

KIC 006952259

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})
006952259-01	OBS	No	0.965749	131.552369	33.1	3.913	8.3	7.8	9.21	7022	6.19	0.00
006952259-02	OBS	No	0.965755	132.028834	53.4	4.102	12.3	13.0	9.21	7022	7.85	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006952259-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
006952259-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD

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

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

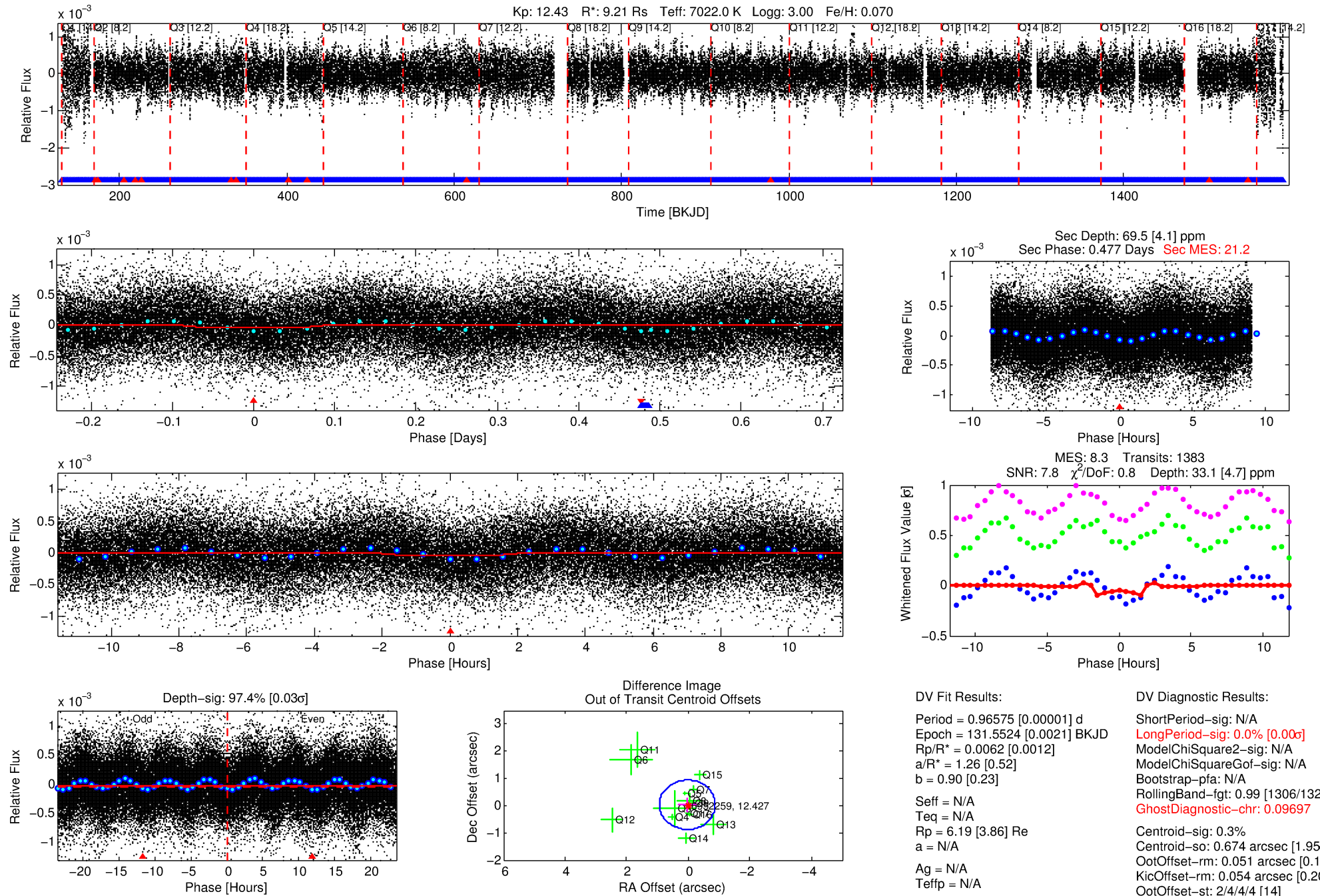
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006952259-01

No Significant Match Found

DV One-Page Summary

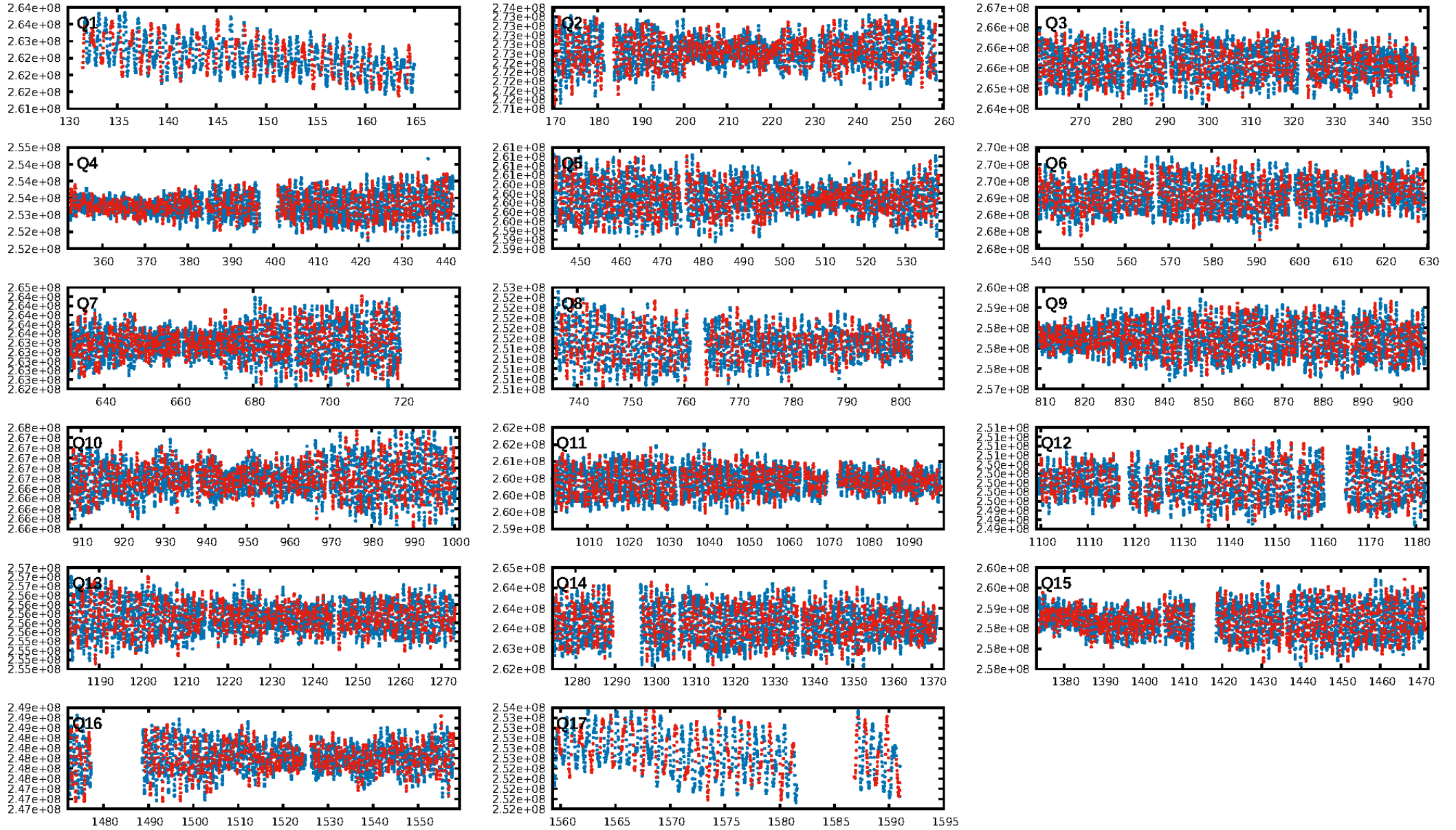
KIC: 6952259 Candidate: 1 of 2 Period: 0.966 d



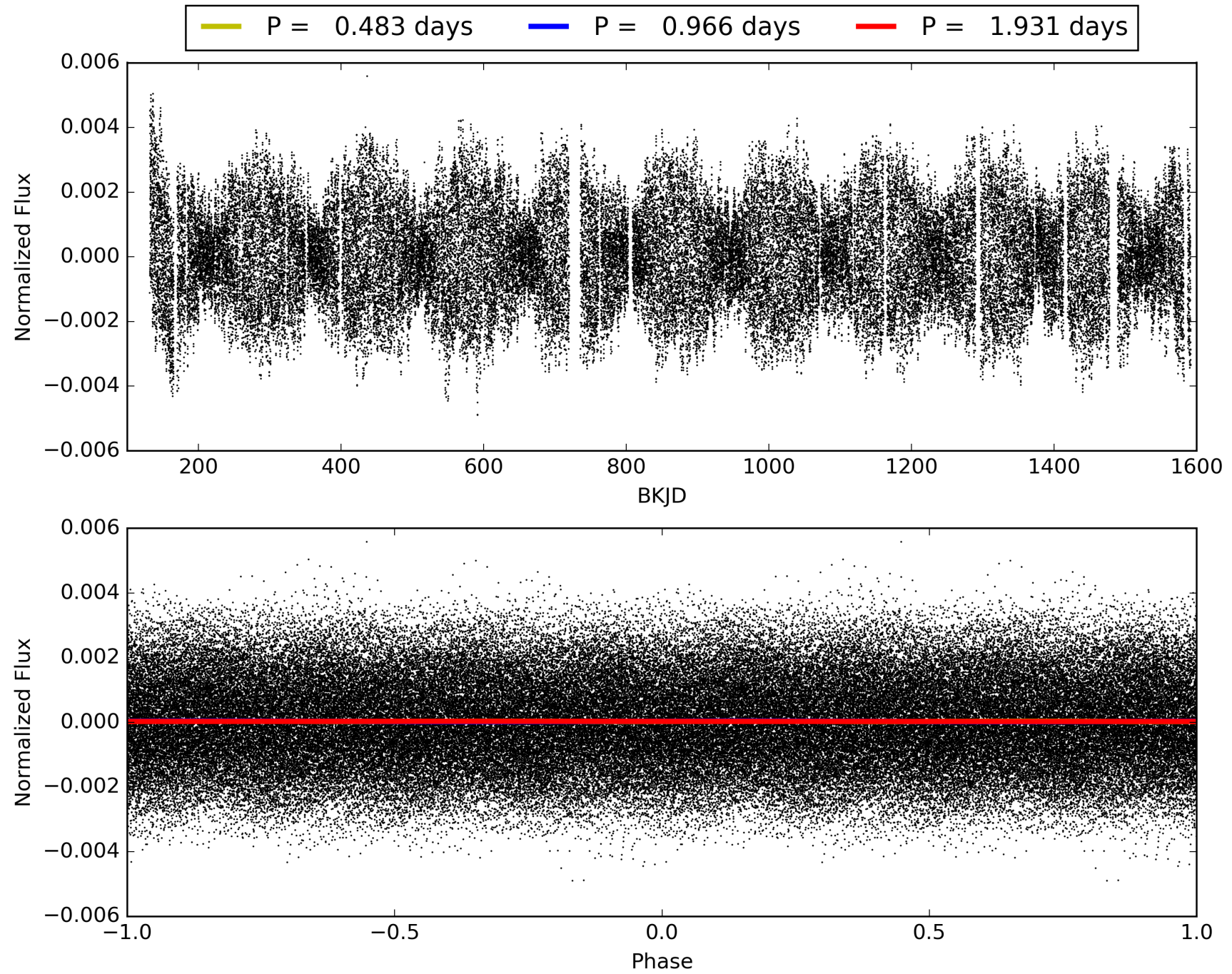
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 17:33:30 Z

