

KIC 004489264

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})
004489264-01	OBS	No	465.878413	424.315960	219.9	13.616	7.1	6.6	1.47	5734	2.42	1.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004489264-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—CENT_FEW_DIFFS

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

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

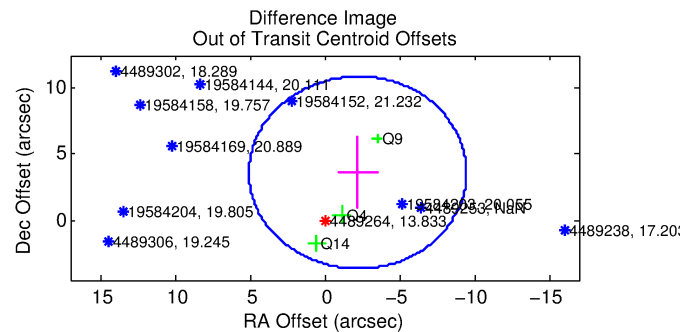
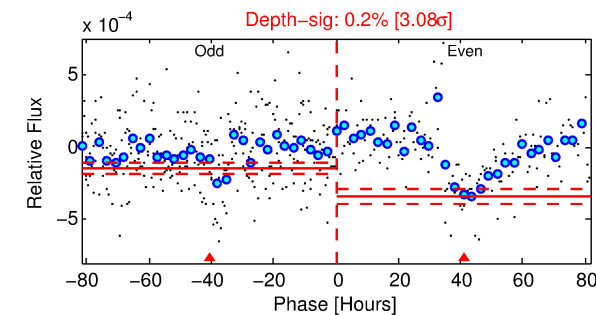
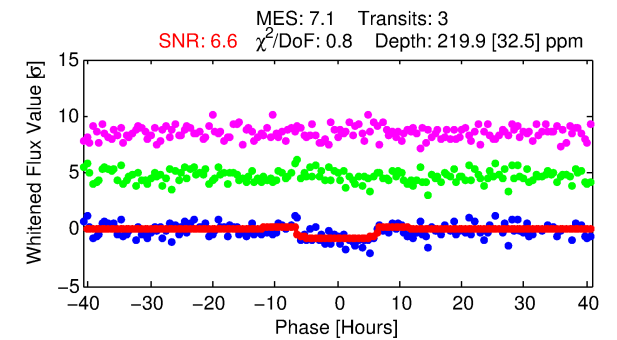
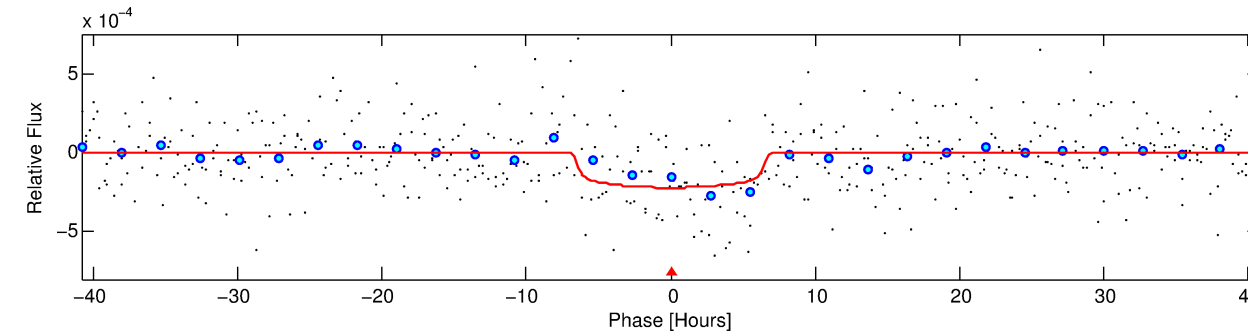
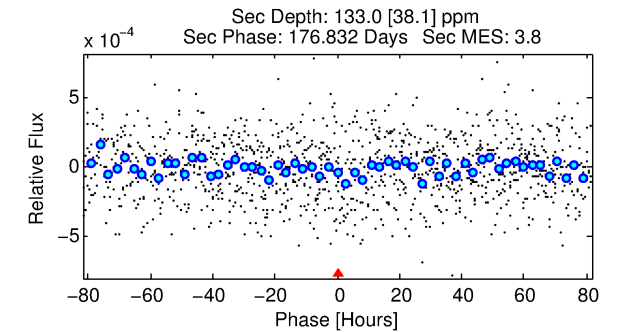
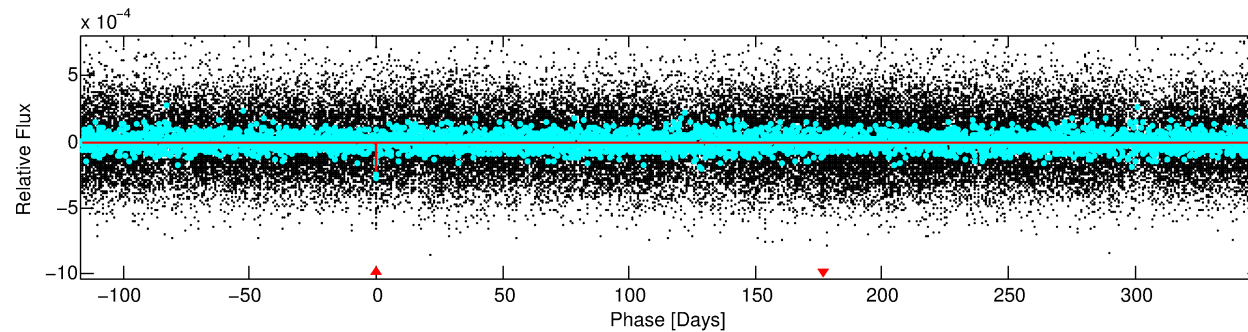
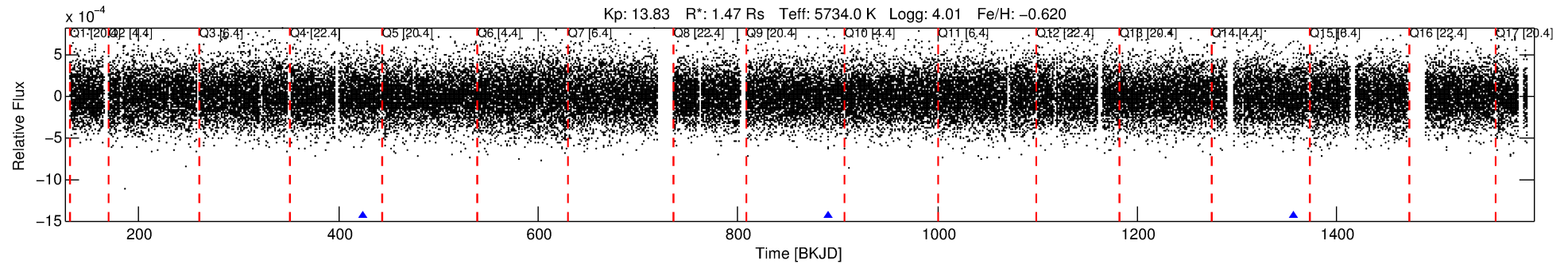
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004489264-01

No Significant Match Found

DV One-Page Summary

KIC: 4489264 Candidate: 1 of 1 Period: 465.878 d



DV Fit Results:

Period = 465.87841 [0.01678] d
Epoch = 424.3160 [0.0225] BKJD
Rp/R* = 0.0151 [0.0051]
a/R* = 161.57 [265.12]
b = 0.81 [0.72]
Seff = 1.75 [1.58]
Teq = 293 [66] K
Rp = 2.42 [1.47] Re
a = 1.0957 [0.5835] AU
Ag = 14953.27 [17321.97] [0.86σ]
Teffp = 5015 [937] K [5.02σ]

