

KIC 006287517

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})
006287517-01	OBS	No	1.736420	131.554798	6.1	0.844	14.0	1.3	2.02	7241	0.99	9437.91
006287517-02	OBS	No	1.736568	131.998029	26.8	3.475	14.9	10.8	2.02	7241	1.26	9436.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006287517-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
006287517-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_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.

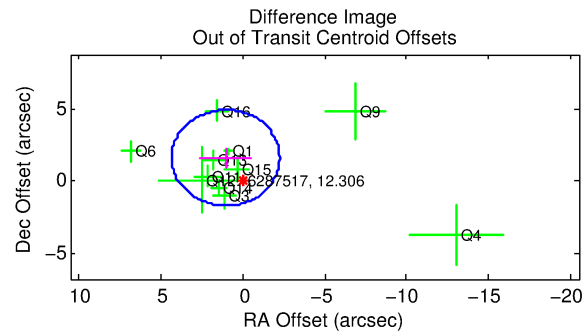
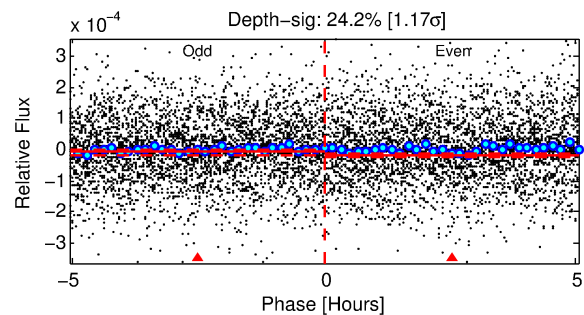
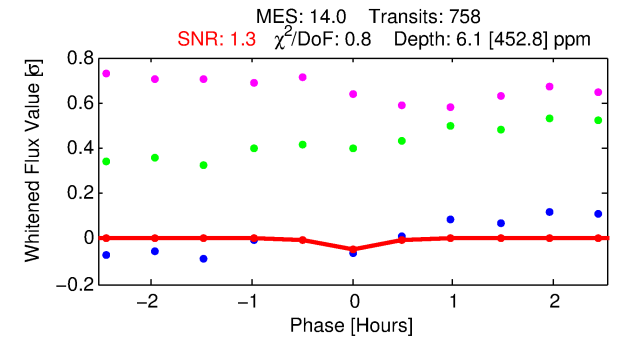
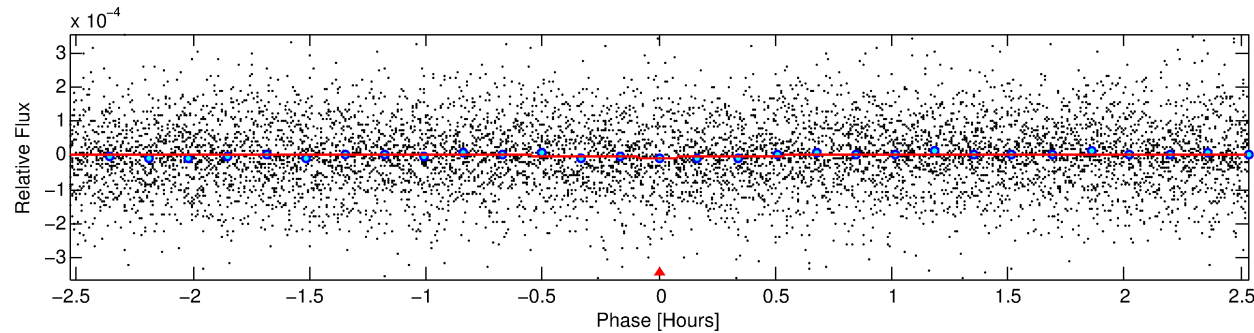
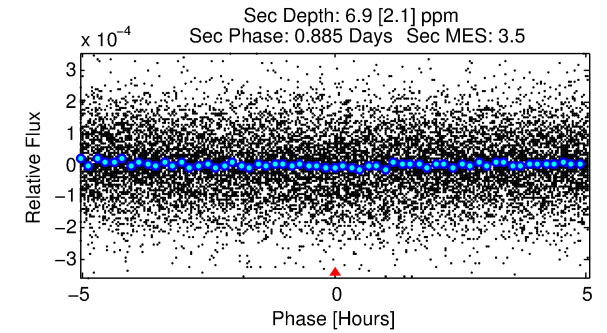
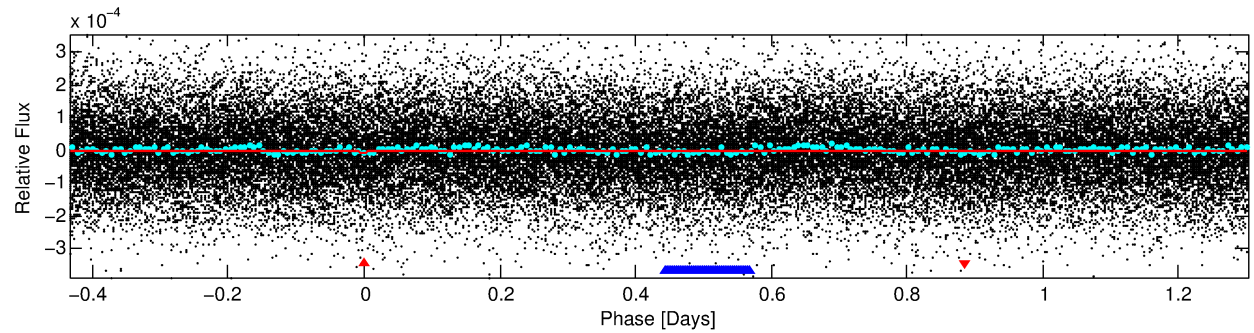
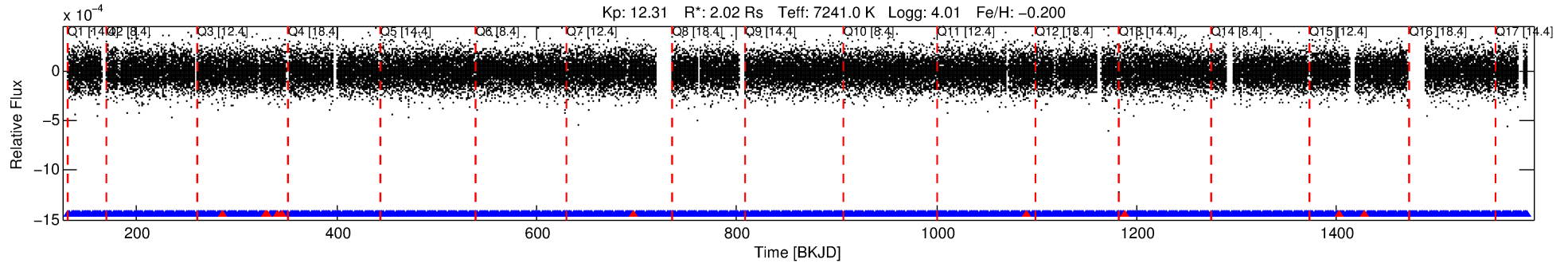
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006287517-01

No Significant Match Found

DV One-Page Summary

KIC: 6287517 Candidate: 1 of 2 Period: 1.736 d



DV Fit Results:

Period = 1.73642 [0.00007] d
Epoch = 131.5548 [0.0093] BKJD
Rp/R* = 0.0045 [0.2786]
a/R* = 1.93 [30.51]
b = 1.00 [0.49]
Seff = 9437.91 [4166.69]
Teq = 2513 [277] K
Rp = 0.99 [61.29] Re
a = 0.0326 [0.0086] AU
Ag = 4.07 [504.18] [0.01σ]
Teffp = 5521 [170784] K [0.02σ]

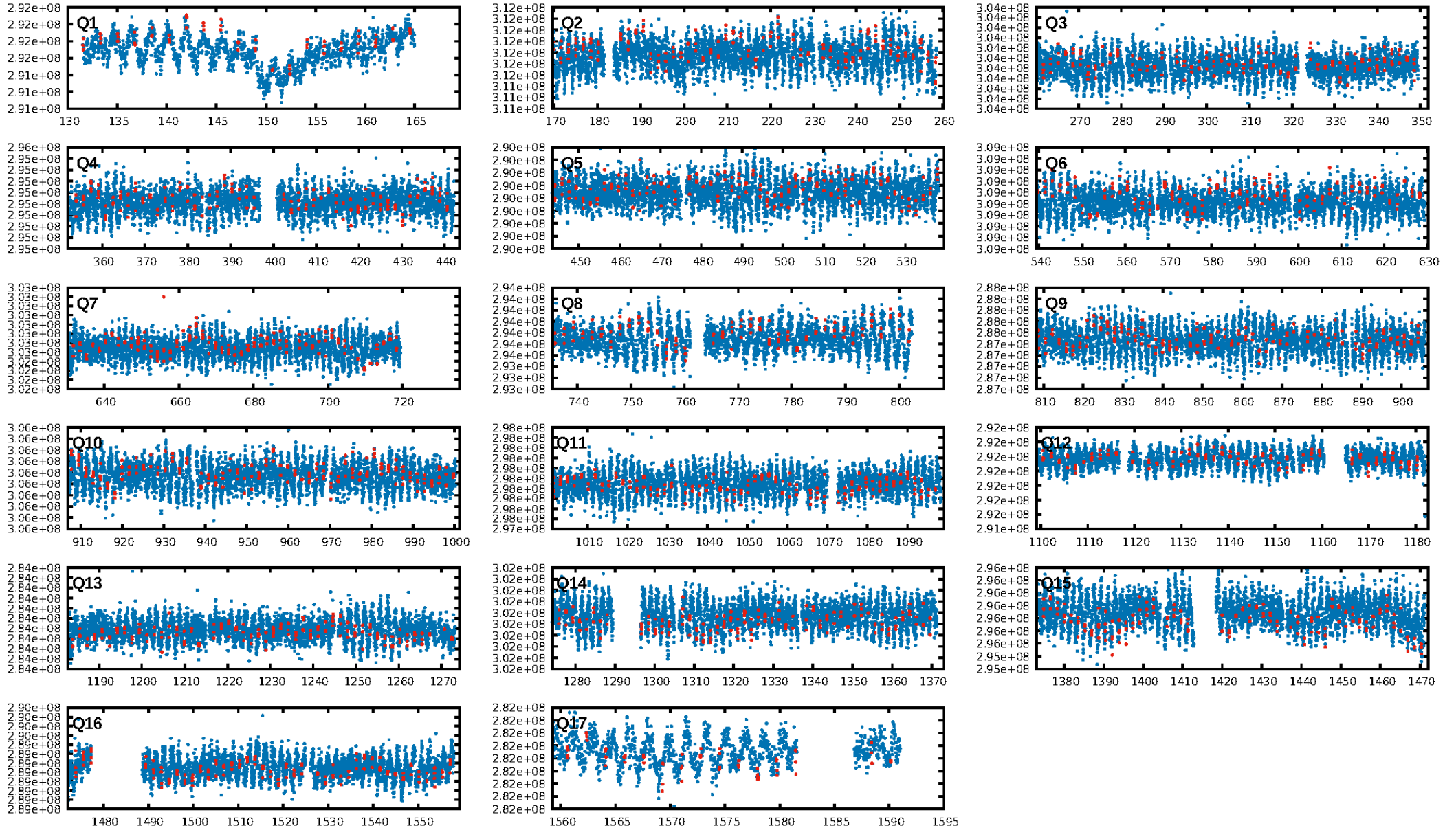
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.1% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.32e-36
RollingBand-fgt: 0.99 [713/723]
GhostDiagnostic-chr: 0.5506
Centroid-sig: 25.7%
Centroid-so: 4.709 arcsec [0.80σ]
OotOffset-rm: 1.912 arcsec [1.74σ]
KicOffset-rm: 1.922 arcsec [1.78σ]
OotOffset-st: 2/3/3 [11]
KicOffset-st: 2/3/3 [11]
DiffImageQuality-fgm: 0.36 [4/11]
DiffImageOverlap-fno: 1.00 [17/17]

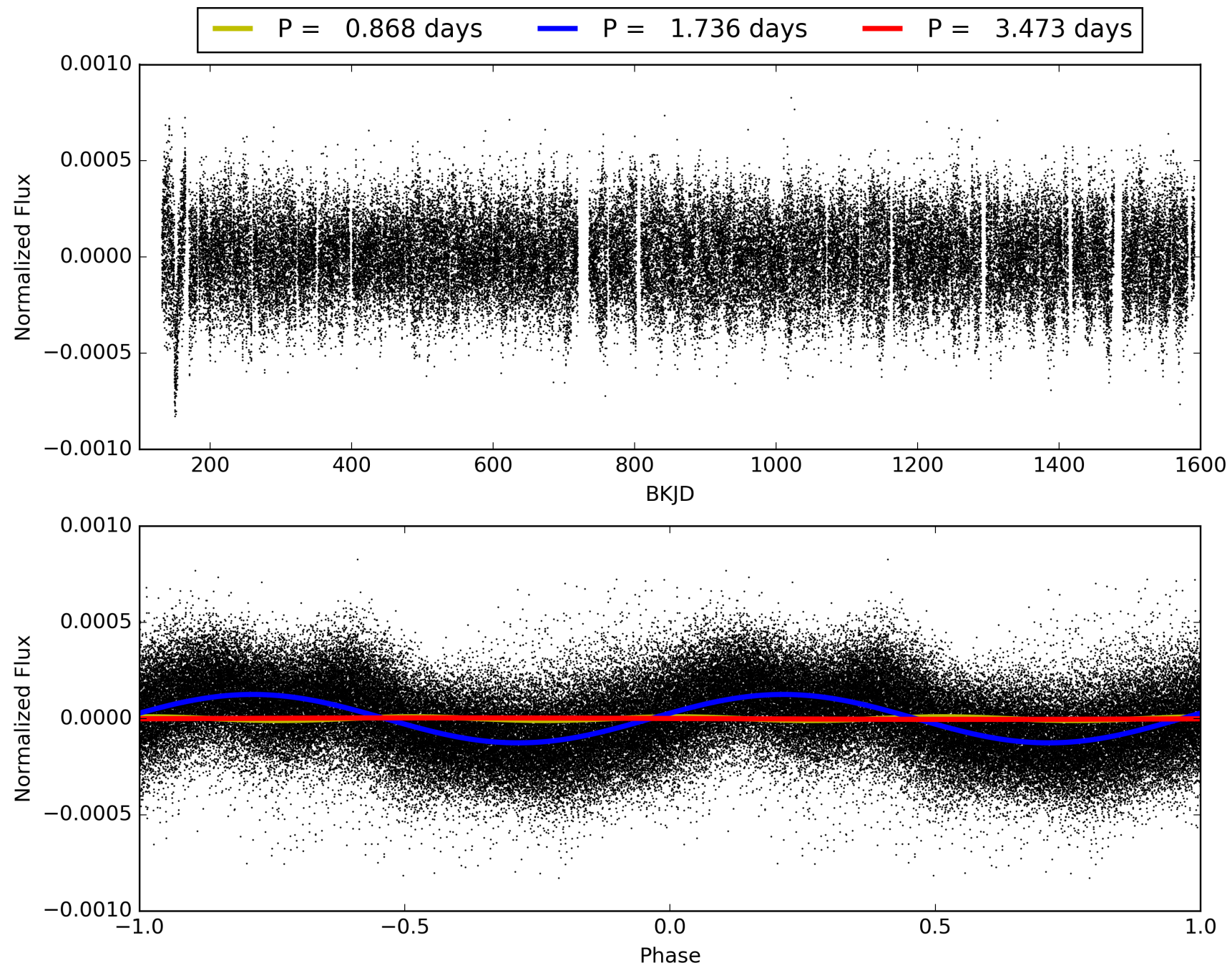
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:01:54 Z