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

TCE 006952259-01, PDC Light Curves

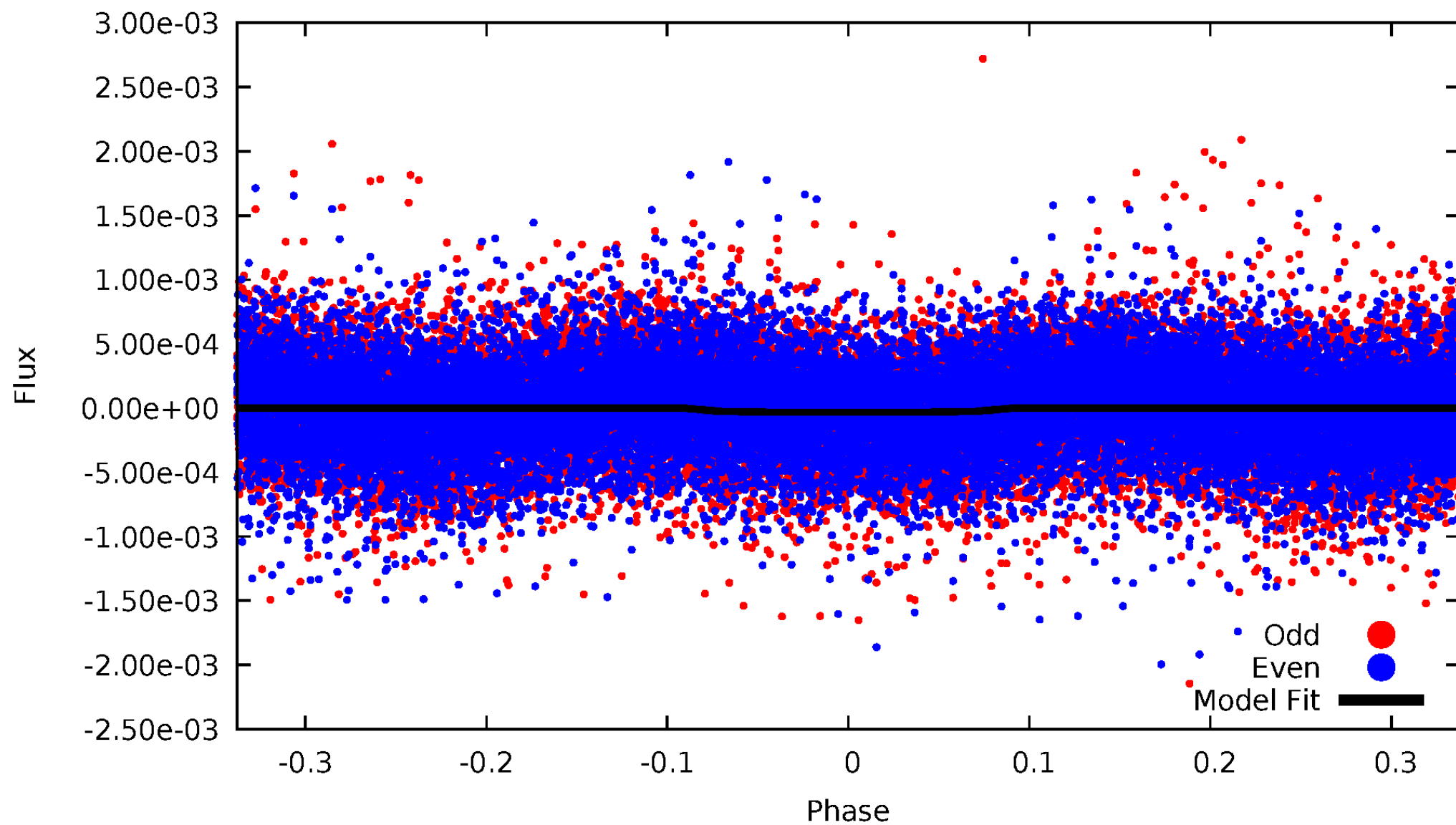


TCE 006952259-01



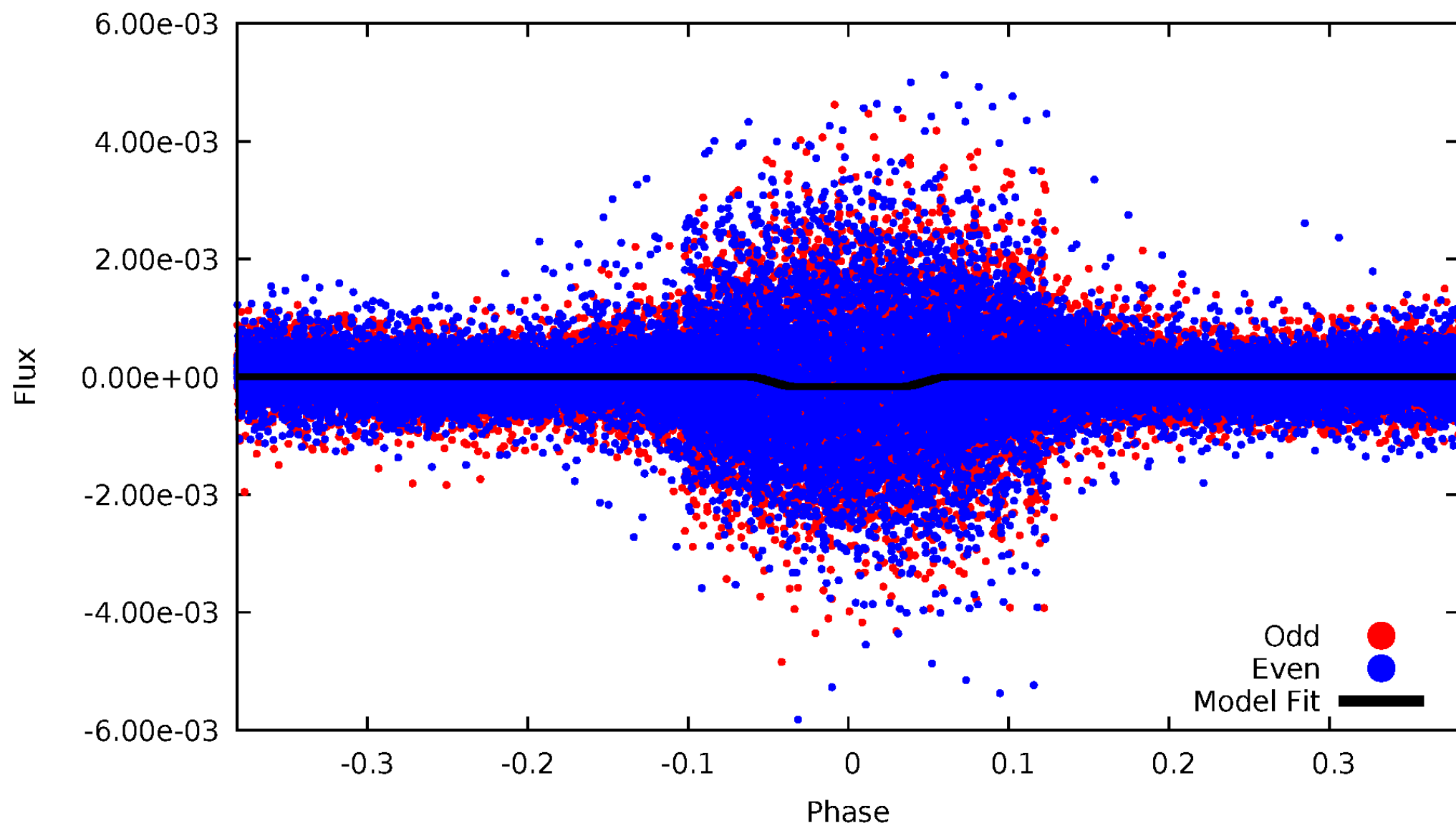
DV Odd/Even

TCE 006952259-01



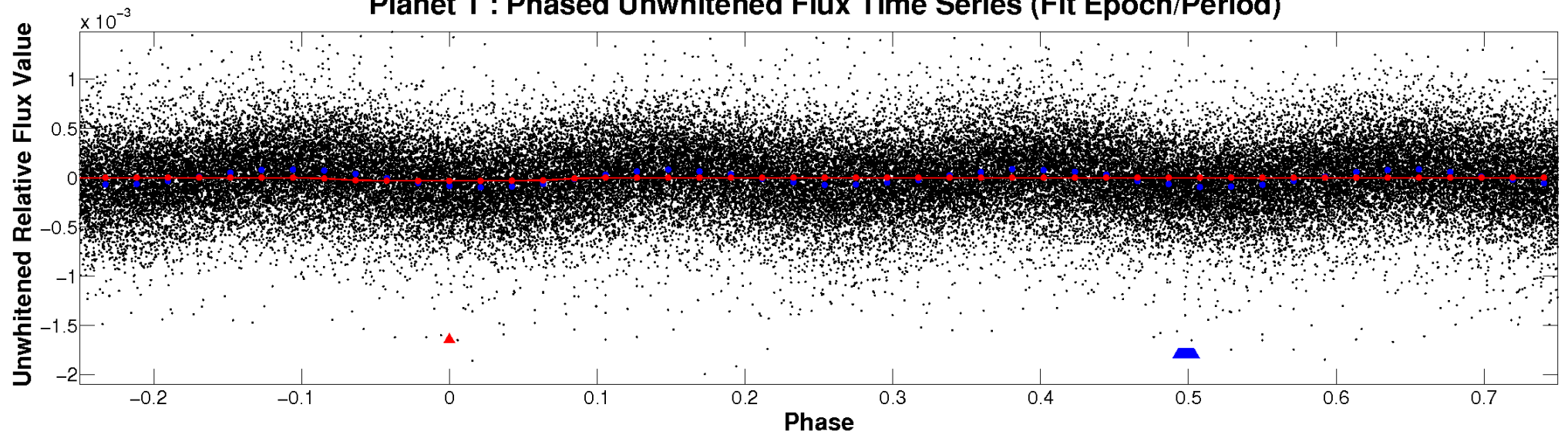
ALT Odd/Even

TCE 006952259-01

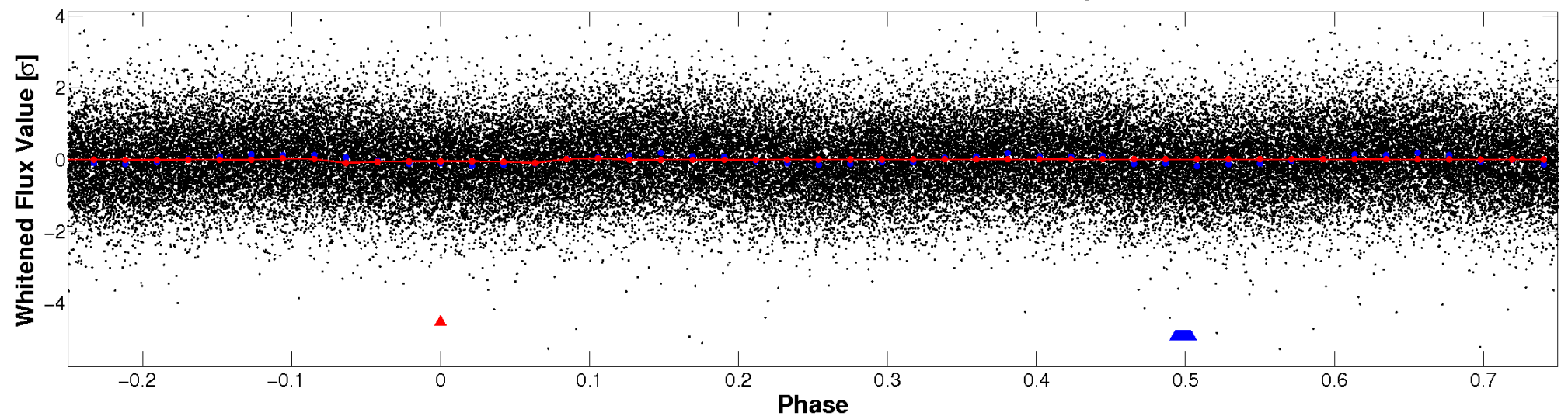


Non-Whitened Vs. Whitened Light Curve

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

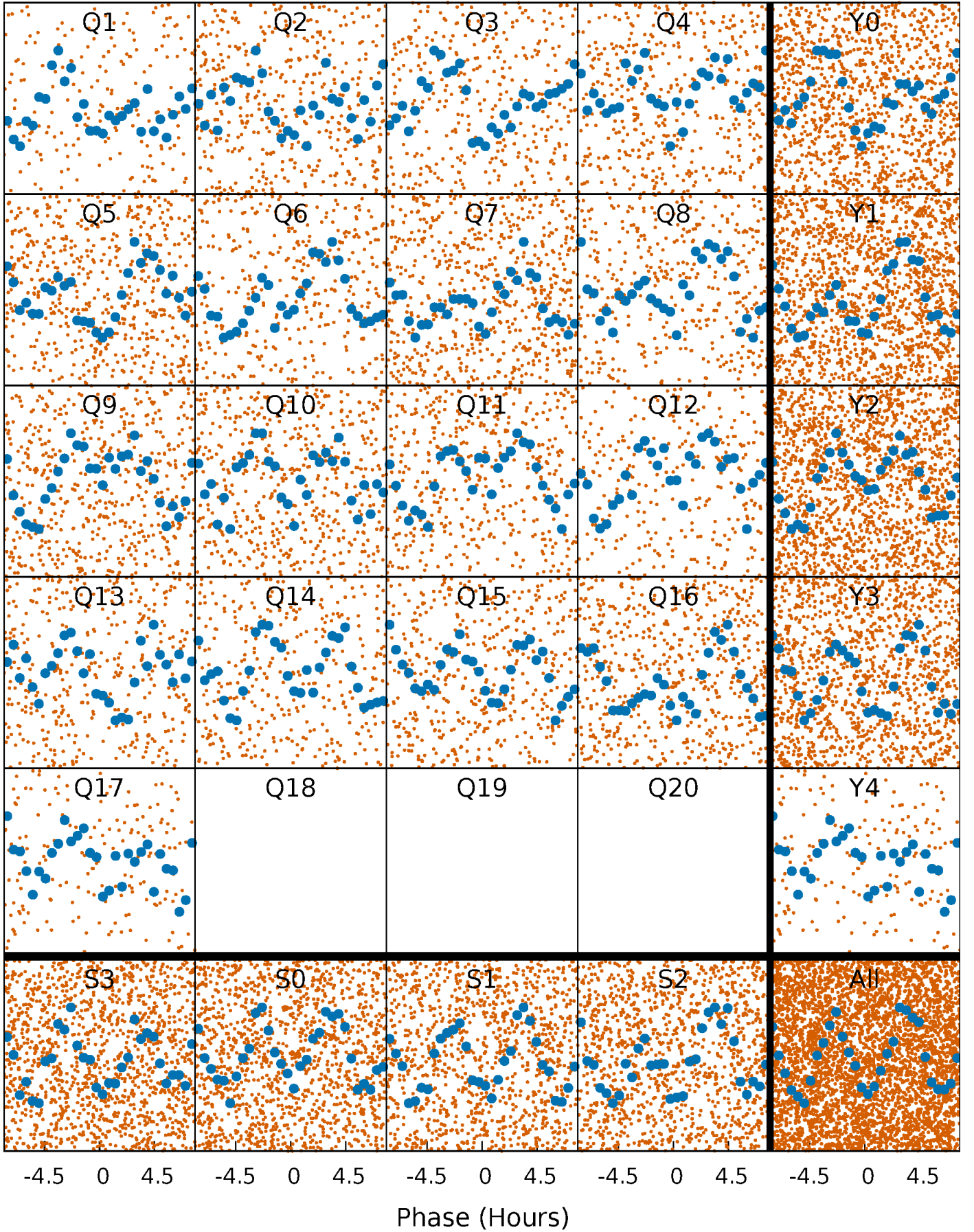


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



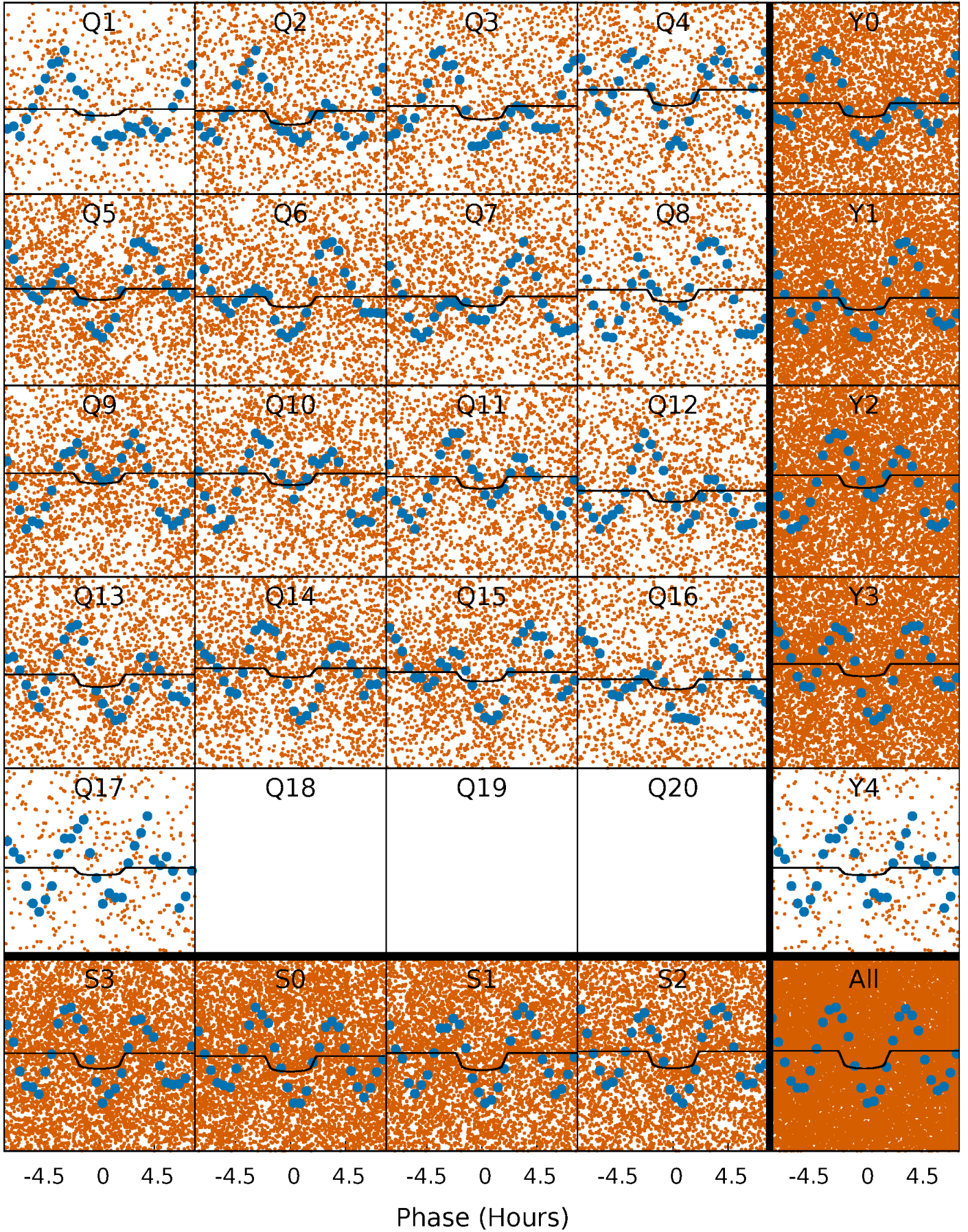
PDC Quarter-Phased Transit Curves

TCE 006952259-01 P= 0.965749 Days $T_0=131.552369$ (BKJD)



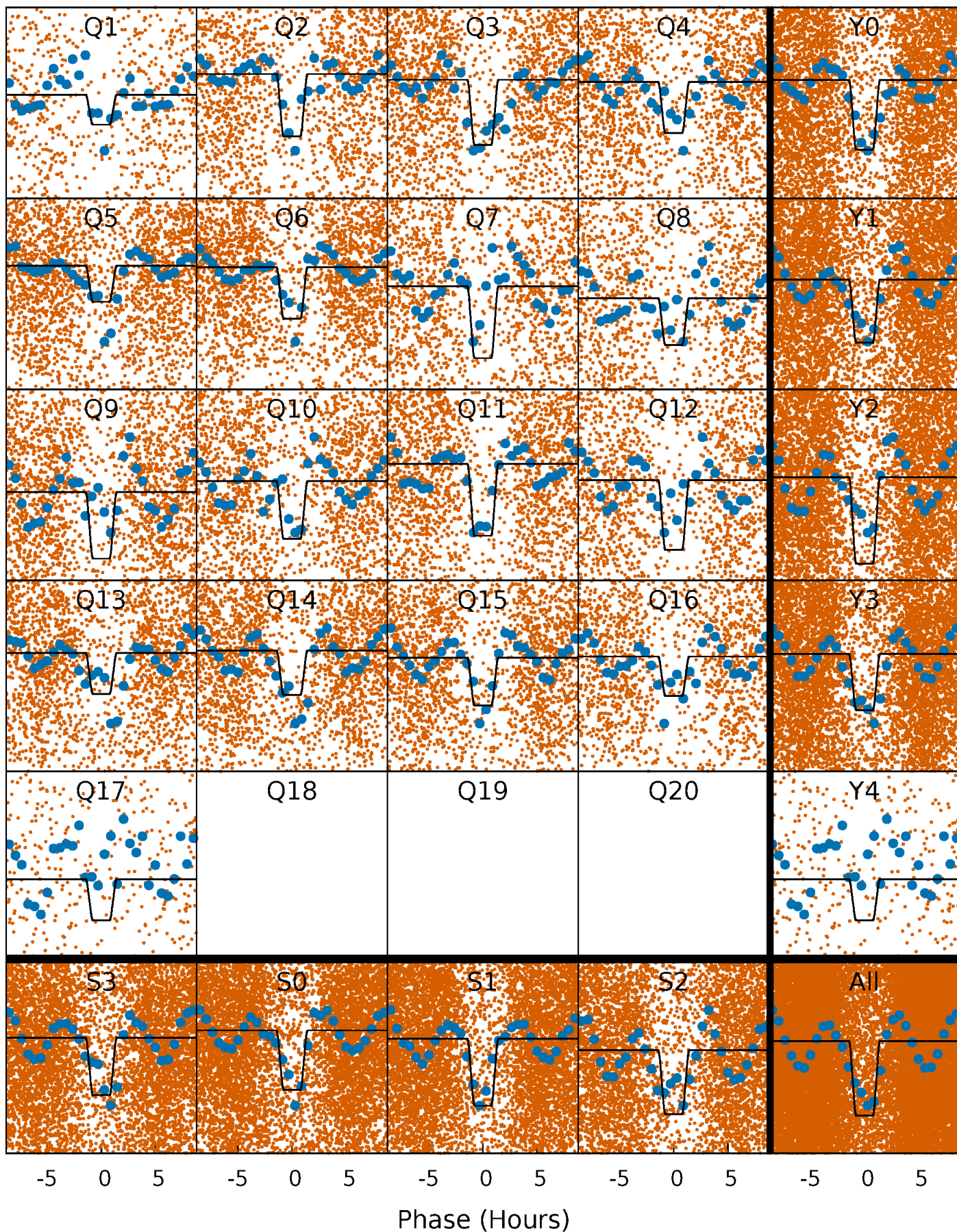
DV Quarter-Phased Transit Curves

TCE 006952259-01 P= 0.965749 Days $T_0=131.552369$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

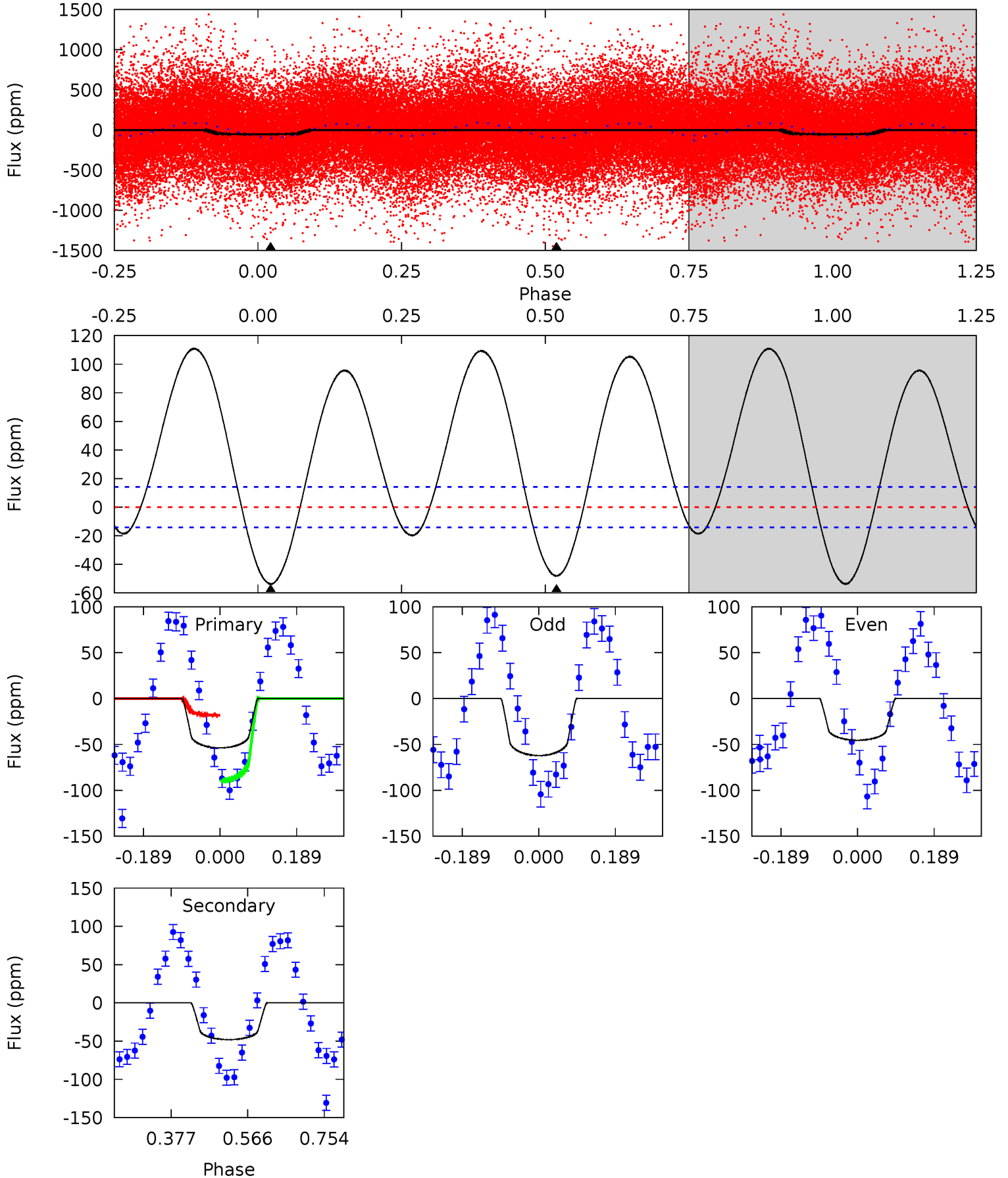
TCE 006952259-01 P= 0.965784 Days $T_0=131.542621$ (BKJD)



DV Model-Shift Uniqueness Test

006952259-01, P = 0.965749 Days, E = 130.586620 Days

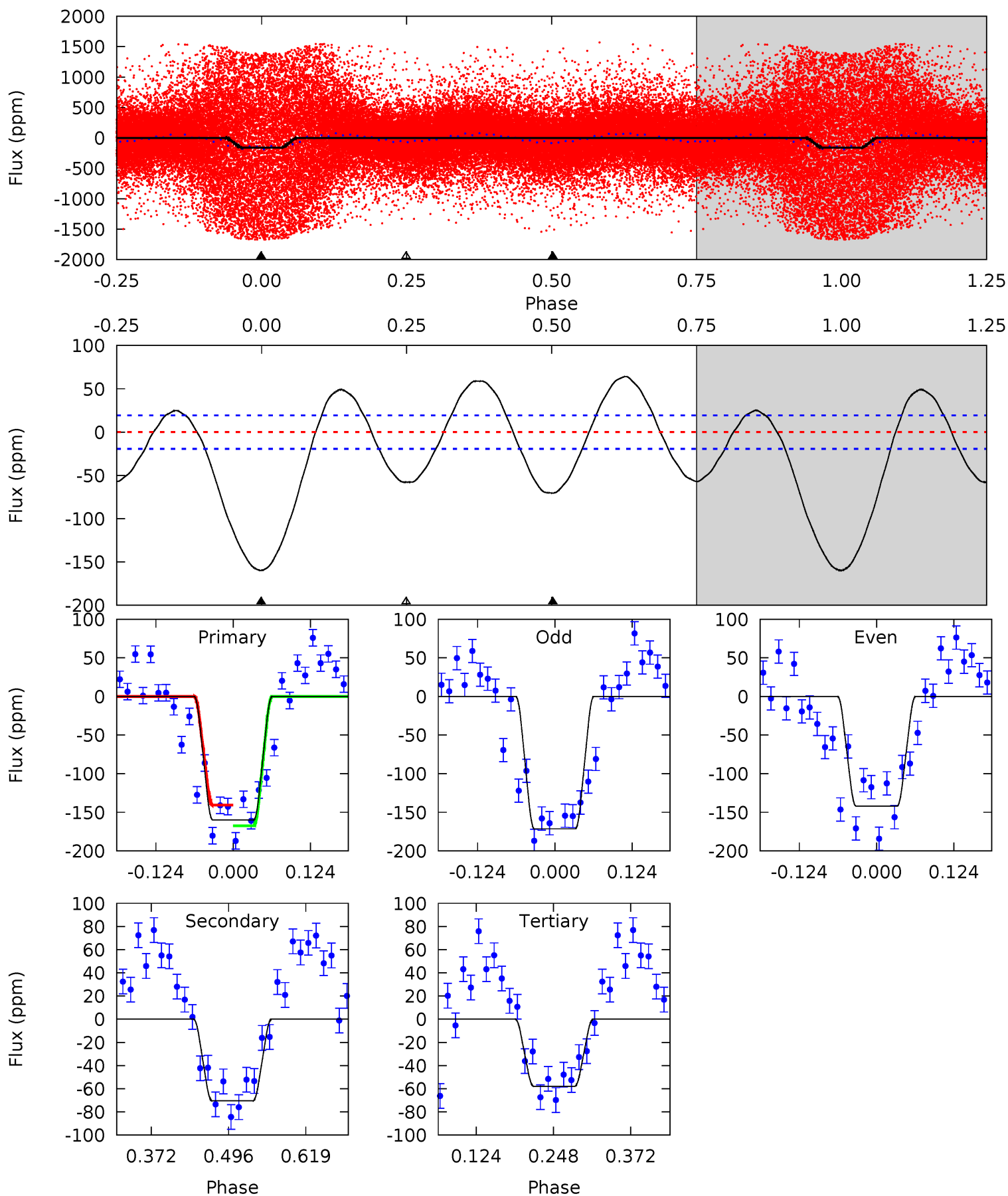
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.8	15.0	0	0	4.43	1.31	6.34	16.8	16.8	15.0	15.0	2.63	1.05	0.67	11.5



Alt Model-Shift Uniqueness Test

006952259-01, P = 0.965784 Days, E = 130.576837 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.3	16.4	13.5	0	4.52	1.54	9.13	23.8	37.3	2.93	16.4	3.40	1.26	0.29	3.13



Stellar Parameters For KIC 006952259

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7022^{+167}_{-251}	$2.998^{+0.620}_{-0.073}$	$0.070^{+0.200}_{-0.350}$	$9.213^{+1.025}_{-5.467}$	$3.080^{+0.211}_{-1.198}$	$0.006^{+0.062}_{-0.001}$
	+2%/-4%	+21%/-2%	+286%/-500%	+11%/-59%	+7%/-39%	+1123%/-25%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 006952259-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-48 ± 3	$5.38^{+1.78}_{-1.72}$	7600^{+488}_{-1179}	6437^{+1286}_{-1536}	$0.697^{+0.702}_{-0.296}$
Alt.	-70 ± 4	$11.93^{+2.27}_{-3.83}$	7566^{+538}_{-1201}	-4746^{+9120}_{-725}	$0.210^{+0.214}_{-0.059}$

