

KIC 004269329

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})
004269329-01	OBS	No	2.102239	131.581888	12.7	6.473	8.4	3.5	2.05	6550	0.86	5168.33
004269329-02	OBS	No	2.103089	133.103002	31.9	17.911	10.4	8.0	2.05	6550	1.17	5165.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004269329-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_POS_DV—CENT_SATURATED
004269329-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

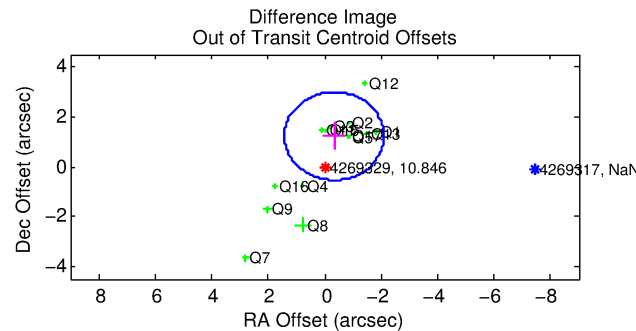
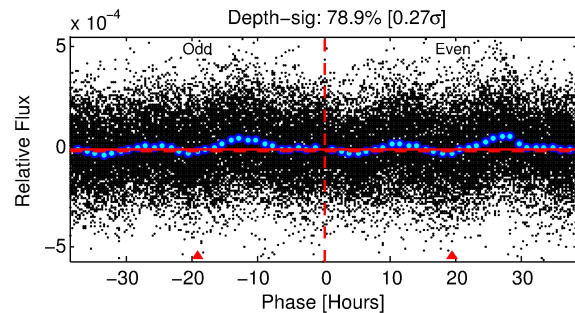
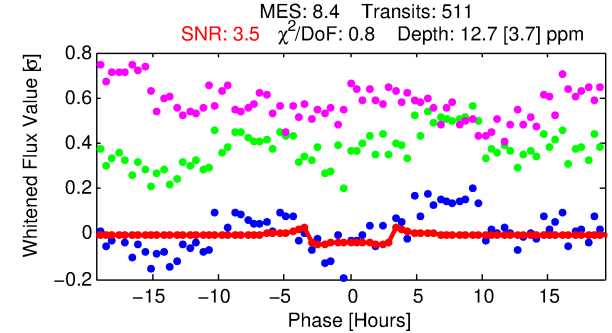
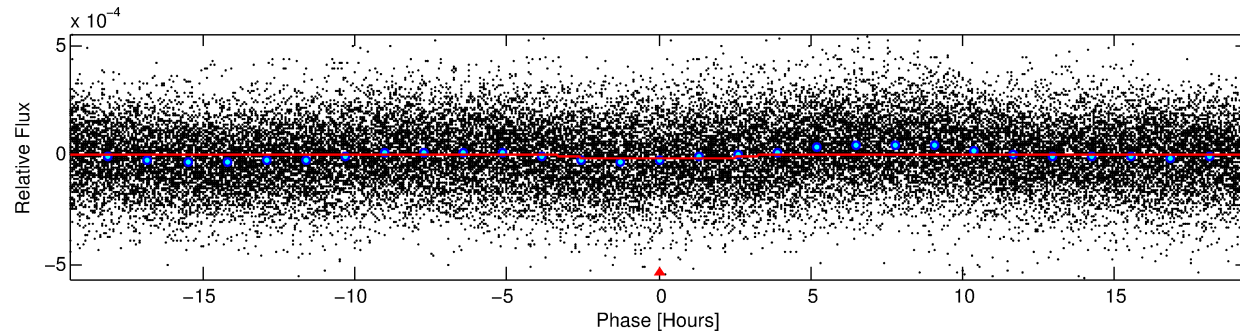
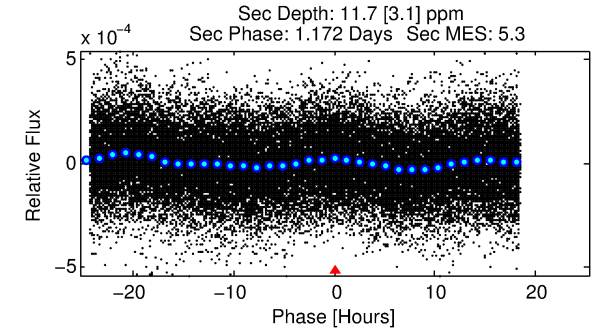
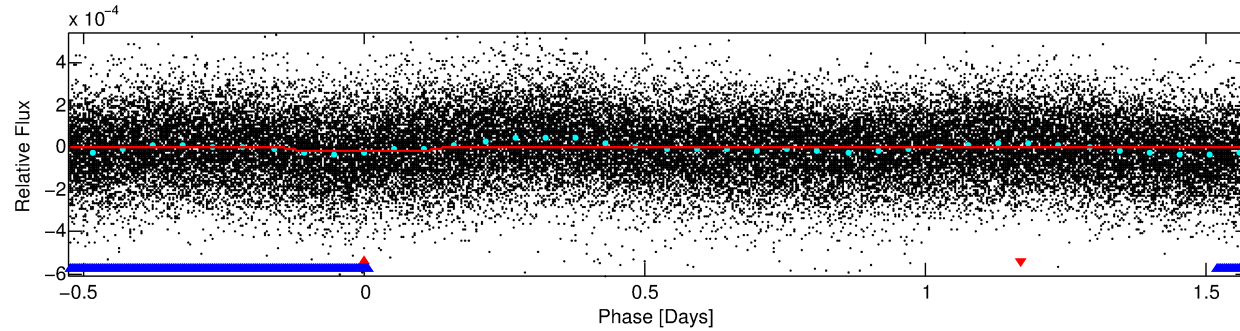
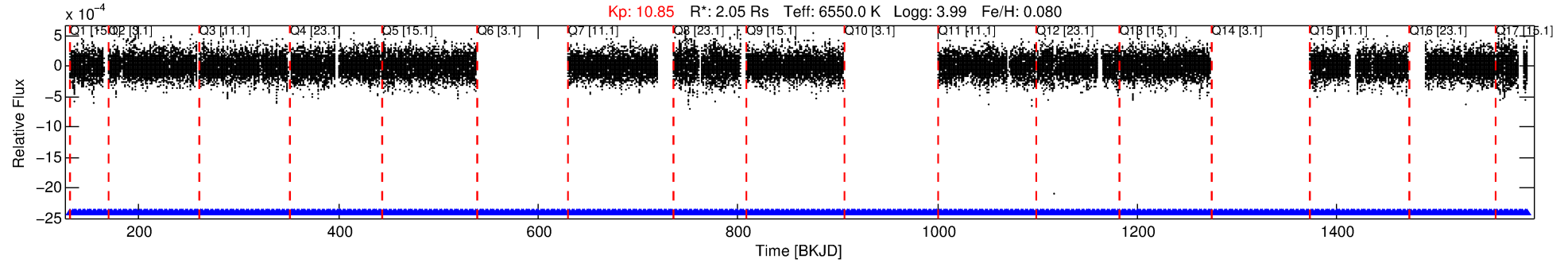
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004269329-01

No Significant Match Found

DV One-Page Summary

KIC: 4269329 Candidate: 1 of 2 Period: 2.102 d



DV Fit Results:

Period = 2.10224 [0.00004] d
Epoch = 131.5819 [0.0079] BKJD
Rp/R* = 0.0038 [0.0014]
a/R* = 1.43 [1.39]
b = 0.90 [0.38]
Seff = 5168.33 [1657.18]
Teq = 2162 [173] K
Rp = 0.86 [0.37] Re
a = 0.0367 [0.0076] AU
Ag = 11.78 [9.83] [1.10σ]
Teffp = 6193 [1197] K [3.33σ]

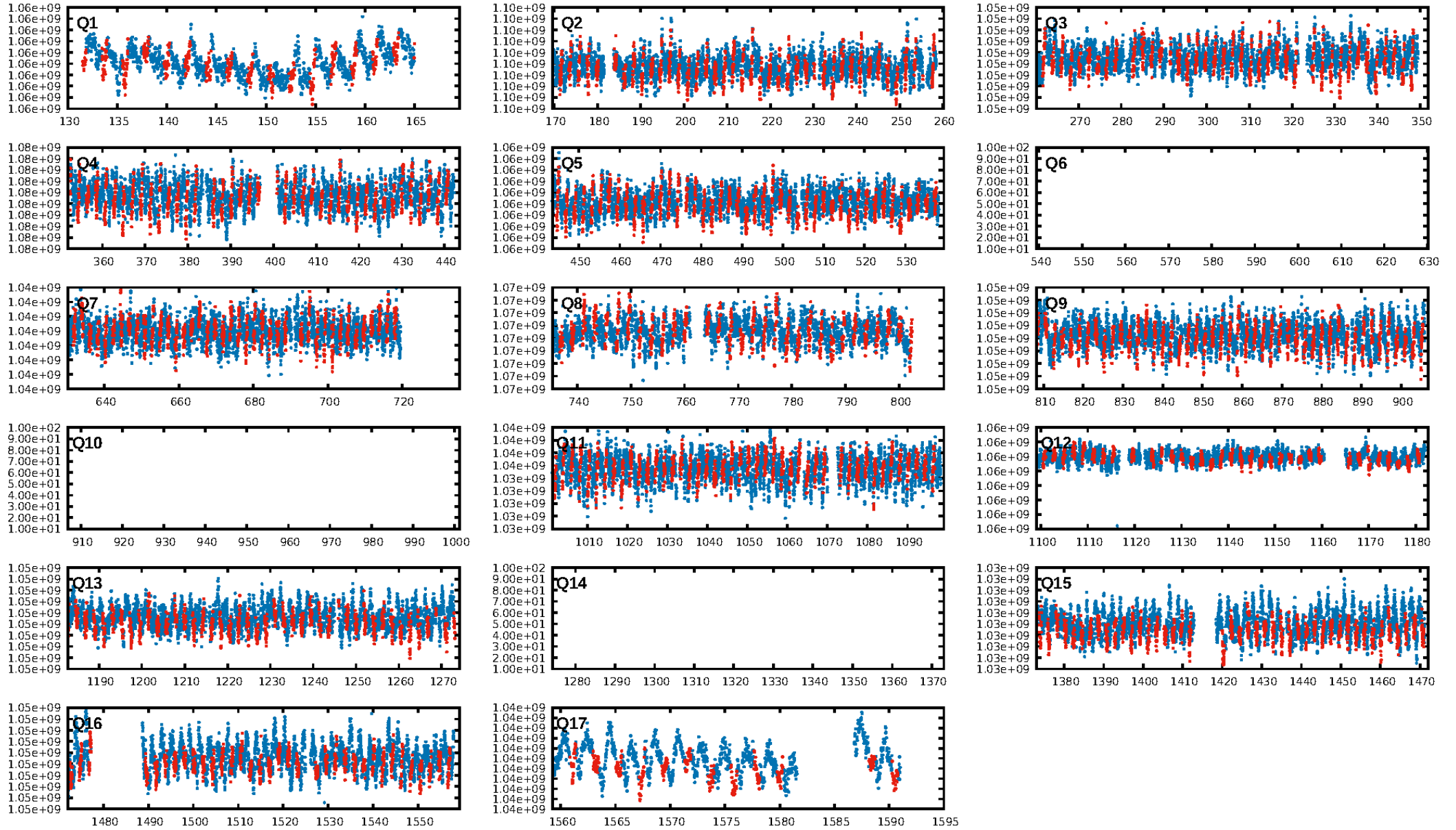
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [483/483]
GhostDiagnostic-chr: 1.952
Centroid-sig: 0.0%
Centroid-so: 3.928 arcsec [3.20σ]
OotOffset-rm: 1.267 arcsec [2.15σ]
KicOffset-rm: 2.022 arcsec [3.35σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.64 [9/14]
DiffImageOverlap-fno: 0.00 [0/14]

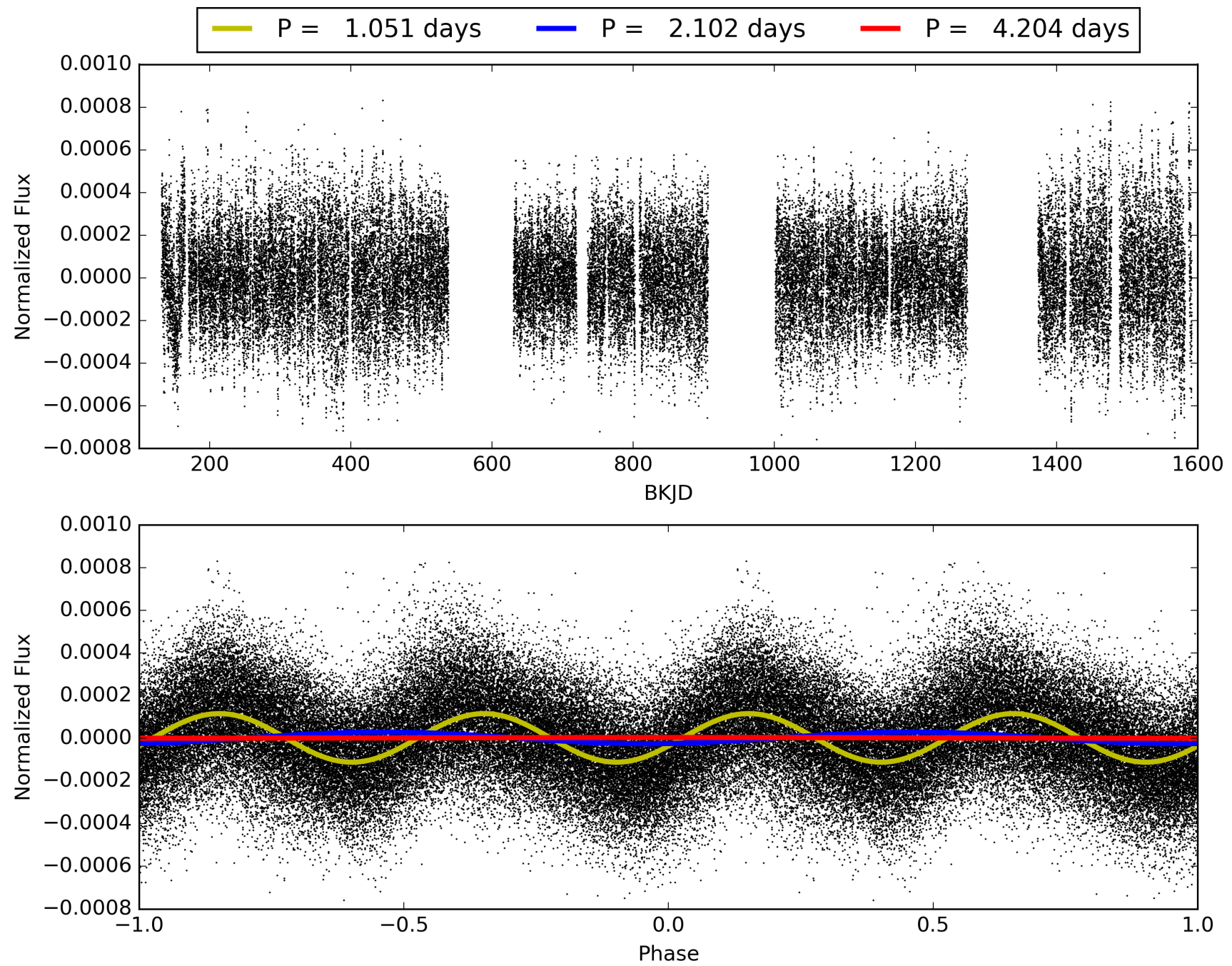
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:27:43 Z

