

KIC 010291589

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})
010291589-01	OBS	4754.01	7.087560	138.275118	173.6	3.446	9.5	9.8	0.93	6060	1.44	197.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010291589-01	OBS	PC	0.96	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.

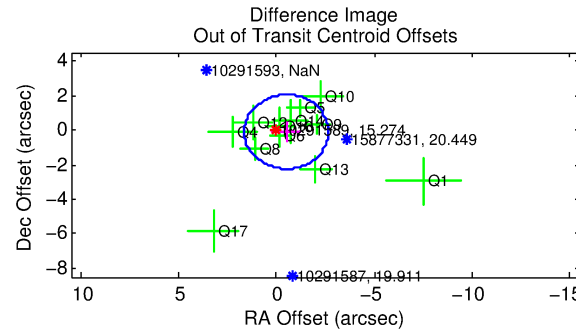
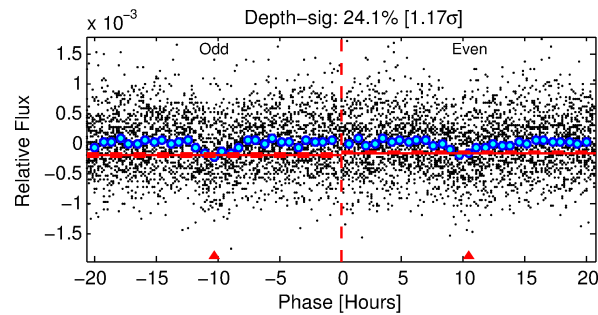
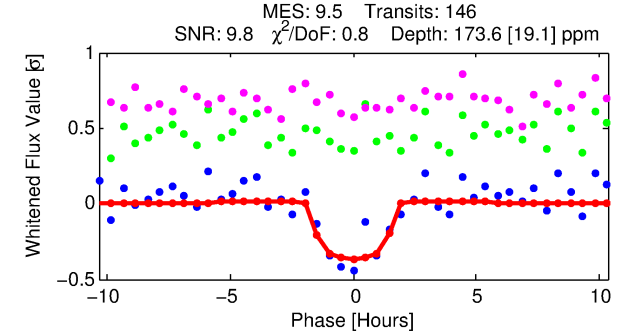
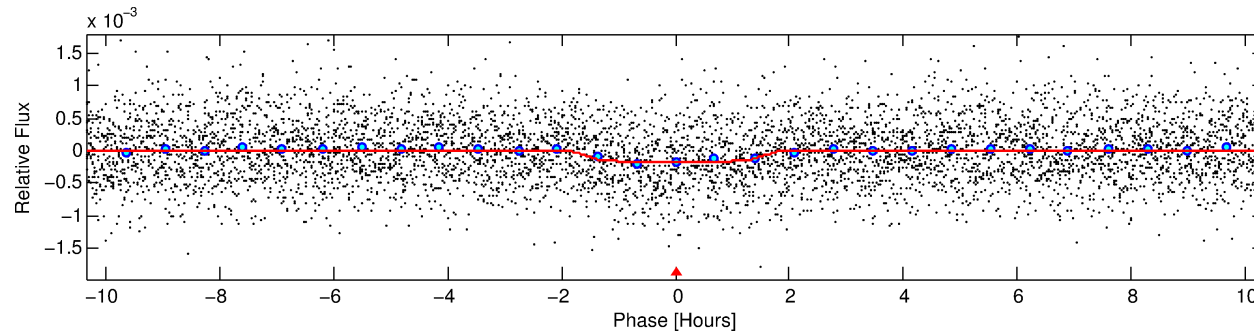
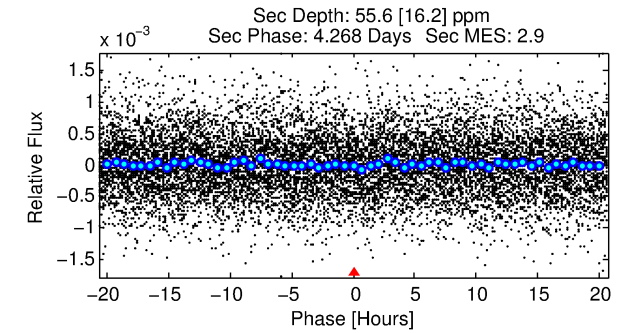
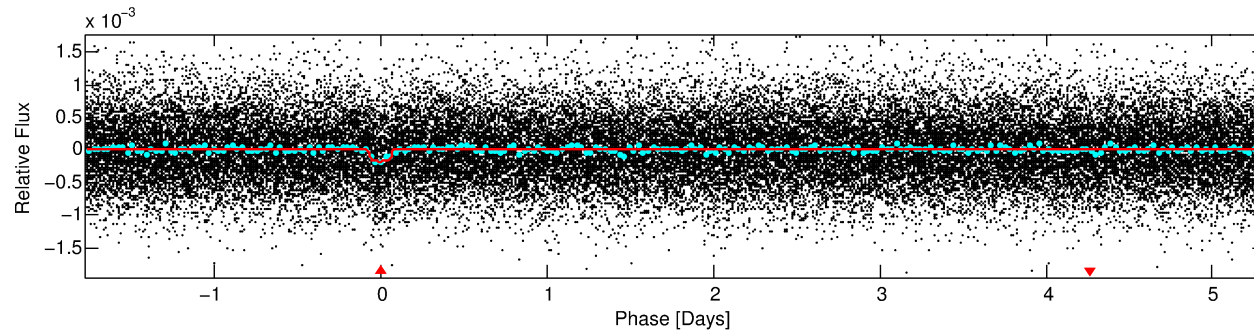
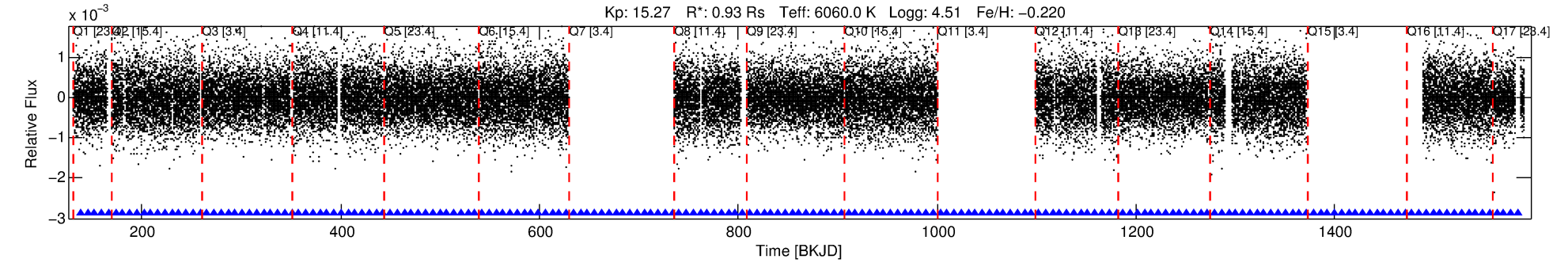
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010291589-01

No Significant Match Found

DV One-Page Summary

KIC: 10291589 Candidate: 1 of 1 Period: 7.088 d
KOI: K04754.01 Corr: 0.964



DV Fit Results:

Period = 7.08756 [0.00007] d
Epoch = 138.2751 [0.0068] BKJD
Rp/R* = 0.0143 [0.0068]
a/R* = 7.30 [18.05]
b = 0.90 [0.52]
Seff = 197.19 [74.75]
Teq = 956 [91] K
Rp = 1.44 [0.81] Re
a = 0.0724 [0.0179] AU
Ag = 77.33 [82.24] [0.93σ]
Teffp = 4381 [1107] K [3.08σ]

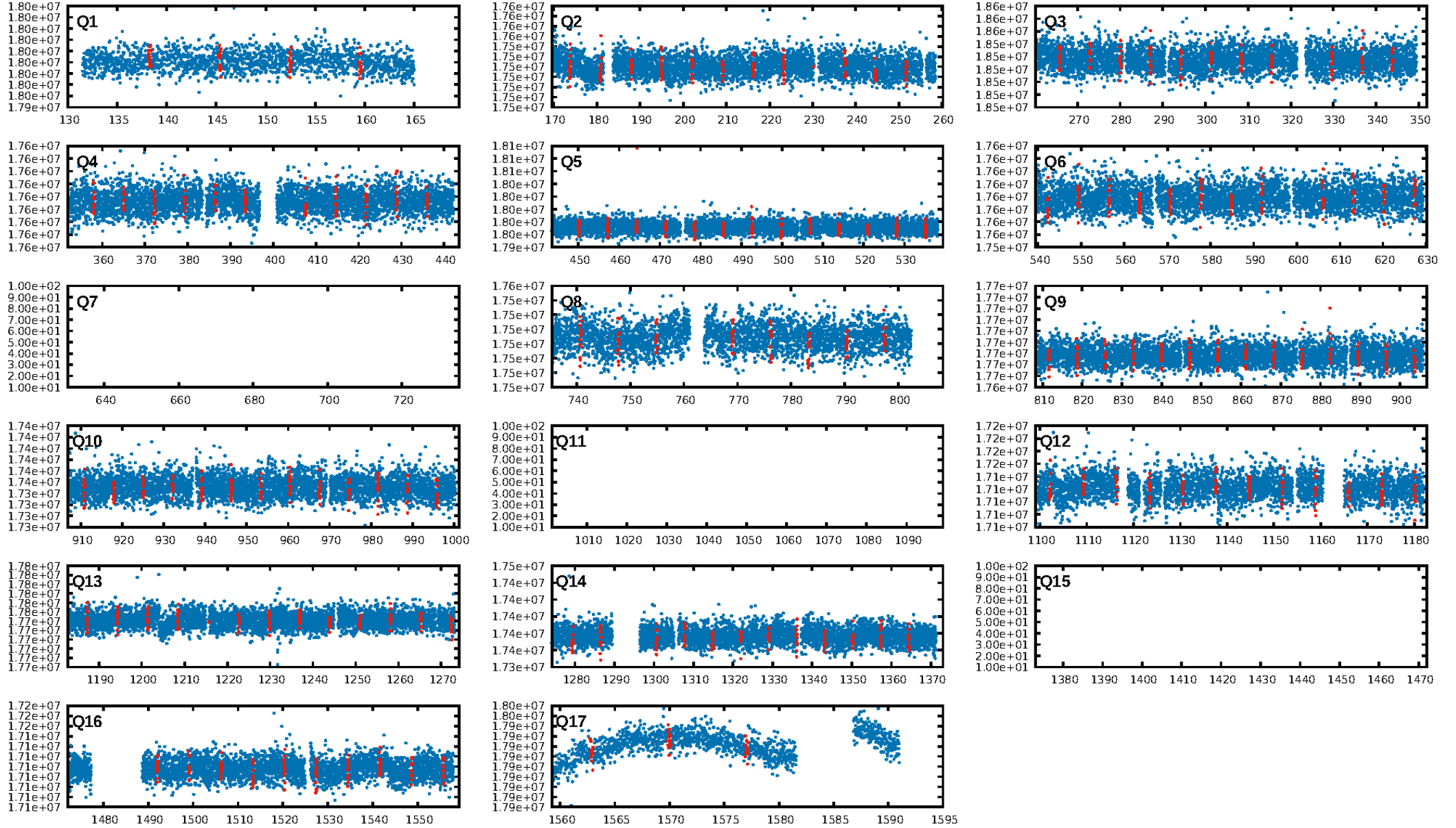
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.30e-22
RollingBand-fgt: 1.00 [139/139]
GhostDiagnostic-chr: 8.588
Centroid-sig: 68.5%
Centroid-so: 1.009 arcsec [0.59σ]
OotOffset-rm: 0.514 arcsec [0.72σ]
KicOffset-rm: 0.518 arcsec [0.64σ]
OotOffset-st: 3/0/4/5 [12]
KicOffset-st: 3/0/4/5 [12]
DiffImageQuality-fgm: 0.33 [4/12]
DiffImageOverlap-fno: 1.00 [14/14]