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

TCE 006287517-01, PDC Light Curves

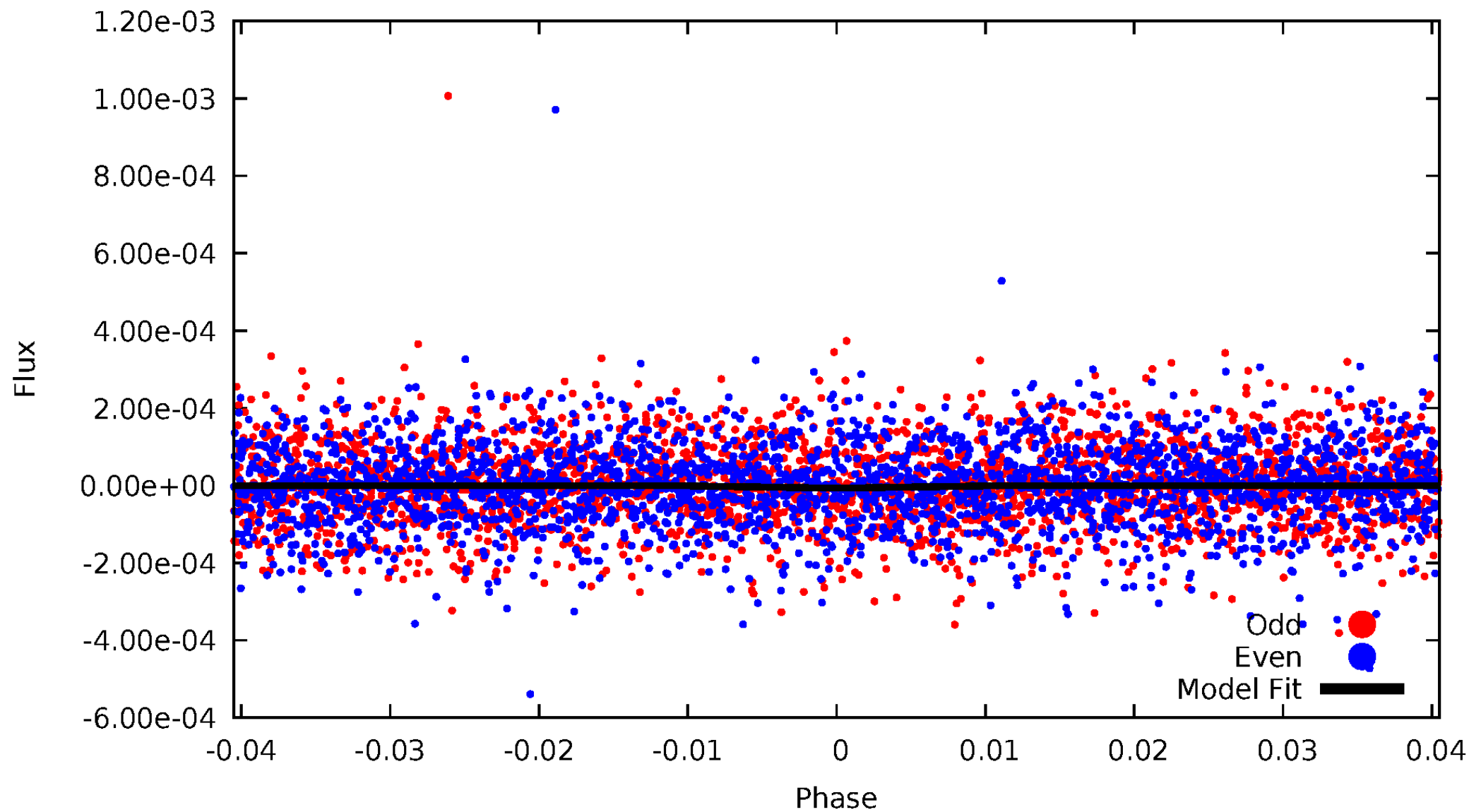


TCE 006287517-01



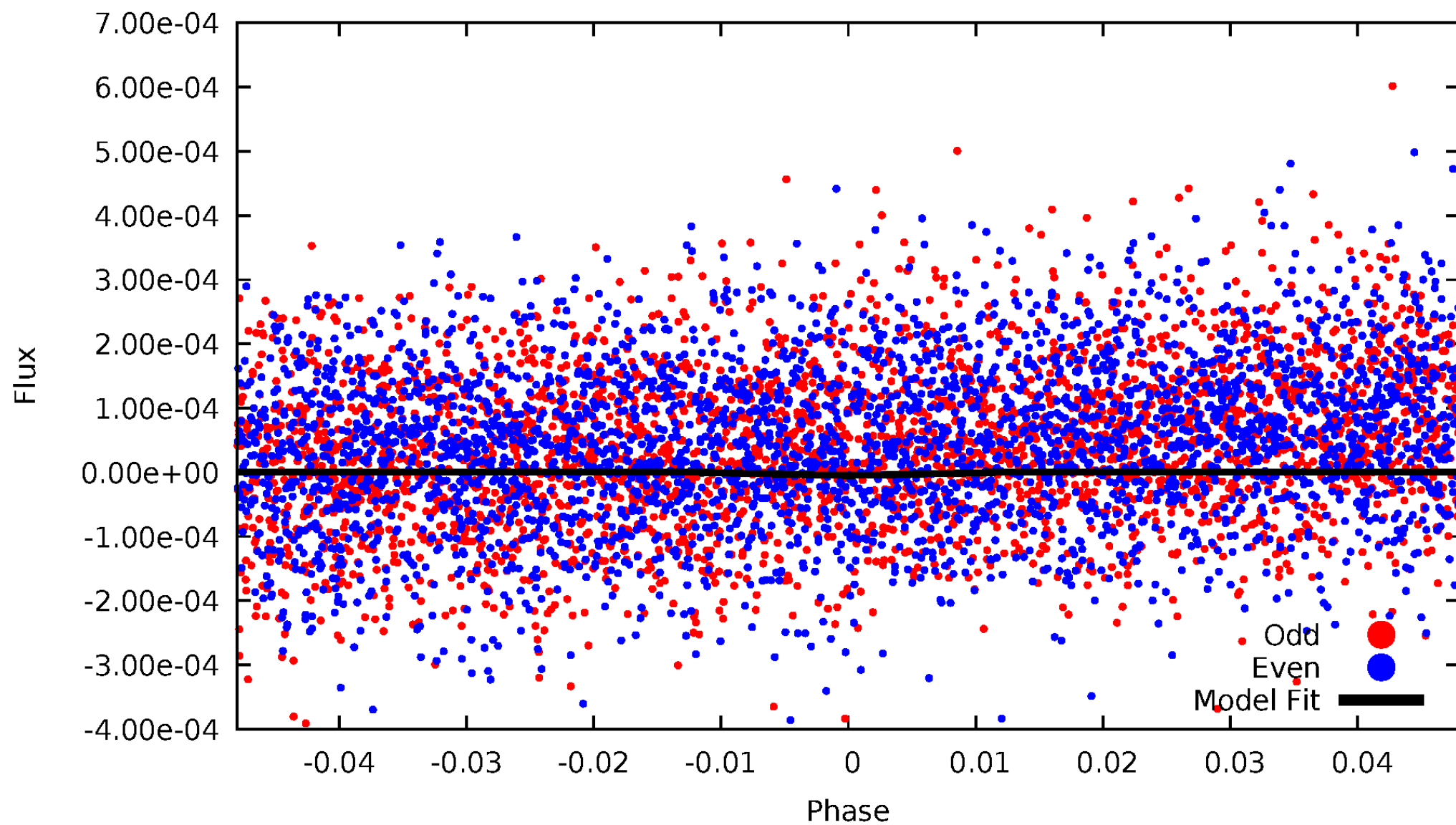
DV Odd/Even

TCE 006287517-01



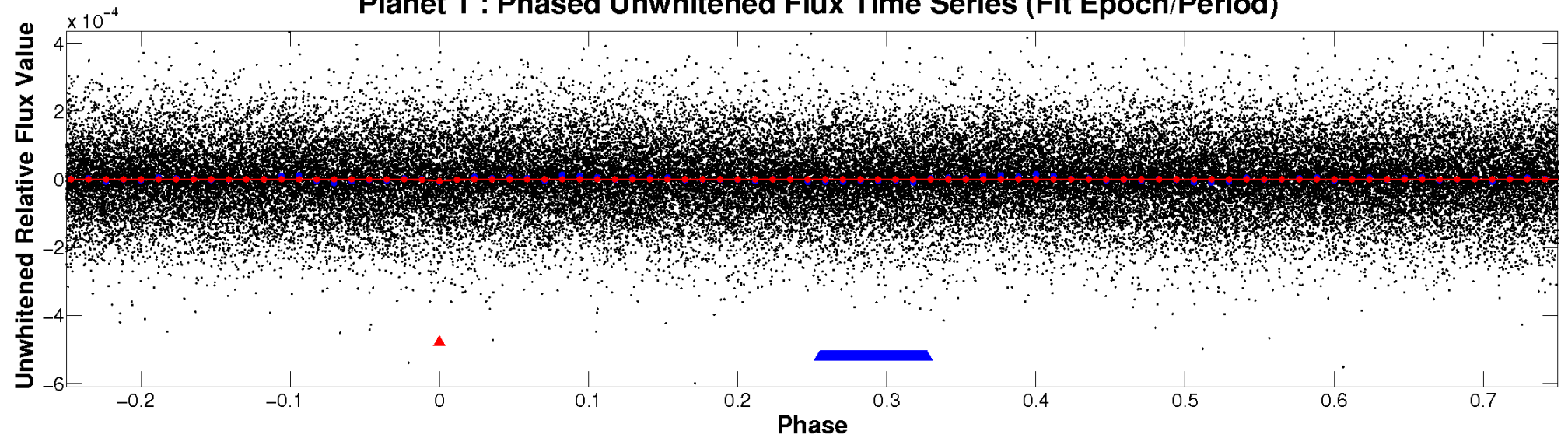
ALT Odd/Even

TCE 006287517-01

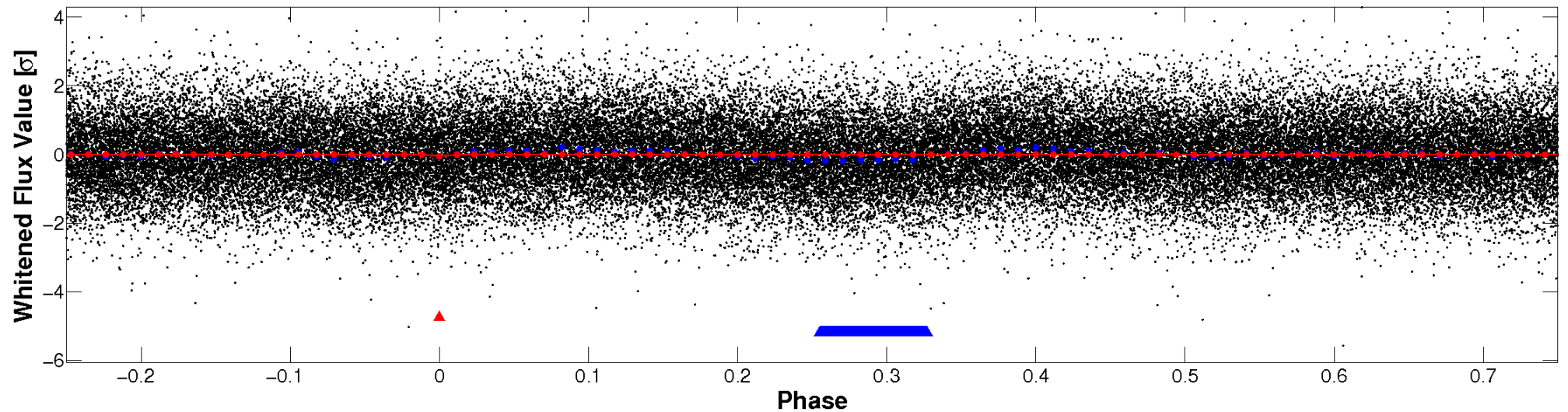


Non-Whitened Vs. Whitened Light Curve

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

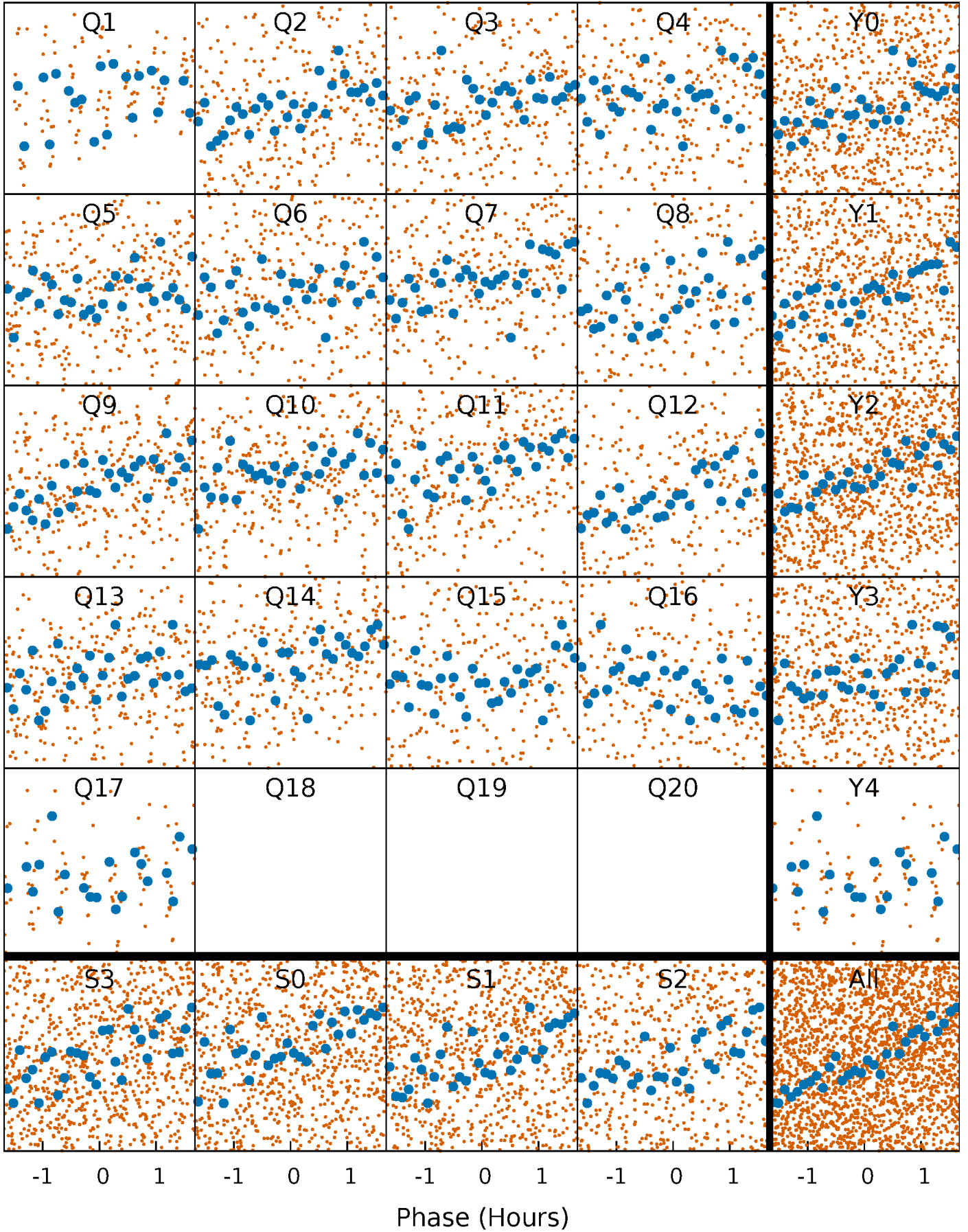


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



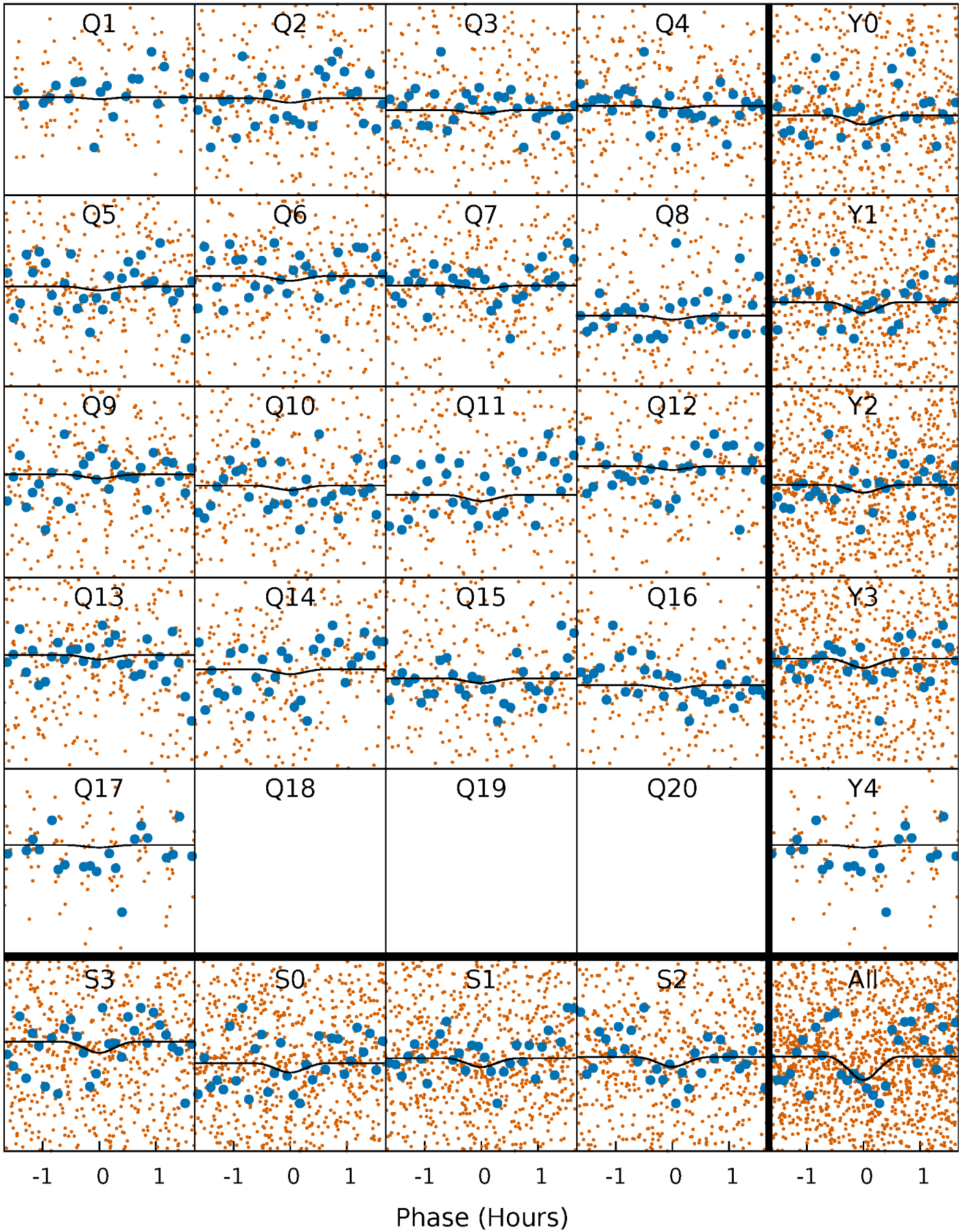
PDC Quarter-Phased Transit Curves

TCE 006287517-01 P= 1.736420 Days $T_0=131.554798$ (BKJD)



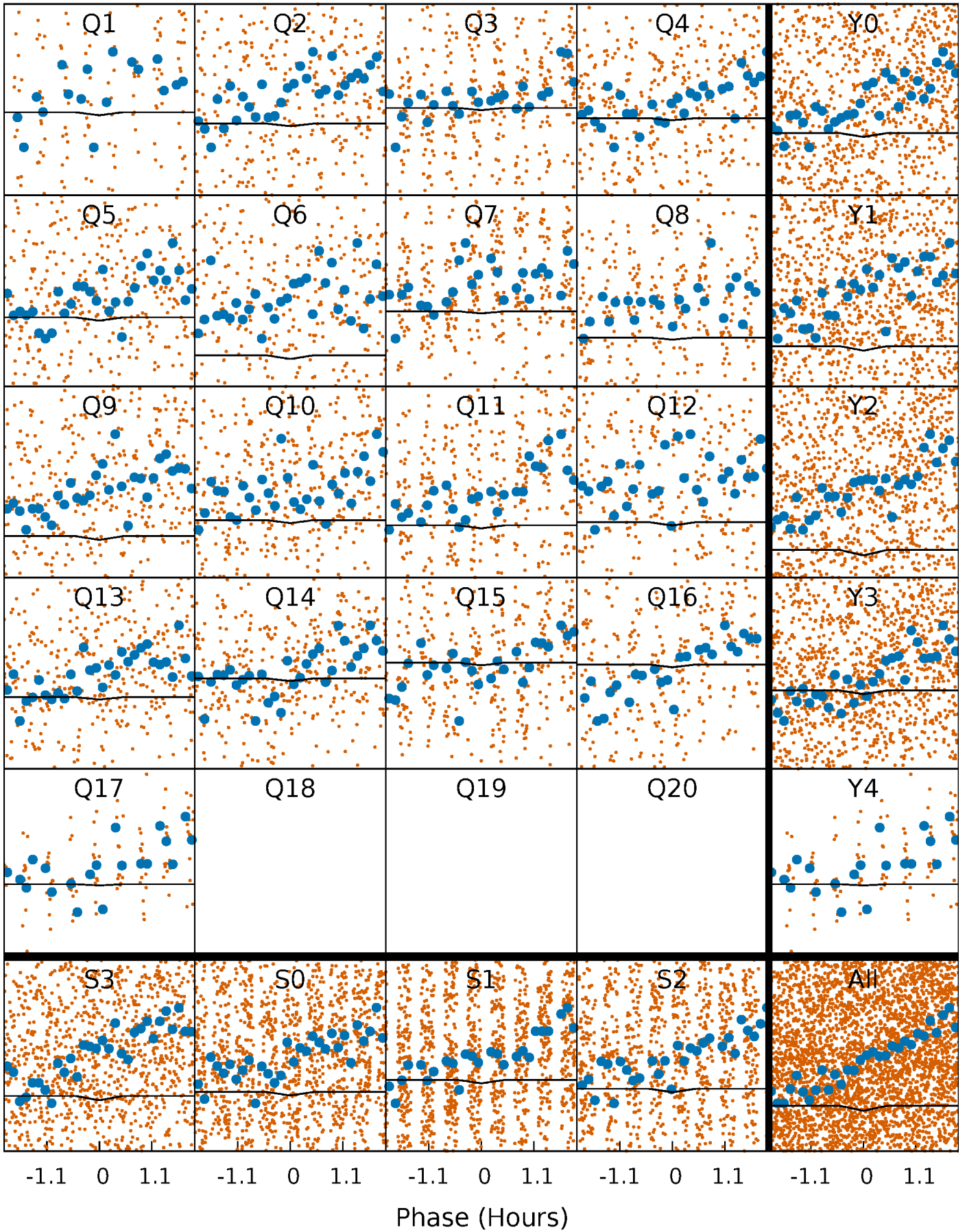
DV Quarter-Phased Transit Curves

TCE 006287517-01 P= 1.736420 Days $T_0=131.554798$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

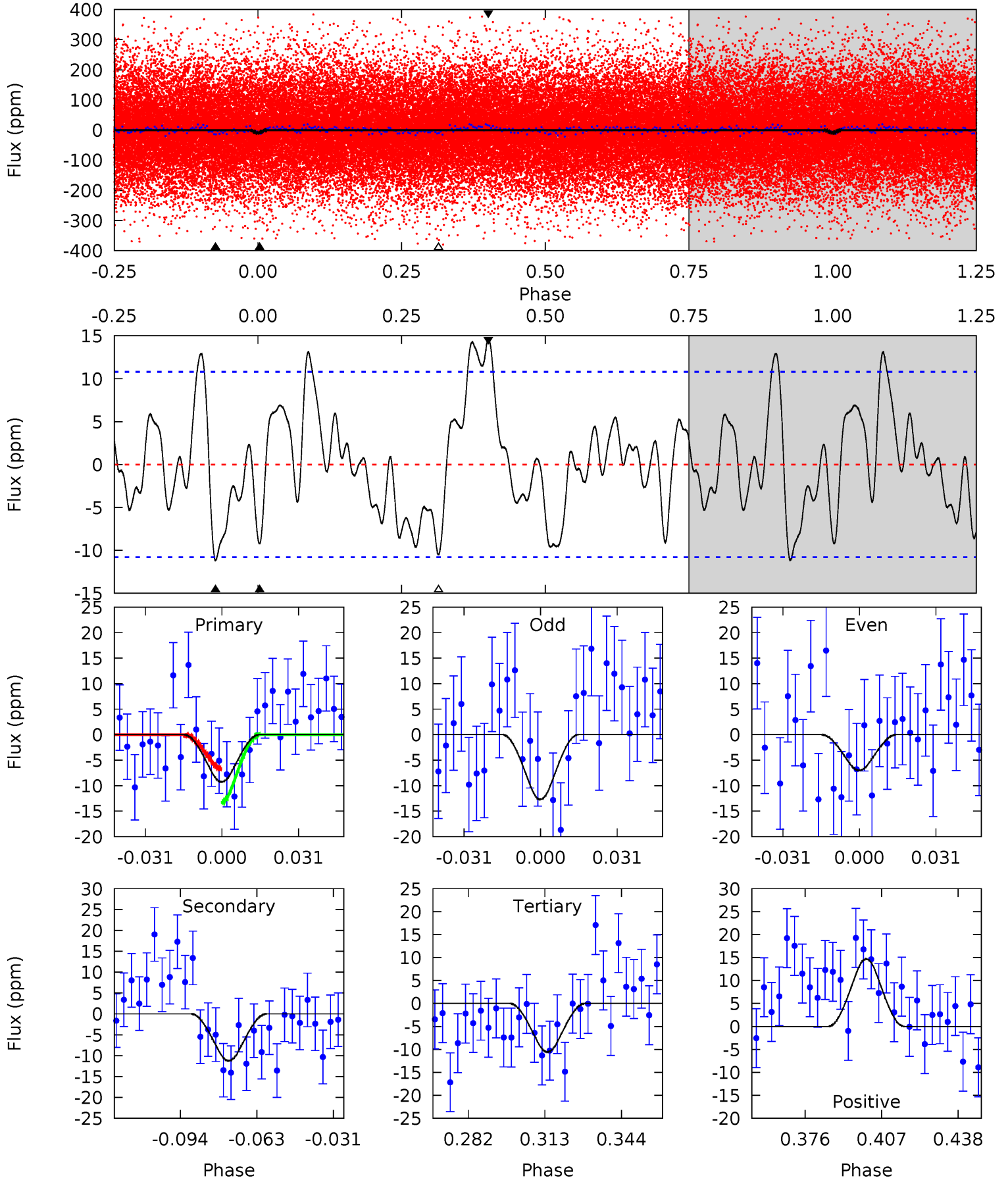
TCE 006287517-01 P= 1.736570 Days $T_0=131.566503$ (BKJD)



DV Model-Shift Uniqueness Test

006287517-01, P = 1.736420 Days, E = 129.818378 Days

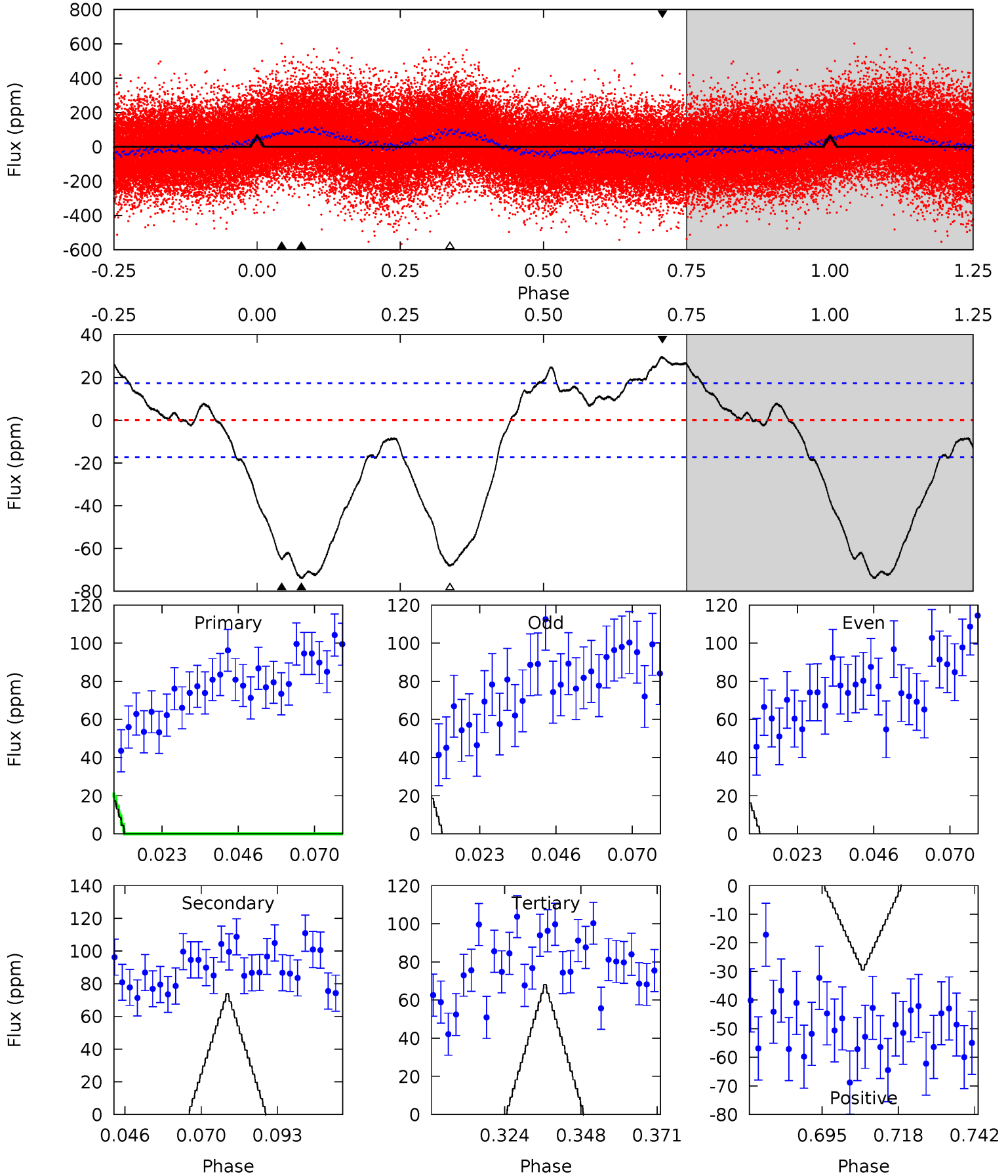
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.13	5.00	4.71	6.54	4.80	2.15	2.48	-0.58	-2.42	0.29	-1.54	1.27	0.86	0.57	1.47



