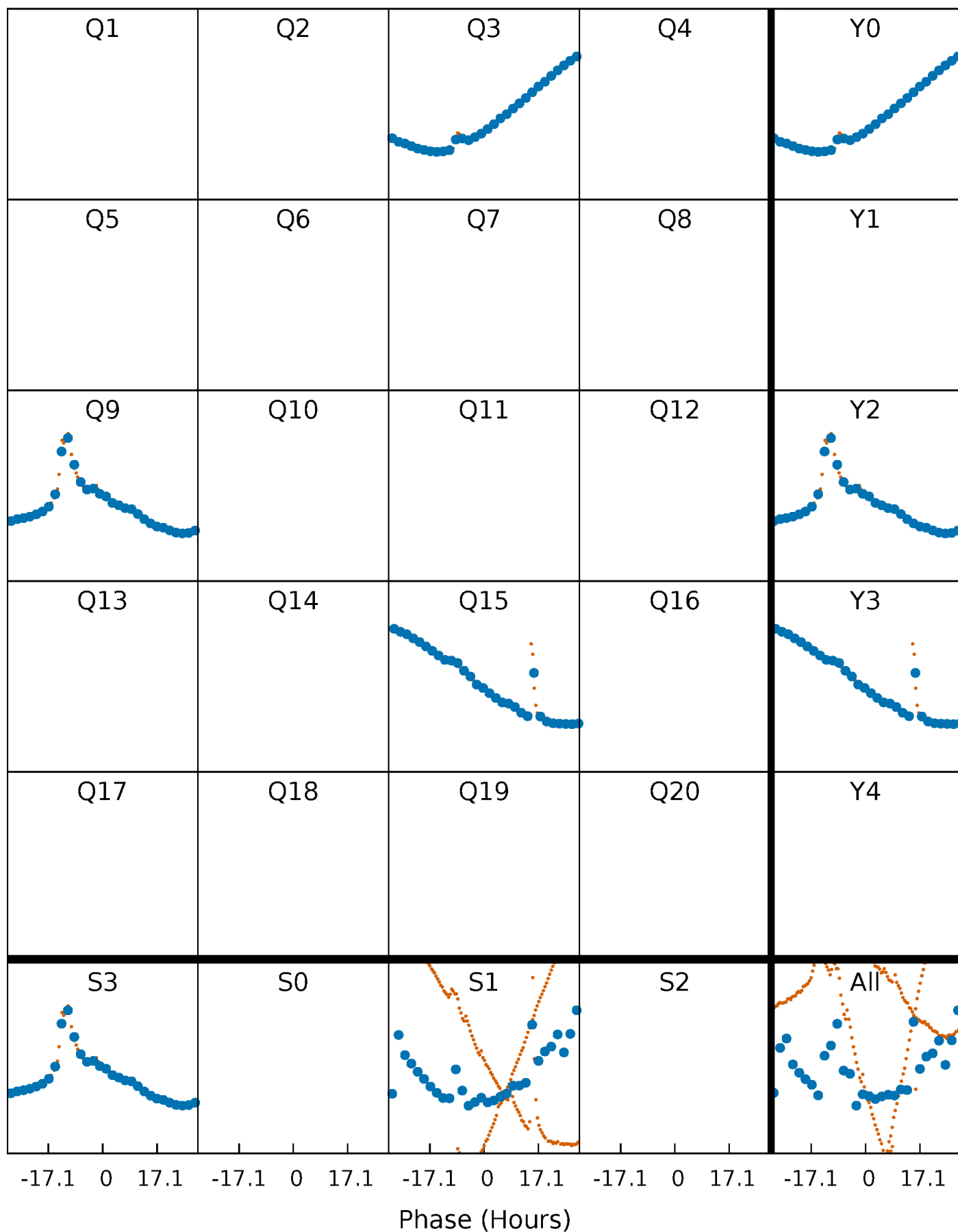


Planet 6 : Phased Whitened Flux Time Series (TPS Epoch/Period)



