

KIC 010331279

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})
010331279-01	OBS	8000.01	225.490444	224.179578	364.7	19.233	8.7	9.2	0.78	5663	1.58	1.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010331279-01	OBS	PC	0.97	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.

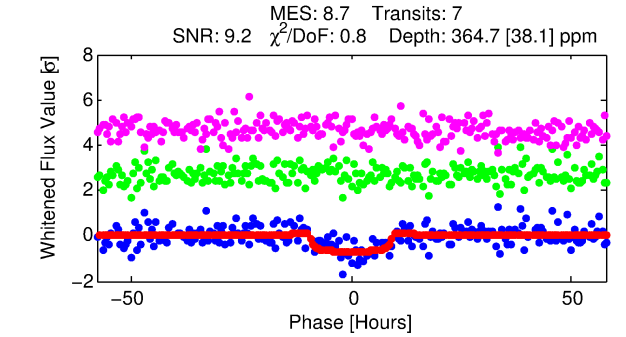
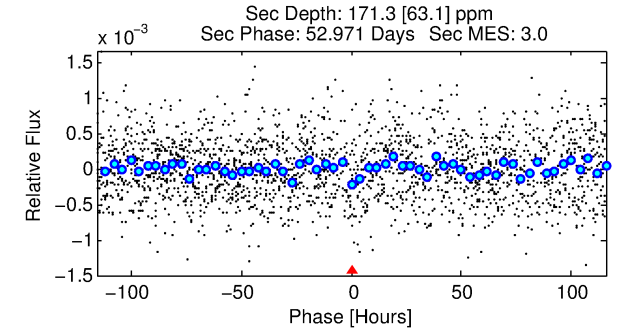
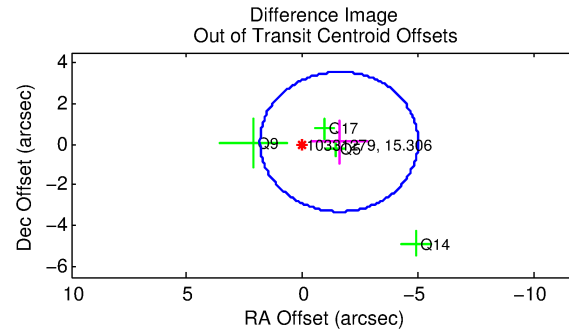
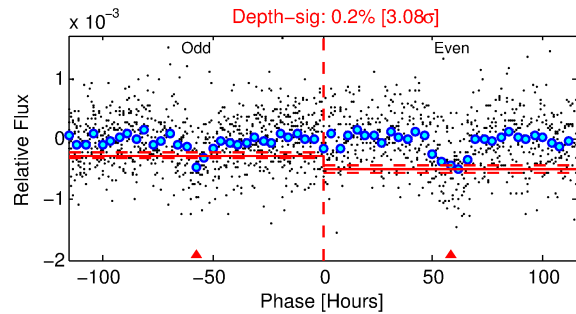
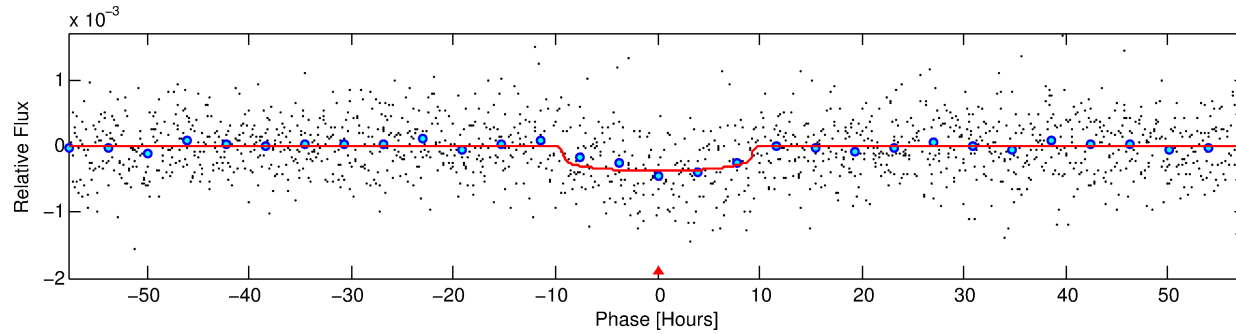
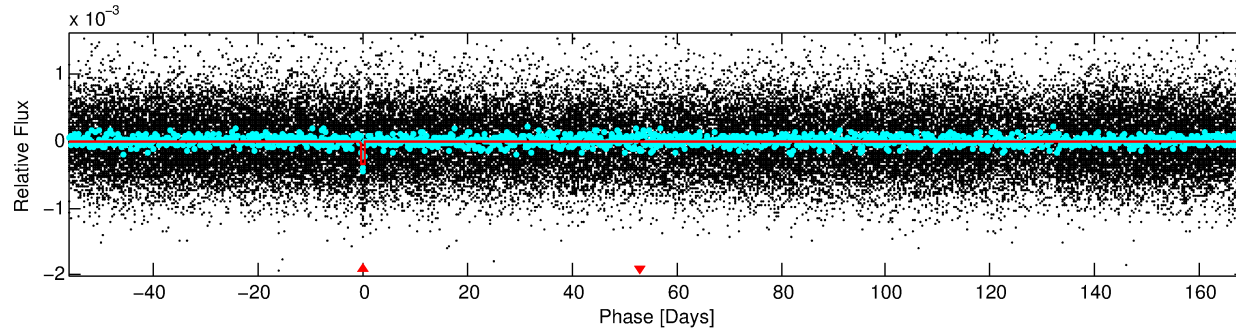
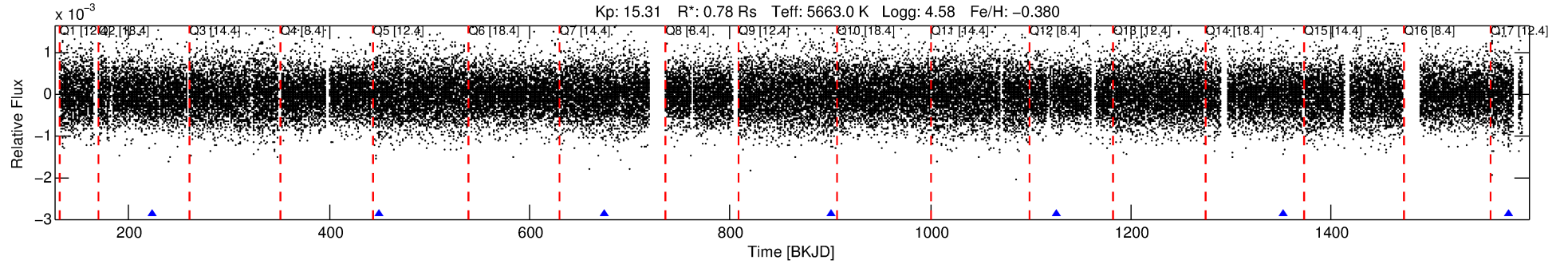
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010331279-01

No Significant Match Found

DV One-Page Summary

KIC: 10331279 Candidate: 1 of 1 Period: 225.490 d



DV Fit Results:

Period = 225.49044 [0.00736] d
Epoch = 224.1796 [0.0272] BKJD
Rp/R* = 0.0185 [0.0064]
a/R* = 69.20 [107.01]
b = 0.66 [1.31]
Seff = 1.20 [0.38]
Teq = 267 [21] K
Rp = 1.58 [0.67] Re
a = 0.6859 [0.1413] AU
Ag = 17806.71 [14893.28] [1.20 σ]
Teffp = 4764 [942] K [4.77 σ]

