

KIC 007677005

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})
007677005-01	OBS	6903.01	38.057656	142.412298	313054.4	5.000	13456.1	-1.0	1.42	6894	46.18	69.53
007677005-02	OBS	No	38.058129	134.579595	177838.8	12.282	6569.6	4465.8	1.42	6894	82.28	69.53
007677005-03	OBS	No	190.275709	143.543340	7221.9	17.782	420.7	133.8	1.42	6894	21.33	8.13
007677005-04	OBS	No	301.720179	184.285303	862.0	13.059	362.3	10.3	1.42	6894	4.77	4.40
007677005-05	OBS	No	190.461260	255.719357	10034.8	2.500	360.9	-1.0	1.42	6894	14.41	8.12
007677005-06	OBS	No	38.060334	141.291858	2277.7	10.500	273.9	-1.0	1.42	6894	6.84	69.52
007677005-07	OBS	No	38.060474	141.954746	16601.4	1.500	335.3	-1.0	1.42	6894	18.55	69.52
007677005-08	OBS	No	190.300020	257.088307	6355.5	3.000	275.5	-1.0	1.42	6894	11.44	8.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007677005-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
007677005-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
007677005-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT— SAME_NTL_PERIOD—CENT_FEW_DIFFS—HALO_GHOST
007677005-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007677005-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
007677005-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
007677005-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—RESIDUAL_TCE—CENT_NOFITS
007677005-08	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—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.

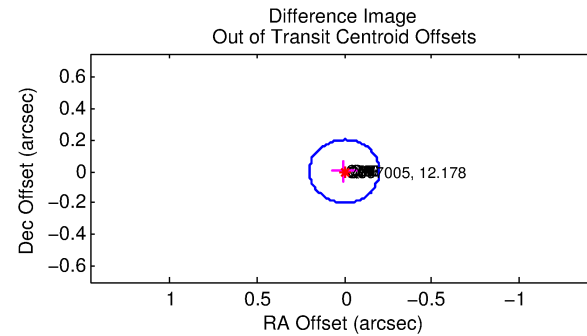
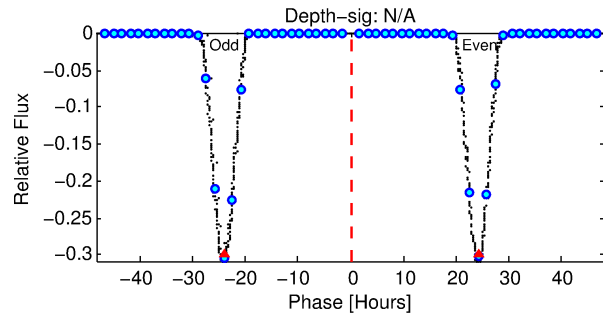
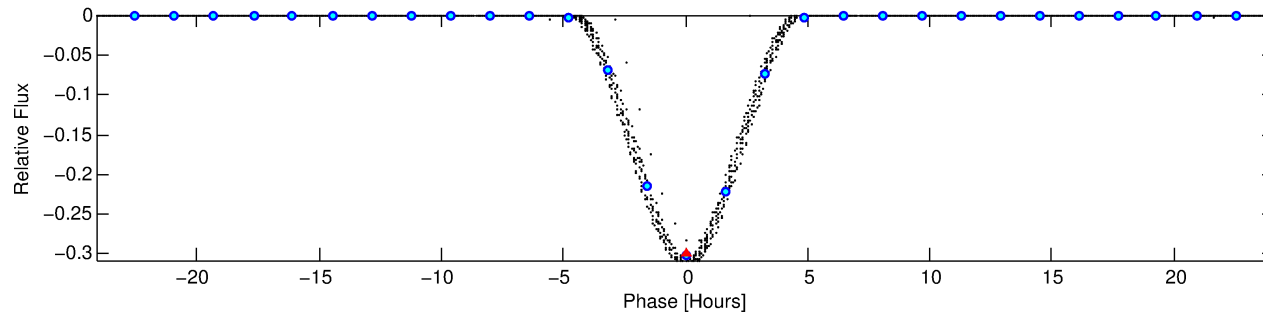
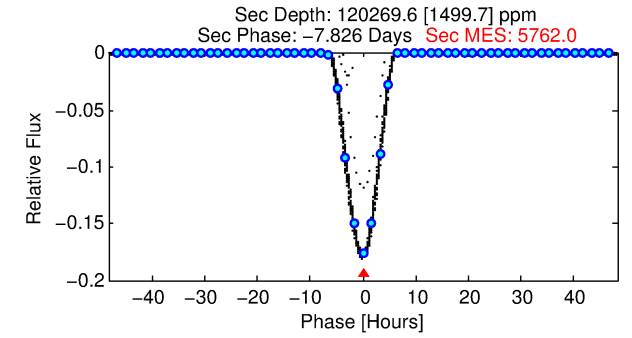
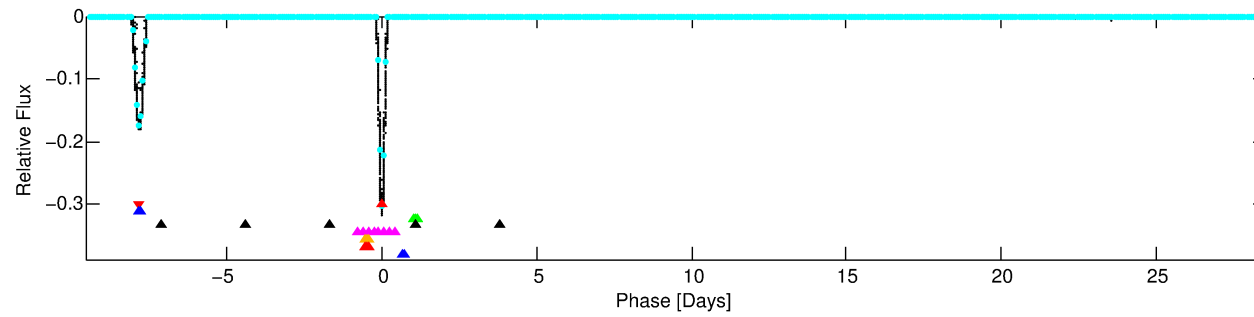
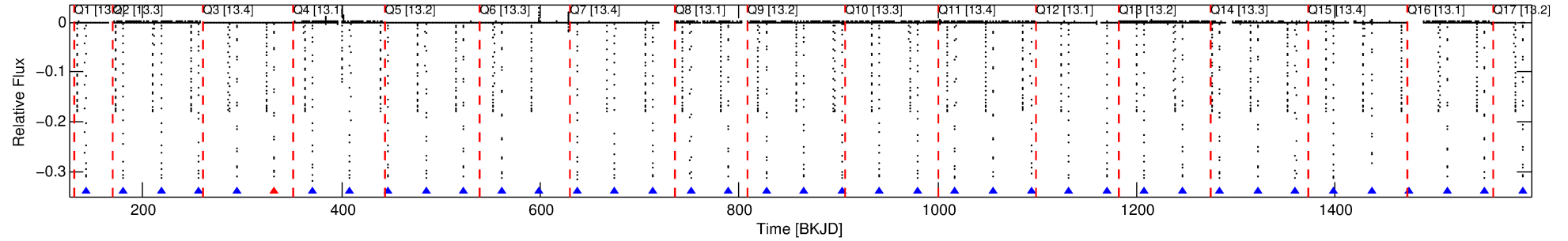
Ephemeris Match Information For 007677005-01

No Significant Match Found

DV One-Page Summary

KIC: 7677005 Candidate: 1 of 8 Period: 38.058 d
KOI: K06903.01 Corr: 0.753

Kp: 12.18 R*: 1.42 Rs Teff: 6894.0 K Logg: 4.25 Fe/H: -0.200



TPS TCE Results:

Period = 38.05766 d
Epoch = 142.4123 BKJD

DV fit results are unavailable

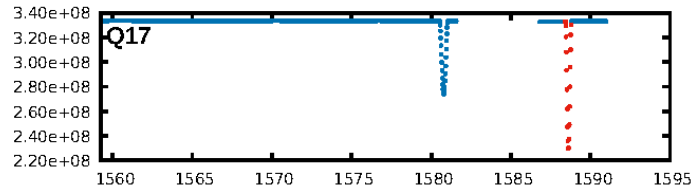
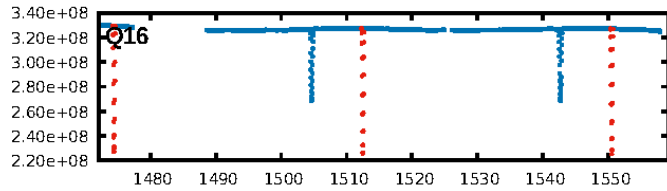
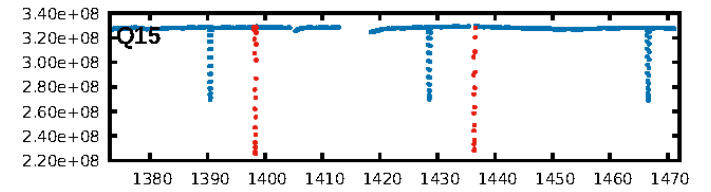
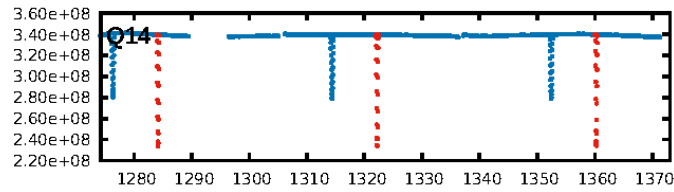
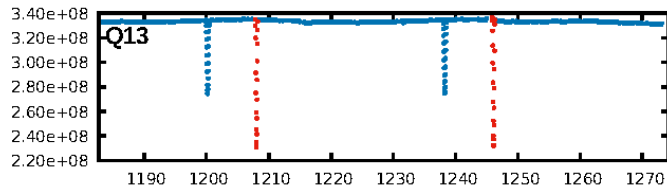
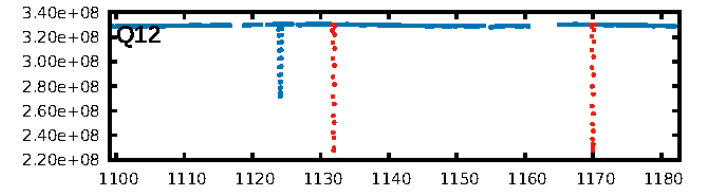
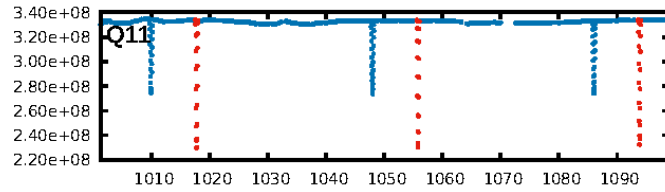
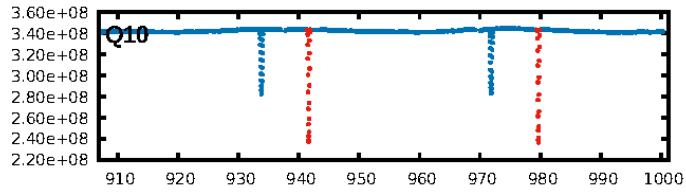
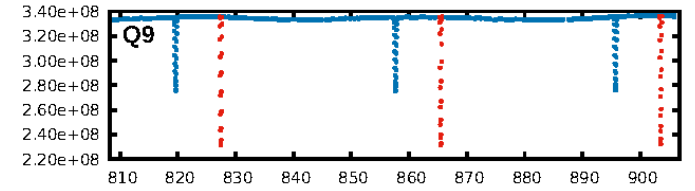
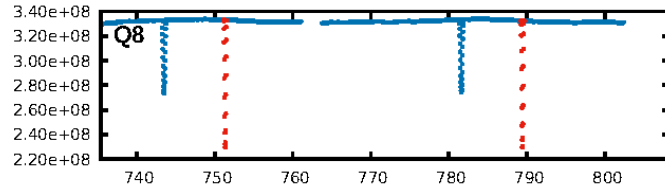
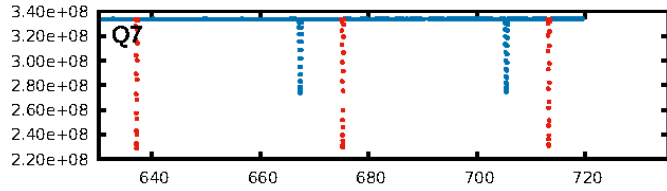
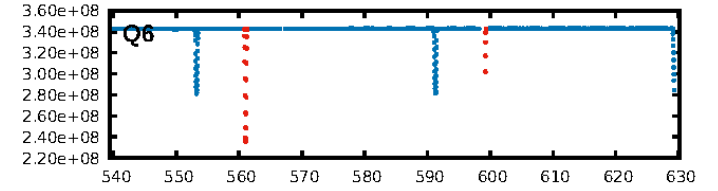
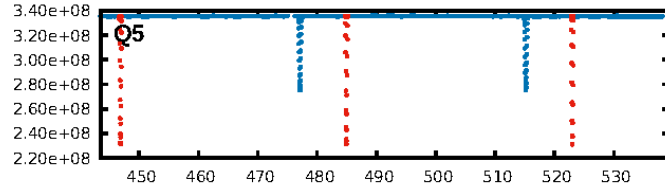
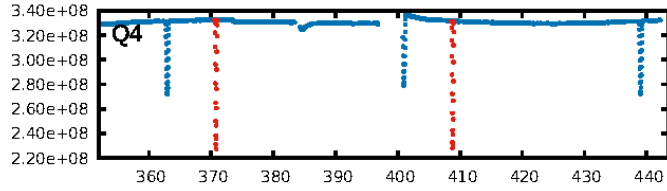
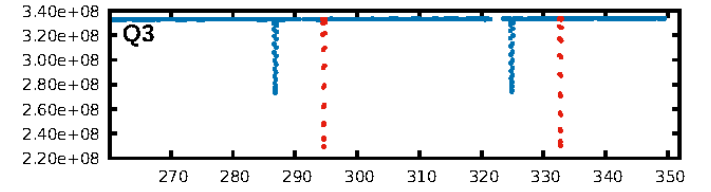
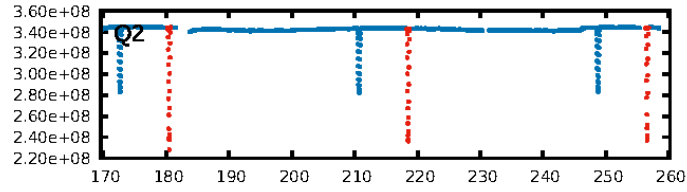
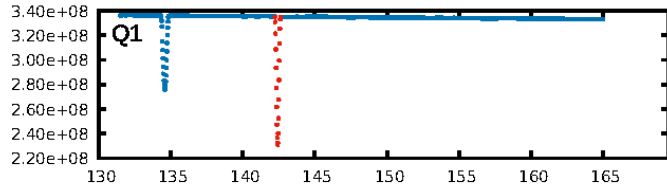
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.97 [35/36]
GhostDiagnostic-chr: 3.409
Centroid-sig: 0.0%
Centroid-so: 0.084 arcsec [314.88σ]
OotOffset-rm: 0.003 arcsec [0.05σ]
KicOffset-rm: 0.050 arcsec [0.72σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

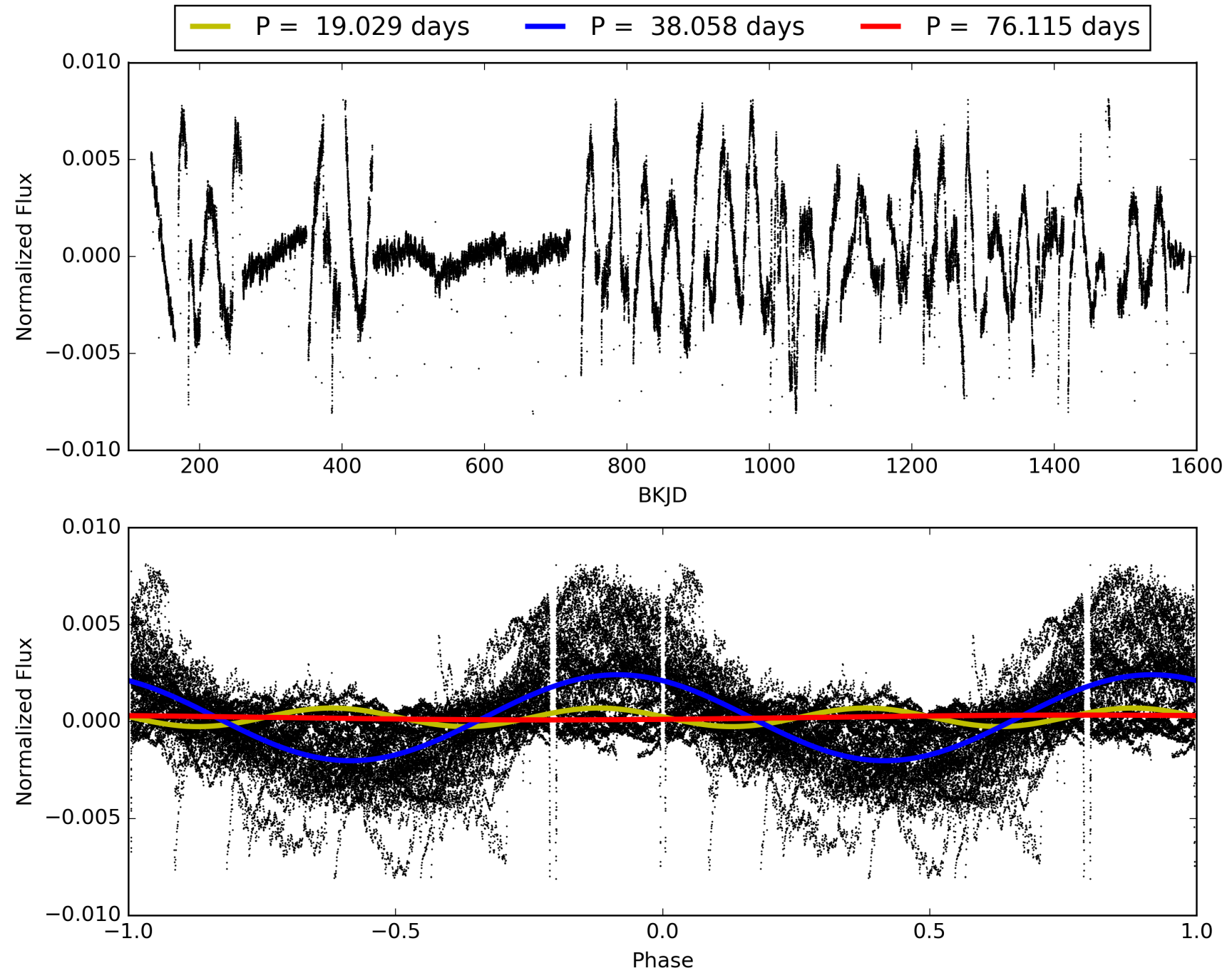
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007677005-01, PDC Light Curves

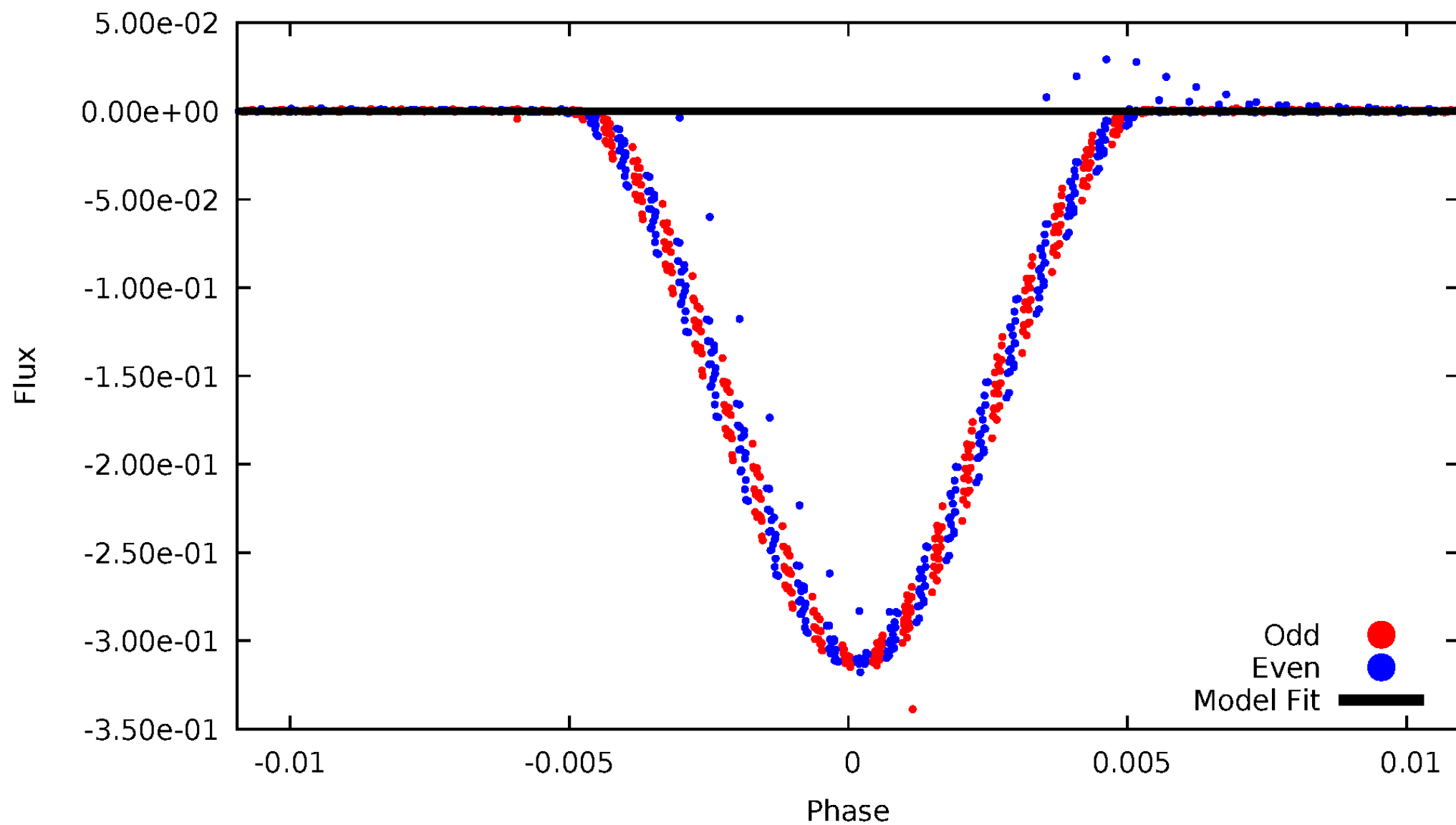


TCE 007677005-01



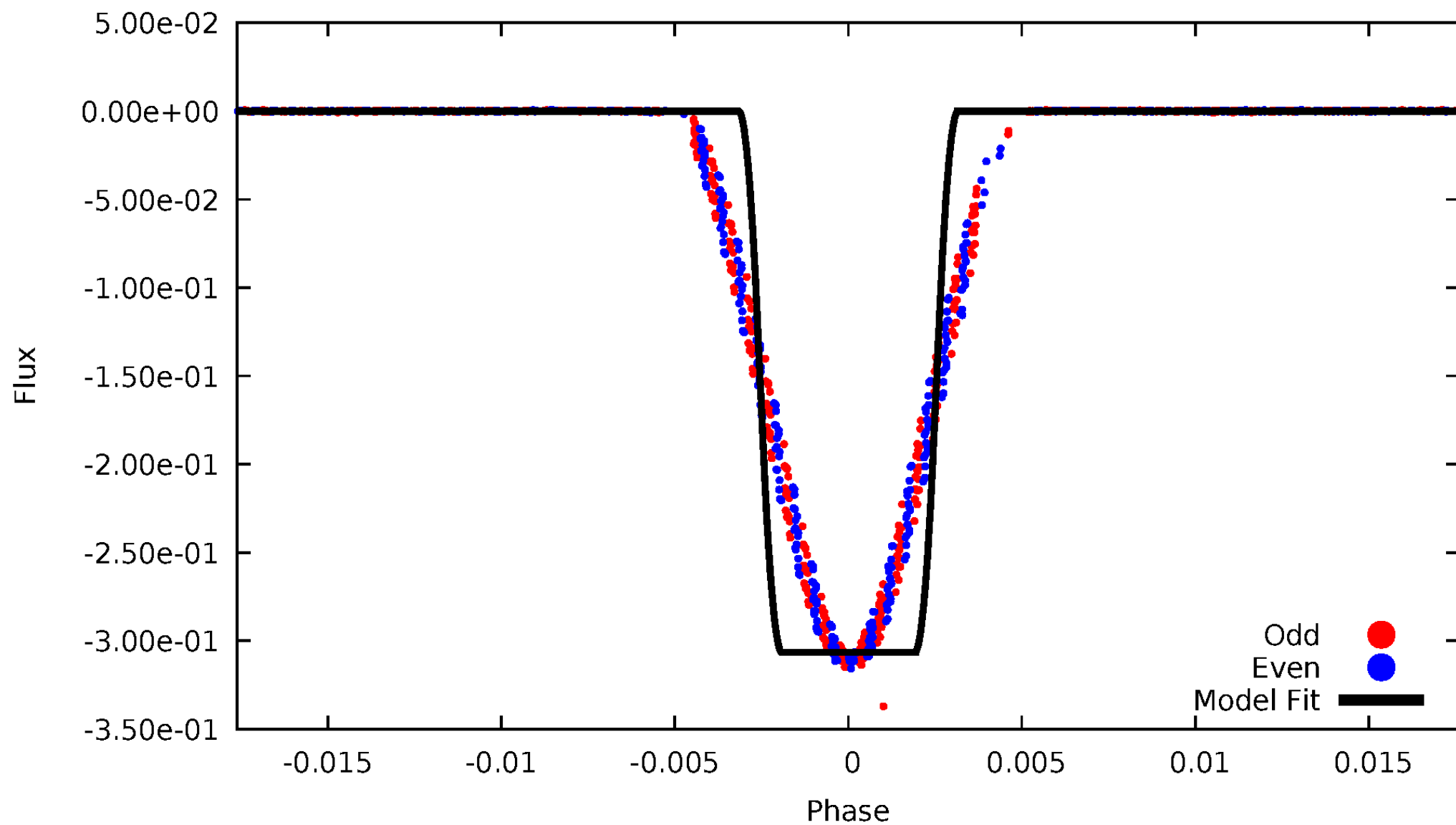
DV Odd/Even

TCE 007677005-01



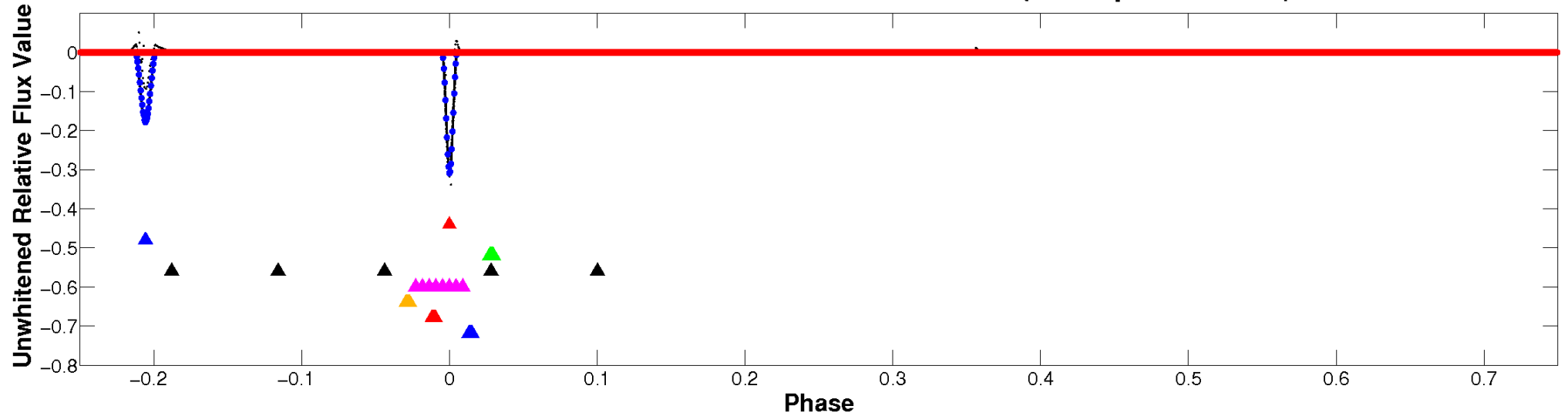
ALT Odd/Even

TCE 007677005-01



Non-Whitened Vs. Whitened Light Curve

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

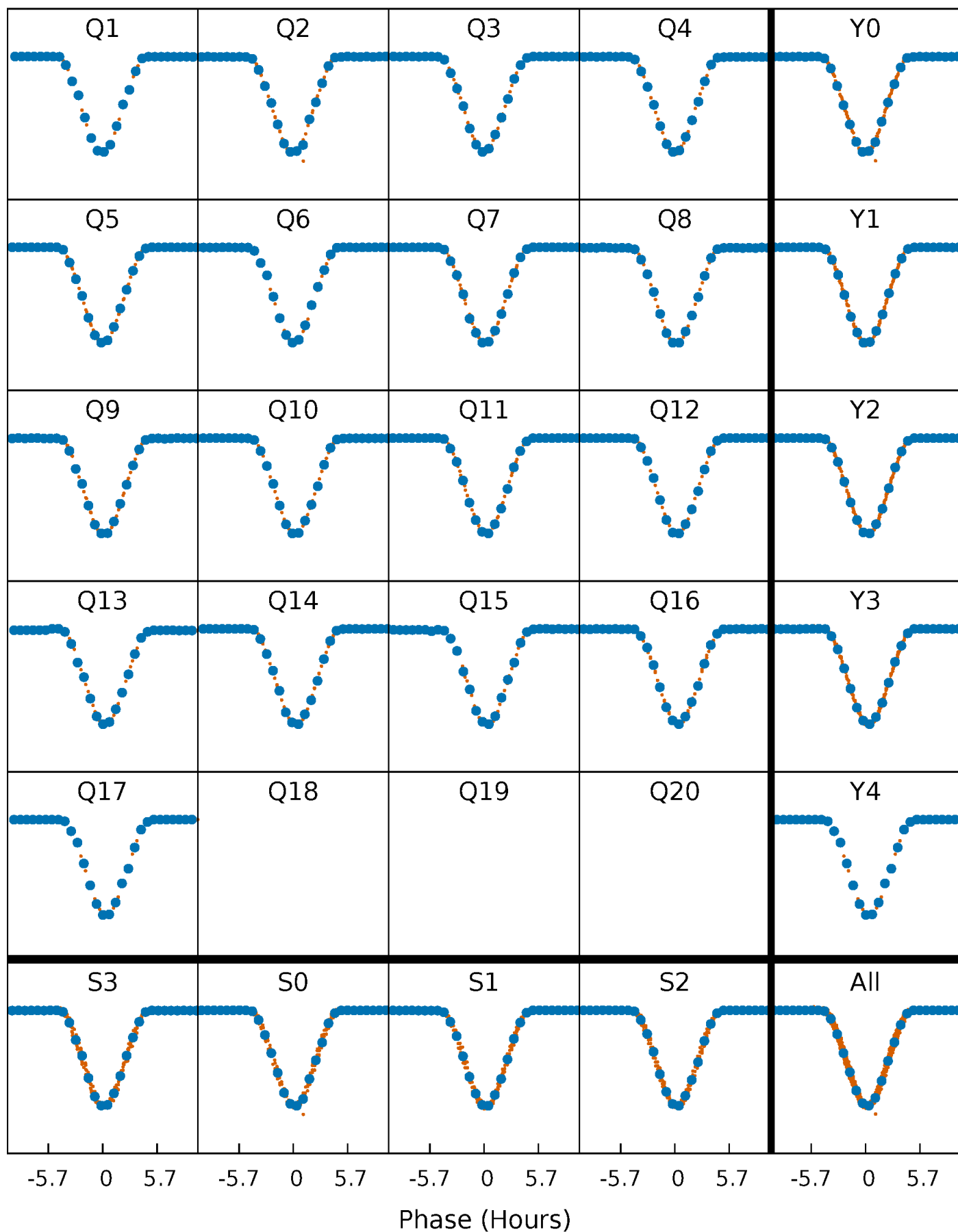


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



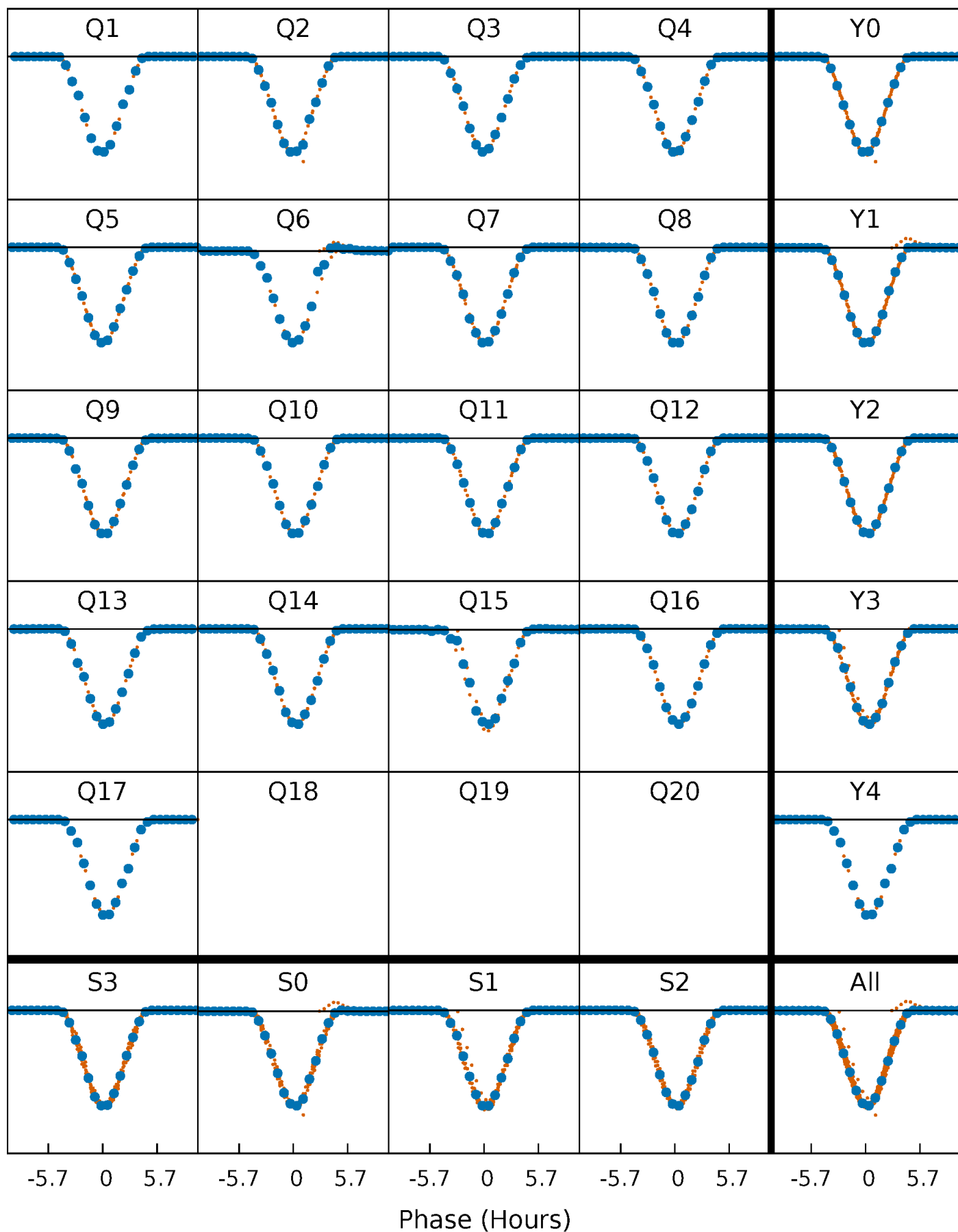
PDC Quarter-Phased Transit Curves

TCE 007677005-01 P= 38.057656 Days $T_0=142.412298$ (BKJD)



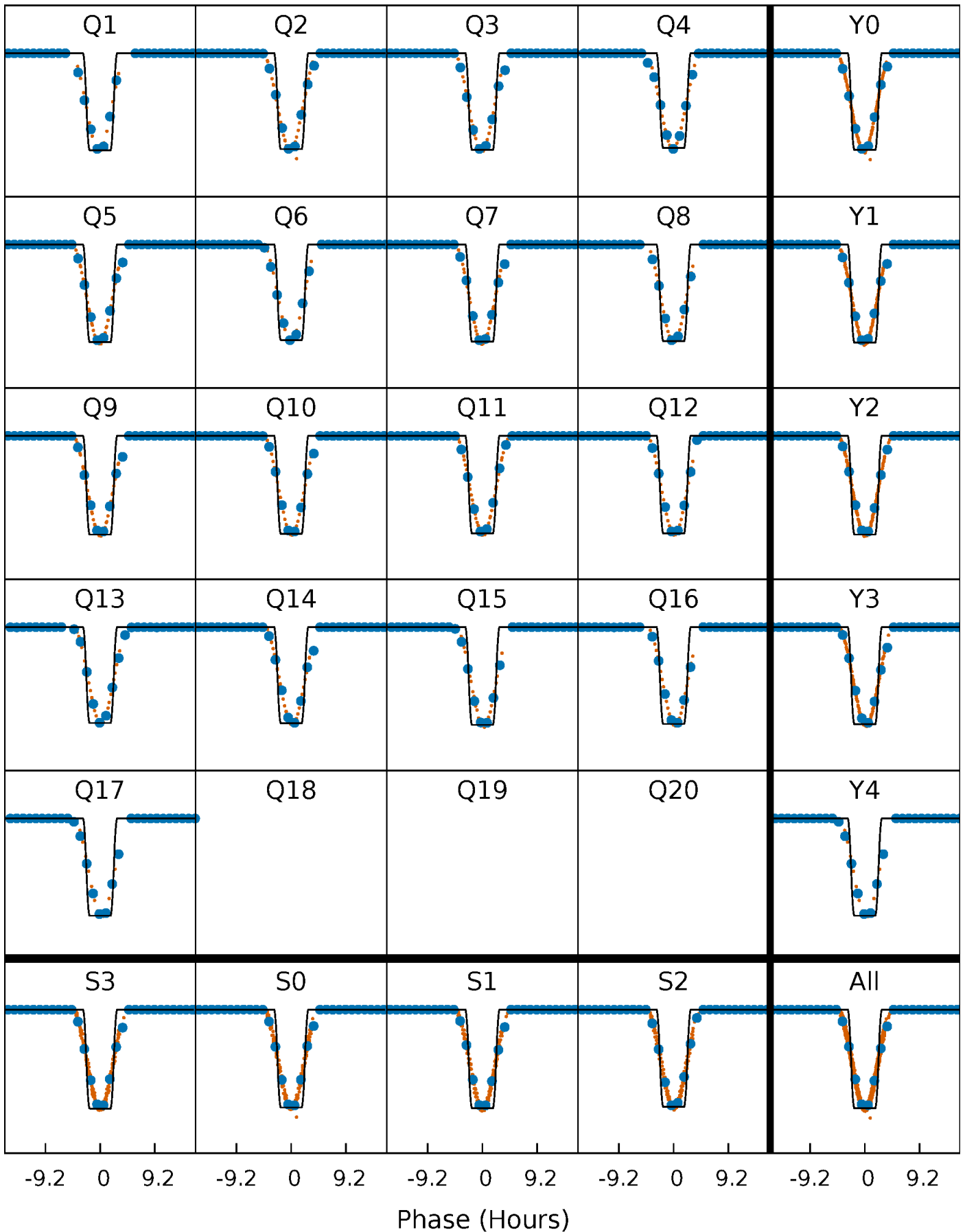
DV Quarter-Phased Transit Curves

TCE 007677005-01 P= 38.057656 Days $T_0=142.412298$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

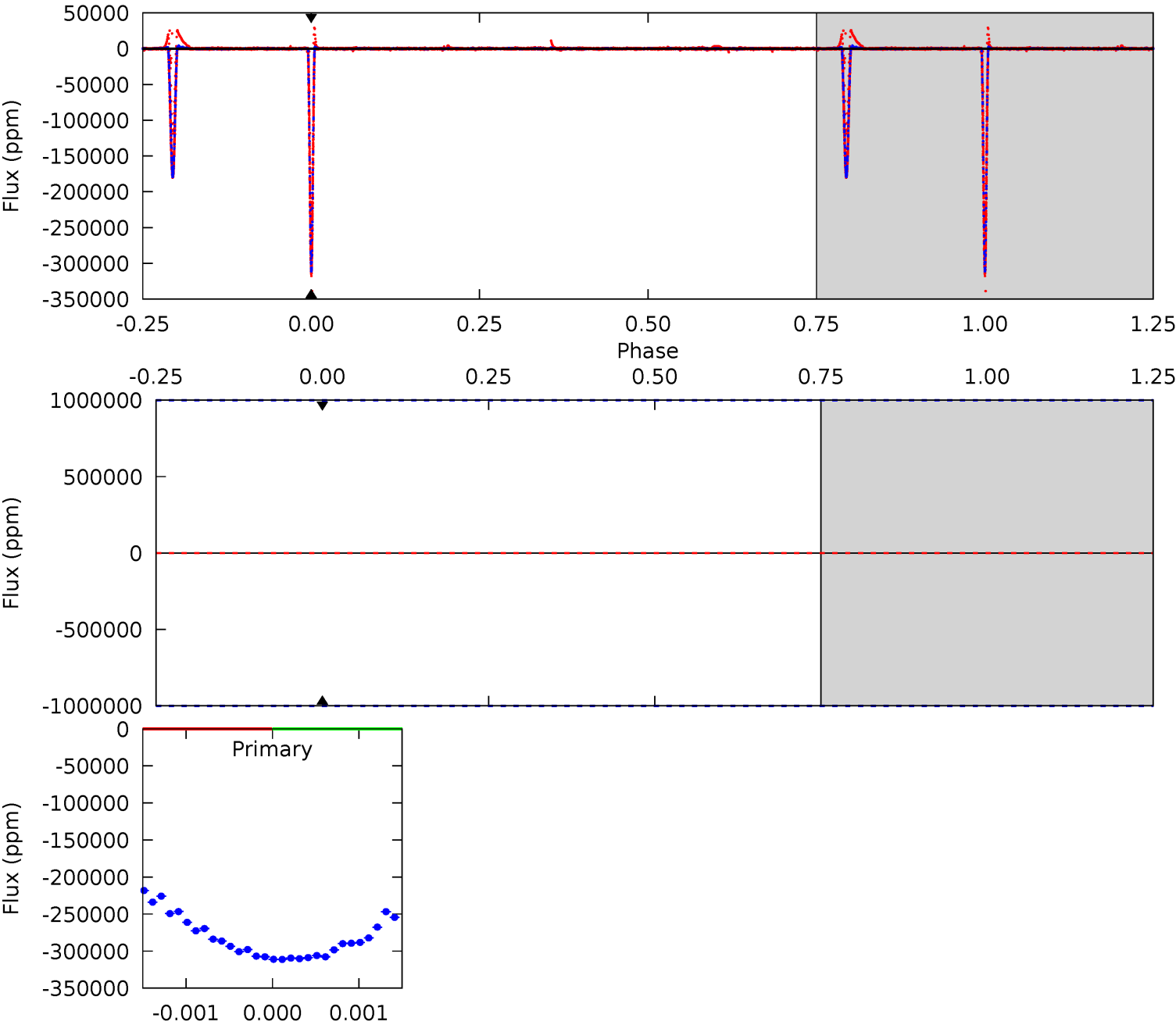
TCE 007677005-01 P= 38.057656 Days $T_0=142.417555$ (BKJD)



DV Model-Shift Uniqueness Test

007677005-01, P = 38.057656 Days, E = 104.354642 Days

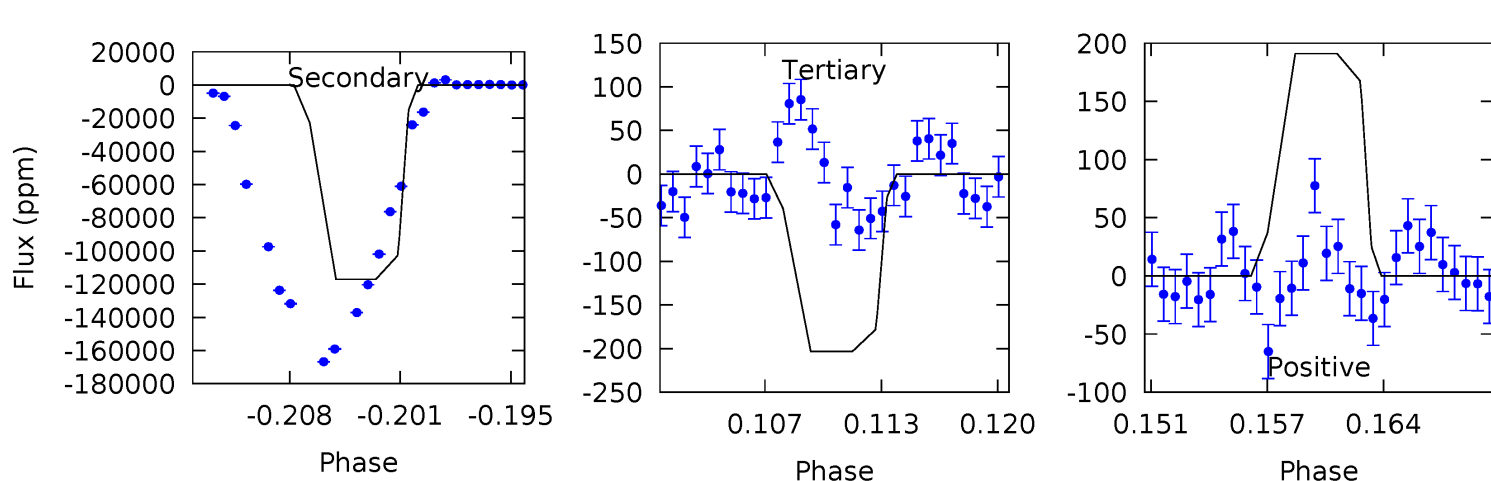
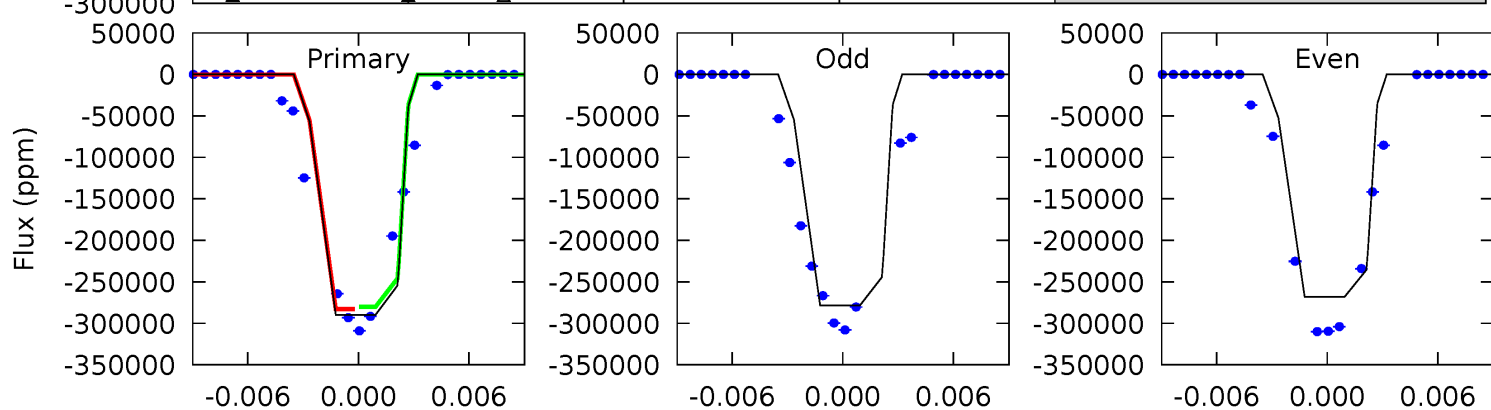
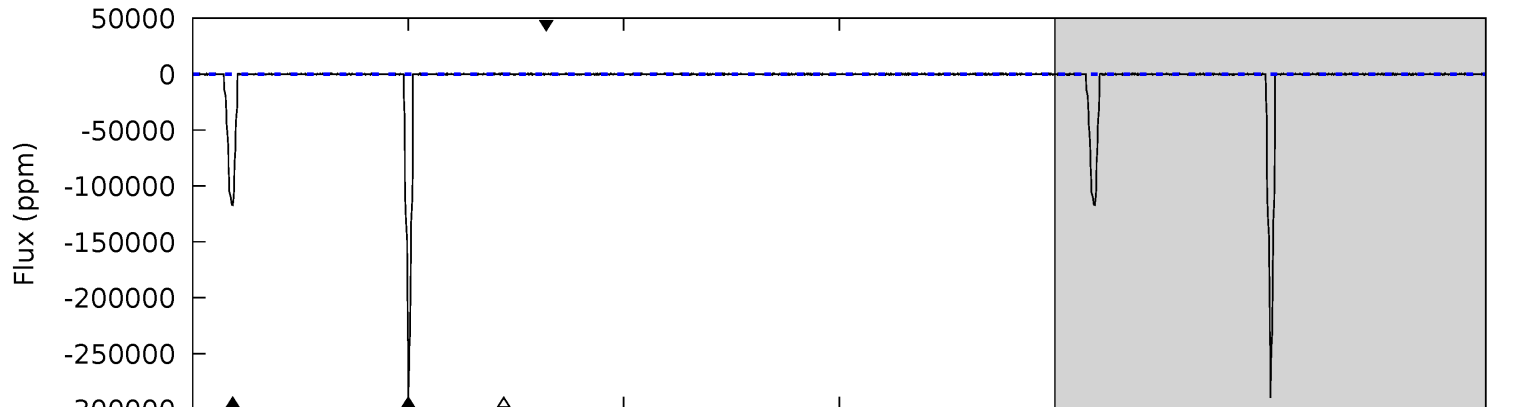
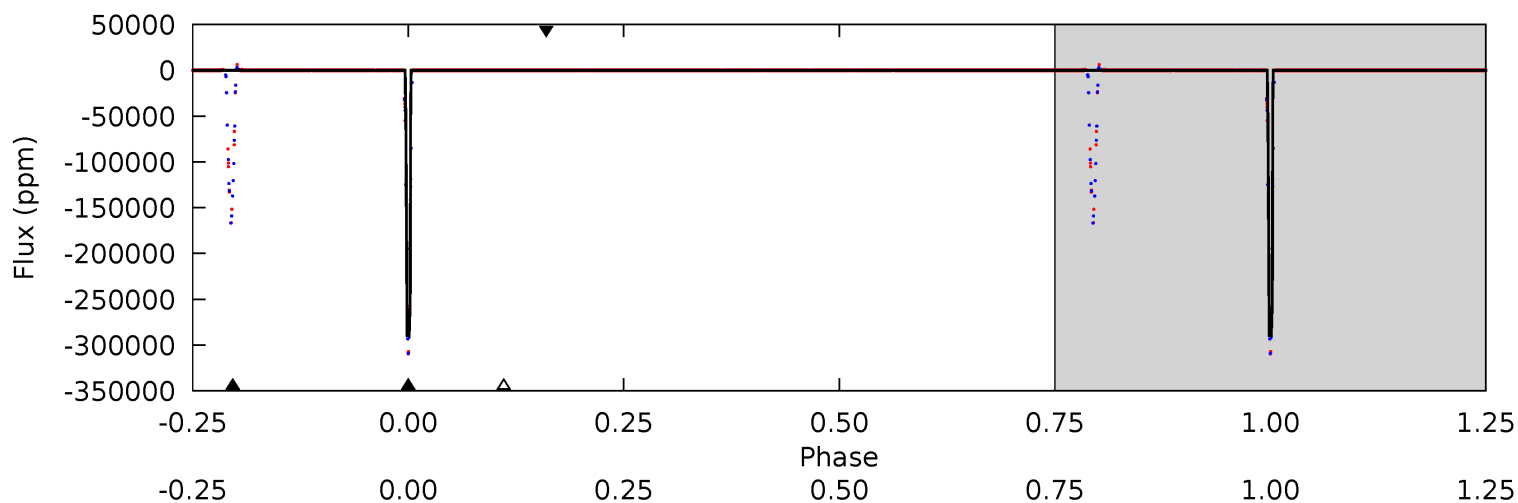
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007677005-01, P = 38.057656 Days, E = 104.359899 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5439	2199	3.81	3.59	5.11	2.73	5.14	5435	5435	2195	2195	113.4	1.00	0.00	0



Stellar Parameters For KIC 007677005

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6894^{+164}_{-247}	$4.250^{+0.092}_{-0.138}$	$-0.200^{+0.250}_{-0.350}$	$1.419^{+0.330}_{-0.220}$	$1.317^{+0.150}_{-0.187}$	$0.649^{+0.326}_{-0.253}$
	+2%/-4%	+2%/-3%	+125%/-175%	+23%/-16%	+11%/-14%	+50%/-39%
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 007677005-01 / KOI 6903.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$46.38^{+17.53}_{-15.93}$	1029^{+57}_{-53}	3028^{+4611}_{-9996}	19^{+1920}_{-1491}
Alt.	-117088 ± 53	$86.59^{+18.54}_{-17.34}$	1033^{+58}_{-58}	5582^{+547}_{-430}	570^{+313}_{-181}

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 $A_{obs} \gg 1.0$

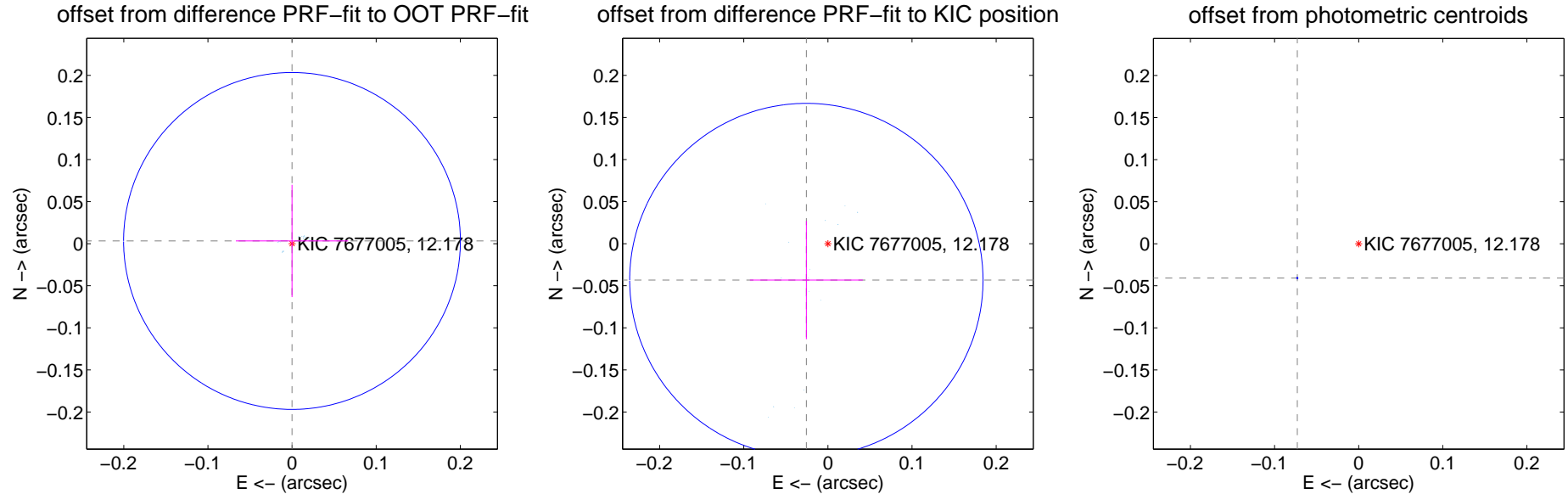
DV Centroid Data

Supplemental centroid analysis for 007677005-01. Kepler magnitude: 12.18. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

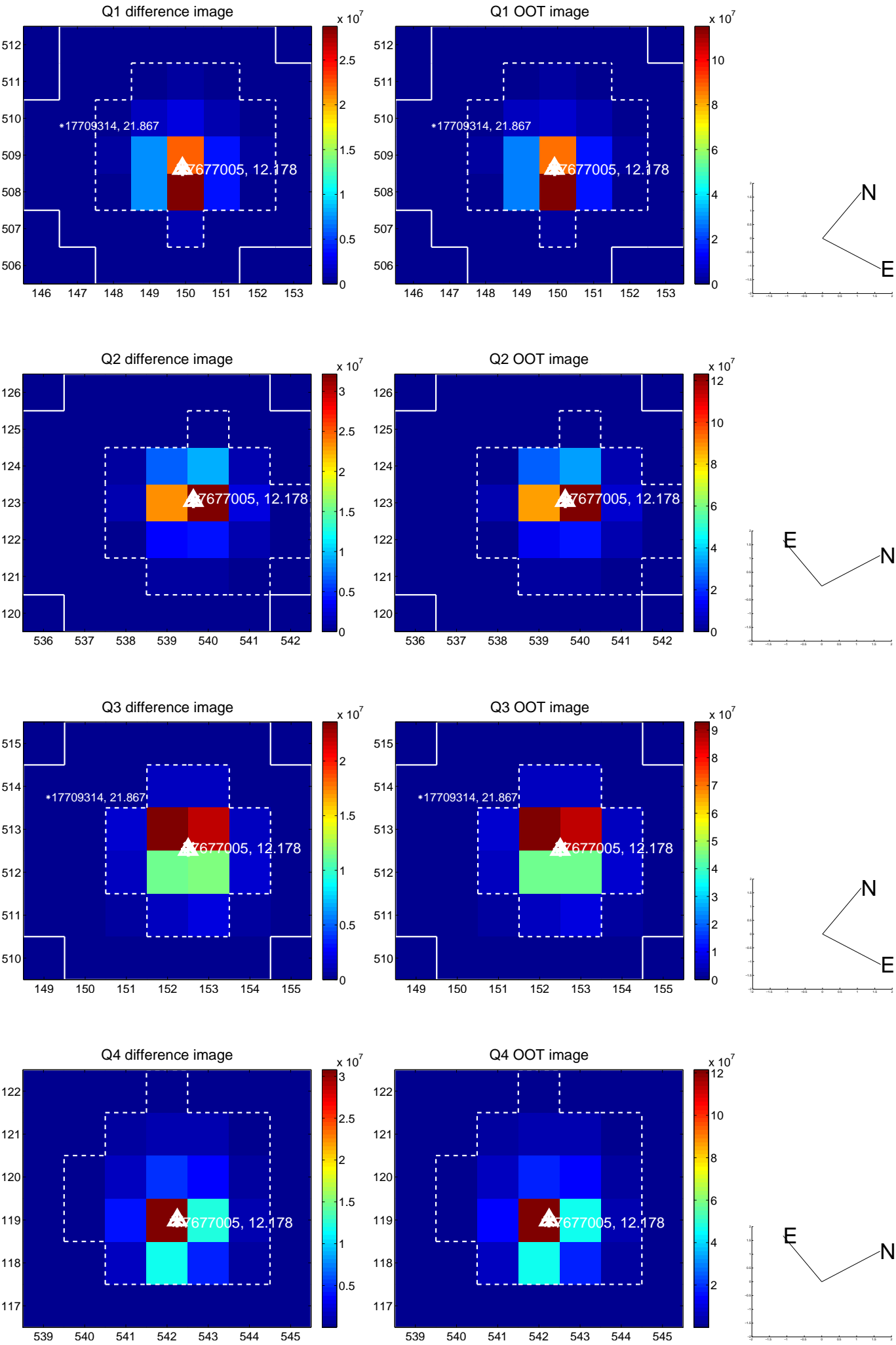
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.003 ± 0.067	0.05	0.000 ± 0.067	0.003 ± 0.067
PRF-fit source offset from KIC position	0.050 ± 0.070	0.72	0.026 ± 0.067	-0.043 ± 0.070
photometric centroid source offset	0.08 ± 0.00	314.88	0.07 ± 0.00	-0.04 ± 0.00

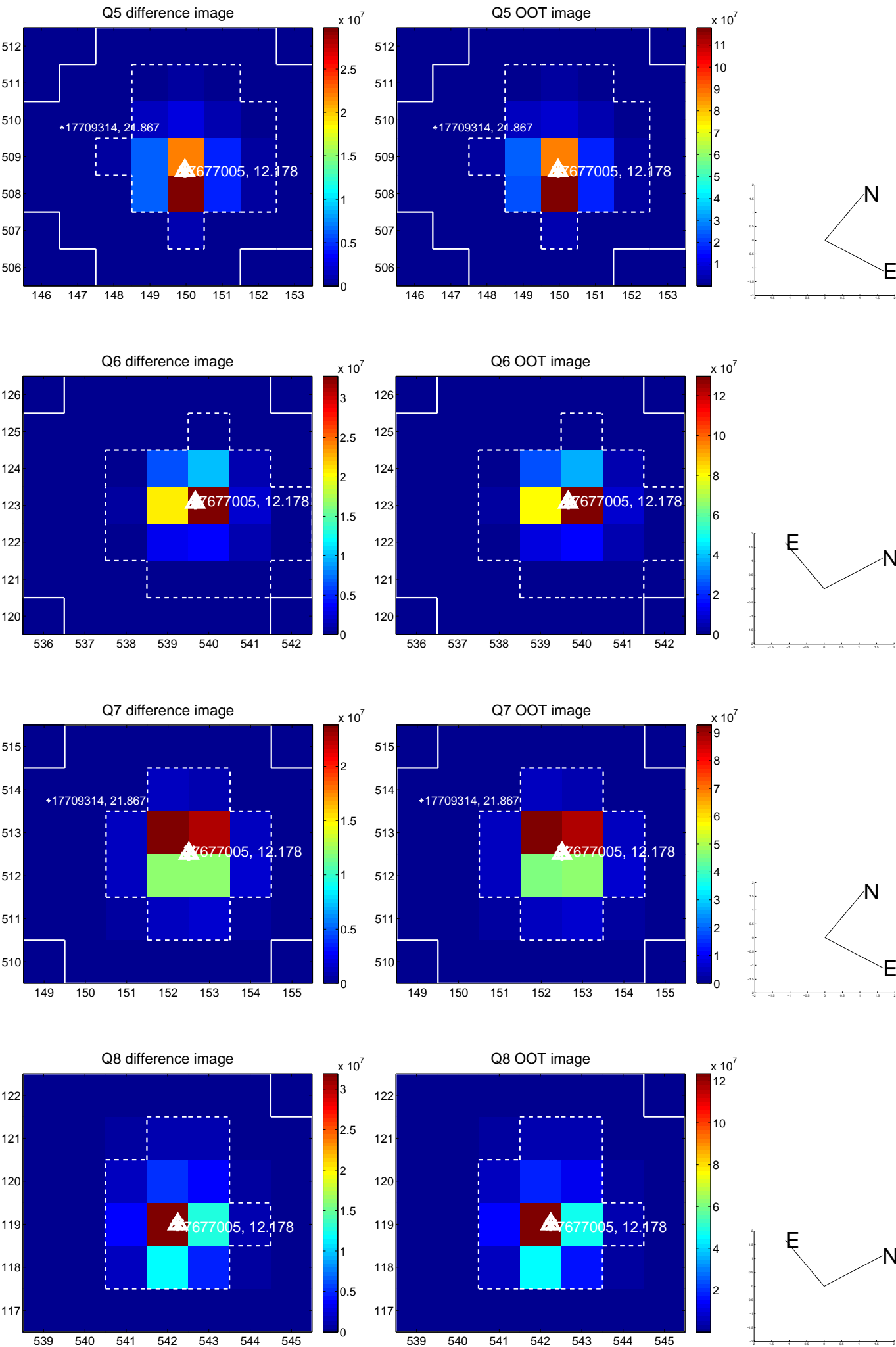


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

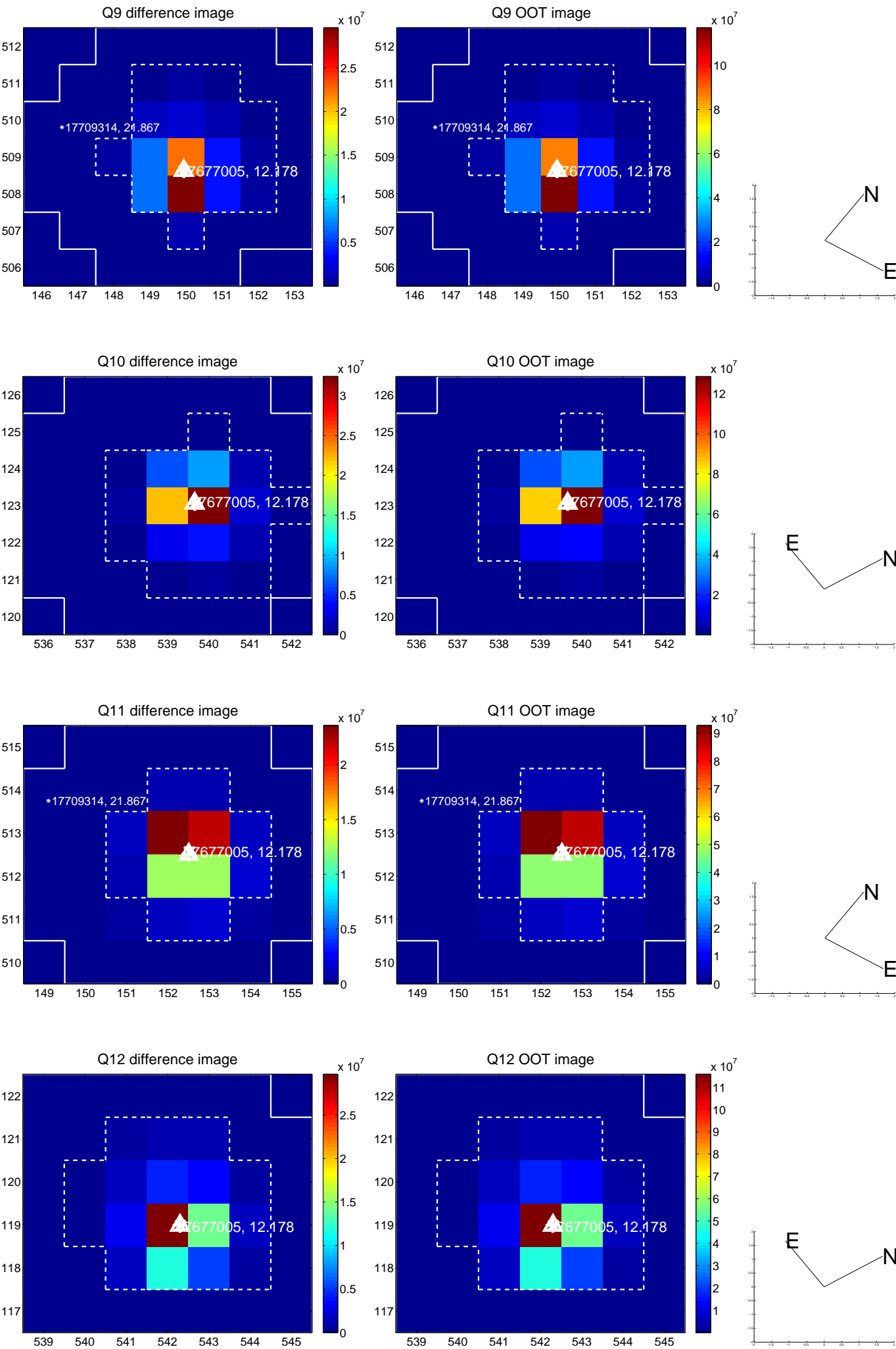
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



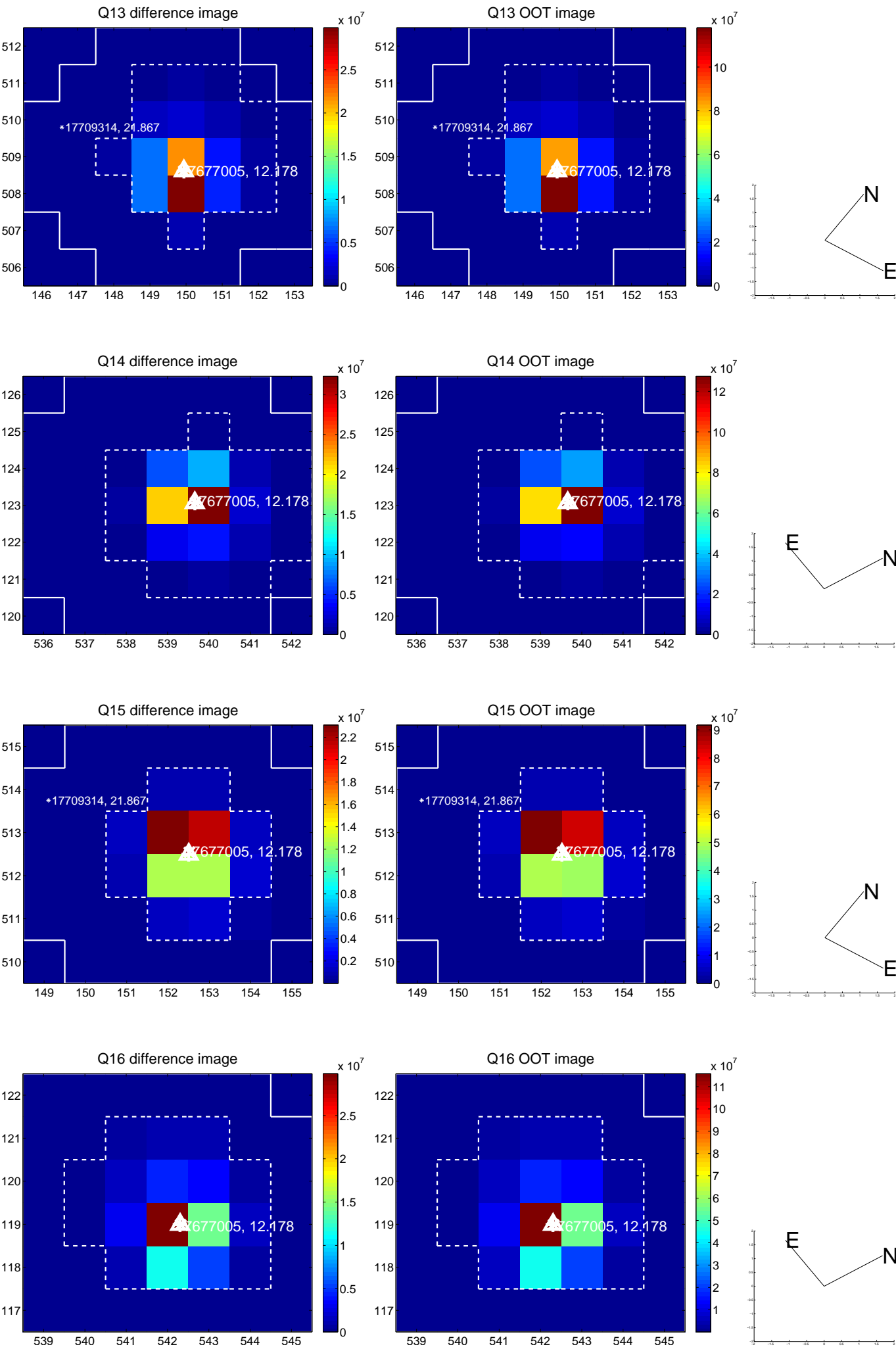
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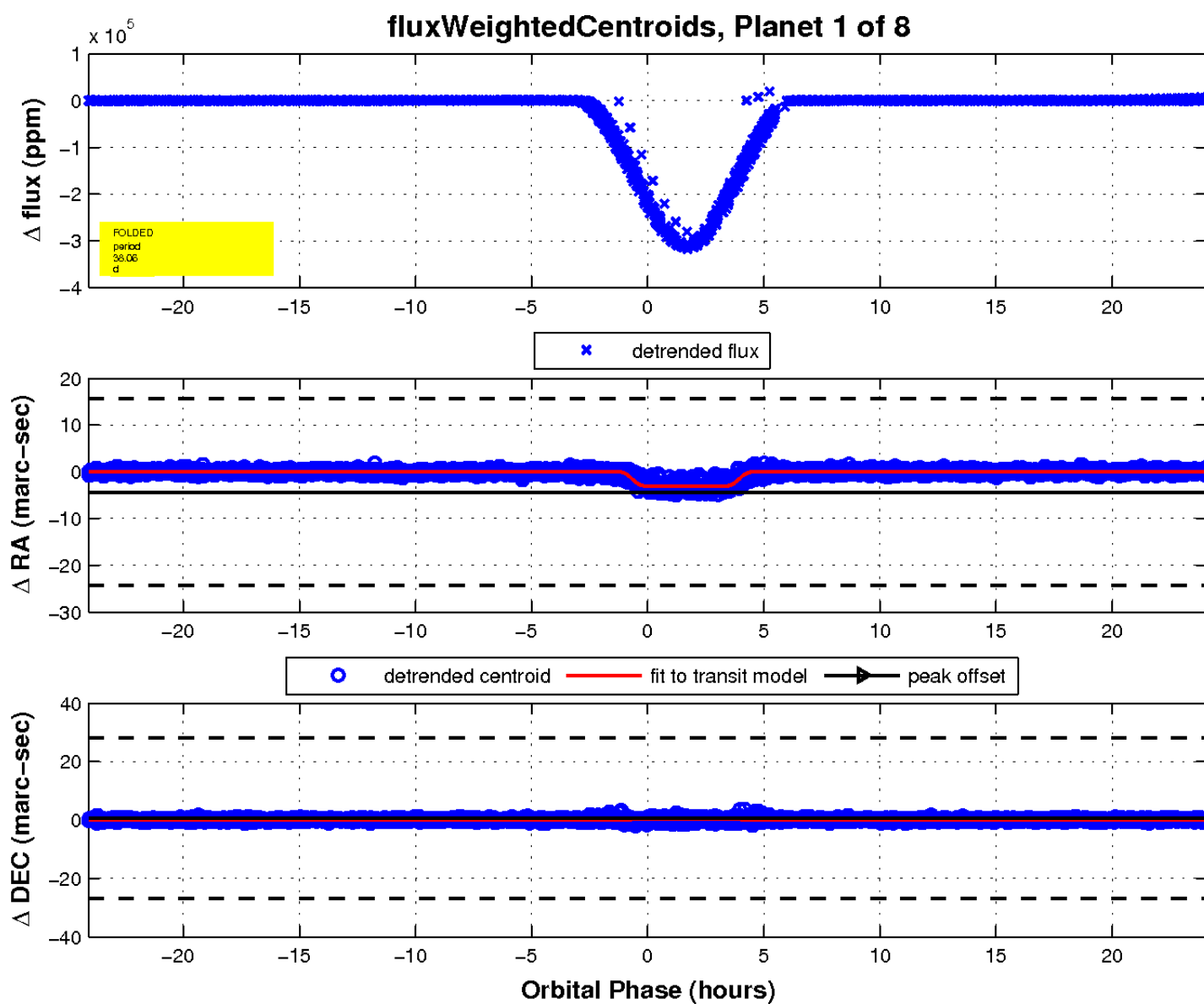
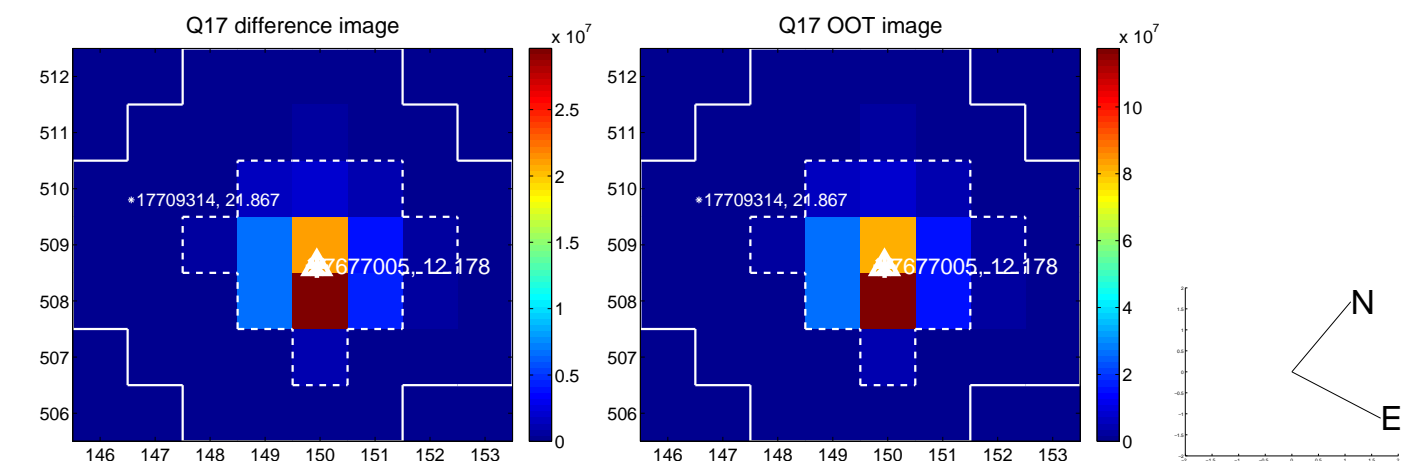
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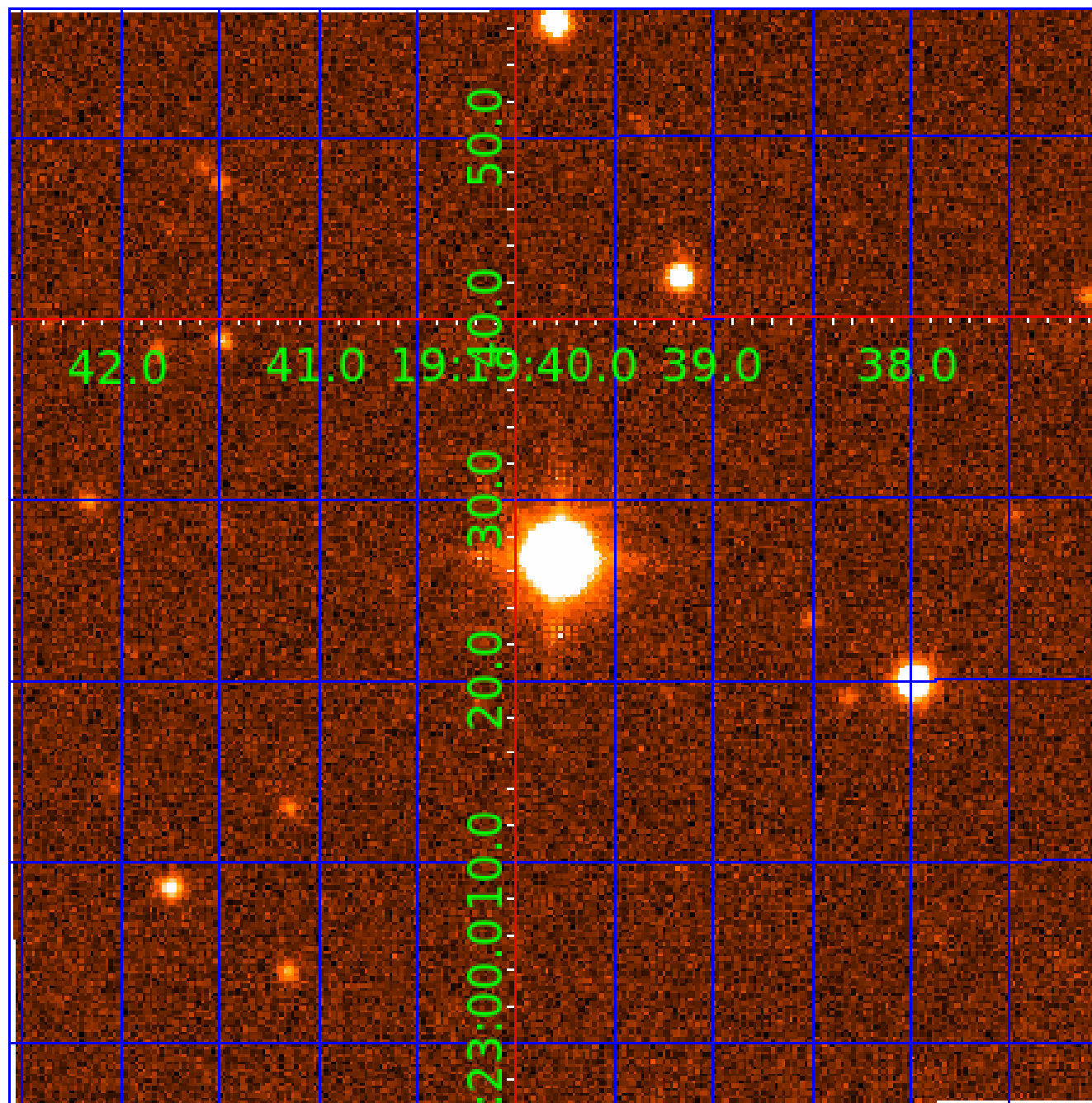


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UKIRT Image

Declination



KIC 007677005

Q1-17 DR25 TCE Parameters

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Robovetter Results

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007677005-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007677005-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
007677005-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
007677005-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—RESIDUAL_TCE—CENT_NOFITS
007677005-08	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—CENT_NOFITS

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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.

