

KIC 011293949

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})
011293949-01	OBS	No	84.441596	148.119493	3843.4	2.337	11.6	6.8	0.16	3117	1.00	0.06
011293949-02	OBS	No	9.682391	132.977128	17.9	25.459	9.9	0.1	0.16	3117	0.07	1.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011293949-01	OBS	FP	0.00	1	0	1	0	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—CENT_FEW_DIFFS—HALO_GHOST
011293949-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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

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

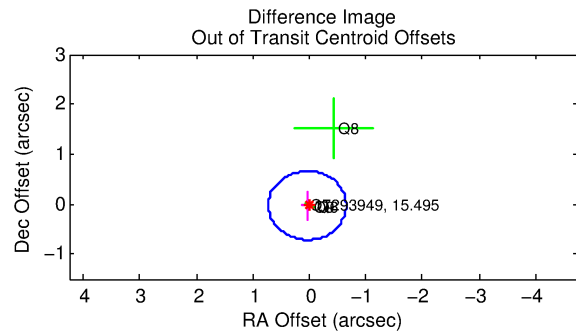
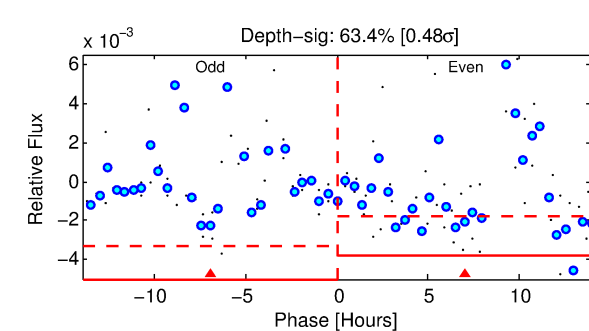
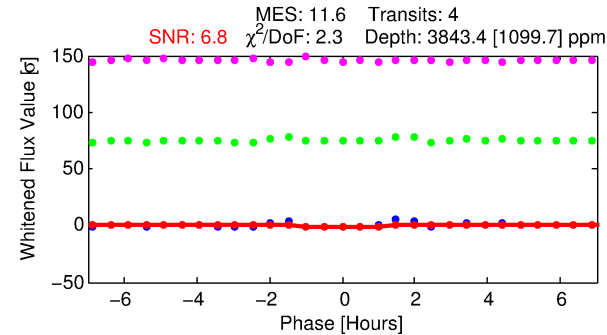
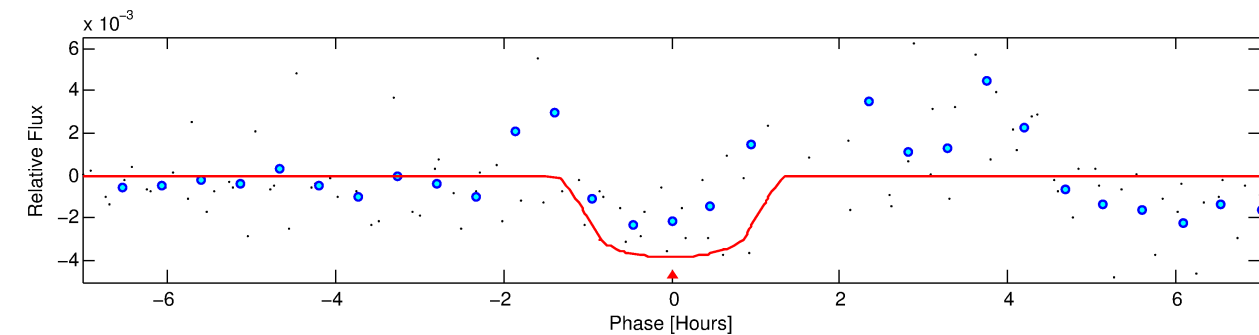
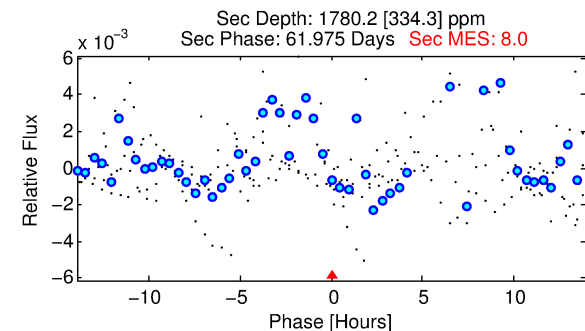
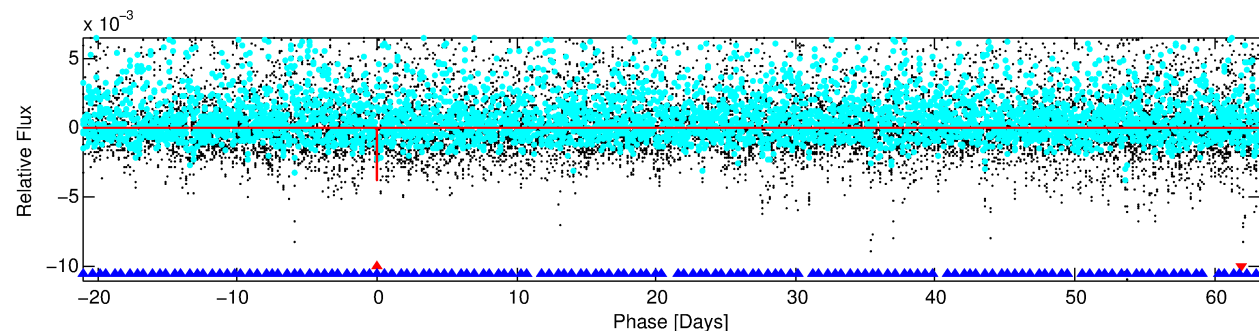
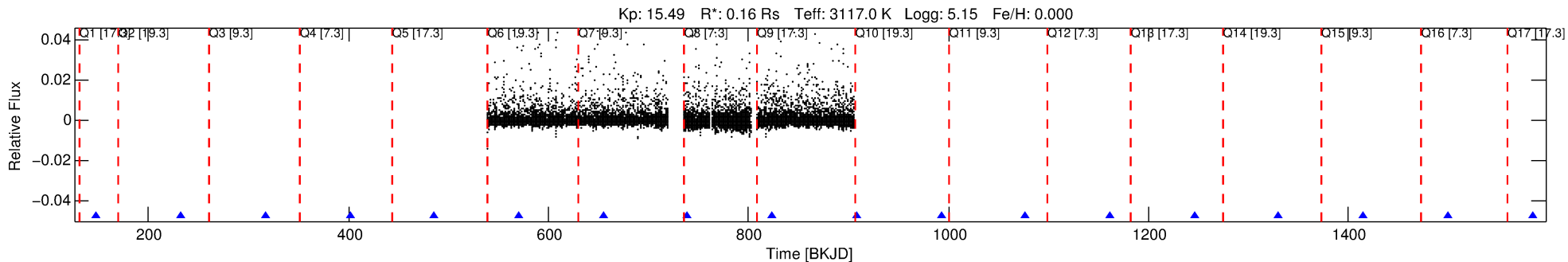
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011293949-01

No Significant Match Found

DV One-Page Summary

KIC: 11293949 Candidate: 1 of 2 Period: 84.442 d



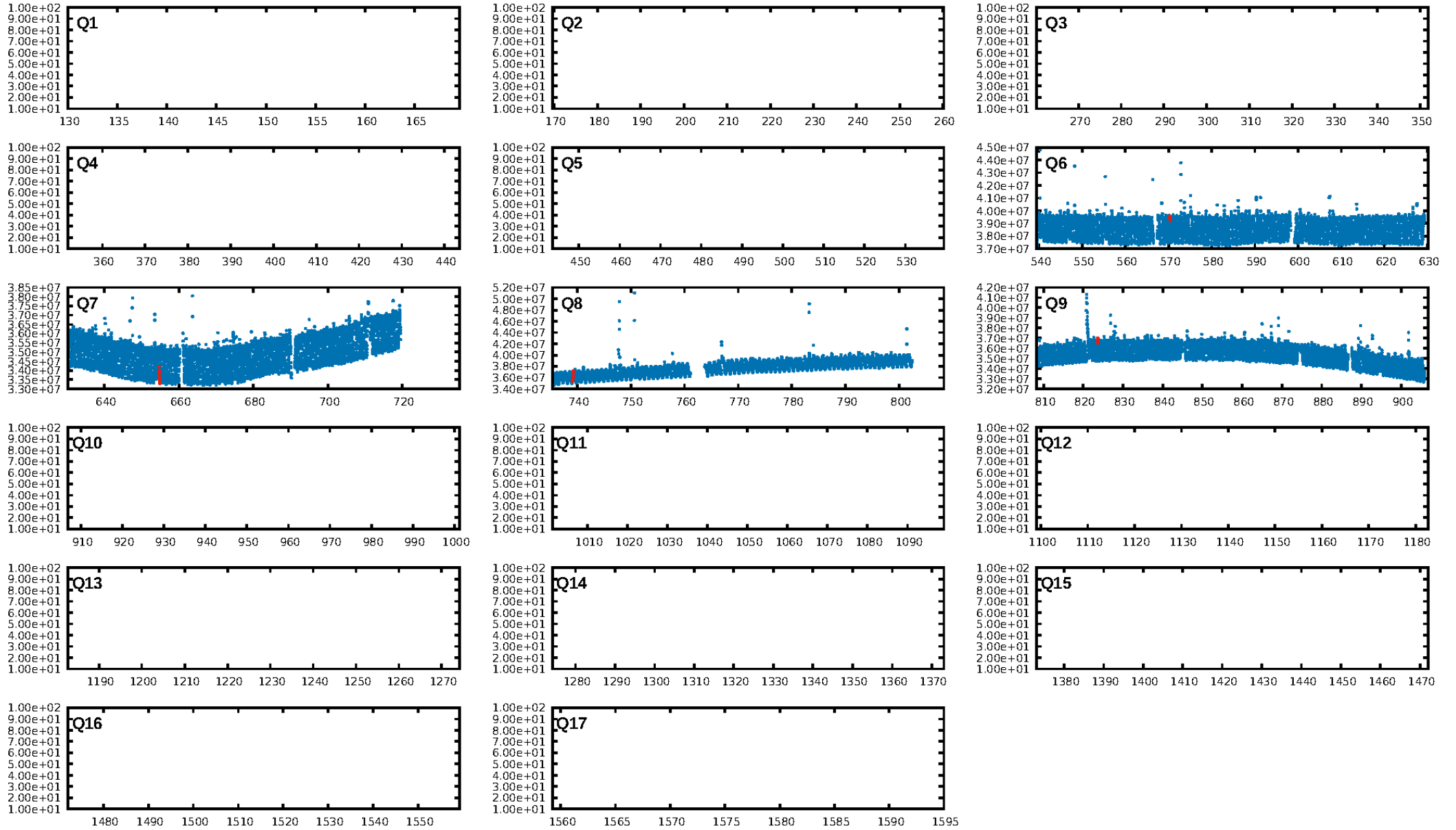
DV Fit Results:

Period = 84.44160 [0.00407] d
Epoch = 148.1195 [0.0275] BKJD
Rp/R* = 0.0561 [0.1257]
a/R* = 291.48 [2825.88]
b = 0.03 [340.65]
Seff = 0.06 [0.00]
Teq = 126 [0] K
Rp = 1.00 [2.25] Re
a = 0.1945 [0.0000] AU
Ag = 36712.78 [164484.36] [0.22 σ]
Teffp = 2702 [3027] K [0.85 σ]

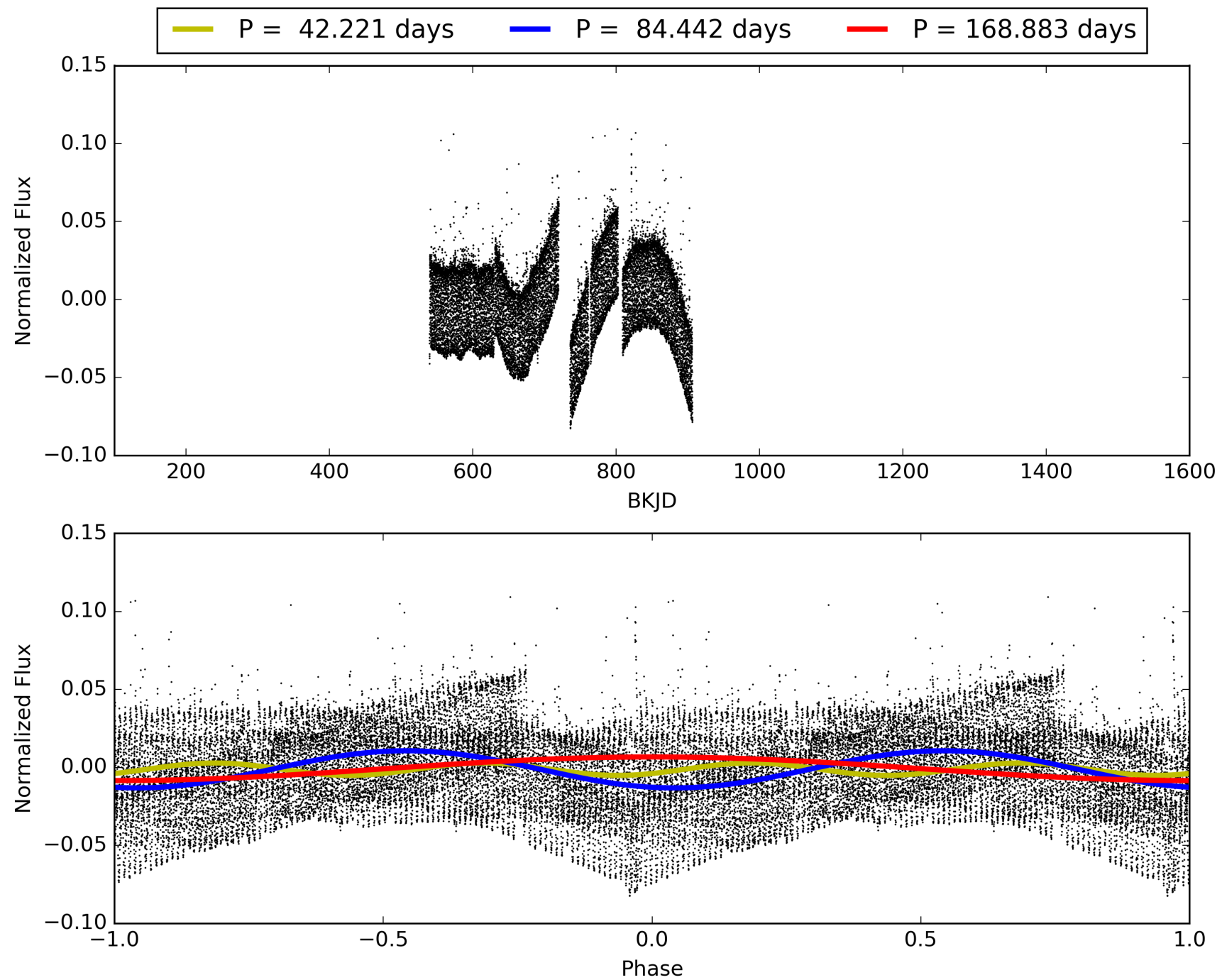
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [70.18 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 5.9%
Bootstrap-pfa: 7.87e-10
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.05098
Centroid-sig: 40.7%
Centroid-so: 0.977 arcsec [3.70 σ]
OotOffset-rm: 0.048 arcsec [0.21 σ]
KicOffset-rm: 1.003 arcsec [3.44 σ]
OotOffset-st: 1/1/1/1 [4]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 011293949-01, PDC Light Curves