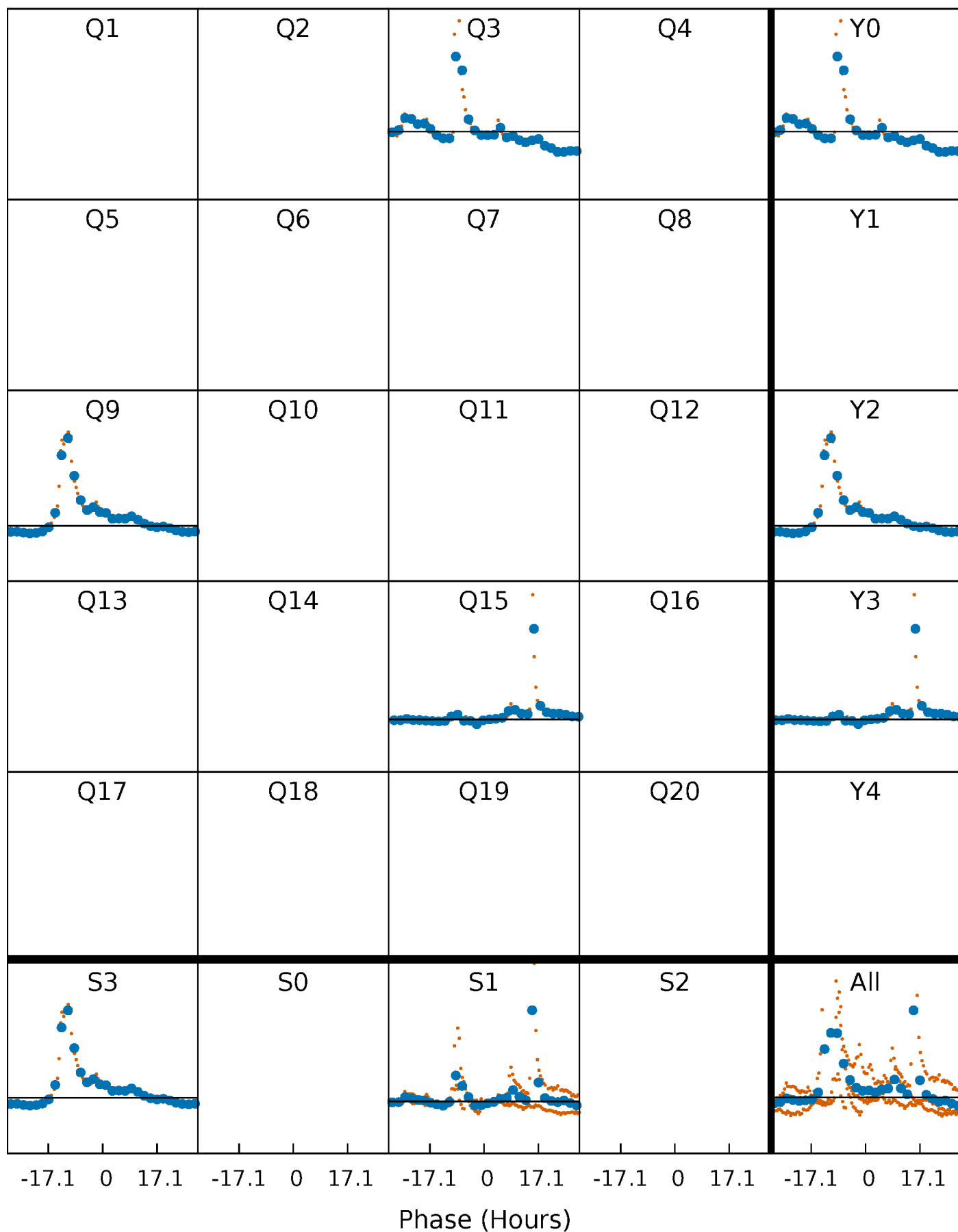
PDC Quarter-Phased Transit Curves

TCE 006529378-06 P=547.312905 Days $T_0=293.814761$ (BKJD)