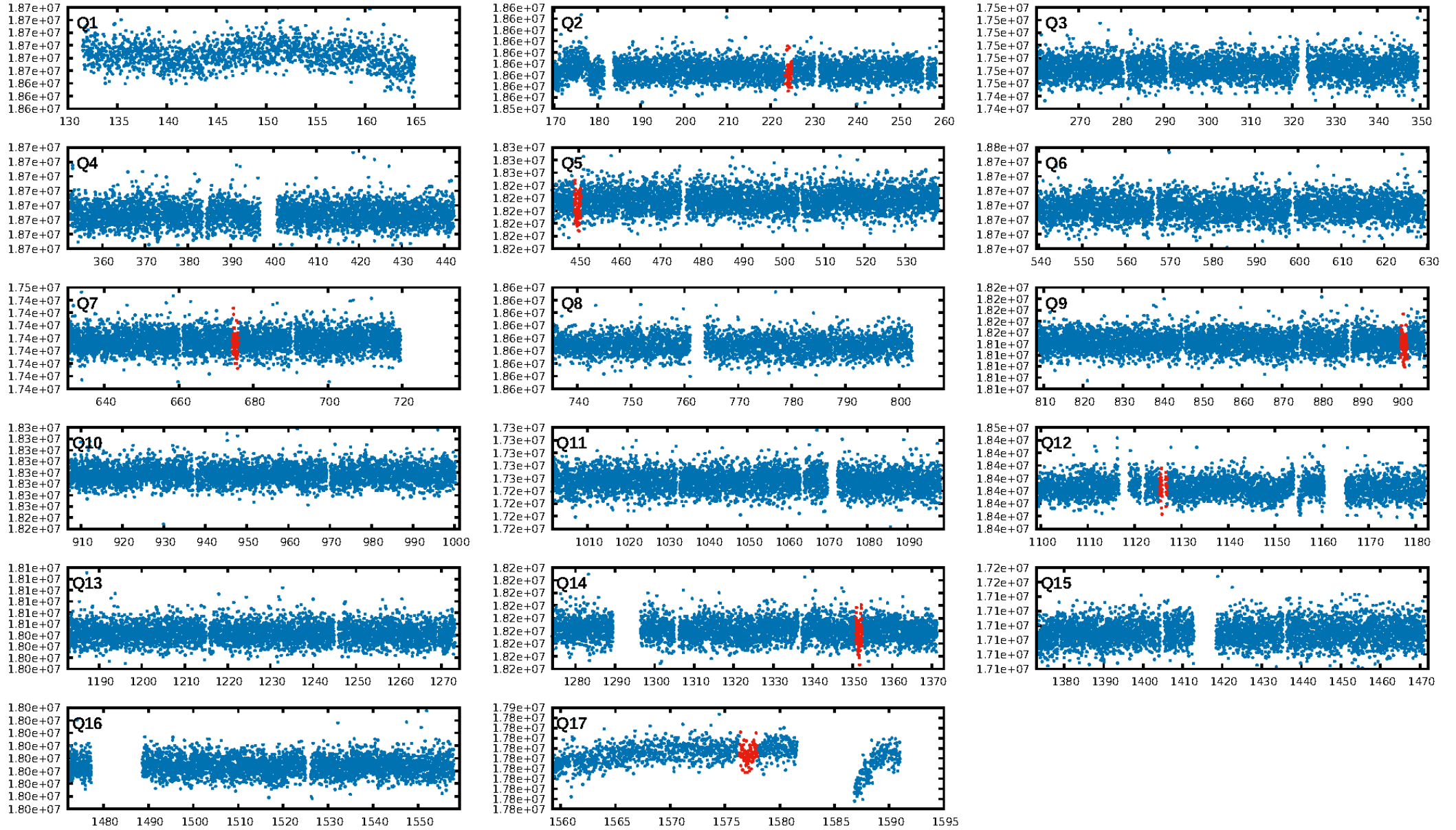
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 16.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.52e-17
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: 0.8537
Centroid-sig: 58.9%
Centroid-so: 1.091 arcsec [0.74 σ]
OotOffset-rm: 1.586 arcsec [1.39 σ]
OotOffset-st: 1/0/0/3 [4]
KicOffset-rm: 1.578 arcsec [1.51 σ]
KicOffset-st: 1/0/0/3 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [5/5]

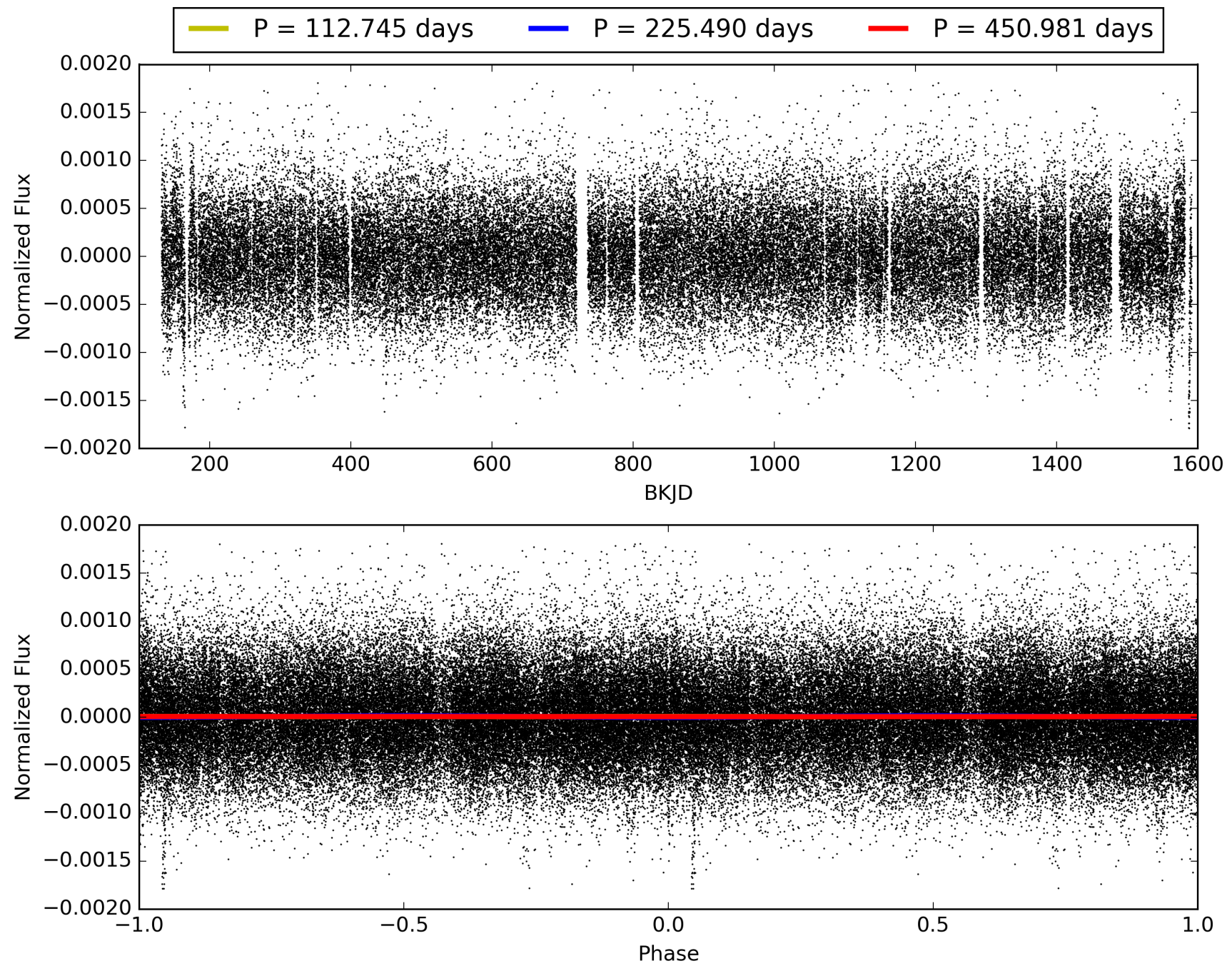
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 21:20:58 Z

