

KIC 002714932

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})
002714932-01	OBS	No	1.936609	133.370964	83.2	10.788	11.1	12.1	1.02	6096	0.93	1353.99
002714932-02	OBS	No	83.586553	183.122566	621.7	30.201	35.1	5.7	1.02	6096	2.53	8.94
002714932-03	OBS	No	379.740193	213.757033	5541.4	40.236	17.8	12.8	1.02	6096	10.27	1.19
002714932-04	OBS	No	194.036588	143.761410	709.8	63.663	14.7	3.5	1.02	6096	2.76	2.91
002714932-05	OBS	No	249.813954	169.244968	595.2	15.000	10.9	-1.0	1.02	6096	2.48	2.08
002714932-06	OBS	No	139.996979	227.369717	657.3	12.352	9.8	5.9	1.02	6096	2.83	4.50
002714932-07	OBS	No	66.159045	173.590743	538.3	13.883	9.3	5.5	1.02	6096	2.69	12.21
002714932-08	OBS	No	101.251584	215.094722	823.1	16.571	9.0	6.7	1.02	6096	3.05	6.93
002714932-09	OBS	No	220.851963	149.666990	4184.1	35.946	8.4	9.1	1.02	6096	7.29	2.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002714932-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
002714932-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
002714932-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
002714932-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— INCONSISTENT_TRANS
002714932-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS
002714932-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
002714932-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
002714932-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
002714932-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS

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

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

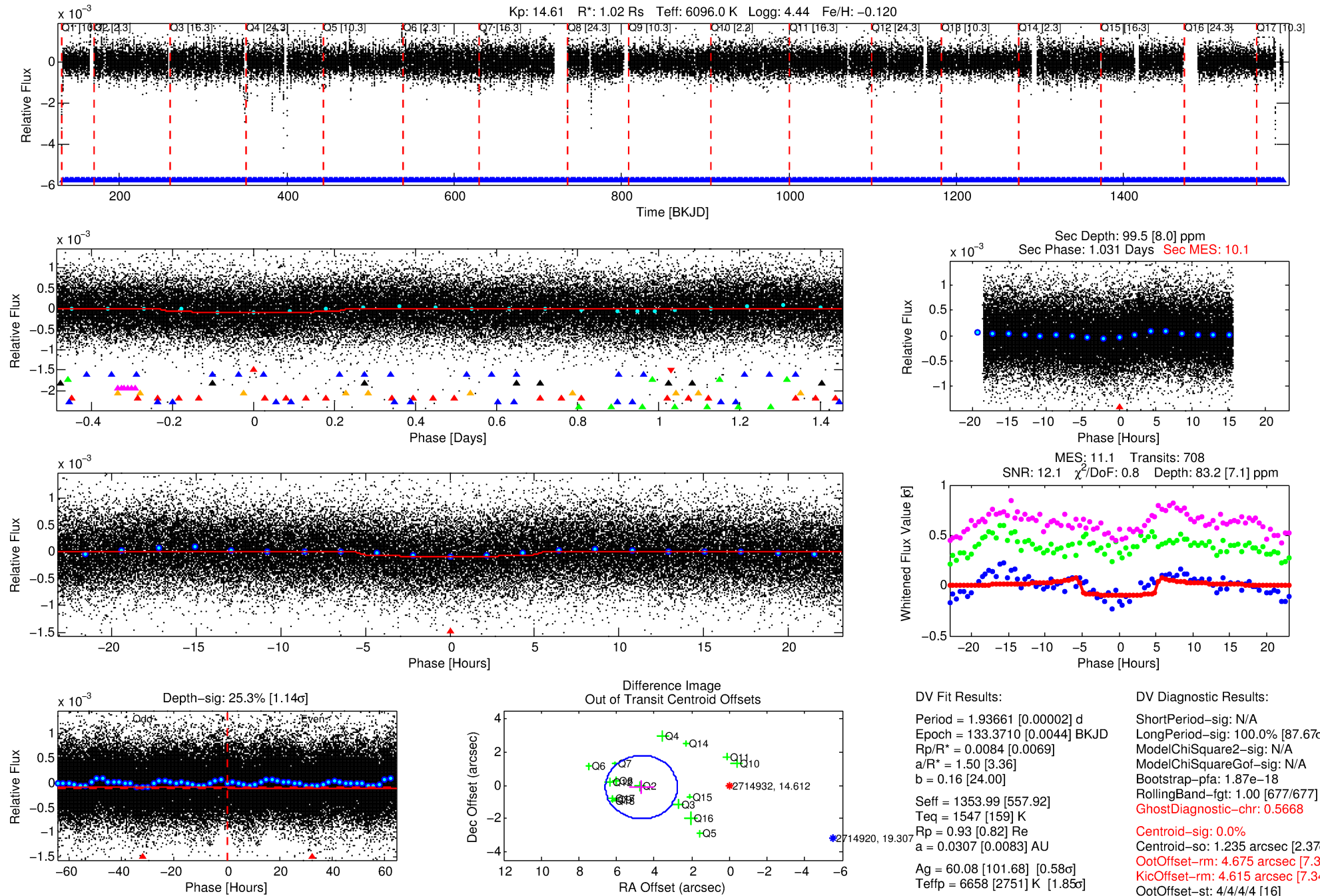
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002714932-01

No Significant Match Found

DV One-Page Summary

KIC: 2714932 Candidate: 1 of 9 Period: 1.937 d



DV Fit Results:

Period = 1.93661 [0.00002] d
Epoch = 133.3710 [0.0044] BKJD
Rp/R* = 0.0084 [0.0069]
a/R* = 1.50 [3.36]
b = 0.16 [24.00]
Seff = 1353.99 [557.92]
Teff = 1547 [159] K
Rp = 0.93 [0.82] Re
a = 0.0307 [0.0083] AU
Ag = 60.08 [101.68] [0.58σ]
Teffp = 6658 [2751] K [1.85σ]

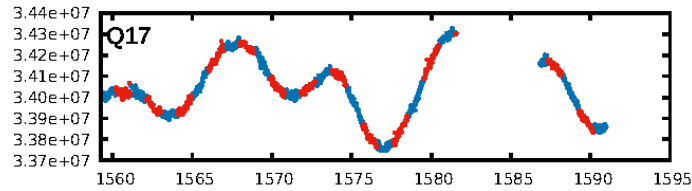
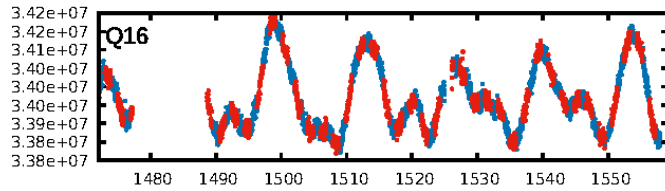
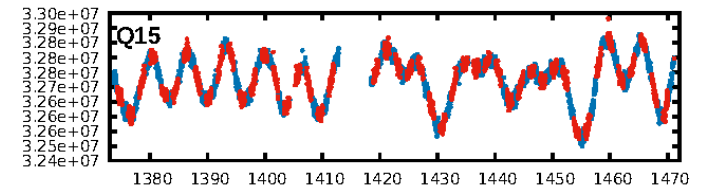
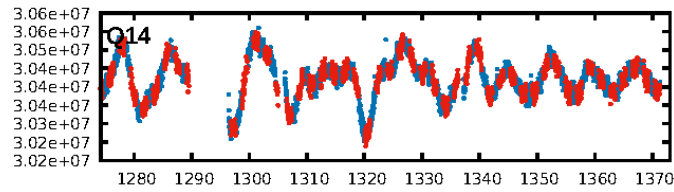
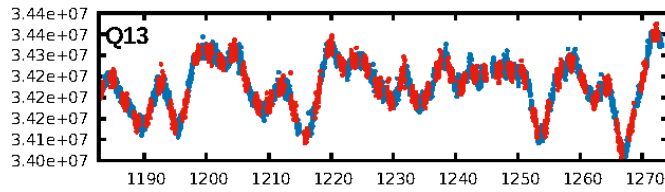
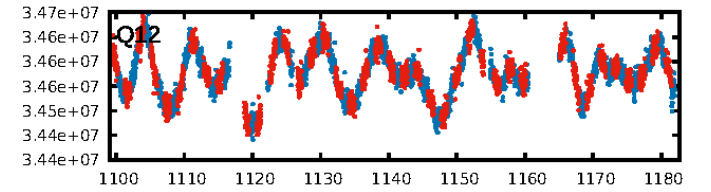
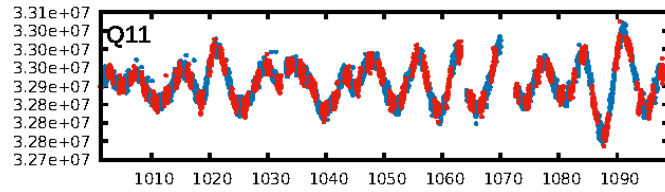
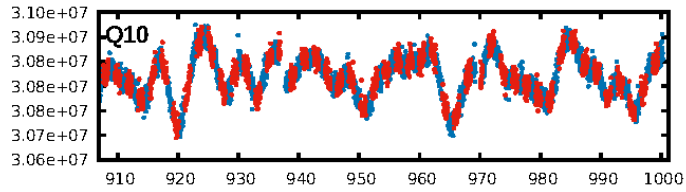
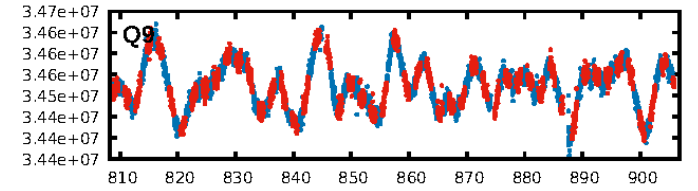
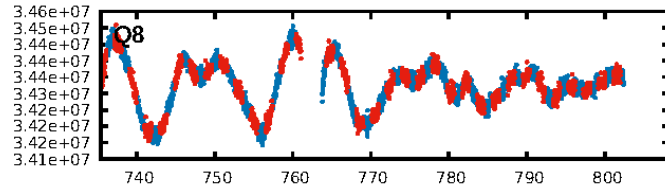
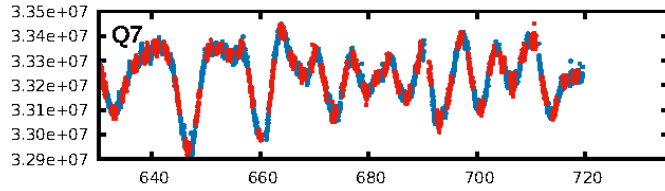
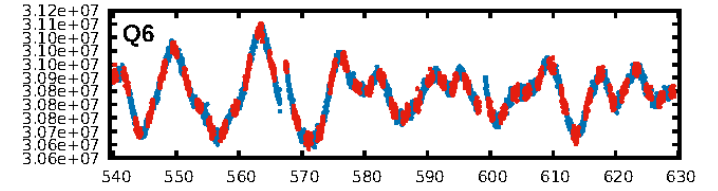
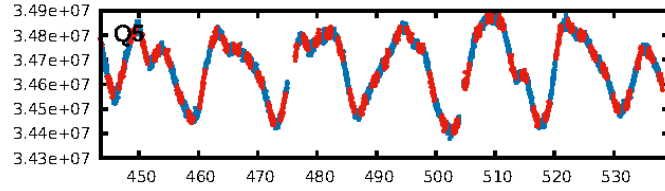
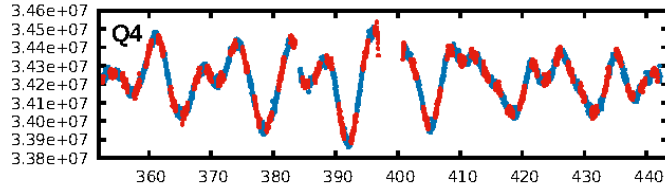
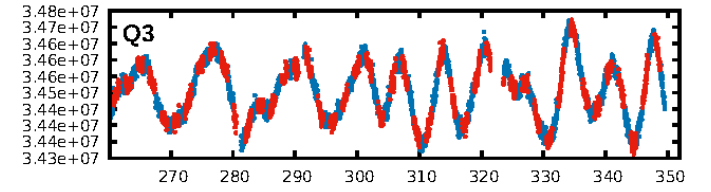
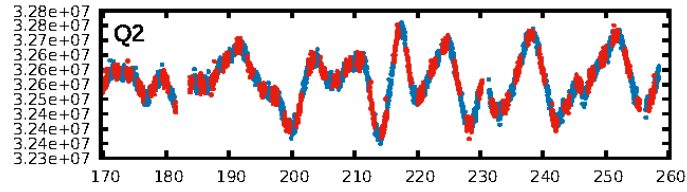
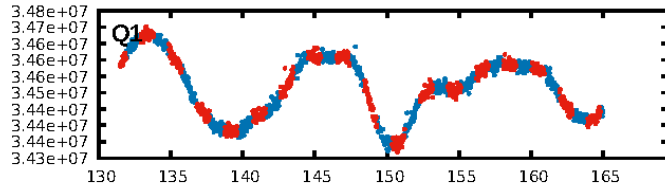
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [87.67σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.87e-18
RollingBand-fgt: 1.00 [677/677]
GhostDiagnostic-chr: 0.5668
Centroid-sig: 0.0%
Centroid-so: 1.235 arcsec [2.37σ]
OotOffset-rm: 4.675 arcsec [7.36σ]
KicOffset-rm: 4.615 arcsec [7.34σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.06 [1/16]
DiffImageOverlap-fno: 1.00 [17/17]

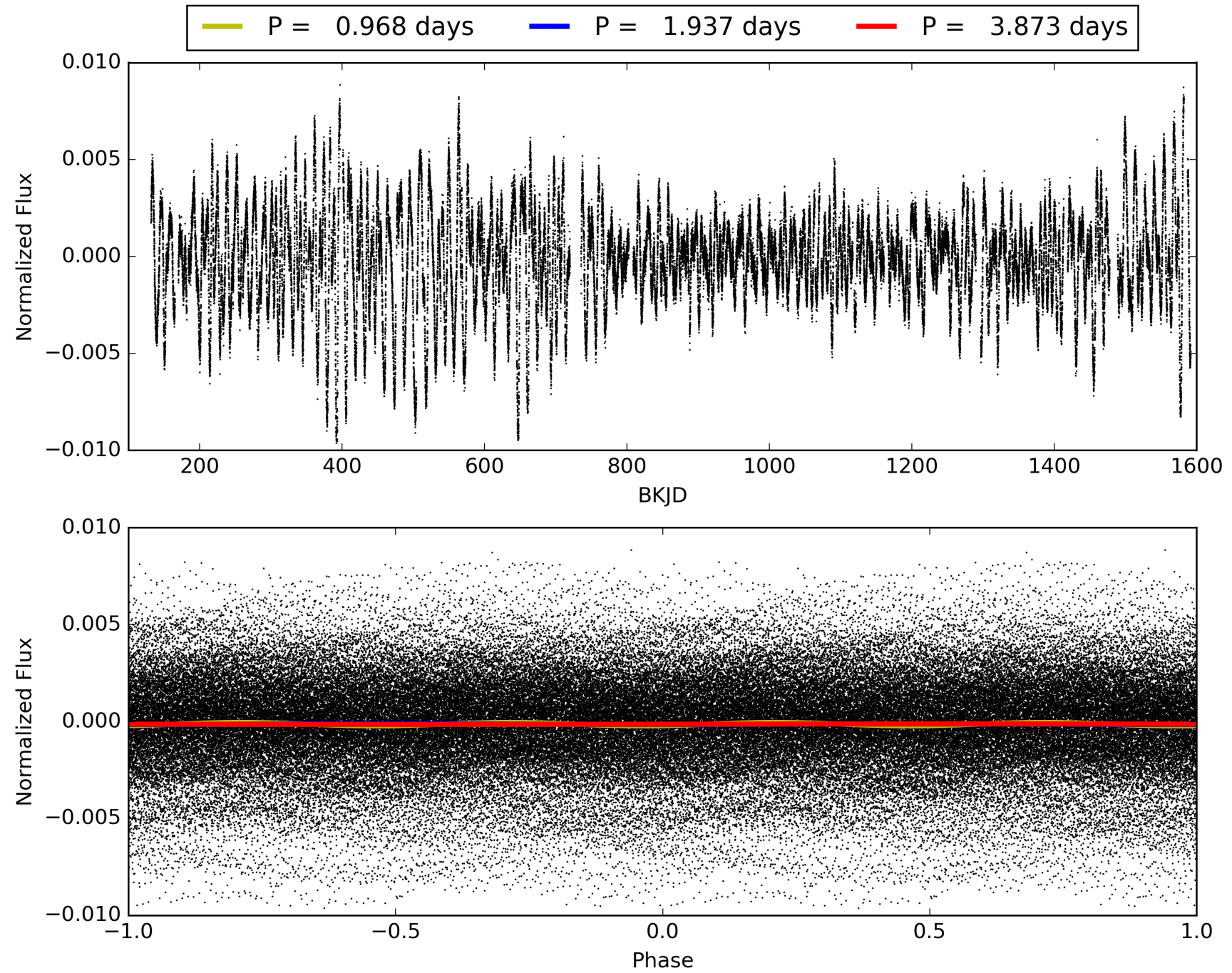
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:28:39 Z

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

TCE 002714932-01, PDC Light Curves

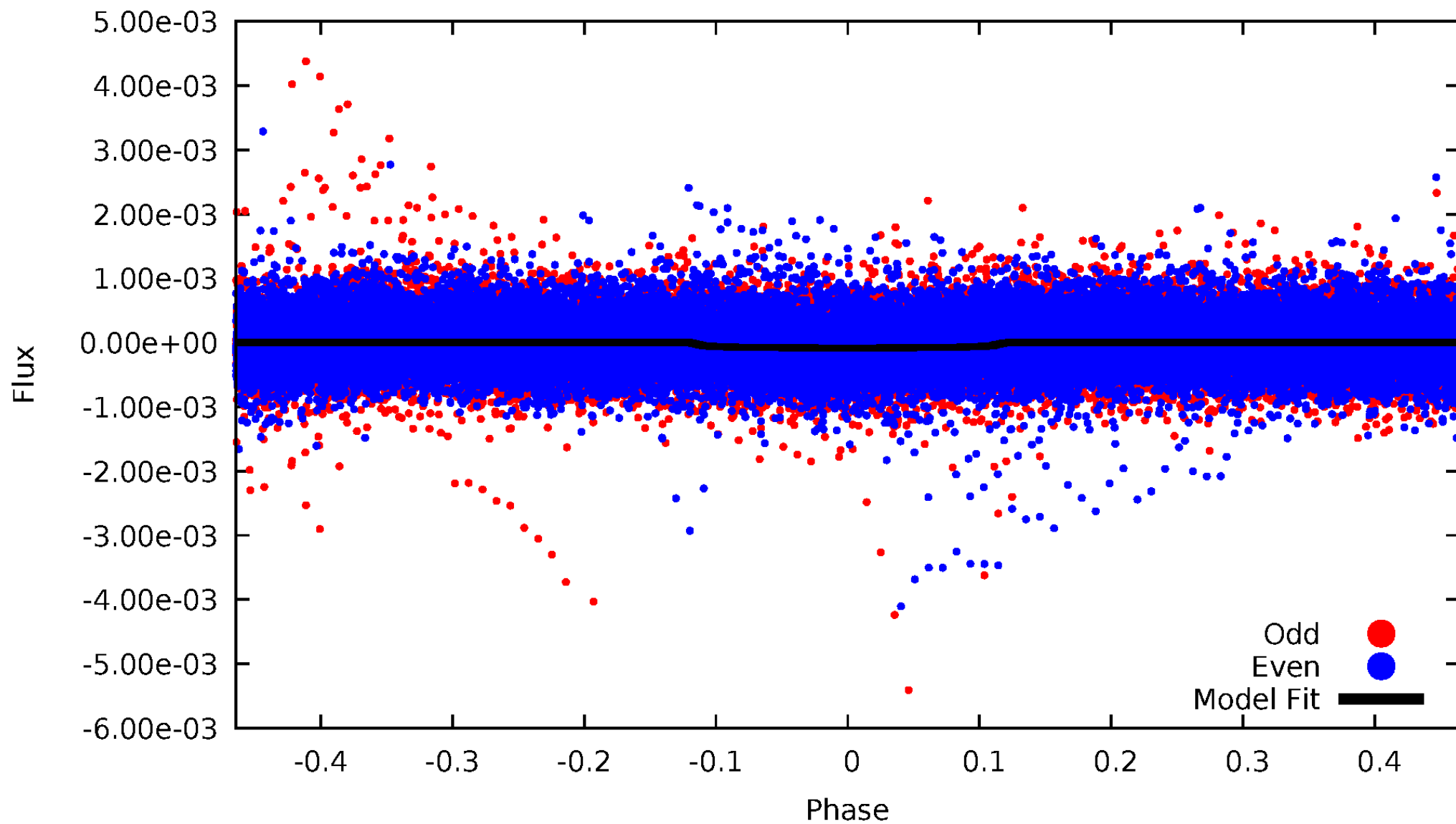


TCE 002714932-01



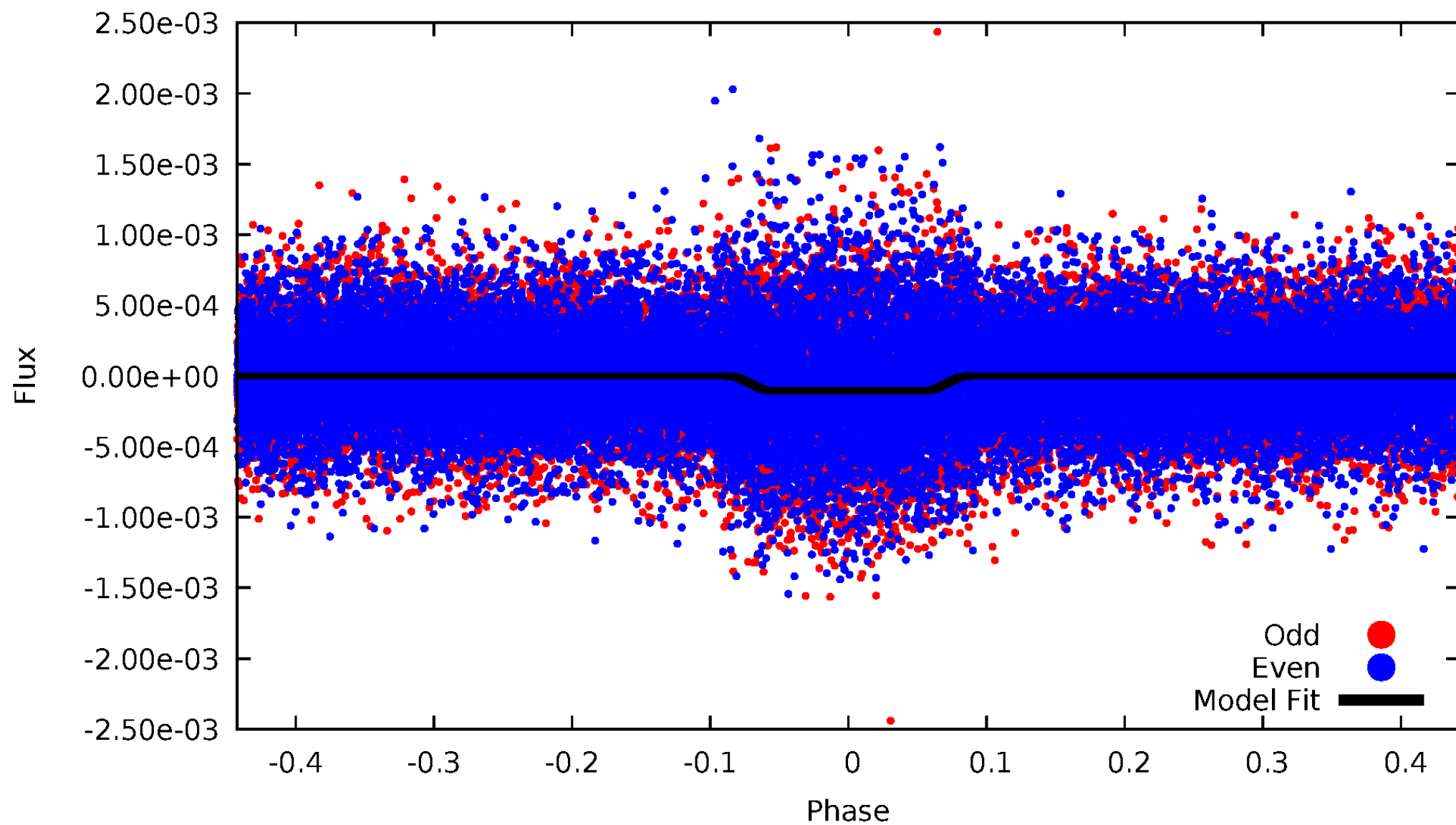
DV Odd/Even

TCE 002714932-01

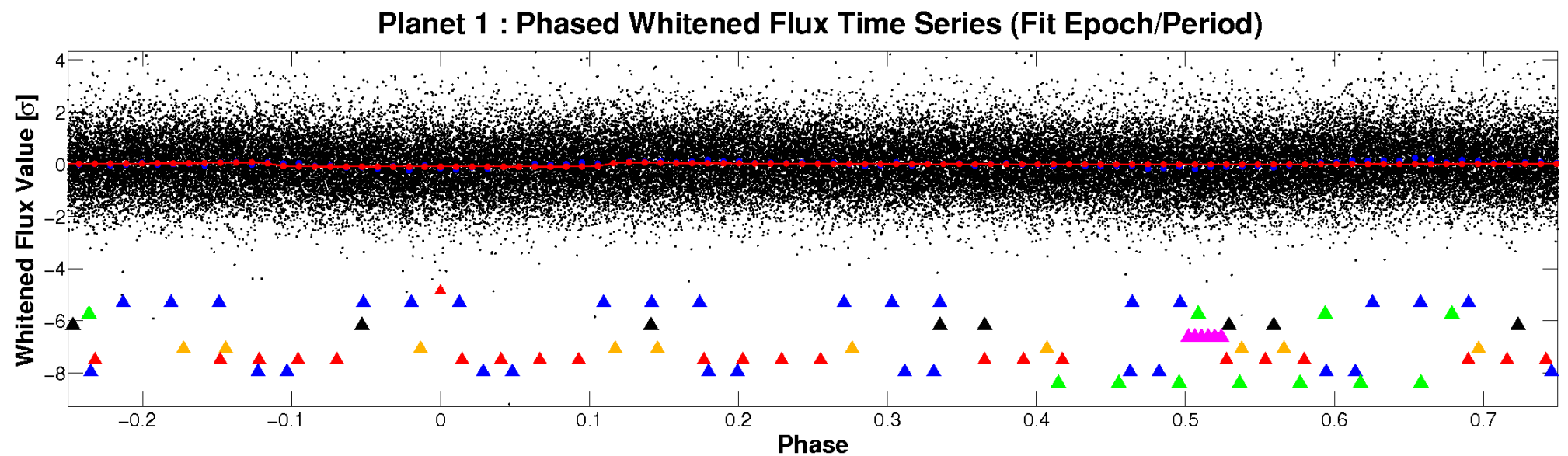
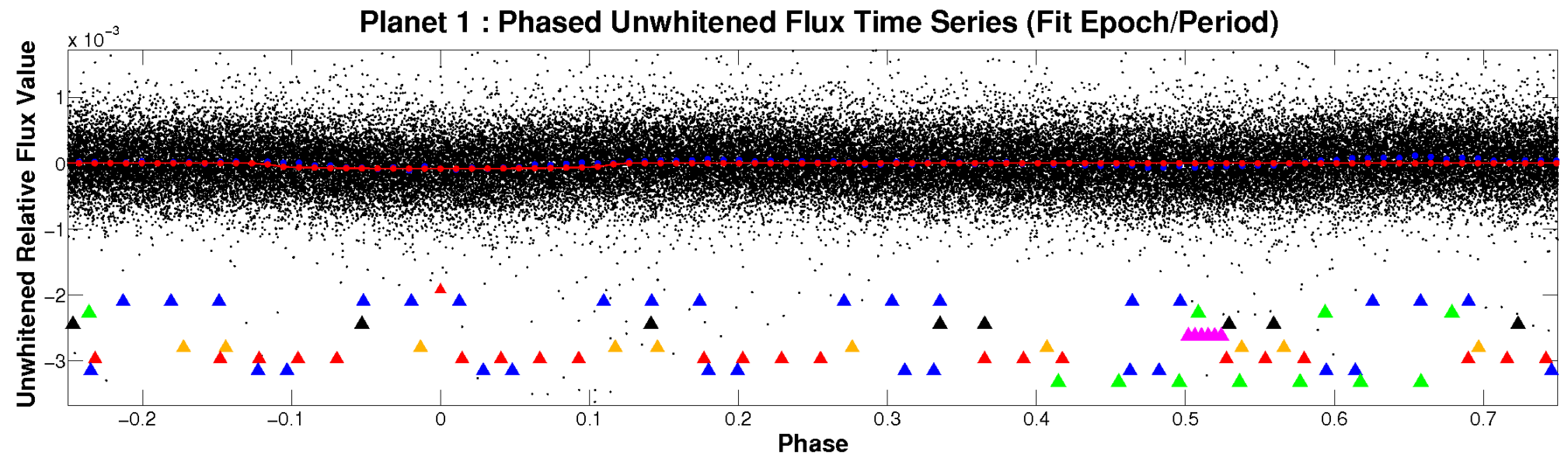


ALT Odd/Even

TCE 002714932-01

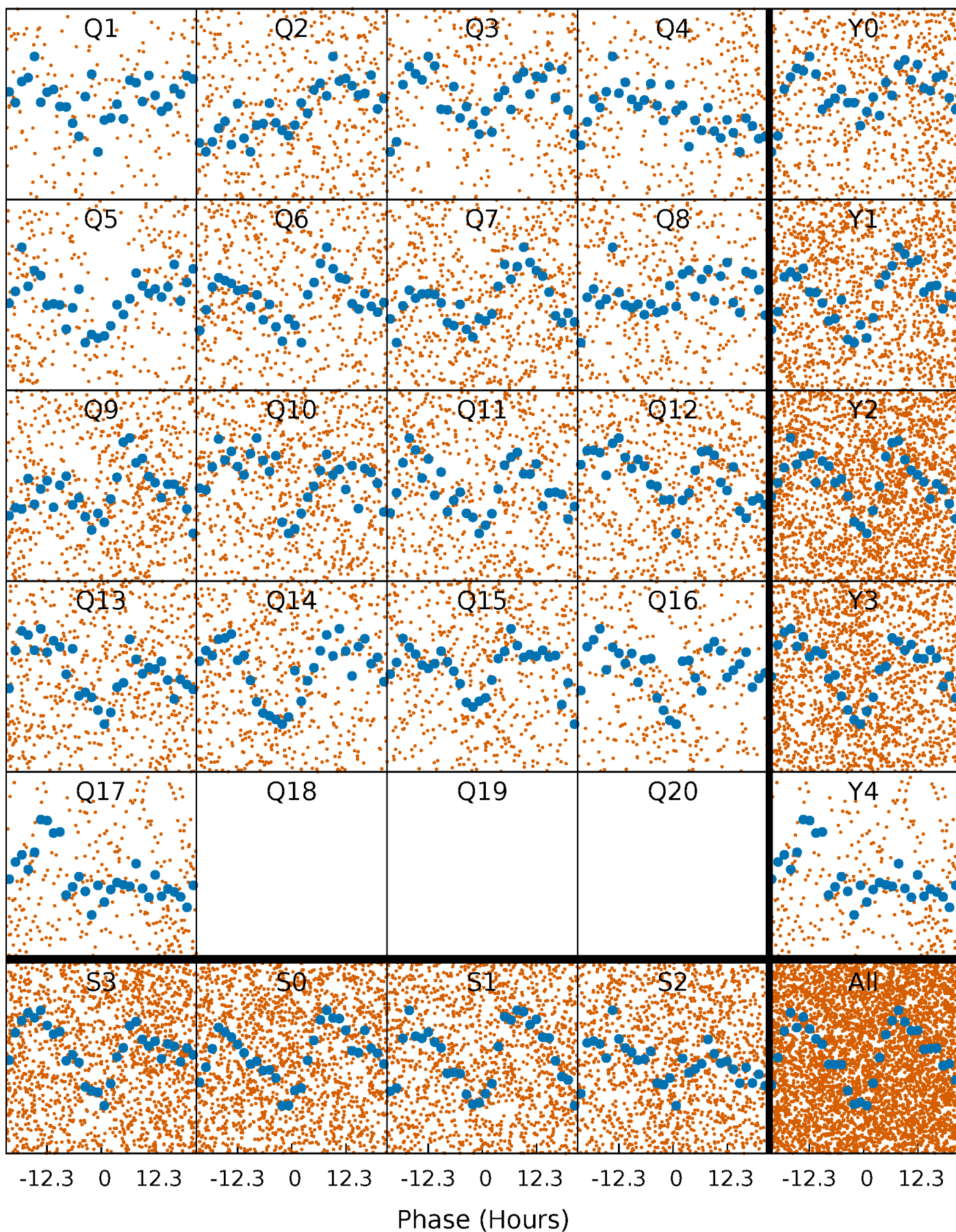


Non-Whitened Vs. Whitened Light Curve



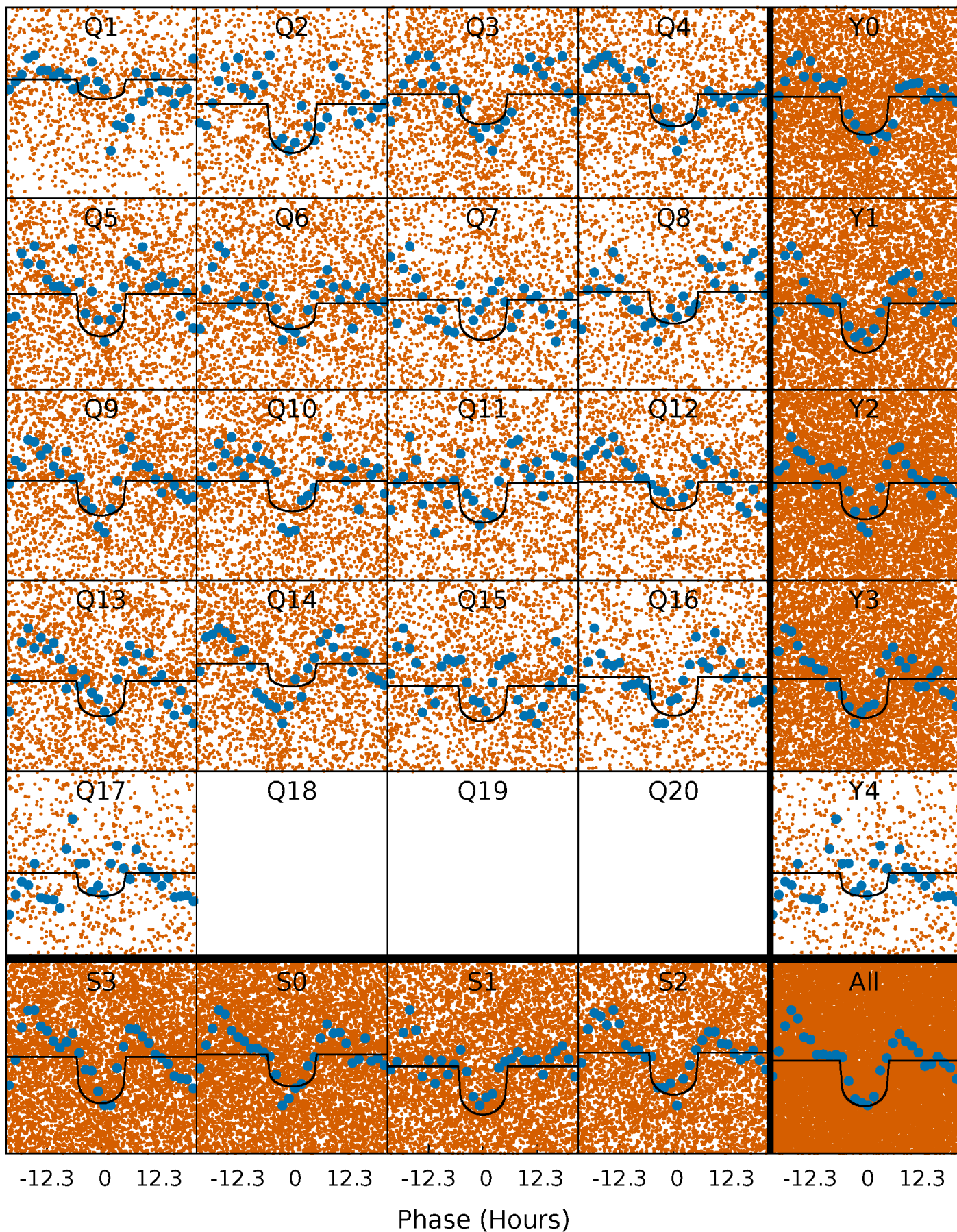
PDC Quarter-Phased Transit Curves

TCE 002714932-01 P= 1.936609 Days $T_0=133.370964$ (BKJD)



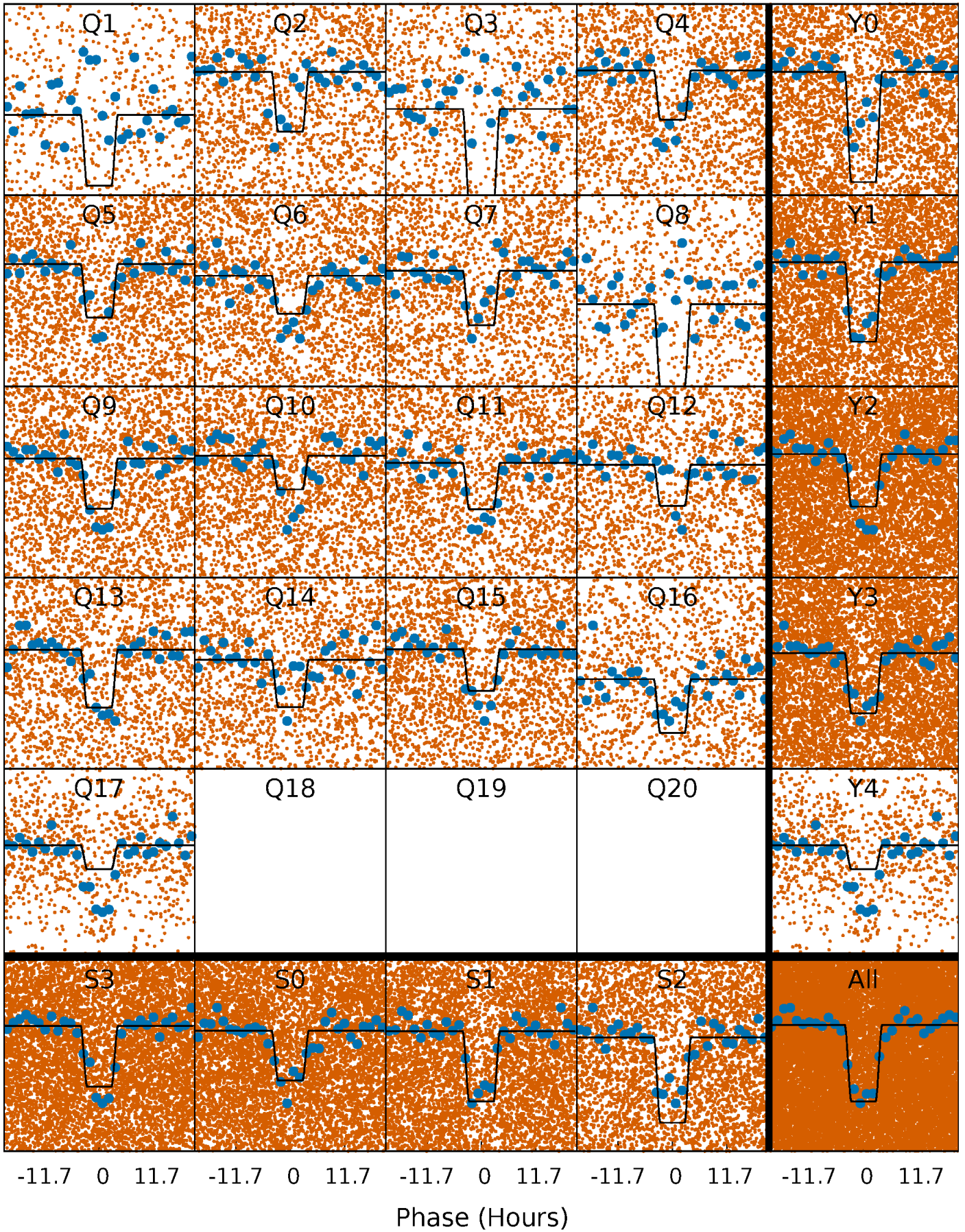
DV Quarter-Phased Transit Curves

TCE 002714932-01 P= 1.936609 Days $T_0=133.370964$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

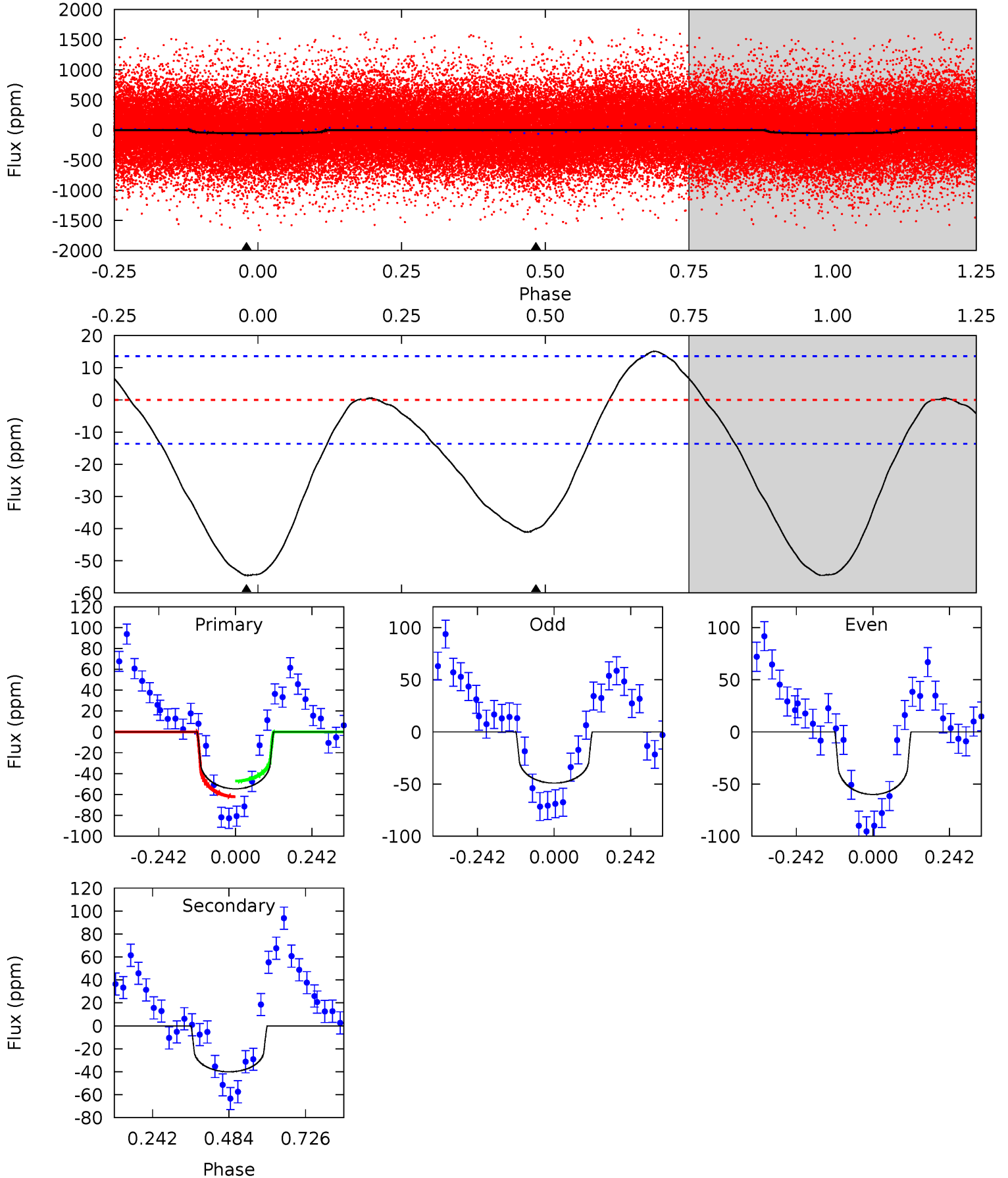
TCE 002714932-01 P= 1.936506 Days $T_0=133.394571$ (BKJD)



DV Model-Shift Uniqueness Test

002714932-01, P = 1.936609 Days, E = 131.434355 Days

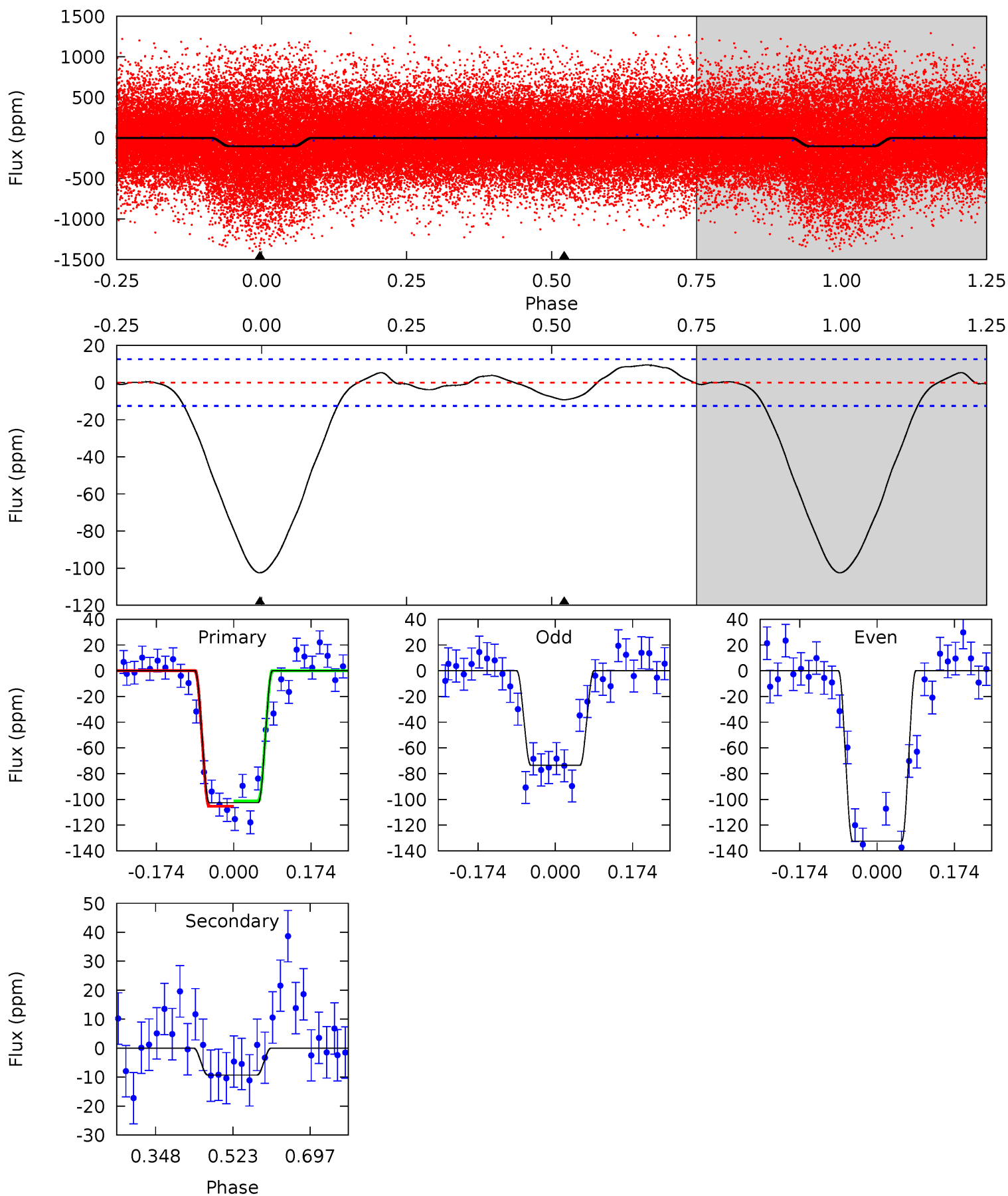
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	12.9	0	0	4.38	1.17	2.06	17.5	17.5	12.9	12.9	1.76	1.47	0.22	2.41



Alt Model-Shift Uniqueness Test

002714932-01, P = 1.936506 Days, E = 131.458065 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.2	3.28	0	0	4.45	1.36	1.01	36.2	36.2	3.28	3.28	10.5	1.00	0.08	0.73



Stellar Parameters For KIC 002714932

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6096^{+189}_{-210}	$4.437^{+0.070}_{-0.210}$	$-0.120^{+0.250}_{-0.350}$	$1.016^{+0.330}_{-0.132}$	$1.026^{+0.153}_{-0.126}$	$1.377^{+0.505}_{-0.707}$
	+3%/-3%	+2%/-5%	+208%/-292%	+32%/-13%	+15%/-12%	+37%/-51%
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 002714932-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-40 ± 3	$1.12^{+0.76}_{-0.67}$	2205^{+174}_{-117}	5038^{+2969}_{-962}	17^{+86}_{-11}
Alt.	-9 ± 3	$1.28^{+0.79}_{-0.69}$	2197^{+173}_{-113}	3554^{+1305}_{-591}	$2.909^{+12.019}_{-1.885}$

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

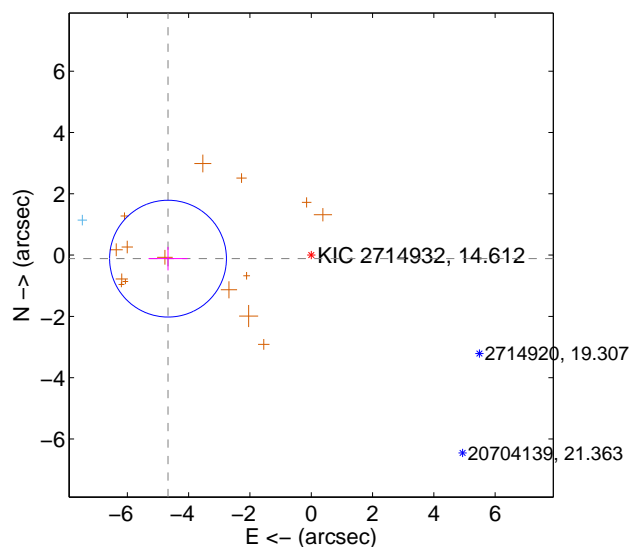
Supplemental centroid analysis for 002714932-01. Kepler magnitude: 14.61. Transit SNR 12.08

There are 1 quarters with good PRF difference image offsets

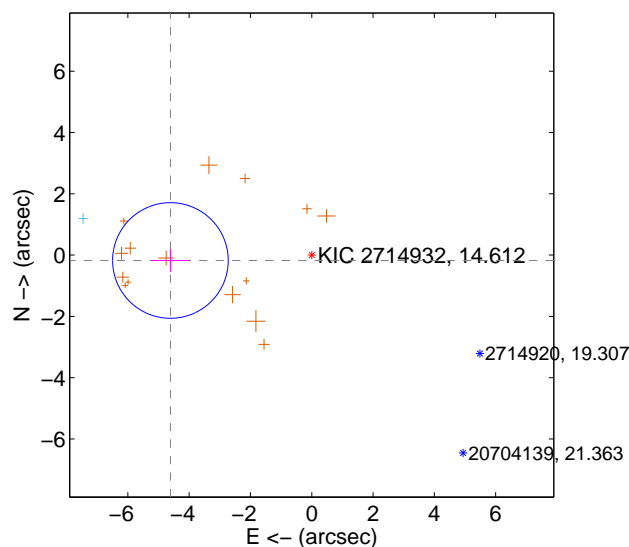
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.675 ± 0.635	7.36	4.674 ± 0.635	-0.116 ± 0.383
PRF-fit source offset from KIC position	4.615 ± 0.629	7.34	4.612 ± 0.629	-0.176 ± 0.373
photometric centroid source offset	1.23 ± 0.52	2.37	1.23 ± 0.52	-0.01 ± 0.50

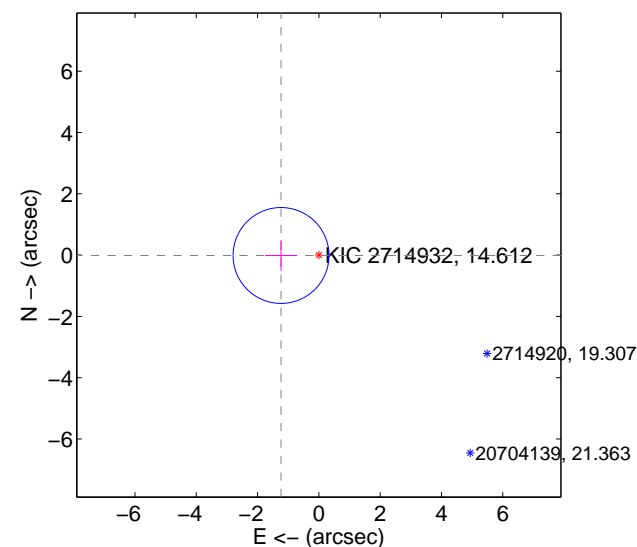
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

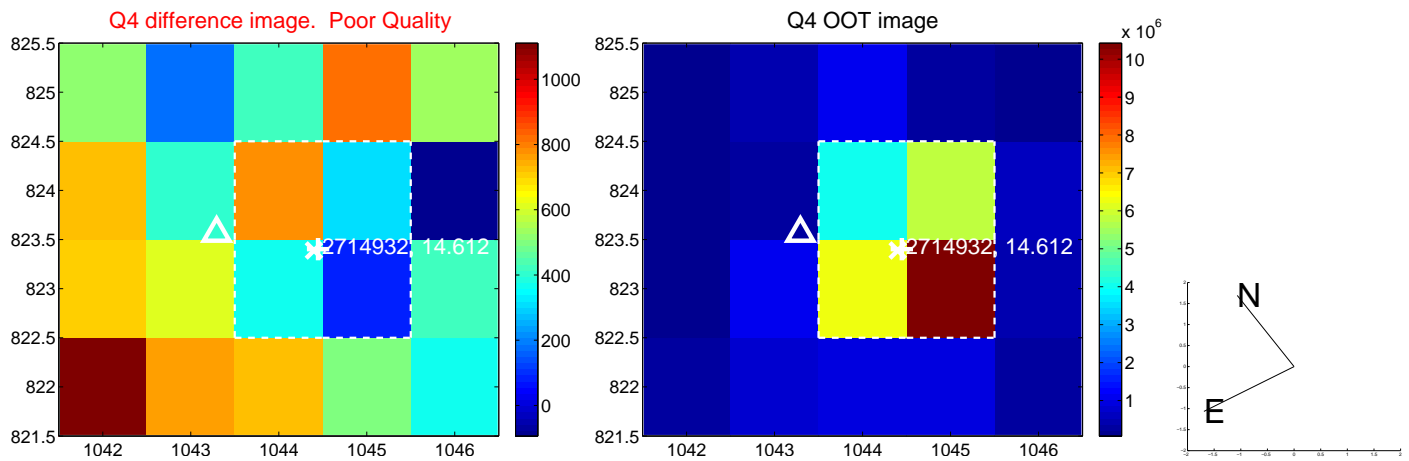
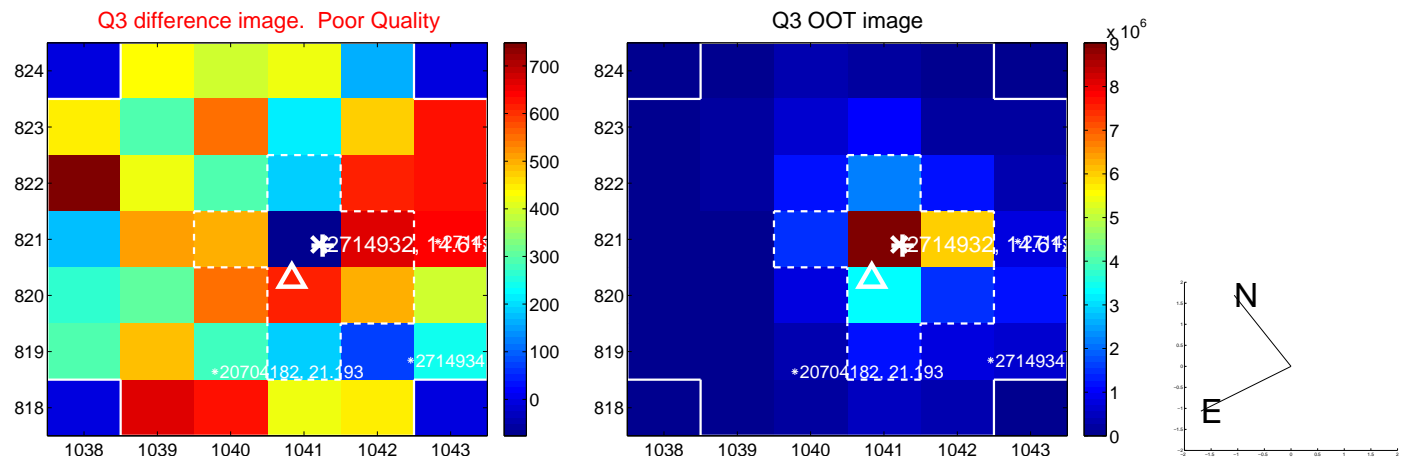
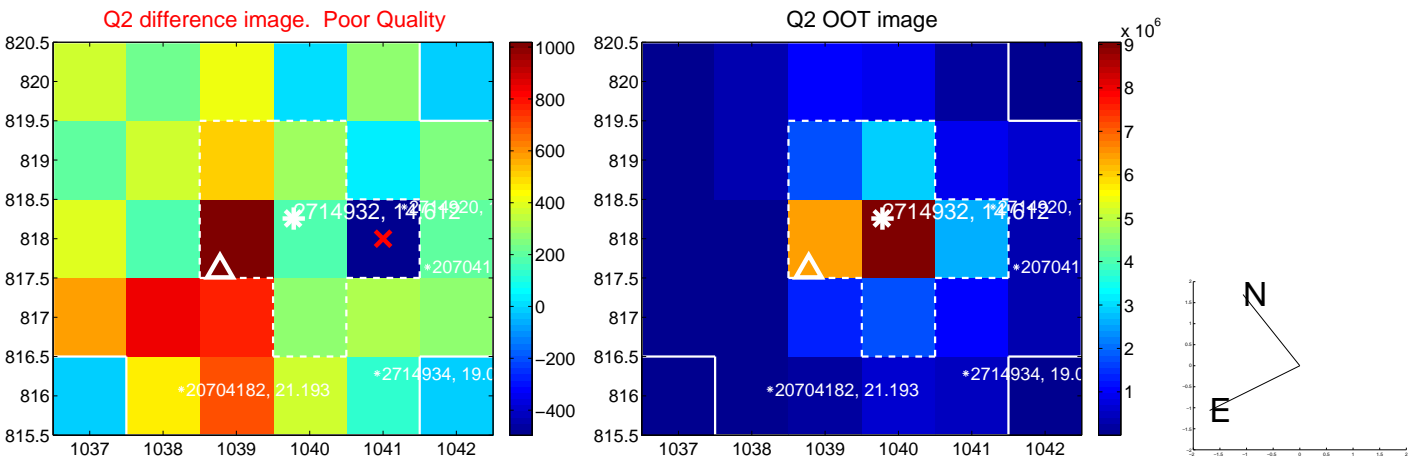
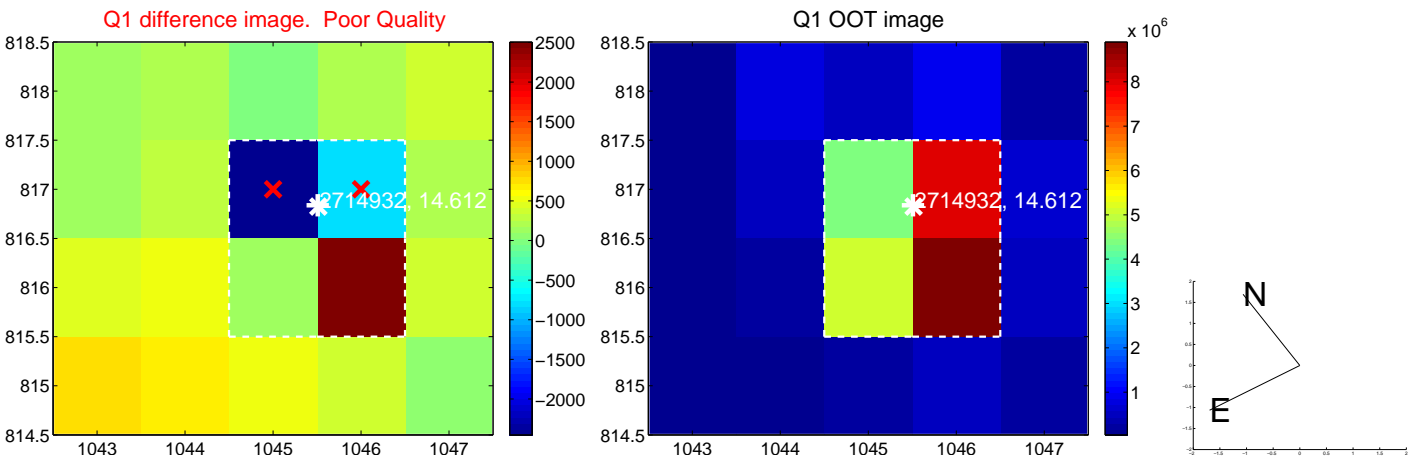


offset from photometric centroids

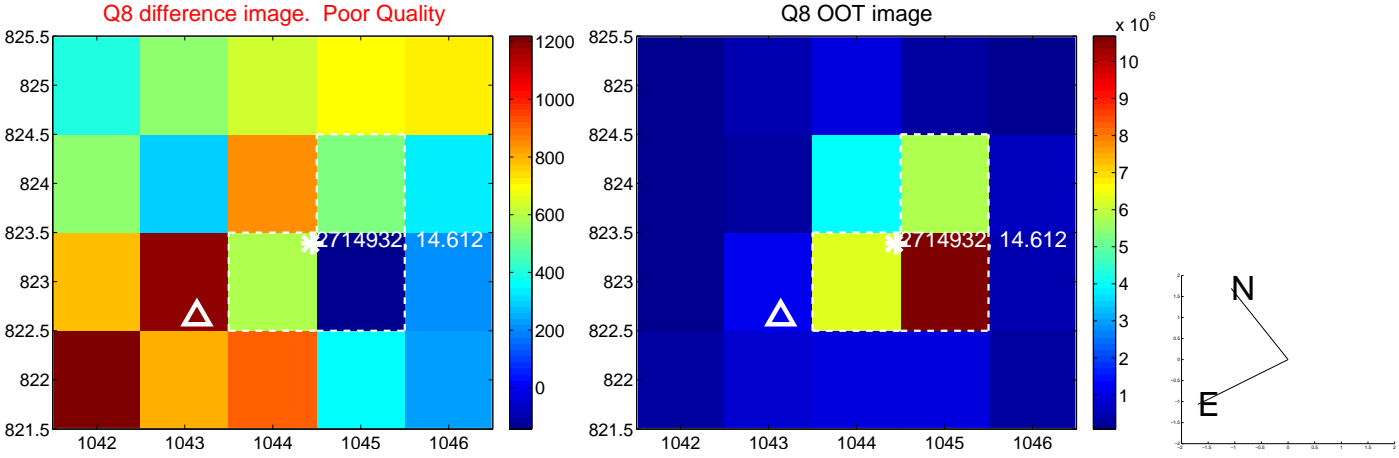
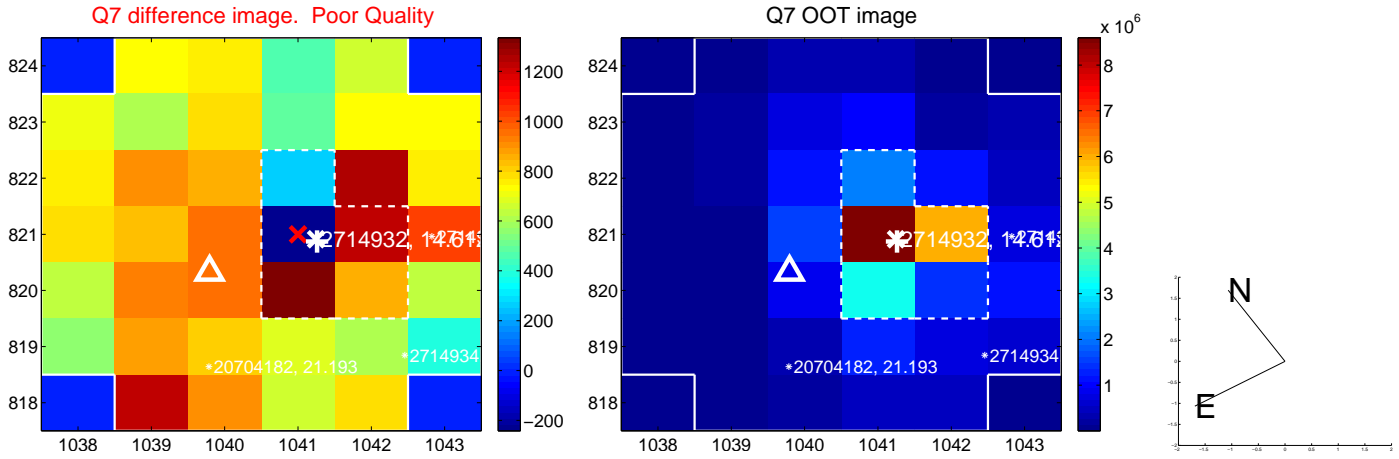
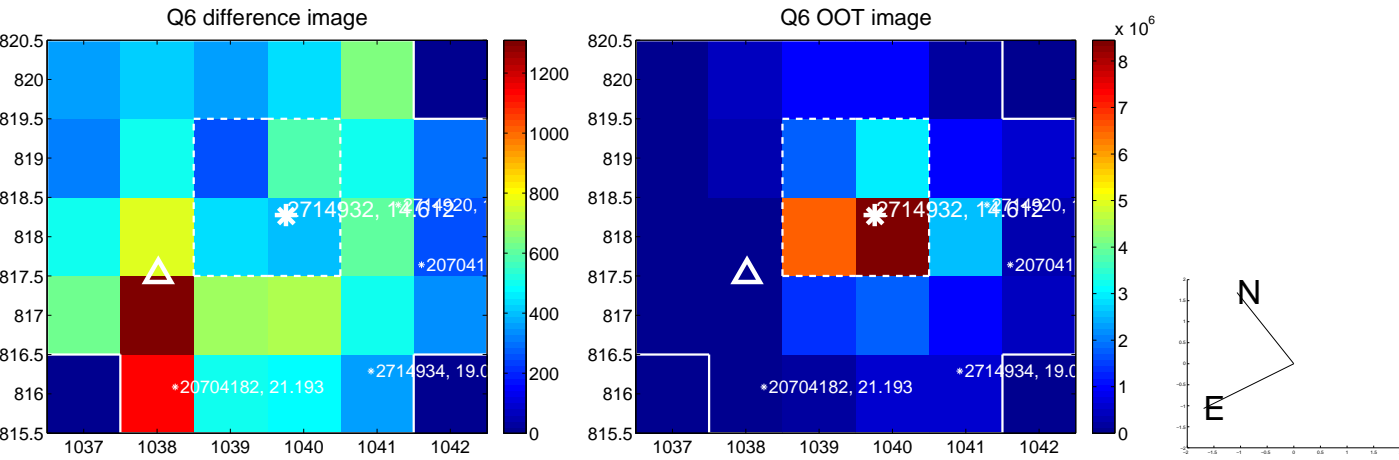
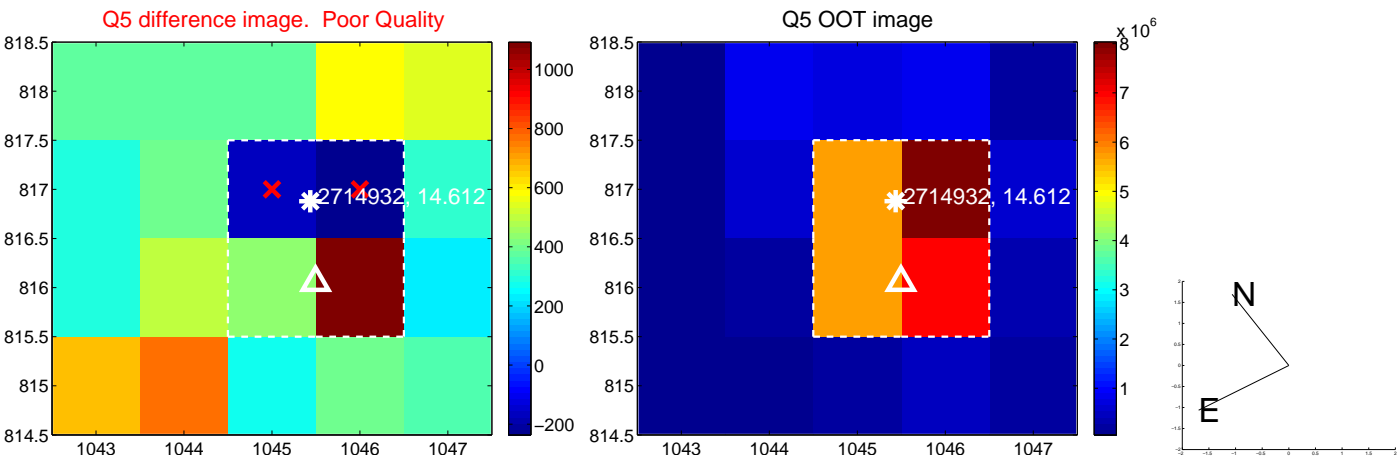


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

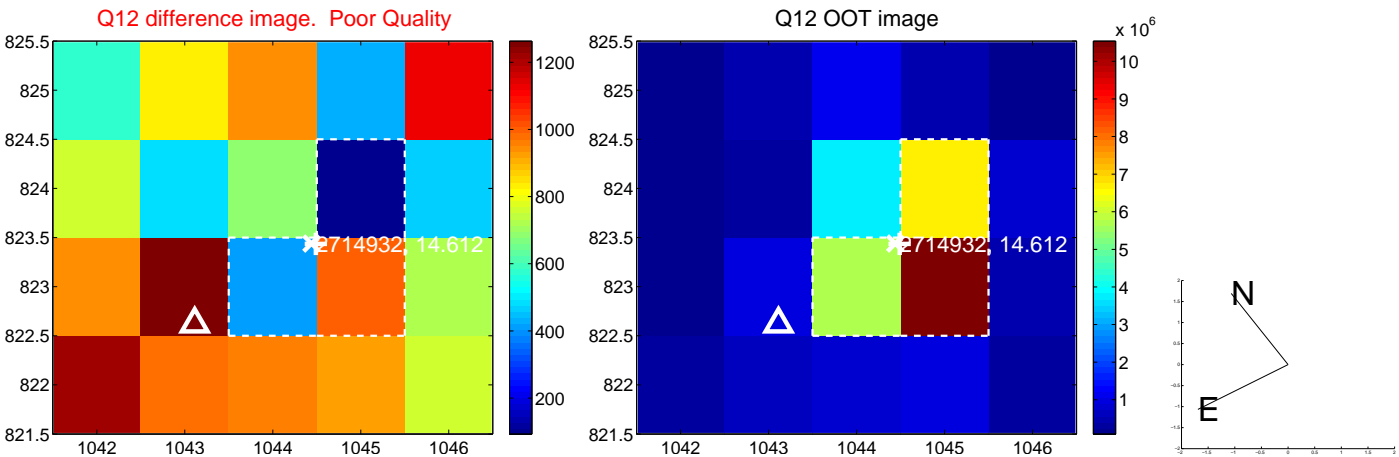
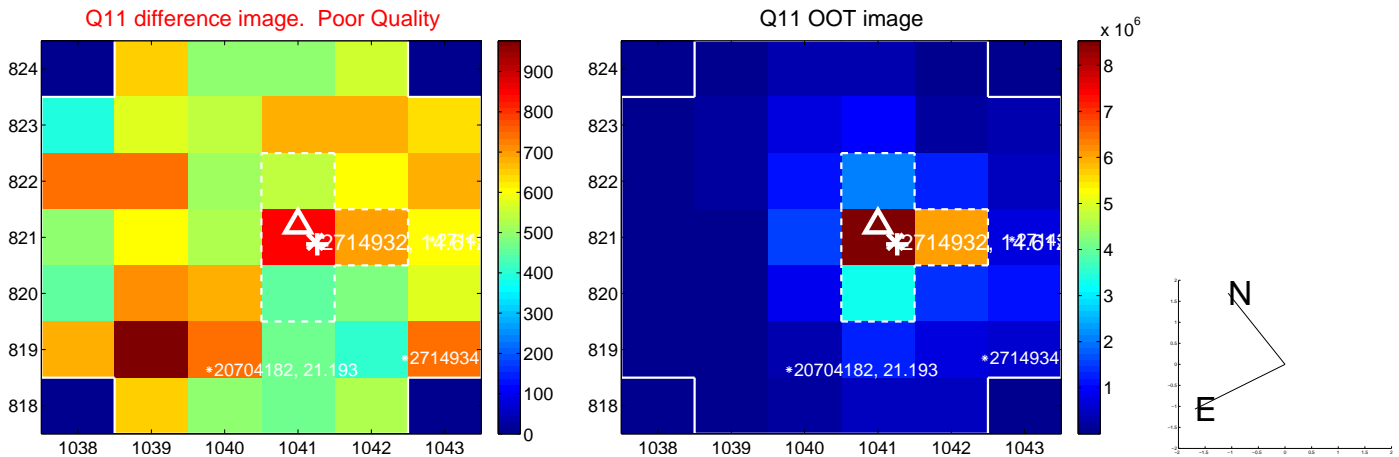
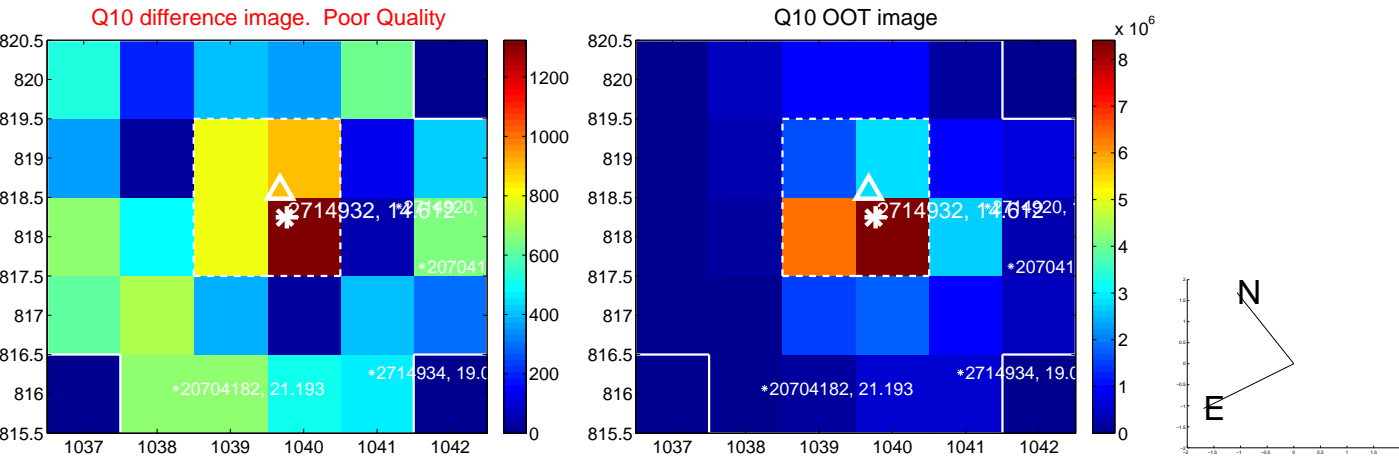
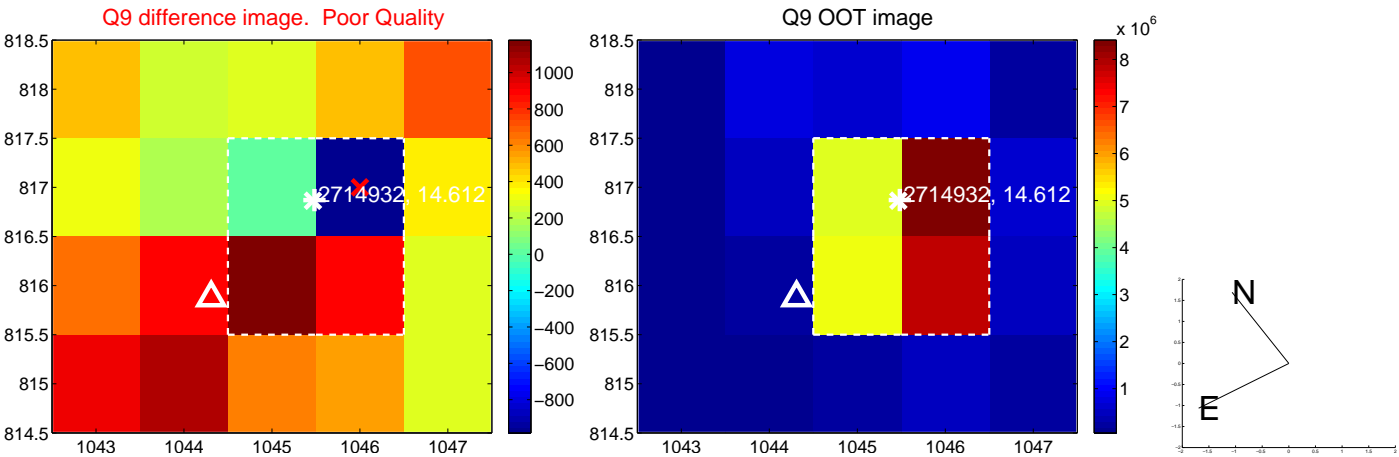
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



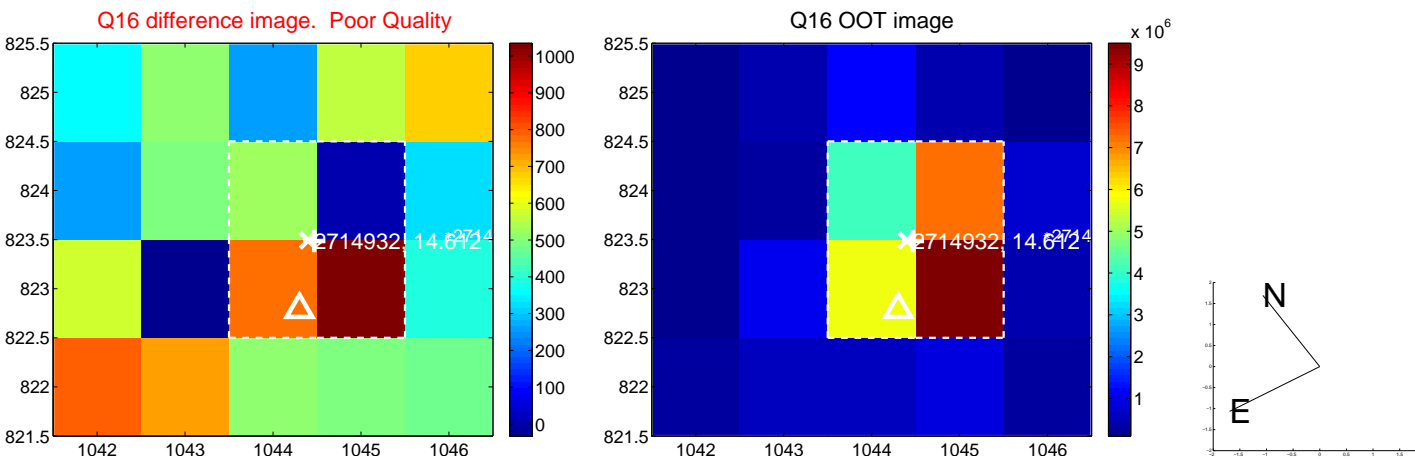
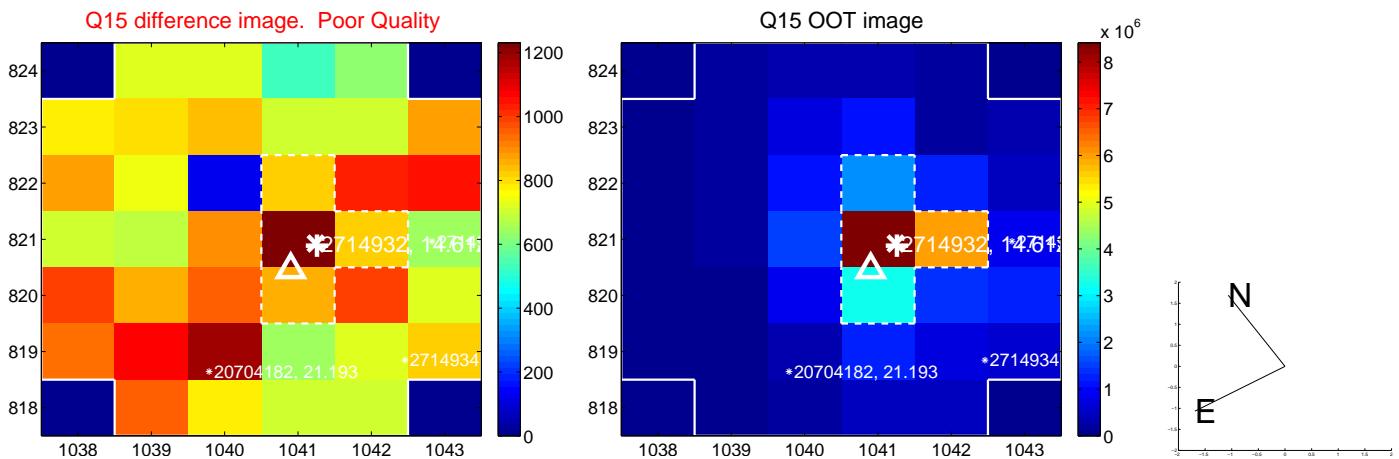
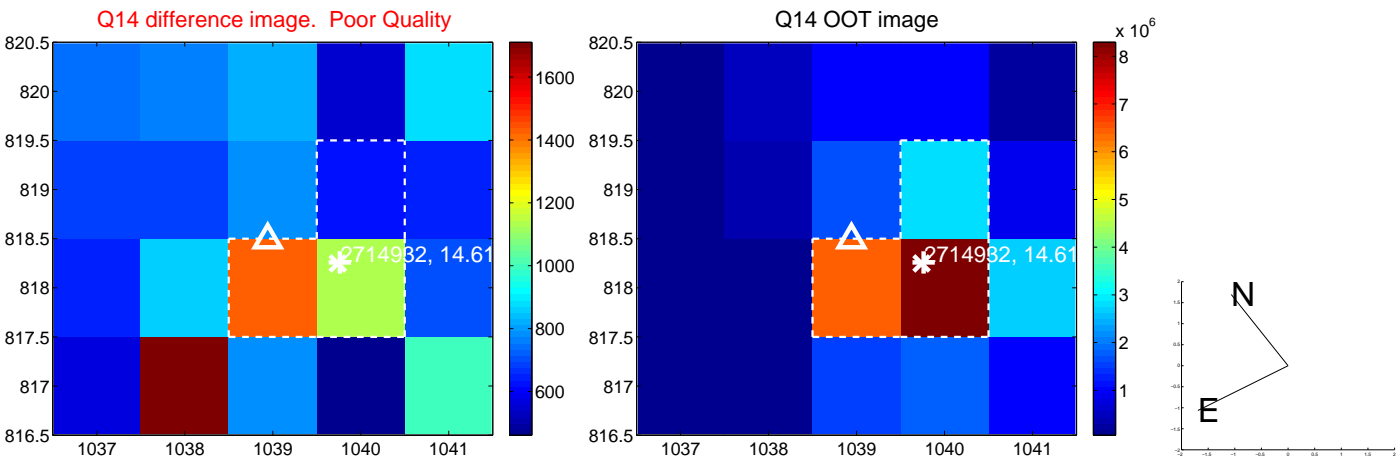
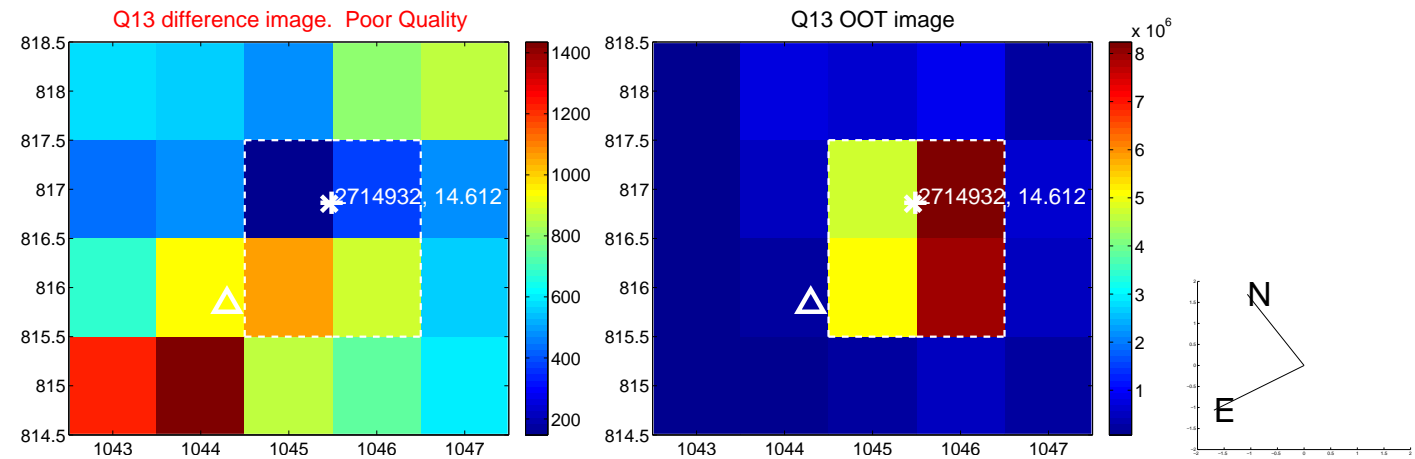
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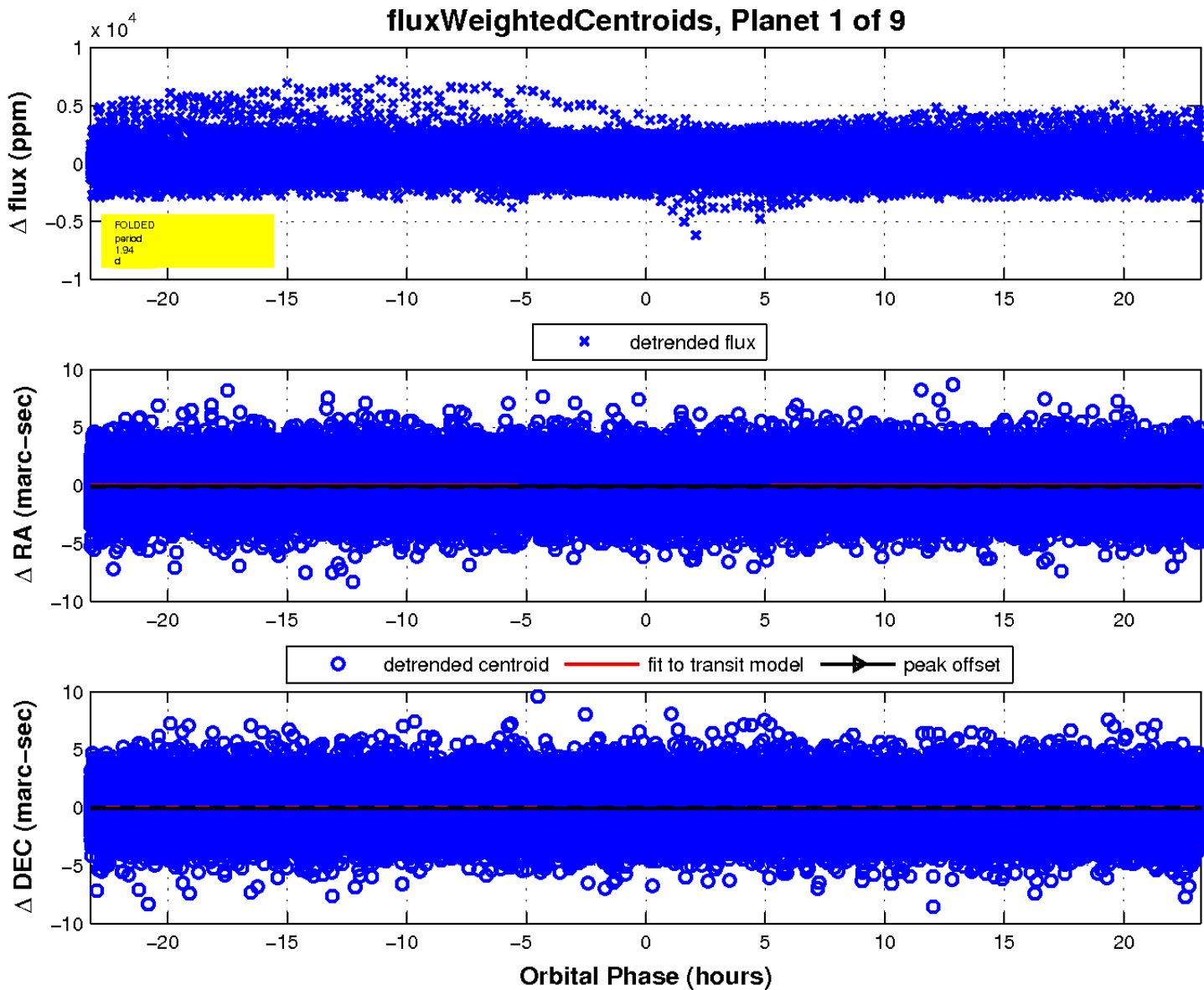
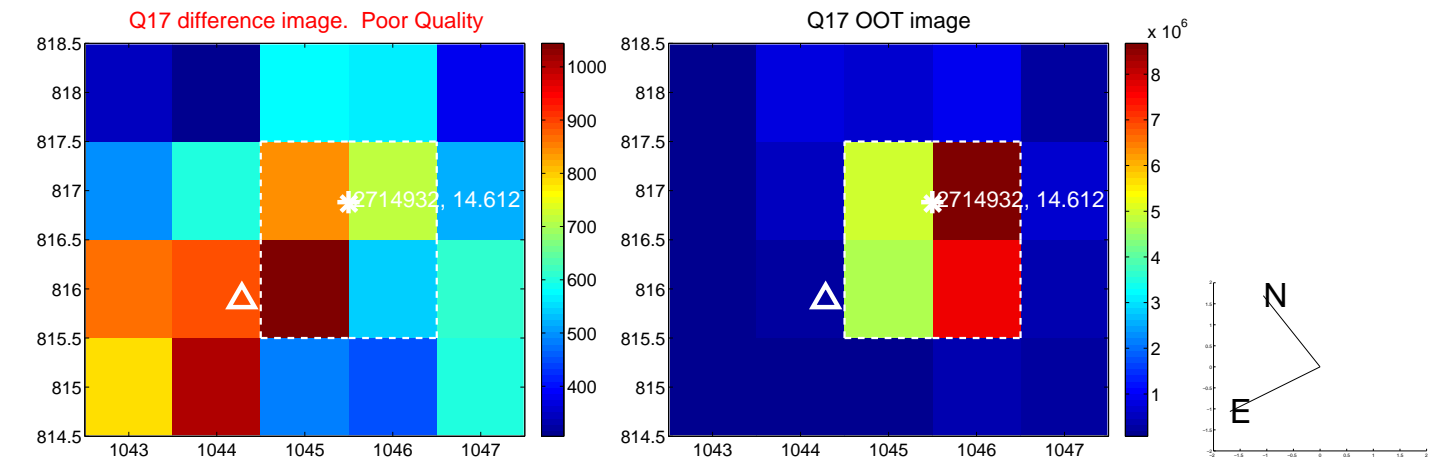
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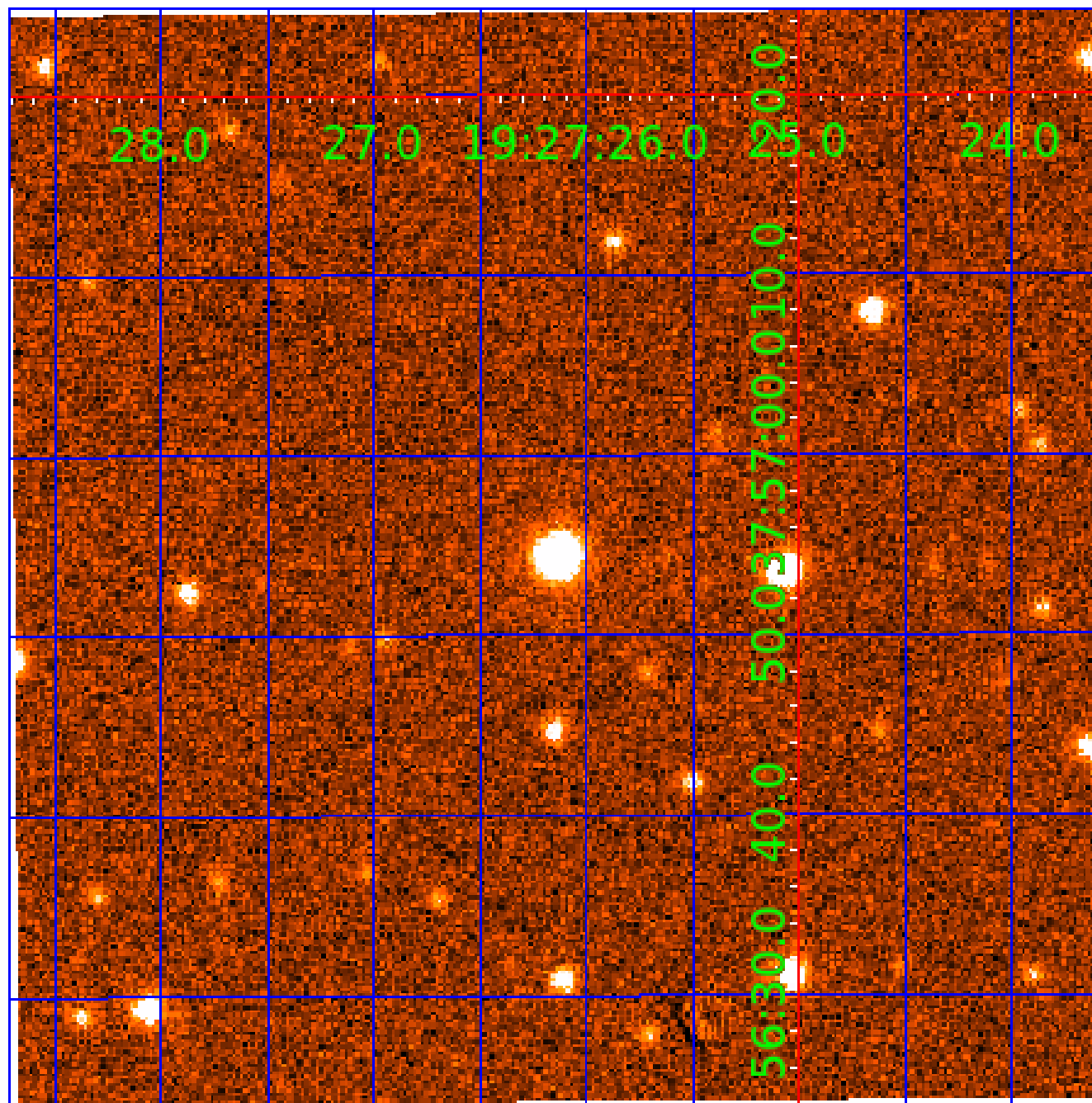


