

KIC 006287313

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})
006287313-01	OBS	2221.01	10.627821	137.824570	329.0	5.240	19.4	20.3	1.01	6082	2.33	136.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006287313-01	OBS	PC	0.99	0	0	0	0	NO_COMMENT

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

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

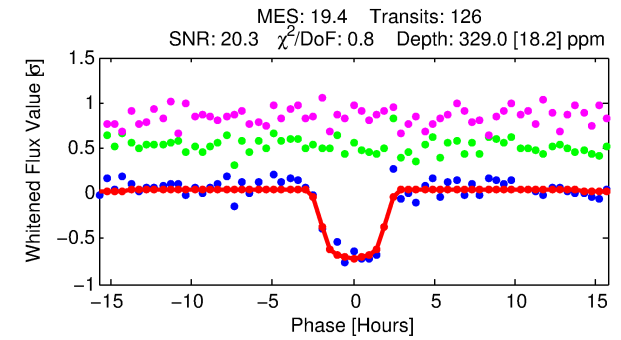
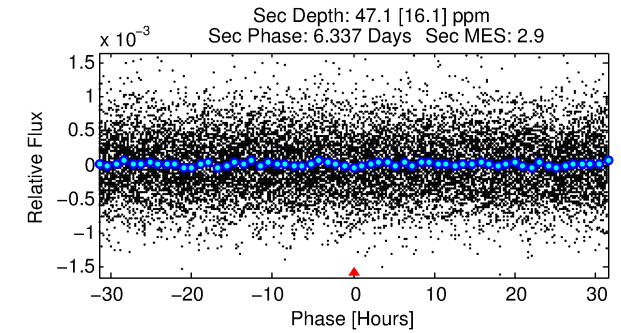
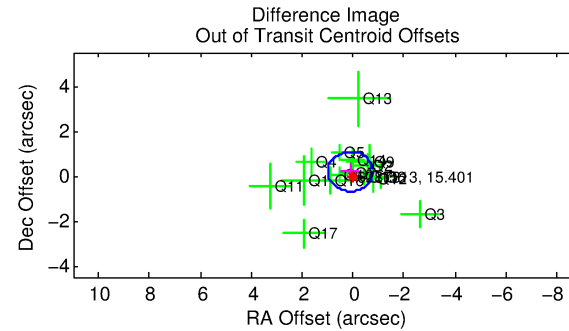
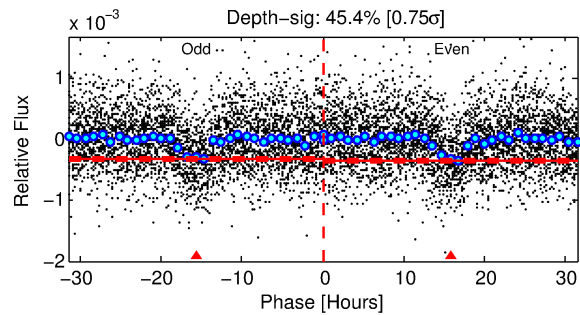
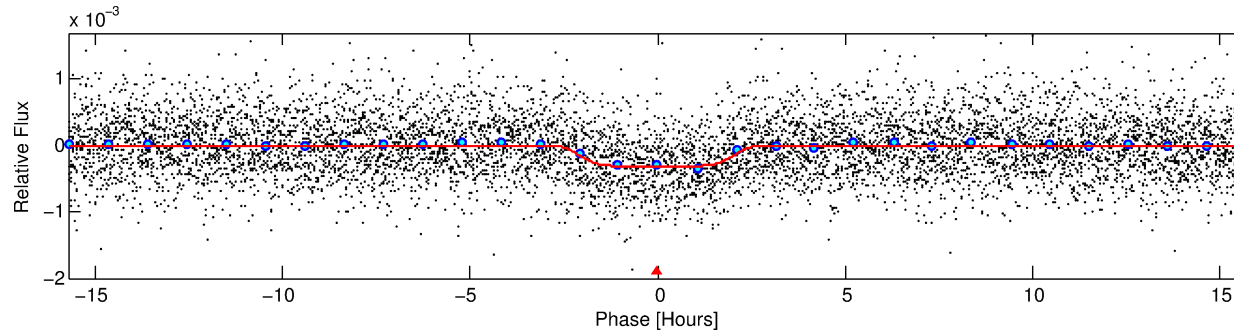
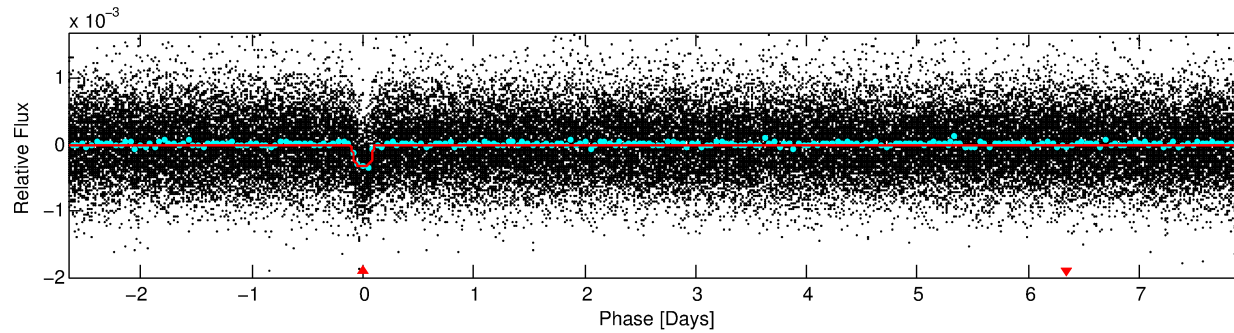
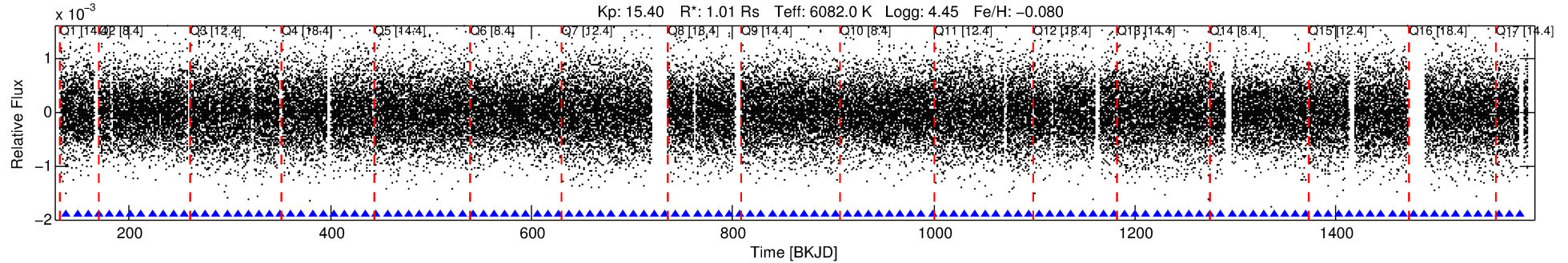
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006287313-01

No Significant Match Found

DV One-Page Summary

KIC: 6287313 Candidate: 1 of 1 Period: 10.628 d
KOI: K02221.01 Corr: 0.978



DV Fit Results:

Period = 10.62782 [0.00007] d
Epoch = 137.8246 [0.0056] BKJD
Rp/R* = 0.0211 [0.0010]
a/R* = 5.62 [1.03]
b = 0.96 [0.02]
Seff = 136.72 [57.17]
Teq = 872 [91] K
Rp = 2.33 [0.75] Re
a = 0.0960 [0.0259] AU
Ag = 43.92 [23.31] [1.84 σ]
Teffp = 3470 [330] K [7.58 σ]

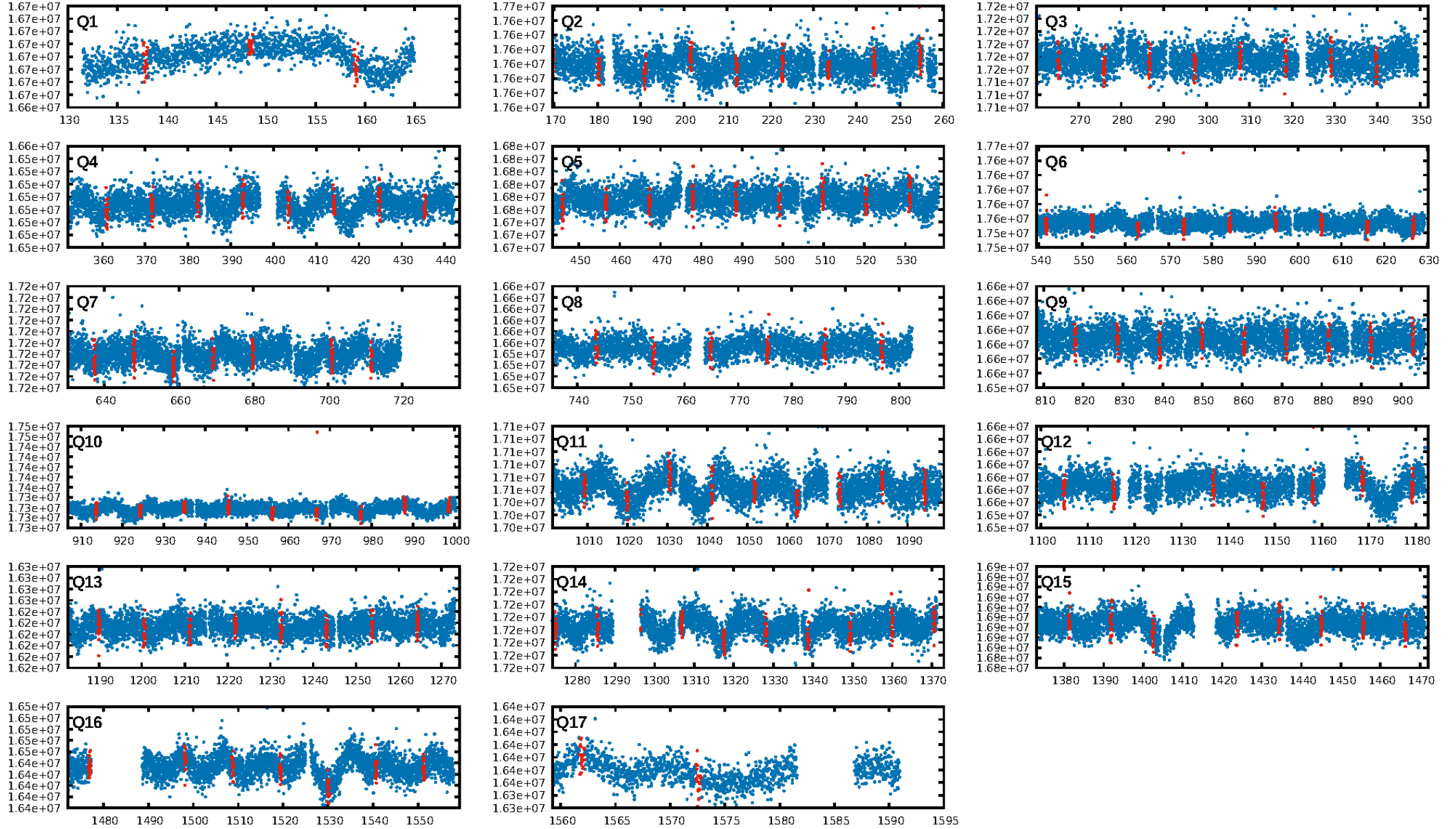
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.68e-85
RollingBand-fgt: 1.00 [121/121]
GhostDiagnostic-chr: 3.006
Centroid-sig: 0.8%
Centroid-so: 1.204 arcsec [1.77 σ]
OotOffset-rm: 0.226 arcsec [0.77 σ]
KicOffset-rm: 0.103 arcsec [0.35 σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.69 [11/16]
DiffImageOverlap-fno: 1.00 [17/17]