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

TCE 004269329-01, PDC Light Curves

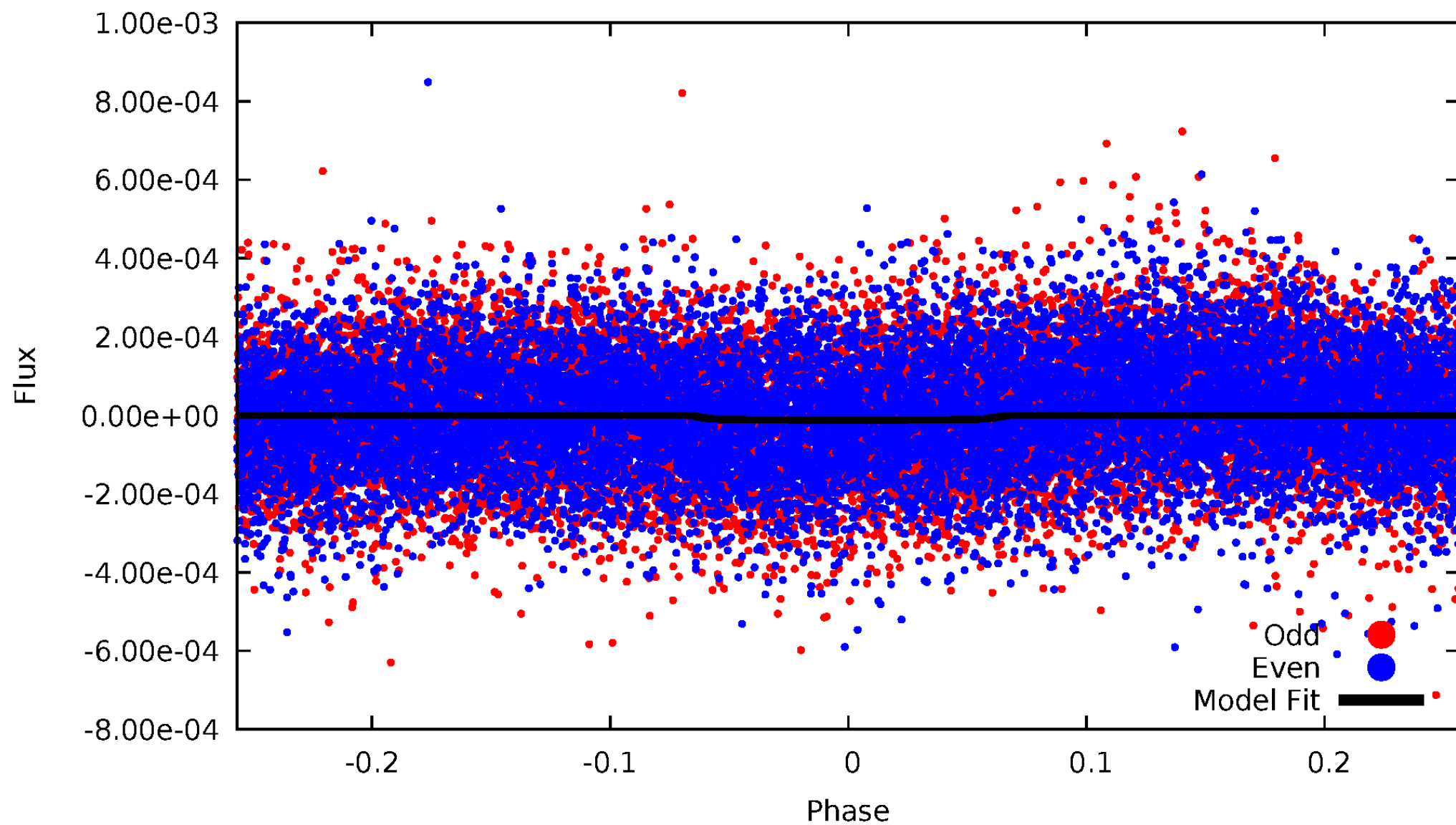


TCE 004269329-01



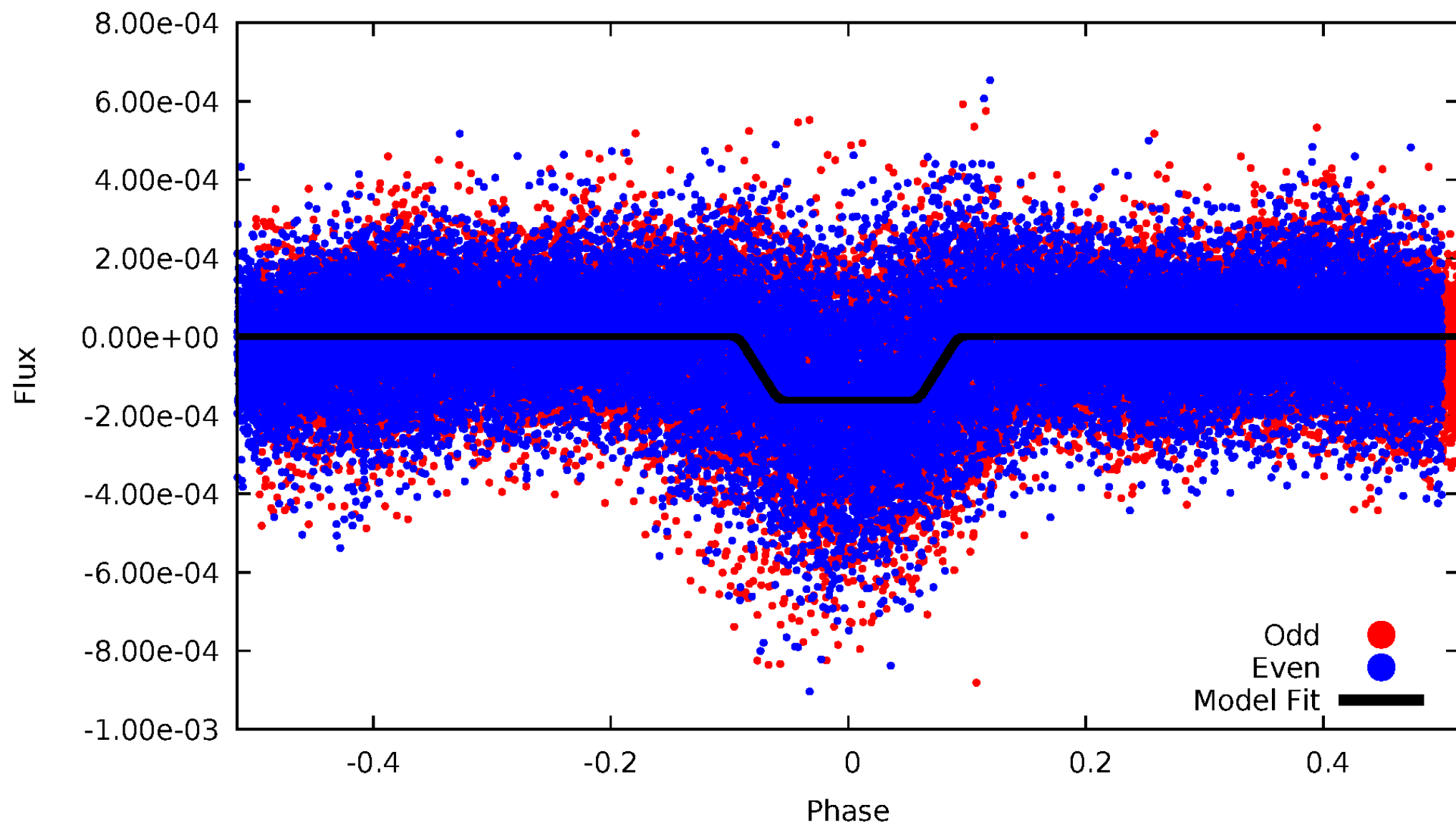
DV Odd/Even

TCE 004269329-01



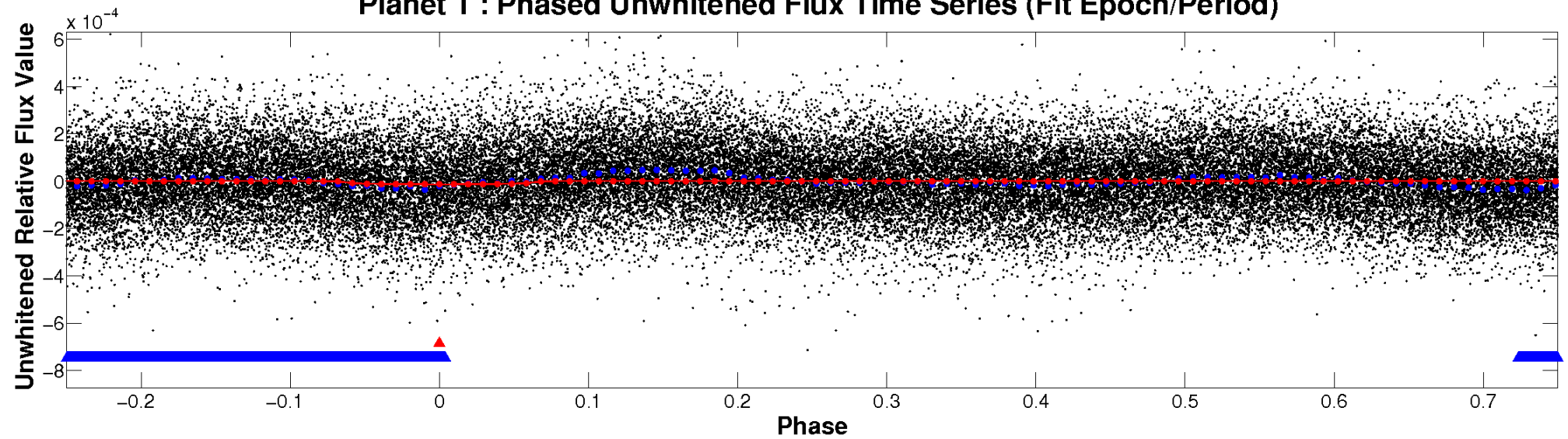
ALT Odd/Even

TCE 004269329-01

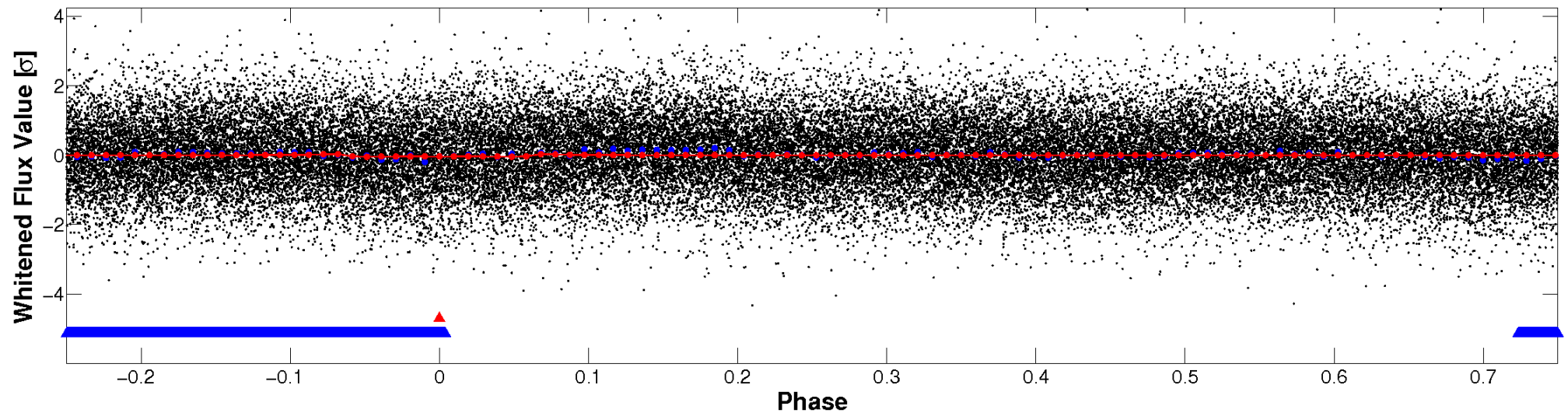


Non-Whitened Vs. Whitened Light Curve

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

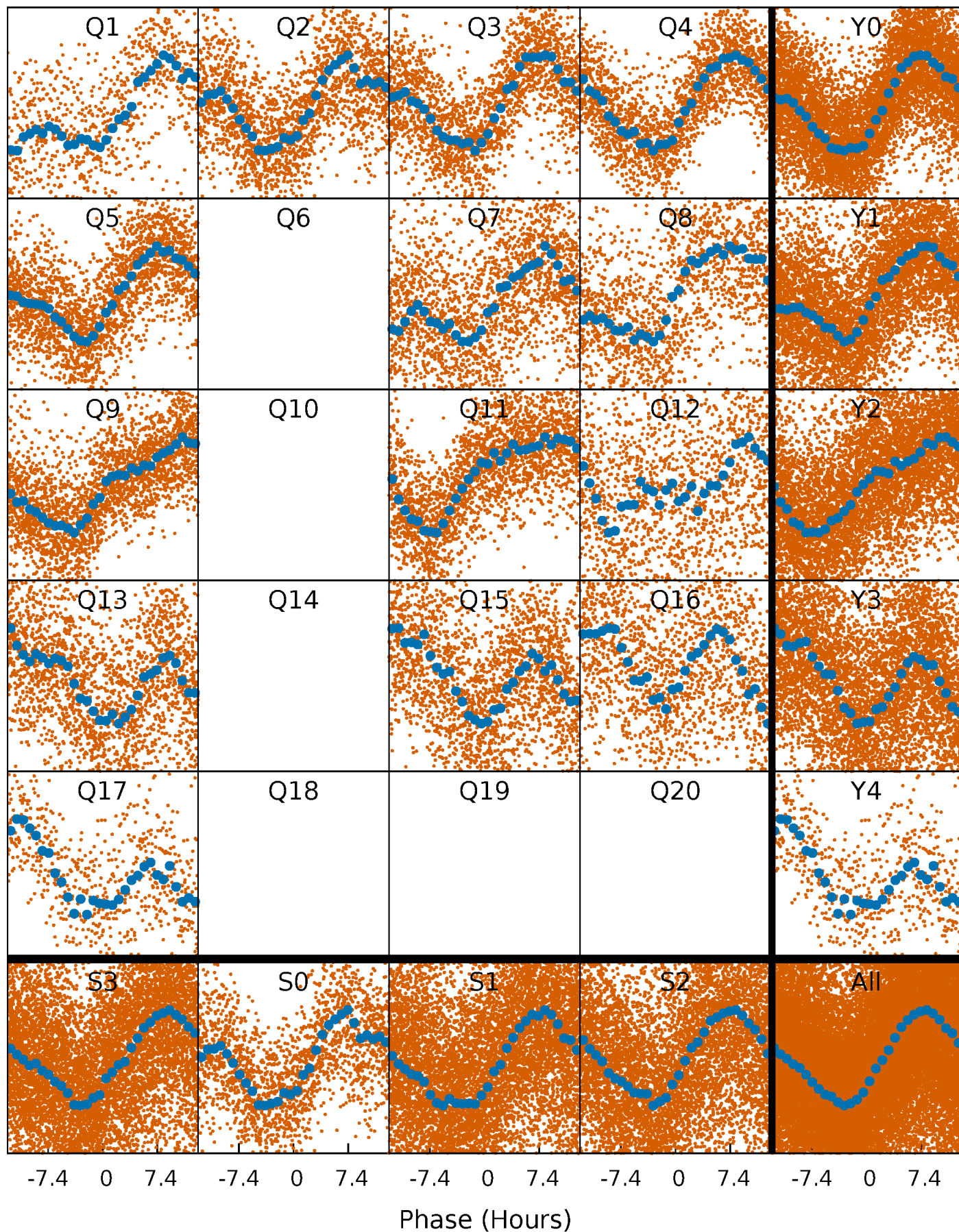


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



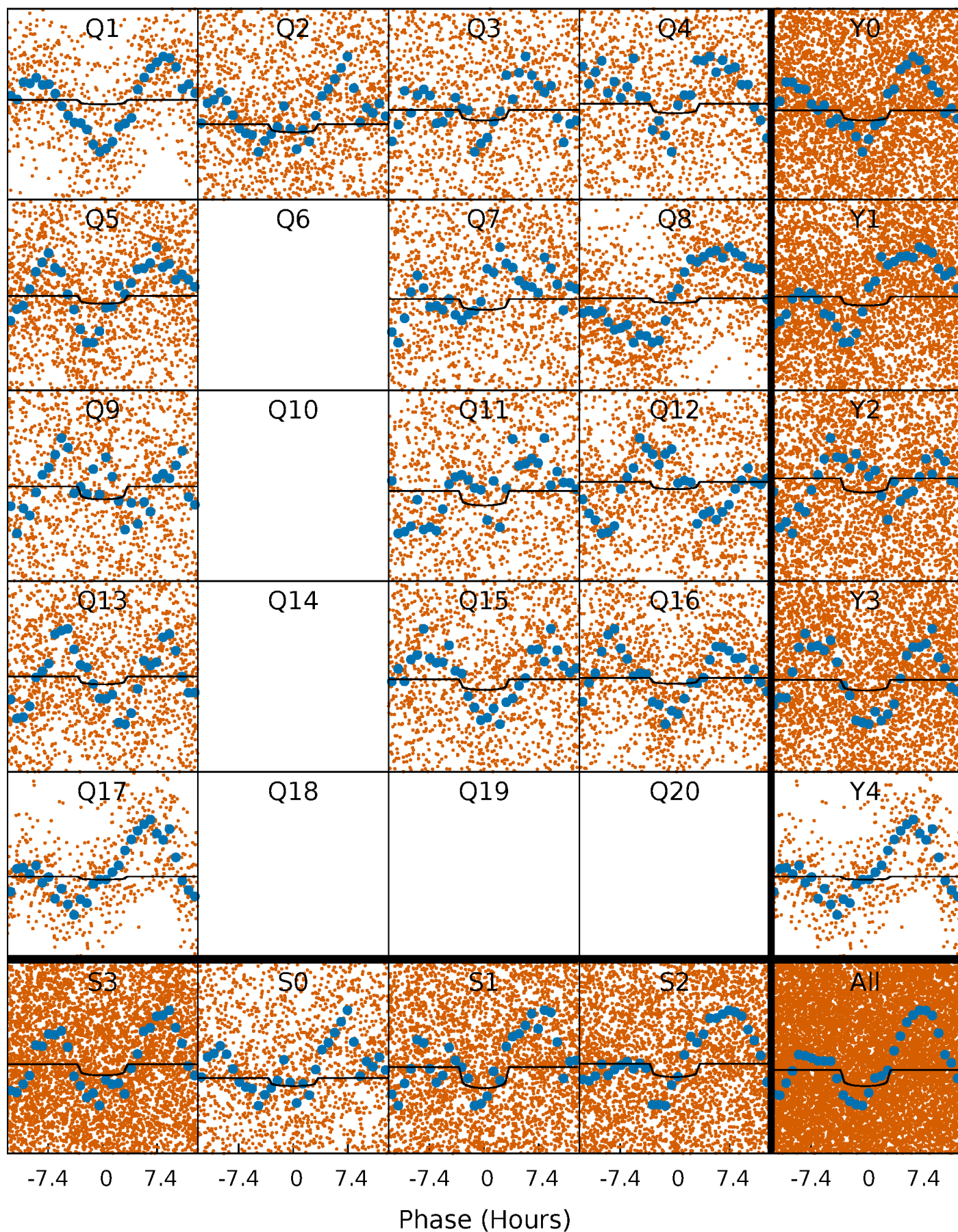
PDC Quarter-Phased Transit Curves

TCE 004269329-01 P= 2.102239 Days $T_0=131.581888$ (BKJD)



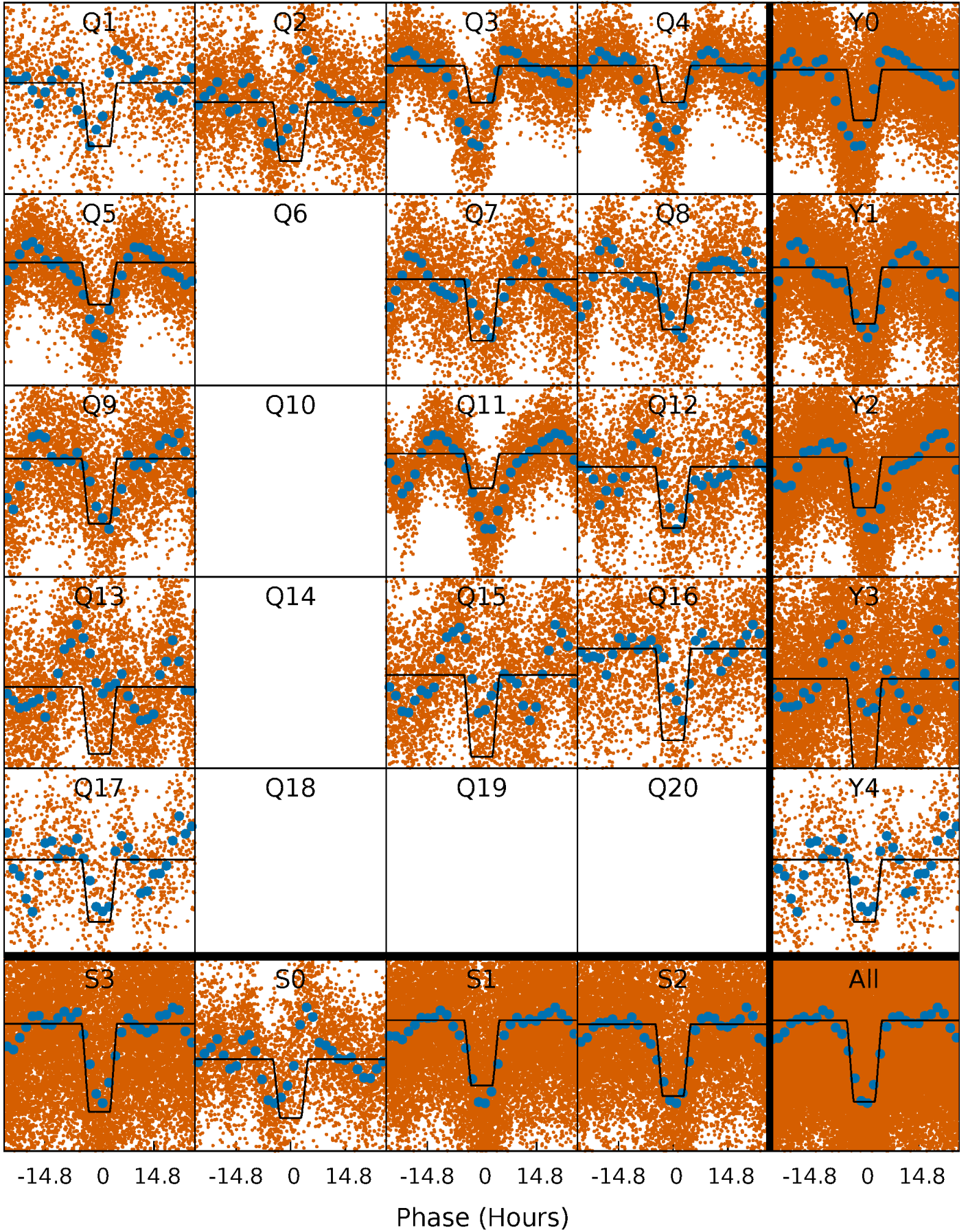
DV Quarter-Phased Transit Curves

TCE 004269329-01 P= 2.102239 Days $T_0=131.581888$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

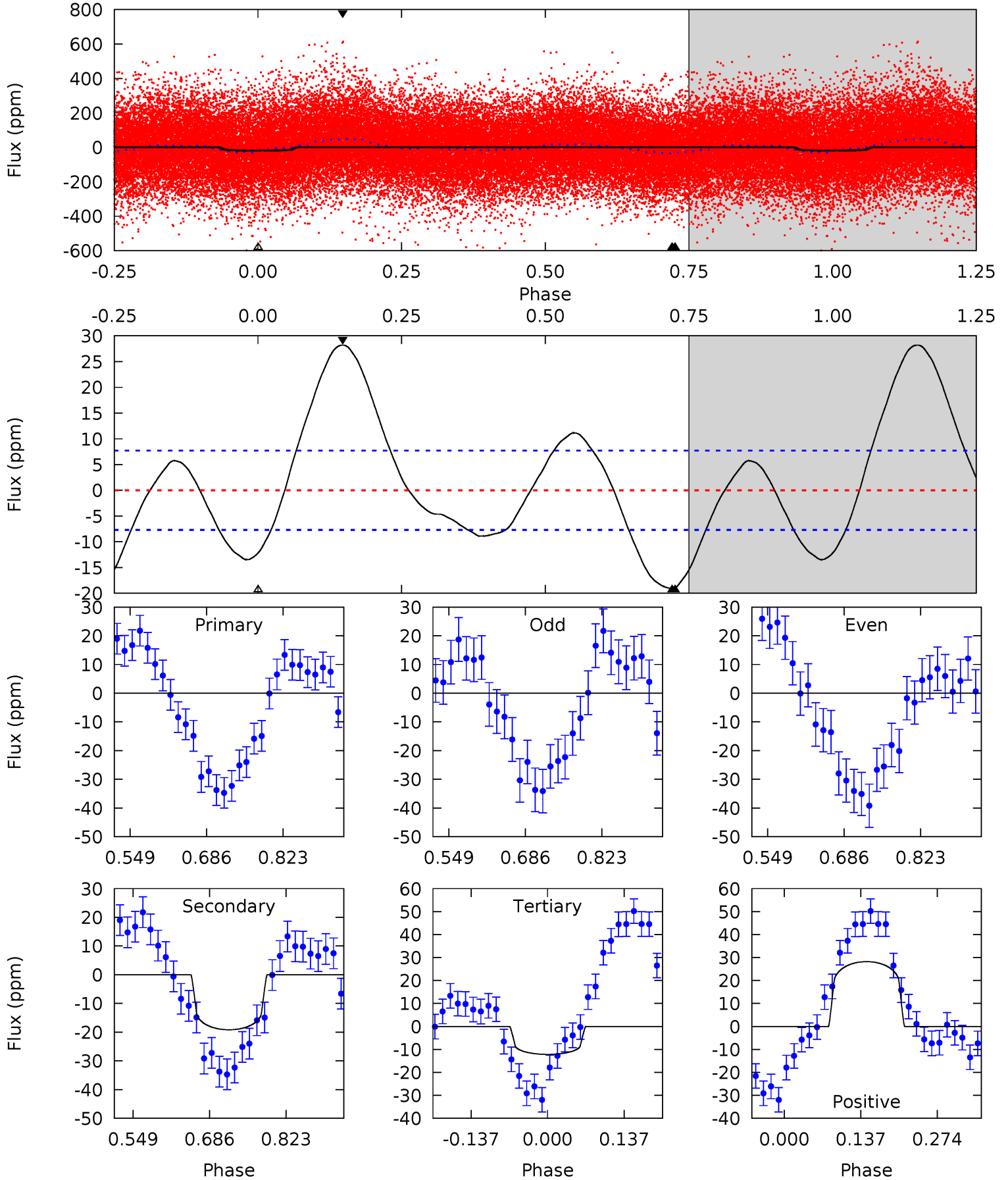
TCE 004269329-01 P= 2.101133 Days $T_0=131.687056$ (BKJD)



