

KIC 007340082

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})
007340082-01	OBS	No	2.108776	132.081927	37.0	8.983	8.3	8.0	0.79	5412	0.59	572.75
007340082-02	OBS	No	415.376436	525.078206	1147.4	16.143	15.9	8.9	0.79	5412	3.44	0.50
007340082-03	OBS	No	178.762895	276.249675	507.3	13.867	14.9	5.7	0.79	5412	2.47	1.54
007340082-05	OBS	No	273.670980	286.638901	976.0	19.380	13.5	8.2	0.79	5412	4.84	0.87
007340082-07	OBS	No	296.400804	199.210791	228.2	12.154	10.2	2.6	0.79	5412	1.34	0.78
007340082-08	OBS	No	405.594636	133.568454	587.0	3.136	8.0	6.6	0.79	5412	2.33	0.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007340082-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
007340082-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007340082-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—INCONSISTENT_TRANS
007340082-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
007340082-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS
007340082-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST

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

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

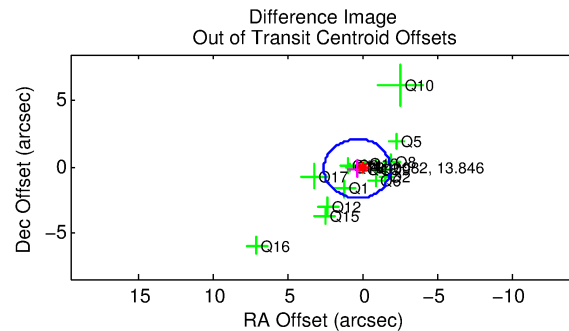
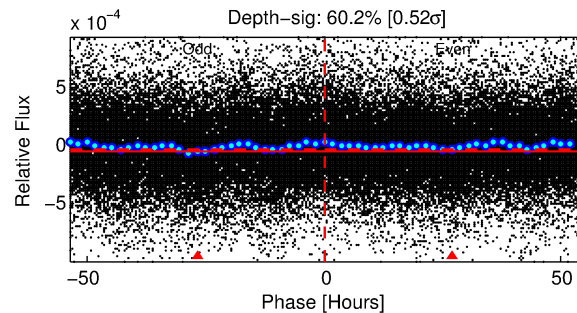
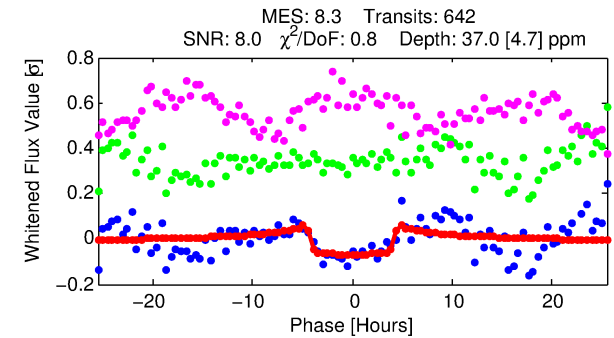
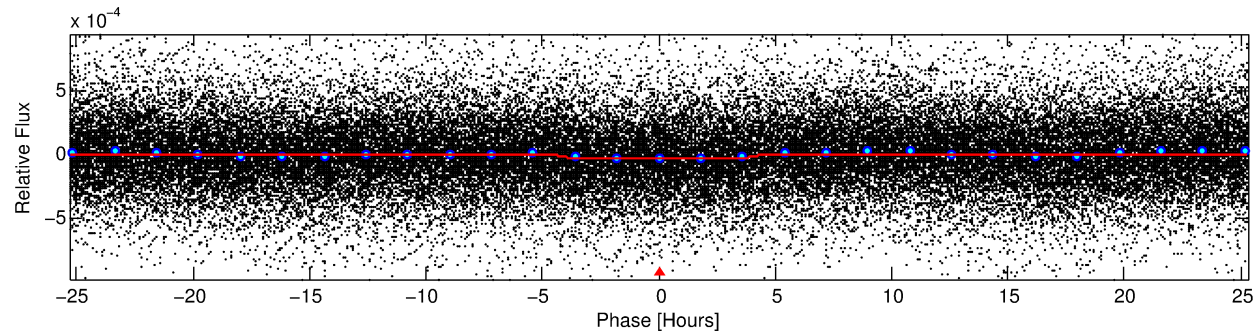
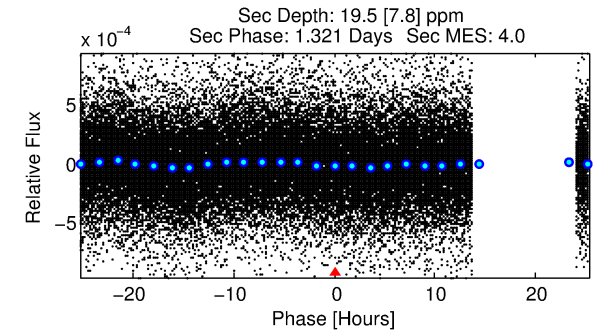
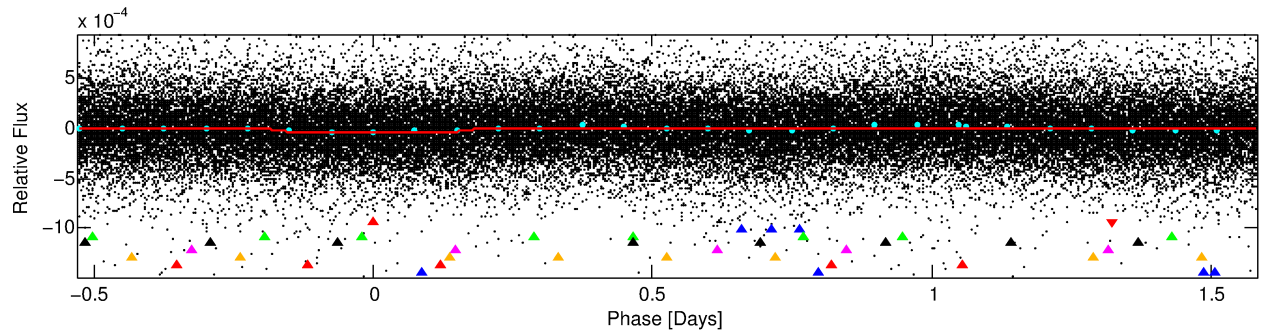
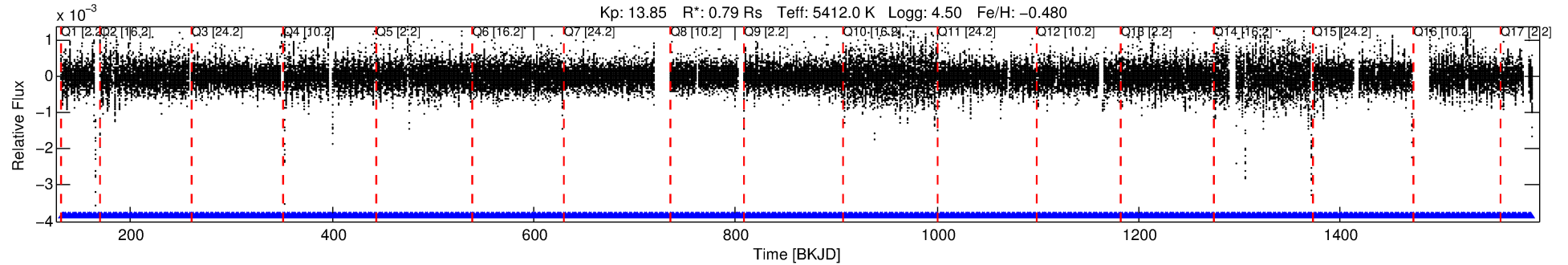
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007340082-01

No Significant Match Found

DV One-Page Summary

KIC: 7340082 Candidate: 1 of 8 Period: 2.109 d



DV Fit Results:

Period = 2.10878 [0.00003] d
Epoch = 132.0819 [0.0064] BKJD
Rp/R* = 0.0069 [0.0013]
a/R* = 1.18 [0.29]
b = 0.93 [0.13]
Seff = 572.76 [131.42]
Teq = 1247 [72] K
Rp = 0.59 [0.14] Re
a = 0.0289 [0.0038] AU
Ag = 25.62 [14.94] [1.65σ]
Teffp = 4339 [610] K [5.03σ]

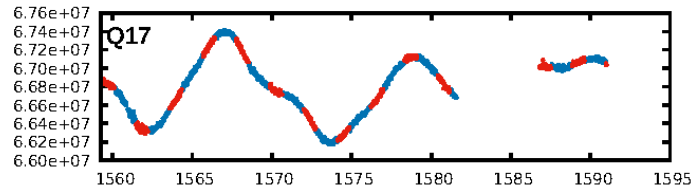
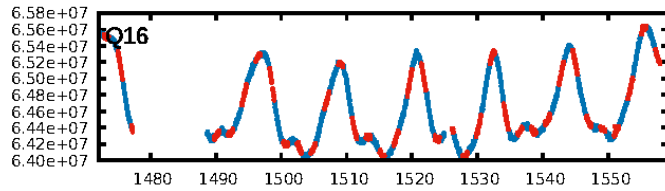
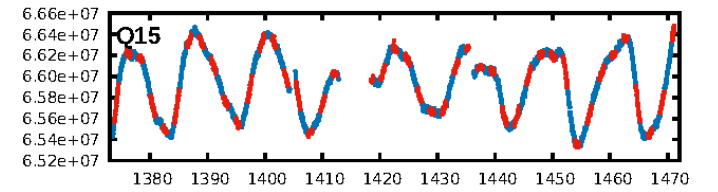
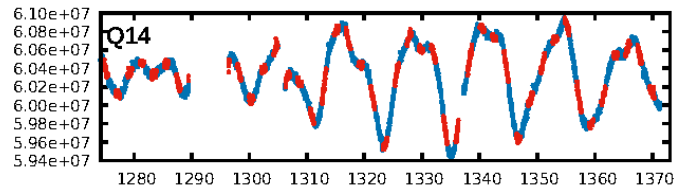
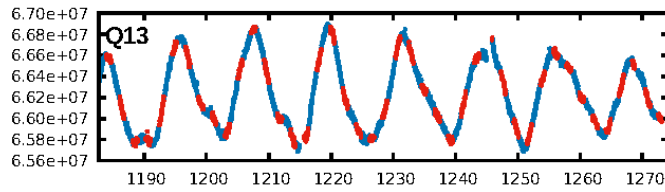
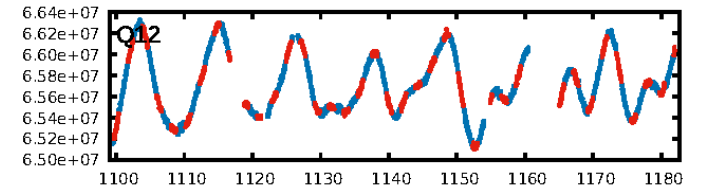
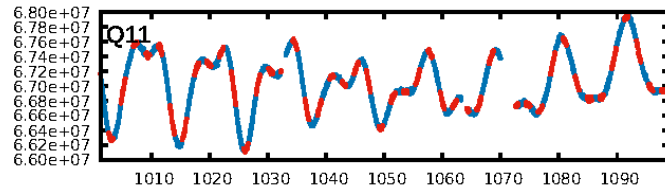
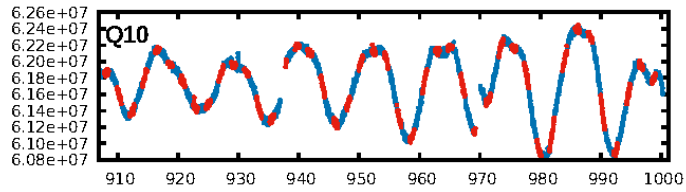
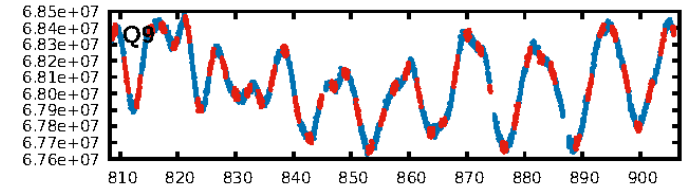
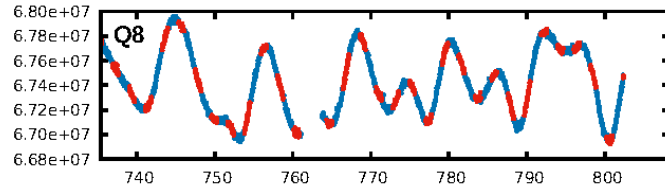
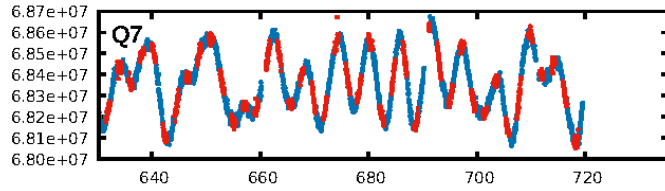
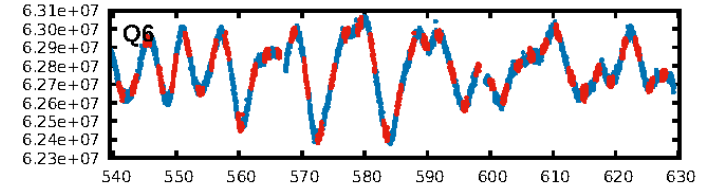
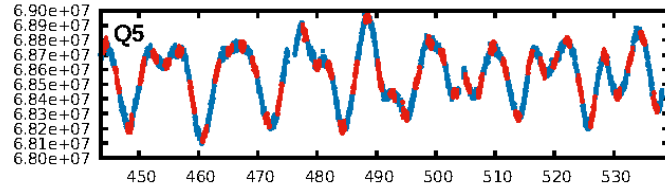
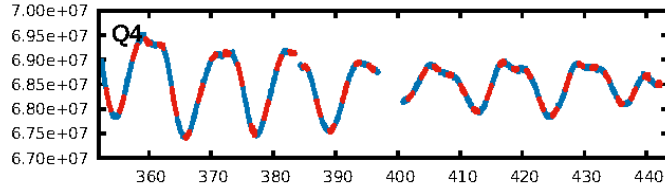
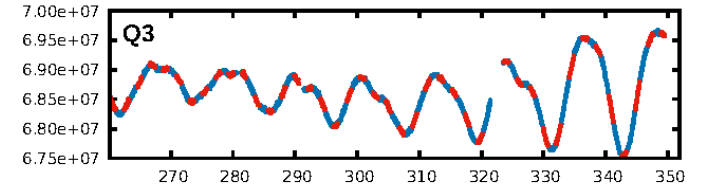
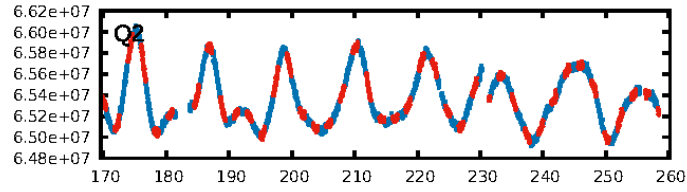
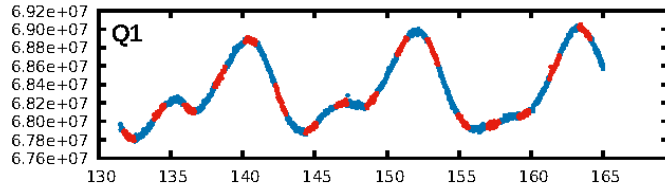
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [402.53σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.33e-10
RollingBand-fgt: 1.00 [613/613]
GhostDiagnostic-chr: 2.092
Centroid-sig: 5.4%
Centroid-so: 1.680 arcsec [1.76σ]
OotOffset-rm: 0.364 arcsec [0.49σ]
KicOffset-rm: 0.378 arcsec [0.60σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.65 [11/17]
DiffImageOverlap-fno: 1.00 [17/17]

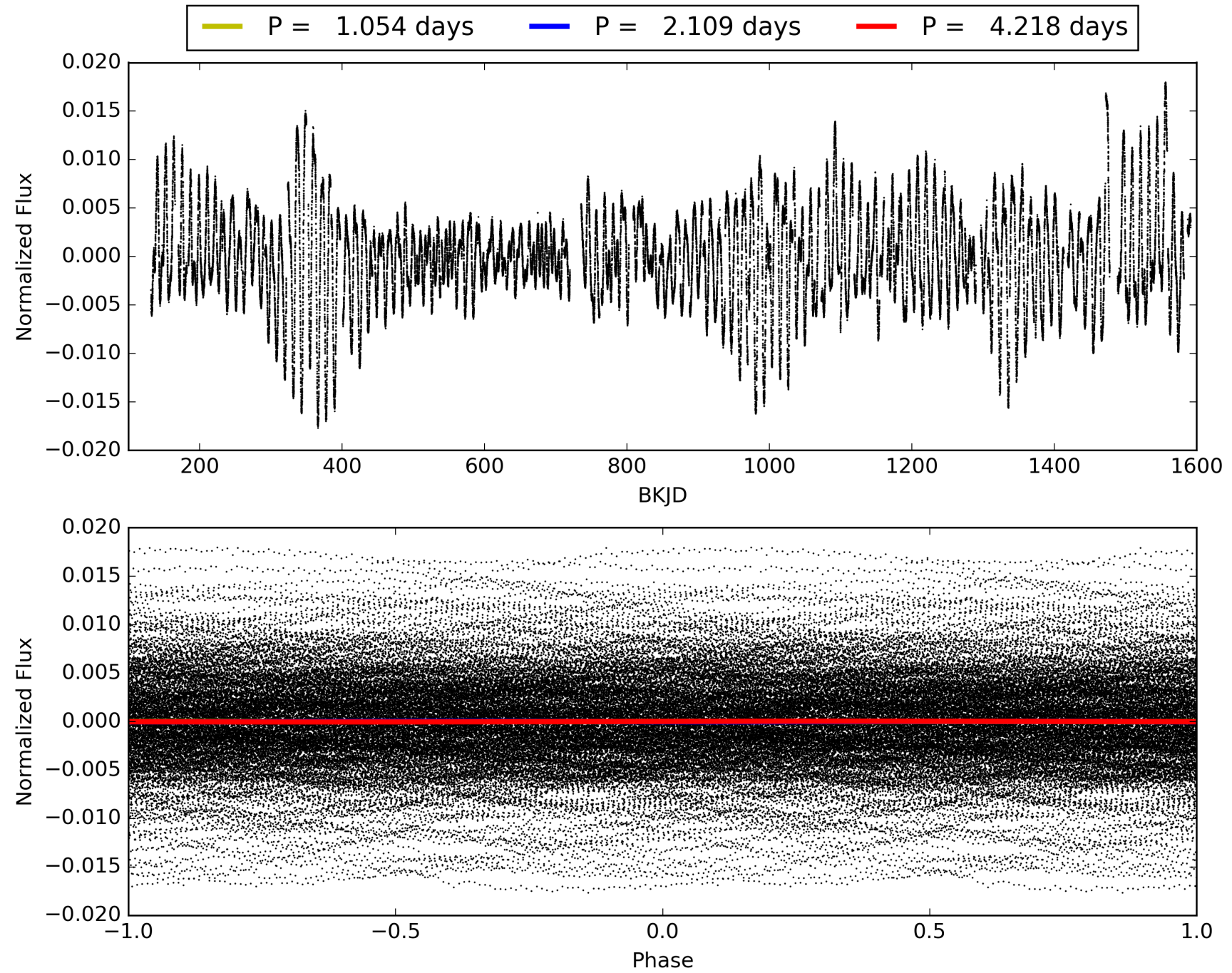
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 02:41:41 Z

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

TCE 007340082-01, PDC Light Curves

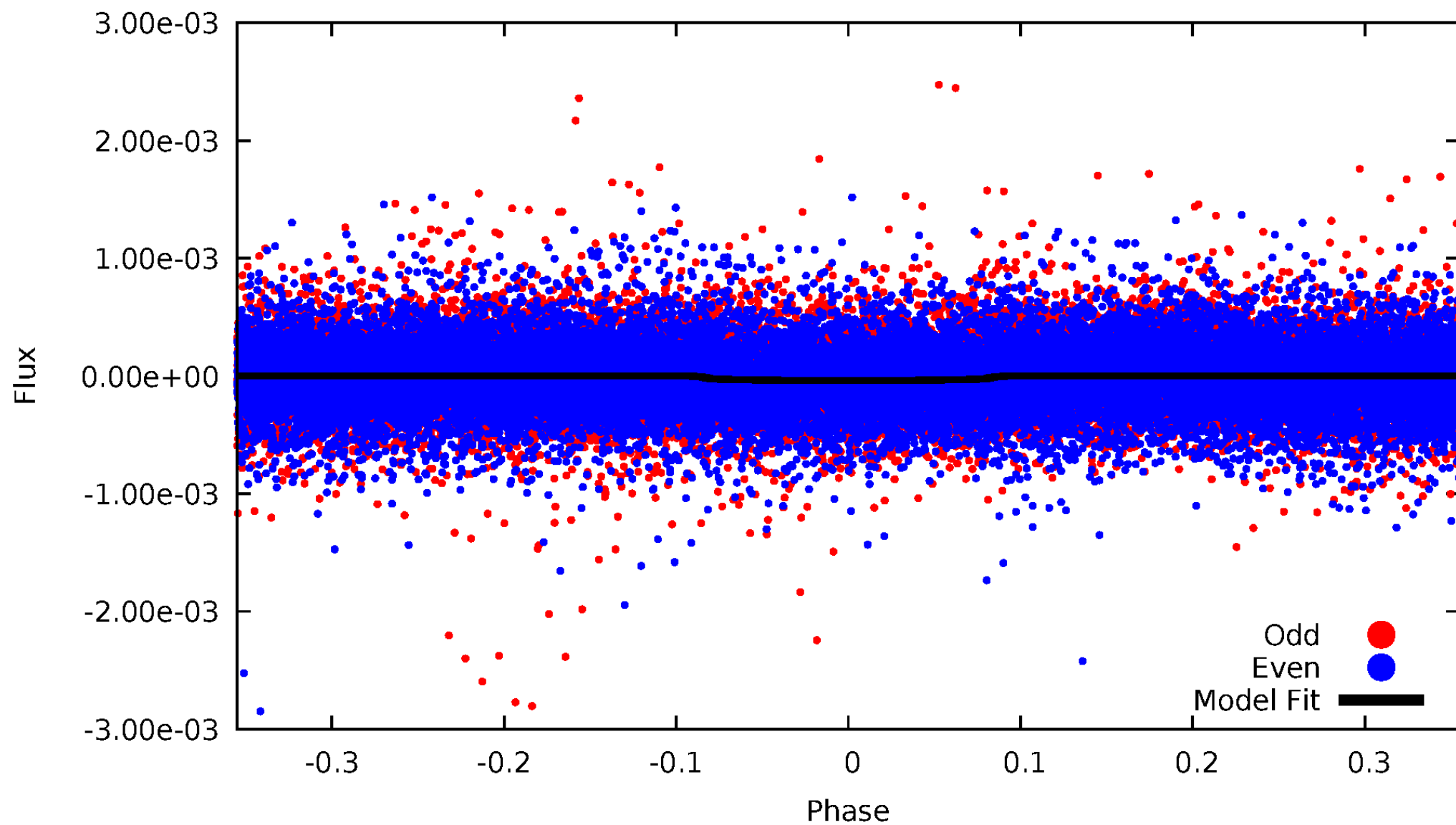


TCE 007340082-01



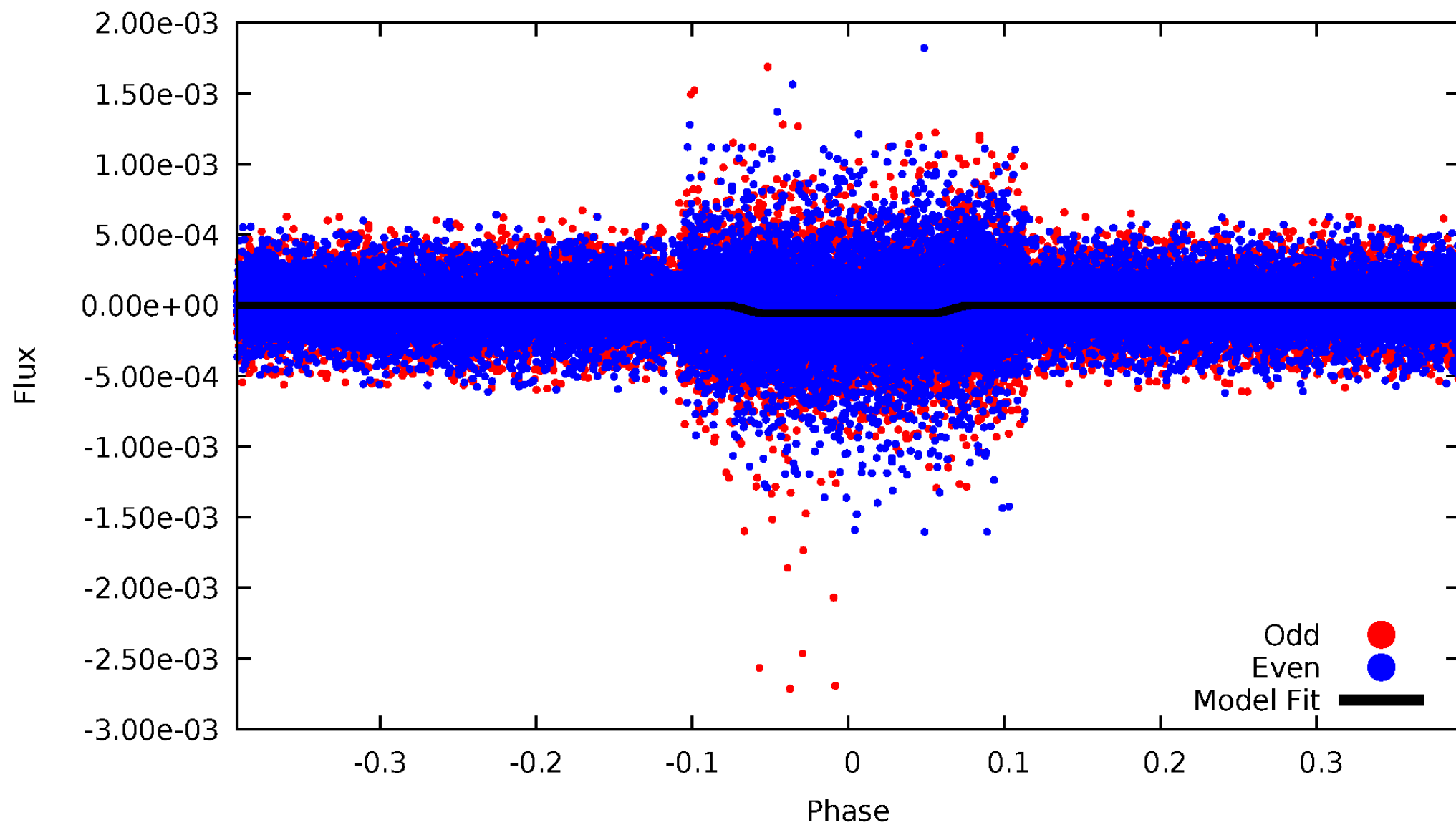
DV Odd/Even

TCE 007340082-01

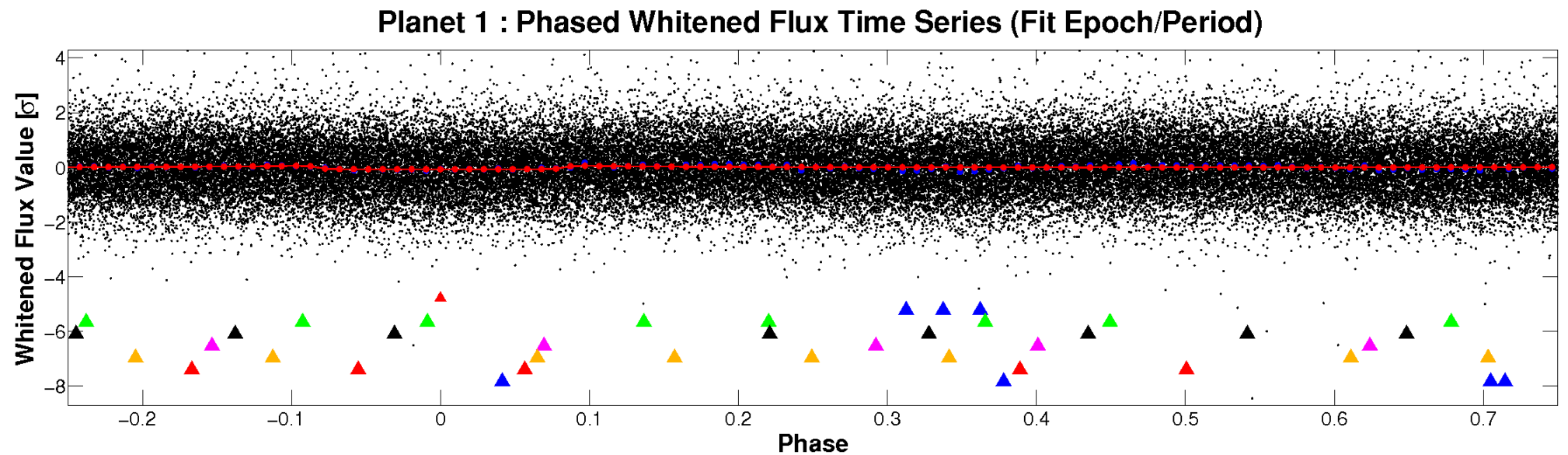
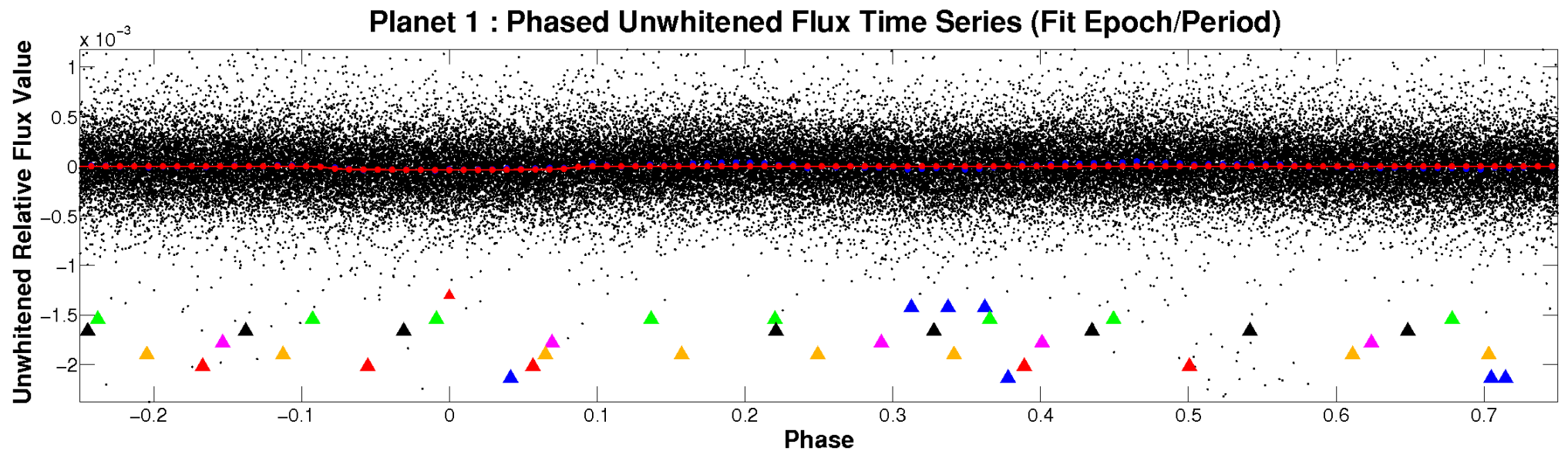


ALT Odd/Even

TCE 007340082-01

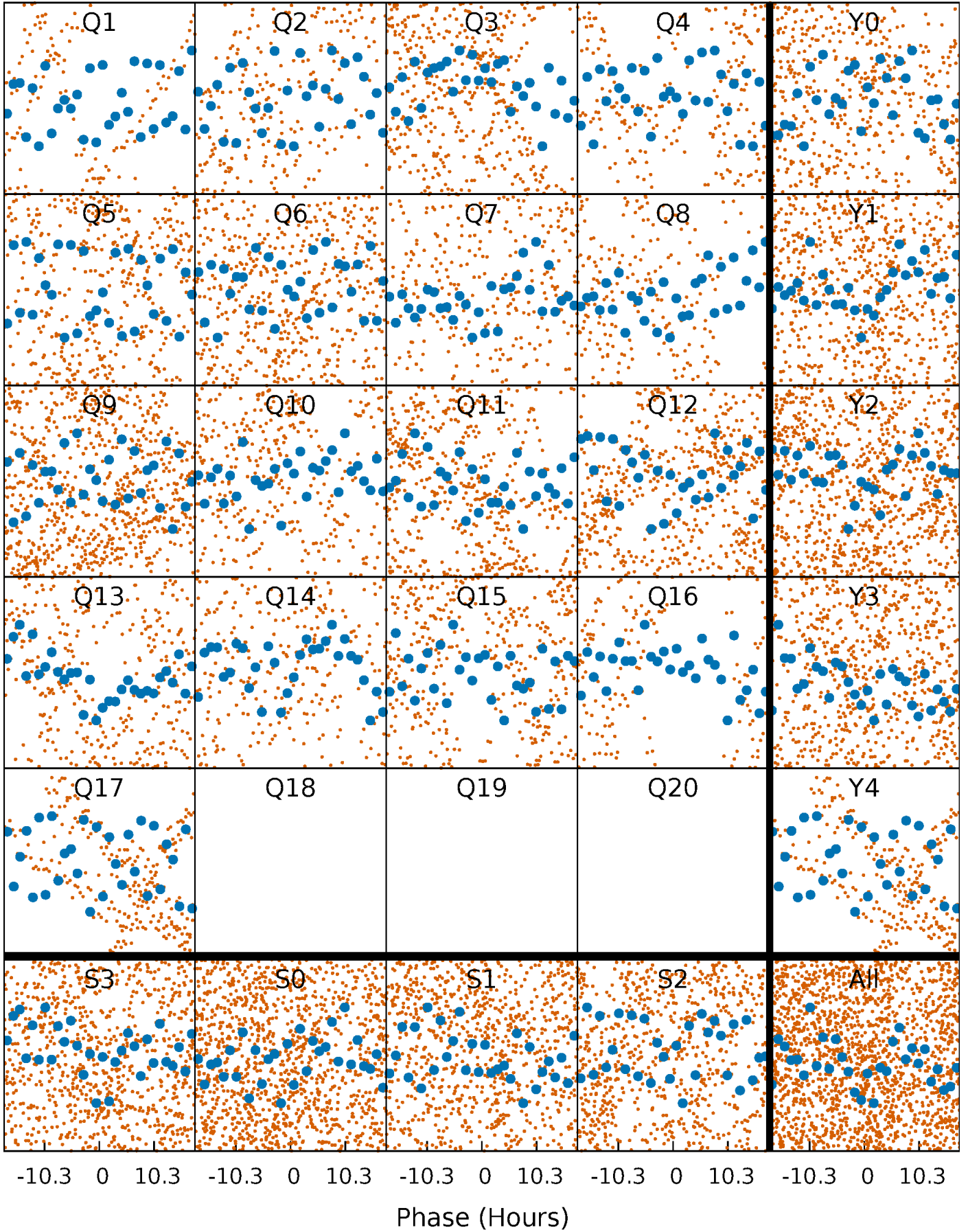


Non-Whitened Vs. Whitened Light Curve



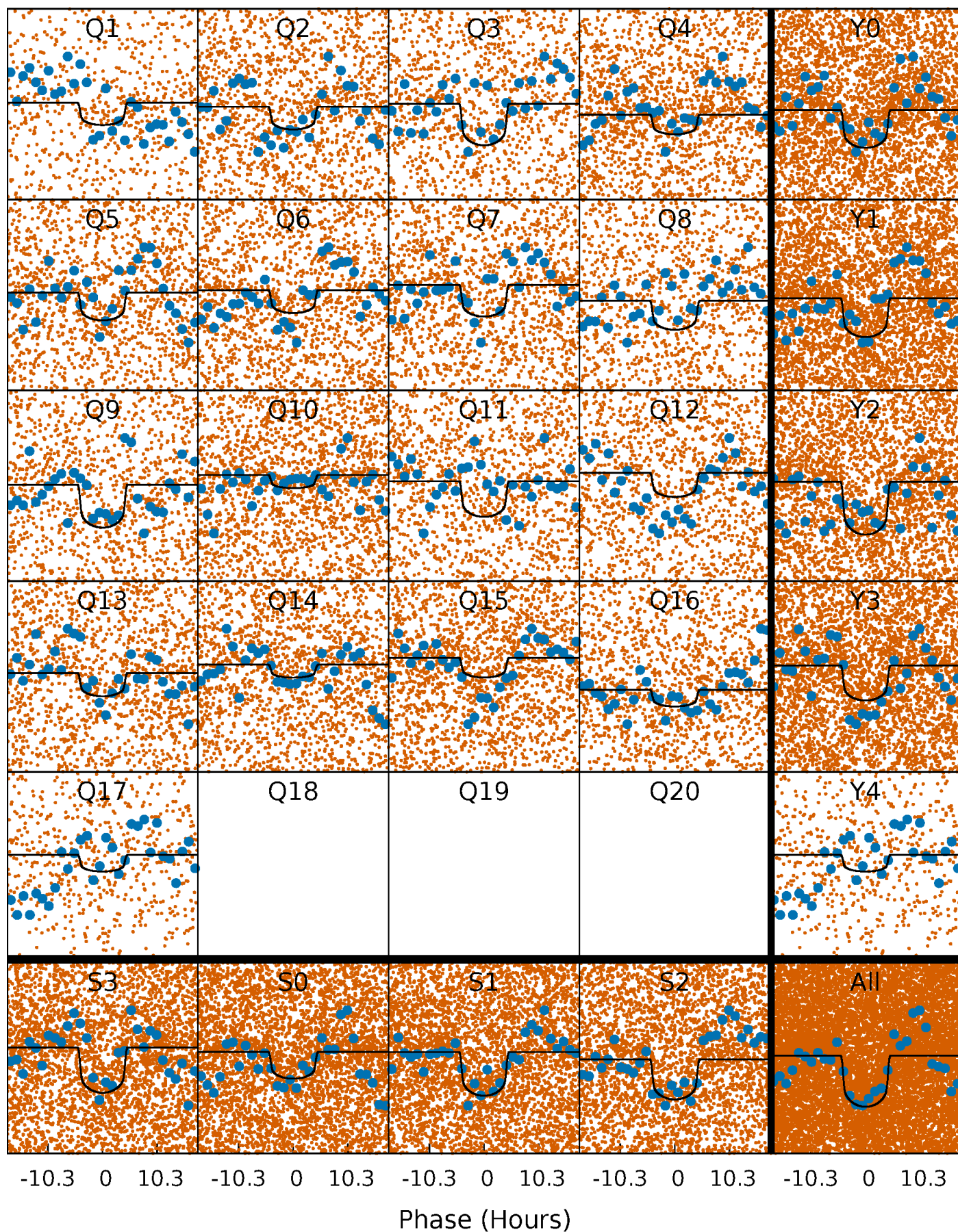
PDC Quarter-Phased Transit Curves

TCE 007340082-01 P= 2.108776 Days $T_0=132.081927$ (BKJD)



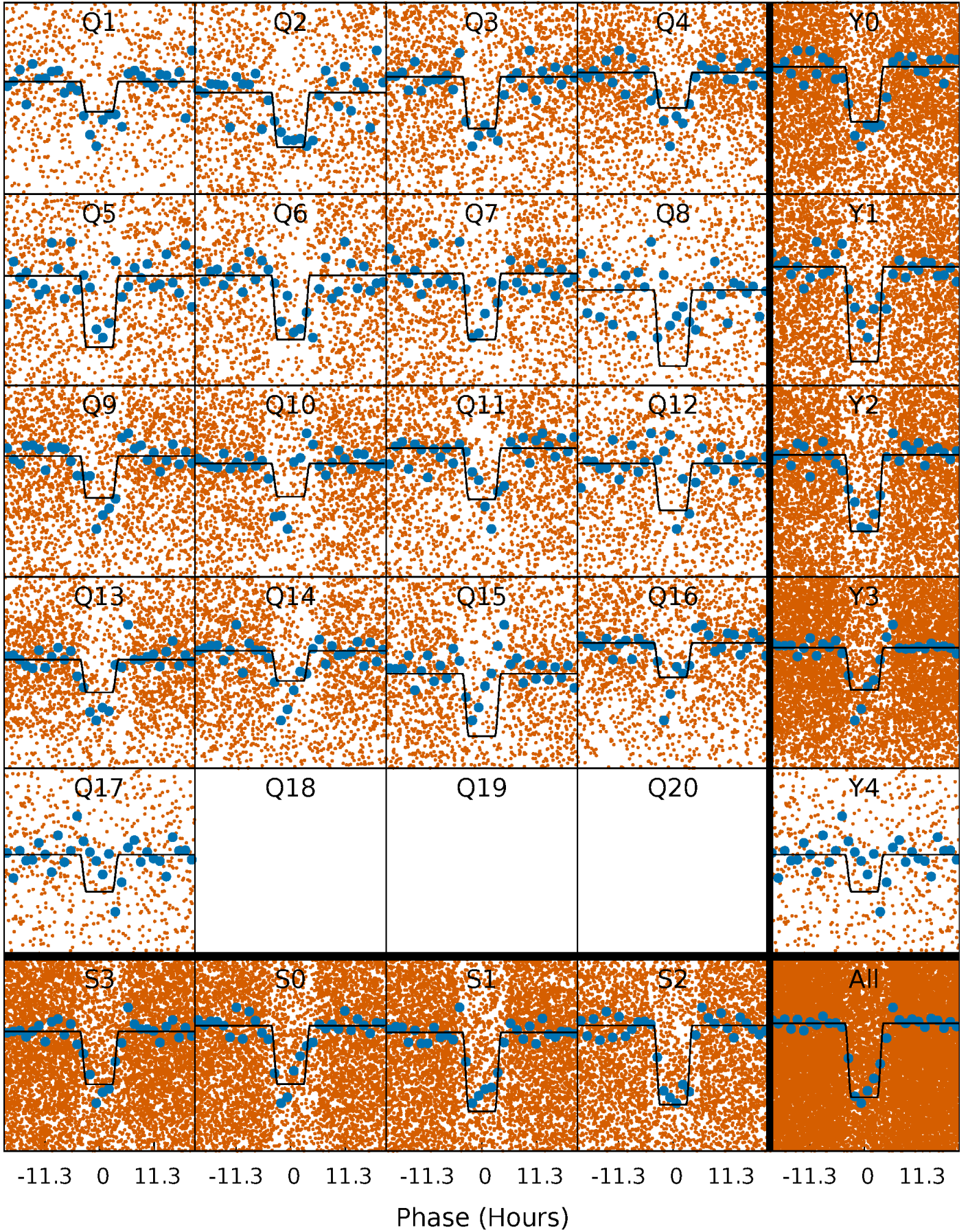
DV Quarter-Phased Transit Curves

TCE 007340082-01 P= 2.108776 Days $T_0=132.081927$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

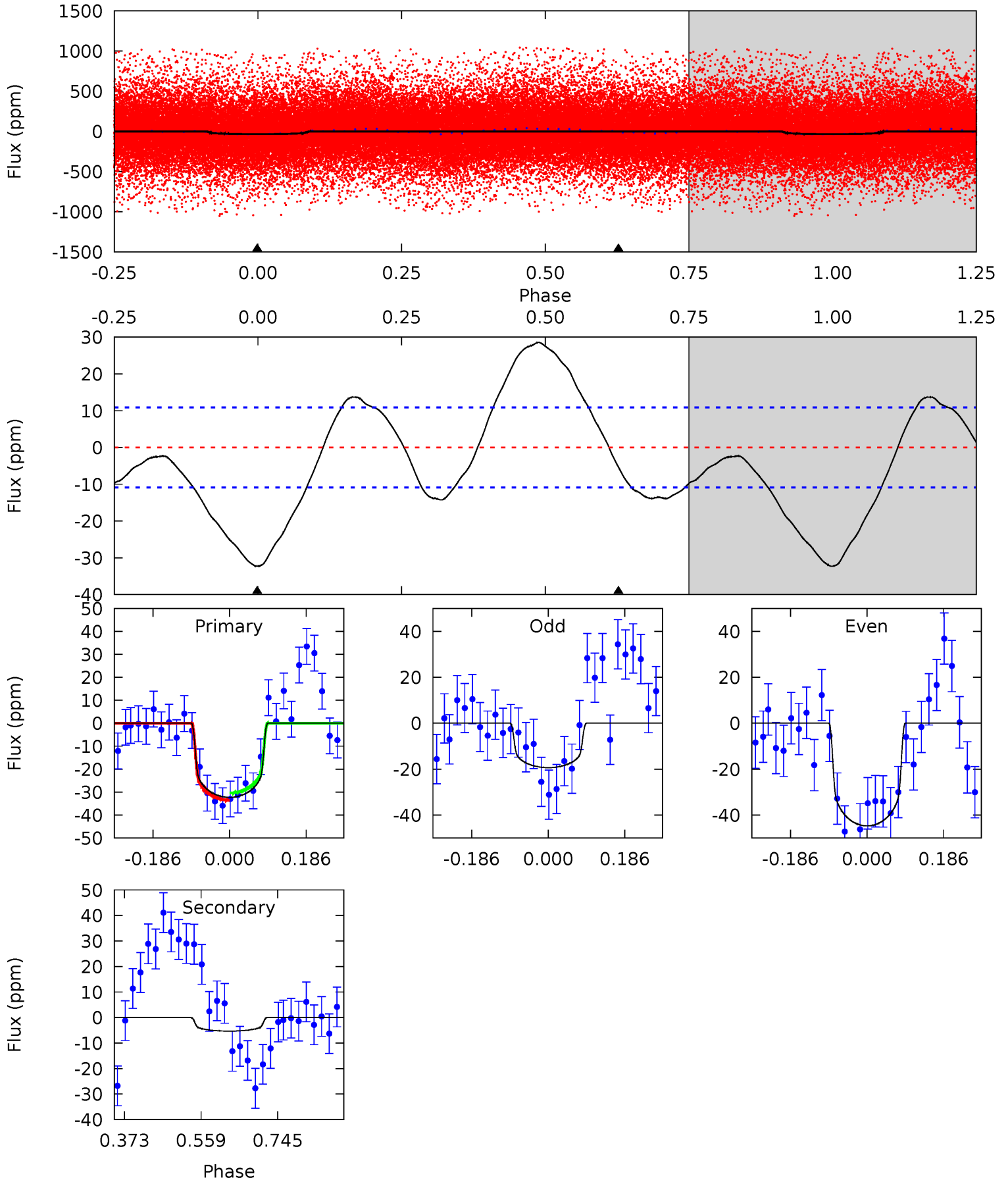
TCE 007340082-01 P= 2.108789 Days $T_0=132.058762$ (BKJD)



DV Model-Shift Uniqueness Test

007340082-01, P = 2.108776 Days, E = 129.973151 Days

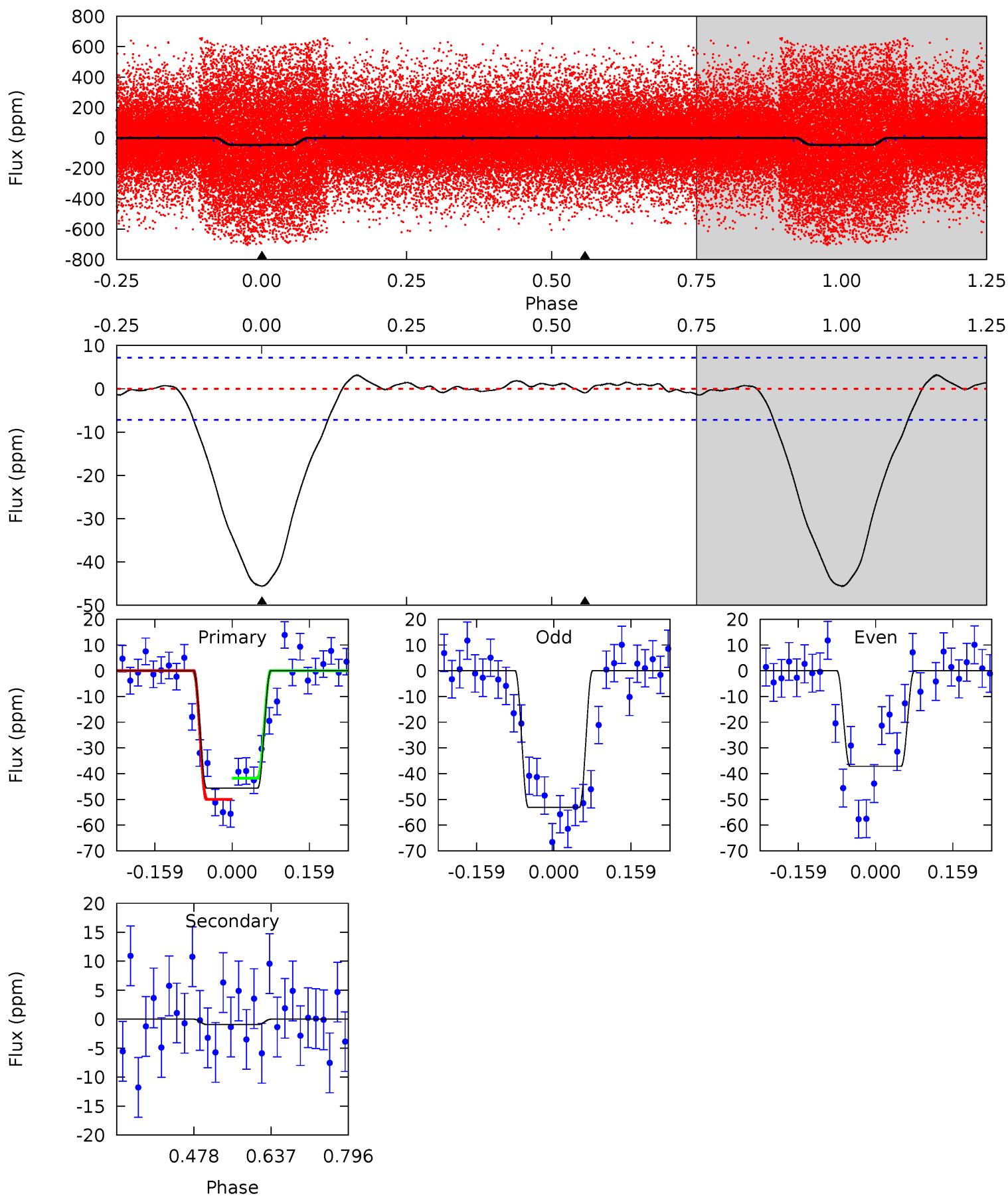
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	2.16	0	0	4.43	1.32	4.22	13.1	13.1	2.16	2.16	5.22	1.20	0.47	0.64



Alt Model-Shift Uniqueness Test

007340082-01, P = 2.108789 Days, E = 129.949973 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.4	0.58	0	0	4.47	1.41	0.58	28.4	28.4	0.58	0.58	4.97	1.46	0.06	2.56



Stellar Parameters For KIC 007340082

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5412^{+162}_{-146}	$4.503^{+0.110}_{-0.099}$	$-0.480^{+0.300}_{-0.300}$	$0.788^{+0.117}_{-0.096}$	$0.720^{+0.105}_{-0.045}$	$2.075^{+0.972}_{-0.609}$
	+3%/-3%	+2%/-2%	+62%/-62%	+15%/-12%	+15%/-6%	+47%/-29%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007340082-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-5 ± 2	$0.59^{+0.13}_{-0.12}$	1746^{+80}_{-85}	3554^{+388}_{-447}	$6.936^{+5.979}_{-3.683}$
Alt.	-1 ± 2	$0.64^{+0.13}_{-0.12}$	1741^{+86}_{-77}	2598^{+524}_{-5268}	$1.036^{+2.189}_{-1.673}$

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

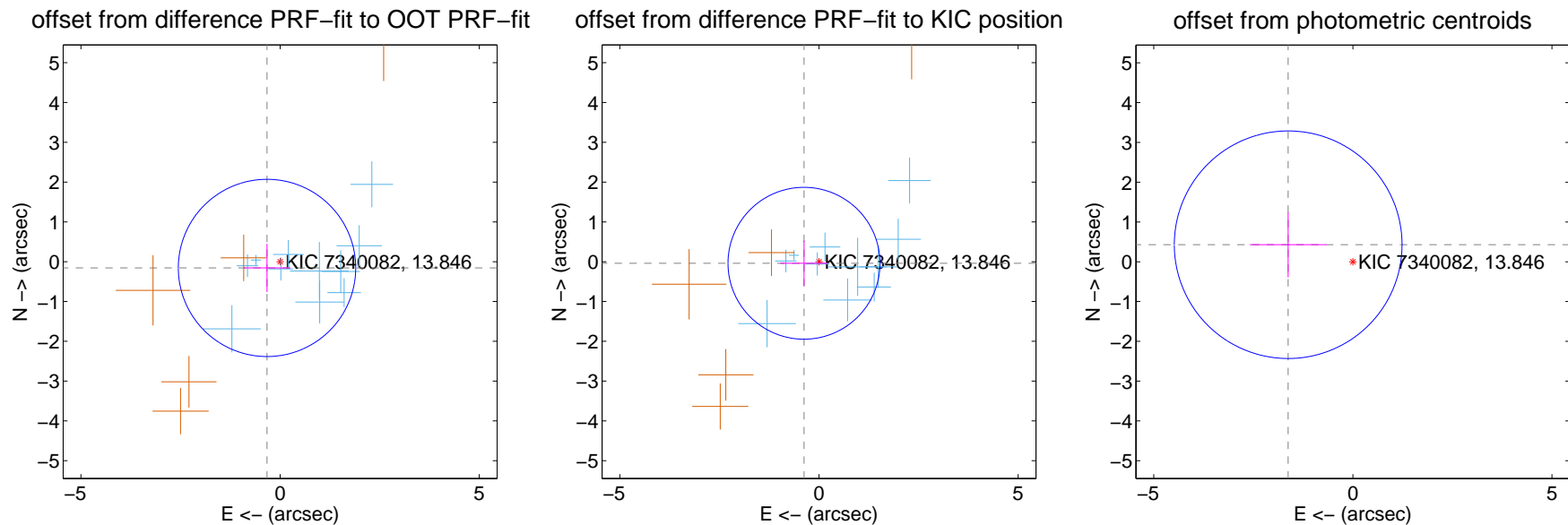
DV Centroid Data

Supplemental centroid analysis for 007340082-01. Kepler magnitude: 13.85. Transit SNR 8.03

There are 11 quarters with good PRF difference image offsets

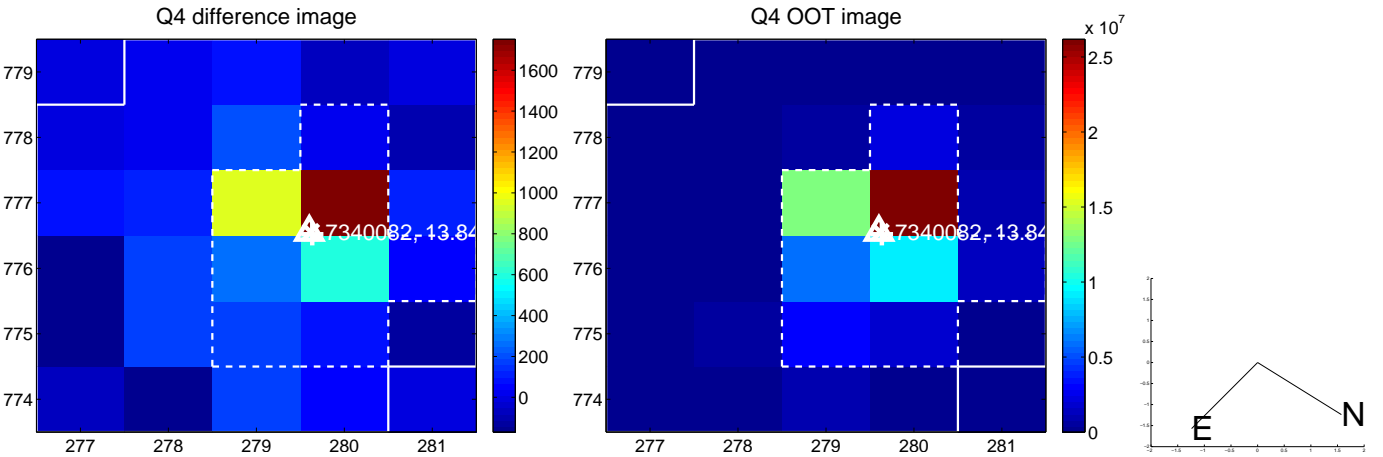
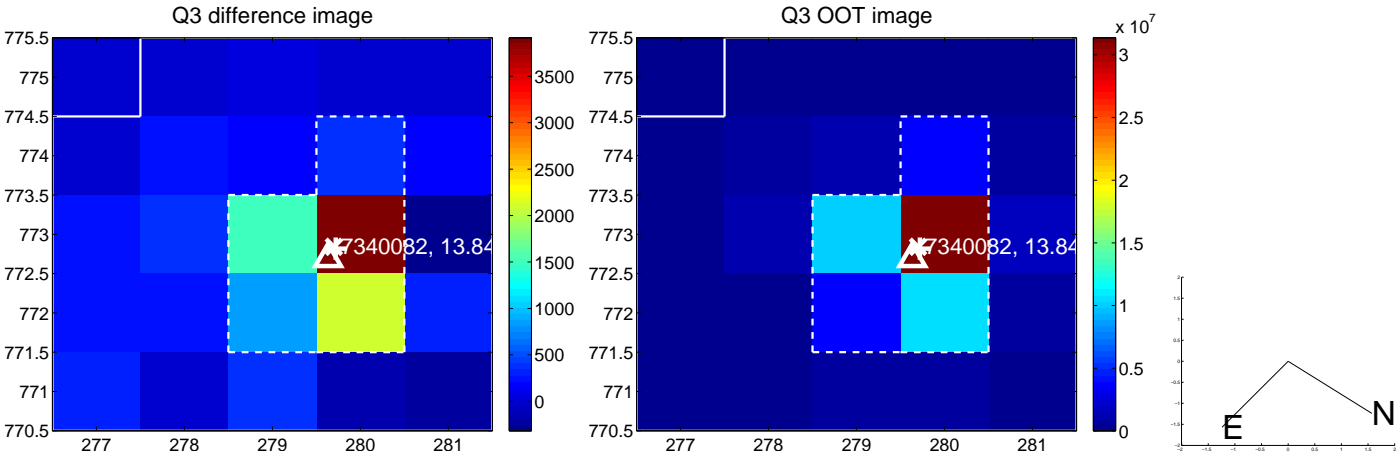
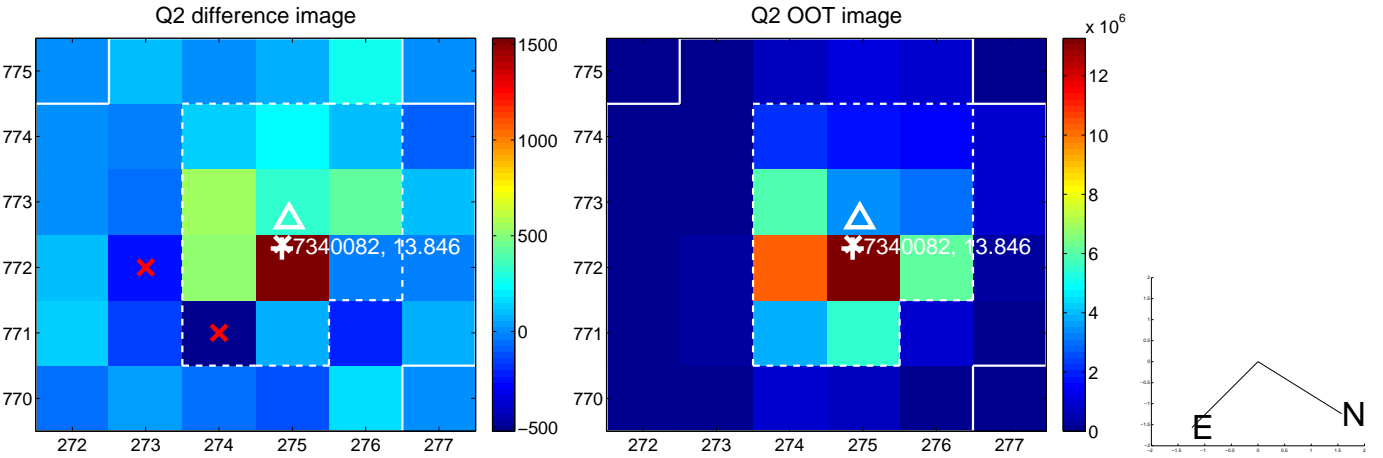
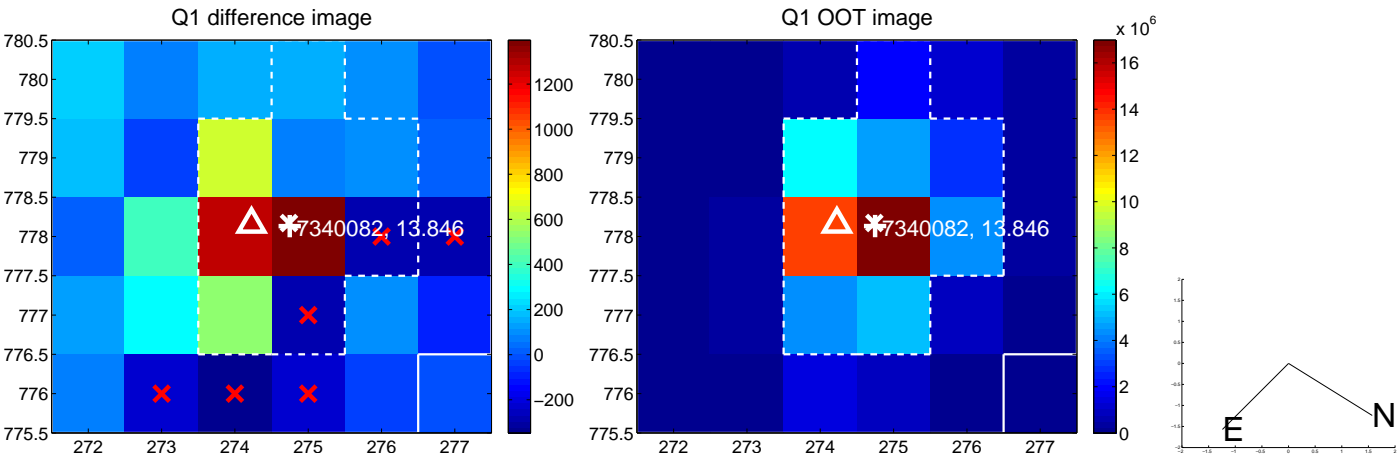
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.364 ± 0.742	0.49	0.329 ± 0.582	-0.156 ± 0.605
PRF-fit source offset from KIC position	0.378 ± 0.636	0.60	0.376 ± 0.591	-0.040 ± 0.570
photometric centroid source offset	1.68 ± 0.95	1.76	1.62 ± 0.96	0.43 ± 0.82