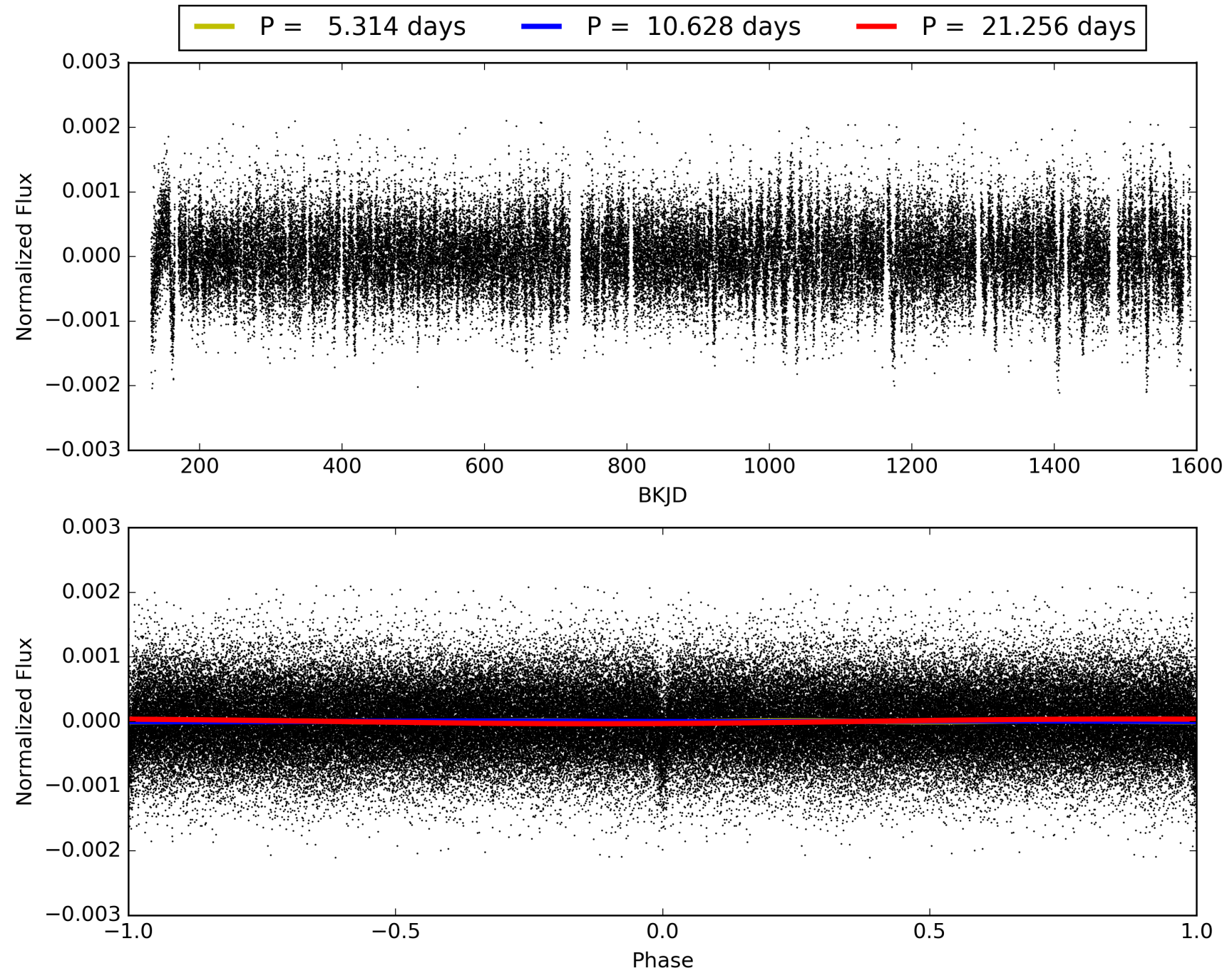
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:50:59 Z