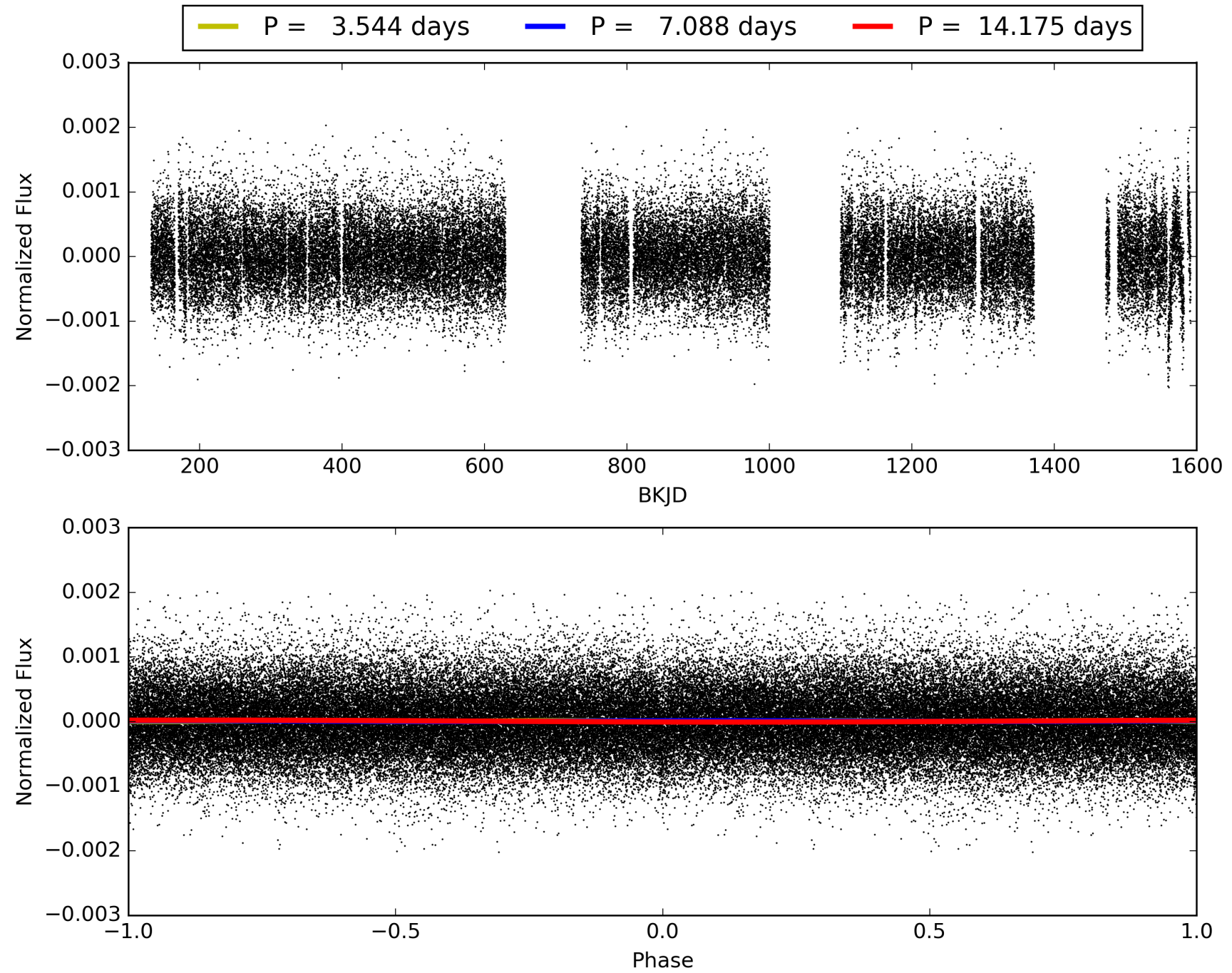
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:18:08 Z

