

KIC 002849511

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})
002849511-01	OBS	No	417.502786	507.560725	138.0	9.109	7.3	7.2	1.99	6257	2.57	4.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002849511-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—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.

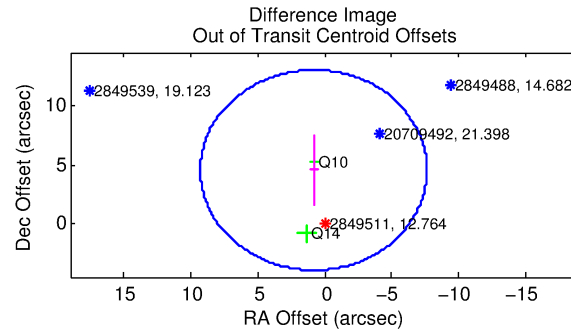
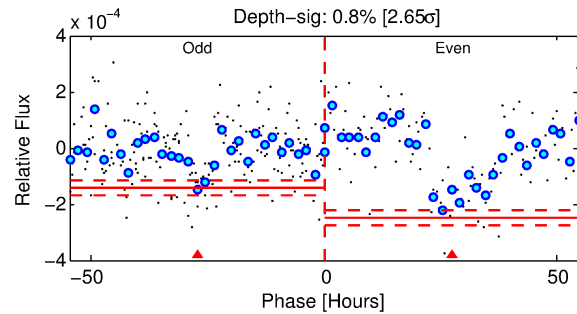
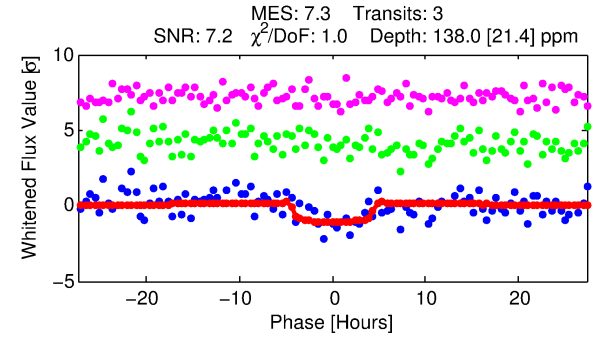
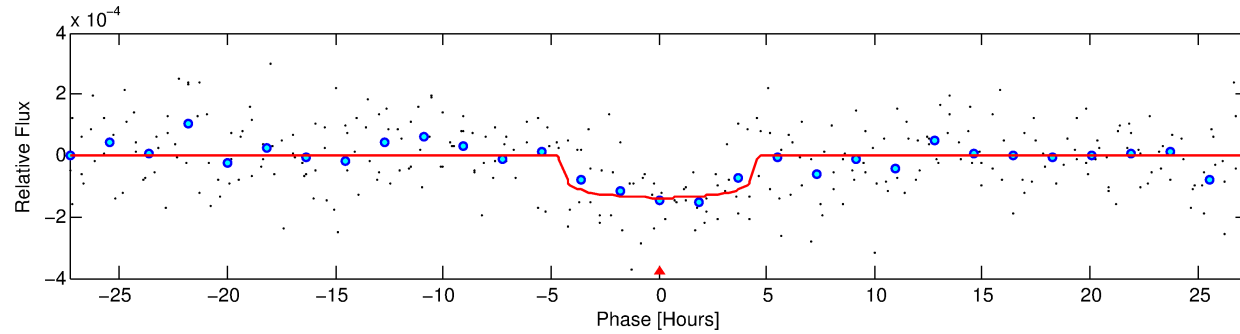
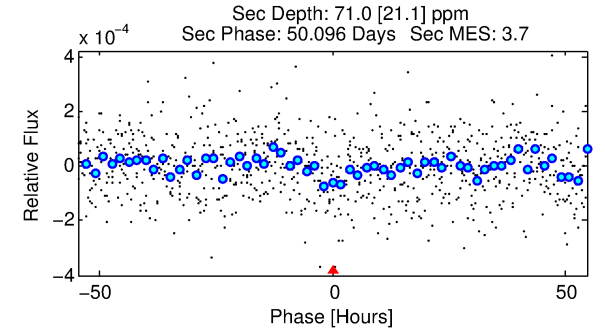
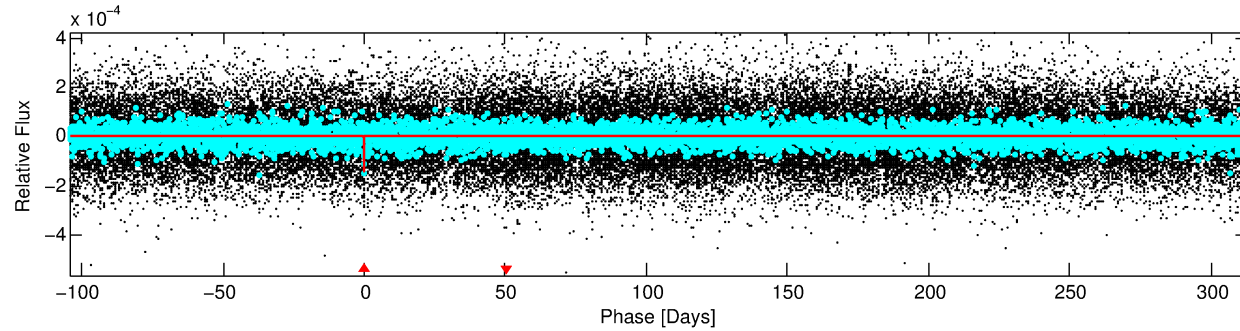
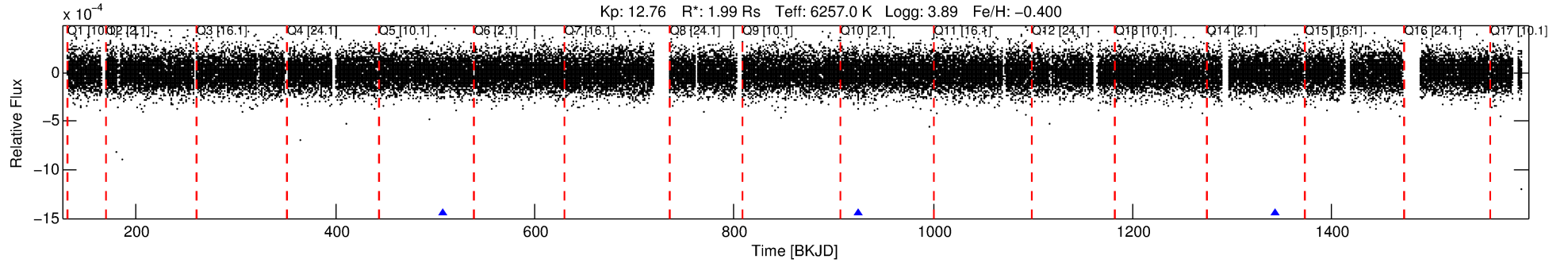
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002849511-01

No Significant Match Found

DV One-Page Summary

KIC: 2849511 Candidate: 1 of 1 Period: 417.503 d



DV Fit Results:

Period = 417.50279 [0.01417] d
Epoch = 507.5607 [0.0189] BKJD
Rp/R* = 0.0118 [0.0060]
a/R* = 224.53 [607.26]
b = 0.78 [1.34]
Seff = 4.21 [2.20]
Teq = 365 [48] K
Rp = 2.57 [1.56] Re
a = 1.1384 [0.3644] AU
Ag = 7653.98 [9003.74] [0.85σ]
Teffp = 5283 [1407] K [3.49σ]

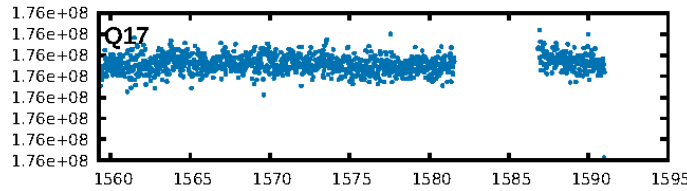
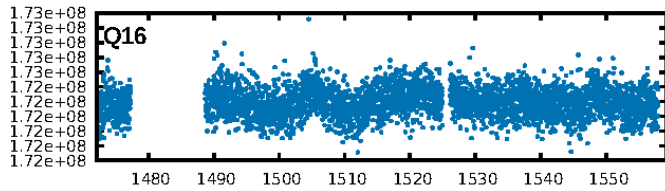
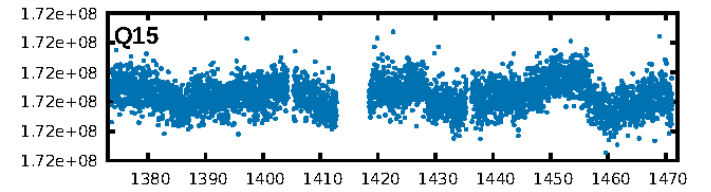
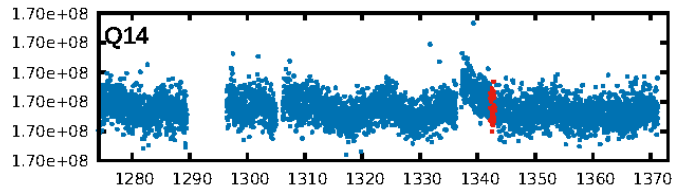
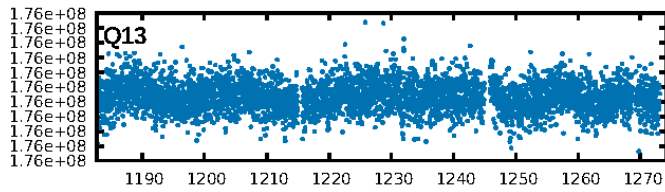
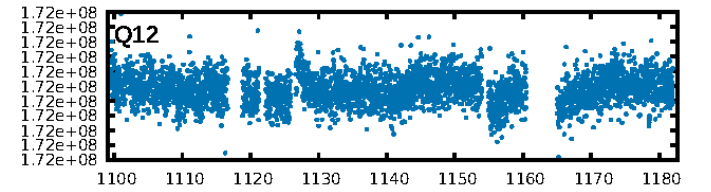
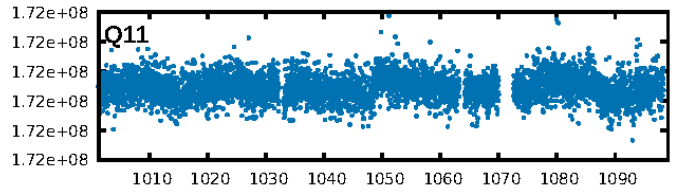
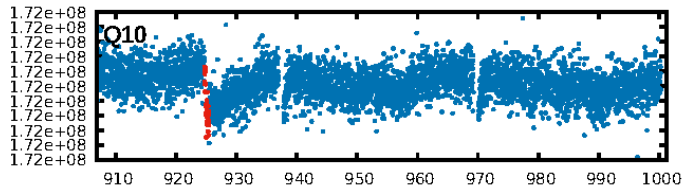
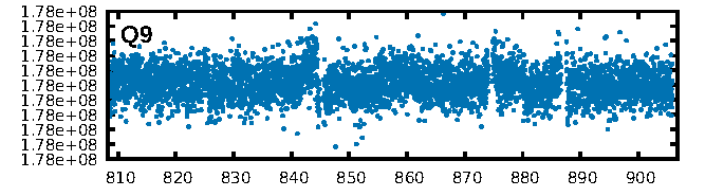
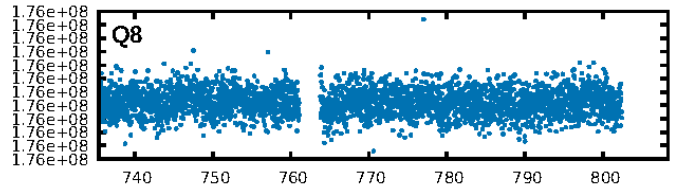
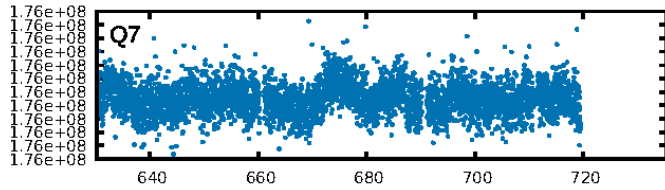
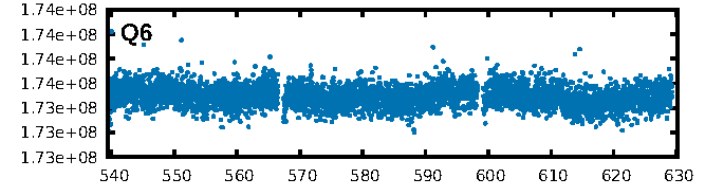
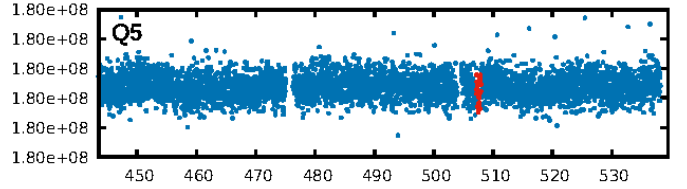
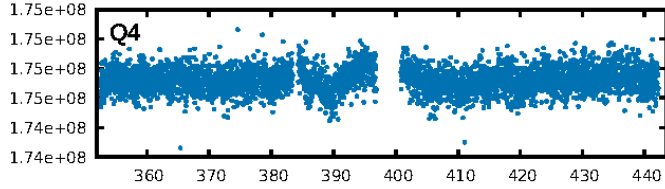
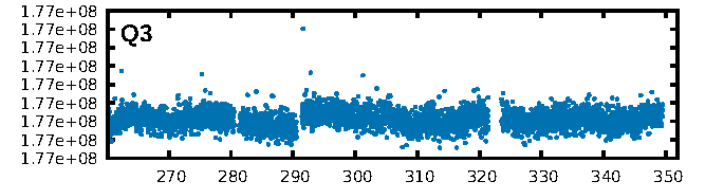
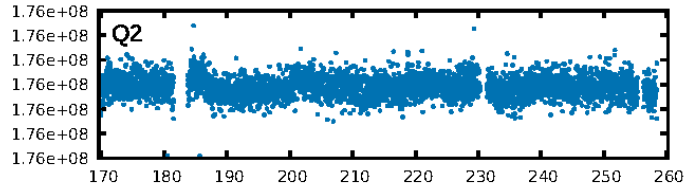
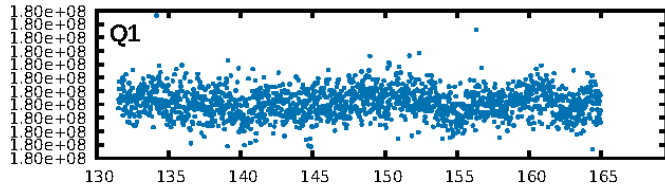
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 5.3%
ModelChiSquareGof-sig: 99.0%
Bootstrap-pfa: 2.15e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.986
Centroid-sig: 0.4%
Centroid-so: 4.420 arcsec [1.73σ]
OotOffset-rm: 4.607 arcsec [1.63σ]
KicOffset-rm: 4.479 arcsec [1.84σ]
OotOffset-st: 2/0/0/0 [2]
KicOffset-st: 2/0/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [3/3]