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

TCE 010331279-01, PDC Light Curves

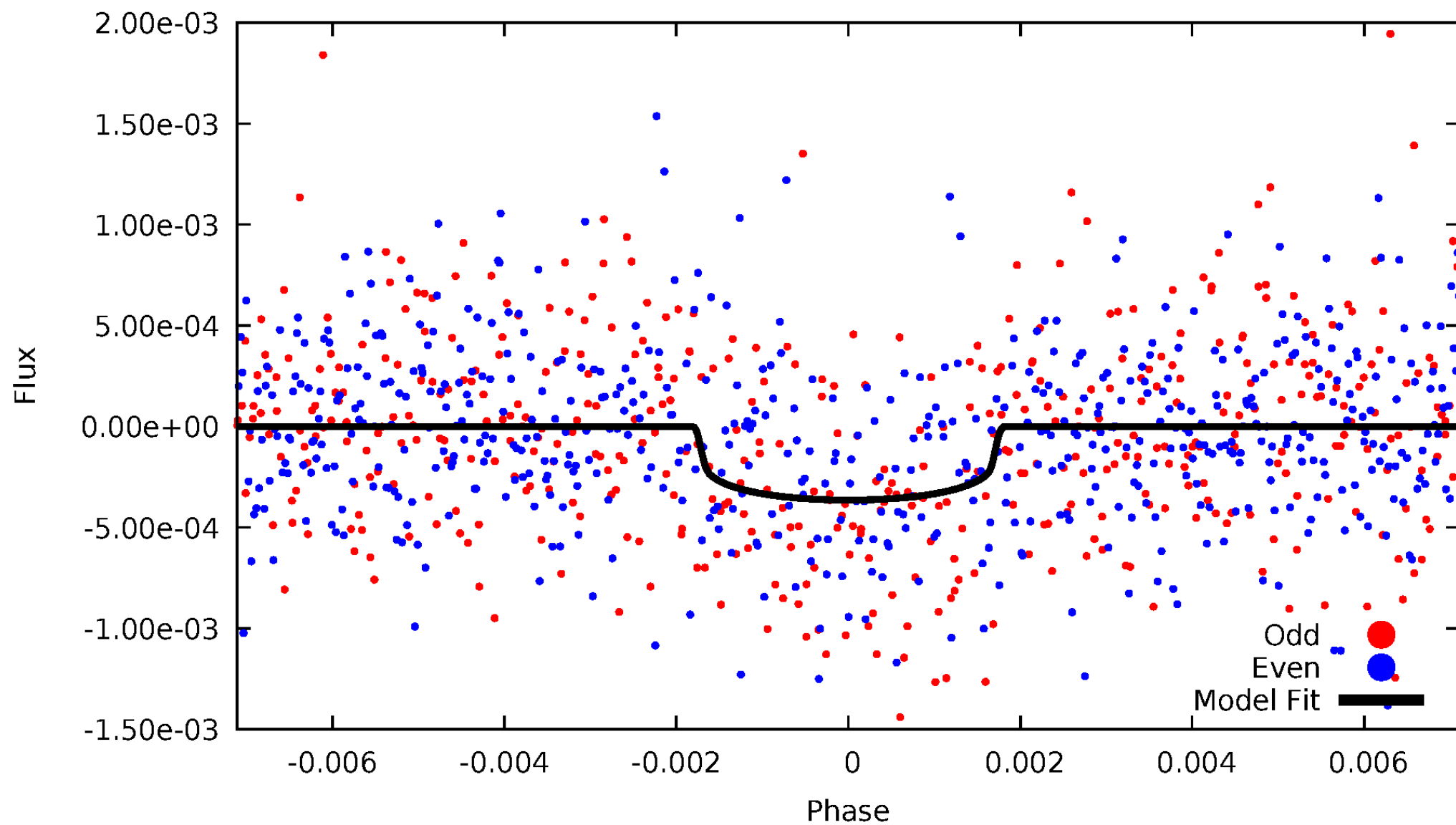


TCE 010331279-01



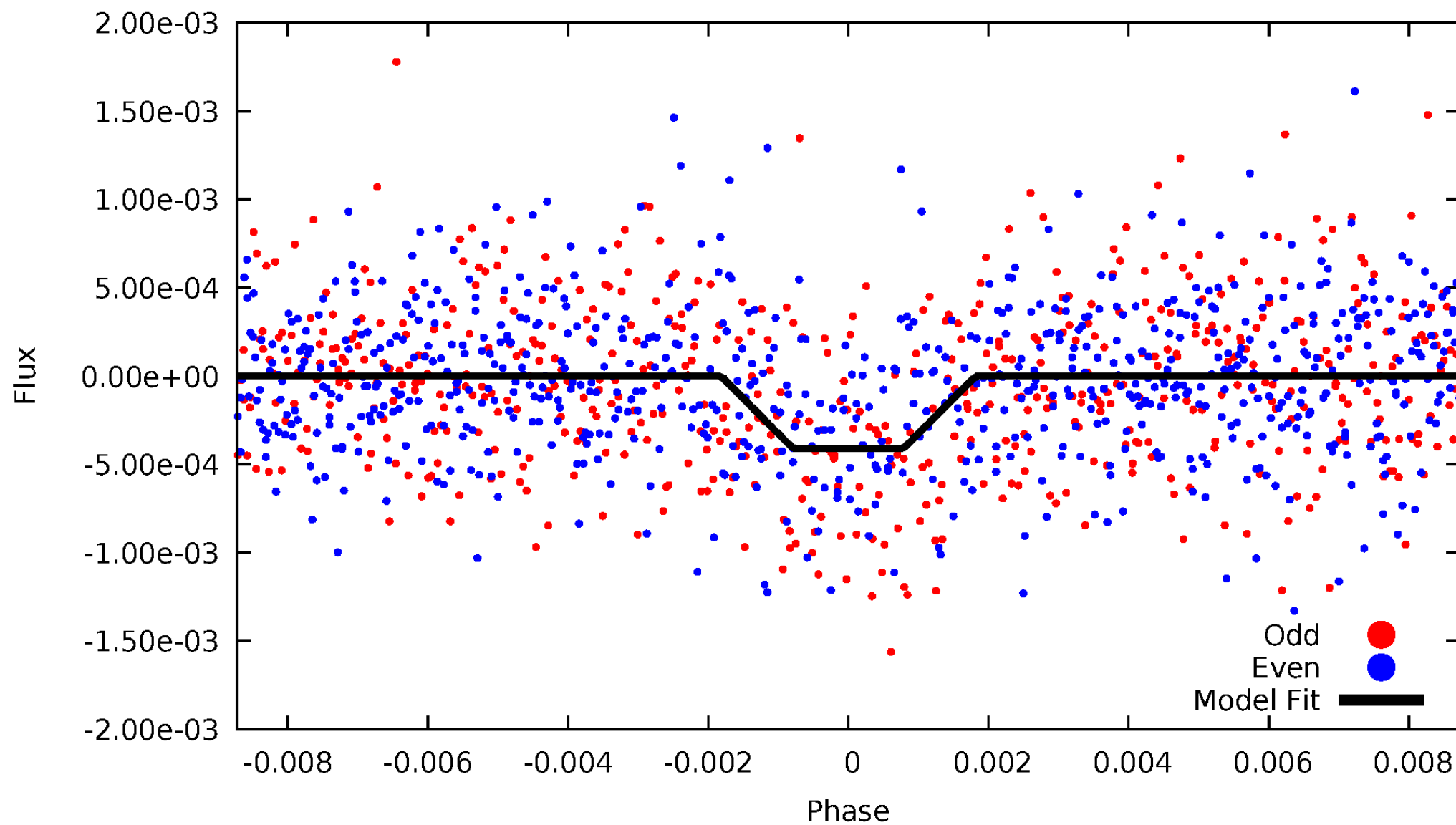
DV Odd/Even

TCE 010331279-01



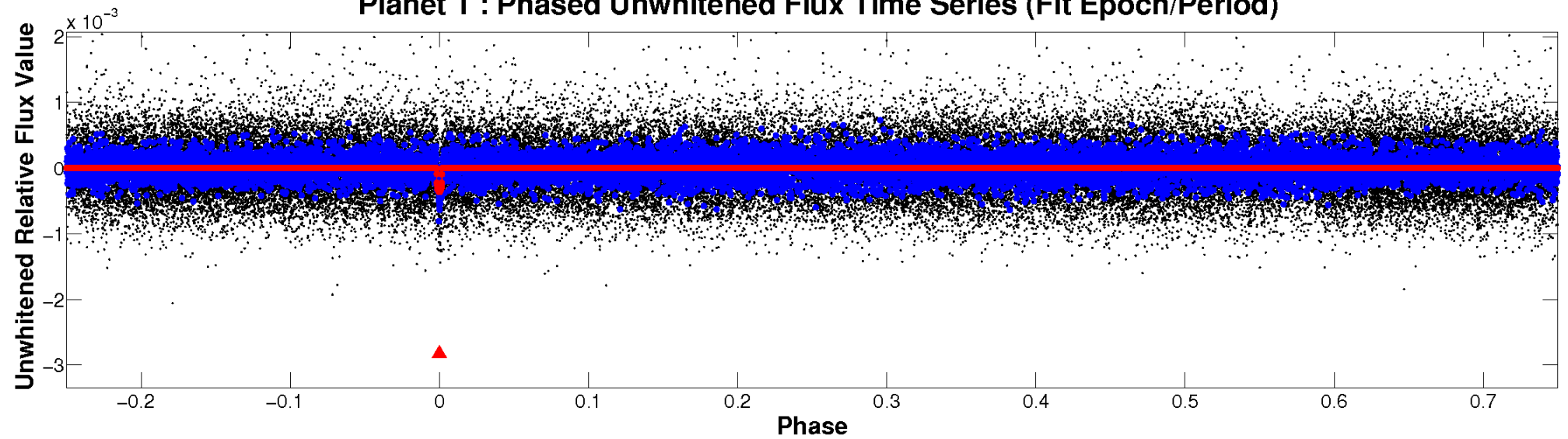
ALT Odd/Even

TCE 010331279-01

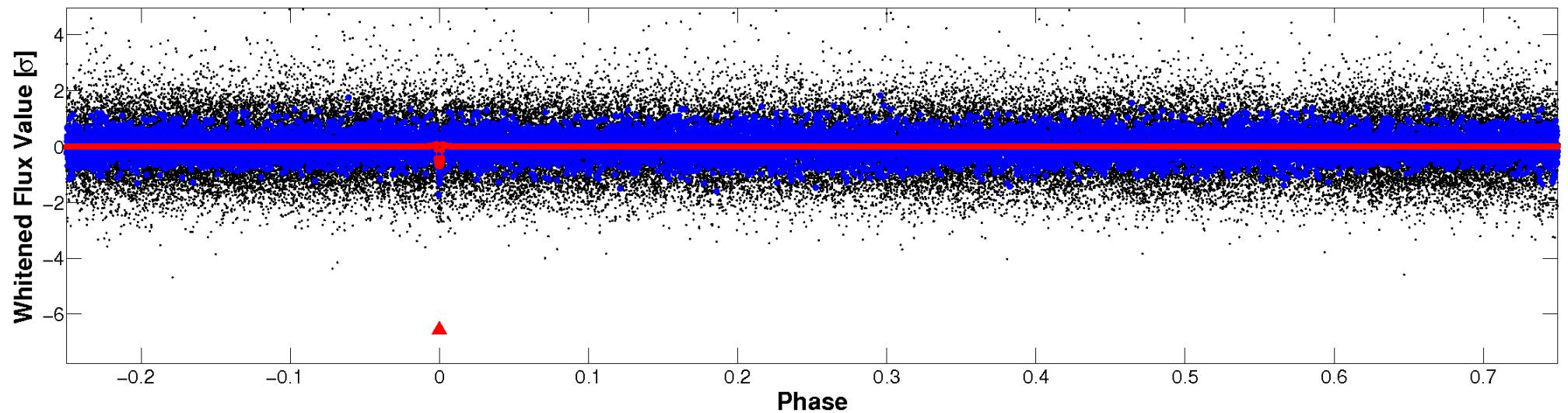