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

TCE 010291589-01, PDC Light Curves

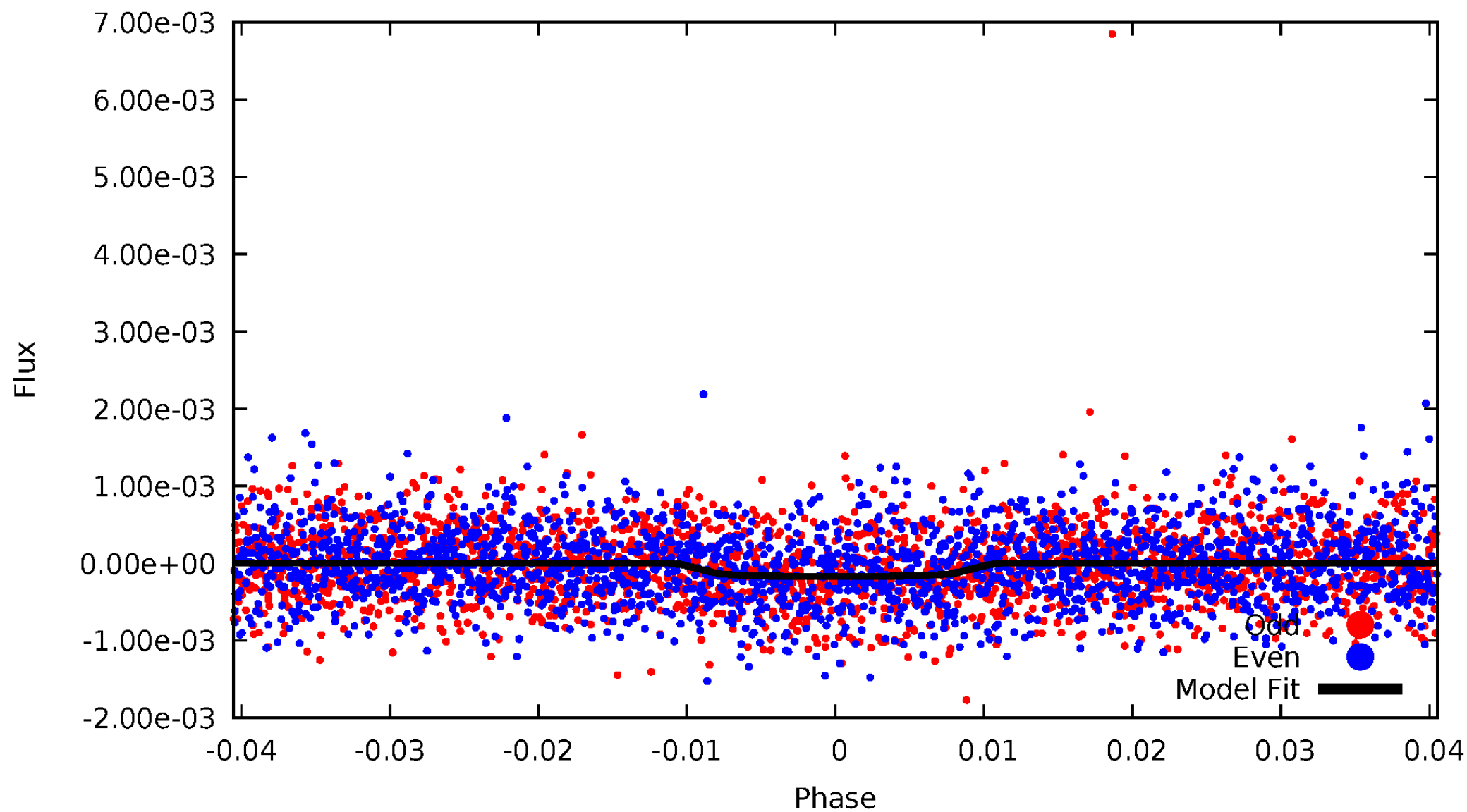


TCE 010291589-01



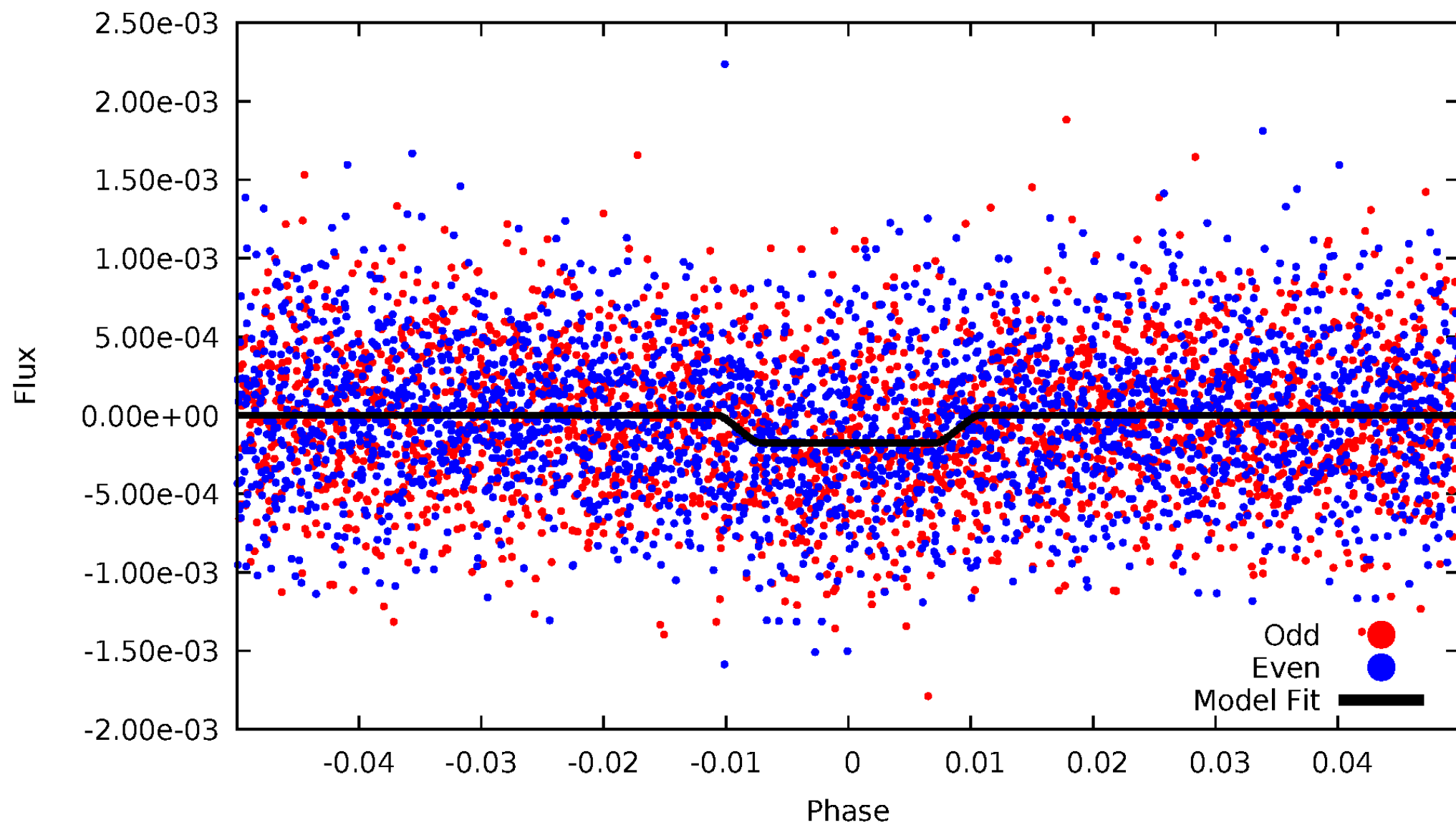
DV Odd/Even

TCE 010291589-01



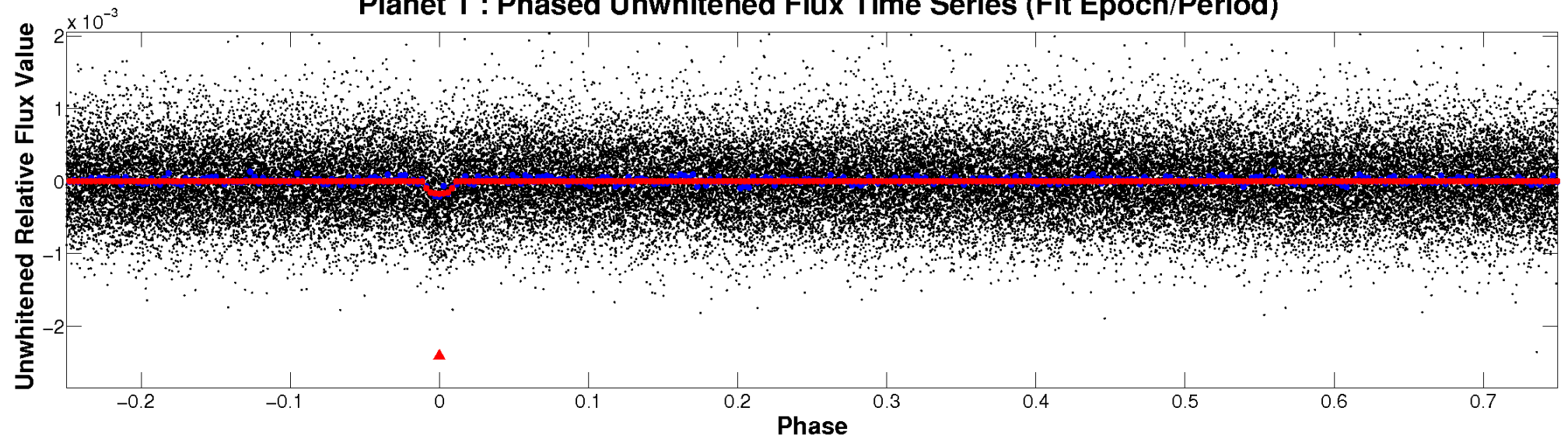
ALT Odd/Even

TCE 010291589-01

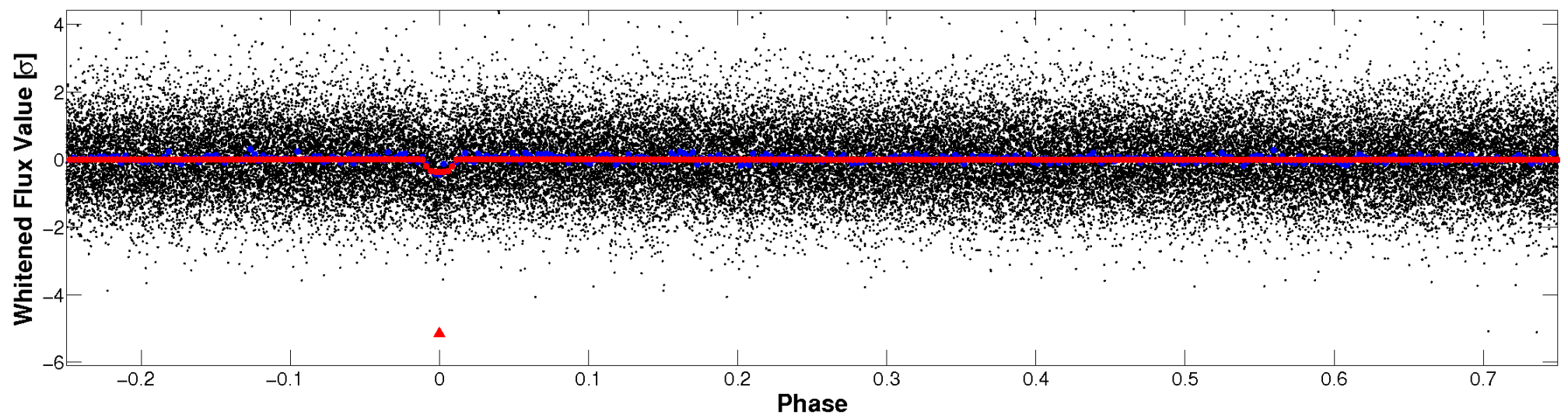


Non-Whitened Vs. Whitened Light Curve

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