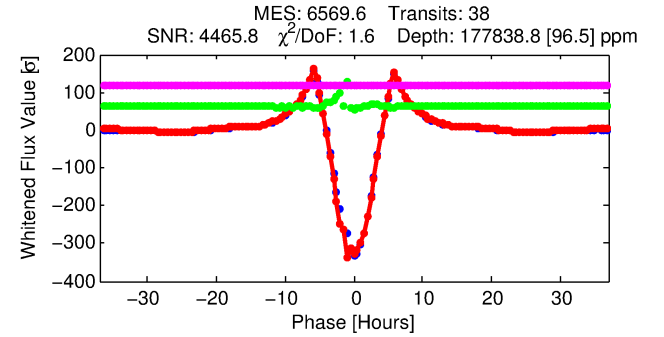
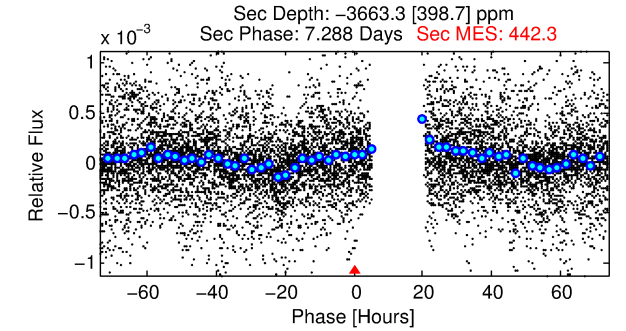
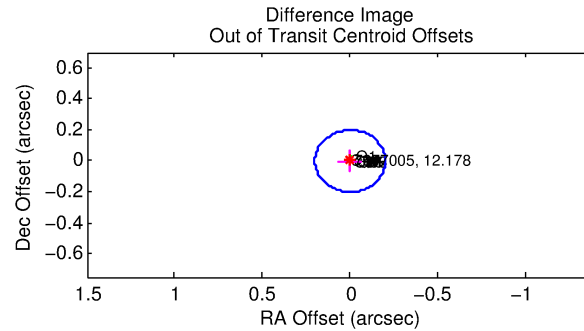
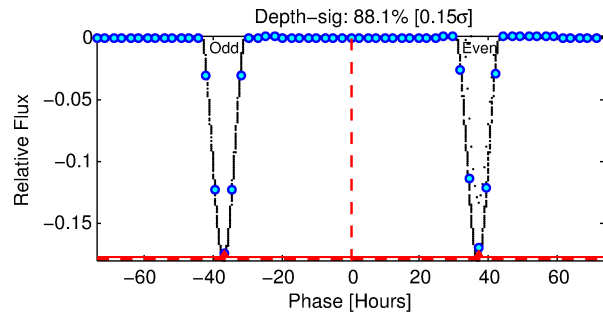
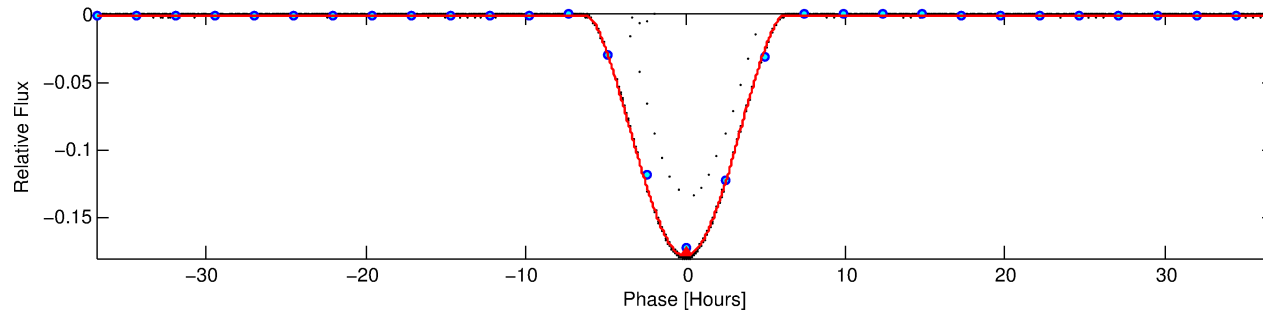
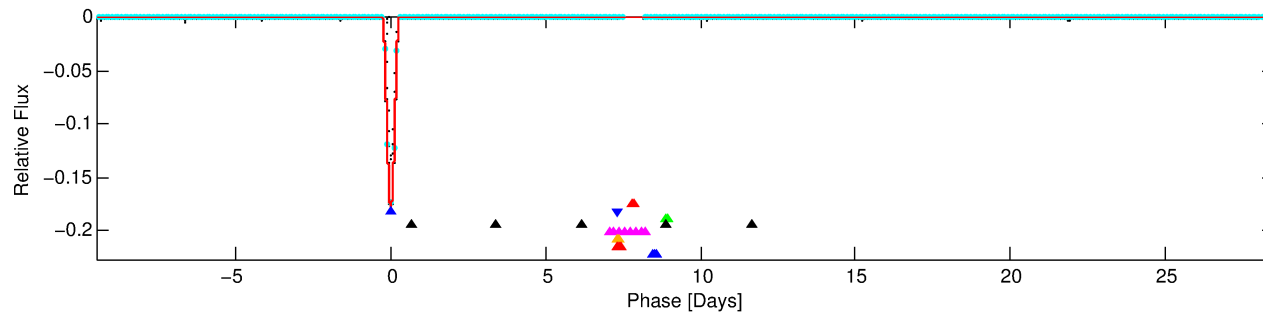
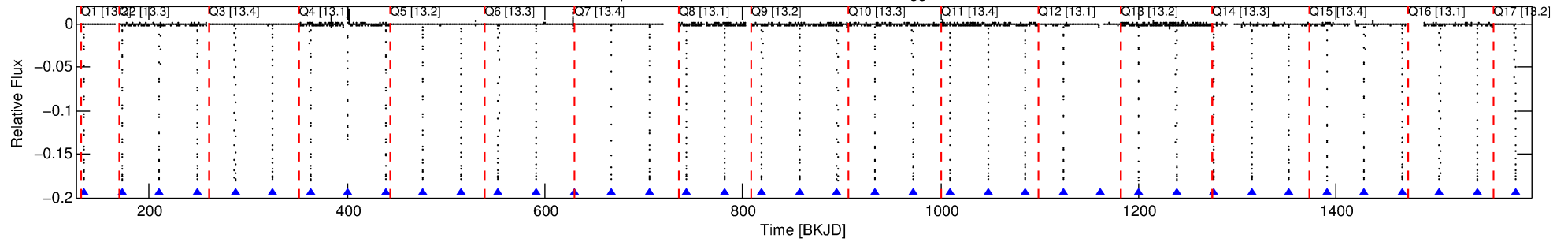
Ephemeris Match Information For 007677005-02

No Significant Match Found

DV One-Page Summary

KIC: 7677005 Candidate: 2 of 8 Period: 38.058 d
KOI: K06903 Corr: No Ephemeris Match

Kp: 12.18 R*: 1.42 Rs Teff: 6894.0 K Logg: 4.25 Fe/H: -0.200



DV Fit Results:

Period = 38.05813 [0.00000] d
Epoch = 134.5796 [0.0001] BKJD
Rp/R* = 0.5314 [0.0315]
a/R* = 30.43 [0.17]
b = 0.83 [0.05]
Seff = 69.53 [20.80]
Teq = 736 [55] K
Rp = 82.28 [19.75] Re
a = 0.2421 [0.0455] AU
Ag = N/A
Teffp = N/A

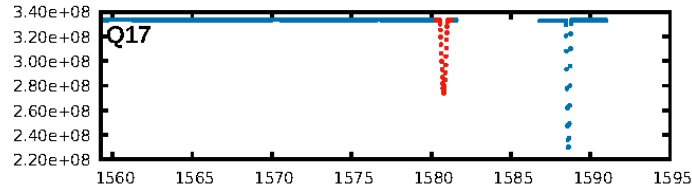
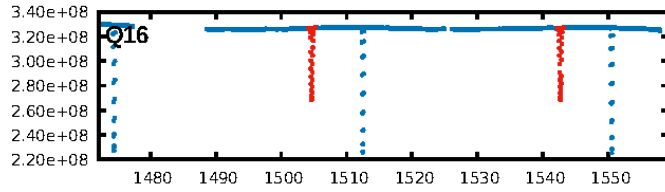
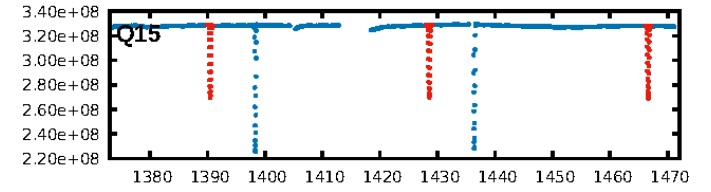
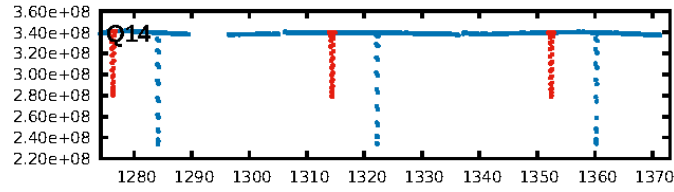
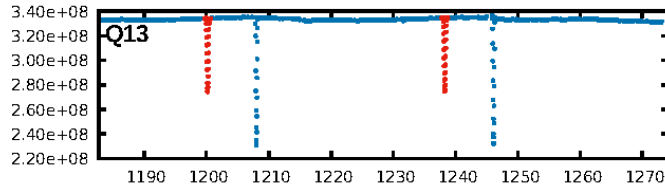
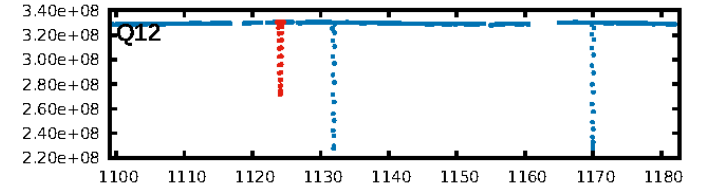
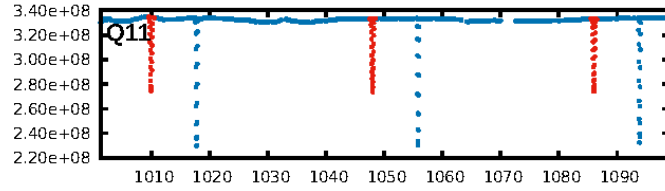
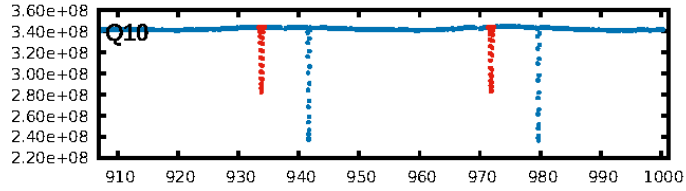
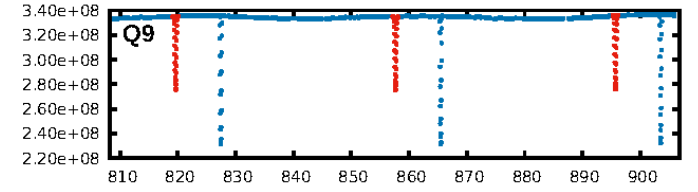
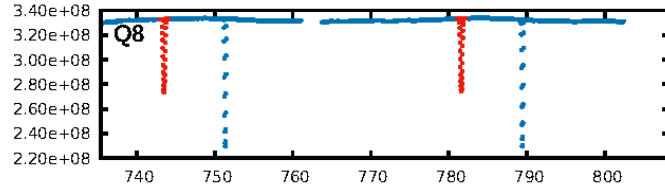
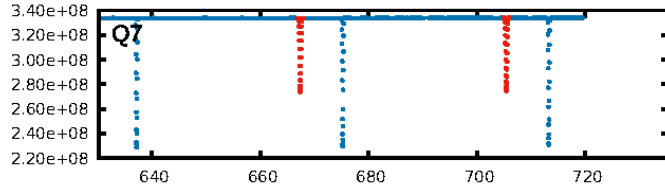
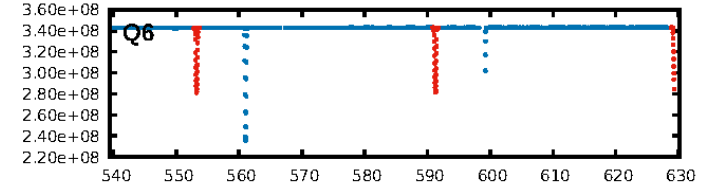
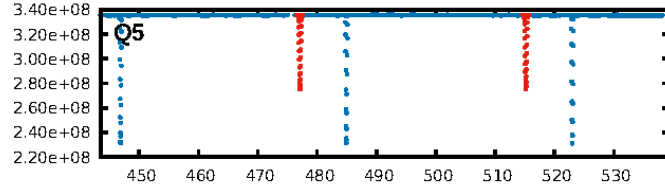
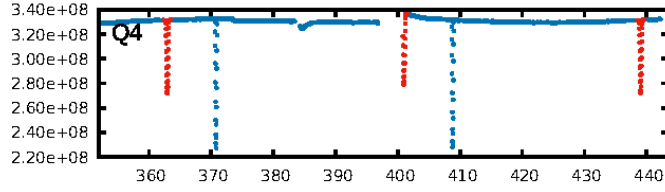
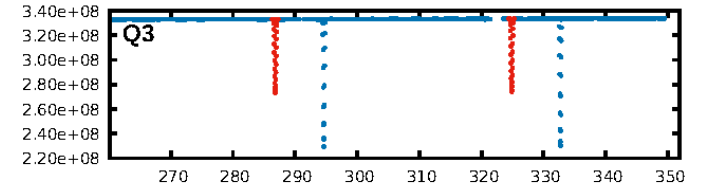
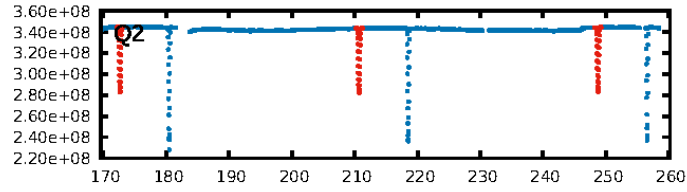
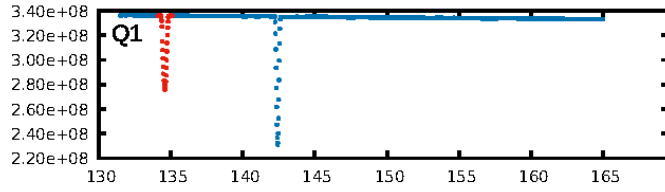
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.006]
LongPeriod-sig: 0.3% [0.006]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [36/36]
GhostDiagnostic-chr: 4.408
Centroid-sig: 0.0%
Centroid-so: 0.084 arcsec [201.81σ]
OotOffset-rm: 0.002 arcsec [0.04σ]
KicOffset-rm: 0.067 arcsec [0.95σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 1.00 [15/15]
DiffImageOverlap-fno: 1.00 [15/15]

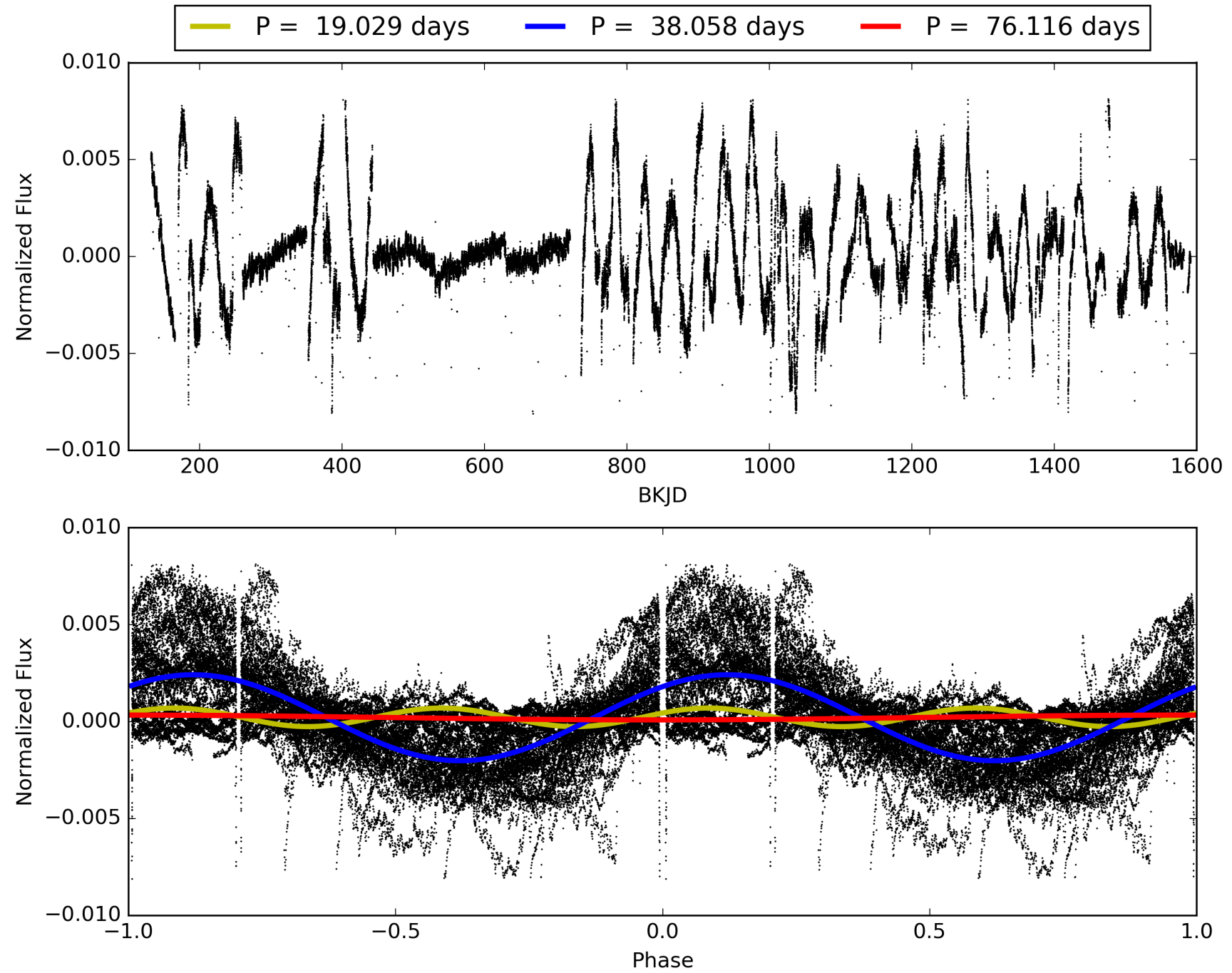
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:09:39 Z

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

TCE 007677005-02, PDC Light Curves

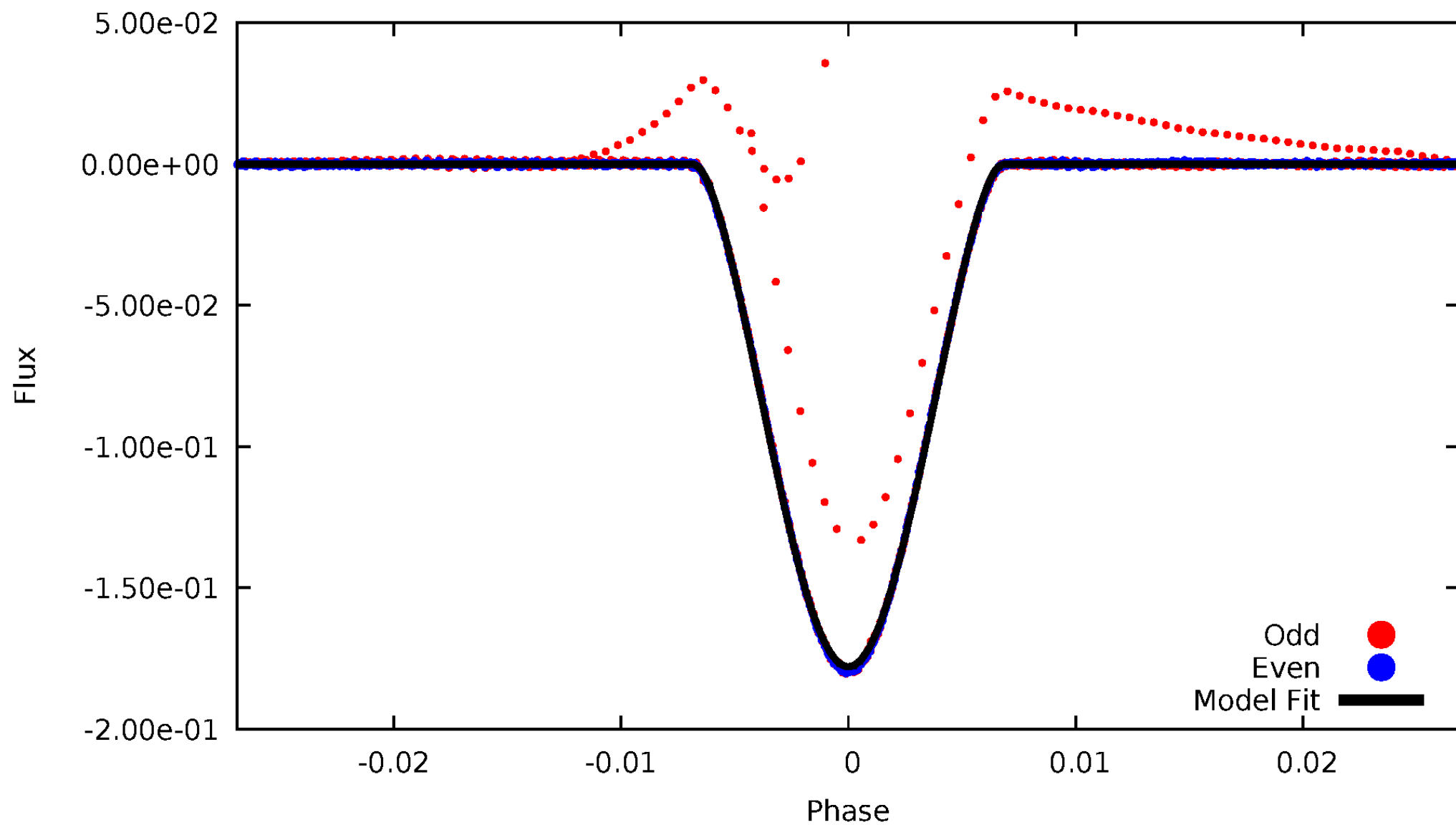


TCE 007677005-02



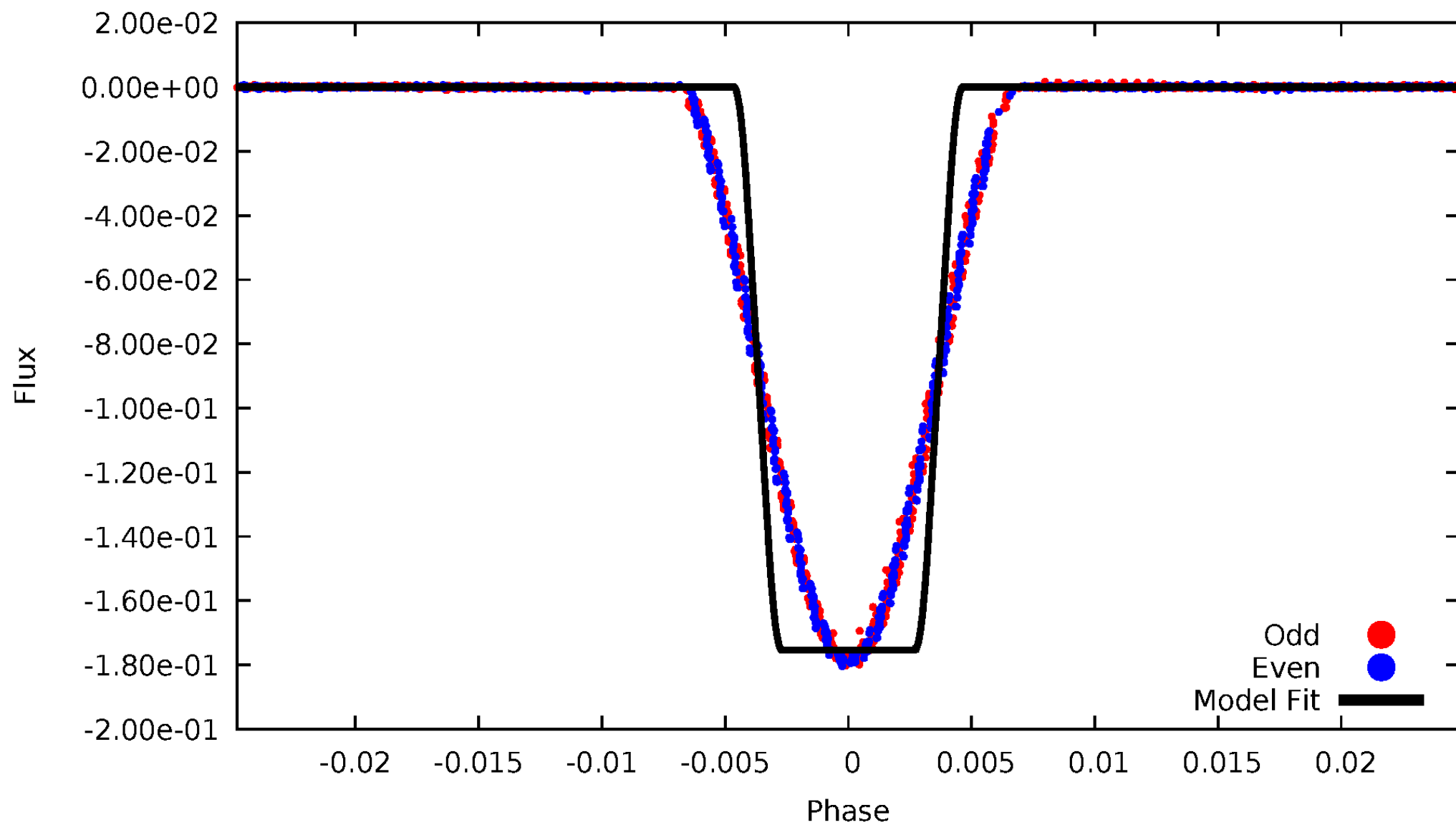
DV Odd/Even

TCE 007677005-02



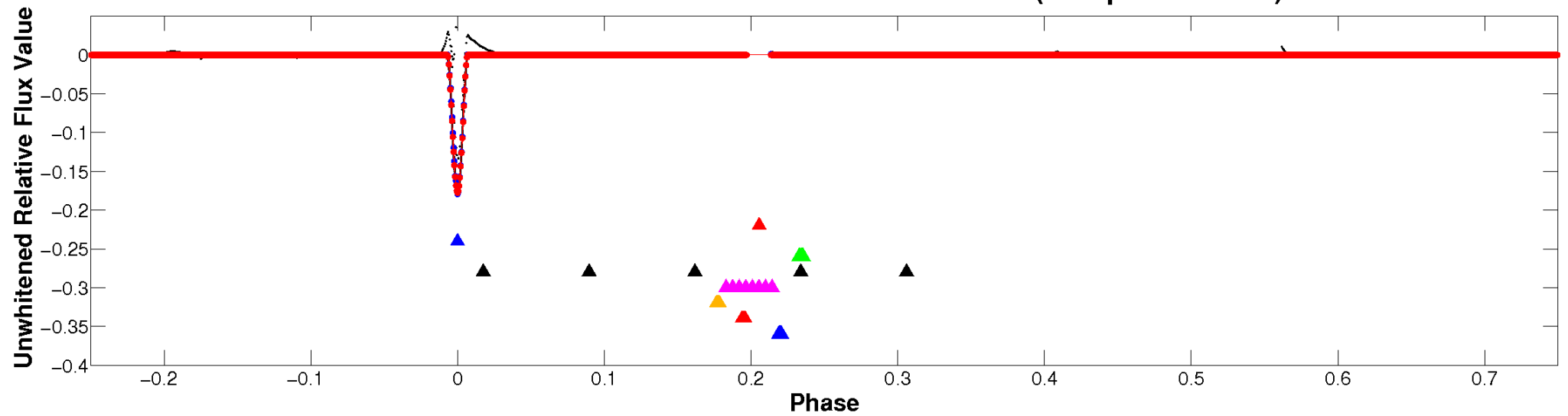
ALT Odd/Even

TCE 007677005-02

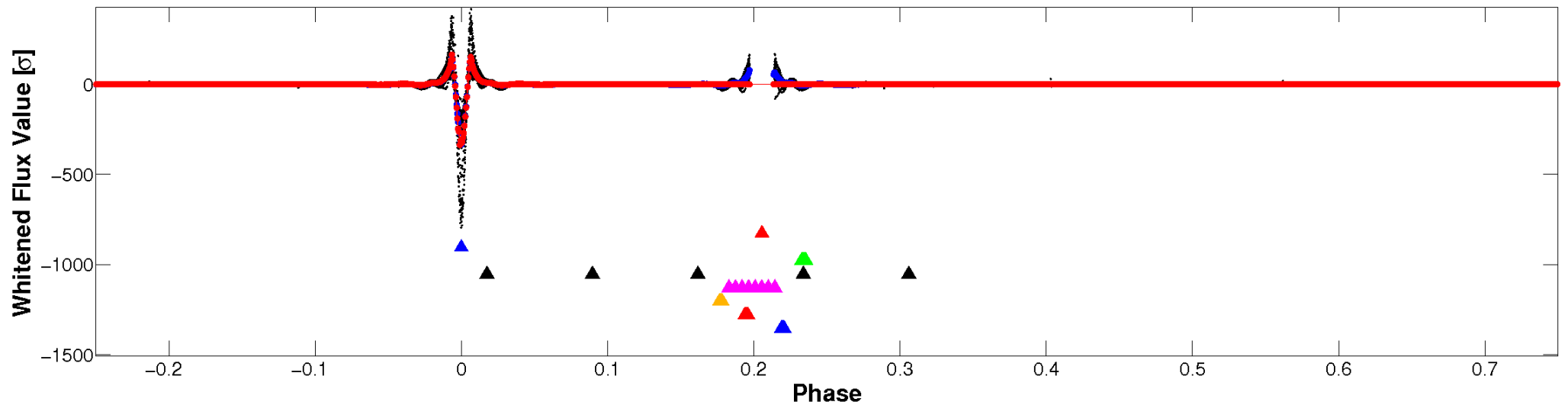


Non-Whitened Vs. Whitened Light Curve

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

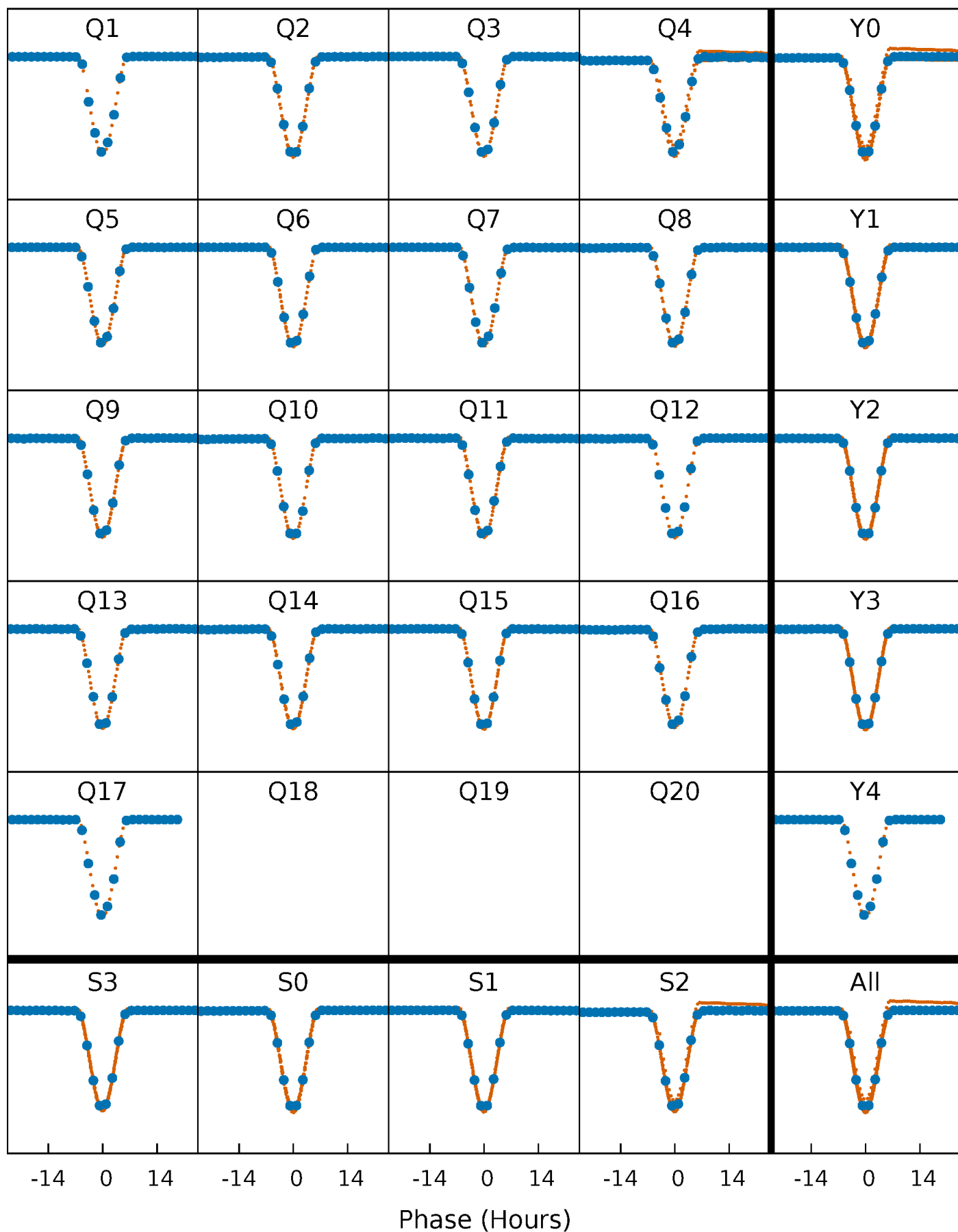


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



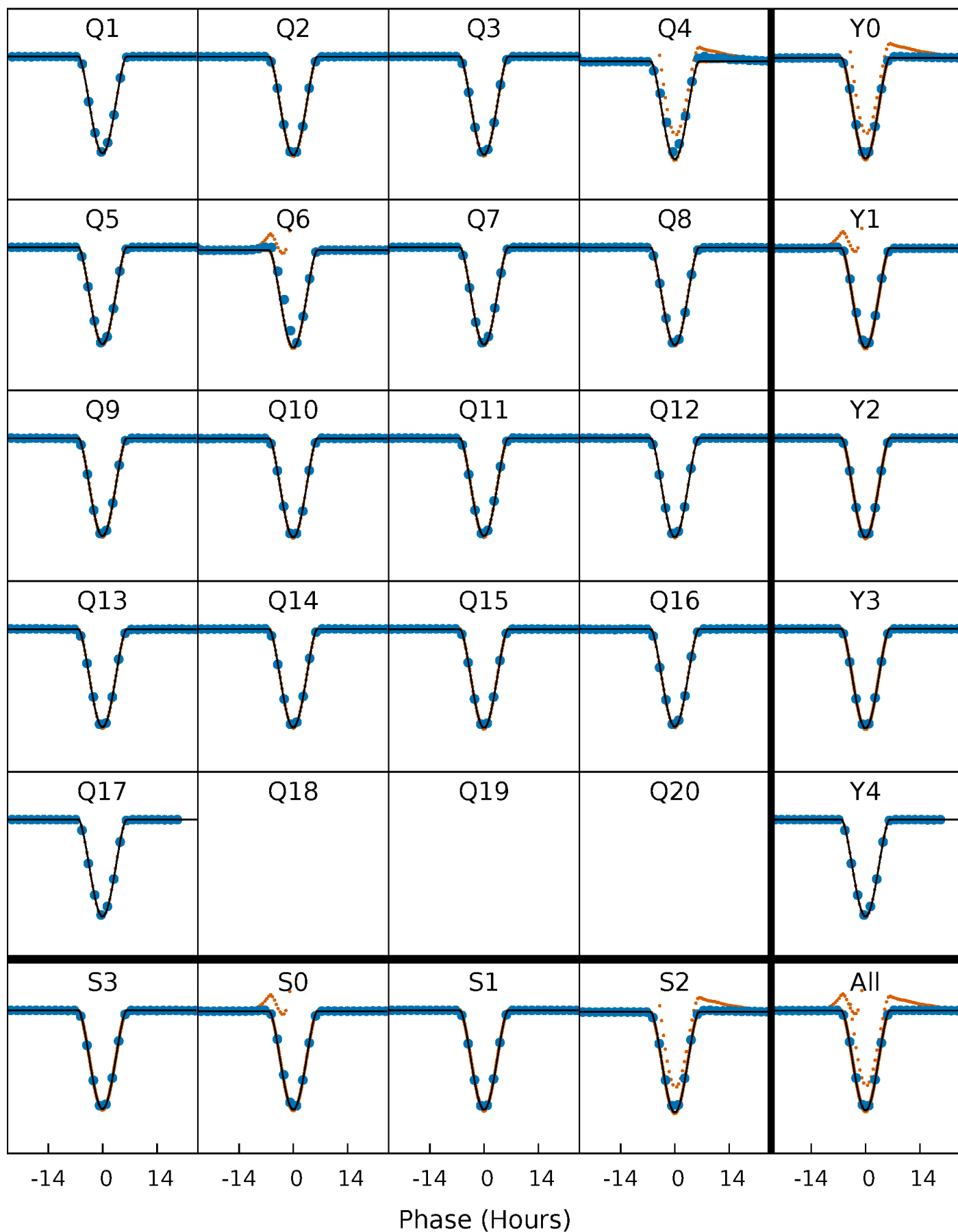
PDC Quarter-Phased Transit Curves

TCE 007677005-02 P= 38.058129 Days $T_0=134.579596$ (BKJD)



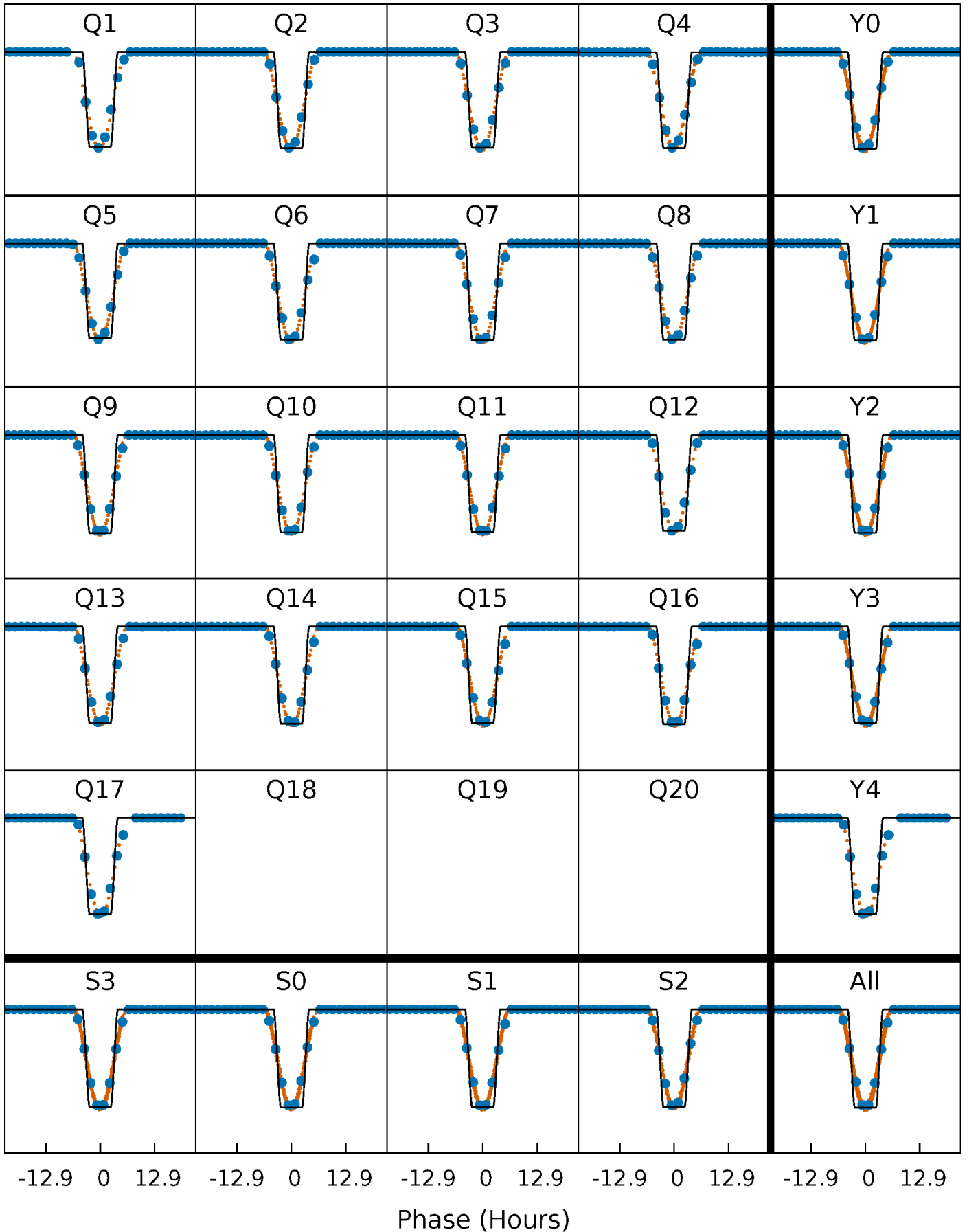
DV Quarter-Phased Transit Curves

TCE 007677005-02 P= 38.058129 Days $T_0=134.579596$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

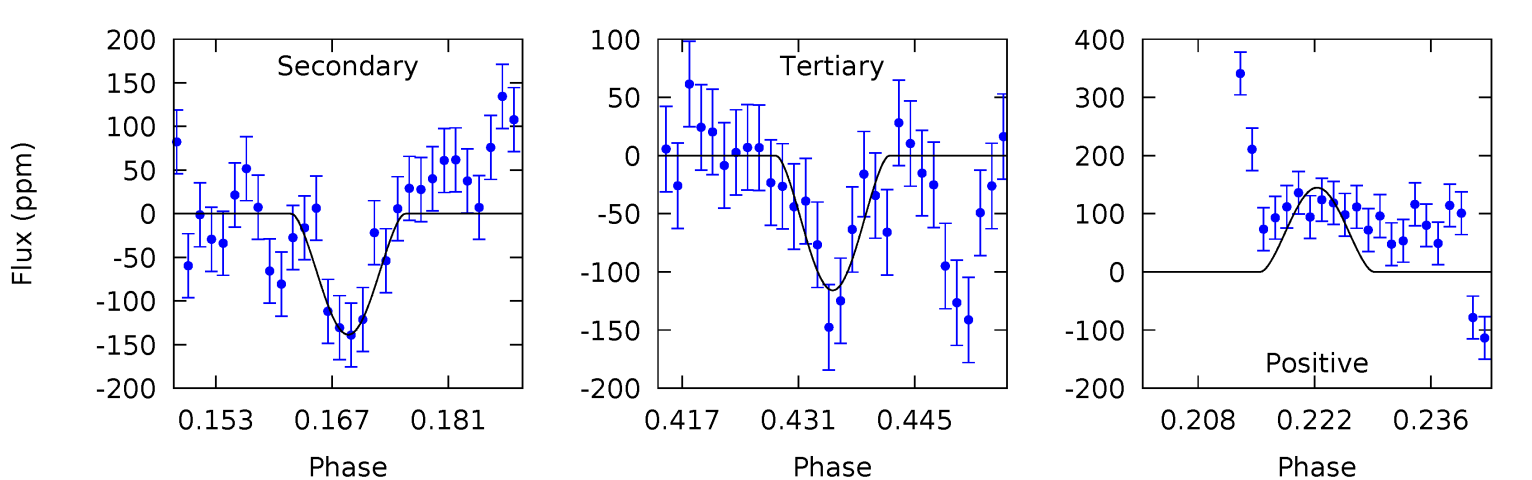
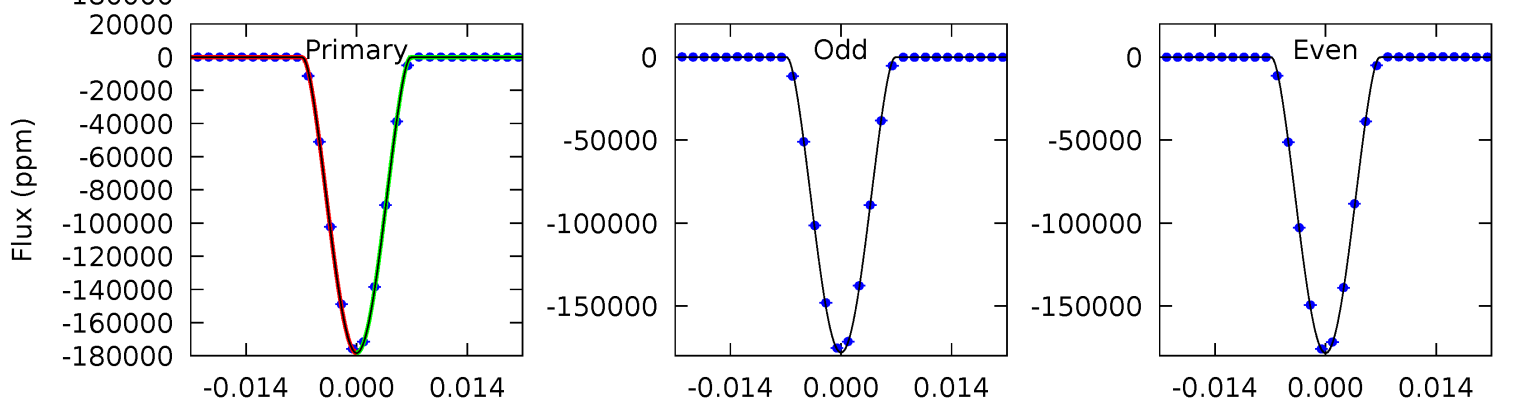
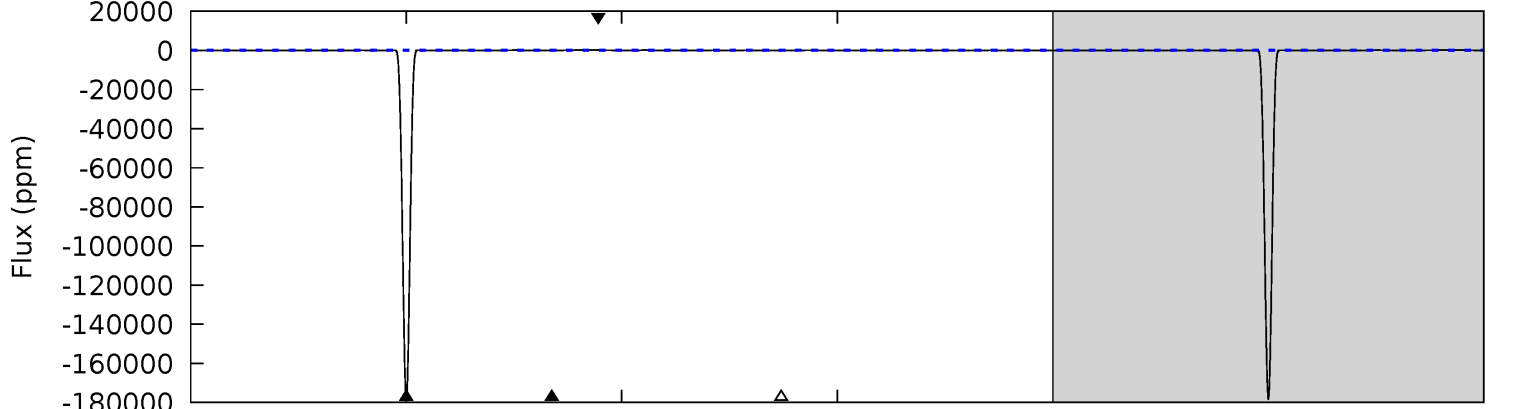
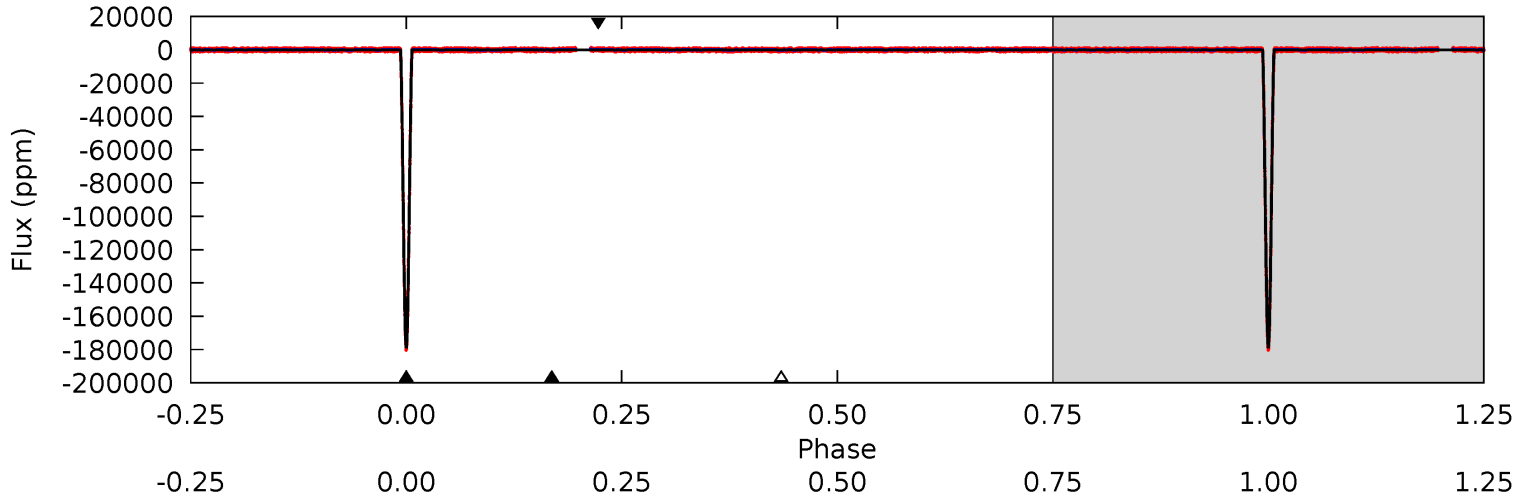
TCE 007677005-02 P= 38.057740 Days $T_0=134.586384$ (BKJD)



DV Model-Shift Uniqueness Test

007677005-02, P = 38.058129 Days, E = 96.521467 Days

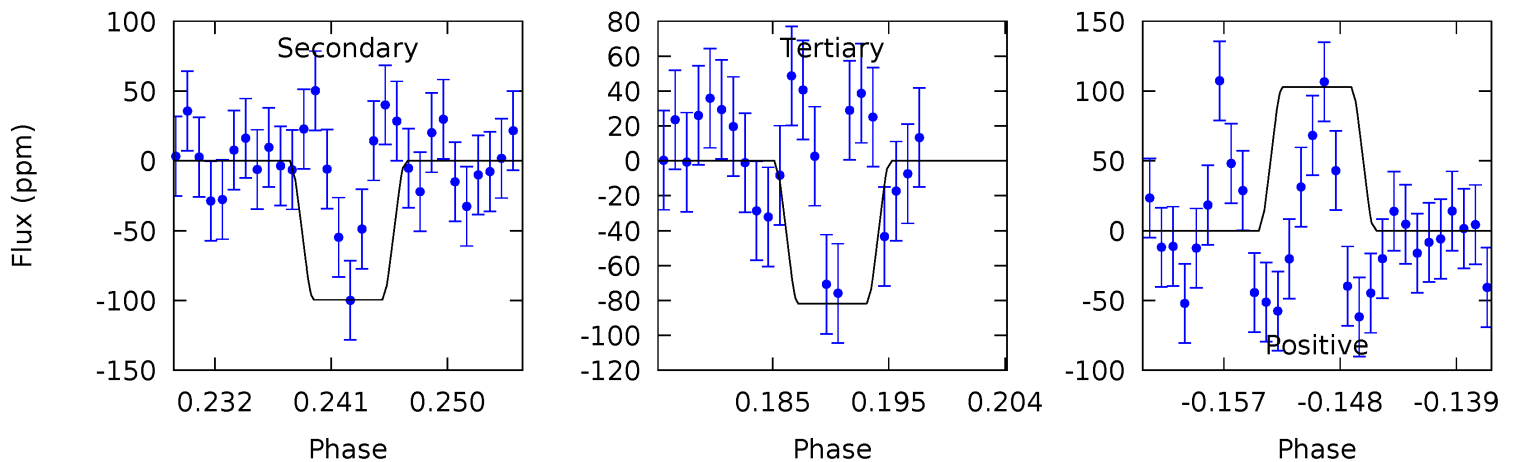
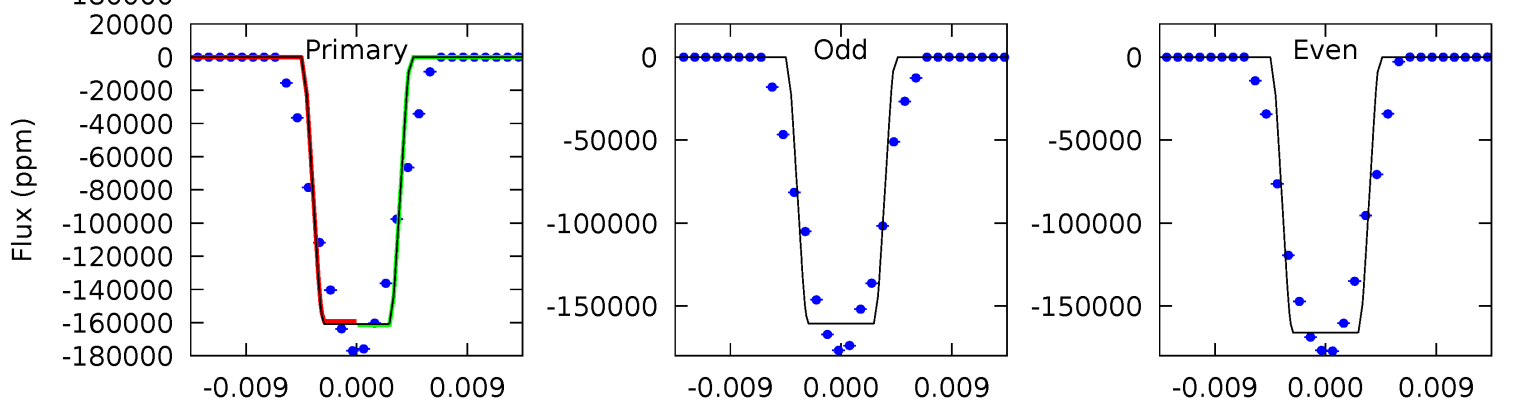
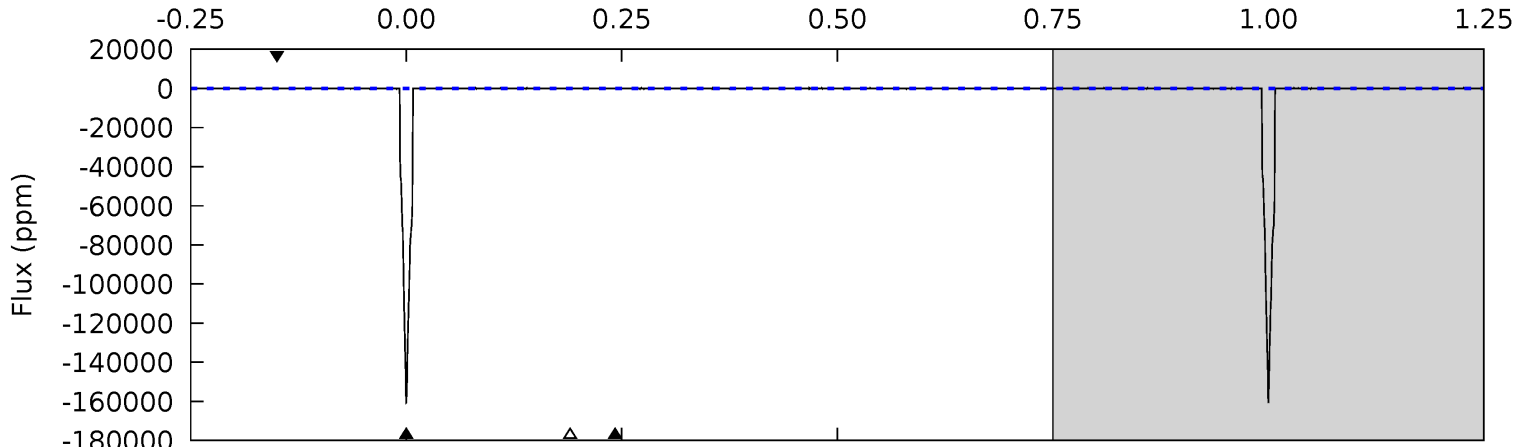
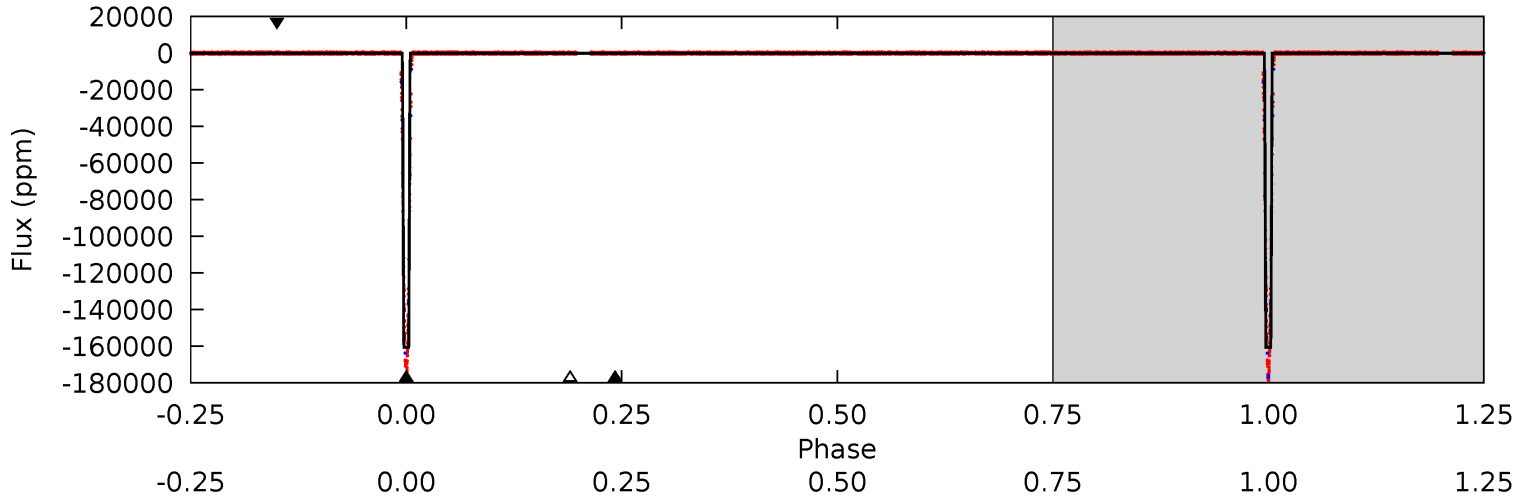
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14896	11.6	9.68	12.1	4.96	2.46	4.62	14887	14884	1.90	-0.52	12.9	0.96	0.00	1.13



Alt Model-Shift Uniqueness Test

007677005-02, P = 38.057740 Days, E = 96.528644 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10037	6.21	5.11	6.43	5.04	2.60	1.61	10032	10031	1.10	-0.21	176.5	1.00	0.00	71.9



Stellar Parameters For KIC 007677005

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6894^{+164}_{-247}	$4.250^{+0.092}_{-0.138}$	$-0.200^{+0.250}_{-0.350}$	$1.419^{+0.330}_{-0.220}$	$1.317^{+0.150}_{-0.187}$	$0.649^{+0.326}_{-0.253}$
	+2%/-4%	+2%/-3%	+125%/-175%	+23%/-16%	+11%/-14%	+50%/-39%
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 007677005-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-139 ± 12	$82.72^{+11.34}_{-8.90}$	1033^{+58}_{-48}	1892^{+60}_{-69}	$0.649^{+0.147}_{-0.144}$
Alt.	-99 ± 16	$65.38^{+9.23}_{-7.42}$	1030^{+56}_{-51}	1937^{+75}_{-91}	$0.734^{+0.236}_{-0.203}$

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 $A_{obs} \gg 1.0$

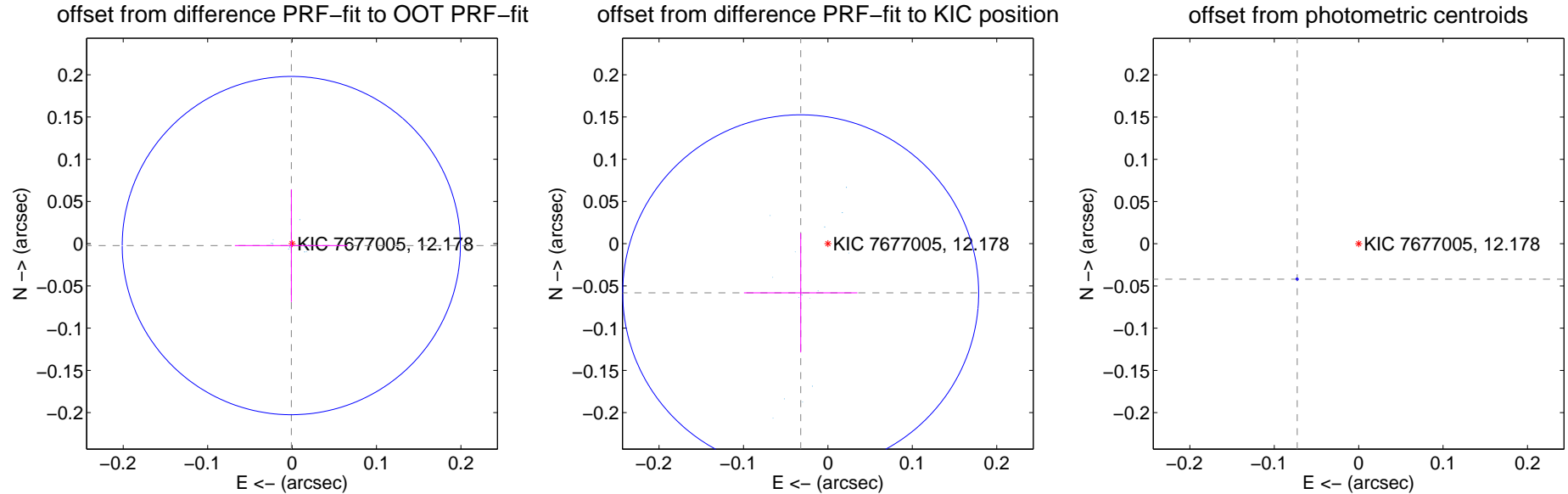
DV Centroid Data

Supplemental centroid analysis for 007677005-02. Kepler magnitude: 12.18. Transit SNR 4465.76

There are 15 quarters with good PRF difference image offsets

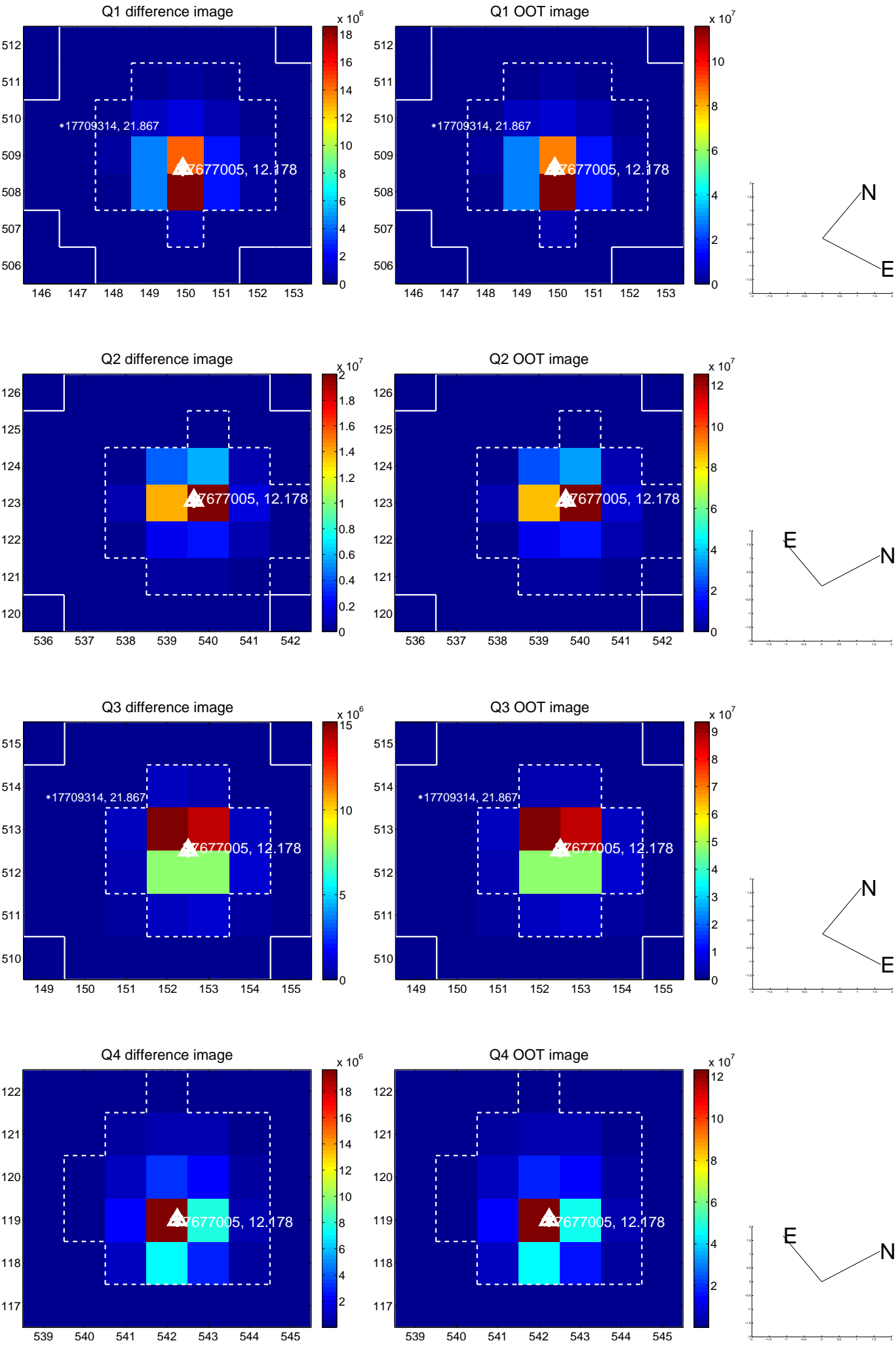
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.002 ± 0.067	0.04	0.001 ± 0.067	-0.002 ± 0.067
PRF-fit source offset from KIC position	0.067 ± 0.070	0.95	0.032 ± 0.067	-0.058 ± 0.071
photometric centroid source offset	0.08 ± 0.00	201.81	0.07 ± 0.00	-0.04 ± 0.00

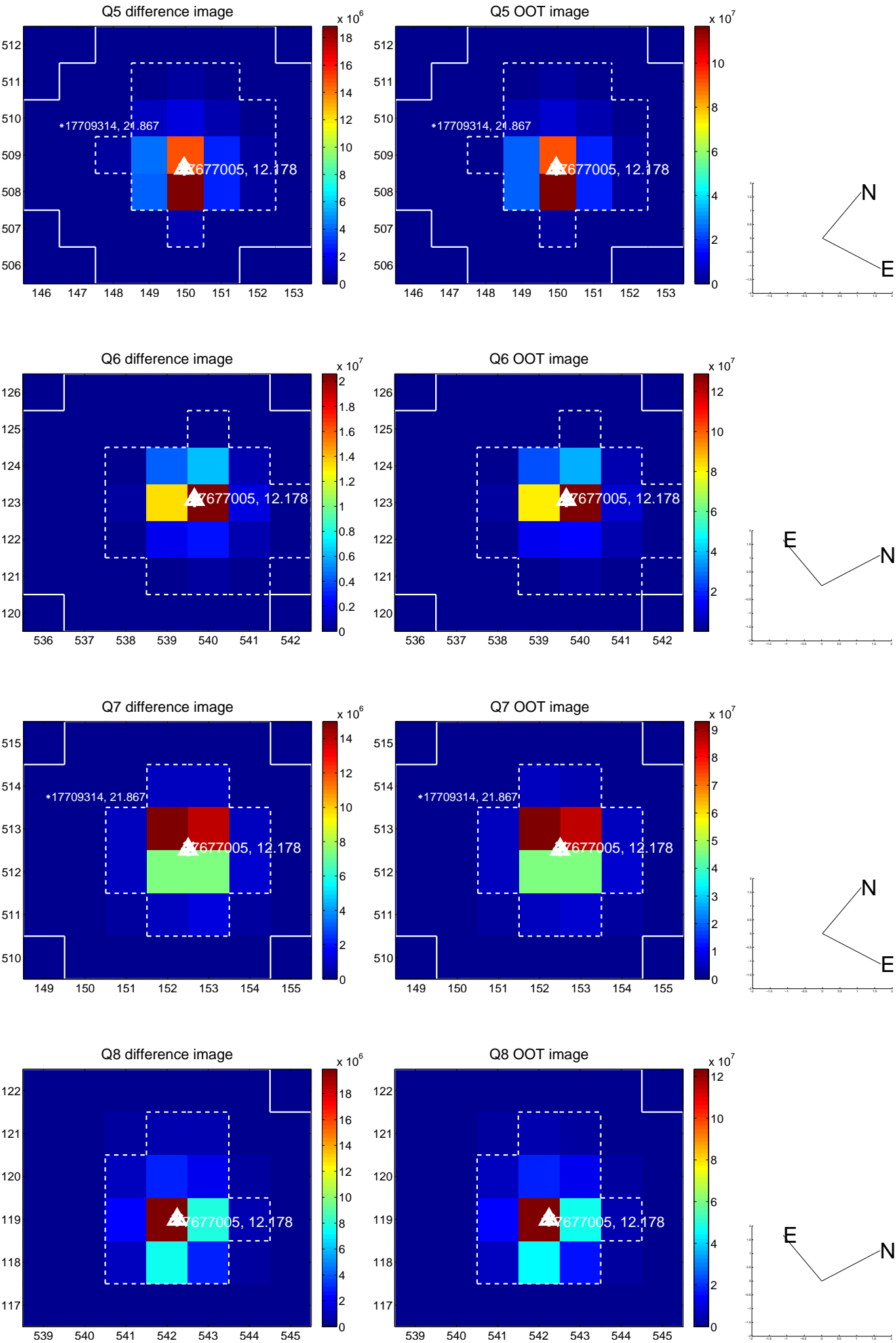


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

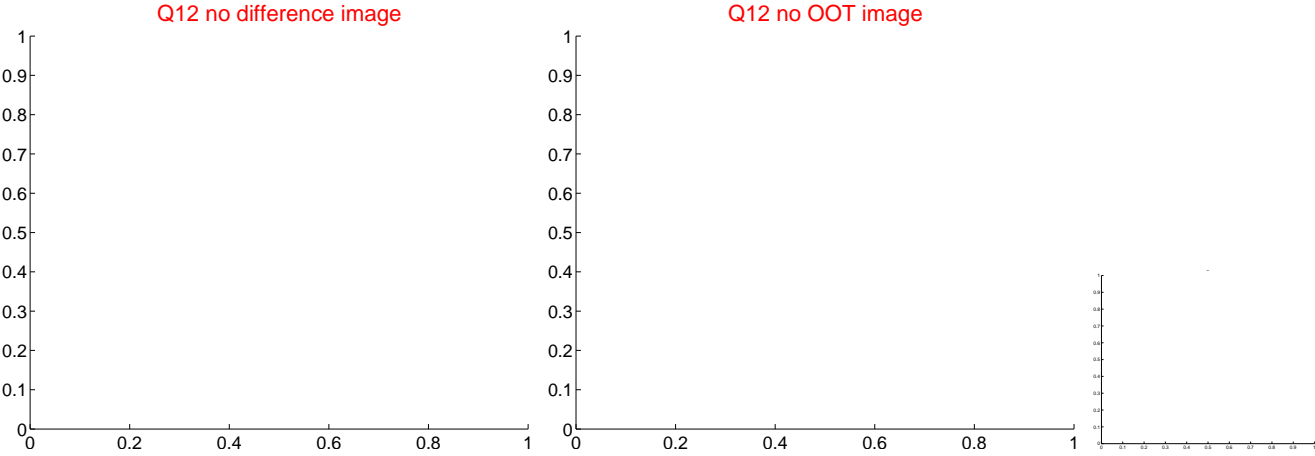
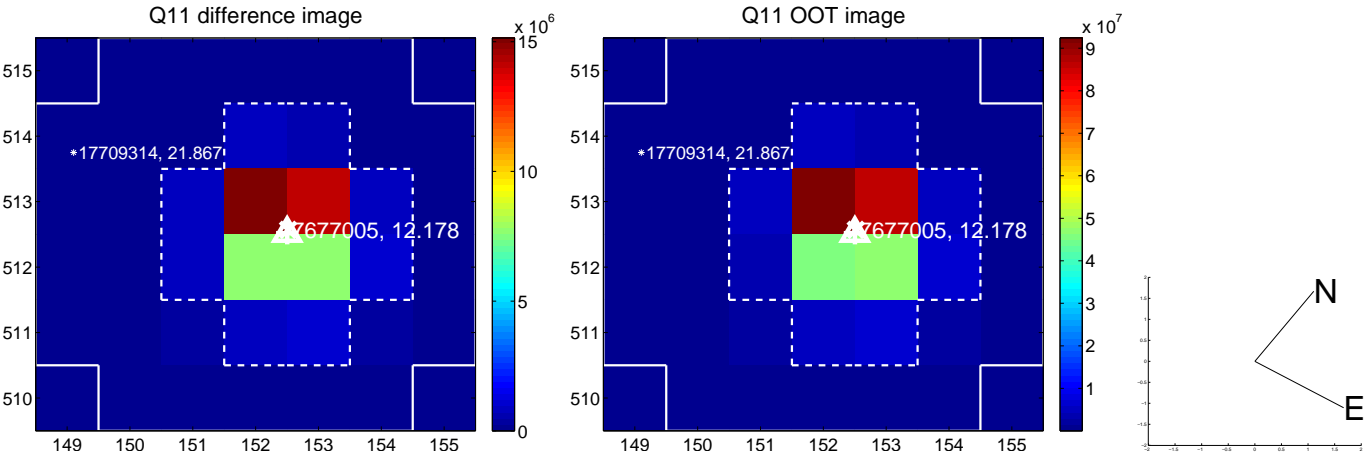
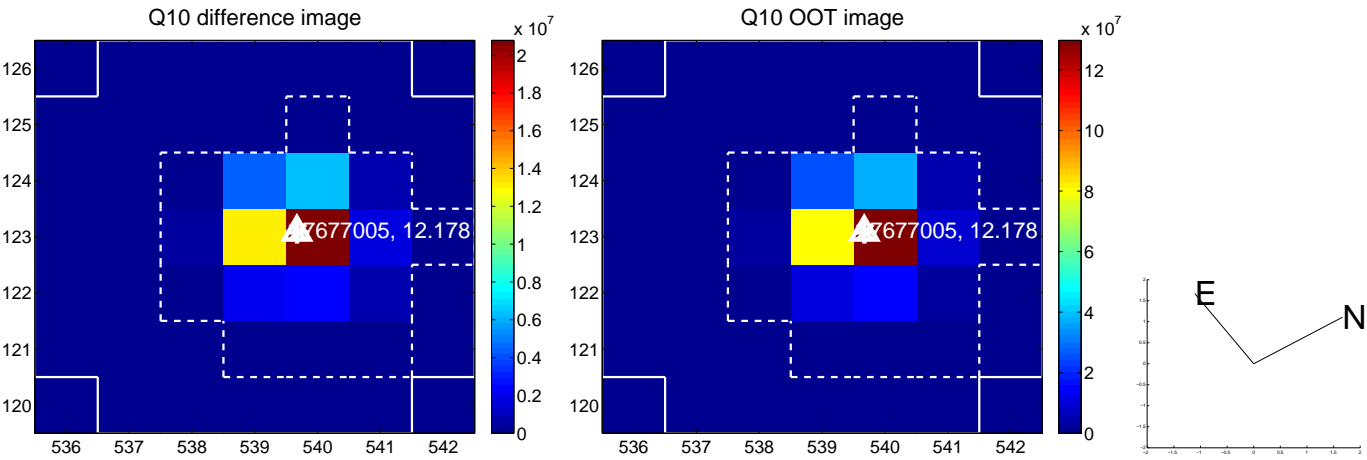
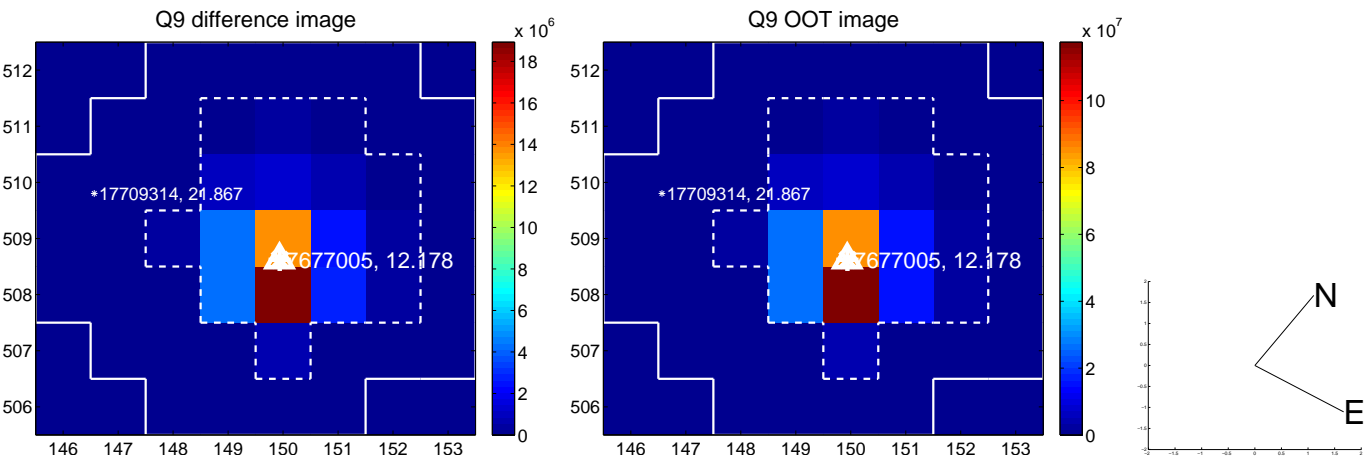
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



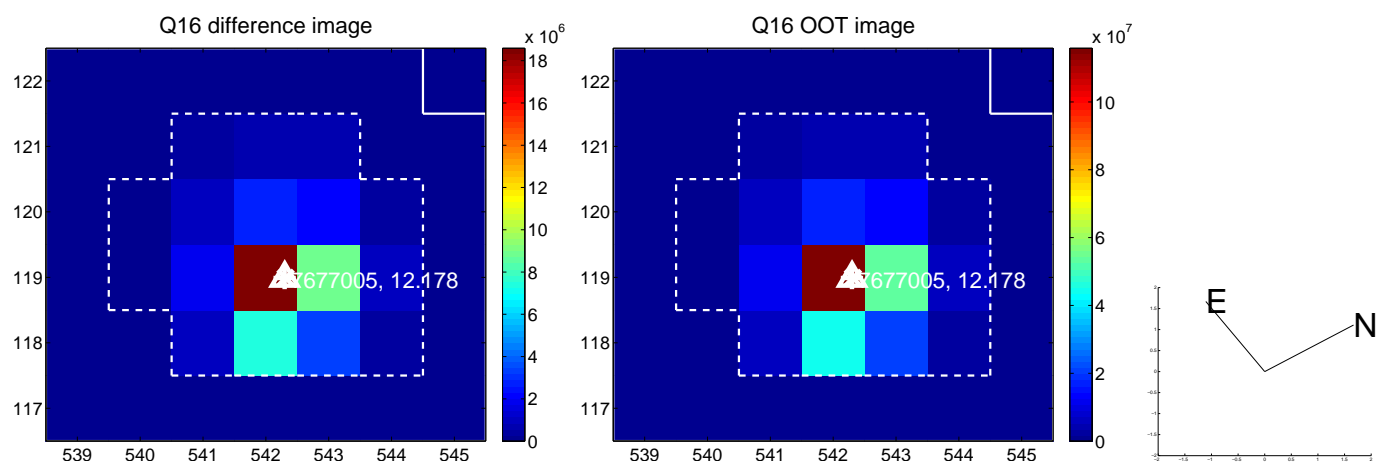
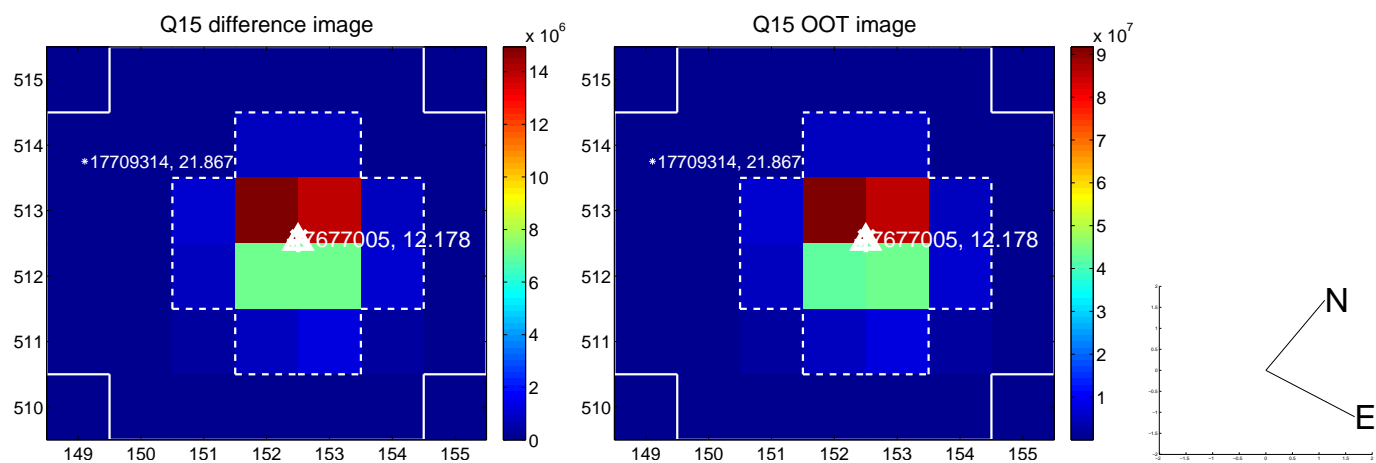
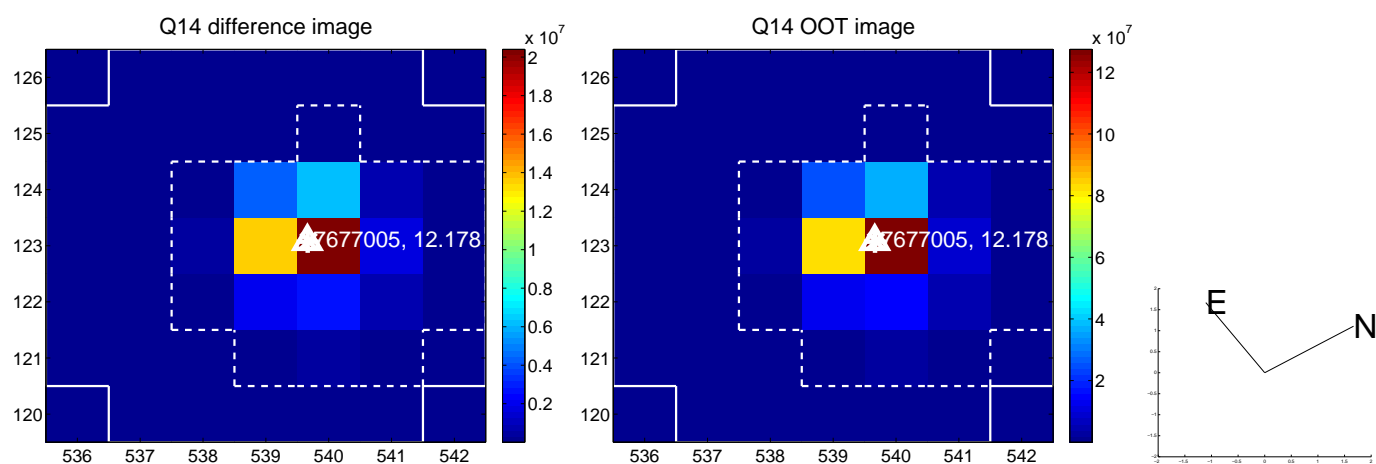
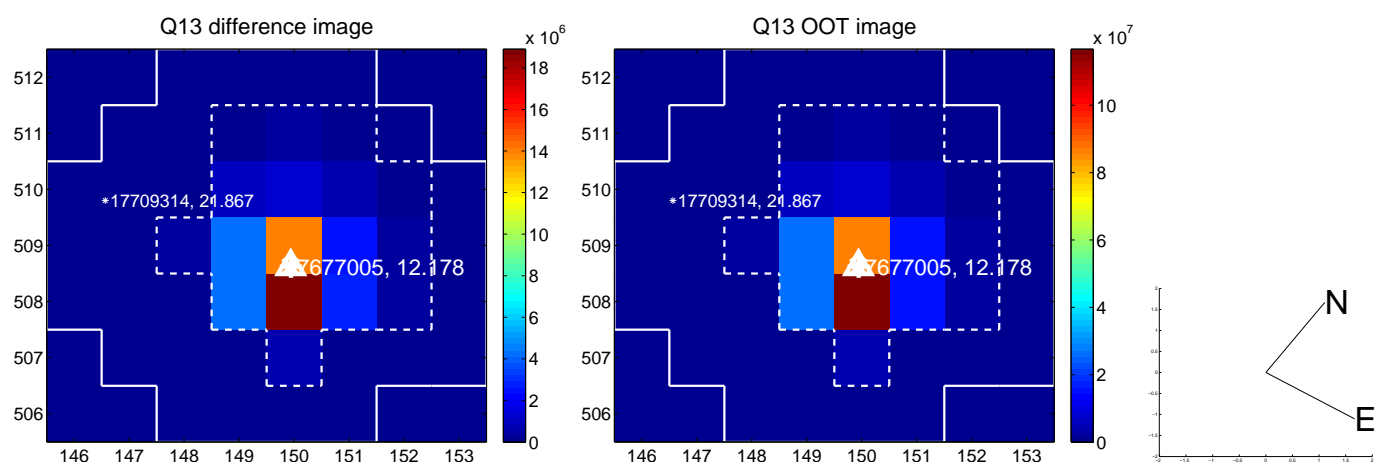
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



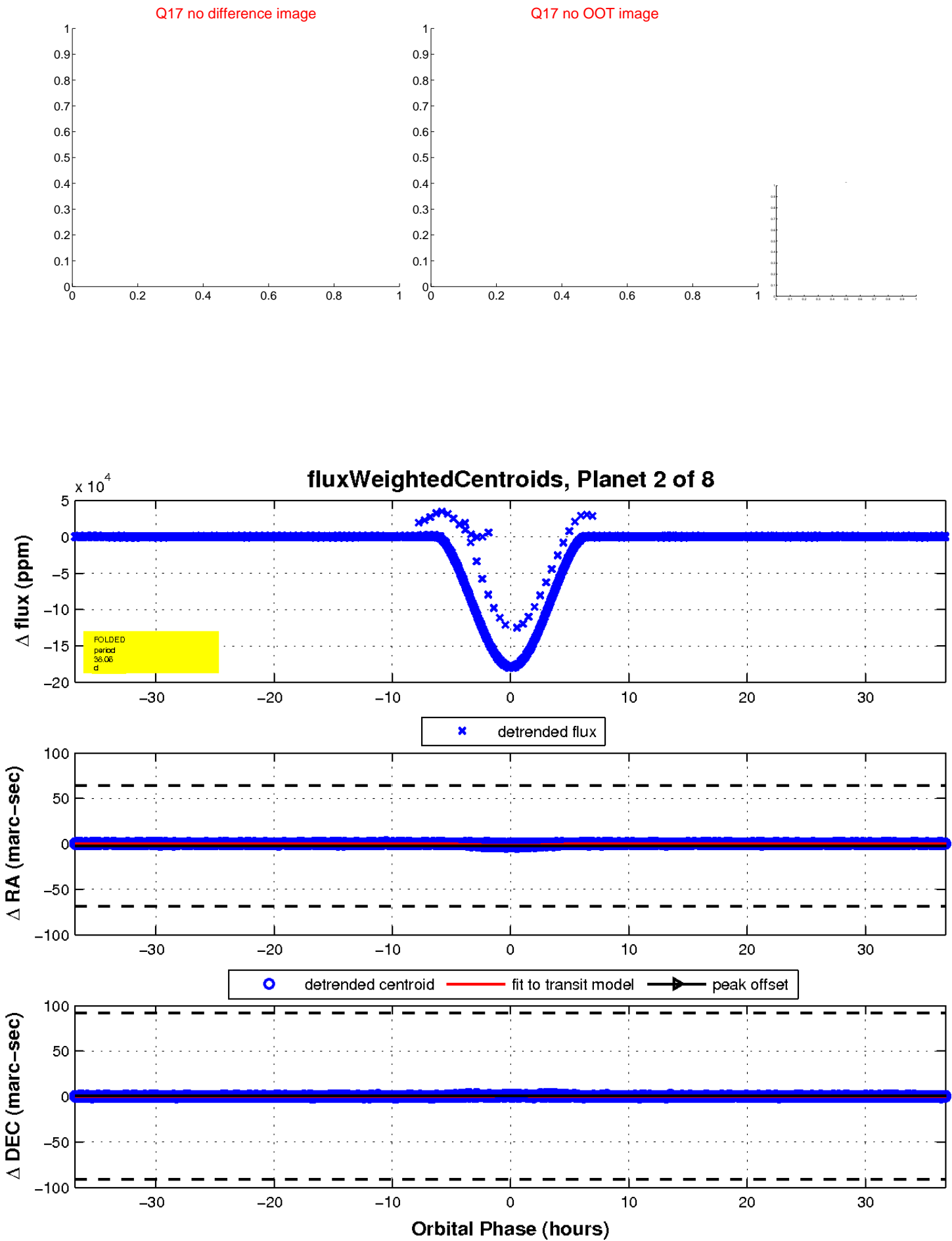
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

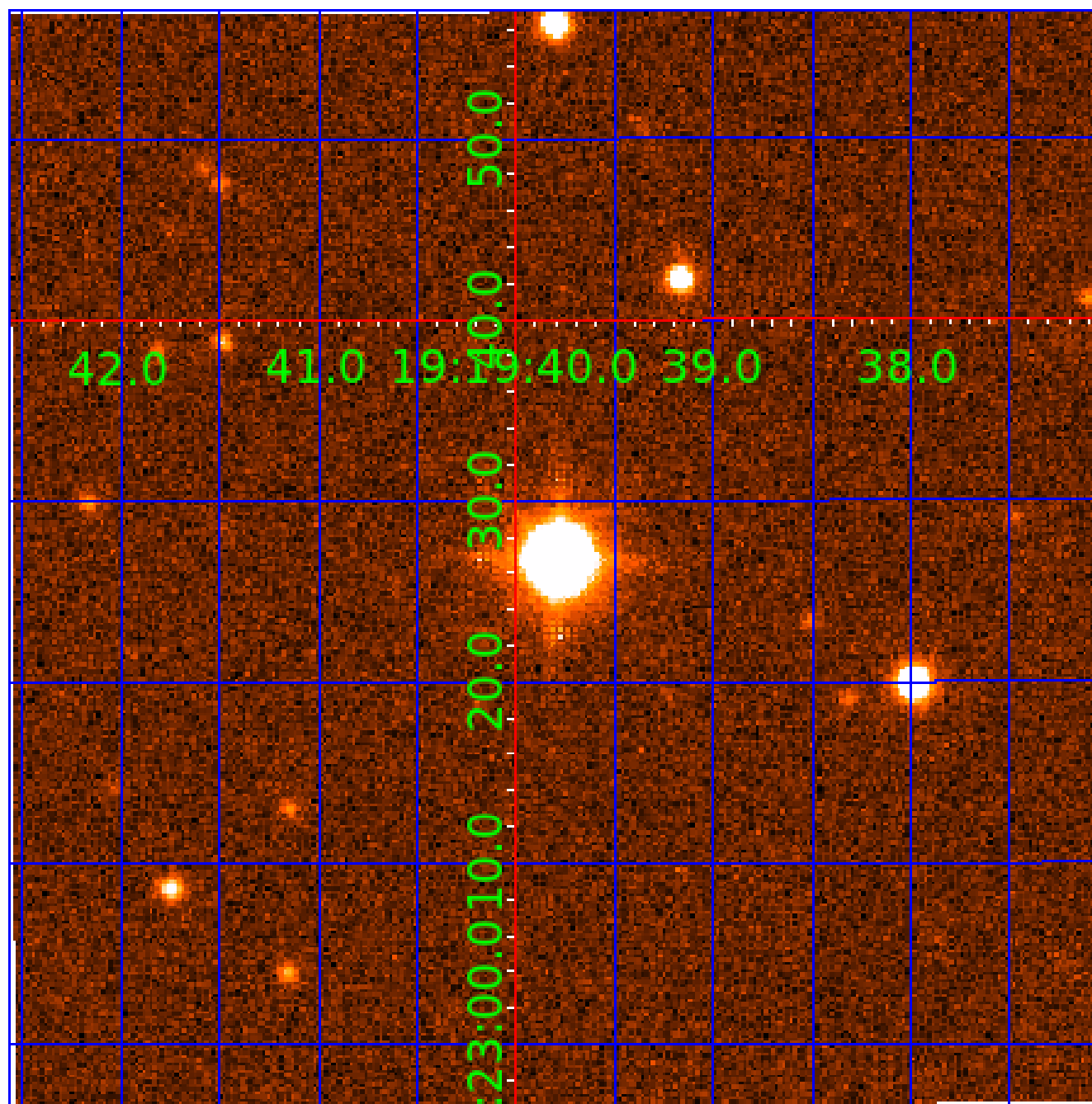


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007677005

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})
007677005-01	OBS	6903.01	38.057656	142.412298	313054.4	5.000	13456.1	-1.0	1.42	6894	46.18	69.53
007677005-02	OBS	No	38.058129	134.579595	177838.8	12.282	6569.6	4465.8	1.42	6894	82.28	69.53
007677005-03	OBS	No	190.275709	143.543340	7221.9	17.782	420.7	133.8	1.42	6894	21.33	8.13
007677005-04	OBS	No	301.720179	184.285303	862.0	13.059	362.3	10.3	1.42	6894	4.77	4.40
007677005-05	OBS	No	190.461260	255.719357	10034.8	2.500	360.9	-1.0	1.42	6894	14.41	8.12
007677005-06	OBS	No	38.060334	141.291858	2277.7	10.500	273.9	-1.0	1.42	6894	6.84	69.52
007677005-07	OBS	No	38.060474	141.954746	16601.4	1.500	335.3	-1.0	1.42	6894	18.55	69.52
007677005-08	OBS	No	190.300020	257.088307	6355.5	3.000	275.5	-1.0	1.42	6894	11.44	8.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007677005-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVN_ALT—HAS_SEC_TCE—CENT_NOFITS
007677005-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
007677005-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT— SAME_NTL_PERIOD—CENT_FEW_DIFFS—HALO_GHOST
007677005-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007677005-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
007677005-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
007677005-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—RESIDUAL_TCE—CENT_NOFITS
007677005-08	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—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.