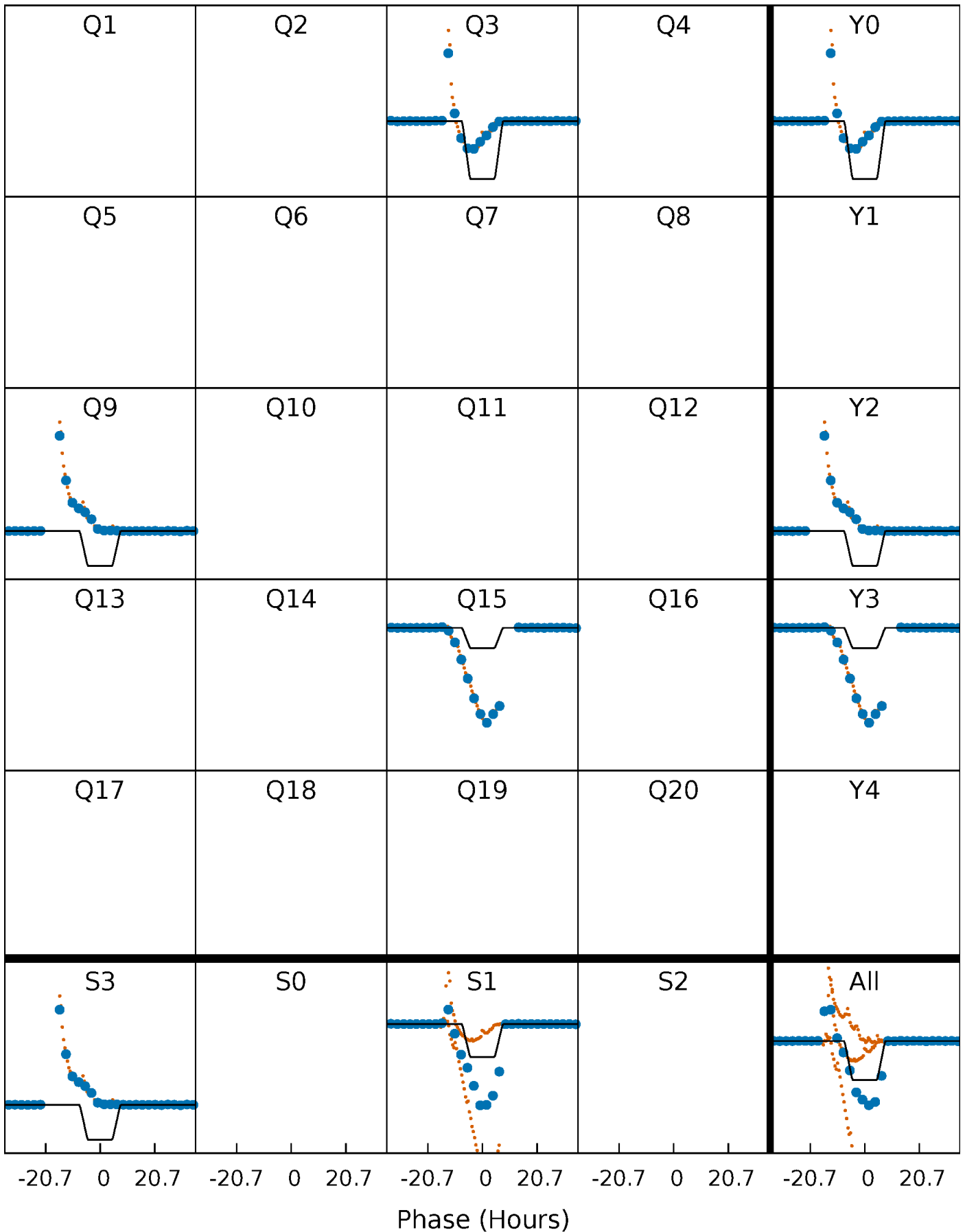
DV Quarter-Phased Transit Curves

TCE 006529378-06 P=547.312905 Days $T_0=293.814761$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