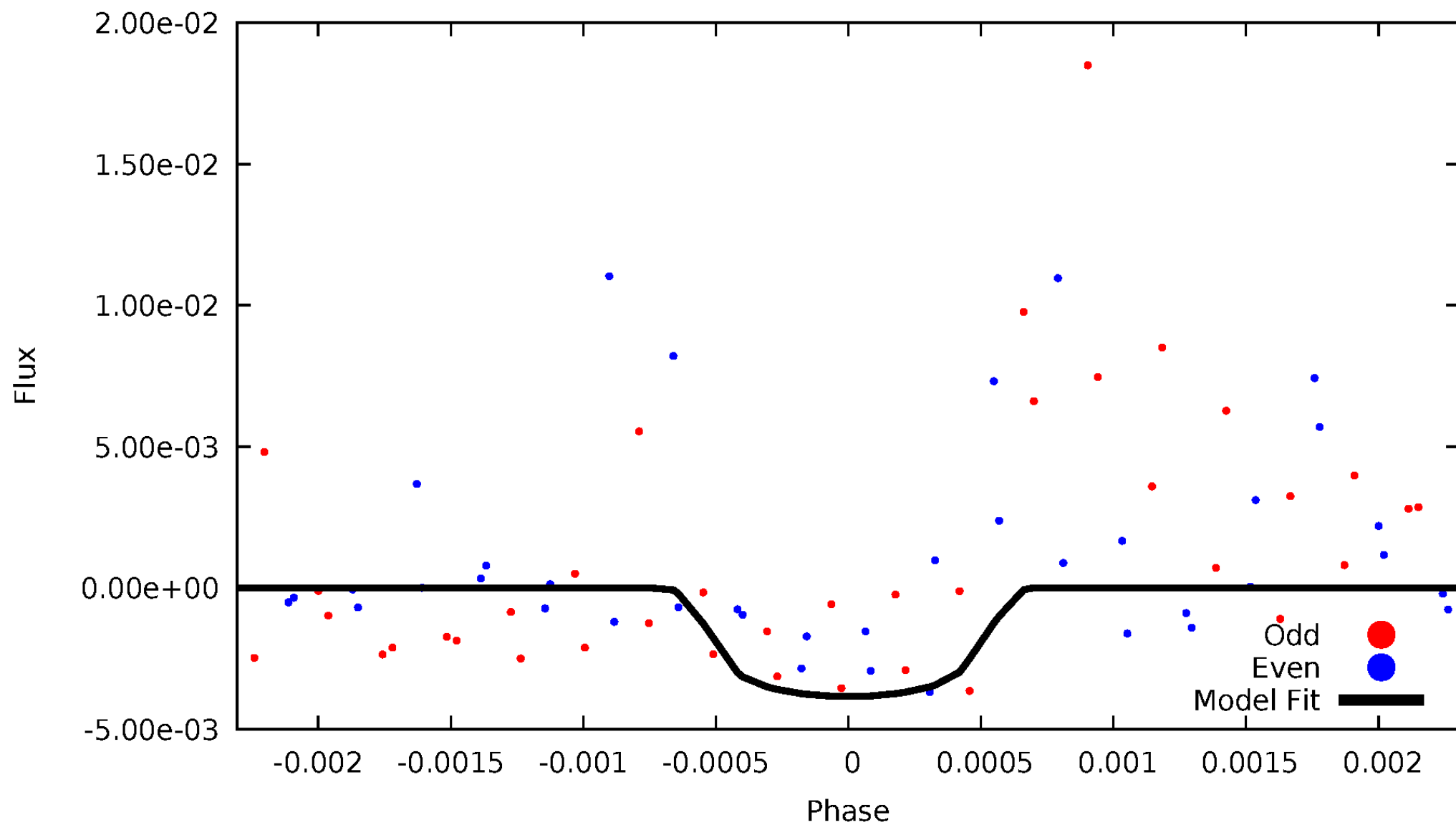


TCE 011293949-01



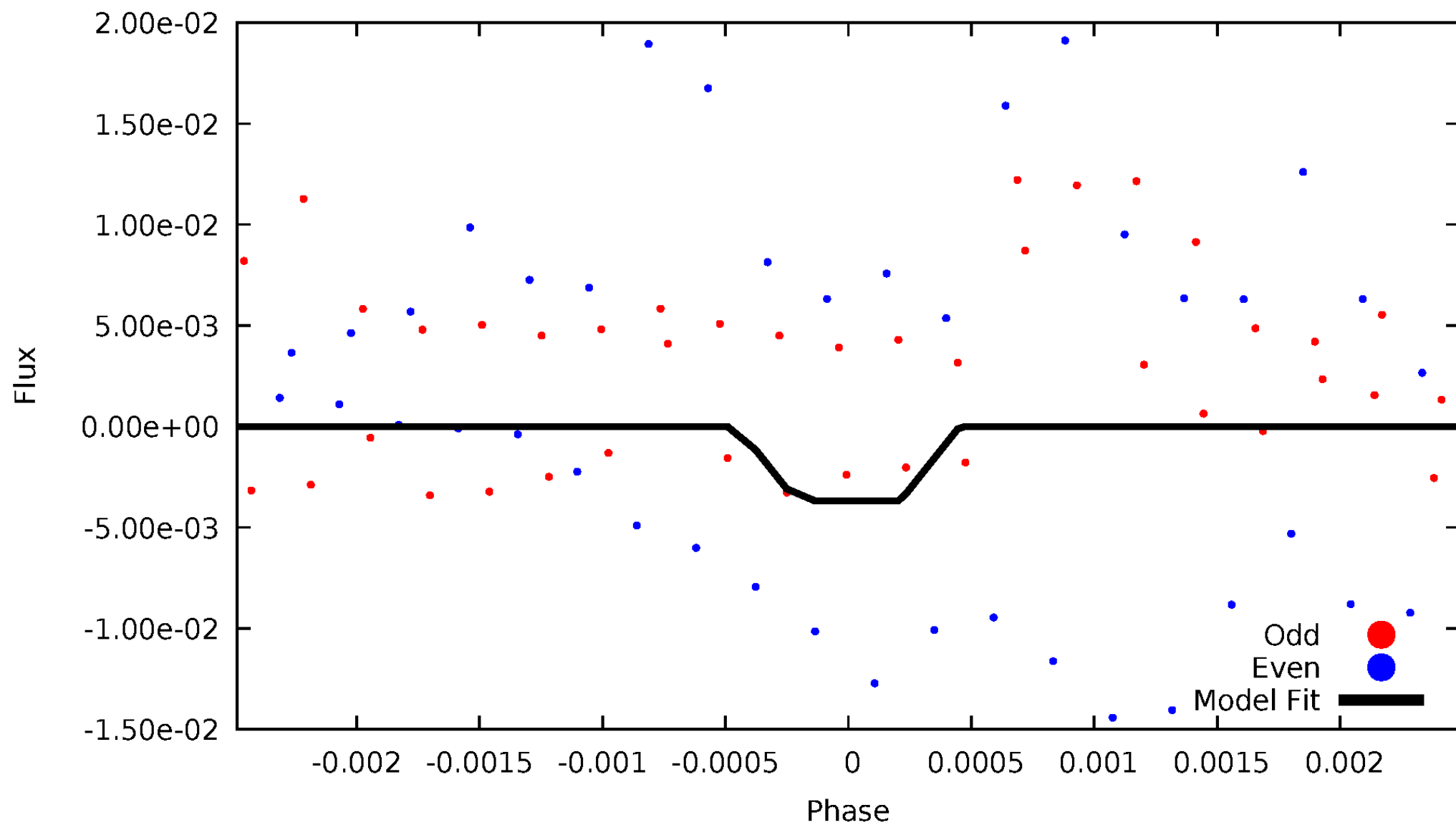
DV Odd/Even

TCE 011293949-01



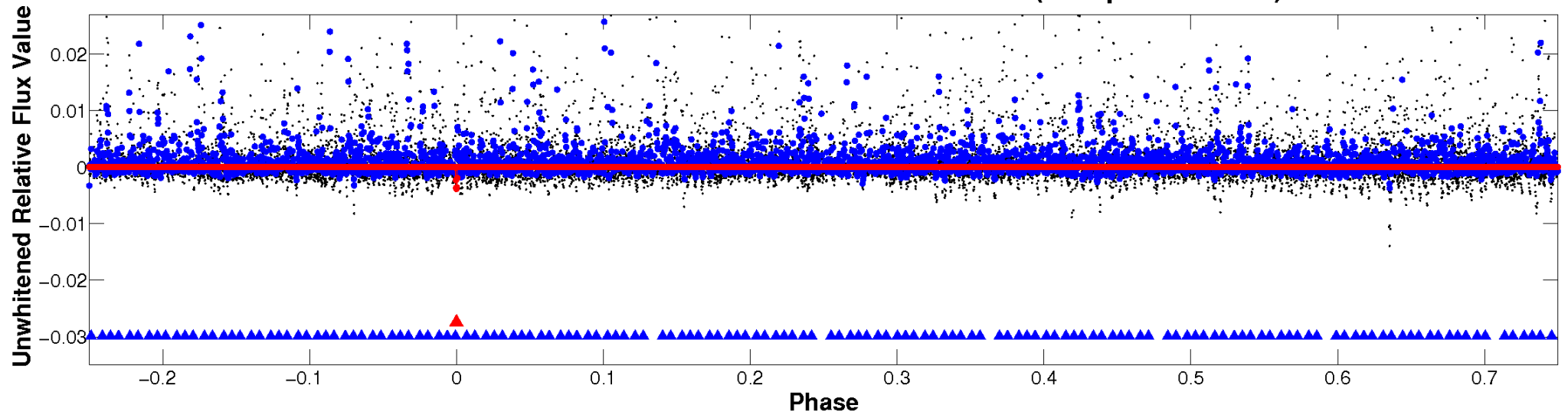
ALT Odd/Even

TCE 011293949-01

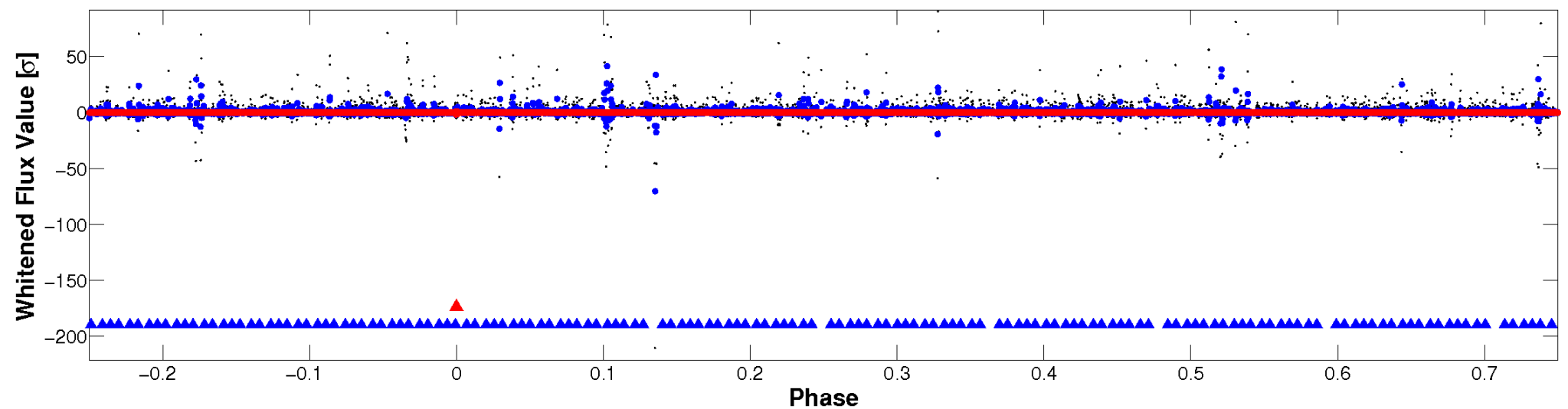


Non-Whitened Vs. Whitened Light Curve

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

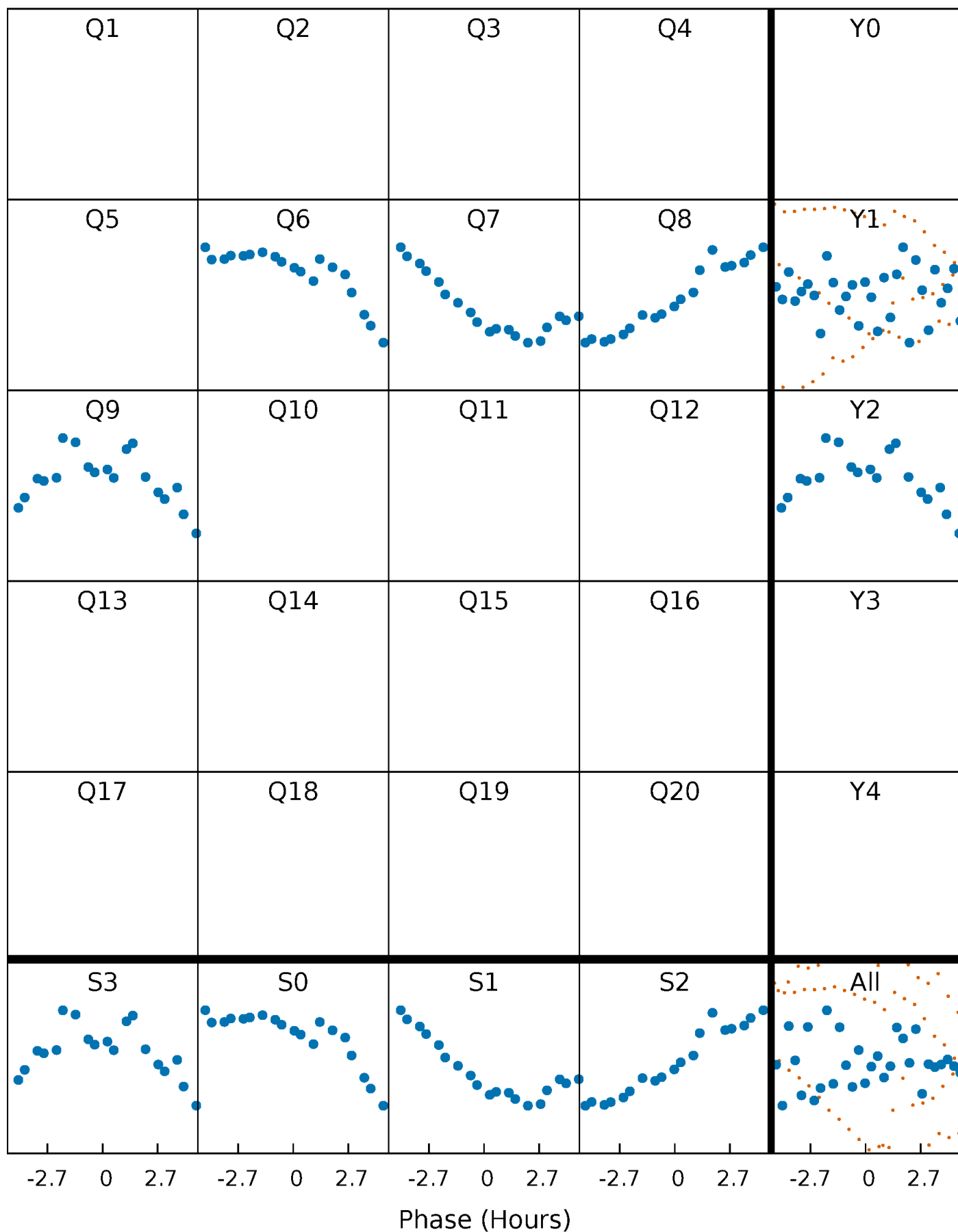


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



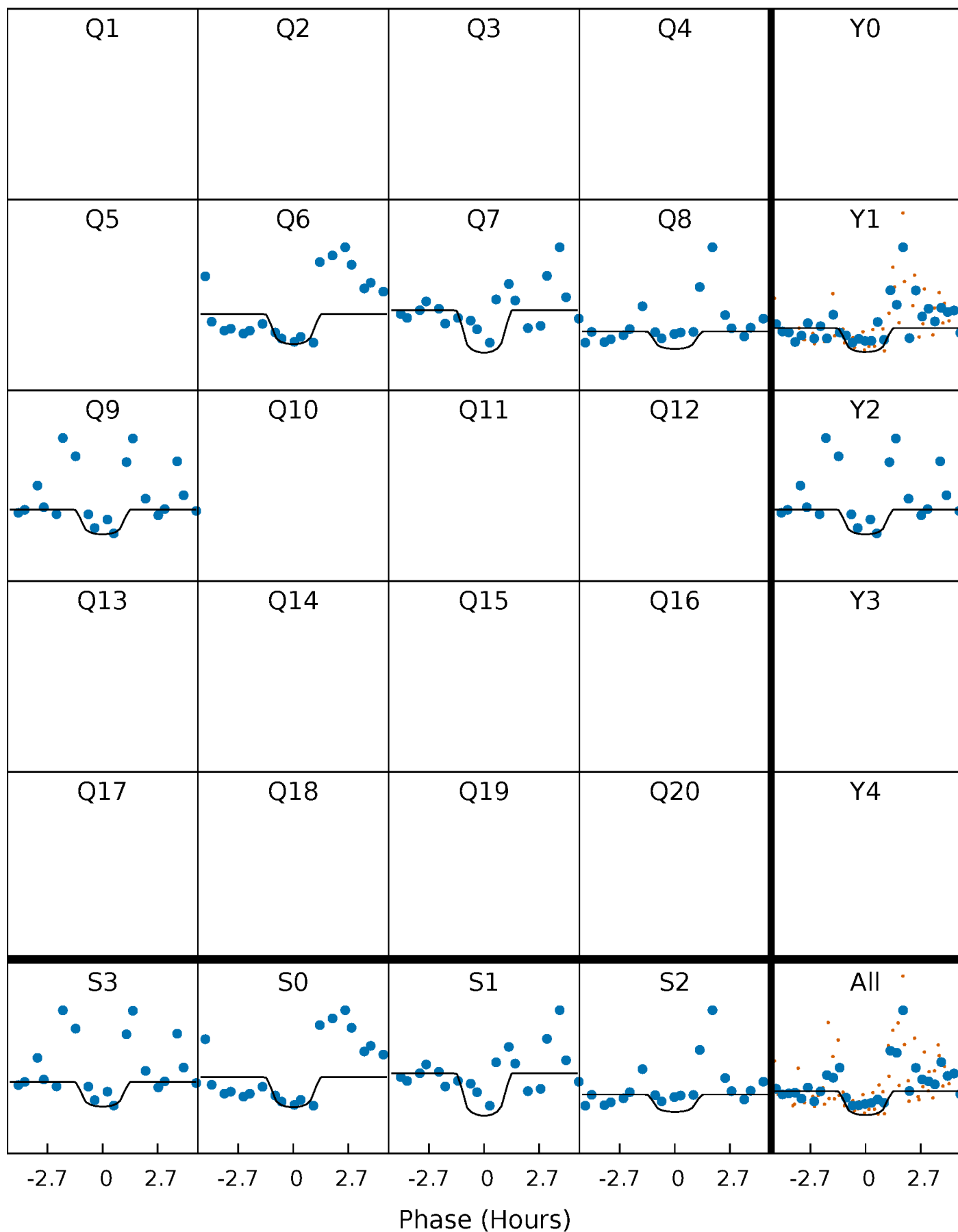
PDC Quarter-Phased Transit Curves

TCE 011293949-01 P= 84.441596 Days $T_0=148.119493$ (BKJD)