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UKIRT Image

Declination



KIC 002714932

Q1-17 DR25 TCE Parameters

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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002714932-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
002714932-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
002714932-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
002714932-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— INCONSISTENT_TRANS
002714932-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS
002714932-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
002714932-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
002714932-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
002714932-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS

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

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

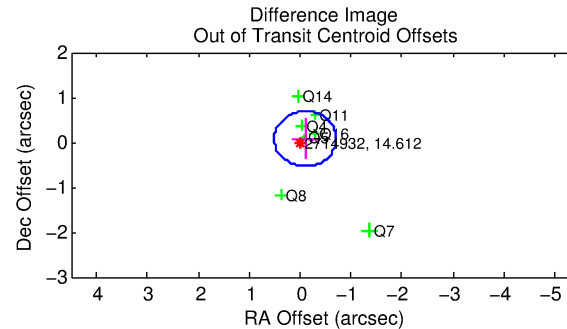
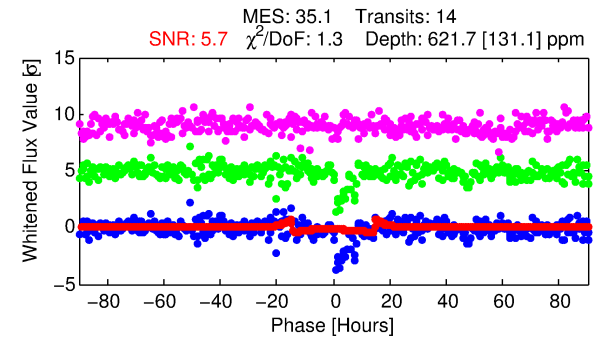
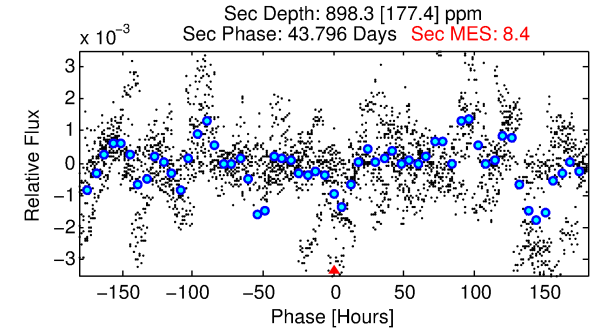
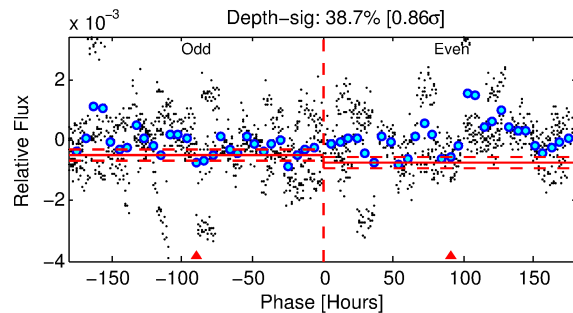
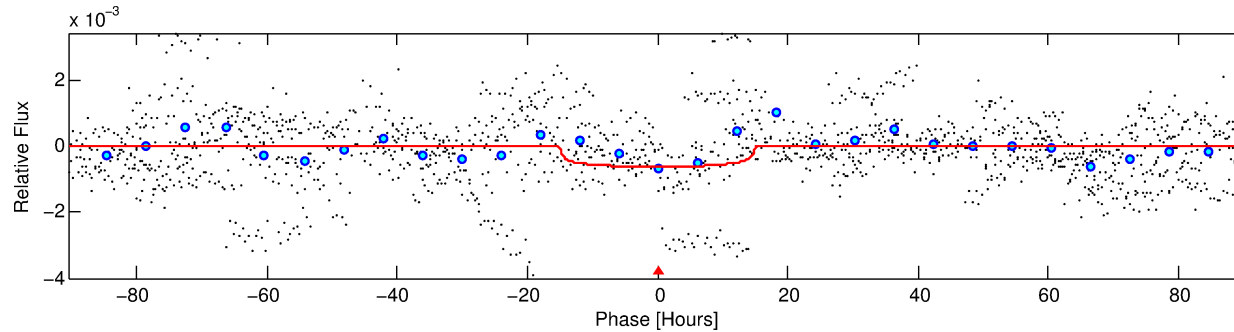
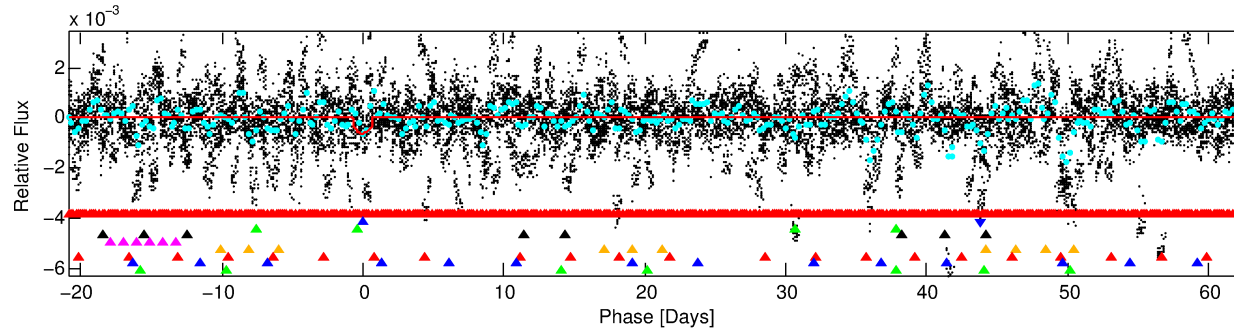
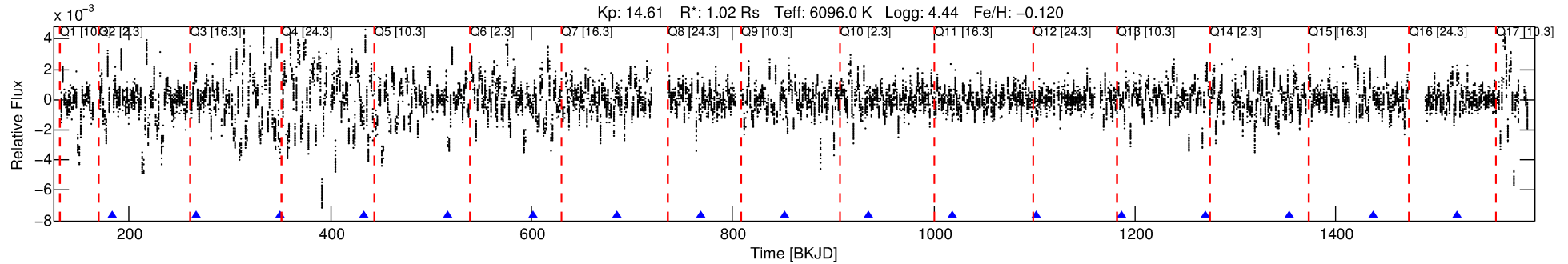
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002714932-02

No Significant Match Found

DV One-Page Summary

KIC: 2714932 Candidate: 2 of 9 Period: 83.587 d



DV Fit Results:

Period = 83.58655 [0.00239] d
Epoch = 183.1226 [0.0238] BKJD
Rp/R* = 0.0228 [0.0061]
a/R* = 21.63 [25.05]
b = 0.02 [49.54]
Seff = 8.94 [3.69]
Teq = 441 [45] K
Rp = 2.53 [1.07] Re
a = 0.3779 [0.1020] AU
Ag = 11048.61 [7643.83] [1.45 σ]
Teffp = 6990 [1029] K [6.36 σ]

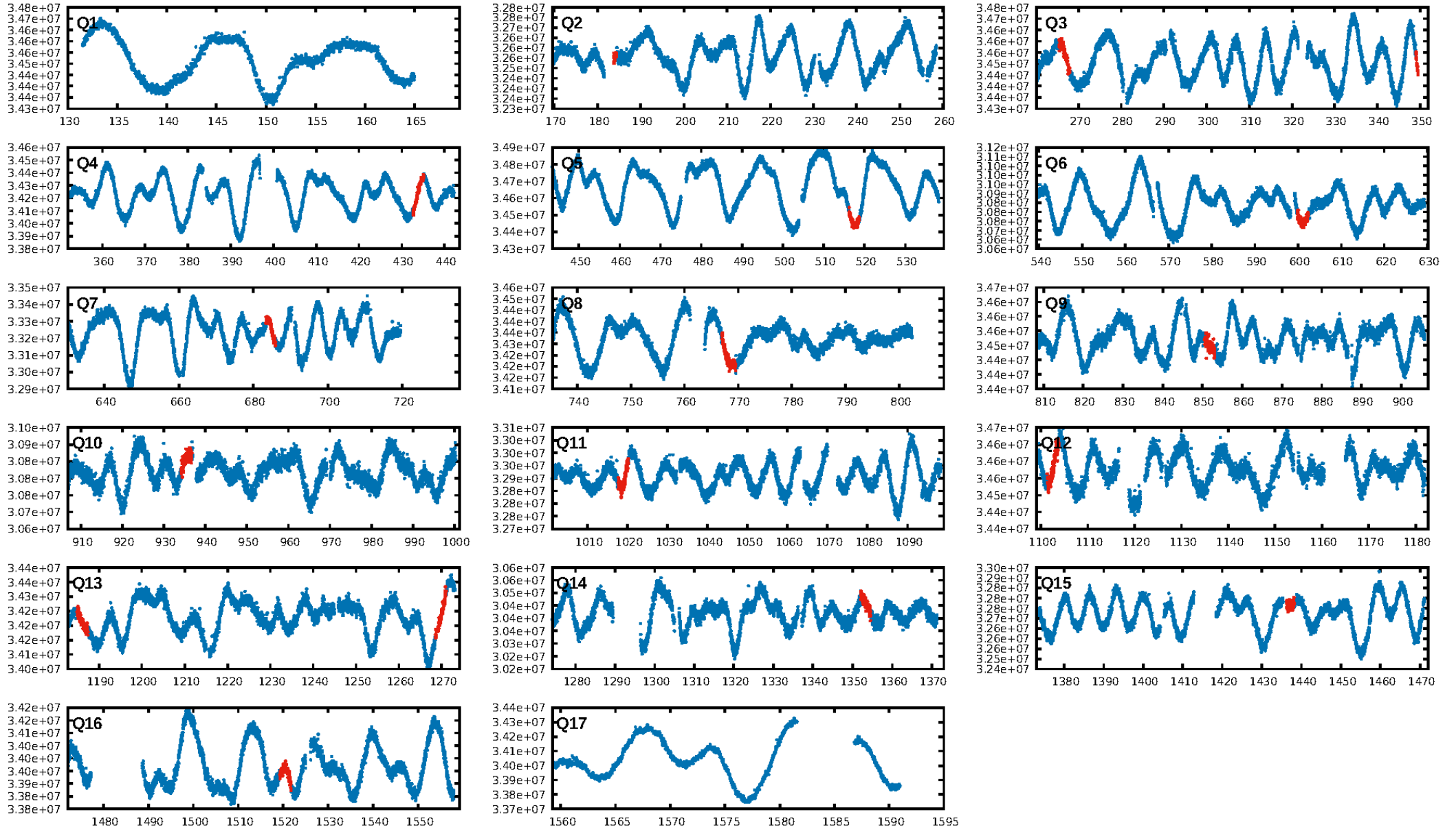
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [12.58 σ]
LongPeriod-sig: 100.0% [12.31 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.29e-119
RollingBand-fgt: 1.00 [14/14]
GhostDiagnostic-chr: 0.2322
Centroid-sig: 11.3%
Centroid-so: 0.312 arcsec [1.04 σ]
OotOffset-rm: 0.124 arcsec [0.61 σ]
OotOffset-st: 1/2/3/1 [7]
KicOffset-rm: 0.193 arcsec [0.69 σ]
KicOffset-st: 1/2/3/1 [7]
DiffImageQuality-fgm: 0.43 [3/7]
DiffImageOverlap-fno: 0.00 [0/8]

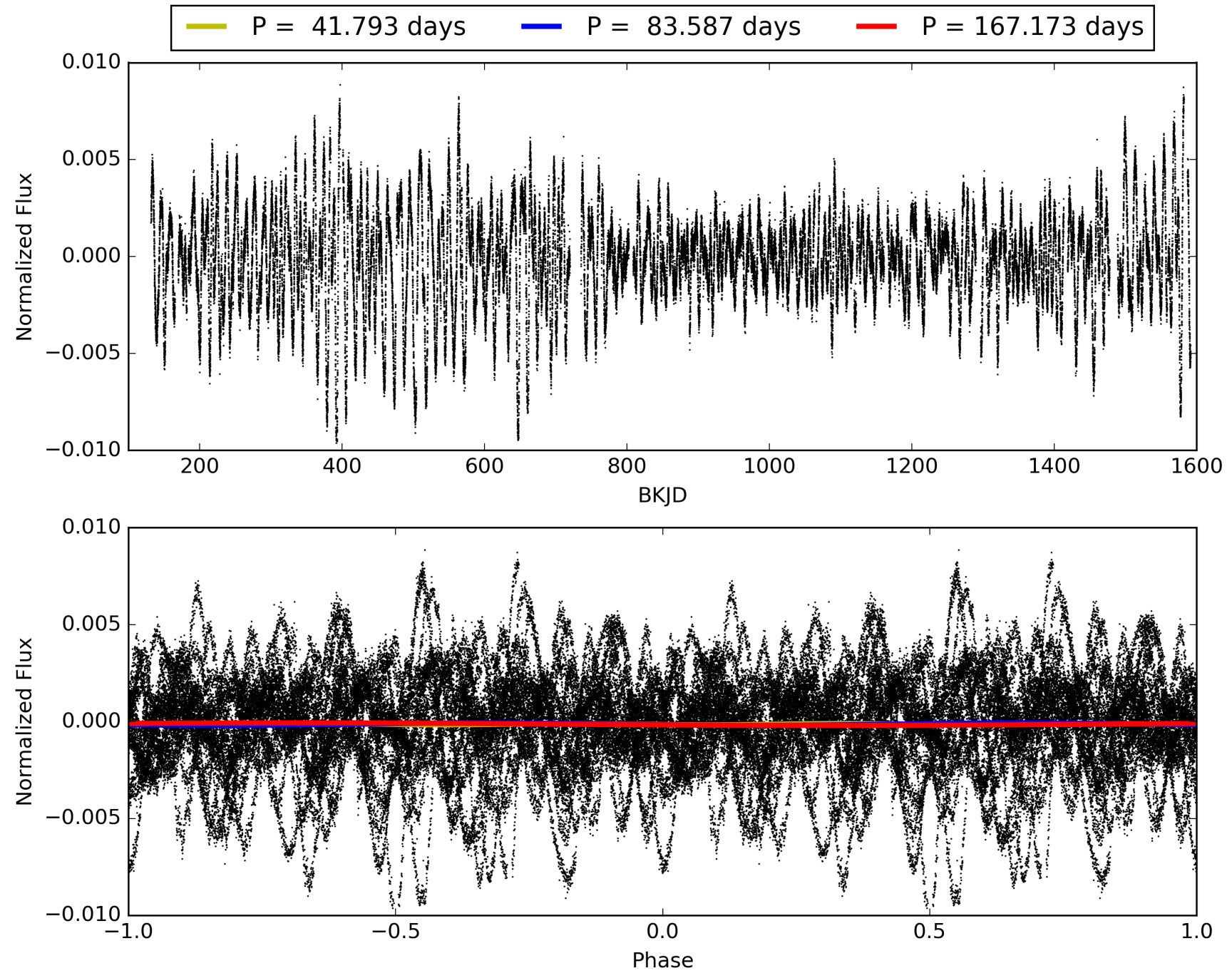
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:28:51 Z

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

TCE 002714932-02, PDC Light Curves

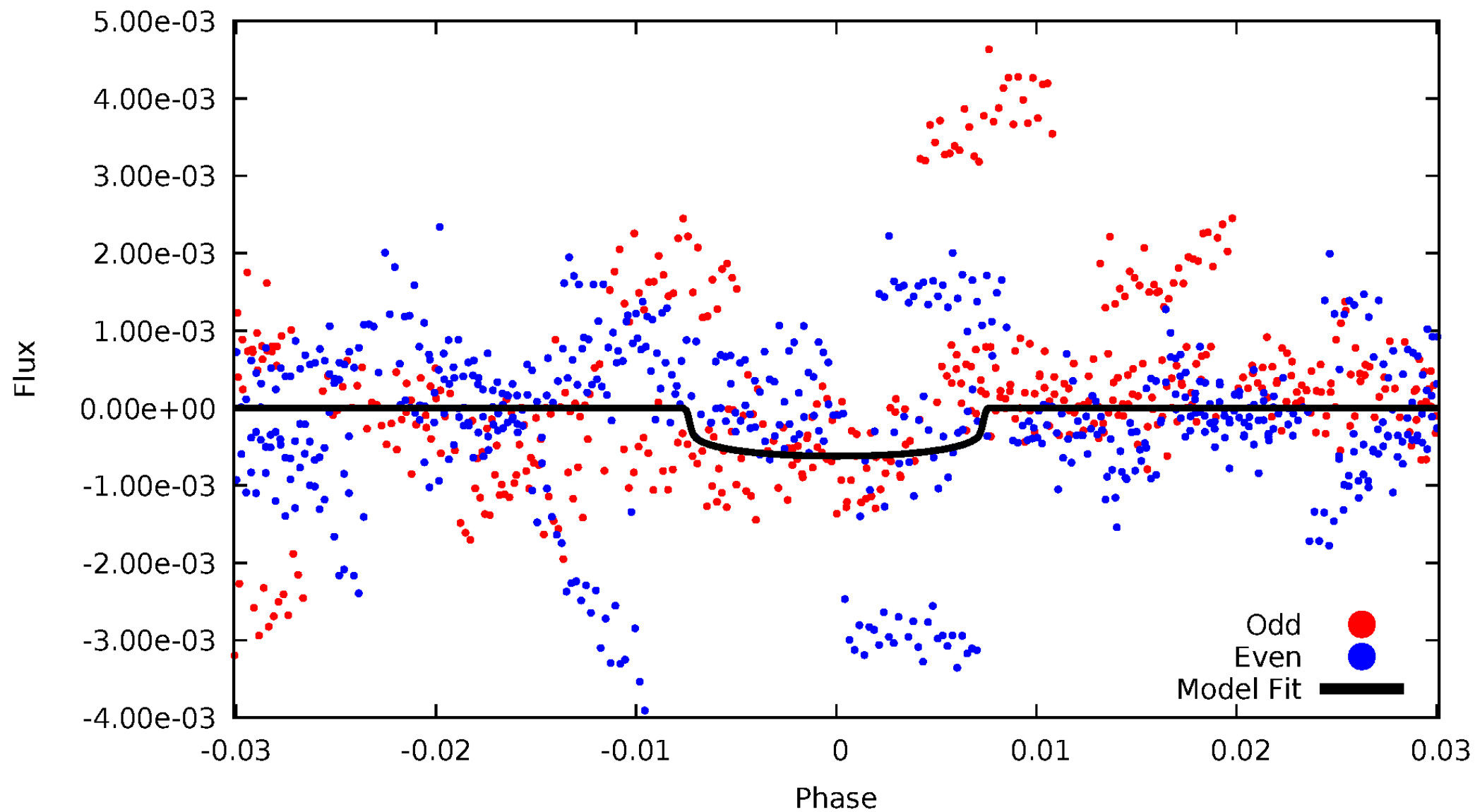


TCE 002714932-02



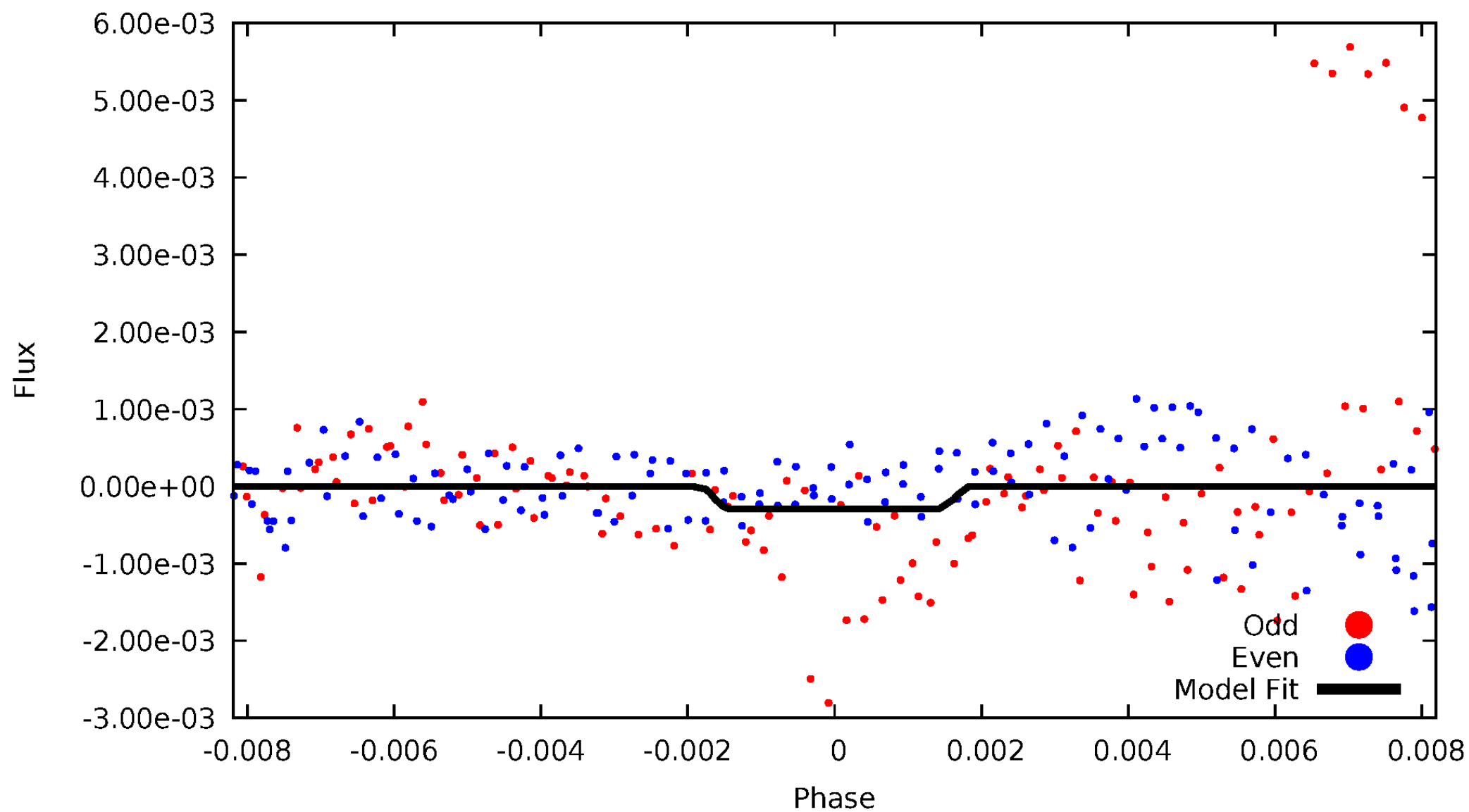
DV Odd/Even

TCE 002714932-02



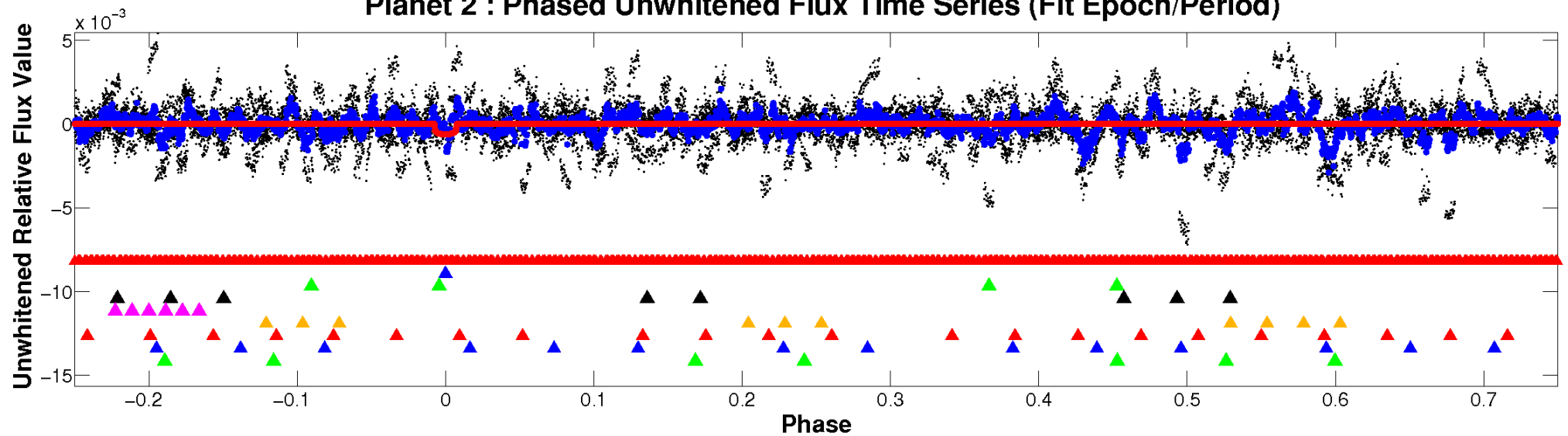
ALT Odd/Even

TCE 002714932-02

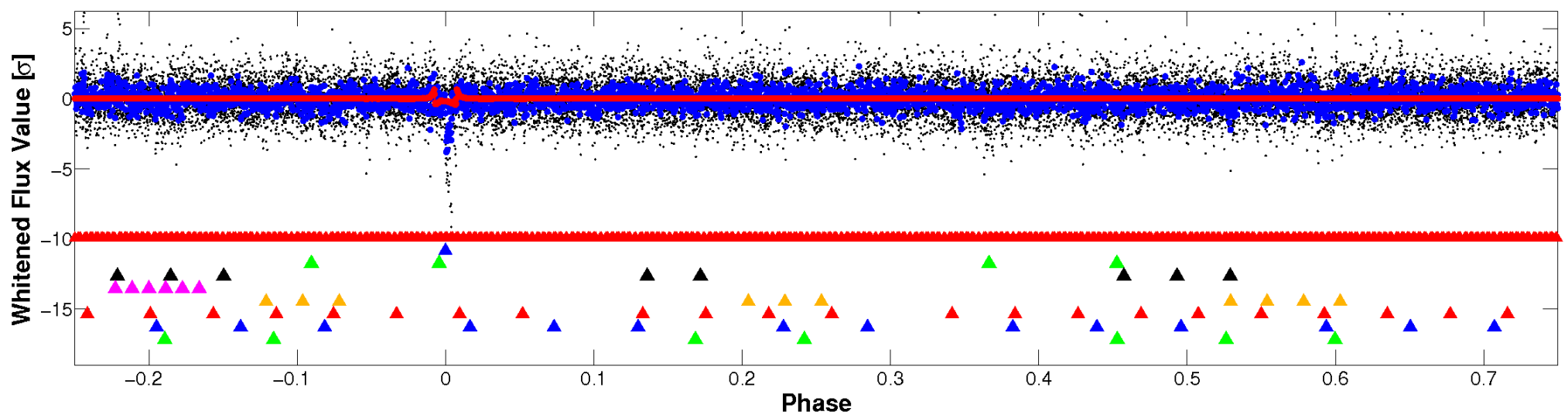


Non-Whitened Vs. Whitened Light Curve

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

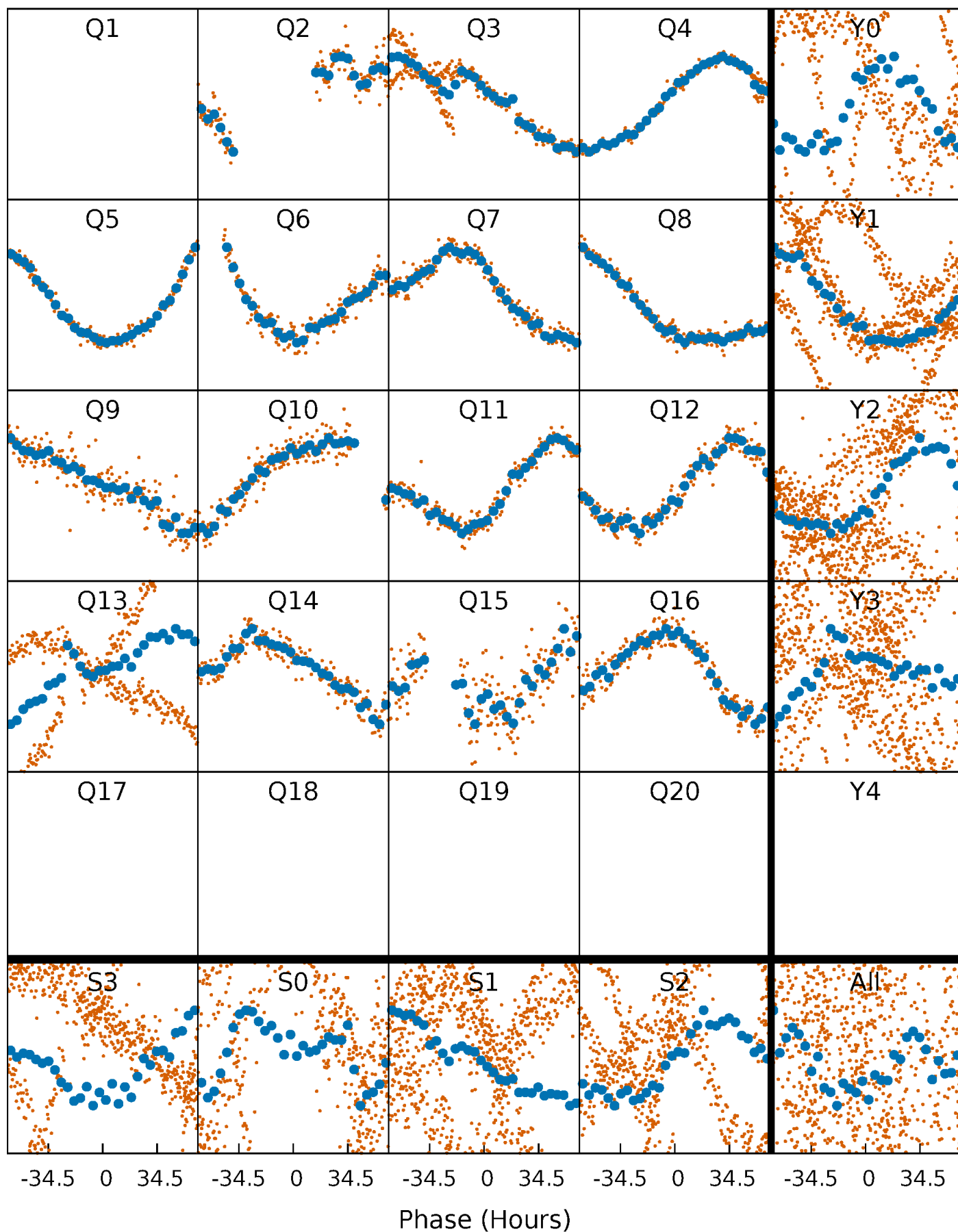


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



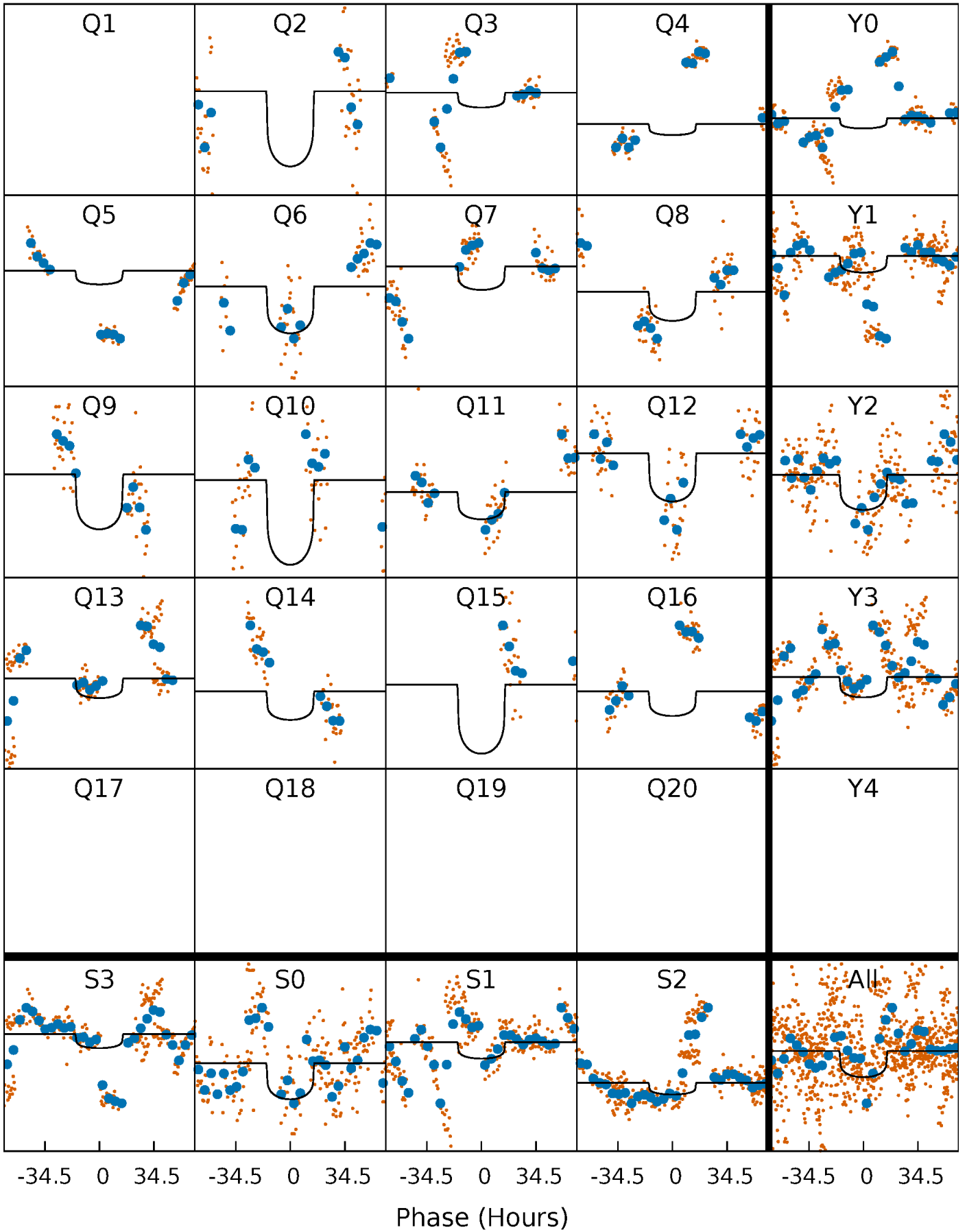
PDC Quarter-Phased Transit Curves

TCE 002714932-02 P= 83.586553 Days $T_0=183.122566$ (BKJD)



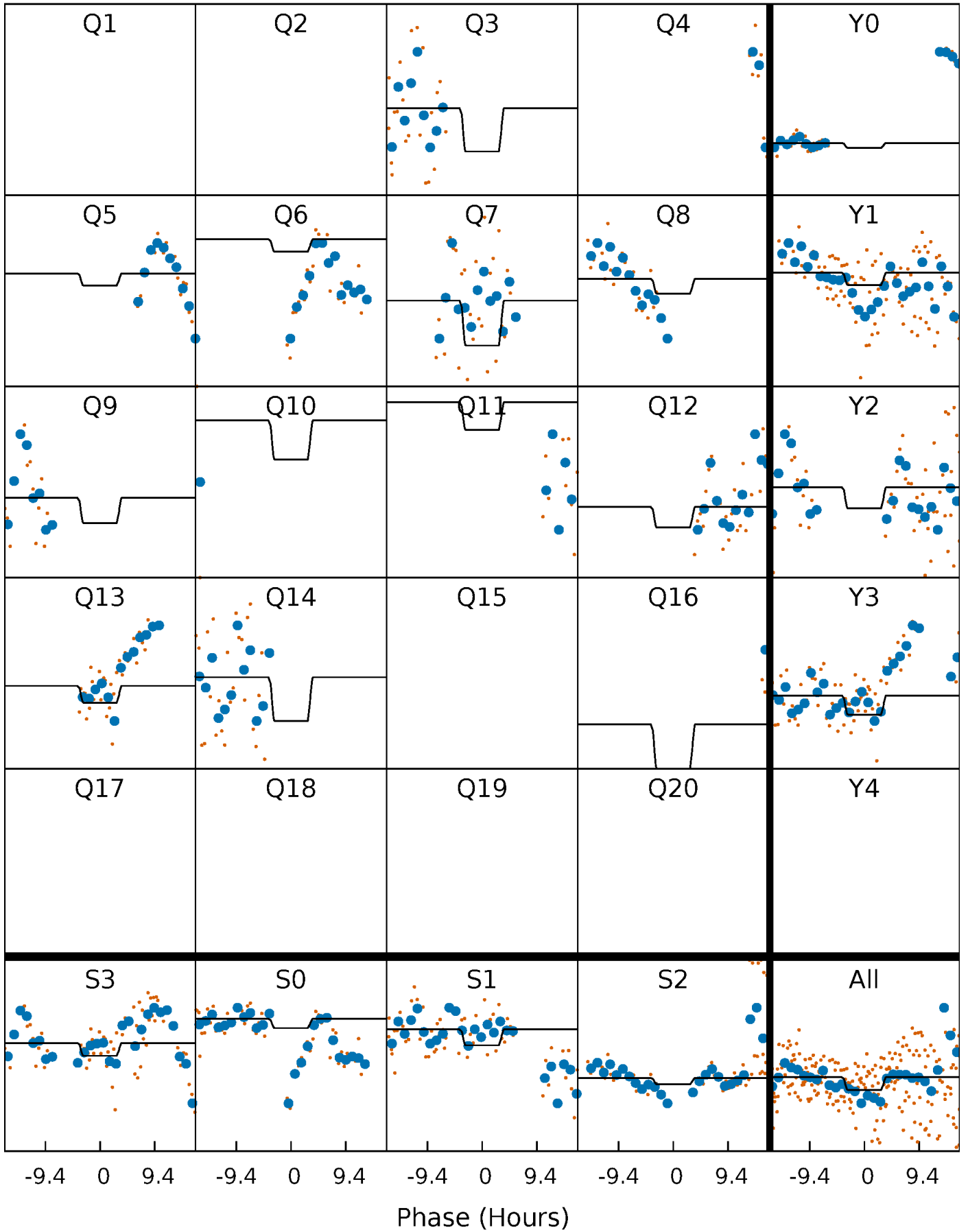
DV Quarter-Phased Transit Curves

TCE 002714932-02 P= 83.586553 Days $T_0=183.122566$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

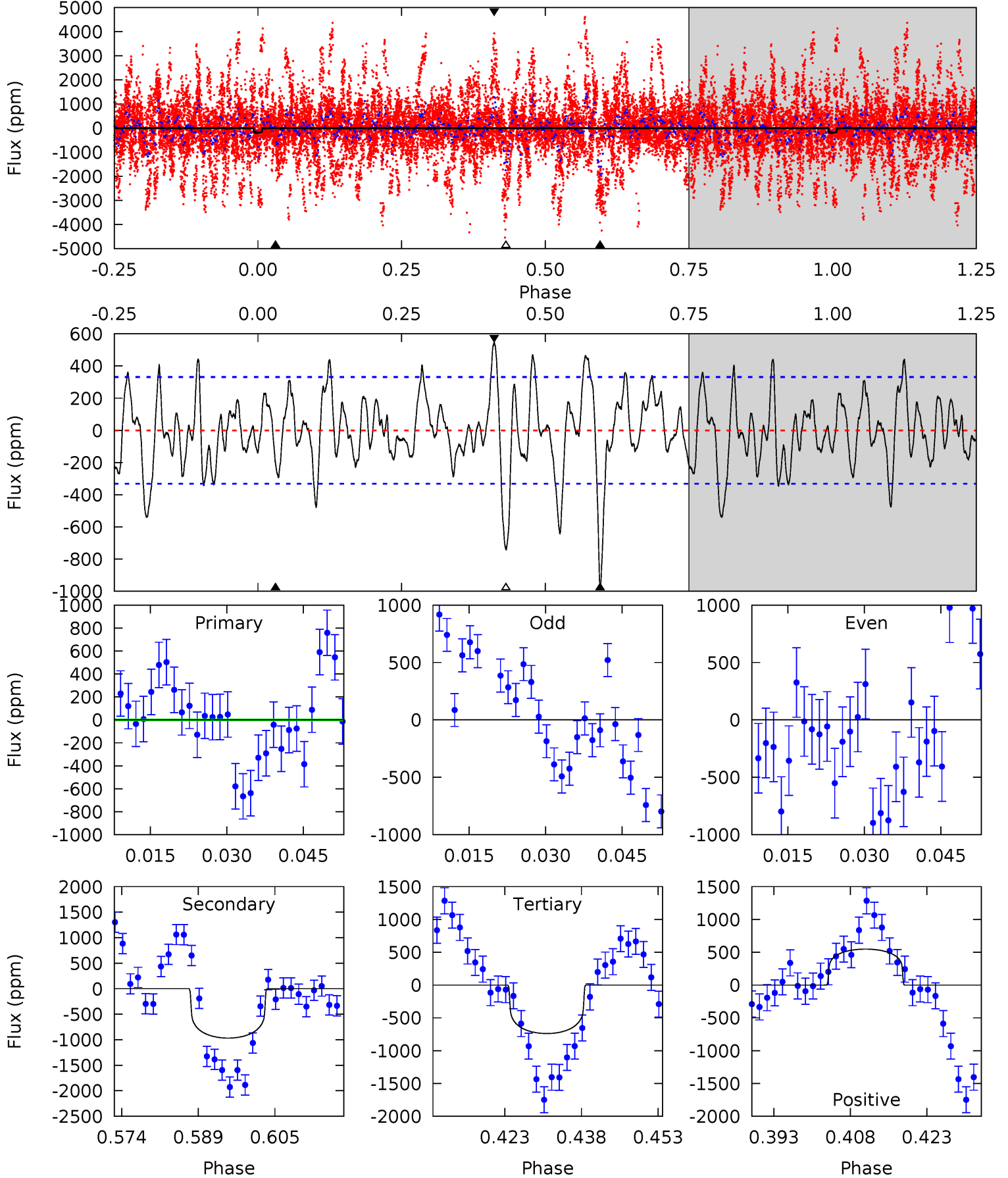
TCE 002714932-02 P= 83.566449 Days $T_0=182.987740$ (BKJD)



DV Model-Shift Uniqueness Test

002714932-02, P = 83.586553 Days, E = 99.536013 Days

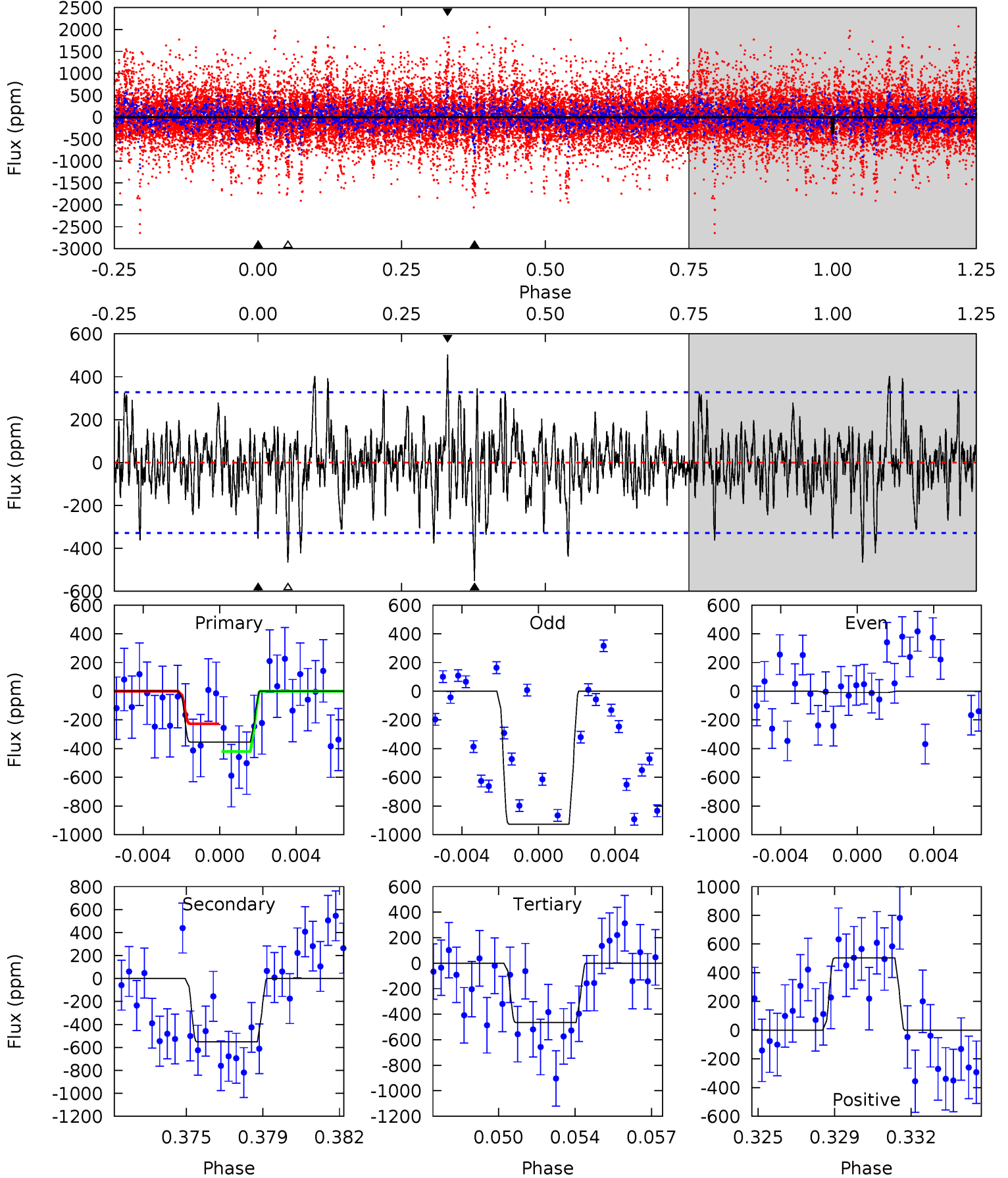
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.00	14.4	11.0	8.16	4.95	2.43	3.10	-8.01	-5.16	3.41	6.26	2.67	8.11	0.36	1.01



Alt Model-Shift Uniqueness Test

002714932-02, P = 83.566449 Days, E = 99.421291 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.64	8.78	7.40	8.01	5.22	2.91	1.87	-1.77	-2.37	1.38	0.77	6.72	1.43	0.48	1.55



Stellar Parameters For KIC 002714932

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6096^{+189}_{-210}	$4.437^{+0.070}_{-0.210}$	$-0.120^{+0.250}_{-0.350}$	$1.016^{+0.330}_{-0.132}$	$1.026^{+0.153}_{-0.126}$	$1.377^{+0.505}_{-0.707}$
	+3%/-3%	+2%/-5%	+208%/-292%	+32%/-13%	+15%/-12%	+37%/-51%
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 002714932-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-968 ± 67	$2.61^{+0.87}_{-0.77}$	626^{+47}_{-34}	7259^{+1598}_{-968}	11099^{+11298}_{-4826}
Alt.	-552 ± 63	$1.96^{+0.83}_{-0.67}$	625^{+51}_{-31}	7152^{+2067}_{-1108}	10867^{+14351}_{-5441}

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 $A_{obs} \gg 1.0$

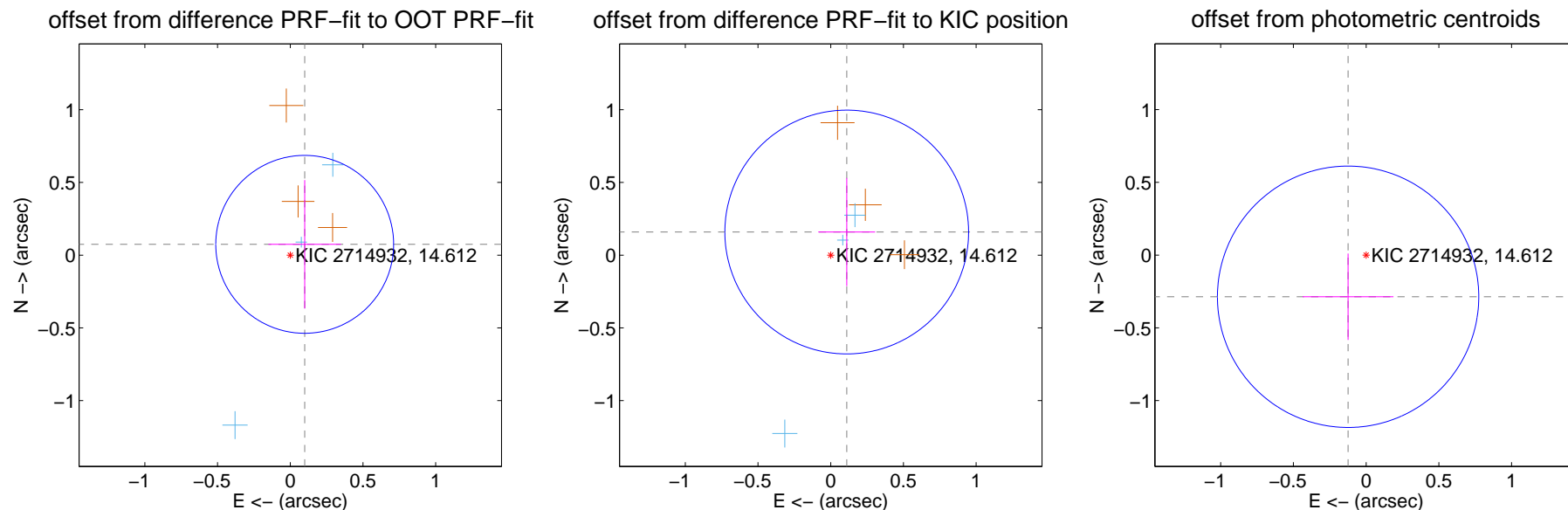
DV Centroid Data

Supplemental centroid analysis for 002714932-02. Kepler magnitude: 14.61. Transit SNR 5.75

There are 3 quarters with good PRF difference image offsets

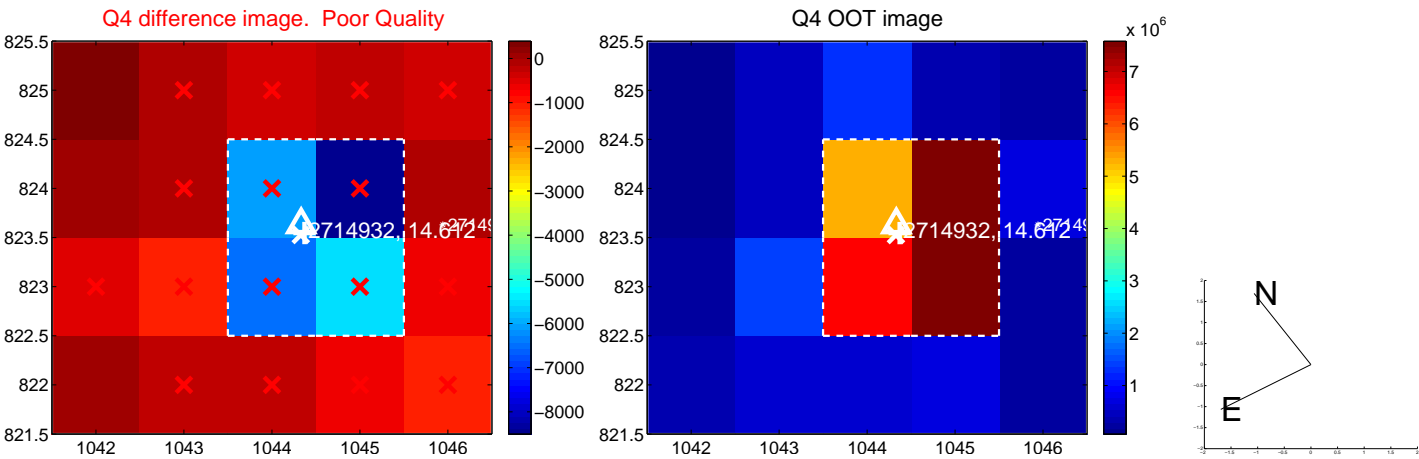
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.124 ± 0.204	0.61	-0.099 ± 0.249	0.074 ± 0.442
PRF-fit source offset from KIC position	0.193 ± 0.279	0.69	-0.110 ± 0.196	0.159 ± 0.372
photometric centroid source offset	0.31 ± 0.30	1.04	0.12 ± 0.31	-0.29 ± 0.30

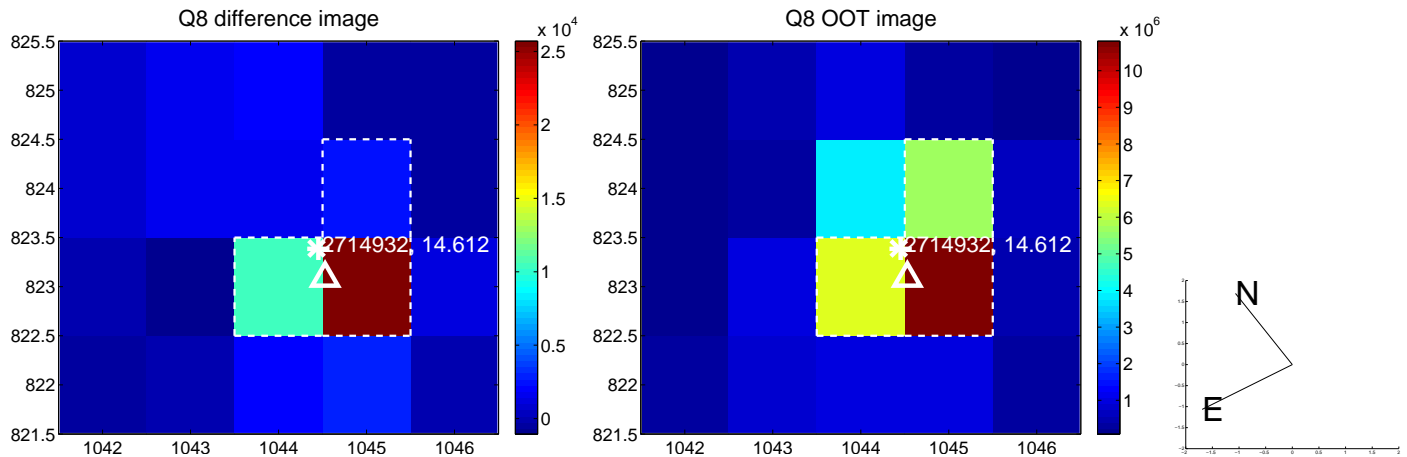
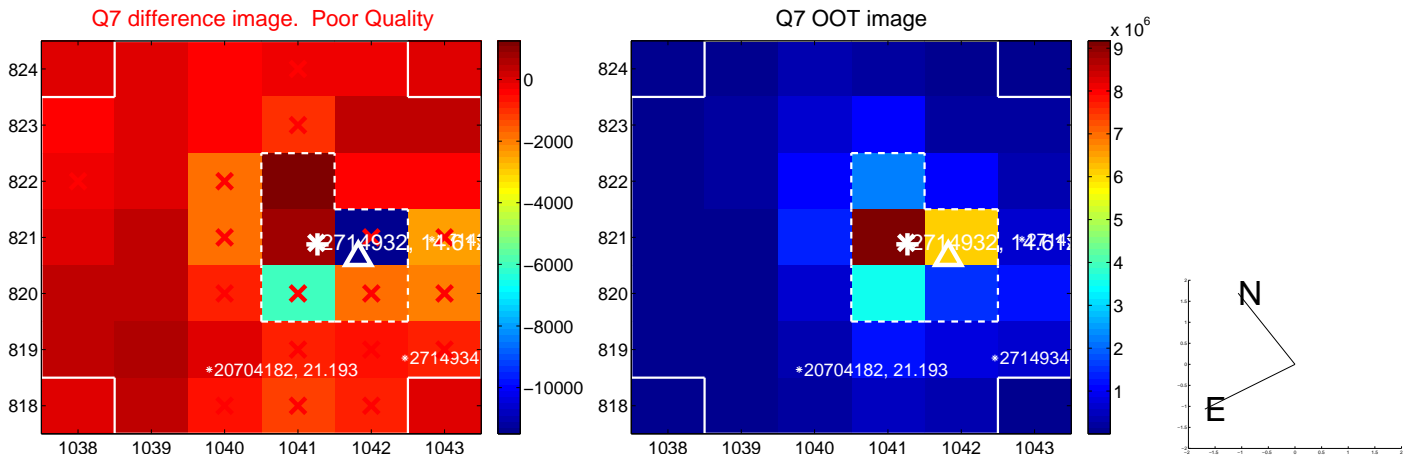
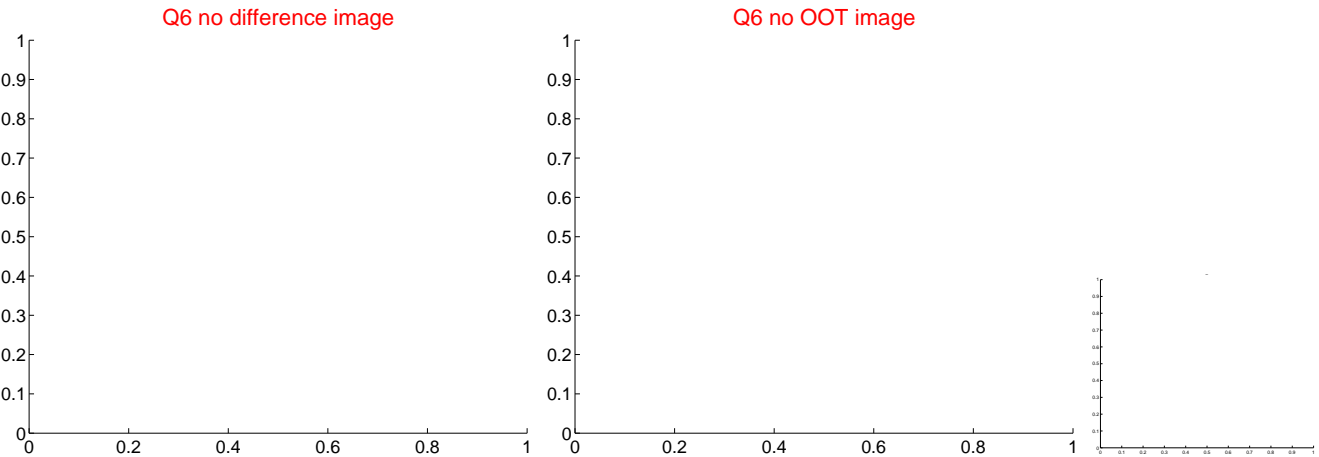
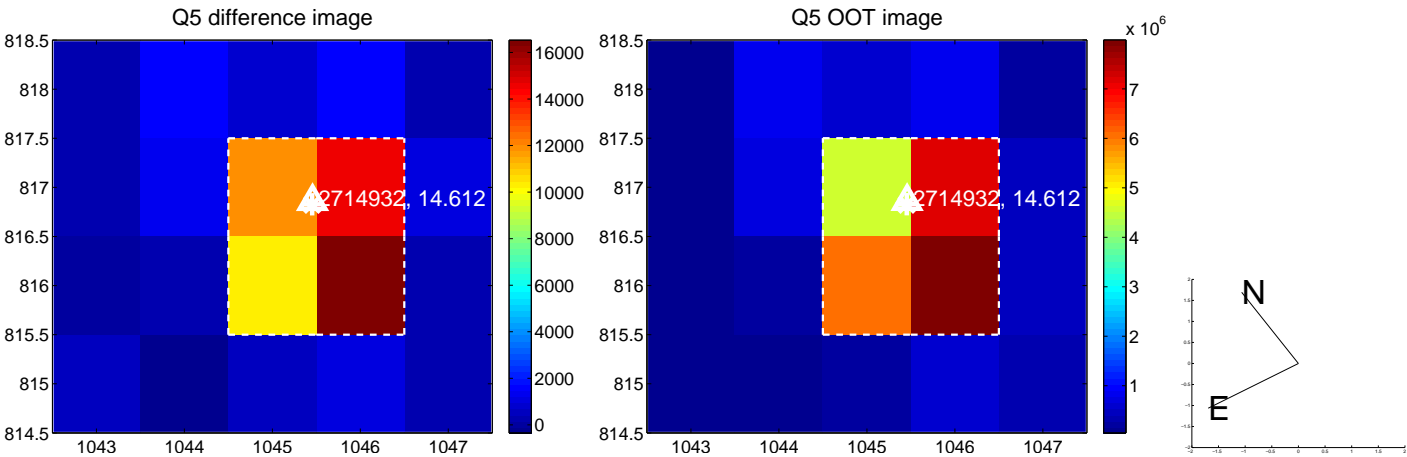


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

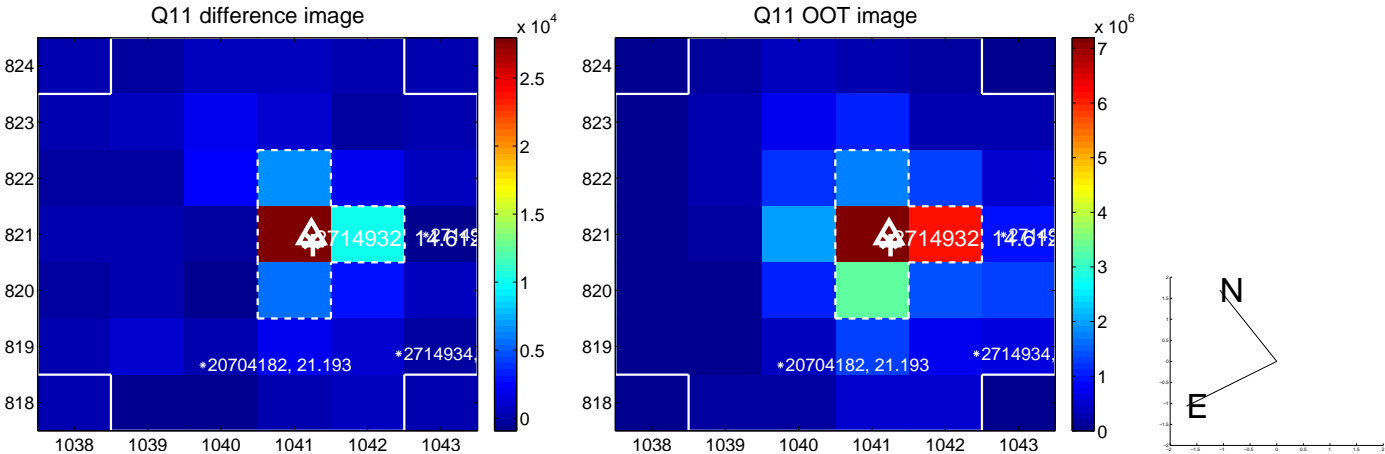
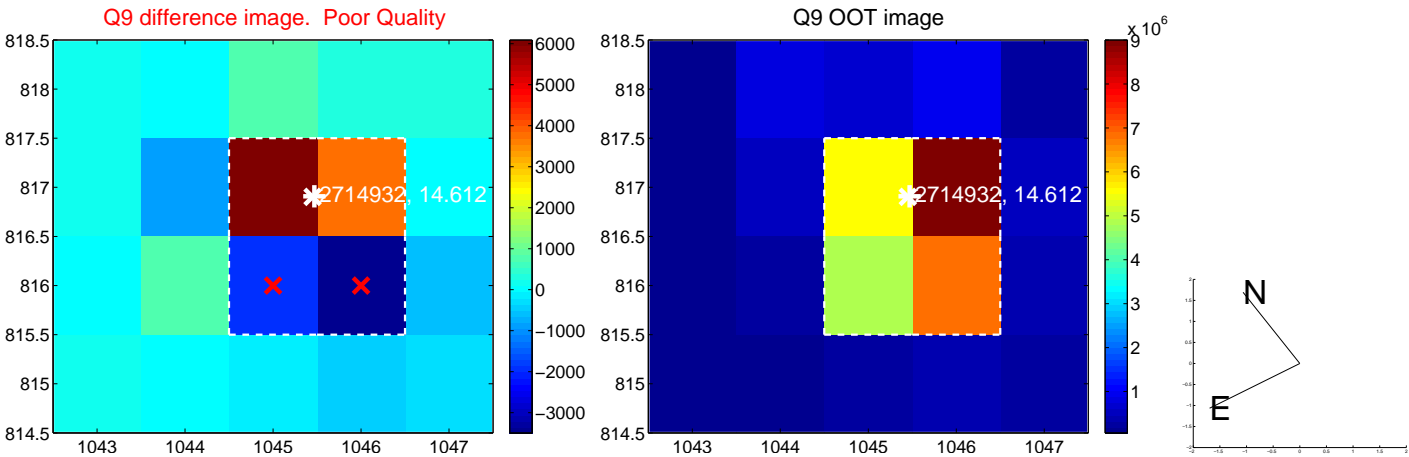
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

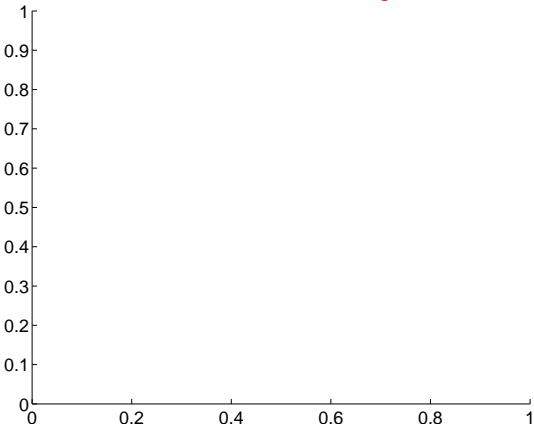


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

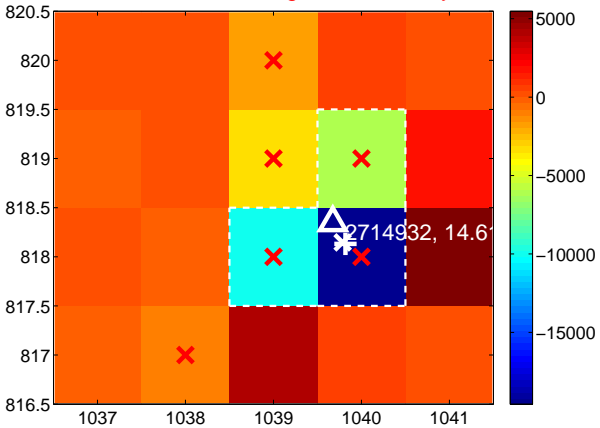
Q13 no difference image



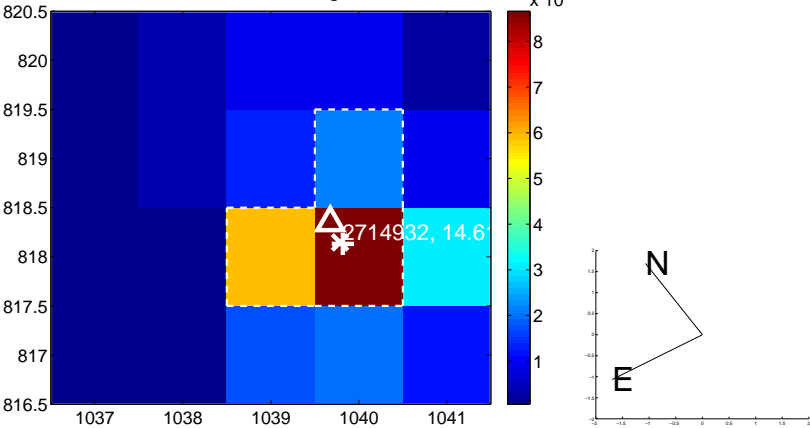
Q13 no OOT image



Q14 difference image. Poor Quality



Q14 OOT image



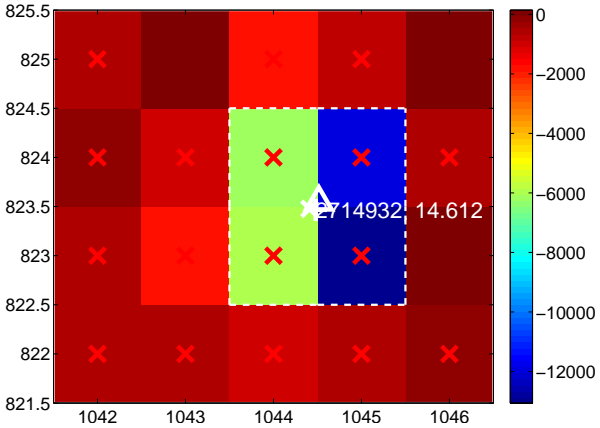
Q15 no difference image



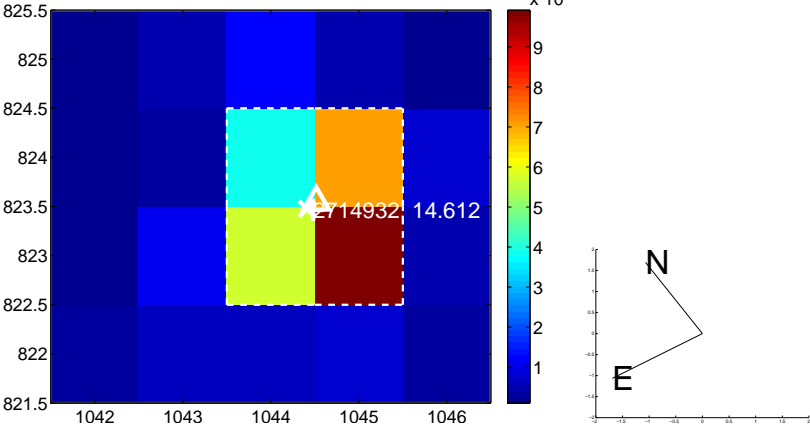
Q15 no OOT image



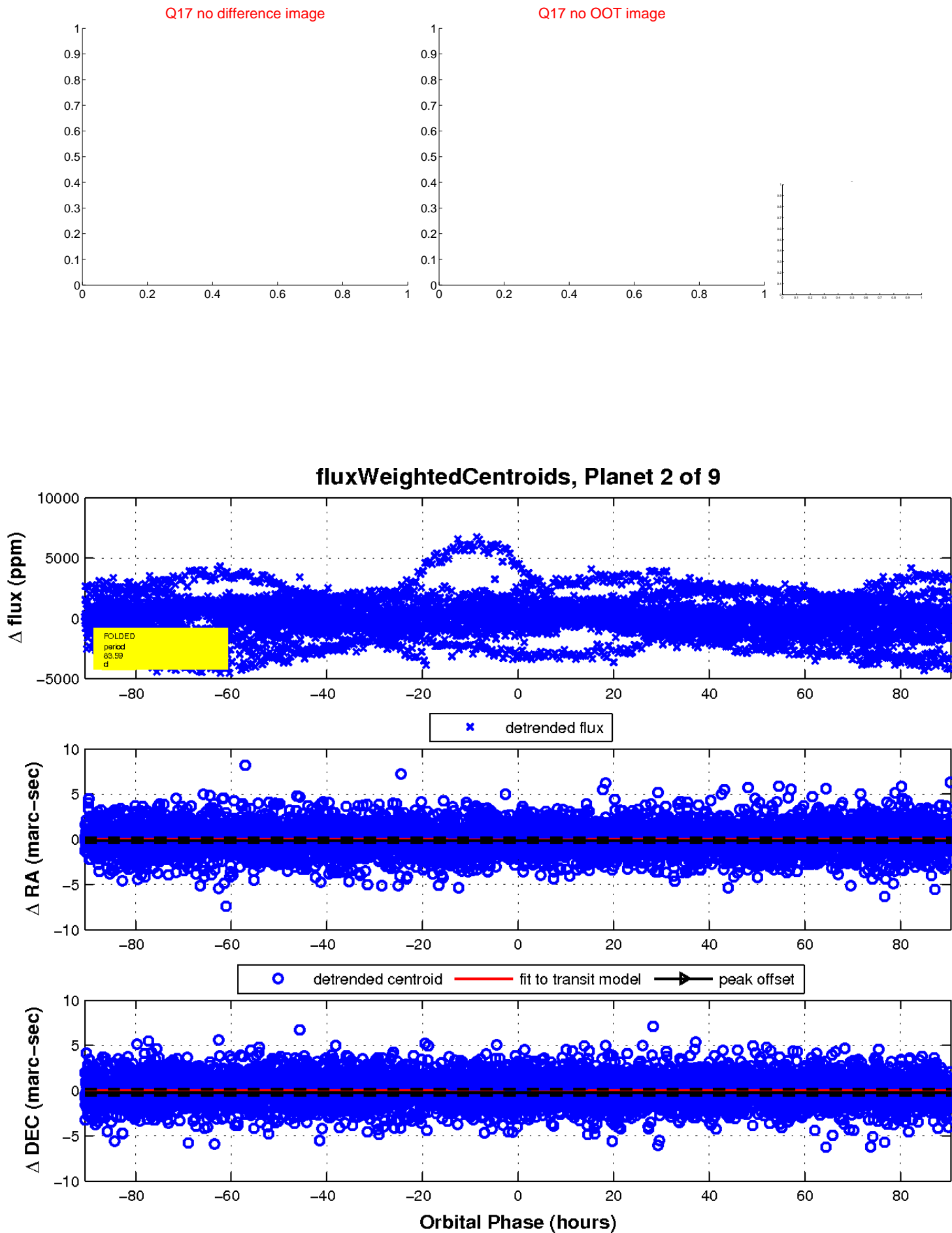
Q16 difference image. Poor Quality



Q16 OOT image

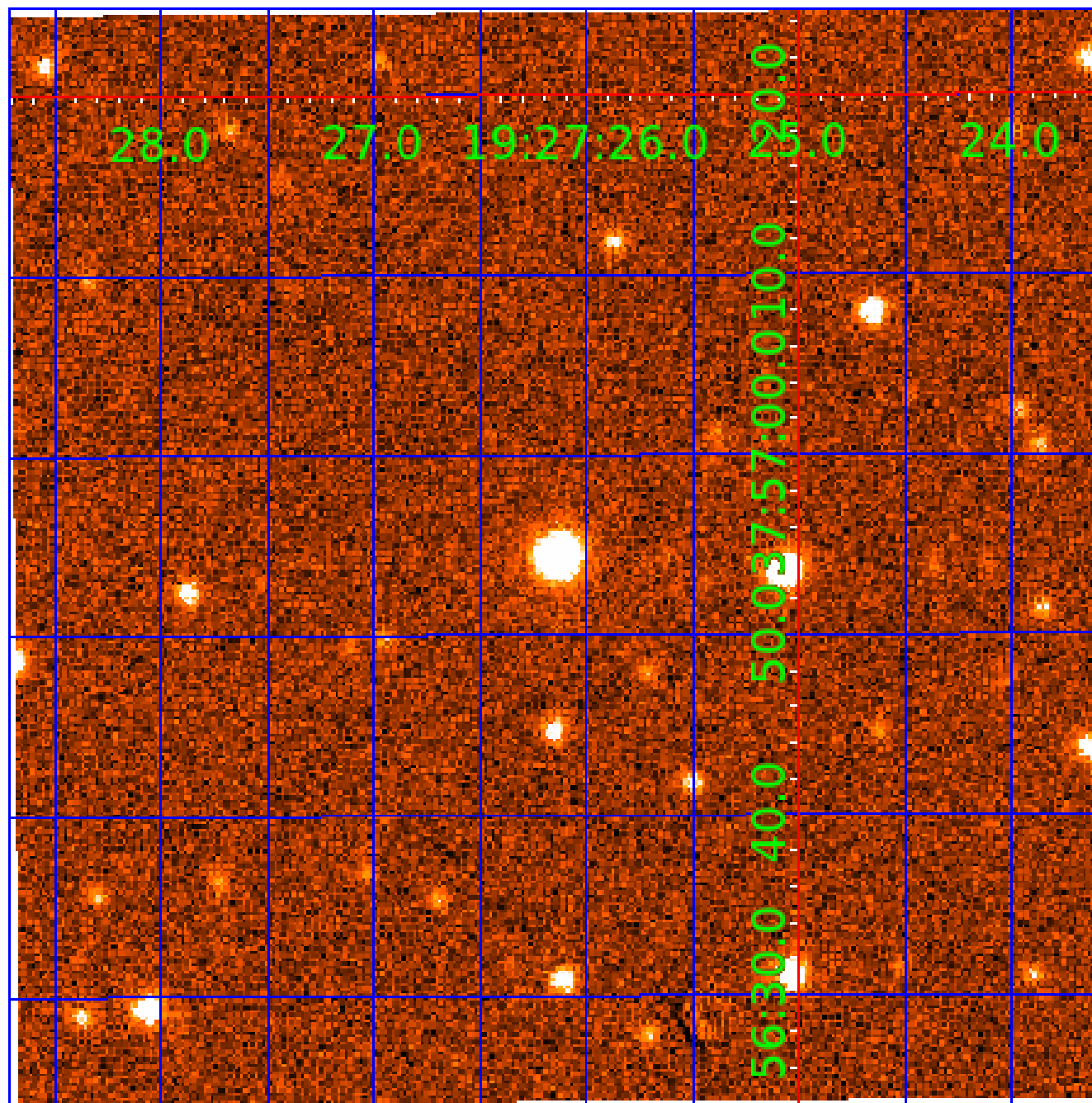


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 002714932

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})
002714932-01	OBS	No	1.936609	133.370964	83.2	10.788	11.1	12.1	1.02	6096	0.93	1353.99
002714932-02	OBS	No	83.586553	183.122566	621.7	30.201	35.1	5.7	1.02	6096	2.53	8.94
002714932-03	OBS	No	379.740193	213.757033	5541.4	40.236	17.8	12.8	1.02	6096	10.27	1.19
002714932-04	OBS	No	194.036588	143.761410	709.8	63.663	14.7	3.5	1.02	6096	2.76	2.91
002714932-05	OBS	No	249.813954	169.244968	595.2	15.000	10.9	-1.0	1.02	6096	2.48	2.08
002714932-06	OBS	No	139.996979	227.369717	657.3	12.352	9.8	5.9	1.02	6096	2.83	4.50
002714932-07	OBS	No	66.159045	173.590743	538.3	13.883	9.3	5.5	1.02	6096	2.69	12.21
002714932-08	OBS	No	101.251584	215.094722	823.1	16.571	9.0	6.7	1.02	6096	3.05	6.93
002714932-09	OBS	No	220.851963	149.666990	4184.1	35.946	8.4	9.1	1.02	6096	7.29	2.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002714932-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
002714932-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
002714932-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
002714932-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— INCONSISTENT_TRANS
002714932-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS
002714932-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
002714932-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
002714932-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
002714932-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS

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

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

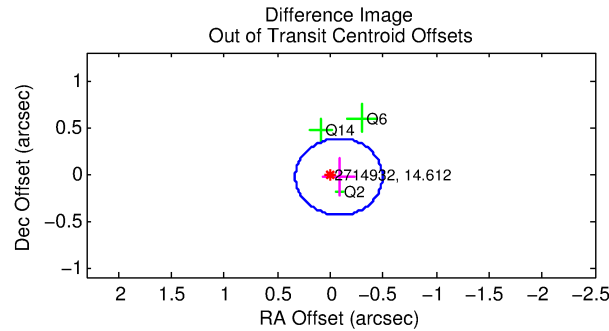
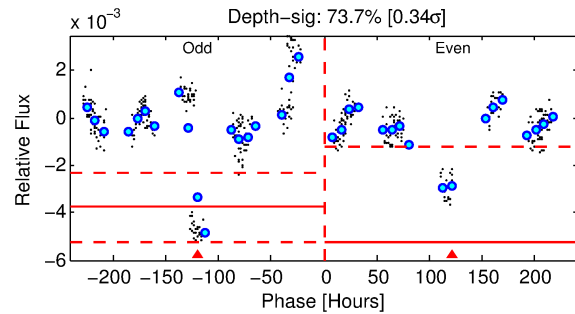
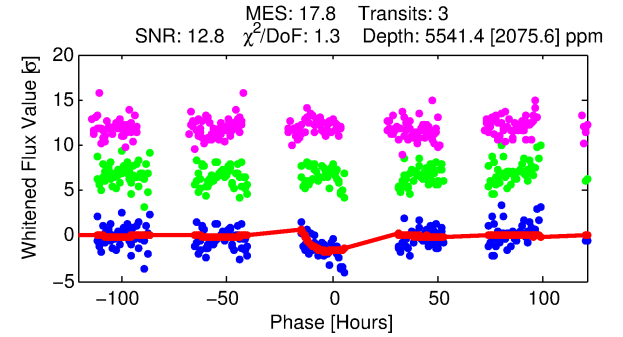
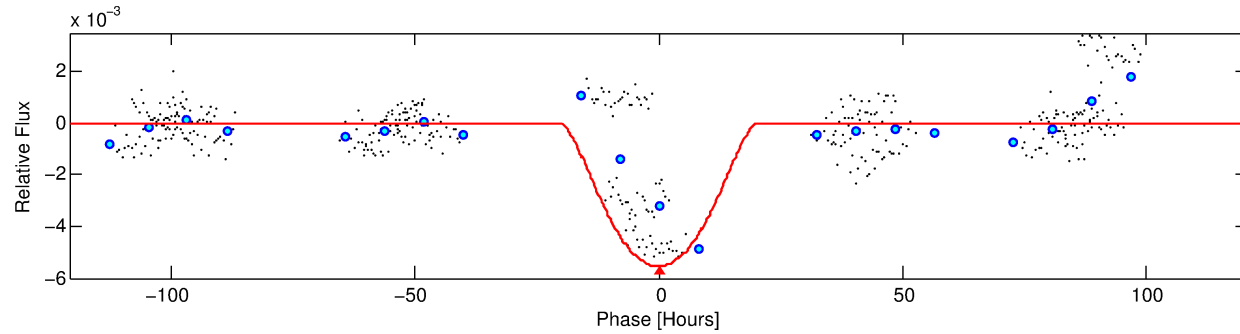
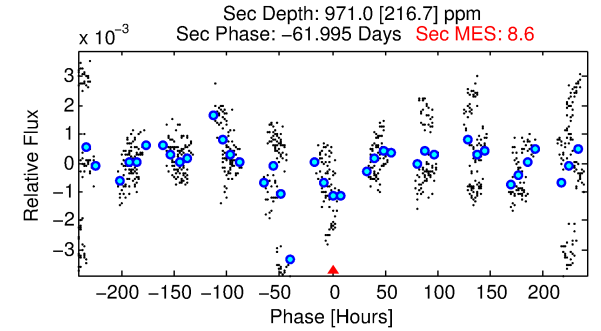
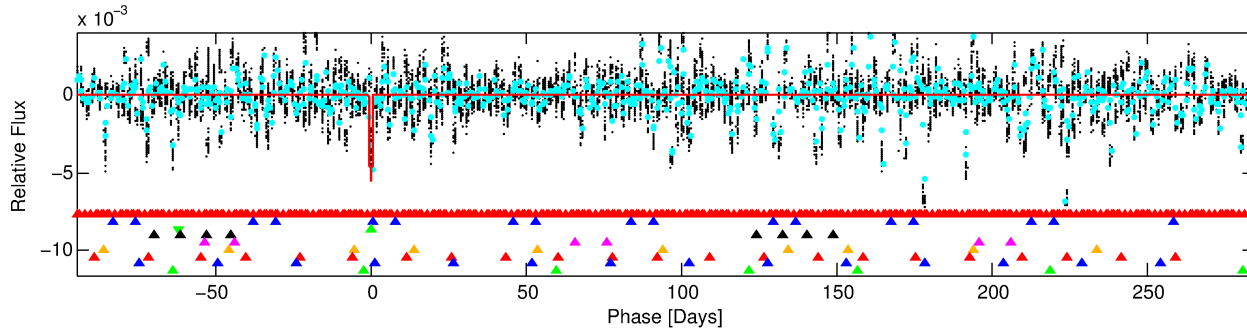
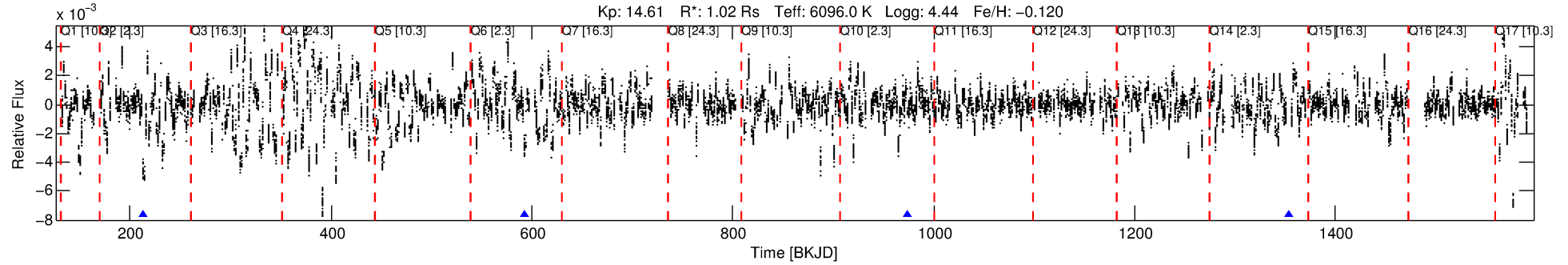
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002714932-03

No Significant Match Found

DV One-Page Summary

KIC: 2714932 Candidate: 3 of 9 Period: 379.740 d



DV Fit Results:

Period = 379.74019 [0.08930] d
Epoch = 213.7570 [0.1733] BKJD
Rp/R* = 0.0927 [0.0381]
a/R* = 39.26 [9.25]
b = 0.95 [0.08]
Seff = 1.19 [0.49]
Teq = 266 [27] K
Rp = 10.27 [5.38] Re
a = 1.0366 [0.2798] AU
Ag = 5437.86 [5088.24] [1.07σ]
Teffp = 3535 [762] K [4.29σ]

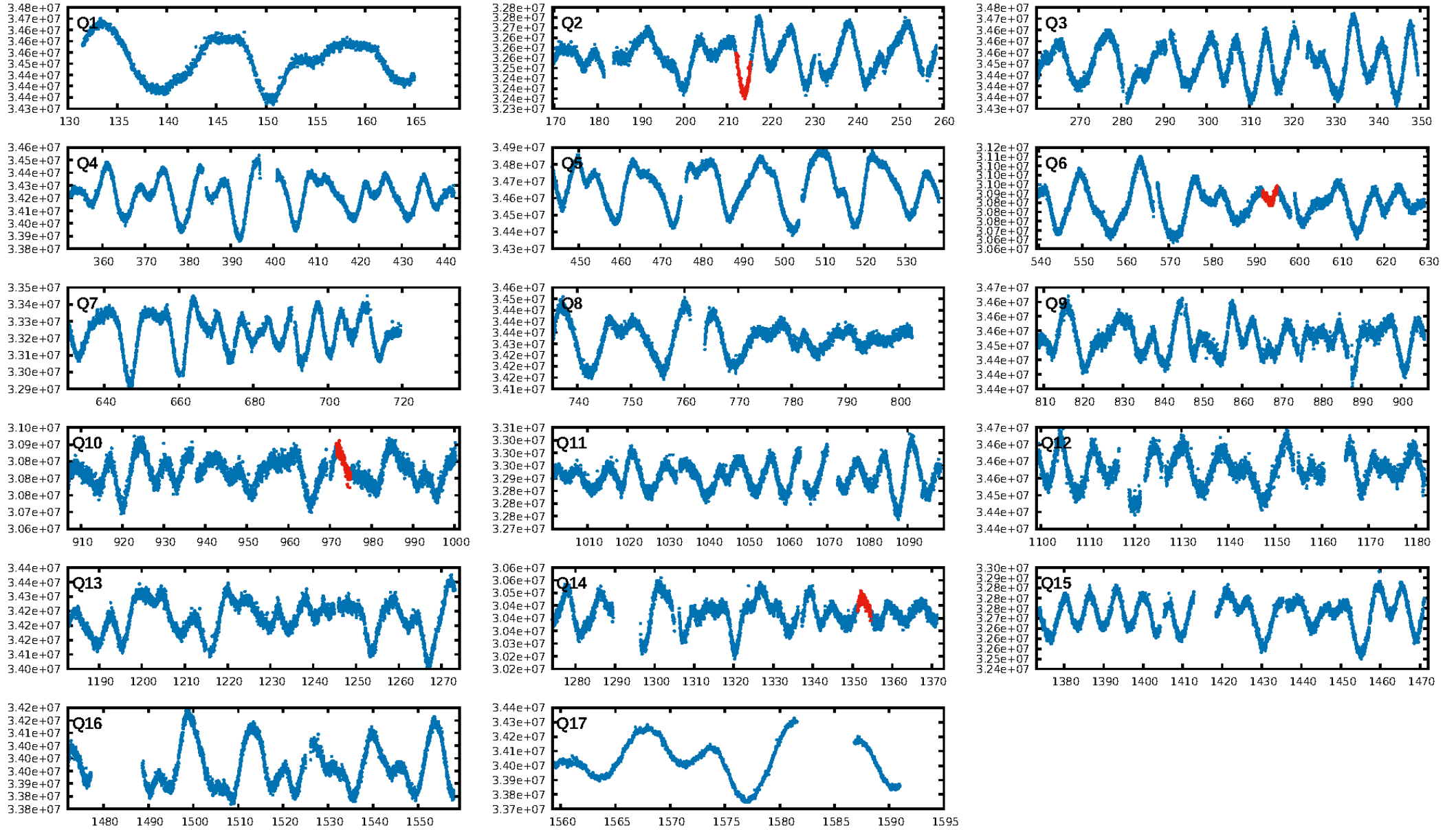
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [72.62σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.41e-24
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.752
Centroid-sig: 10.4%
Centroid-so: 0.489 arcsec [5.32σ]
OotOffset-rm: 0.088 arcsec [0.64σ]
KicOffset-rm: 0.128 arcsec [0.71σ]
OotOffset-st: 3/0/0 [3]
KicOffset-st: 3/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.00 [0/3]

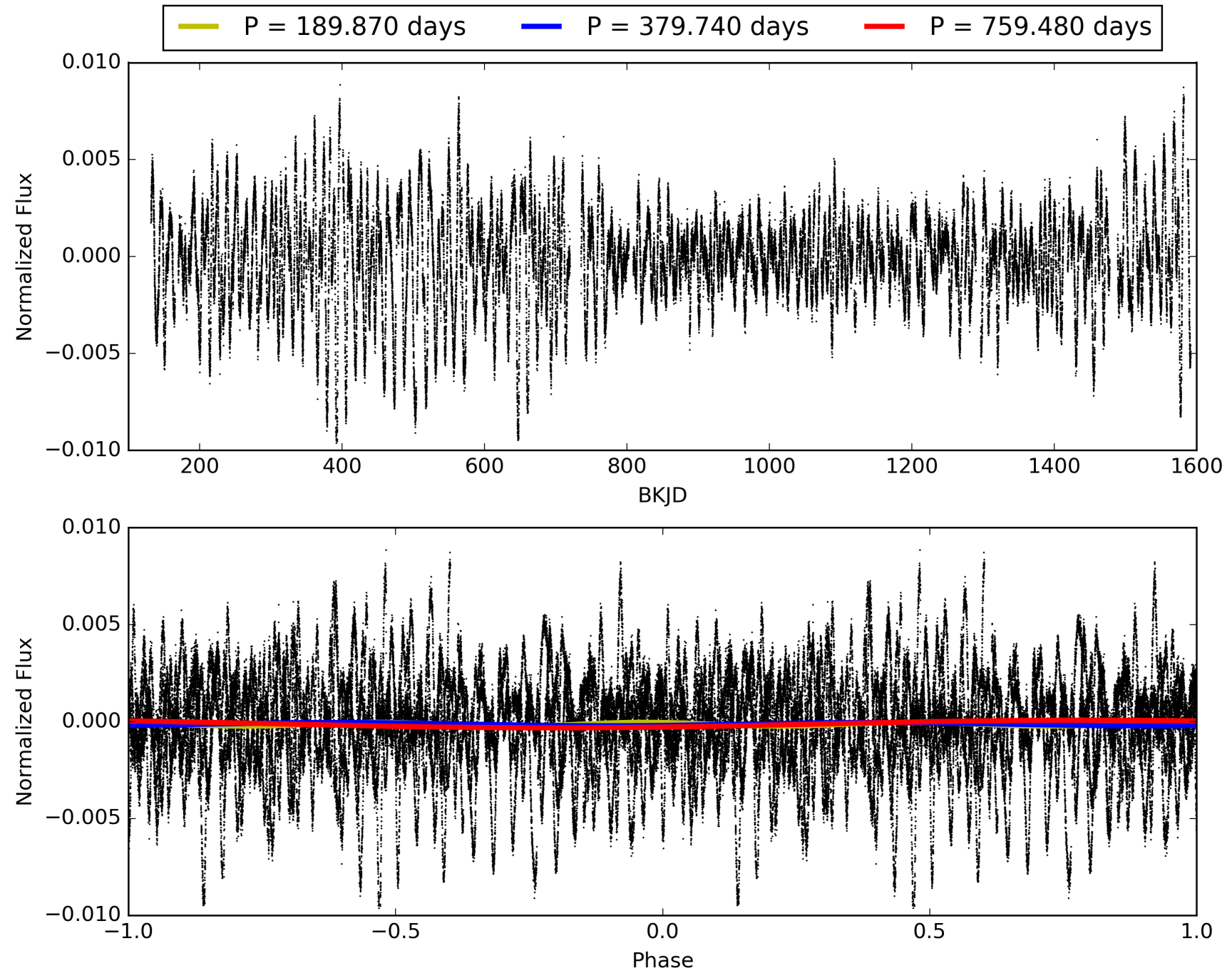
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:28:56 Z

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

TCE 002714932-03, PDC Light Curves

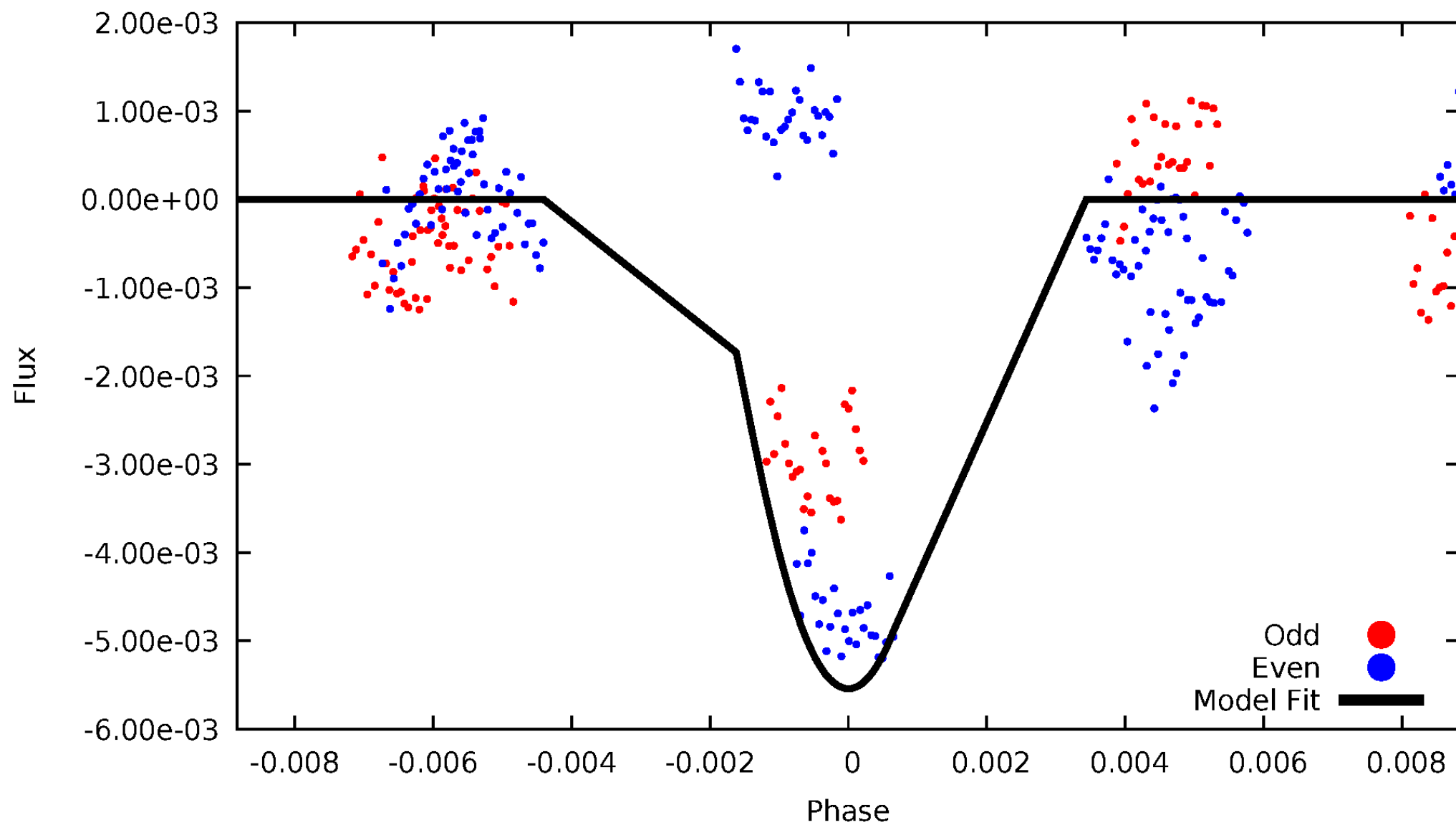


TCE 002714932-03



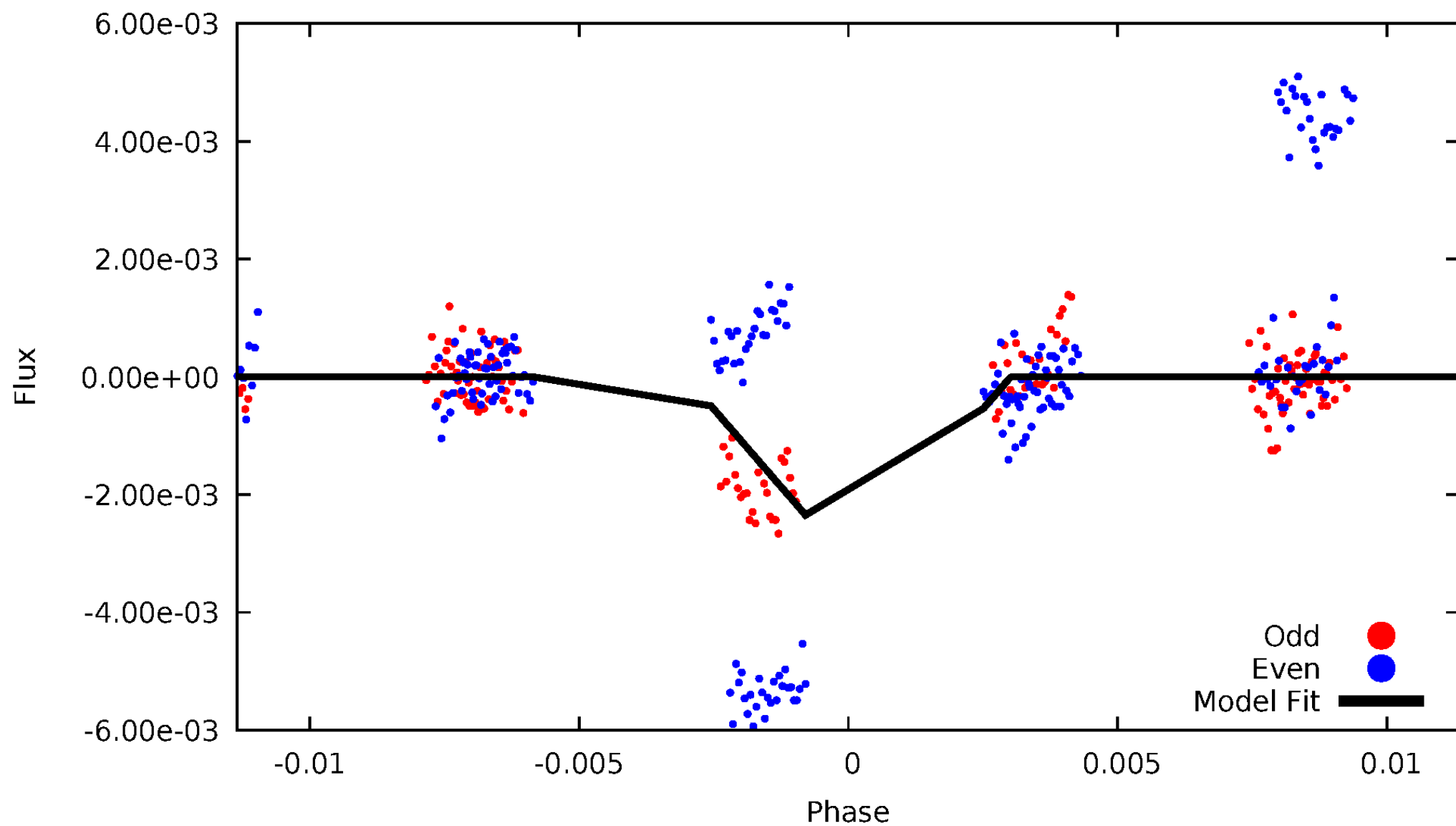
DV Odd/Even

TCE 002714932-03



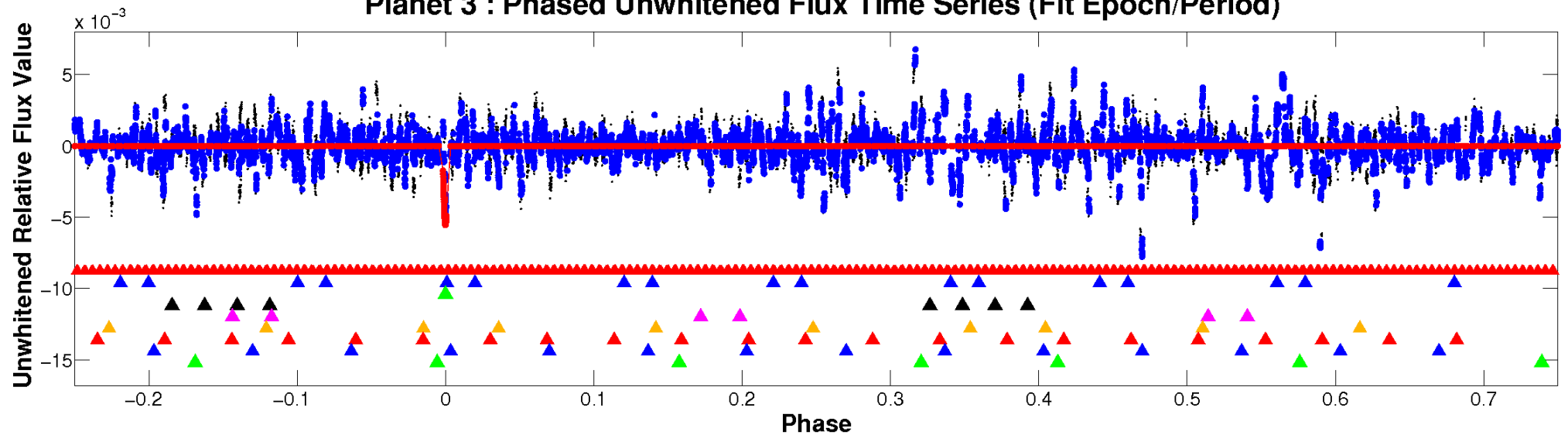
ALT Odd/Even

TCE 002714932-03

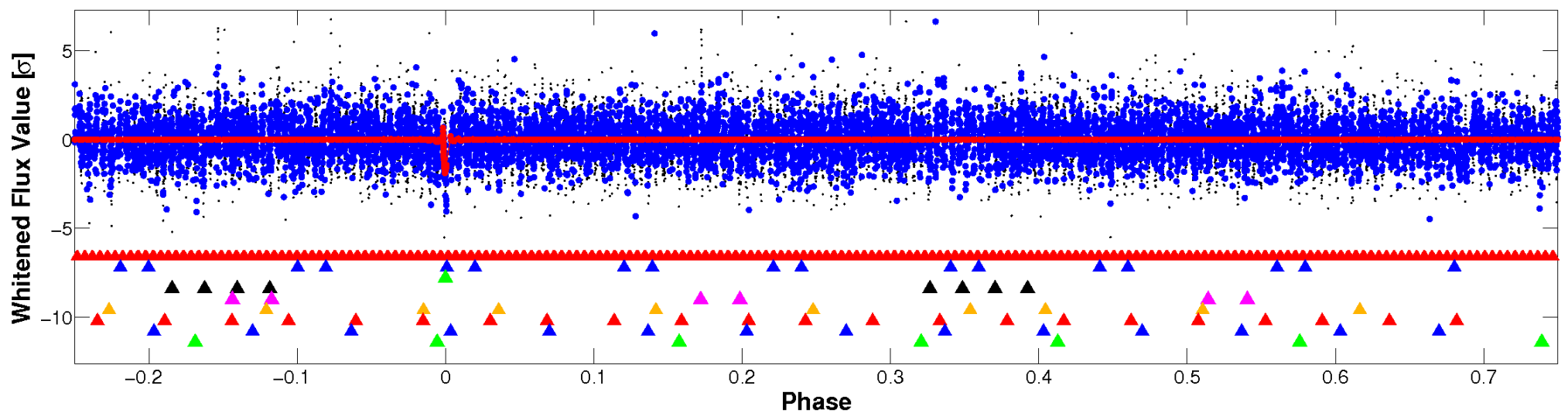


Non-Whitened Vs. Whitened Light Curve

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

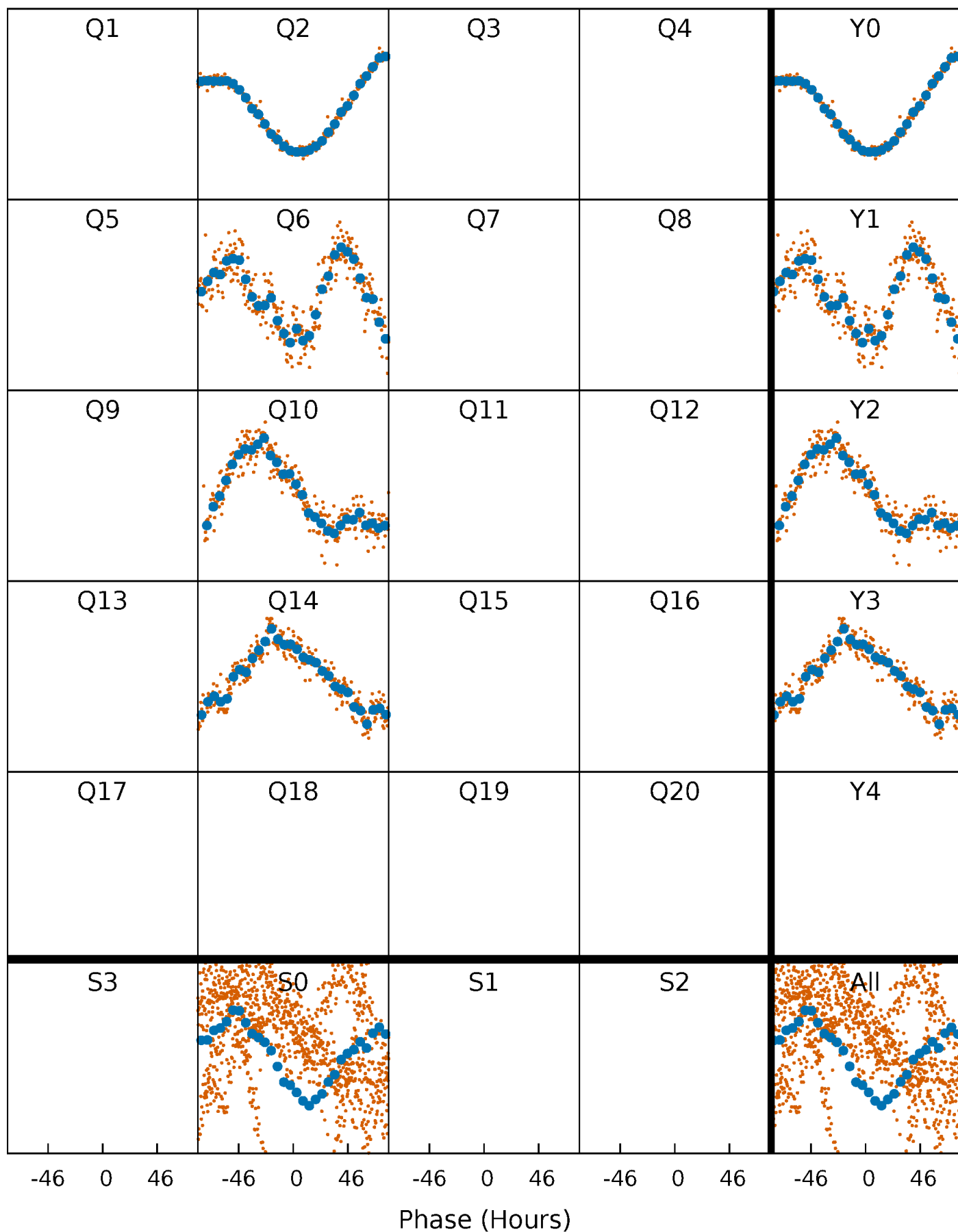


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



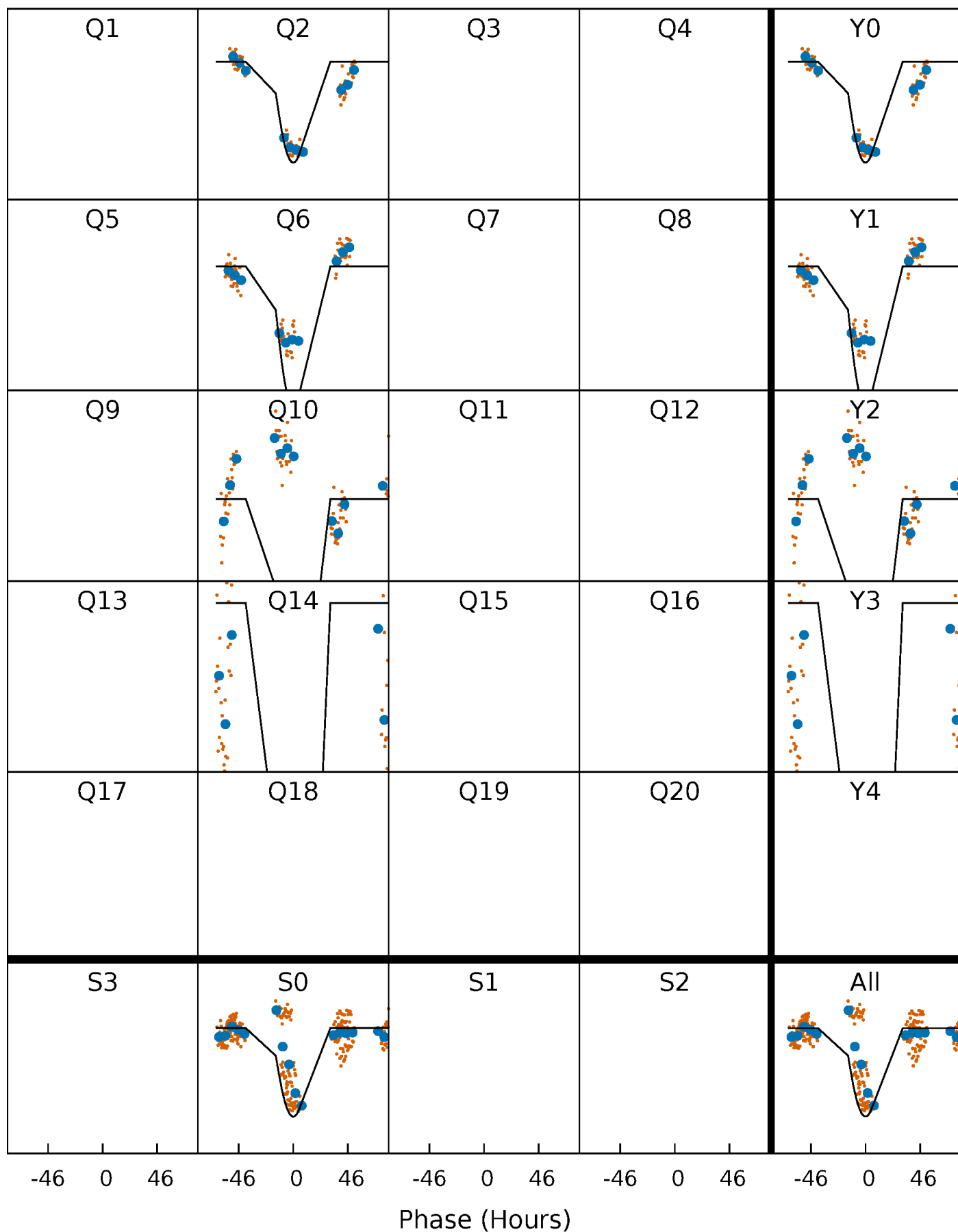
PDC Quarter-Phased Transit Curves

TCE 002714932-03 $P=379.740193$ Days $T_0=213.757033$ (BKJD)



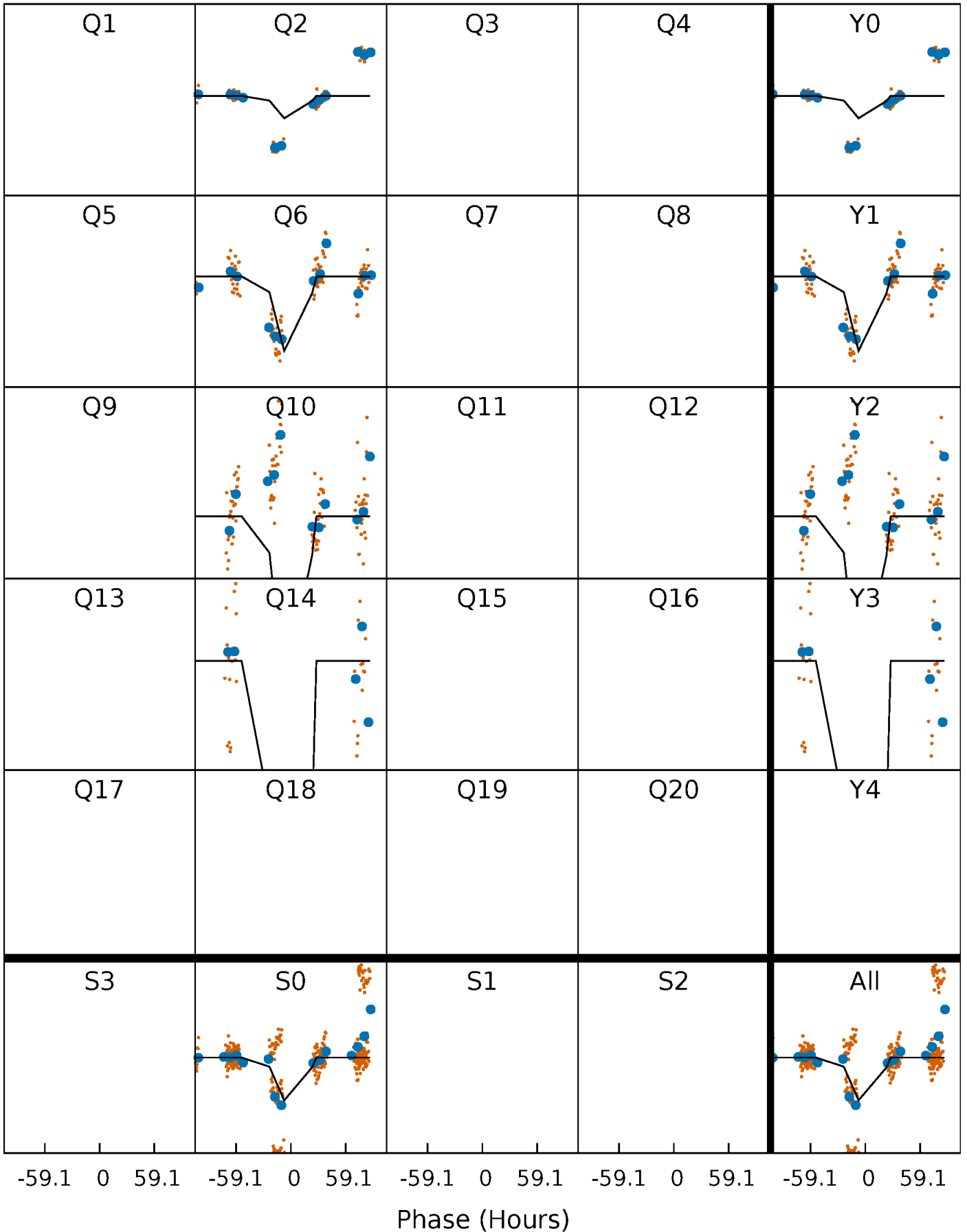
DV Quarter-Phased Transit Curves

TCE 002714932-03 P=379.740193 Days $T_0=213.757033$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

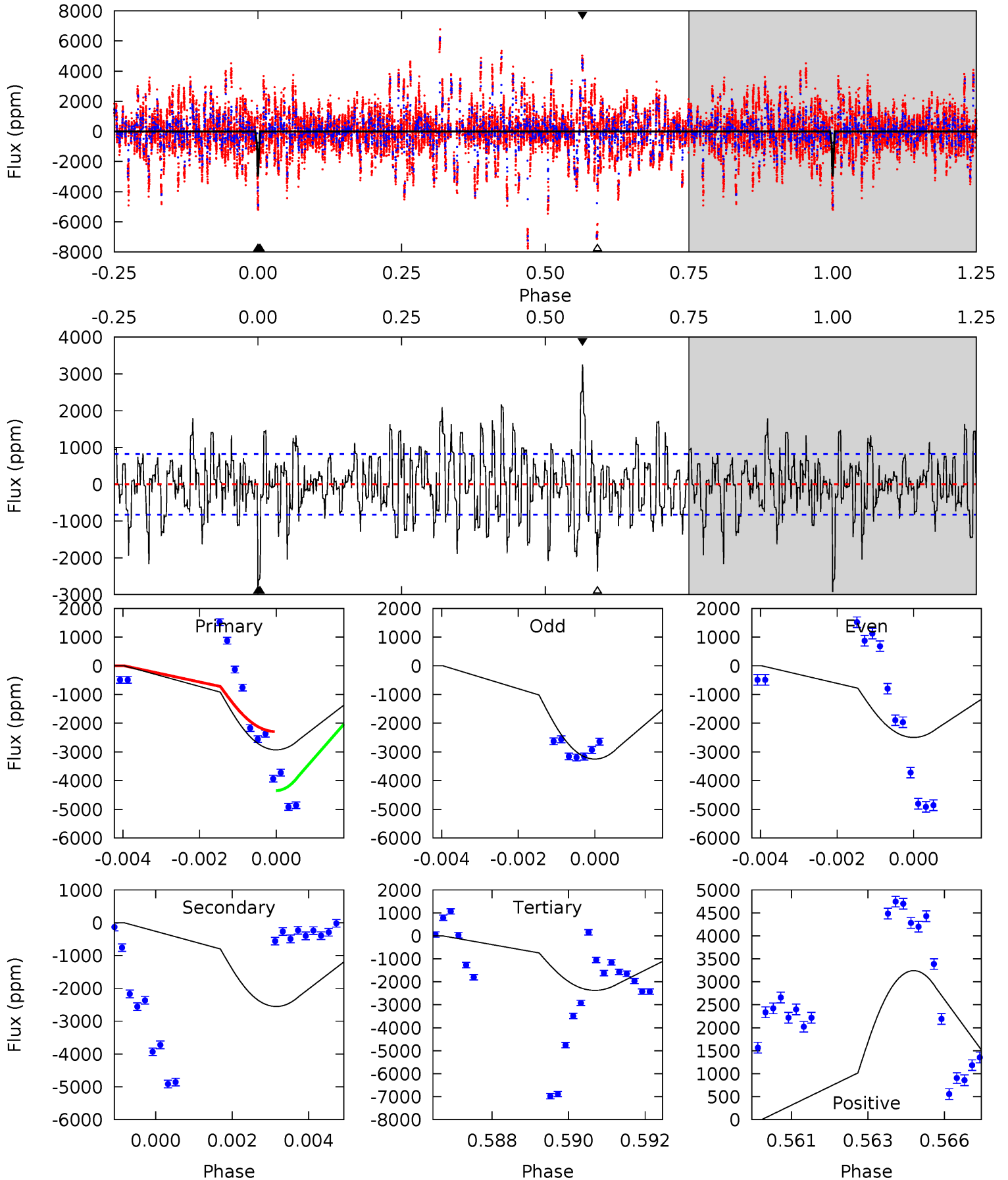
TCE 002714932-03 P=379.641922 Days $T_0=214.307106$ (BKJD)



DV Model-Shift Uniqueness Test

002714932-03, P = 379.740193 Days, E = 213.757033 Days

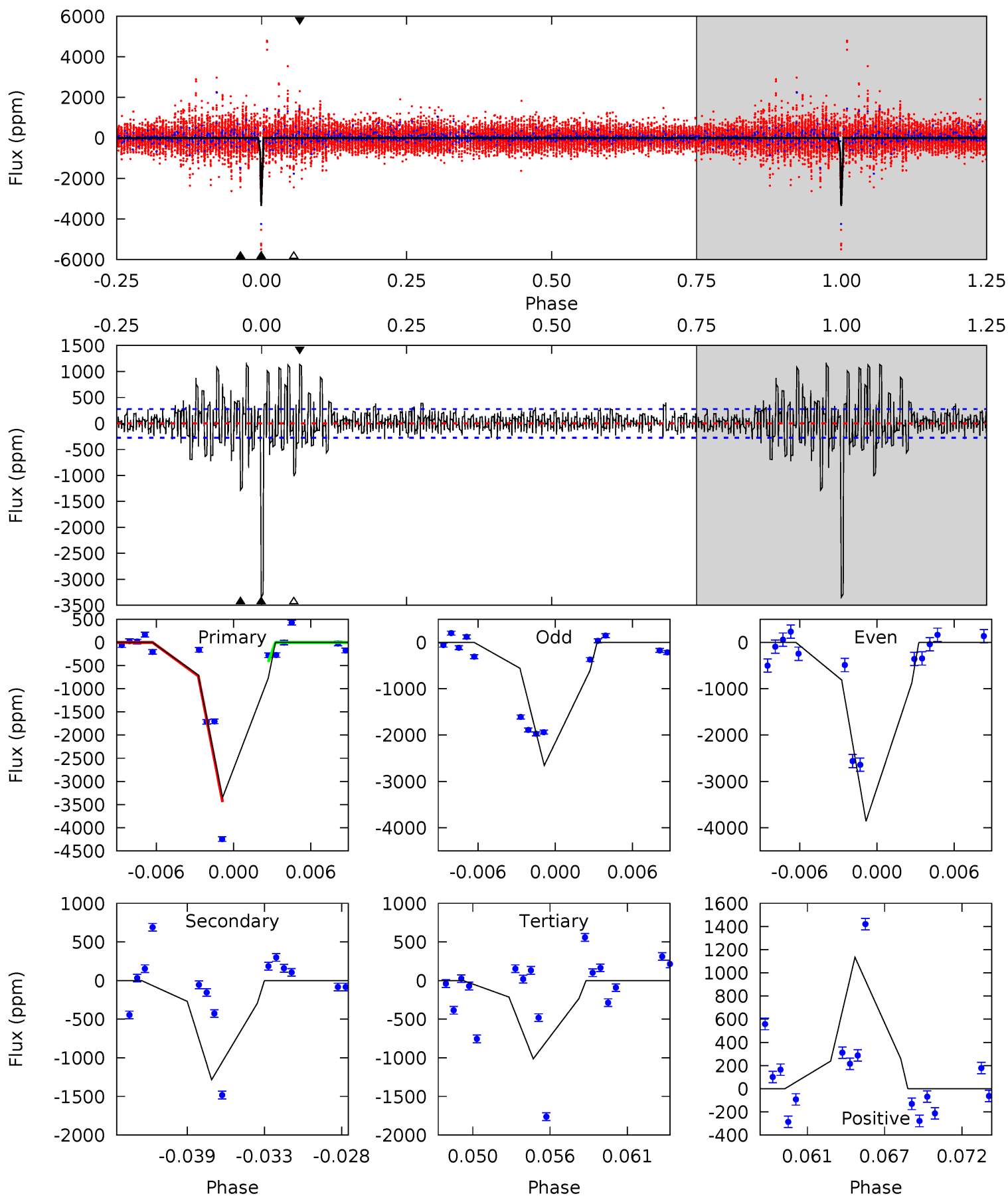
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.8	16.4	15.2	20.8	5.31	3.06	4.49	3.56	-2.01	1.15	-4.42	2.42	0.72	0.53	5.72



Alt Model-Shift Uniqueness Test

002714932-03, P = 379.641922 Days, E = 214.307106 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
62.2	23.9	18.8	21.1	5.14	2.77	3.35	43.4	41.1	5.04	2.78	13.3	1.01	0.26	26.3



Stellar Parameters For KIC 002714932

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6096^{+189}_{-210}	$4.437^{+0.070}_{-0.210}$	$-0.120^{+0.250}_{-0.350}$	$1.016^{+0.330}_{-0.132}$	$1.026^{+0.153}_{-0.126}$	$1.377^{+0.505}_{-0.707}$
	+3%/-3%	+2%/-5%	+208%/-292%	+32%/-13%	+15%/-12%	+37%/-51%
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 002714932-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2553 ± 156	$10.82^{+4.76}_{-4.23}$	378^{+25}_{-21}	4608^{+1105}_{-560}	12673^{+23134}_{-6516}
Alt.	-1284 ± 54	$6.69^{+4.68}_{-3.63}$	378^{+30}_{-21}	4900^{+2368}_{-909}	16686^{+64313}_{-10902}

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

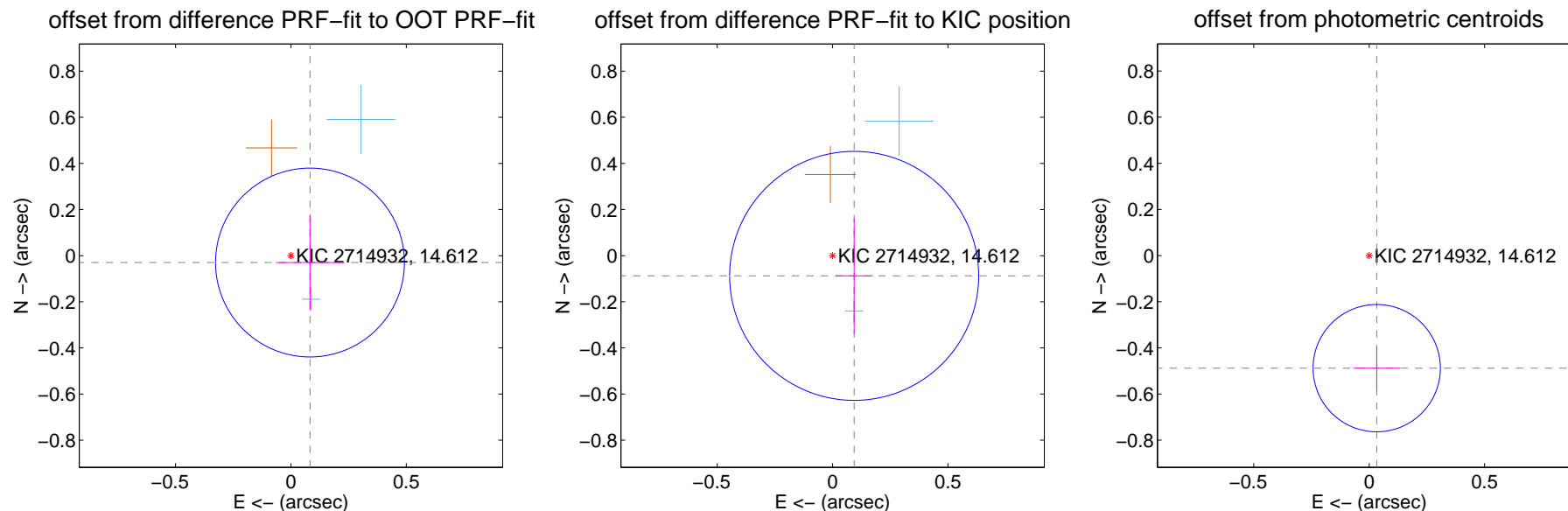
DV Centroid Data

Supplemental centroid analysis for 002714932-03. Kepler magnitude: 14.61. Transit SNR 12.82

There are 2 quarters with good PRF difference image offsets

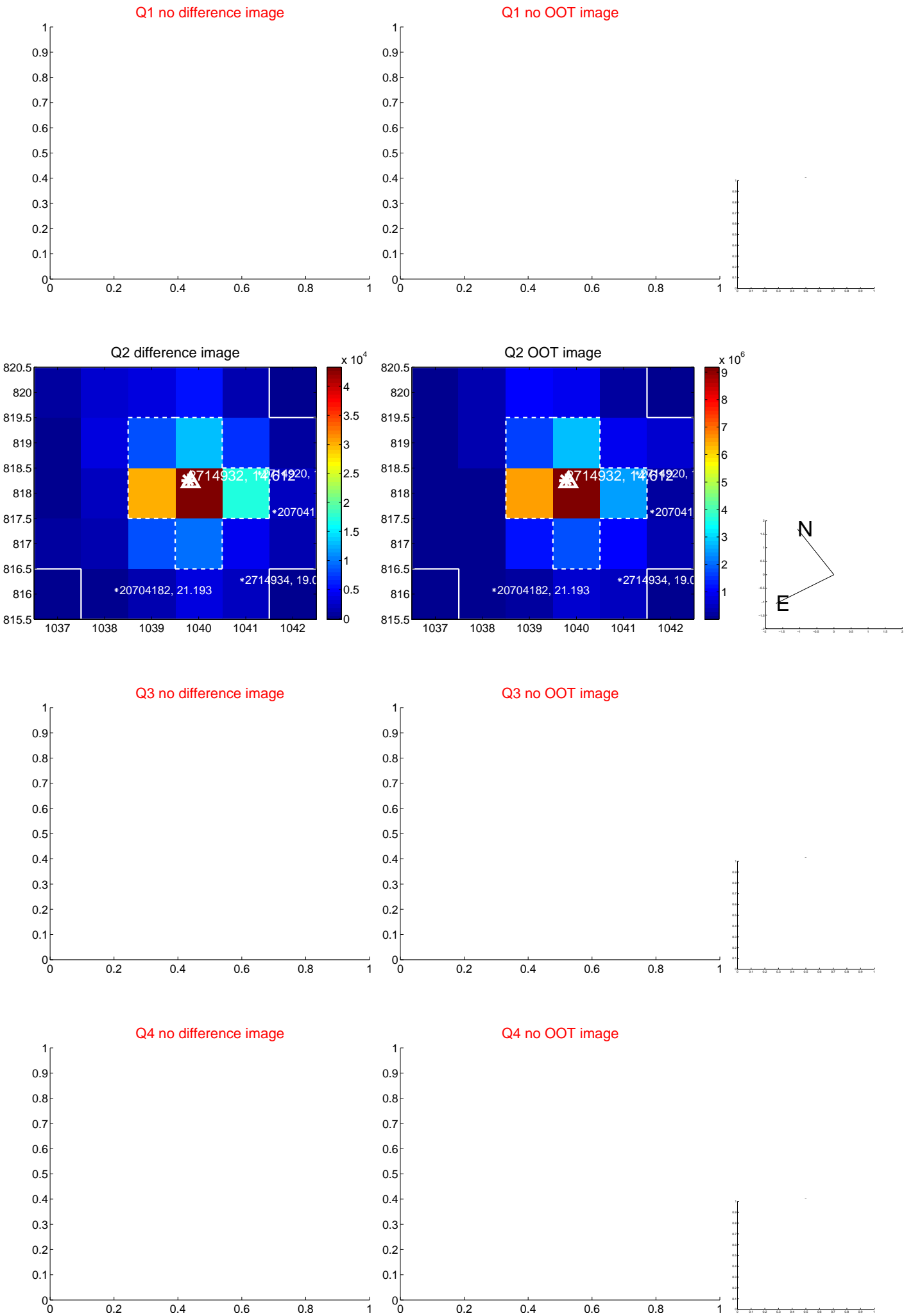
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.088 ± 0.136	0.64	-0.083 ± 0.148	-0.030 ± 0.206
PRF-fit source offset from KIC position	0.128 ± 0.180	0.71	-0.094 ± 0.081	-0.088 ± 0.249
photometric centroid source offset	0.49 ± 0.09	5.32	-0.03 ± 0.10	-0.49 ± 0.09



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.

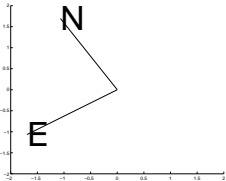
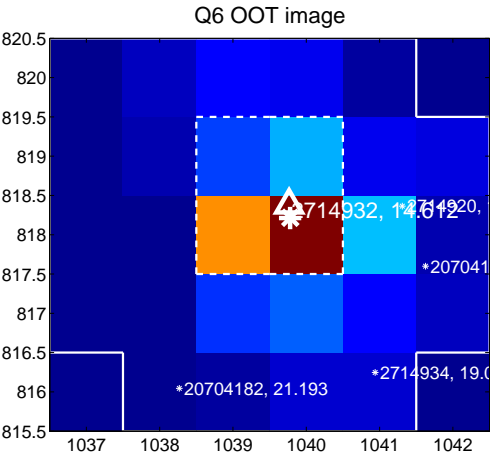
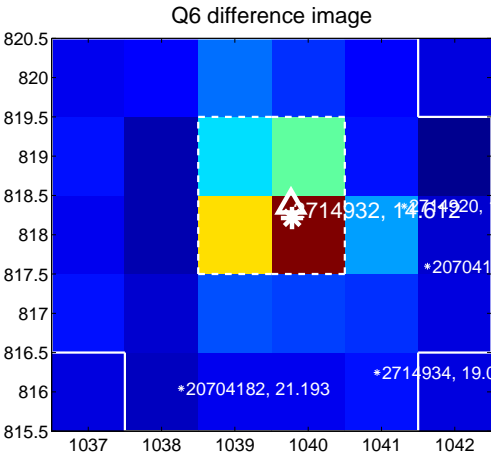


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

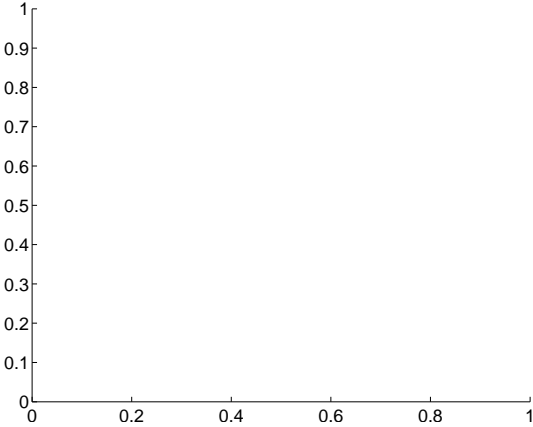
Q5 no difference image



Q5 no OOT image



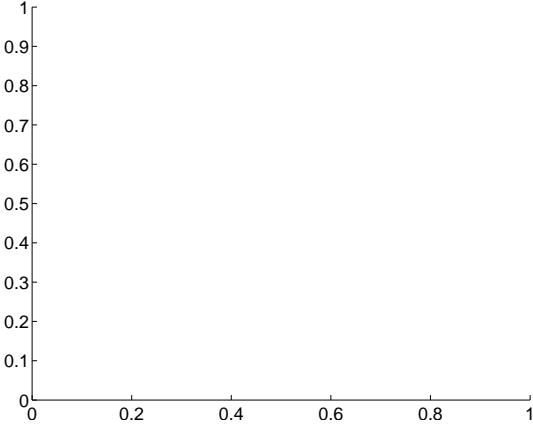
Q7 no difference image



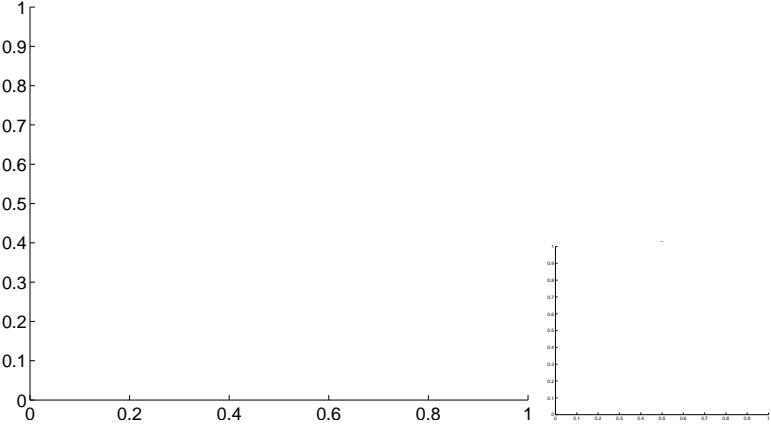
Q7 no OOT image



Q8 no difference image



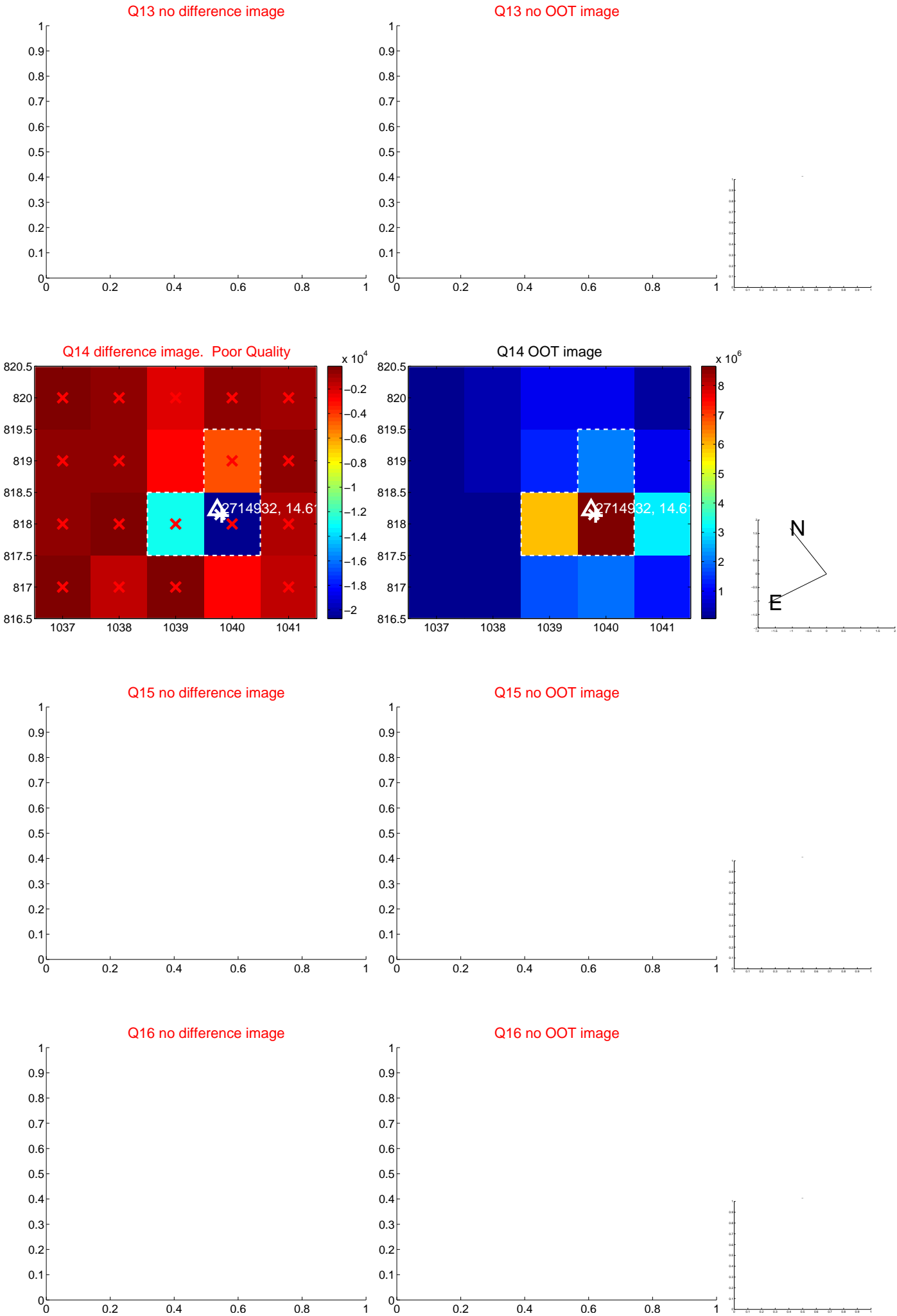
Q8 no OOT image



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



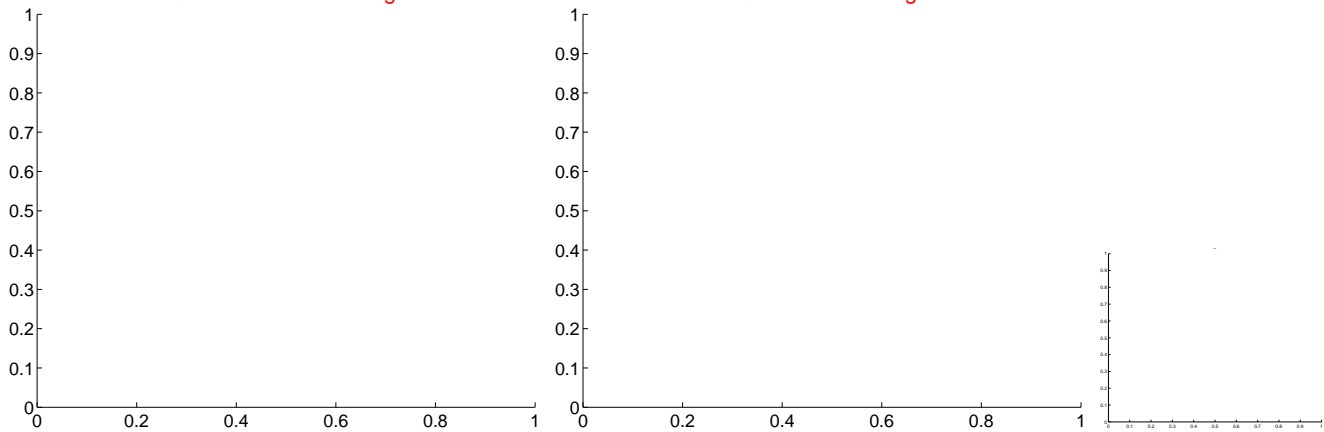
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



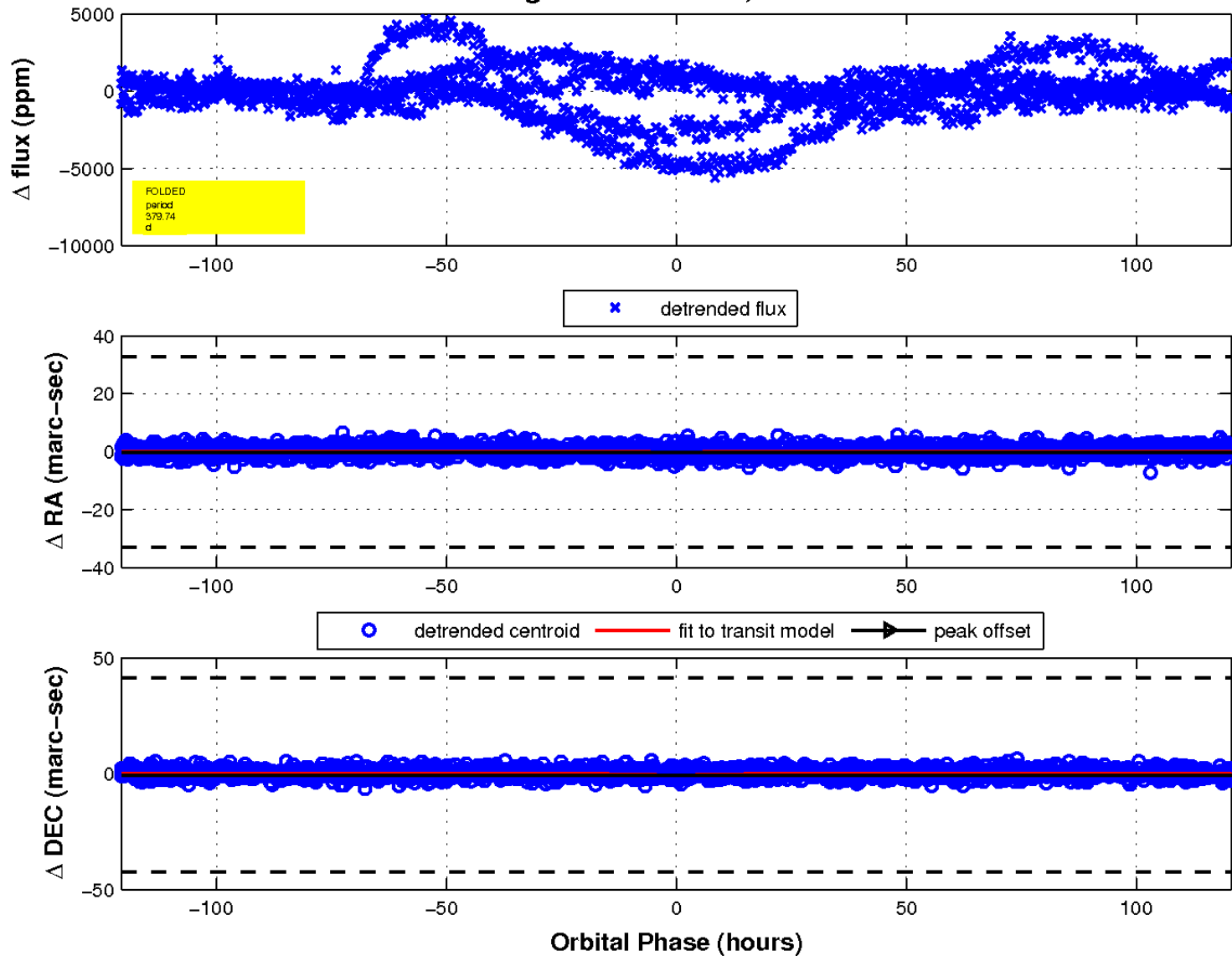
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q17 no difference image

Q17 no OOT image

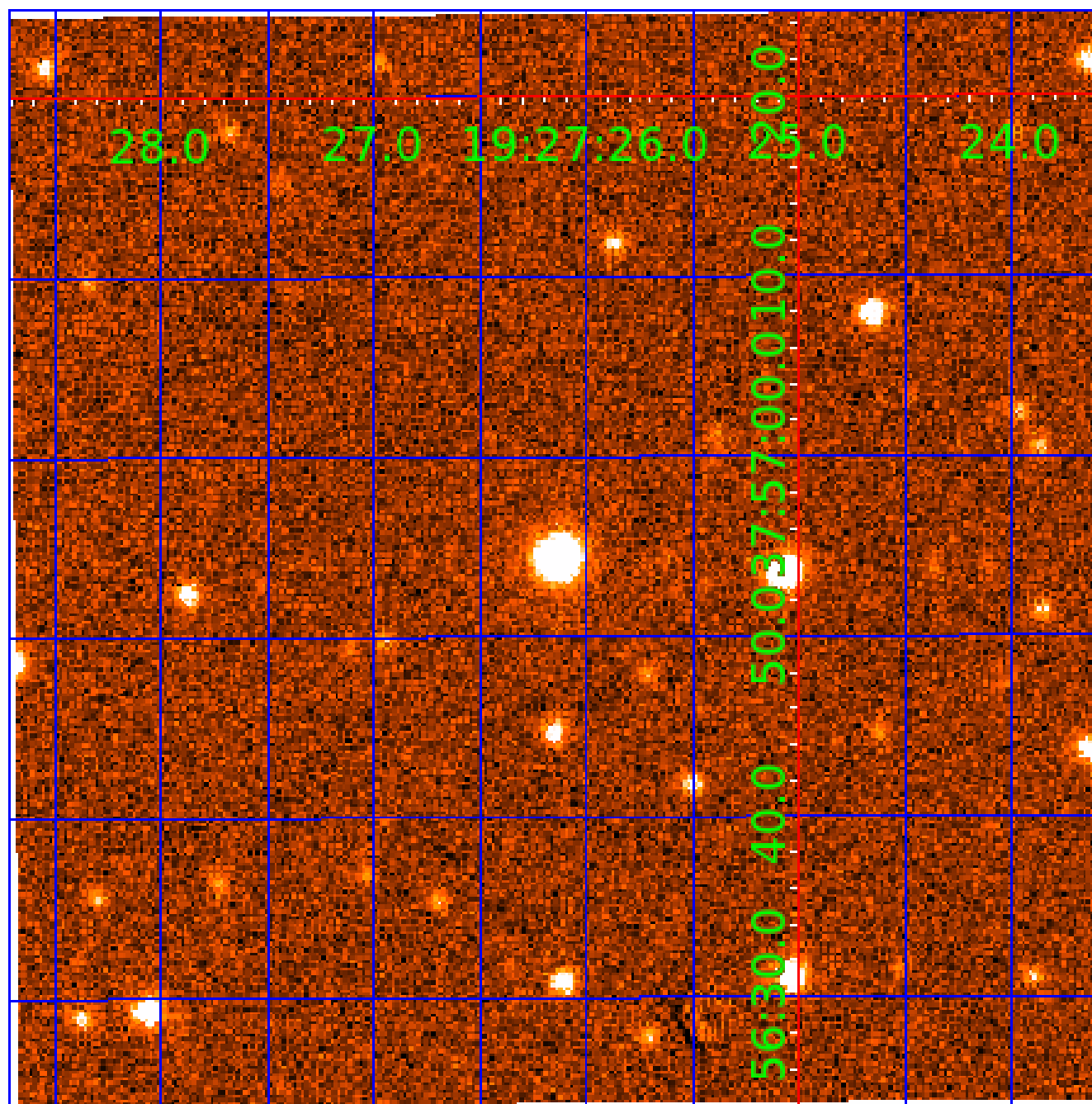


fluxWeightedCentroids, Planet 3 of 9



UKIRT Image

Declination



KIC 002714932

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})
002714932-01	OBS	No	1.936609	133.370964	83.2	10.788	11.1	12.1	1.02	6096	0.93	1353.99
002714932-02	OBS	No	83.586553	183.122566	621.7	30.201	35.1	5.7	1.02	6096	2.53	8.94
002714932-03	OBS	No	379.740193	213.757033	5541.4	40.236	17.8	12.8	1.02	6096	10.27	1.19
002714932-04	OBS	No	194.036588	143.761410	709.8	63.663	14.7	3.5	1.02	6096	2.76	2.91
002714932-05	OBS	No	249.813954	169.244968	595.2	15.000	10.9	-1.0	1.02	6096	2.48	2.08
002714932-06	OBS	No	139.996979	227.369717	657.3	12.352	9.8	5.9	1.02	6096	2.83	4.50
002714932-07	OBS	No	66.159045	173.590743	538.3	13.883	9.3	5.5	1.02	6096	2.69	12.21
002714932-08	OBS	No	101.251584	215.094722	823.1	16.571	9.0	6.7	1.02	6096	3.05	6.93
002714932-09	OBS	No	220.851963	149.666990	4184.1	35.946	8.4	9.1	1.02	6096	7.29	2.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002714932-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
002714932-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
002714932-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
002714932-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— INCONSISTENT_TRANS
002714932-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS
002714932-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
002714932-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
002714932-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
002714932-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS

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

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

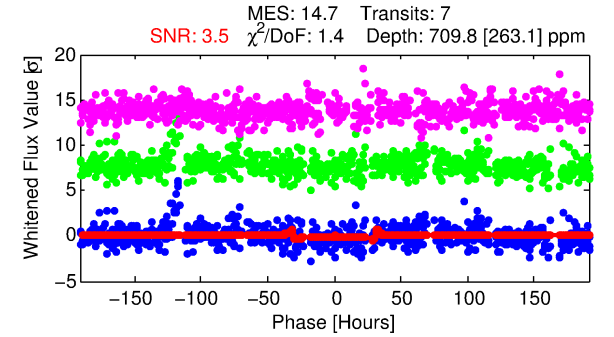
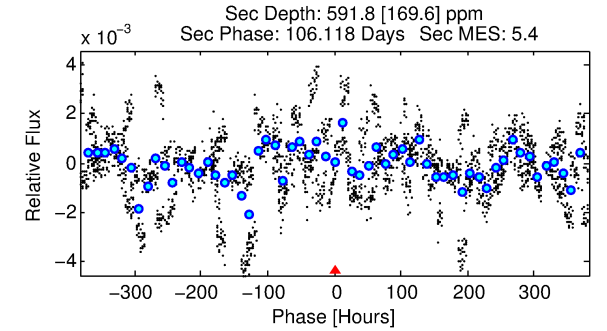
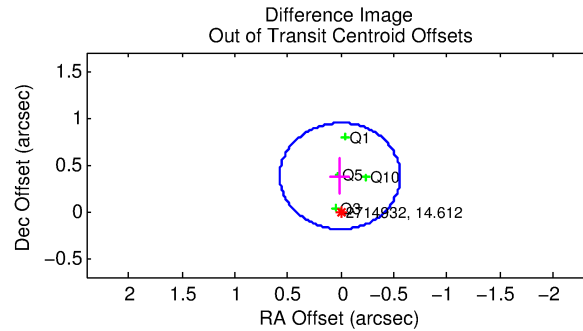
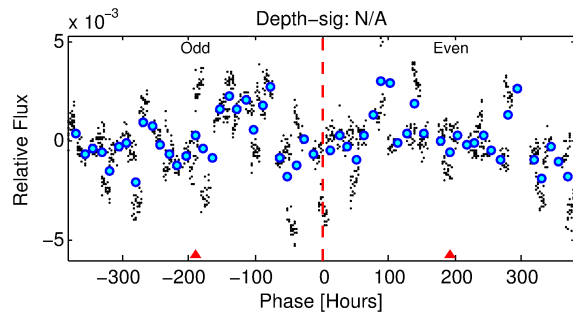
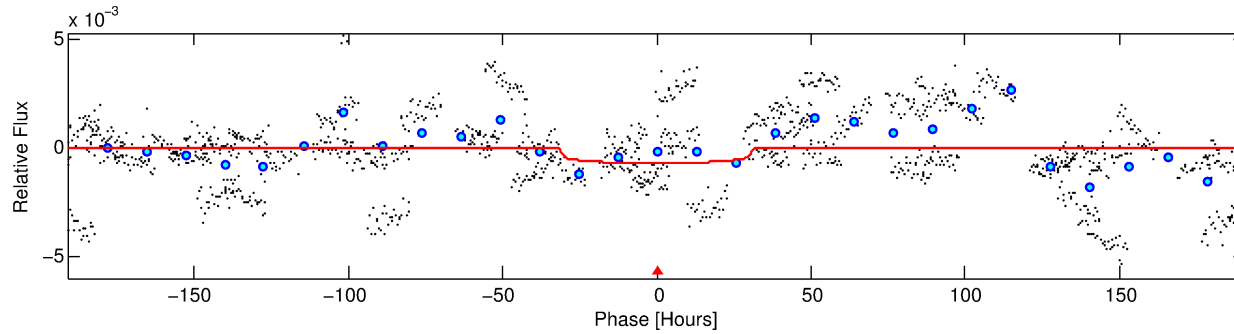
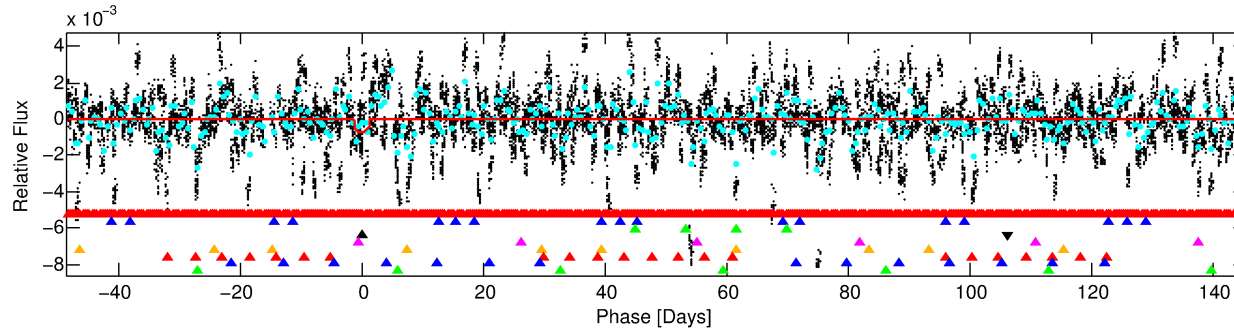
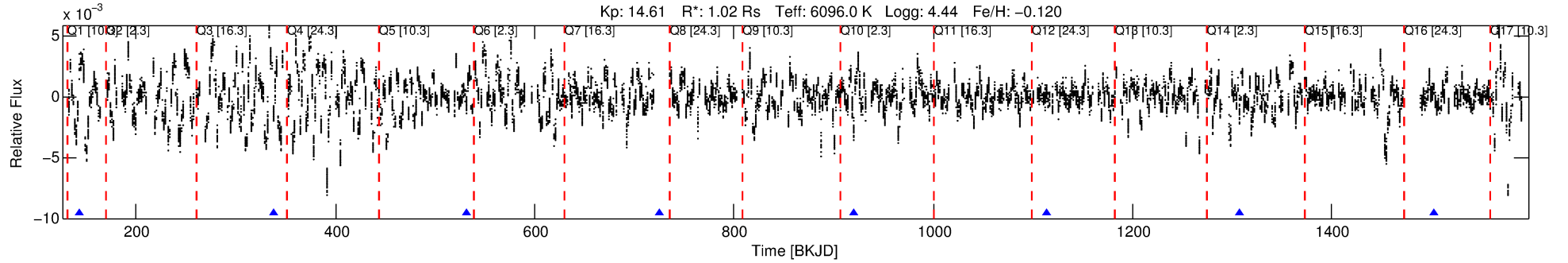
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002714932-04

No Significant Match Found

DV One-Page Summary

KIC: 2714932 Candidate: 4 of 9 Period: 194.037 d



DV Fit Results:

Period = 194.03659 [0.01163] d
Epoch = 143.7614 [0.0554] BKJD
Rp/R* = 0.0249 [0.0059]
a/R* = 21.68 [13.08]
b = 0.43 [1.15]
Seff = 2.91 [1.20]
Teq = 333 [34] K
Rp = 2.76 [1.11] Re
a = 0.6625 [0.1788] AU
Ag = 18799.31 [12755.57] [1.47σ]
Teffp = 6029 [864] K [6.59σ]

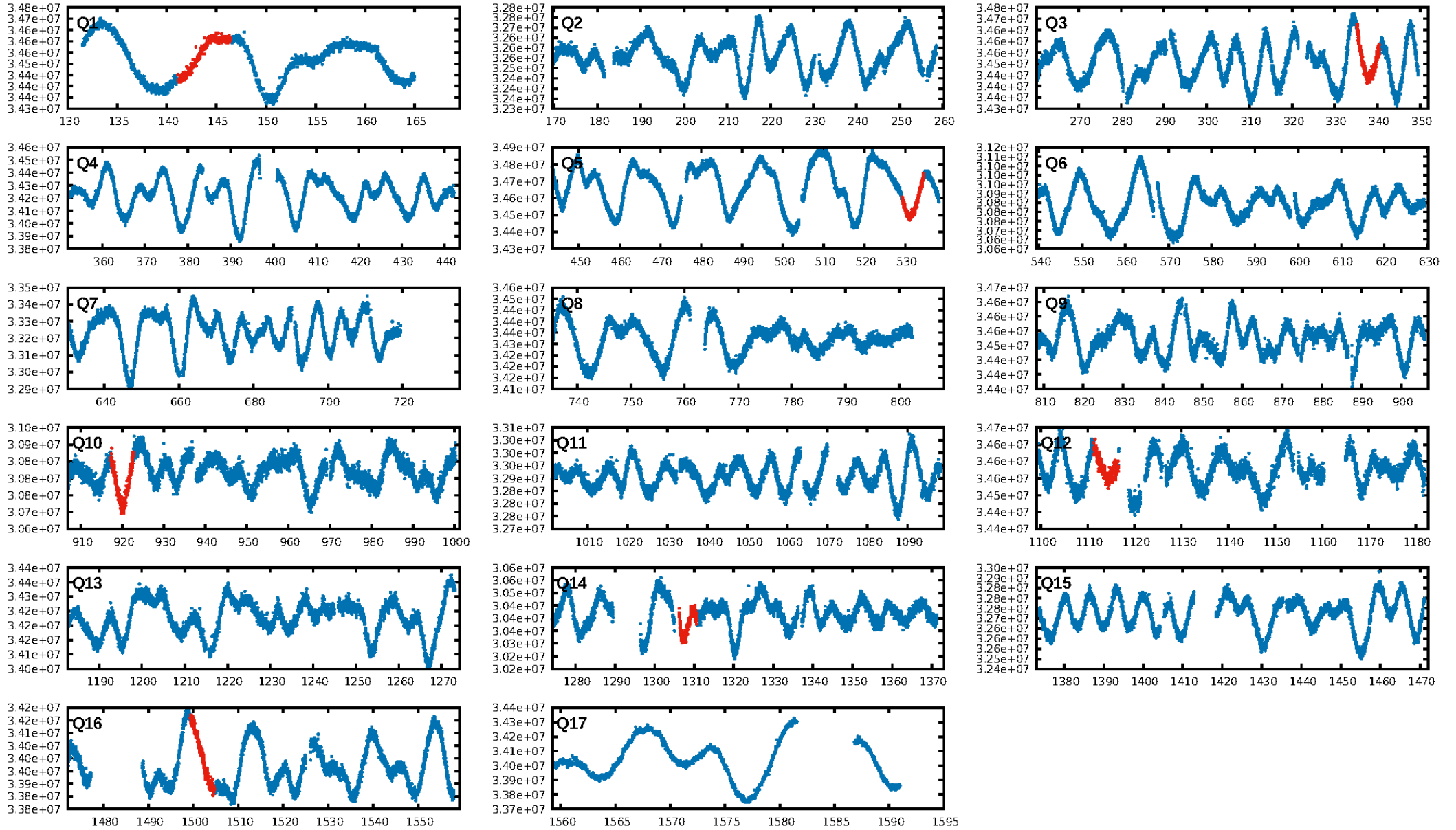
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [20.00σ]
LongPeriod-sig: 100.0% [8.80σ]
ModelChiSquare2-sig: 2.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.27e-24
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -1.276
Centroid-sig: 18.5%
Centroid-so: 0.905 arcsec [3.14σ]
OotOffset-rm: 0.378 arcsec [2.00σ]
KicOffset-rm: 0.374 arcsec [2.22σ]
OotOffset-st: 1/1/0/2 [4]
KicOffset-st: 1/1/0/2 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 0.00 [0/4]

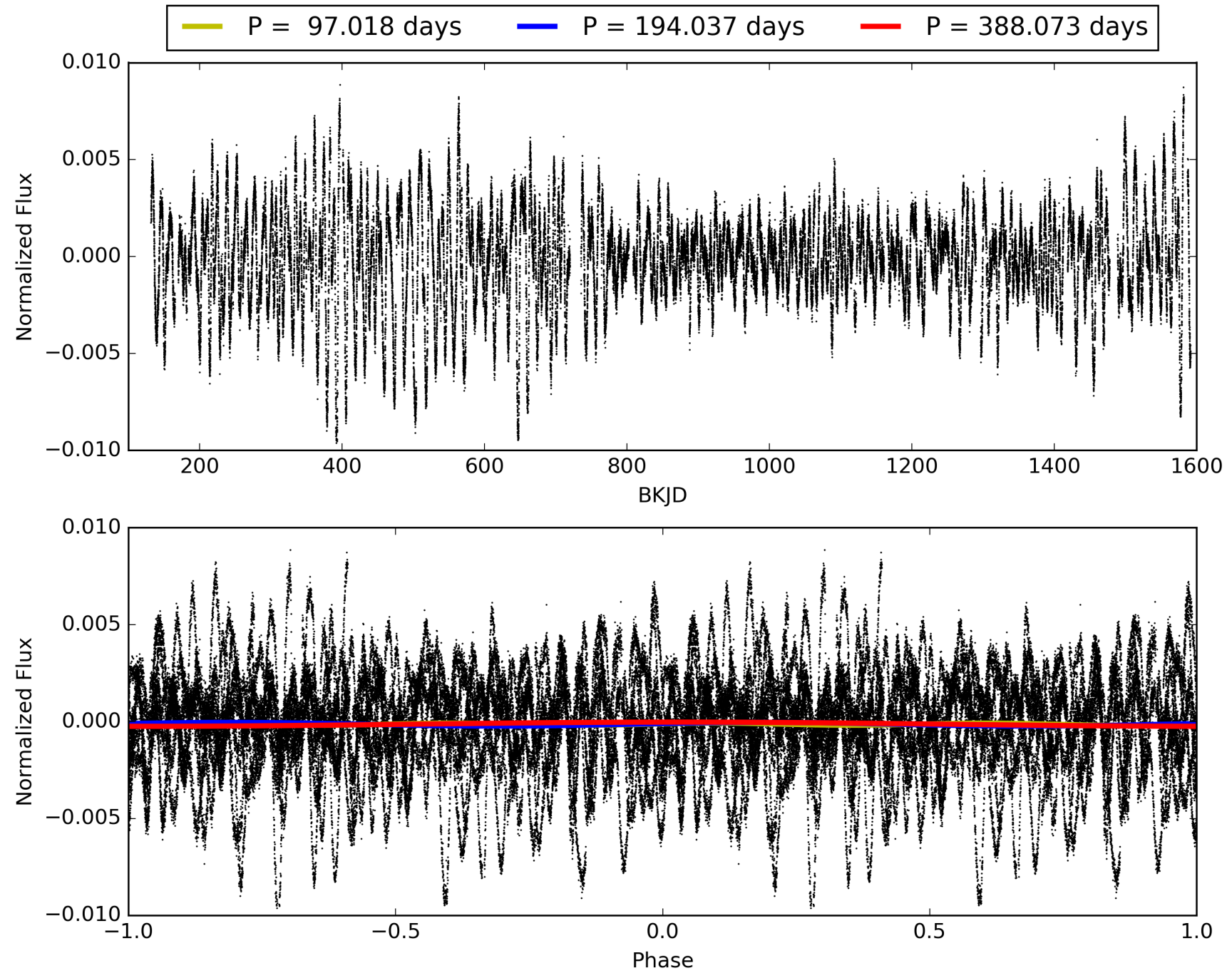
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:29:02 Z