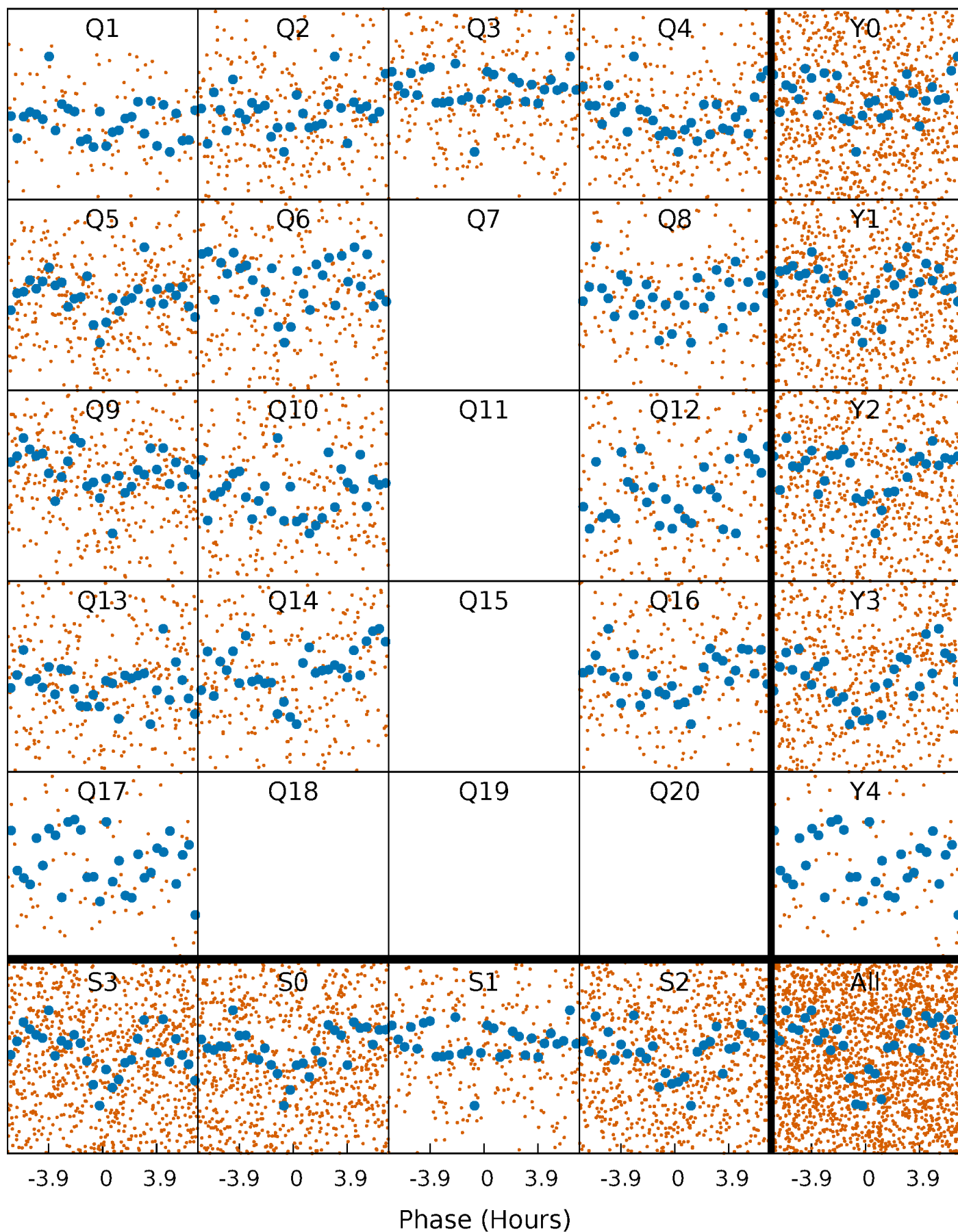


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



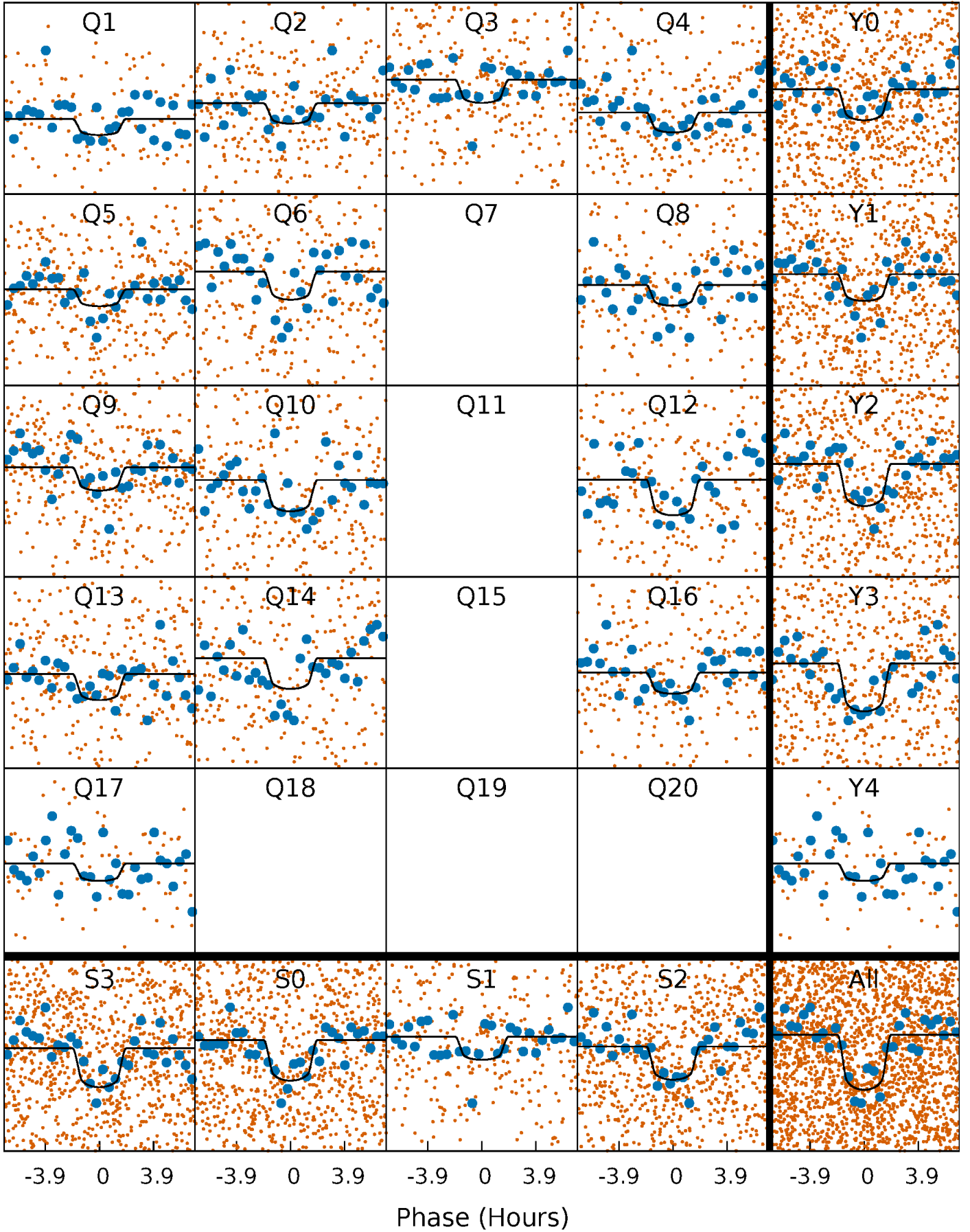
PDC Quarter-Phased Transit Curves

TCE 010291589-01 P= 7.087560 Days $T_0=138.275118$ (BKJD)



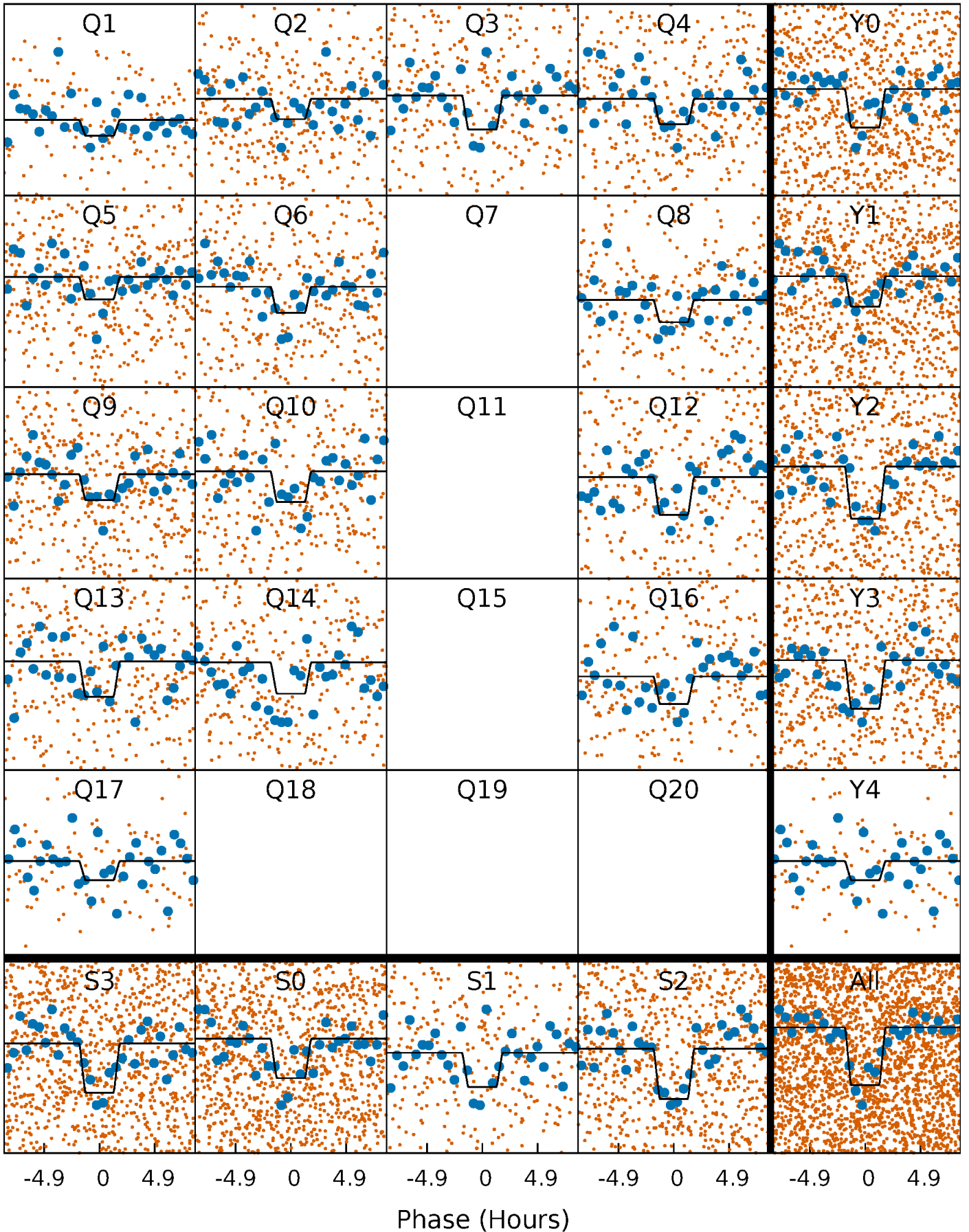
DV Quarter-Phased Transit Curves

TCE 010291589-01 P= 7.087560 Days $T_0=138.275118$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