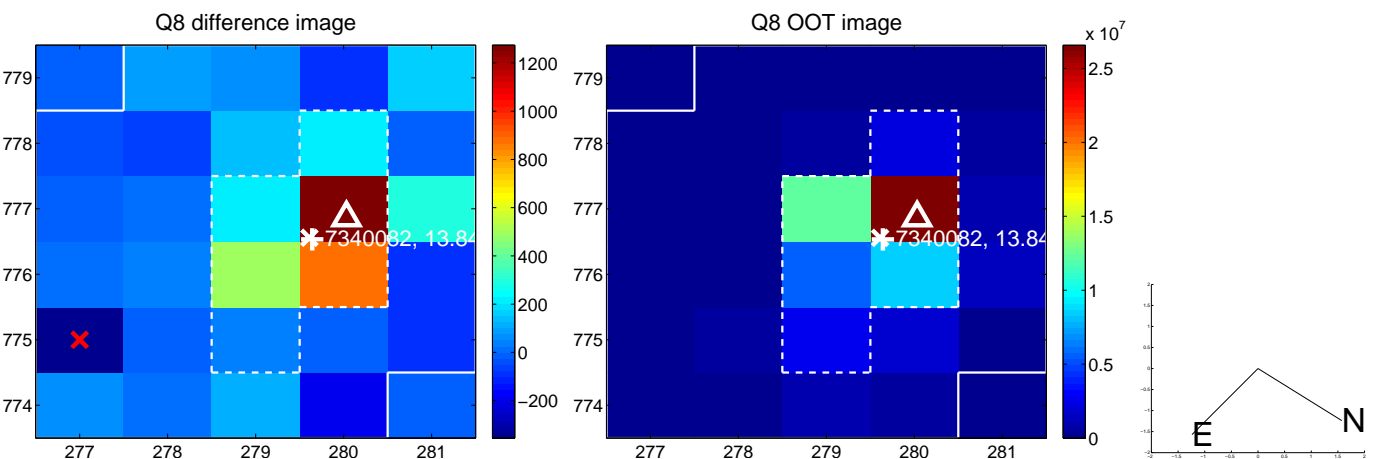
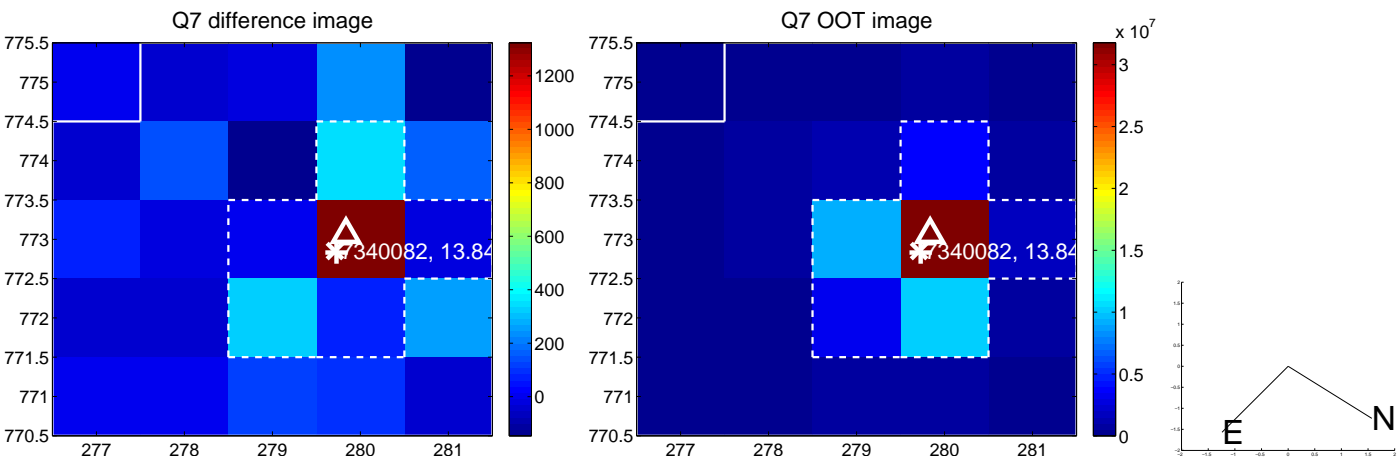
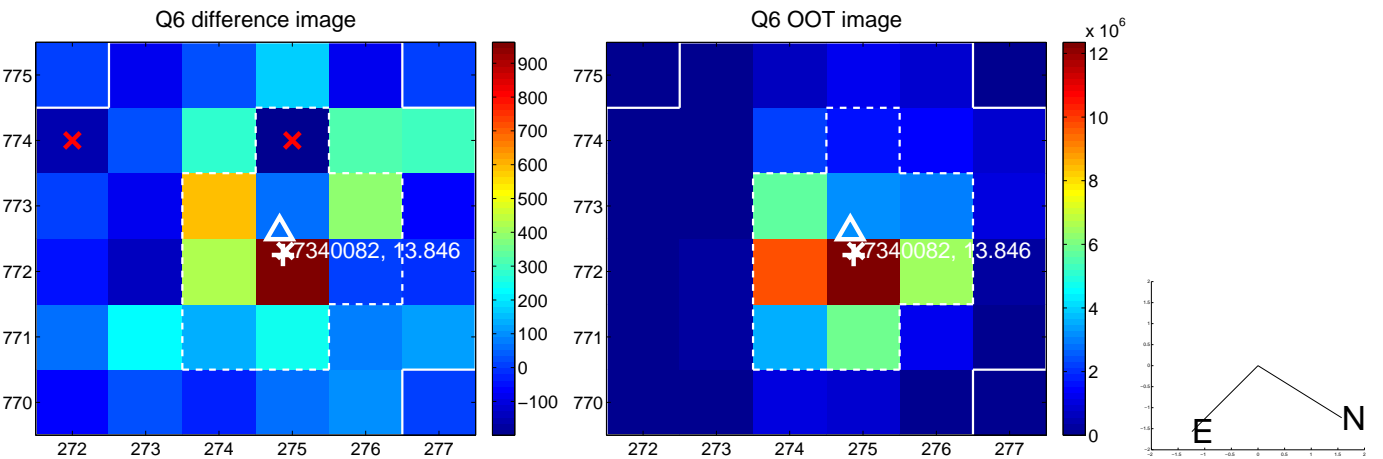
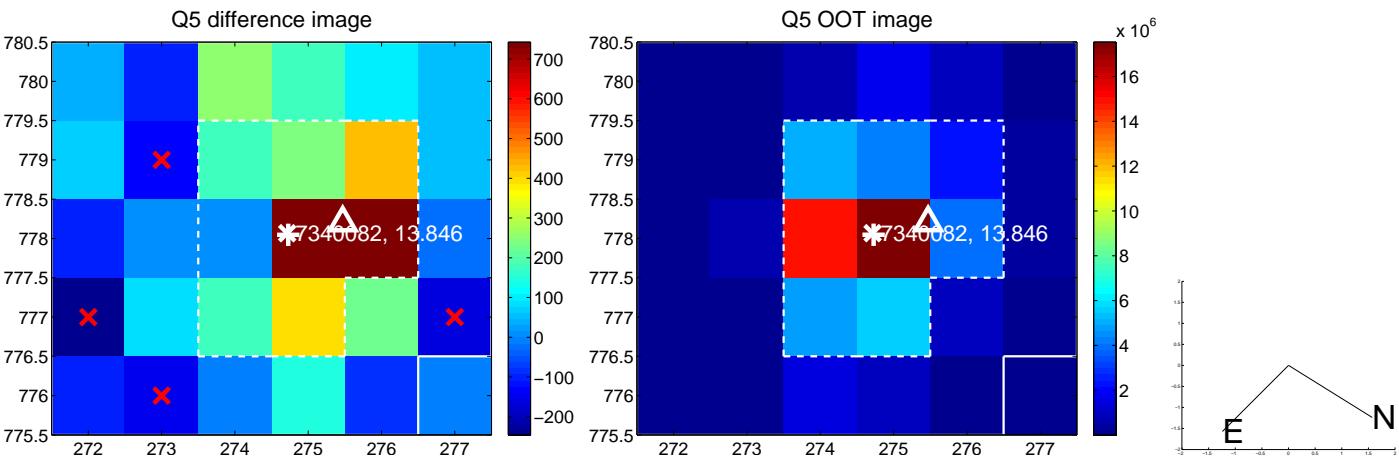


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

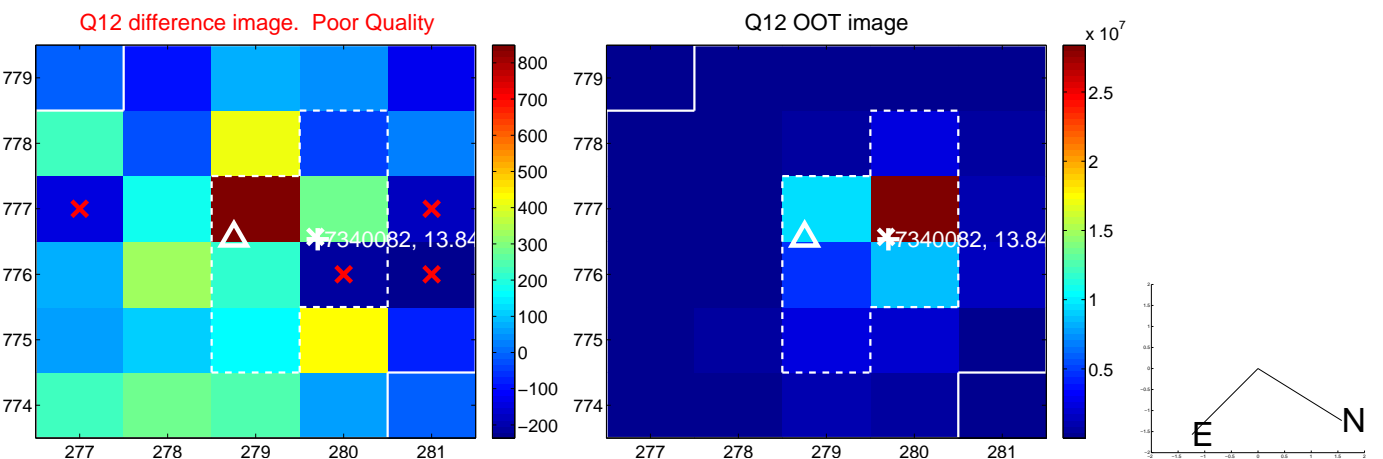
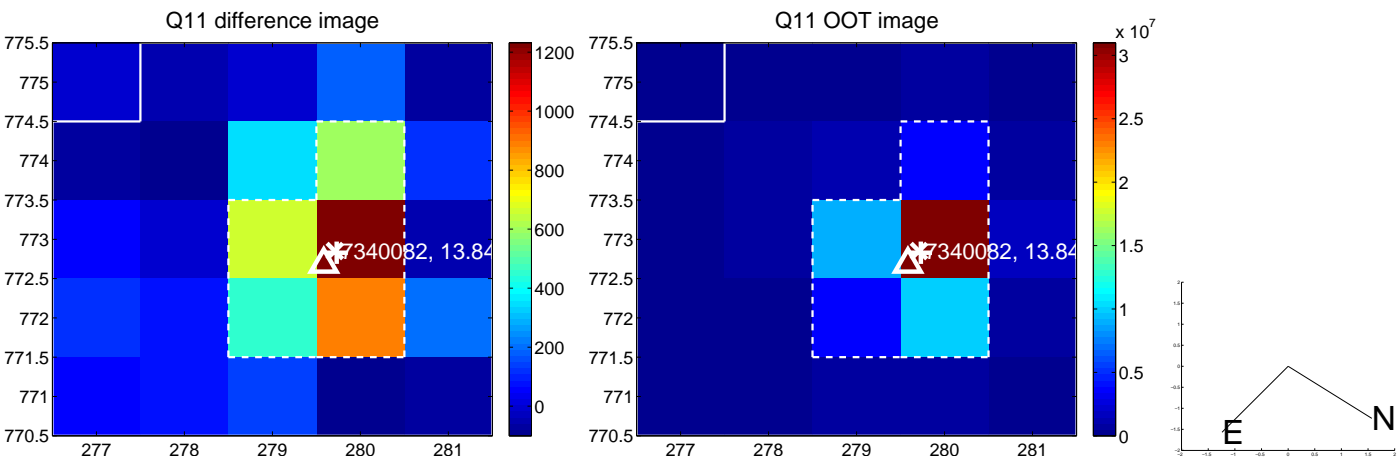
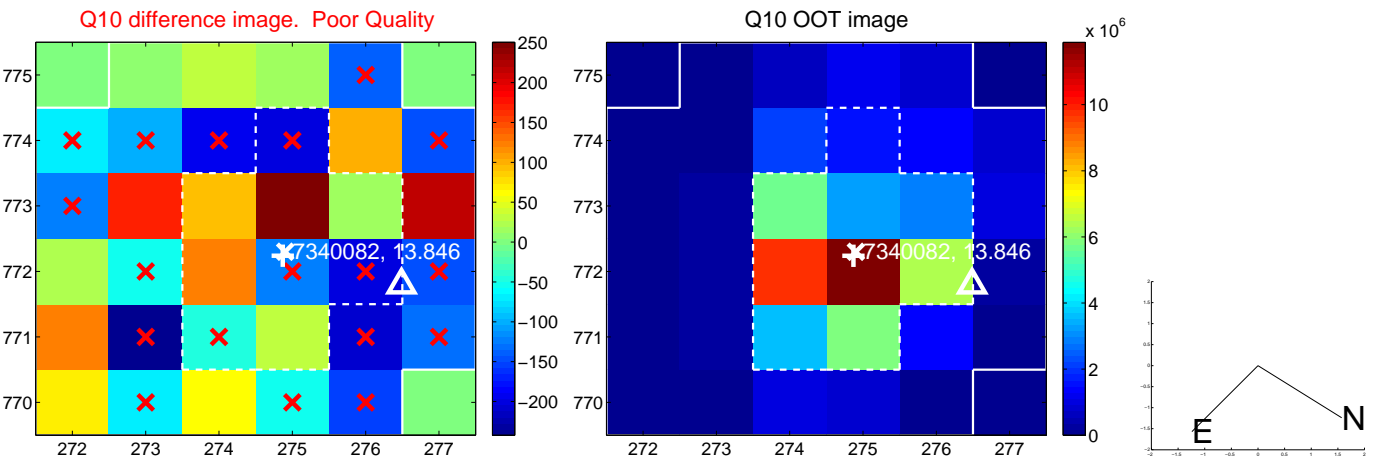
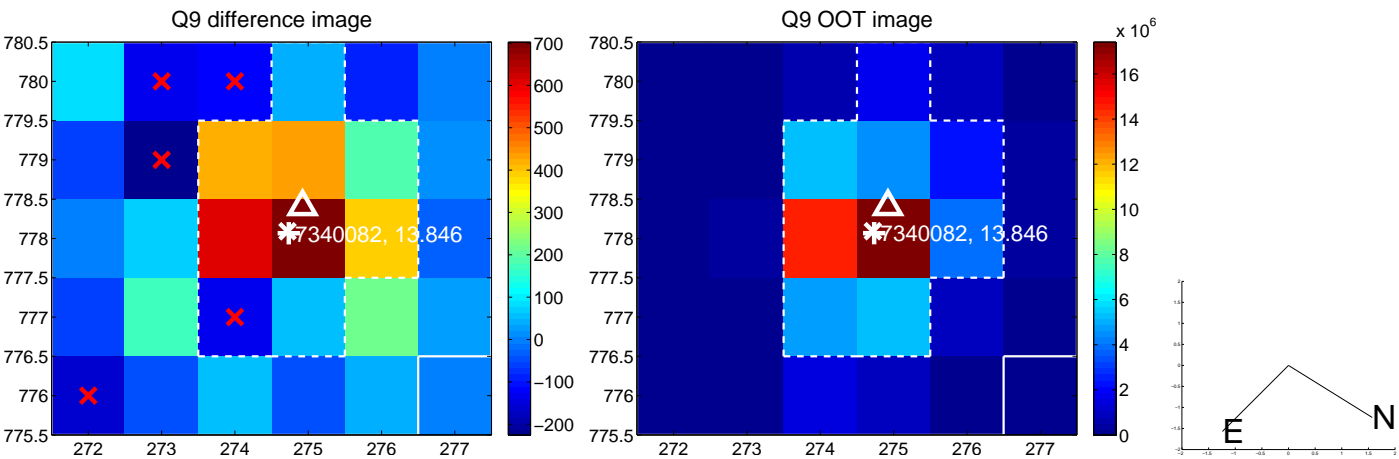
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



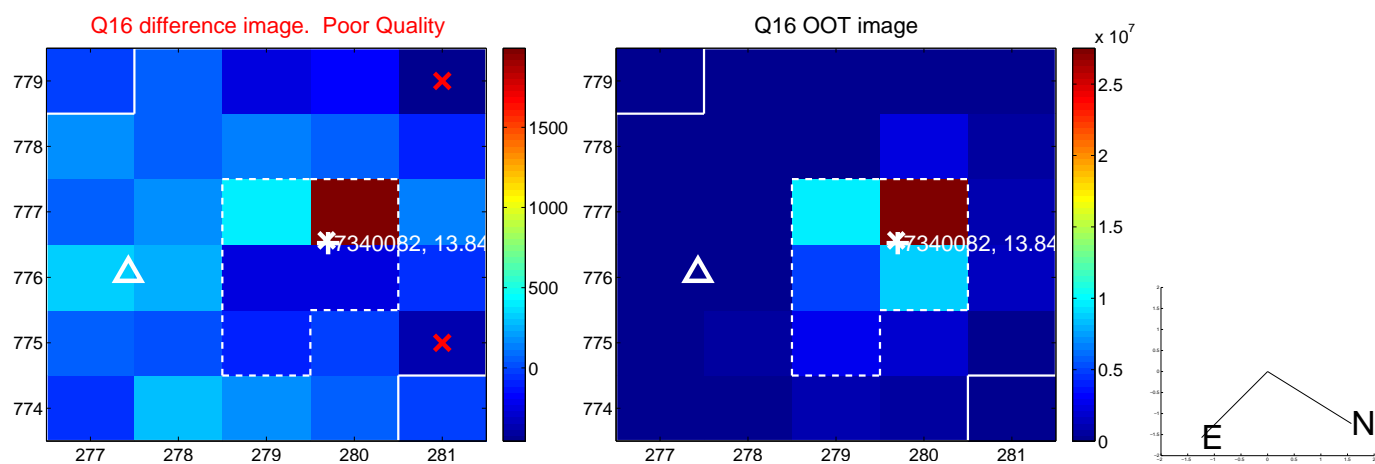
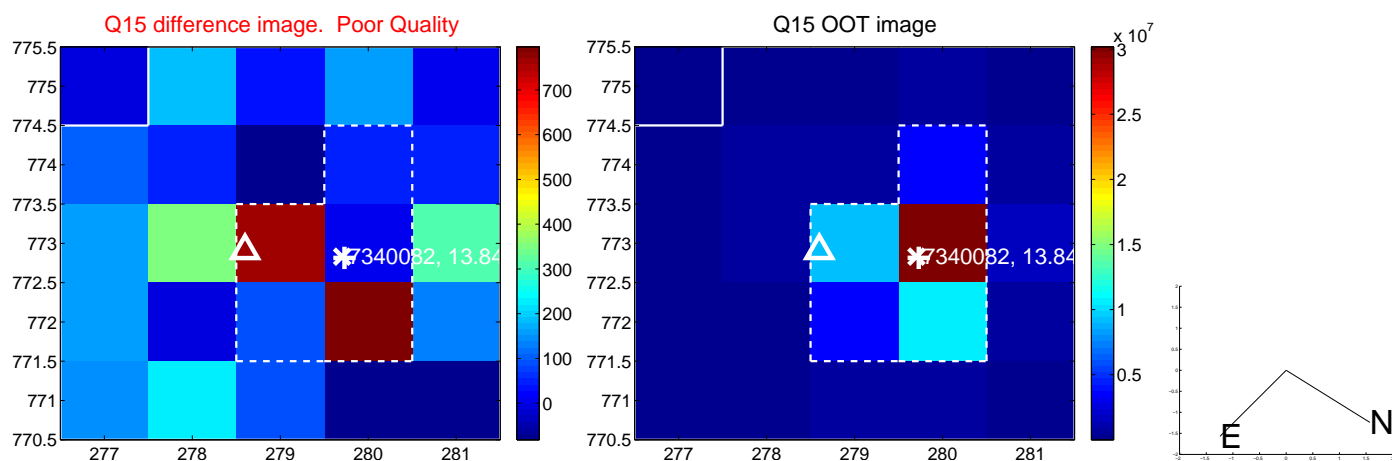
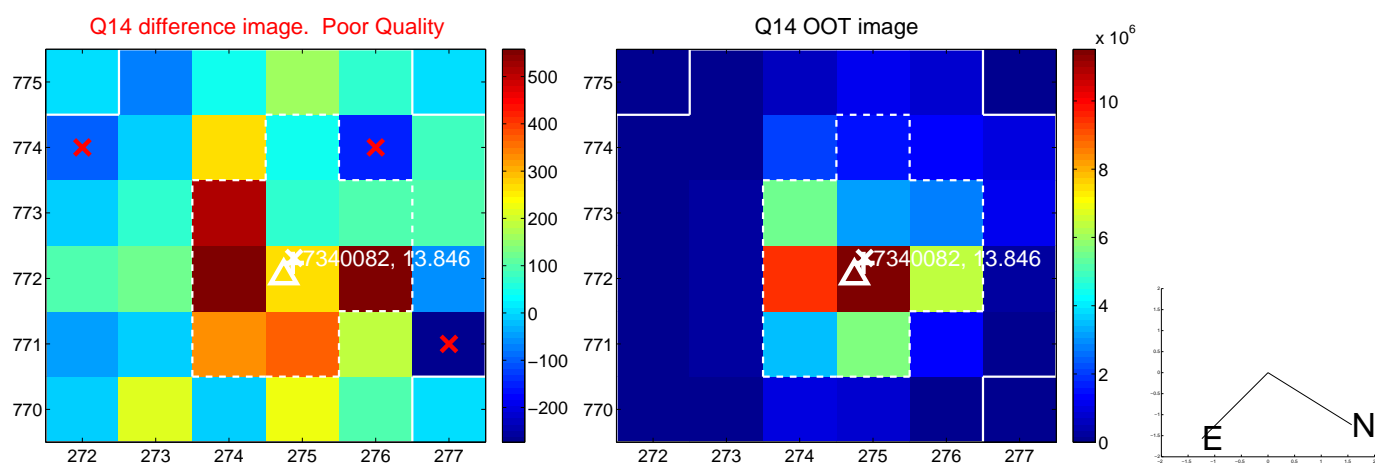
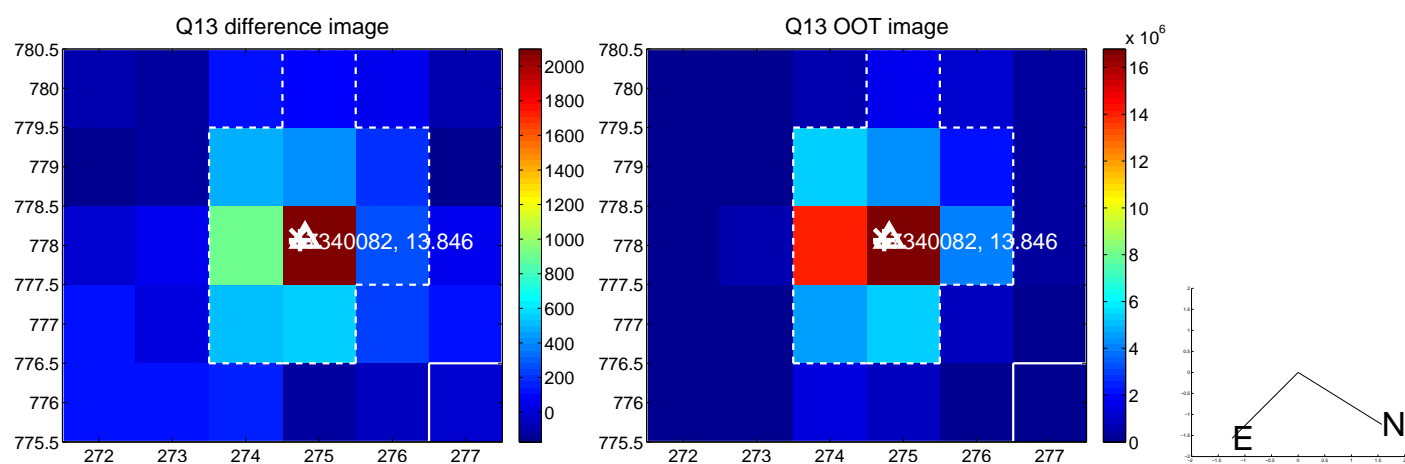
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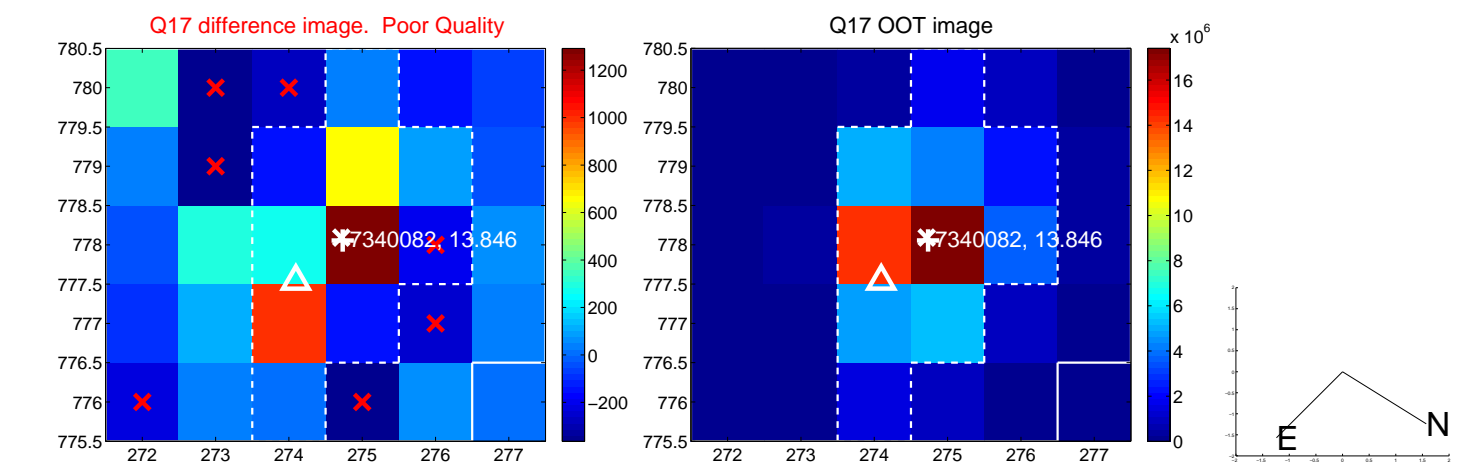
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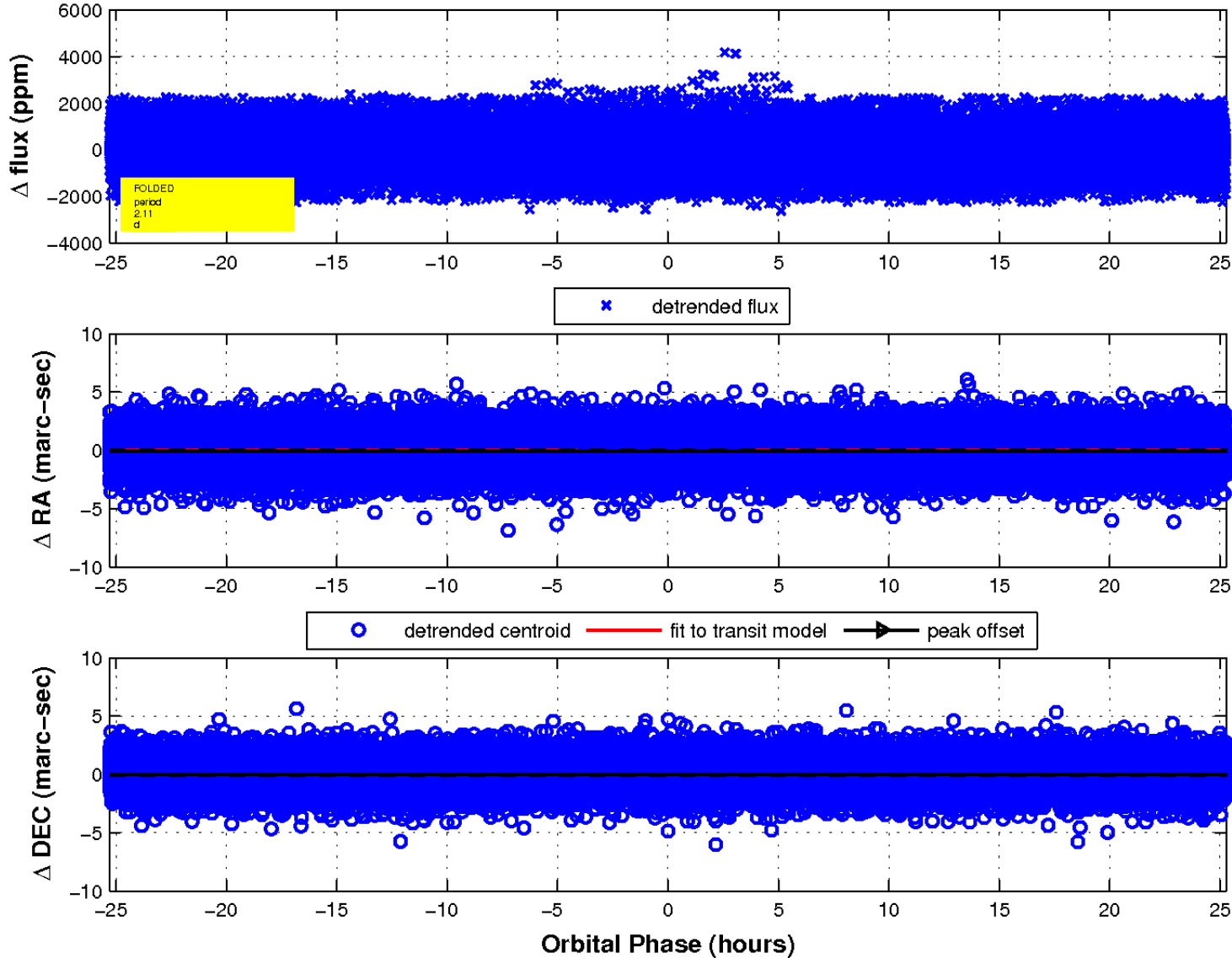
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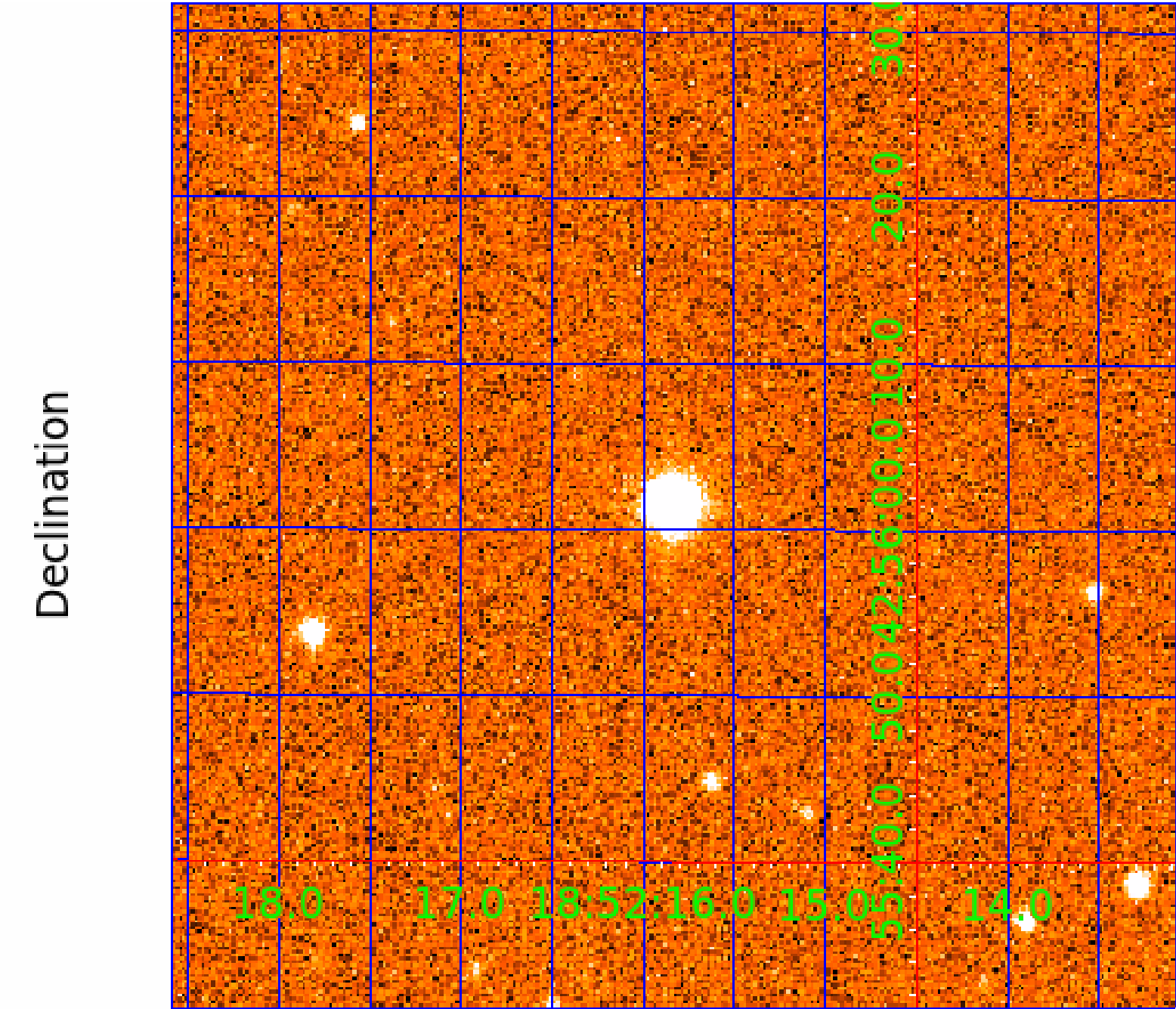
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 8



UKIRT Image



KIC 007340082

Q1-17 DR25 TCE Parameters

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007340082-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—INCONSISTENT_TRANS
007340082-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
007340082-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS
007340082-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST

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

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

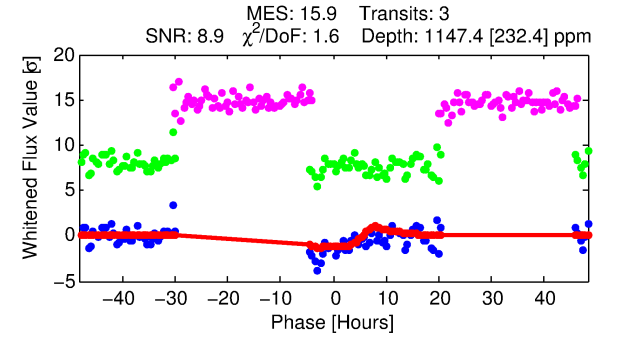
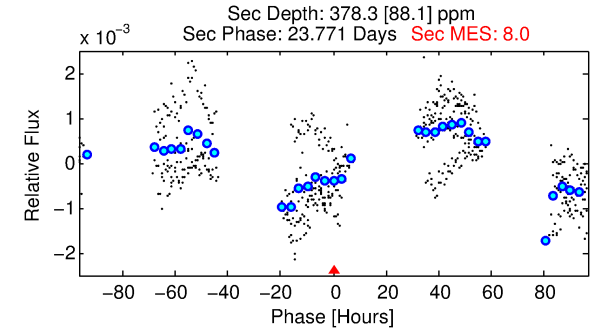
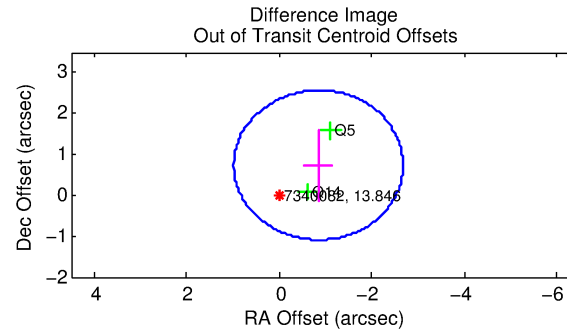
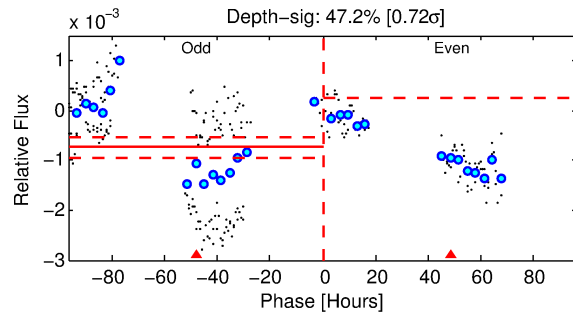
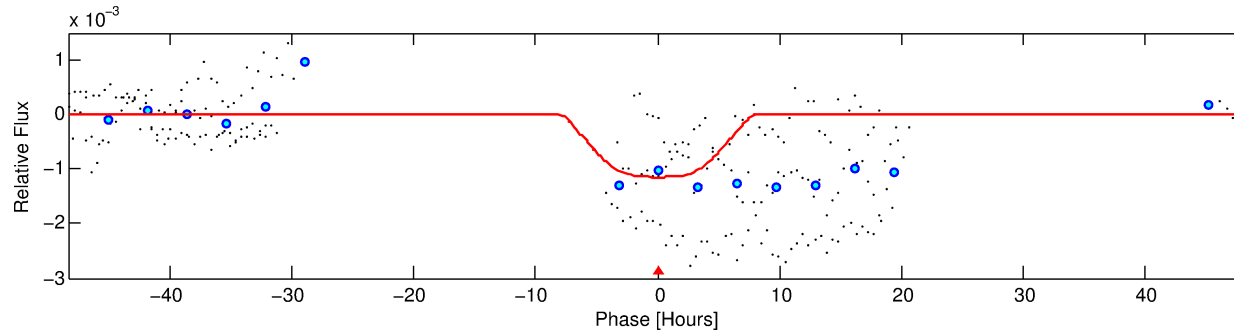
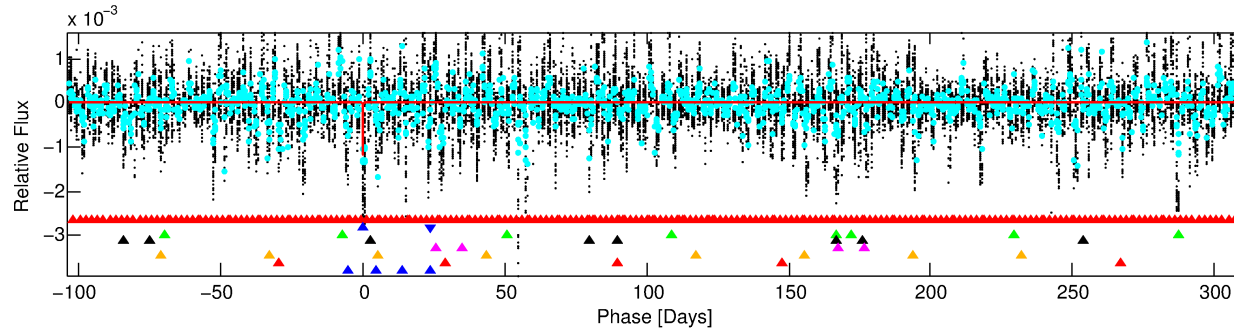
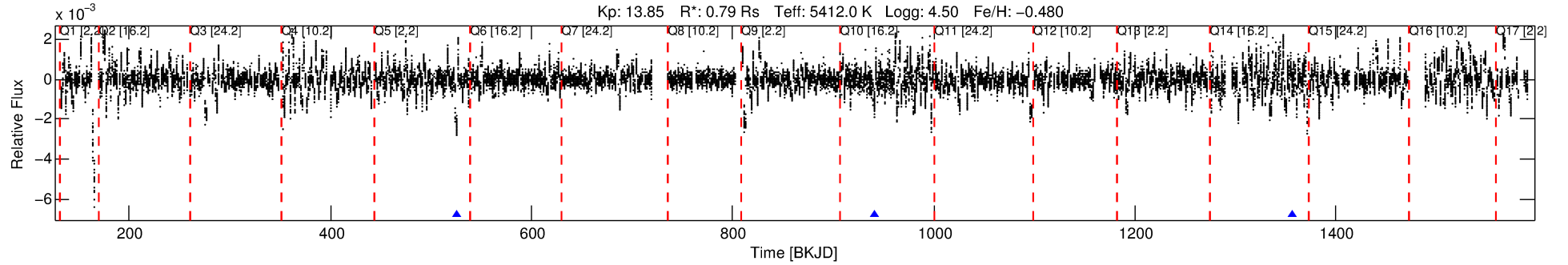
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007340082-02

No Significant Match Found

DV One-Page Summary

KIC: 7340082 Candidate: 2 of 8 Period: 415.376 d



DV Fit Results:

Period = 415.37644 [0.02741] d
Epoch = 525.0782 [0.0459] BKJD
Rp/R* = 0.0400 [0.0045]
a/R* = 82.34 [17.42]
b = 0.95 [0.02]
Seff = 0.50 [0.11]
Teq = 214 [12] K
Rp = 3.44 [0.64] Re
a = 0.9773 [0.1271] AU
Ag = 16783.12 [6341.25] [2.65σ]
Teffp = 3773 [325] K [10.94σ]

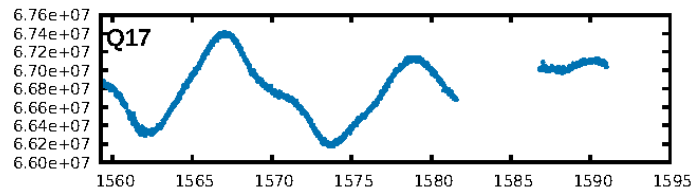
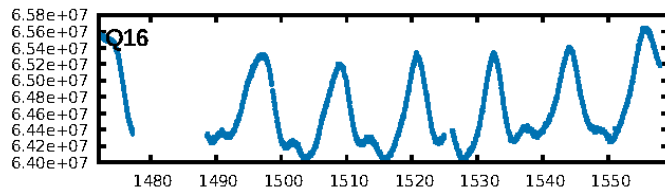
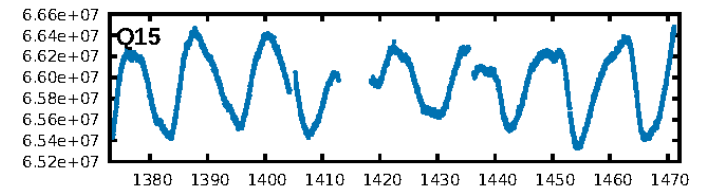
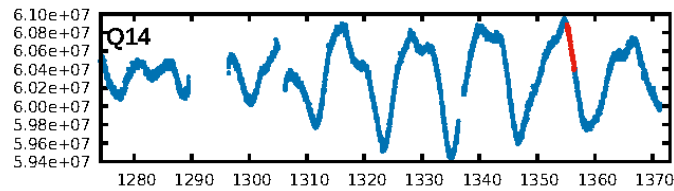
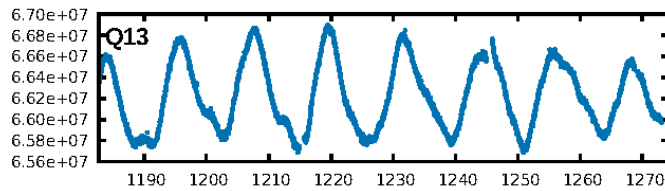
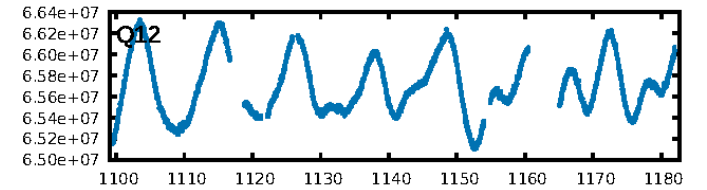
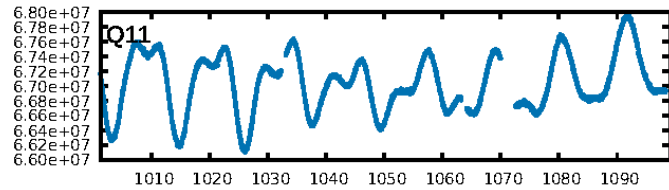
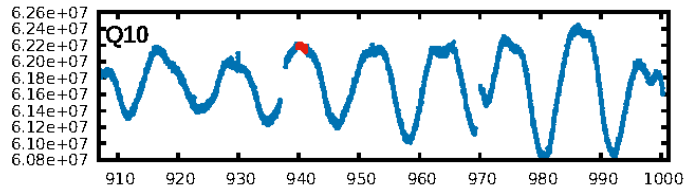
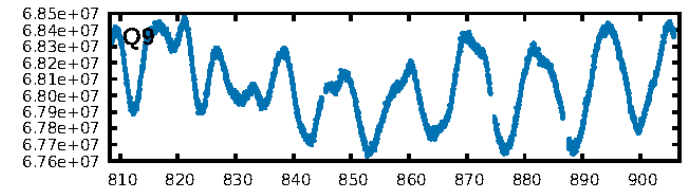
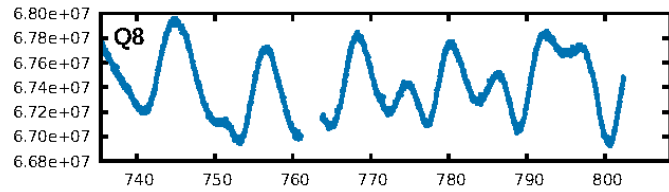
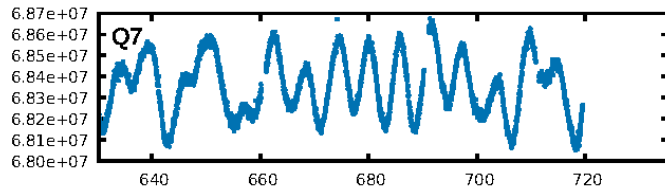
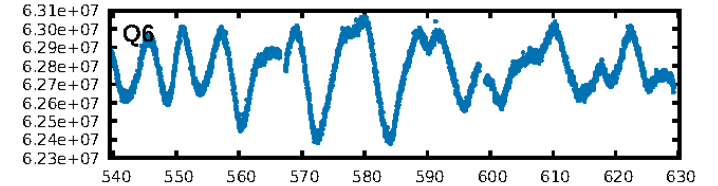
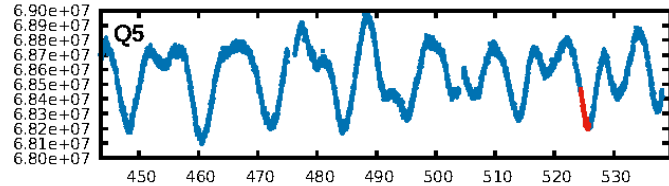
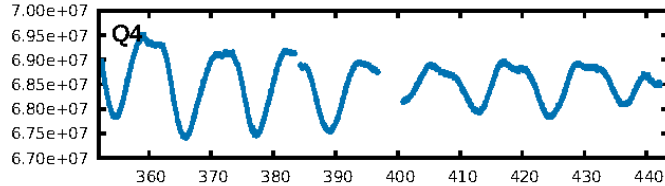
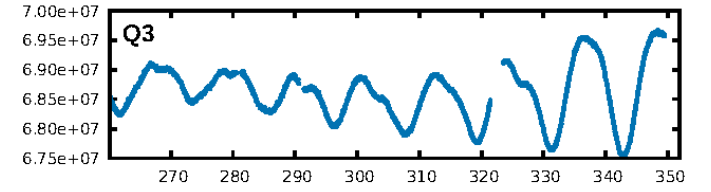
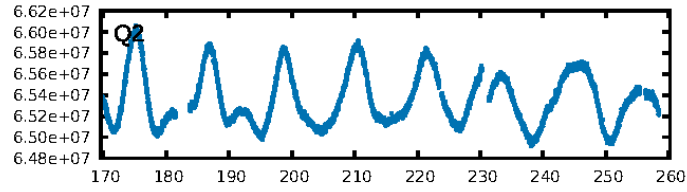
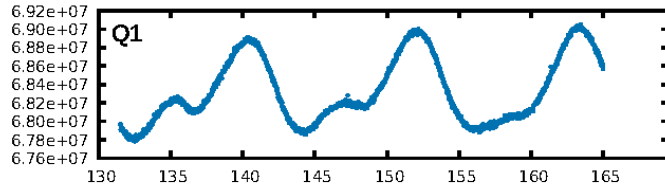
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [14.28σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 77.2%
Bootstrap-pfa: 2.20e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.2993
Centroid-sig: 16.1%
Centroid-so: 0.365 arcsec [0.79σ]
OotOffset-rm: 1.122 arcsec [1.84σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-rm: 1.080 arcsec [1.37σ]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.00 [0/3]

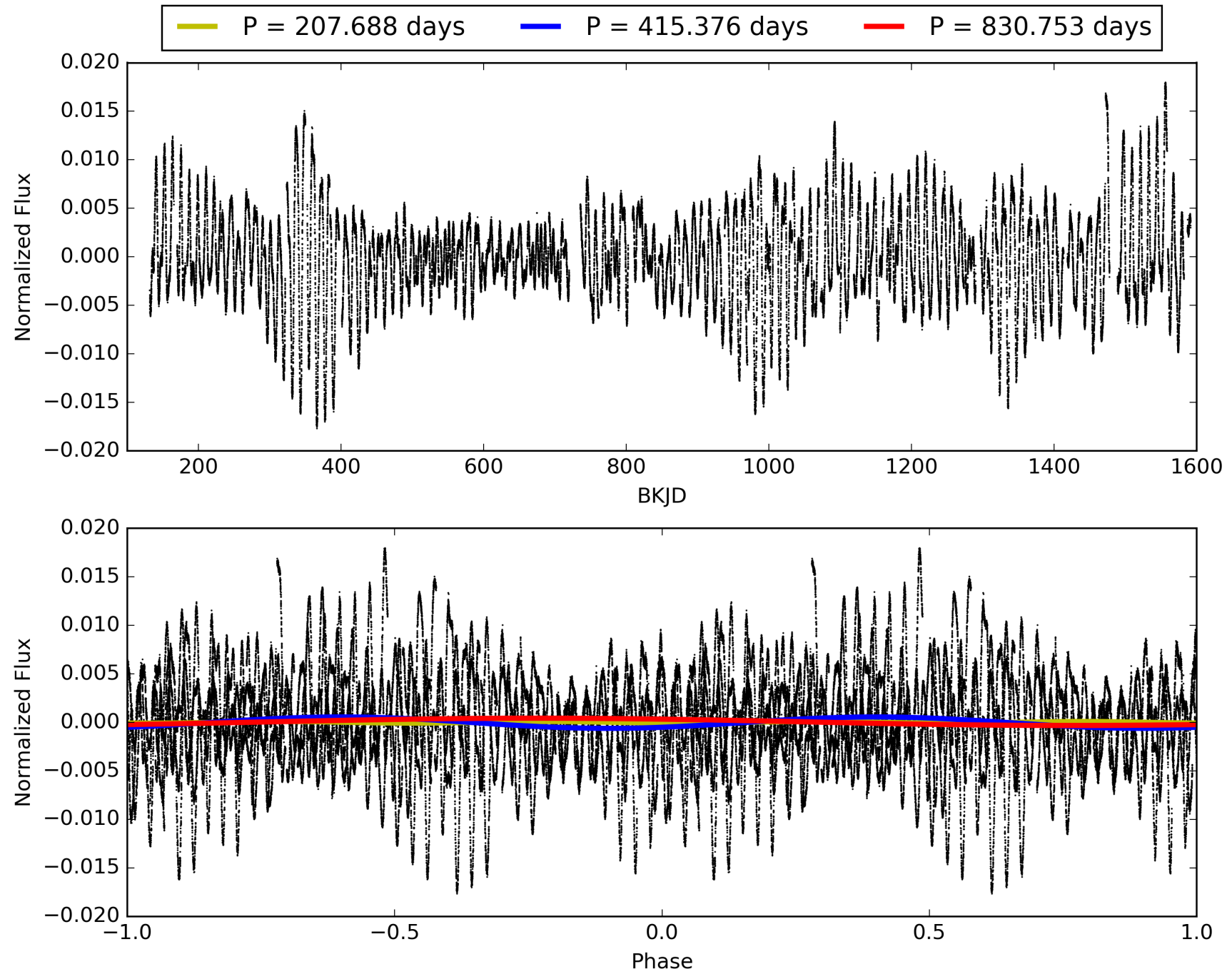
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 02:41:53 Z

