

KIC 011288072

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})
011288072-01	OBS	No	1.129055	131.680863	12.3	2.794	10.6	10.4	3.25	8175	1.18	58271.69
011288072-02	OBS	No	1.128973	132.233338	5.7	11.419	9.9	5.8	3.25	8175	0.86	58277.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011288072-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_FEW_DIFFS
011288072-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_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.

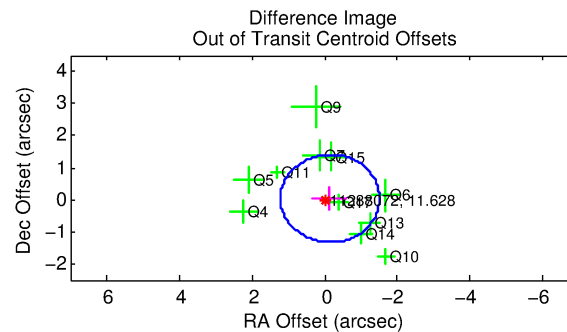
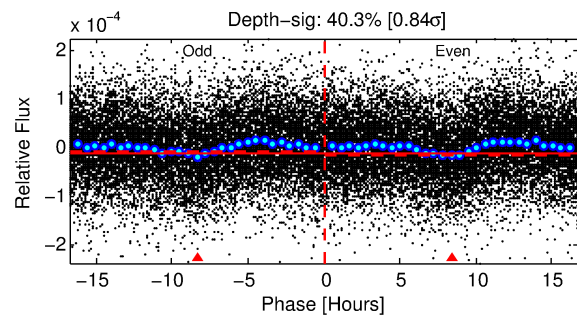
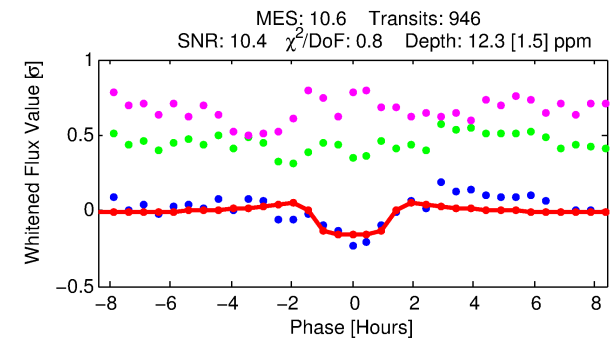
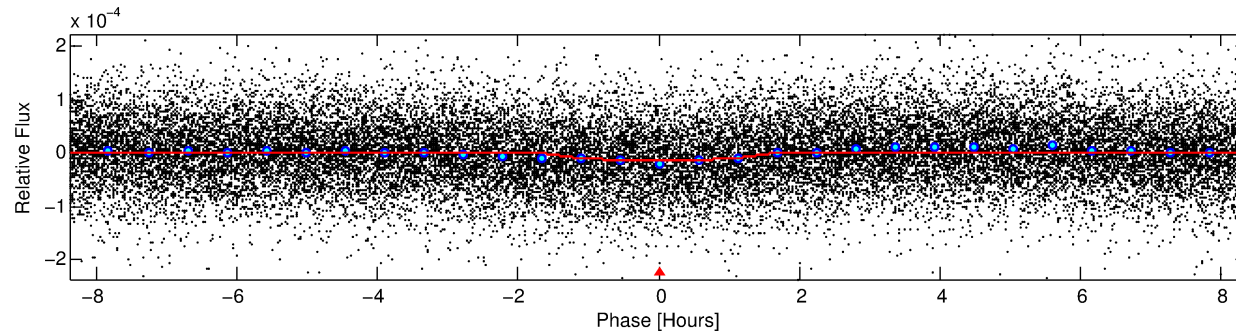
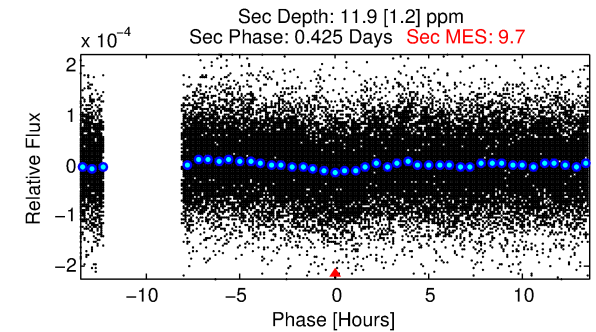
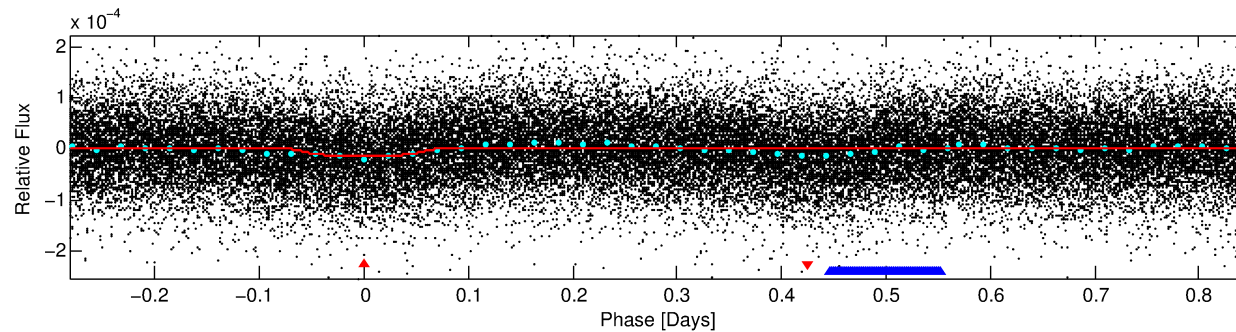
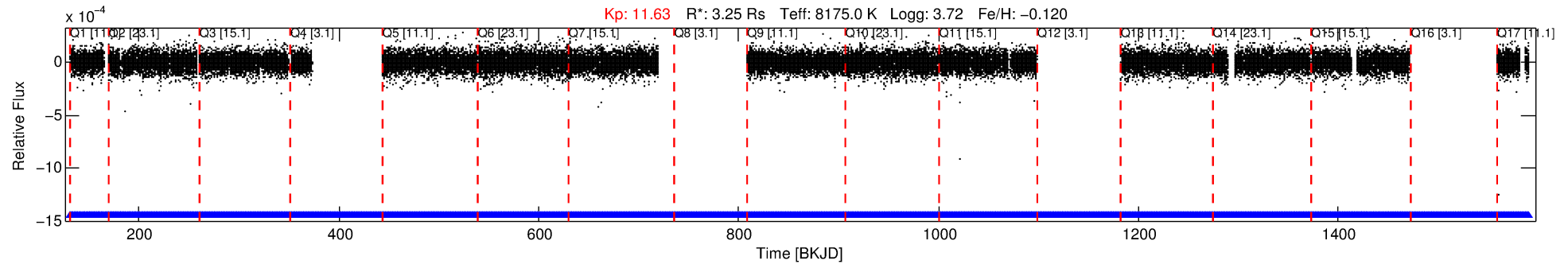
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011288072-01

No Significant Match Found

DV One-Page Summary

KIC: 11288072 Candidate: 1 of 2 Period: 1.129 d



DV Fit Results:

Period = 1.12905 [0.00001] d
Epoch = 131.6809 [0.0027] BKJD
Rp/R* = 0.0033 [0.0005]
a/R* = 2.80 [2.10]
b = 0.49 [1.35]
Seff = 58271.69 [41310.75]
Teq = 3962 [702] K
Rp = 1.18 [0.56] Re
a = 0.0269 [0.0116] AU
Ag = 3.41 [2.62] [0.92σ]
Teffp = 8322 [791] K [4.12σ]

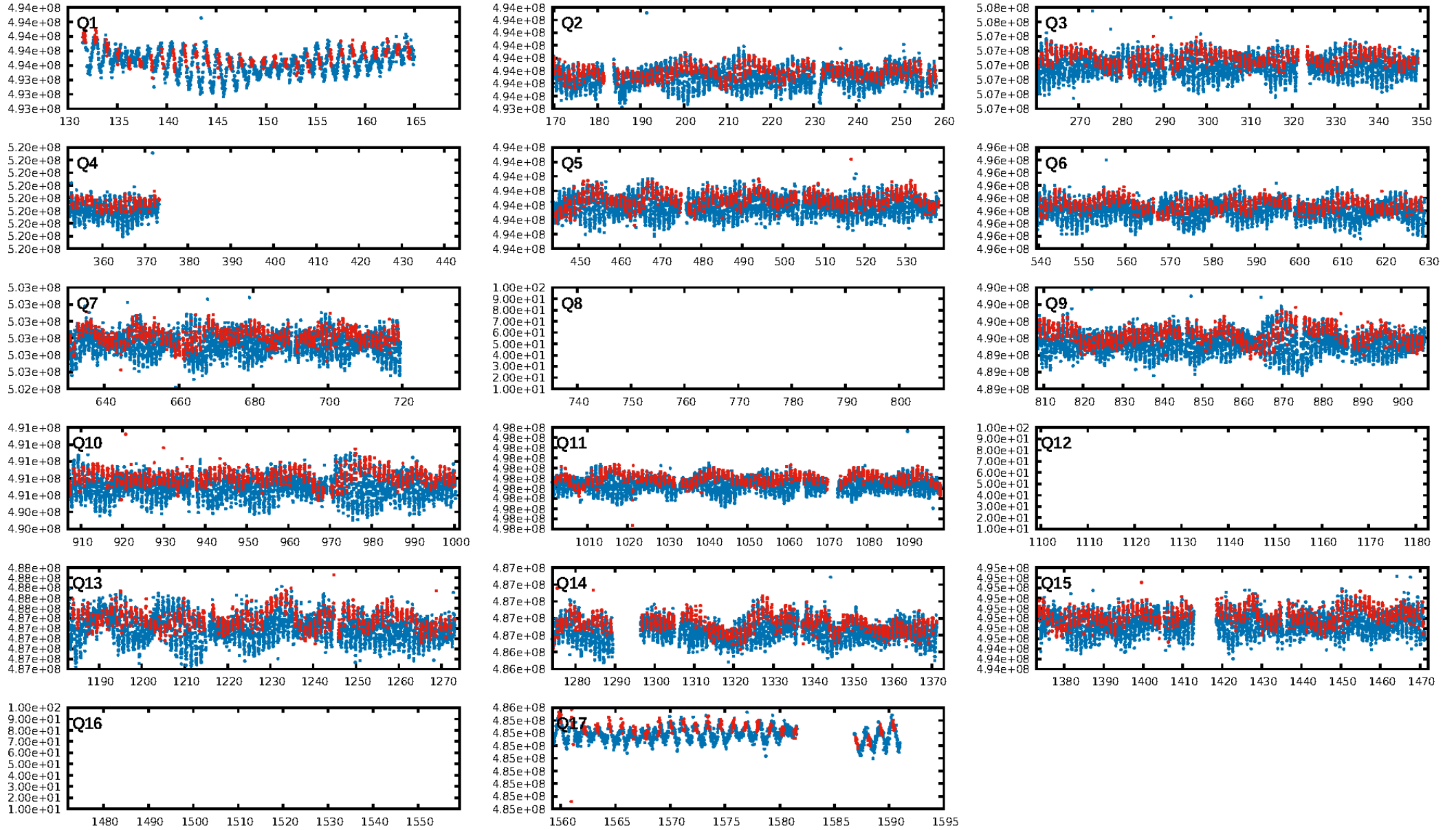
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [874/874]
GhostDiagnostic-chr: -2.631
Centroid-sig: 0.0%
Centroid-so: 2.214 arcsec [2.21σ]
OotOffset-rm: 0.149 arcsec [0.33σ]
KicOffset-rm: 0.163 arcsec [0.35σ]
OotOffset-st: 3/3/1/4 [11]
KicOffset-st: 3/3/1/4 [11]
DiffImageQuality-fgm: 0.00 [0/11]
DiffImageOverlap-fno: 0.21 [3/14]

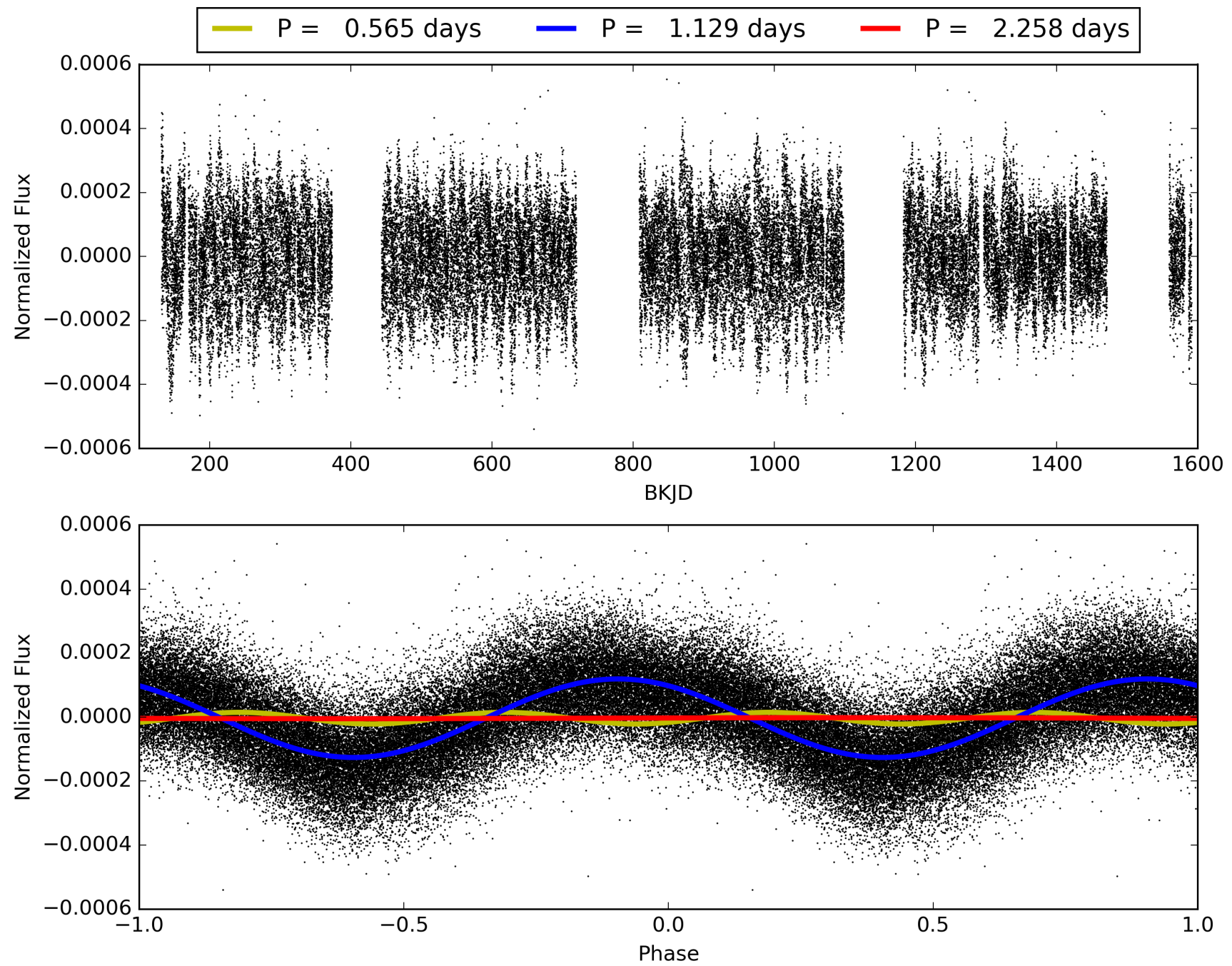
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:31:41 Z