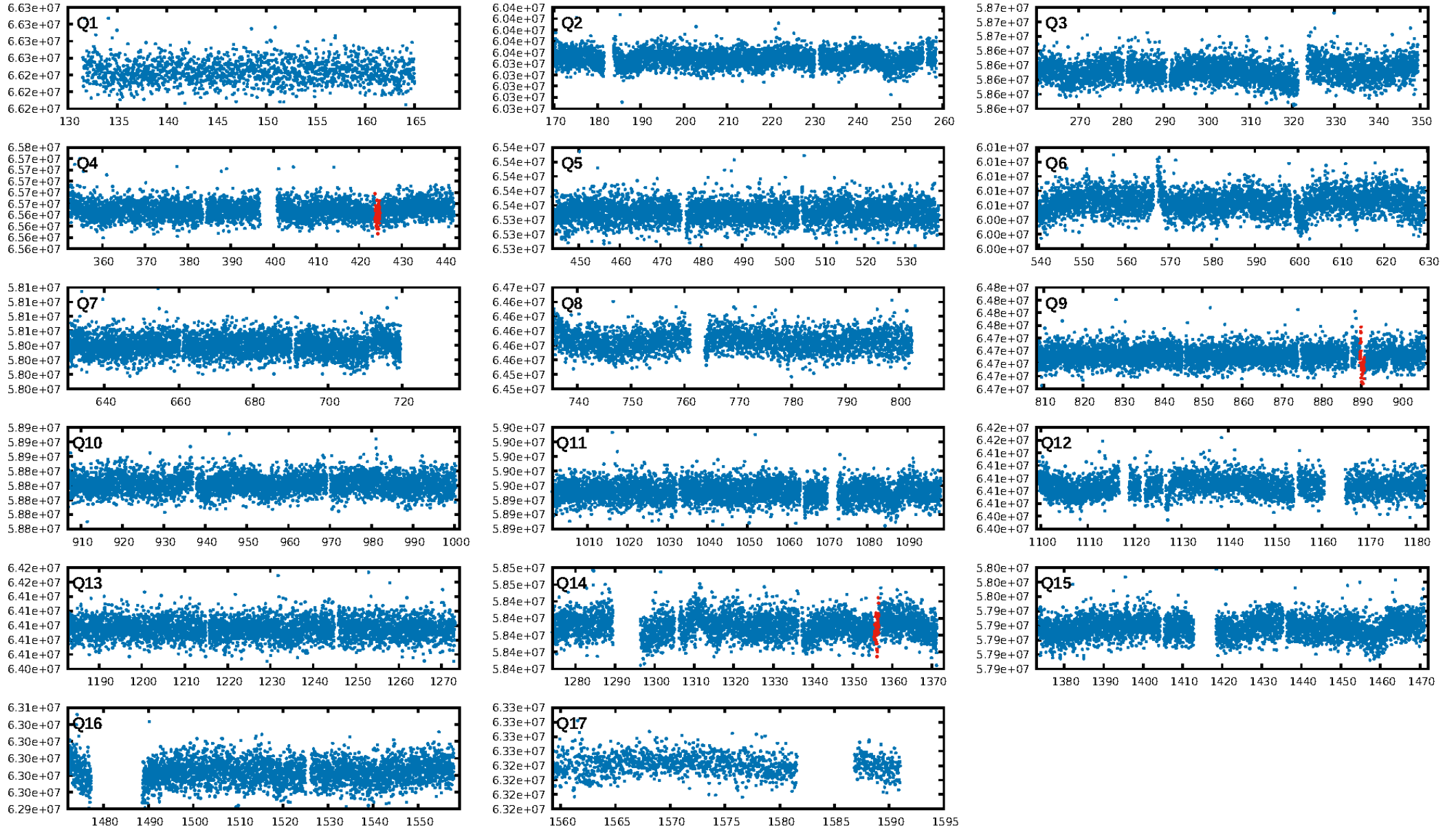
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 7.4%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 4.90e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.208
Centroid-sig: 10.8%
Centroid-so: 1.560 arcsec [0.83σ]
OotOffset-rm: 4.252 arcsec [1.75σ]
KicOffset-rm: 4.020 arcsec [1.66σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

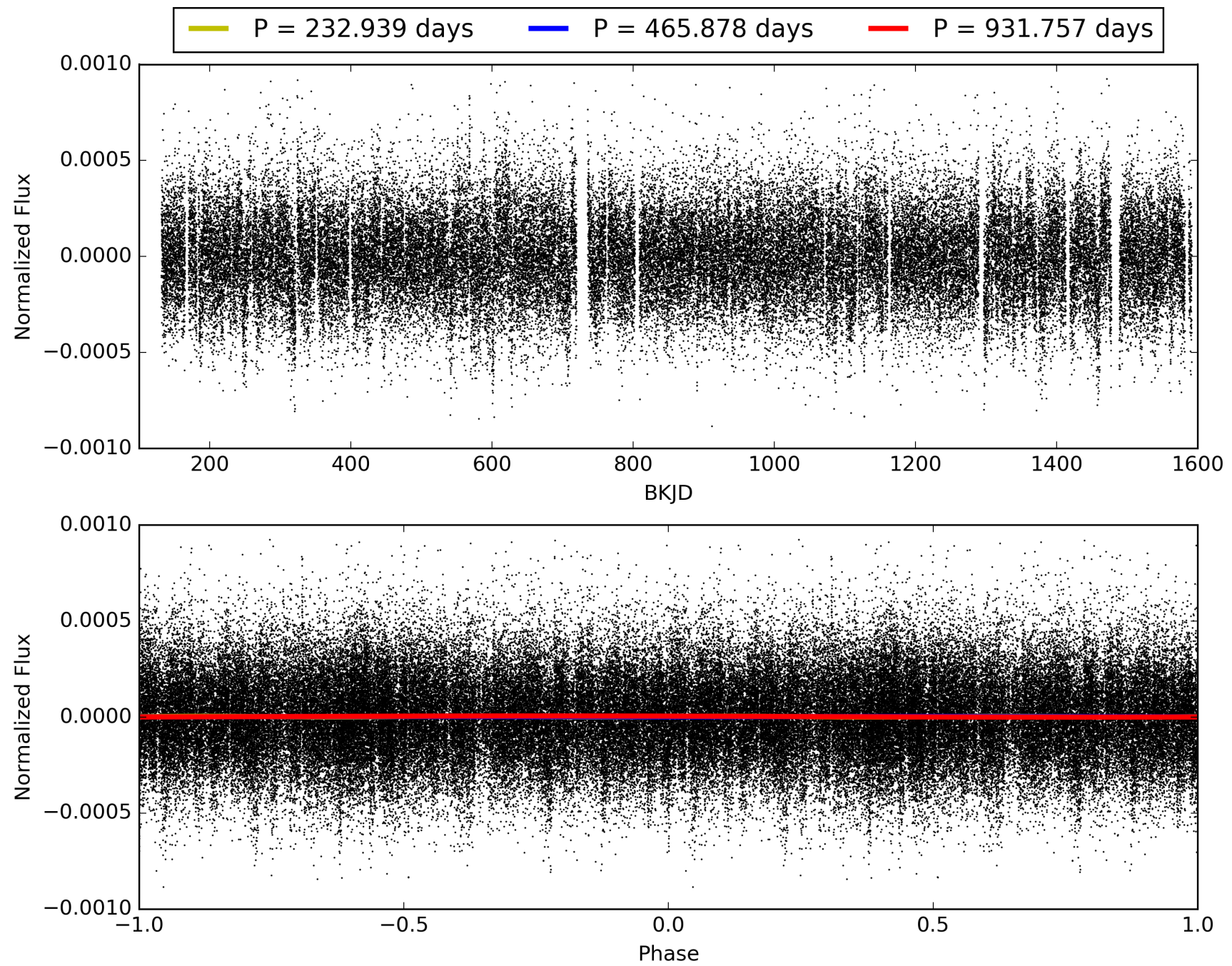
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:40:22 Z