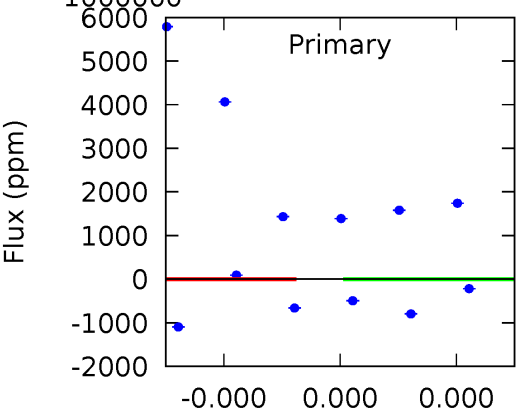
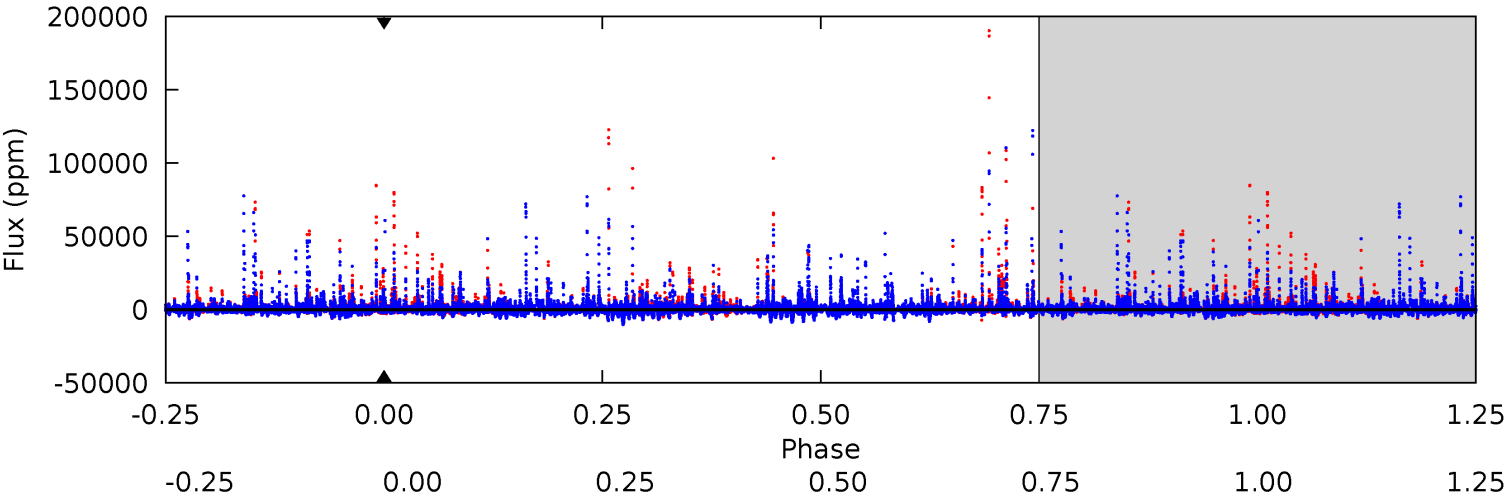
TCE 006529378-06 P=547.312905 Days $T_0=294.004130$ (BKJD)



DV Model-Shift Uniqueness Test

006529378-06, P = 547.312905 Days, E = 293.814761 Days

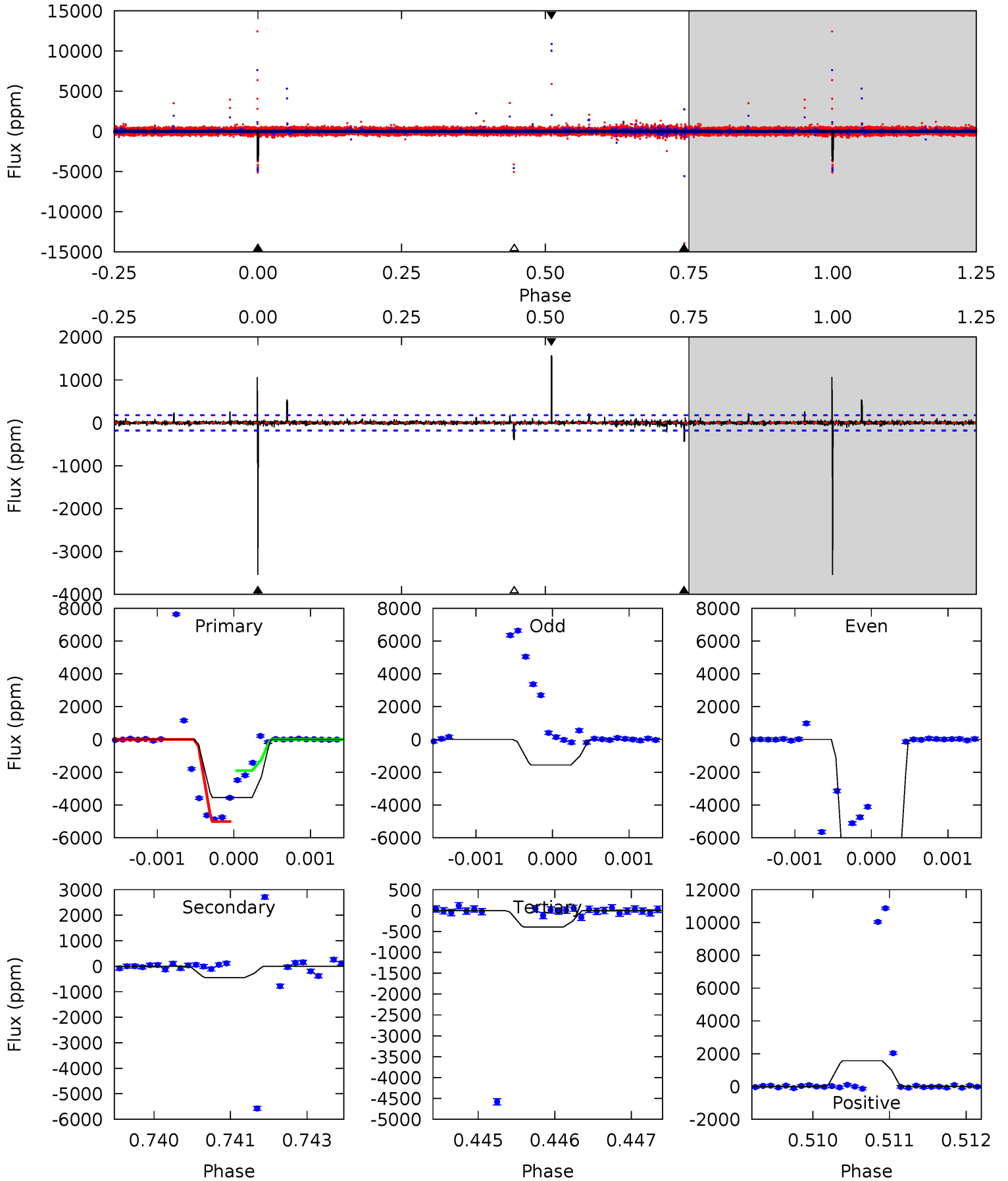
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