Non-Whitened Vs. Whitened Light Curve

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

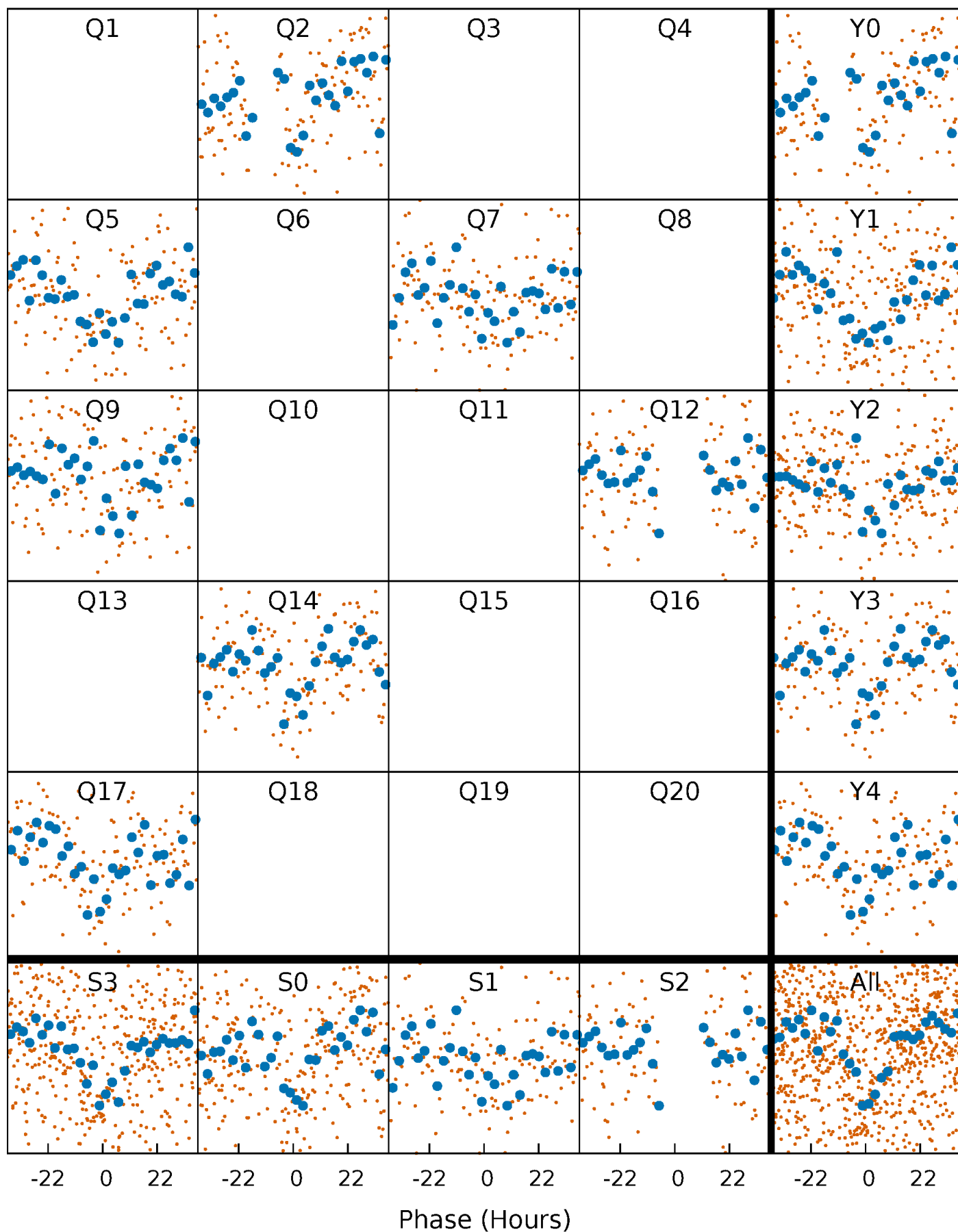


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



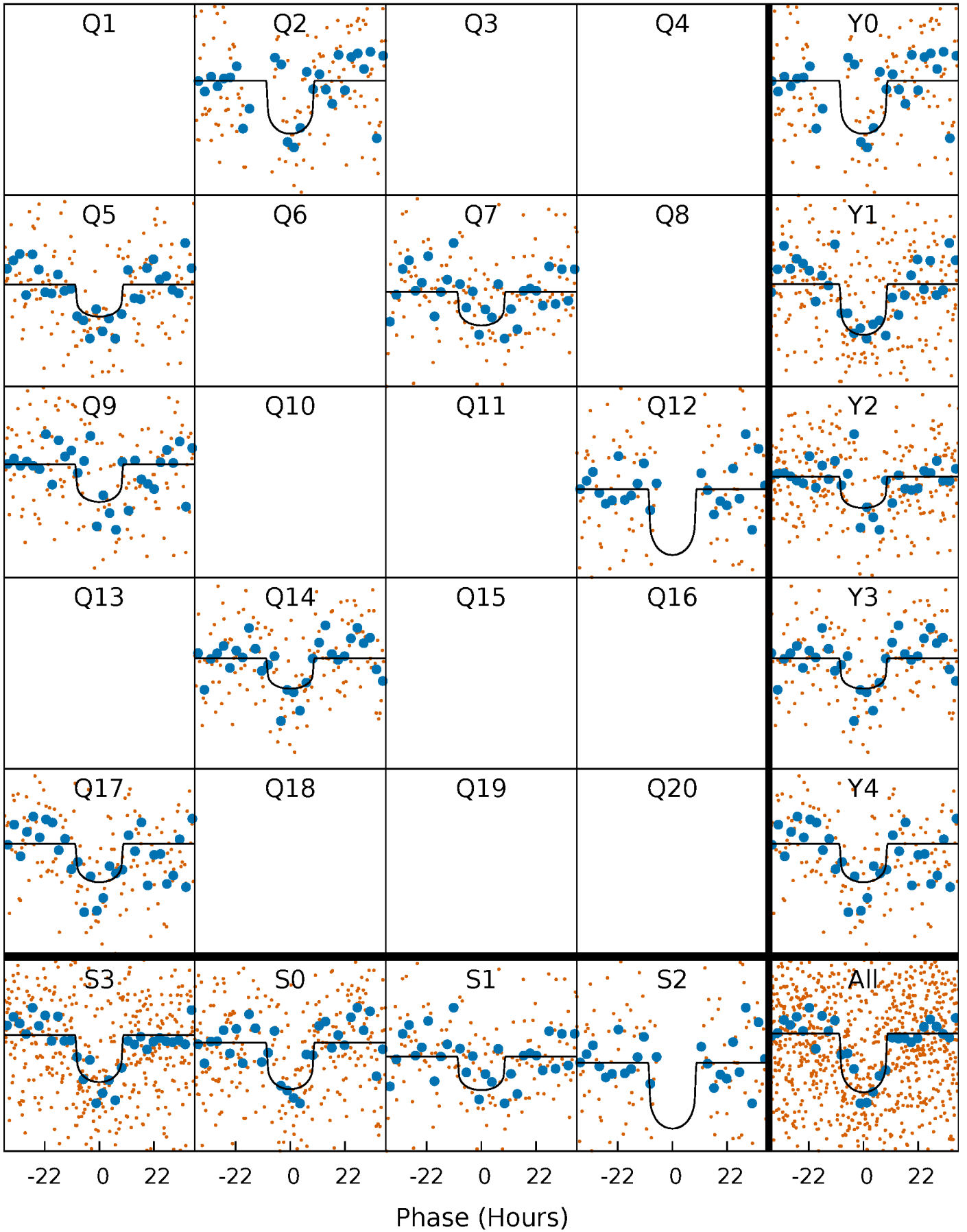
PDC Quarter-Phased Transit Curves

TCE 010331279-01 $P=225.490444$ Days $T_0=224.179578$ (BKJD)