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

TCE 004489264-01, PDC Light Curves

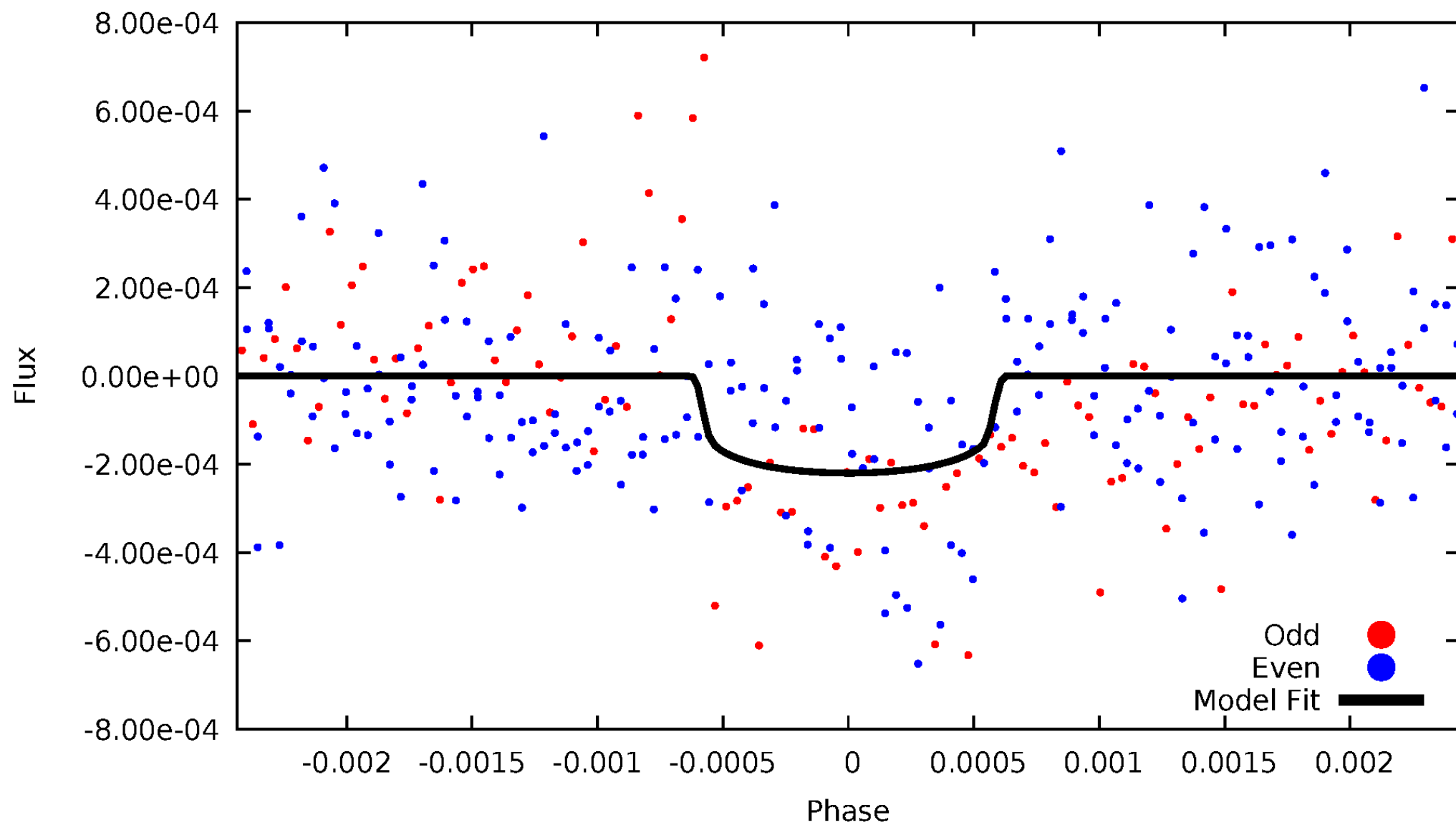


TCE 004489264-01



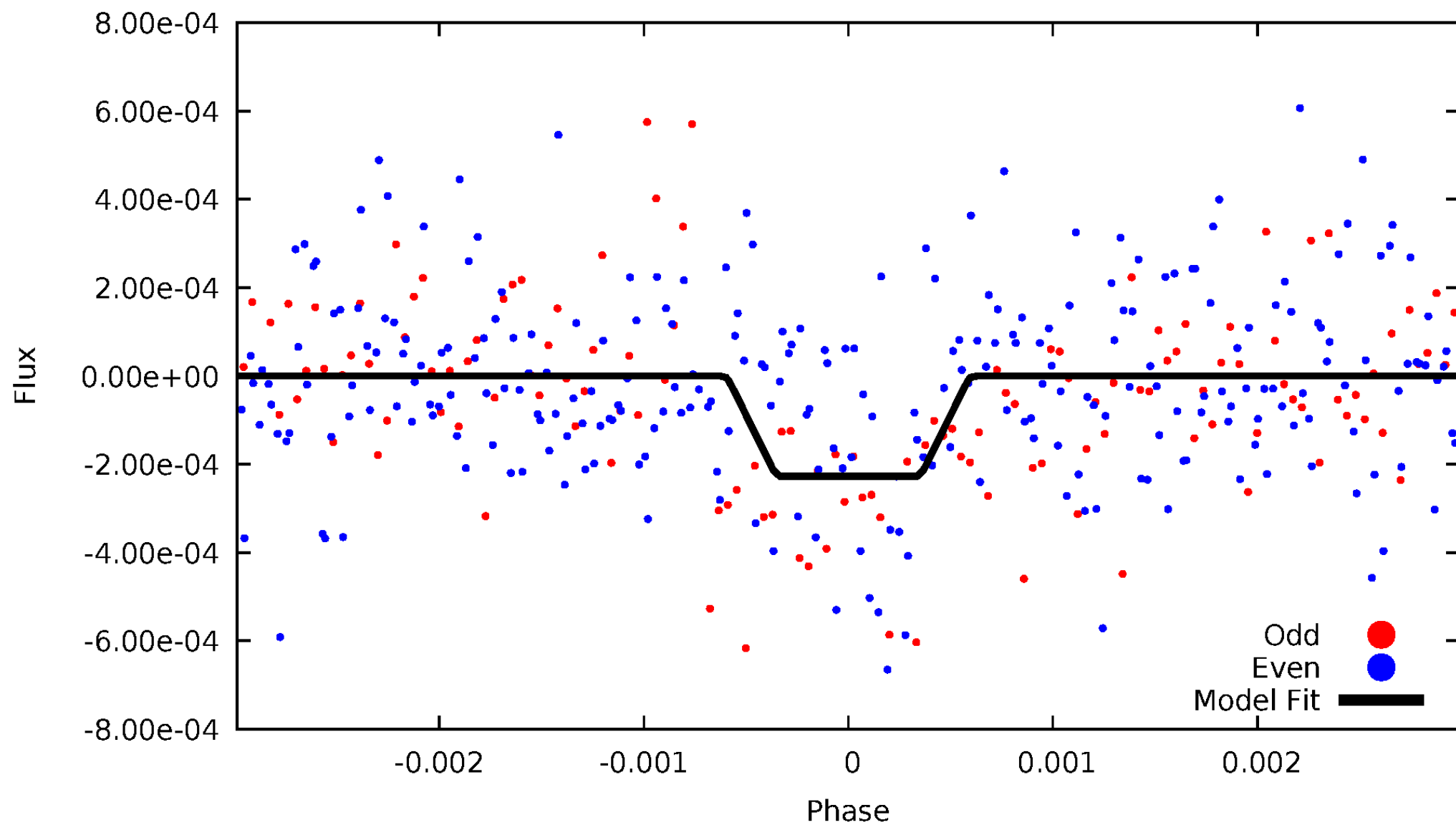
DV Odd/Even

TCE 004489264-01



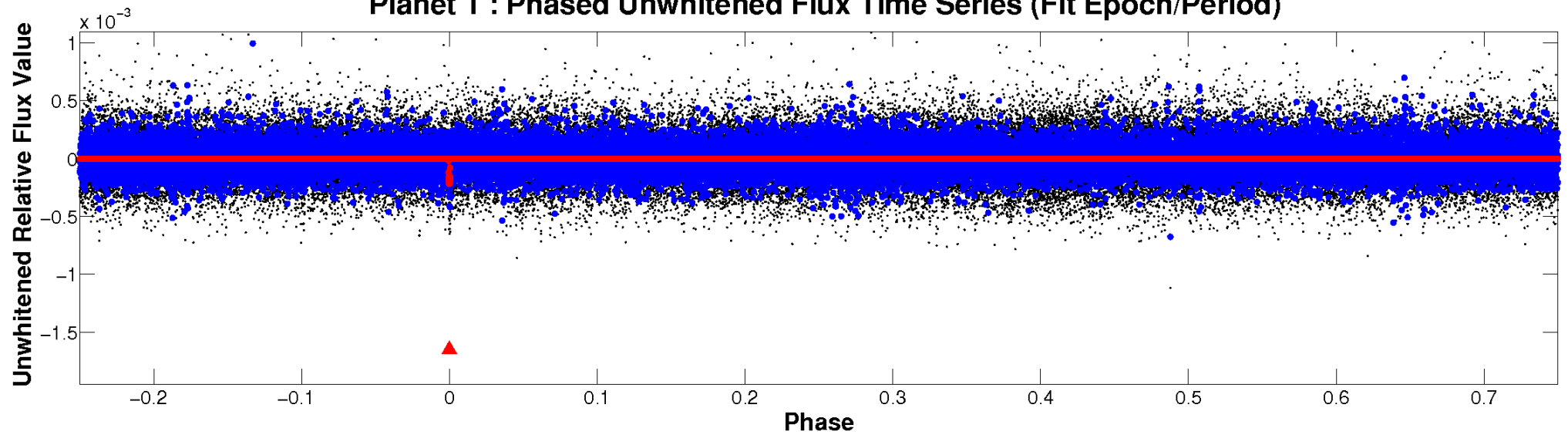
ALT Odd/Even

TCE 004489264-01

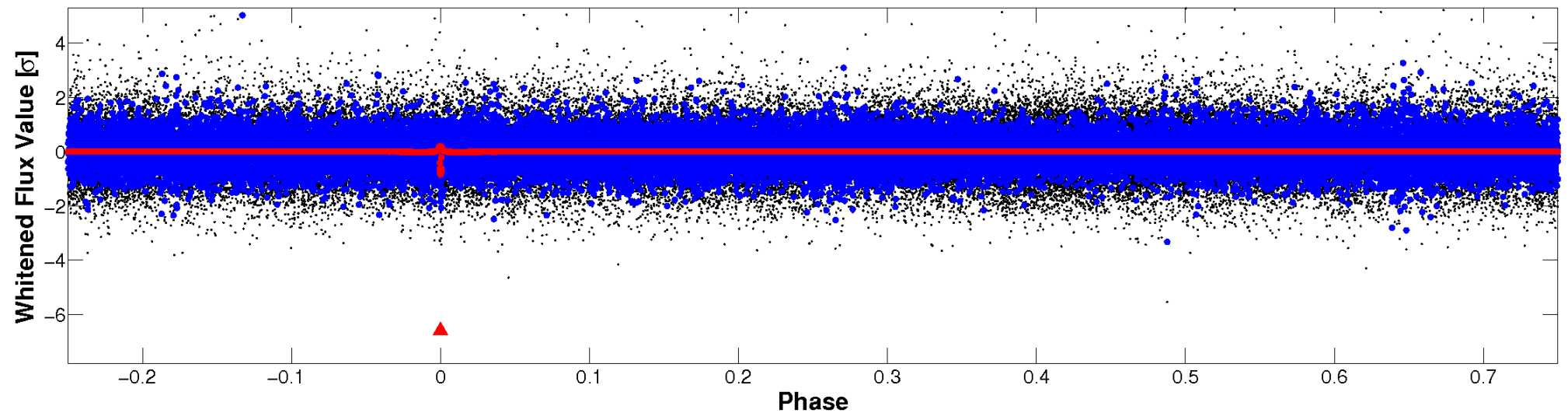