006529378-06, P = 547.312905 Days, E = 294.004130 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
106.9	13.4	11.9	47.2	5.42	3.23	1.16	95.0	59.6	1.50	-33.9	156.7	4.45	0.31	0



Stellar Parameters For KIC 006529378

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4484^{+156}_{-156}	$4.620^{+0.033}_{-0.033}$	$0.060^{+0.250}_{-0.300}$	$0.683^{+0.043}_{-0.053}$	$0.709^{+0.052}_{-0.063}$	$3.137^{+0.558}_{-0.393}$
	+3%/-3%	+1%/-1%	+417%/-500%	+6%/-8%	+7%/-9%	+18%/-13%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 006529378-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$5.91^{+5.55}_{-3.85}$	211^{+7}_{-7}	3334^{+7966}_{-13089}	$22139^{+4108517}_{-2838709}$
Alt.	-444 ± 33	$8.87^{+6.83}_{-5.59}$	211^{+9}_{-8}	2619^{+882}_{-338}	4164^{+25978}_{-2802}

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 $A_{obs} \gg 1.0$

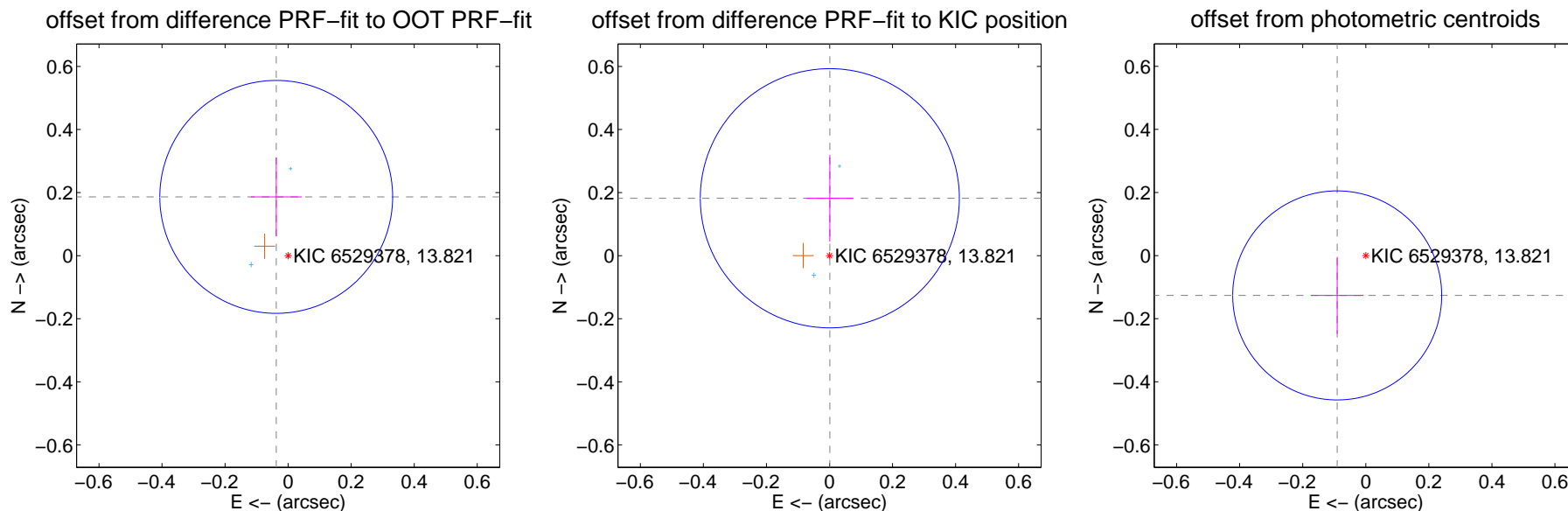
DV Centroid Data

Supplemental centroid analysis for 006529378-06. Kepler magnitude: 13.82. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.190 ± 0.123	1.54	0.038 ± 0.081	0.186 ± 0.125
PRF-fit source offset from KIC position	0.182 ± 0.137	1.33	-0.001 ± 0.074	0.182 ± 0.137
photometric centroid source offset	0.16 ± 0.11	1.41	0.09 ± 0.08	-0.13 ± 0.12