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

TCE 007340082-02, PDC Light Curves

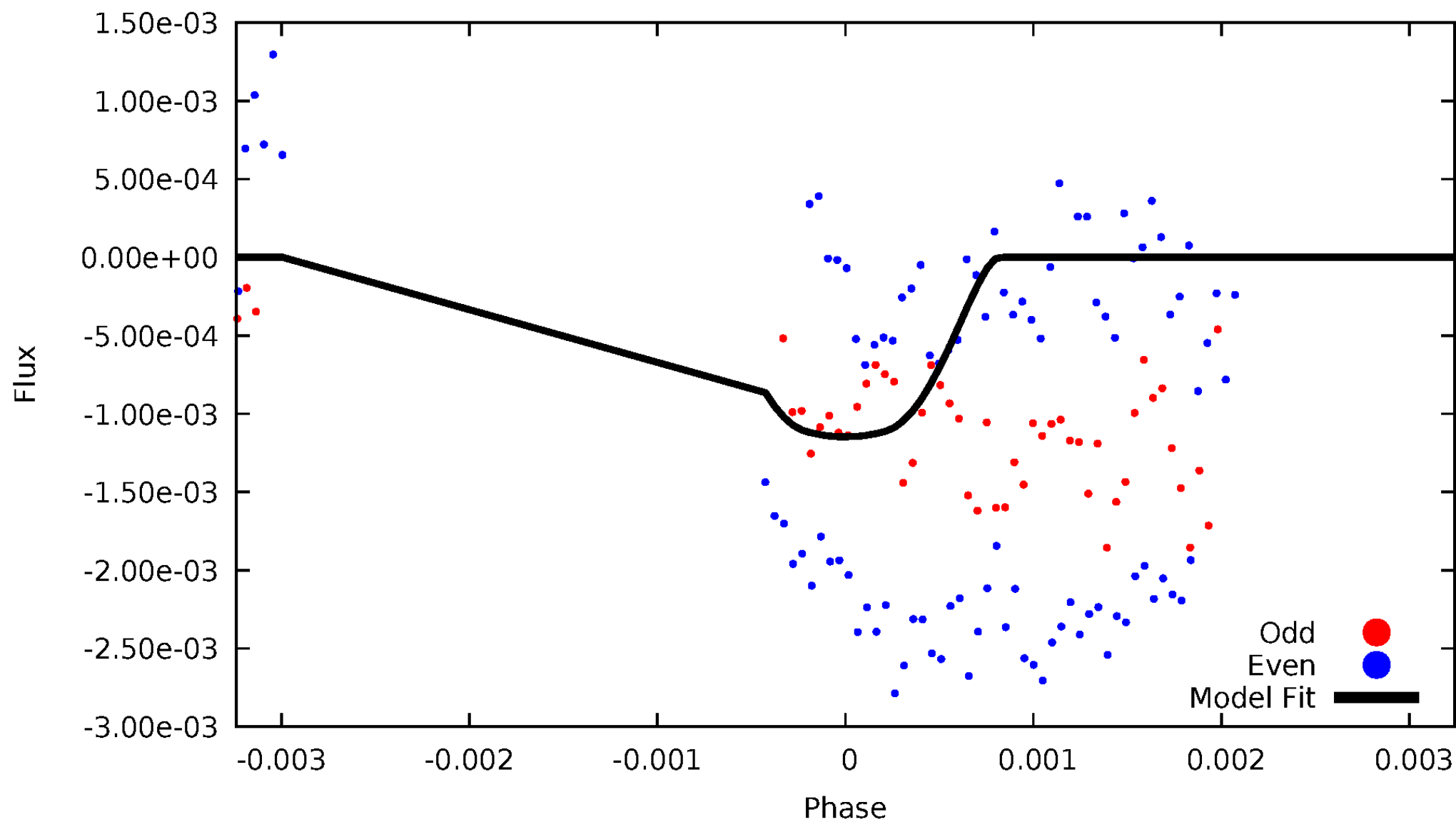


TCE 007340082-02



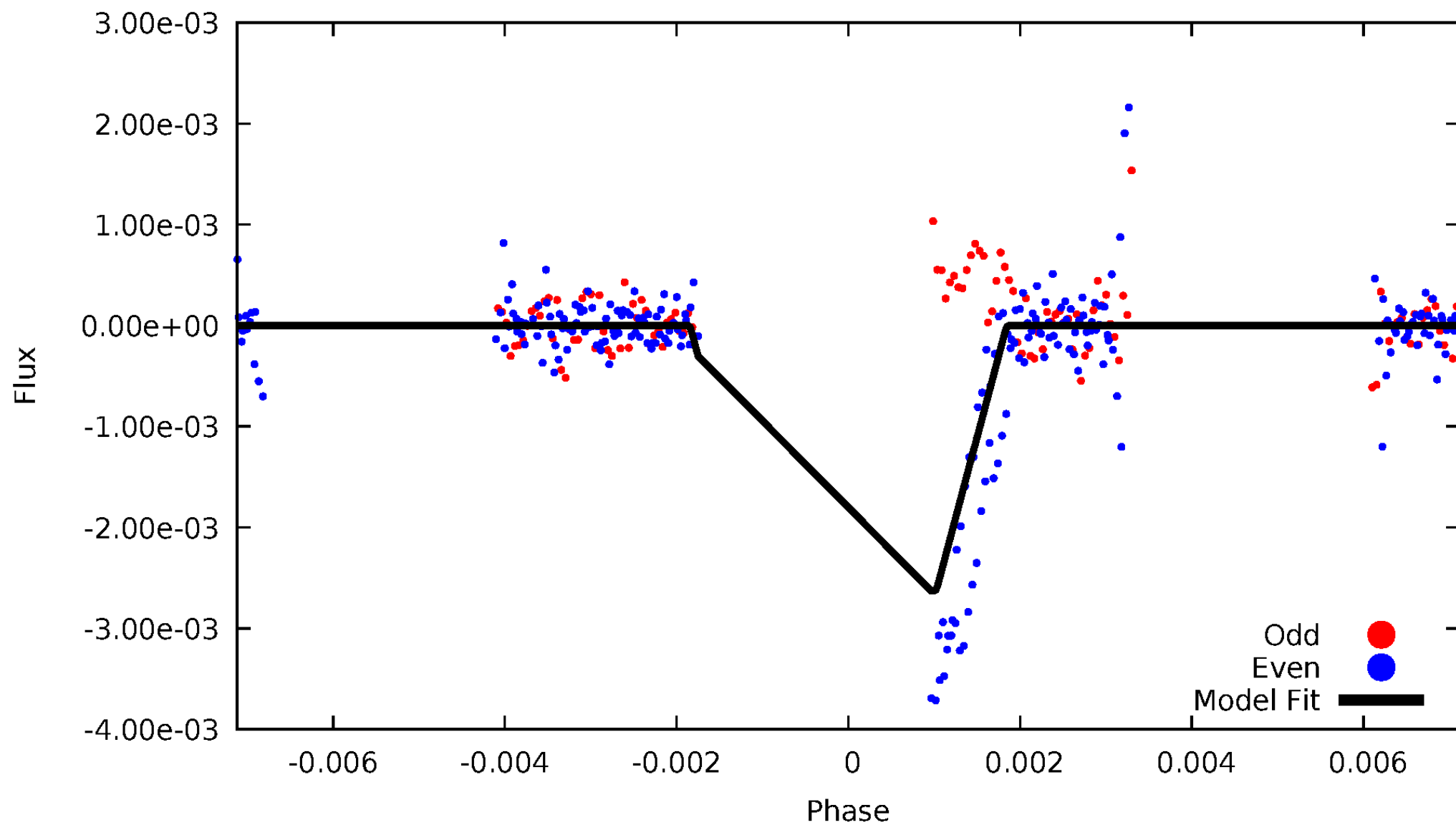
DV Odd/Even

TCE 007340082-02



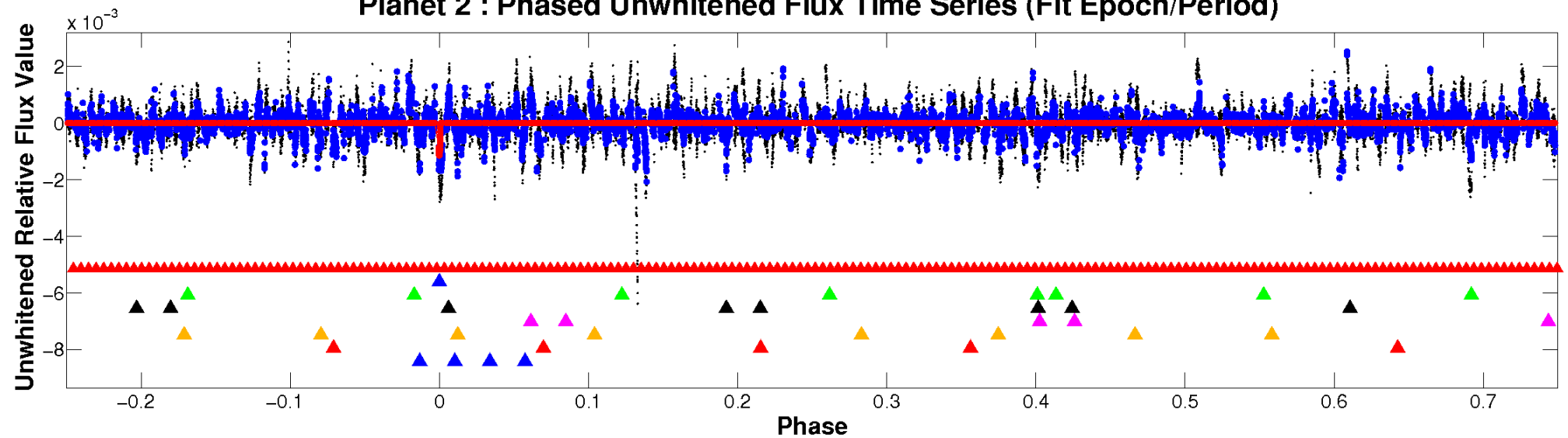
ALT Odd/Even

TCE 007340082-02

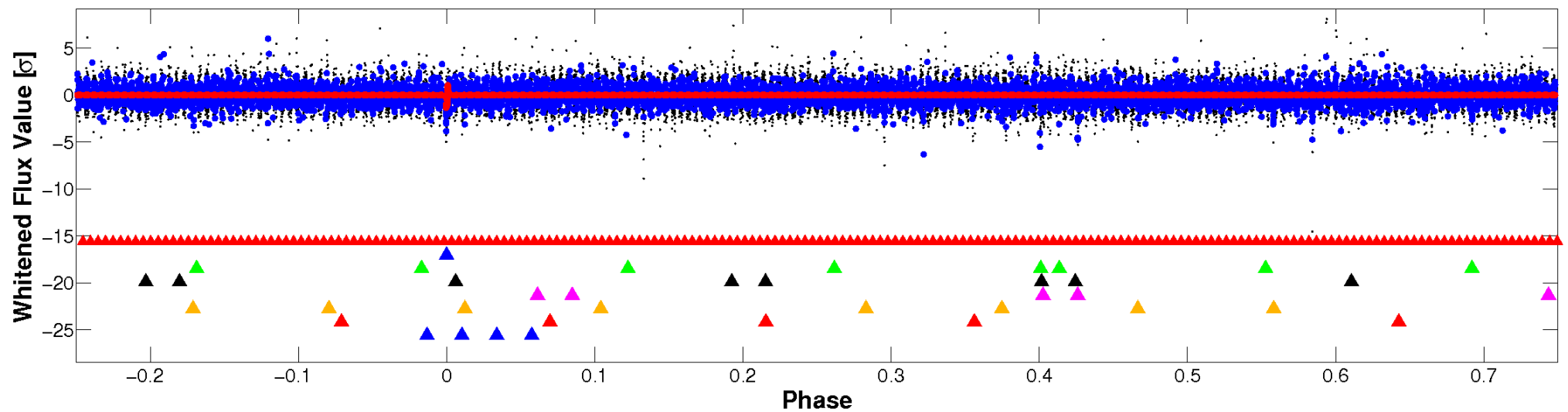


Non-Whitened Vs. Whitened Light Curve

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

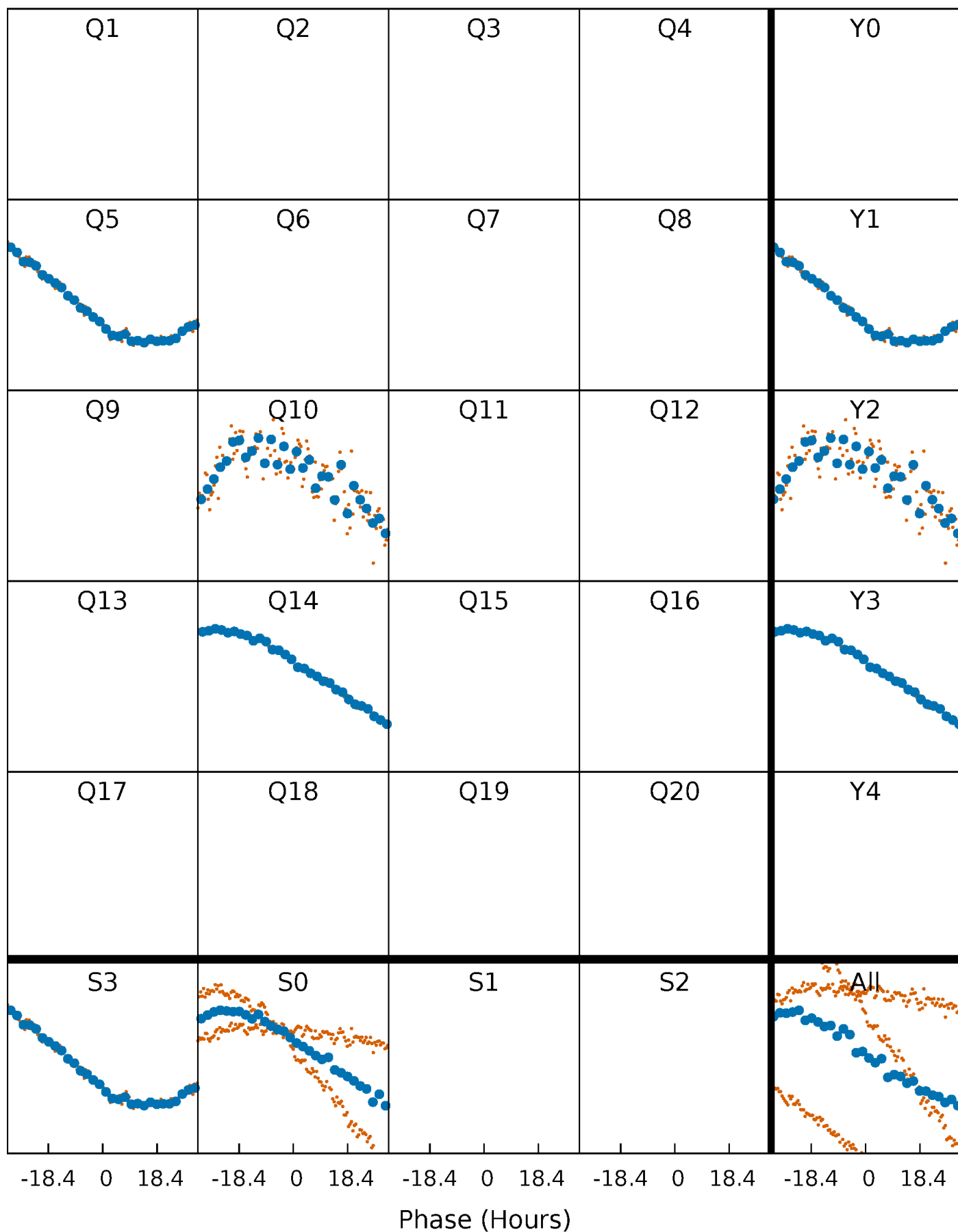


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



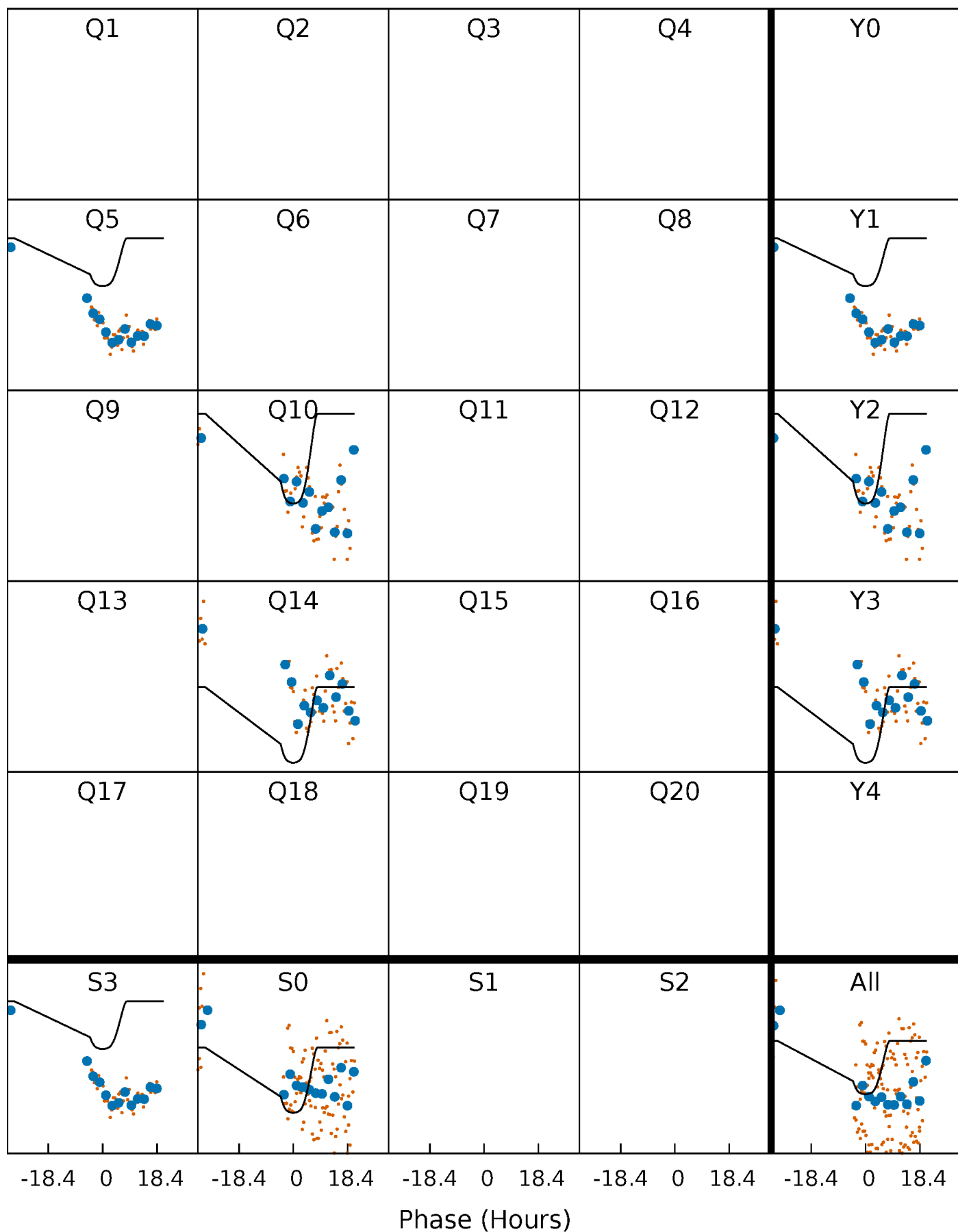
PDC Quarter-Phased Transit Curves

TCE 007340082-02 $P=415.376436$ Days $T_0=525.078206$ (BKJD)



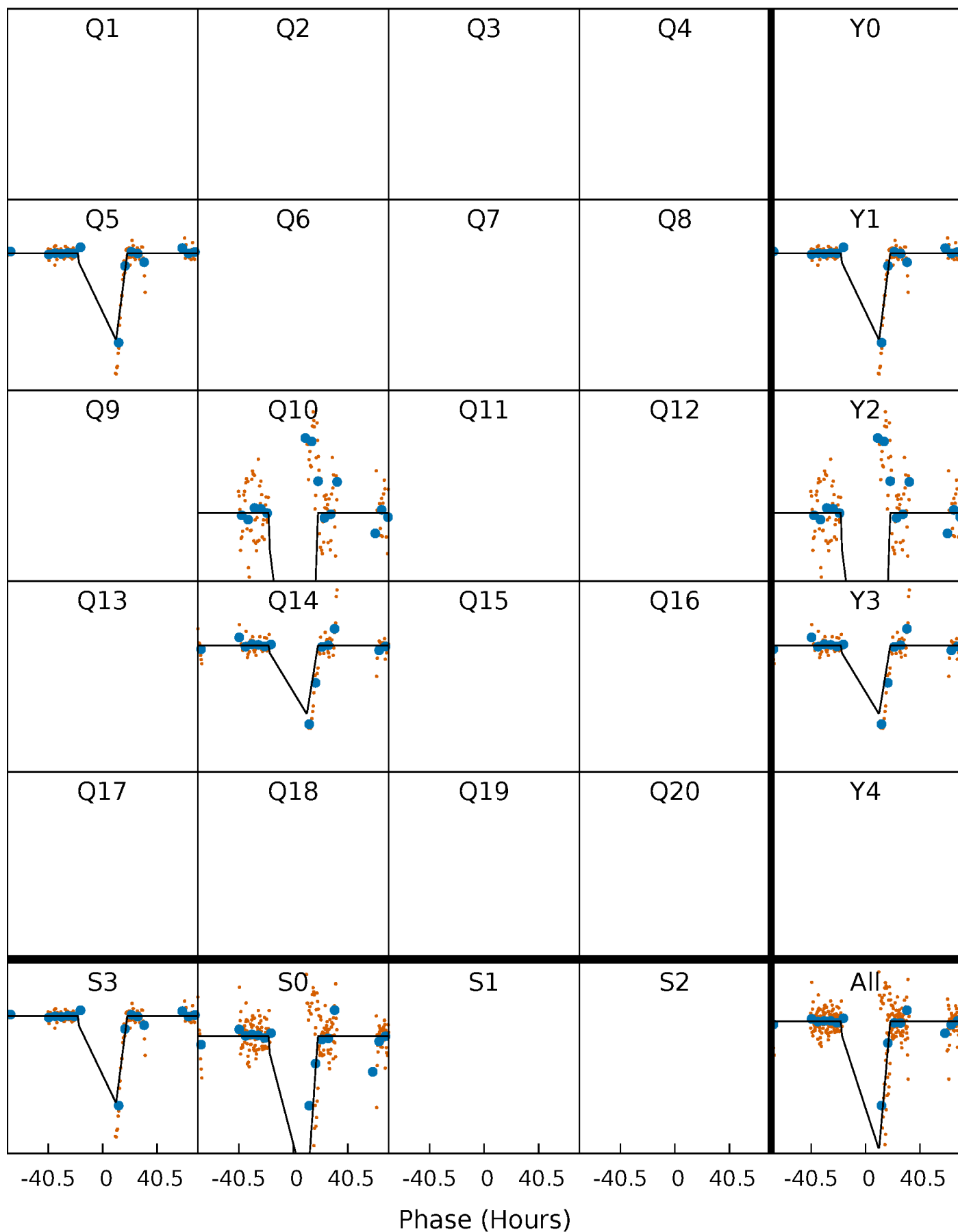
DV Quarter-Phased Transit Curves

TCE 007340082-02 $P=415.376436$ Days $T_0=525.078206$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

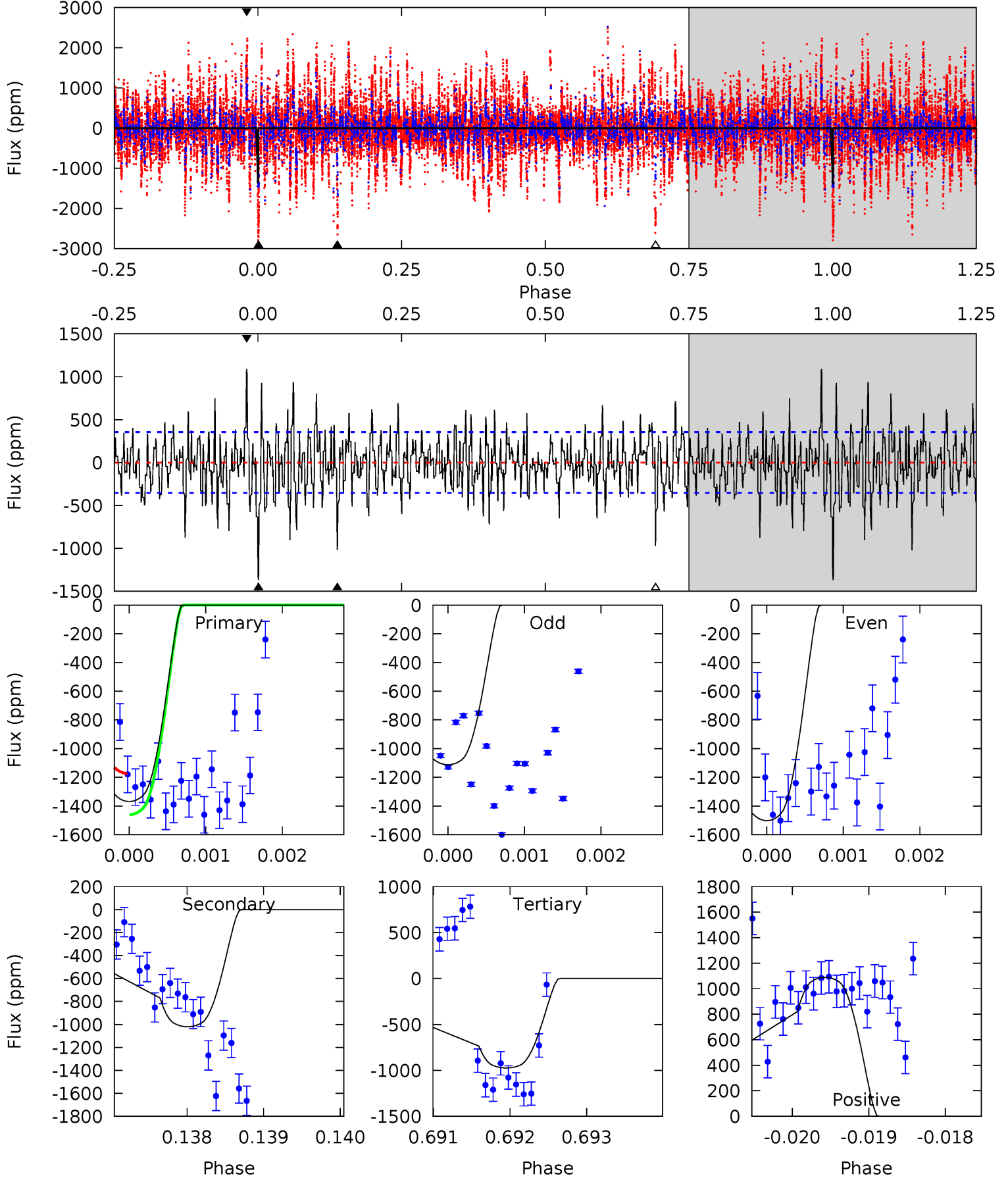
TCE 007340082-02 P=415.407464 Days $T_0=524.499920$ (BKJD)



DV Model-Shift Uniqueness Test

007340082-02, P = 415.376436 Days, E = 109.701770 Days

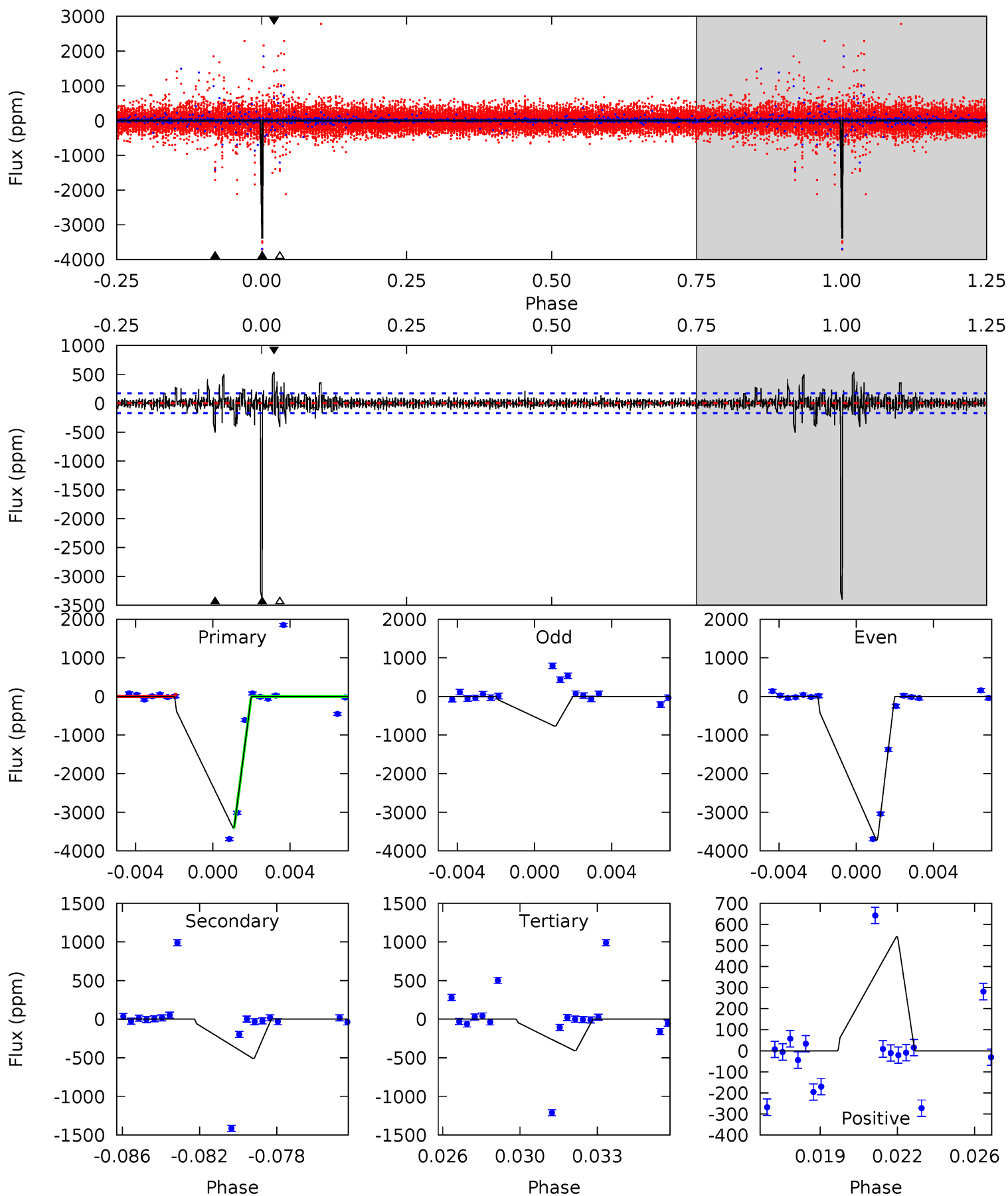
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.0	15.6	14.9	16.7	5.42	3.24	4.38	6.04	4.29	0.70	-1.05	2.68	1.16	0.44	1.95



Alt Model-Shift Uniqueness Test

007340082-02, P = 415.407464 Days, E = 109.092456 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
103.6	15.5	12.5	16.5	5.21	2.90	1.44	91.1	87.1	3.05	-0.98	48.2	0.66	0.14	35.3



Stellar Parameters For KIC 007340082

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5412^{+162}_{-146}	$4.503^{+0.110}_{-0.099}$	$-0.480^{+0.300}_{-0.300}$	$0.788^{+0.117}_{-0.096}$	$0.720^{+0.105}_{-0.045}$	$2.075^{+0.972}_{-0.609}$
	+3%/-3%	+2%/-2%	+62%/-62%	+15%/-12%	+15%/-6%	+47%/-29%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007340082-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1020 ± 65	$3.48^{+0.49}_{-0.51}$	299^{+16}_{-14}	4906^{+288}_{-260}	44926^{+15864}_{-10128}
Alt.	-510 ± 33	$4.43^{+0.52}_{-0.53}$	299^{+15}_{-13}	3922^{+162}_{-153}	13843^{+4039}_{-2708}

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

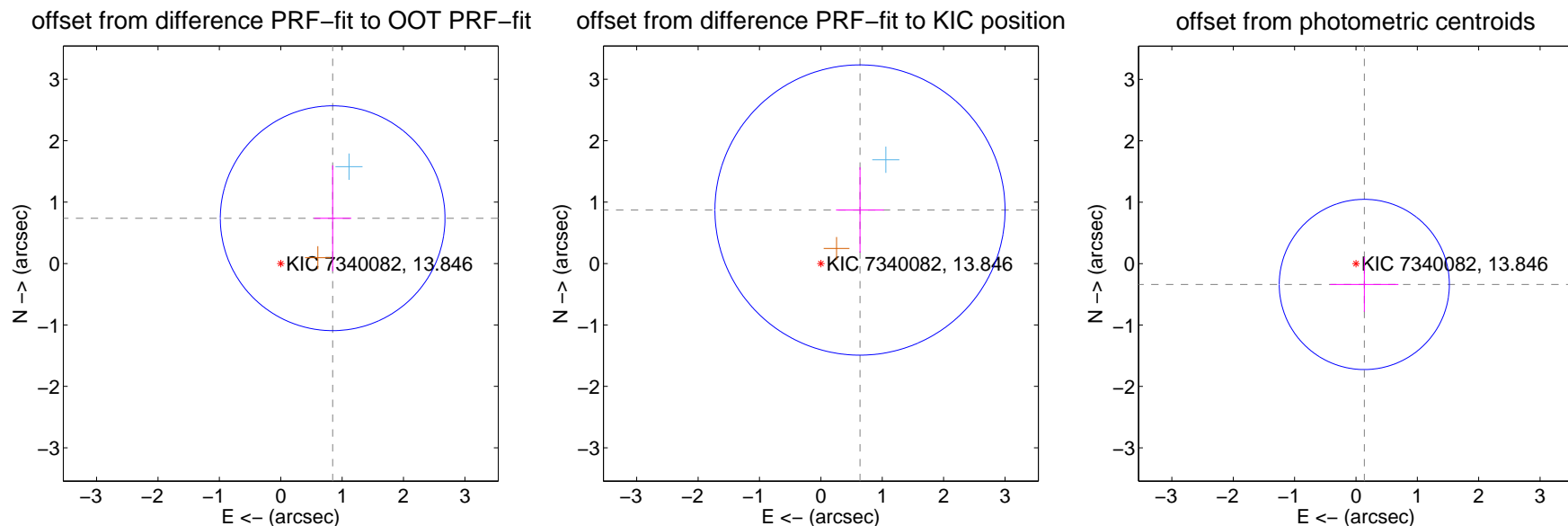
DV Centroid Data

Supplemental centroid analysis for 007340082-02. Kepler magnitude: 13.85. Transit SNR 8.88

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.38 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.122 ± 0.610	1.84	-0.846 ± 0.303	0.738 ± 0.861
PRF-fit source offset from KIC position	1.080 ± 0.788	1.37	-0.637 ± 0.390	0.872 ± 0.695
photometric centroid source offset	0.37 ± 0.46	0.79	-0.14 ± 0.56	-0.34 ± 0.45

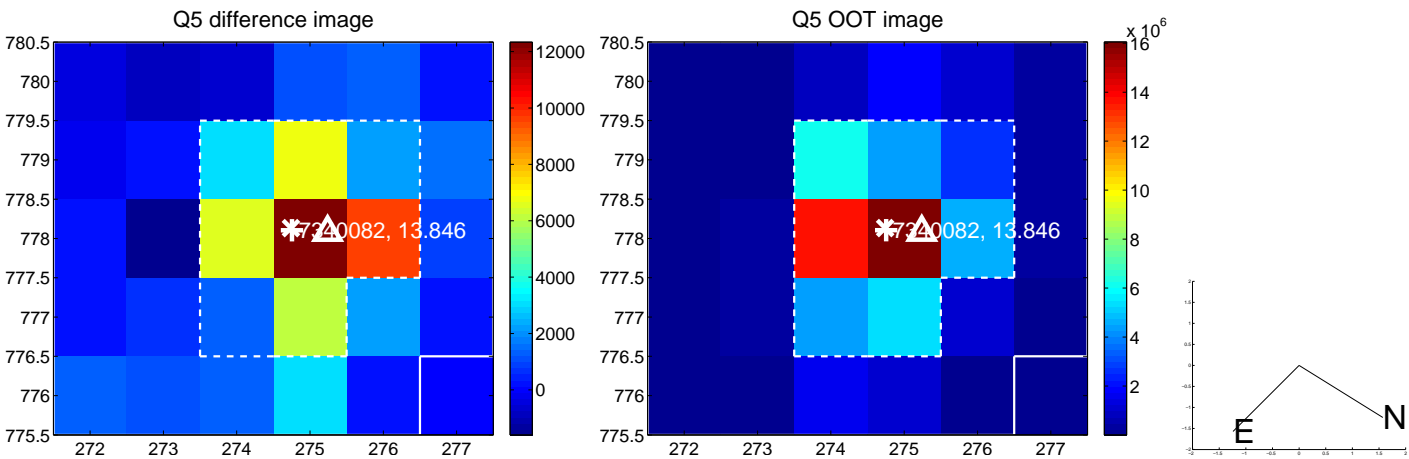


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

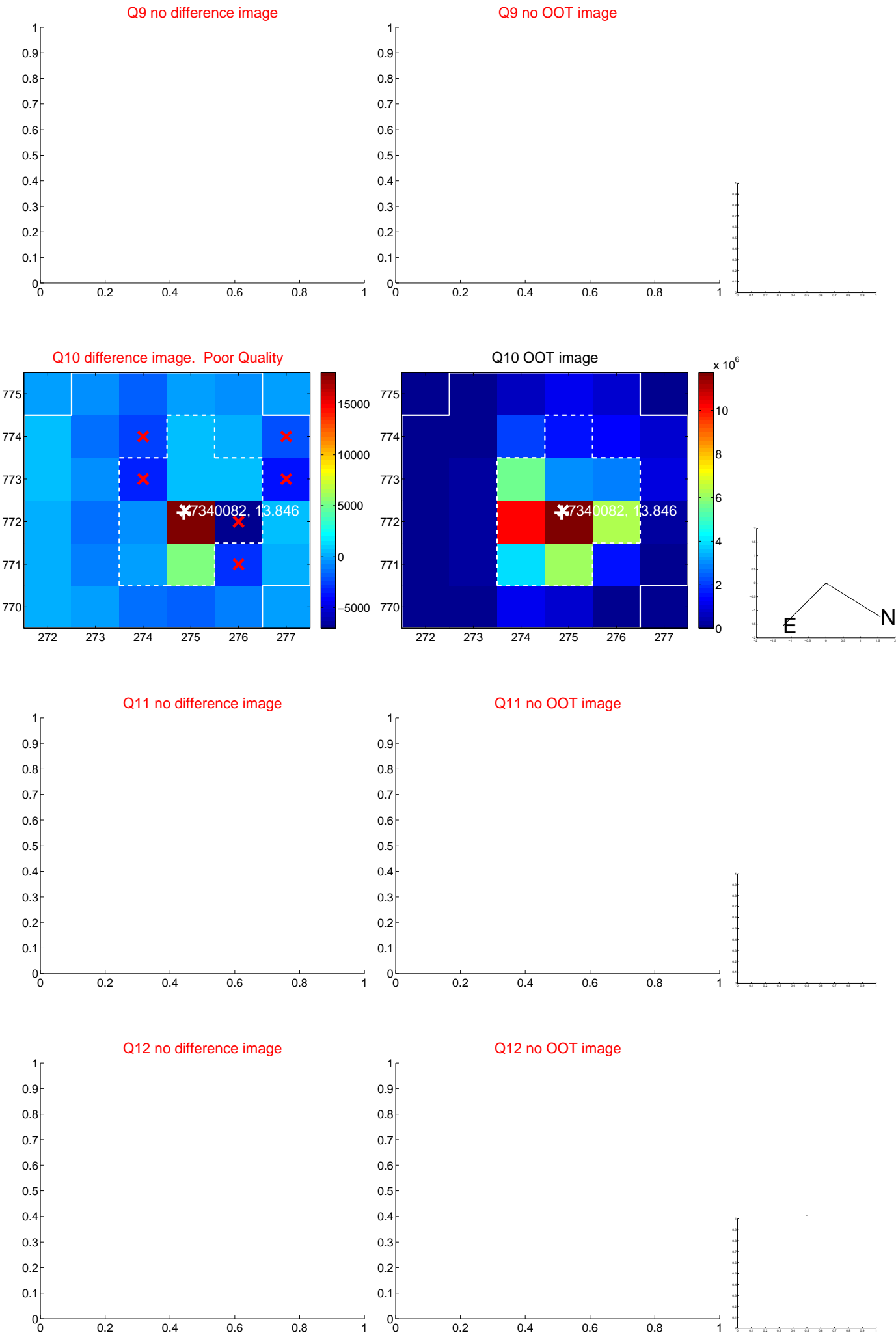
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



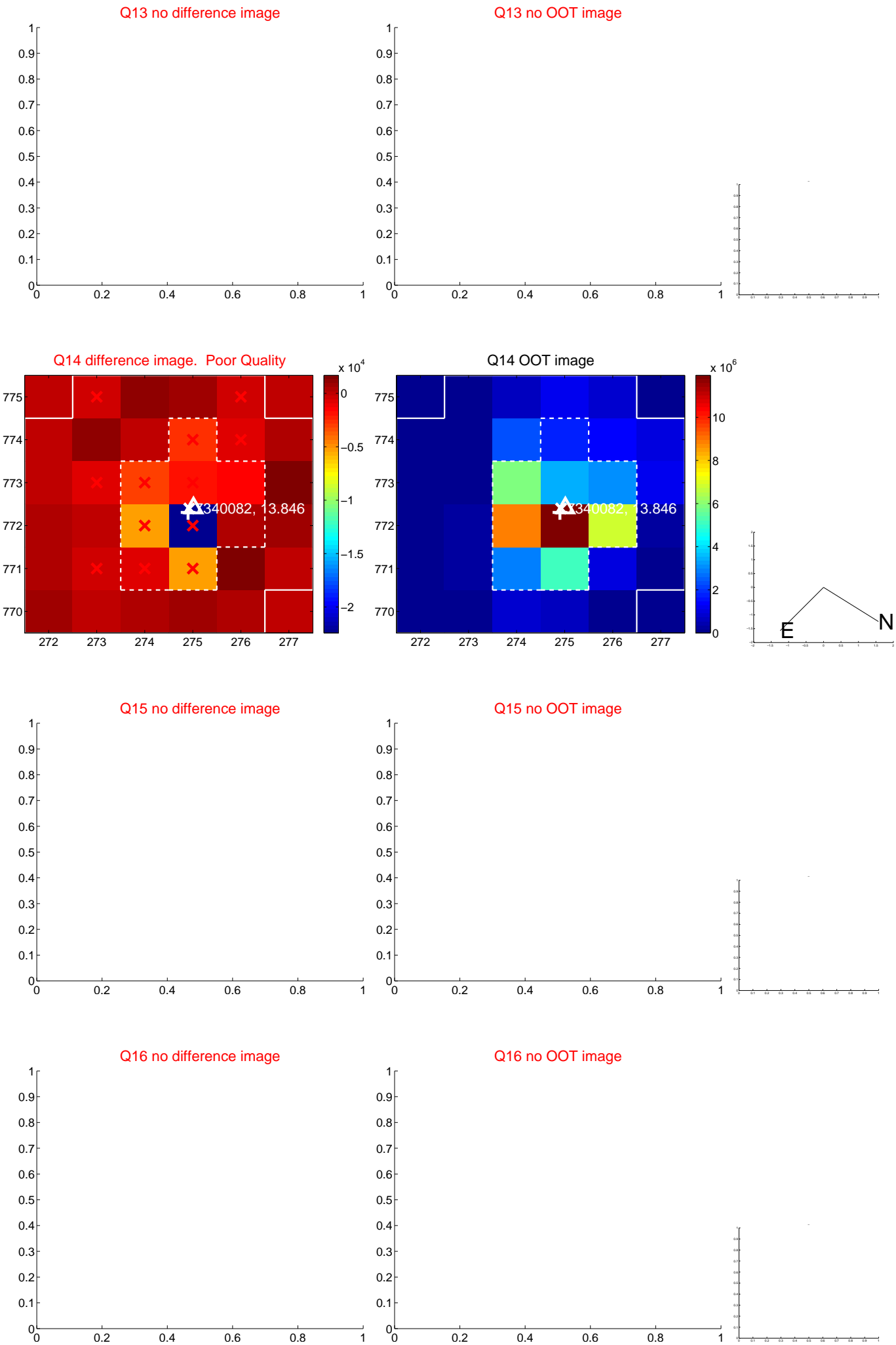
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



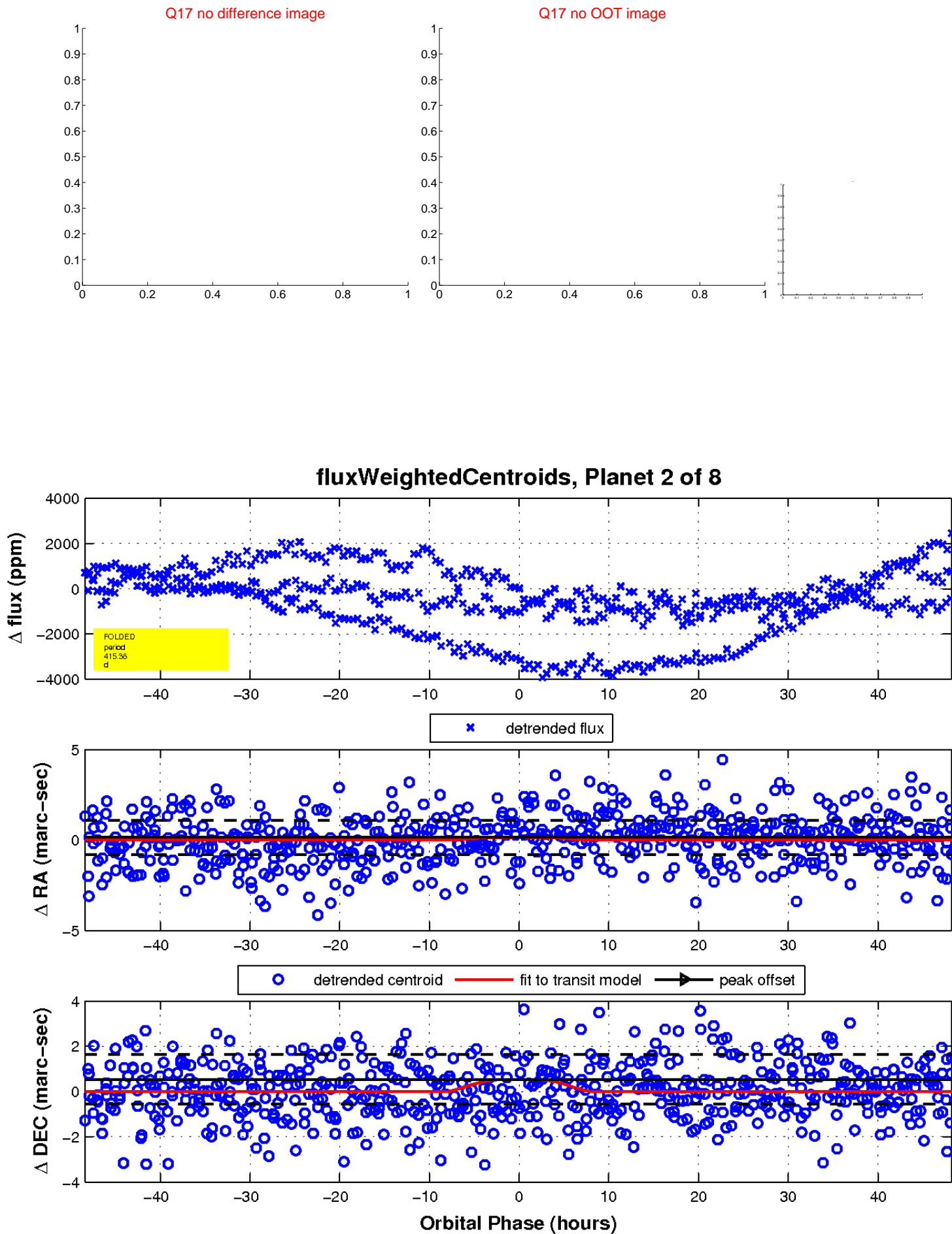
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



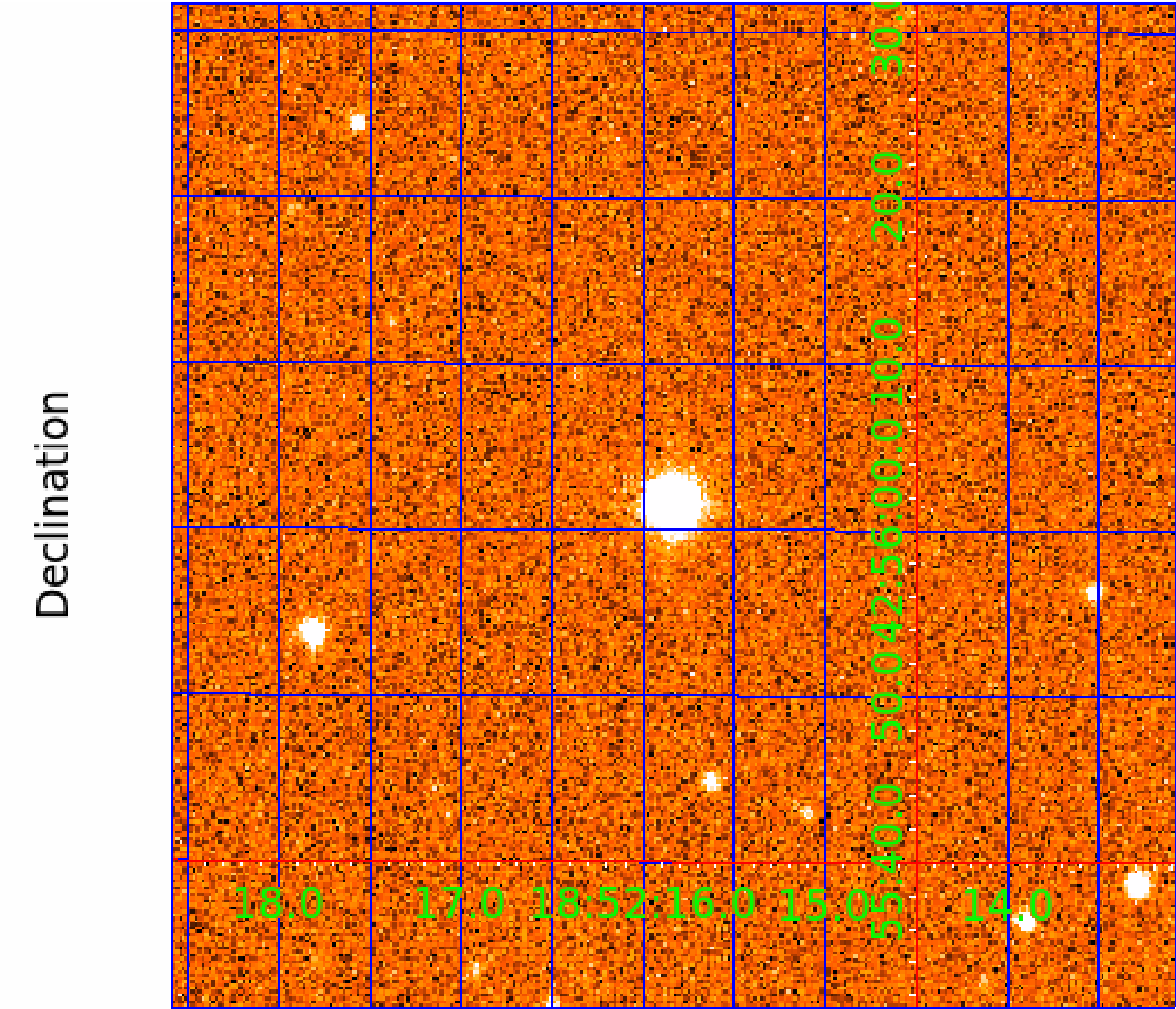
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 007340082

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})
007340082-01	OBS	No	2.108776	132.081927	37.0	8.983	8.3	8.0	0.79	5412	0.59	572.75
007340082-02	OBS	No	415.376436	525.078206	1147.4	16.143	15.9	8.9	0.79	5412	3.44	0.50
007340082-03	OBS	No	178.762895	276.249675	507.3	13.867	14.9	5.7	0.79	5412	2.47	1.54
007340082-05	OBS	No	273.670980	286.638901	976.0	19.380	13.5	8.2	0.79	5412	4.84	0.87
007340082-07	OBS	No	296.400804	199.210791	228.2	12.154	10.2	2.6	0.79	5412	1.34	0.78
007340082-08	OBS	No	405.594636	133.568454	587.0	3.136	8.0	6.6	0.79	5412	2.33	0.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007340082-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
007340082-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007340082-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—INCONSISTENT_TRANS
007340082-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
007340082-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS
007340082-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST

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

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

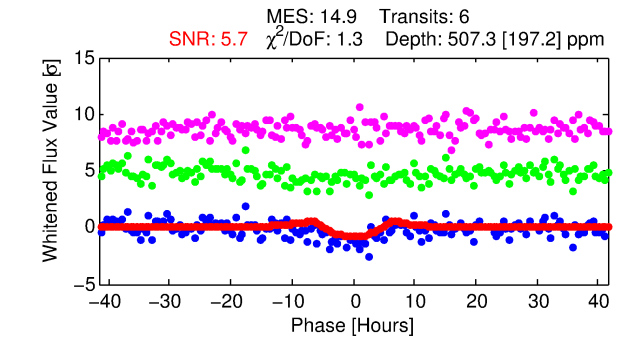
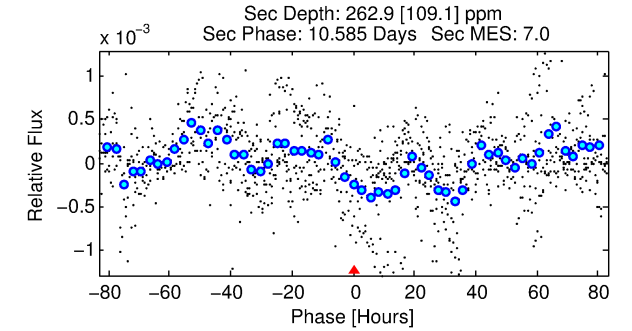
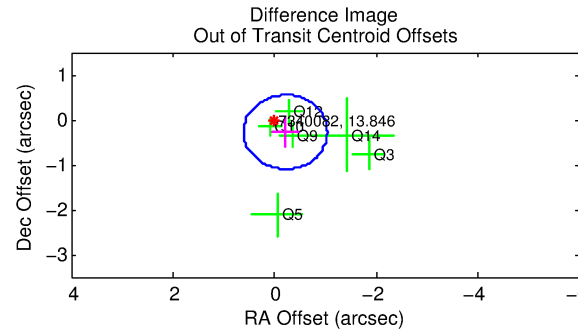
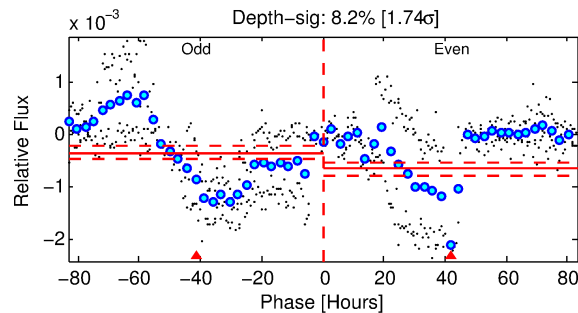
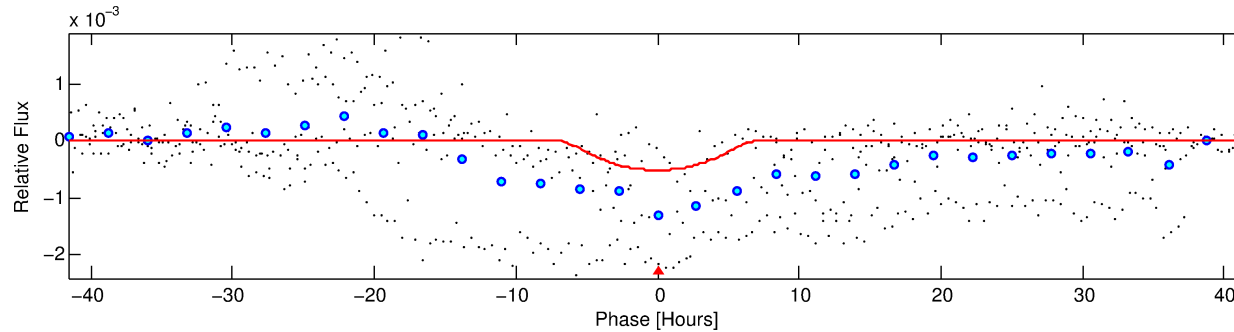
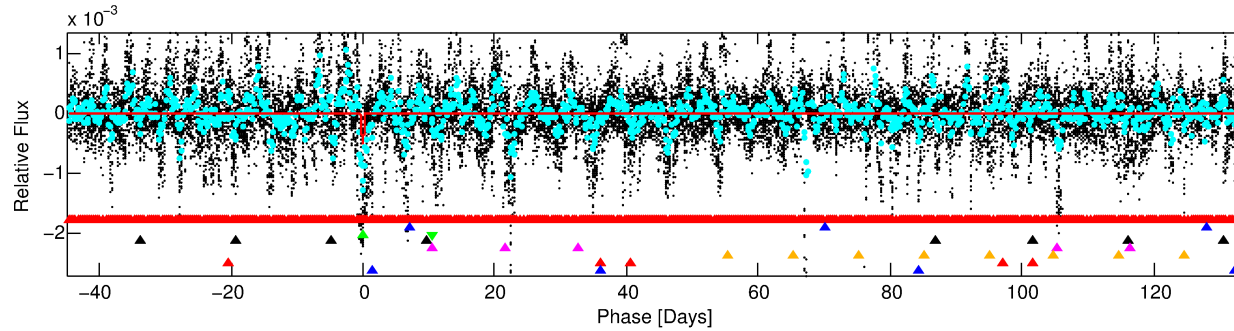
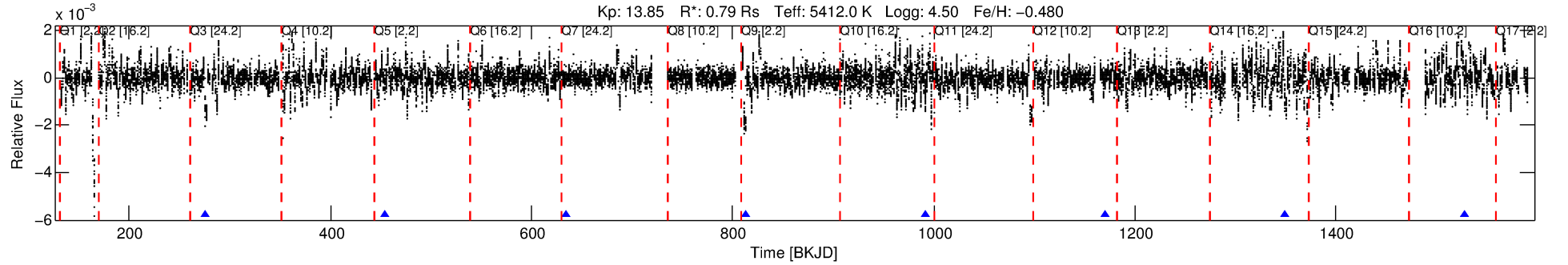
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007340082-03

No Significant Match Found

DV One-Page Summary

KIC: 7340082 Candidate: 3 of 8 Period: 178.763 d



DV Fit Results:

Period = 178.76289 [0.00909] d
Epoch = 276.2497 [0.0359] BKJD
Rp/R* = 0.0287 [0.0108]
a/R* = 32.26 [9.27]
b = 0.98 [0.03]
Seff = 1.54 [0.35]
Teq = 284 [16] K
Rp = 2.47 [1.00] Re
a = 0.5571 [0.0725] AU
Ag = 7361.02 [6499.78] [1.13 σ]
Teffp = 4067 [884] K [4.28 σ]

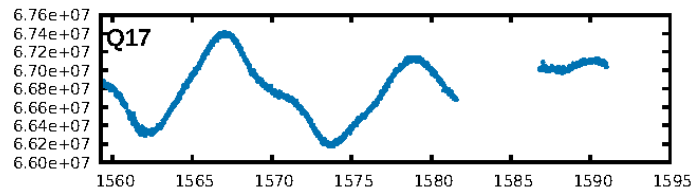
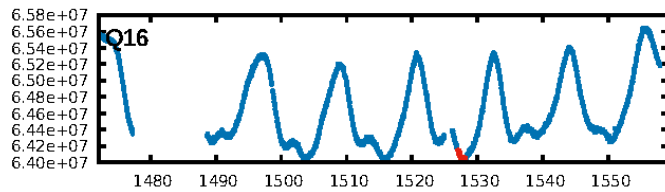
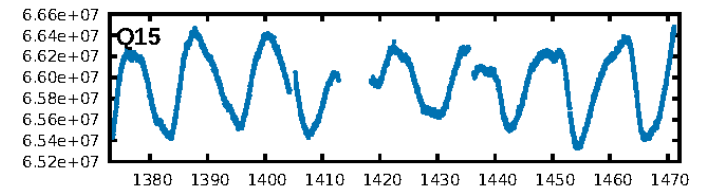
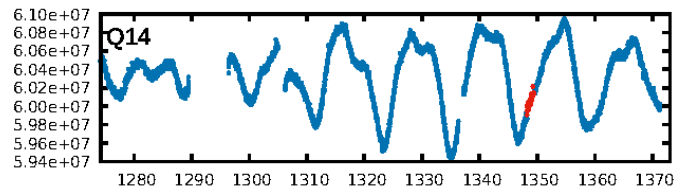
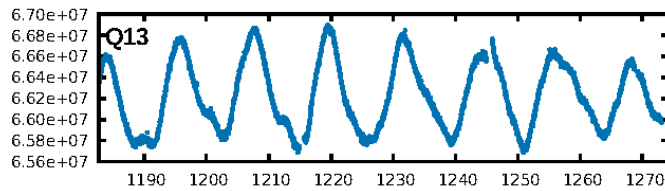
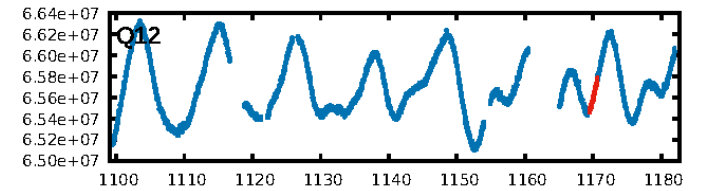
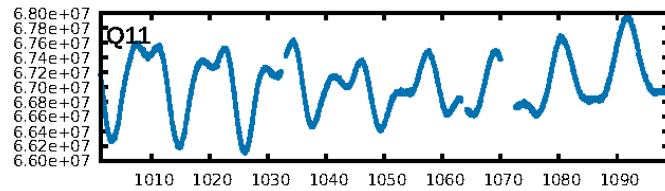
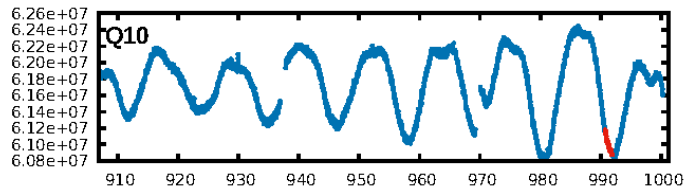
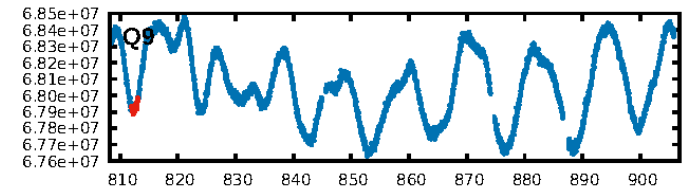
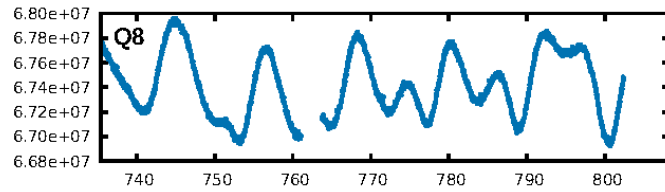
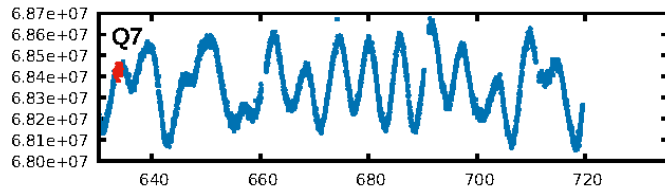
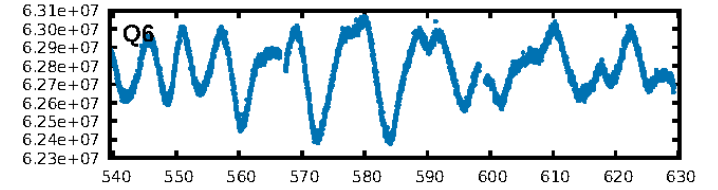
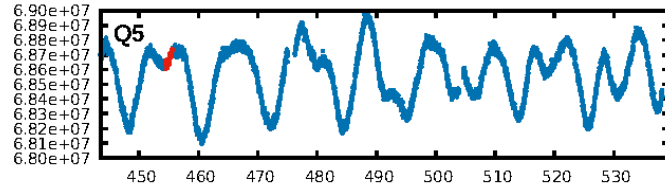
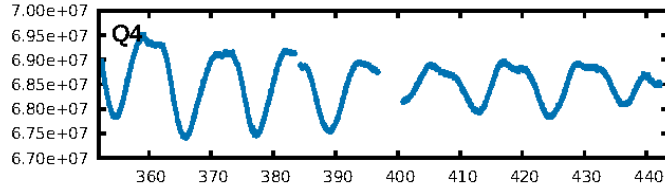
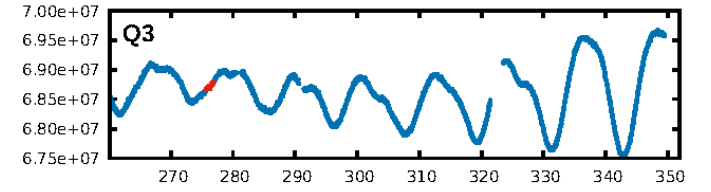
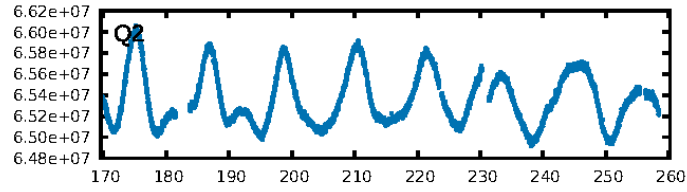
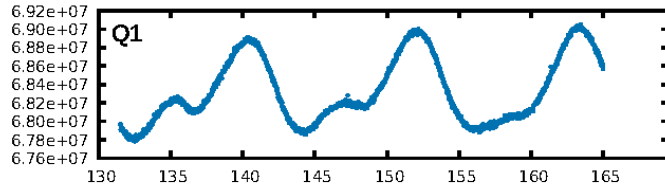
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [24.31 σ]
LongPeriod-sig: 100.0% [16.83 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.02e-16
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 0.4585
Centroid-sig: 79.1%
Centroid-so: 0.345 arcsec [0.56 σ]
OotOffset-rm: 0.347 arcsec [1.26 σ]
KicOffset-rm: 0.322 arcsec [1.10 σ]
OotOffset-st: 2/1/1/2 [6]
KicOffset-st: 2/1/1/2 [6]
DiffImageQuality-fgm: 0.83 [5/6]
DiffImageOverlap-fno: 0.00 [0/6]