Non-Whitened Vs. Whitened Light Curve

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

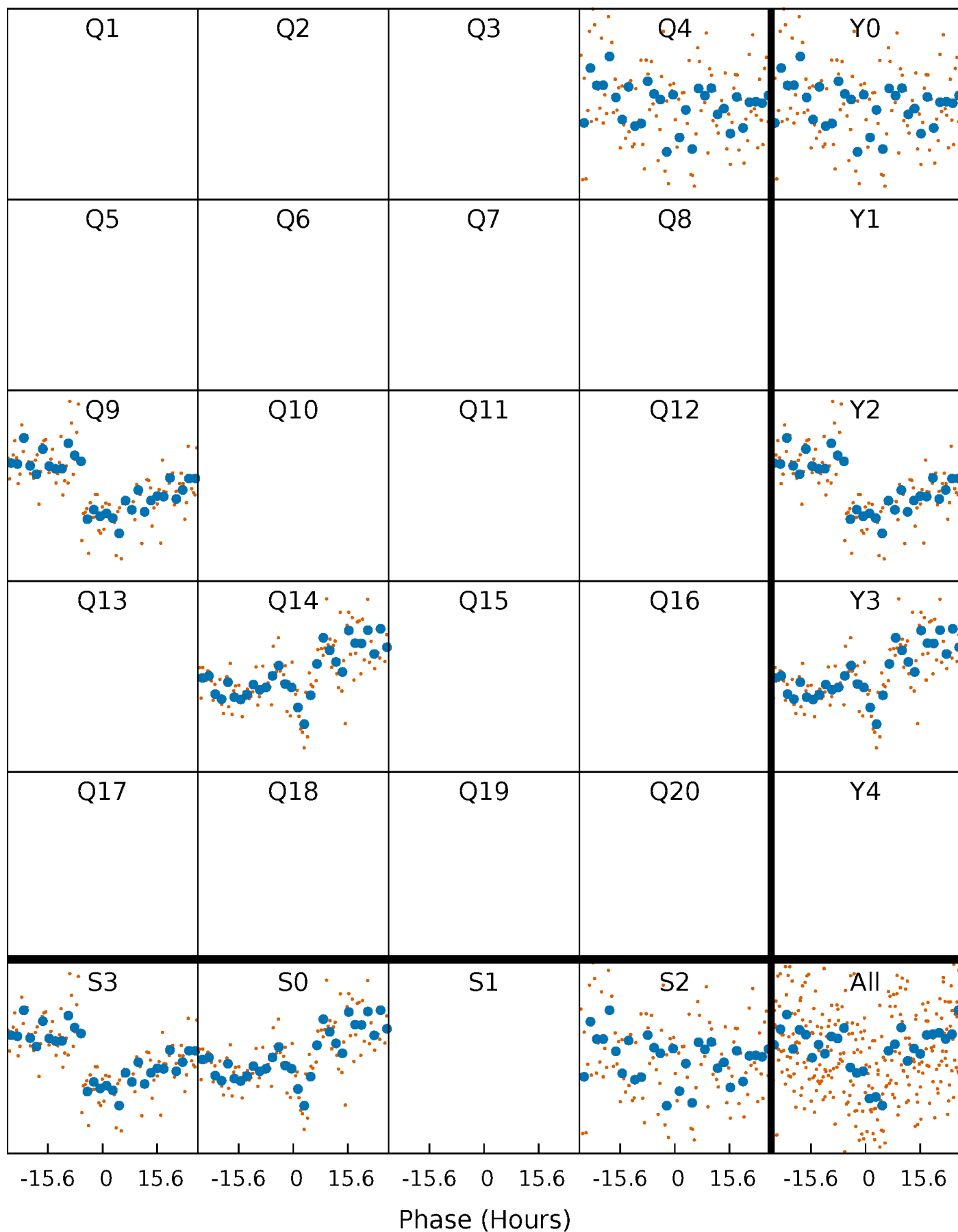


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



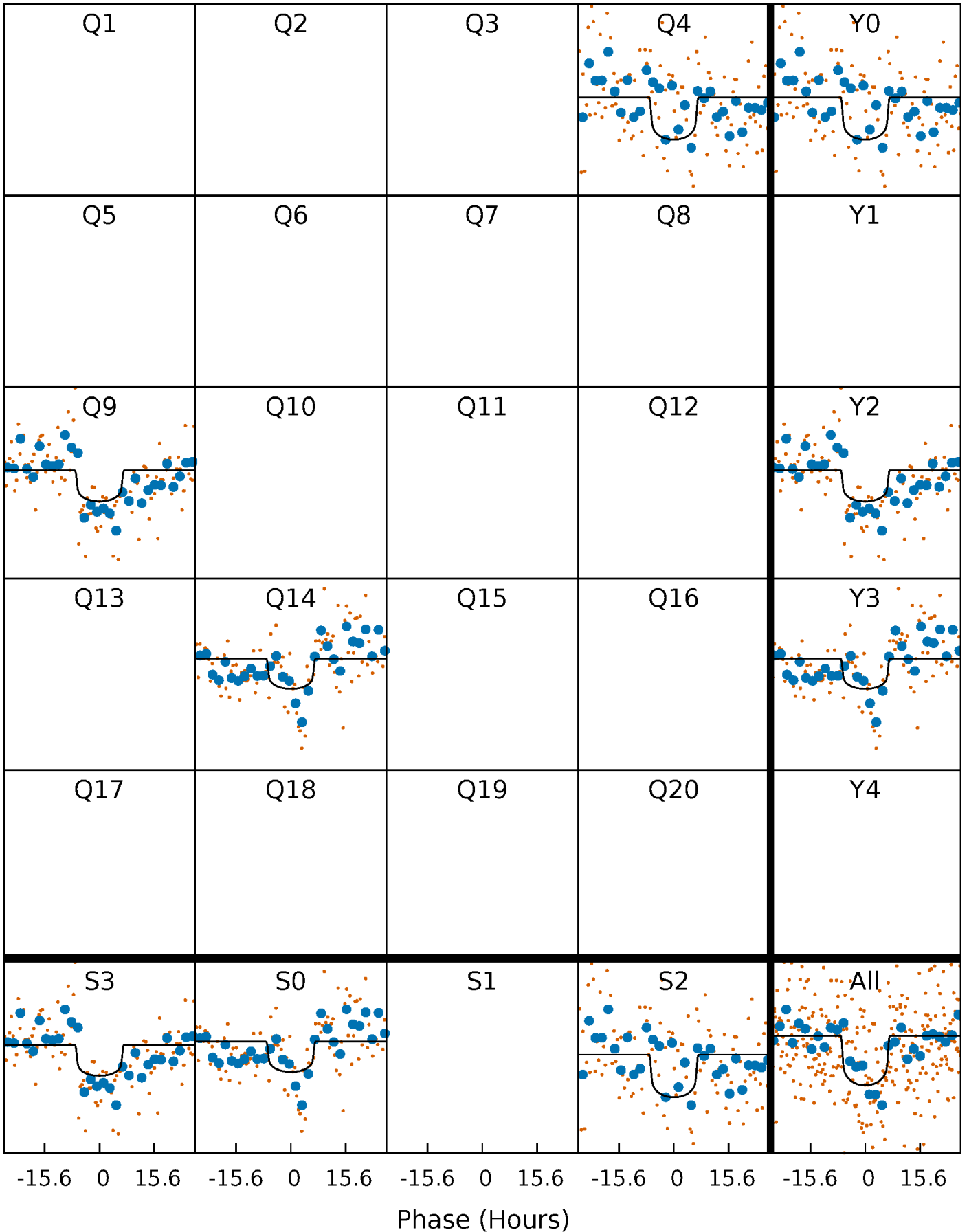
PDC Quarter-Phased Transit Curves

TCE 004489264-01 P=465.878413 Days $T_0=424.315960$ (BKJD)