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

TCE 002714932-04, PDC Light Curves

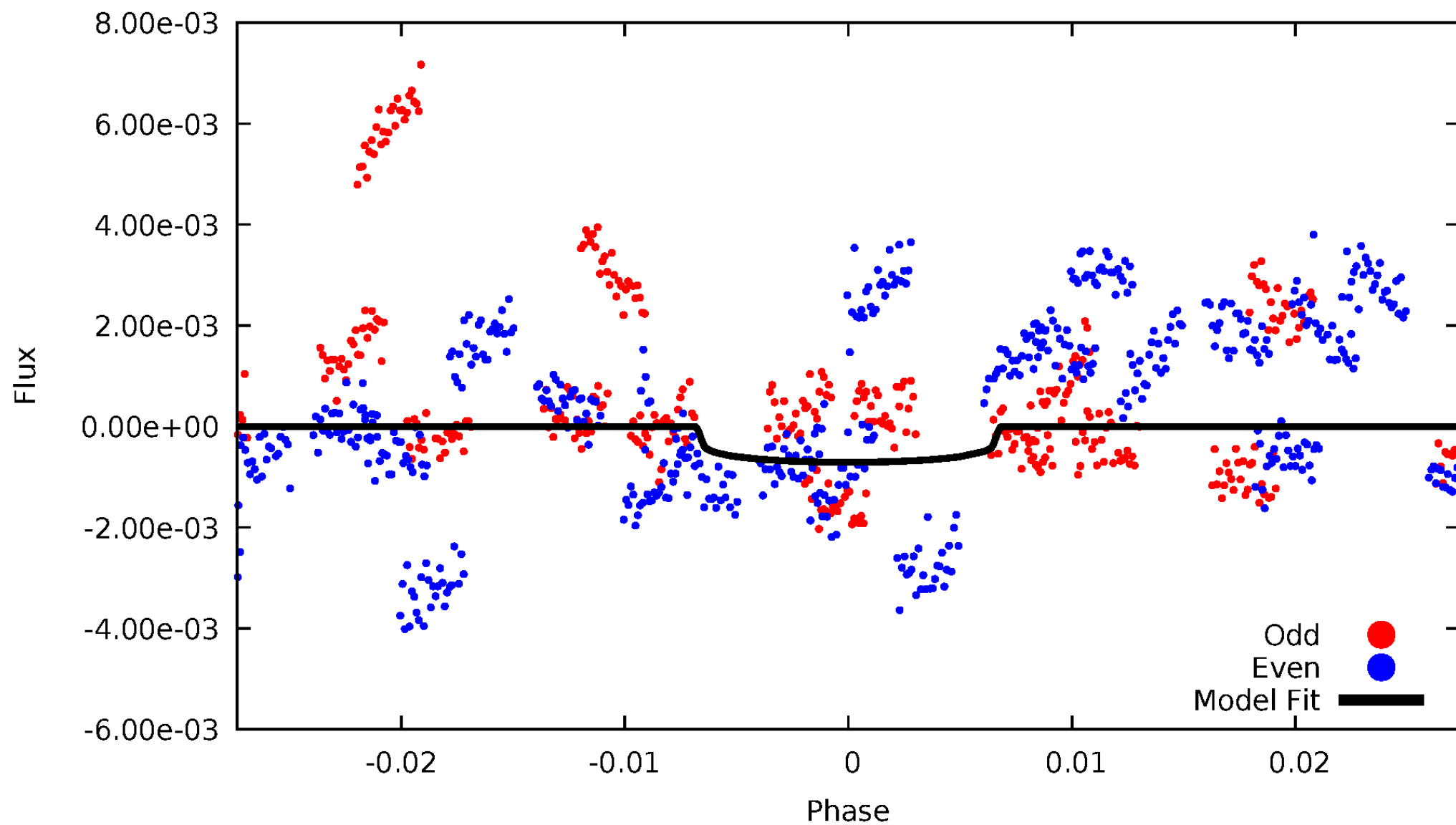


TCE 002714932-04



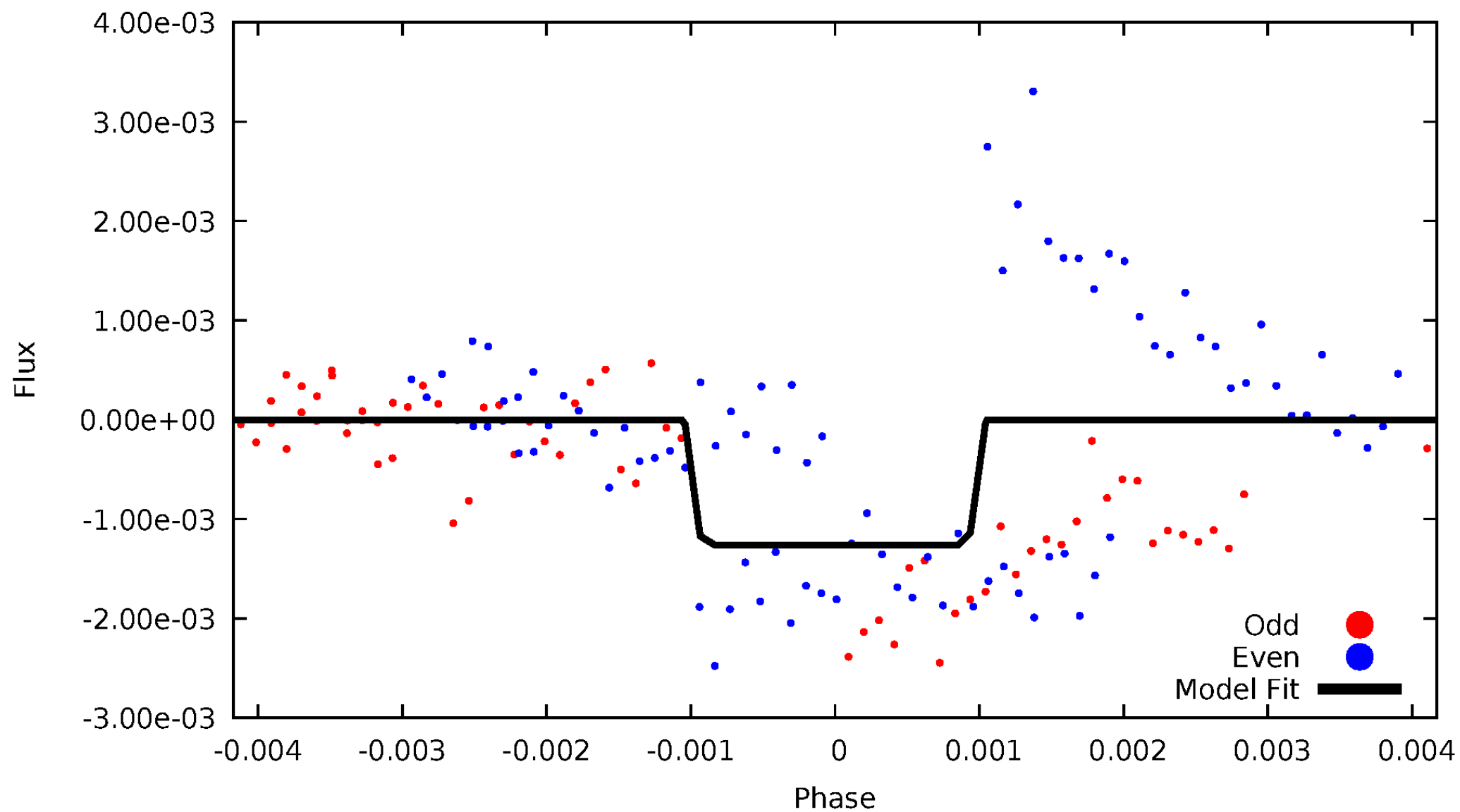
DV Odd/Even

TCE 002714932-04



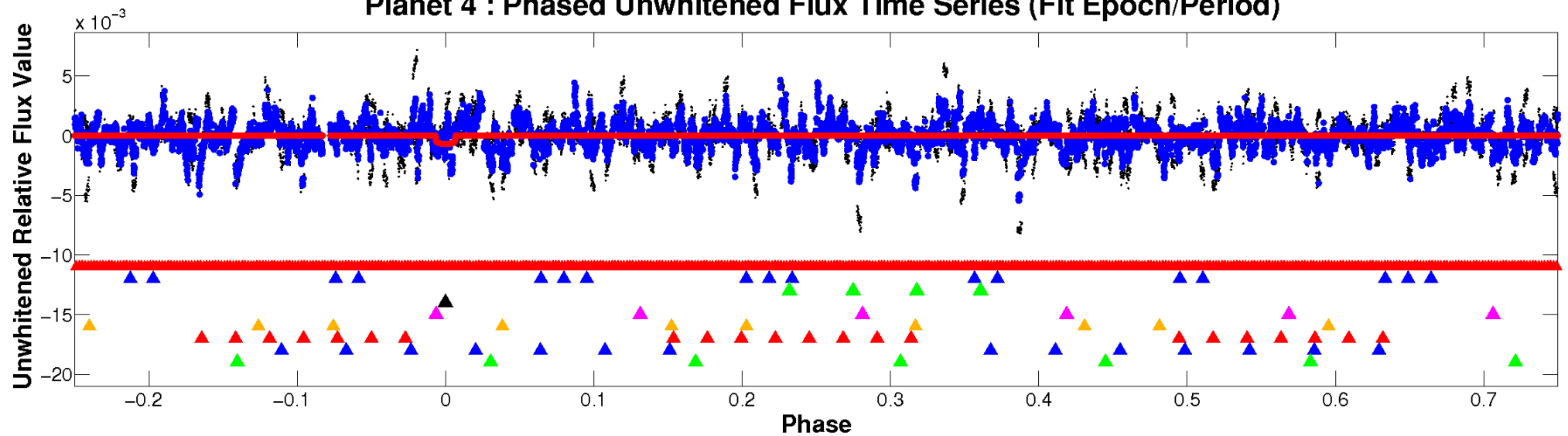
ALT Odd/Even

TCE 002714932-04

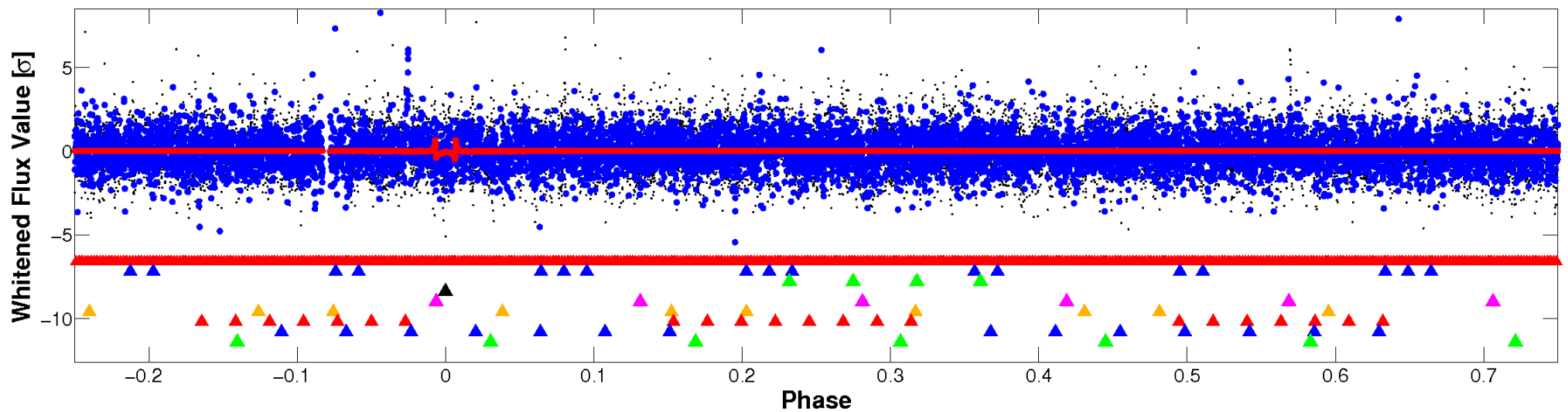


Non-Whitened Vs. Whitened Light Curve

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

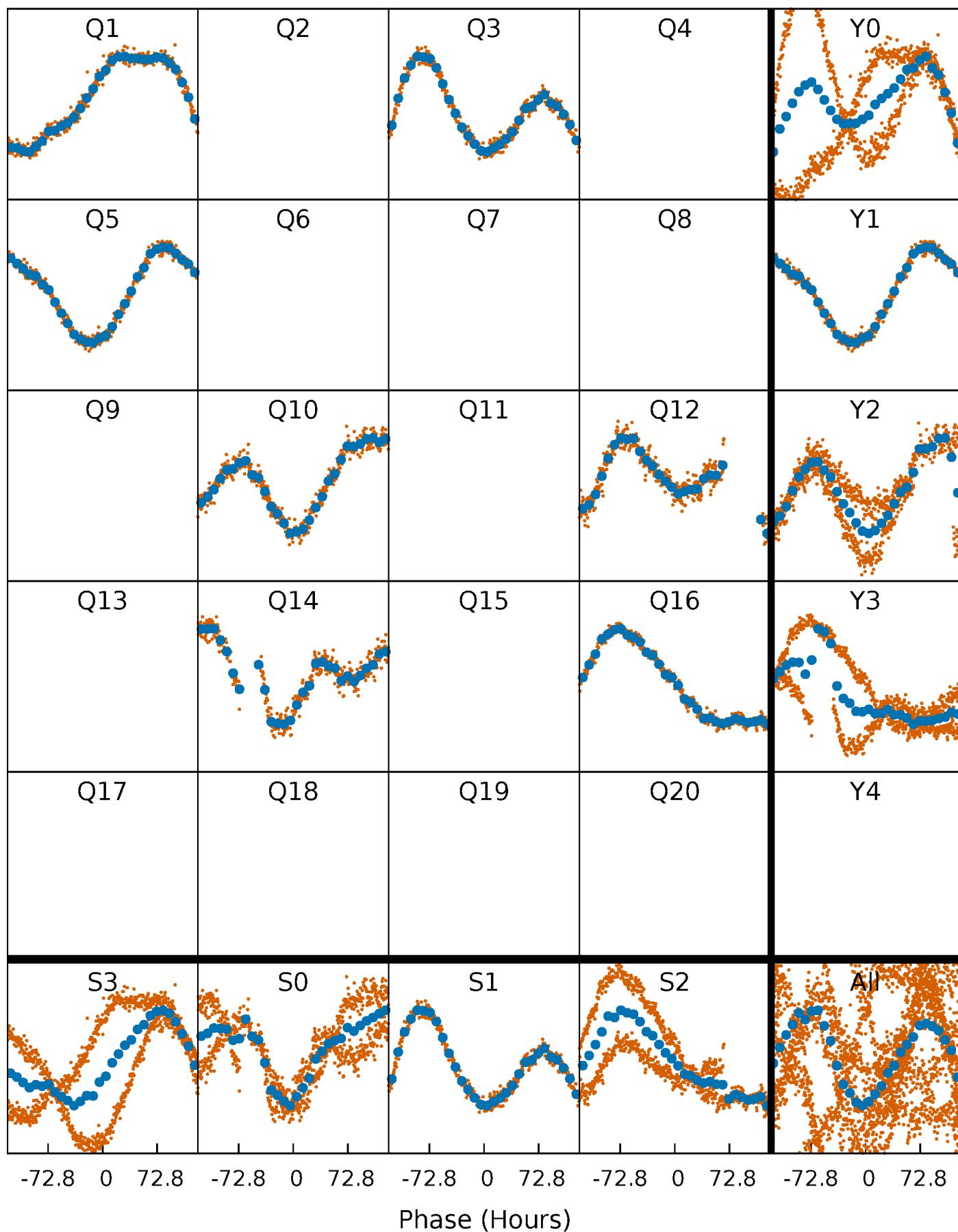


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



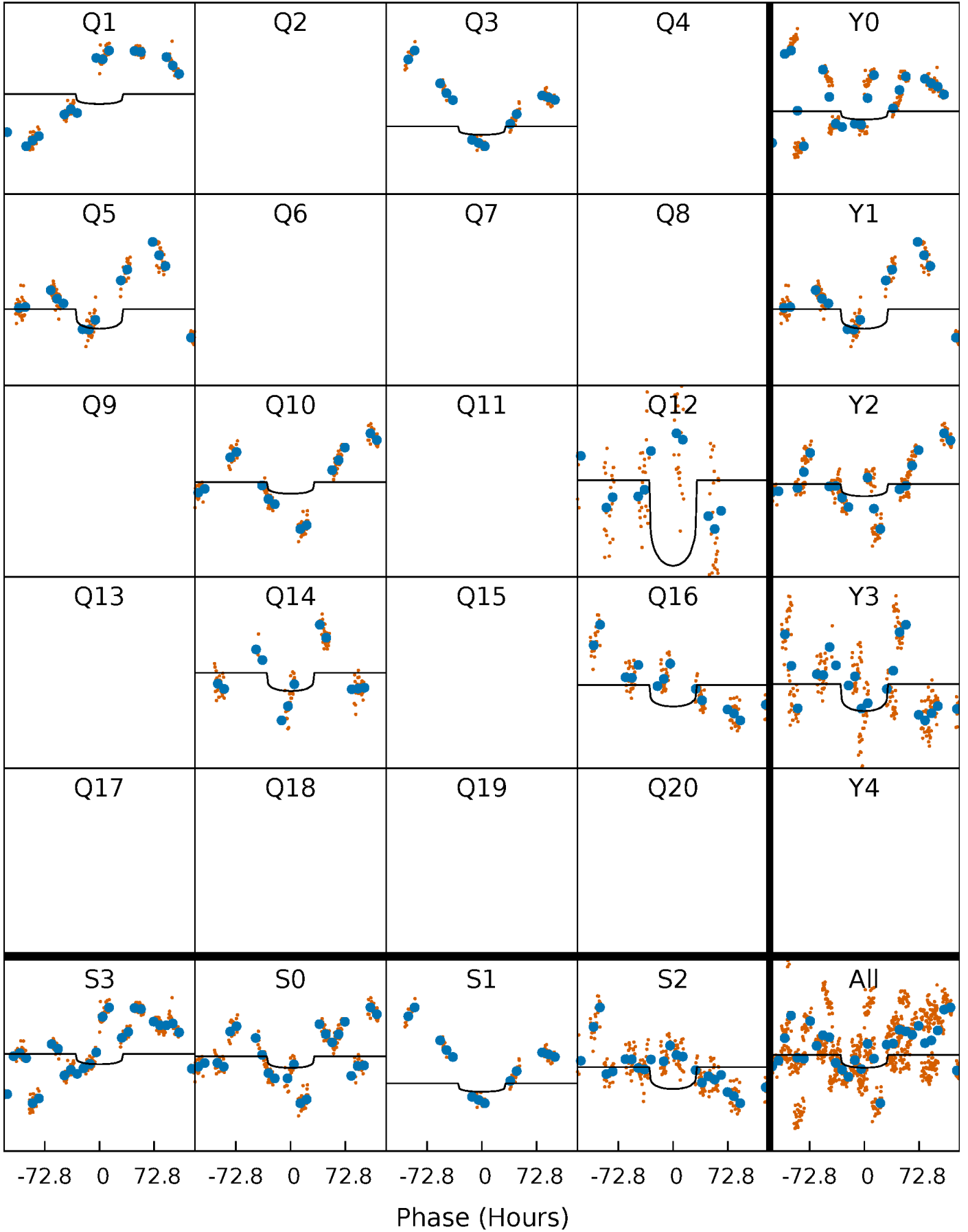
PDC Quarter-Phased Transit Curves

TCE 002714932-04 P=194.036588 Days $T_0=143.761410$ (BKJD)



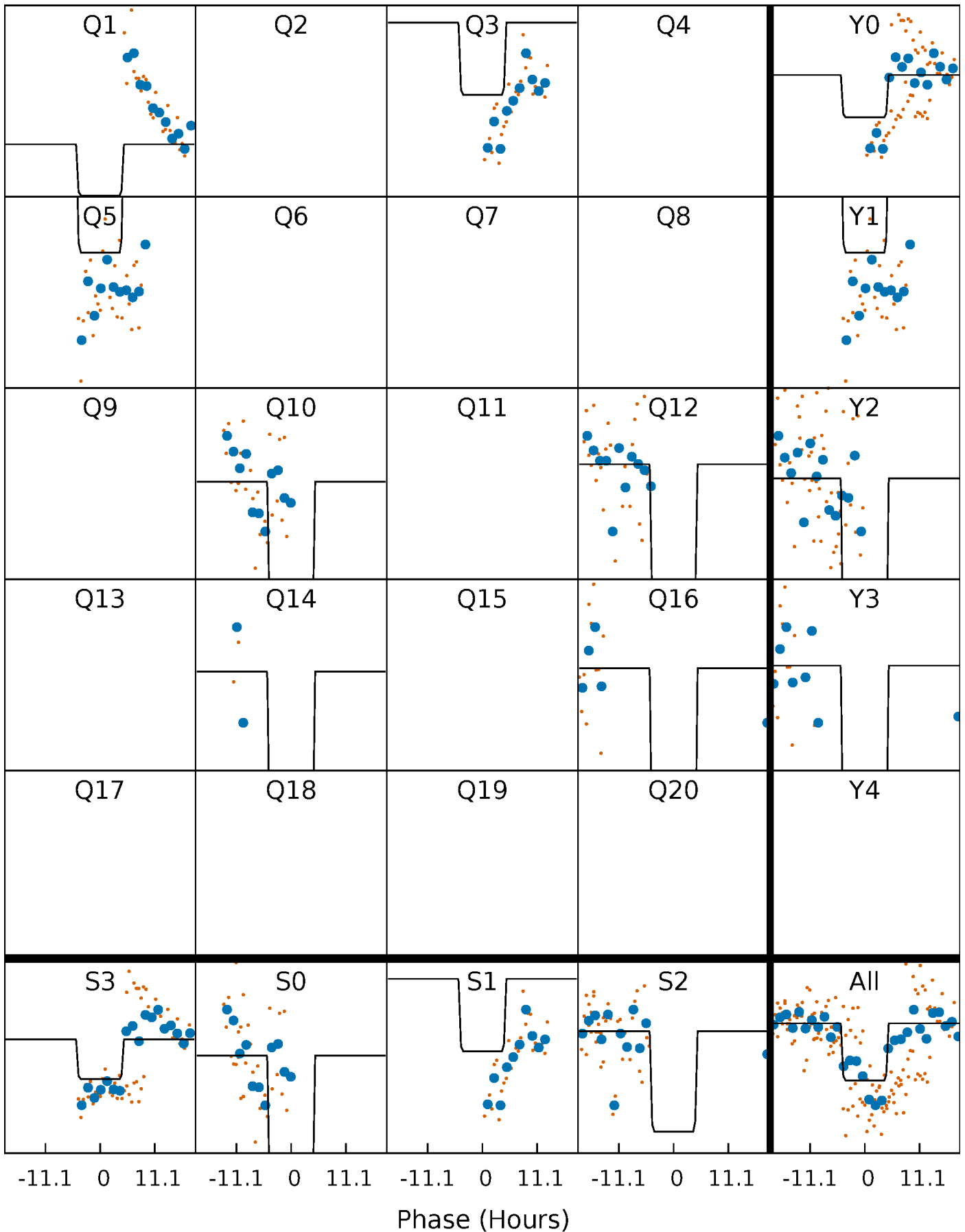
DV Quarter-Phased Transit Curves

TCE 002714932-04 P=194.036588 Days $T_0=143.761410$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

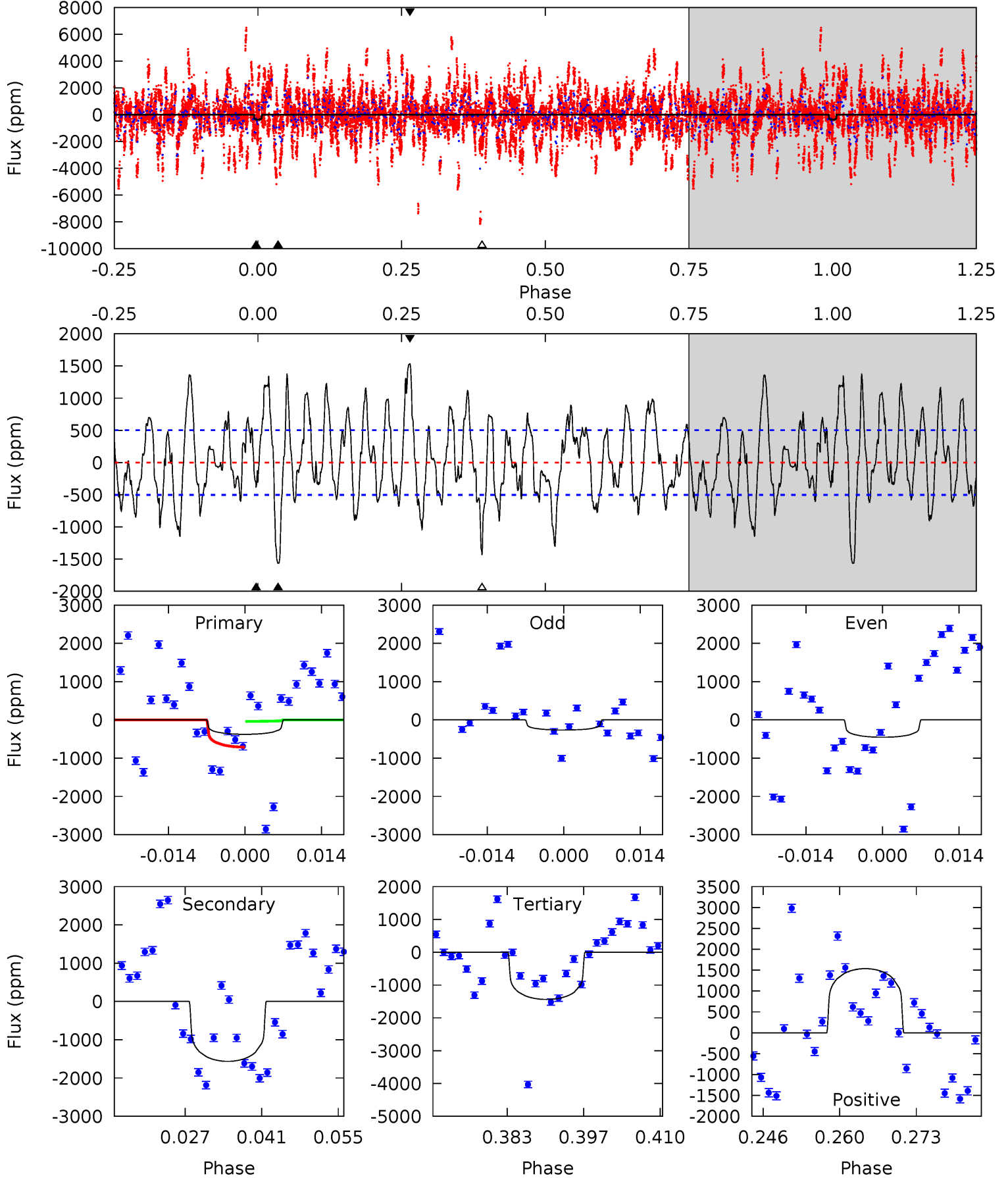
TCE 002714932-04 P=193.853184 Days $T_0=143.548125$ (BKJD)



DV Model-Shift Uniqueness Test

002714932-04, P = 194.036588 Days, E = 143.761410 Days

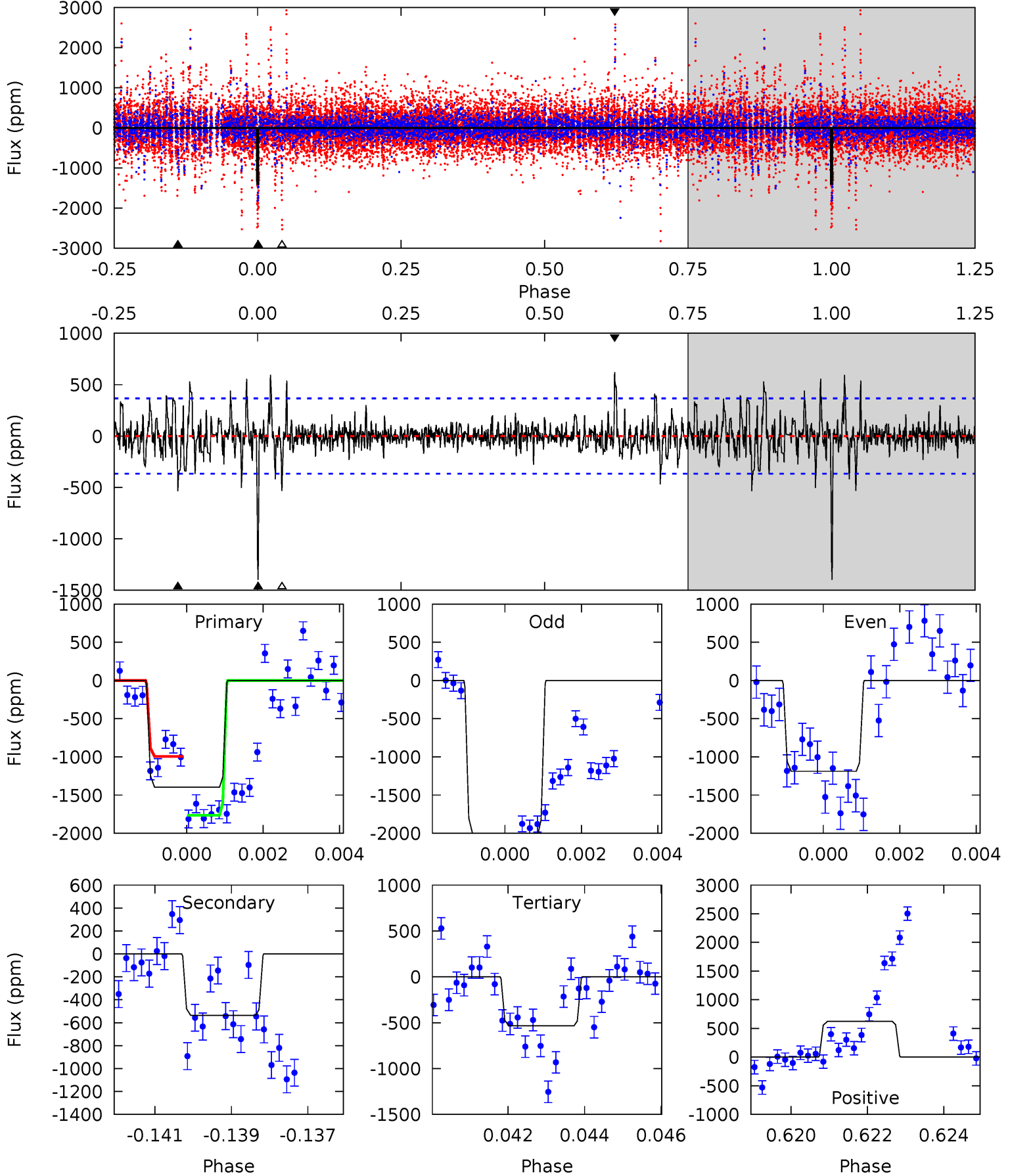
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.71	15.4	14.2	15.1	4.97	2.47	5.53	-10.5	-11.4	1.25	0.29	0.87	0.62	0.50	3.35



Alt Model-Shift Uniqueness Test

002714932-04, P = 193.853184 Days, E = 143.548125 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.3	7.81	7.77	9.06	5.33	3.09	1.58	12.6	11.3	0.04	-1.25	5.09	0.74	0.31	5.55



Stellar Parameters For KIC 002714932

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6096^{+189}_{-210}	$4.437^{+0.070}_{-0.210}$	$-0.120^{+0.250}_{-0.350}$	$1.016^{+0.330}_{-0.132}$	$1.026^{+0.153}_{-0.126}$	$1.377^{+0.505}_{-0.707}$
	+3%/-3%	+2%/-5%	+208%/-292%	+32%/-13%	+15%/-12%	+37%/-51%
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 002714932-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1565 ± 102	$2.89^{+0.88}_{-0.69}$	474^{+36}_{-24}	7828^{+1422}_{-981}	44847^{+32821}_{-18510}
Alt.	-536 ± 69	$4.13^{+0.94}_{-0.78}$	474^{+37}_{-24}	4977^{+477}_{-369}	7244^{+4113}_{-2441}

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

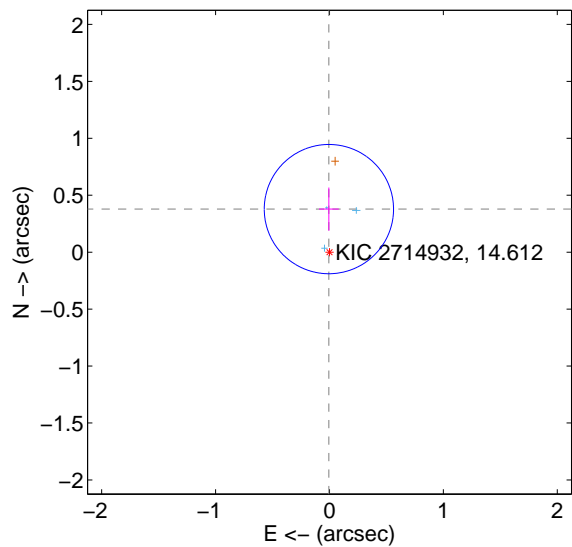
Supplemental centroid analysis for 002714932-04. Kepler magnitude: 14.61. Transit SNR 3.54

There are 3 quarters with good PRF difference image offsets

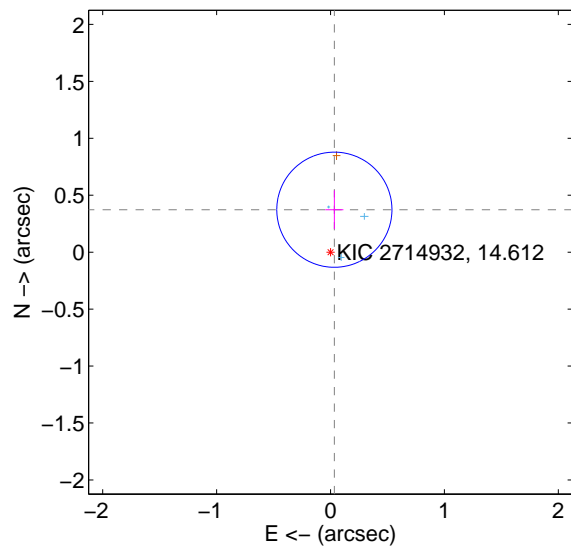
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.378 ± 0.189	2.00	0.005 ± 0.087	0.378 ± 0.190
PRF-fit source offset from KIC position	0.374 ± 0.169	2.22	-0.034 ± 0.080	0.373 ± 0.170
photometric centroid source offset	0.91 ± 0.29	3.14	-0.08 ± 0.27	-0.90 ± 0.29

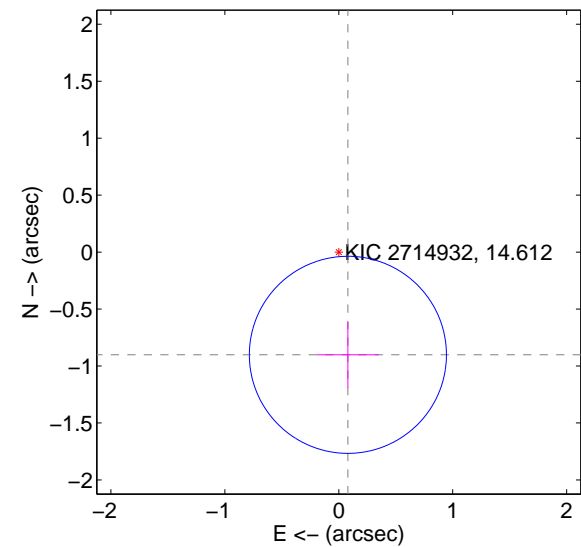
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

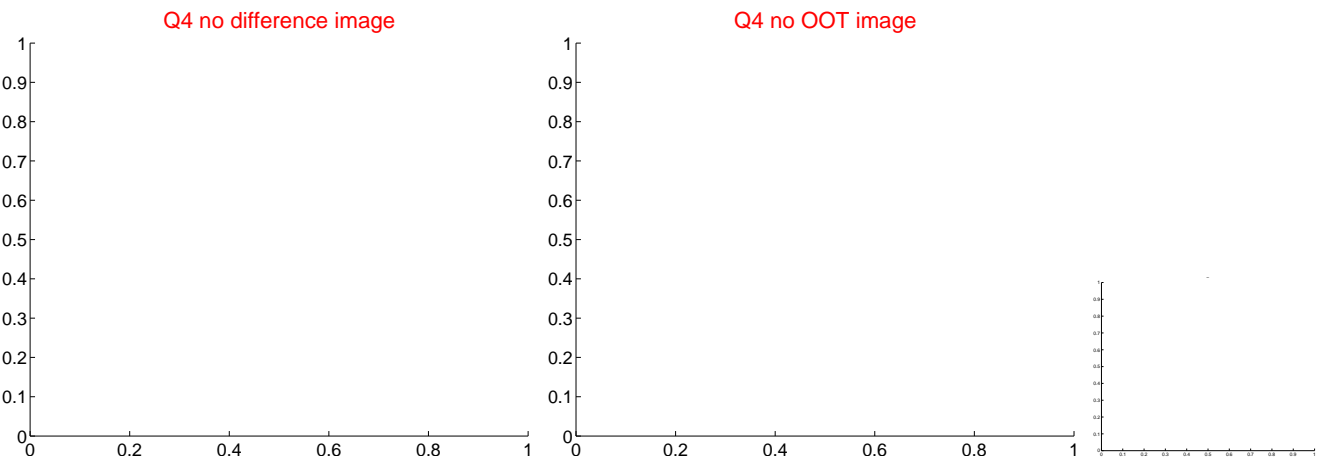
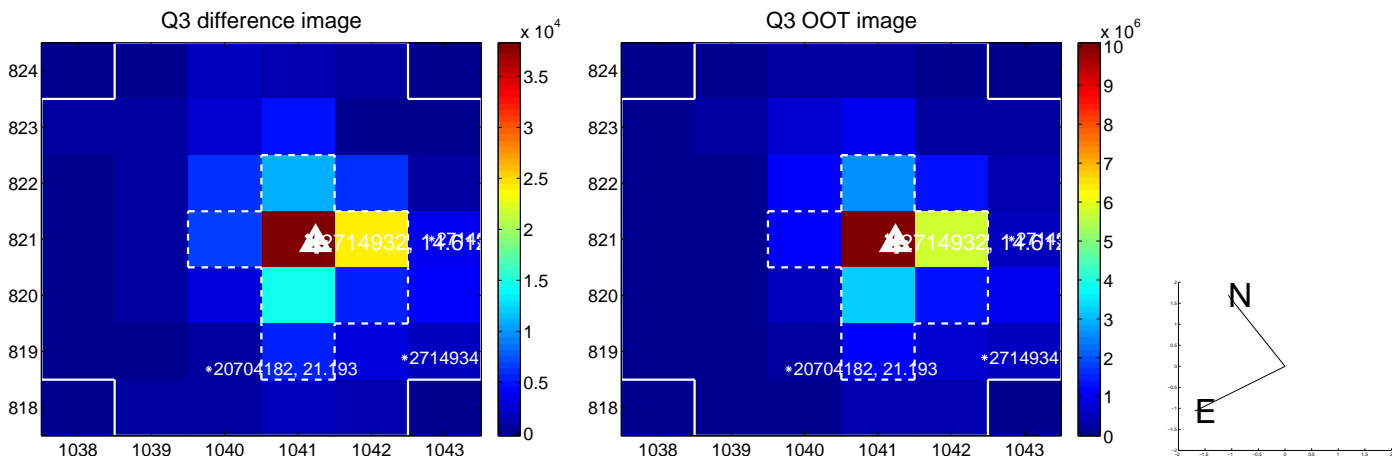
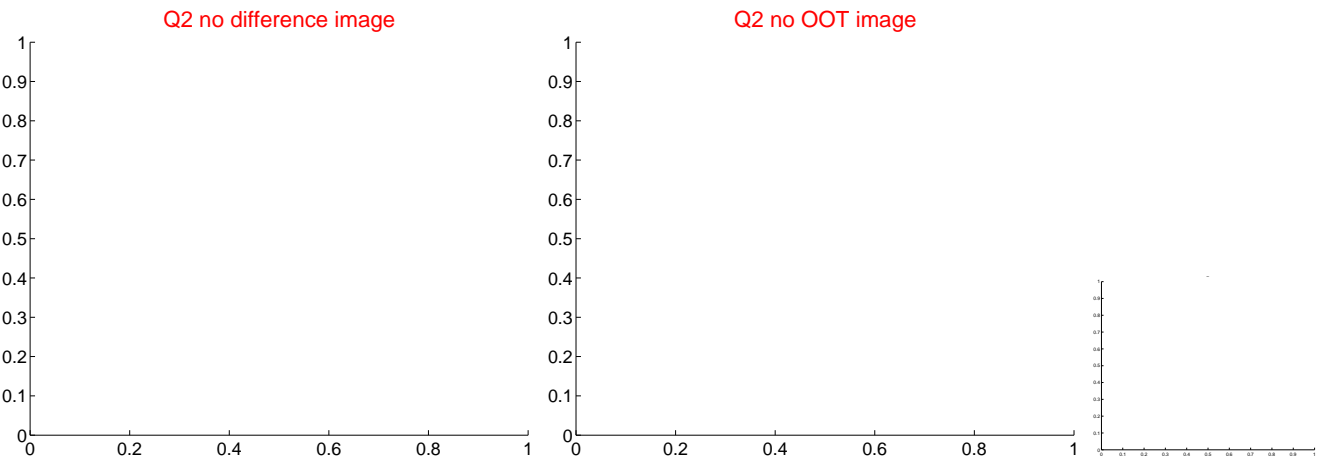
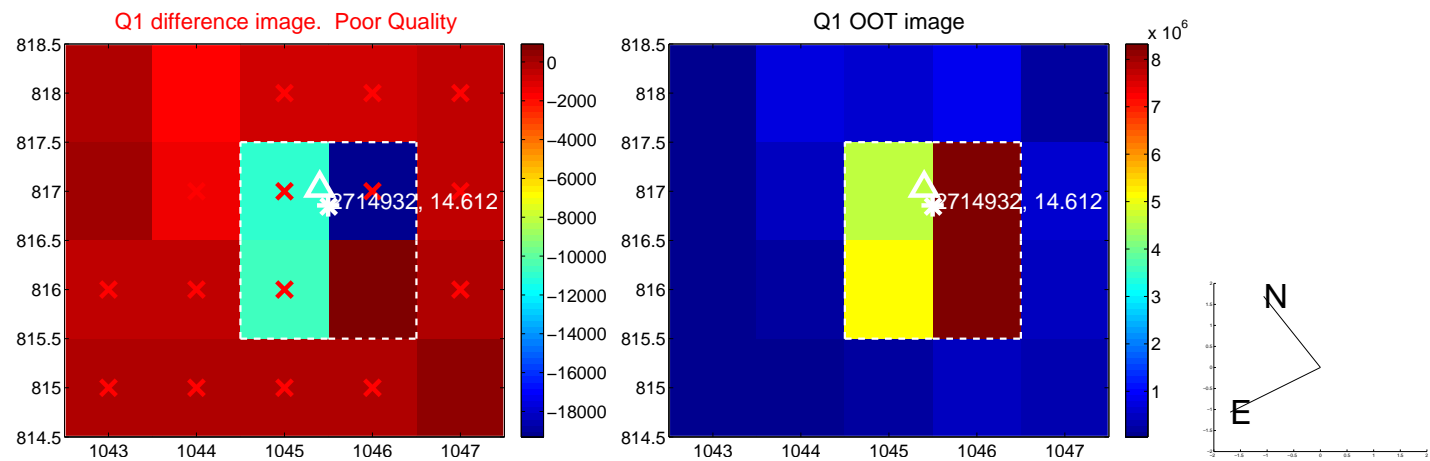


offset from photometric centroids

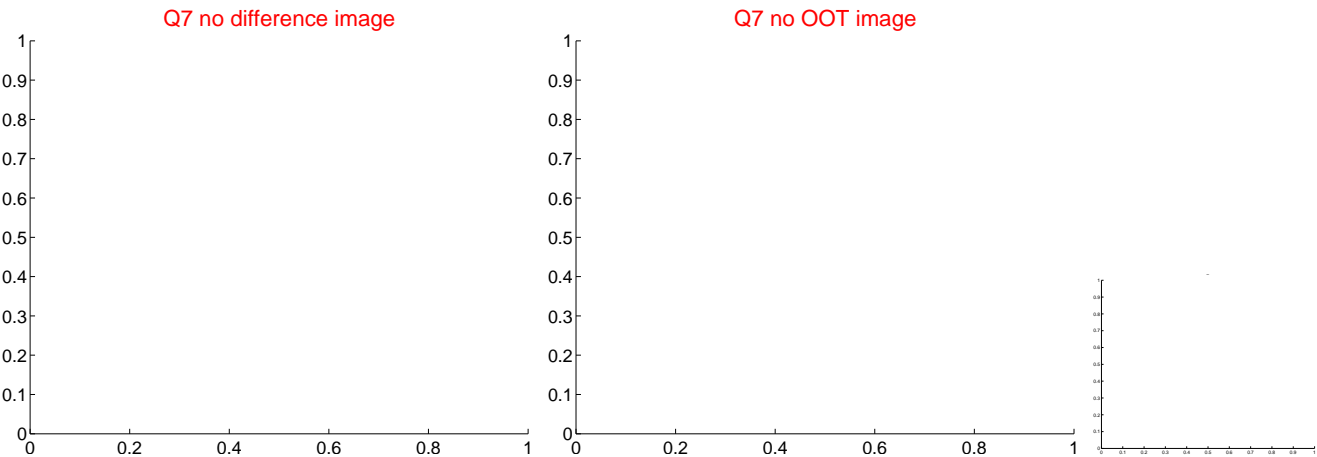
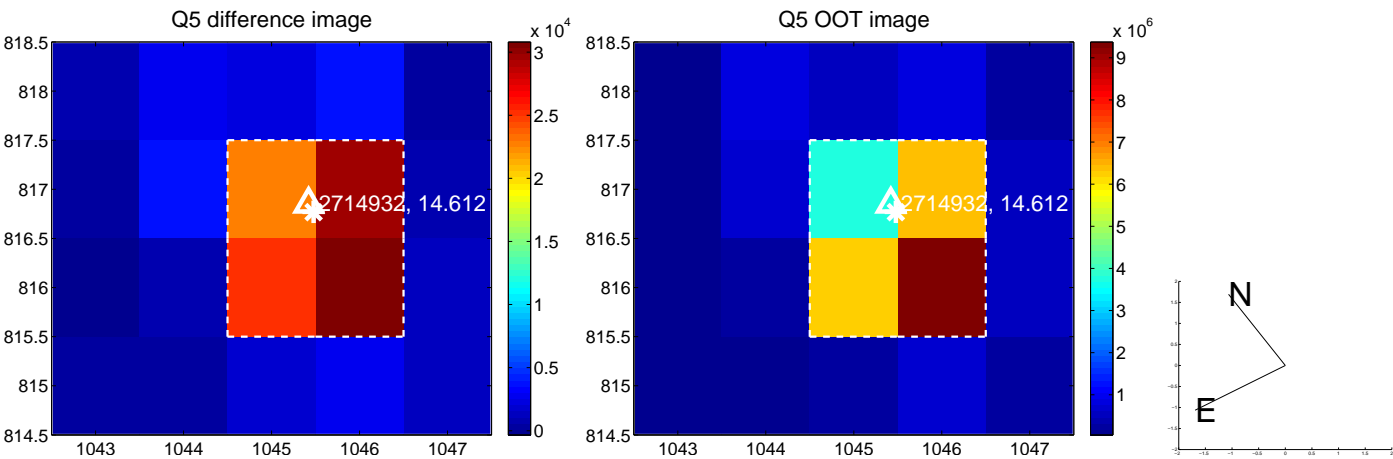


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

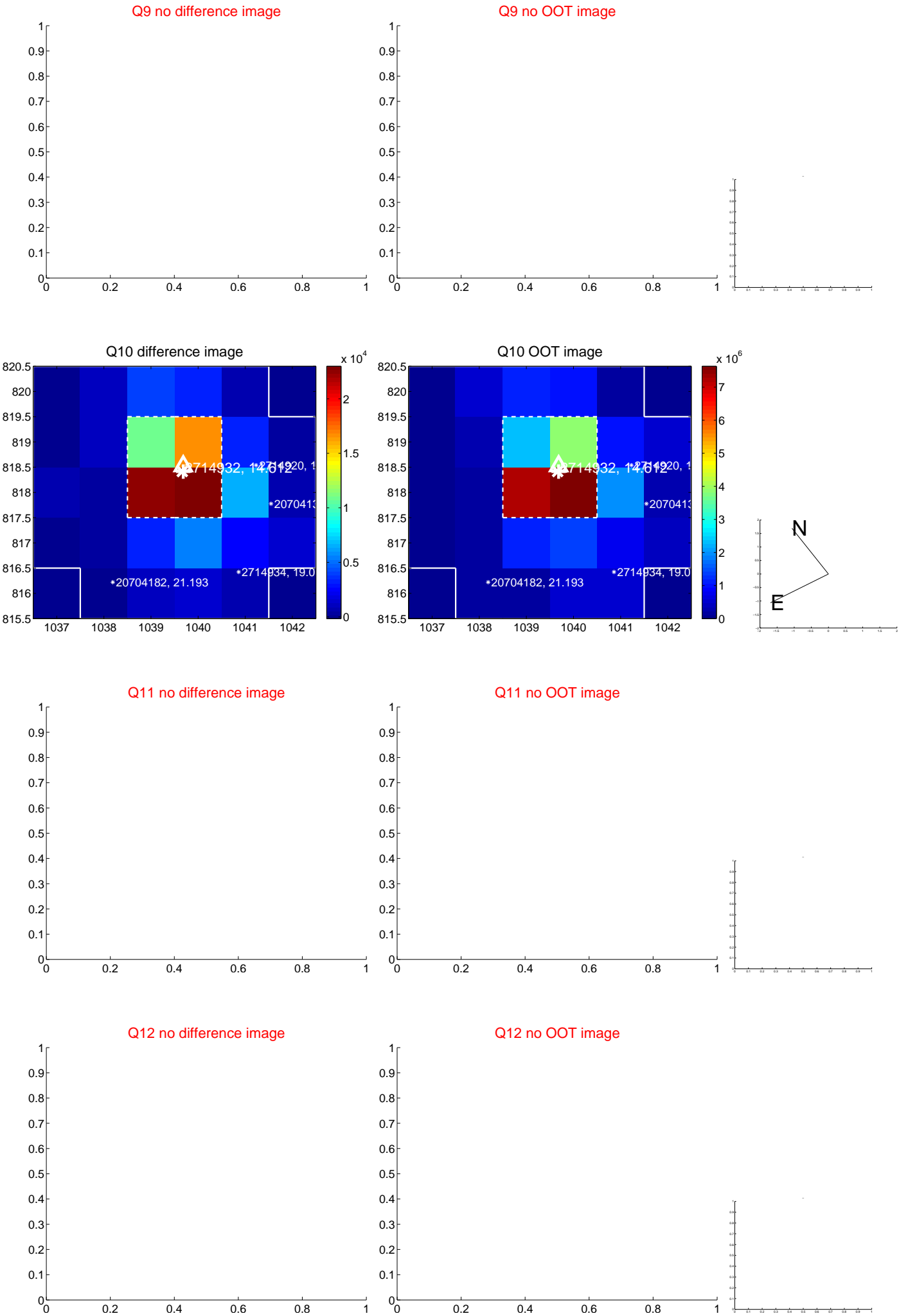
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



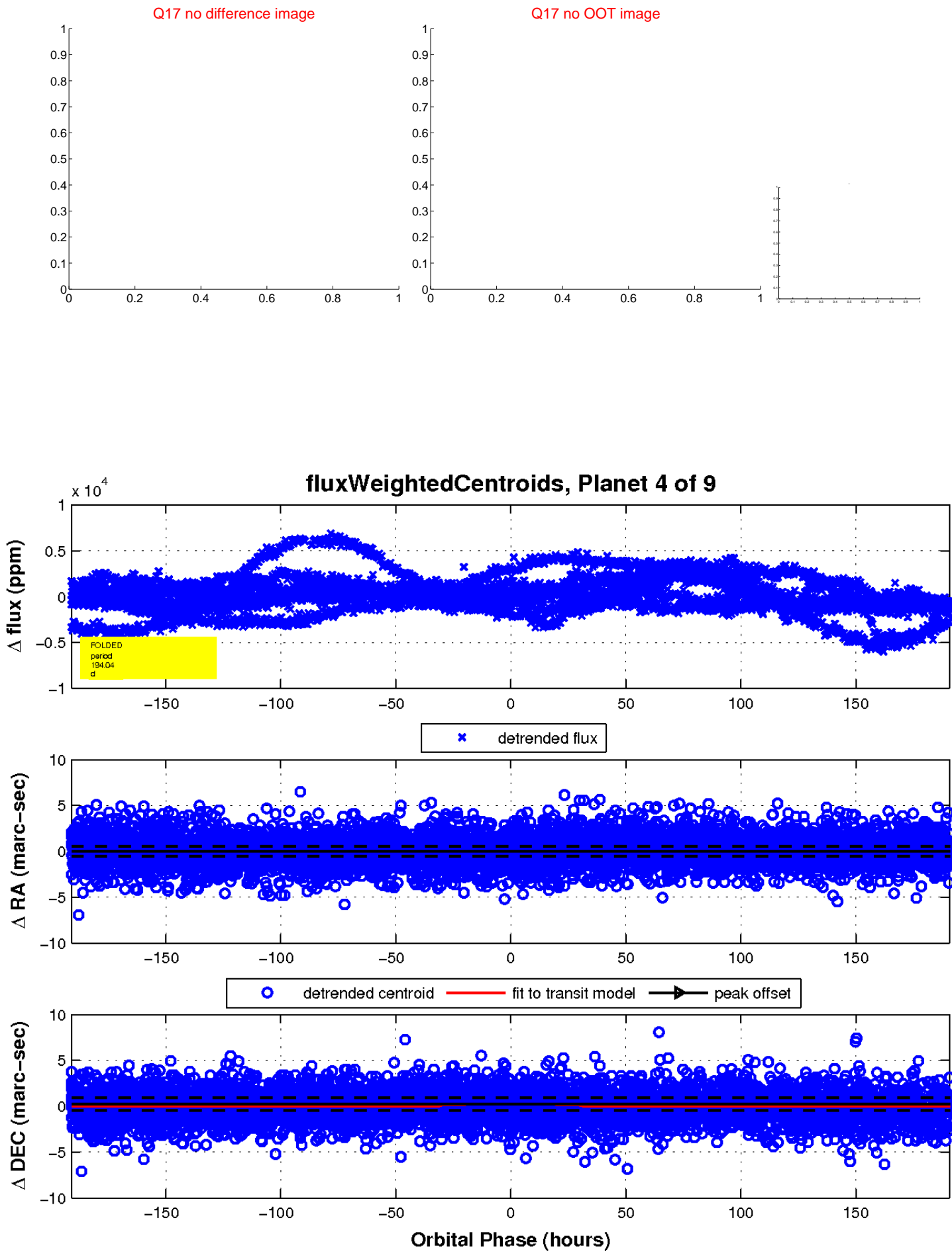
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

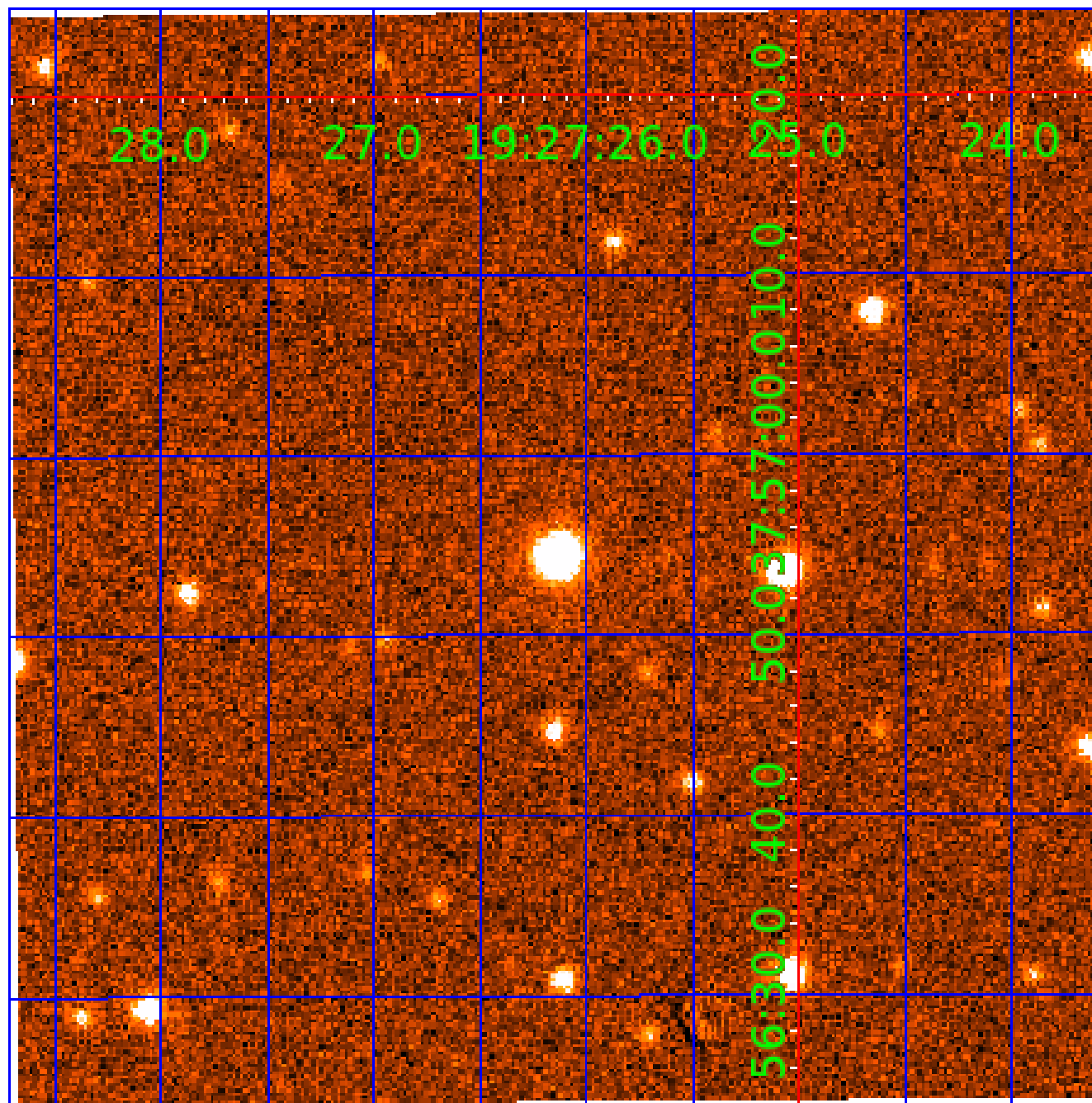


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 002714932

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})
002714932-01	OBS	No	1.936609	133.370964	83.2	10.788	11.1	12.1	1.02	6096	0.93	1353.99
002714932-02	OBS	No	83.586553	183.122566	621.7	30.201	35.1	5.7	1.02	6096	2.53	8.94
002714932-03	OBS	No	379.740193	213.757033	5541.4	40.236	17.8	12.8	1.02	6096	10.27	1.19
002714932-04	OBS	No	194.036588	143.761410	709.8	63.663	14.7	3.5	1.02	6096	2.76	2.91
002714932-05	OBS	No	249.813954	169.244968	595.2	15.000	10.9	-1.0	1.02	6096	2.48	2.08
002714932-06	OBS	No	139.996979	227.369717	657.3	12.352	9.8	5.9	1.02	6096	2.83	4.50
002714932-07	OBS	No	66.159045	173.590743	538.3	13.883	9.3	5.5	1.02	6096	2.69	12.21
002714932-08	OBS	No	101.251584	215.094722	823.1	16.571	9.0	6.7	1.02	6096	3.05	6.93
002714932-09	OBS	No	220.851963	149.666990	4184.1	35.946	8.4	9.1	1.02	6096	7.29	2.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002714932-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
002714932-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
002714932-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
002714932-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— INCONSISTENT_TRANS
002714932-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS
002714932-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
002714932-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
002714932-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
002714932-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS

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

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

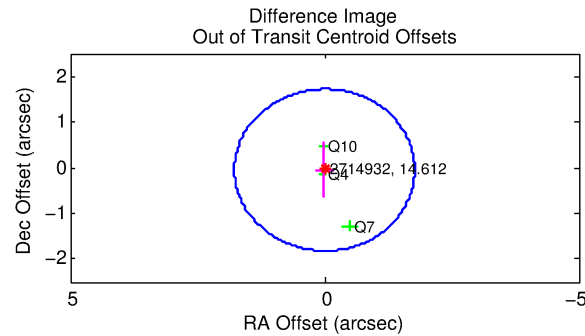
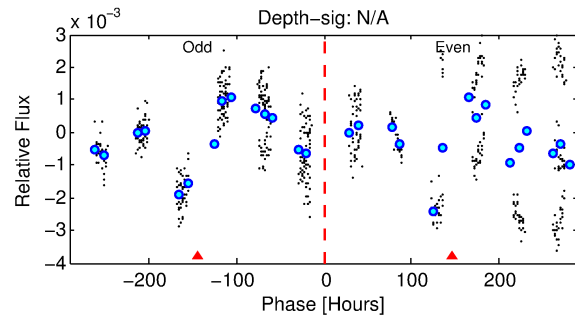
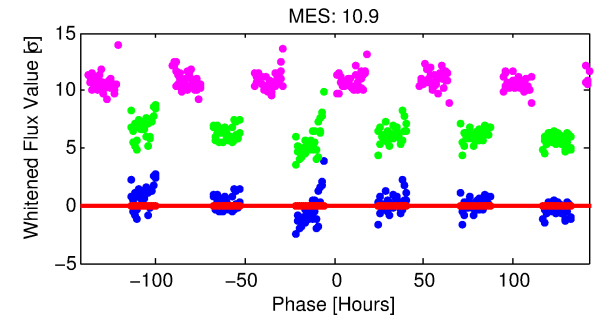
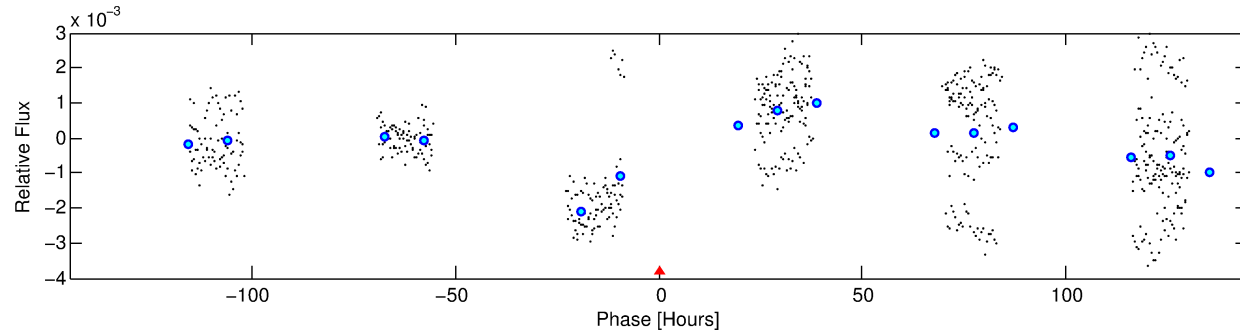
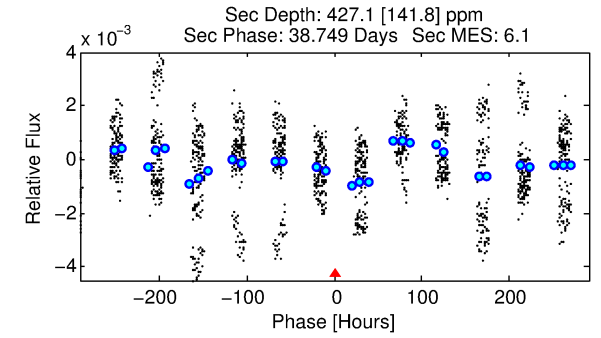
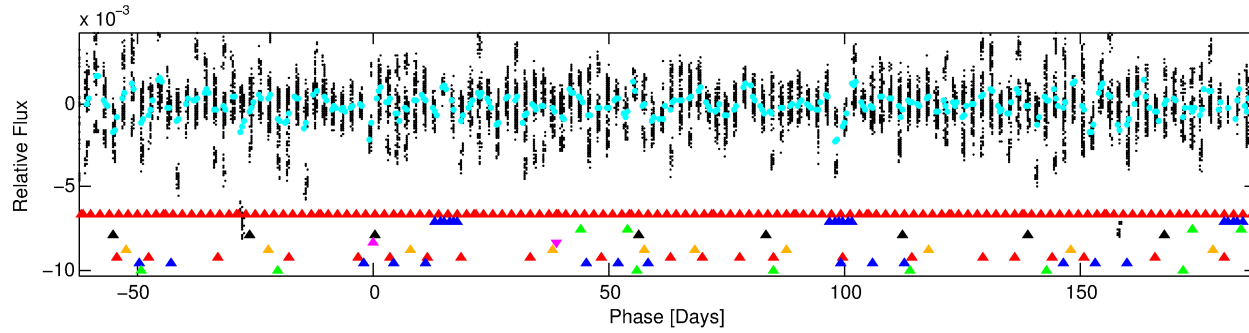
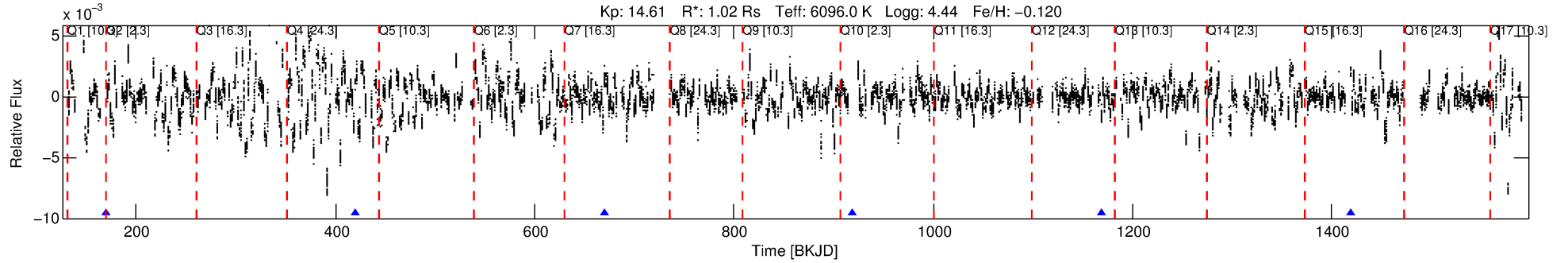
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002714932-05

No Significant Match Found

DV One-Page Summary

KIC: 2714932 Candidate: 5 of 9 Period: 249.814 d



TPS TCE Results:

Period = 249.81395 d
Epoch = 169.2450 BKJD

DV fit results are unavailable

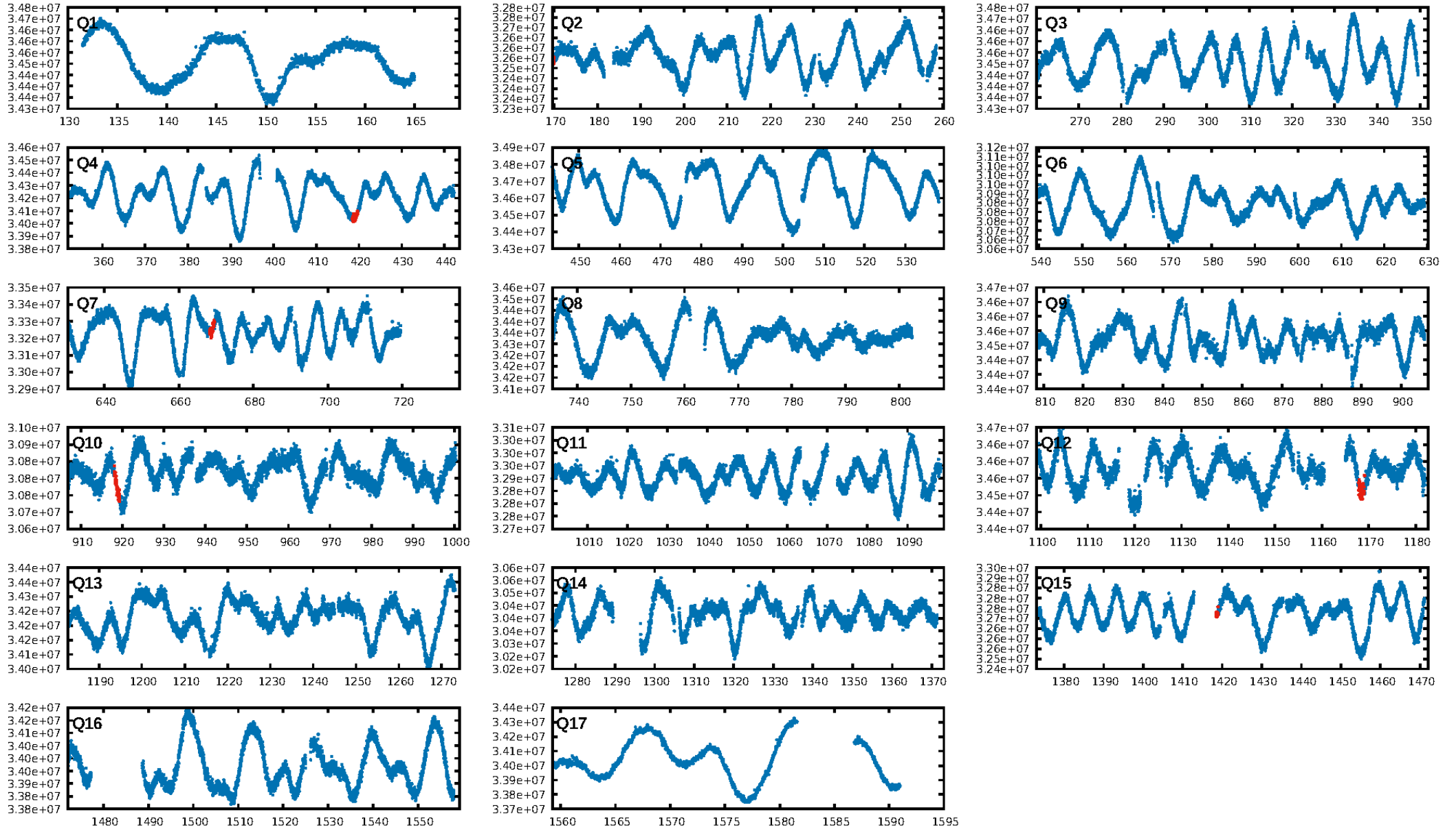
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [17.85σ]
LongPeriod-sig: 100.0% [72.62σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.62e-12
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.5047
Centroid-sig: 62.5%
Centroid-so: 0.590 arcsec [4.75σ]
OotOffset-rm: 0.048 arcsec [0.08σ]
KicOffset-rm: 0.172 arcsec [0.45σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 0.00 [0/3]

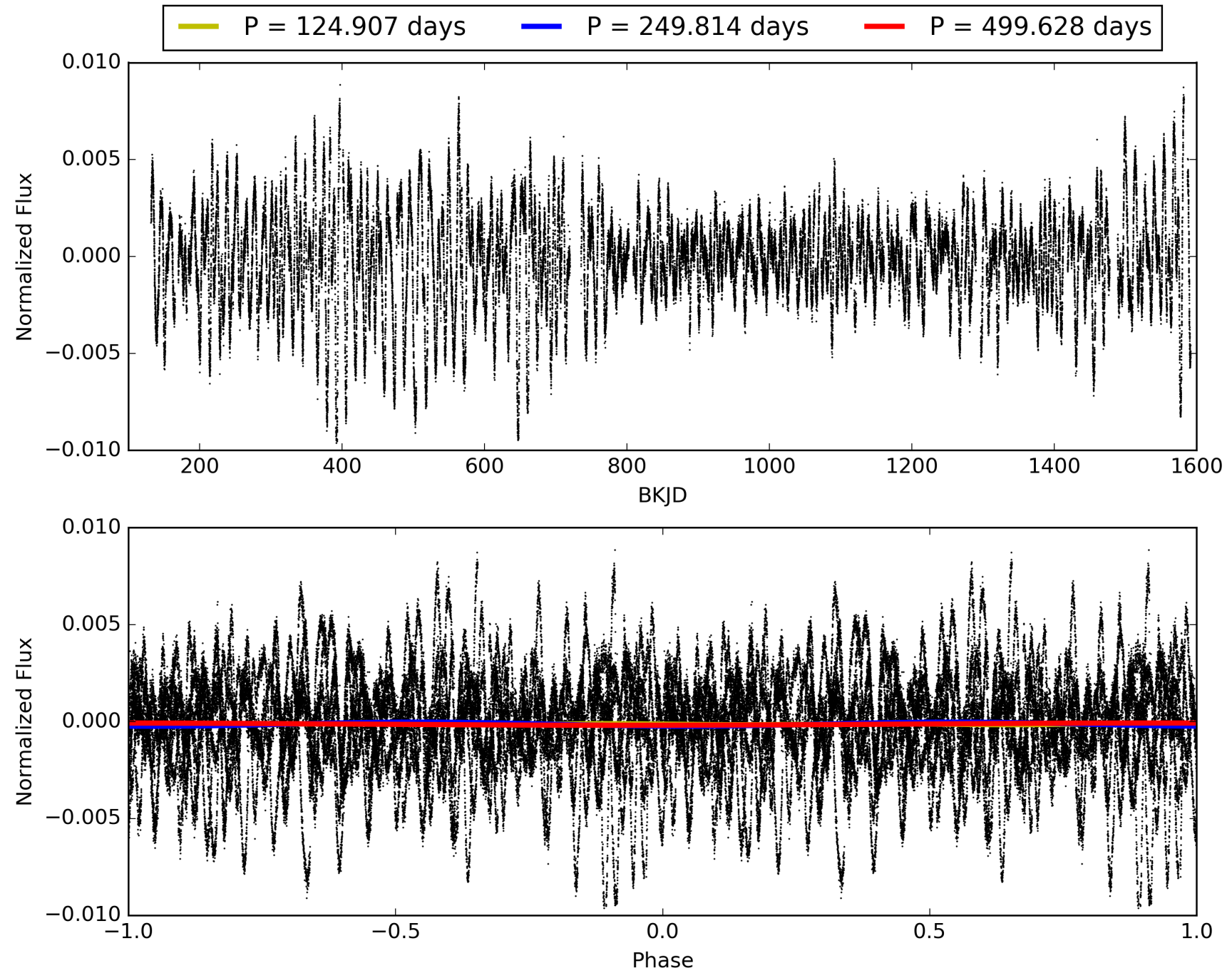
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:29:07 Z

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

TCE 002714932-05, PDC Light Curves

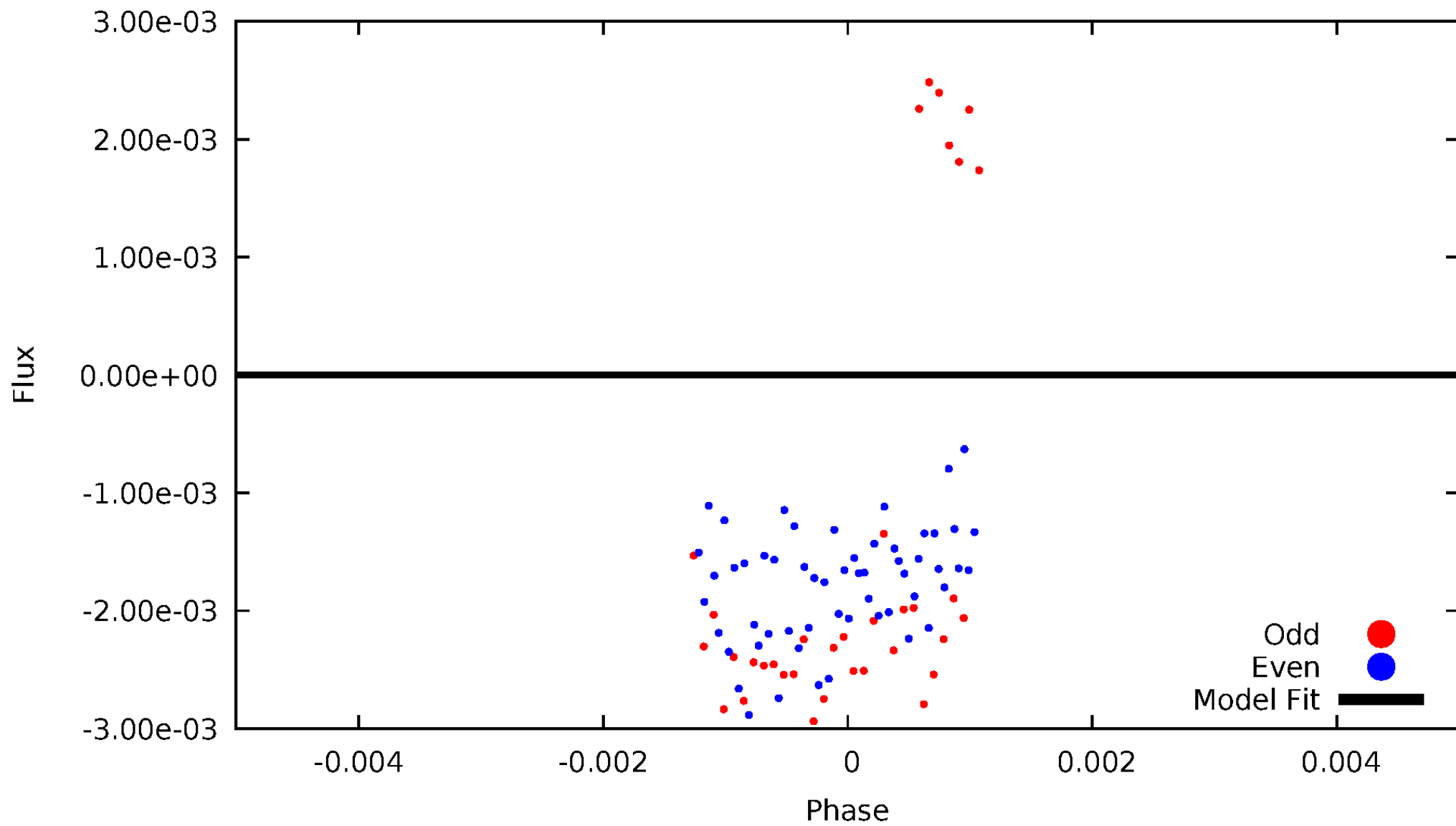


TCE 002714932-05



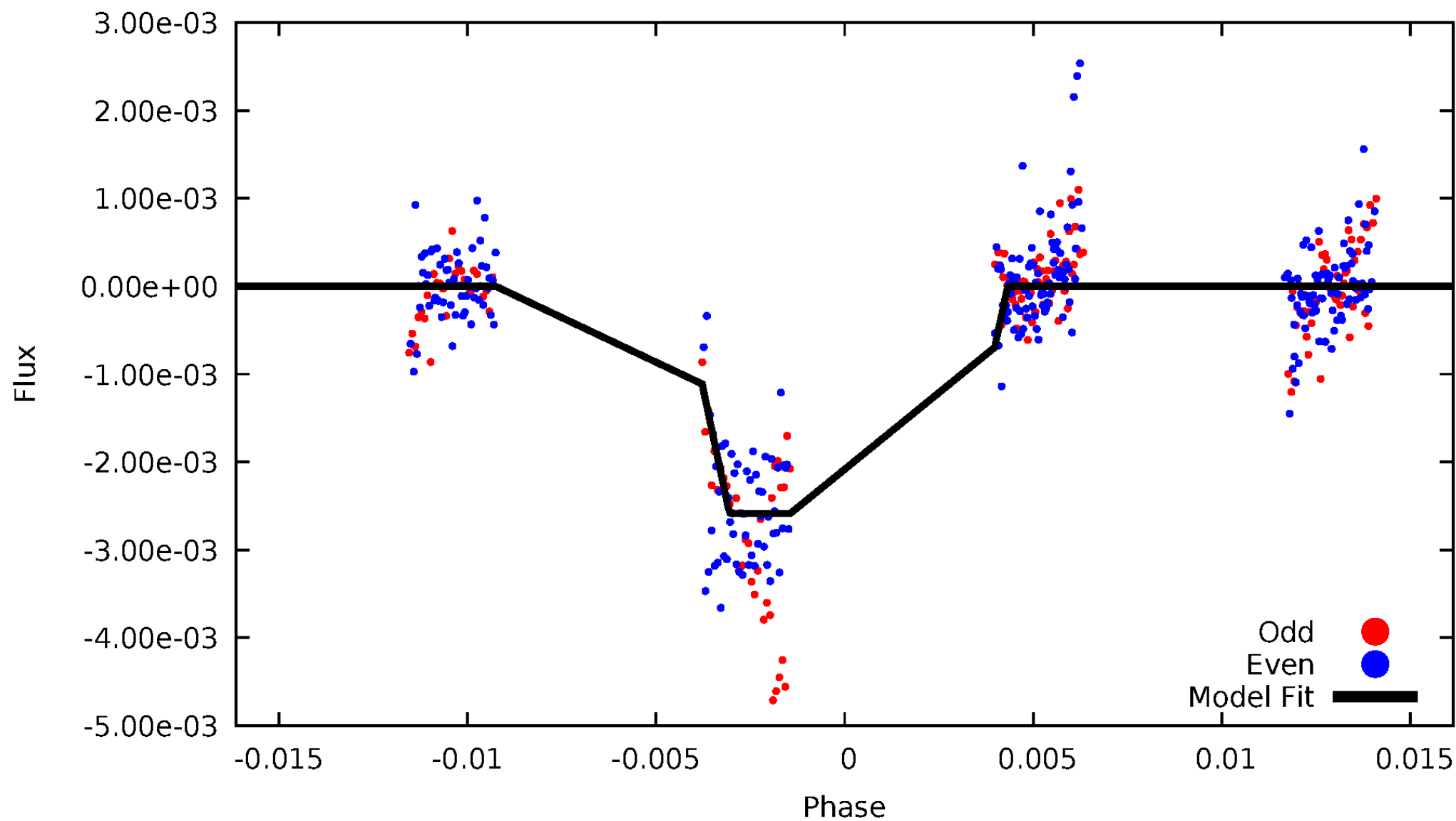
DV Odd/Even

TCE 002714932-05



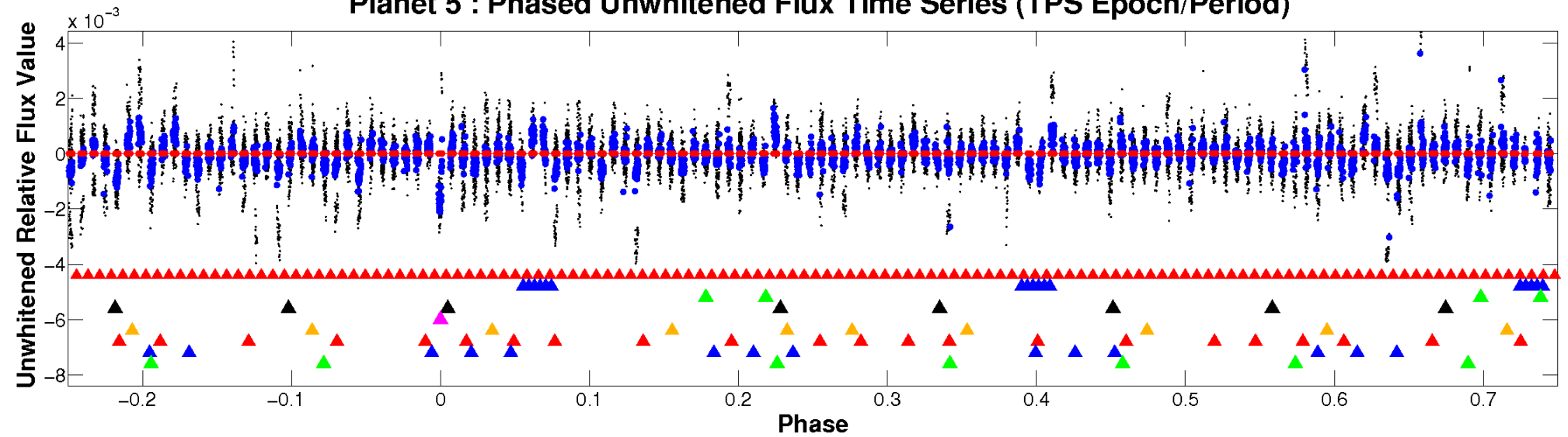
ALT Odd/Even

TCE 002714932-05



Non-Whitened Vs. Whitened Light Curve

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

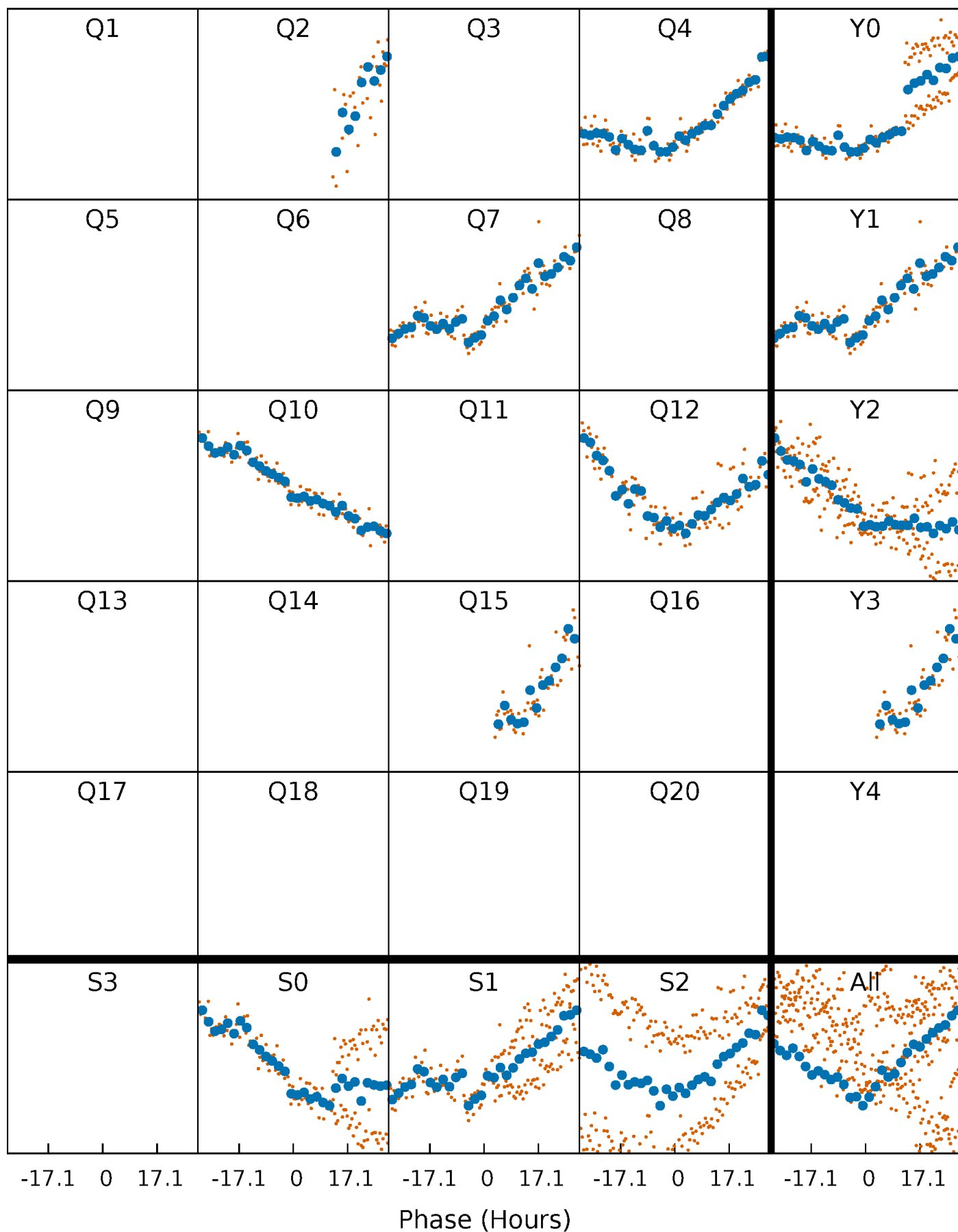


Planet 5 : Phased Whitened Flux Time Series (TPS Epoch/Period)