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 $A_{obs} \gg 1.0$

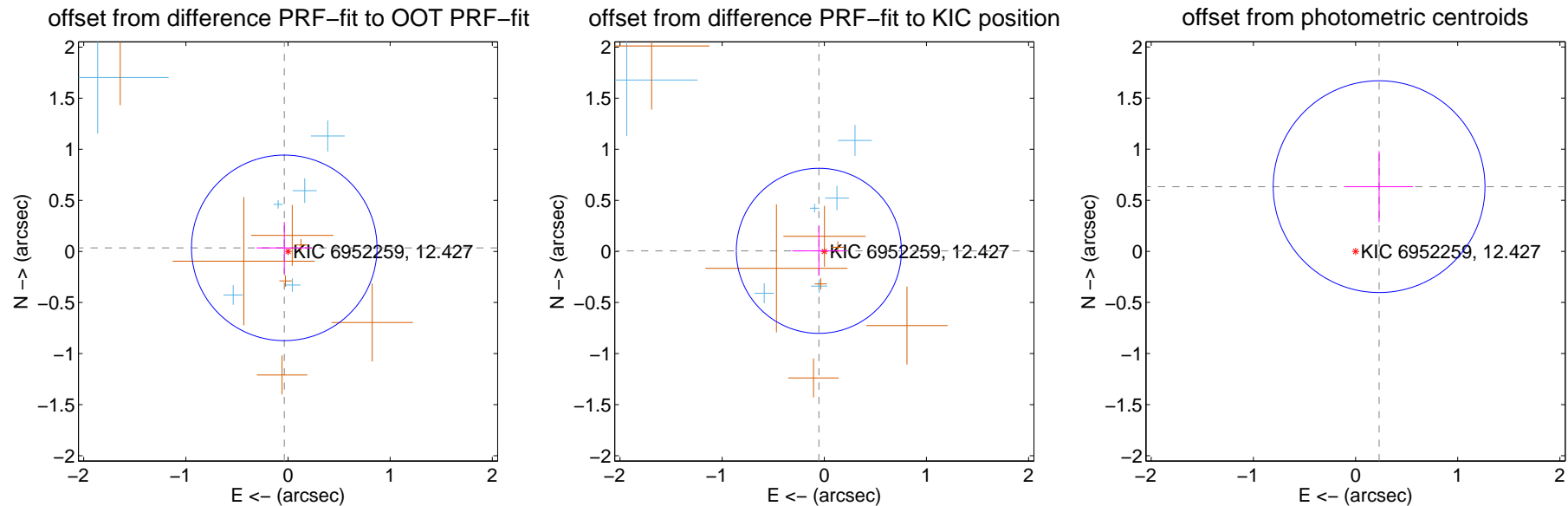
DV Centroid Data

Supplemental centroid analysis for 006952259-01. Kepler magnitude: 12.43. Transit SNR 7.85

There are 7 quarters with good PRF difference image offsets

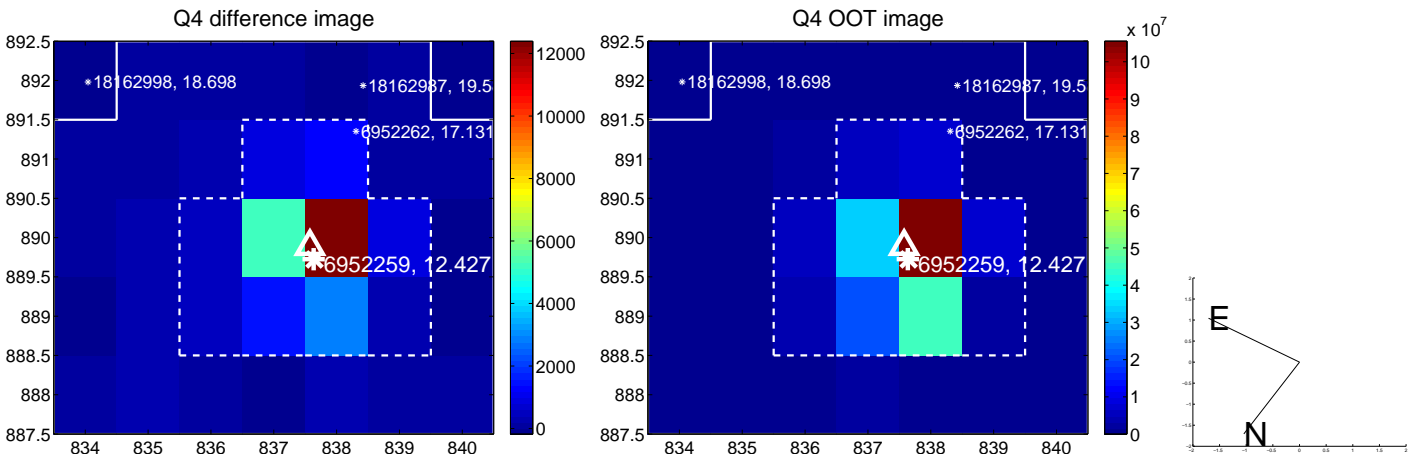
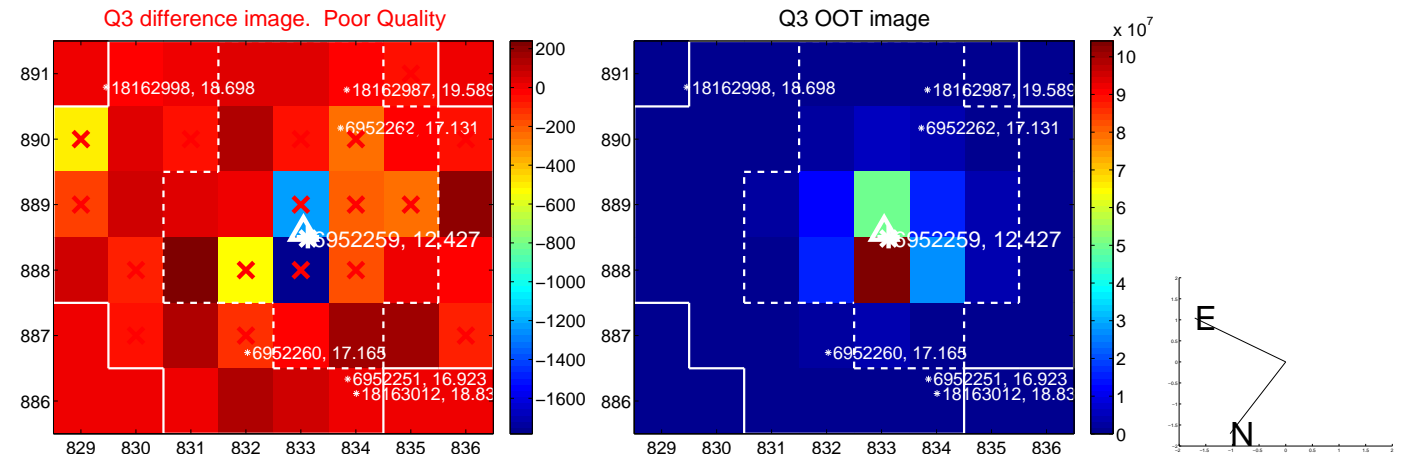
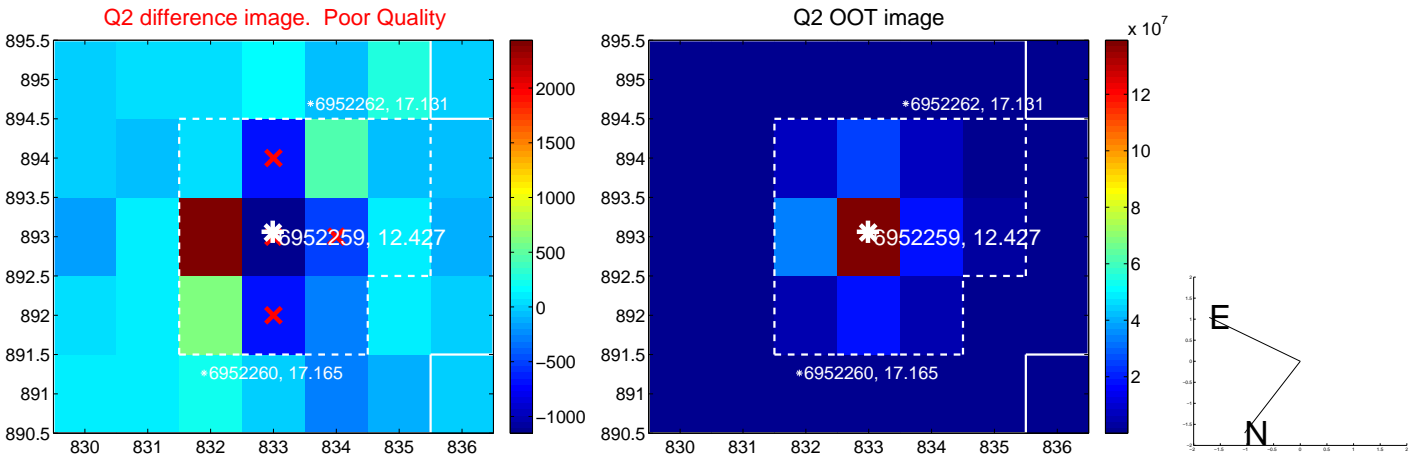
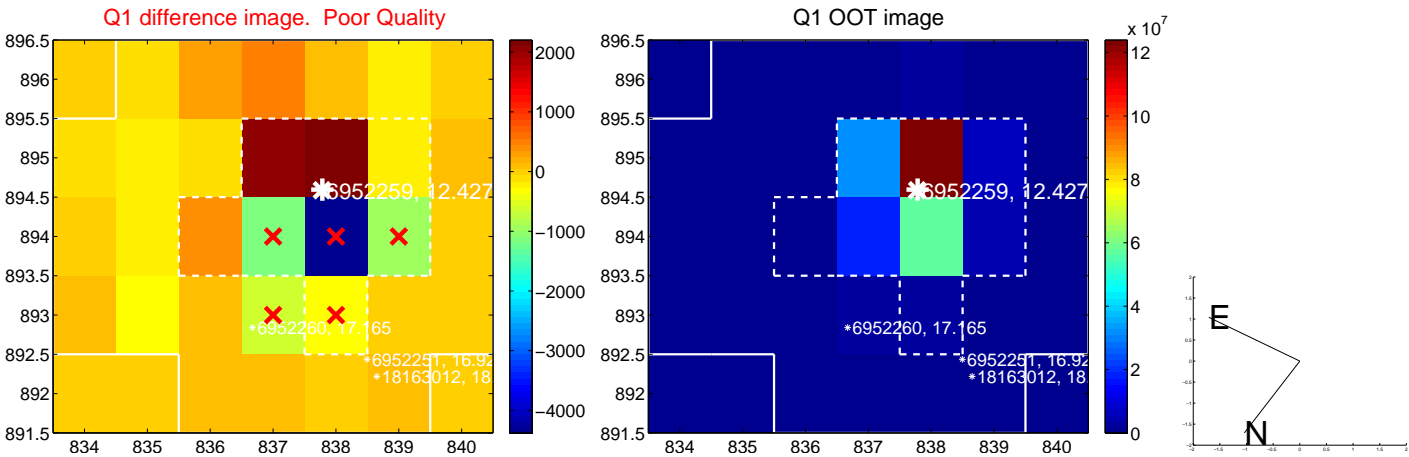
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.051 ± 0.303	0.17	0.037 ± 0.268	0.035 ± 0.253
PRF-fit source offset from KIC position	0.054 ± 0.269	0.20	0.053 ± 0.261	0.006 ± 0.243
photometric centroid source offset	0.67 ± 0.35	1.95	-0.23 ± 0.33	0.63 ± 0.35

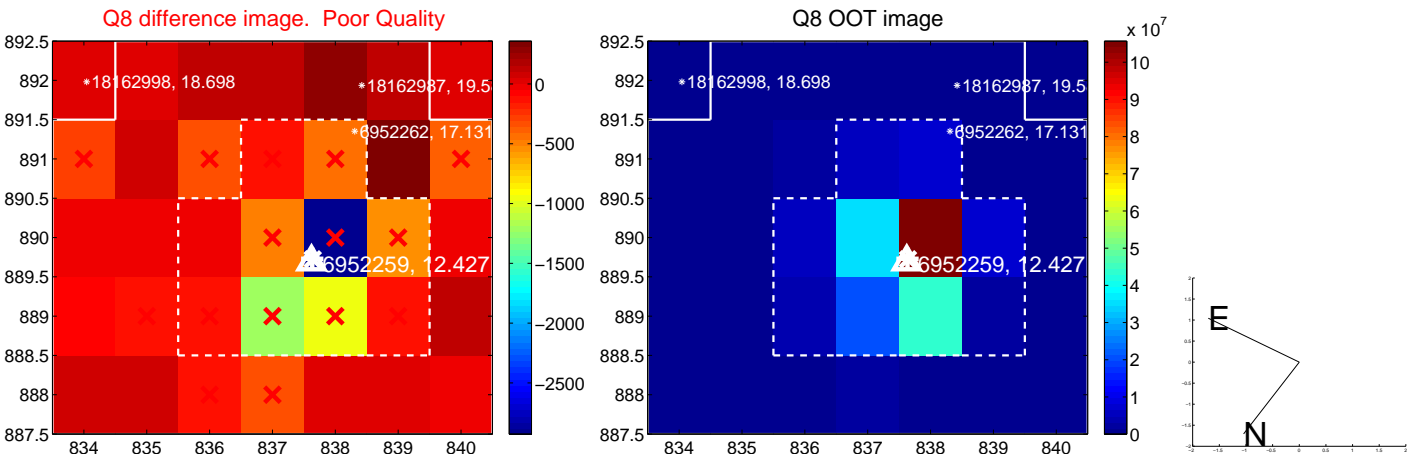
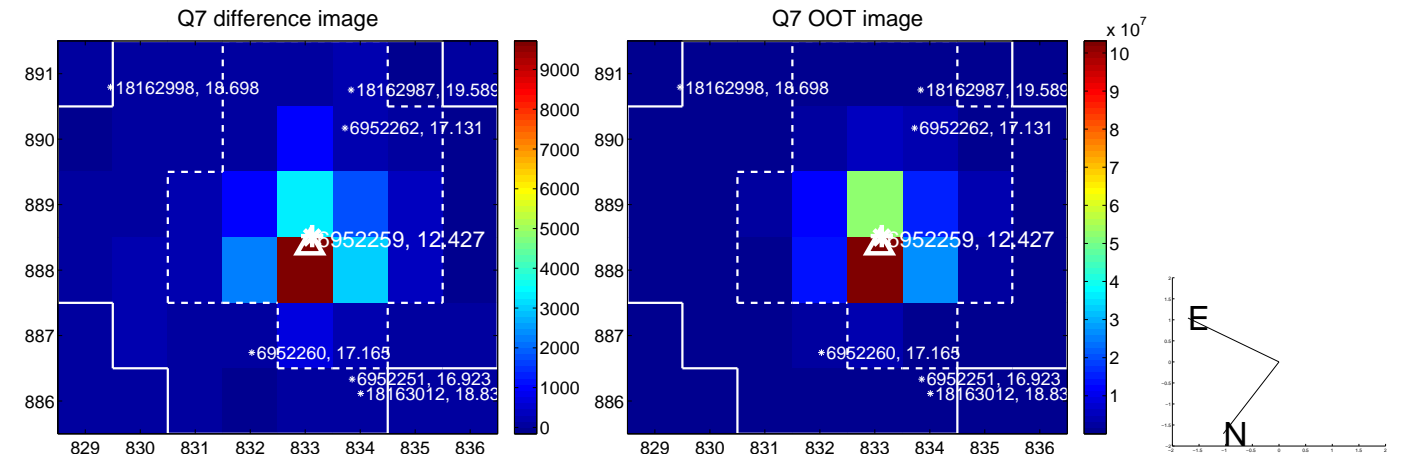
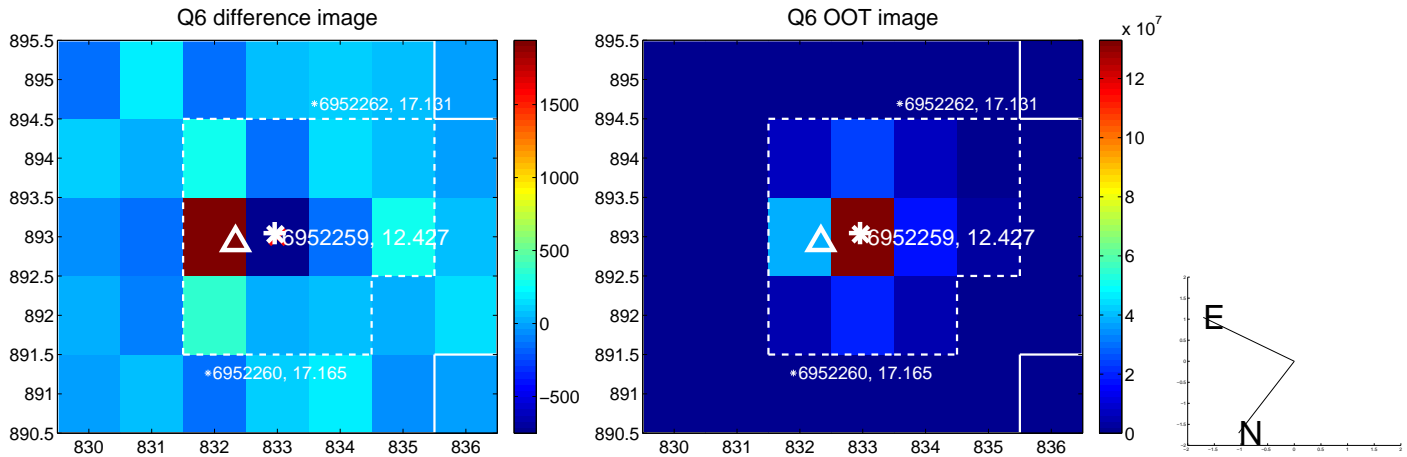
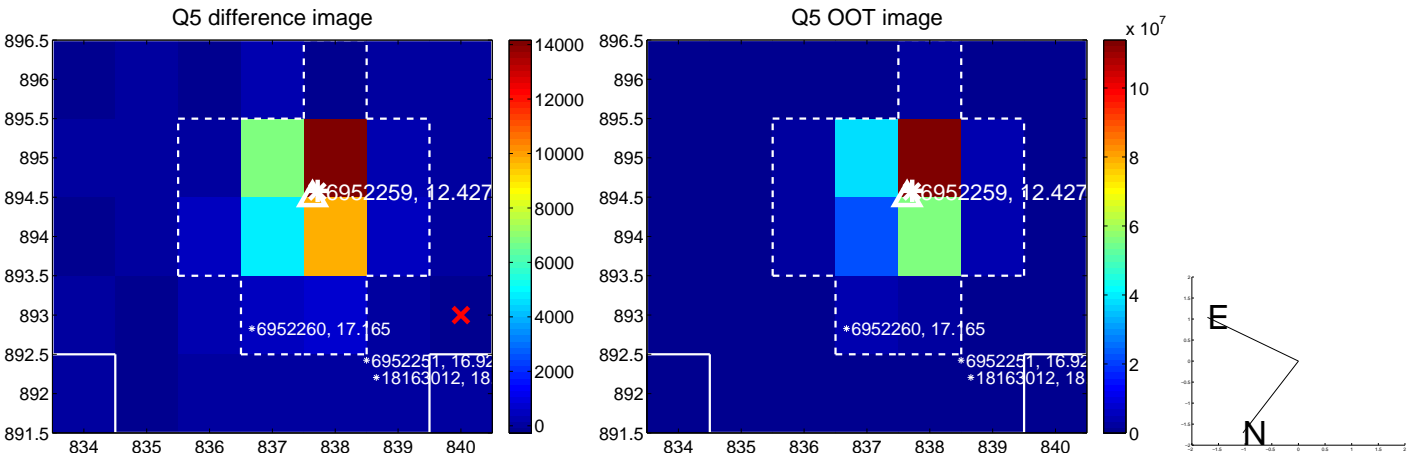