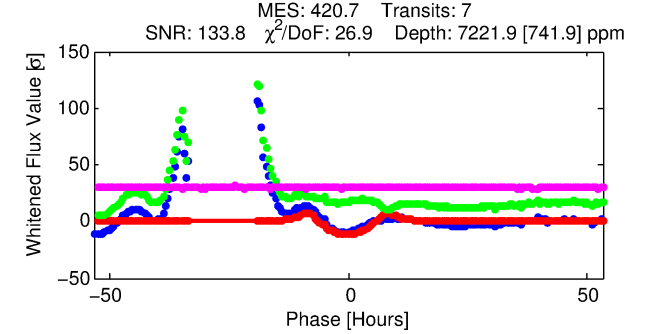
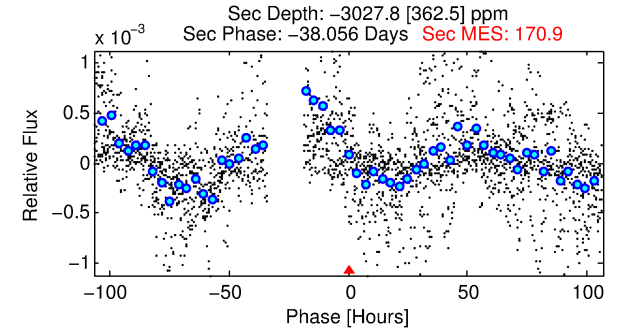
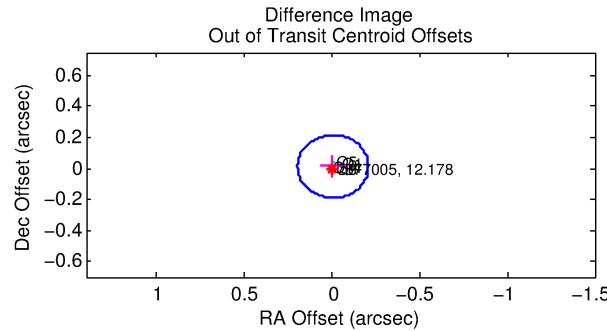
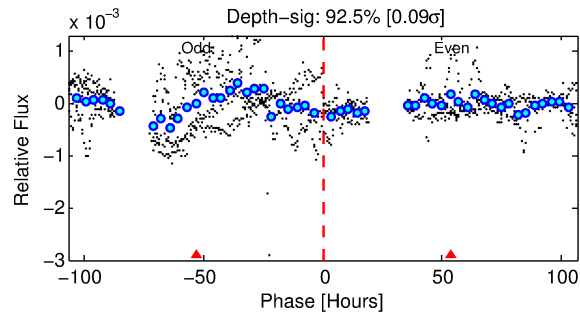
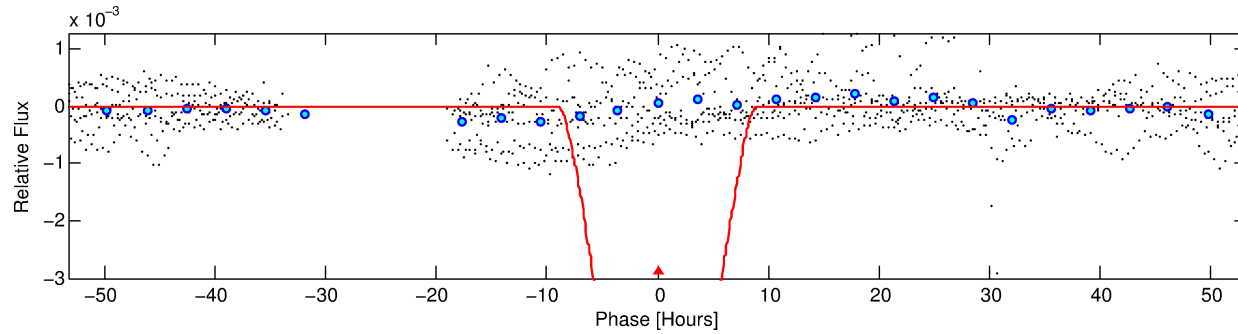
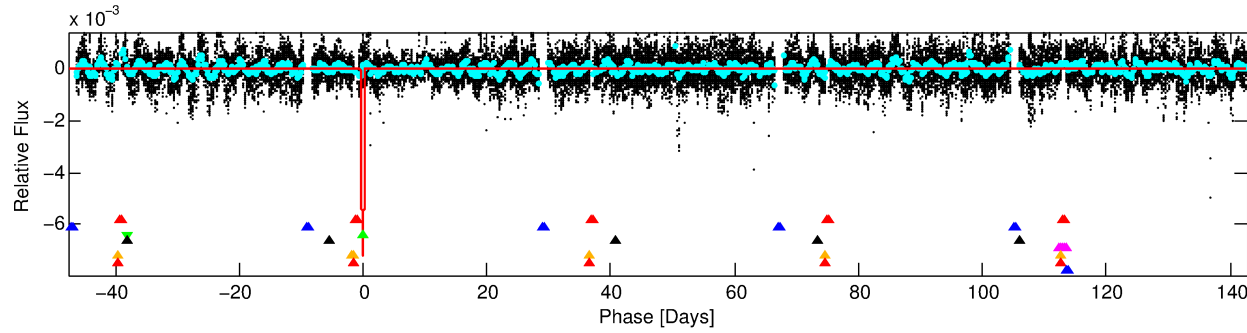
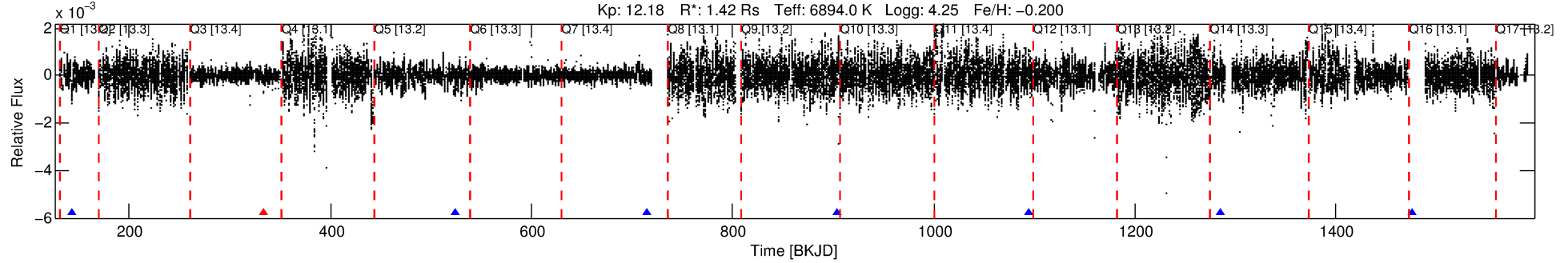
Ephemeris Match Information For 007677005-03

No Significant Match Found

DV One-Page Summary

KIC: 7677005 Candidate: 3 of 8 Period: 190.276 d
KOI: K06903 Corr: No Ephemeris Match

Kp: 12.18 R*: 1.42 Rs Teff: 6894.0 K Logg: 4.25 Fe/H: -0.200



DV Fit Results:

Period = 190.27571 [0.00424] d
Epoch = 143.5433 [0.0099] BKJD
Rp/R* = 0.1377 [0.0900]
a/R* = 44.38 [4.87]
b = 1.00 [0.12]
Seff = 8.13 [2.43]
Teq = 431 [32] K
Rp = 21.33 [14.79] Re
a = 0.7078 [0.1329] AU
Ag = N/A
Teffp = N/A

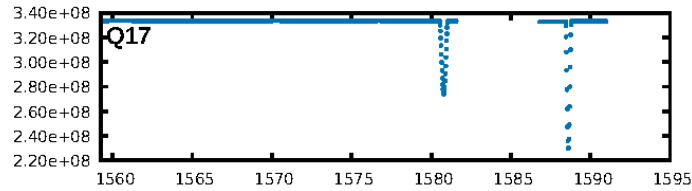
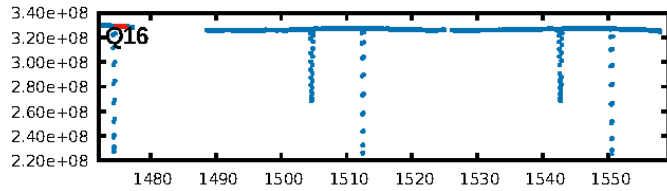
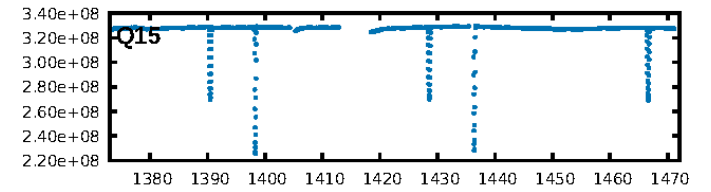
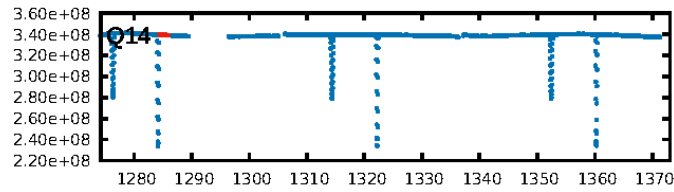
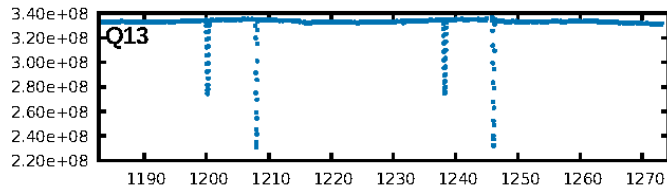
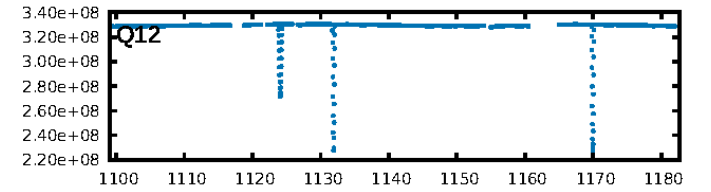
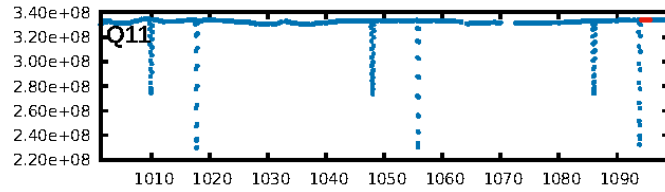
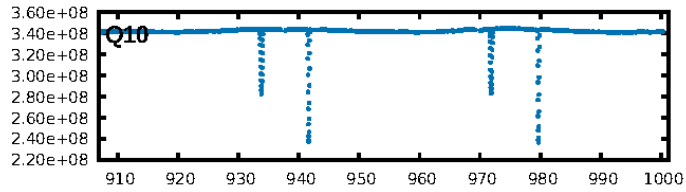
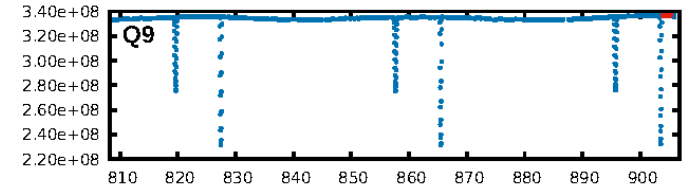
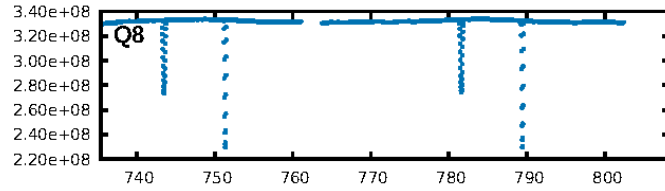
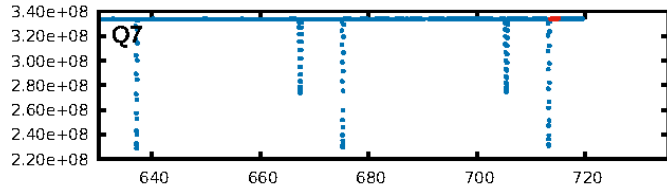
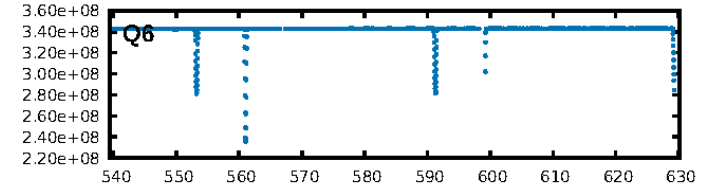
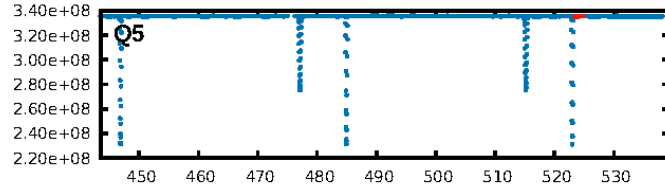
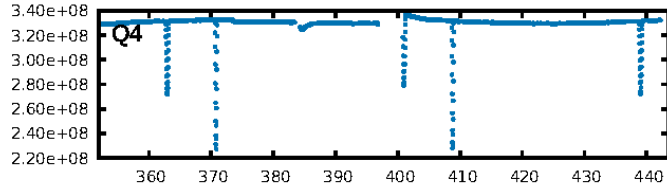
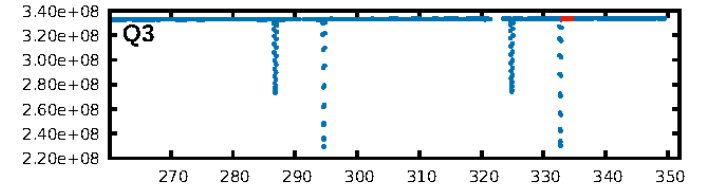
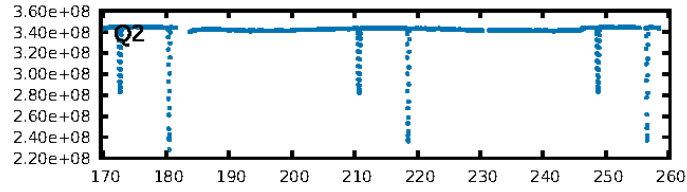
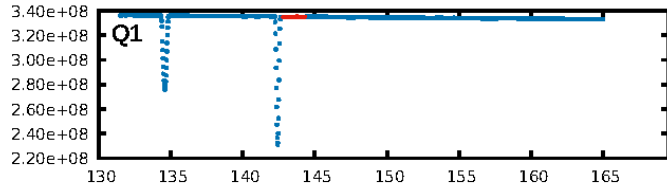
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [204.71σ]
LongPeriod-sig: 2.6% [0.03σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.83 [5/6]
GhostDiagnostic-chr: -0.02076
Centroid-sig: 85.3%
Centroid-so: 0.081 arcsec [4.23σ]
OotOffset-rm: 0.015 arcsec [0.22σ]
KicOffset-rm: 0.019 arcsec [0.23σ]
OotOffset-st: 1/1/0/3 [5]
KicOffset-st: 1/1/0/3 [5]
DiffImageQuality-fgm: 0.00 [0/5]
DiffImageOverlap-fno: 0.00 [0/5]

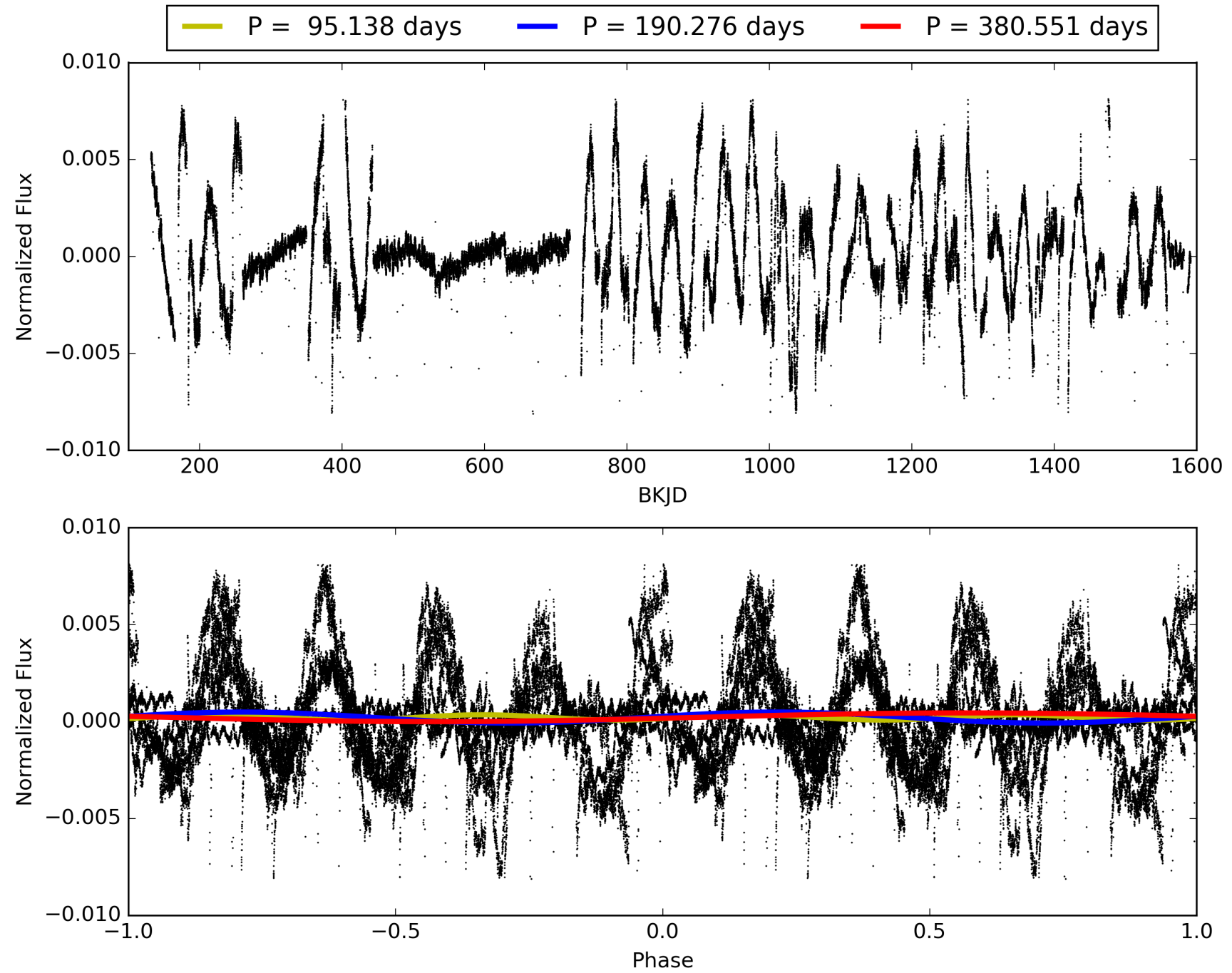
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:09:44 Z

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

TCE 007677005-03, PDC Light Curves

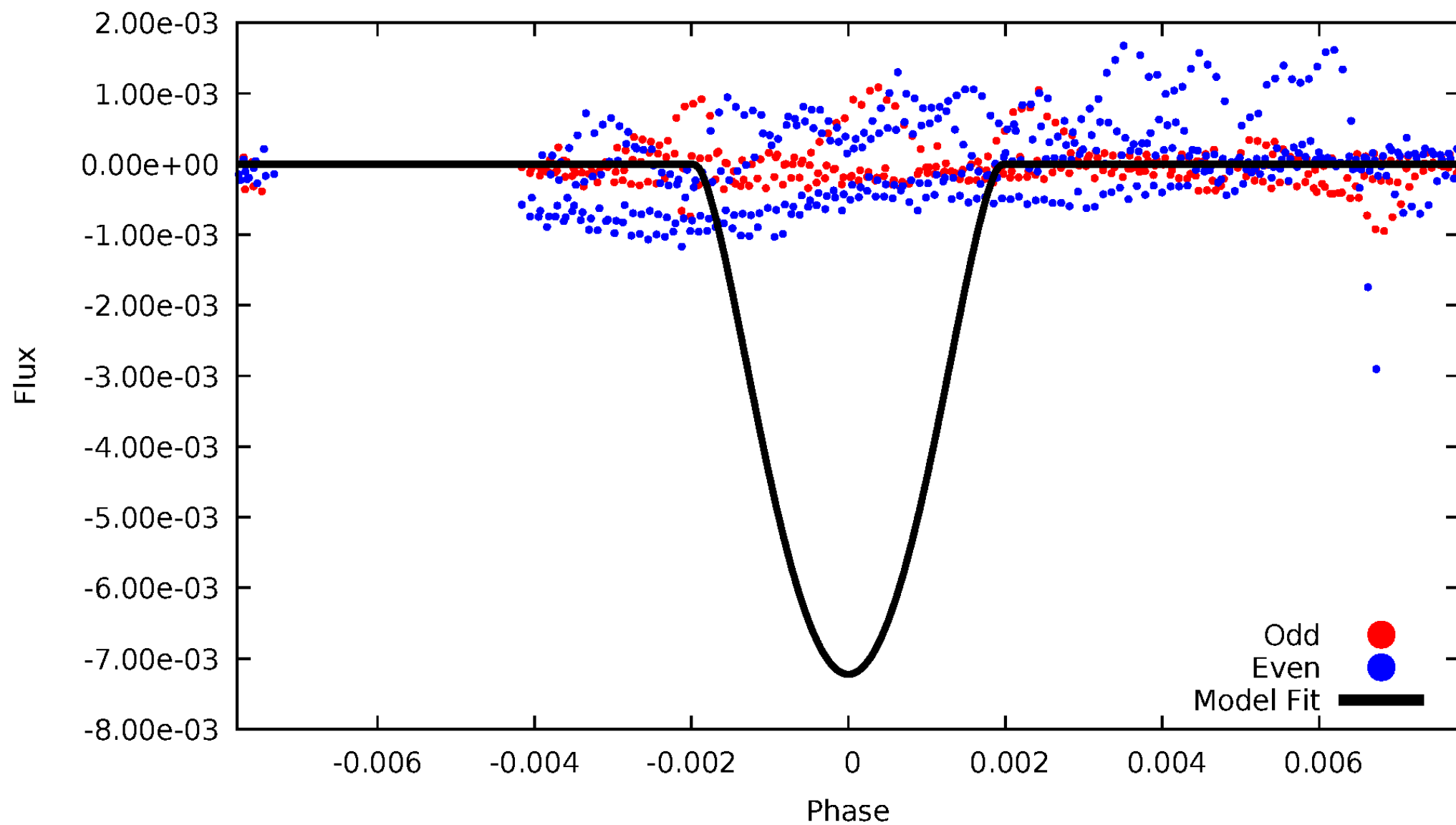


TCE 007677005-03



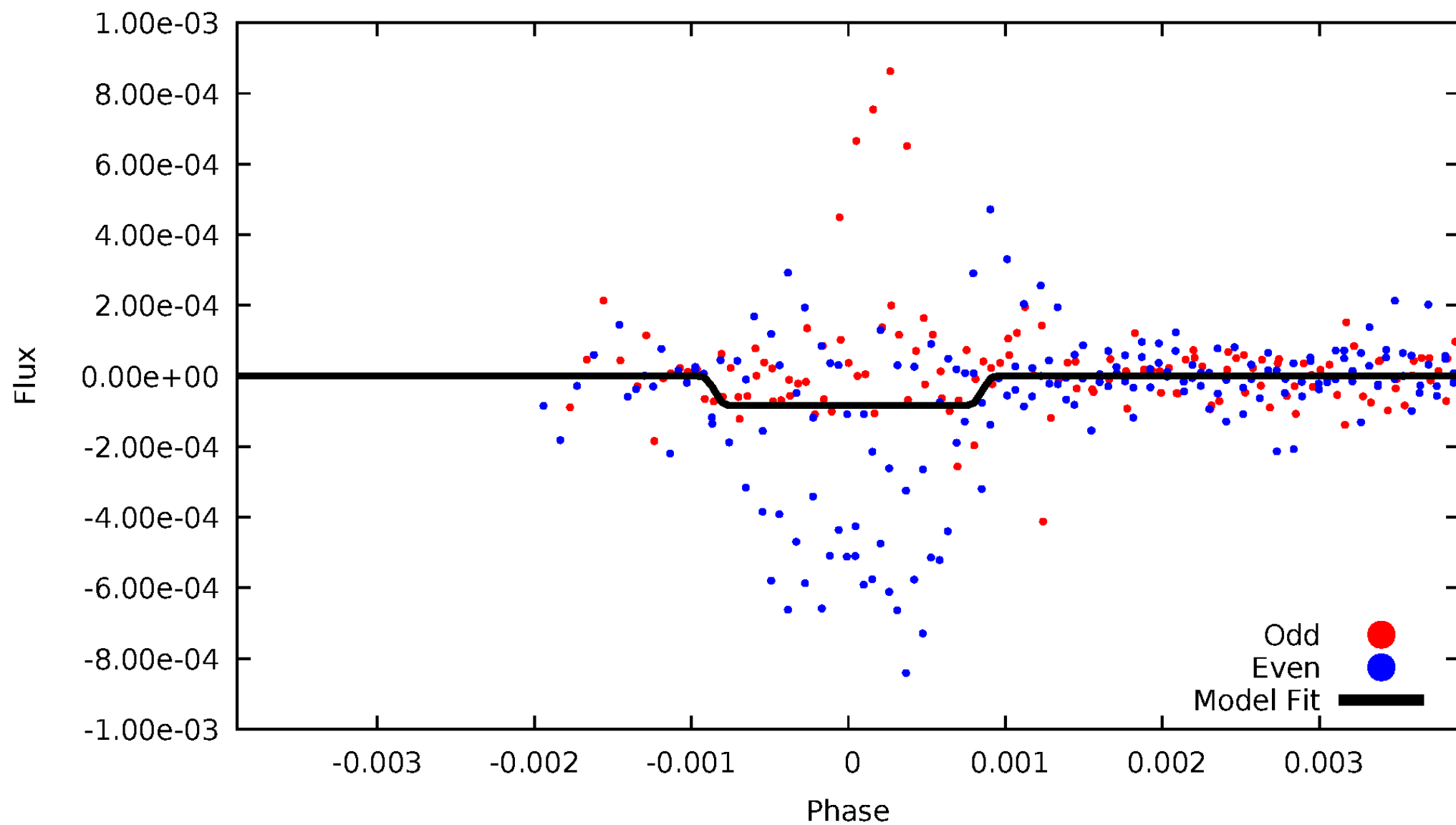
DV Odd/Even

TCE 007677005-03



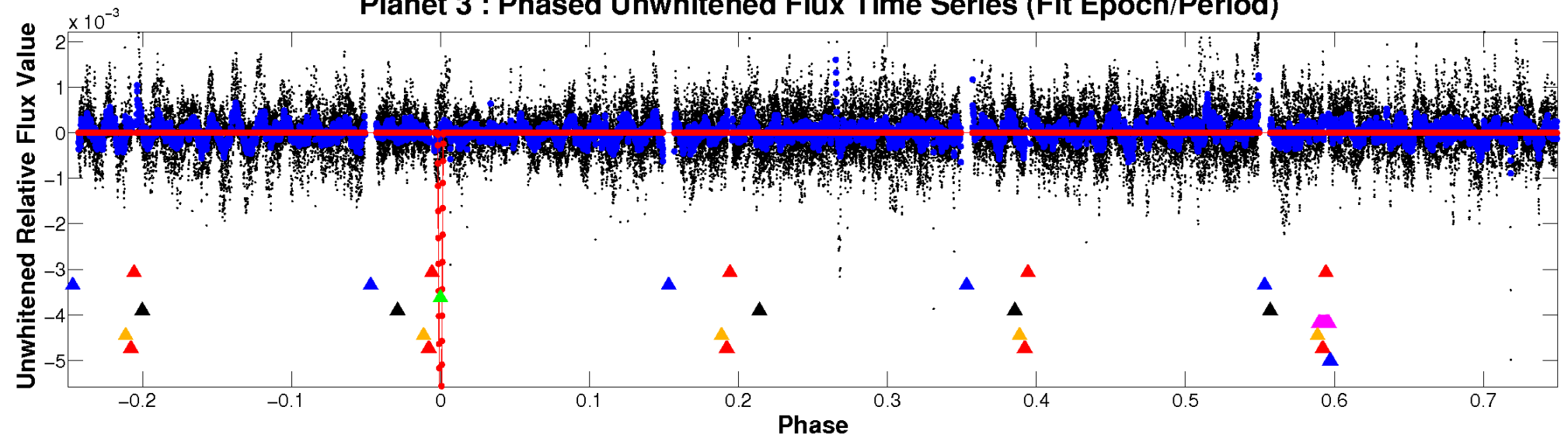
ALT Odd/Even

TCE 007677005-03

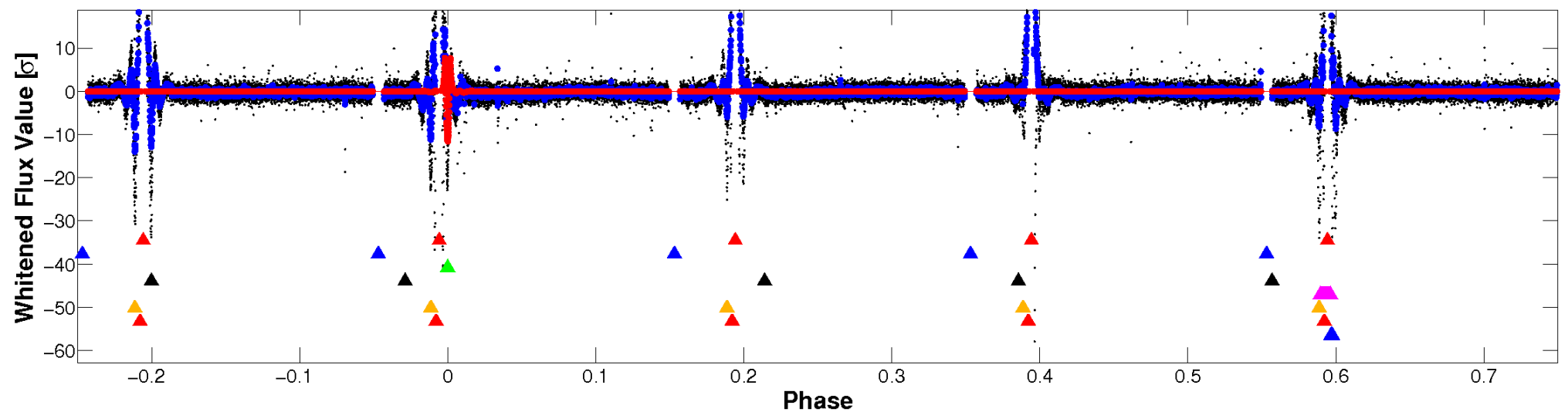


Non-Whitened Vs. Whitened Light Curve

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

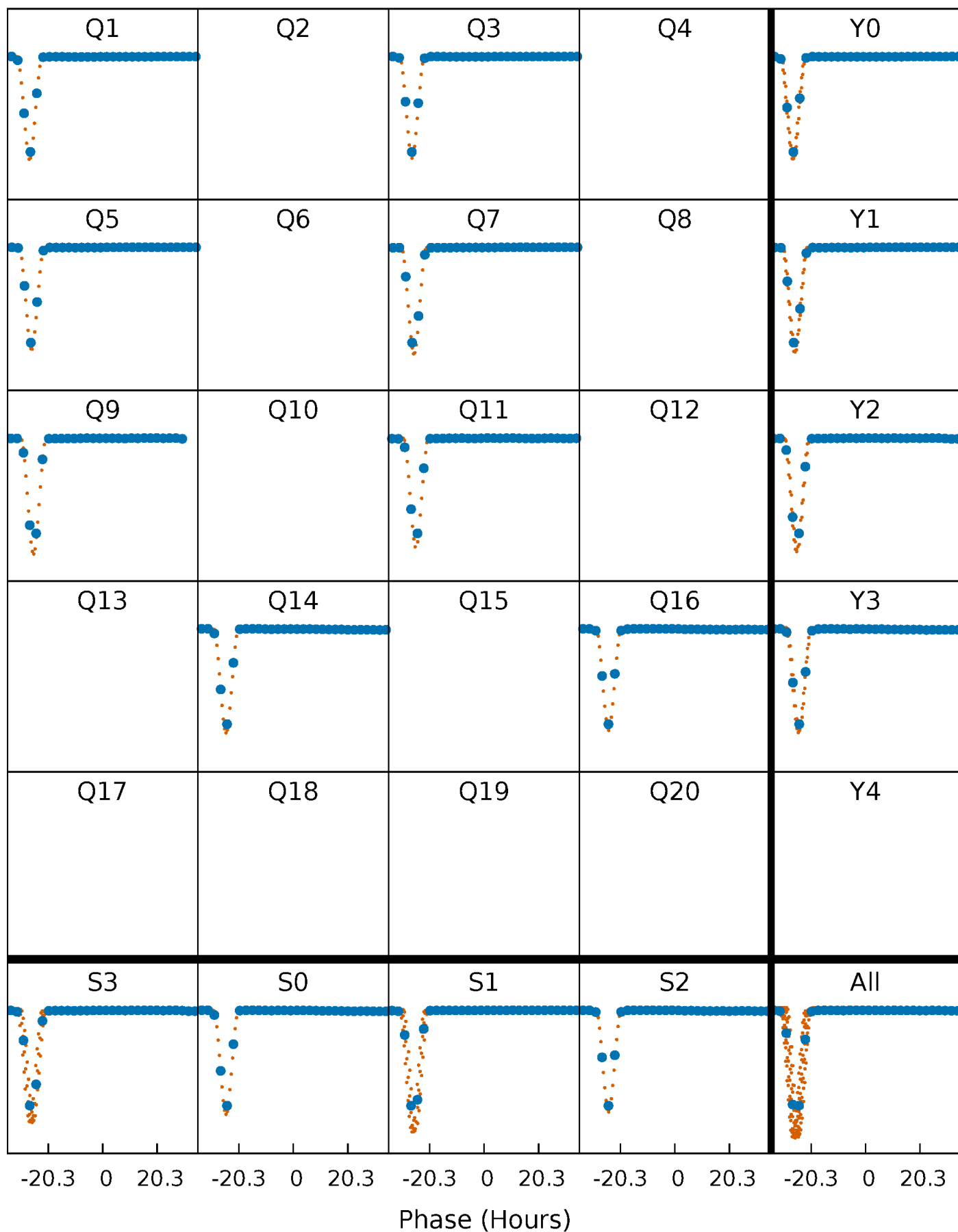


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



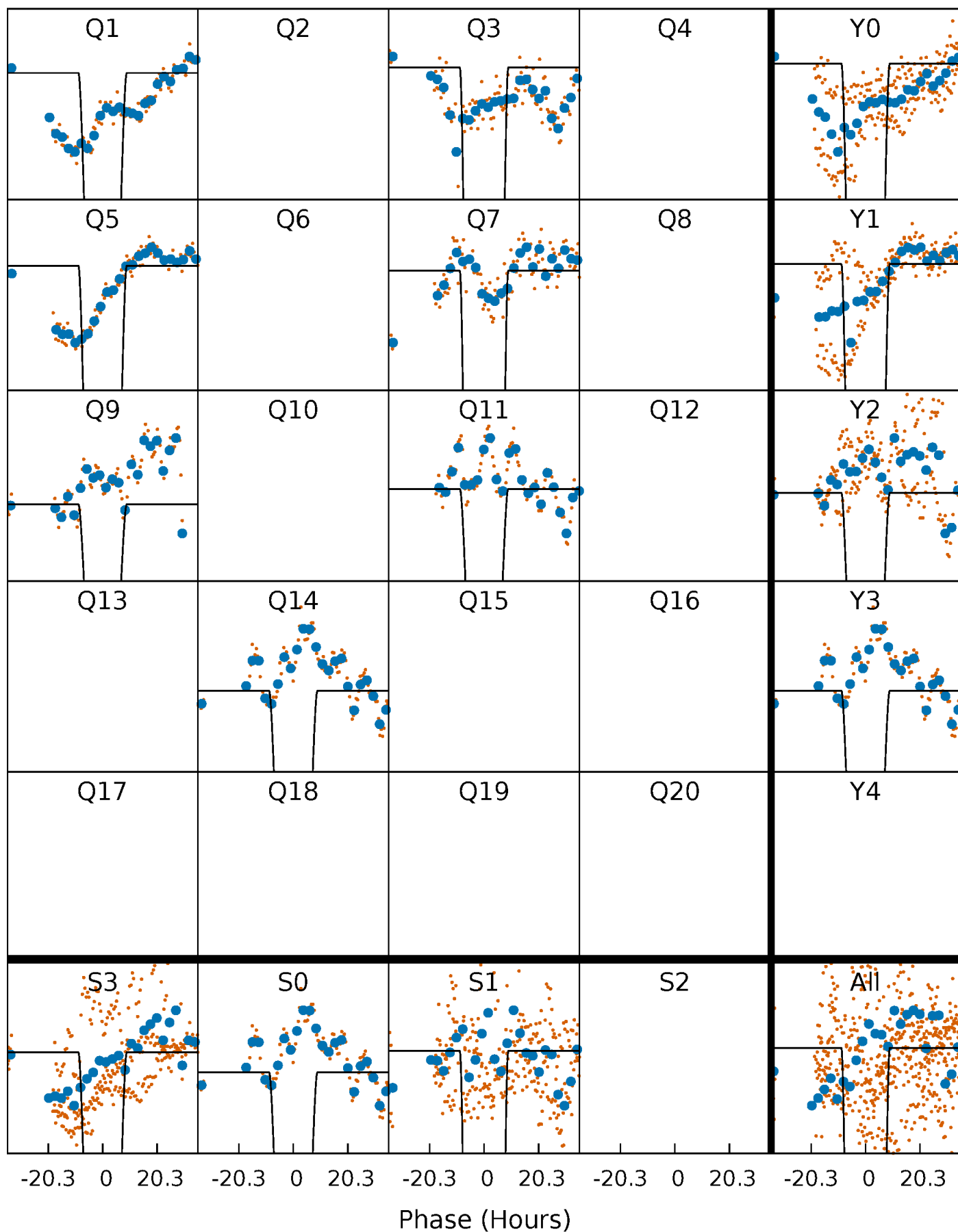
PDC Quarter-Phased Transit Curves

TCE 007677005-03 P=190.275709 Days $T_0=143.543340$ (BKJD)



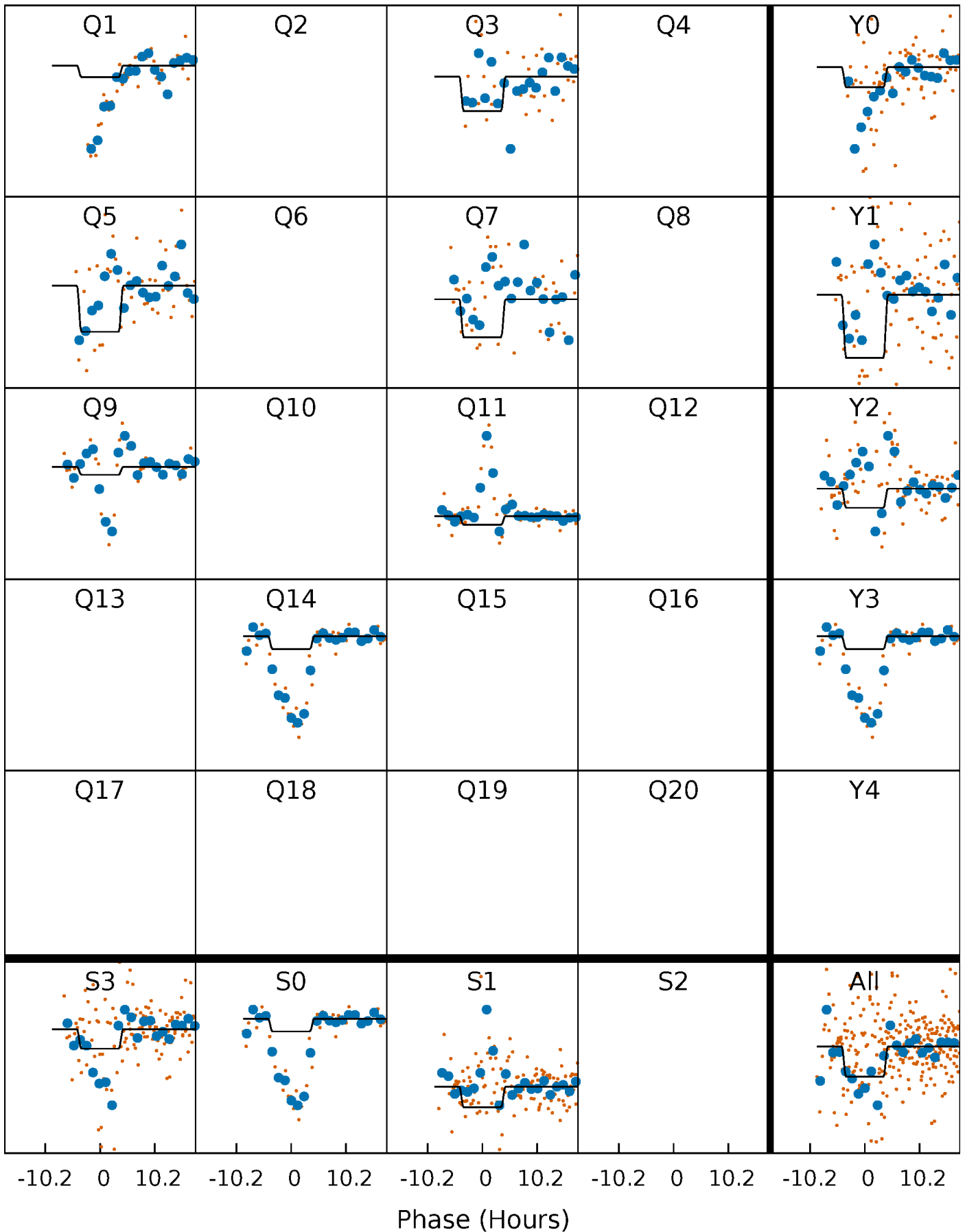
DV Quarter-Phased Transit Curves

TCE 007677005-03 $P=190.275709$ Days $T_0=143.543340$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

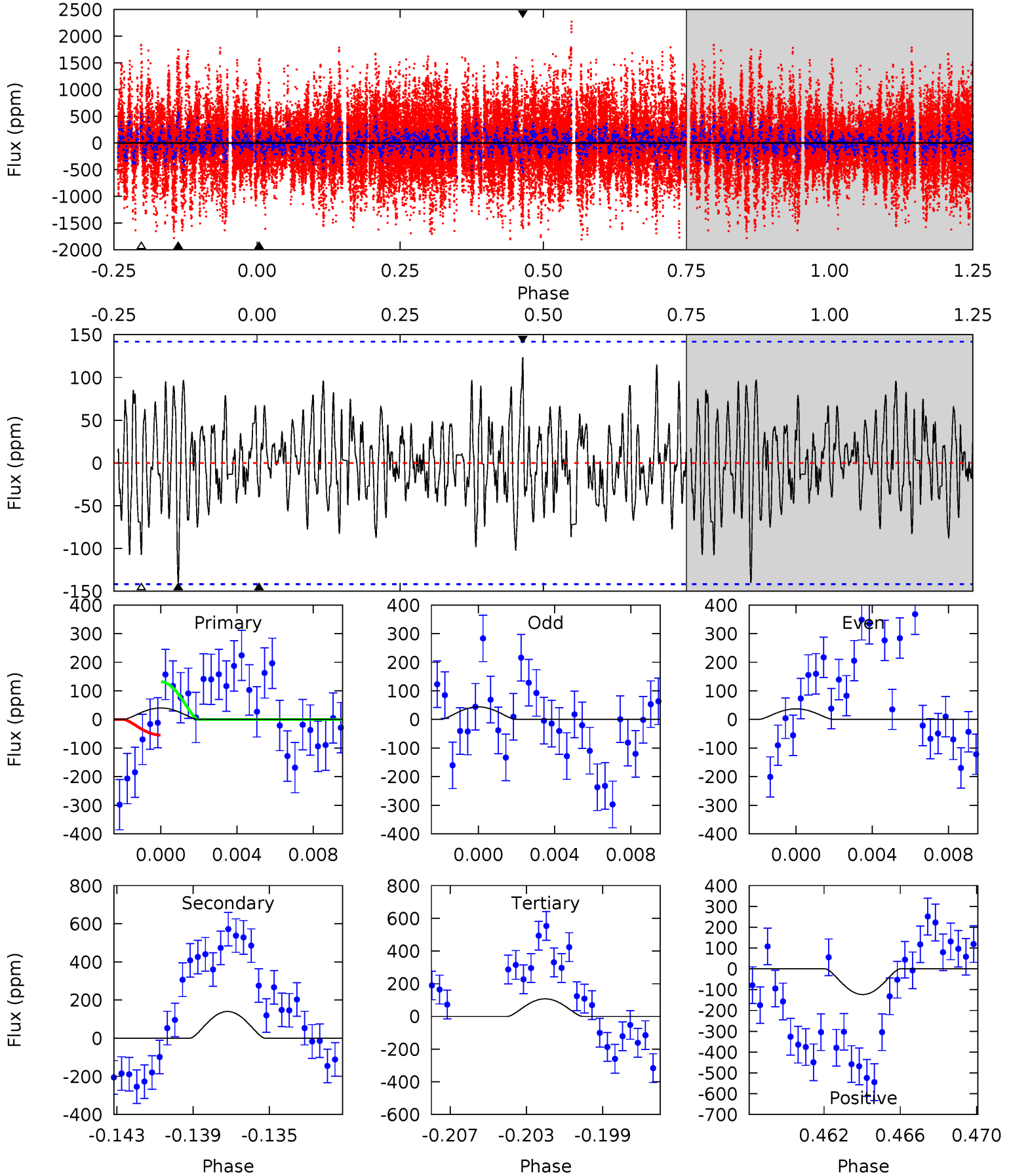
TCE 007677005-03 P=190.334069 Days $T_0=142.844874$ (BKJD)



DV Model-Shift Uniqueness Test

007677005-03, P = 190.275709 Days, E = 143.543340 Days

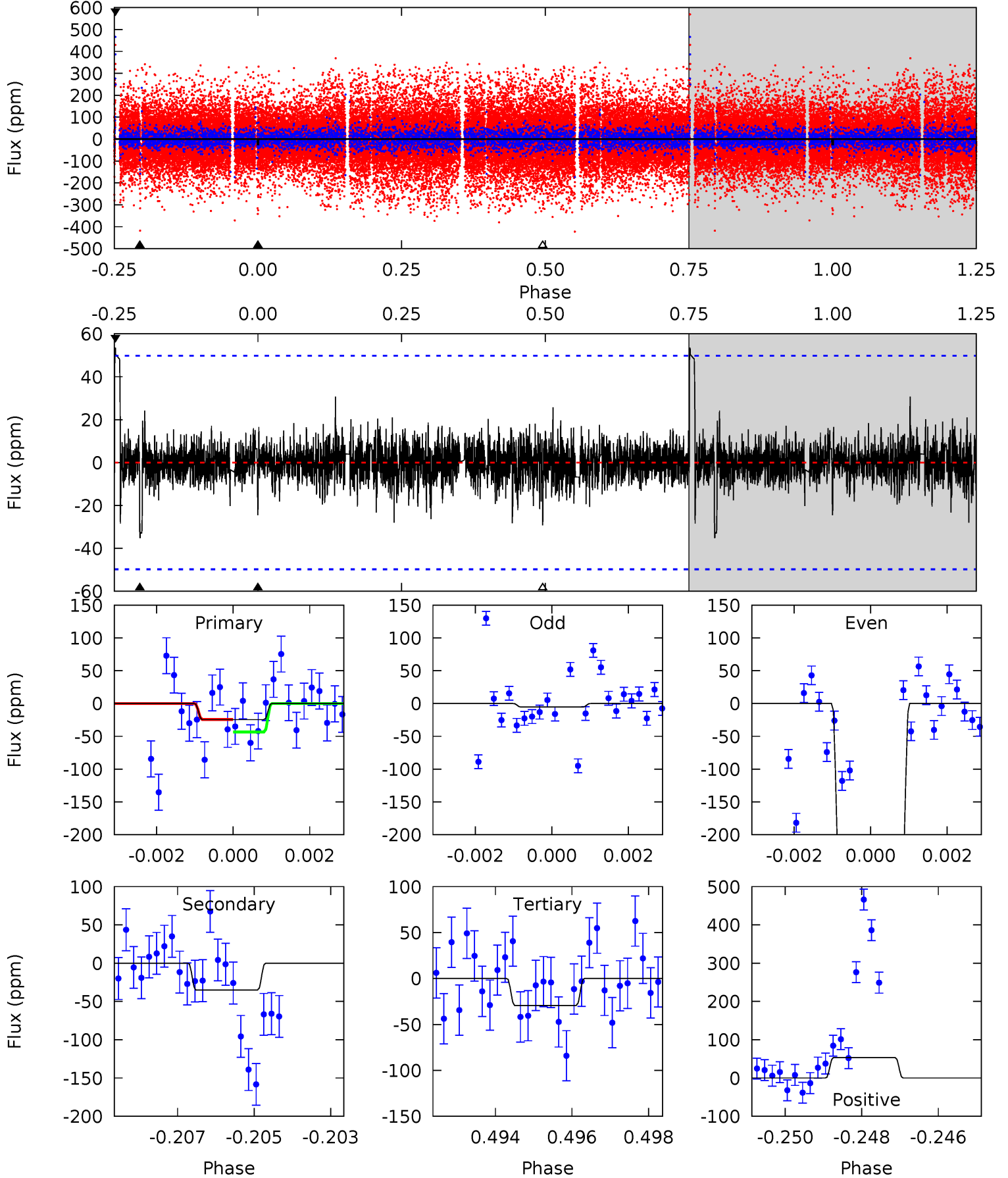
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.47	5.13	3.94	4.53	5.20	2.88	1.44	-2.47	-3.06	1.19	0.60	0.12	-0.33	0.47	1.43



Alt Model-Shift Uniqueness Test

007677005-03, P = 190.334069 Days, E = 142.844874 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.63	3.78	3.14	5.74	5.34	3.11	0.71	-0.51	-3.11	0.64	-1.96	15.5	4.16	0.60	1.04



Stellar Parameters For KIC 007677005

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6894^{+164}_{-247}	$4.250^{+0.092}_{-0.138}$	$-0.200^{+0.250}_{-0.350}$	$1.419^{+0.330}_{-0.220}$	$1.317^{+0.150}_{-0.187}$	$0.649^{+0.326}_{-0.253}$
	+2%/-4%	+2%/-3%	+125%/-175%	+23%/-16%	+11%/-14%	+50%/-39%
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 007677005-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-140 ± 27	$22.75^{+14.82}_{-11.59}$	604^{+35}_{-31}	2705^{+622}_{-290}	72^{+218}_{-44}
Alt.	-35 ± 9	$9.80^{+10.15}_{-7.15}$	603^{+34}_{-30}	2842^{+1444}_{-492}	102^{+1198}_{-78}

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 $A_{obs} \gg 1.0$

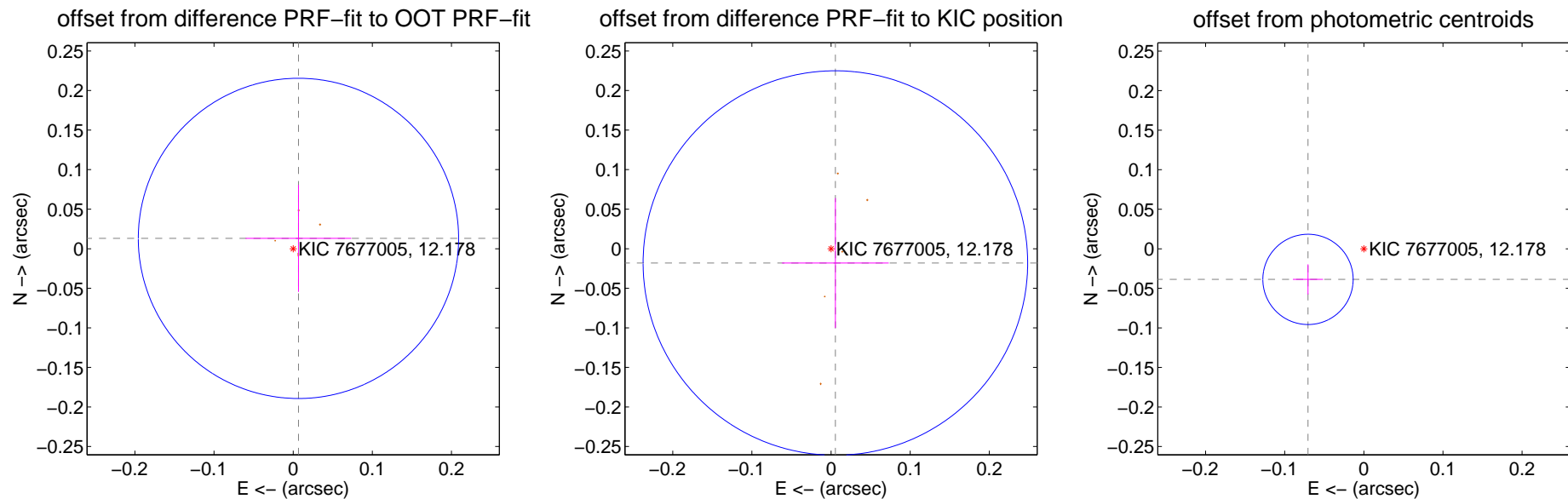
DV Centroid Data

Supplemental centroid analysis for 007677005-03. Kepler magnitude: 12.18. Transit SNR 133.78

There are 0 quarters with good PRF difference image offsets

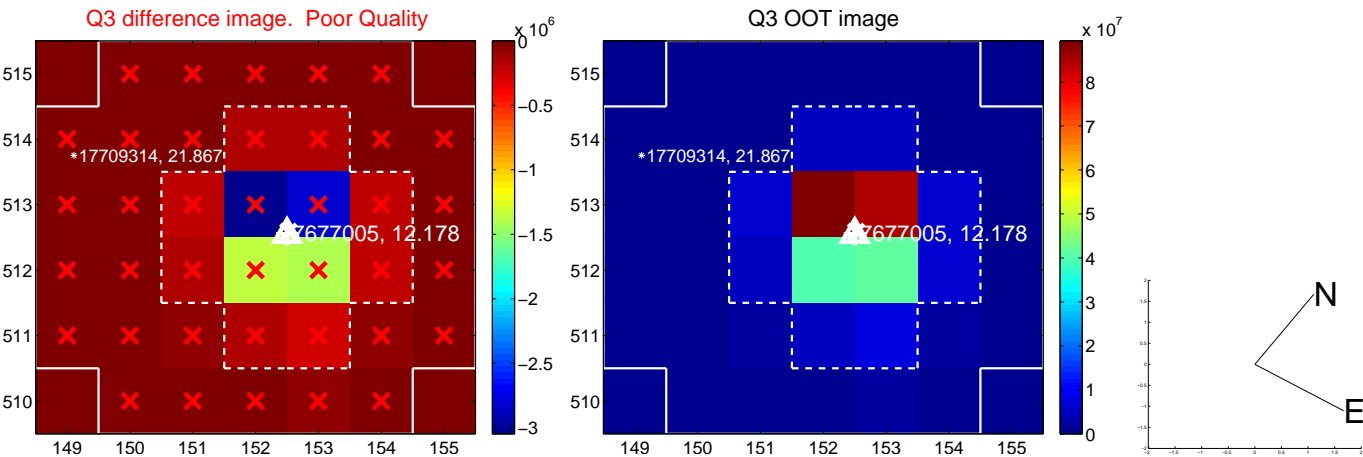
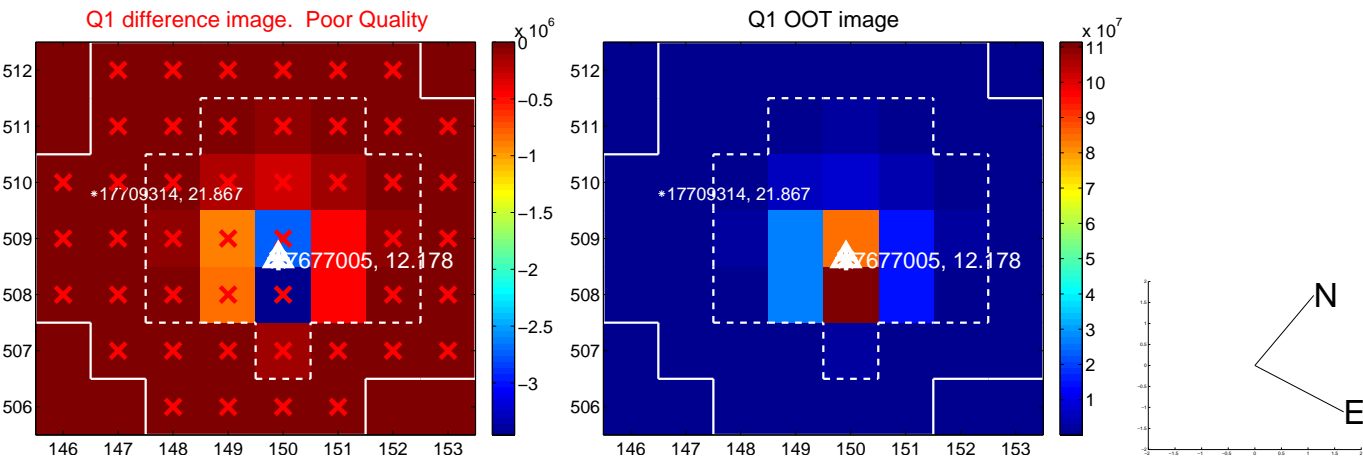
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.015 ± 0.067	0.22	-0.007 ± 0.067	0.013 ± 0.068
PRF-fit source offset from KIC position	0.019 ± 0.081	0.23	-0.005 ± 0.067	-0.018 ± 0.082
photometric centroid source offset	0.08 ± 0.02	4.23	0.07 ± 0.02	-0.04 ± 0.02

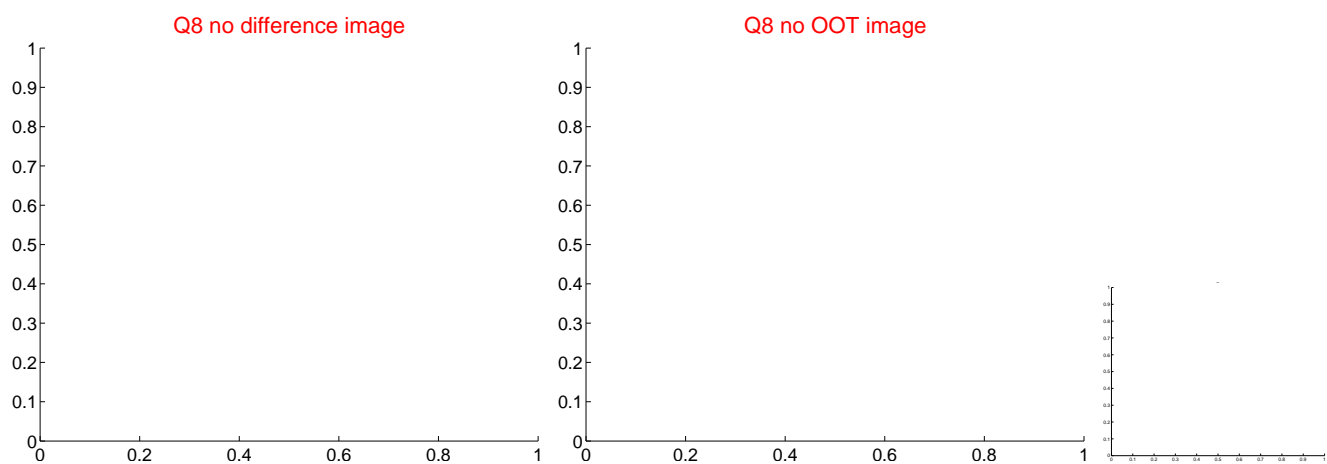
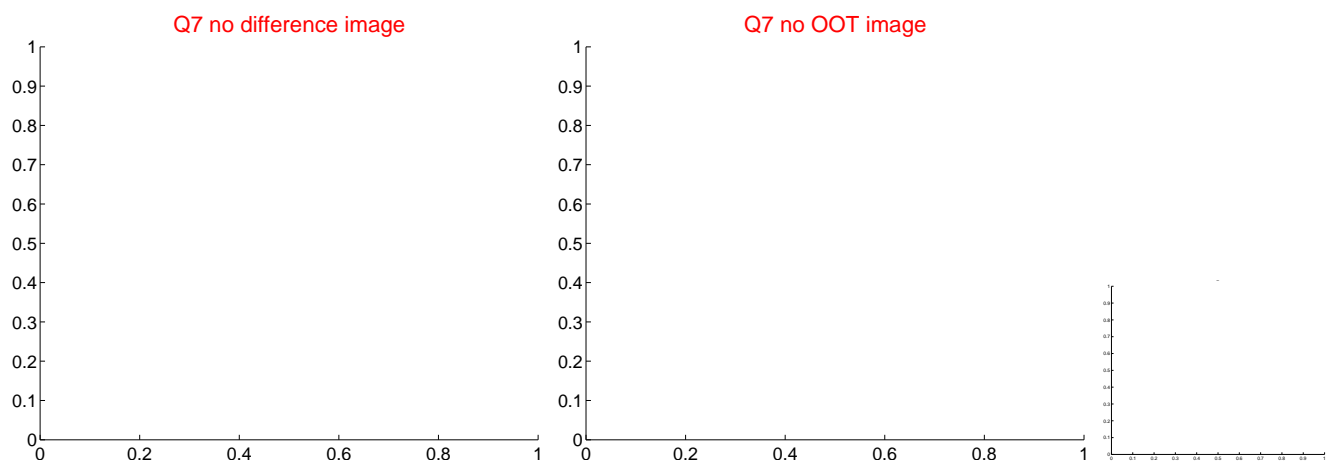
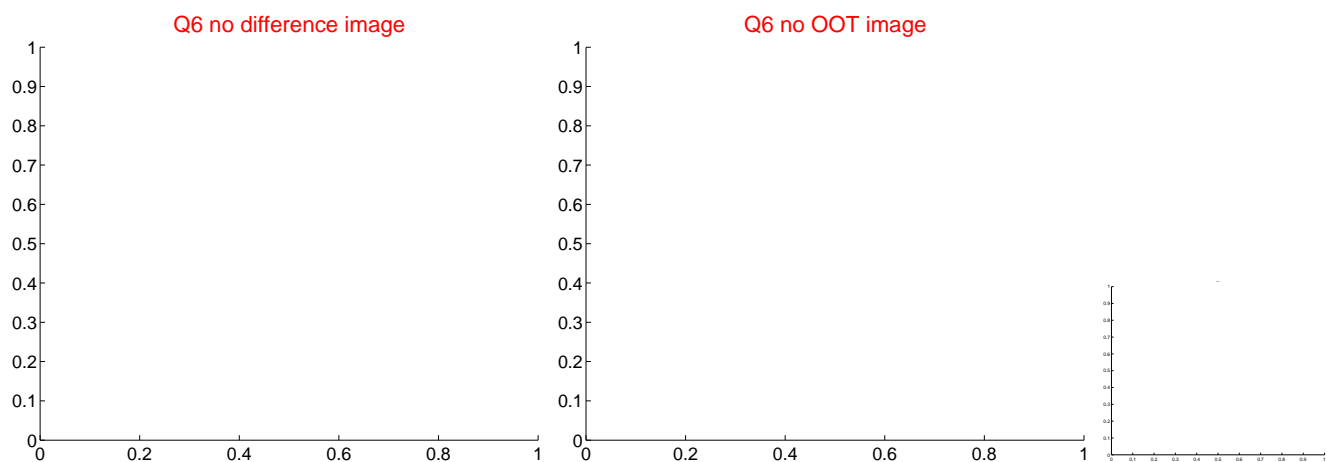
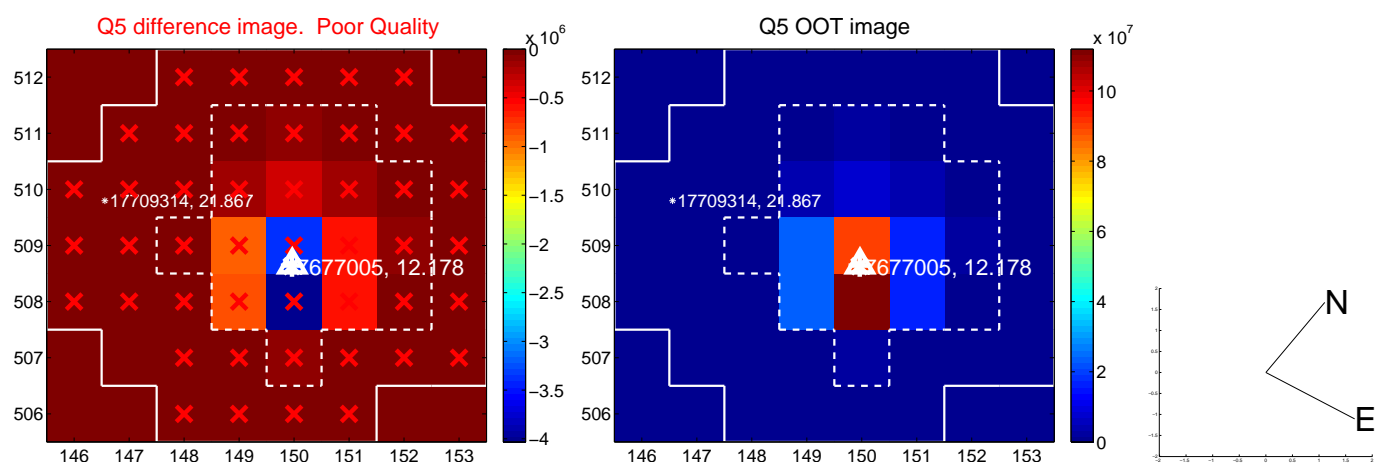


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

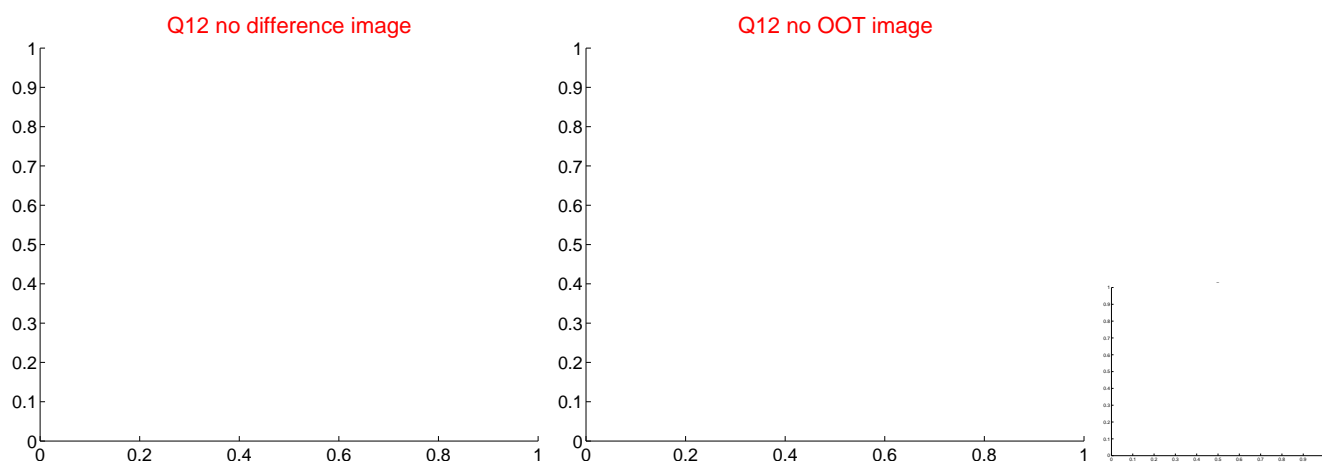
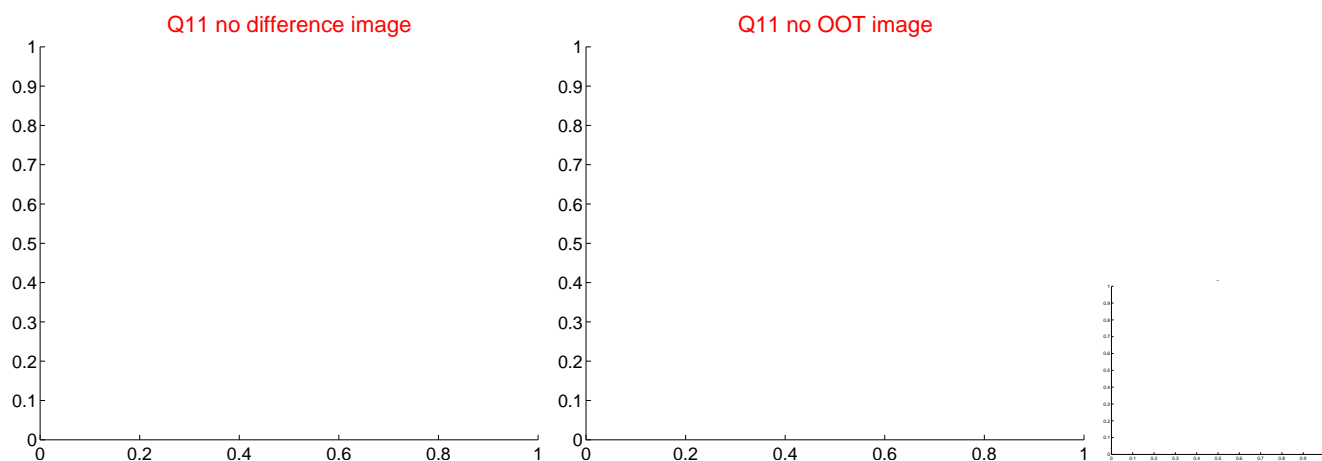
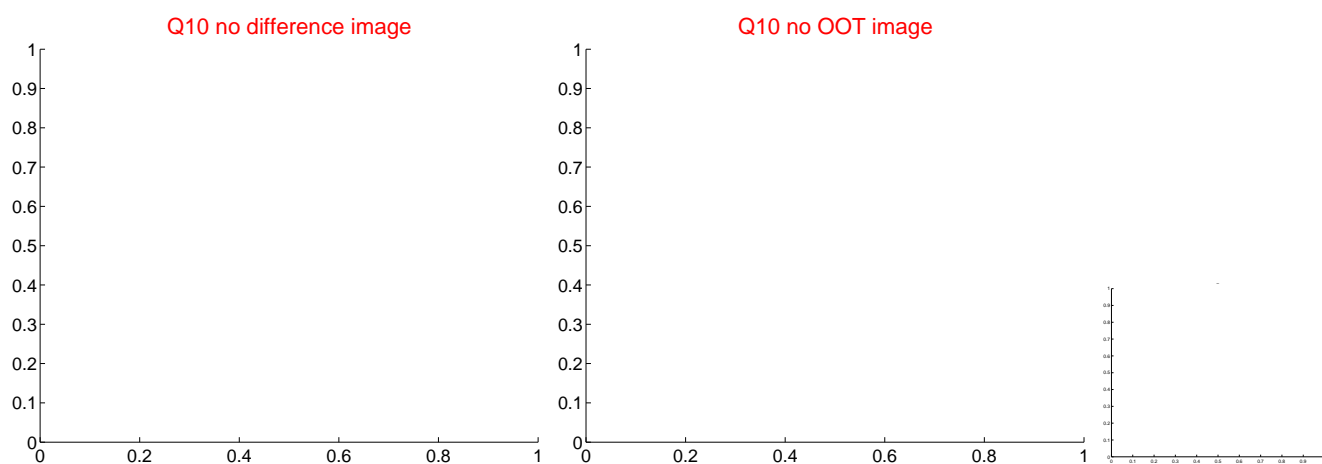
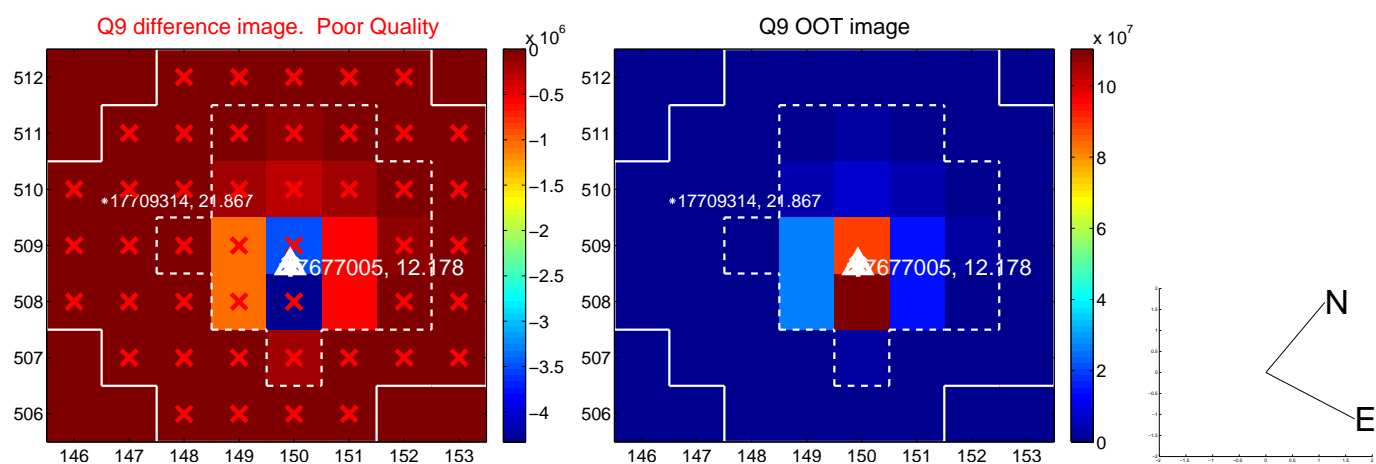
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



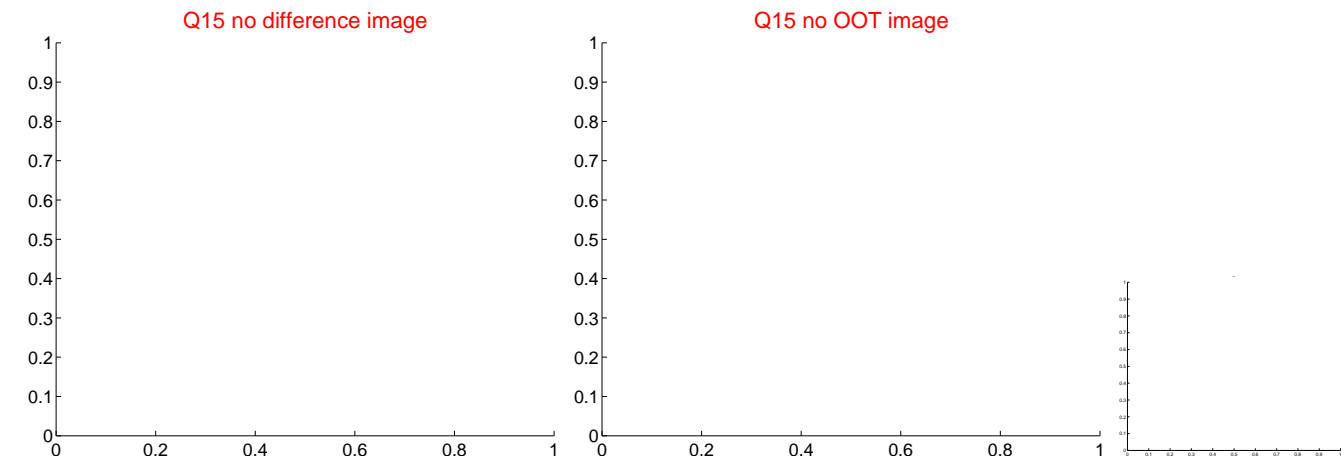
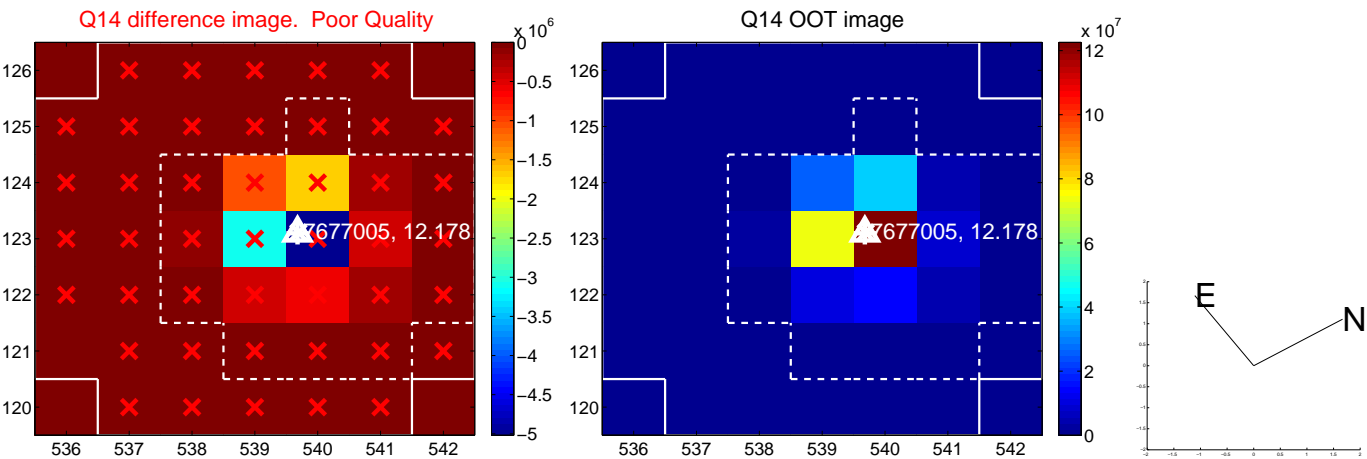
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



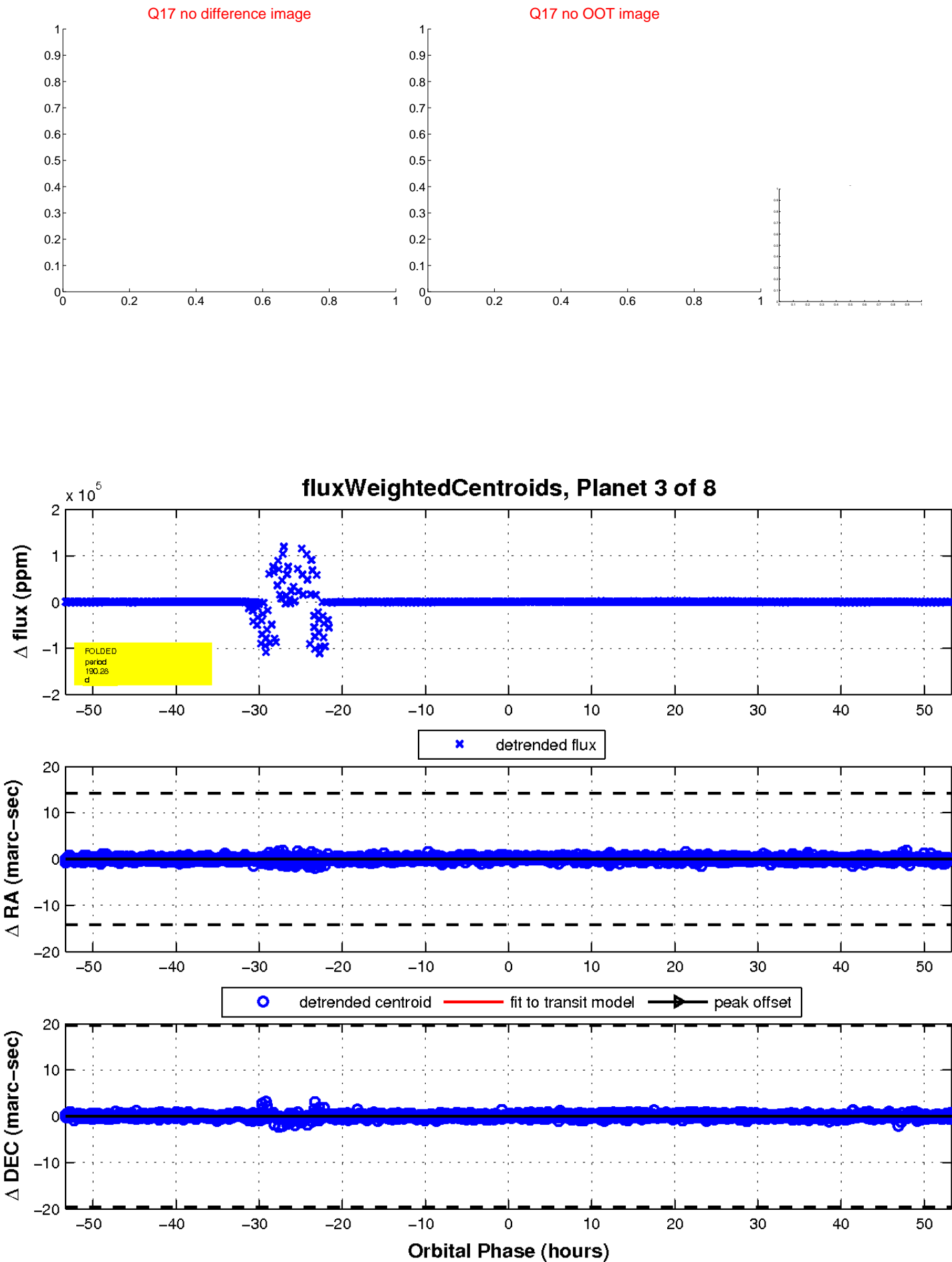
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

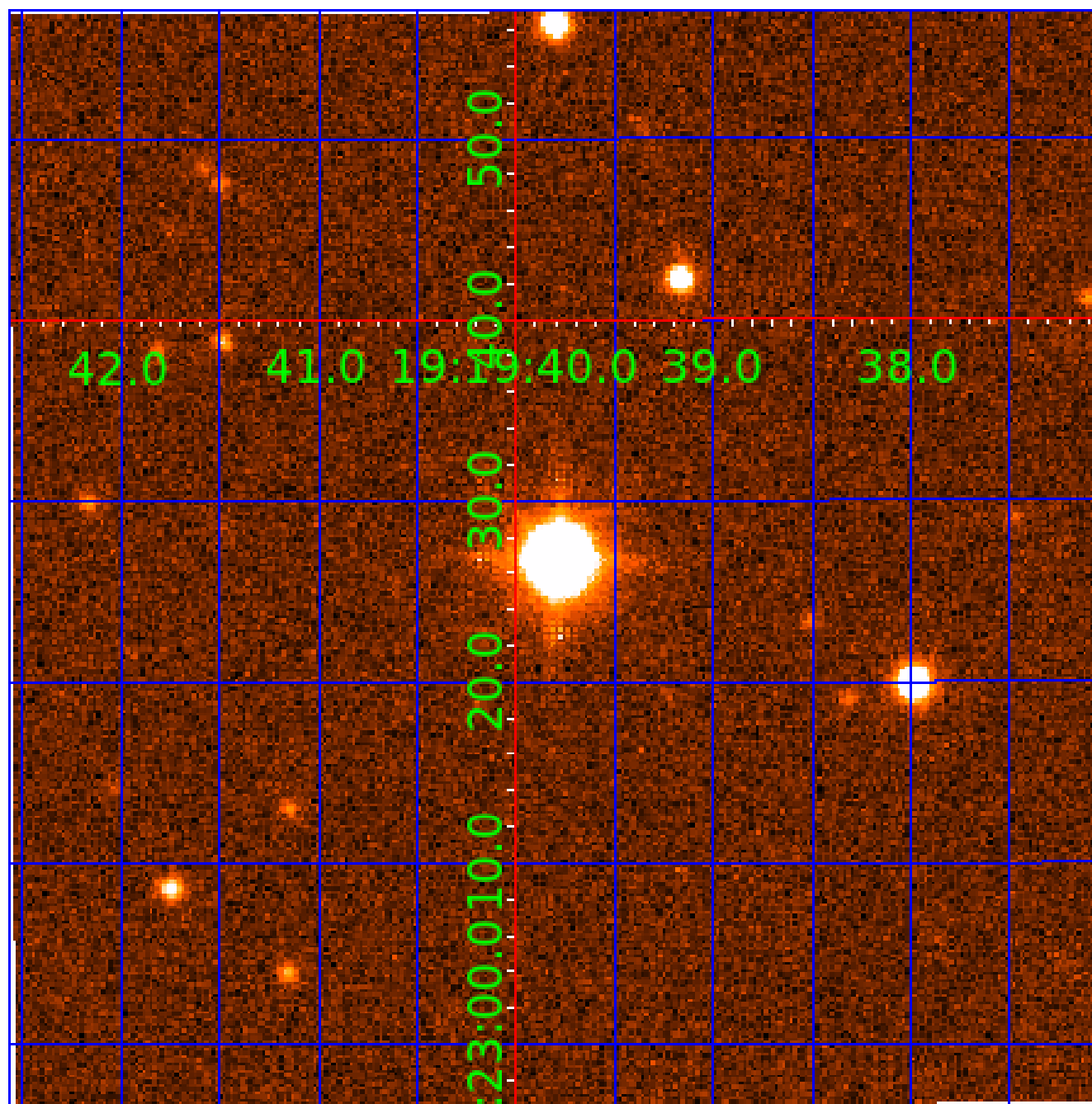


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007677005

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})
007677005-01	OBS	6903.01	38.057656	142.412298	313054.4	5.000	13456.1	-1.0	1.42	6894	46.18	69.53
007677005-02	OBS	No	38.058129	134.579595	177838.8	12.282	6569.6	4465.8	1.42	6894	82.28	69.53
007677005-03	OBS	No	190.275709	143.543340	7221.9	17.782	420.7	133.8	1.42	6894	21.33	8.13
007677005-04	OBS	No	301.720179	184.285303	862.0	13.059	362.3	10.3	1.42	6894	4.77	4.40
007677005-05	OBS	No	190.461260	255.719357	10034.8	2.500	360.9	-1.0	1.42	6894	14.41	8.12
007677005-06	OBS	No	38.060334	141.291858	2277.7	10.500	273.9	-1.0	1.42	6894	6.84	69.52
007677005-07	OBS	No	38.060474	141.954746	16601.4	1.500	335.3	-1.0	1.42	6894	18.55	69.52
007677005-08	OBS	No	190.300020	257.088307	6355.5	3.000	275.5	-1.0	1.42	6894	11.44	8.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007677005-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
007677005-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
007677005-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT— SAME_NTL_PERIOD—CENT_FEW_DIFFS—HALO_GHOST
007677005-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007677005-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
007677005-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
007677005-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—RESIDUAL_TCE—CENT_NOFITS
007677005-08	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—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.