DV Model-Shift Uniqueness Test

004269329-01, P = 2.102239 Days, E = 129.479649 Days

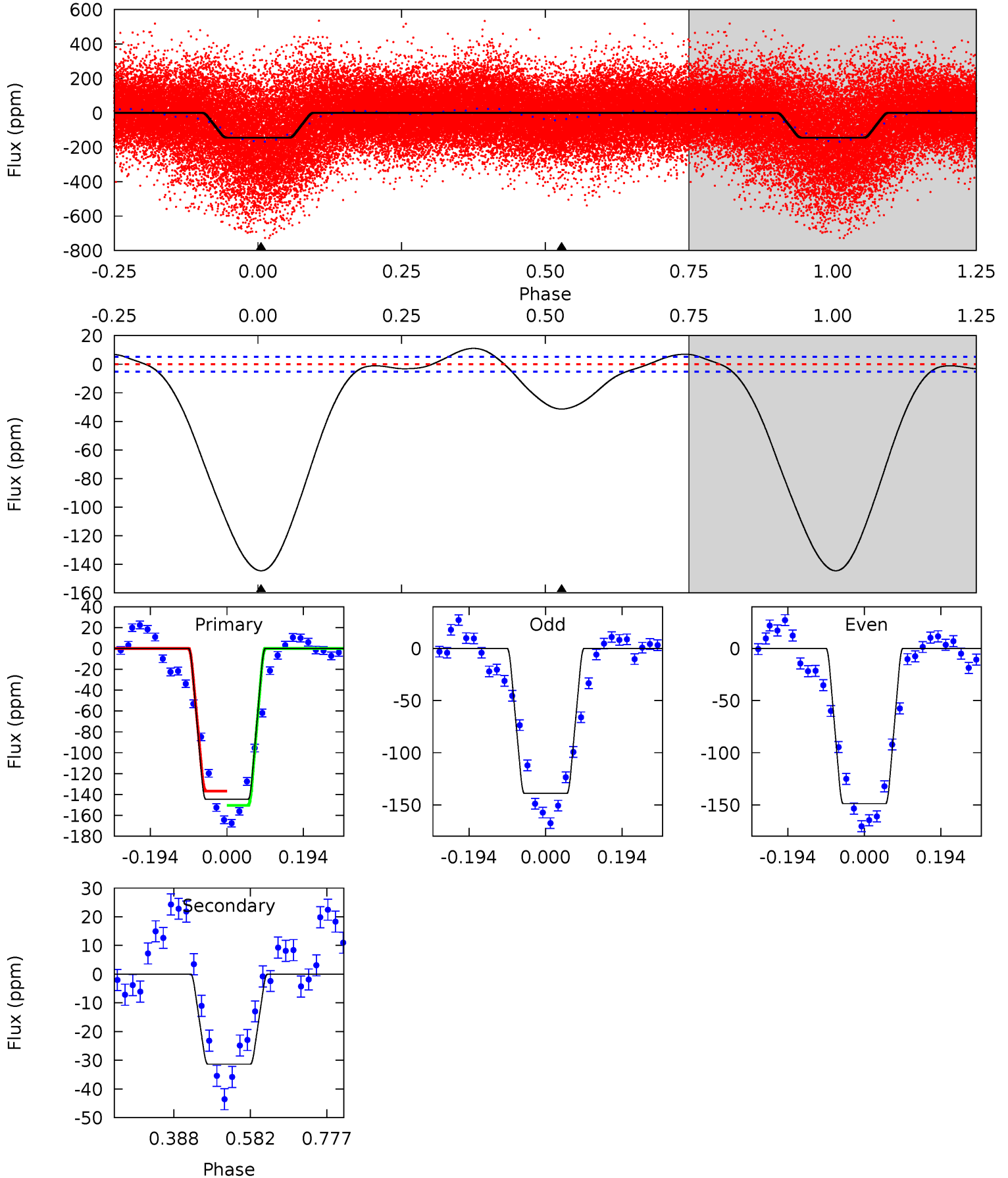
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.1	11.2	7.10	16.5	4.50	1.49	6.80	3.99	-5.38	4.08	-5.28	1.79	0.96	0.60	5.47



Alt Model-Shift Uniqueness Test

004269329-01, P = 2.101133 Days, E = 129.585923 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
122.3	26.5	0	0	4.42	1.30	3.04	122.3	122.3	26.5	26.5	4.12	1.09	0.07	5.75



Stellar Parameters For KIC 004269329

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6550^{+78}_{-85}	$3.986^{+0.180}_{-0.120}$	$0.080^{+0.150}_{-0.150}$	$2.054^{+0.389}_{-0.475}$	$1.491^{+0.135}_{-0.165}$	$0.242^{+0.234}_{-0.088}$
	+1%/-1%	+5%/-3%	+188%/-188%	+19%/-23%	+9%/-11%	+96%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004269329-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-19 ± 2	$0.84^{+0.33}_{-0.32}$	3009^{+153}_{-169}	6990^{+2515}_{-1052}	20^{+32}_{-9}
Alt.	-31 ± 1	$2.81^{+0.46}_{-0.44}$	3015^{+149}_{-174}	4423^{+242}_{-199}	$2.938^{+1.157}_{-0.756}$

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 $A_{obs} \gg 1.0$

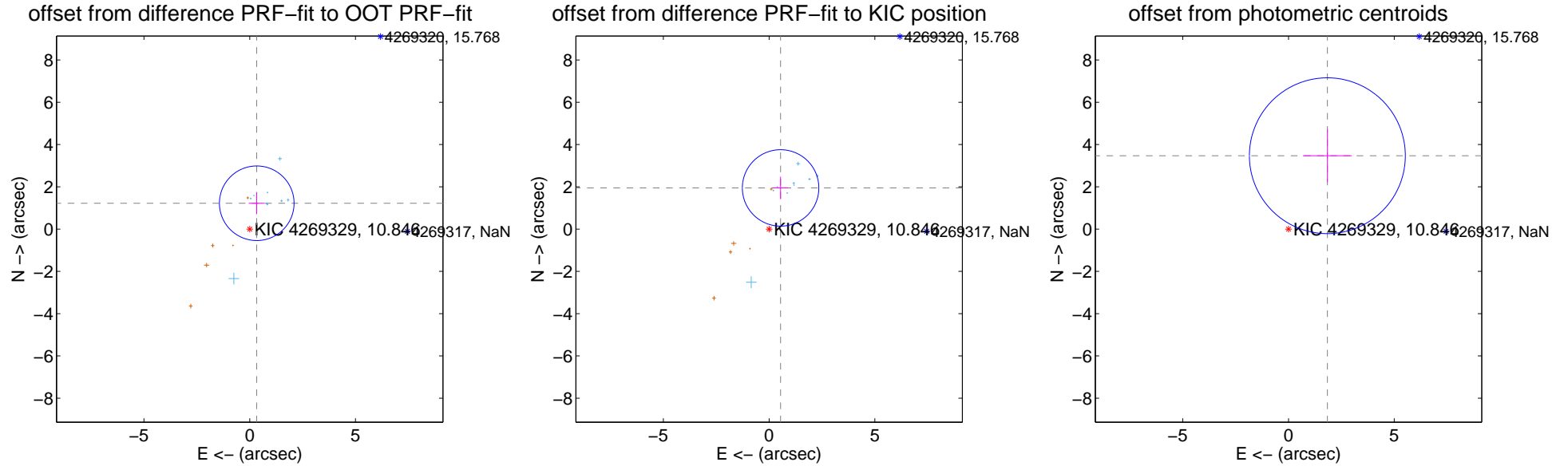
DV Centroid Data

Supplemental centroid analysis for 004269329-01. **Kepler magnitude: 10.85**. Transit SNR 3.51

There are 9 quarters with good PRF difference image offsets

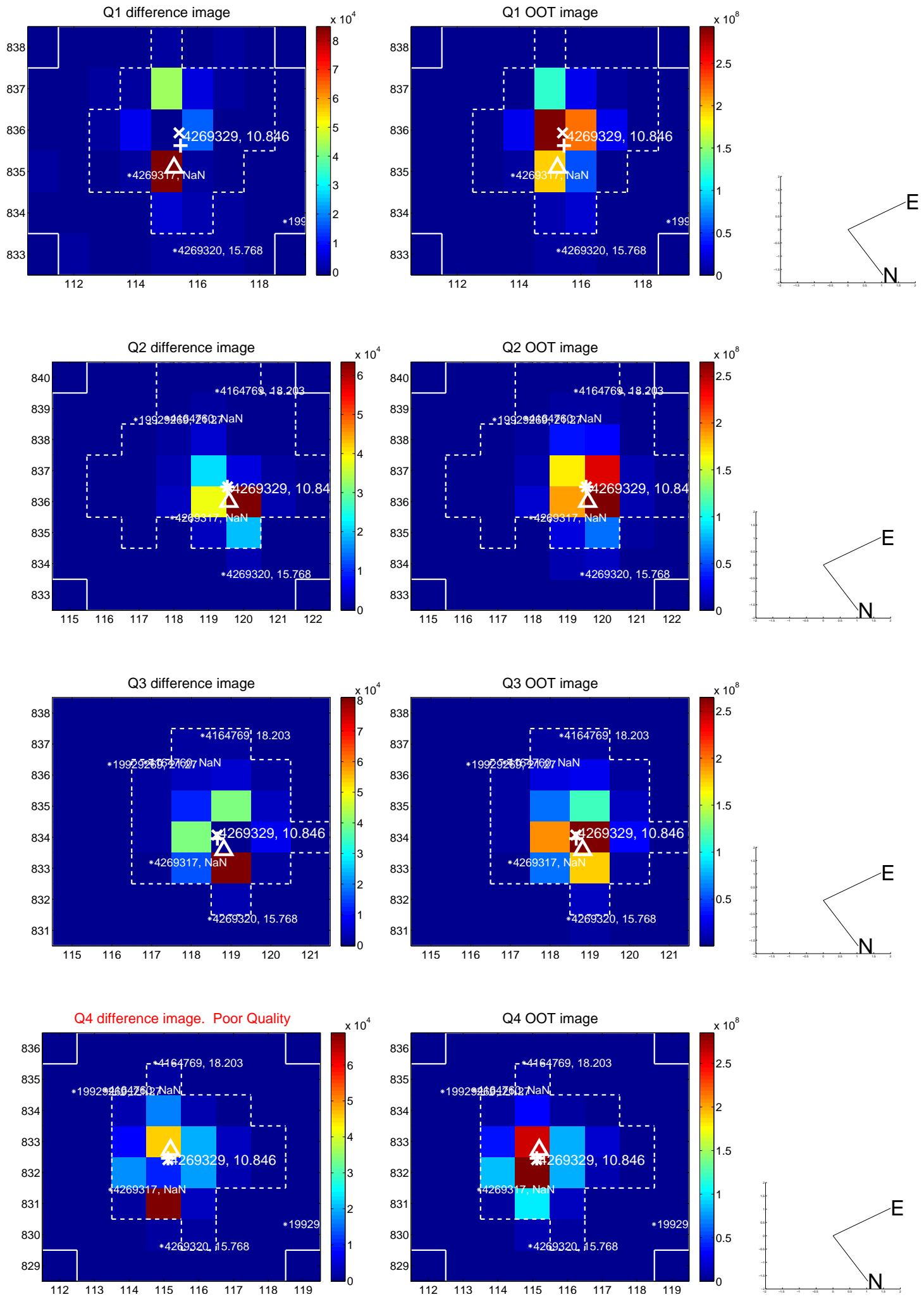
The direct PRF centroid is offset from the target star catalog position by about 1.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.267 ± 0.588	2.15	-0.332 ± 0.383	1.223 ± 0.518
PRF-fit source offset from KIC position	2.022 ± 0.603	3.35	-0.544 ± 0.380	1.948 ± 0.530
photometric centroid source offset	3.93 ± 1.23	3.20	-1.84 ± 1.15	3.47 ± 1.25

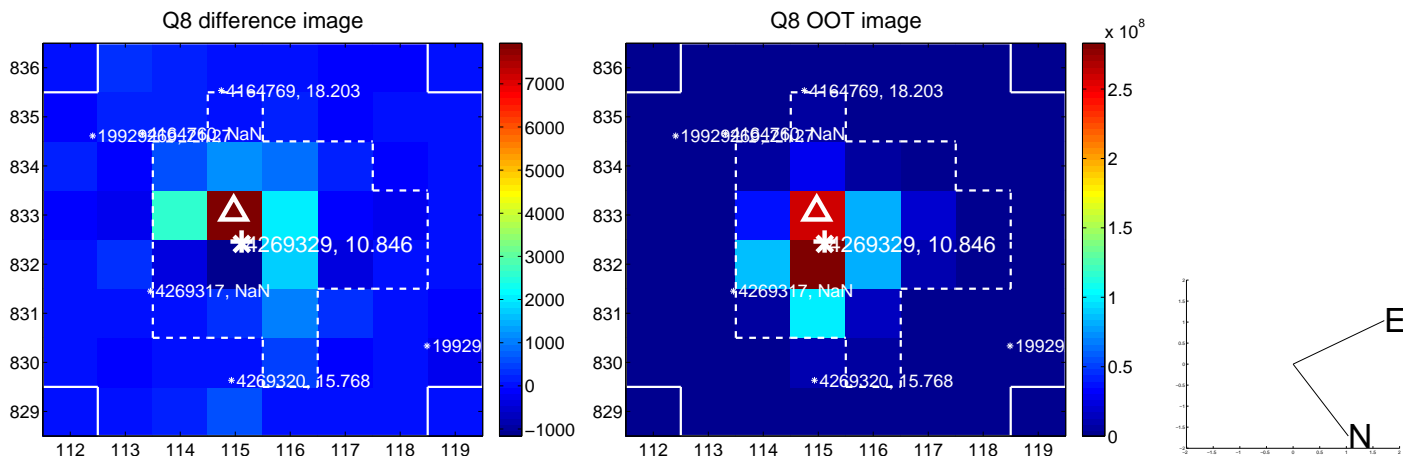
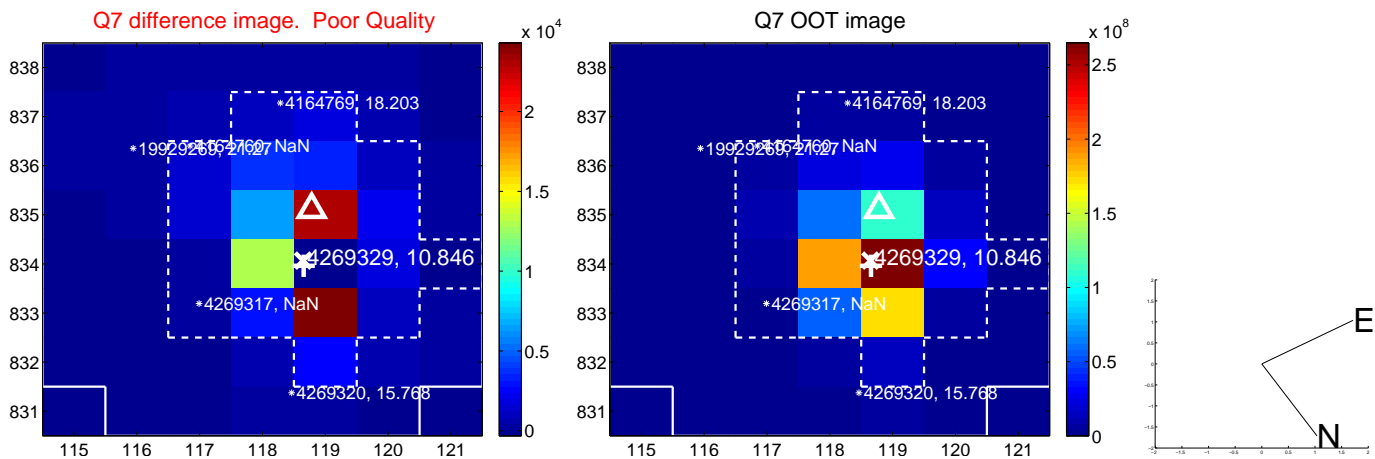
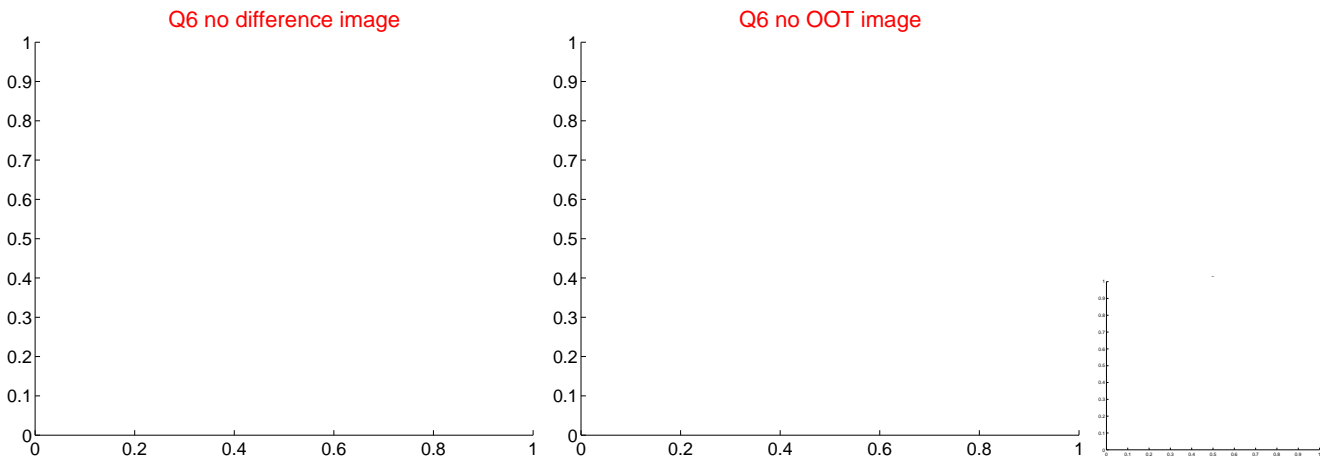
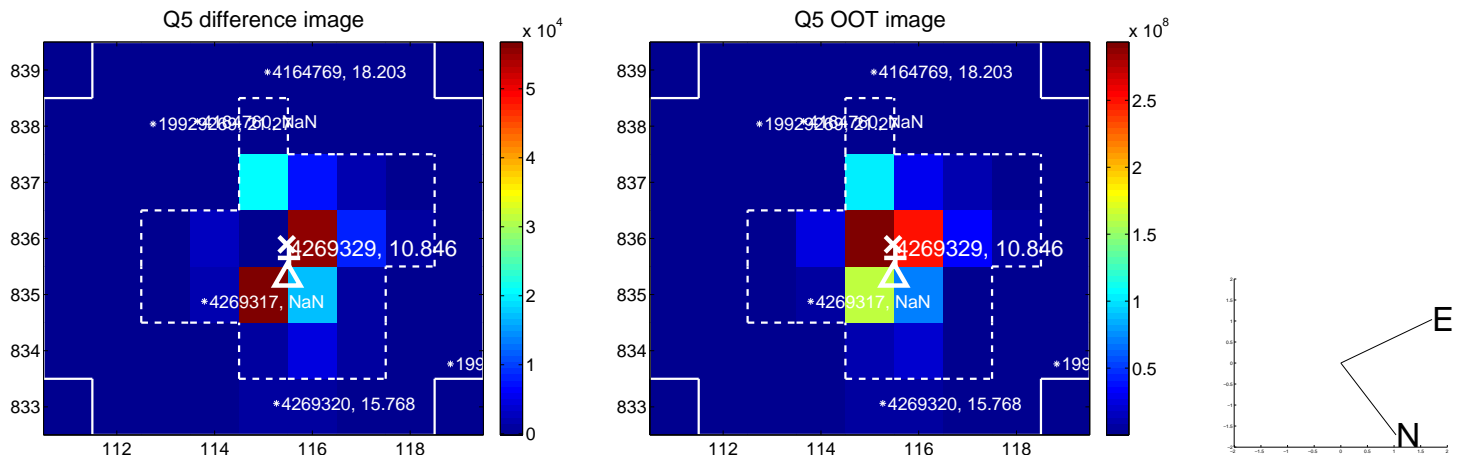