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

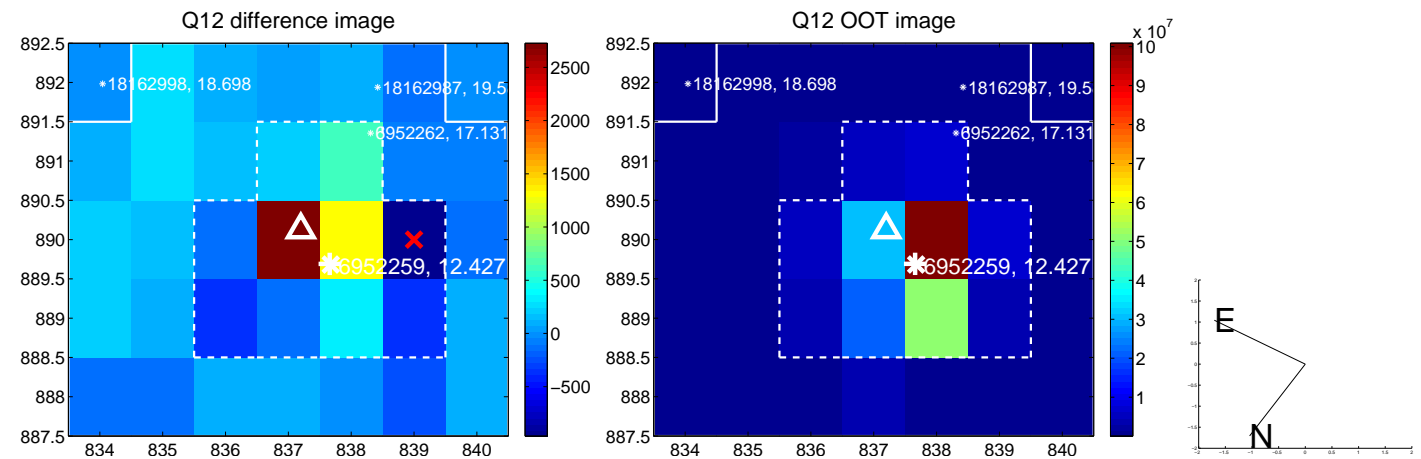
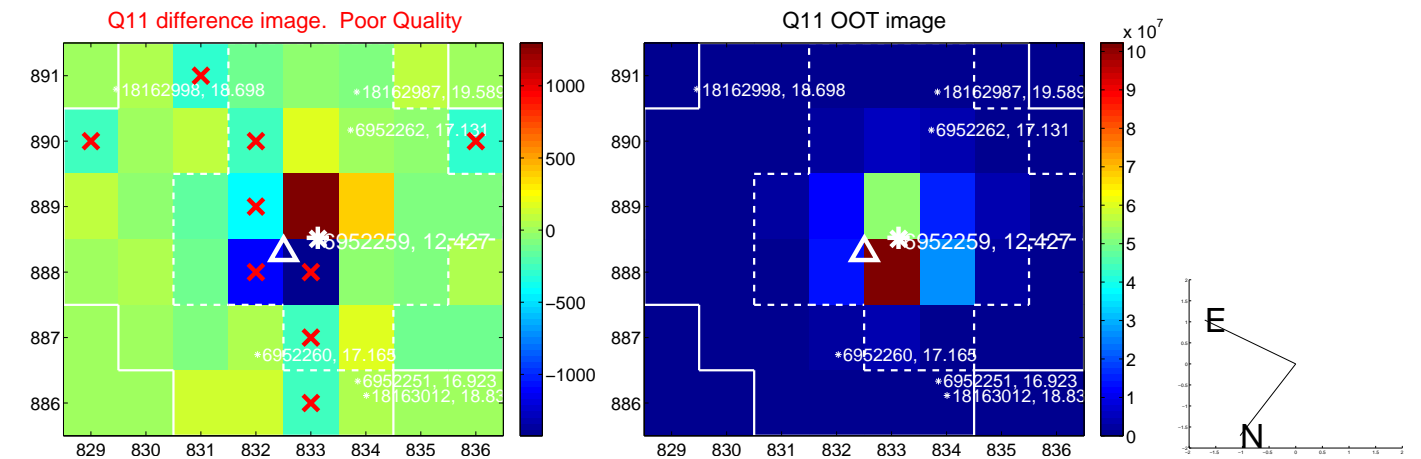
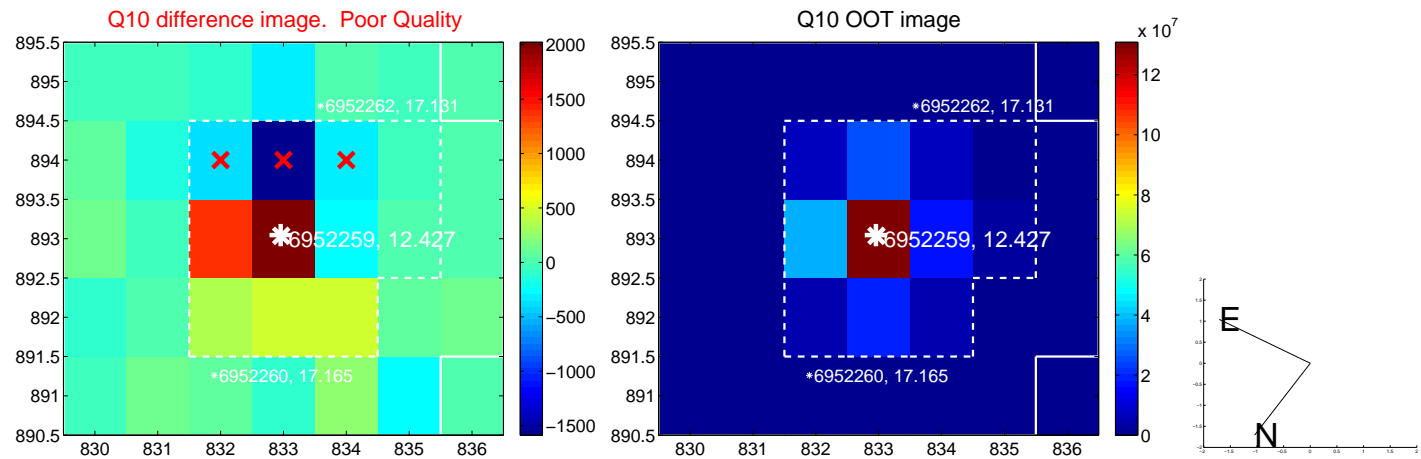
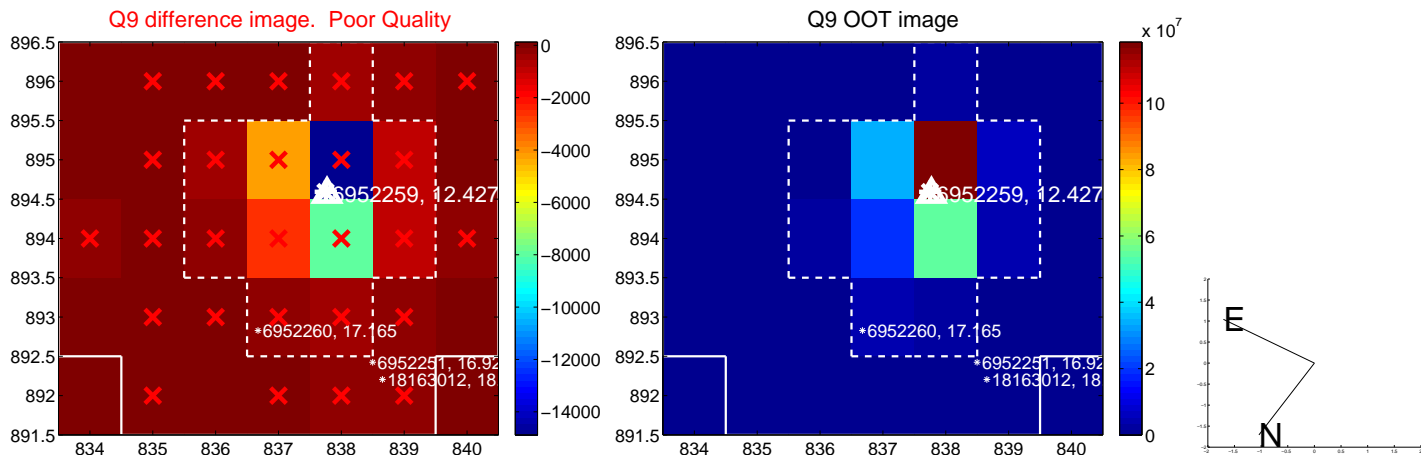
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



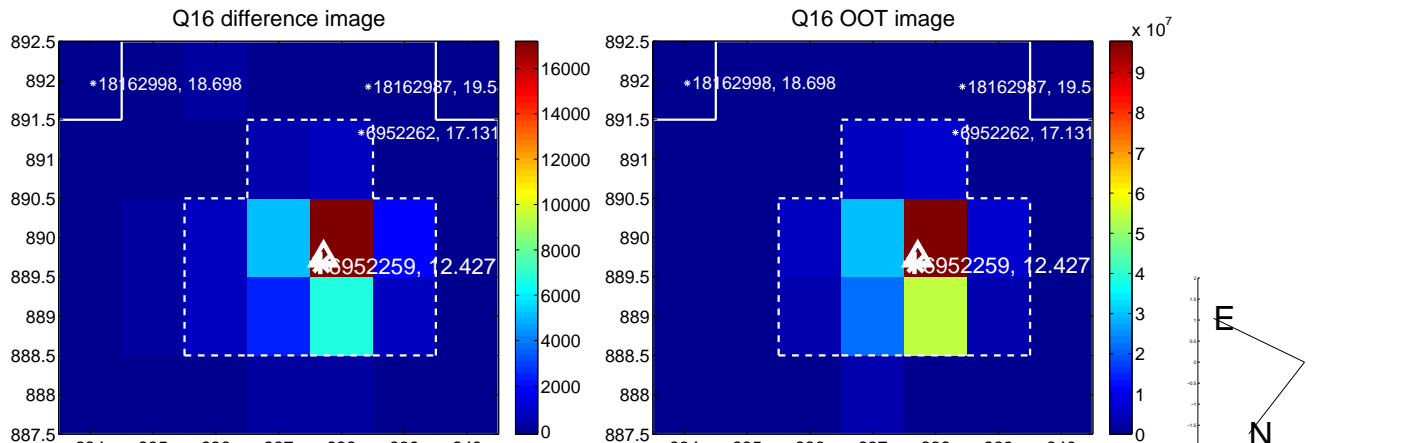
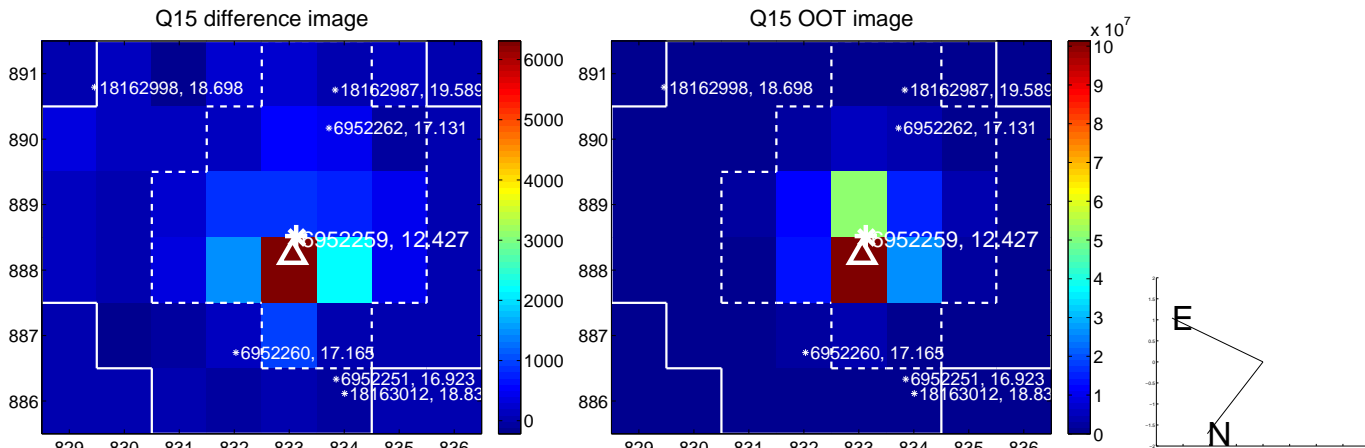
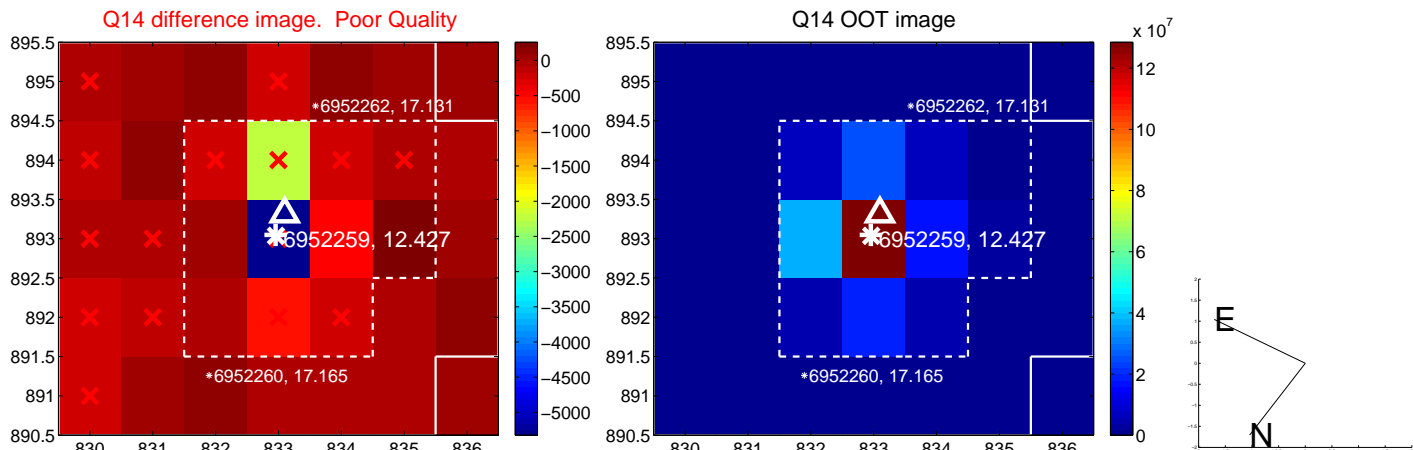
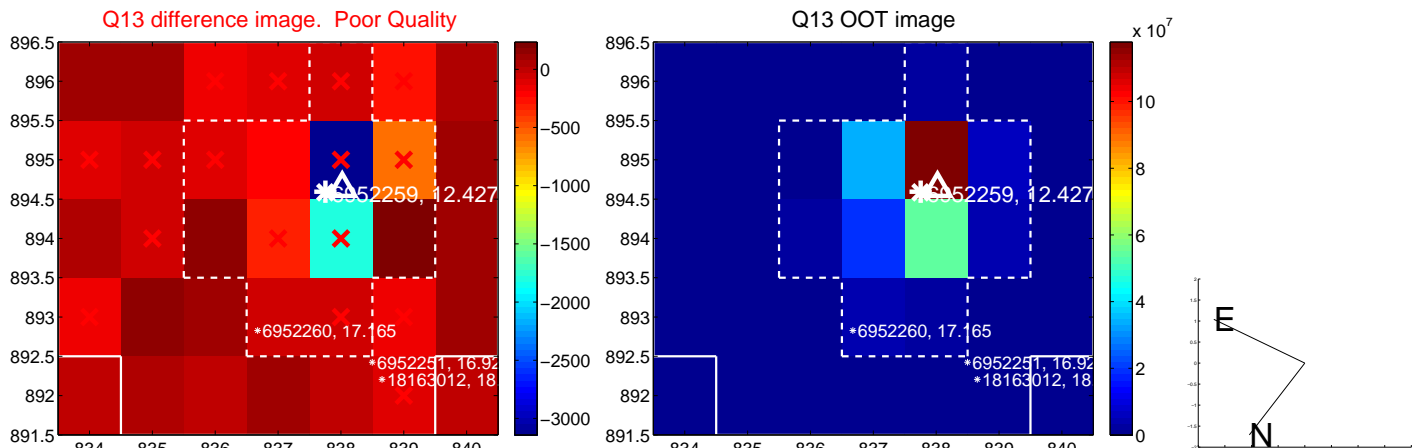
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



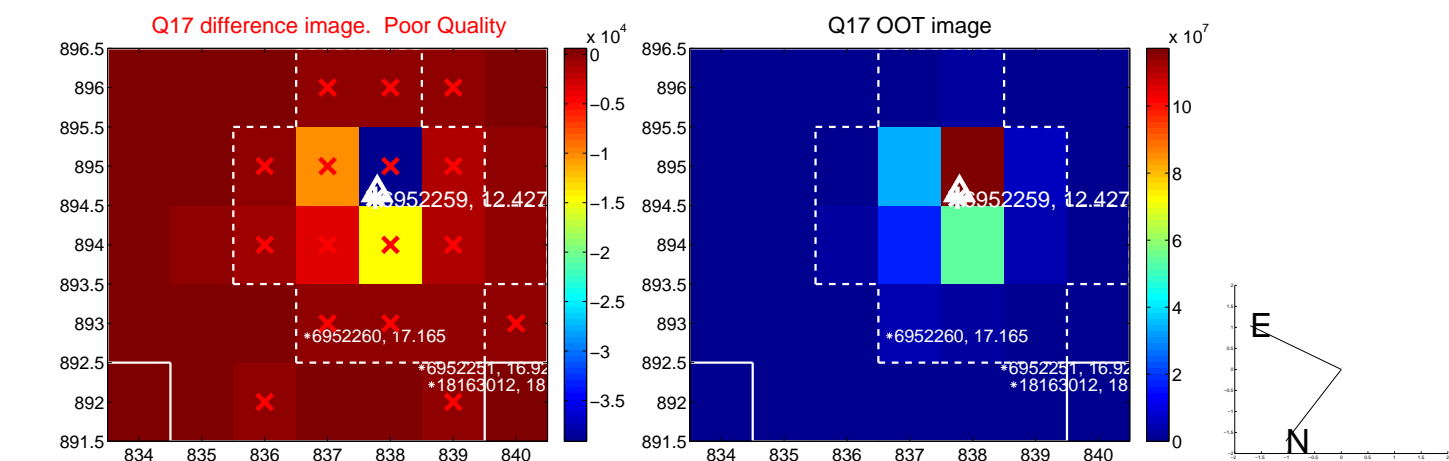
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



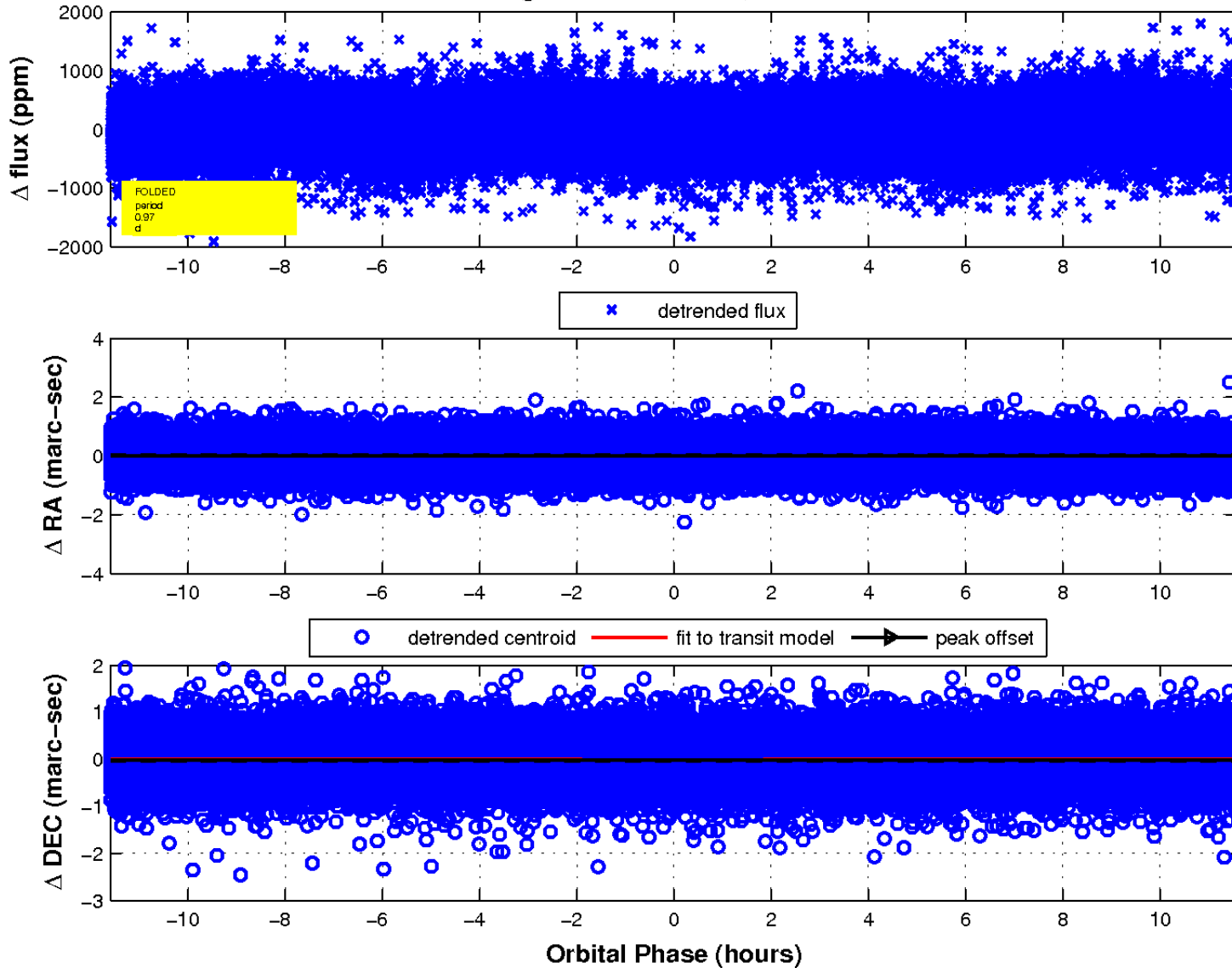
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

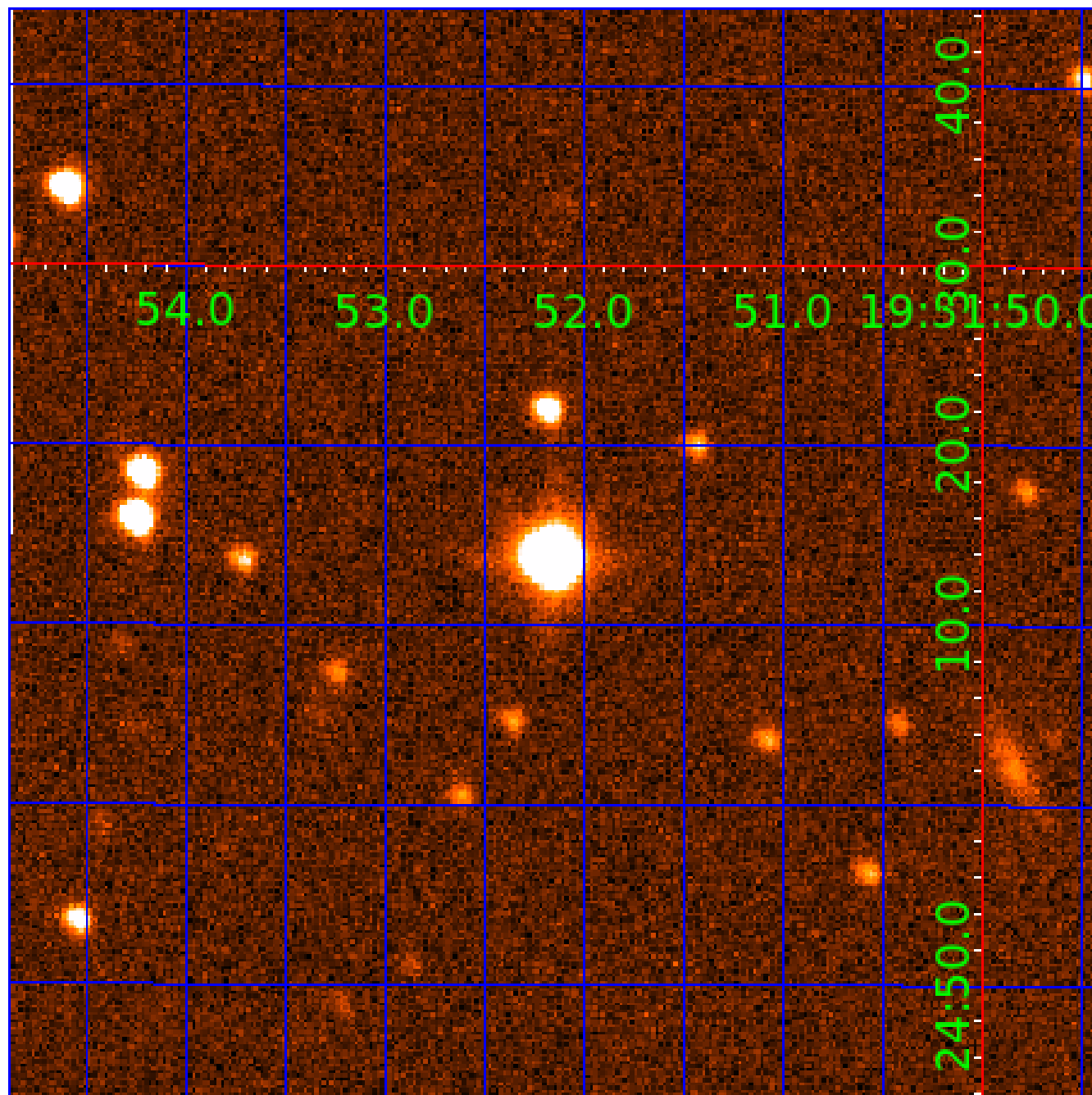


fluxWeightedCentroids, Planet 1 of 2



UKIRT Image

Declination



KIC 006952259

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})
006952259-01	OBS	No	0.965749	131.552369	33.1	3.913	8.3	7.8	9.21	7022	6.19	0.00
006952259-02	OBS	No	0.965755	132.028834	53.4	4.102	12.3	13.0	9.21	7022	7.85	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006952259-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST
006952259-02	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD