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

TCE 011288072-01, PDC Light Curves

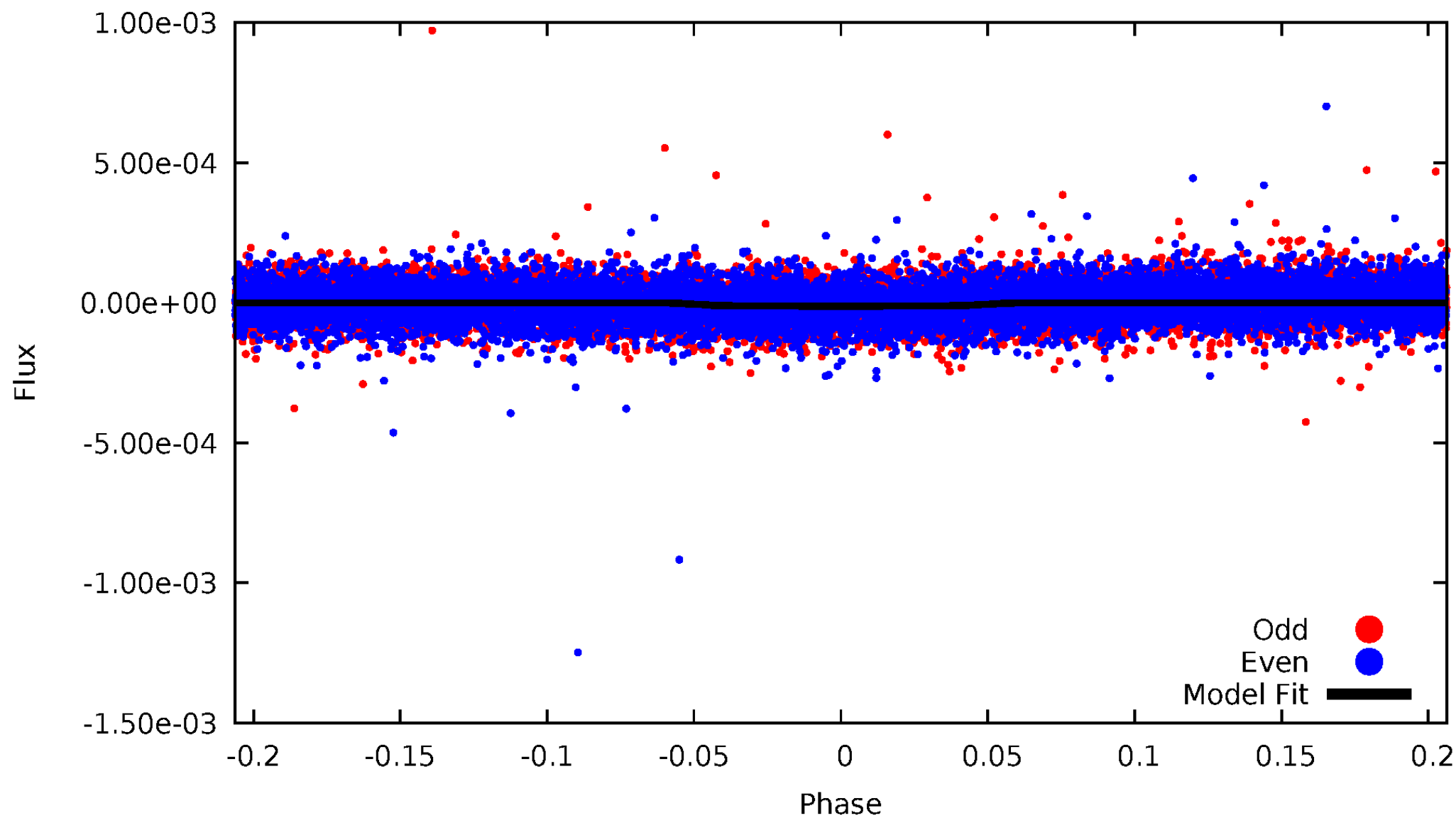


TCE 011288072-01



DV Odd/Even

TCE 011288072-01

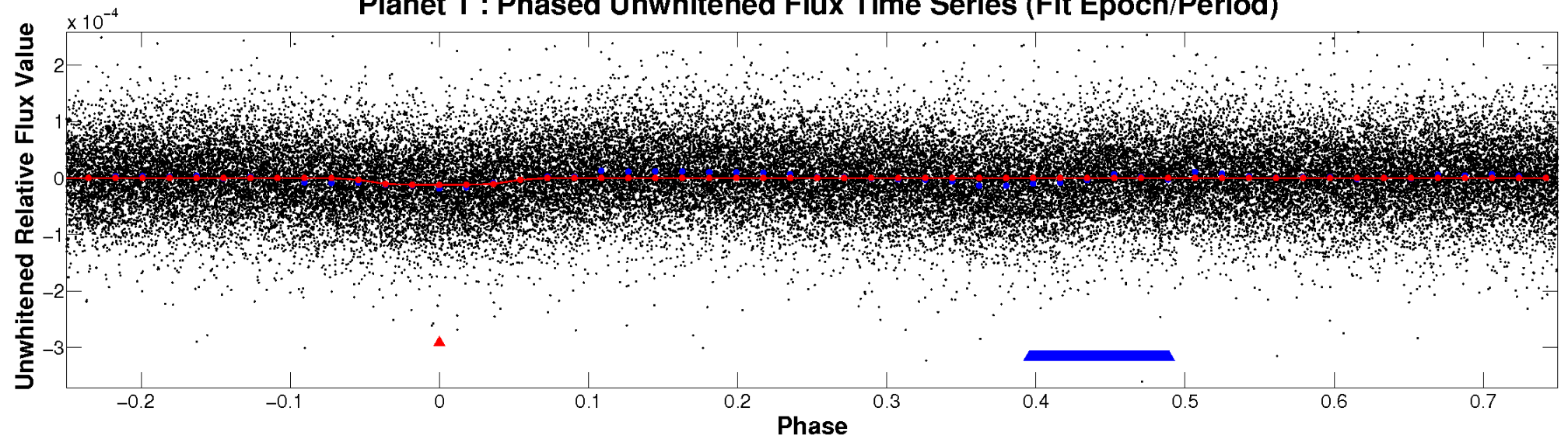


ALT Odd/Even

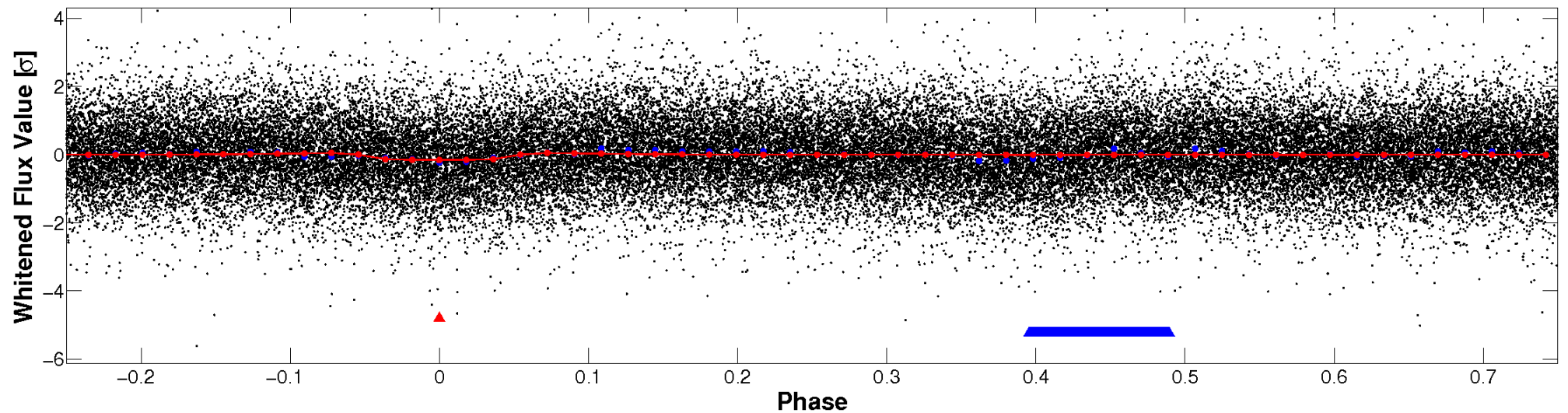
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

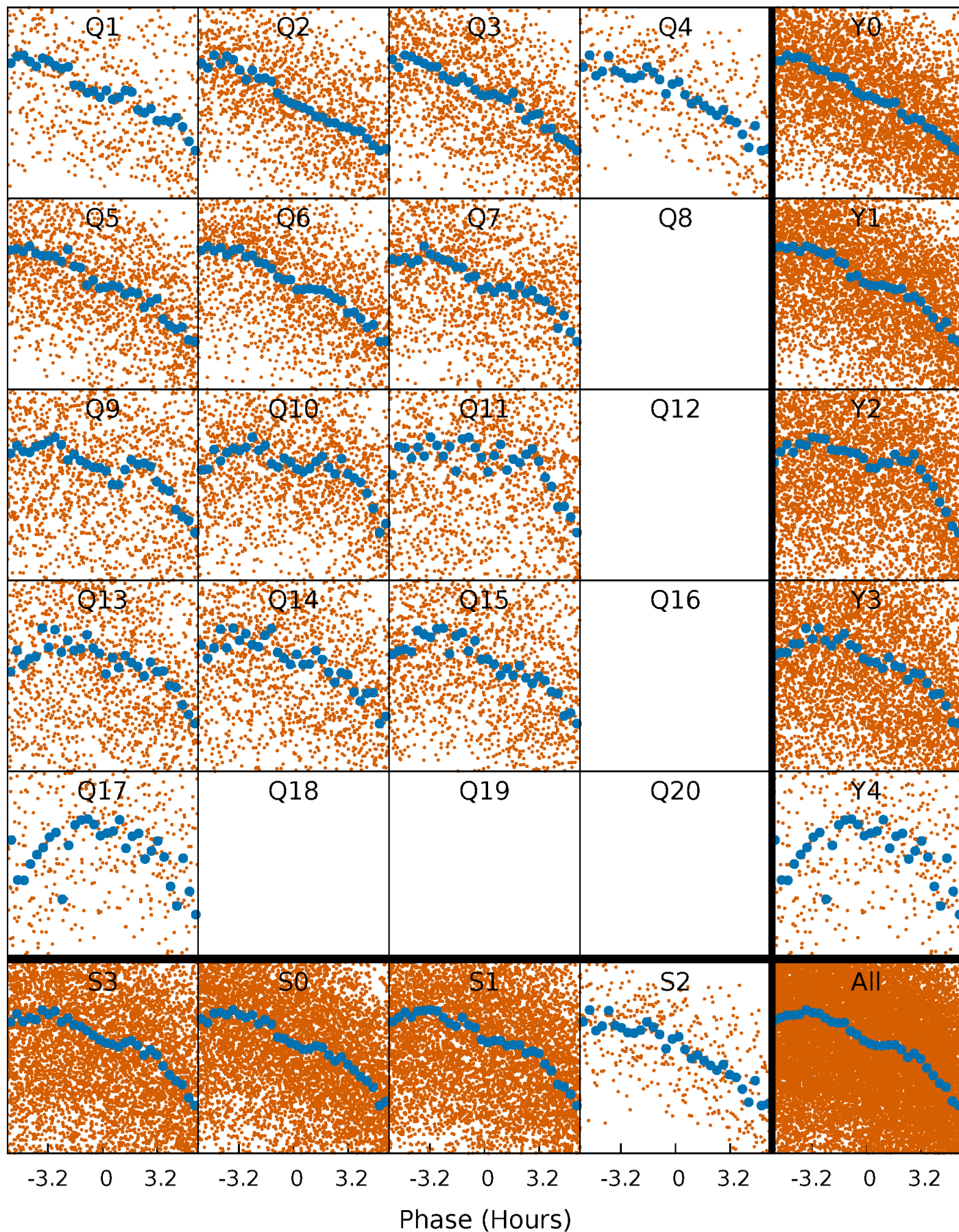


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



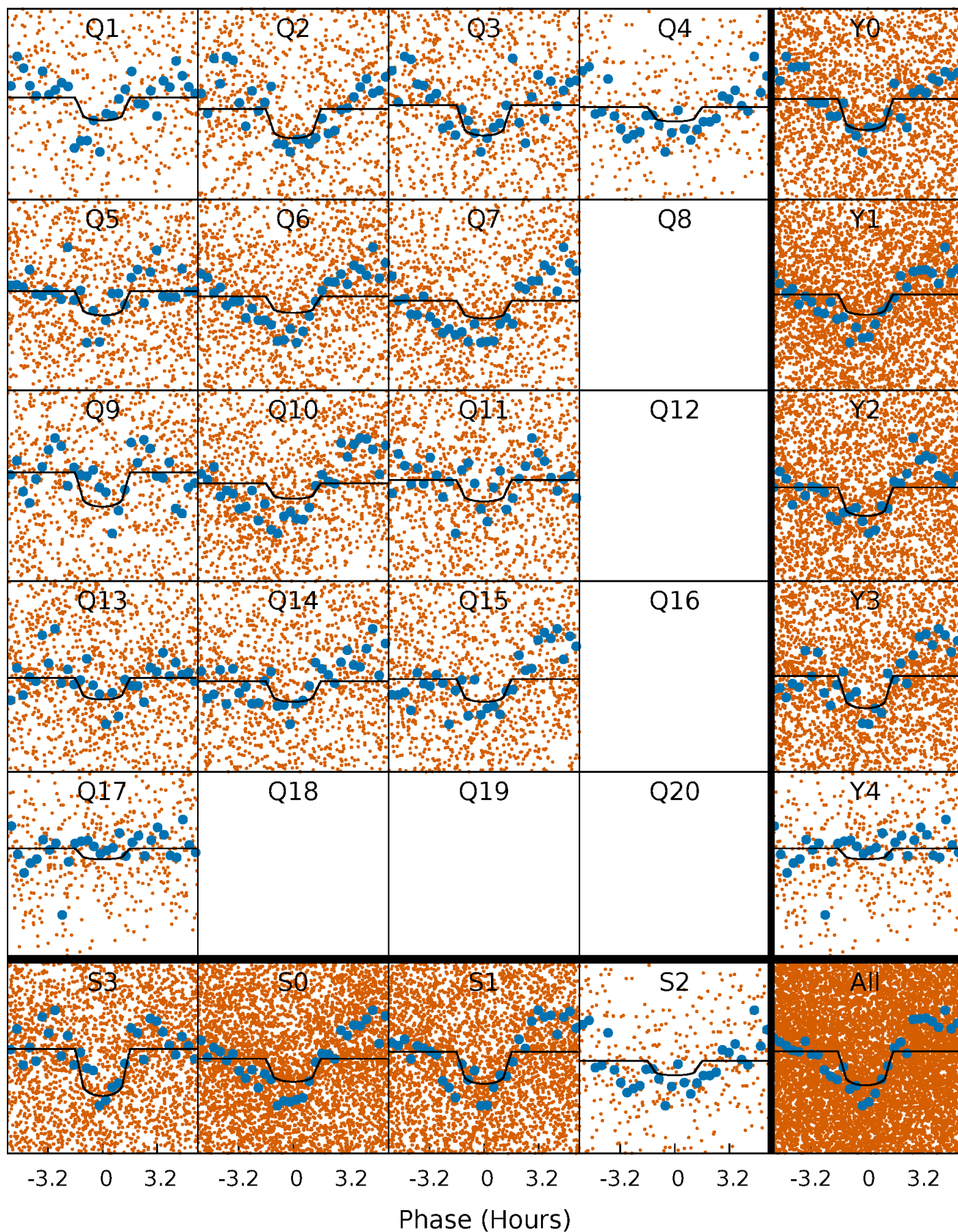
PDC Quarter-Phased Transit Curves

TCE 011288072-01 P= 1.129055 Days $T_0=131.680863$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 011288072-01 P= 1.129055 Days $T_0=131.680863$ (BKJD)

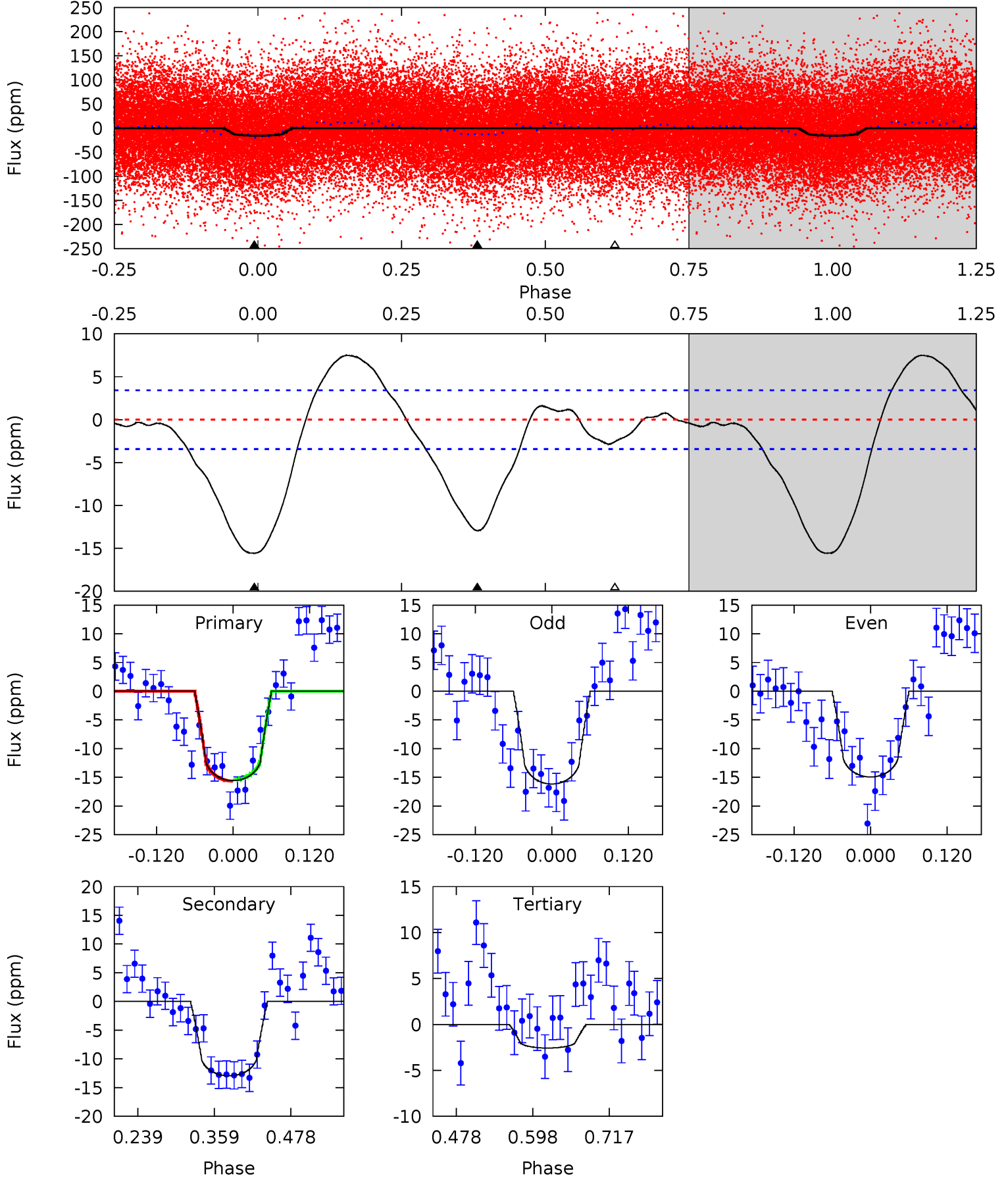


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

011288072-01, P = 1.129055 Days, E = 130.551808 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	17.1	3.40	0	4.53	1.56	4.00	17.2	20.6	13.7	17.1	0.81	1.01	0.33	0.15



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 011288072

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8175^{+228}_{-342}	$3.724^{+0.405}_{-0.135}$	$-0.120^{+0.200}_{-0.350}$	$3.246^{+0.843}_{-1.445}$	$2.039^{+0.384}_{-0.469}$	$0.084^{+0.310}_{-0.033}$
	+3%/-4%	+11%/-4%	+167%/-292%	+26%/-45%	+19%/-23%	+370%/-39%
Source	KIC0	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 011288072-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-13 ± 1	$1.10^{+0.31}_{-0.28}$	5385^{+445}_{-643}	8371^{+1174}_{-939}	$4.355^{+3.352}_{-1.684}$
Alt.	N/A	N/A	N/A	N/A	N/A

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

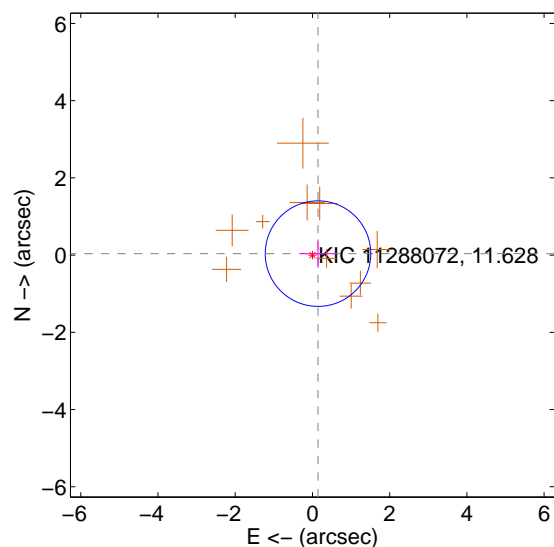
Supplemental centroid analysis for 011288072-01. **Kepler magnitude: 11.63.** Transit SNR 10.43

There are 0 quarters with good PRF difference image offsets

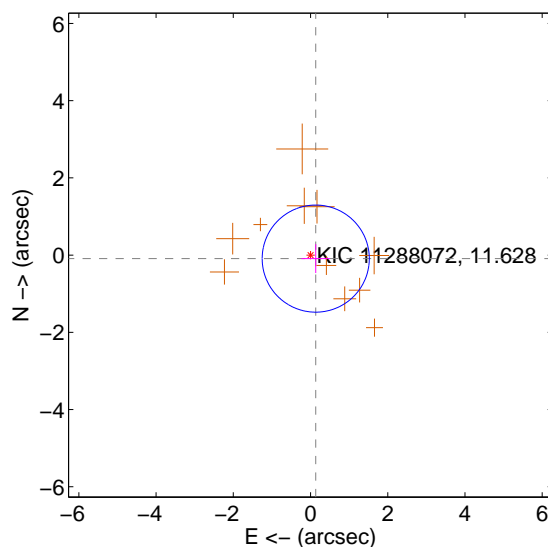
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.149 ± 0.456	0.33	-0.144 ± 0.461	0.038 ± 0.367
PRF-fit source offset from KIC position	0.163 ± 0.463	0.35	-0.135 ± 0.371	-0.091 ± 0.373
photometric centroid source offset	2.21 ± 1.00	2.21	0.11 ± 0.94	-2.21 ± 1.00