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

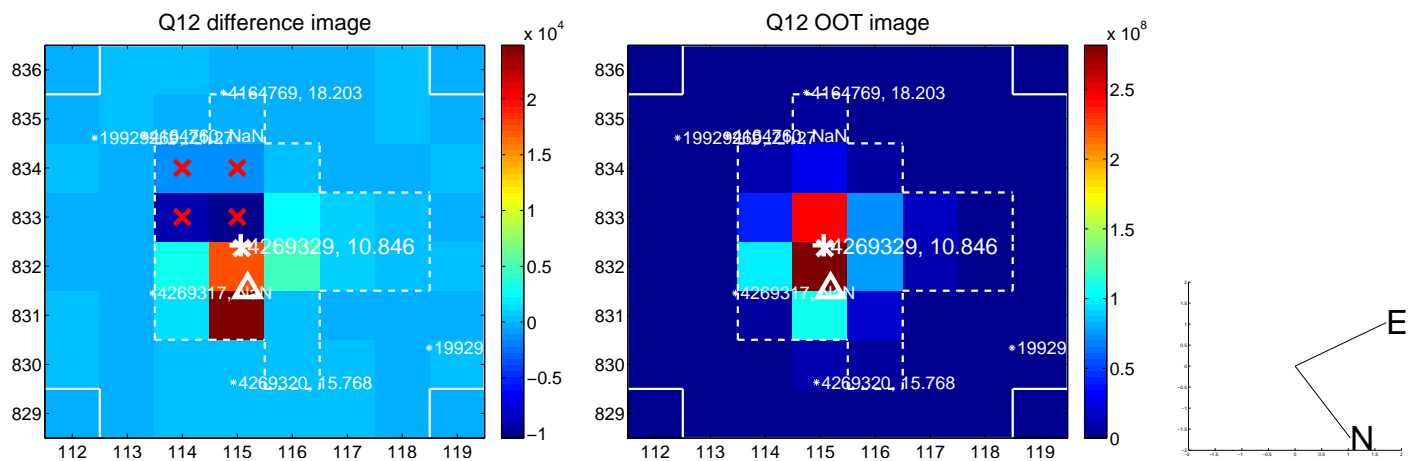
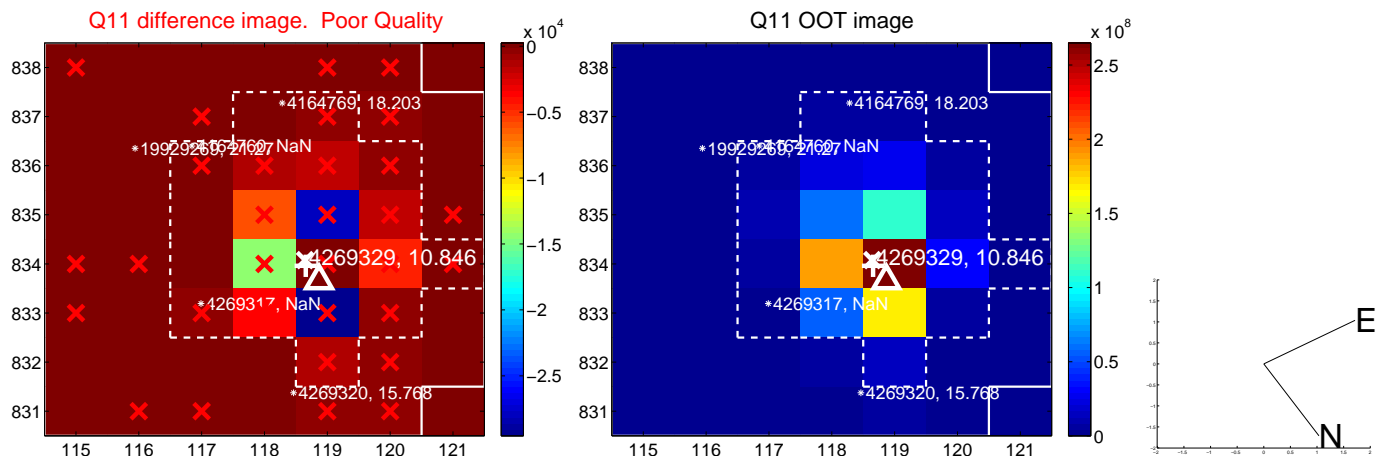
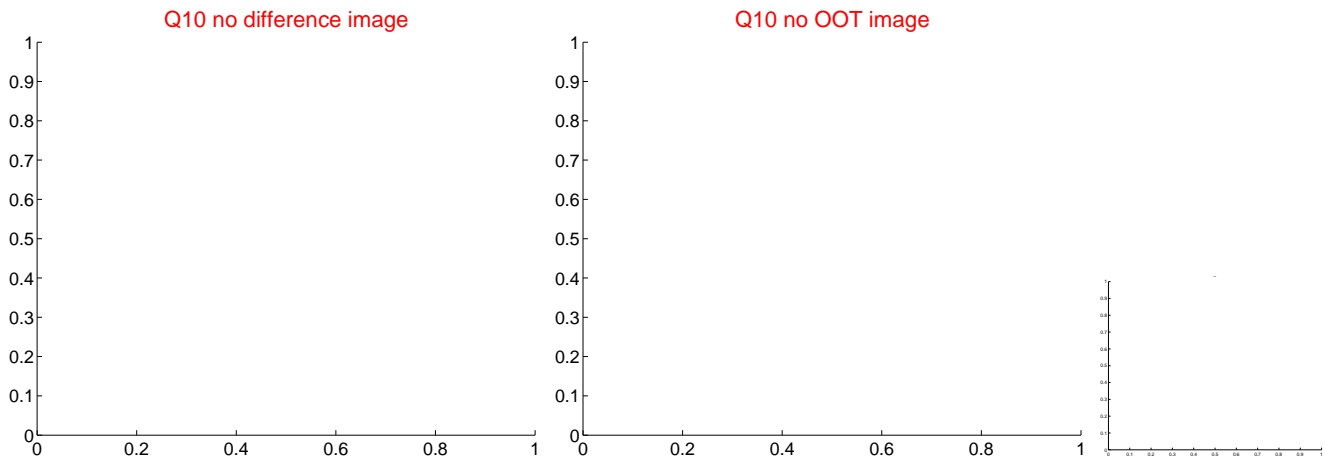
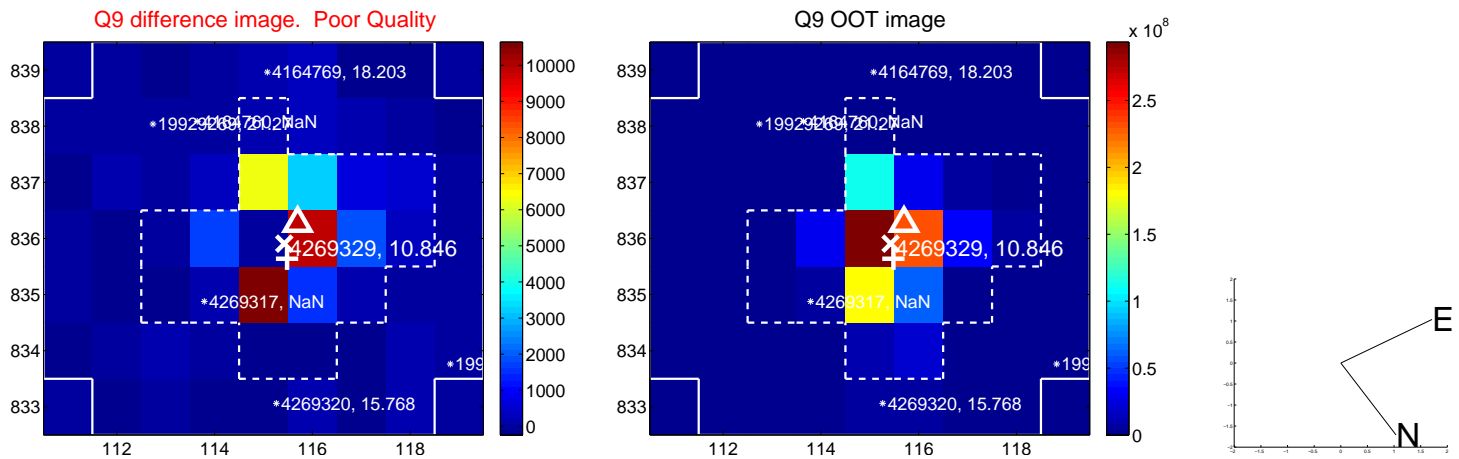
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



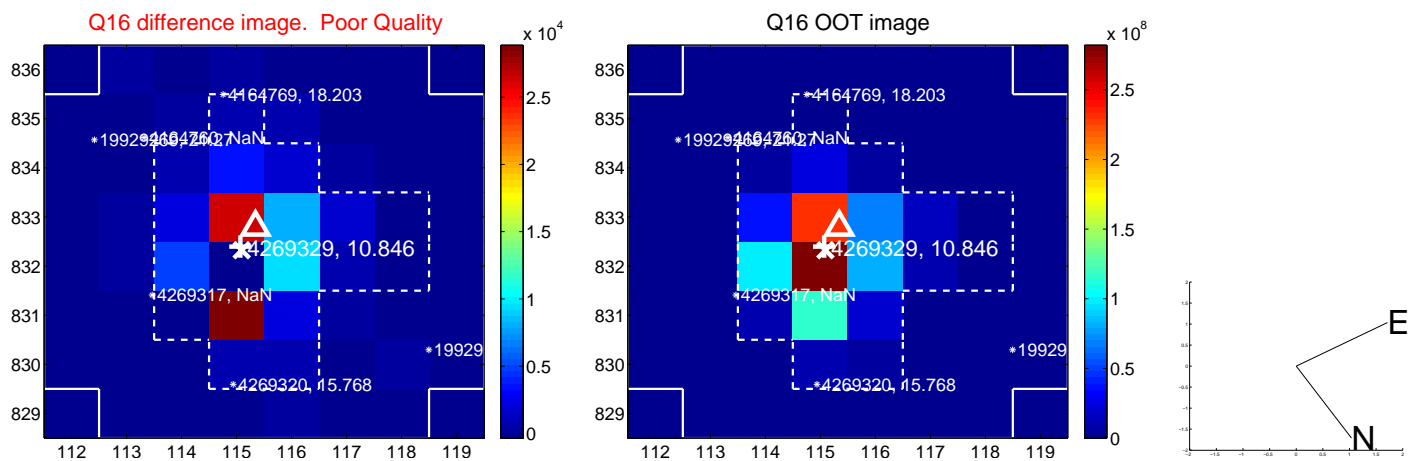
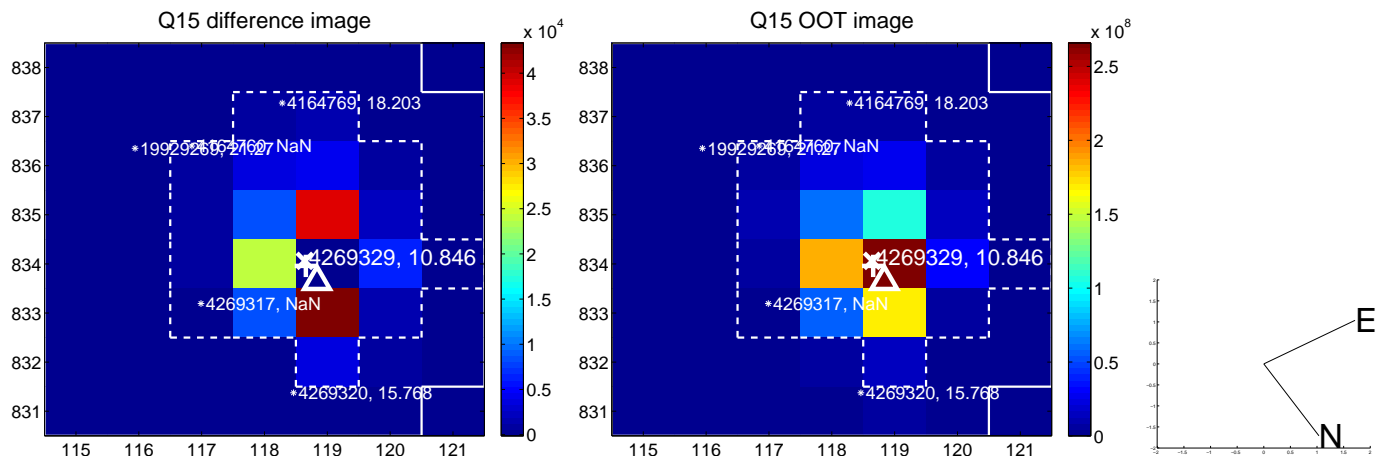
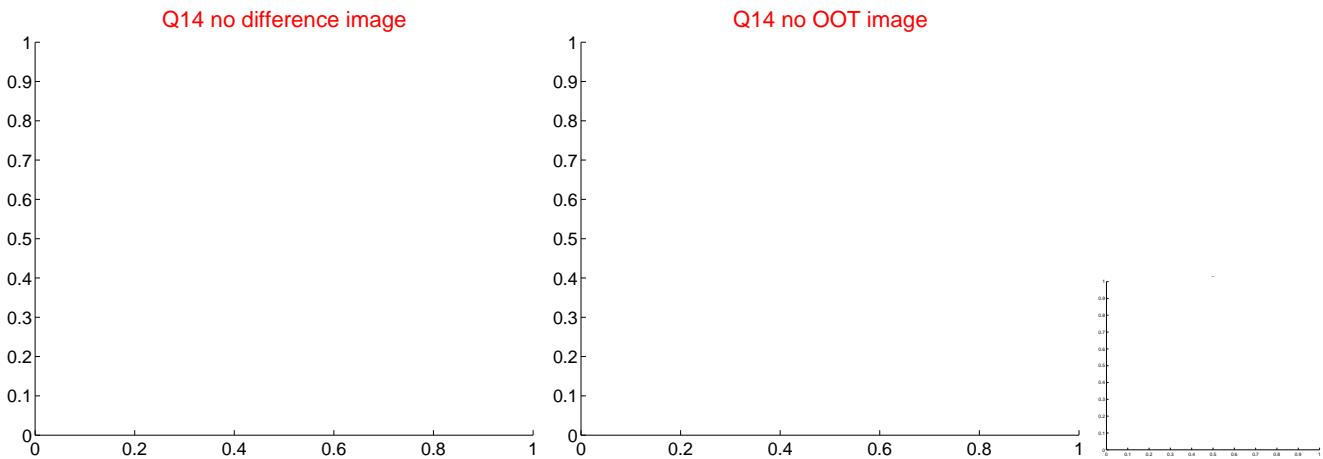
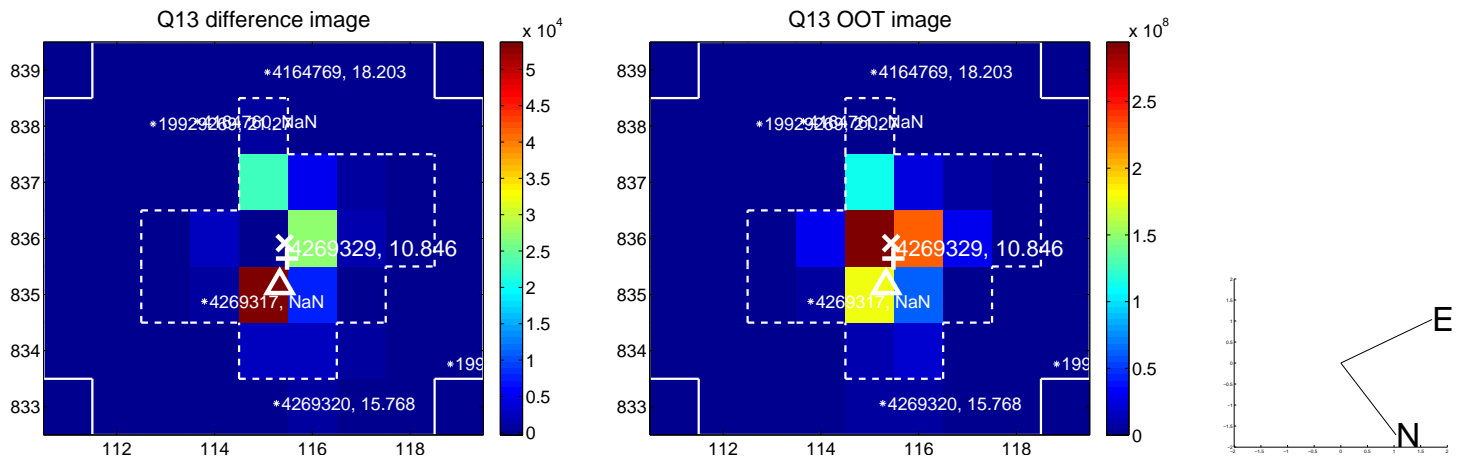
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



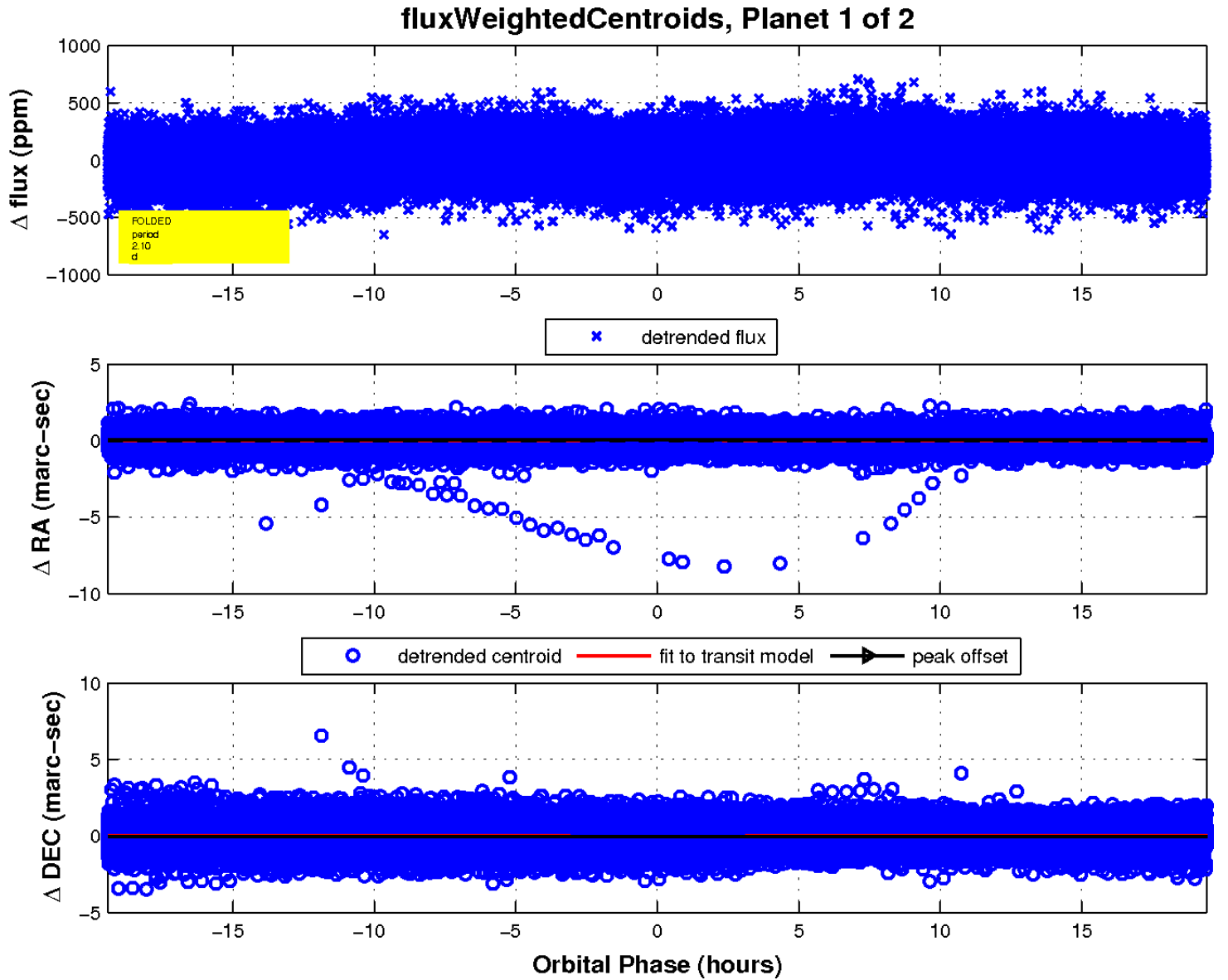
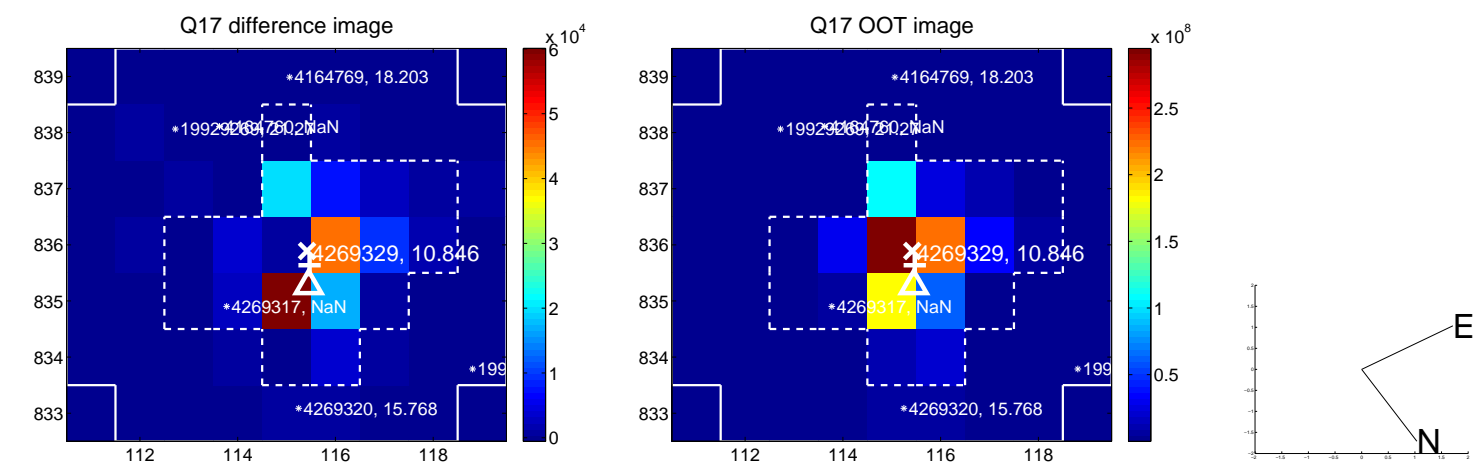
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

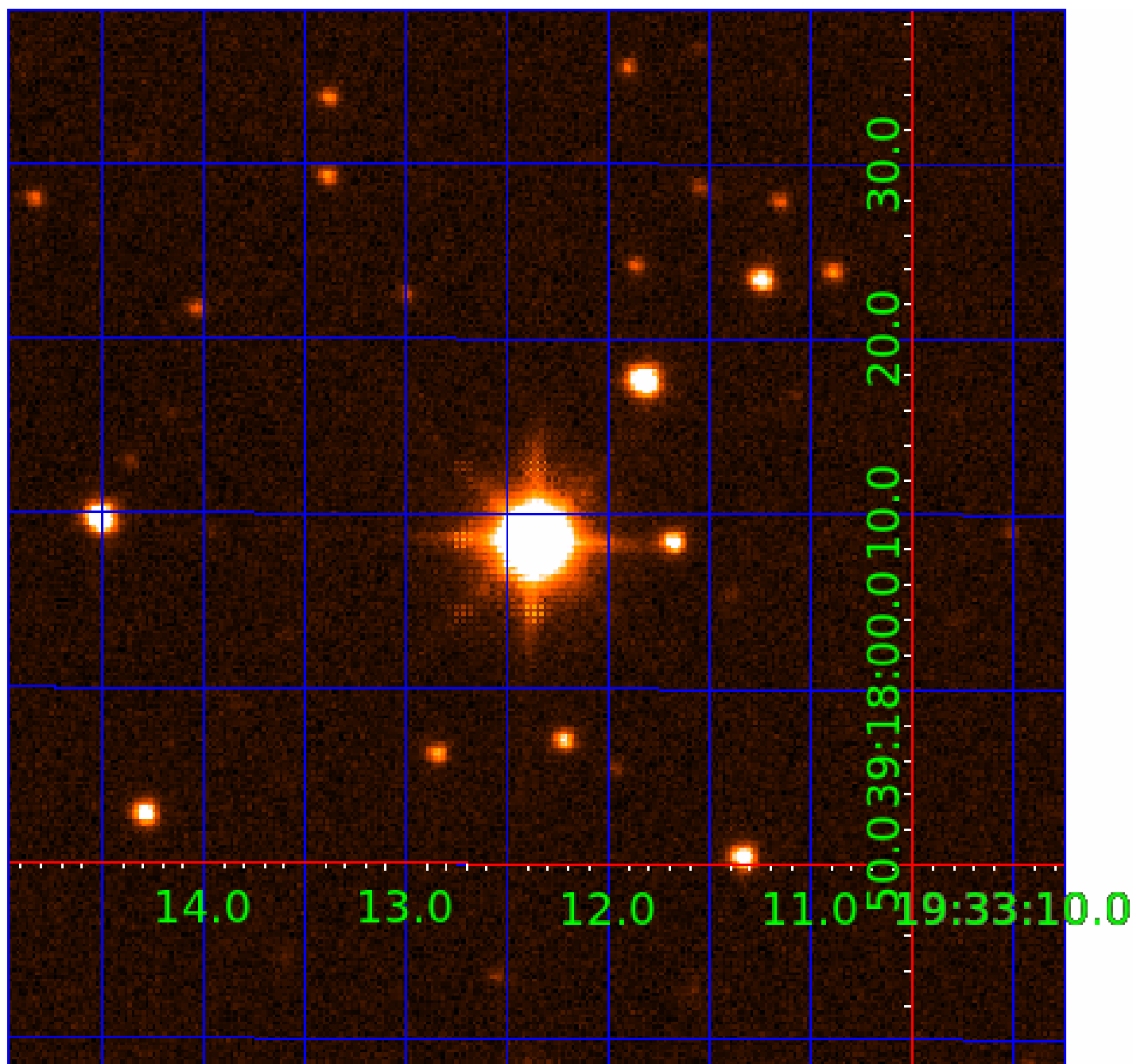


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004269329

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})
004269329-01	OBS	No	2.102239	131.581888	12.7	6.473	8.4	3.5	2.05	6550	0.86	5168.33
004269329-02	OBS	No	2.103089	133.103002	31.9	17.911	10.4	8.0	2.05	6550	1.17	5165.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004269329-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_POS_DV—CENT_SATURATED
004269329-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—CENT_SATURATED