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

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

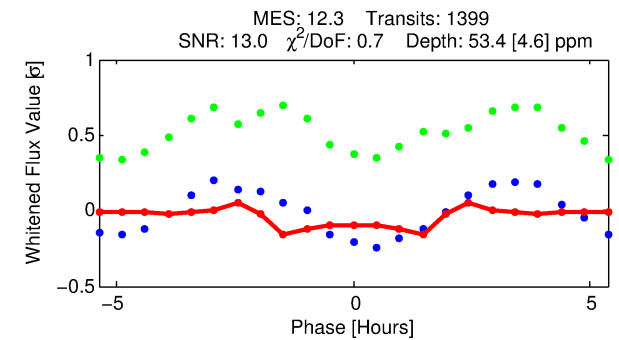
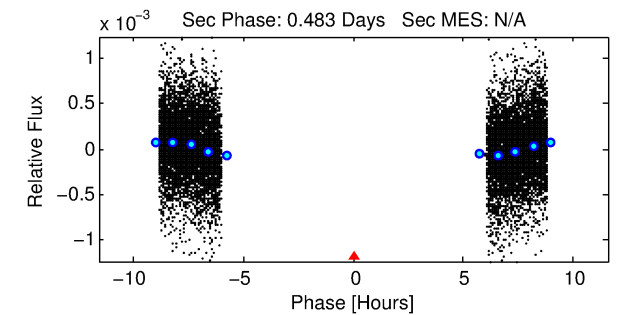
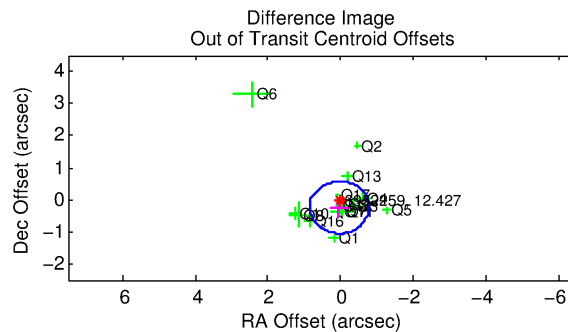
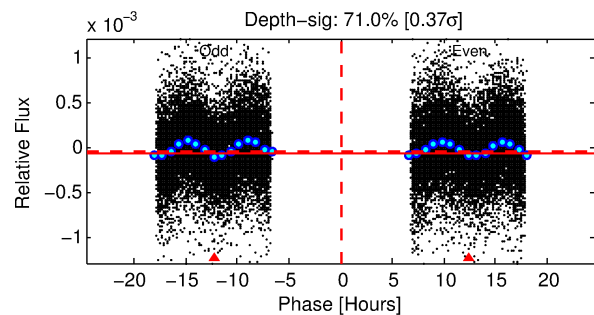
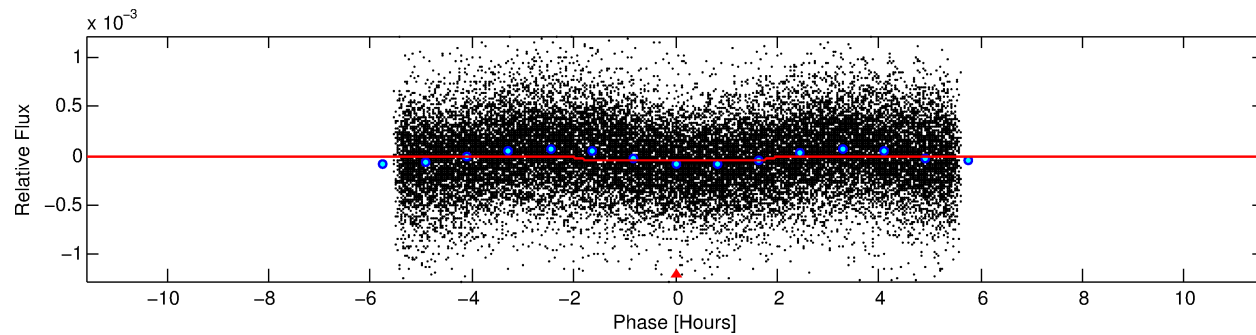
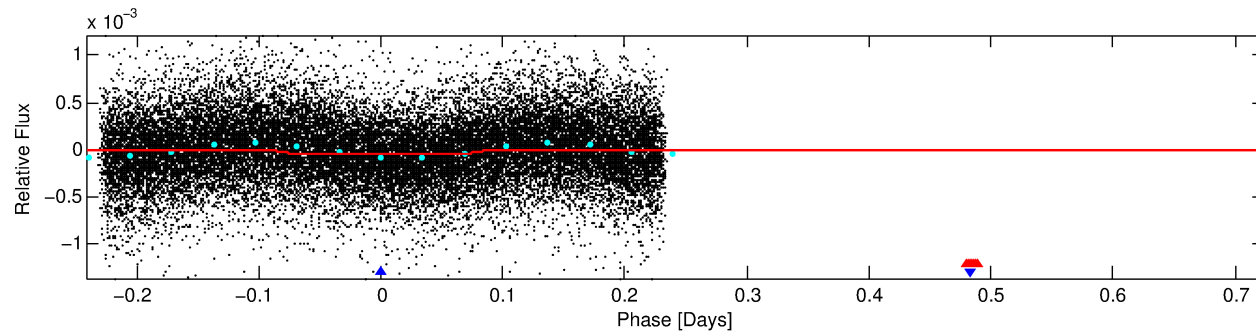
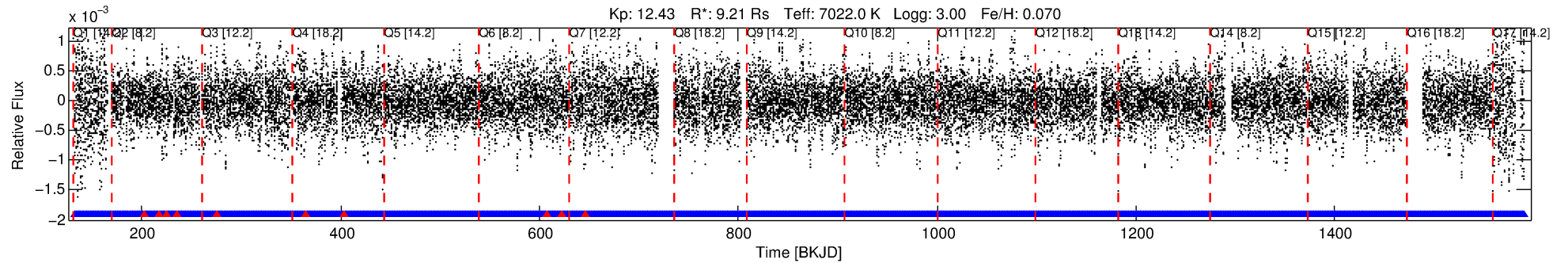
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006952259-02

No Significant Match Found

DV One-Page Summary

KIC: 6952259 Candidate: 2 of 2 Period: 0.966 d



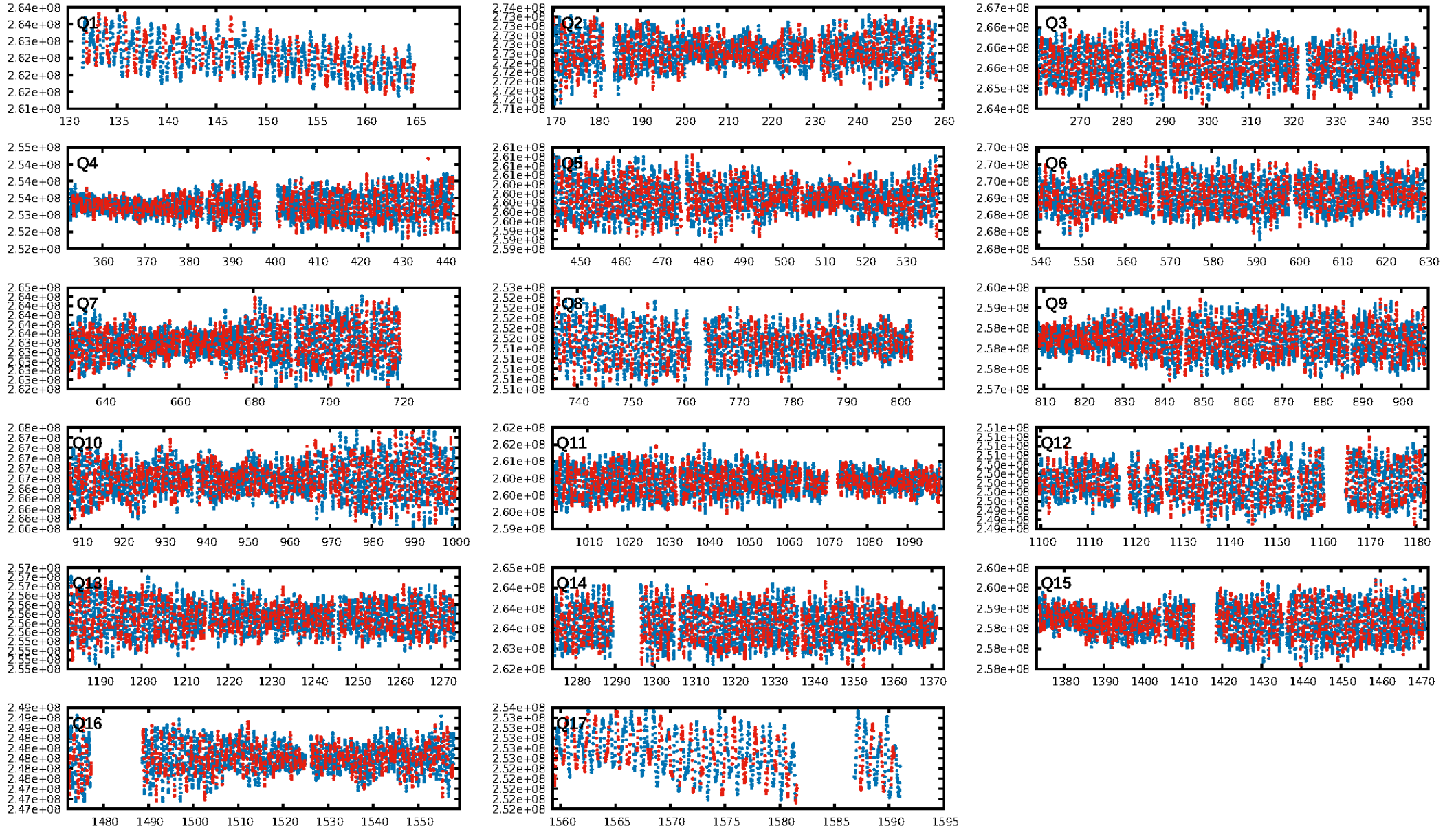
DV Fit Results:

Period = 0.96576 [0.00001] d
Epoch = 132.0288 [0.0015] BKJD
Rp/R* = 0.0078 [0.0011]
a/R* = 1.24 [0.36]
b = 0.90 [0.17]
Seff = N/A
Teq = N/A
Rp = 7.85 [4.79] Re
a = N/A

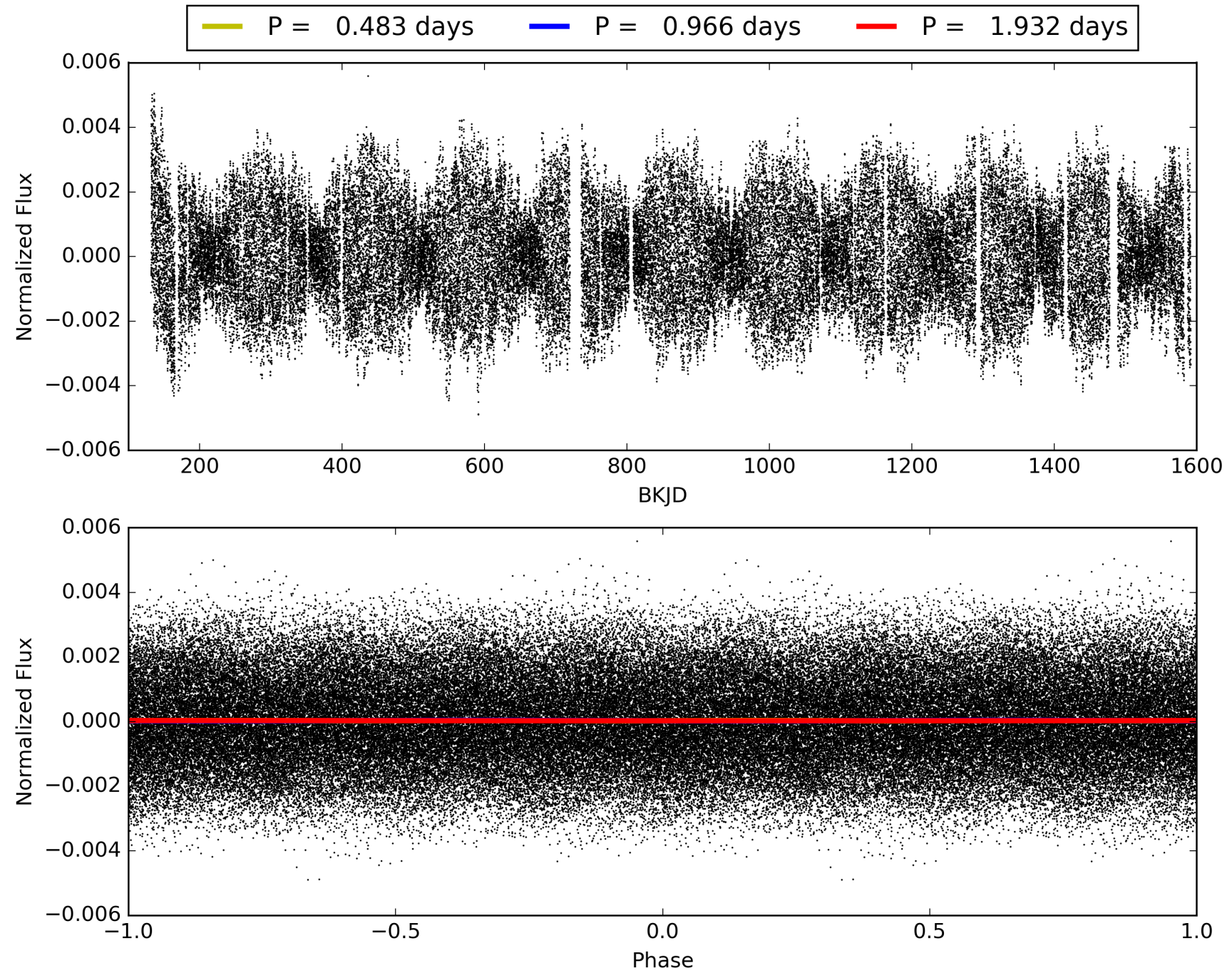
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [1326/1336]
GhostDiagnostic-chr: 1.397
Centroid-sig: 7.5%
Centroid-so: 0.330 arcsec [1.63 σ]
OotOffset-rm: 0.242 arcsec [0.90 σ]
KicOffset-rm: 0.246 arcsec [0.94 σ]
OotOffset-st: 3/3/4/5 [15]
KicOffset-st: 3/3/4/5 [15]
DiffImageQuality-fgm: 0.47 [7/15]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006952259-02, PDC Light Curves