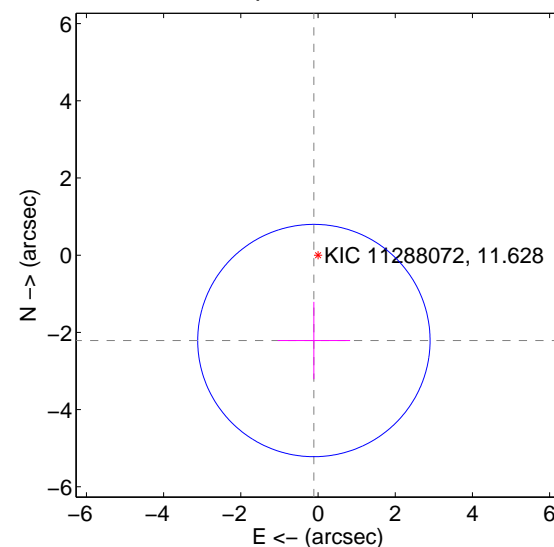
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

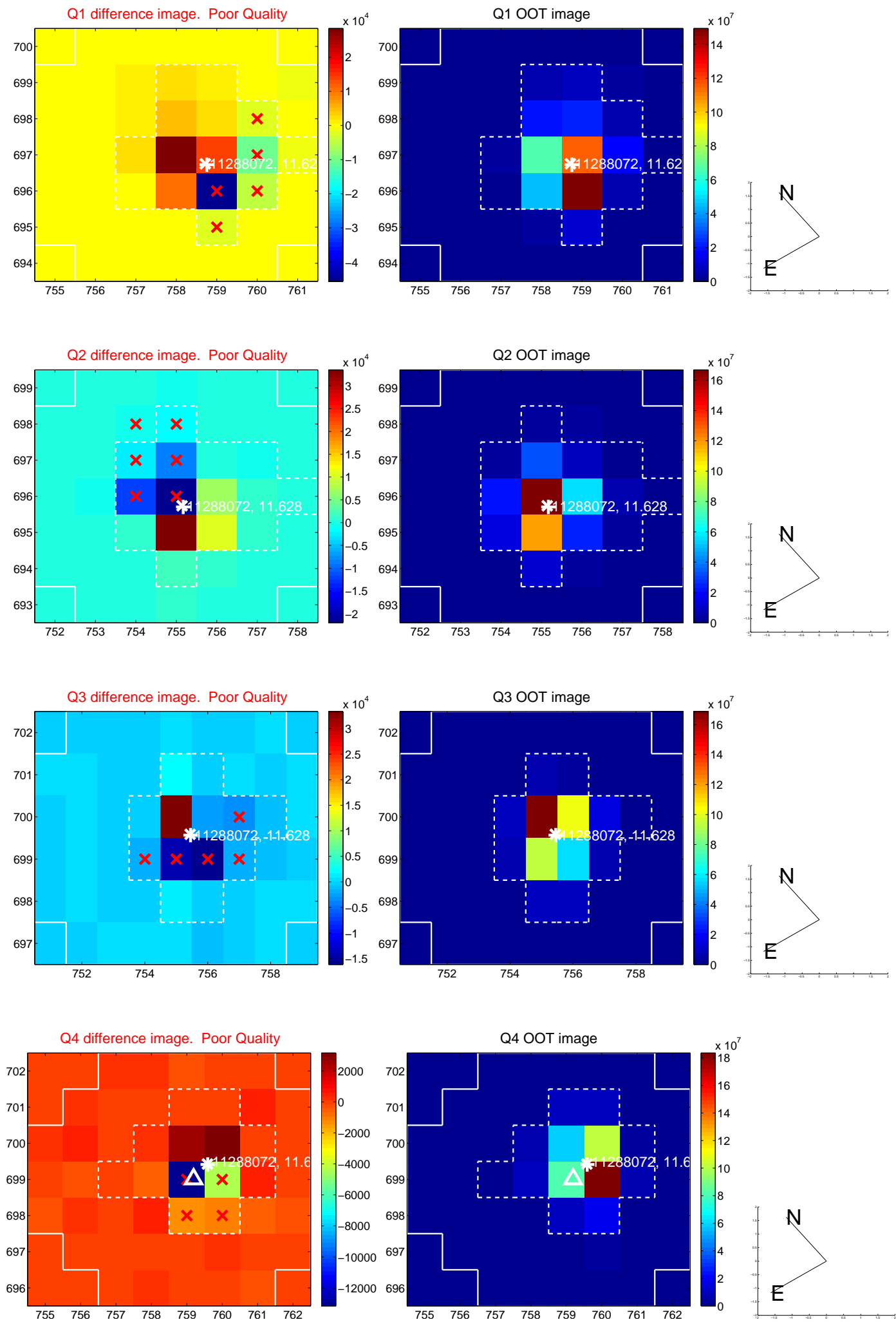


offset from photometric centroids

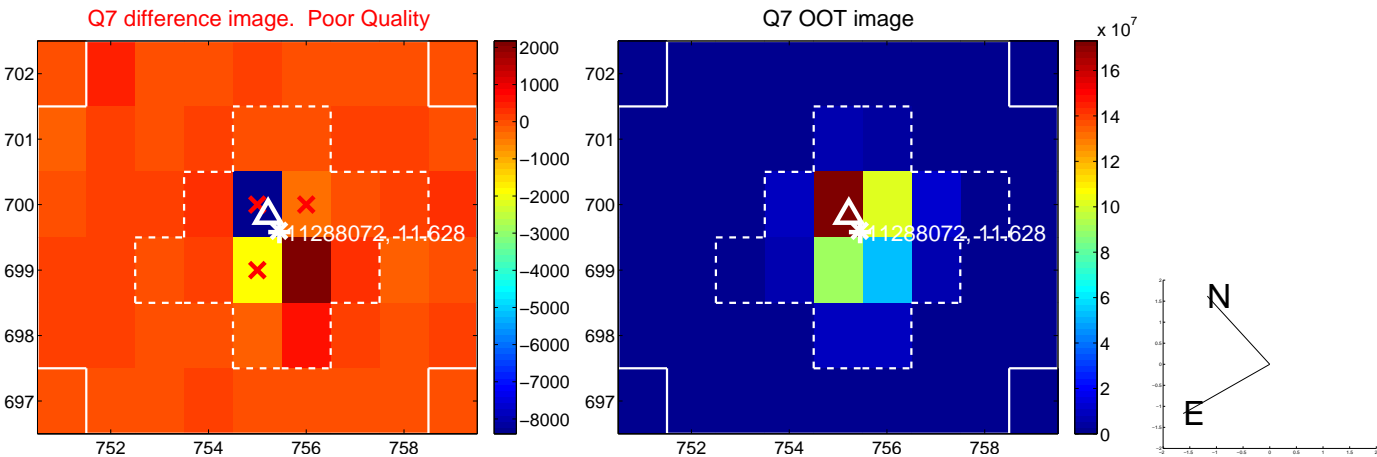
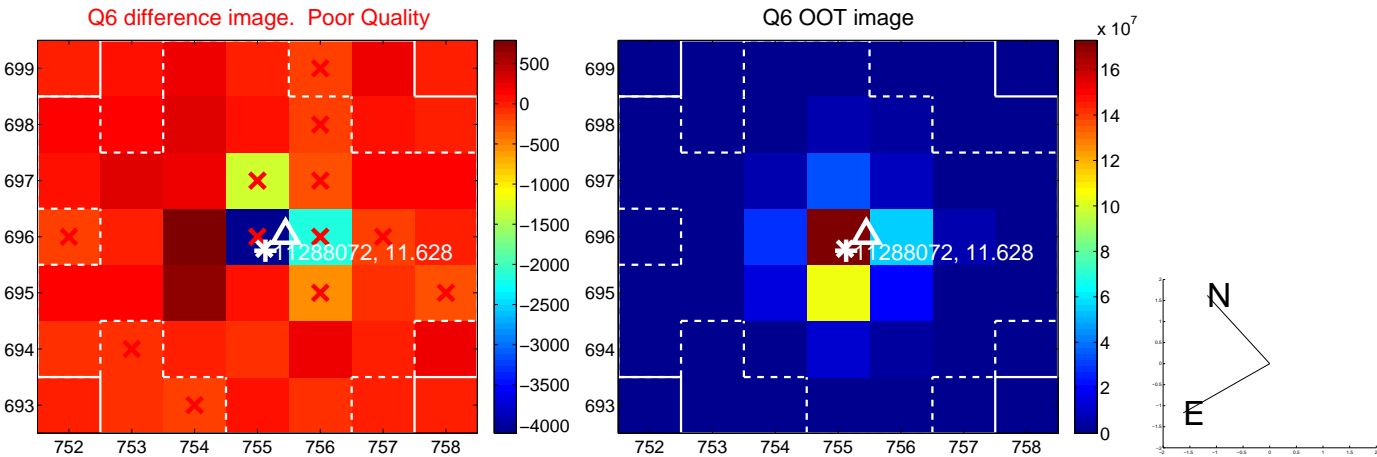
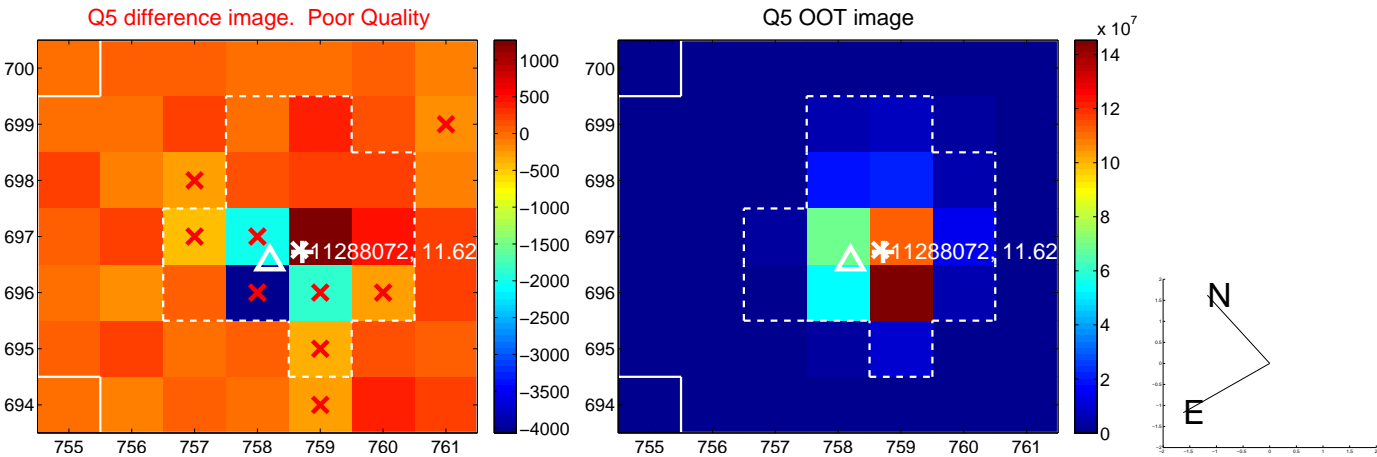


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

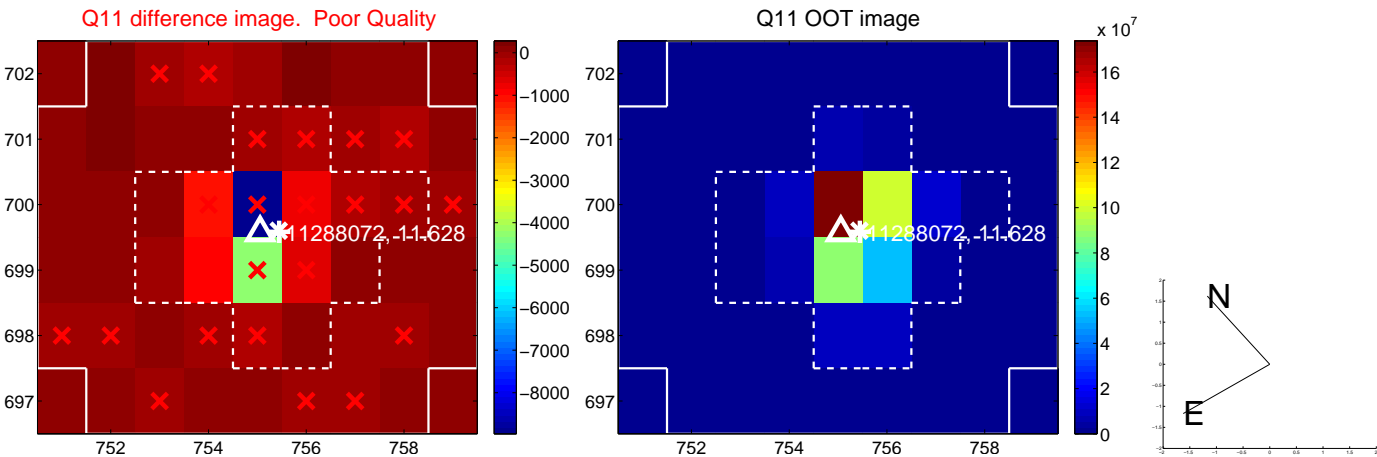
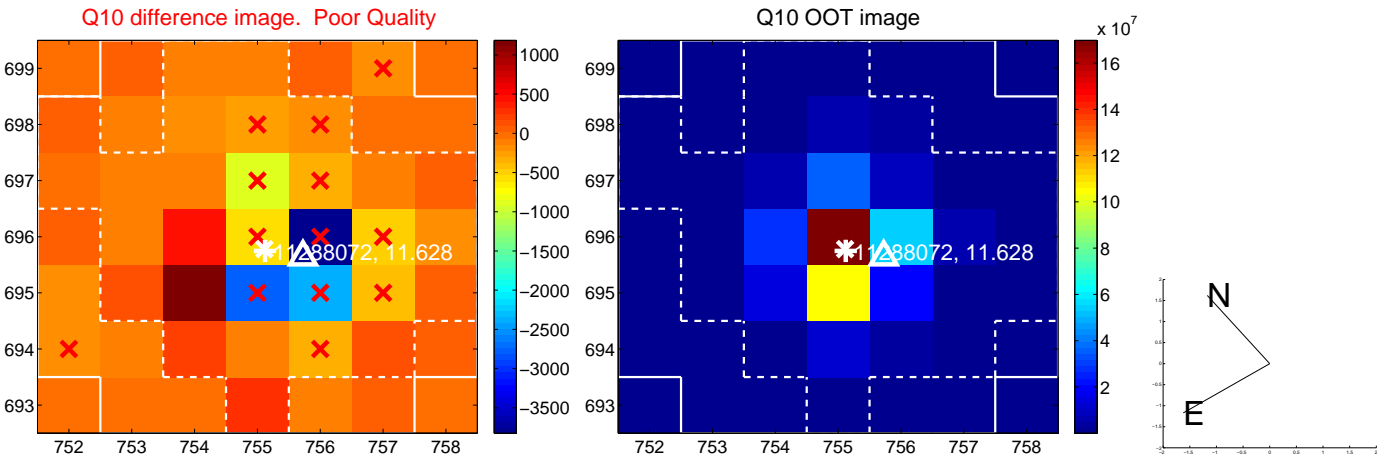
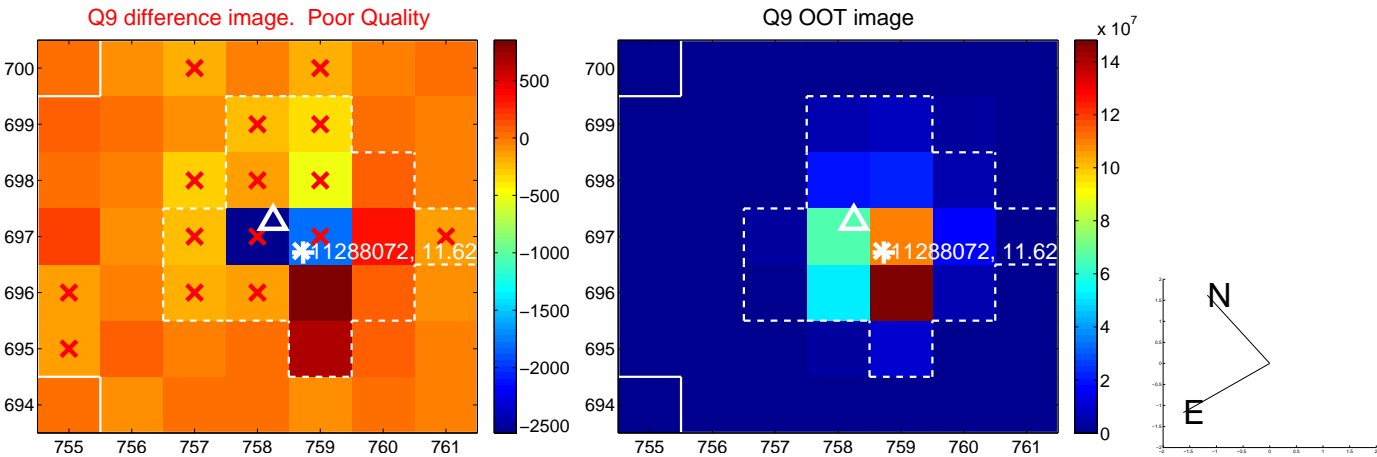
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