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

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

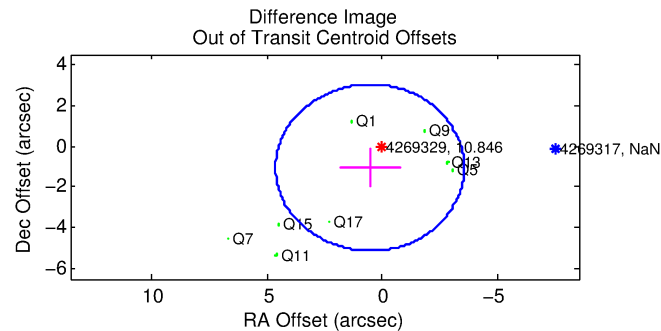
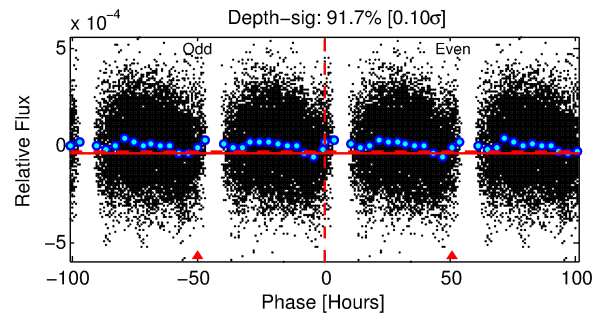
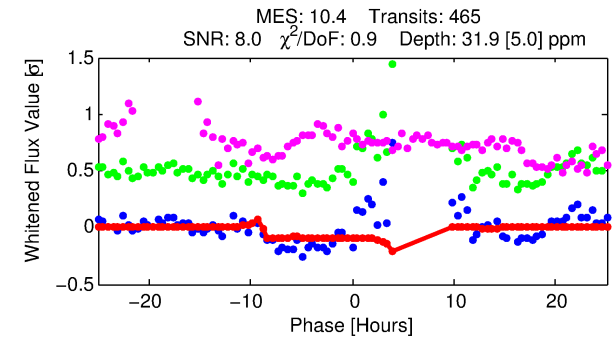
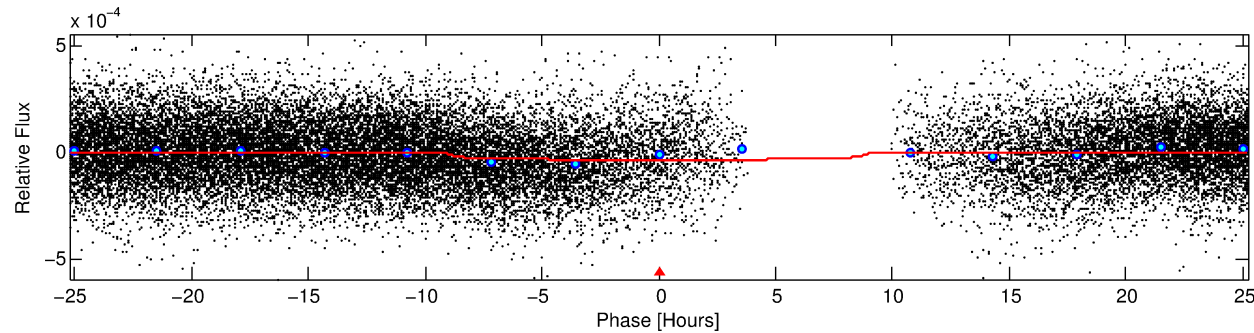
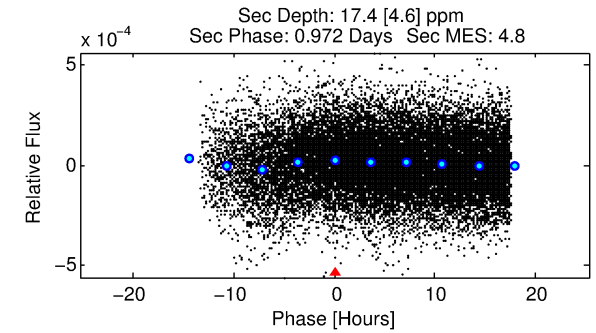
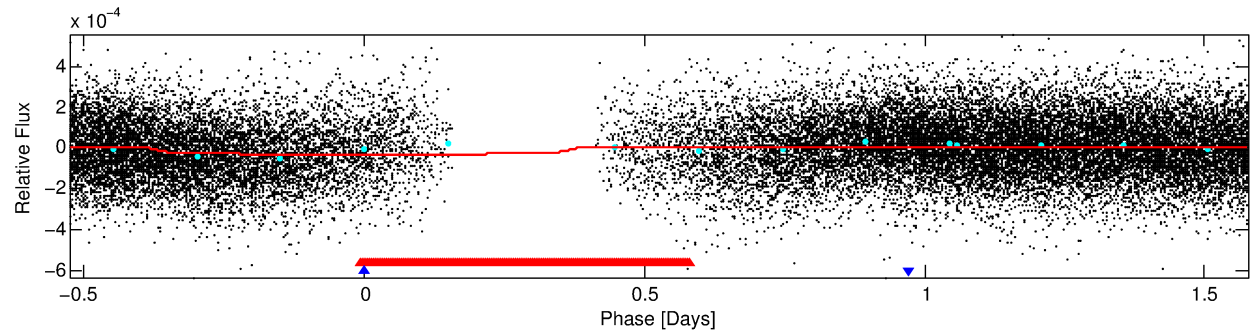
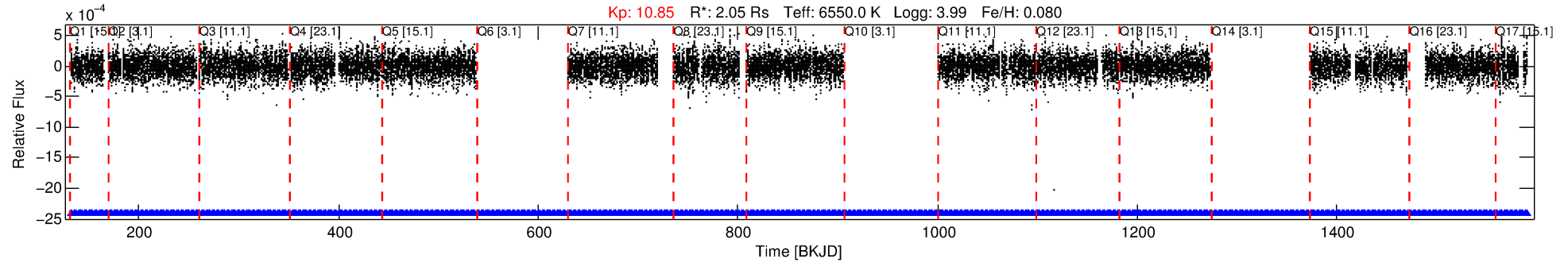
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004269329-02

No Significant Match Found

DV One-Page Summary

KIC: 4269329 Candidate: 2 of 2 Period: 2.103 d



DV Fit Results:

Period = 2.10309 [0.00004] d
Epoch = 133.1030 [0.0248] BKJD
Rp/R* = 0.0052 [0.0047]
a/R* = 1.12 [1.09]
b = 0.03 [187.41]
Seff = 5165.55 [1656.28]
Teq = 2162 [173] K
Rp = 1.16 [1.09] Re
a = 0.0367 [0.0076] AU
Ag = 9.53 [17.71] [0.48σ]
Teffp = 5873 [2689] K [1.38σ]

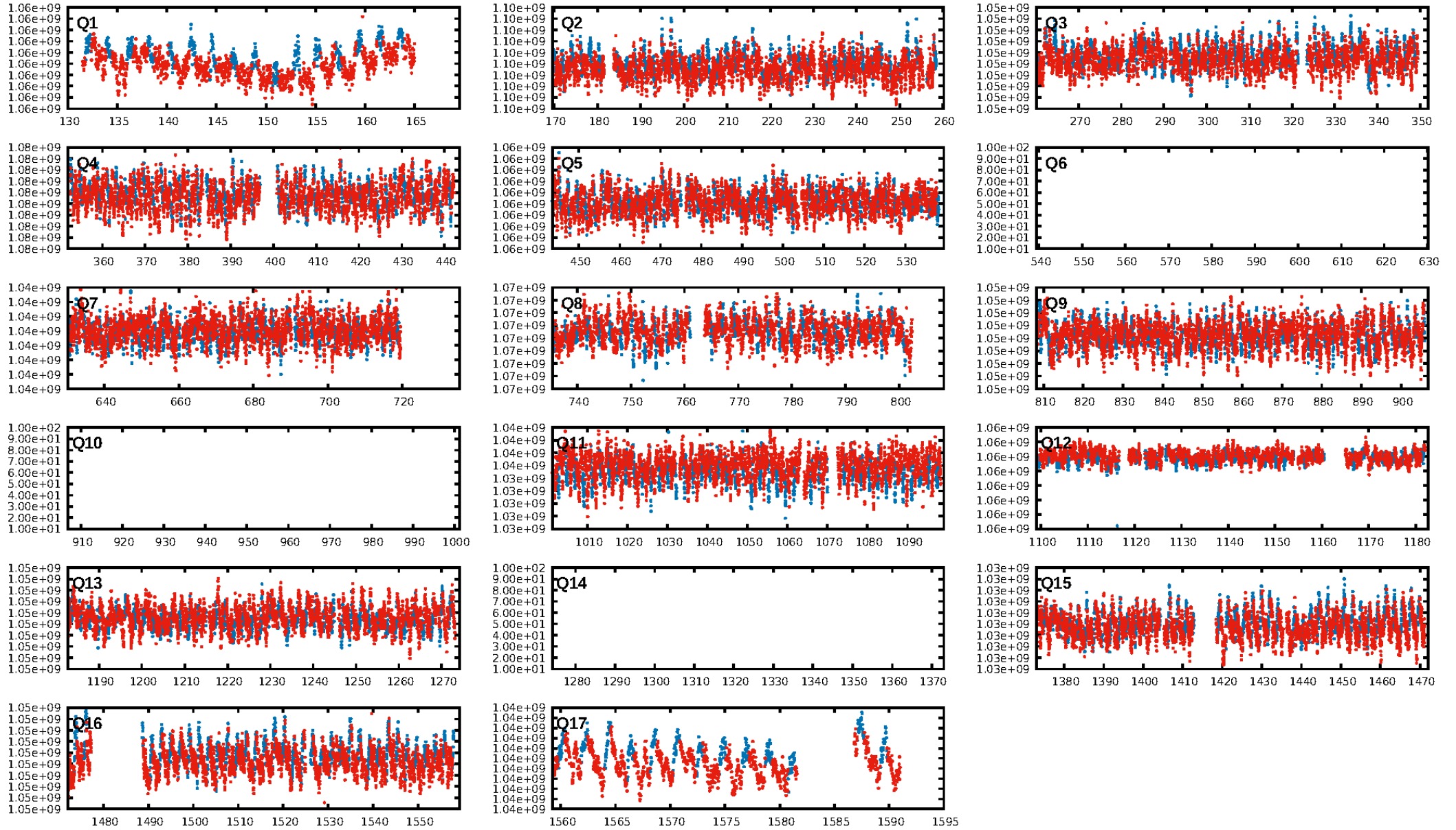
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [449/449]
GhostDiagnostic-chr: 0.7839
Centroid-sig: 0.0%
Centroid-so: 1.662 arcsec [4.42σ]
OotOffset-rm: 1.181 arcsec [0.87σ]
OotOffset-st: 0/3/0/5 [8]
KicOffset-rm: 0.244 arcsec [0.18σ]
KicOffset-st: 0/3/0/5 [8]
DiffImageQuality-fgm: 0.25 [2/8]
DiffImageOverlap-fno: 0.00 [0/14]

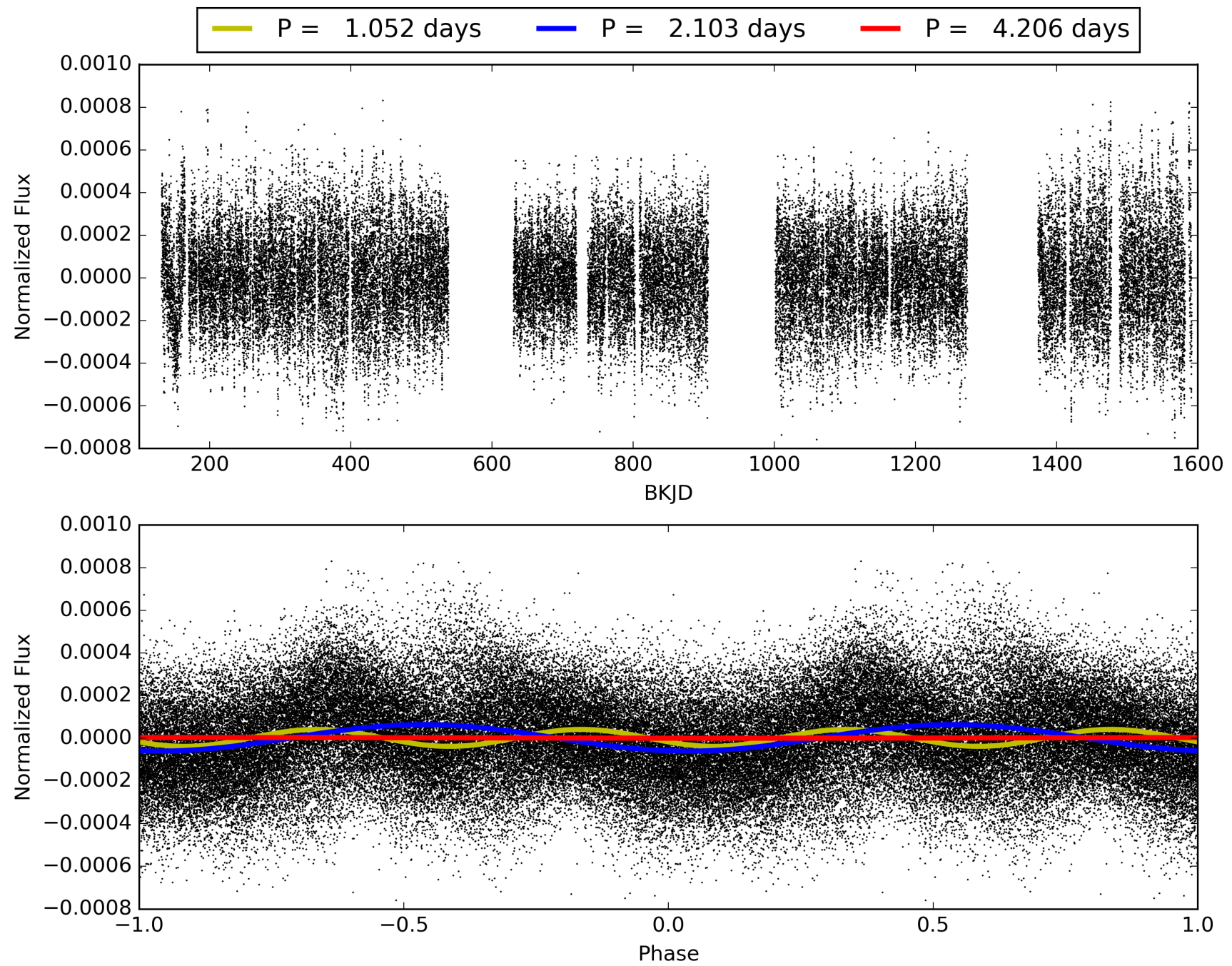
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:27:56 Z

