

KIC 006777538

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})
006777538-01	OBS	No	0.526731	131.599111	5.7	3.728	14.5	1.7	5.26	7055	1.58	0.00
006777538-02	OBS	No	44.260283	133.422797	936.5	3.613	15.1	14.7	5.26	7055	30.14	632.60
006777538-03	OBS	No	24.248735	138.159454	86.8	7.161	13.2	2.2	5.26	7055	5.04	1411.12
006777538-04	OBS	No	17.928323	138.897318	67.0	12.190	12.3	1.9	5.26	7055	4.67	2110.71
006777538-05	OBS	No	34.502910	149.769446	1108.7	0.583	13.5	8.1	5.26	7055	18.77	881.74
006777538-06	OBS	No	60.582034	187.125078	684.4	1.774	11.0	7.9	5.26	7055	14.36	416.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006777538-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006777538-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006777538-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006777538-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006777538-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV
006777538-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV

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

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

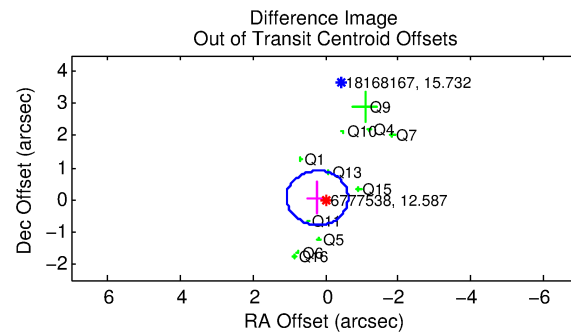
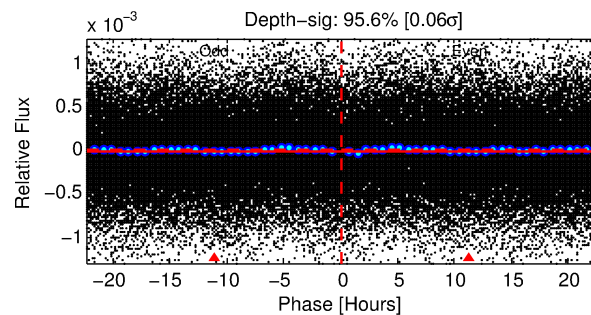
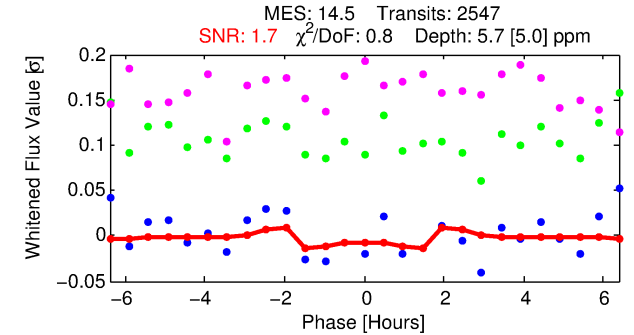
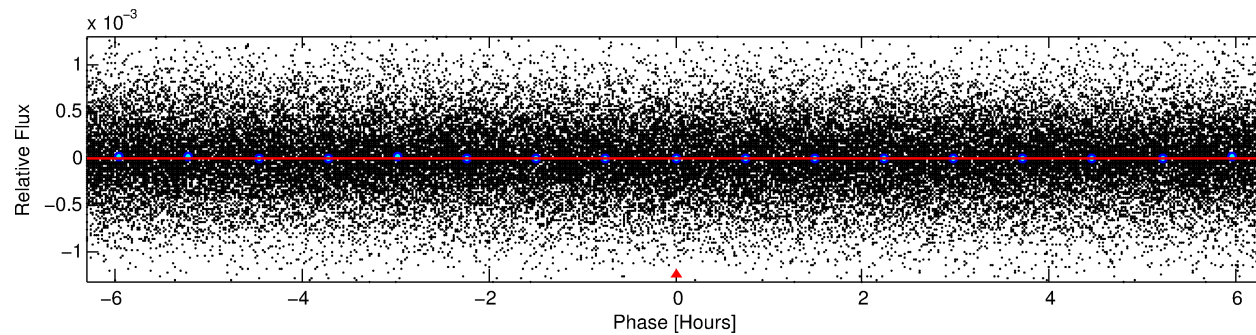
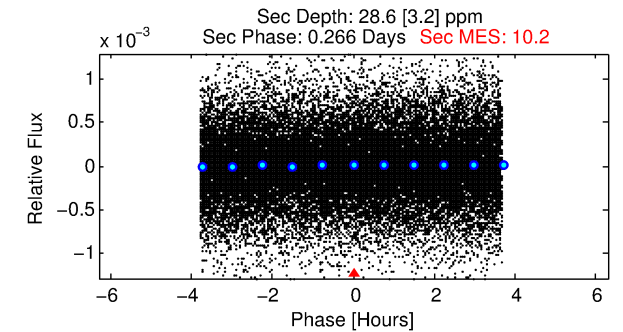
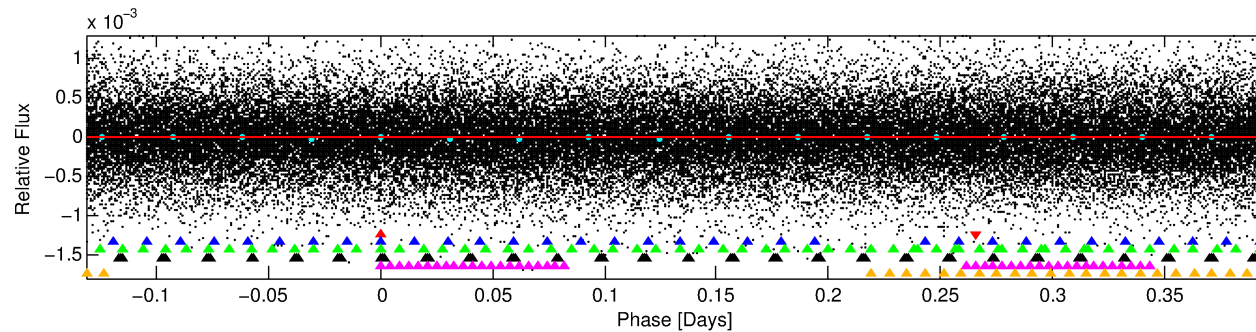
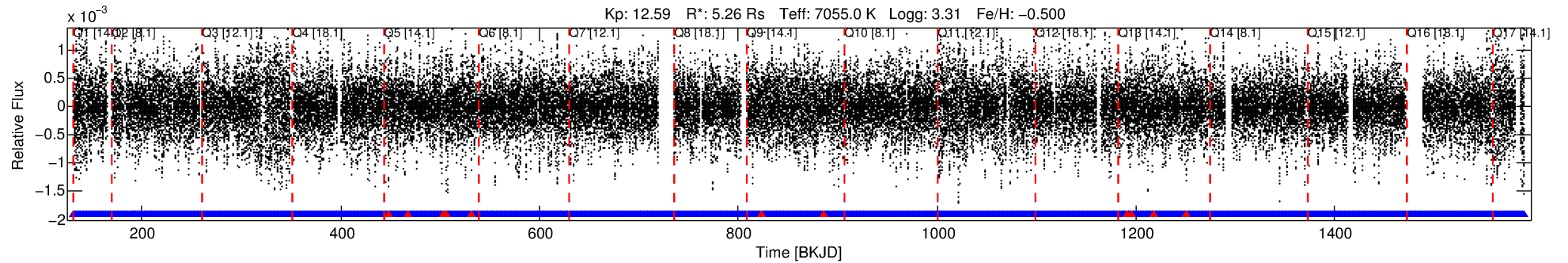
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006777538-01

No Significant Match Found

DV One-Page Summary

KIC: 6777538 Candidate: 1 of 6 Period: 0.527 d



DV Fit Results:

Period = 0.52673 [0.00007] d
Epoch = 131.5991 [0.0089] BKJD
Rp/R* = 0.0027 [0.0025]
a/R* = 1.02 [0.24]
b = 0.97 [0.37]
Seff = N/A
Teq = N/A
Rp = 1.58 [1.63] Re
a = N/A
Ag = N/A
Teffp = N/A

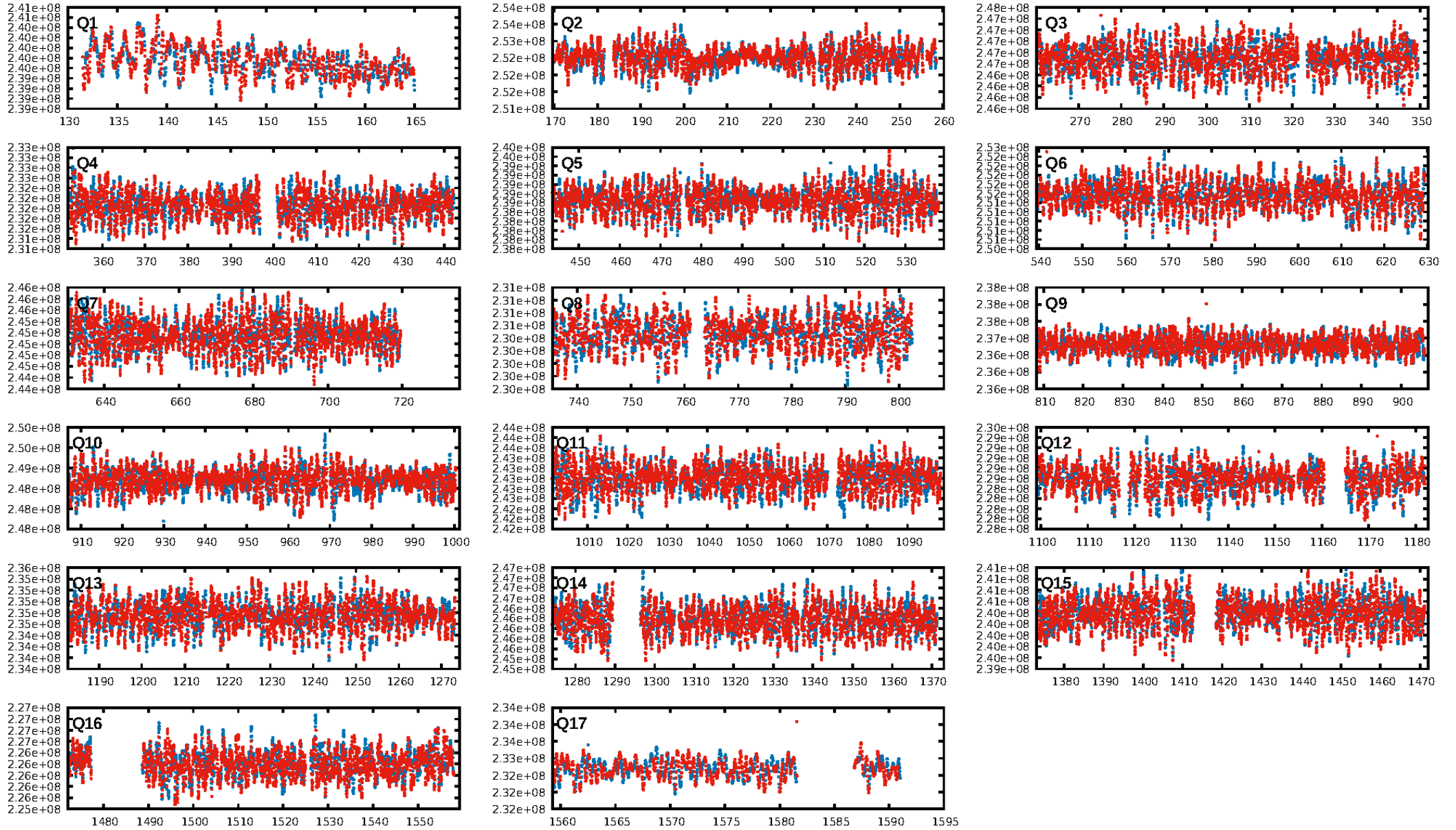
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [32.76σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.05e-29
RollingBand-fgt: 1.00 [2422/2433]
GhostDiagnostic-chr: 1.914
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.230 arcsec [0.81σ]
KicOffset-rm: 0.264 arcsec [0.69σ]
OotOffset-st: 2/3/2/4 [11]
KicOffset-st: 2/3/2/4 [11]
DiffImageQuality-fgm: 0.36 [4/11]
DiffImageOverlap-fno: 1.00 [17/17]

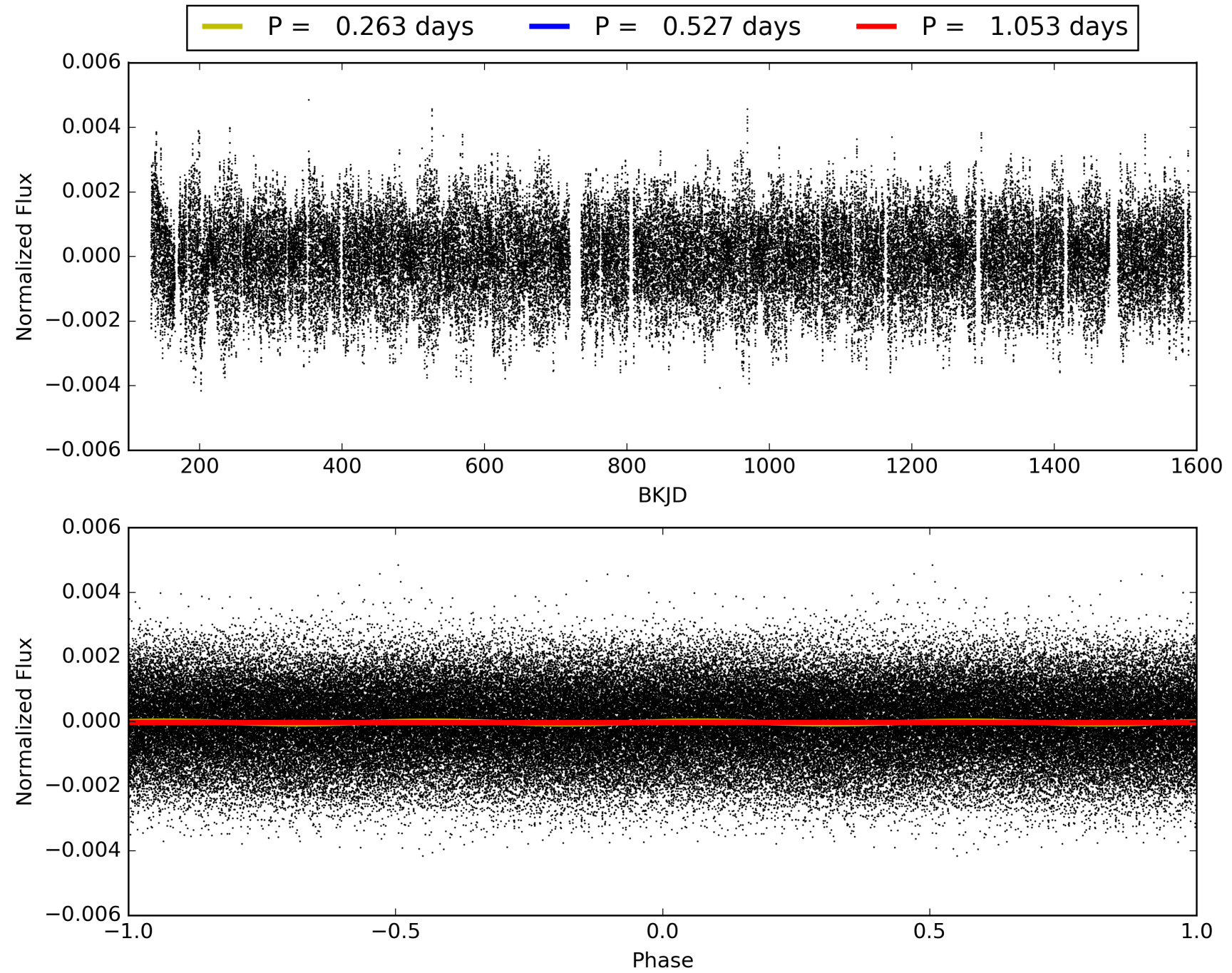
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:21:06 Z

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

TCE 006777538-01, PDC Light Curves

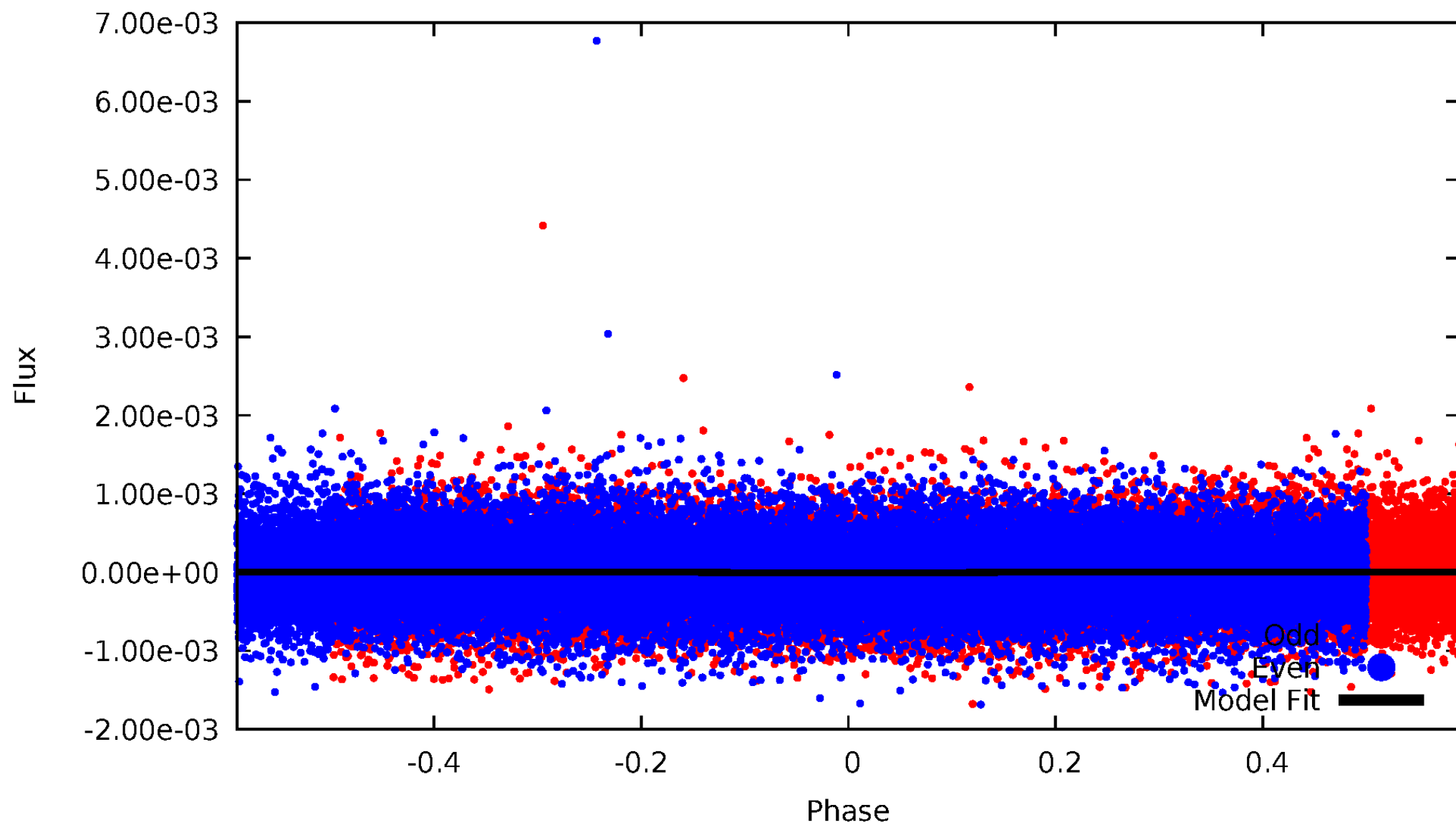


TCE 006777538-01



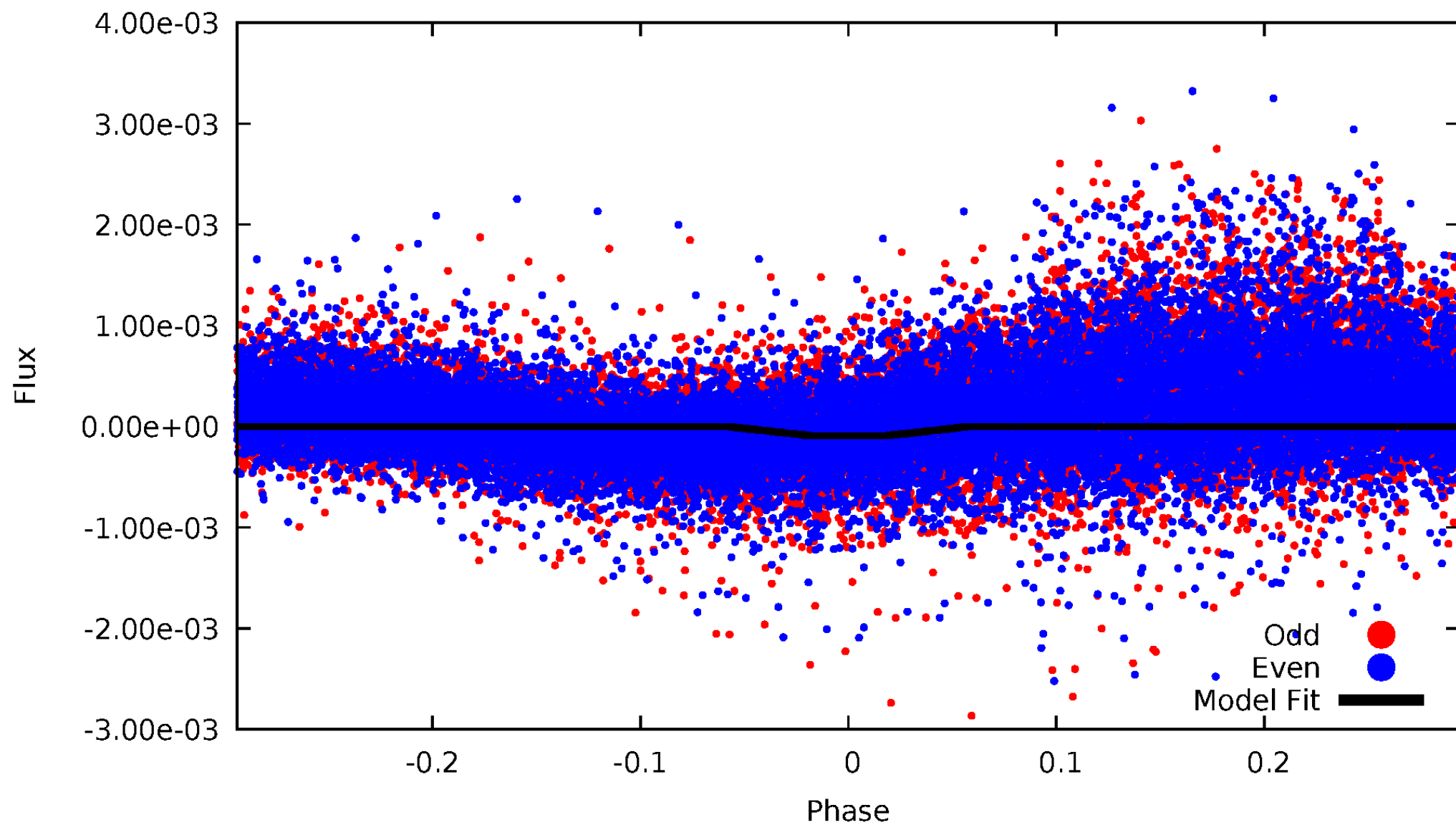
DV Odd/Even

TCE 006777538-01



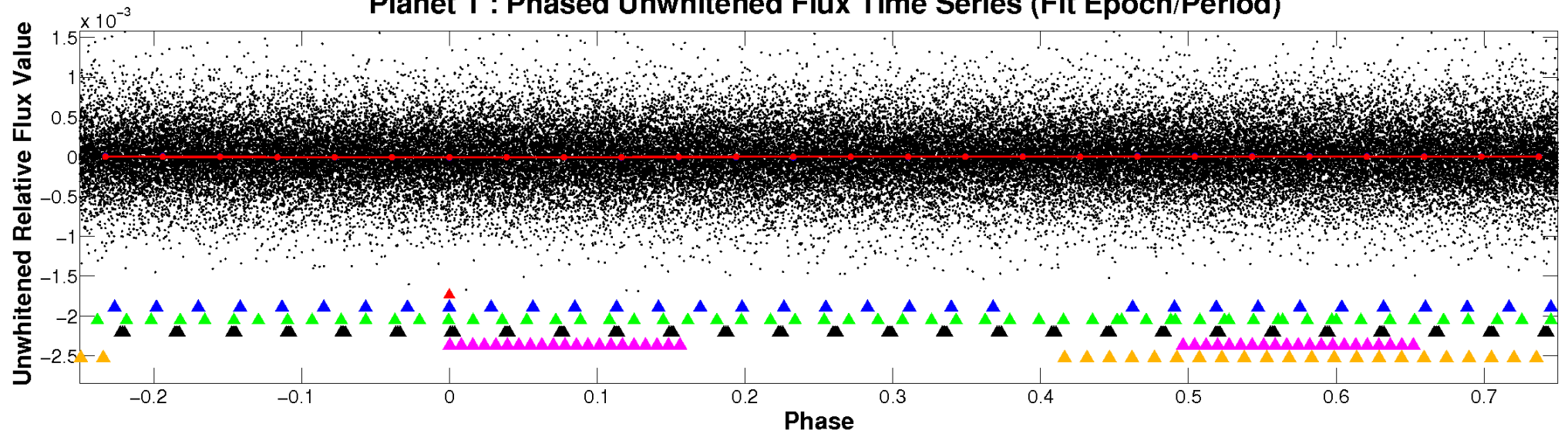
ALT Odd/Even

TCE 006777538-01

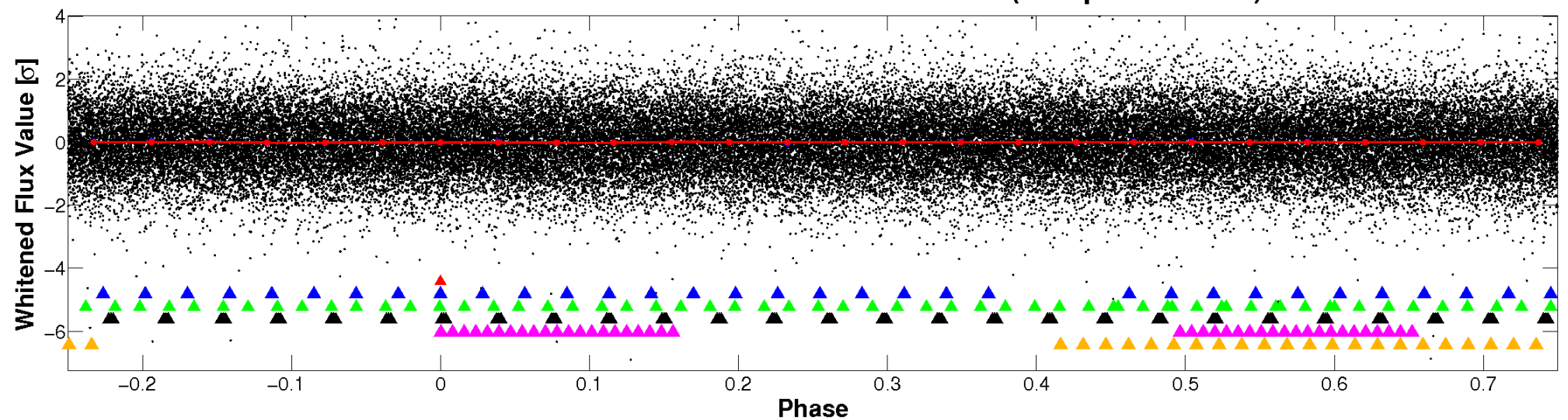


Non-Whitened Vs. Whitened Light Curve

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

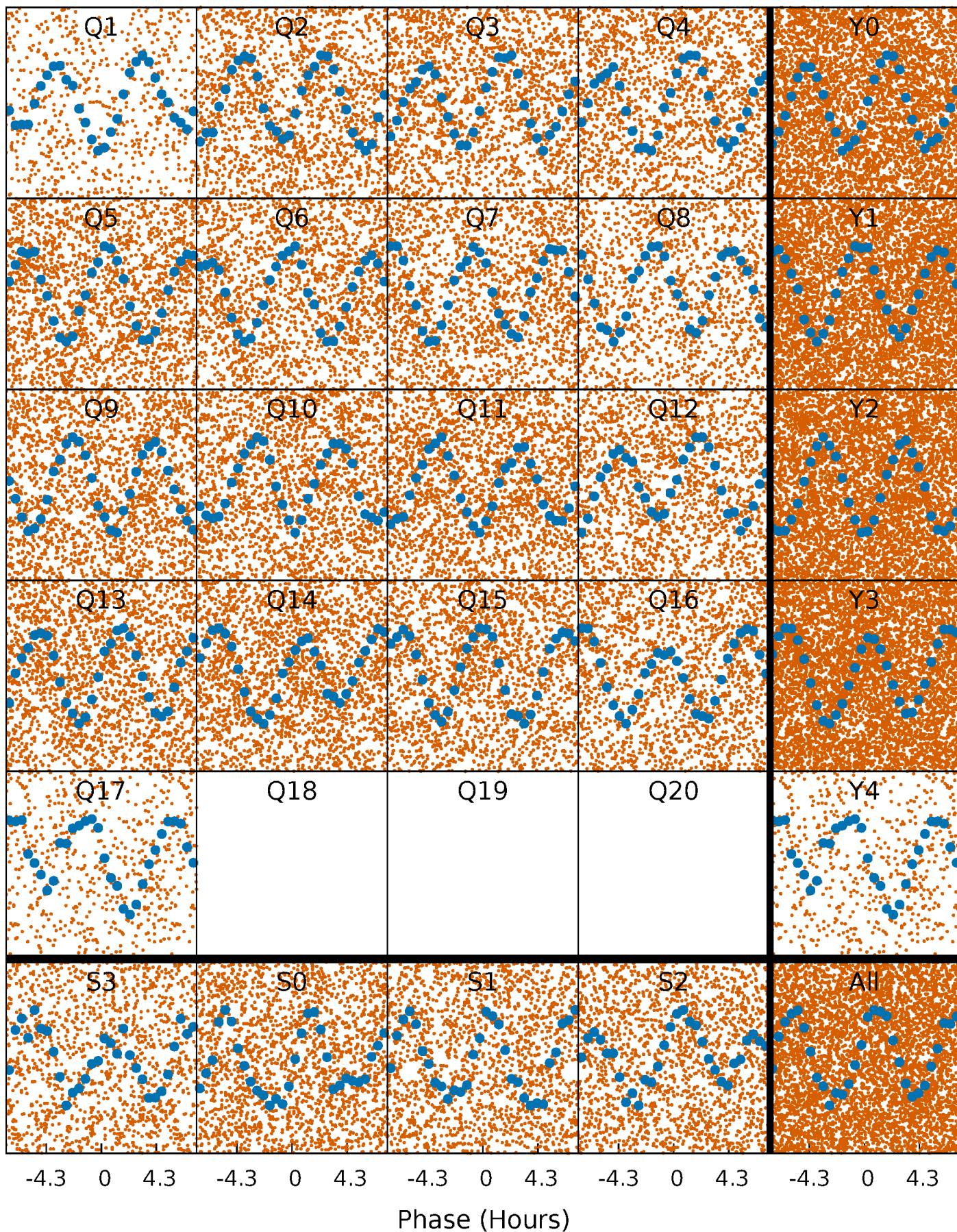


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



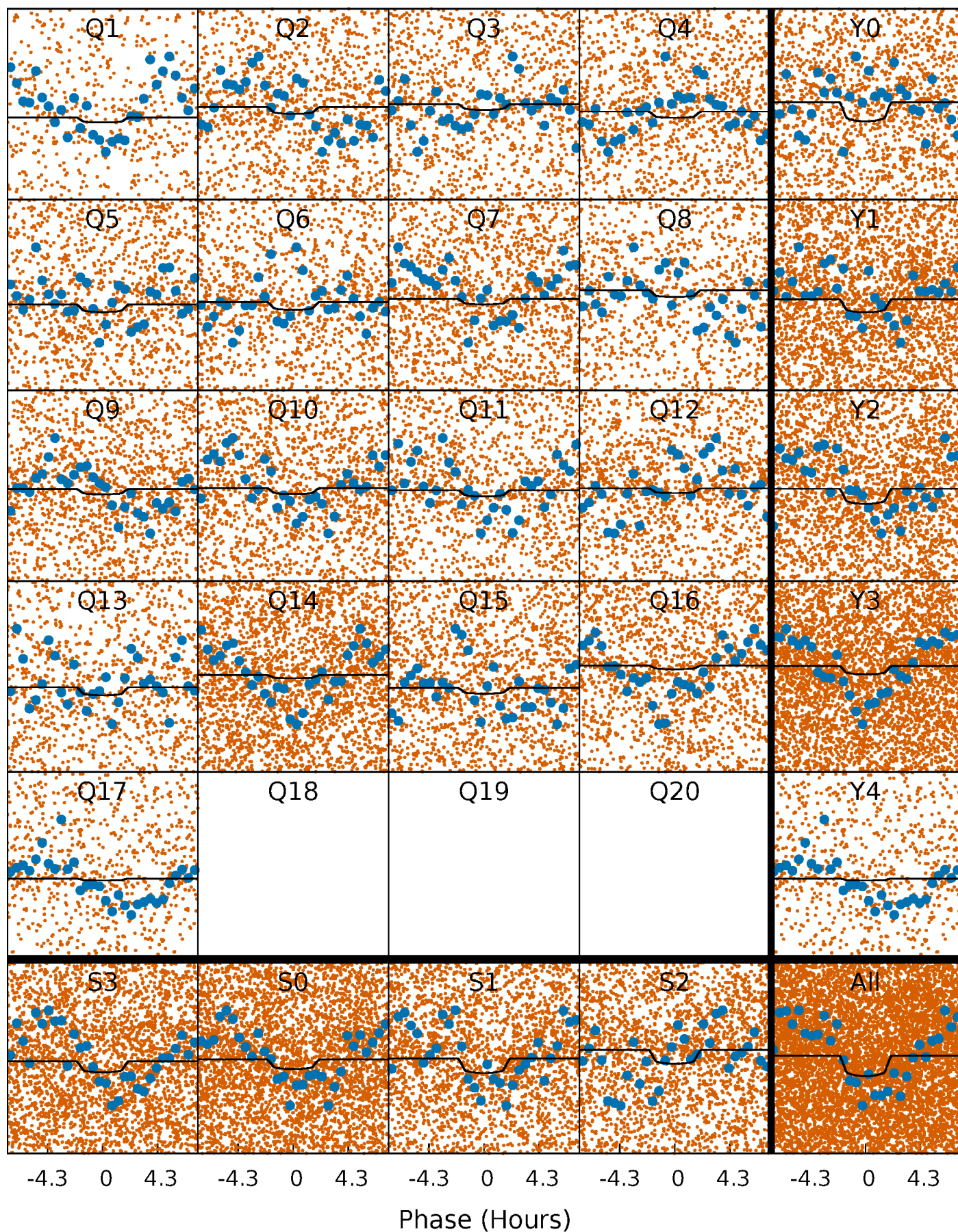
PDC Quarter-Phased Transit Curves

TCE 006777538-01 P= 0.526731 Days $T_0=131.599111$ (BKJD)



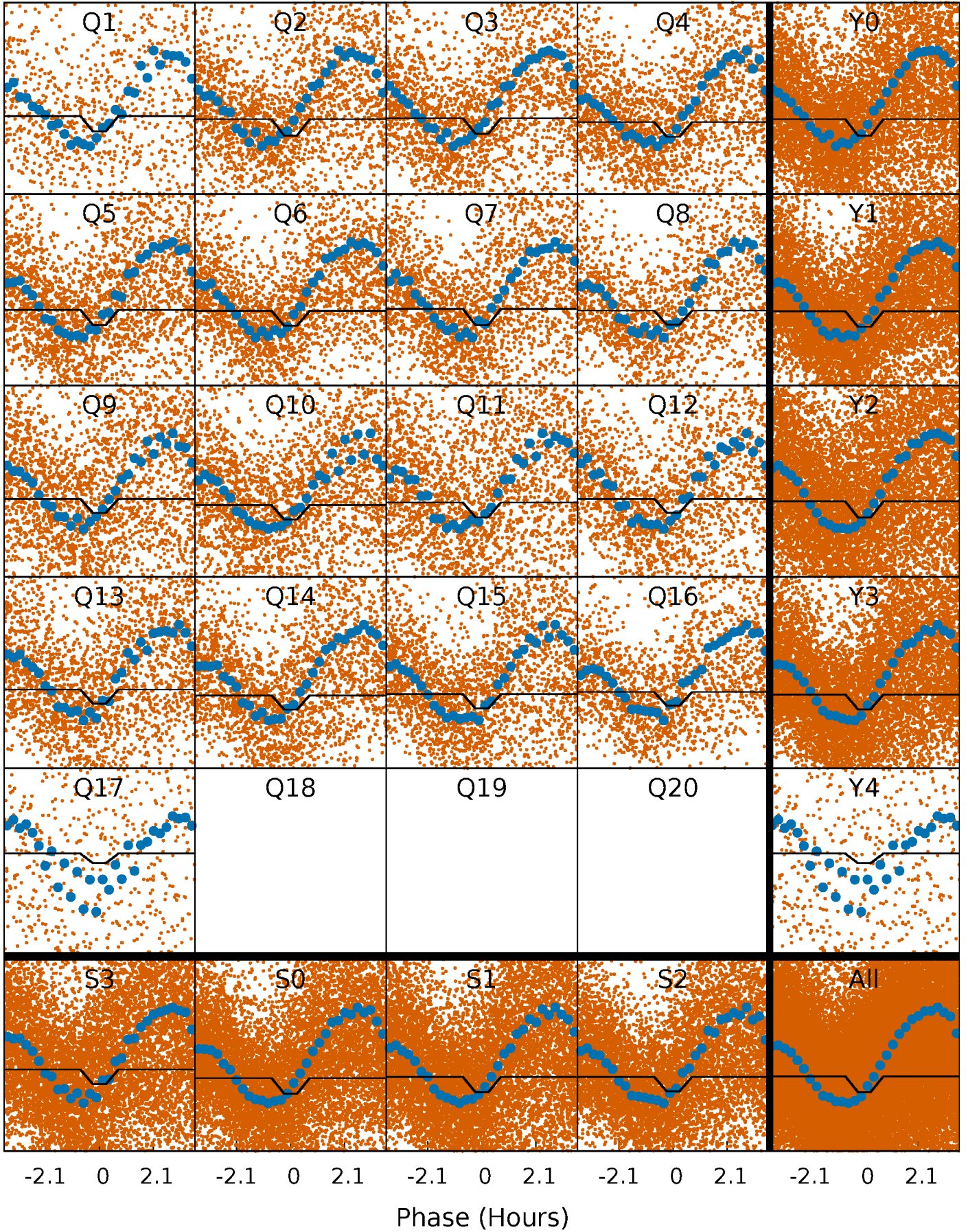
DV Quarter-Phased Transit Curves

TCE 006777538-01 P= 0.526731 Days $T_0=131.599111$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

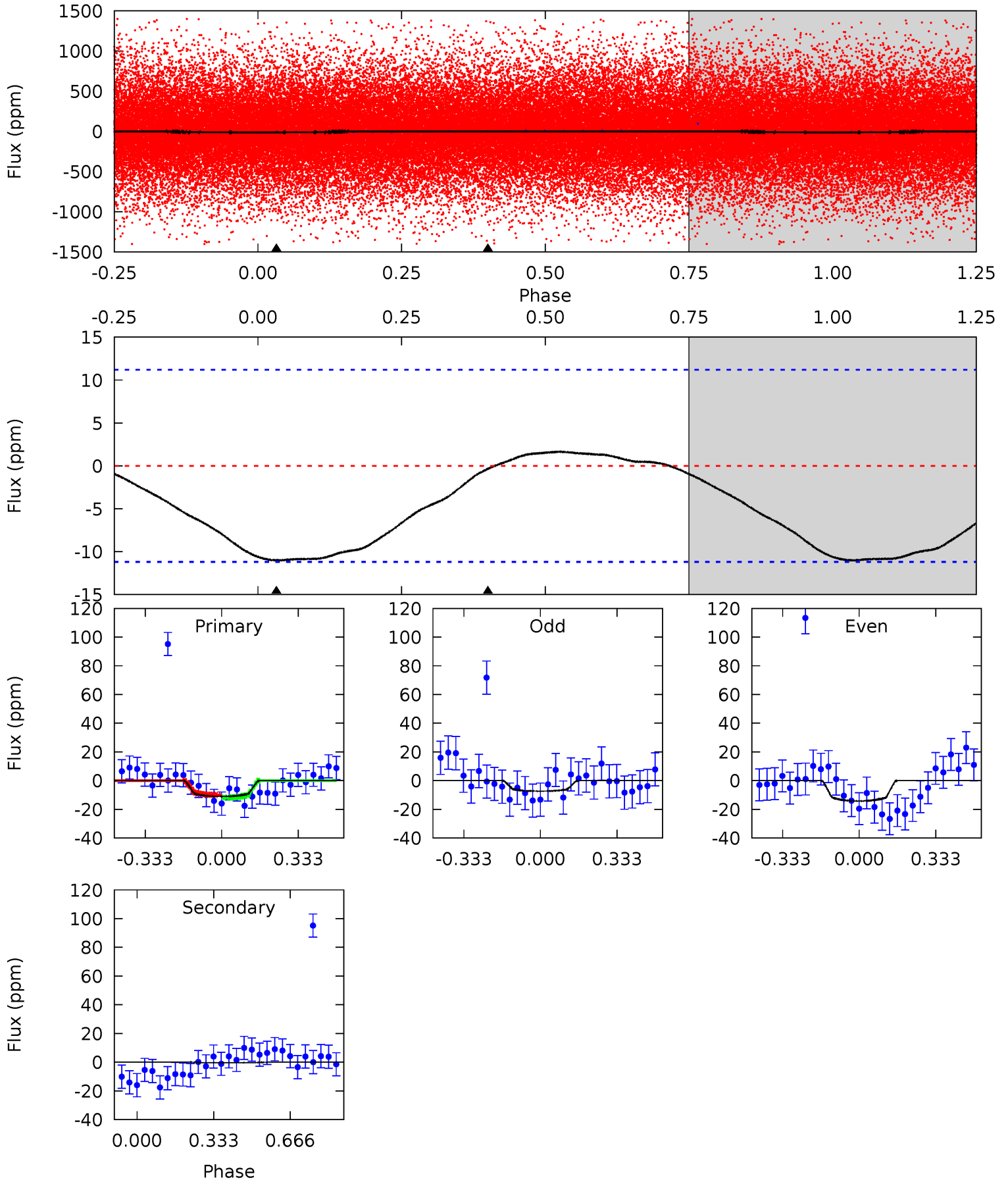
TCE 006777538-01 P= 0.526568 Days $T_0=131.622993$ (BKJD)



DV Model-Shift Uniqueness Test

006777538-01, P = 0.526731 Days, E = 131.072380 Days

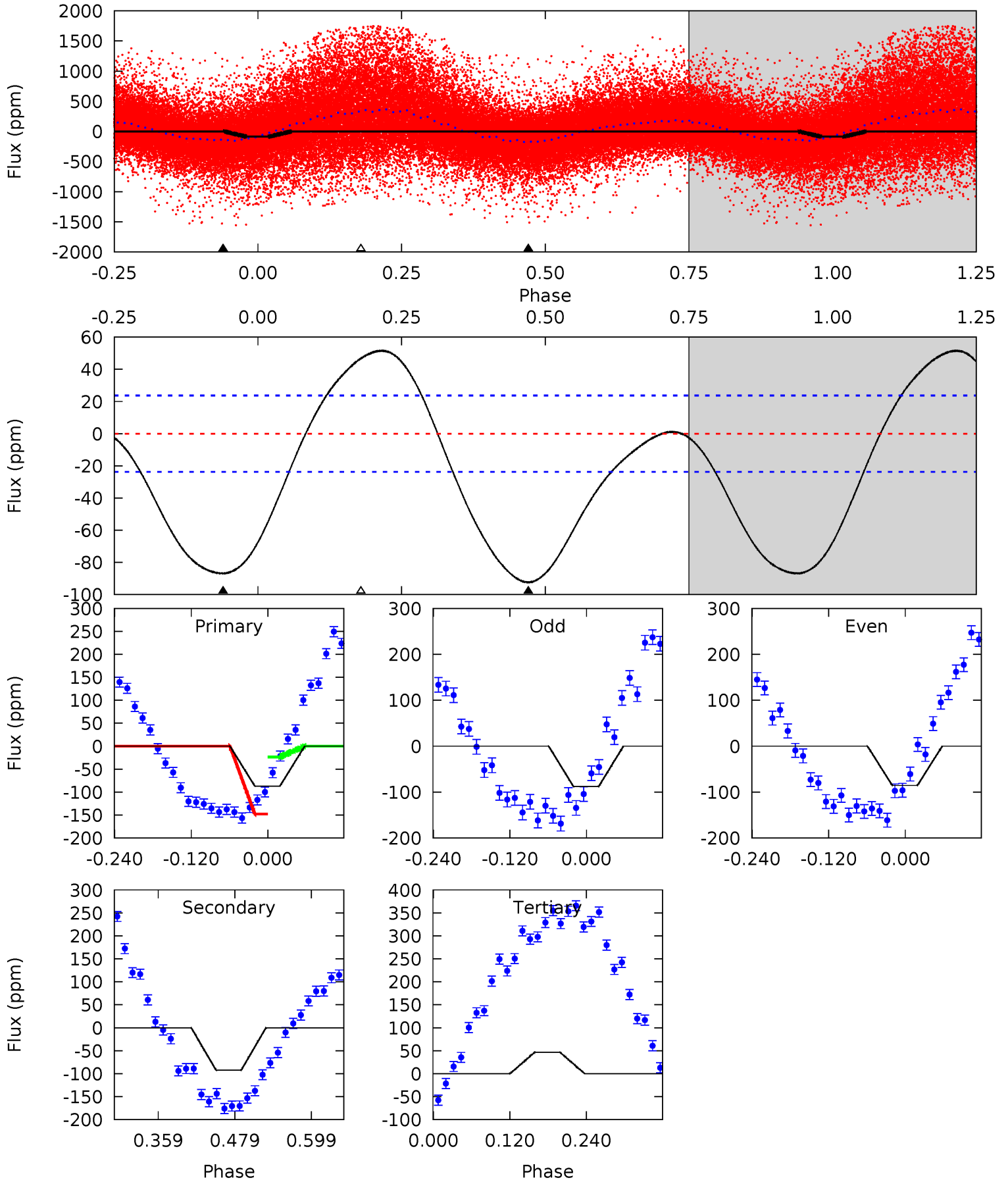
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.25	0.14	0	0	4.31	0.97	0.24	4.25	4.25	0.14	0.14	1.37	-157.4	0.13	0.37



Alt Model-Shift Uniqueness Test

006777538-01, P = 0.526568 Days, E = 131.096425 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.6	17.6	-8.92	0	4.53	1.56	5.07	25.5	16.6	26.5	17.6	0.24	1.08	0.36	11.5



Stellar Parameters For KIC 006777538

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7055^{+190}_{-233}	$3.310^{+0.459}_{-0.081}$	$-0.500^{+0.350}_{-0.300}$	$5.265^{+1.120}_{-2.614}$	$2.063^{+0.059}_{-0.558}$	$0.020^{+0.094}_{-0.007}$
	+3%/-3%	+14%/-2%	+70%/-60%	+21%/-50%	+3%/-27%	+473%/-33%
Source	PHO1	FLK73	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 006777538-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-0 ± 3	$1.55^{+1.25}_{-0.94}$	7519^{+587}_{-976}	-5916^{+2886}_{-1023}	$0.016^{+0.274}_{-0.160}$
Alt.	-92 ± 5	$4.72^{+1.66}_{-1.54}$	7479^{+608}_{-882}	5807^{+1872}_{-2204}	$0.575^{+0.709}_{-0.257}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

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

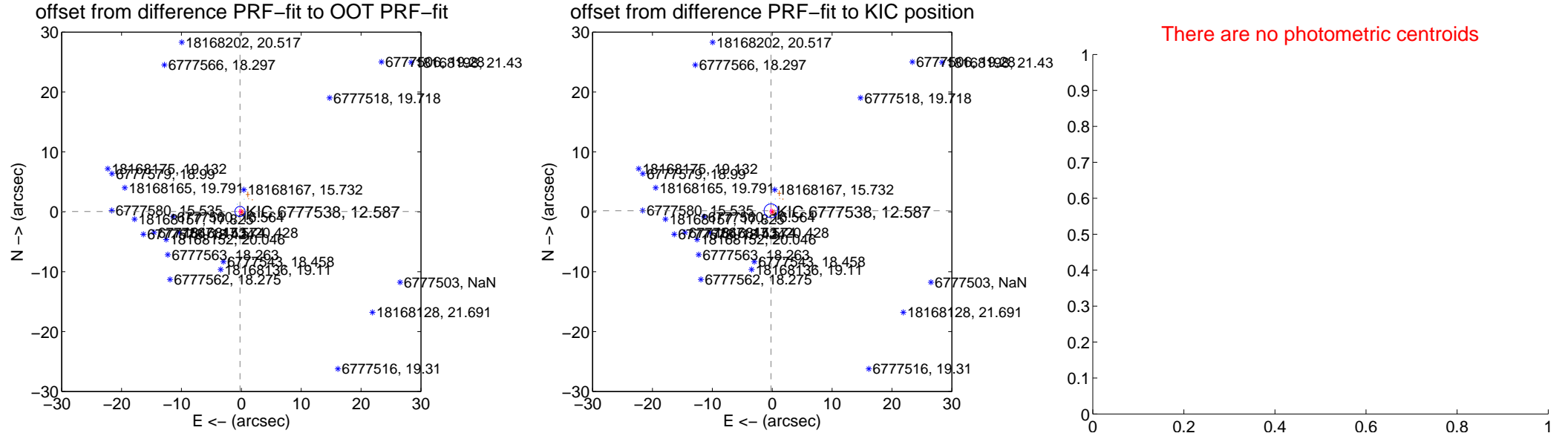
DV Centroid Data

Supplemental centroid analysis for 006777538-01. Kepler magnitude: 12.59. Transit SNR 1.71

There are 4 quarters with good PRF difference image offsets

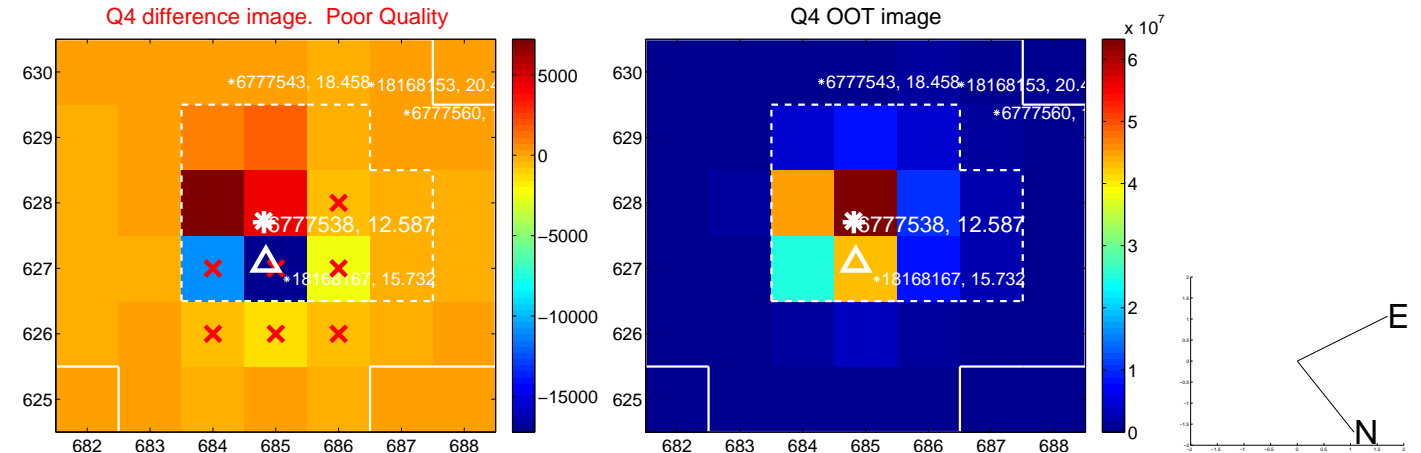
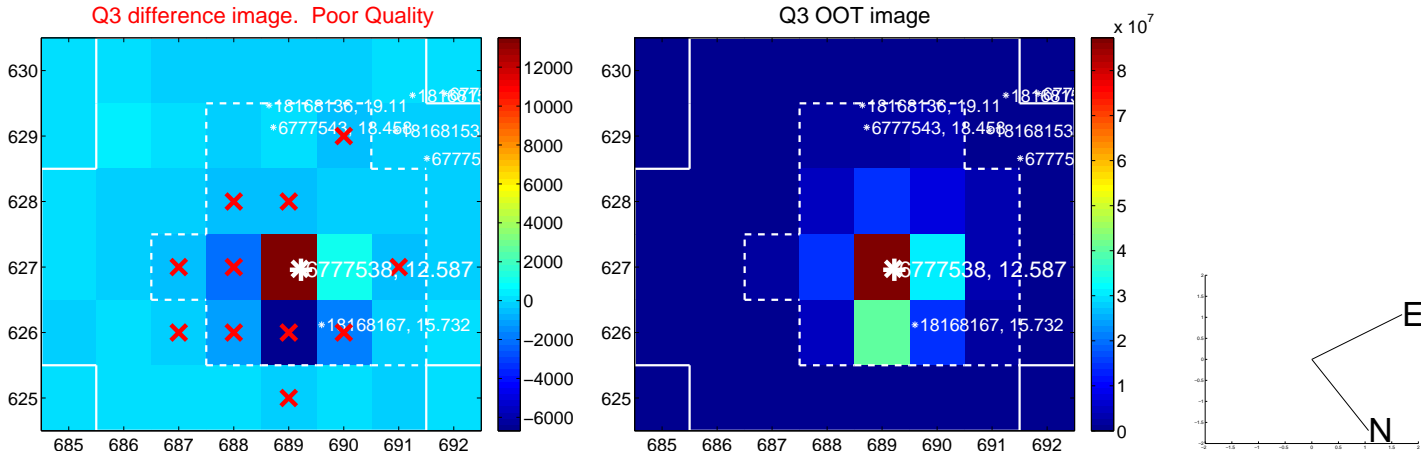
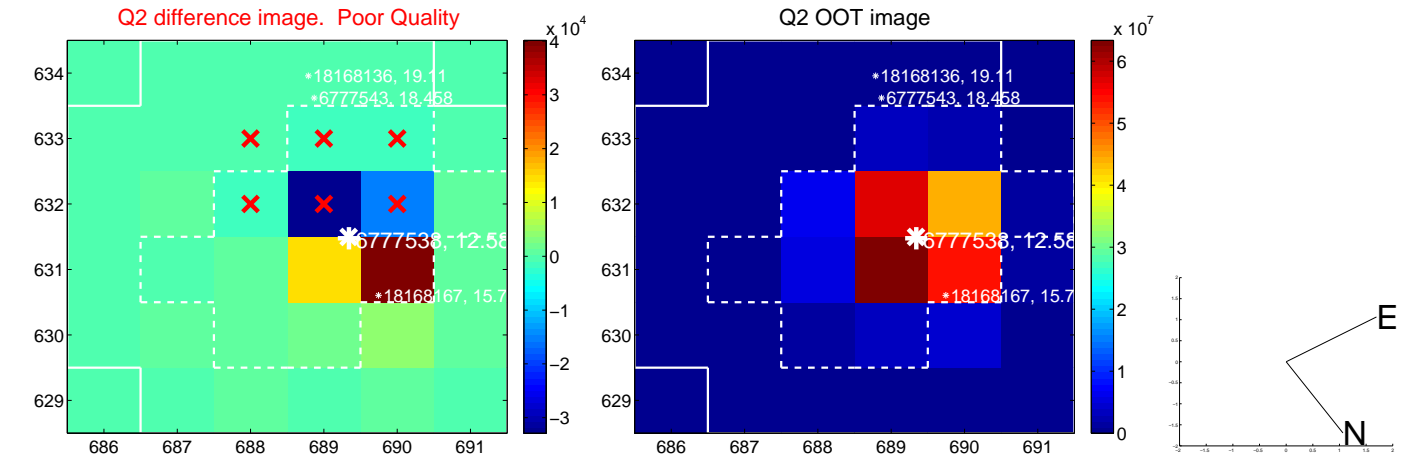
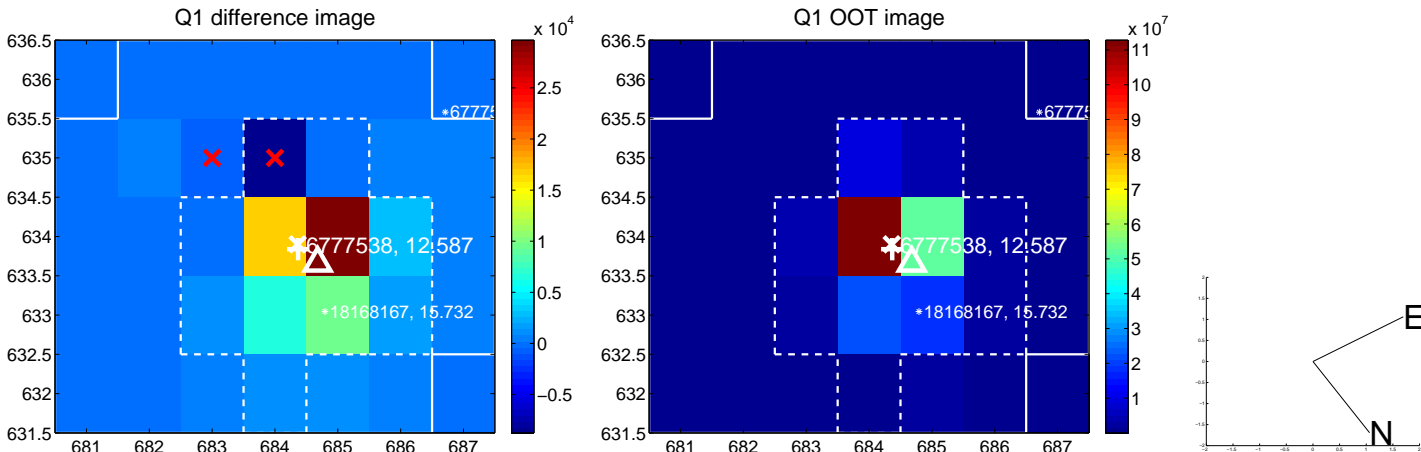
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.230 ± 0.282	0.81	0.223 ± 0.262	0.055 ± 0.512
PRF-fit source offset from KIC position	0.264 ± 0.385	0.69	0.200 ± 0.251	0.171 ± 0.513
photometric centroid source offset	—	—	—	—