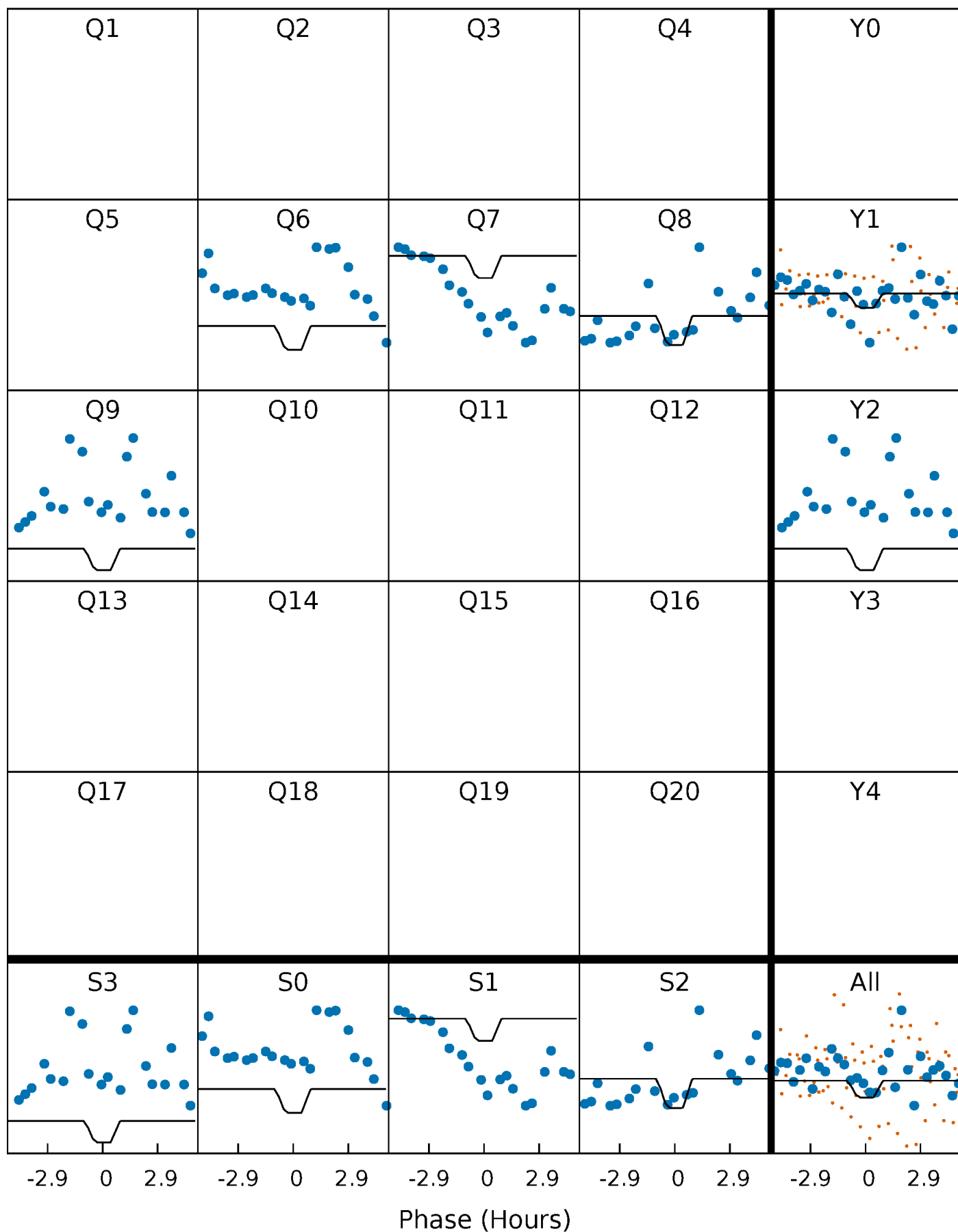
DV Quarter-Phased Transit Curves

TCE 011293949-01 P= 84.441596 Days $T_0=148.119493$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

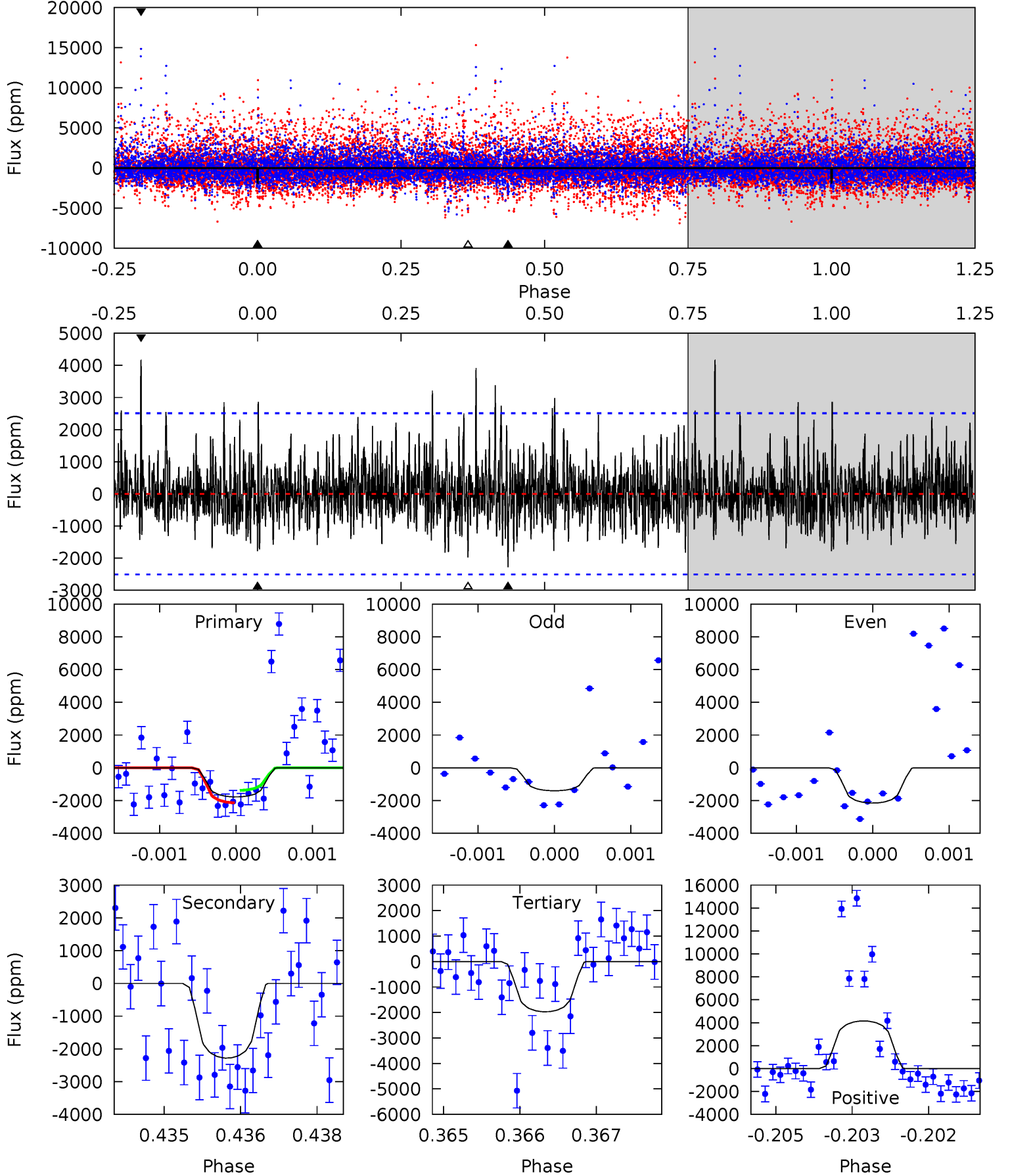
TCE 011293949-01 P= 84.438735 Days $T_0=148.134787$ (BKJD)



DV Model-Shift Uniqueness Test

011293949-01, P = 84.441596 Days, E = 148.119493 Days

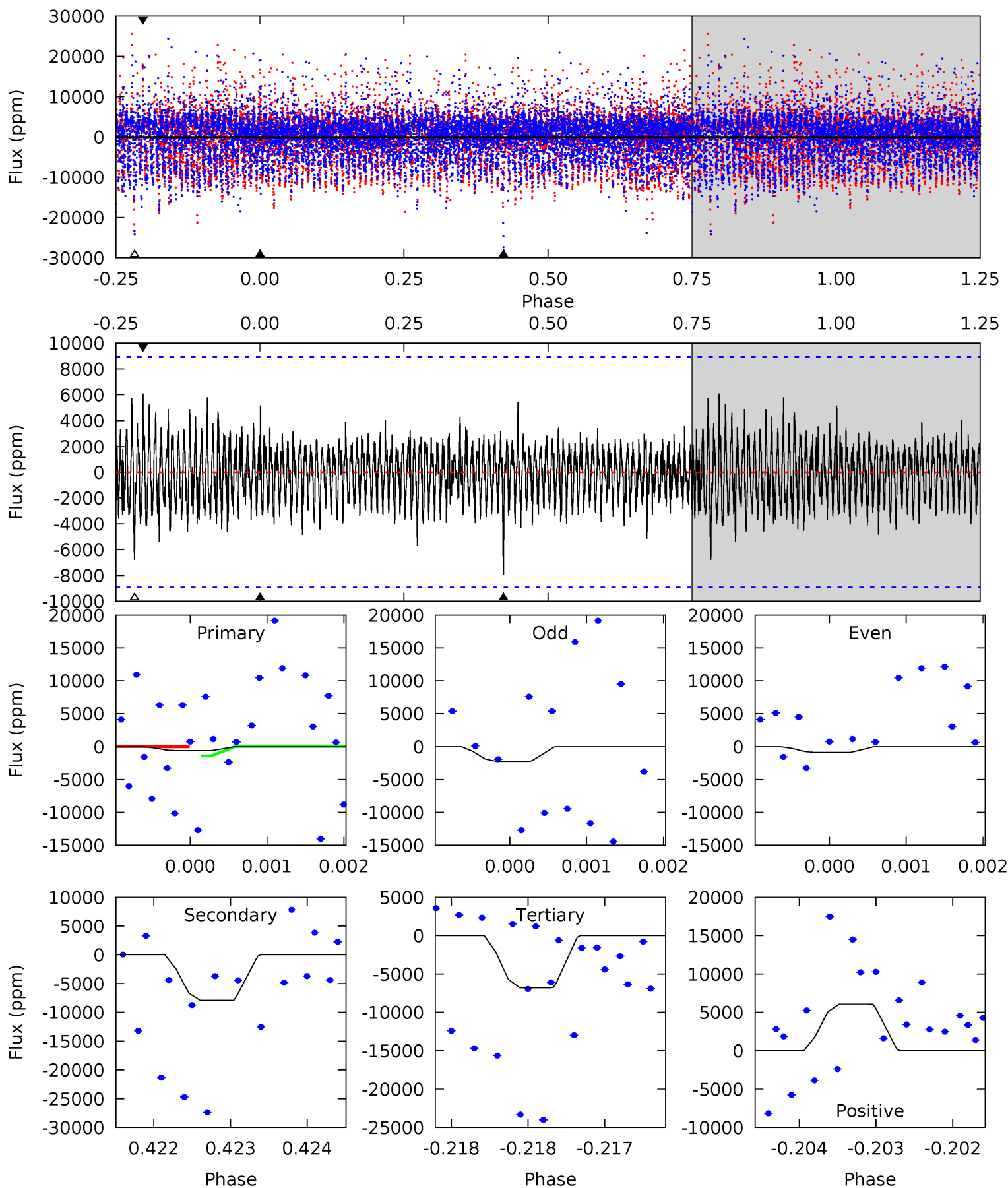
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.84	4.92	4.25	8.95	5.40	3.22	1.60	-0.42	-5.11	0.66	-4.03	0.66	1.28	0.65	0.83



Alt Model-Shift Uniqueness Test

011293949-01, P = 84.438735 Days, E = 148.134787 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.38	4.87	4.18	3.74	5.50	3.36	1.11	-3.80	-3.37	0.69	1.13	0.43	-0.79	0.43	0.42



Stellar Parameters For KIC 011293949

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3117^{+1}_{-1}	$5.147^{+-1.000}_{-1.000}$	$0.000^{+-1.000}_{-1.000}$	$0.164^{+-1.000}_{-1.000}$	$0.138^{+-1.000}_{-1.000}$	$43.900^{+-1.000}_{-1.000}$
	+0%/-0%	+19%/-19%	+inf%/-inf%	+610%/-610%	+725%/-725%	+2%/-2%
Source	PHO54	PHO54	PHO54	BTSL		

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

Secondary Eclipse Parameters for KIC 011293949-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2281±464	$2.01^{+2.26}_{-1.33}$	178^{+17}_{-16}	2496^{+882}_{-372}	11854^{+89853}_{-8936}
Alt.	-7914±1624	$2.13^{+2.10}_{-1.50}$	179^{+16}_{-15}	2913^{+1336}_{-452}	$37572^{+379427}_{-27109}$