Alt Model-Shift Uniqueness Test

006287517-01, P = 1.736570 Days, E = 129.829933 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.3	20.8	19.2	8.30	4.86	2.27	7.99	-0.88	9.98	1.63	12.5	1.21	1.14	0.29	2.40



Stellar Parameters For KIC 006287517

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7241^{+203}_{-304}	$4.013^{+0.234}_{-0.156}$	$-0.200^{+0.250}_{-0.350}$	$2.016^{+0.528}_{-0.587}$	$1.526^{+0.224}_{-0.298}$	$0.263^{+0.384}_{-0.117}$
	+3%/-4%	+6%/-4%	+125%/-175%	+26%/-29%	+15%/-20%	+146%/-45%
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 006287517-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-11 ± 2	$43.78^{+47.36}_{-31.07}$	3484^{+235}_{-284}	-3330^{+228}_{-152}	$0.004^{+0.040}_{-0.003}$
Alt.	-74 ± 4	$40.19^{+47.02}_{-27.72}$	3455^{+274}_{-257}	-3238^{+812}_{-199}	$0.027^{+0.244}_{-0.021}$

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

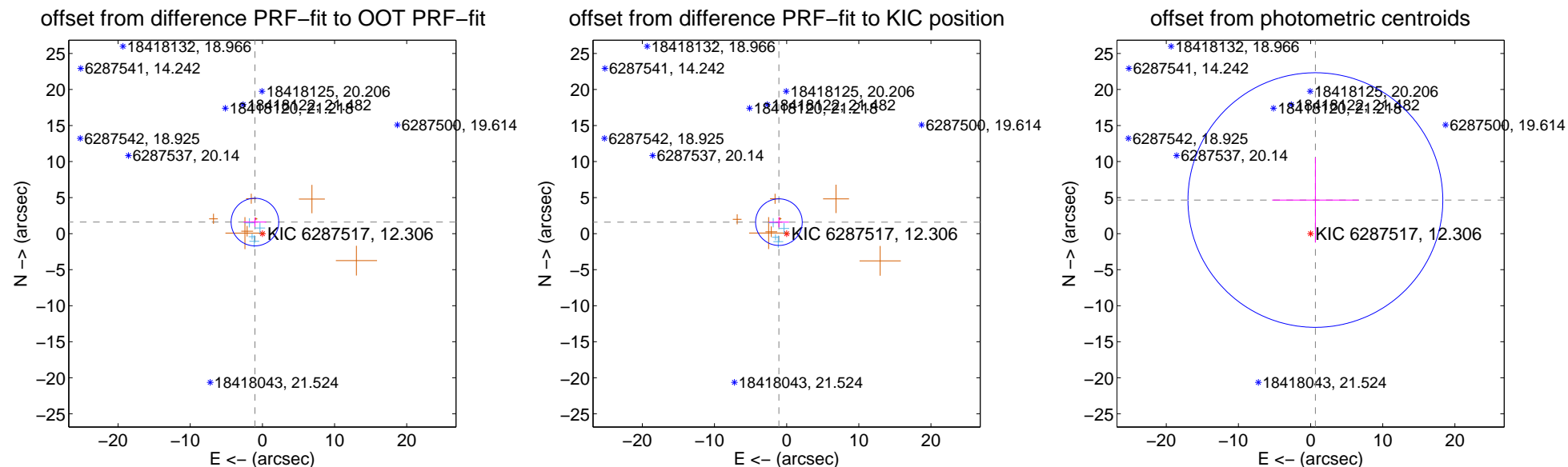
DV Centroid Data

Supplemental centroid analysis for 006287517-01. Kepler magnitude: 12.31. Transit SNR 1.34

There are 4 quarters with good PRF difference image offsets

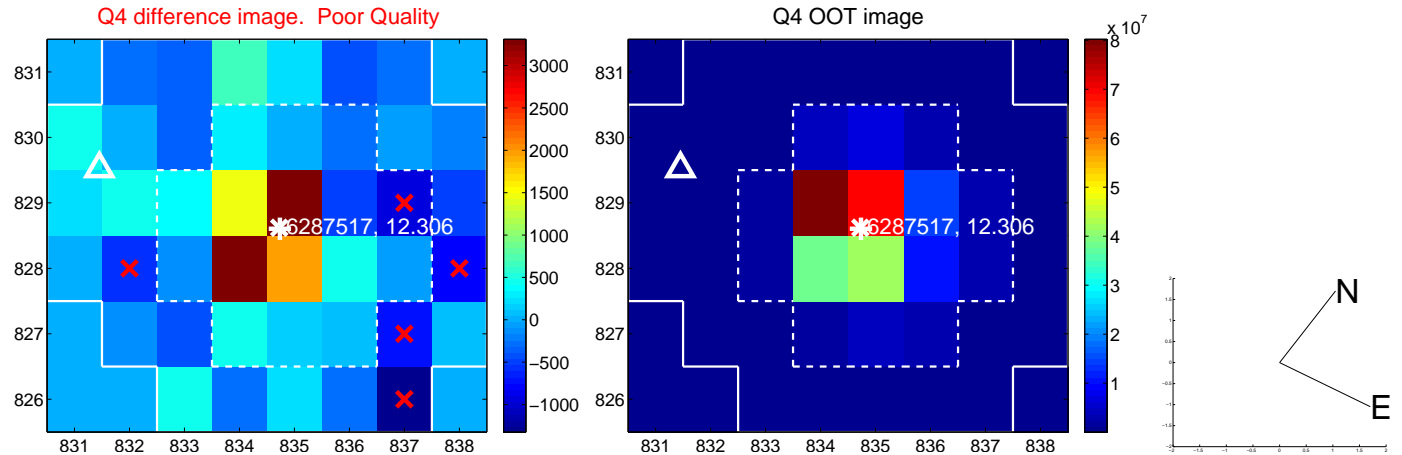
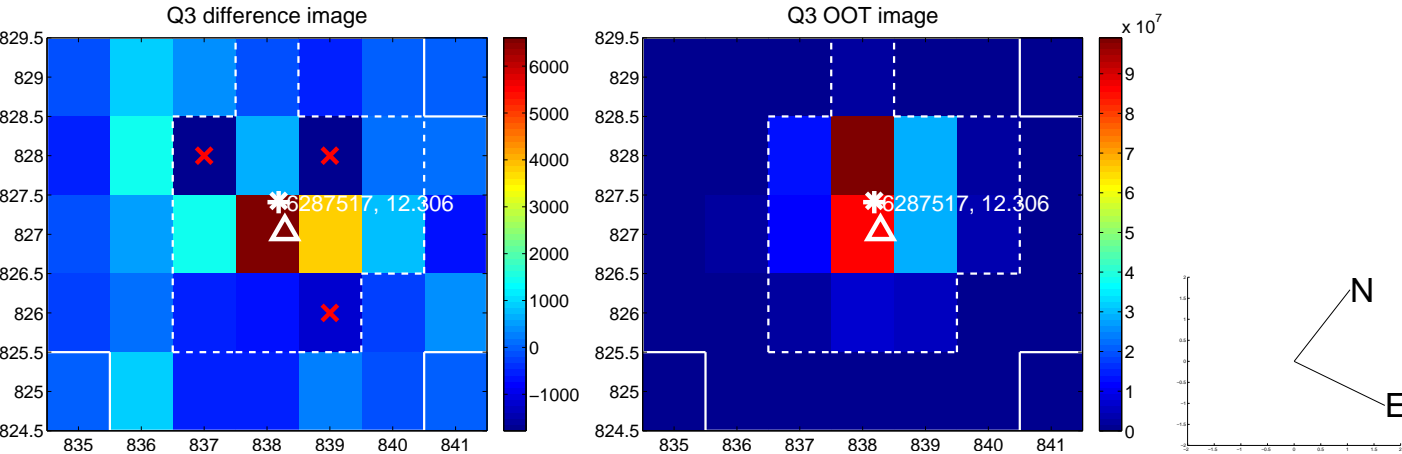
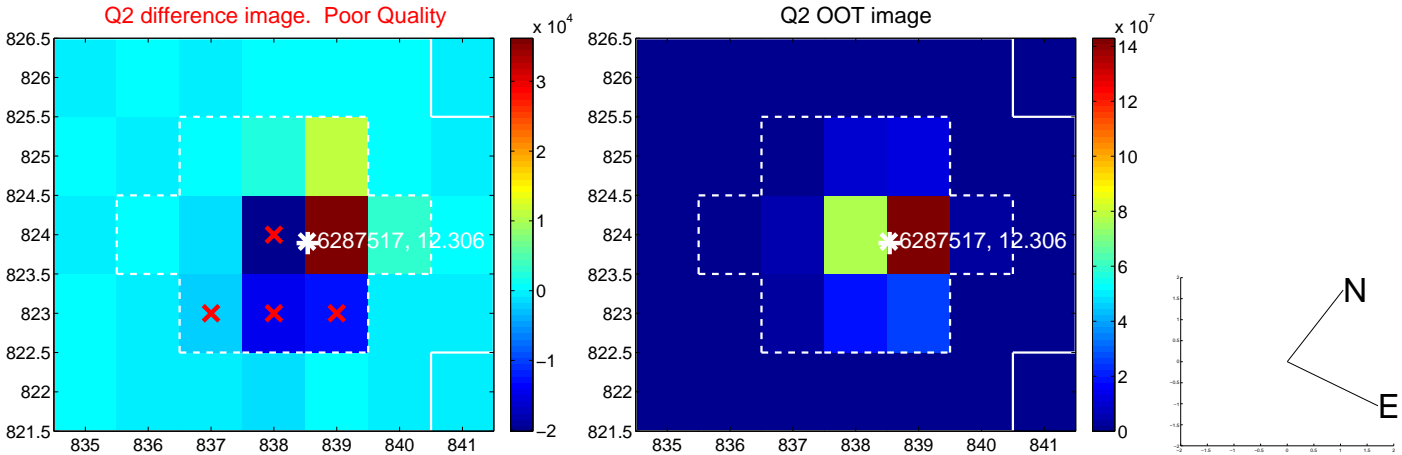
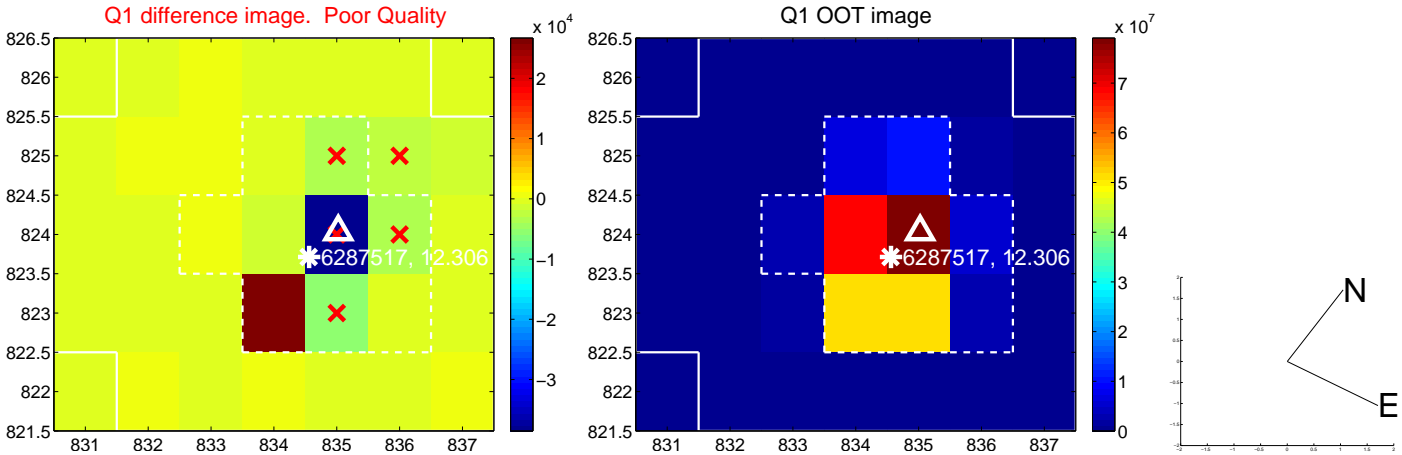
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.912 ± 1.101	1.74	1.038 ± 1.575	1.606 ± 0.622
PRF-fit source offset from KIC position	1.922 ± 1.078	1.78	1.072 ± 1.378	1.595 ± 0.720
photometric centroid source offset	4.71 ± 5.89	0.80	-0.66 ± 6.00	4.66 ± 5.89

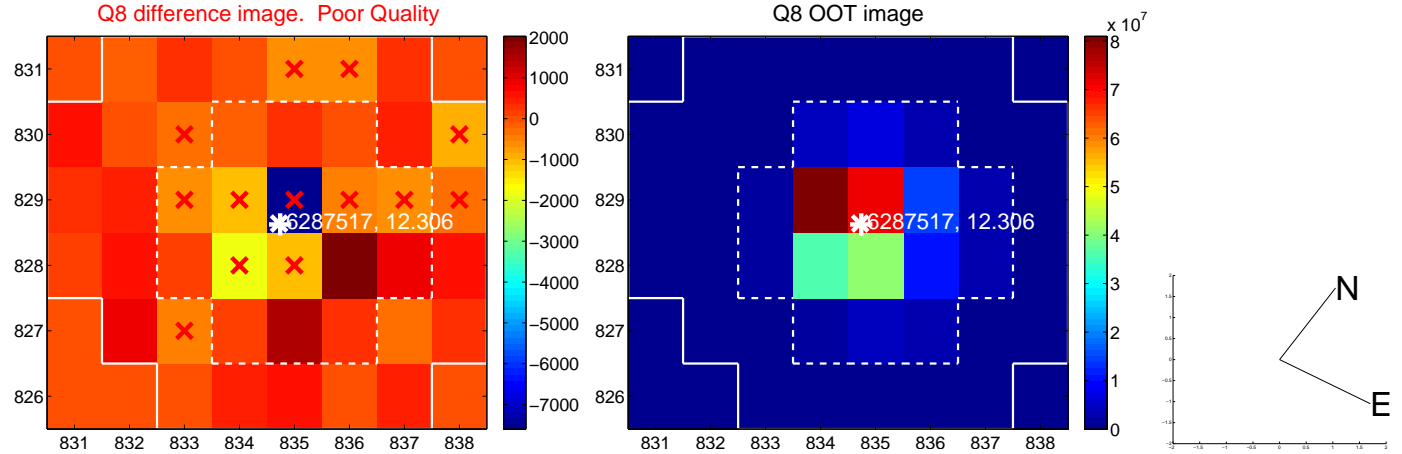
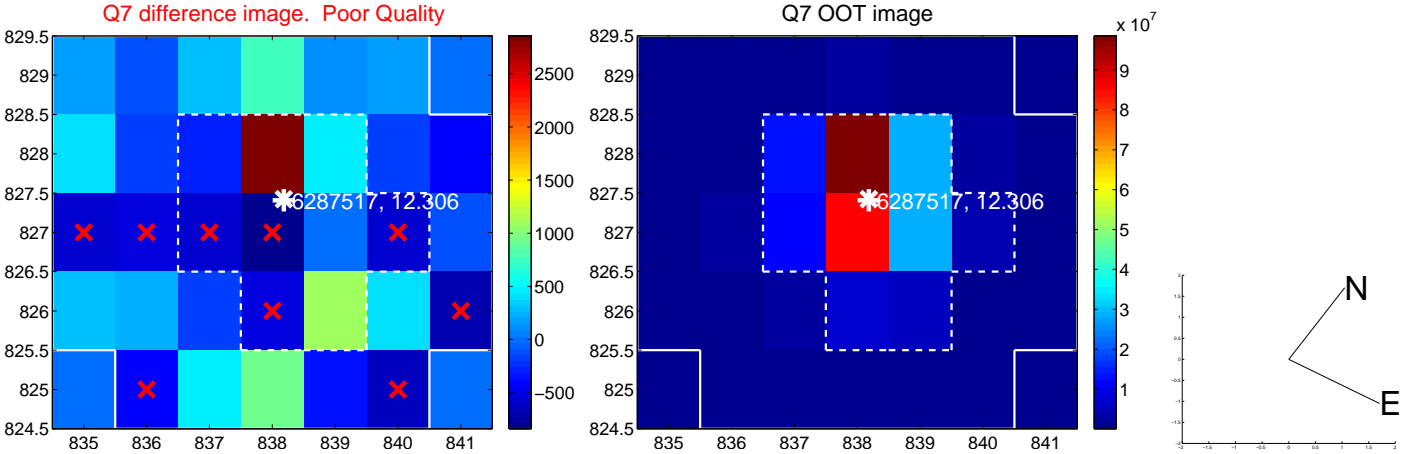
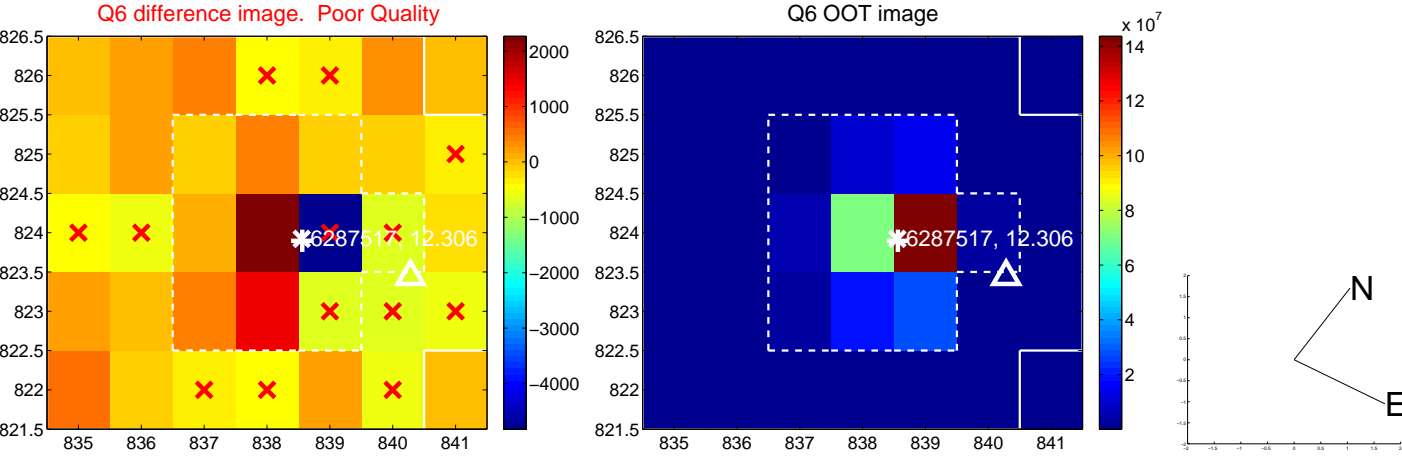
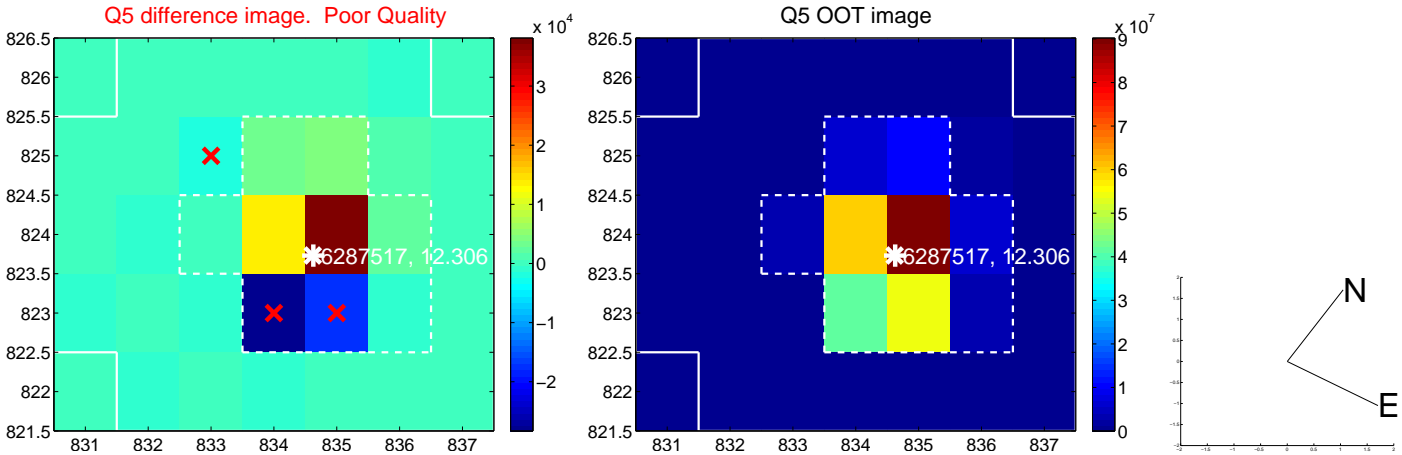