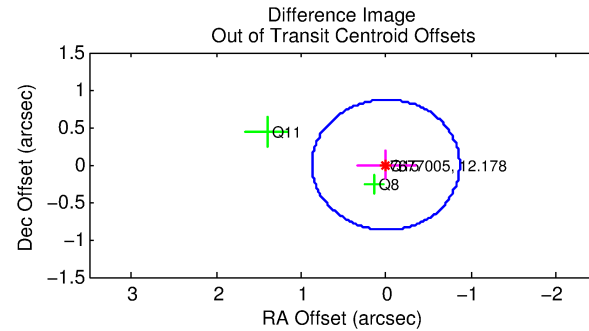
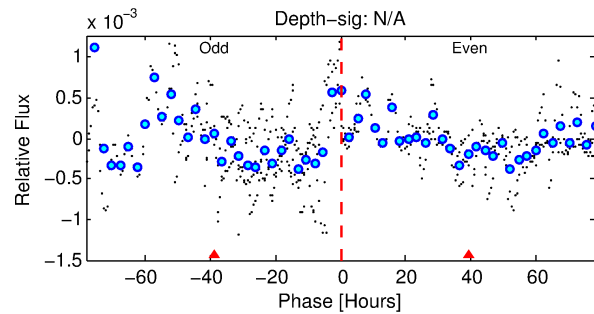
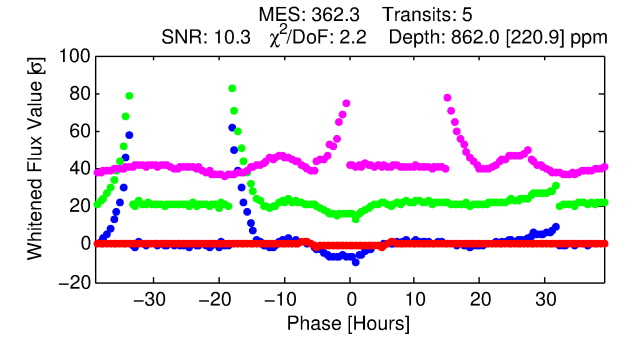
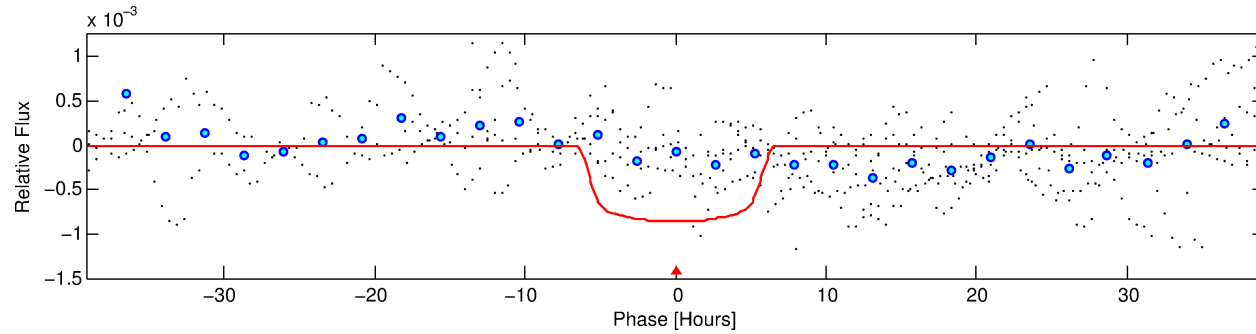
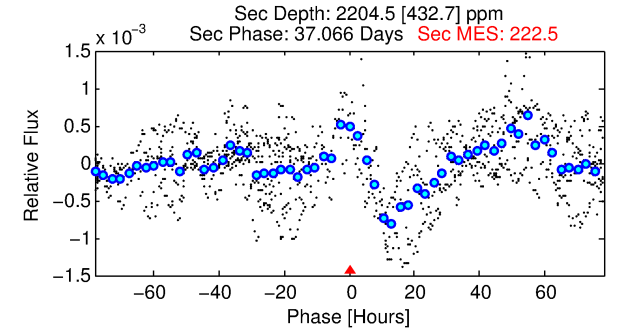
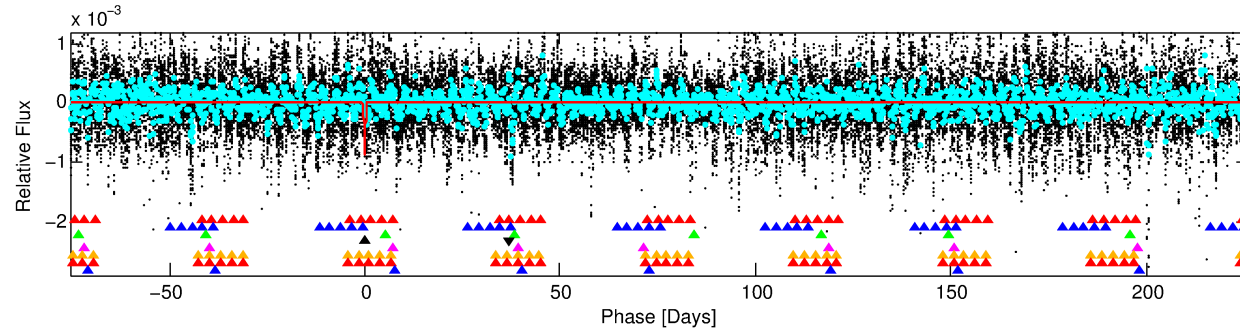
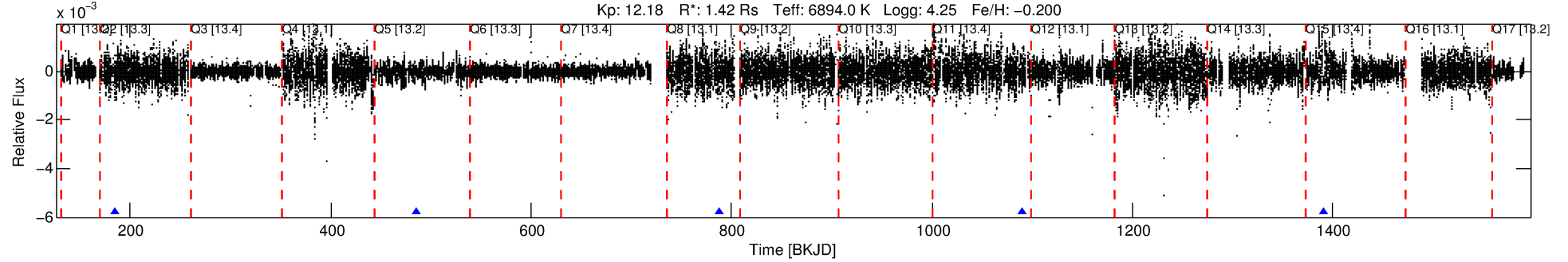
Ephemeris Match Information For 007677005-04

No Significant Match Found

DV One-Page Summary

KIC: 7677005 Candidate: 4 of 8 Period: 301.720 d
KOI: K06903 Corr: No Ephemeris Match

Kp: 12.18 R*: 1.42 Rs Teff: 6894.0 K Logg: 4.25 Fe/H: -0.200



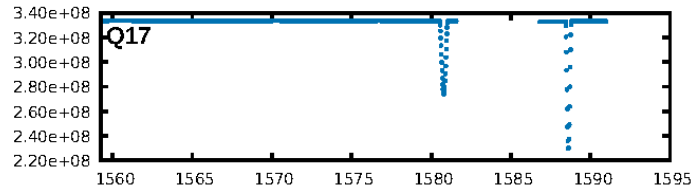
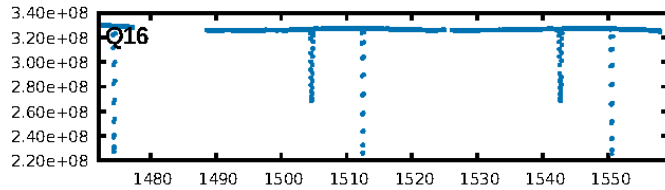
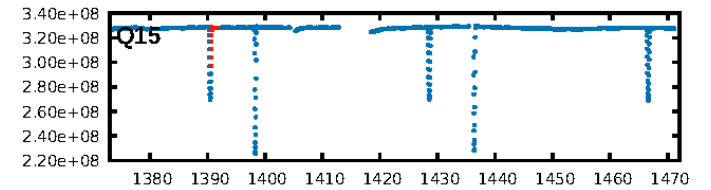
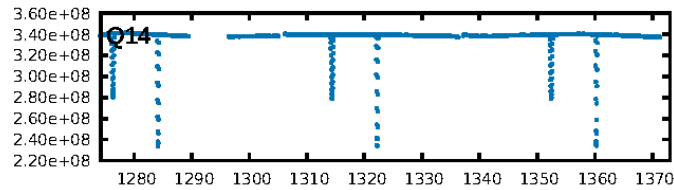
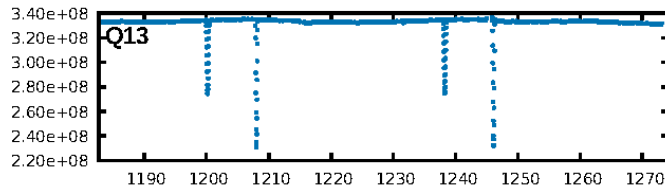
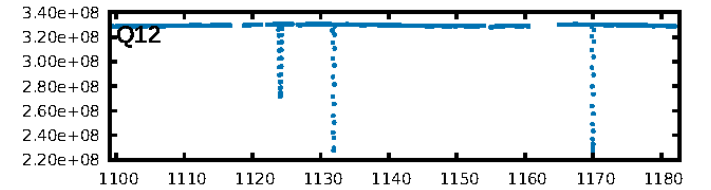
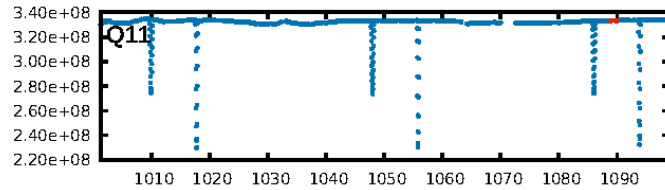
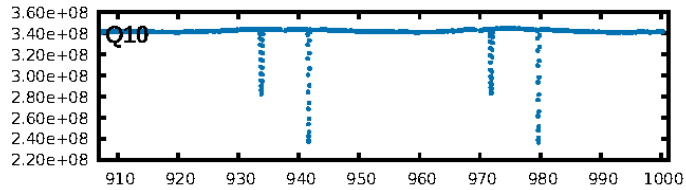
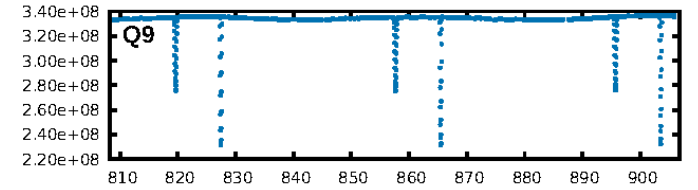
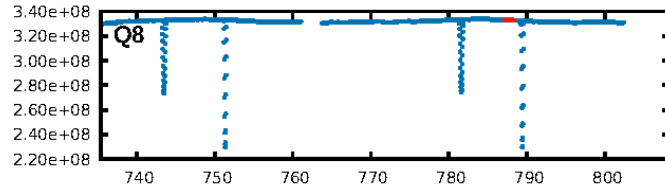
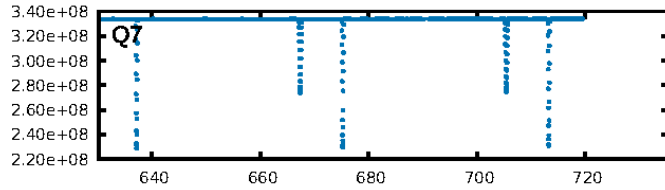
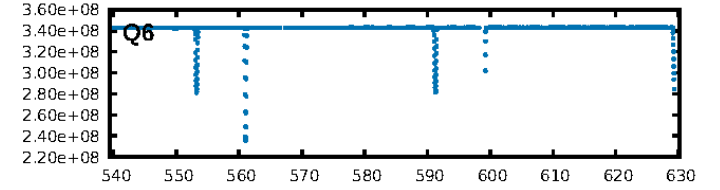
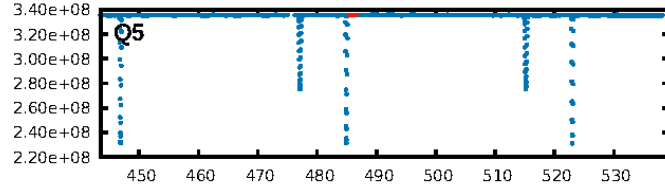
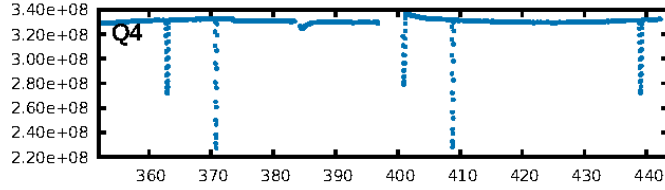
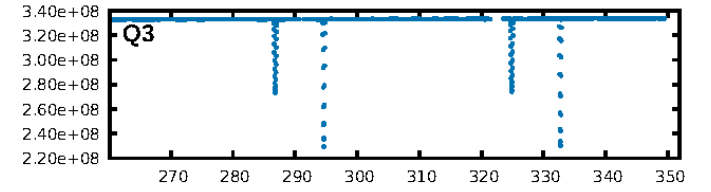
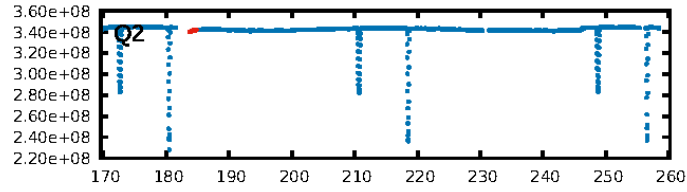
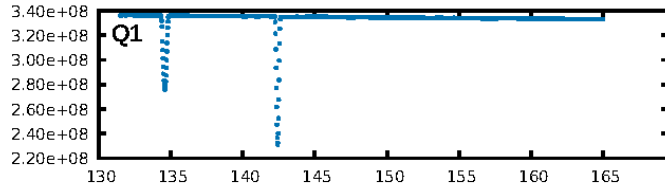
DV Fit Results:

Period = 301.72018 [0.01093] d
Epoch = 184.2853 [0.0194] BKJD
Rp/R* = 0.0308 [0.0043]
a/R* = 95.58 [25.31]
b = 0.88 [0.07]
Seff = 4.40 [1.32]
Teq = 369 [28] K
Rp = 4.77 [1.30] Re
a = 0.9625 [0.1807] AU
Ag = 49387.70 [21331.01] [2.32σ]
Teffp = 8511 [791] K [10.29σ]

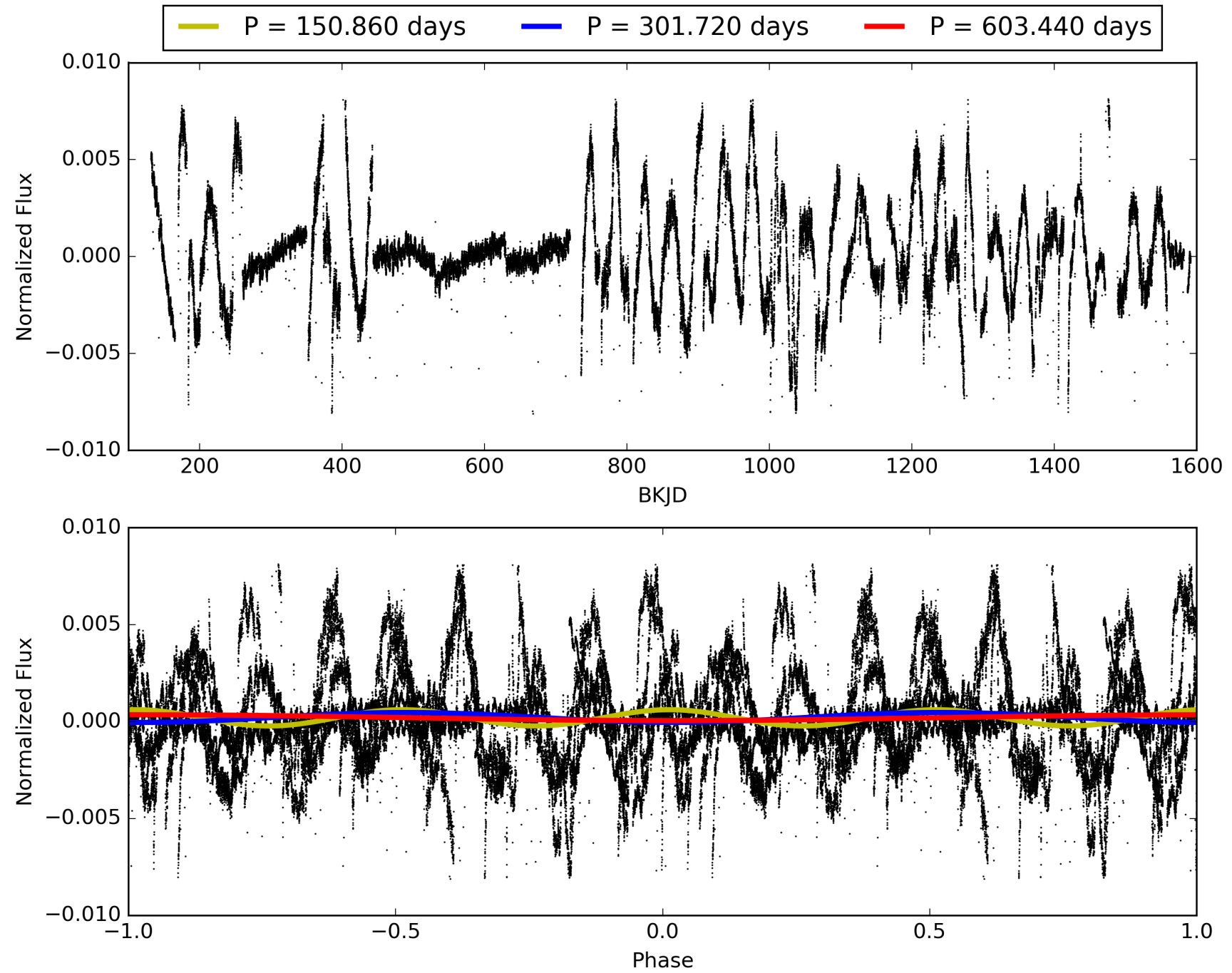
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [200.82σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 73.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 2.239
Centroid-sig: 5.1%
Centroid-so: 0.189 arcsec [1.02σ]
OotOffset-rm: 0.002 arcsec [0.01σ]
OotOffset-st: 0/2/1/0 [3]
KicOffset-rm: 0.193 arcsec [1.88σ]
KicOffset-st: 0/2/1/0 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 0.25 [1/4]

TCE 007677005-04, PDC Light Curves

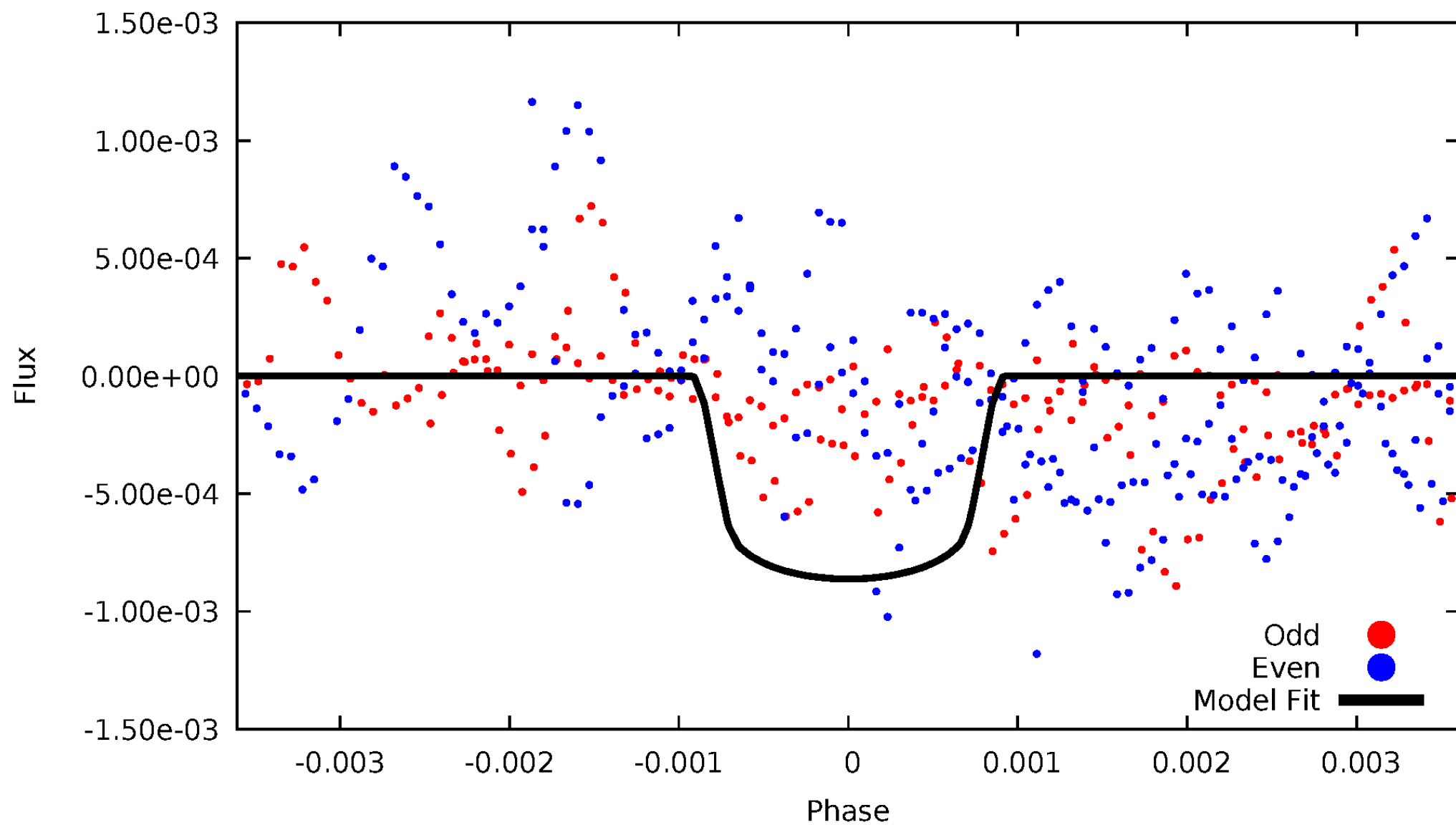


TCE 007677005-04



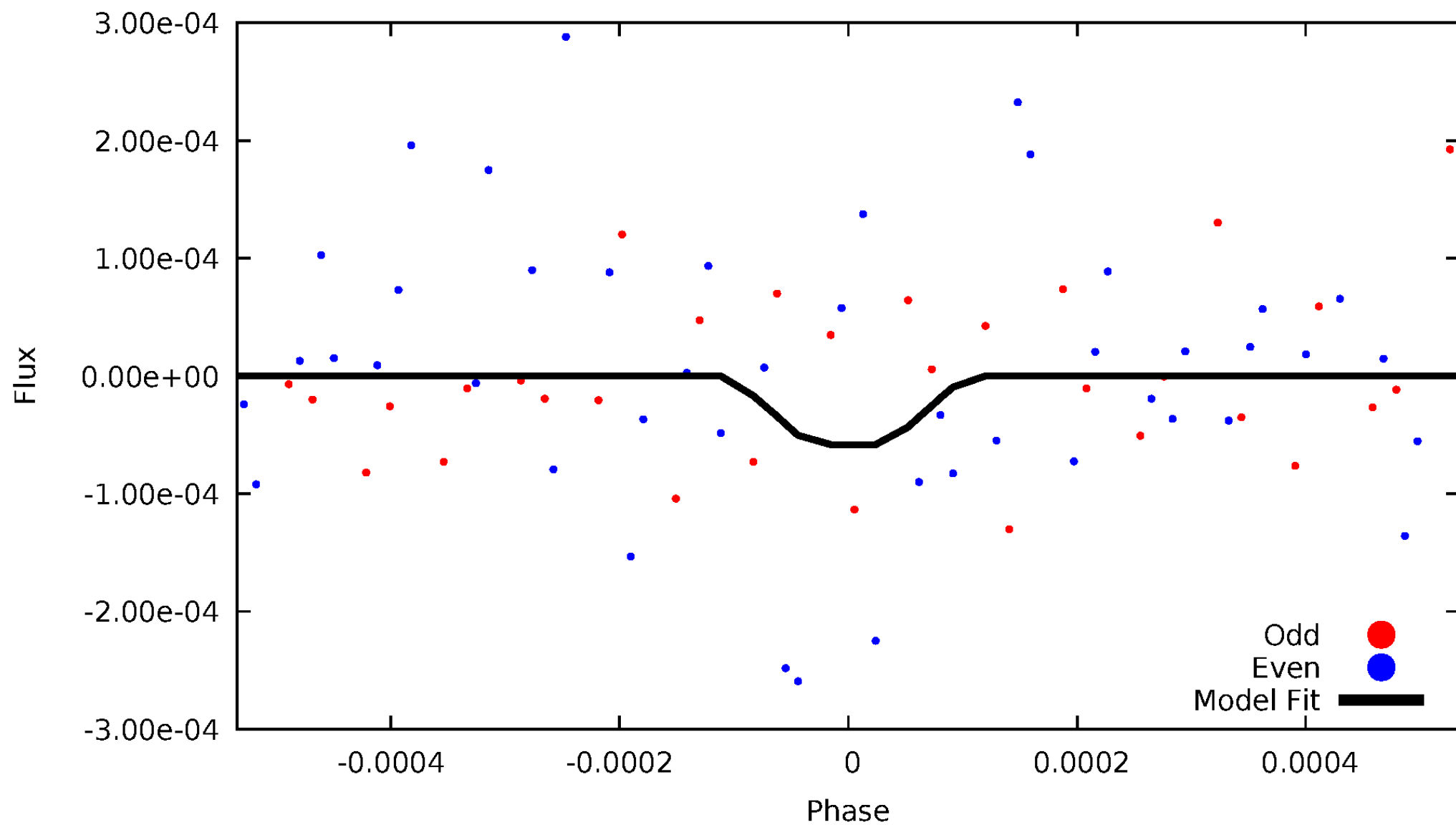
DV Odd/Even

TCE 007677005-04



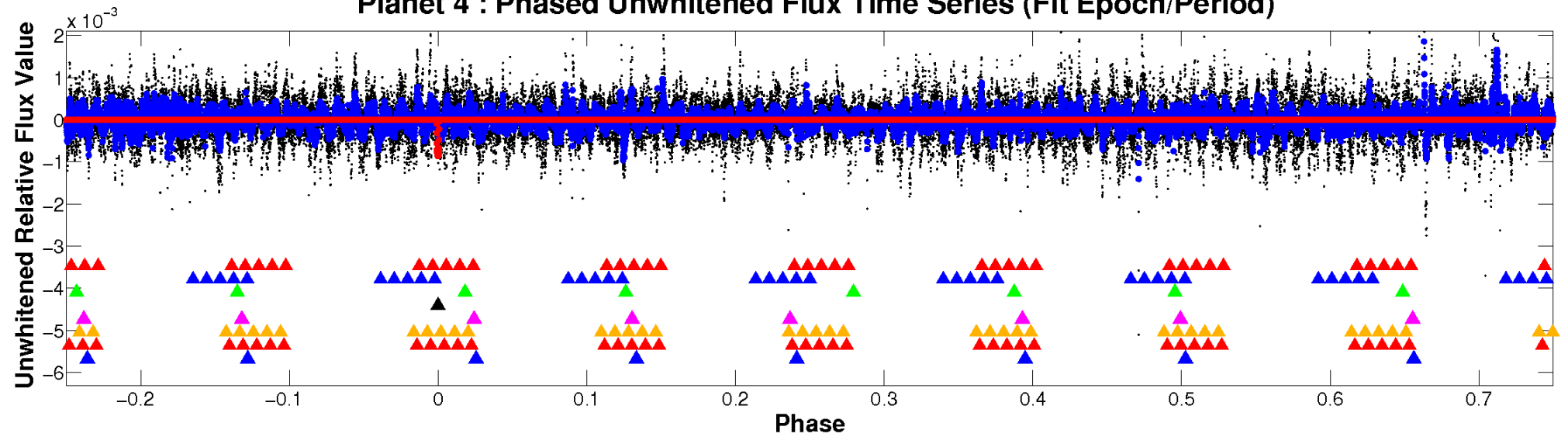
ALT Odd/Even

TCE 007677005-04

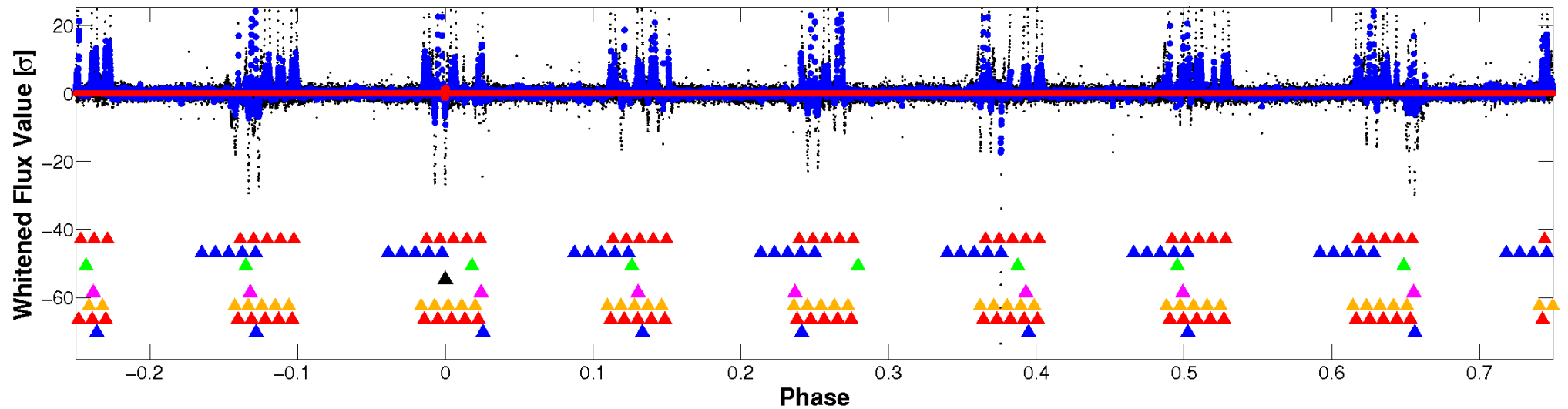


Non-Whitened Vs. Whitened Light Curve

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

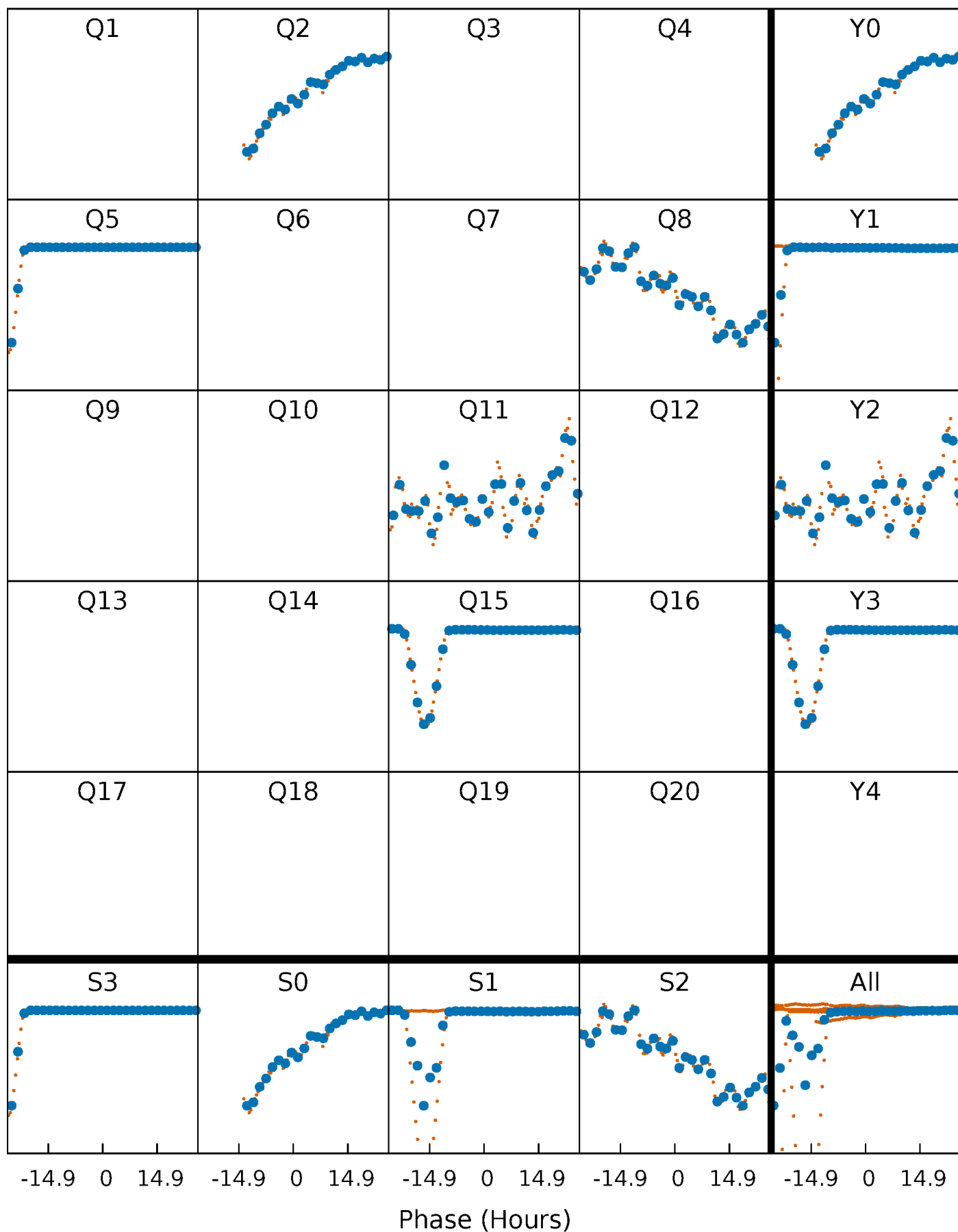


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



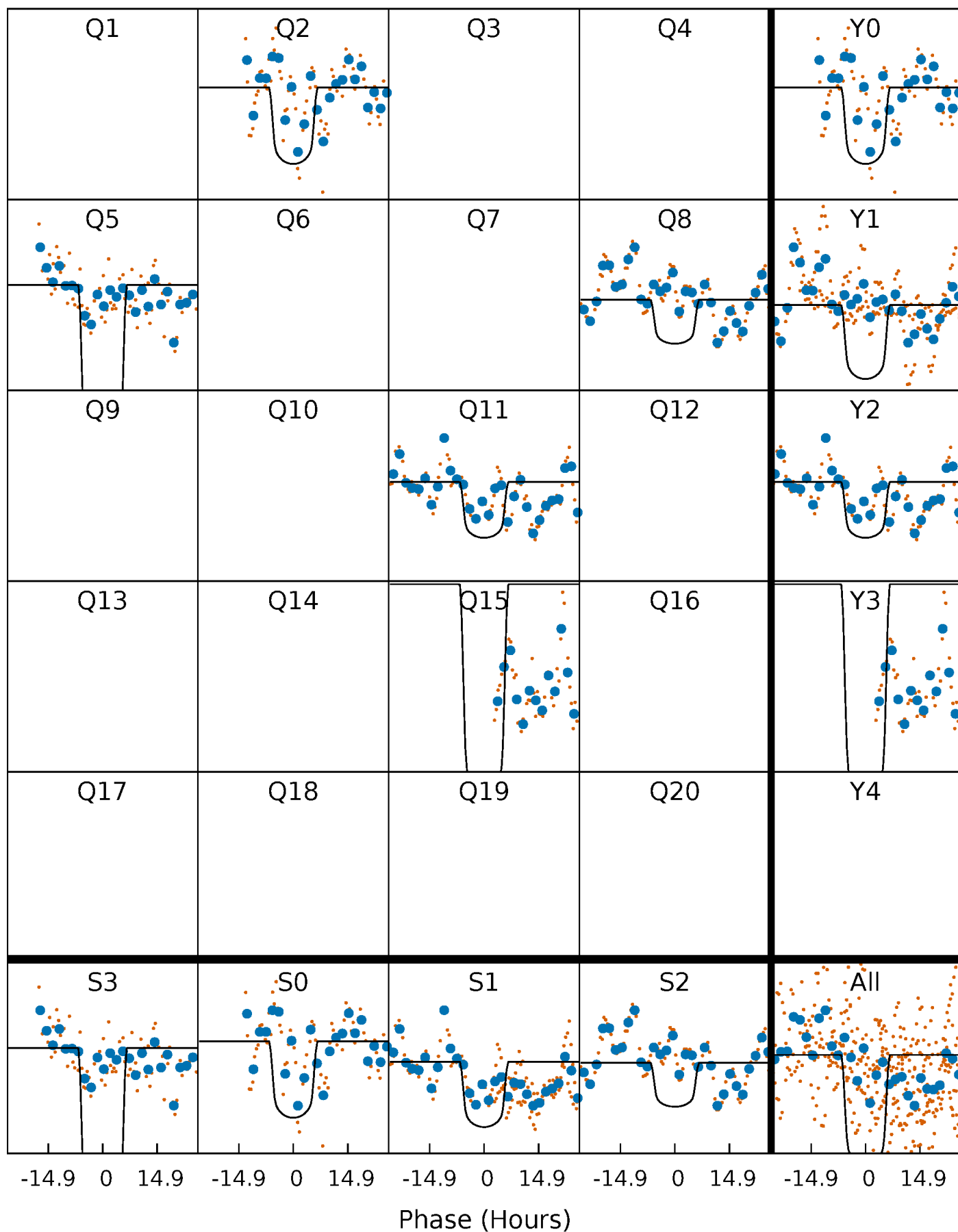
PDC Quarter-Phased Transit Curves

TCE 007677005-04 P=301.720179 Days $T_0=184.285303$ (BKJD)



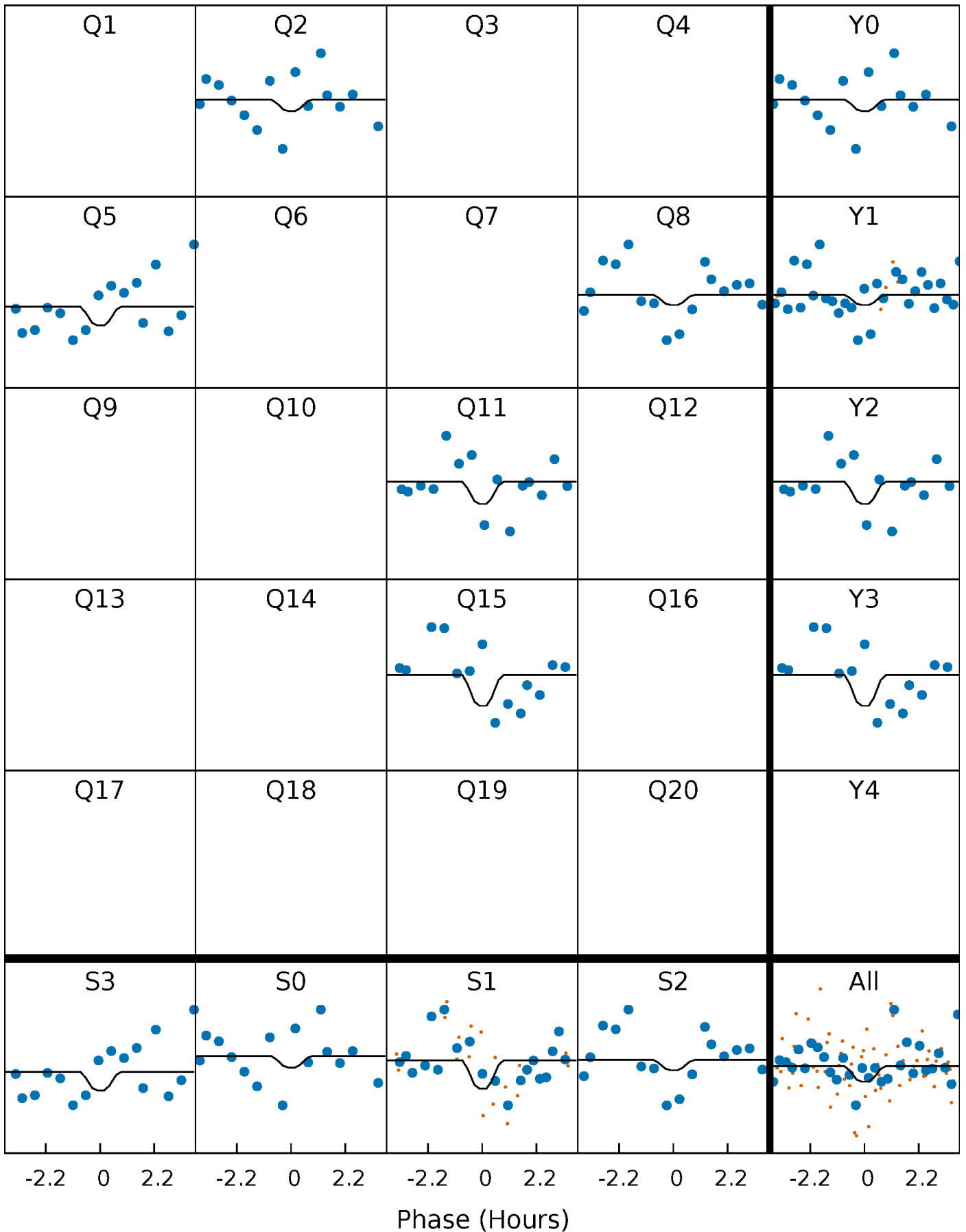
DV Quarter-Phased Transit Curves

TCE 007677005-04 P=301.720179 Days $T_0=184.285303$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

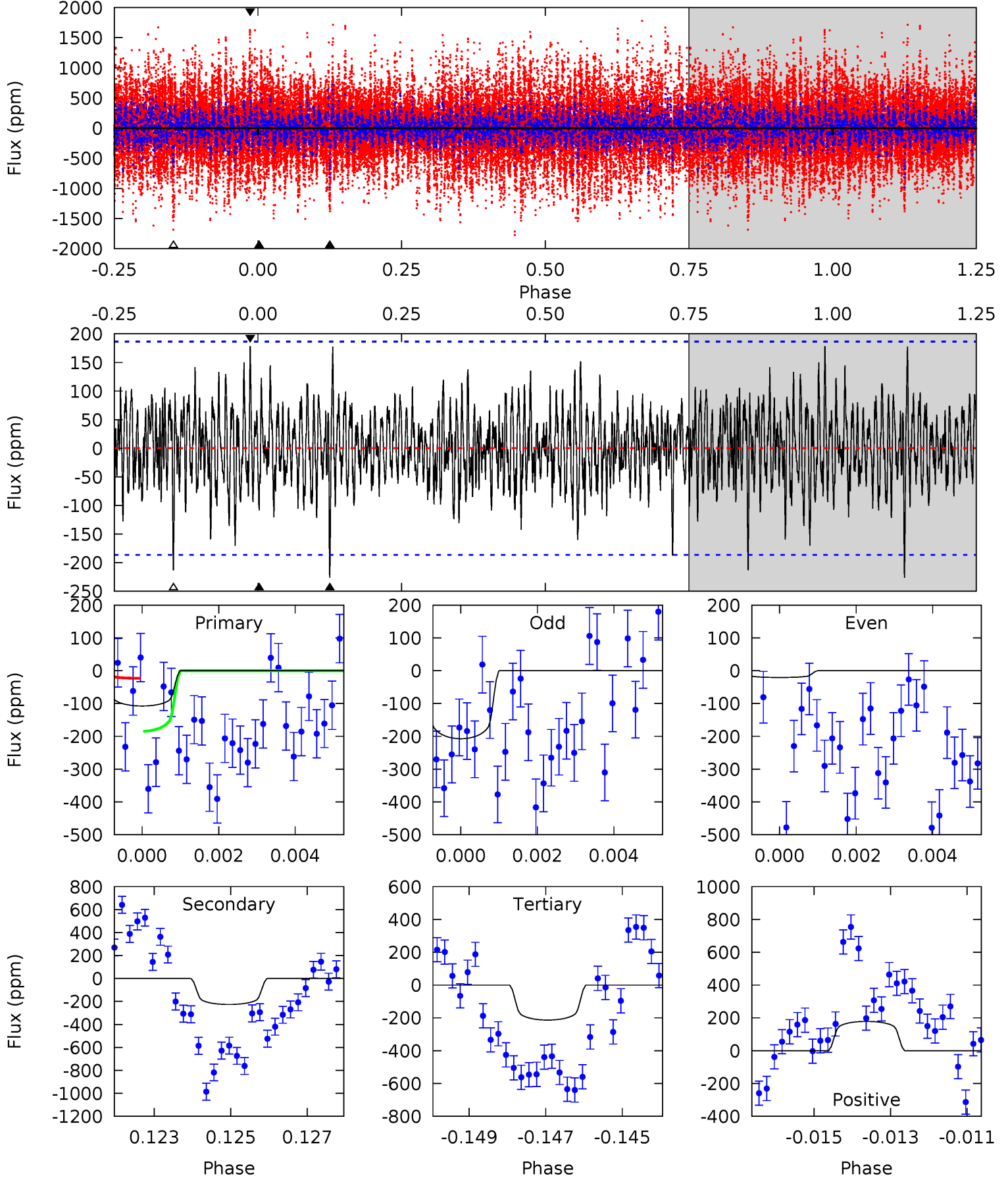
TCE 007677005-04 P=301.871793 Days $T_0=184.044980$ (BKJD)



DV Model-Shift Uniqueness Test

007677005-04, P = 301.720179 Days, E = 184.285303 Days

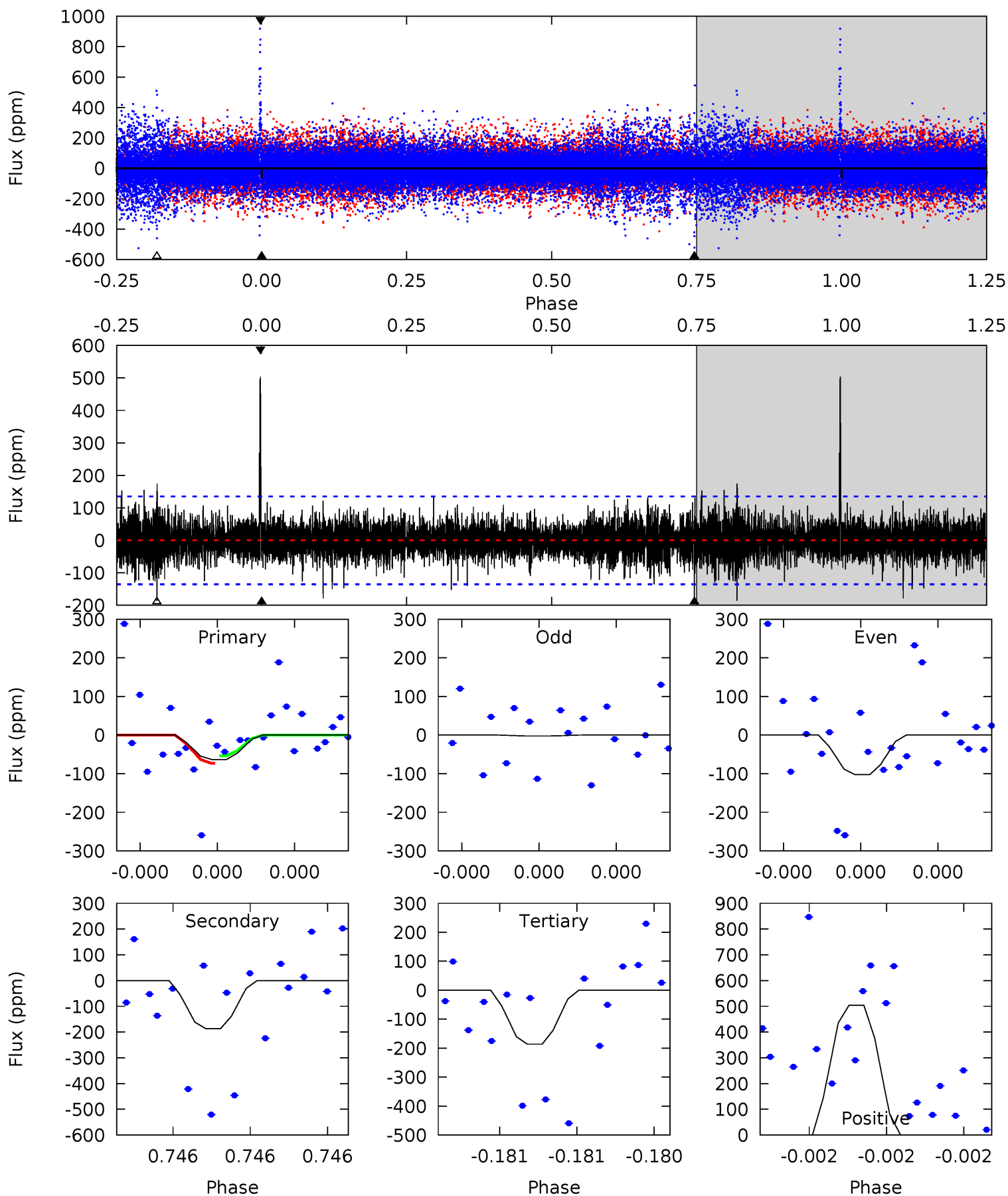
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.09	6.48	6.12	5.12	5.34	3.12	1.57	-3.03	-2.03	0.37	1.36	2.54	1.22	0.44	2.31



Alt Model-Shift Uniqueness Test

007677005-04, P = 301.871793 Days, E = 184.044980 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.68	7.90	7.88	21.3	5.73	3.72	1.52	-5.20	-18.6	0.03	-13.4	1.87	1.98	0.73	0.41



Stellar Parameters For KIC 007677005

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6894^{+164}_{-247}	$4.250^{+0.092}_{-0.138}$	$-0.200^{+0.250}_{-0.350}$	$1.419^{+0.330}_{-0.220}$	$1.317^{+0.150}_{-0.187}$	$0.649^{+0.326}_{-0.253}$
	+2%/-4%	+2%/-3%	+125%/-175%	+23%/-16%	+11%/-14%	+50%/-39%
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 007677005-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-226 ± 35	$4.85^{+0.93}_{-0.86}$	517^{+32}_{-27}	4869^{+374}_{-318}	4862^{+2292}_{-1494}
Alt.	-187 ± 24	$1.24^{+0.69}_{-0.64}$	517^{+30}_{-26}	9762^{+8445}_{-2441}	$64093^{+216031}_{-38595}$

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 $A_{obs} \gg 1.0$

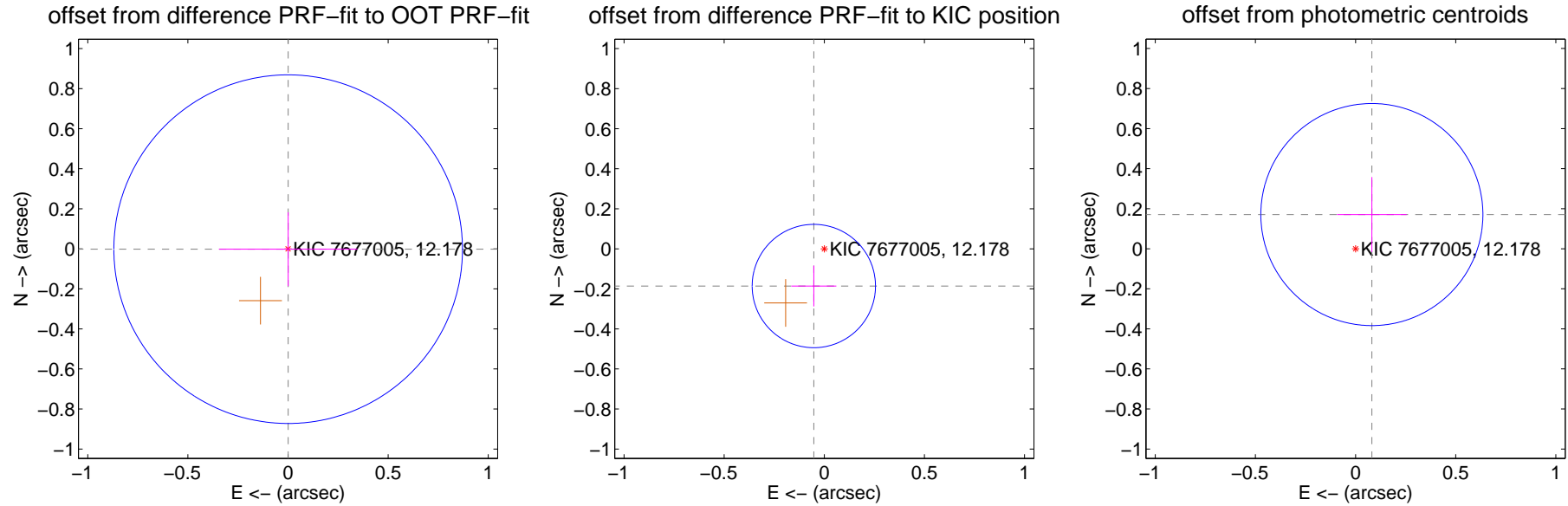
DV Centroid Data

Supplemental centroid analysis for 007677005-04. Kepler magnitude: 12.18. Transit SNR 10.26

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.002 ± 0.290	0.01	-0.001 ± 0.346	-0.002 ± 0.185
PRF-fit source offset from KIC position	0.193 ± 0.103	1.88	0.052 ± 0.112	-0.186 ± 0.102
photometric centroid source offset	0.19 ± 0.18	1.02	-0.08 ± 0.17	0.17 ± 0.19

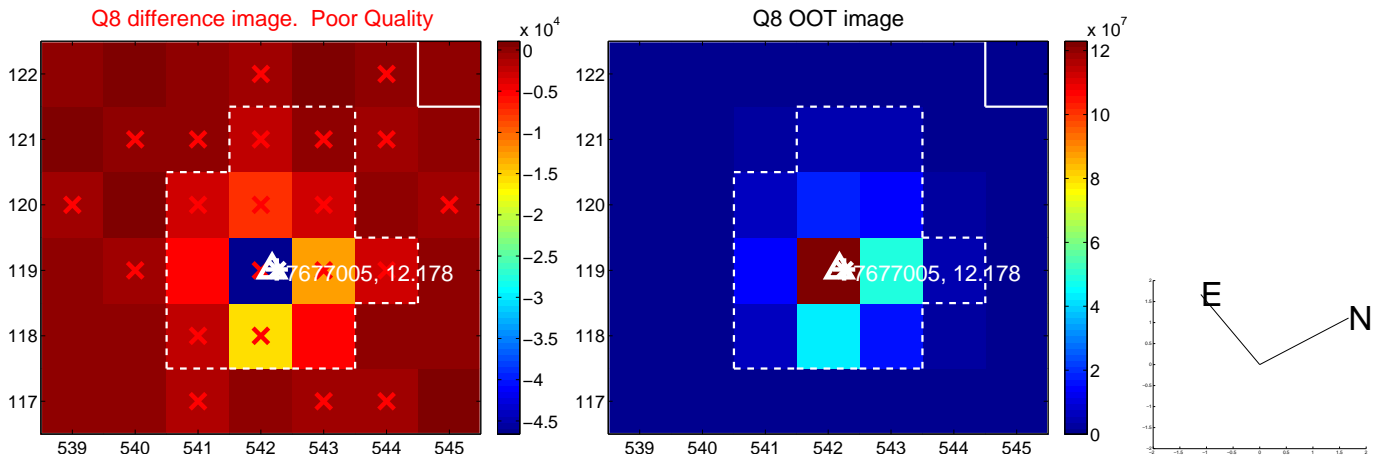
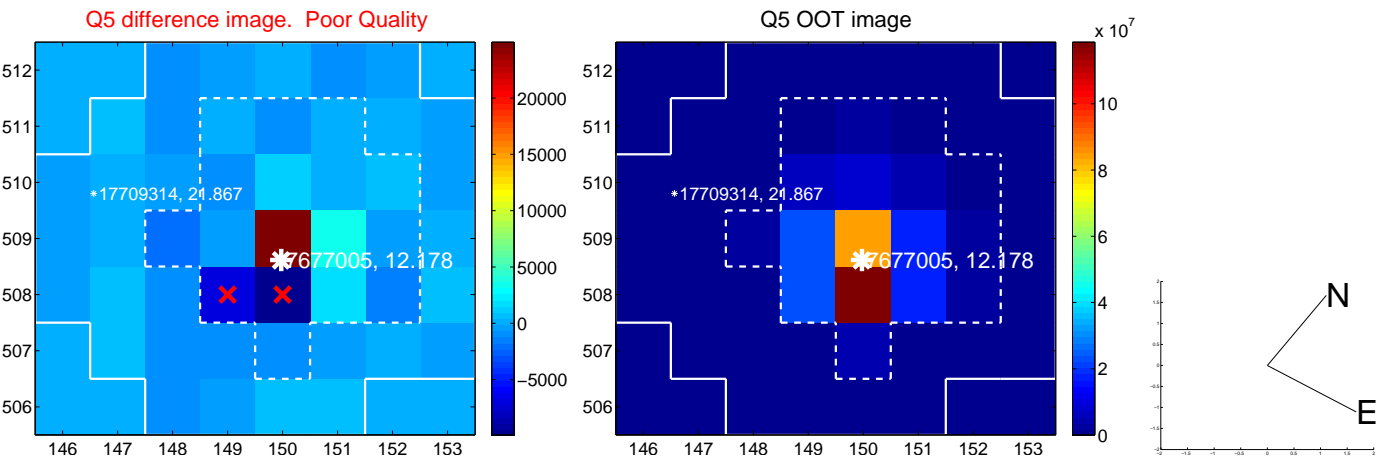


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

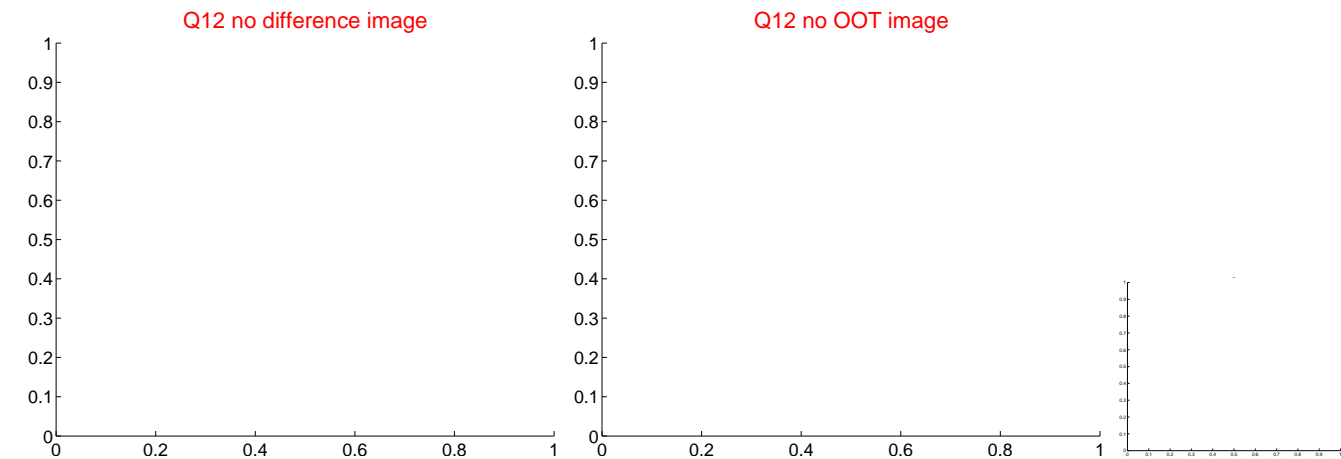
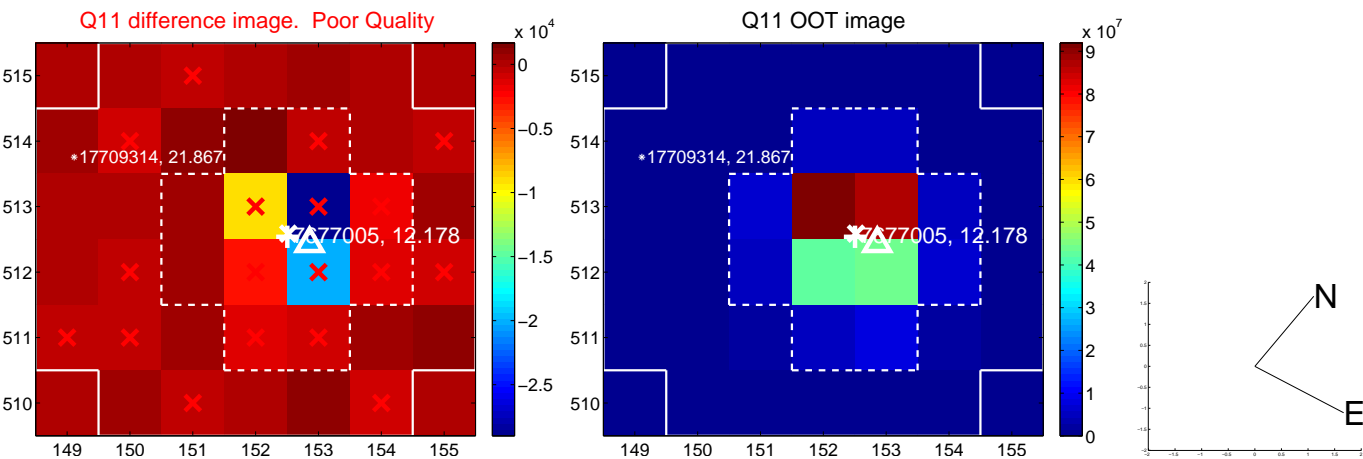
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



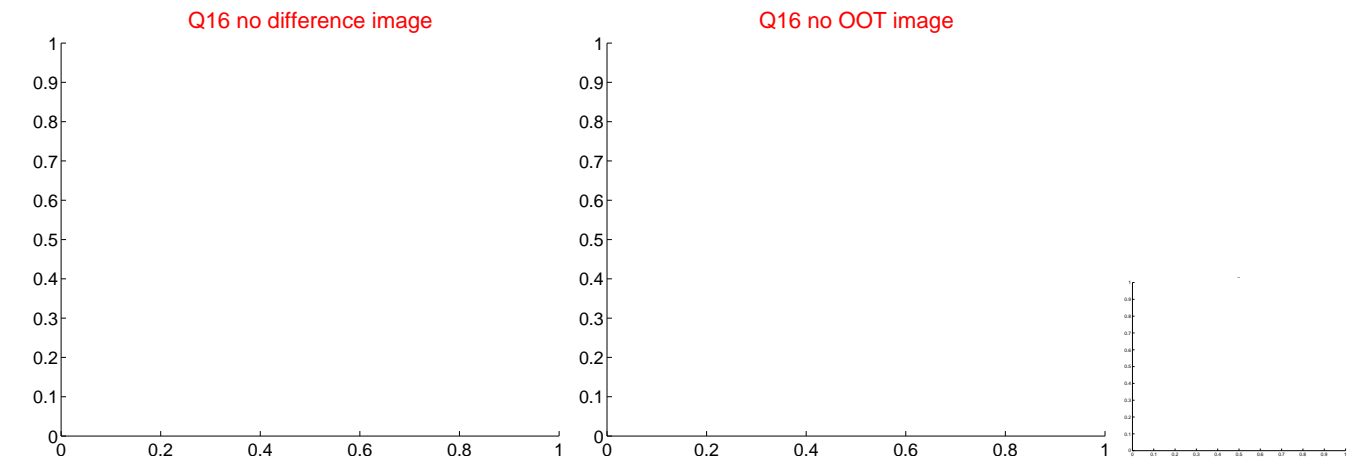
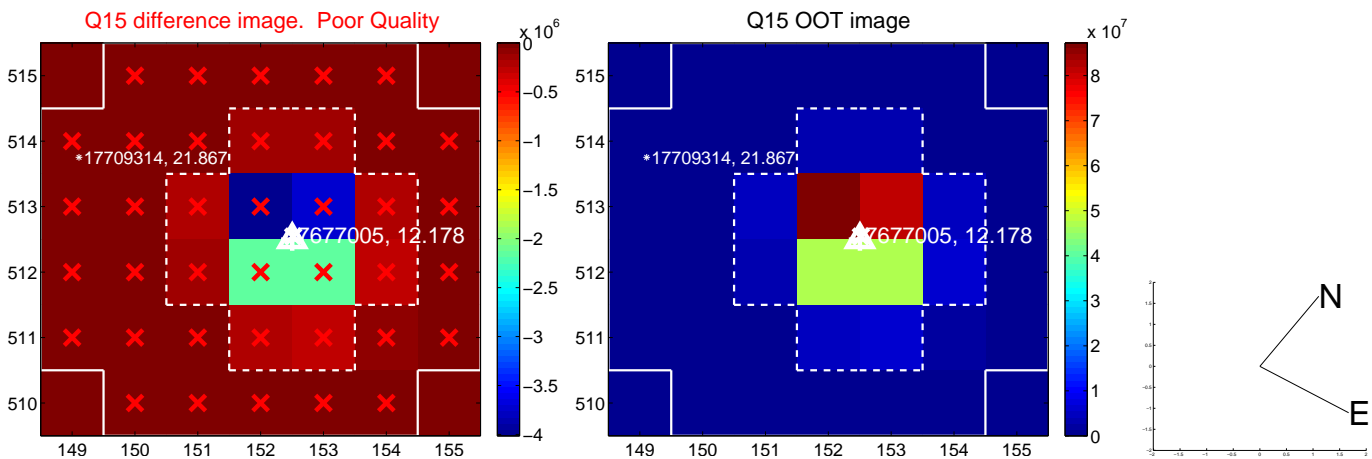
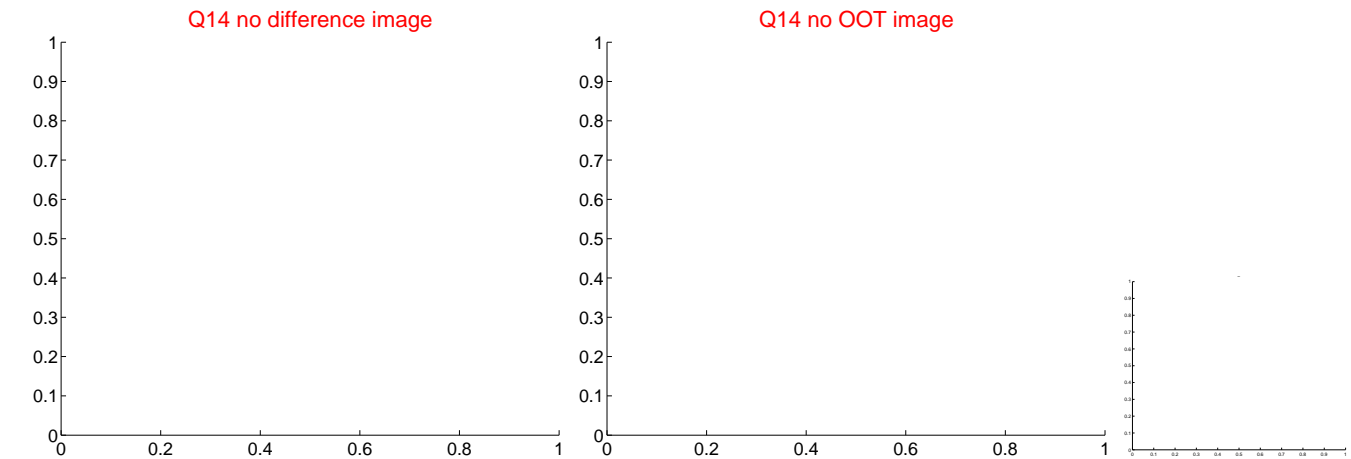
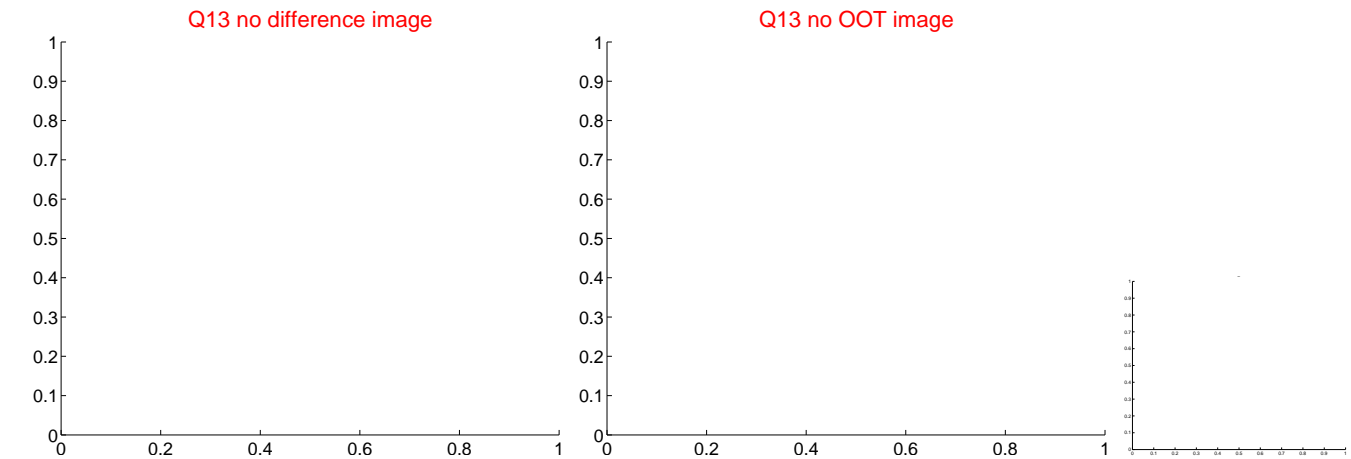
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



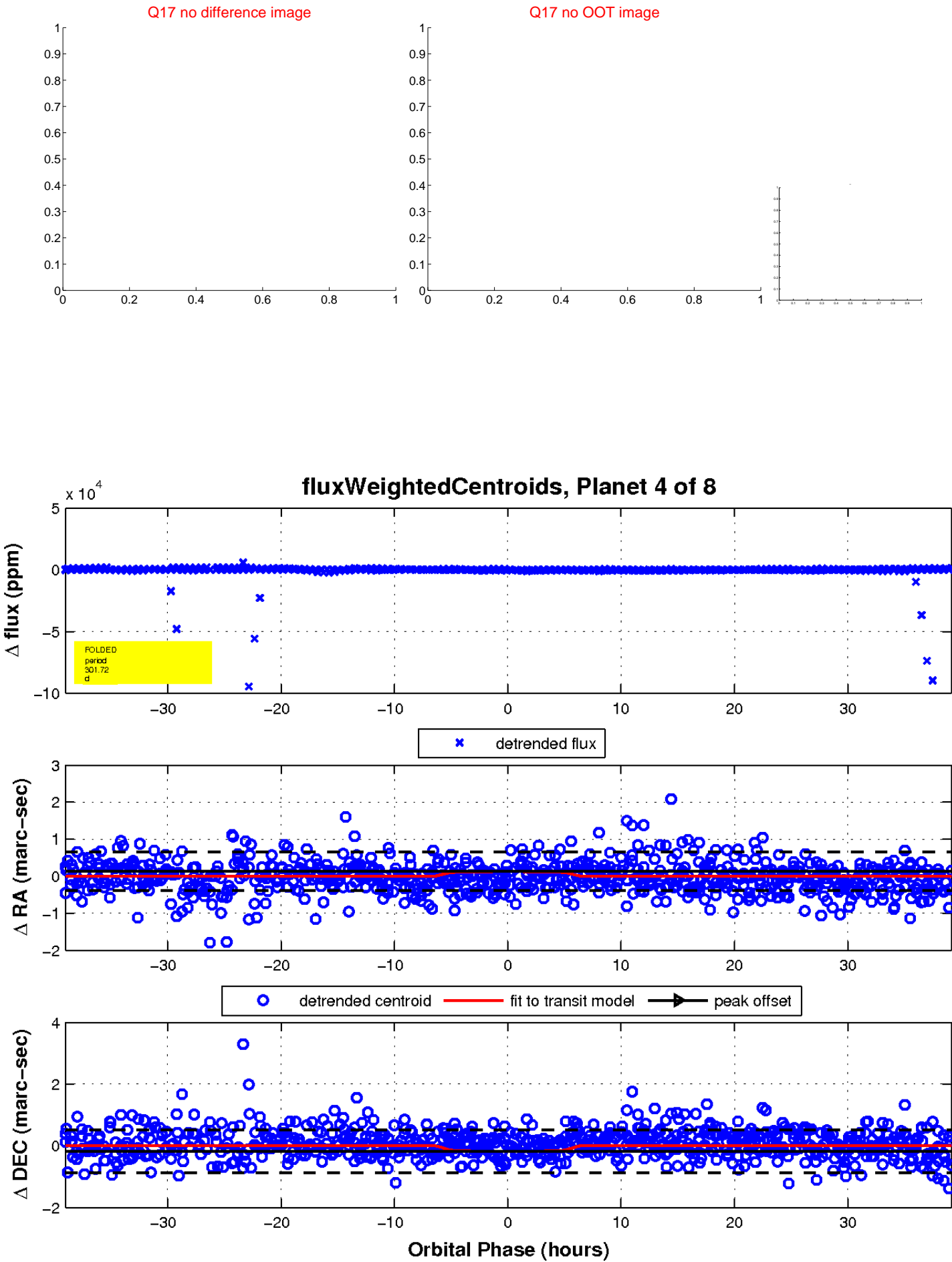
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

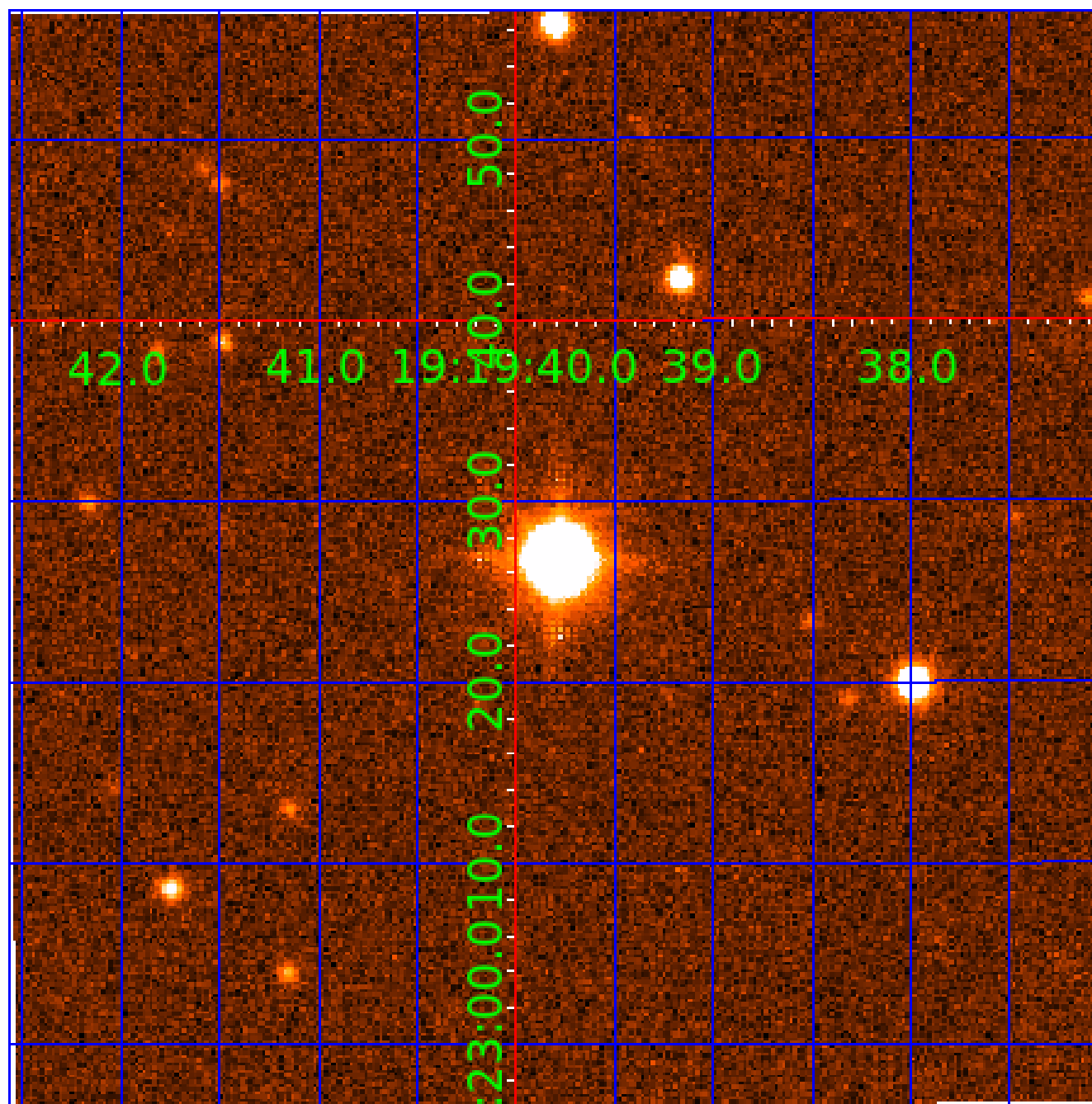


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007677005

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
007677005-01	OBS	6903.01	38.057656	142.412298	313054.4	5.000	13456.1	-1.0	1.42	6894	46.18	69.53
007677005-02	OBS	No	38.058129	134.579595	177838.8	12.282	6569.6	4465.8	1.42	6894	82.28	69.53
007677005-03	OBS	No	190.275709	143.543340	7221.9	17.782	420.7	133.8	1.42	6894	21.33	8.13
007677005-04	OBS	No	301.720179	184.285303	862.0	13.059	362.3	10.3	1.42	6894	4.77	4.40
007677005-05	OBS	No	190.461260	255.719357	10034.8	2.500	360.9	-1.0	1.42	6894	14.41	8.12
007677005-06	OBS	No	38.060334	141.291858	2277.7	10.500	273.9	-1.0	1.42	6894	6.84	69.52
007677005-07	OBS	No	38.060474	141.954746	16601.4	1.500	335.3	-1.0	1.42	6894	18.55	69.52
007677005-08	OBS	No	190.300020	257.088307	6355.5	3.000	275.5	-1.0	1.42	6894	11.44	8.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007677005-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVN_ALT—HAS_SEC_TCE—CENT_NOFITS
007677005-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
007677005-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT— SAME_NTL_PERIOD—CENT_FEW_DIFFS—HALO_GHOST
007677005-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007677005-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
007677005-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
007677005-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—RESIDUAL_TCE—CENT_NOFITS
007677005-08	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—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.