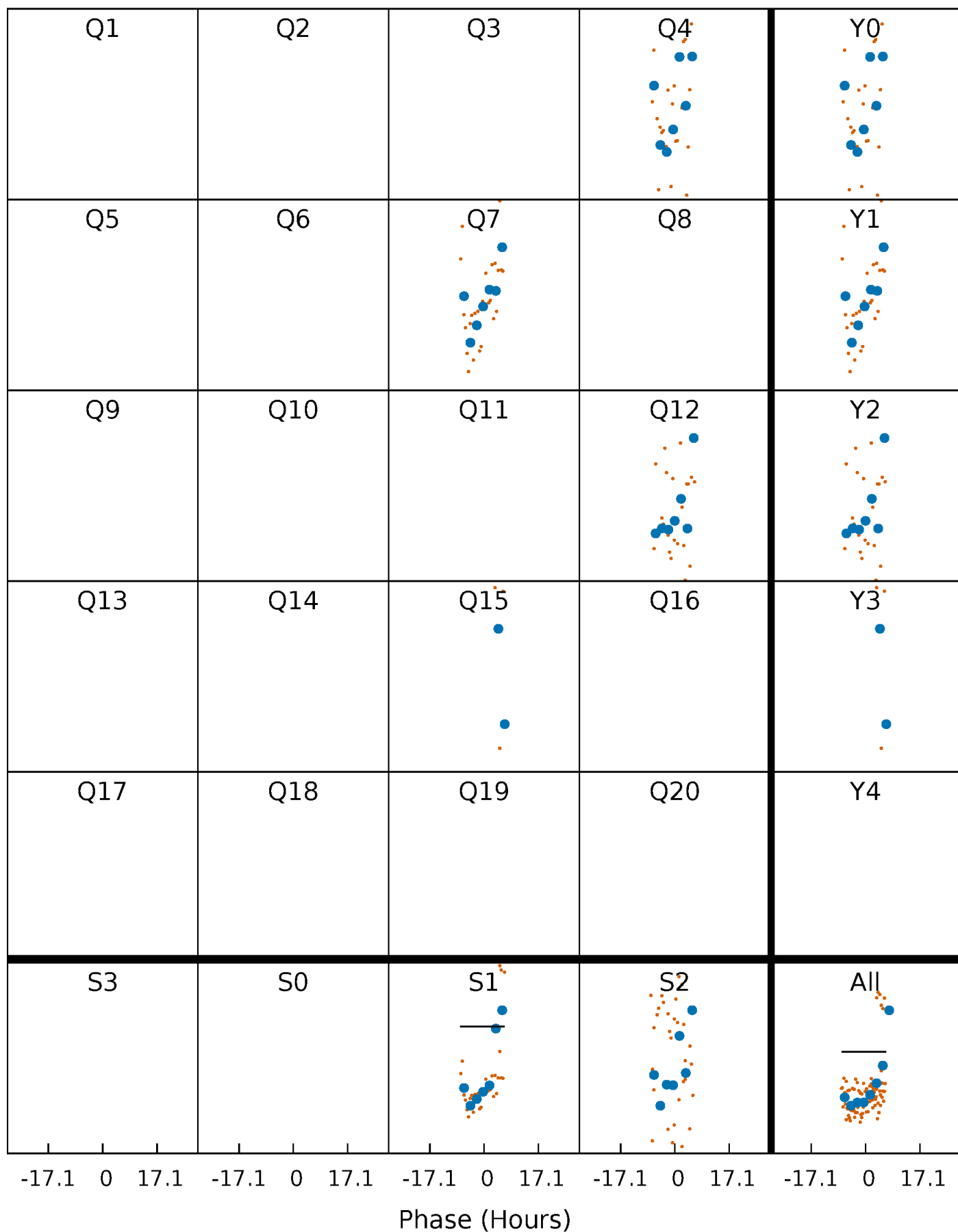
PDC Quarter-Phased Transit Curves

TCE 002714932-05 $P=249.813954$ Days $T_0=169.244968$ (BKJD)



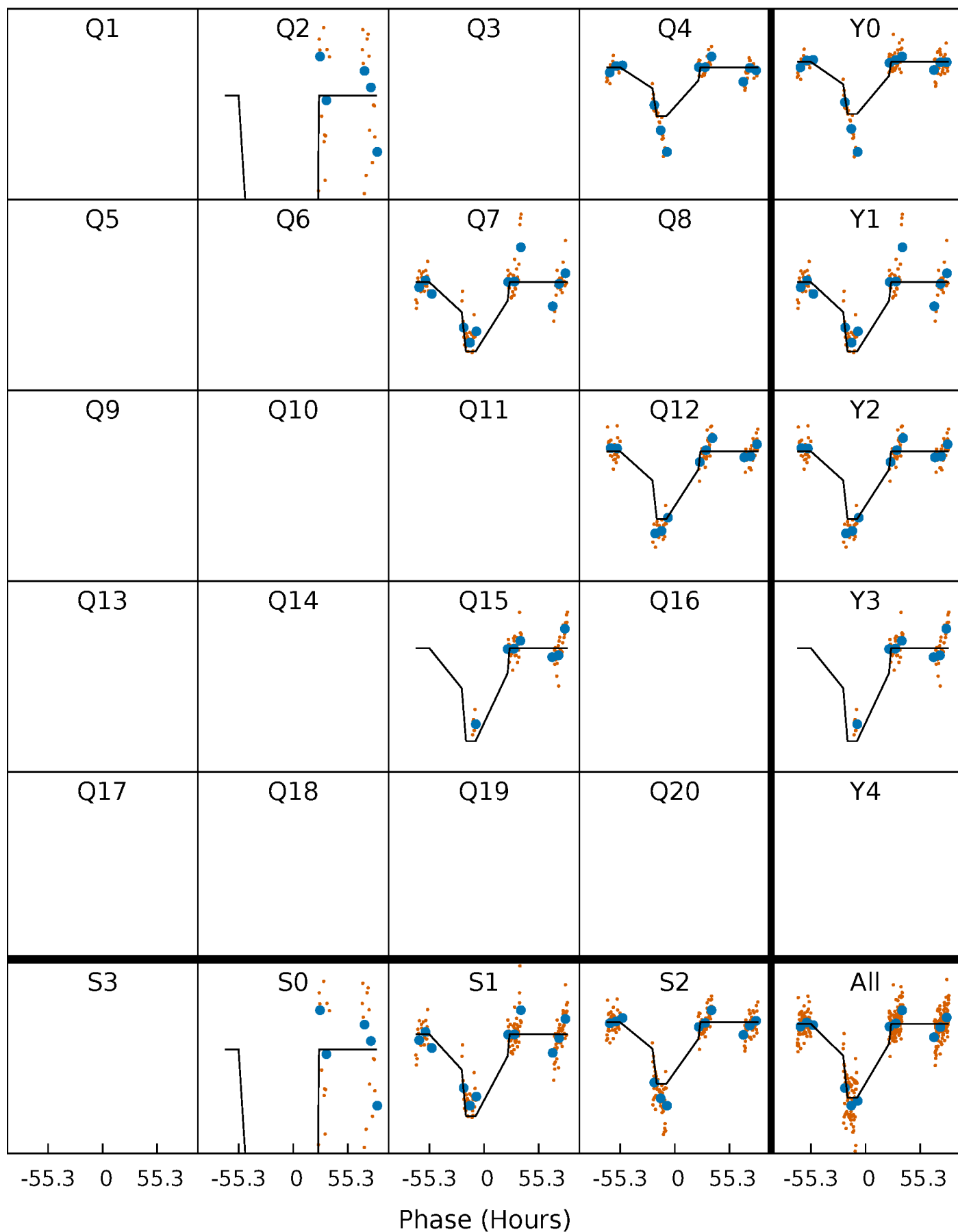
DV Quarter-Phased Transit Curves

TCE 002714932-05 $P=249.813954$ Days $T_0=169.244968$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

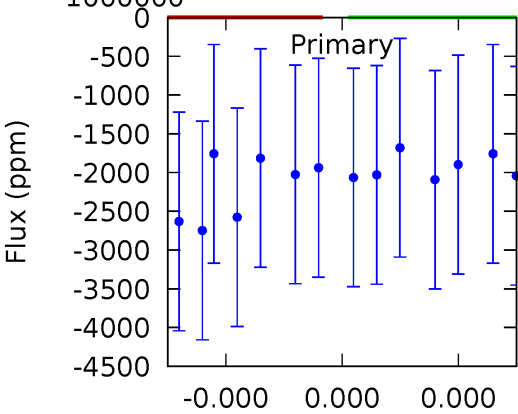
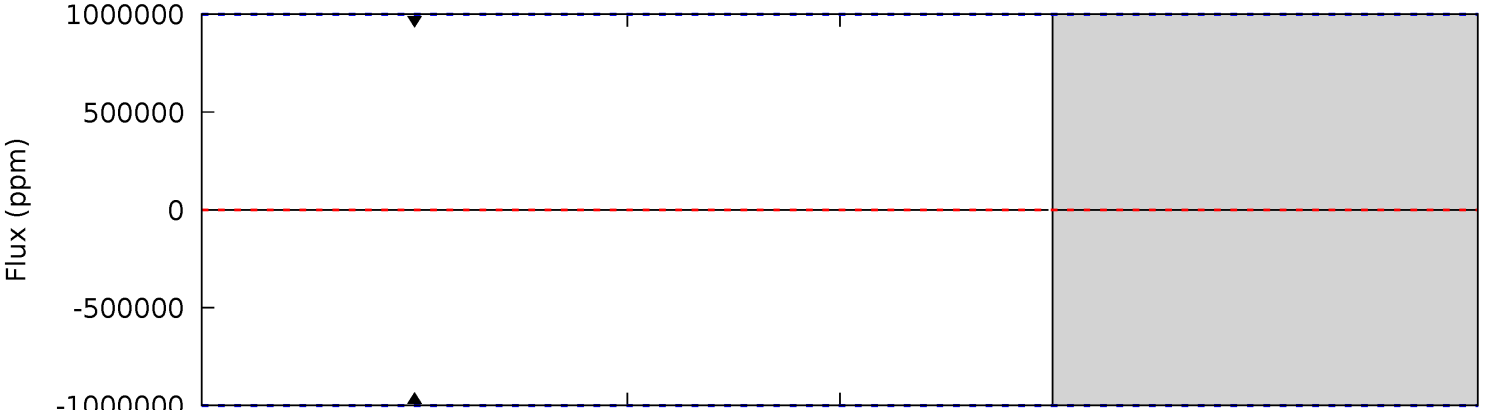
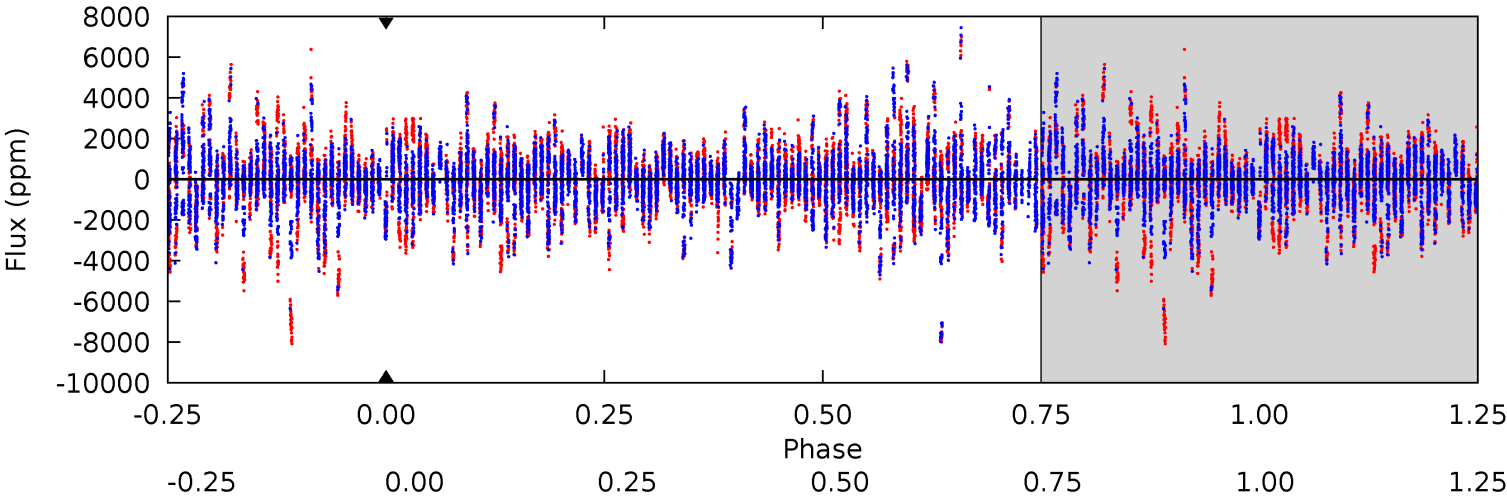
TCE 002714932-05 $P=249.813954$ Days $T_0=169.873982$ (BKJD)



DV Model-Shift Uniqueness Test

002714932-05, P = 249.813954 Days, E = 169.244968 Days

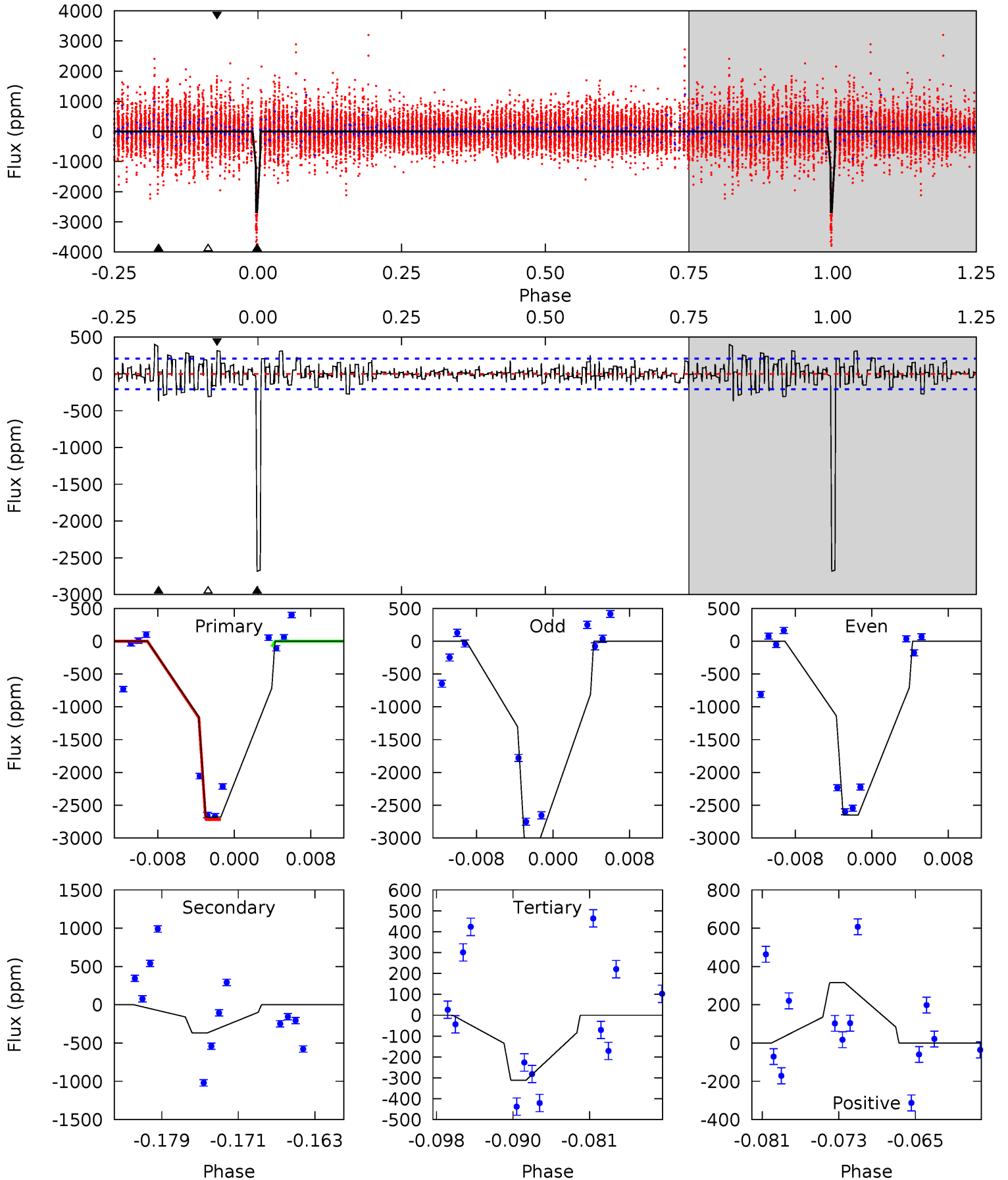
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

002714932-05, P = 249.813954 Days, E = 169.873982 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
65.2	8.95	7.58	7.66	5.07	2.65	1.88	57.6	57.5	1.37	1.29	4.32	1.06	0.13	27.9



Stellar Parameters For KIC 002714932

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6096^{+189}_{-210}	$4.437^{+0.070}_{-0.210}$	$-0.120^{+0.250}_{-0.350}$	$1.016^{+0.330}_{-0.132}$	$1.026^{+0.153}_{-0.126}$	$1.377^{+0.505}_{-0.707}$
	+3%/-3%	+2%/-5%	+208%/-292%	+32%/-13%	+15%/-12%	+37%/-51%
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 002714932-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$9.22^{+8.96}_{-6.56}$	437^{+34}_{-25}	5968^{+19826}_{-25024}	$21910^{+905365}_{-584487}$
Alt.	-368 ± 41	$10.35^{+9.58}_{-6.76}$	435^{+33}_{-24}	3328^{+1649}_{-542}	1153^{+9020}_{-851}

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 $A_{obs} \gg 1.0$

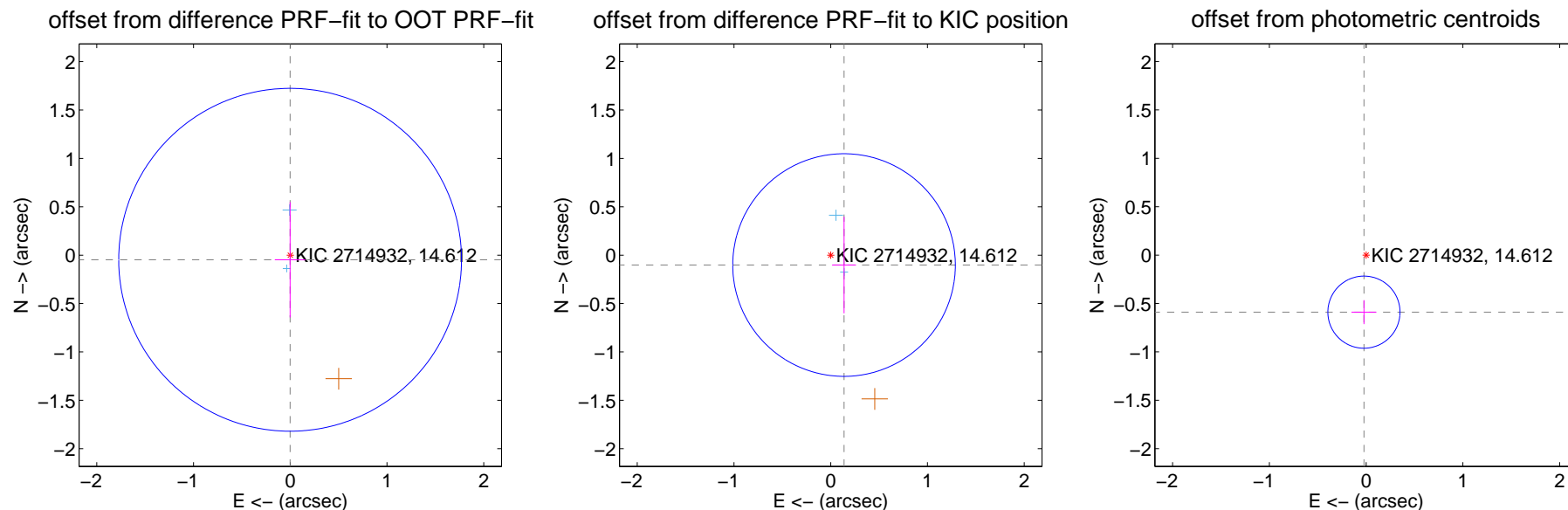
DV Centroid Data

Supplemental centroid analysis for 002714932-05. Kepler magnitude: 14.61. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.048 ± 0.591	0.08	0.002 ± 0.158	-0.048 ± 0.595
PRF-fit source offset from KIC position	0.172 ± 0.383	0.45	-0.138 ± 0.123	-0.102 ± 0.498
photometric centroid source offset	0.59 ± 0.12	4.75	0.02 ± 0.13	-0.59 ± 0.12



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

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

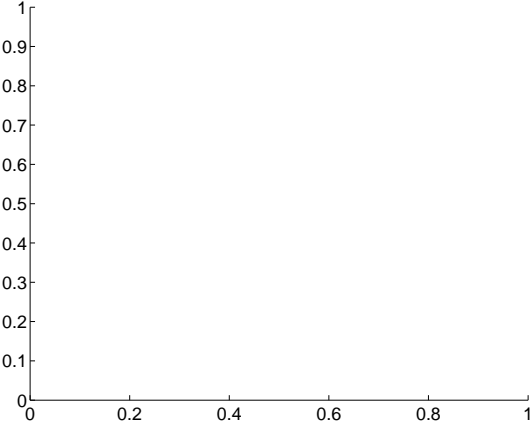
Q1 no difference image



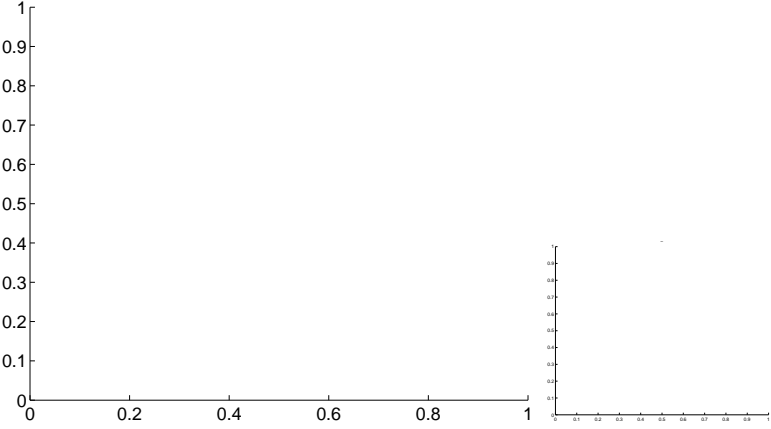
Q1 no OOT image



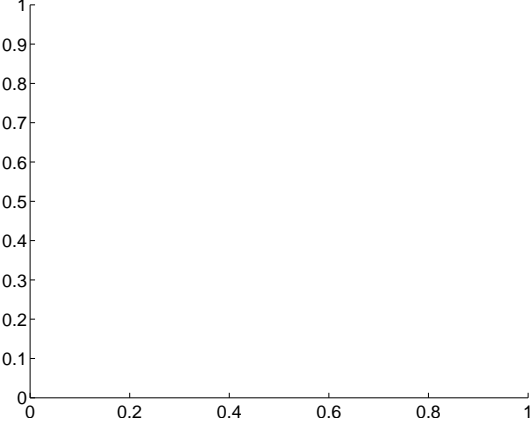
Q2 no difference image



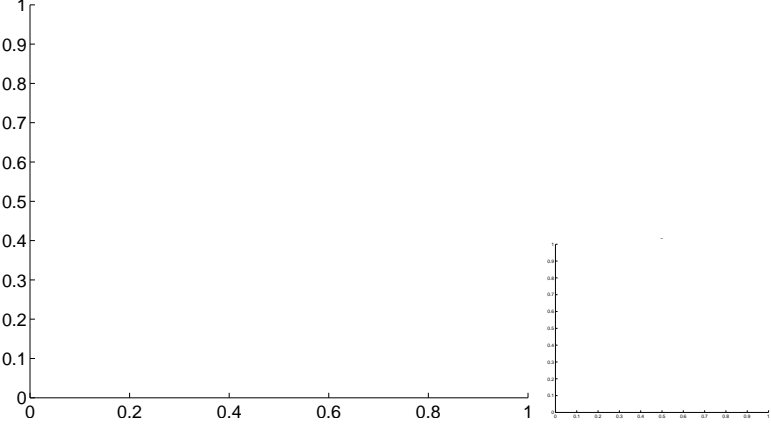
Q2 no OOT image



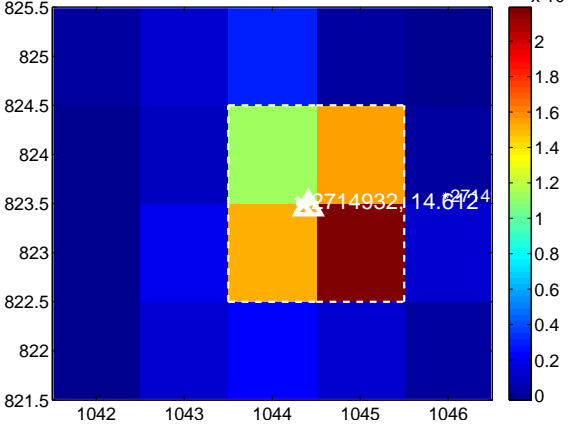
Q3 no difference image



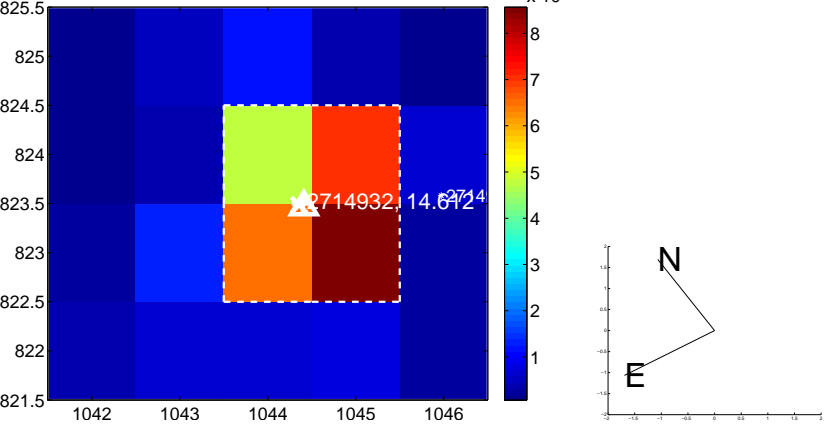
Q3 no OOT image



Q4 difference image



Q4 OOT image



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

Q5 no difference image



Q5 no OOT image



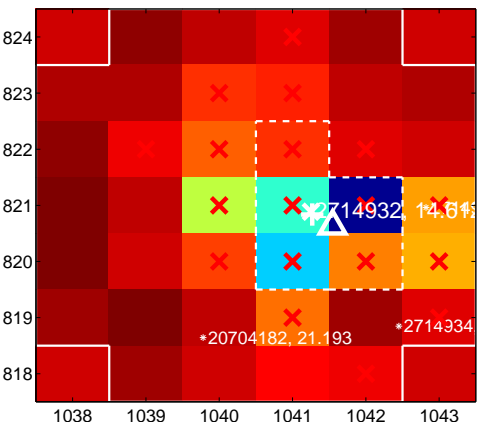
Q6 no difference image



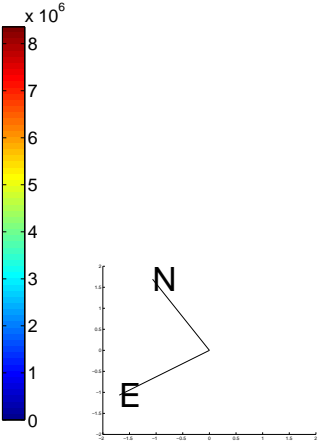
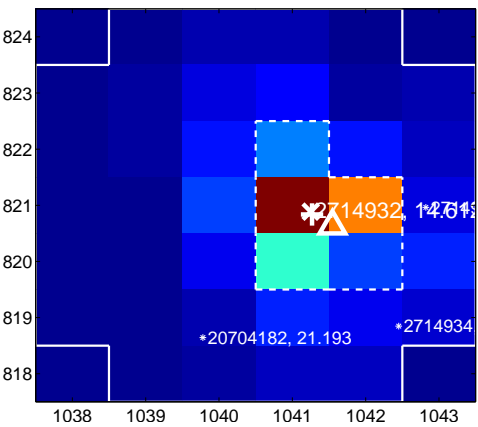
Q6 no OOT image



Q7 difference image. Poor Quality



Q7 OOT image



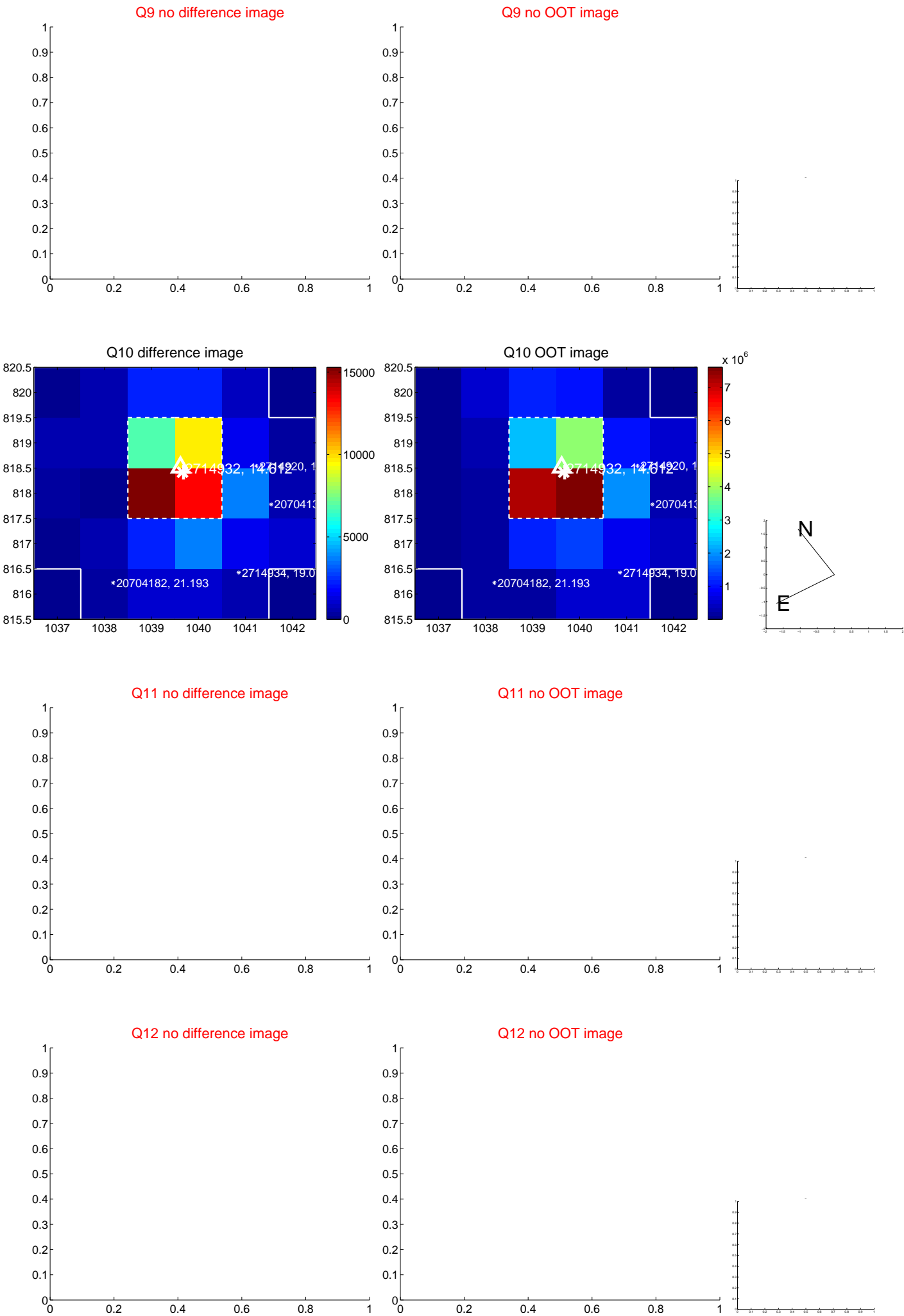
Q8 no difference image



Q8 no OOT image



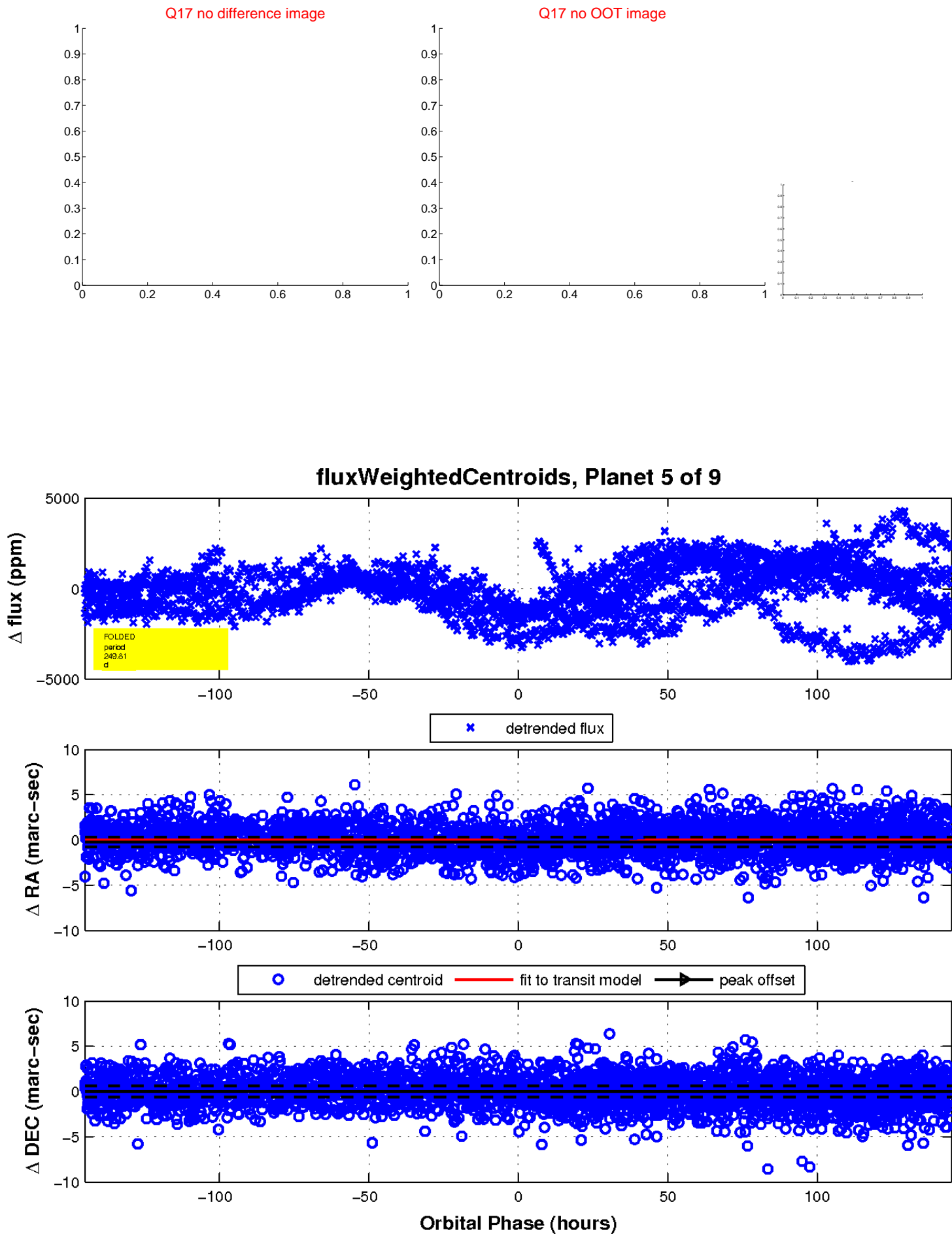
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

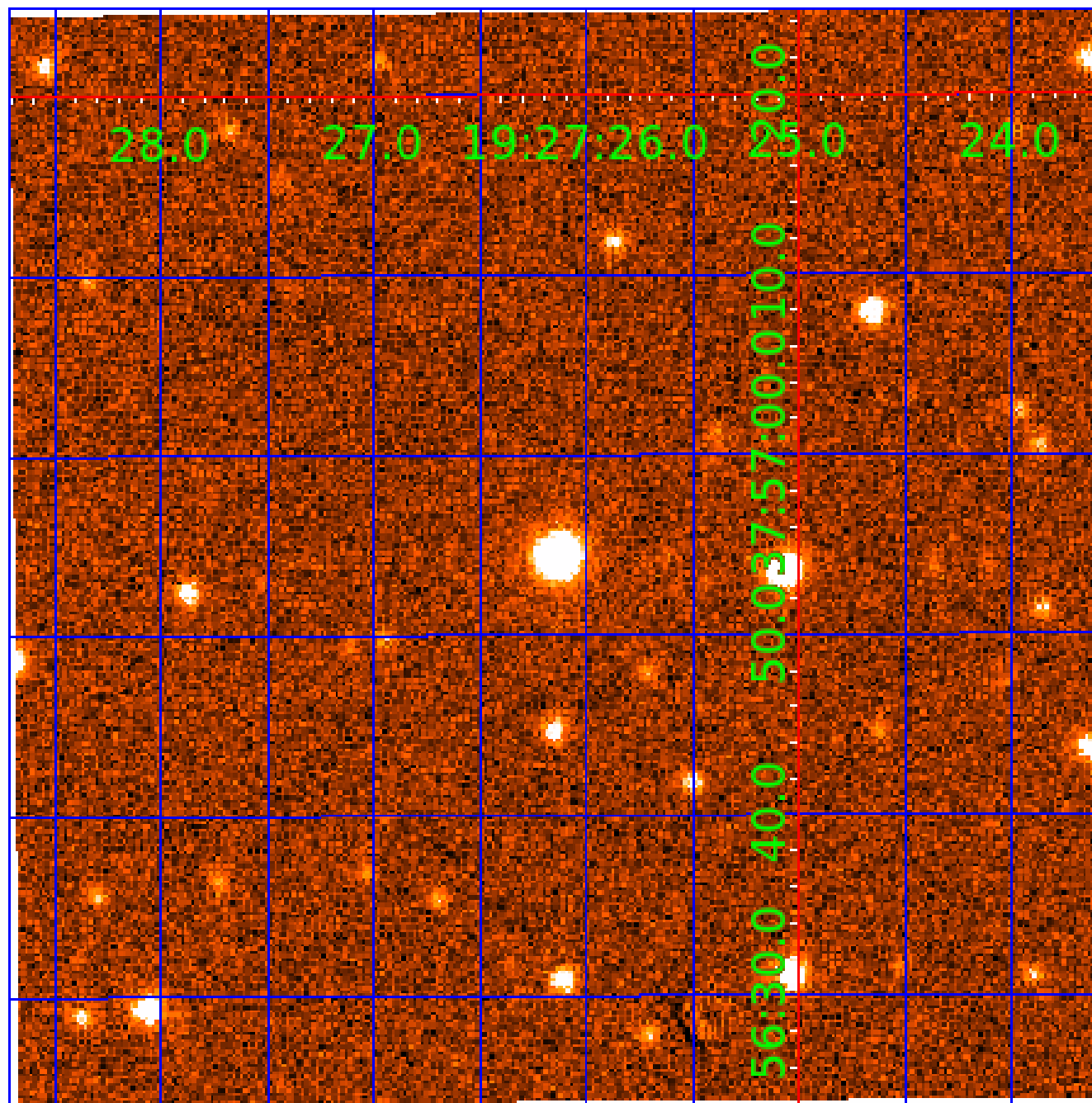


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 002714932

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})
002714932-01	OBS	No	1.936609	133.370964	83.2	10.788	11.1	12.1	1.02	6096	0.93	1353.99
002714932-02	OBS	No	83.586553	183.122566	621.7	30.201	35.1	5.7	1.02	6096	2.53	8.94
002714932-03	OBS	No	379.740193	213.757033	5541.4	40.236	17.8	12.8	1.02	6096	10.27	1.19
002714932-04	OBS	No	194.036588	143.761410	709.8	63.663	14.7	3.5	1.02	6096	2.76	2.91
002714932-05	OBS	No	249.813954	169.244968	595.2	15.000	10.9	-1.0	1.02	6096	2.48	2.08
002714932-06	OBS	No	139.996979	227.369717	657.3	12.352	9.8	5.9	1.02	6096	2.83	4.50
002714932-07	OBS	No	66.159045	173.590743	538.3	13.883	9.3	5.5	1.02	6096	2.69	12.21
002714932-08	OBS	No	101.251584	215.094722	823.1	16.571	9.0	6.7	1.02	6096	3.05	6.93
002714932-09	OBS	No	220.851963	149.666990	4184.1	35.946	8.4	9.1	1.02	6096	7.29	2.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002714932-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
002714932-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
002714932-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
002714932-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— INCONSISTENT_TRANS
002714932-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS
002714932-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
002714932-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
002714932-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
002714932-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS

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

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

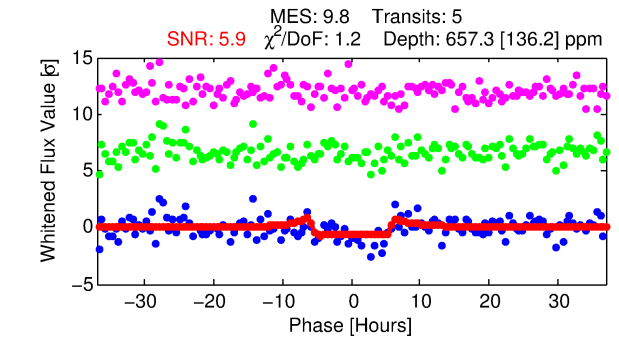
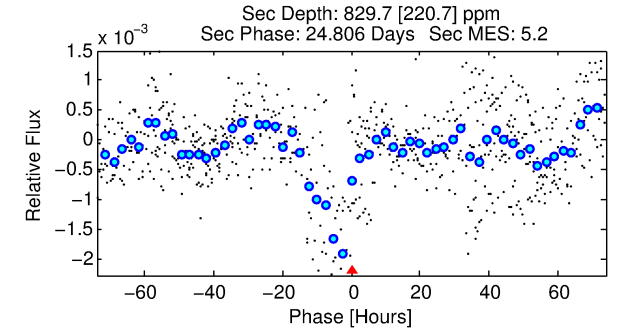
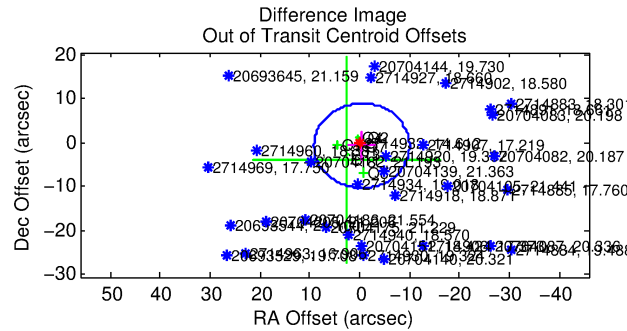
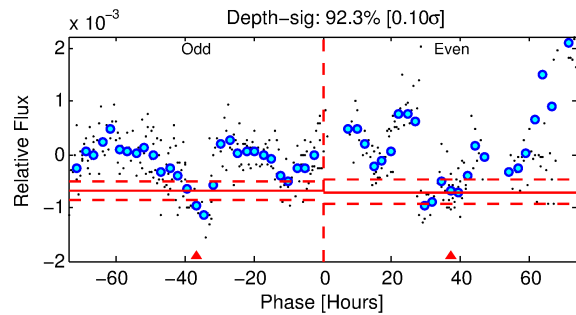
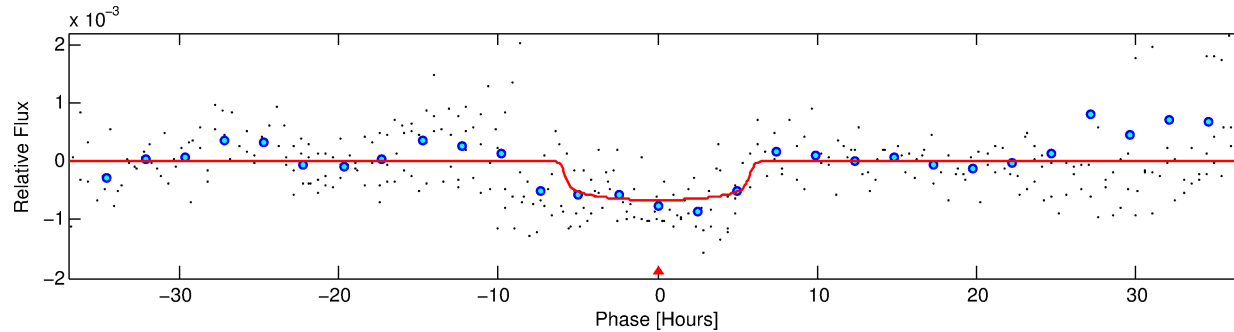
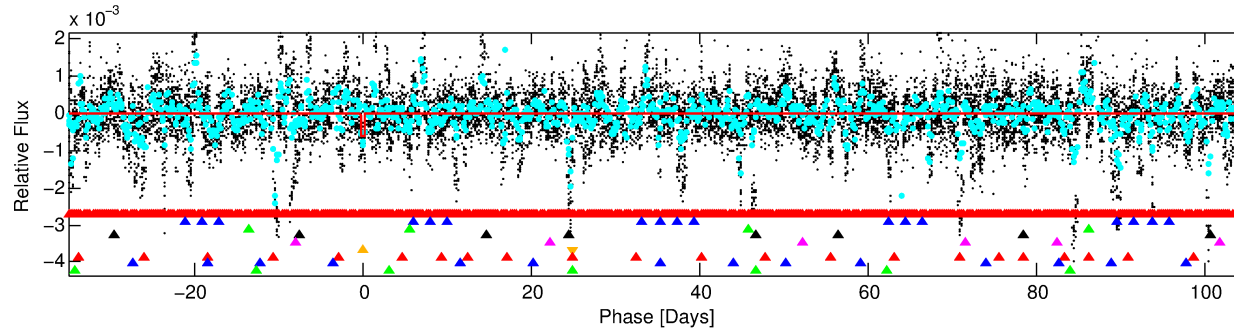
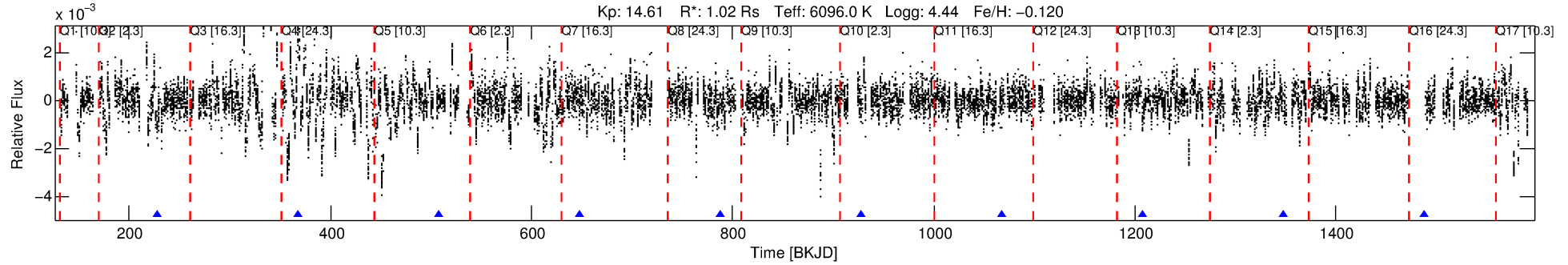
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002714932-06

No Significant Match Found

DV One-Page Summary

KIC: 2714932 Candidate: 6 of 9 Period: 139.997 d



DV Fit Results:

Period = 139.99698 [0.00441] d
 Epoch = 227.3697 [0.0222] BKJD
 Rp/R* = 0.0255 [0.0069]
 a/R* = 60.68 [70.46]
 b = 0.75 [0.69]
 Seff = 4.50 [1.85]
 Teq = 371 [38] K
 Rp = 2.83 [1.19] Re
 a = 0.5330 [0.1439] AU
 Ag = 16235.92 [11645.07] [1.39 σ]
 Tefp = 6480 [1002] K [6.09 σ]

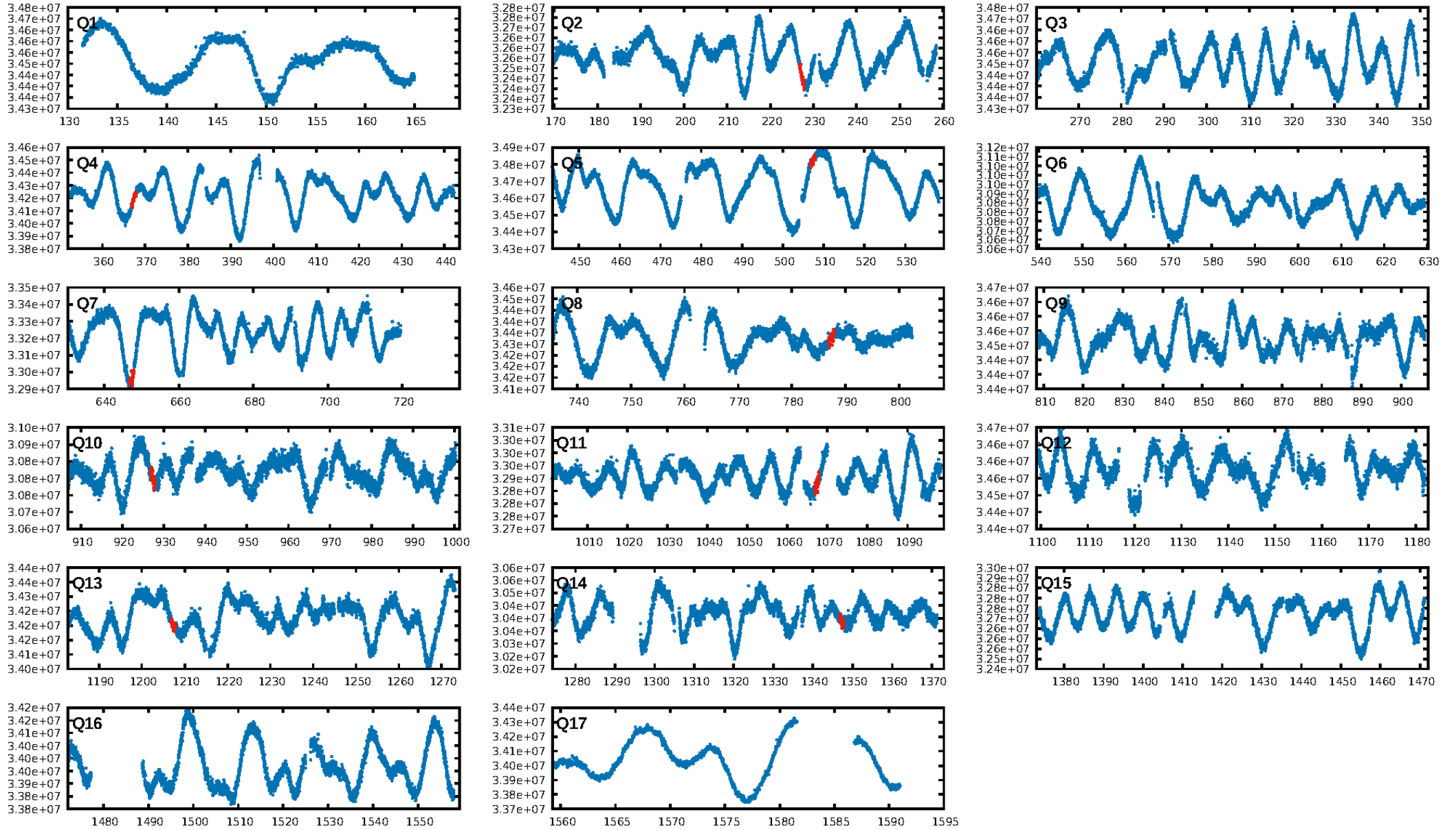
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [44.99 σ]
 LongPeriod-sig: 100.0% [20.00 σ]
 ModelChiSquare2-sig: 29.5%
 ModelChiSquareGof-sig: 100.0%
 Bootstrap-pfa: 3.02e-11
 RollingBand-fgt: 1.00 [5/5]
 GhostDiagnostic-chr: -3.353
 Centroid-sig: 44.3%
 Centroid-so: 0.619 arcsec [1.07 σ]
 OotOffset-rm: 0.853 arcsec [0.27 σ]
 OotOffset-st: 2/2/2/1 [7]
 KicOffset-rm: 0.983 arcsec [0.30 σ]
 KicOffset-st: 2/2/2/1 [7]
 DiffImageQuality-fgm: 0.43 [3/7]
 DiffImageOverlap-fno: 0.00 [0/9]

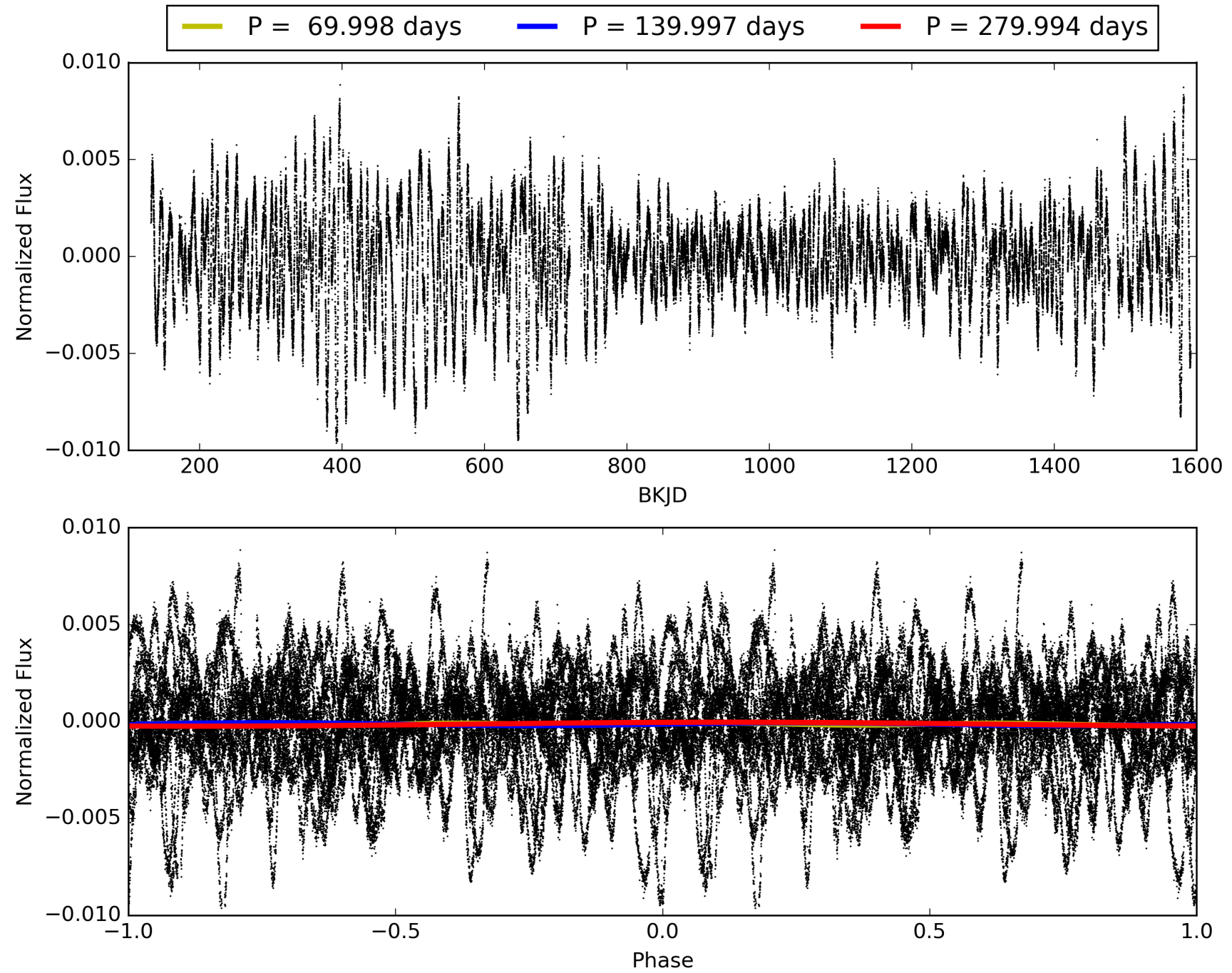
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:29:11 Z

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

TCE 002714932-06, PDC Light Curves

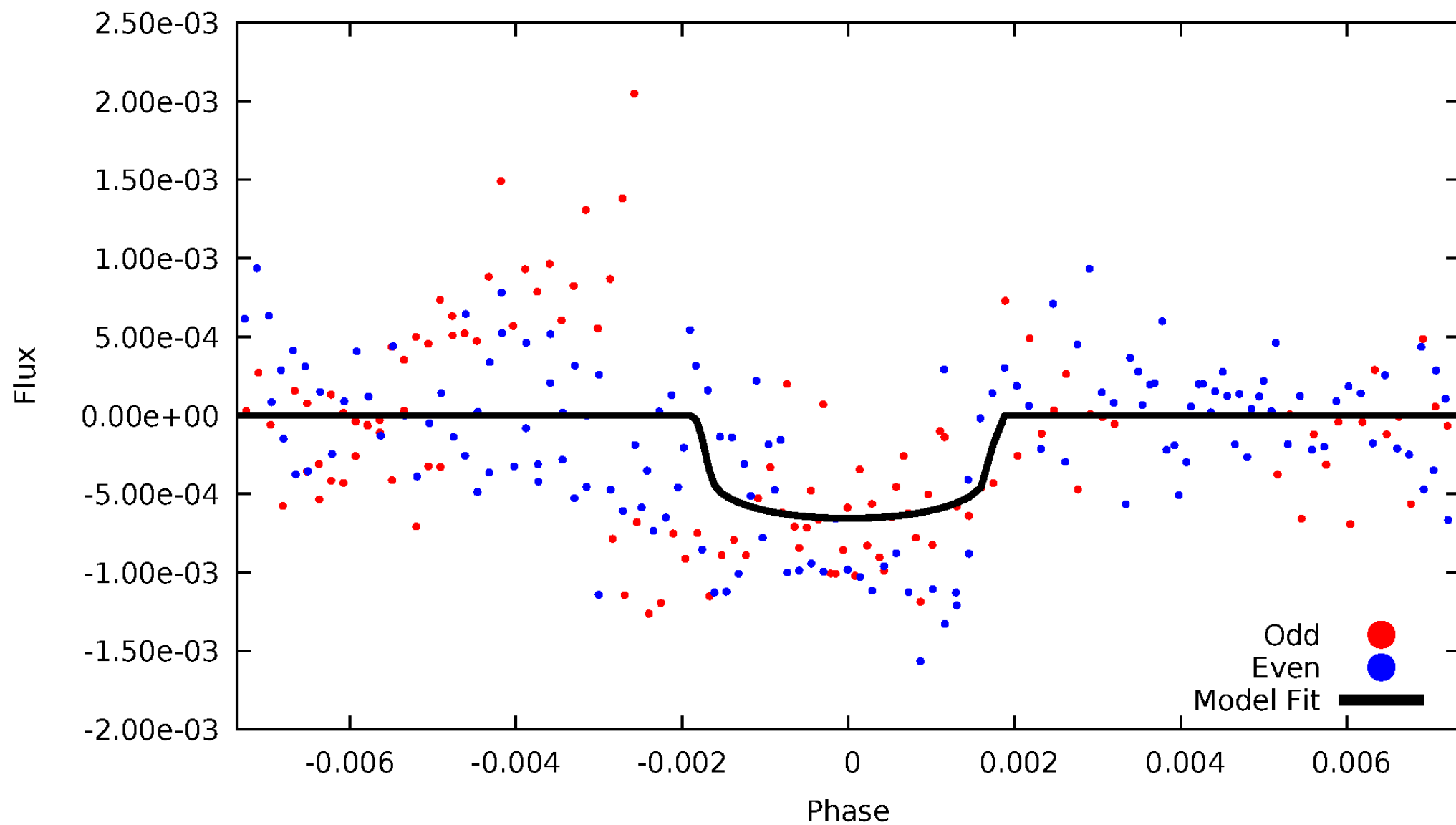


TCE 002714932-06



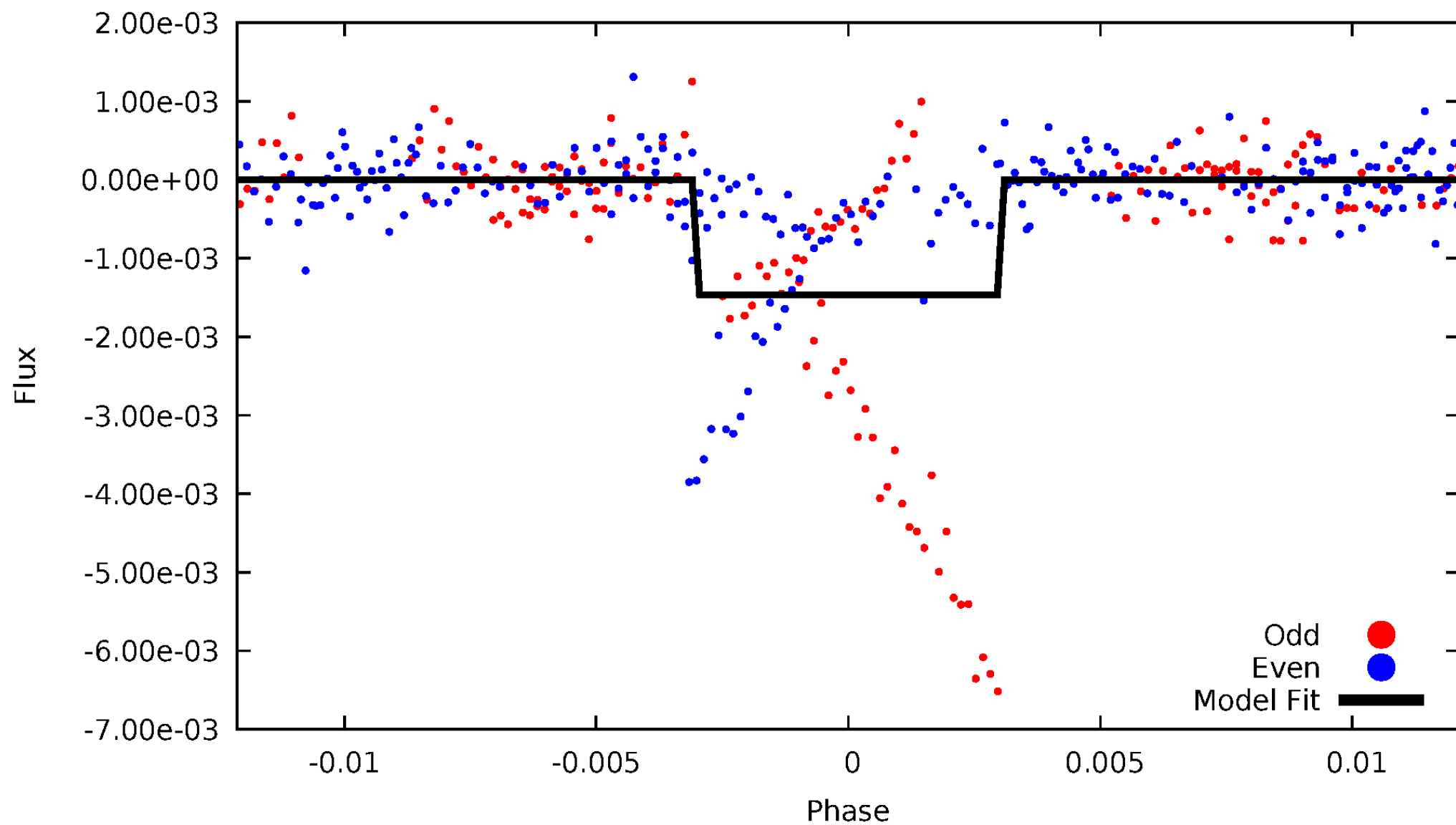
DV Odd/Even

TCE 002714932-06



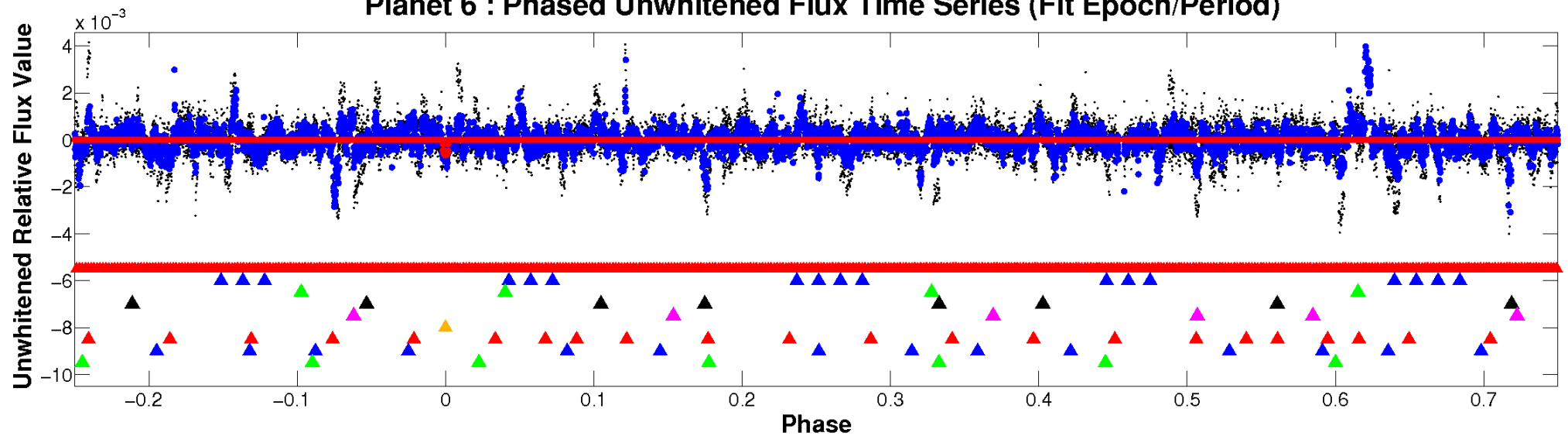
ALT Odd/Even

TCE 002714932-06

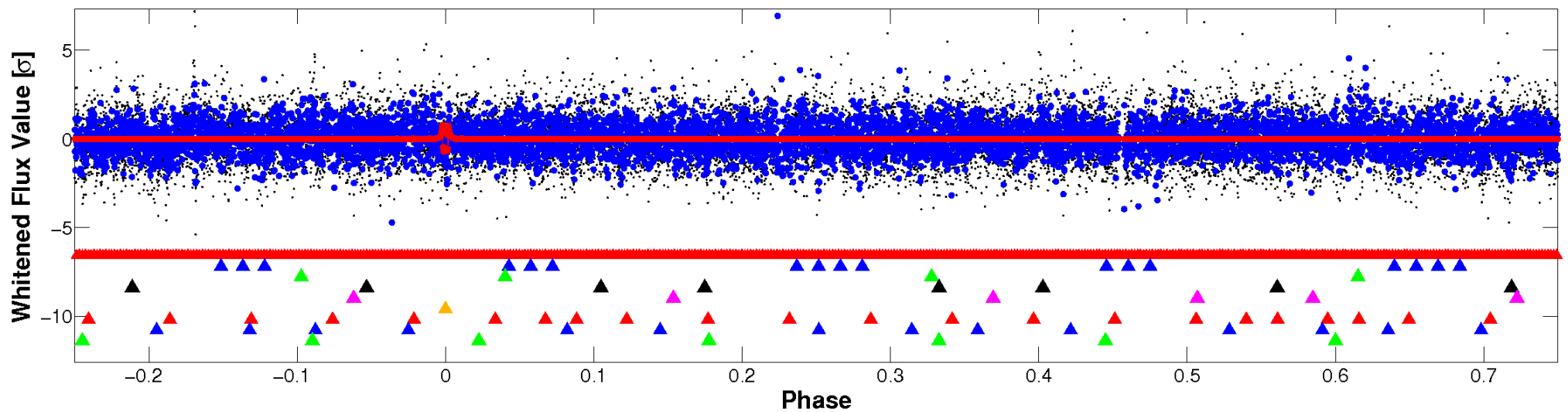


Non-Whitened Vs. Whitened Light Curve

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

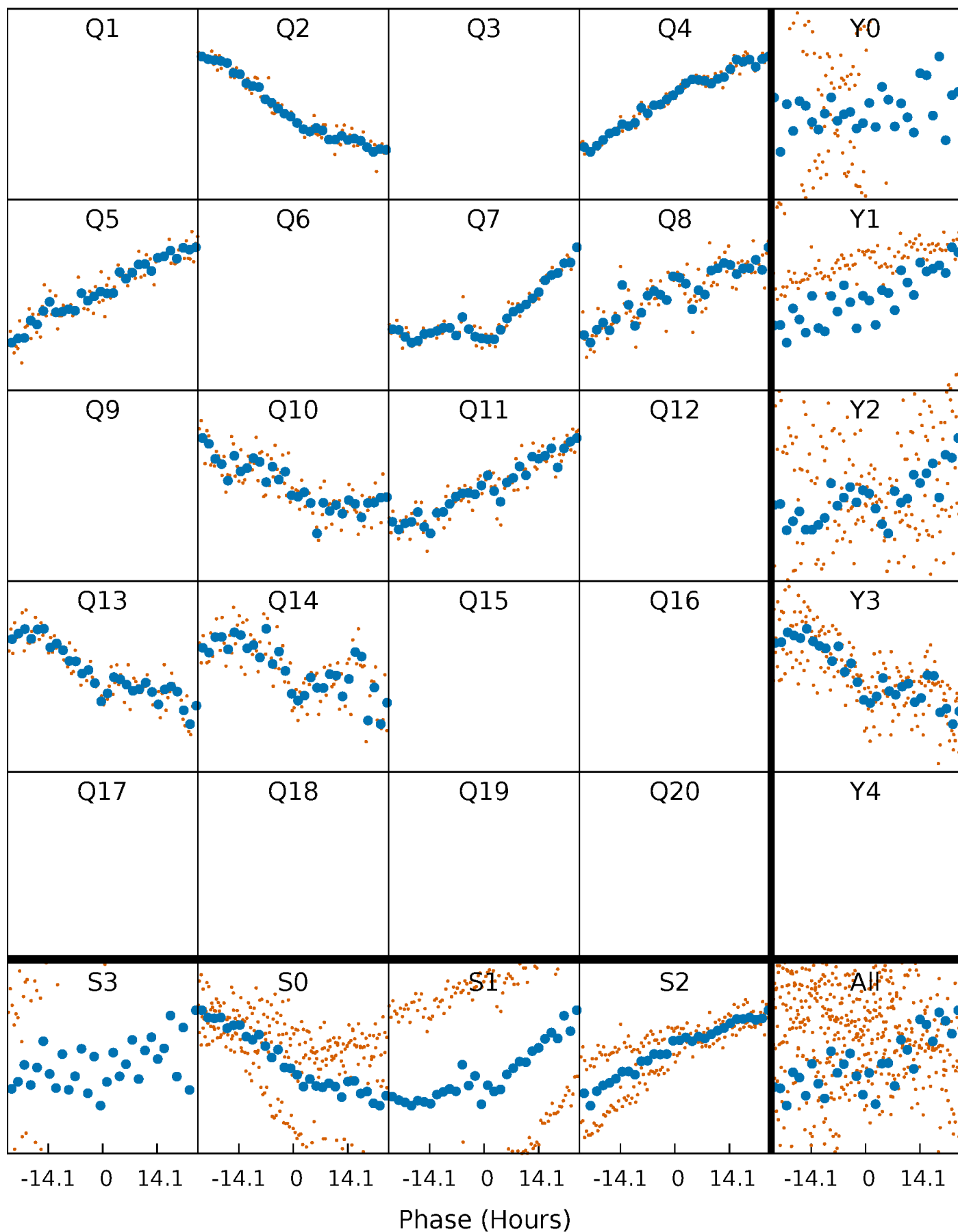


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



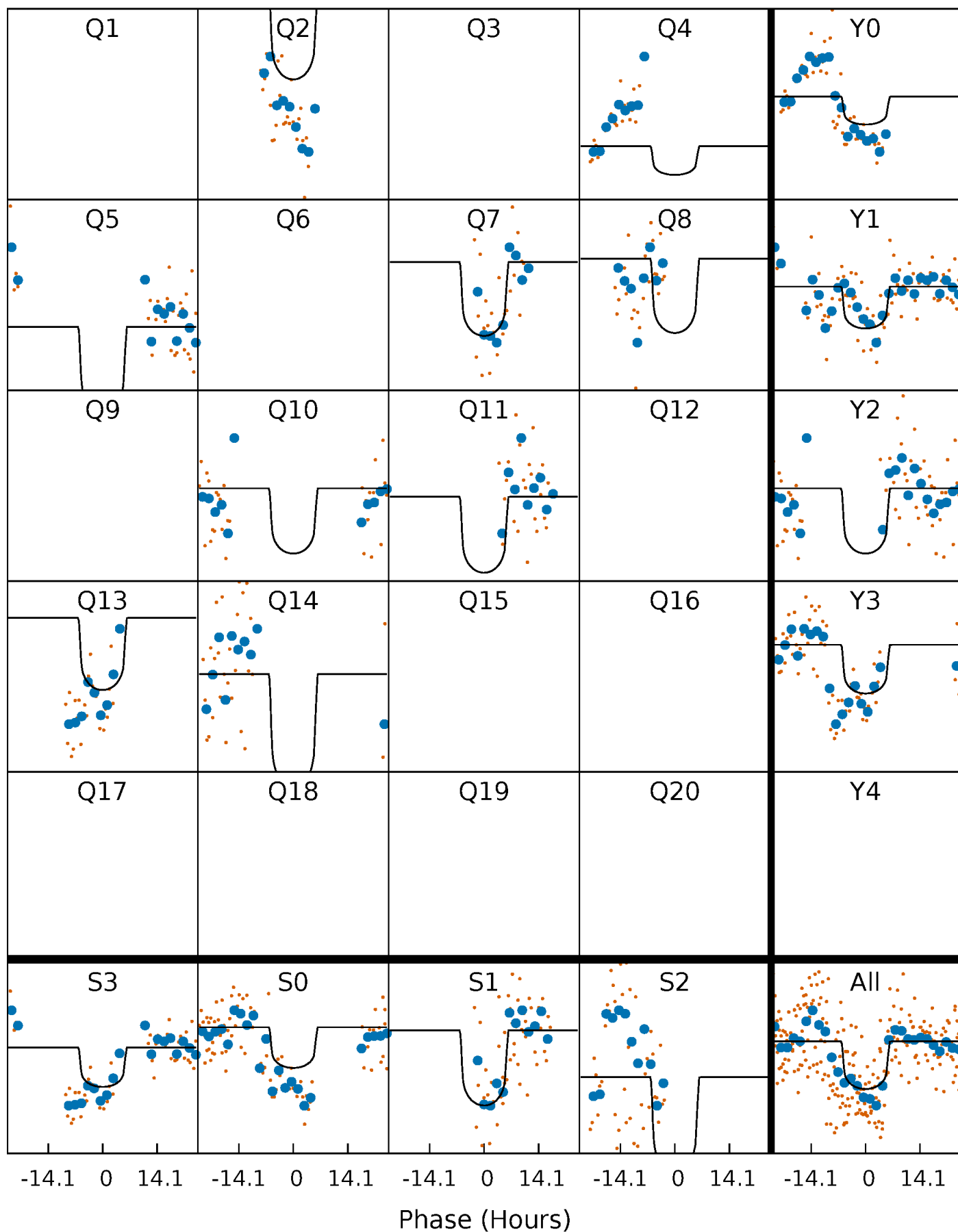
PDC Quarter-Phased Transit Curves

TCE 002714932-06 $P=139.996979$ Days $T_0=227.369717$ (BKJD)



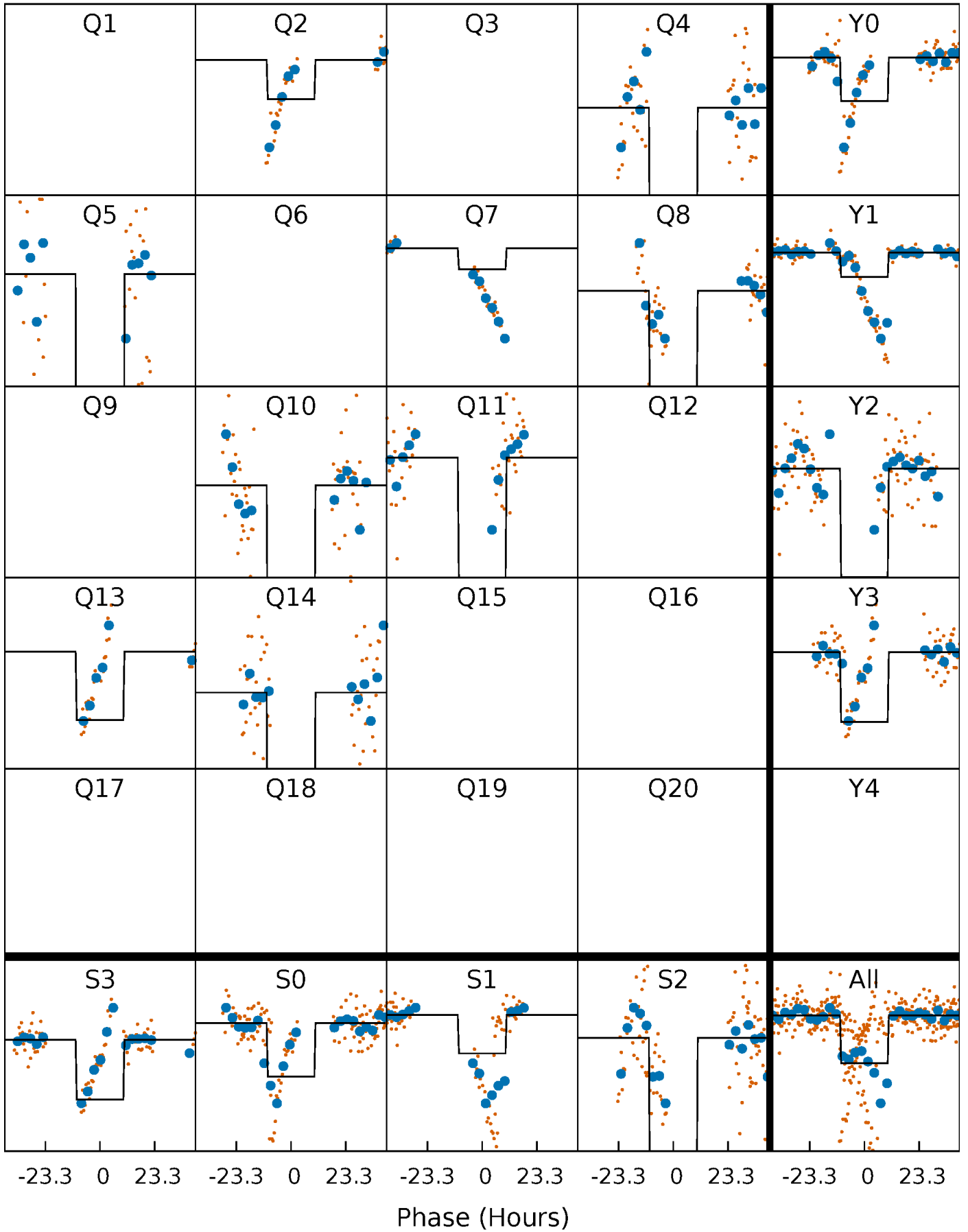
DV Quarter-Phased Transit Curves

TCE 002714932-06 P=139.996979 Days $T_0=227.369717$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

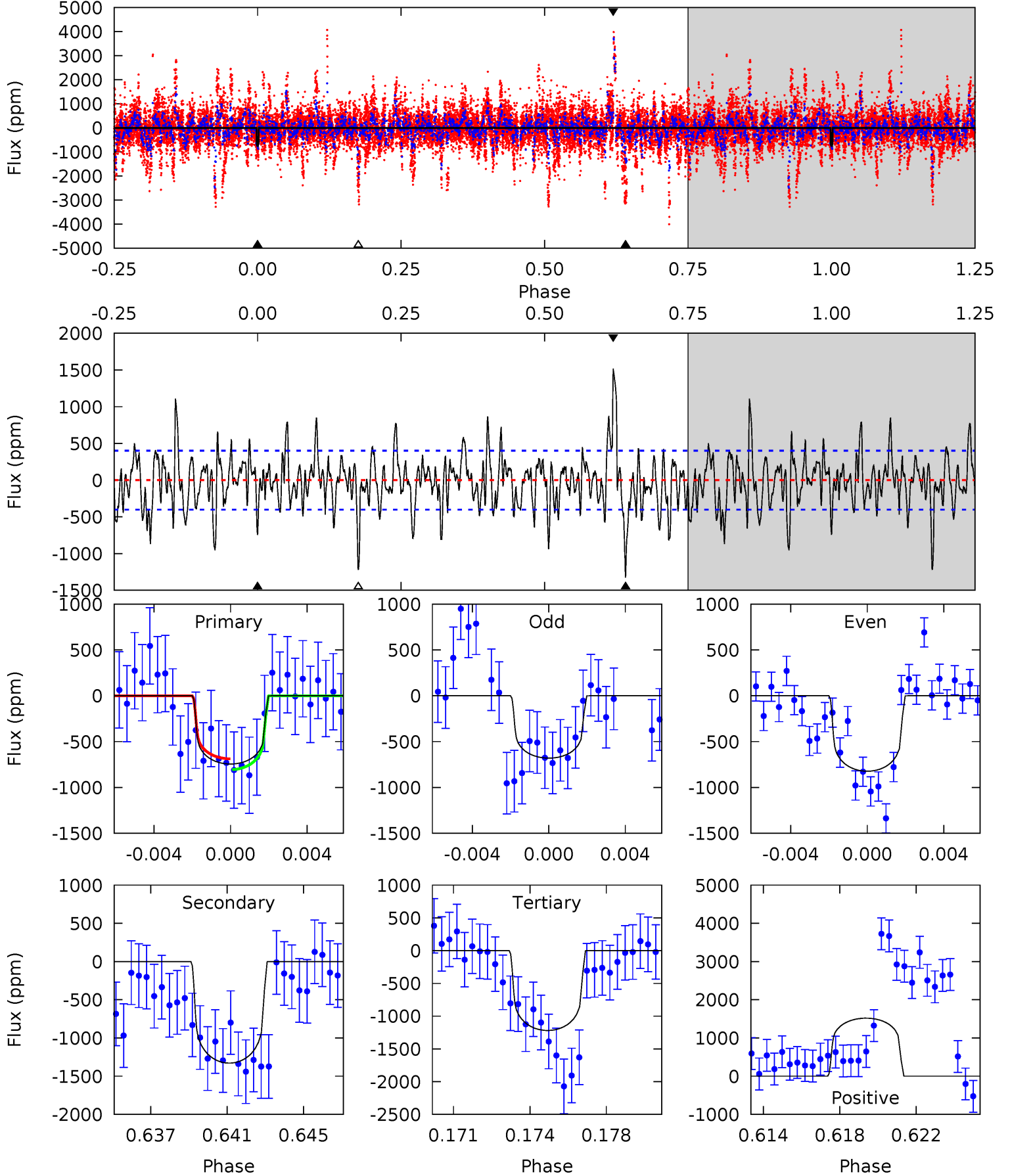
TCE 002714932-06 P=139.976697 Days $T_0=227.463618$ (BKJD)



DV Model-Shift Uniqueness Test

002714932-06, P = 139.996979 Days, E = 87.372738 Days

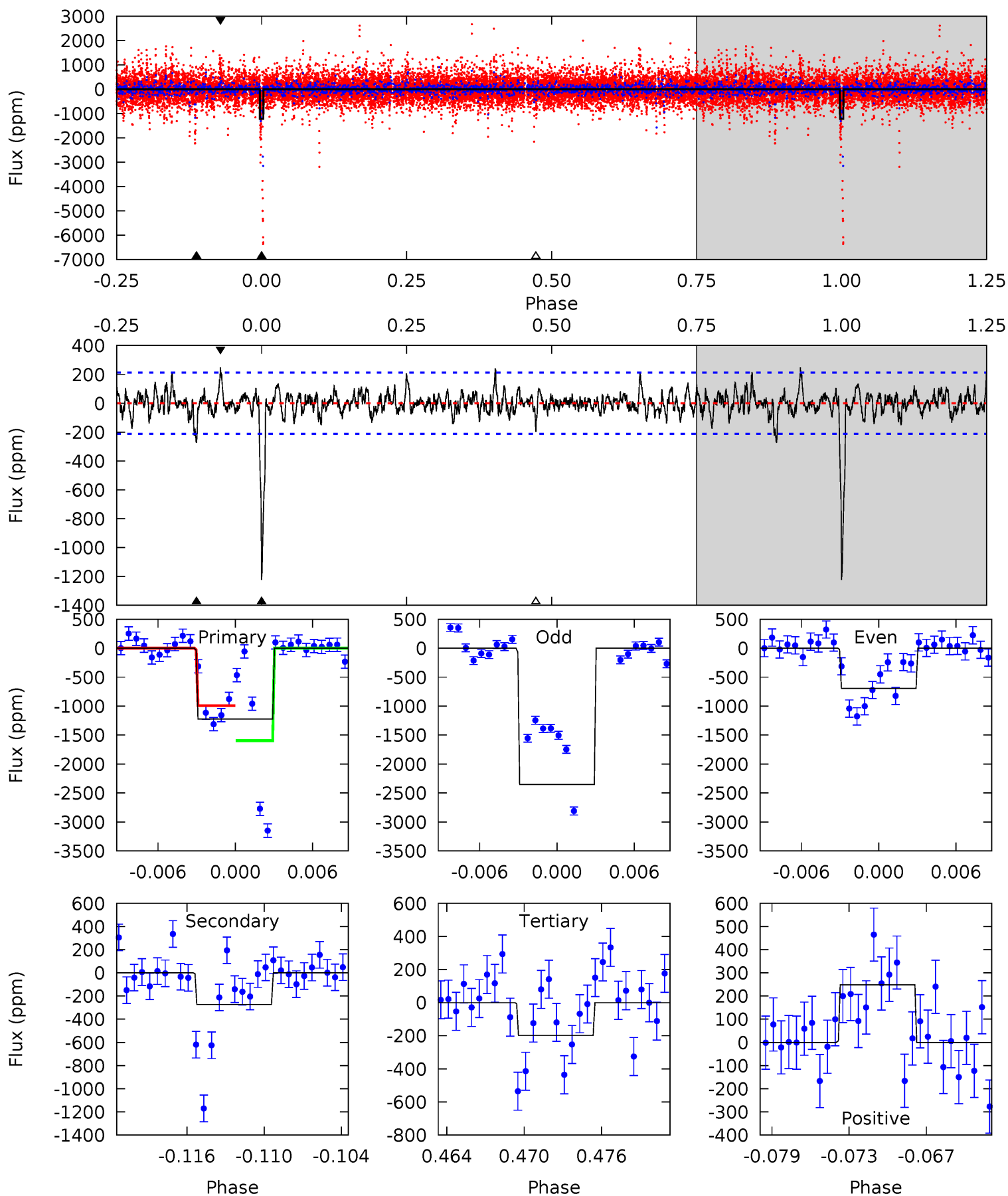
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.66	17.2	15.8	19.7	5.21	2.89	4.00	-6.16	-10.0	1.42	-2.45	0.90	0.97	0.53	0.77



Alt Model-Shift Uniqueness Test

002714932-06, P = 139.976697 Days, E = 87.486921 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.5	6.61	4.79	5.99	5.12	2.74	1.40	24.7	23.5	1.82	0.61	21.2	2.30	0.17	7.18



Stellar Parameters For KIC 002714932

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6096^{+189}_{-210}	$4.437^{+0.070}_{-0.210}$	$-0.120^{+0.250}_{-0.350}$	$1.016^{+0.330}_{-0.132}$	$1.026^{+0.153}_{-0.126}$	$1.377^{+0.505}_{-0.707}$
	+3%/-3%	+2%/-5%	+208%/-292%	+32%/-13%	+15%/-12%	+37%/-51%
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 002714932-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1329 ± 77	$2.94^{+0.95}_{-0.81}$	528^{+40}_{-28}	7420^{+1627}_{-1011}	23943^{+21350}_{-10130}
Alt.	-274 ± 41	$4.39^{+1.13}_{-0.92}$	528^{+40}_{-27}	4257^{+357}_{-299}	2144^{+1356}_{-766}