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

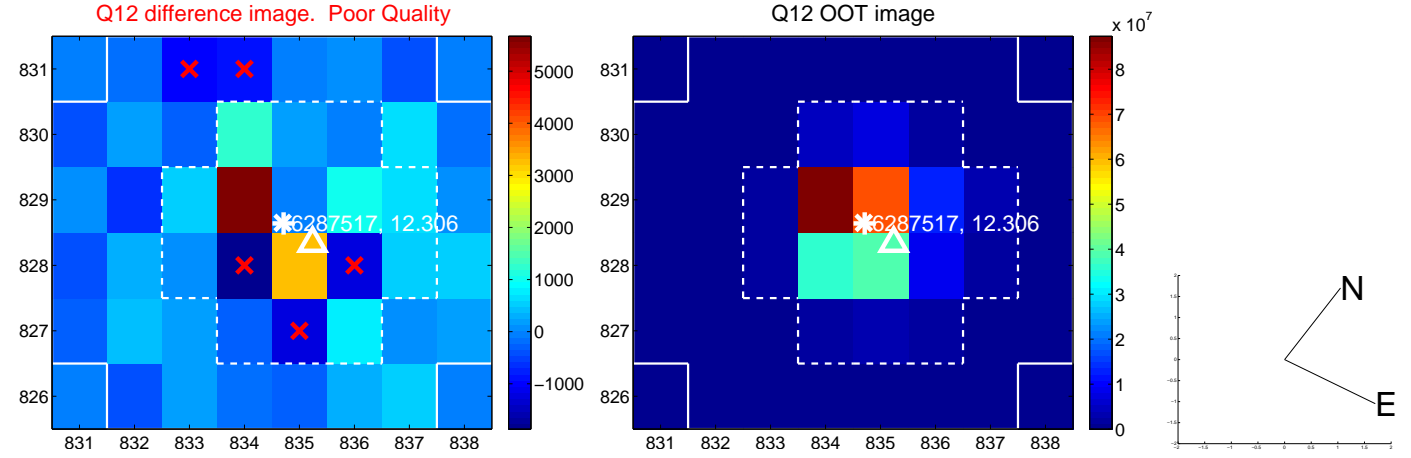
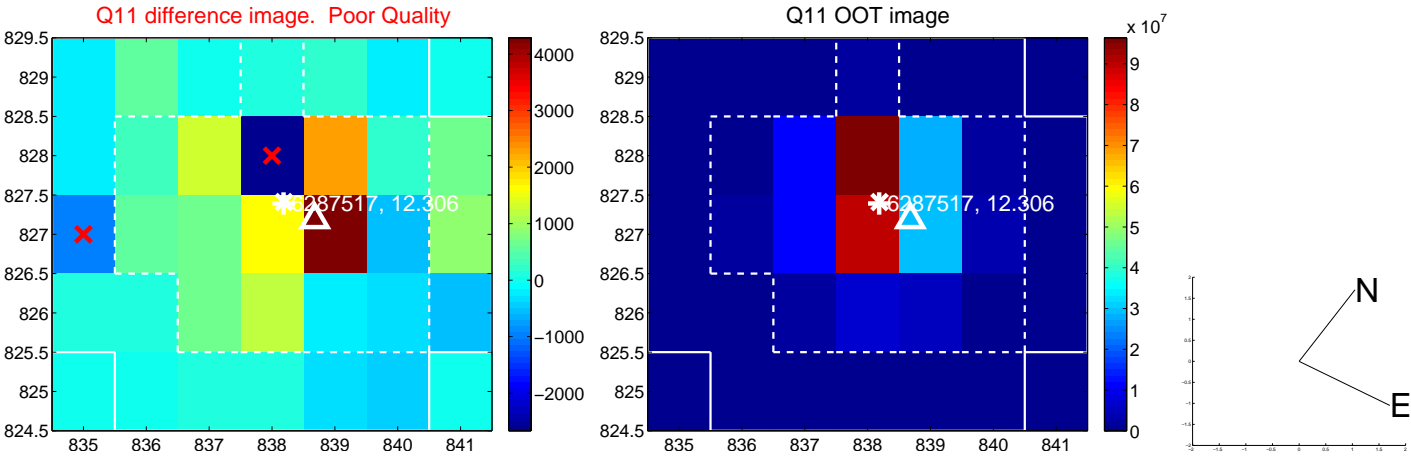
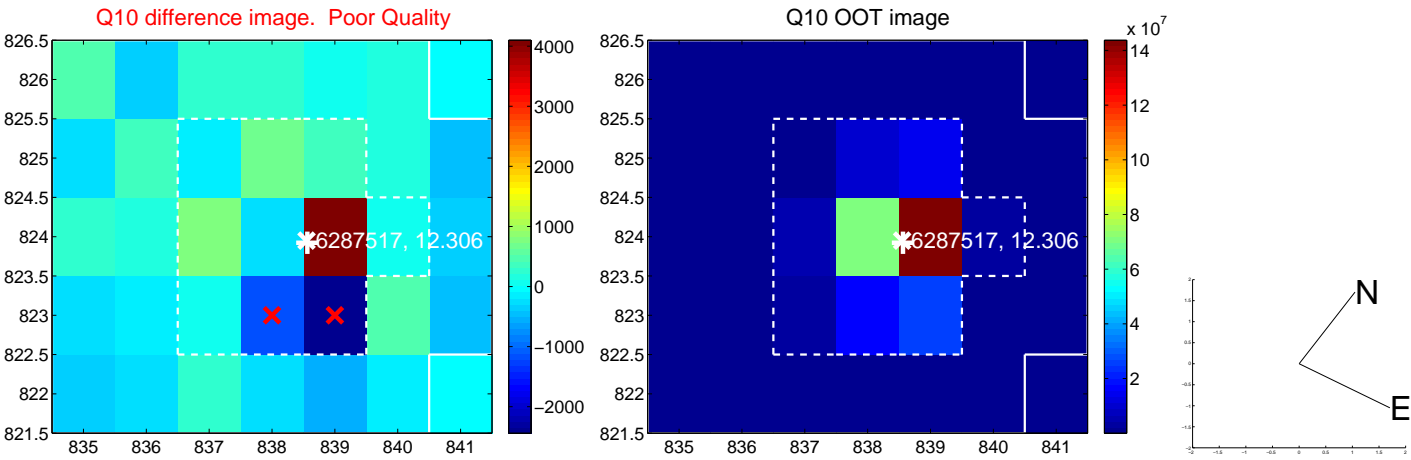
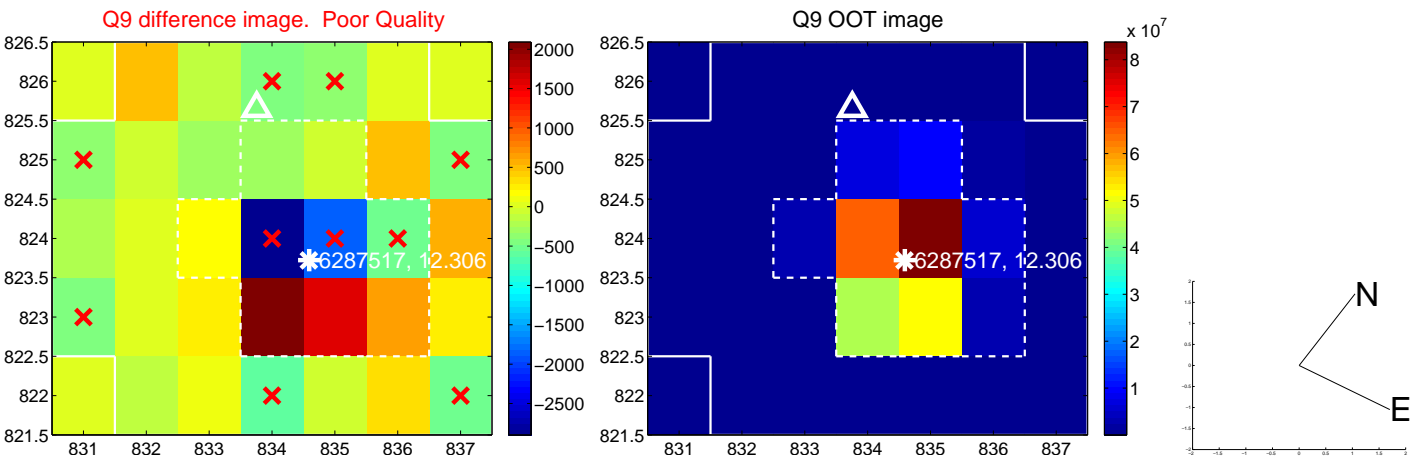
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



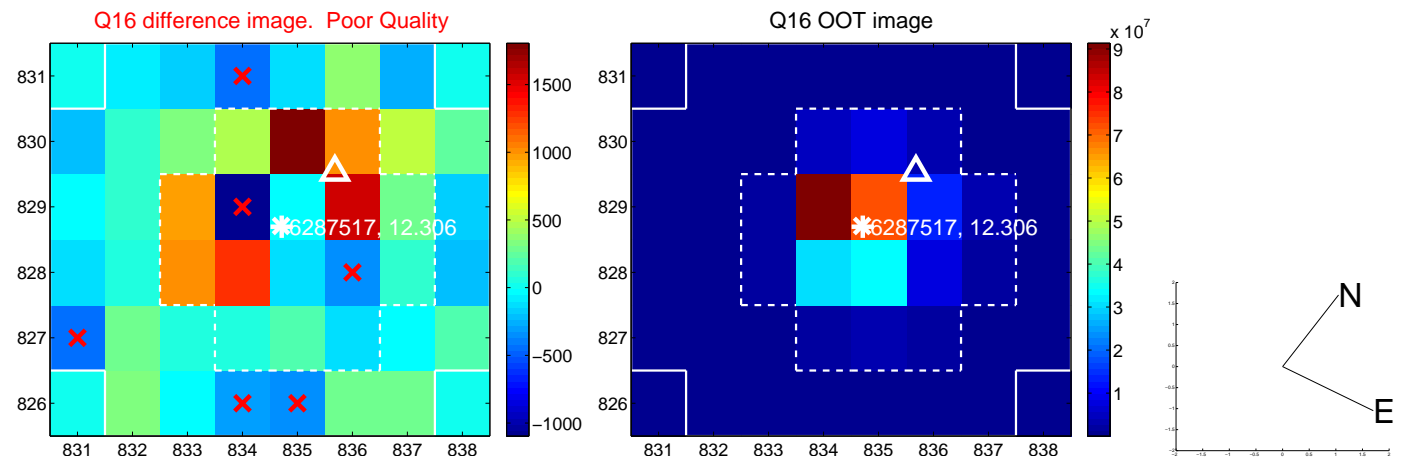
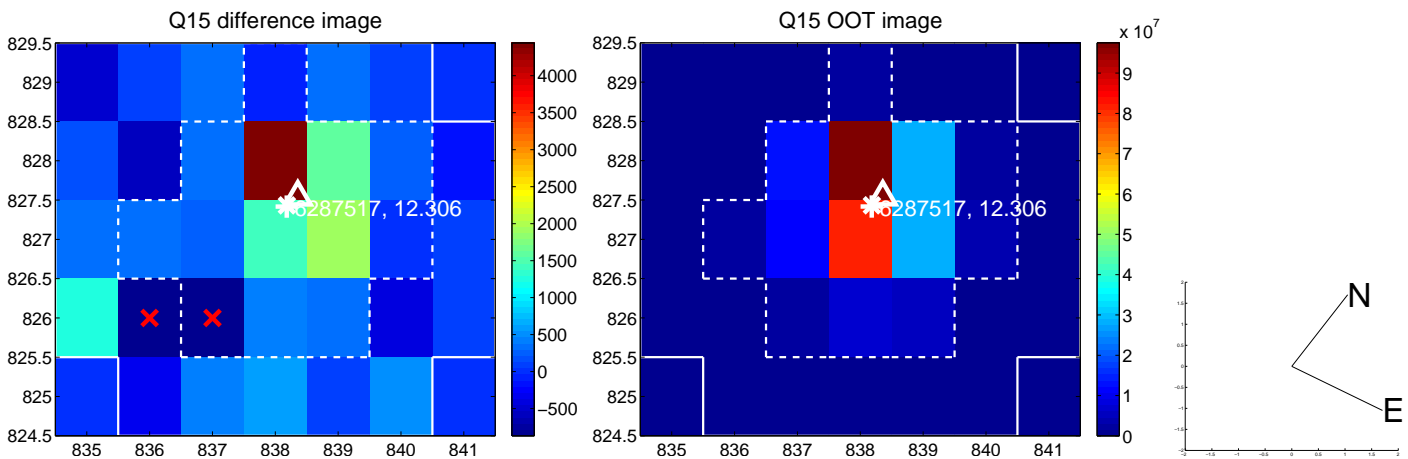
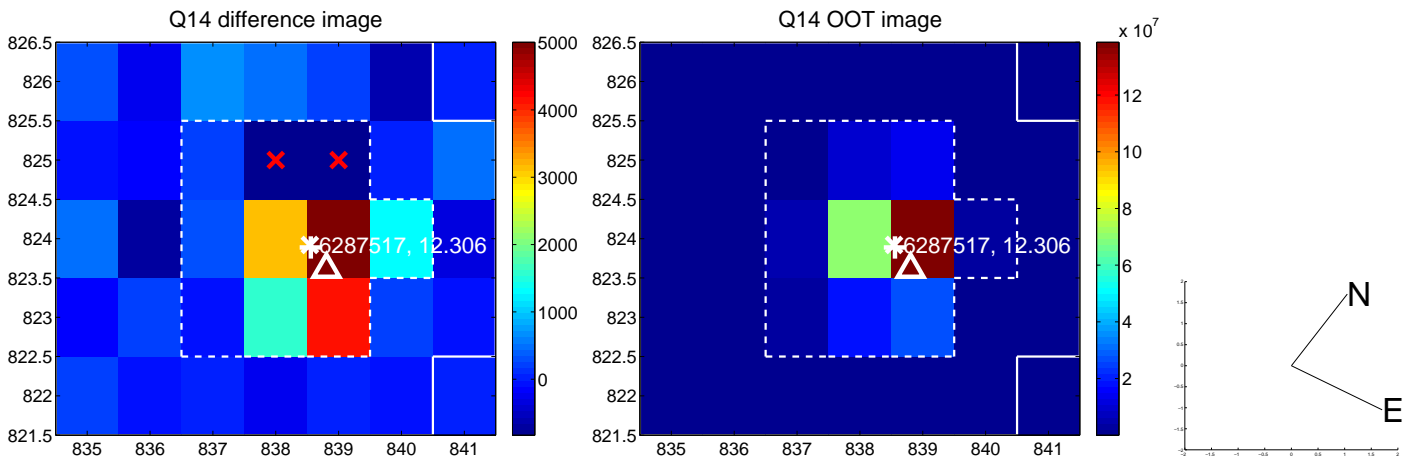
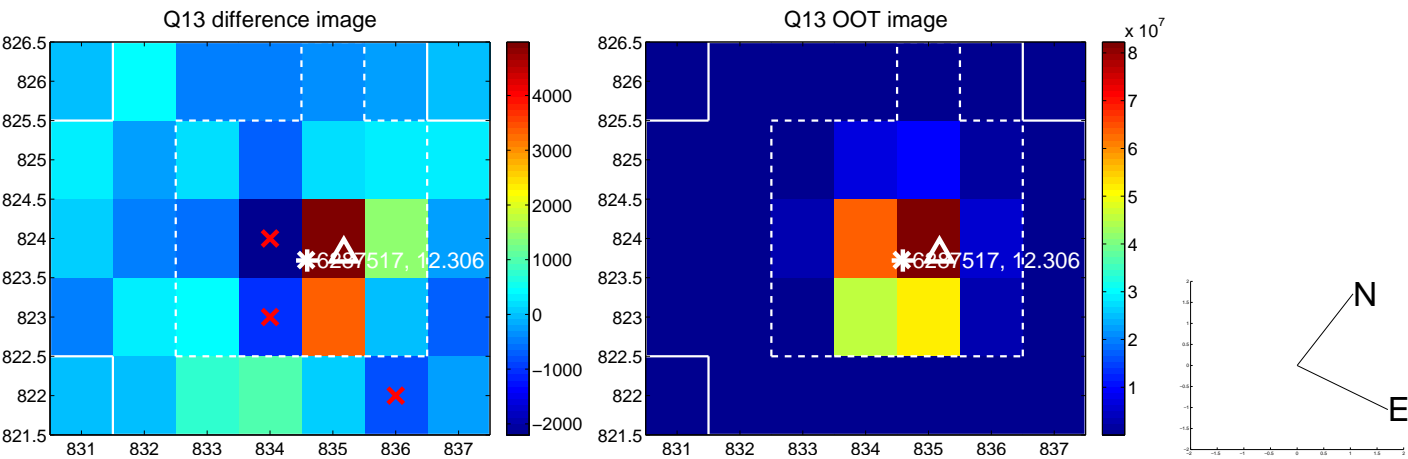
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



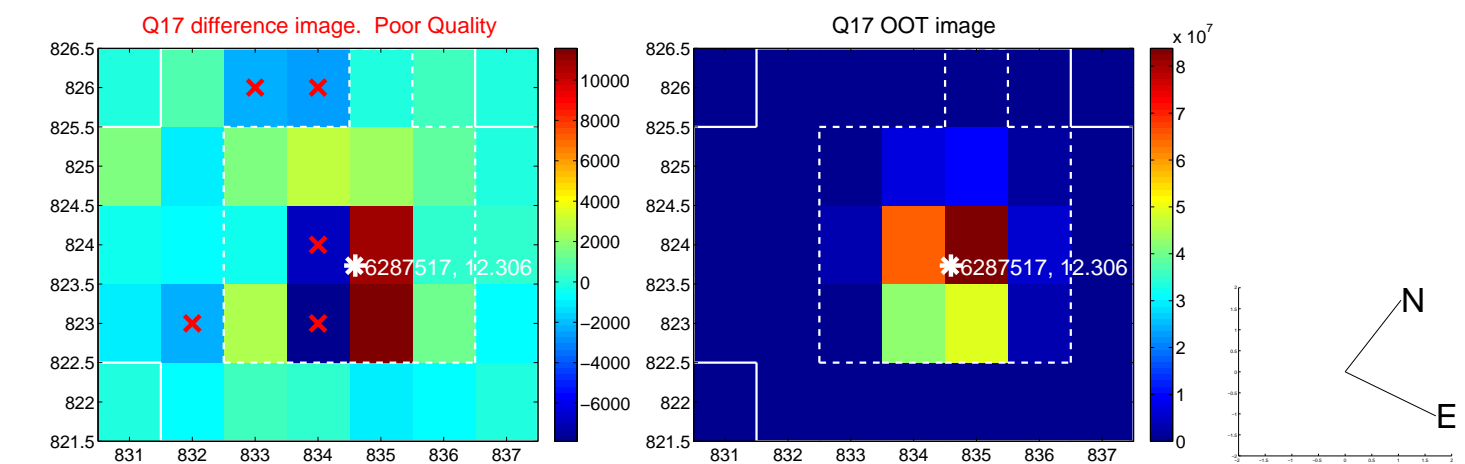
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



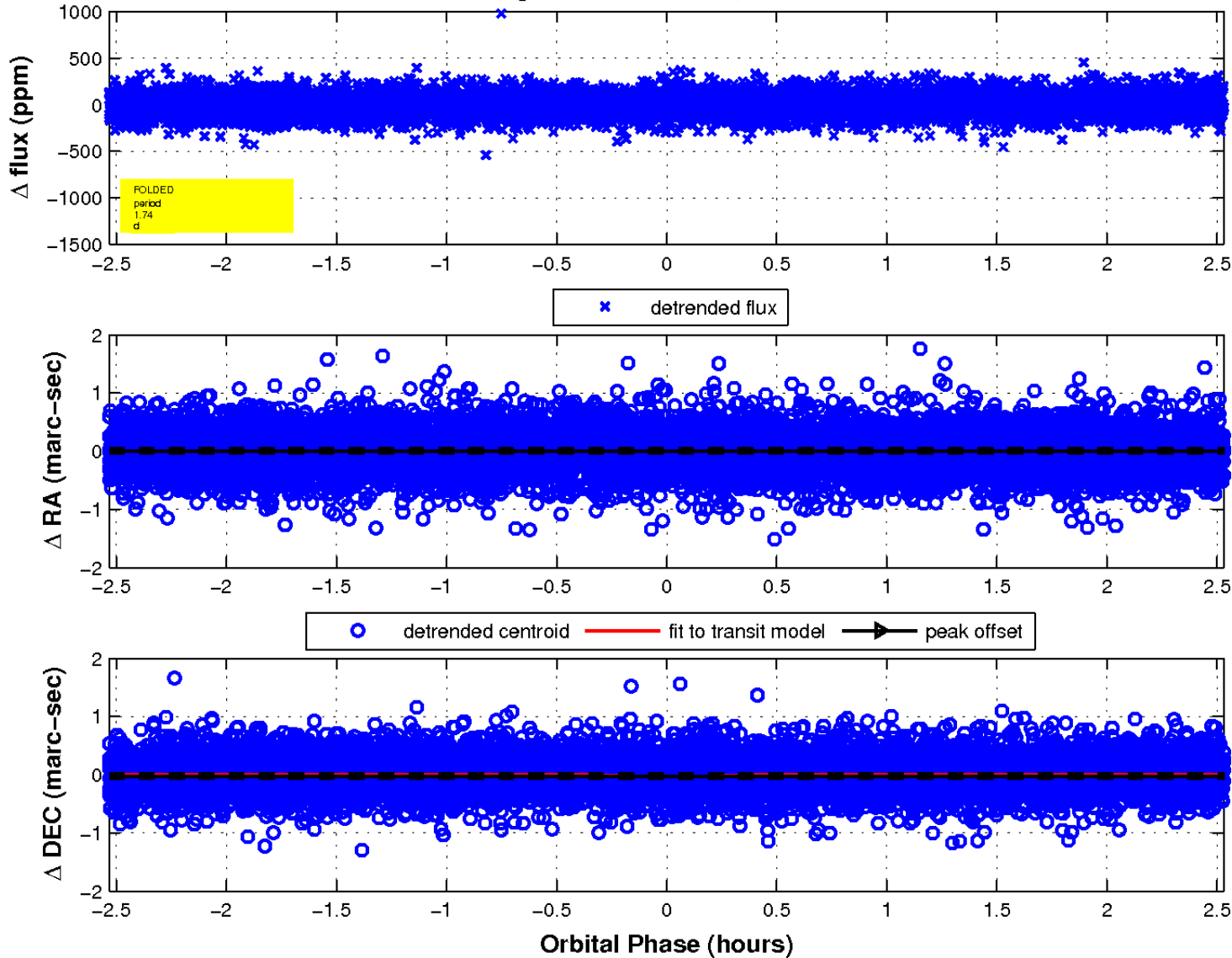
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