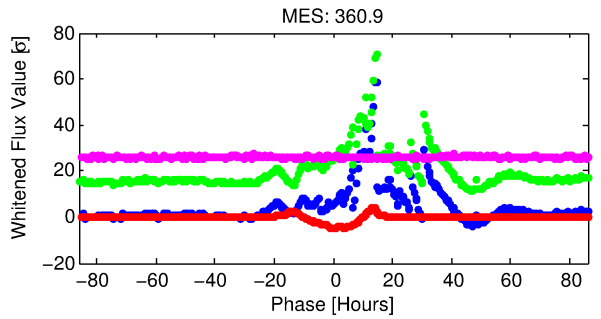
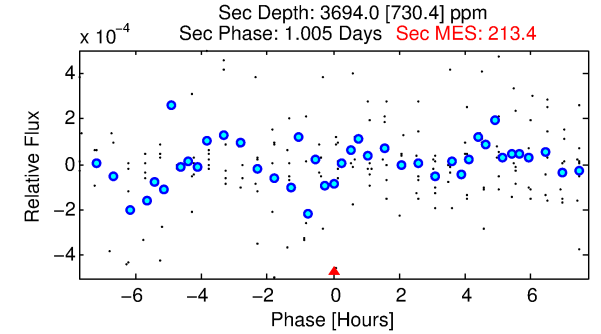
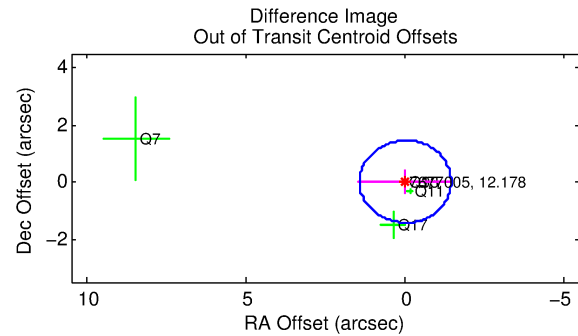
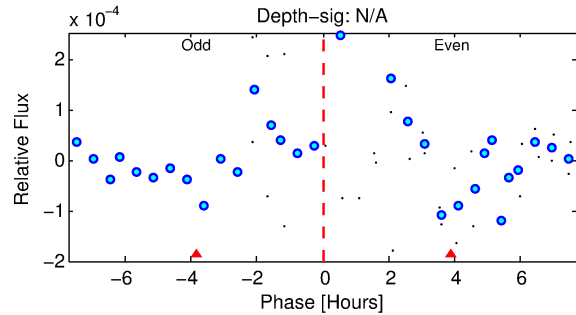
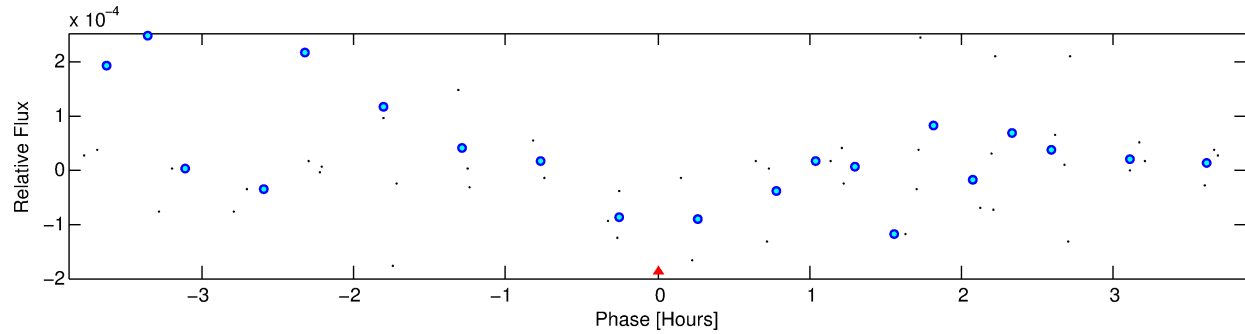
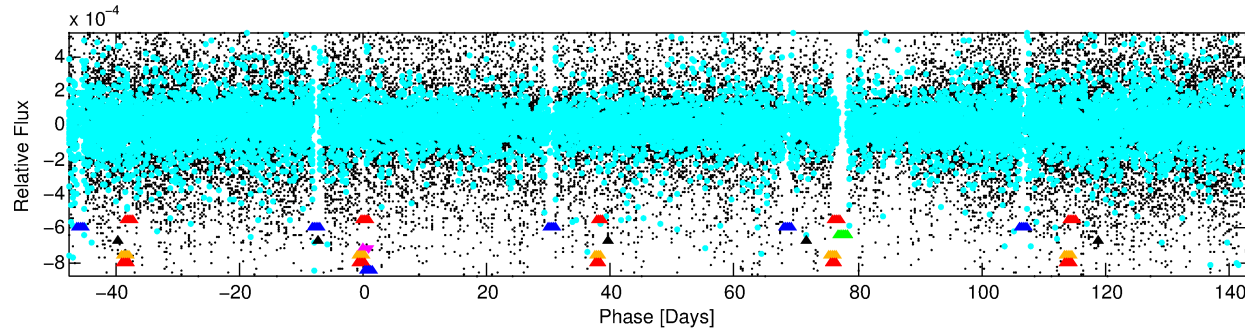
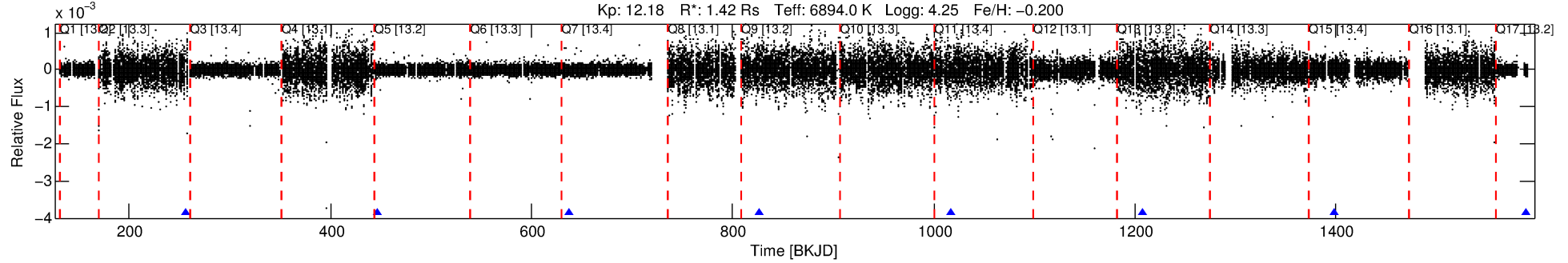
Ephemeris Match Information For 007677005-05

No Significant Match Found

DV One-Page Summary

KIC: 7677005 Candidate: 5 of 8 Period: 190.461 d
KOI: K06903 Corr: No Ephemeris Match

Kp: 12.18 R*: 1.42 Rs Teff: 6894.0 K Logg: 4.25 Fe/H: -0.200



TPS TCE Results:

Period = 190.46126 d
Epoch = 255.7194 BKJD

DV fit results are unavailable

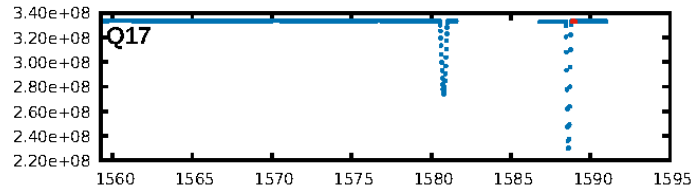
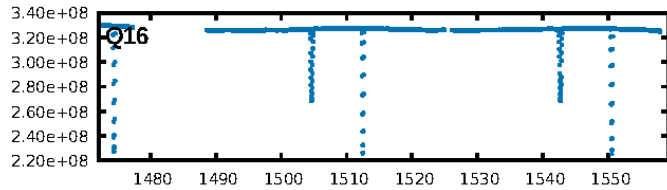
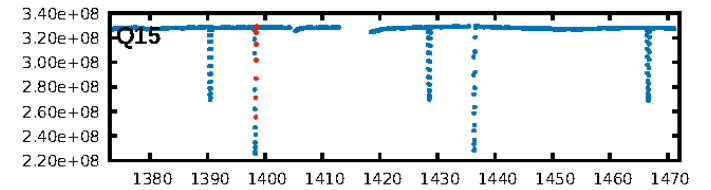
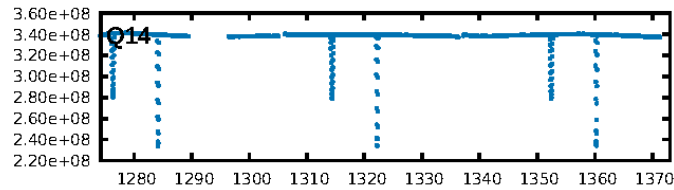
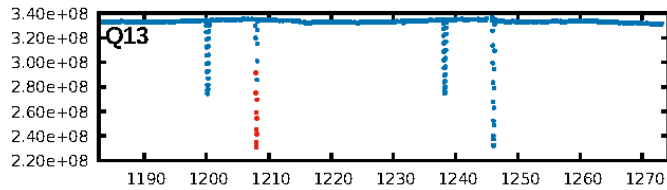
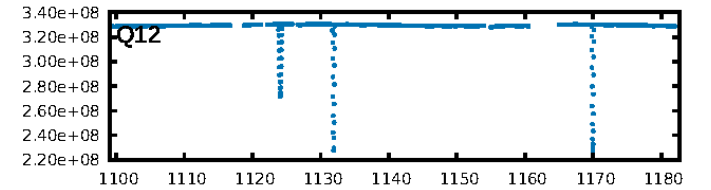
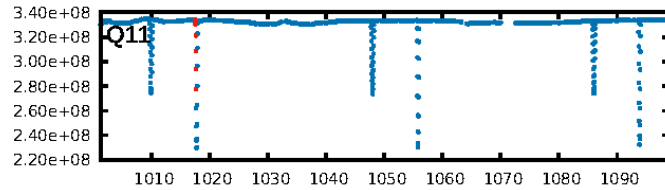
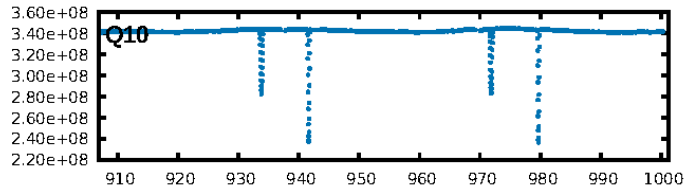
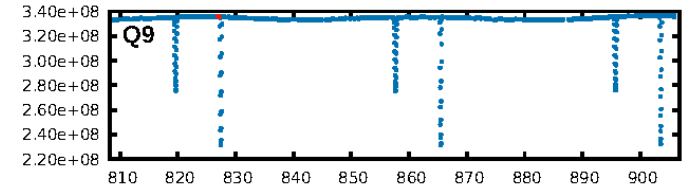
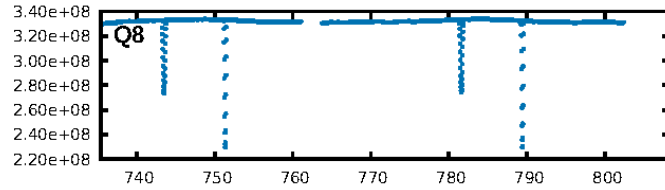
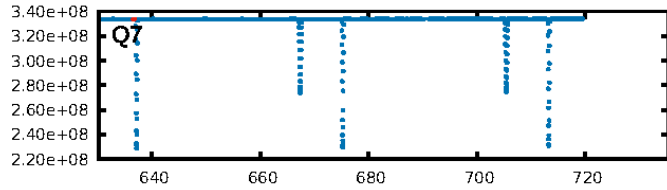
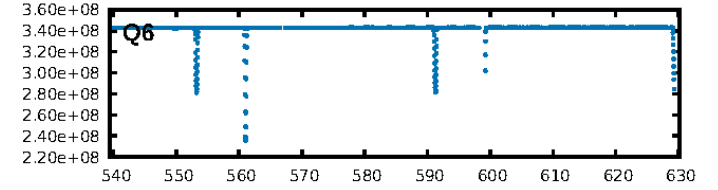
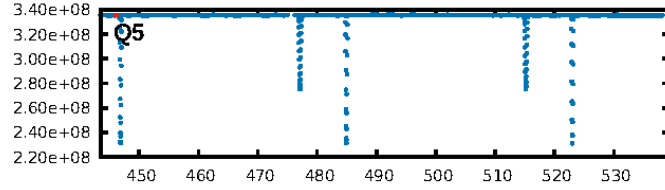
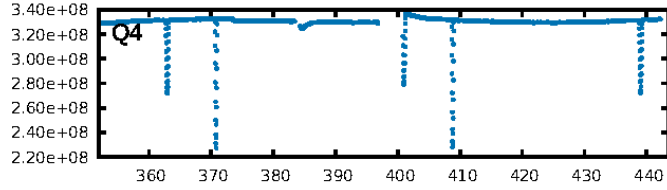
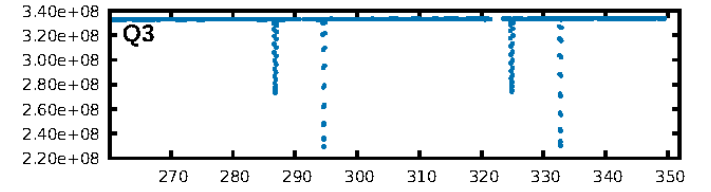
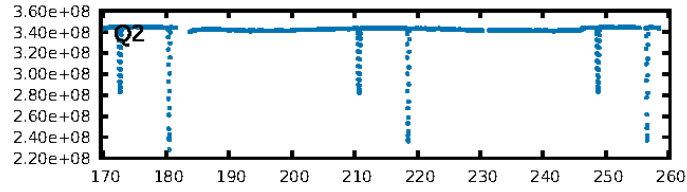
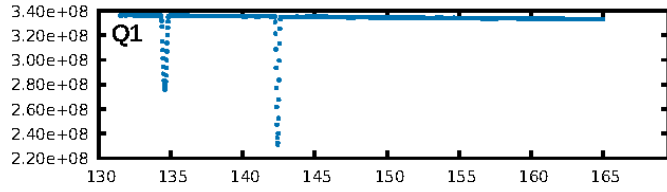
DV Diagnostic Results:

ShortPeriod-sig: 67.8% [0.99σ]
LongPeriod-sig: 100.0% [200.82σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -0.2266
Centroid-sig: 38.9%
Centroid-so: 7.337 arcsec [0.99σ]
OotOffset-rm: 0.016 arcsec [0.03σ]
OotOffset-st: 0/3/0/3 [6]
KicOffset-rm: 0.007 arcsec [0.01σ]
KicOffset-st: 0/3/0/3 [6]
DiffImageQuality-fgm: 0.50 [3/6]
DiffImageOverlap-fno: 0.00 [0/7]

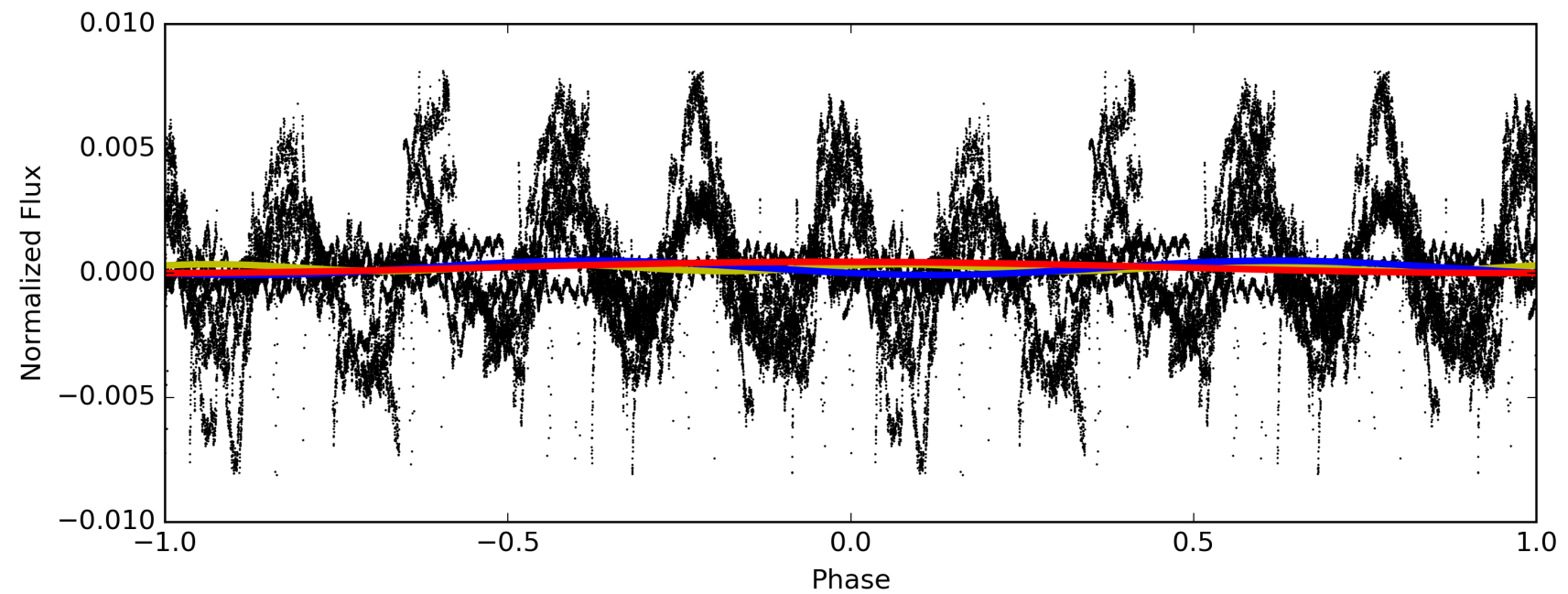
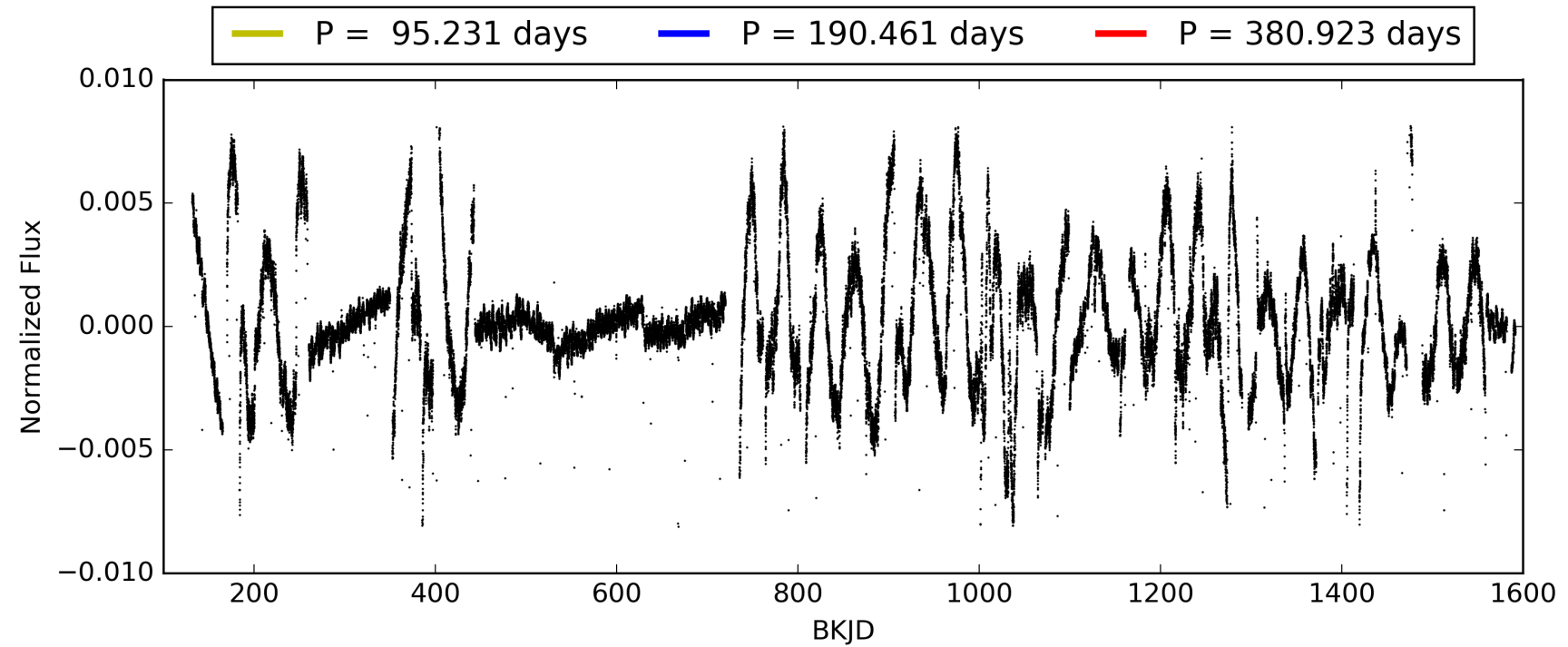
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:10:11 Z

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

TCE 007677005-05, PDC Light Curves

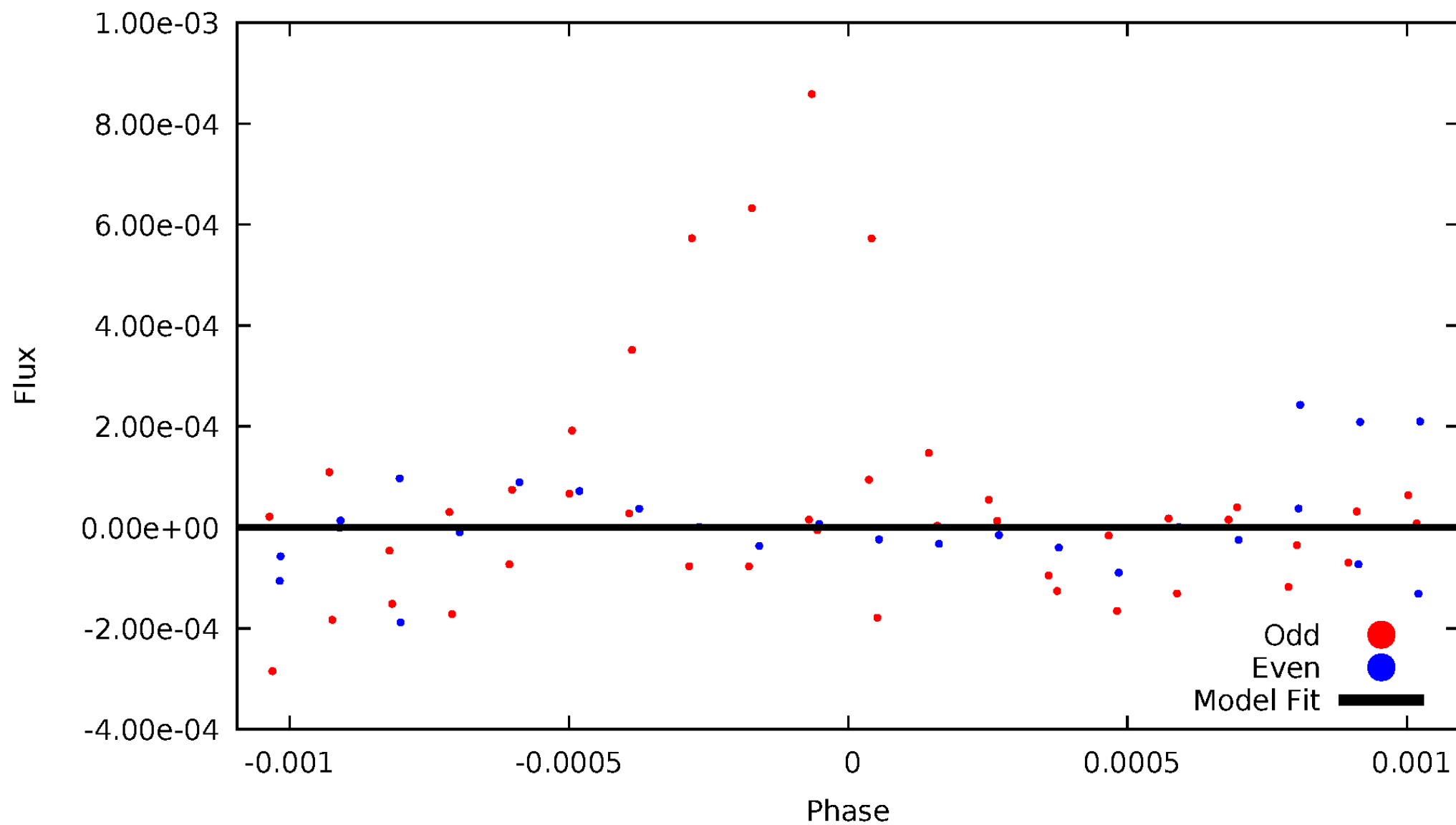


TCE 007677005-05



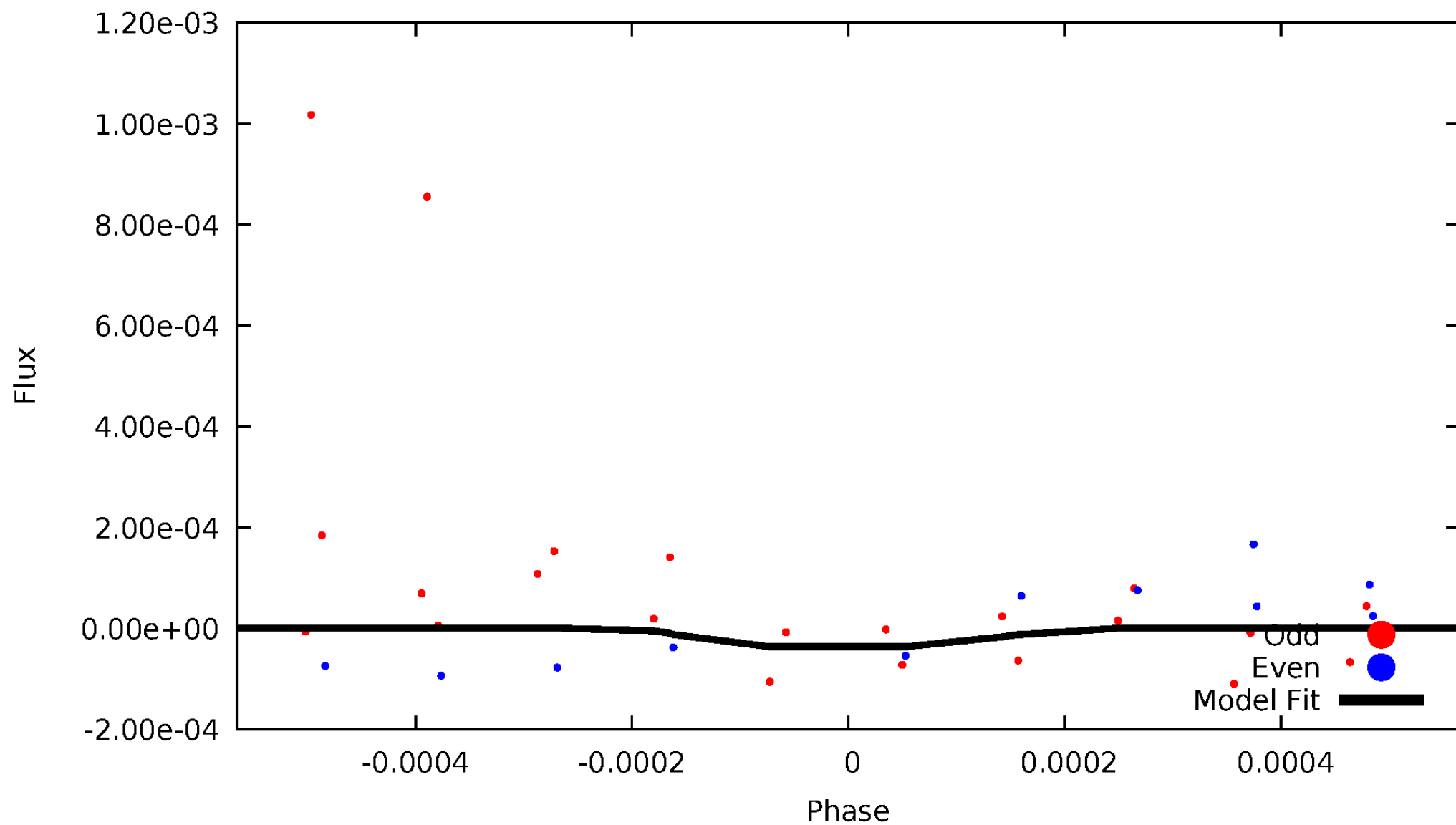
DV Odd/Even

TCE 007677005-05



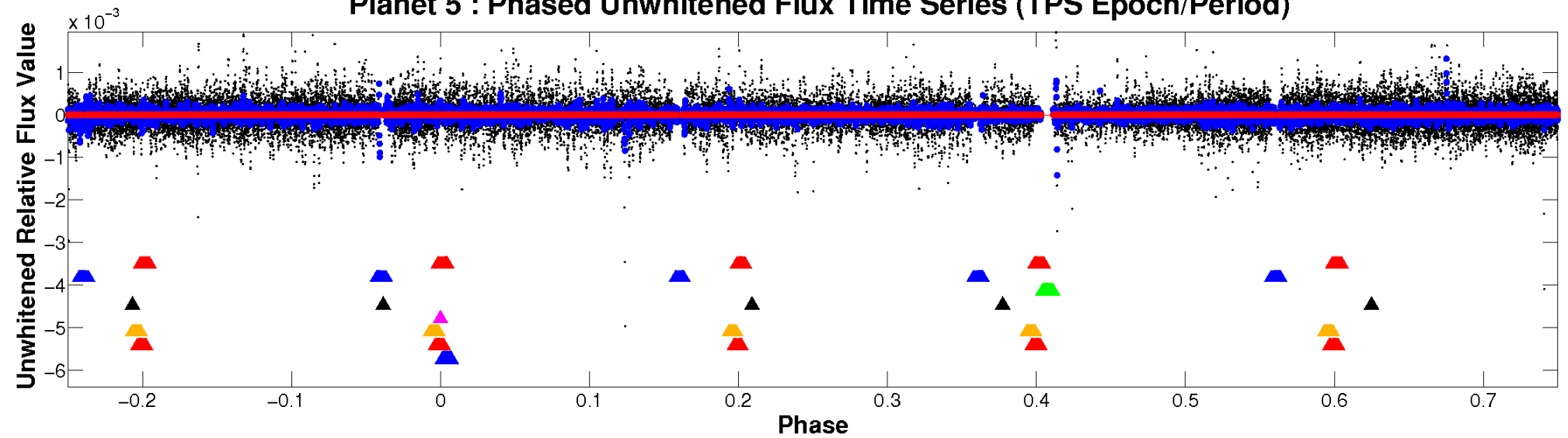
ALT Odd/Even

TCE 007677005-05

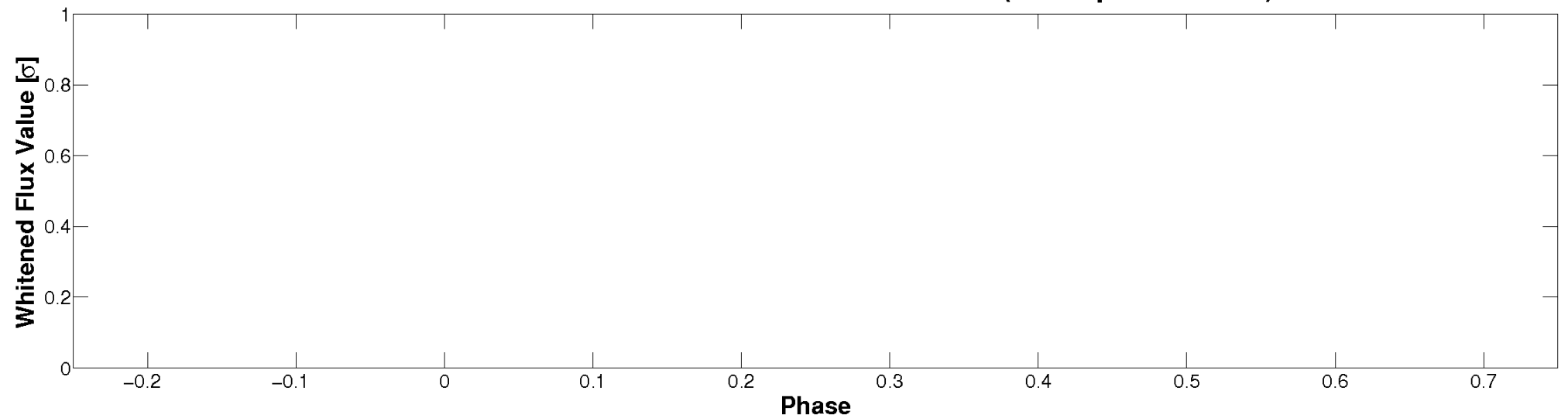


Non-Whitened Vs. Whitened Light Curve

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

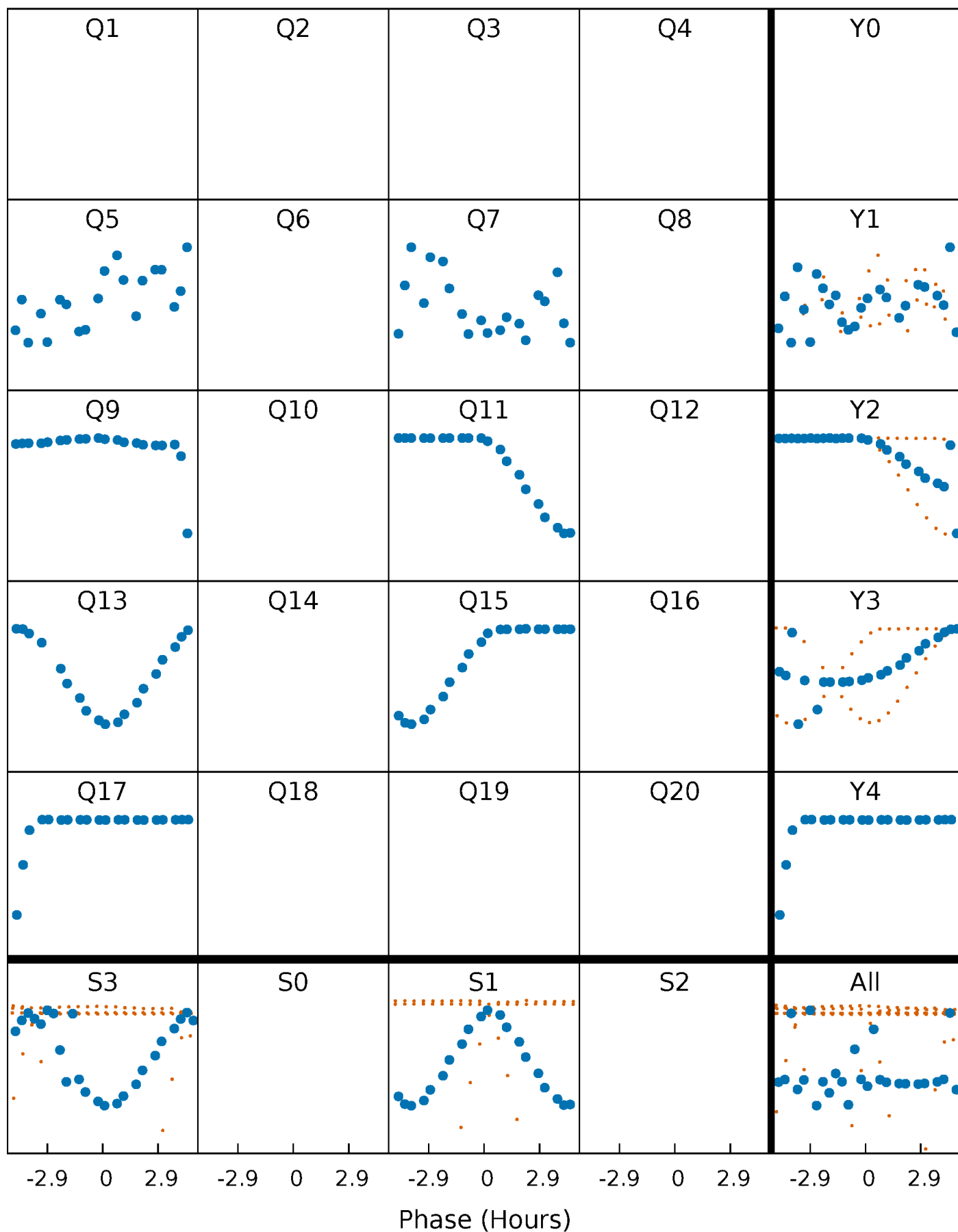


Planet 5 : Phased Whitened Flux Time Series (TPS Epoch/Period)



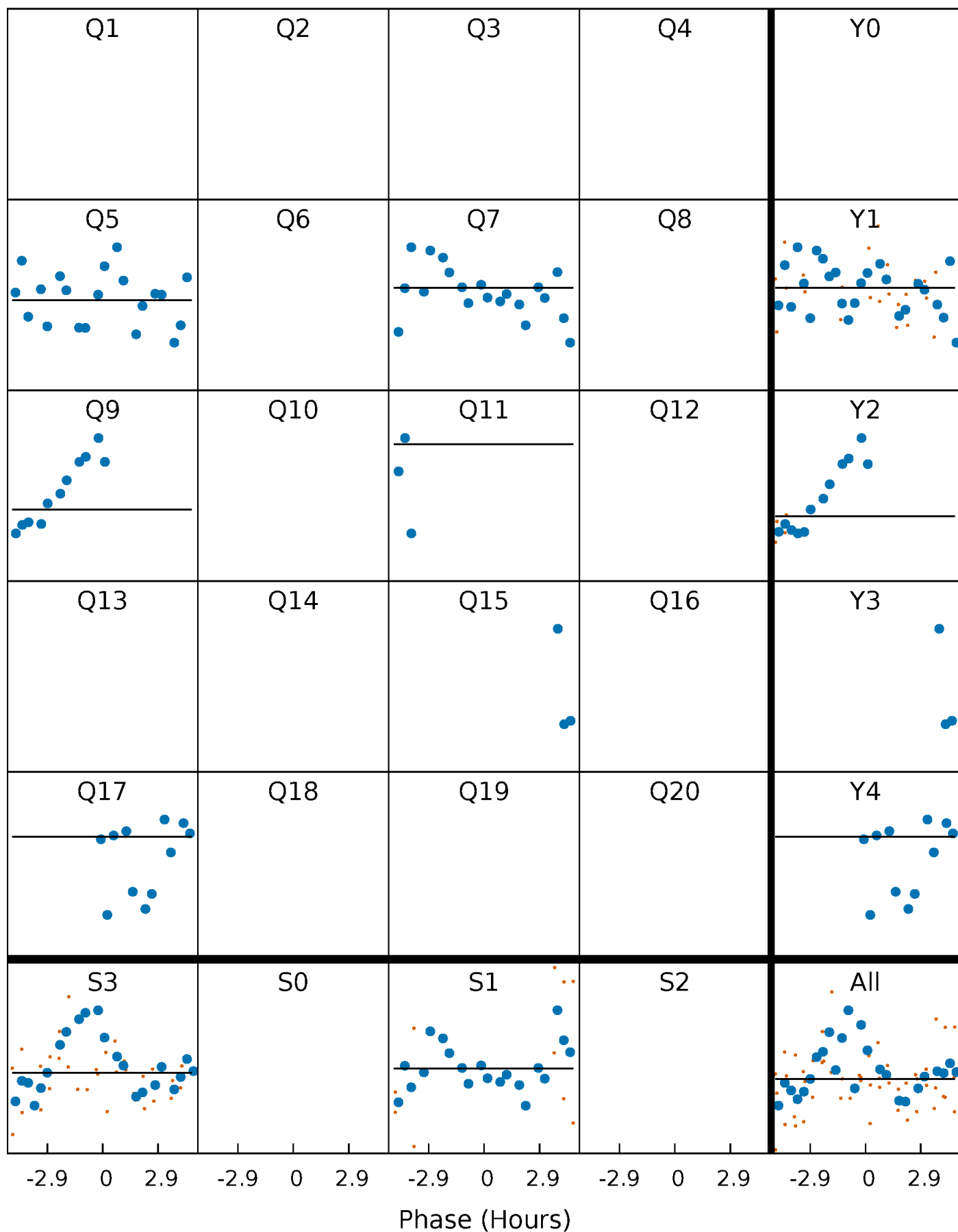
PDC Quarter-Phased Transit Curves

TCE 007677005-05 $P=190.461260$ Days $T_0=255.719357$ (BKJD)



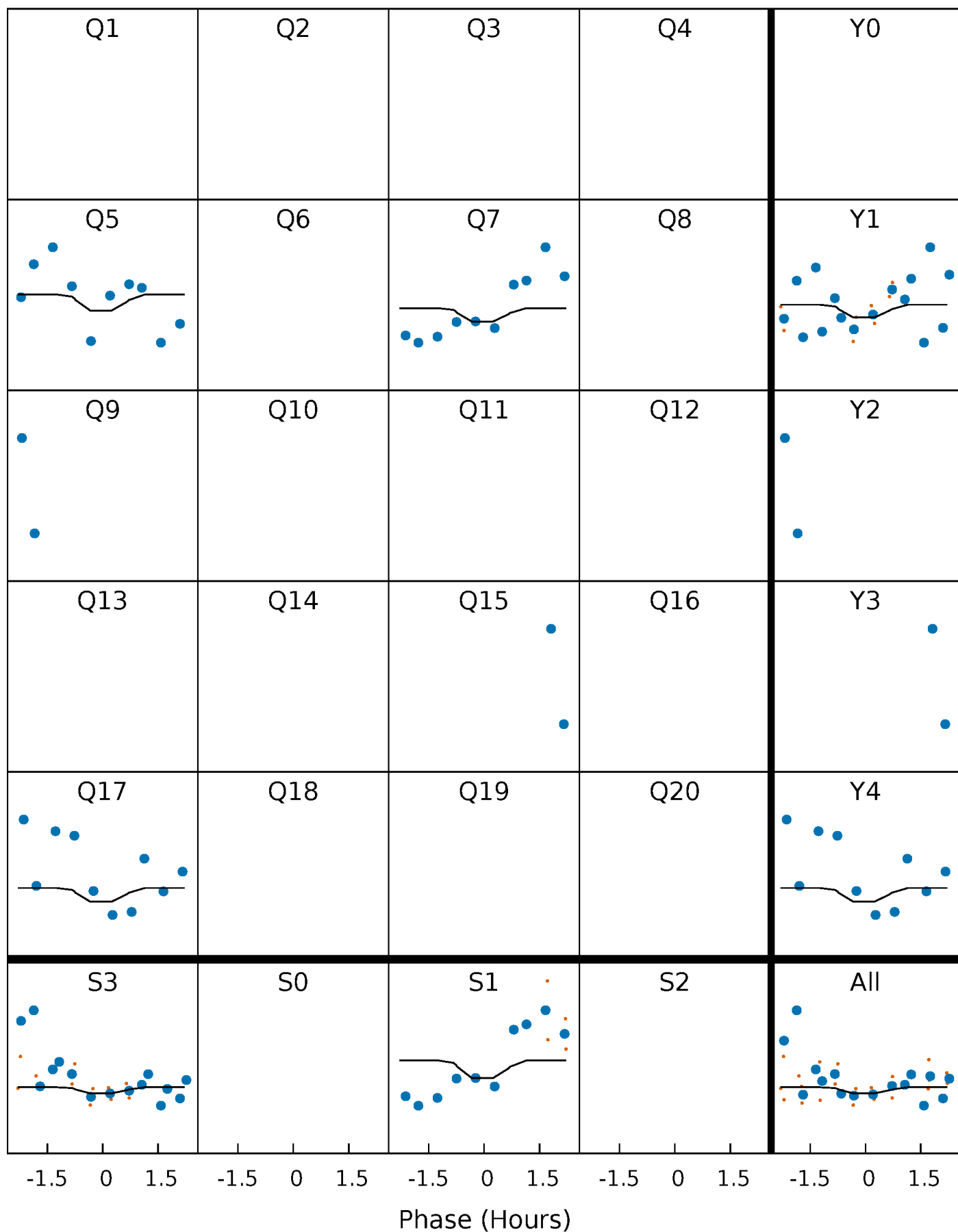
DV Quarter-Phased Transit Curves

TCE 007677005-05 $P=190.461260$ Days $T_0=255.719357$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

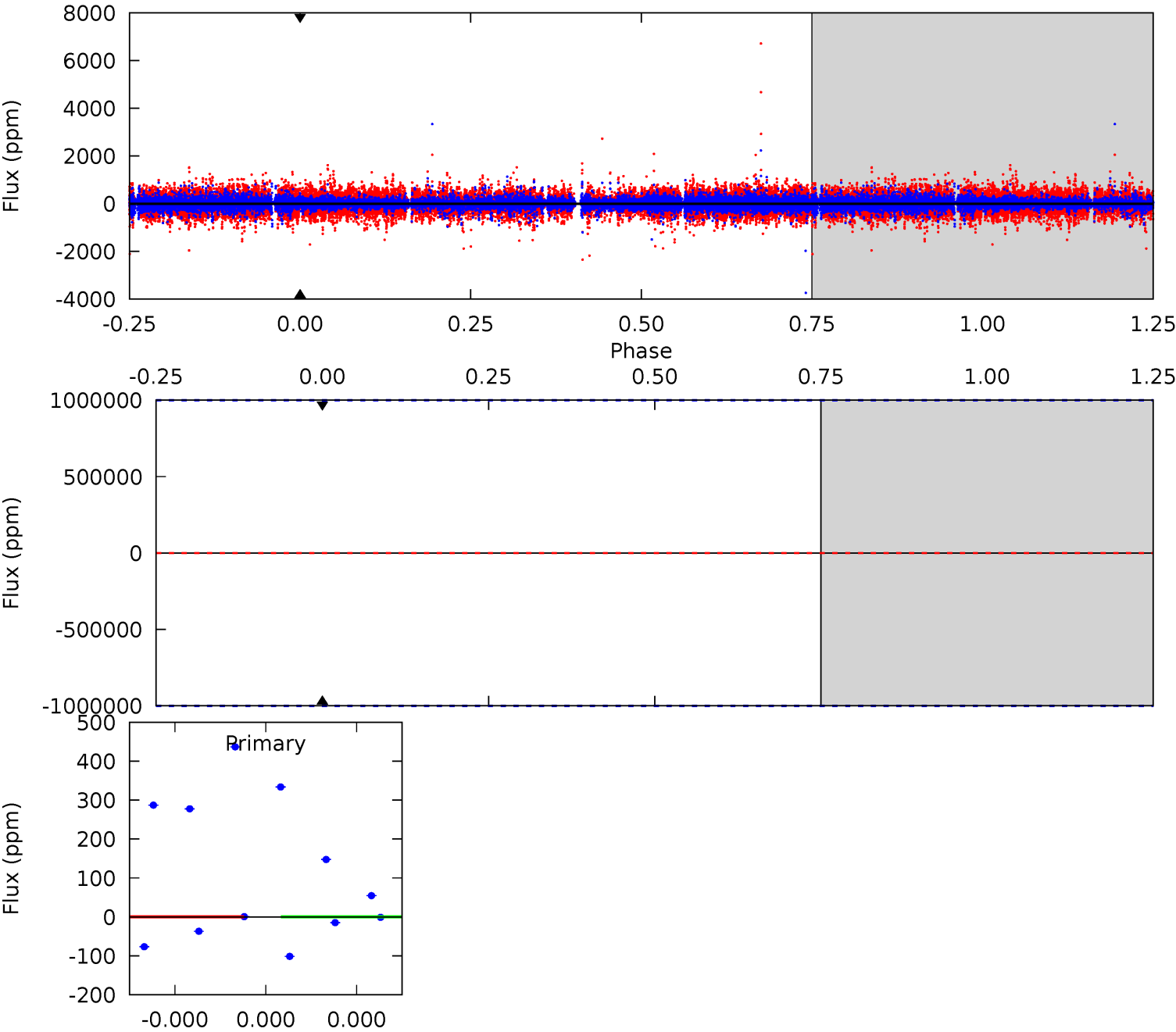
TCE 007677005-05 $P=190.461260$ Days $T_0=255.801490$ (BKJD)



DV Model-Shift Uniqueness Test

007677005-05, P = 190.461260 Days, E = 65.258097 Days

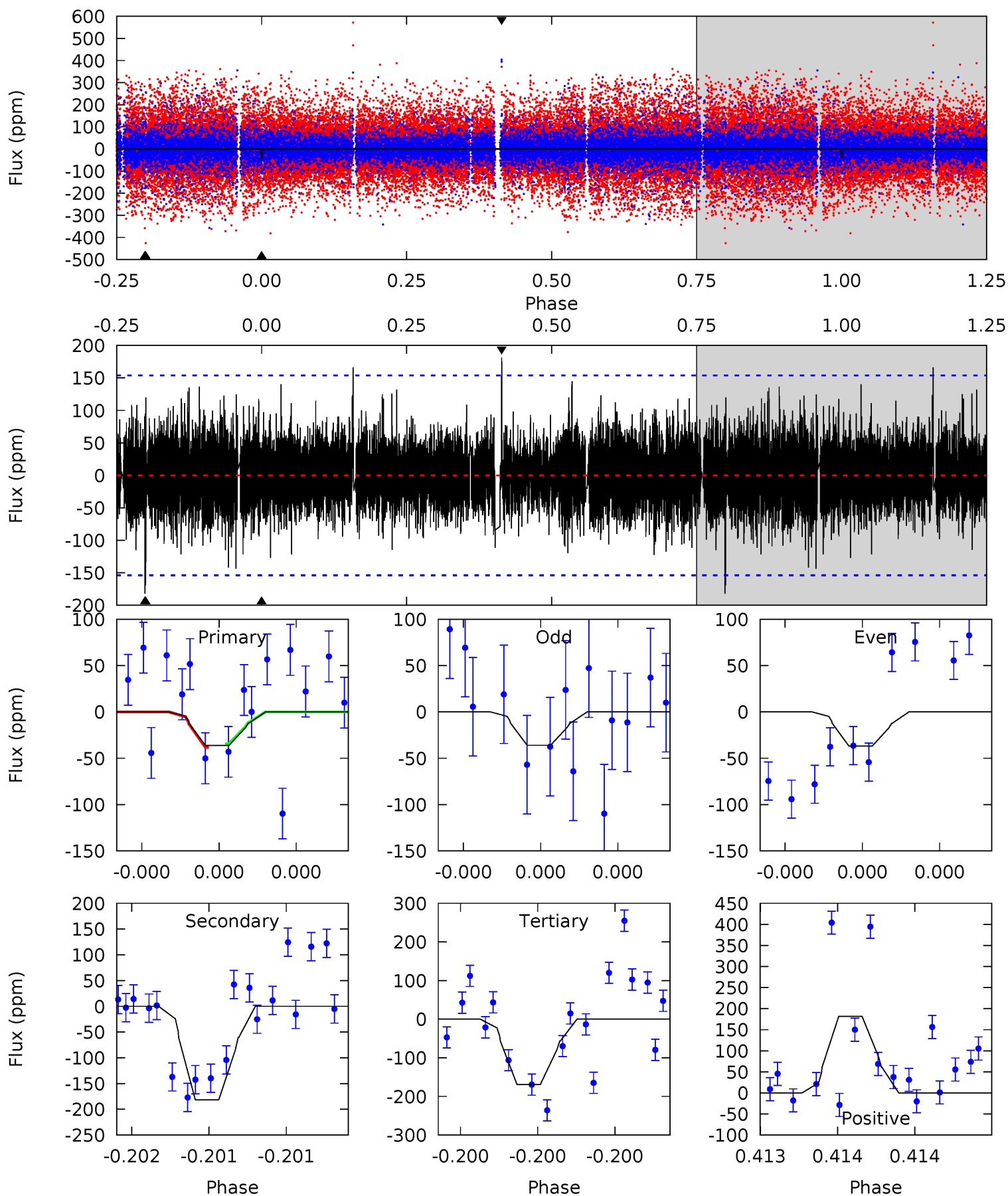
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007677005-05, $P = 190.461260$ Days, $E = 65.340230$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.32	6.62	6.16	6.61	5.61	3.53	1.21	-4.83	-5.29	0.47	0.01	0.01	0.98	0.50	0.07



Stellar Parameters For KIC 007677005

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6894^{+164}_{-247}	$4.250^{+0.092}_{-0.138}$	$-0.200^{+0.250}_{-0.350}$	$1.419^{+0.330}_{-0.220}$	$1.317^{+0.150}_{-0.187}$	$0.649^{+0.326}_{-0.253}$
	+2%/-4%	+2%/-3%	+125%/-175%	+23%/-16%	+11%/-14%	+50%/-39%
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 007677005-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$17.32^{+15.13}_{-11.14}$	603^{+34}_{-30}	4737^{+14921}_{-22357}	$2391^{+159387}_{-134348}$
Alt.	-182 ± 27	$11.49^{+12.45}_{-8.02}$	604^{+37}_{-31}	3454^{+1854}_{-680}	383^{+3593}_{-297}

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 $A_{obs} \gg 1.0$

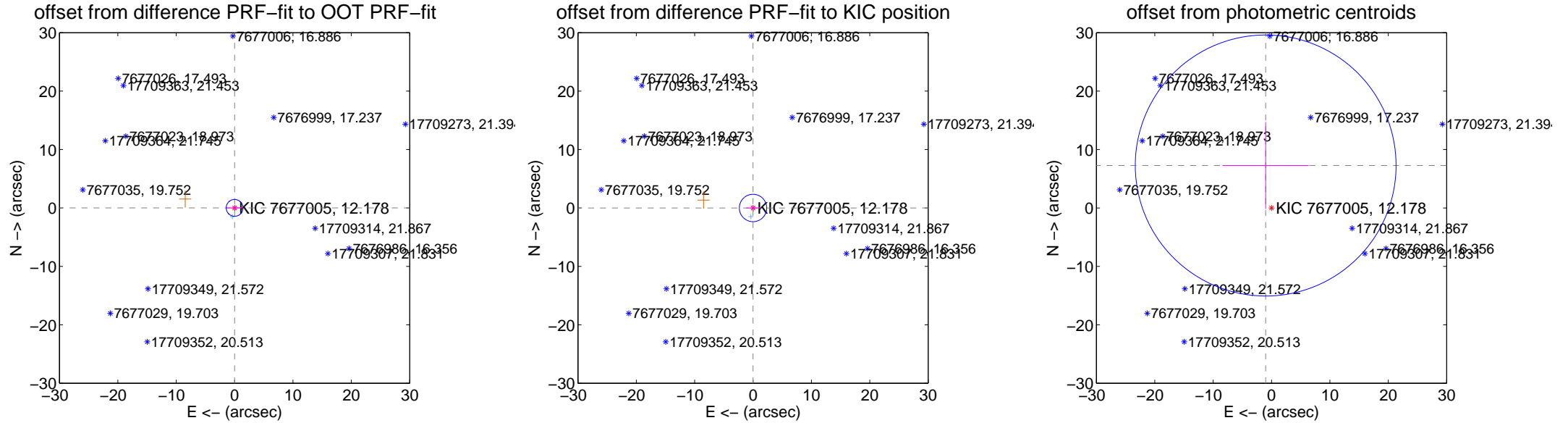
DV Centroid Data

Supplemental centroid analysis for 007677005-05. Kepler magnitude: 12.18. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.016 ± 0.480	0.03	-0.008 ± 1.485	0.014 ± 0.417
PRF-fit source offset from KIC position	0.007 ± 0.782	0.01	0.005 ± 1.210	-0.005 ± 0.335
photometric centroid source offset	7.34 ± 7.45	0.99	1.00 ± 7.38	7.27 ± 7.45

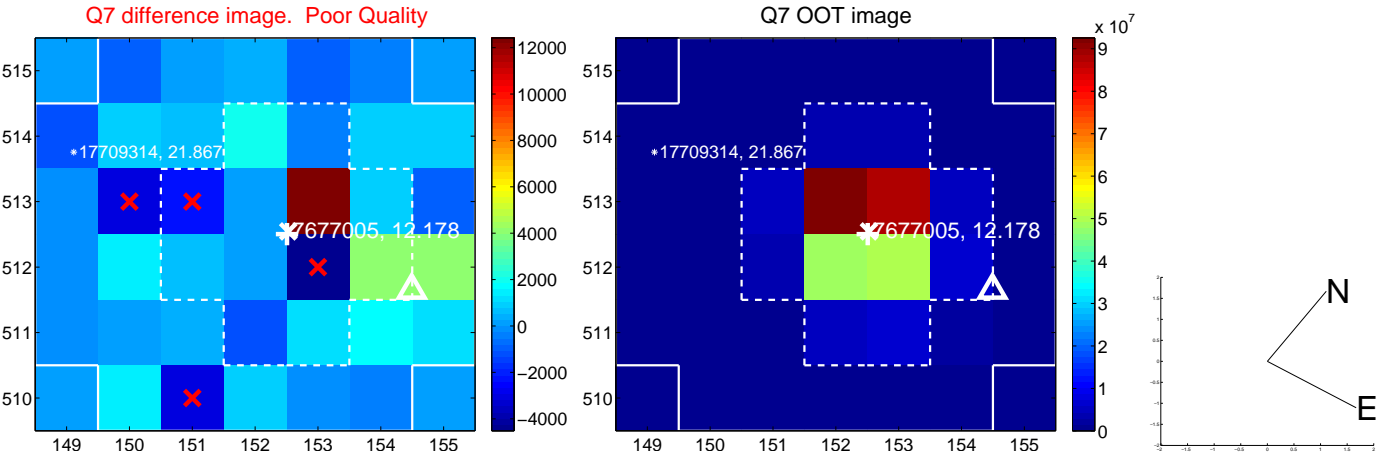
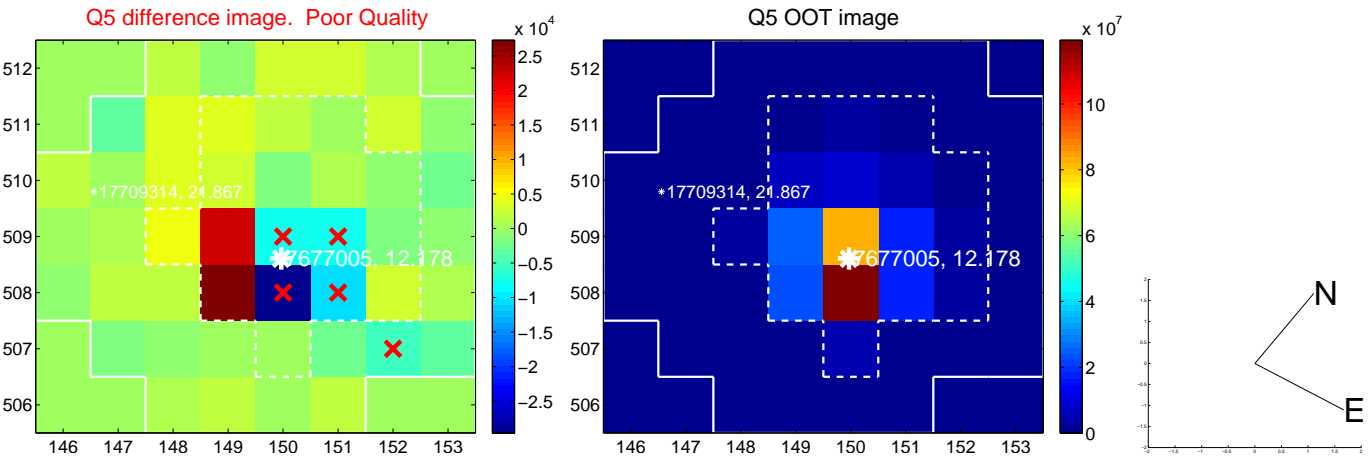


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

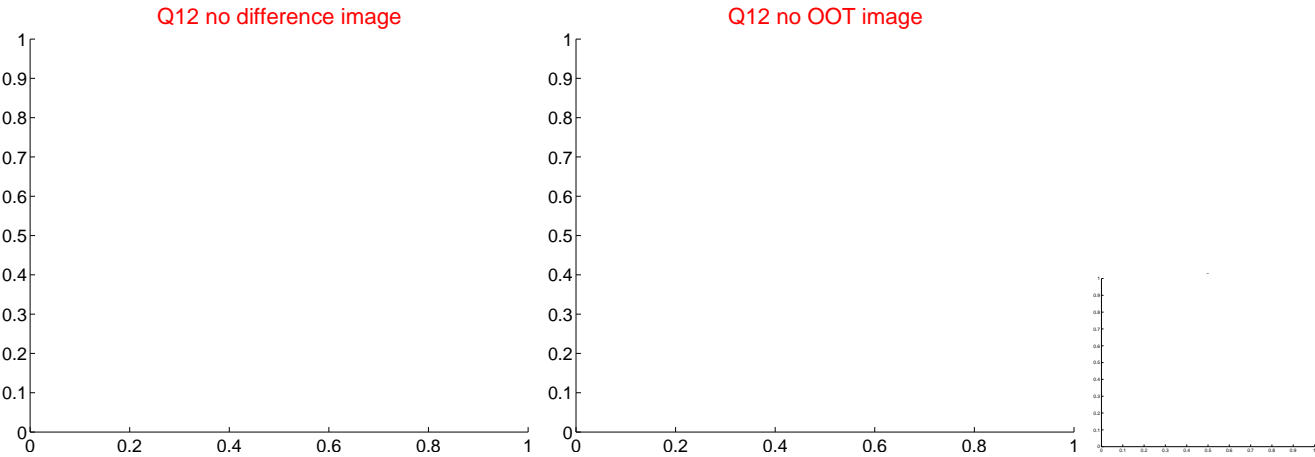
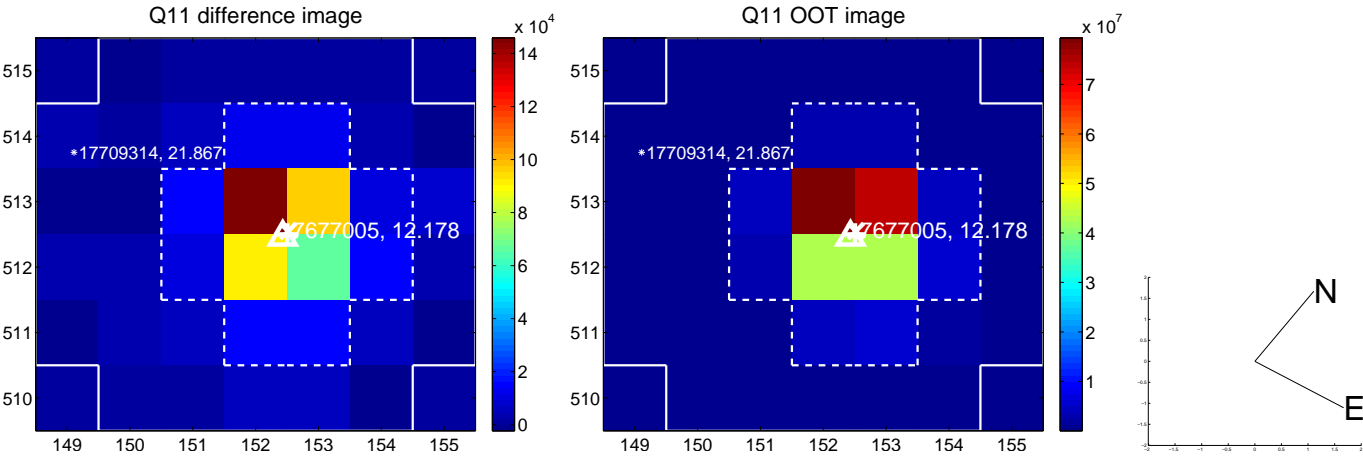
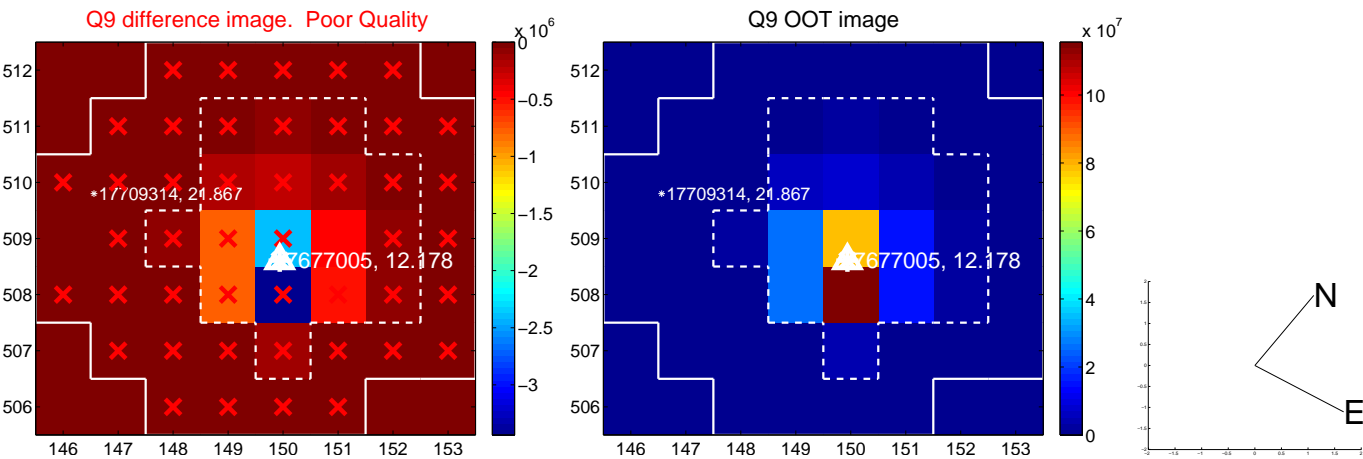
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



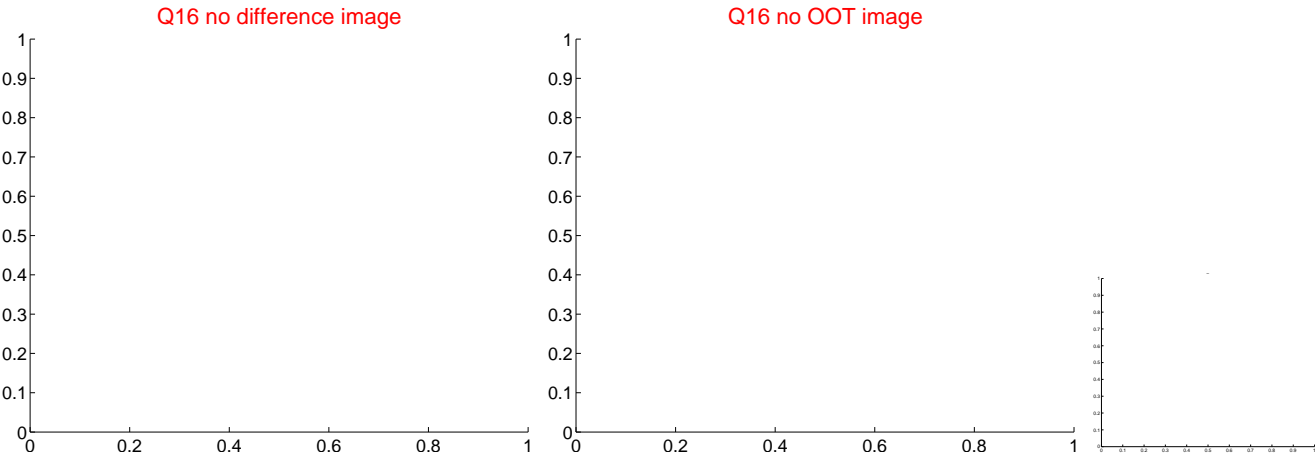
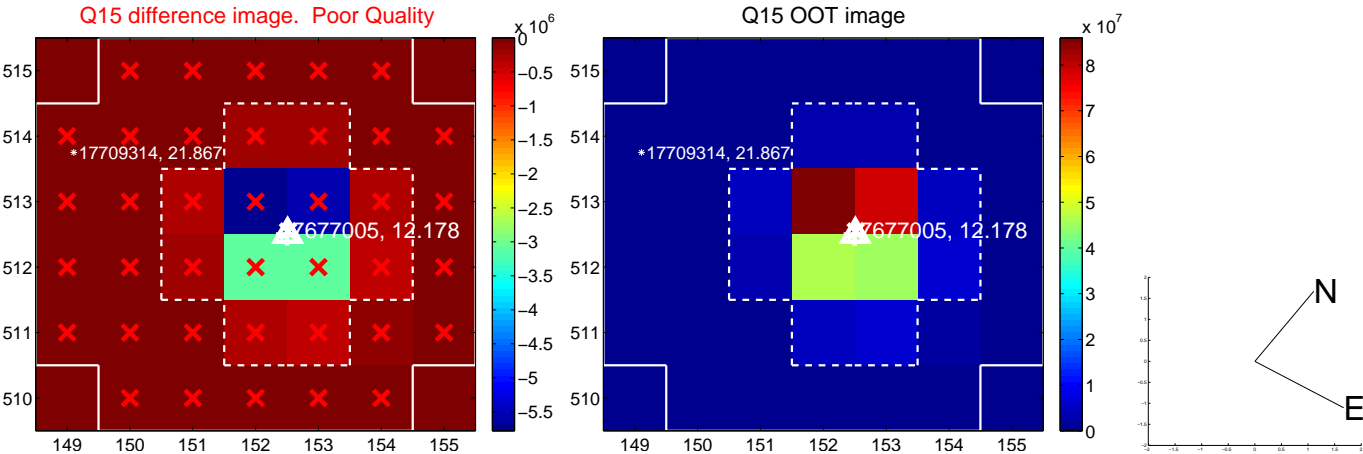
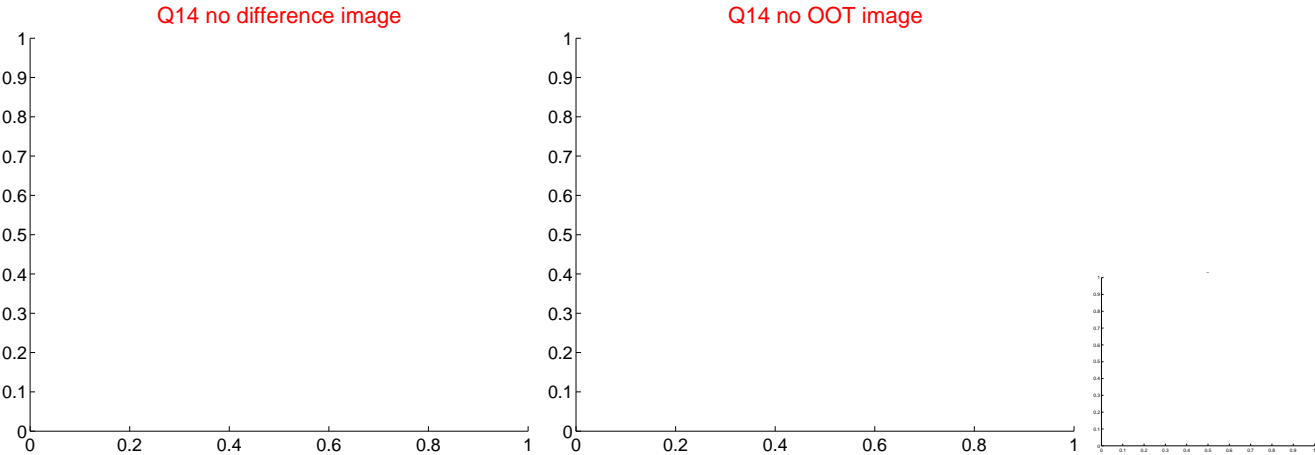
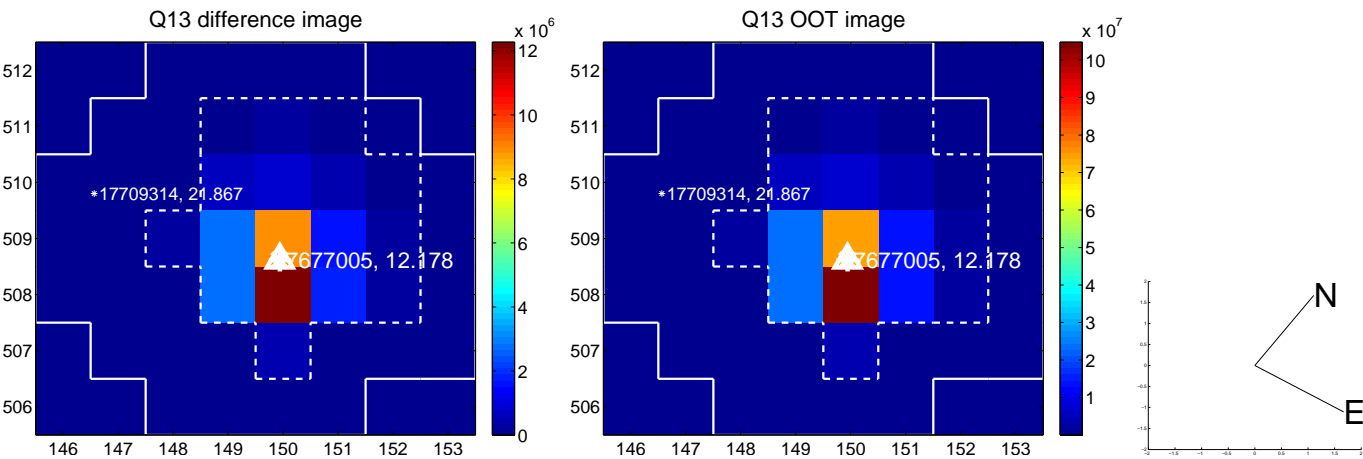
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



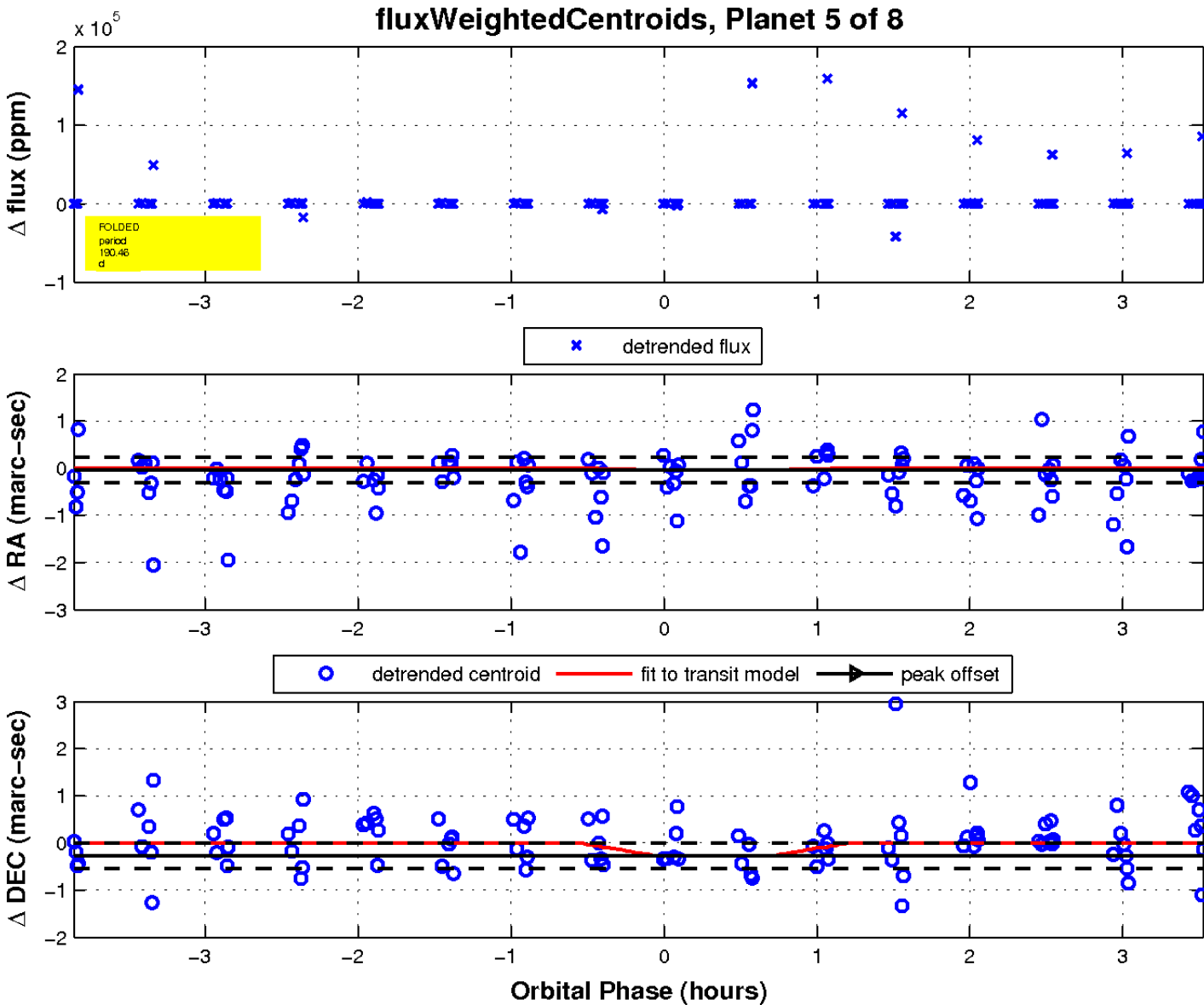
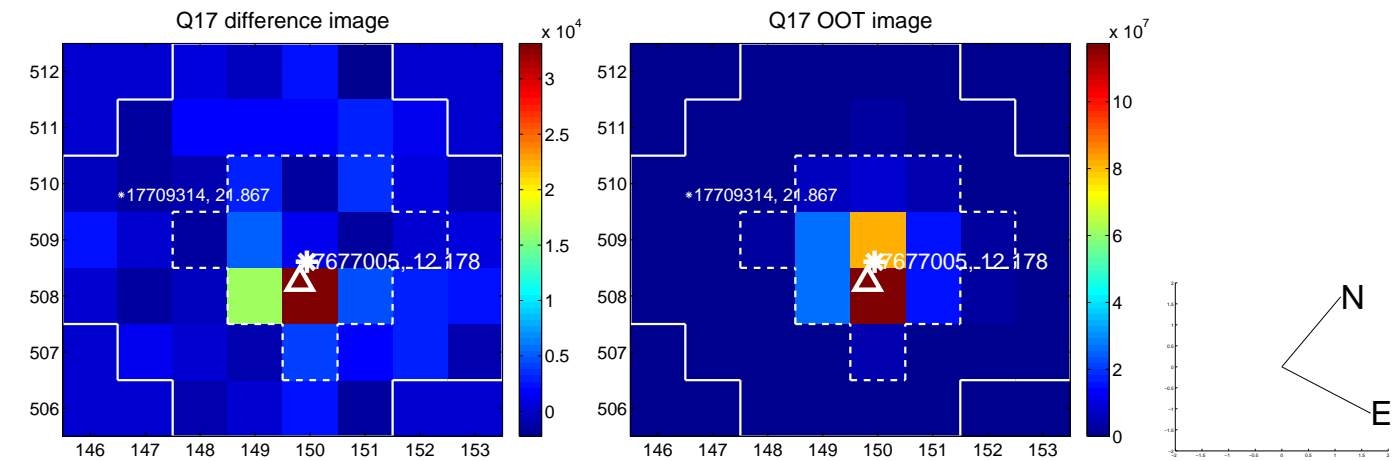
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

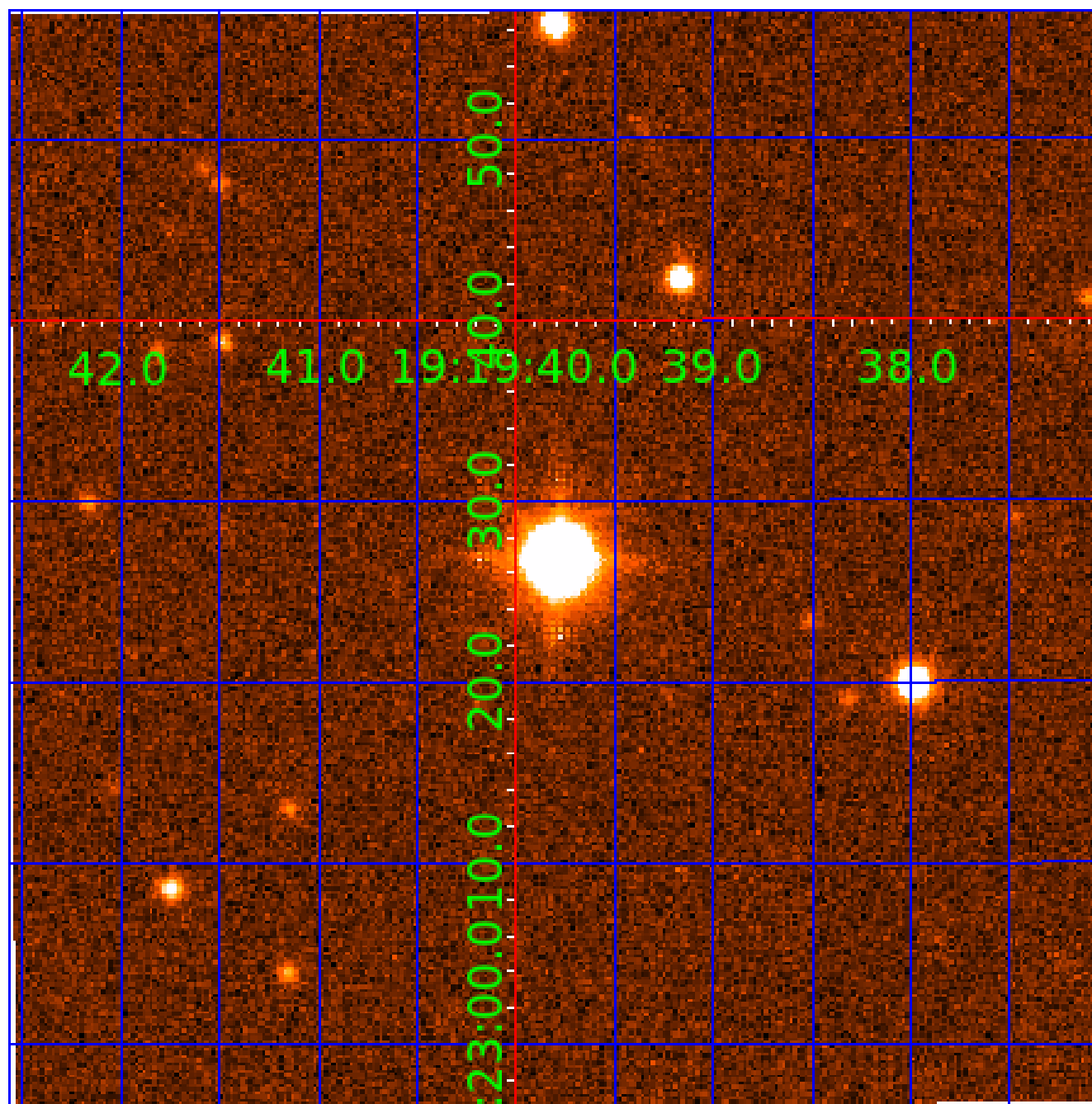


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007677005

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})
007677005-01	OBS	6903.01	38.057656	142.412298	313054.4	5.000	13456.1	-1.0	1.42	6894	46.18	69.53
007677005-02	OBS	No	38.058129	134.579595	177838.8	12.282	6569.6	4465.8	1.42	6894	82.28	69.53
007677005-03	OBS	No	190.275709	143.543340	7221.9	17.782	420.7	133.8	1.42	6894	21.33	8.13
007677005-04	OBS	No	301.720179	184.285303	862.0	13.059	362.3	10.3	1.42	6894	4.77	4.40
007677005-05	OBS	No	190.461260	255.719357	10034.8	2.500	360.9	-1.0	1.42	6894	14.41	8.12
007677005-06	OBS	No	38.060334	141.291858	2277.7	10.500	273.9	-1.0	1.42	6894	6.84	69.52
007677005-07	OBS	No	38.060474	141.954746	16601.4	1.500	335.3	-1.0	1.42	6894	18.55	69.52
007677005-08	OBS	No	190.300020	257.088307	6355.5	3.000	275.5	-1.0	1.42	6894	11.44	8.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007677005-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
007677005-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
007677005-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT— SAME_NTL_PERIOD—CENT_FEW_DIFFS—HALO_GHOST
007677005-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007677005-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
007677005-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
007677005-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—RESIDUAL_TCE—CENT_NOFITS
007677005-08	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—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 007677005-06