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

TCE 006287313-01, PDC Light Curves

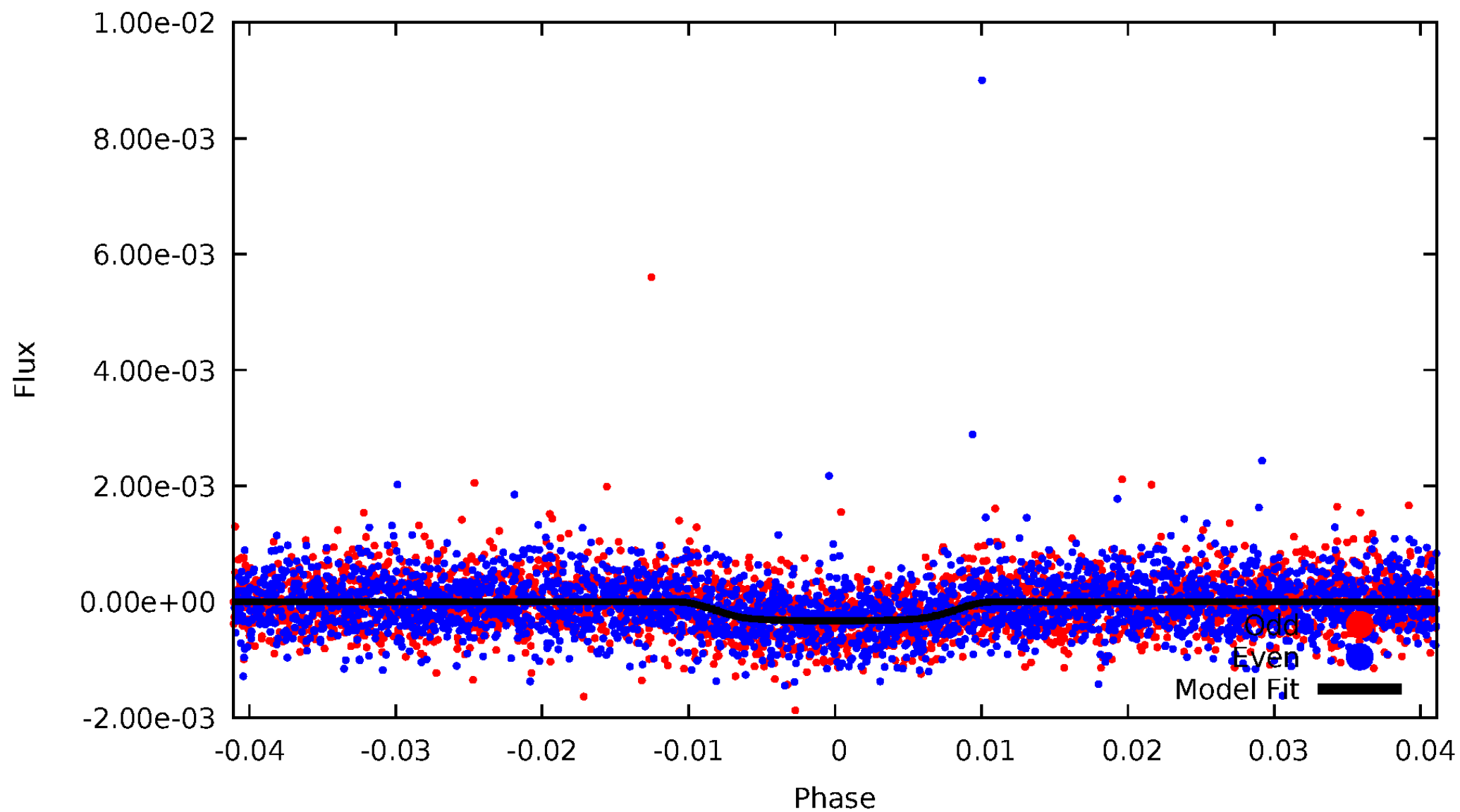


TCE 006287313-01



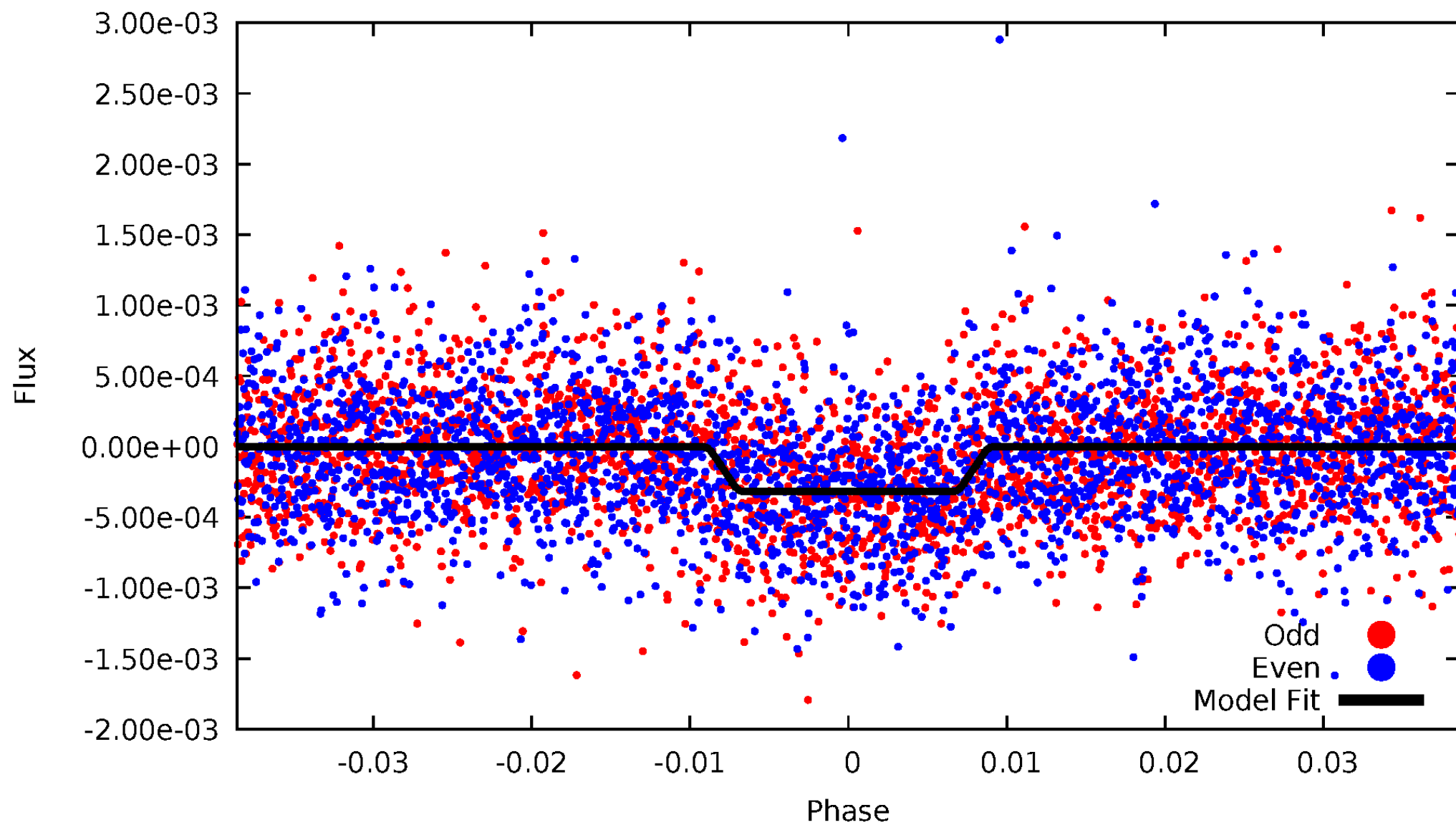
DV Odd/Even

TCE 006287313-01



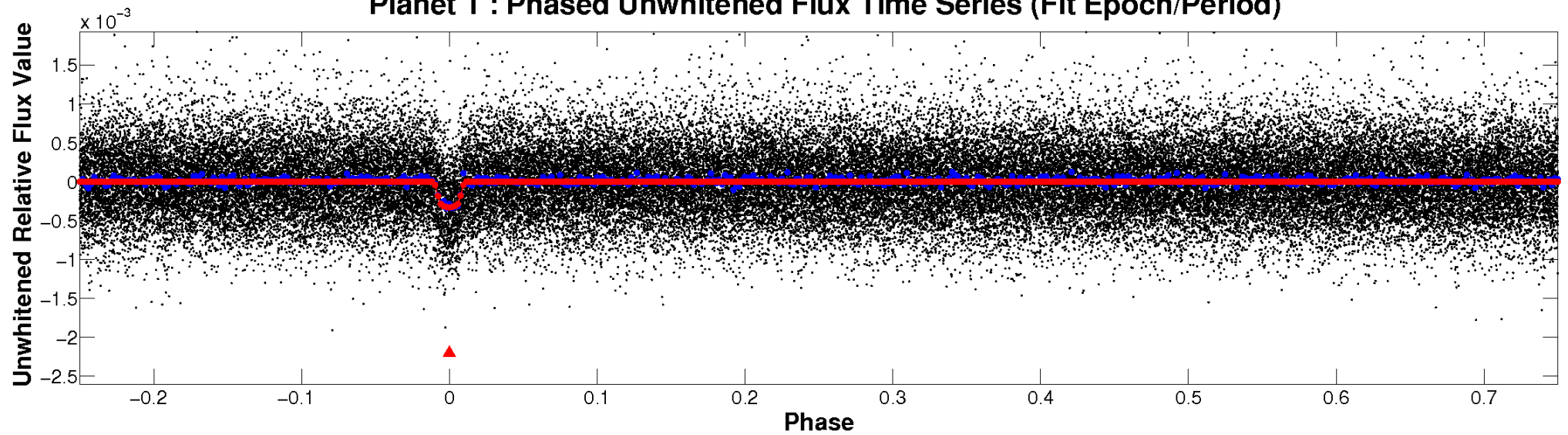
ALT Odd/Even

TCE 006287313-01

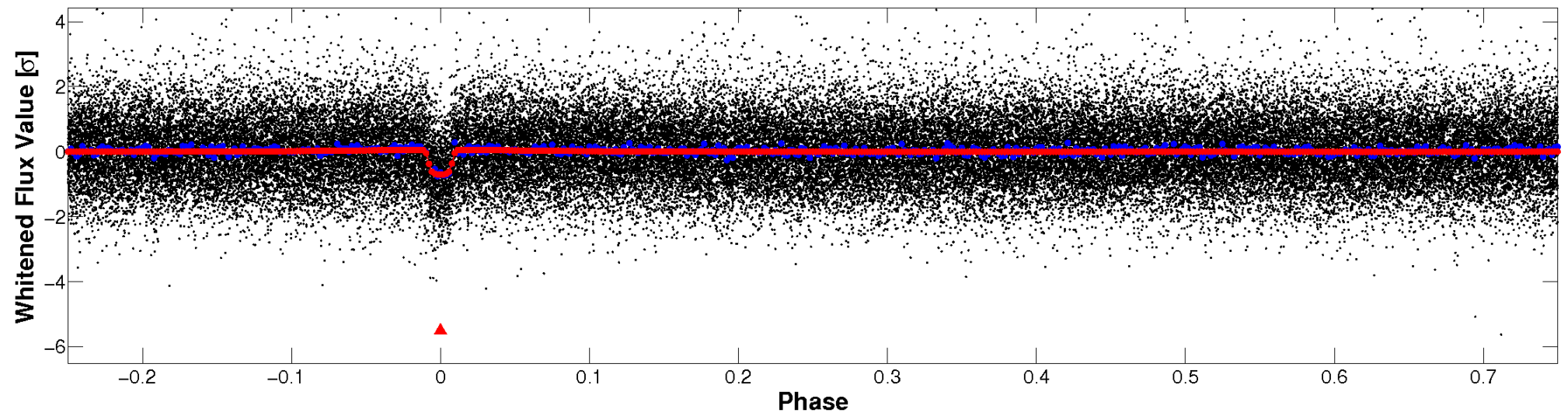


Non-Whitened Vs. Whitened Light Curve

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

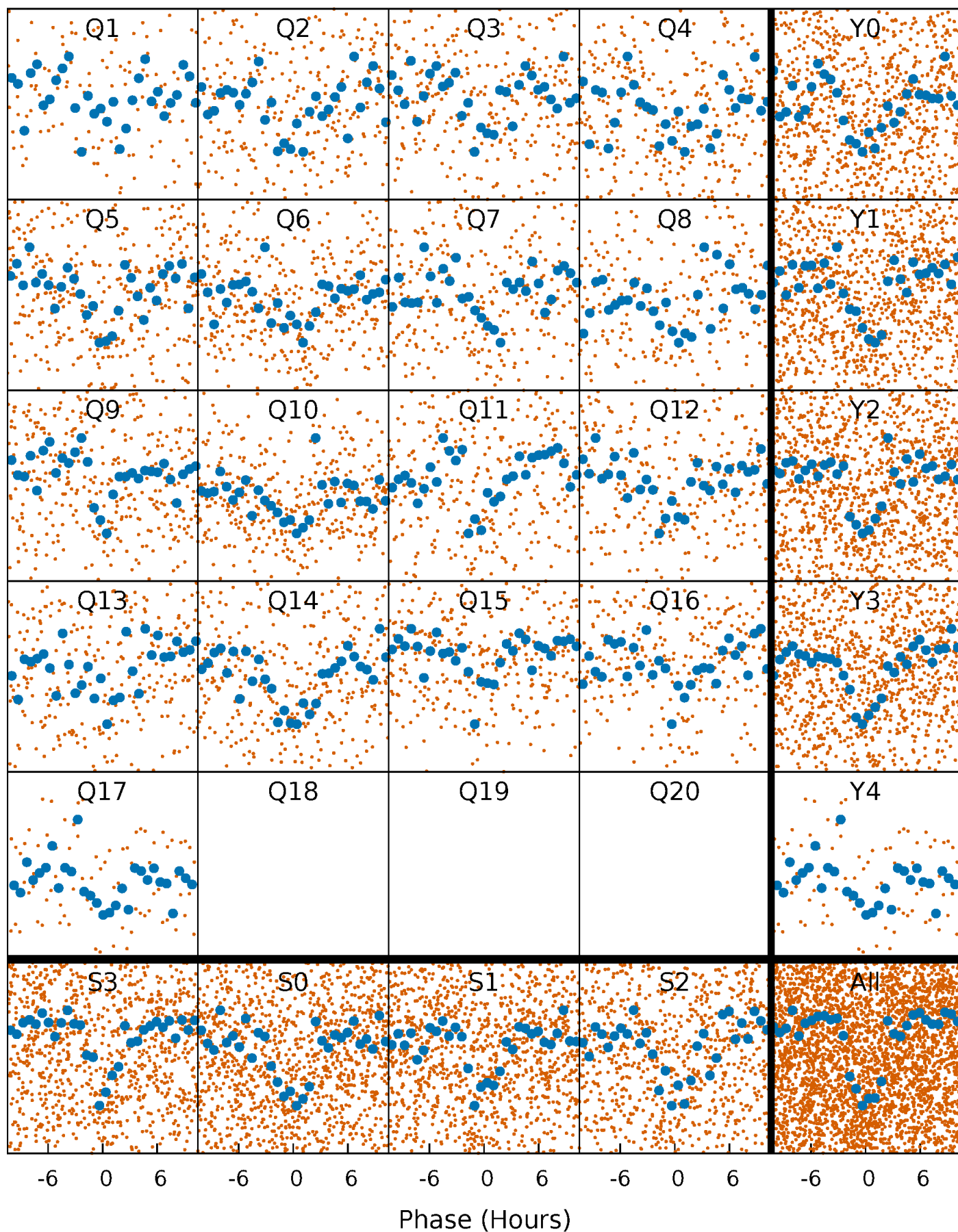


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



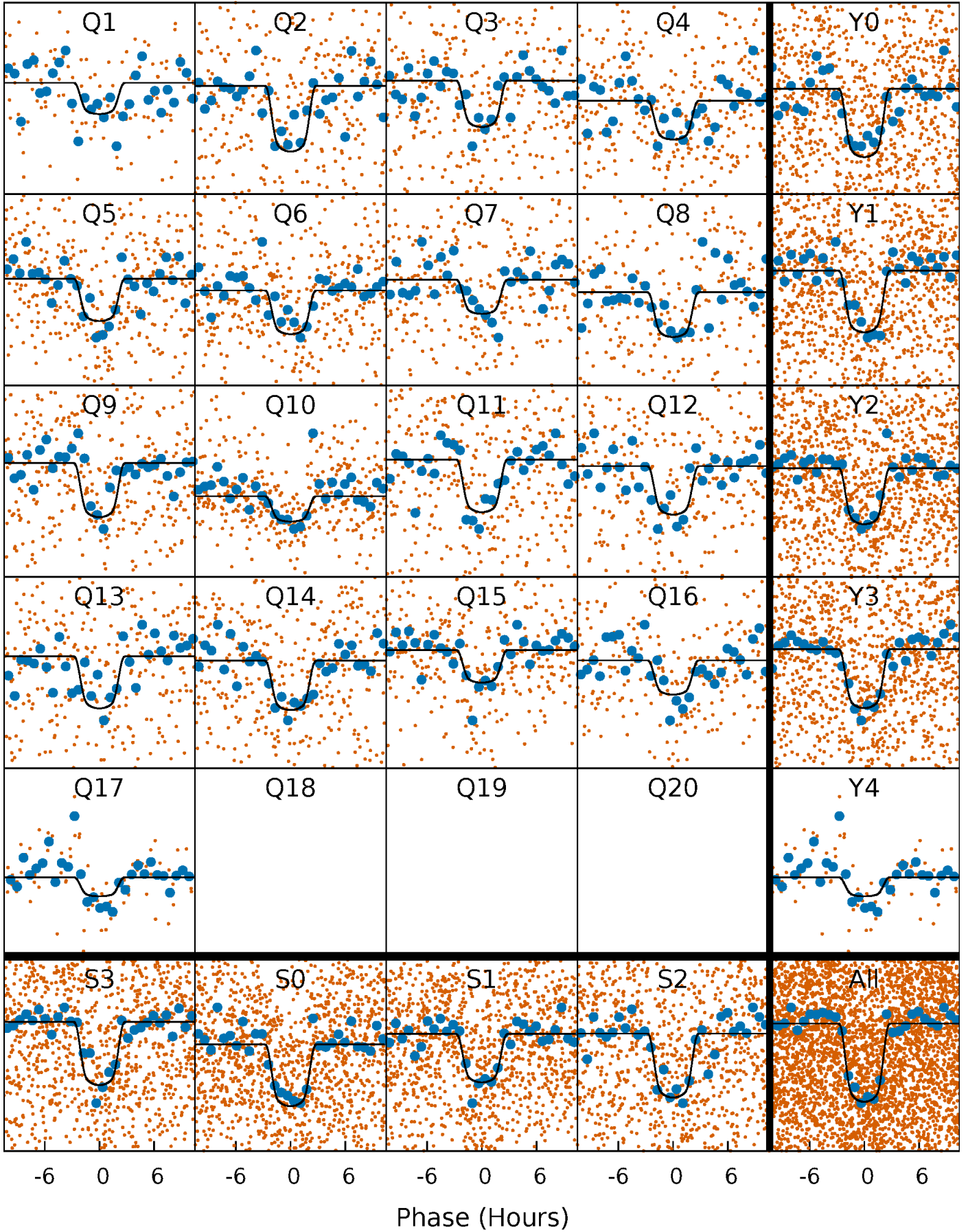
PDC Quarter-Phased Transit Curves

TCE 006287313-01 P= 10.627821 Days $T_0=137.824570$ (BKJD)