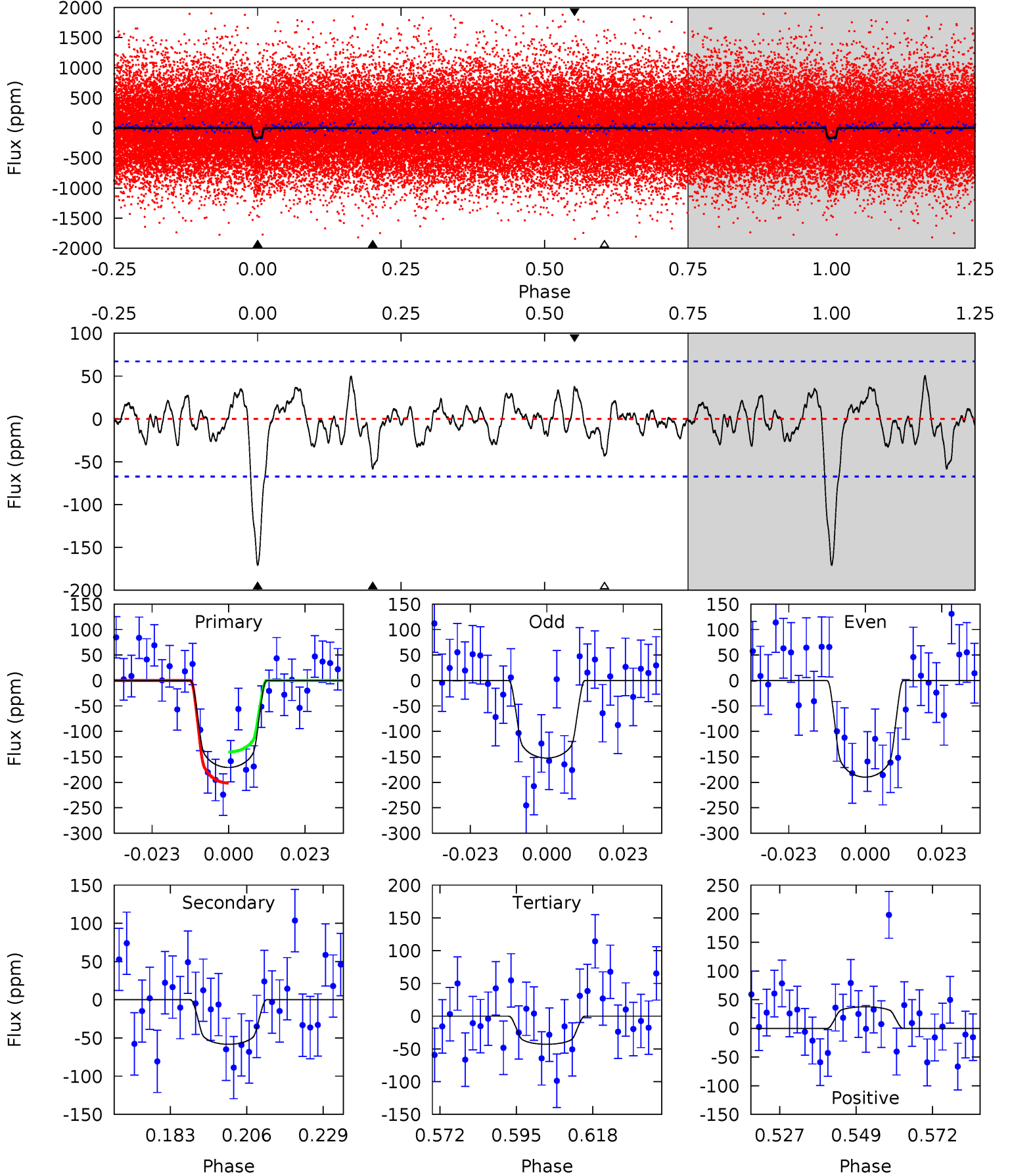
TCE 010291589-01 P= 7.087696 Days $T_0=138.269428$ (BKJD)



DV Model-Shift Uniqueness Test

010291589-01, P = 7.087560 Days, E = 131.187558 Days

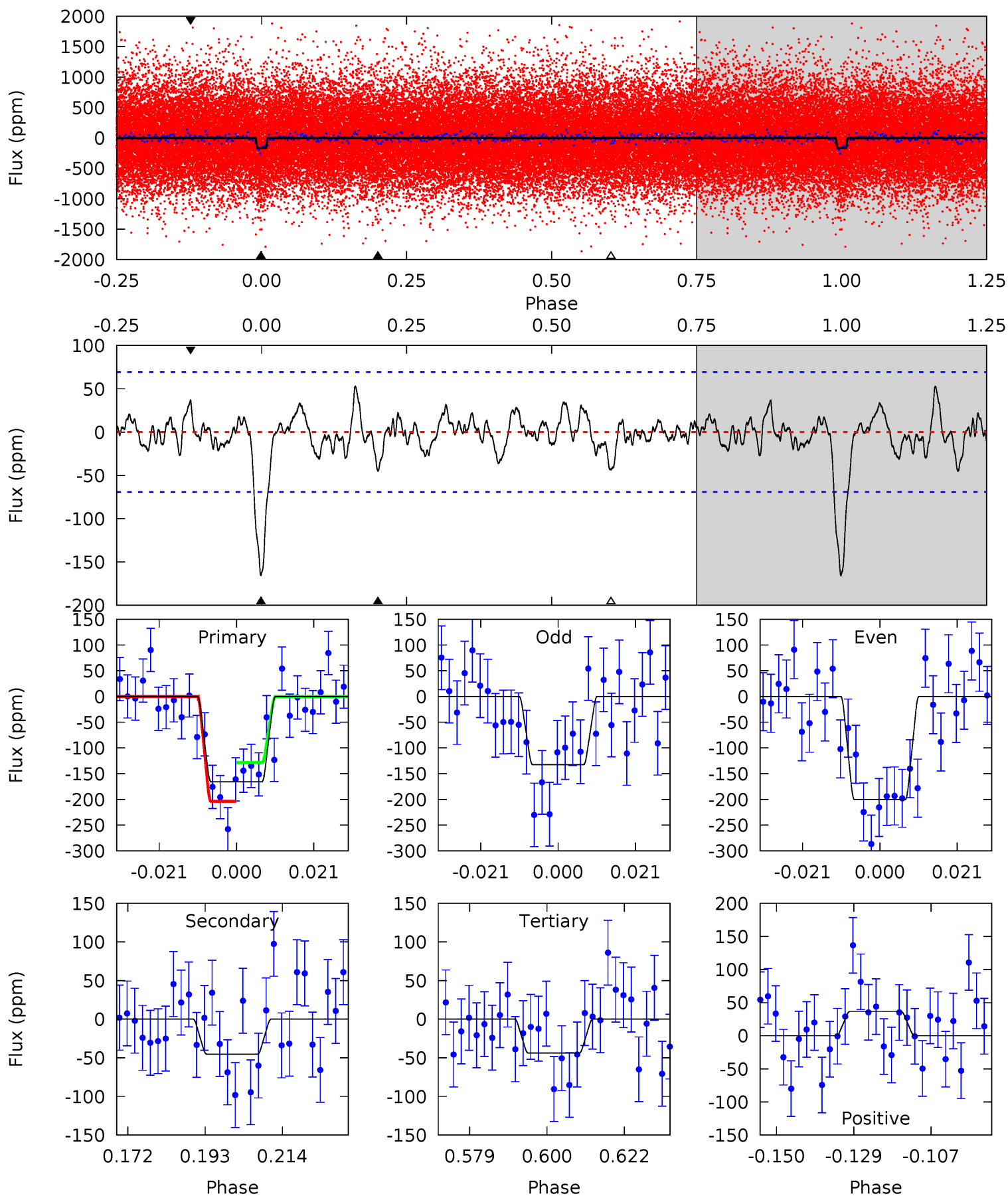
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	4.23	3.11	2.73	4.86	2.28	1.18	9.26	9.64	1.11	1.49	1.36	0.96	0.23	2.21



Alt Model-Shift Uniqueness Test

010291589-01, P = 7.087696 Days, E = 131.181732 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	3.19	3.09	2.59	4.88	2.30	1.08	8.60	9.11	0.10	0.60	2.38	1.10	0.24	2.66



Stellar Parameters For KIC 010291589

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6060^{+181}_{-199}	$4.509^{+0.048}_{-0.192}$	$-0.220^{+0.300}_{-0.300}$	$0.925^{+0.276}_{-0.092}$	$1.008^{+0.132}_{-0.132}$	$1.795^{+0.451}_{-0.918}$
	+3%/-3%	+1%/-4%	+136%/-136%	+30%/-10%	+13%/-13%	+25%/-51%
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 010291589-01 / KOI 4754.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-58 ± 14	$1.46^{+0.84}_{-0.68}$	1361^{+92}_{-59}	4602^{+1528}_{-691}	76^{+195}_{-47}
Alt.	-45 ± 14	$1.40^{+0.79}_{-0.69}$	1364^{+92}_{-63}	4483^{+1516}_{-700}	64^{+172}_{-39}

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

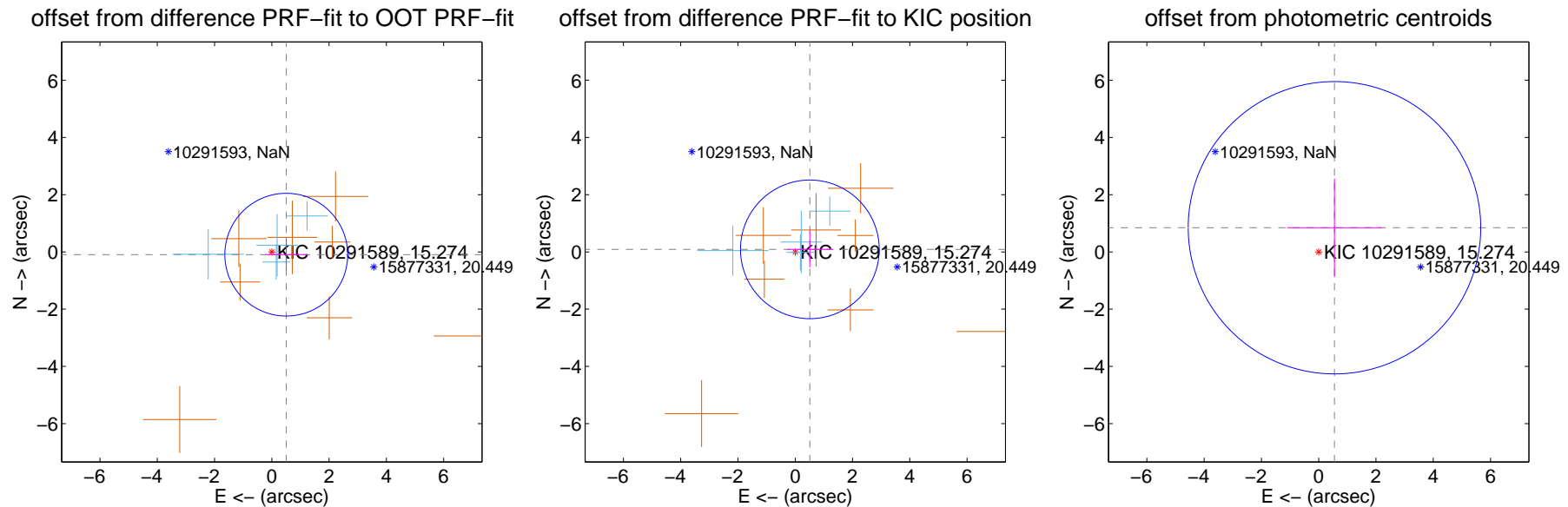
DV Centroid Data

Supplemental centroid analysis for 010291589-01. Kepler magnitude: 15.27. Transit SNR 9.79