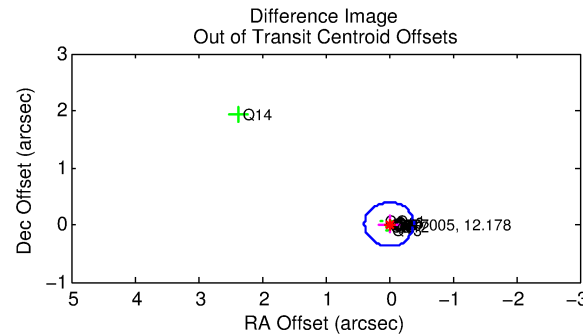
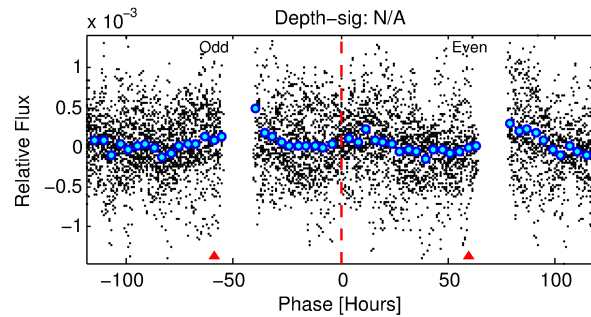
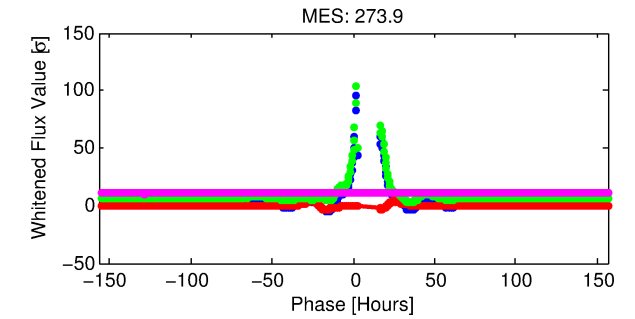
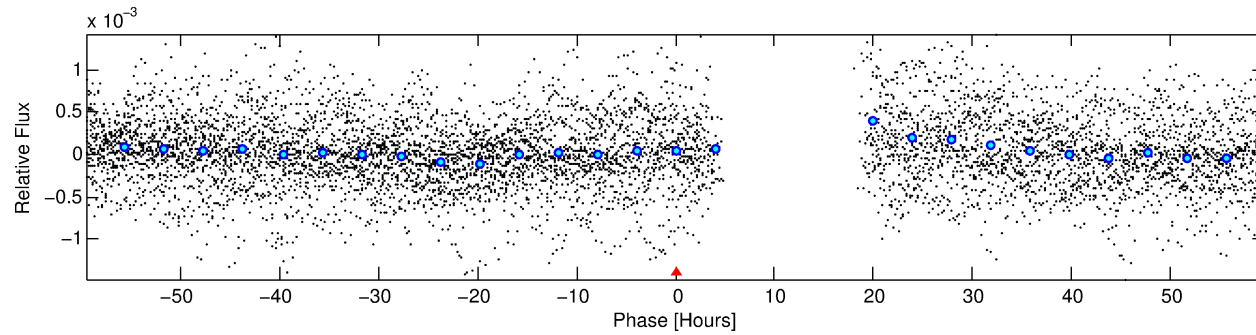
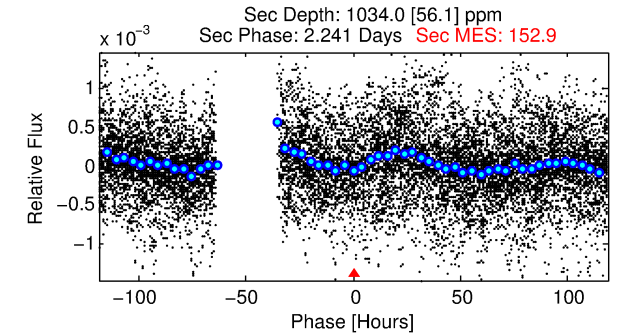
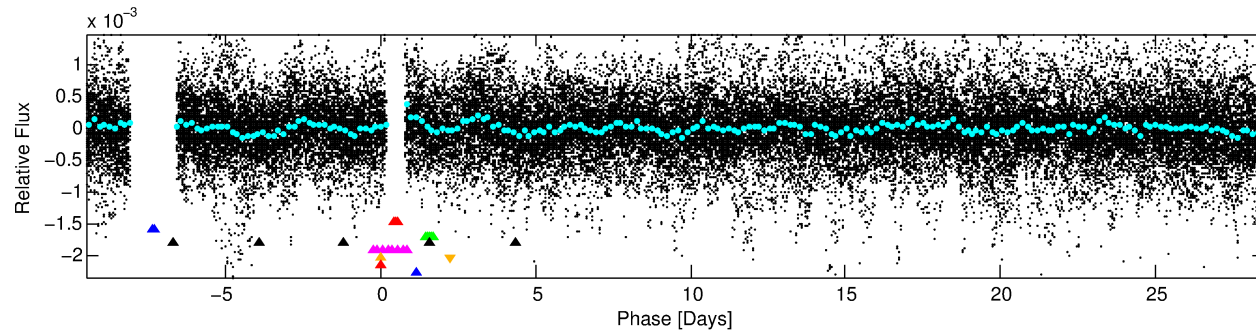
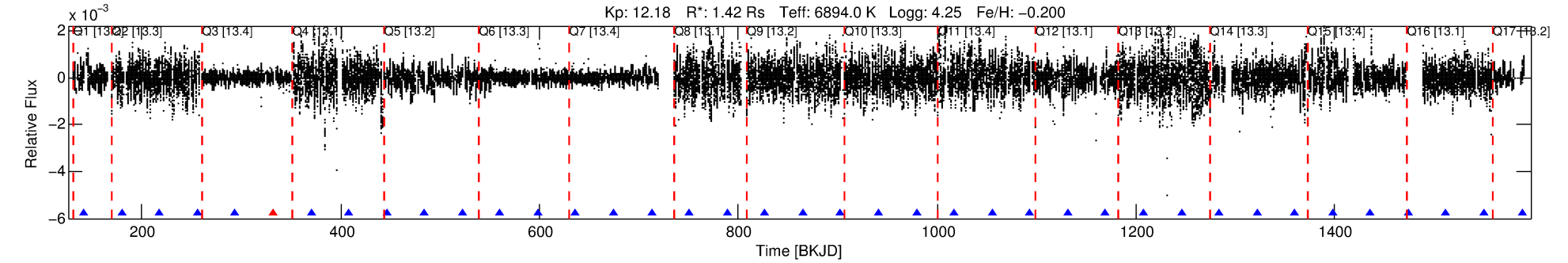
No Significant Match Found

DV One-Page Summary

KIC: 7677005 Candidate: 6 of 8 Period: 38.060 d

KOI: K06903 Corr: No Ephemeris Match

Kp: 12.18 R*: 1.42 Rs Teff: 6894.0 K Logg: 4.25 Fe/H: -0.200



TPS TCE Results:

Period = 38.06033 d

Epoch = 141.2919 BKJD

DV fit results are unavailable

DV Diagnostic Results:

ShortPeriod-sig: 0.3% [0.00σ]

LongPeriod-sig: 0.0% [0.00σ]

ModelChiSquare2-sig: N/A

ModelChiSquareGof-sig: N/A

Bootstrap-pfa: N/A

RollingBand-fgt: 0.97 [32/33]

GhostDiagnostic-chr: -3.306

Centroid-sig: 38.1%

Centroid-so: 0.827 arcsec [0.81σ]

OotOffset-rm: 0.009 arcsec [0.07σ]

KicOffset-rm: 0.058 arcsec [0.83σ]

OotOffset-st: 4/3/4/4 [15]

KicOffset-st: 4/3/4/4 [15]

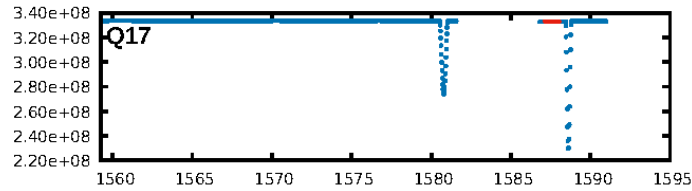
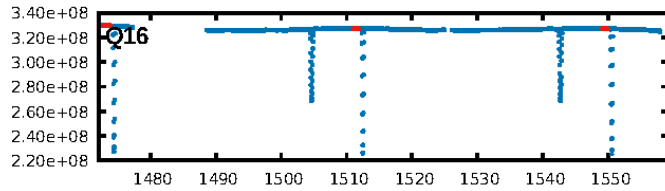
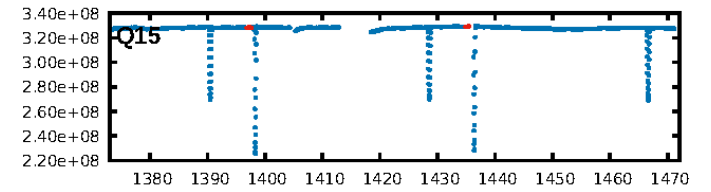
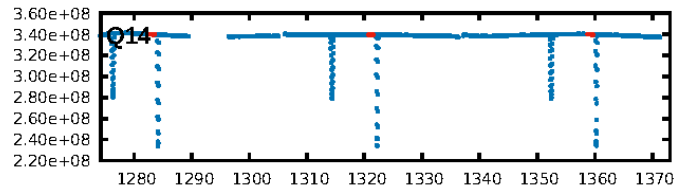
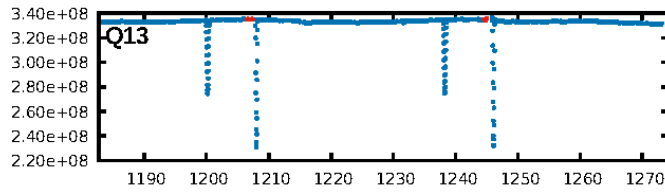
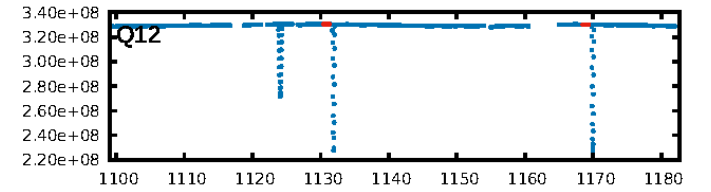
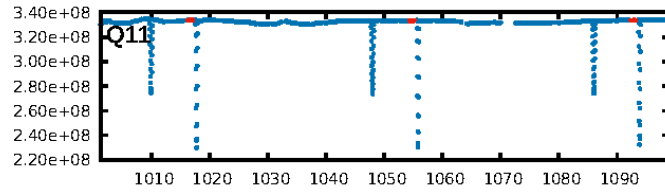
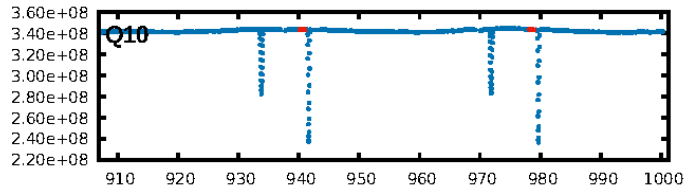
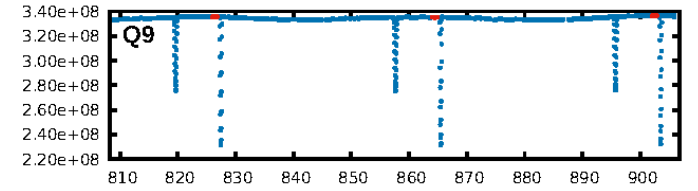
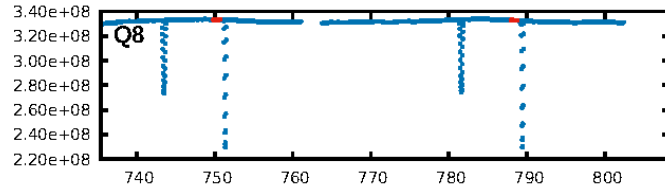
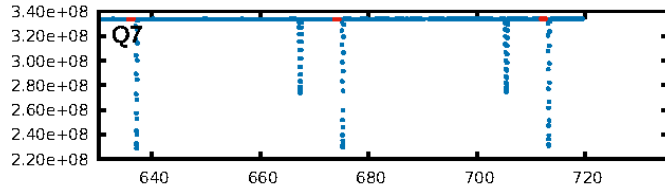
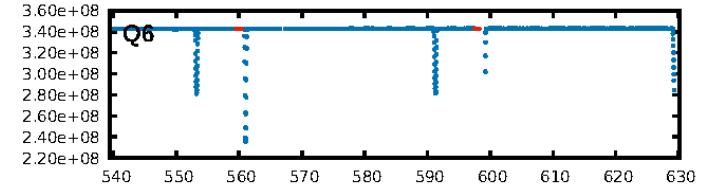
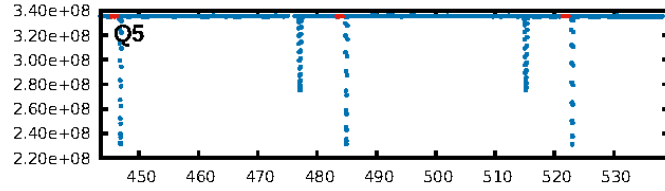
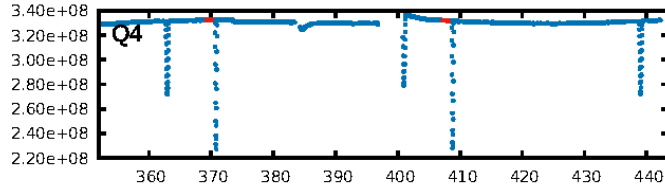
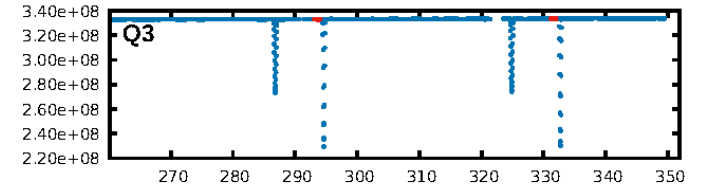
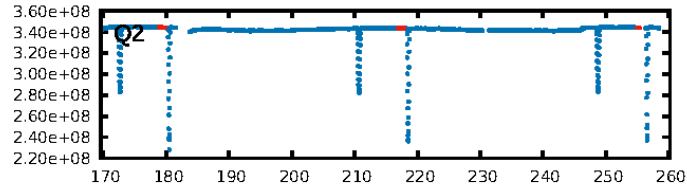
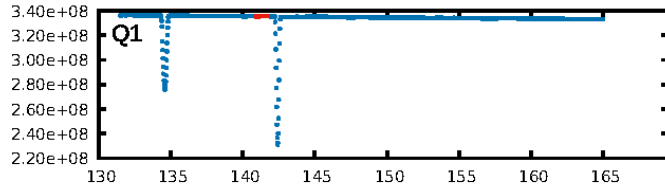
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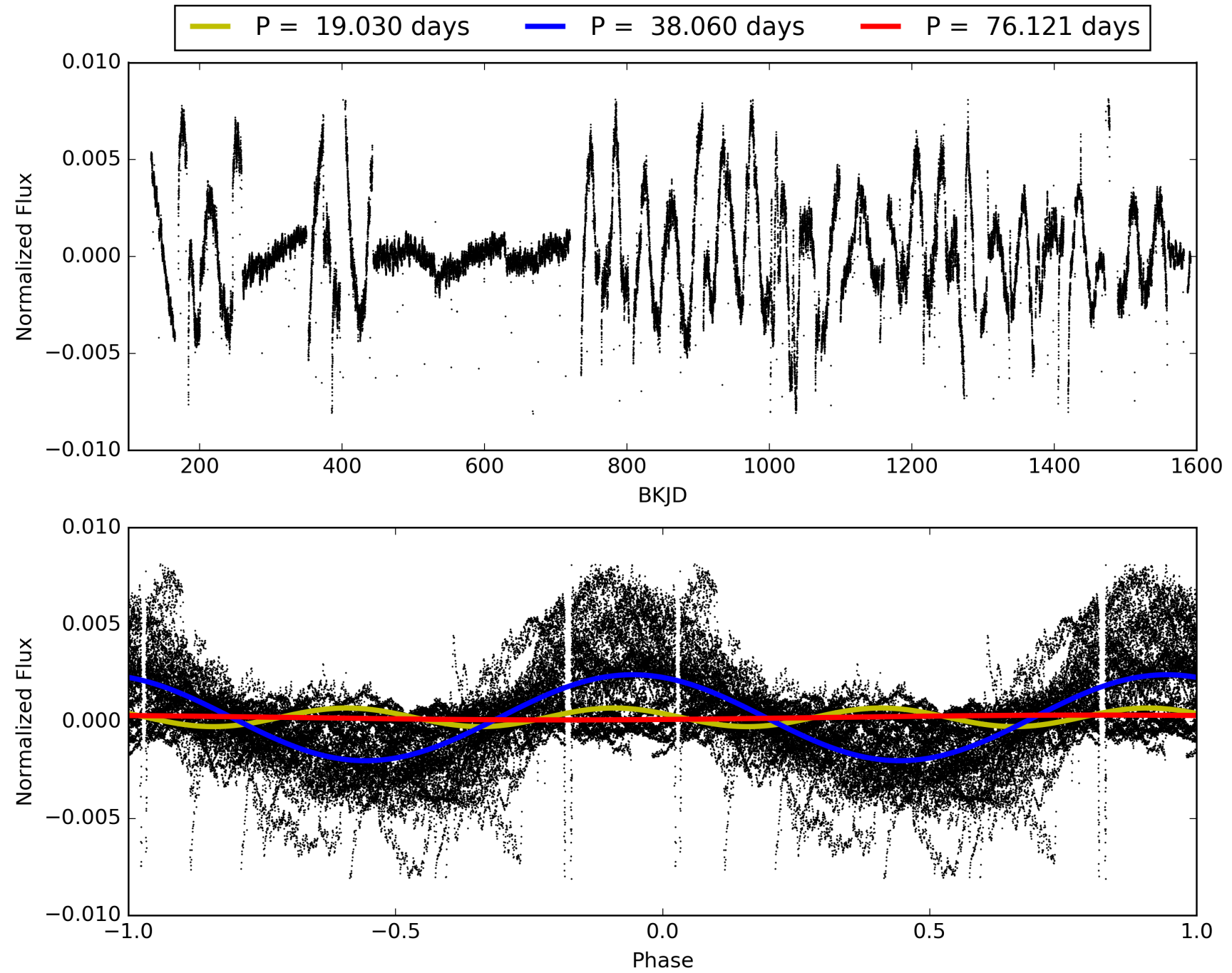
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:10:18 Z

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

TCE 007677005-06, PDC Light Curves

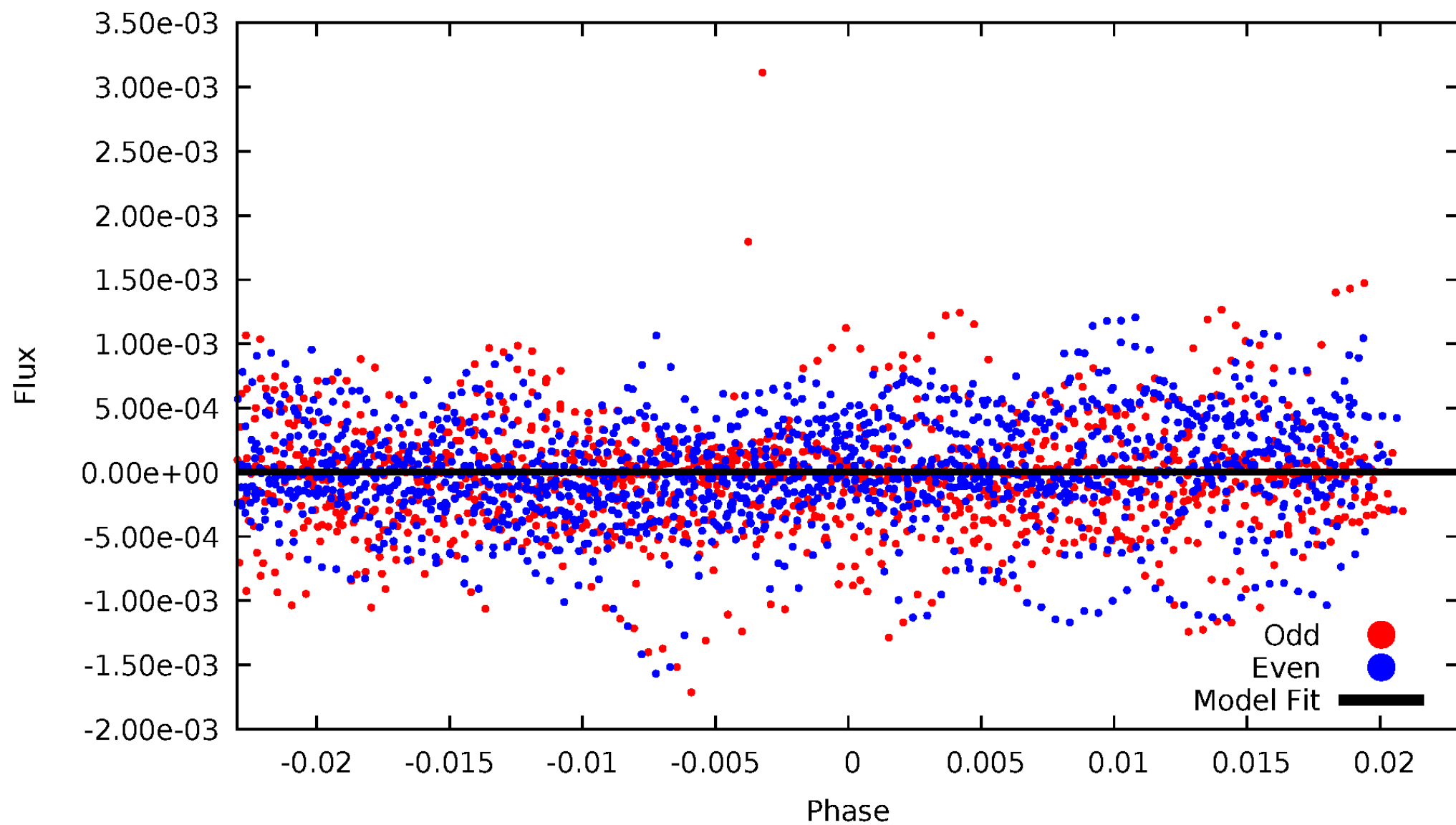


TCE 007677005-06



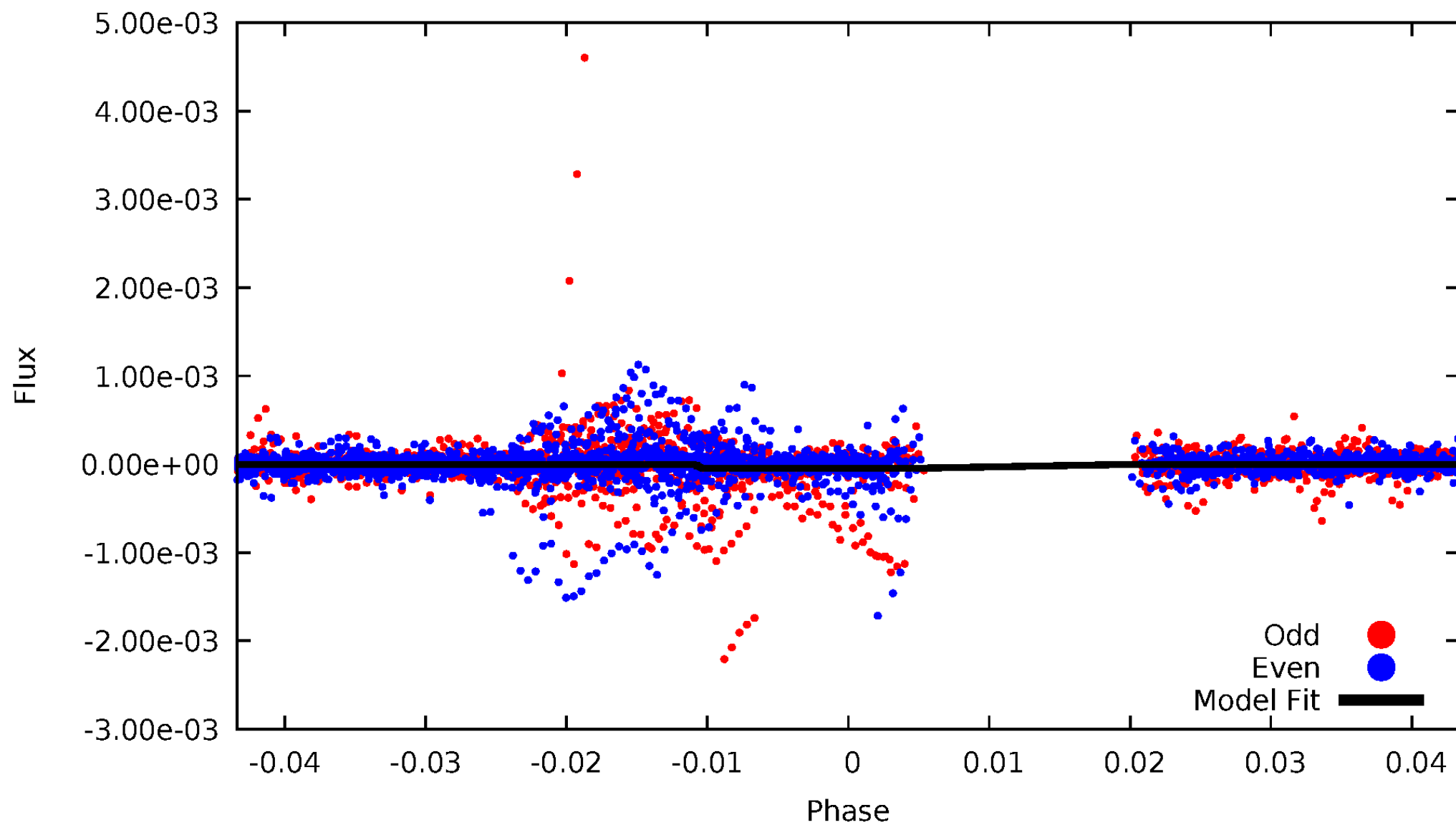
DV Odd/Even

TCE 007677005-06



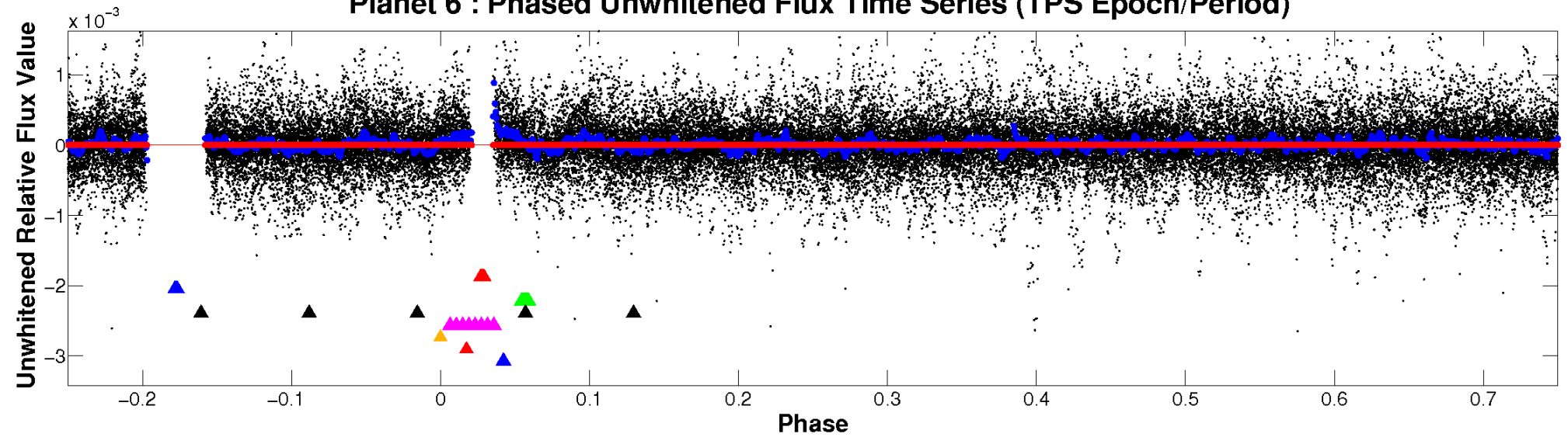
ALT Odd/Even

TCE 007677005-06



Non-Whitened Vs. Whitened Light Curve

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

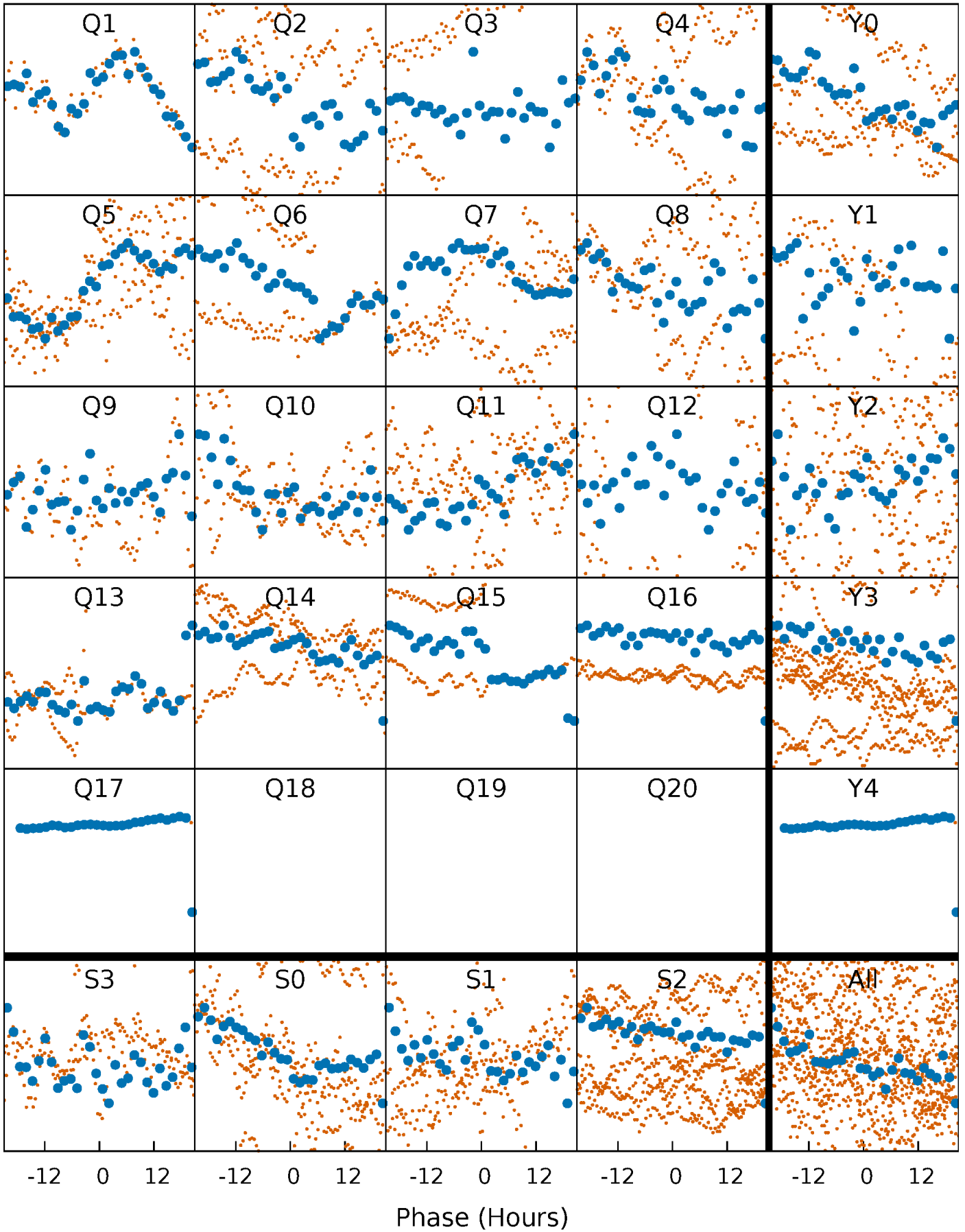


Planet 6 : Phased Whitened Flux Time Series (TPS Epoch/Period)



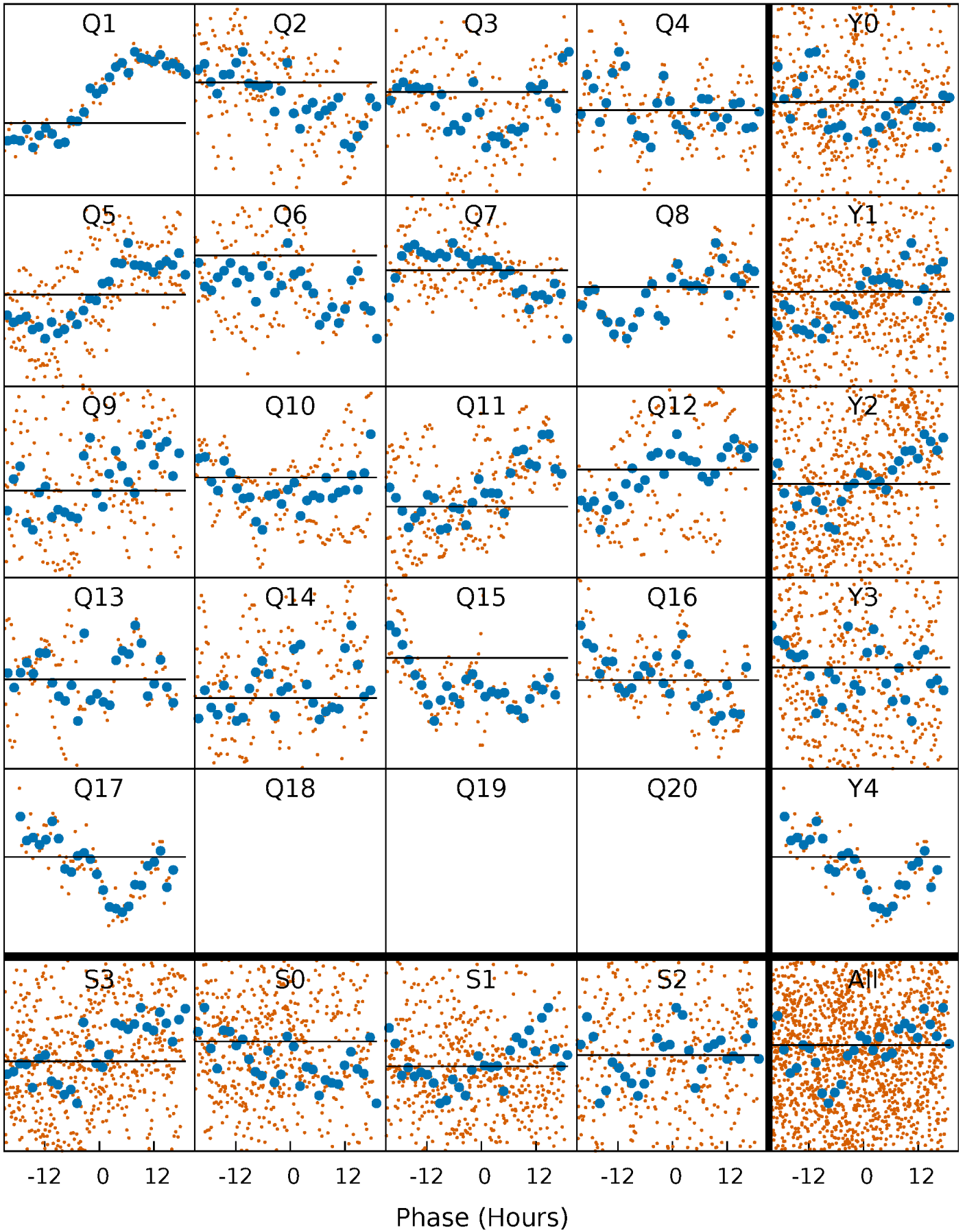
PDC Quarter-Phased Transit Curves

TCE 007677005-06 P= 38.060334 Days $T_0=141.291858$ (BKJD)



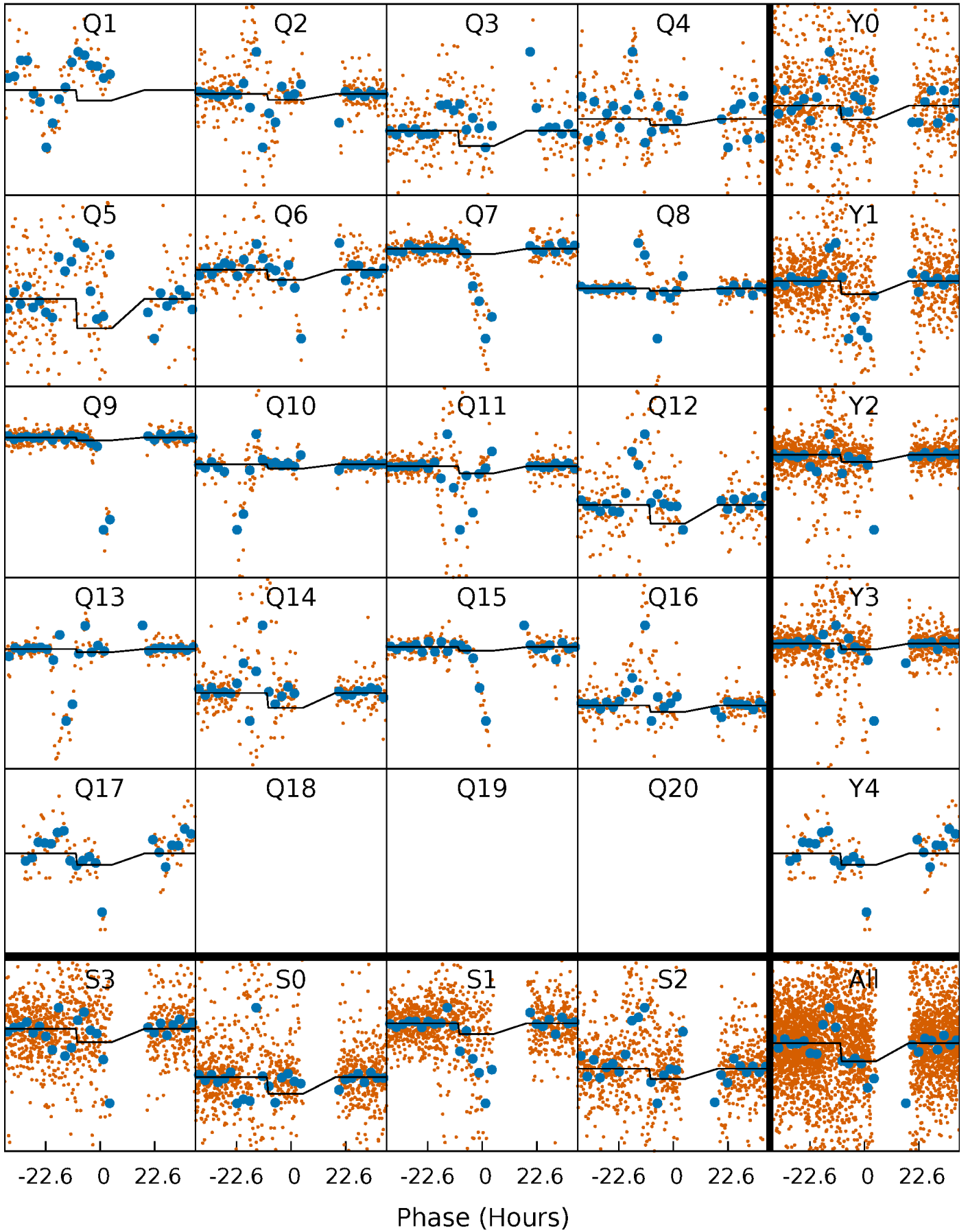
DV Quarter-Phased Transit Curves

TCE 007677005-06 P= 38.060334 Days $T_0=141.291858$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

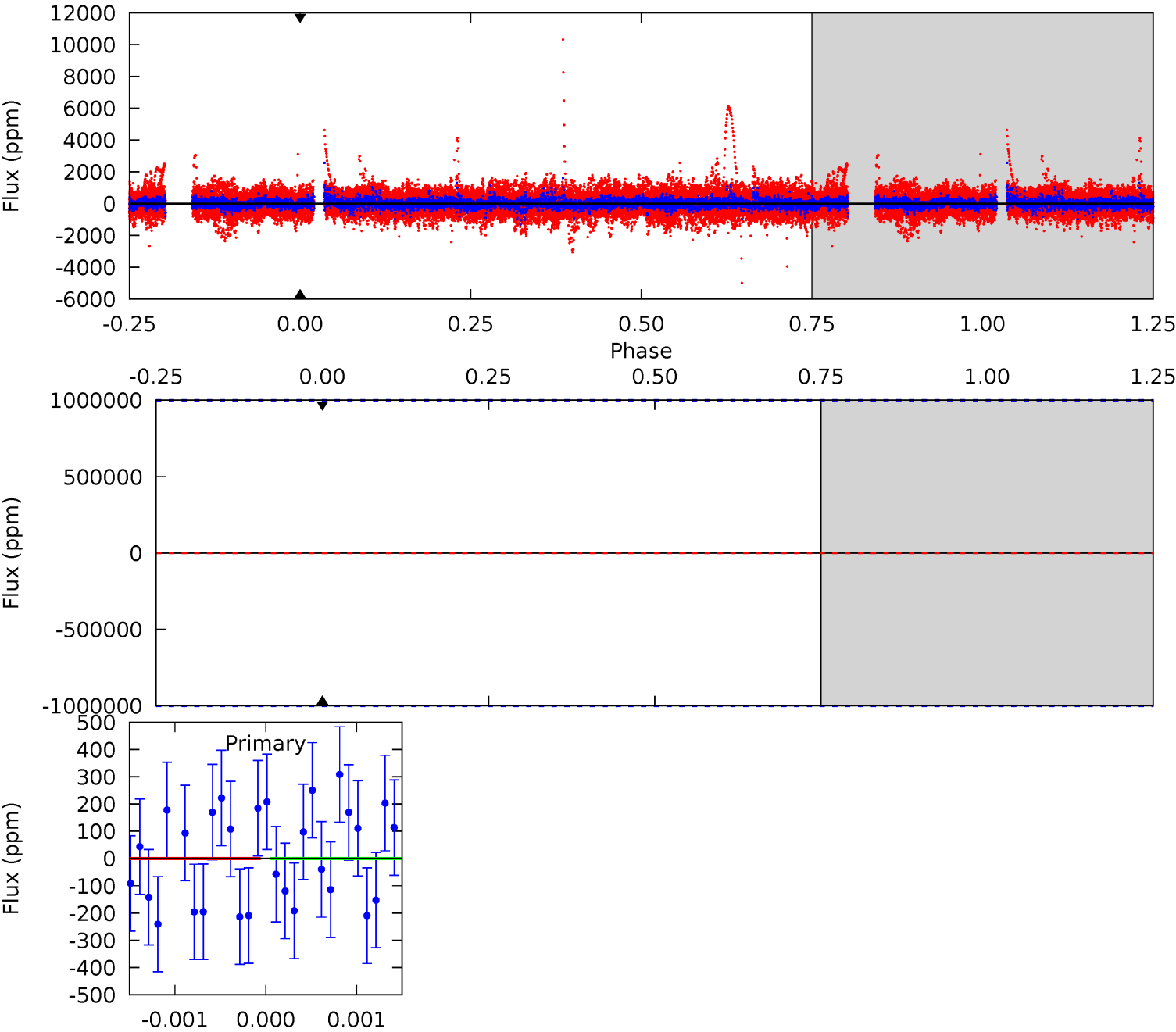
TCE 007677005-06 P= 38.060334 Days $T_0=141.881624$ (BKJD)



DV Model-Shift Uniqueness Test

007677005-06, P = 38.060334 Days, E = 103.231524 Days

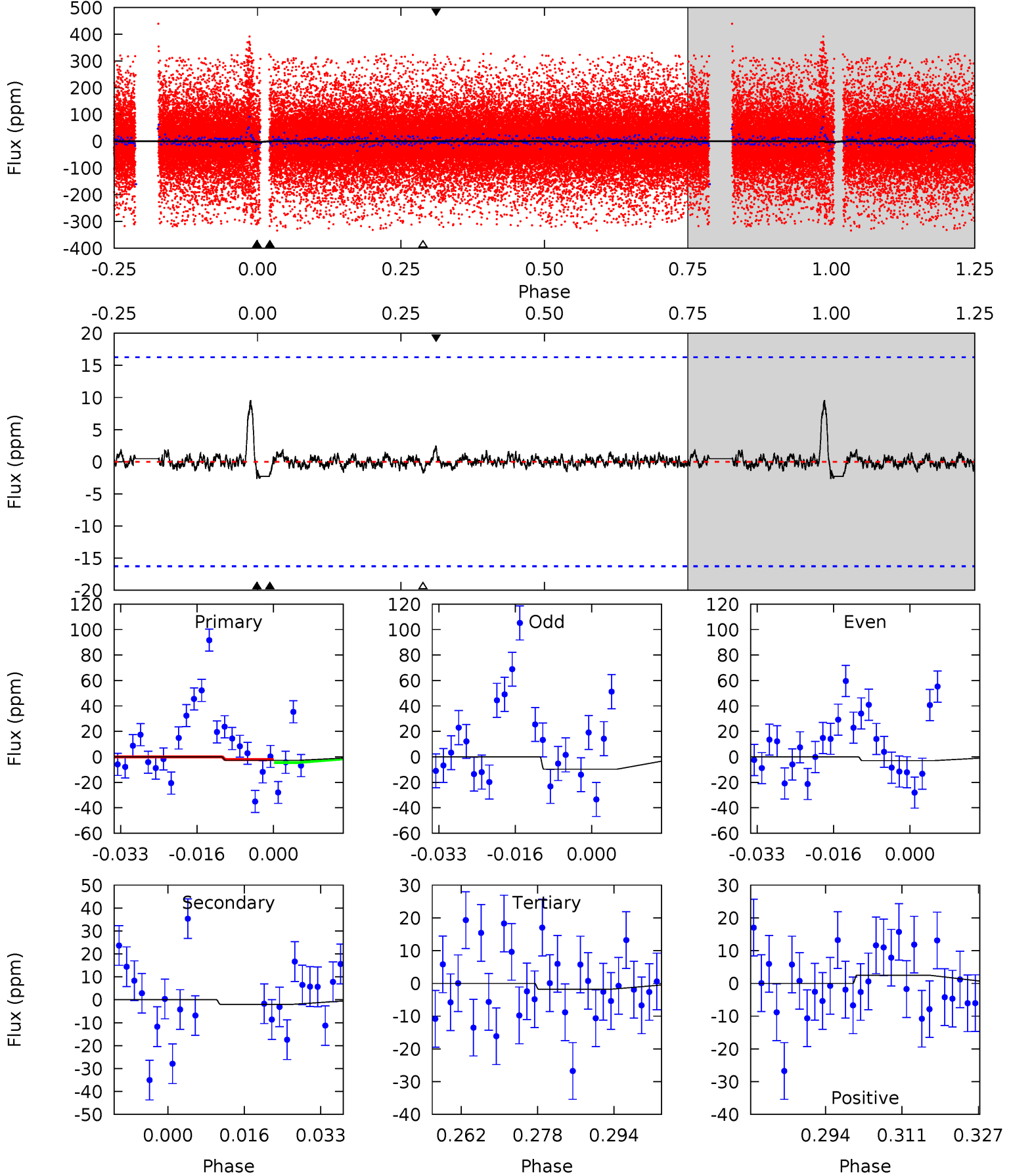
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007677005-06, $P = 38.060334$ Days, $E = 103.821290$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.82	0.60	0.54	0.75	4.93	2.40	0.19	0.28	0.06	0.07	-0.15	1.03	5.23	0.78	0.32



Stellar Parameters For KIC 007677005

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6894^{+164}_{-247}	$4.250^{+0.092}_{-0.138}$	$-0.200^{+0.250}_{-0.350}$	$1.419^{+0.330}_{-0.220}$	$1.317^{+0.150}_{-0.187}$	$0.649^{+0.326}_{-0.253}$
	+2%/-4%	+2%/-3%	+125%/-175%	+23%/-16%	+11%/-14%	+50%/-39%
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 007677005-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$14.15^{+12.48}_{-9.40}$	1030^{+58}_{-51}	4223^{+22219}_{-26430}	128^{+30886}_{-23299}
Alt.	-2 ± 3	$10.86^{+12.21}_{-7.71}$	1034^{+60}_{-54}	1583^{+932}_{-3577}	$0.352^{+4.439}_{-0.597}$

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

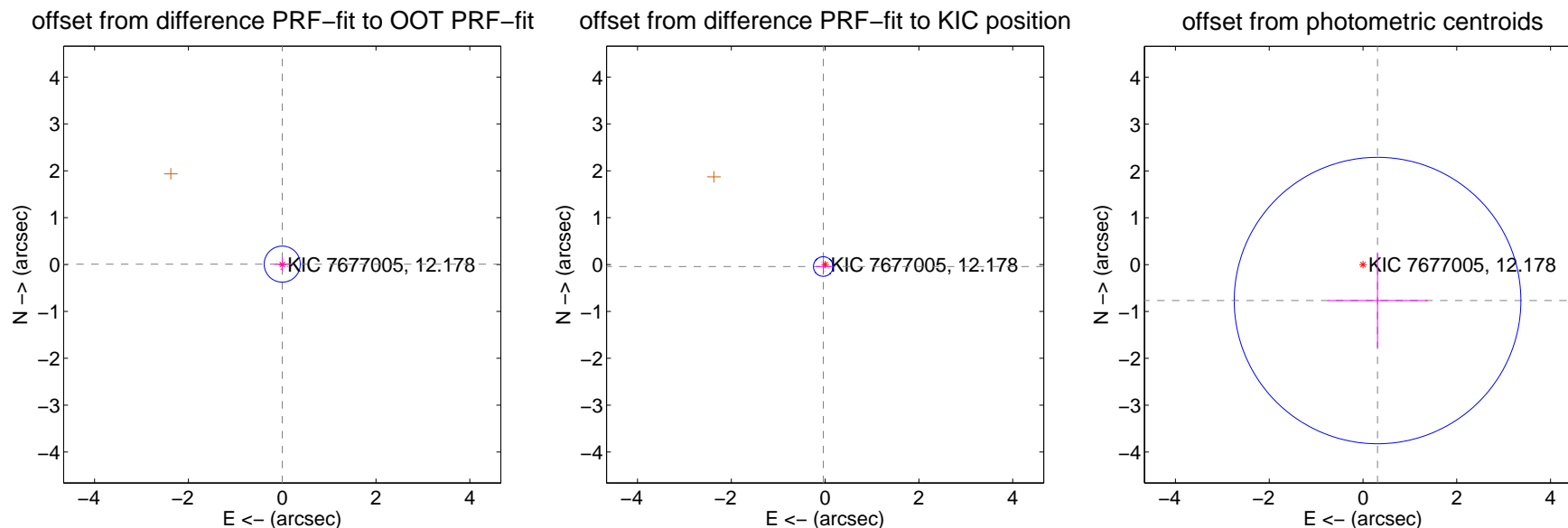
DV Centroid Data

Supplemental centroid analysis for 007677005-06. Kepler magnitude: 12.18. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

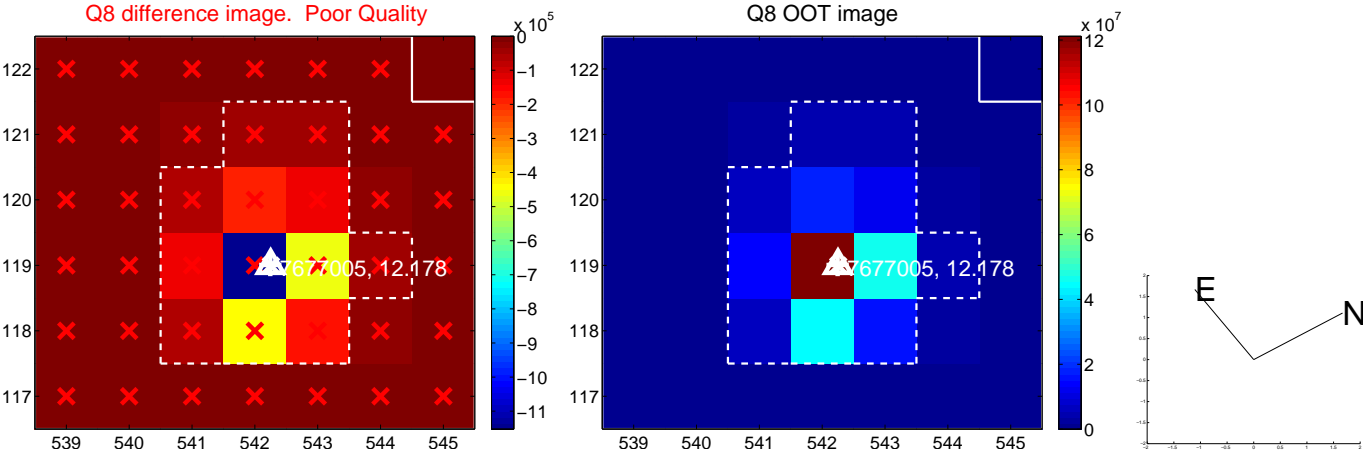
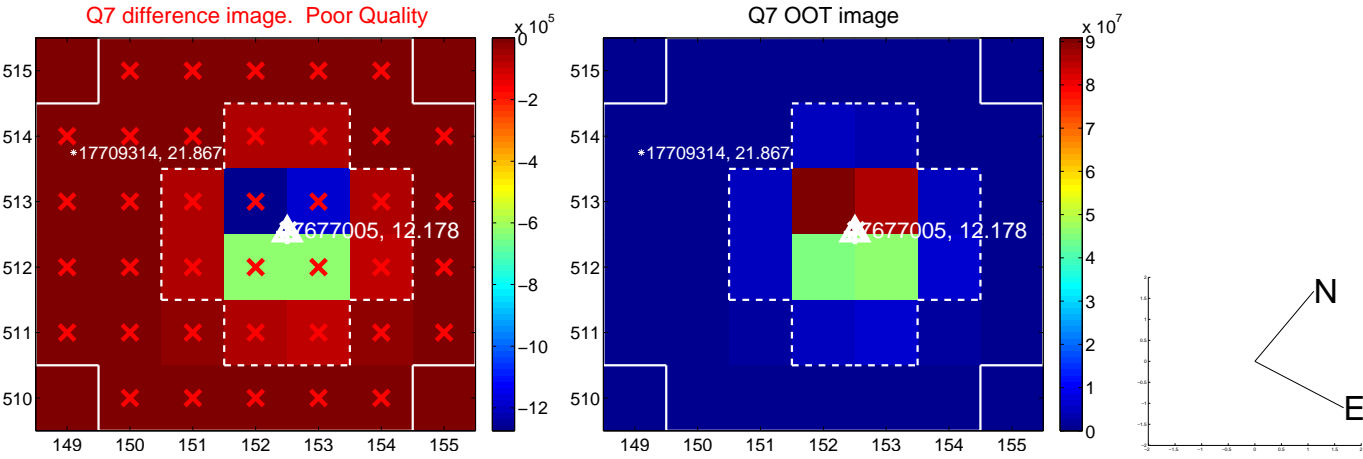
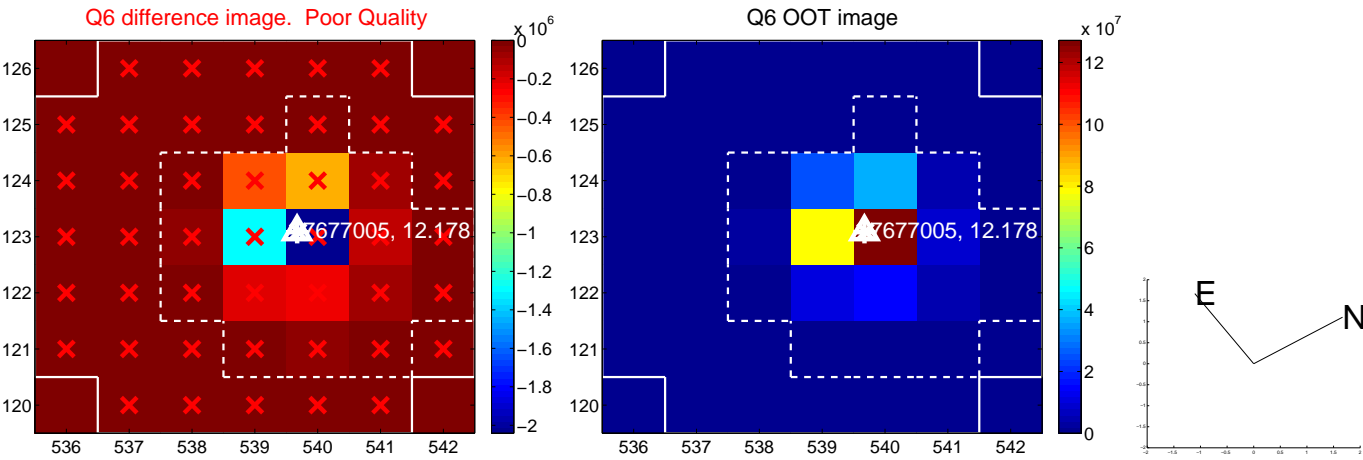
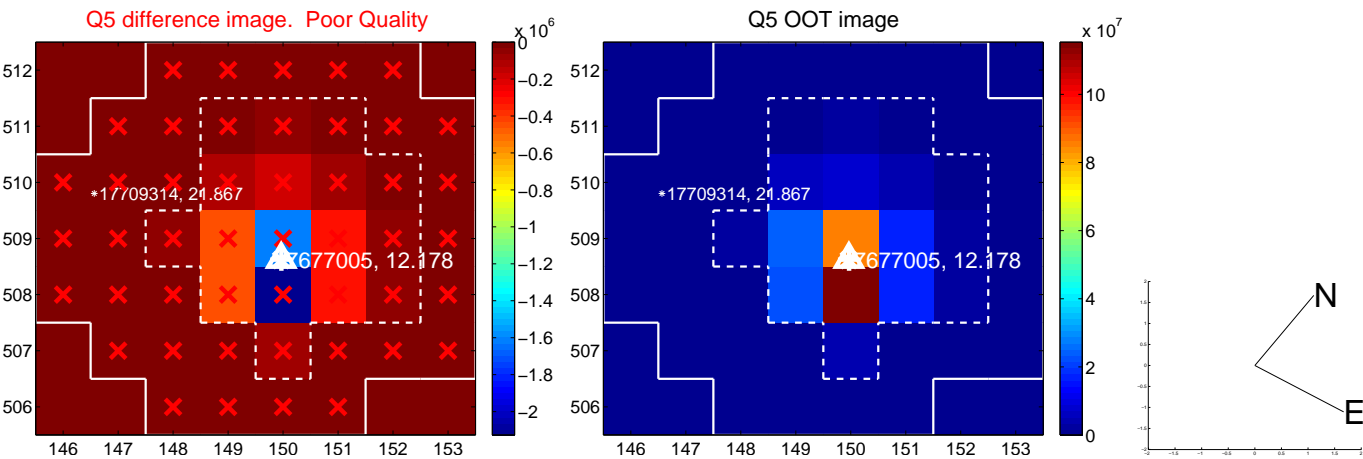
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.009 ± 0.128	0.07	-0.001 ± 0.170	0.009 ± 0.144
PRF-fit source offset from KIC position	0.058 ± 0.070	0.83	0.040 ± 0.165	-0.043 ± 0.140
photometric centroid source offset	0.83 ± 1.02	0.81	-0.31 ± 1.07	-0.77 ± 1.01

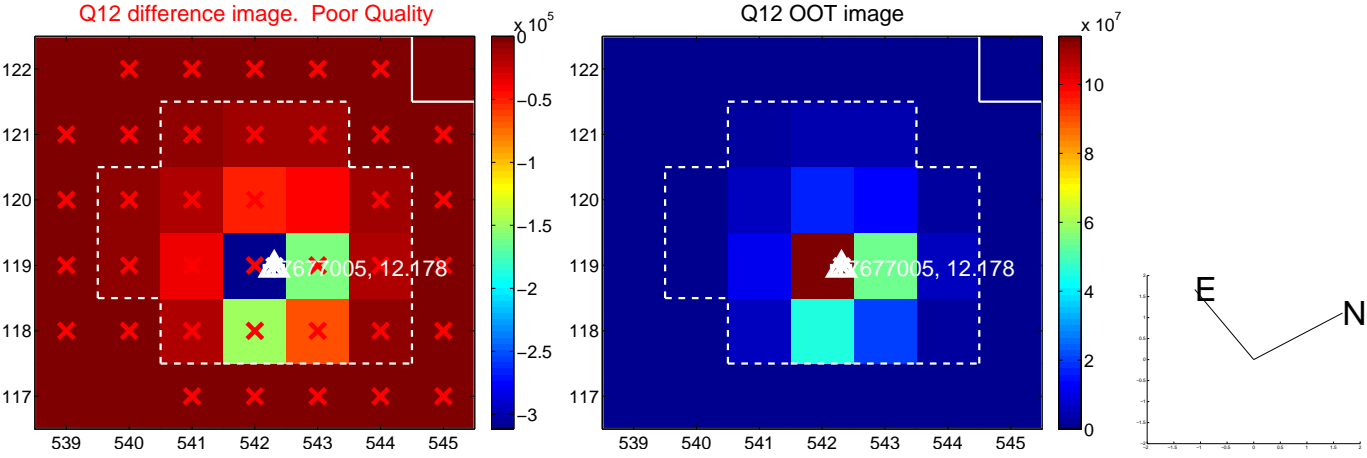
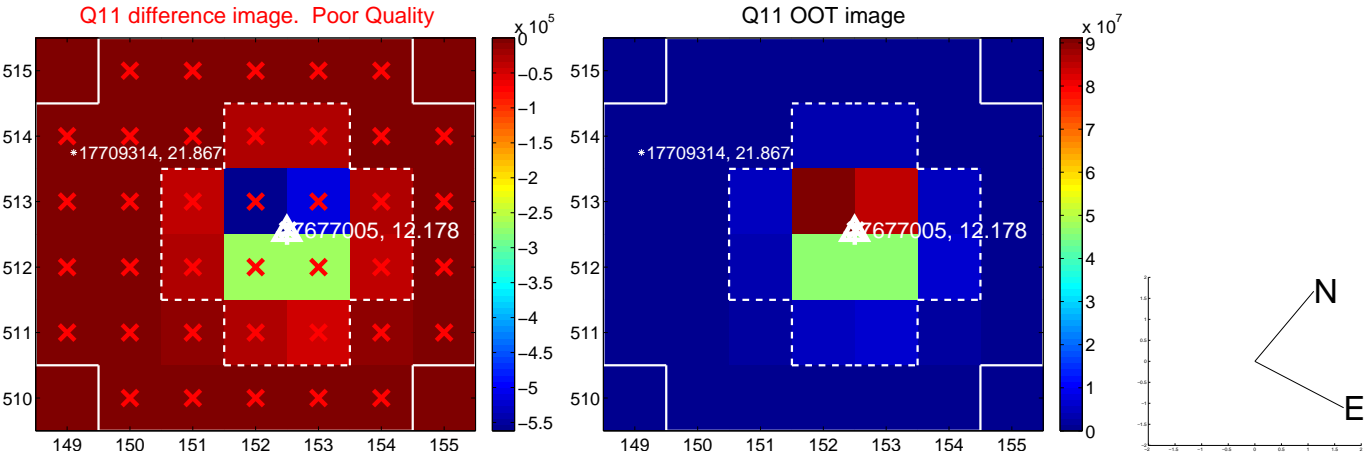
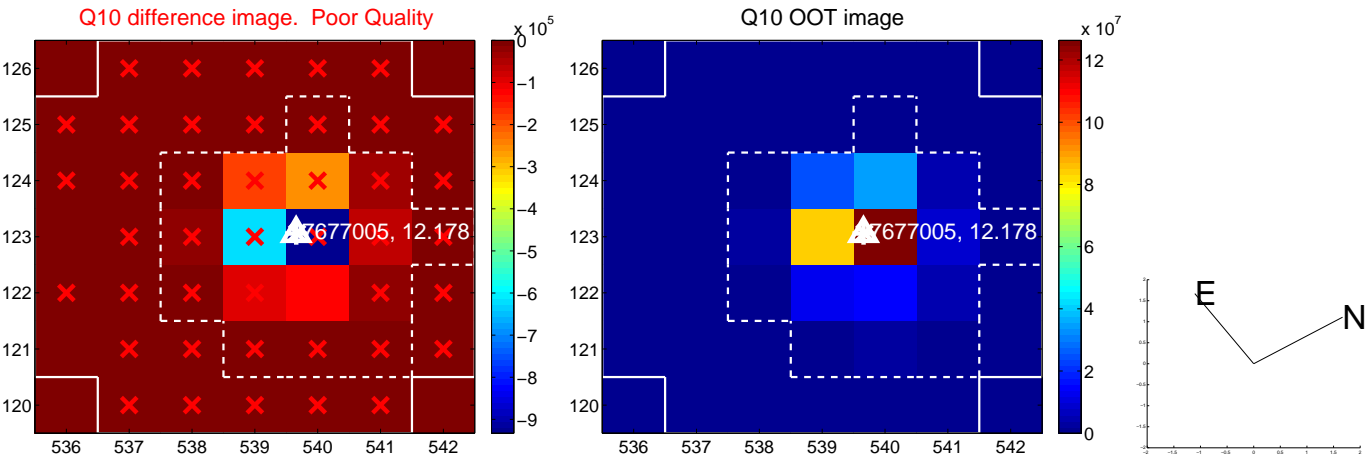
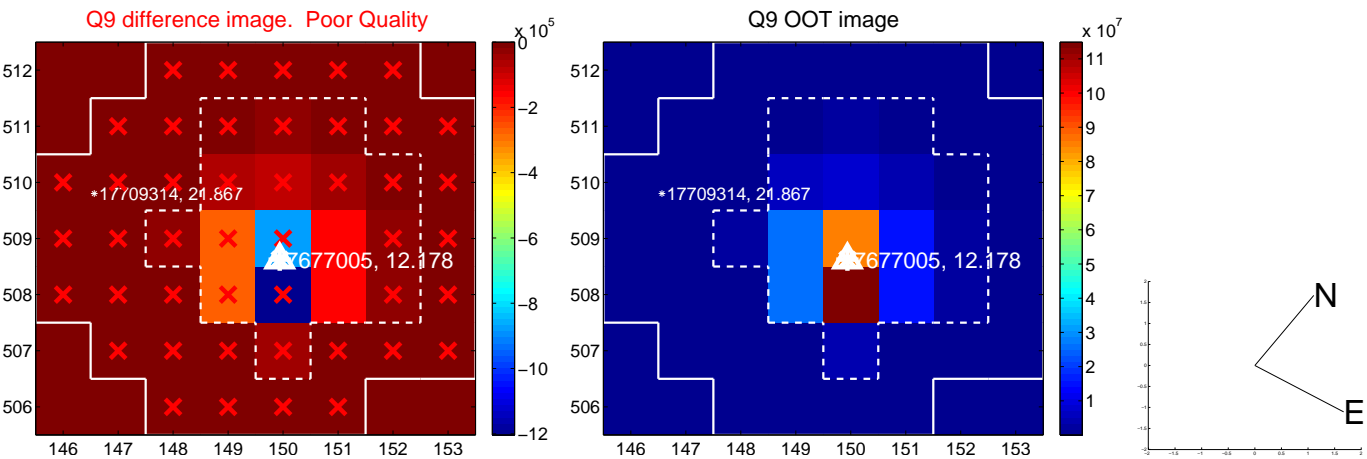


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

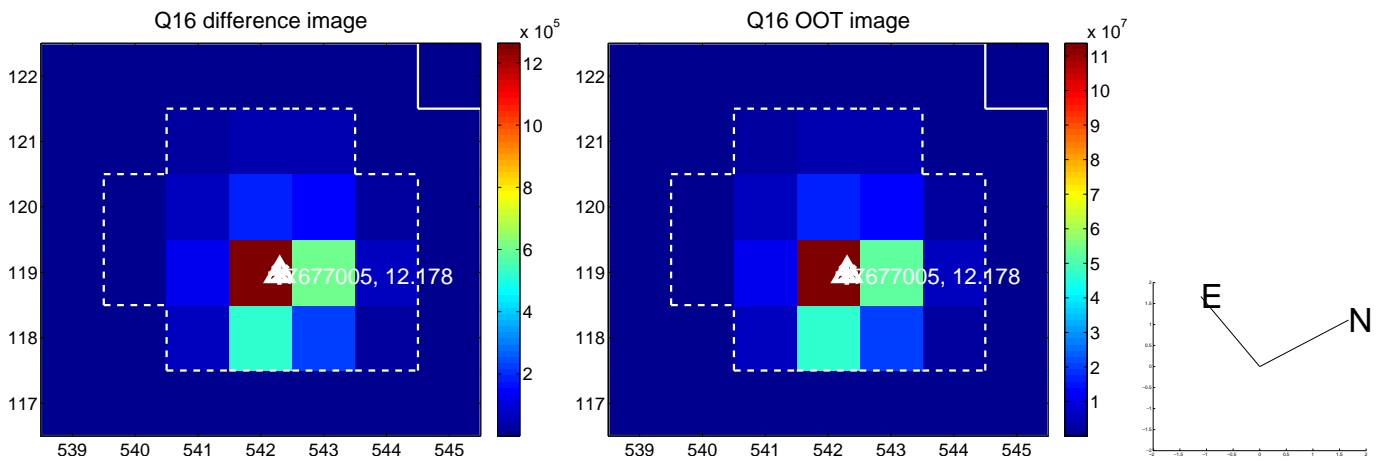
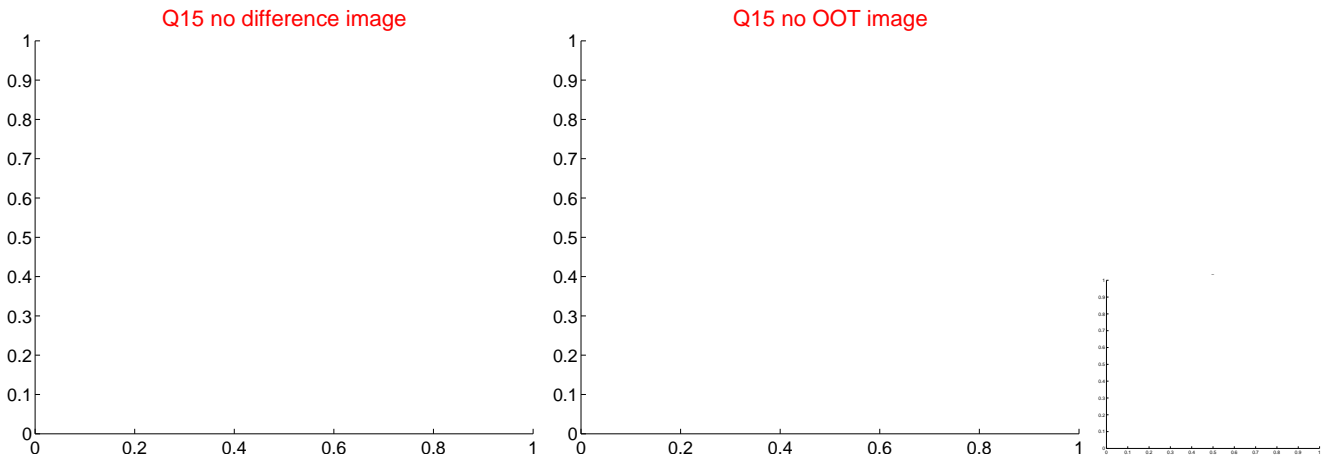
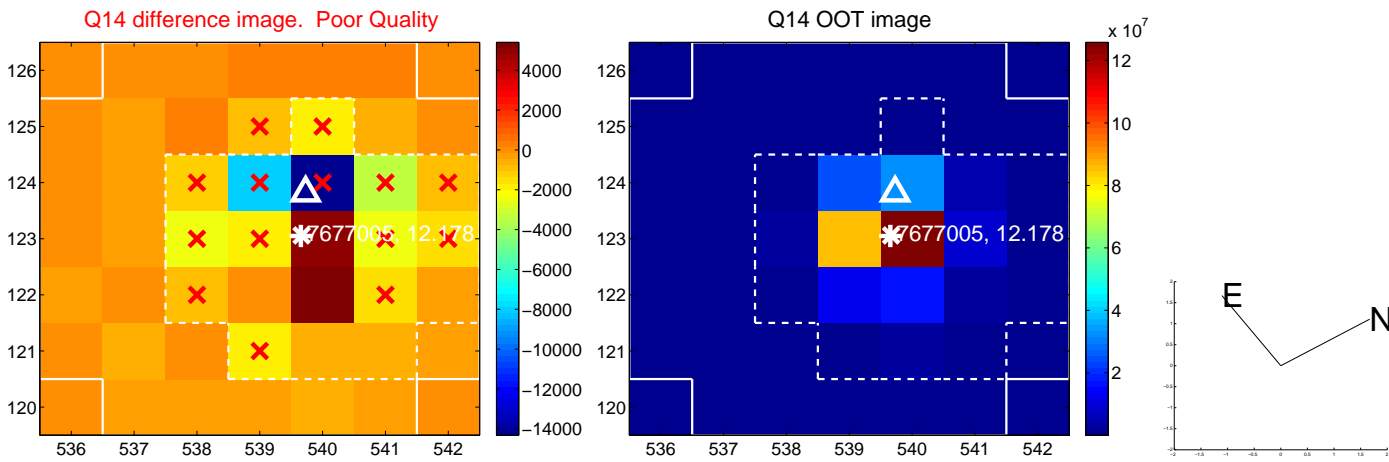
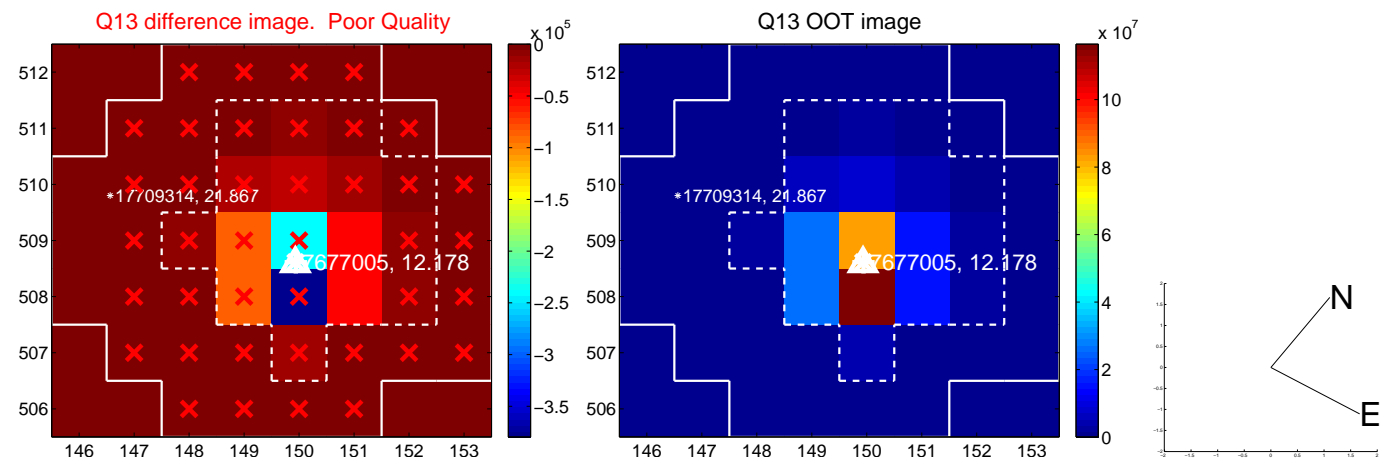
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



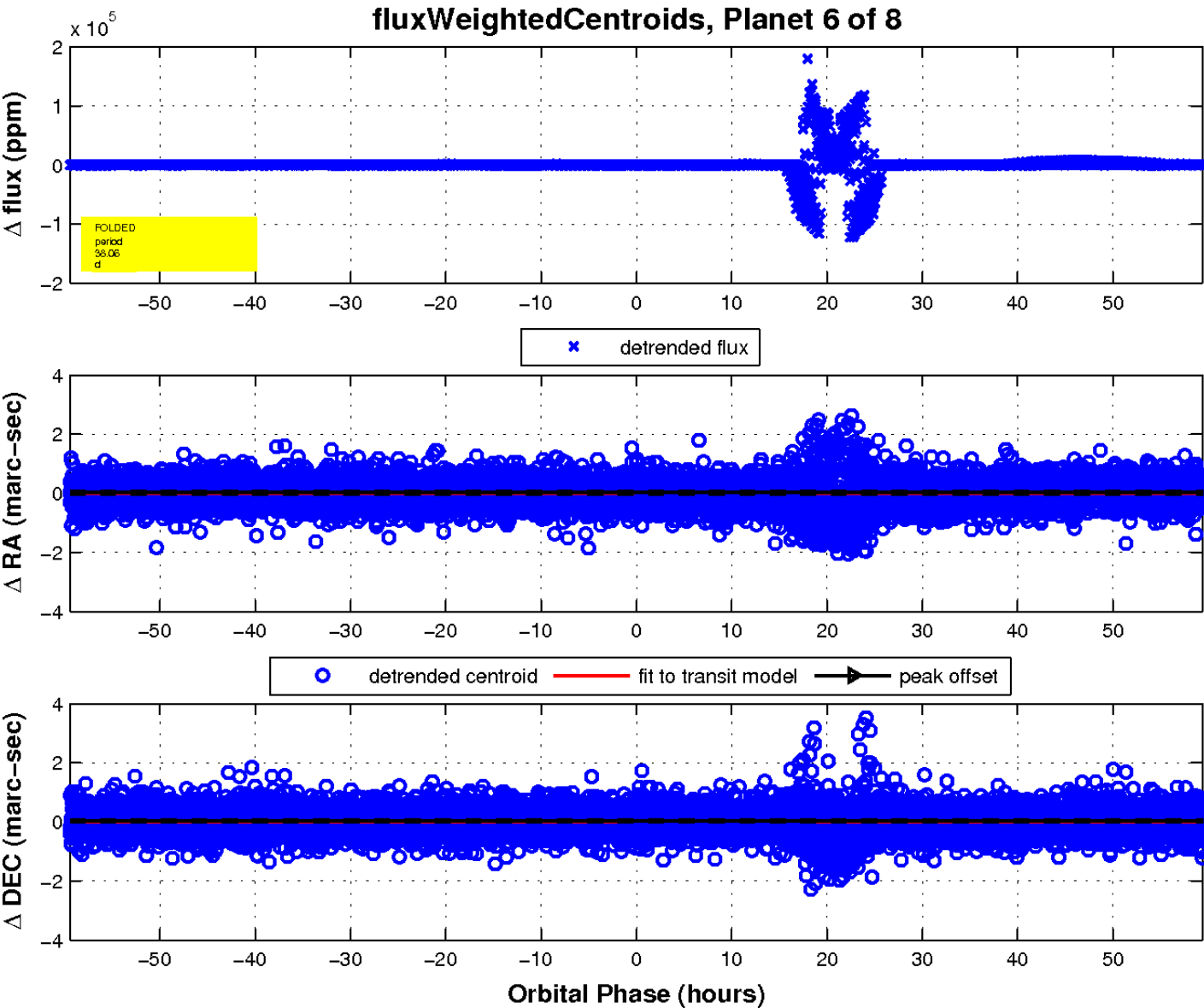
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

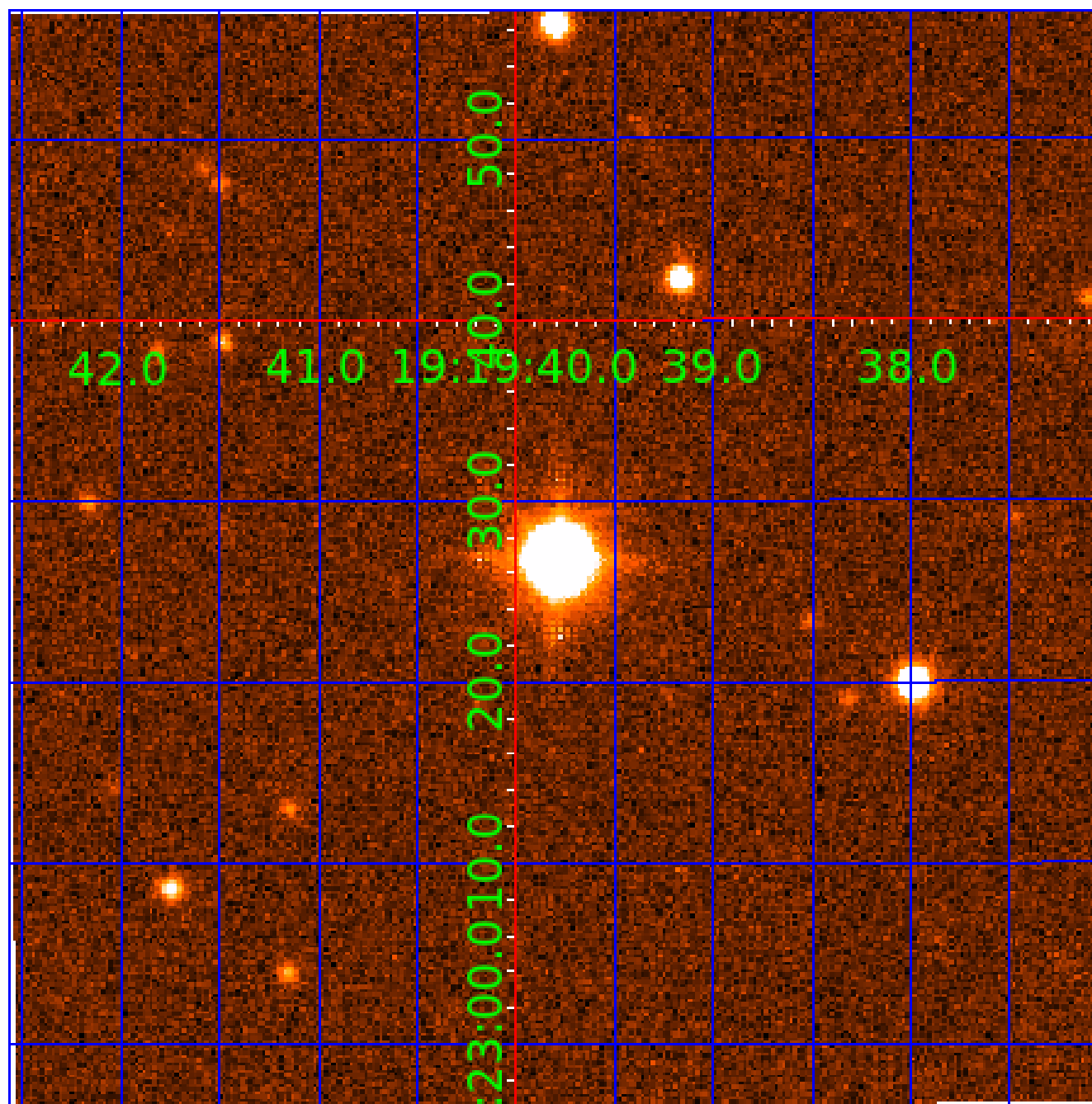


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007677005

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})
007677005-01	OBS	6903.01	38.057656	142.412298	313054.4	5.000	13456.1	-1.0	1.42	6894	46.18	69.53
007677005-02	OBS	No	38.058129	134.579595	177838.8	12.282	6569.6	4465.8	1.42	6894	82.28	69.53
007677005-03	OBS	No	190.275709	143.543340	7221.9	17.782	420.7	133.8	1.42	6894	21.33	8.13
007677005-04	OBS	No	301.720179	184.285303	862.0	13.059	362.3	10.3	1.42	6894	4.77	4.40
007677005-05	OBS	No	190.461260	255.719357	10034.8	2.500	360.9	-1.0	1.42	6894	14.41	8.12
007677005-06	OBS	No	38.060334	141.291858	2277.7	10.500	273.9	-1.0	1.42	6894	6.84	69.52
007677005-07	OBS	No	38.060474	141.954746	16601.4	1.500	335.3	-1.0	1.42	6894	18.55	69.52
007677005-08	OBS	No	190.300020	257.088307	6355.5	3.000	275.5	-1.0	1.42	6894	11.44	8.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007677005-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVN_ALT—HAS_SEC_TCE—CENT_NOFITS
007677005-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
007677005-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT— SAME_NTL_PERIOD—CENT_FEW_DIFFS—HALO_GHOST
007677005-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007677005-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
007677005-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
007677005-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—RESIDUAL_TCE—CENT_NOFITS
007677005-08	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—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 007677005-07

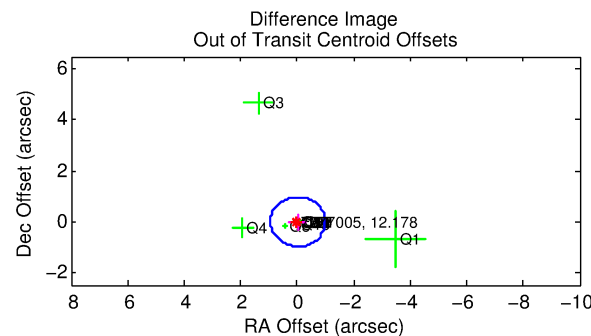
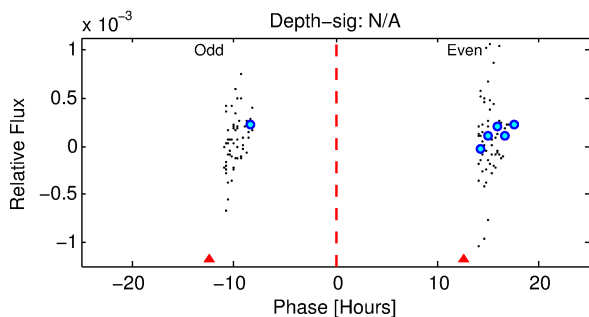
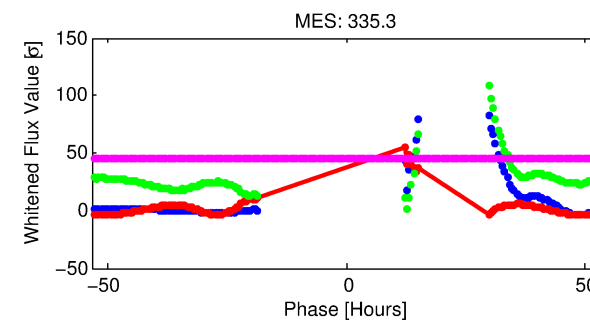
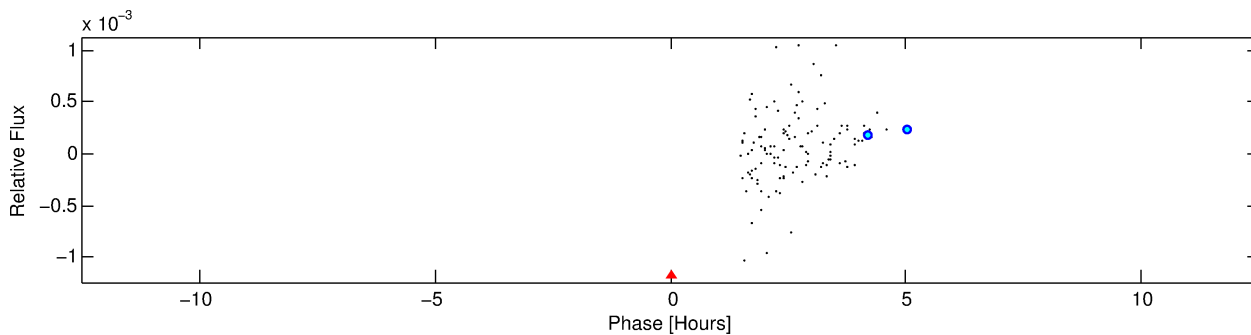
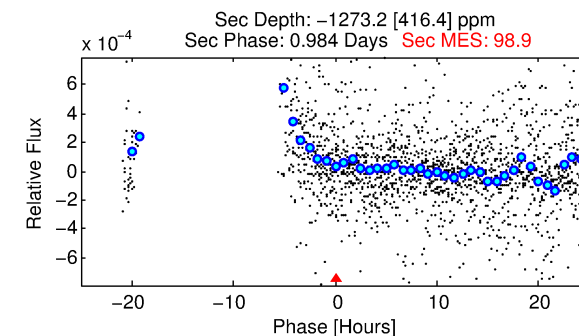
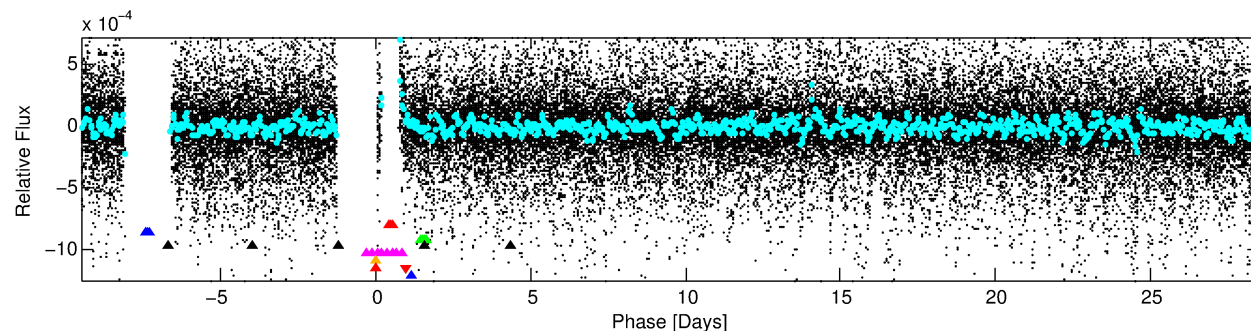
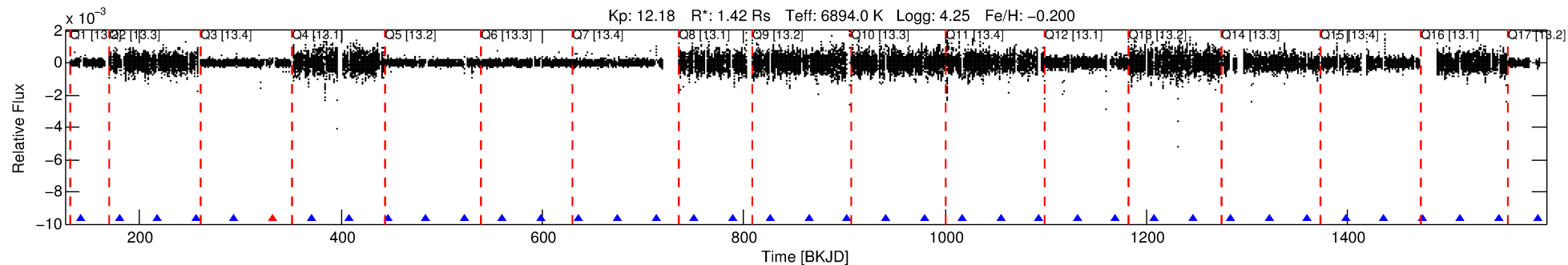
No Significant Match Found