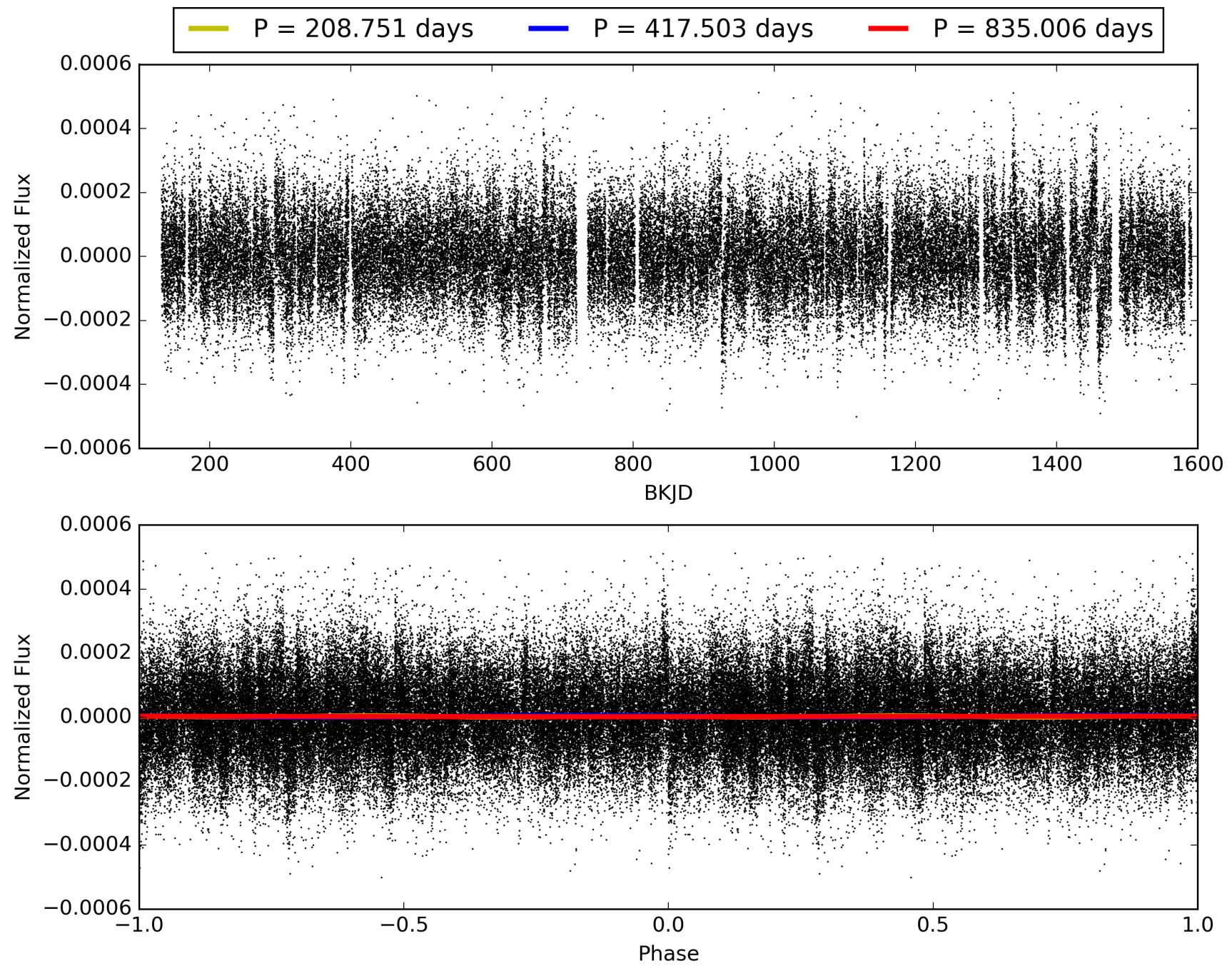
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:10:55 Z