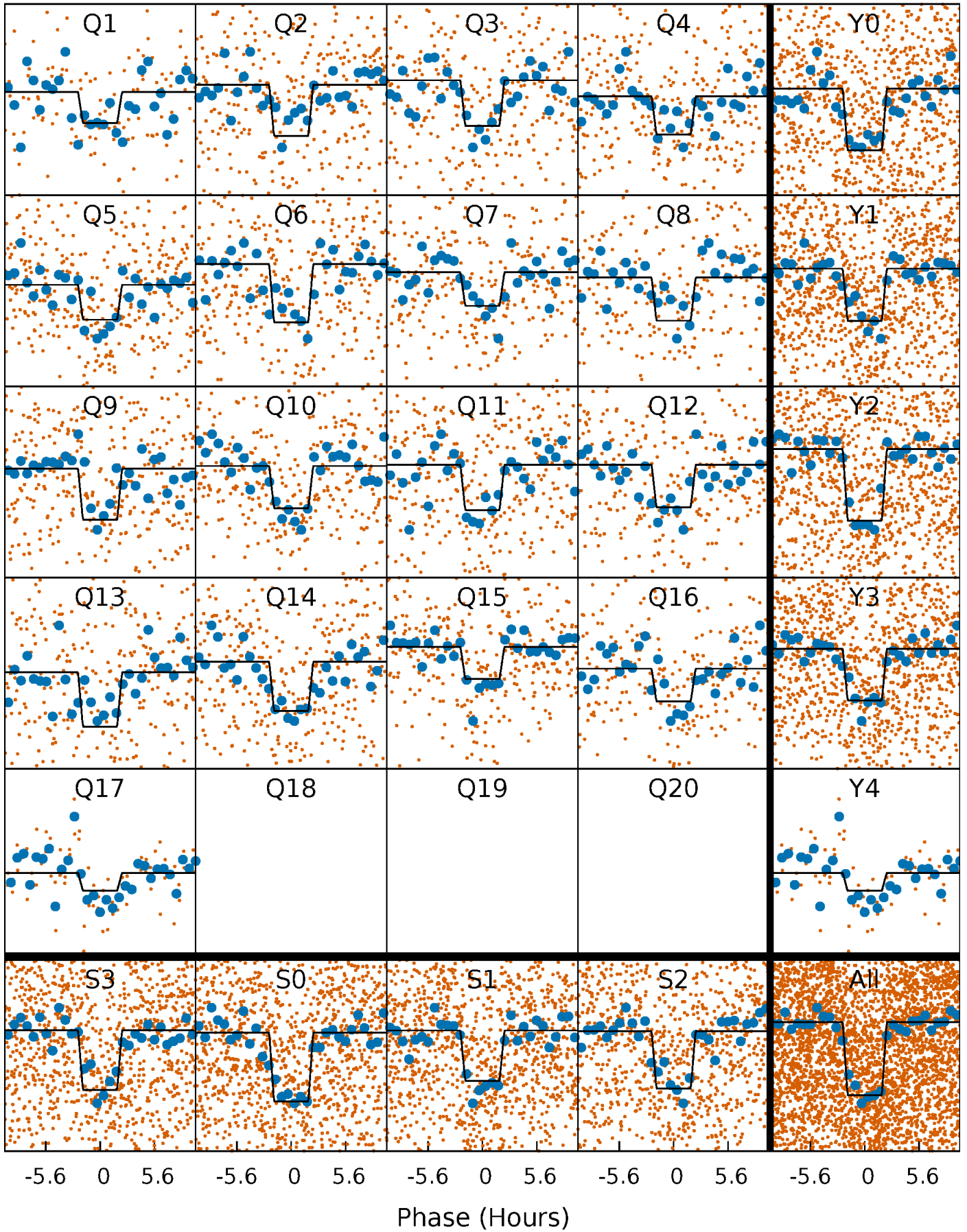
DV Quarter-Phased Transit Curves

TCE 006287313-01 P= 10.627821 Days $T_0=137.824570$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

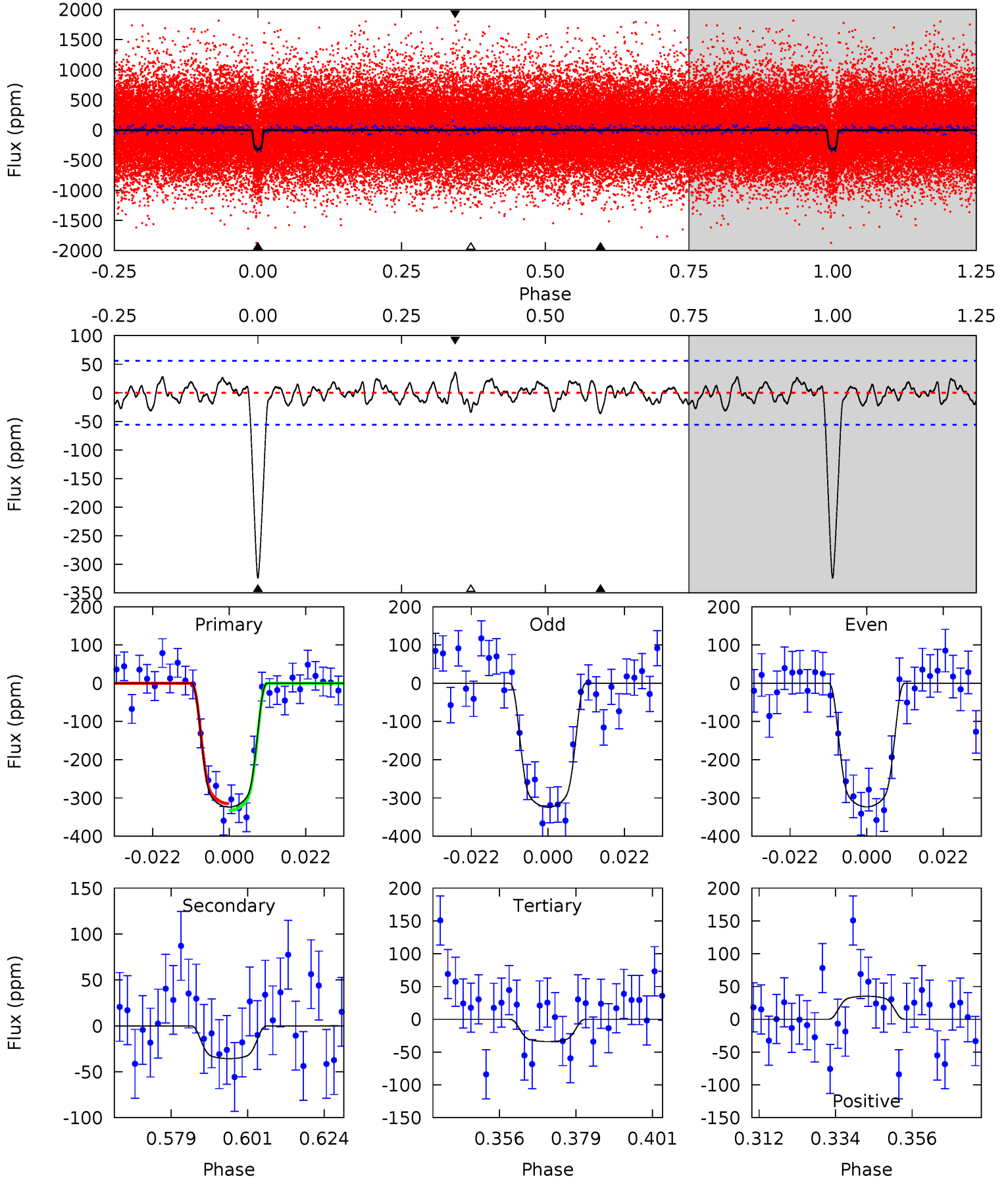
TCE 006287313-01 P= 10.627799 Days $T_0=137.825028$ (BKJD)



DV Model-Shift Uniqueness Test

006287313-01, P = 10.627821 Days, E = 127.196749 Days

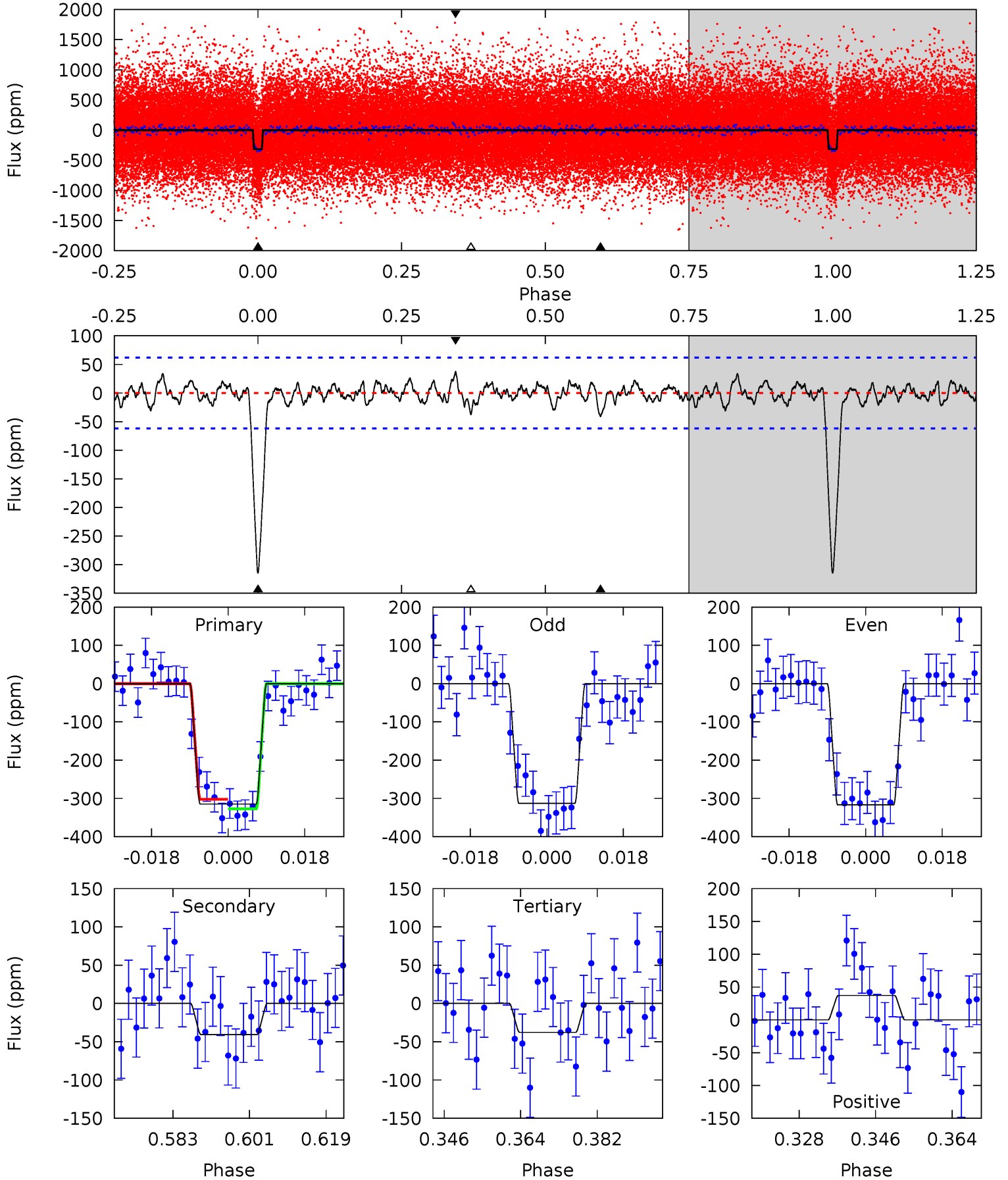
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.2	3.12	2.96	3.06	4.87	2.29	1.12	25.3	25.2	0.16	0.06	0.04	1.00	0.10	0.76