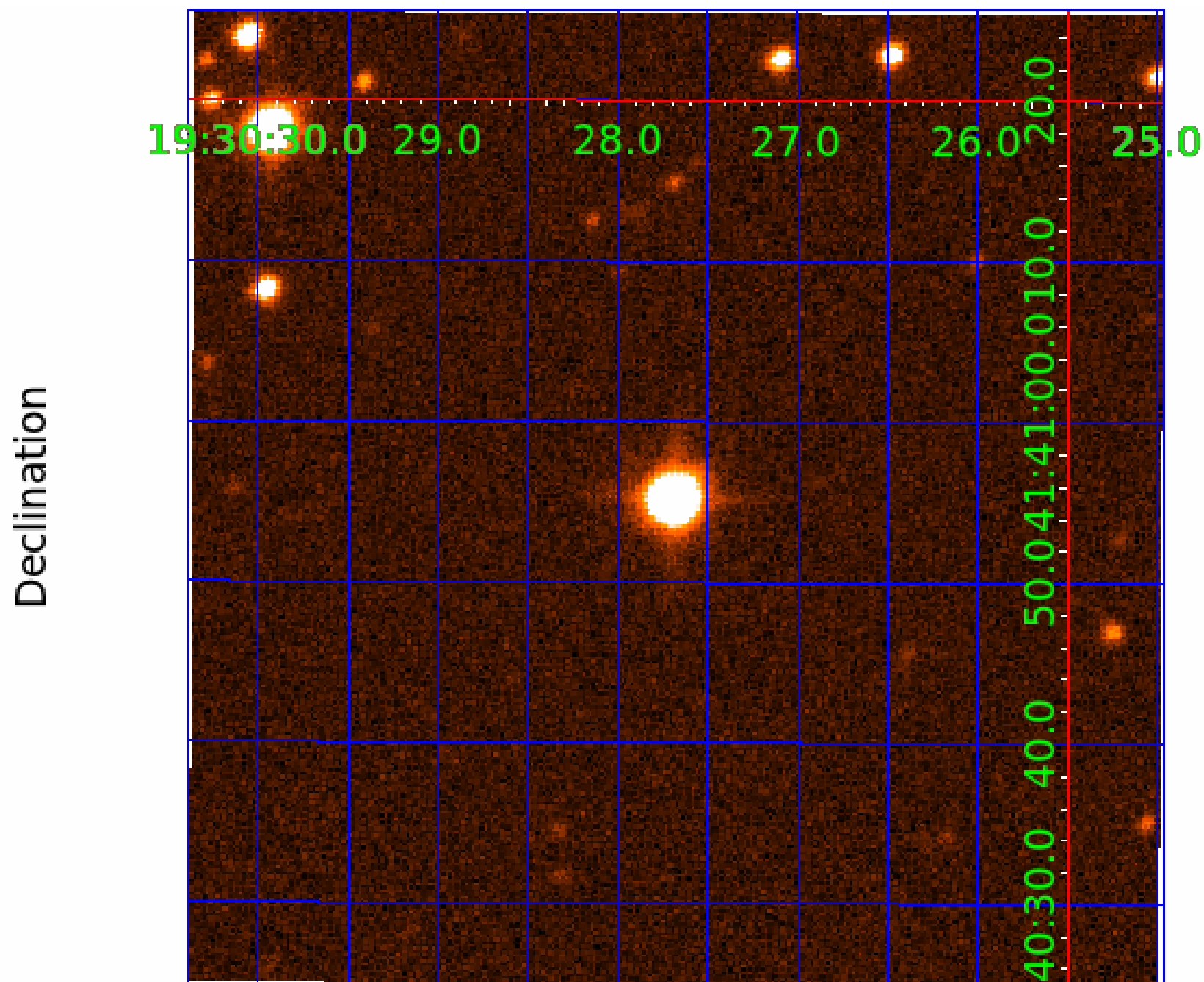
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 2



UKIRT Image



KIC 006287517

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})
006287517-01	OBS	No	1.736420	131.554798	6.1	0.844	14.0	1.3	2.02	7241	0.99	9437.91
006287517-02	OBS	No	1.736568	131.998029	26.8	3.475	14.9	10.8	2.02	7241	1.26	9436.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006287517-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
006287517-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_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.

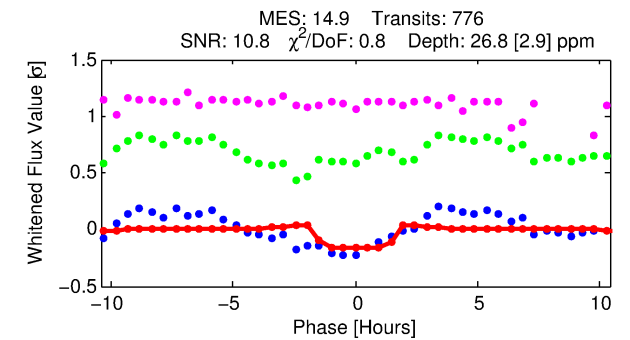
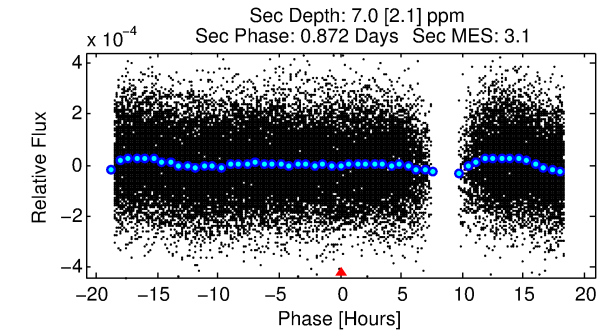
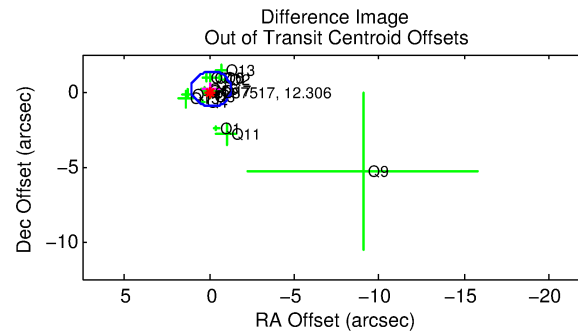
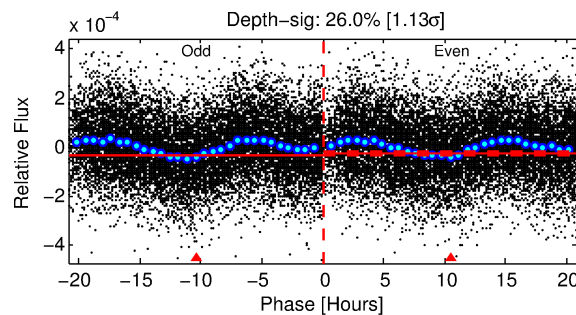
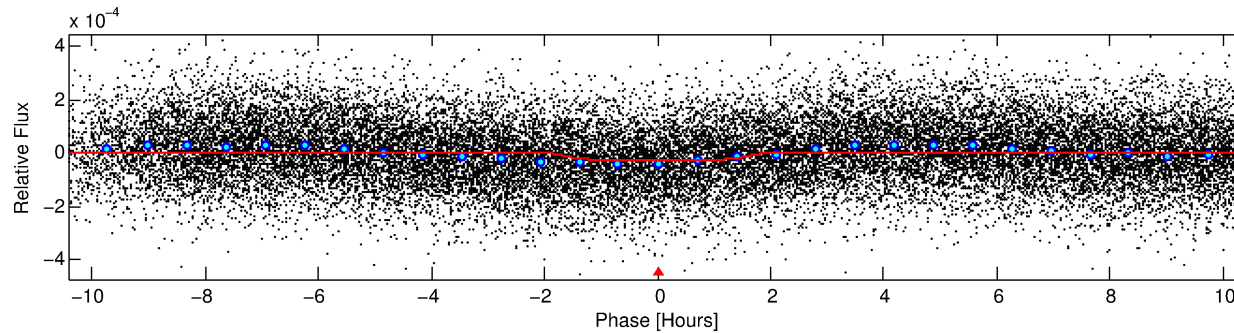
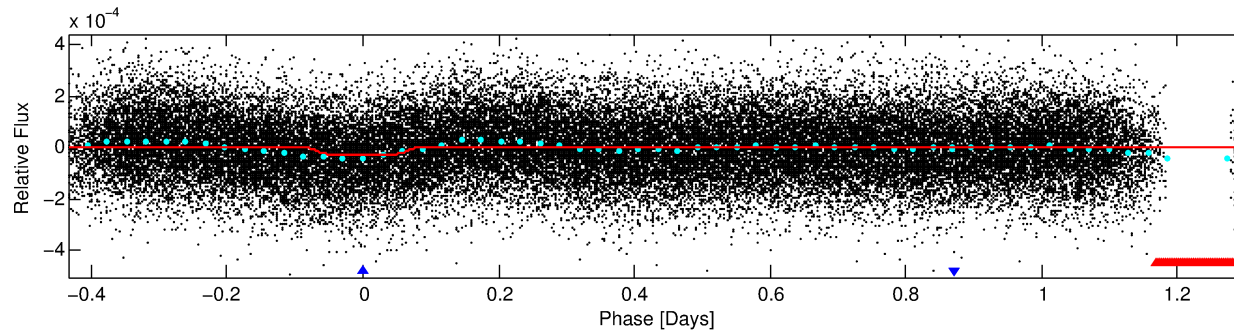
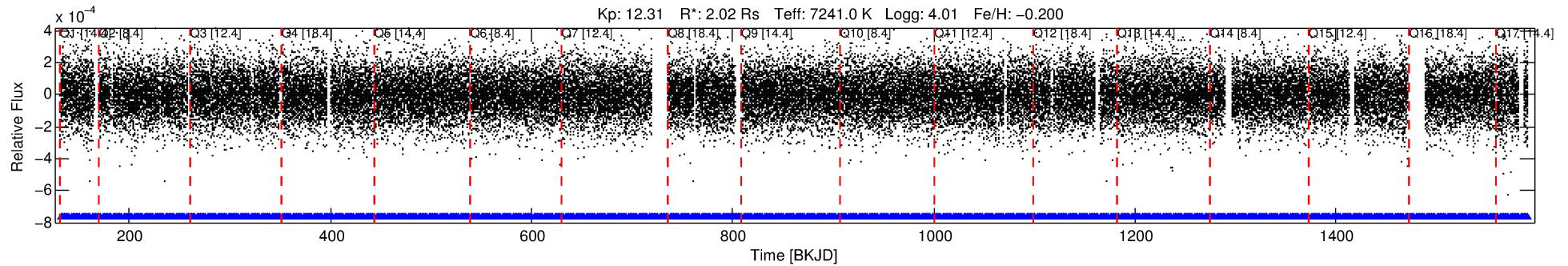
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006287517-02

No Significant Match Found

DV One-Page Summary

KIC: 6287517 Candidate: 2 of 2 Period: 1.737 d



DV Fit Results:

Period = 1.73657 [0.00001] d
Epoch = 131.9980 [0.0030] BKJD
Rp/R* = 0.0057 [0.0013]
a/R* = 1.66 [1.54]
b = 0.94 [0.18]
Seff = 9436.84 [4166.22]
Teq = 2513 [277] K
Rp = 1.26 [0.47] Re
a = 0.0326 [0.0086] AU
Ag = 2.57 [1.75] [0.90σ]
Teffp = 4922 [700] K [3.20σ]

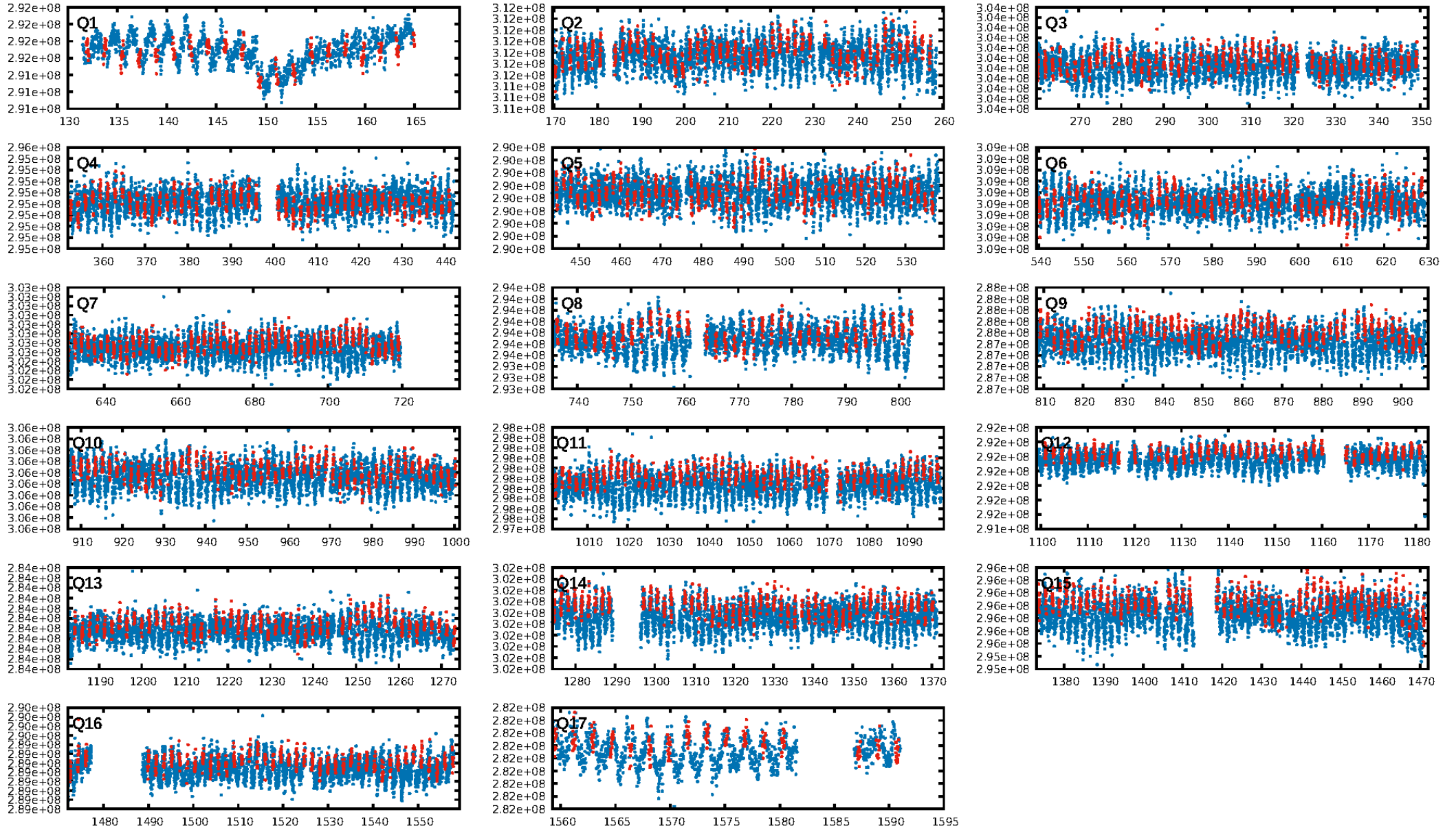
DV Diagnostic Results:

ShortPeriod-sig: 0.1% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.33e-40
RollingBand-fgt: 1.00 [740/740]
GhostDiagnostic-chr: -2.882
Centroid-sig: 0.7%
Centroid-so: 1.099 arcsec [1.95σ]
OotOffset-rm: 0.221 arcsec [0.57σ]
KicOffset-rm: 0.165 arcsec [0.44σ]
OotOffset-st: 4/4/2/5 [15]
KicOffset-st: 4/4/2/5 [15]
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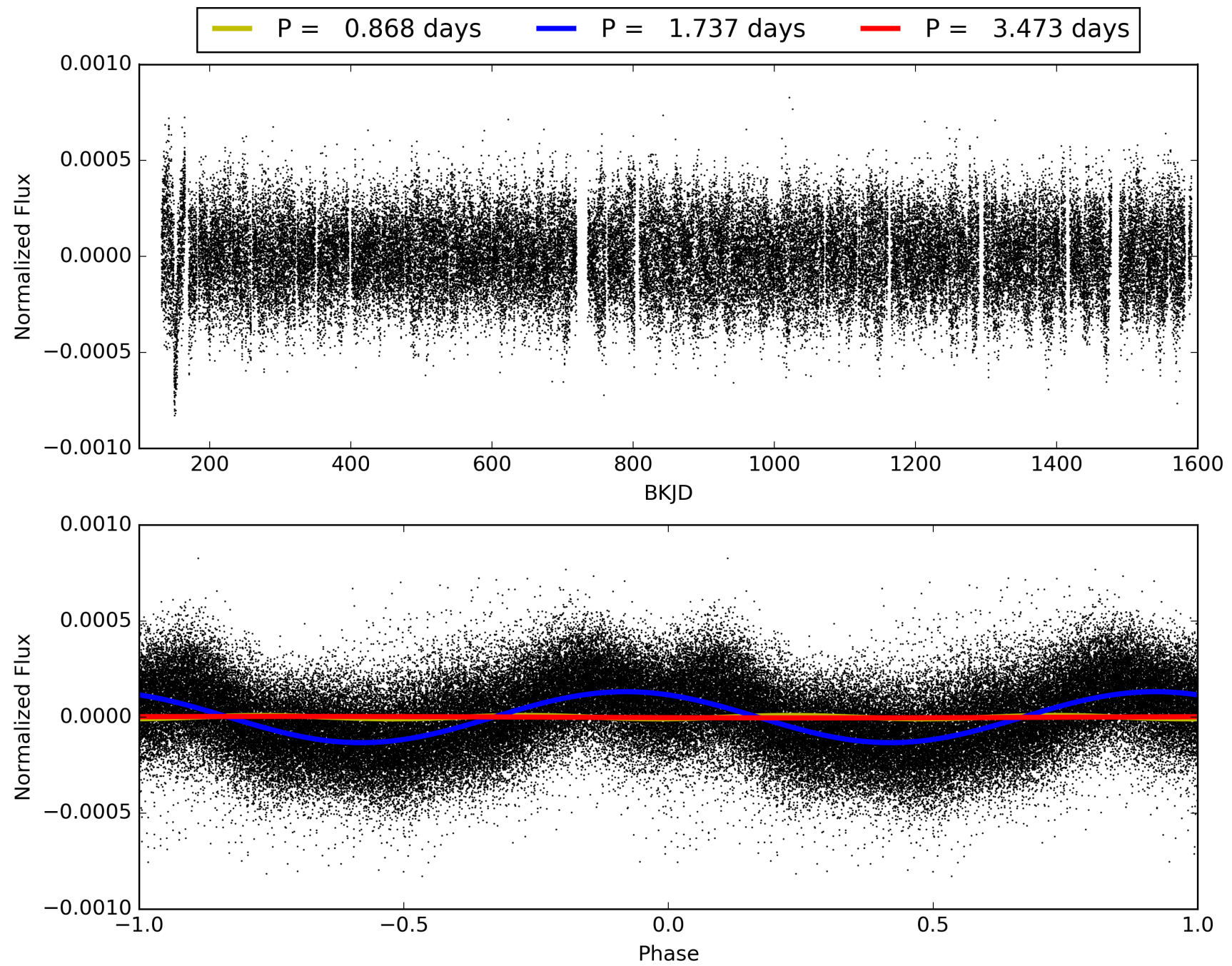
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:02:02 Z