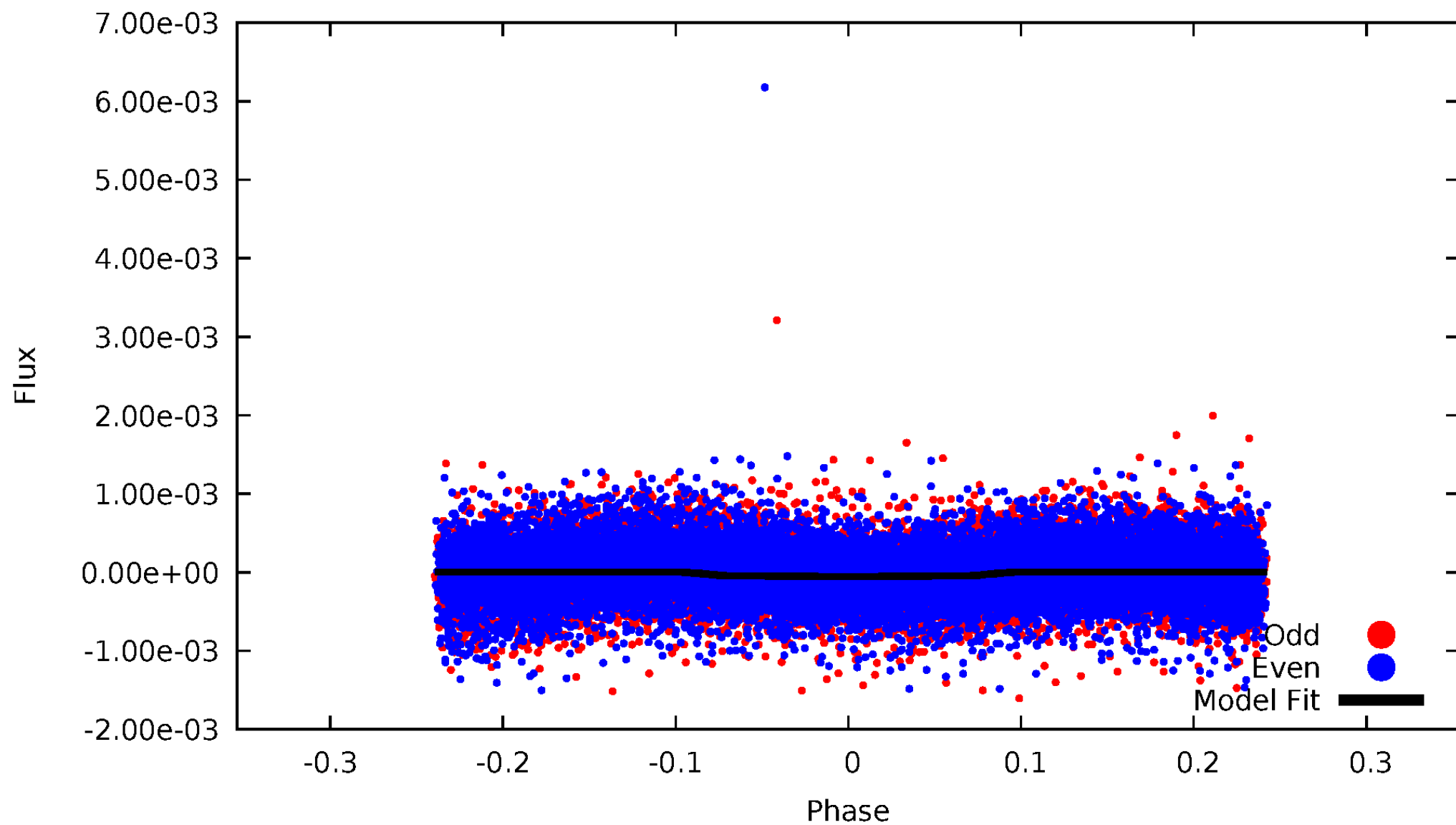


TCE 006952259-02



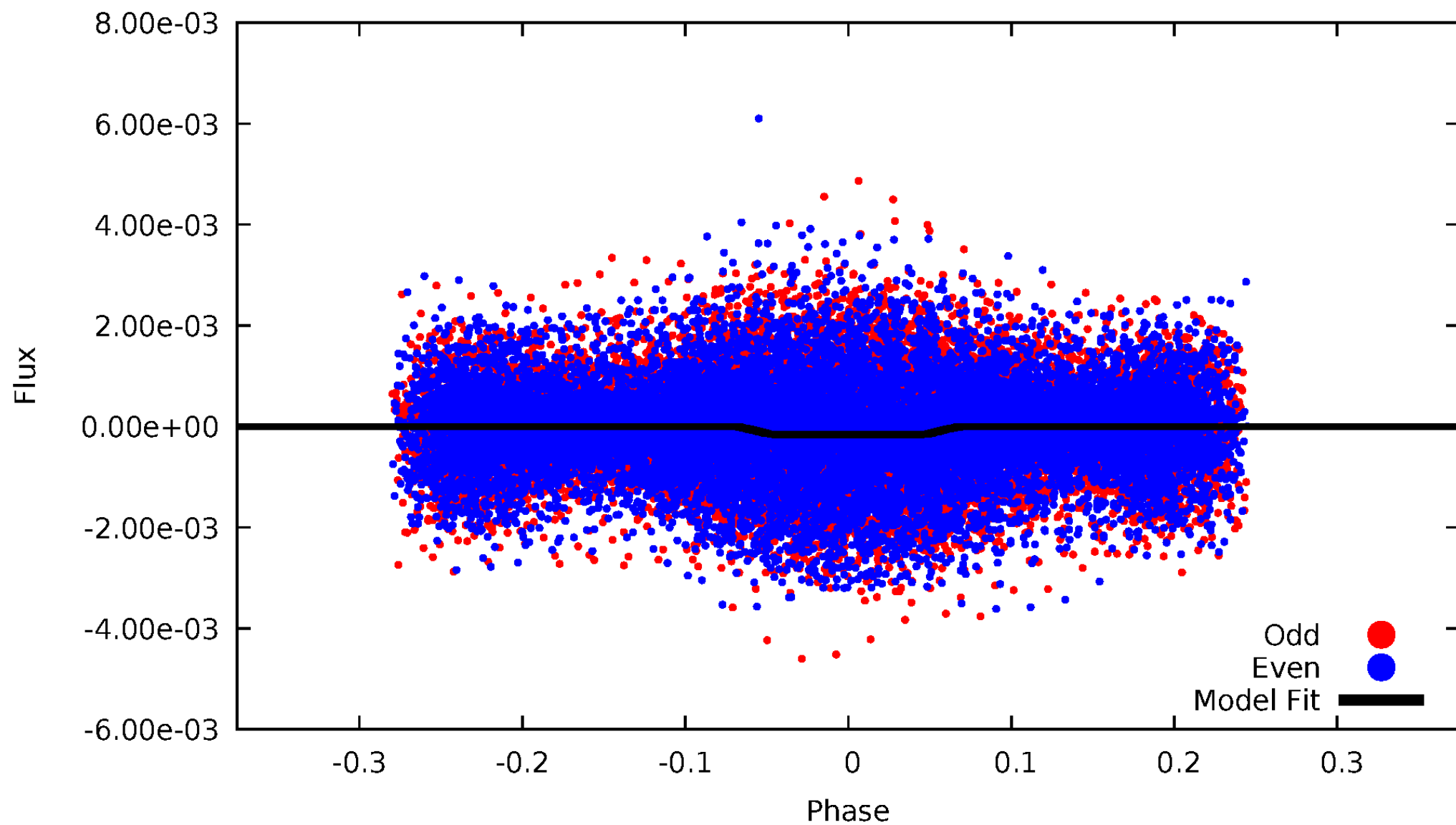
DV Odd/Even

TCE 006952259-02



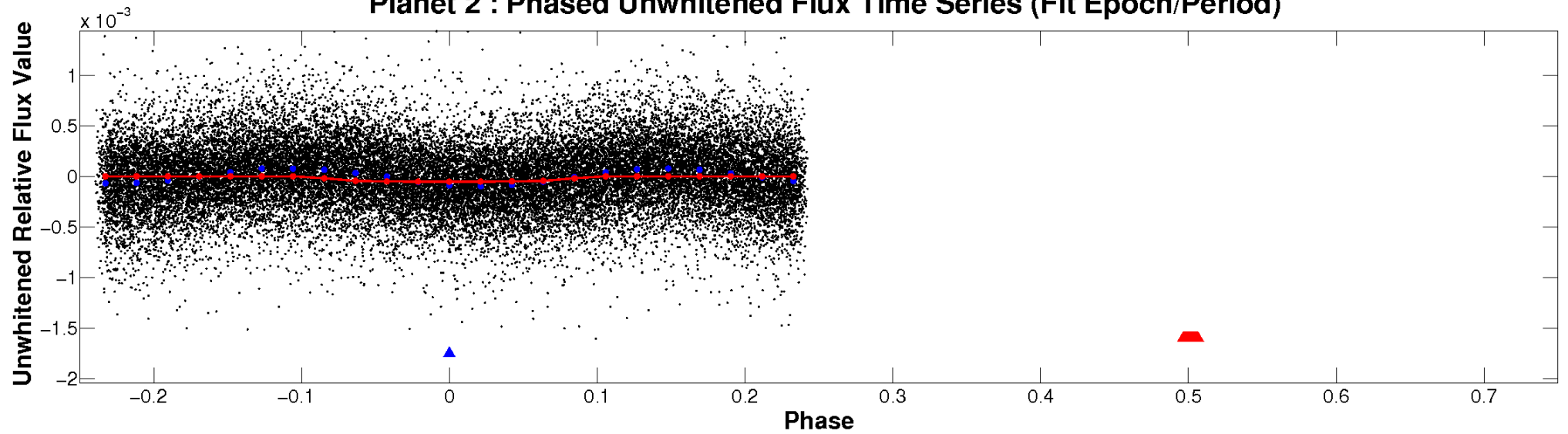
ALT Odd/Even

TCE 006952259-02

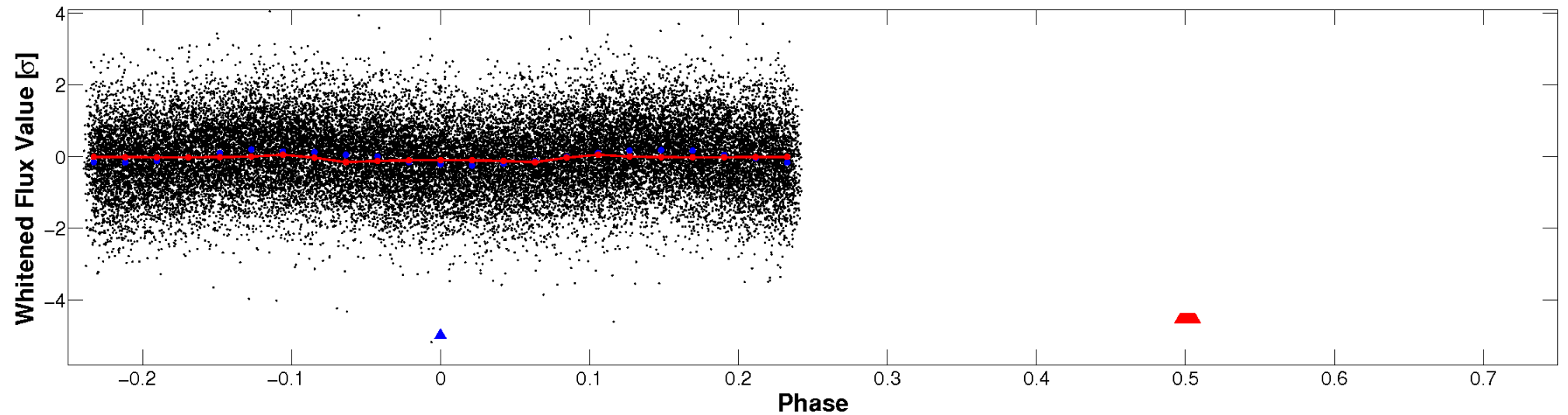


Non-Whitened Vs. Whitened Light Curve

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

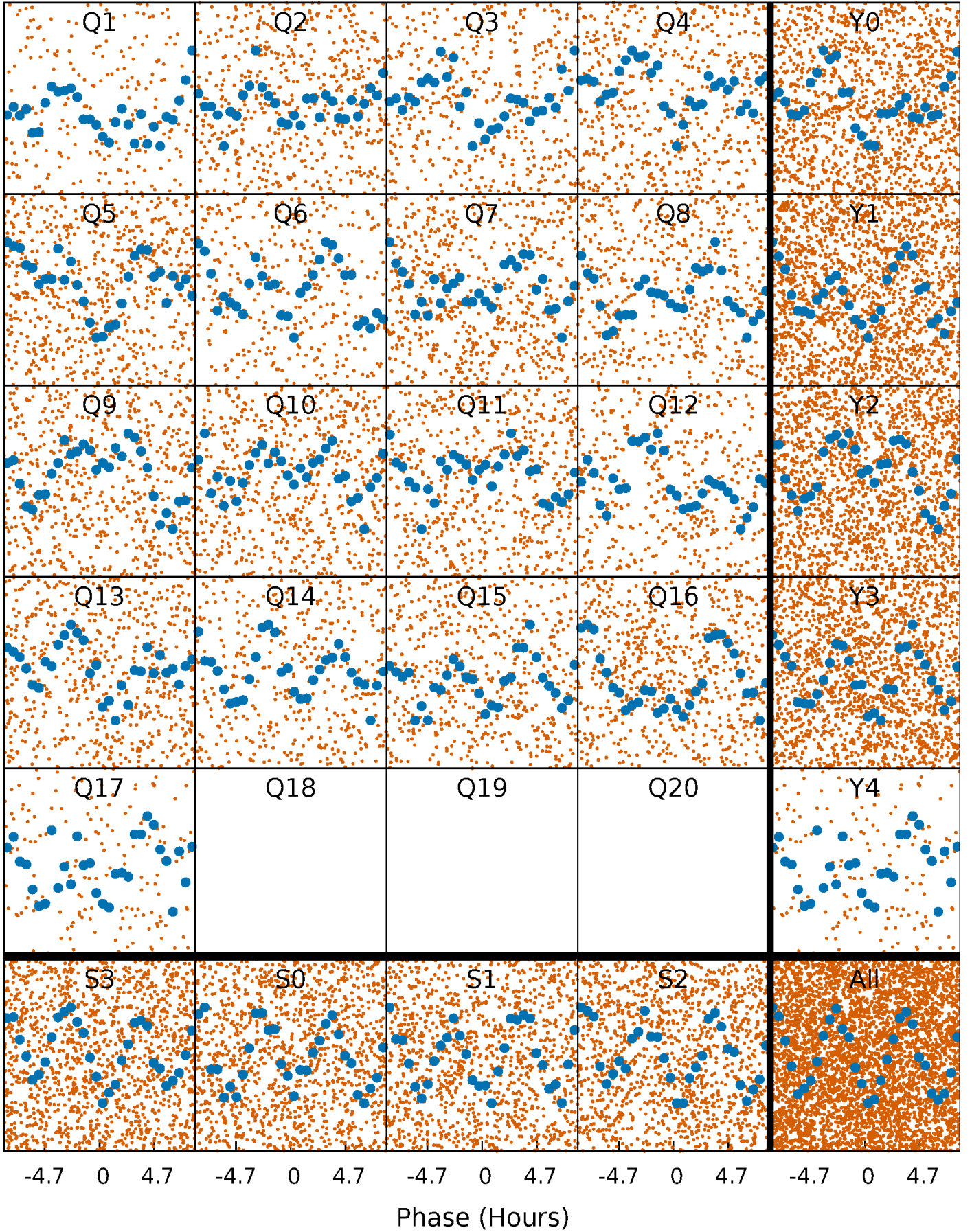


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



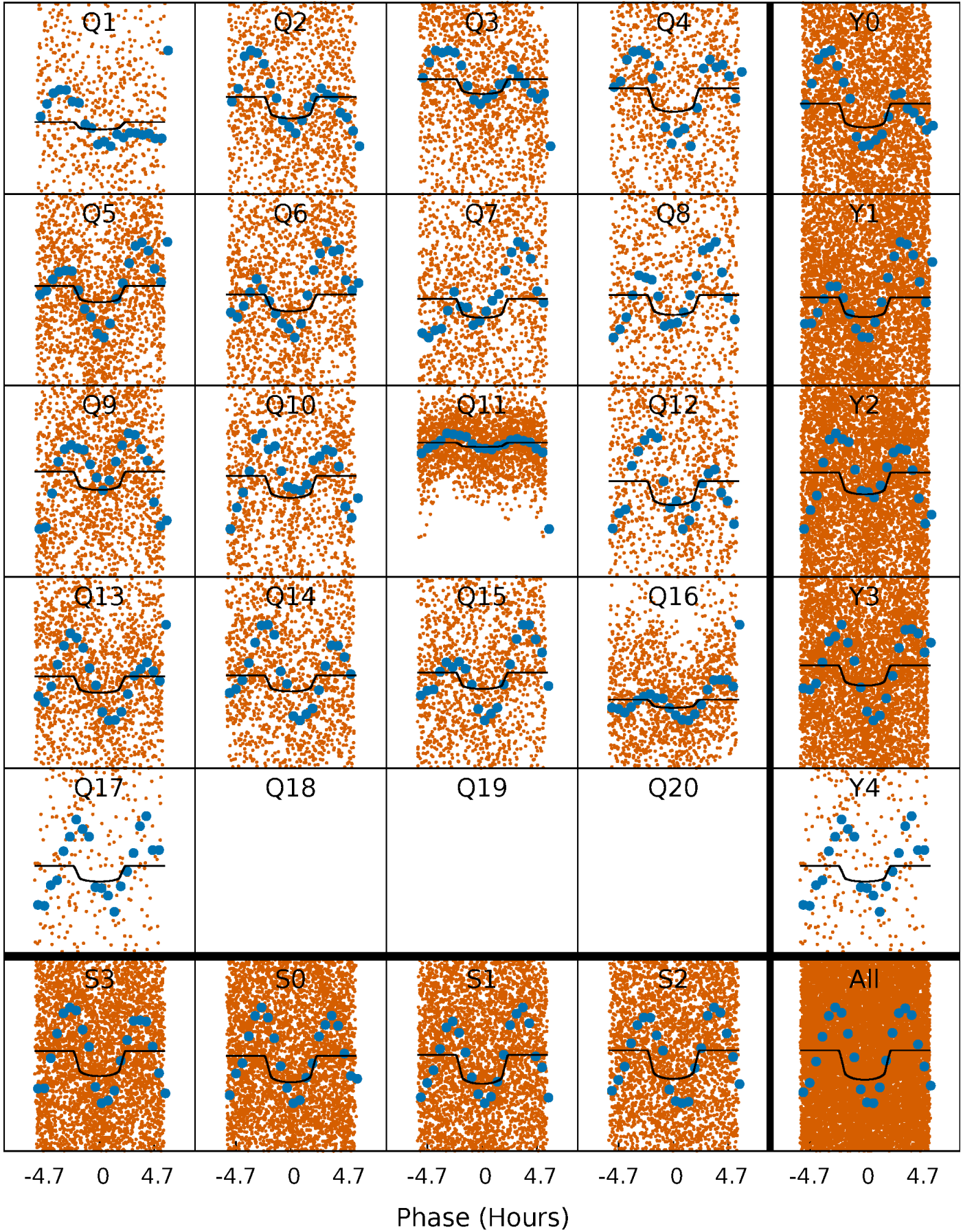
PDC Quarter-Phased Transit Curves

TCE 006952259-02 $P = 0.965755$ Days $T_0 = 132.028834$ (BKJD)



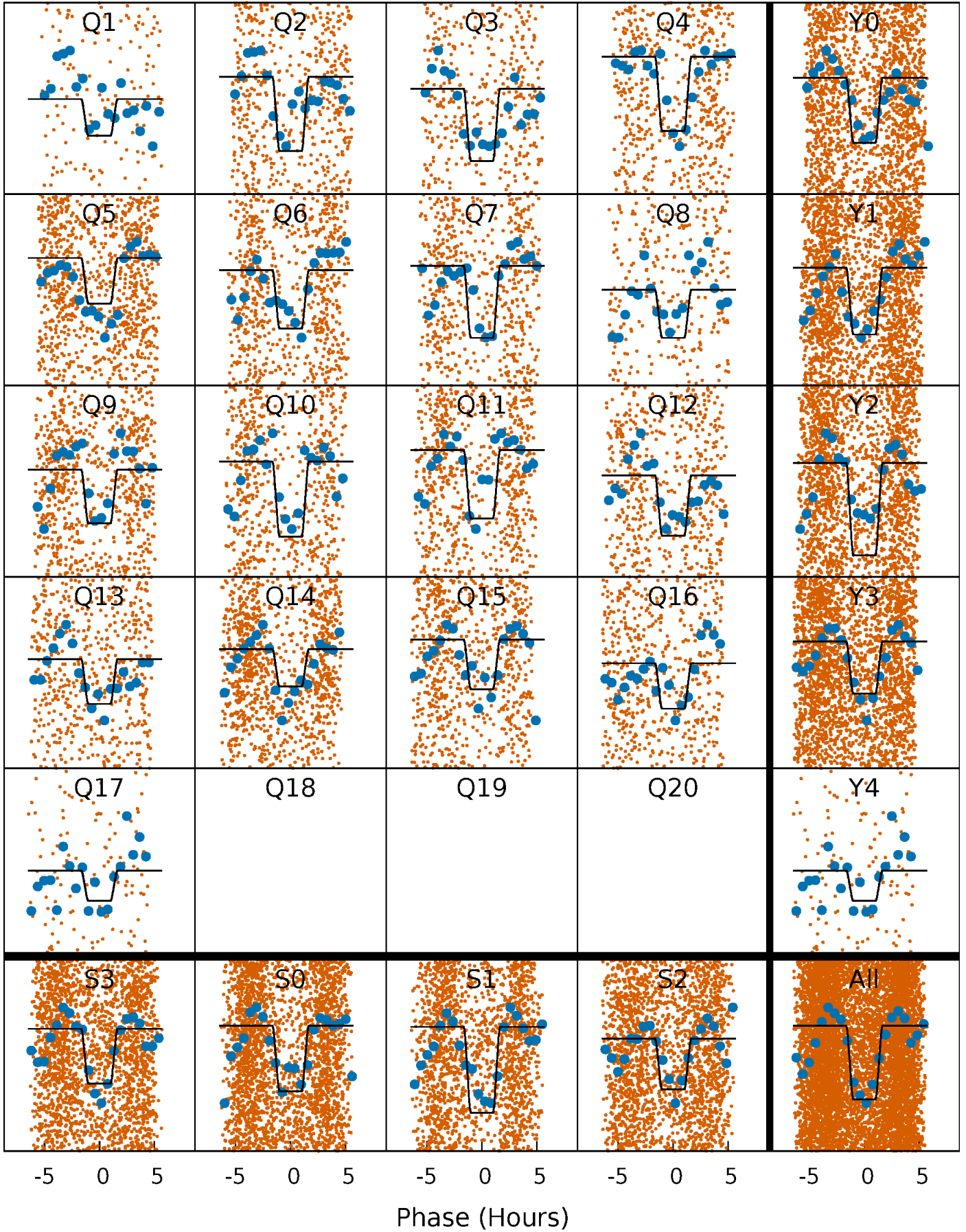
DV Quarter-Phased Transit Curves

TCE 006952259-02 P= 0.965755 Days $T_0=132.028834$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

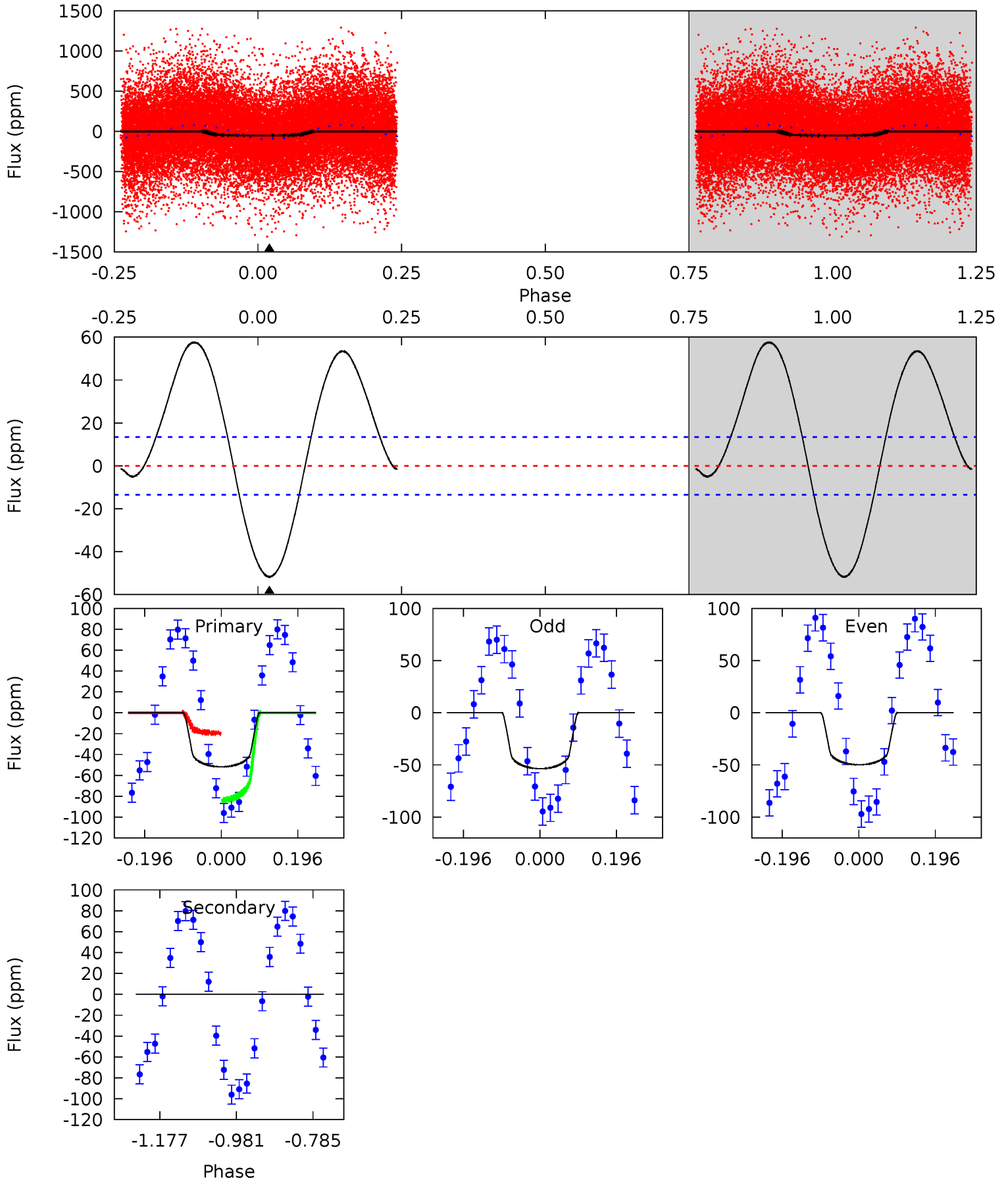
TCE 006952259-02 P= 0.965783 Days $T_0=132.026422$ (BKJD)



DV Model-Shift Uniqueness Test

006952259-02, P = 0.965755 Days, E = 131.063079 Days

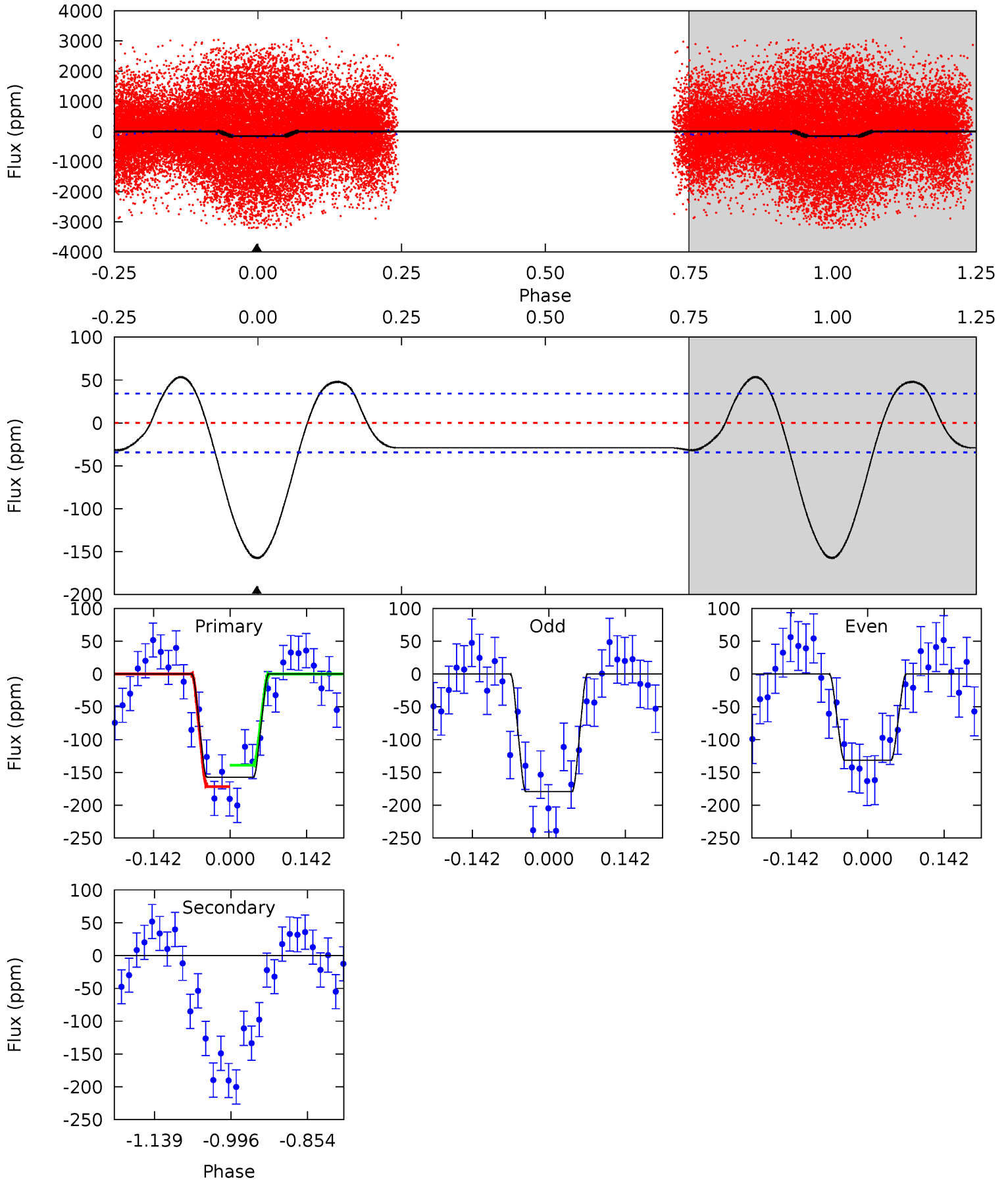
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.0	0	0	0	4.42	1.29	1.76	17.0	17.0	0	0	0.61	0.97	0.53	12.0