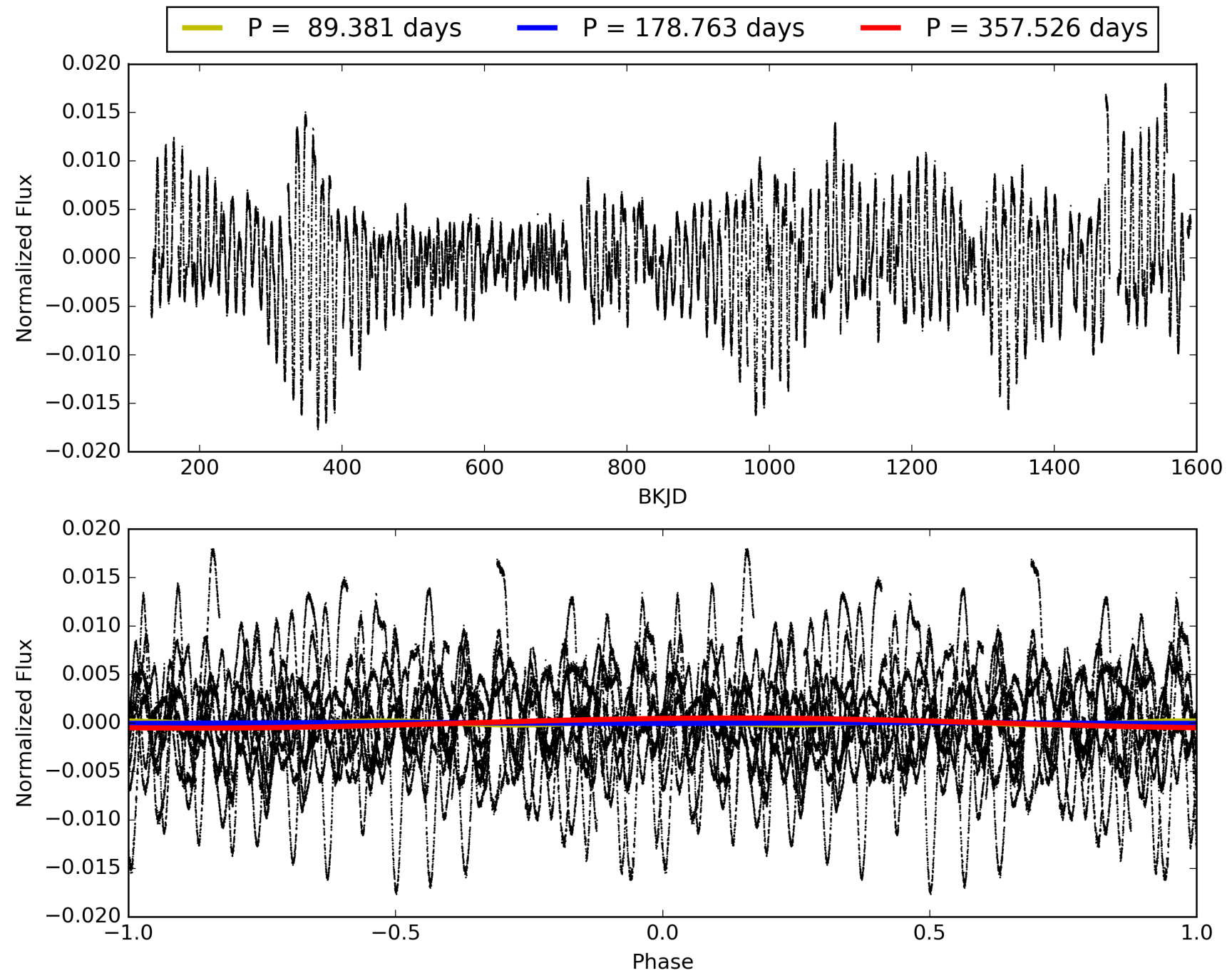
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 02:41:58 Z

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

TCE 007340082-03, PDC Light Curves

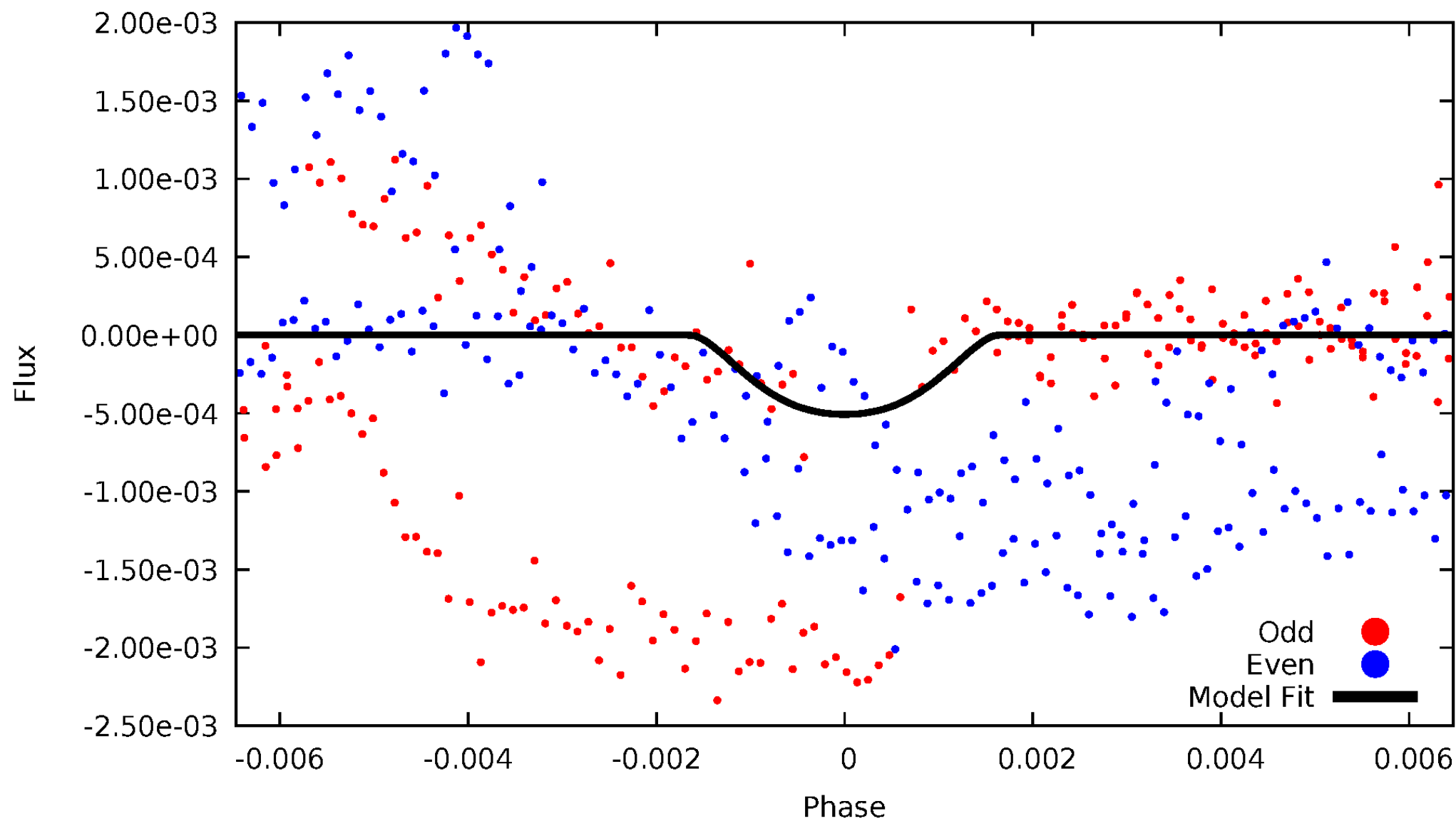


TCE 007340082-03



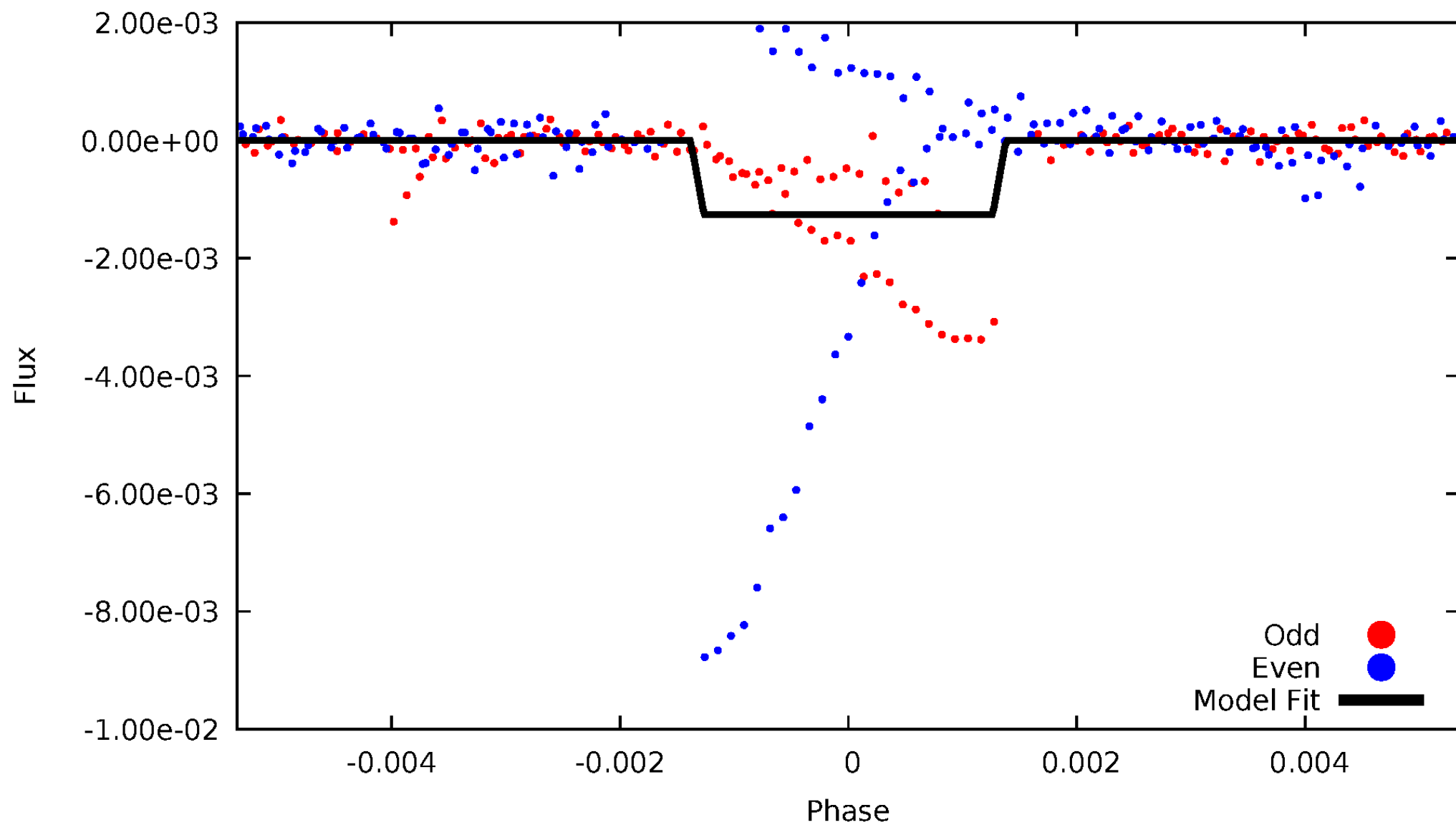
DV Odd/Even

TCE 007340082-03



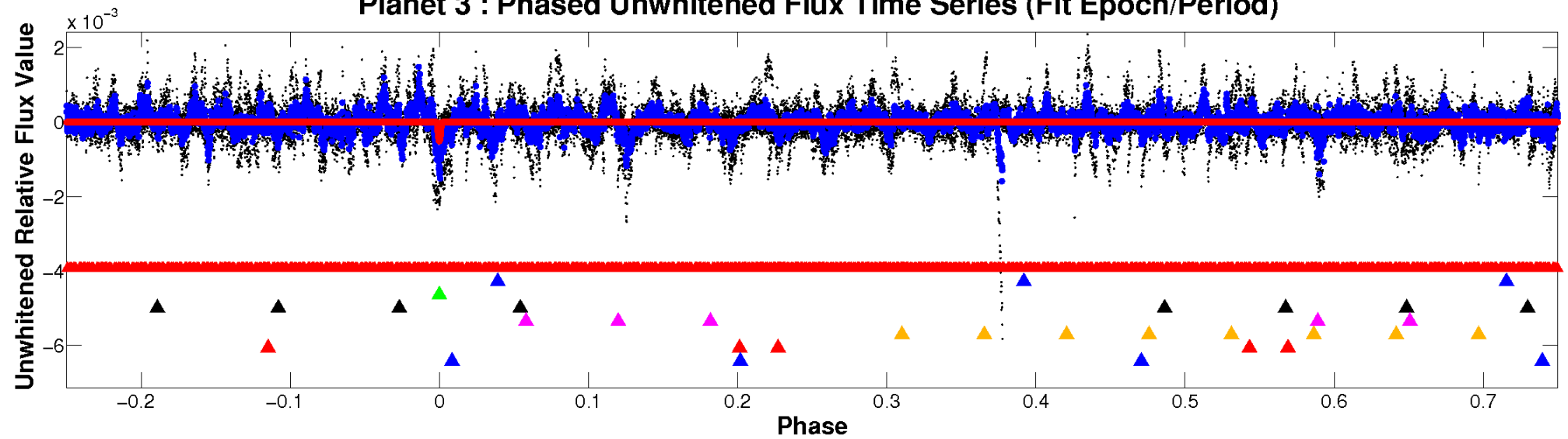
ALT Odd/Even

TCE 007340082-03

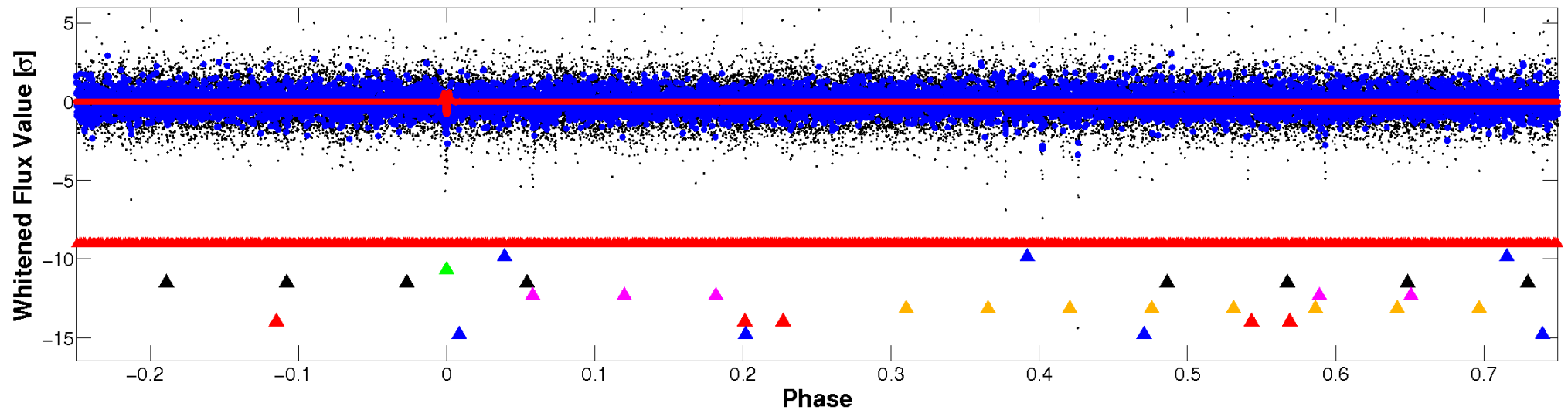


Non-Whitened Vs. Whitened Light Curve

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

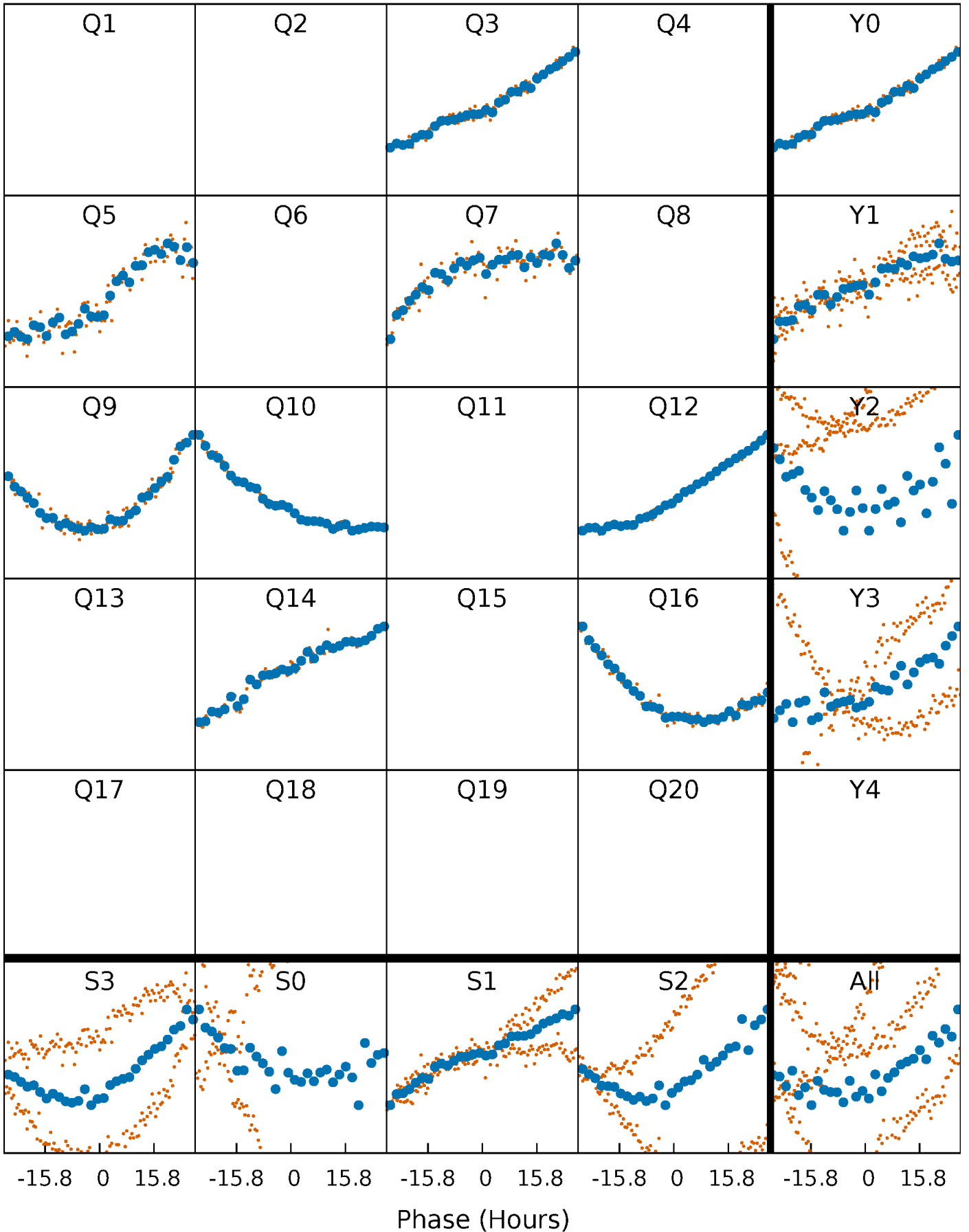


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



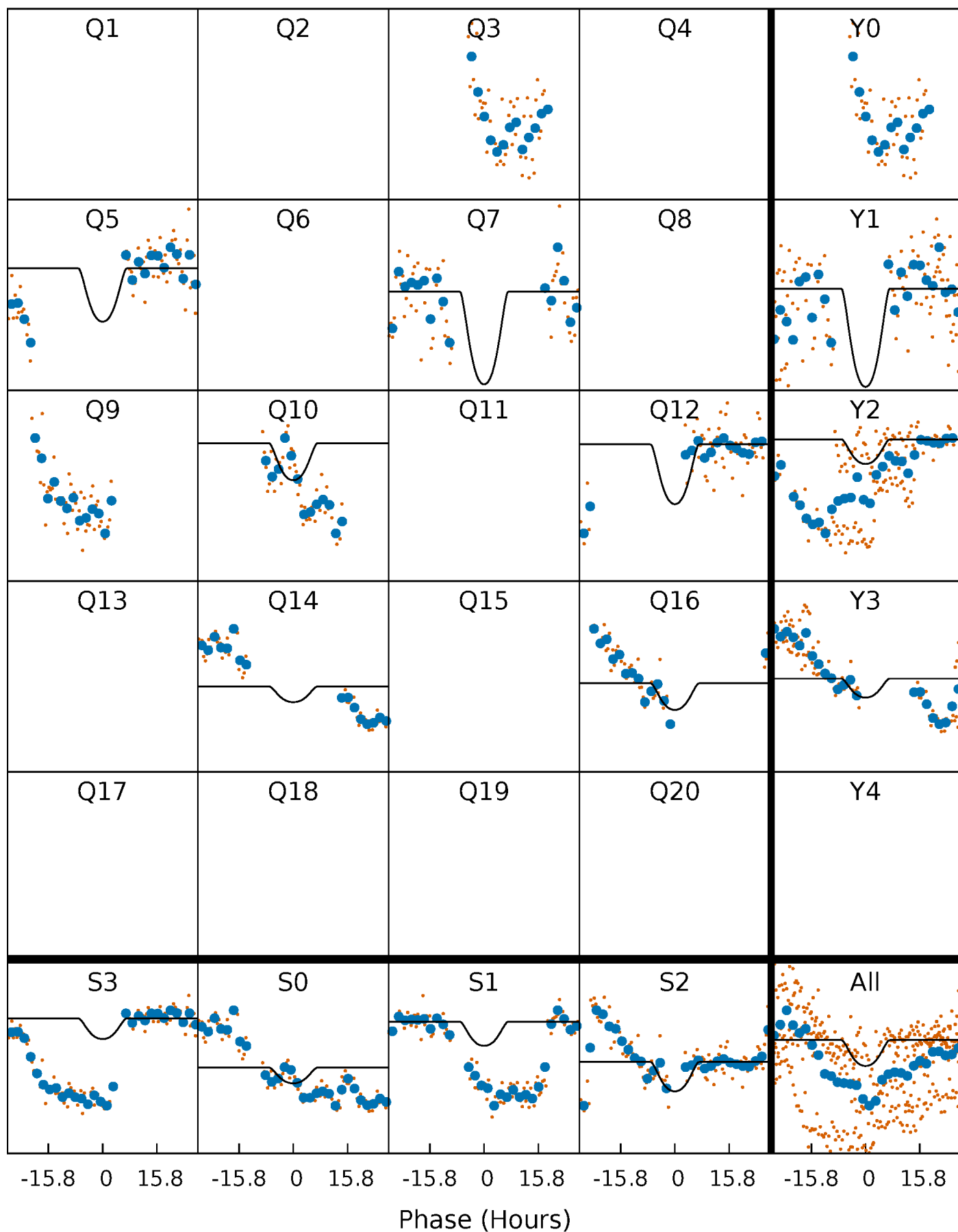
PDC Quarter-Phased Transit Curves

TCE 007340082-03 $P=178.762895$ Days $T_0=276.249675$ (BKJD)



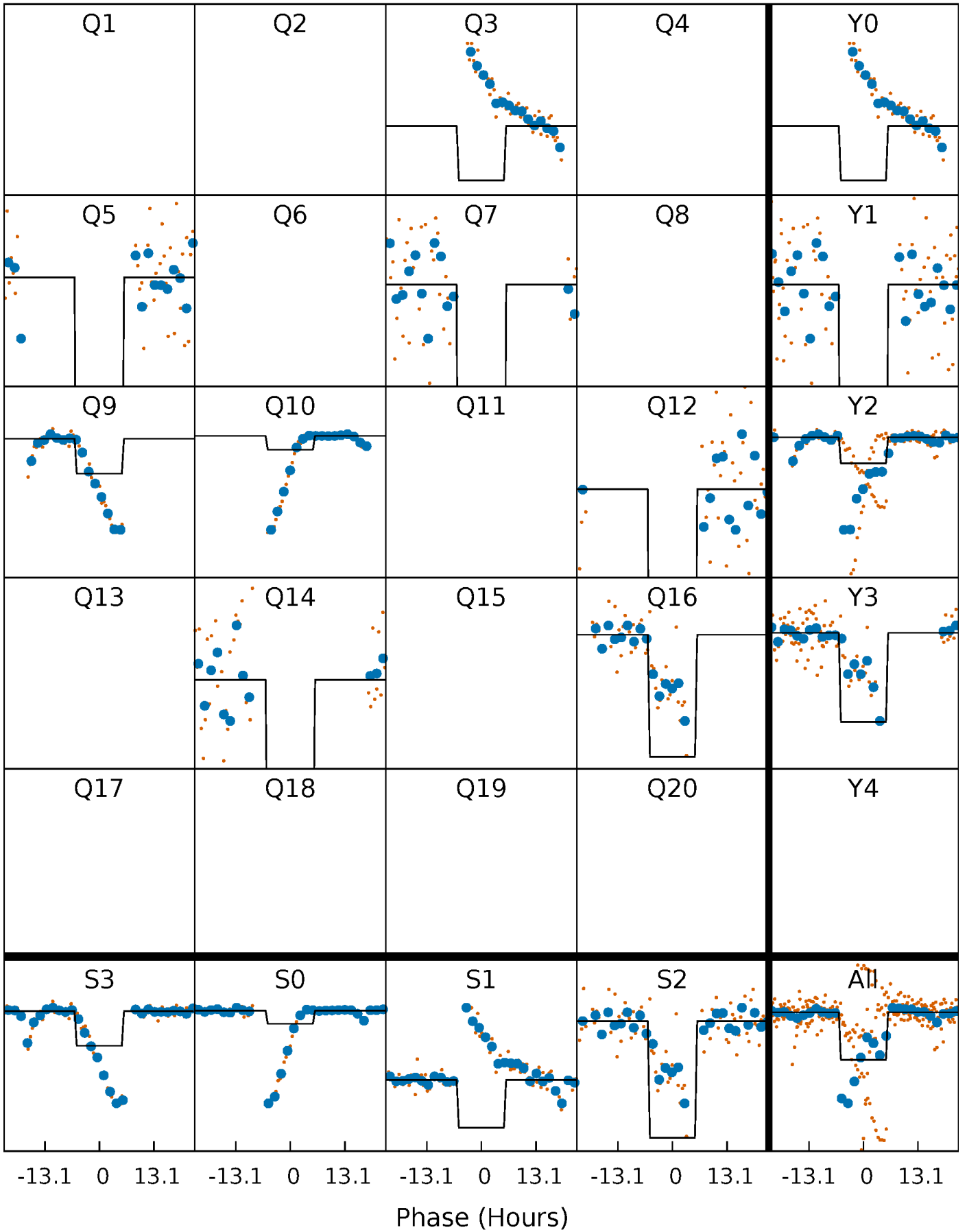
DV Quarter-Phased Transit Curves

TCE 007340082-03 $P=178.762895$ Days $T_0=276.249675$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

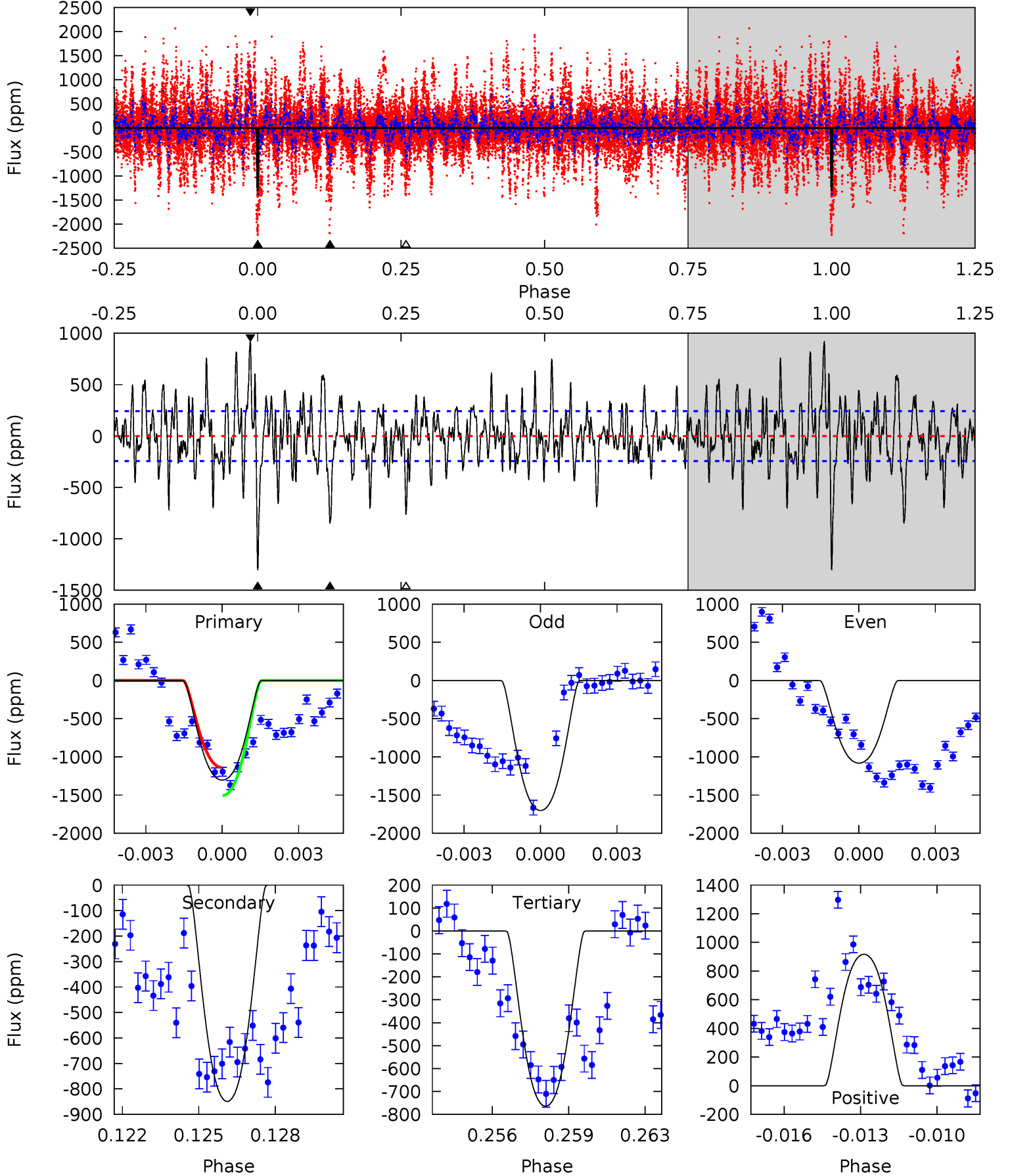
TCE 007340082-03 P=178.739160 Days $T_0=276.198307$ (BKJD)



DV Model-Shift Uniqueness Test

007340082-03, P = 178.762895 Days, E = 97.486780 Days

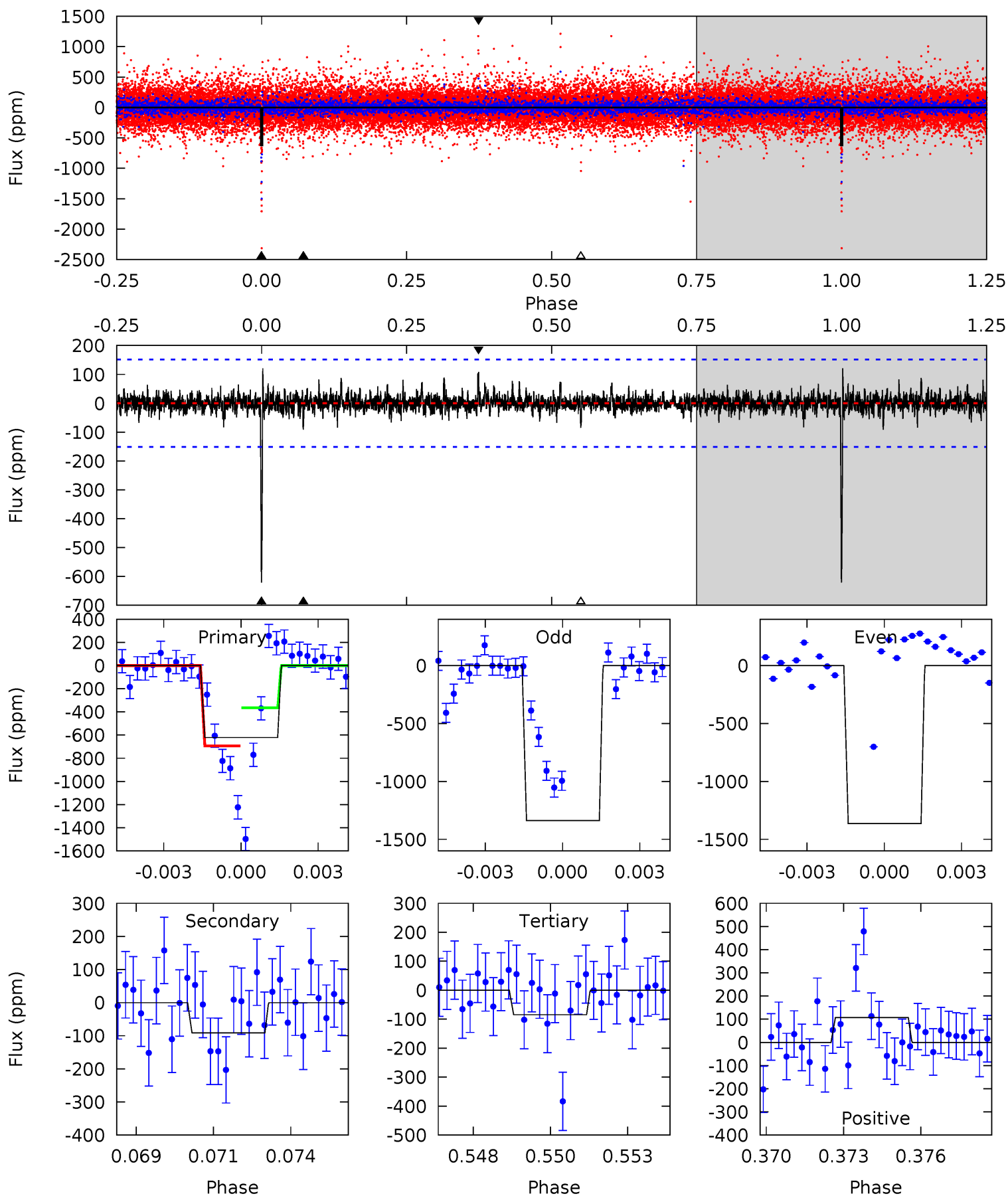
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.1	18.3	16.5	19.8	5.24	2.95	5.07	11.7	8.35	1.84	-1.47	6.46	1.88	0.41	3.96



Alt Model-Shift Uniqueness Test

007340082-03, P = 178.739160 Days, E = 97.459147 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.6	3.18	2.94	3.72	5.28	3.01	0.67	18.7	17.9	0.24	-0.54	0.51	1.00	0.16	5.70



Stellar Parameters For KIC 007340082

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5412^{+162}_{-146}	$4.503^{+0.110}_{-0.099}$	$-0.480^{+0.300}_{-0.300}$	$0.788^{+0.117}_{-0.096}$	$0.720^{+0.105}_{-0.045}$	$2.075^{+0.972}_{-0.609}$
	+3%/-3%	+2%/-2%	+62%/-62%	+15%/-12%	+15%/-6%	+47%/-29%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007340082-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-849 ± 46	$2.58^{+0.88}_{-0.98}$	396^{+18}_{-18}	5390^{+1351}_{-658}	22347^{+34310}_{-10041}
Alt.	-91 ± 29	$3.06^{+1.05}_{-0.93}$	397^{+18}_{-19}	3348^{+441}_{-321}	1660^{+1877}_{-803}

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

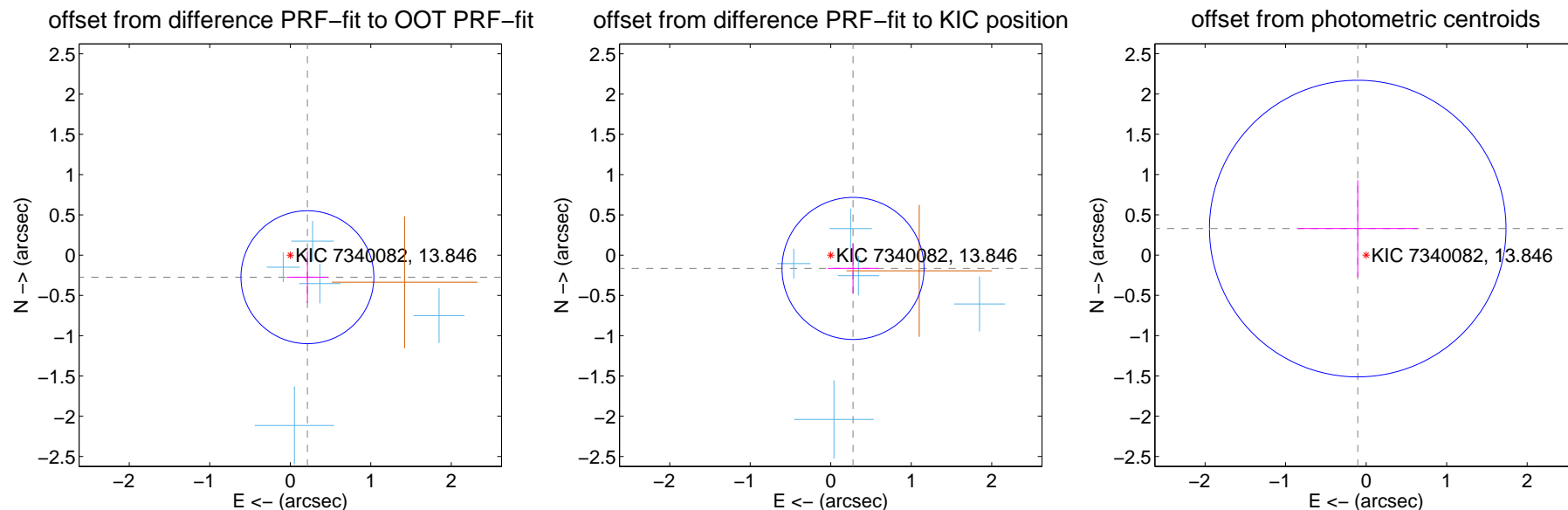
DV Centroid Data

Supplemental centroid analysis for 007340082-03. Kepler magnitude: 13.85. Transit SNR 5.67

There are 5 quarters with good PRF difference image offsets

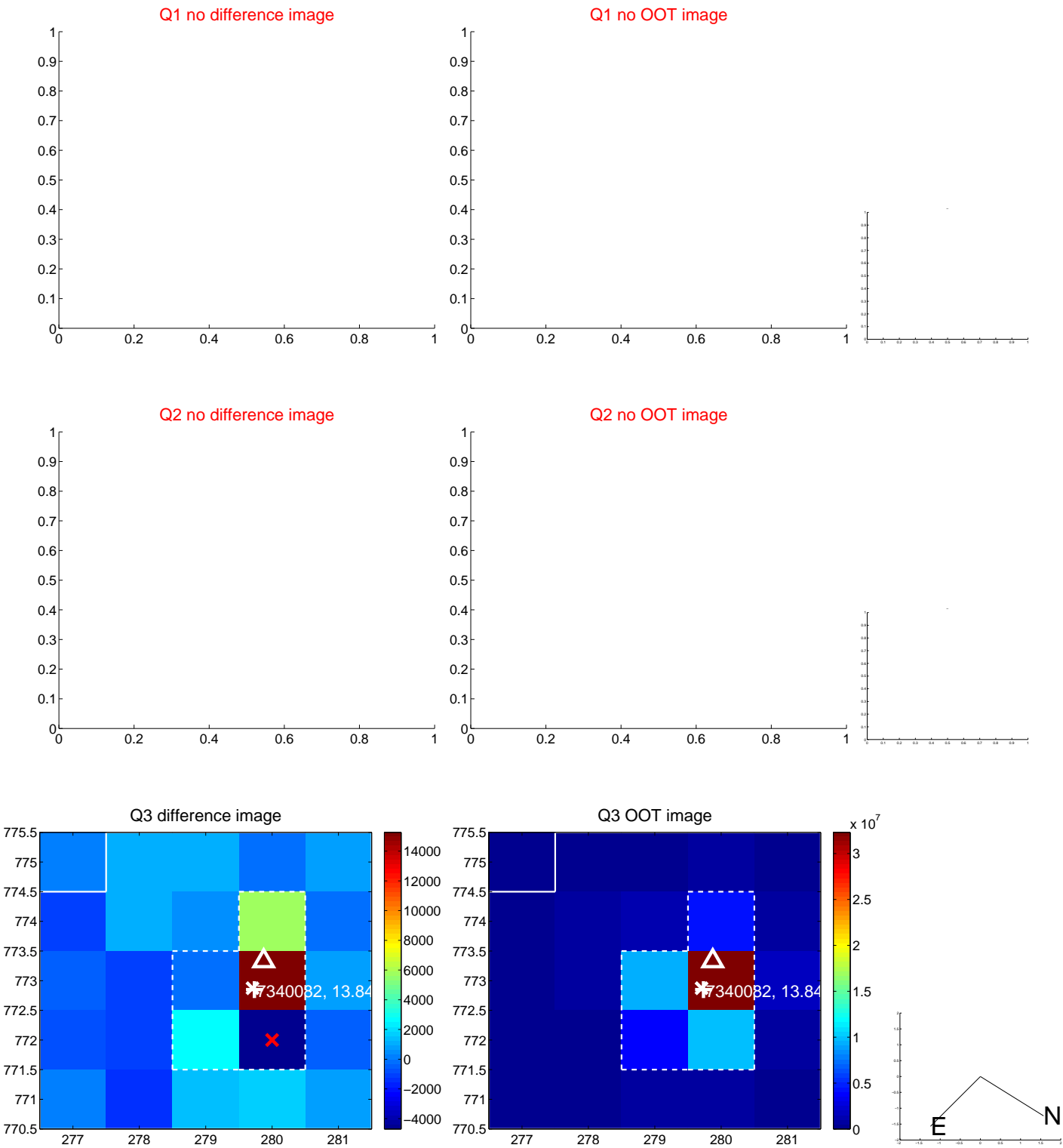
The direct PRF centroid is offset from the target star catalog position by about 0.35 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.347 ± 0.275	1.26	-0.213 ± 0.257	-0.274 ± 0.321
PRF-fit source offset from KIC position	0.322 ± 0.294	1.10	-0.277 ± 0.315	-0.165 ± 0.311
photometric centroid source offset	0.35 ± 0.61	0.56	0.10 ± 0.74	0.33 ± 0.60

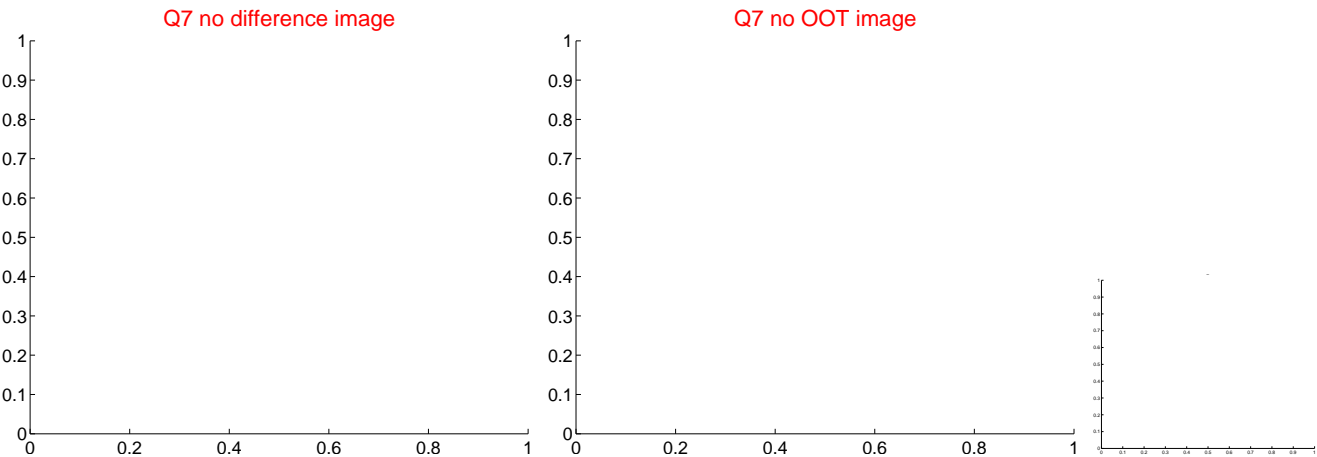
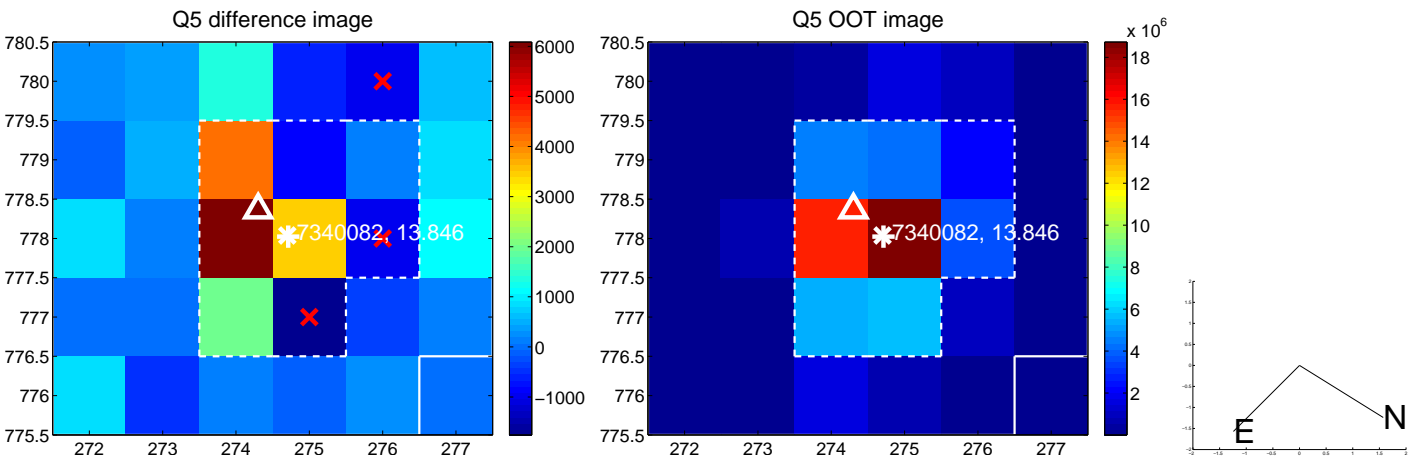


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

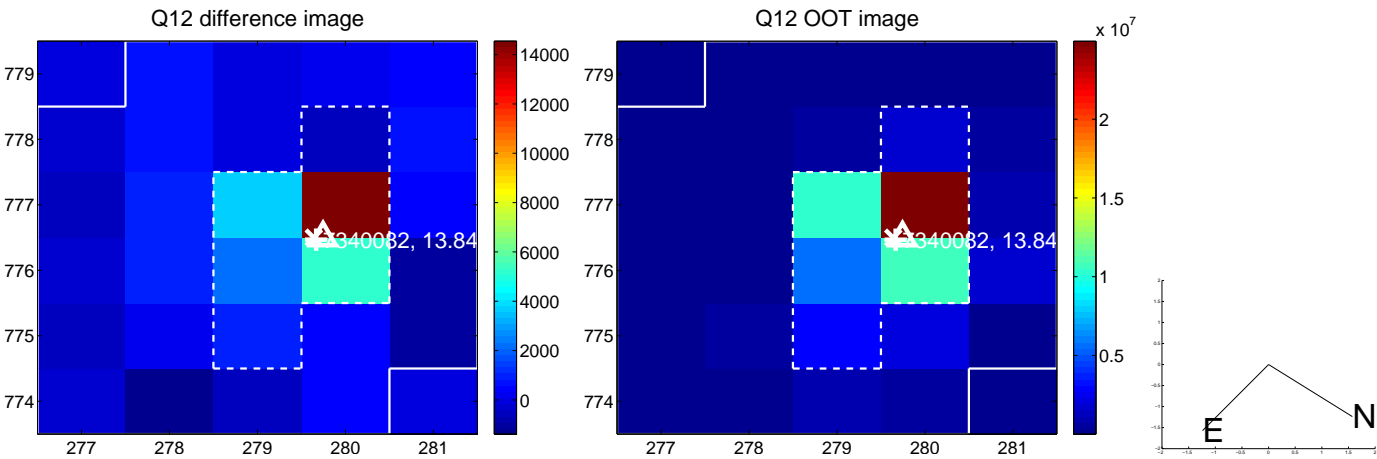
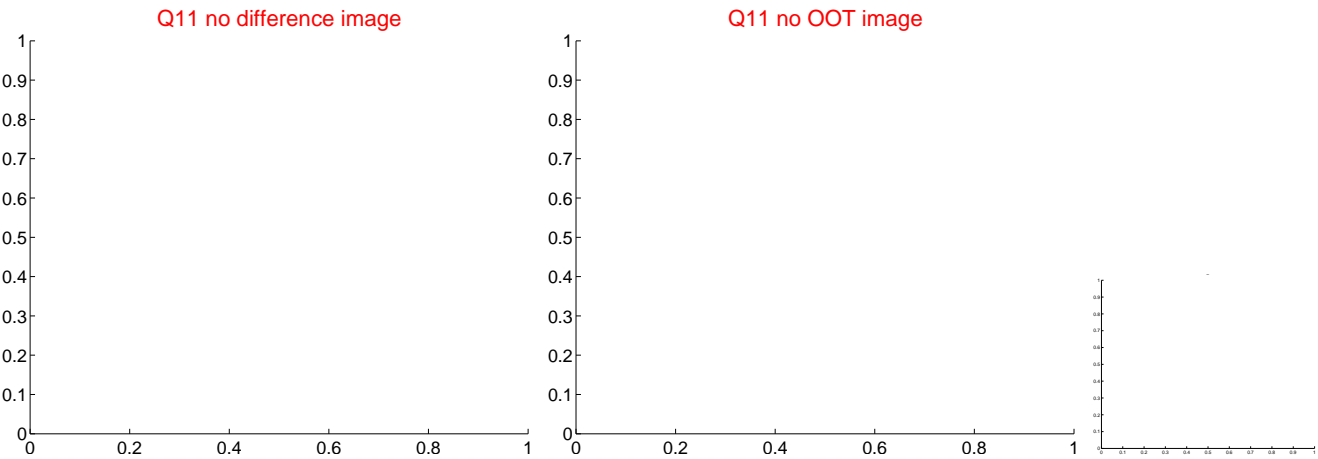
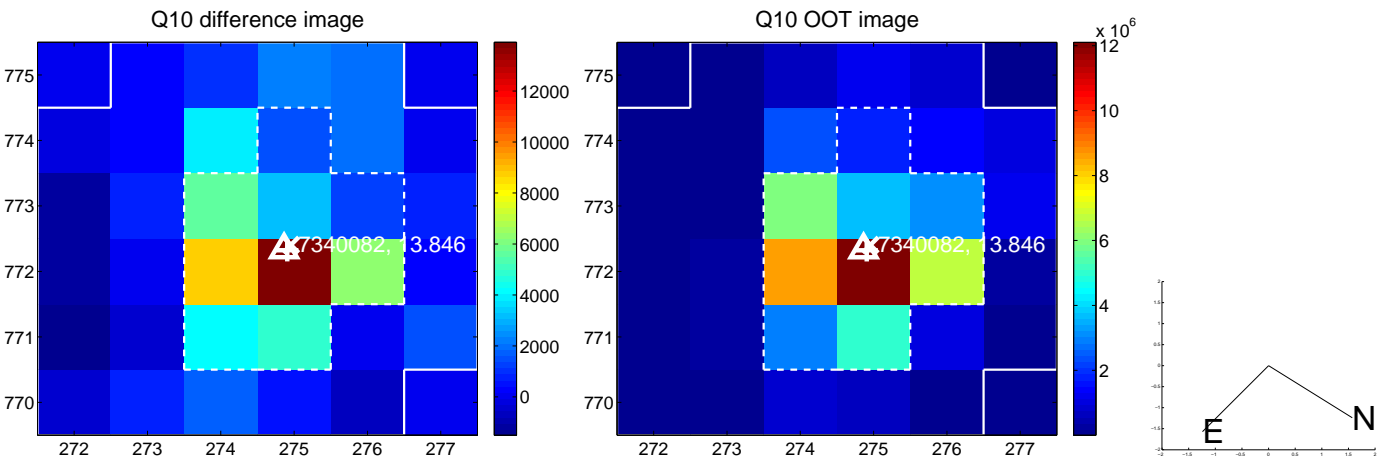
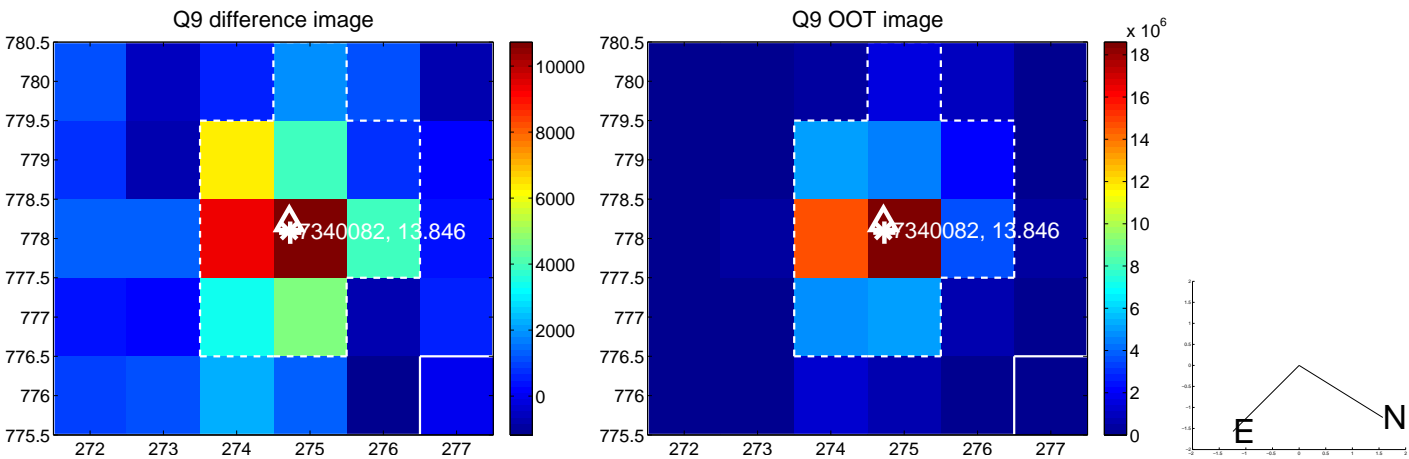
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