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

TCE 002849511-01, PDC Light Curves

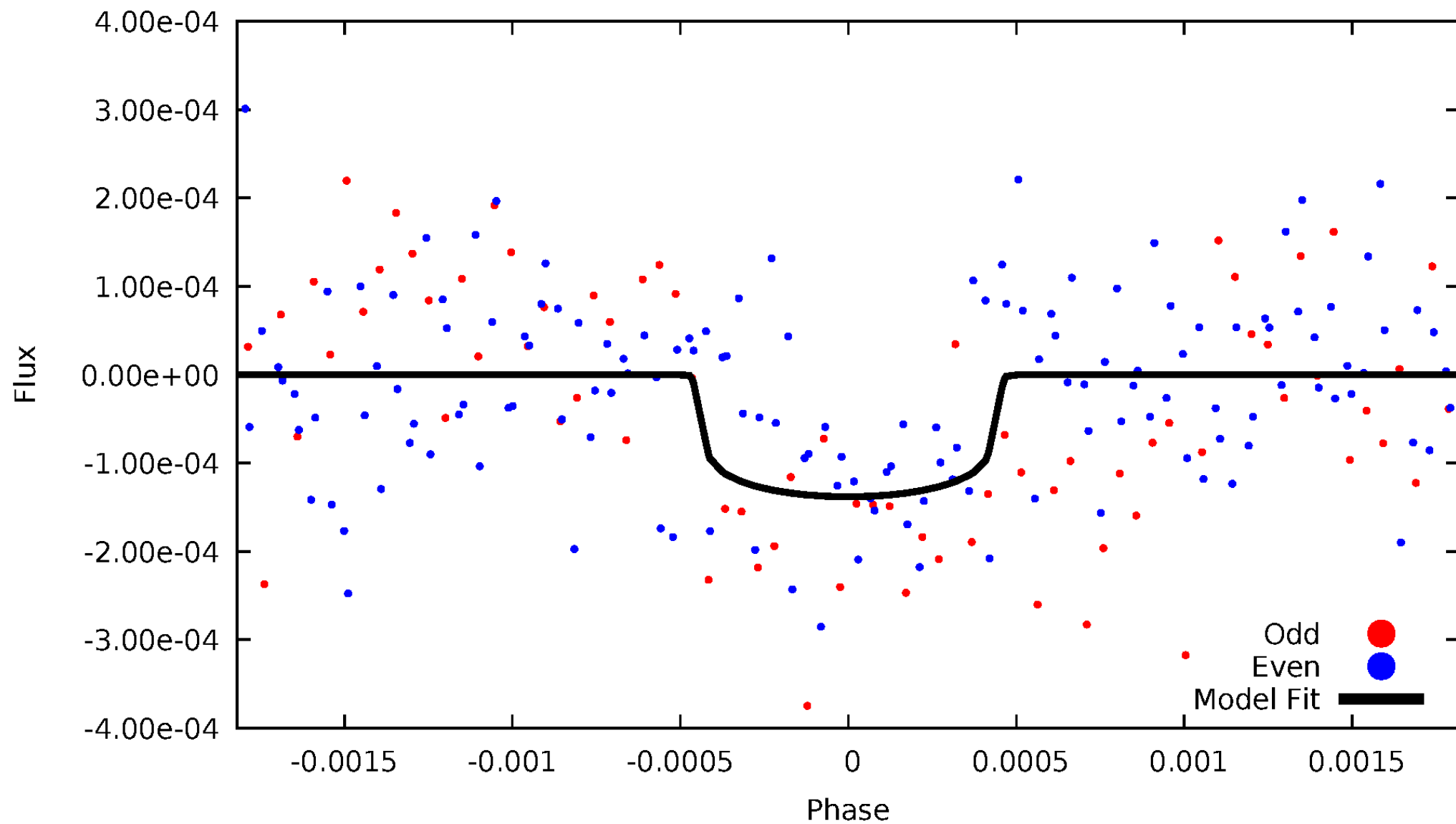


TCE 002849511-01