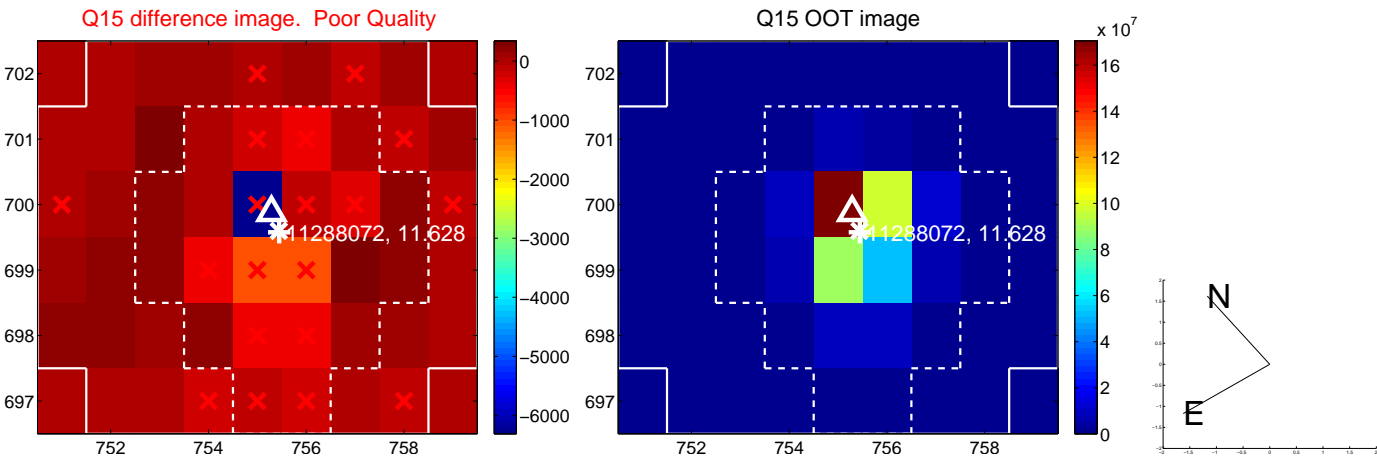
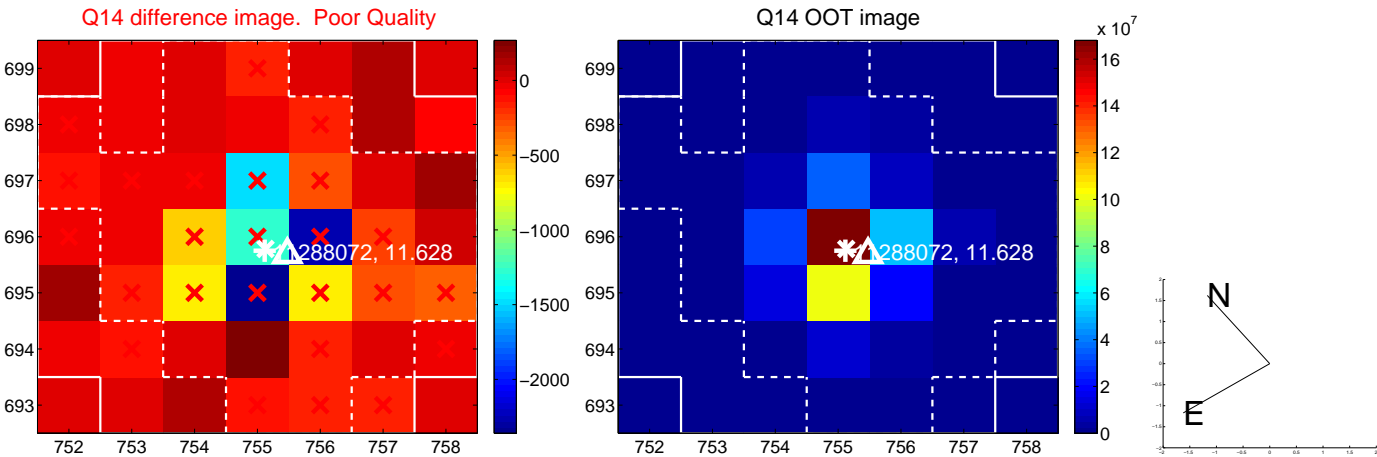
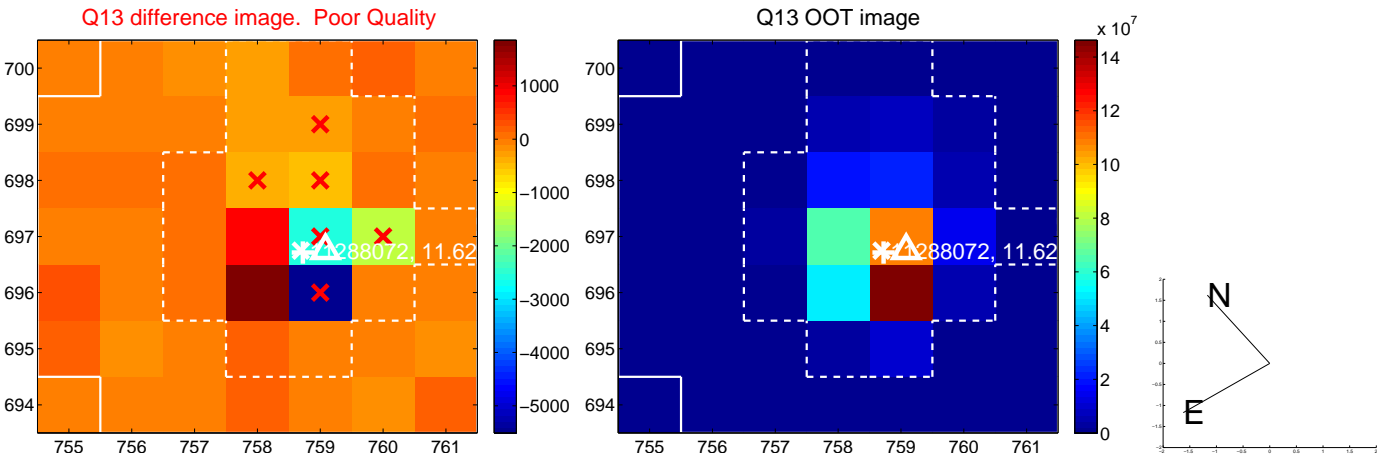
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



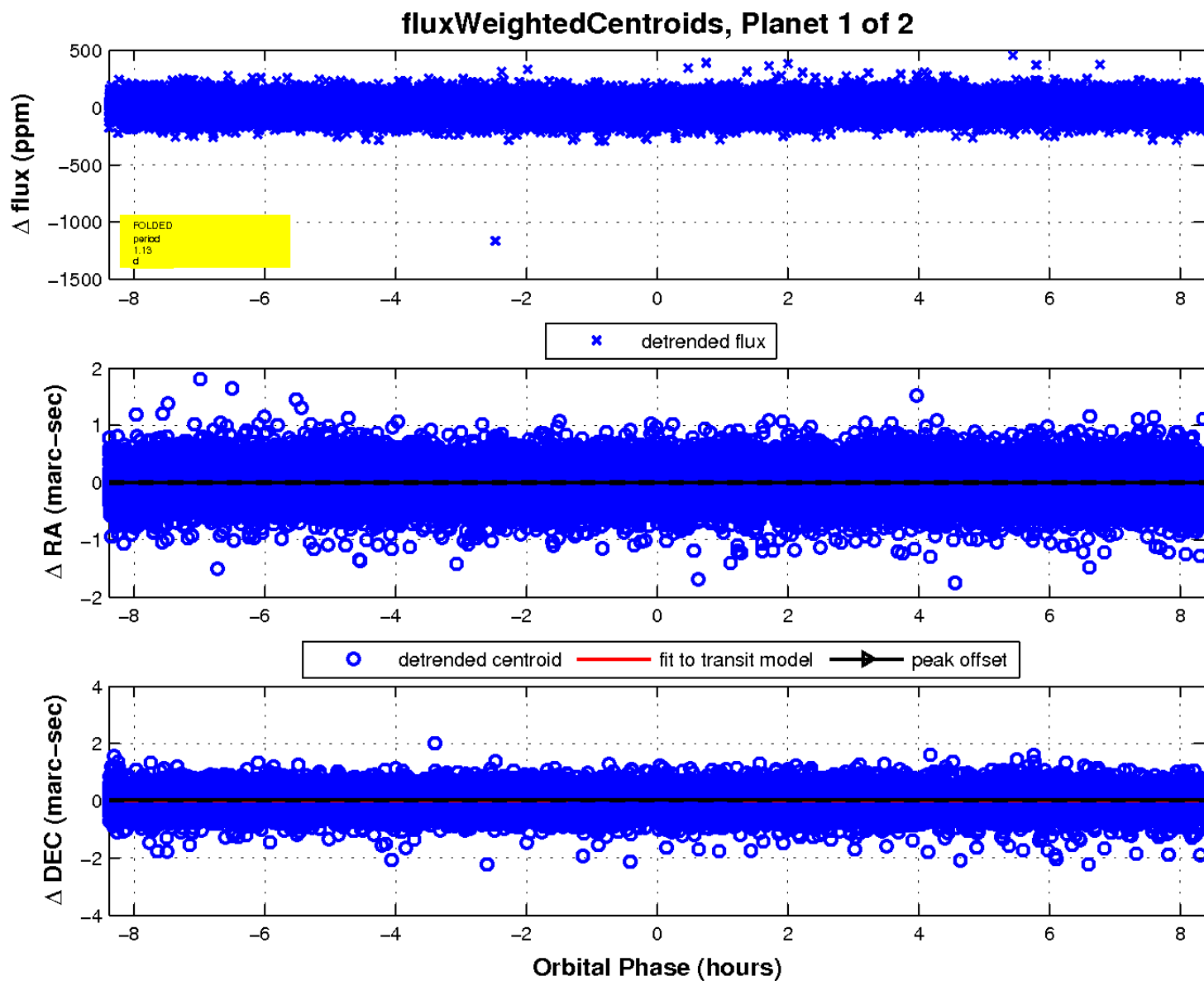
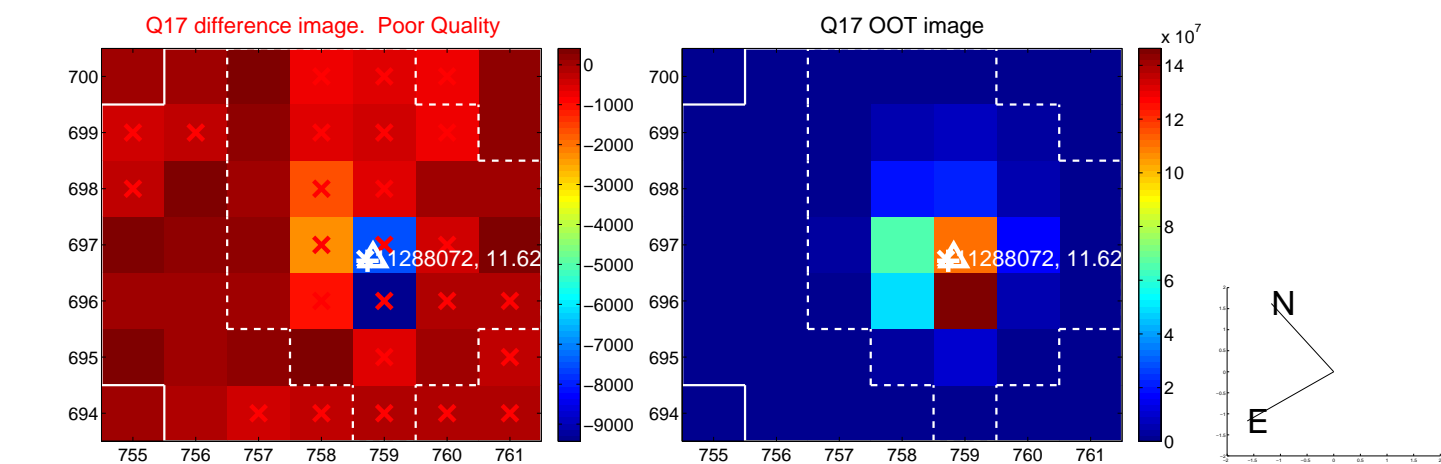
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

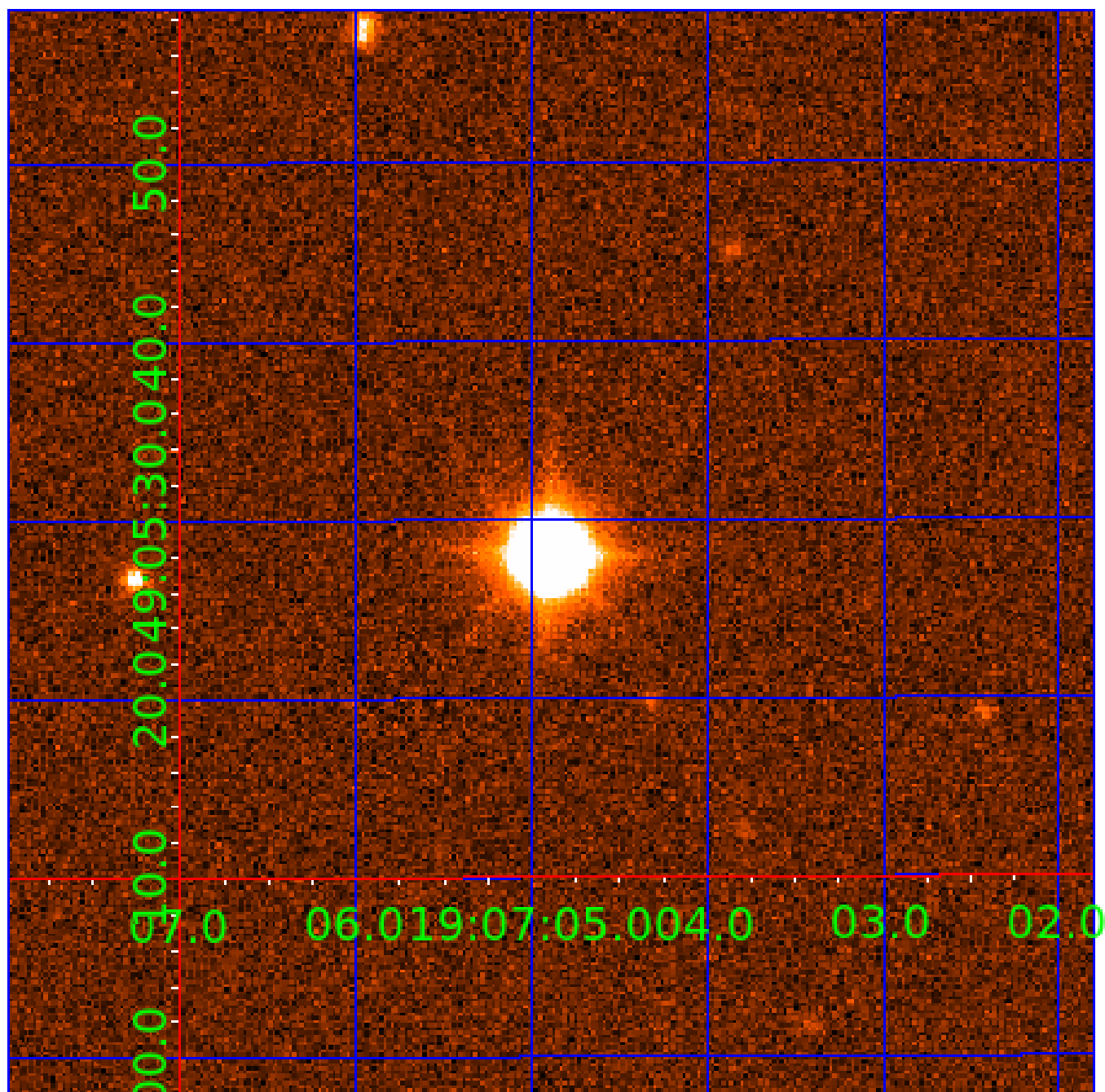


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011288072

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})
011288072-01	OBS	No	1.129055	131.680863	12.3	2.794	10.6	10.4	3.25	8175	1.18	58271.69
011288072-02	OBS	No	1.128973	132.233338	5.7	11.419	9.9	5.8	3.25	8175	0.86	58277.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011288072-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_FEW_DIFFS
011288072-02	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_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.

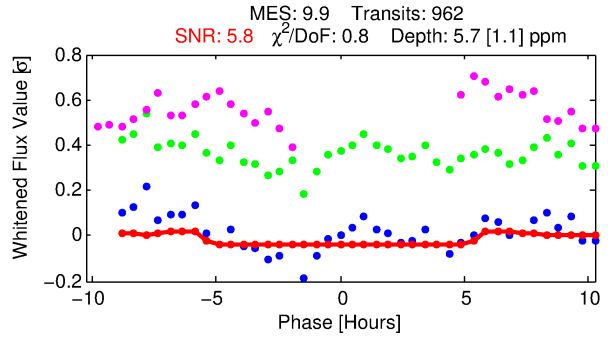
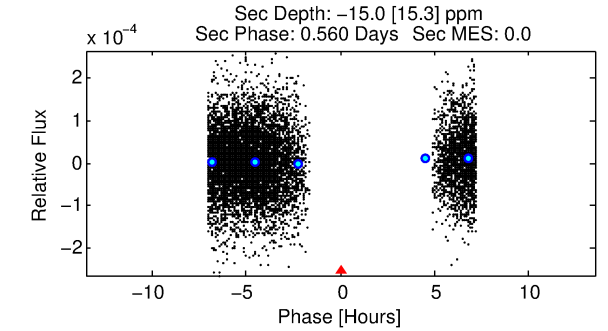
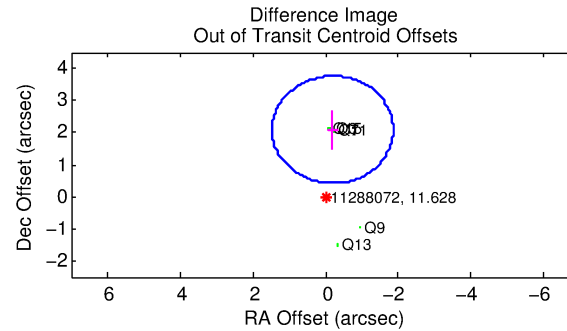
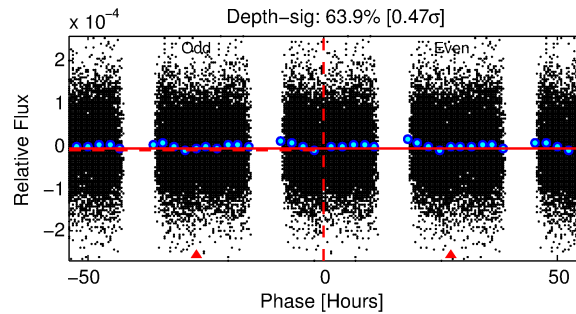
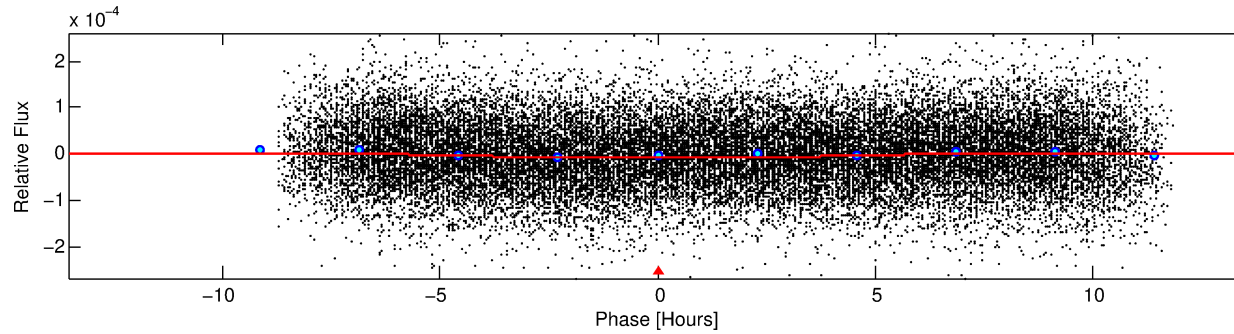
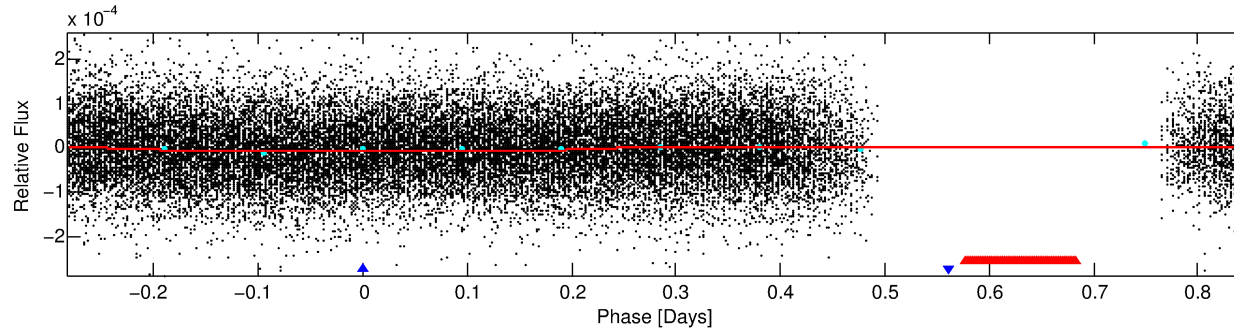
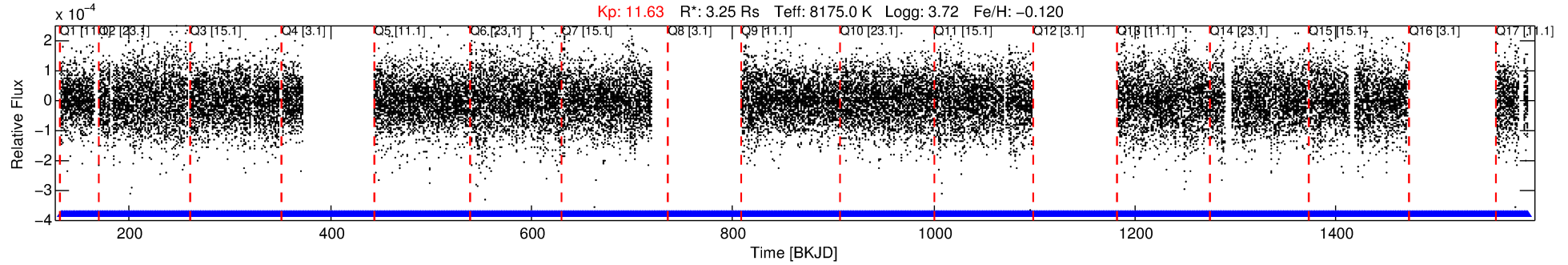
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011288072-02