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

TCE 006287517-02, PDC Light Curves

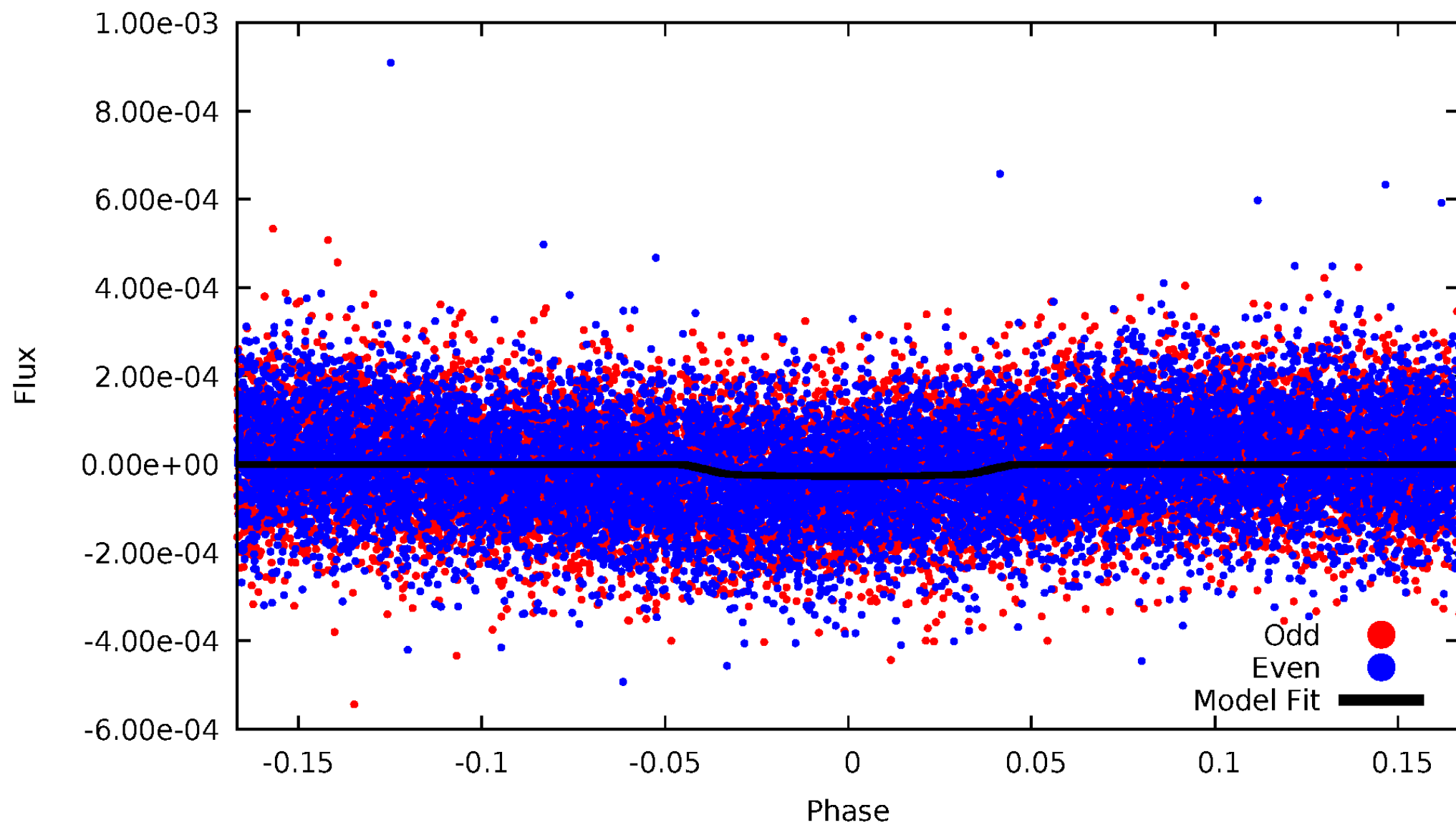


TCE 006287517-02



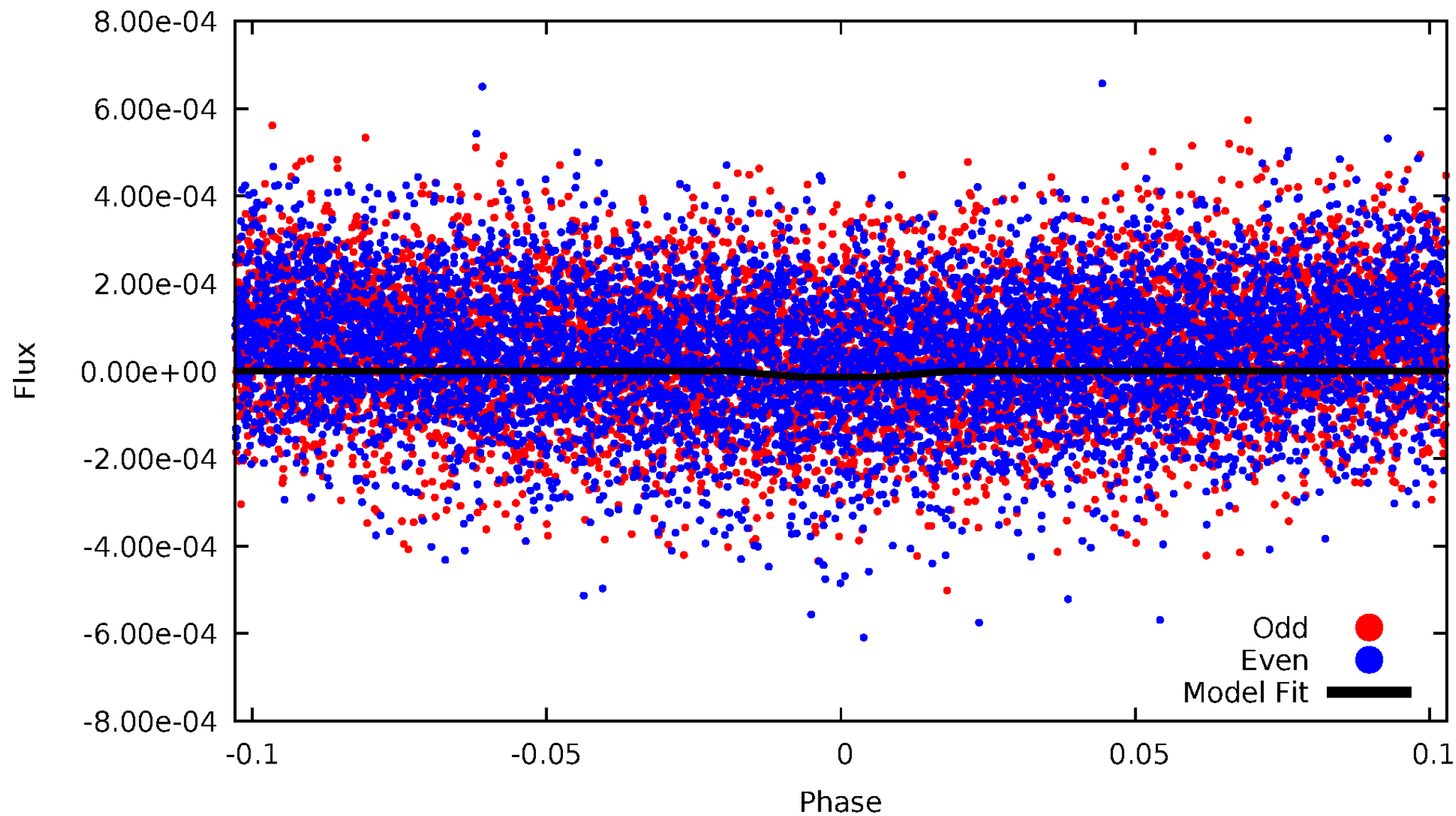
DV Odd/Even

TCE 006287517-02



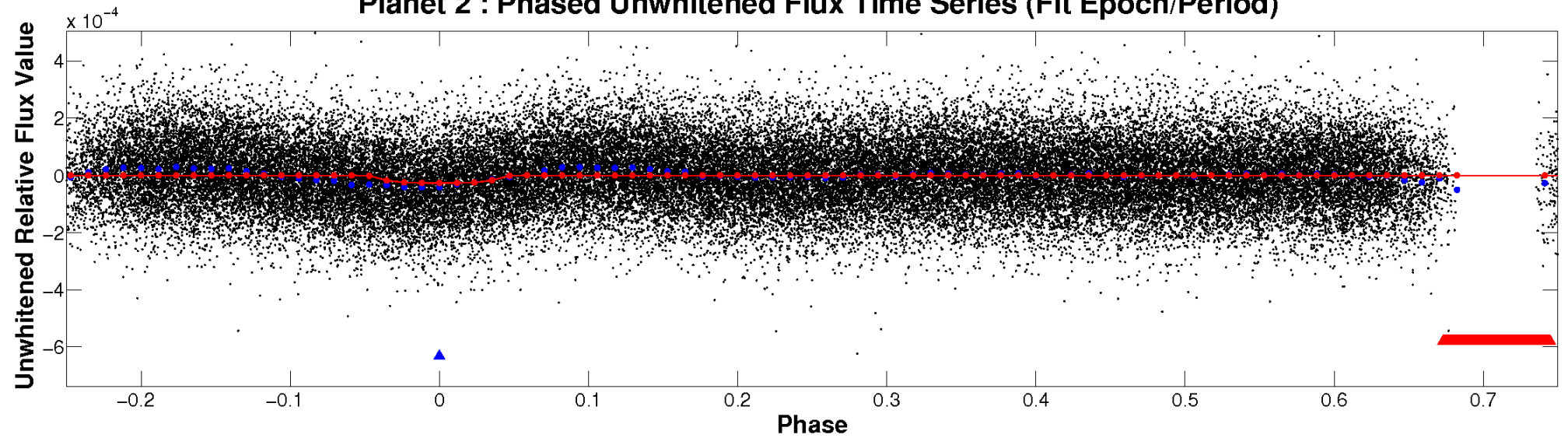
ALT Odd/Even

TCE 006287517-02

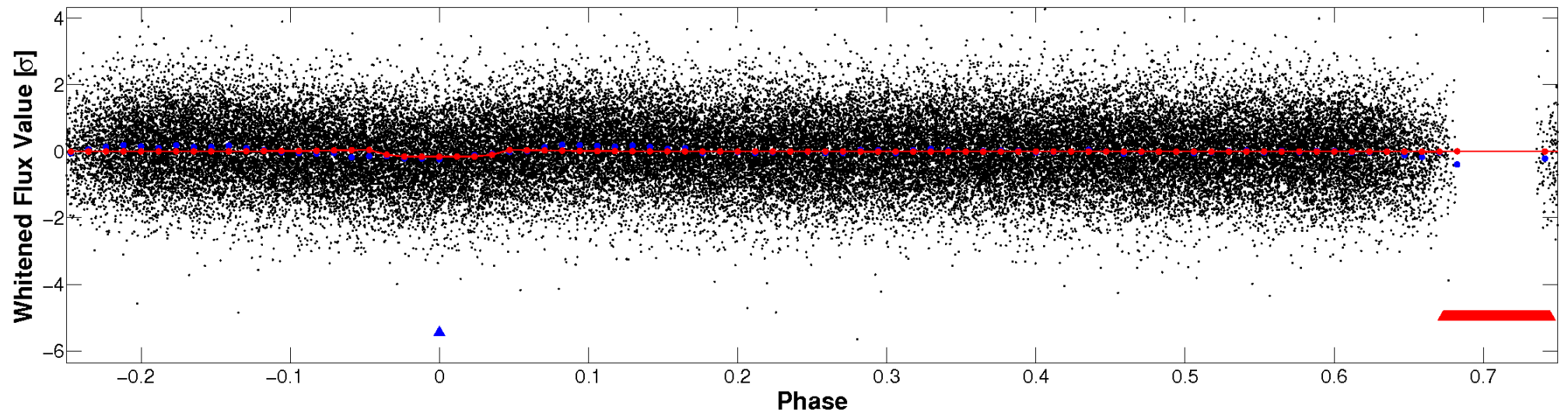


Non-Whitened Vs. Whitened Light Curve

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

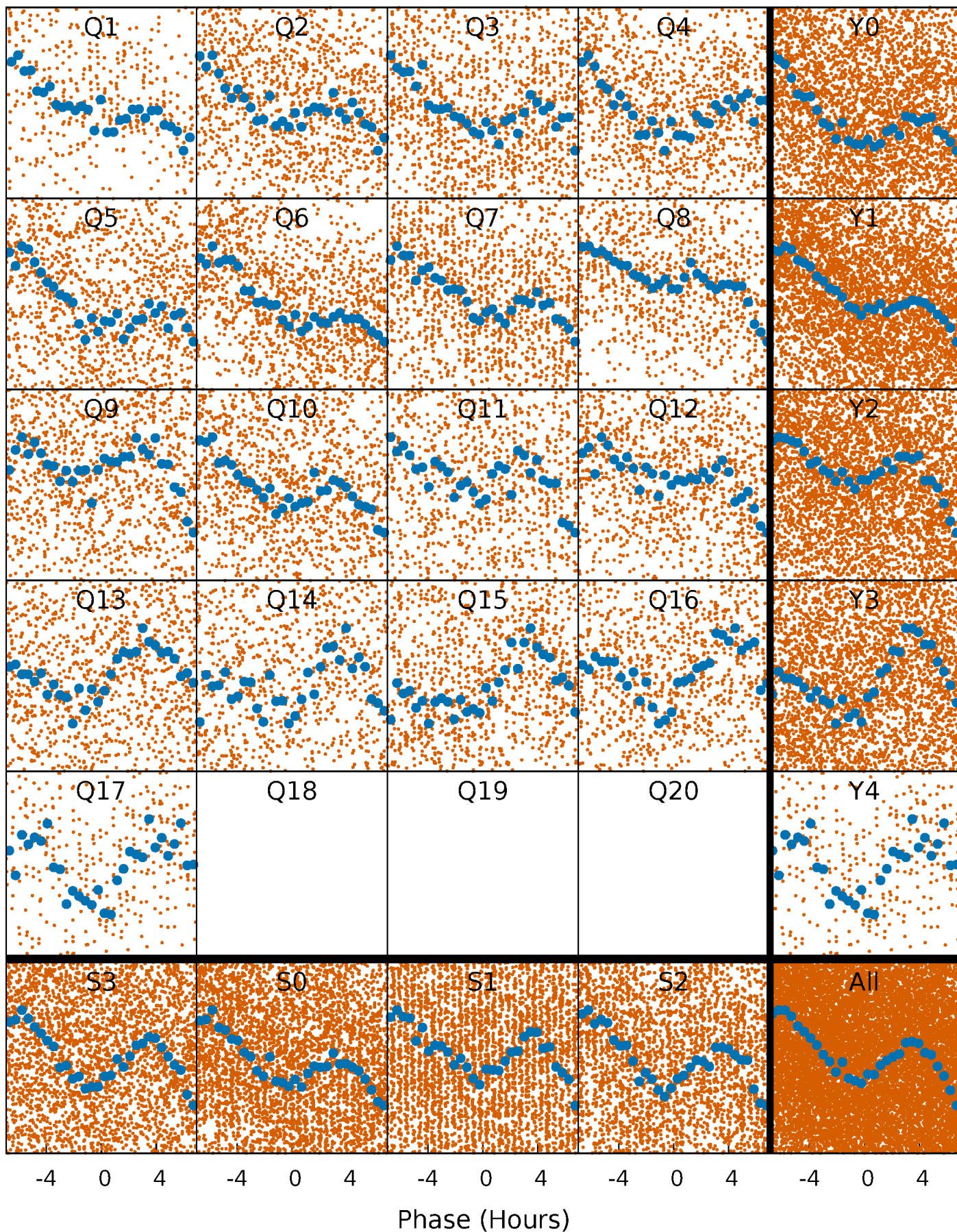


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



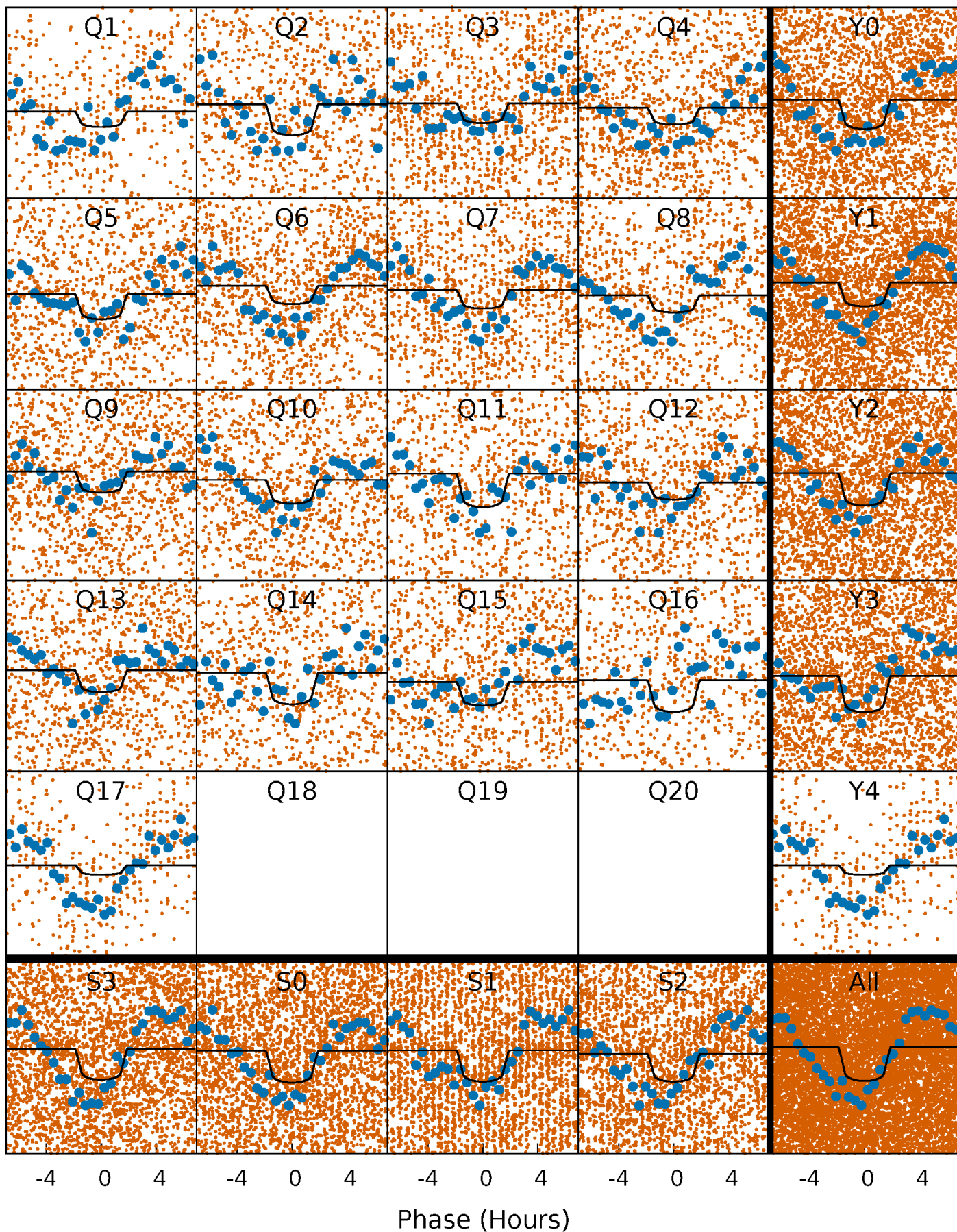
PDC Quarter-Phased Transit Curves

TCE 006287517-02 P= 1.736568 Days $T_0=131.998029$ (BKJD)



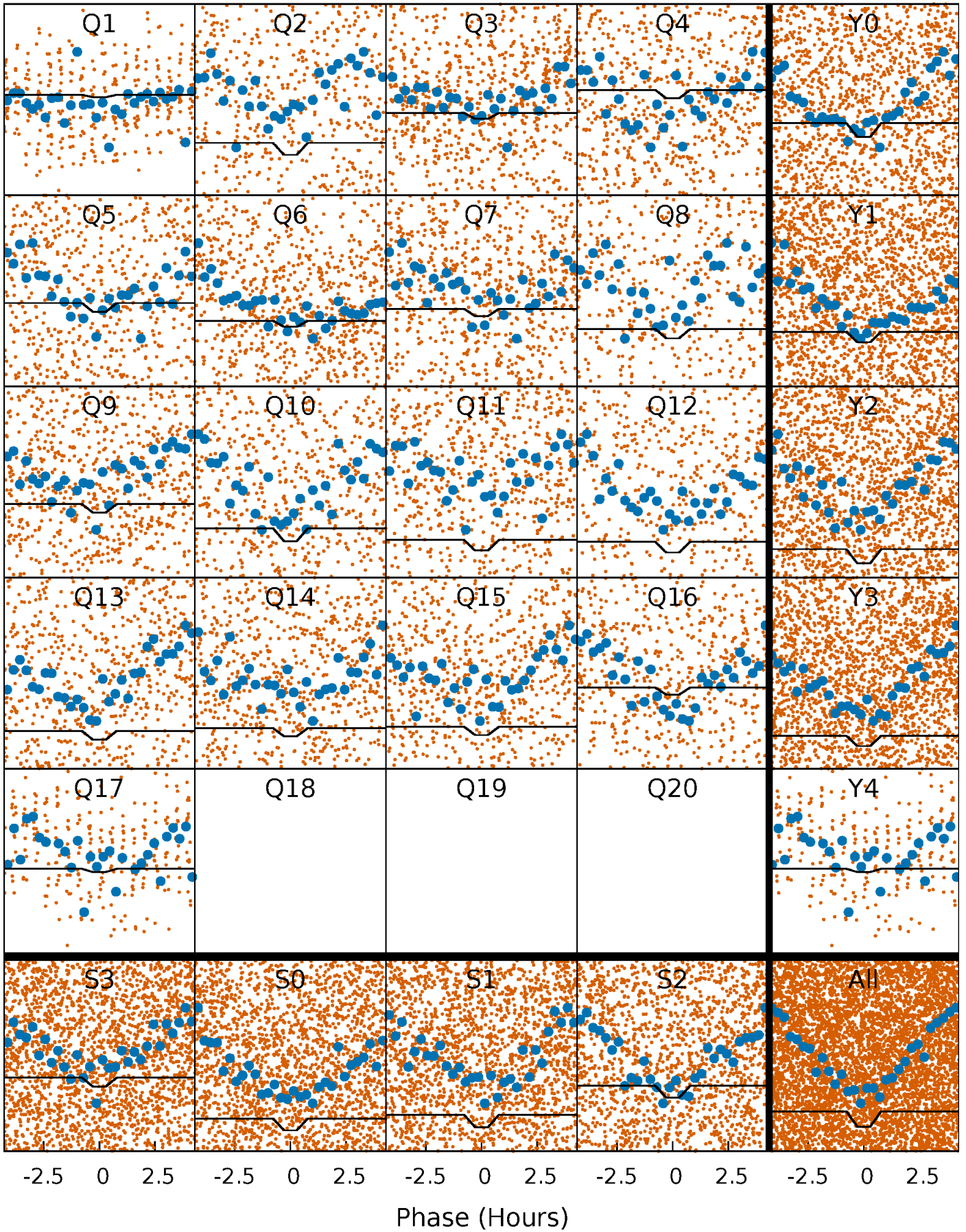
DV Quarter-Phased Transit Curves

TCE 006287517-02 P= 1.736568 Days $T_0=131.998029$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

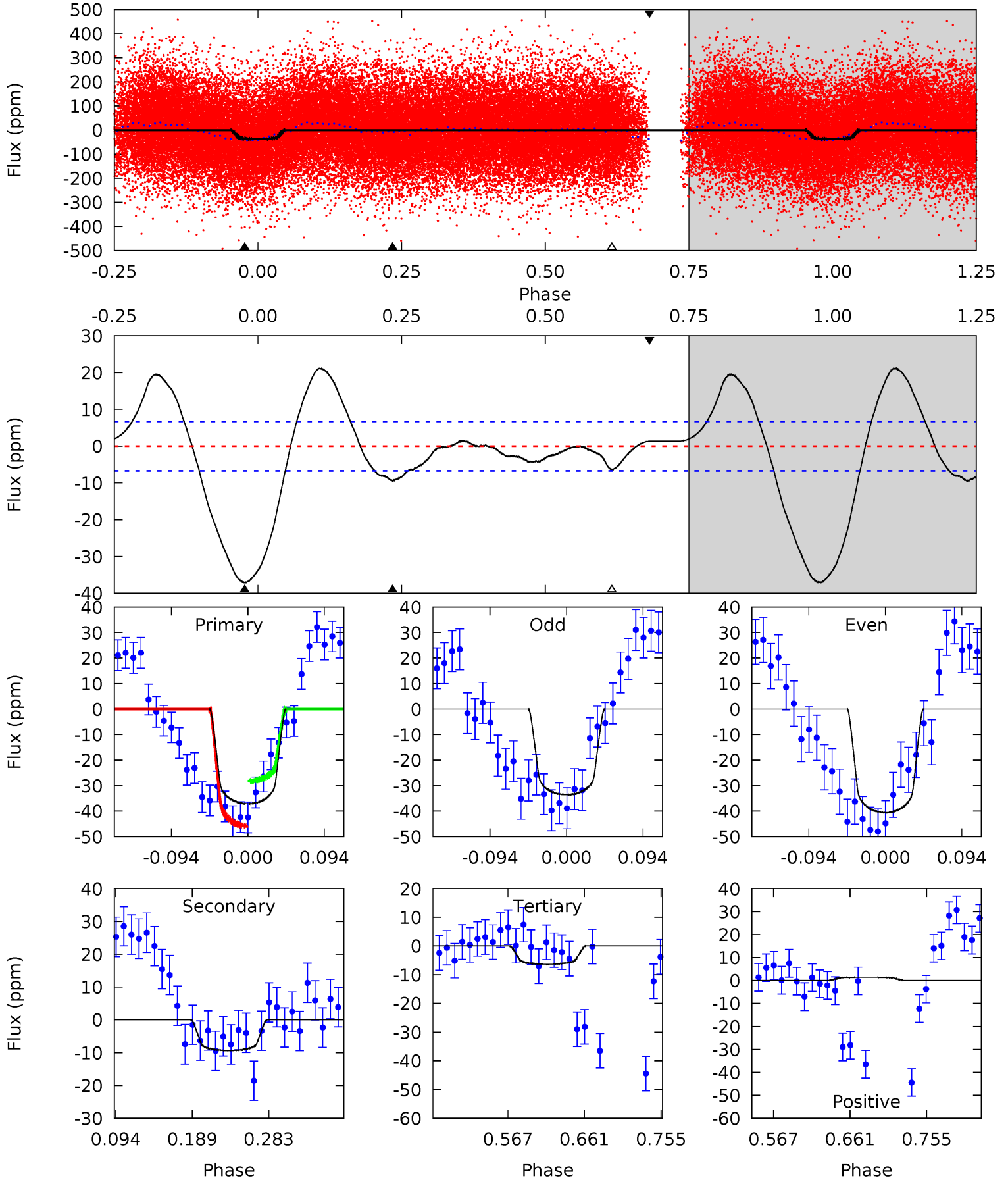
TCE 006287517-02 P= 1.736511 Days $T_0=131.997798$ (BKJD)