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 $A_{obs} \gg 1.0$

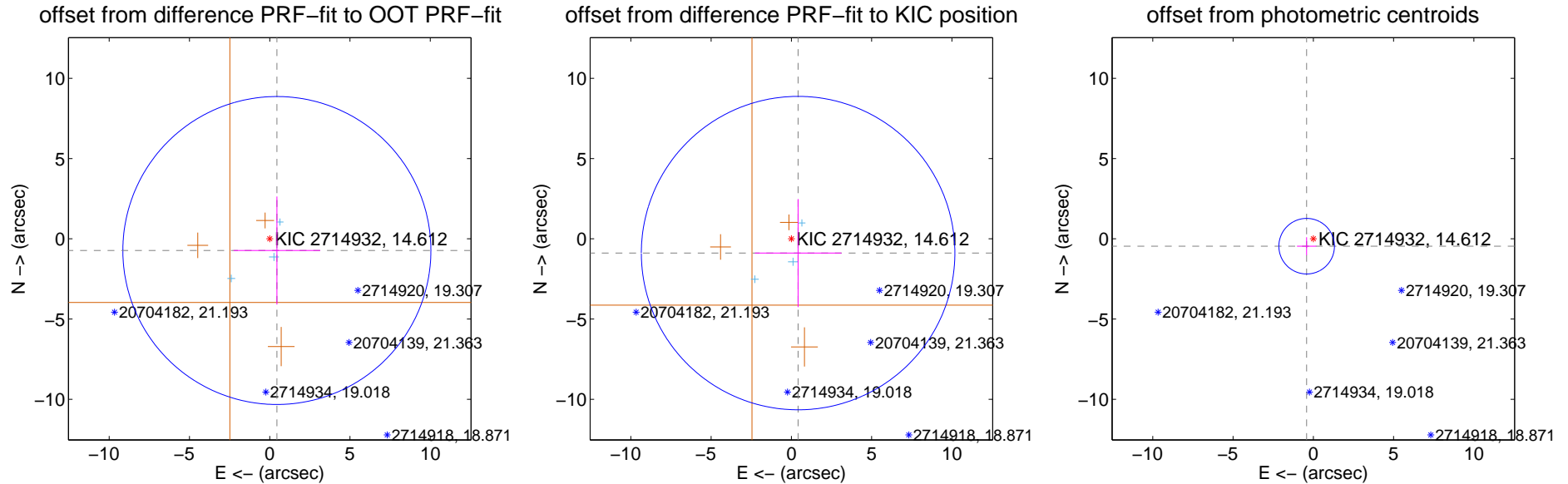
DV Centroid Data

Supplemental centroid analysis for 002714932-06. Kepler magnitude: 14.61. Transit SNR 5.92

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.853 ± 3.198	0.27	-0.445 ± 2.696	-0.728 ± 3.366
PRF-fit source offset from KIC position	0.983 ± 3.255	0.30	-0.419 ± 2.696	-0.889 ± 3.366
photometric centroid source offset	0.62 ± 0.58	1.07	0.42 ± 0.60	-0.46 ± 0.56



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

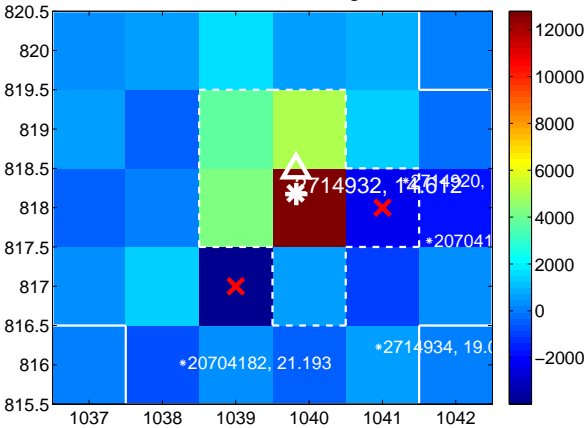
Q1 no difference image



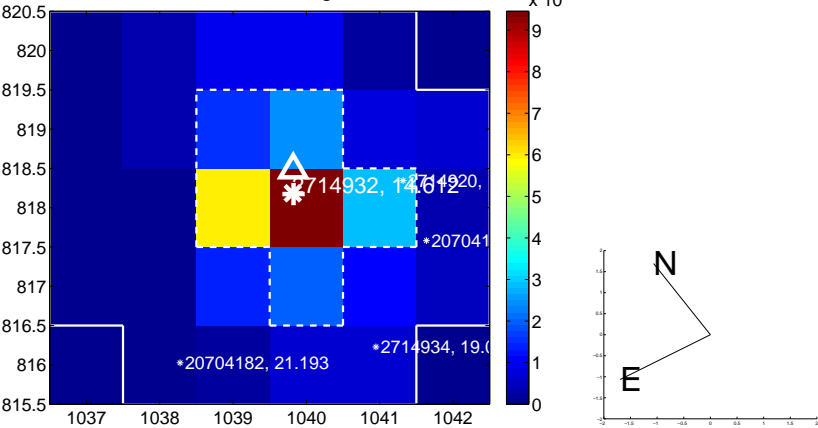
Q1 no OOT image



Q2 difference image



Q2 OOT image



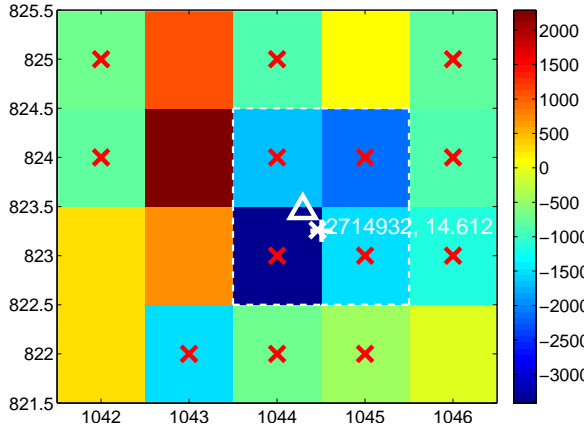
Q3 no difference image



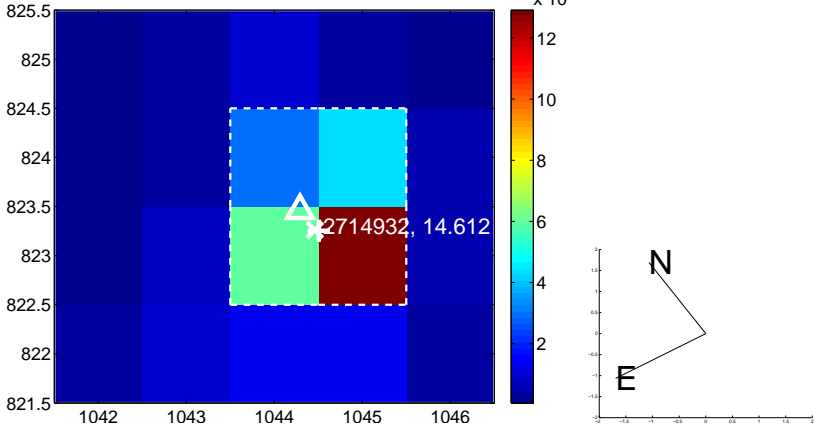
Q3 no OOT image



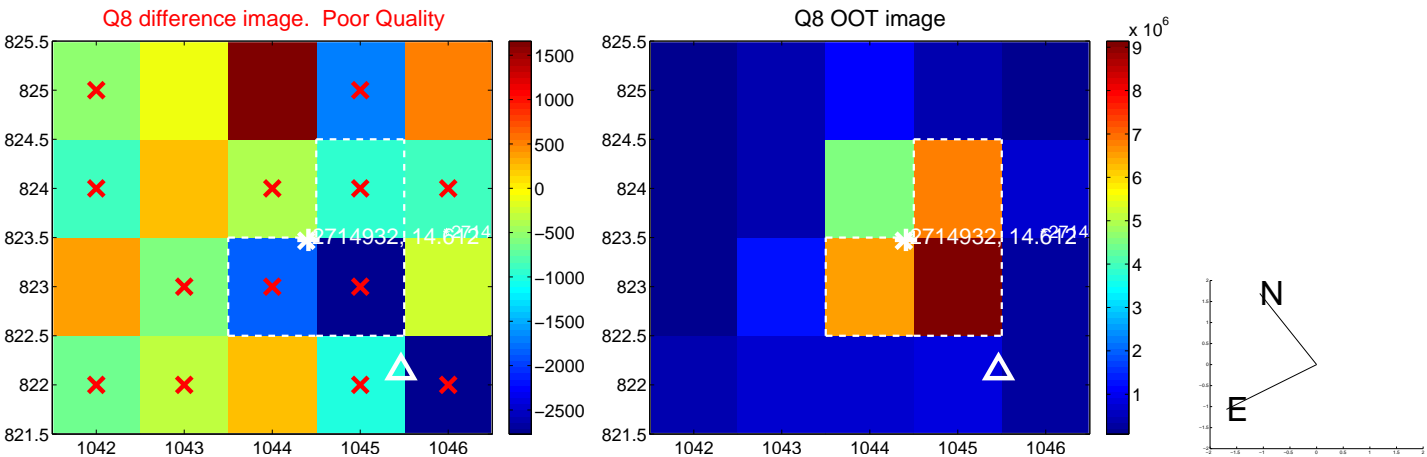
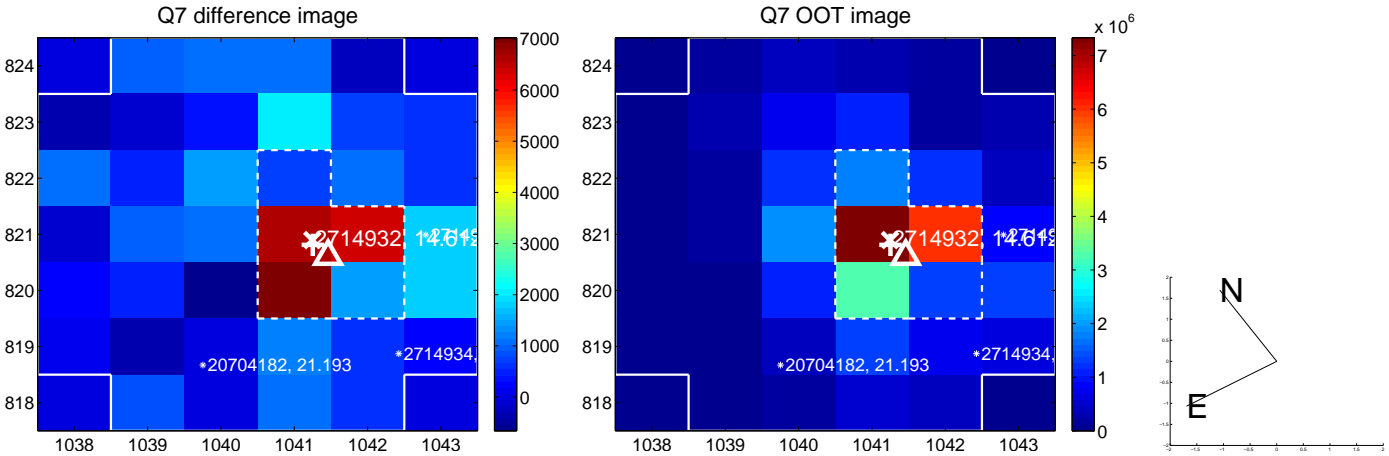
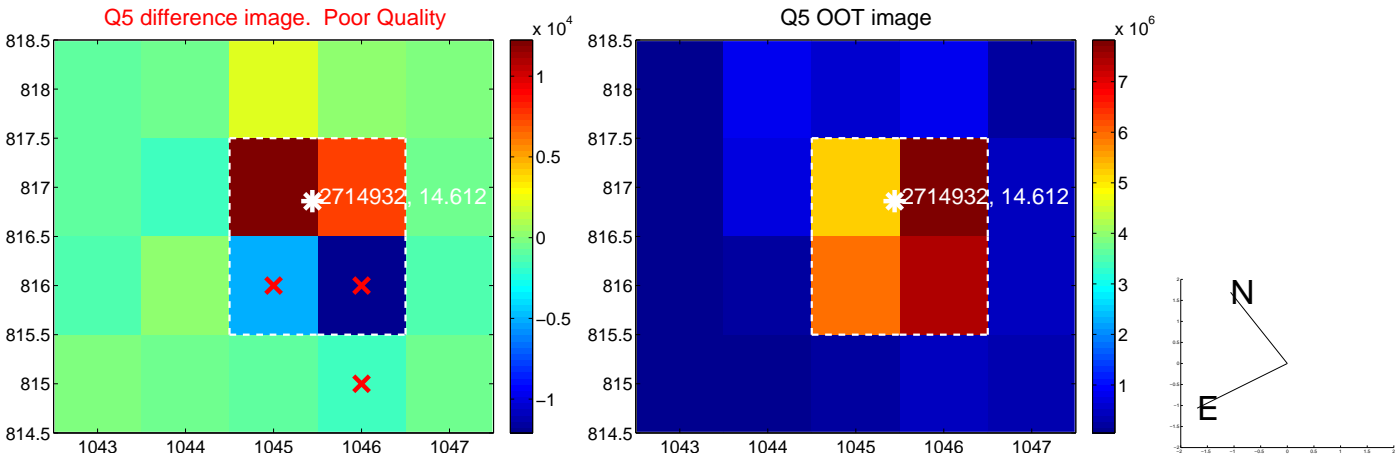
Q4 difference image. Poor Quality



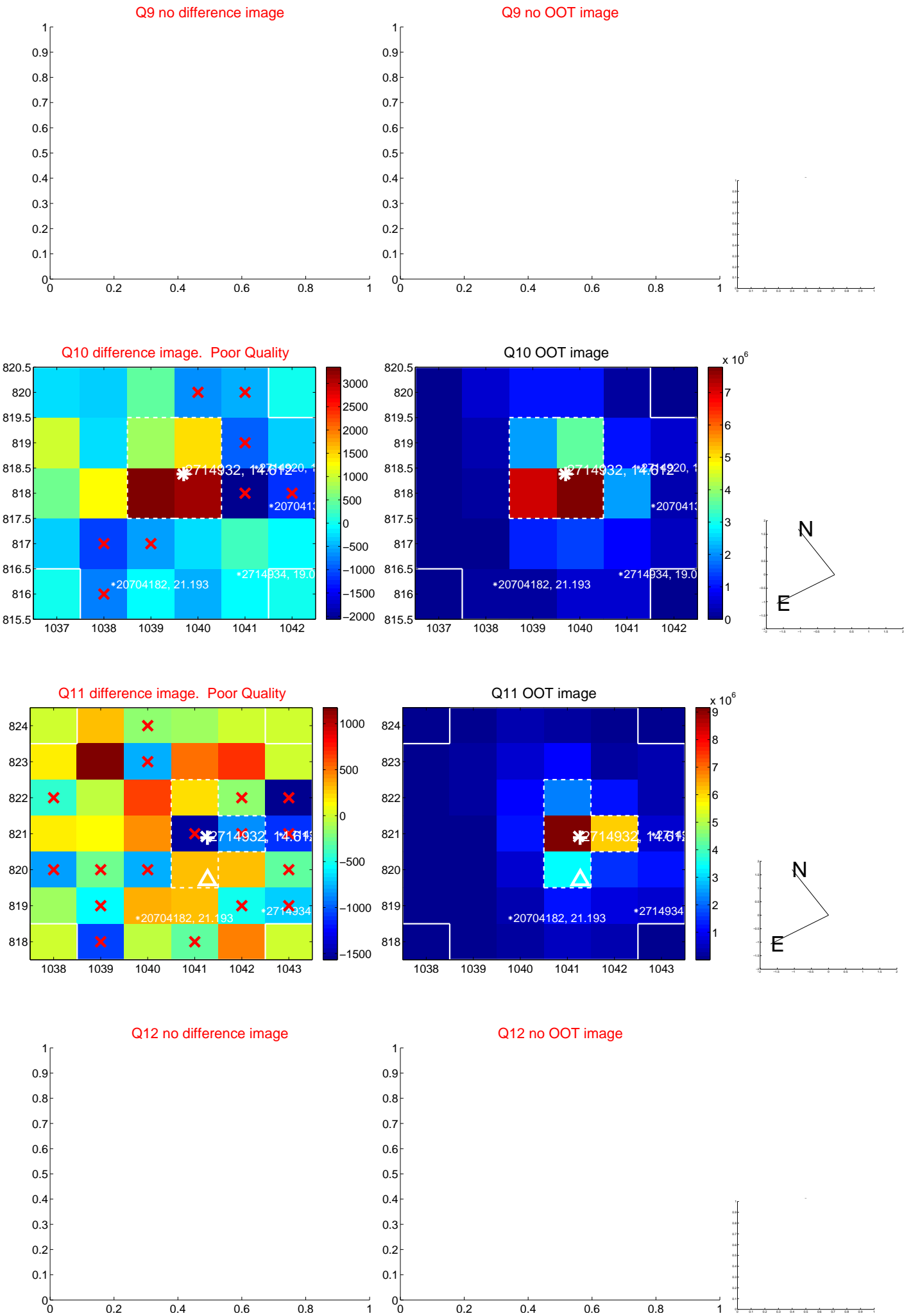
Q4 OOT image



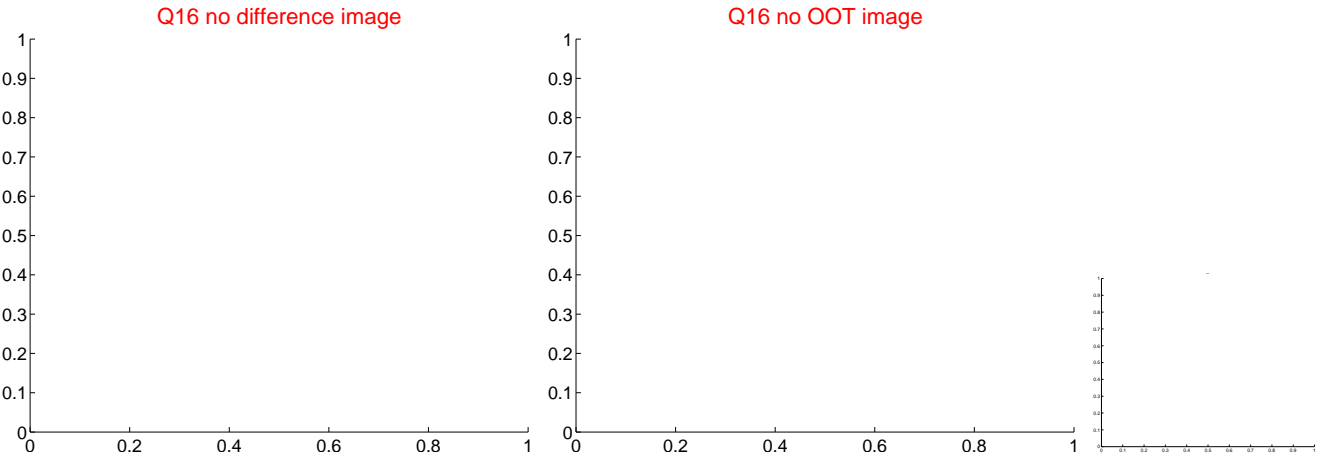
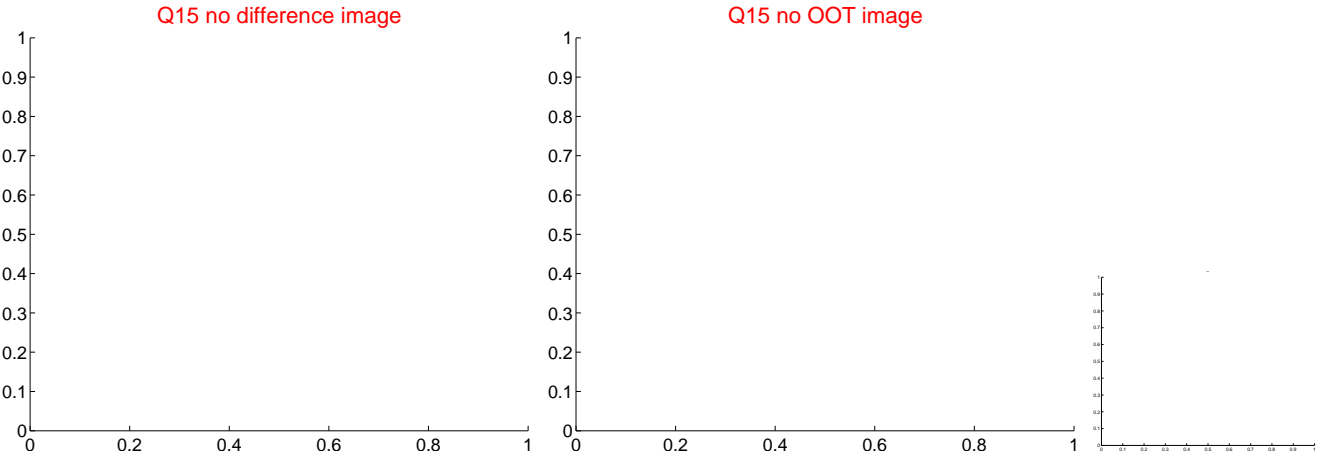
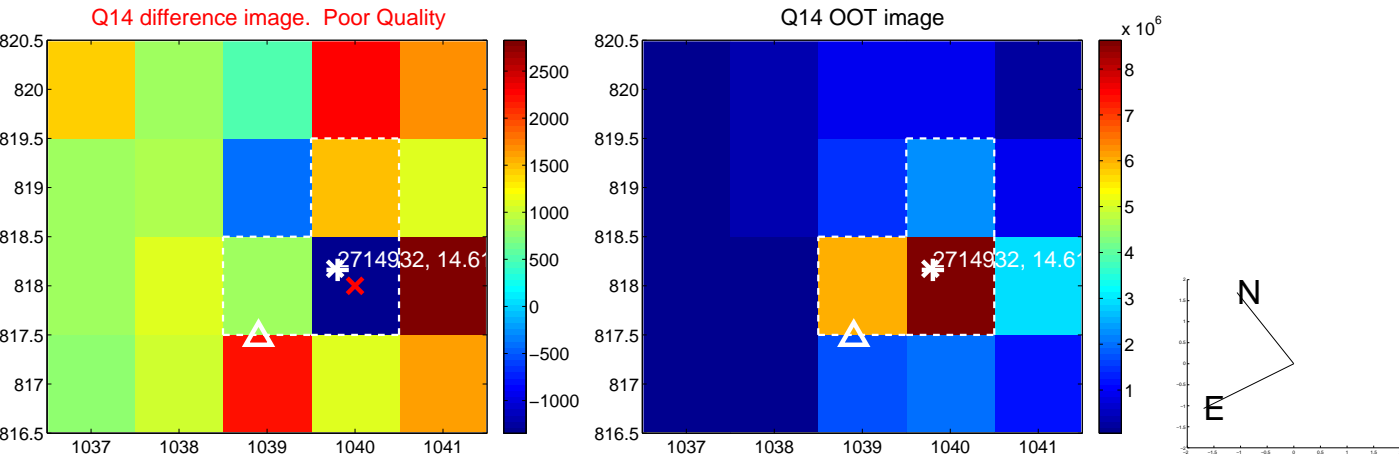
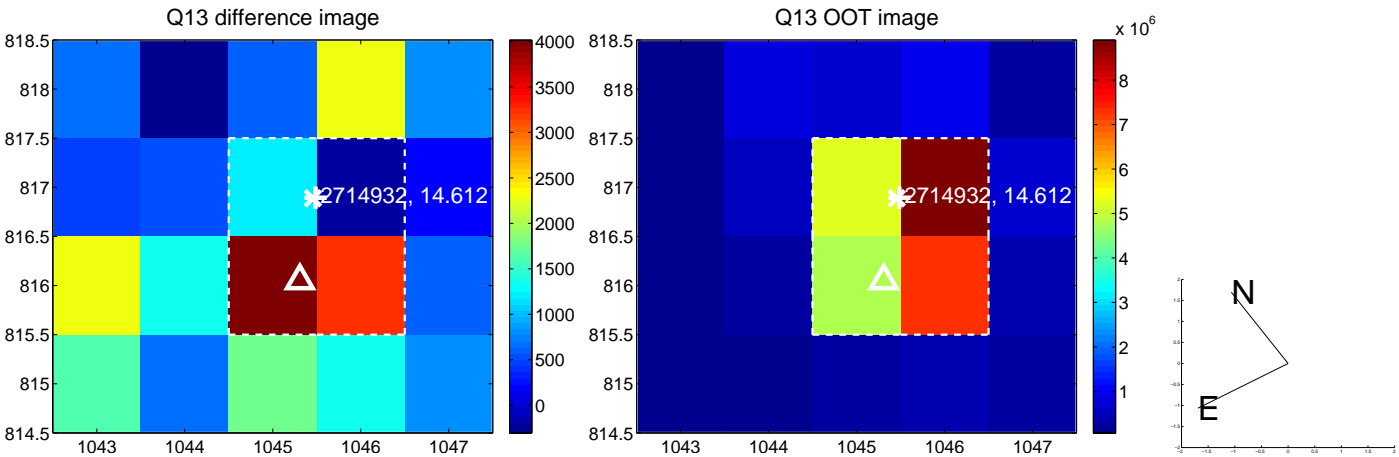
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



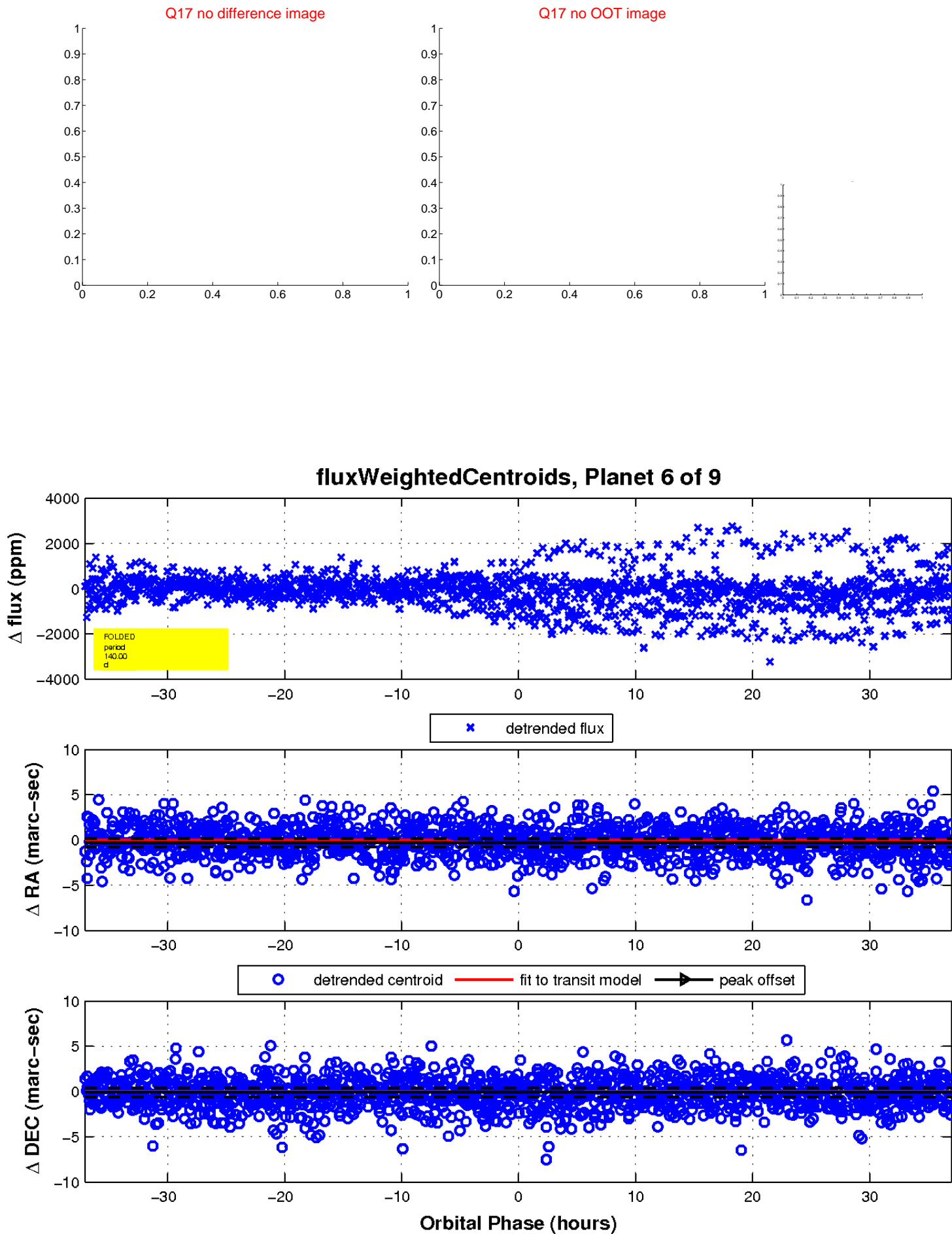
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

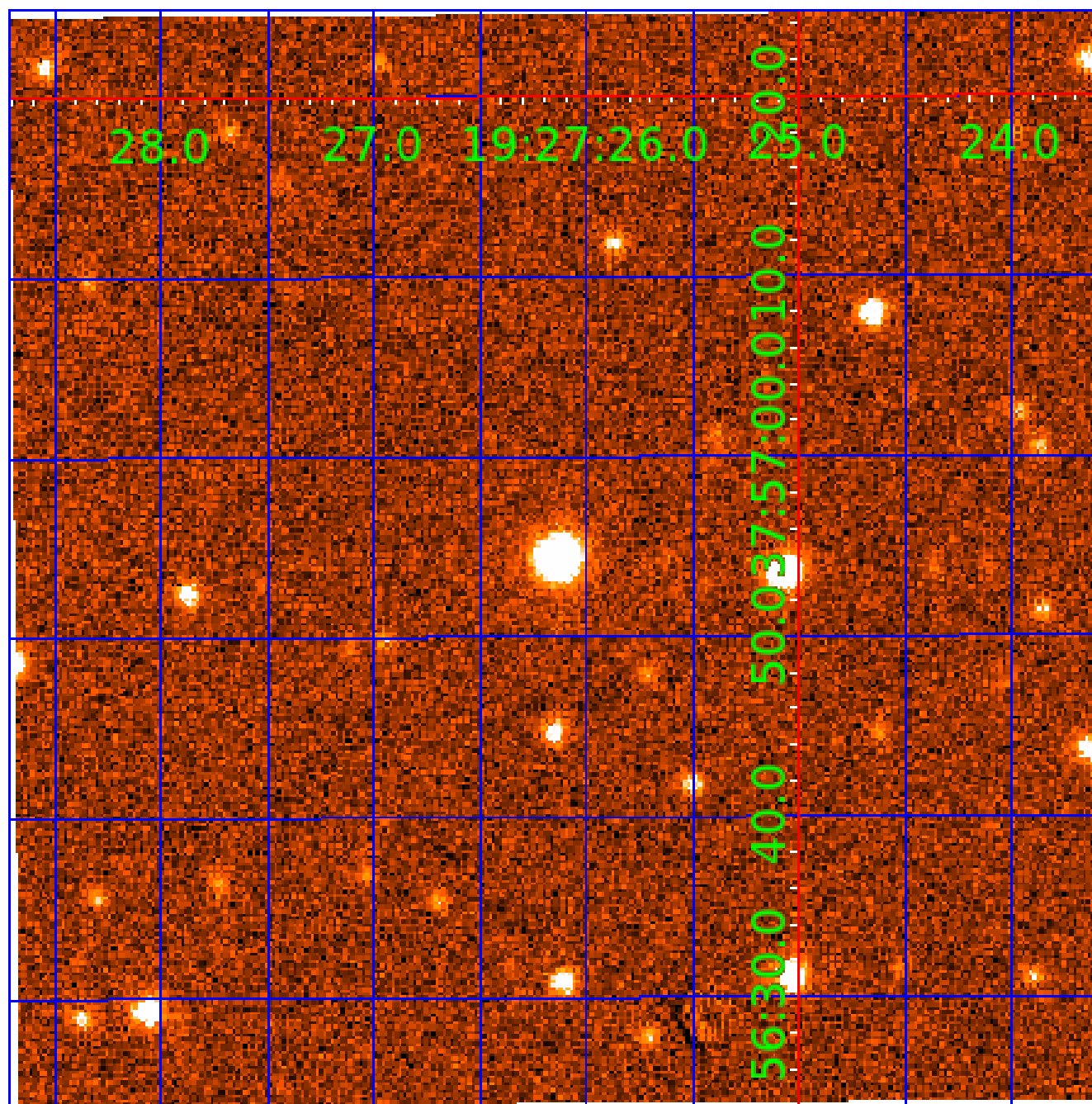


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 002714932

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})
002714932-01	OBS	No	1.936609	133.370964	83.2	10.788	11.1	12.1	1.02	6096	0.93	1353.99
002714932-02	OBS	No	83.586553	183.122566	621.7	30.201	35.1	5.7	1.02	6096	2.53	8.94
002714932-03	OBS	No	379.740193	213.757033	5541.4	40.236	17.8	12.8	1.02	6096	10.27	1.19
002714932-04	OBS	No	194.036588	143.761410	709.8	63.663	14.7	3.5	1.02	6096	2.76	2.91
002714932-05	OBS	No	249.813954	169.244968	595.2	15.000	10.9	-1.0	1.02	6096	2.48	2.08
002714932-06	OBS	No	139.996979	227.369717	657.3	12.352	9.8	5.9	1.02	6096	2.83	4.50
002714932-07	OBS	No	66.159045	173.590743	538.3	13.883	9.3	5.5	1.02	6096	2.69	12.21
002714932-08	OBS	No	101.251584	215.094722	823.1	16.571	9.0	6.7	1.02	6096	3.05	6.93
002714932-09	OBS	No	220.851963	149.666990	4184.1	35.946	8.4	9.1	1.02	6096	7.29	2.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002714932-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
002714932-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
002714932-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
002714932-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— INCONSISTENT_TRANS
002714932-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS
002714932-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
002714932-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
002714932-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
002714932-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS

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

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

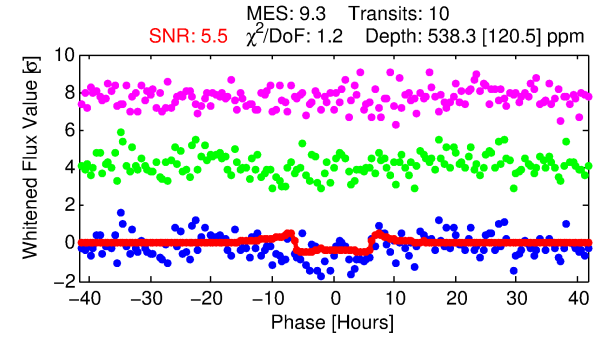
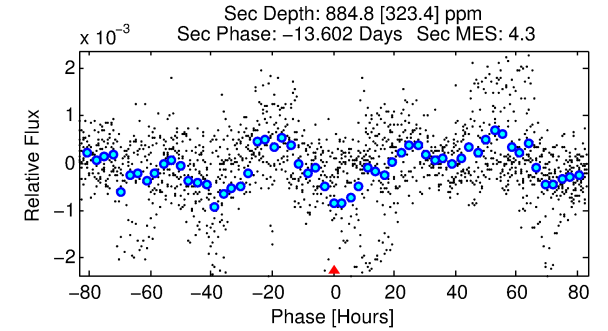
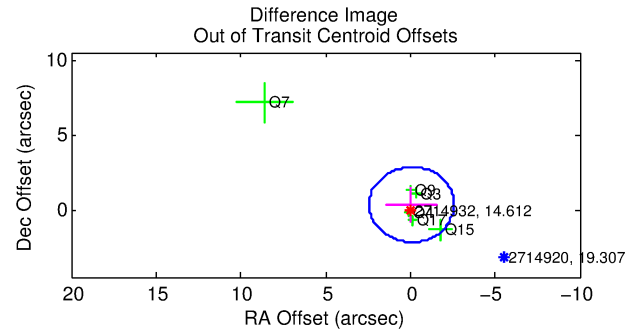
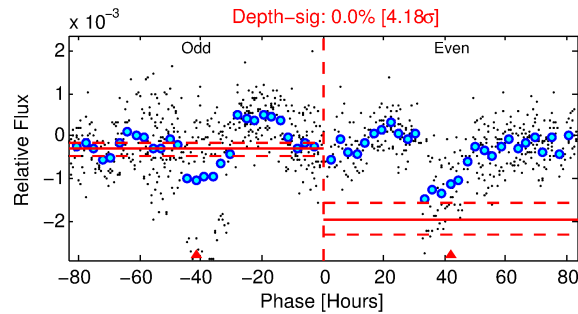
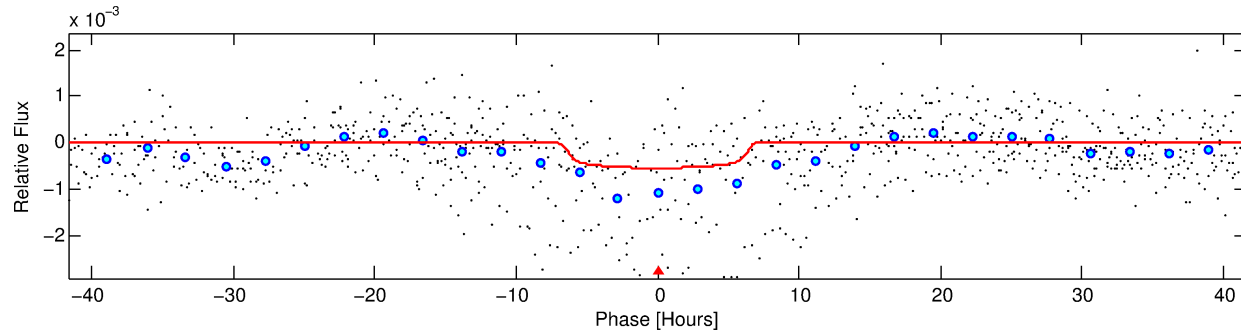
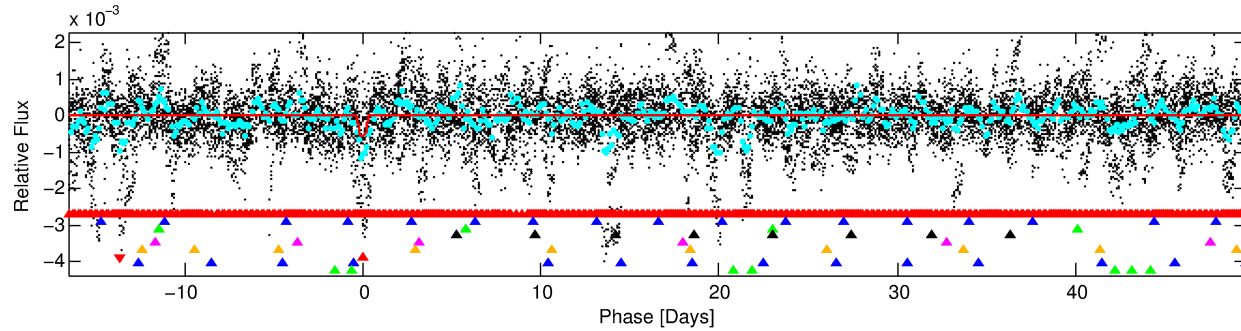
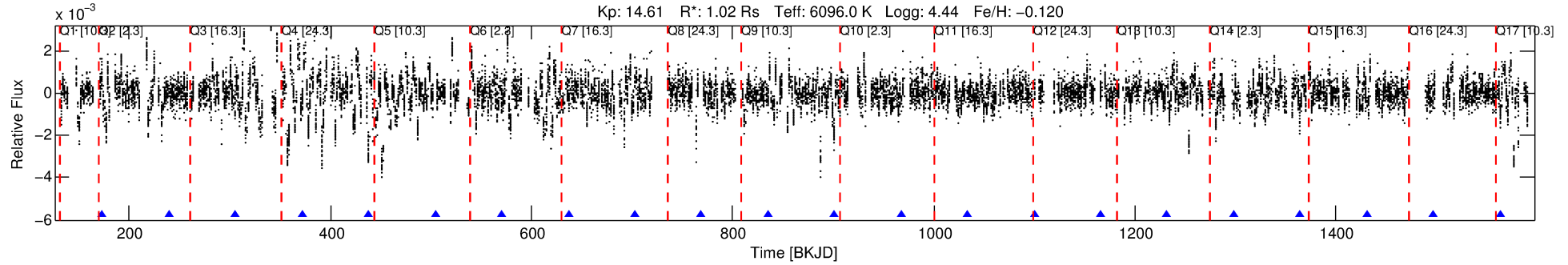
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002714932-07

No Significant Match Found

DV One-Page Summary

KIC: 2714932 Candidate: 7 of 9 Period: 66.159 d



DV Fit Results:

Period = 66.15905 [0.00210] d
Epoch = 173.5907 [0.0245] BKJD
Rp/R* = 0.0242 [0.0040]
a/R* = 20.48 [10.76]
b = 0.86 [0.17]
Seff = 12.21 [5.03]
Teq = 477 [49] K
Rp = 2.69 [0.98] Re
a = 0.3234 [0.0873] AU
Ag = 7053.14 [4414.59] [1.60 σ]
Teffp = 6754 [861] K [7.28 σ]

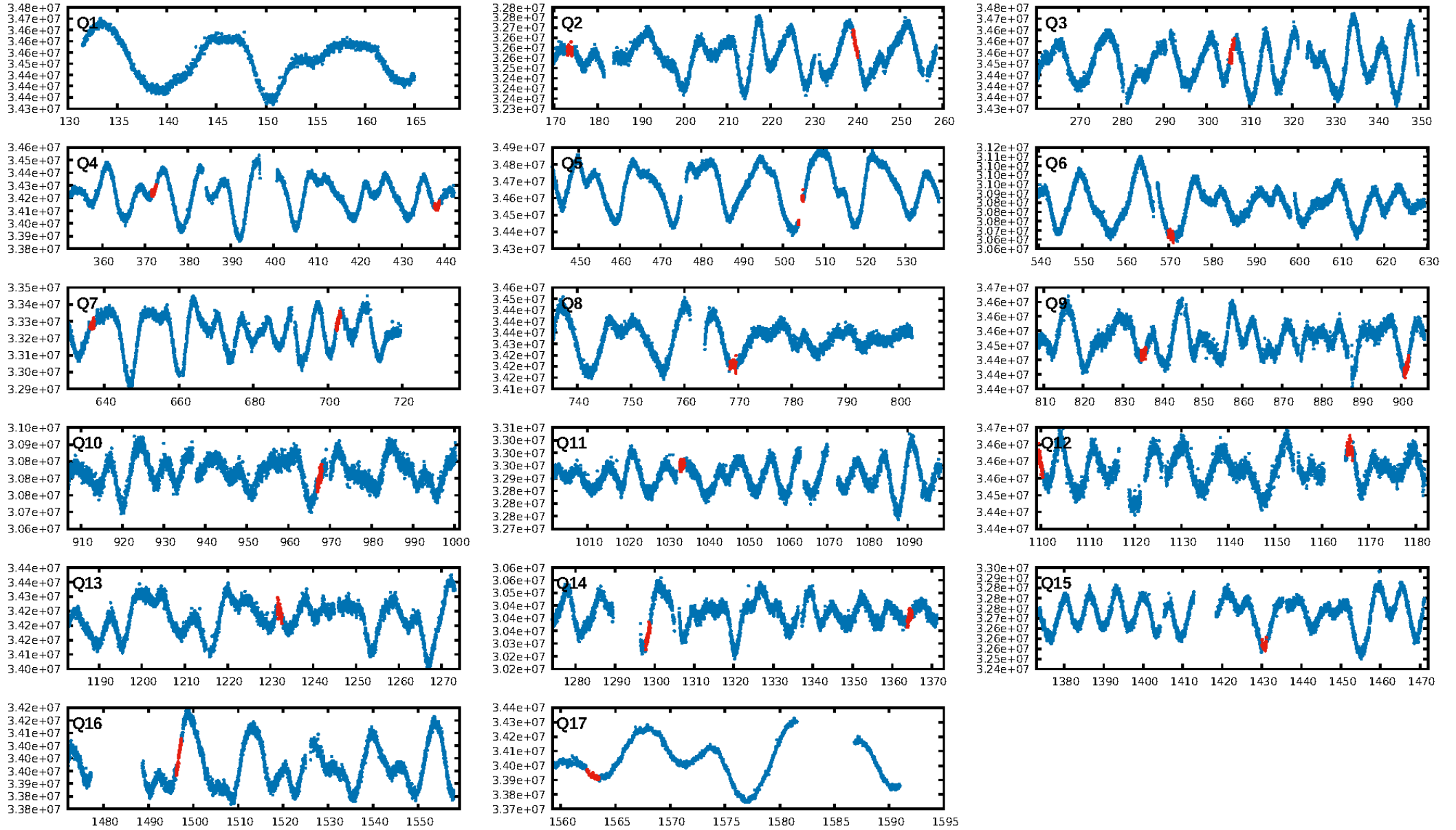
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [87.67 σ]
LongPeriod-sig: 100.0% [12.58 σ]
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.57e-11
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 0.5396
Centroid-sig: 24.9%
Centroid-so: 0.994 arcsec [2.36 σ]
OotOffset-rm: 0.342 arcsec [0.41 σ]
KicOffset-rm: 0.336 arcsec [0.70 σ]
OotOffset-st: 0/3/1/2 [6]
KicOffset-st: 0/3/1/2 [6]
DiffImageQuality-fgm: 0.50 [3/6]
DiffImageOverlap-fno: 0.00 [0/11]

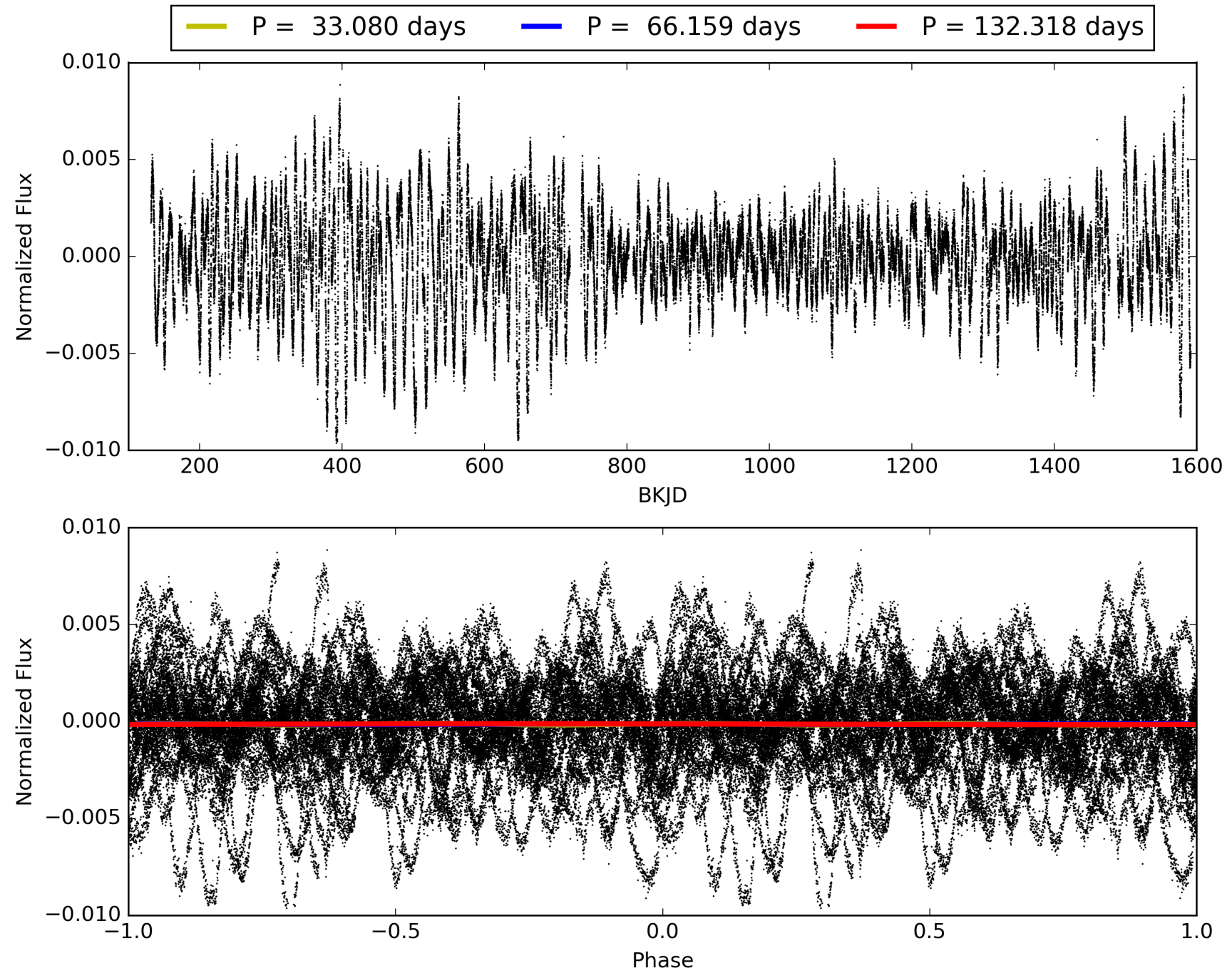
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:29:15 Z

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

TCE 002714932-07, PDC Light Curves

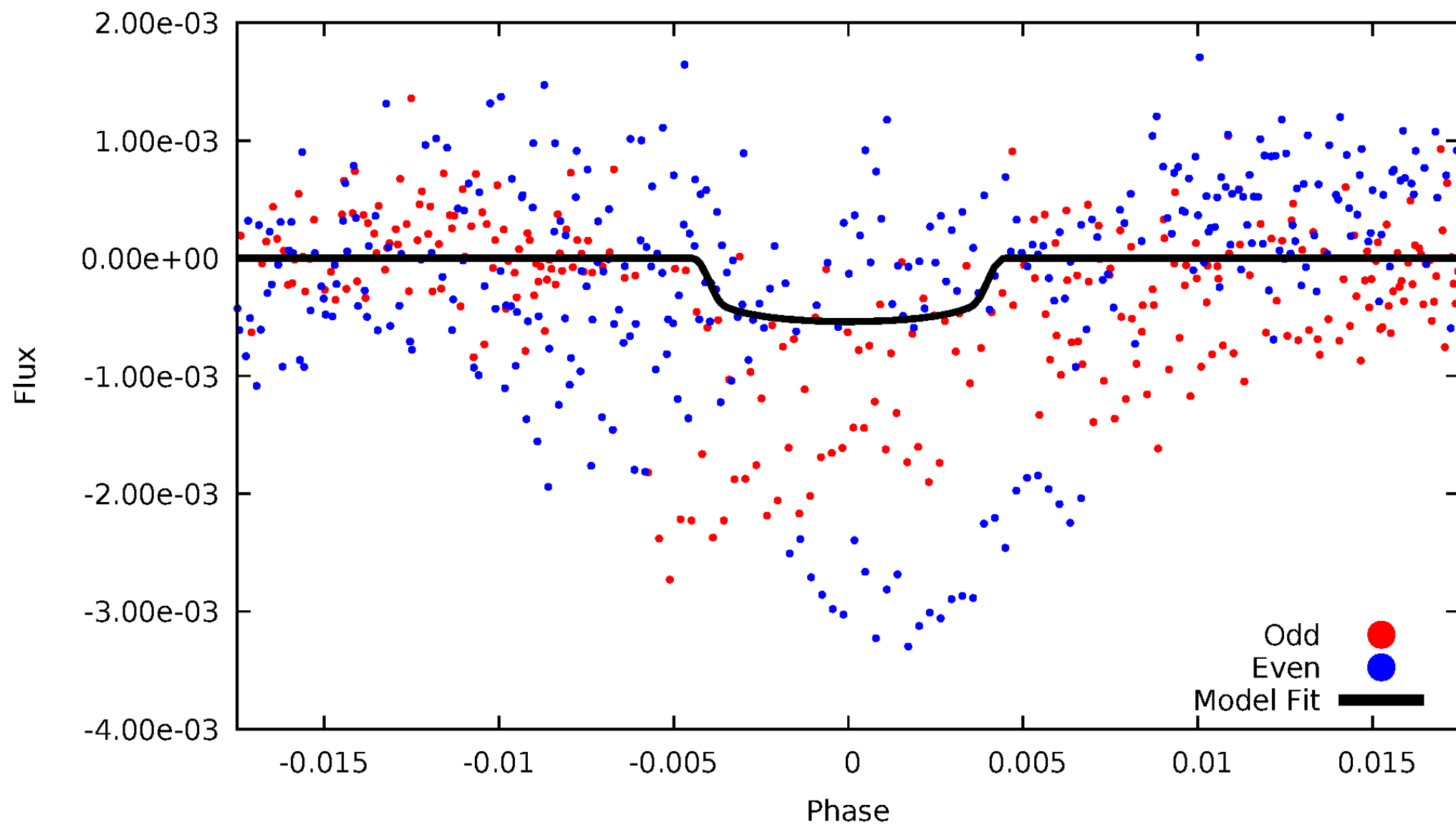


TCE 002714932-07



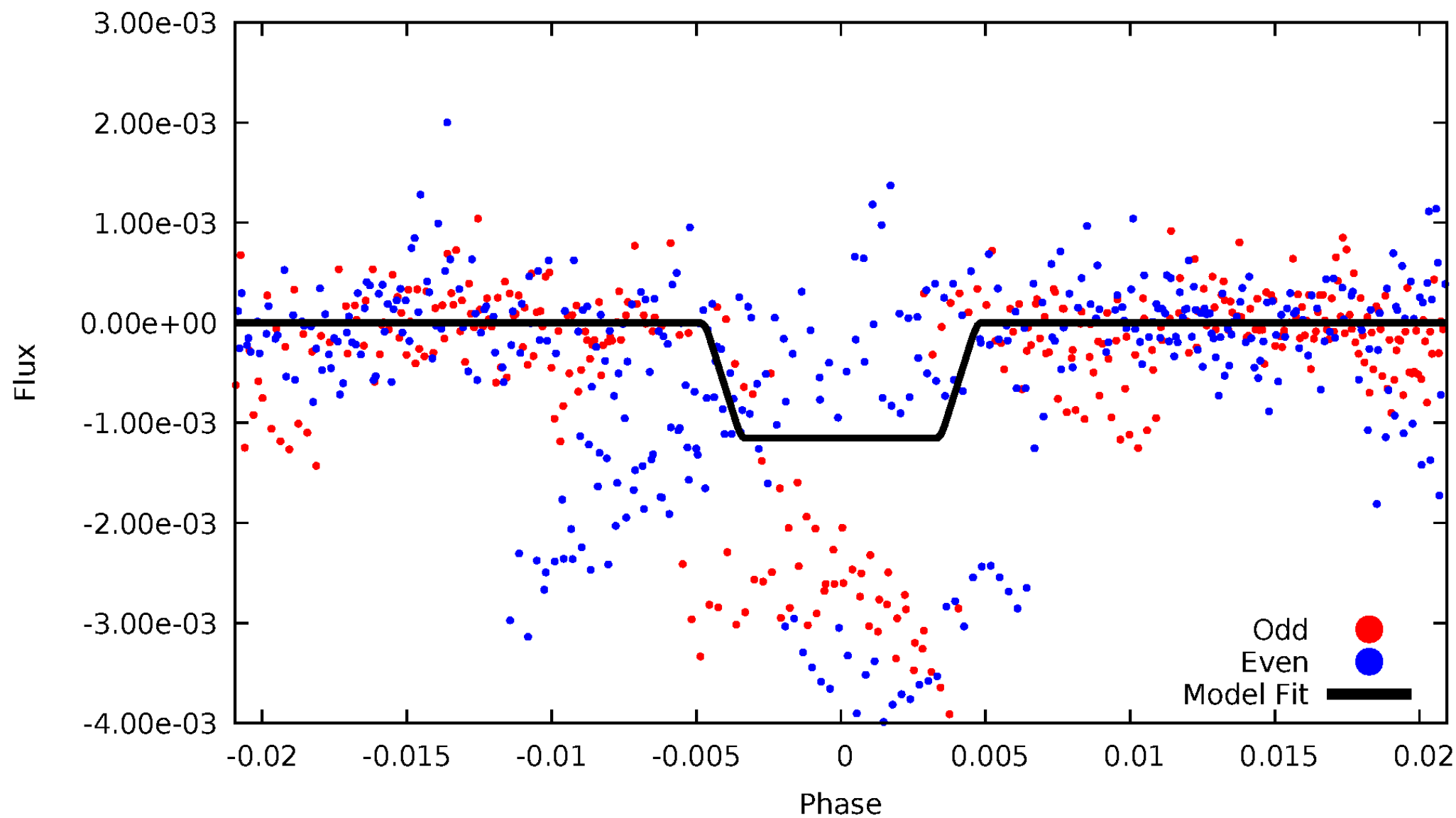
DV Odd/Even

TCE 002714932-07



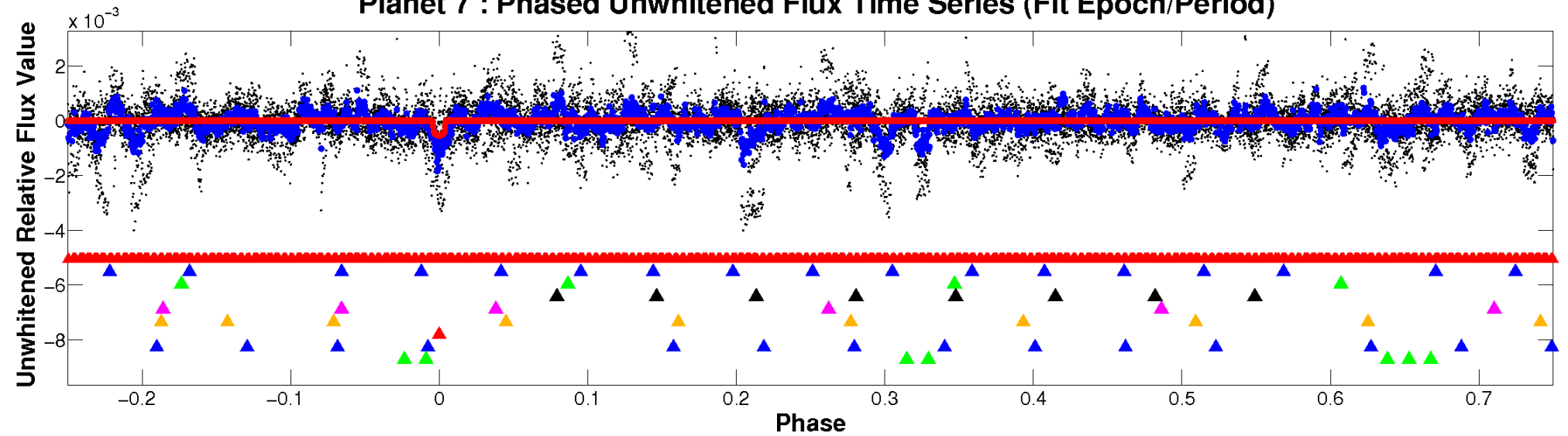
ALT Odd/Even

TCE 002714932-07

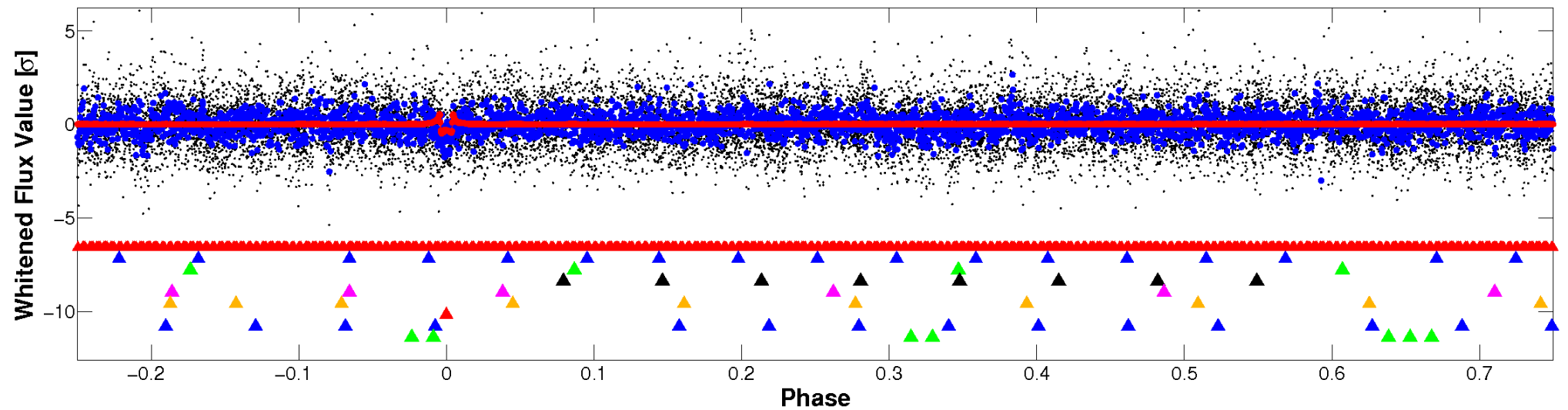


Non-Whitened Vs. Whitened Light Curve

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

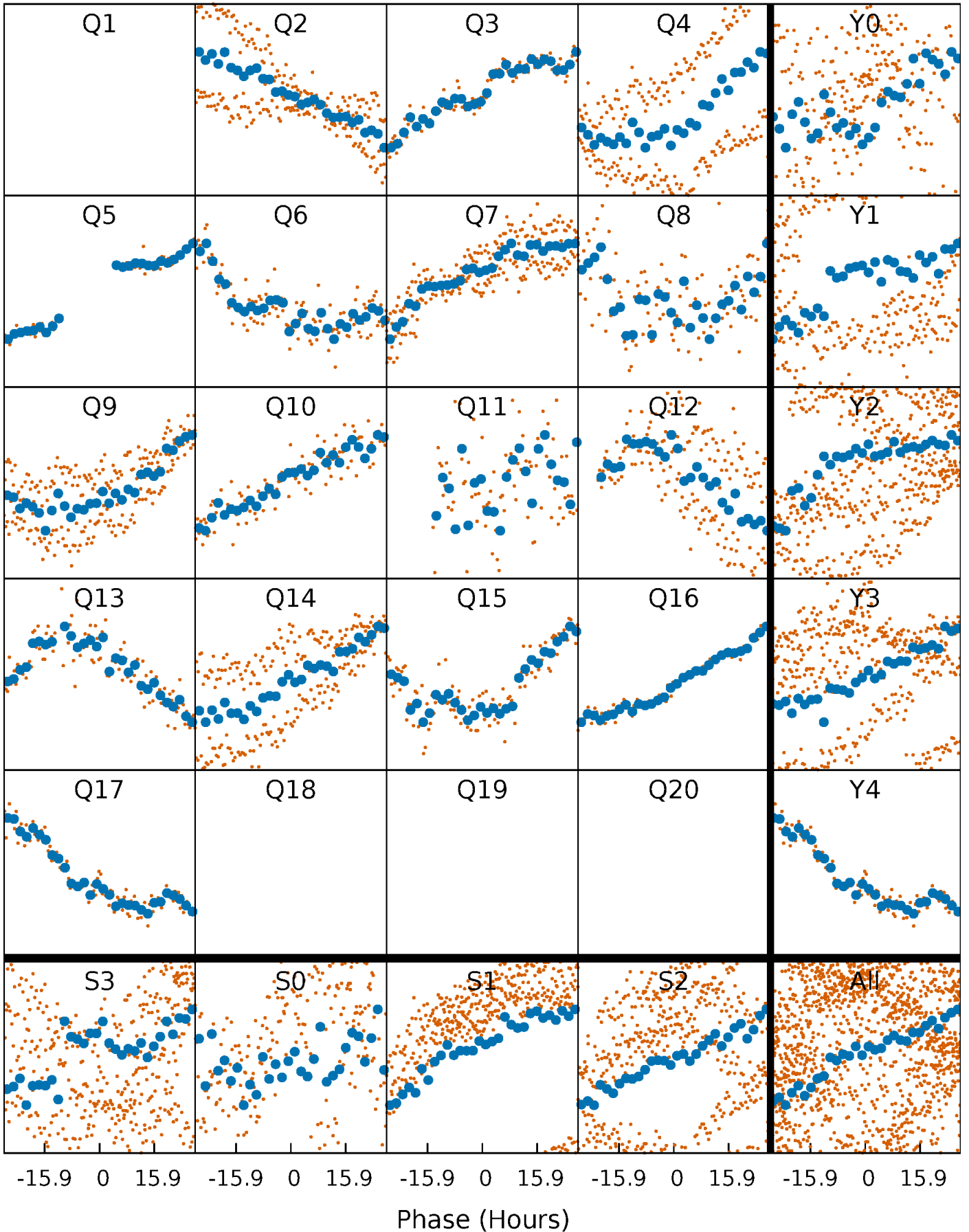


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



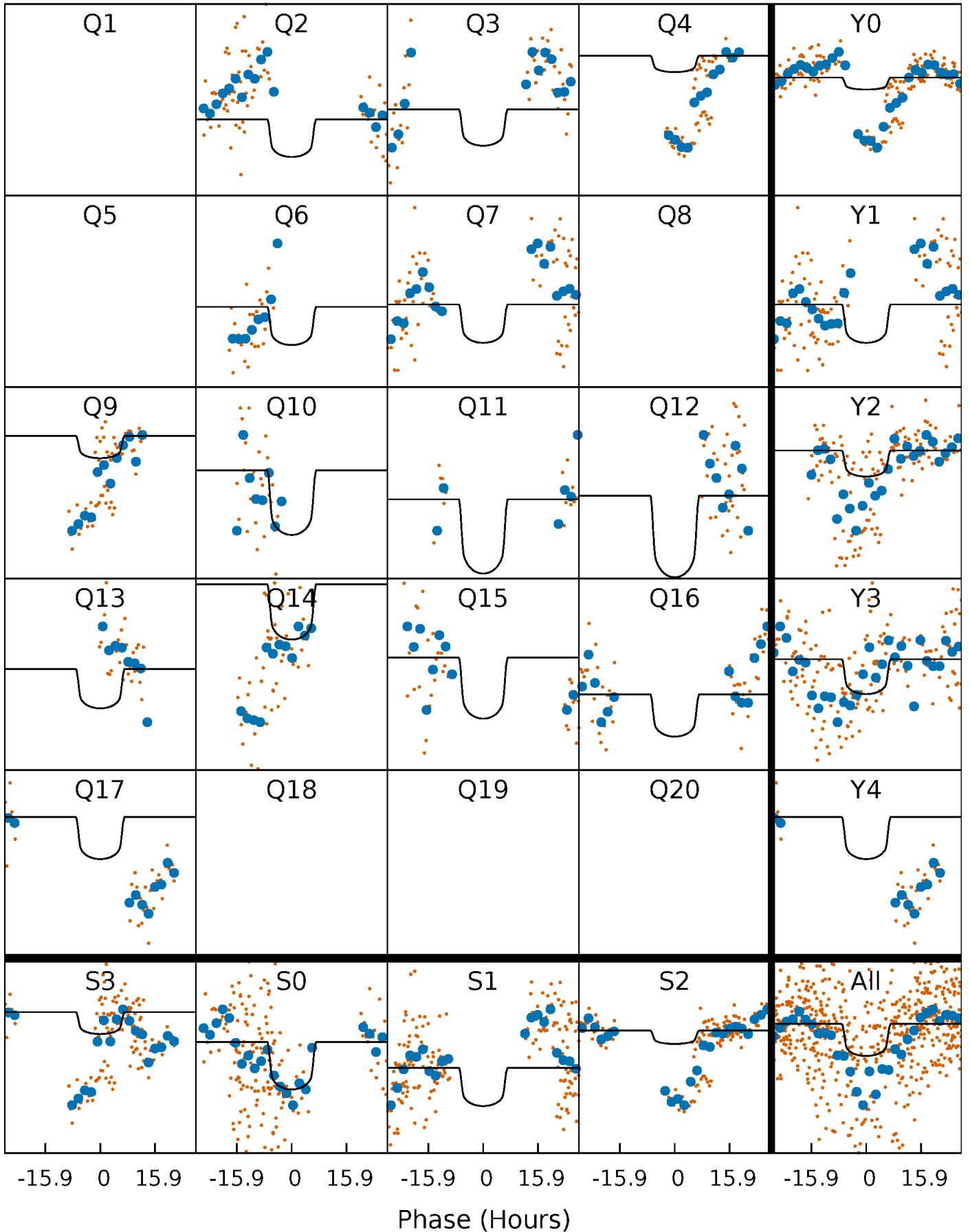
PDC Quarter-Phased Transit Curves

TCE 002714932-07 P= 66.159045 Days $T_0=173.590743$ (BKJD)



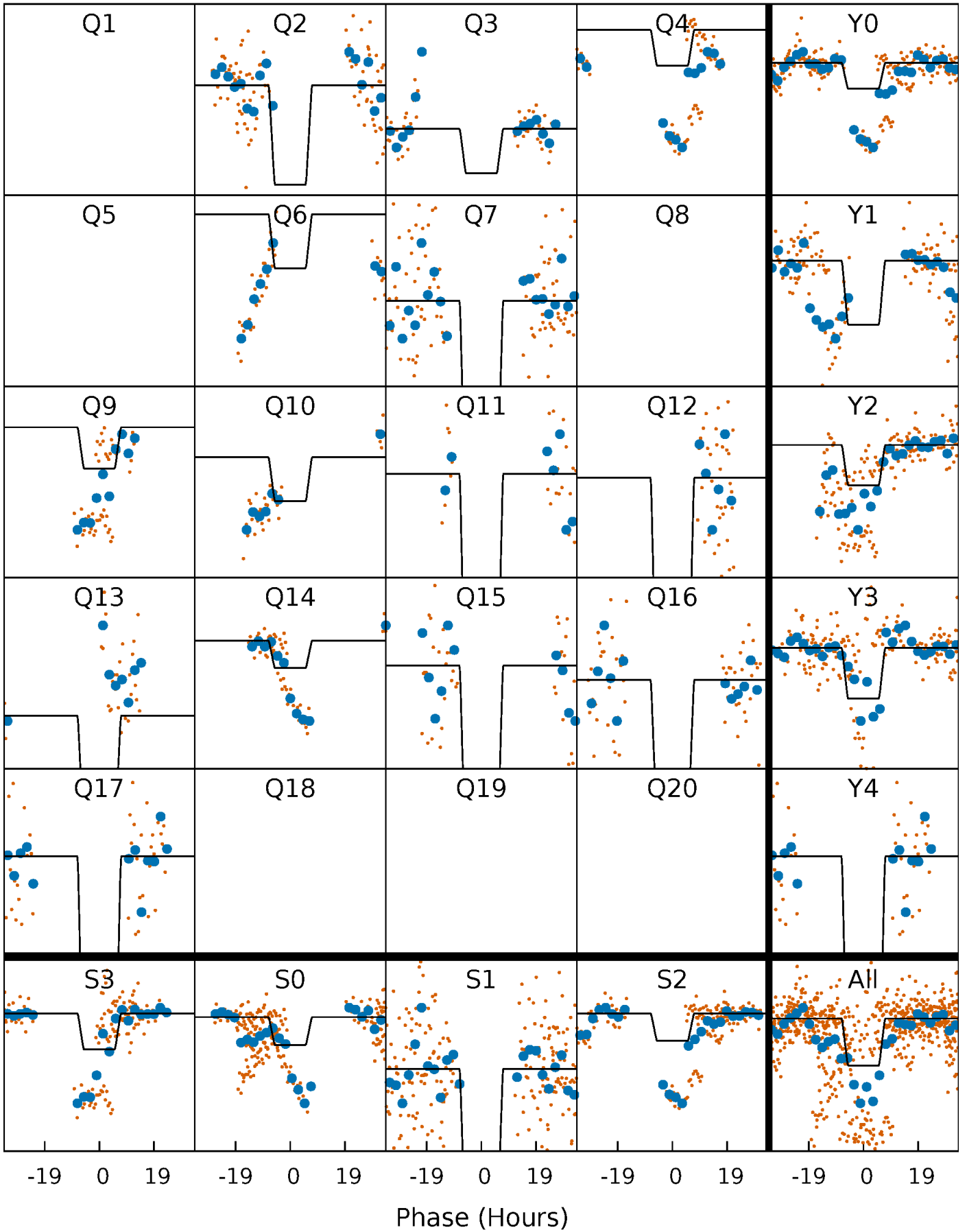
DV Quarter-Phased Transit Curves

TCE 002714932-07 $P = 66.159045$ Days $T_0 = 173.590743$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

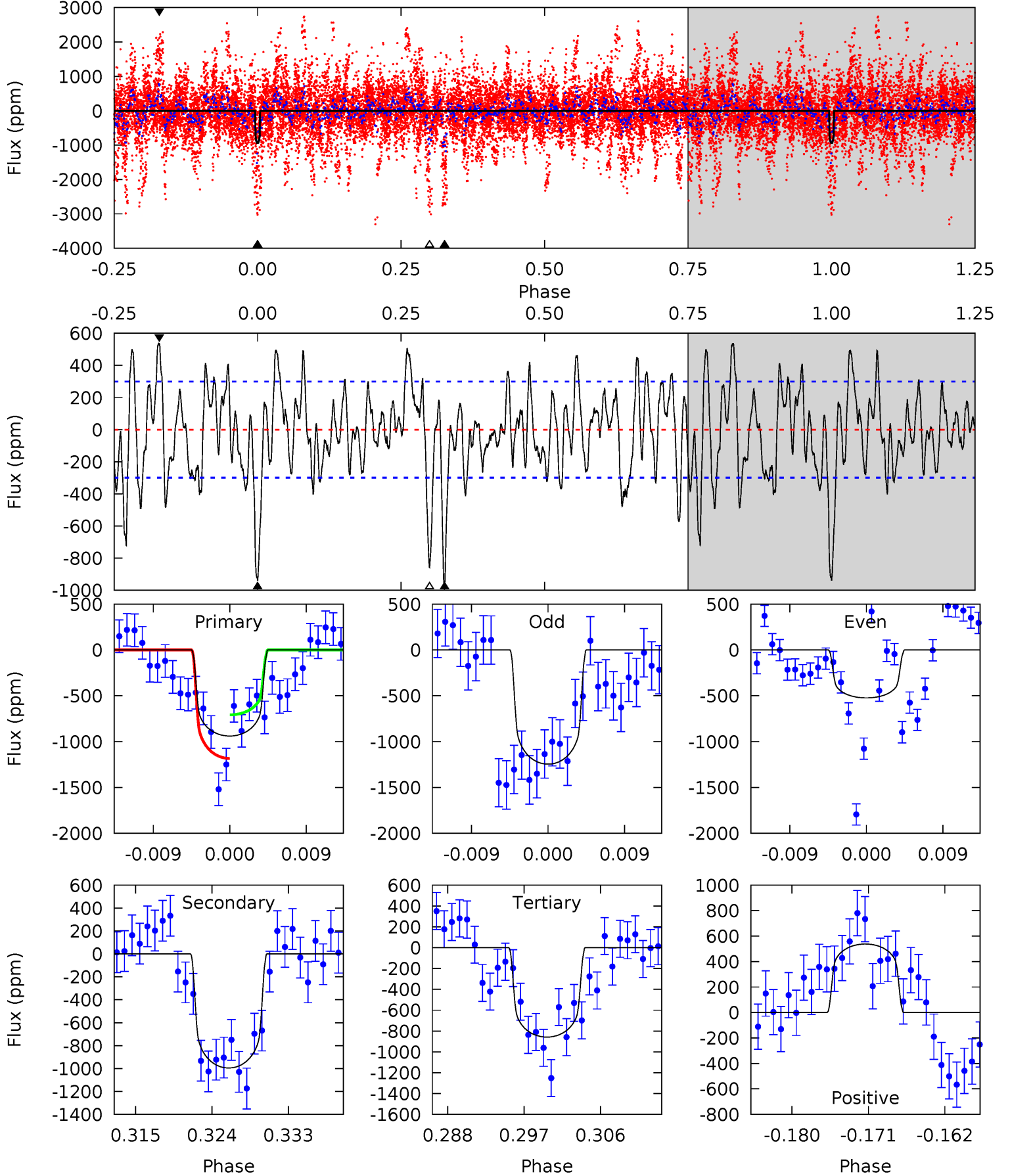
TCE 002714932-07 $P = 66.154350$ Days $T_0 = 173.625478$ (BKJD)



DV Model-Shift Uniqueness Test

002714932-07, P = 66.159045 Days, E = 107.431698 Days

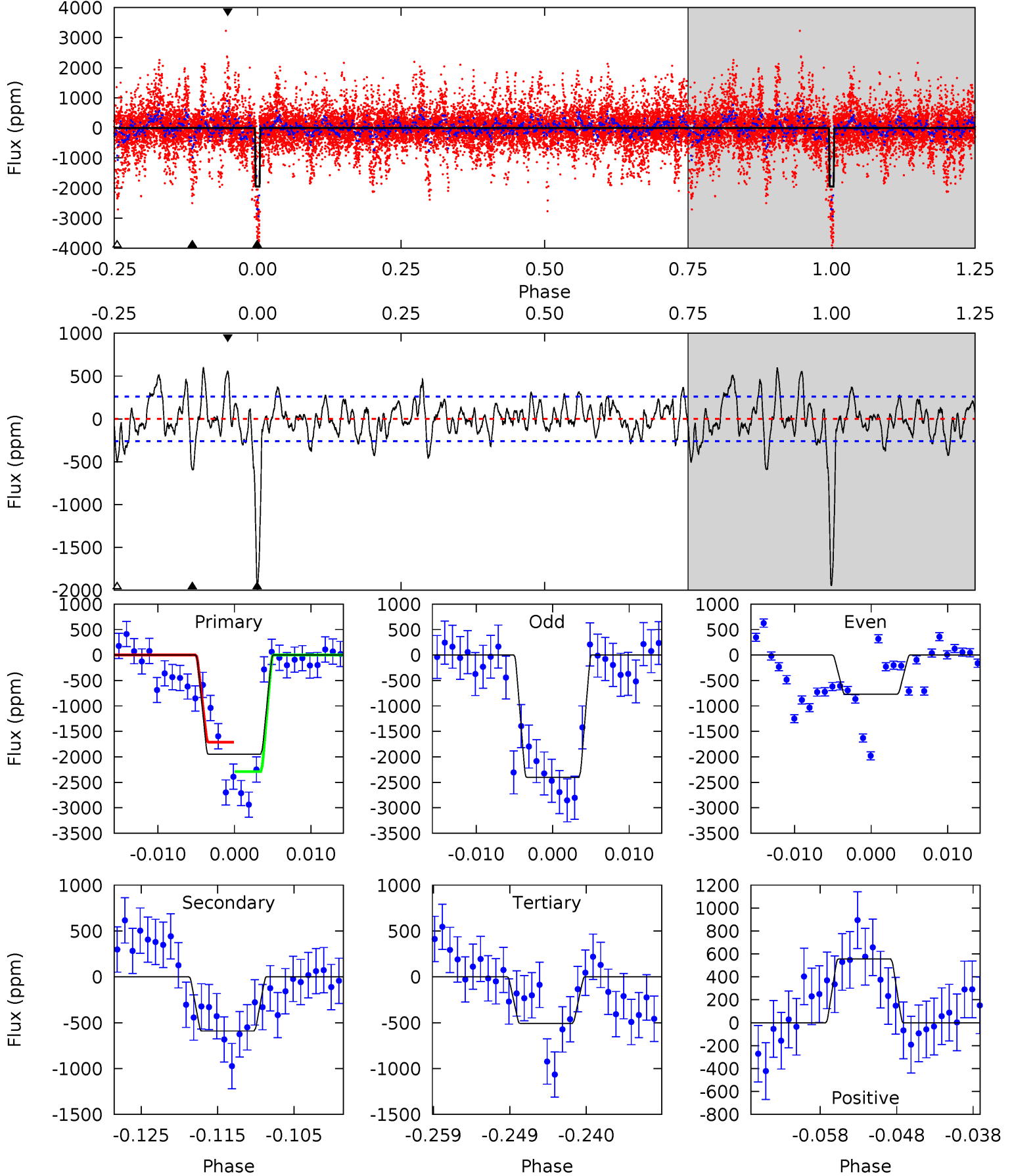
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	16.8	14.5	9.06	5.05	2.61	3.85	1.37	6.77	2.31	7.71	5.70	1.13	0.35	4.06



Alt Model-Shift Uniqueness Test

002714932-07, P = 66.154350 Days, E = 107.471128 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.6	11.4	9.80	10.7	5.03	2.59	3.28	27.8	26.9	1.60	0.66	15.5	1.58	0.24	5.50



Stellar Parameters For KIC 002714932

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6096^{+189}_{-210}	$4.437^{+0.070}_{-0.210}$	$-0.120^{+0.250}_{-0.350}$	$1.016^{+0.330}_{-0.132}$	$1.026^{+0.153}_{-0.126}$	$1.377^{+0.505}_{-0.707}$
	+3%/-3%	+2%/-5%	+208%/-292%	+32%/-13%	+15%/-12%	+37%/-51%
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 002714932-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-995 ± 59	$2.81^{+0.56}_{-0.54}$	680^{+49}_{-35}	7018^{+767}_{-611}	7151^{+3633}_{-2161}
Alt.	-590 ± 52	$3.93^{+0.85}_{-0.61}$	678^{+57}_{-35}	5207^{+339}_{-283}	2164^{+896}_{-652}

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 $A_{obs} \gg 1.0$

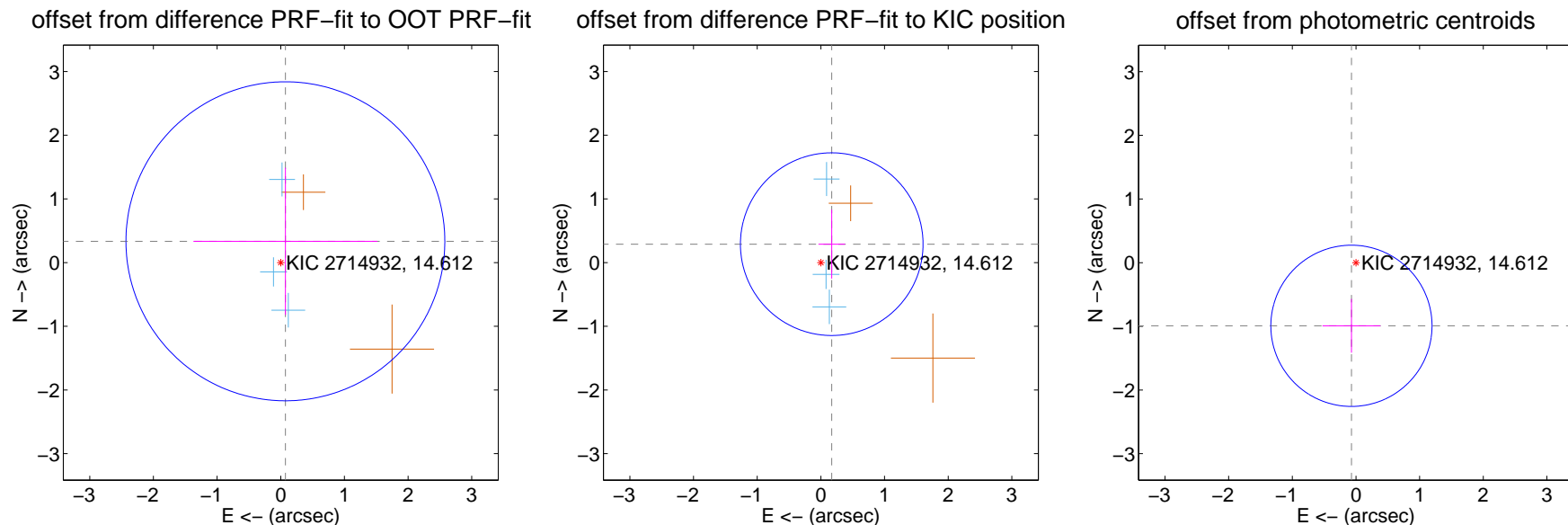
DV Centroid Data

Supplemental centroid analysis for 002714932-07. Kepler magnitude: 14.61. Transit SNR 5.45

There are 3 quarters with good PRF difference image offsets

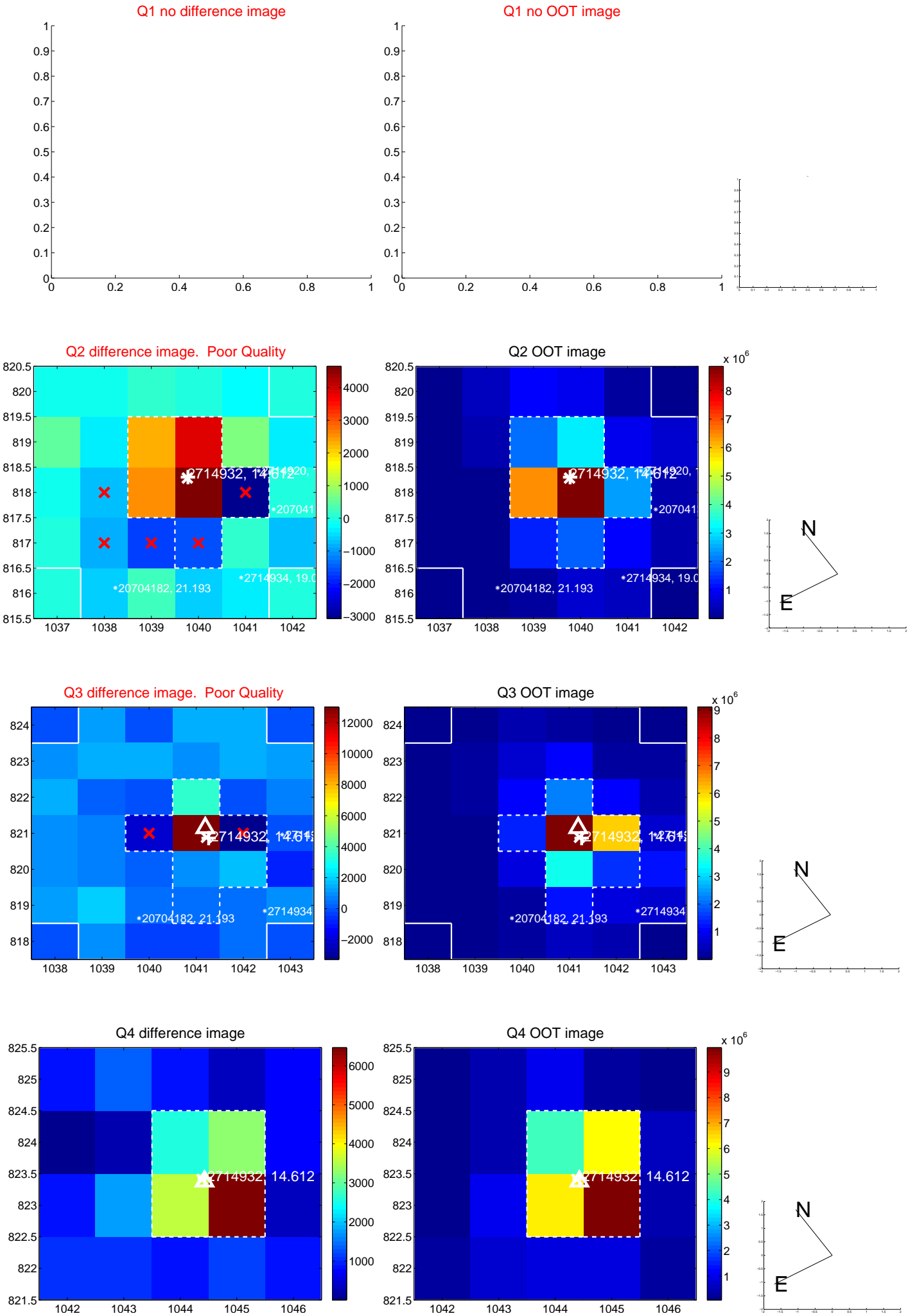
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.342 ± 0.835	0.41	-0.073 ± 1.445	0.335 ± 1.155
PRF-fit source offset from KIC position	0.336 ± 0.478	0.70	-0.171 ± 0.208	0.289 ± 0.541
photometric centroid source offset	0.99 ± 0.42	2.36	0.07 ± 0.46	-0.99 ± 0.42