No Significant Match Found

DV One-Page Summary

KIC: 11288072 Candidate: 2 of 2 Period: 1.129 d



DV Fit Results:

Period = 1.12897 [0.00003] d
Epoch = 132.2333 [0.0085] BKJD
 $R_p/R^* = 0.0024$ [0.0013]
 $a/R^* = 1.01$ [0.09]
 $b = 0.82$ [1.39]
 $\text{Seff} = 58277.34$ [41314.75]
 $T_{\text{eq}} = 3962$ [702] K
 $R_p = 0.86$ [0.61] R_e
 $a = 0.0269$ [0.0116] AU
 $A_g = \text{N/A}$
 $T_{\text{eff}} = \text{N/A}$

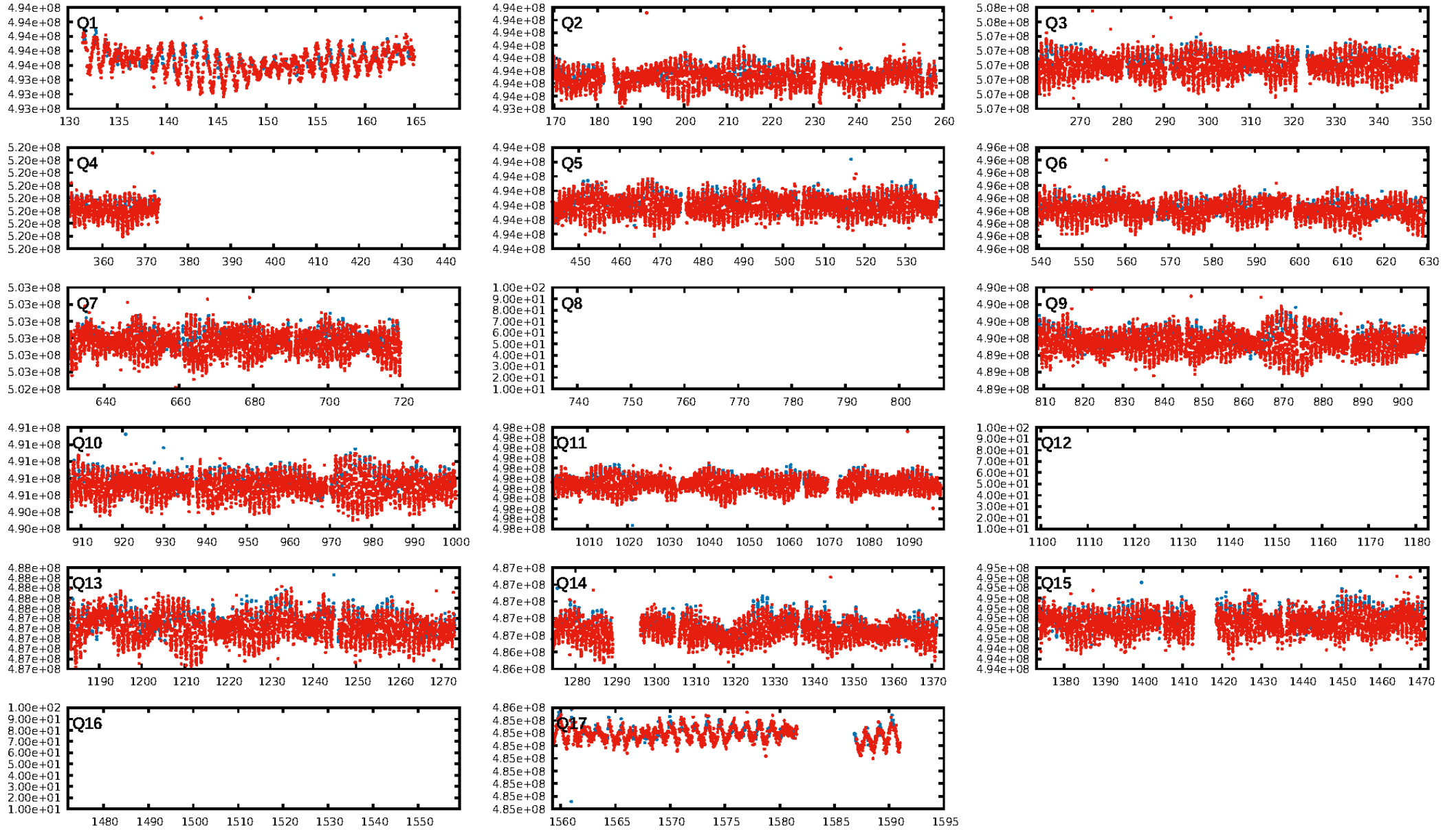
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [889/889]
GhostDiagnostic-chr: 0.7954
Centroid-sig: 31.6%
Centroid-so: 1.025 arcsec [0.79 σ]
OotOffset-rm: 2.098 arcsec [3.77 σ]
KicOffset-rm: 2.013 arcsec [3.04 σ]
OotOffset-st: 0/4/0/2 [6]
KicOffset-st: 0/4/0/2 [6]
DiffImageQuality-fgm: 1.00 [6/6]
DiffImageOverlap-fno: 0.00 [0/14]

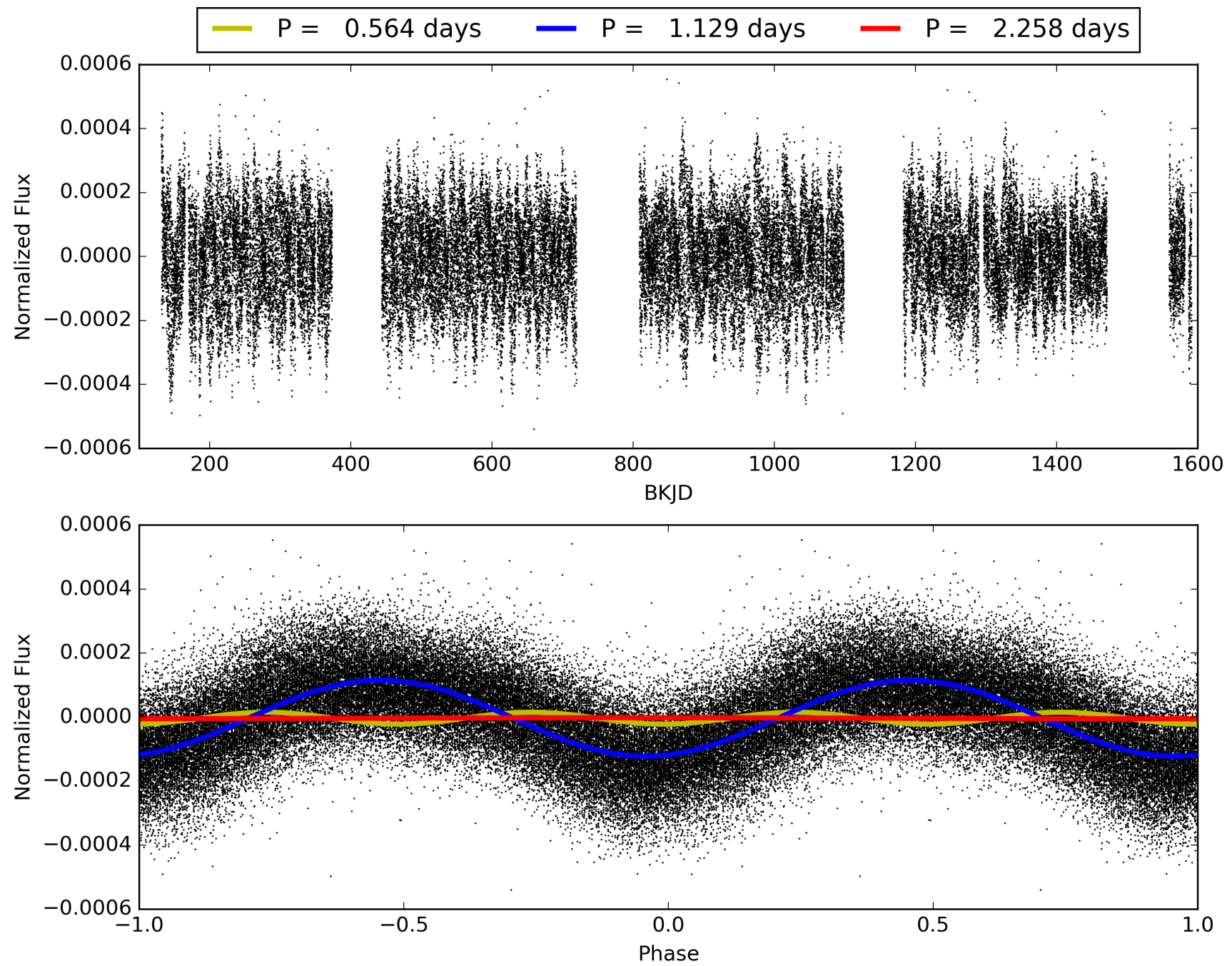
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 09:32:03 Z