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

TCE 004269329-02, PDC Light Curves

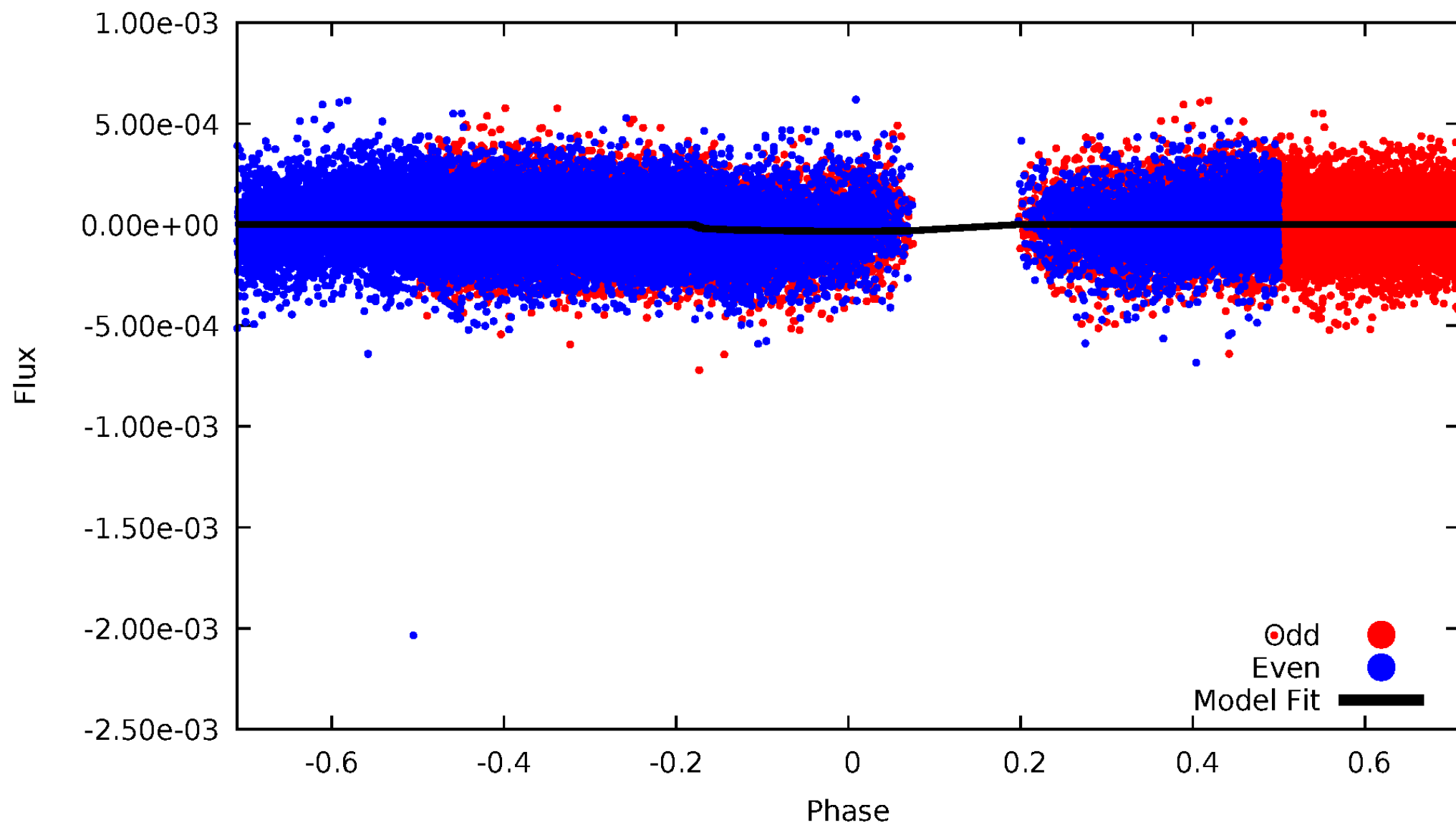


TCE 004269329-02



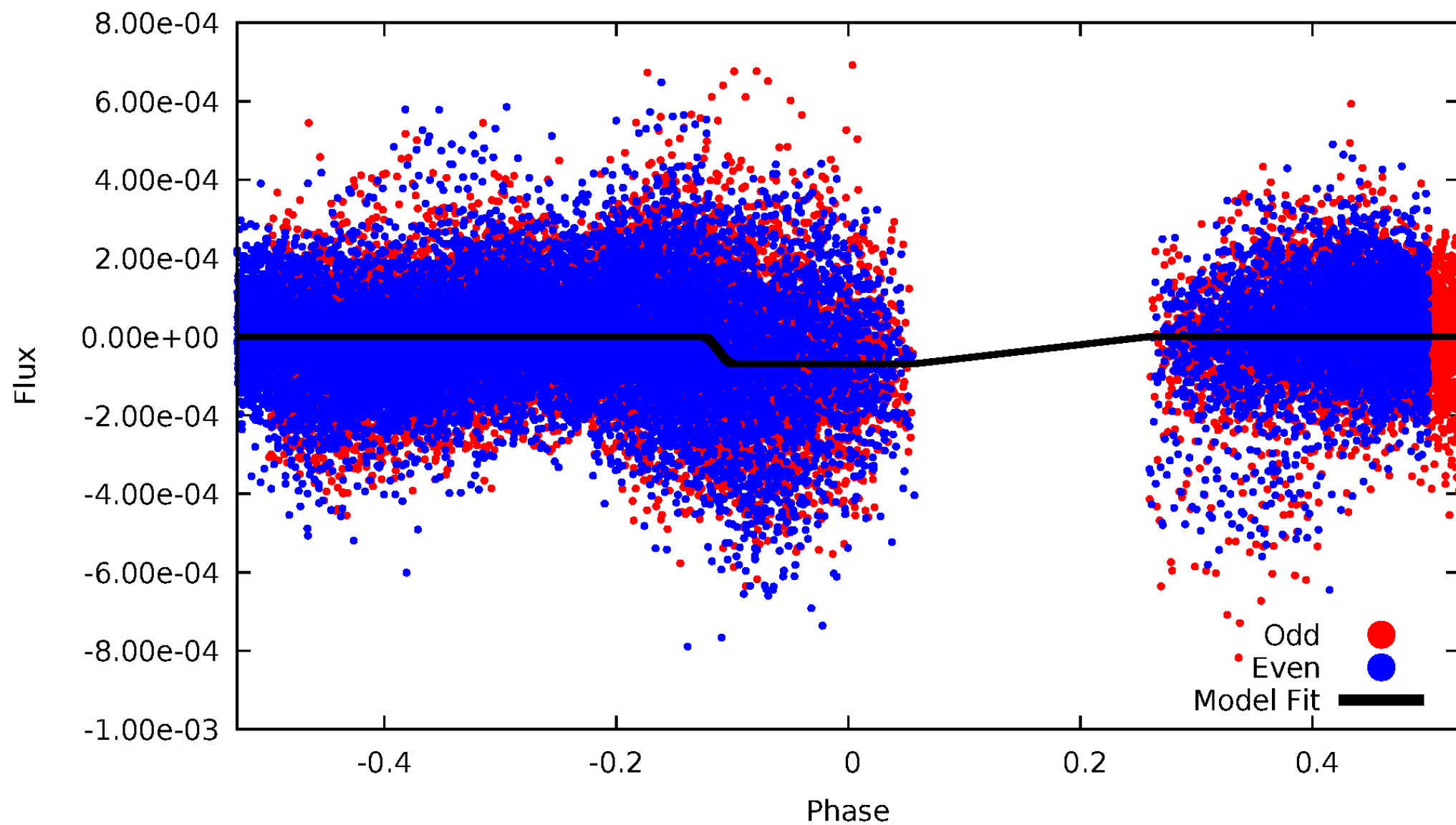
DV Odd/Even

TCE 004269329-02



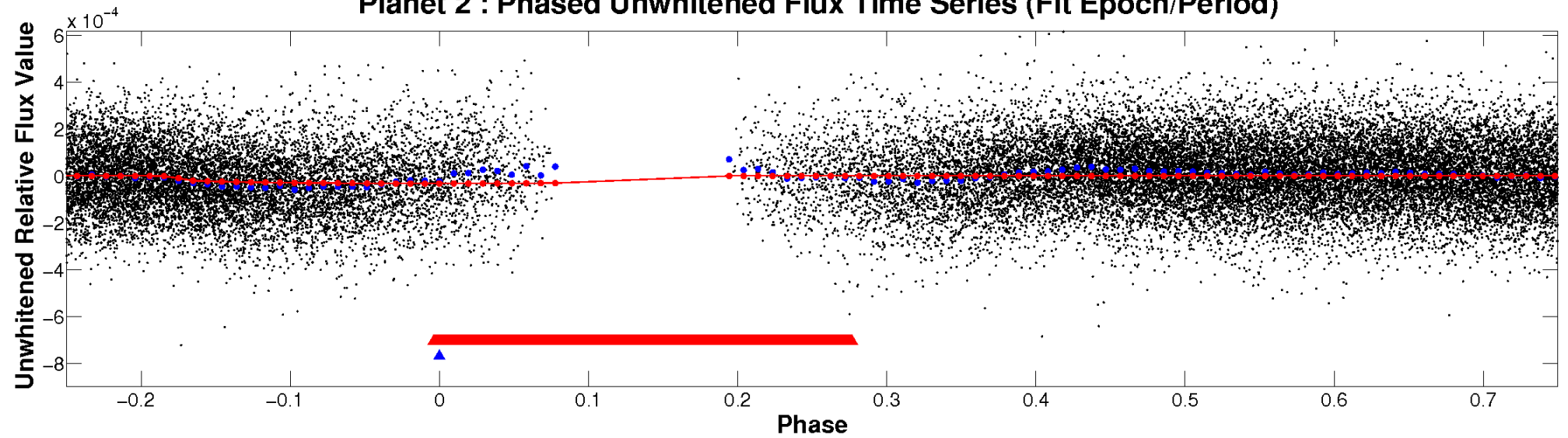
ALT Odd/Even

TCE 004269329-02

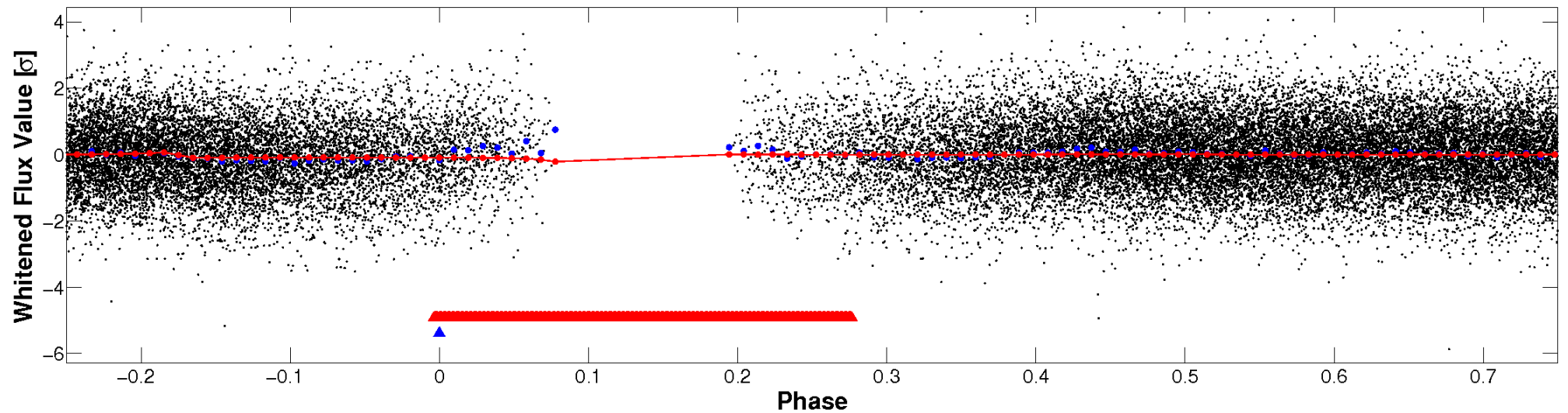


Non-Whitened Vs. Whitened Light Curve

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

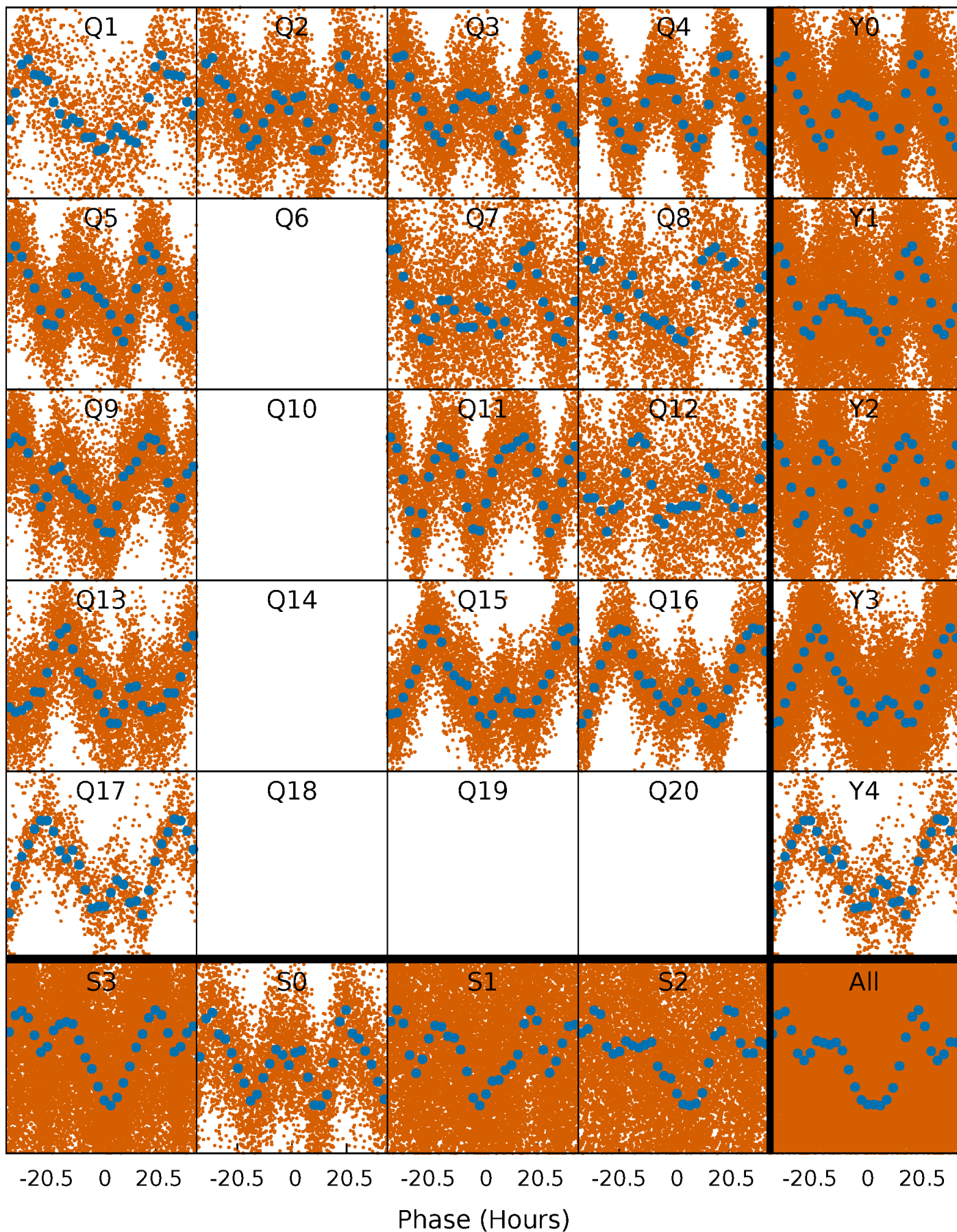


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



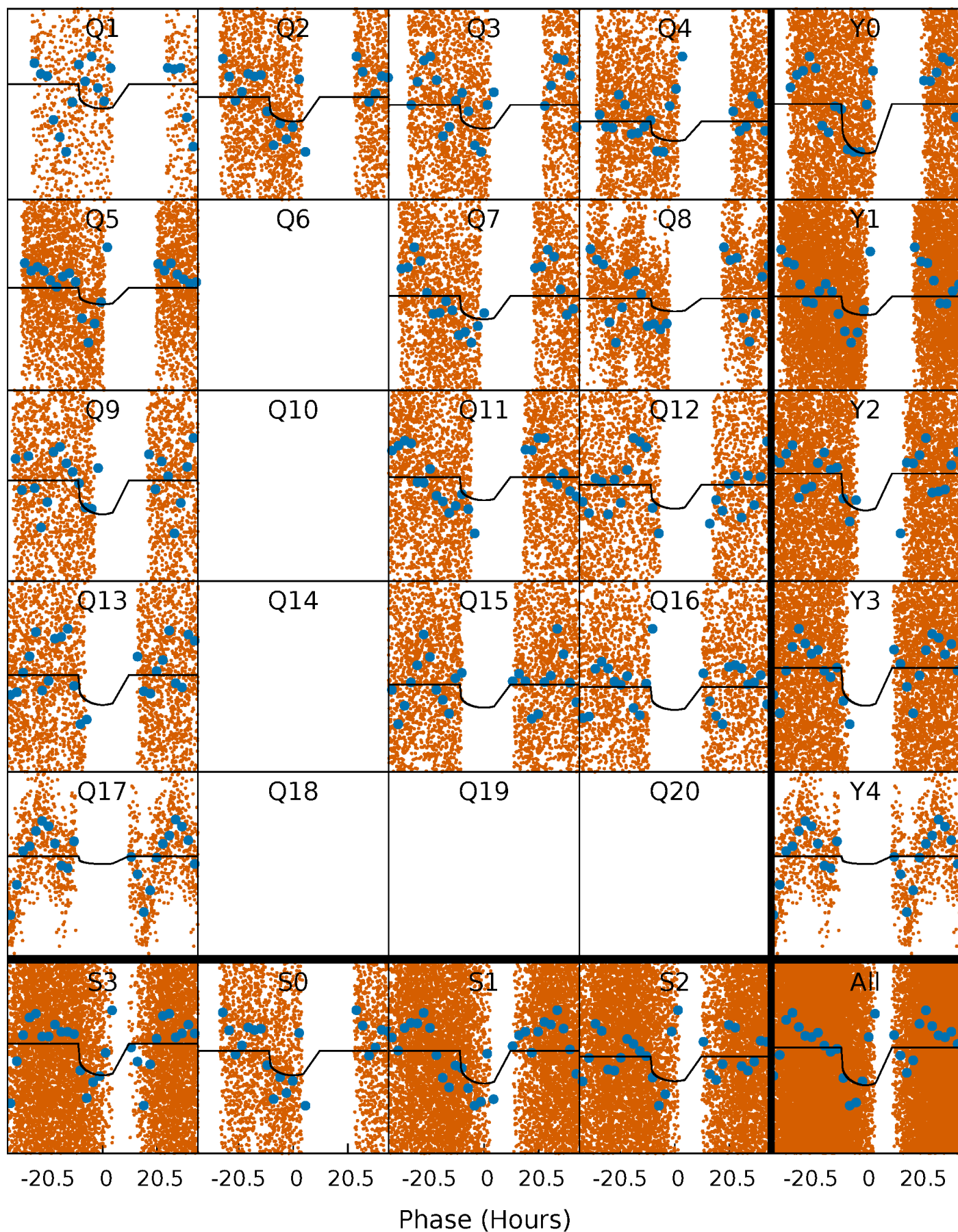
PDC Quarter-Phased Transit Curves

TCE 004269329-02 P= 2.103089 Days $T_0=133.103002$ (BKJD)



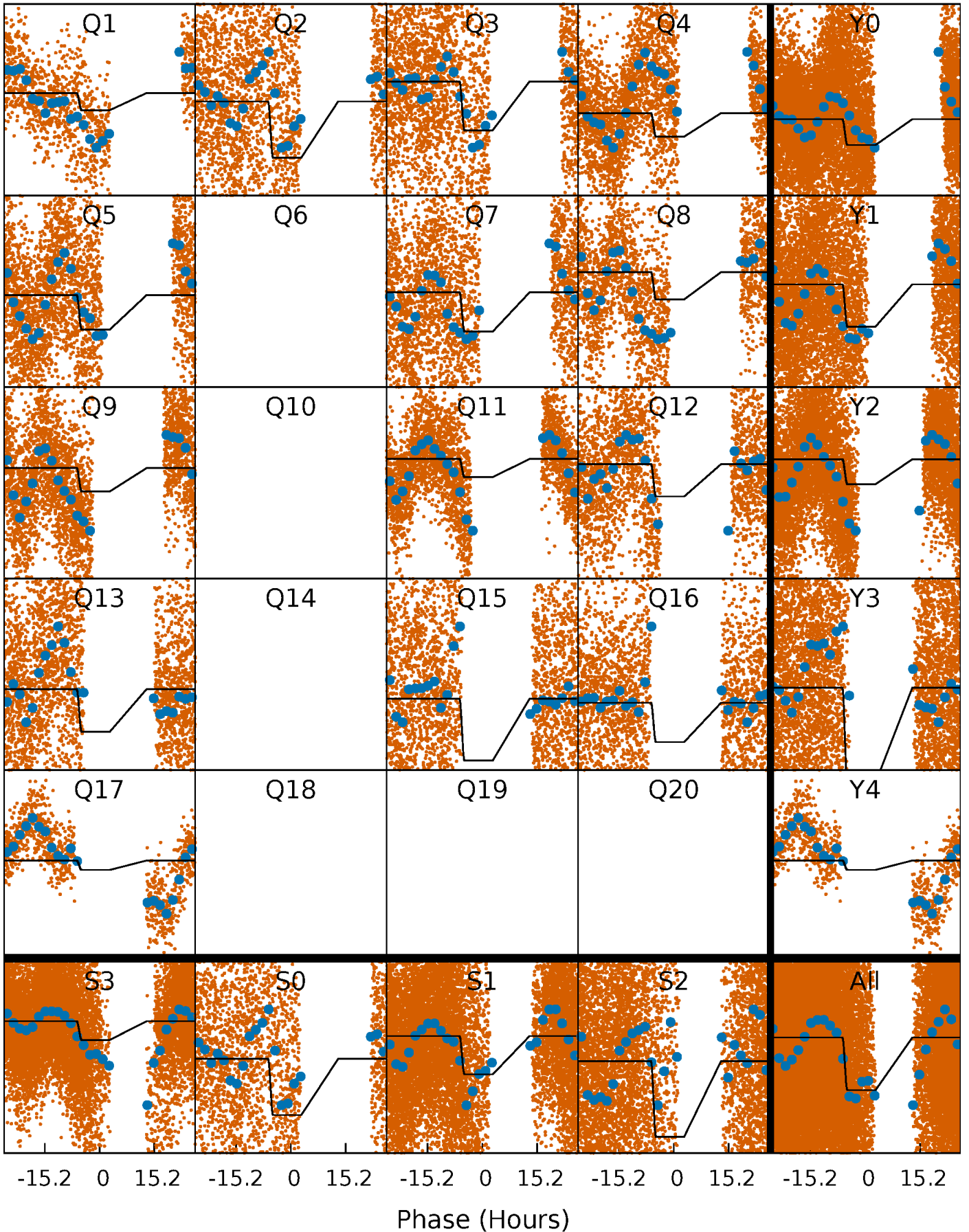
DV Quarter-Phased Transit Curves

TCE 004269329-02 P= 2.103089 Days $T_0=133.103002$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

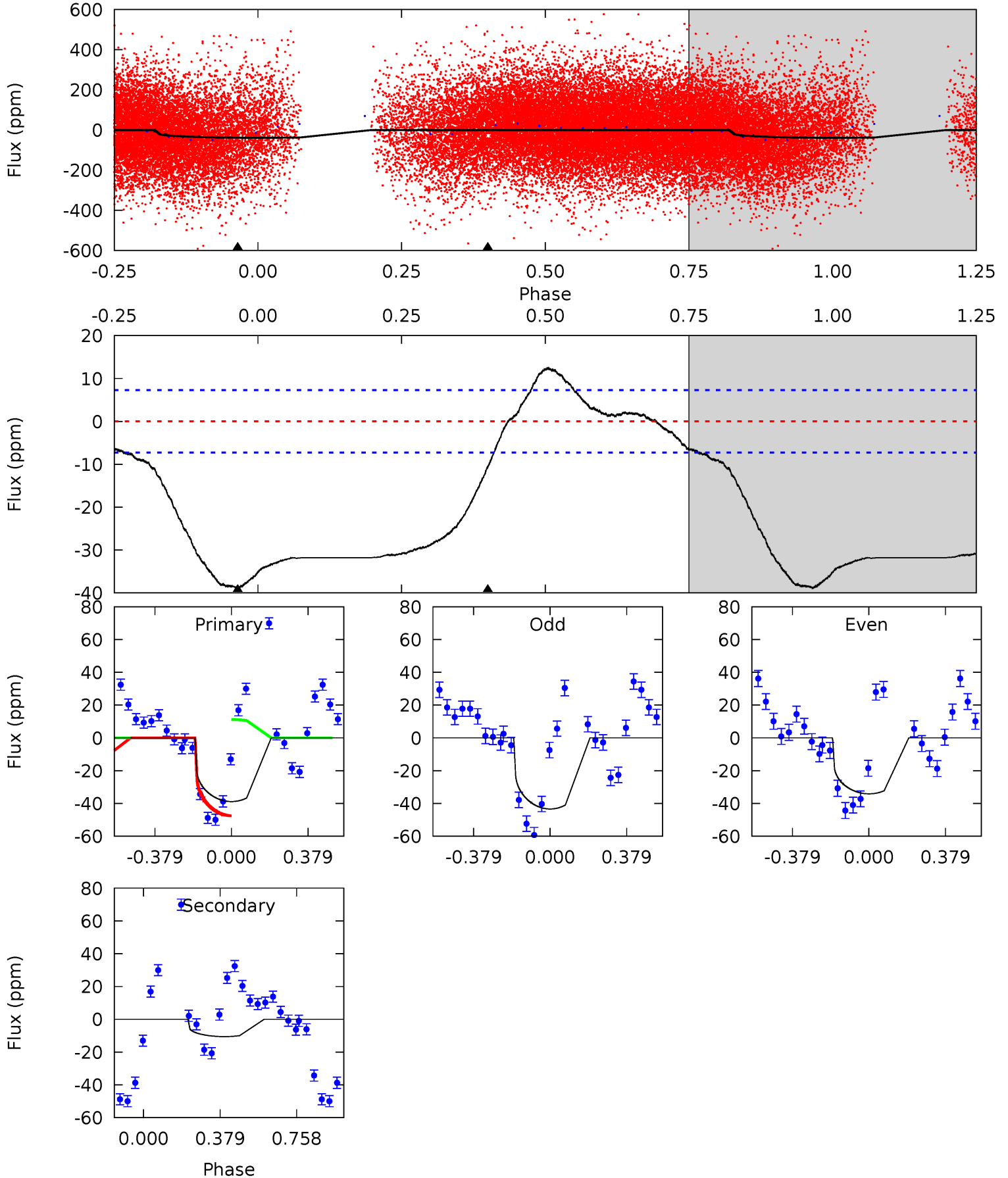
TCE 004269329-02 P= 2.102842 Days $T_0=133.142999$ (BKJD)