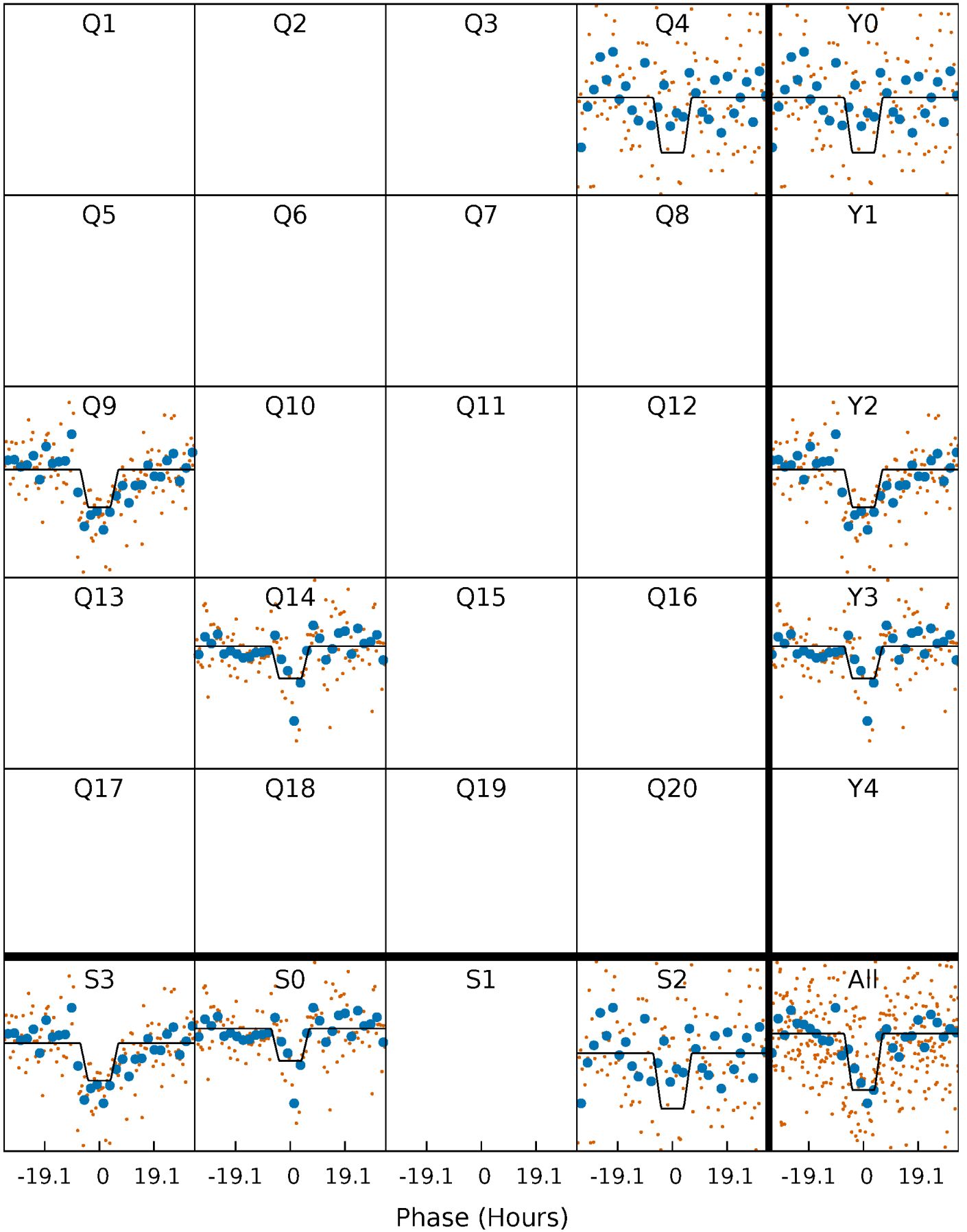
DV Quarter-Phased Transit Curves

TCE 004489264-01 P=465.878413 Days $T_0=424.315960$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

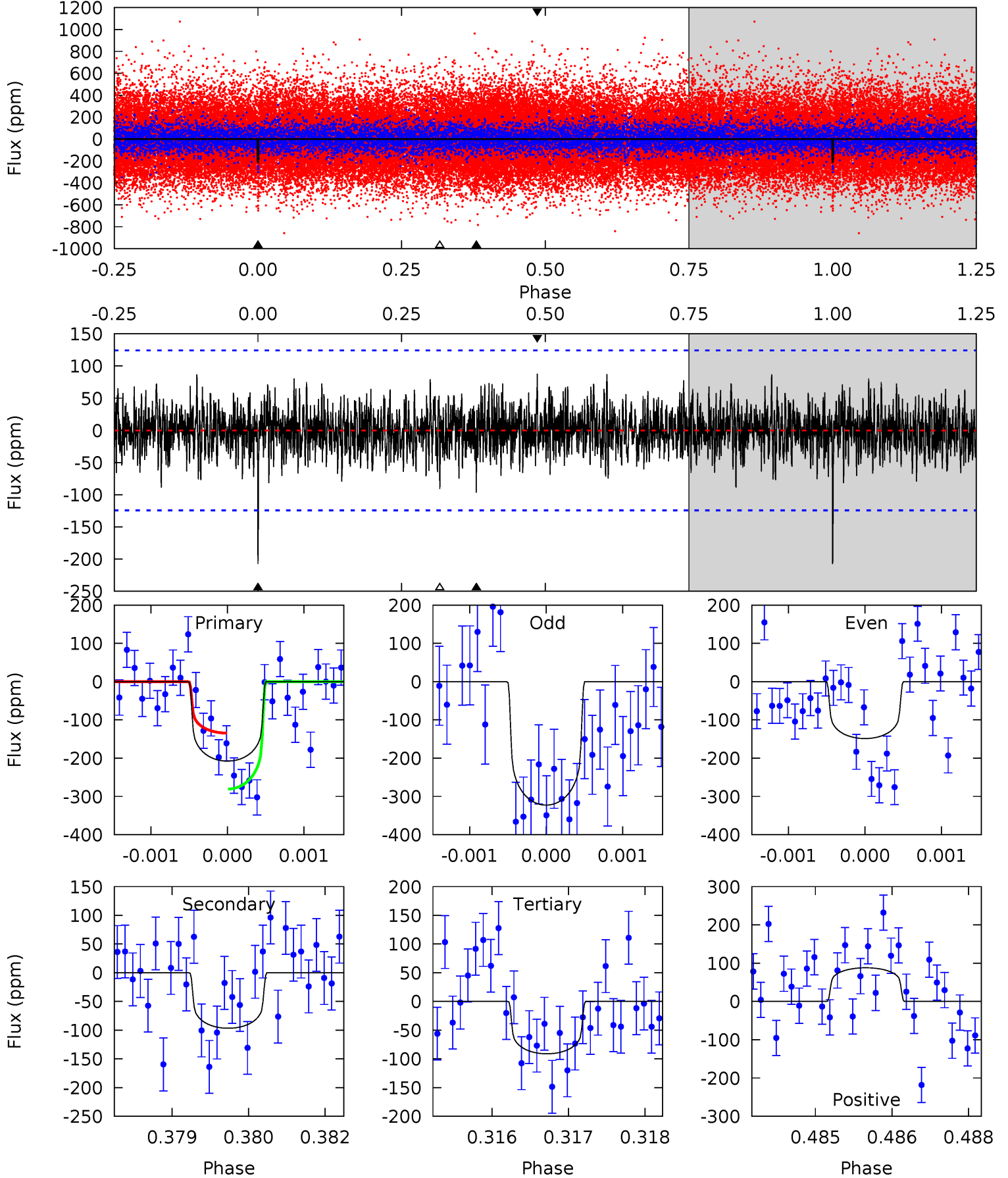
TCE 004489264-01 P=465.851112 Days $T_0=424.411016$ (BKJD)