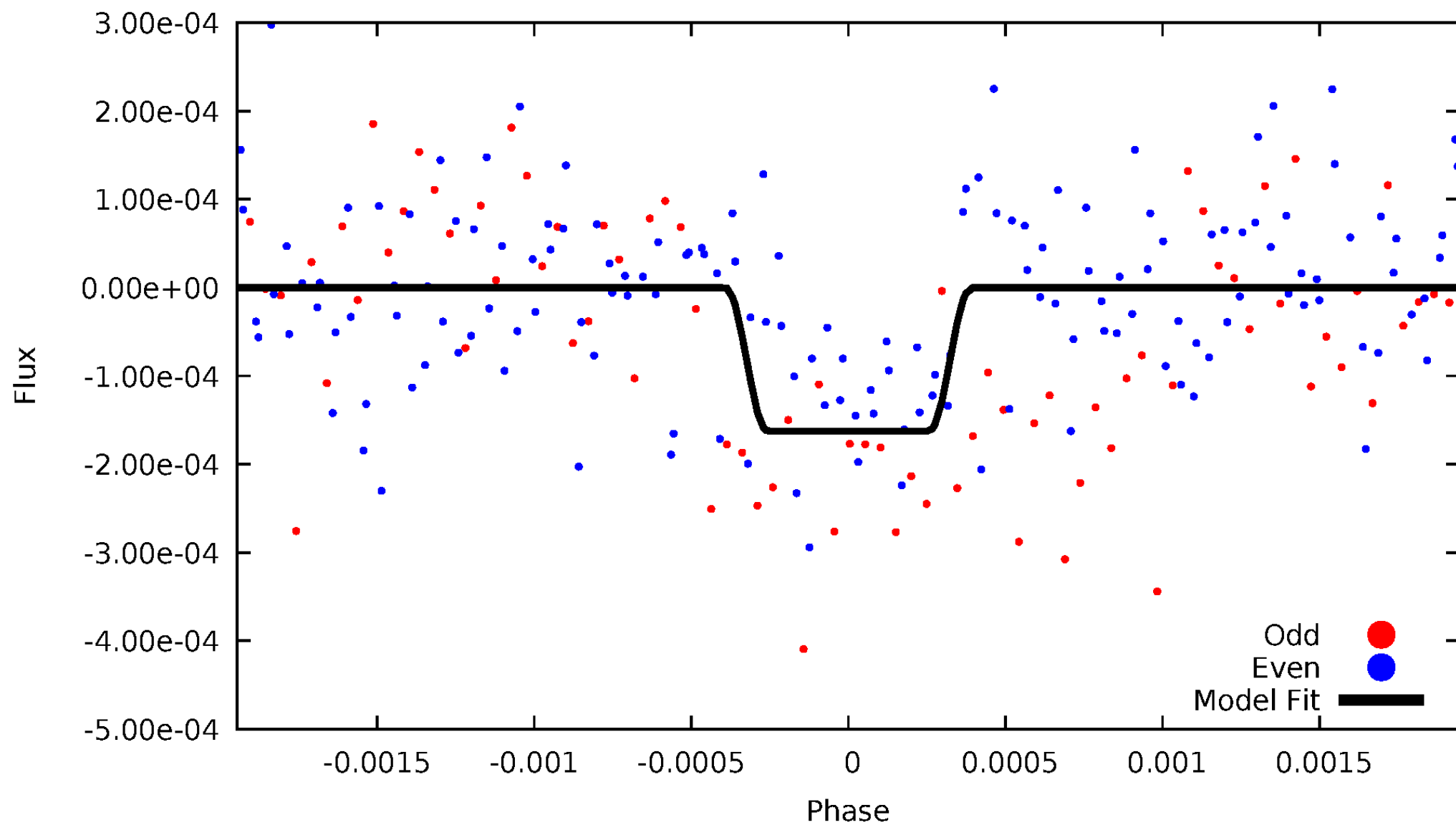
DV Odd/Even

TCE 002849511-01

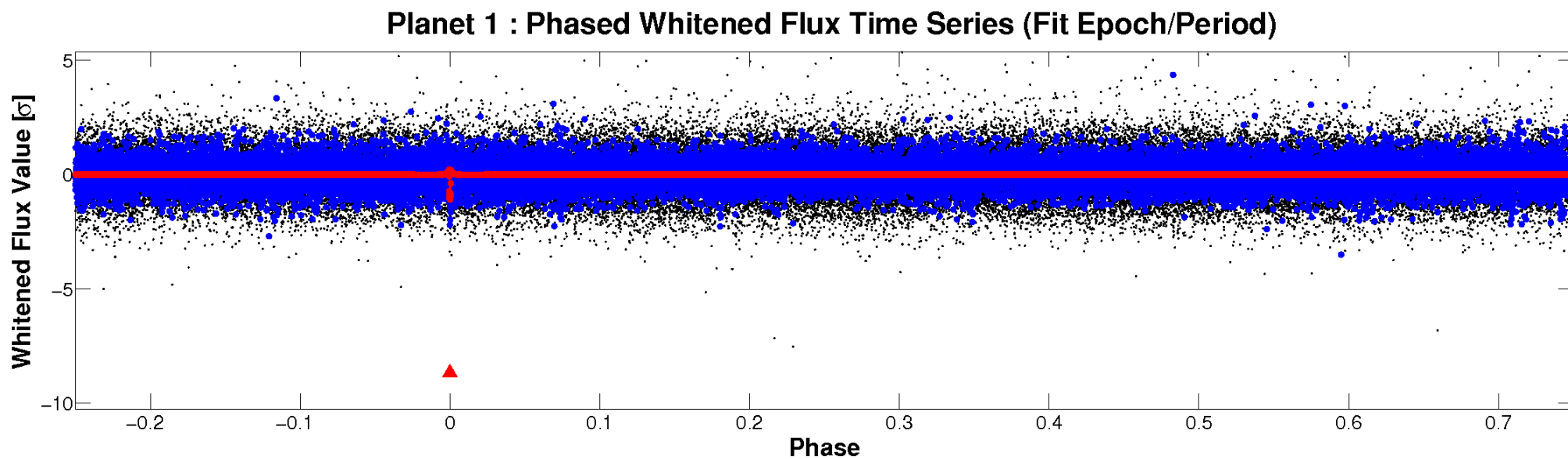
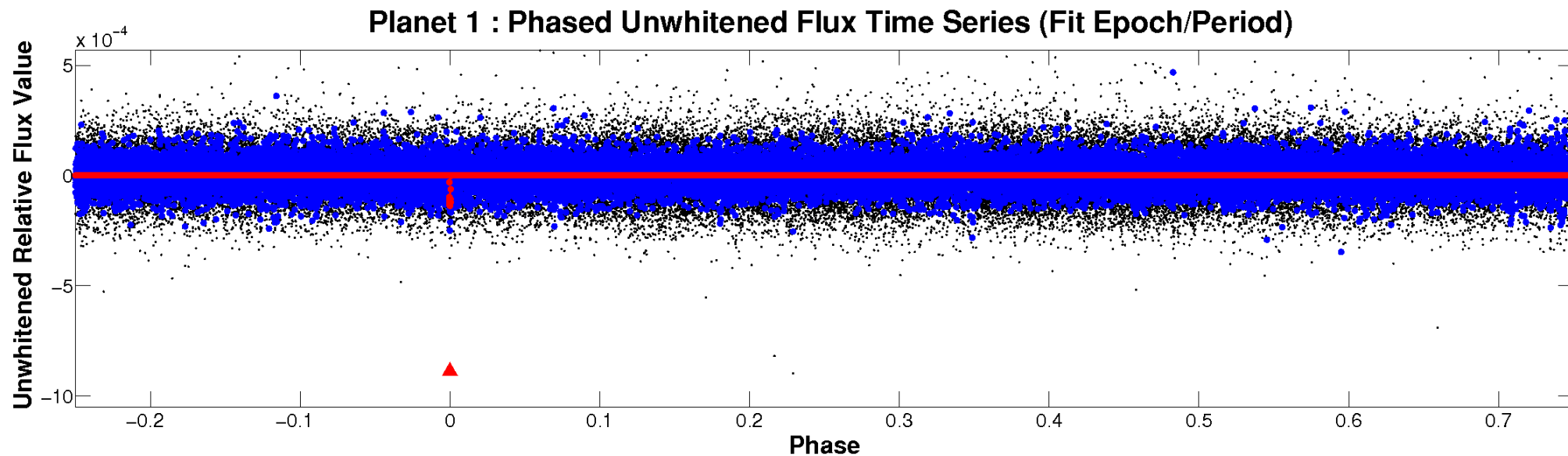