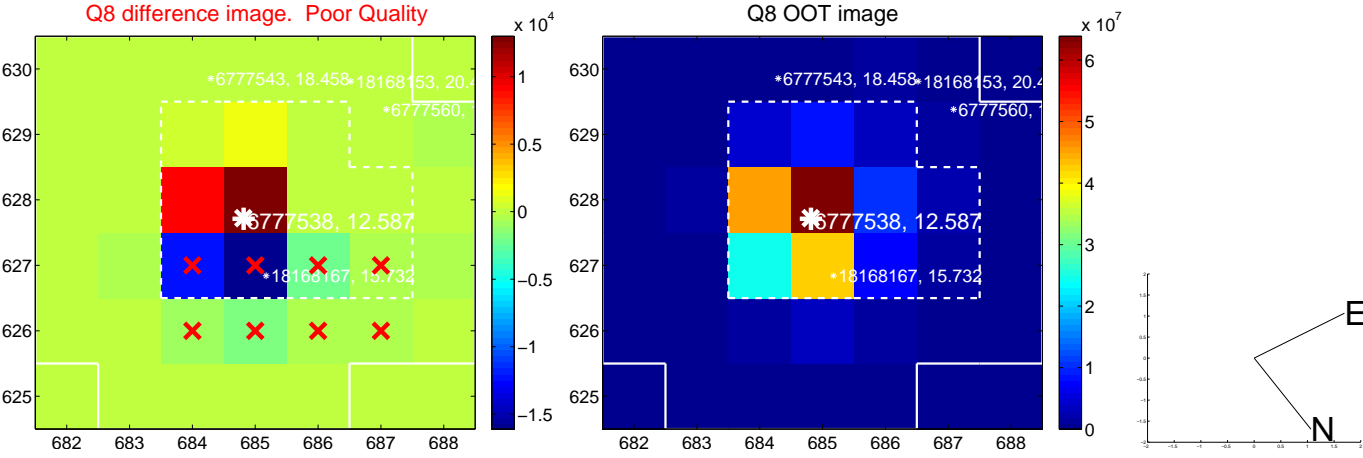
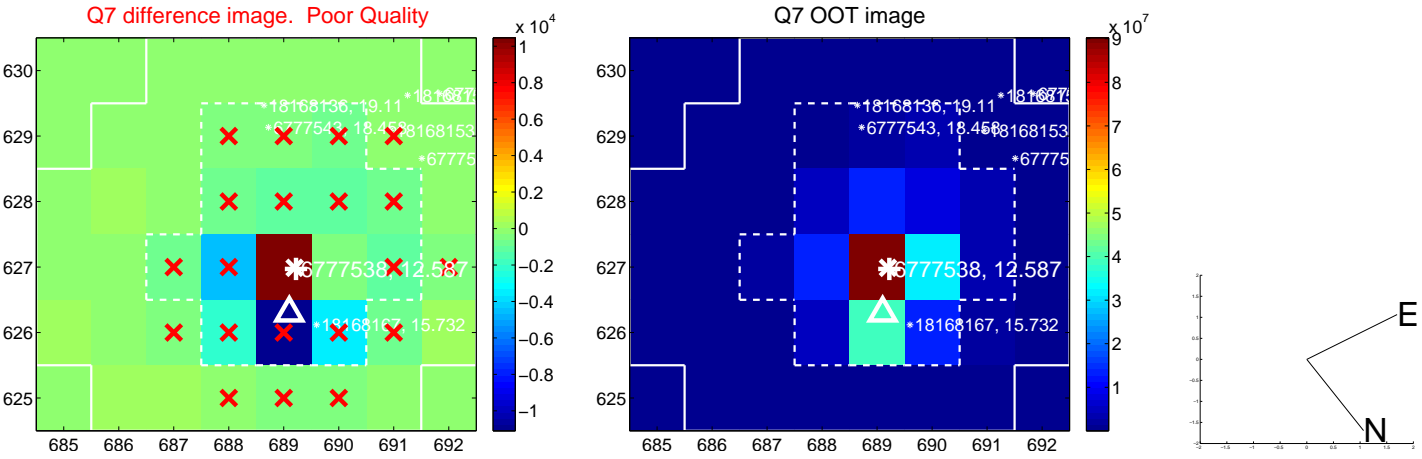
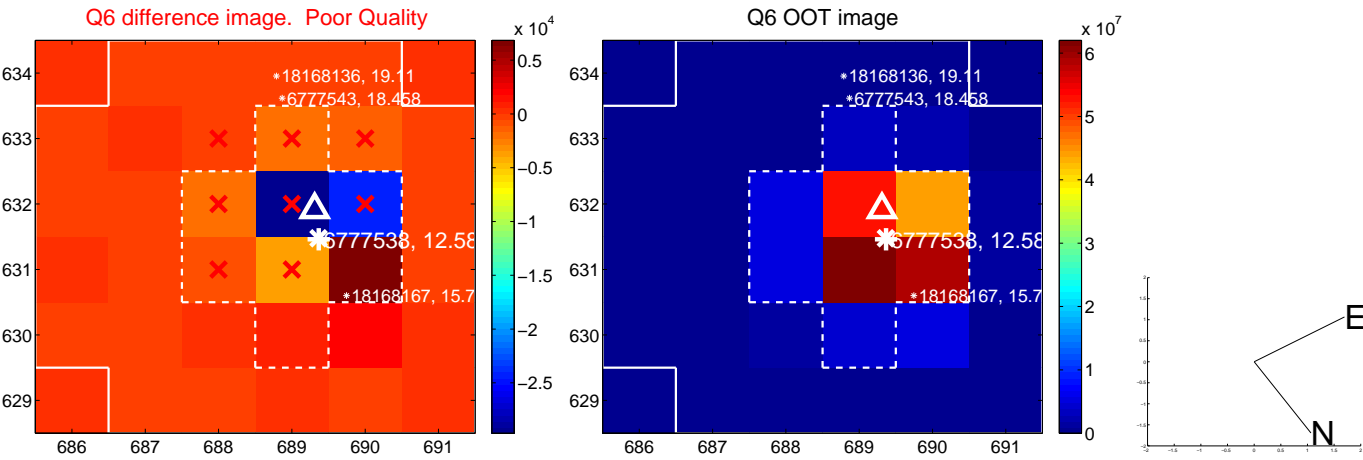
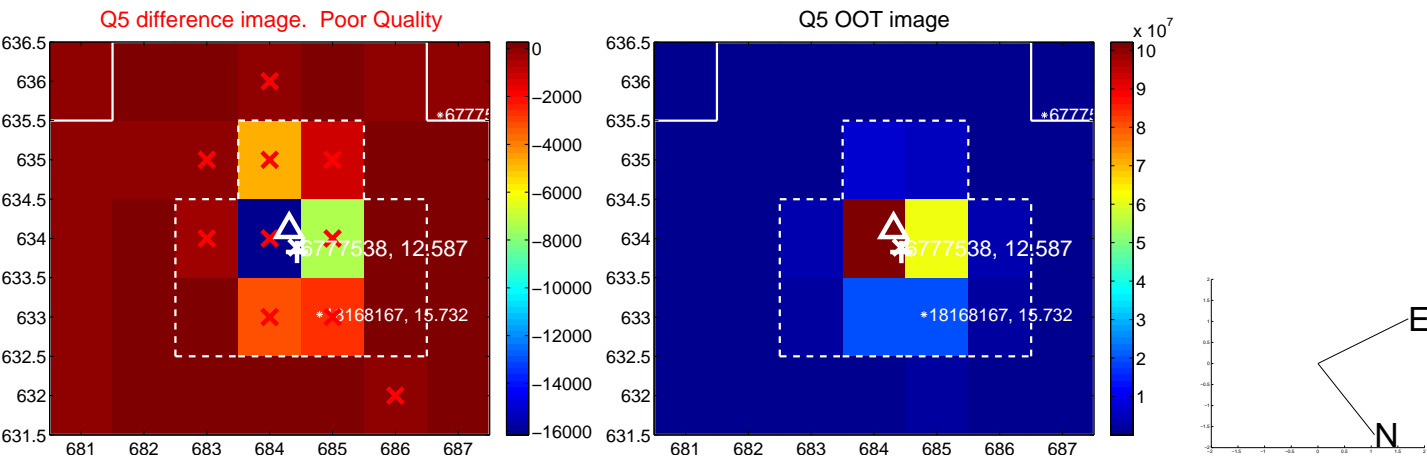


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

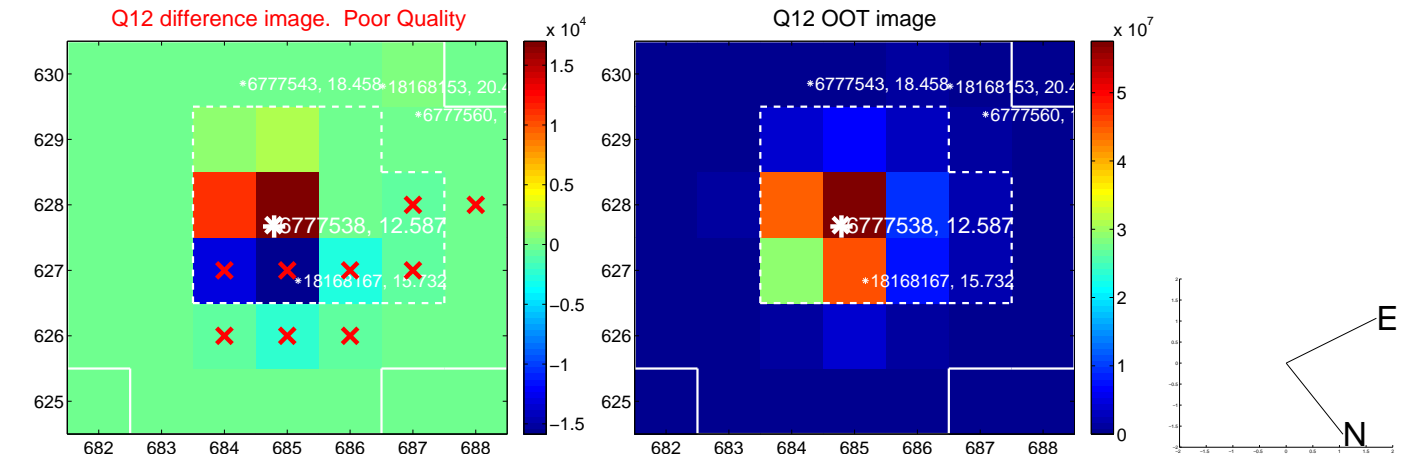
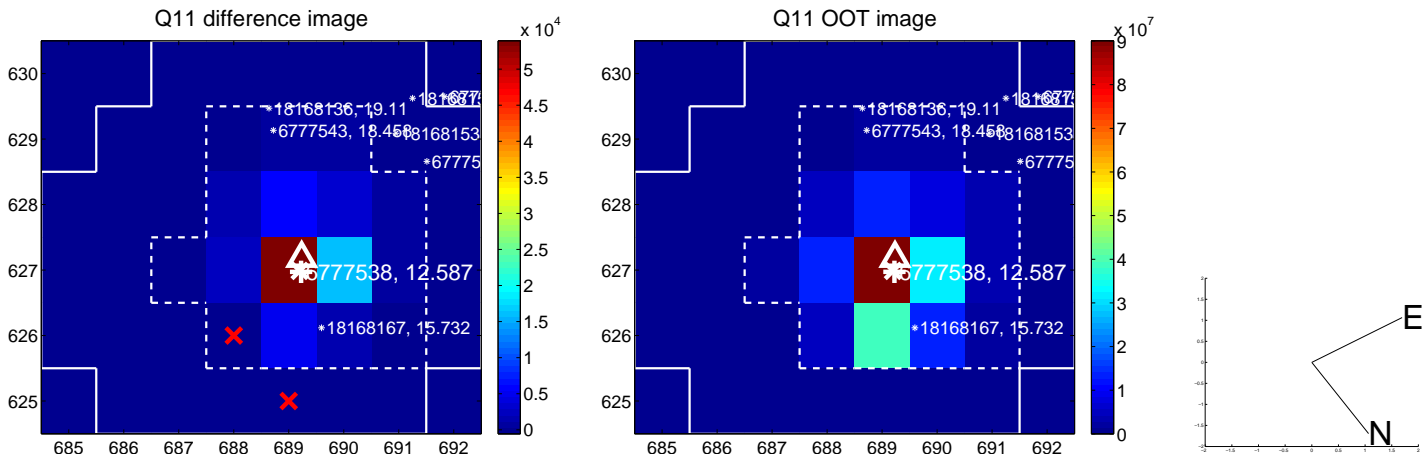
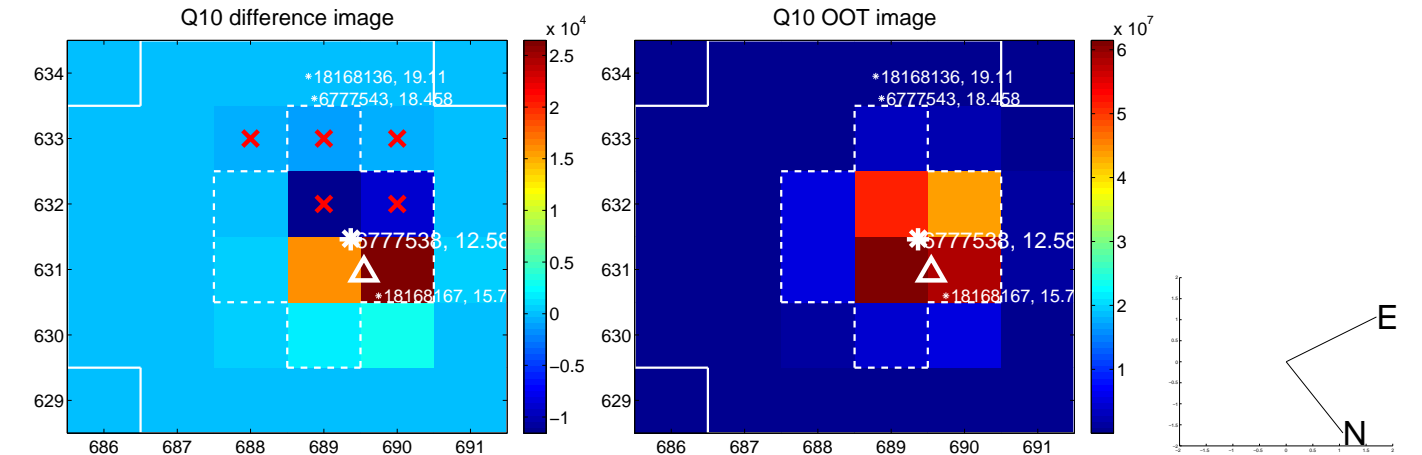
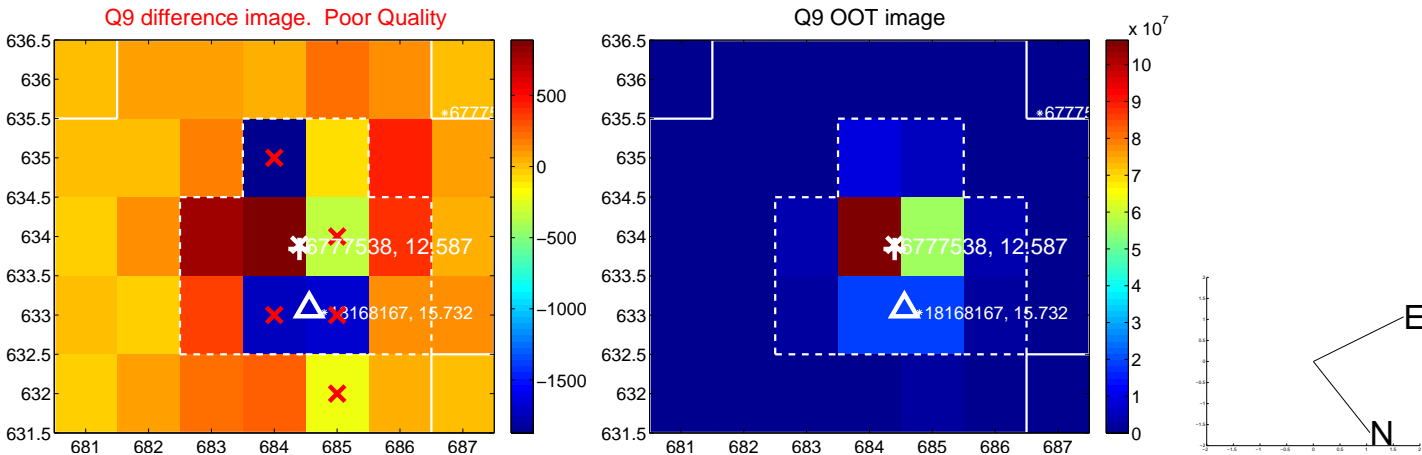
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



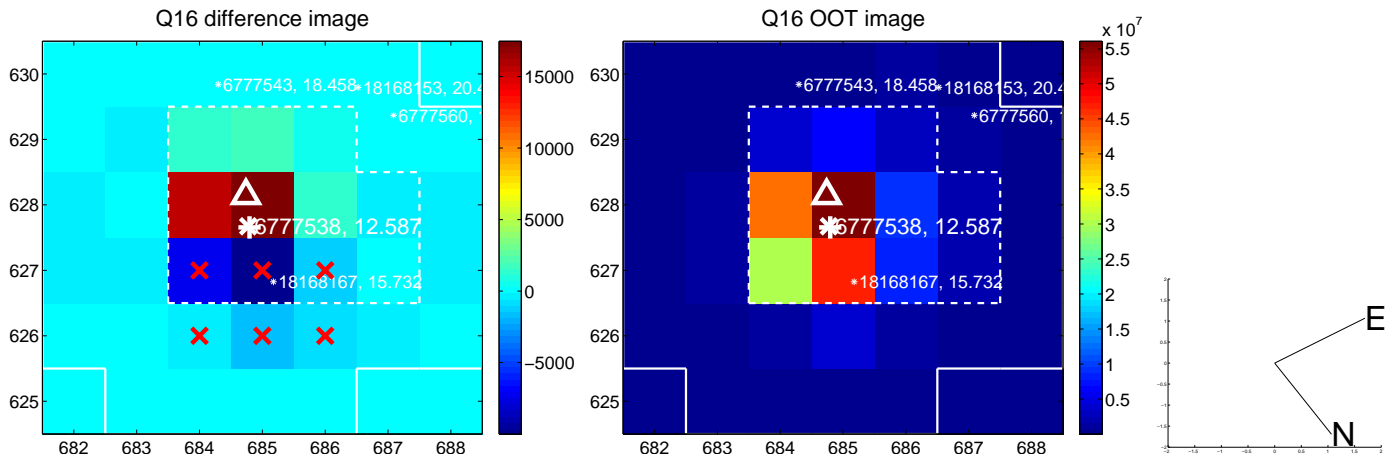
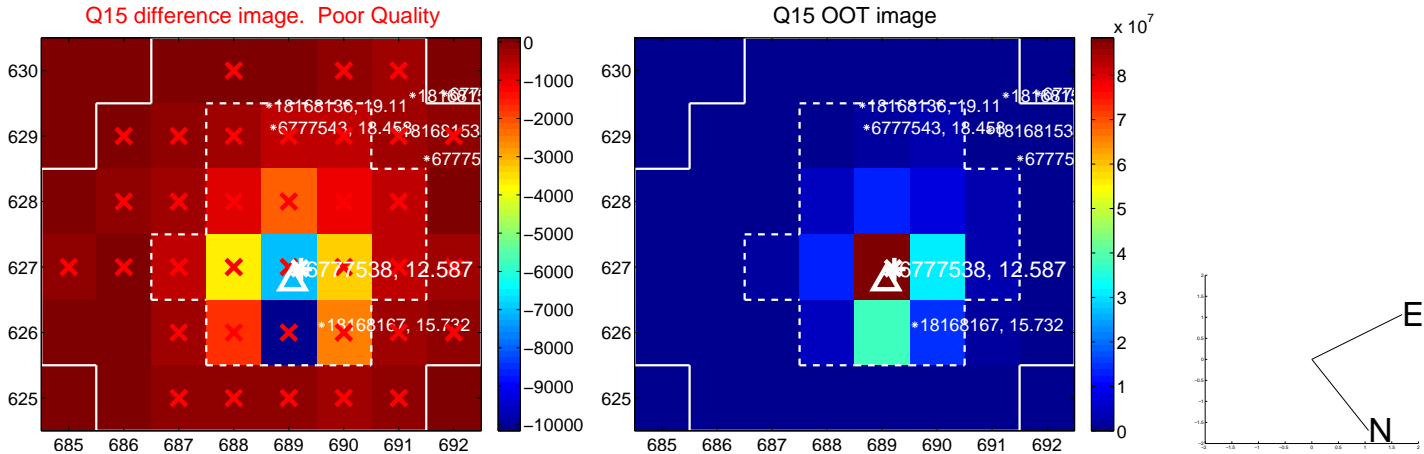
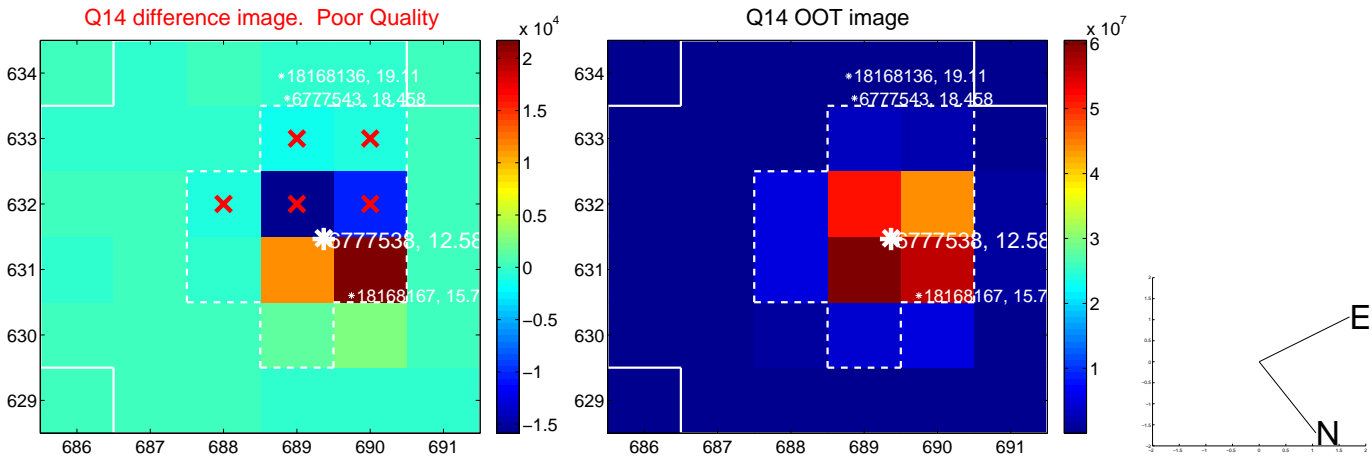
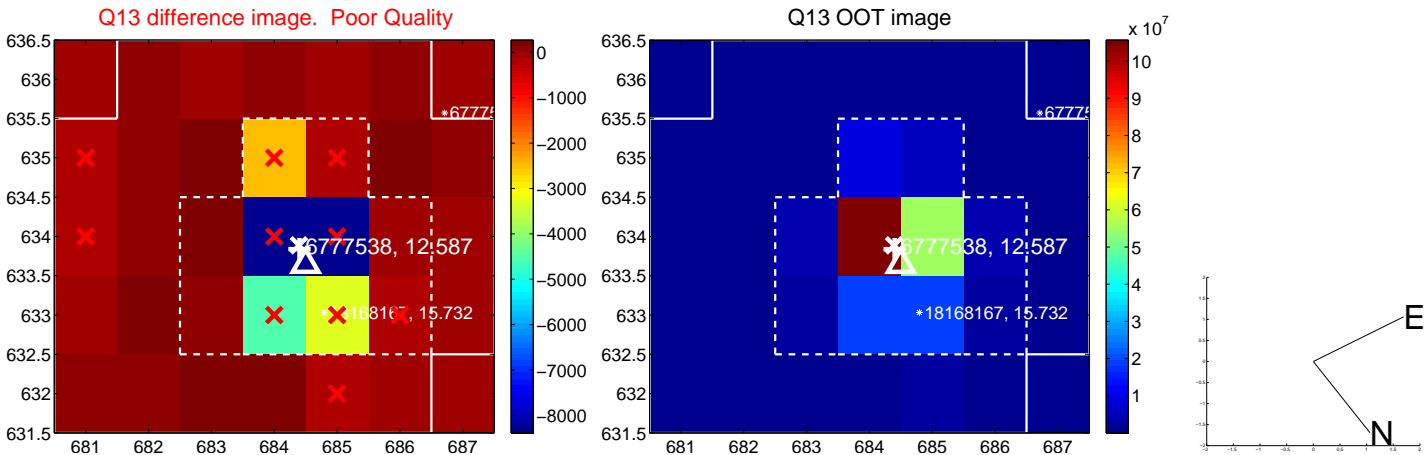
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



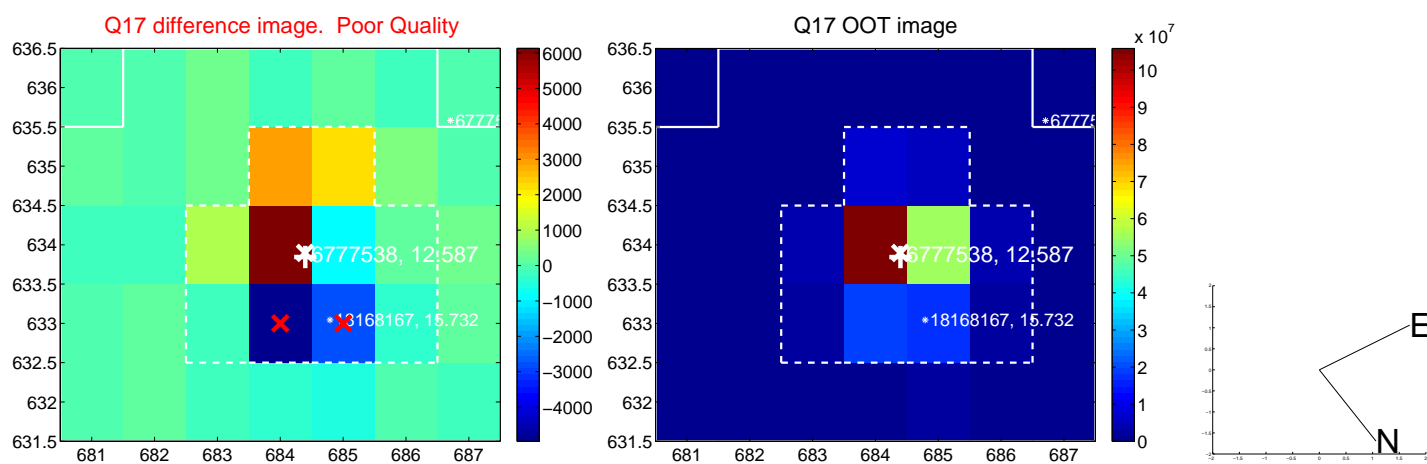
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

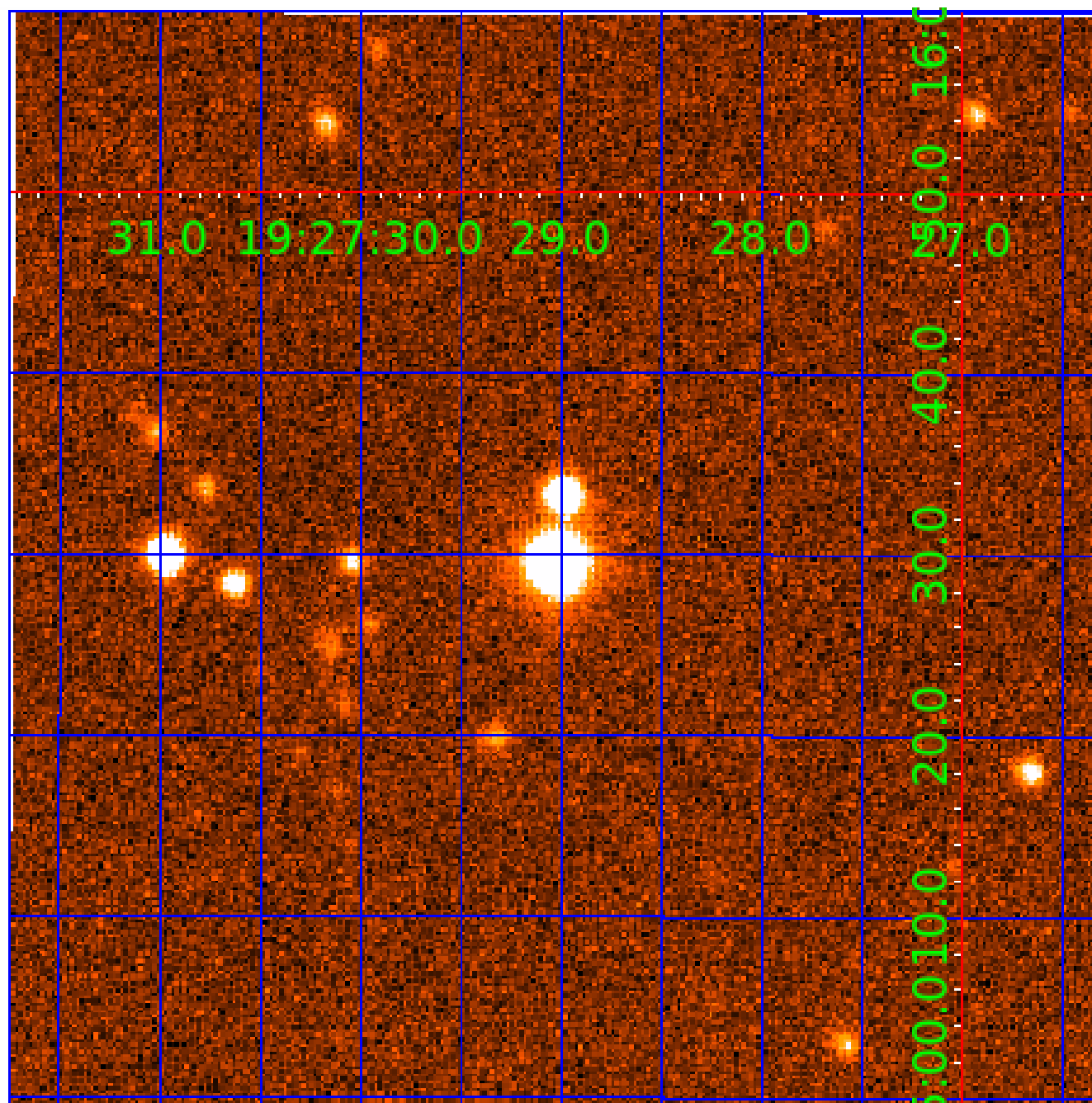


folded centroid time series figure for this object.



UKIRT Image

Declination



KIC 006777538

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})
006777538-01	OBS	No	0.526731	131.599111	5.7	3.728	14.5	1.7	5.26	7055	1.58	0.00
006777538-02	OBS	No	44.260283	133.422797	936.5	3.613	15.1	14.7	5.26	7055	30.14	632.60
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006777538-04	OBS	No	17.928323	138.897318	67.0	12.190	12.3	1.9	5.26	7055	4.67	2110.71
006777538-05	OBS	No	34.502910	149.769446	1108.7	0.583	13.5	8.1	5.26	7055	18.77	881.74
006777538-06	OBS	No	60.582034	187.125078	684.4	1.774	11.0	7.9	5.26	7055	14.36	416.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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006777538-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006777538-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006777538-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006777538-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV
006777538-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV

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

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

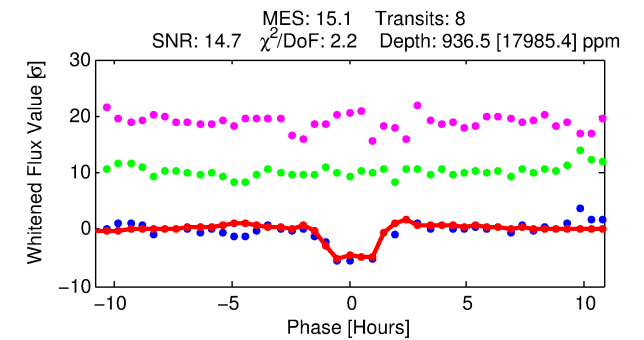
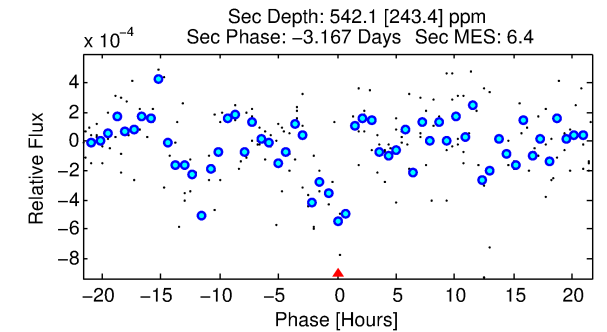
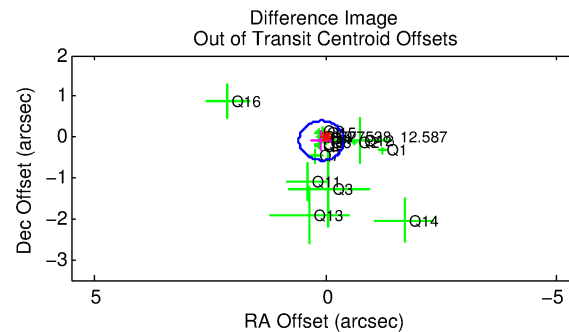
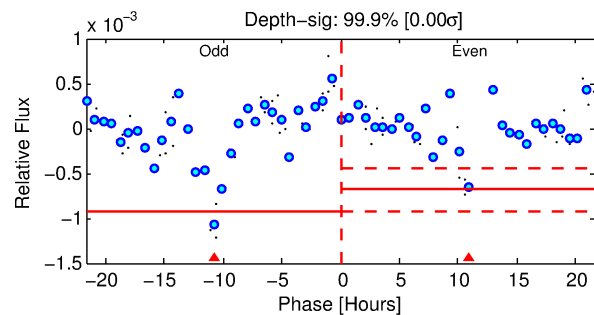
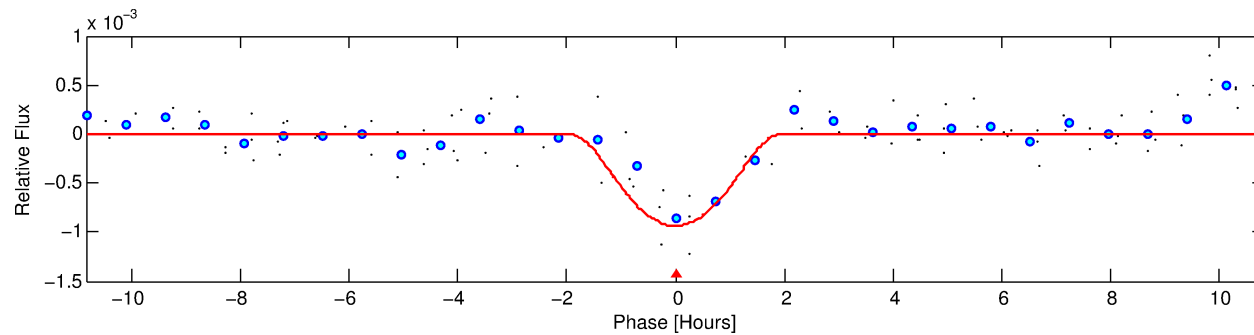
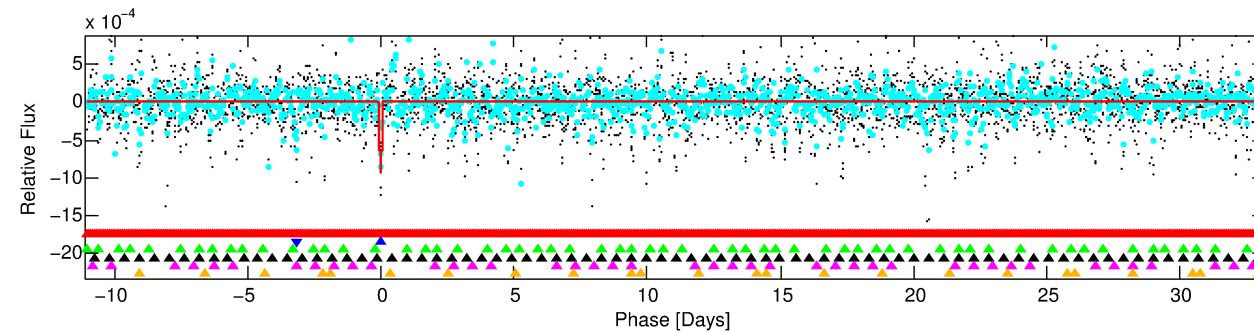
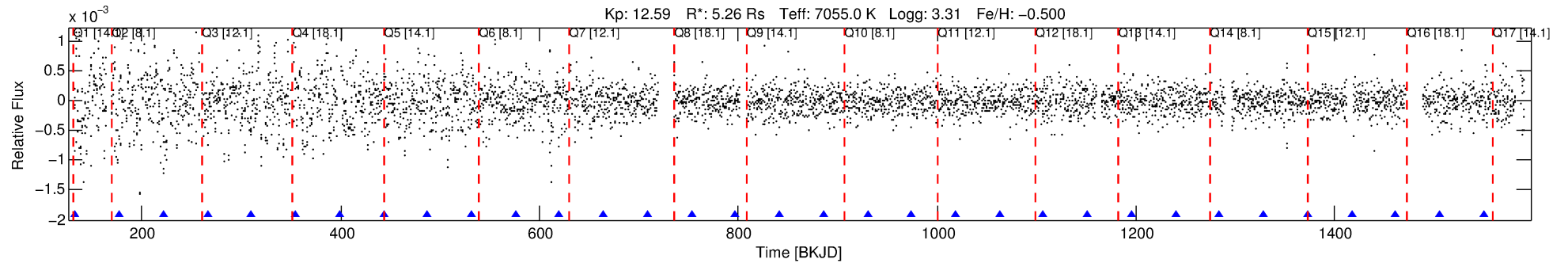
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006777538-02

No Significant Match Found

DV One-Page Summary

KIC: 6777538 Candidate: 2 of 6 Period: 44.260 d



DV Fit Results:

Period = 44.26028 [0.00059] d
Epoch = 133.4228 [0.0096] BKJD
Rp/R* = 0.0525 [0.2741]
a/R* = 30.72 [41.32]
b = 1.00 [1.09]
Seff = 632.60 [499.50]
Teq = 1279 [252] K
Rp = 30.14 [158.18] Re
a = 0.3119 [0.1508] AU
Ag = 31.94 [334.97] [0.09σ]
Teffp = 4700 [12292] K [0.28σ]

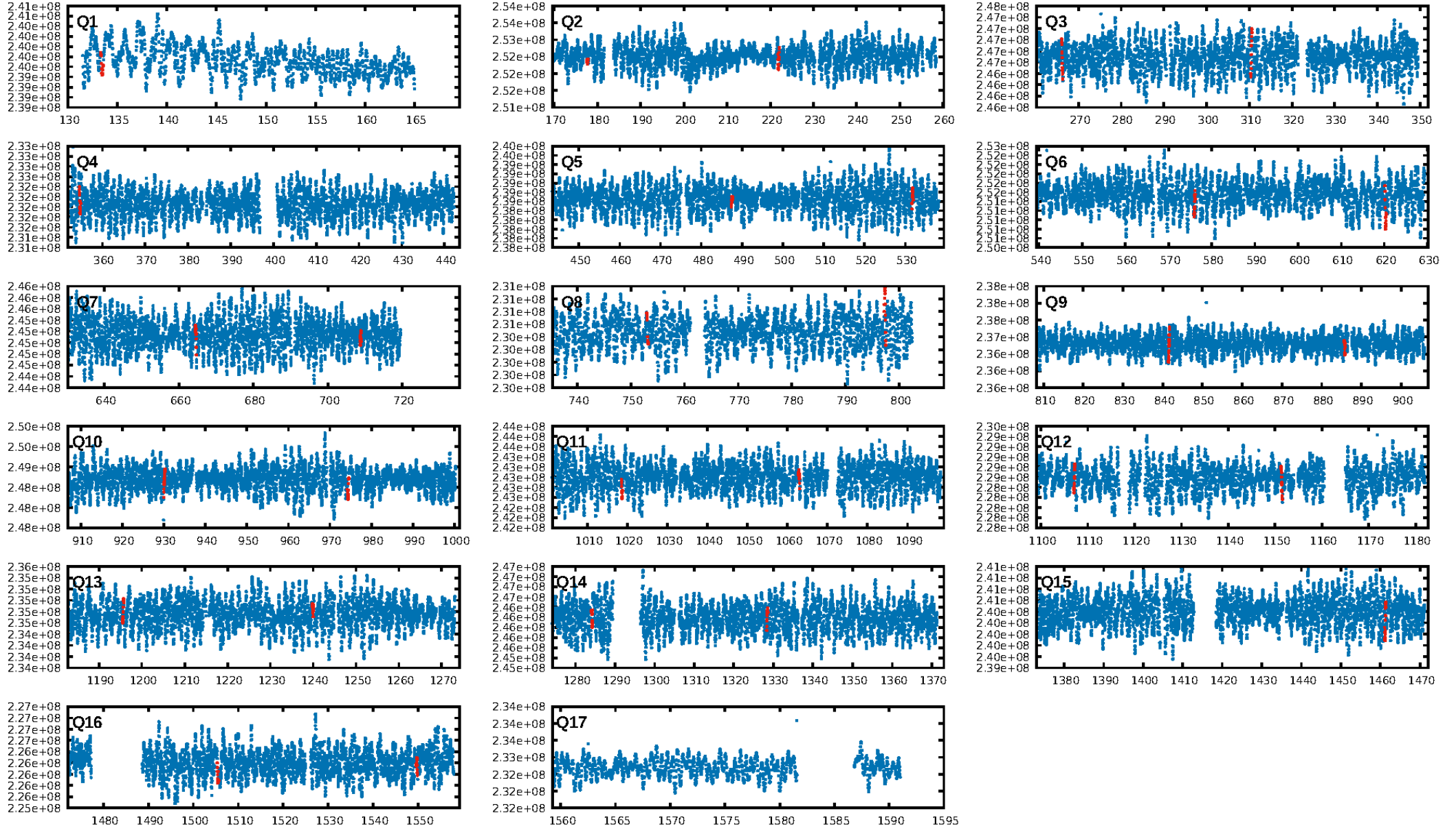
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [63.99σ]
LongPeriod-sig: 100.0% [97.32σ]
ModelChiSquare2-sig: 3.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.69e-20
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: -1.394
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.124 arcsec [0.77σ]
KicOffset-rm: 0.046 arcsec [0.21σ]
OotOffset-st: 4/4/4/4 [16]
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DiffImageOverlap-fno: 0.00 [0/16]

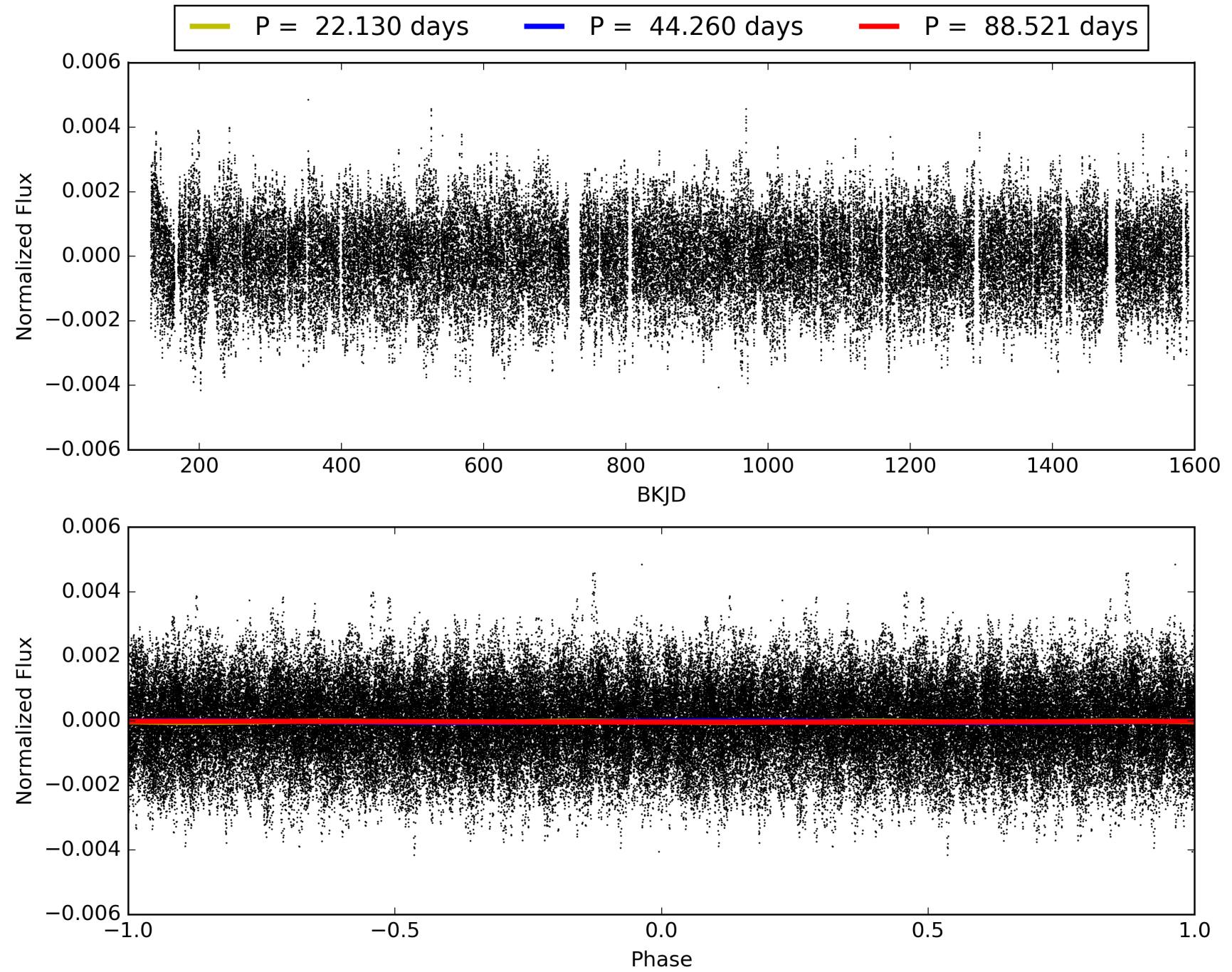
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:21:17 Z

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

TCE 006777538-02, PDC Light Curves

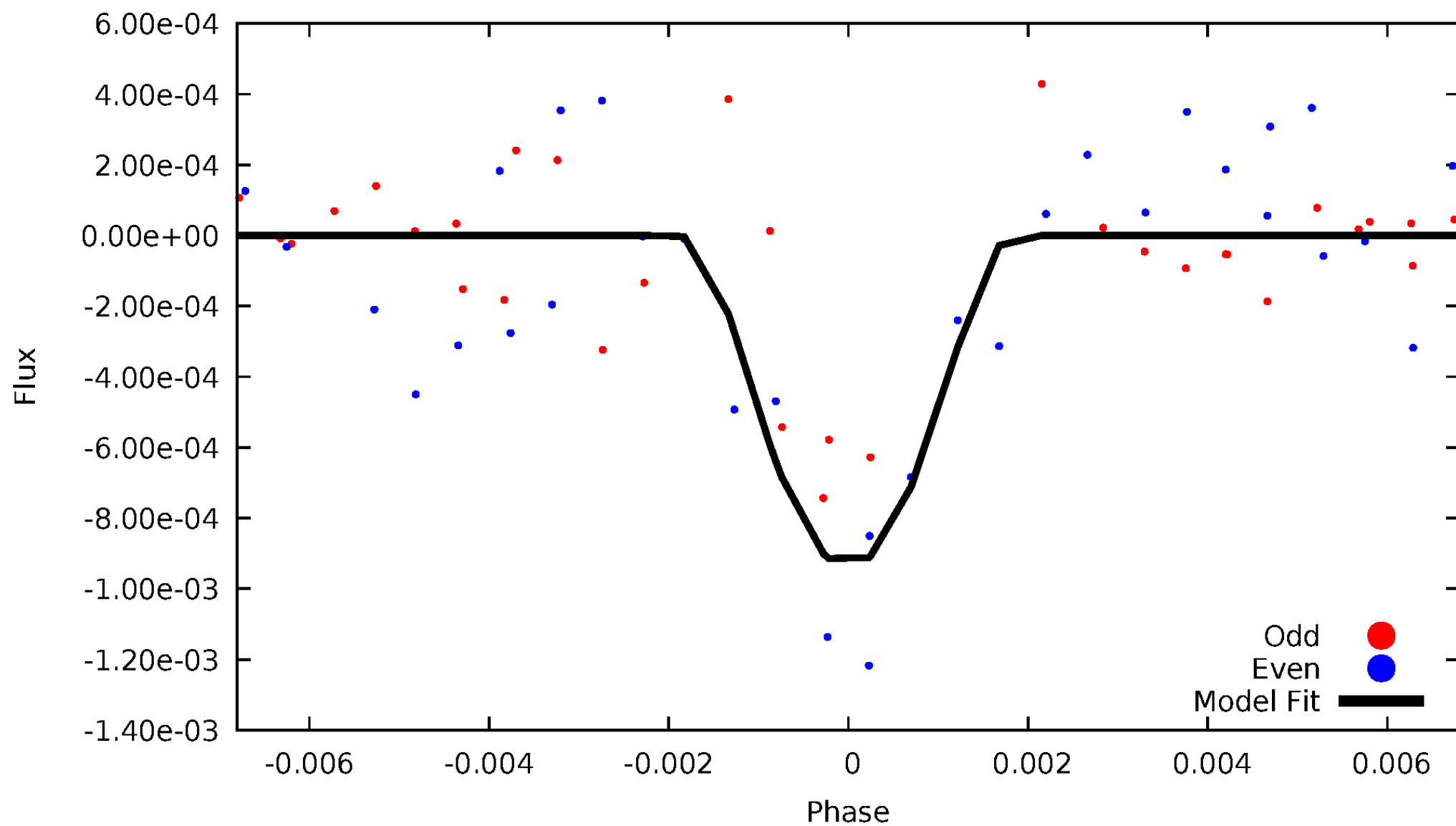


TCE 006777538-02



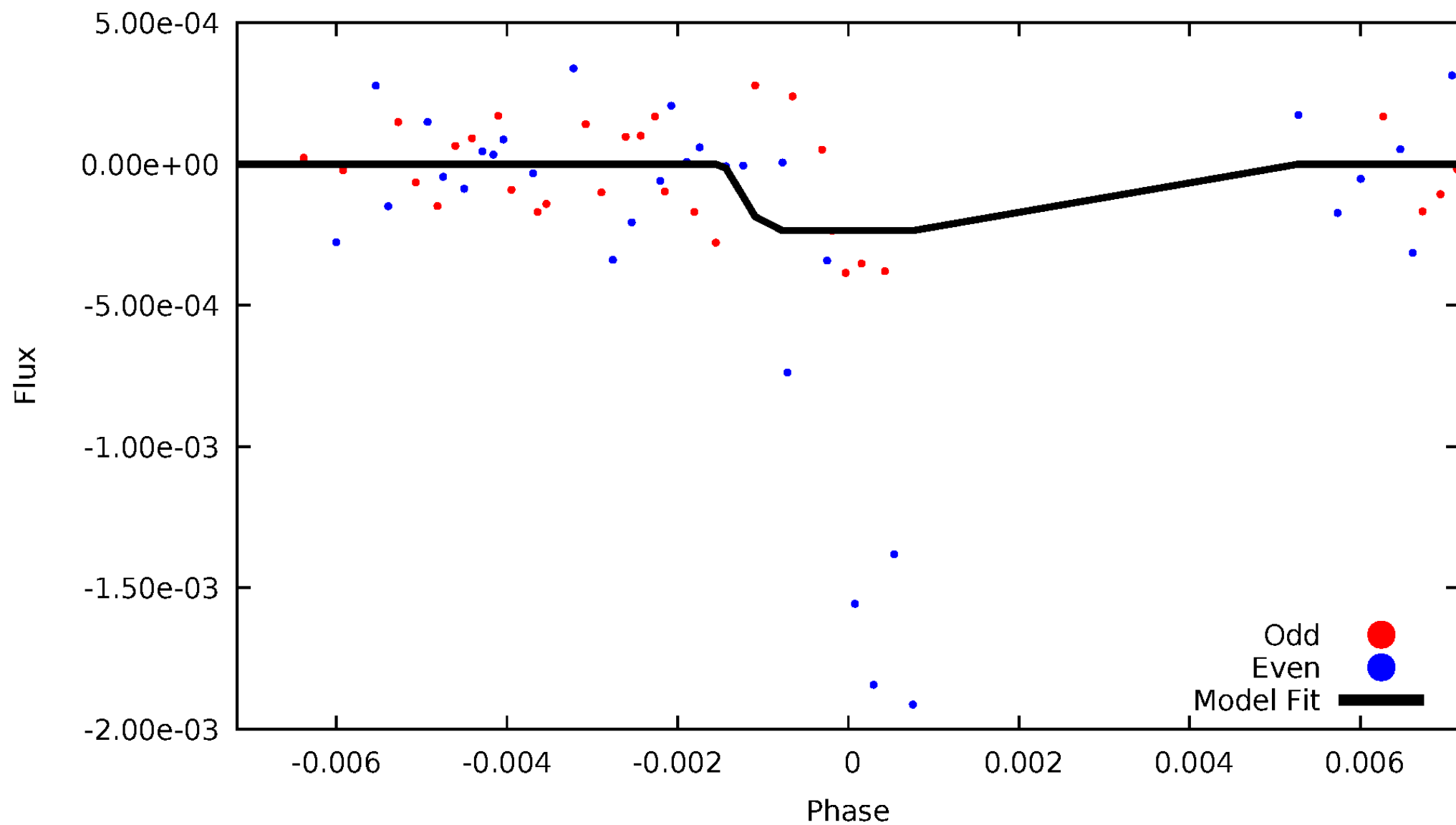
DV Odd/Even

TCE 006777538-02



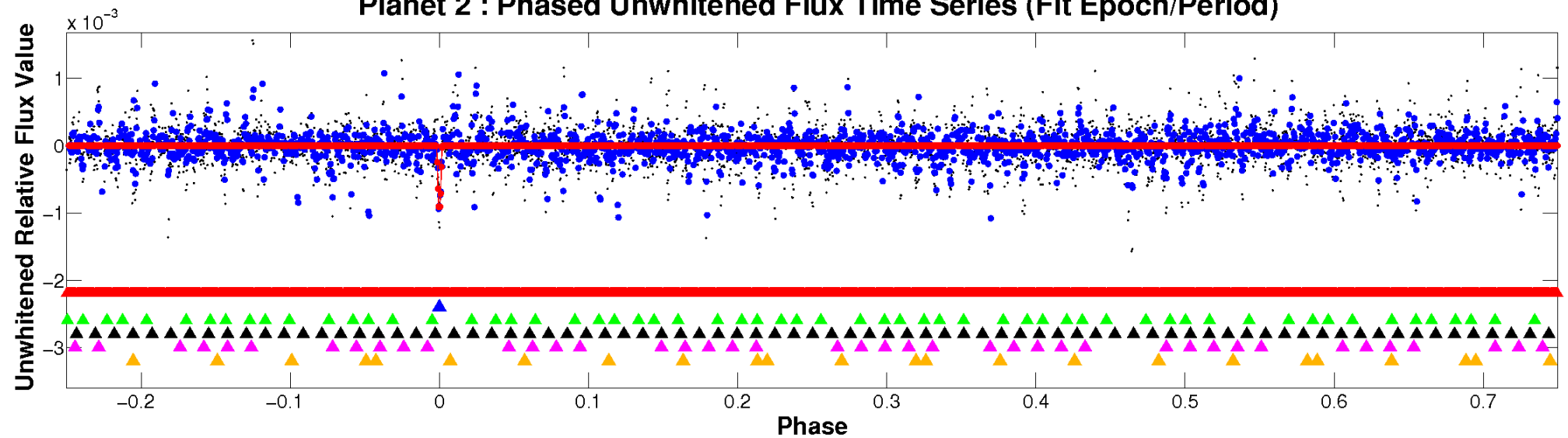
ALT Odd/Even

TCE 006777538-02

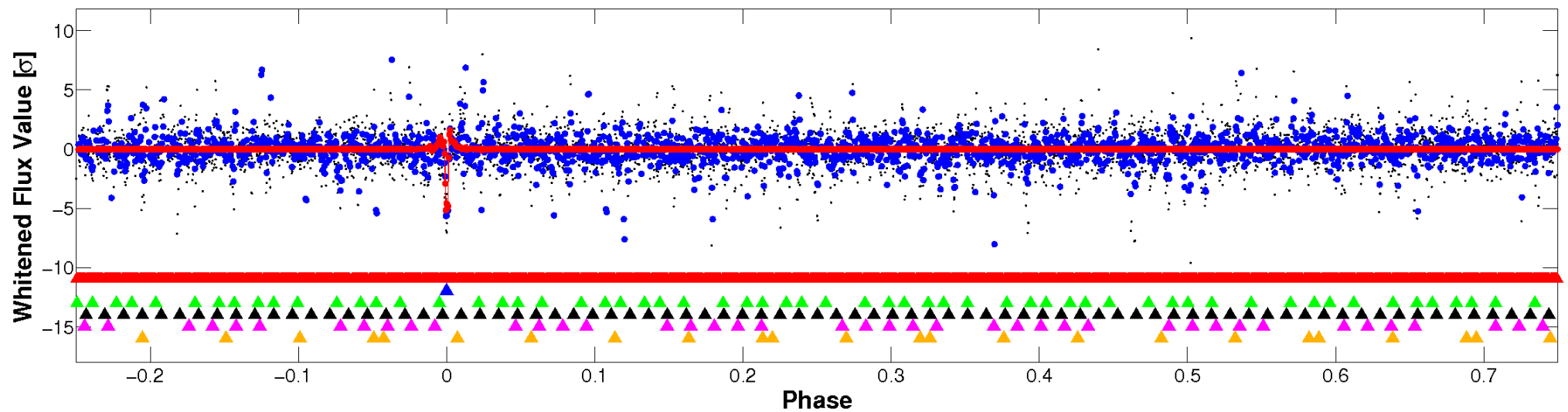


Non-Whitened Vs. Whitened Light Curve

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

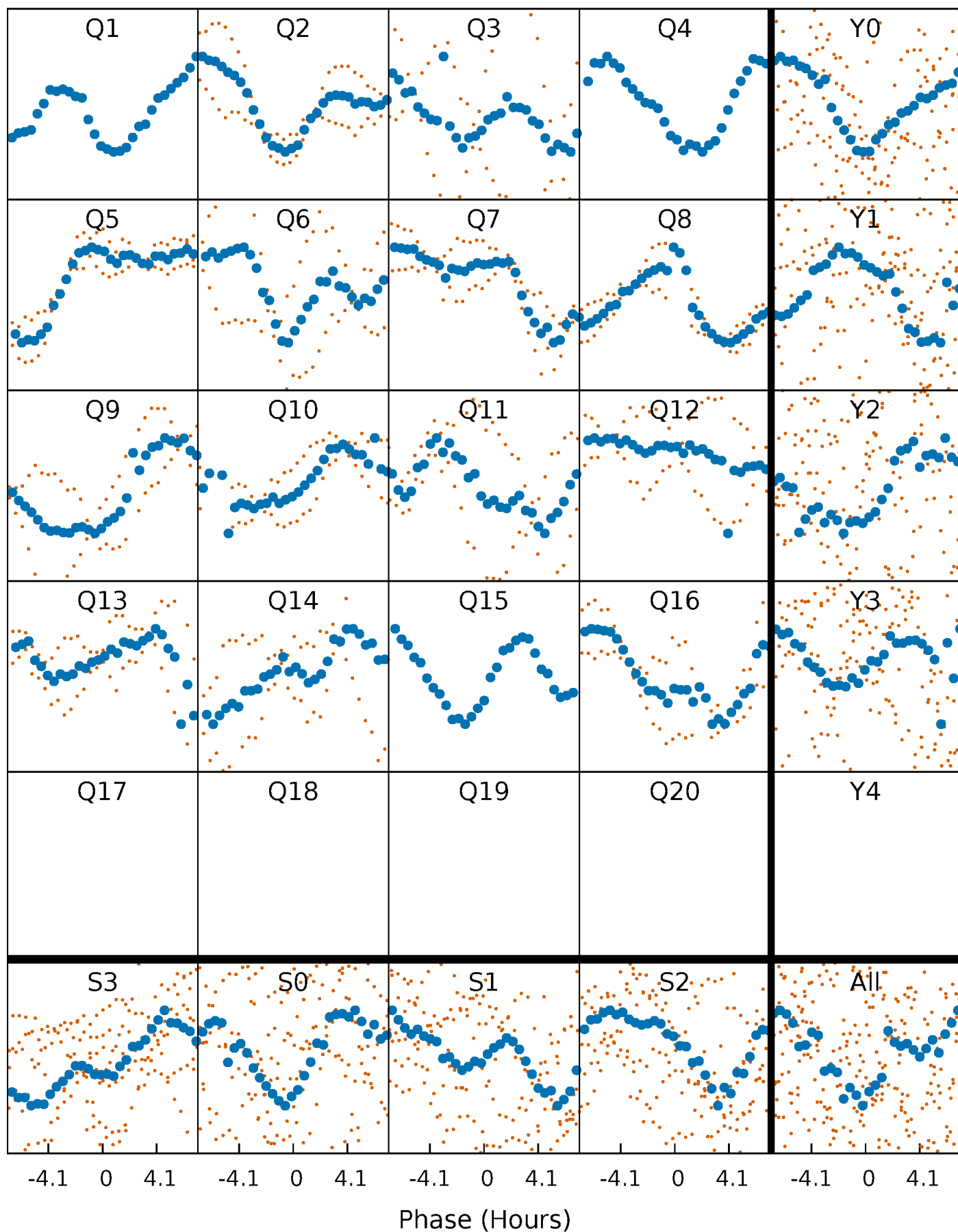


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



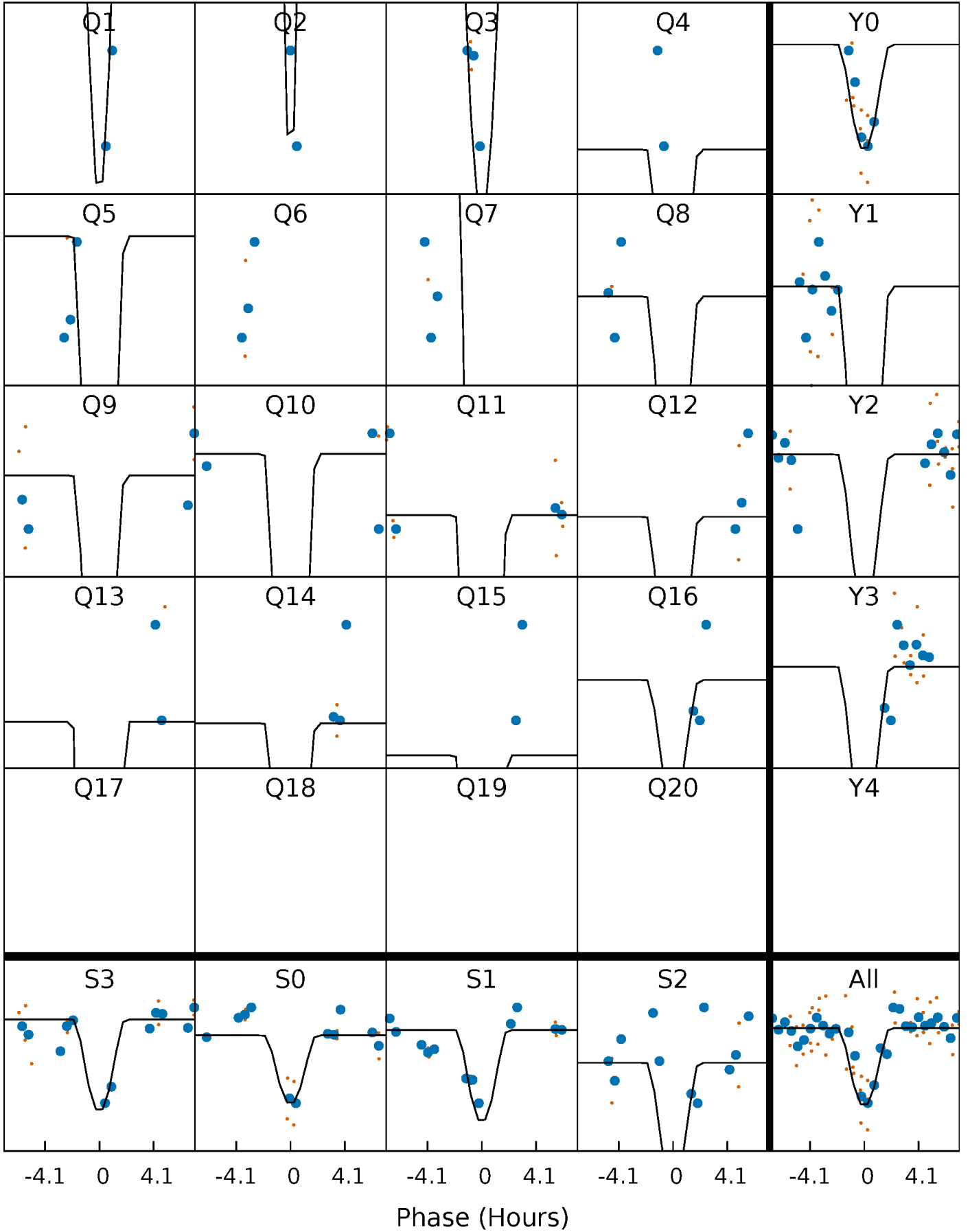
PDC Quarter-Phased Transit Curves

TCE 006777538-02 P= 44.260283 Days $T_0=133.422797$ (BKJD)