DV Model-Shift Uniqueness Test

004489264-01, P = 465.878413 Days, E = 424.315960 Days

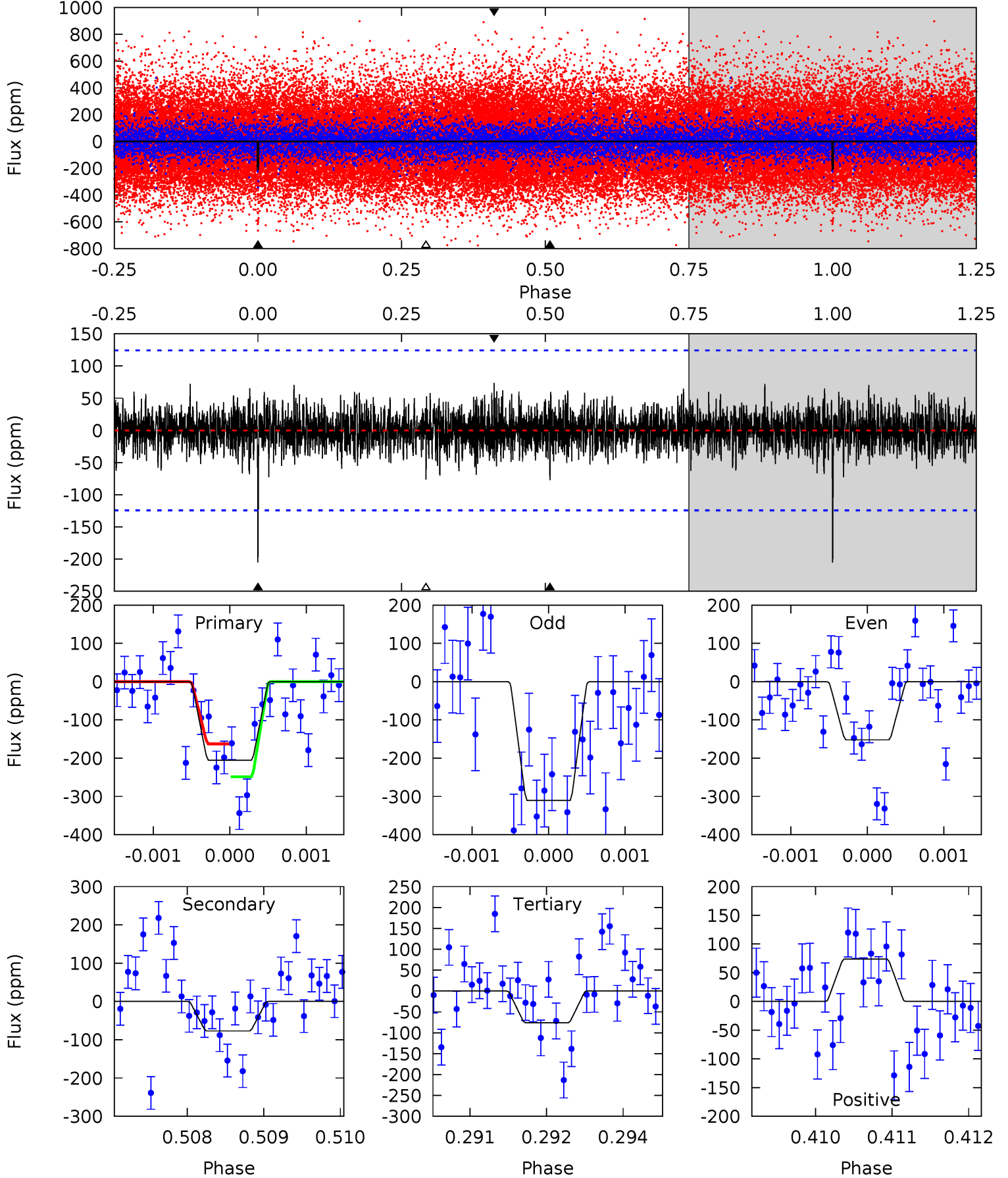
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.05	4.21	3.97	3.83	5.41	3.23	1.15	5.08	5.22	0.24	0.38	3.62	0.99	0.30	3.19



Alt Model-Shift Uniqueness Test

004489264-01, P = 465.851112 Days, E = 424.411016 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.96	3.37	3.33	3.22	5.42	3.24	0.94	5.63	5.73	0.04	0.14	3.29	0.89	0.26	1.87



Stellar Parameters For KIC 004489264

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5734^{+171}_{-171}	$4.009^{+0.539}_{-0.231}$	$-0.620^{+0.350}_{-0.250}$	$1.473^{+0.556}_{-0.741}$	$0.808^{+0.096}_{-0.070}$	$0.357^{+2.093}_{-0.205}$
	+3%/-3%	+13%/-6%	+56%/-40%	+38%/-50%	+12%/-9%	+587%/-57%
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 004489264-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-97 ± 23	$2.26^{+1.08}_{-0.94}$	403^{+45}_{-54}	4724^{+980}_{-552}	11805^{+23982}_{-6355}
Alt.	-77 ± 23	$2.31^{+1.05}_{-0.89}$	408^{+41}_{-55}	4539^{+837}_{-560}	9247^{+17328}_{-5310}

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

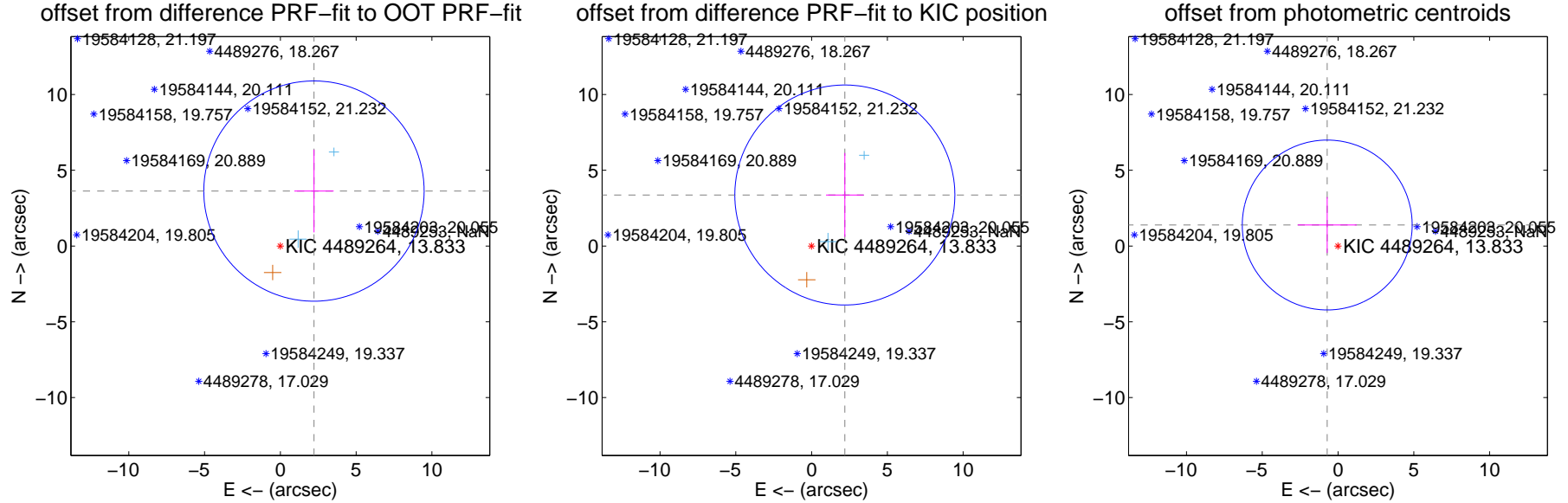
DV Centroid Data

Supplemental centroid analysis for 004489264-01. Kepler magnitude: 13.83. Transit SNR 6.55