DV Model-Shift Uniqueness Test

006287517-02, P = 1.736568 Days, E = 130.261461 Days

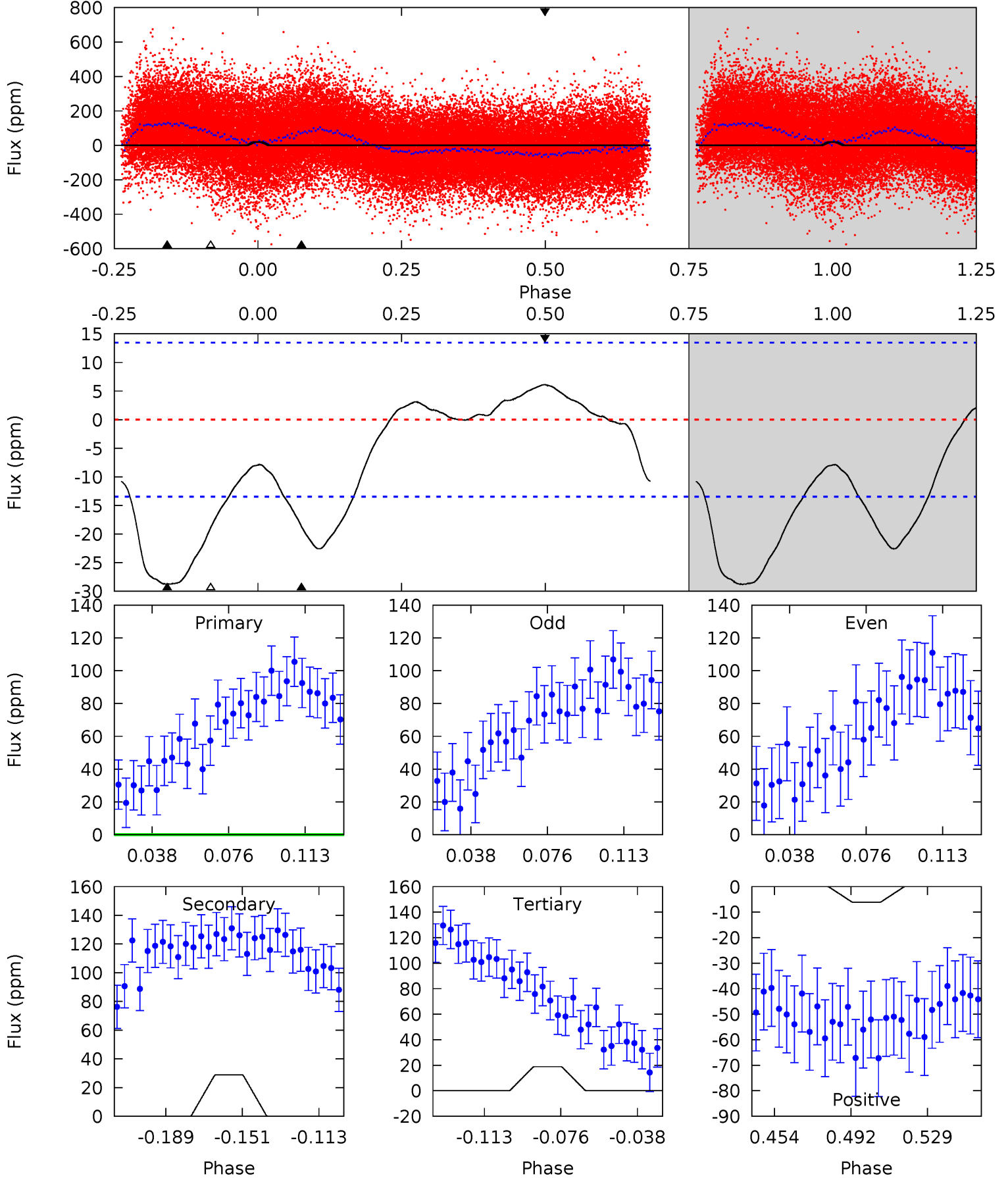
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.3	6.40	4.32	0.95	4.58	1.67	5.82	21.0	24.4	2.08	5.45	2.39	1.02	0.36	6.04



Alt Model-Shift Uniqueness Test

006287517-02, P = 1.736511 Days, E = 130.261287 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.61	10.2	6.68	2.17	4.76	2.08	3.12	-0.07	4.44	3.51	8.02	2.97	0.64	0.18	1.97



Stellar Parameters For KIC 006287517

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7241^{+203}_{-304}	$4.013^{+0.234}_{-0.156}$	$-0.200^{+0.250}_{-0.350}$	$2.016^{+0.528}_{-0.587}$	$1.526^{+0.224}_{-0.298}$	$0.263^{+0.384}_{-0.117}$
	+3%/-4%	+6%/-4%	+125%/-175%	+26%/-29%	+15%/-20%	+146%/-45%
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 006287517-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-9 ± 1	$1.22^{+0.36}_{-0.31}$	3476^{+263}_{-298}	5168^{+705}_{-551}	$3.701^{+2.876}_{-1.579}$
Alt.	-29 ± 3	$0.78^{+0.34}_{-0.28}$	3479^{+247}_{-286}	9057^{+3505}_{-1683}	27^{+41}_{-14}

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

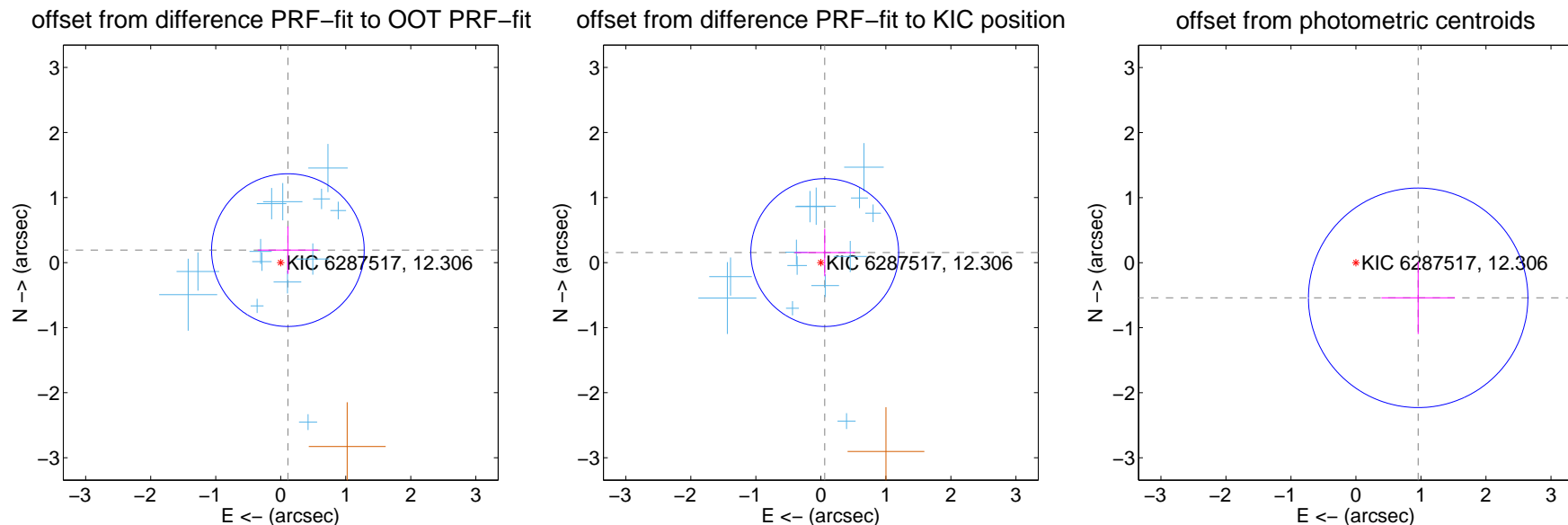
DV Centroid Data

Supplemental centroid analysis for 006287517-02. Kepler magnitude: 12.31. Transit SNR 10.76

There are 13 quarters with good PRF difference image offsets

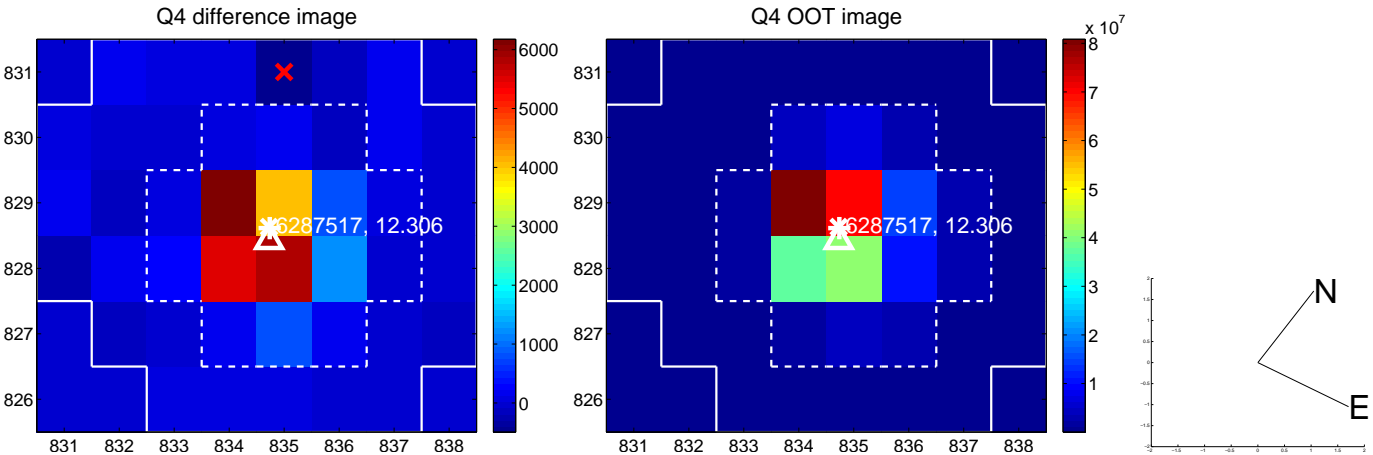
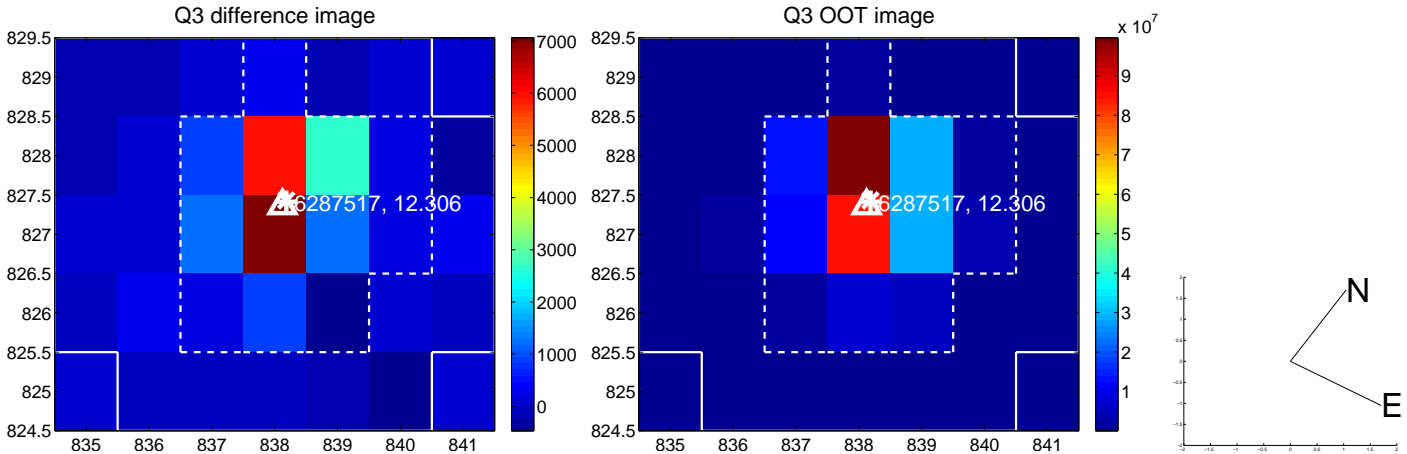
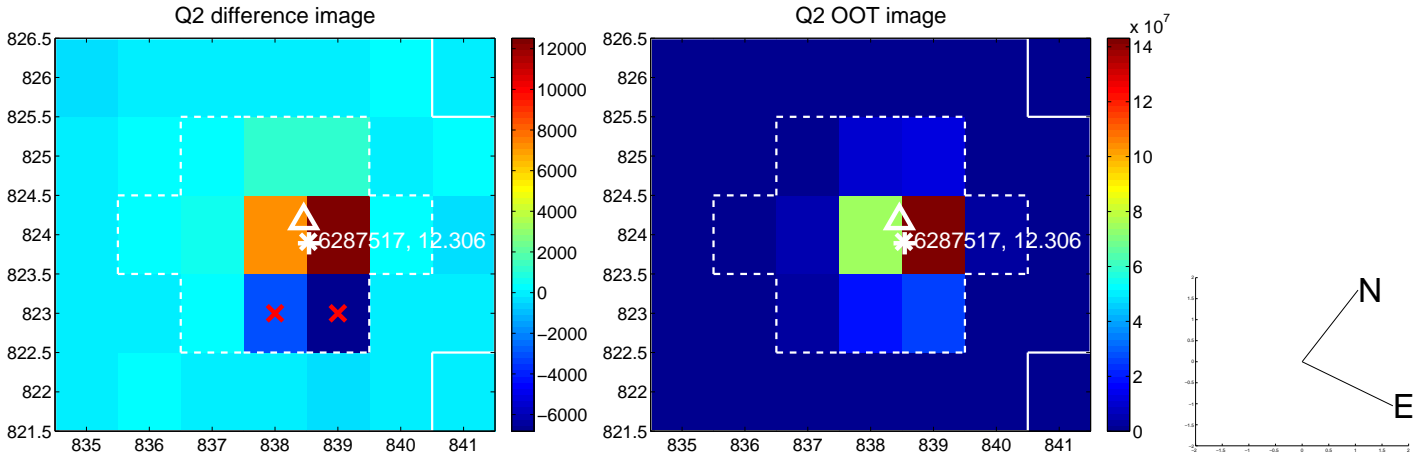
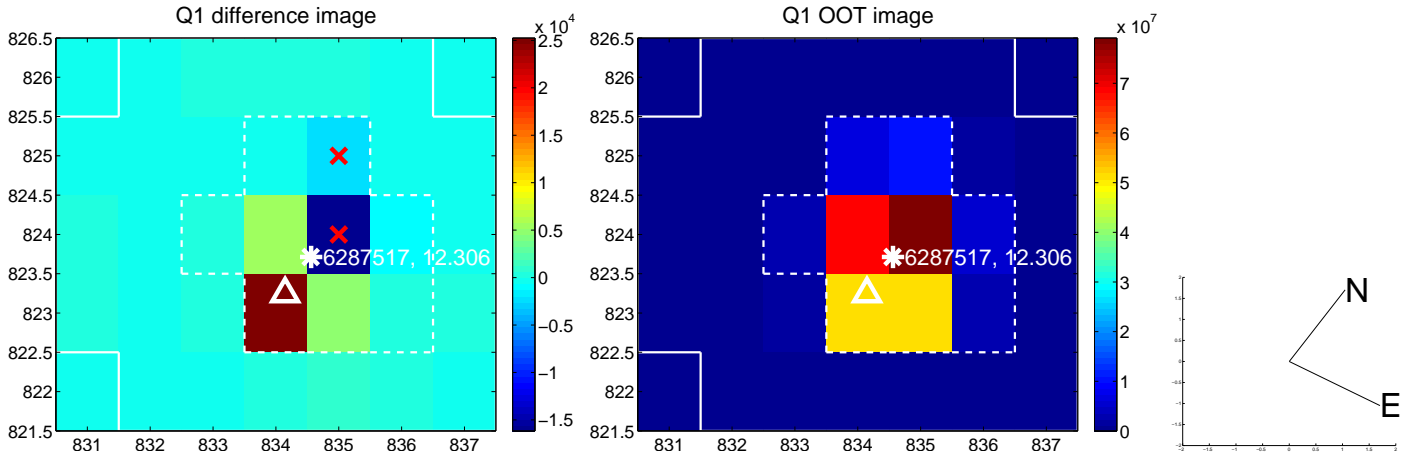
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.221 ± 0.391	0.57	-0.110 ± 0.463	0.192 ± 0.364
PRF-fit source offset from KIC position	0.165 ± 0.379	0.44	-0.059 ± 0.463	0.154 ± 0.364
photometric centroid source offset	1.10 ± 0.56	1.95	-0.96 ± 0.56	-0.54 ± 0.56