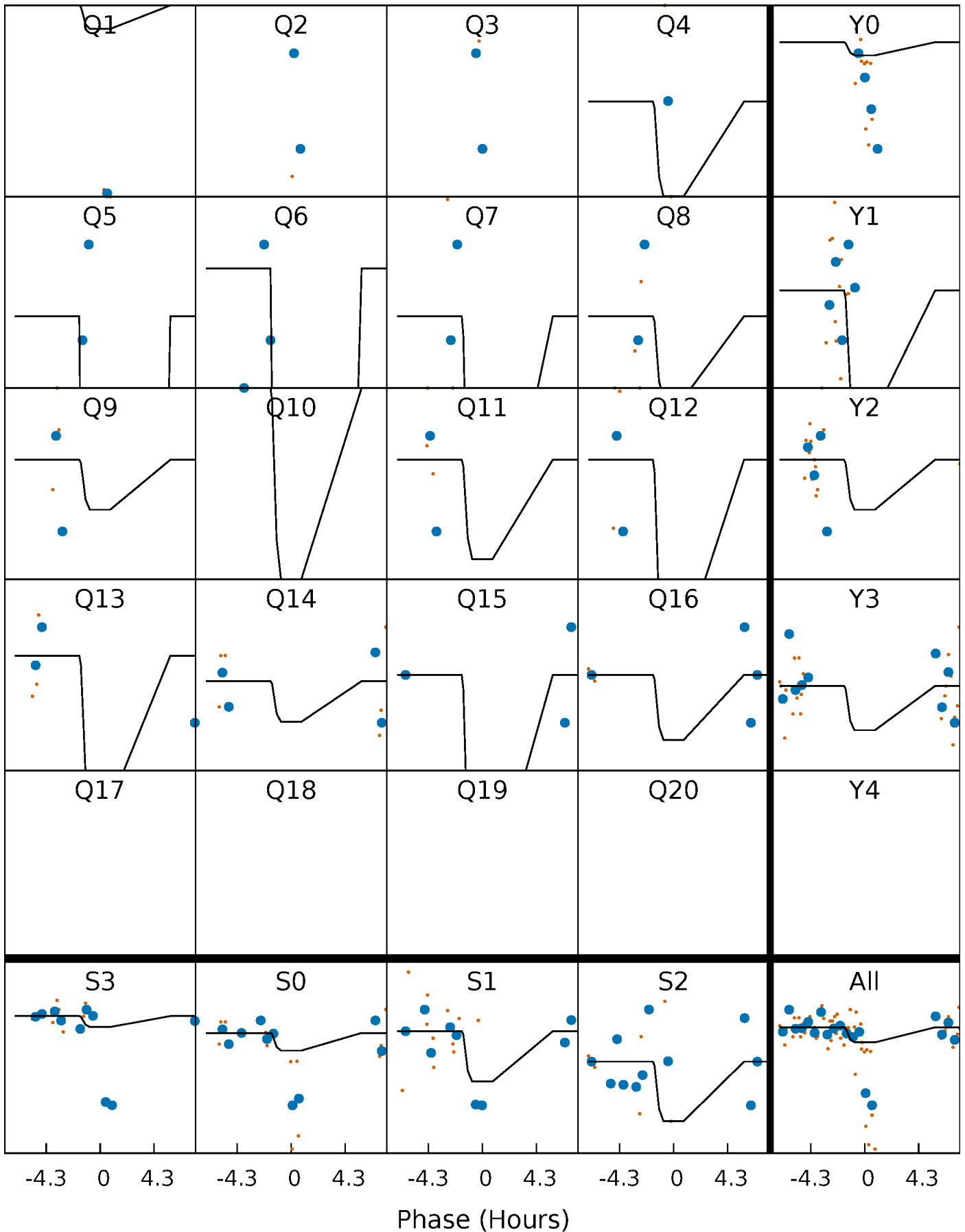
DV Quarter-Phased Transit Curves

TCE 006777538-02 P= 44.260283 Days $T_0=133.422797$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

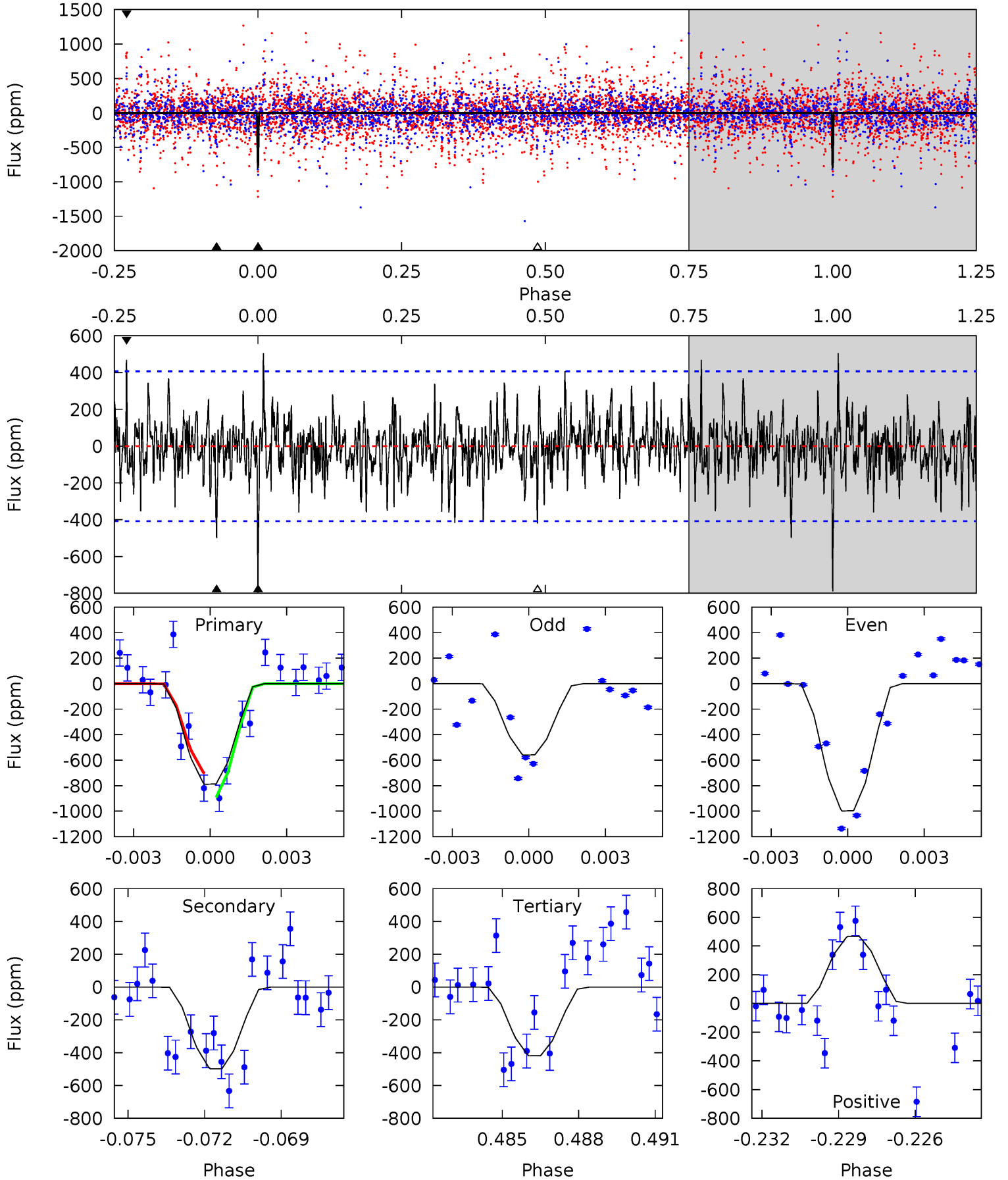
TCE 006777538-02 P= 44.254757 Days $T_0=133.420200$ (BKJD)



DV Model-Shift Uniqueness Test

006777538-02, P = 44.260283 Days, E = 89.162514 Days

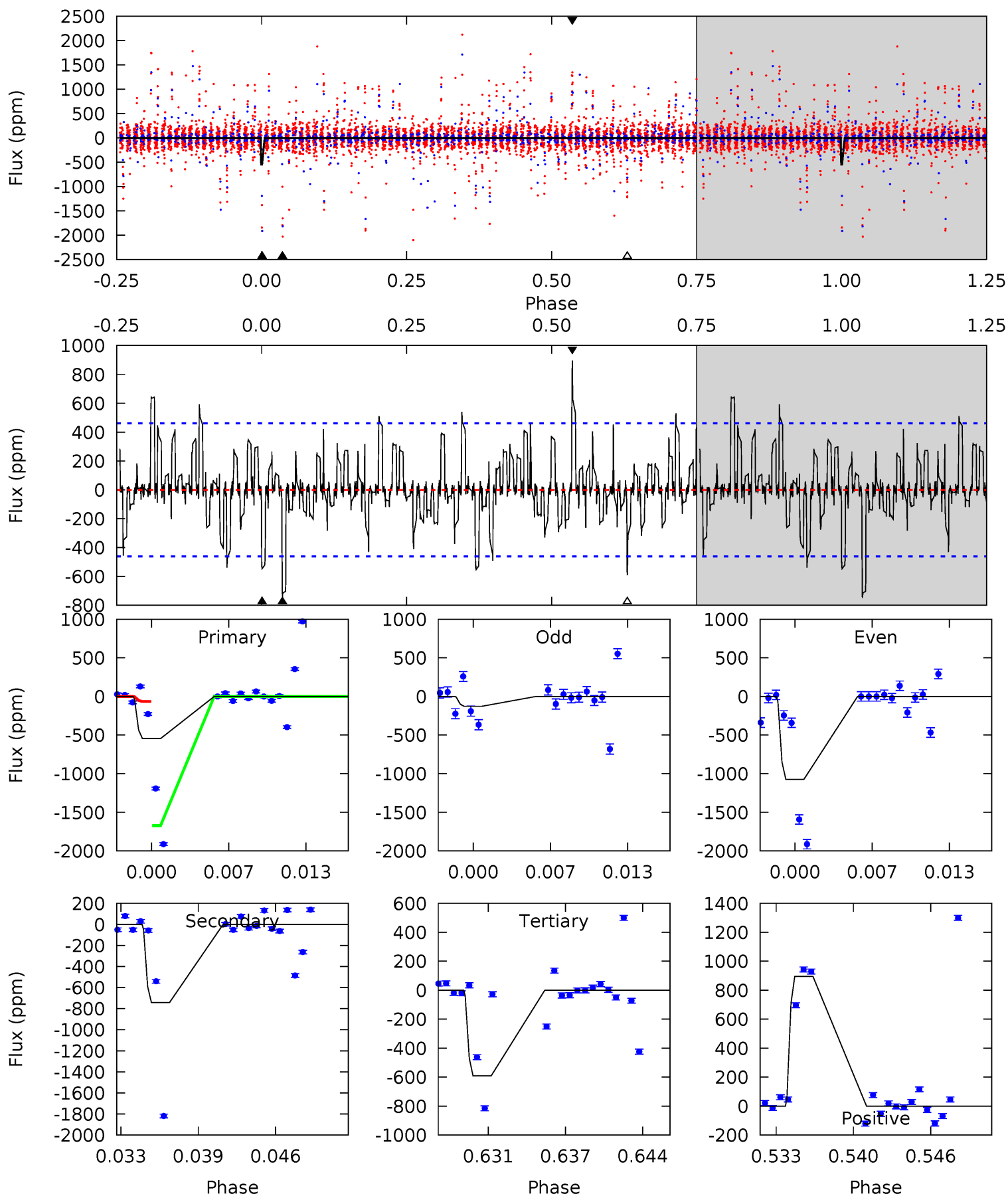
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	6.43	5.40	6.02	5.25	2.97	1.54	4.76	4.14	1.03	0.40	2.72	0.89	0.39	1.20



Alt Model-Shift Uniqueness Test

006777538-02, P = 44.254757 Days, E = 89.165443 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.05	8.21	6.54	9.92	5.11	2.72	1.41	-0.49	-3.87	1.67	-1.71	4.20	1.65	0.55	8.64



Stellar Parameters For KIC 006777538

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7055^{+190}_{-233}	$3.310^{+0.459}_{-0.081}$	$-0.500^{+0.350}_{-0.300}$	$5.265^{+1.120}_{-2.614}$	$2.063^{+0.059}_{-0.558}$	$0.020^{+0.094}_{-0.007}$
	+3%/-3%	+14%/-2%	+70%/-60%	+21%/-50%	+3%/-27%	+473%/-33%
Source	PHO1	FLK73	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 006777538-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-499 ± 78	$98.02^{+110.77}_{-70.22}$	1702^{+139}_{-213}	2937^{+1511}_{-672}	$2.640^{+29.876}_{-2.062}$
Alt.	-742 ± 90	$97.30^{+103.02}_{-70.15}$	1708^{+133}_{-210}	3151^{+1730}_{-622}	$4.121^{+42.806}_{-3.183}$

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 $A_{obs} \gg 1.0$

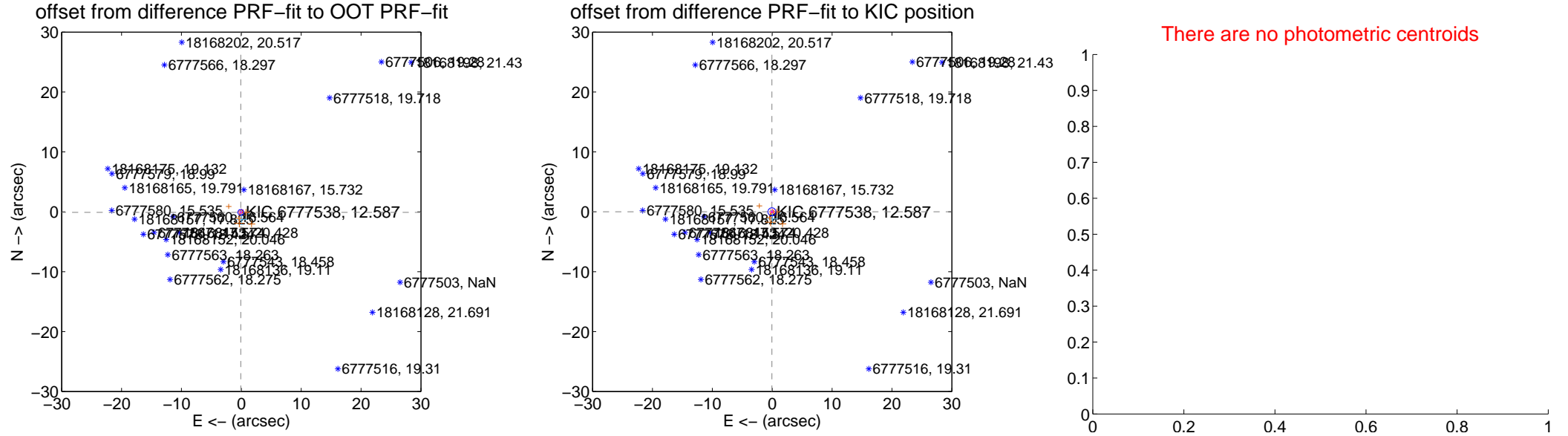
DV Centroid Data

Supplemental centroid analysis for 006777538-02. Kepler magnitude: 12.59. Transit SNR 14.68

There are 8 quarters with good PRF difference image offsets

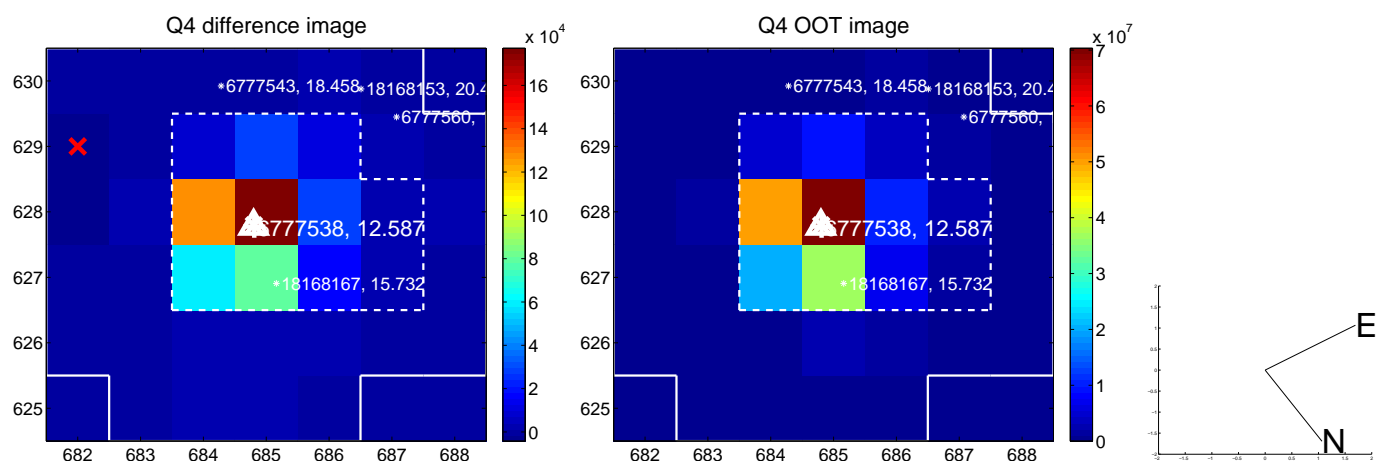
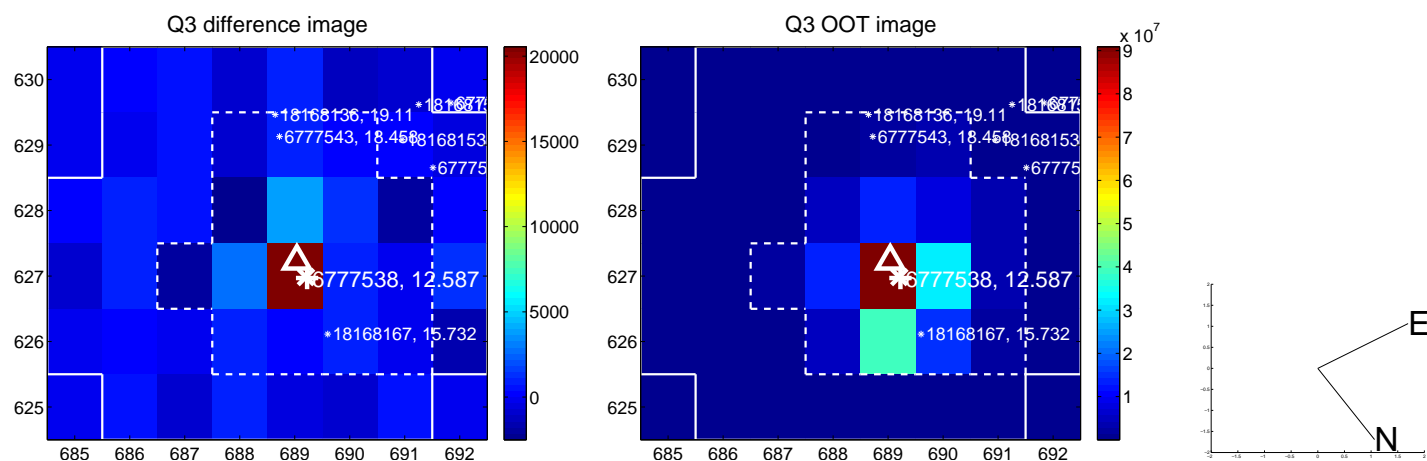
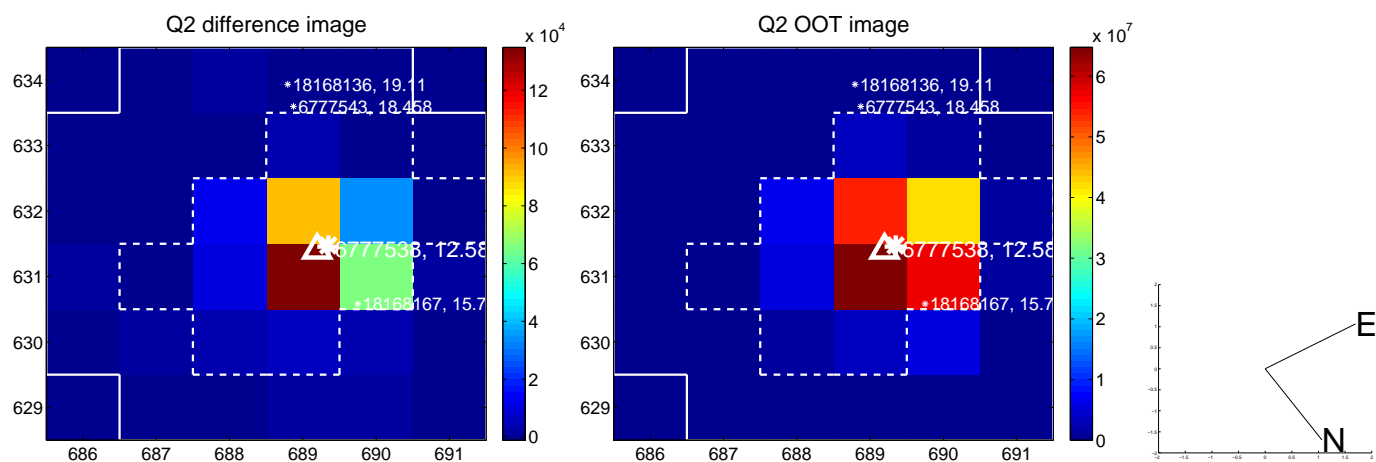
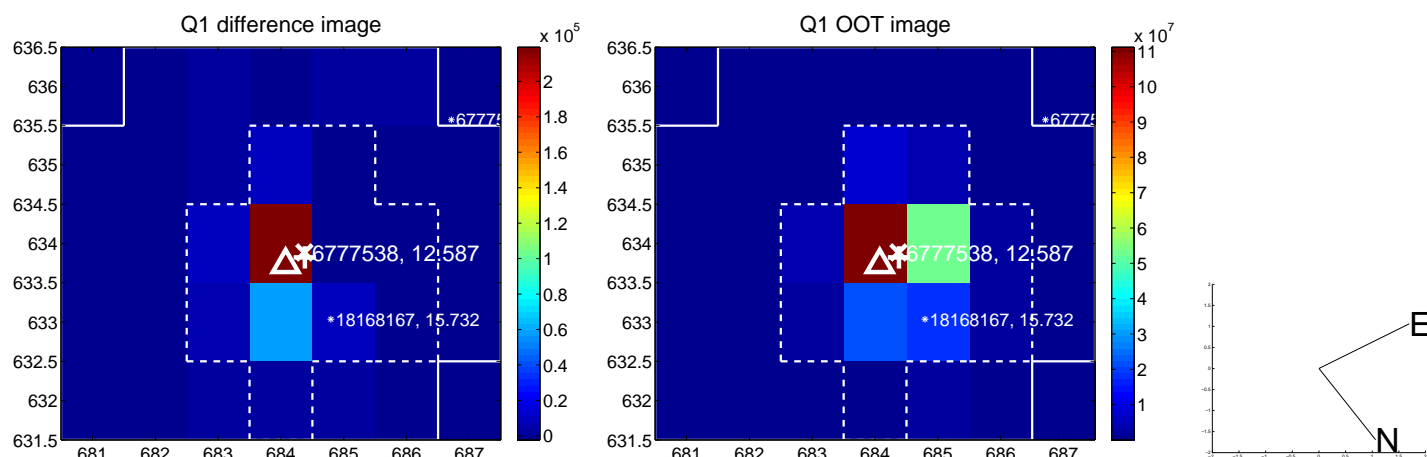
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.124 ± 0.161	0.77	0.088 ± 0.222	-0.087 ± 0.208
PRF-fit source offset from KIC position	0.046 ± 0.223	0.21	0.046 ± 0.222	0.000 ± 0.197
photometric centroid source offset	—	—	—	—

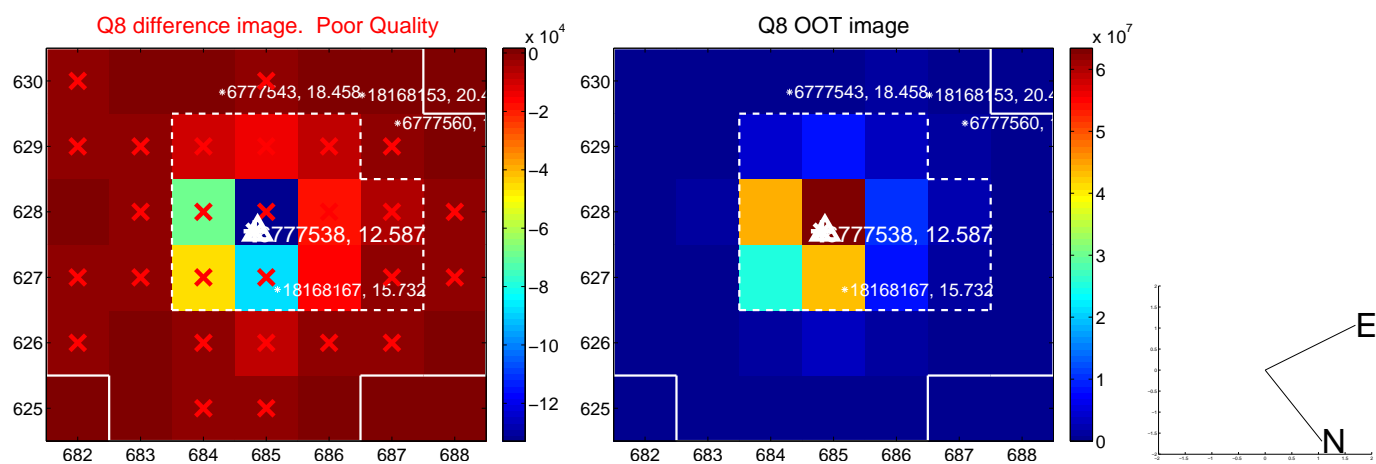
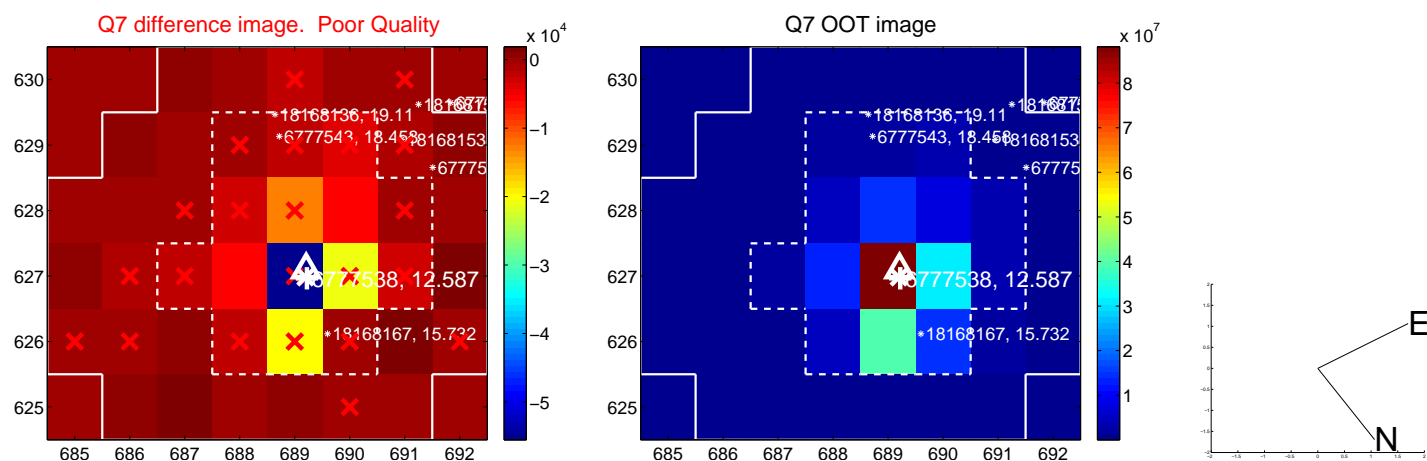
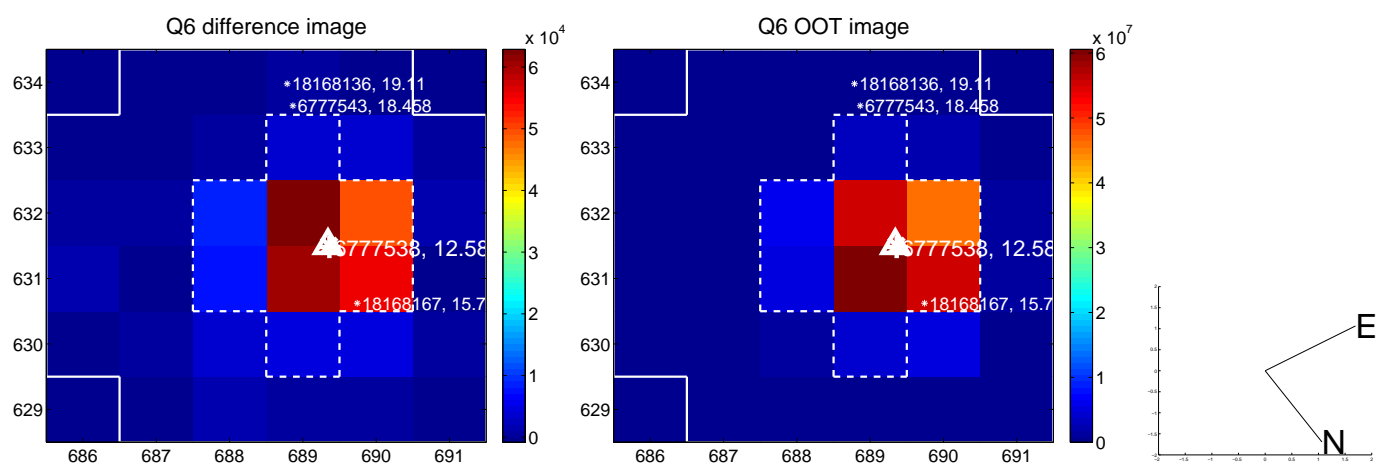
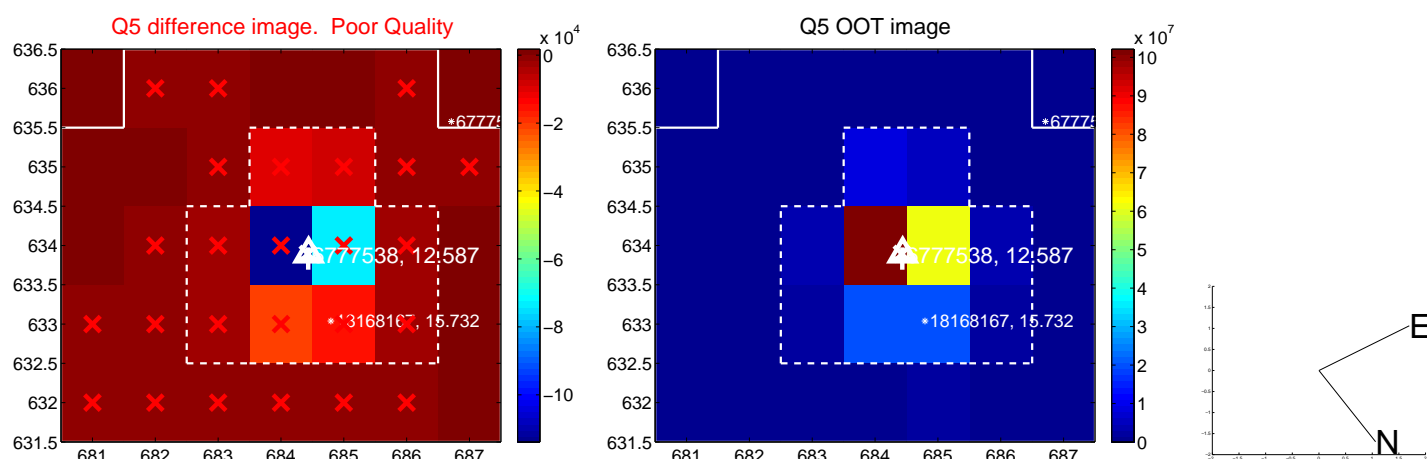


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

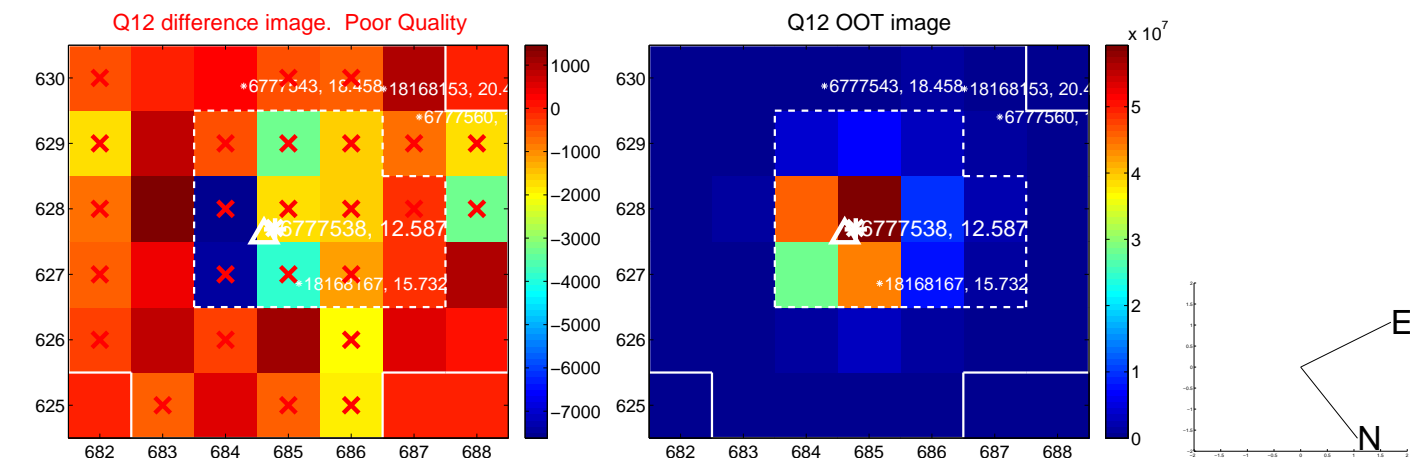
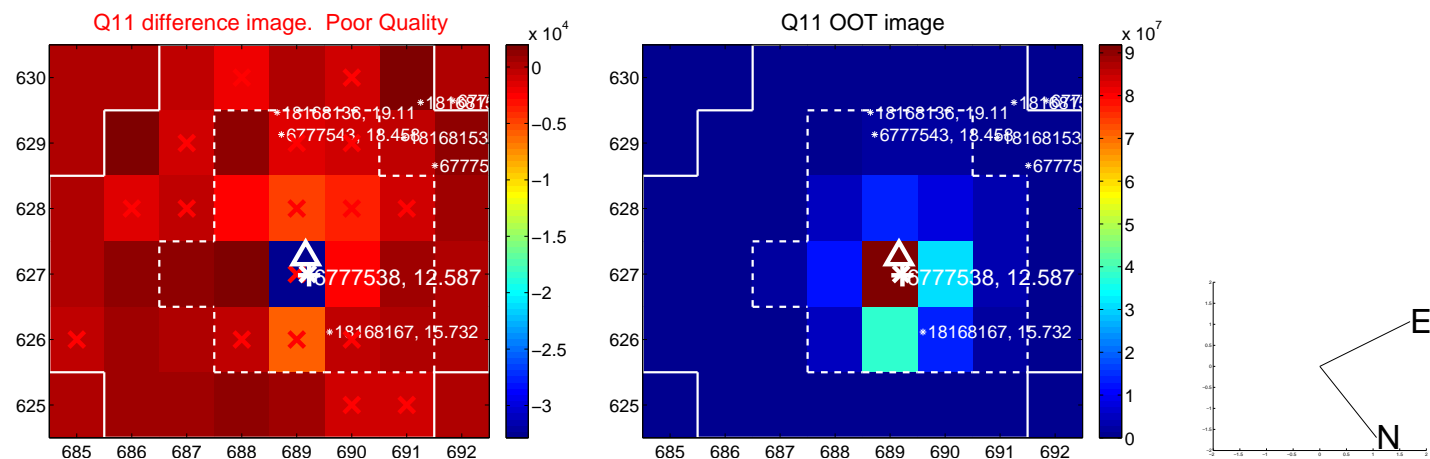
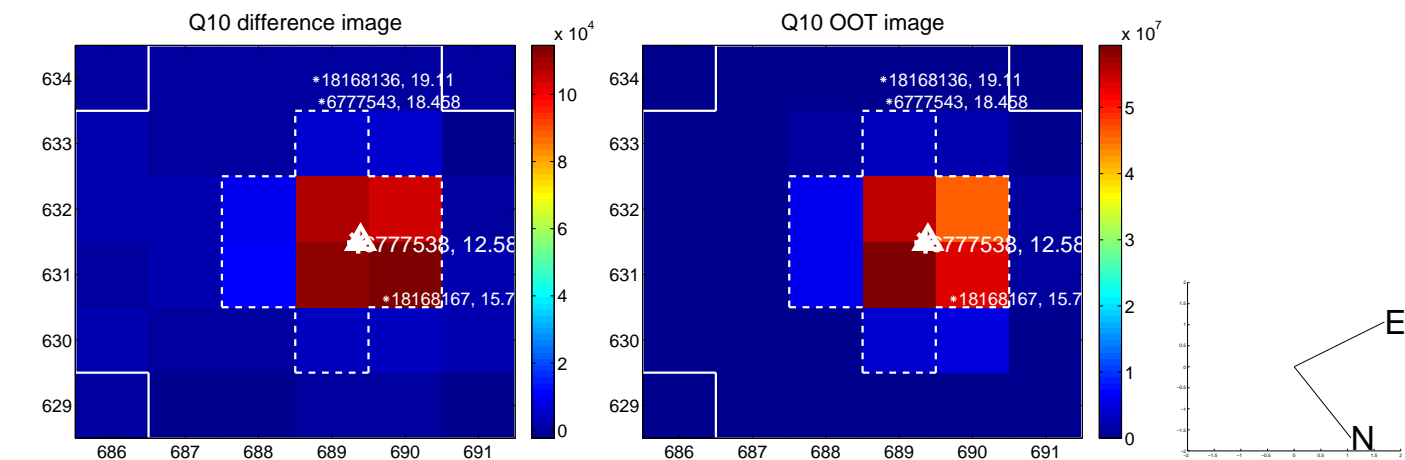
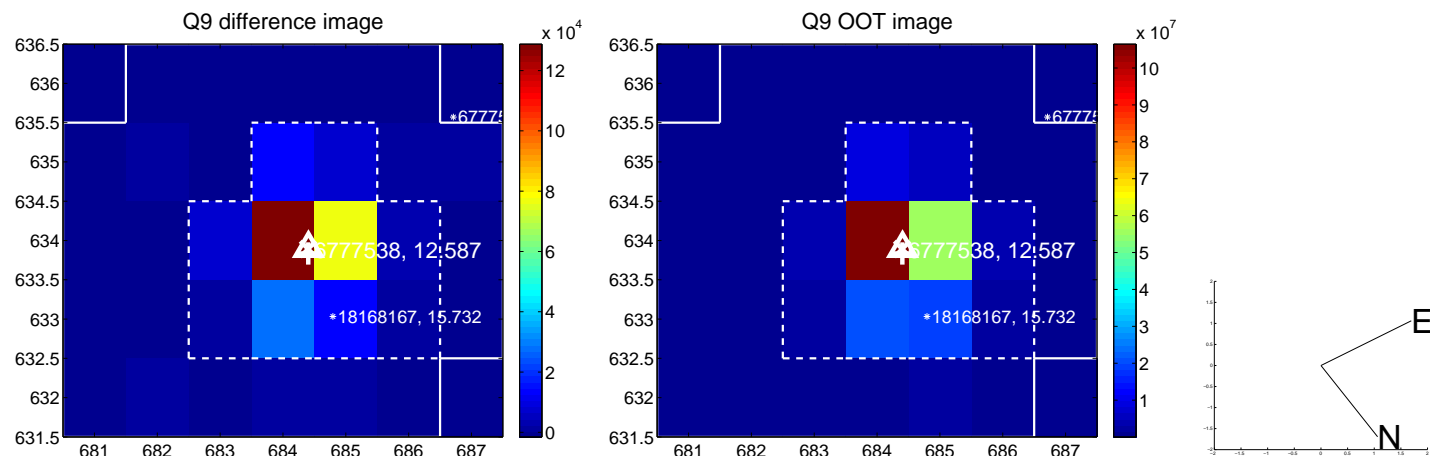
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



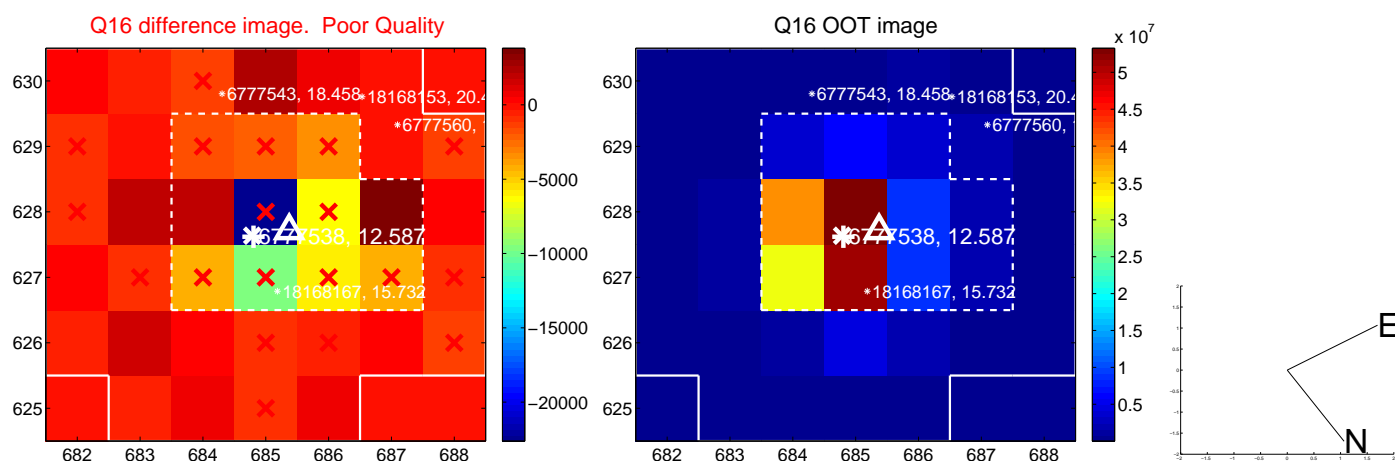
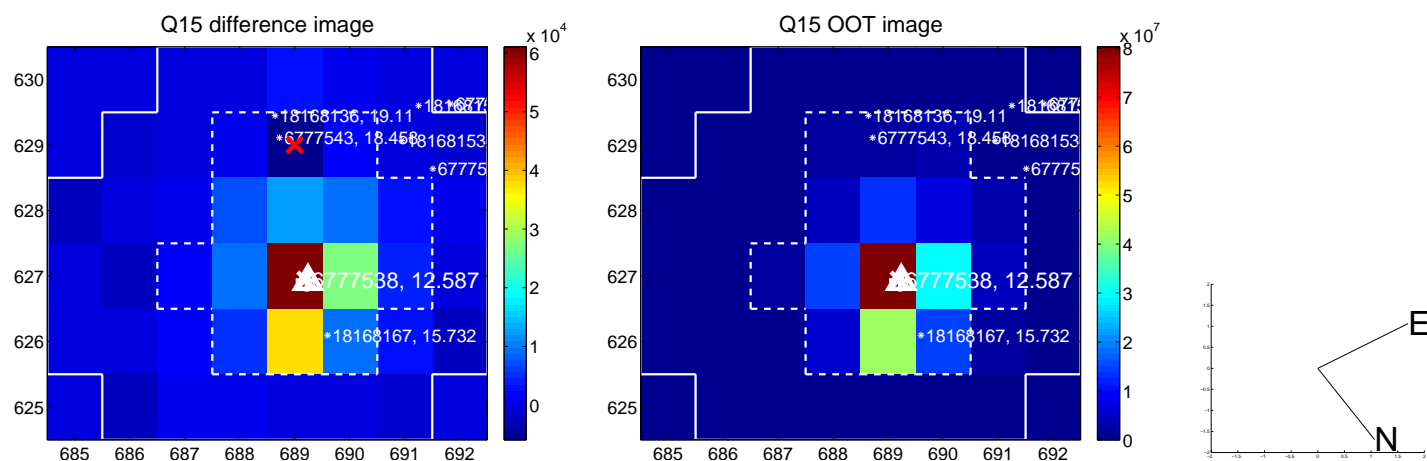
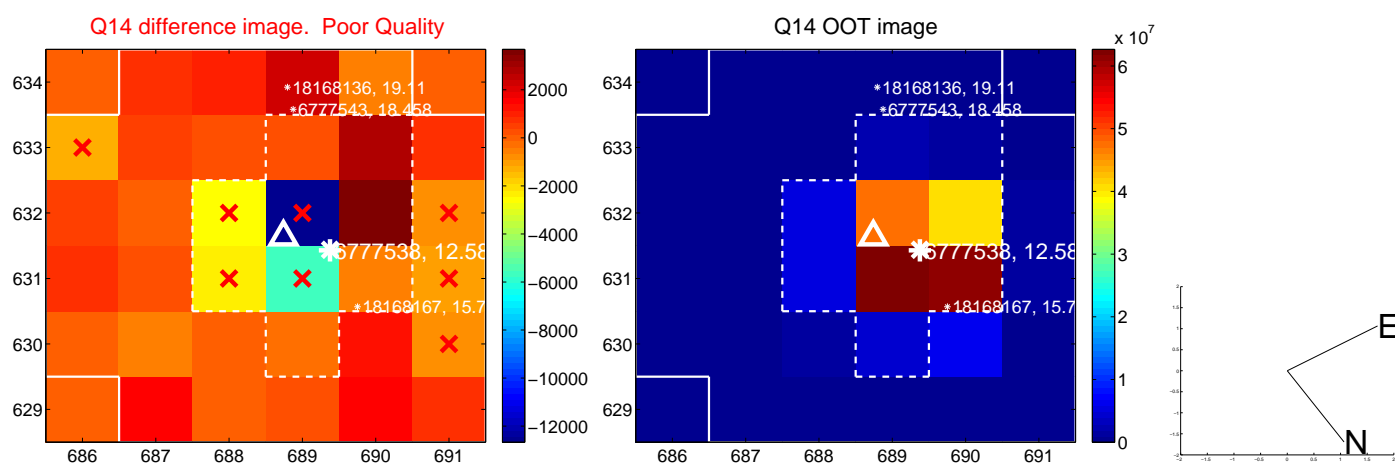
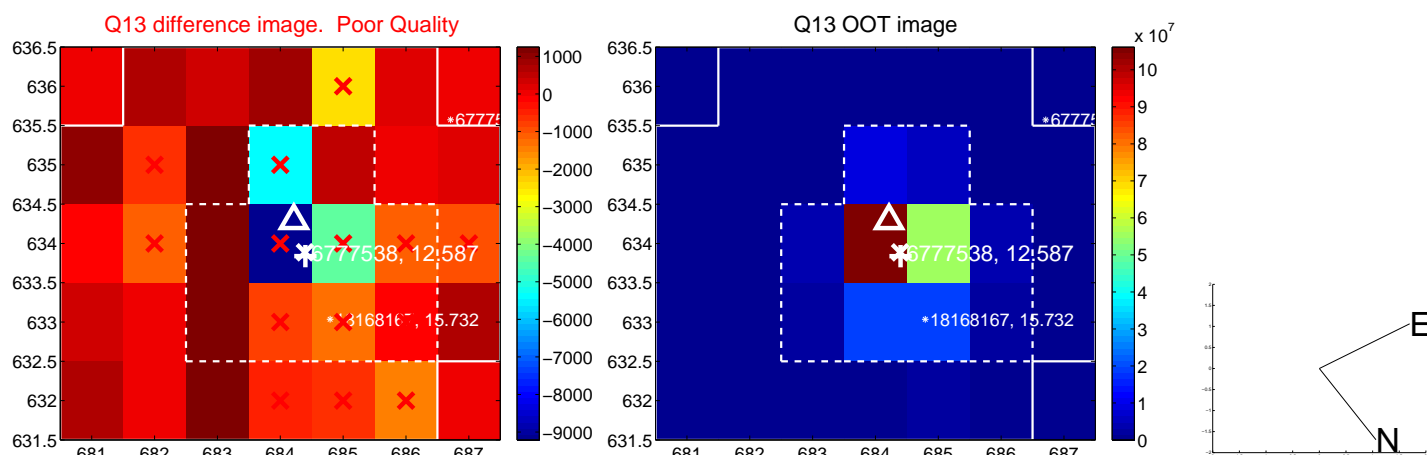
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



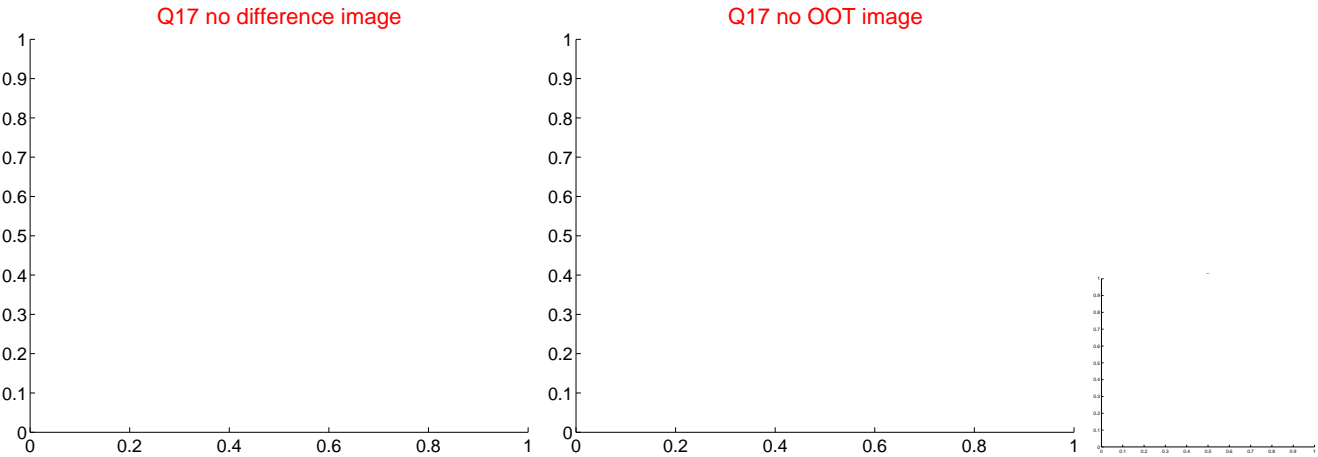
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



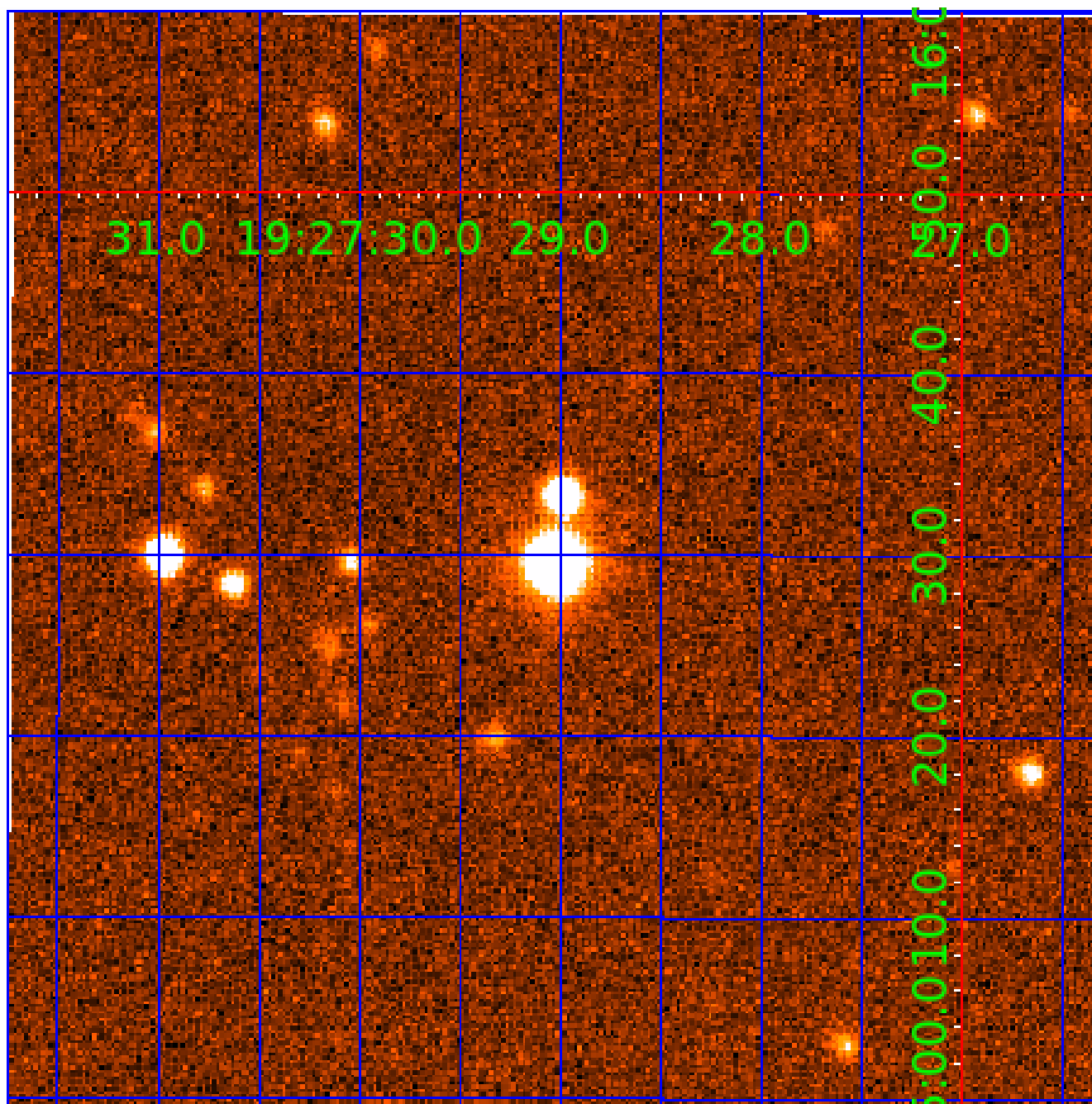
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 006777538

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})
006777538-01	OBS	No	0.526731	131.599111	5.7	3.728	14.5	1.7	5.26	7055	1.58	0.00
006777538-02	OBS	No	44.260283	133.422797	936.5	3.613	15.1	14.7	5.26	7055	30.14	632.60
006777538-03	OBS	No	24.248735	138.159454	86.8	7.161	13.2	2.2	5.26	7055	5.04	1411.12
006777538-04	OBS	No	17.928323	138.897318	67.0	12.190	12.3	1.9	5.26	7055	4.67	2110.71
006777538-05	OBS	No	34.502910	149.769446	1108.7	0.583	13.5	8.1	5.26	7055	18.77	881.74
006777538-06	OBS	No	60.582034	187.125078	684.4	1.774	11.0	7.9	5.26	7055	14.36	416.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006777538-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006777538-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006777538-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006777538-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006777538-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV
006777538-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV

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

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

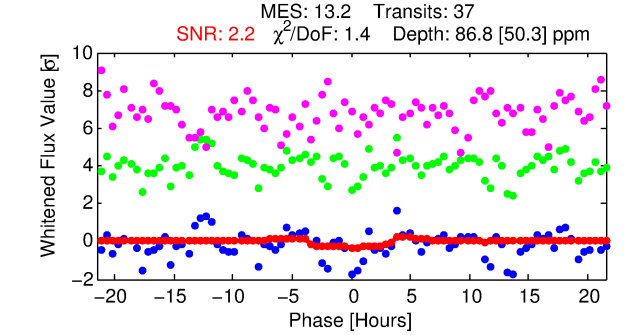
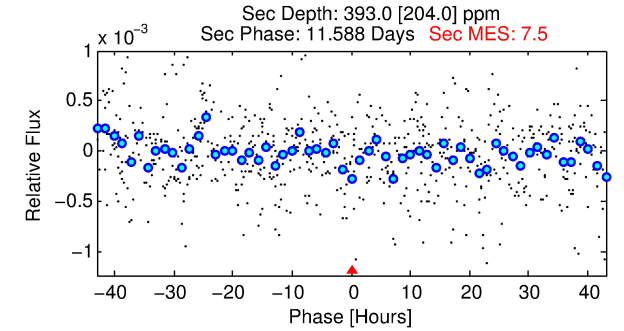
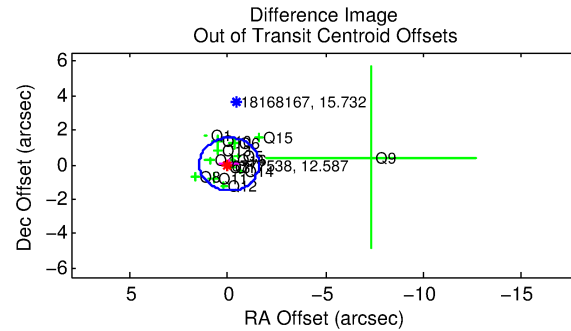
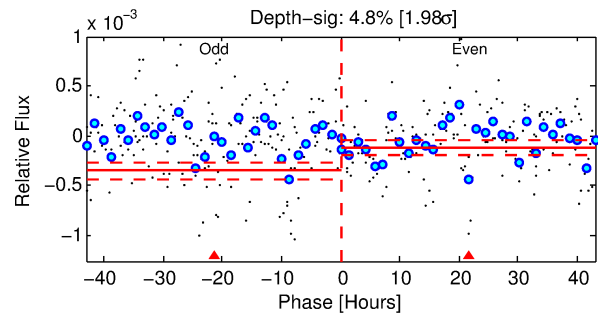
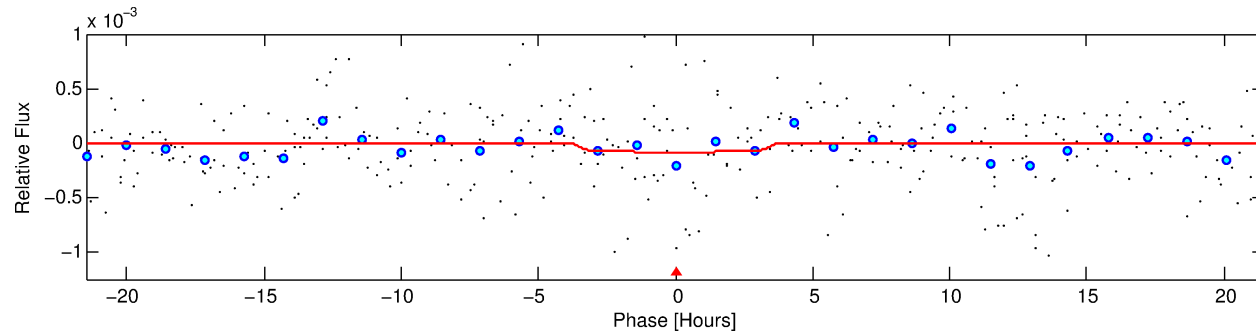
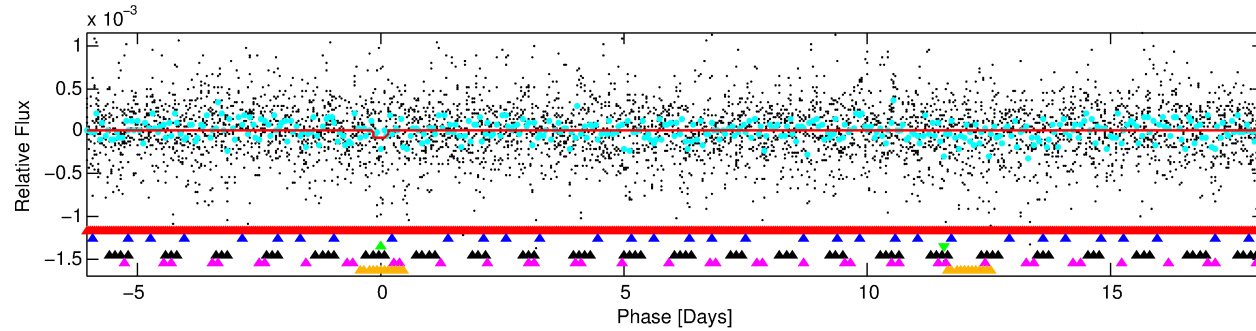
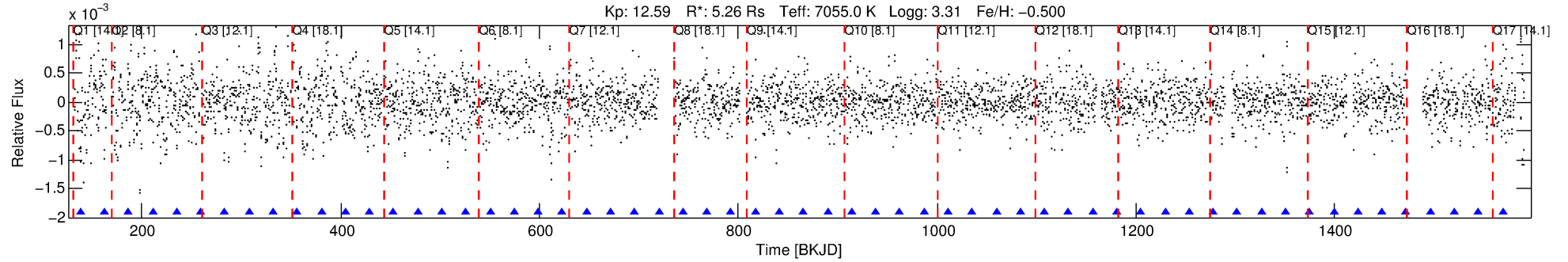
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006777538-03

No Significant Match Found

DV One-Page Summary

KIC: 6777538 Candidate: 3 of 6 Period: 24.249 d



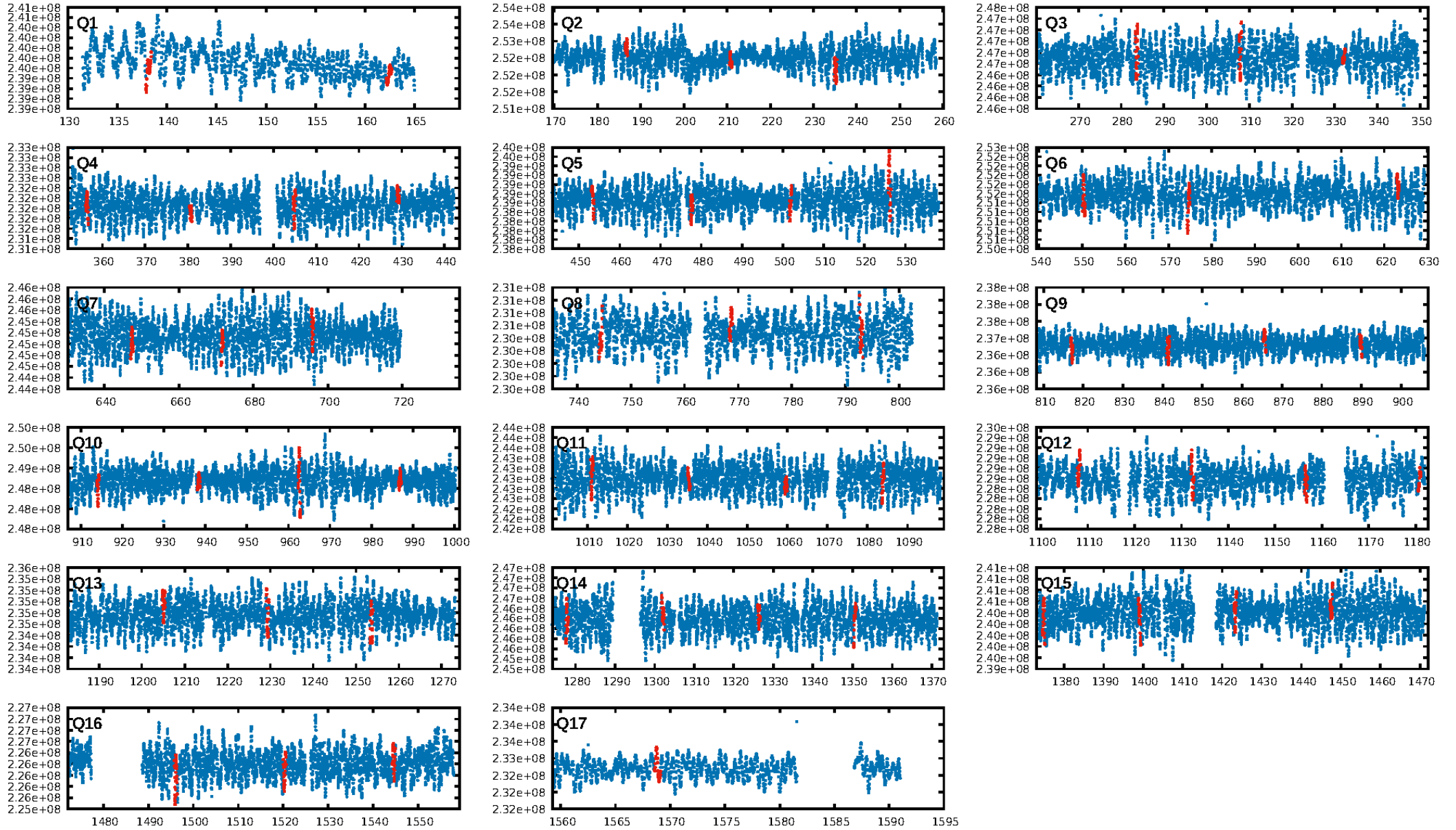
DV Fit Results:

Period = 24.24874 [0.00169] d
Epoch = 138.1595 [0.0560] BKJD
Rp/R* = 0.0088 [0.0211]
a/R* = 23.77 [326.34]
b = 0.42 [27.40]
Seff = 1411.12 [1114.21]
Teff = 1563 [309] K
Rp = 5.04 [12.39] Re
a = 0.2088 [0.1009] AU
Ag = 371.03 [1819.87] [0.20 σ]
Teffp = 10605 [12844] K [0.70 σ]

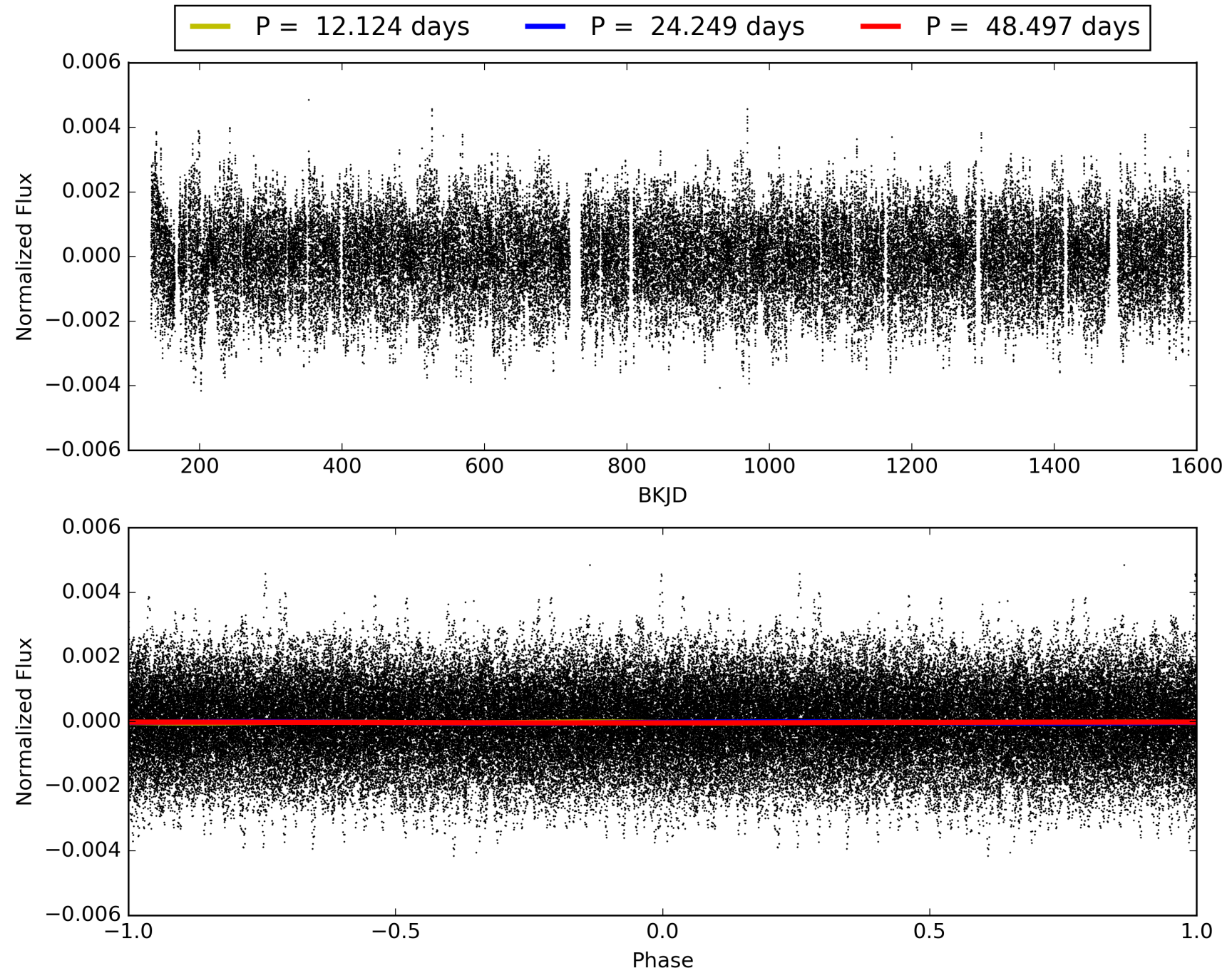
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [10.73 σ]
LongPeriod-sig: 100.0% [34.25 σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.36e-27
RollingBand-fgt: 1.00 [34/34]
GhostDiagnostic-chr: 0.609
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.080 arcsec [0.16 σ]
KicOffset-rm: 0.151 arcsec [0.38 σ]
OotOffset-st: 3/3/4/5 [15]
KicOffset-st: 3/3/4/5 [15]
DiffImageQuality-fgm: 0.53 [8/15]
DiffImageOverlap-fno: 0.00 [0/17]

TCE 006777538-03, PDC Light Curves

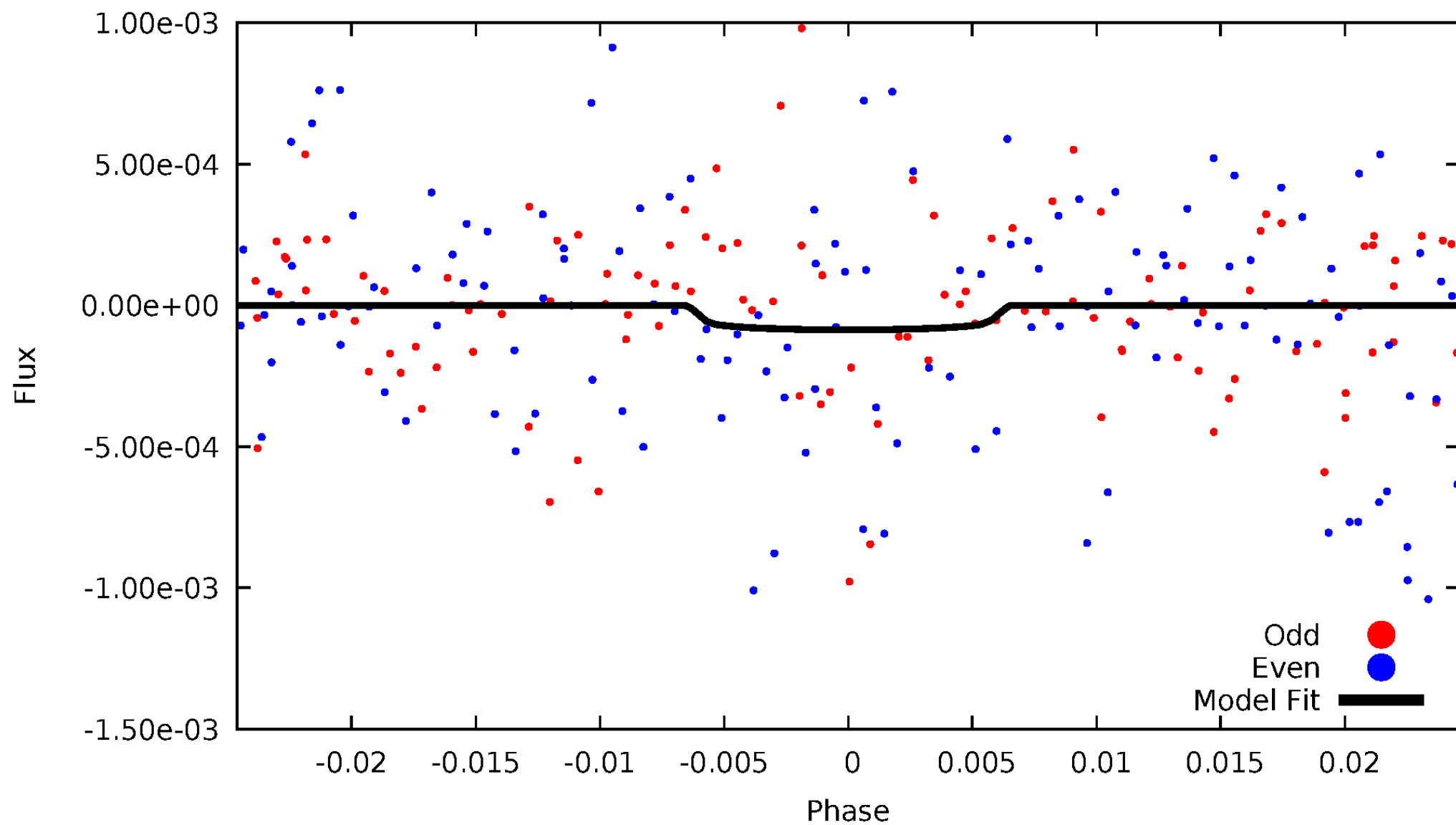


TCE 006777538-03



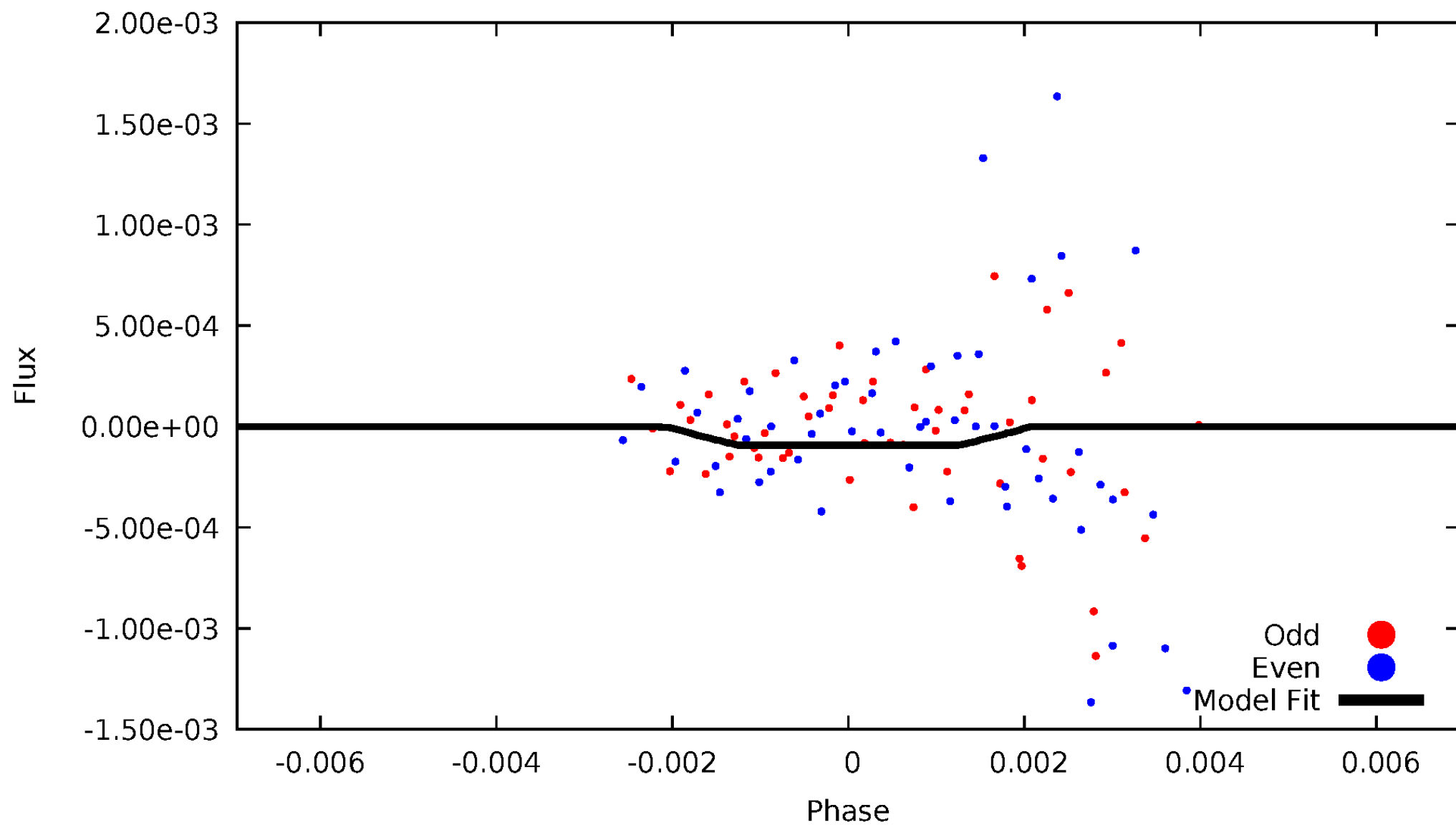
DV Odd/Even

TCE 006777538-03



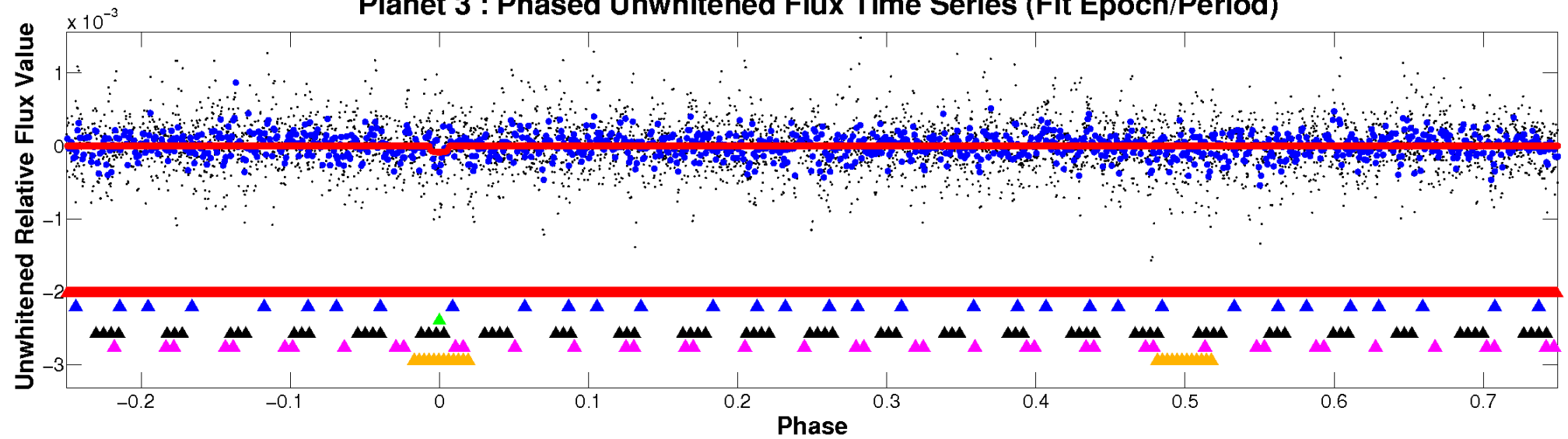
ALT Odd/Even

TCE 006777538-03

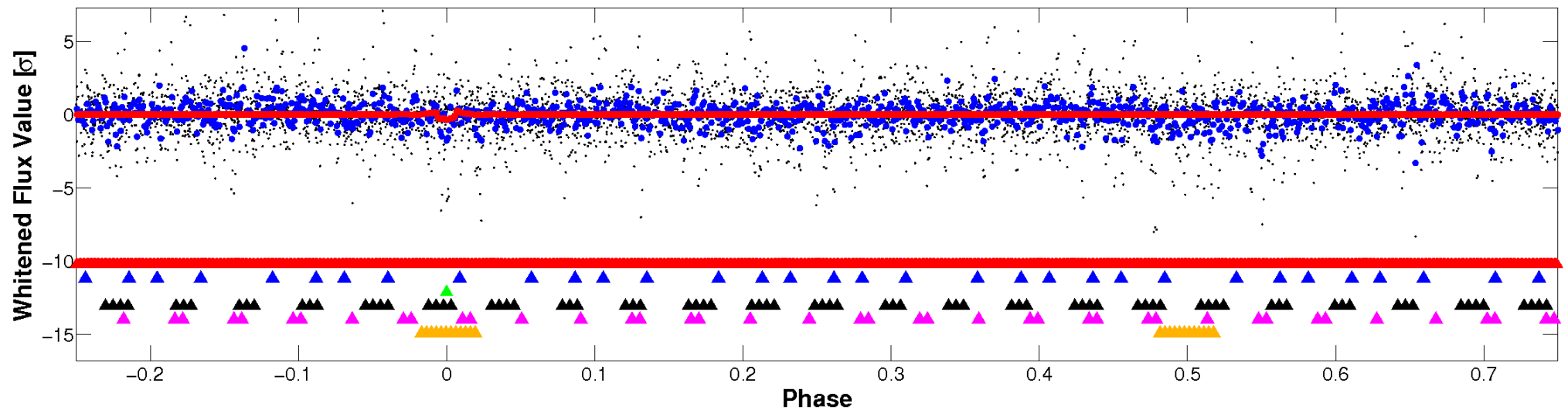


Non-Whitened Vs. Whitened Light Curve

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

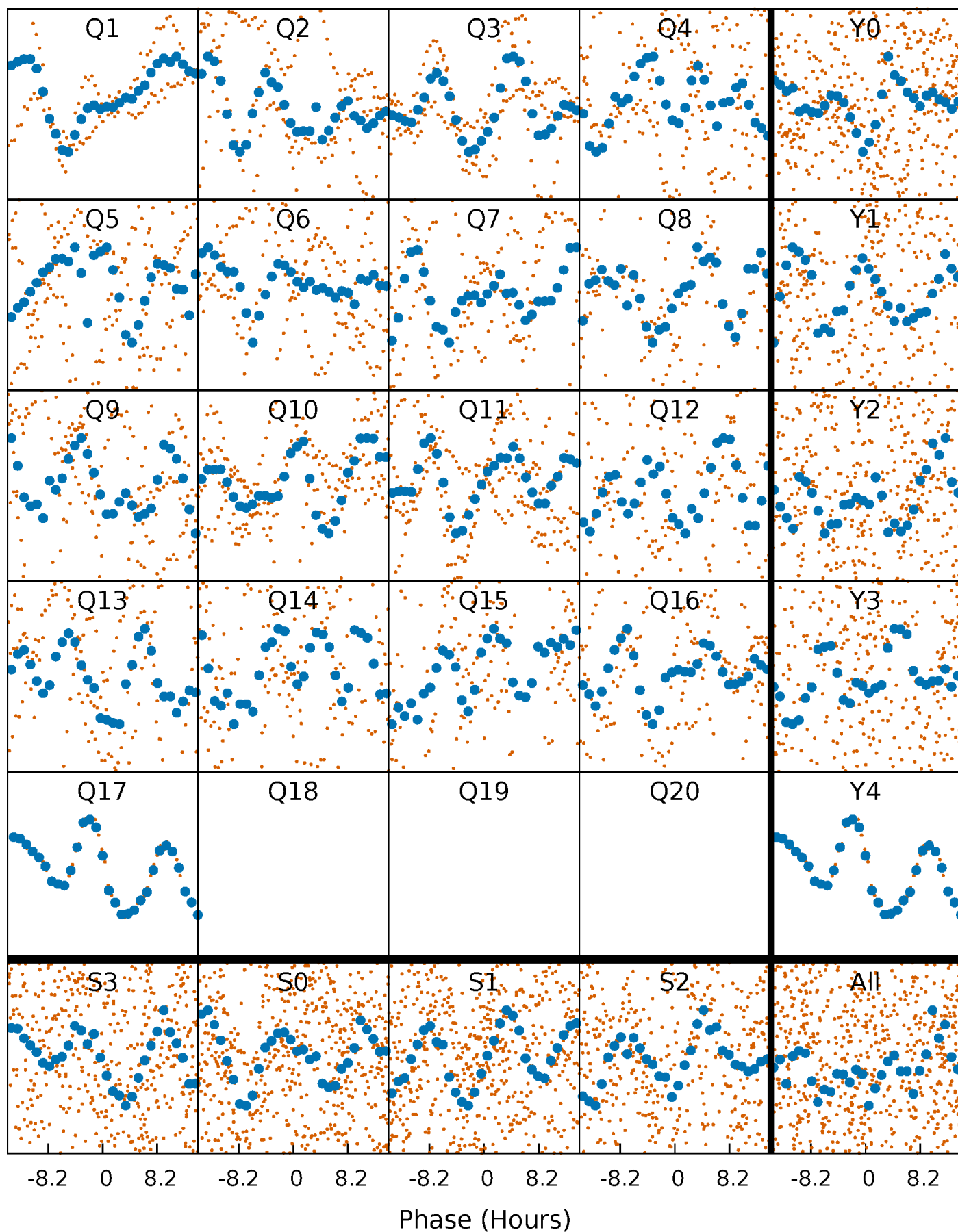


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



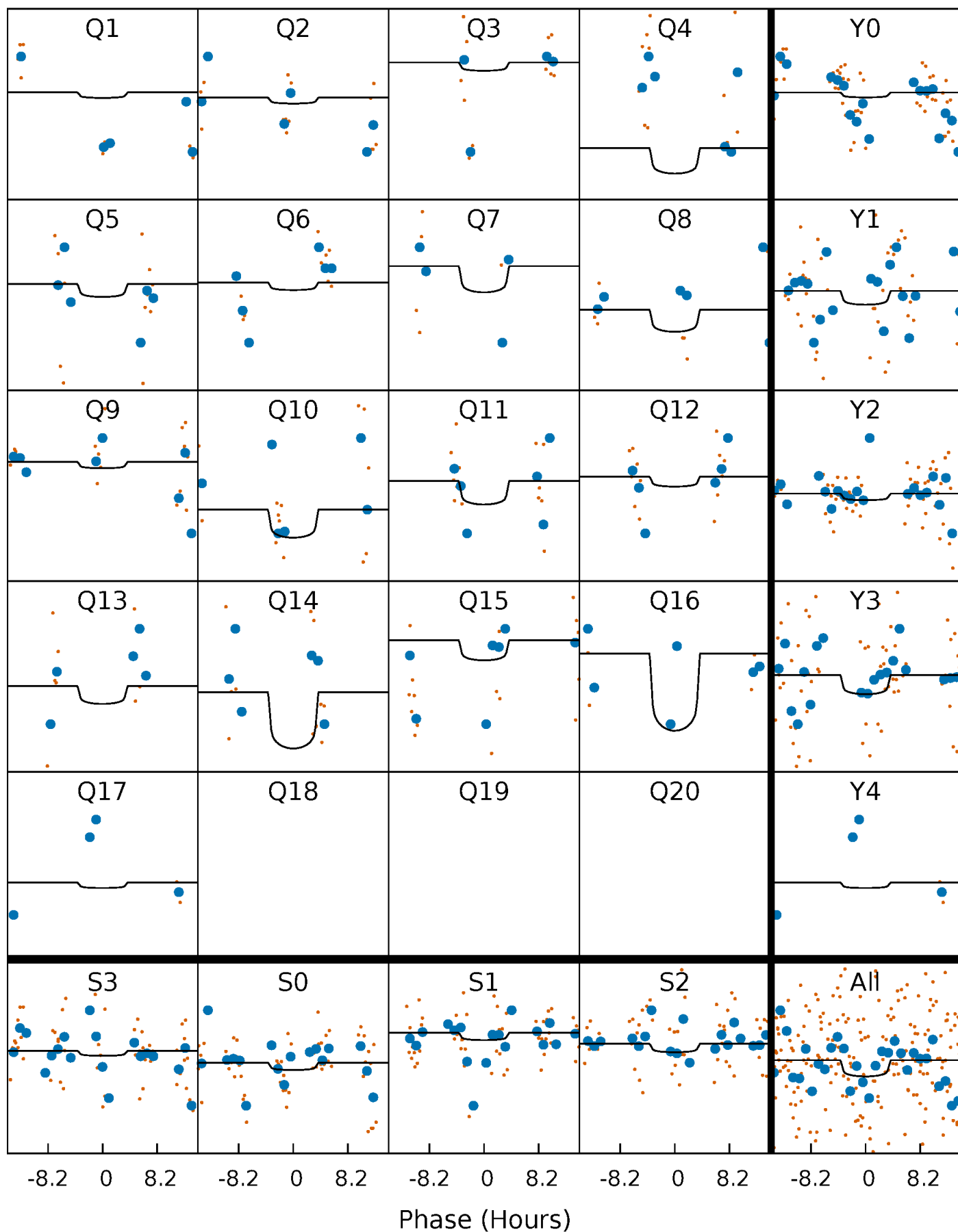
PDC Quarter-Phased Transit Curves

TCE 006777538-03 P= 24.248735 Days $T_0=138.159454$ (BKJD)



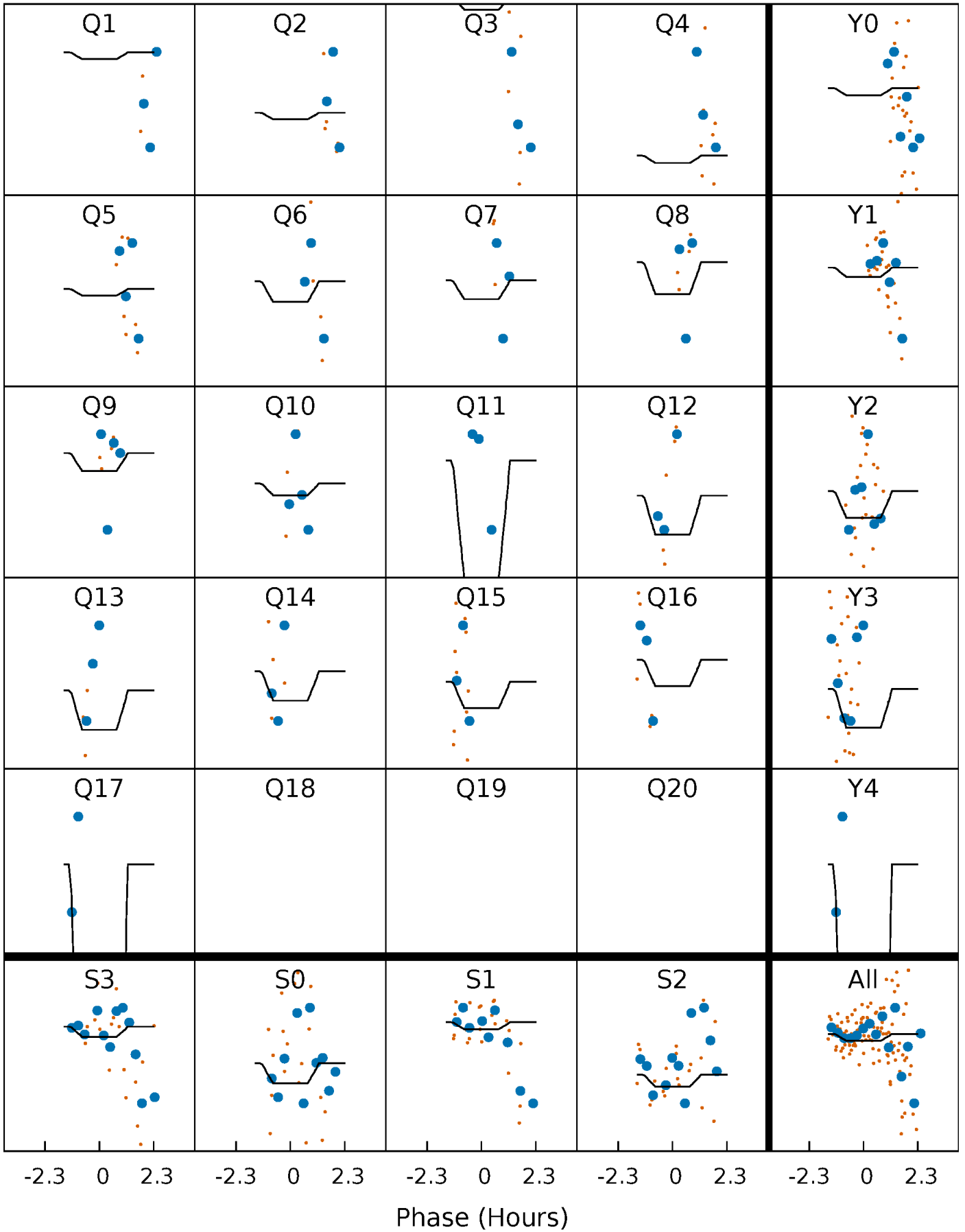
DV Quarter-Phased Transit Curves

TCE 006777538-03 P= 24.248735 Days $T_0=138.159454$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

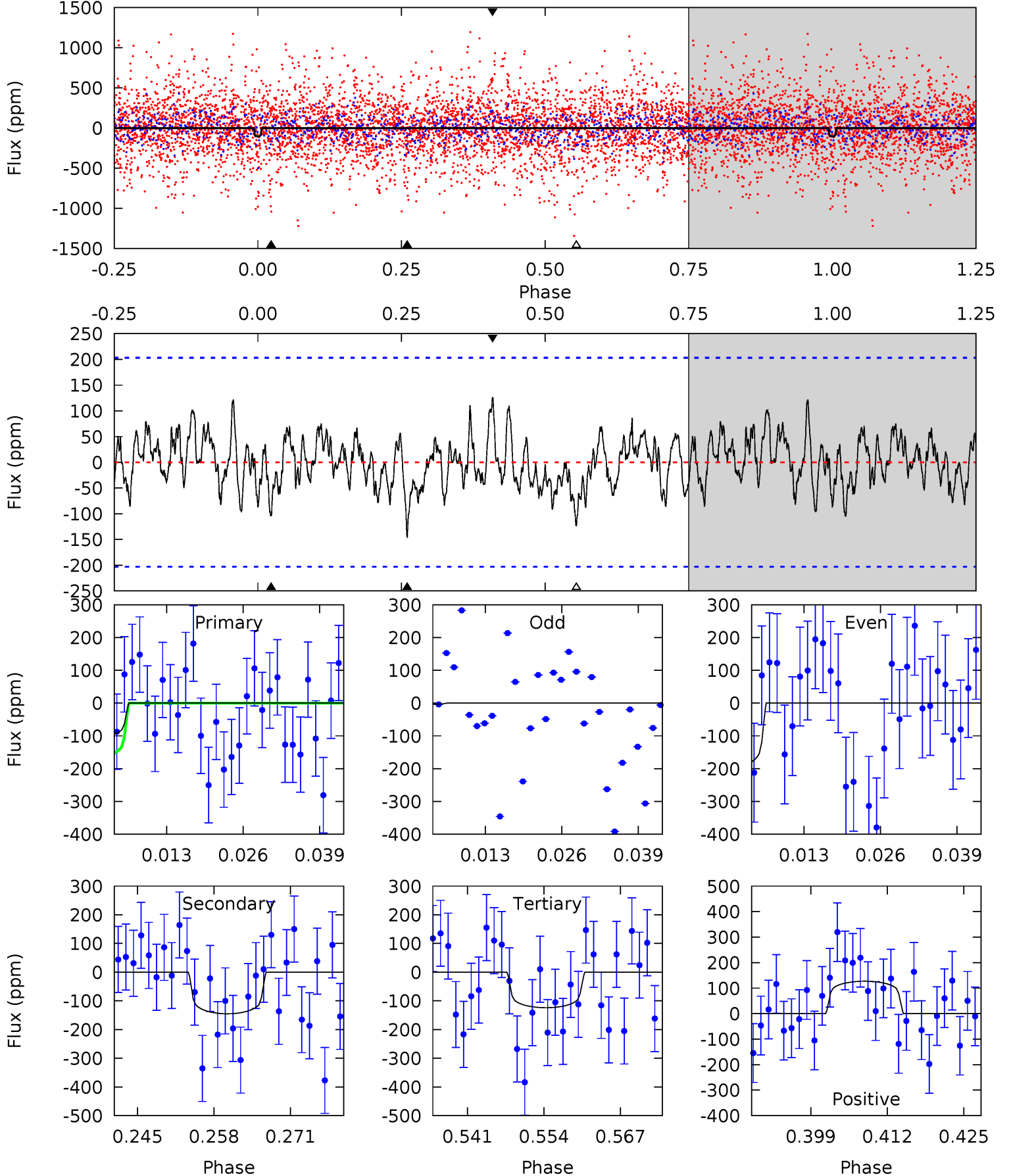
TCE 006777538-03 P= 24.231851 Days $T_0=138.101263$ (BKJD)



DV Model-Shift Uniqueness Test

006777538-03, P = 24.248735 Days, E = 113.910719 Days

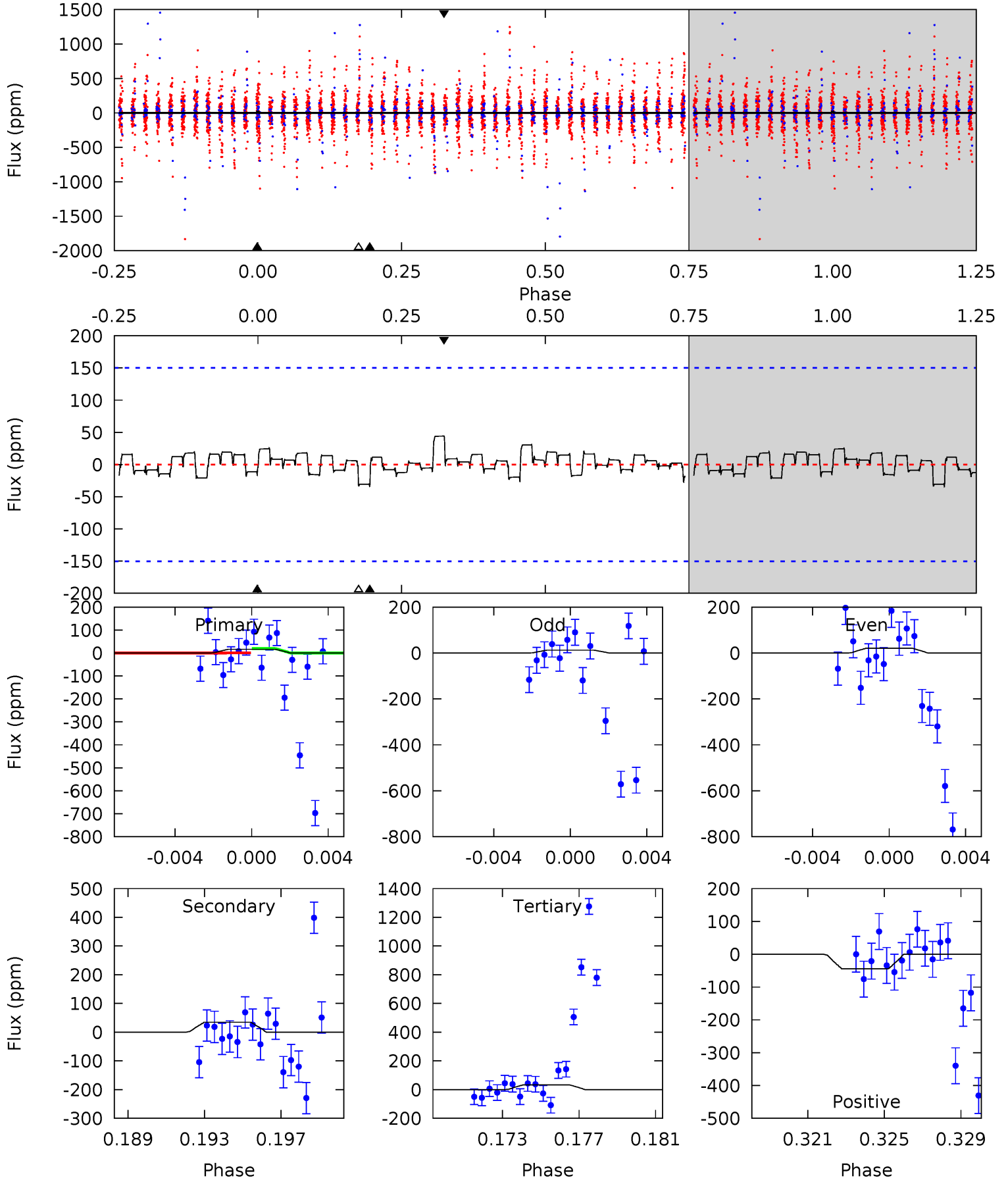
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.56	3.56	3.04	3.12	4.98	2.49	1.08	-0.47	-0.55	0.52	0.44	2.39	0.75	0.47	1.49



Alt Model-Shift Uniqueness Test

006777538-03, P = 24.231851 Days, E = 113.869412 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.56	1.20	1.13	1.54	5.19	2.87	0.40	-0.57	-0.97	0.06	-0.34	0.13	0	0.56	0.35



Stellar Parameters For KIC 006777538

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7055^{+190}_{-233}	$3.310^{+0.459}_{-0.081}$	$-0.500^{+0.350}_{-0.300}$	$5.265^{+1.120}_{-2.614}$	$2.063^{+0.059}_{-0.558}$	$0.020^{+0.094}_{-0.007}$
	+3%/-3%	+14%/-2%	+70%/-60%	+21%/-50%	+3%/-27%	+473%/-33%
Source	PHO1	FLK73	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 006777538-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-145 ± 41	$8.37^{+9.08}_{-5.46}$	2072^{+182}_{-253}	5709^{+5283}_{-1469}	44^{+369}_{-33}
Alt.	-35 ± 29	$9.05^{+9.17}_{-6.01}$	2092^{+162}_{-260}	3939^{+2455}_{-1316}	$7.149^{+65.717}_{-6.412}$

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 $A_{obs} \gg 1.0$

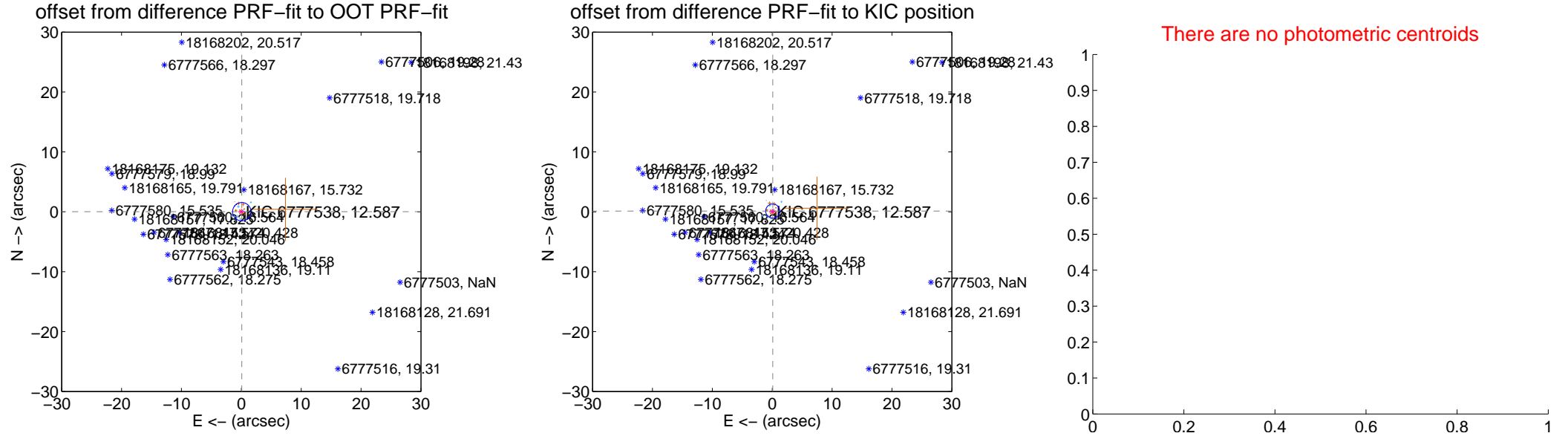
DV Centroid Data

Supplemental centroid analysis for 006777538-03. Kepler magnitude: 12.59. Transit SNR 2.17

There are 8 quarters with good PRF difference image offsets

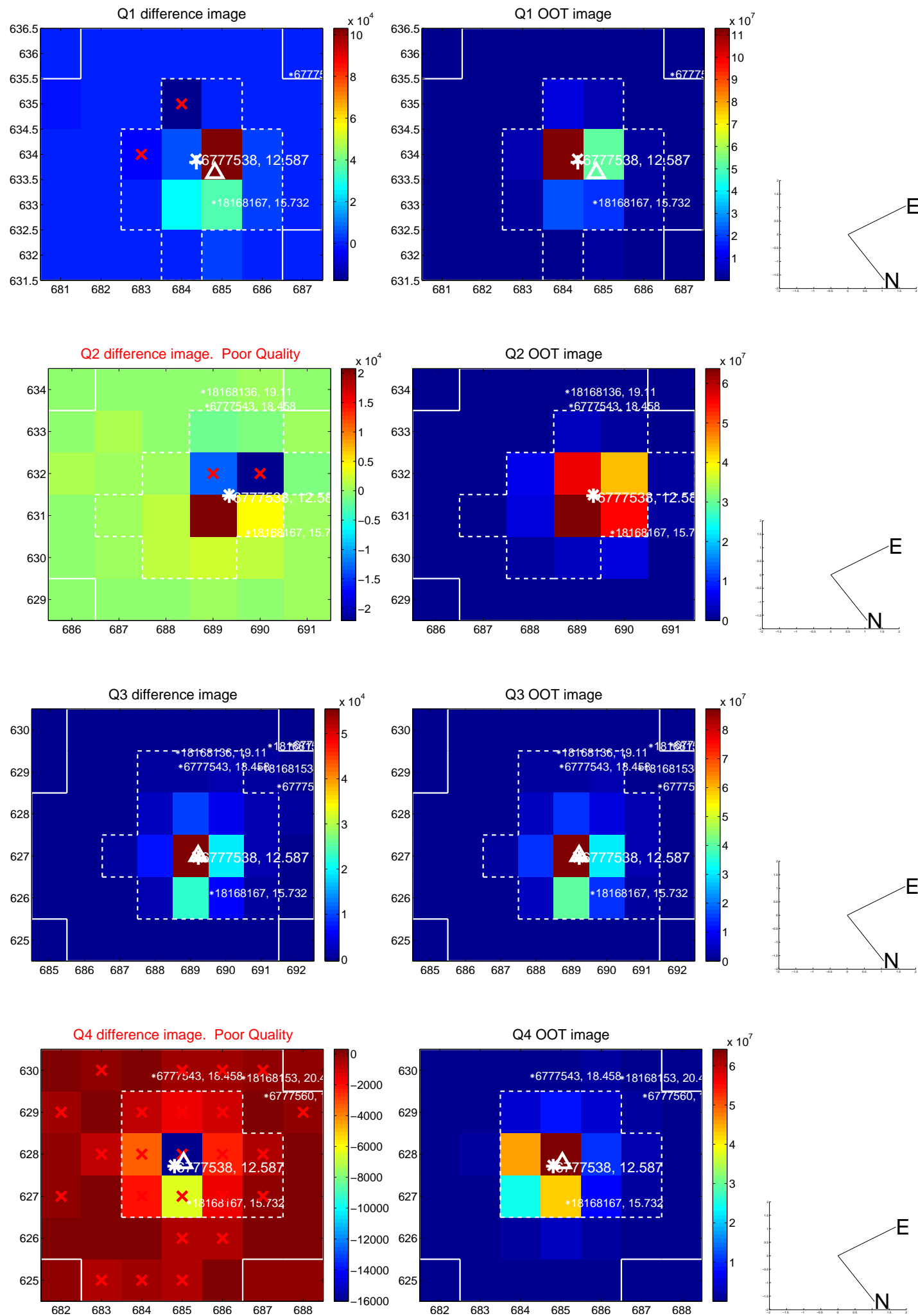
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.080 ± 0.511	0.16	-0.077 ± 0.517	0.022 ± 0.232
PRF-fit source offset from KIC position	0.151 ± 0.393	0.38	-0.087 ± 0.553	0.124 ± 0.233
photometric centroid source offset	—	—	—	—

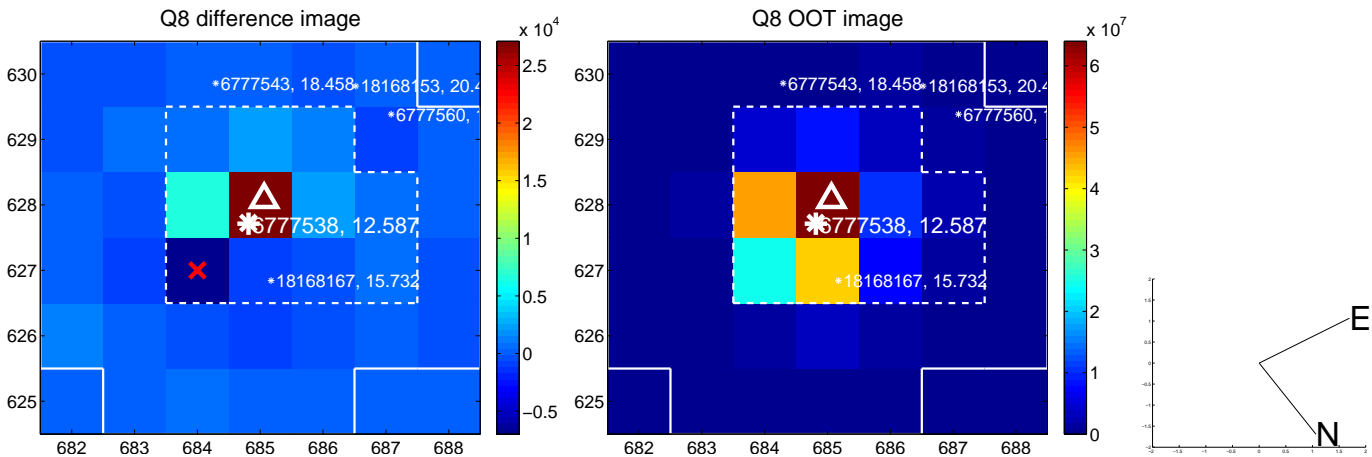
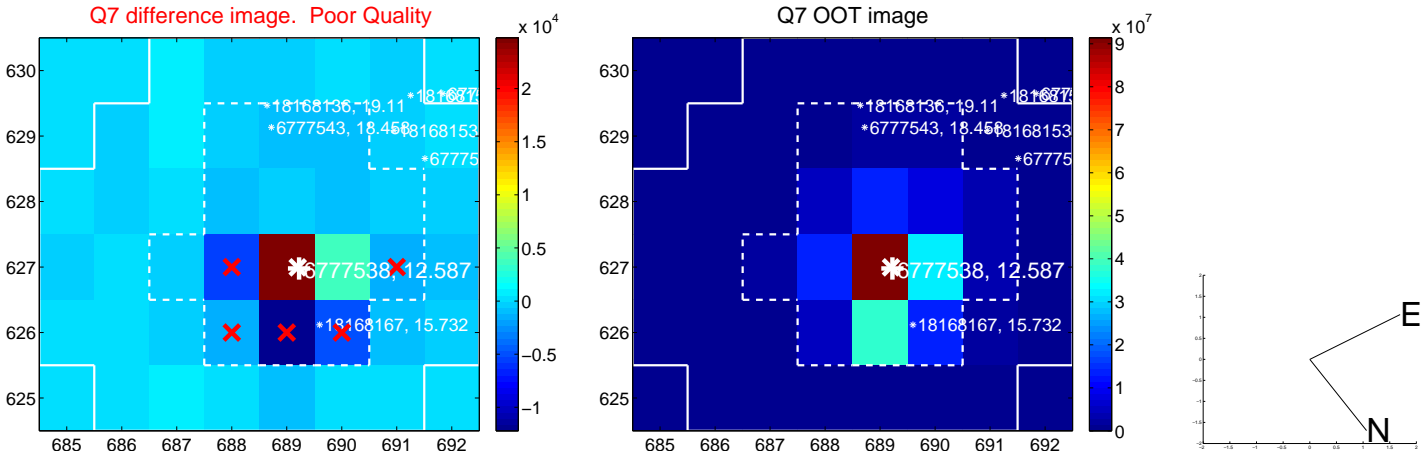
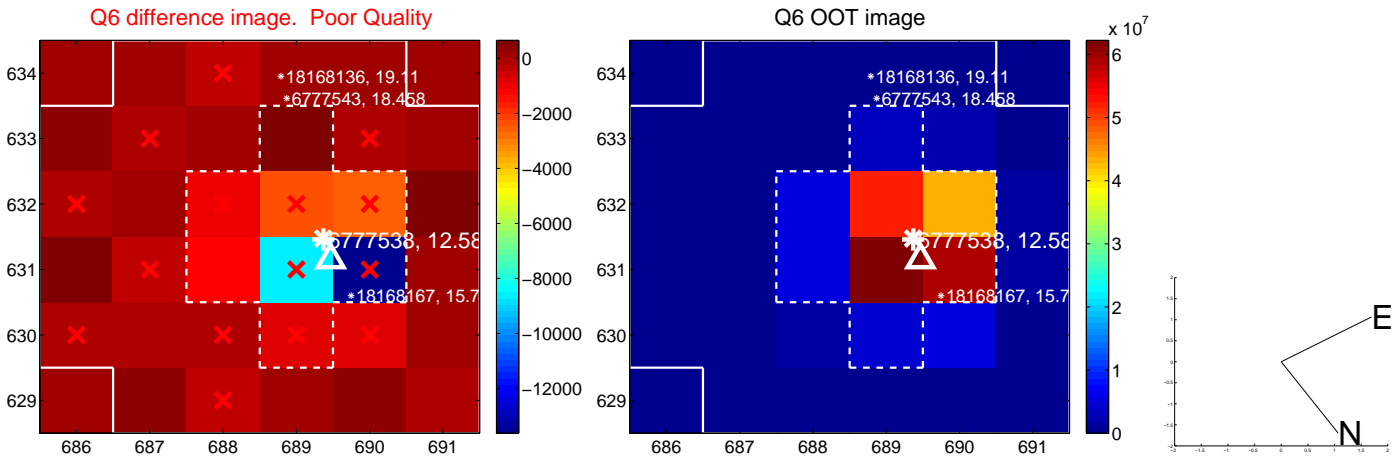
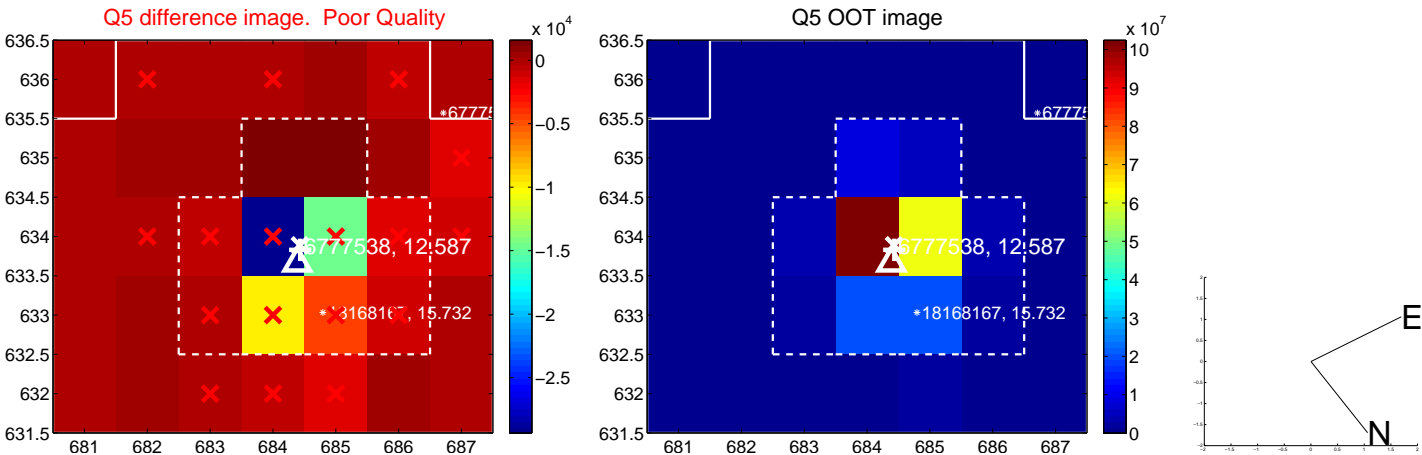