Alt Model-Shift Uniqueness Test

006952259-02, P = 0.965783 Days, E = 131.060639 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.6	0	0	0	4.49	1.47	3.74	20.6	20.6	0	0	3.13	1.05	0.25	1.68



Stellar Parameters For KIC 006952259

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7022^{+167}_{-251}	$2.998^{+0.620}_{-0.073}$	$0.070^{+0.200}_{-0.350}$	$9.213^{+1.025}_{-5.467}$	$3.080^{+0.211}_{-1.198}$	$0.006^{+0.062}_{-0.001}$
	+2%/-4%	+21%/-2%	+286%/-500%	+11%/-59%	+7%/-39%	+1123%/-25%
Source	PHO1	FLK73	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 006952259-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 3	$7.03^{+1.77}_{-2.14}$	7560^{+561}_{-1212}	-6160^{+939}_{-480}	$0.001^{+0.029}_{-0.028}$
Alt.	0 ± 8	$11.97^{+1.96}_{-3.72}$	7593^{+499}_{-1050}	-6179^{+869}_{-437}	$0.001^{+0.026}_{-0.027}$

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

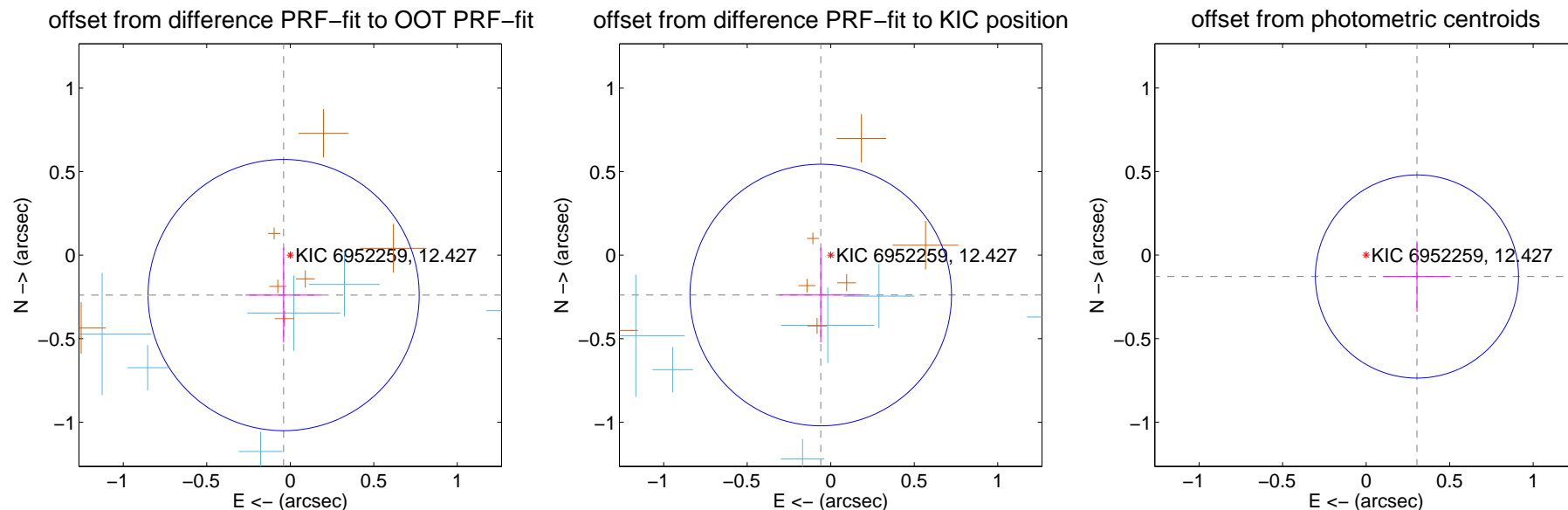
DV Centroid Data

Supplemental centroid analysis for 006952259-02. Kepler magnitude: 12.43. Transit SNR 12.99

There are 7 quarters with good PRF difference image offsets

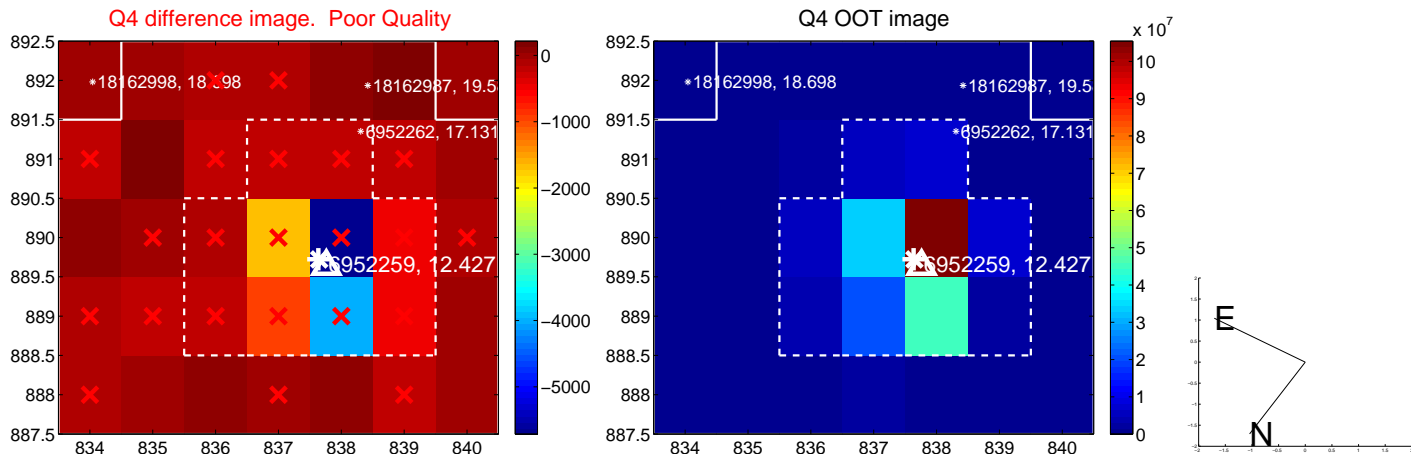
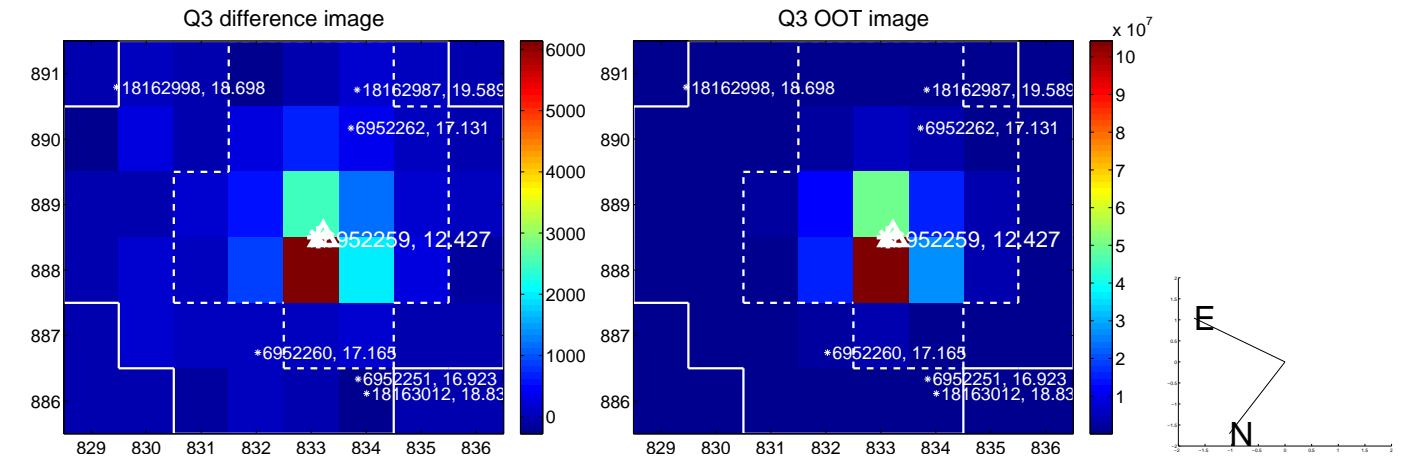
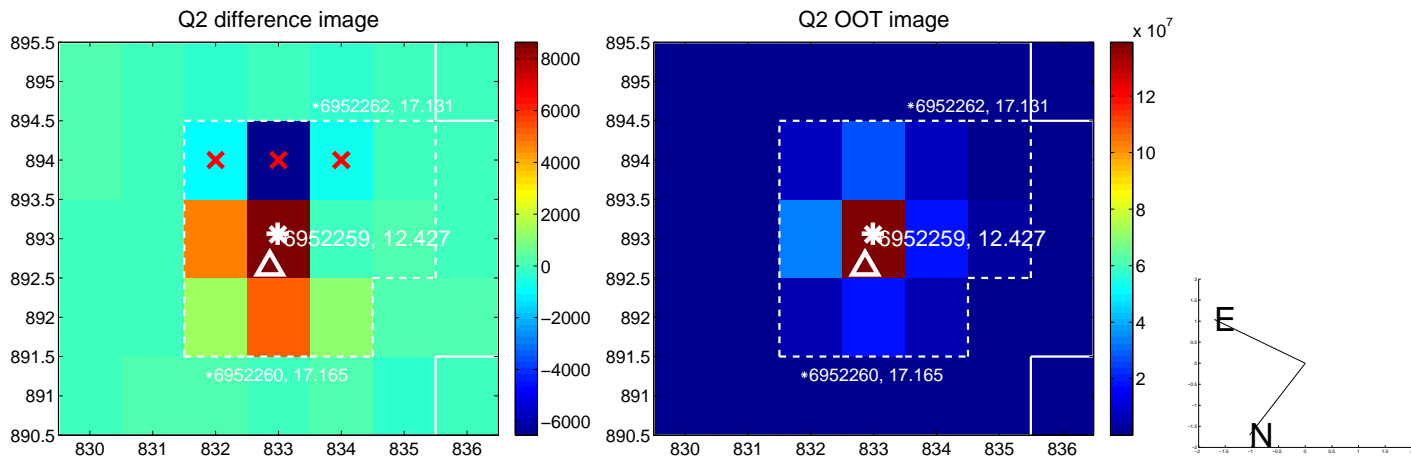
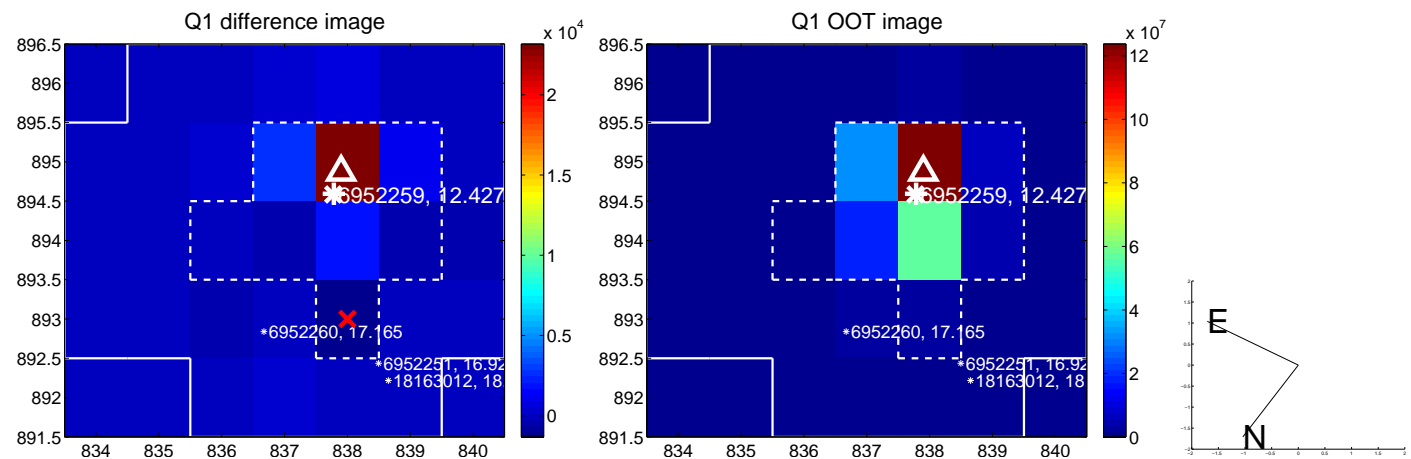
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.242 ± 0.271	0.90	0.040 ± 0.228	-0.239 ± 0.283
PRF-fit source offset from KIC position	0.246 ± 0.261	0.94	0.060 ± 0.248	-0.239 ± 0.283
photometric centroid source offset	0.33 ± 0.20	1.63	-0.30 ± 0.20	-0.13 ± 0.21

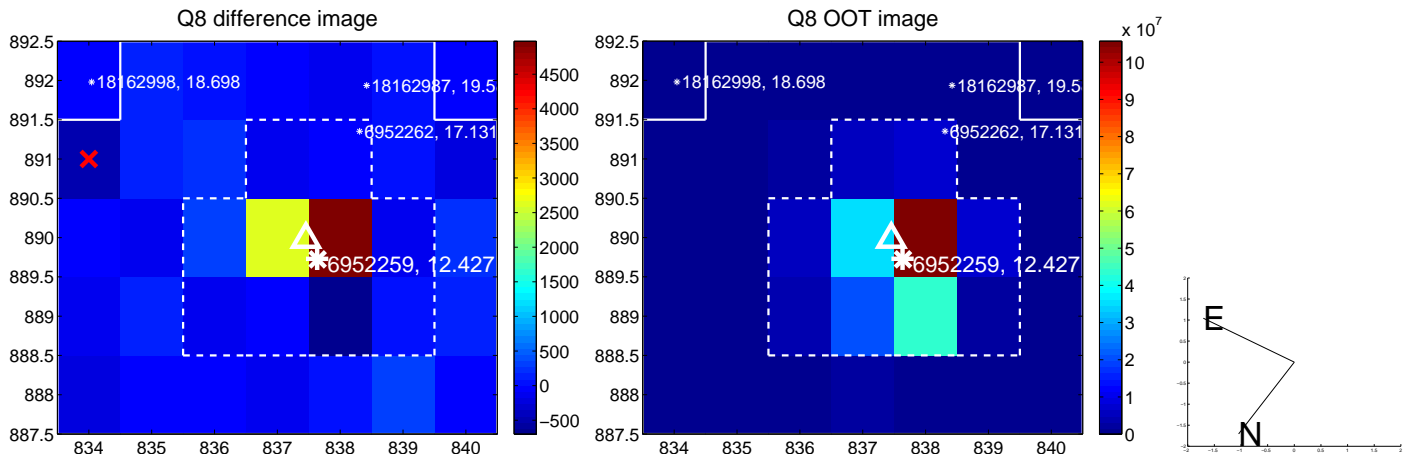
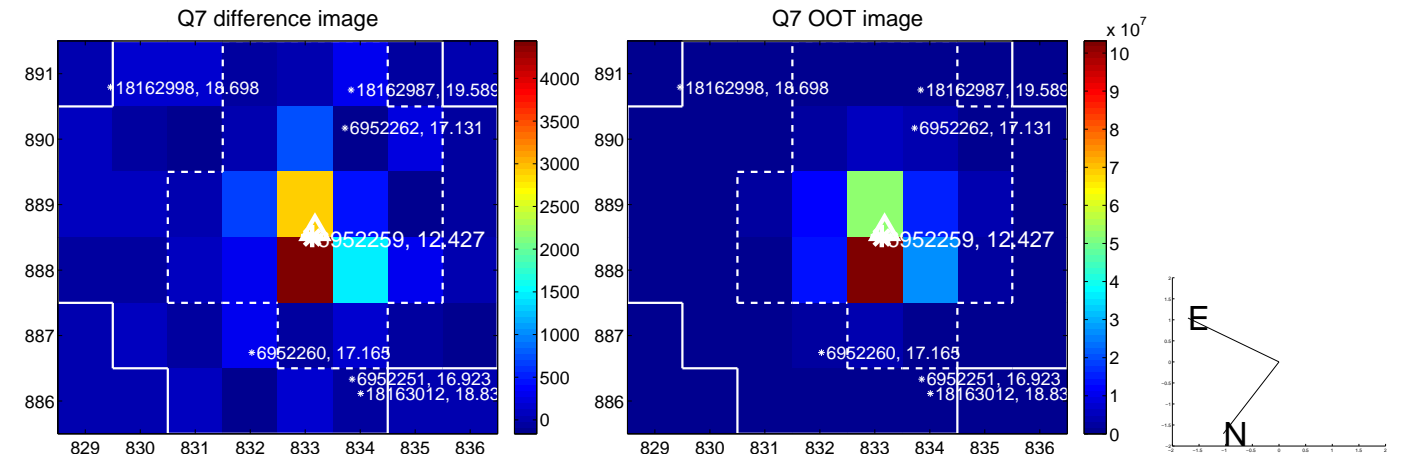
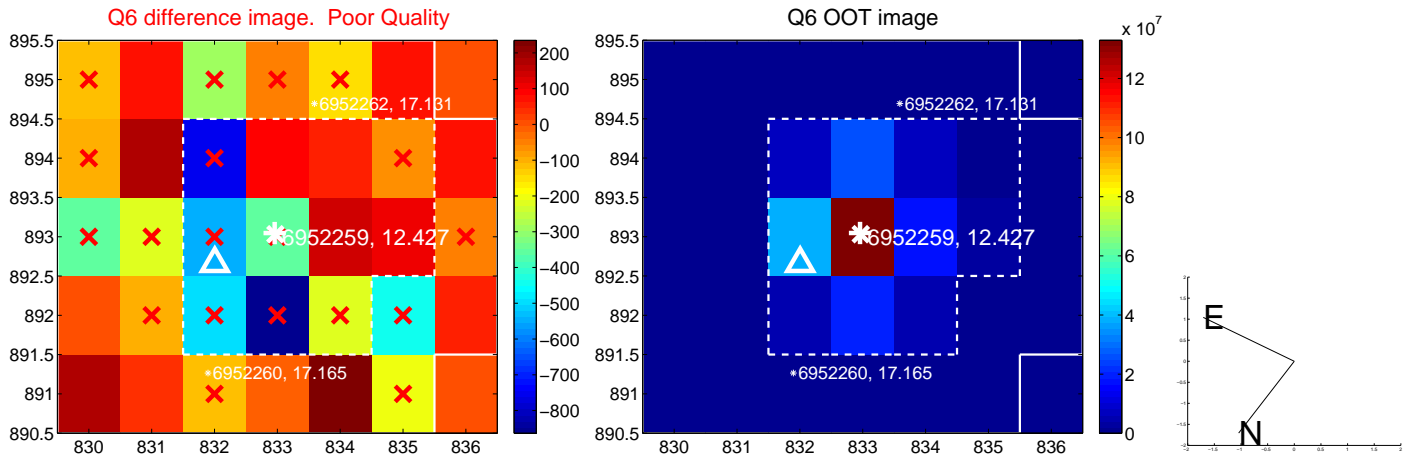
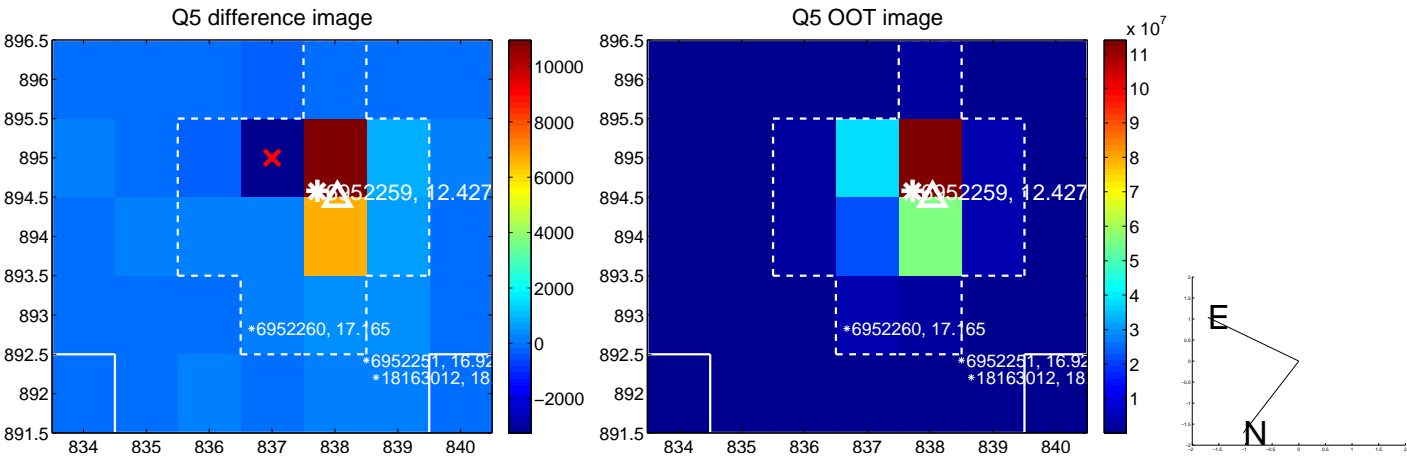