There are 2 quarters with good PRF difference image offsets

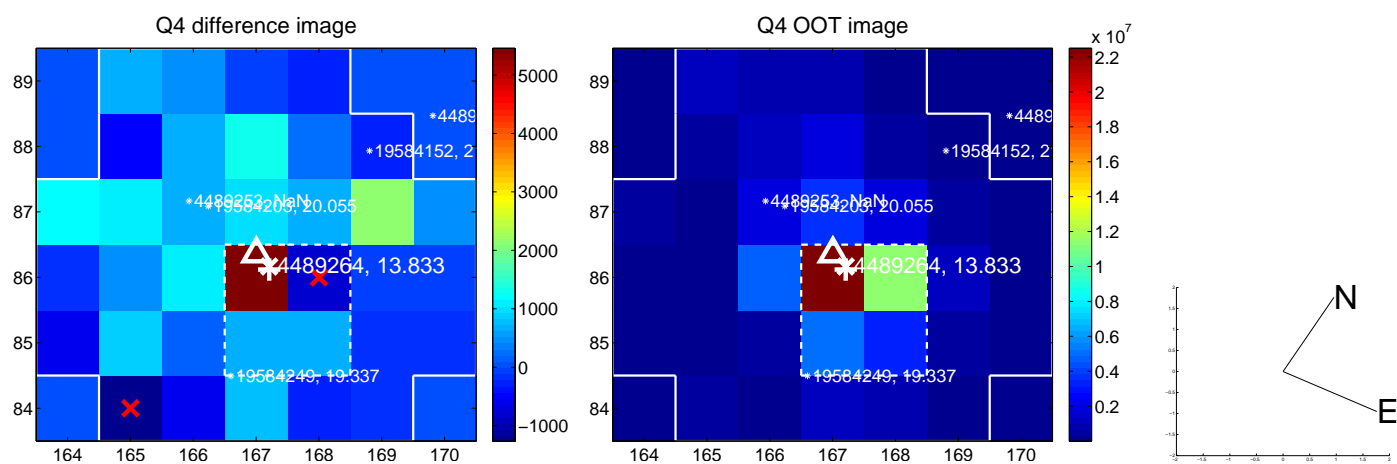
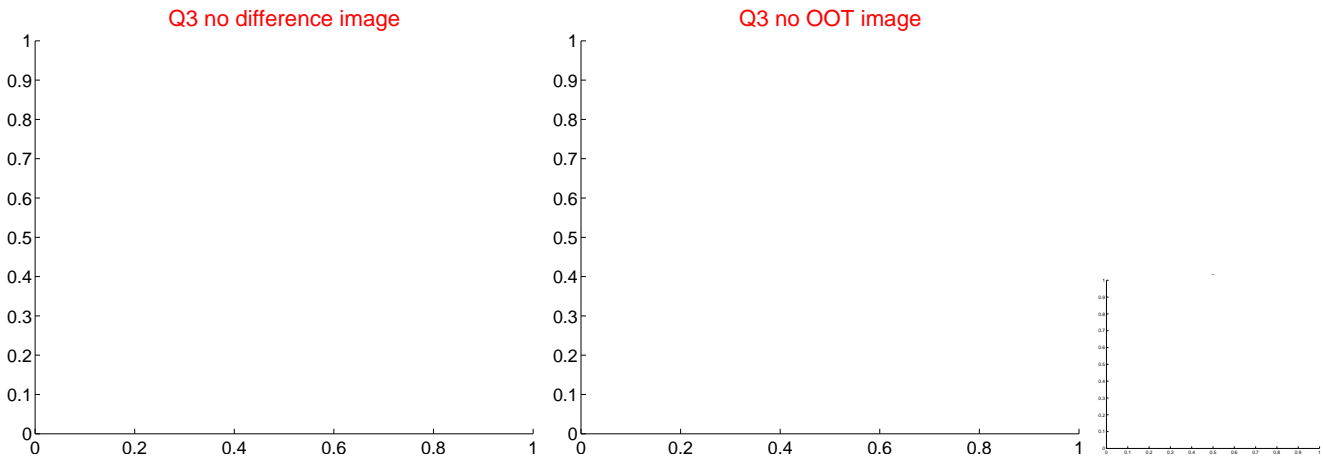
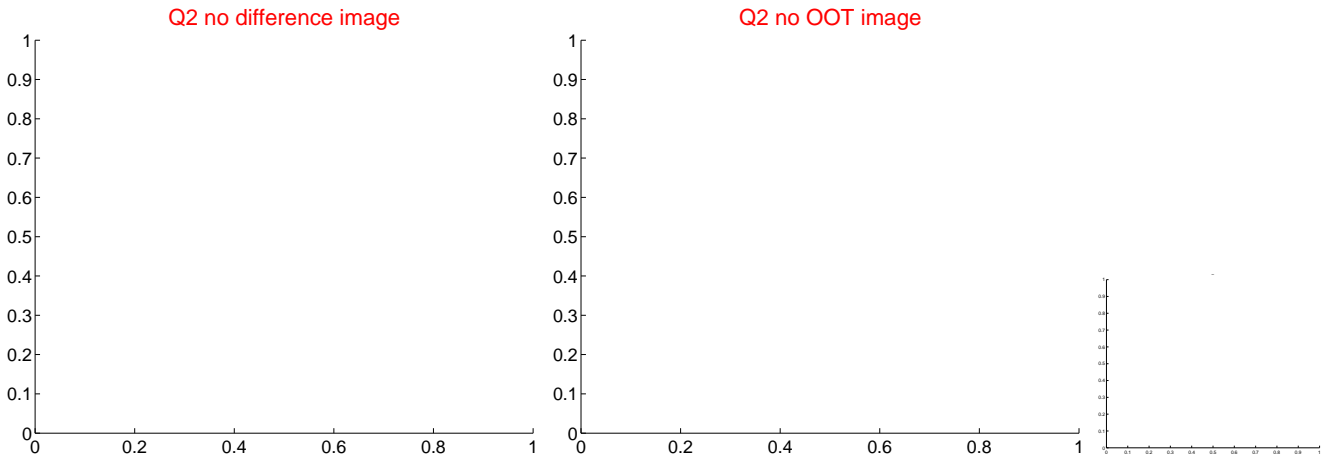
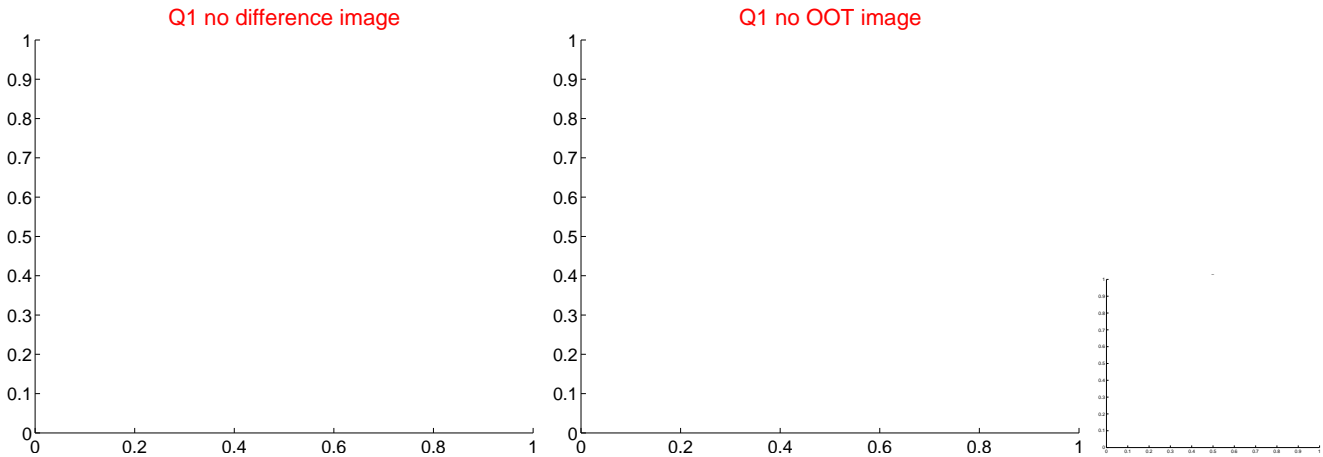
The direct PRF centroid is offset from the target star catalog position by about 0.51 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.252 ± 2.423	1.75	-2.218 ± 1.295	3.627 ± 2.728
PRF-fit source offset from KIC position	4.020 ± 2.420	1.66	-2.195 ± 1.246	3.368 ± 2.773
photometric centroid source offset	1.56 ± 1.87	0.83	0.71 ± 1.95	1.39 ± 1.85



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.