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

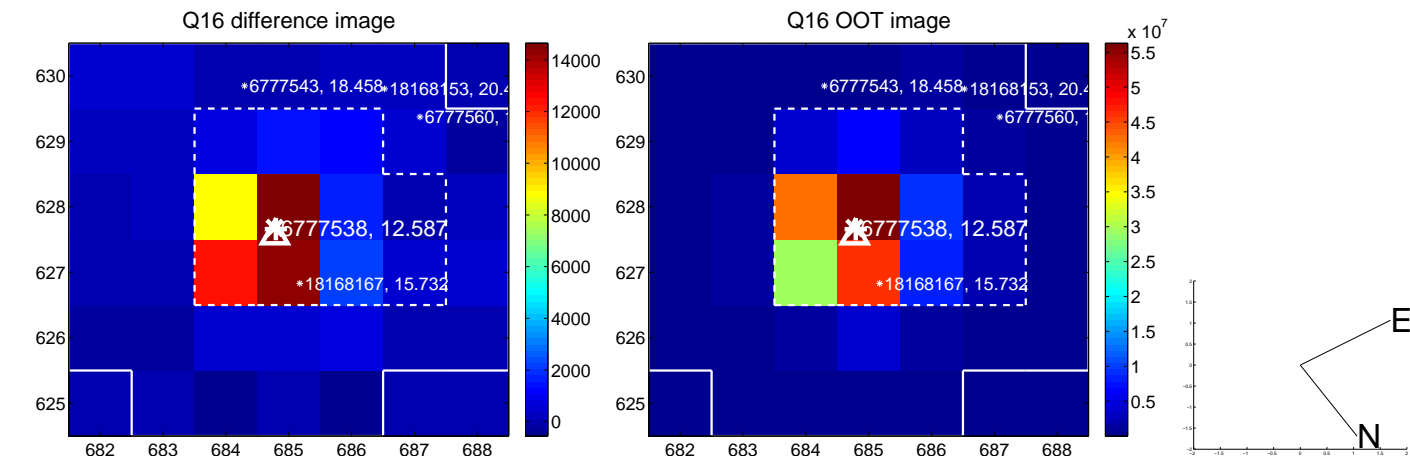
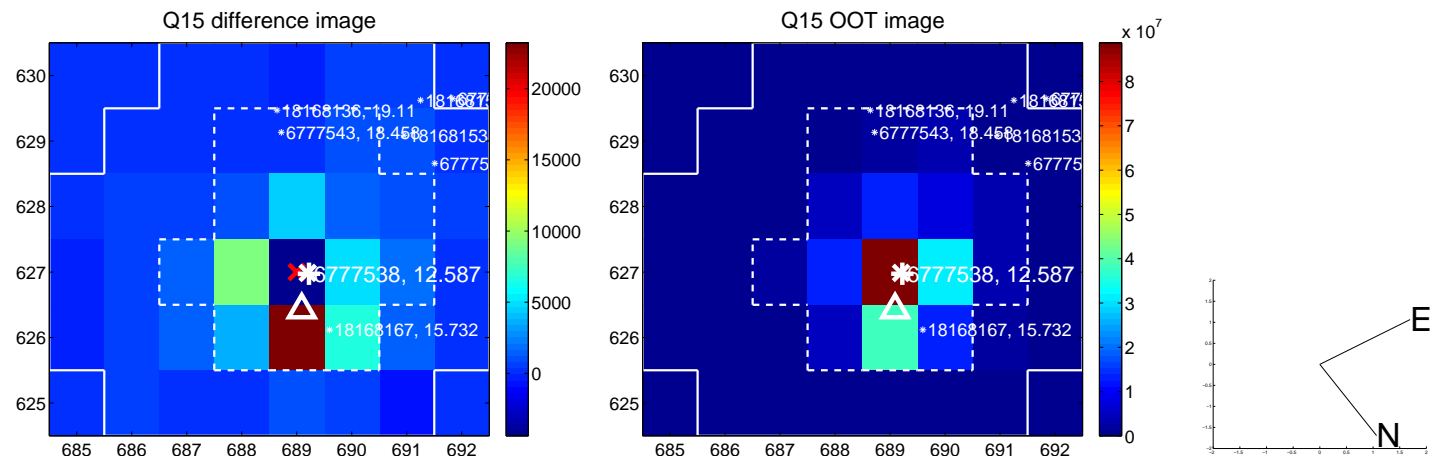
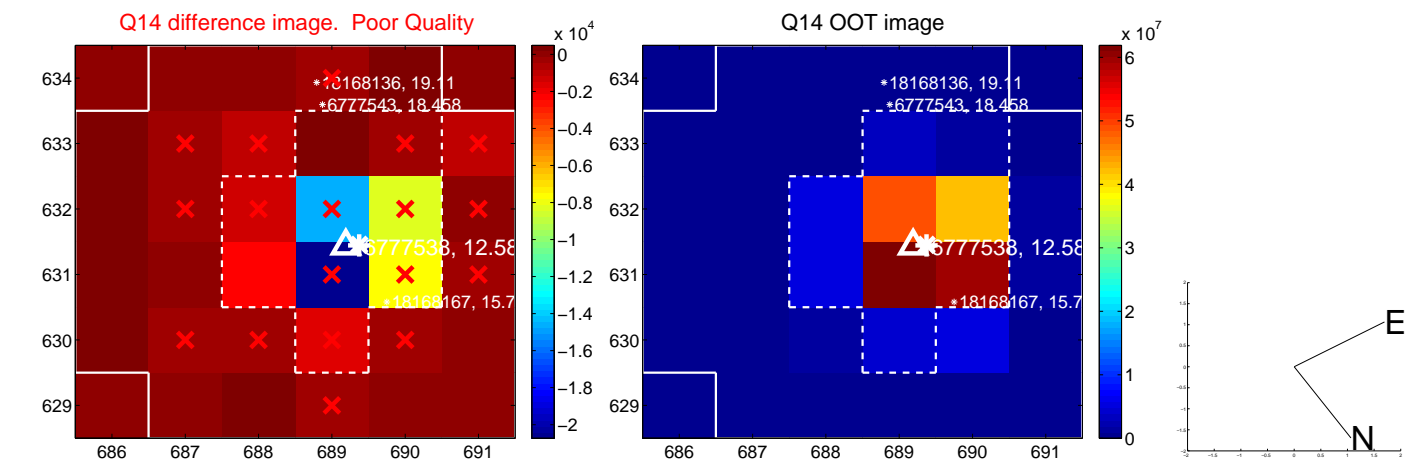
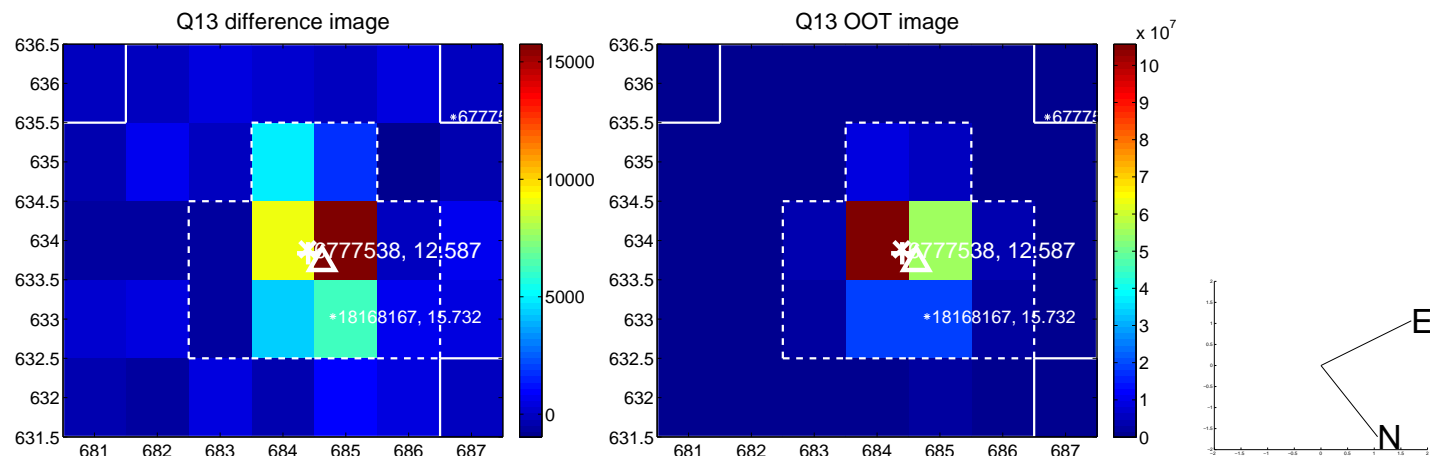
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



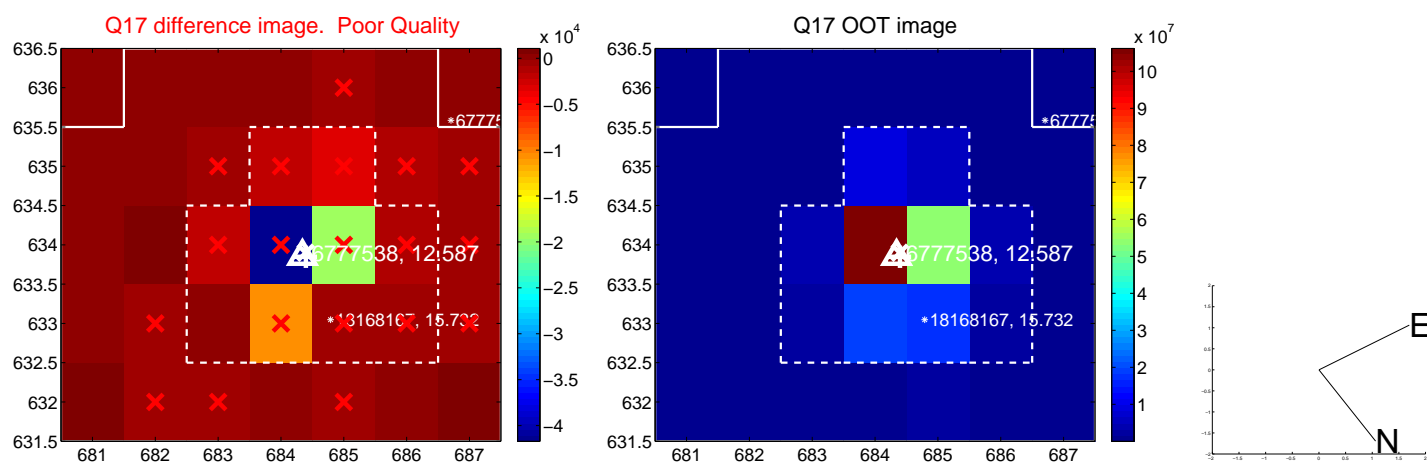
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

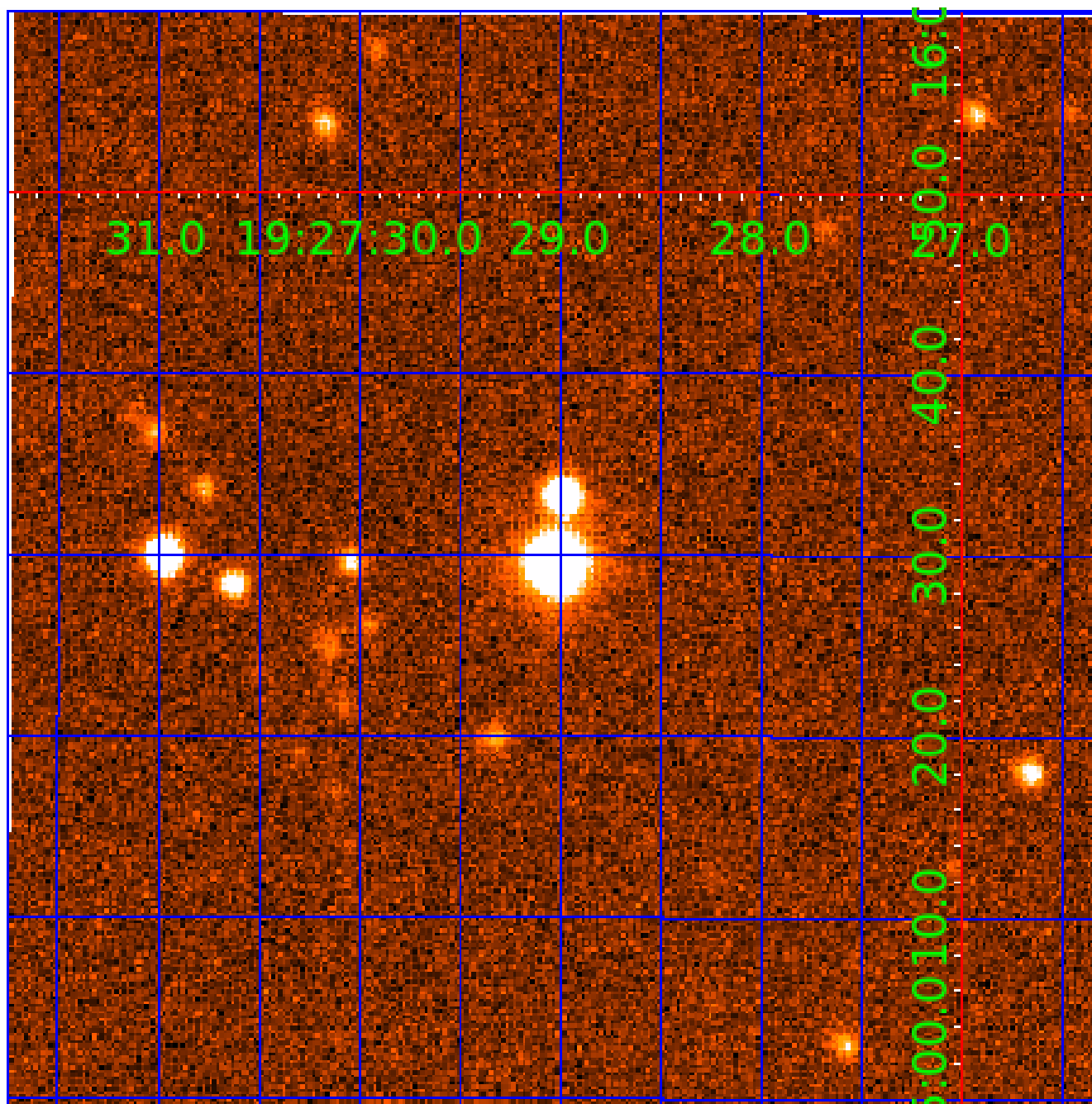


folded centroid time series figure for this object.



UKIRT Image

Declination



KIC 006777538

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})
006777538-01	OBS	No	0.526731	131.599111	5.7	3.728	14.5	1.7	5.26	7055	1.58	0.00
006777538-02	OBS	No	44.260283	133.422797	936.5	3.613	15.1	14.7	5.26	7055	30.14	632.60
006777538-03	OBS	No	24.248735	138.159454	86.8	7.161	13.2	2.2	5.26	7055	5.04	1411.12
006777538-04	OBS	No	17.928323	138.897318	67.0	12.190	12.3	1.9	5.26	7055	4.67	2110.71
006777538-05	OBS	No	34.502910	149.769446	1108.7	0.583	13.5	8.1	5.26	7055	18.77	881.74
006777538-06	OBS	No	60.582034	187.125078	684.4	1.774	11.0	7.9	5.26	7055	14.36	416.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006777538-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006777538-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006777538-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006777538-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006777538-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV
006777538-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV

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

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

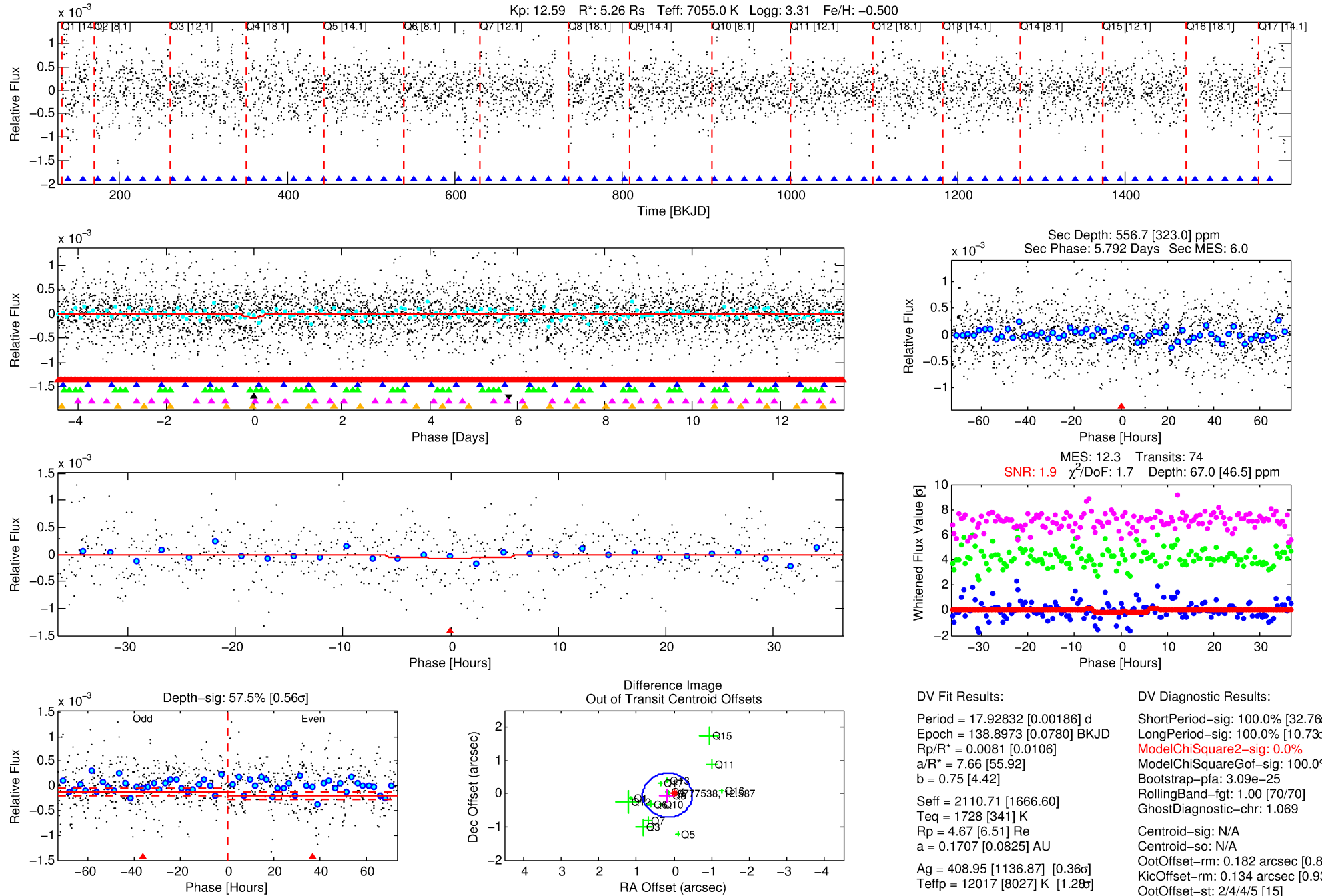
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006777538-04

No Significant Match Found

DV One-Page Summary

KIC: 6777538 Candidate: 4 of 6 Period: 17.928 d



DV Fit Results:

Period = 17.92832 [0.00186] d
Epoch = 138.8973 [0.0780] BKJD
Rp/R* = 0.0081 [0.0106]
a/R* = 7.66 [55.92]
b = 0.75 [4.42]
Seff = 2110.71 [1666.60]
Teff = 1728 [341] K
Rp = 4.67 [6.51] Re
a = 0.1707 [0.0825] AU
Ag = 408.95 [1136.87] [0.36 σ]
Teffp = 12017 [8027] K [1.28 σ]

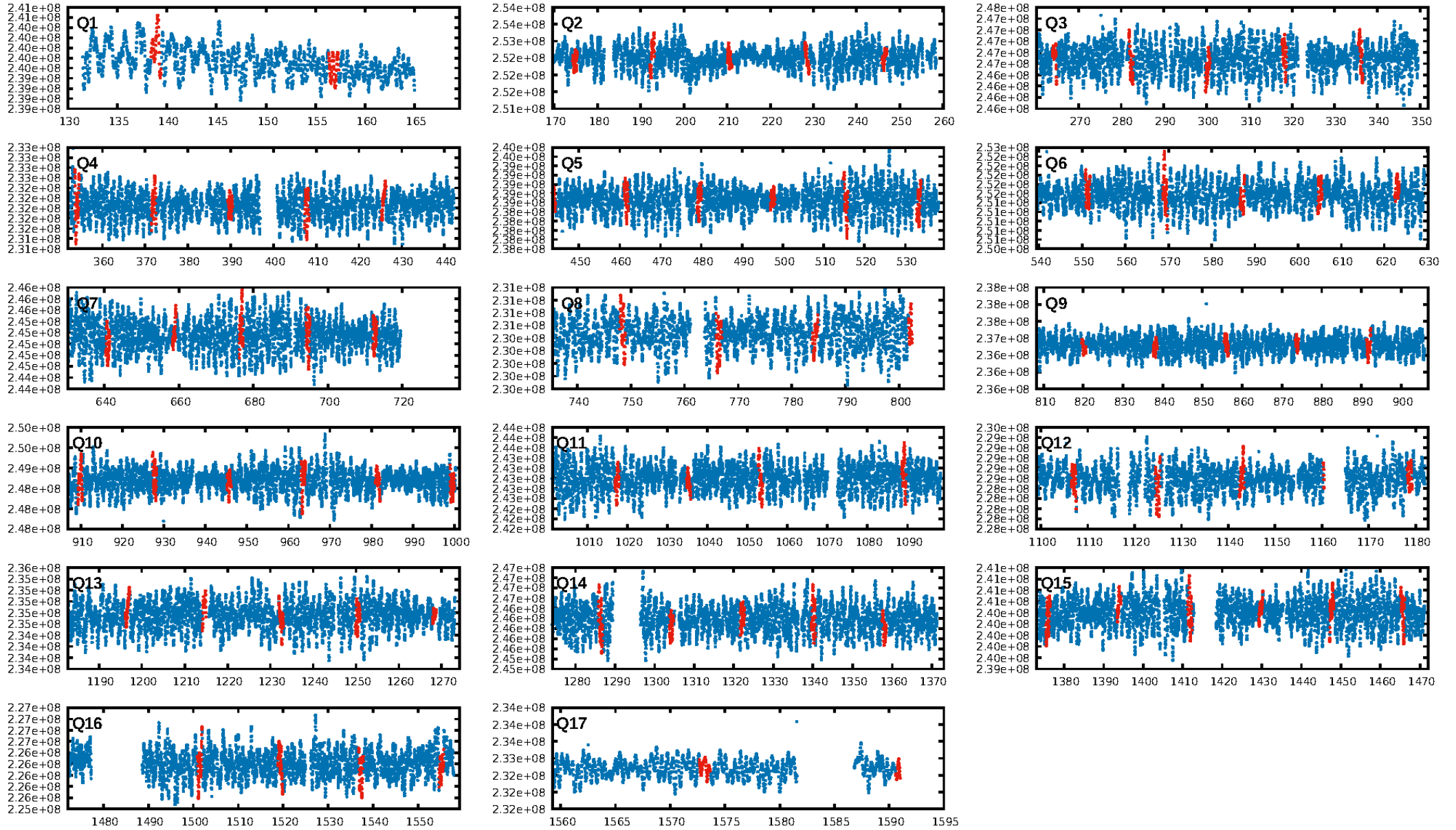
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [32.76 σ]
LongPeriod-sig: 100.0% [10.73 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.09e-25
RollingBand-fgt: 1.00 [70/70]
GhostDiagnostic-chr: 1.069
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.182 arcsec [0.83 σ]
KicOffset-rm: 0.134 arcsec [0.93 σ]
OotOffset-st: 2/4/4/5 [15]
KicOffset-st: 2/4/4/5 [15]
DiffImageQuality-fgm: 0.47 [7/15]
DiffImageOverlap-fno: 0.00 [0/17]

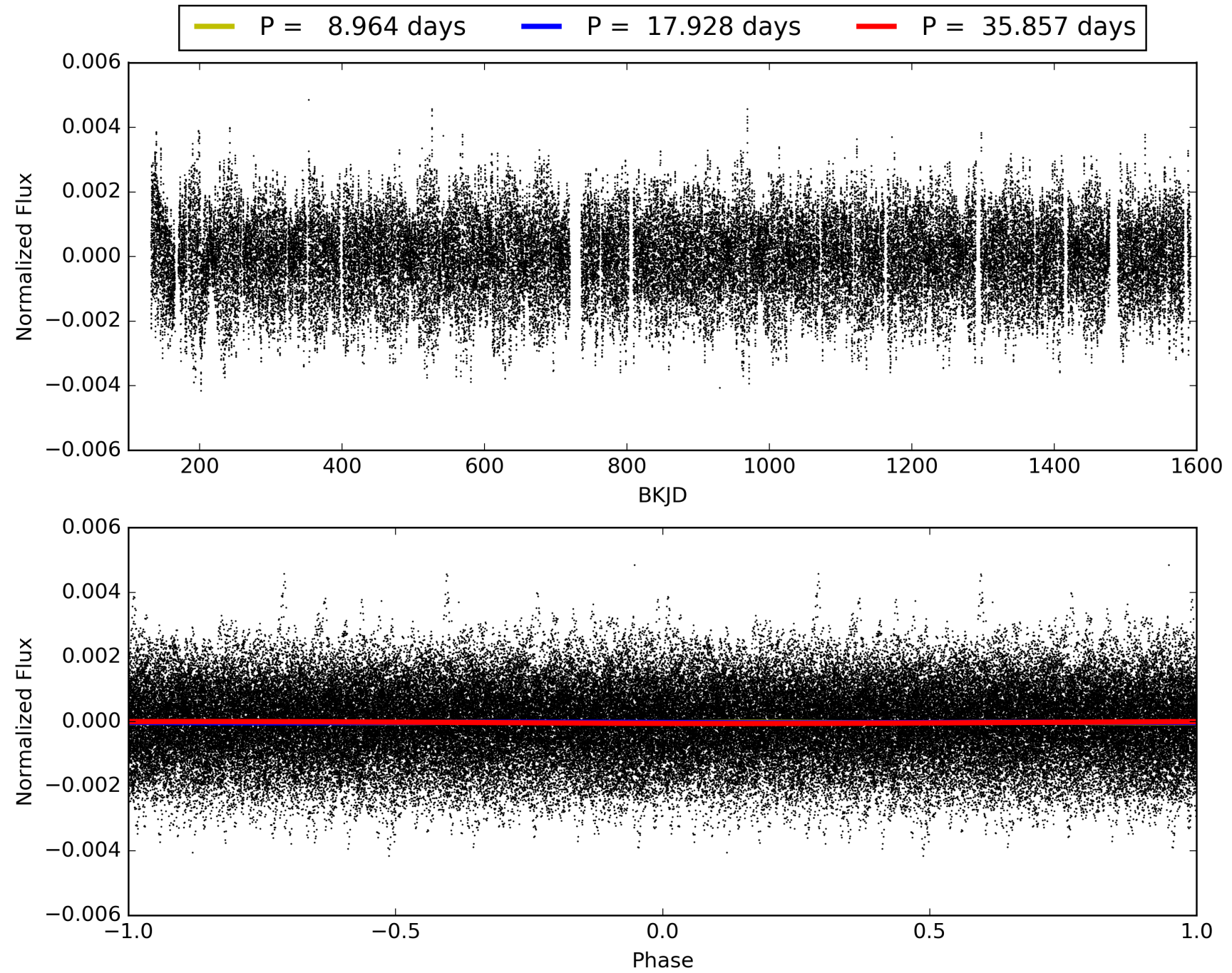
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:21:24 Z

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

TCE 006777538-04, PDC Light Curves

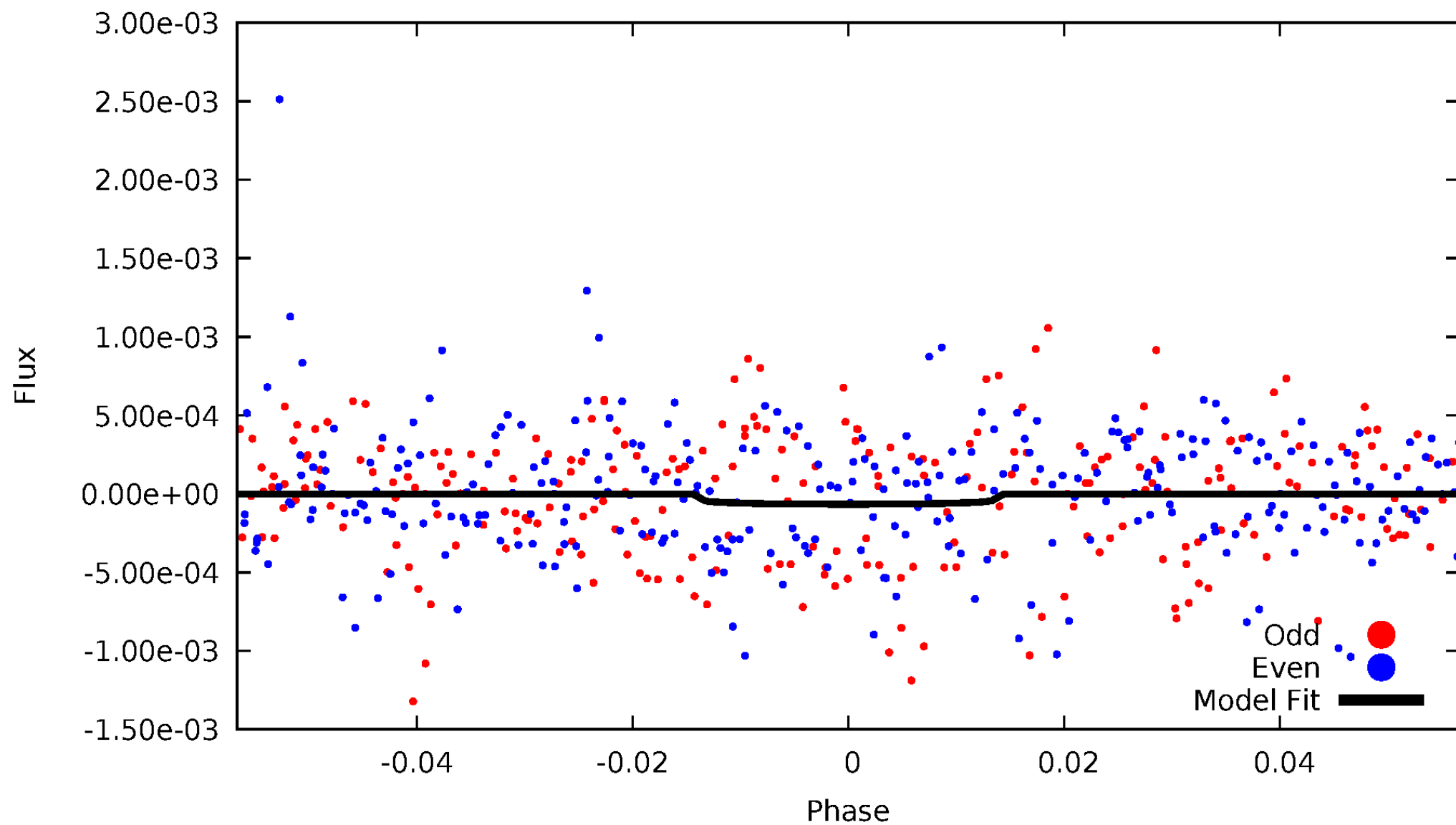


TCE 006777538-04



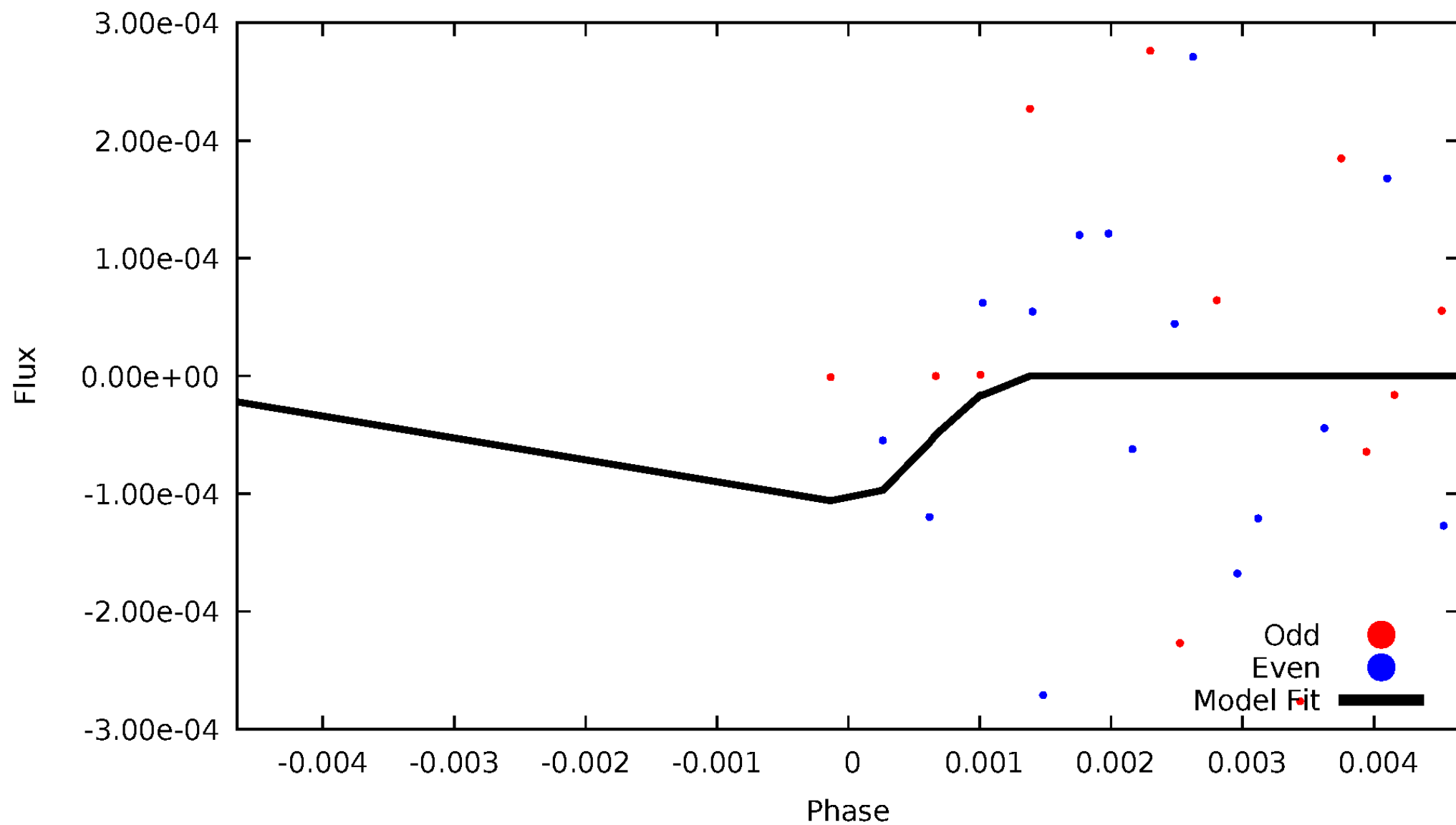
DV Odd/Even

TCE 006777538-04



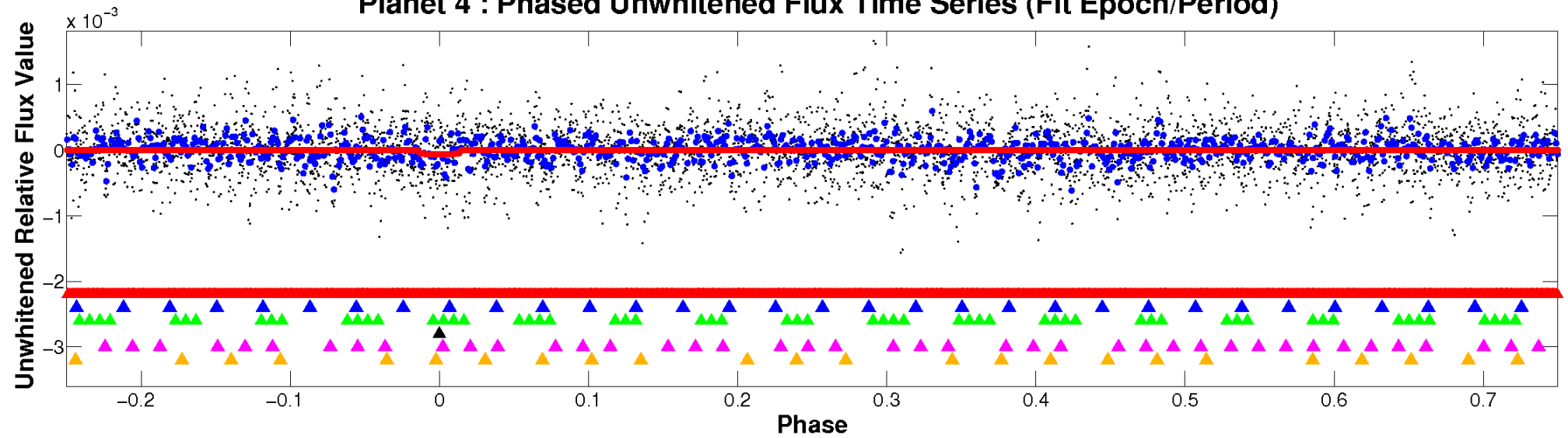
ALT Odd/Even

TCE 006777538-04

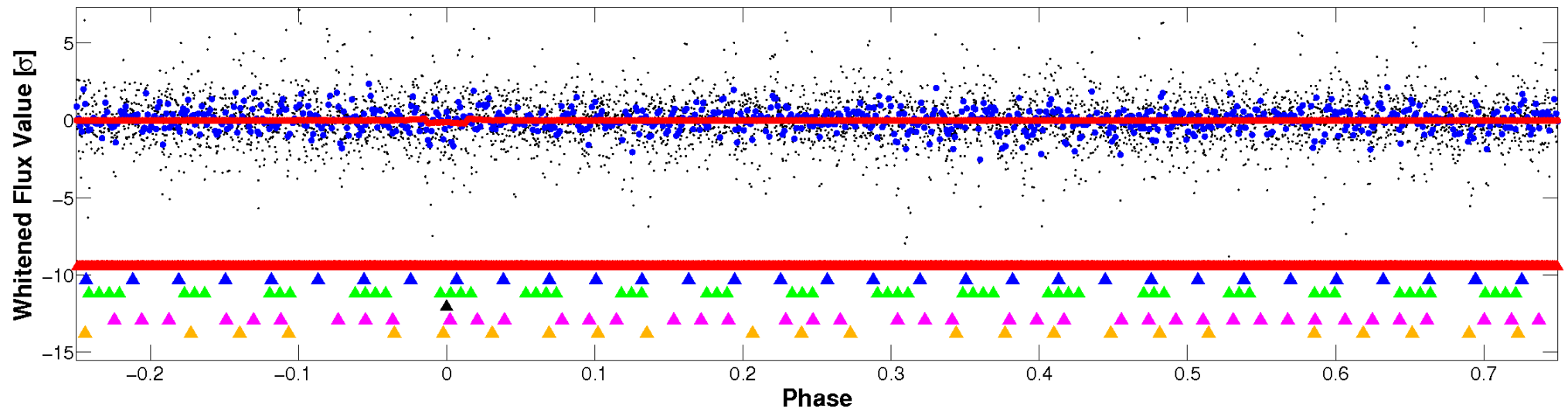


Non-Whitened Vs. Whitened Light Curve

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

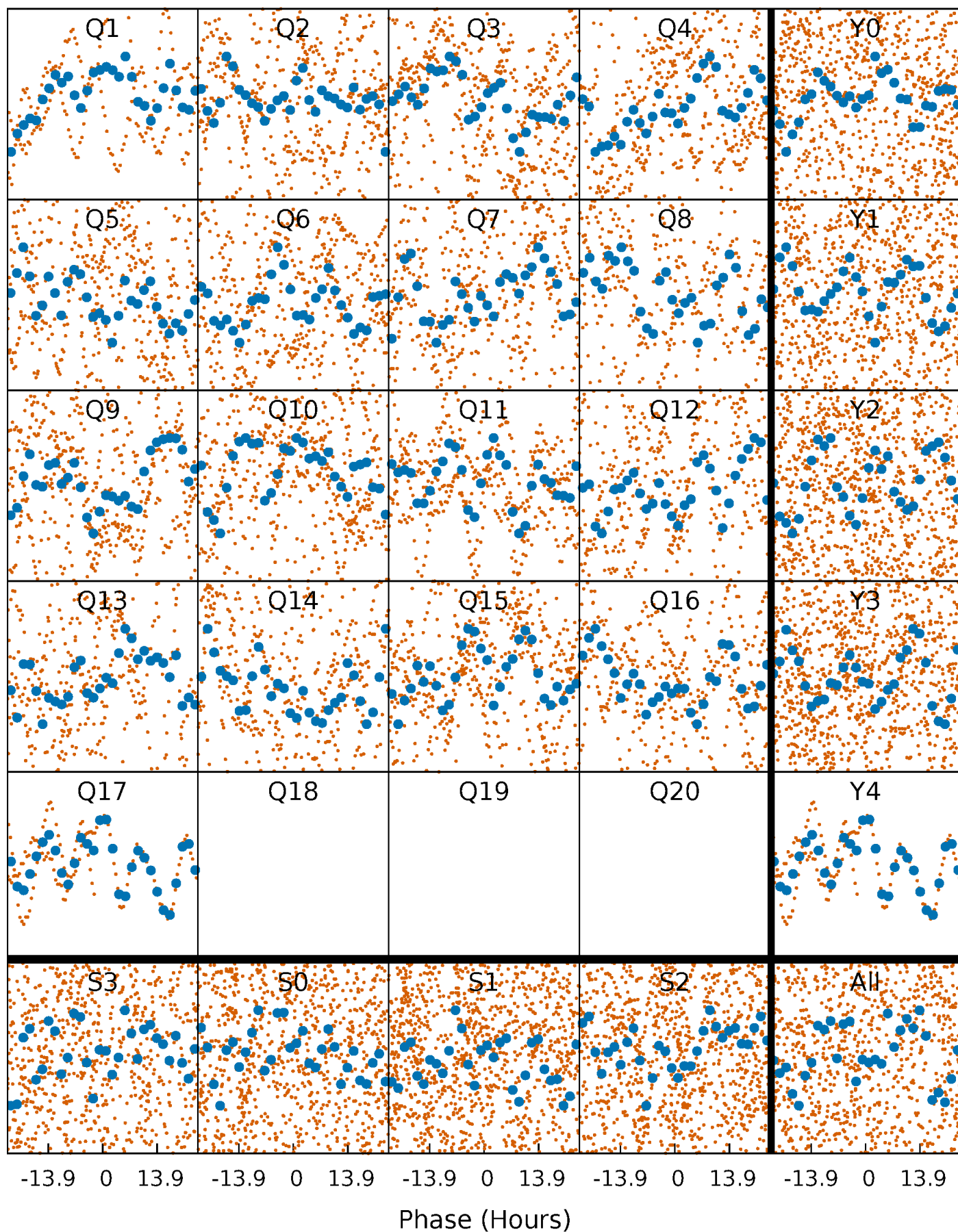


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



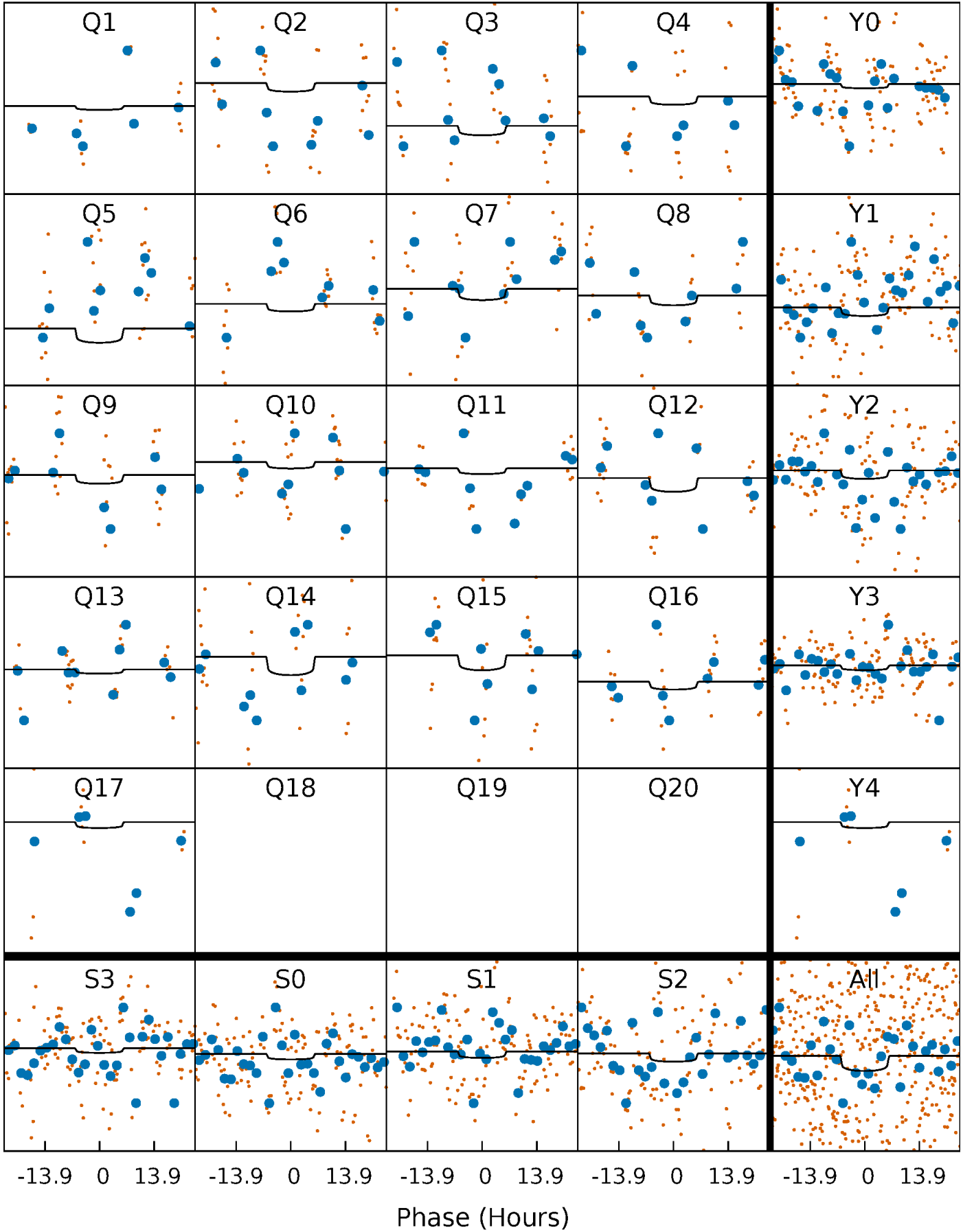
PDC Quarter-Phased Transit Curves

TCE 006777538-04 P= 17.928323 Days $T_0=138.897318$ (BKJD)



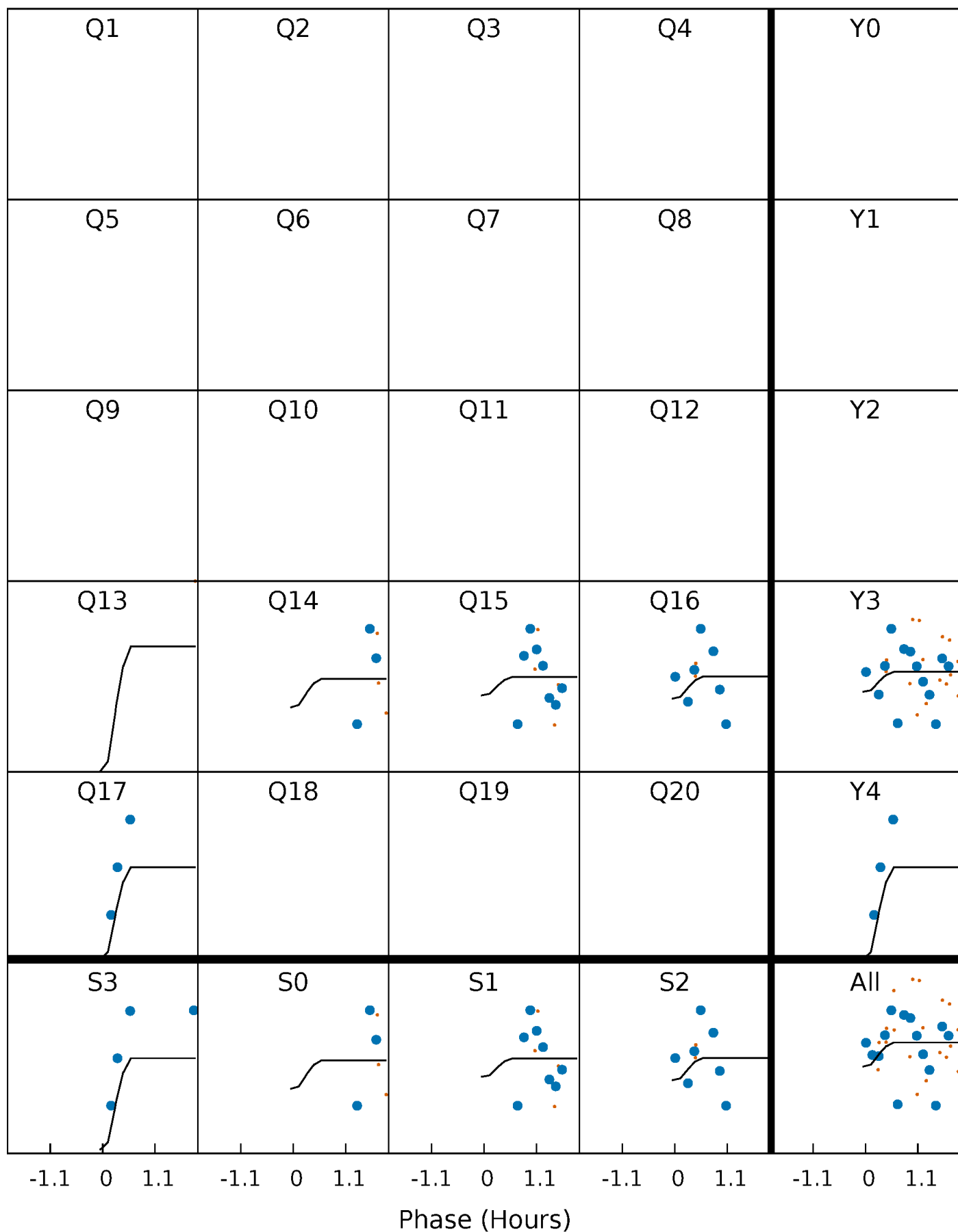
DV Quarter-Phased Transit Curves

TCE 006777538-04 P= 17.928323 Days $T_0=138.897318$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

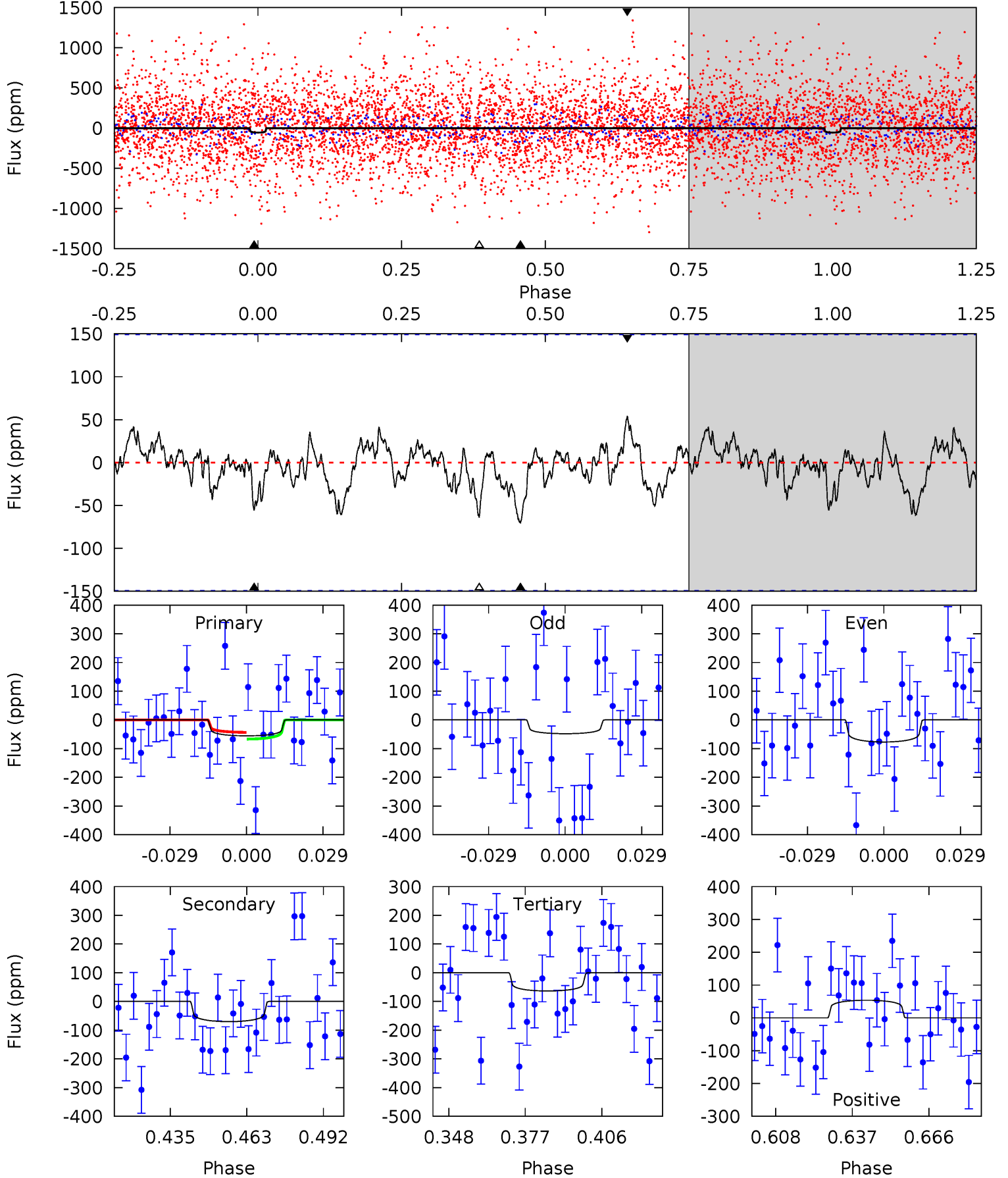
TCE 006777538-04 P= 17.913763 Days $T_0=138.830329$ (BKJD)



DV Model-Shift Uniqueness Test

006777538-04, P = 17.928323 Days, E = 120.968995 Days

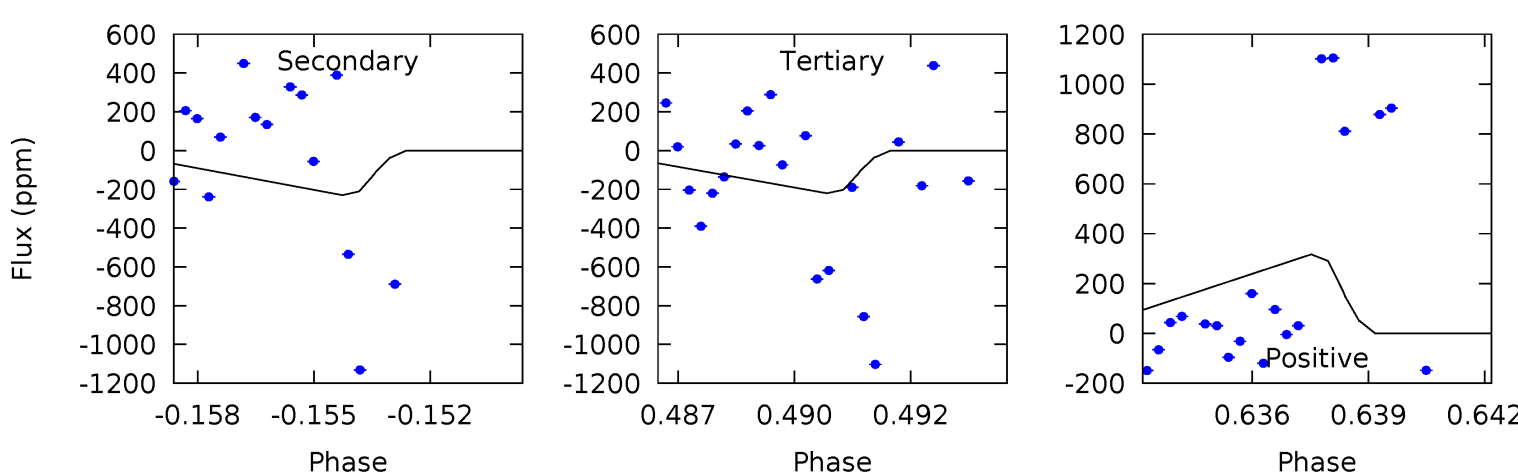
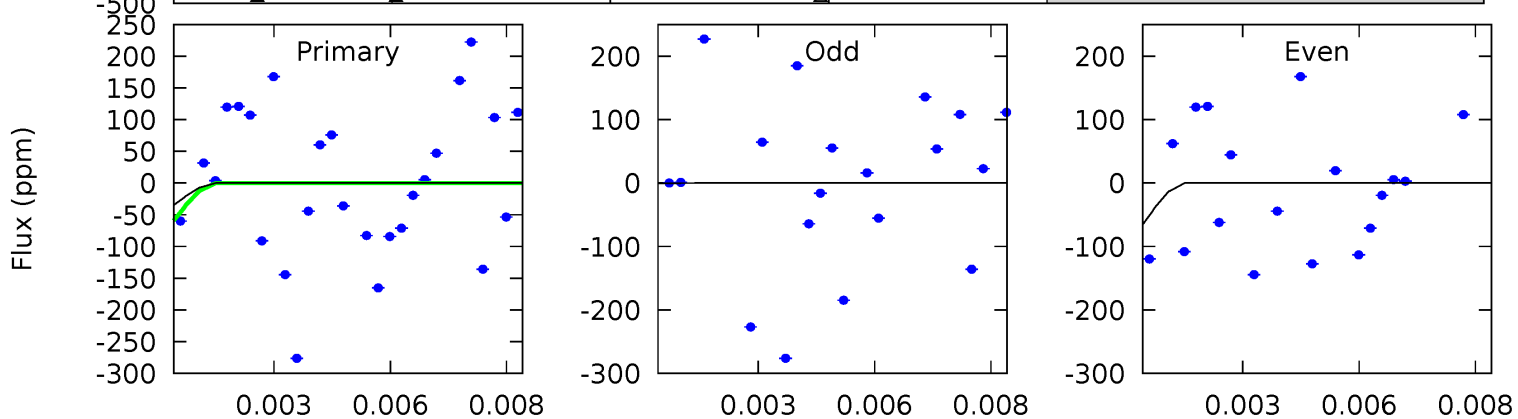
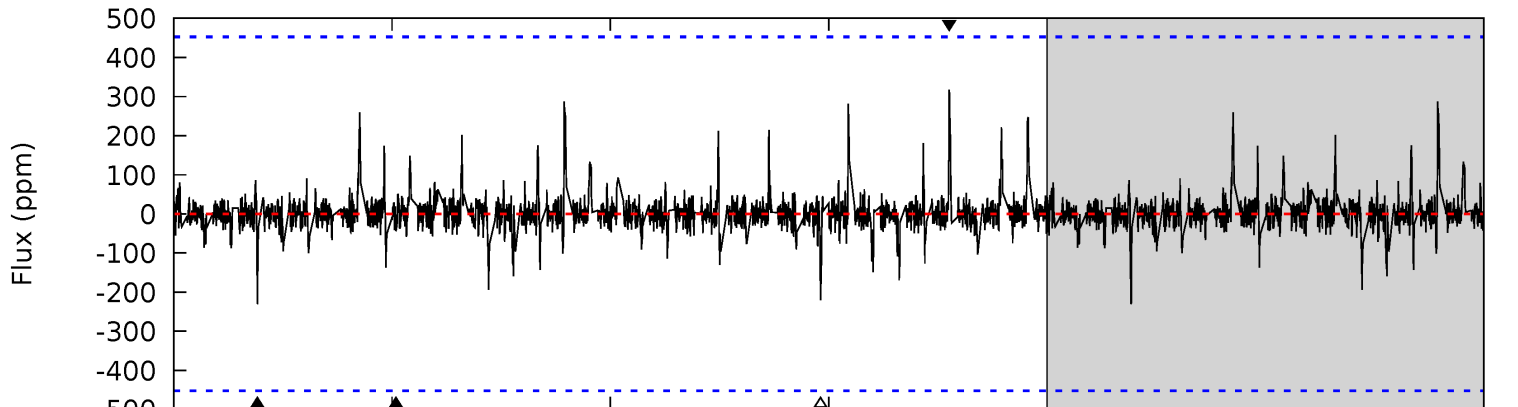
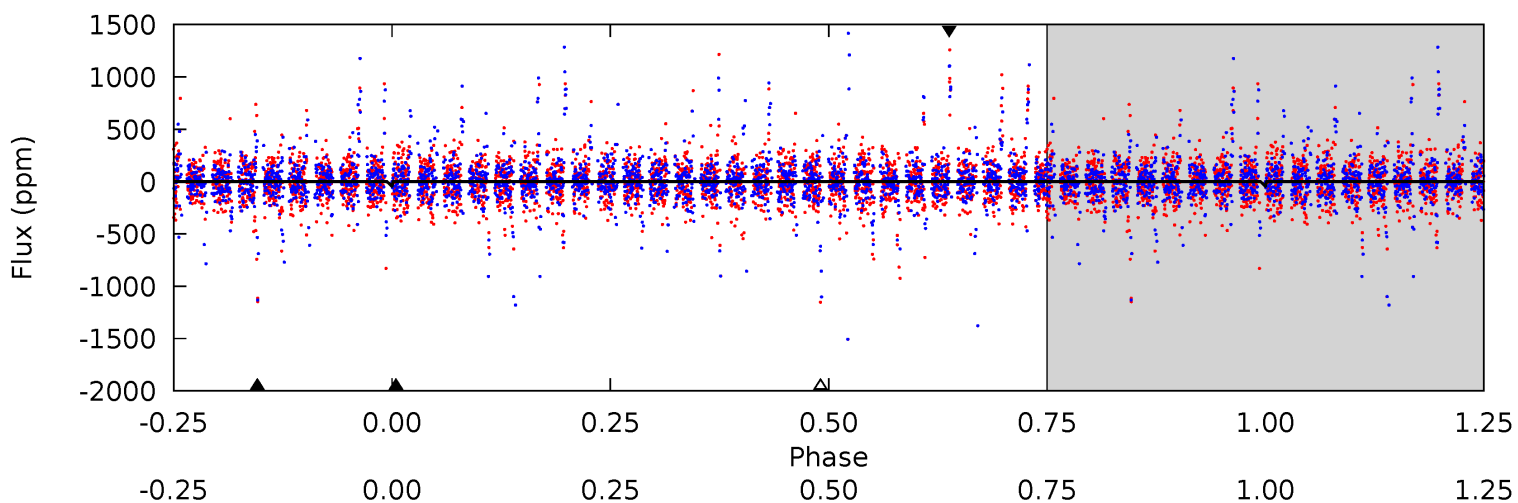
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.79	2.26	2.05	1.73	4.82	2.18	0.67	-0.26	0.06	0.21	0.53	0.46	1.91	0.43	0.39