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

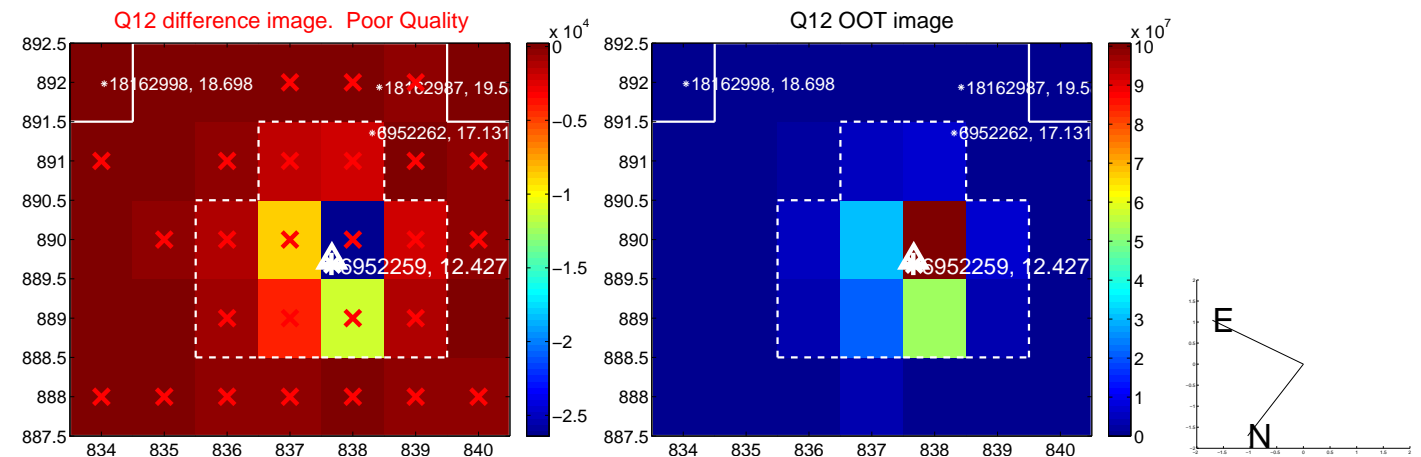
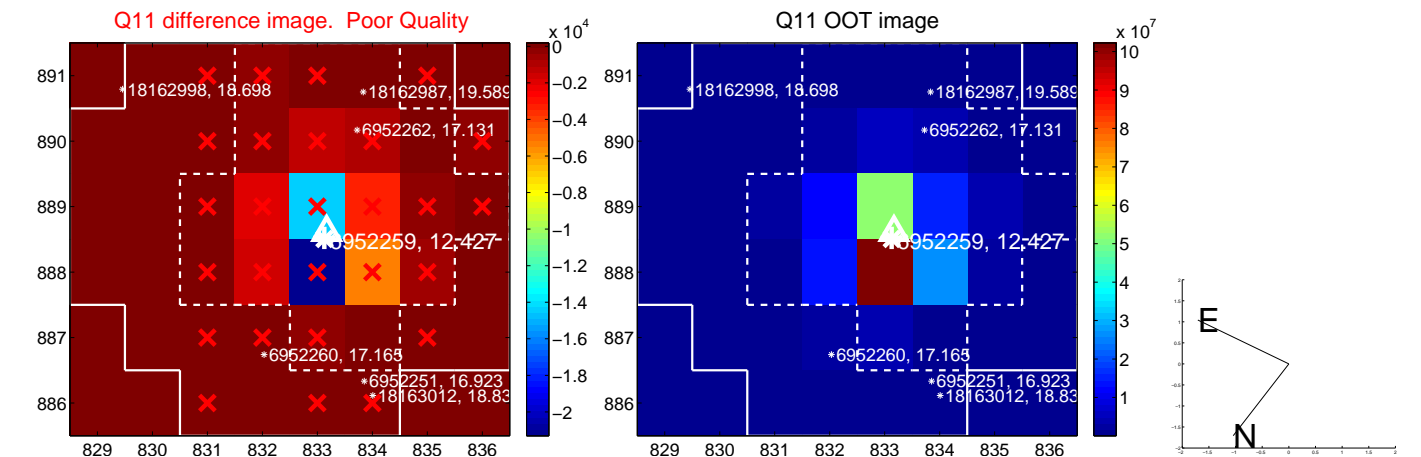
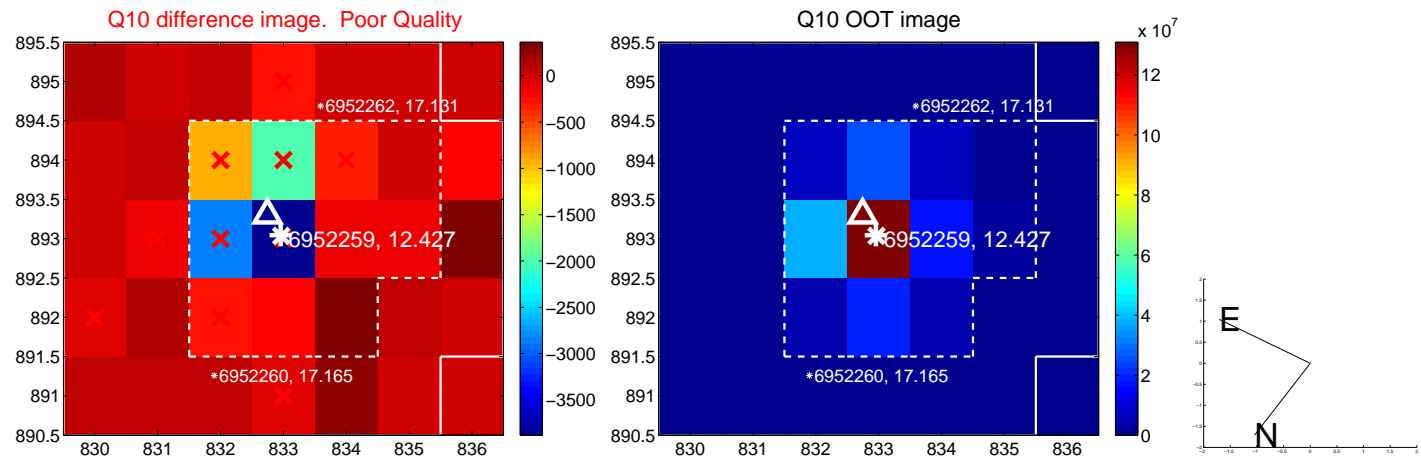
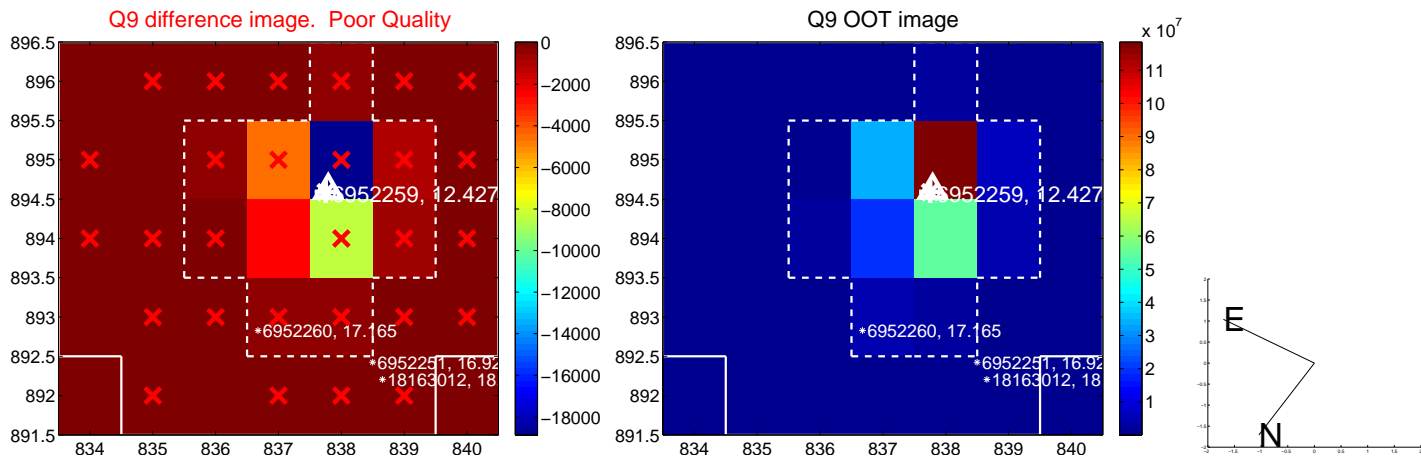
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



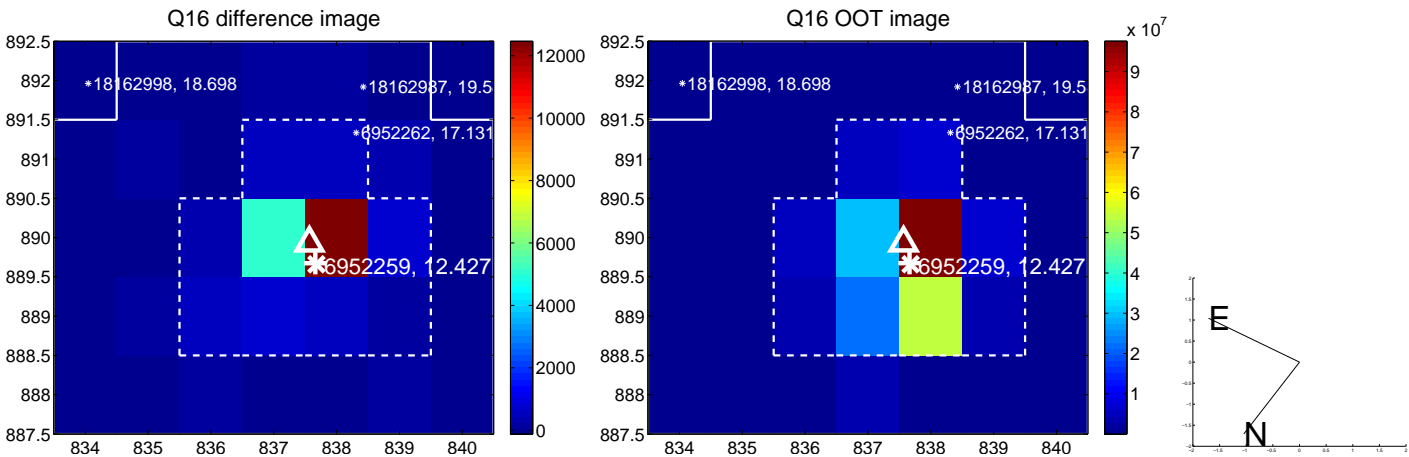
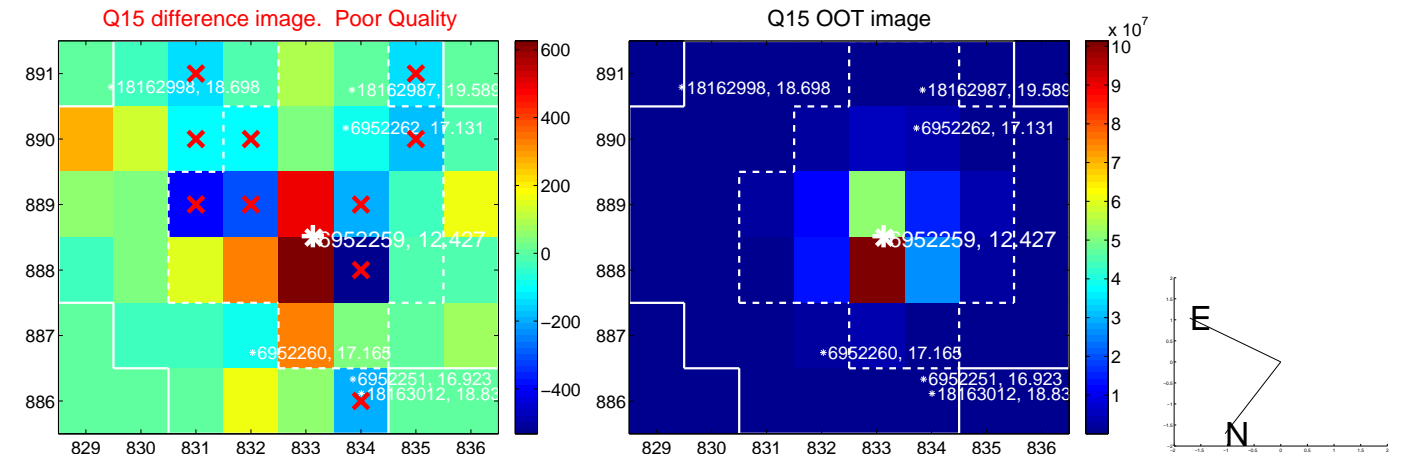
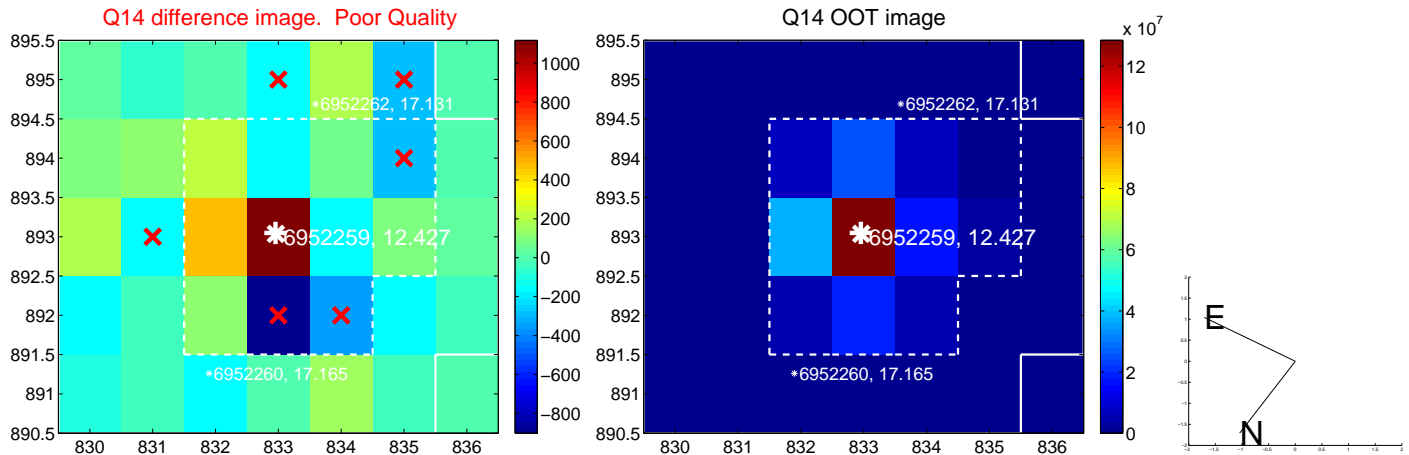
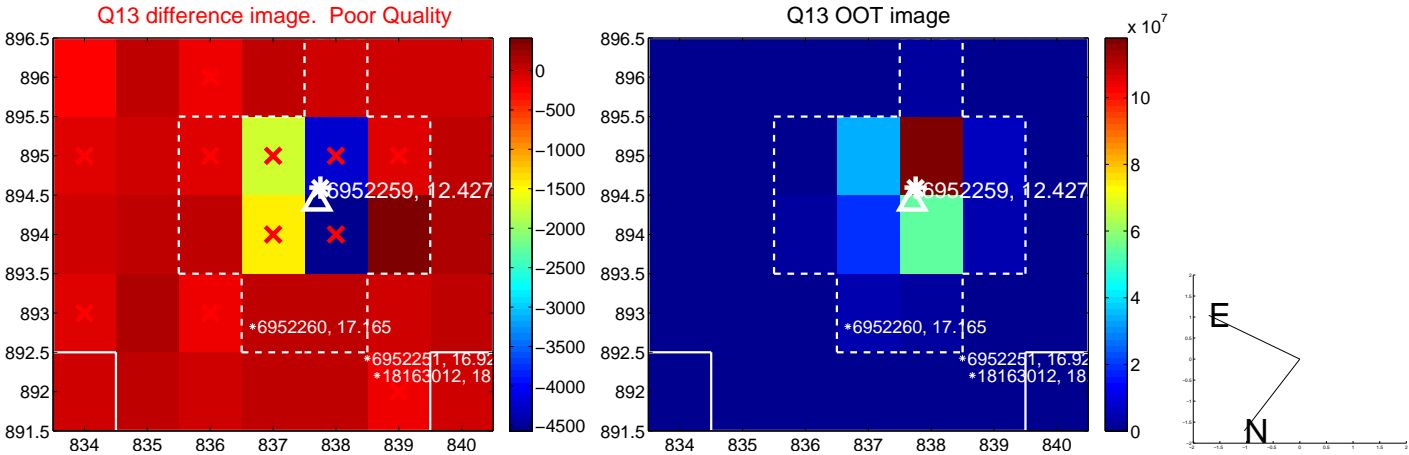
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



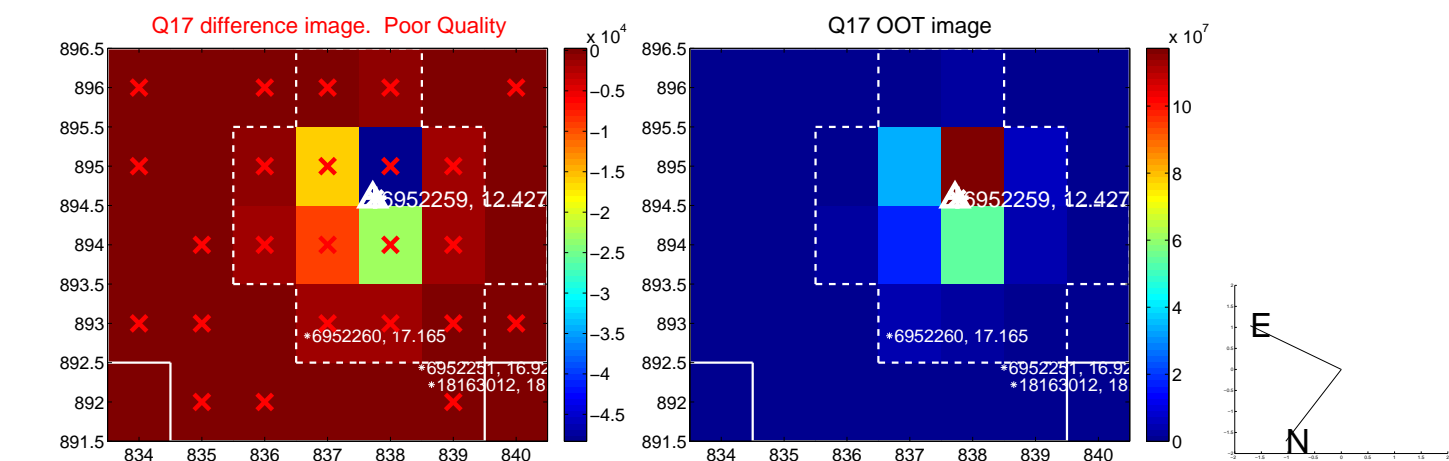
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



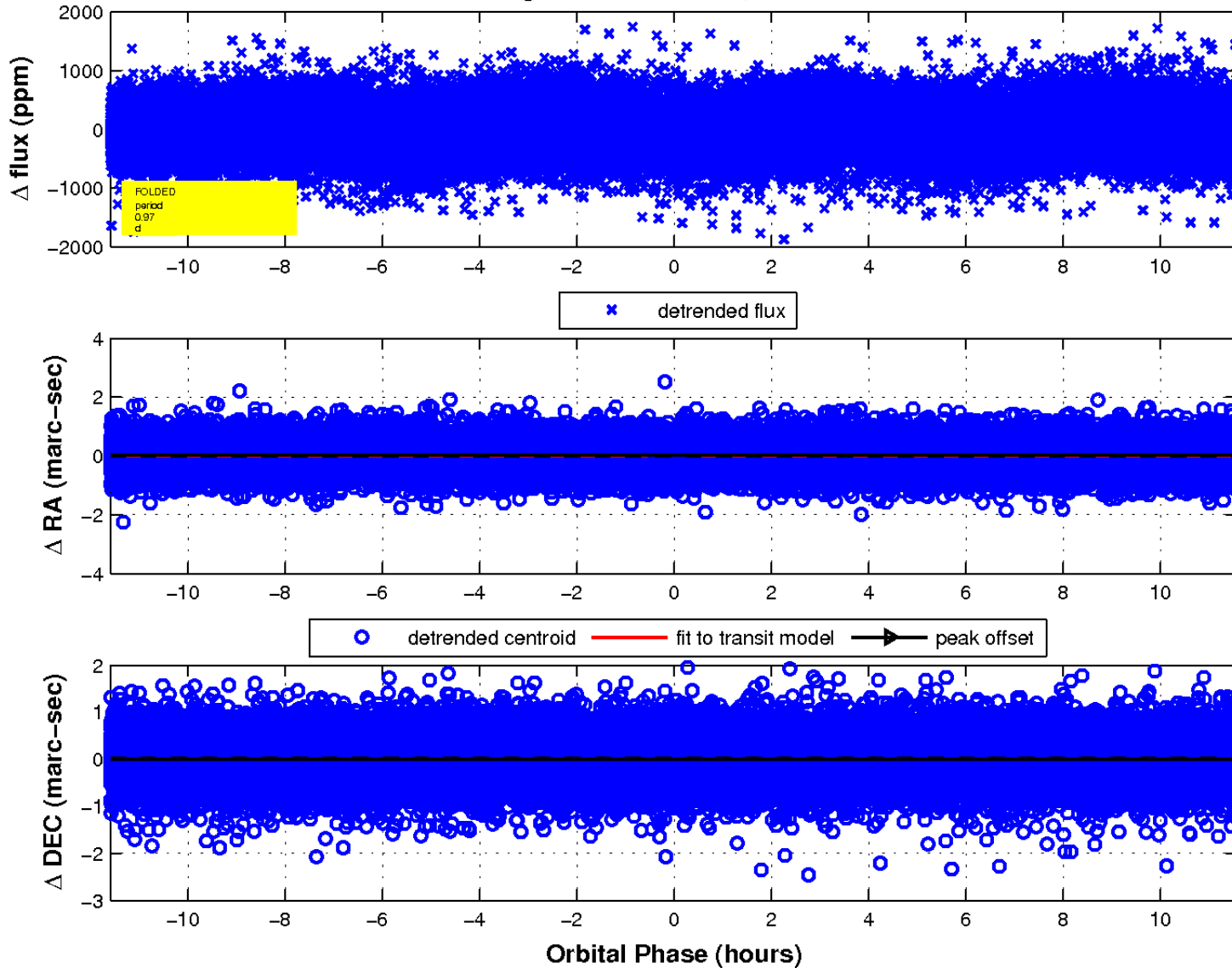
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