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 $A_{obs} \gg 1.0$

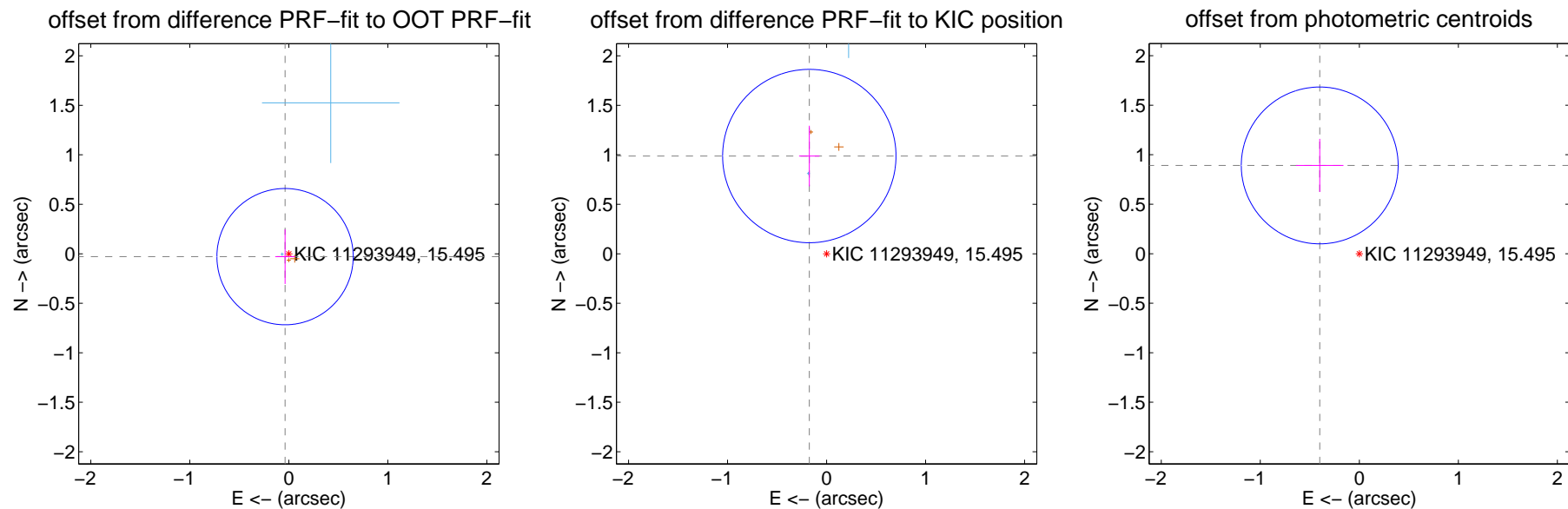
DV Centroid Data

Supplemental centroid analysis for 011293949-01. Kepler magnitude: 15.49. Transit SNR 6.78

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.048 ± 0.230	0.21	0.038 ± 0.100	-0.029 ± 0.276
PRF-fit source offset from KIC position	1.003 ± 0.292	3.44	0.174 ± 0.103	0.988 ± 0.306
photometric centroid source offset	0.98 ± 0.26	3.70	0.40 ± 0.24	0.89 ± 0.27

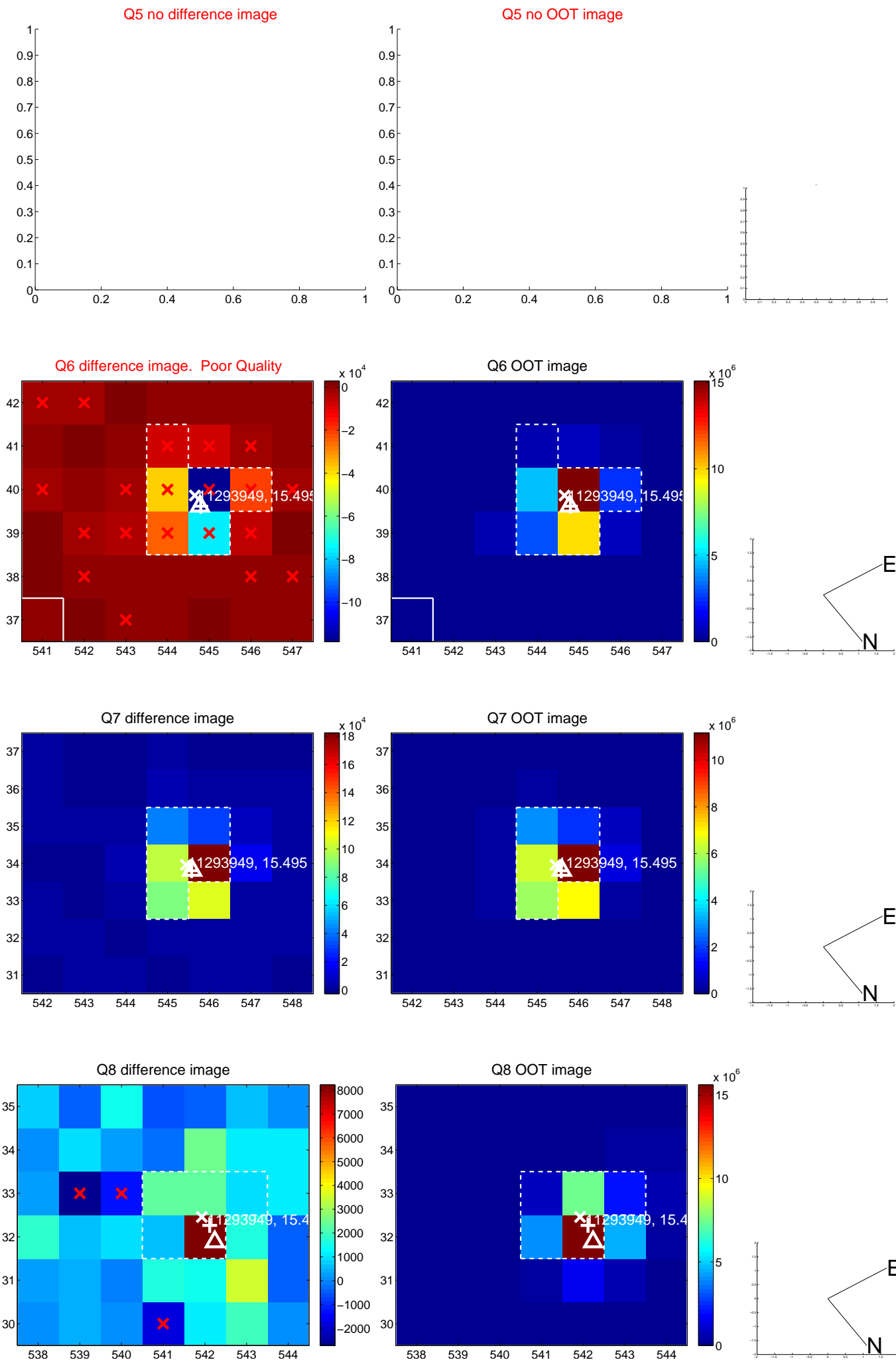


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

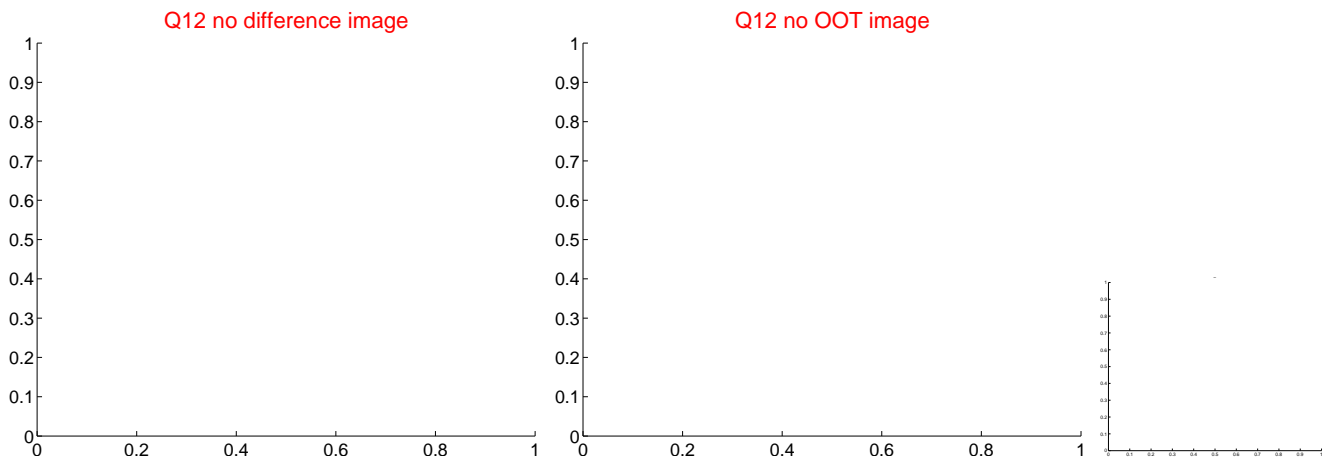
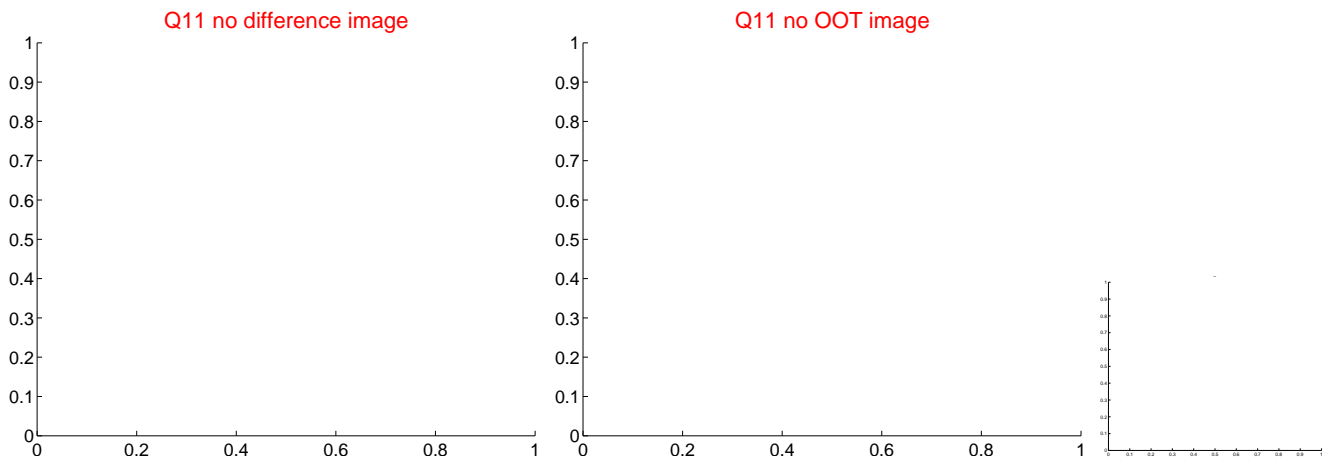
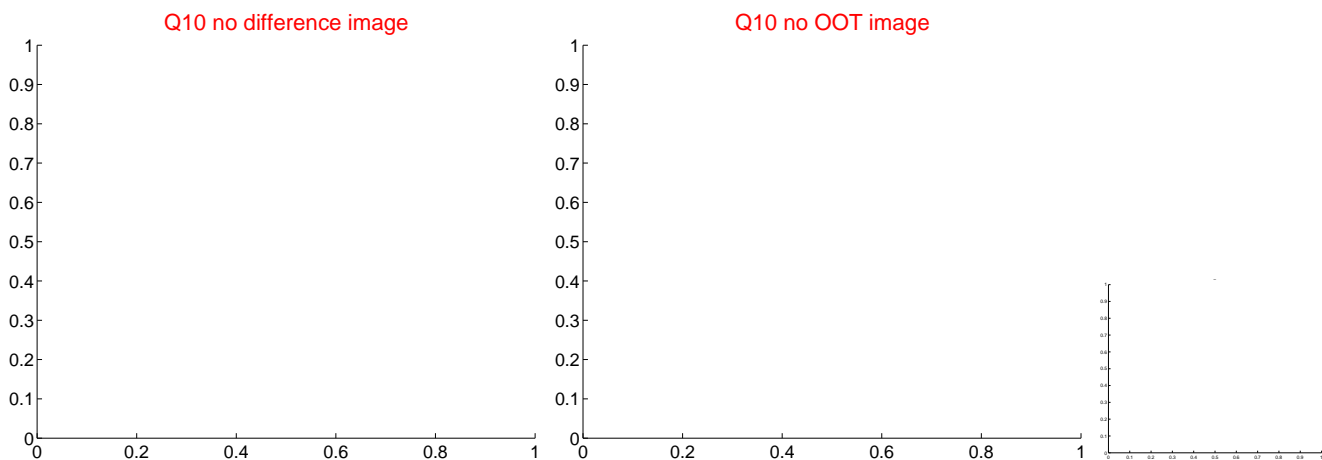
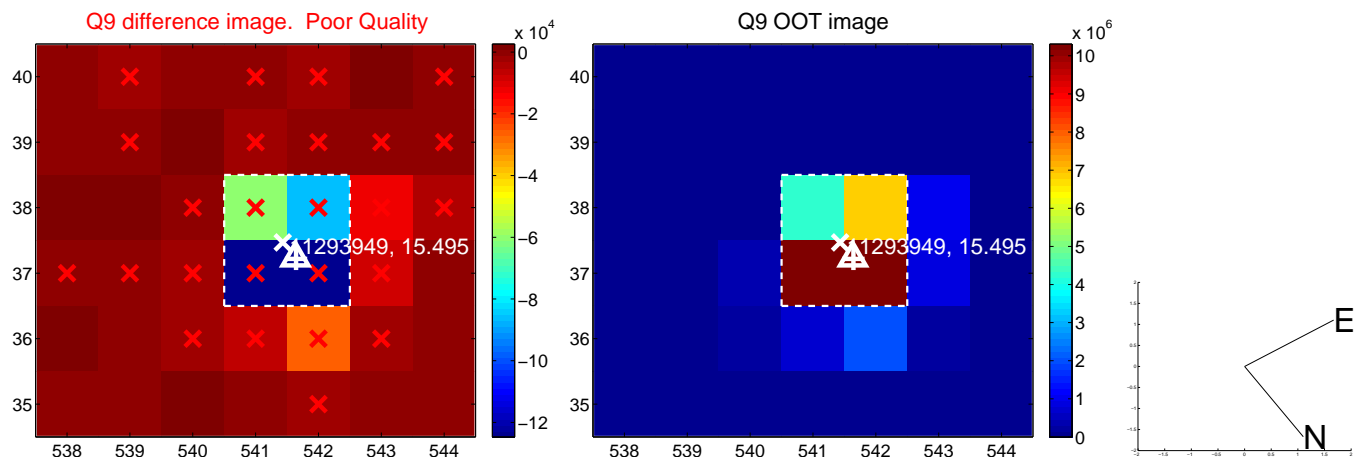
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



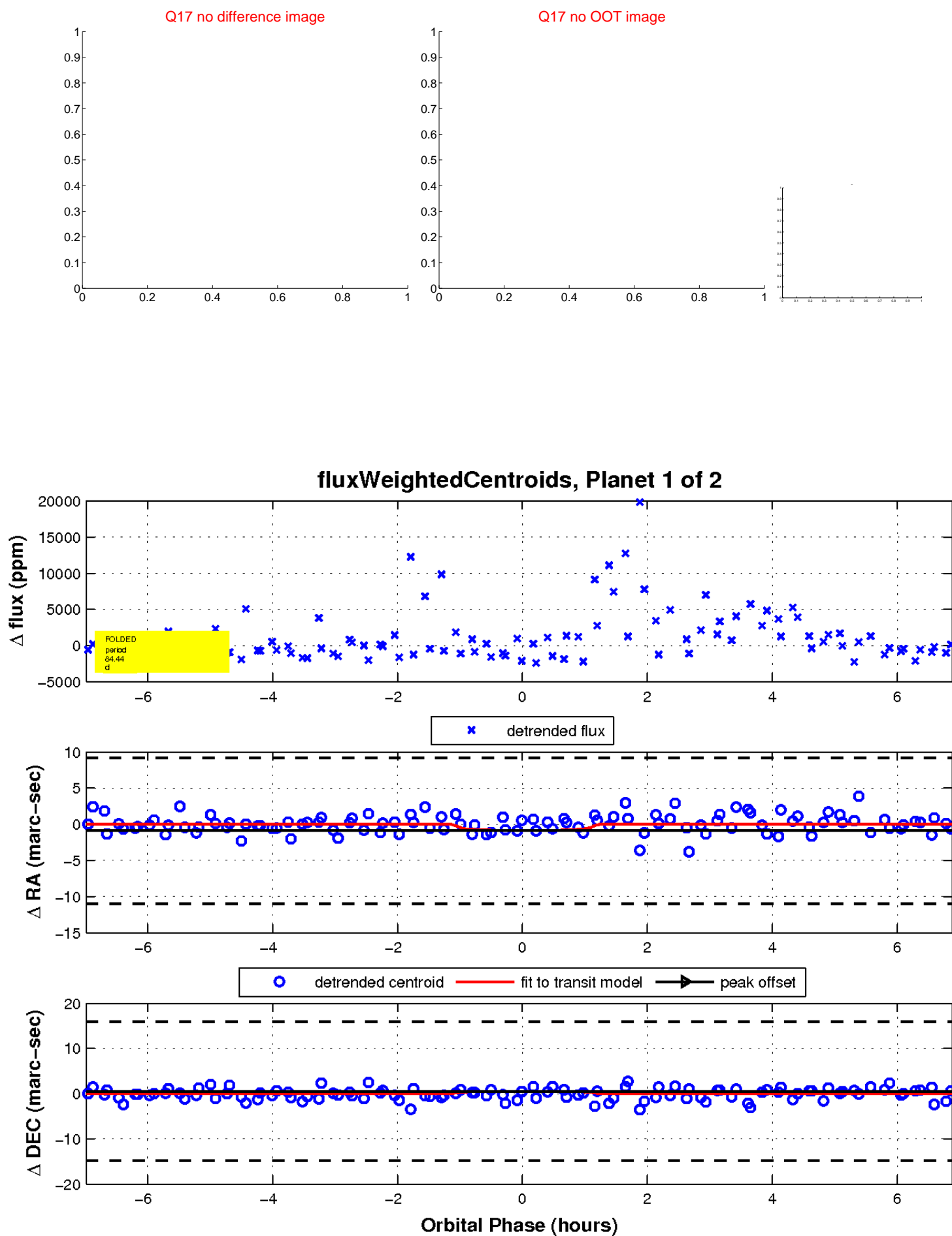
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