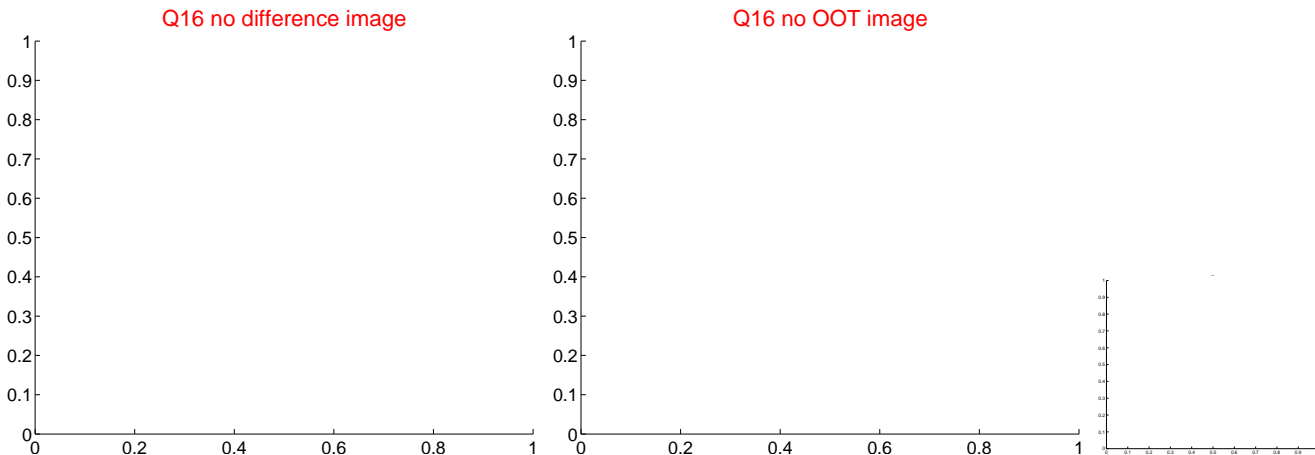
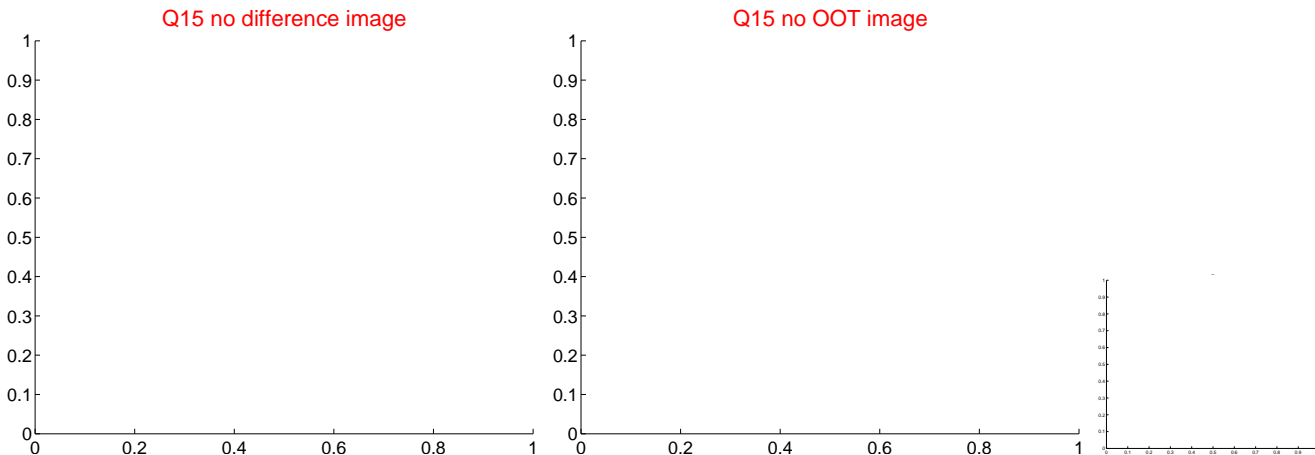
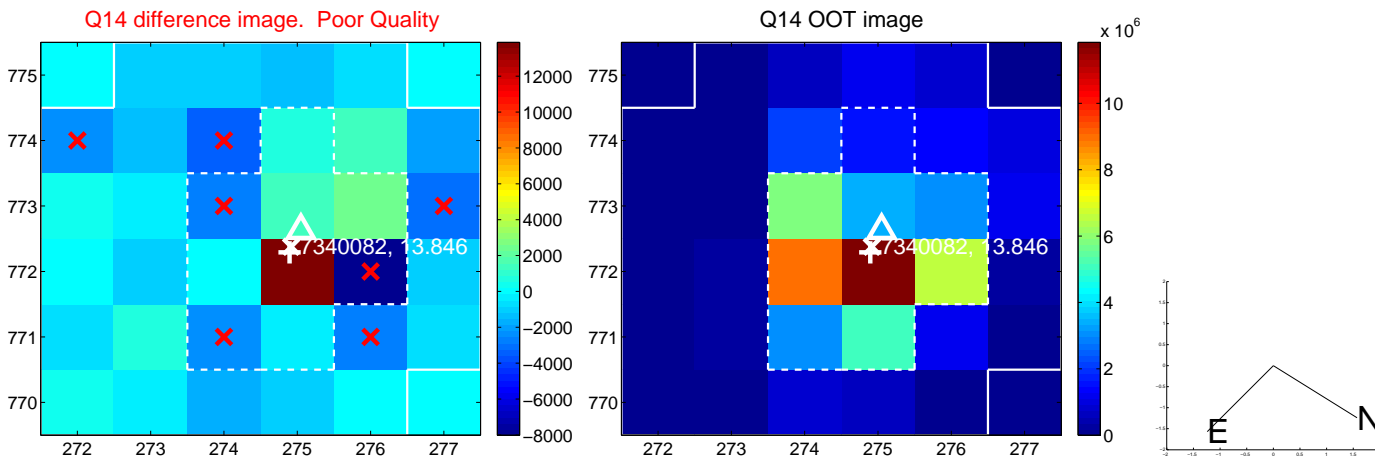
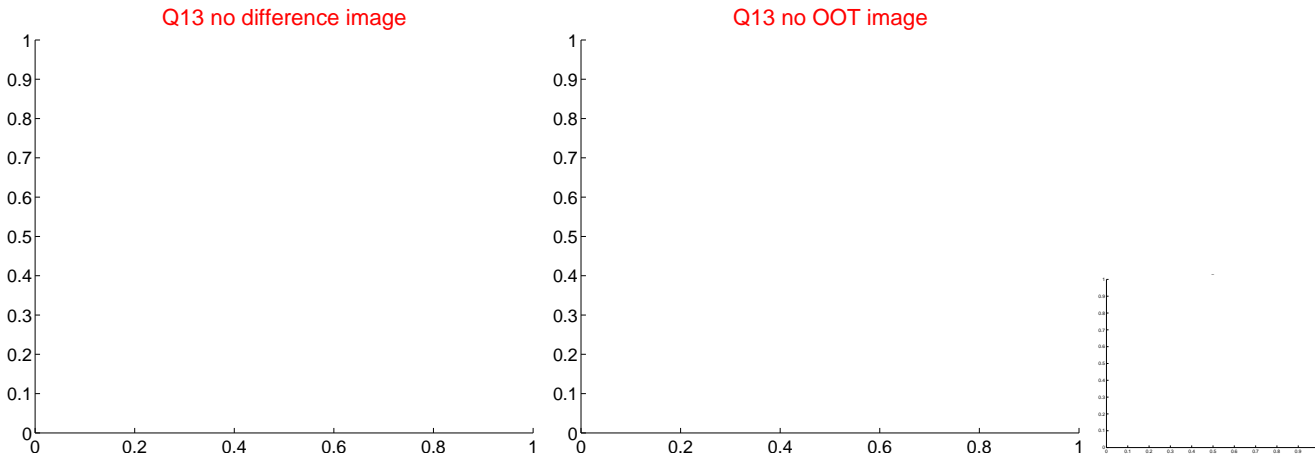
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



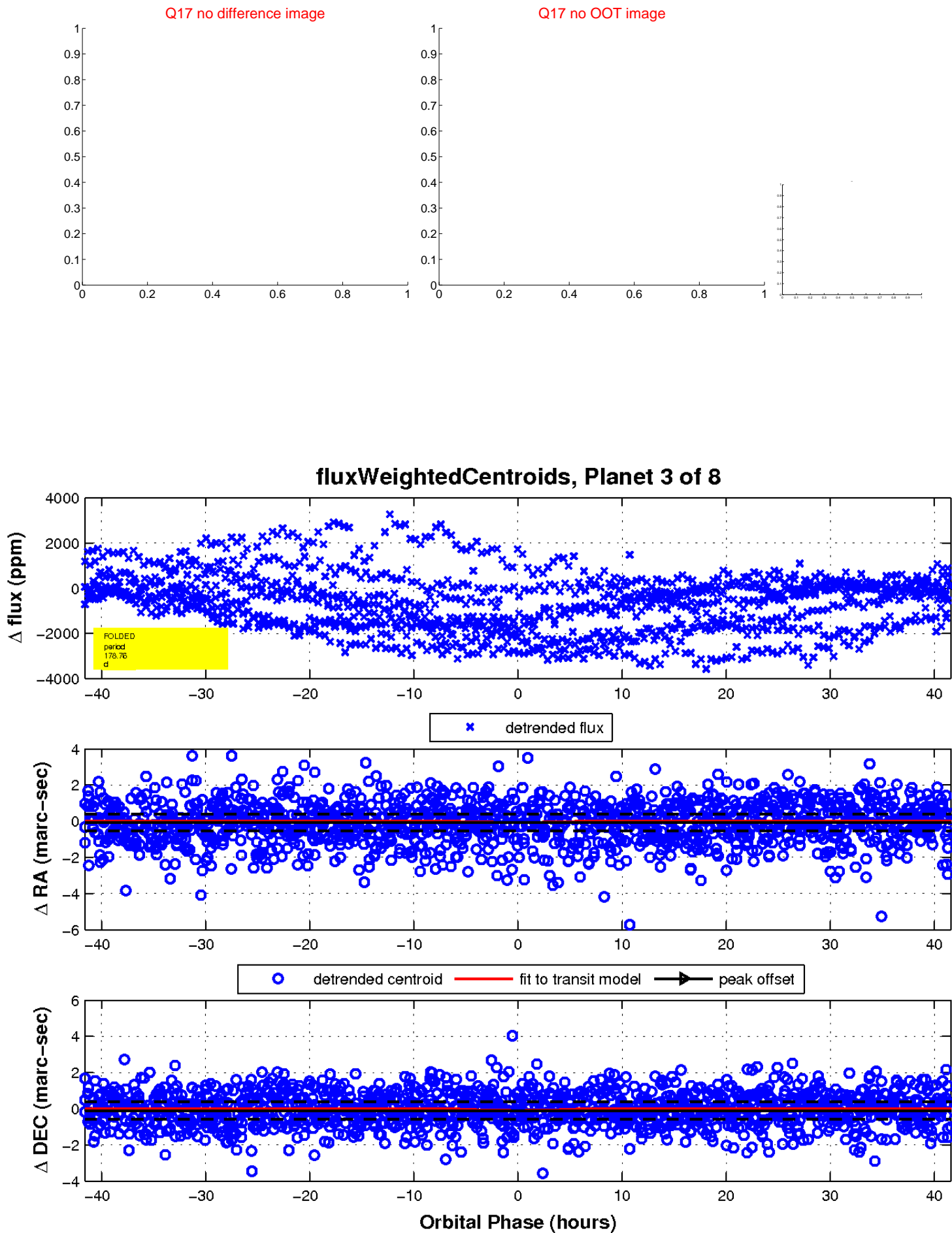
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



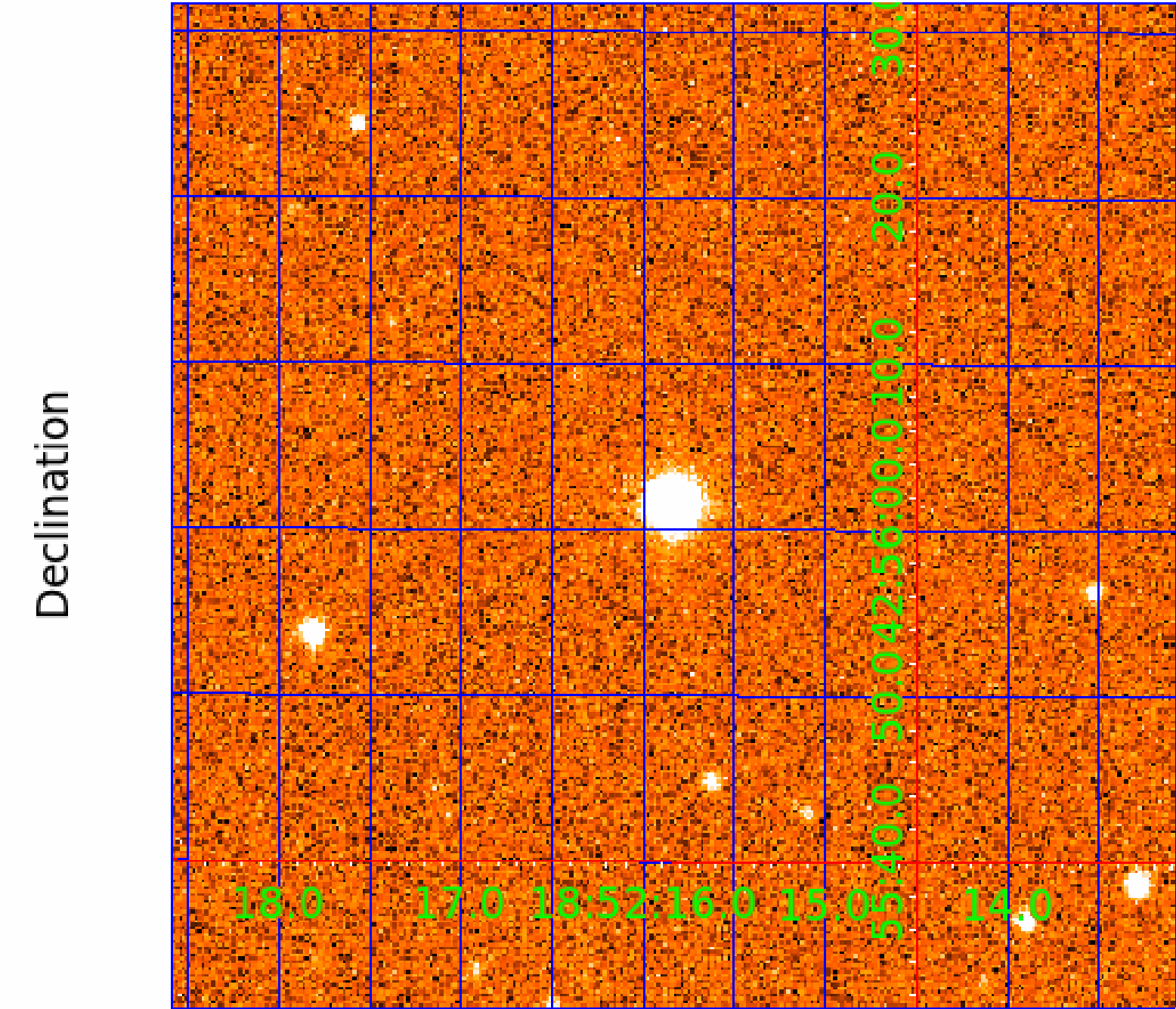
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image



KIC 007340082

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})
007340082-01	OBS	No	2.108776	132.081927	37.0	8.983	8.3	8.0	0.79	5412	0.59	572.75
007340082-02	OBS	No	415.376436	525.078206	1147.4	16.143	15.9	8.9	0.79	5412	3.44	0.50
007340082-03	OBS	No	178.762895	276.249675	507.3	13.867	14.9	5.7	0.79	5412	2.47	1.54
007340082-05	OBS	No	273.670980	286.638901	976.0	19.380	13.5	8.2	0.79	5412	4.84	0.87
007340082-07	OBS	No	296.400804	199.210791	228.2	12.154	10.2	2.6	0.79	5412	1.34	0.78
007340082-08	OBS	No	405.594636	133.568454	587.0	3.136	8.0	6.6	0.79	5412	2.33	0.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007340082-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
007340082-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007340082-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—INCONSISTENT_TRANS
007340082-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
007340082-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS
007340082-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST

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

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

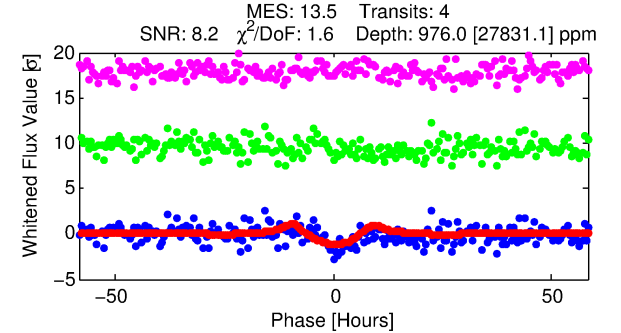
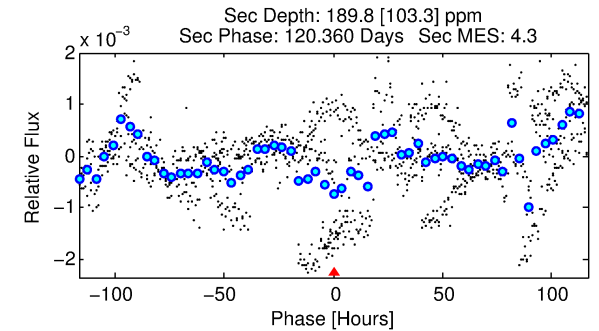
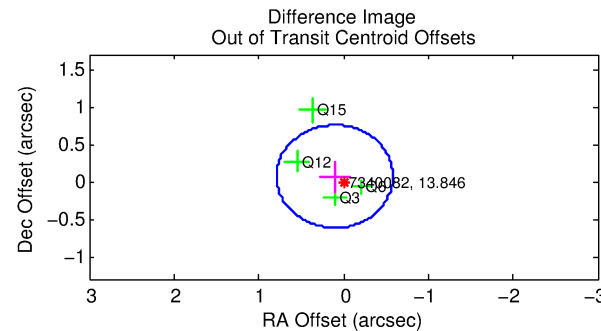
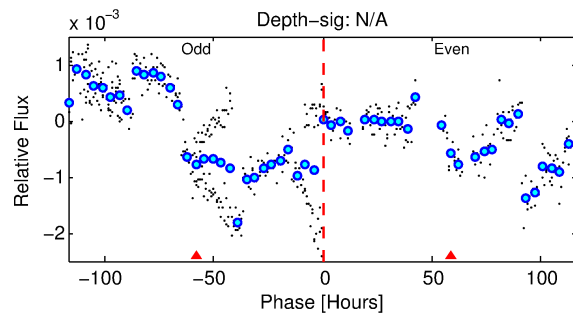
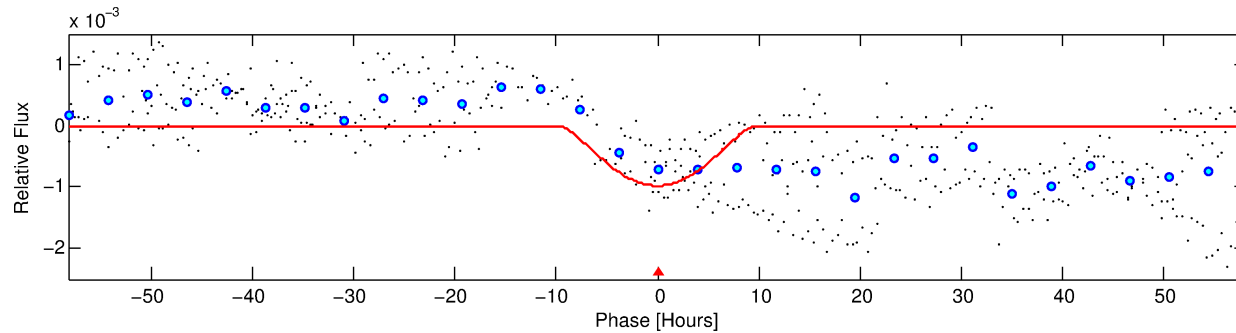
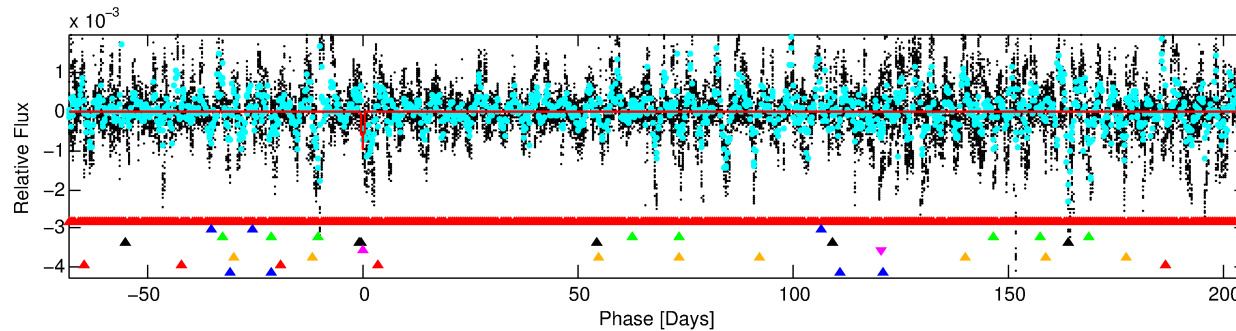
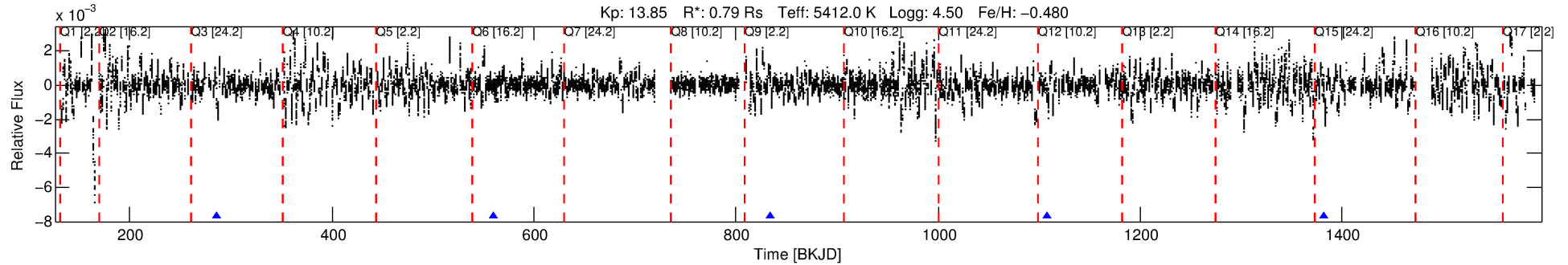
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007340082-05

No Significant Match Found

DV One-Page Summary

KIC: 7340082 Candidate: 5 of 8 Period: 273.671 d



DV Fit Results:

Period = 273.67098 [0.01506] d
Epoch = 286.6389 [0.0399] BKJD
Rp/R* = 0.0563 [0.1258]
a/R* = 36.73 [19.42]
b = 1.00 [0.90]
Seff = 0.87 [0.20]
Teq = 246 [14] K
Rp = 4.84 [10.84] Re
a = 0.7399 [0.0963] AU
Ag = 2436.55 [10975.15] [0.22σ]
Teffp = 2676 [3012] K [0.81σ]

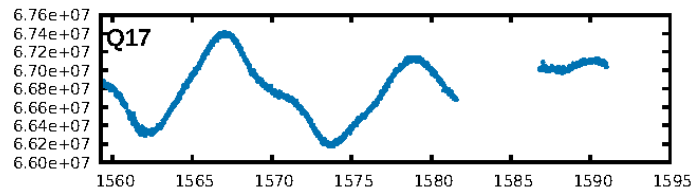
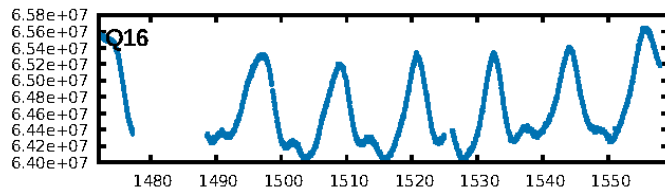
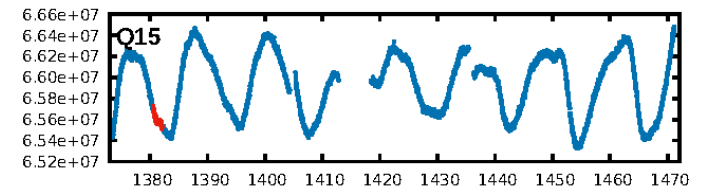
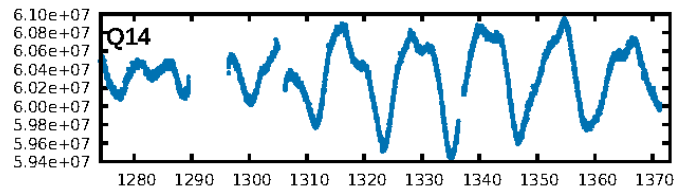
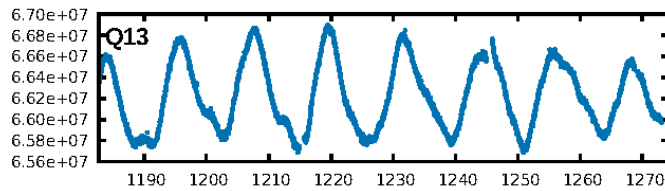
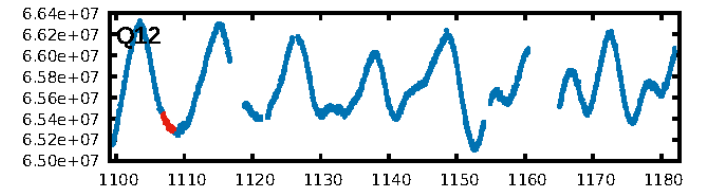
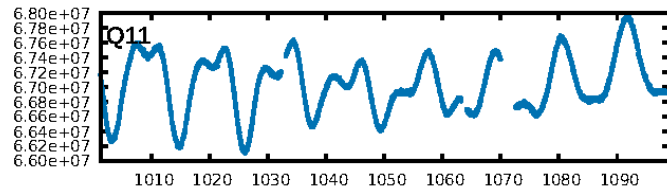
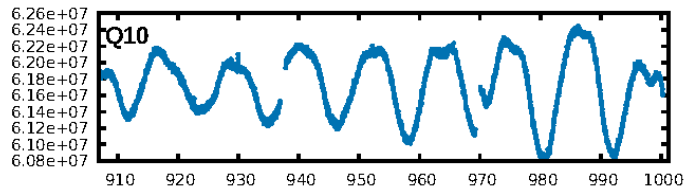
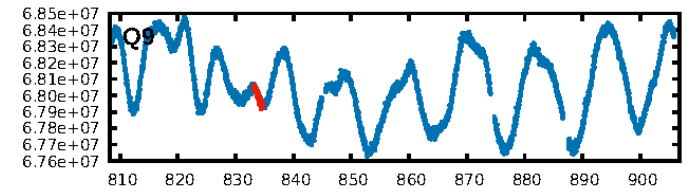
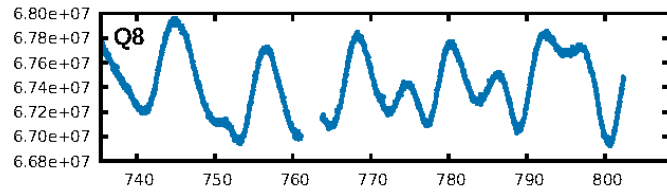
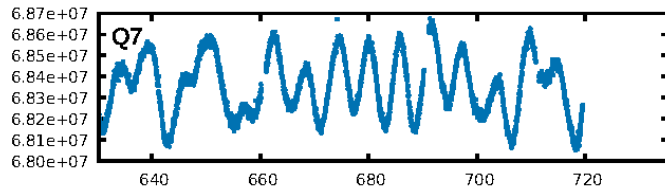
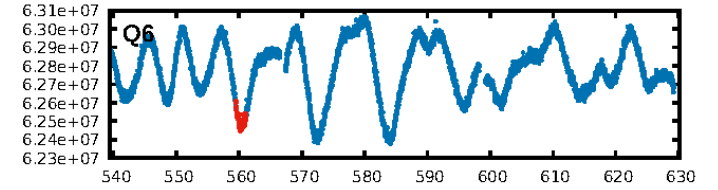
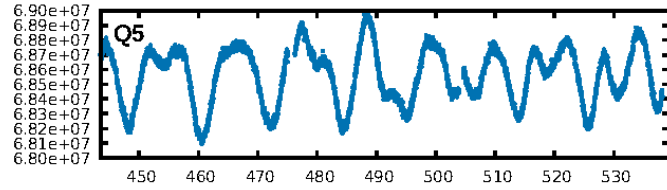
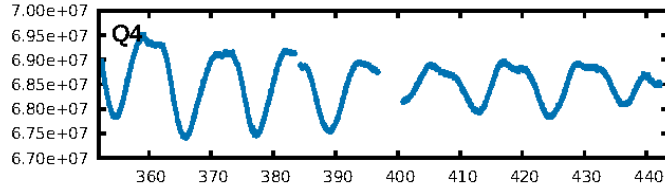
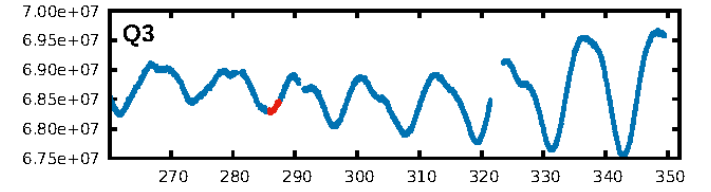
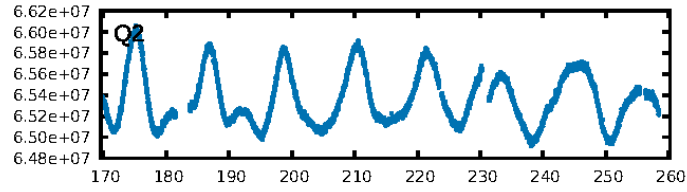
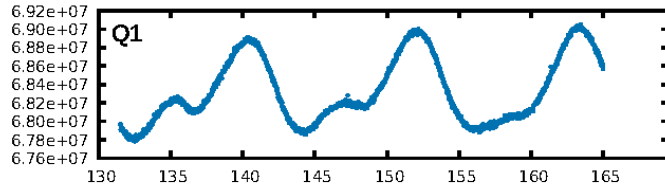
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [104.47σ]
LongPeriod-sig: 100.0% [23.85σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.38e-12
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.488
Centroid-sig: 59.7%
Centroid-so: 0.102 arcsec [0.27σ]
OotOffset-rm: 0.126 arcsec [0.55σ]
OotOffset-st: 1/2/1/0 [4]
KicOffset-rm: 0.249 arcsec [1.13σ]
KicOffset-st: 1/2/1/0 [4]
DiffImageQuality-fgm: 1.00 [4/4]
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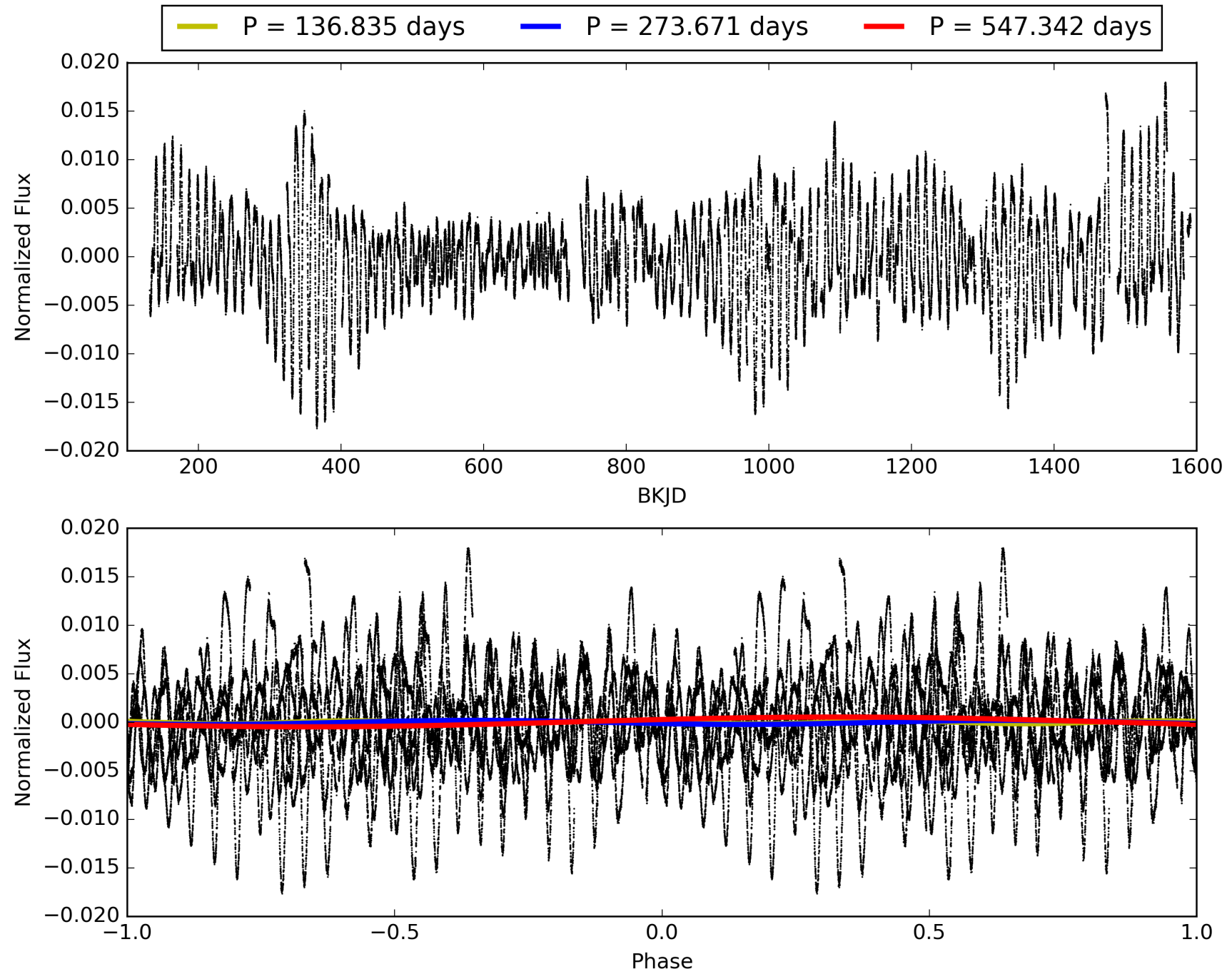
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 02:42:09 Z

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

TCE 007340082-05, PDC Light Curves

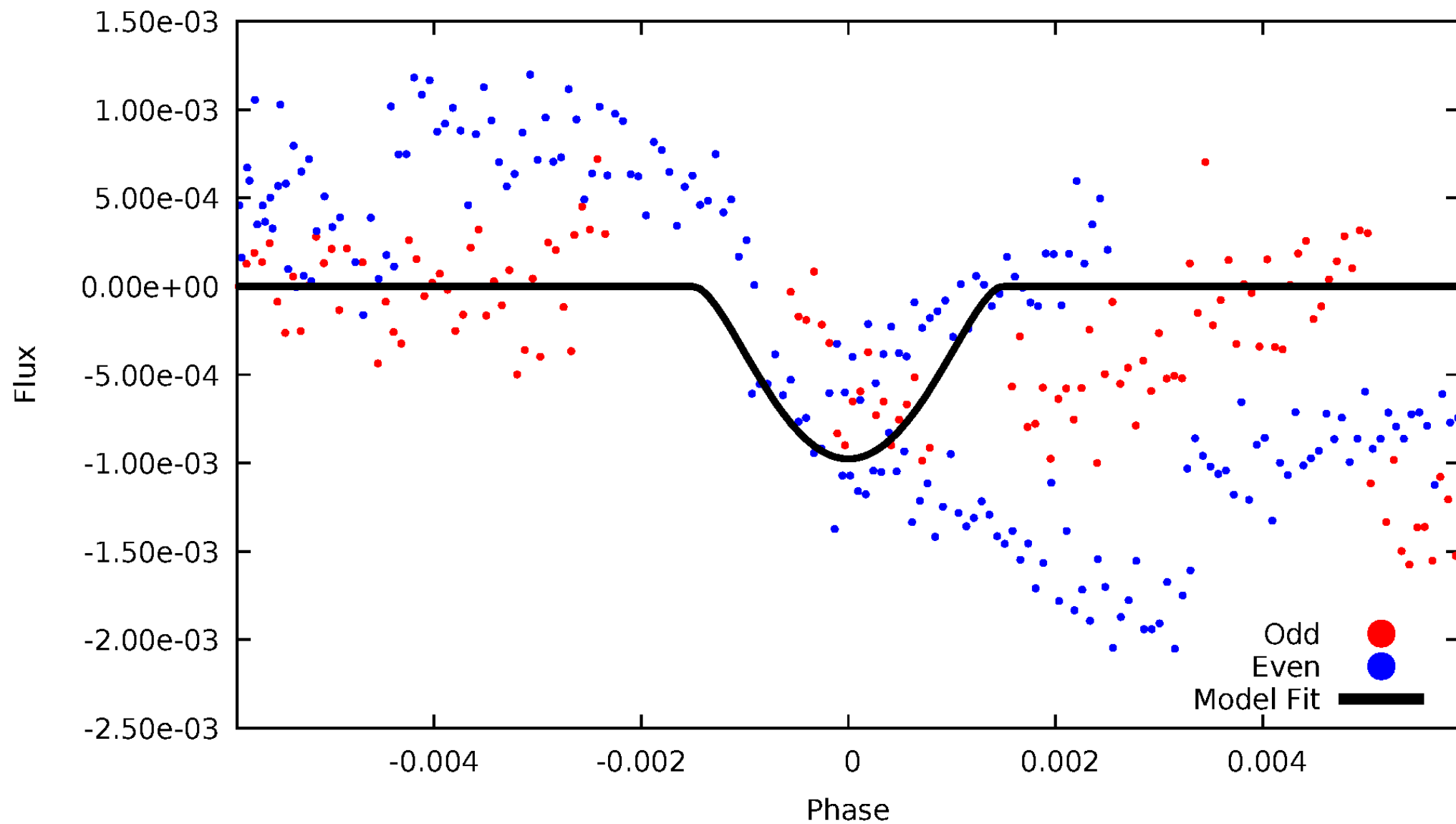


TCE 007340082-05



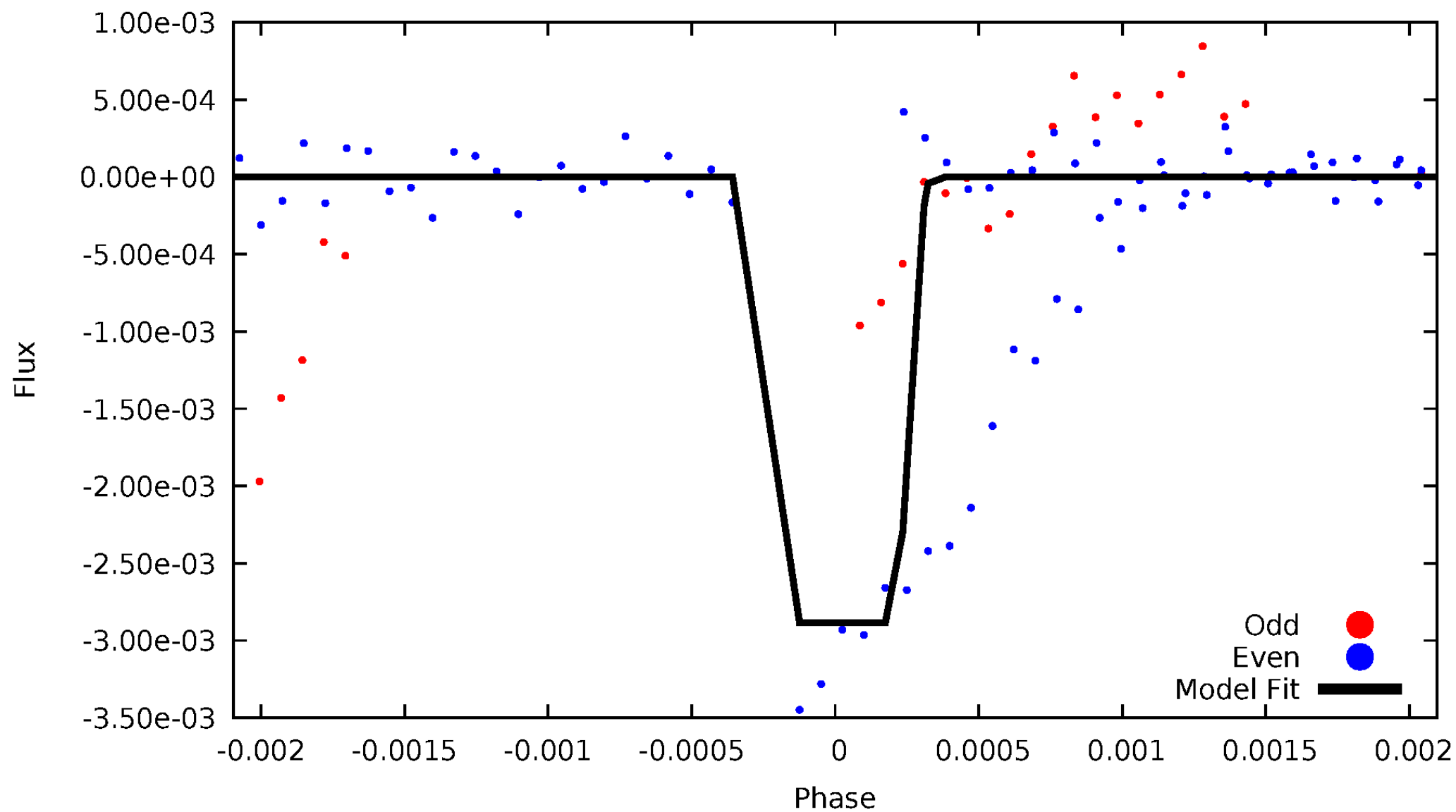
DV Odd/Even

TCE 007340082-05



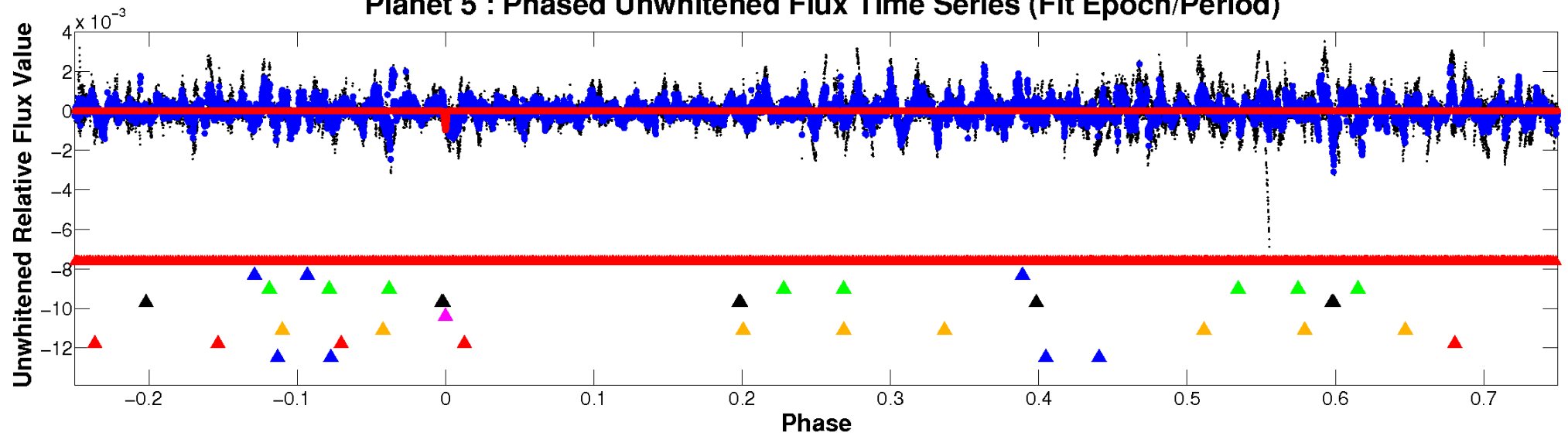
ALT Odd/Even

TCE 007340082-05

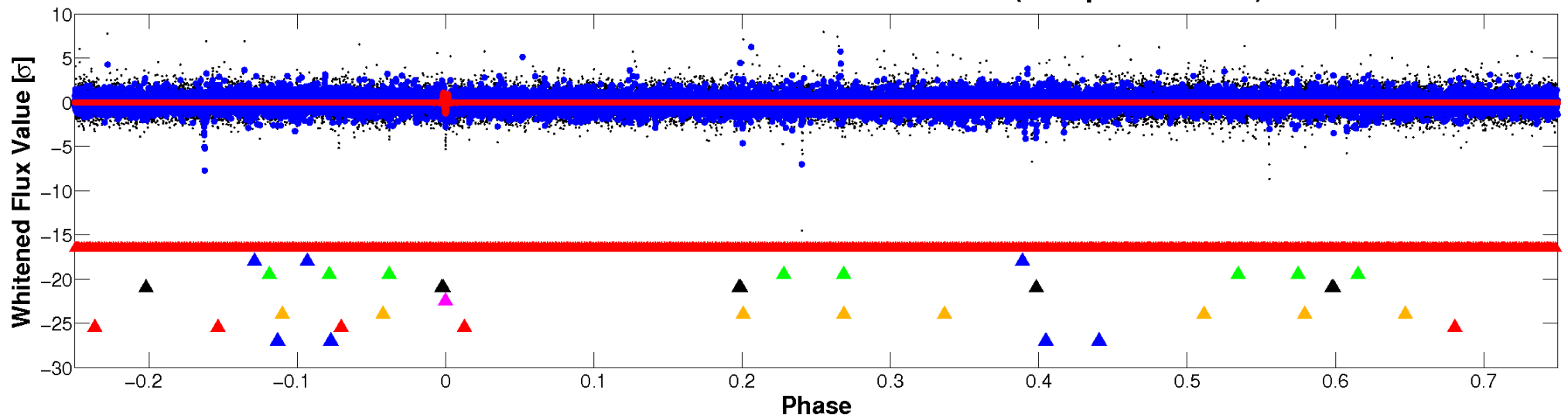


Non-Whitened Vs. Whitened Light Curve

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

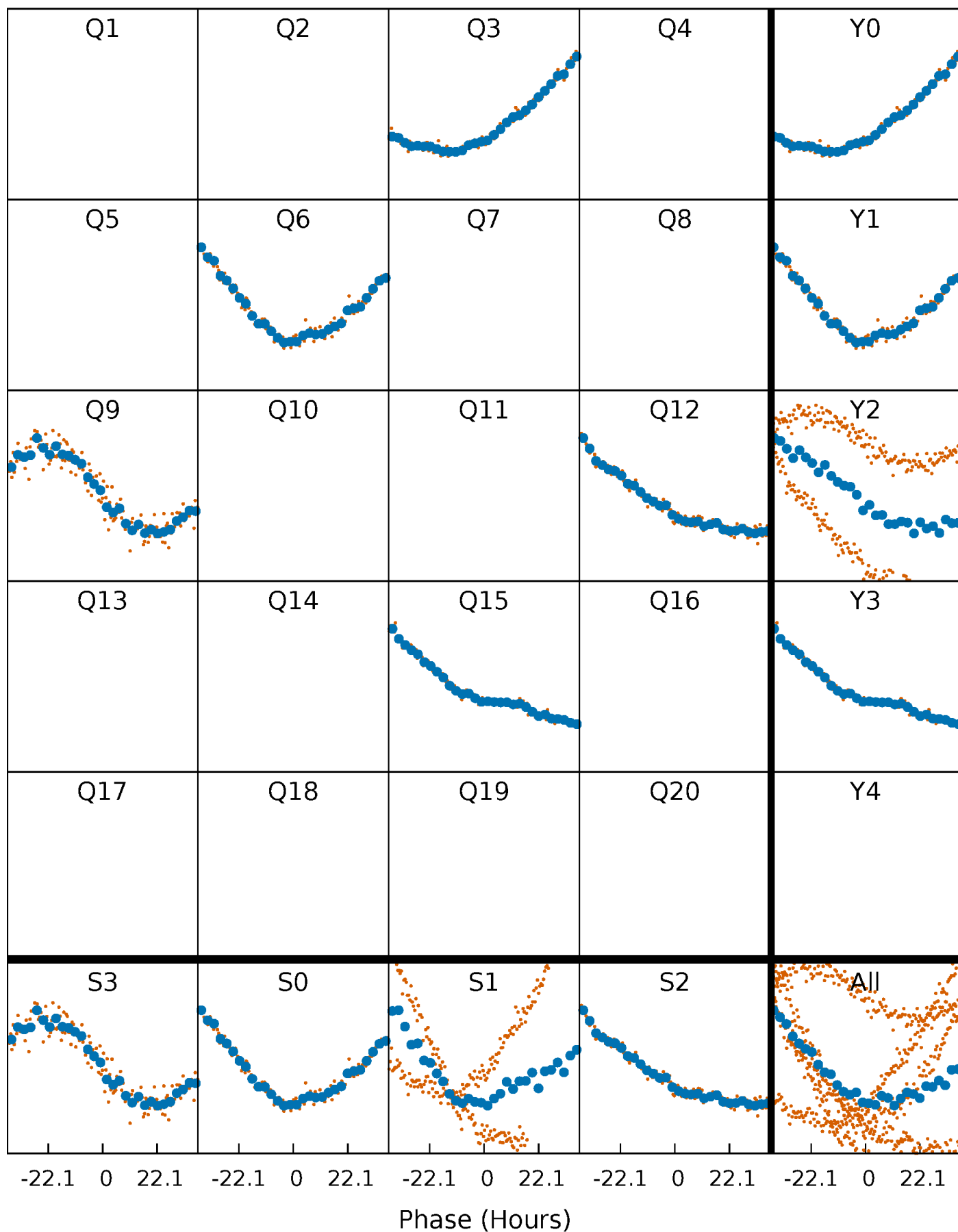


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



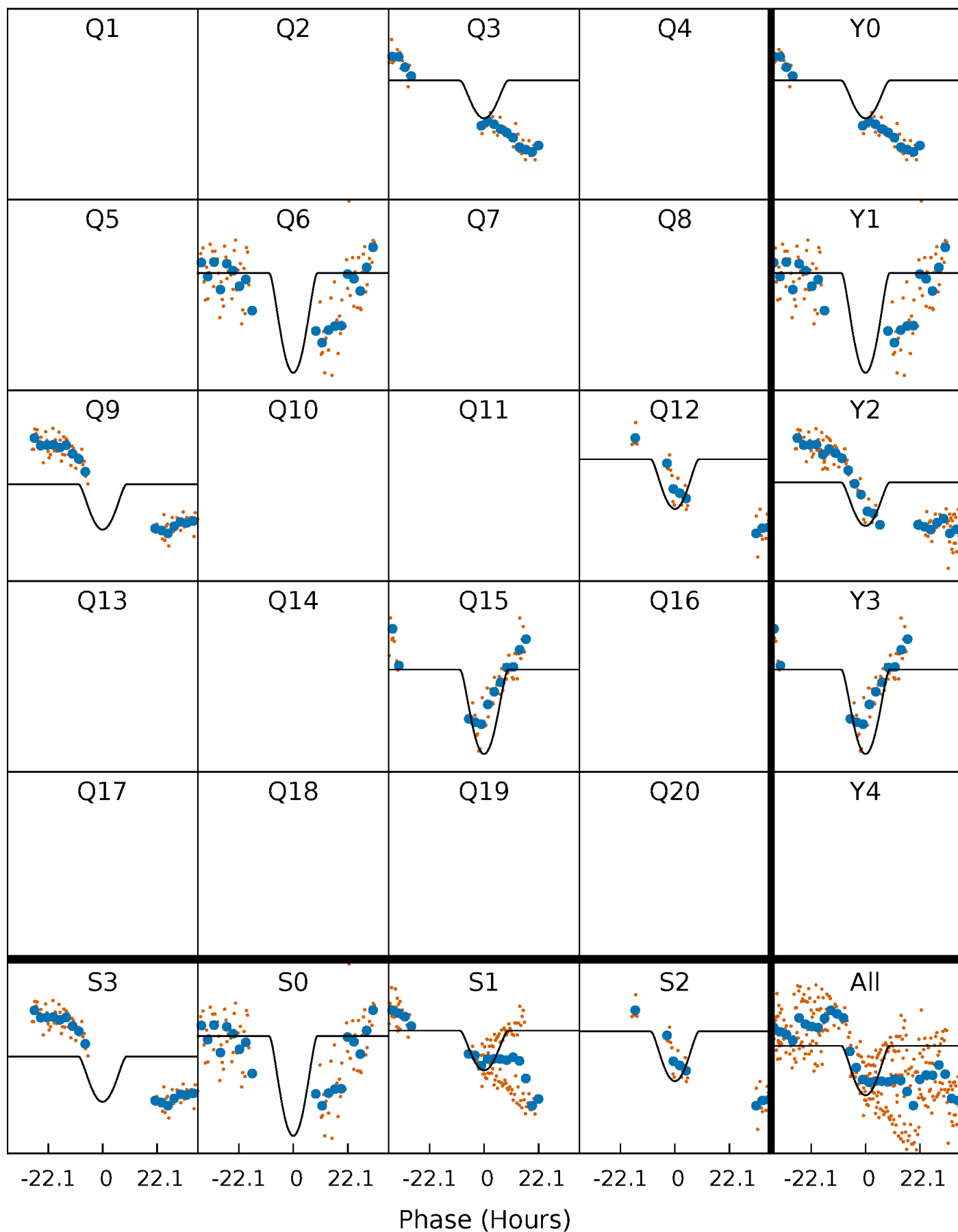
PDC Quarter-Phased Transit Curves

TCE 007340082-05 $P=273.670980$ Days $T_0=286.638901$ (BKJD)



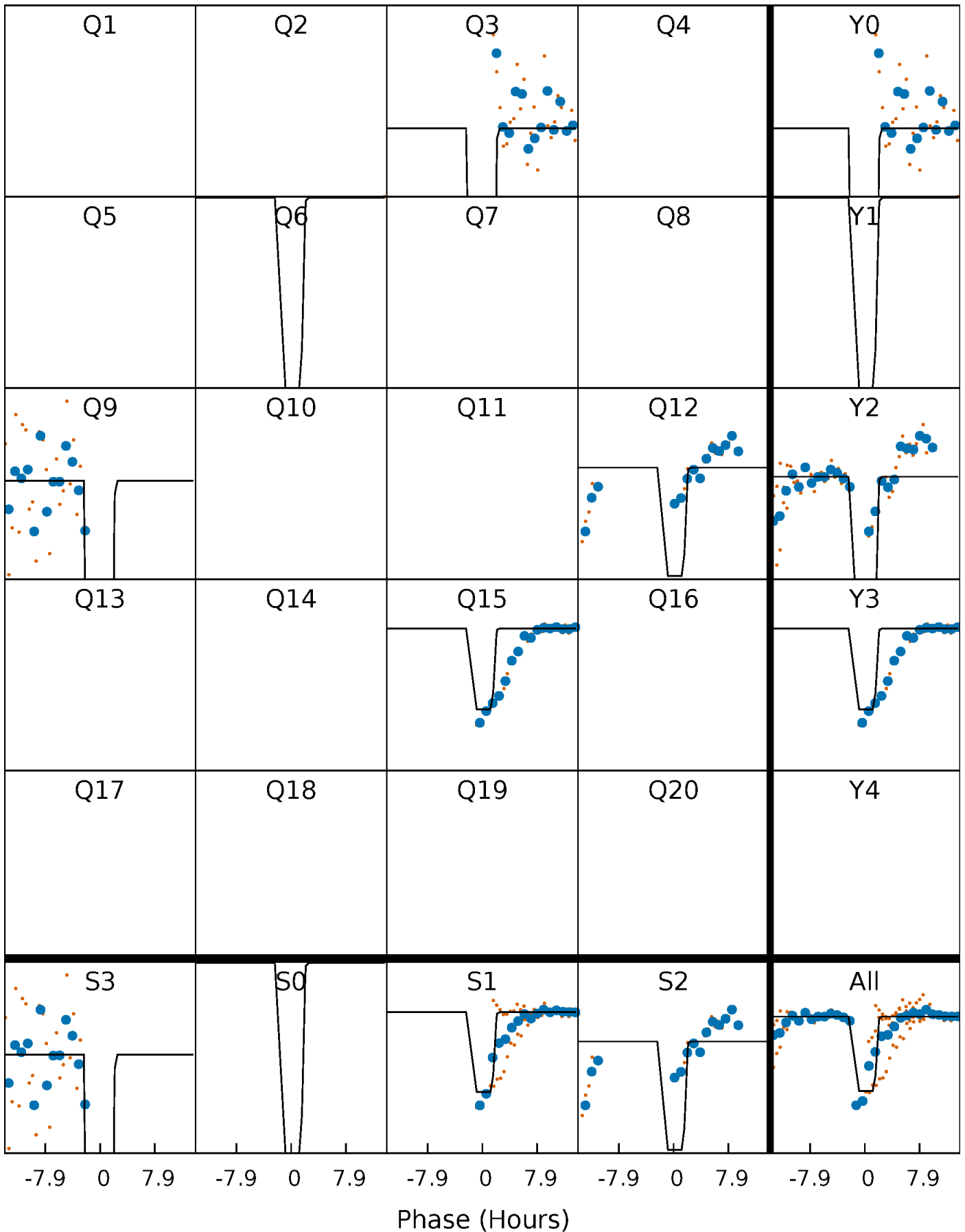
DV Quarter-Phased Transit Curves

TCE 007340082-05 $P=273.670980$ Days $T_0=286.638901$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

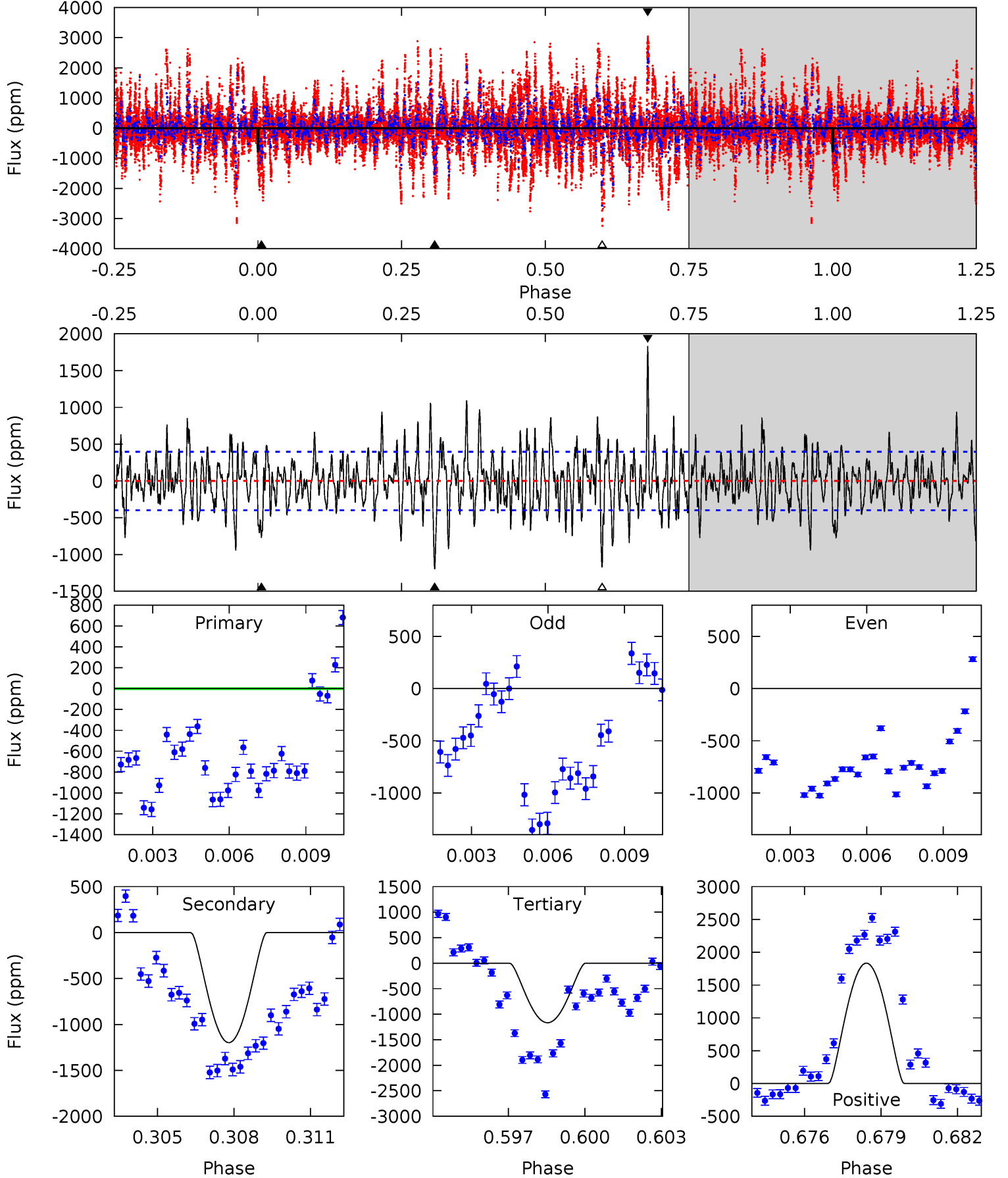
TCE 007340082-05 $P=273.646235$ Days $T_0=286.537719$ (BKJD)