Alt Model-Shift Uniqueness Test

006777538-04, P = 17.913763 Days, E = 120.916566 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.51	2.67	2.57	3.69	5.27	2.99	0.44	-2.05	-3.18	0.11	-1.01	0.36	1.00	0.58	0.30



Stellar Parameters For KIC 006777538

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7055^{+190}_{-233}	$3.310^{+0.459}_{-0.081}$	$-0.500^{+0.350}_{-0.300}$	$5.265^{+1.120}_{-2.614}$	$2.063^{+0.059}_{-0.558}$	$0.020^{+0.094}_{-0.007}$
	+3%/-3%	+14%/-2%	+70%/-60%	+21%/-50%	+3%/-27%	+473%/-33%
Source	PHO1	FLK73	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 006777538-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-70 ± 31	$5.10^{+5.63}_{-3.41}$	2316^{+173}_{-291}	5999^{+6210}_{-1614}	35^{+315}_{-27}
Alt.	-230 ± 86	$6.43^{+5.93}_{-4.00}$	2319^{+177}_{-302}	7582^{+7965}_{-2021}	80^{+575}_{-57}

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

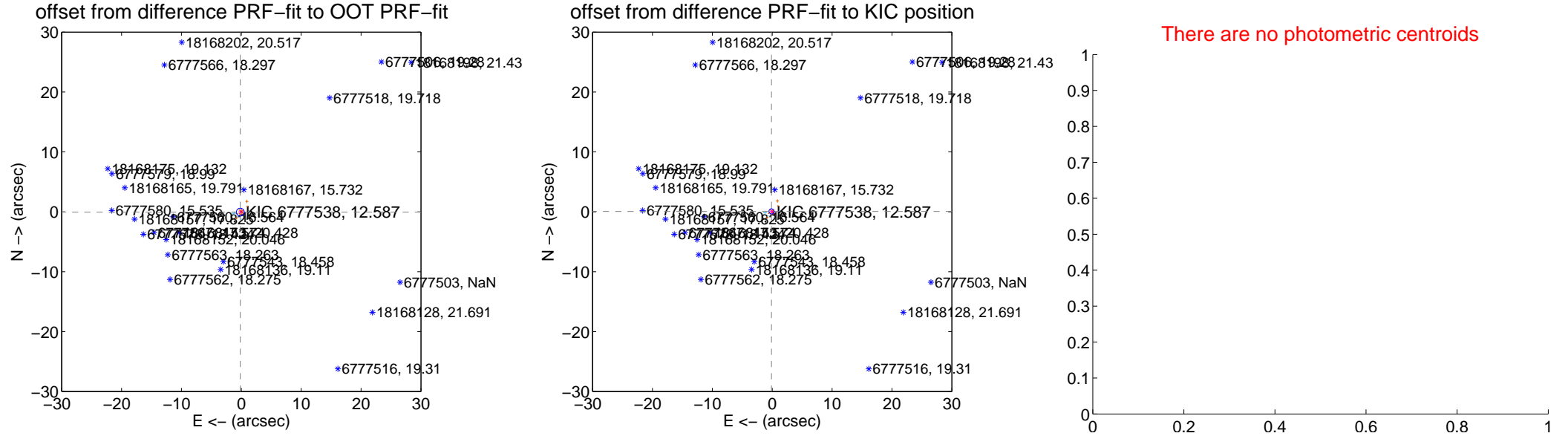
DV Centroid Data

Supplemental centroid analysis for 006777538-04. Kepler magnitude: 12.59. Transit SNR 1.94

There are 7 quarters with good PRF difference image offsets

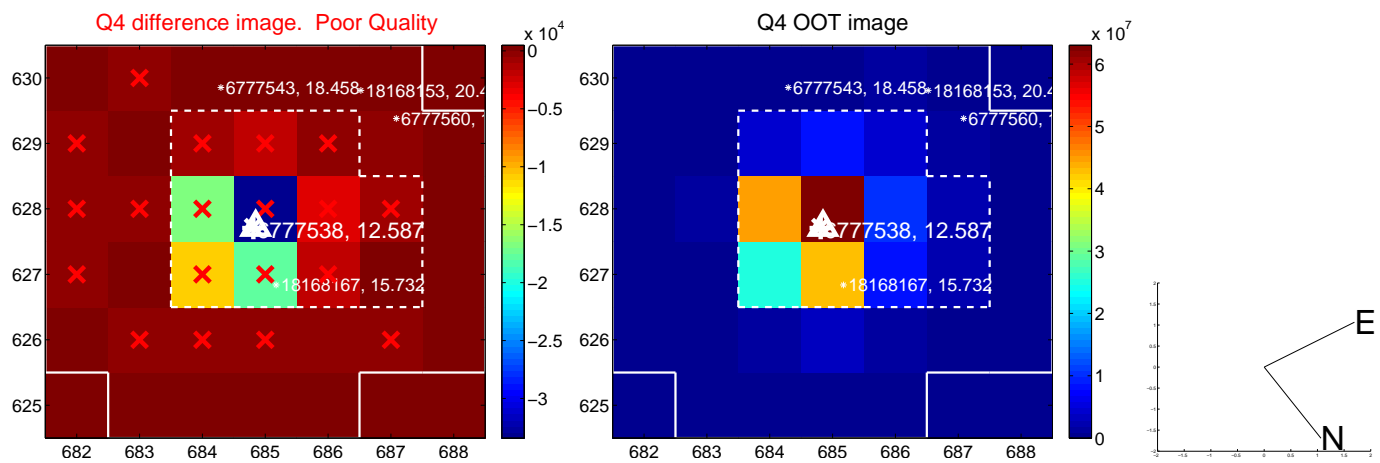
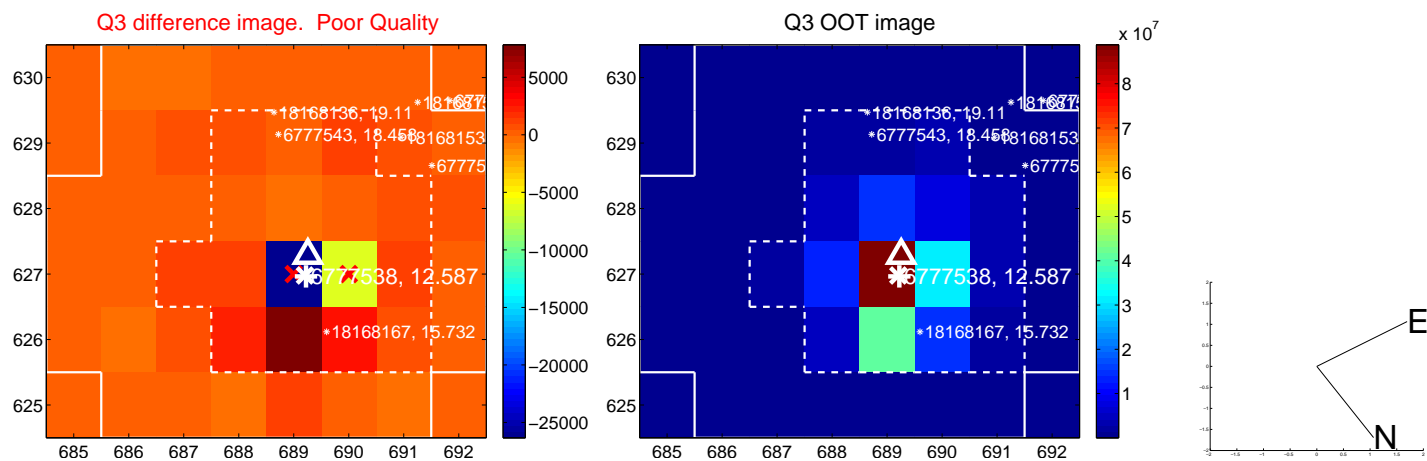
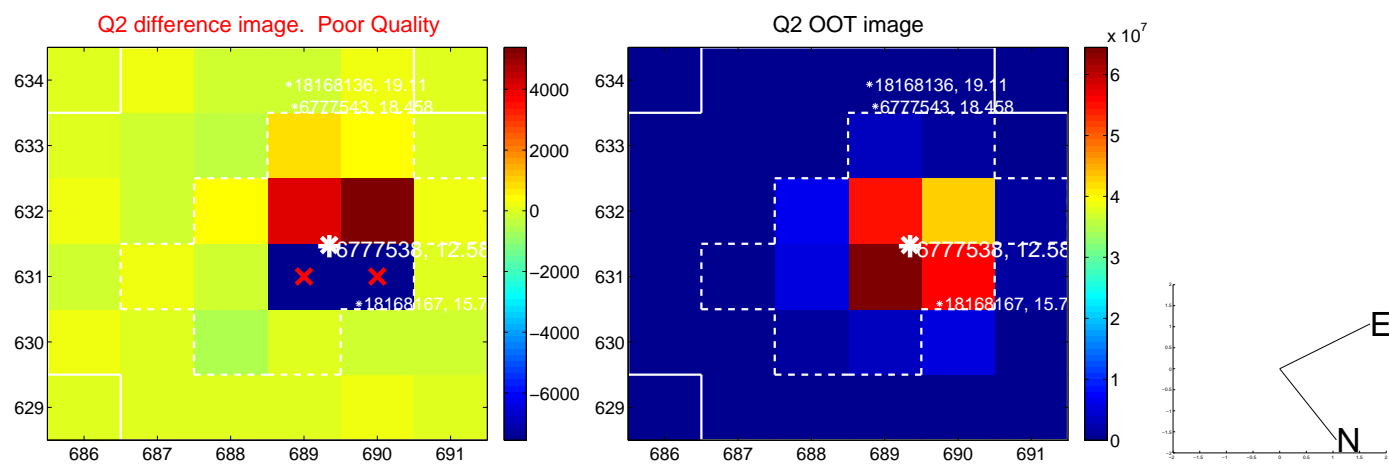
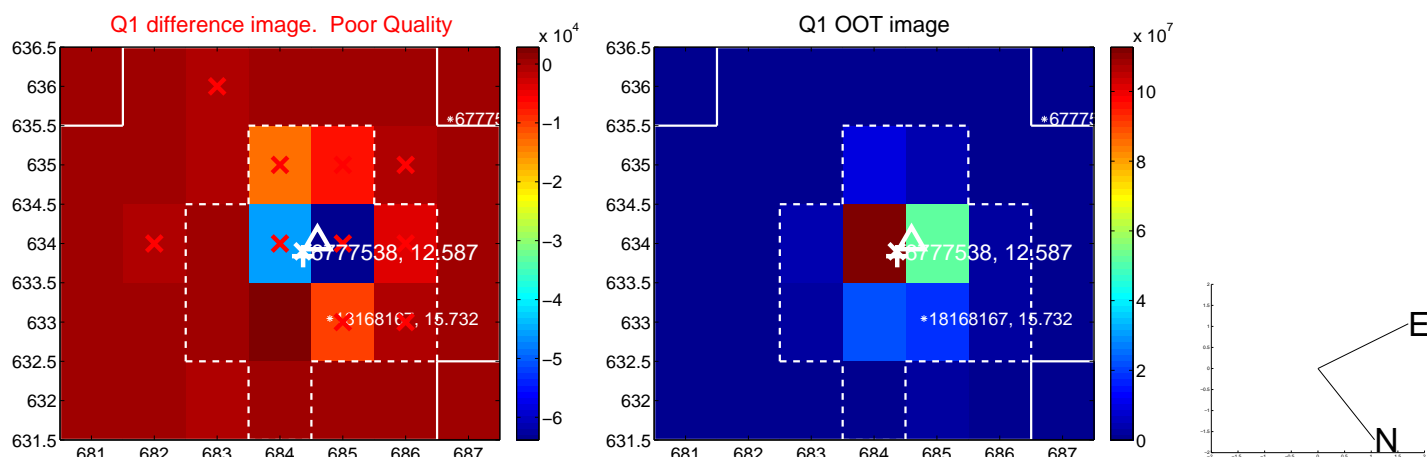
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.182 ± 0.219	0.83	0.174 ± 0.196	-0.055 ± 0.189
PRF-fit source offset from KIC position	0.134 ± 0.144	0.93	0.117 ± 0.176	0.065 ± 0.189
photometric centroid source offset	—	—	—	—

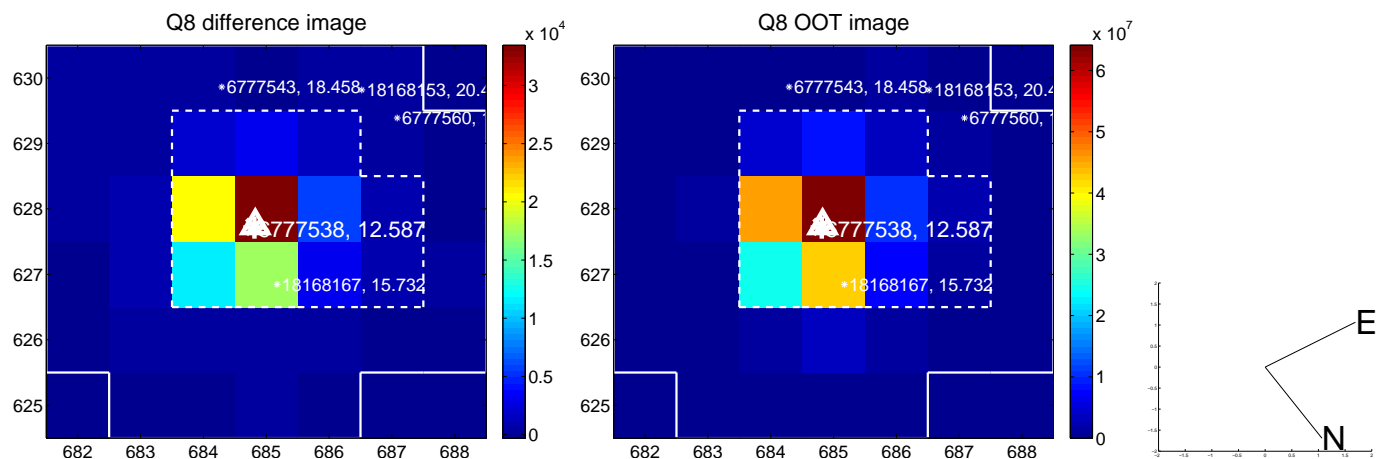
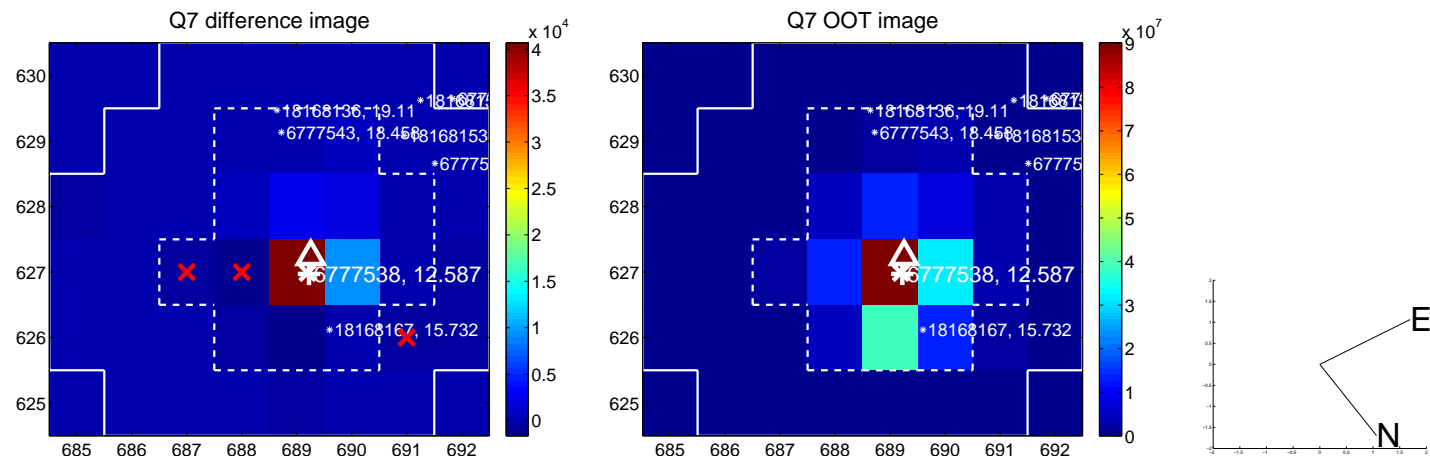
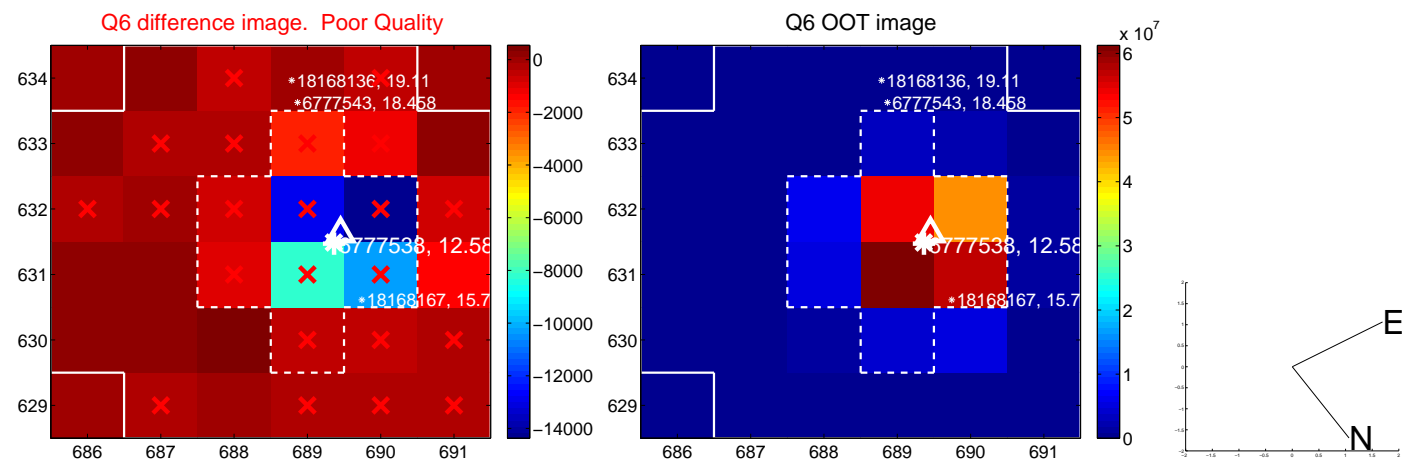
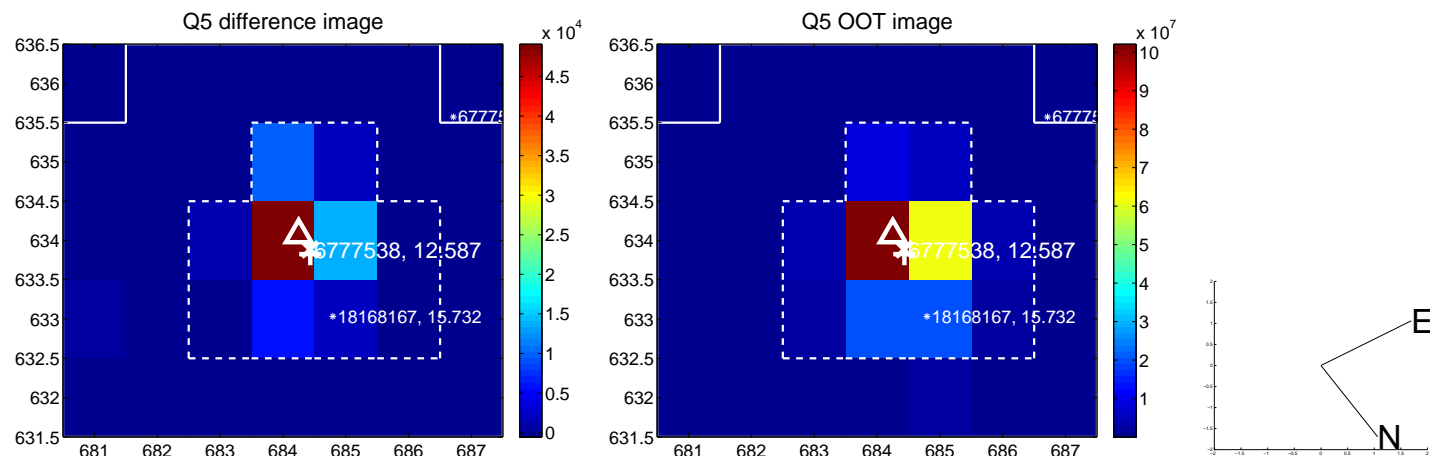


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

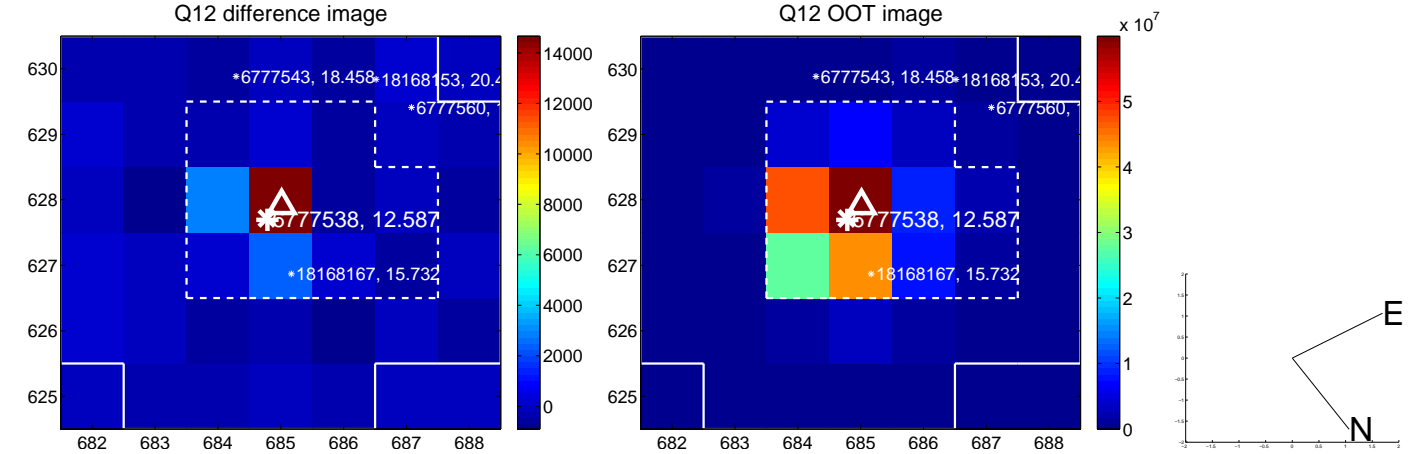
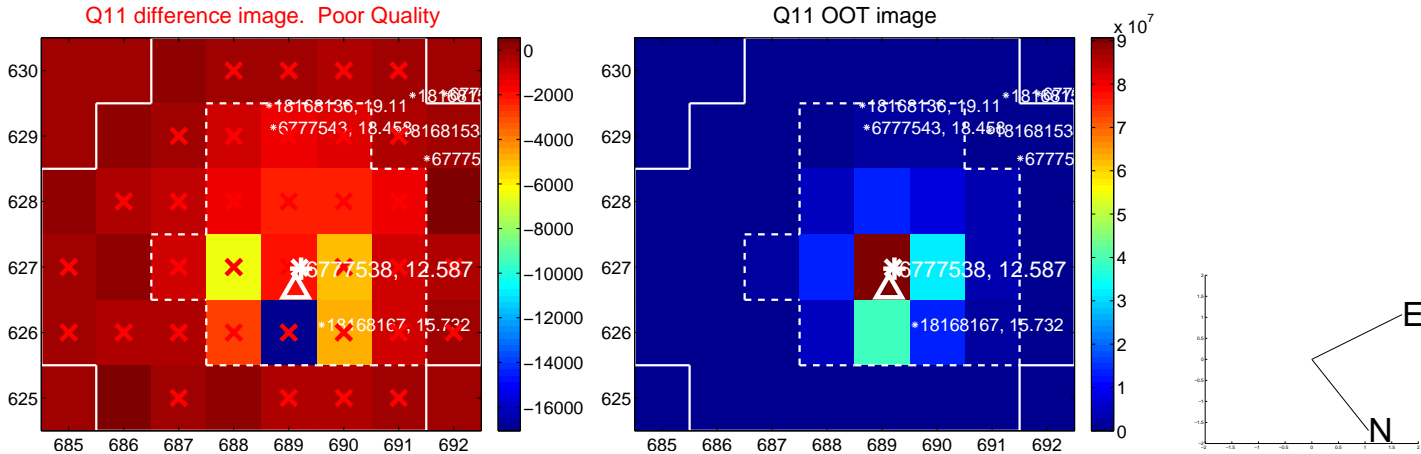
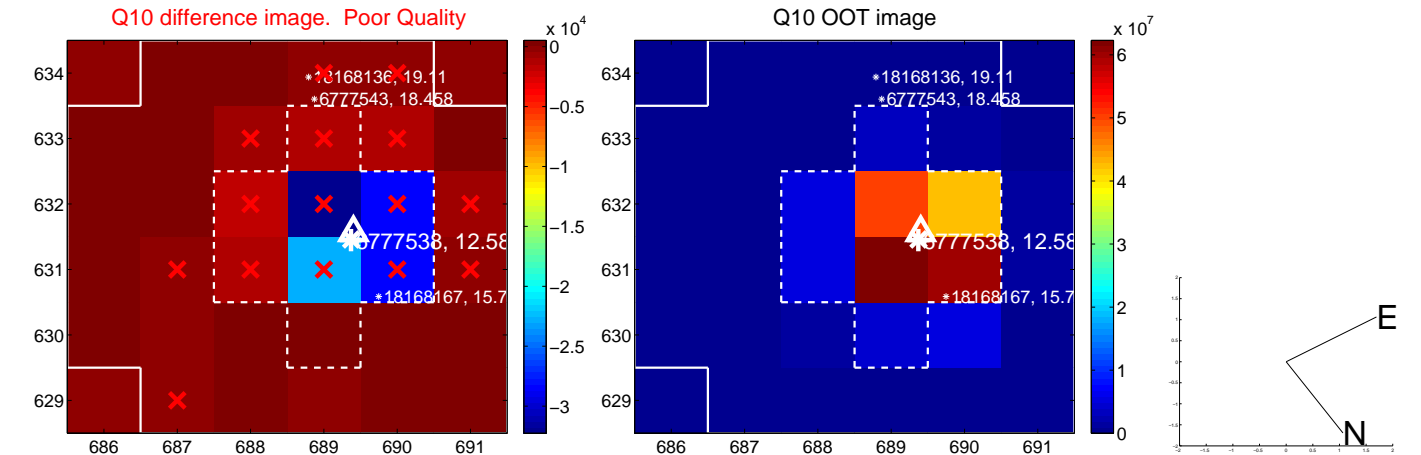
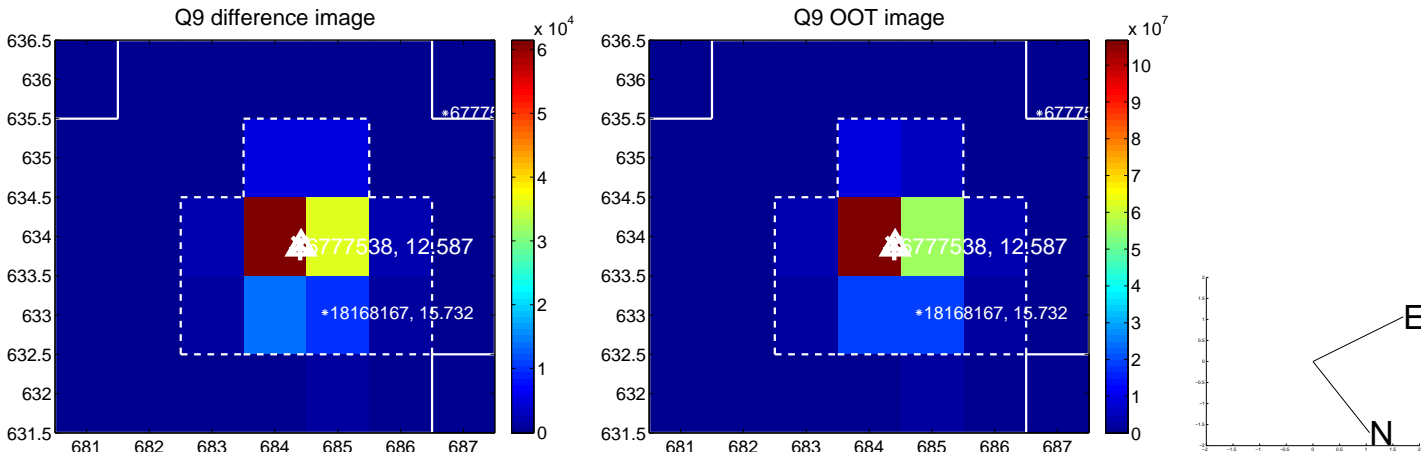
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



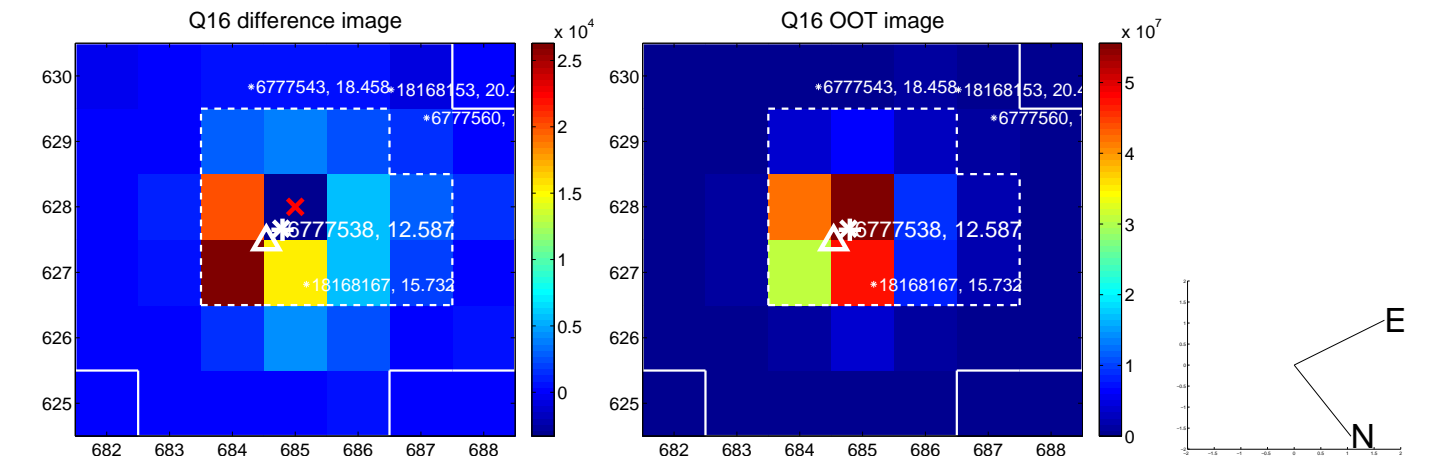
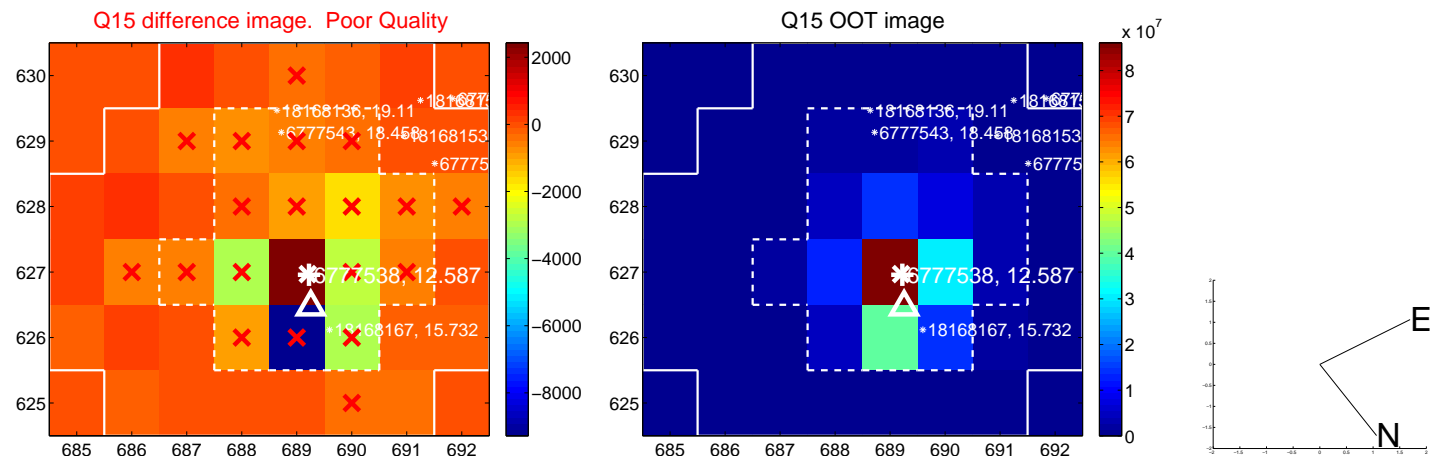
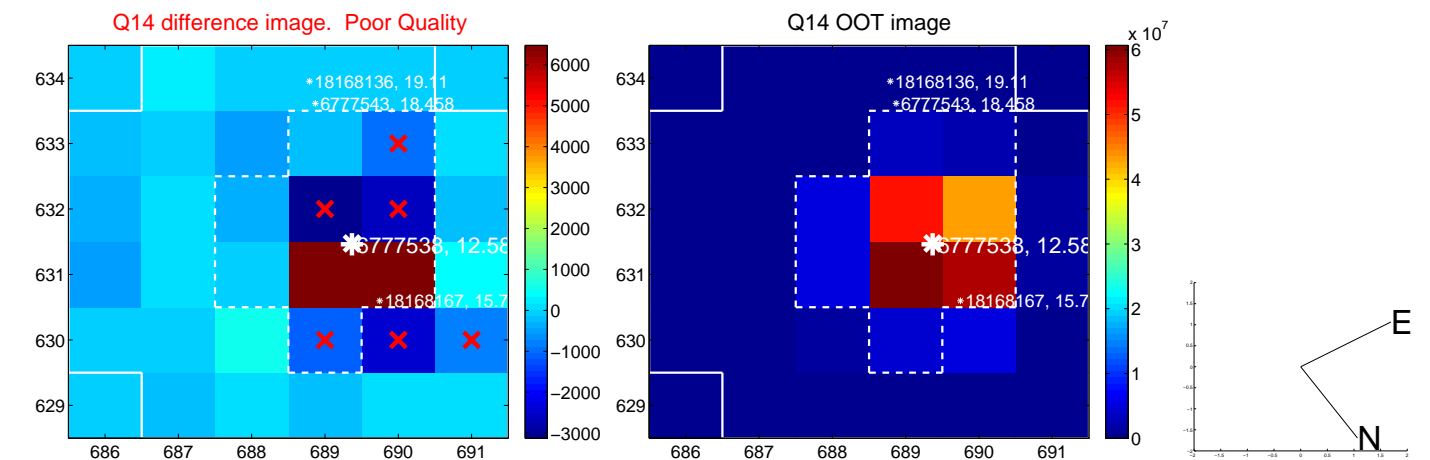
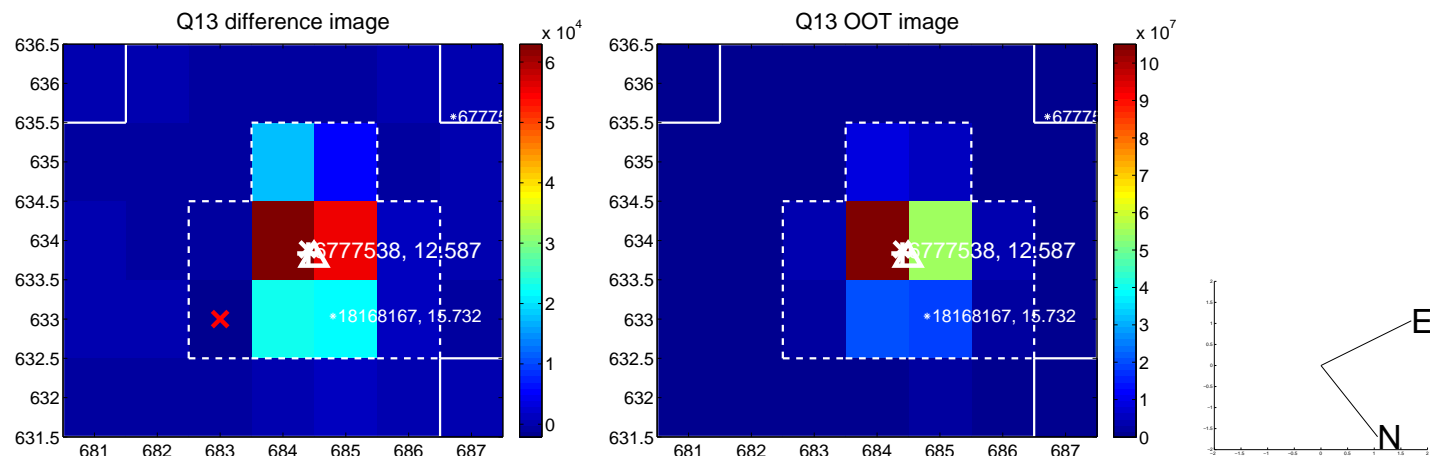
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



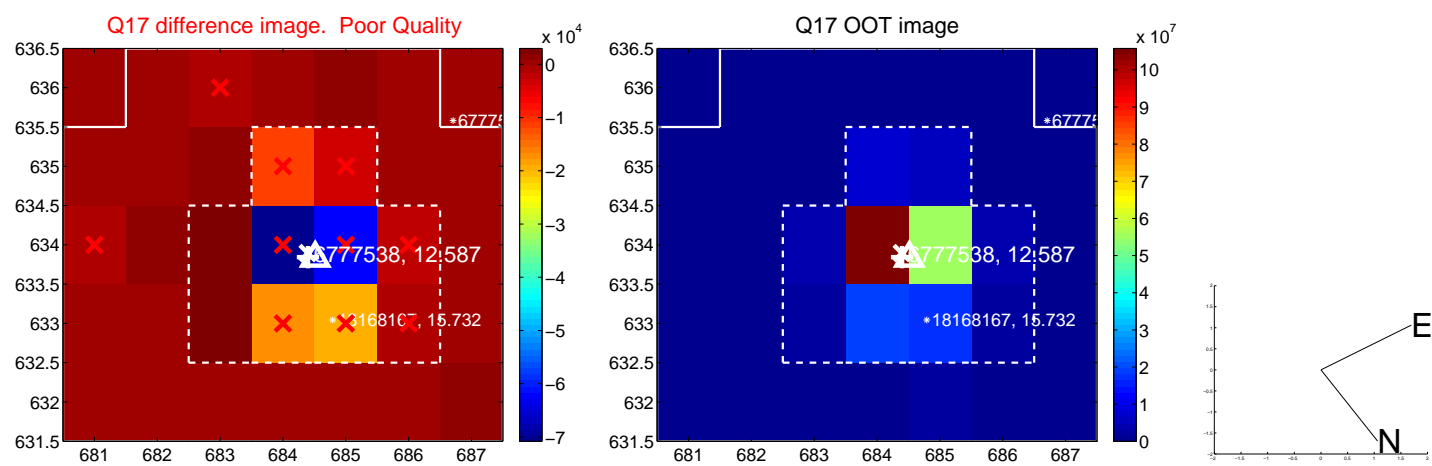
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white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



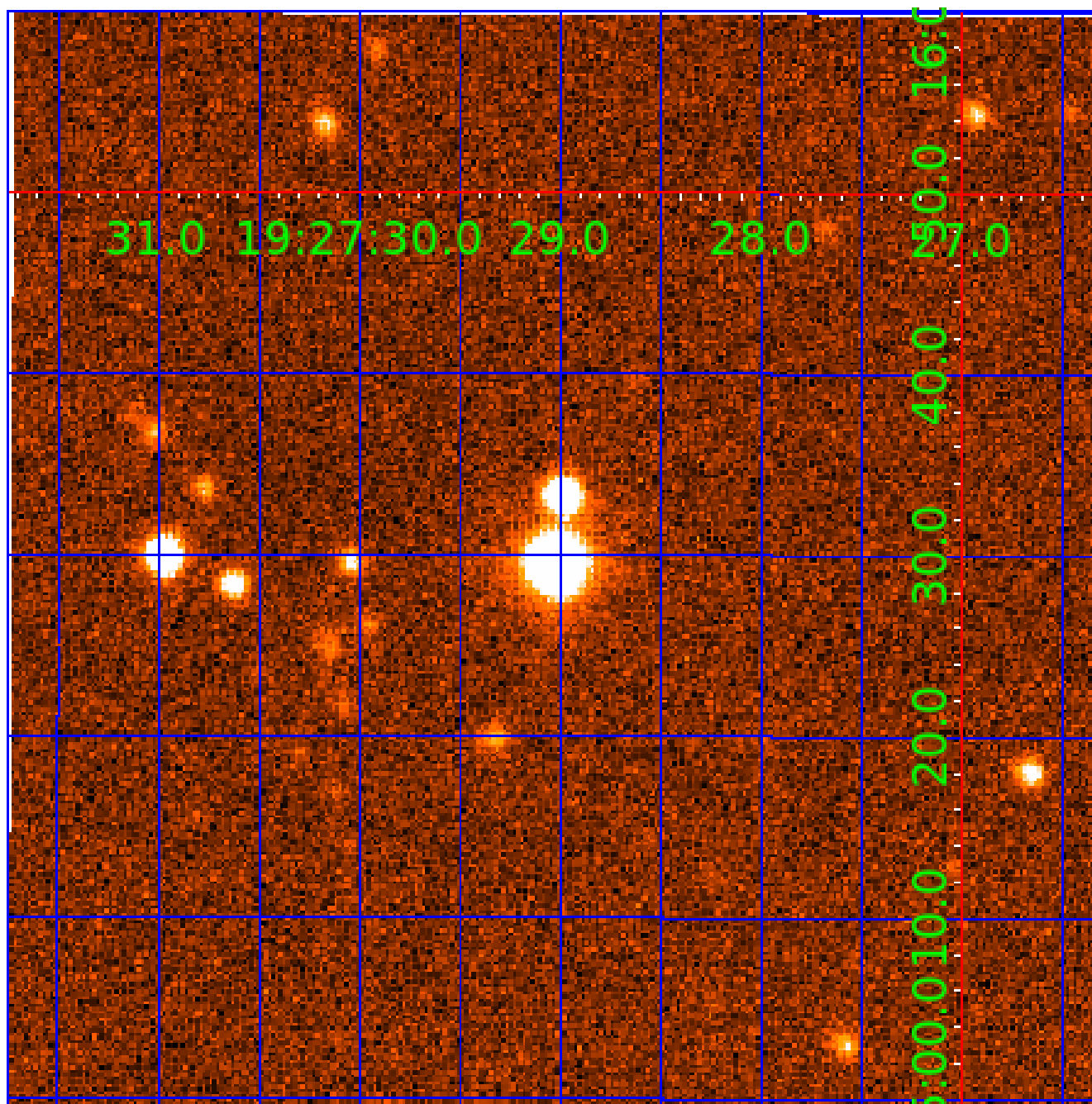
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 006777538

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})
006777538-01	OBS	No	0.526731	131.599111	5.7	3.728	14.5	1.7	5.26	7055	1.58	0.00
006777538-02	OBS	No	44.260283	133.422797	936.5	3.613	15.1	14.7	5.26	7055	30.14	632.60
006777538-03	OBS	No	24.248735	138.159454	86.8	7.161	13.2	2.2	5.26	7055	5.04	1411.12
006777538-04	OBS	No	17.928323	138.897318	67.0	12.190	12.3	1.9	5.26	7055	4.67	2110.71
006777538-05	OBS	No	34.502910	149.769446	1108.7	0.583	13.5	8.1	5.26	7055	18.77	881.74
006777538-06	OBS	No	60.582034	187.125078	684.4	1.774	11.0	7.9	5.26	7055	14.36	416.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006777538-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006777538-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006777538-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006777538-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006777538-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV
006777538-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV

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

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

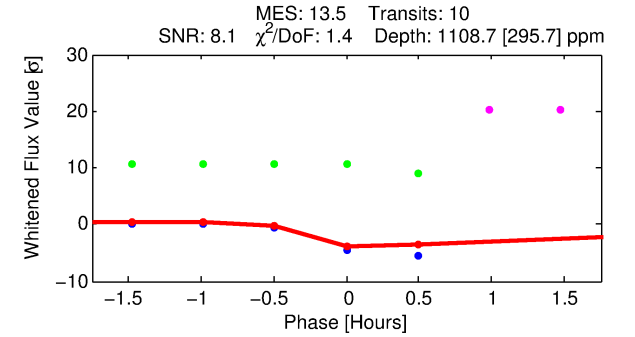
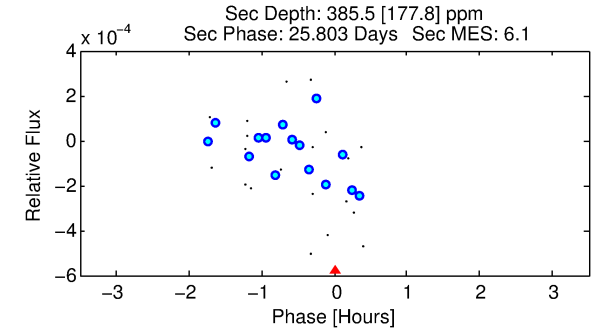
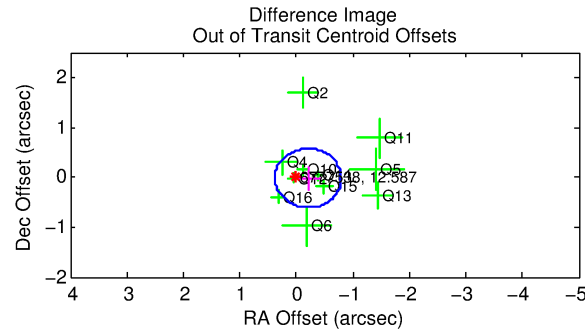
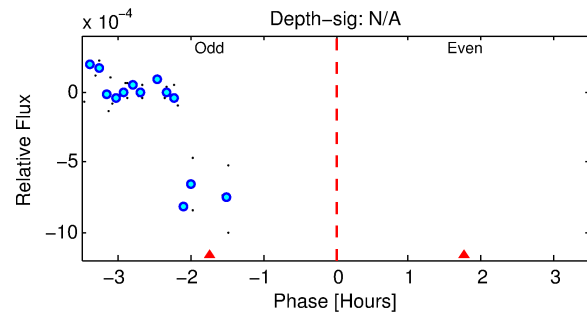
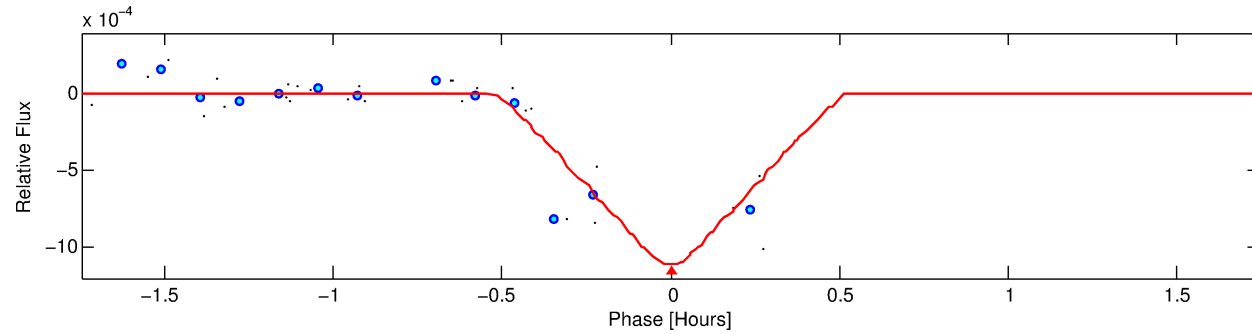
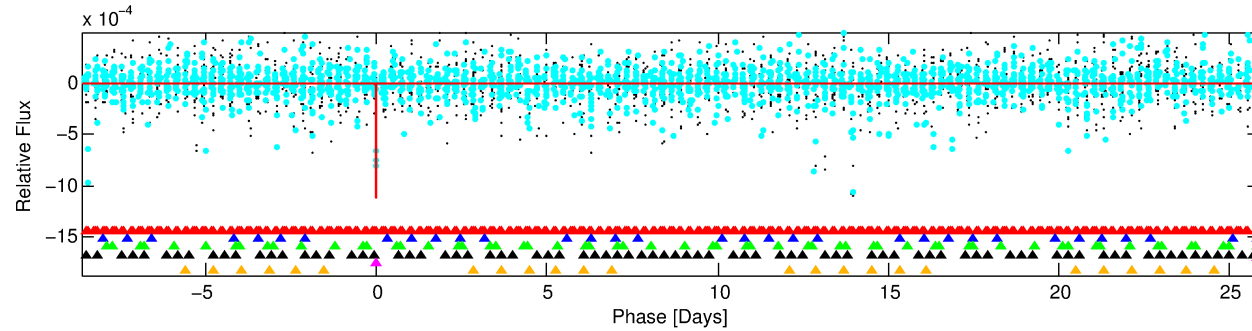
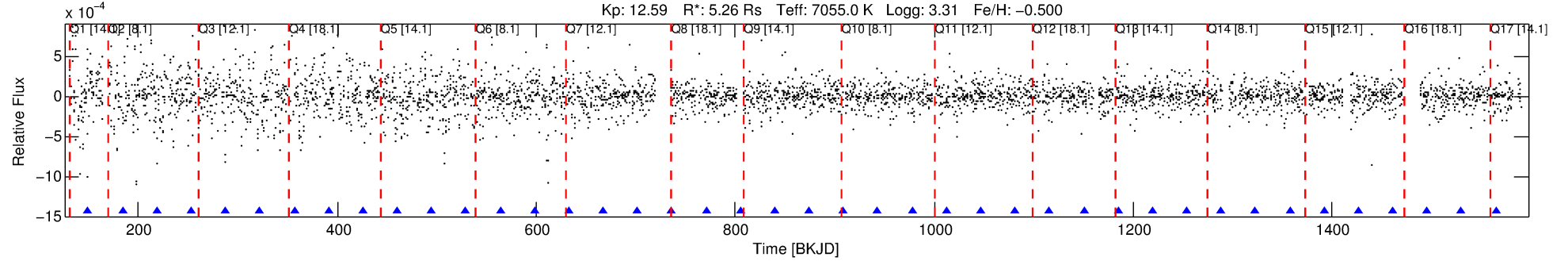
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006777538-05

No Significant Match Found

DV One-Page Summary

KIC: 6777538 Candidate: 5 of 6 Period: 34.503 d



DV Fit Results:

Period = 34.50291 [0.00033] d
Epoch = 149.7694 [0.0019] BKJD
Rp/R* = 0.0327 [0.0221]
a/R* = 402.69 [1516.97]
b = 0.52 [5.17]
Seff = 881.74 [696.21]
Teq = 1390 [274] K
Rp = 18.77 [15.76] Re
a = 0.2642 [0.1277] AU
Ag = 42.00 [68.39] [0.60 σ]
Teffp = 5469 [1964] K [2.06 σ]

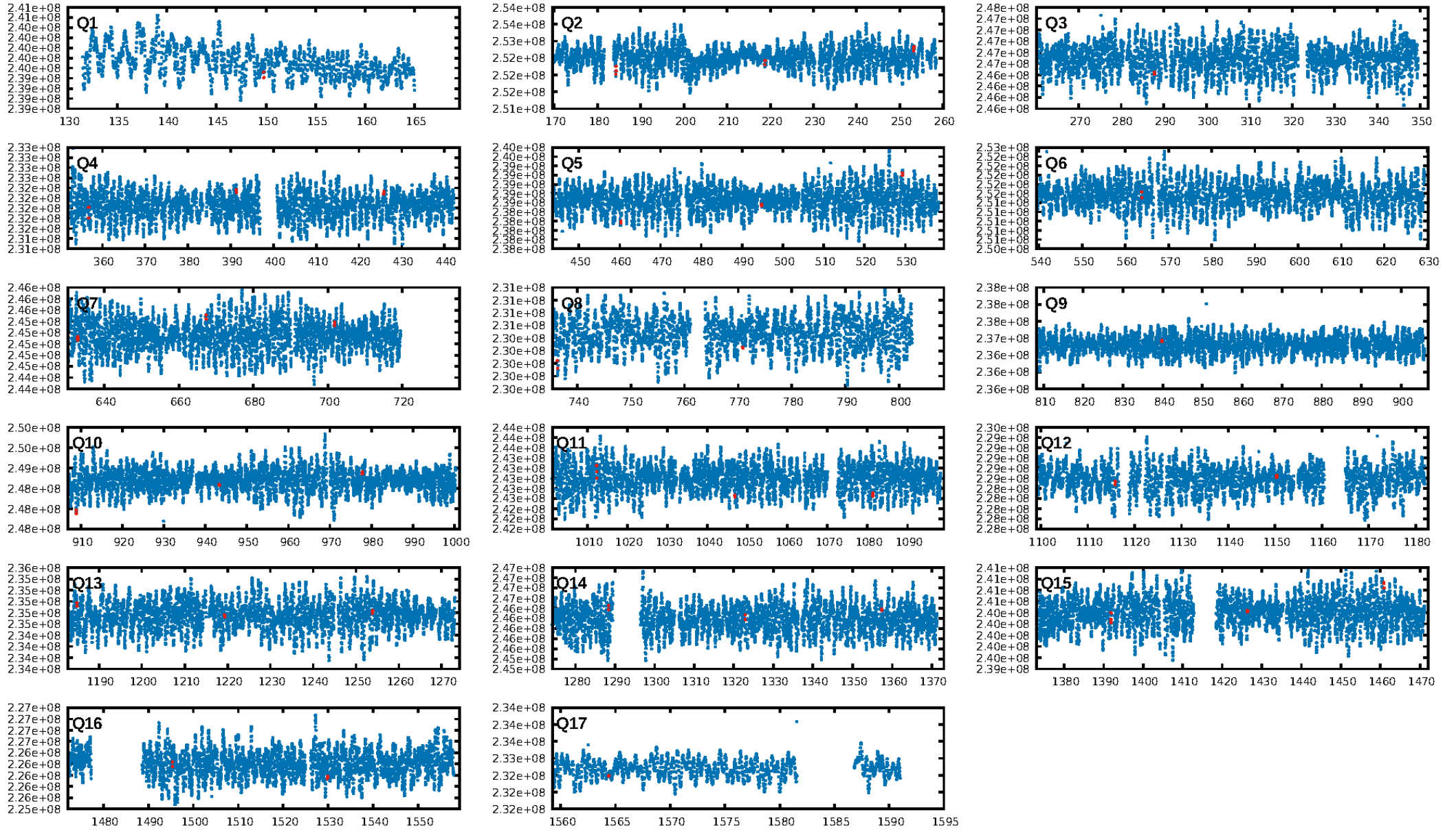
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [34.25 σ]
LongPeriod-sig: 100.0% [63.99 σ]
ModelChiSquare2-sig: 42.9%
ModelChiSquareGof-sig: 85.2%
Bootstrap-pfa: 5.96e-18
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: 3.808
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.208 arcsec [1.06 σ]
KicOffset-rm: 0.220 arcsec [1.10 σ]
OotOffset-st: 4/2/3/2 [11]
KicOffset-st: 4/2/3/2 [11]
DiffImageQuality-fgm: 0.36 [4/11]
DiffImageOverlap-fno: 0.00 [0/12]

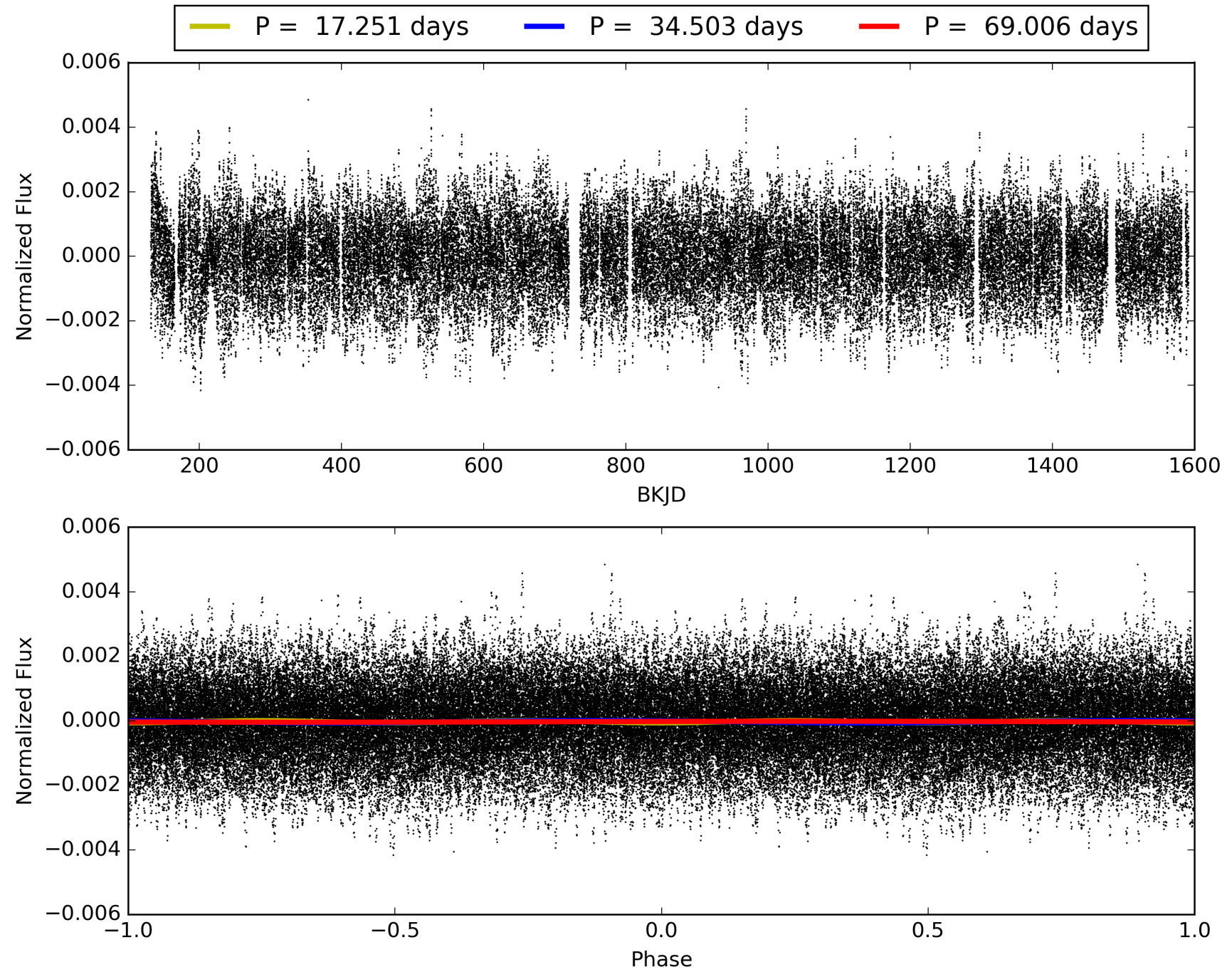
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:21:28 Z