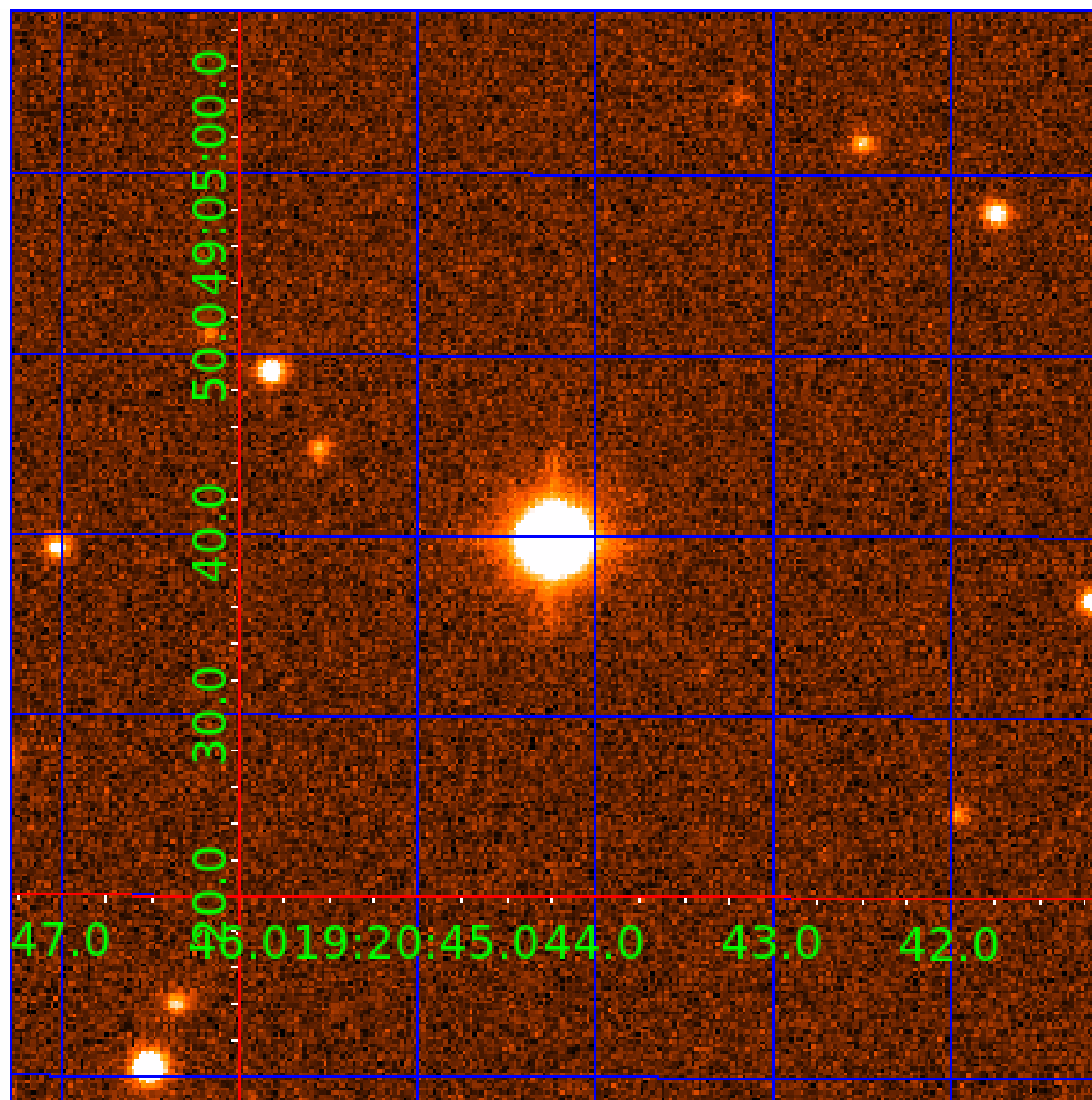


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011293949

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})
011293949-01	OBS	No	84.441596	148.119493	3843.4	2.337	11.6	6.8	0.16	3117	1.00	0.06
011293949-02	OBS	No	9.682391	132.977128	17.9	25.459	9.9	0.1	0.16	3117	0.07	1.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011293949-01	OBS	FP	0.00	1	0	1	0	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—CENT_FEW_DIFFS—HALO_GHOST
011293949-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—CENT_FEW_DIFFS

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

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

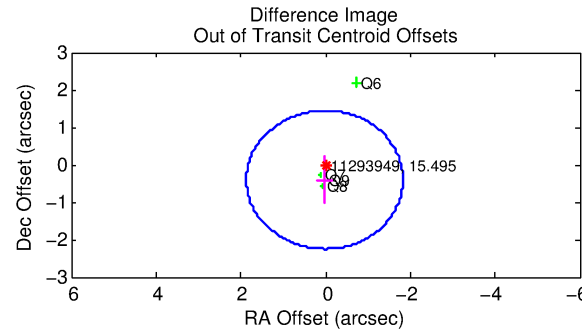
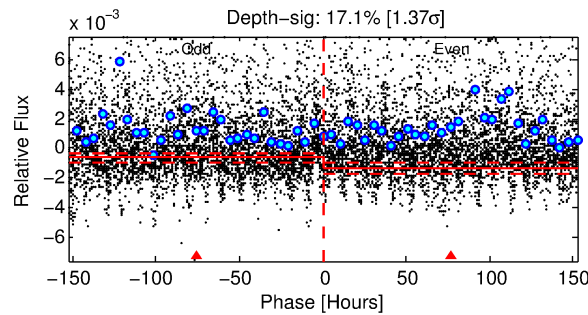
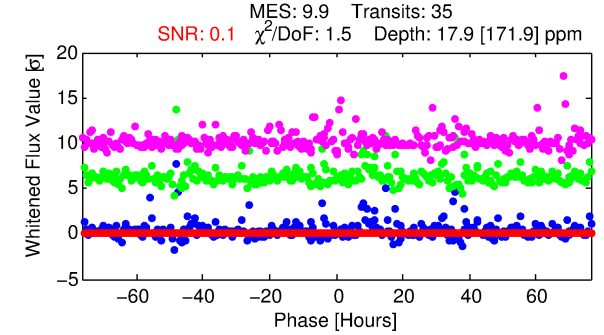
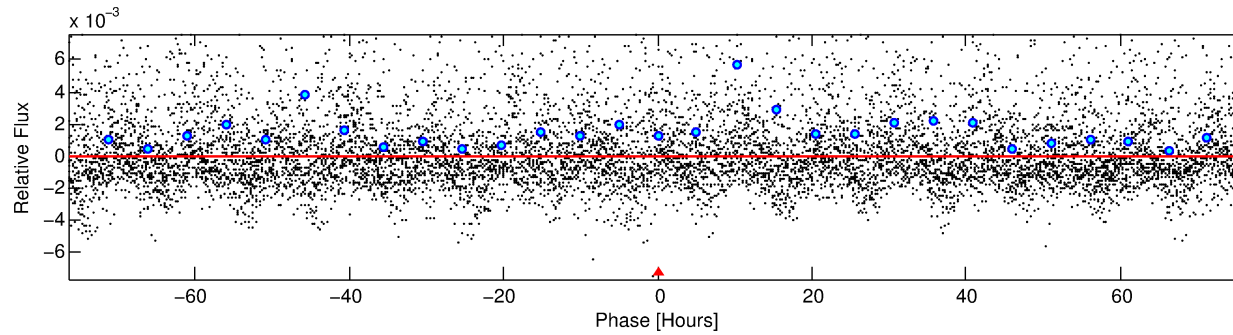
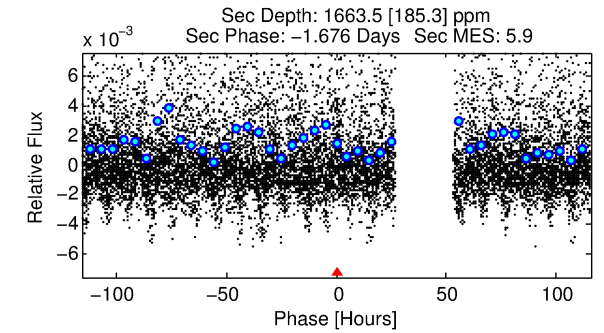
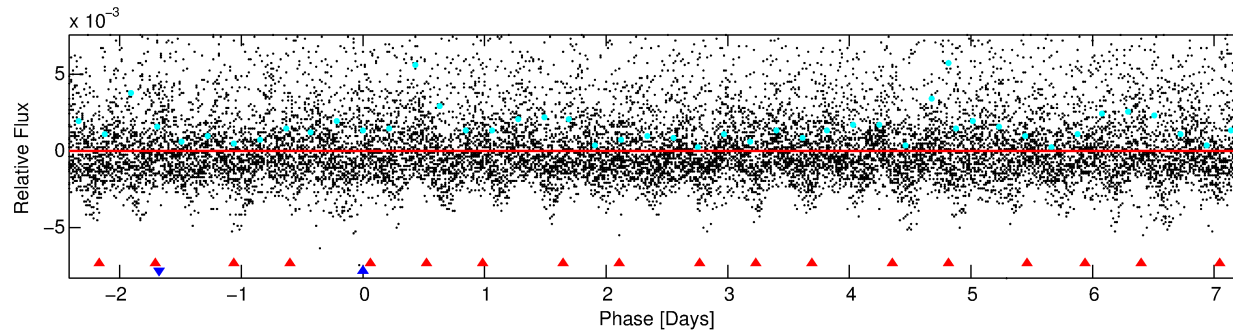
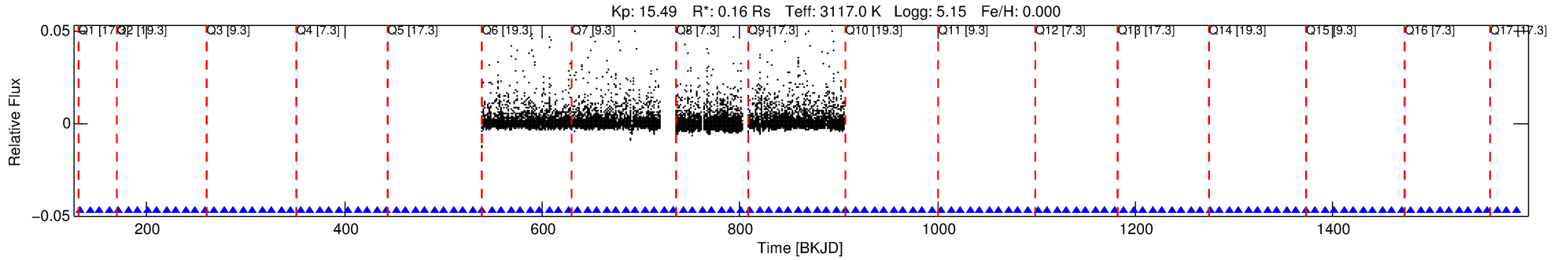
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011293949-02

No Significant Match Found

DV One-Page Summary

KIC: 11293949 Candidate: 2 of 2 Period: 9.682 d



DV Fit Results:

Period = 9.68239 [0.06151] d
Epoch = 132.9771 [5.4496] BKJD
Rp/R* = 0.0038 [0.5009]
a/R* = 2.92 [1483.76]
b = 0.20 [2754.56]
Seff = 1.08 [0.01]
Teq = 260 [1] K
Rp = 0.07 [8.96] Re
a = 0.0459 [0.0002] AU
Ag = 408952.69 [106757045.29] [0.00σ]
Teffp = 10162 [663168] K [0.01σ]

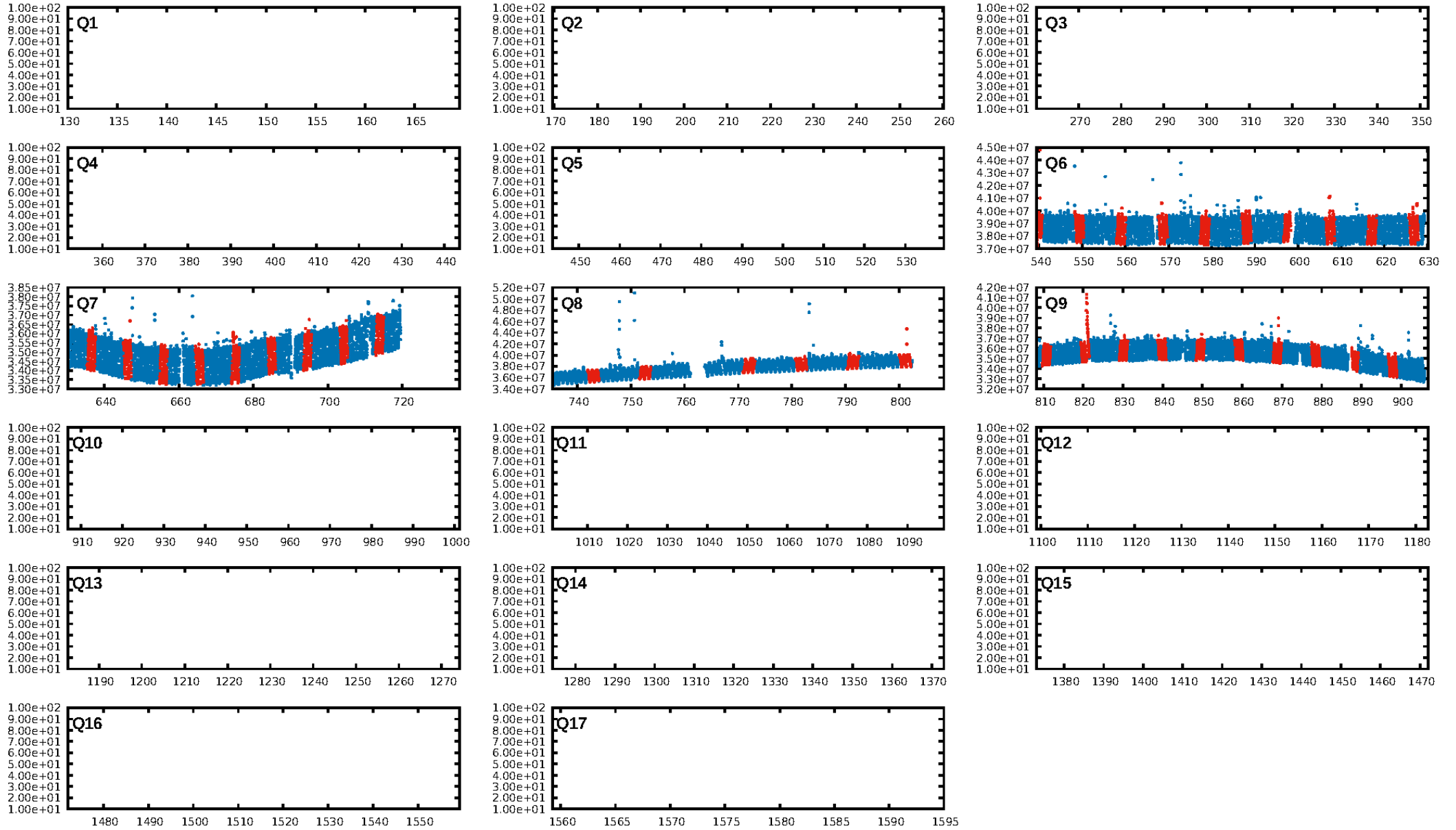
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [70.18σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.66e-10
RollingBand-fgt: 1.00 [35/35]
GhostDiagnostic-chr: -2.625
Centroid-sig: 6.4%
Centroid-so: 8.566 arcsec [1.35σ]
OptOffset-rm: 0.404 arcsec [0.66σ]
OptOffset-st: 1/1/1/1 [4]
KicOffset-rm: 0.880 arcsec [2.29σ]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 1.00 [4/4]