Alt Model-Shift Uniqueness Test

006287313-01, P = 10.627799 Days, E = 127.197229 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.0	3.22	3.00	2.96	4.91	2.36	0.96	22.0	22.0	0.22	0.26	0.17	1.00	0.11	0.99



Stellar Parameters For KIC 006287313

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6082^{+189}_{-210}	$4.445^{+0.072}_{-0.217}$	$-0.080^{+0.250}_{-0.300}$	$1.014^{+0.322}_{-0.115}$	$1.041^{+0.153}_{-0.139}$	$1.405^{+0.504}_{-0.746}$
	+3%/-3%	+2%/-5%	+312%/-375%	+32%/-11%	+15%/-13%	+36%/-53%
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 006287313-01 / KOI 2221.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-36 ± 11	$2.40^{+0.41}_{-0.24}$	1246^{+93}_{-66}	3664^{+187}_{-257}	29^{+13}_{-11}
Alt.	-41 ± 13	$2.01^{+0.33}_{-0.20}$	1235^{+102}_{-63}	3949^{+245}_{-279}	47^{+20}_{-17}

T_{max} = Theoretical Maximum Planetary Temperature
 T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)
 A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

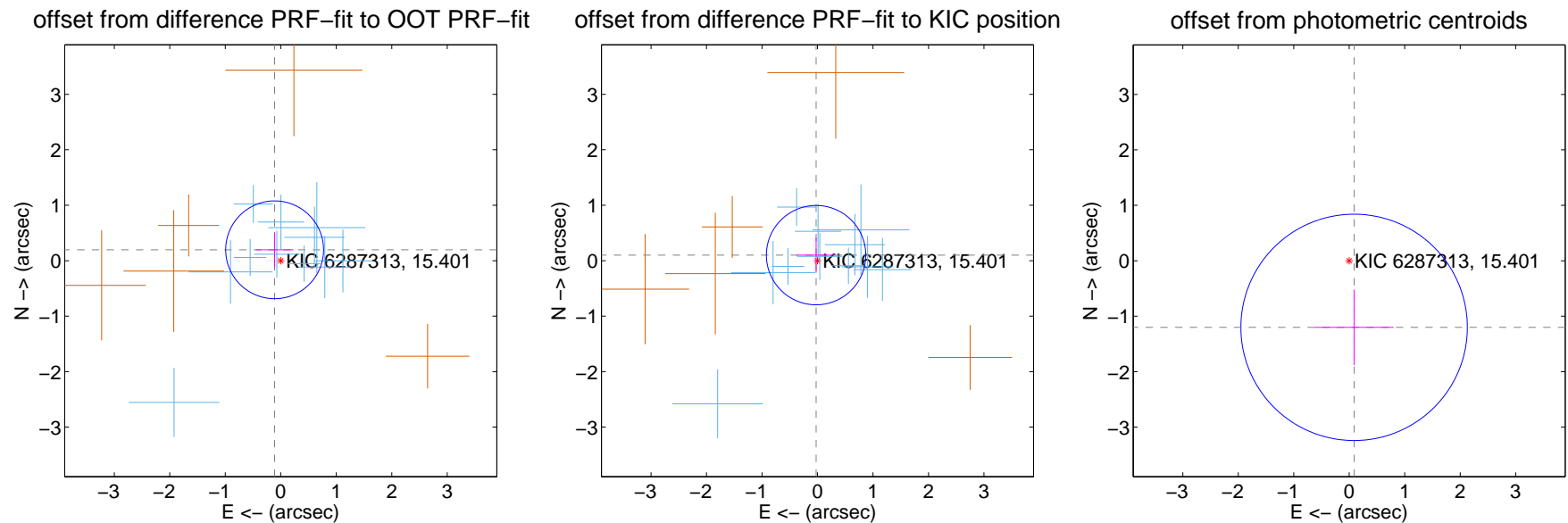
DV Centroid Data

Supplemental centroid analysis for 006287313-01. Kepler magnitude: 15.40. Transit SNR 20.25

There are 11 quarters with good PRF difference image offsets

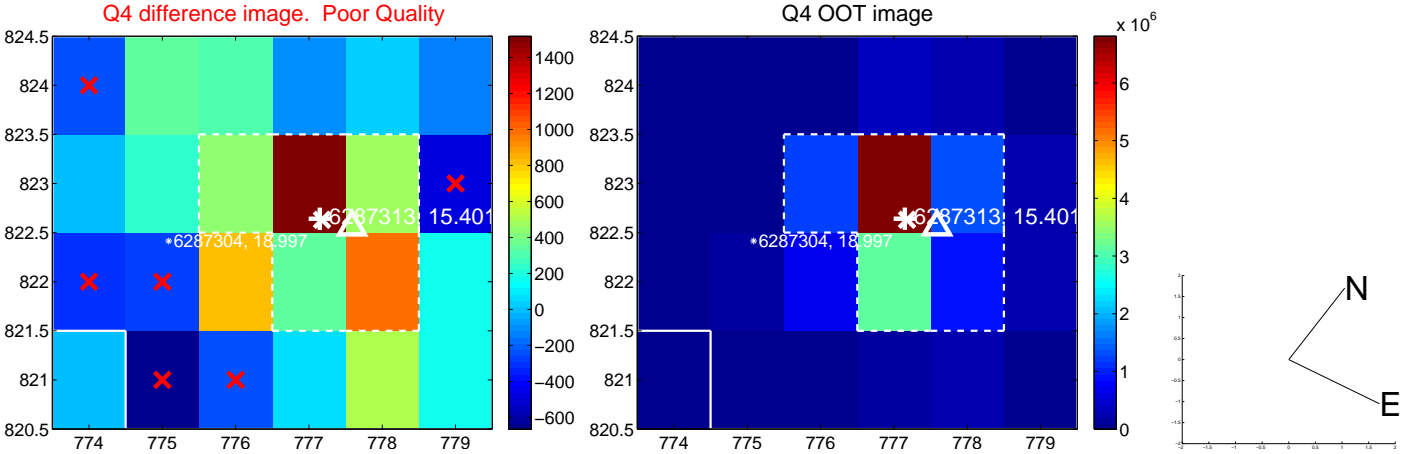
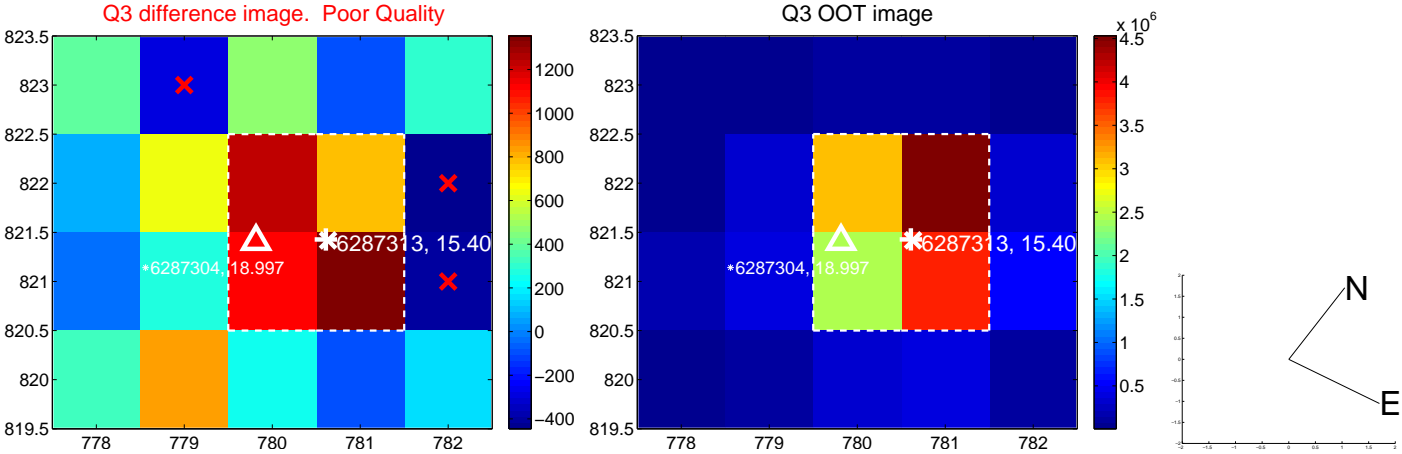
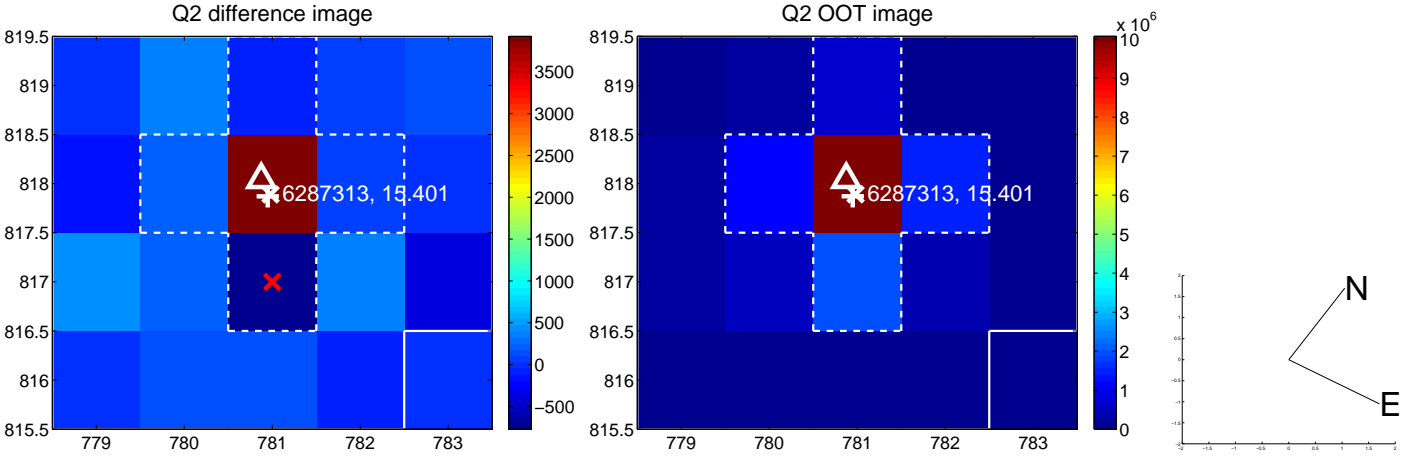
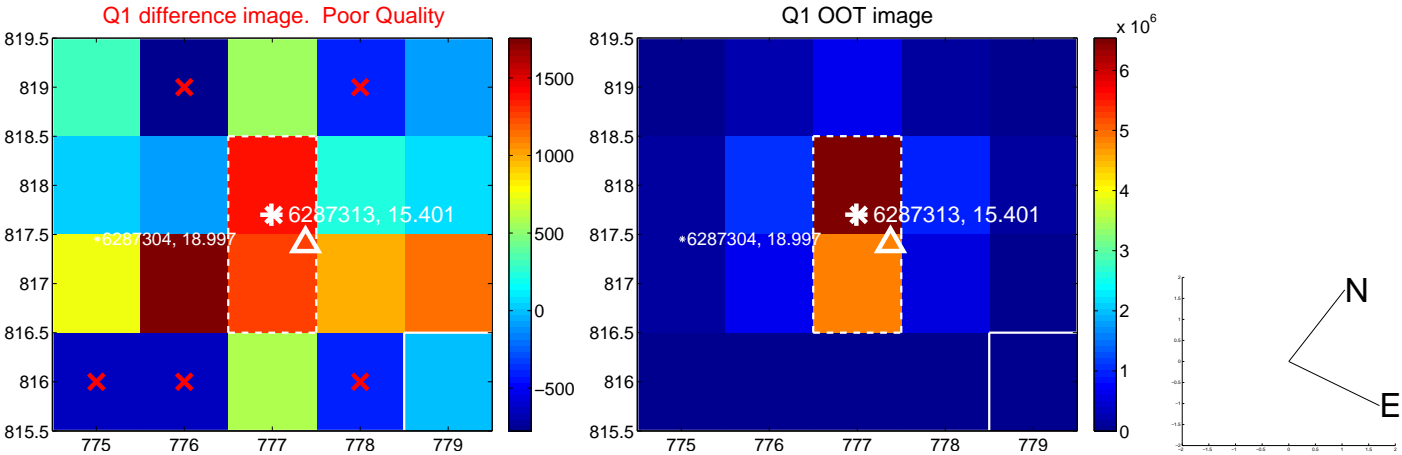
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.226 ± 0.294	0.77	0.111 ± 0.340	0.197 ± 0.316
PRF-fit source offset from KIC position	0.103 ± 0.299	0.35	0.026 ± 0.353	0.100 ± 0.316
photometric centroid source offset	1.20 ± 0.68	1.77	-0.09 ± 0.71	-1.20 ± 0.68