There are 4 quarters with good PRF difference image offsets

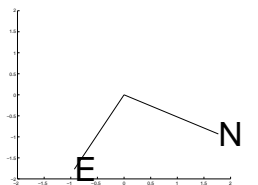
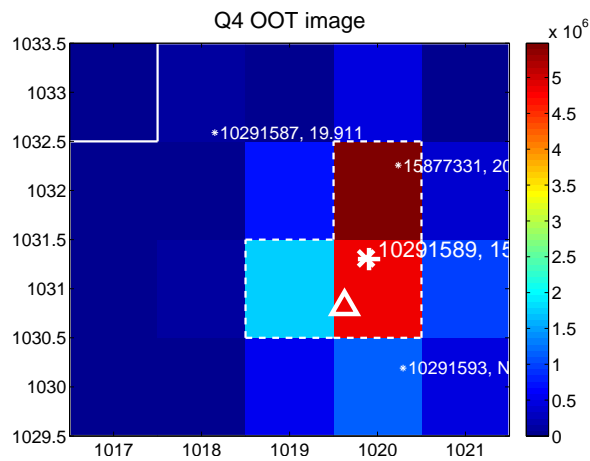
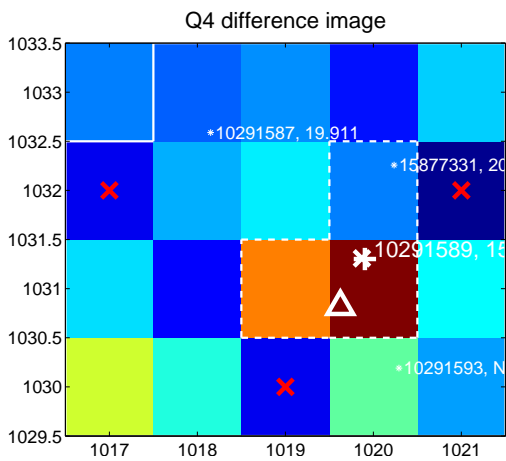
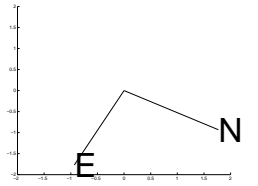
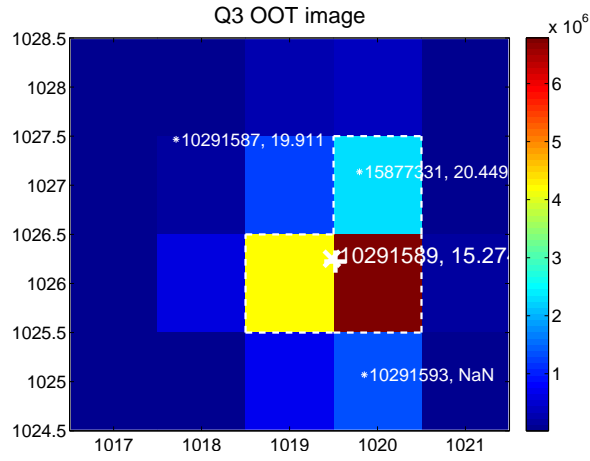
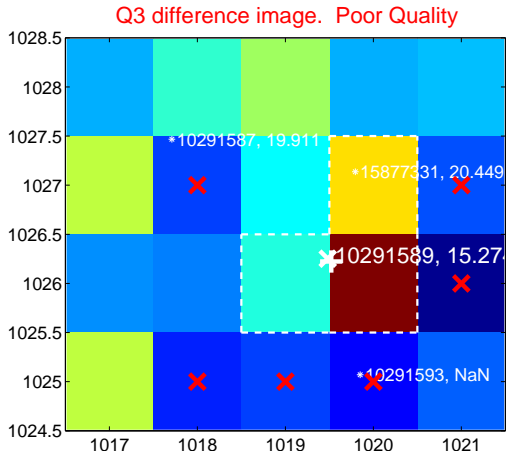
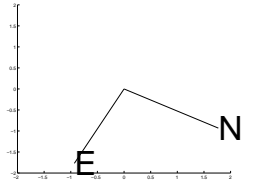
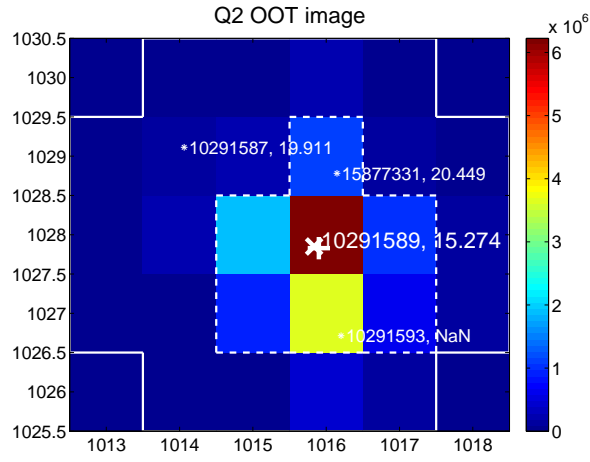
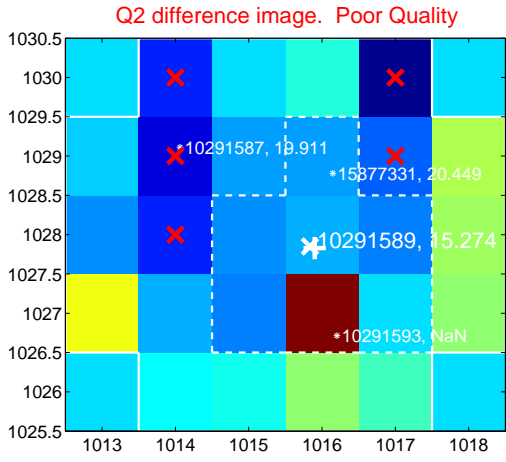
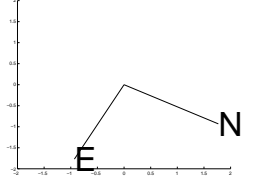
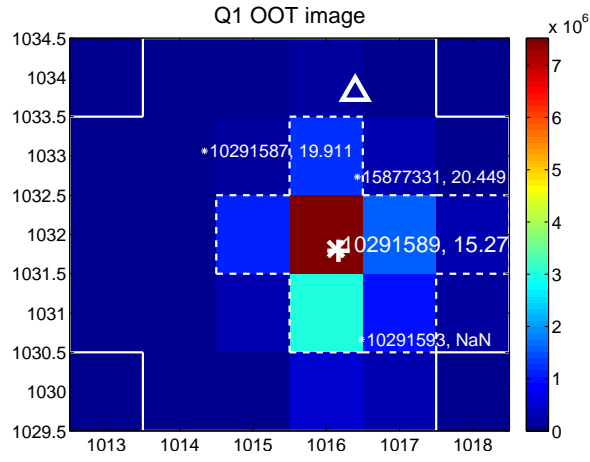
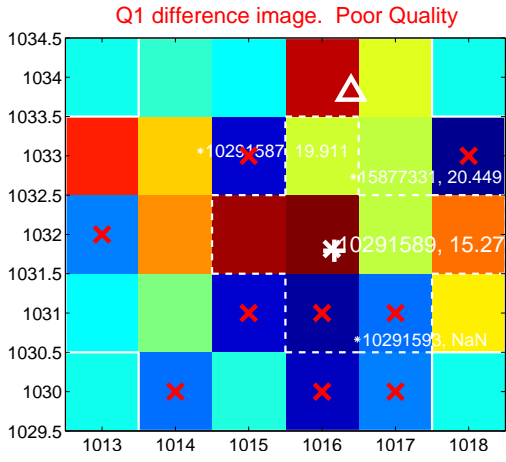
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.514 ± 0.715	0.72	-0.505 ± 0.734	-0.096 ± 0.584
PRF-fit source offset from KIC position	0.518 ± 0.808	0.64	-0.510 ± 0.793	0.089 ± 0.622
photometric centroid source offset	1.01 ± 1.70	0.59	-0.55 ± 1.66	0.85 ± 1.72