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

TCE 006777538-05, PDC Light Curves

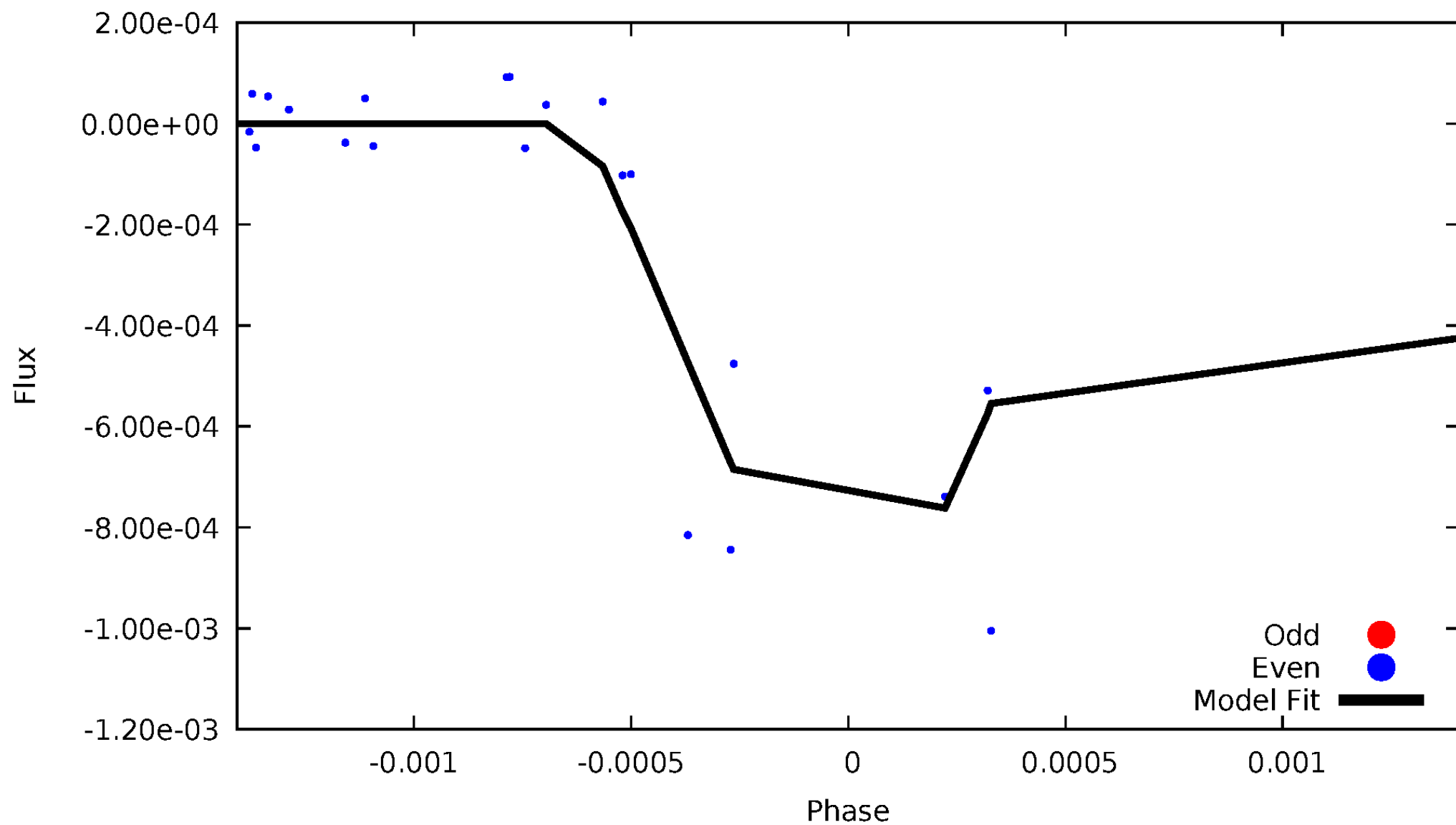


TCE 006777538-05



DV Odd/Even

TCE 006777538-05

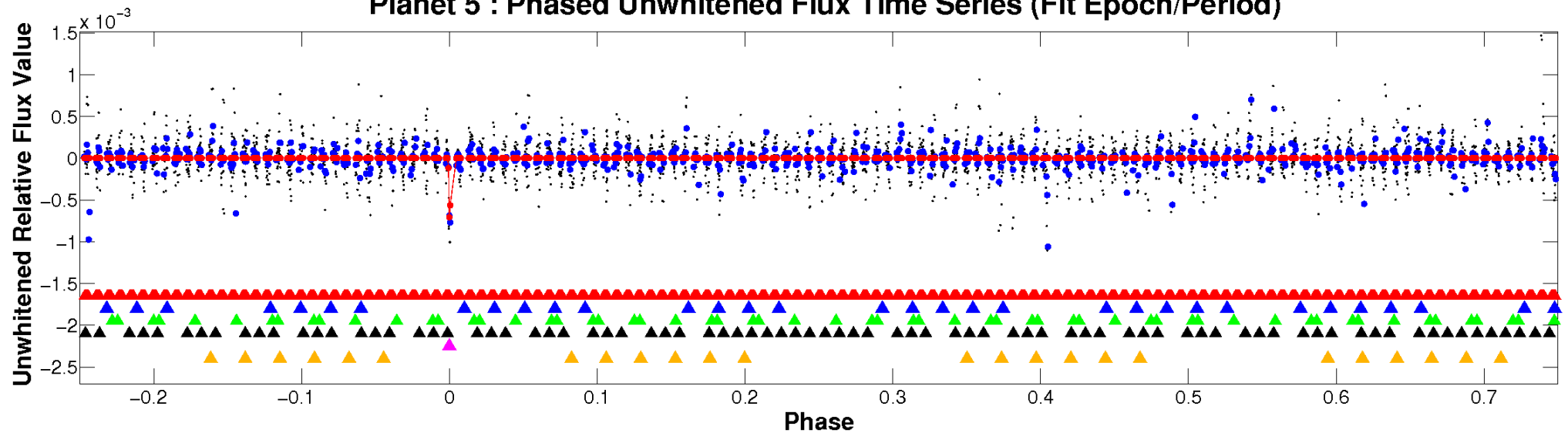


ALT Odd/Even

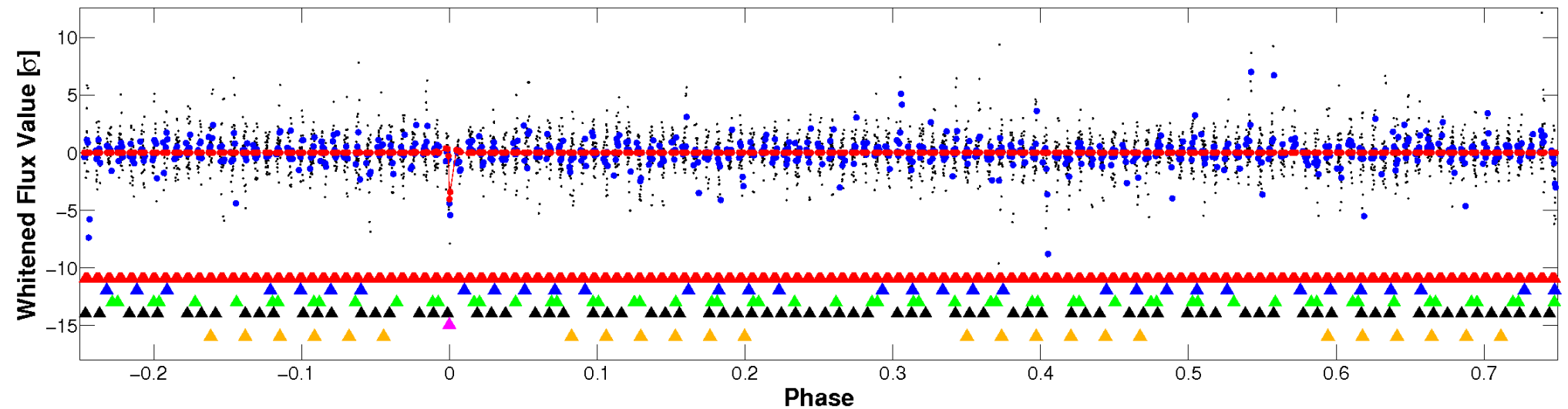
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

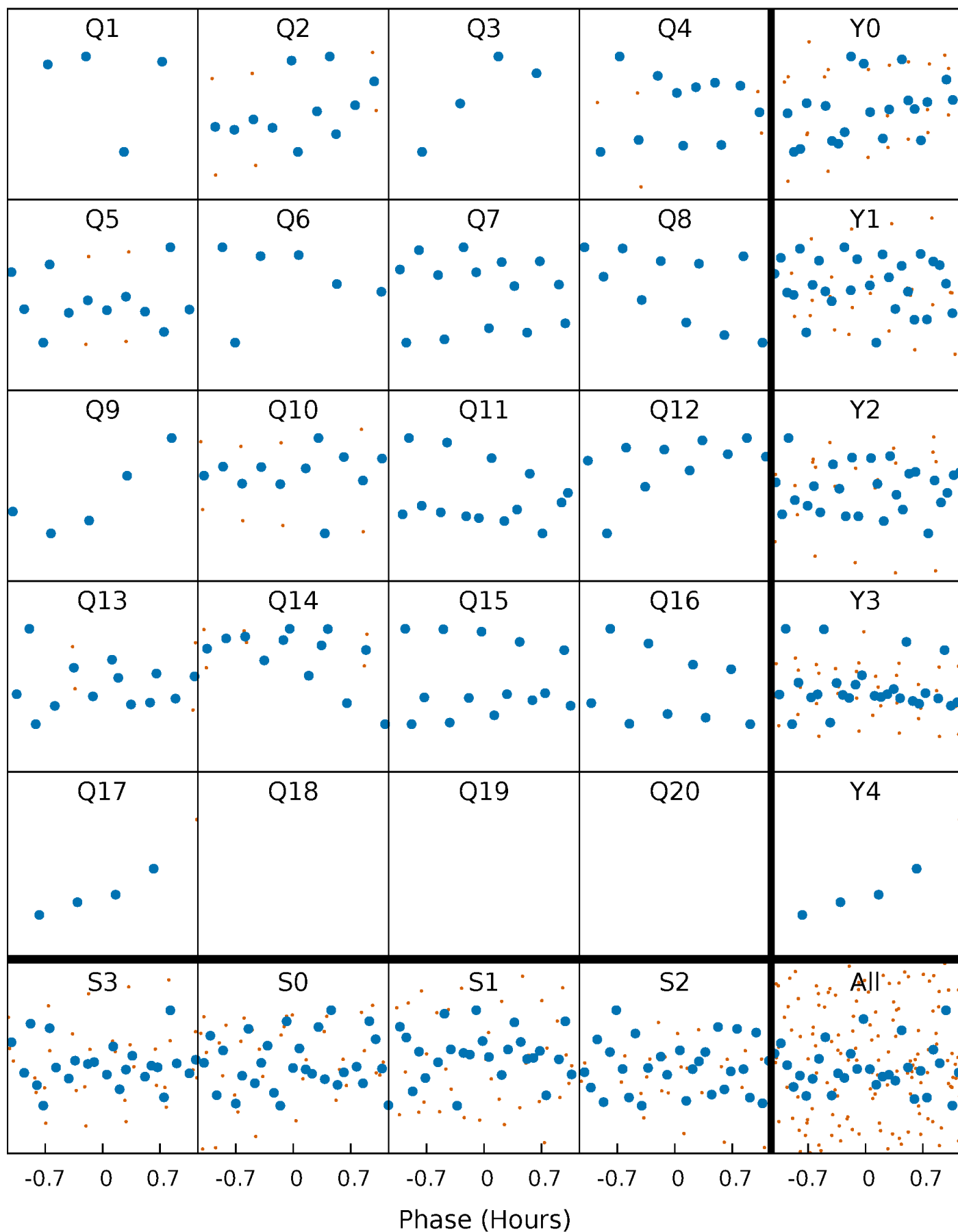


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



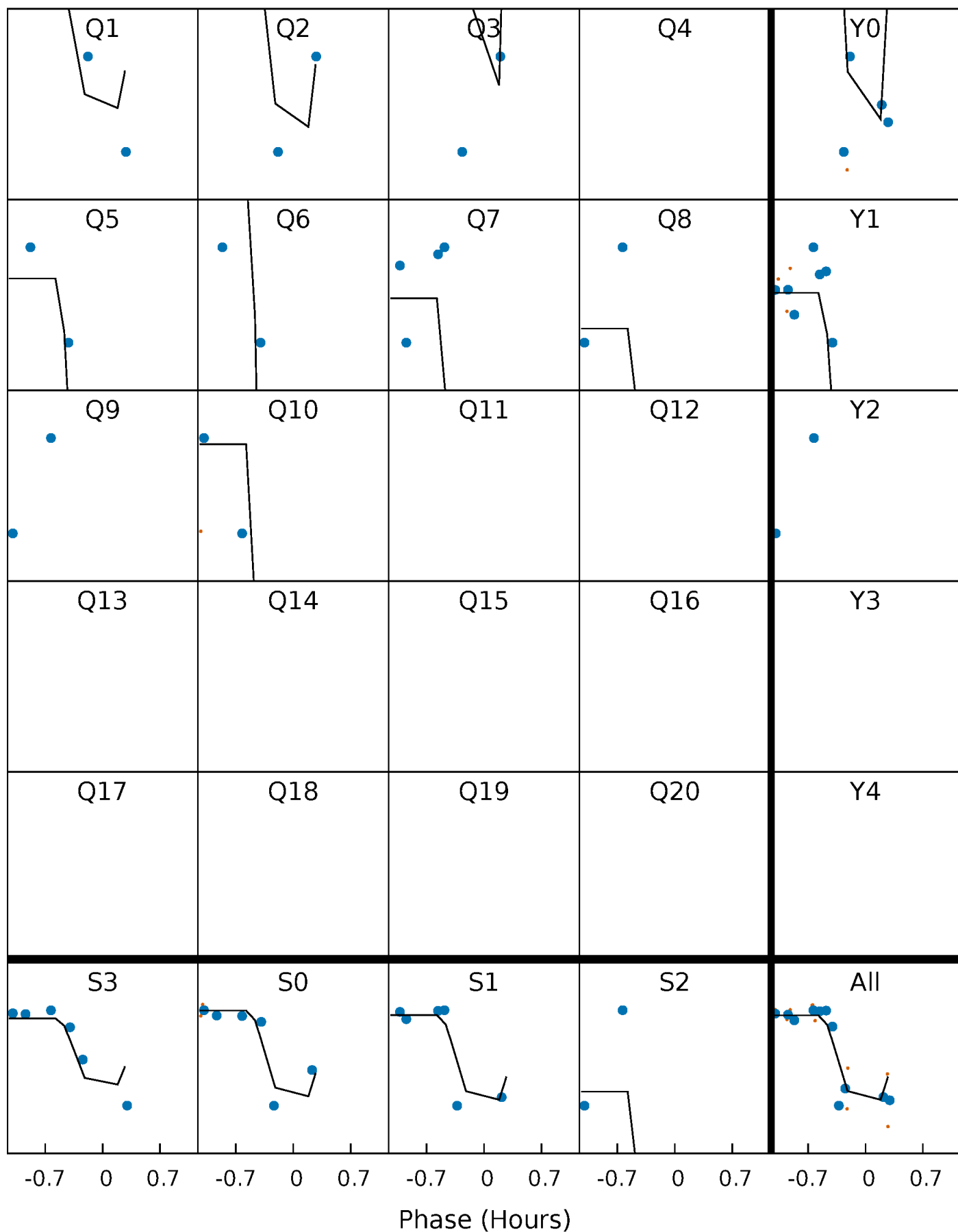
PDC Quarter-Phased Transit Curves

TCE 006777538-05 $P = 34.502910$ Days $T_0 = 149.769446$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006777538-05 $P = 34.502910$ Days $T_0 = 149.769446$ (BKJD)

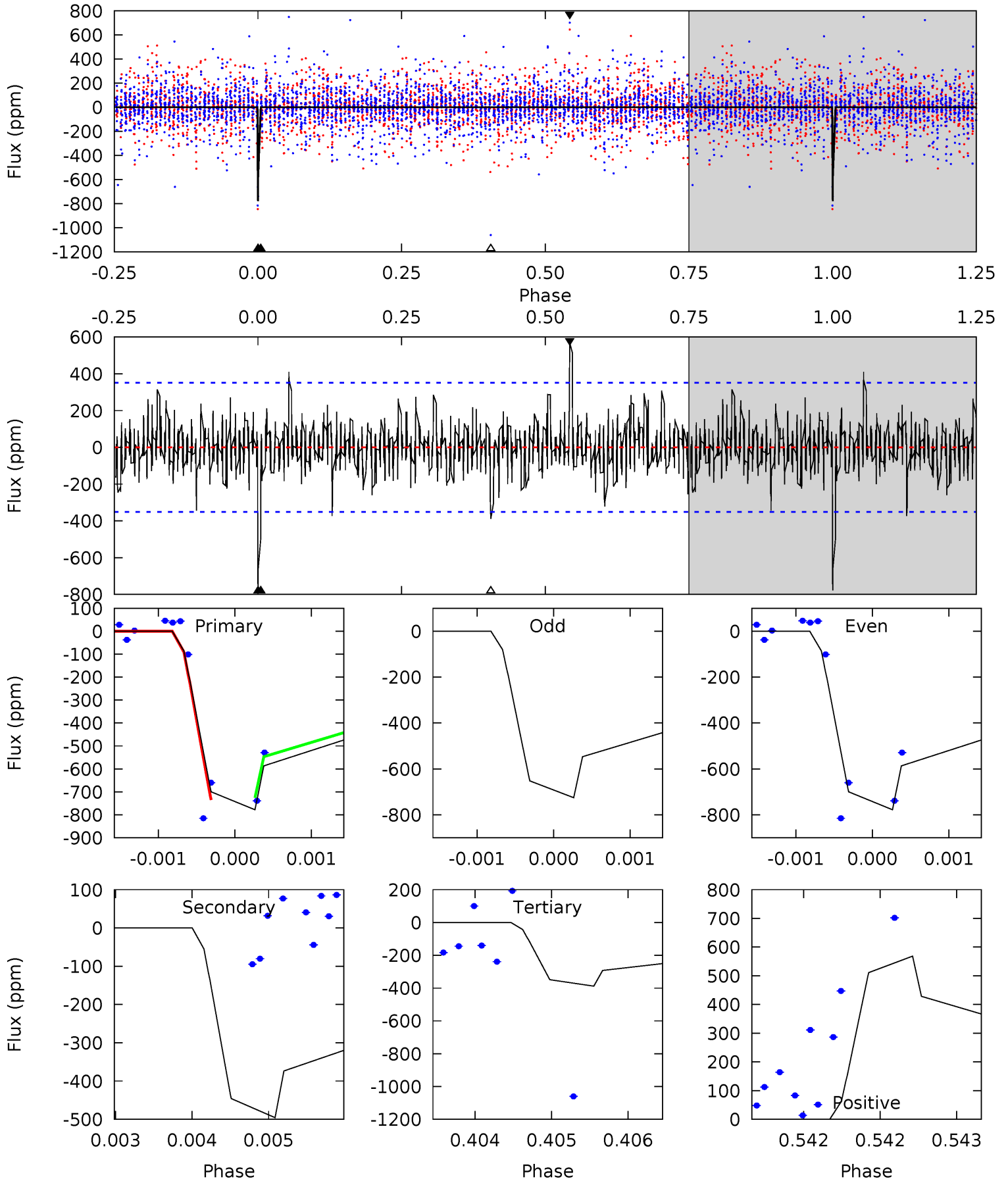


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

006777538-05, P = 34.502910 Days, E = 115.266536 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	7.74	6.06	8.88	5.48	3.34	1.39	6.09	3.27	1.68	-1.14	0.43	1.01	0.42	0.07



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 006777538

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7055^{+190}_{-233}	$3.310^{+0.459}_{-0.081}$	$-0.500^{+0.350}_{-0.300}$	$5.265^{+1.120}_{-2.614}$	$2.063^{+0.059}_{-0.558}$	$0.020^{+0.094}_{-0.007}$
	+3%/-3%	+14%/-2%	+70%/-60%	+21%/-50%	+3%/-27%	+473%/-33%
Source	PHO1	FLK73	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 006777538-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-496 ± 64	$17.40^{+11.37}_{-10.31}$	1865^{+139}_{-227}	5549^{+3528}_{-1061}	59^{+310}_{-38}
Alt.	N/A	N/A	N/A	N/A	N/A

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

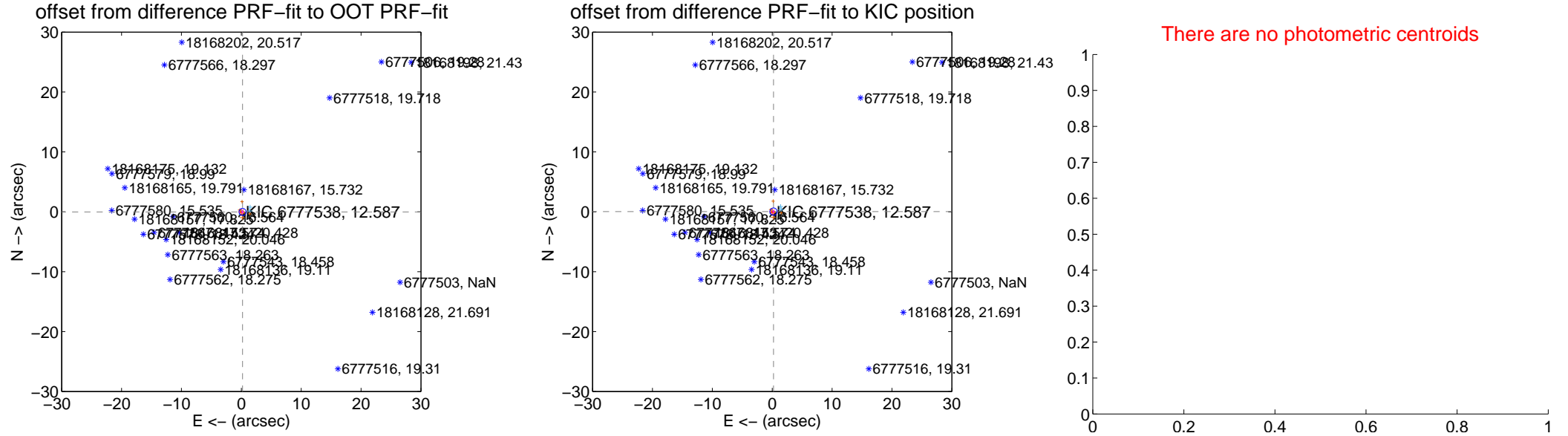
DV Centroid Data

Supplemental centroid analysis for 006777538-05. Kepler magnitude: 12.59. Transit SNR 8.14

There are 4 quarters with good PRF difference image offsets

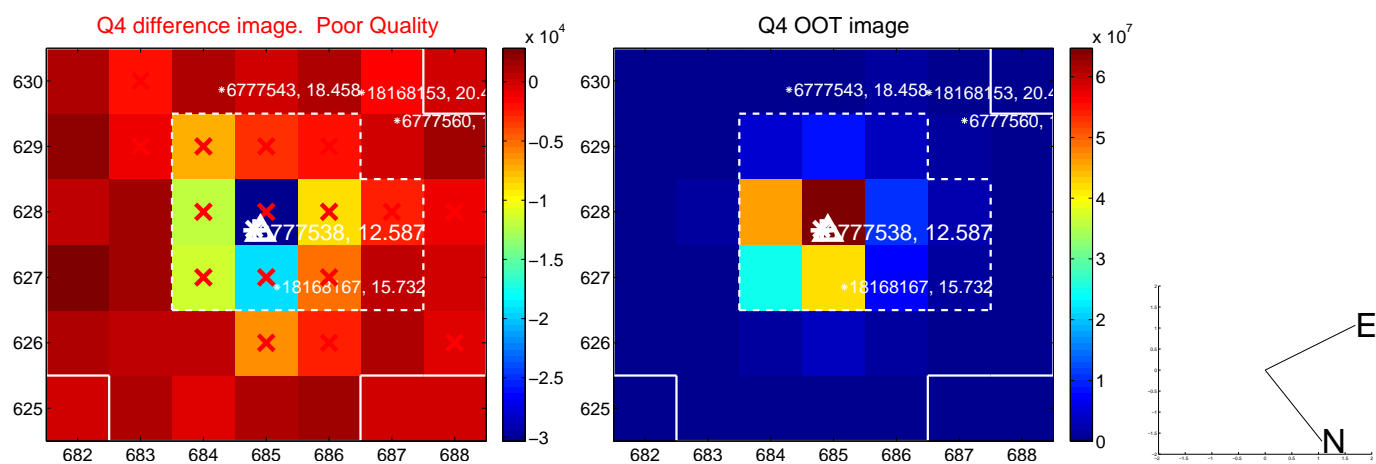
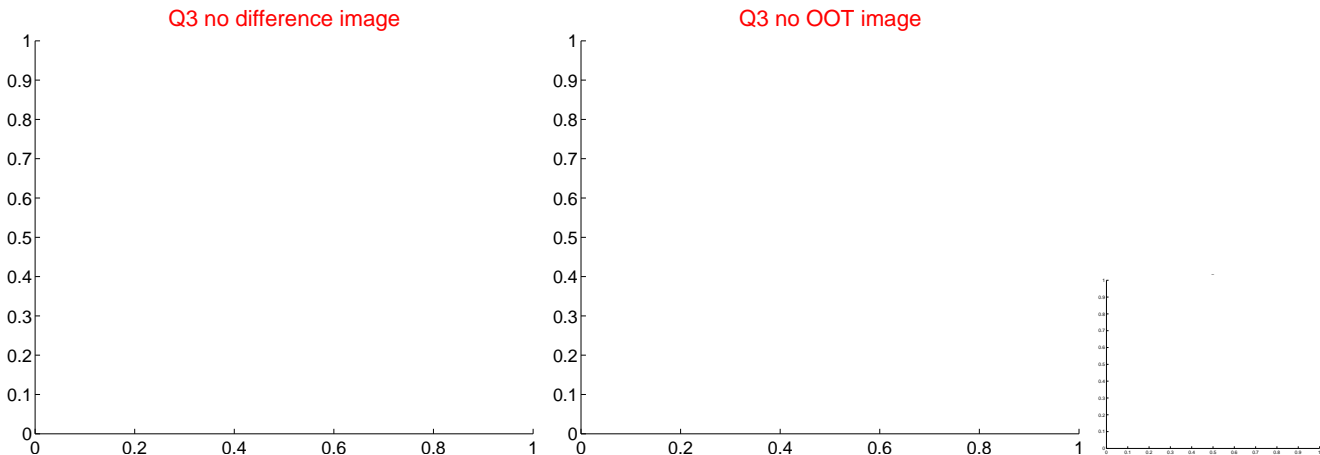
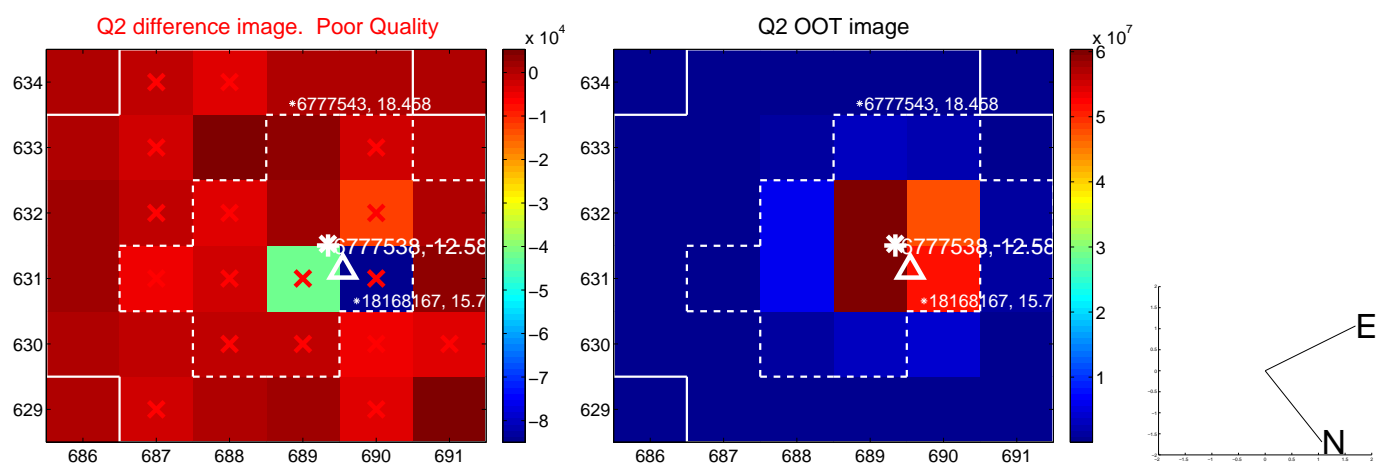
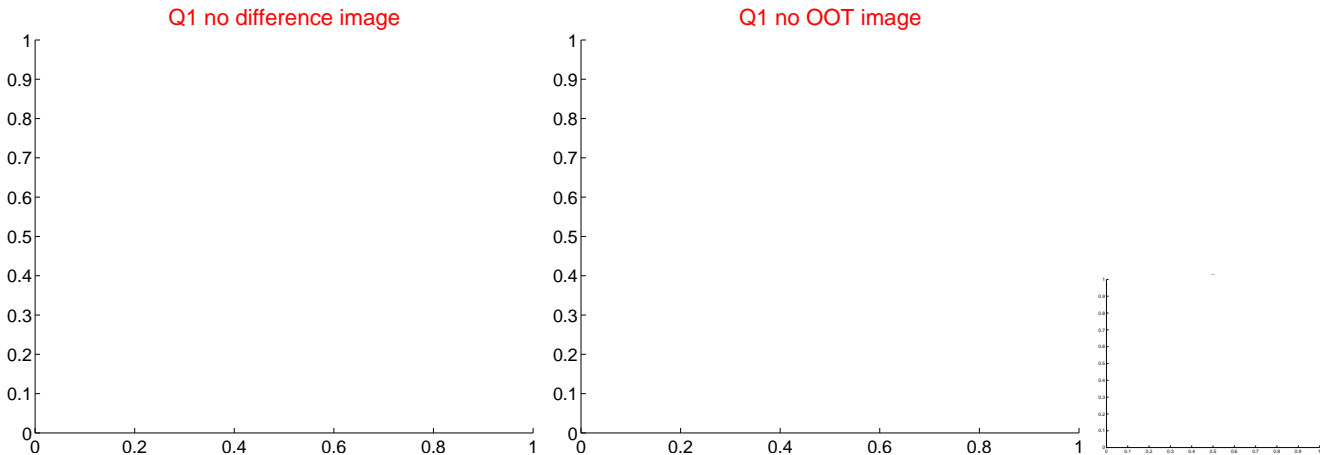
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.208 ± 0.196	1.06	-0.207 ± 0.197	-0.022 ± 0.234
PRF-fit source offset from KIC position	0.220 ± 0.201	1.10	-0.216 ± 0.195	0.040 ± 0.209
photometric centroid source offset	—	—	—	—

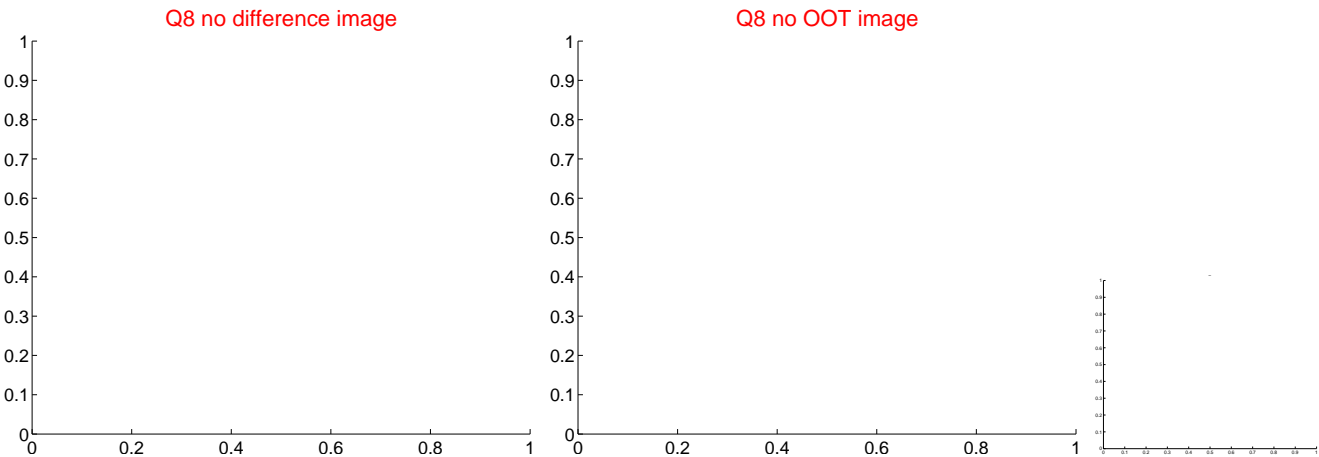
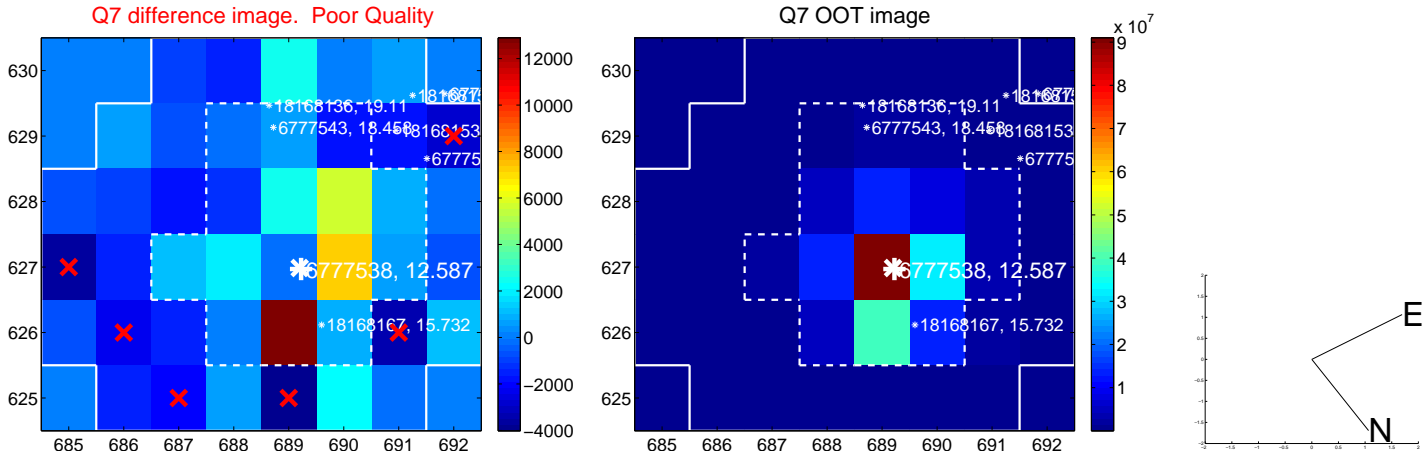
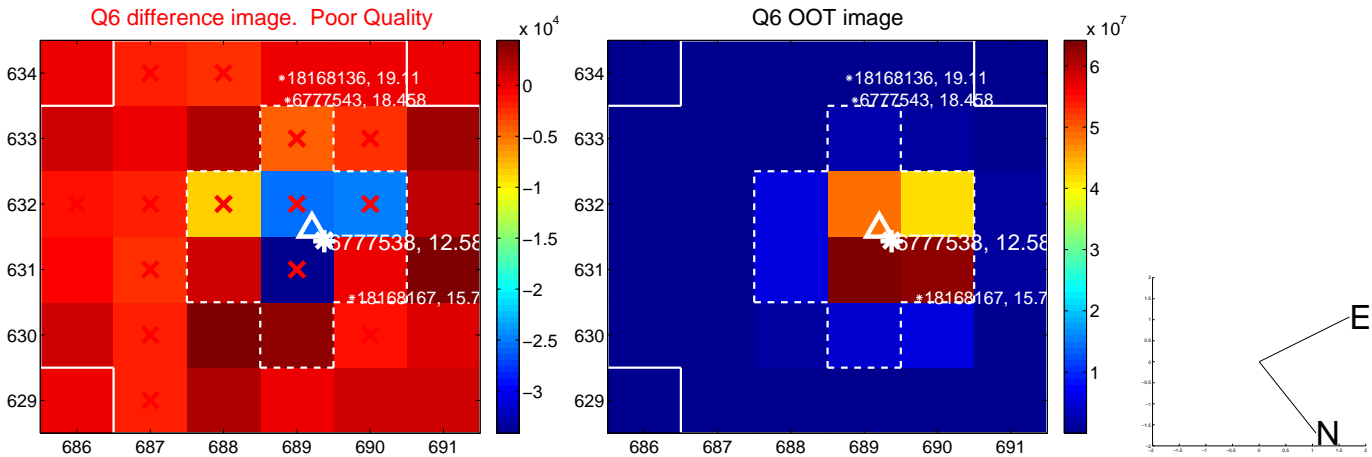
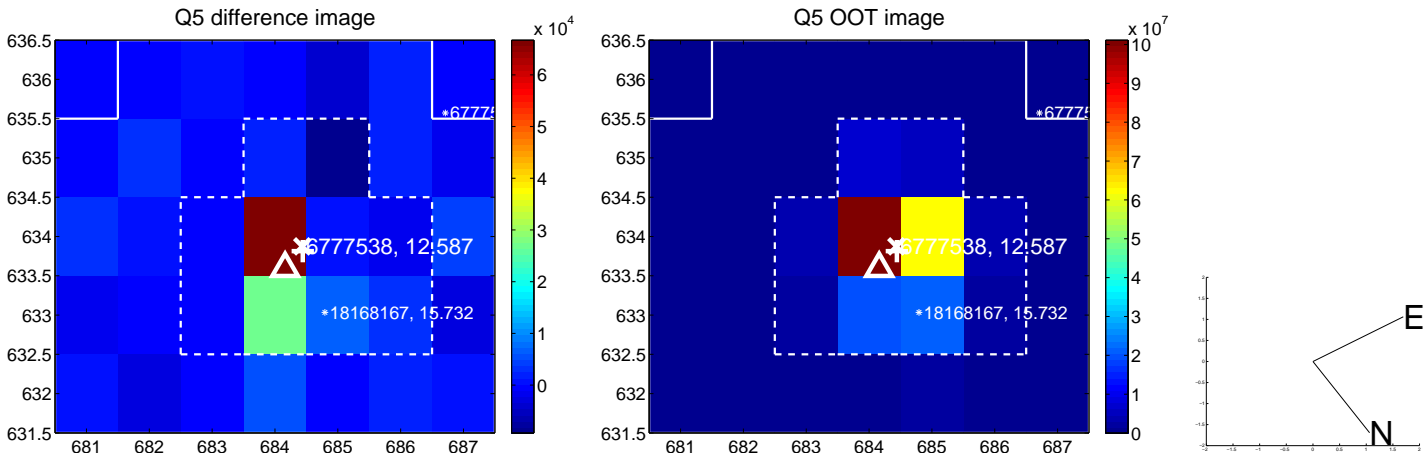


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

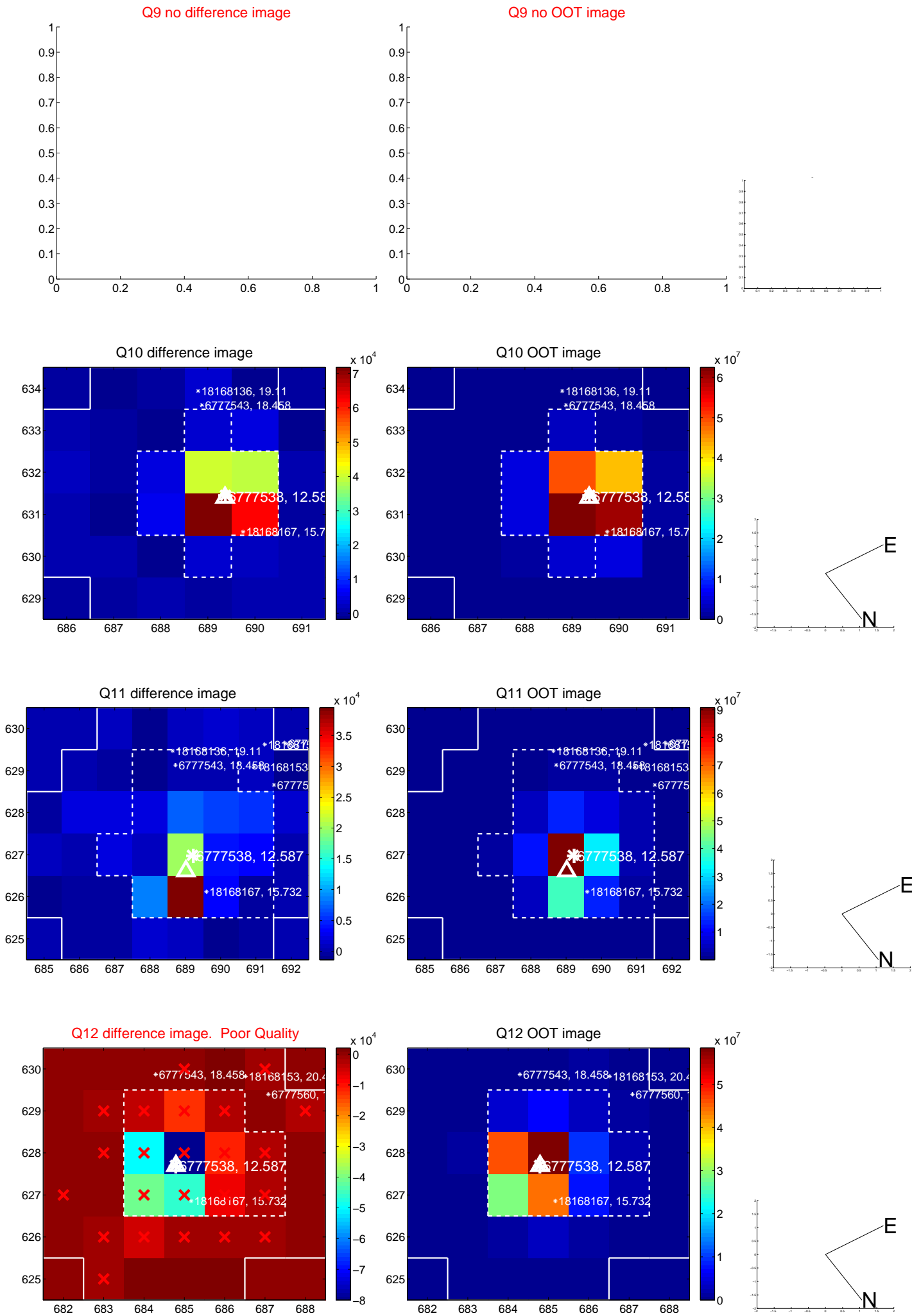
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



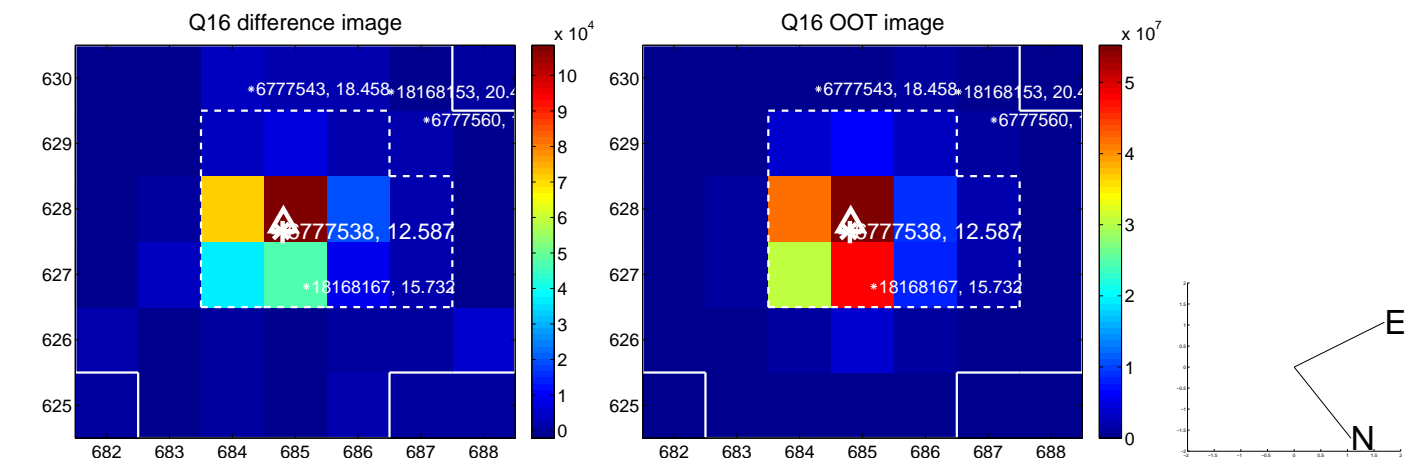
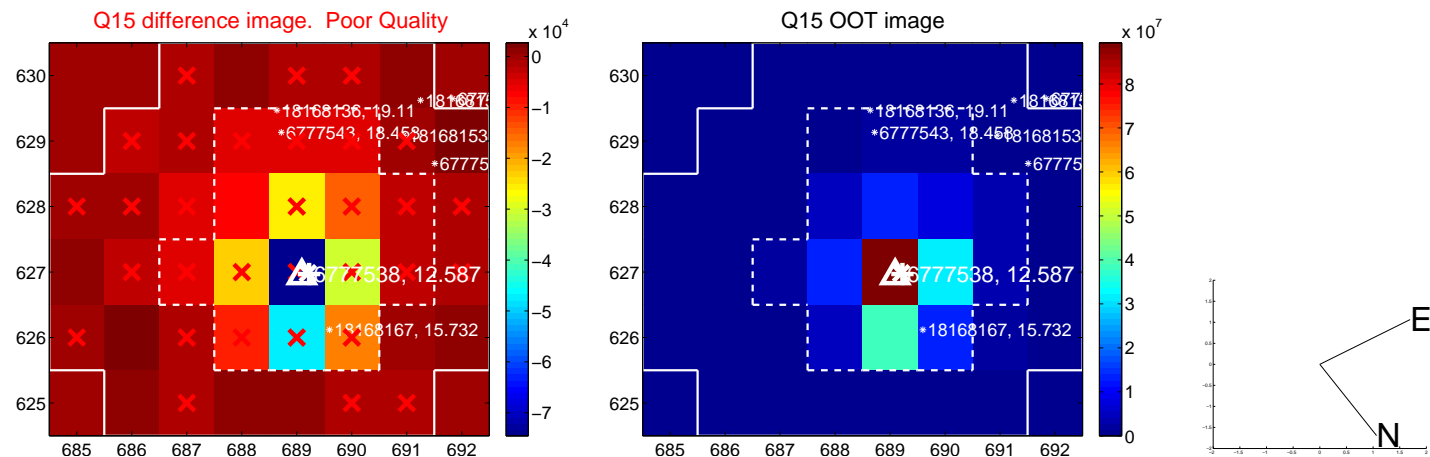
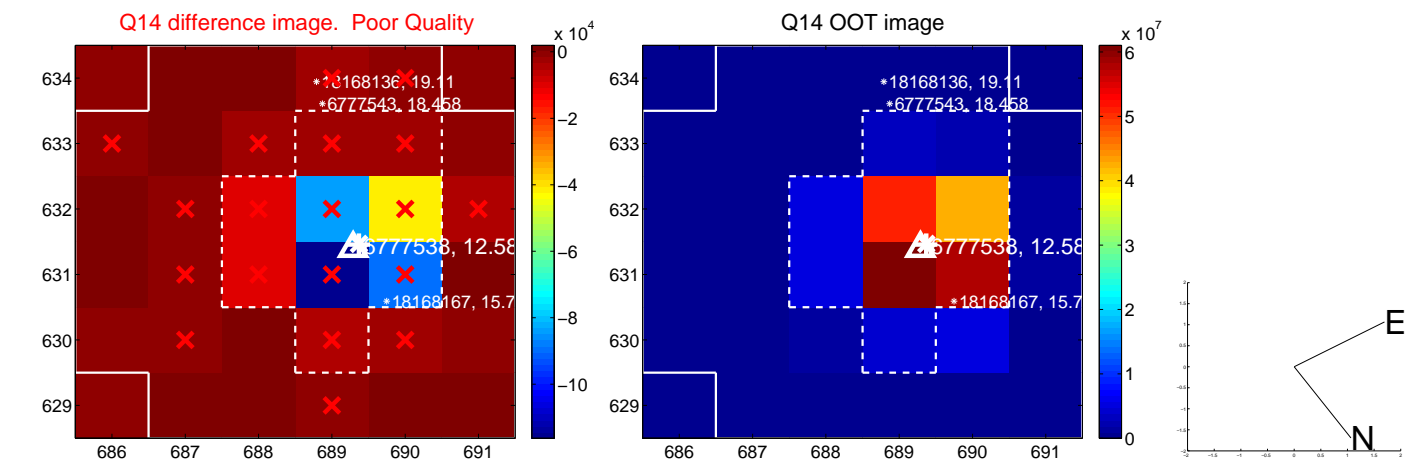
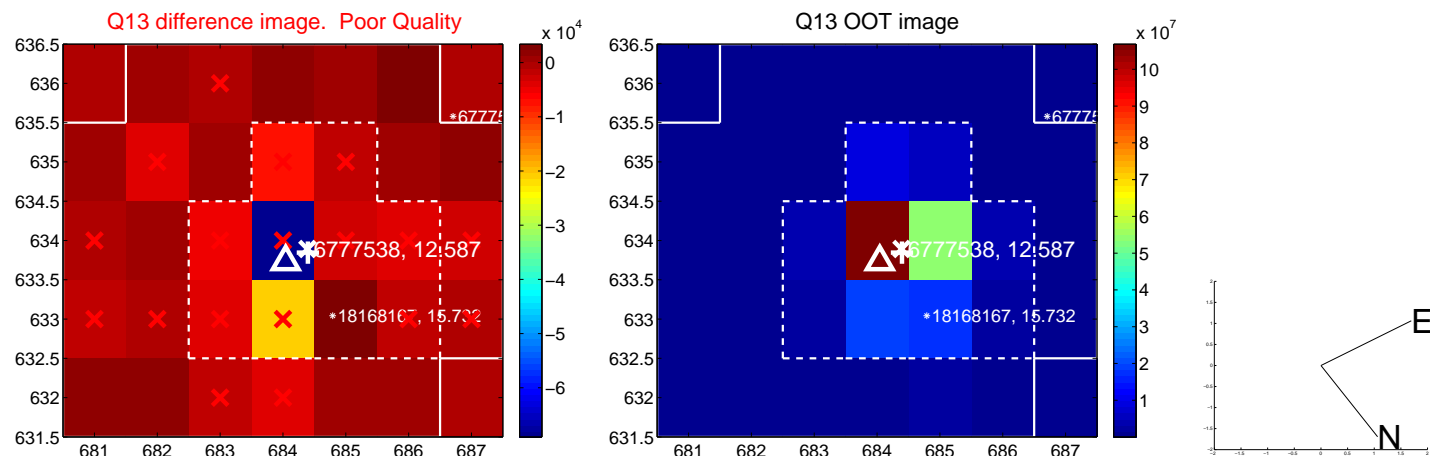
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



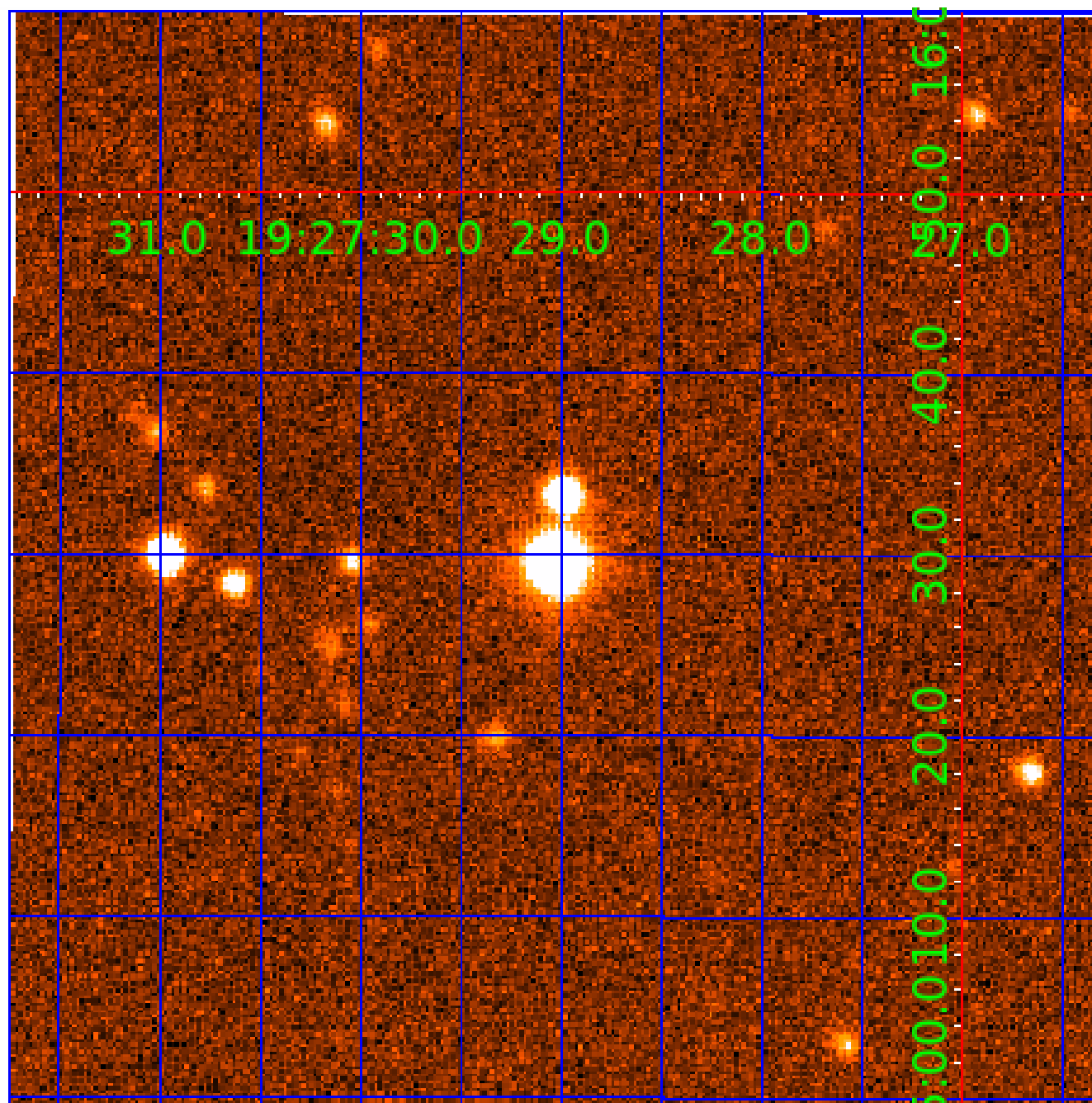
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination



KIC 006777538

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})
006777538-01	OBS	No	0.526731	131.599111	5.7	3.728	14.5	1.7	5.26	7055	1.58	0.00
006777538-02	OBS	No	44.260283	133.422797	936.5	3.613	15.1	14.7	5.26	7055	30.14	632.60
006777538-03	OBS	No	24.248735	138.159454	86.8	7.161	13.2	2.2	5.26	7055	5.04	1411.12
006777538-04	OBS	No	17.928323	138.897318	67.0	12.190	12.3	1.9	5.26	7055	4.67	2110.71
006777538-05	OBS	No	34.502910	149.769446	1108.7	0.583	13.5	8.1	5.26	7055	18.77	881.74
006777538-06	OBS	No	60.582034	187.125078	684.4	1.774	11.0	7.9	5.26	7055	14.36	416.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006777538-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
006777538-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006777538-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006777538-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
006777538-05	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV
006777538-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV

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

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

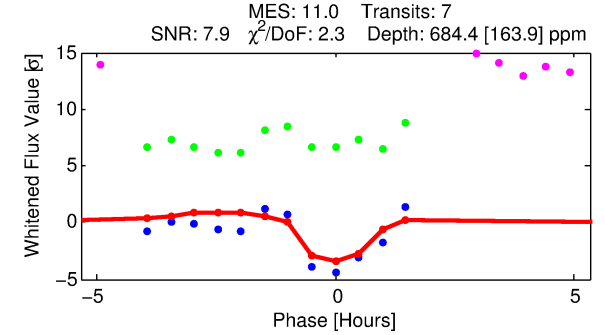
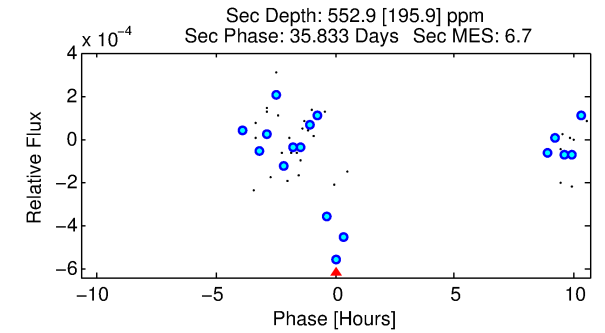
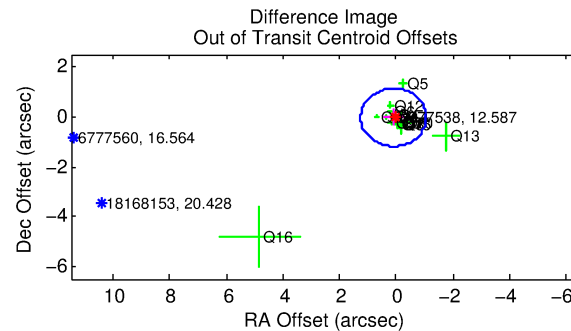
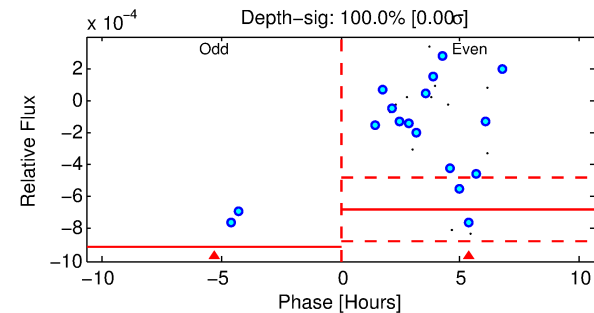
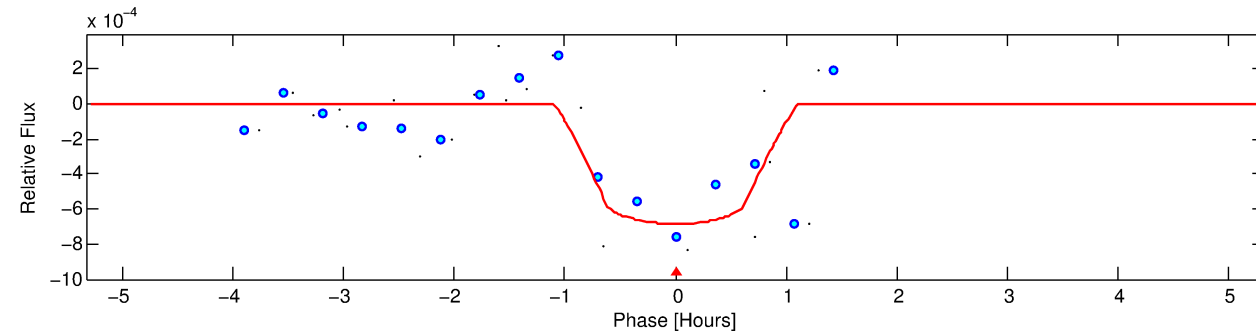
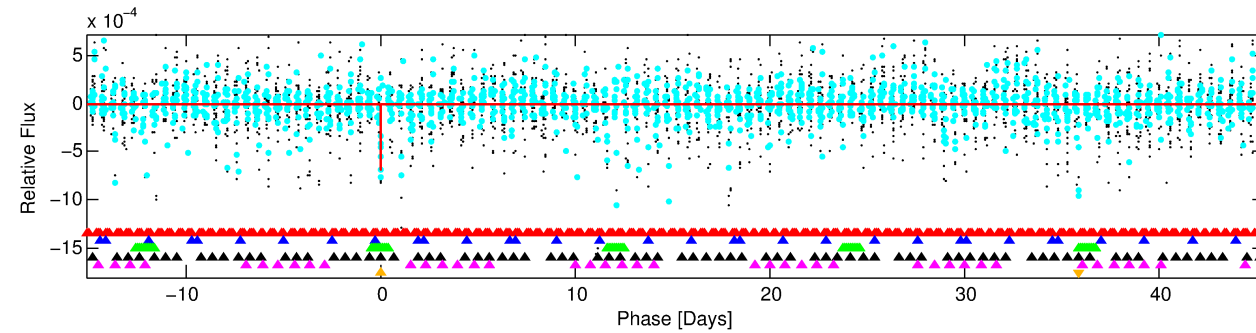
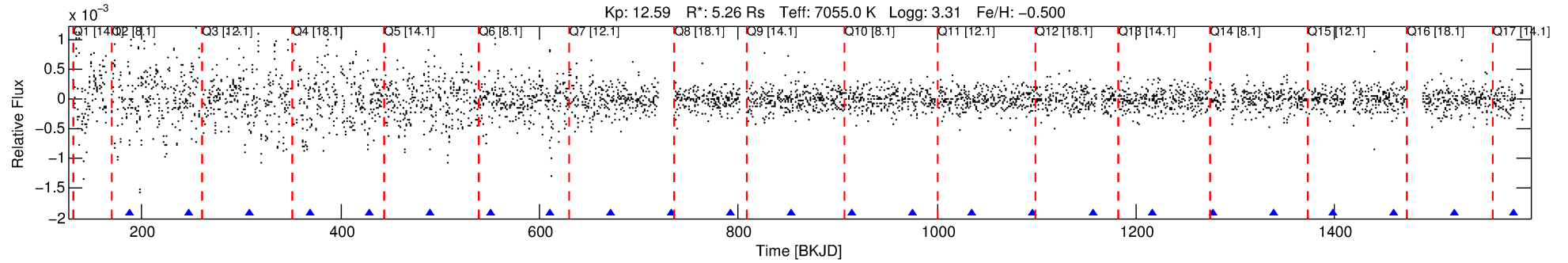
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006777538-06