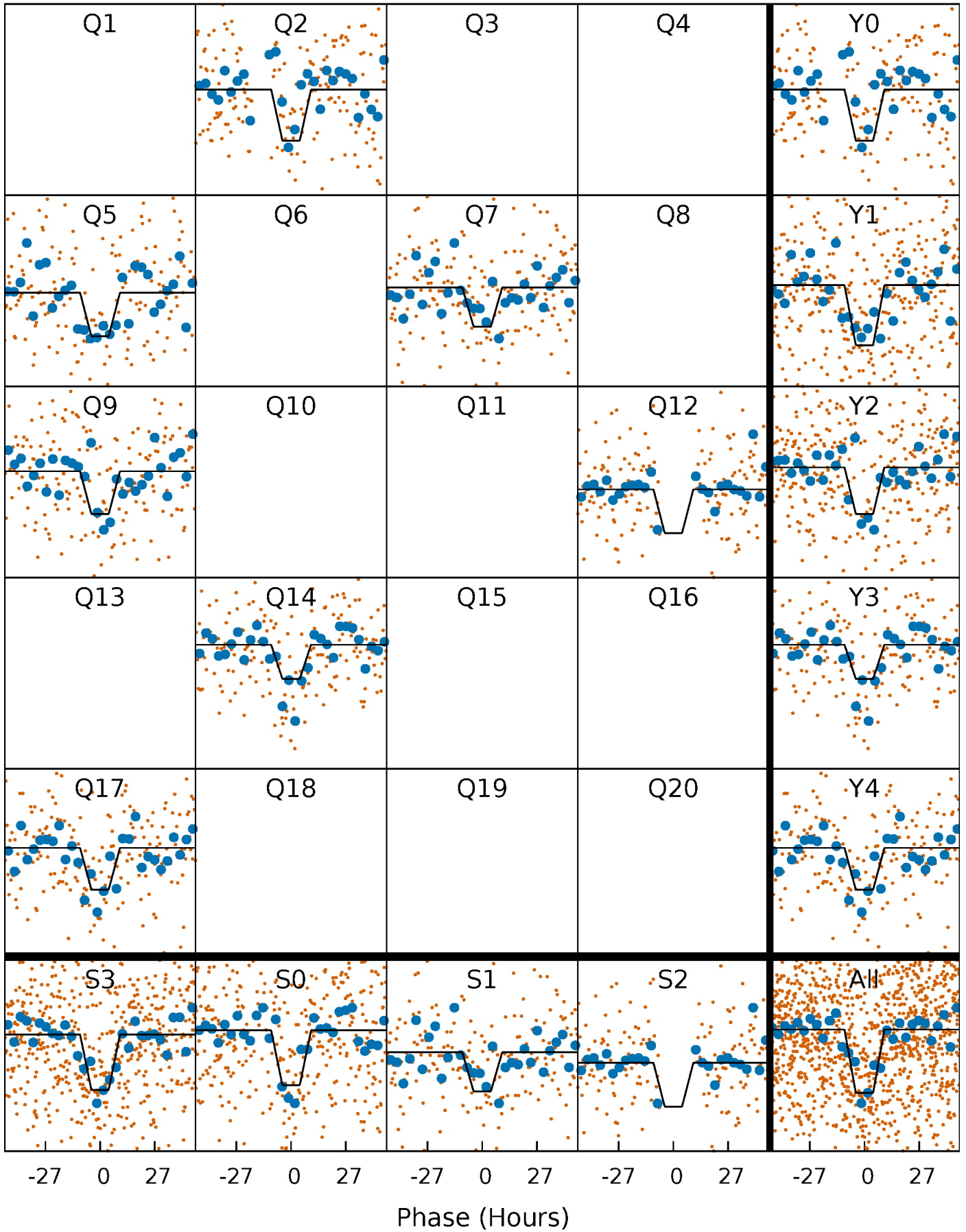
DV Quarter-Phased Transit Curves

TCE 010331279-01 $P=225.490444$ Days $T_0=224.179578$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

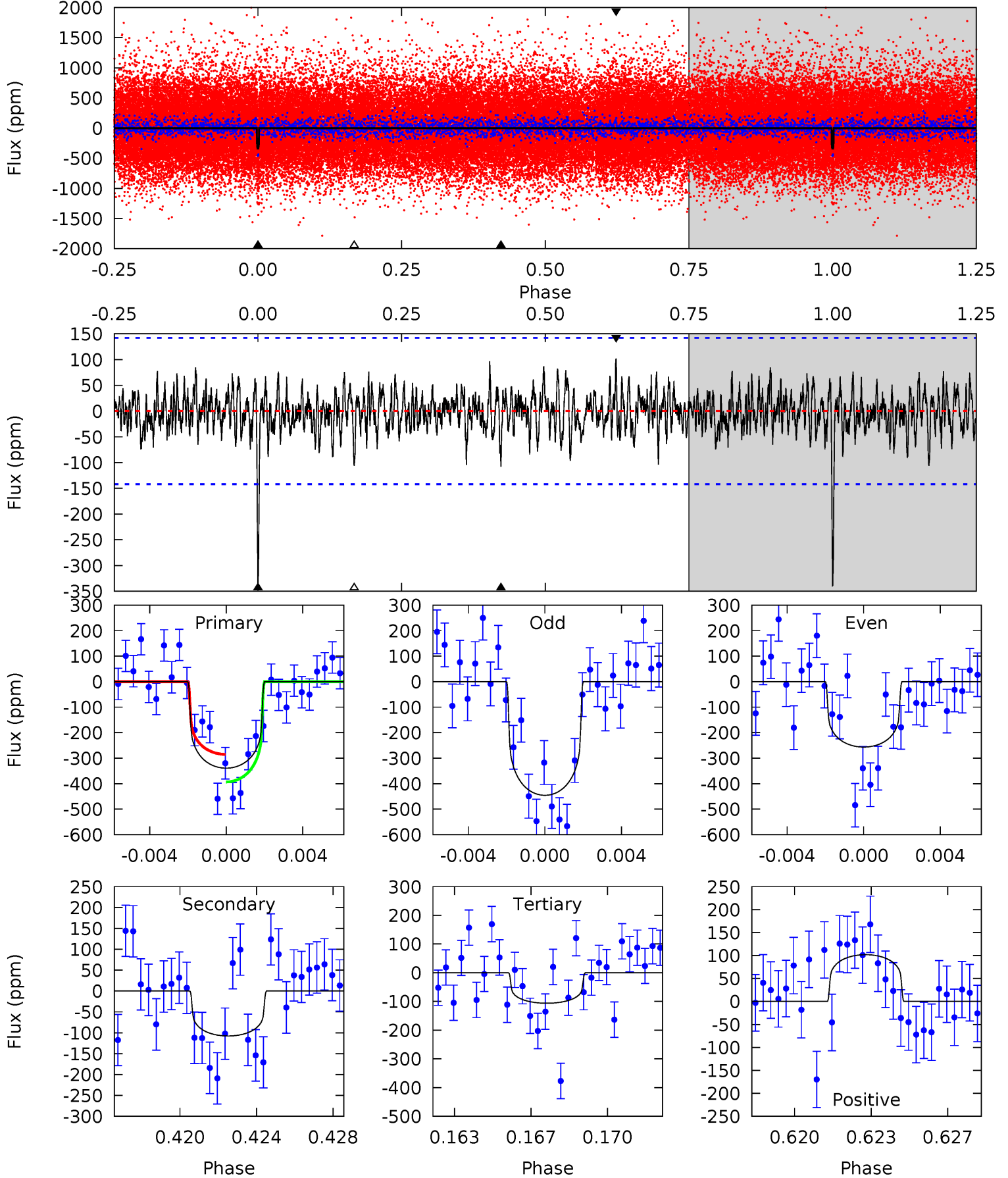
TCE 010331279-01 P=225.470712 Days $T_0=224.276756$ (BKJD)



DV Model-Shift Uniqueness Test

010331279-01, P = 225.490444 Days, E = 224.179578 Days

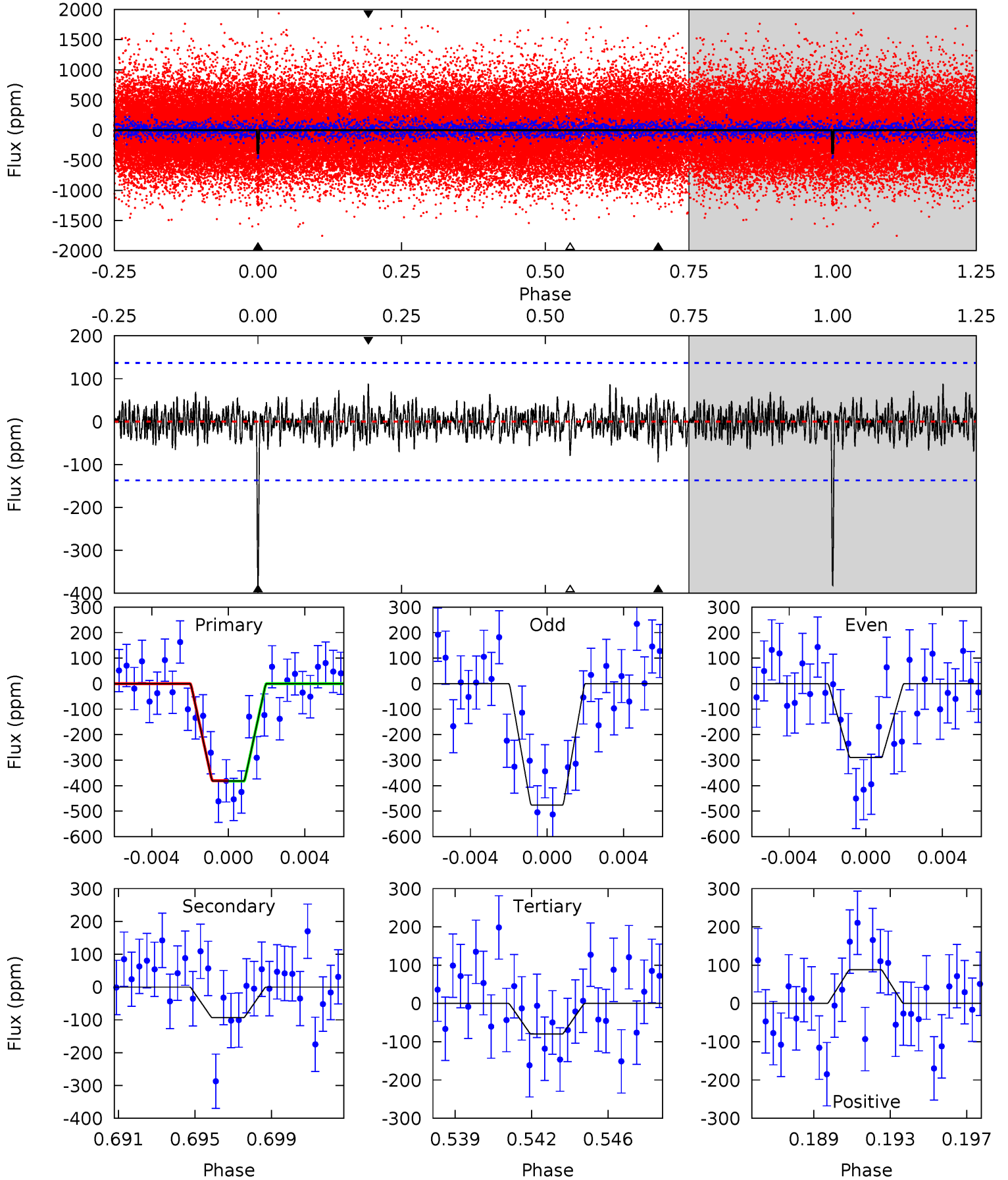
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	3.96	3.90	3.74	5.22	2.91	1.15	8.57	8.73	0.06	0.22	3.47	1.01	0.23	1.98