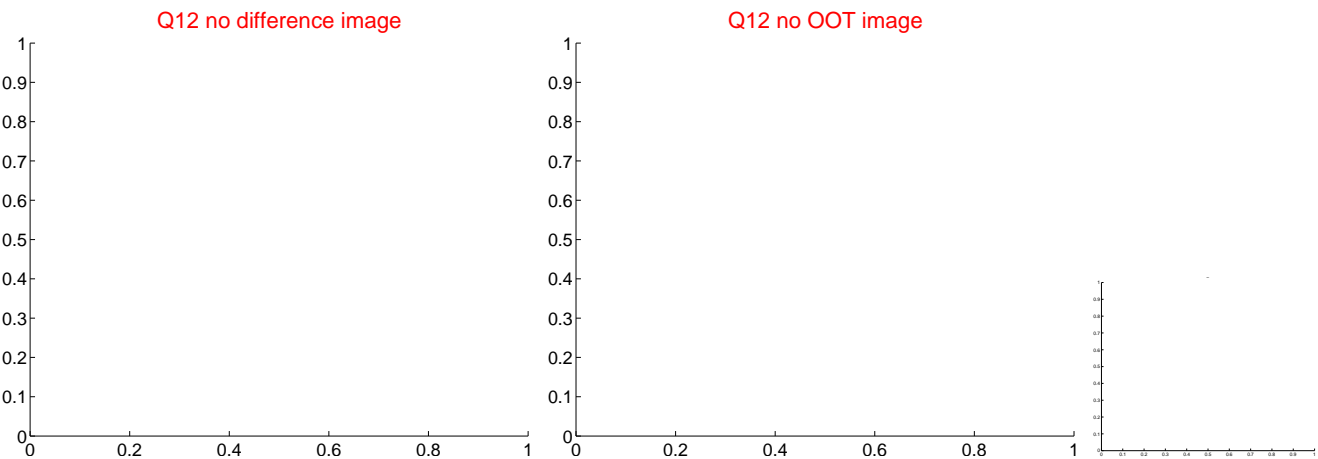
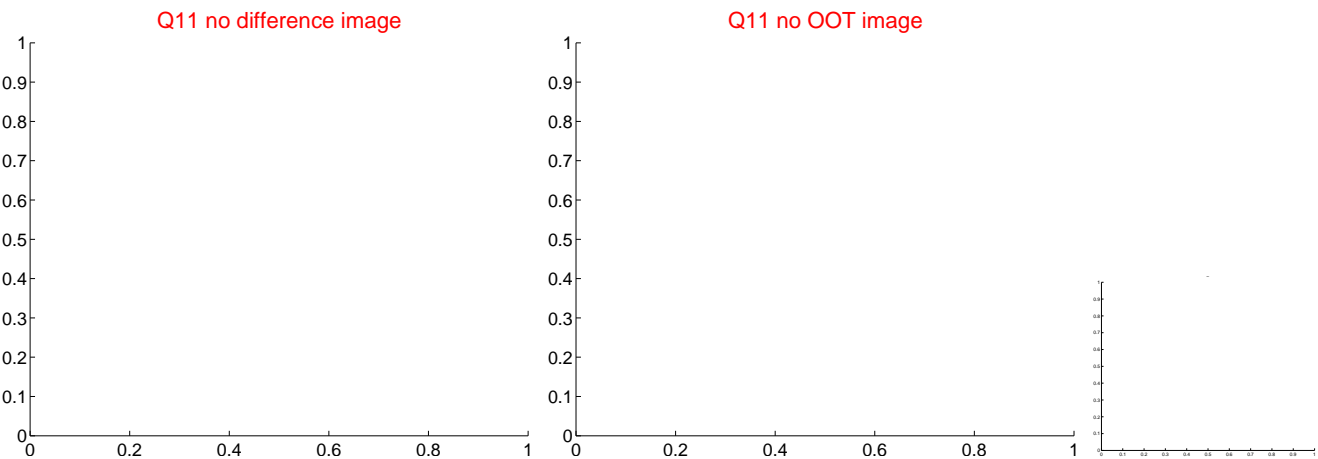
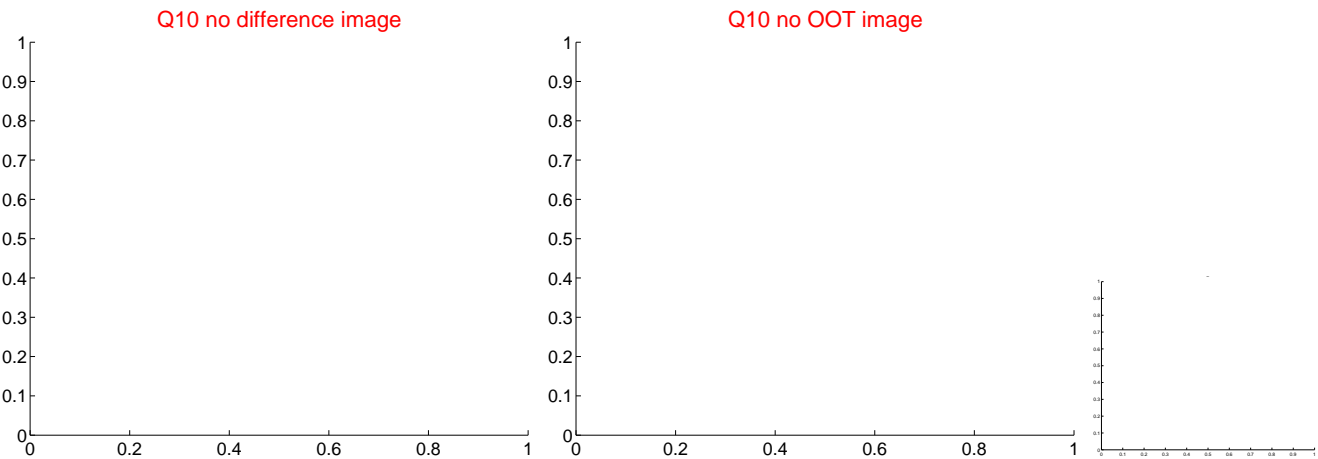
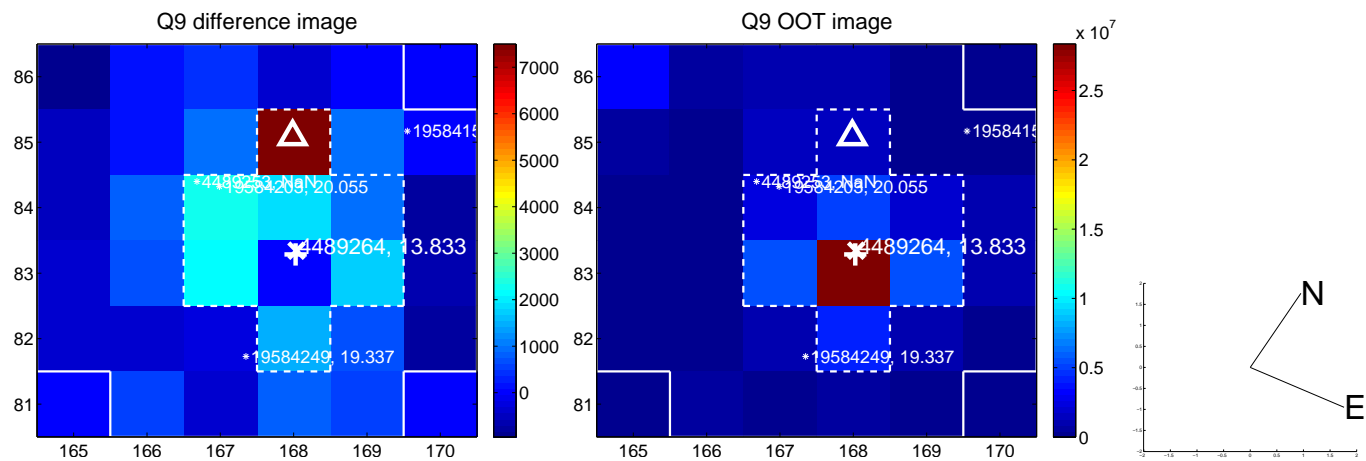
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



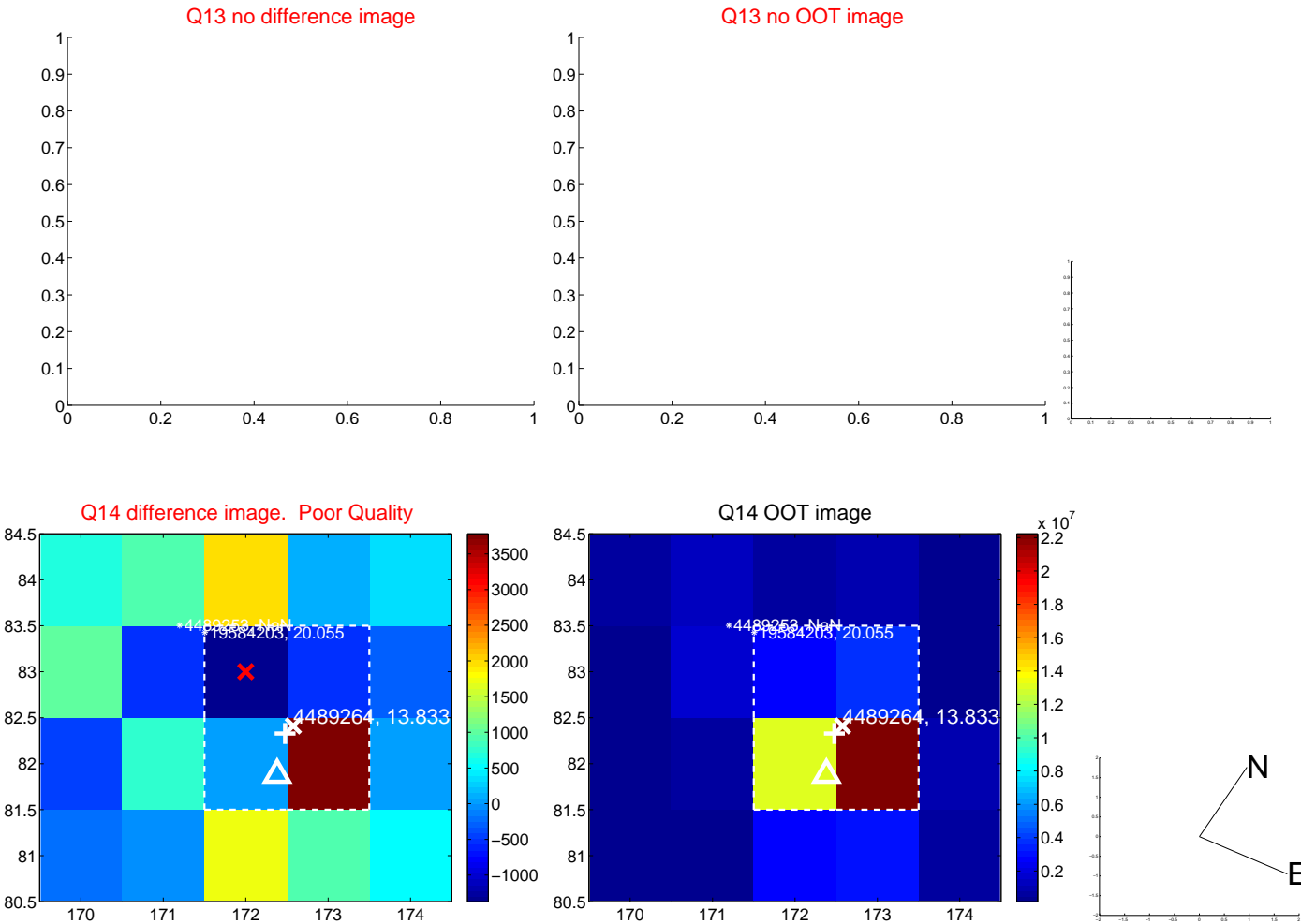
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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