ALT Odd/Even

TCE 002849511-01

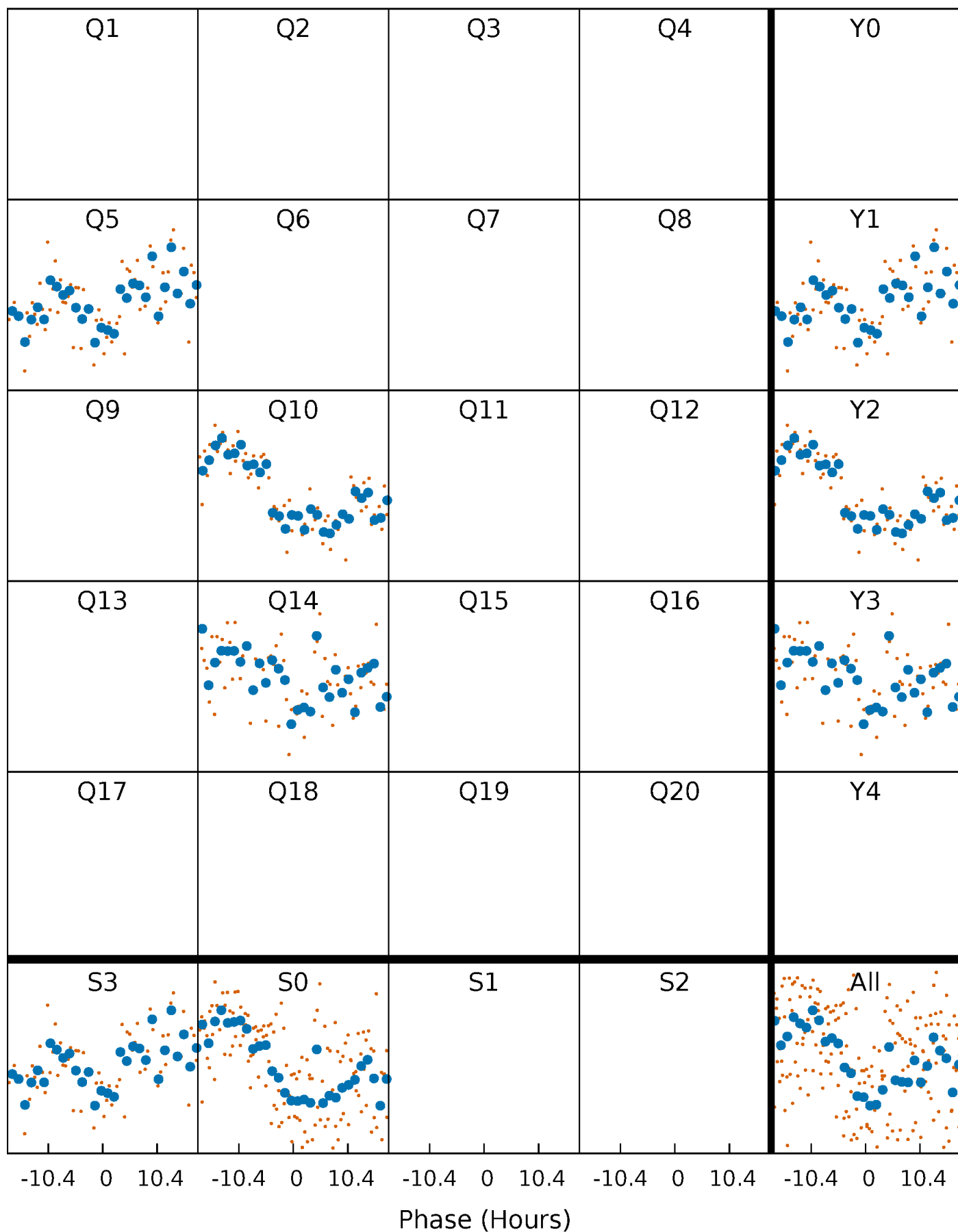


Non-Whitened Vs. Whitened Light Curve



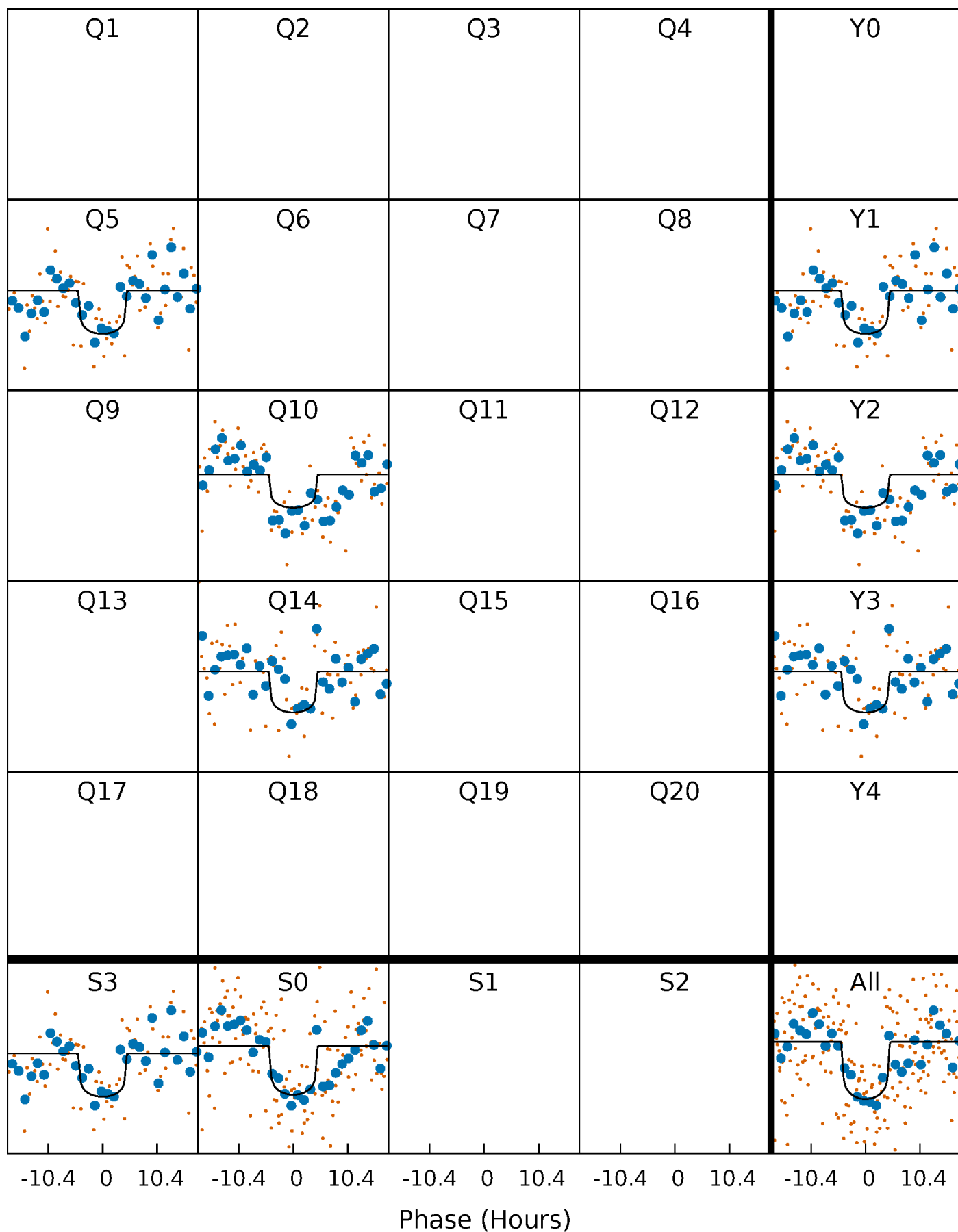
PDC Quarter-Phased Transit Curves

TCE 002849511-01 P=417.502787 Days $T_0=507.560725$ (BKJD)



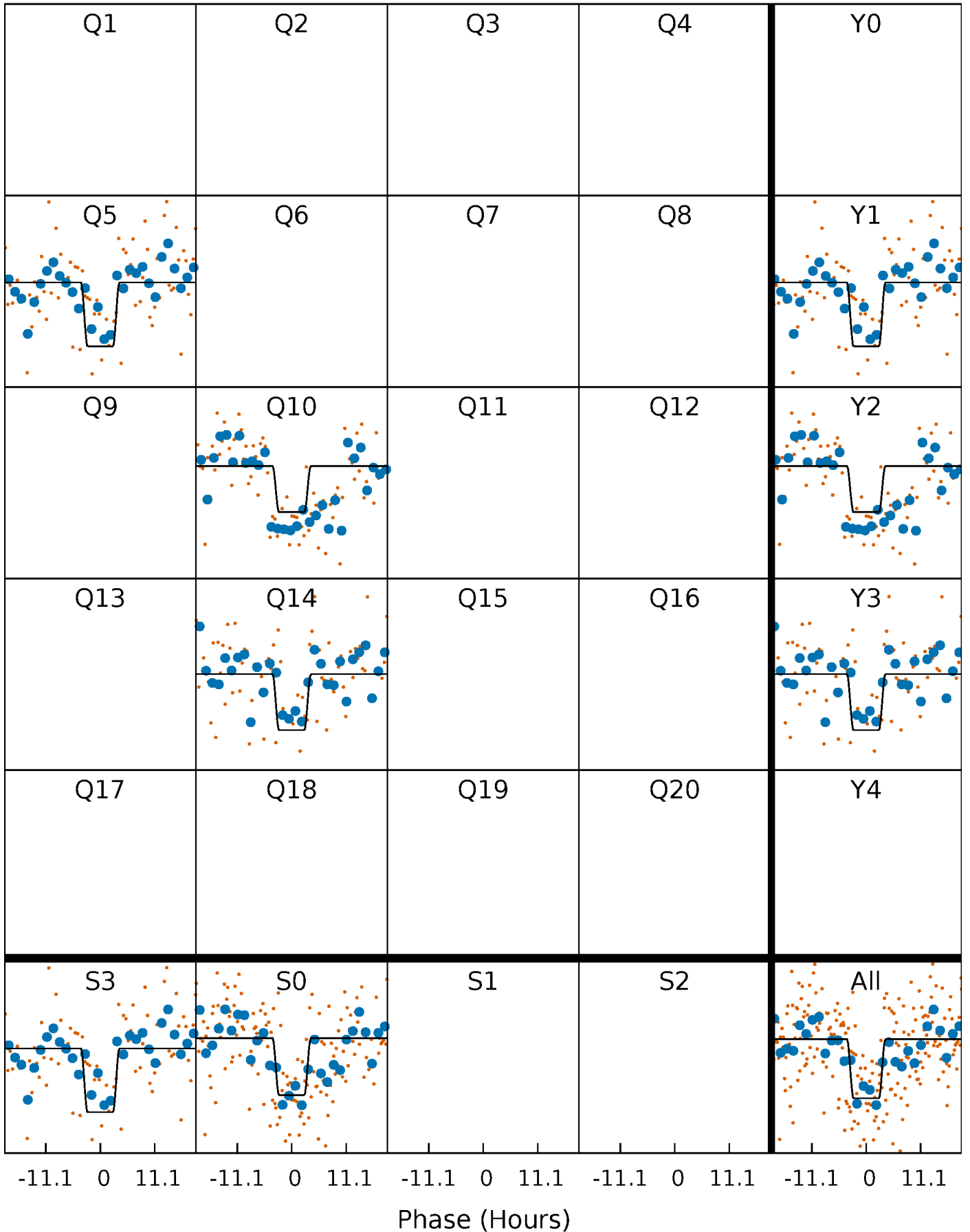
DV Quarter-Phased Transit Curves

TCE 002849511-01 P=417.502787 Days $T_0=507.560725$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