DV One-Page Summary

KIC: 7677005 Candidate: 7 of 8 Period: 38.060 d

KOI: K06903 Corr: No Ephemeris Match

Kp: 12.18 R*: 1.42 Rs Teff: 6894.0 K Logg: 4.25 Fe/H: -0.200



TPS TCE Results:

Period = 38.06047 d

Epoch = 141.9547 BKJD

DV fit results are unavailable

DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]

LongPeriod-sig: 100.0% [204.71σ]

ModelChiSquare2-sig: N/A

ModelChiSquareGoF-sig: N/A

Bootstrap-pfa: N/A

RollingBand-fgt: 0.97 [28/29]

GhostDiagnostic-chr: 0.7674

Centroid-sig: 6.6%

Centroid-so: 1.033 arcsec [1.51σ]

OotOffset-rm: 0.022 arcsec [0.07σ]

KicOffset-rm: 0.057 arcsec [0.21σ]

OotOffset-st: 3/4/4/5 [16]

KicOffset-st: 3/4/4/5 [16]

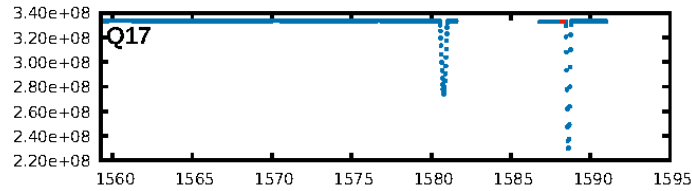
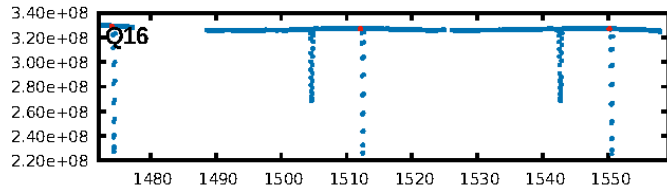
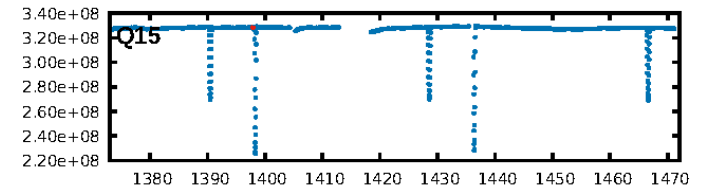
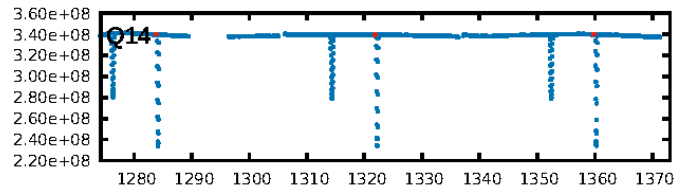
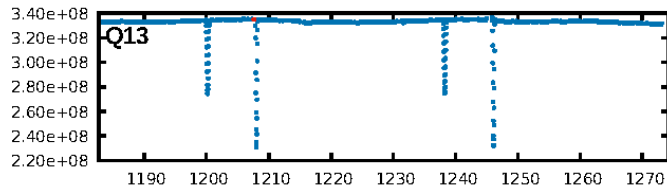
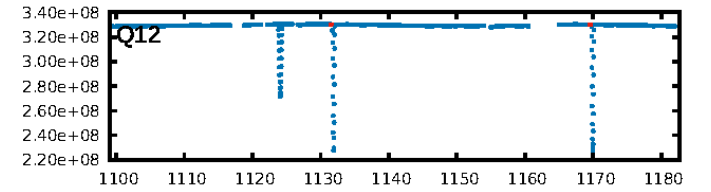
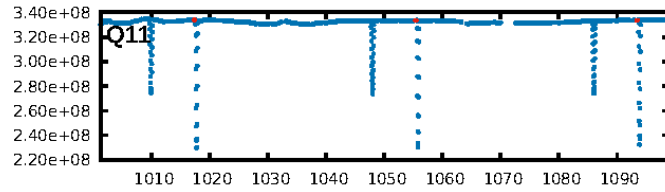
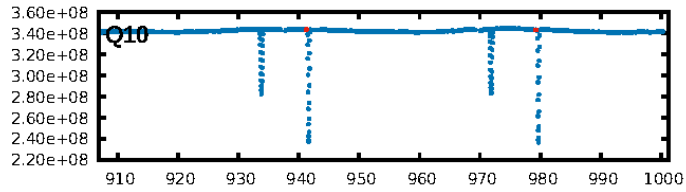
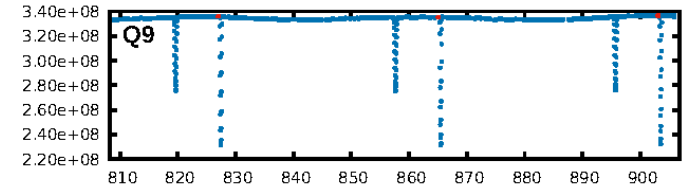
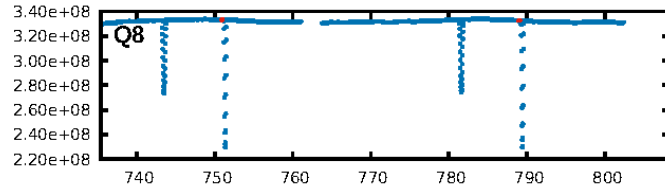
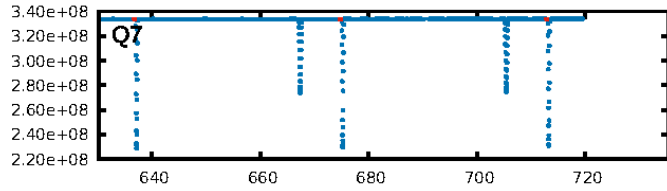
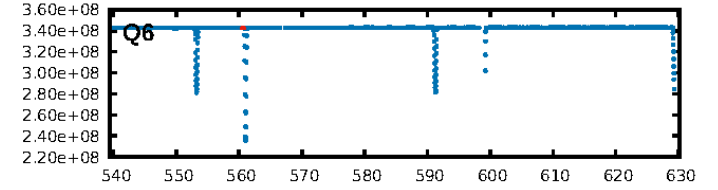
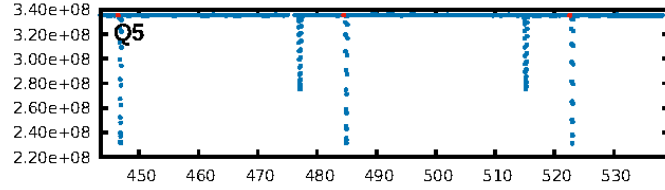
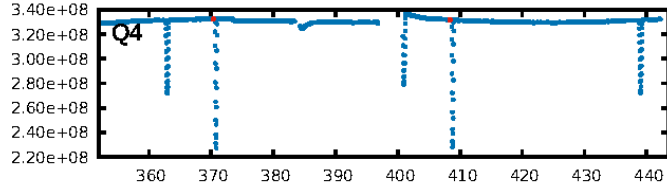
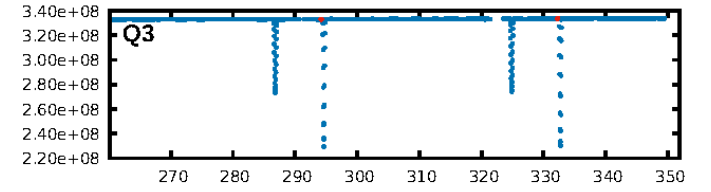
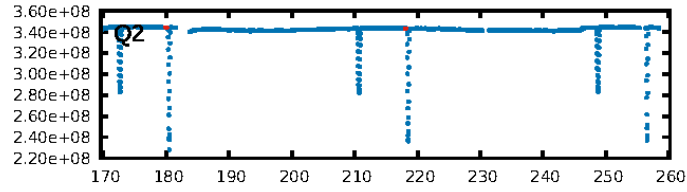
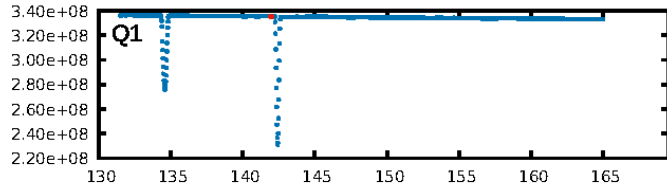
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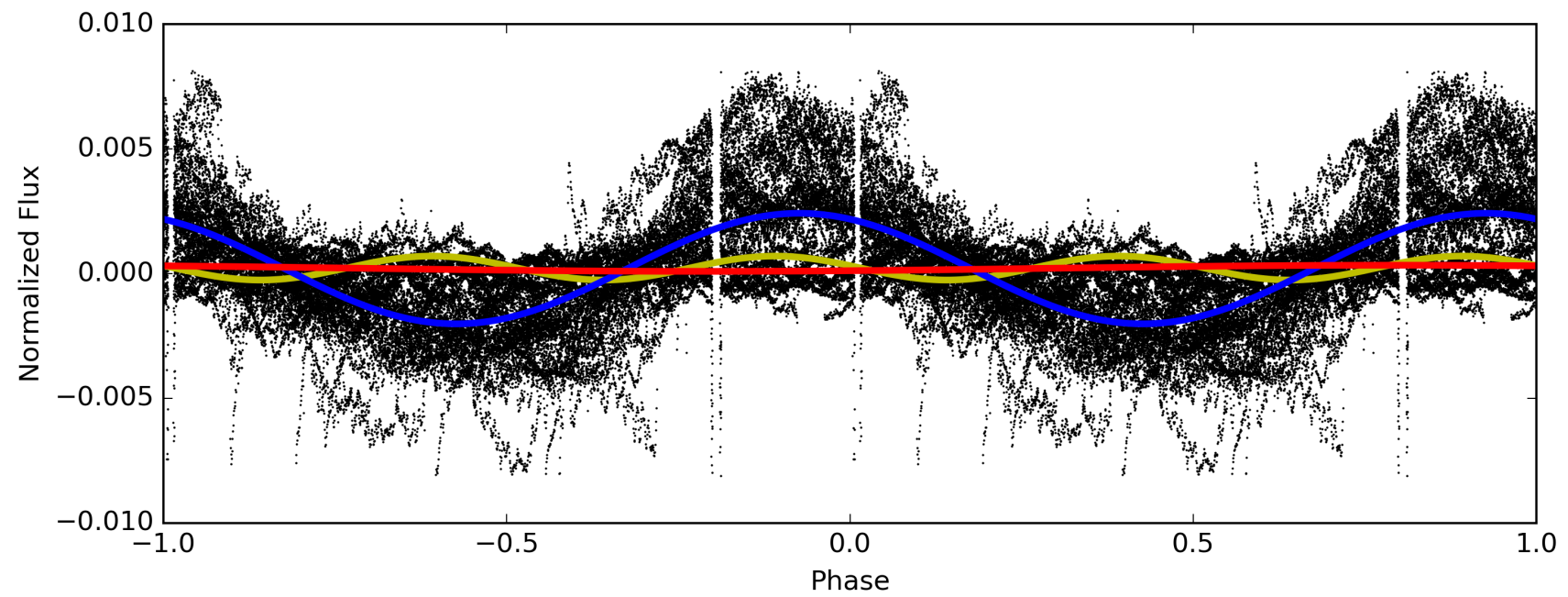
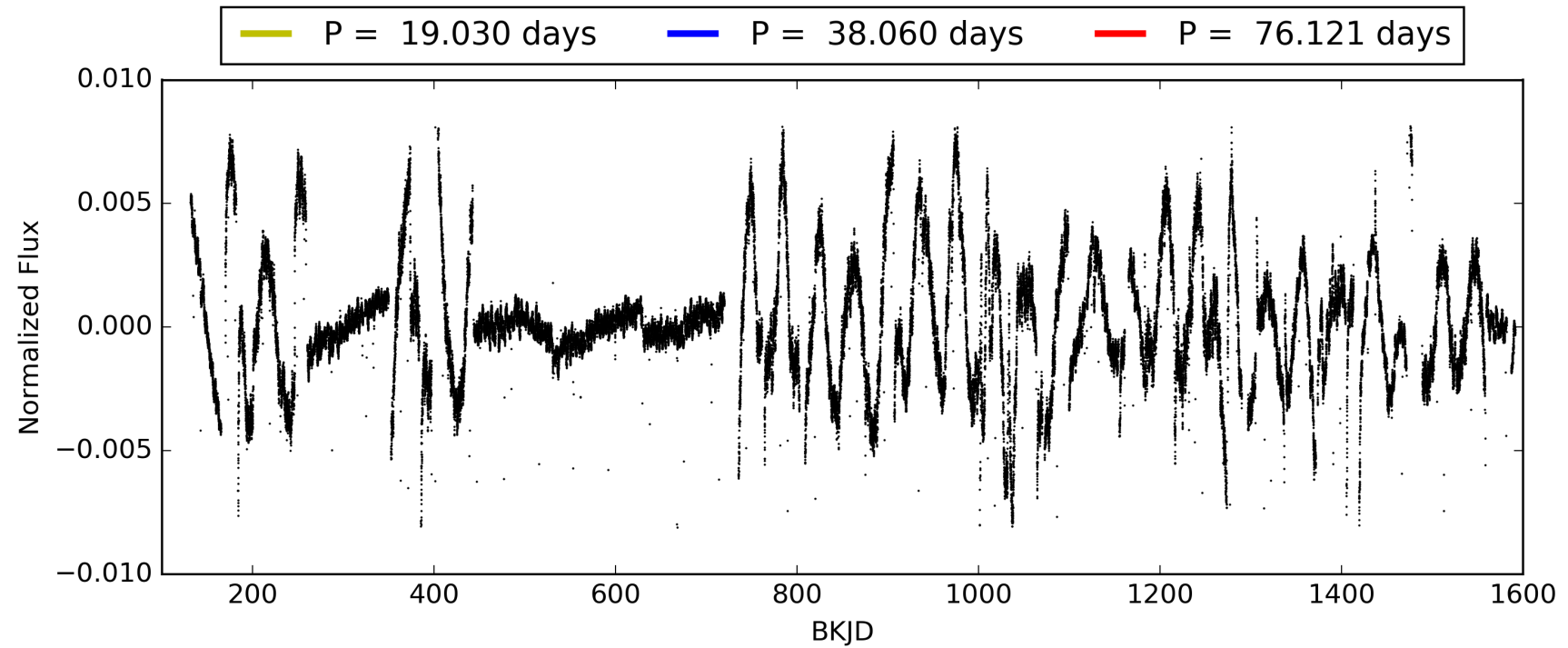
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:10:24 Z

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

TCE 007677005-07, PDC Light Curves

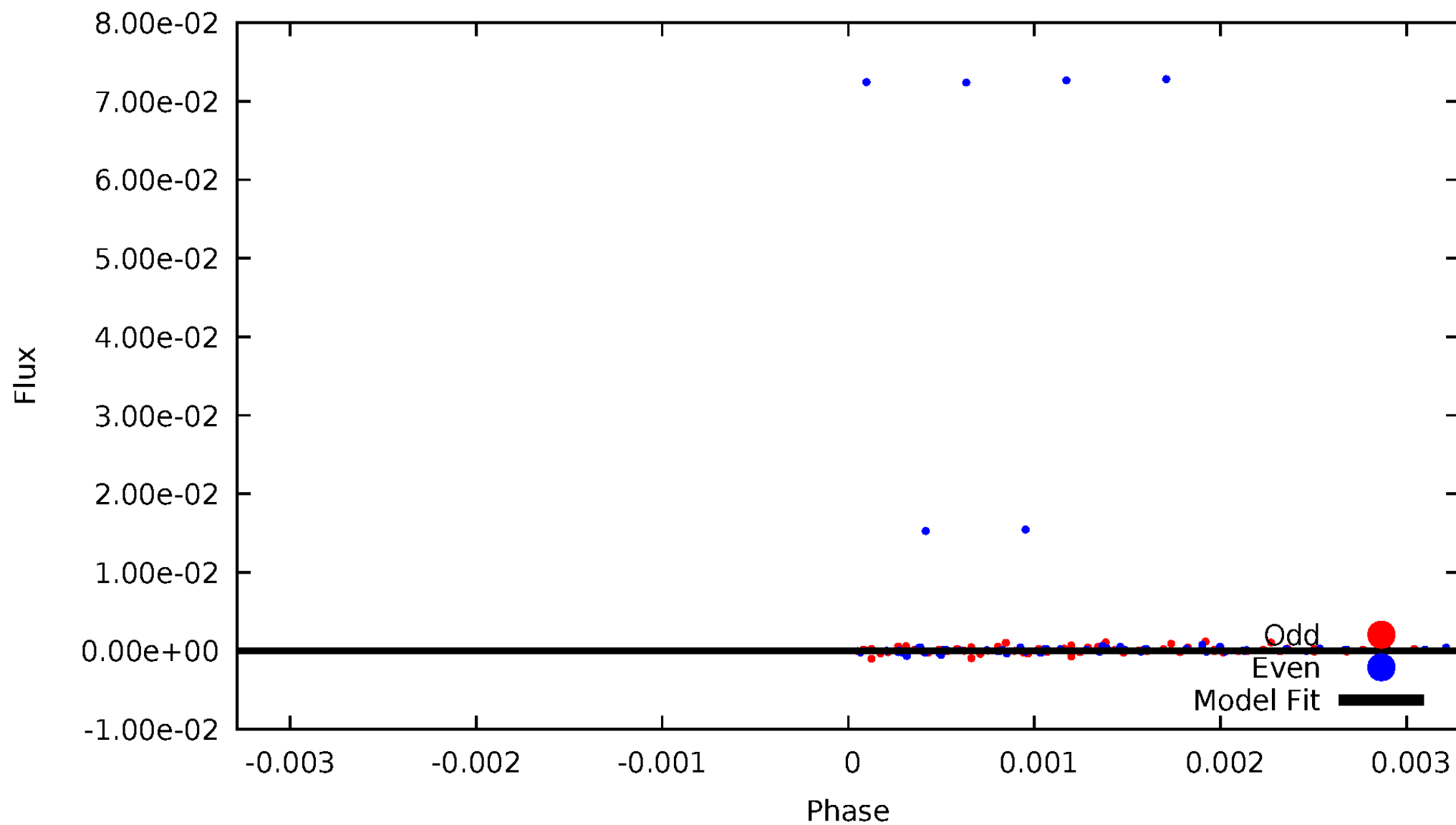


TCE 007677005-07



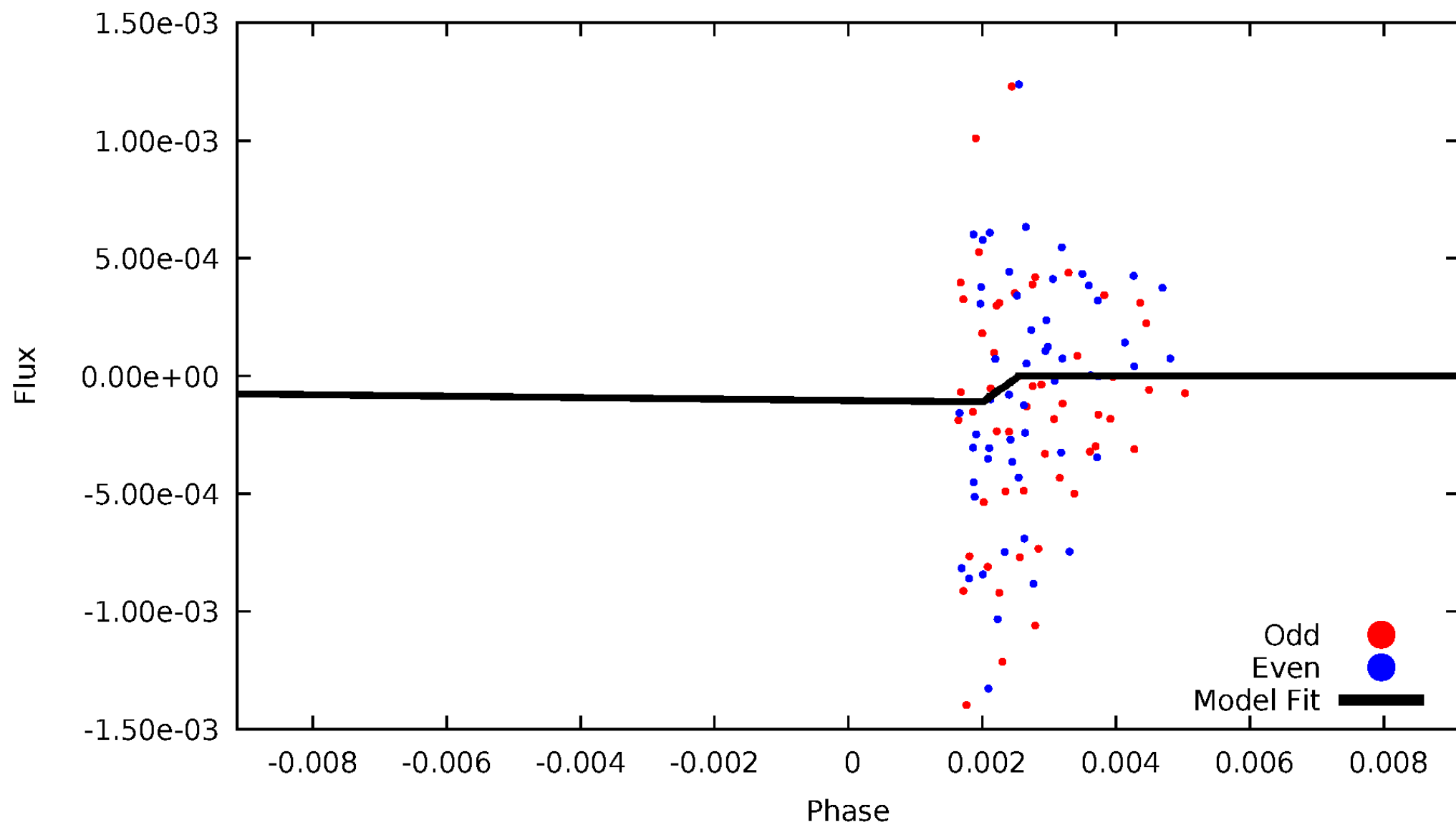
DV Odd/Even

TCE 007677005-07

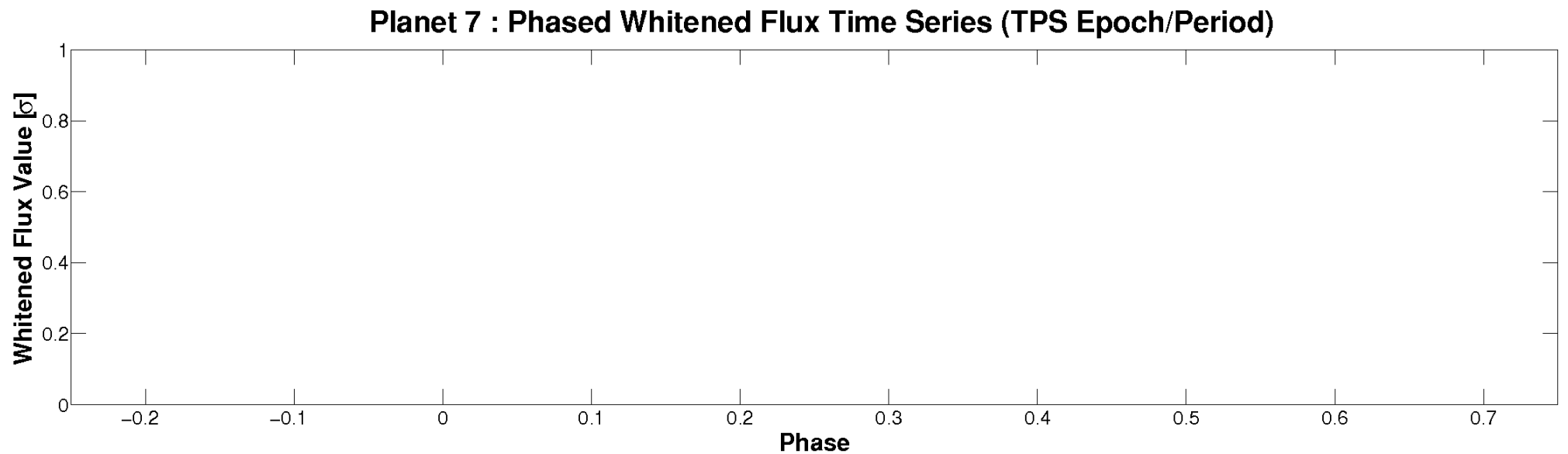
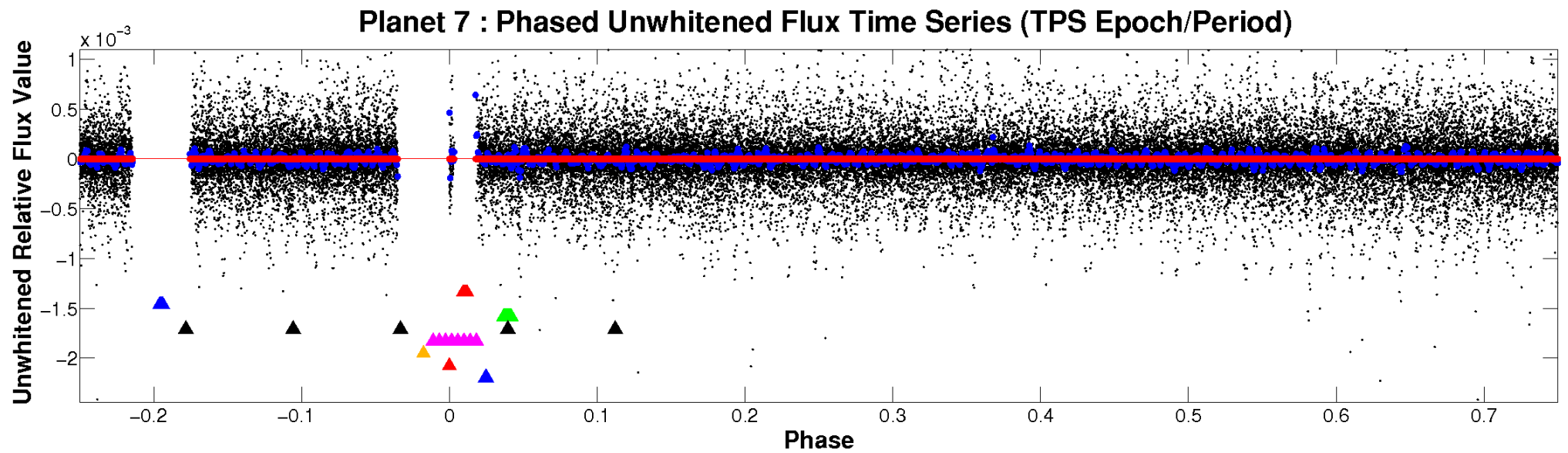


ALT Odd/Even

TCE 007677005-07

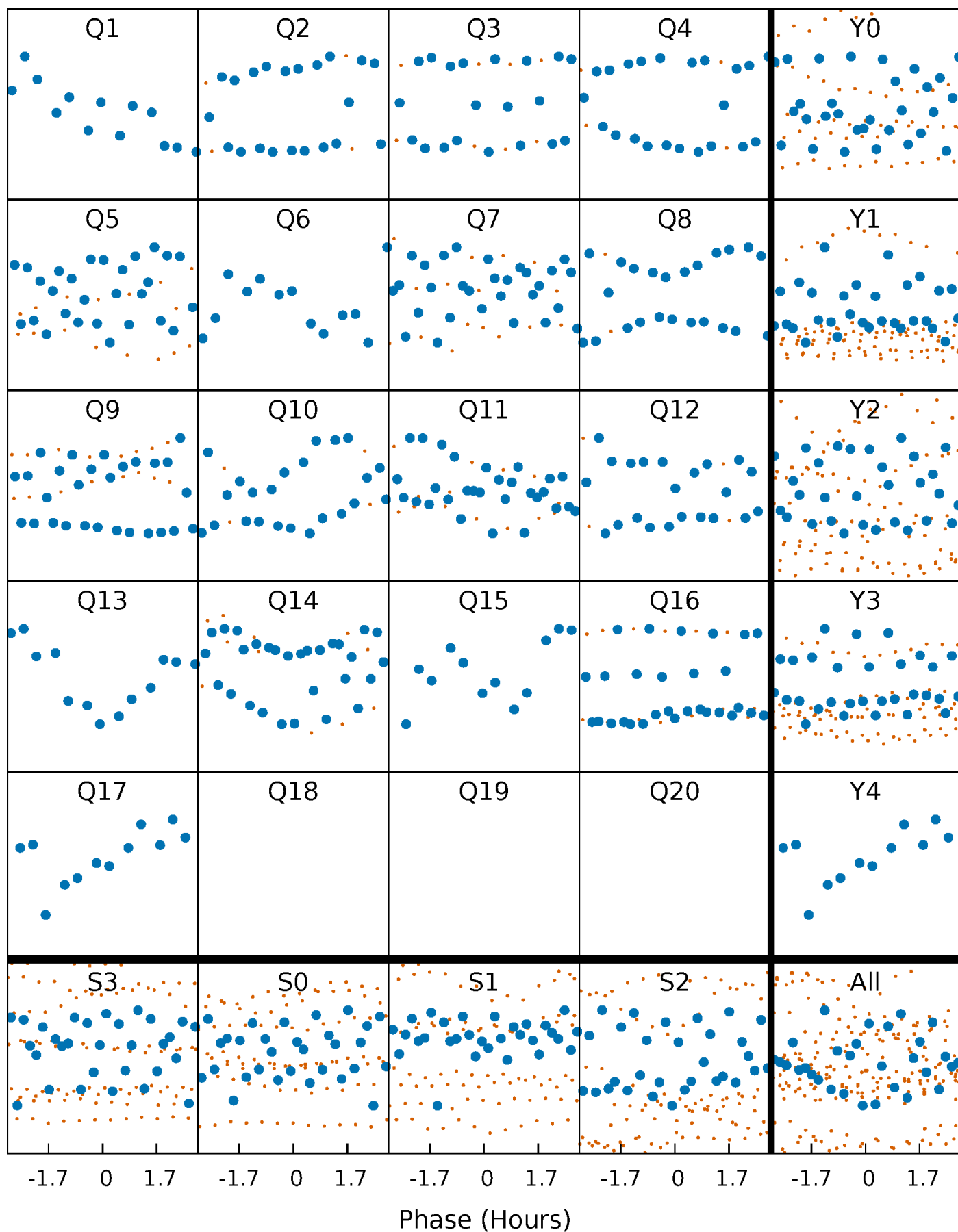


Non-Whitened Vs. Whitened Light Curve



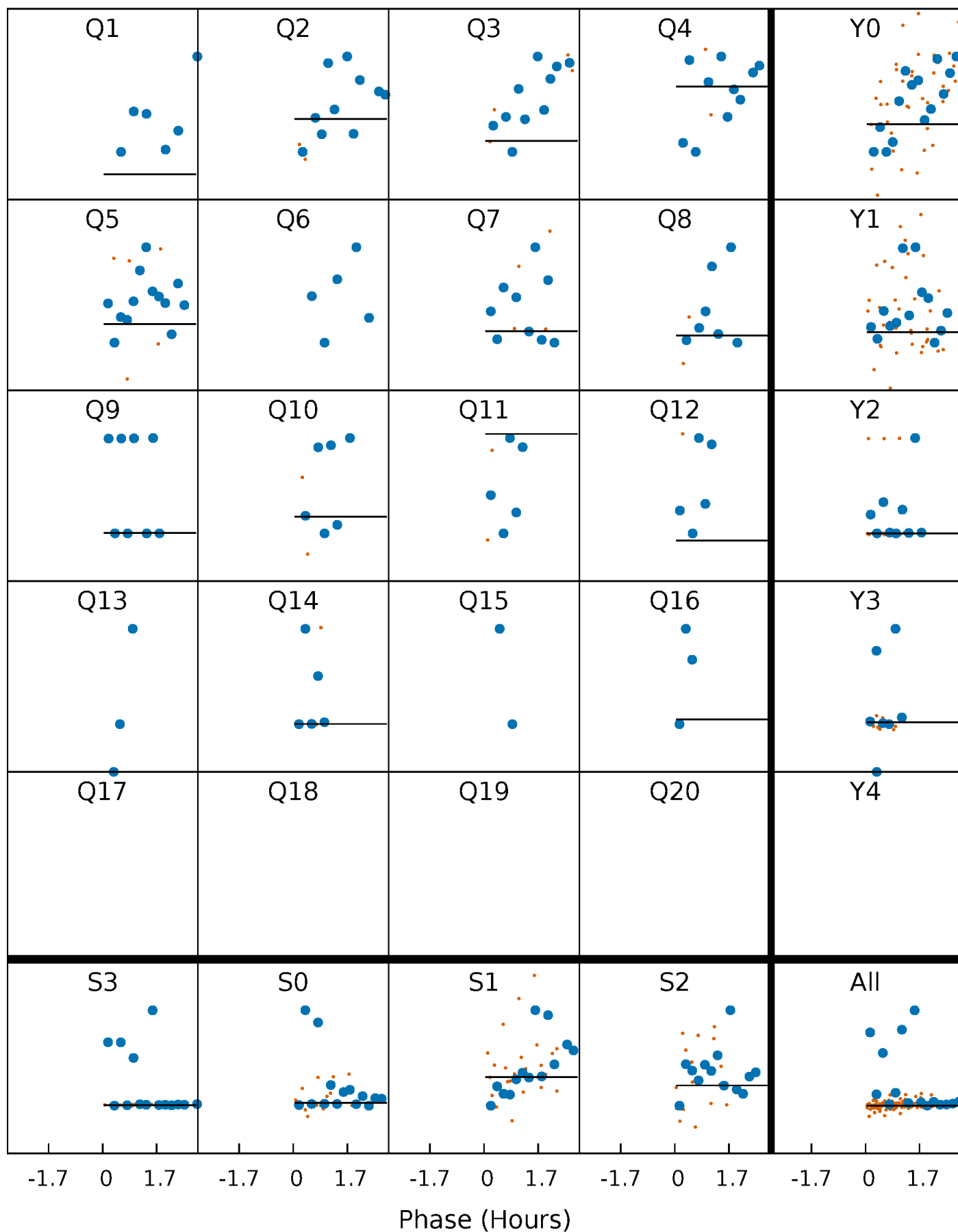
PDC Quarter-Phased Transit Curves

TCE 007677005-07 $P = 38.060474$ Days $T_0 = 141.954746$ (BKJD)



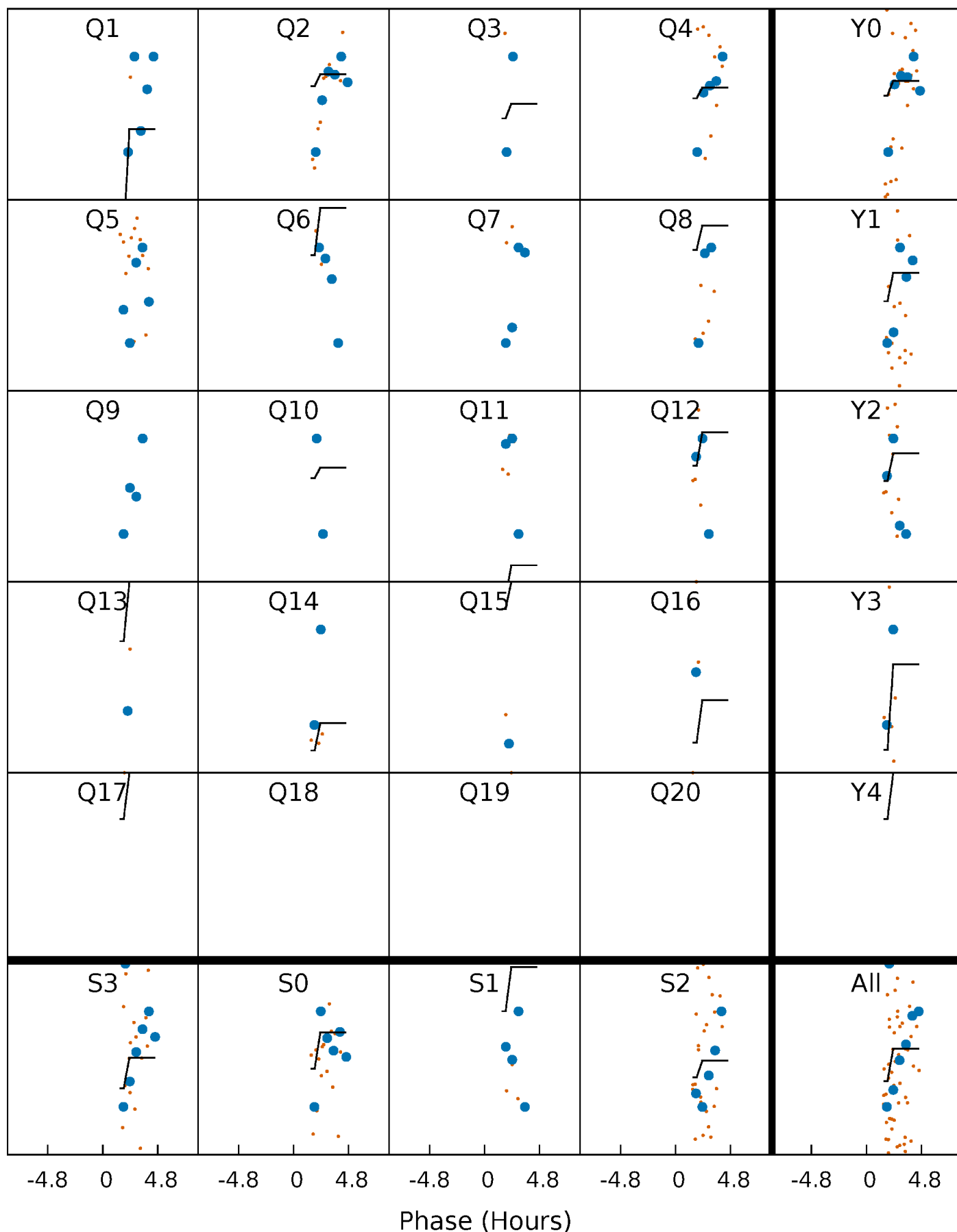
DV Quarter-Phased Transit Curves

TCE 007677005-07 $P = 38.060474$ Days $T_0 = 141.954746$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

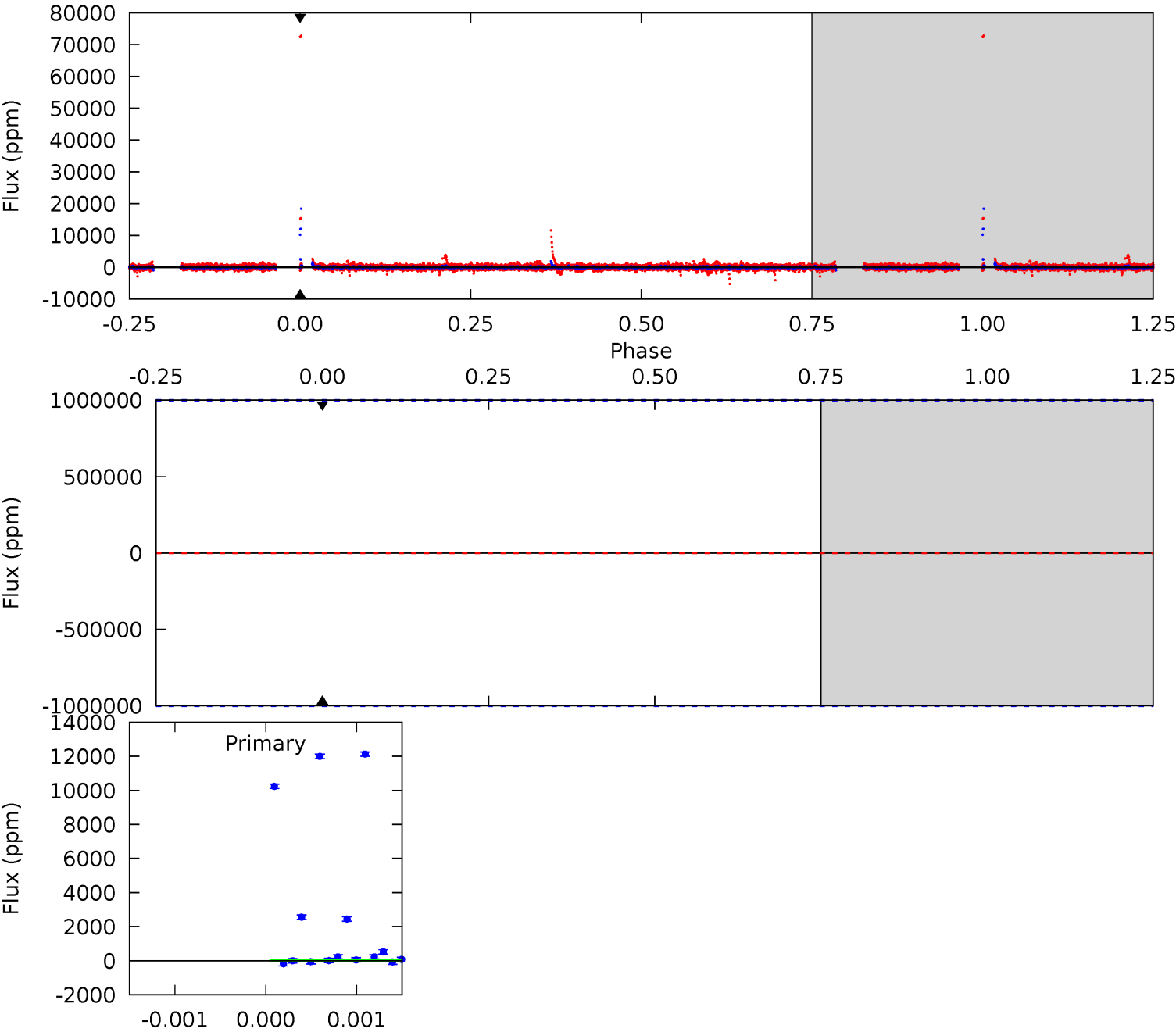
TCE 007677005-07 P= 38.060474 Days $T_0=141.894049$ (BKJD)



DV Model-Shift Uniqueness Test

007677005-07, P = 38.060474 Days, E = 103.894272 Days

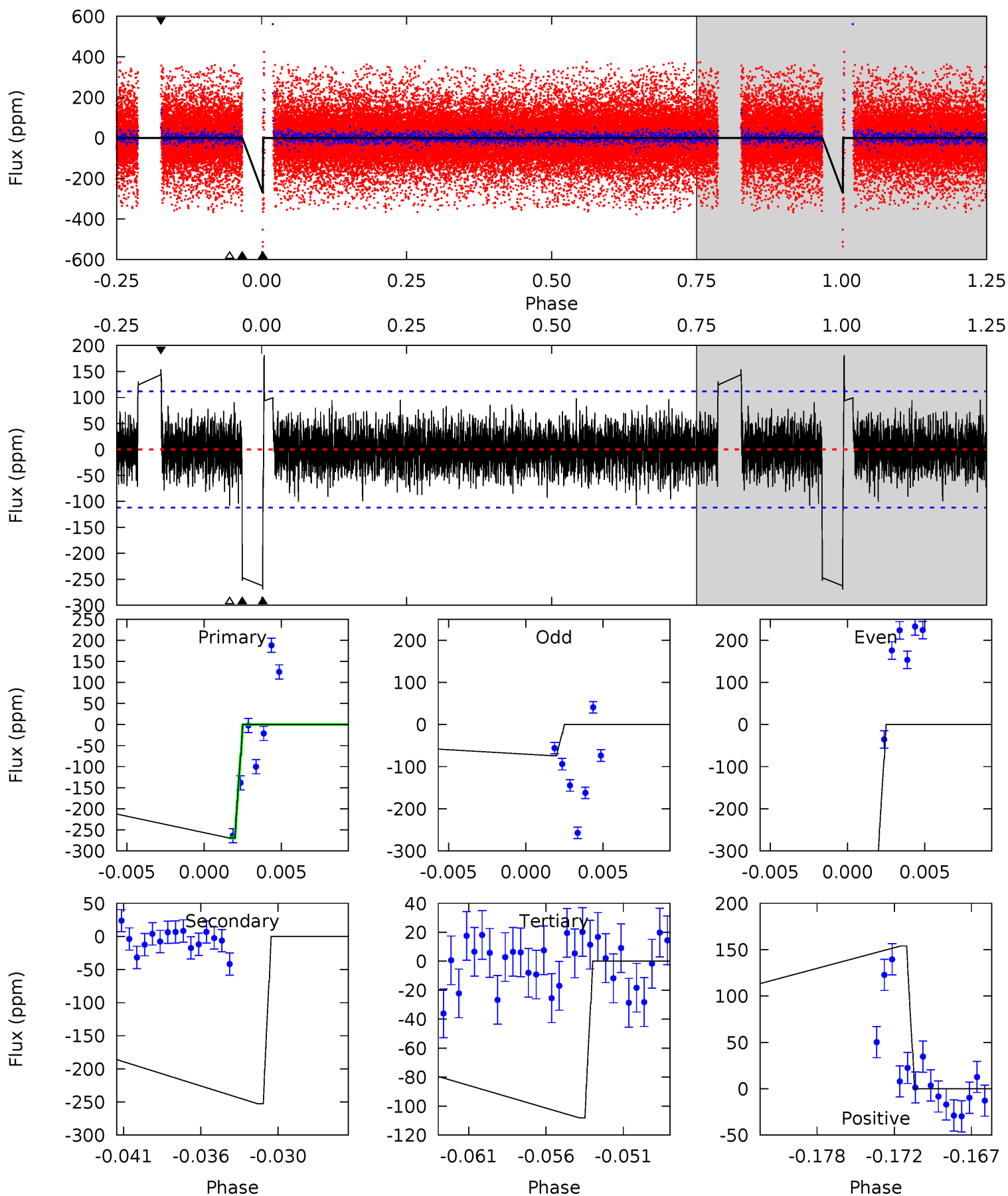
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007677005-07, $P = 38.060474$ Days, $E = 103.833575$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	11.6	4.98	7.09	5.15	2.80	1.22	7.42	5.31	6.66	4.54	5.25	1.13	0.40	0



Stellar Parameters For KIC 007677005

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6894^{+164}_{-247}	$4.250^{+0.092}_{-0.138}$	$-0.200^{+0.250}_{-0.350}$	$1.419^{+0.330}_{-0.220}$	$1.317^{+0.150}_{-0.187}$	$0.649^{+0.326}_{-0.253}$
	+2%/-4%	+2%/-3%	+125%/-175%	+23%/-16%	+11%/-14%	+50%/-39%
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 007677005-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$20.29^{+15.13}_{-12.78}$	1035^{+56}_{-54}	3826^{+12392}_{-19676}	90^{+12677}_{-12214}
Alt.	-253 ± 22	$10.71^{+12.47}_{-7.39}$	1033^{+58}_{-51}	3728^{+2197}_{-791}	71^{+692}_{-56}

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 $A_{obs} \gg 1.0$

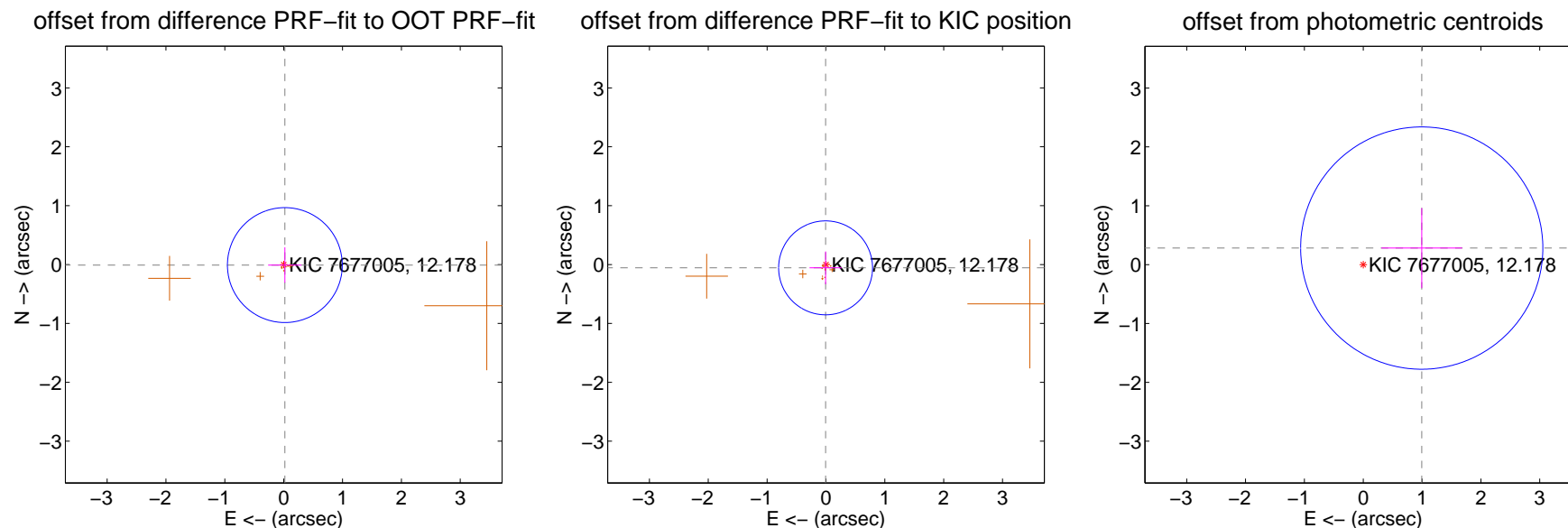
DV Centroid Data

Supplemental centroid analysis for 007677005-07. Kepler magnitude: 12.18. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

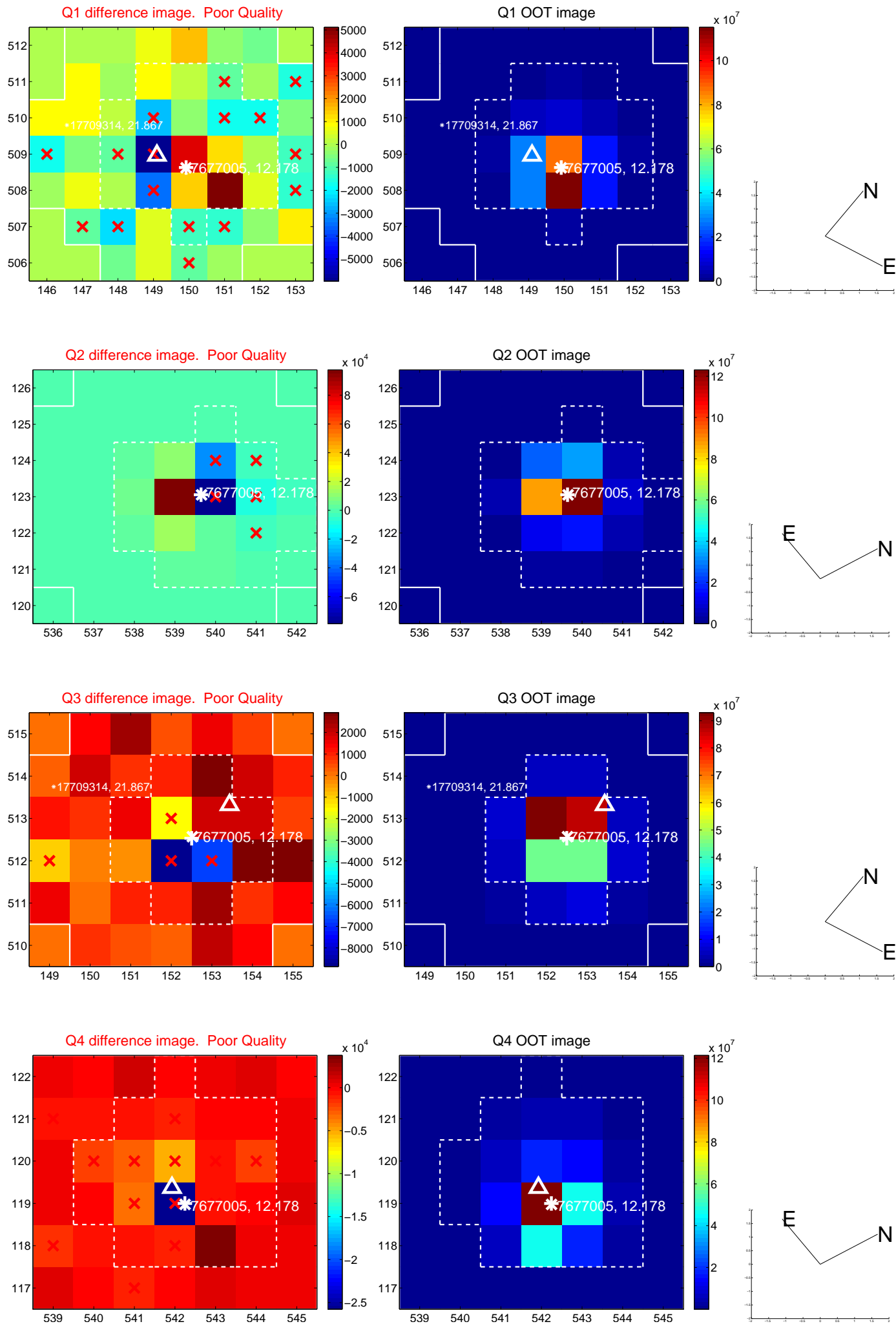
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.022 ± 0.325	0.07	-0.020 ± 0.283	-0.009 ± 0.301
PRF-fit source offset from KIC position	0.057 ± 0.266	0.21	0.007 ± 0.273	-0.056 ± 0.278
photometric centroid source offset	1.03 ± 0.69	1.51	-0.99 ± 0.69	0.28 ± 0.68

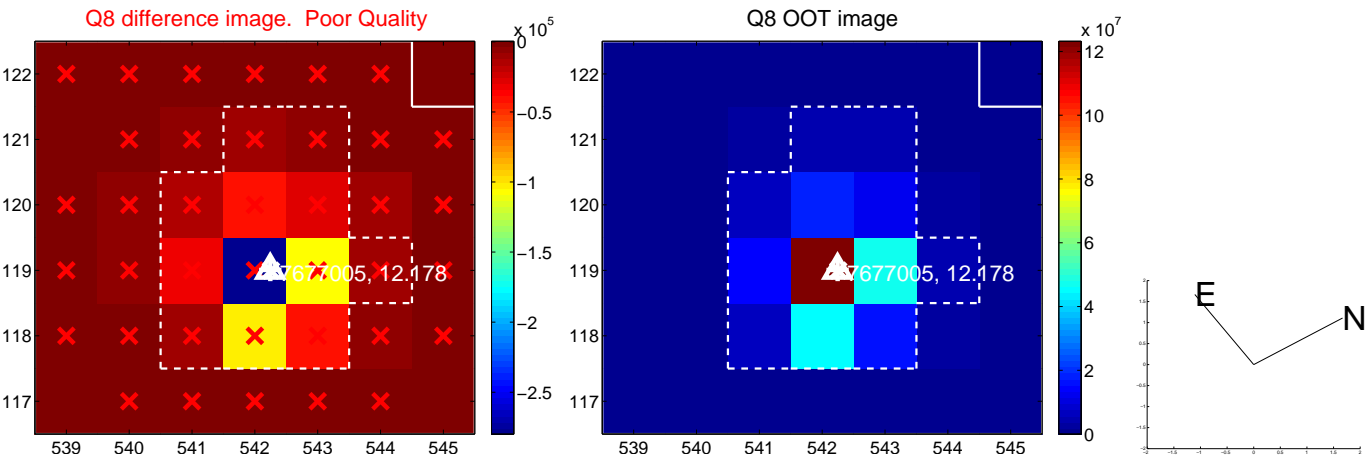
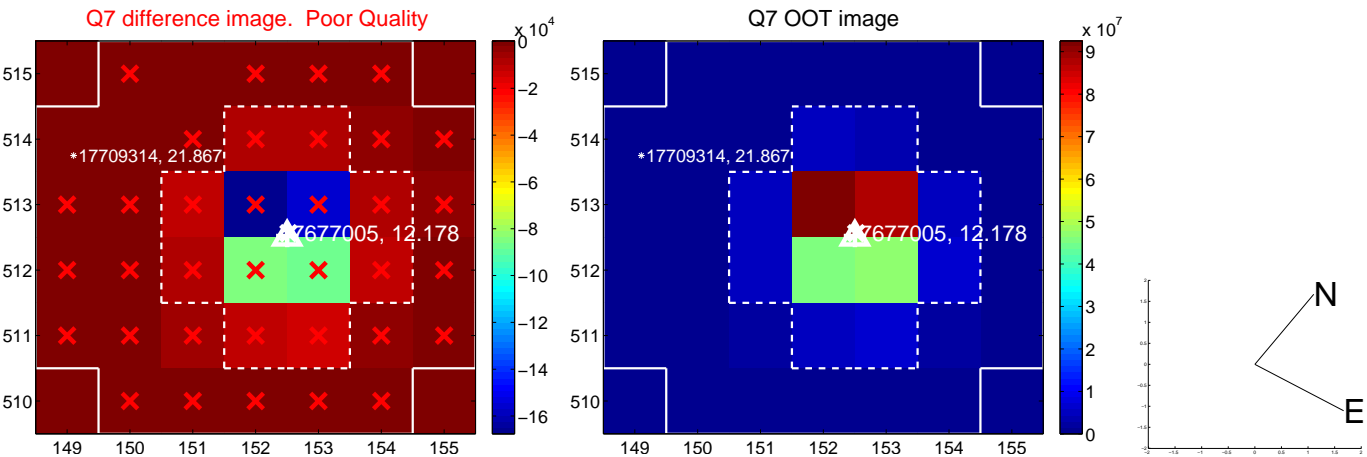
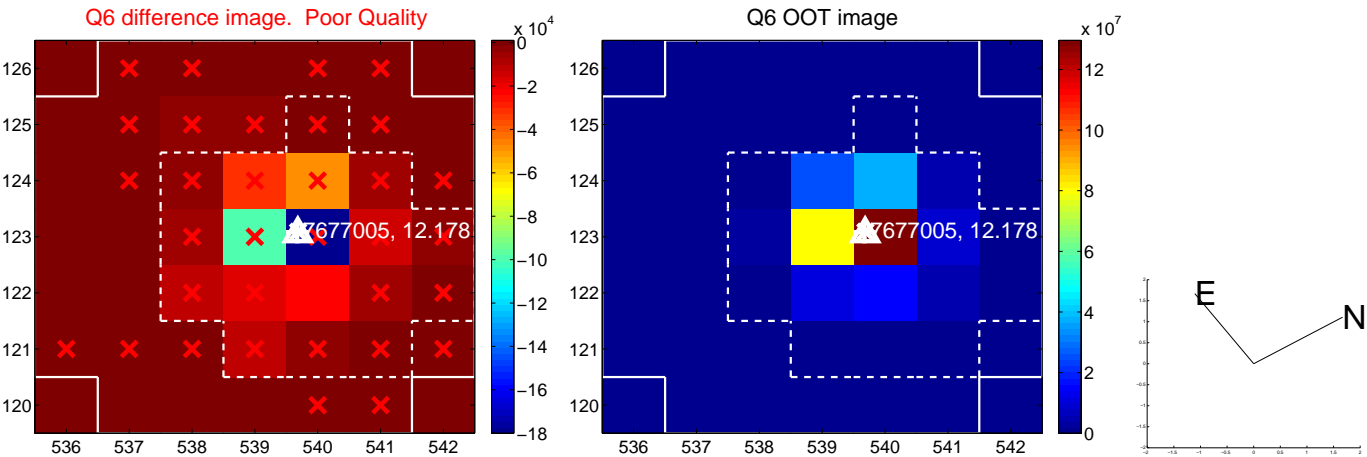
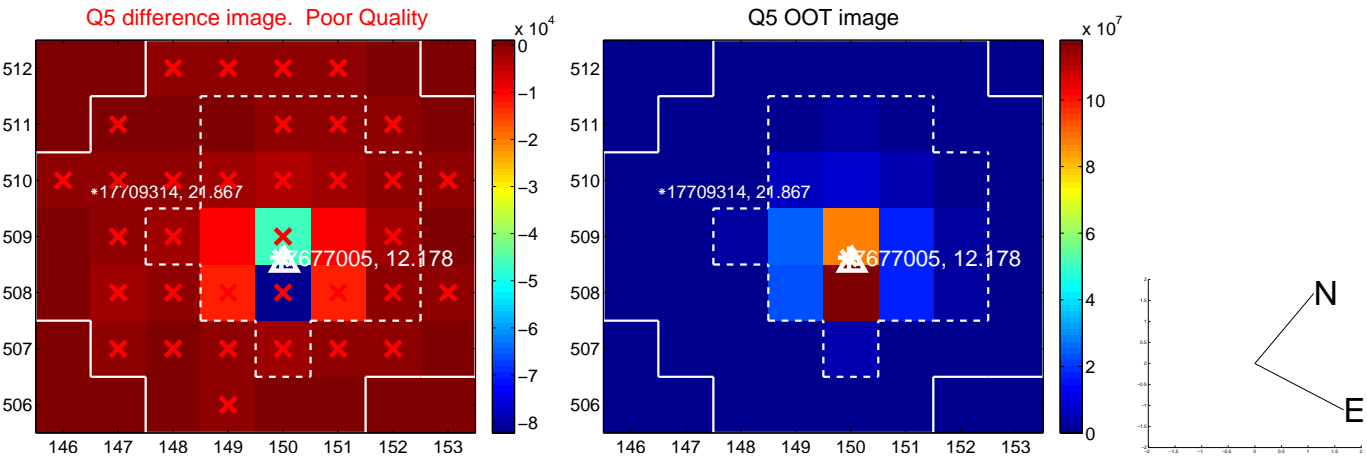


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

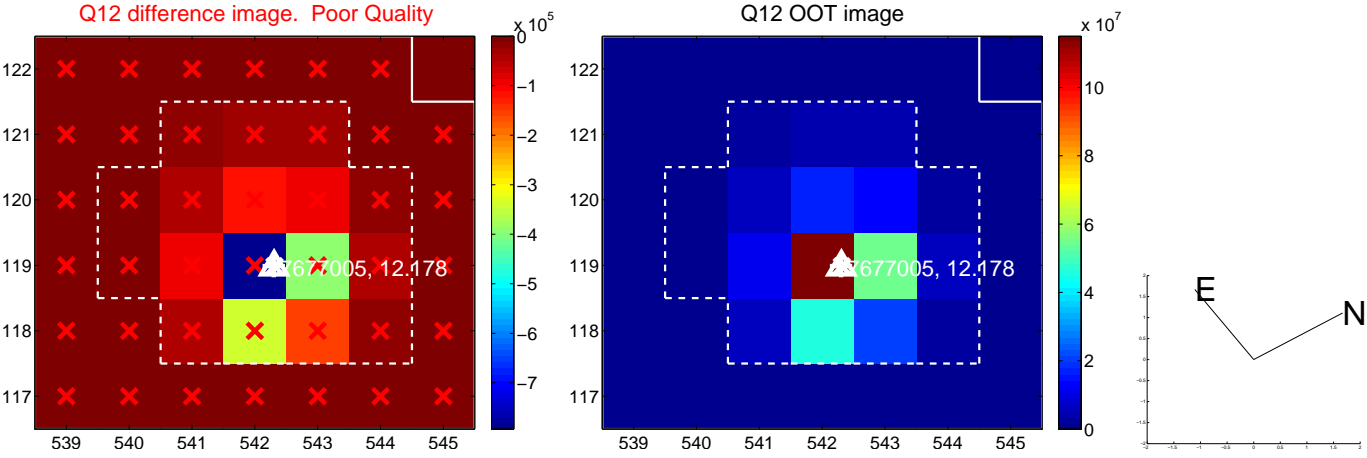
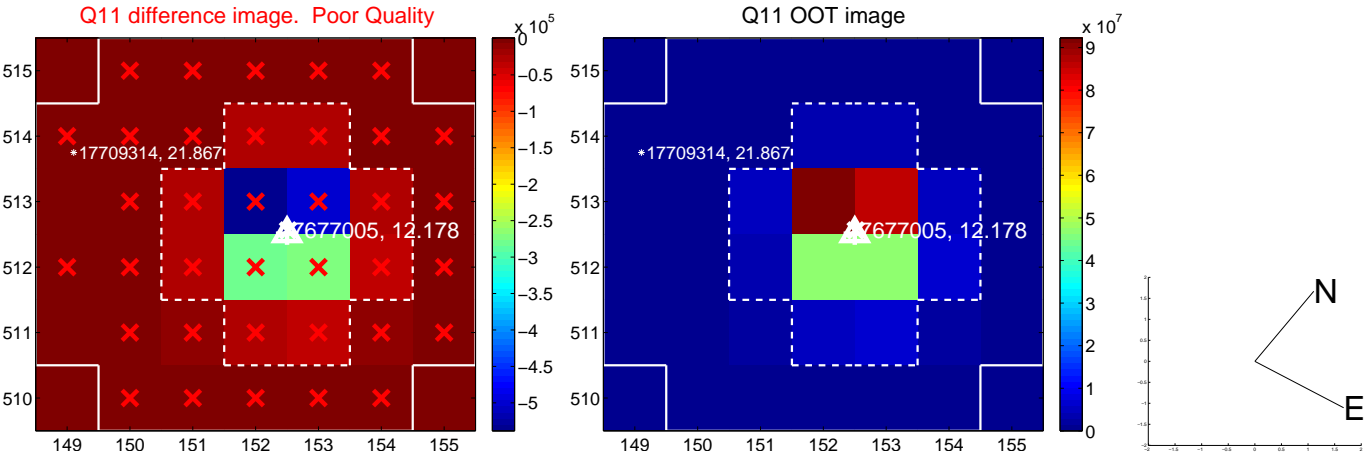
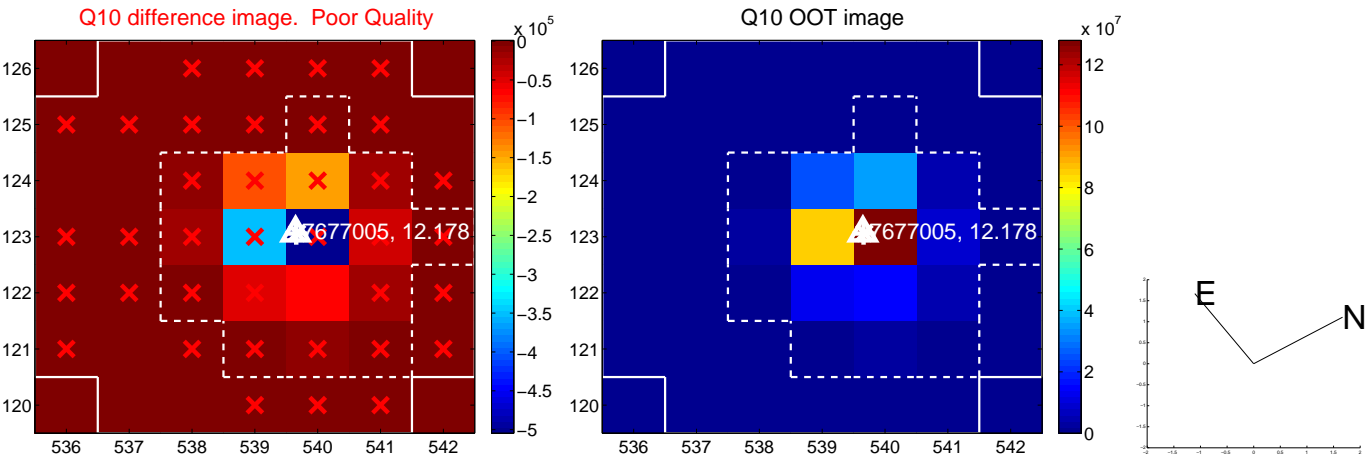
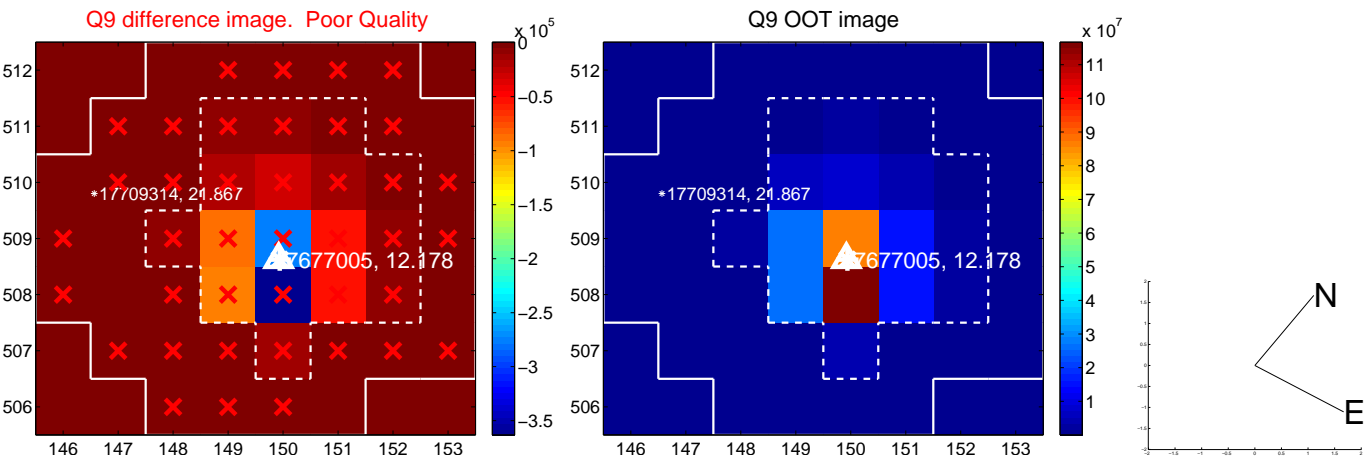
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



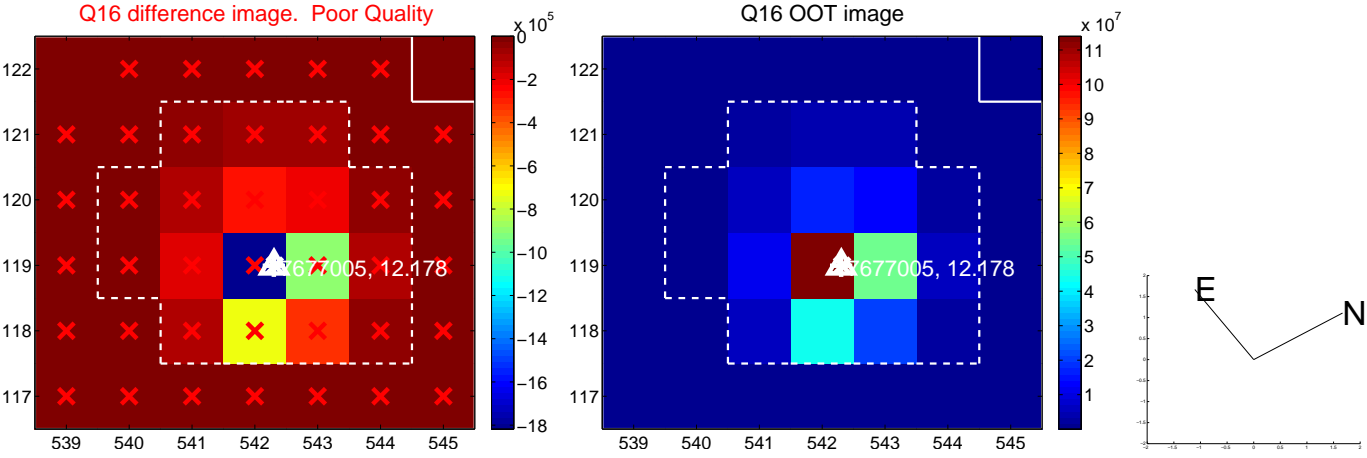
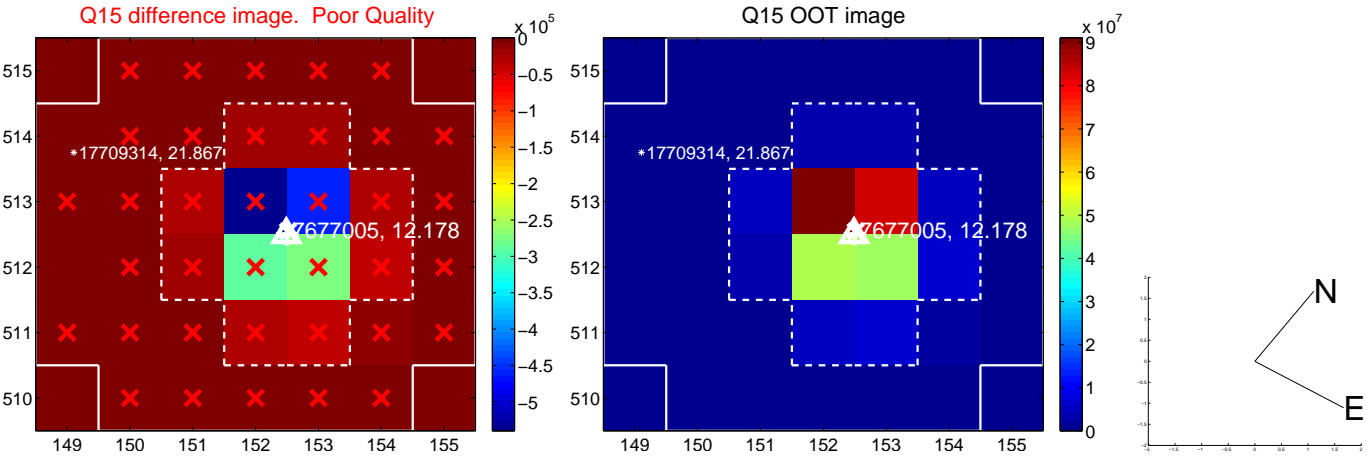
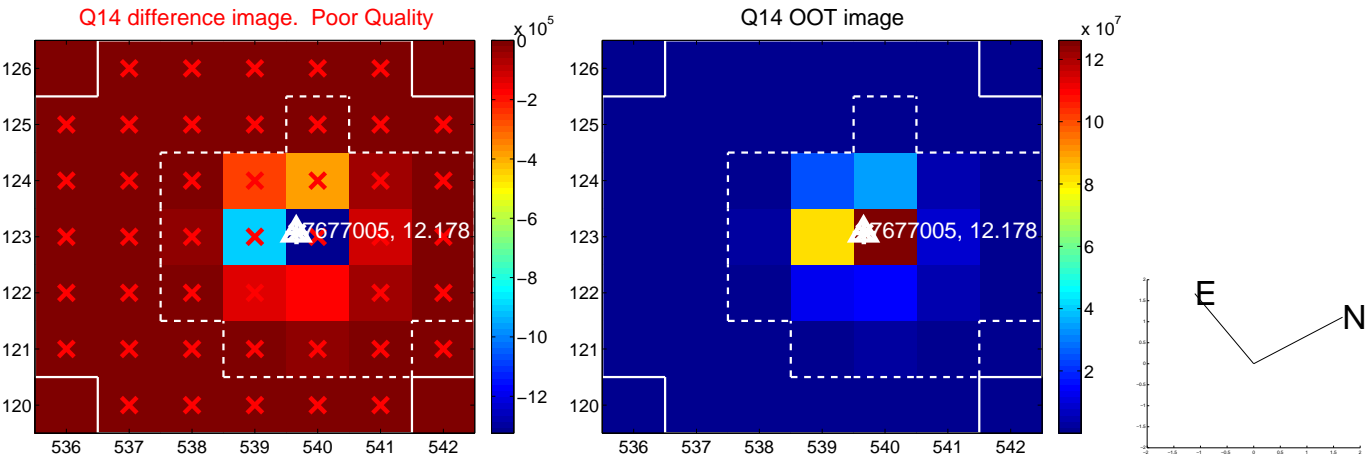
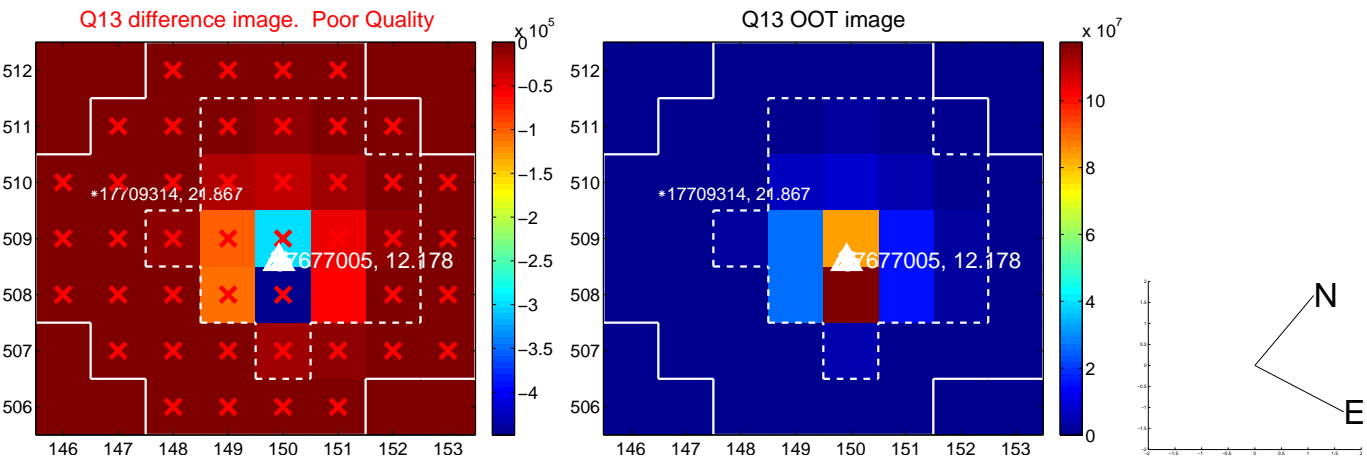
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



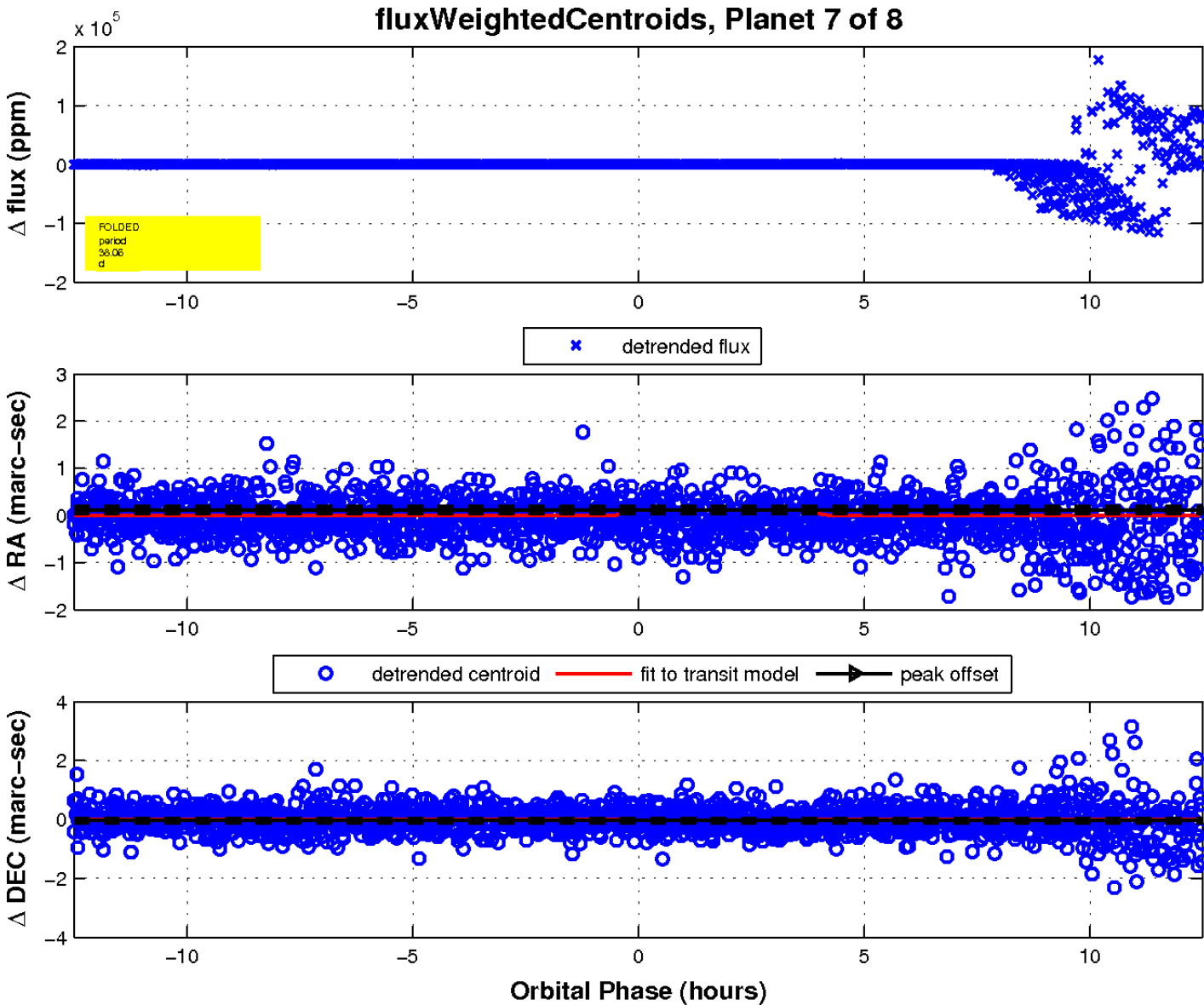
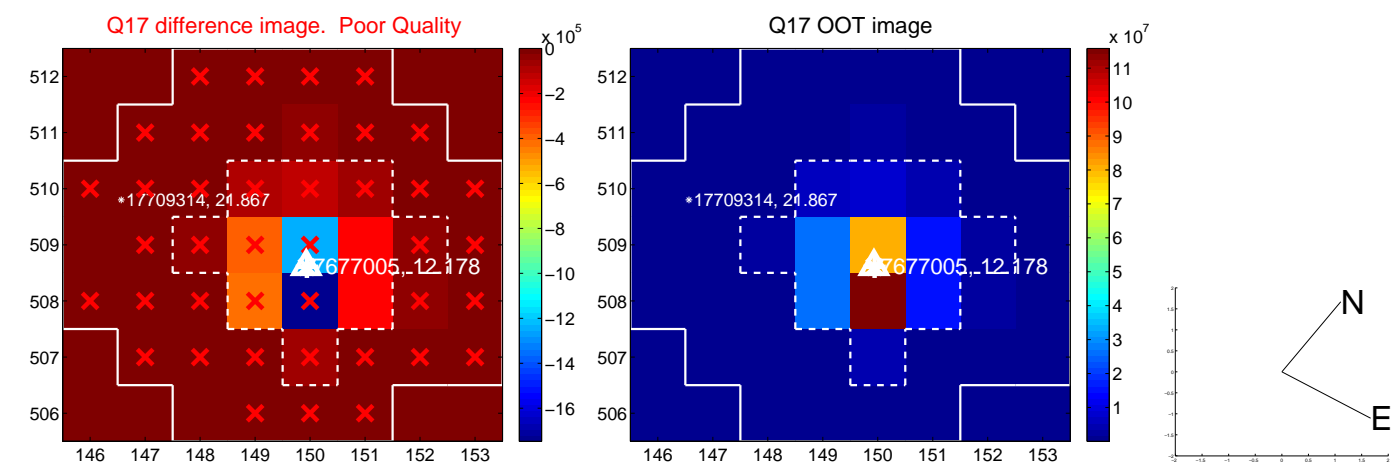
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

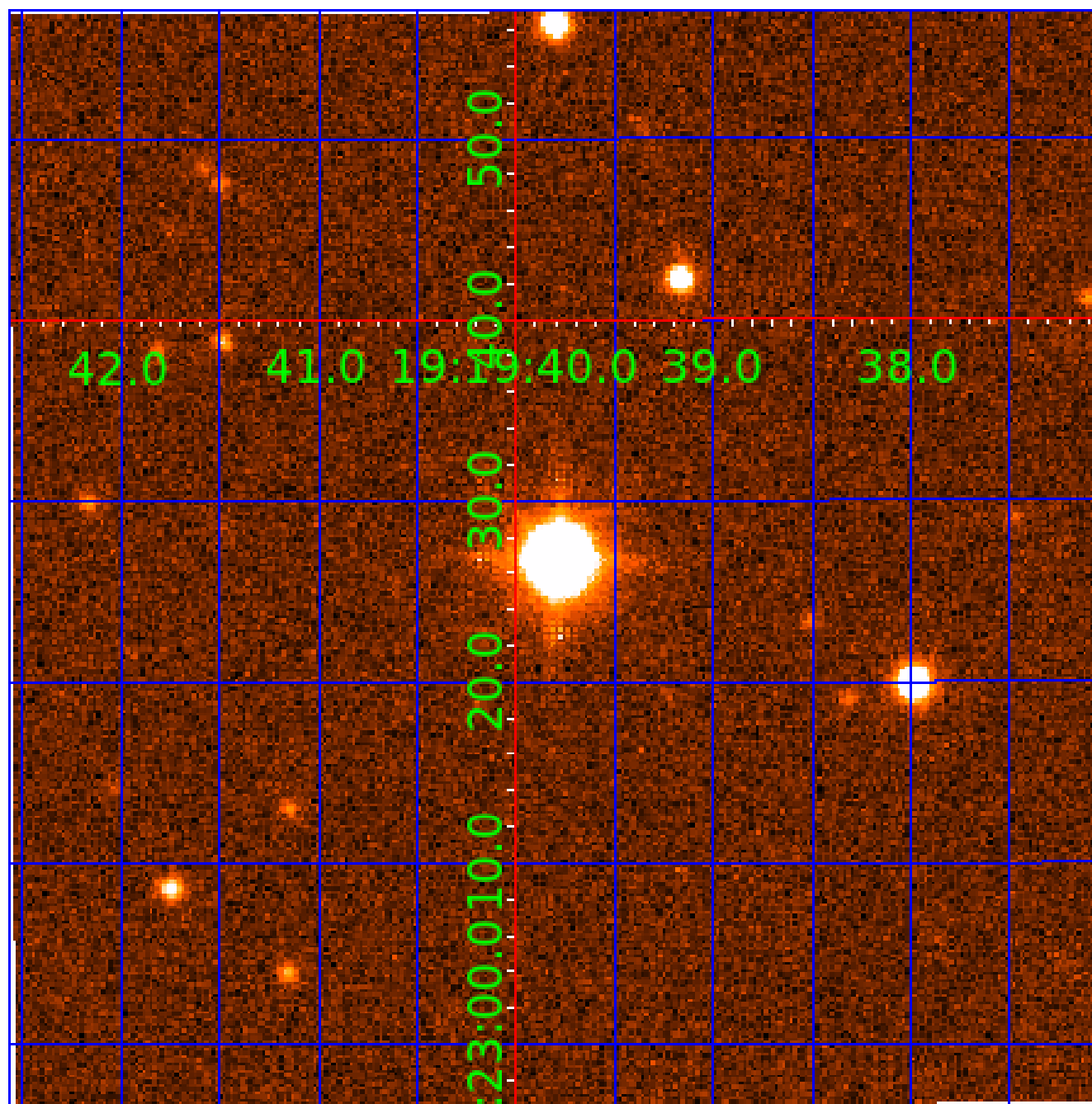


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007677005

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})
007677005-01	OBS	6903.01	38.057656	142.412298	313054.4	5.000	13456.1	-1.0	1.42	6894	46.18	69.53
007677005-02	OBS	No	38.058129	134.579595	177838.8	12.282	6569.6	4465.8	1.42	6894	82.28	69.53
007677005-03	OBS	No	190.275709	143.543340	7221.9	17.782	420.7	133.8	1.42	6894	21.33	8.13
007677005-04	OBS	No	301.720179	184.285303	862.0	13.059	362.3	10.3	1.42	6894	4.77	4.40
007677005-05	OBS	No	190.461260	255.719357	10034.8	2.500	360.9	-1.0	1.42	6894	14.41	8.12
007677005-06	OBS	No	38.060334	141.291858	2277.7	10.500	273.9	-1.0	1.42	6894	6.84	69.52
007677005-07	OBS	No	38.060474	141.954746	16601.4	1.500	335.3	-1.0	1.42	6894	18.55	69.52
007677005-08	OBS	No	190.300020	257.088307	6355.5	3.000	275.5	-1.0	1.42	6894	11.44	8.13

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007677005-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_ALT—MOD_ODDEVEN_ALT—HAS_SEC_TCE—CENT_NOFITS
007677005-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
007677005-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT— SAME_NTL_PERIOD—CENT_FEW_DIFFS—HALO_GHOST
007677005-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT— MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007677005-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT— MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS—HALO_GHOST
007677005-06	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—SAME_NTL_PERIOD—CENT_NOFITS
007677005-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—RESIDUAL_TCE—CENT_NOFITS
007677005-08	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—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.