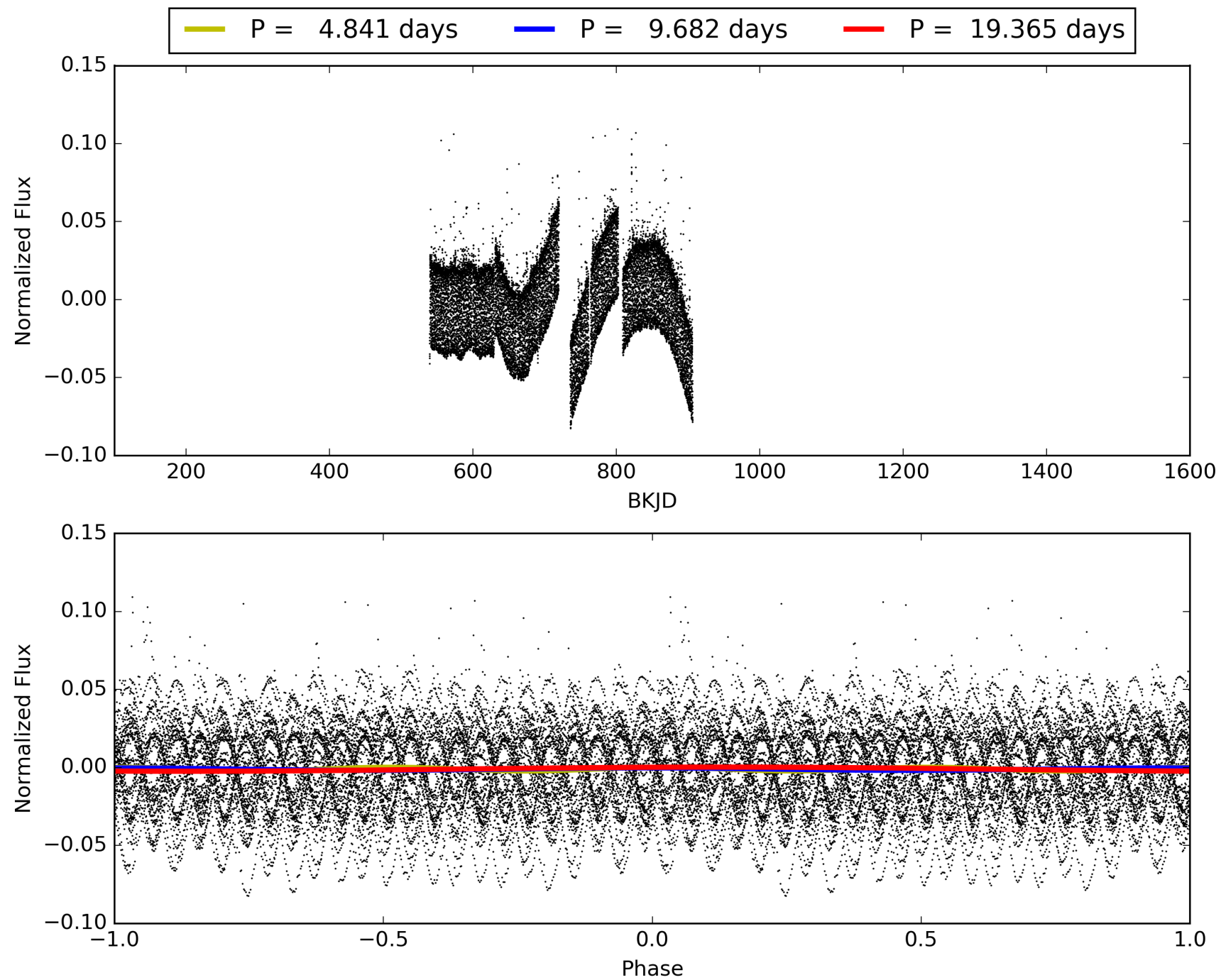
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:15:18 Z