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

TCE 011288072-02, PDC Light Curves

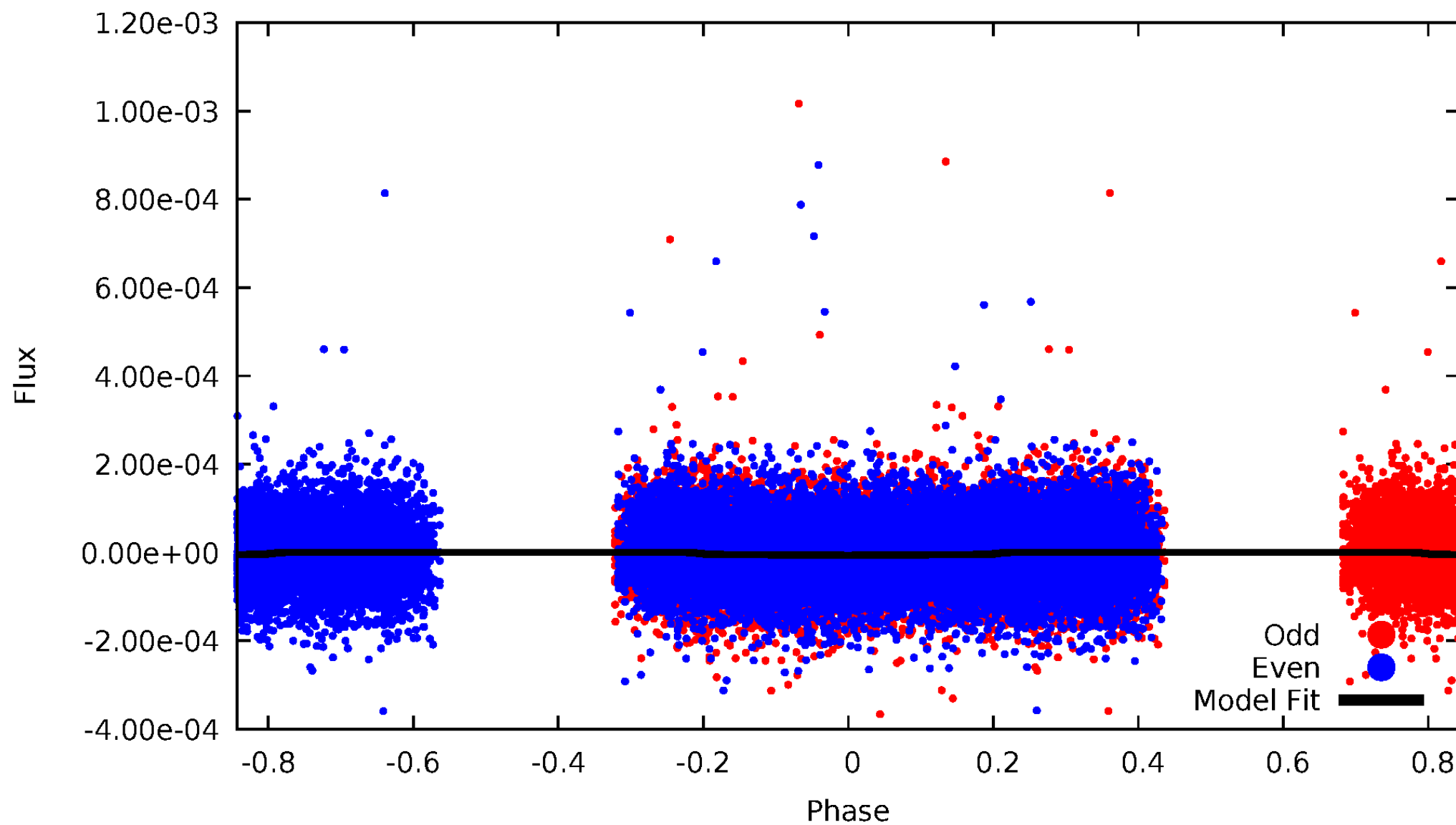


TCE 011288072-02



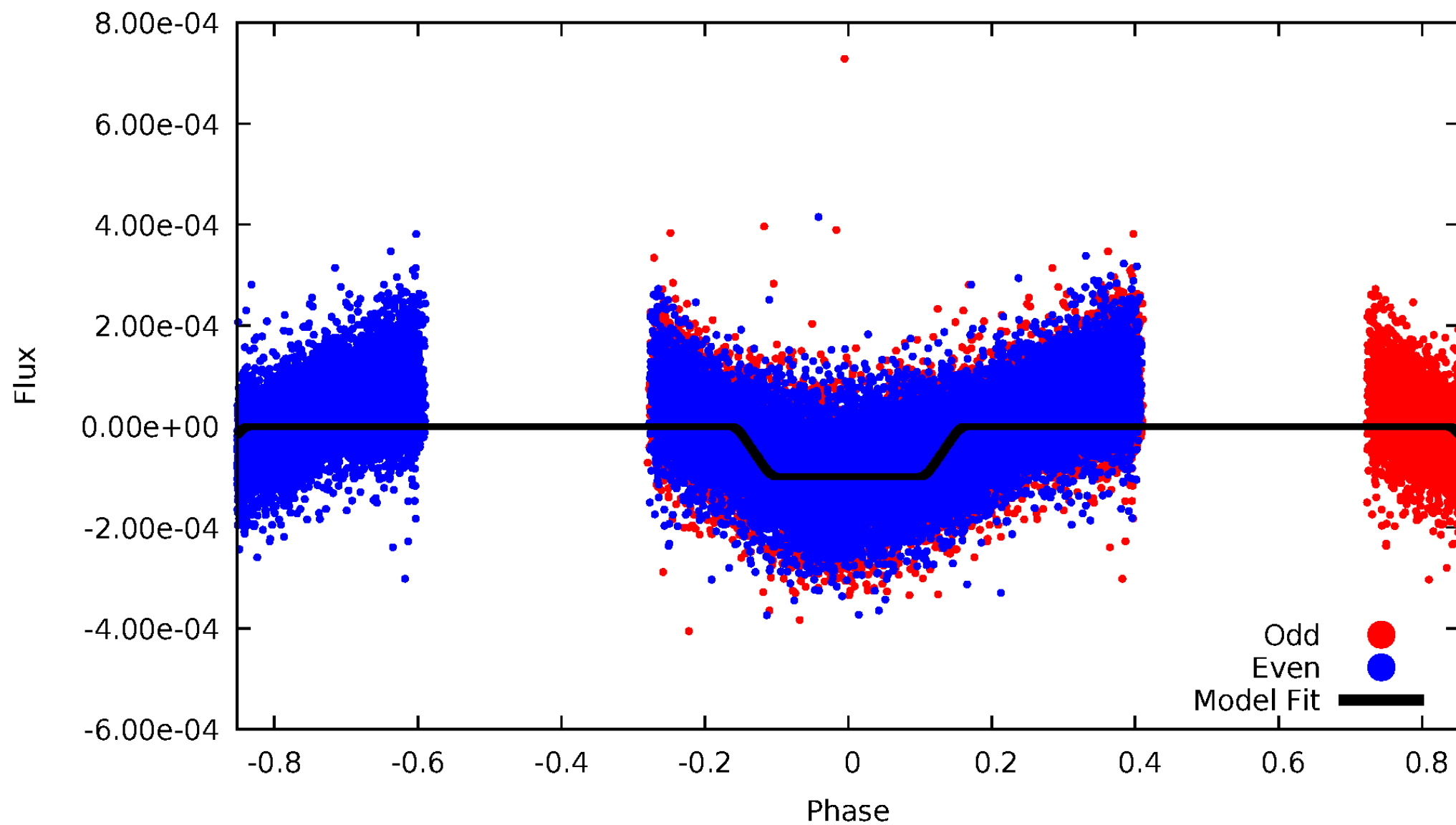
DV Odd/Even

TCE 011288072-02



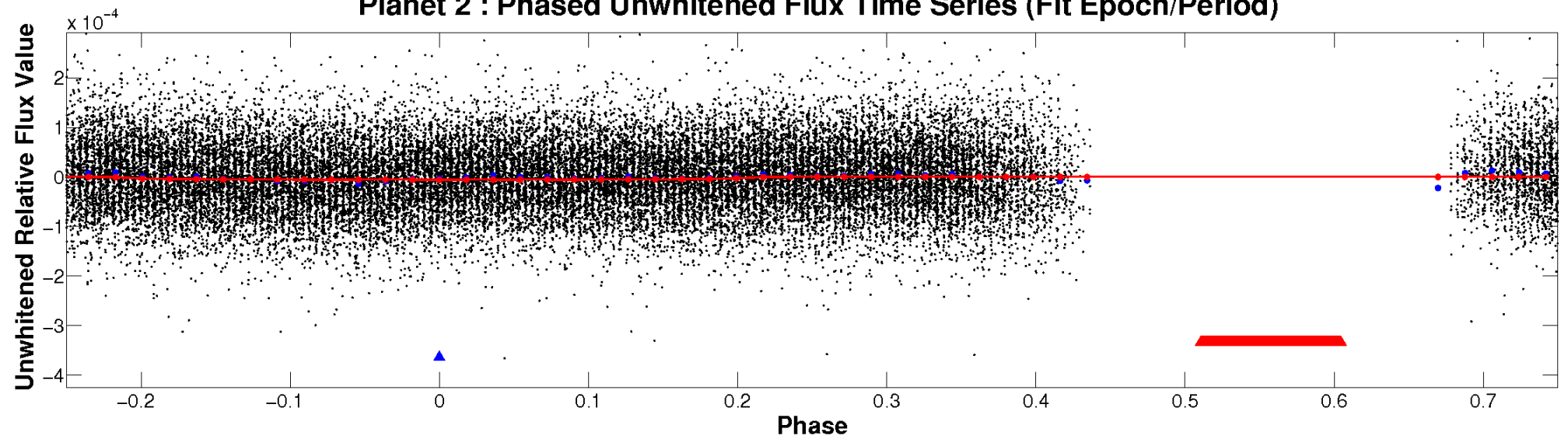
ALT Odd/Even

TCE 011288072-02

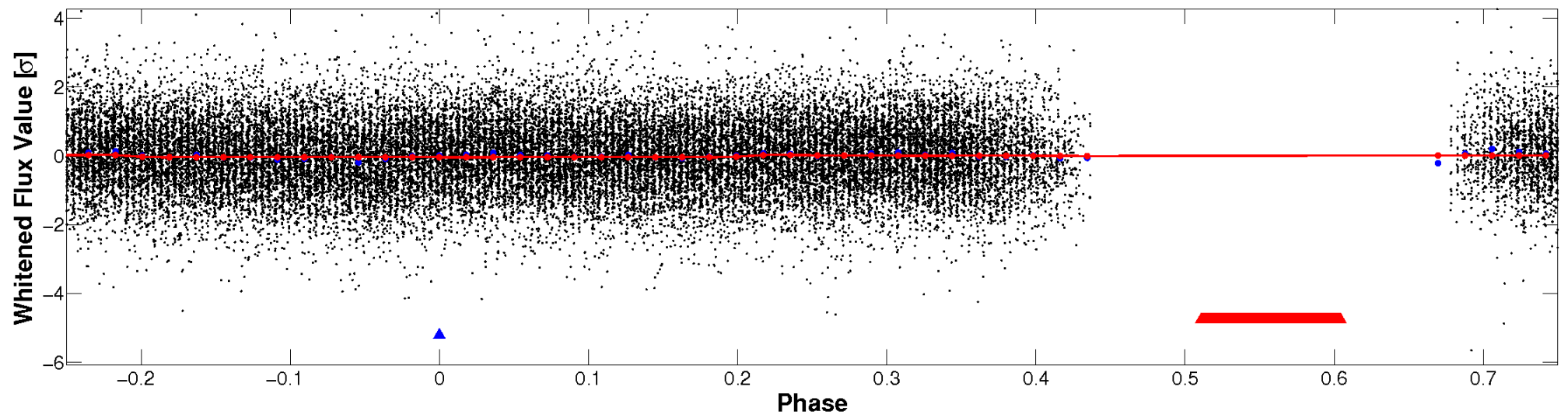


Non-Whitened Vs. Whitened Light Curve

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

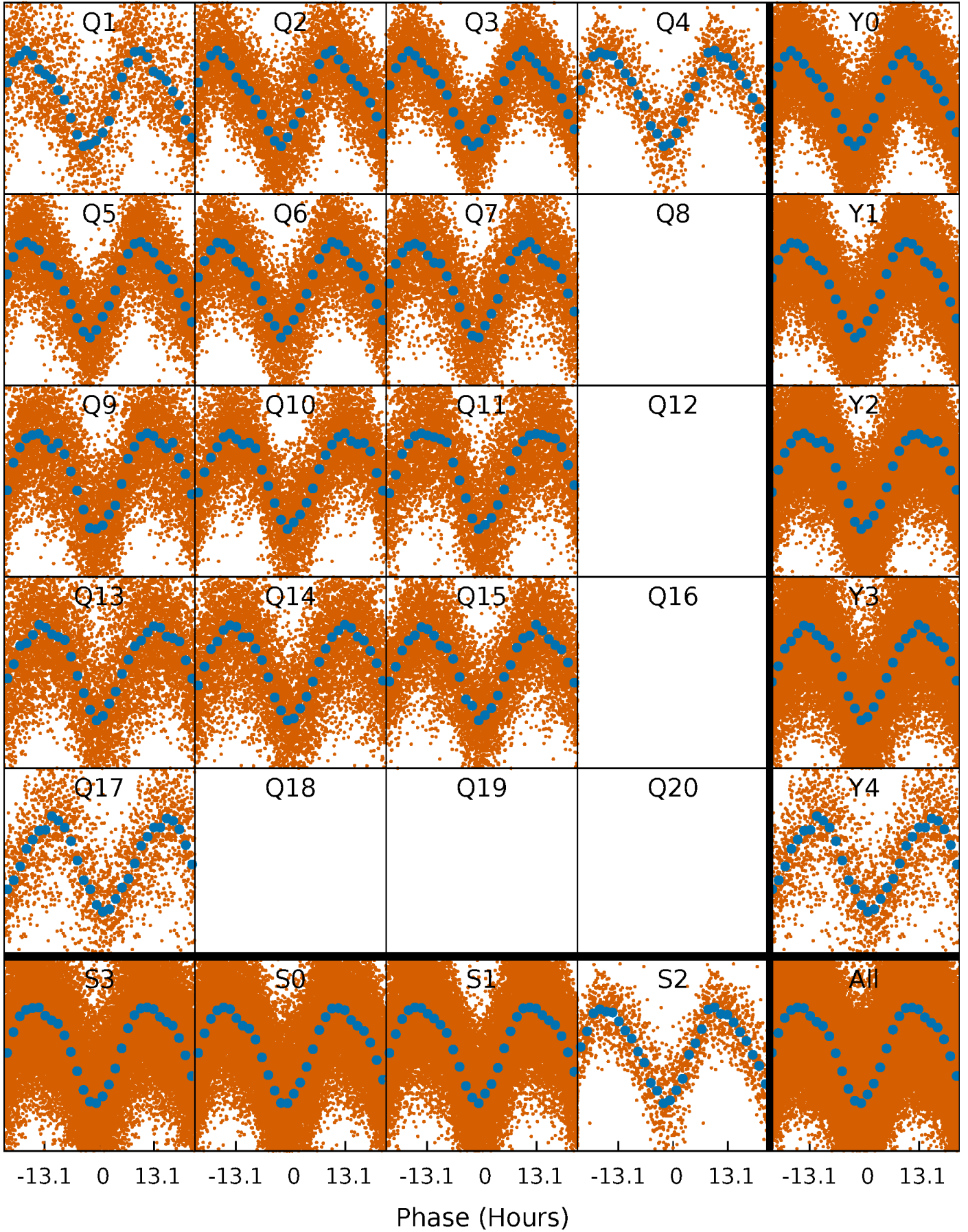


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



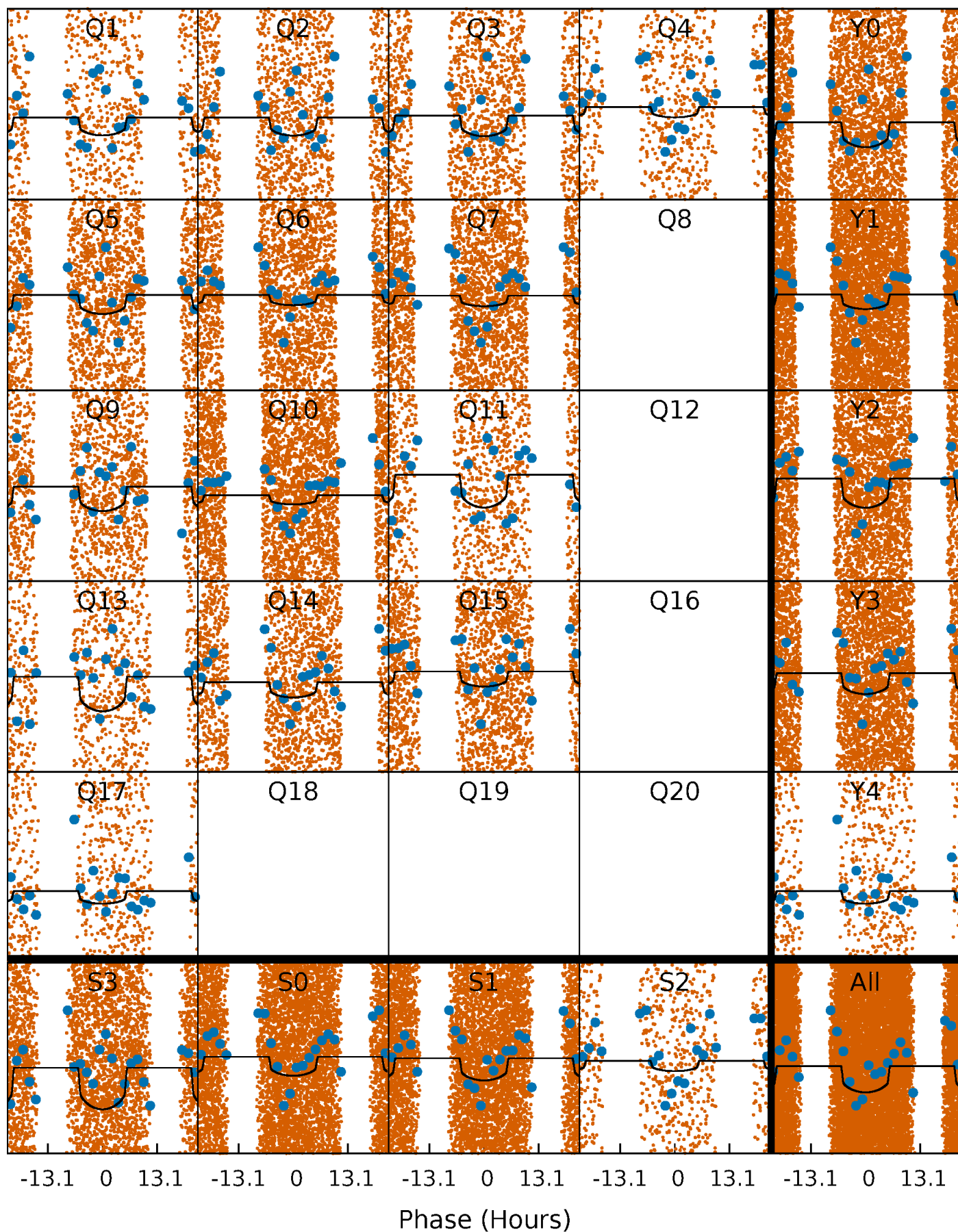
PDC Quarter-Phased Transit Curves

TCE 011288072-02 P= 1.128973 Days $T_0=132.233338$ (BKJD)



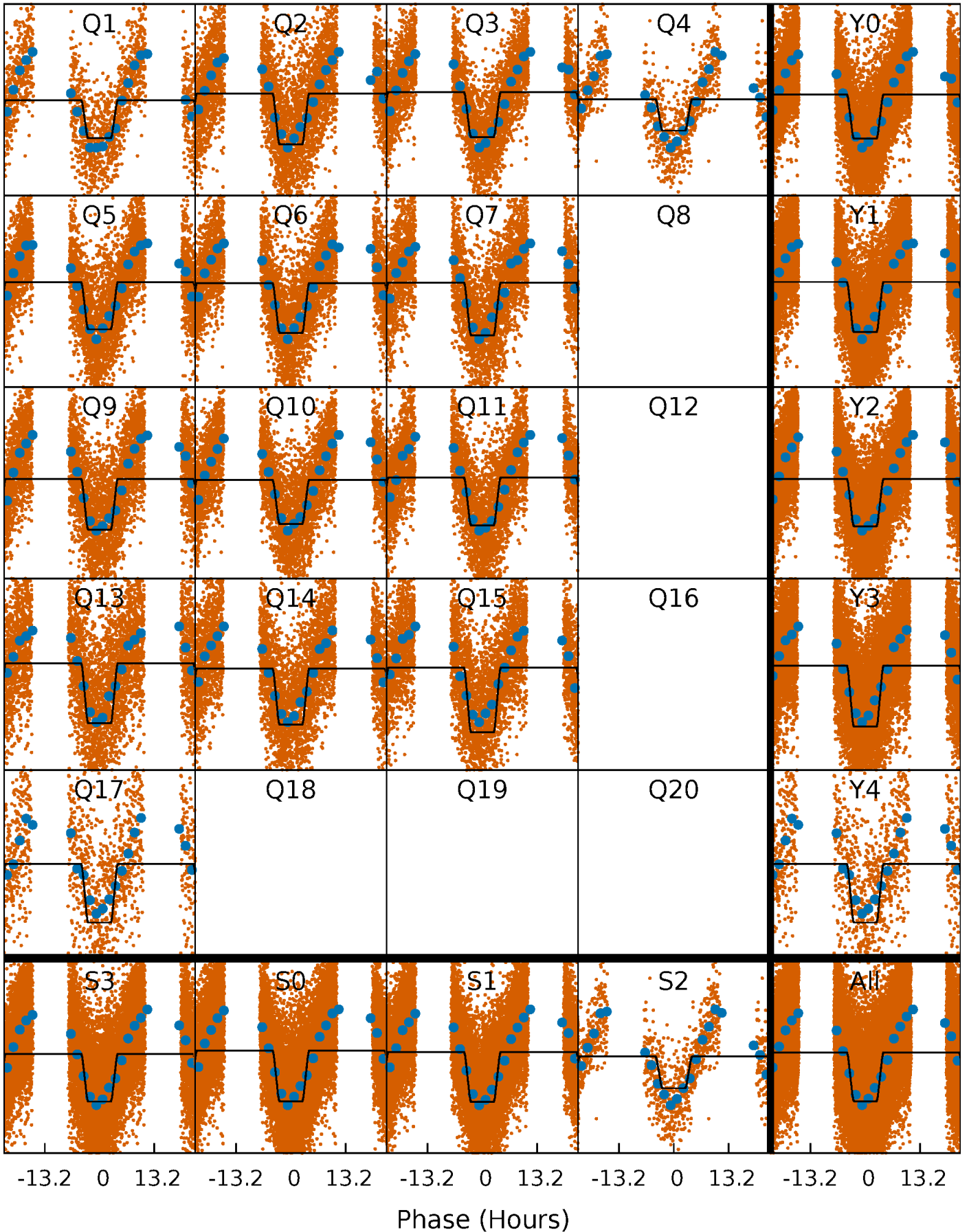
DV Quarter-Phased Transit Curves

TCE 011288072-02 P= 1.128973 Days $T_0=132.233338$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

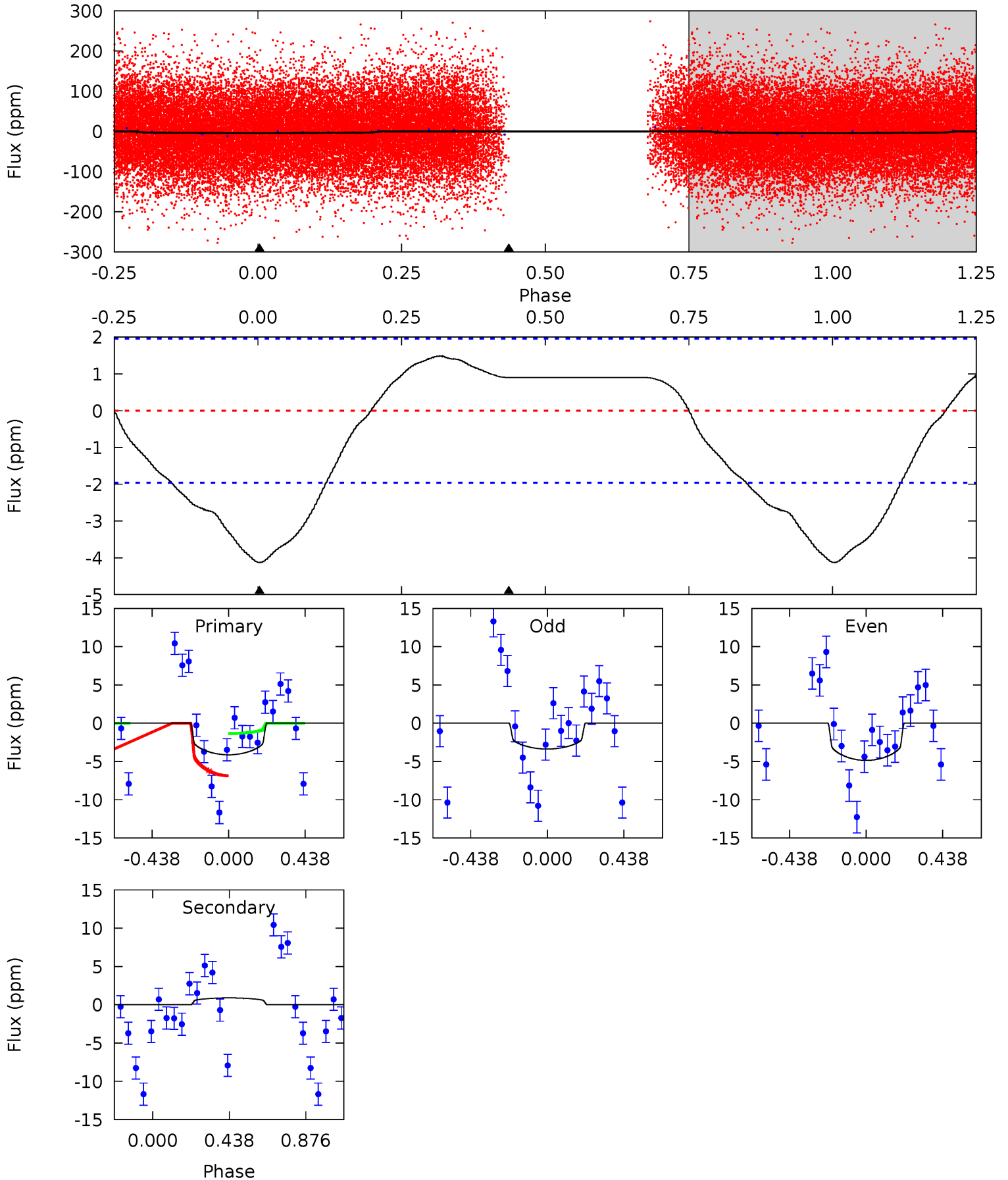
TCE 011288072-02 P= 1.129071 Days $T_0=132.161090$ (BKJD)