DV Model-Shift Uniqueness Test

007340082-05, P = 273.670980 Days, E = 12.967921 Days

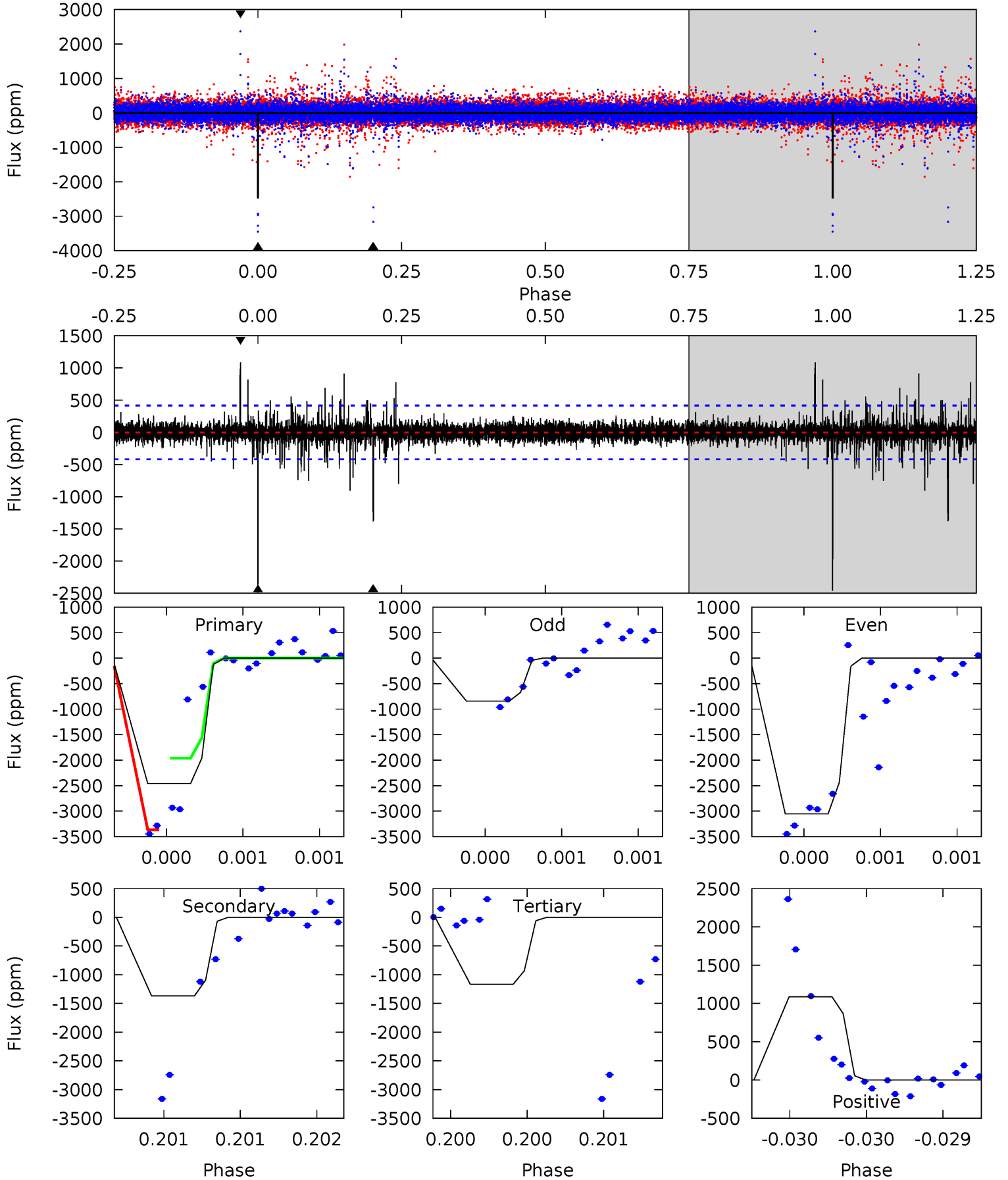
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	15.8	15.4	24.2	5.25	2.97	4.30	-5.22	-14.0	0.41	-8.39	1.46	0.76	0.60	1.73



Alt Model-Shift Uniqueness Test

007340082-05, $P = 273.646235$ Days, $E = 12.891484$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.9	18.3	15.6	14.6	5.57	3.48	1.21	17.3	18.3	2.73	3.78	15.2	1.35	0.31	6.93



Stellar Parameters For KIC 007340082

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5412^{+162}_{-146}	$4.503^{+0.110}_{-0.099}$	$-0.480^{+0.300}_{-0.300}$	$0.788^{+0.117}_{-0.096}$	$0.720^{+0.105}_{-0.045}$	$2.075^{+0.972}_{-0.609}$
	$+3\%/-3\%$	$+2\%/-2\%$	$+62\%/-62\%$	$+15\%/-12\%$	$+15\%/-6\%$	$+47\%/-29\%$
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007340082-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1198 ± 76	$9.35^{+9.31}_{-6.41}$	344^{+16}_{-15}	3527^{+1957}_{-645}	4165^{+38396}_{-3087}
Alt.	-1371 ± 75	$9.11^{+8.97}_{-6.02}$	345^{+17}_{-17}	3597^{+1809}_{-625}	4956^{+40975}_{-3672}

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 $A_{obs} \gg 1.0$

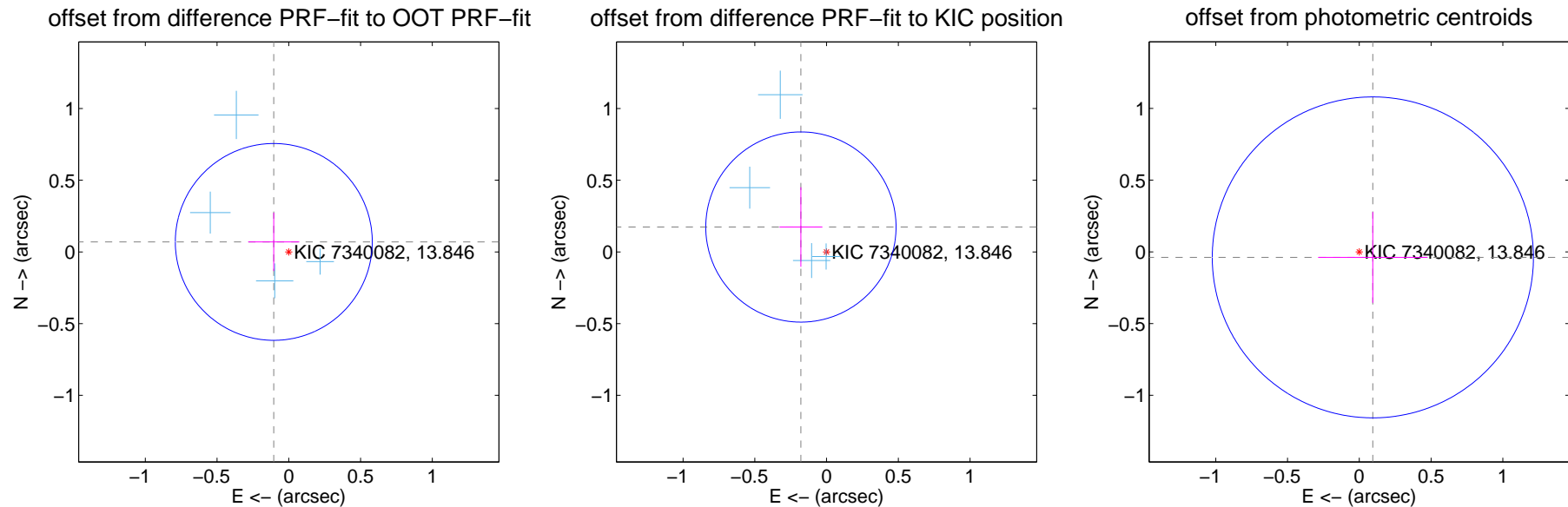
DV Centroid Data

Supplemental centroid analysis for 007340082-05. Kepler magnitude: 13.85. Transit SNR 8.24

There are 4 quarters with good PRF difference image offsets

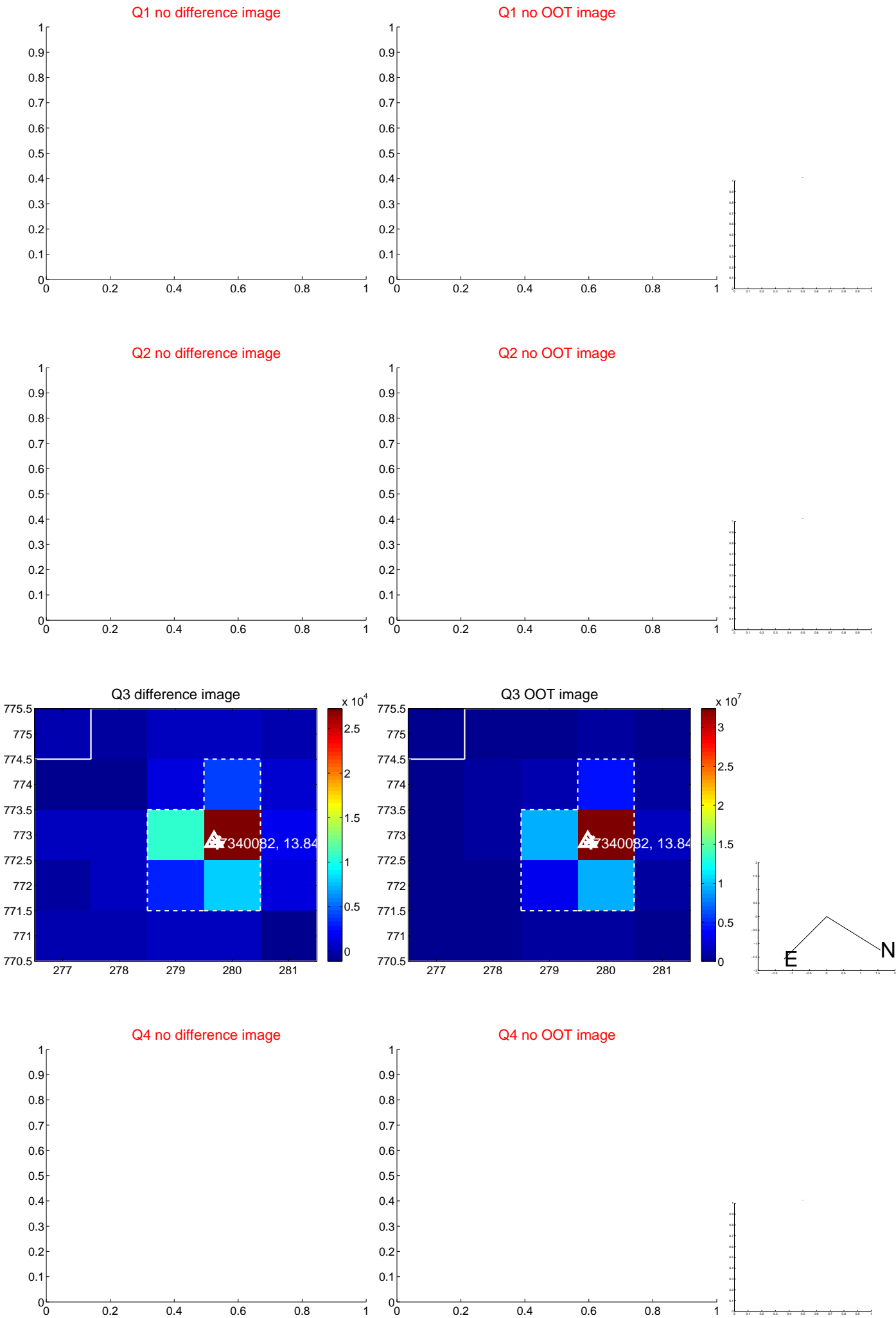
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.126 ± 0.229	0.55	0.105 ± 0.178	0.070 ± 0.204
PRF-fit source offset from KIC position	0.249 ± 0.221	1.13	0.179 ± 0.149	0.174 ± 0.278
photometric centroid source offset	0.10 ± 0.37	0.27	-0.09 ± 0.38	-0.04 ± 0.32

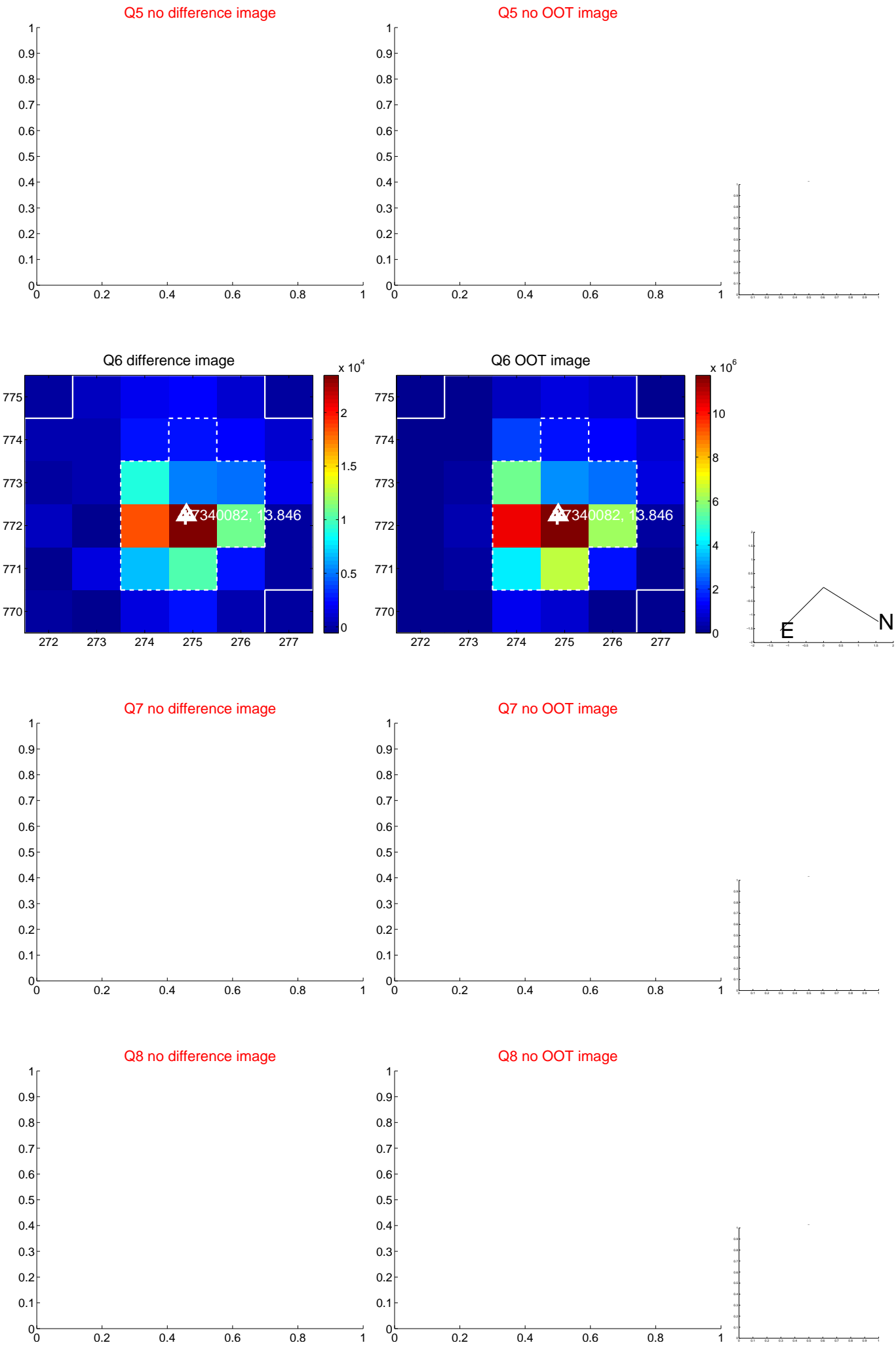


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

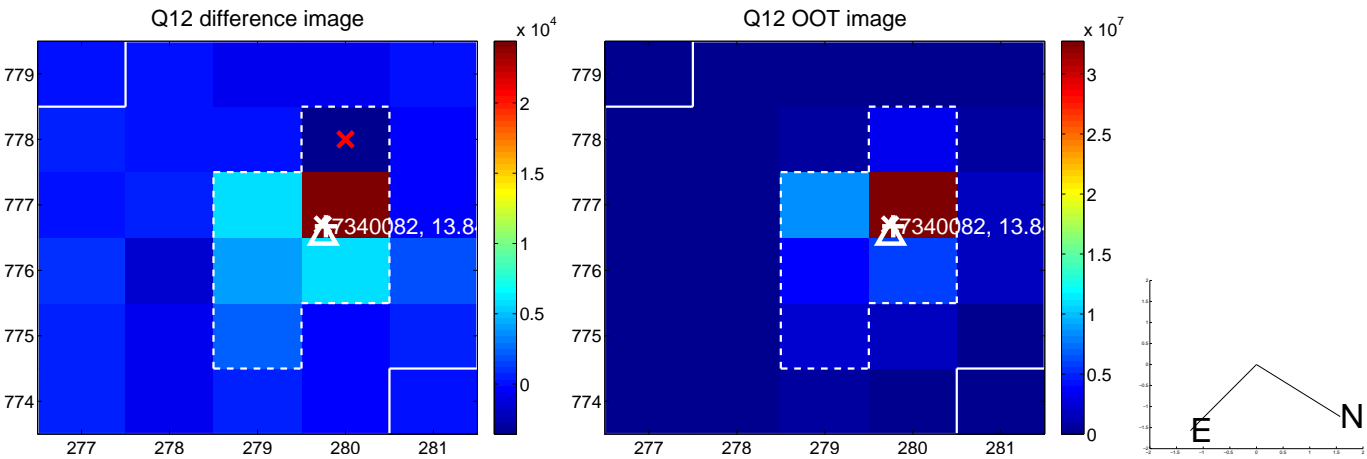
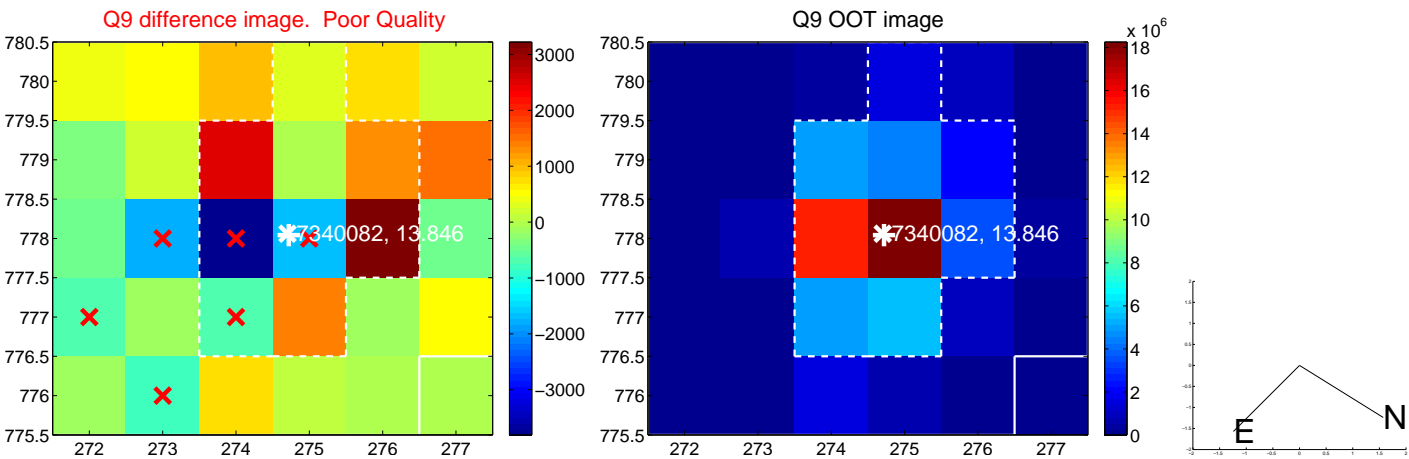
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



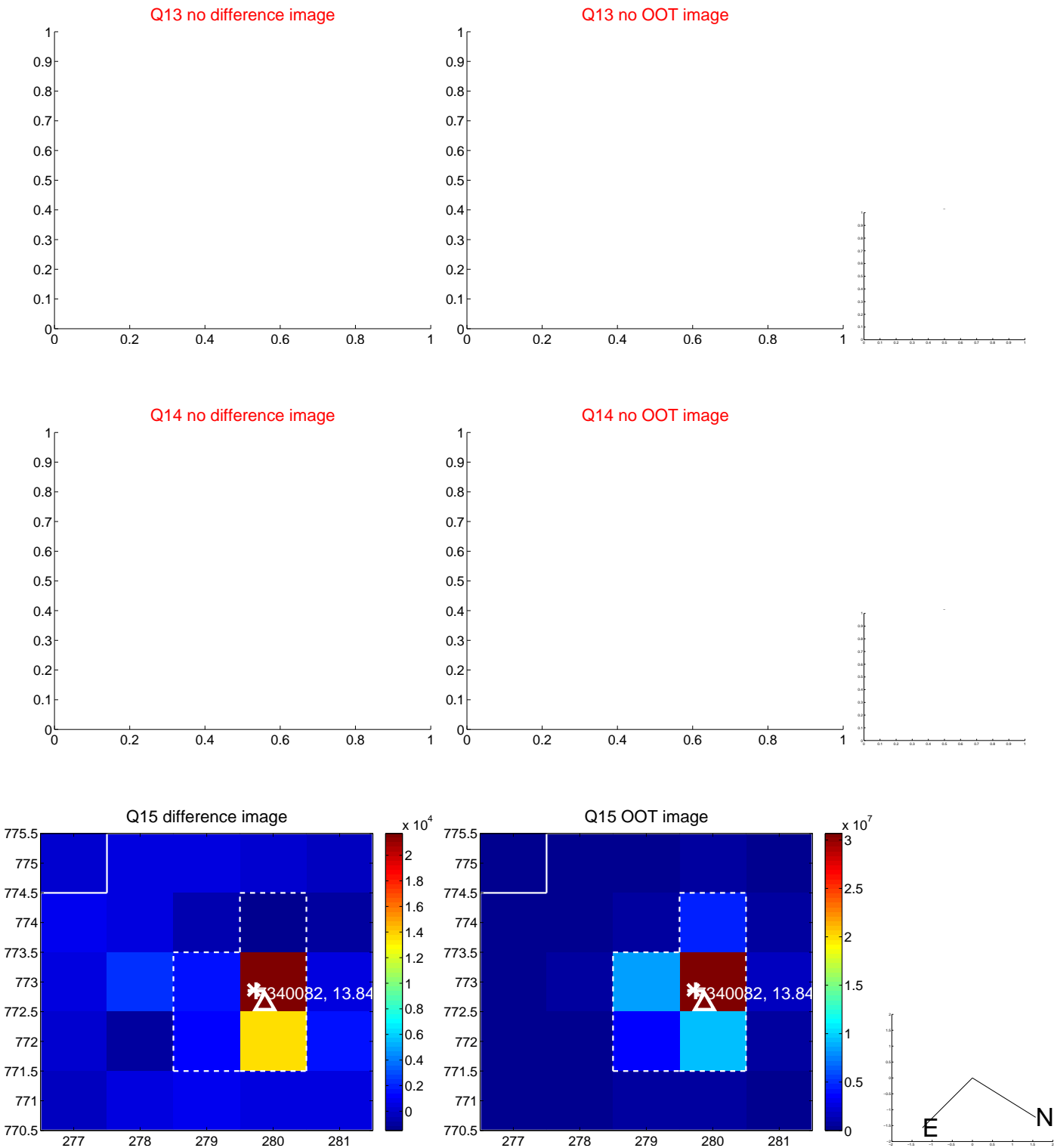
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



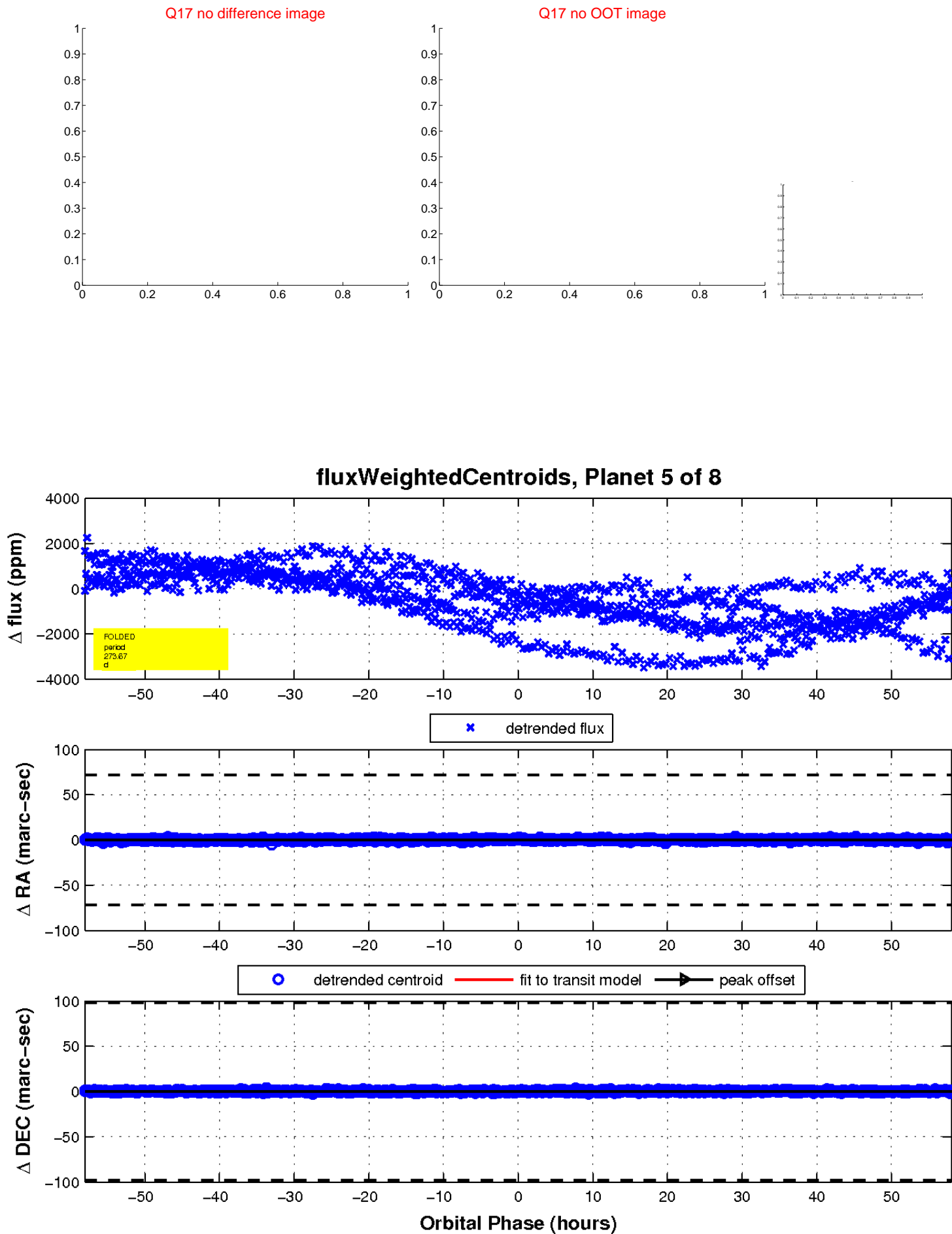
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



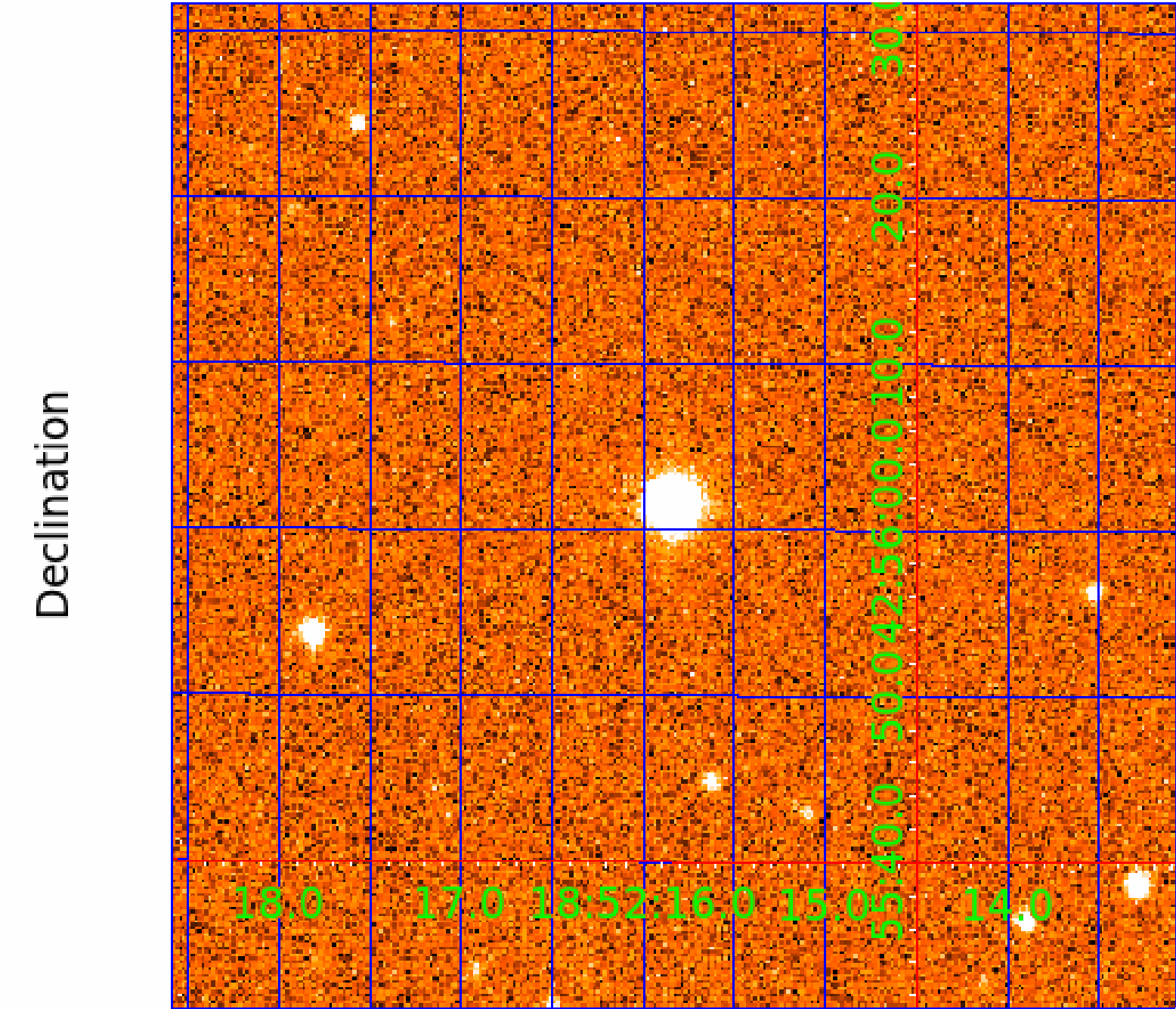
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image



KIC 007340082

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})
007340082-01	OBS	No	2.108776	132.081927	37.0	8.983	8.3	8.0	0.79	5412	0.59	572.75
007340082-02	OBS	No	415.376436	525.078206	1147.4	16.143	15.9	8.9	0.79	5412	3.44	0.50
007340082-03	OBS	No	178.762895	276.249675	507.3	13.867	14.9	5.7	0.79	5412	2.47	1.54
007340082-05	OBS	No	273.670980	286.638901	976.0	19.380	13.5	8.2	0.79	5412	4.84	0.87
007340082-07	OBS	No	296.400804	199.210791	228.2	12.154	10.2	2.6	0.79	5412	1.34	0.78
007340082-08	OBS	No	405.594636	133.568454	587.0	3.136	8.0	6.6	0.79	5412	2.33	0.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007340082-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
007340082-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007340082-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—INCONSISTENT_TRANS
007340082-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
007340082-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS
007340082-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST

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

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

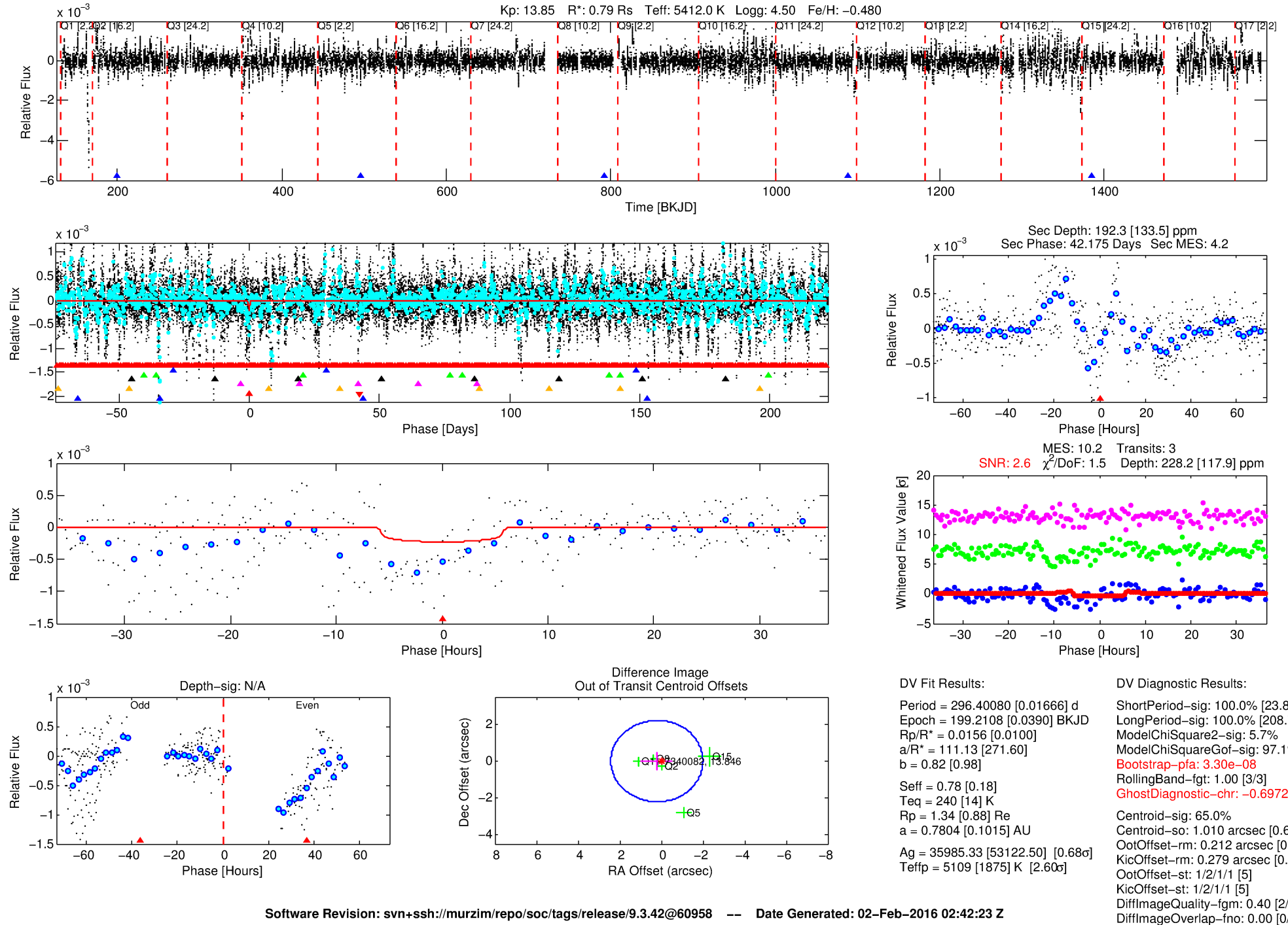
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007340082-07

No Significant Match Found

DV One-Page Summary

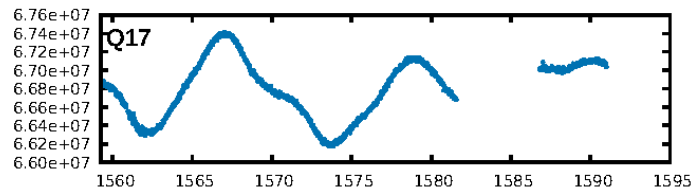
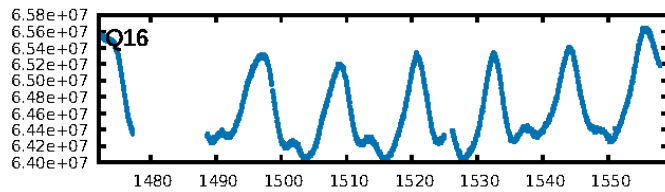
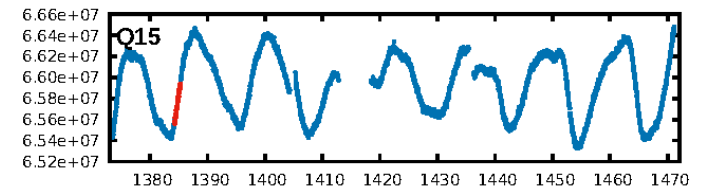
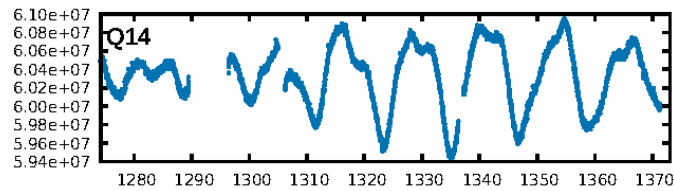
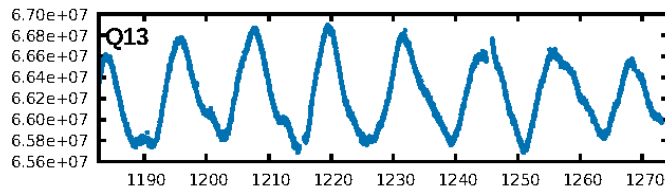
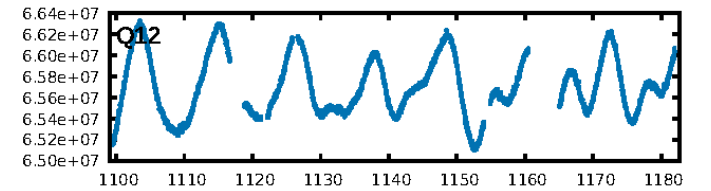
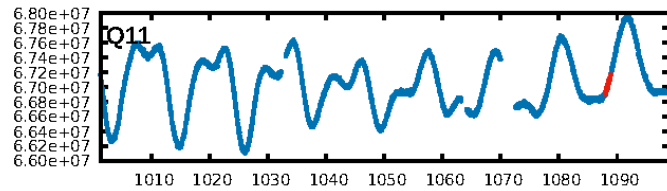
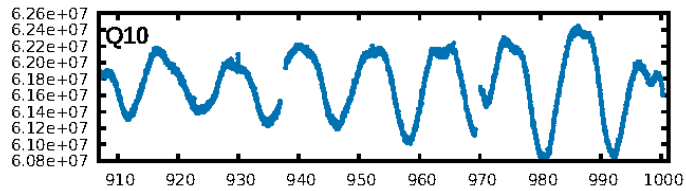
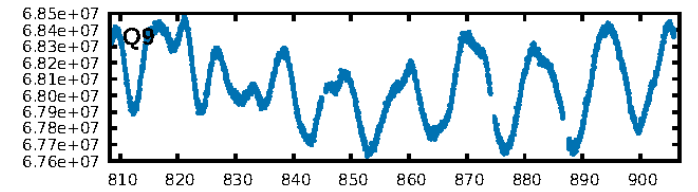
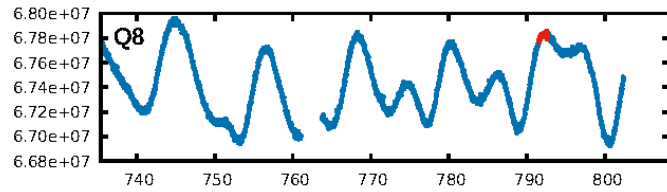
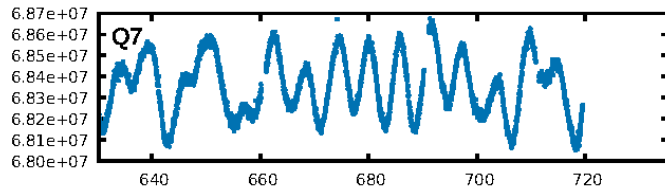
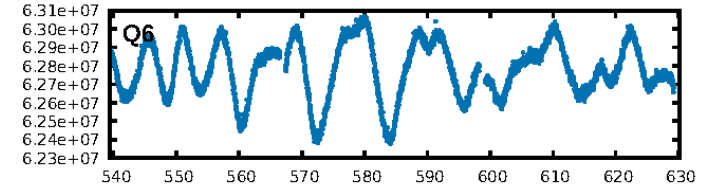
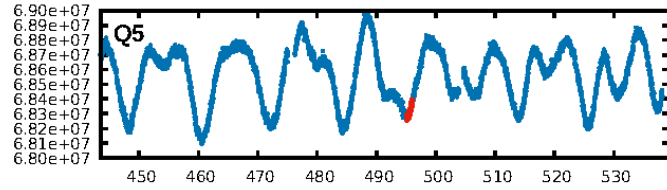
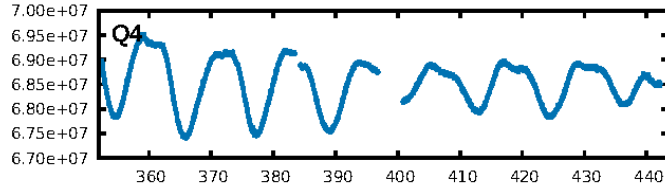
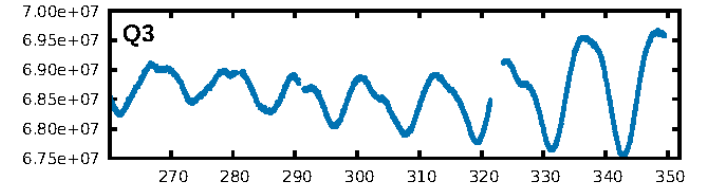
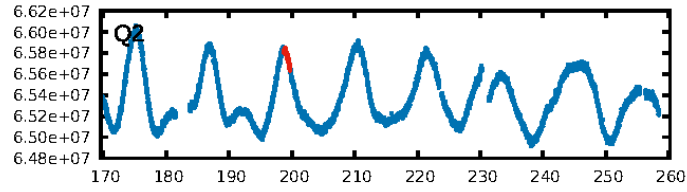
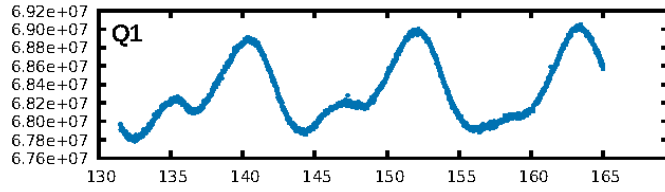
KIC: 7340082 Candidate: 7 of 8 Period: 296.401 d



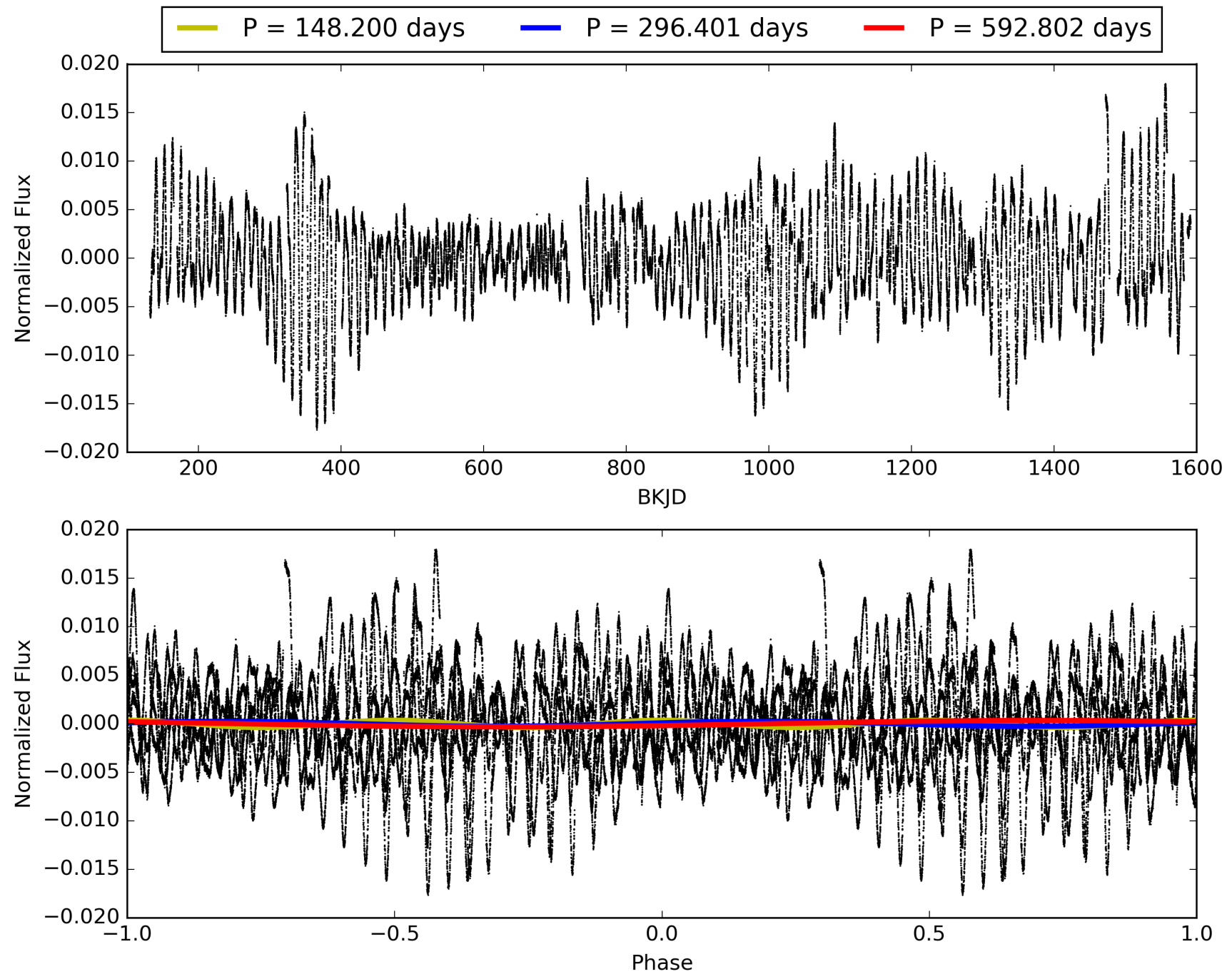
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 02:42:23 Z

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

TCE 007340082-07, PDC Light Curves

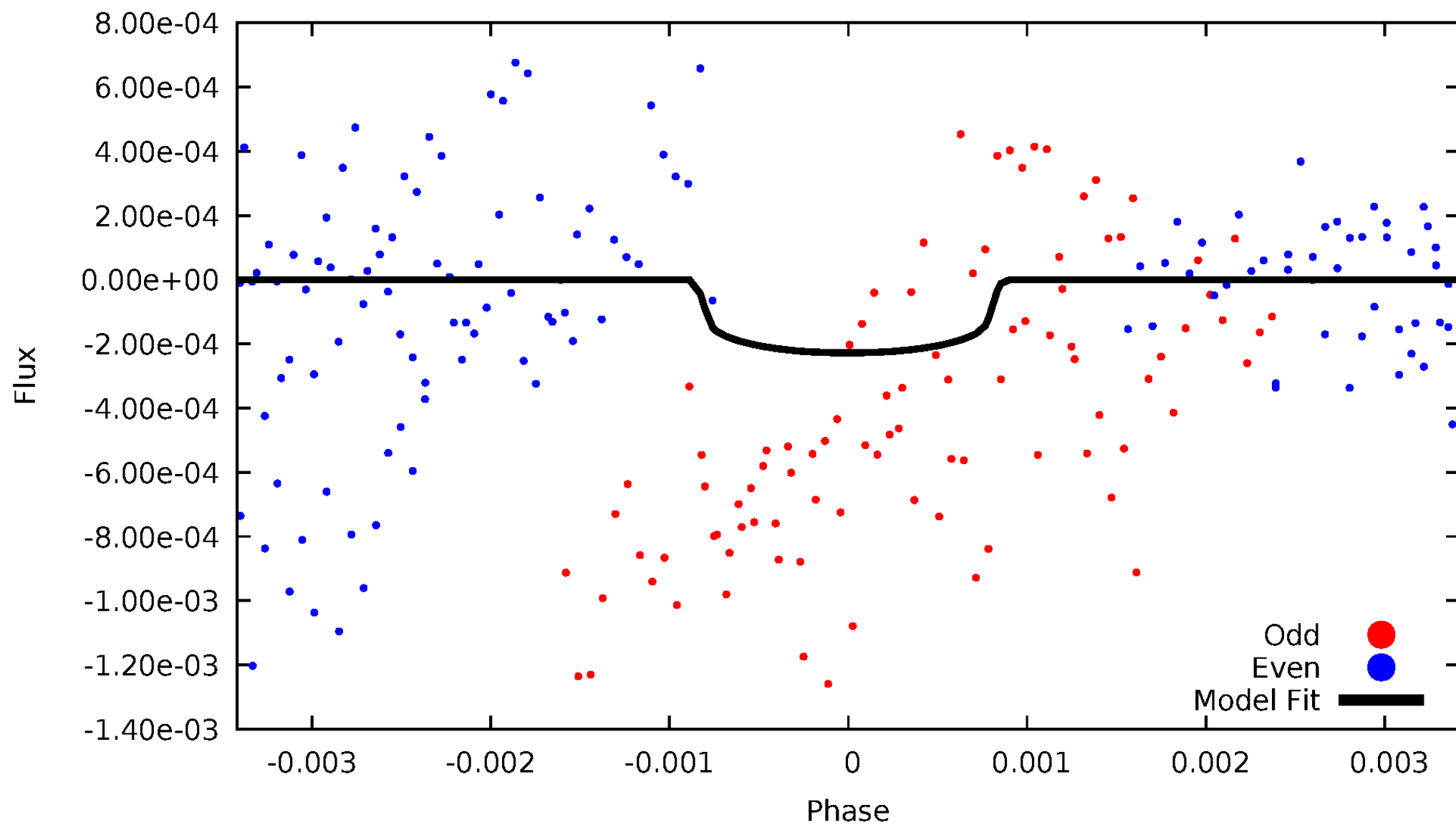


TCE 007340082-07



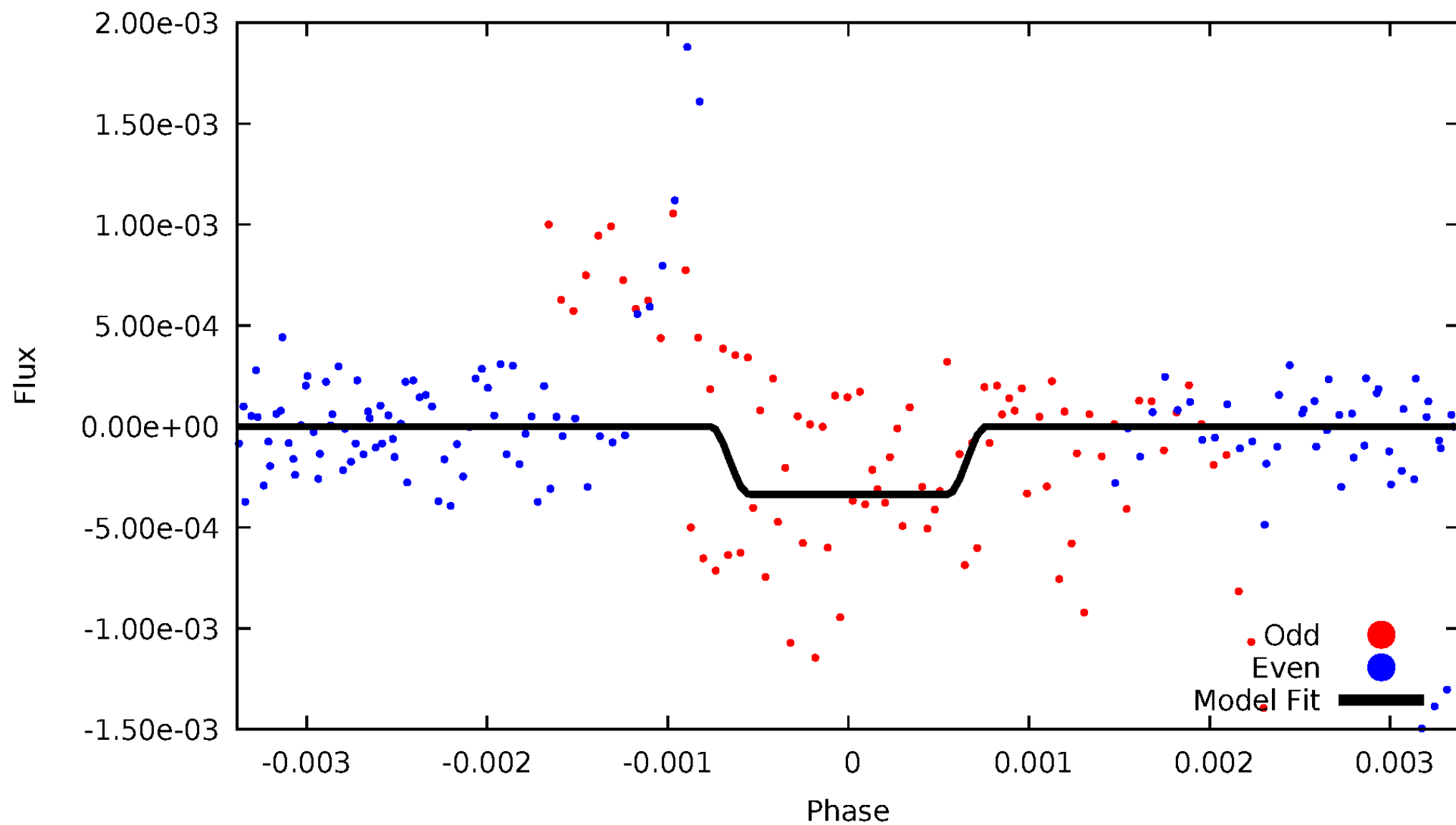
DV Odd/Even

TCE 007340082-07



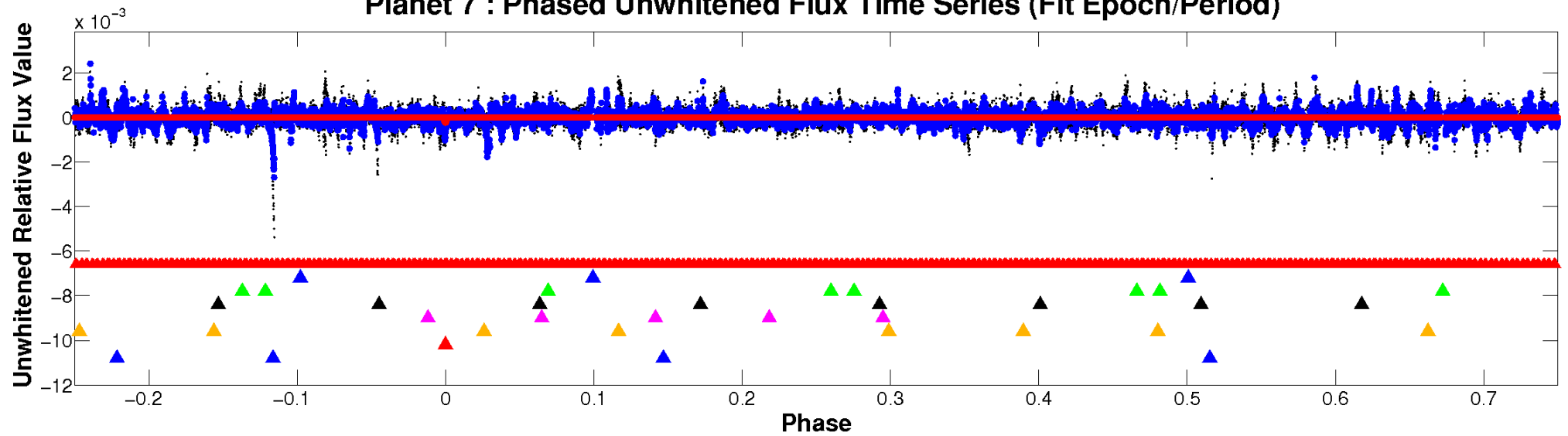
ALT Odd/Even

TCE 007340082-07

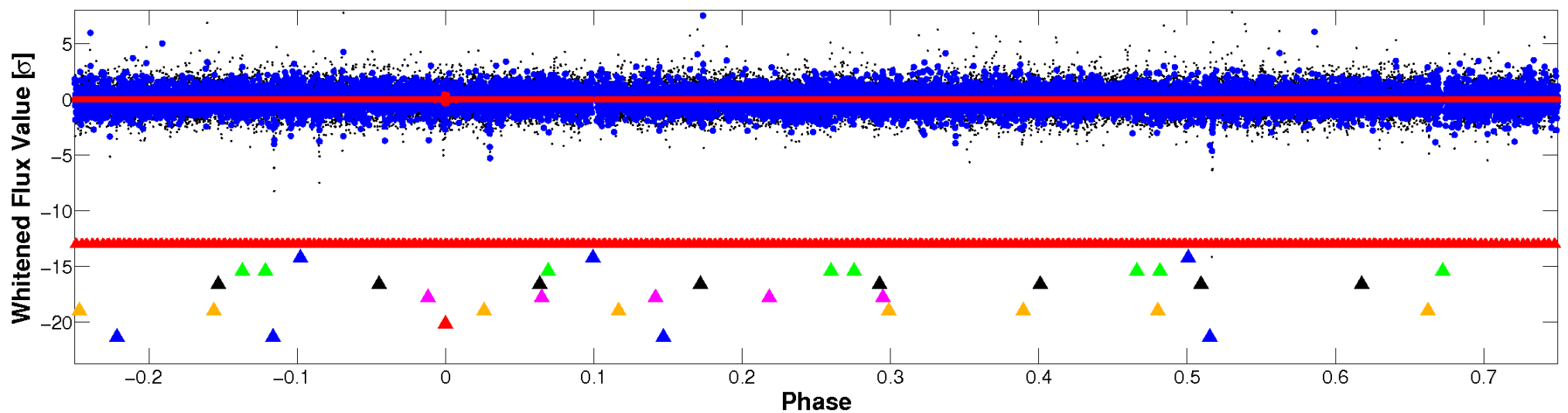


Non-Whitened Vs. Whitened Light Curve

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

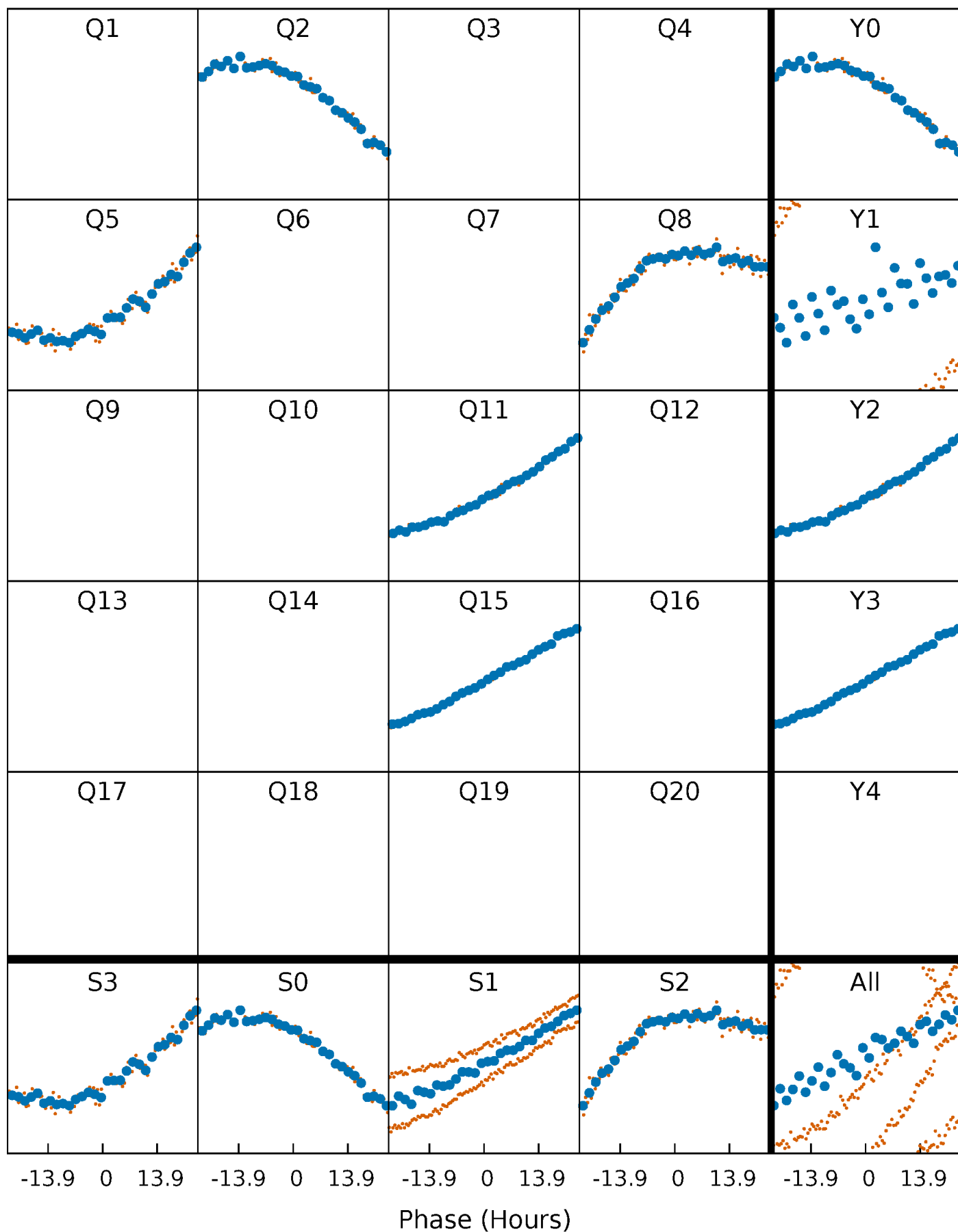


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



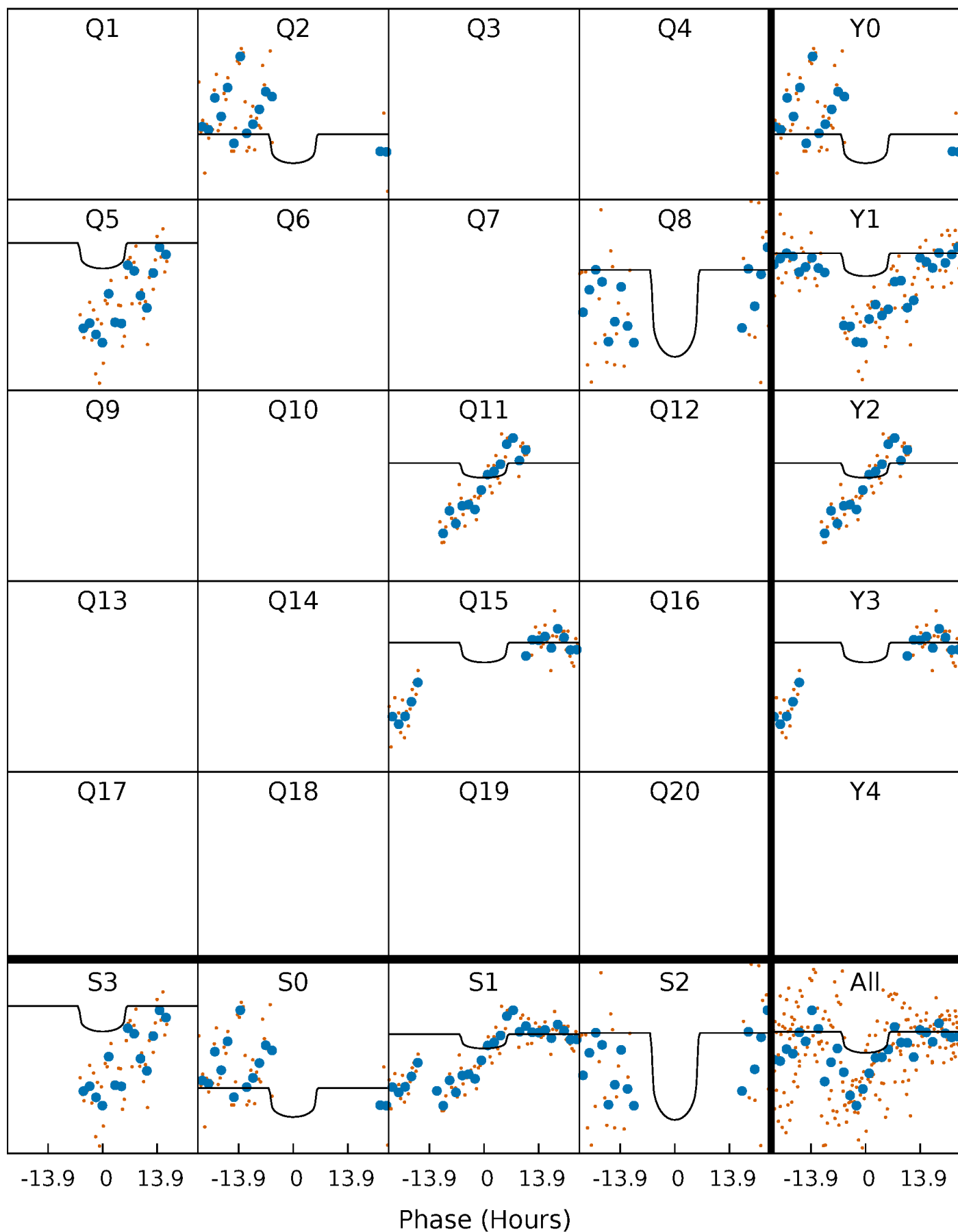
PDC Quarter-Phased Transit Curves

TCE 007340082-07 P=296.400804 Days $T_0=199.210791$ (BKJD)