DV Model-Shift Uniqueness Test

004269329-02, P = 2.103089 Days, E = 130.999913 Days

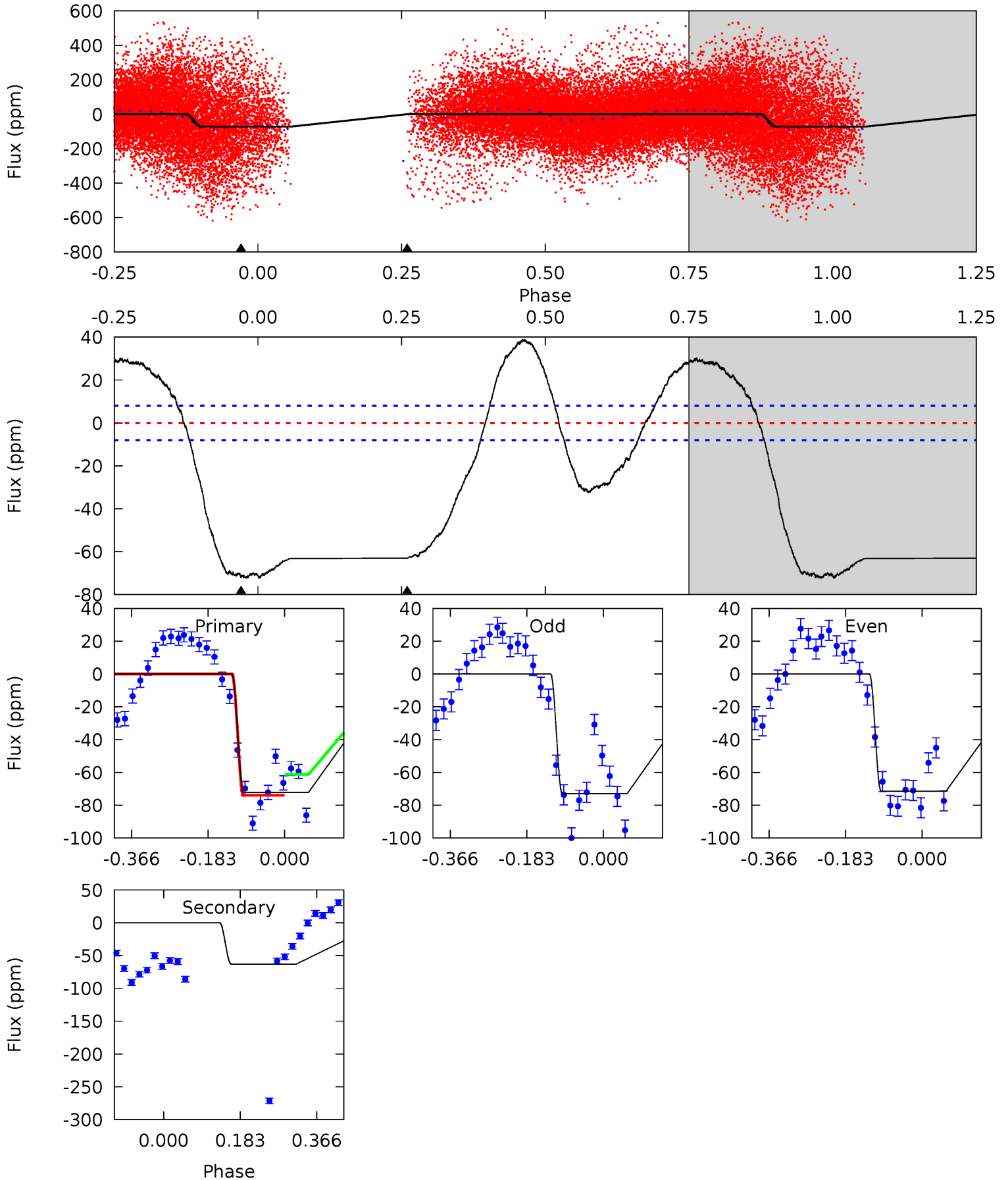
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.8	6.21	0	0	4.28	0.88	0.88	22.8	22.8	6.21	6.21	2.71	1.05	0.24	6.19



Alt Model-Shift Uniqueness Test

004269329-02, P = 2.102842 Days, E = 131.040157 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
39.8	34.7	0	0	4.44	1.33	12.9	39.8	39.8	34.7	34.7	0.39	0.95	0.35	2.31



Stellar Parameters For KIC 004269329

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6550^{+78}_{-85}	$3.986^{+0.180}_{-0.120}$	$0.080^{+0.150}_{-0.150}$	$2.054^{+0.389}_{-0.475}$	$1.491^{+0.135}_{-0.165}$	$0.242^{+0.234}_{-0.088}$
	+1%/-1%	+5%/-3%	+188%/-188%	+19%/-23%	+9%/-11%	+96%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004269329-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-11 ± 2	$1.37^{+1.11}_{-0.83}$	3009^{+151}_{-175}	4768^{+2818}_{-1019}	$4.092^{+23.880}_{-2.783}$
Alt.	-63 ± 2	$1.87^{+1.18}_{-0.98}$	3018^{+148}_{-166}	6287^{+3612}_{-1266}	13^{+46}_{-8}

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 $A_{obs} \gg 1.0$

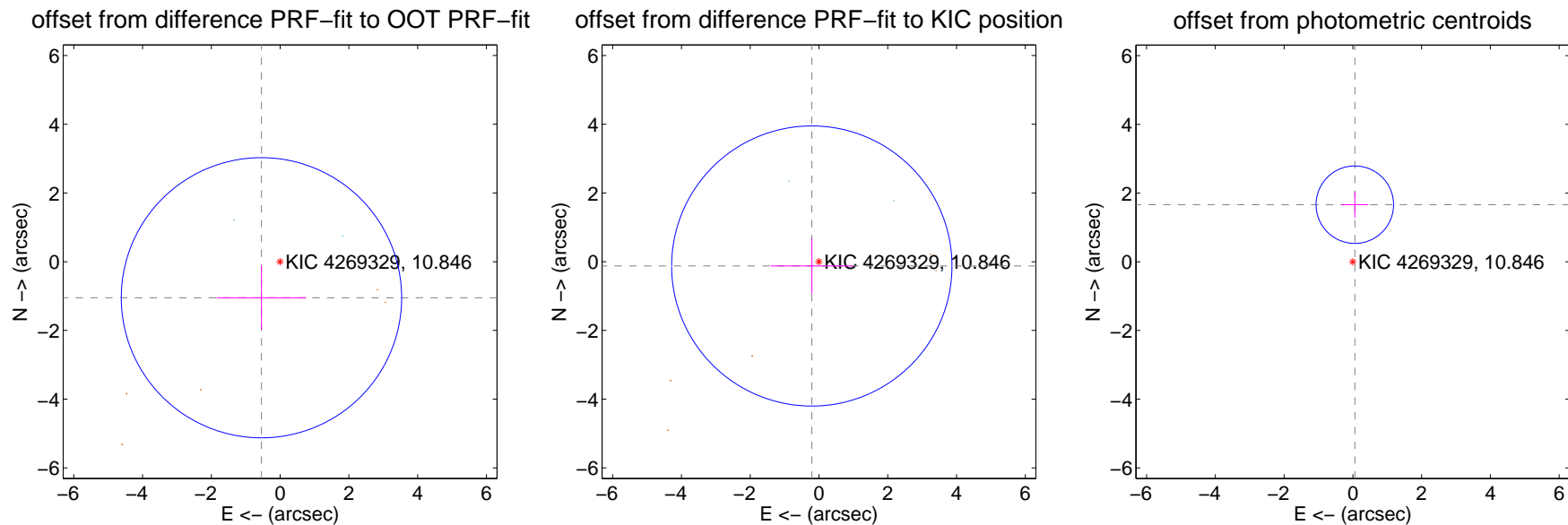
DV Centroid Data

Supplemental centroid analysis for 004269329-02. **Kepler magnitude: 10.85.** Transit SNR 8.00

There are 2 quarters with good PRF difference image offsets

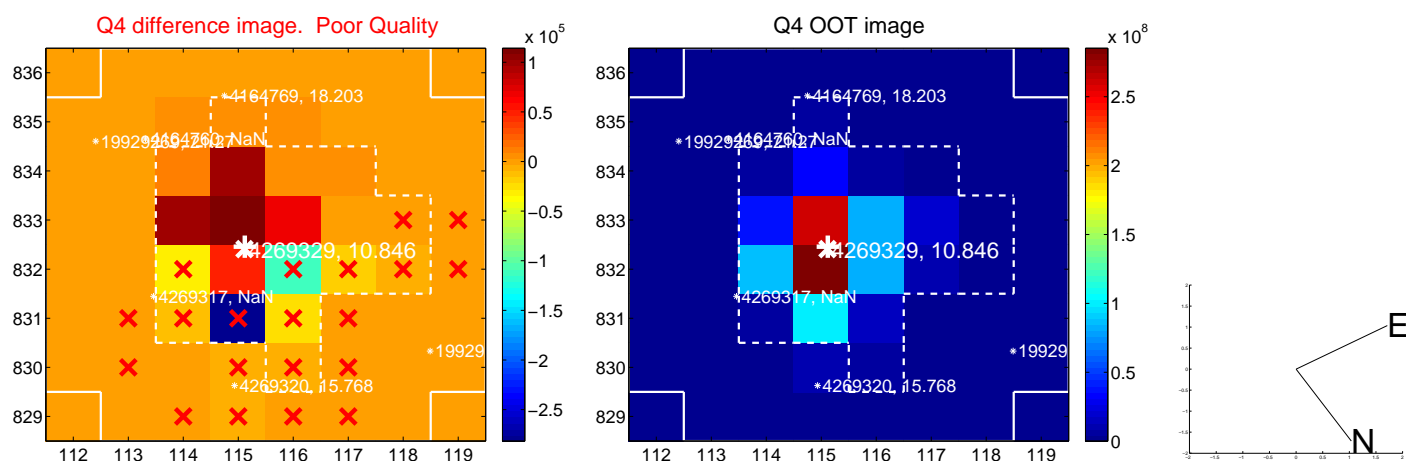
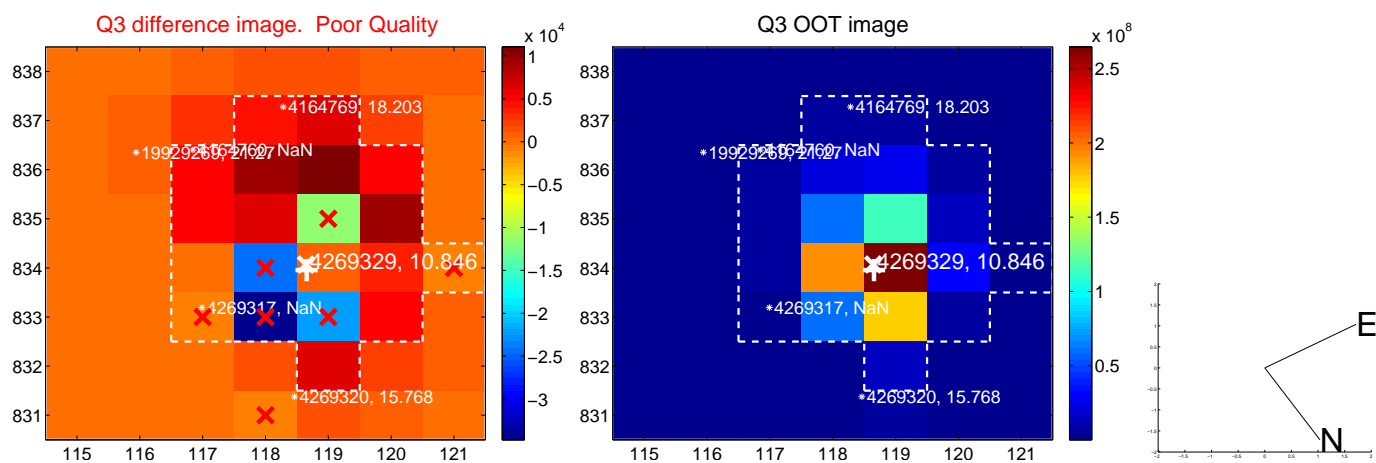
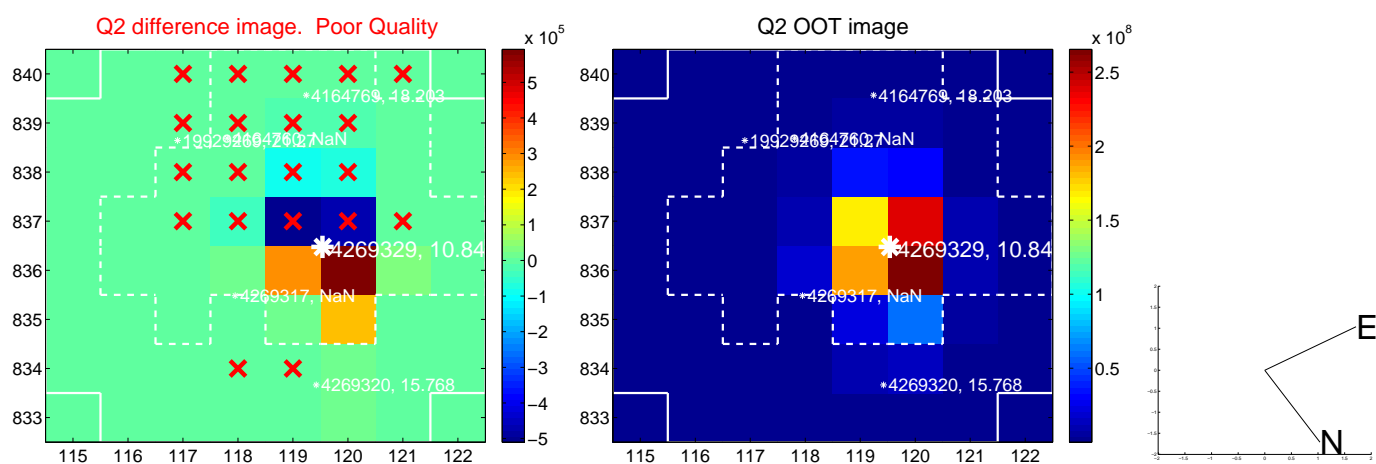
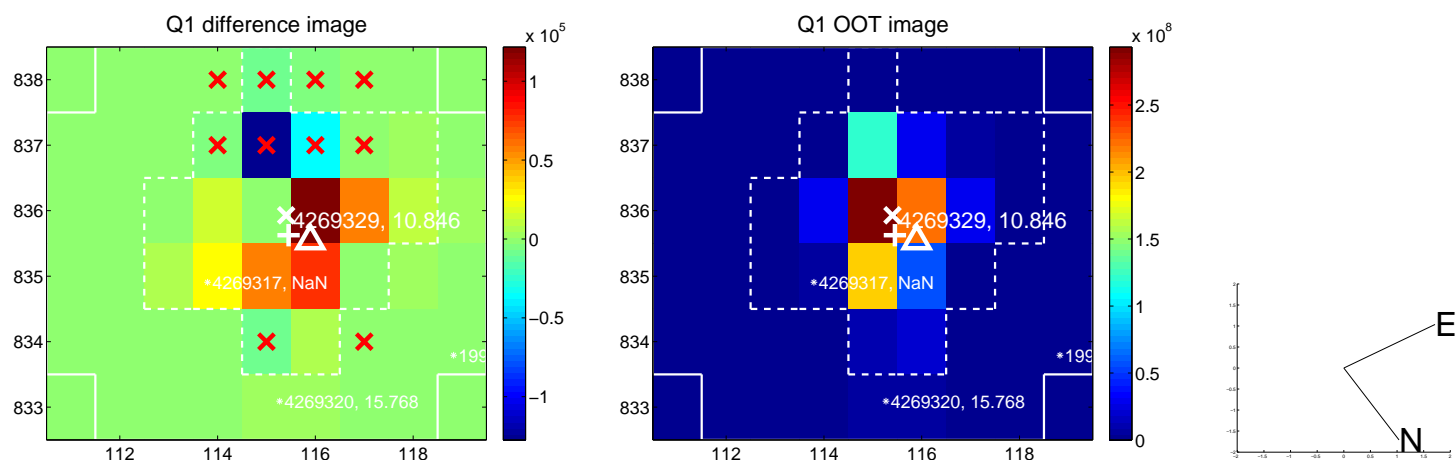
The direct PRF centroid is offset from the target star catalog position by about 1.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.181 ± 1.359	0.87	0.542 ± 1.300	-1.049 ± 0.932
PRF-fit source offset from KIC position	0.244 ± 1.358	0.18	0.209 ± 1.199	-0.125 ± 0.803
photometric centroid source offset	1.66 ± 0.38	4.42	-0.06 ± 0.40	1.66 ± 0.38

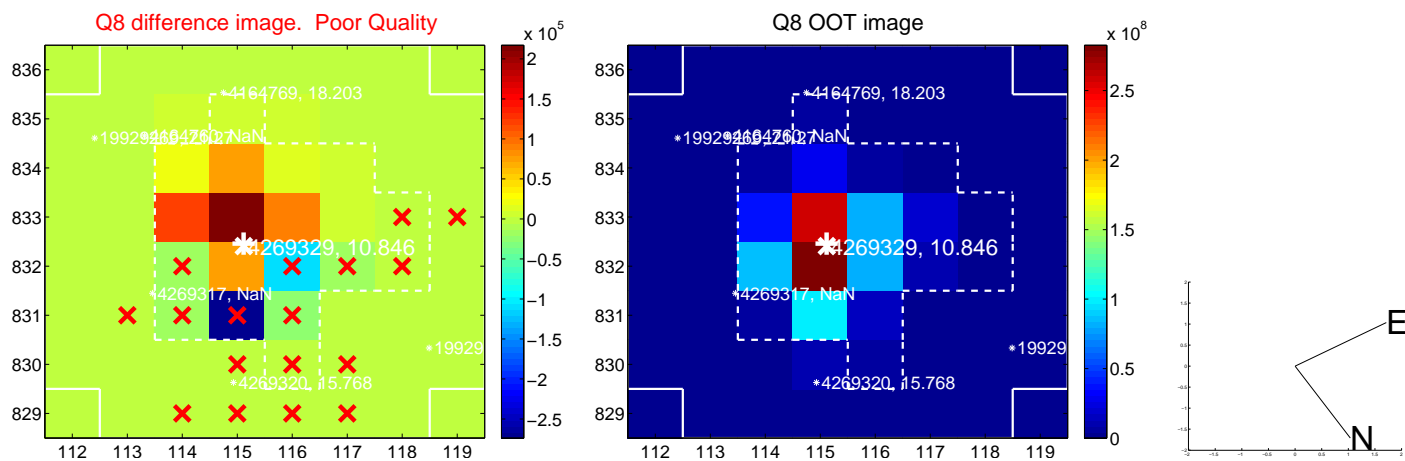
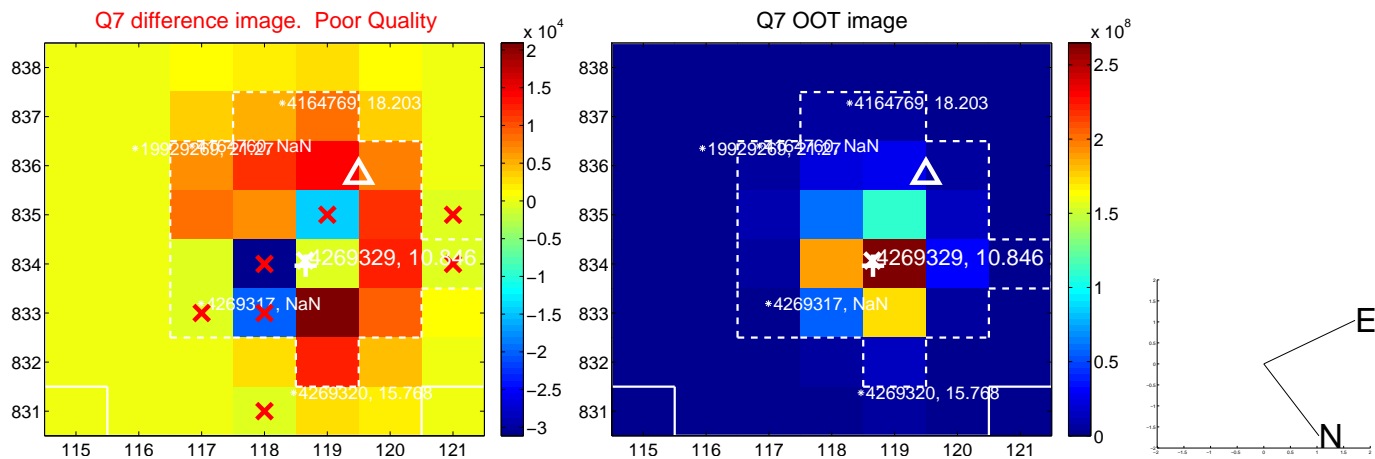
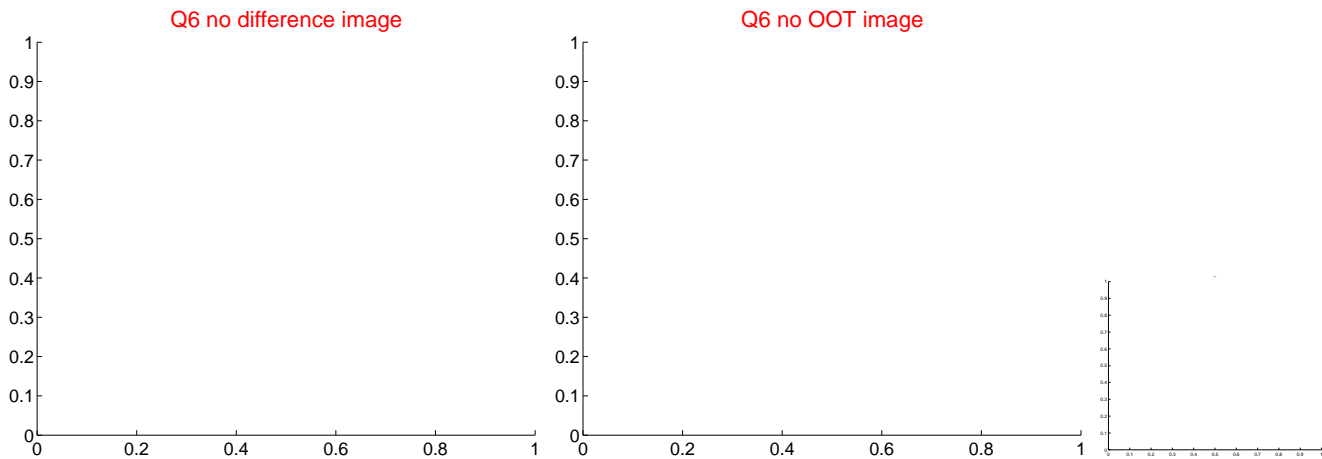
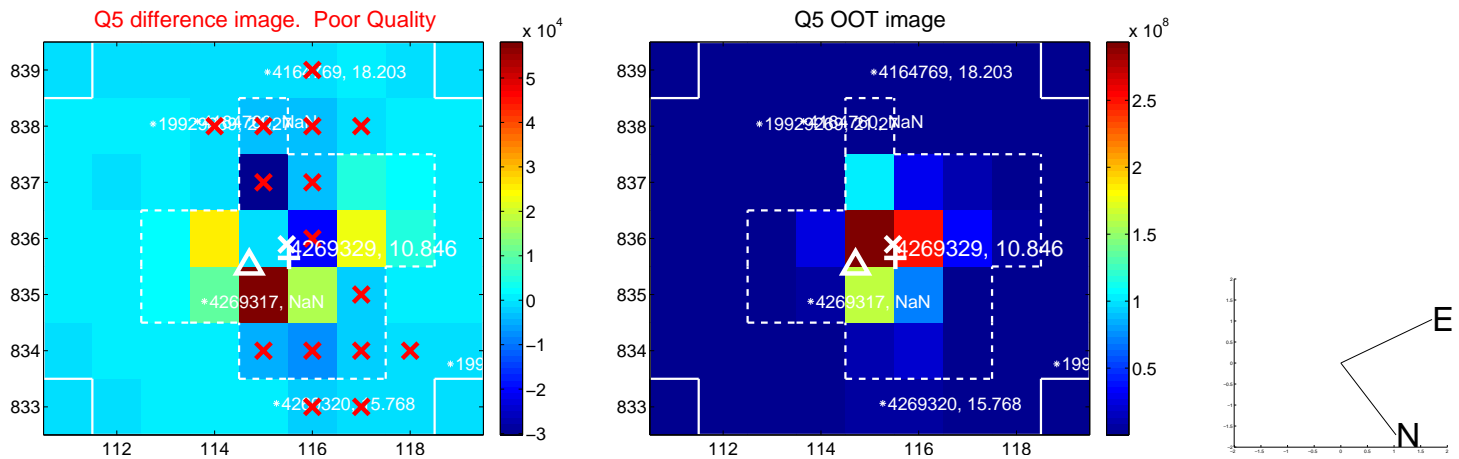