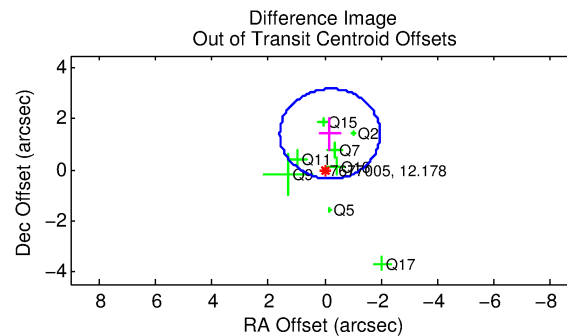
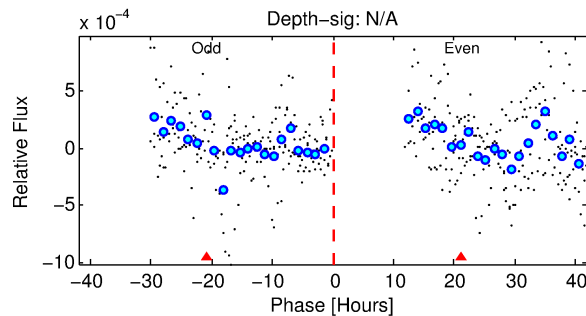
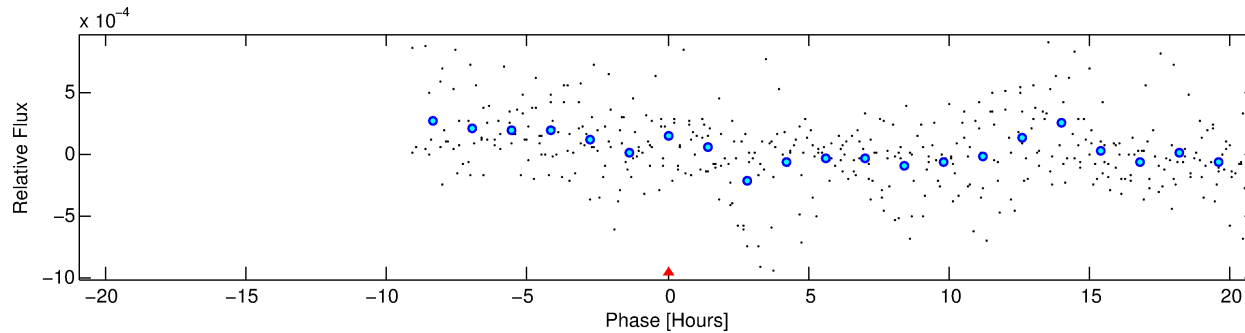
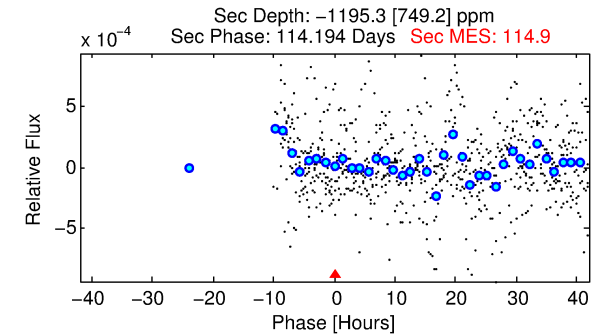
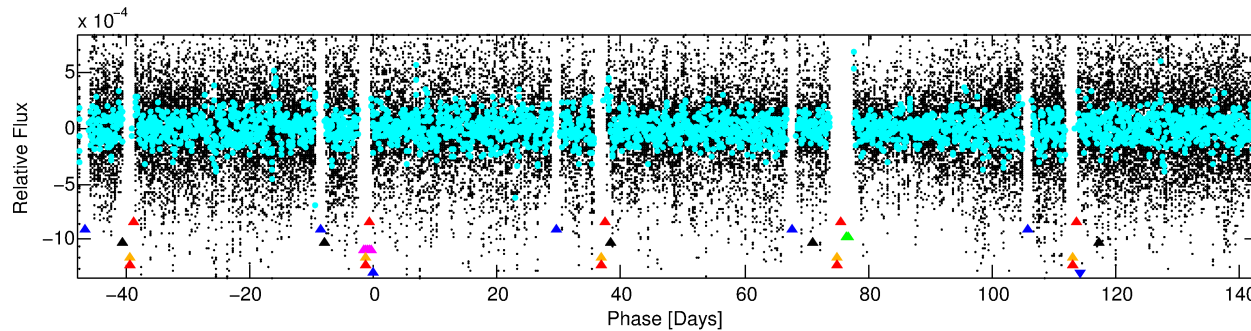
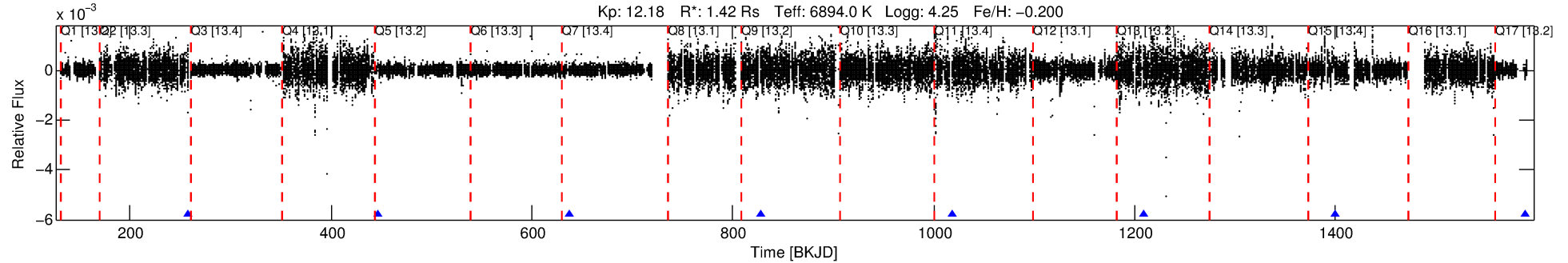
Ephemeris Match Information For 007677005-08

No Significant Match Found

DV One-Page Summary

KIC: 7677005 Candidate: 8 of 8 Period: 190.300 d
KOI: K06903 Corr: No Ephemeris Match

Kp: 12.18 R*: 1.42 Rs Teff: 6894.0 K Logg: 4.25 Fe/H: -0.200



TPS TCE Results:

Period = 190.30002 d
Epoch = 257.0883 BKJD

DV fit results are unavailable

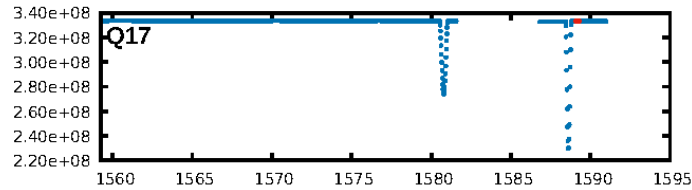
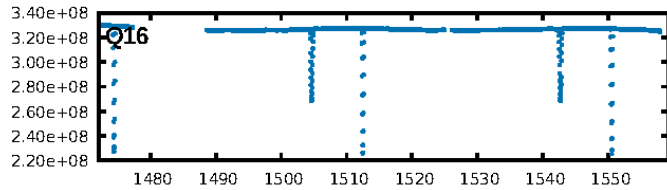
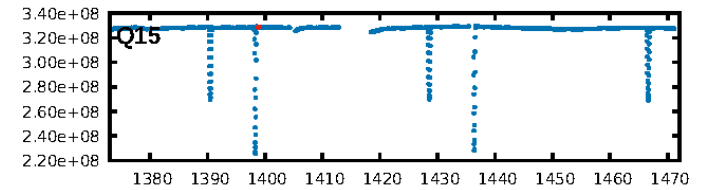
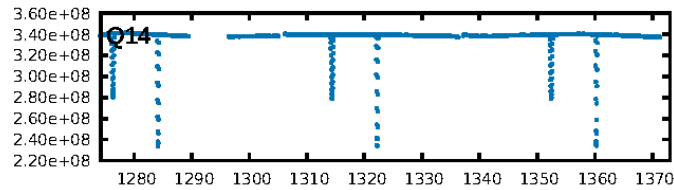
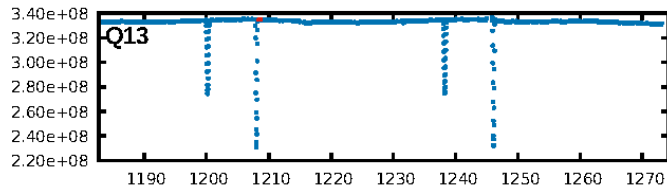
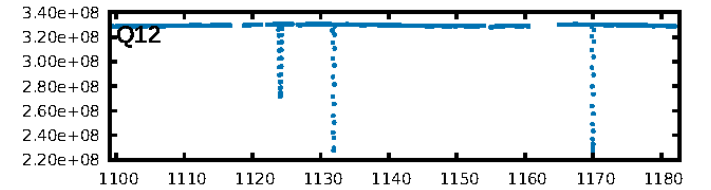
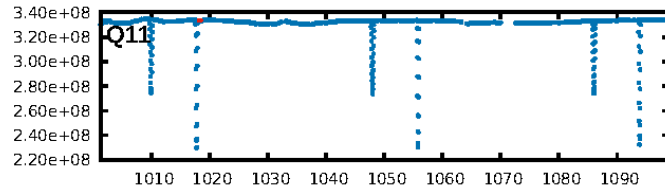
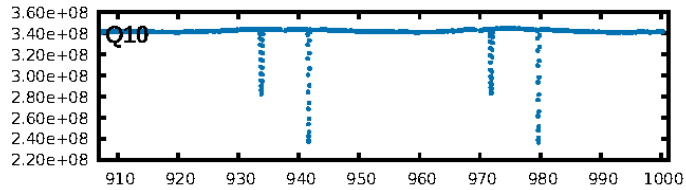
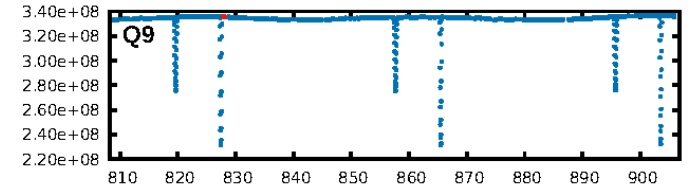
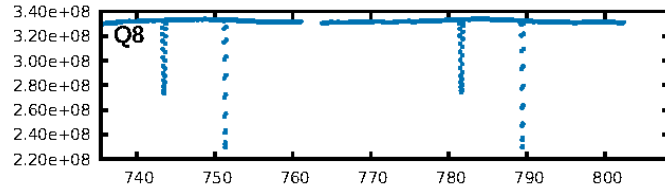
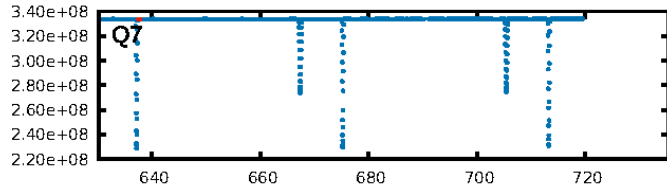
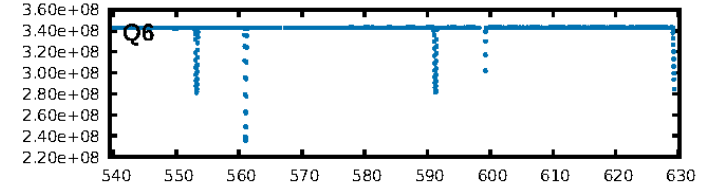
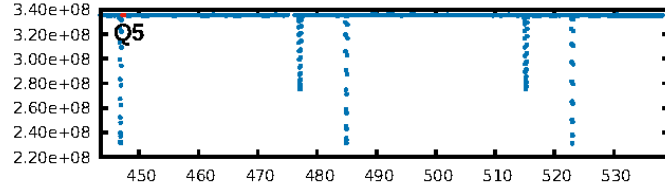
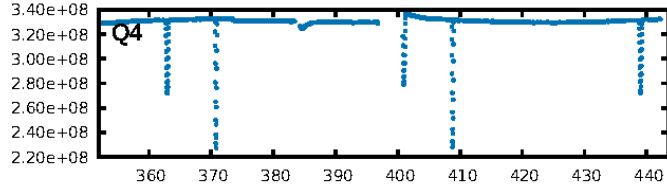
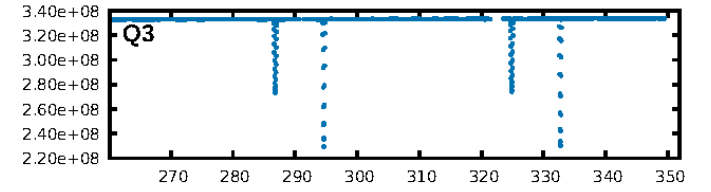
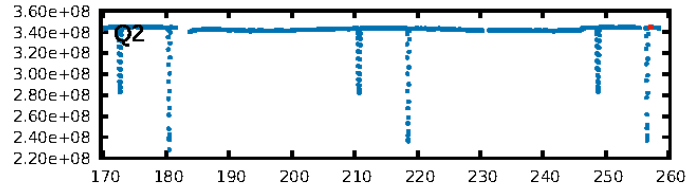
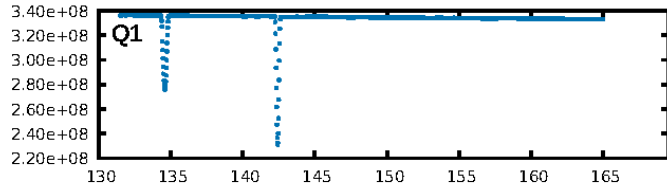
DV Diagnostic Results:

ShortPeriod-sig: 2.6% [0.03 σ]
LongPeriod-sig: 67.8% [0.99 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 13.61
Centroid-sig: 23.7%
Centroid-so: 4.090 arcsec [1.05 σ]
OotOffset-rm: 1.427 arcsec [2.41 σ]
KicOffset-rm: 1.457 arcsec [3.32 σ]
OotOffset-st: 1/3/0/4 [8]
KicOffset-st: 1/3/0/4 [8]
DiffImageQuality-fgm: 0.38 [3/8]
DiffImageOverlap-fno: 0.00 [0/8]

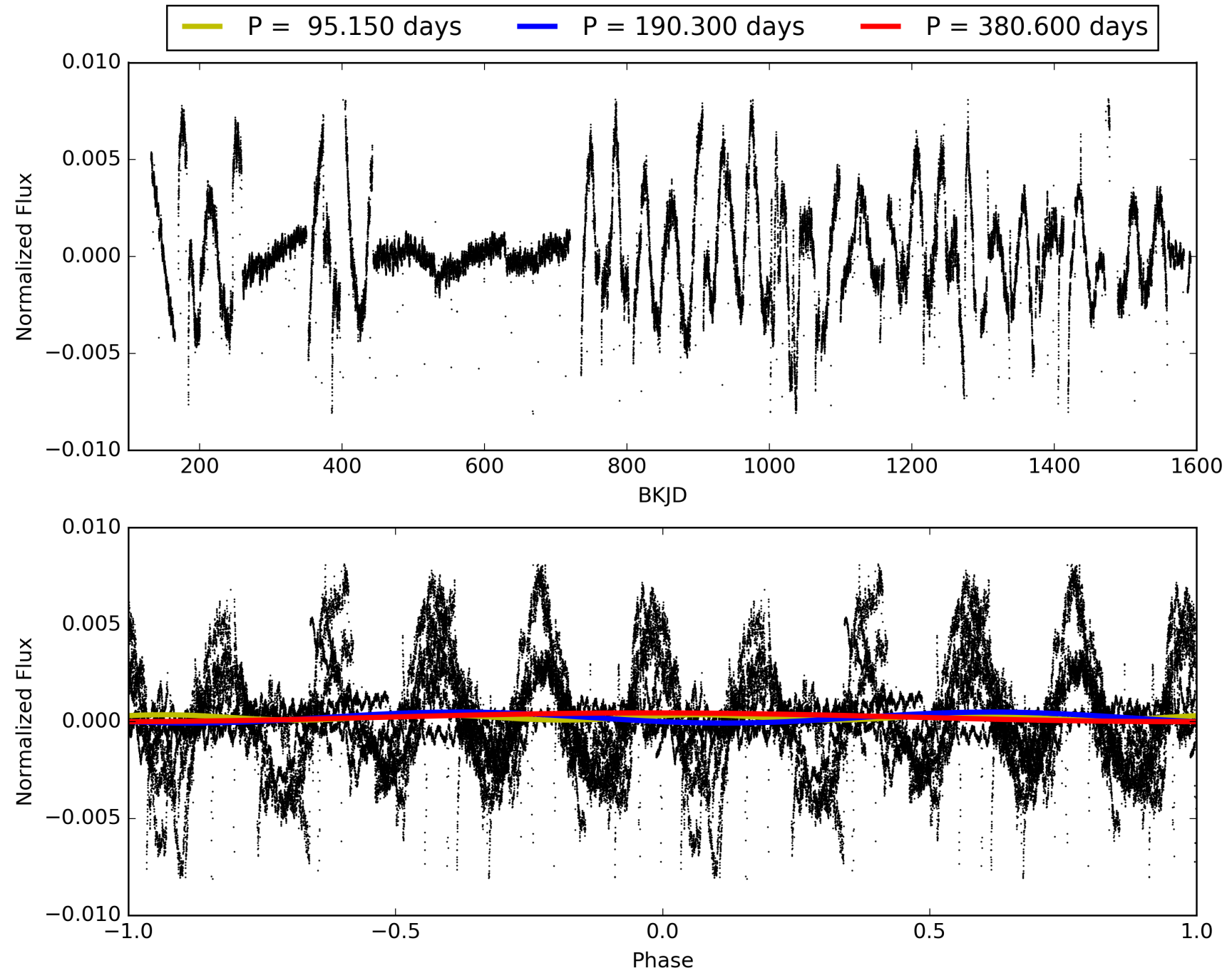
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:10:31 Z

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

TCE 007677005-08, PDC Light Curves

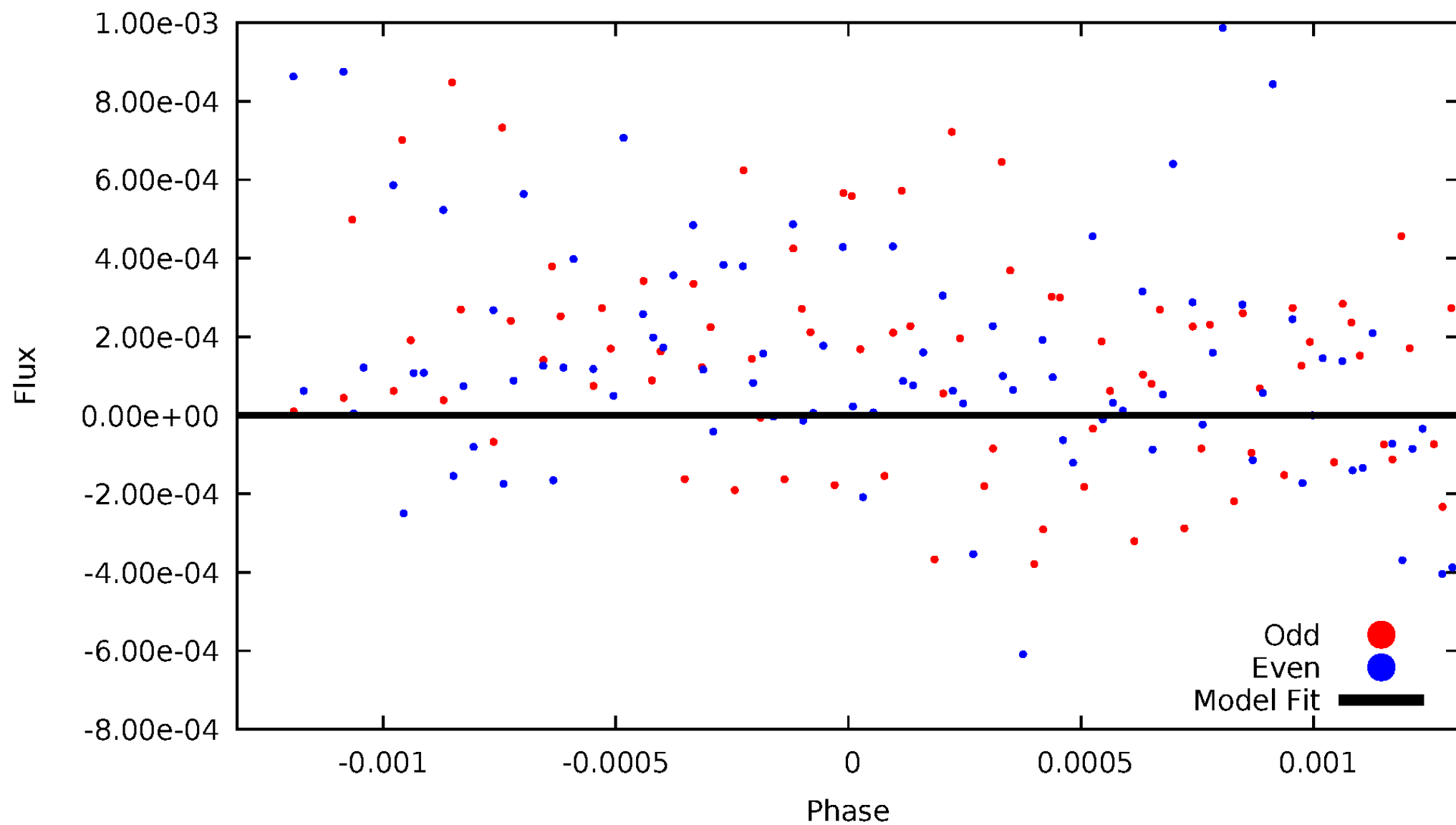


TCE 007677005-08



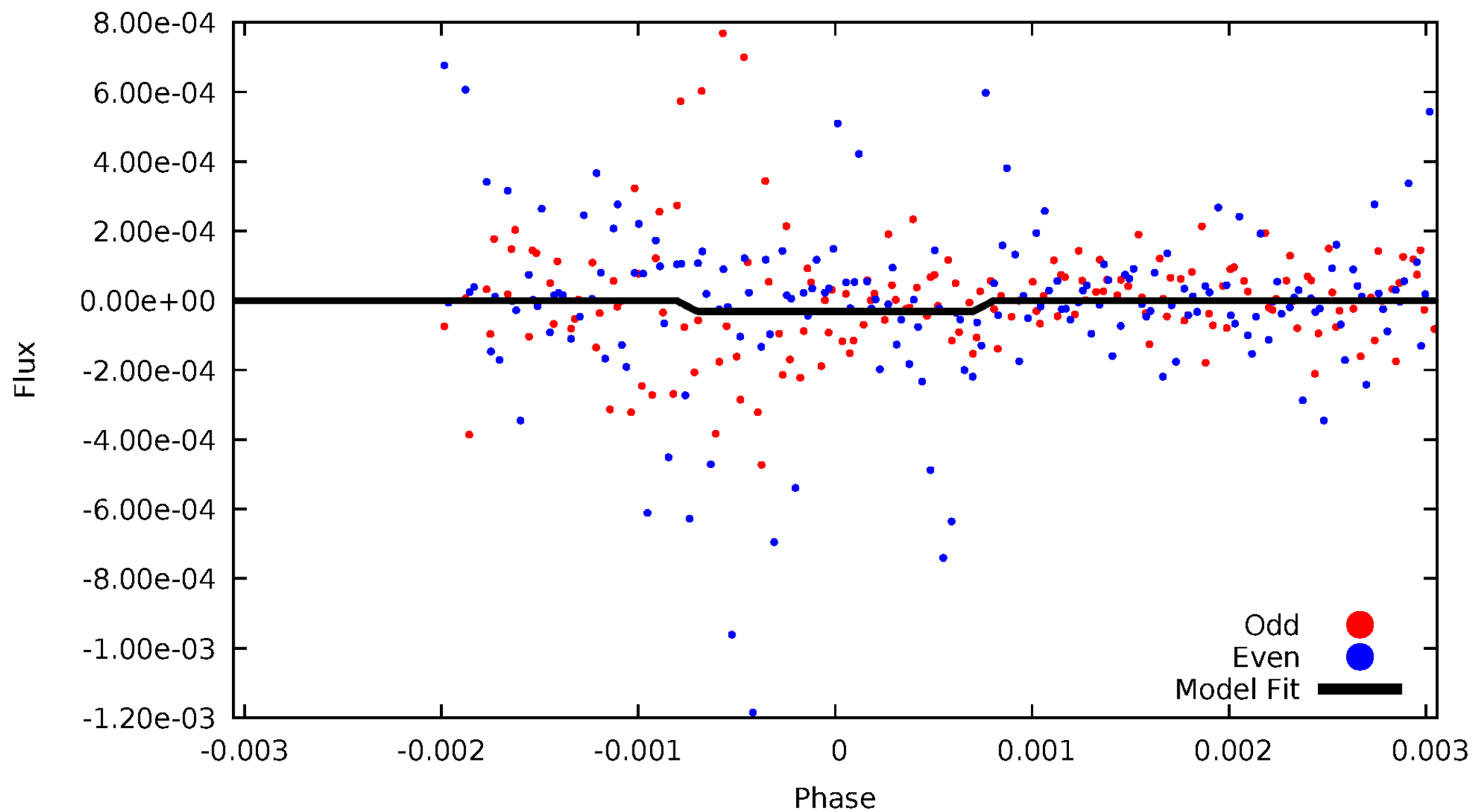
DV Odd/Even

TCE 007677005-08



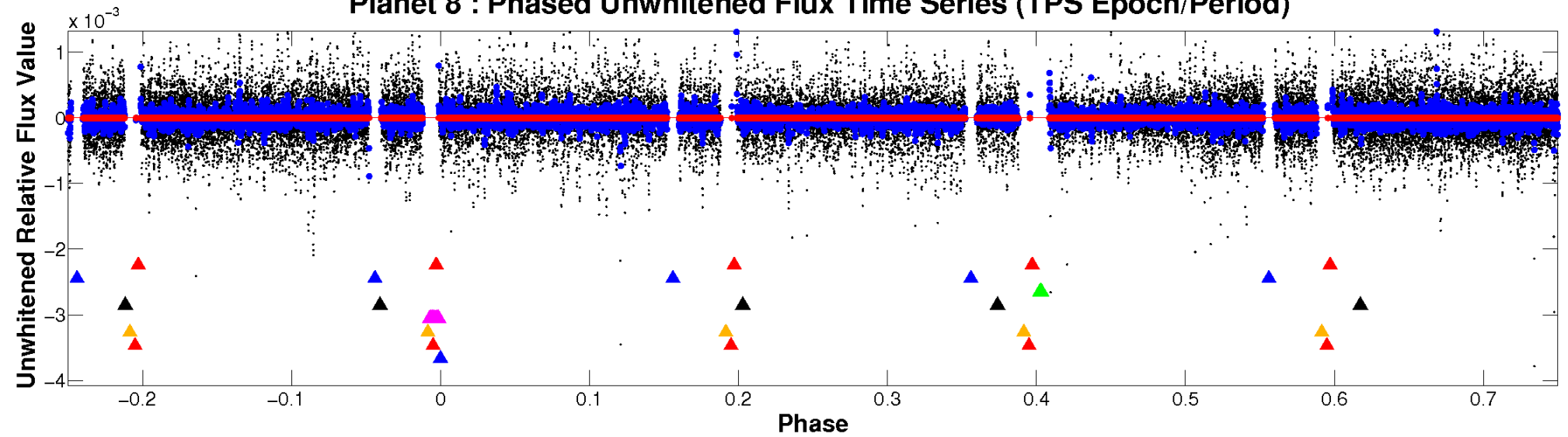
ALT Odd/Even

TCE 007677005-08



Non-Whitened Vs. Whitened Light Curve

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

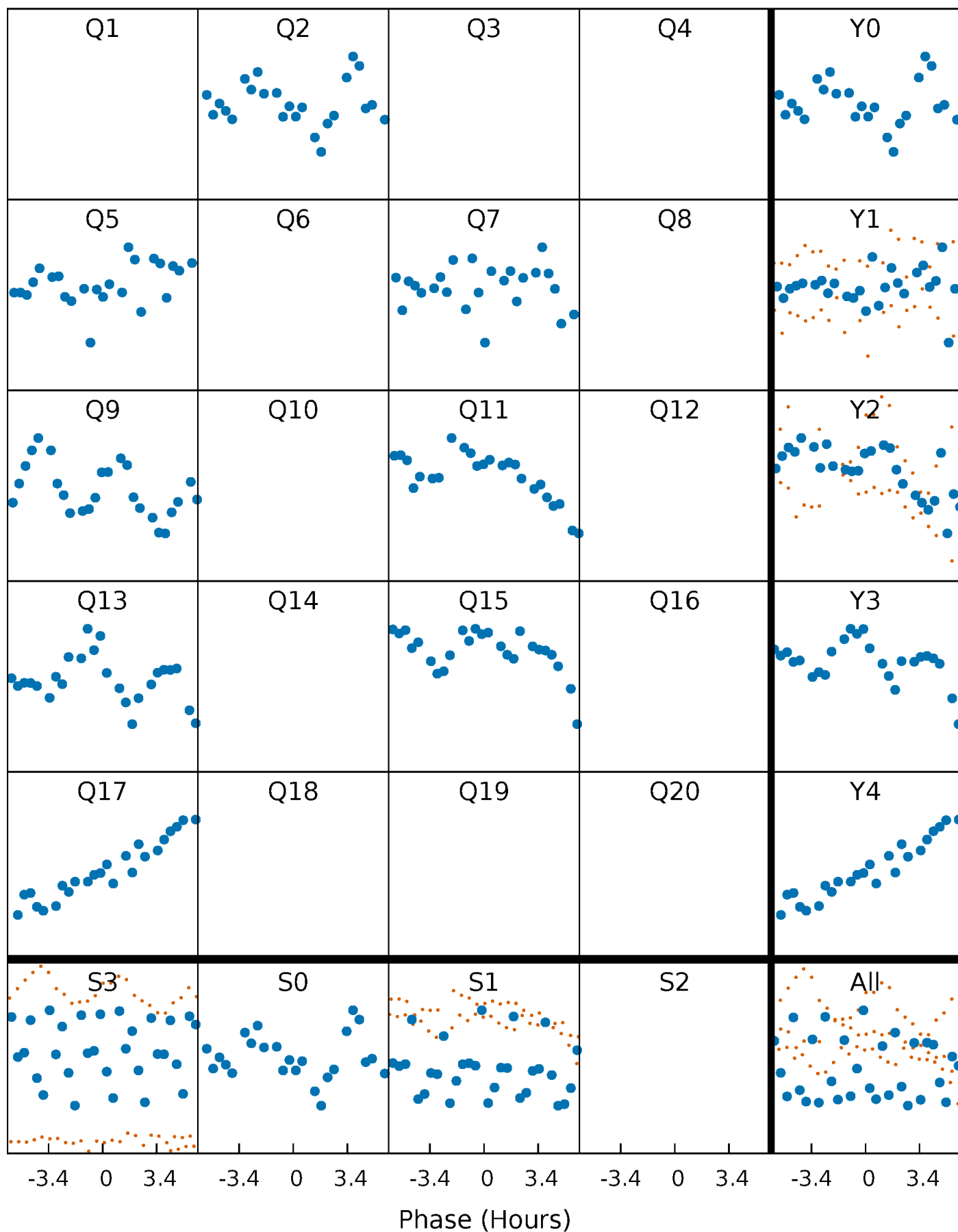


Planet 8 : Phased Whitened Flux Time Series (TPS Epoch/Period)



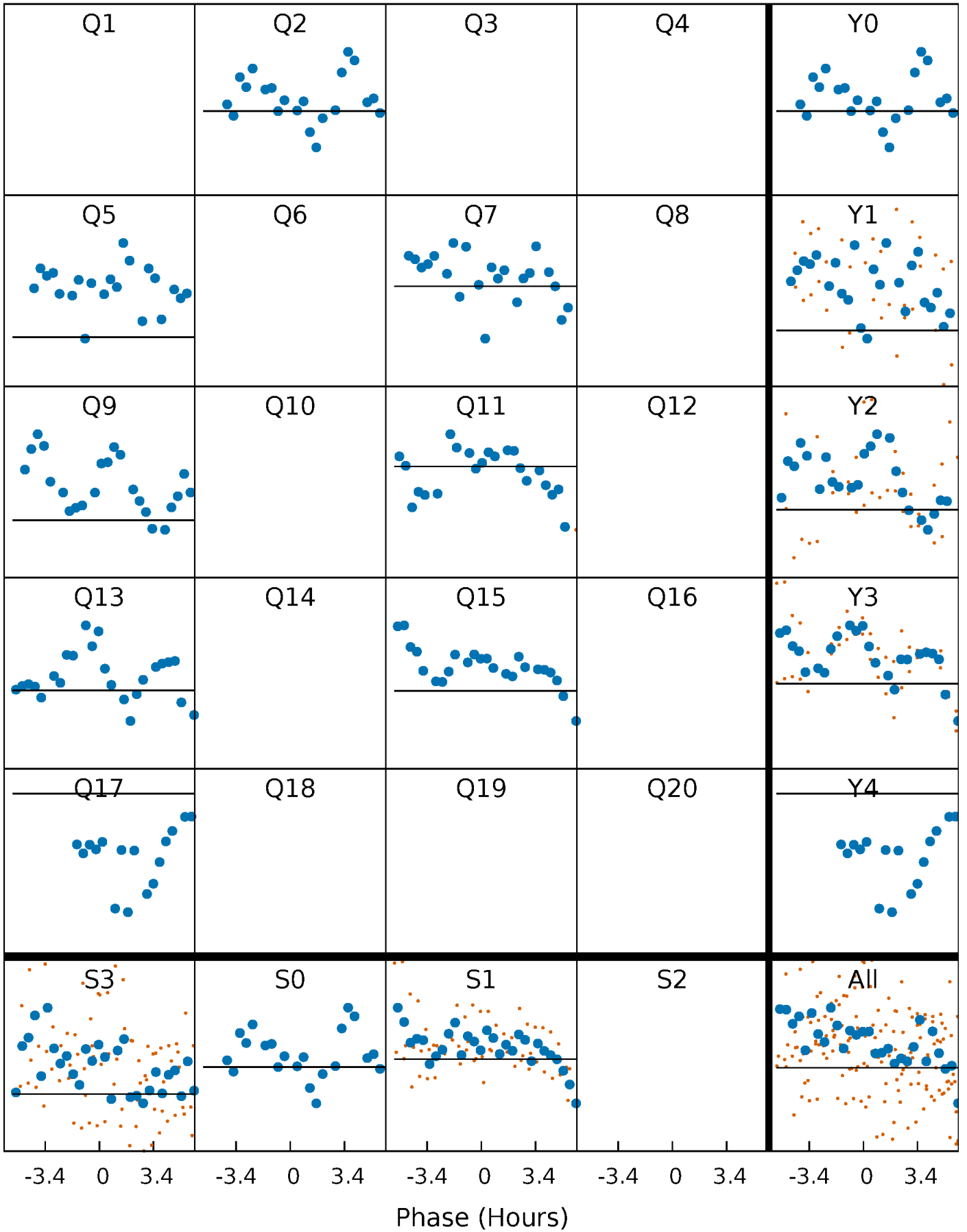
PDC Quarter-Phased Transit Curves

TCE 007677005-08 $P=190.300020$ Days $T_0=257.088307$ (BKJD)



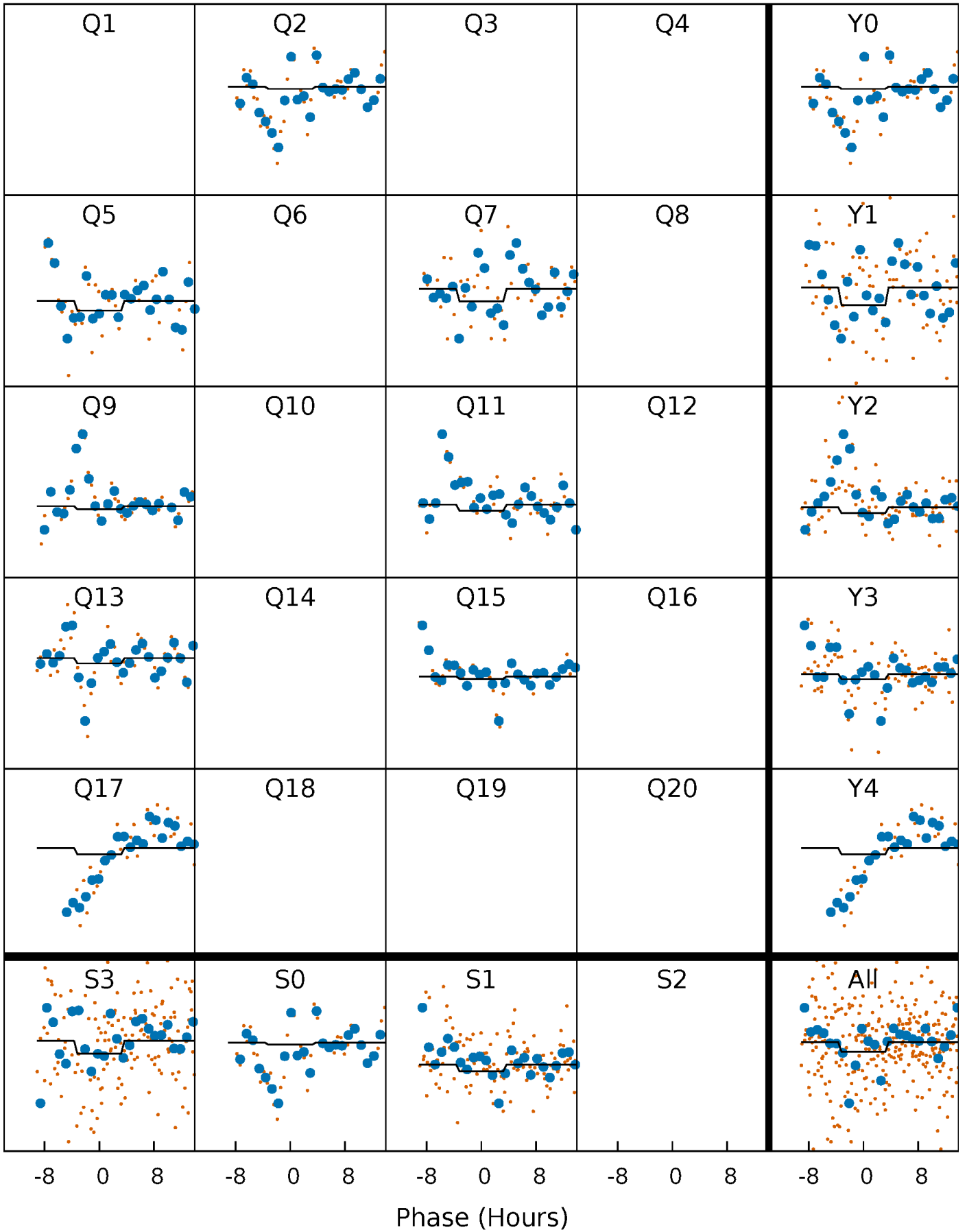
DV Quarter-Phased Transit Curves

TCE 007677005-08 P=190.300020 Days $T_0=257.088307$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

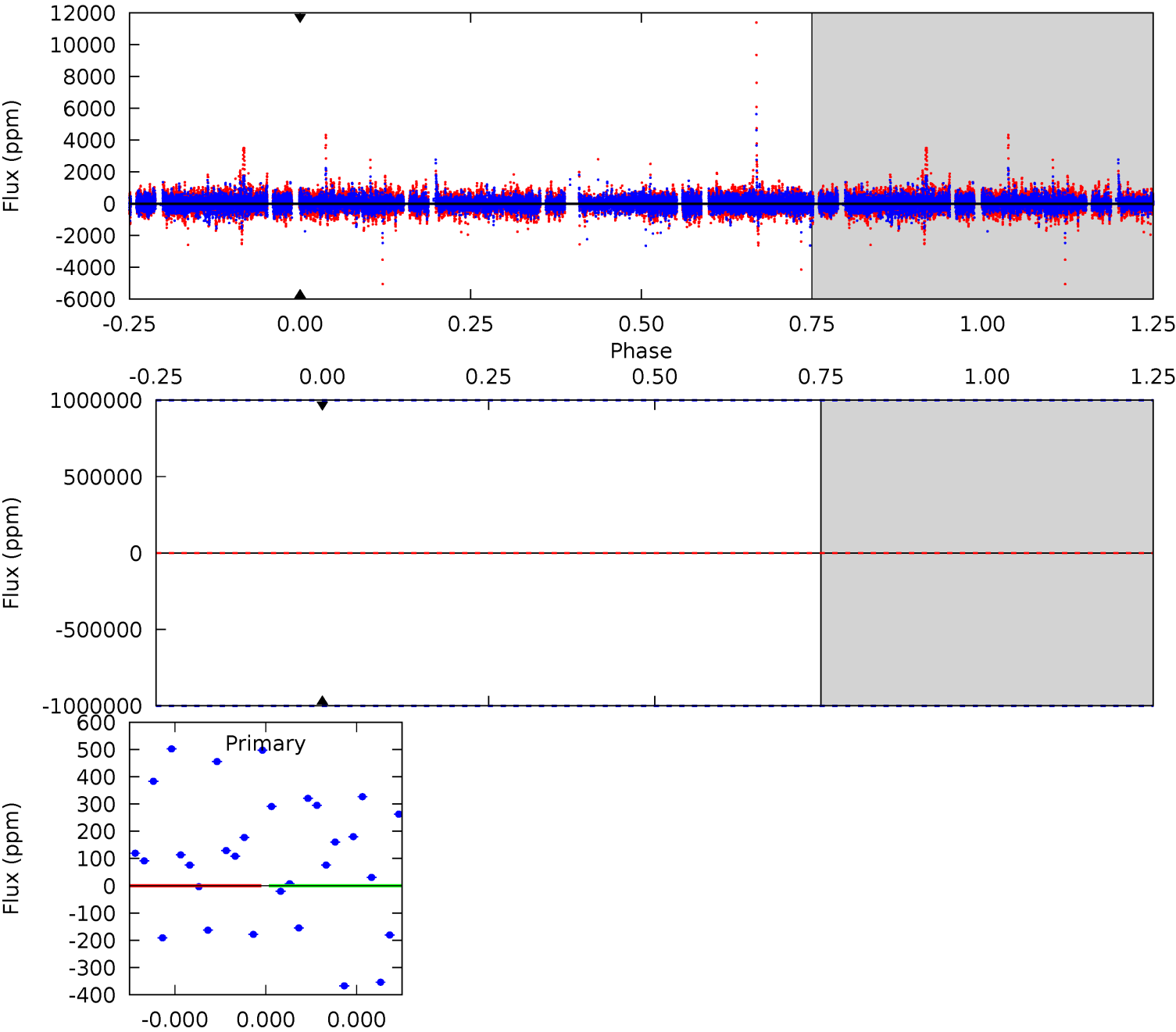
TCE 007677005-08 P=190.300020 Days $T_0=257.239182$ (BKJD)



DV Model-Shift Uniqueness Test

007677005-08, P = 190.300020 Days, E = 66.788287 Days

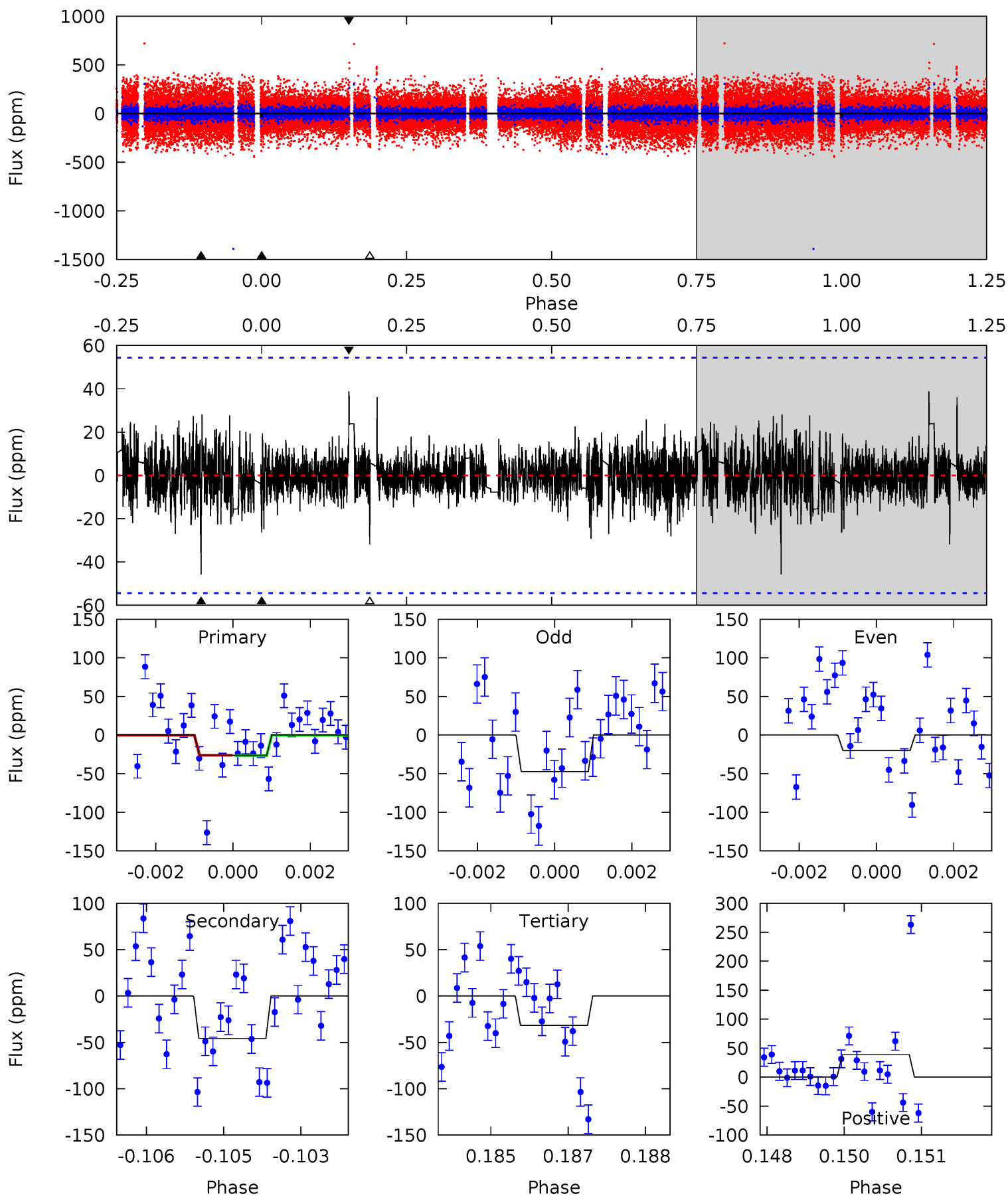
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007677005-08, $P = 190.300020$ Days, $E = 66.939162$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.60	4.52	3.14	3.83	5.37	3.15	0.72	-0.53	-1.22	1.38	0.69	1.32	0.95	0.46	0.02



Stellar Parameters For KIC 007677005

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6894^{+164}_{-247}	$4.250^{+0.092}_{-0.138}$	$-0.200^{+0.250}_{-0.350}$	$1.419^{+0.330}_{-0.220}$	$1.317^{+0.150}_{-0.187}$	$0.649^{+0.326}_{-0.253}$
	+2%/-4%	+2%/-3%	+125%/-175%	+23%/-16%	+11%/-14%	+50%/-39%
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 007677005-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$16.04^{+13.05}_{-10.74}$	605^{+34}_{-33}	4773^{+17511}_{-23364}	$2559^{+188145}_{-152003}$
Alt.	-46 ± 10	$10.76^{+12.09}_{-7.46}$	604^{+35}_{-30}	2876^{+1243}_{-515}	108^{+981}_{-85}

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 $A_{obs} \gg 1.0$

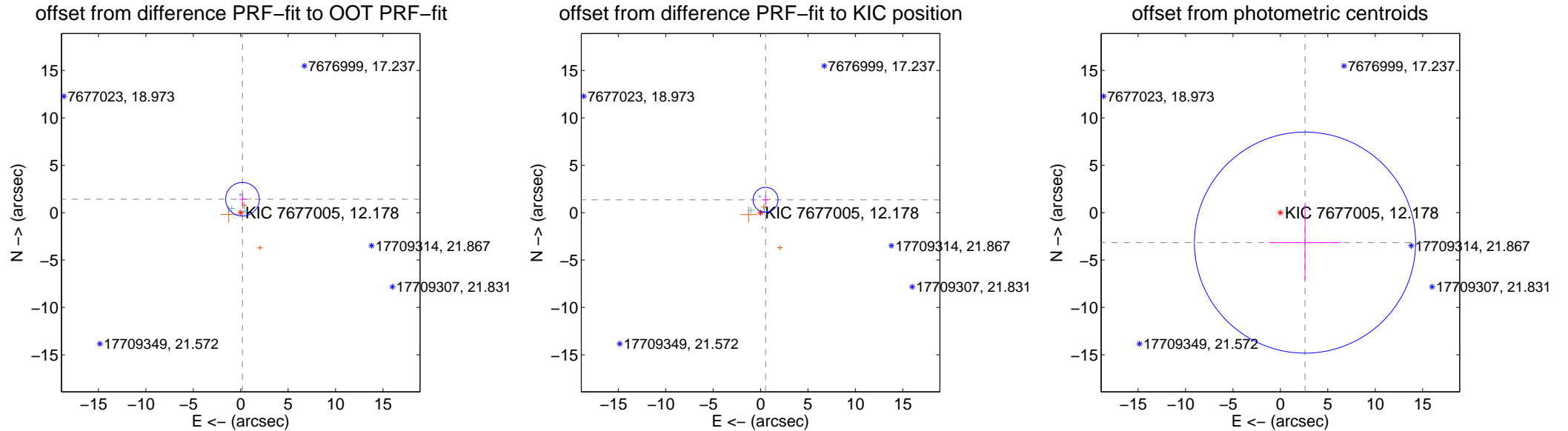
DV Centroid Data

Supplemental centroid analysis for 007677005-08. Kepler magnitude: 12.18. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

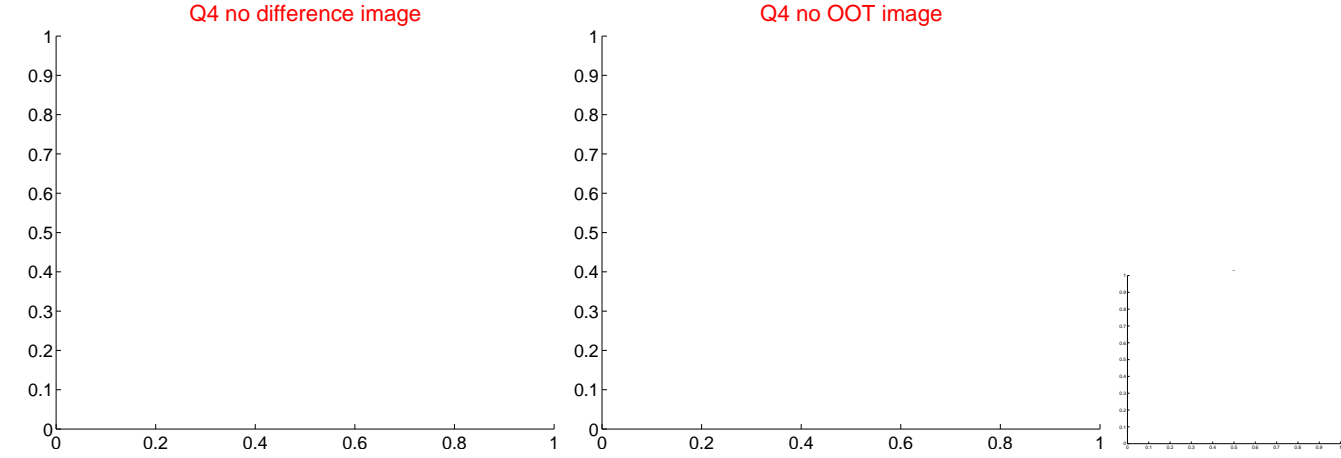
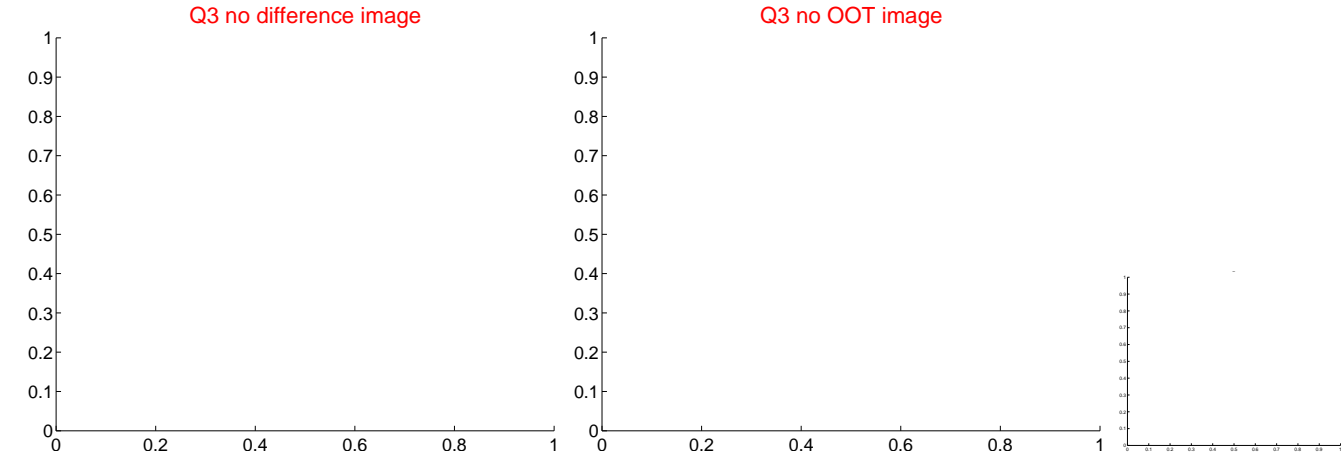
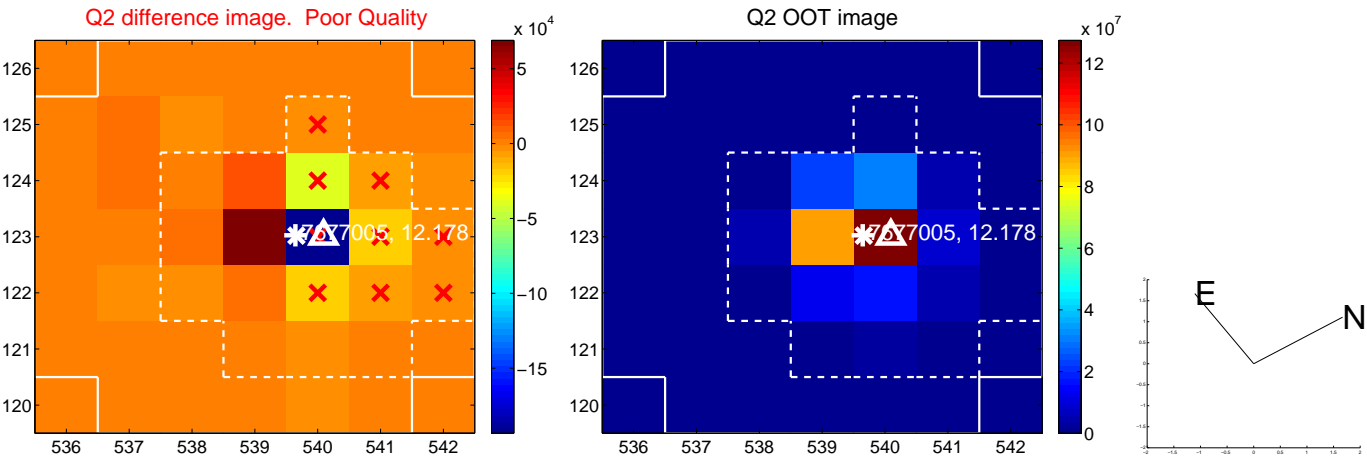
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.427 ± 0.591	2.41	-0.185 ± 0.346	1.415 ± 0.615
PRF-fit source offset from KIC position	1.457 ± 0.439	3.32	-0.528 ± 0.334	1.358 ± 0.503
photometric centroid source offset	4.09 ± 3.89	1.05	-2.60 ± 3.78	-3.16 ± 3.96

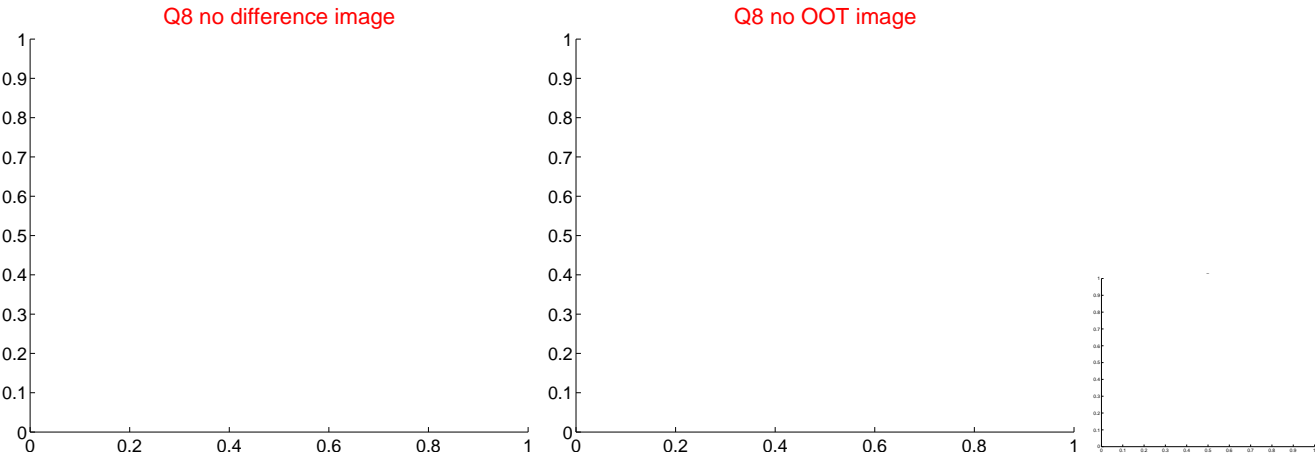
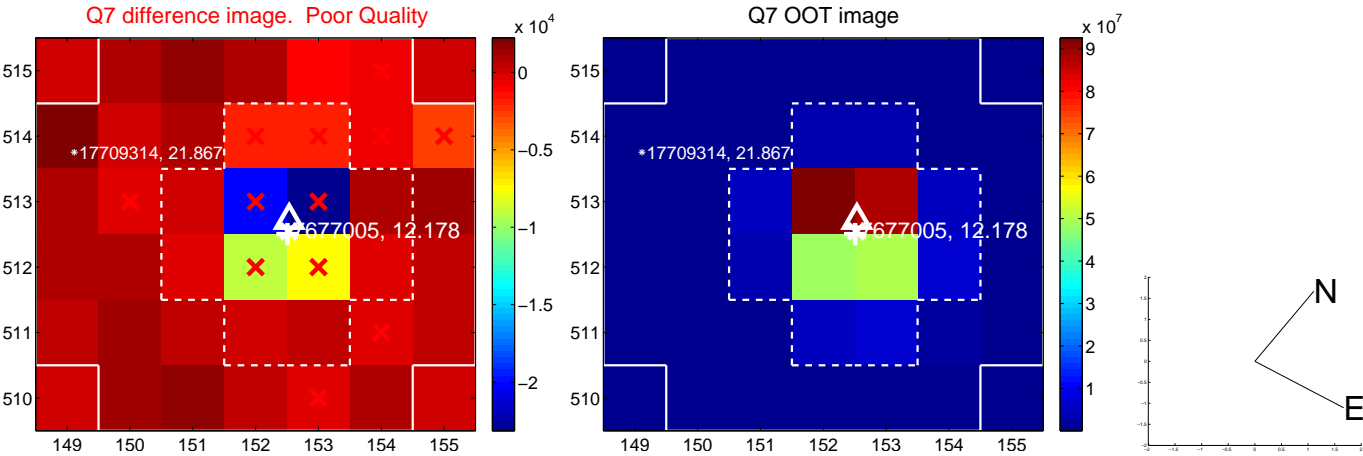
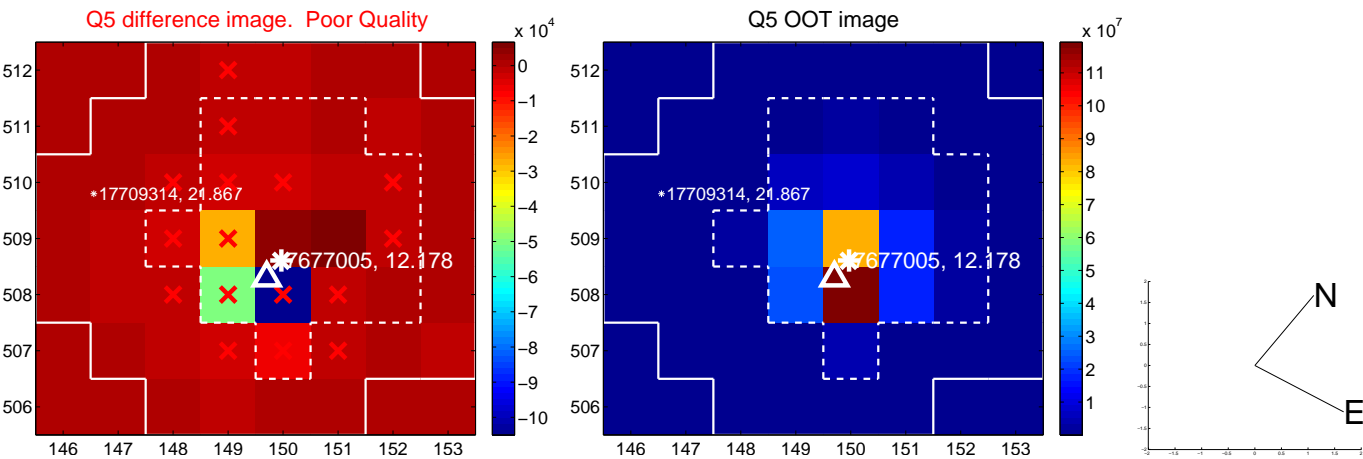


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

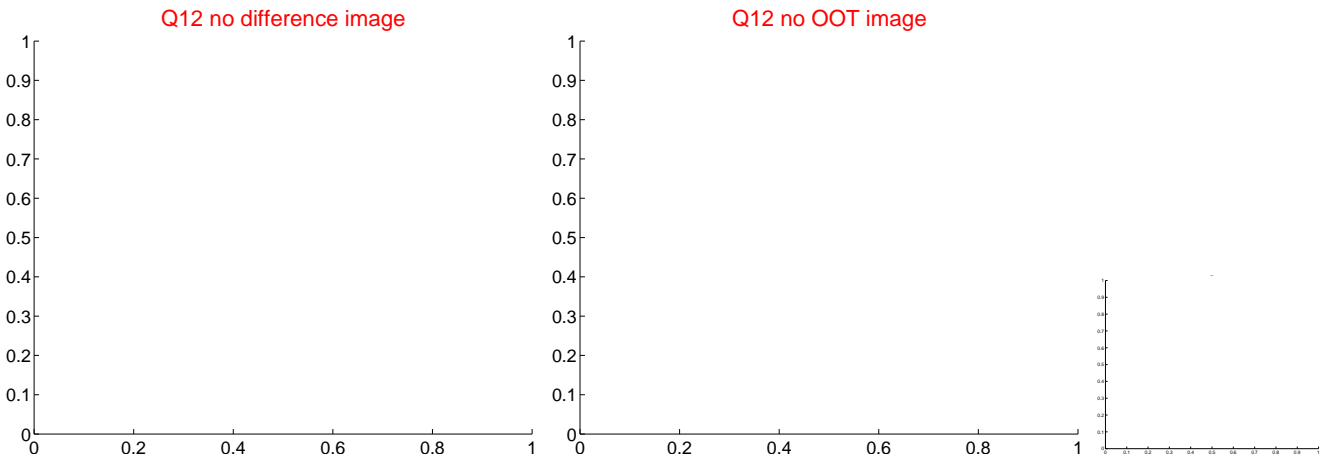
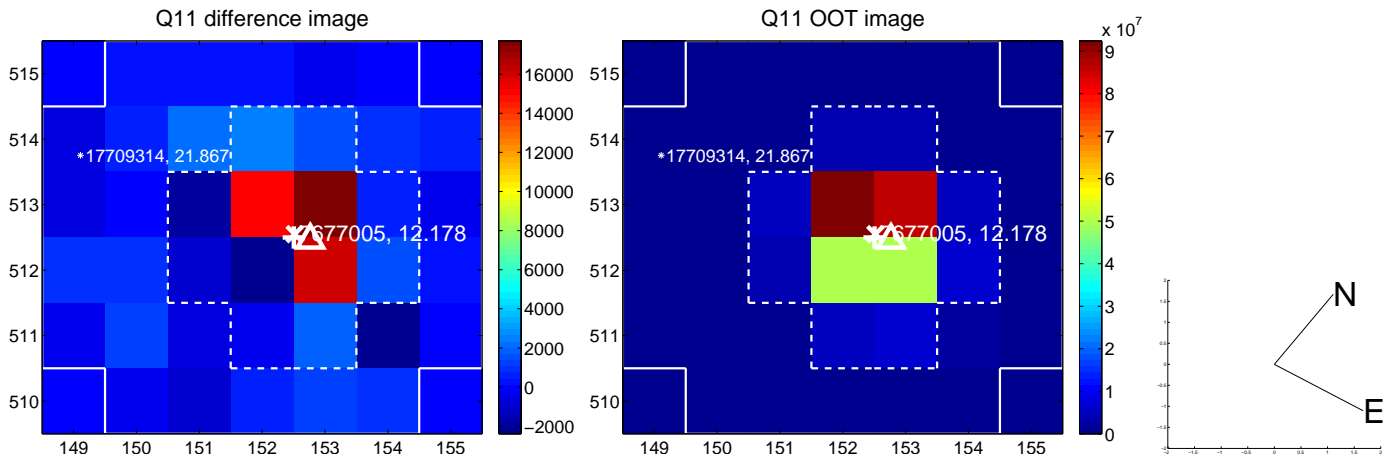
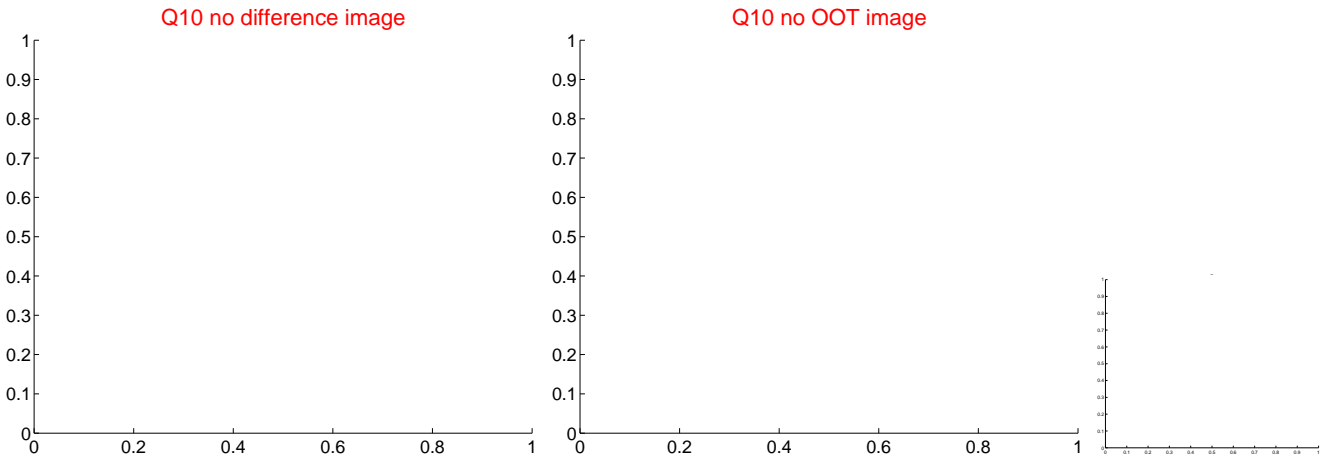
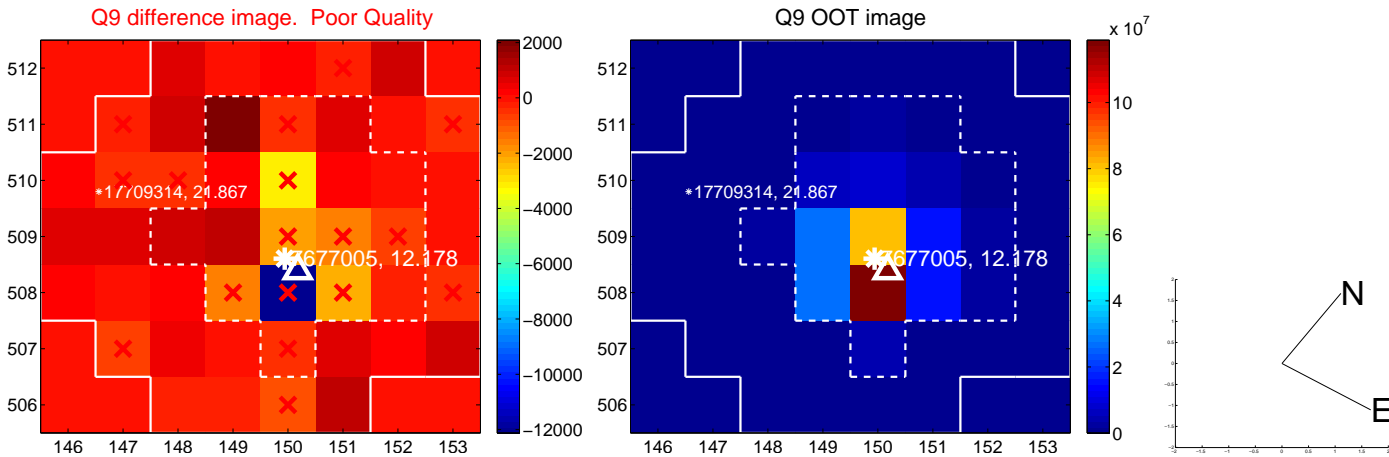
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



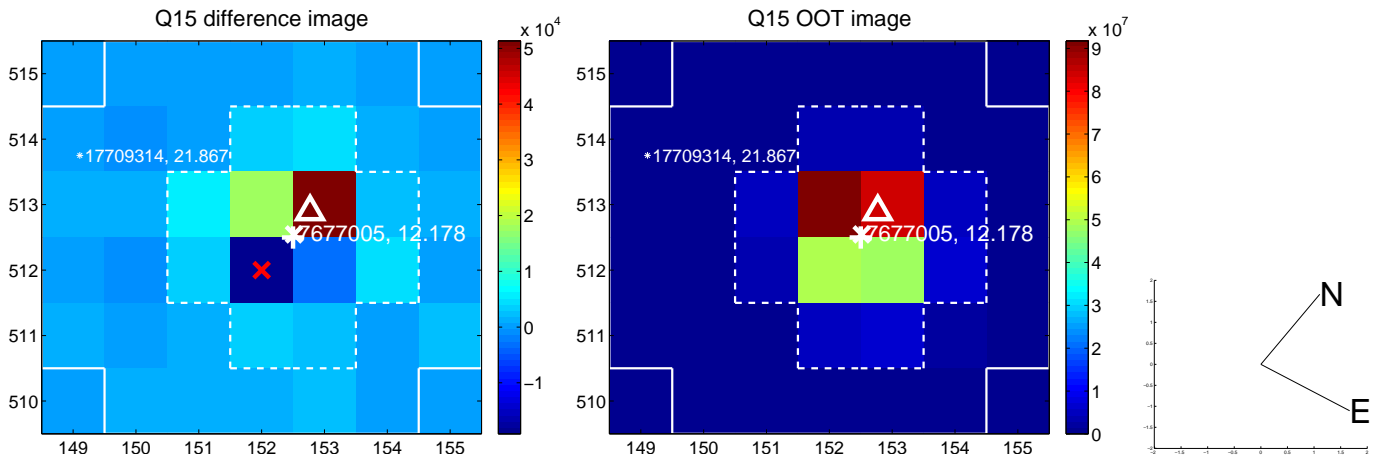
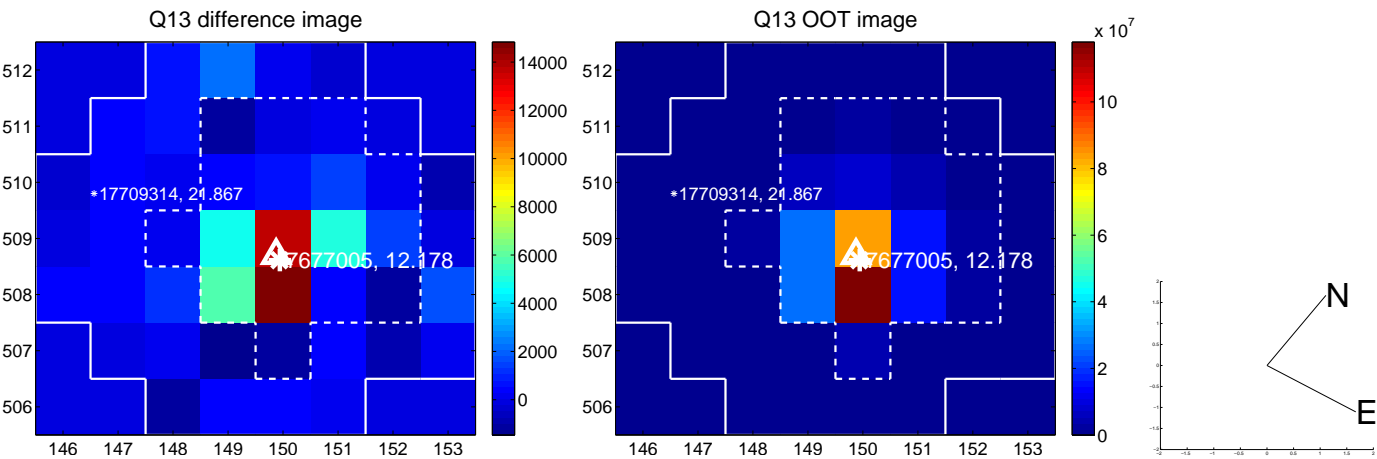
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



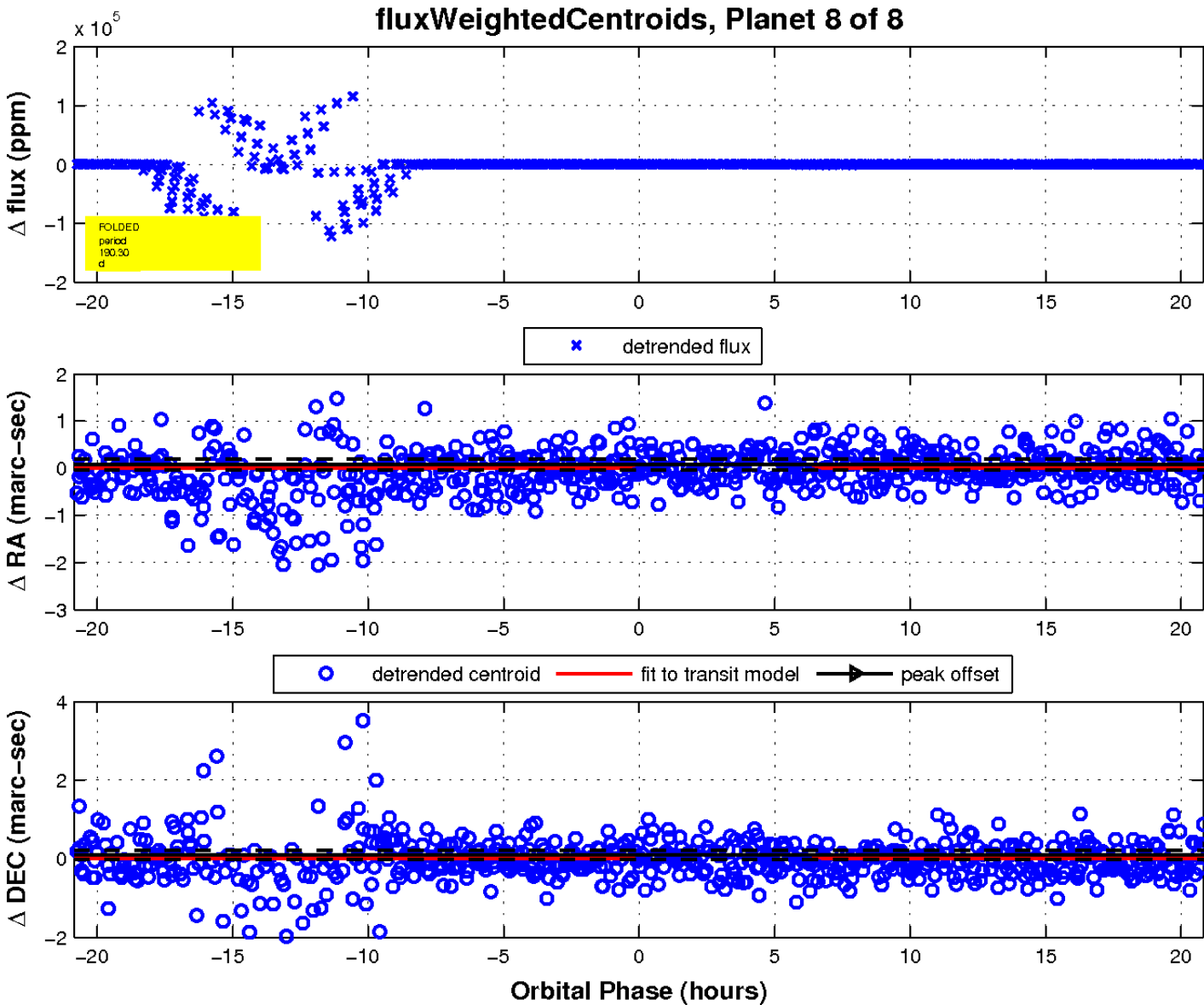
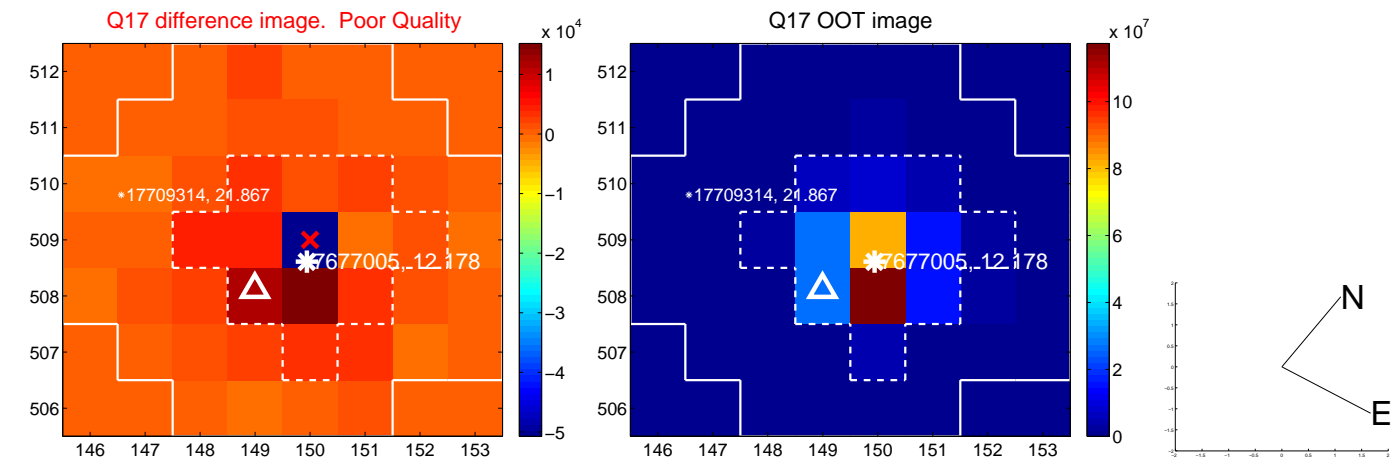
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