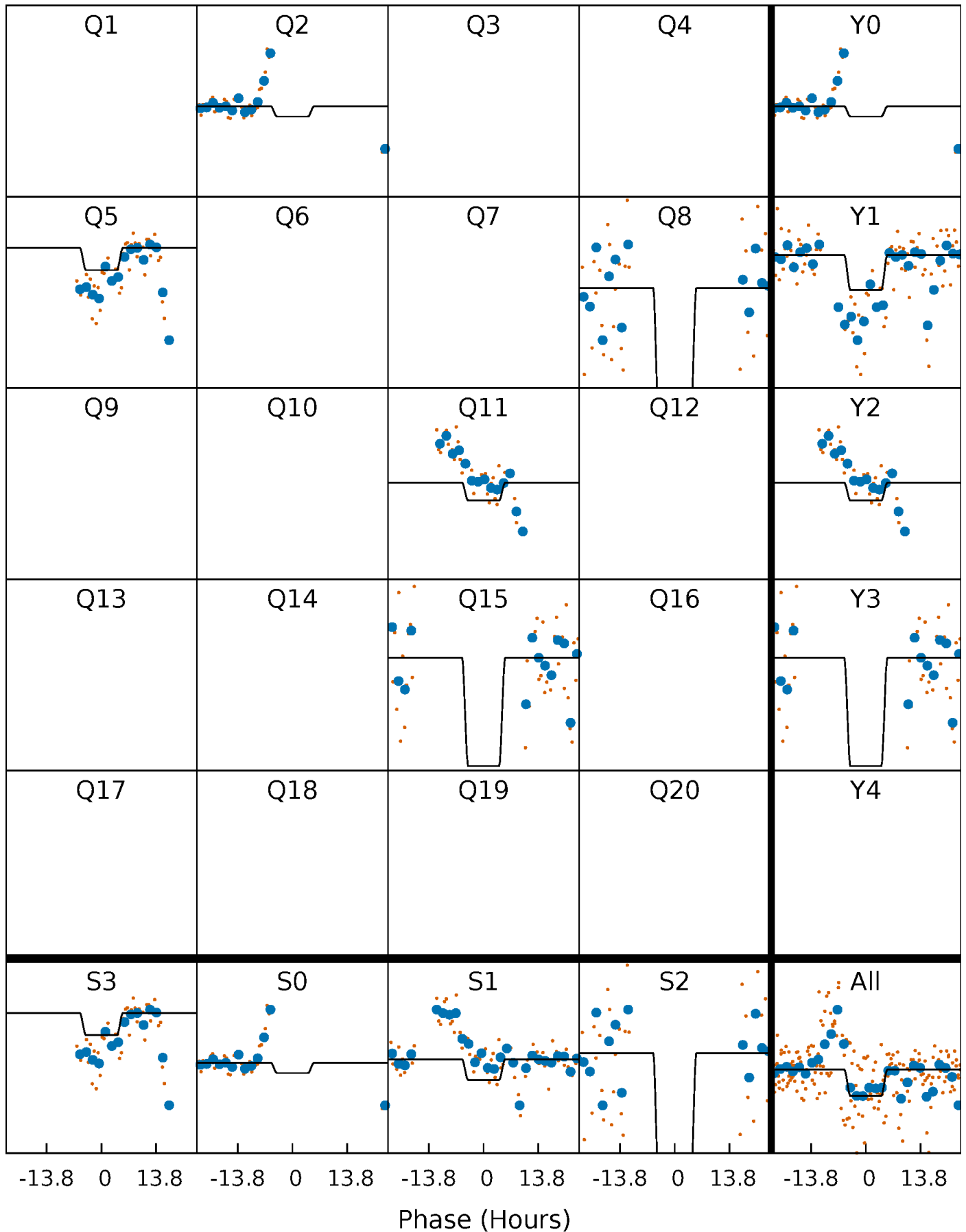
DV Quarter-Phased Transit Curves

TCE 007340082-07 $P=296.400804$ Days $T_0=199.210791$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

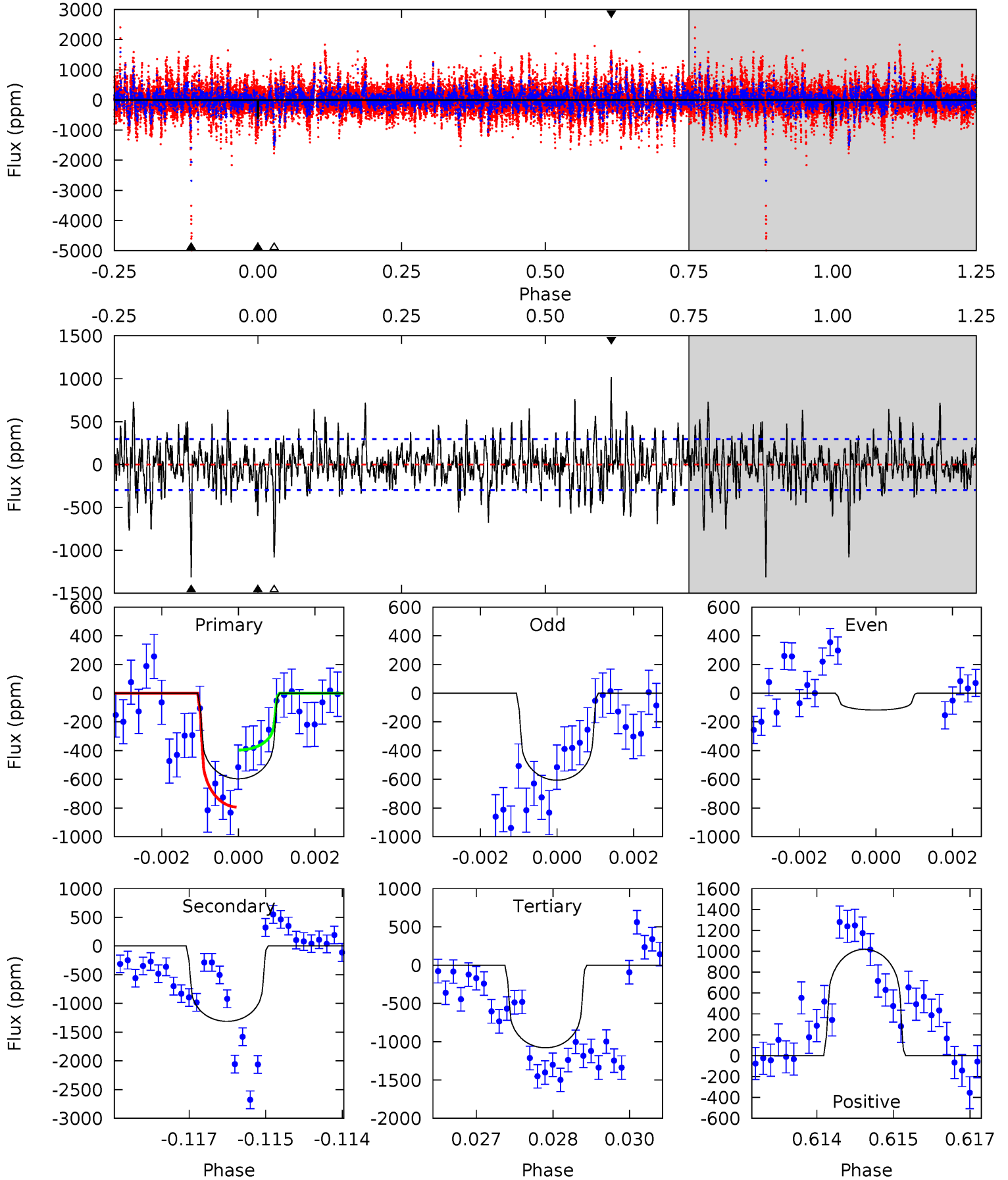
TCE 007340082-07 $P=296.402410$ Days $T_0=199.229851$ (BKJD)



DV Model-Shift Uniqueness Test

007340082-07, P = 296.400804 Days, E = 199.210791 Days

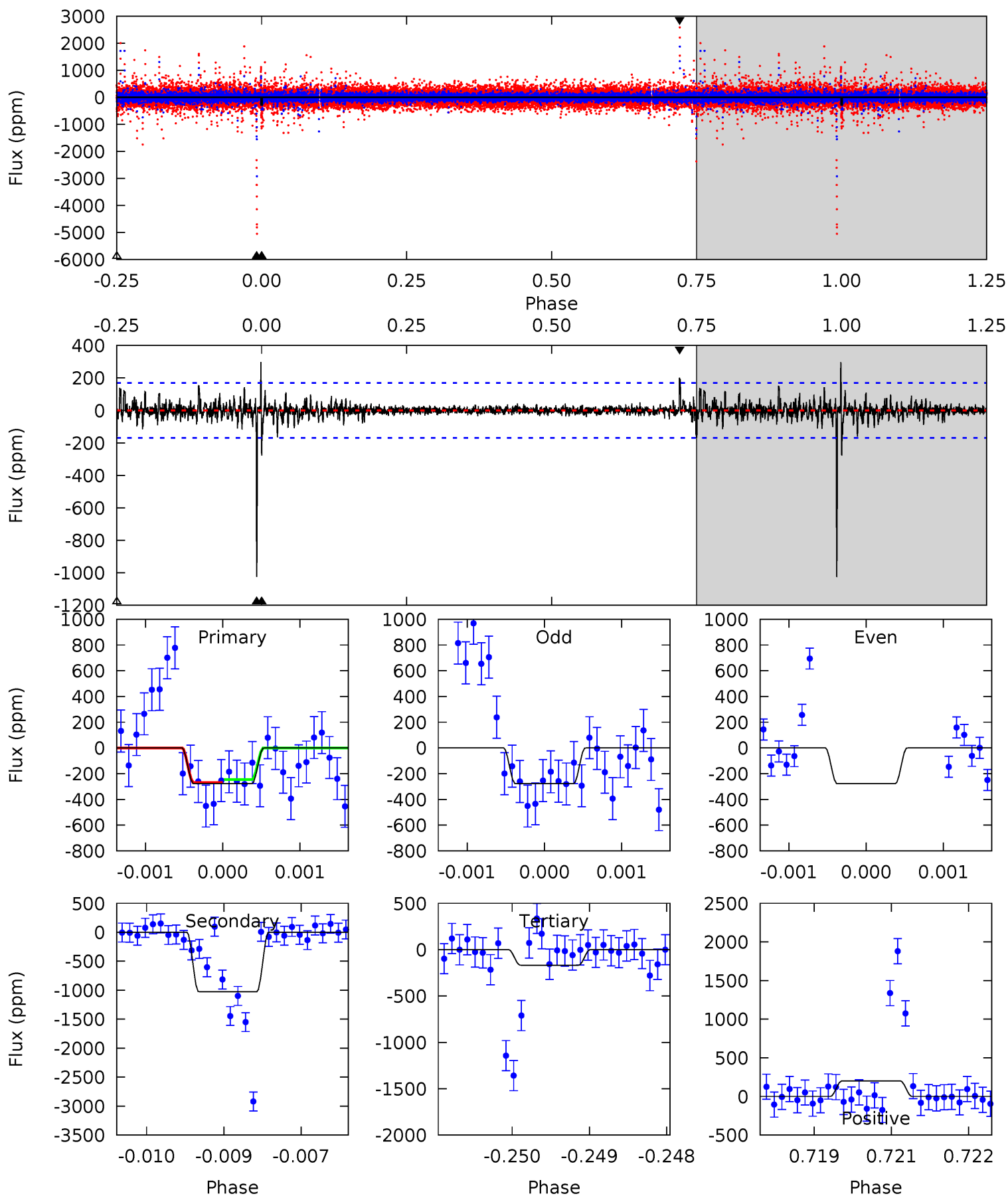
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	23.7	19.5	18.4	5.36	3.14	3.90	-8.71	-7.62	4.21	5.30	1.22	0.85	0.44	3.62



Alt Model-Shift Uniqueness Test

007340082-07, P = 296.402410 Days, E = 199.229851 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.83	32.6	5.33	6.38	5.39	3.18	0.87	3.50	2.44	27.3	26.3	0	1.00	0.22	0.37



Stellar Parameters For KIC 007340082

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5412^{+162}_{-146}	$4.503^{+0.110}_{-0.099}$	$-0.480^{+0.300}_{-0.300}$	$0.788^{+0.117}_{-0.096}$	$0.720^{+0.105}_{-0.045}$	$2.075^{+0.972}_{-0.609}$
	+3%/-3%	+2%/-2%	+62%/-62%	+15%/-12%	+15%/-6%	+47%/-29%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007340082-07 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1312 ± 55	$1.39^{+0.91}_{-0.75}$	335^{+16}_{-15}	8324^{+7740}_{-2020}	$233849^{+882428}_{-148052}$
Alt.	-1025 ± 31	$1.62^{+0.90}_{-0.81}$	335^{+18}_{-16}	7102^{+4172}_{-1443}	$132108^{+397166}_{-78382}$

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

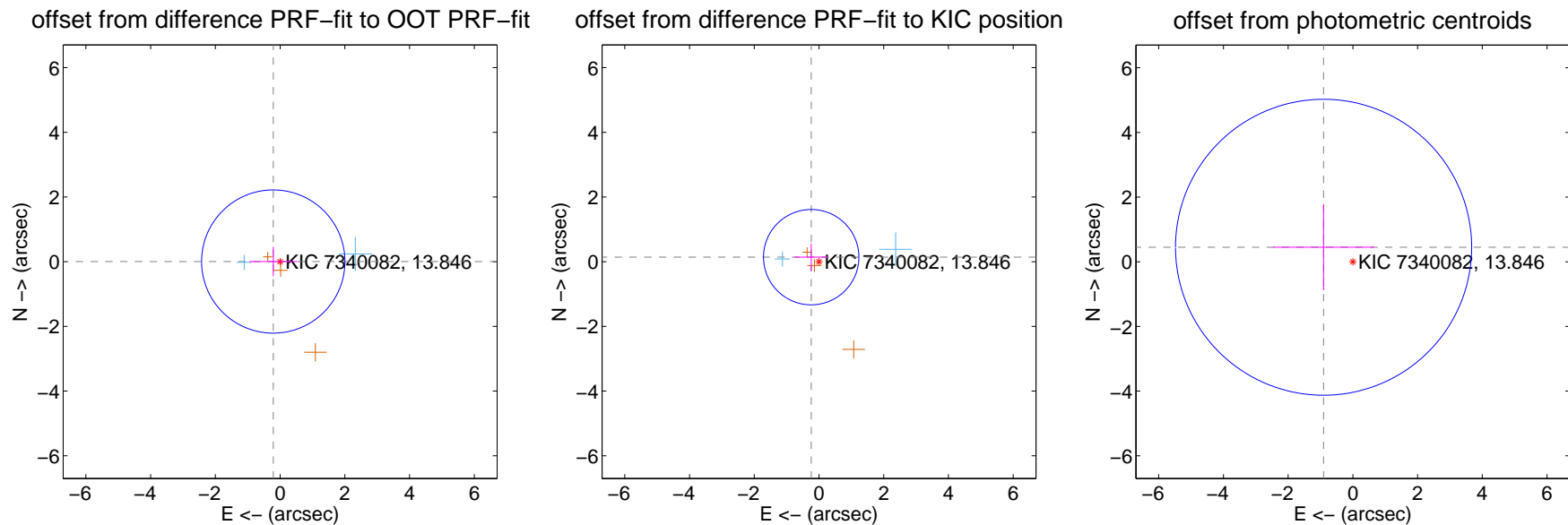
DV Centroid Data

Supplemental centroid analysis for 007340082-07. Kepler magnitude: 13.85. Transit SNR 2.57

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.212 ± 0.738	0.29	0.212 ± 0.736	0.005 ± 0.454
PRF-fit source offset from KIC position	0.279 ± 0.491	0.57	0.241 ± 0.520	0.140 ± 0.424
photometric centroid source offset	1.01 ± 1.53	0.66	0.91 ± 1.57	0.45 ± 1.33



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

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

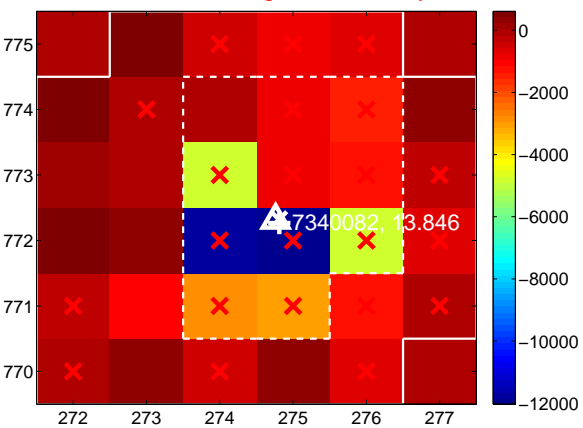
Q1 no difference image



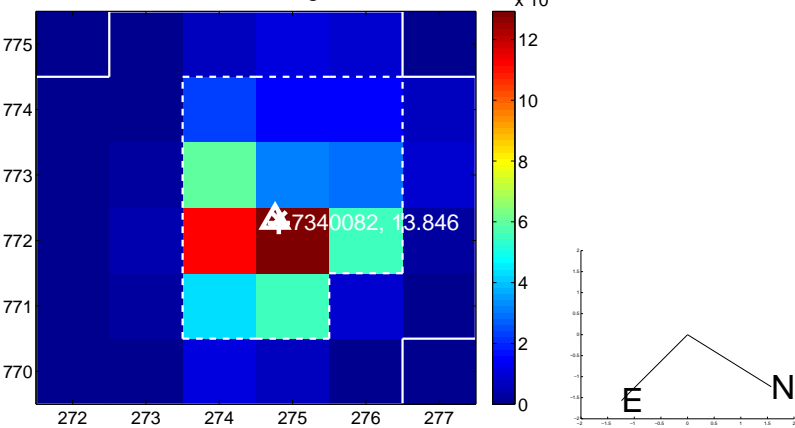
Q1 no OOT image



Q2 difference image. Poor Quality



Q2 OOT image



Q3 no difference image



Q3 no OOT image



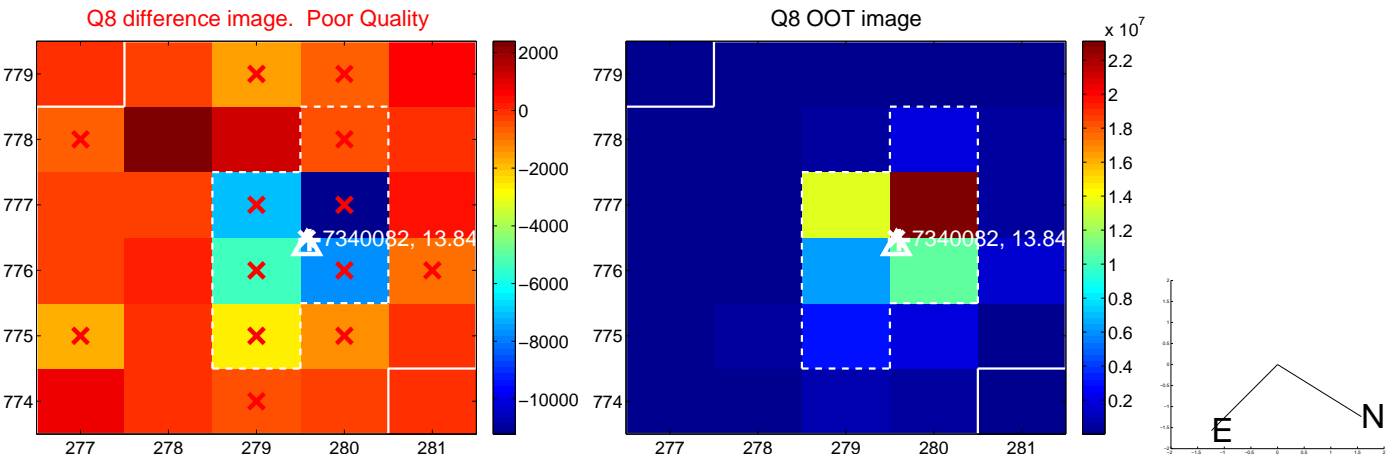
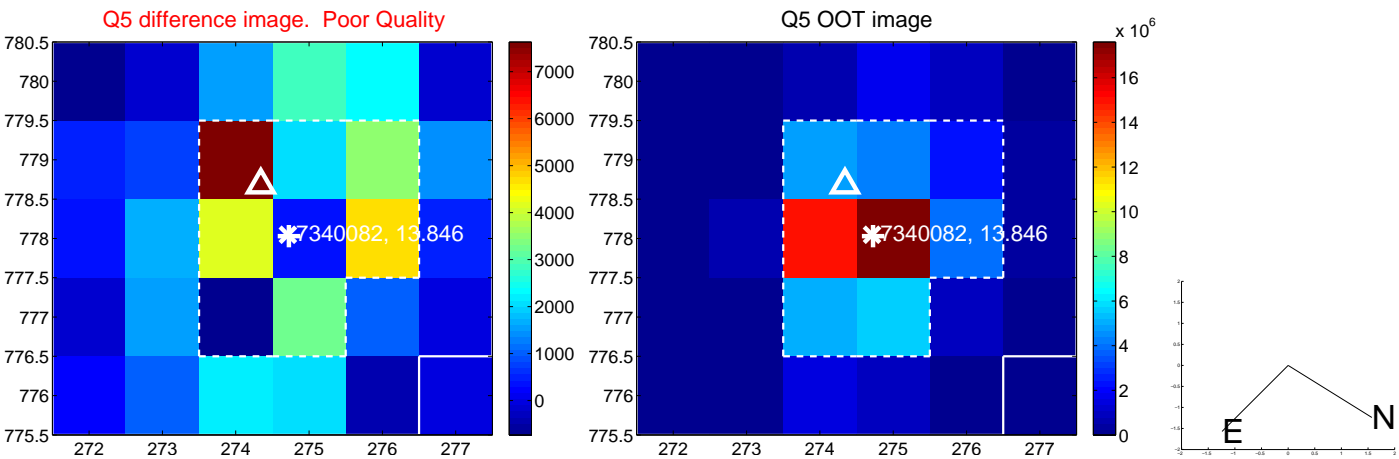
Q4 no difference image



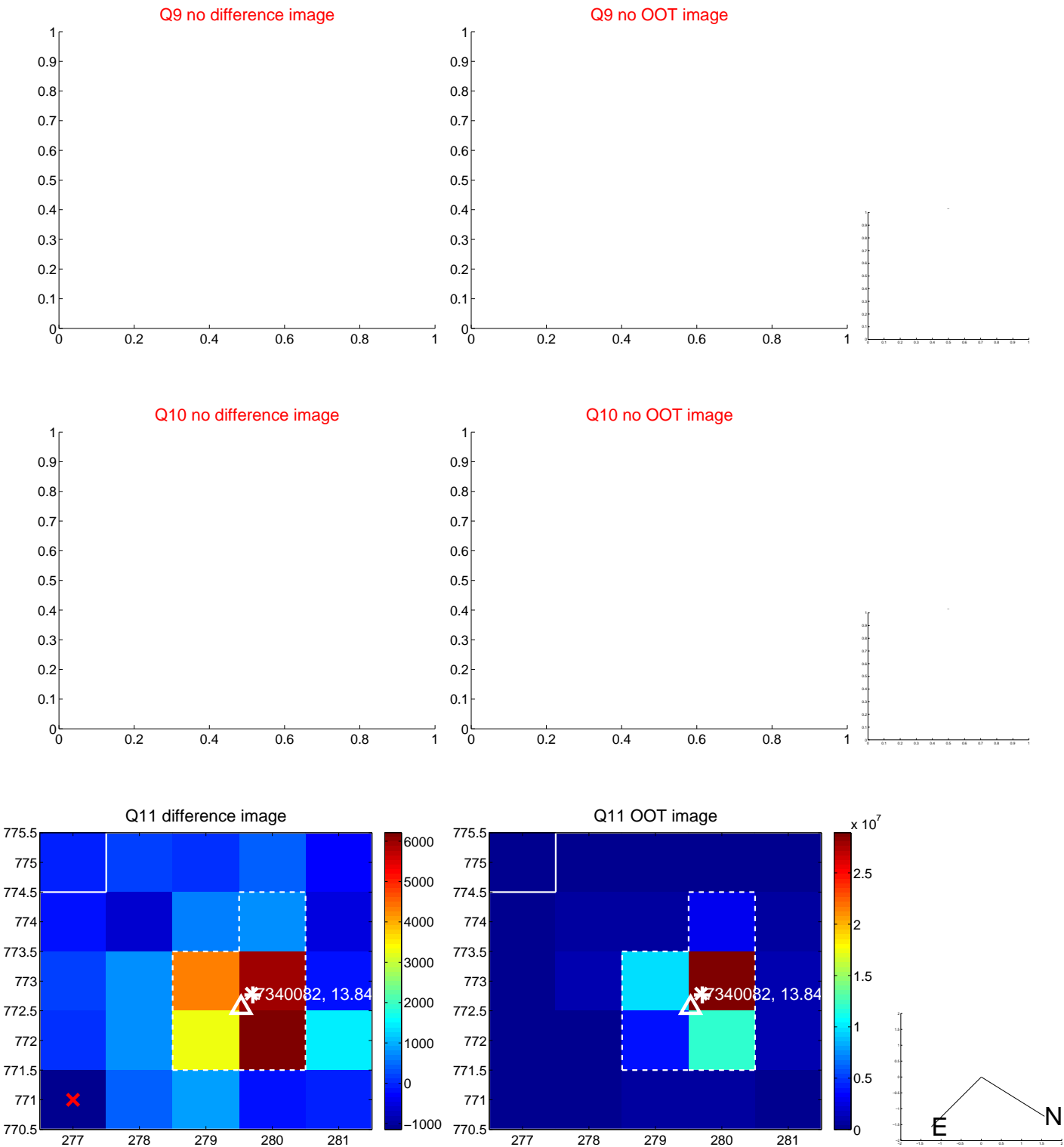
Q4 no OOT image



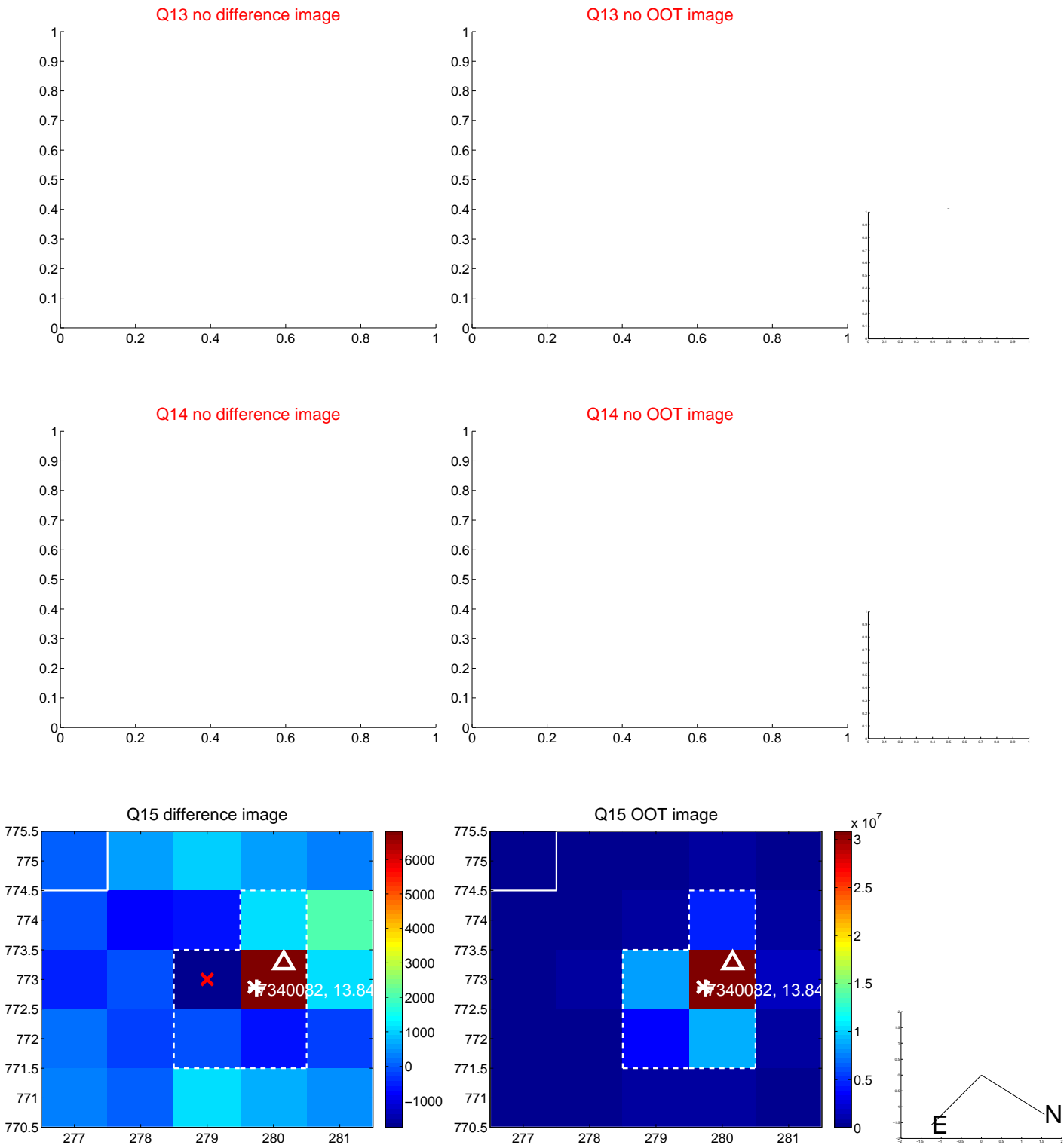
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



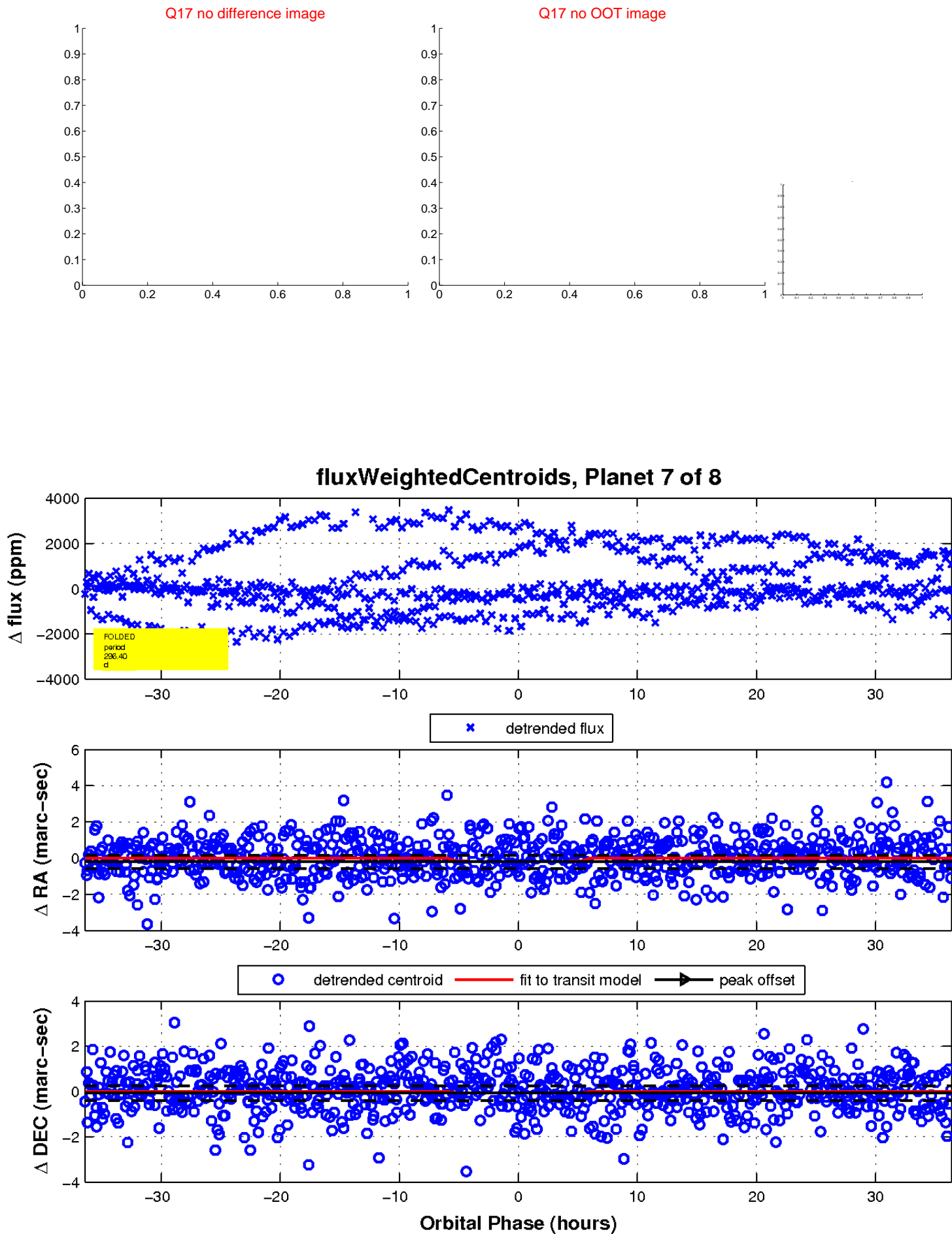
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

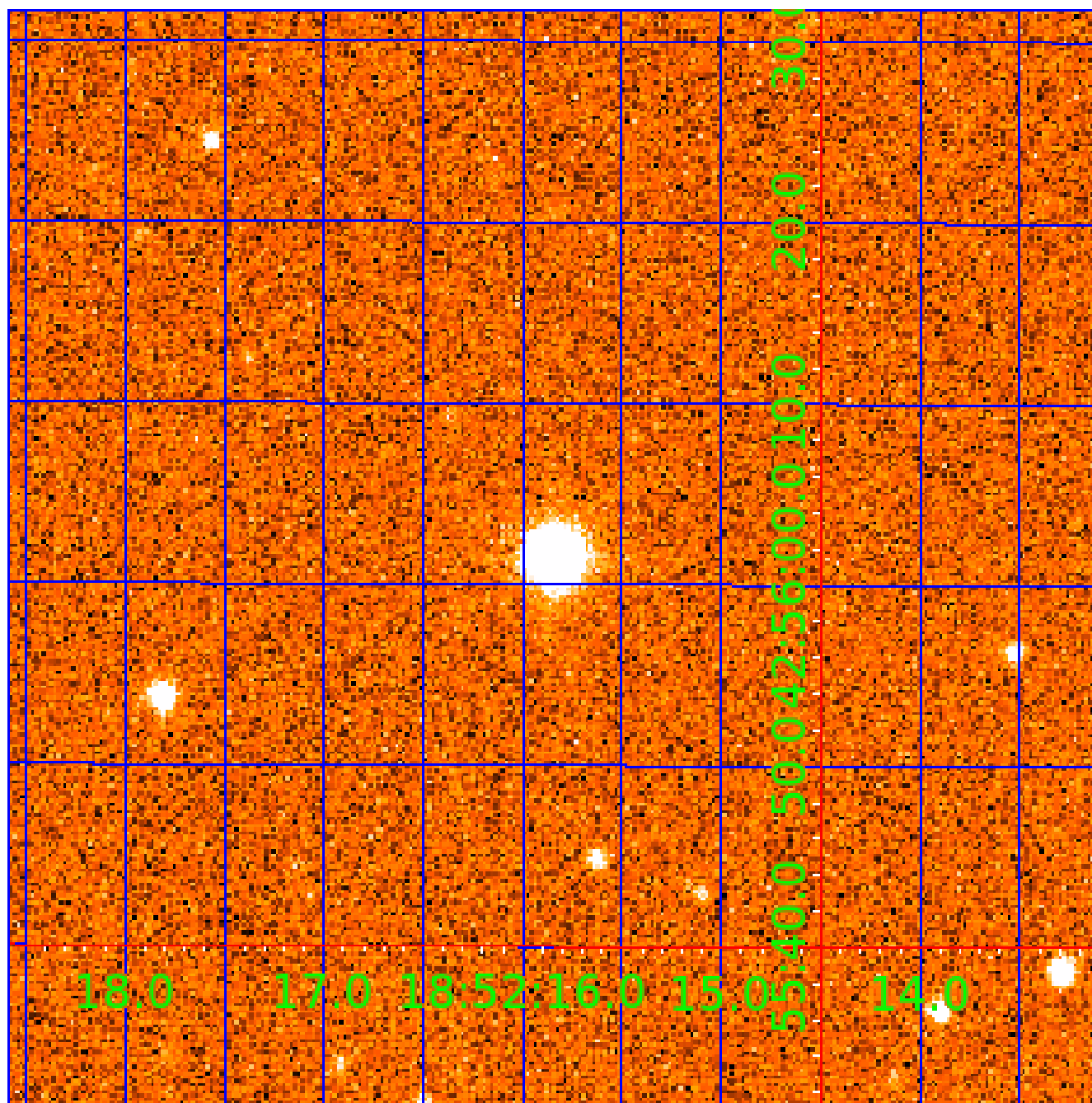


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007340082

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})
007340082-01	OBS	No	2.108776	132.081927	37.0	8.983	8.3	8.0	0.79	5412	0.59	572.75
007340082-02	OBS	No	415.376436	525.078206	1147.4	16.143	15.9	8.9	0.79	5412	3.44	0.50
007340082-03	OBS	No	178.762895	276.249675	507.3	13.867	14.9	5.7	0.79	5412	2.47	1.54
007340082-05	OBS	No	273.670980	286.638901	976.0	19.380	13.5	8.2	0.79	5412	4.84	0.87
007340082-07	OBS	No	296.400804	199.210791	228.2	12.154	10.2	2.6	0.79	5412	1.34	0.78
007340082-08	OBS	No	405.594636	133.568454	587.0	3.136	8.0	6.6	0.79	5412	2.33	0.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007340082-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
007340082-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007340082-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—ALL_TRANS_CHASES—INCONSISTENT_TRANS
007340082-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
007340082-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS
007340082-08	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_FEW_DIFFS—HALO_GHOST

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

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

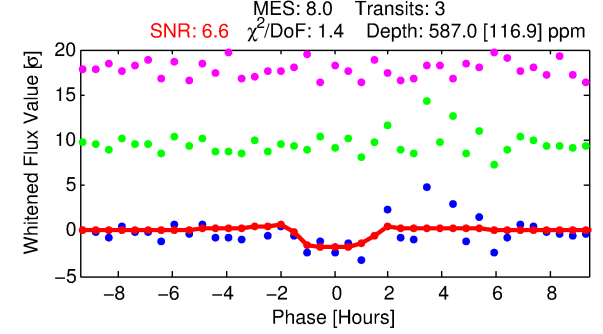
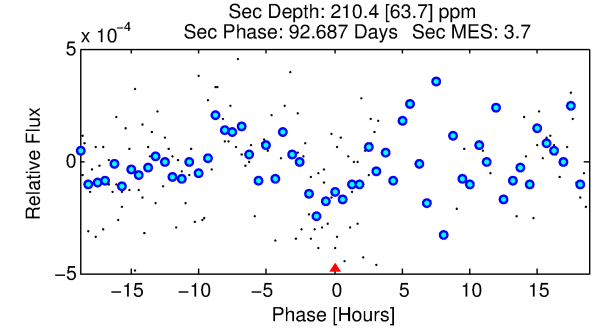
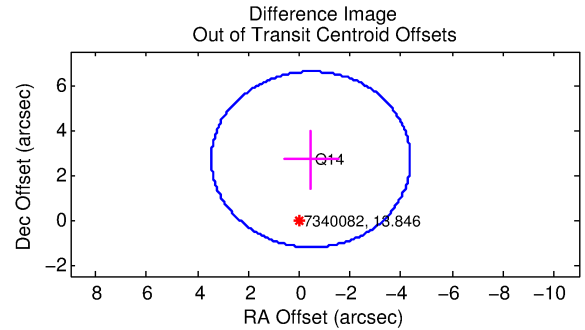
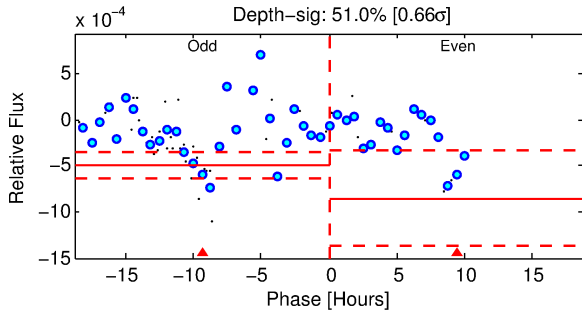
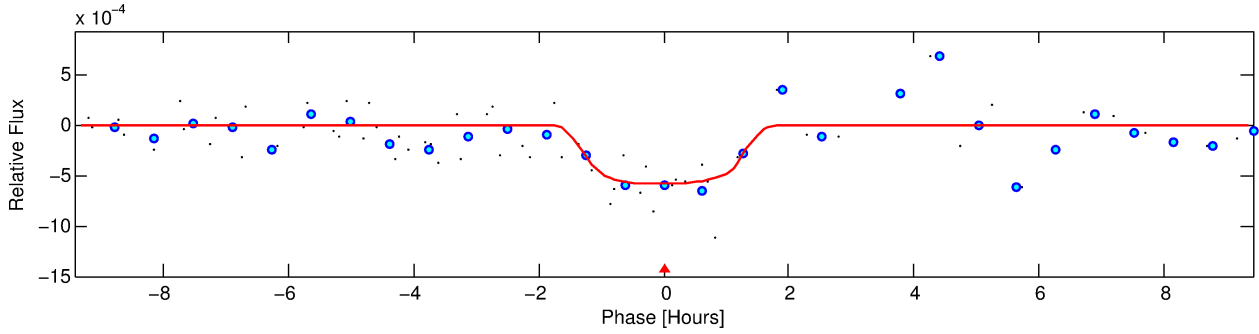
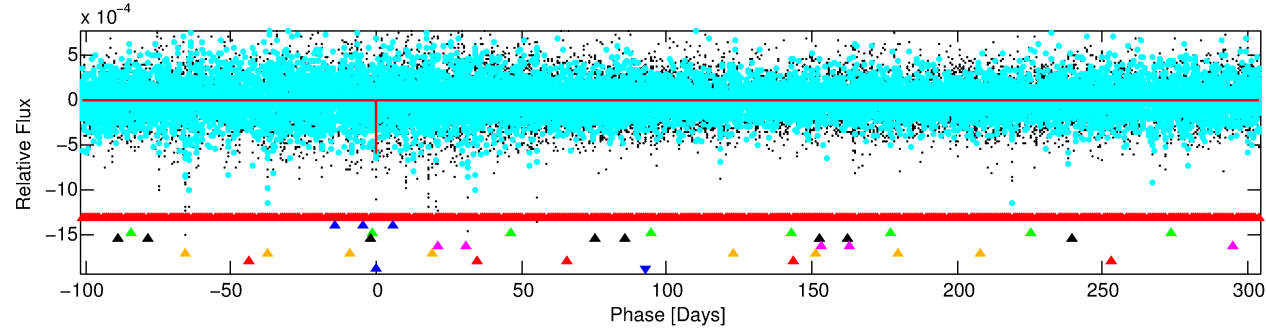
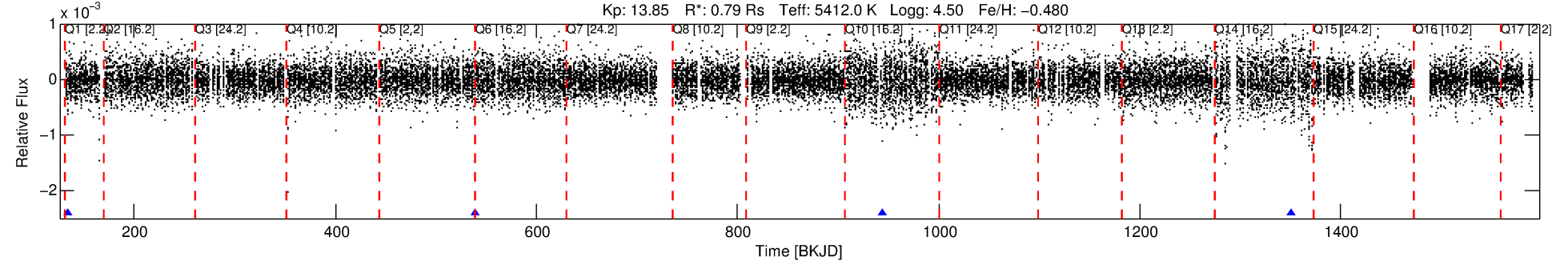
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007340082-08

No Significant Match Found

DV One-Page Summary

KIC: 7340082 Candidate: 8 of 8 Period: 405.595 d



DV Fit Results:

Period = 405.59464 [0.00418] d
Epoch = 133.5685 [0.0077] BKJD
Rp/R* = 0.0270 [0.0112]
a/R* = 455.78 [829.64]
b = 0.92 [0.32]
Seff = 0.52 [0.12]
Teq = 216 [12] K
Rp = 2.33 [1.02] Re
a = 0.9619 [0.1251] AU
Ag = 19794.10 [17844.91] [1.11 σ]
Teffp = 3963 [880] K [4.26 σ]

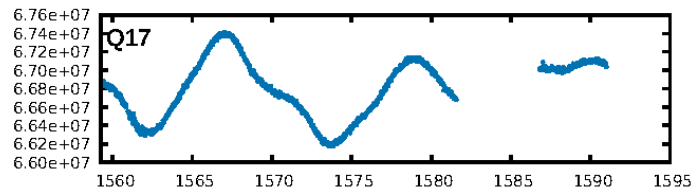
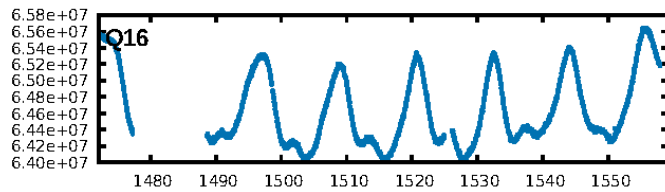
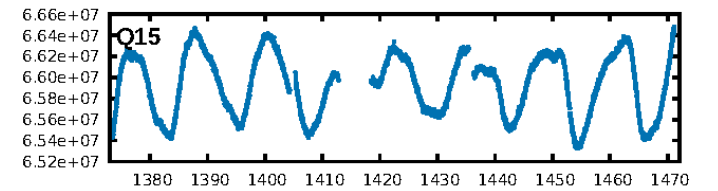
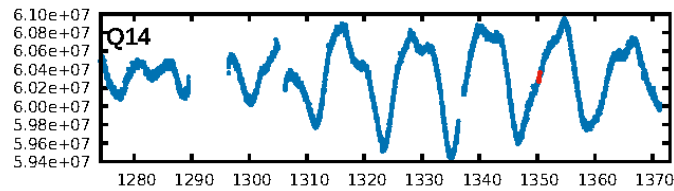
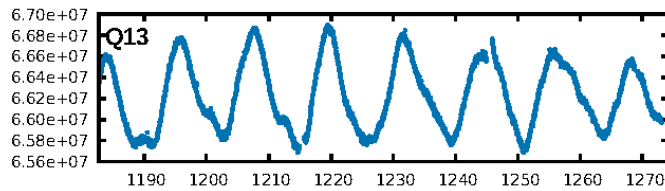
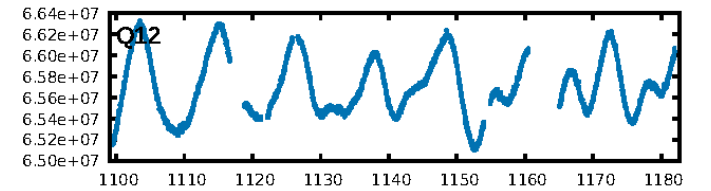
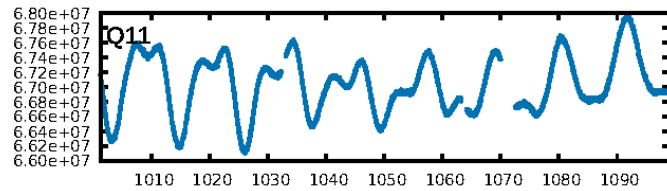
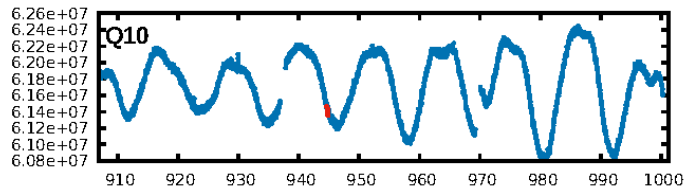
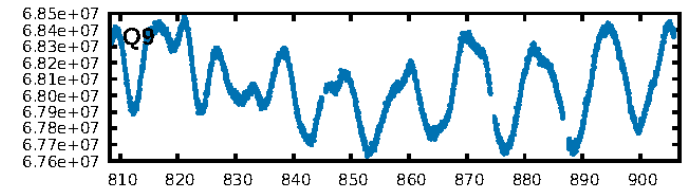
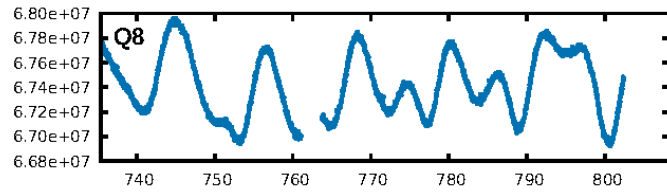
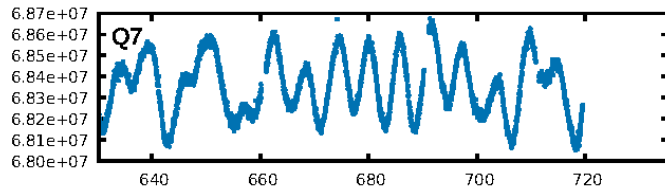
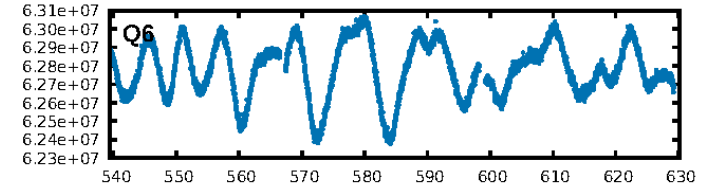
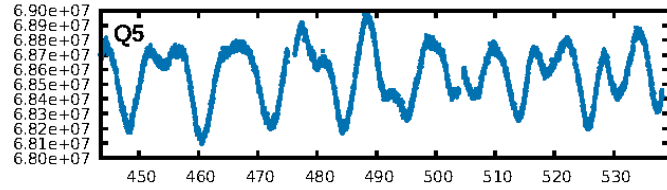
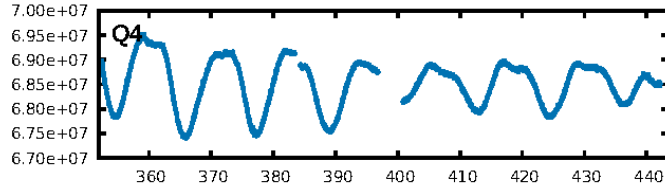
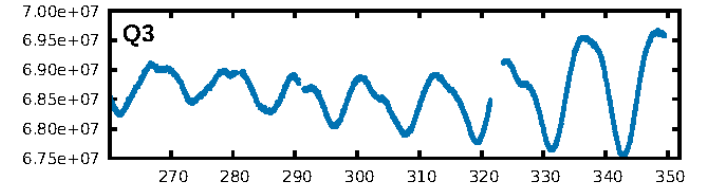
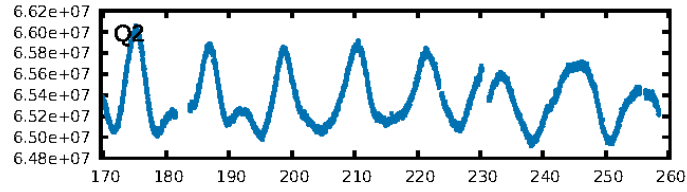
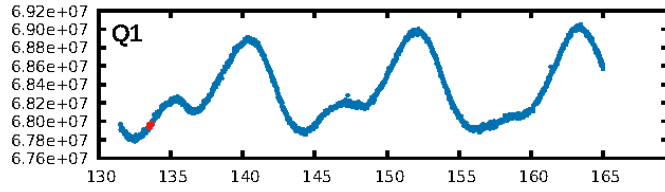
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [208.79 σ]
LongPeriod-sig: 100.0% [14.28 σ]
ModelChiSquare2-sig: 23.2%
ModelChiSquareGof-sig: 81.4%
Bootstrap-pfa: 1.50e-08
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.03403
Centroid-sig: 3.3%
Centroid-so: 1.952 arcsec [1.25 σ]
OotOffset-rm: 2.728 arcsec [2.09 σ]
KicOffset-rm: 2.836 arcsec [2.16 σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/0/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

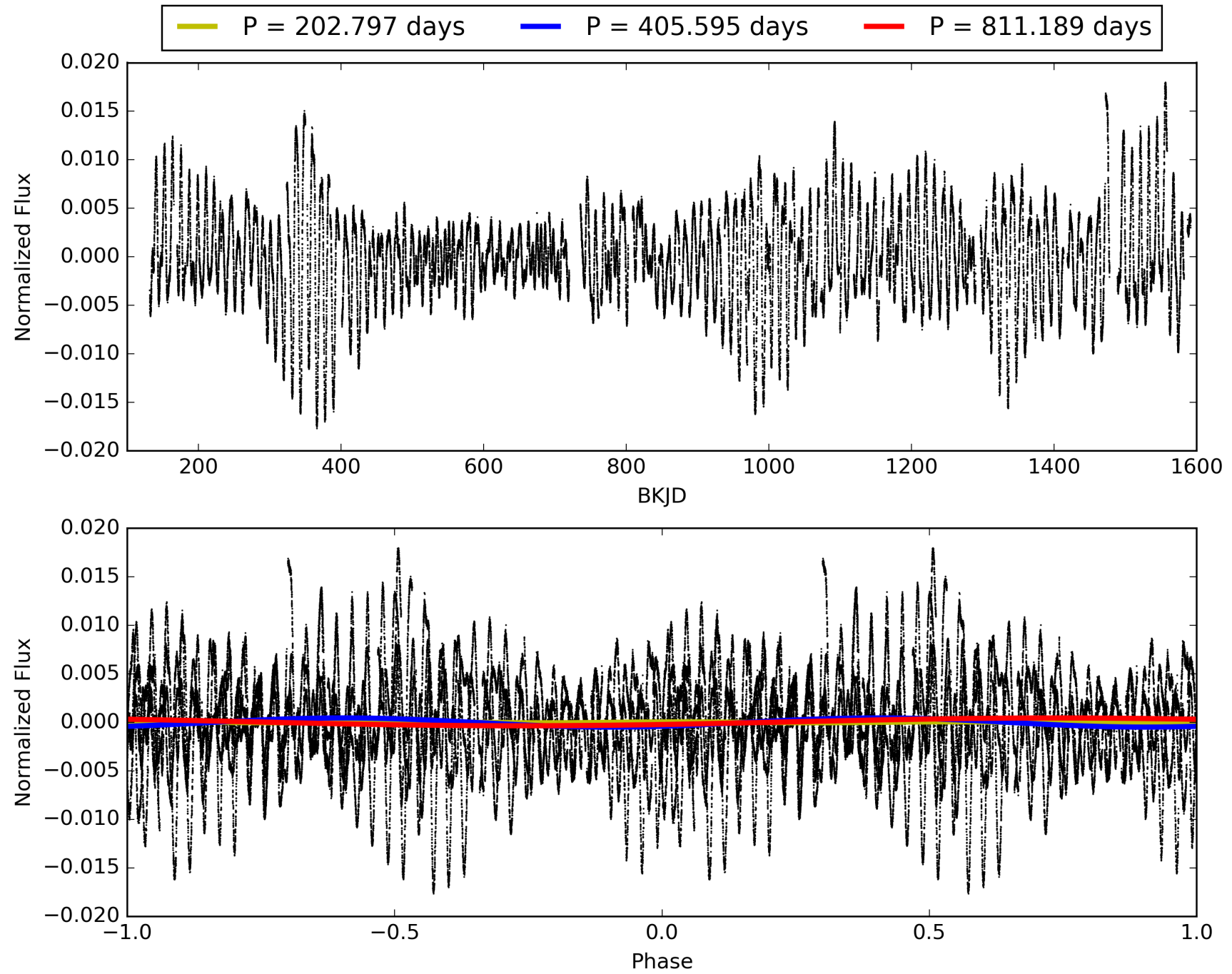
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 02:42:33 Z