No Significant Match Found

DV One-Page Summary

KIC: 6777538 Candidate: 6 of 6 Period: 60.582 d



DV Fit Results:

Period = 60.58203 [0.00311] d
Epoch = 187.1251 [0.0187] BKJD
Rp/R* = 0.0250 [0.0532]
a/R* = 229.09 [2665.84]
b = 0.53 [16.48]
Seff = 416.25 [328.67]
Teq = 1152 [227] K
Rp = 14.36 [31.37] Re
a = 0.3845 [0.1858] AU
Ag = 217.95 [945.71] [0.23 σ]
Teffp = 6842 [7305] K [0.78 σ]

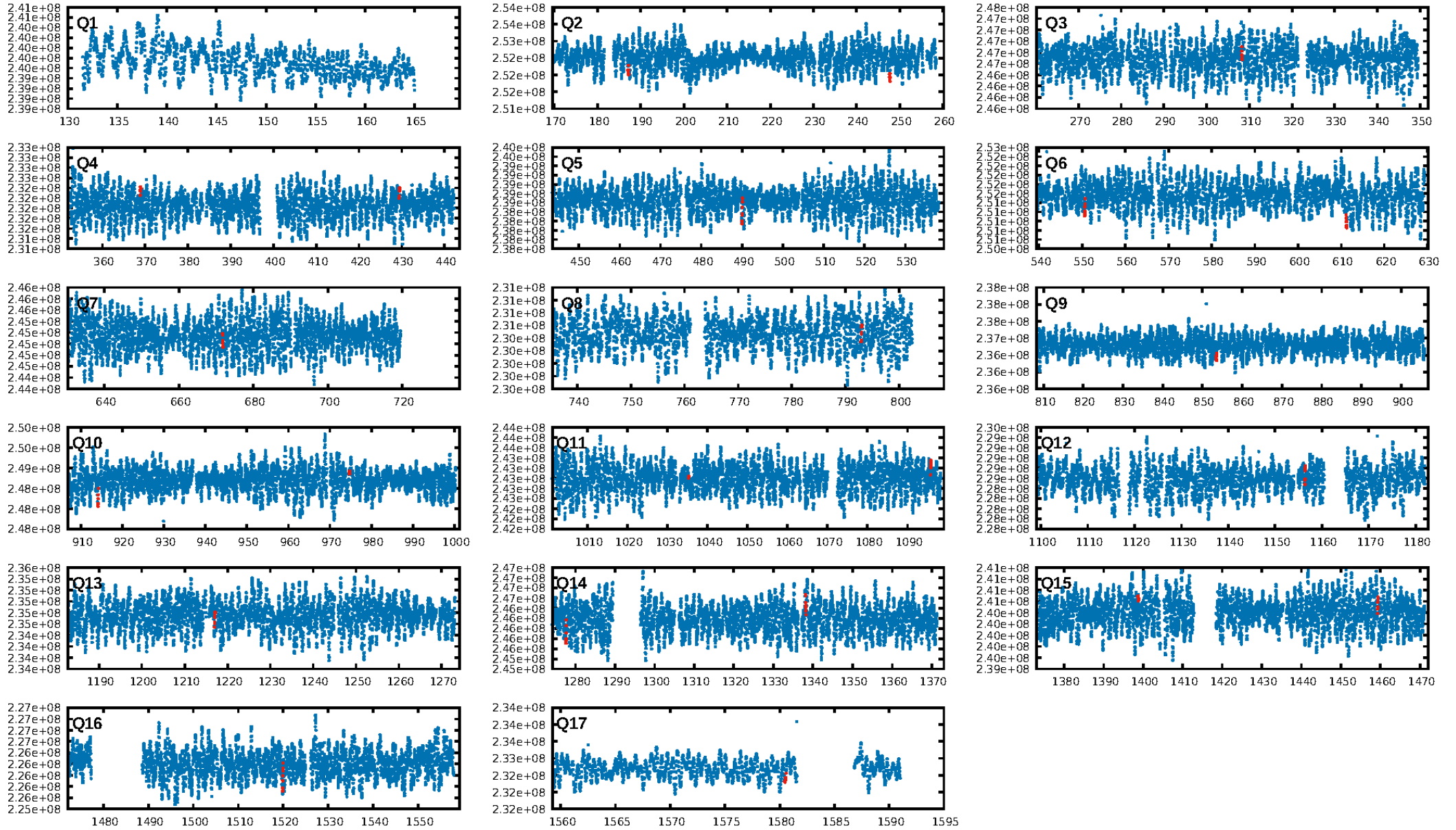
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [97.32 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 14.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.30e-17
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 0.7385
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.103 arcsec [0.27 σ]
KicOffset-rm: 0.080 arcsec [0.54 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.56 [9/16]
DiffImageOverlap-fno: 0.00 [0/16]

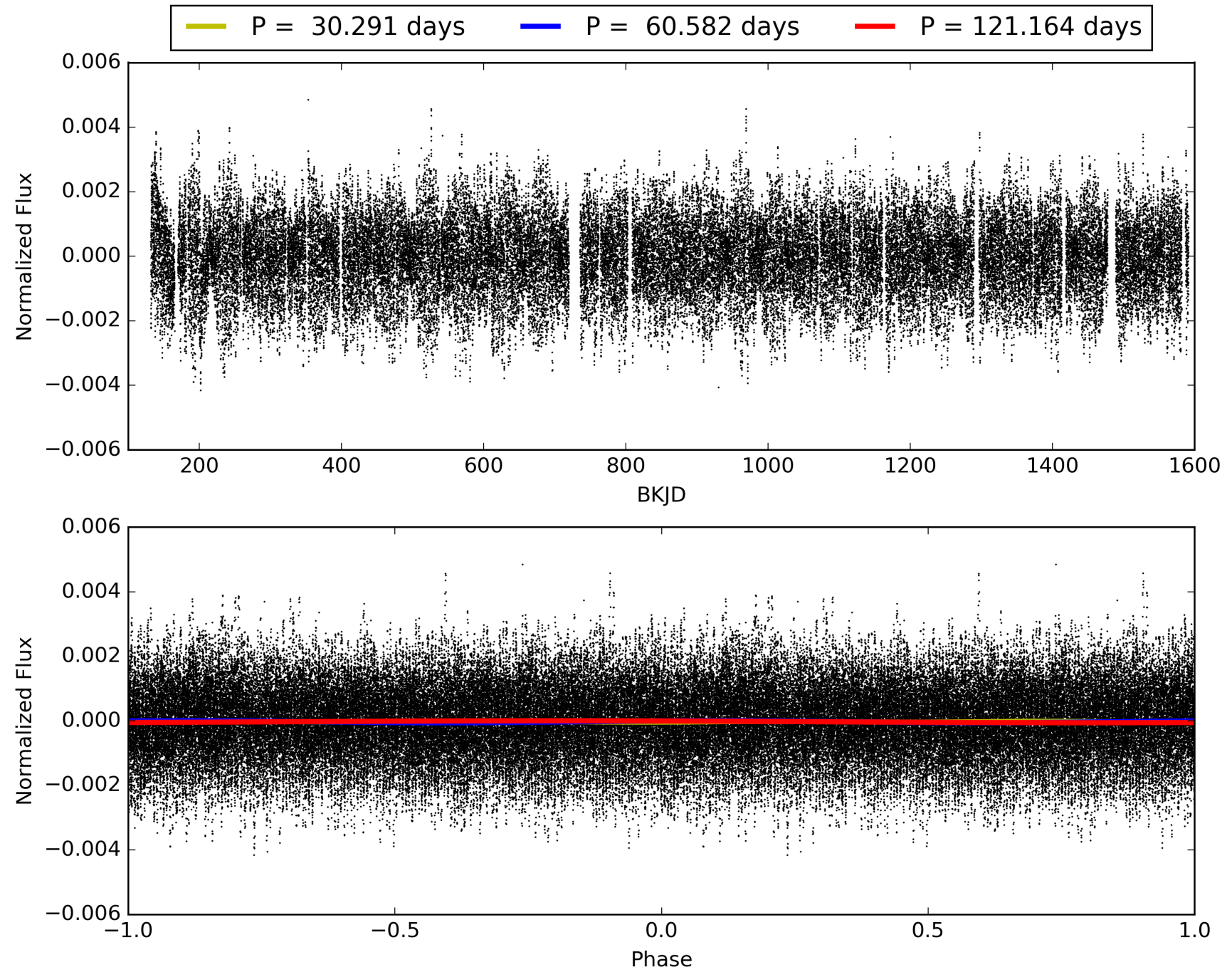
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:21:32 Z

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

TCE 006777538-06, PDC Light Curves

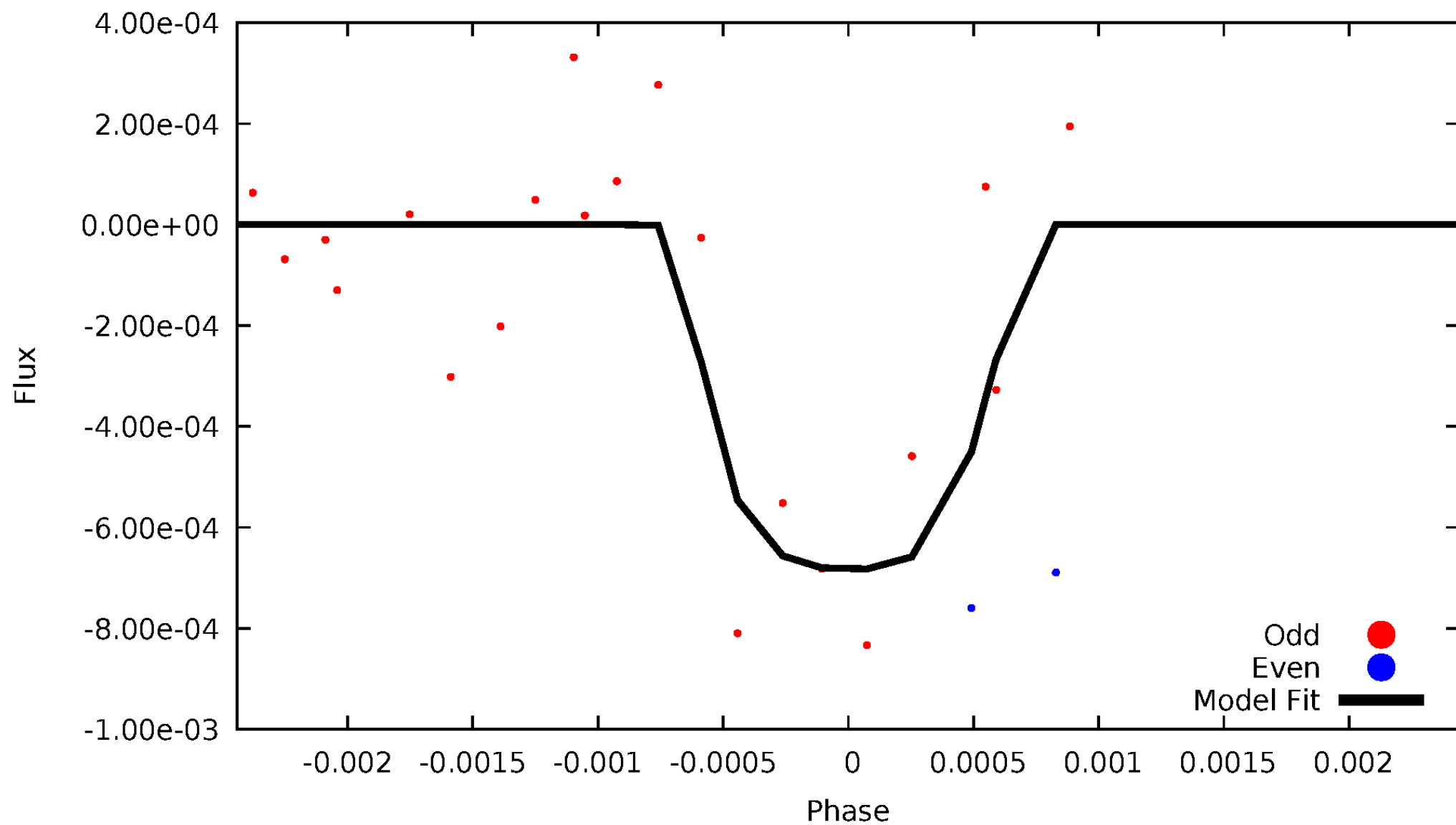


TCE 006777538-06



DV Odd/Even

TCE 006777538-06

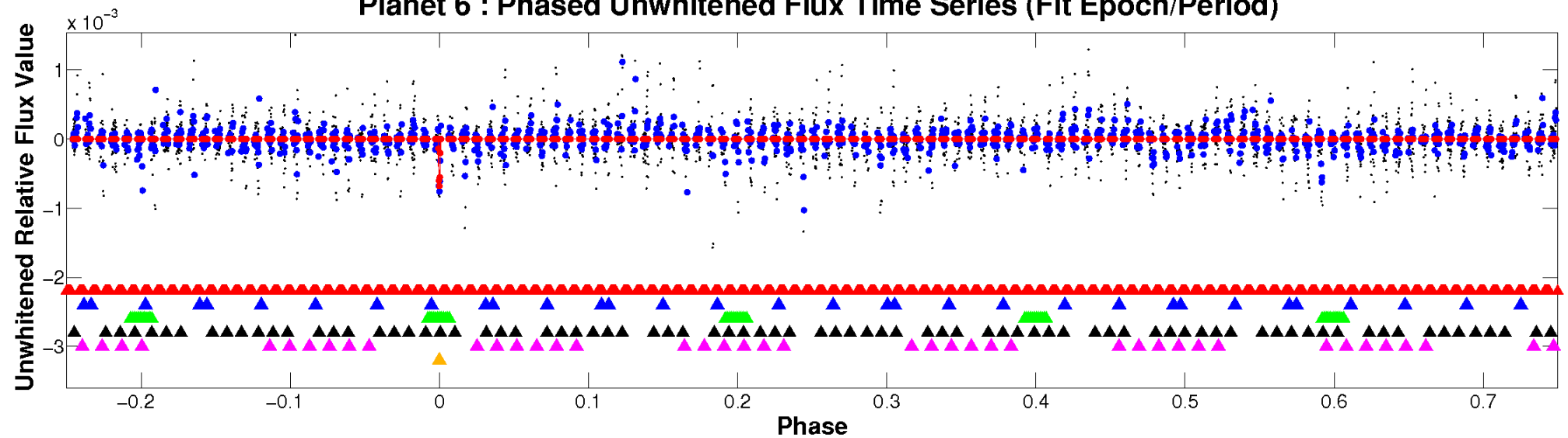


ALT Odd/Even

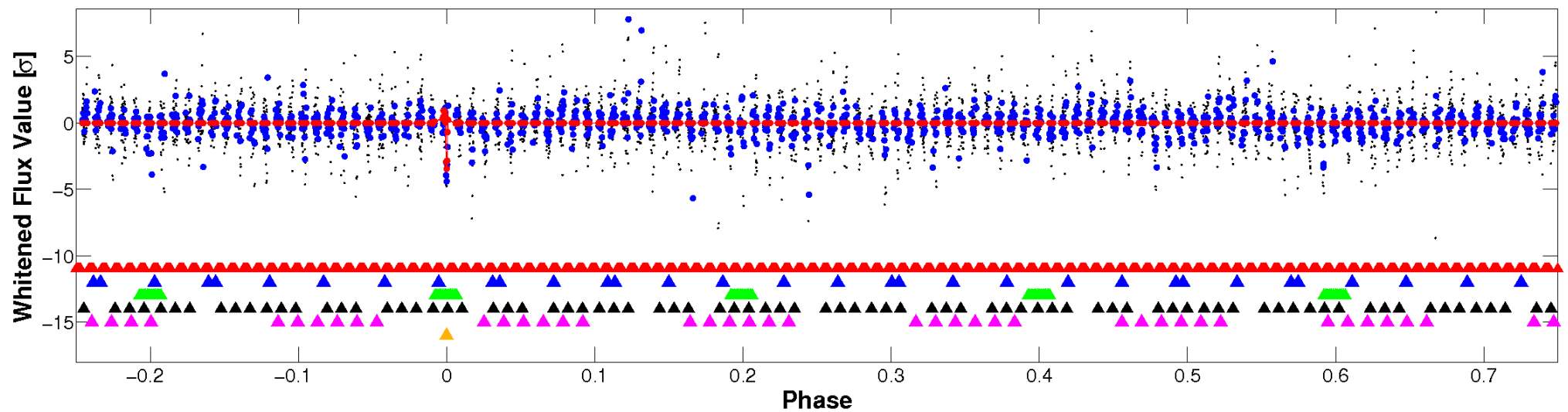
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

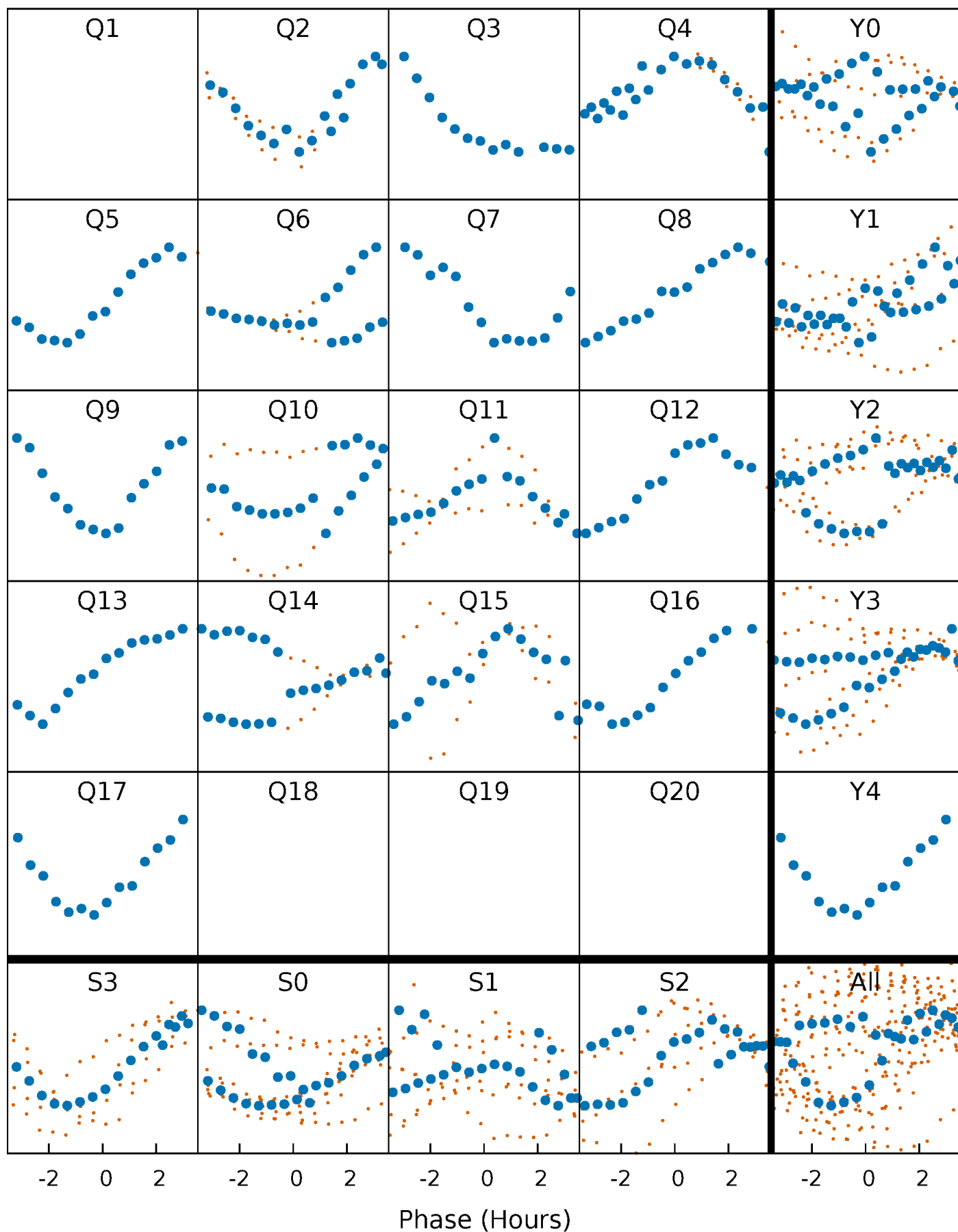


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



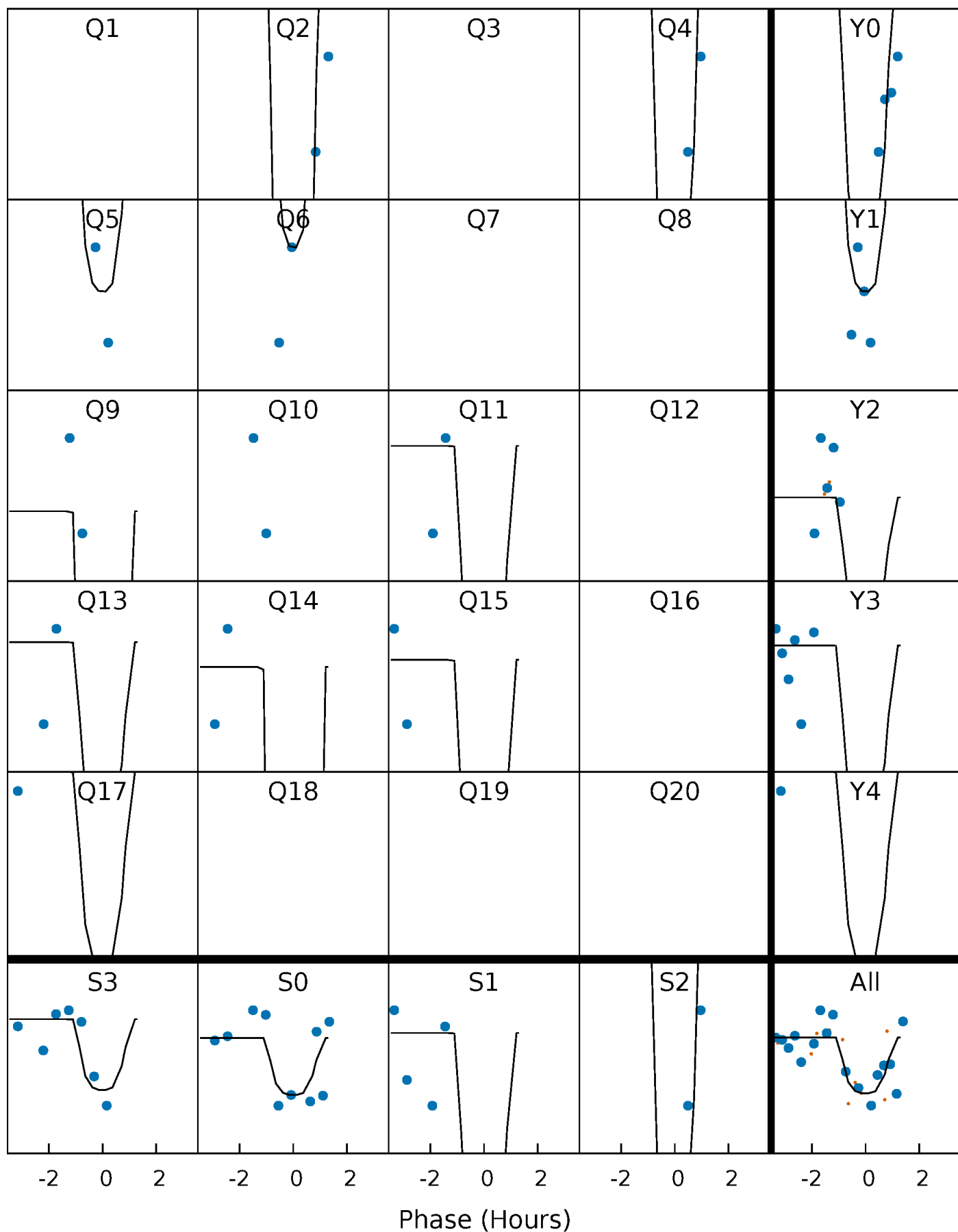
PDC Quarter-Phased Transit Curves

TCE 006777538-06 P= 60.582034 Days $T_0=187.125078$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 006777538-06 $P = 60.582034$ Days $T_0 = 187.125078$ (BKJD)

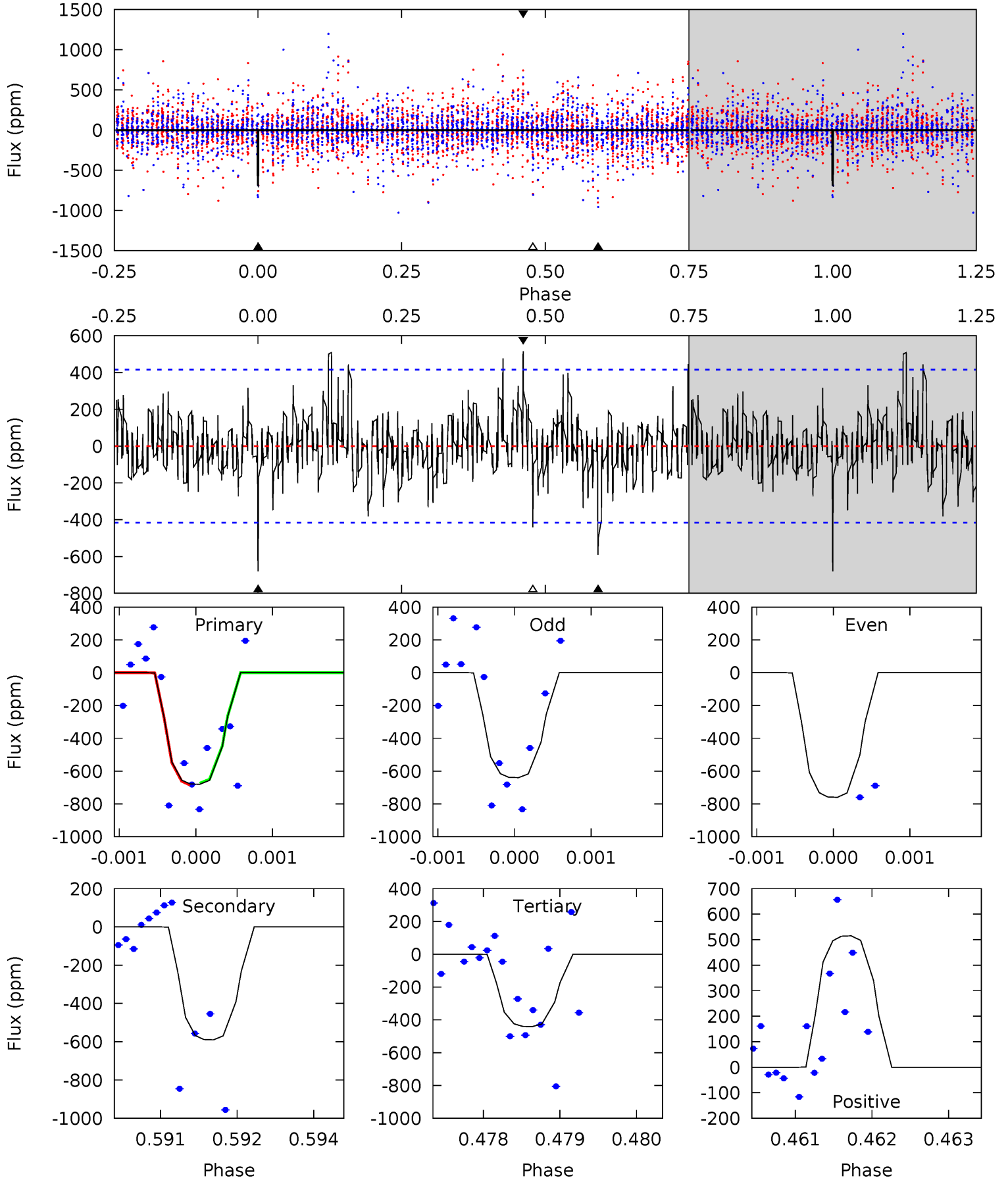


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

006777538-06, P = 60.582034 Days, E = 126.543044 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.81	7.64	5.71	6.67	5.39	3.19	1.44	3.10	2.14	1.93	0.97	0.65	0.96	0.43	0.07



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 006777538

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7055^{+190}_{-233}	$3.310^{+0.459}_{-0.081}$	$-0.500^{+0.350}_{-0.300}$	$5.265^{+1.120}_{-2.614}$	$2.063^{+0.059}_{-0.558}$	$0.020^{+0.094}_{-0.007}$
	+3%/-3%	+14%/-2%	+70%/-60%	+21%/-50%	+3%/-27%	+473%/-33%
Source	PHO1	FLK73	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 006777538-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-590 ± 77	$22.59^{+22.20}_{-15.25}$	1532^{+122}_{-183}	5154^{+3905}_{-1223}	93^{+736}_{-71}
Alt.	N/A	N/A	N/A	N/A	N/A

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 $A_{obs} \gg 1.0$

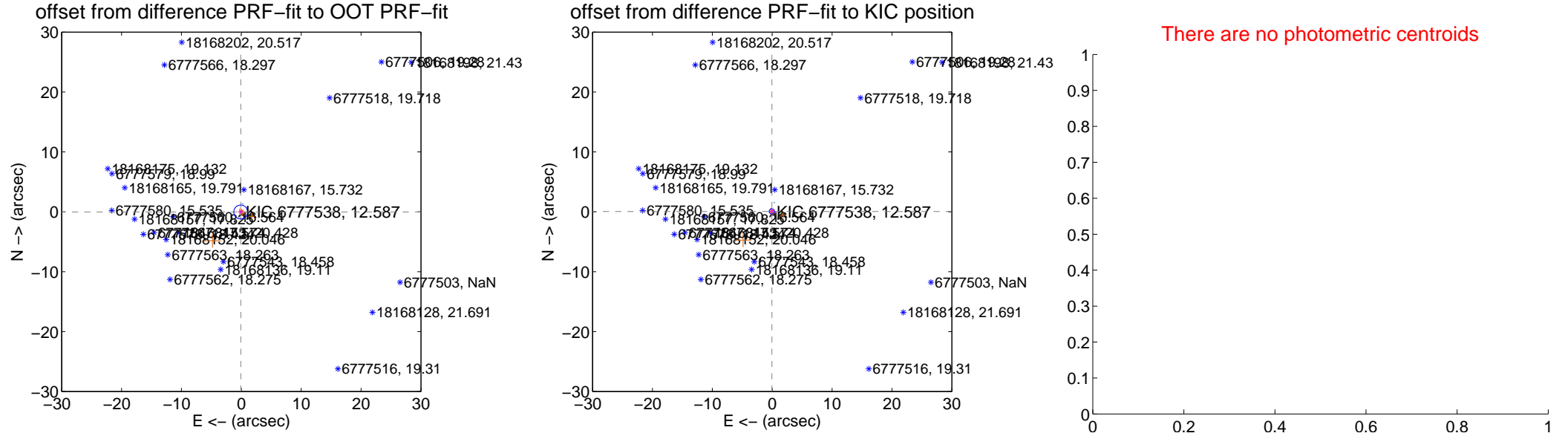
DV Centroid Data

Supplemental centroid analysis for 006777538-06. Kepler magnitude: 12.59. Transit SNR 7.94

There are 9 quarters with good PRF difference image offsets

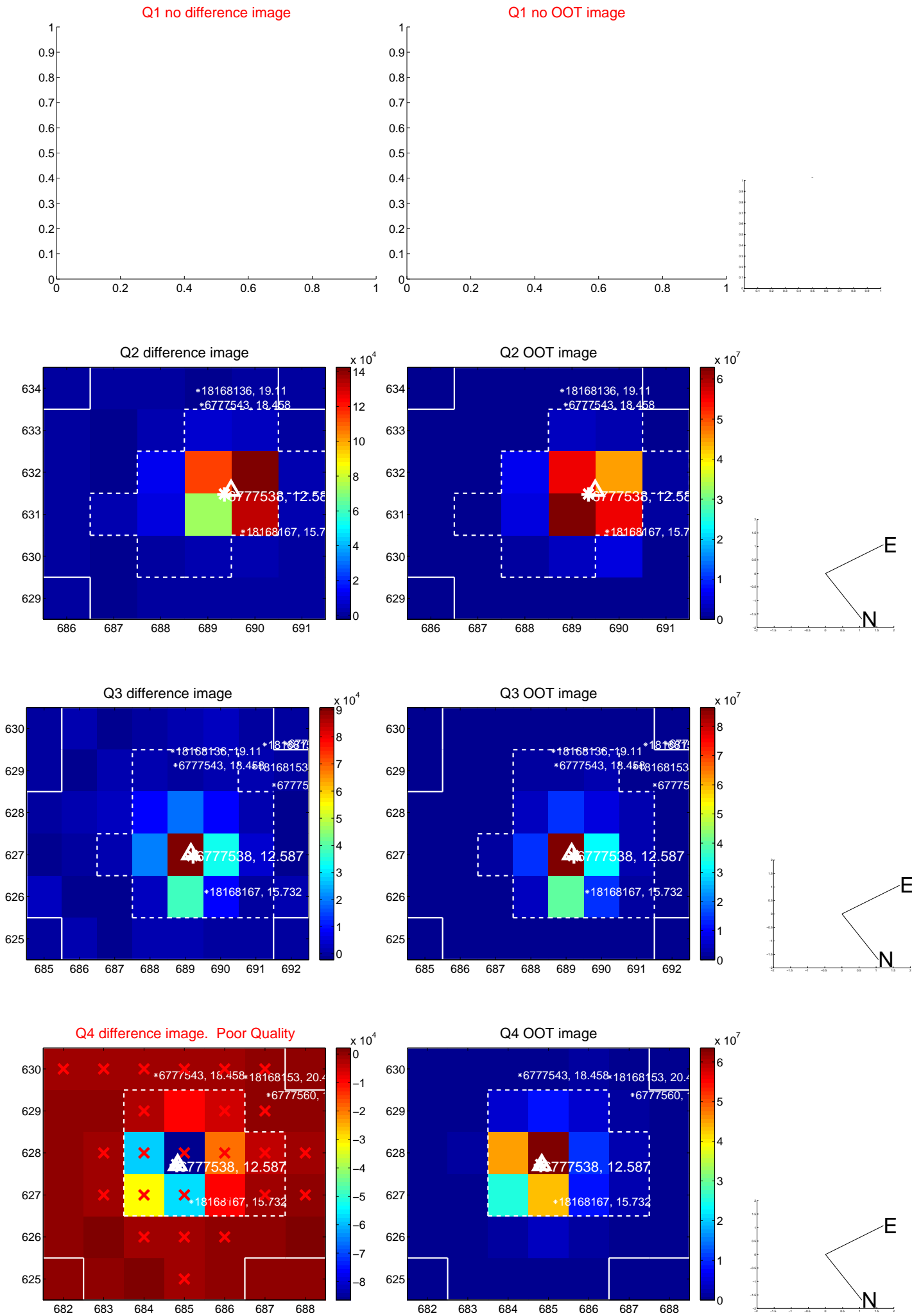
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.103 ± 0.386	0.27	0.099 ± 0.331	-0.027 ± 0.309
PRF-fit source offset from KIC position	0.080 ± 0.148	0.54	0.056 ± 0.326	0.056 ± 0.294
photometric centroid source offset	—	—	—	—

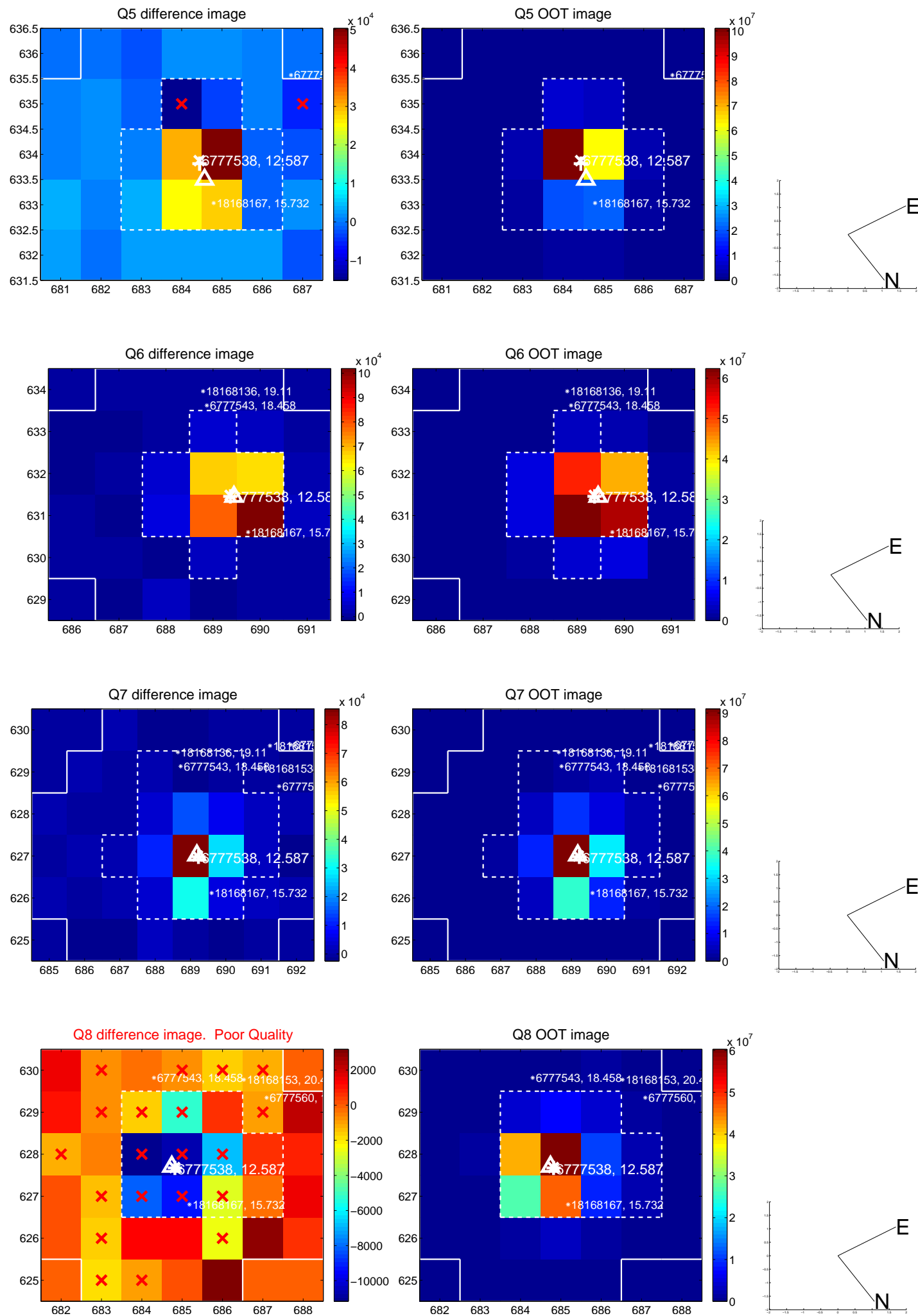


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

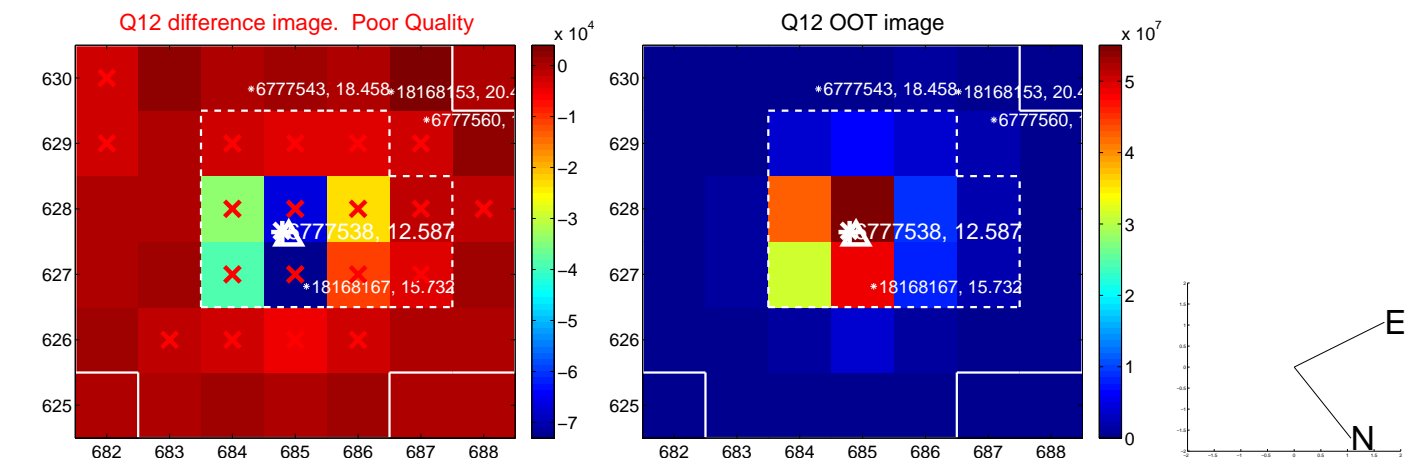
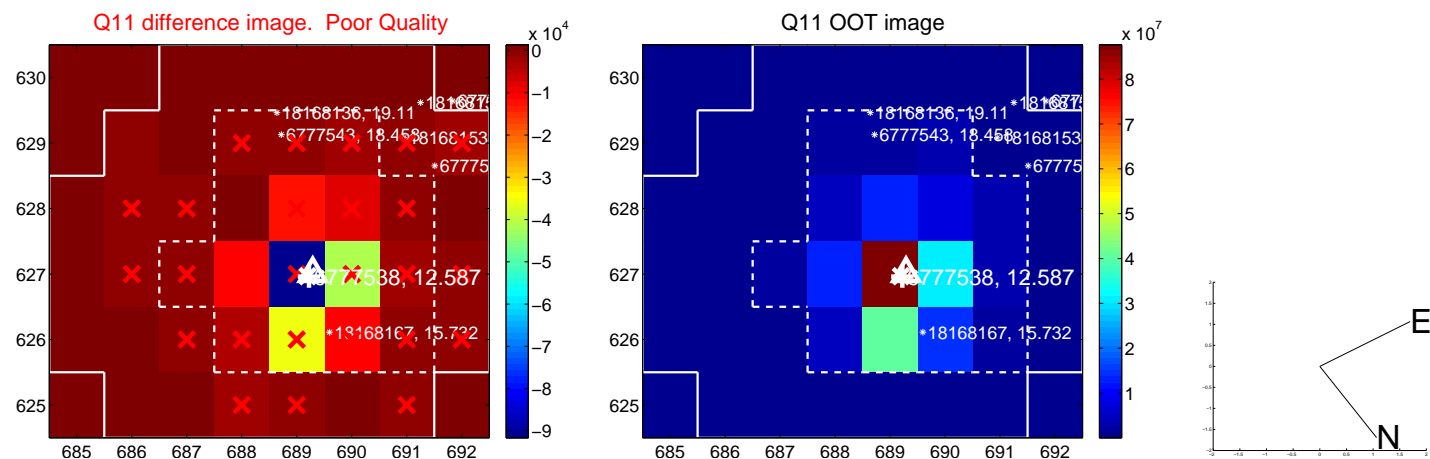
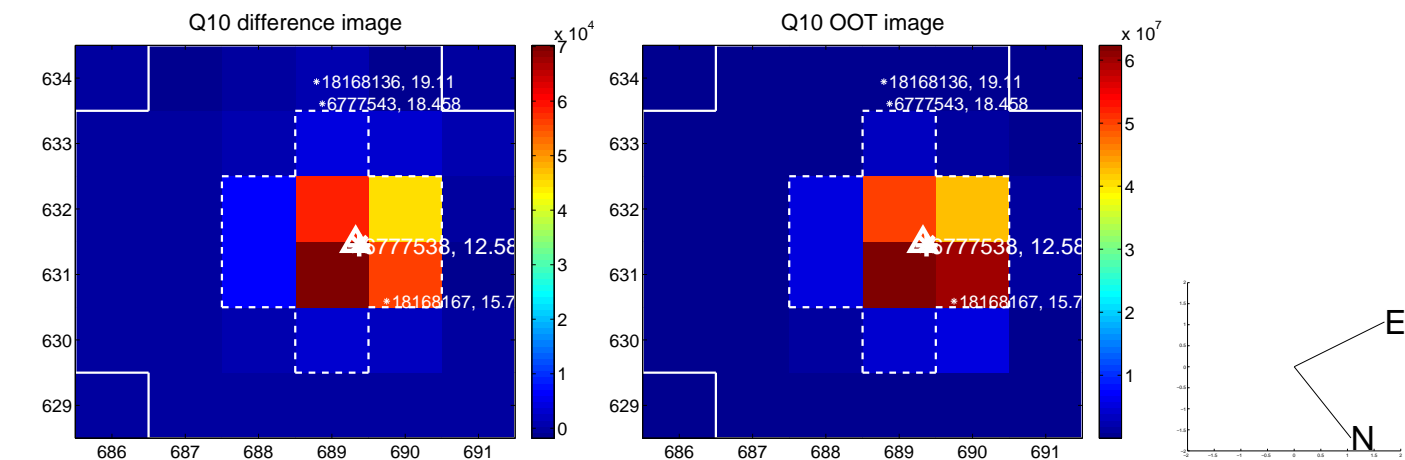
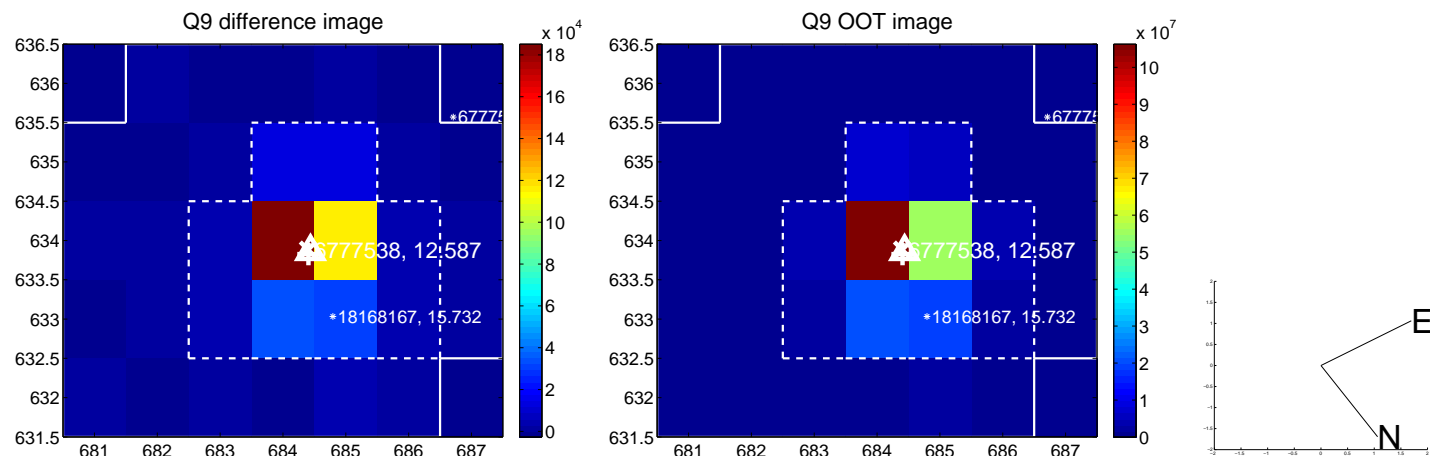
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



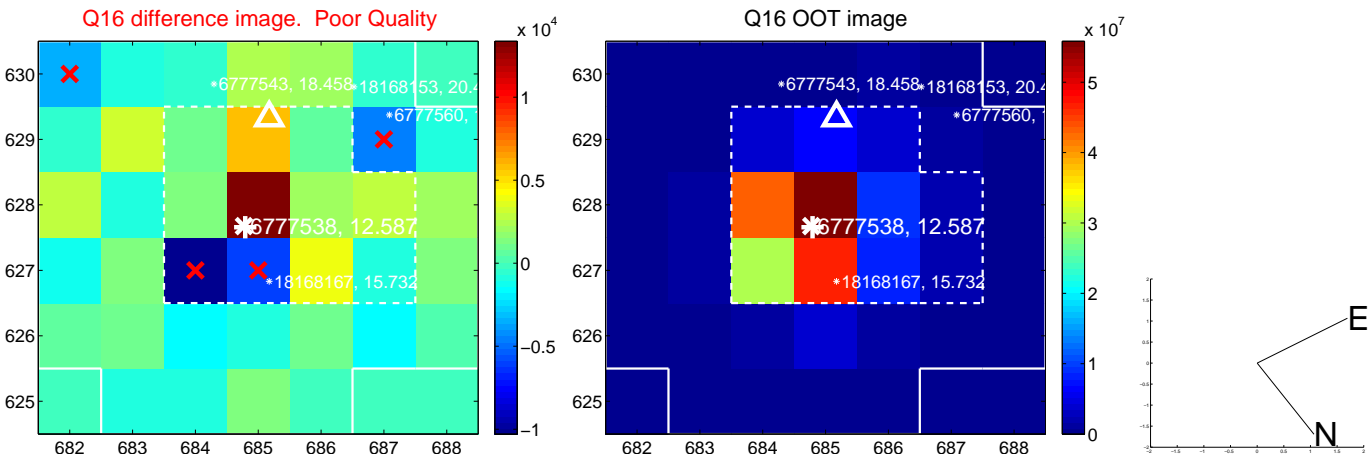
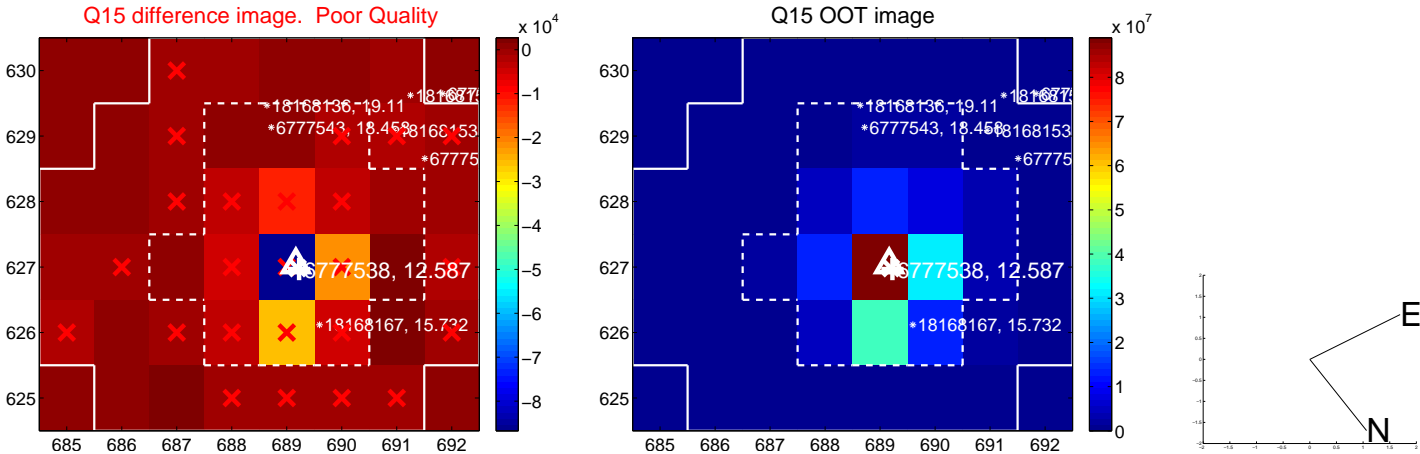
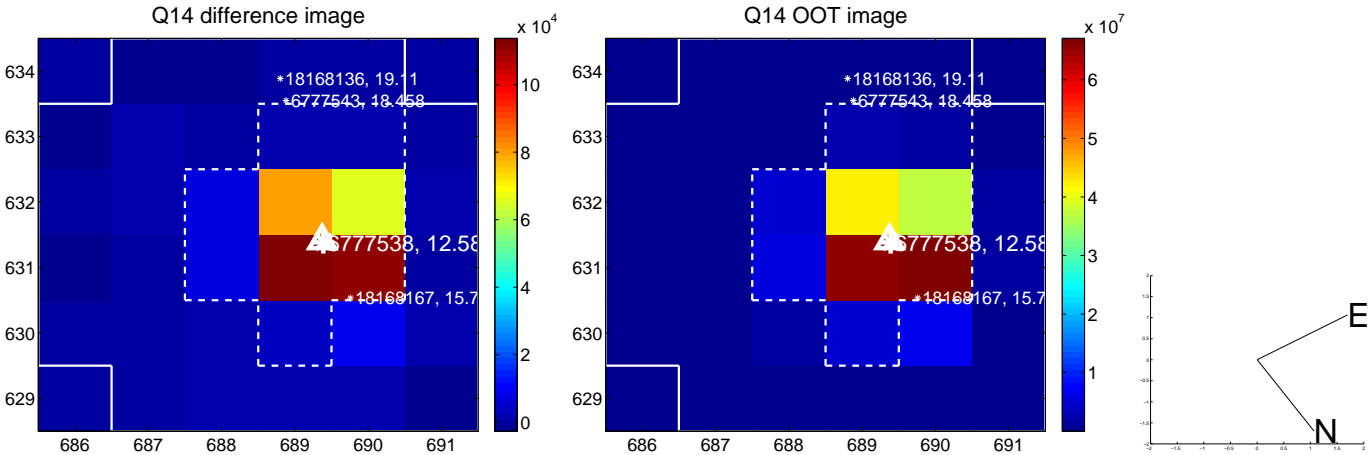
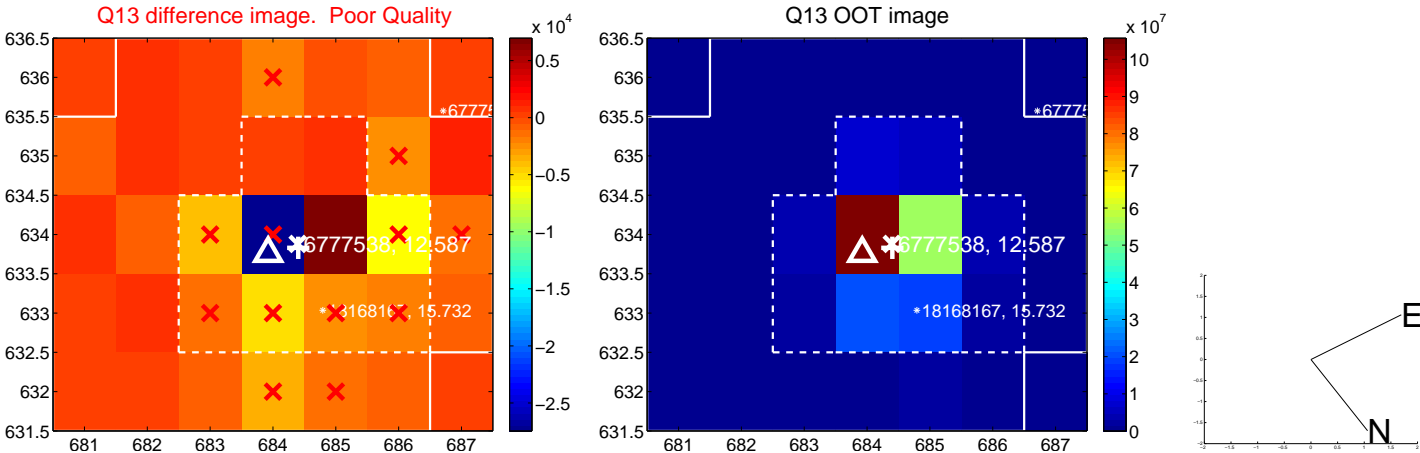
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



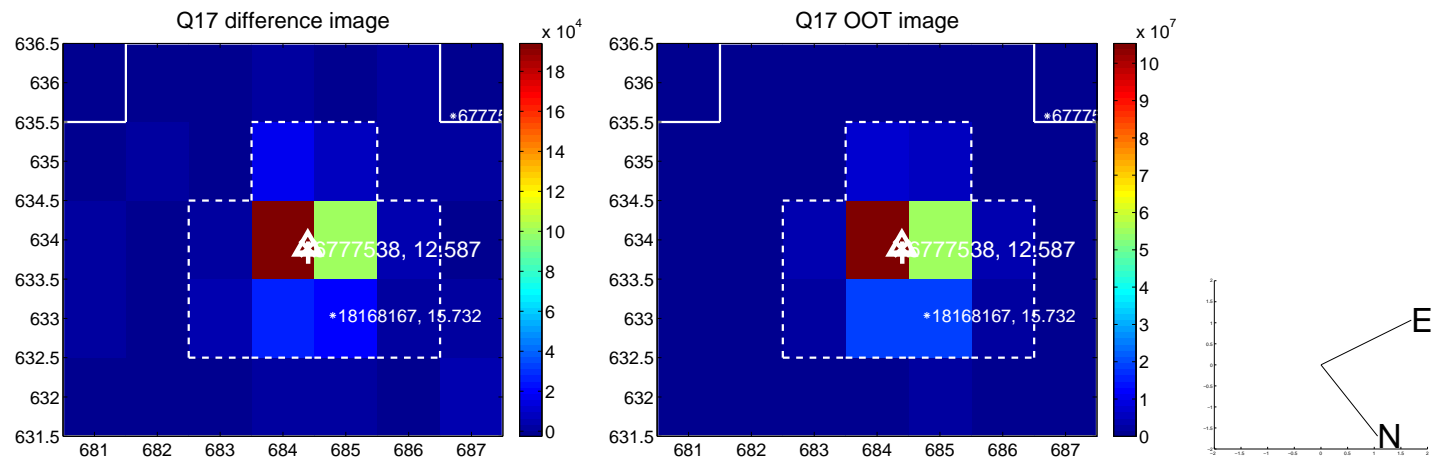
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



folded centroid time series figure for this object.

UKIRT Image

Declination