Alt Model-Shift Uniqueness Test

010331279-01, P = 225.470712 Days, E = 224.276756 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	3.56	3.04	3.36	5.21	2.90	0.95	11.5	11.2	0.52	0.19	3.54	1.05	0.19	0.04



Stellar Parameters For KIC 010331279

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5663^{+169}_{-152}	$4.579^{+0.040}_{-0.160}$	$-0.380^{+0.300}_{-0.300}$	$0.782^{+0.194}_{-0.065}$	$0.847^{+0.097}_{-0.089}$	$2.496^{+0.532}_{-1.105}$
	+3%/-3%	+1%/-3%	+79%/-79%	+25%/-8%	+11%/-11%	+21%/-44%
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 010331279-01 / KOI 8000.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-108 ± 27	$1.66^{+0.59}_{-0.61}$	380^{+22}_{-15}	4419^{+899}_{-521}	9604^{+14241}_{-4643}
Alt.	-93 ± 26	$1.77^{+0.65}_{-0.60}$	381^{+23}_{-16}	4211^{+731}_{-493}	7538^{+9725}_{-3850}

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 $A_{obs} \gg 1.0$

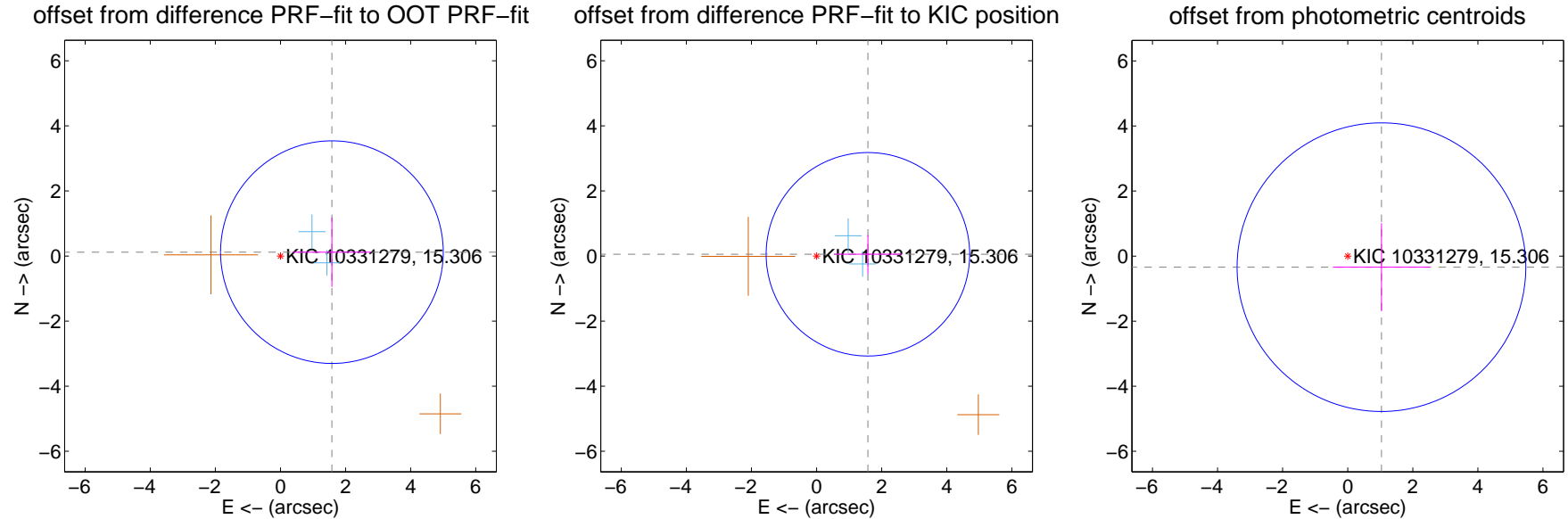
DV Centroid Data

Supplemental centroid analysis for 010331279-01. Kepler magnitude: 15.31. Transit SNR 9.22

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.586 ± 1.140	1.39	-1.581 ± 1.211	0.119 ± 1.065
PRF-fit source offset from KIC position	1.578 ± 1.042	1.51	-1.577 ± 1.043	0.053 ± 0.590
photometric centroid source offset	1.09 ± 1.48	0.74	-1.04 ± 1.49	-0.34 ± 1.35