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

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

Q1 no difference image



Q1 no OOT image



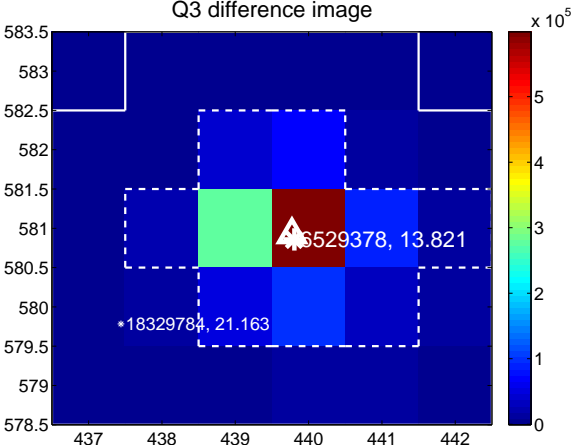
Q2 no difference image



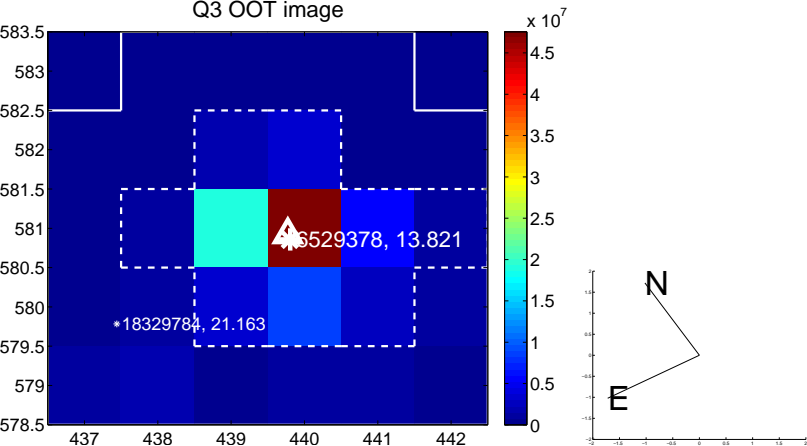
Q2 no OOT image



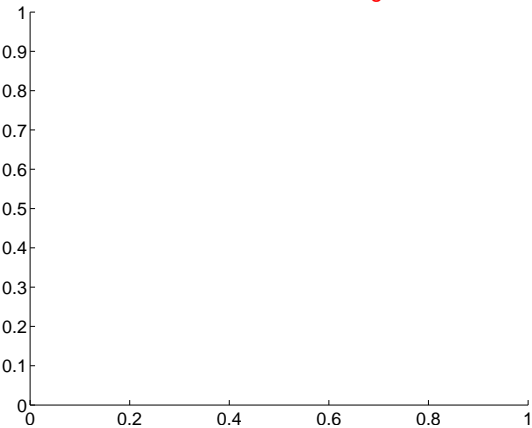