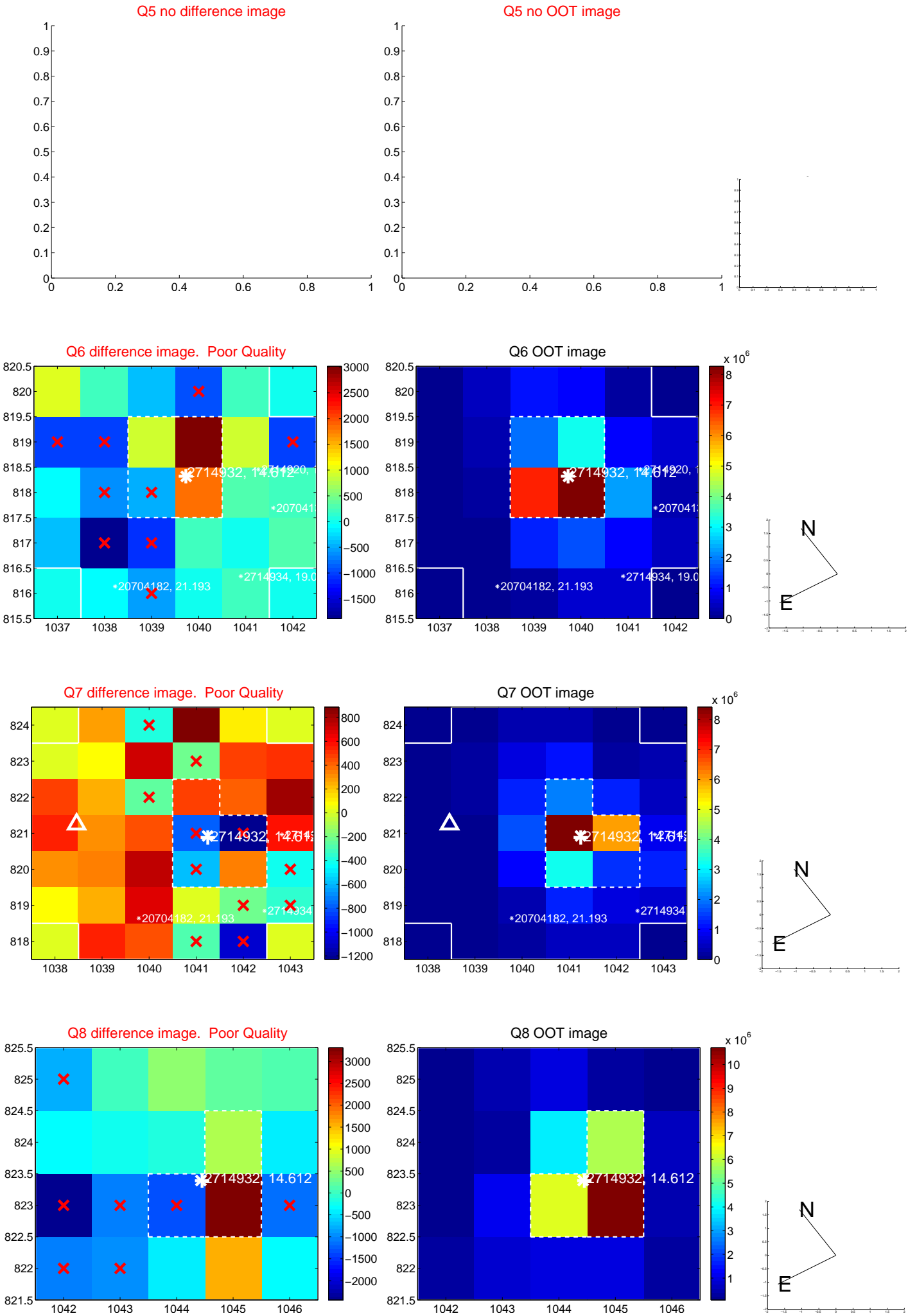


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

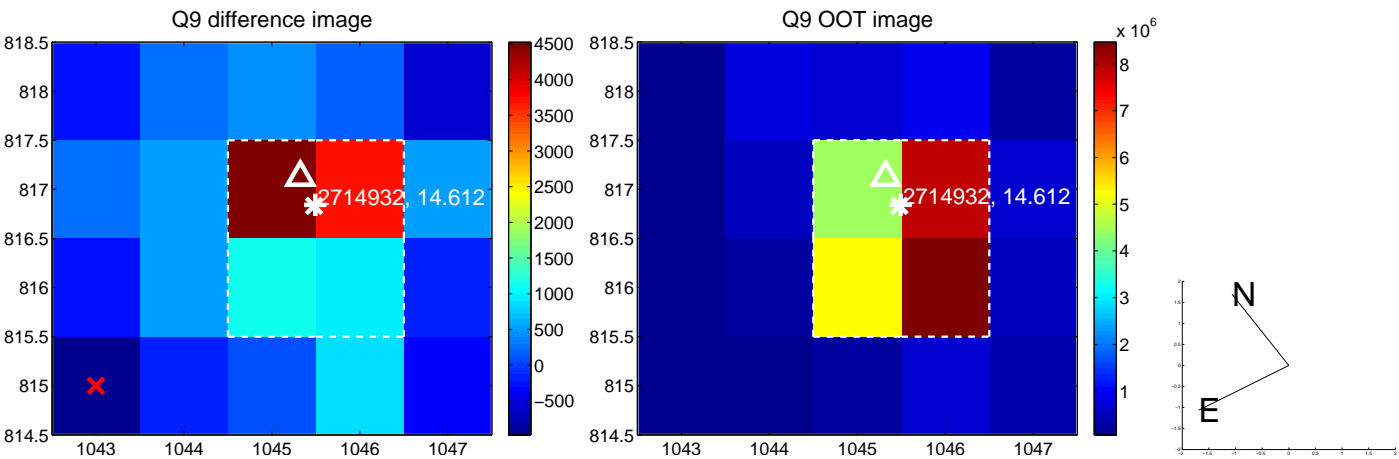
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



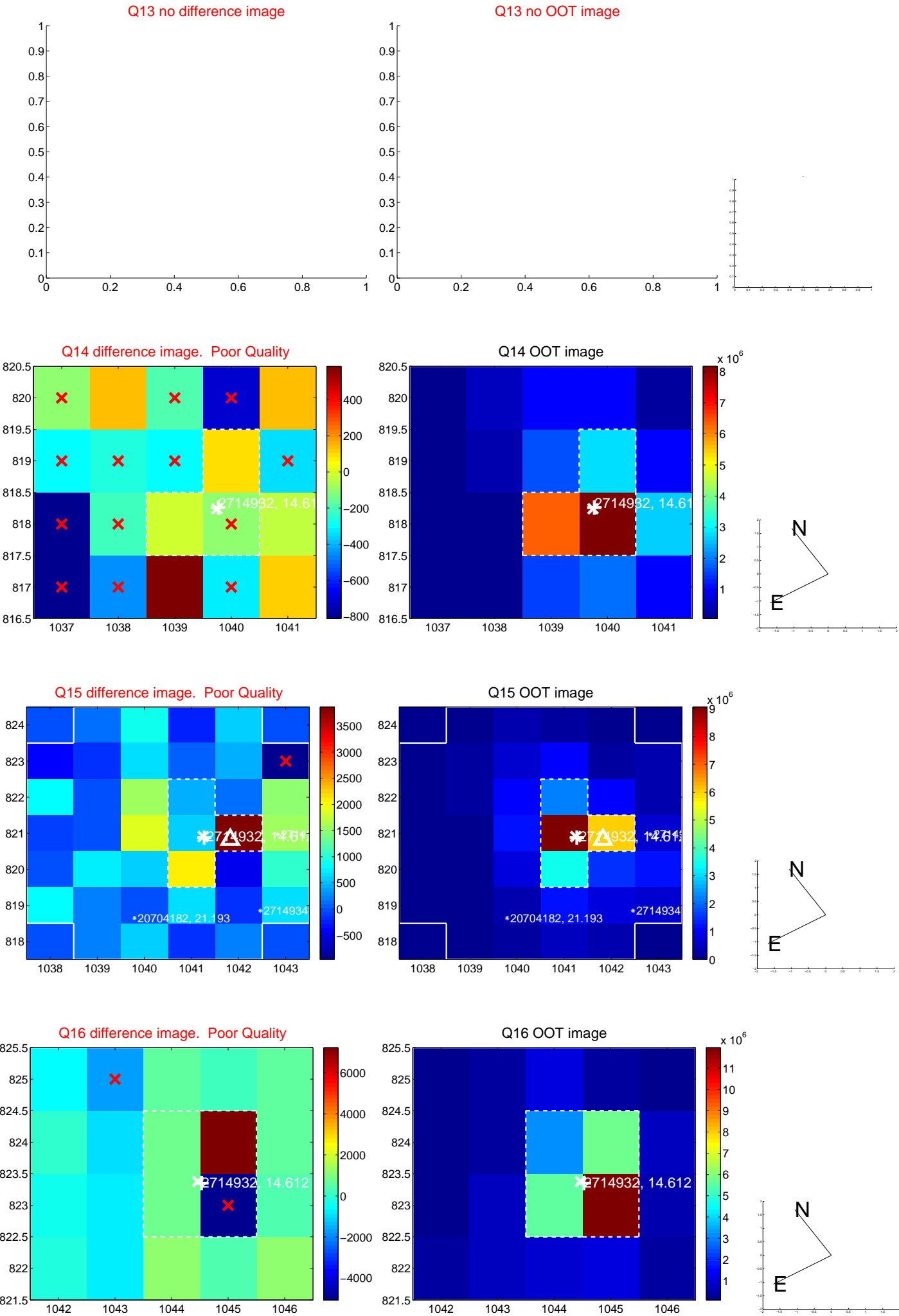
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



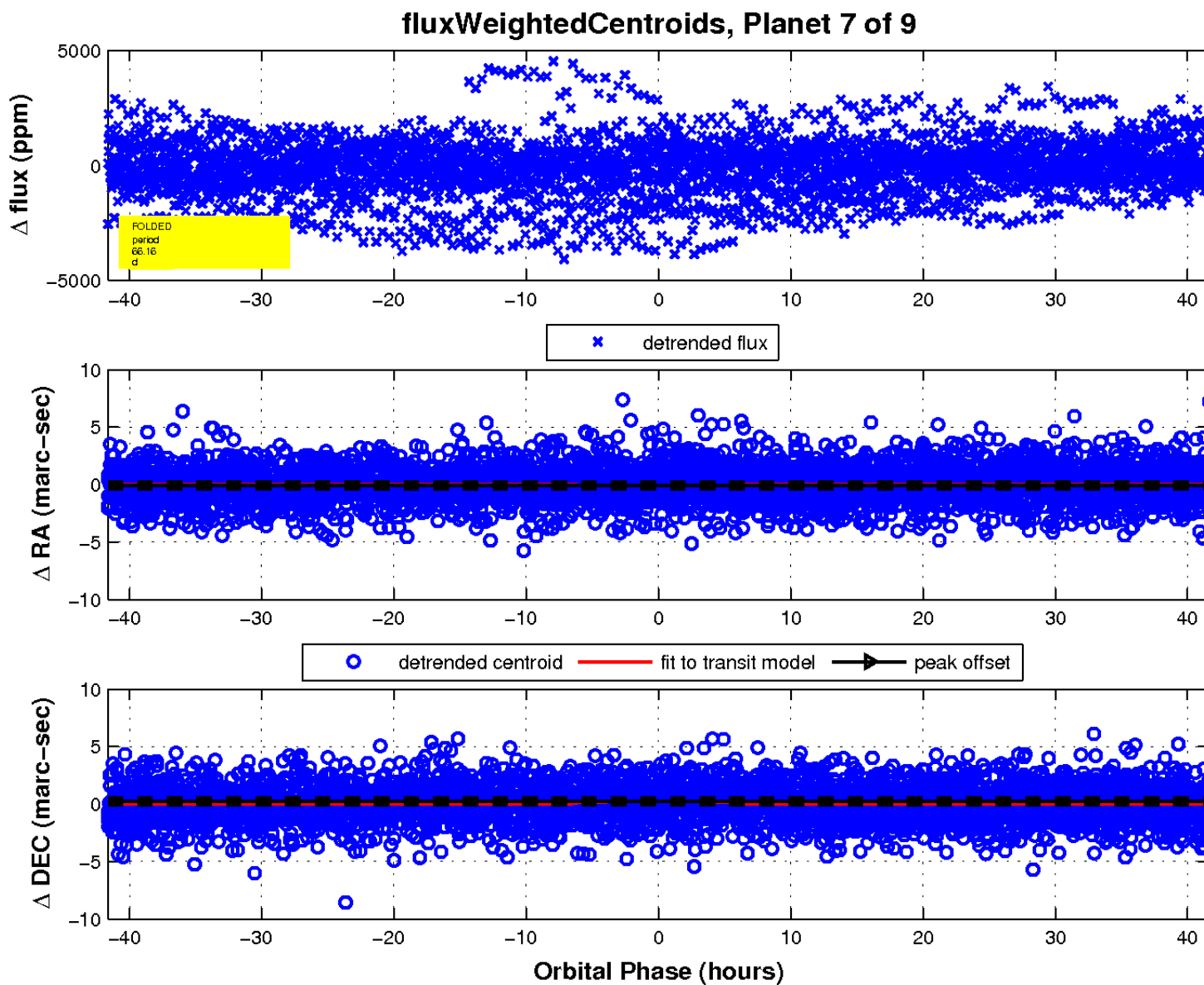
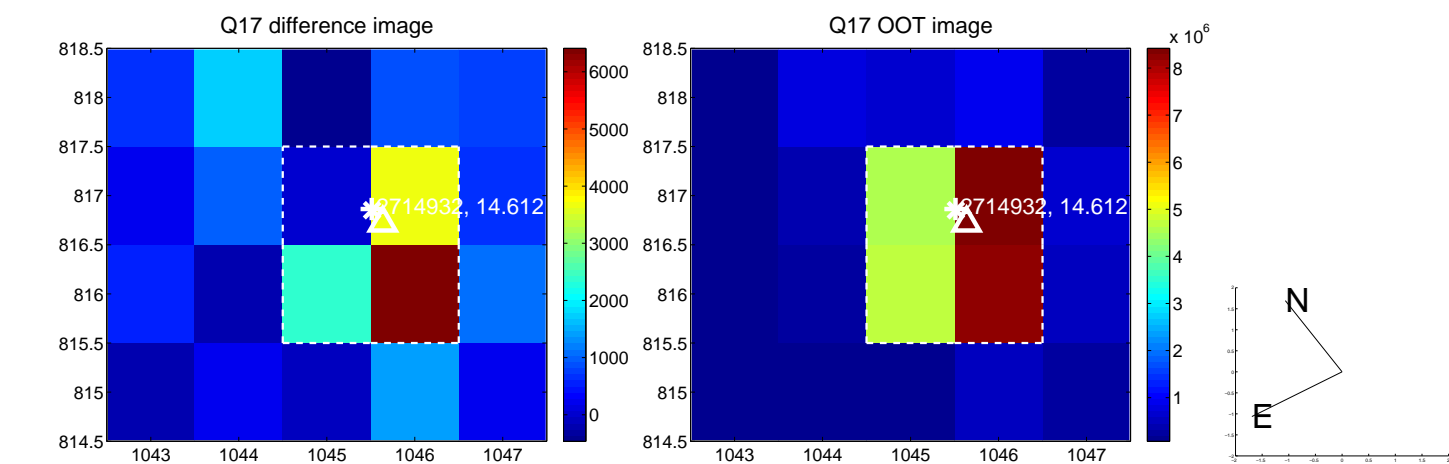
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

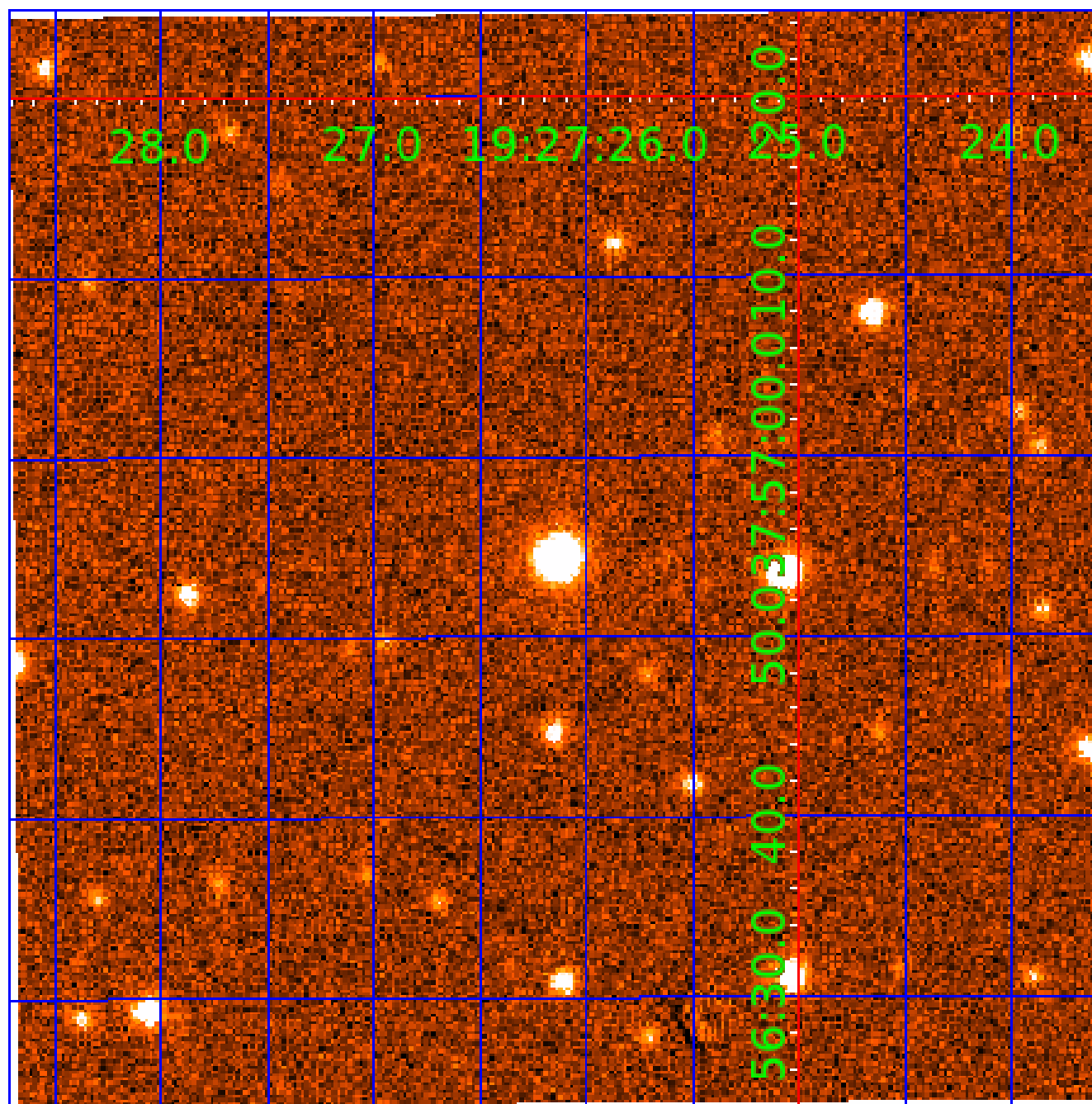


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 002714932

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})
002714932-01	OBS	No	1.936609	133.370964	83.2	10.788	11.1	12.1	1.02	6096	0.93	1353.99
002714932-02	OBS	No	83.586553	183.122566	621.7	30.201	35.1	5.7	1.02	6096	2.53	8.94
002714932-03	OBS	No	379.740193	213.757033	5541.4	40.236	17.8	12.8	1.02	6096	10.27	1.19
002714932-04	OBS	No	194.036588	143.761410	709.8	63.663	14.7	3.5	1.02	6096	2.76	2.91
002714932-05	OBS	No	249.813954	169.244968	595.2	15.000	10.9	-1.0	1.02	6096	2.48	2.08
002714932-06	OBS	No	139.996979	227.369717	657.3	12.352	9.8	5.9	1.02	6096	2.83	4.50
002714932-07	OBS	No	66.159045	173.590743	538.3	13.883	9.3	5.5	1.02	6096	2.69	12.21
002714932-08	OBS	No	101.251584	215.094722	823.1	16.571	9.0	6.7	1.02	6096	3.05	6.93
002714932-09	OBS	No	220.851963	149.666990	4184.1	35.946	8.4	9.1	1.02	6096	7.29	2.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002714932-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
002714932-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
002714932-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
002714932-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— INCONSISTENT_TRANS
002714932-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS
002714932-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
002714932-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
002714932-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
002714932-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS

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

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

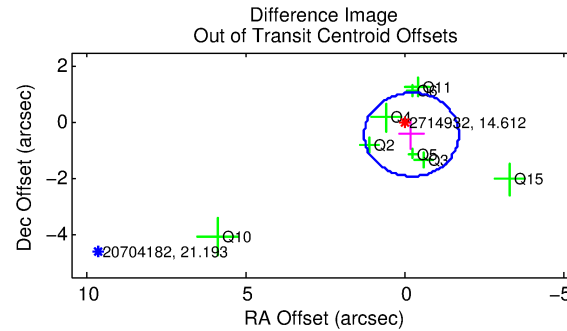
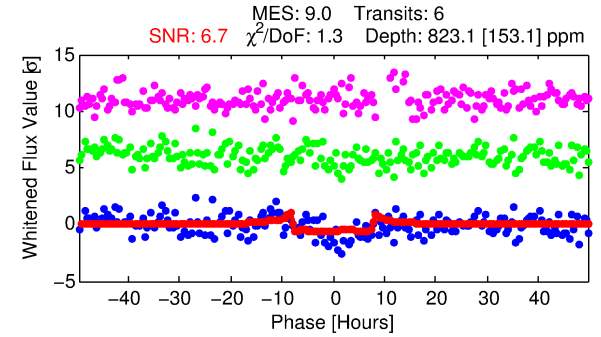
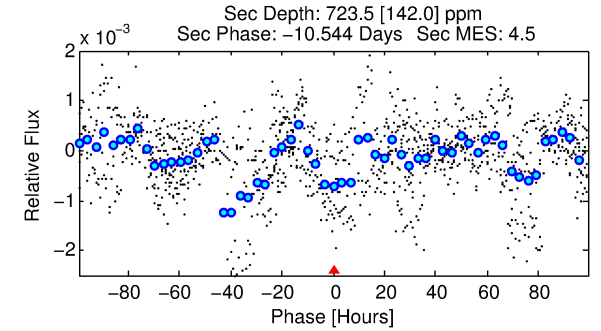
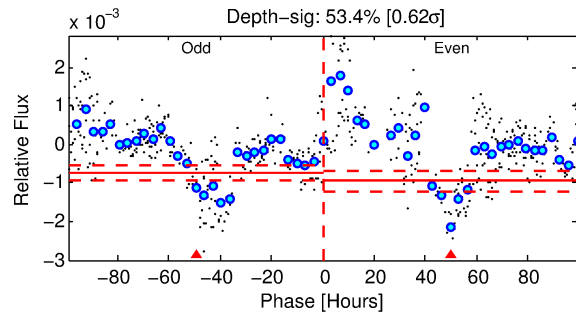
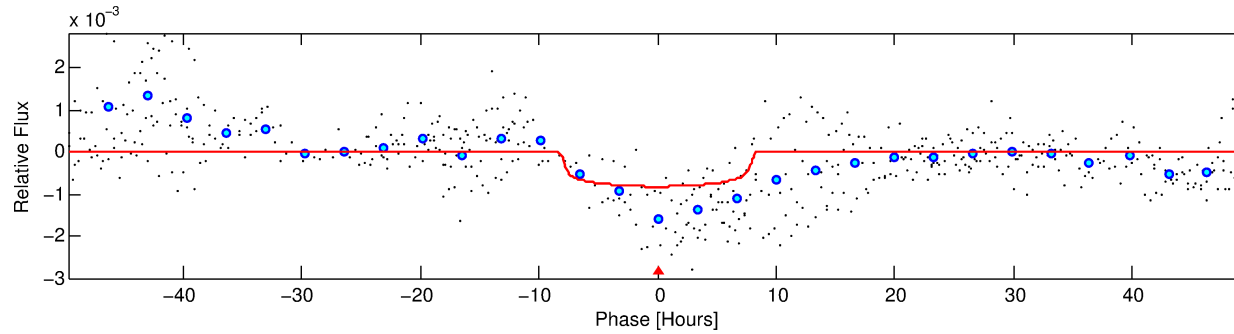
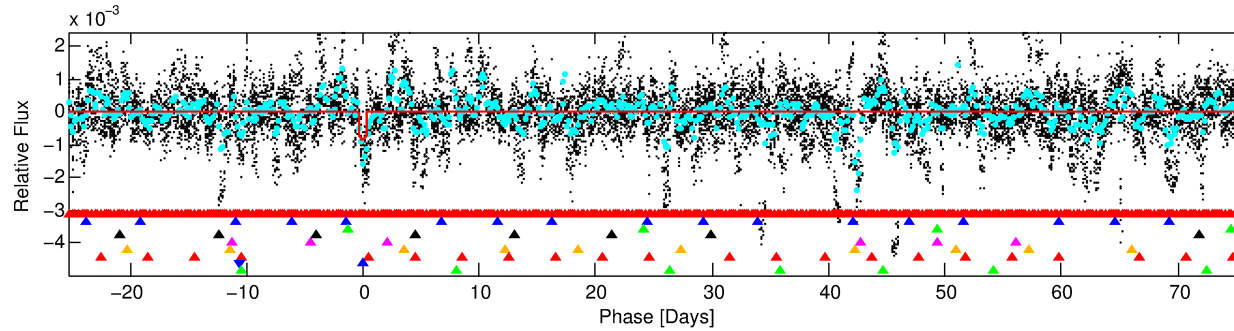
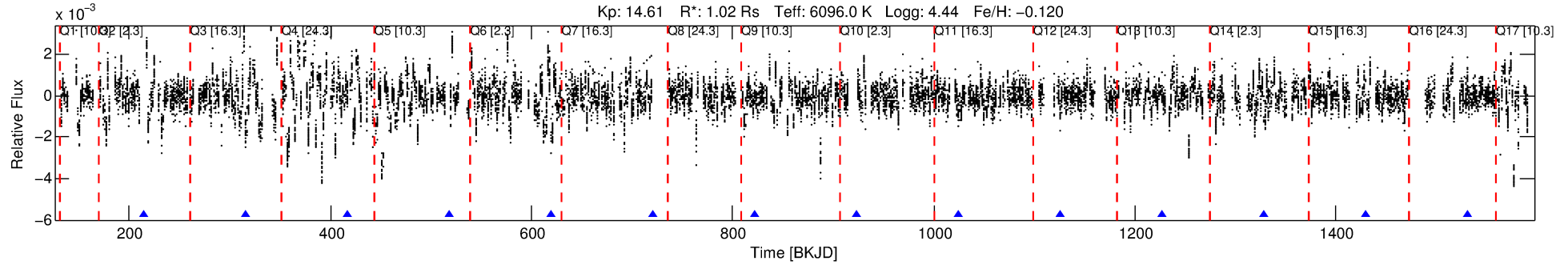
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002714932-08

No Significant Match Found

DV One-Page Summary

KIC: 2714932 Candidate: 8 of 9 Period: 101.252 d



DV Fit Results:

Period = 101.25158 [0.00369] d
Epoch = 215.0947 [0.0221] BKJD
Rp/R* = 0.0275 [0.0068]
a/R* = 38.59 [40.40]
b = 0.61 [1.08]
Seff = 6.93 [2.85]
Teff = 414 [43] K
Rp = 3.05 [1.24] Re
a = 0.4294 [0.1159] AU
Ag = 7888.31 [5185.78] [1.52σ]
Teffp = 6027 [826] K [6.79σ]

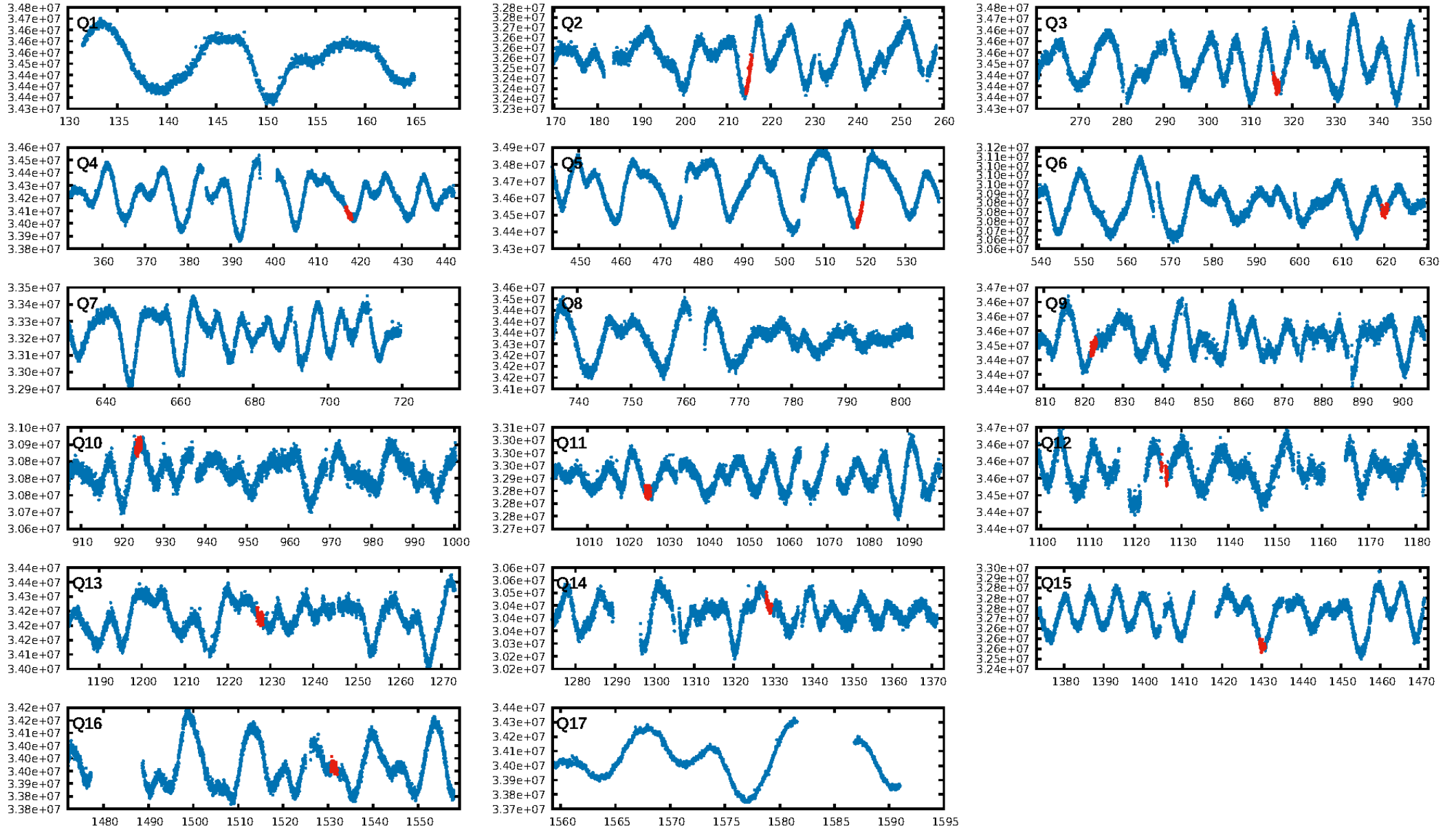
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [12.31σ]
LongPeriod-sig: 100.0% [44.99σ]
ModelChiSquare2-sig: 30.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.98e-11
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 1.138
Centroid-sig: 5.6%
Centroid-so: 0.534 arcsec [1.56σ]
OotOffset-rm: 0.474 arcsec [0.96σ]
KicOffset-rm: 0.554 arcsec [1.13σ]
OotOffset-st: 3/3/1/1 [8]
KicOffset-st: 3/3/1/1 [8]
DiffImageQuality-fgm: 0.75 [6/8]
DiffImageOverlap-fno: 0.00 [0/11]

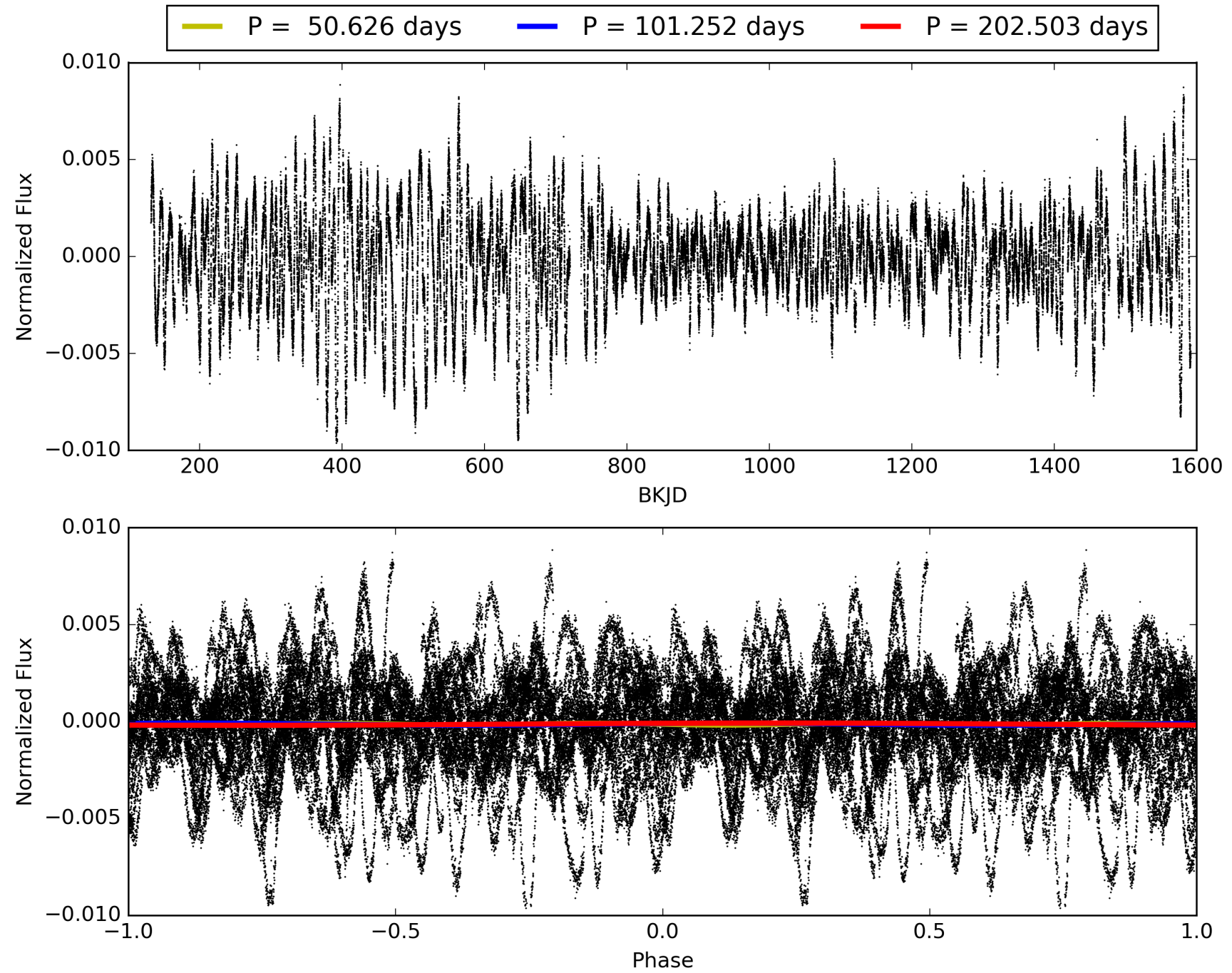
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:29:19 Z

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

TCE 002714932-08, PDC Light Curves

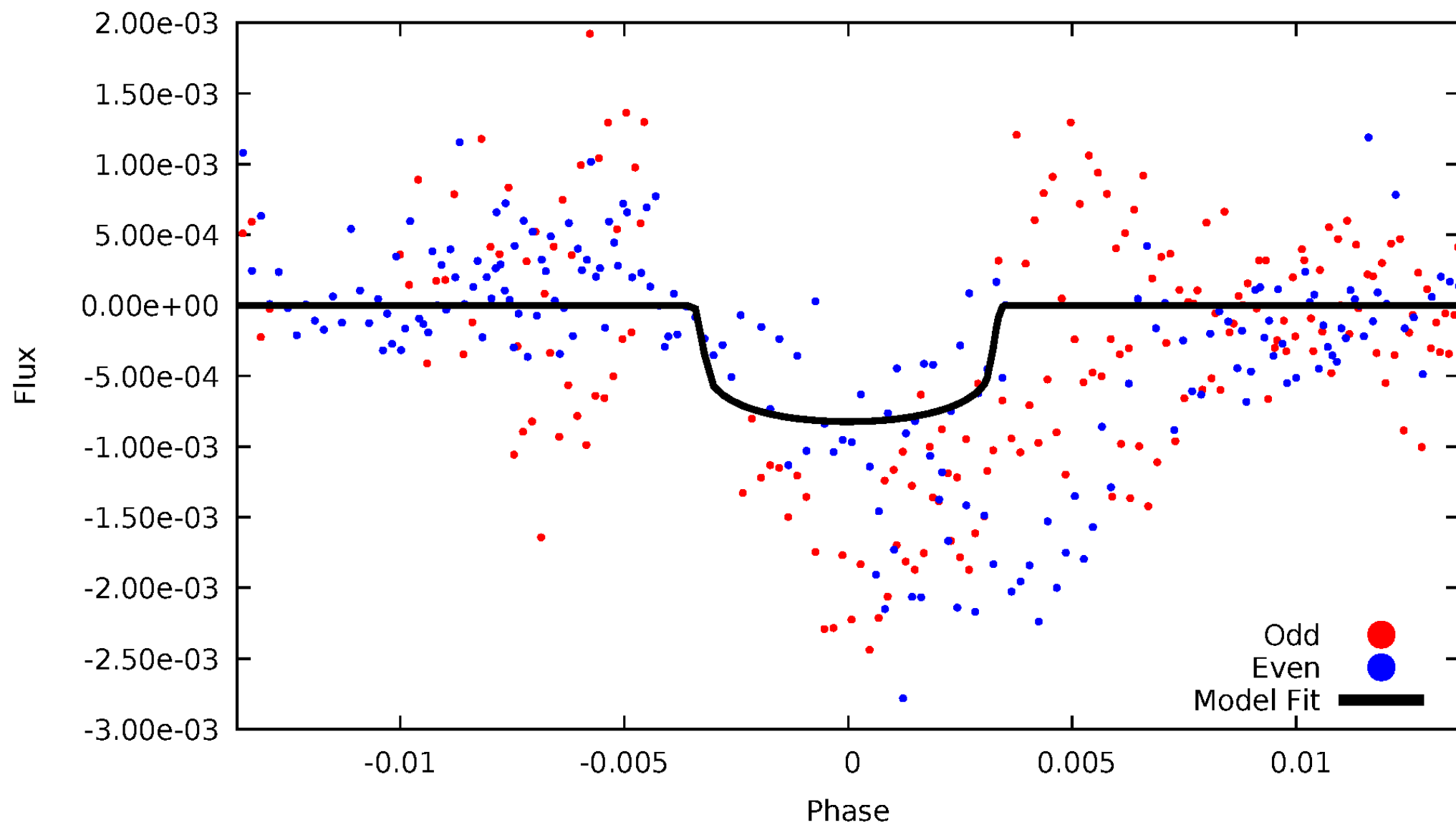


TCE 002714932-08



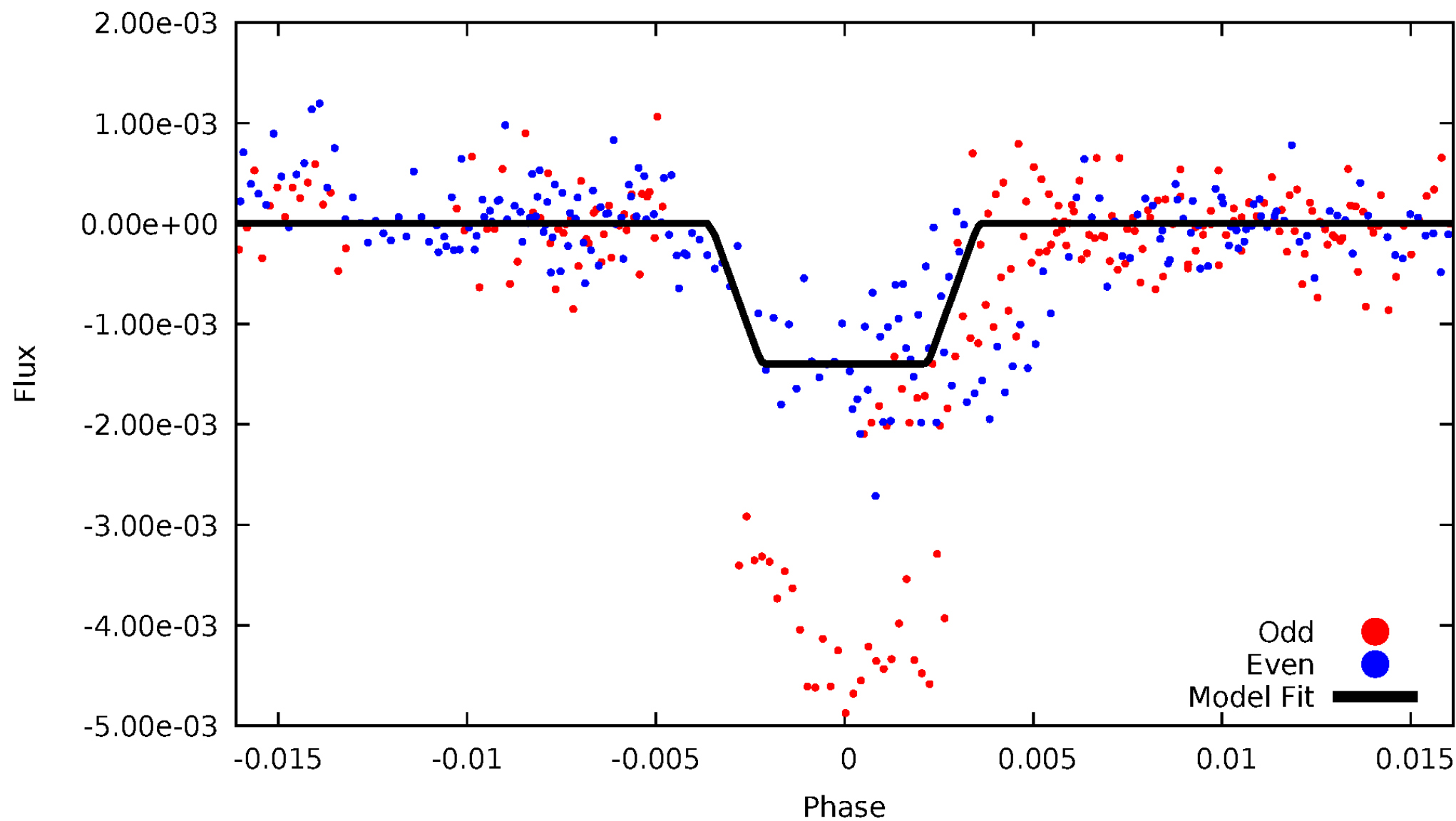
DV Odd/Even

TCE 002714932-08



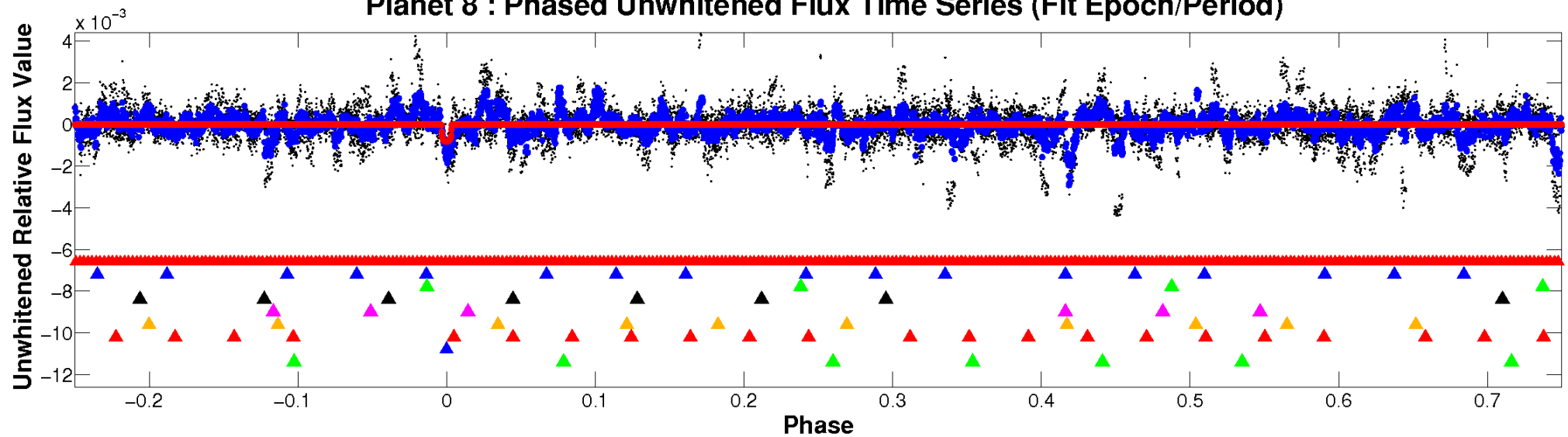
ALT Odd/Even

TCE 002714932-08

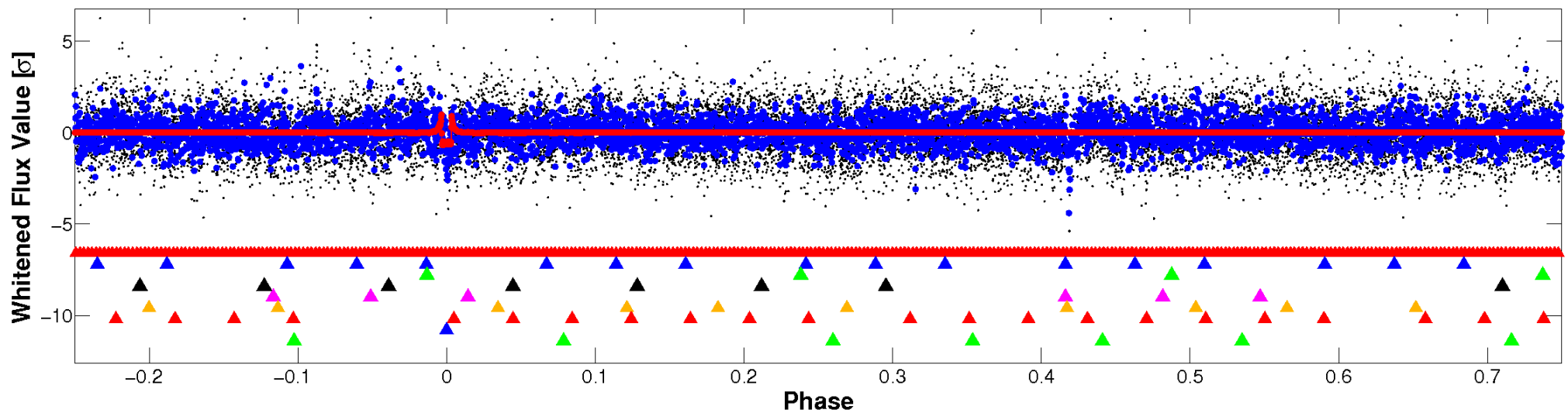


Non-Whitened Vs. Whitened Light Curve

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

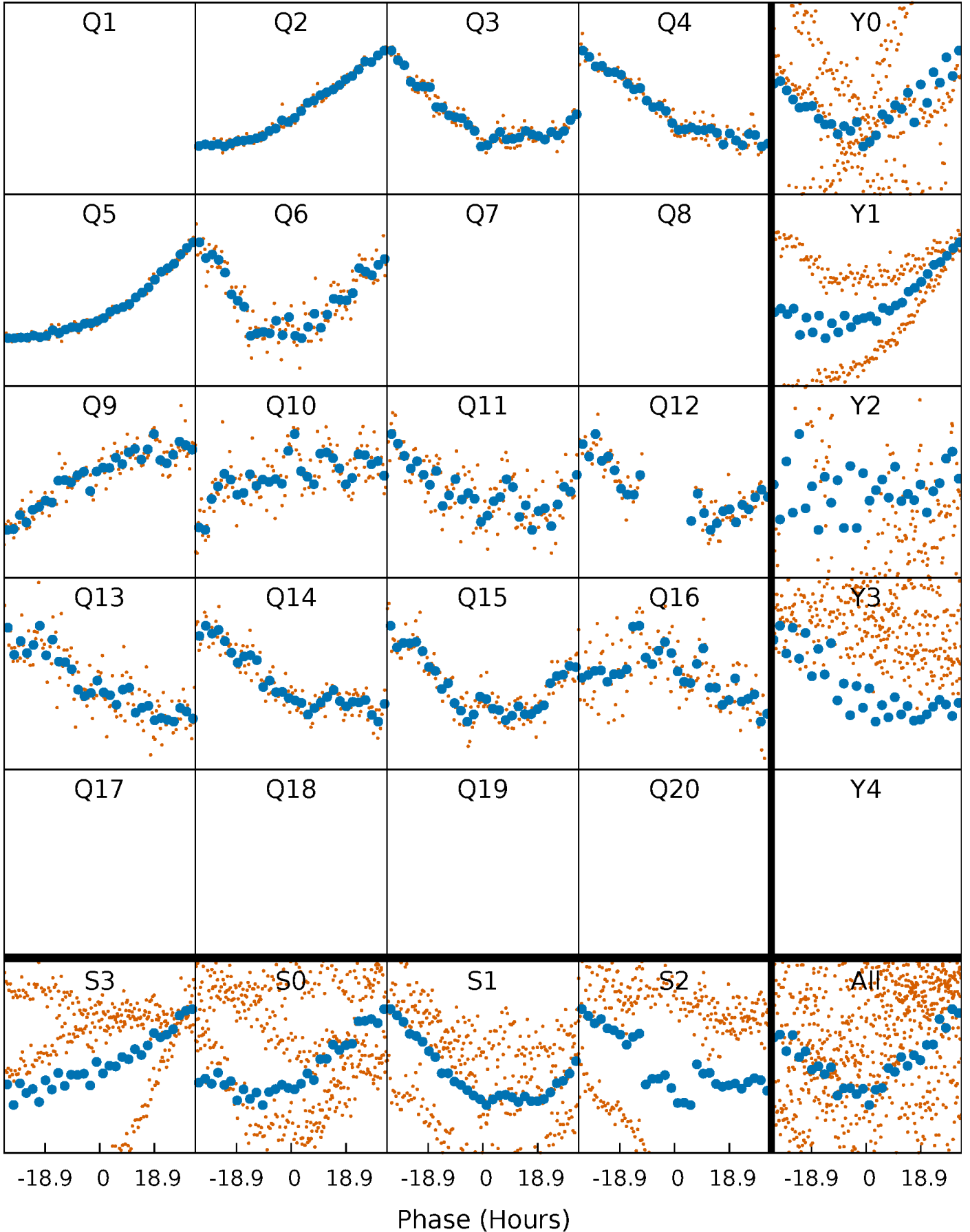


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



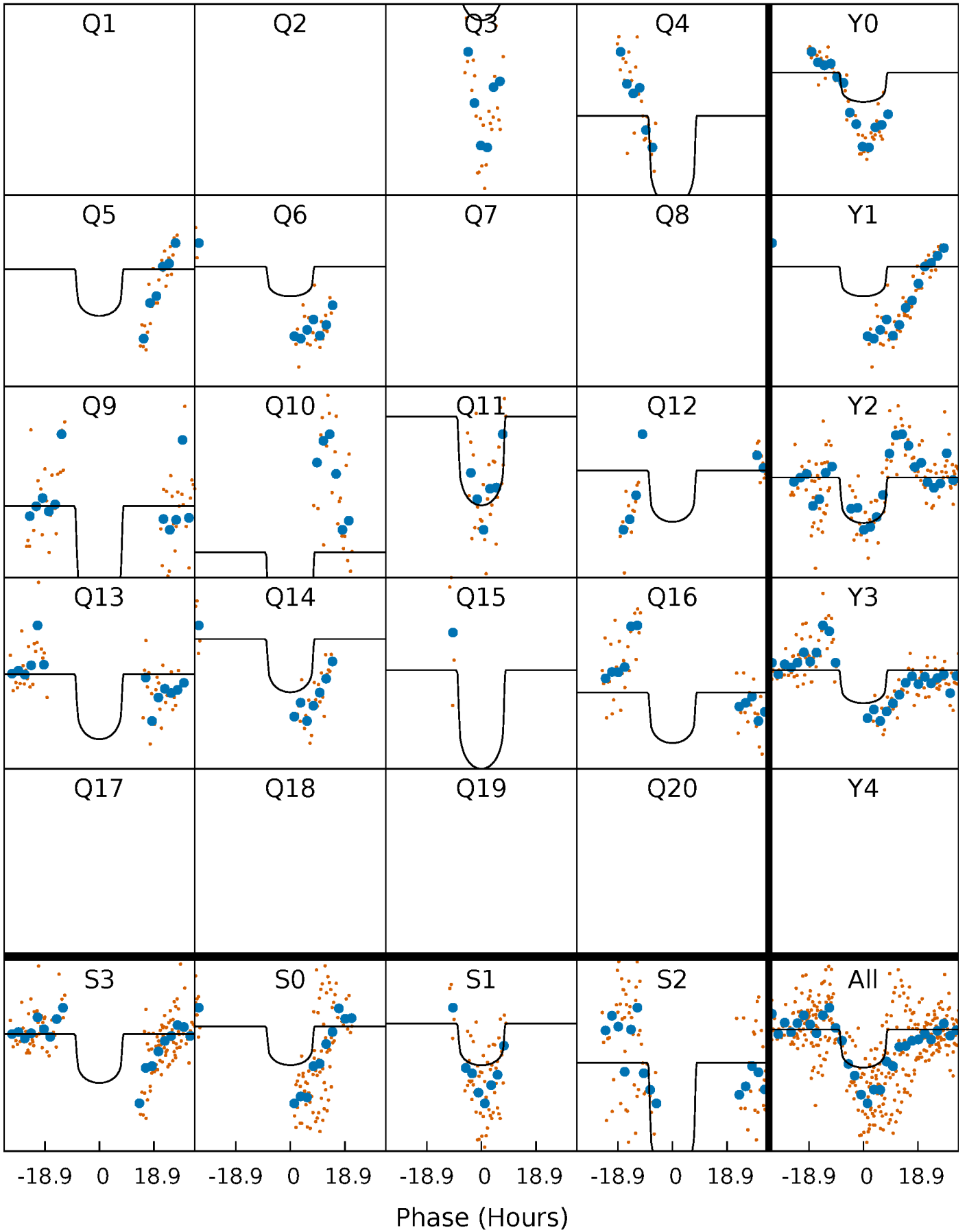
PDC Quarter-Phased Transit Curves

TCE 002714932-08 P=101.251584 Days $T_0=215.094721$ (BKJD)



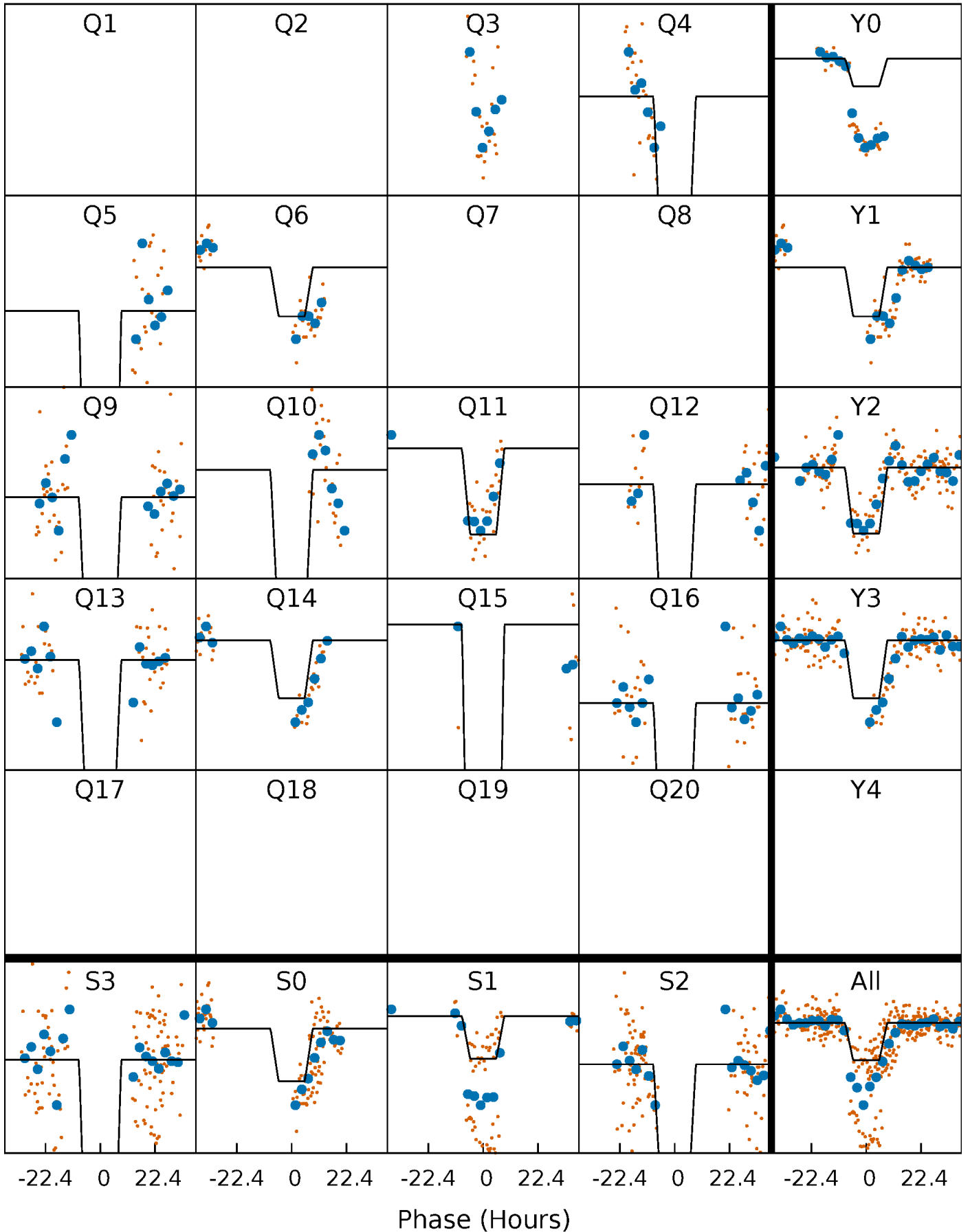
DV Quarter-Phased Transit Curves

TCE 002714932-08 P=101.251584 Days $T_0=215.094721$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

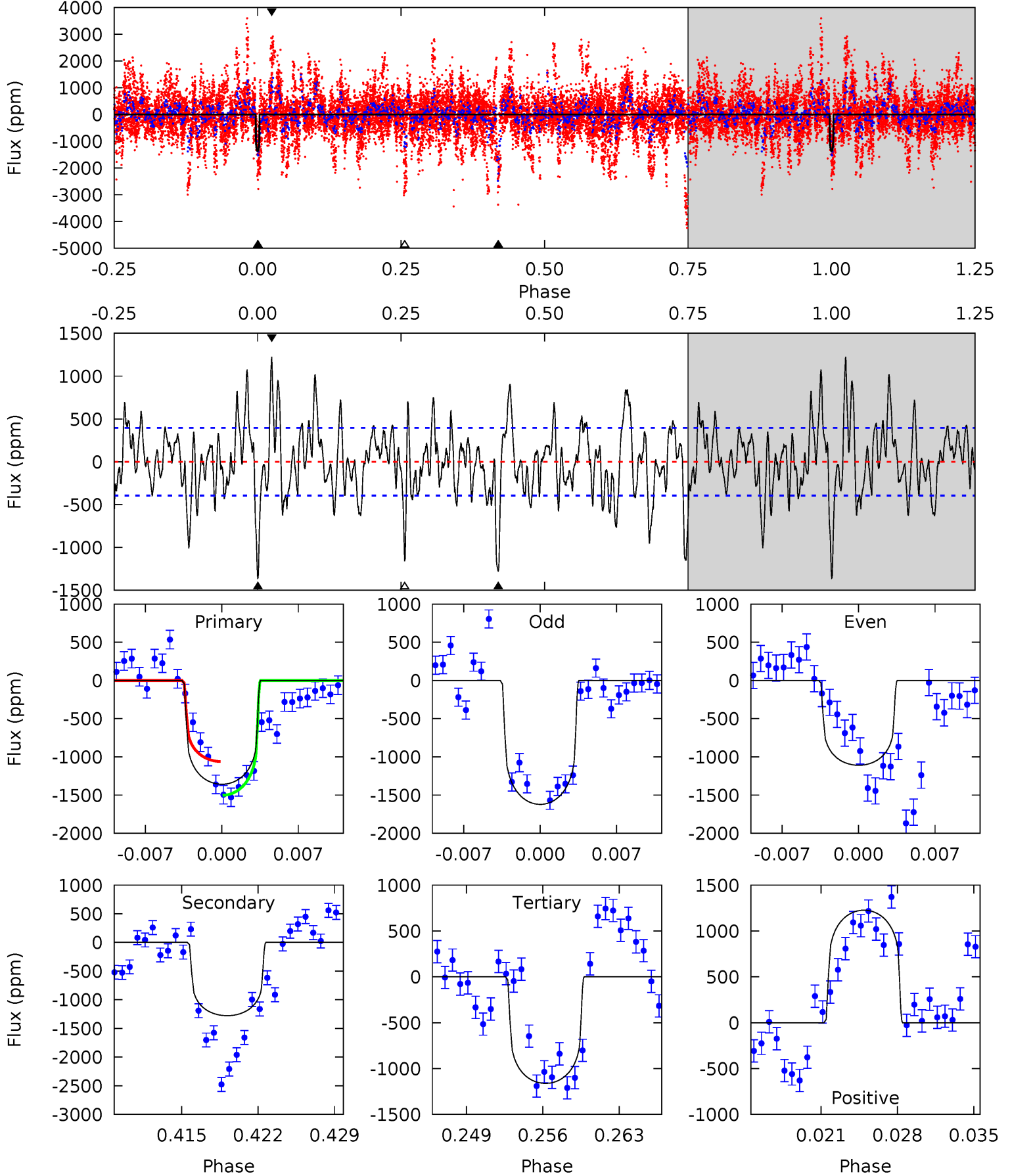
TCE 002714932-08 $P=101.250113$ Days $T_0=215.141233$ (BKJD)



DV Model-Shift Uniqueness Test

002714932-08, P = 101.251584 Days, E = 113.843137 Days

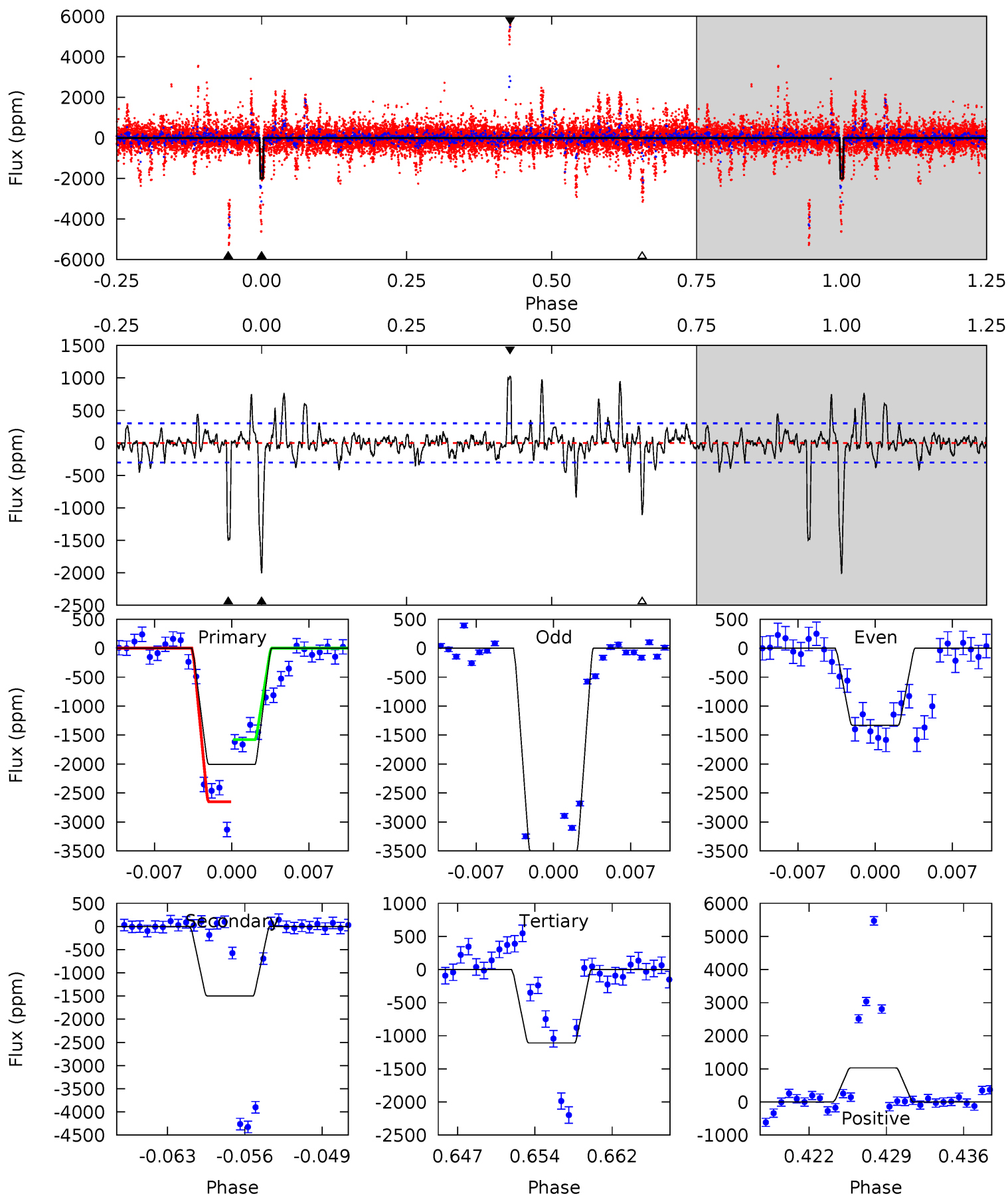
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	16.5	15.0	15.8	5.10	2.70	4.56	2.53	1.70	1.50	0.66	3.14	0.95	0.47	2.67



Alt Model-Shift Uniqueness Test

002714932-08, P = 101.250113 Days, E = 113.891120 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.0	25.4	18.8	17.4	5.09	2.70	3.34	15.2	16.6	6.61	7.99	13.1	1.15	0.34	8.74



Stellar Parameters For KIC 002714932

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6096^{+189}_{-210}	$4.437^{+0.070}_{-0.210}$	$-0.120^{+0.250}_{-0.350}$	$1.016^{+0.330}_{-0.132}$	$1.026^{+0.153}_{-0.126}$	$1.377^{+0.505}_{-0.707}$
	+3%/-3%	+2%/-5%	+208%/-292%	+32%/-13%	+15%/-12%	+37%/-51%
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 002714932-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1278 ± 77	$3.13^{+0.92}_{-0.72}$	589^{+42}_{-32}	6970^{+1241}_{-755}	12632^{+9596}_{-4864}
Alt.	-1499 ± 59	$4.28^{+1.05}_{-0.89}$	591^{+43}_{-34}	6230^{+738}_{-525}	8237^{+4436}_{-2851}

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 $A_{obs} \gg 1.0$

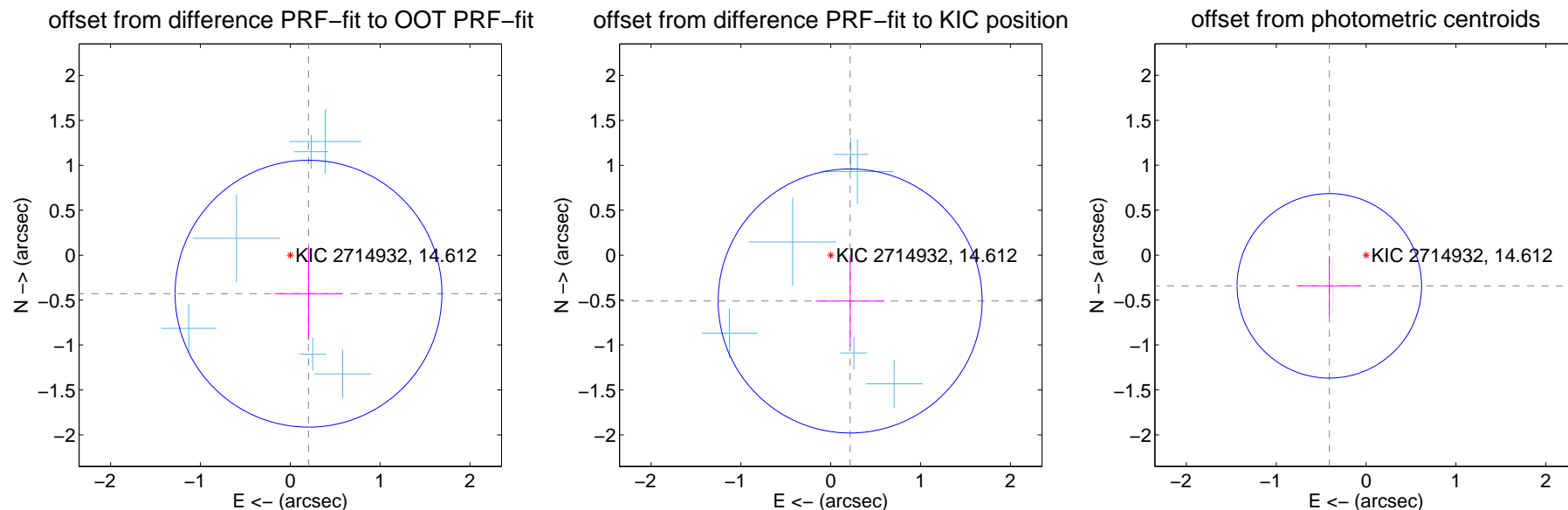
DV Centroid Data

Supplemental centroid analysis for 002714932-08. Kepler magnitude: 14.61. Transit SNR 6.70

There are 6 quarters with good PRF difference image offsets

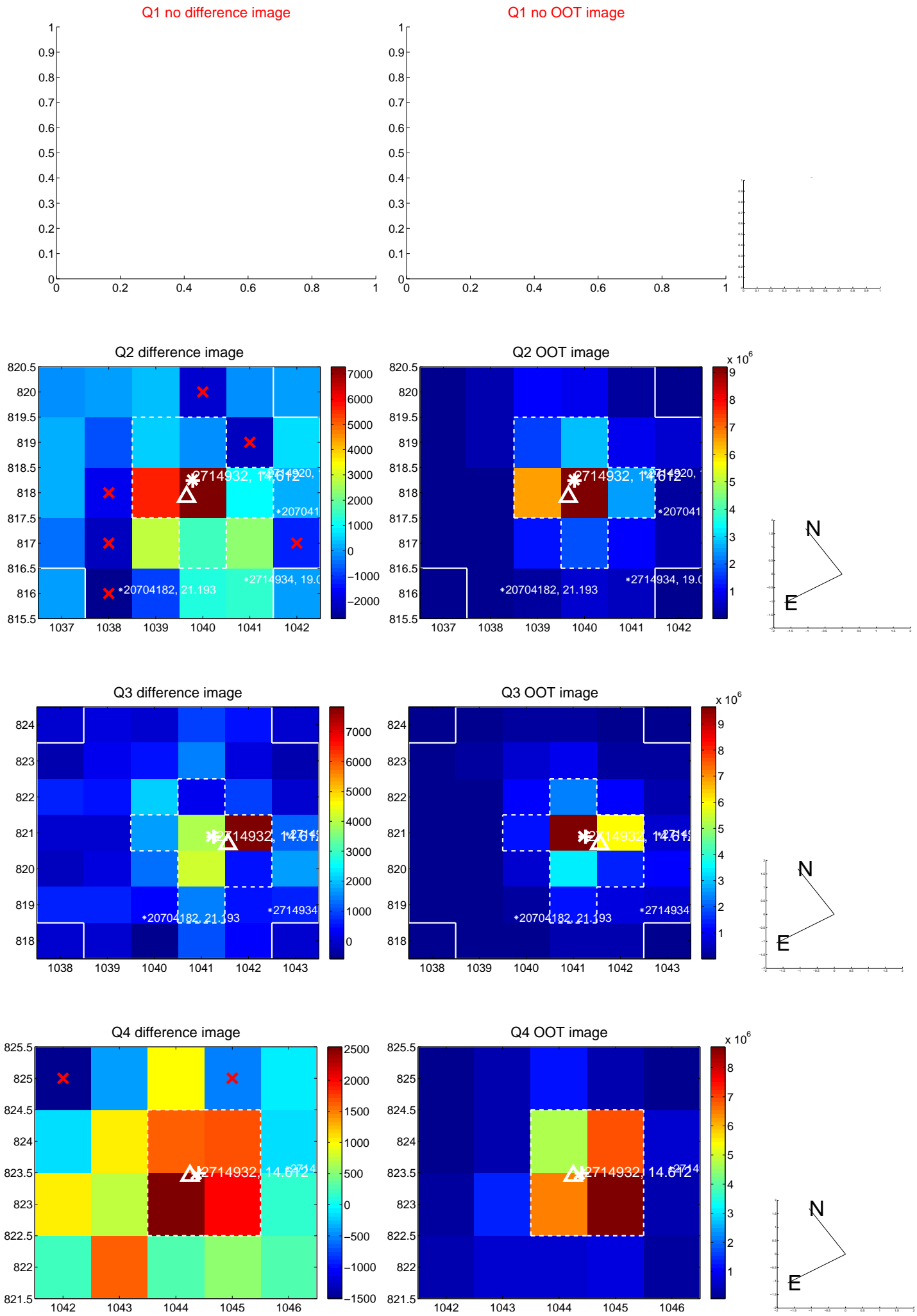
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.474 ± 0.495	0.96	-0.203 ± 0.377	-0.429 ± 0.518
PRF-fit source offset from KIC position	0.554 ± 0.490	1.13	-0.216 ± 0.382	-0.510 ± 0.507
photometric centroid source offset	0.53 ± 0.34	1.56	0.41 ± 0.35	-0.34 ± 0.33

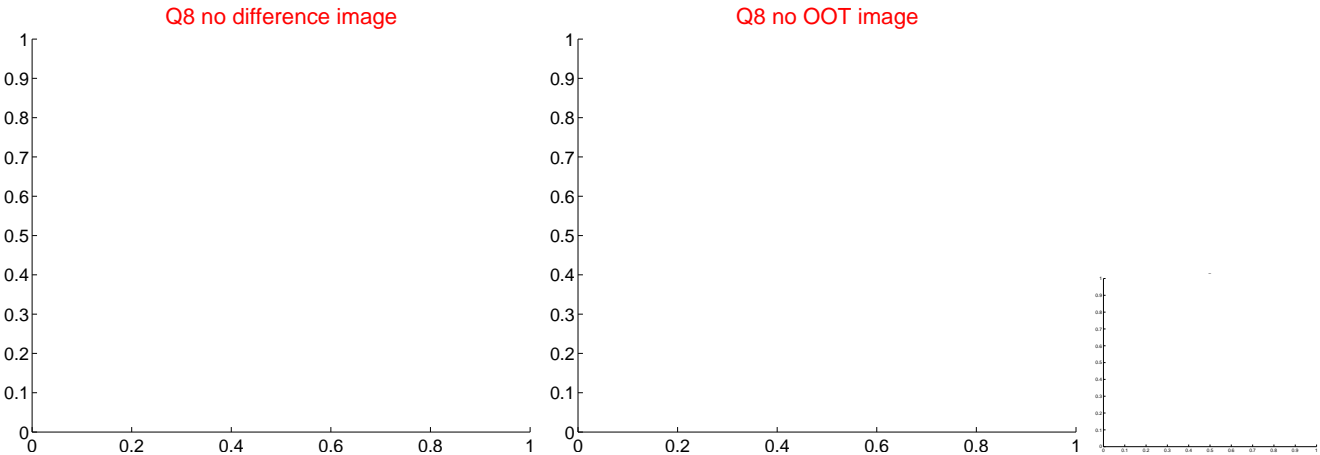
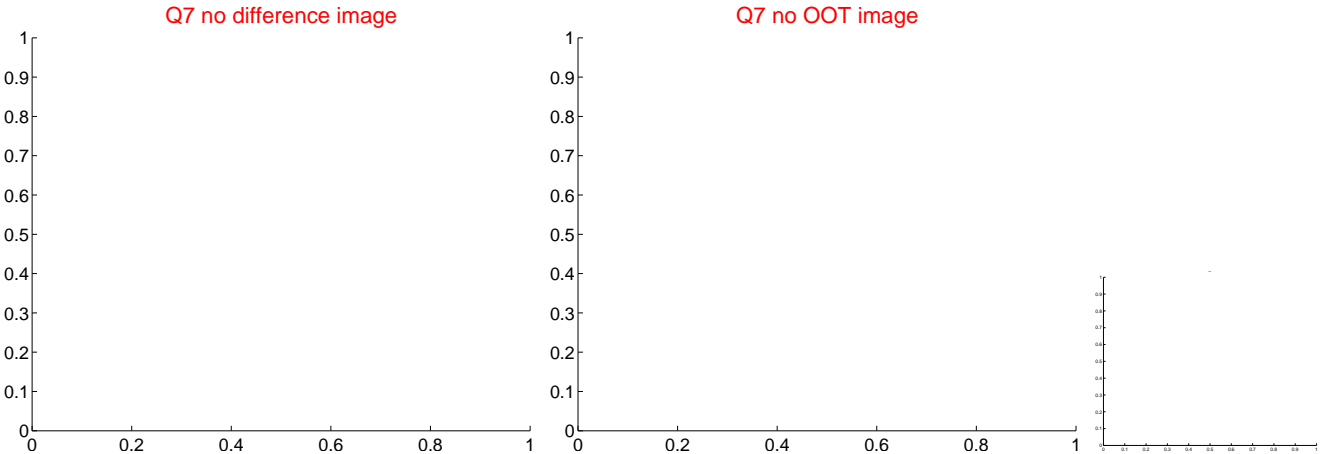
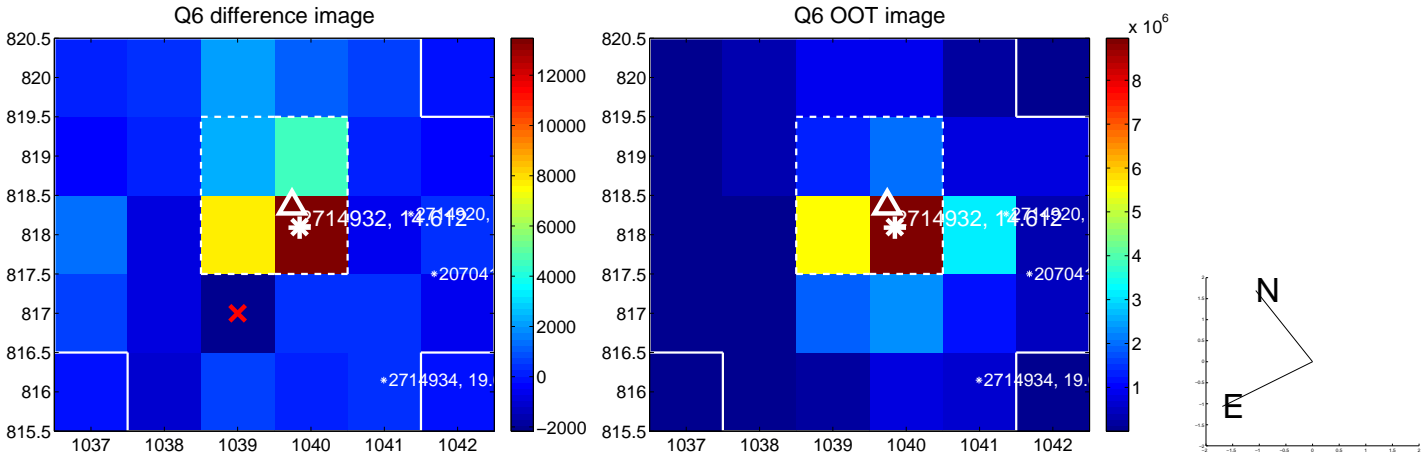
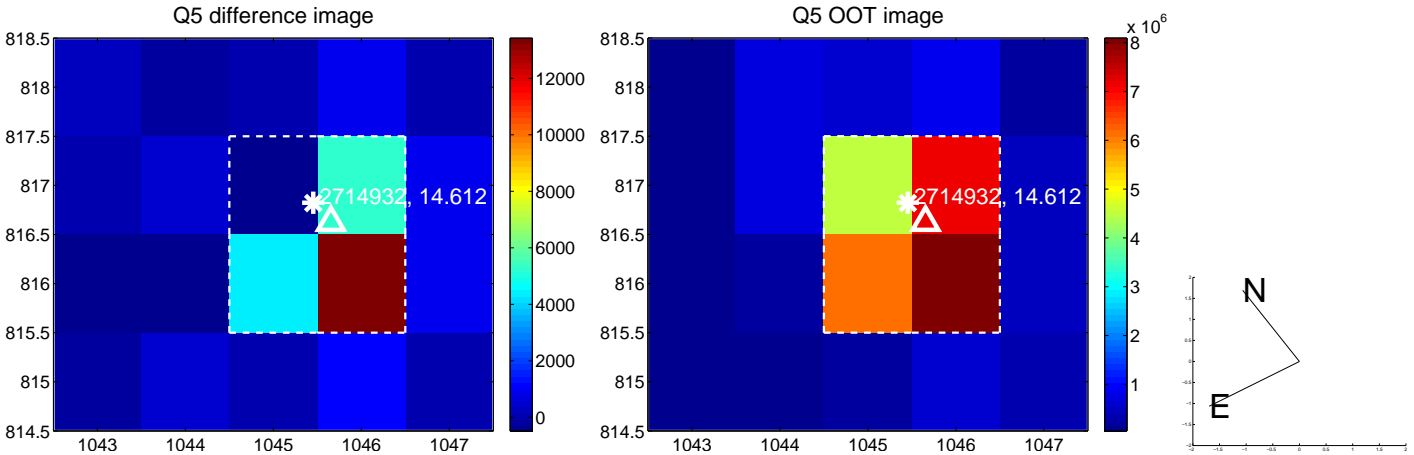


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

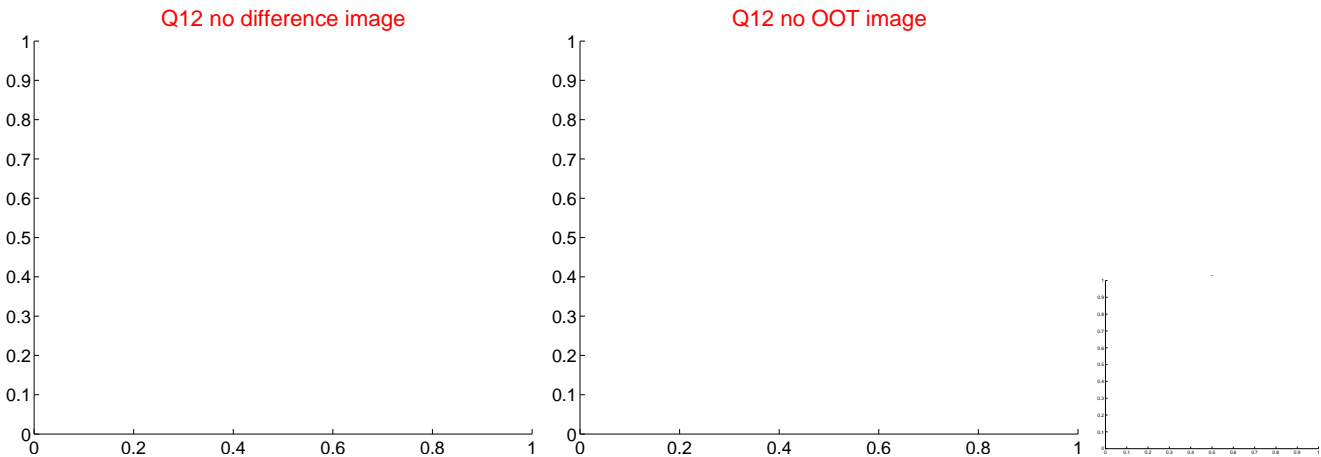
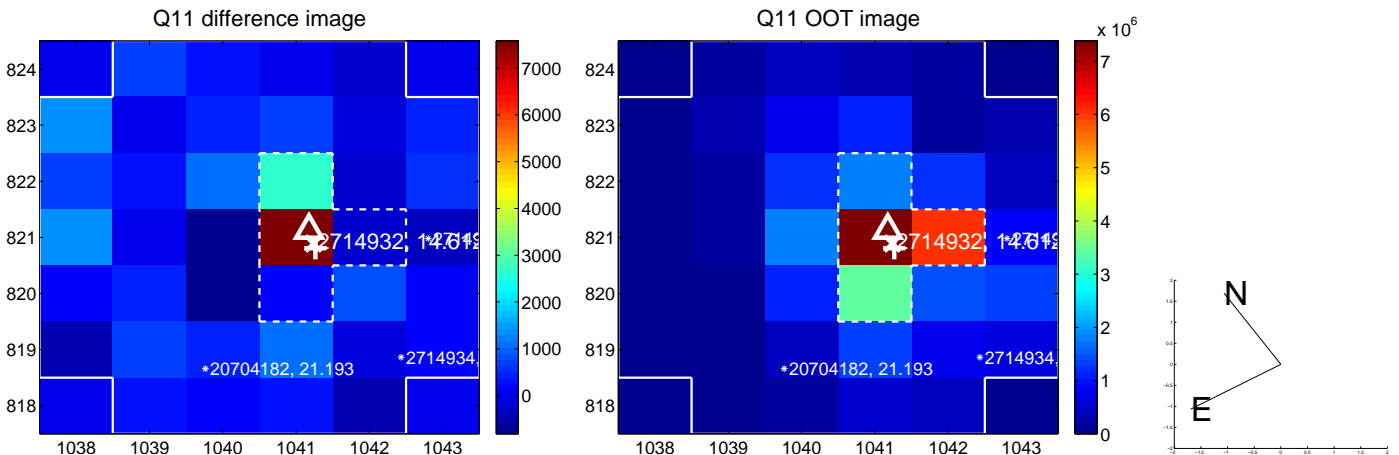
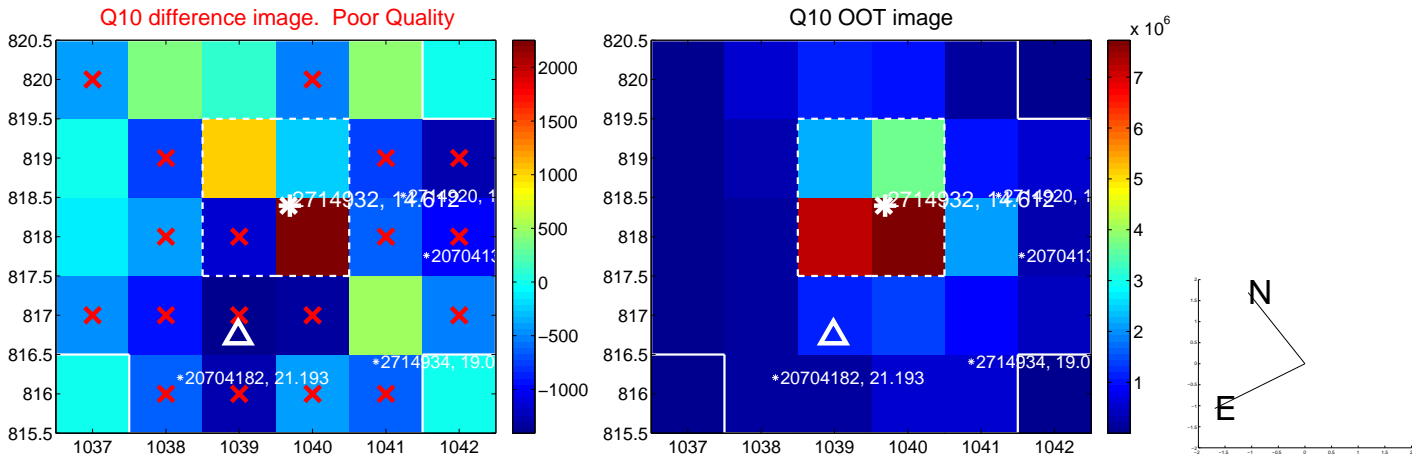
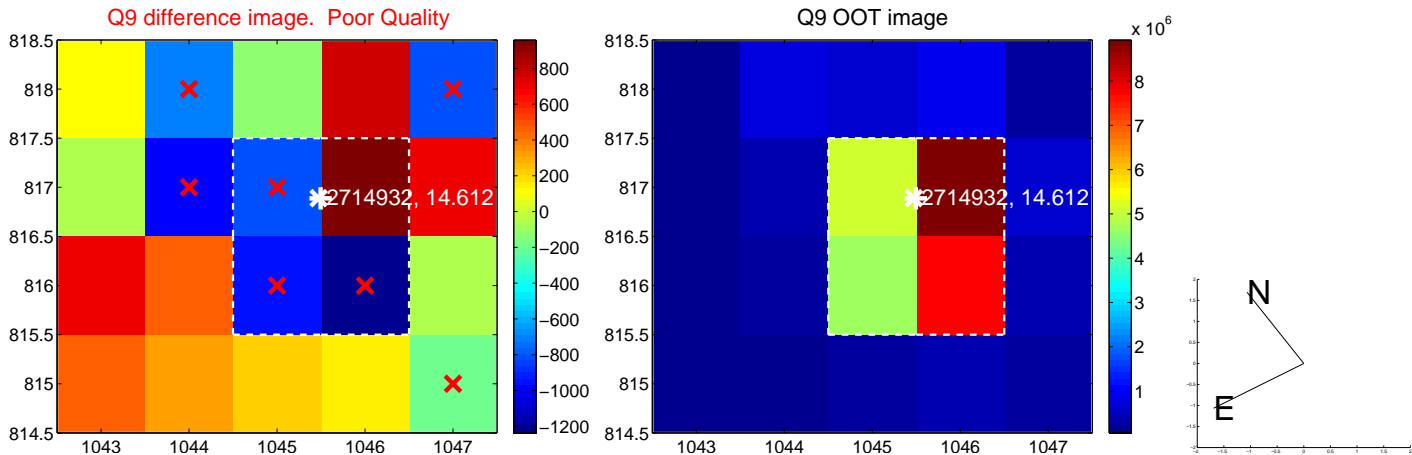
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