DV Model-Shift Uniqueness Test

011288072-02, P = 1.128973 Days, E = 131.104365 Days

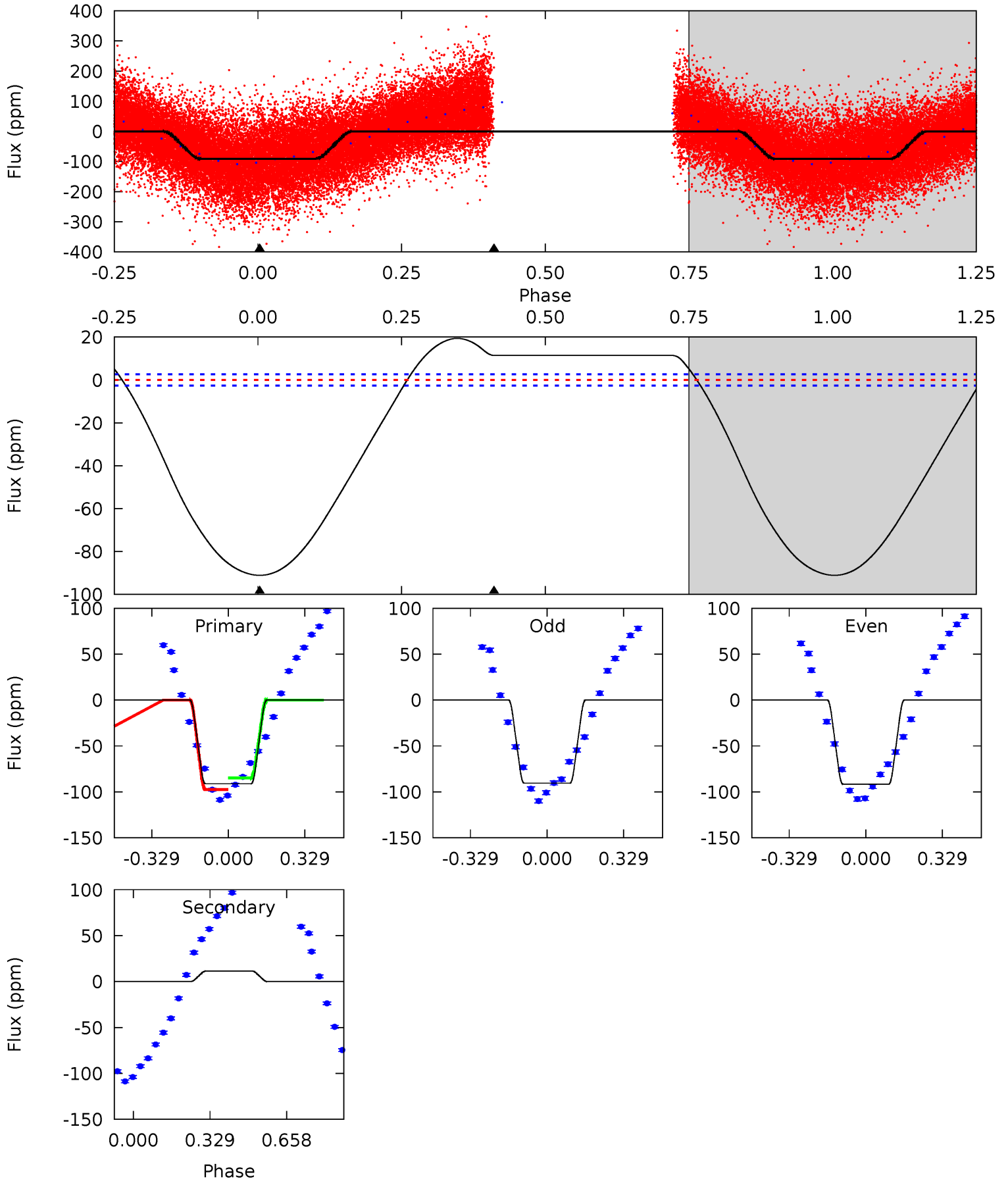
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.95	-1.95	0	0	4.24	0.78	1.31	8.95	8.95	-1.95	-1.95	1.59	0.99	0.27	6.26



Alt Model-Shift Uniqueness Test

011288072-02, P = 1.129071 Days, E = 131.032019 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
148.1	-18.6	0	0	4.31	0.98	12.7	148.1	148.1	-18.6	-18.6	0.95	1.02	0.18	11.5



Stellar Parameters For KIC 011288072

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8175^{+228}_{-342}	$3.724^{+0.405}_{-0.135}$	$-0.120^{+0.200}_{-0.350}$	$3.246^{+0.843}_{-1.445}$	$2.039^{+0.384}_{-0.469}$	$0.084^{+0.310}_{-0.033}$
	+3%/-4%	+11%/-4%	+167%/-292%	+26%/-45%	+19%/-23%	+370%/-39%
Source	KIC0	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 011288072-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	1 ± 0	$0.80^{+0.47}_{-0.41}$	5396^{+417}_{-639}	-5500^{+676}_{-1557}	$-0.528^{+0.380}_{-1.706}$
Alt.	11 ± 1	$3.36^{+0.79}_{-0.79}$	5393^{+455}_{-580}	-5356^{+312}_{-296}	$-0.404^{+0.131}_{-0.283}$

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 $A_{obs} \gg 1.0$

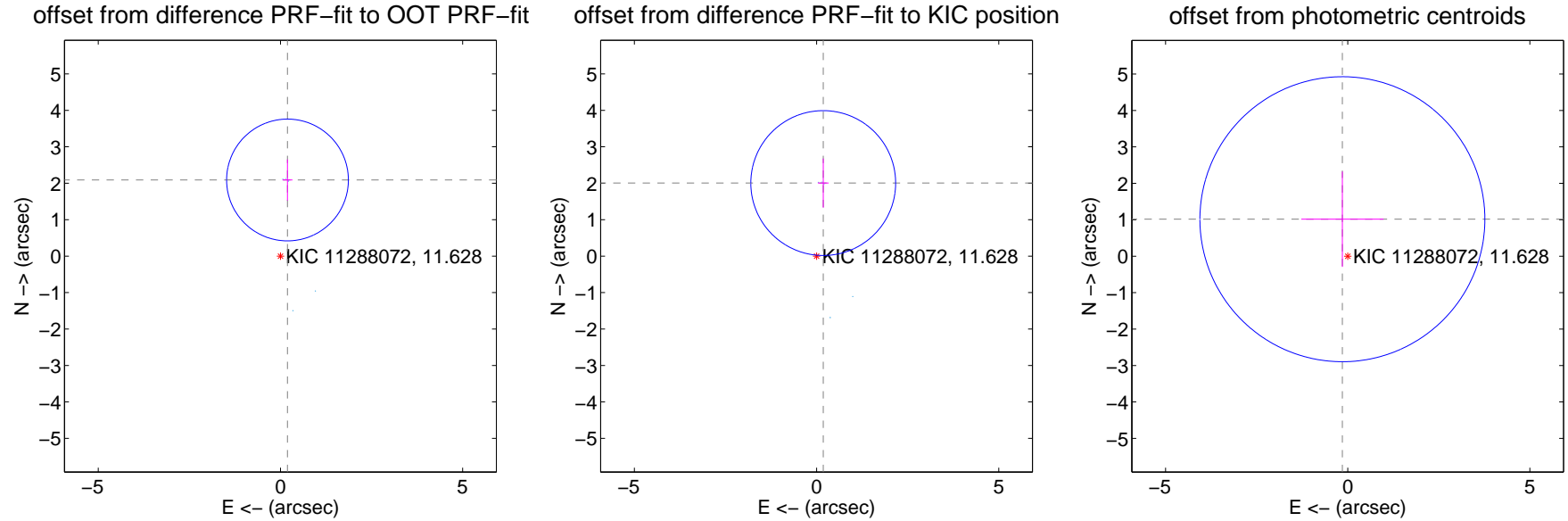
DV Centroid Data

Supplemental centroid analysis for 011288072-02. **Kepler magnitude: 11.63.** Transit SNR 5.78

There are 6 quarters with good PRF difference image offsets

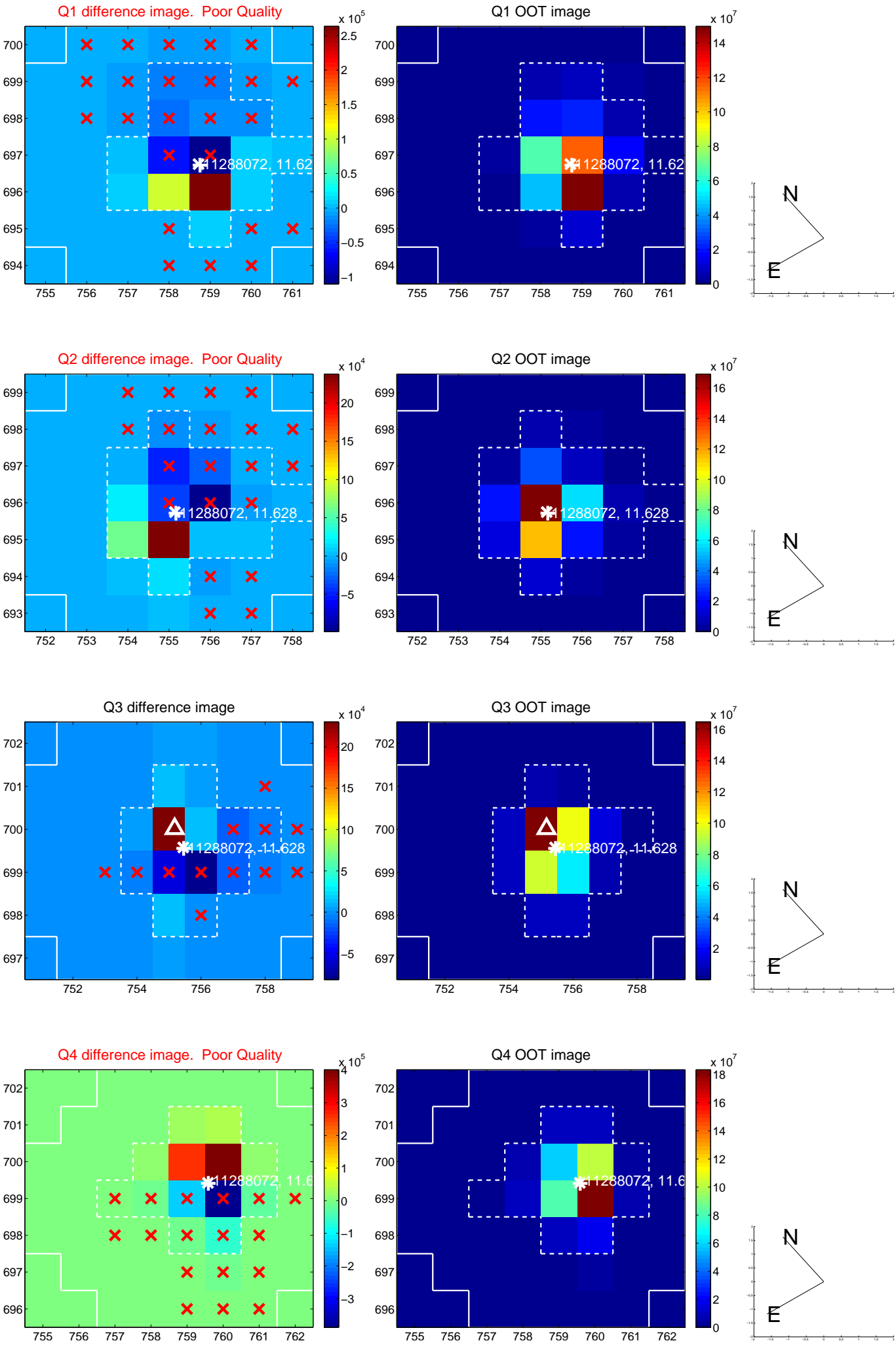
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.098 ± 0.557	3.77	-0.193 ± 0.136	2.089 ± 0.566
PRF-fit source offset from KIC position	2.013 ± 0.662	3.04	-0.183 ± 0.146	2.005 ± 0.675
photometric centroid source offset	1.03 ± 1.30	0.79	0.15 ± 1.13	1.01 ± 1.31

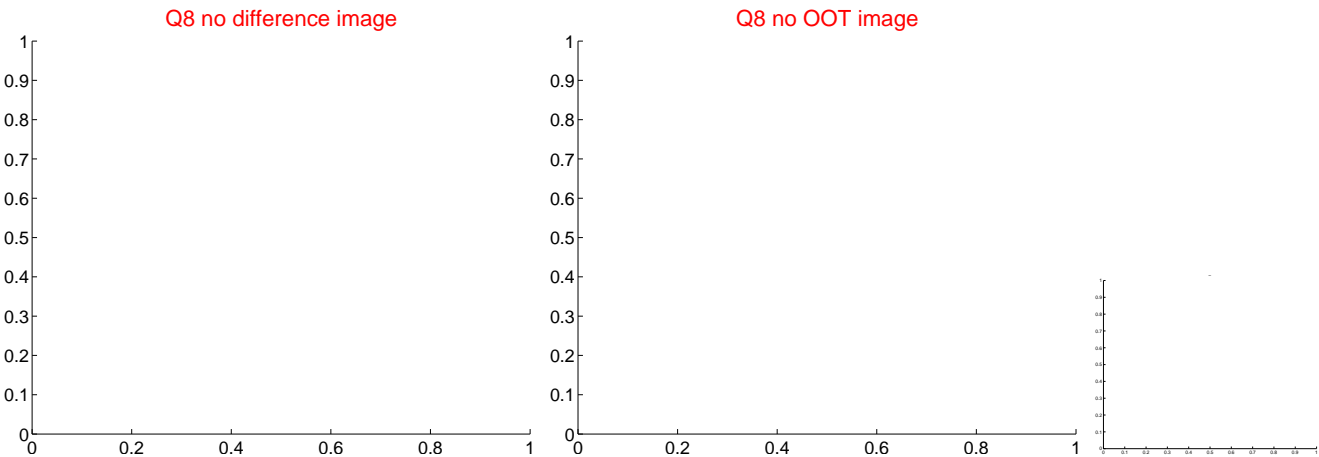
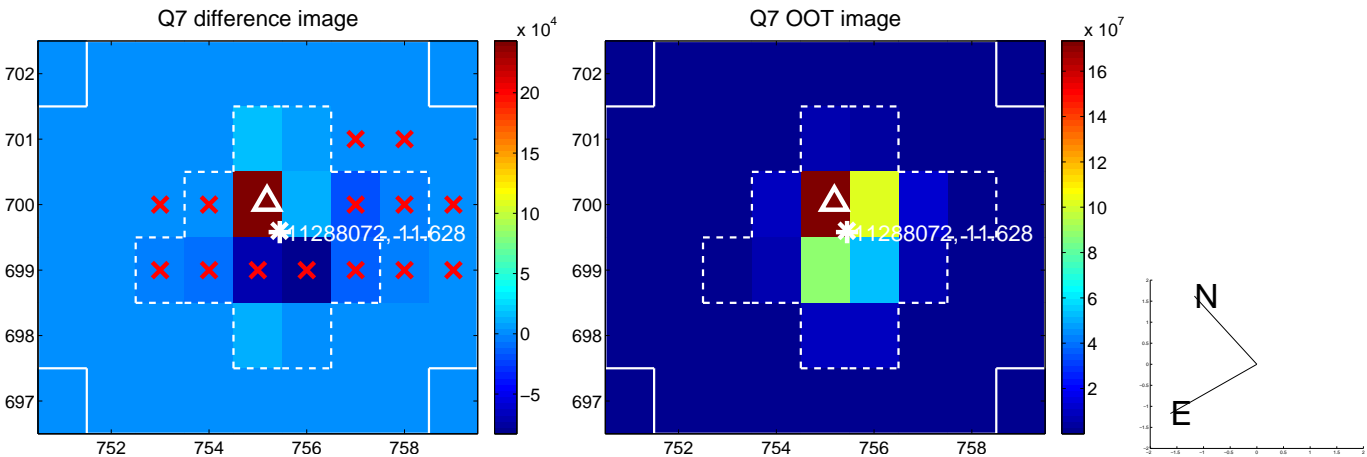
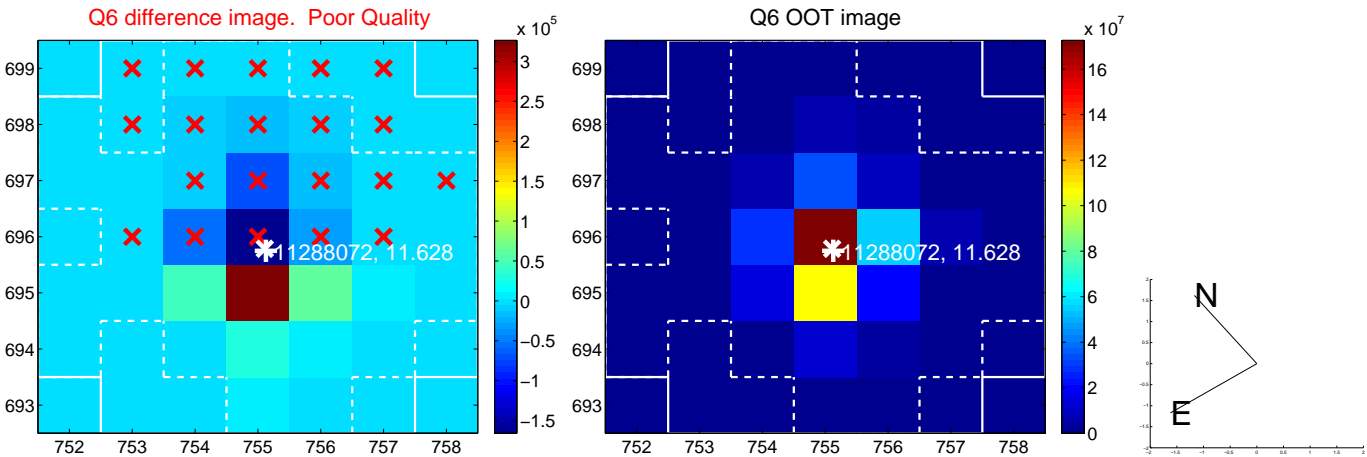
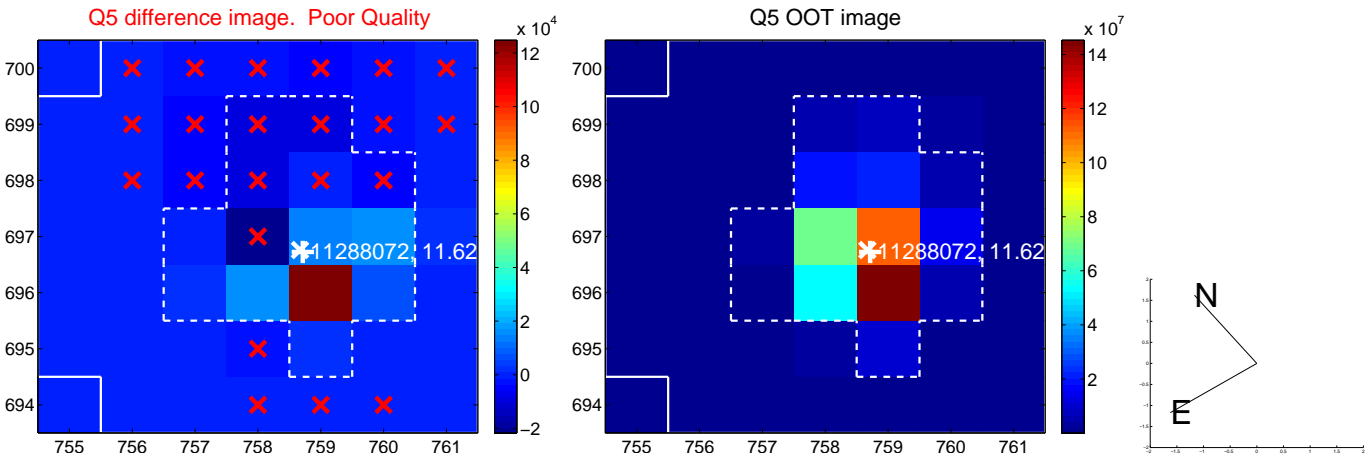