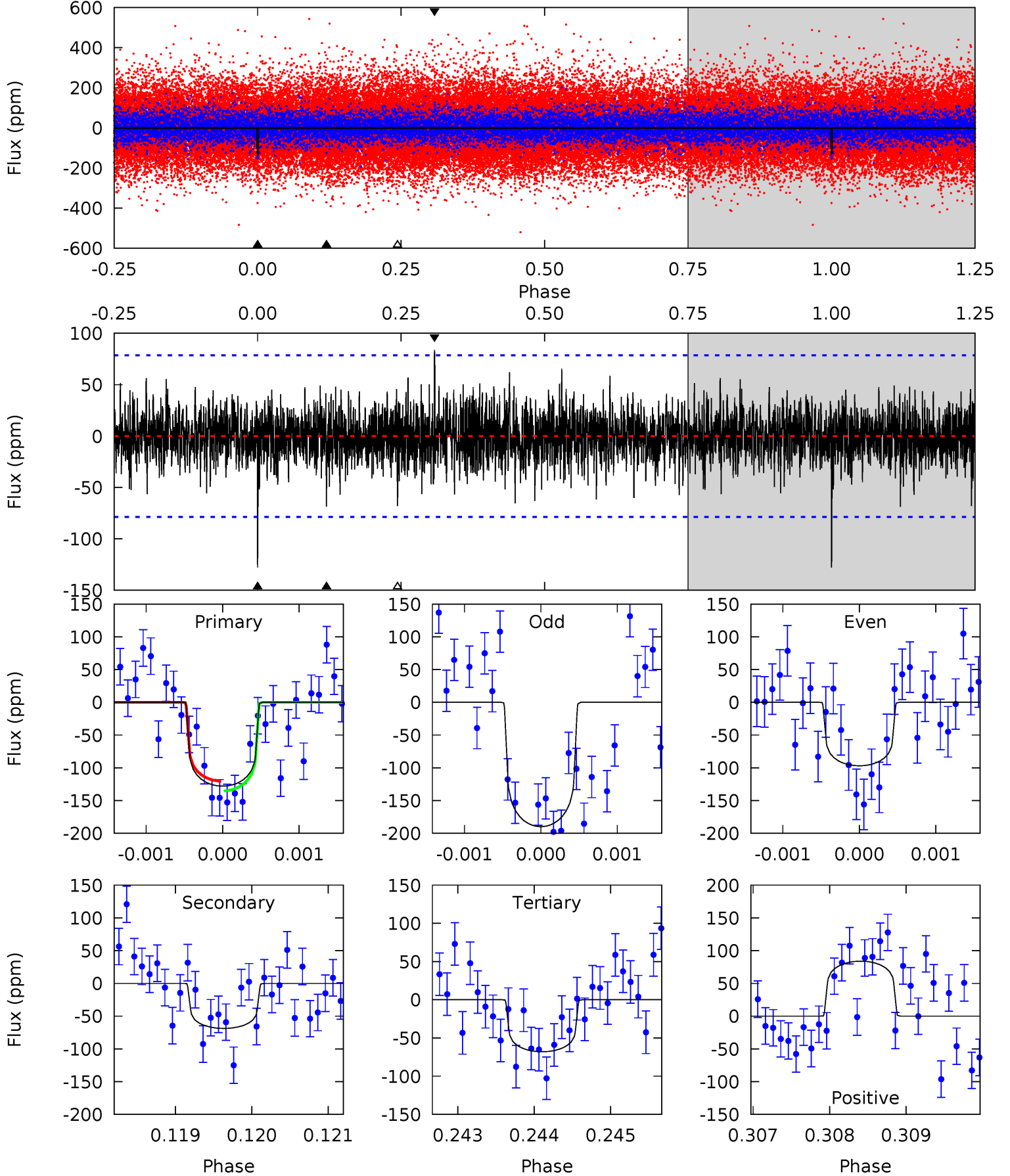
TCE 002849511-01 P=417.512120 Days $T_0=507.559832$ (BKJD)



DV Model-Shift Uniqueness Test

002849511-01, P = 417.502787 Days, E = 90.057938 Days

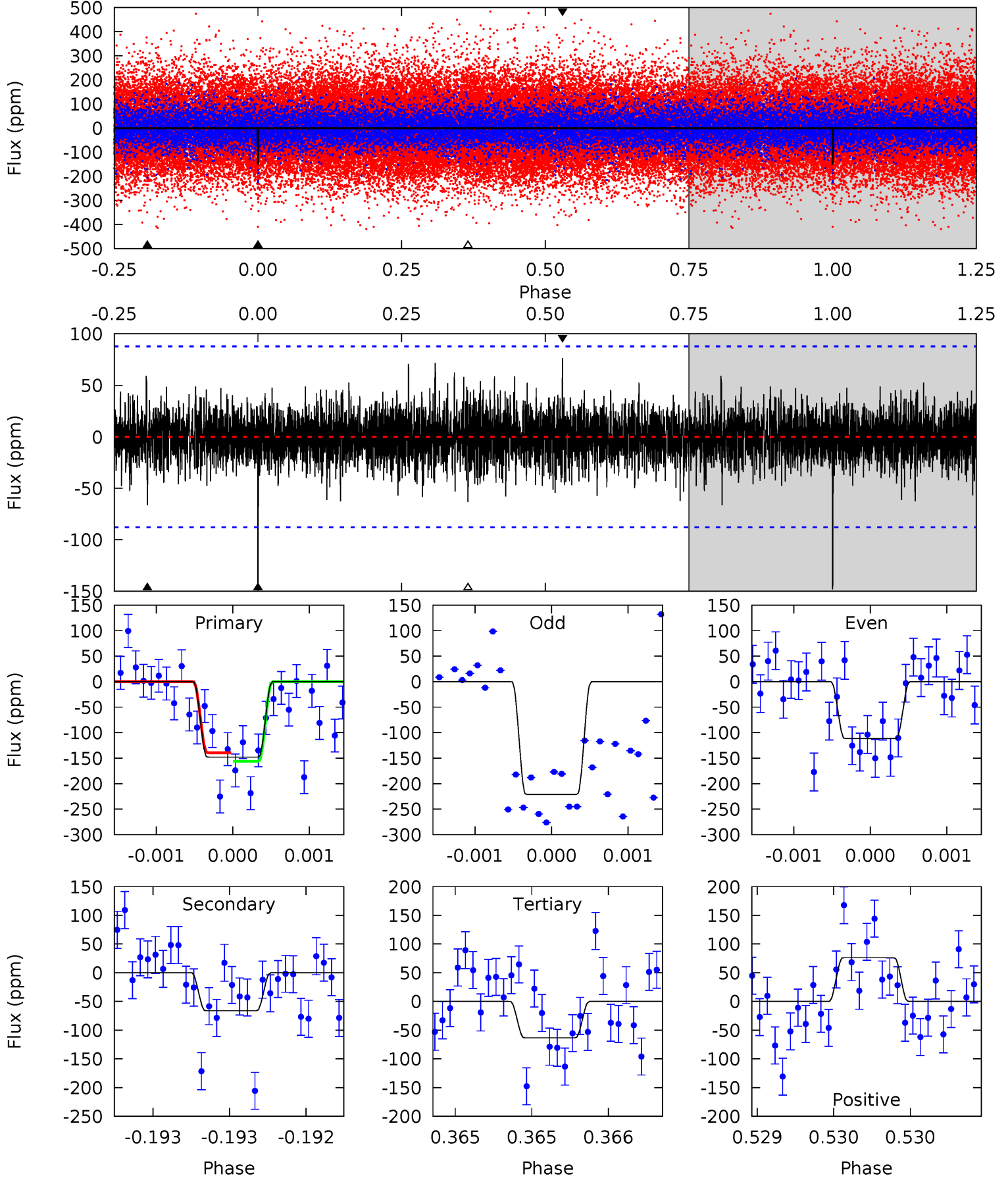
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.88	4.77	4.72	5.82	5.46	3.30	1.25	4.16	3.06	0.05	-1.05	3.05	1.14	0.40	0.52