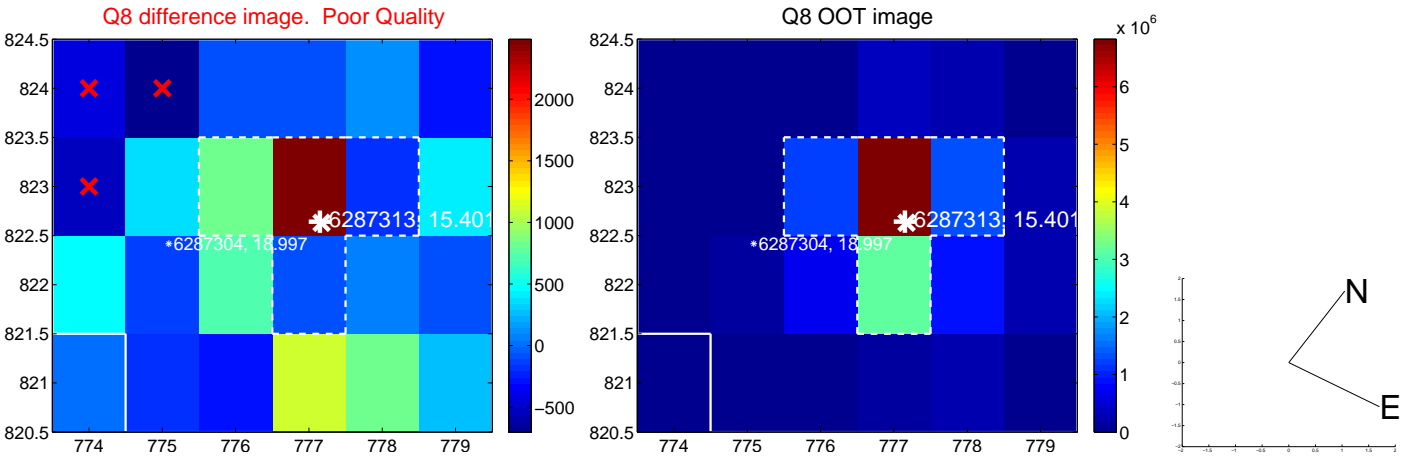
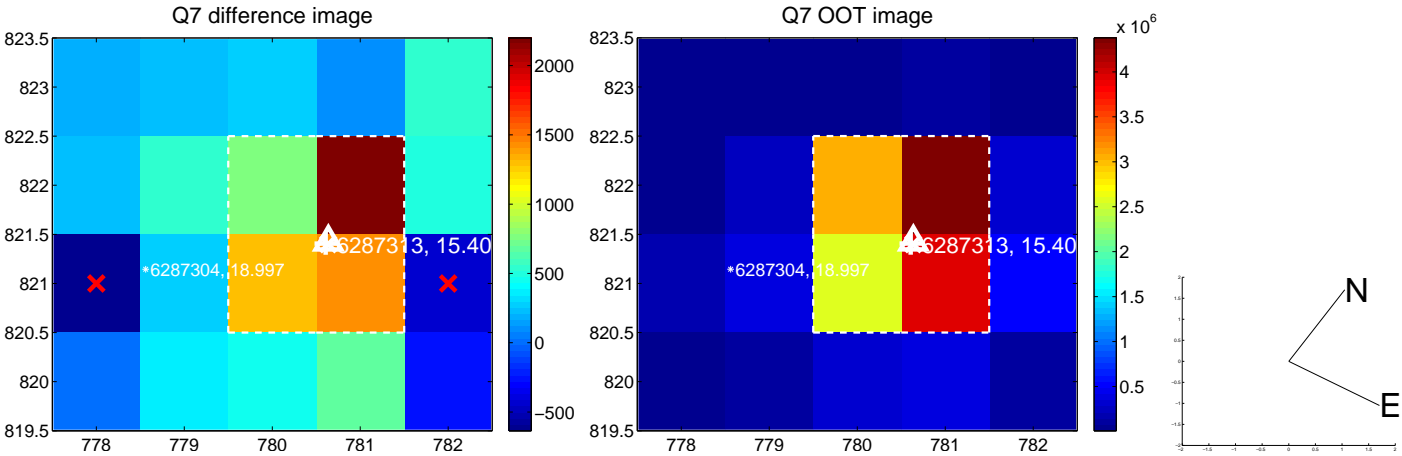
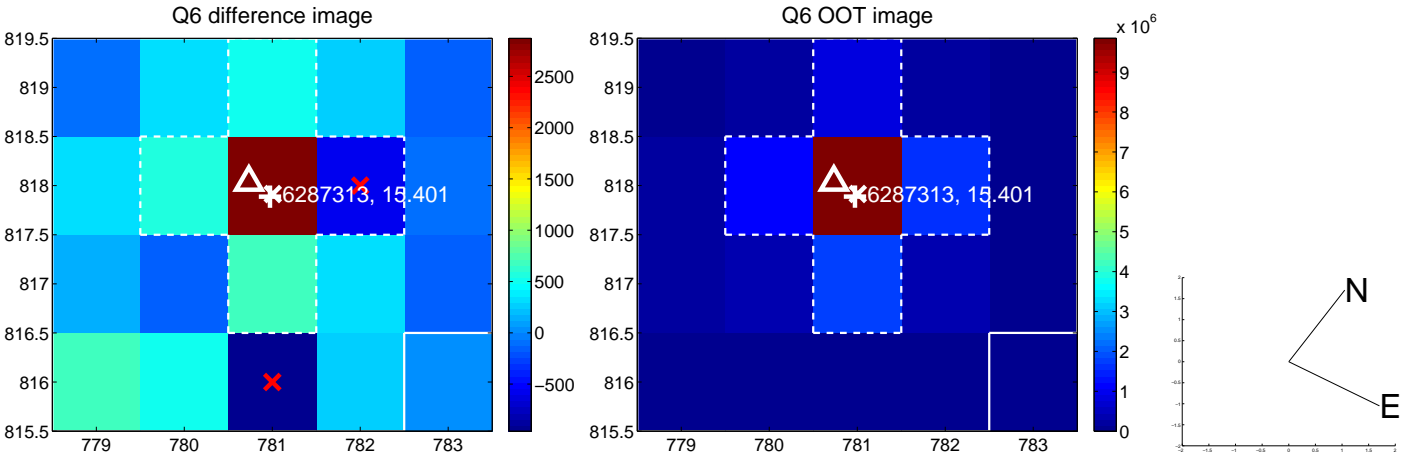
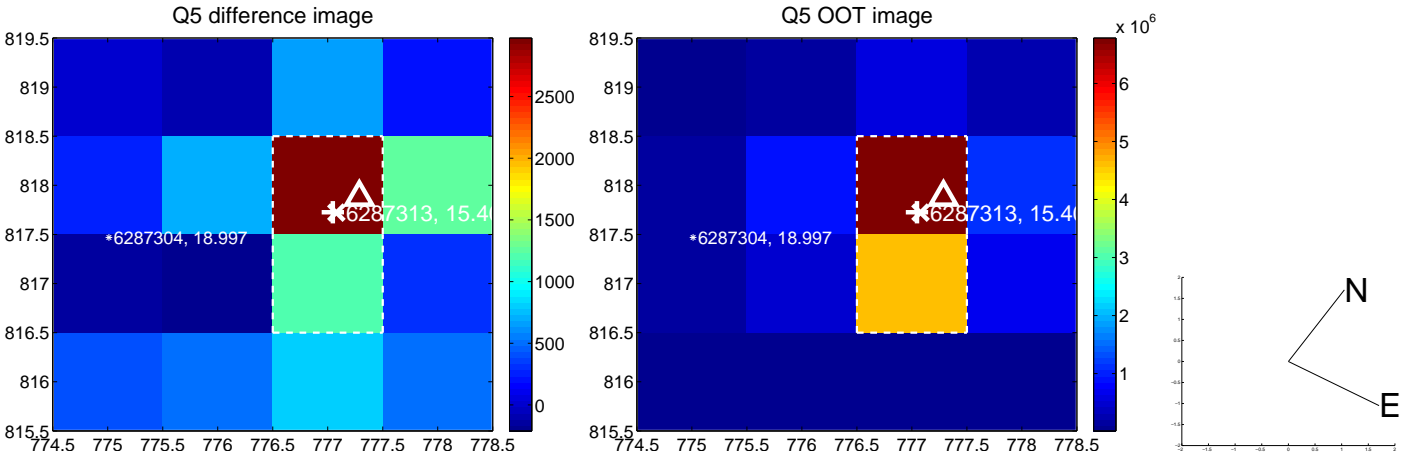