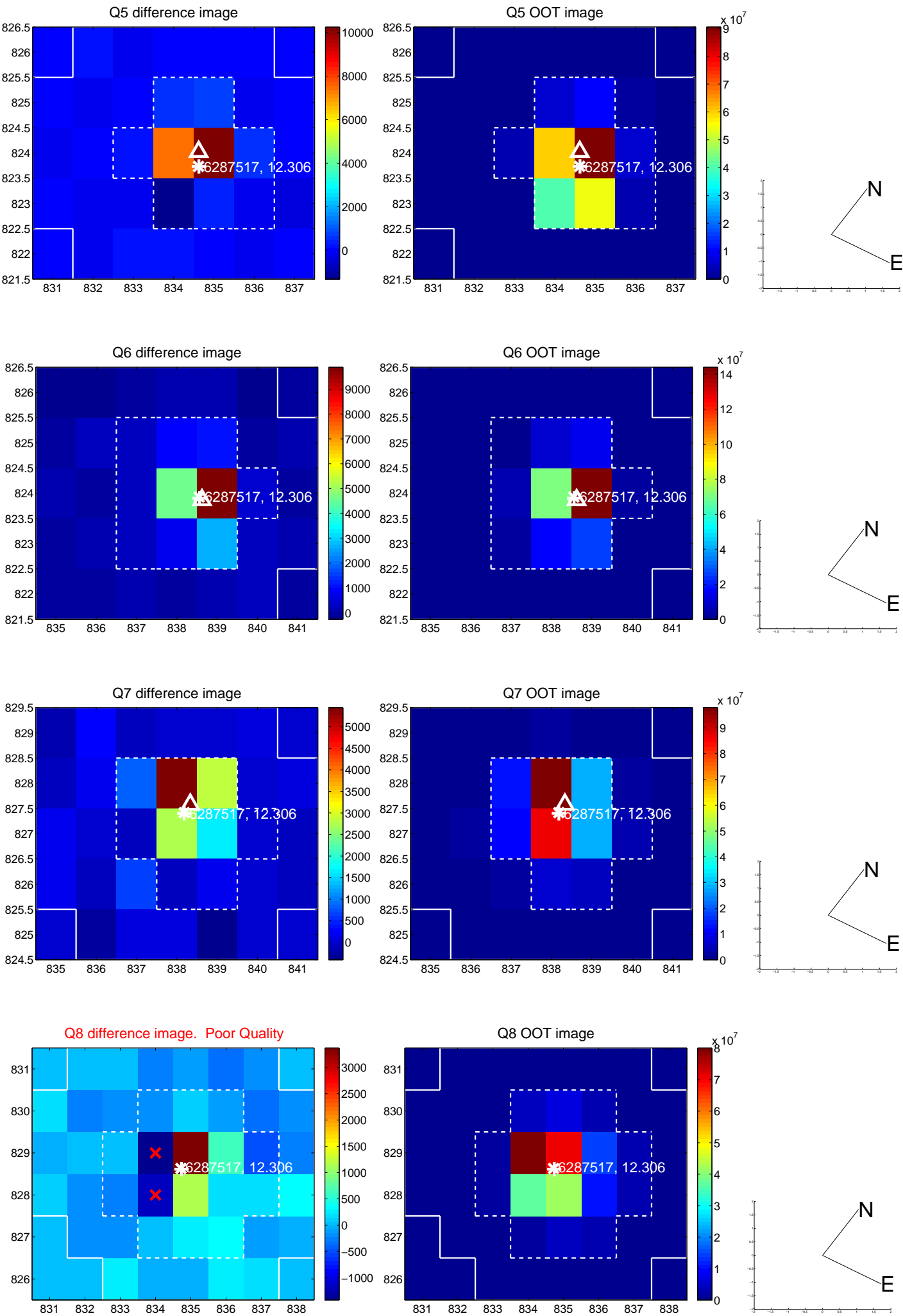


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

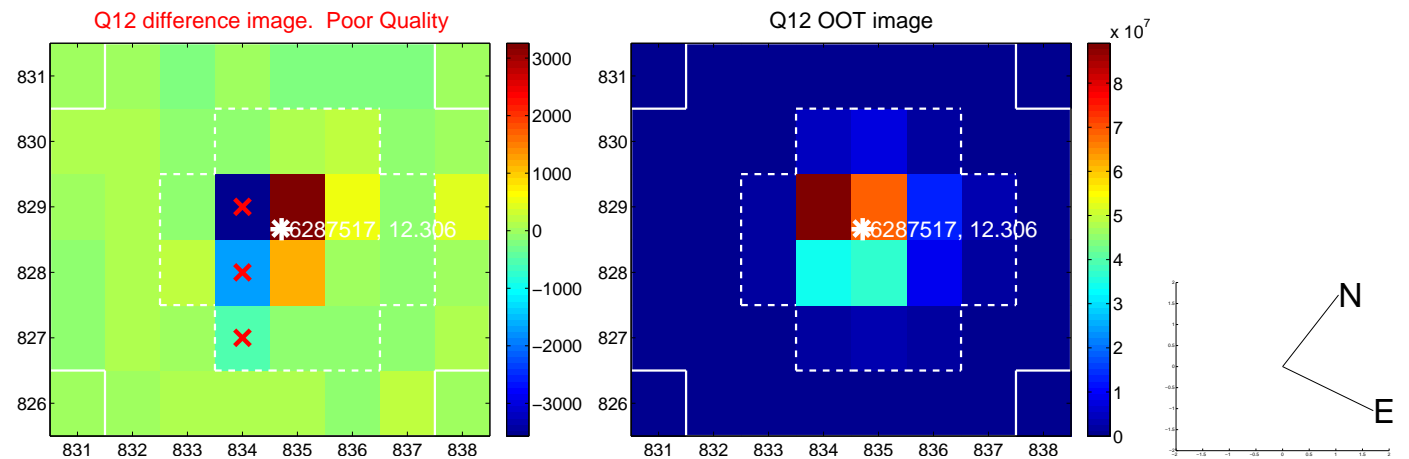
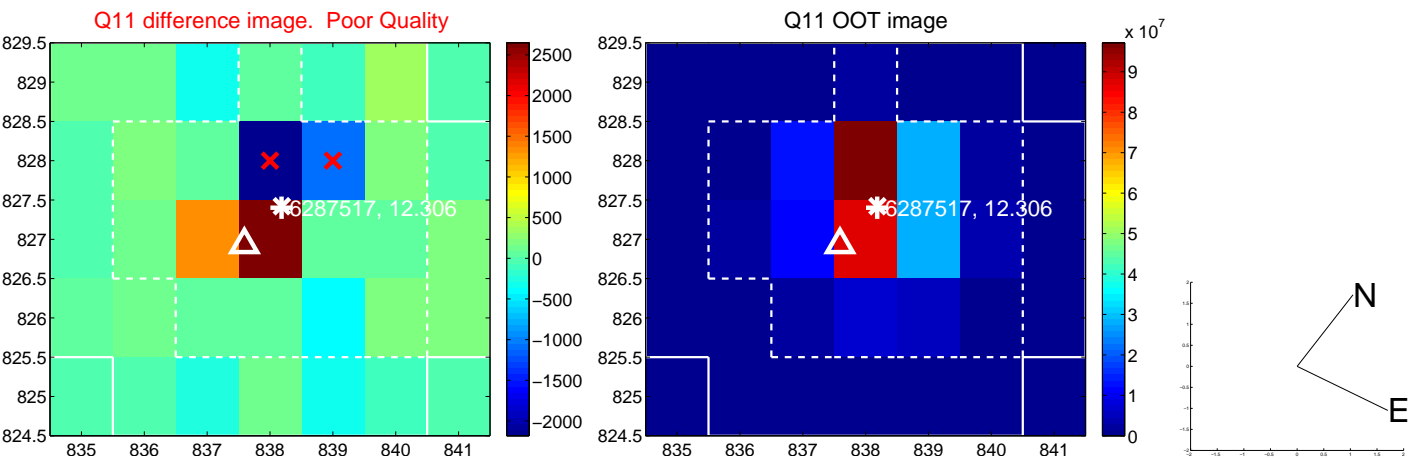
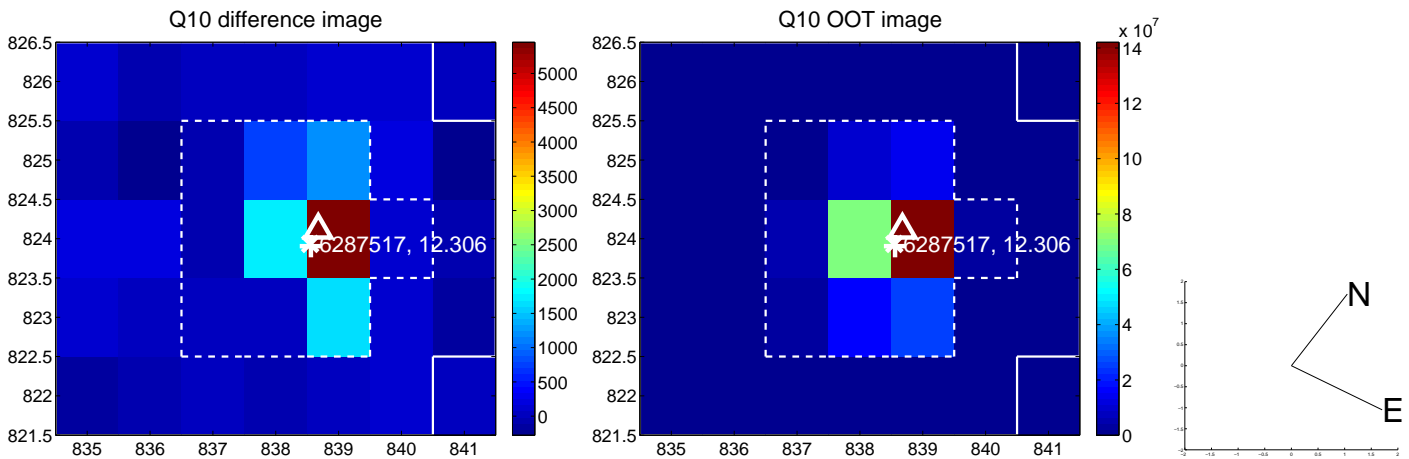
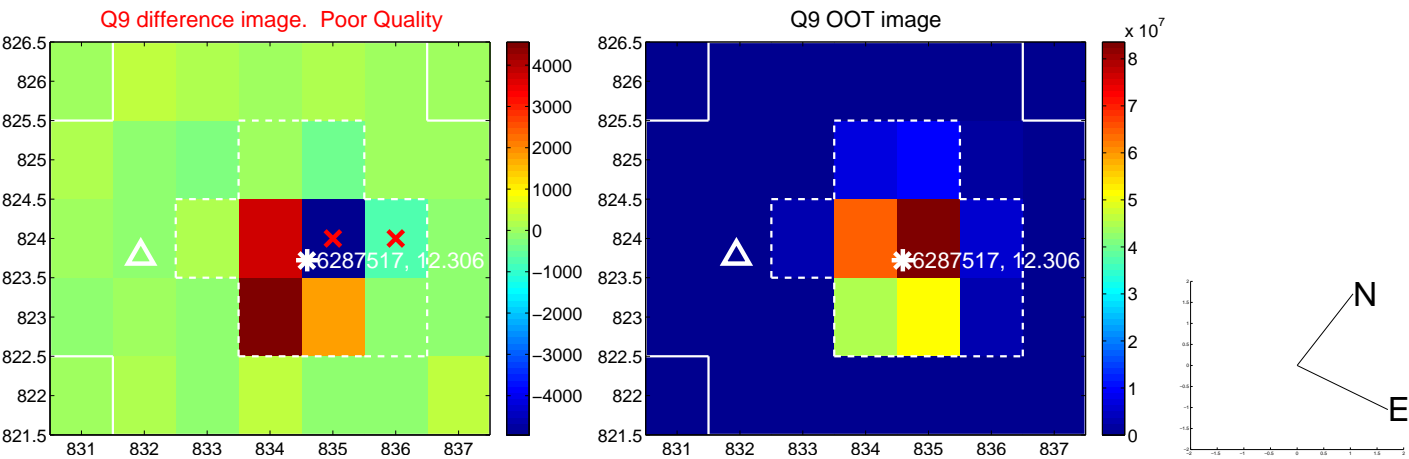
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



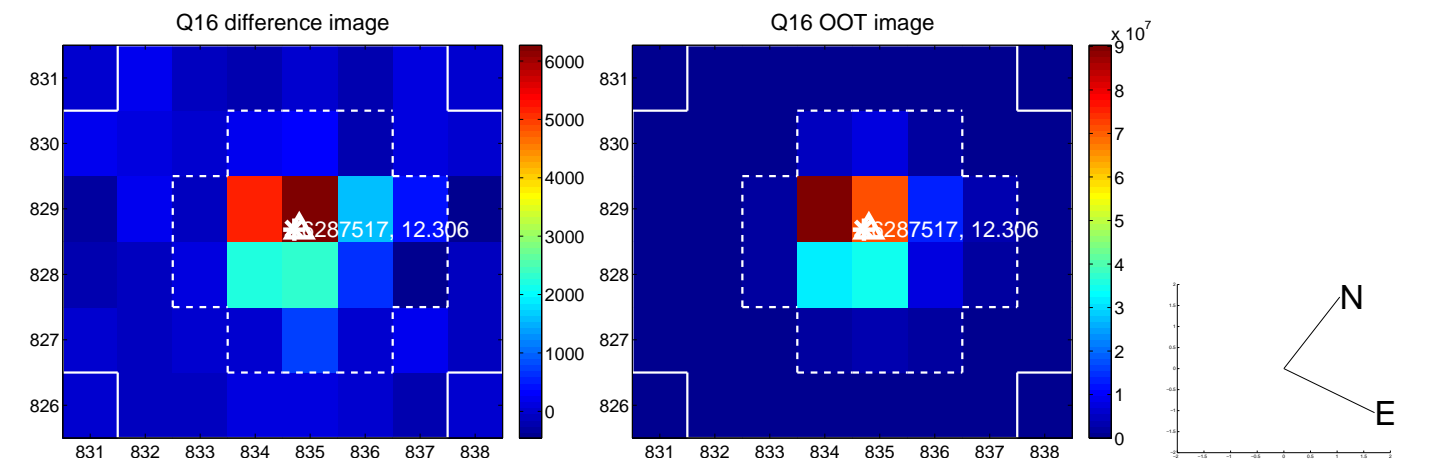
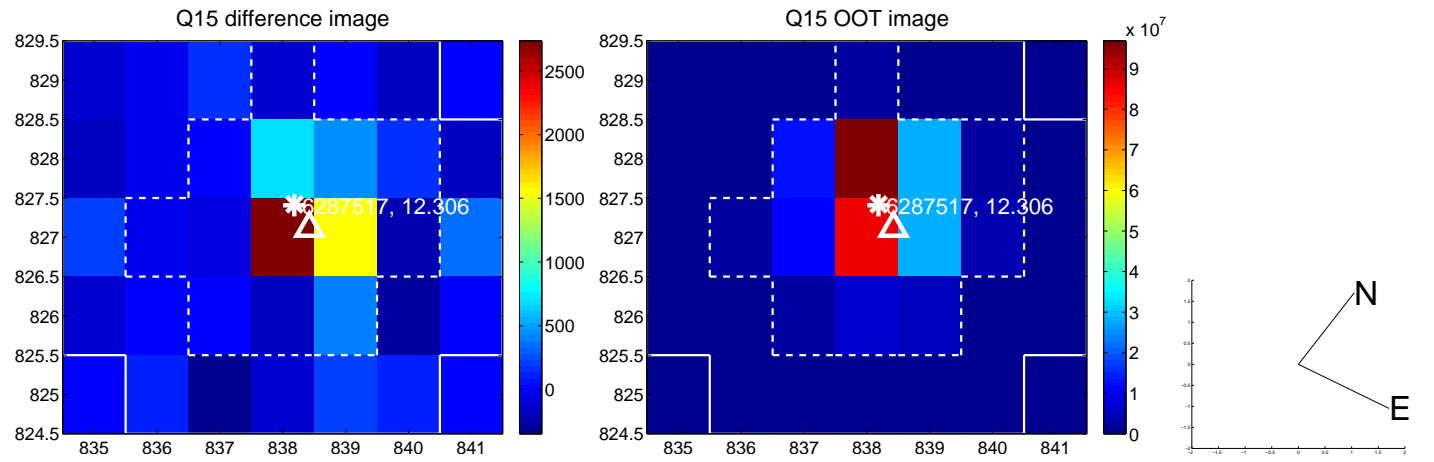
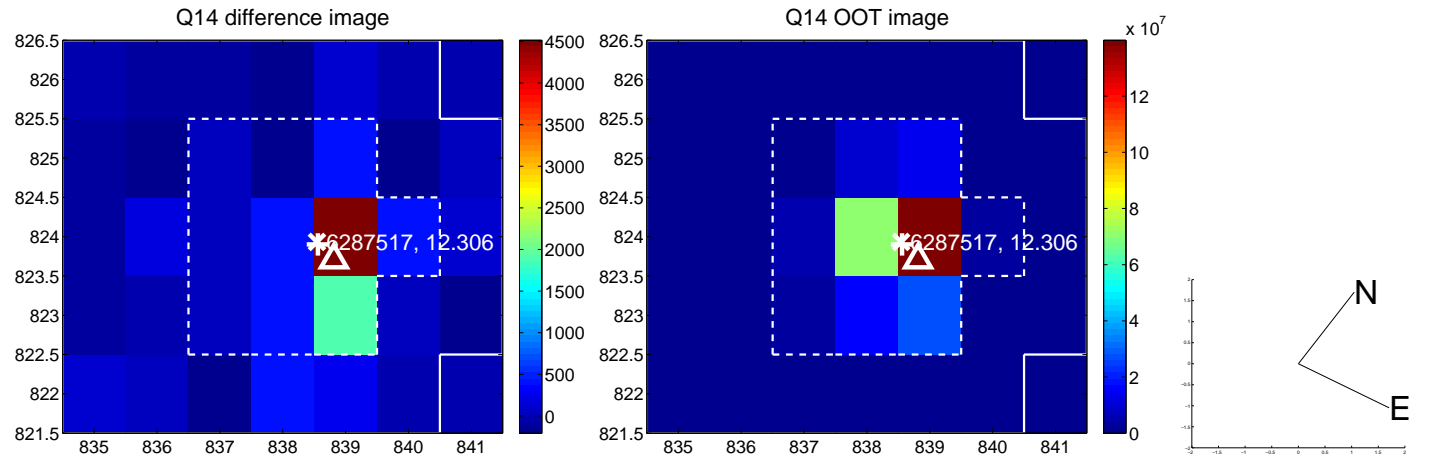
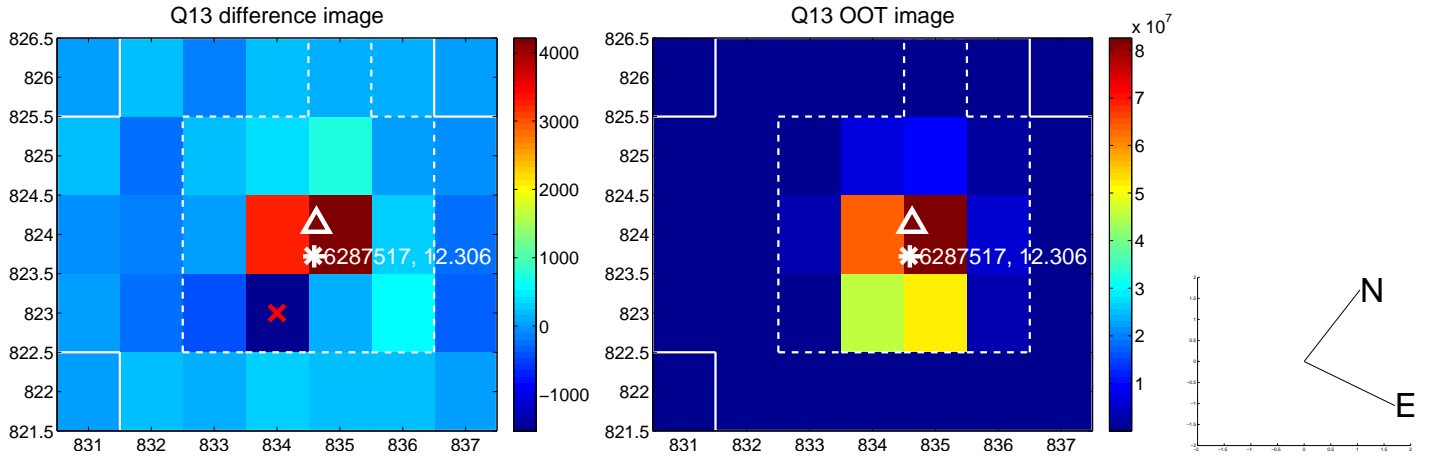
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



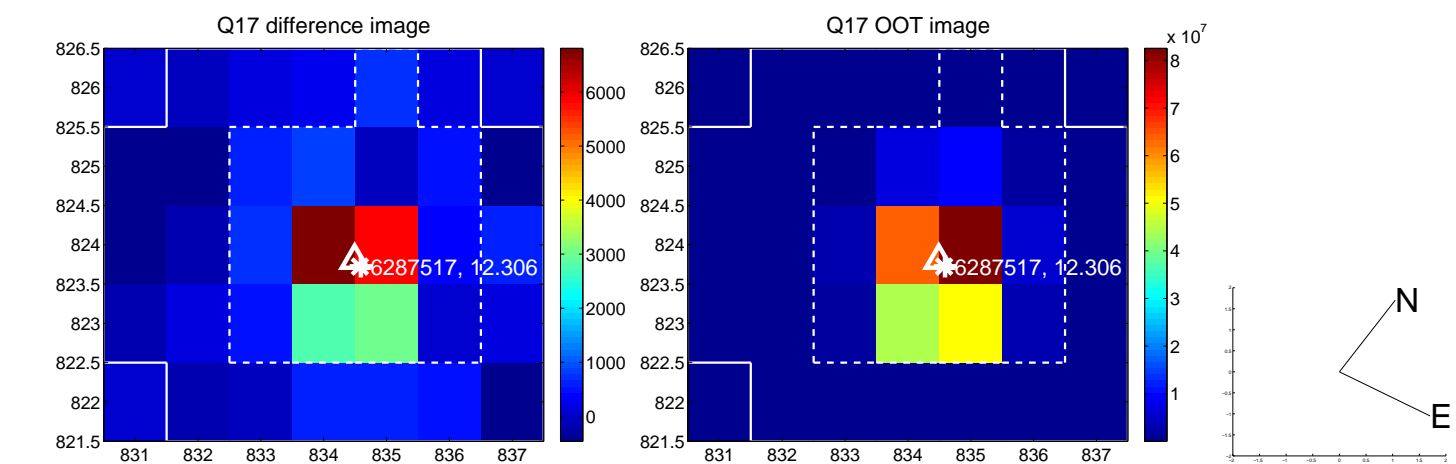
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



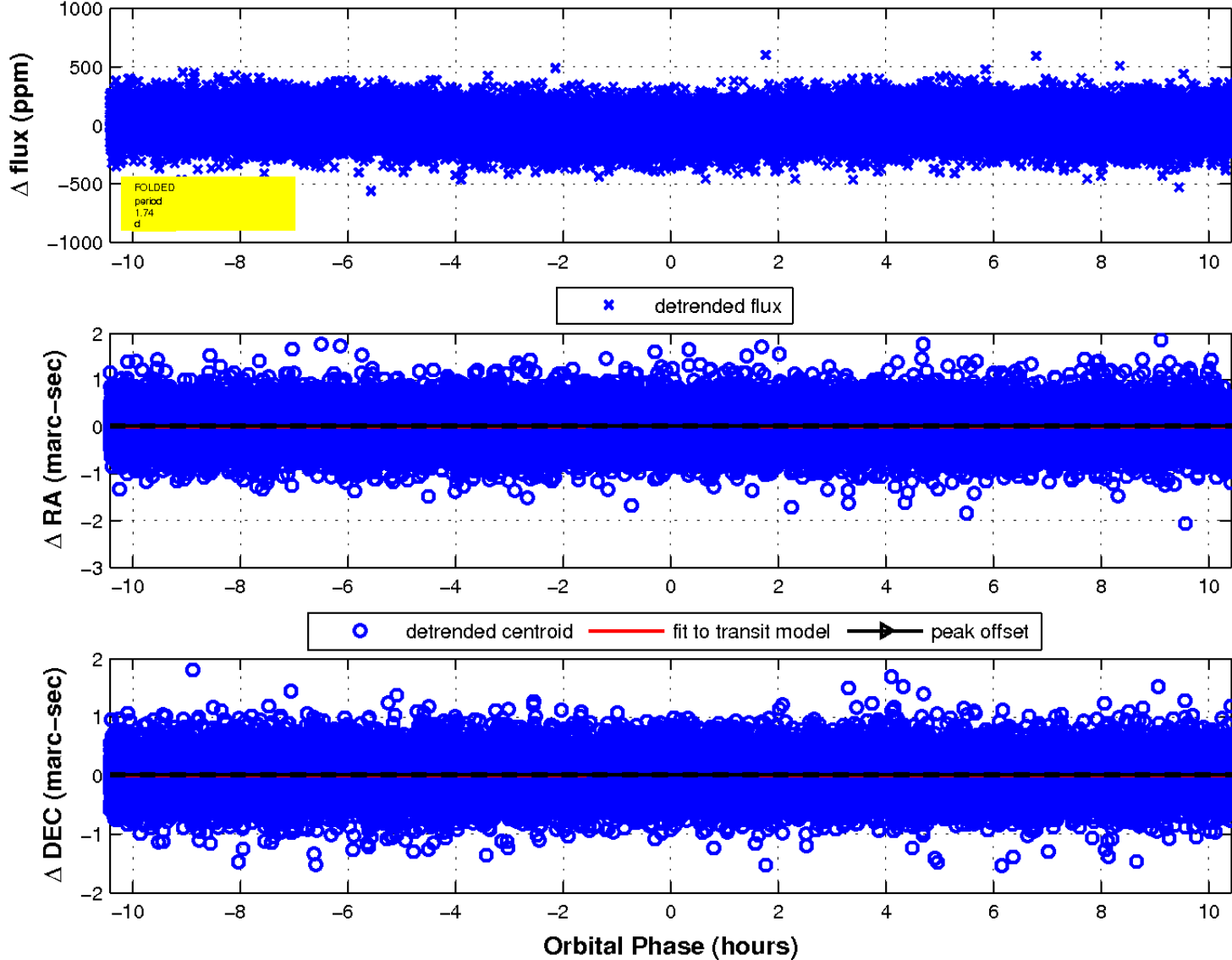
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