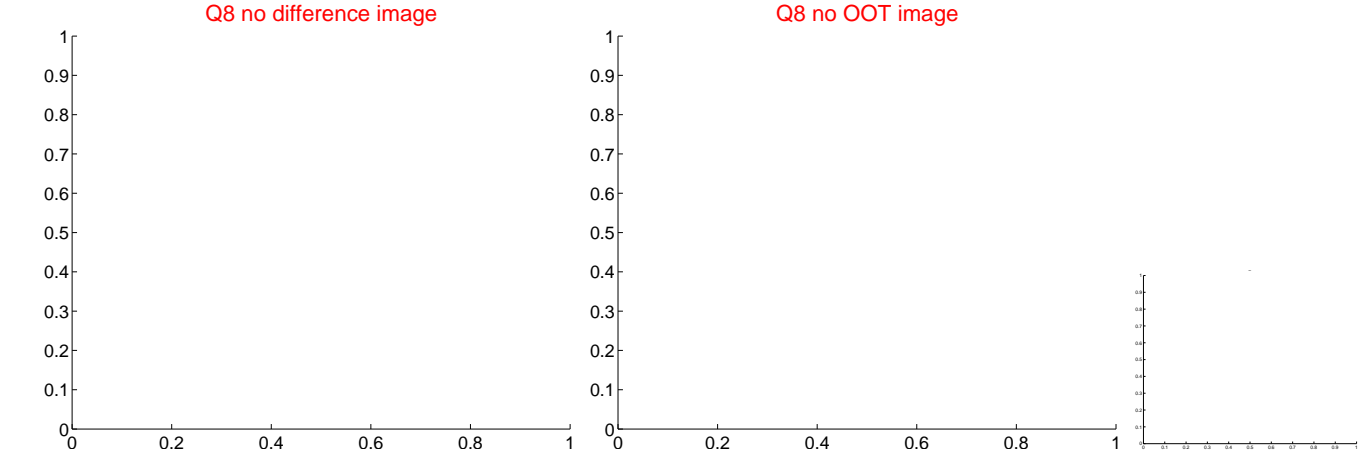
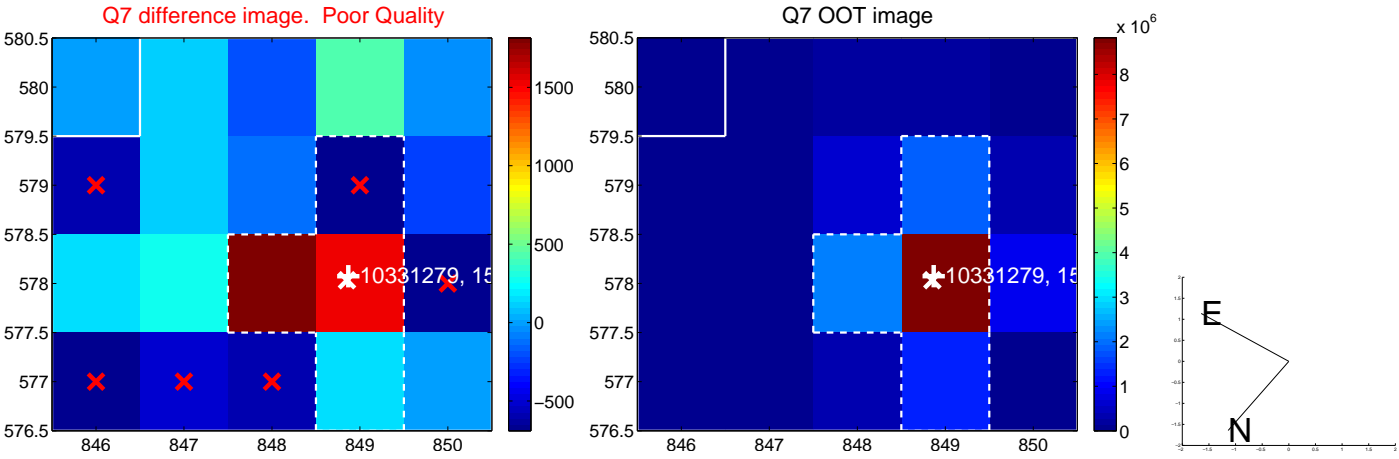
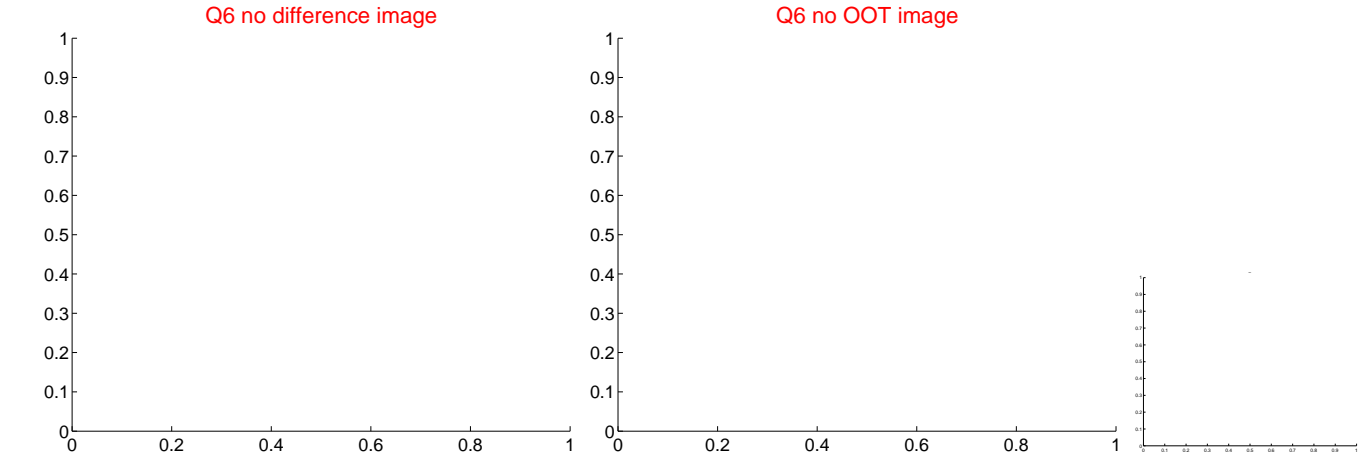
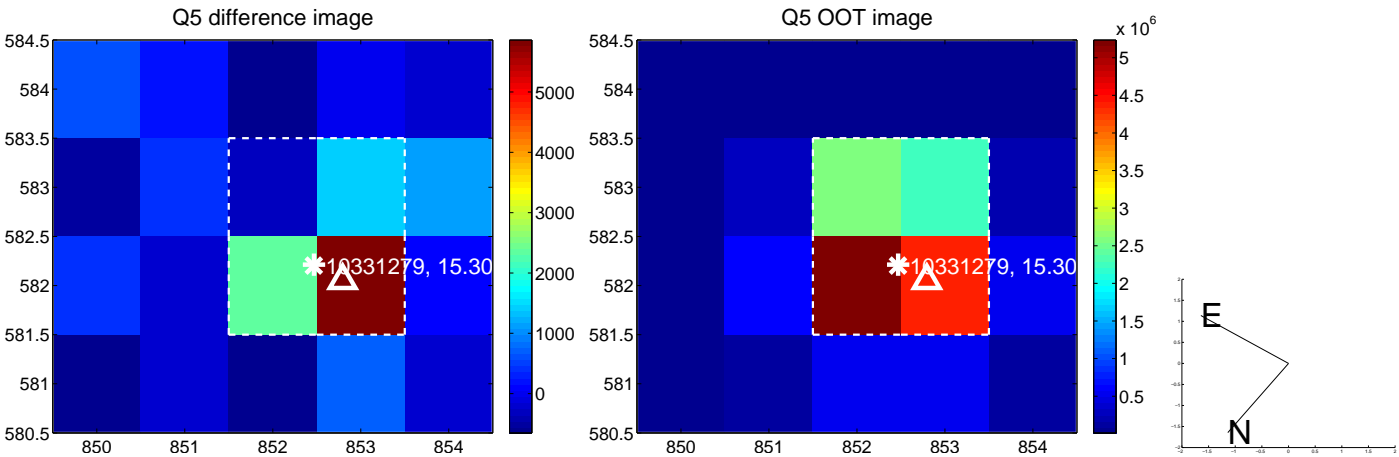


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

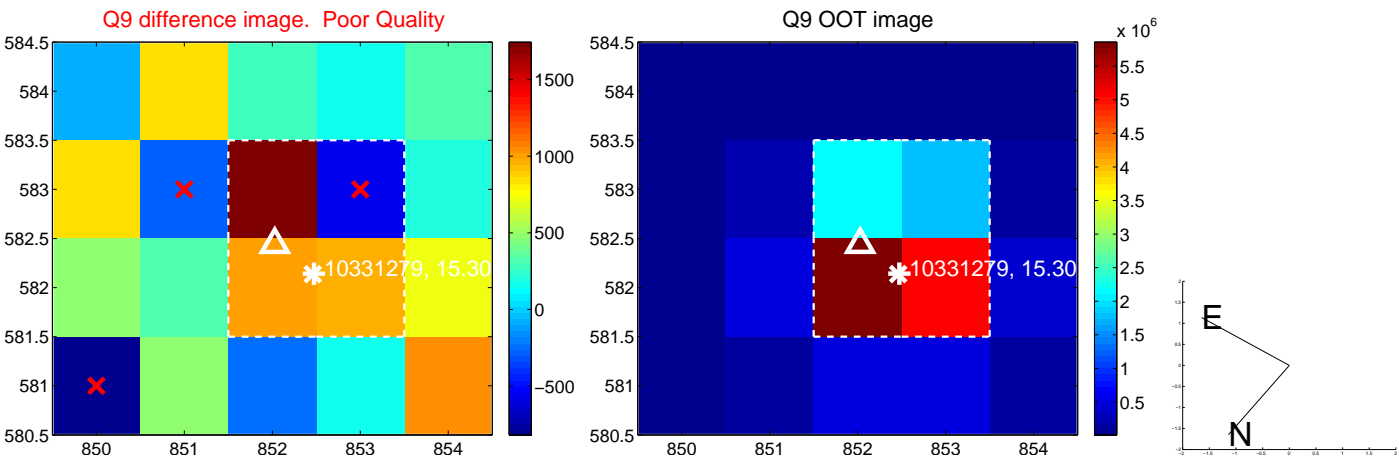
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