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

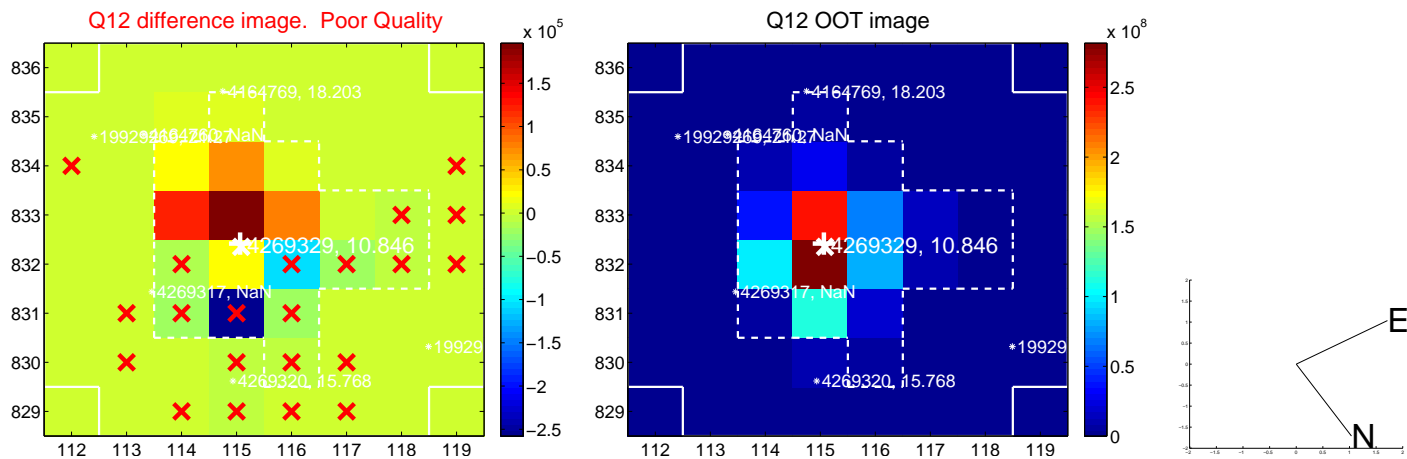
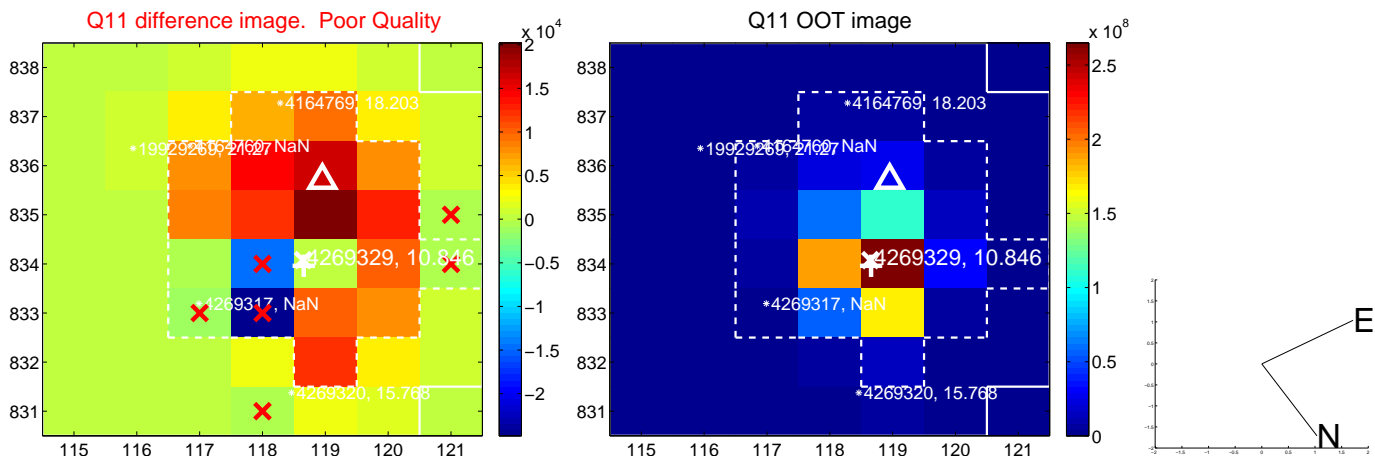
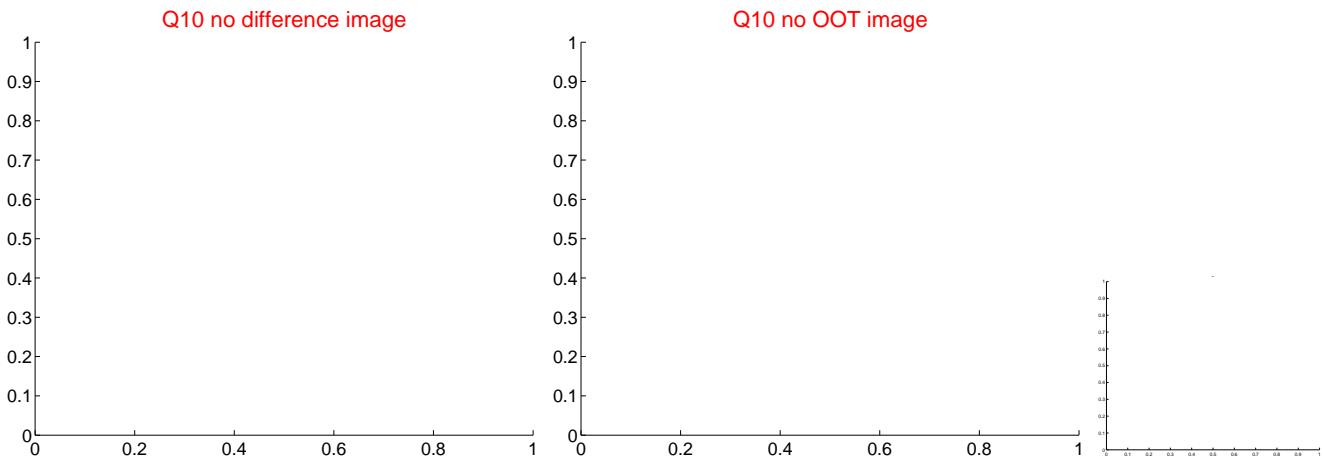
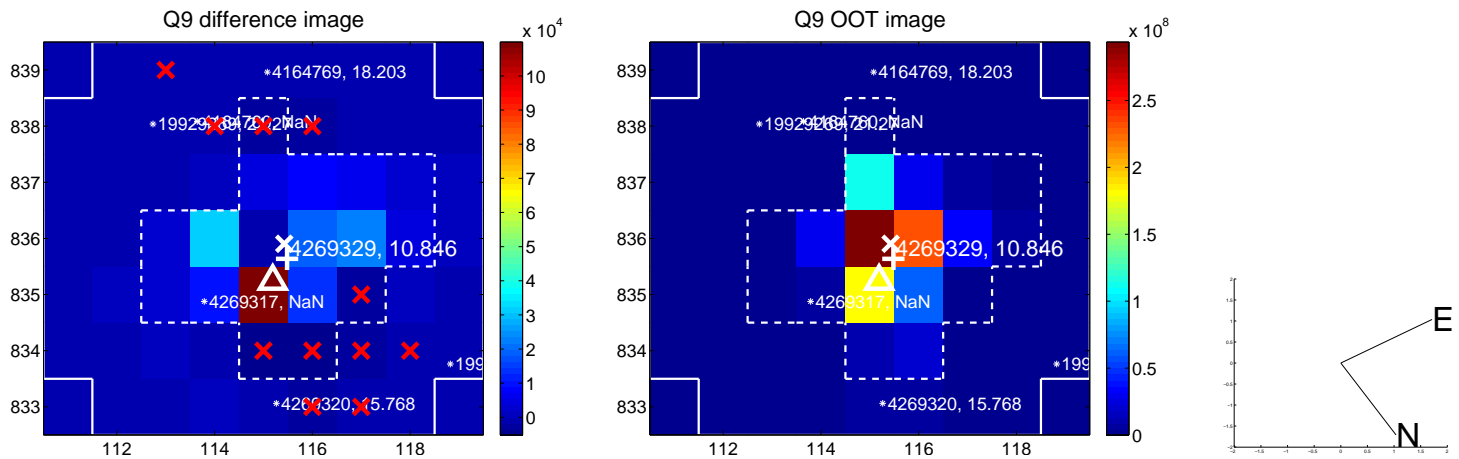
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



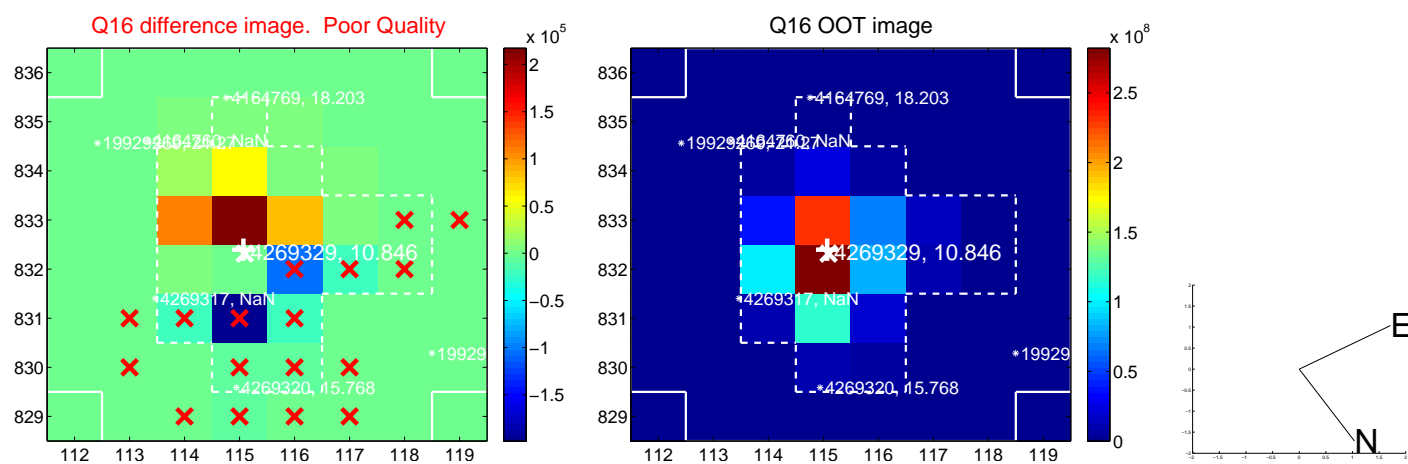
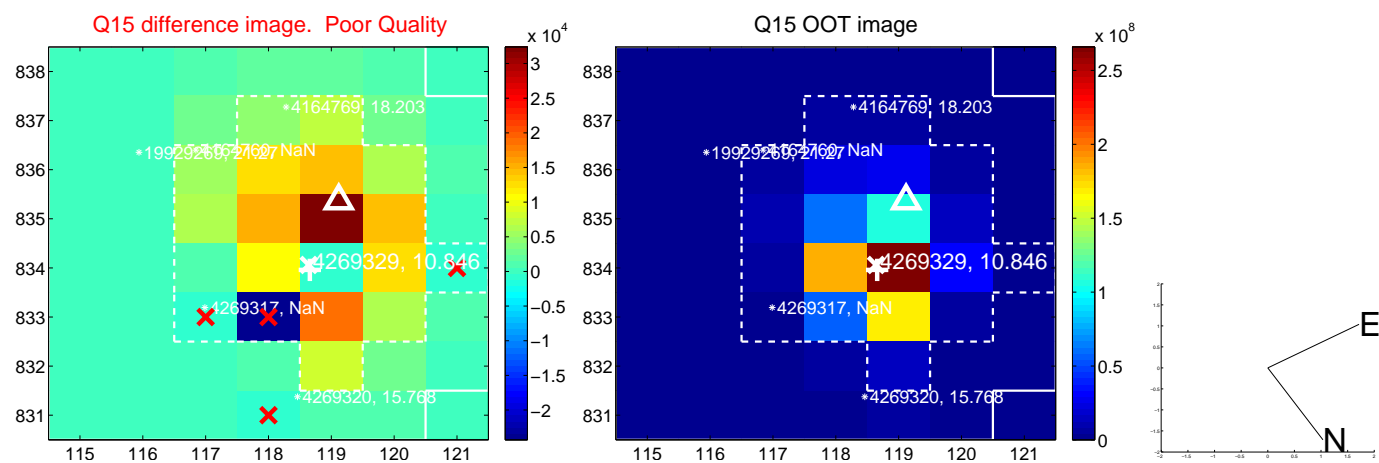
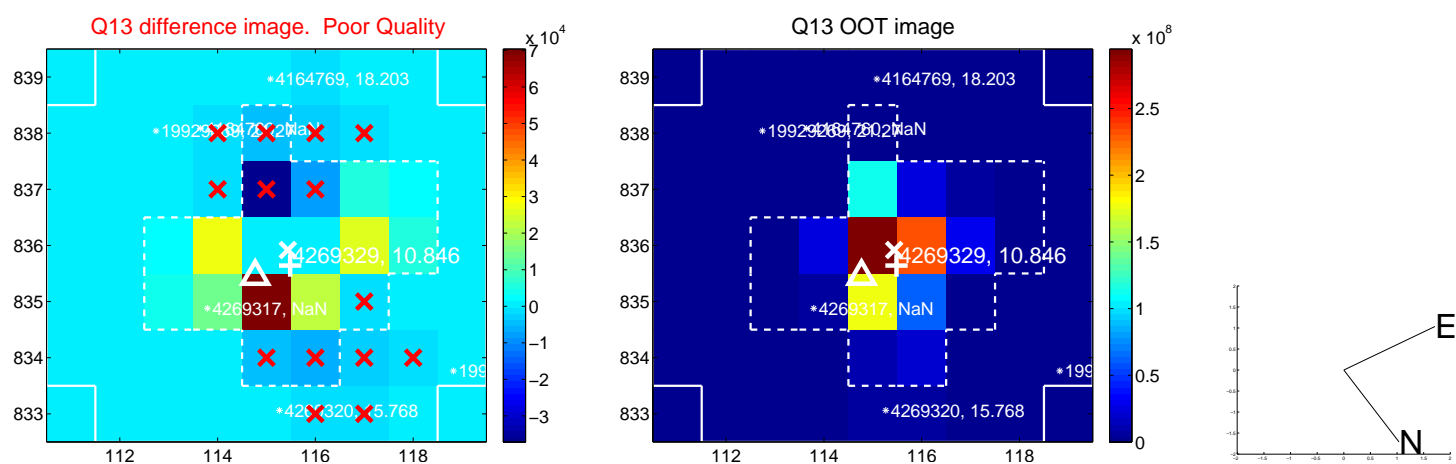
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



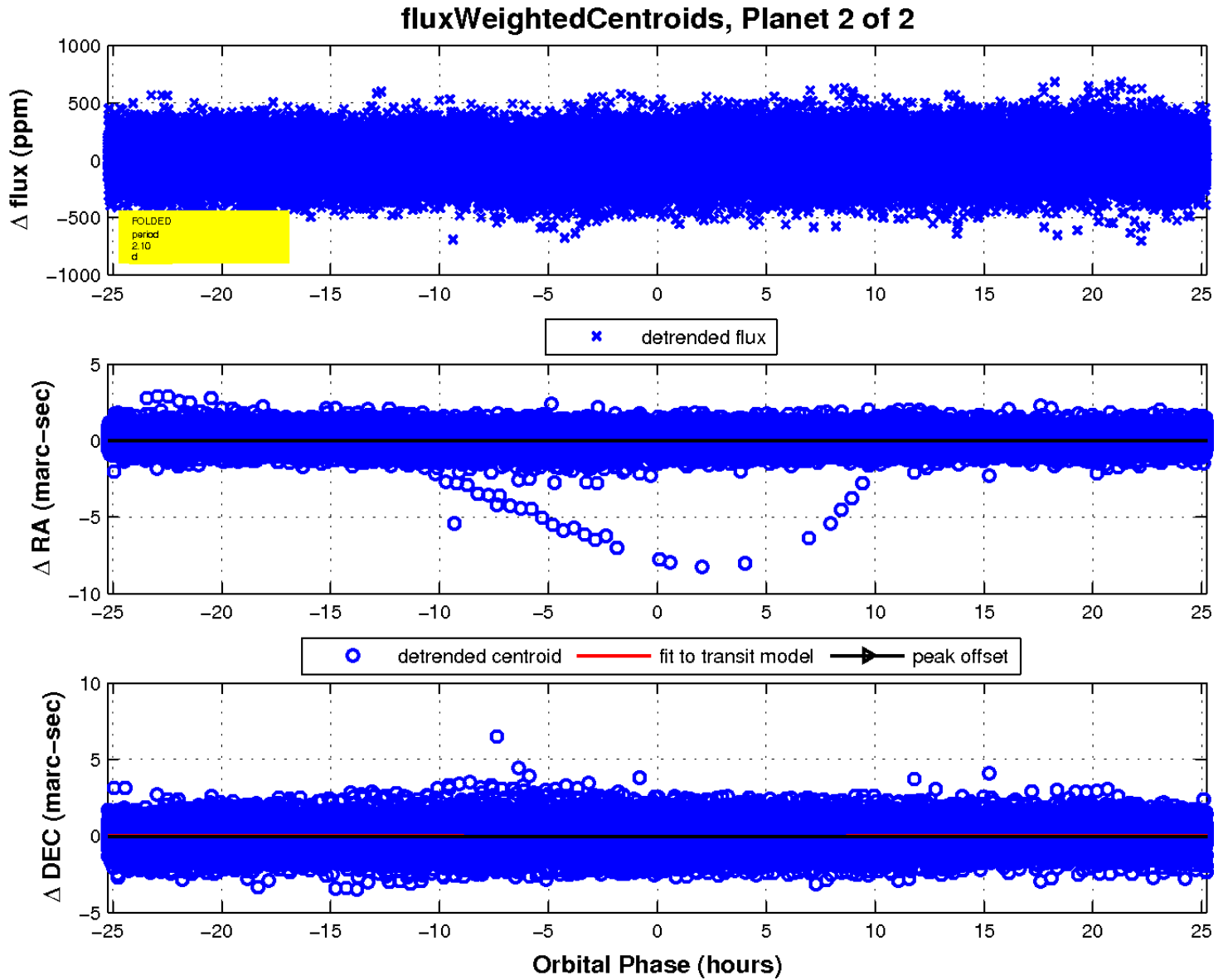
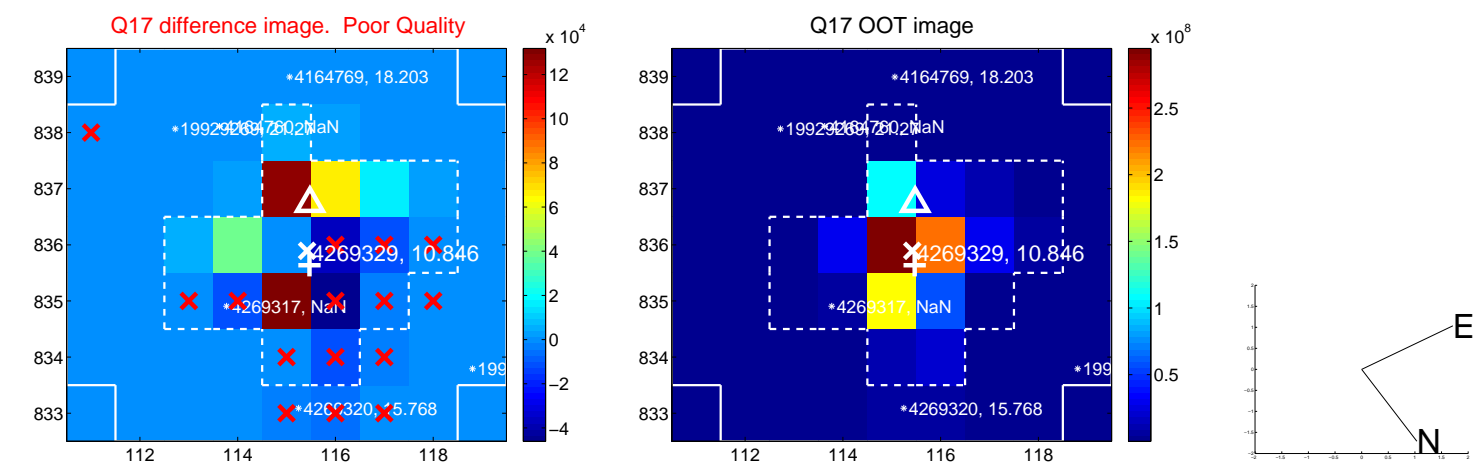
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