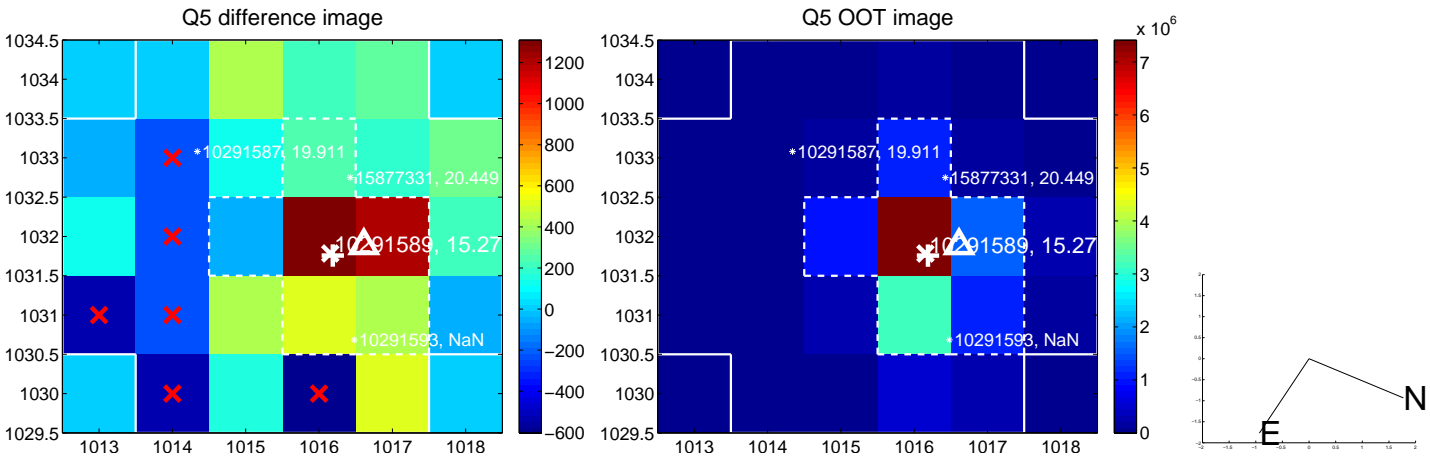


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

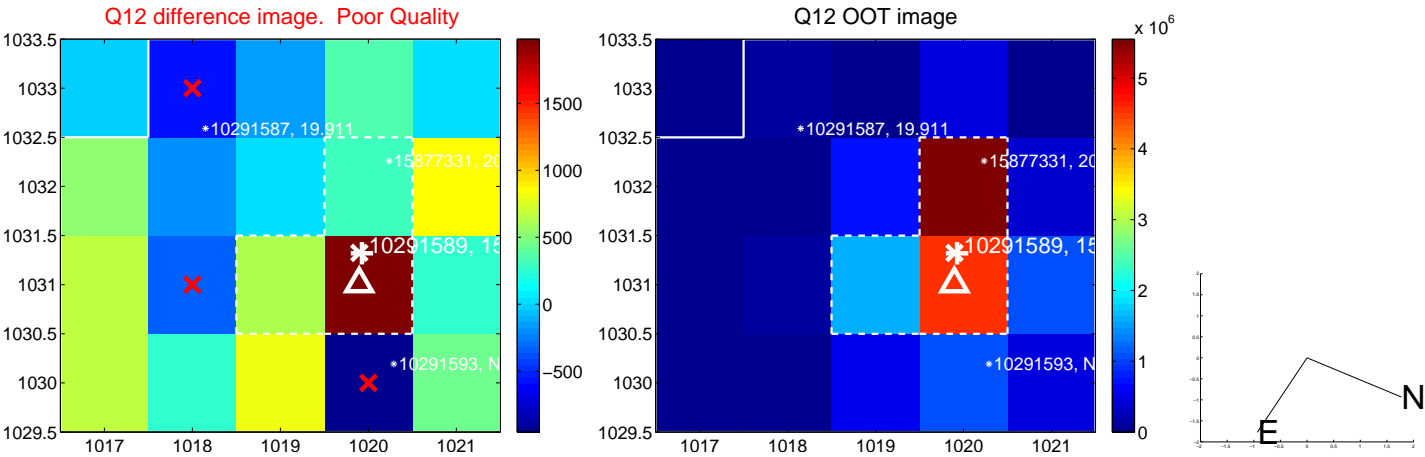
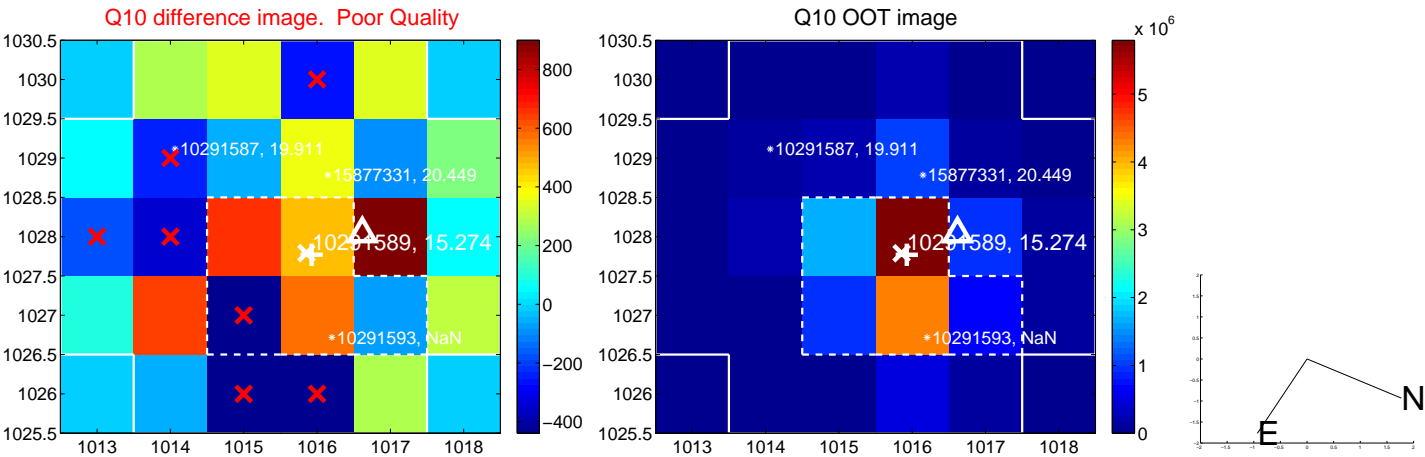
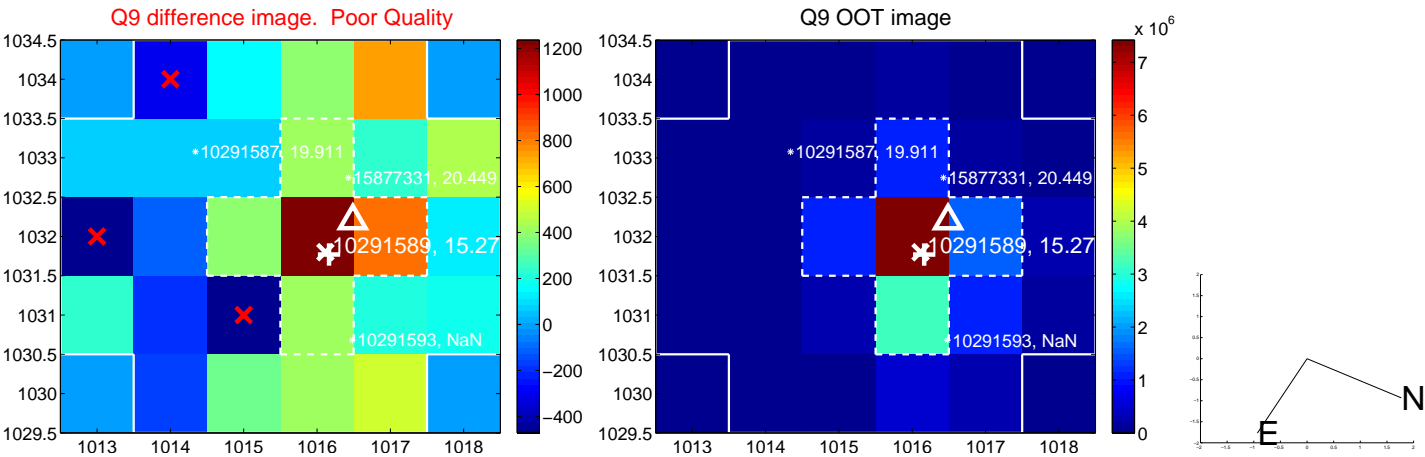
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