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

TCE 007340082-08, PDC Light Curves

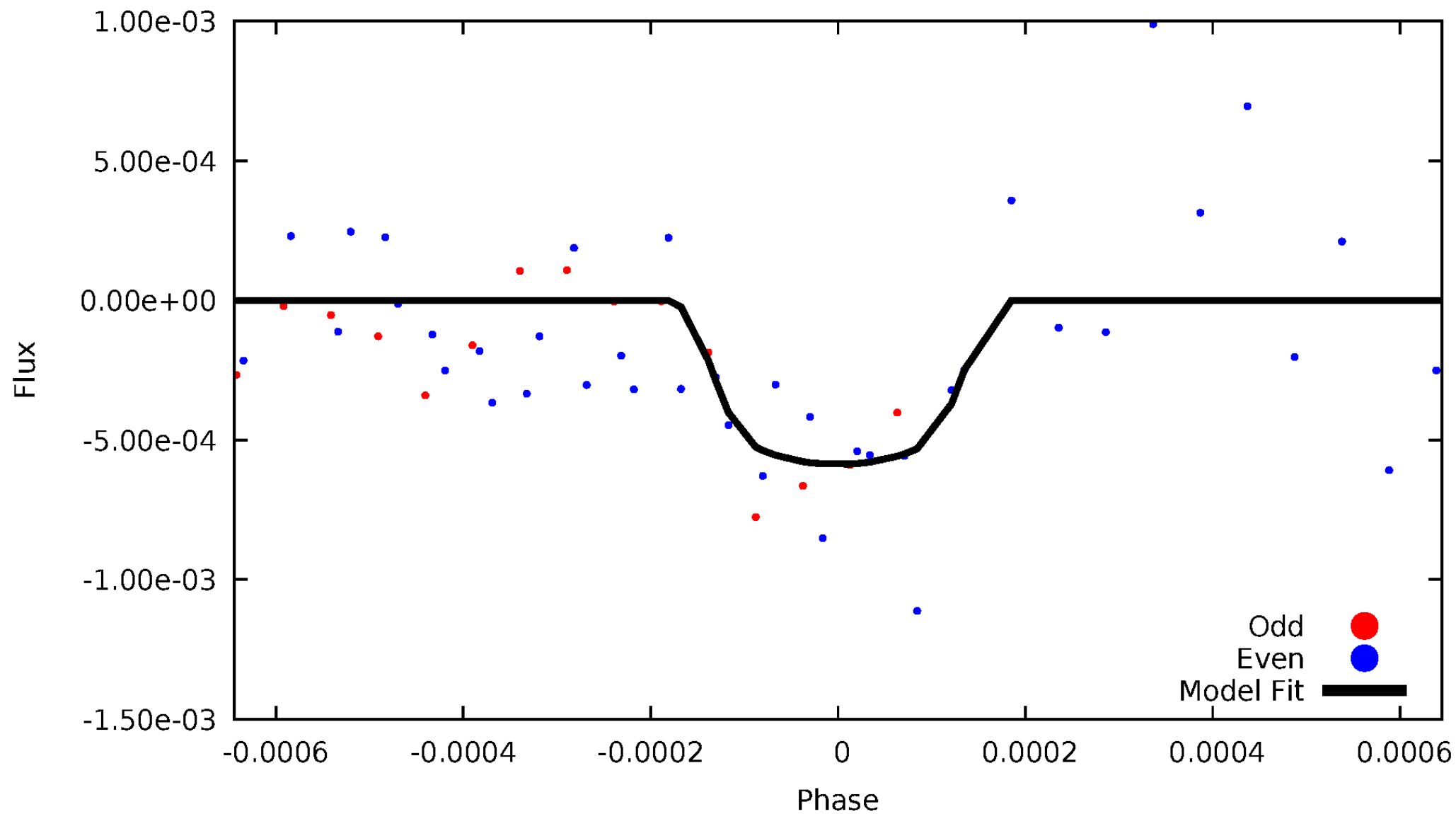


TCE 007340082-08



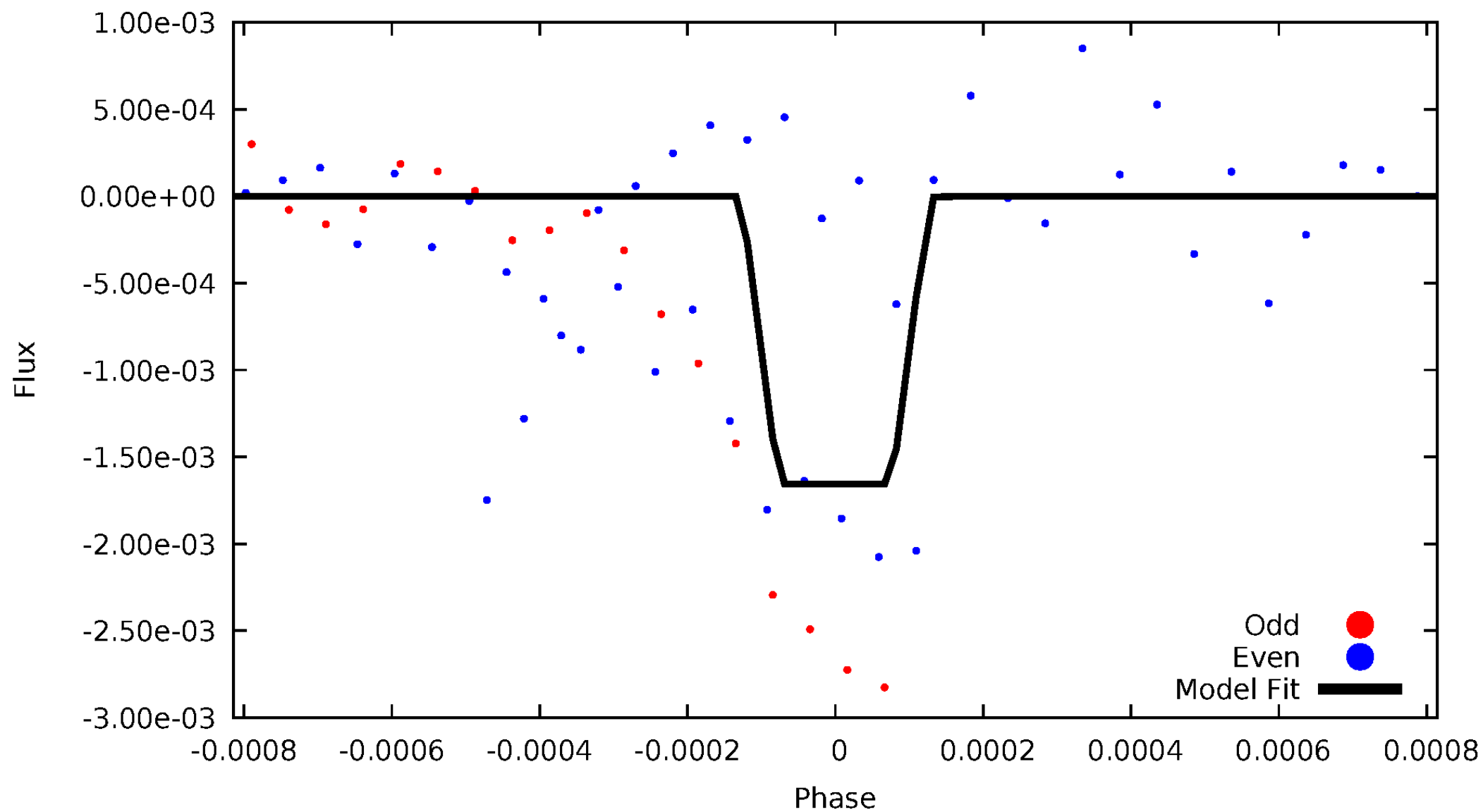
DV Odd/Even

TCE 007340082-08



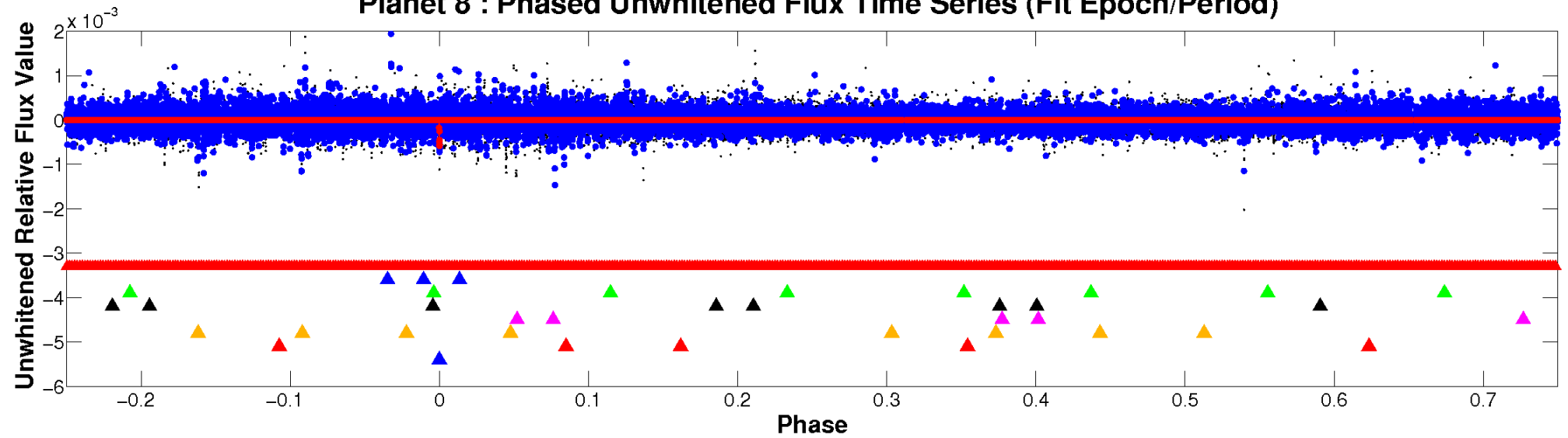
ALT Odd/Even

TCE 007340082-08

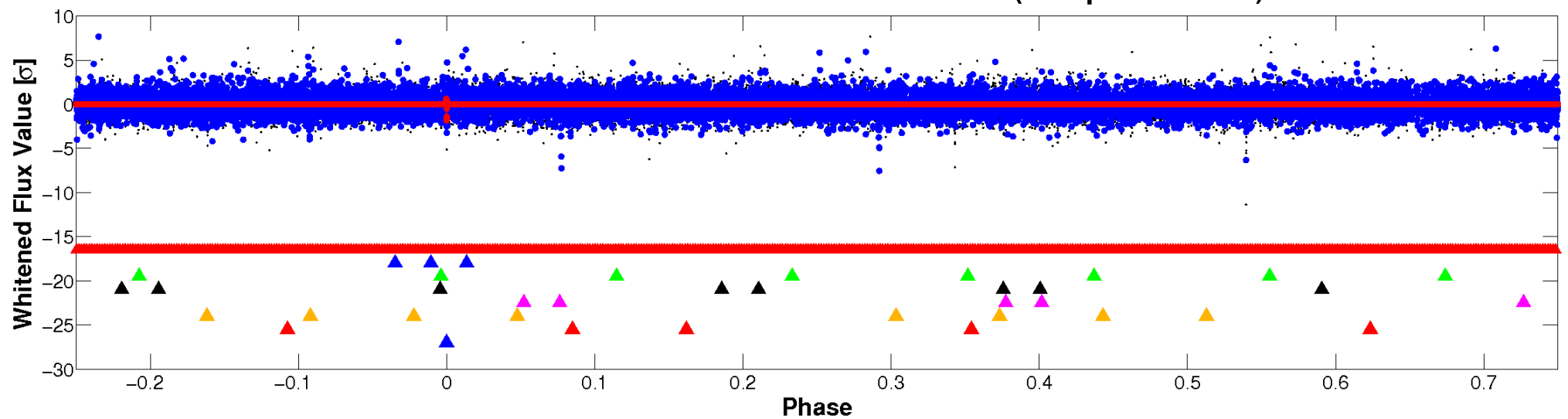


Non-Whitened Vs. Whitened Light Curve

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

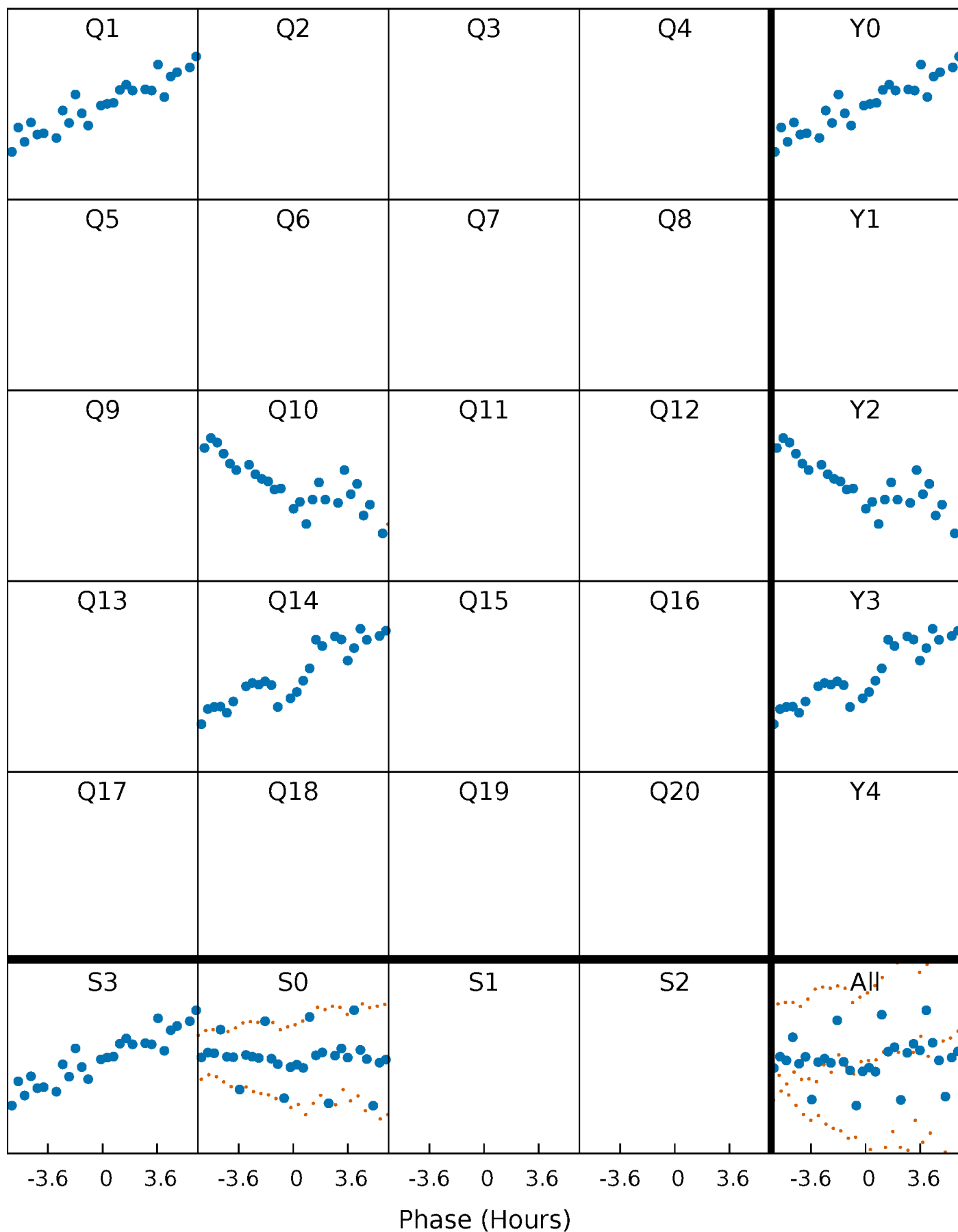


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



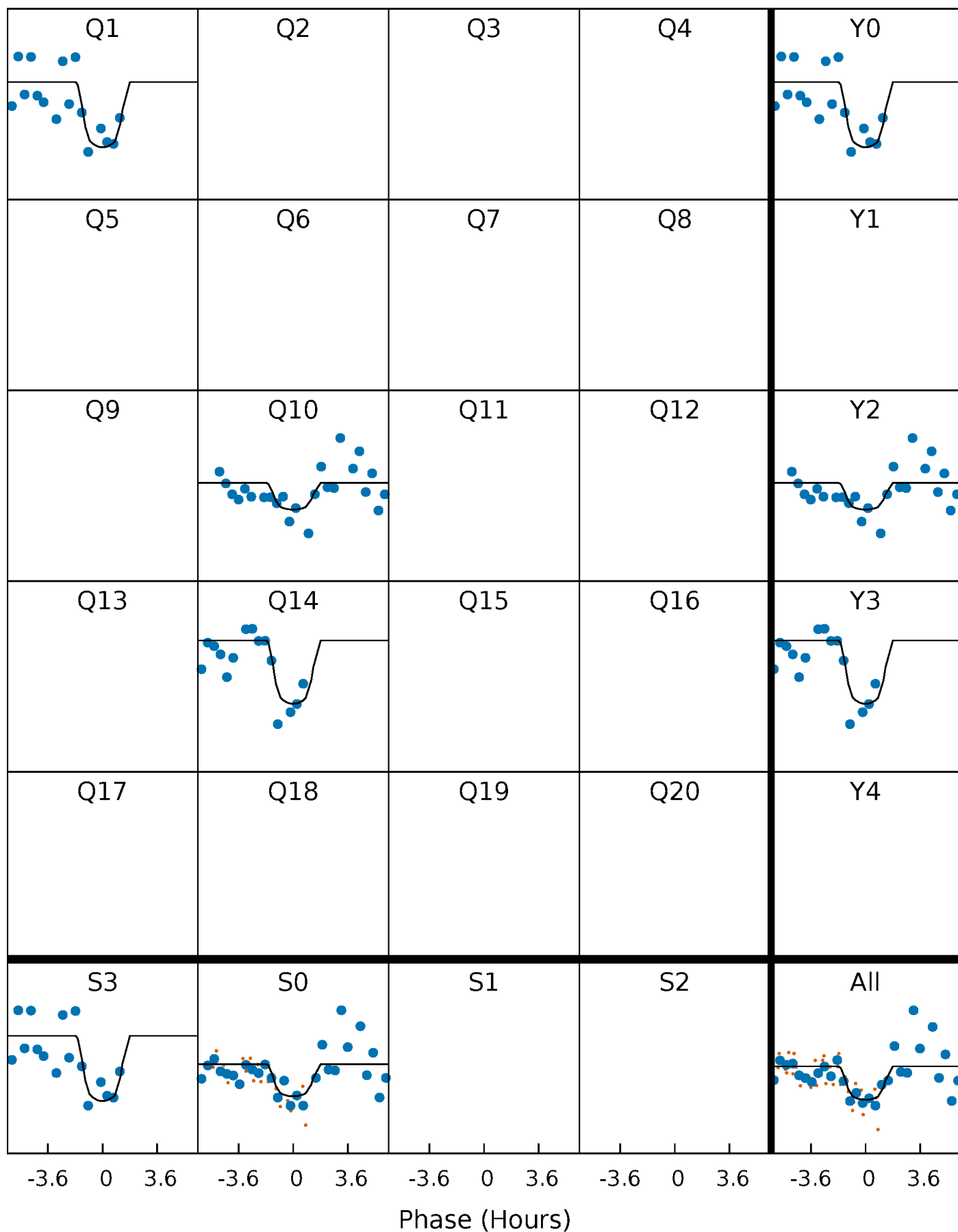
PDC Quarter-Phased Transit Curves

TCE 007340082-08 $P=405.594636$ Days $T_0=133.568454$ (BKJD)



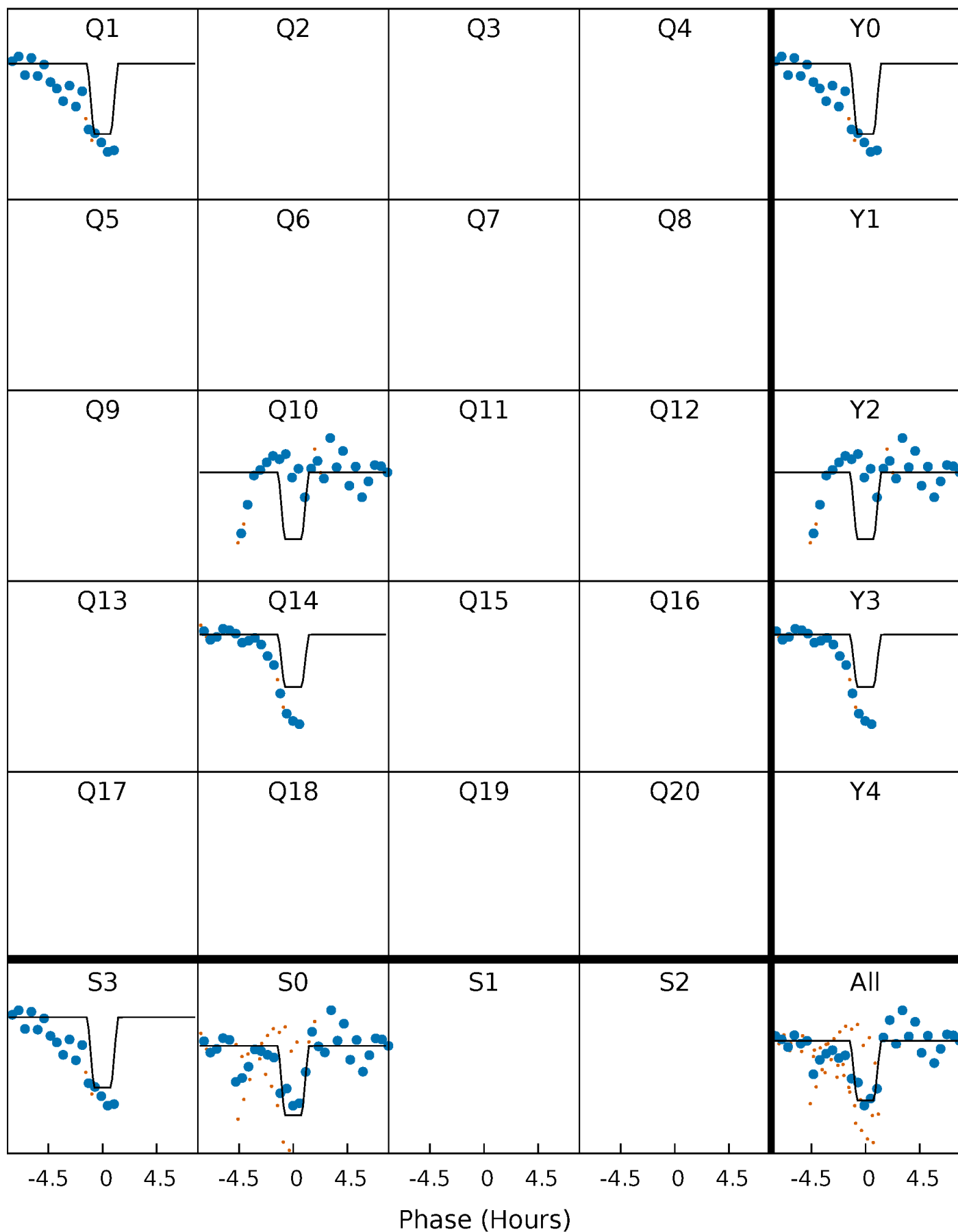
DV Quarter-Phased Transit Curves

TCE 007340082-08 P=405.594636 Days $T_0=133.568454$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

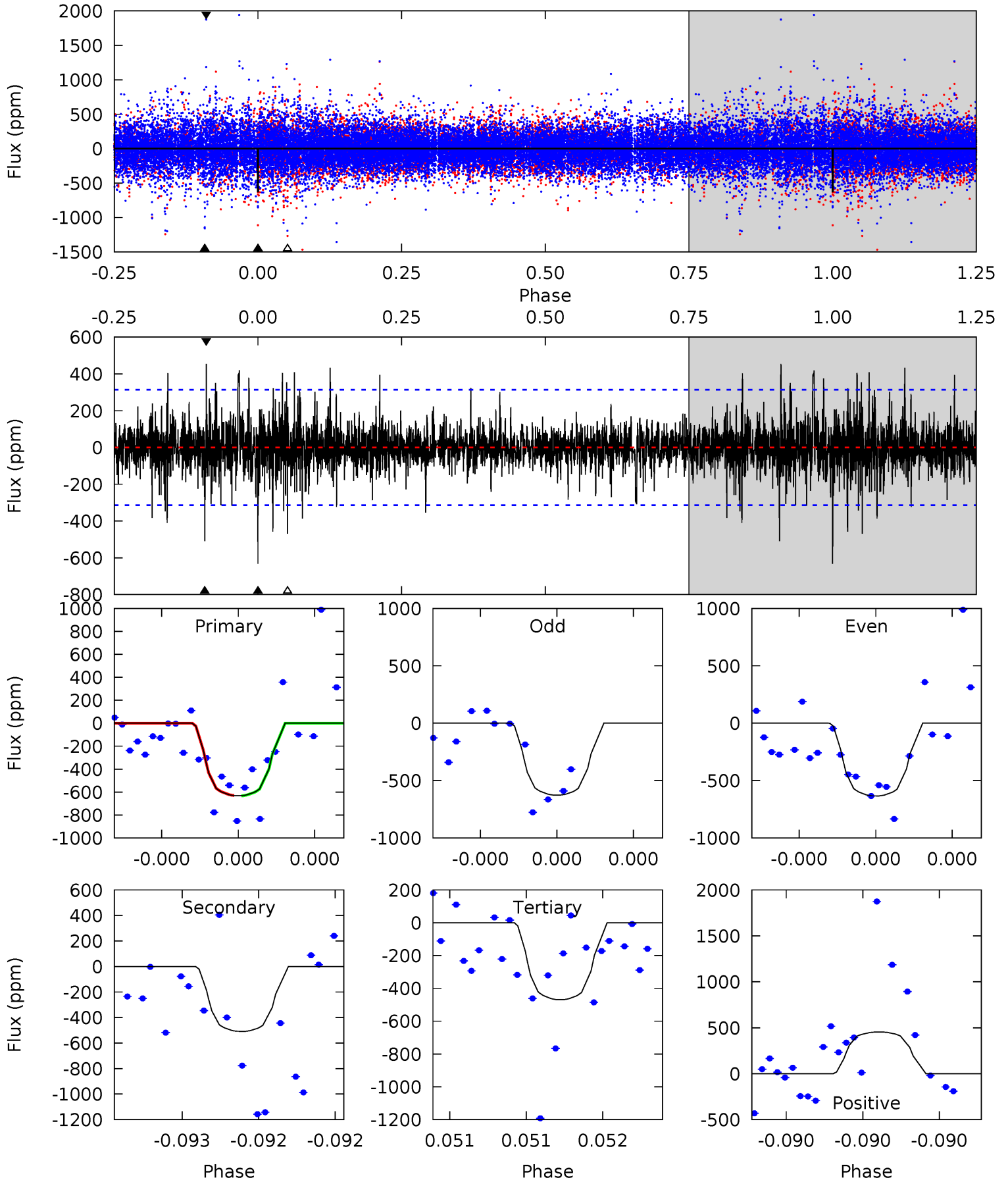
TCE 007340082-08 P=405.592544 Days $T_0=133.573362$ (BKJD)



DV Model-Shift Uniqueness Test

007340082-08, P = 405.594636 Days, E = 133.568454 Days

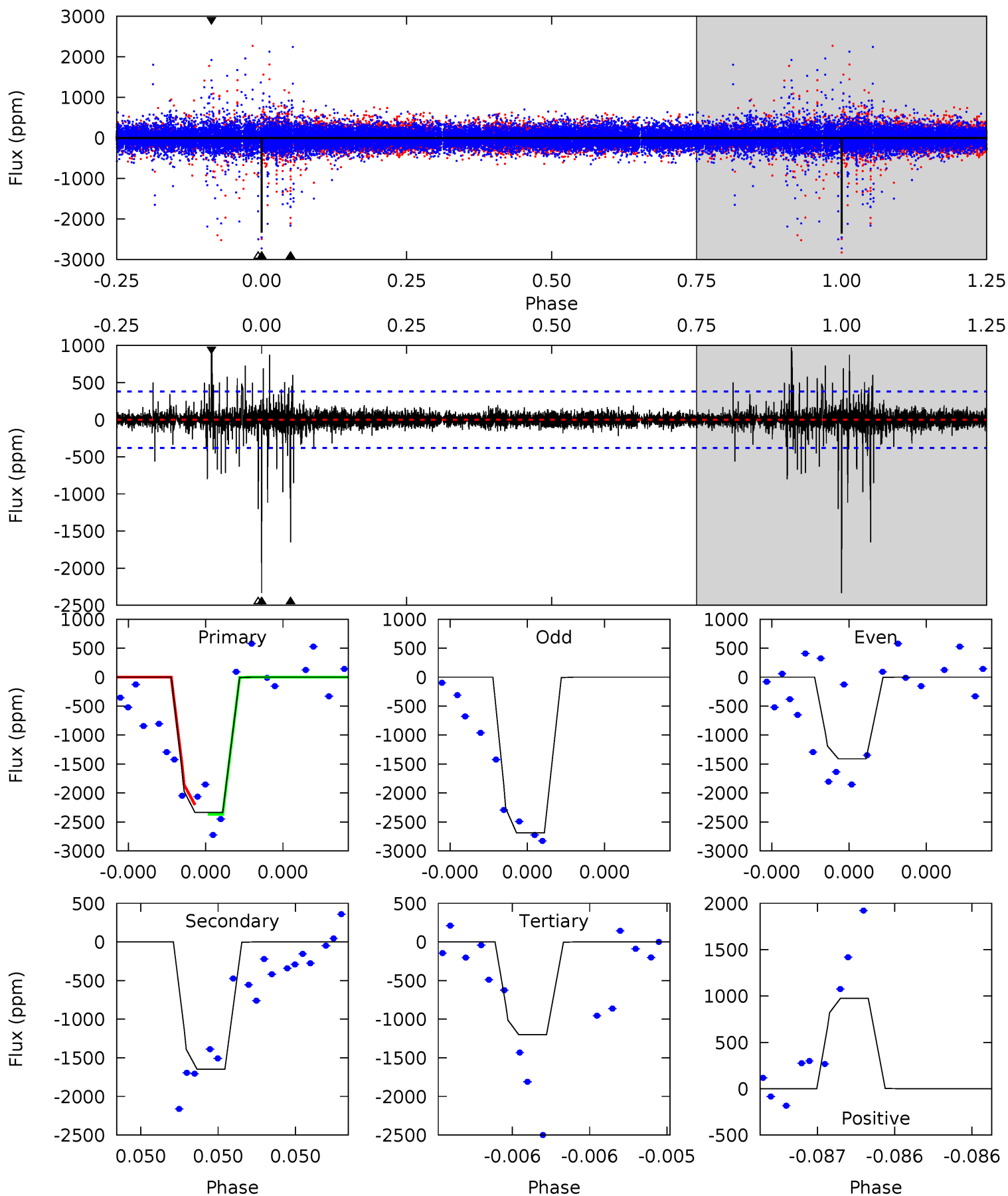
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	9.17	8.45	8.17	5.66	3.61	1.47	2.94	3.21	0.72	1.00	0.06	1.01	0.42	0.03



Alt Model-Shift Uniqueness Test

007340082-08, P = 405.592544 Days, E = 133.573362 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.7	24.5	17.8	14.5	5.66	3.61	1.20	16.9	20.2	6.65	10.0	9.39	0.76	0.29	0



Stellar Parameters For KIC 007340082

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5412^{+162}_{-146}	$4.503^{+0.110}_{-0.099}$	$-0.480^{+0.300}_{-0.300}$	$0.788^{+0.117}_{-0.096}$	$0.720^{+0.105}_{-0.045}$	$2.075^{+0.972}_{-0.609}$
	+3%/-3%	+2%/-2%	+62%/-62%	+15%/-12%	+15%/-6%	+47%/-29%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007340082-08 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-509 ± 55	$2.29^{+1.03}_{-0.90}$	302^{+14}_{-15}	5029^{+1334}_{-699}	49466^{+87686}_{-25539}
Alt.	-1649 ± 67	$3.54^{+1.07}_{-0.98}$	302^{+14}_{-14}	5404^{+891}_{-576}	68568^{+60666}_{-28552}

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

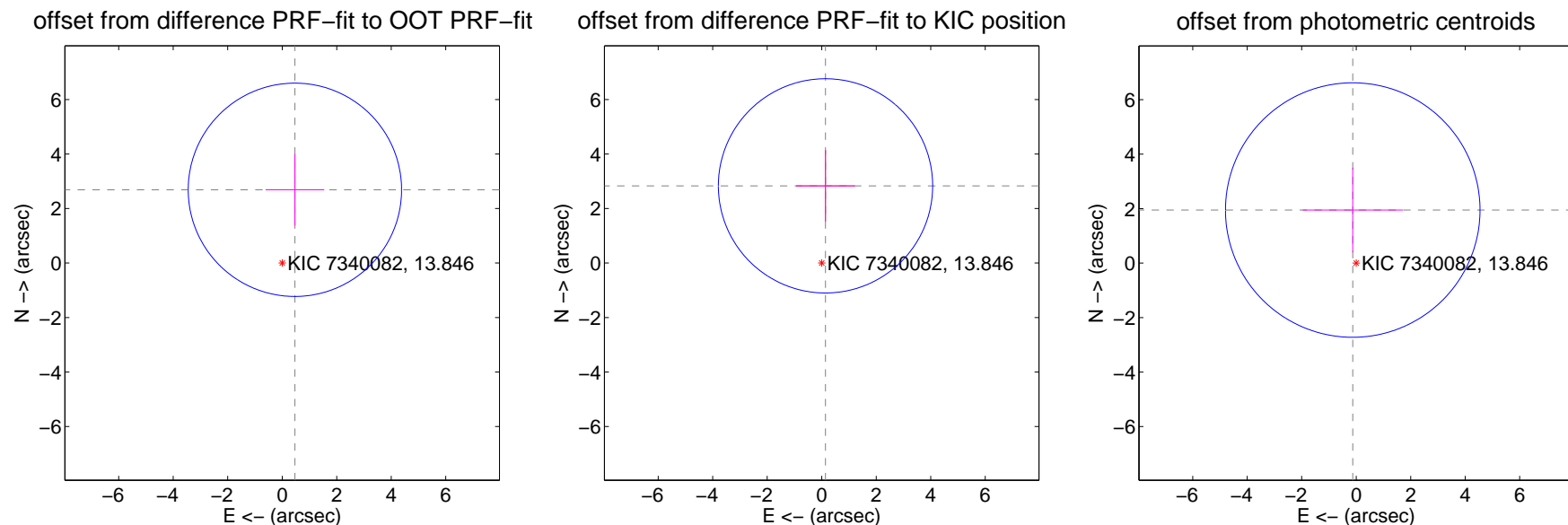
DV Centroid Data

Supplemental centroid analysis for 007340082-08. Kepler magnitude: 13.85. Transit SNR 6.60

There are 0 quarters with good PRF difference image offsets

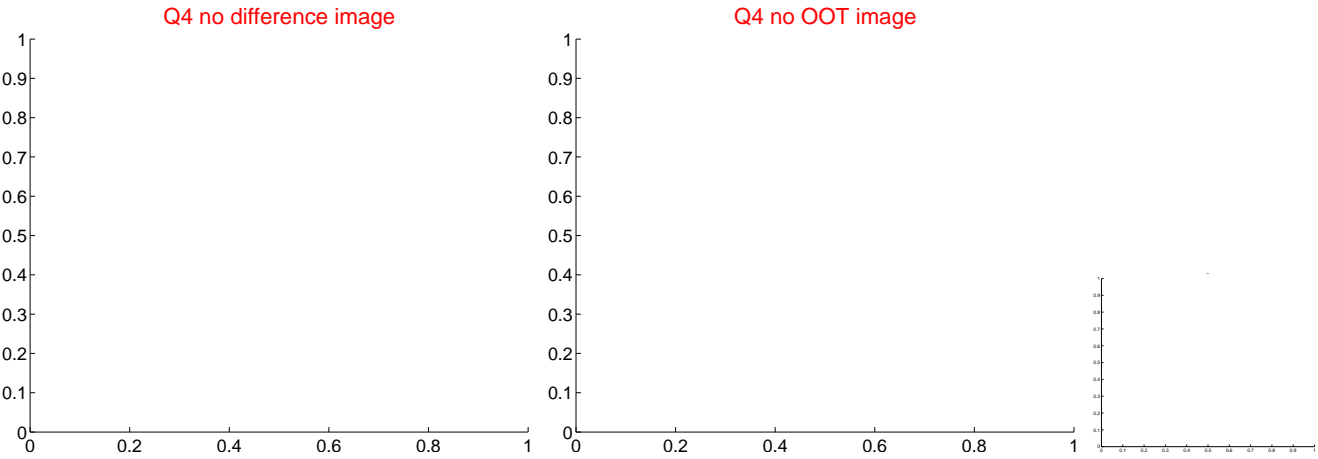
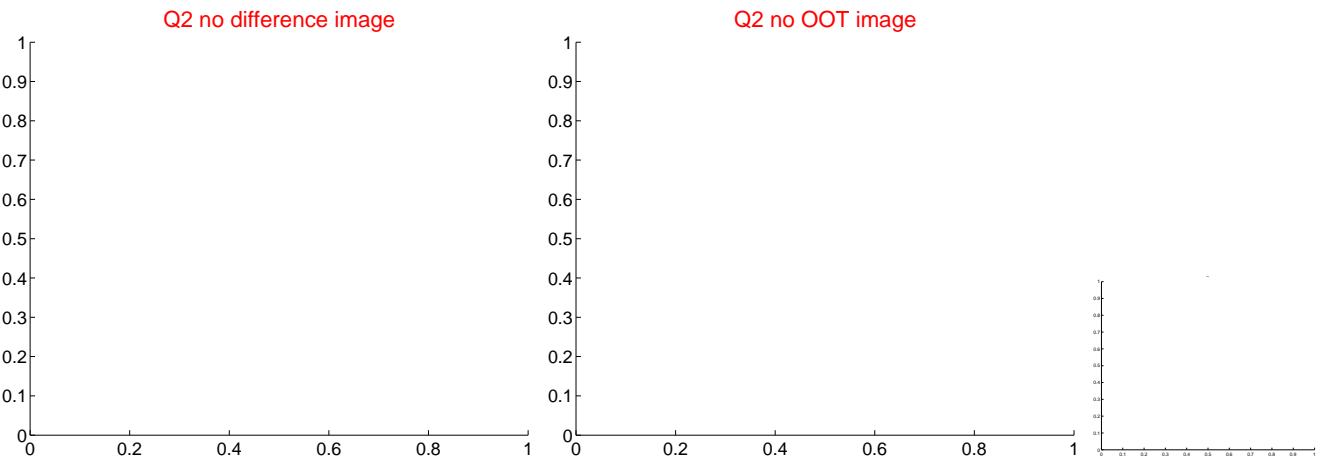
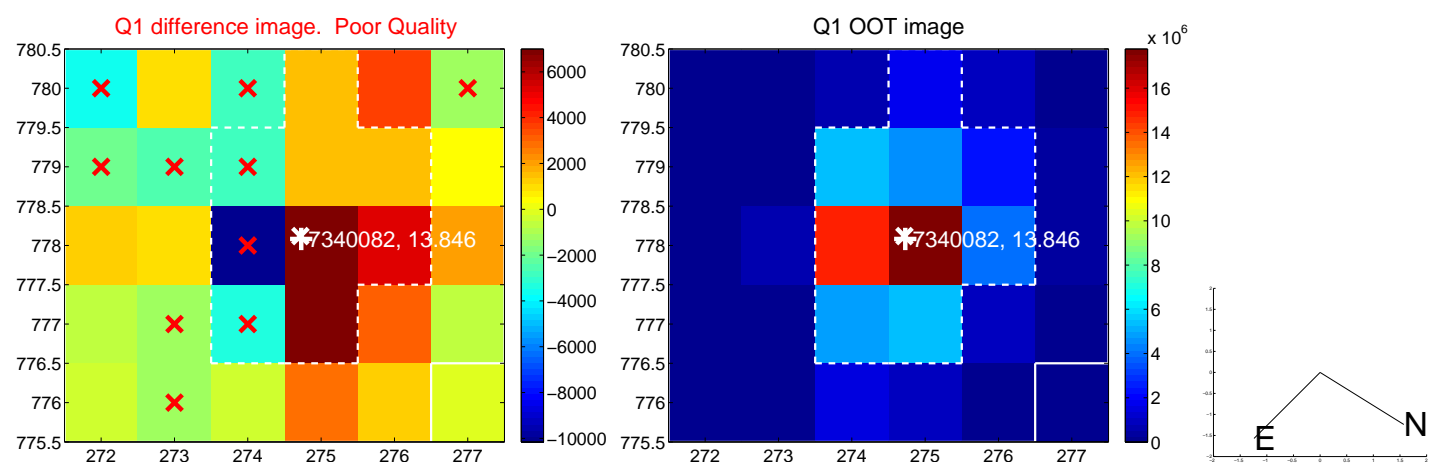
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.728 ± 1.305	2.09	-0.465 ± 1.075	2.688 ± 1.311
PRF-fit source offset from KIC position	2.836 ± 1.311	2.16	-0.139 ± 1.075	2.833 ± 1.311
photometric centroid source offset	1.95 ± 1.56	1.25	0.13 ± 1.84	1.95 ± 1.56



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.

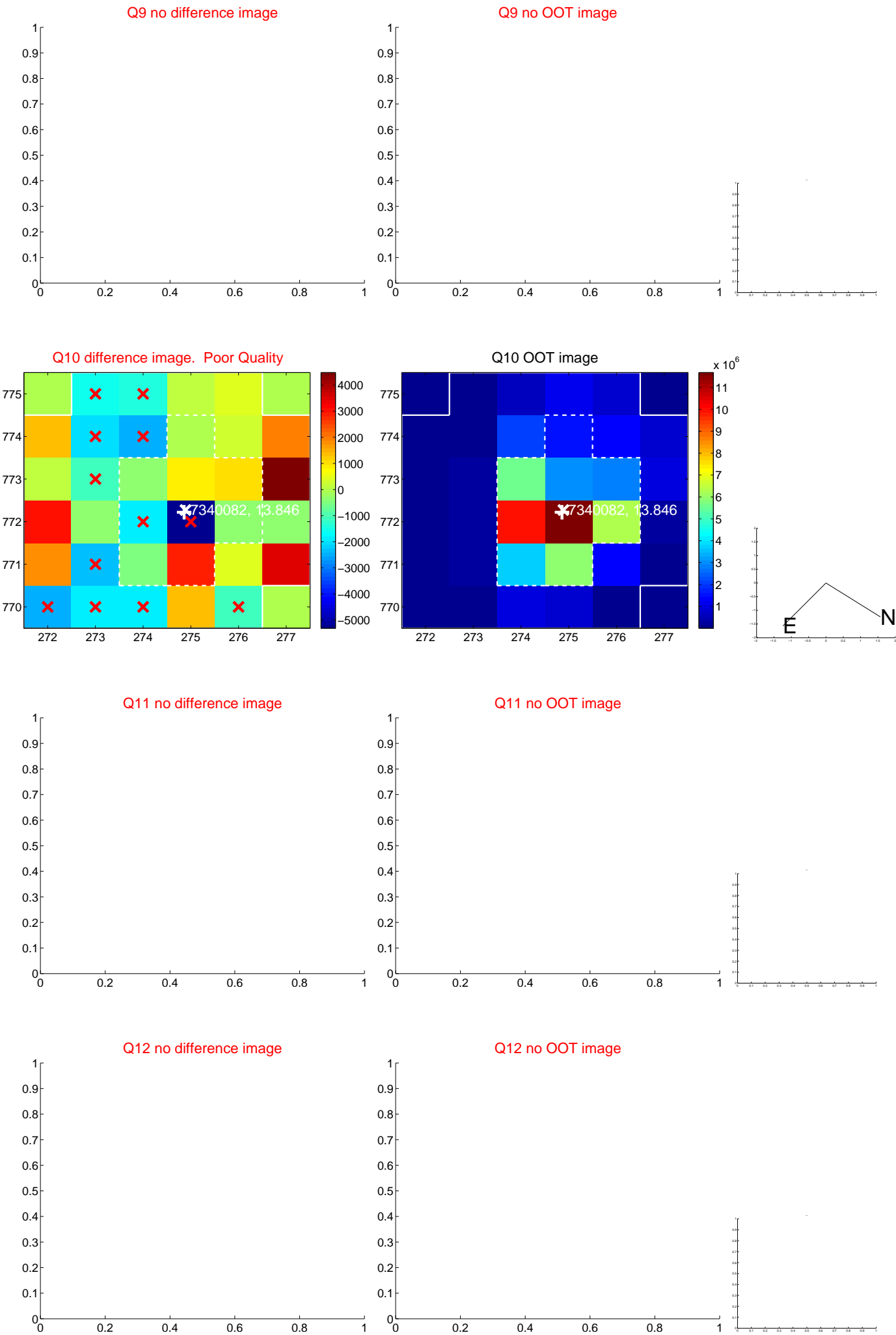
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



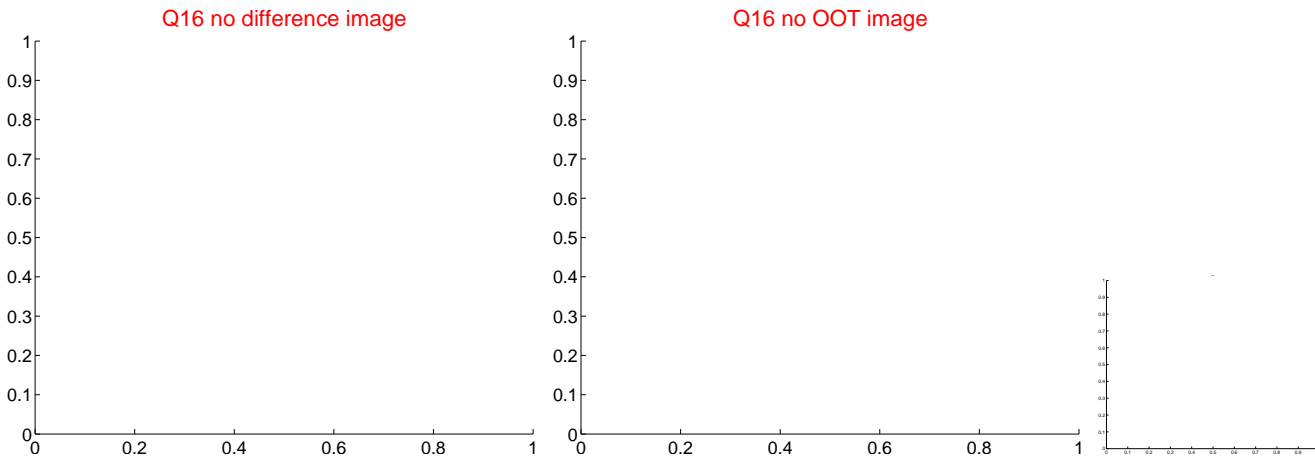
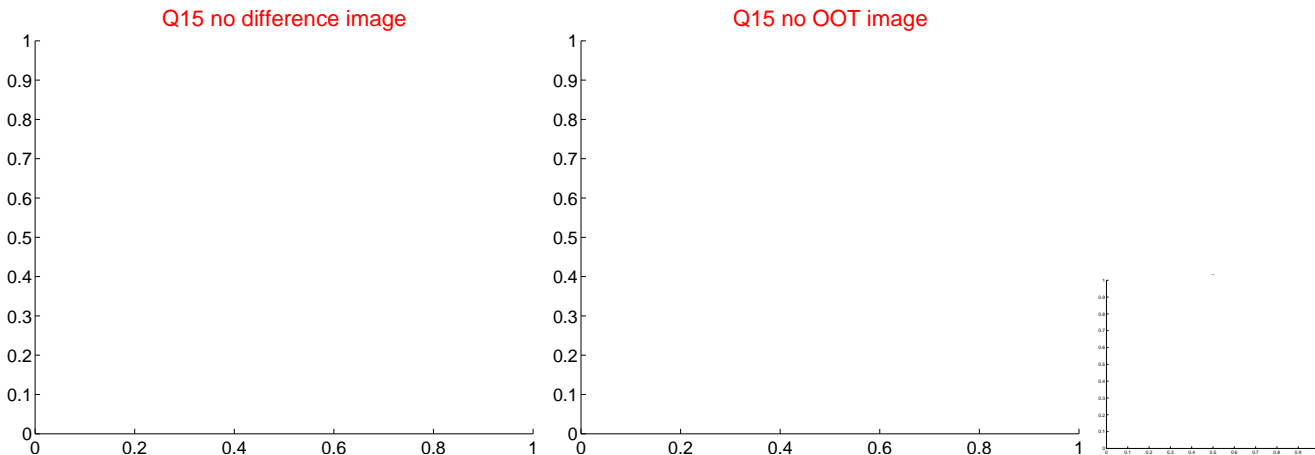
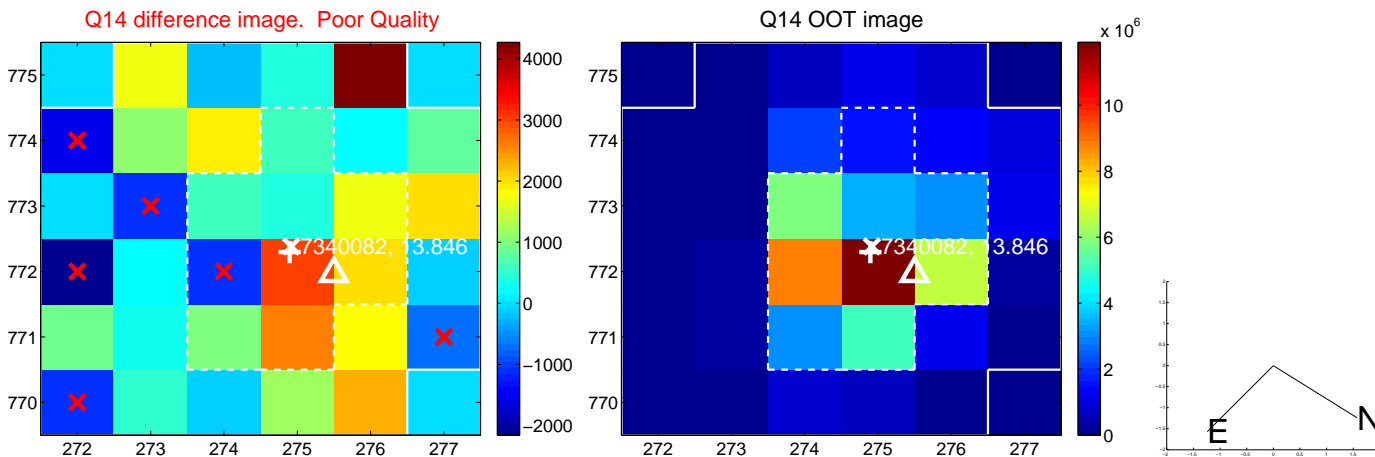
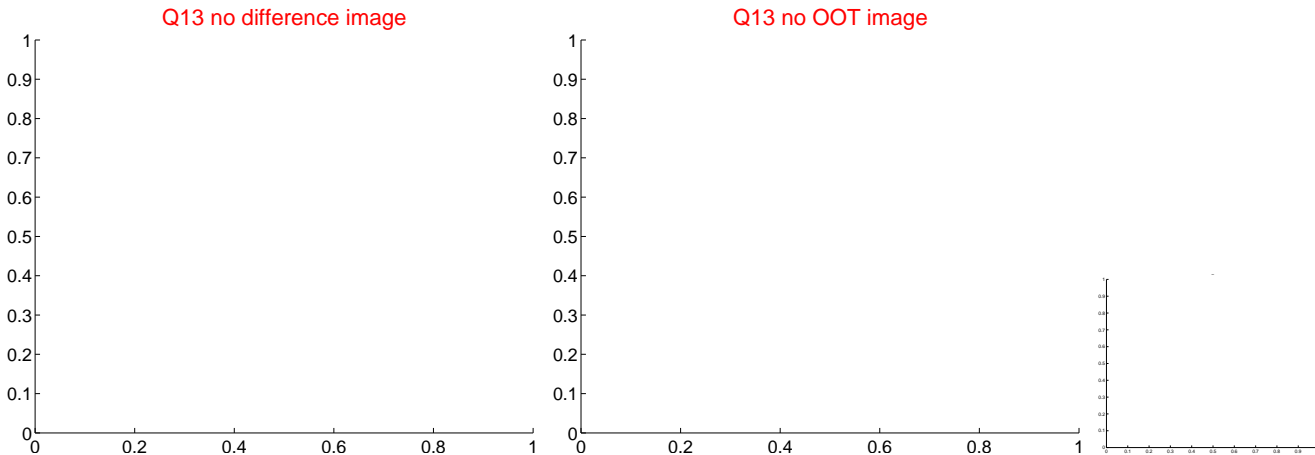
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



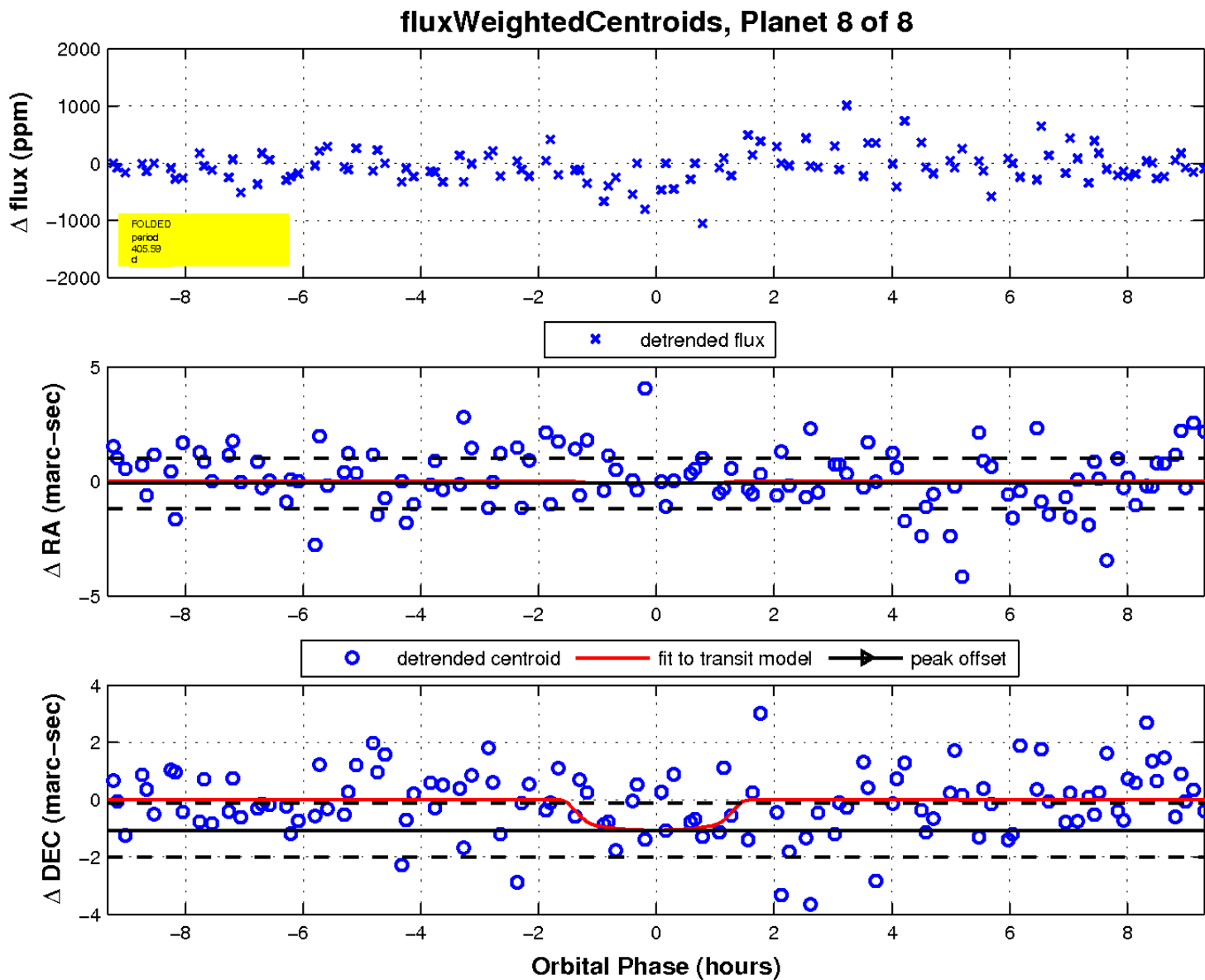
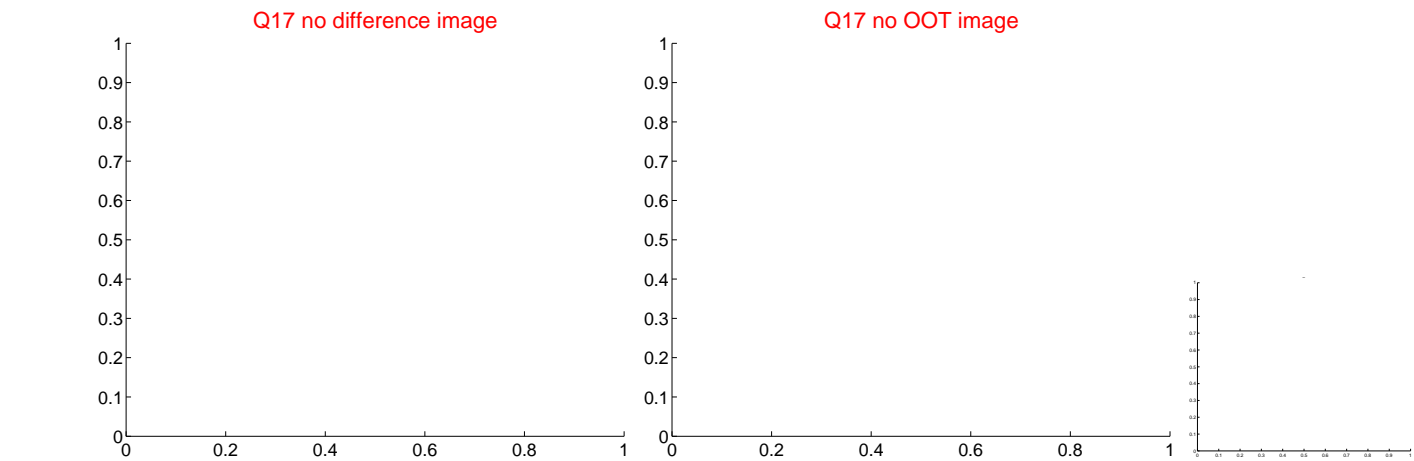
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