Q3 difference image



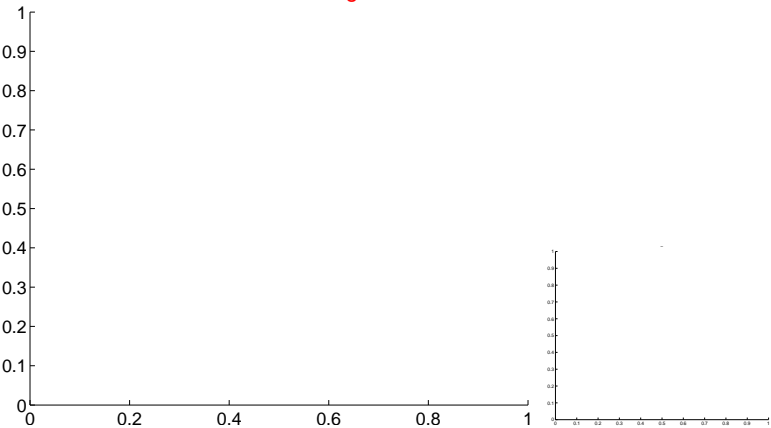
Q3 OOT image



Q4 no difference image



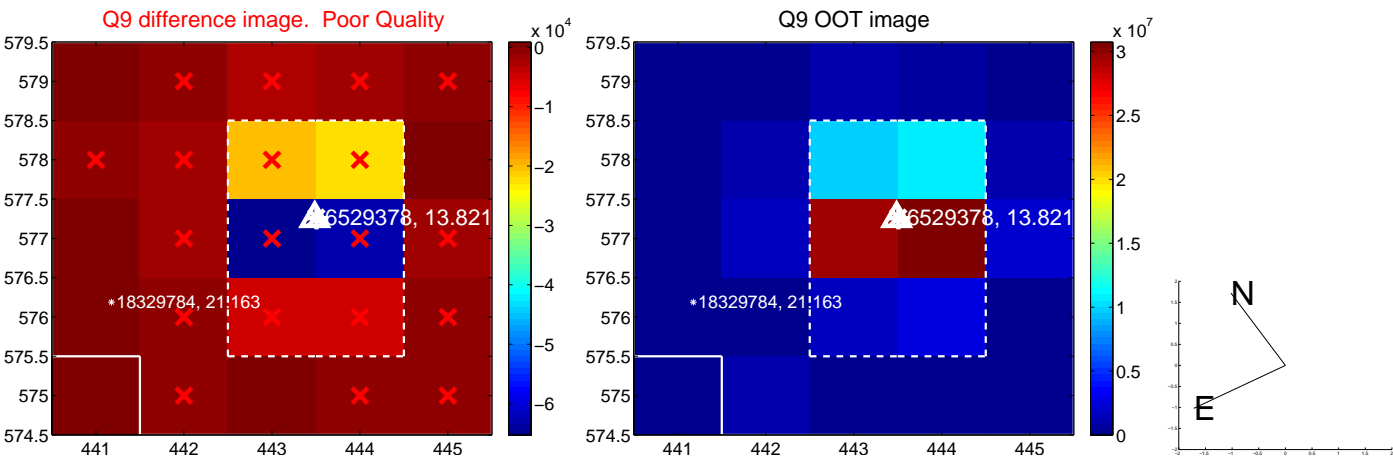
Q4 no OOT image



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



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



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Q13 no difference image