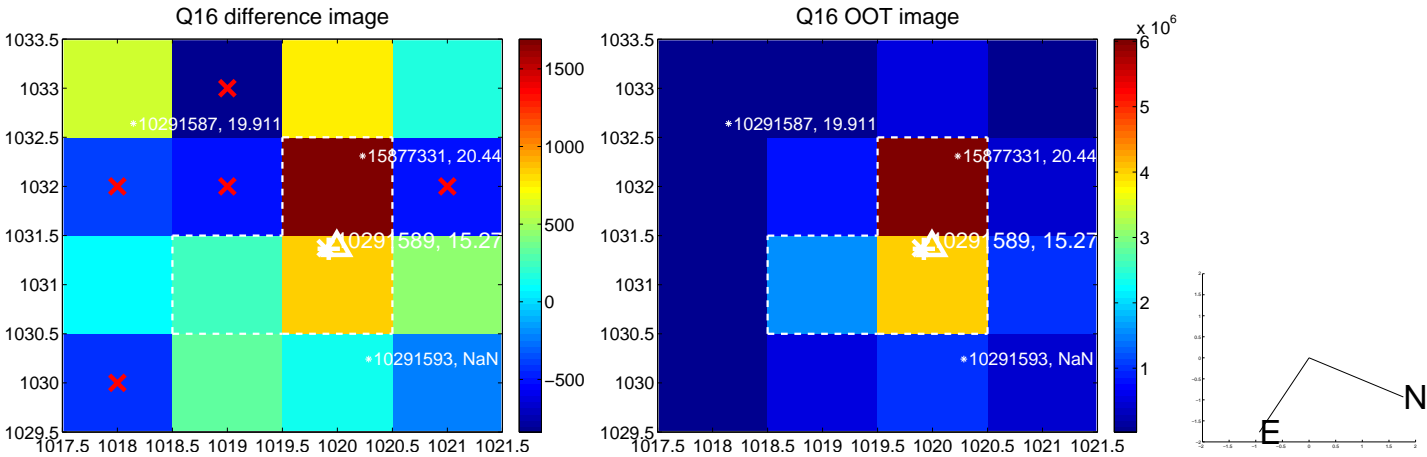
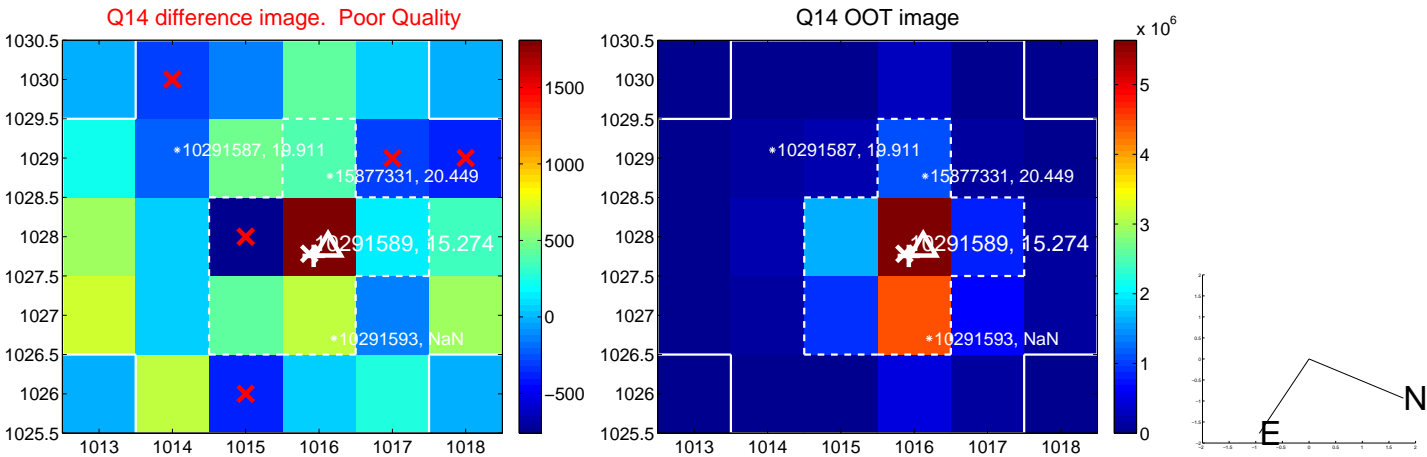
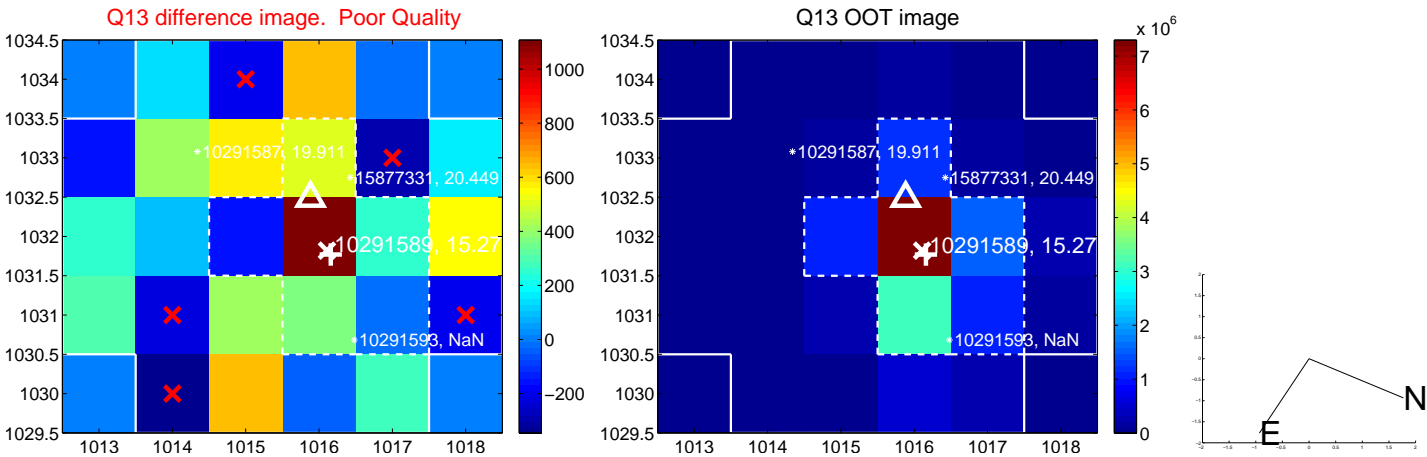
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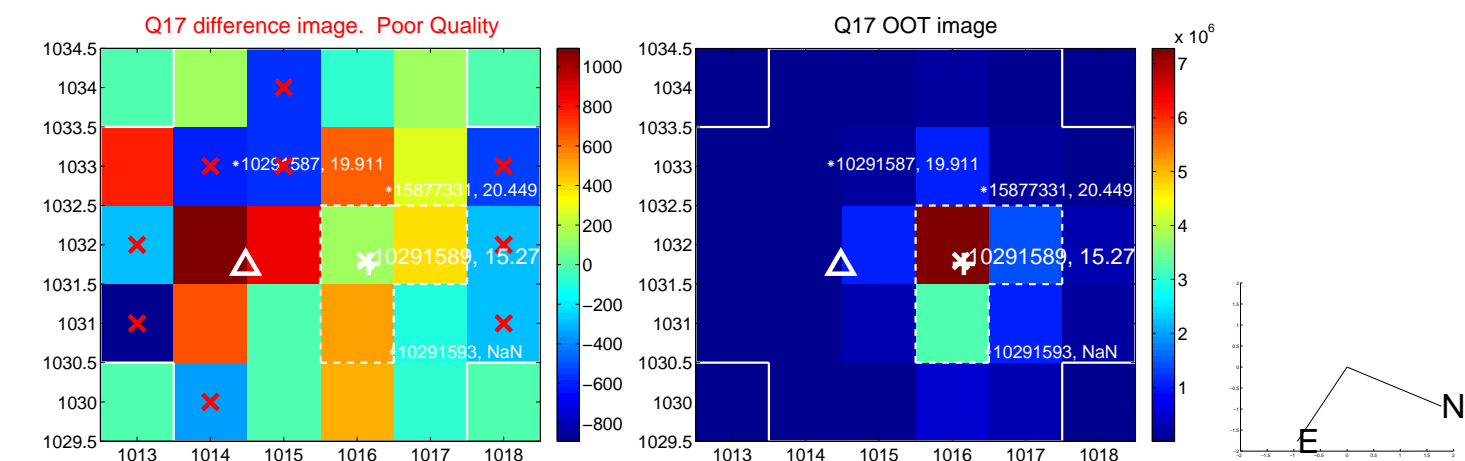
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



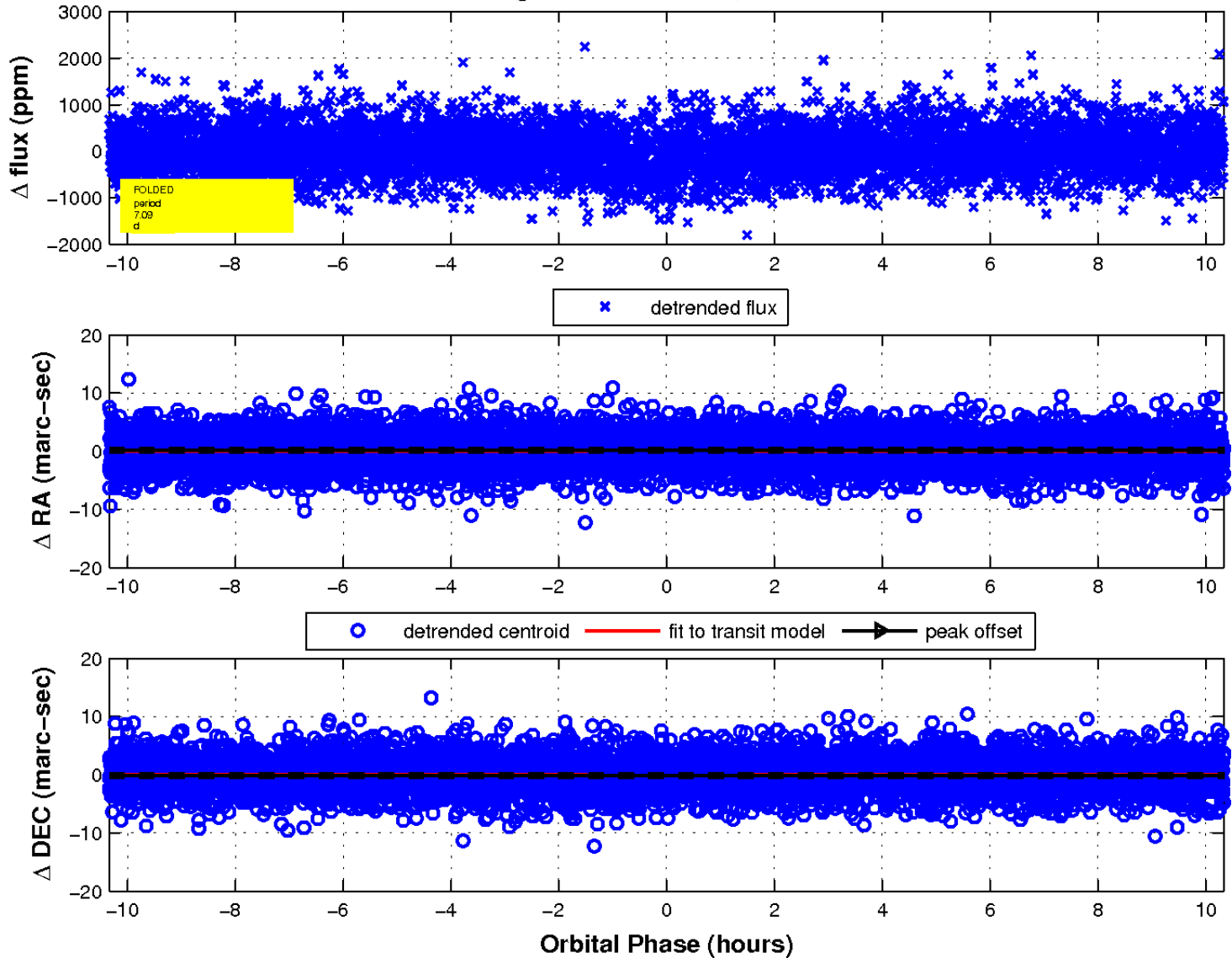
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