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

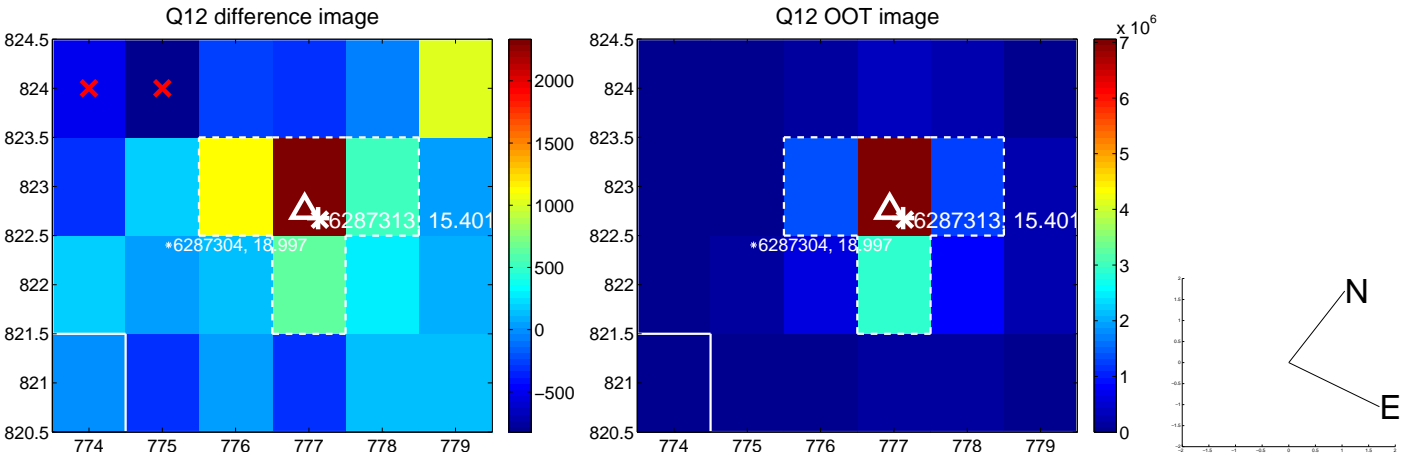
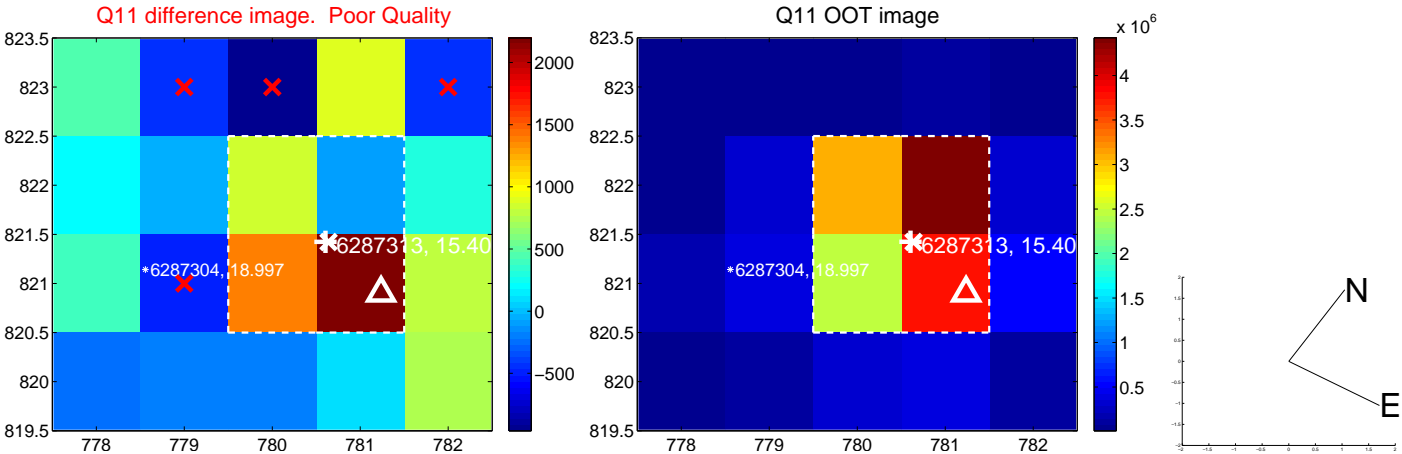
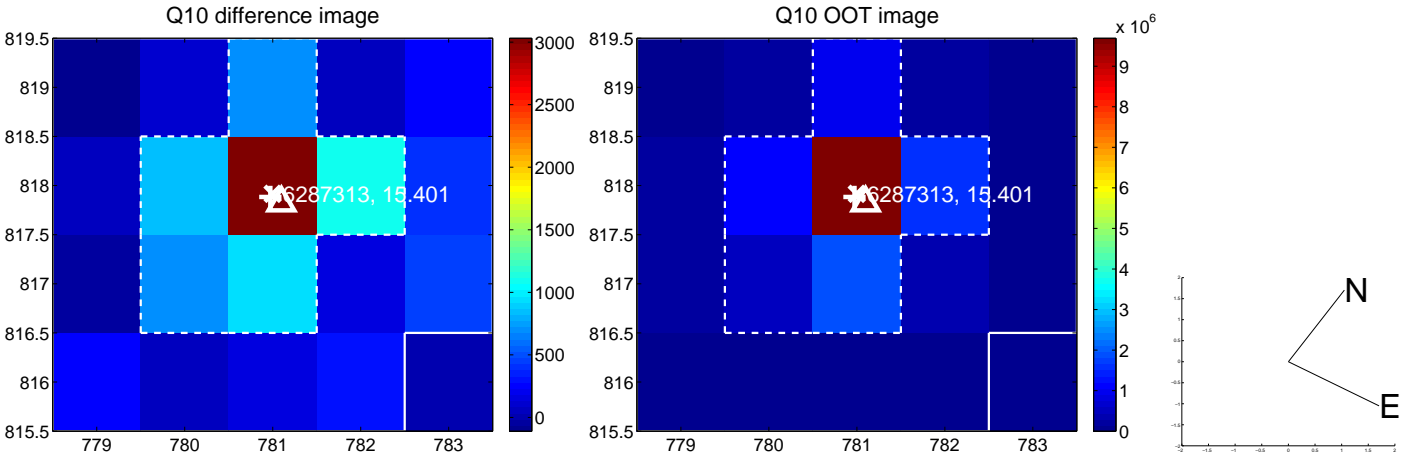
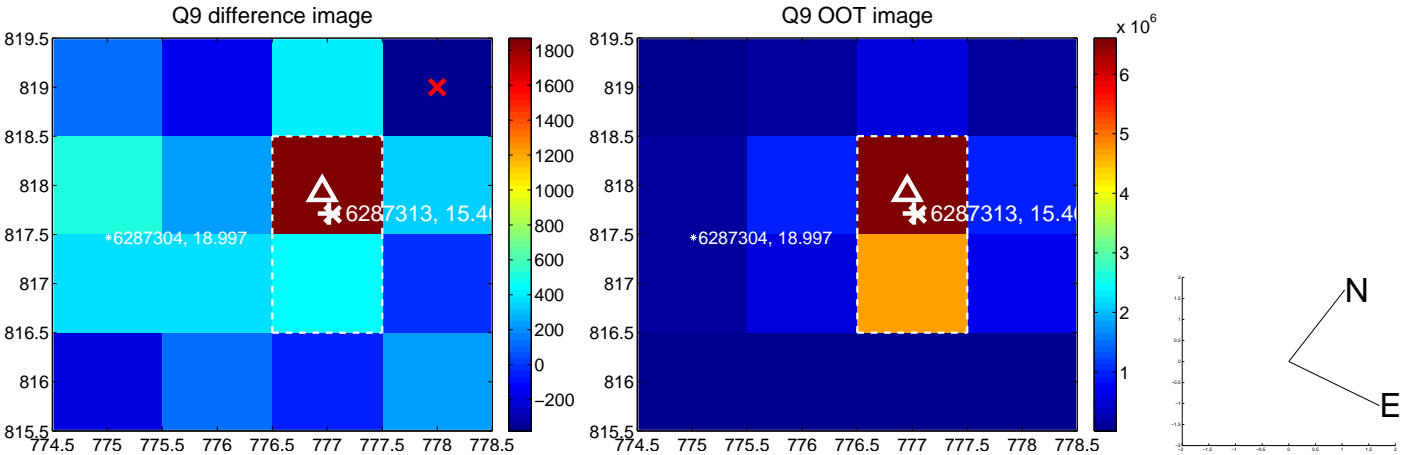
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