Q13 no OOT image



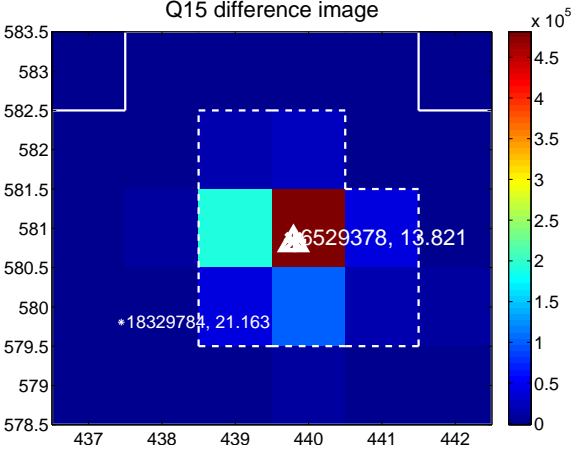
Q14 no difference image



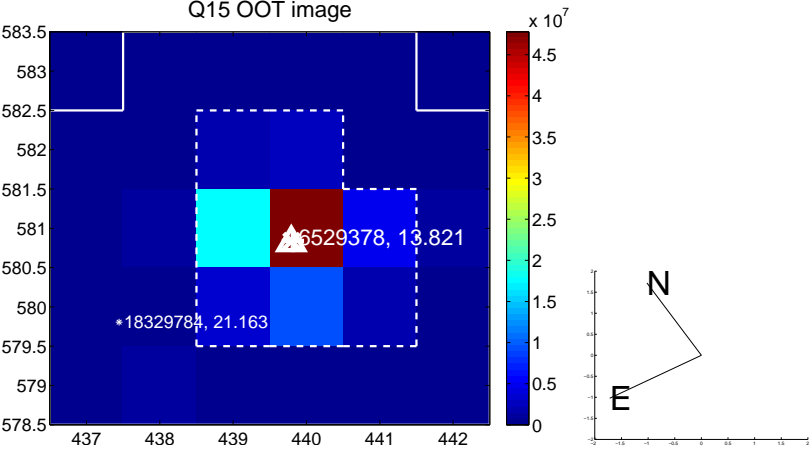
Q14 no OOT image



Q15 difference image



Q15 OOT image



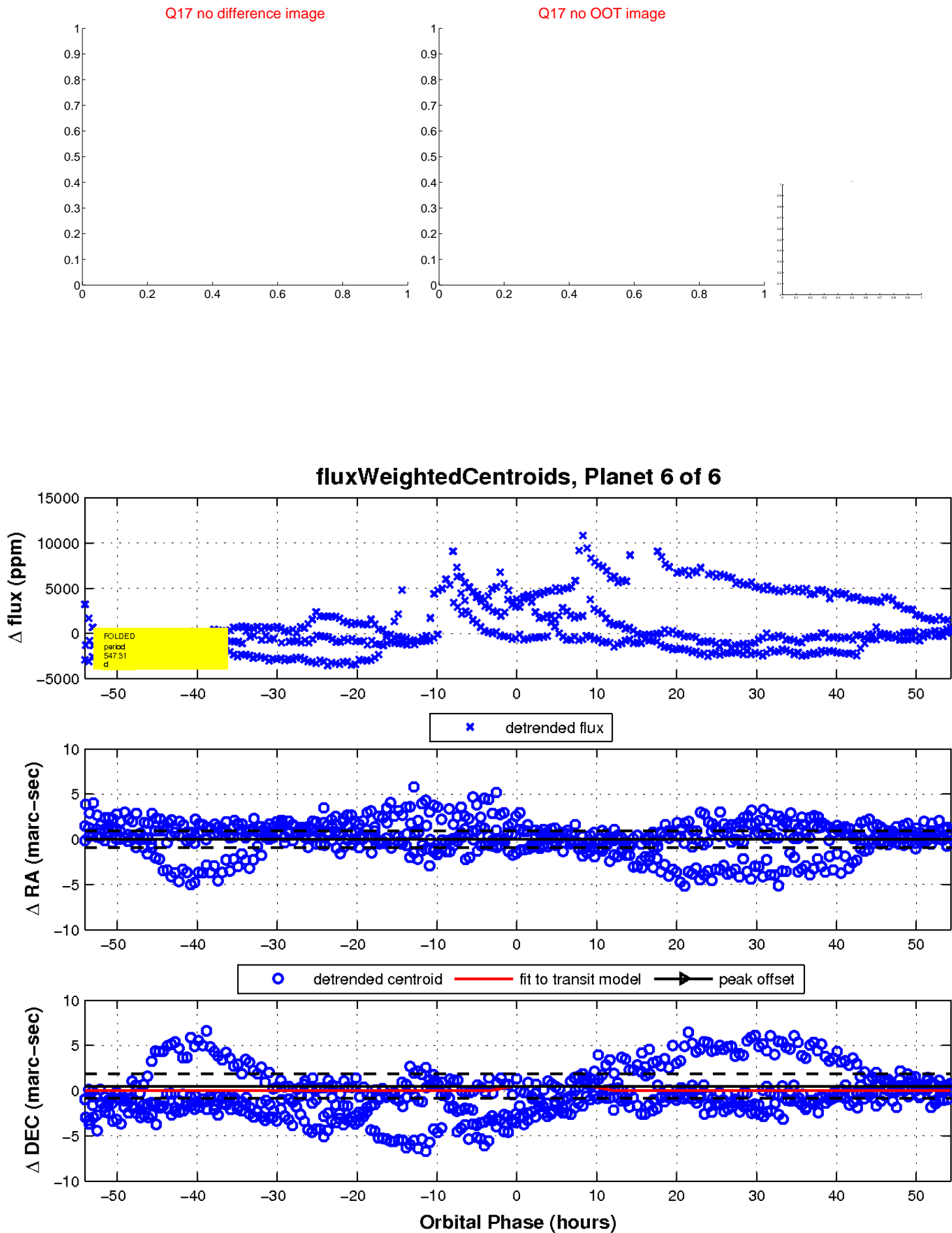
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