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

TCE 011293949-02, PDC Light Curves

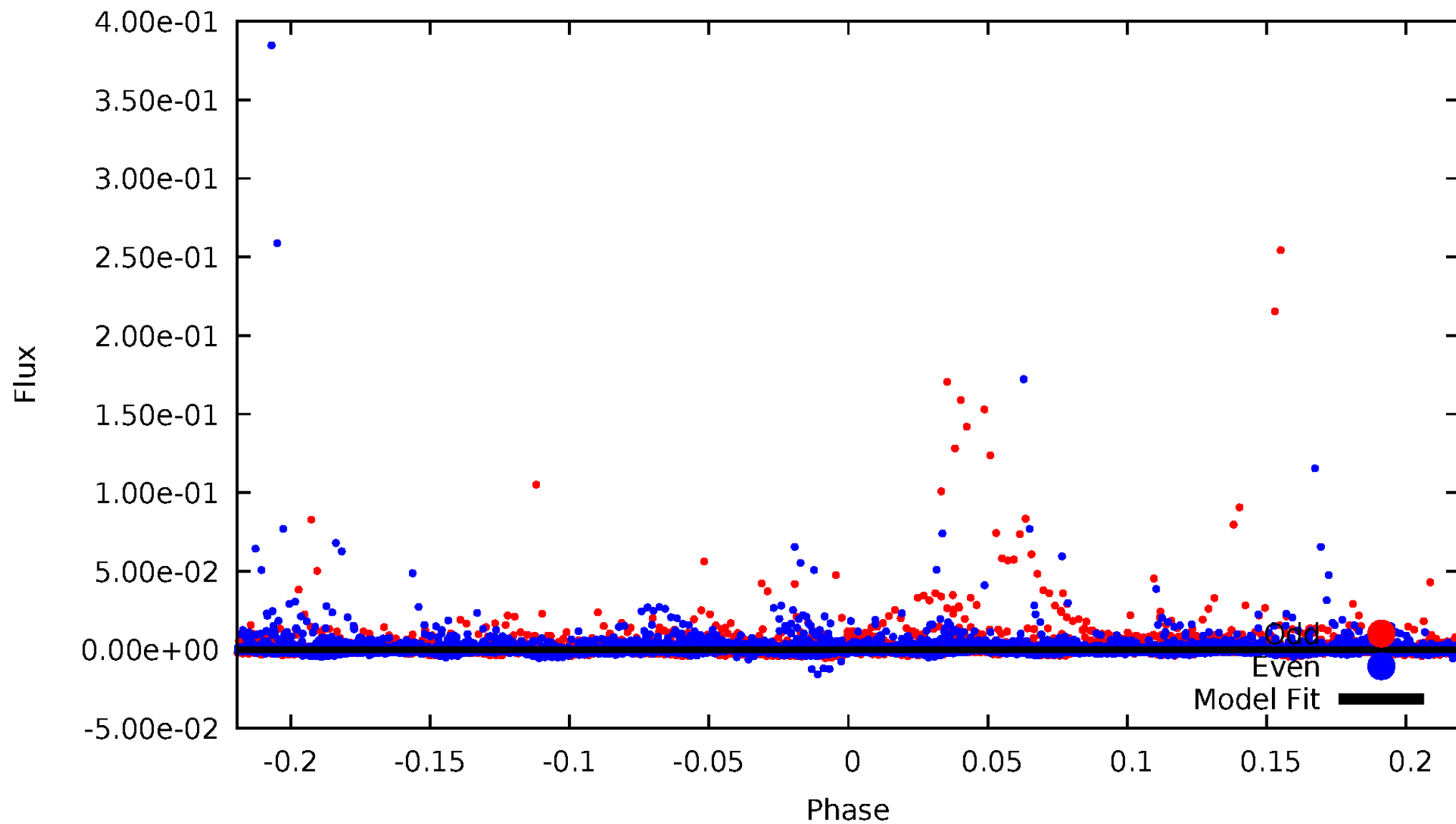


TCE 011293949-02



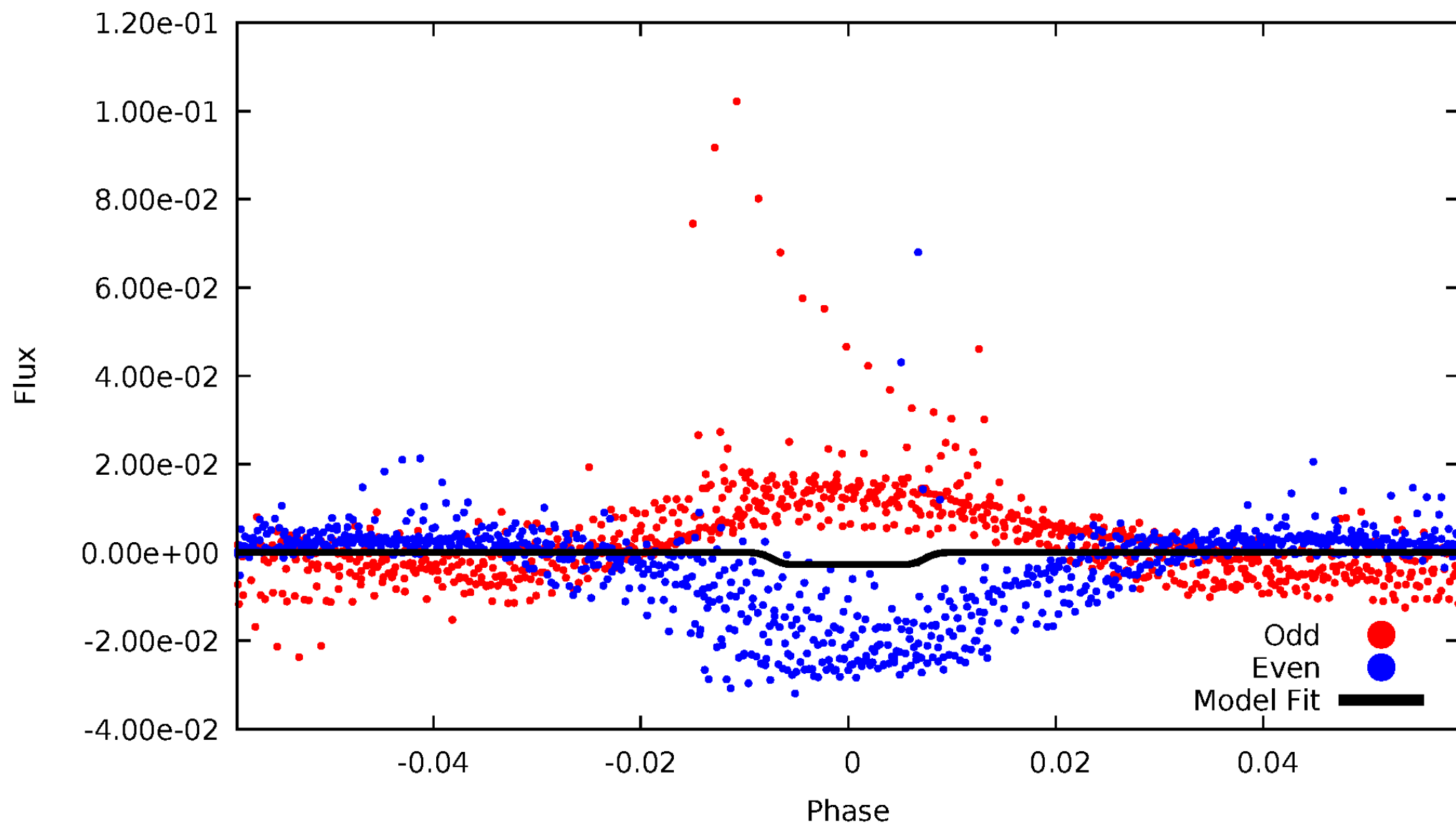
DV Odd/Even

TCE 011293949-02



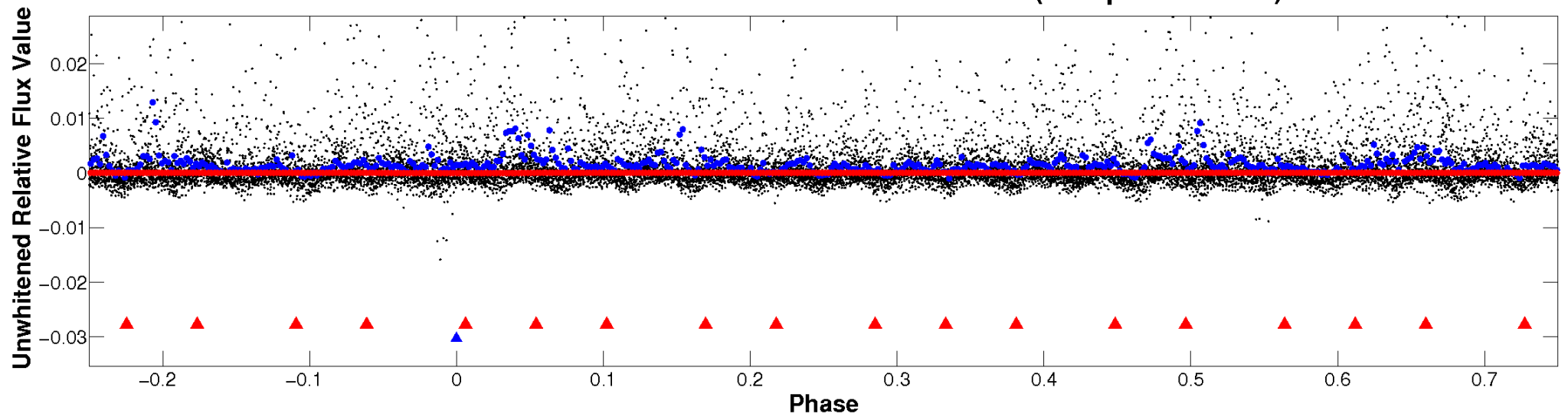
ALT Odd/Even

TCE 011293949-02

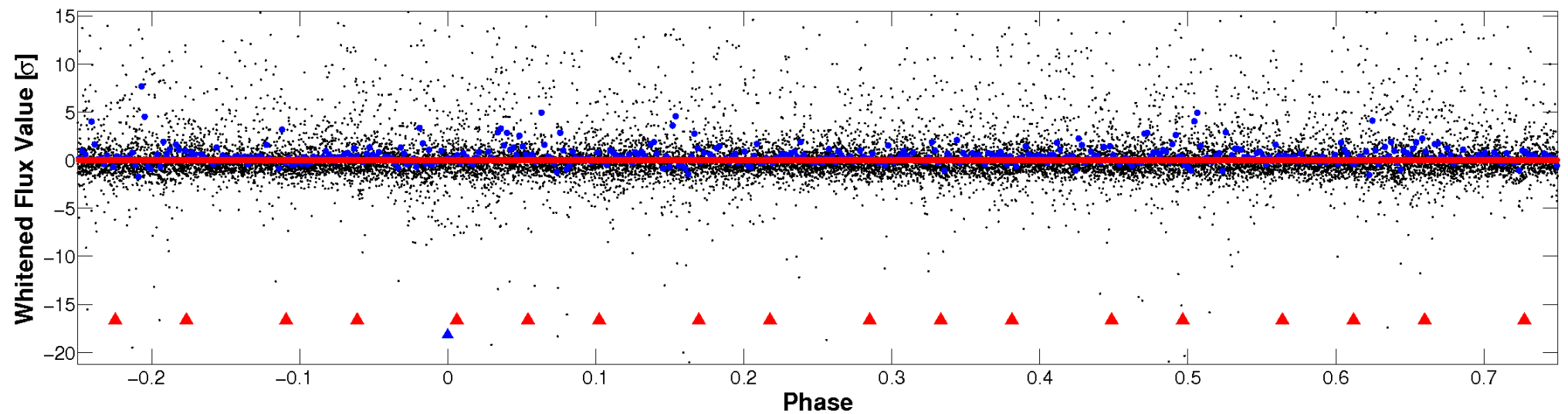


Non-Whitened Vs. Whitened Light Curve

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

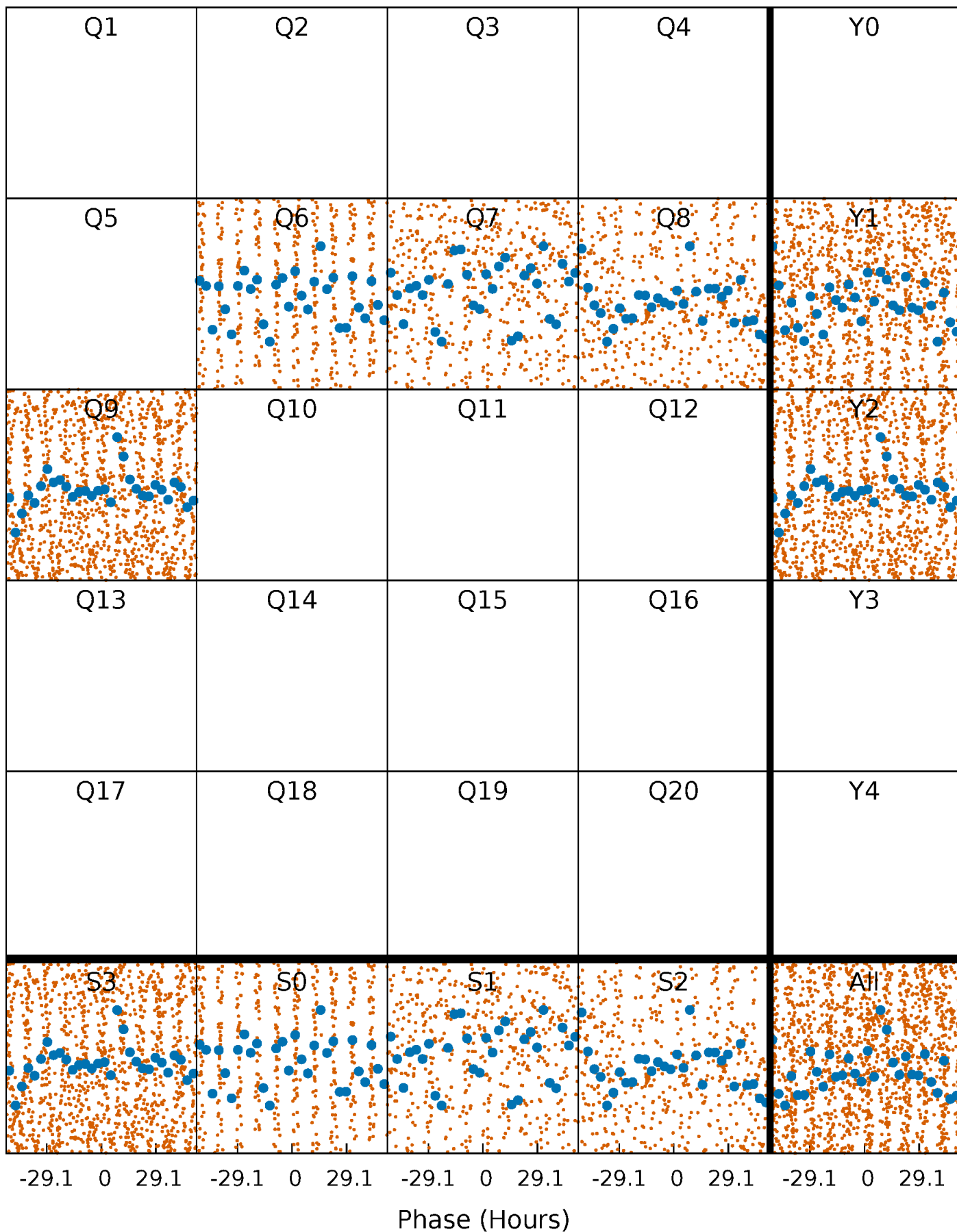


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



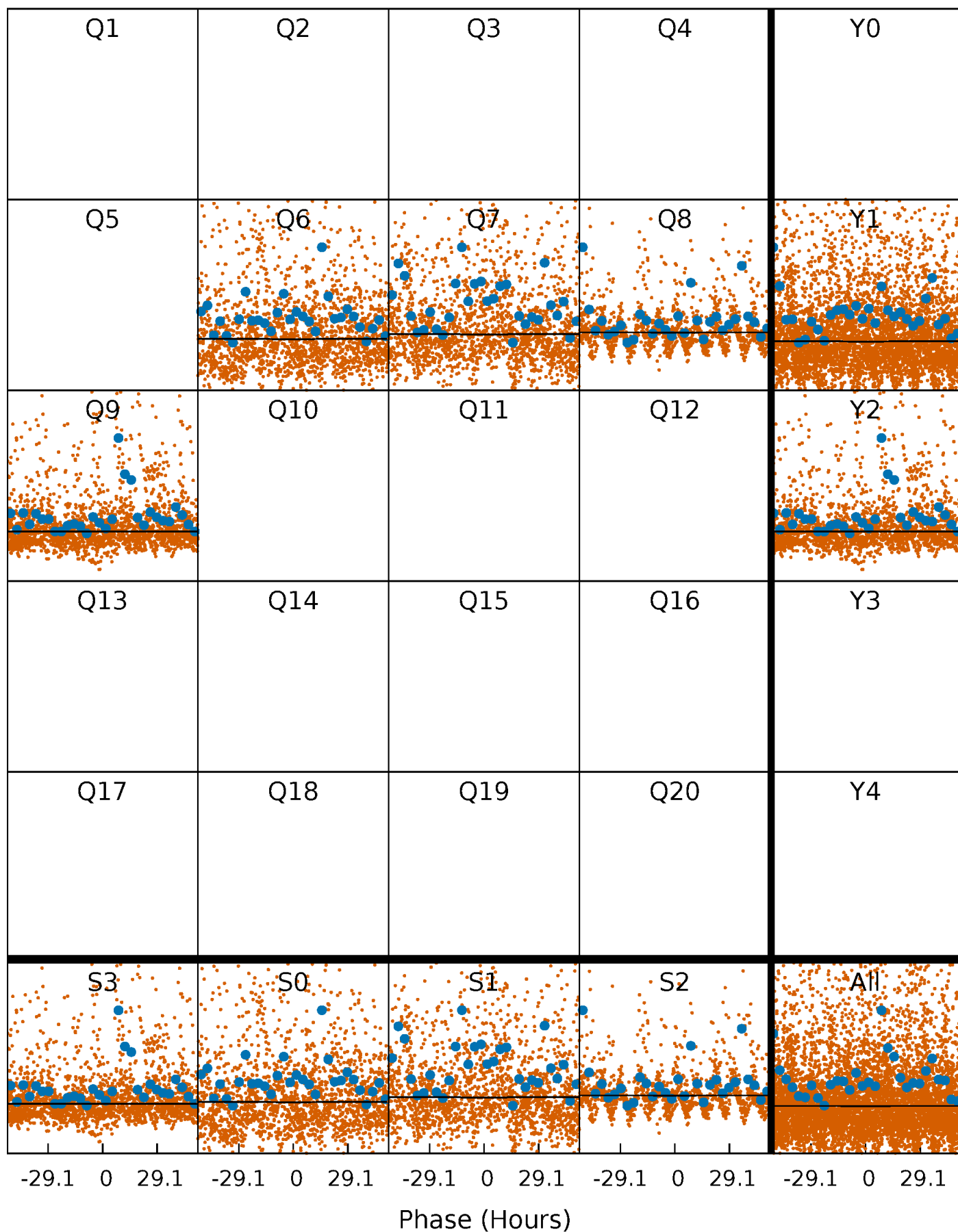
PDC Quarter-Phased Transit Curves

TCE 011293949-02 P= 9.682391 Days $T_0=132.977128$ (BKJD)



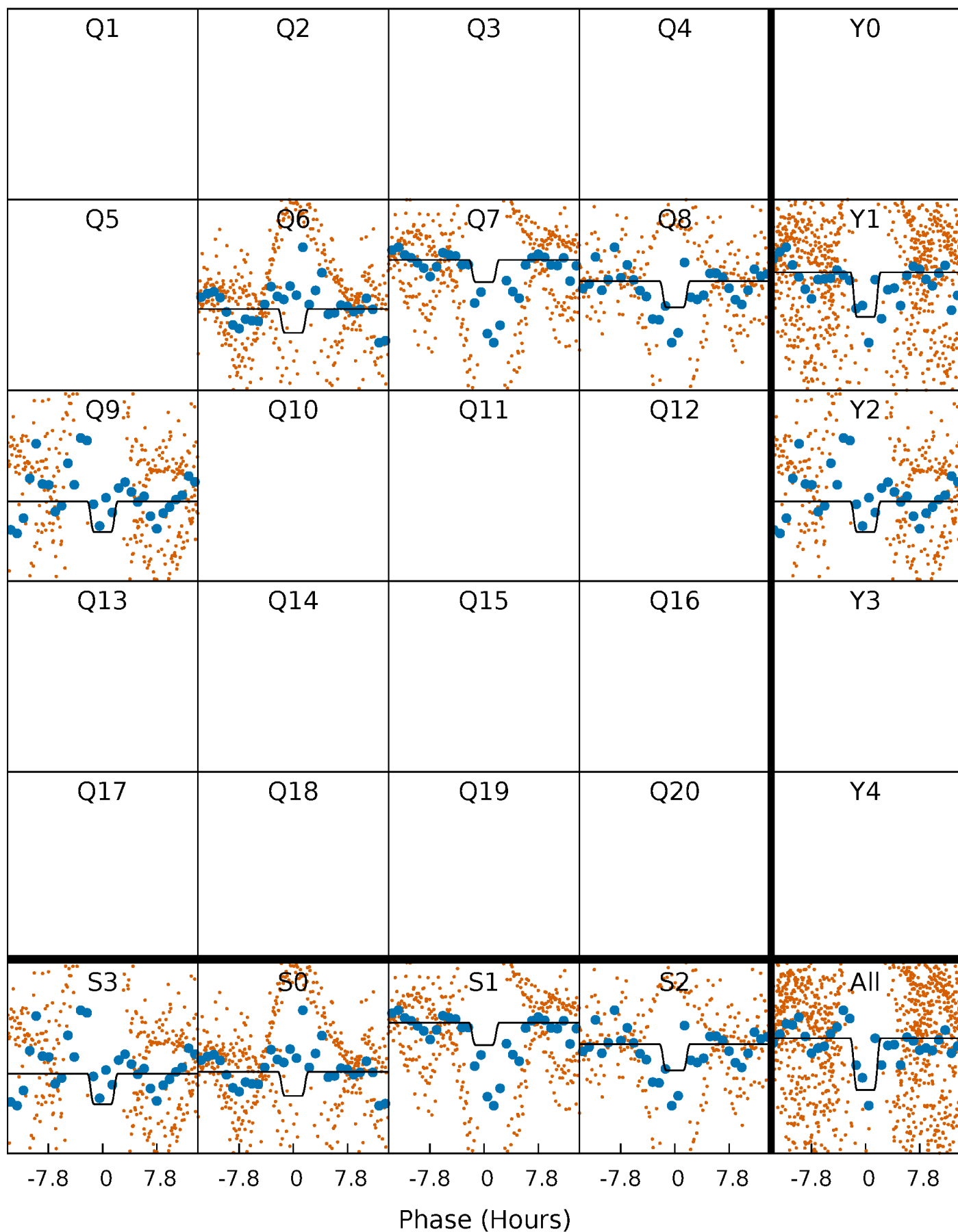
DV Quarter-Phased Transit Curves

TCE 011293949-02 P= 9.682391 Days $T_0=132.977128$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

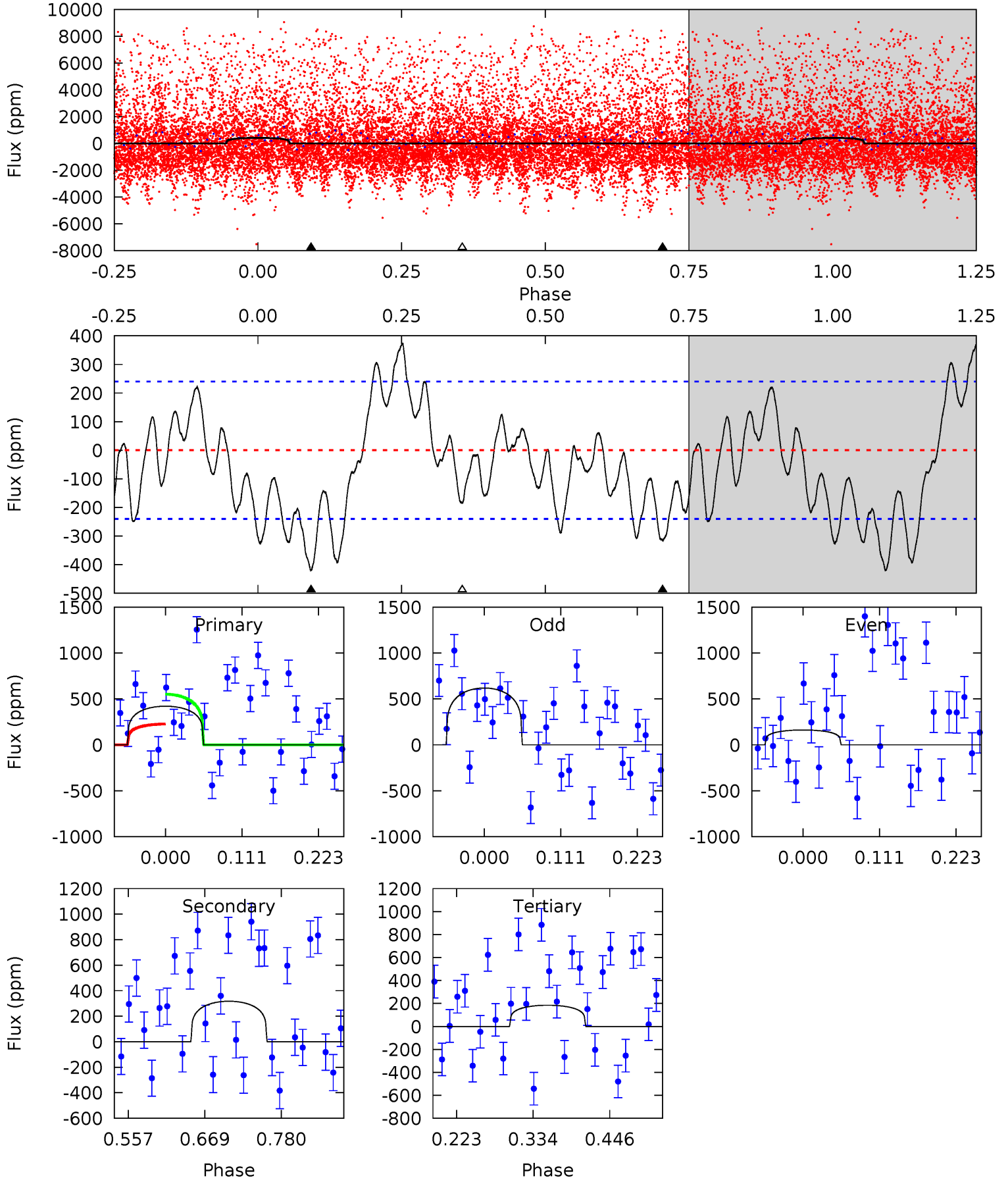
TCE 011293949-02 P= 9.687748 Days $T_0=133.316297$ (BKJD)