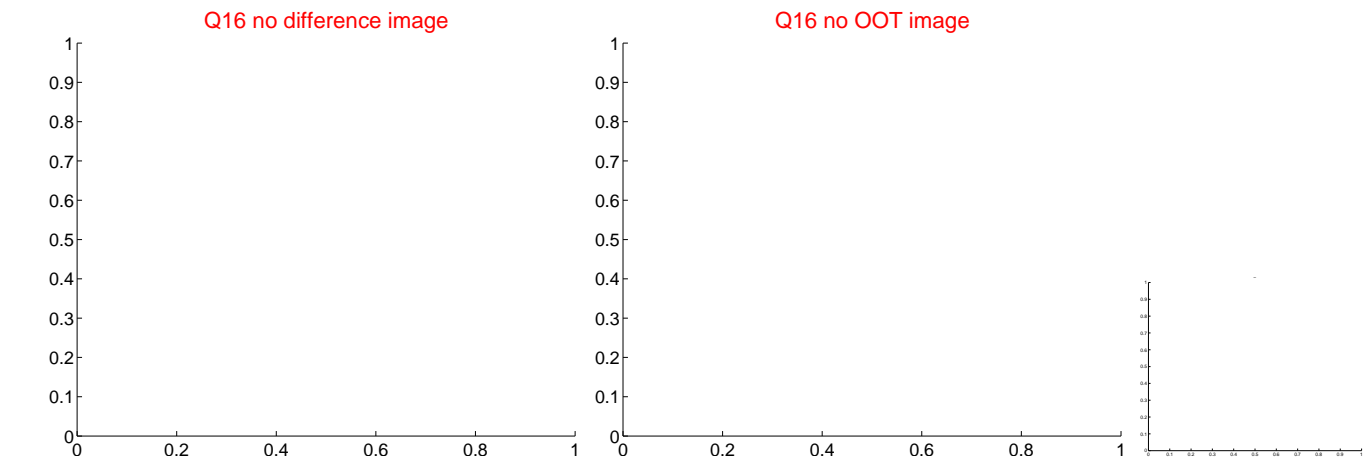
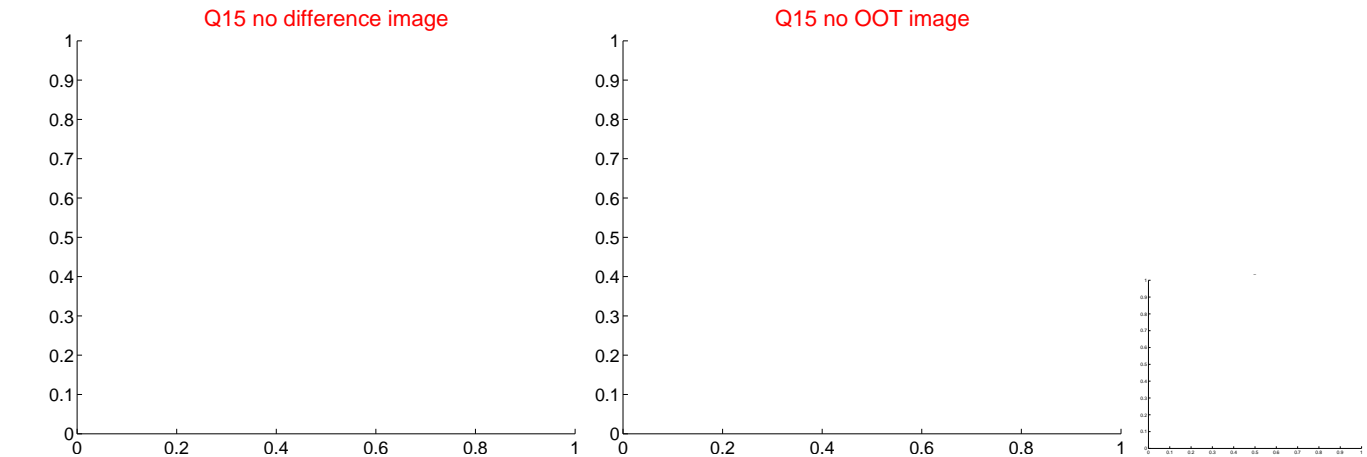
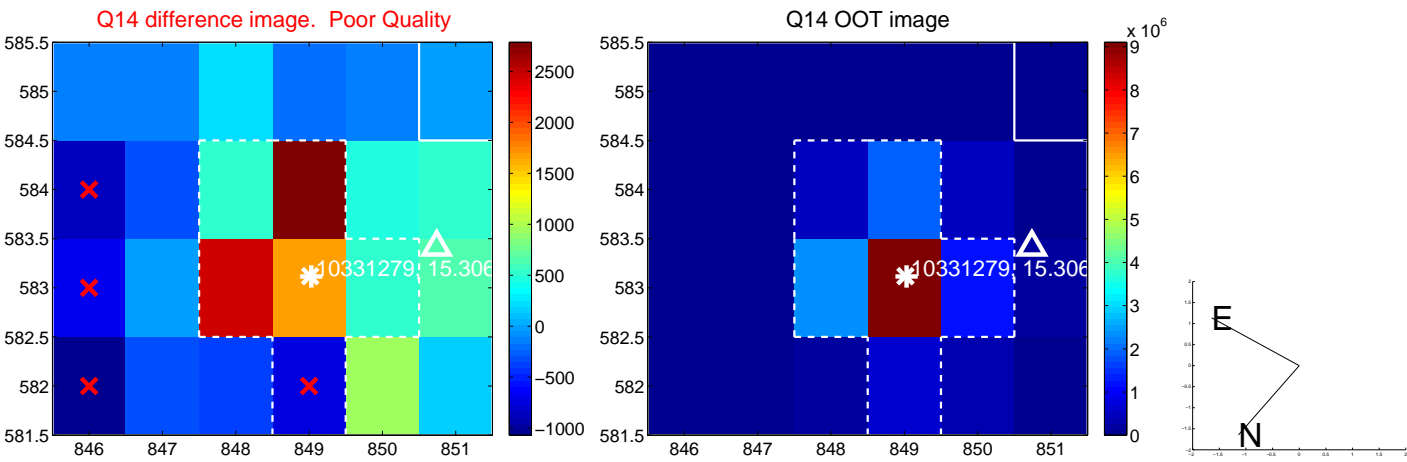
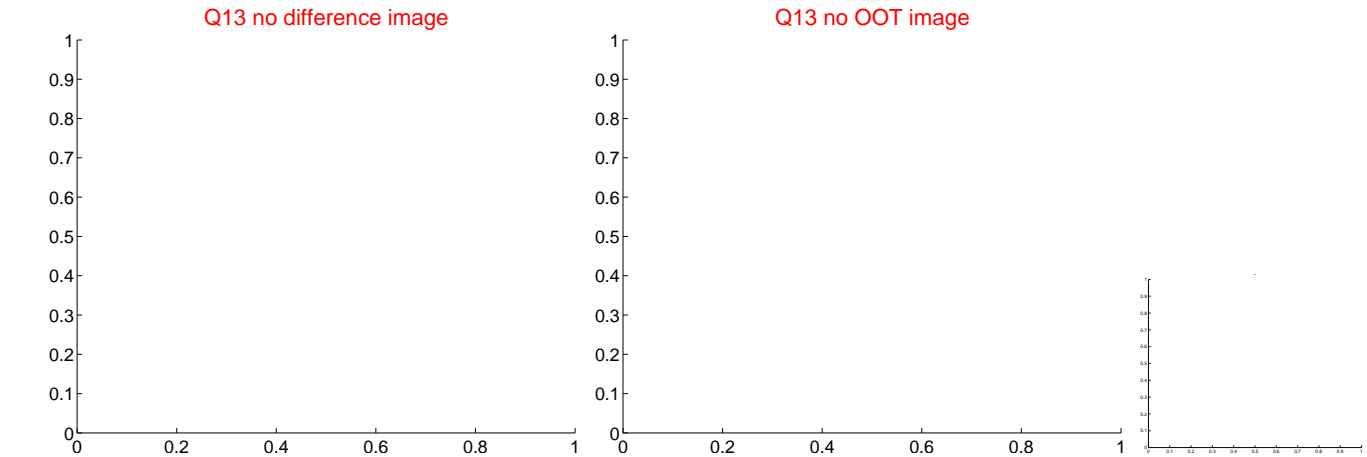
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



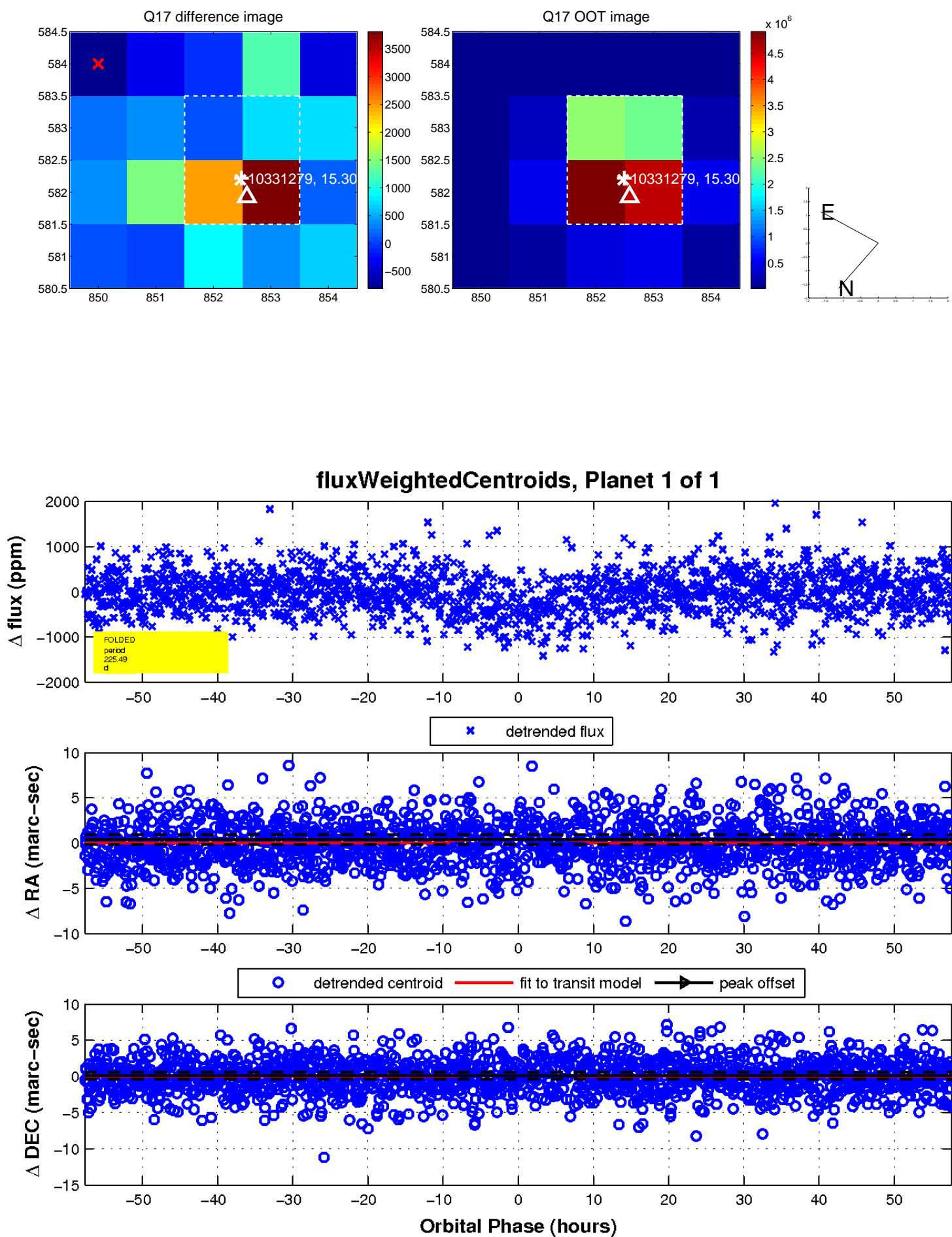
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