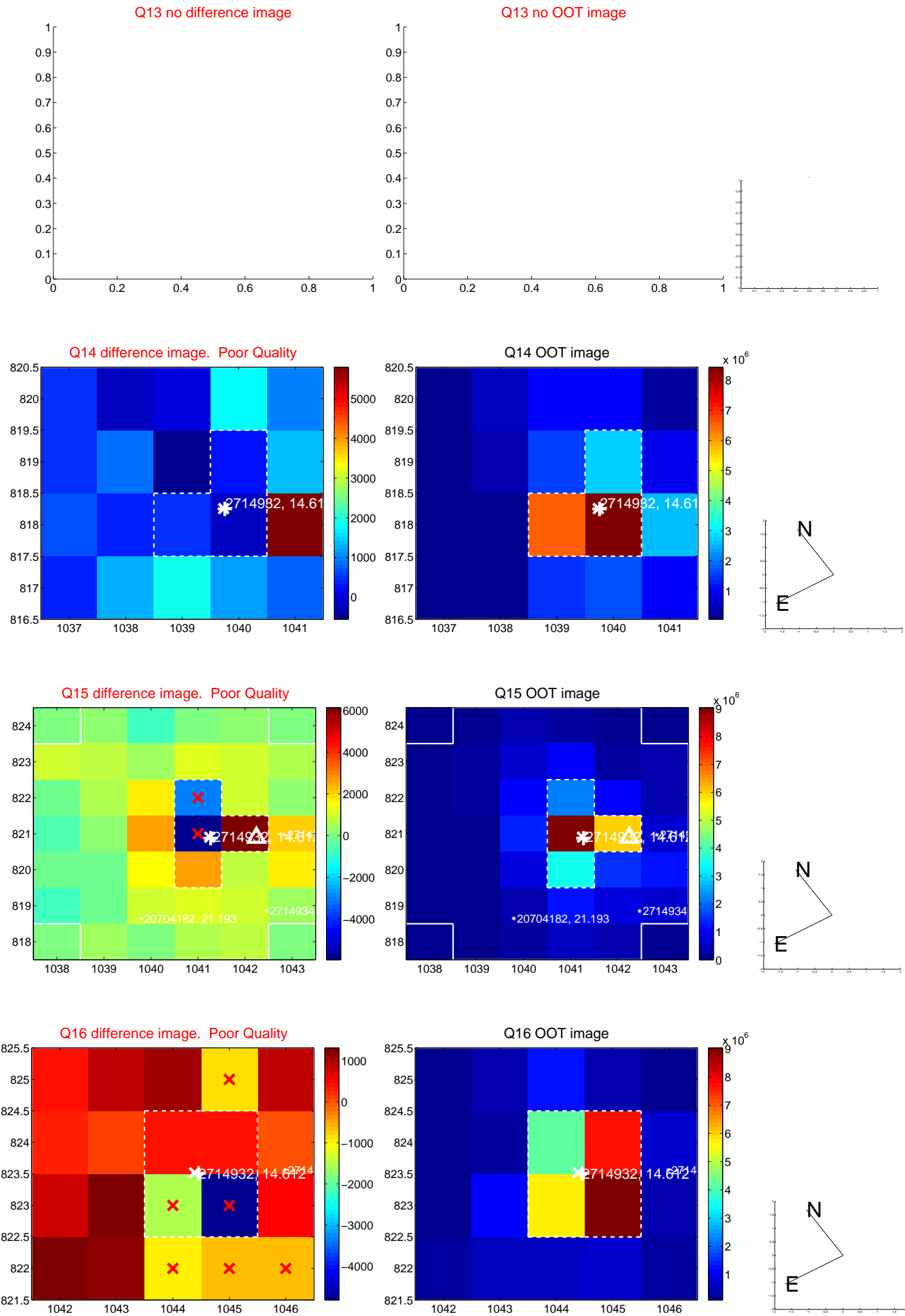
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



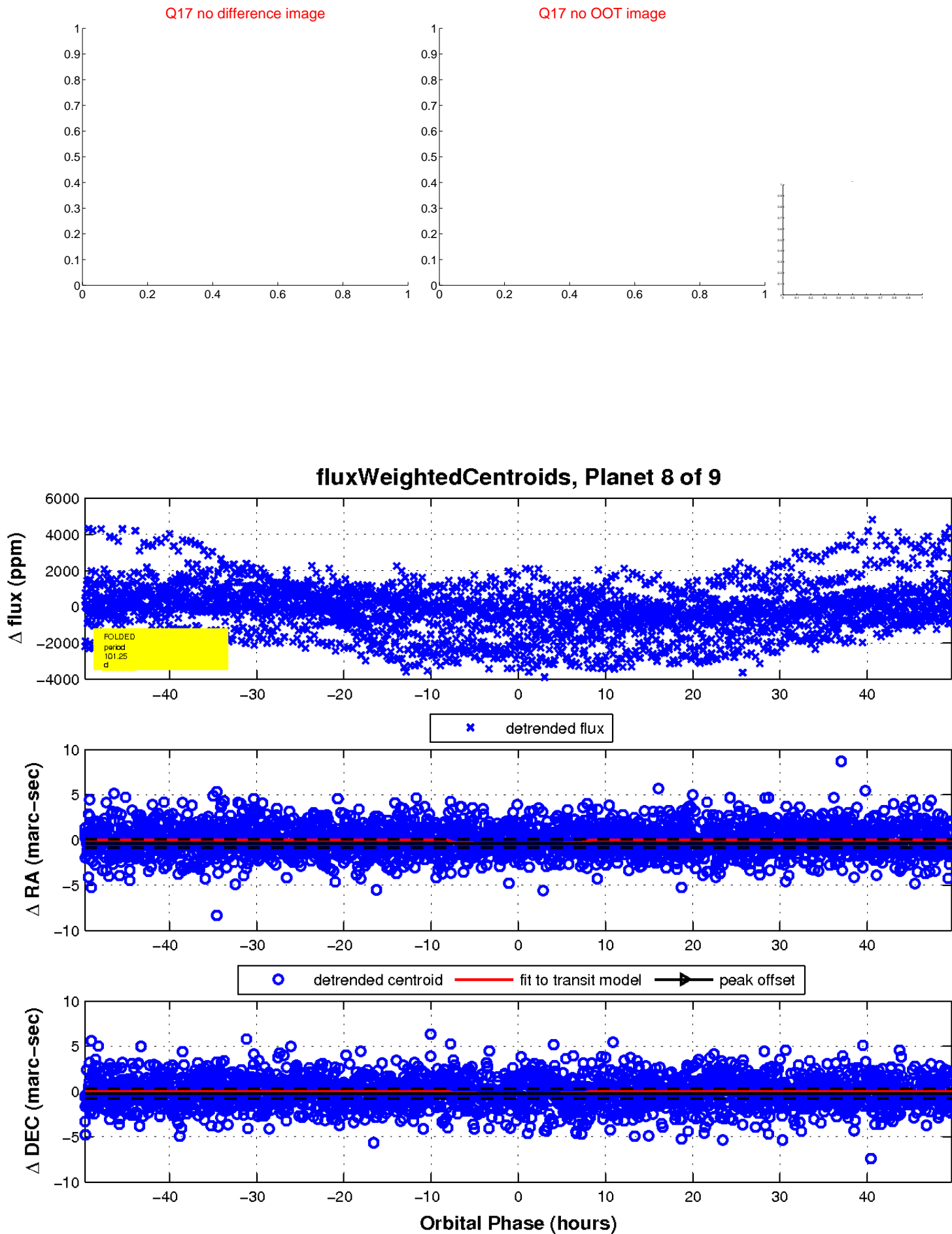
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

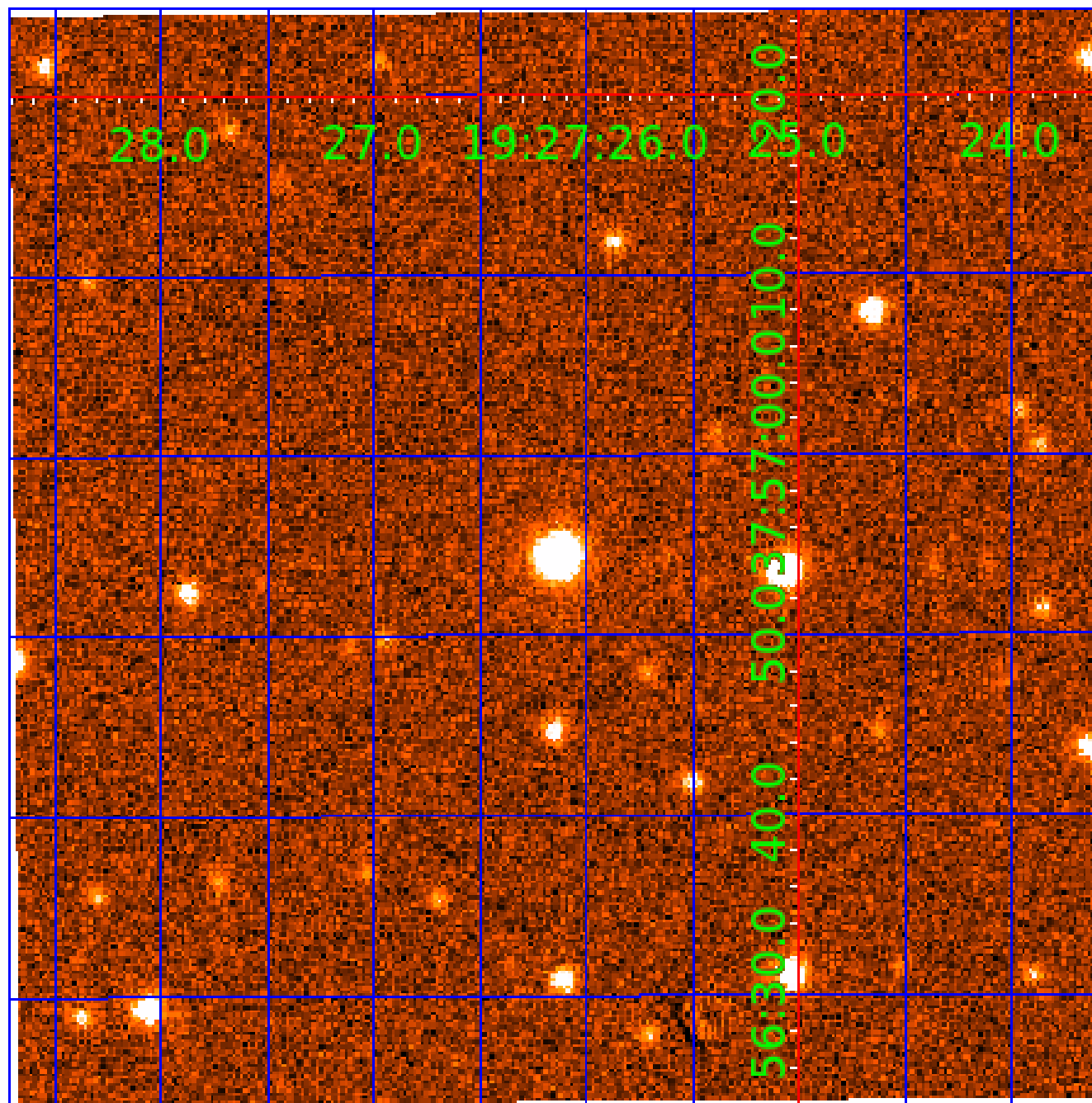


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 002714932

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})
002714932-01	OBS	No	1.936609	133.370964	83.2	10.788	11.1	12.1	1.02	6096	0.93	1353.99
002714932-02	OBS	No	83.586553	183.122566	621.7	30.201	35.1	5.7	1.02	6096	2.53	8.94
002714932-03	OBS	No	379.740193	213.757033	5541.4	40.236	17.8	12.8	1.02	6096	10.27	1.19
002714932-04	OBS	No	194.036588	143.761410	709.8	63.663	14.7	3.5	1.02	6096	2.76	2.91
002714932-05	OBS	No	249.813954	169.244968	595.2	15.000	10.9	-1.0	1.02	6096	2.48	2.08
002714932-06	OBS	No	139.996979	227.369717	657.3	12.352	9.8	5.9	1.02	6096	2.83	4.50
002714932-07	OBS	No	66.159045	173.590743	538.3	13.883	9.3	5.5	1.02	6096	2.69	12.21
002714932-08	OBS	No	101.251584	215.094722	823.1	16.571	9.0	6.7	1.02	6096	3.05	6.93
002714932-09	OBS	No	220.851963	149.666990	4184.1	35.946	8.4	9.1	1.02	6096	7.29	2.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002714932-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET
002714932-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
002714932-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
002714932-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV— INCONSISTENT_TRANS
002714932-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS
002714932-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS
002714932-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
002714932-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV
002714932-09	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS

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

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

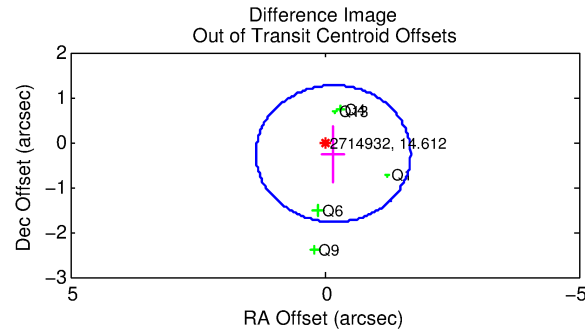
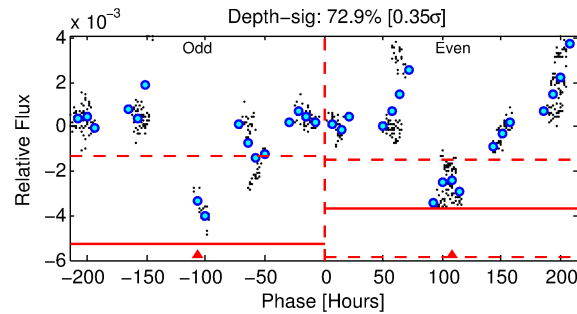
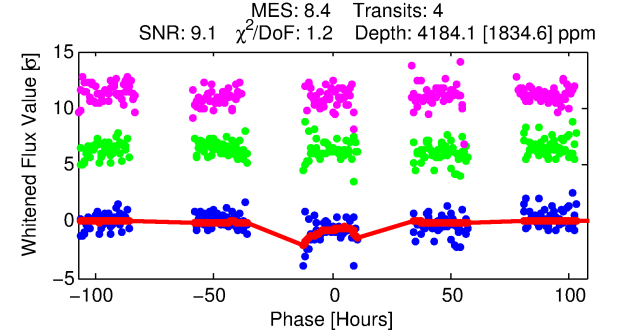
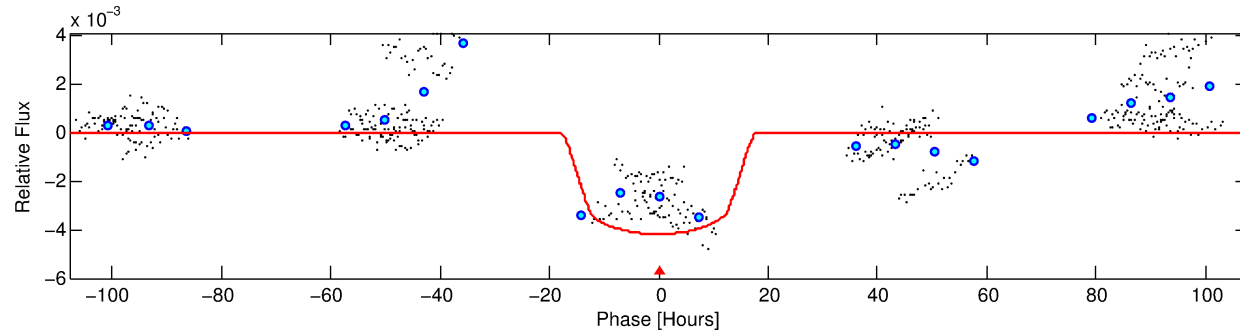
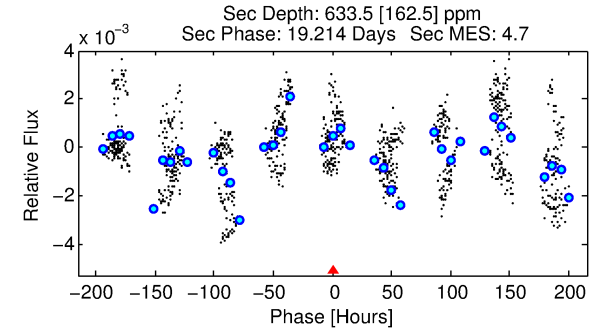
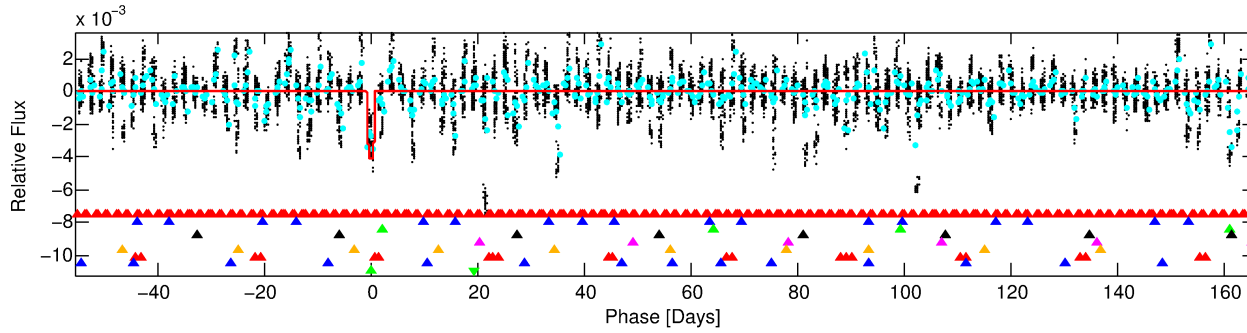
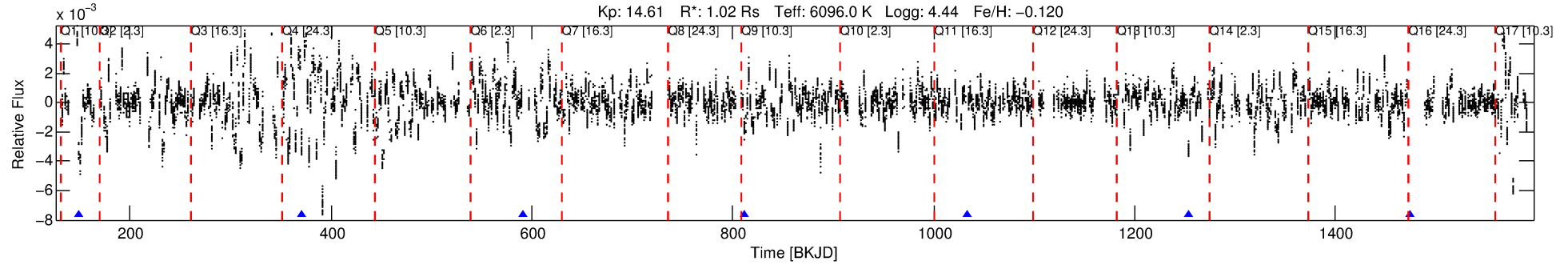
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002714932-09

No Significant Match Found

DV One-Page Summary

KIC: 2714932 Candidate: 9 of 9 Period: 220.852 d



DV Fit Results:

Period = 220.85196 [0.03891] d
Epoch = 149.6670 [0.1074] BKJD
Rp/R* = 0.0658 [0.0214]
a/R* = 32.91 [34.00]
b = 0.80 [0.40]
Seff = 2.45 [1.01]
Teq = 319 [33] K
Rp = 7.29 [3.35] Re
a = 0.7223 [0.1950] AU
Ag = 3419.98 [2734.53] [1.25σ]
Teffp = 3771 [672] K [5.13σ]

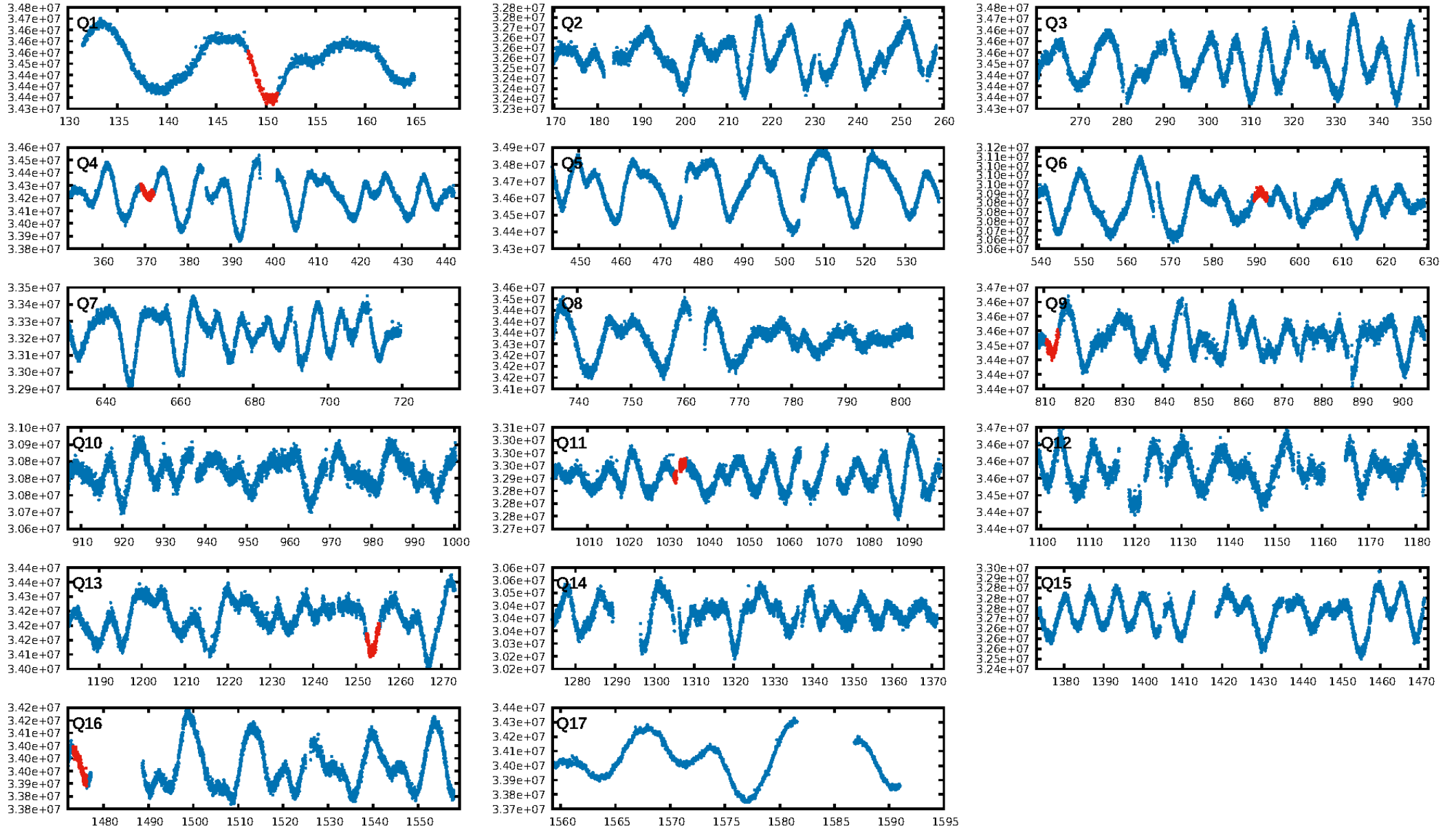
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [8.80σ]
LongPeriod-sig: 100.0% [17.85σ]
ModelChiSquare2-sig: 71.8%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.78e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.3621
Centroid-sig: 11.8%
Centroid-so: 0.649 arcsec [10.36σ]
OotOffset-rm: 0.309 arcsec [0.61σ]
KicOffset-rm: 0.553 arcsec [1.67σ]
OotOffset-st: 1/0/1/3 [5]
KicOffset-st: 1/0/1/3 [5]
DiffImageQuality-fgm: 0.80 [4/5]
DiffImageOverlap-fno: 0.00 [0/5]

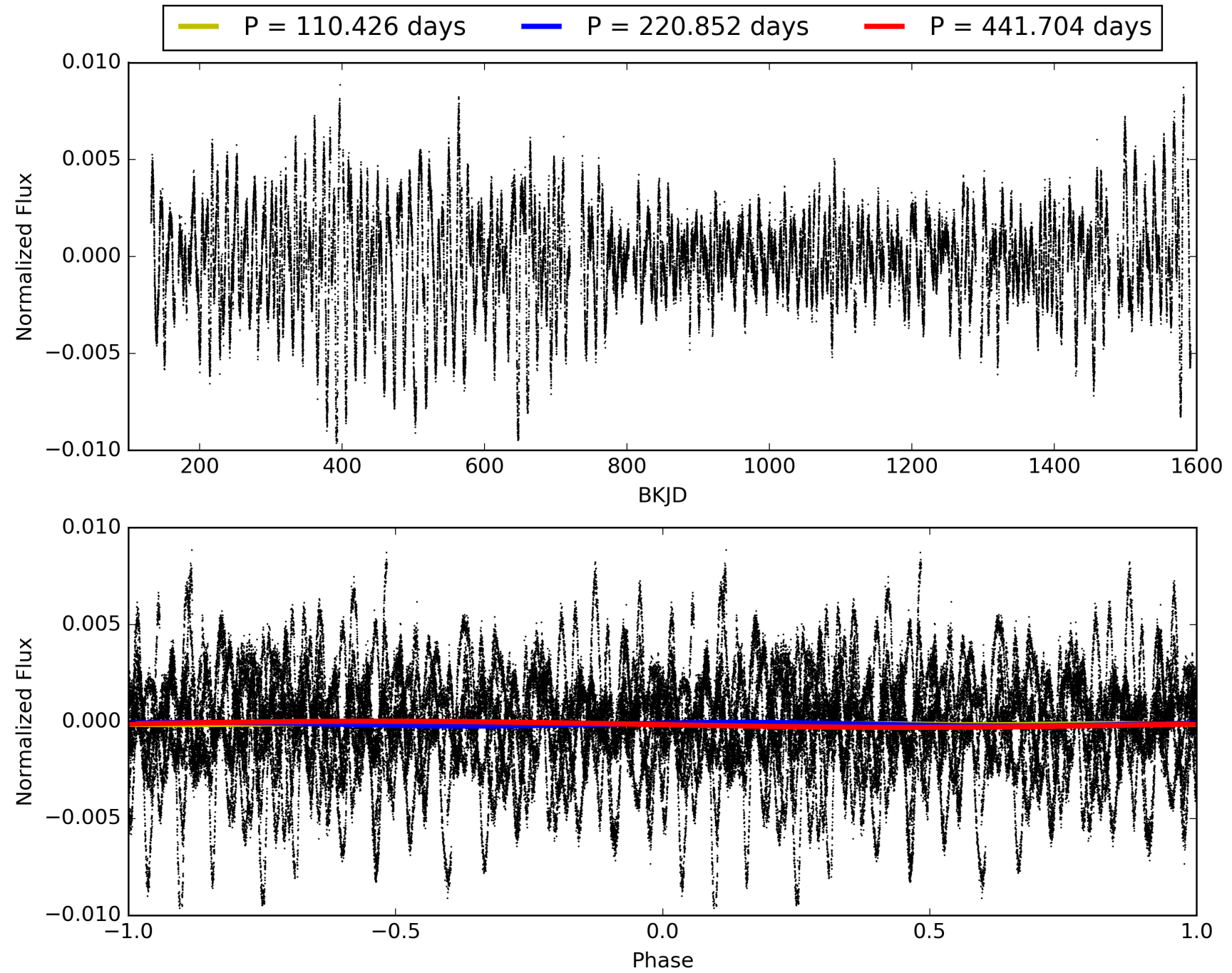
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 00:29:24 Z

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

TCE 002714932-09, PDC Light Curves

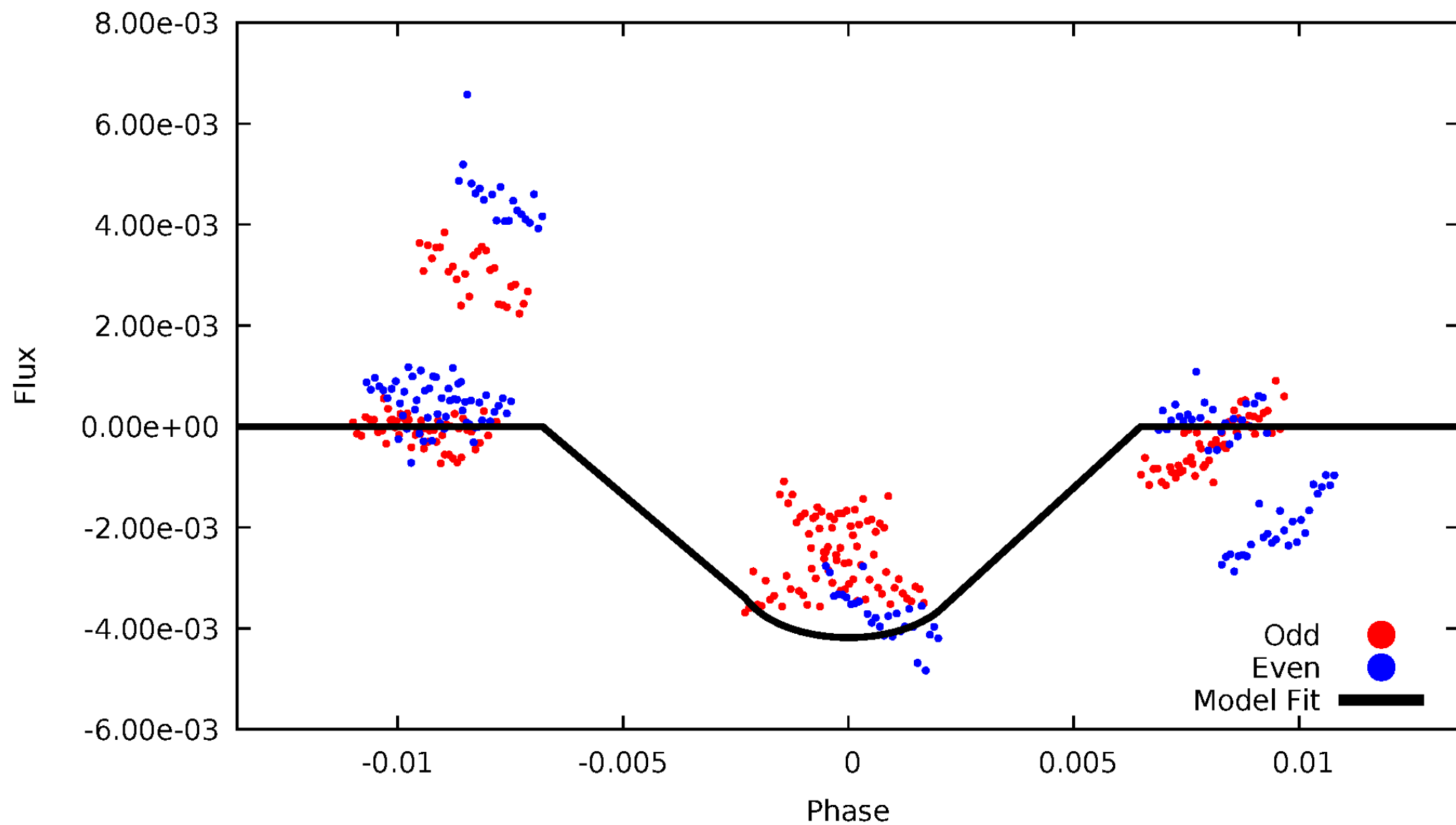


TCE 002714932-09



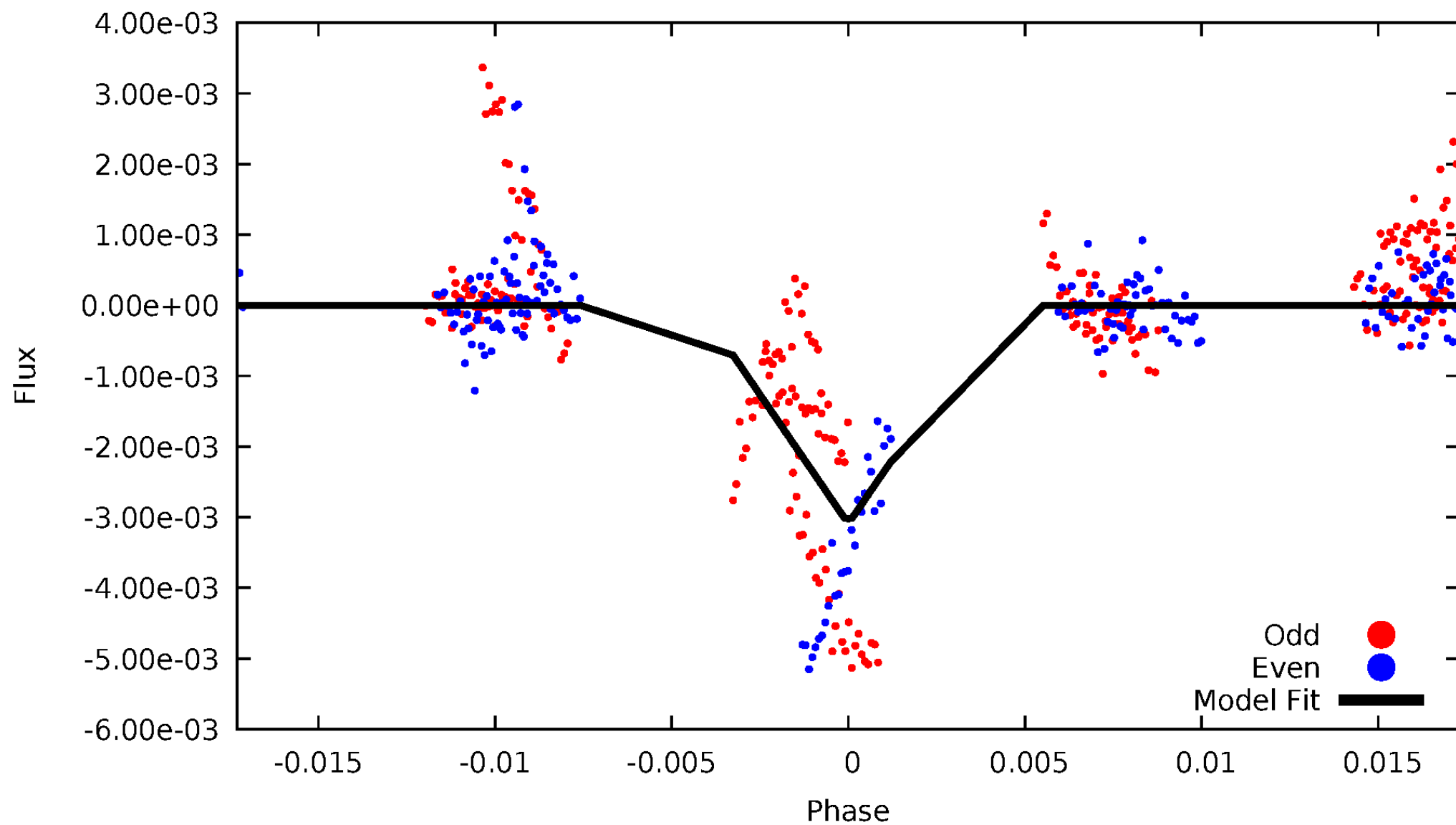
DV Odd/Even

TCE 002714932-09



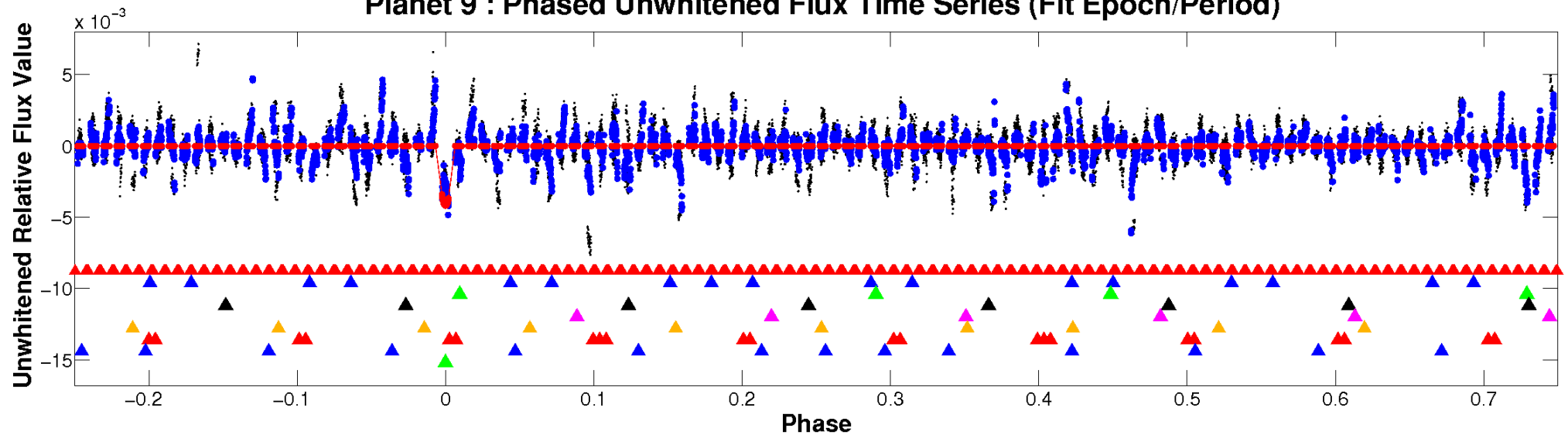
ALT Odd/Even

TCE 002714932-09

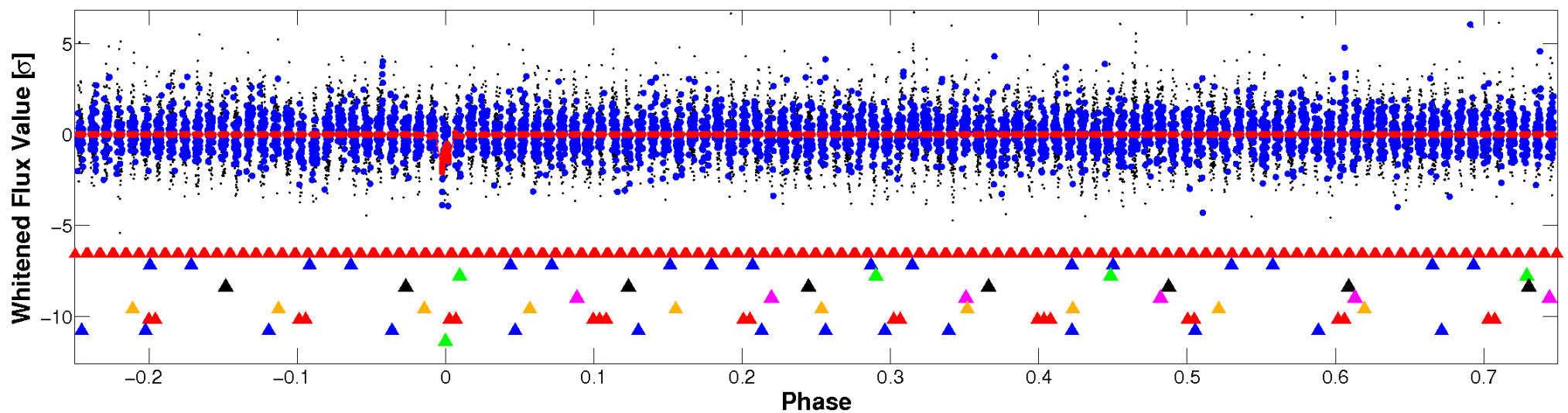


Non-Whitened Vs. Whitened Light Curve

Planet 9 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

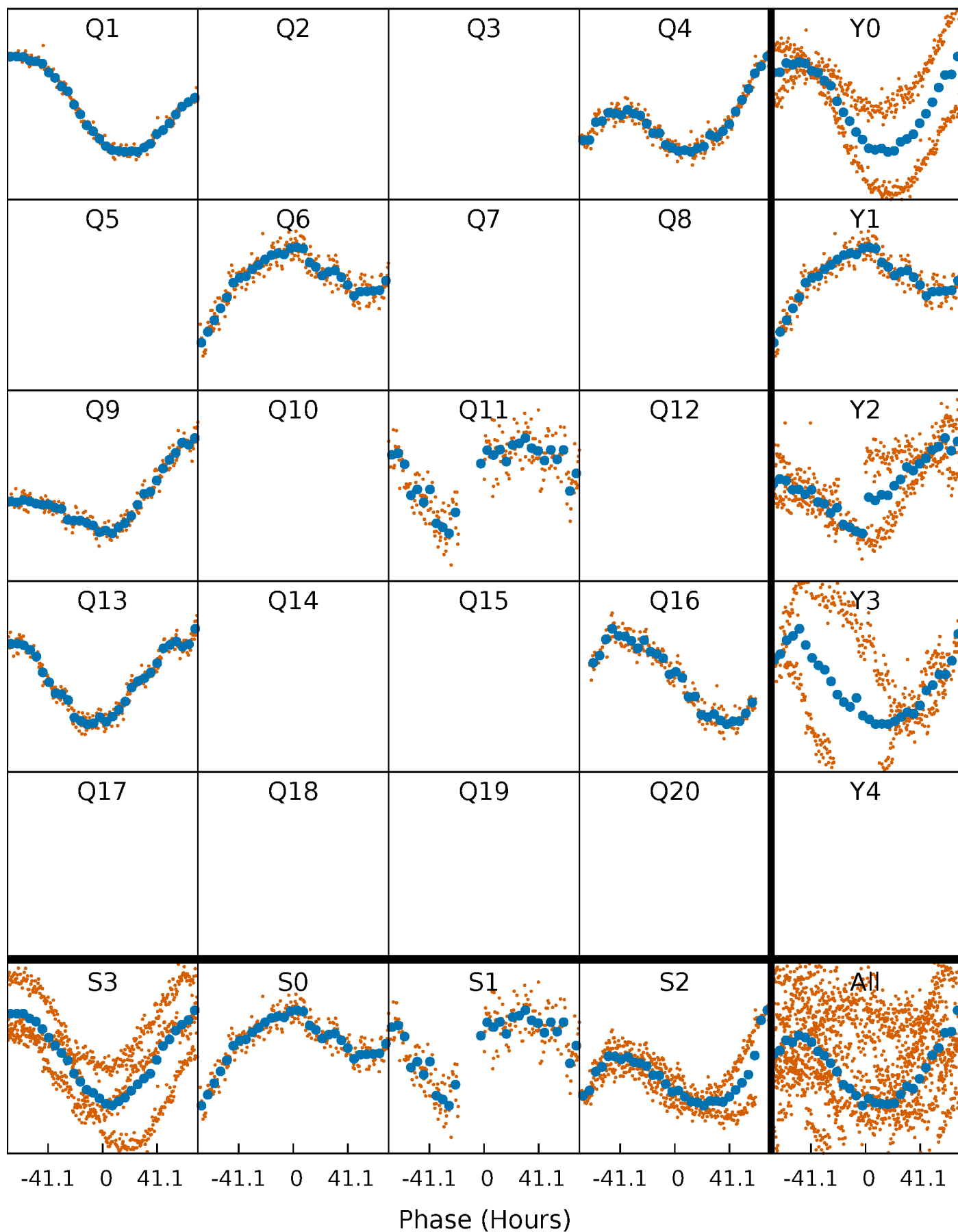


Planet 9 : Phased Whitened Flux Time Series (Fit Epoch/Period)



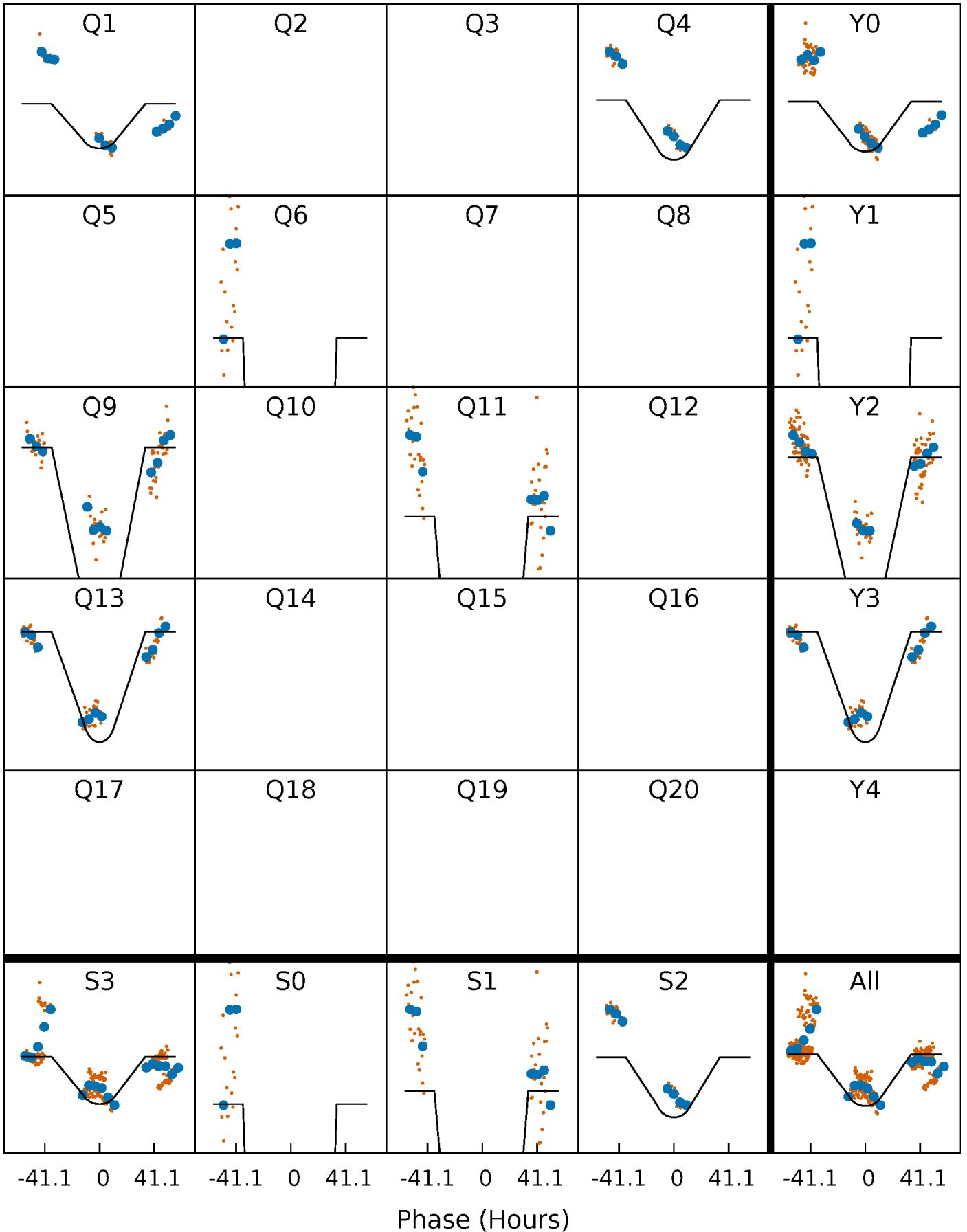
PDC Quarter-Phased Transit Curves

TCE 002714932-09 $P=220.851963$ Days $T_0=149.666990$ (BKJD)



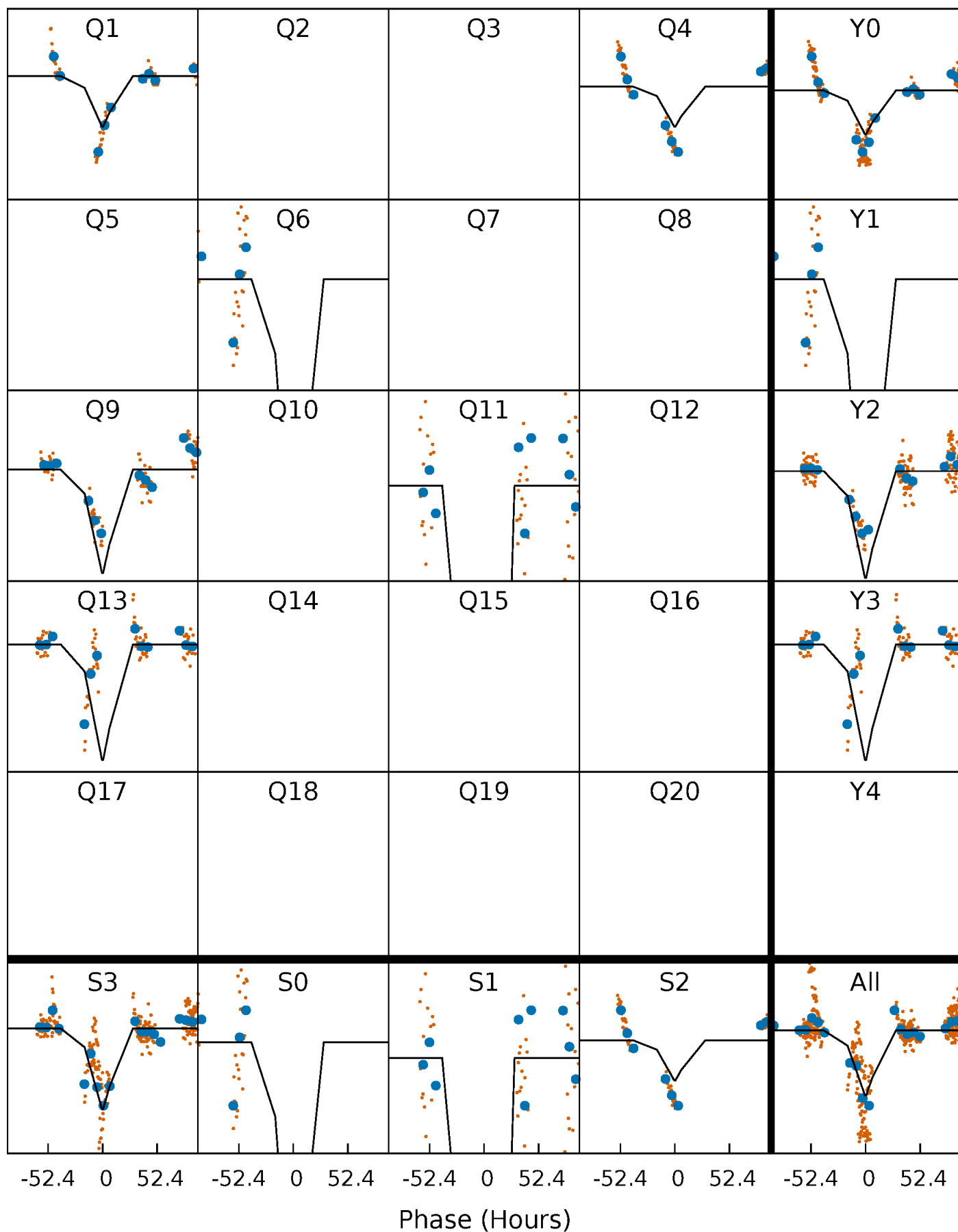
DV Quarter-Phased Transit Curves

TCE 002714932-09 P=220.851963 Days $T_0=149.666990$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

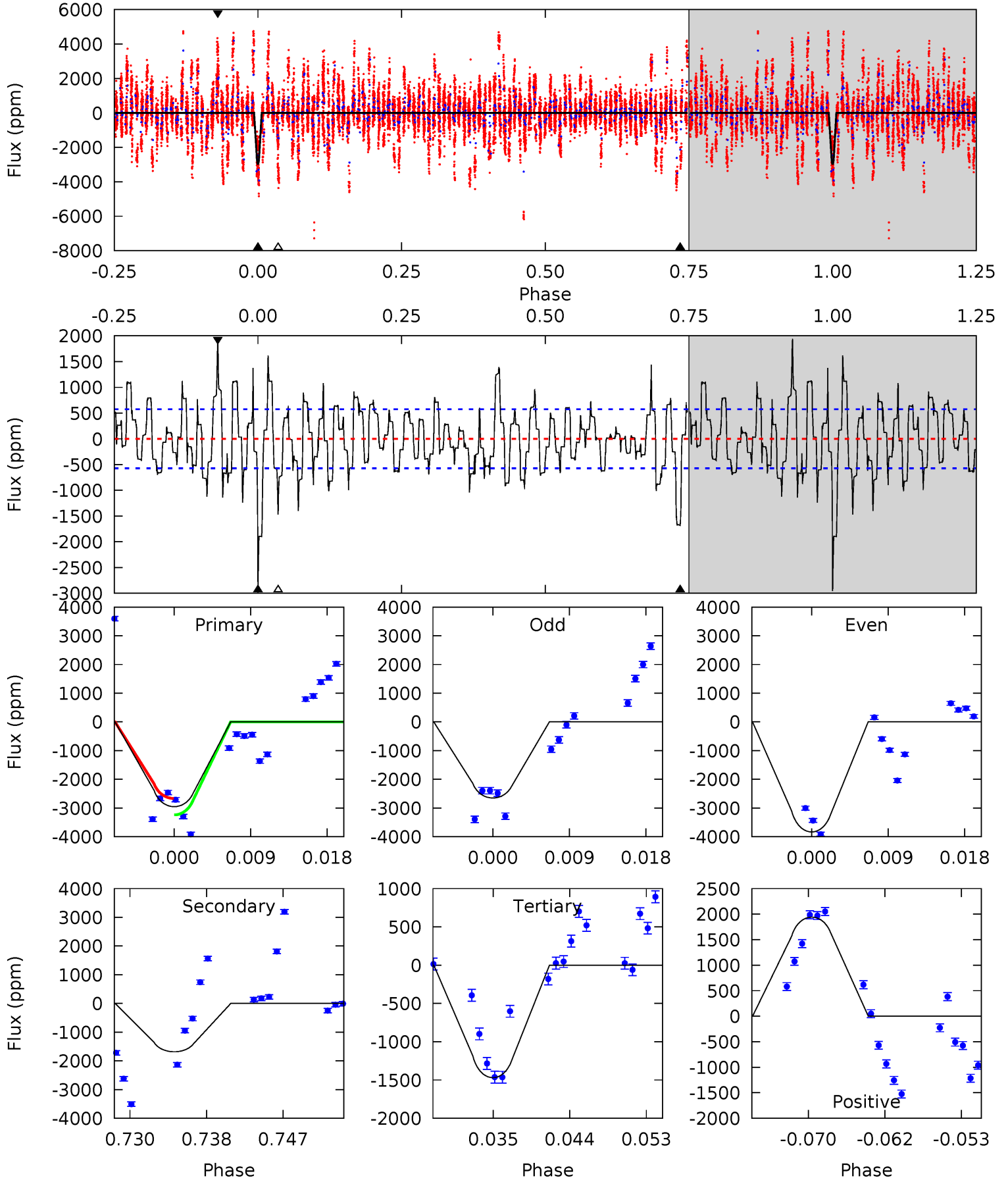
TCE 002714932-09 P=220.859539 Days $T_0=149.843033$ (BKJD)



DV Model-Shift Uniqueness Test

002714932-09, P = 220.851963 Days, E = 149.666990 Days

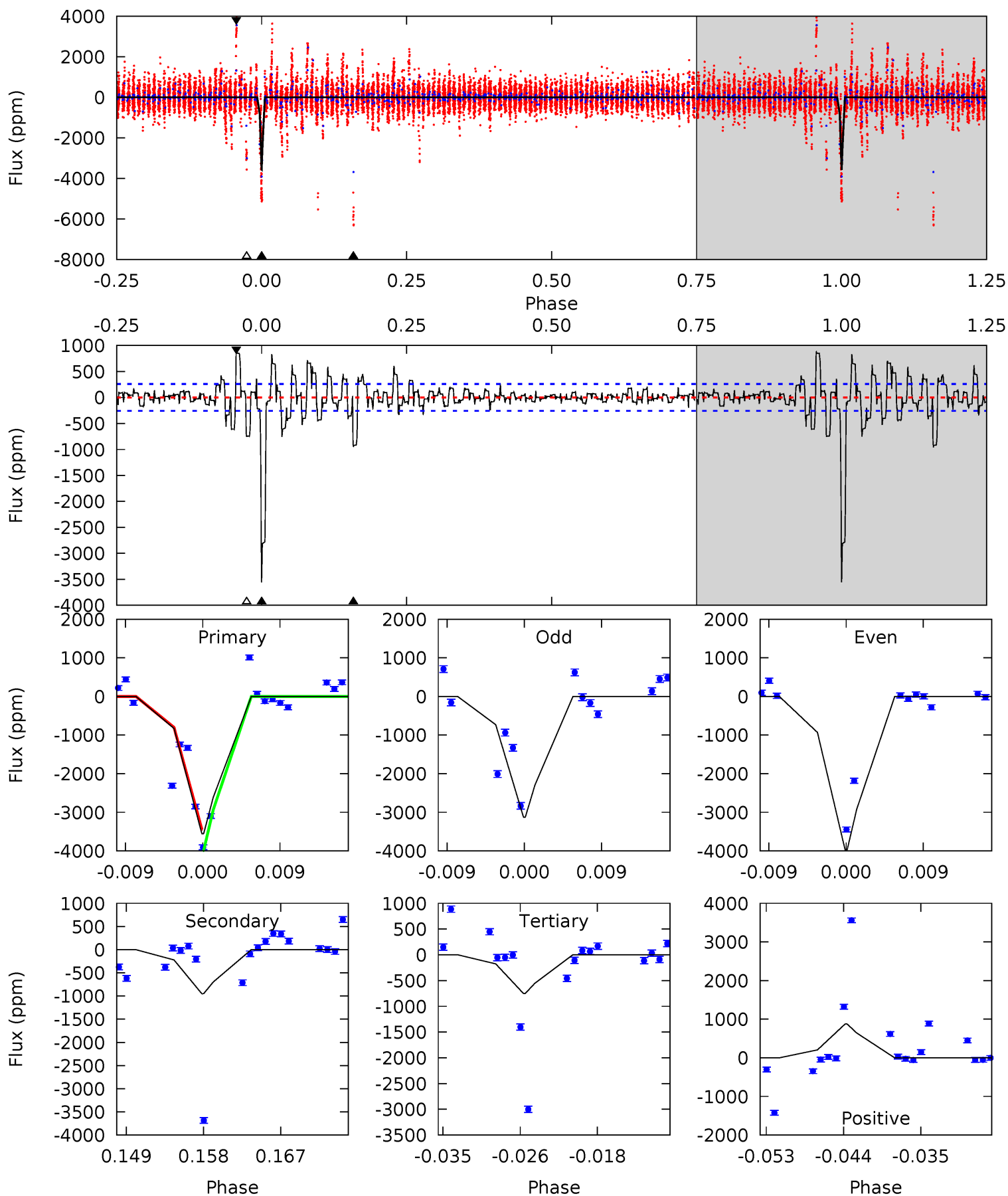
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.0	14.8	12.9	17.1	5.05	2.62	4.82	13.1	8.91	1.87	-2.28	4.73	0.95	0.40	2.50



Alt Model-Shift Uniqueness Test

002714932-09, P = 220.859539 Days, E = 149.843033 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
69.5	18.6	14.7	17.1	5.05	2.62	3.55	54.8	52.3	3.90	1.44	7.78	1.00	0.20	4.25



Stellar Parameters For KIC 002714932

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6096^{+189}_{-210}	$4.437^{+0.070}_{-0.210}$	$-0.120^{+0.250}_{-0.350}$	$1.016^{+0.330}_{-0.132}$	$1.026^{+0.153}_{-0.126}$	$1.377^{+0.505}_{-0.707}$
	+3%/-3%	+2%/-5%	+208%/-292%	+32%/-13%	+15%/-12%	+37%/-51%
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 002714932-09 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1682 ± 114	$7.55^{+2.85}_{-2.52}$	454^{+35}_{-25}	4945^{+968}_{-547}	8397^{+10802}_{-3967}
Alt.	-951 ± 51	$6.40^{+2.63}_{-2.29}$	454^{+37}_{-22}	4726^{+950}_{-538}	6594^{+9588}_{-3253}

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 $A_{obs} \gg 1.0$

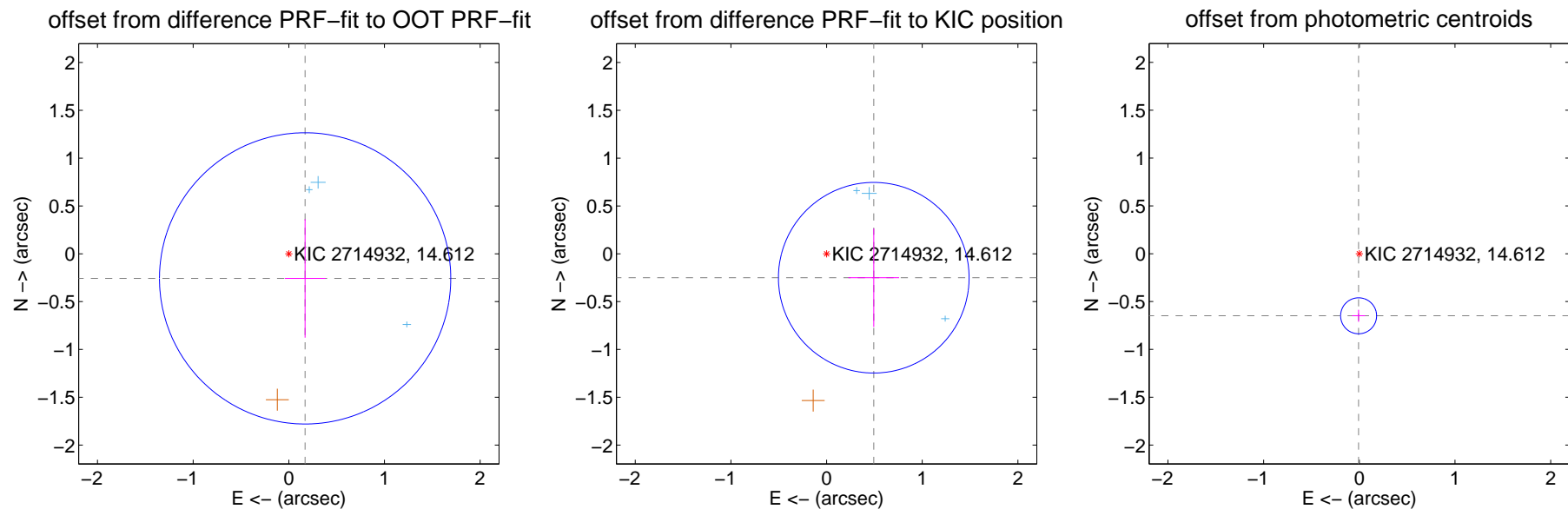
DV Centroid Data

Supplemental centroid analysis for 002714932-09. Kepler magnitude: 14.61. Transit SNR 9.08

There are 4 quarters with good PRF difference image offsets

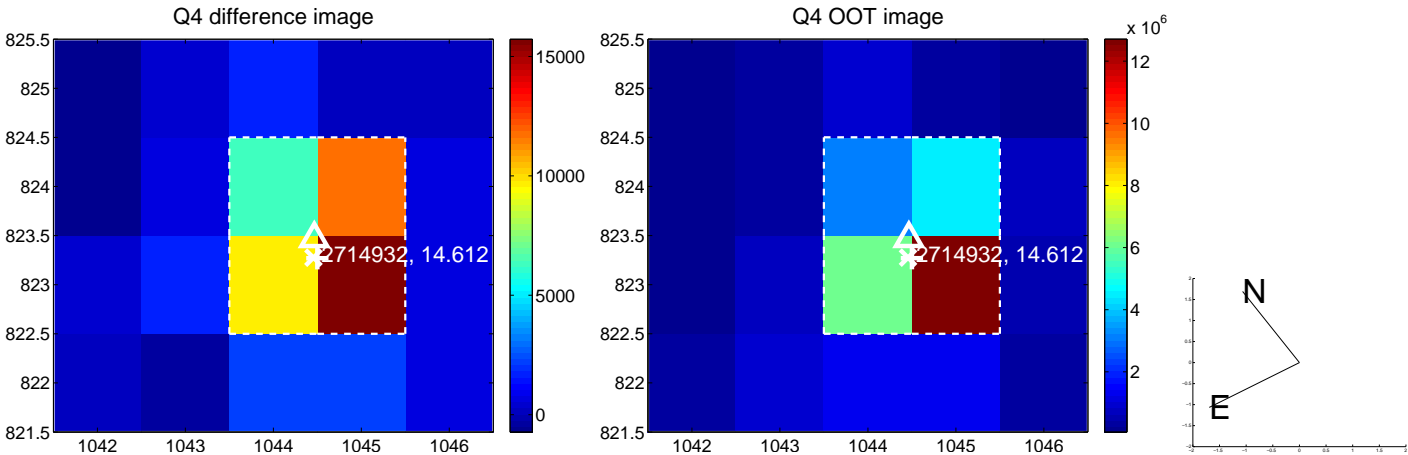
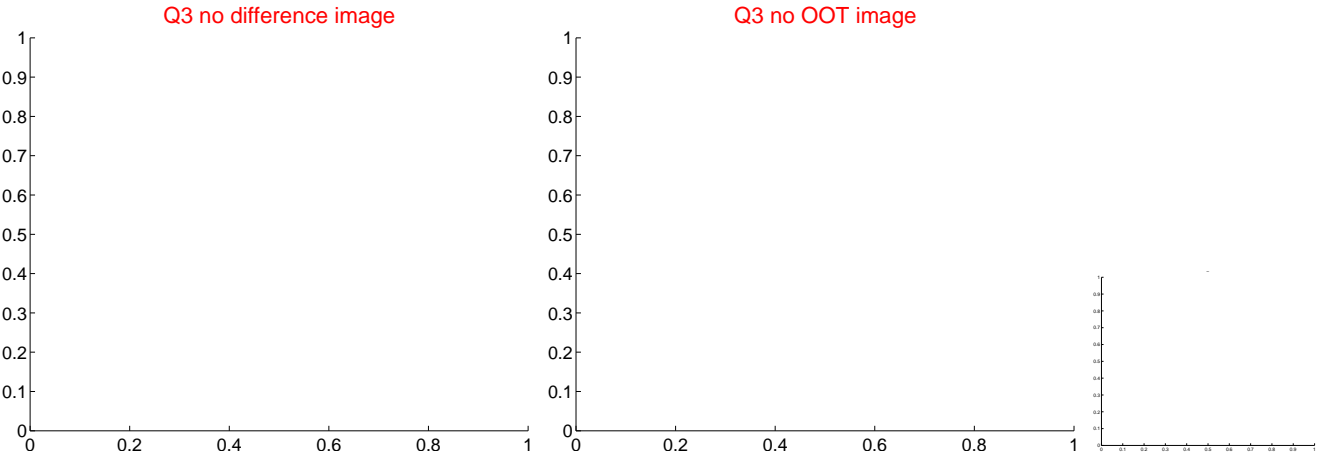
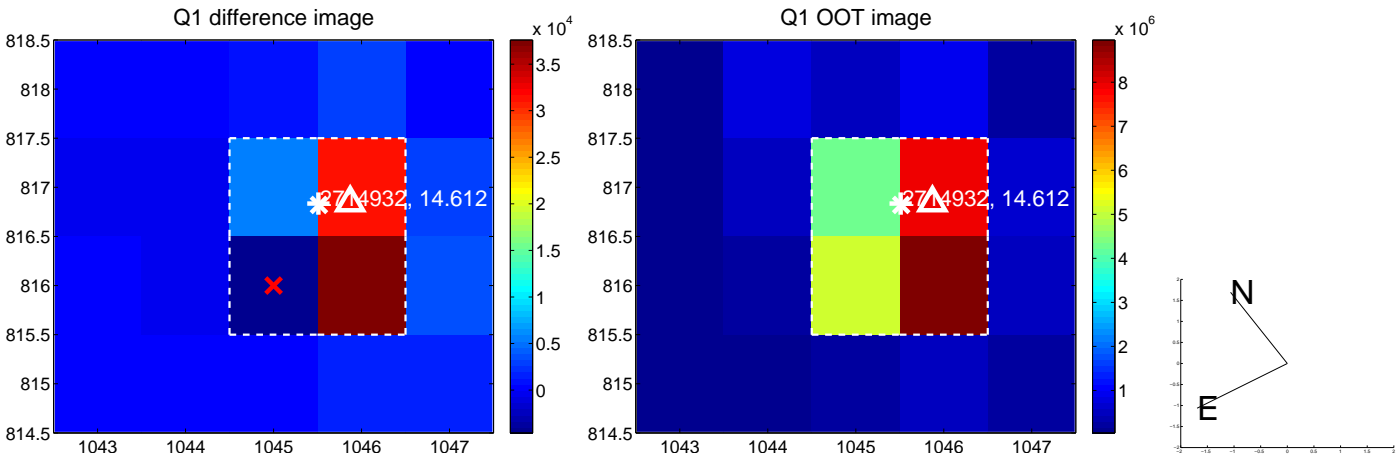
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.309 ± 0.507	0.61	-0.170 ± 0.213	-0.257 ± 0.620
PRF-fit source offset from KIC position	0.553 ± 0.332	1.67	-0.493 ± 0.266	-0.250 ± 0.514
photometric centroid source offset	0.65 ± 0.06	10.36	0.01 ± 0.07	-0.65 ± 0.06

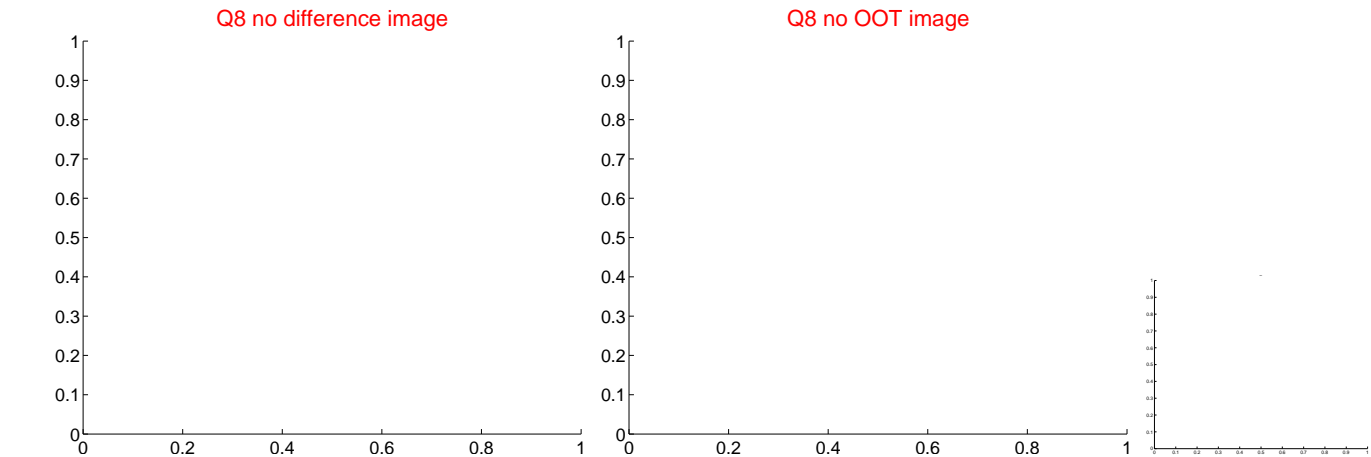
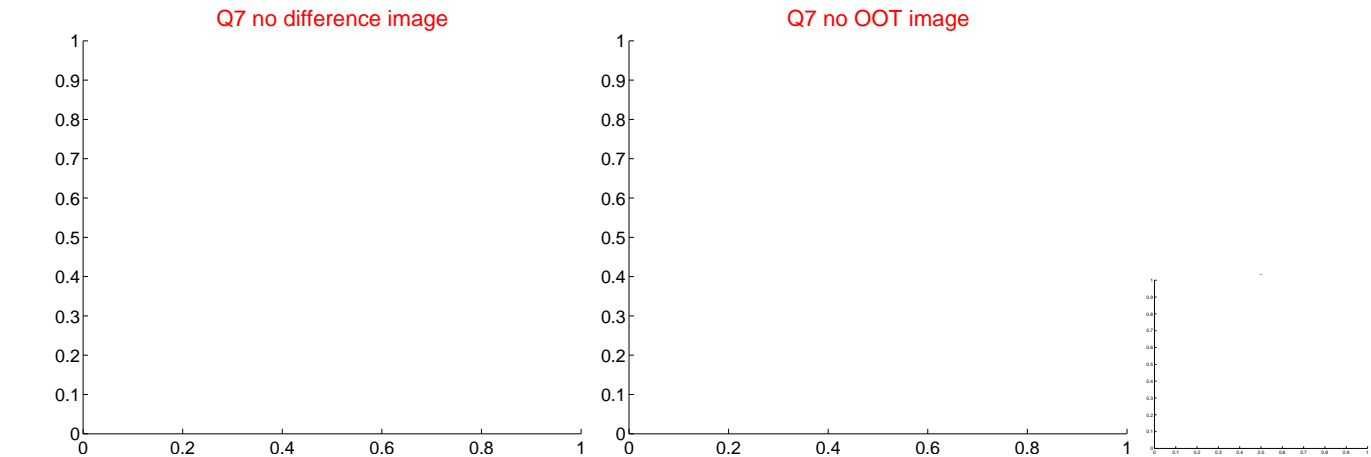
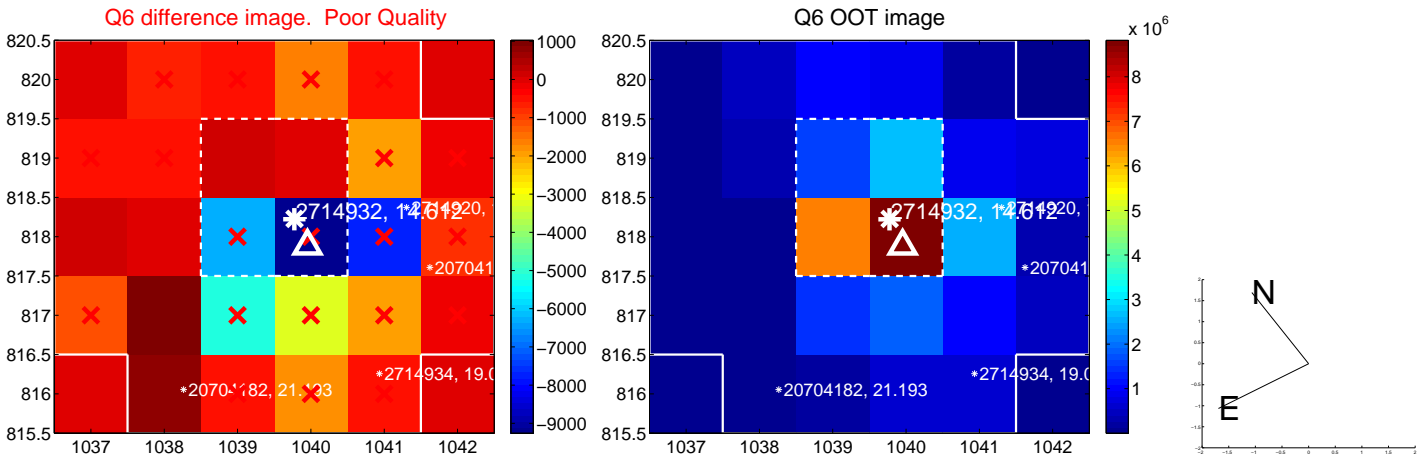
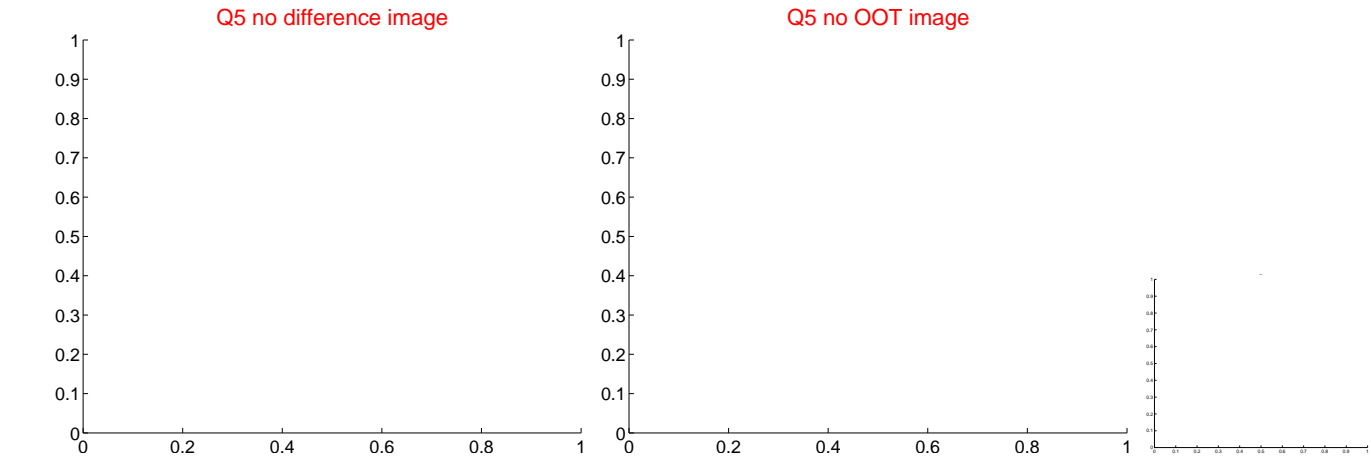


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

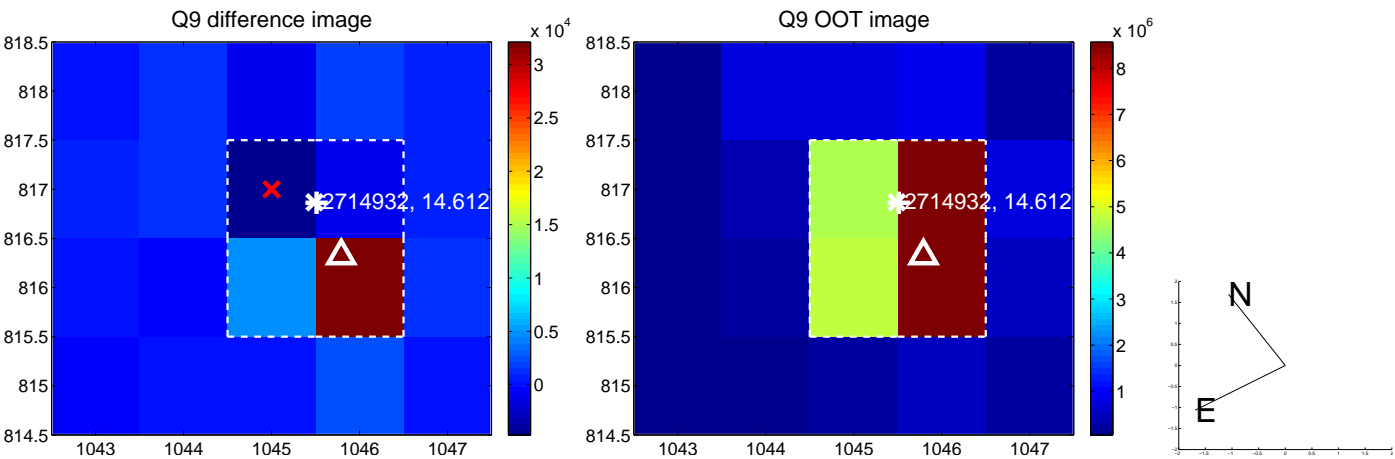
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



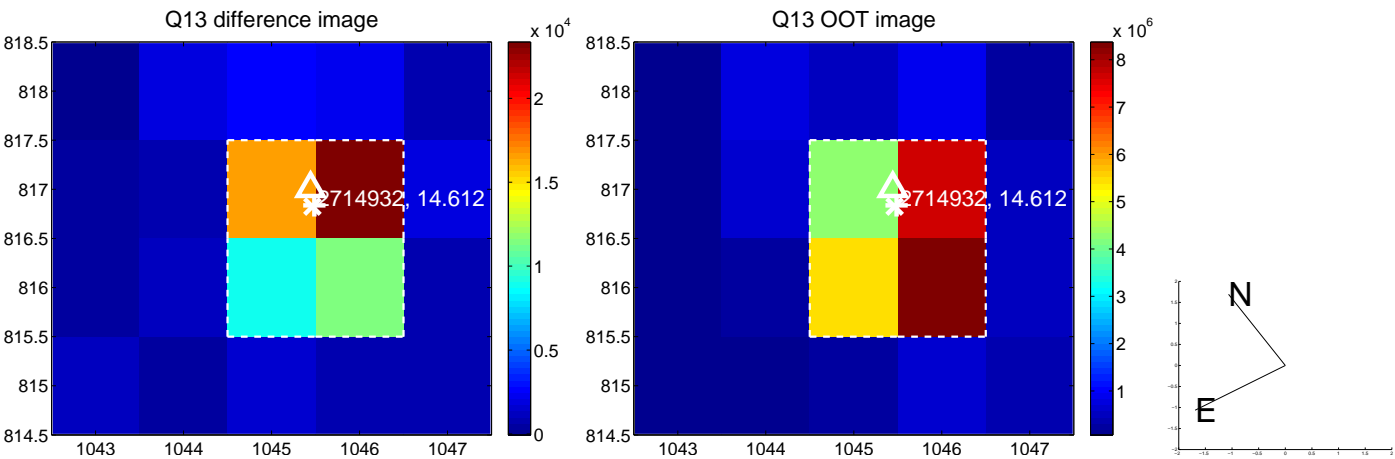
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



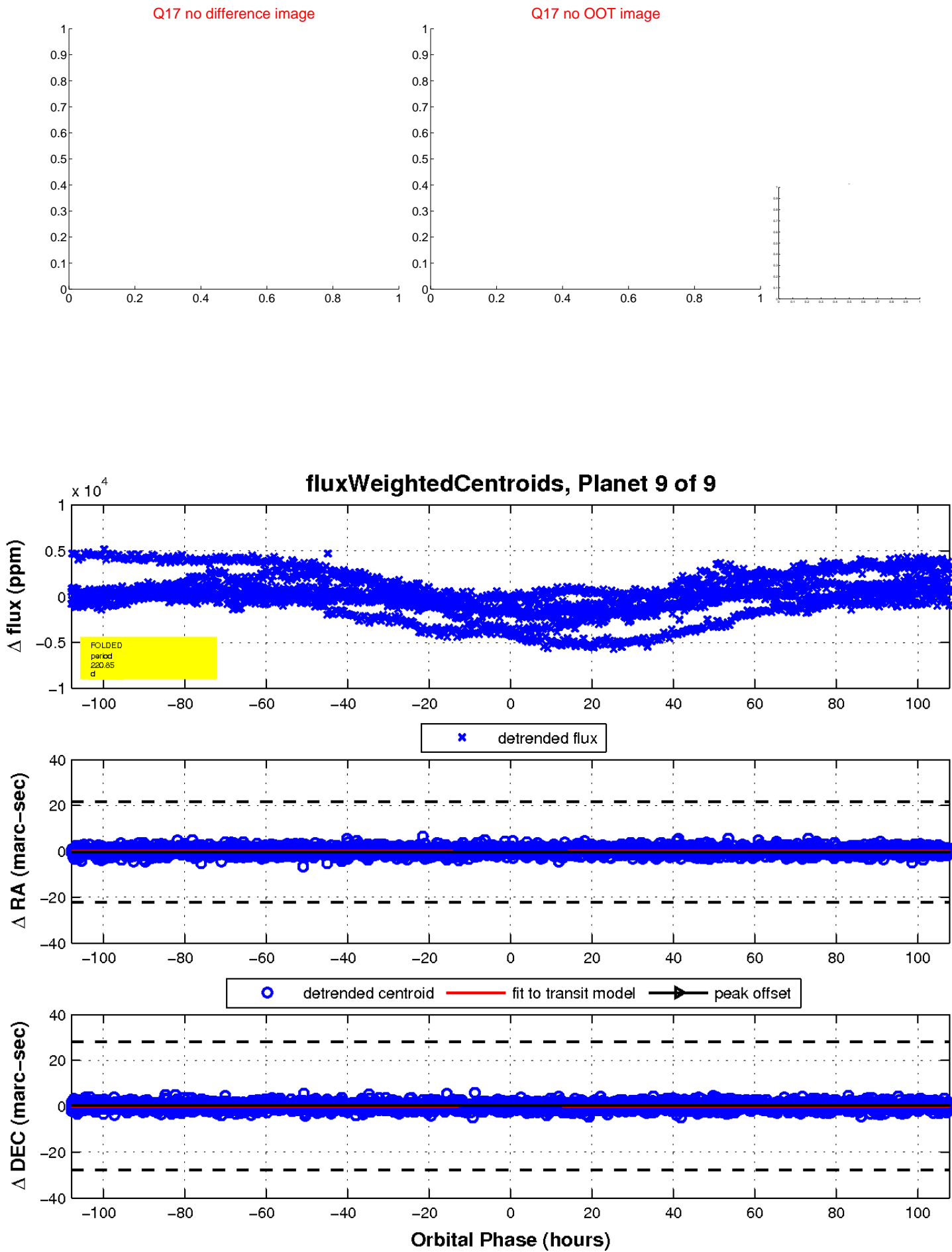
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