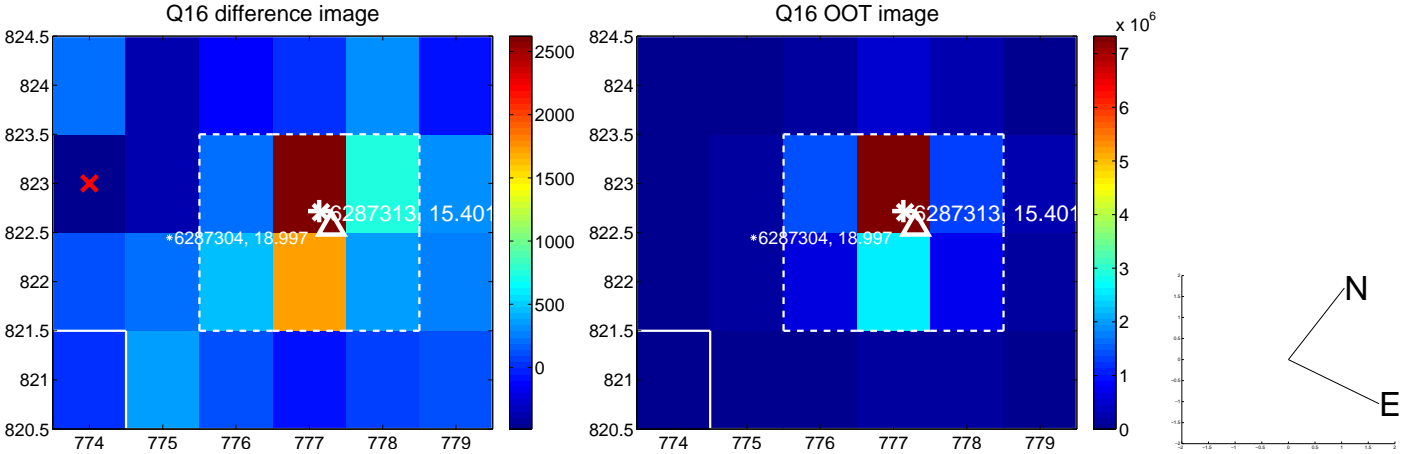
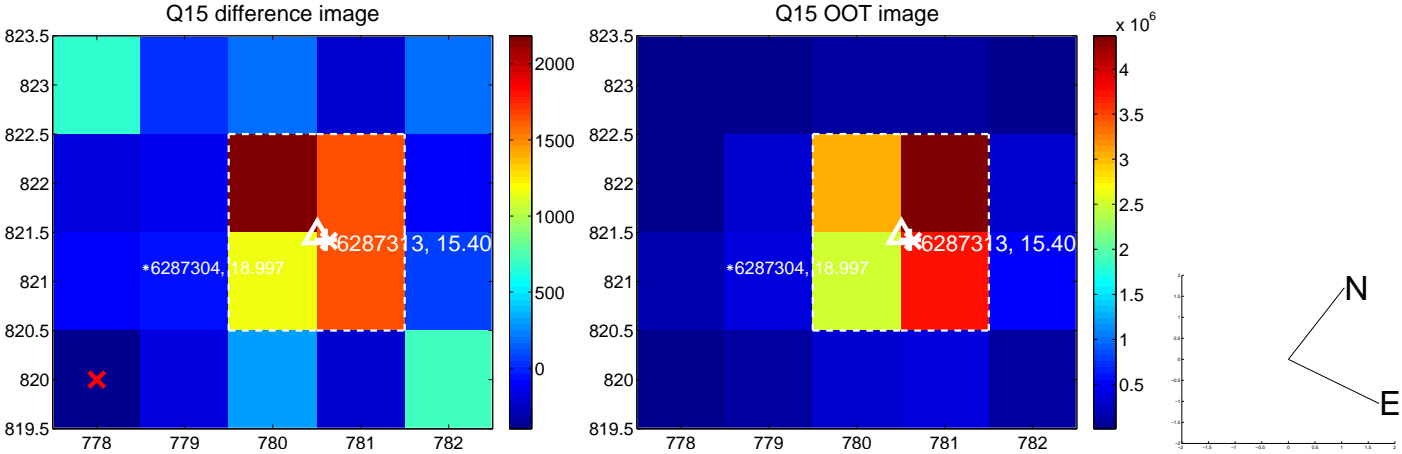
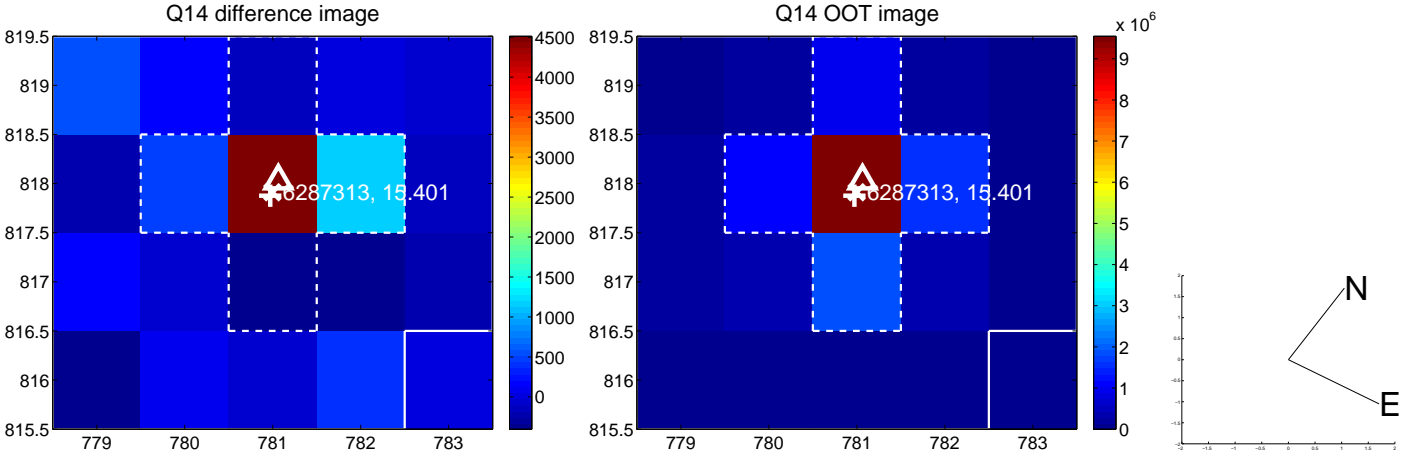
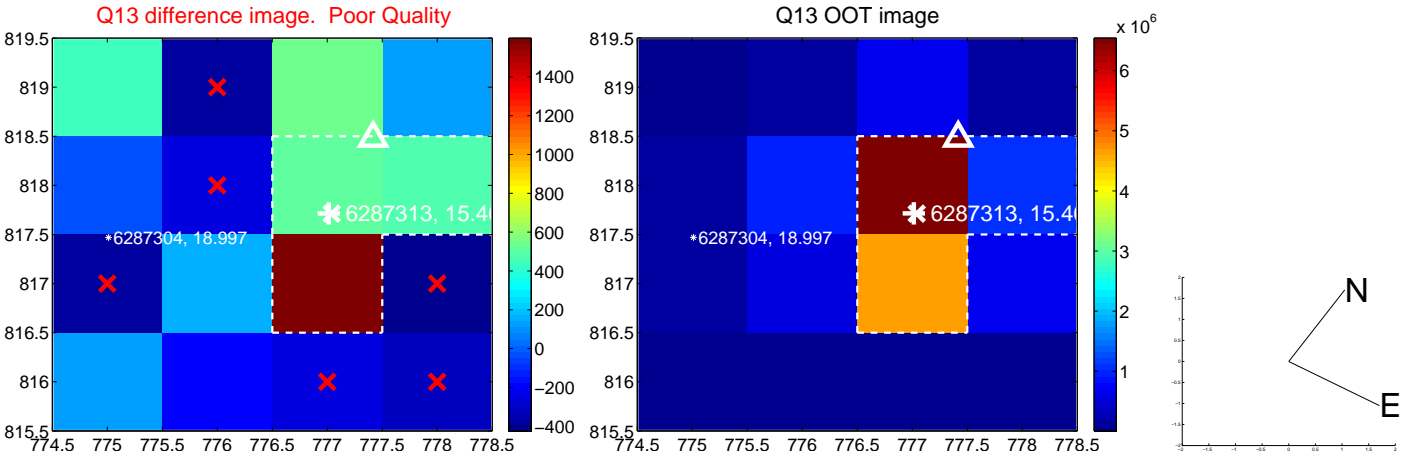
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



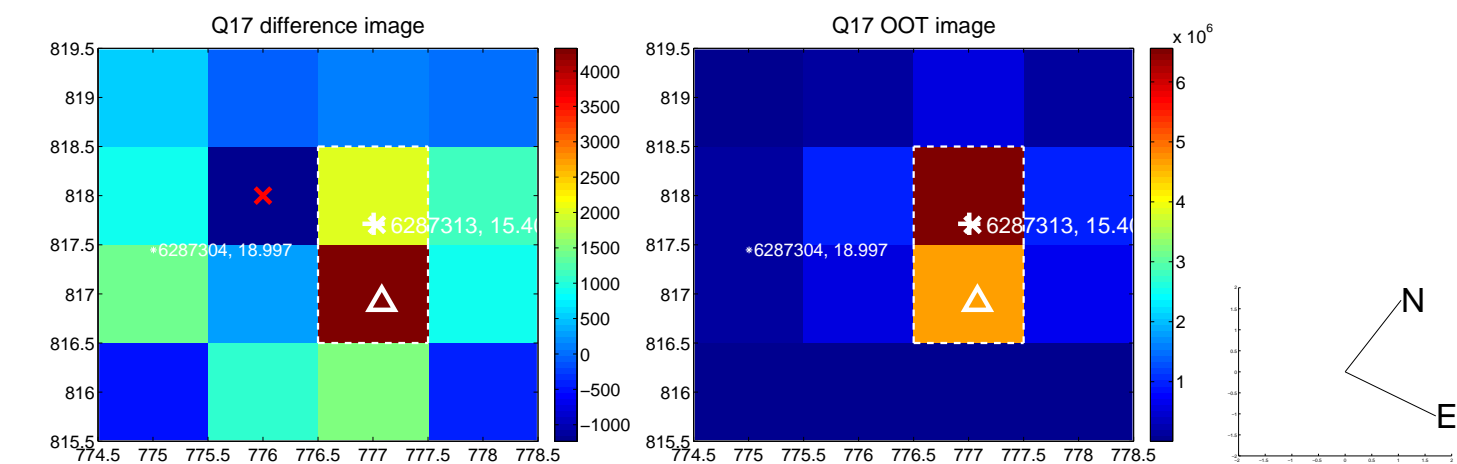
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



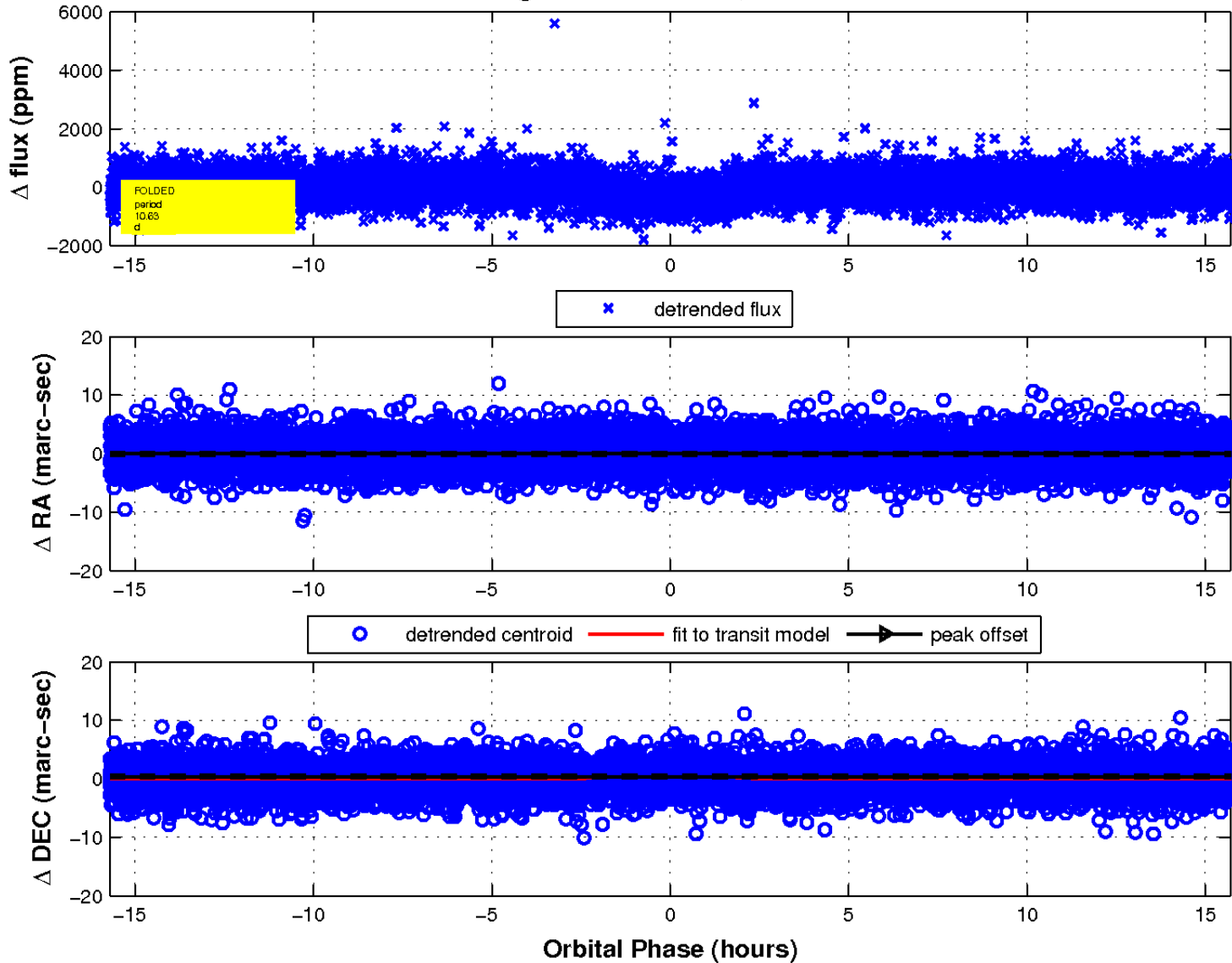
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