DV Model-Shift Uniqueness Test

011293949-02, P = 9.682391 Days, E = 132.977128 Days

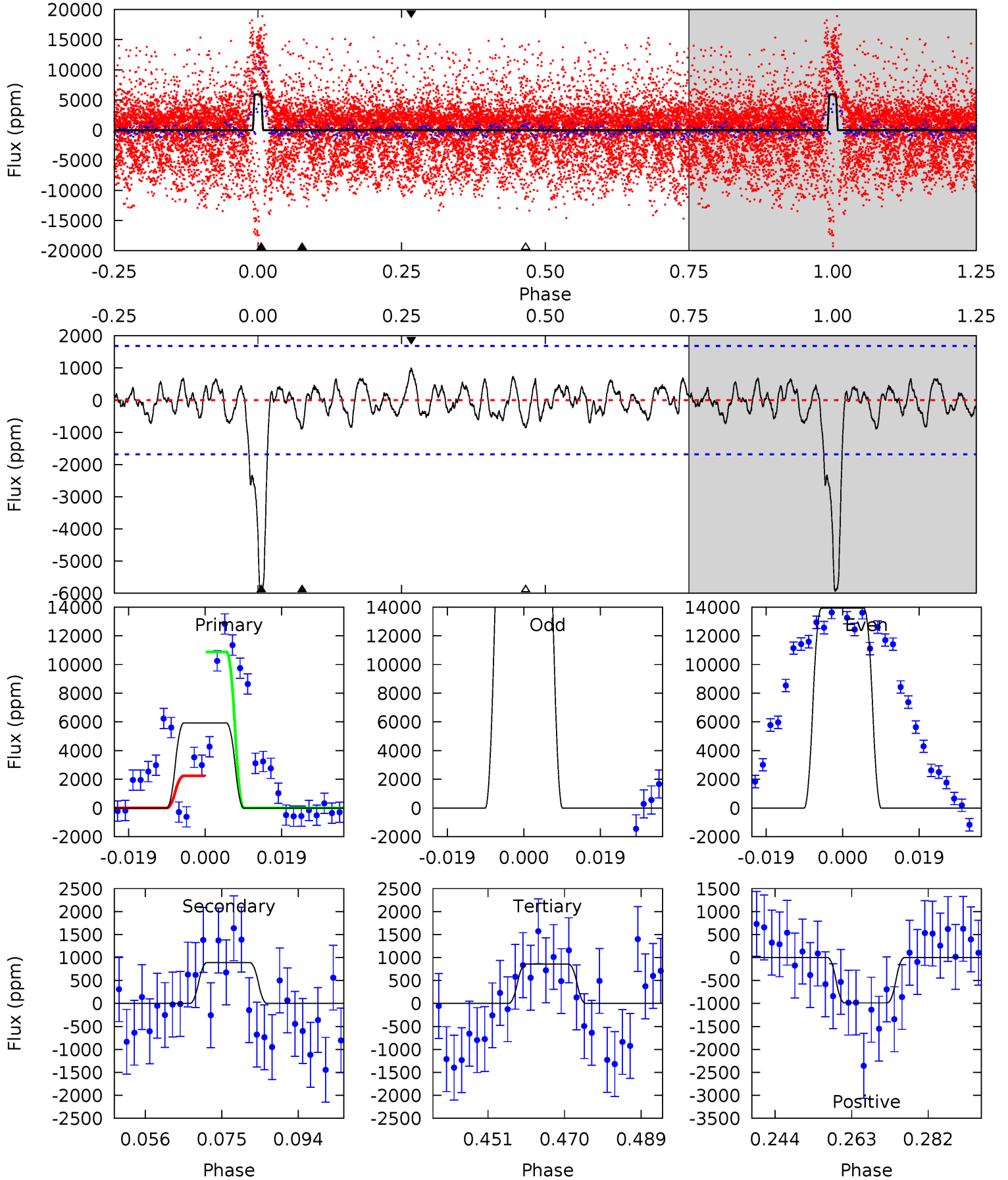
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.95	6.00	3.49	0	4.54	1.59	2.63	4.47	7.95	2.52	6.00	4.37	1.61	0.47	3.07



Alt Model-Shift Uniqueness Test

011293949-02, P = 9.687748 Days, E = 133.316297 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	2.60	2.50	2.88	4.90	2.35	1.11	14.8	14.4	0.10	-0.28	16.6	-0.43	0.14	0



Stellar Parameters For KIC 011293949

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3117^{+1}_{-1}	$5.147^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$0.164^{+1.000}_{-1.000}$	$0.138^{+1.000}_{-1.000}$	$43.900^{+1.000}_{-1.000}$
	+0%/-0%	+19%/-19%	+inf%/-inf%	+610%/-610%	+725%/-725%	+2%/-2%
Source	PHO54	PHO54	PHO54	BTSL		

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

Secondary Eclipse Parameters for KIC 011293949-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-318 ± 53	$6.28^{+8.56}_{-4.35}$	369^{+32}_{-33}	1616^{+407}_{-213}	$9.092^{+90.103}_{-7.186}$
Alt.	-892 ± 343	$6.98^{+7.97}_{-4.86}$	369^{+30}_{-33}	1747^{+456}_{-229}	22^{+187}_{-17}

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

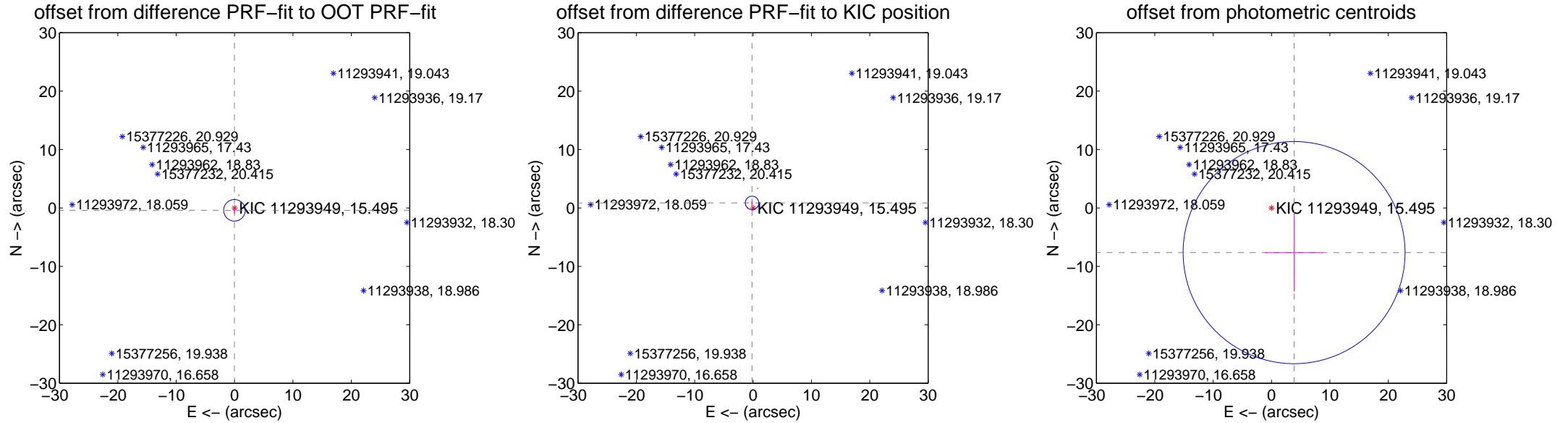
DV Centroid Data

Supplemental centroid analysis for 011293949-02. Kepler magnitude: 15.49. Transit SNR 0.15

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.404 ± 0.616	0.66	0.021 ± 0.196	-0.403 ± 0.607
PRF-fit source offset from KIC position	0.880 ± 0.384	2.29	0.172 ± 0.165	0.863 ± 0.421
photometric centroid source offset	8.57 ± 6.34	1.35	-3.87 ± 4.95	-7.64 ± 6.64

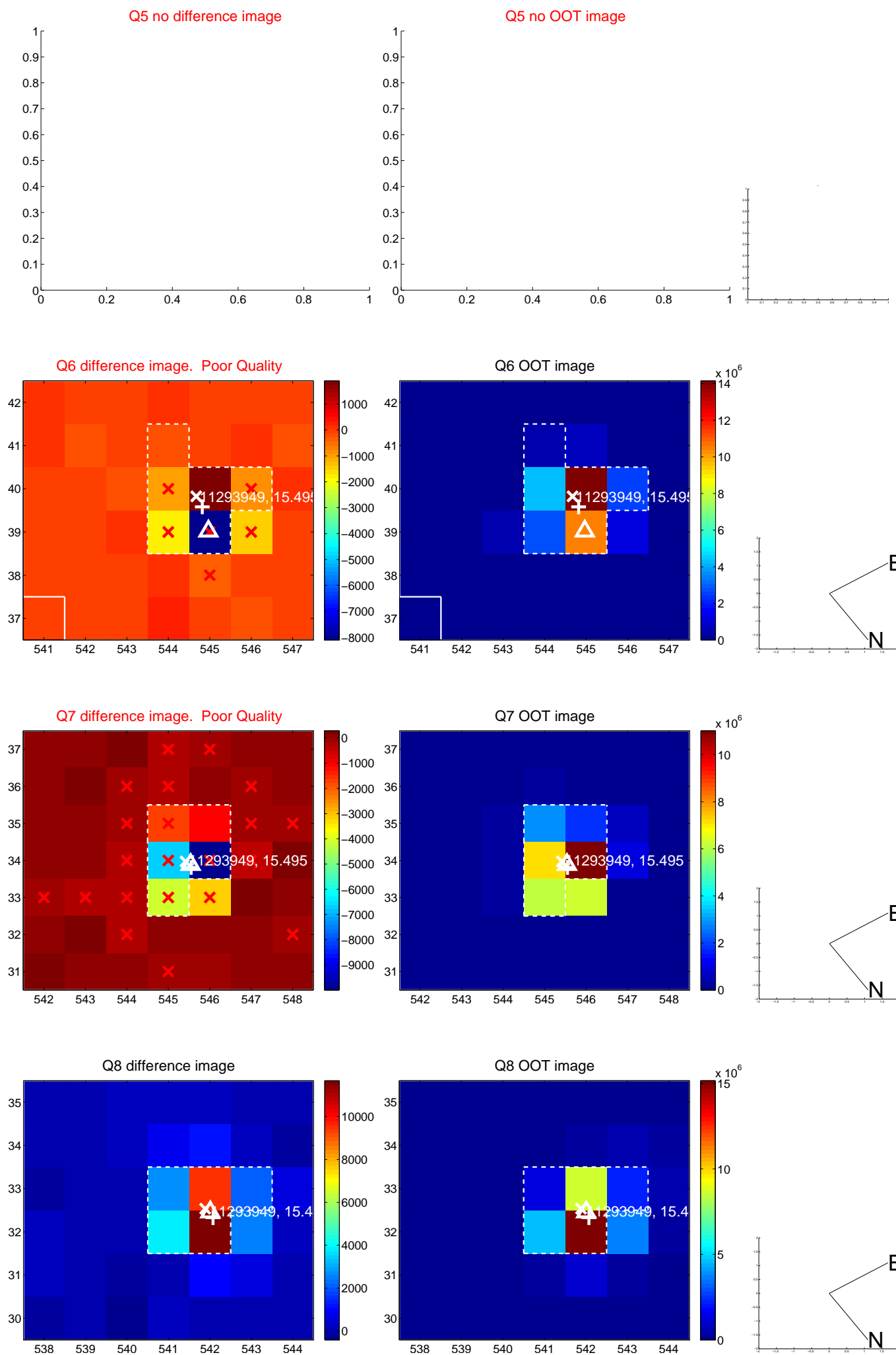


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

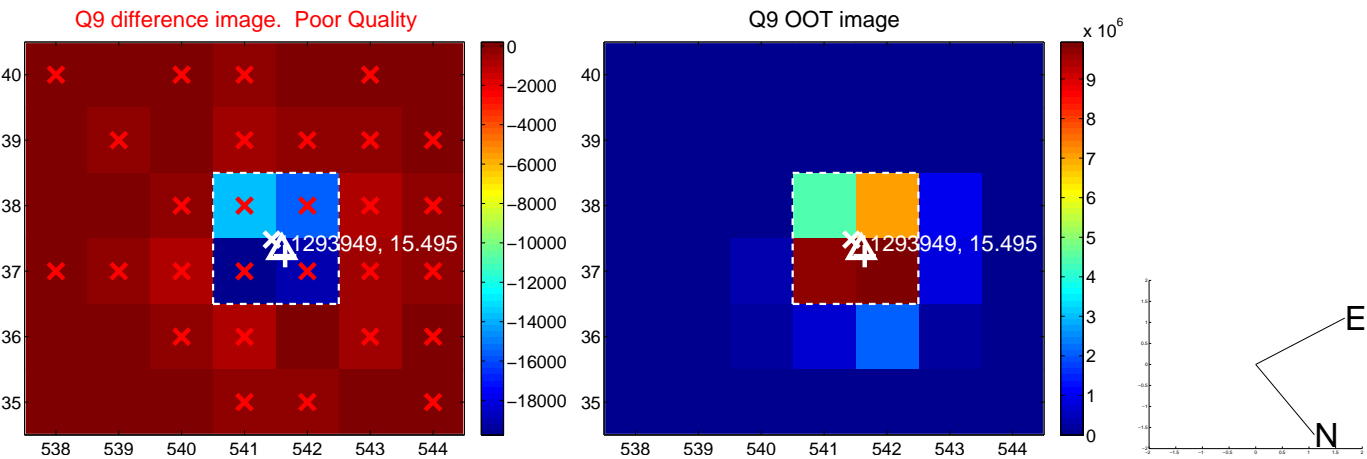
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



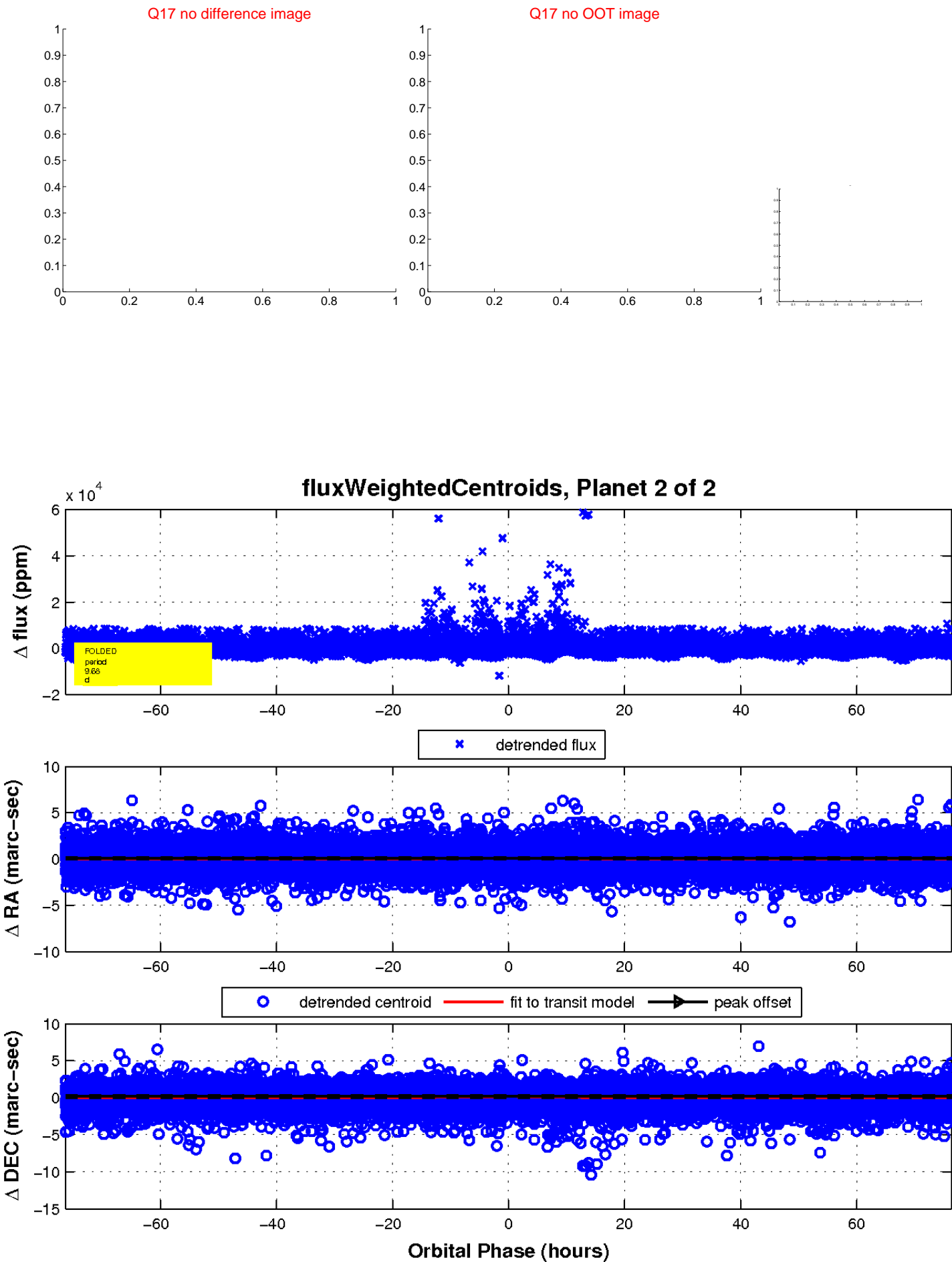
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