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

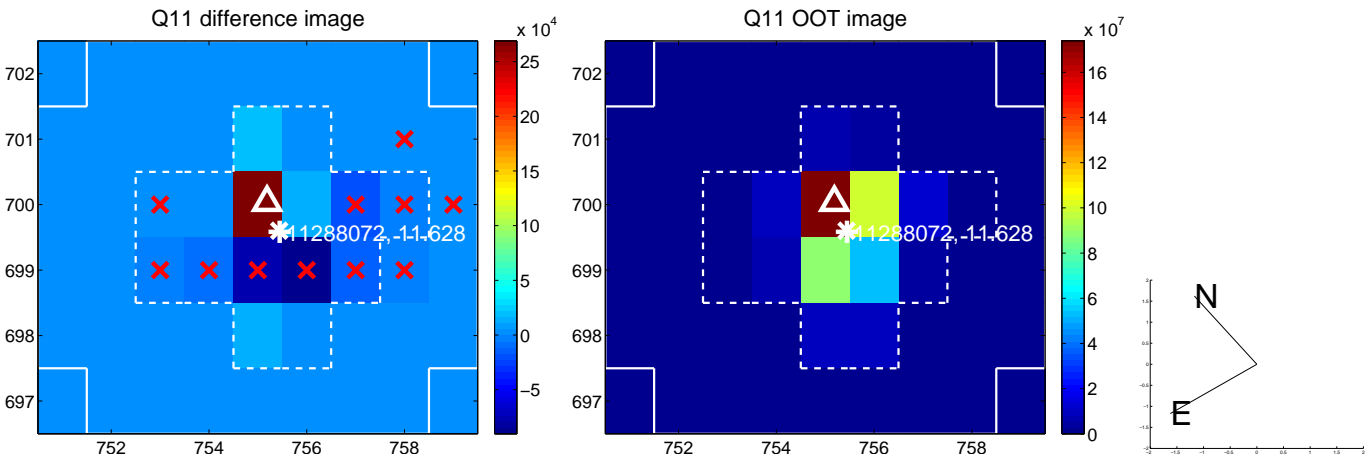
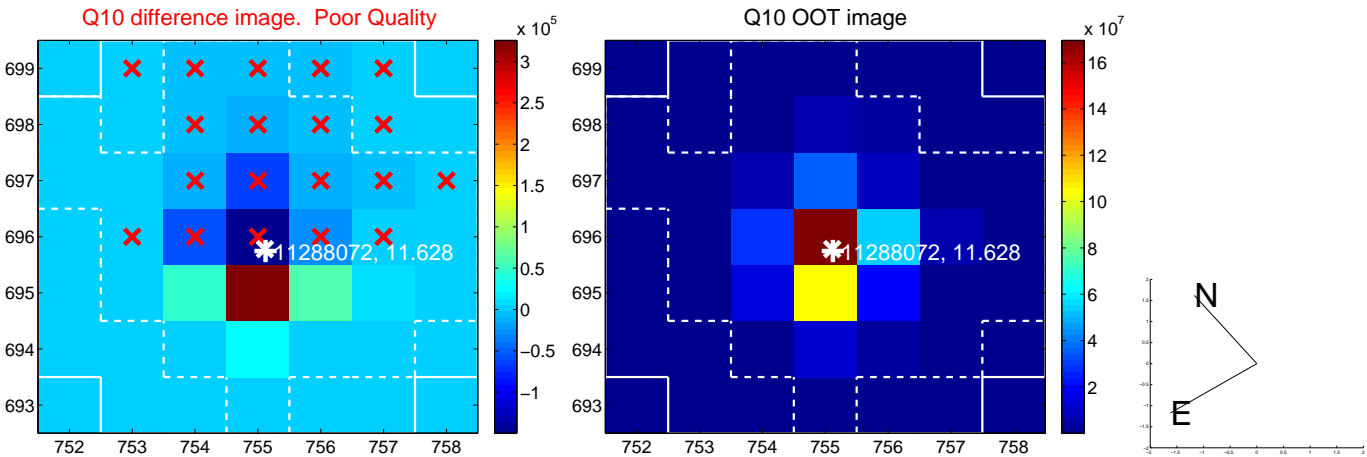
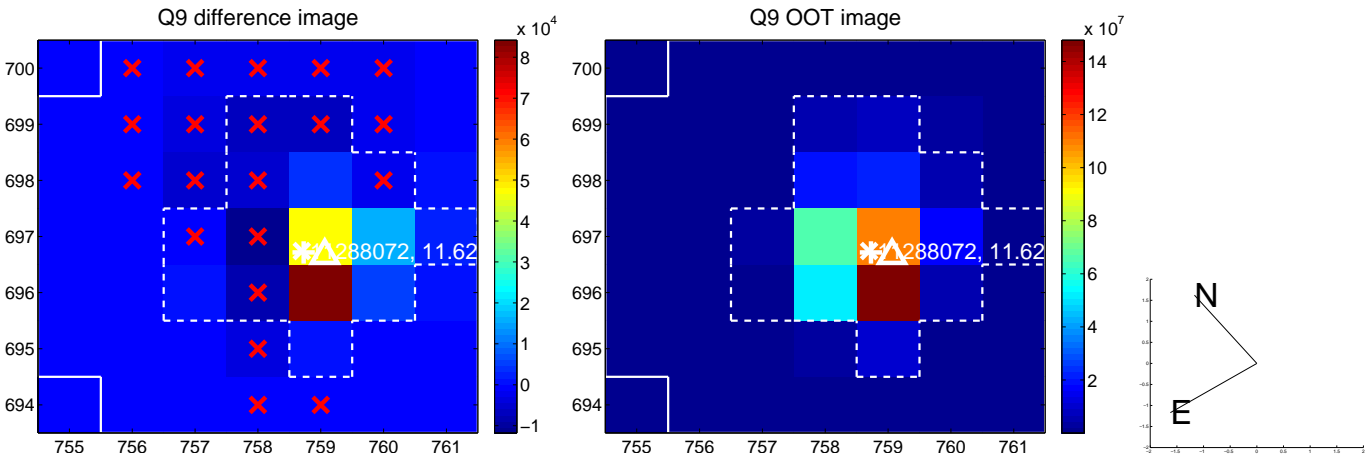
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



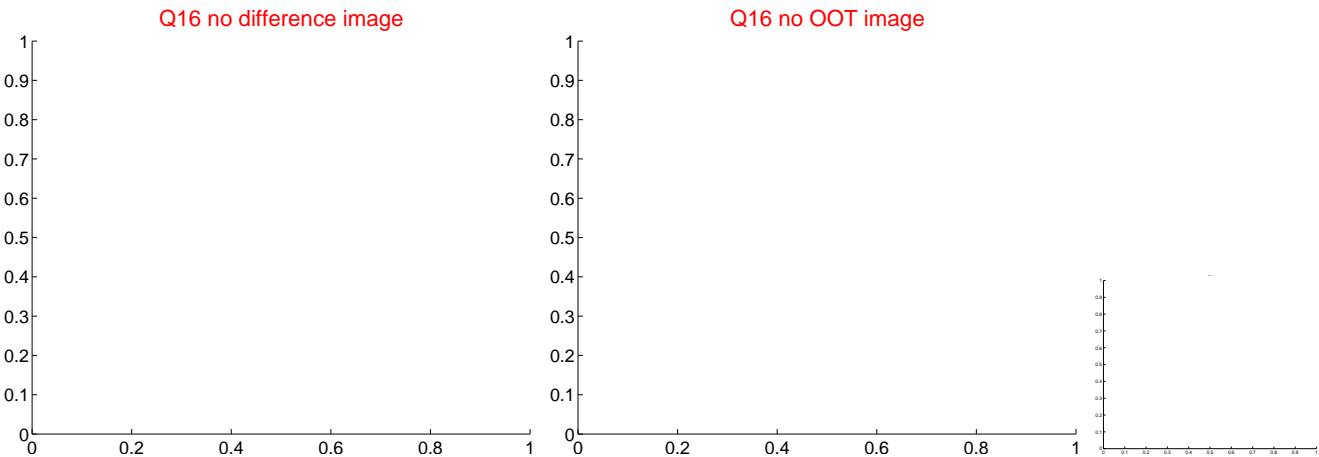
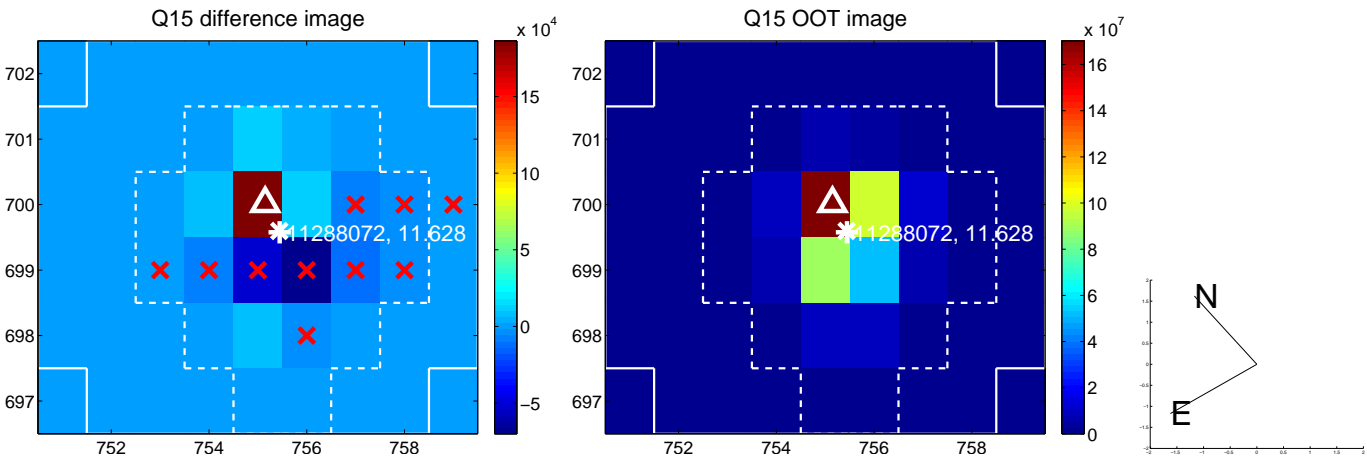
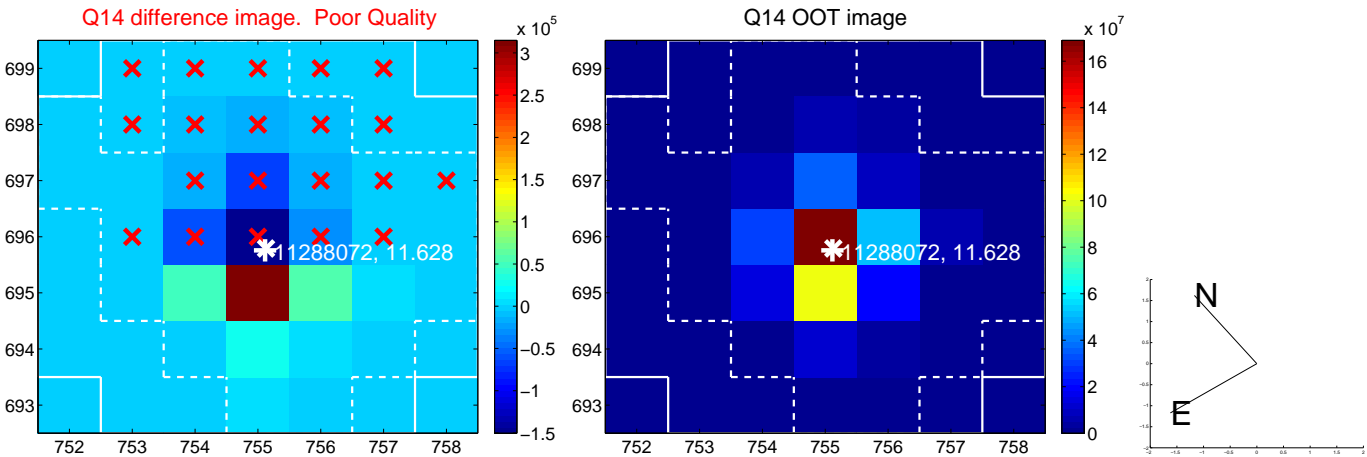
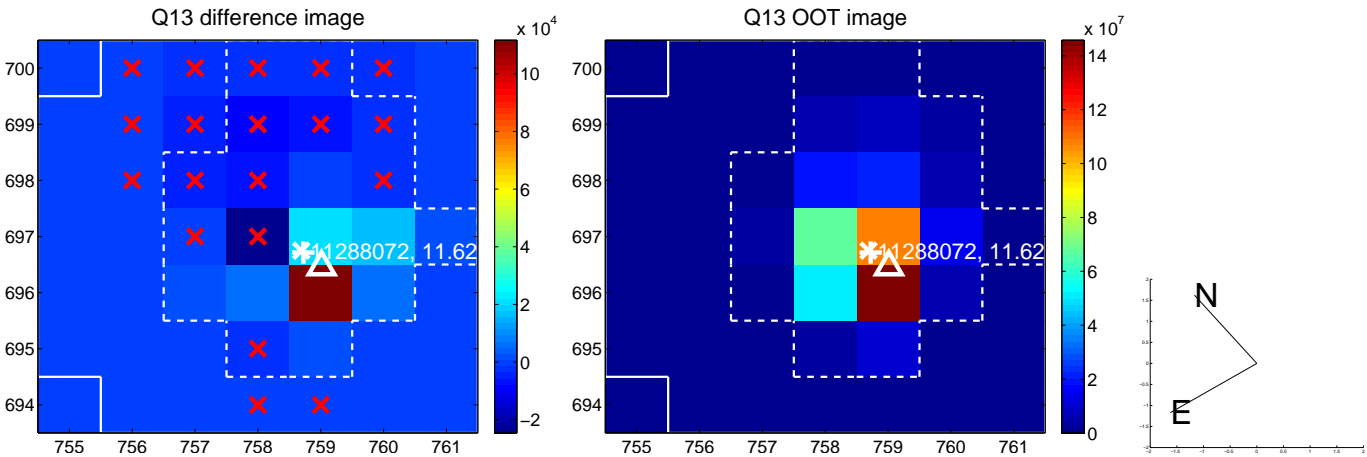
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



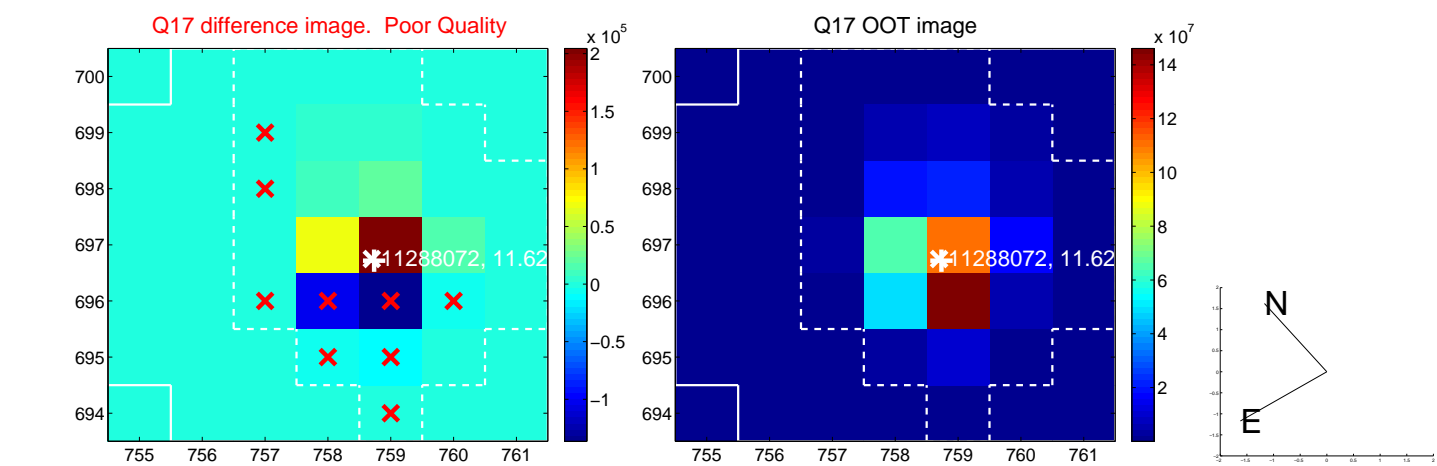
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



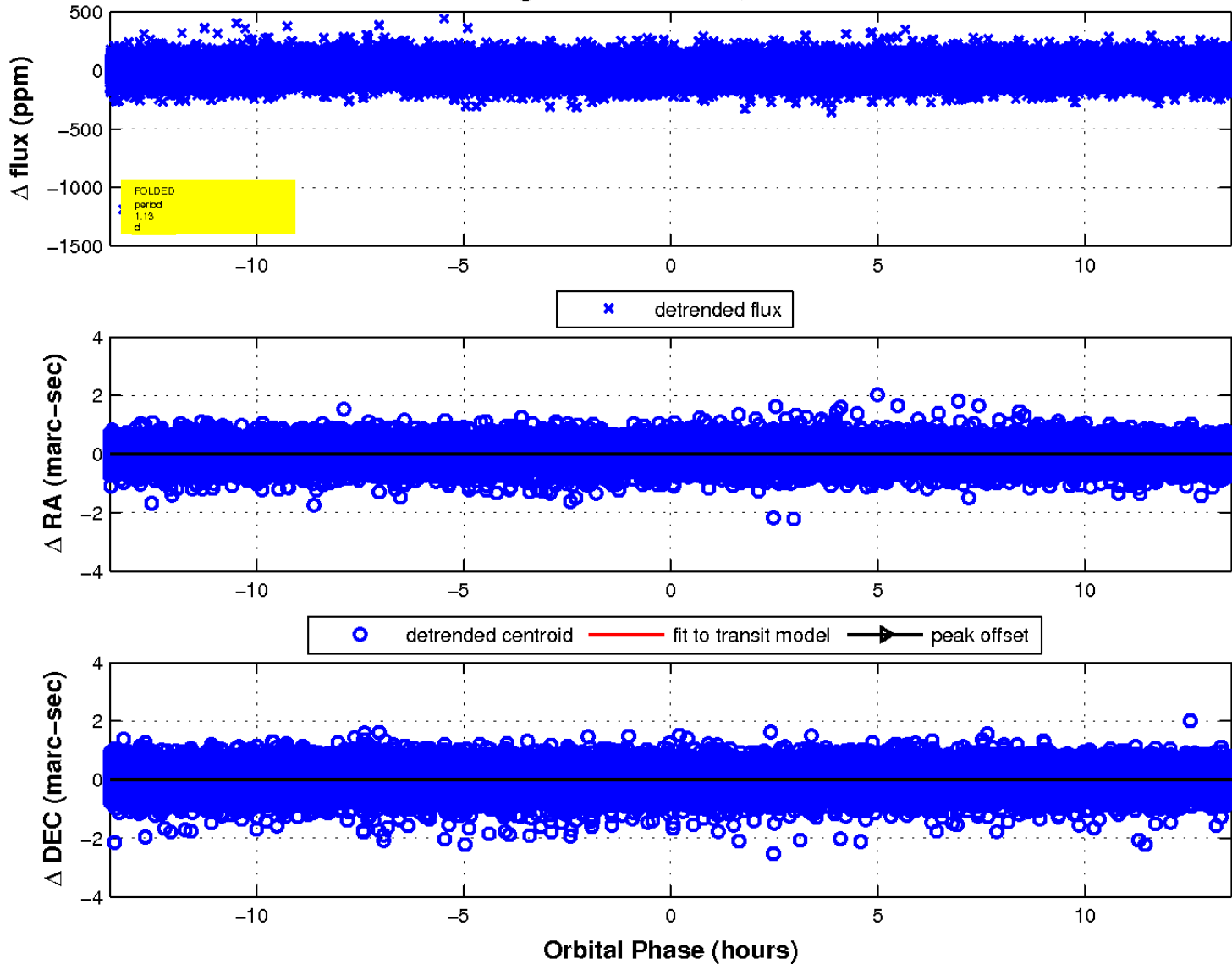
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 2 of 2



UKIRT Image

Declination