Alt Model-Shift Uniqueness Test

002849511-01, P = 417.512120 Days, E = 90.047712 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.27	4.15	3.97	4.77	5.50	3.37	1.10	5.31	4.50	0.18	-0.63	3.23	1.33	0.34	0.53



Stellar Parameters For KIC 002849511

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6257^{+172}_{-172}	$3.891^{+0.300}_{-0.100}$	$-0.400^{+0.350}_{-0.300}$	$1.994^{+0.443}_{-0.665}$	$1.128^{+0.203}_{-0.183}$	$0.200^{+0.373}_{-0.072}$
	+3%/-3%	+8%/-3%	+87%/-75%	+22%/-33%	+18%/-16%	+186%/-36%
Source	PHO1	FLK73	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 002849511-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-69 ± 14	$2.46^{+1.37}_{-1.18}$	500^{+29}_{-44}	5218^{+2107}_{-827}	8389^{+22649}_{-4954}
Alt.	-66 ± 16	$2.55^{+1.43}_{-1.17}$	499^{+32}_{-42}	5051^{+1770}_{-756}	7358^{+17345}_{-4407}

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 $A_{obs} \gg 1.0$

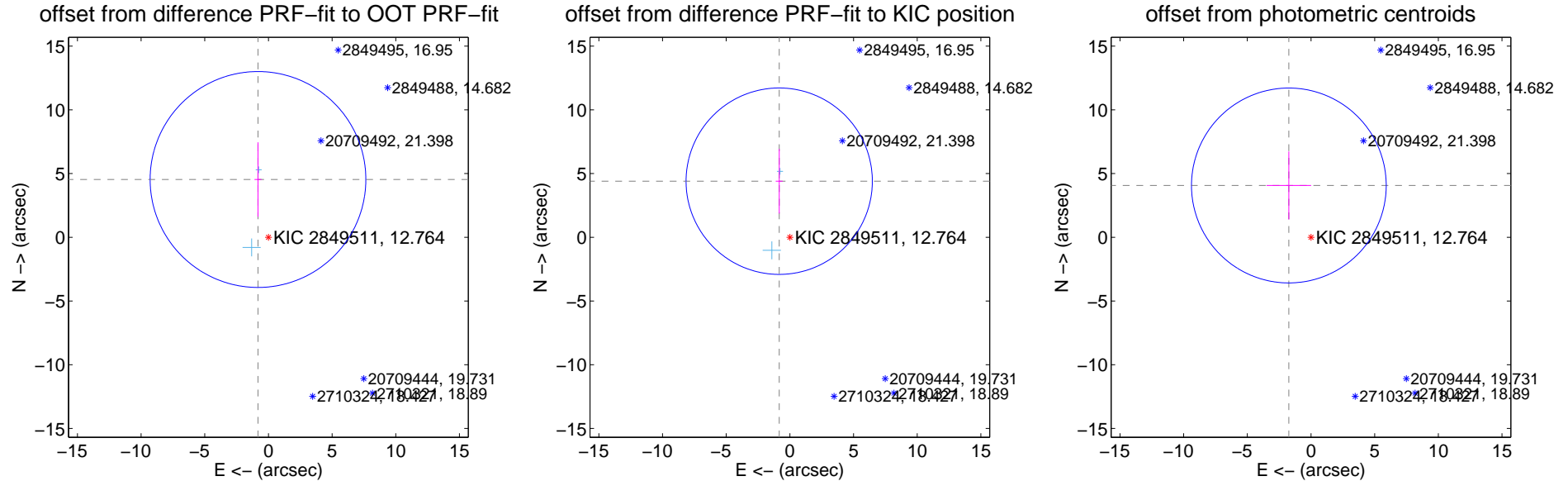
DV Centroid Data

Supplemental centroid analysis for 002849511-01. Kepler magnitude: 12.76. Transit SNR 7.18

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.607 ± 2.823	1.63	0.821 ± 0.273	4.533 ± 2.917
PRF-fit source offset from KIC position	4.479 ± 2.438	1.84	0.838 ± 0.271	4.400 ± 2.531
photometric centroid source offset	4.42 ± 2.55	1.73	1.74 ± 1.75	4.06 ± 2.67

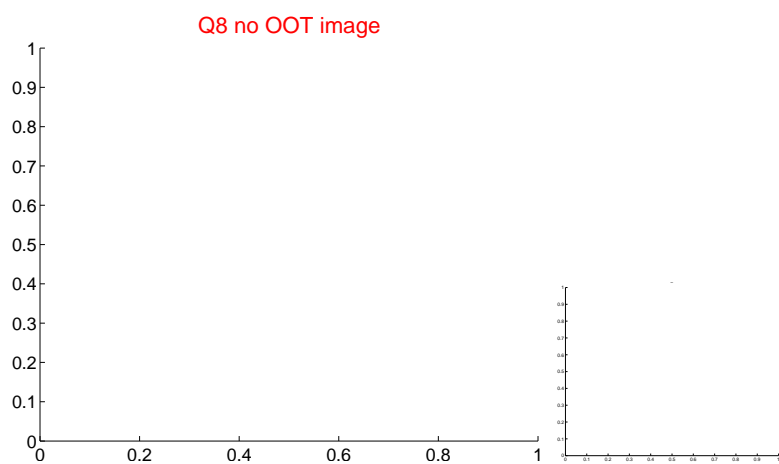
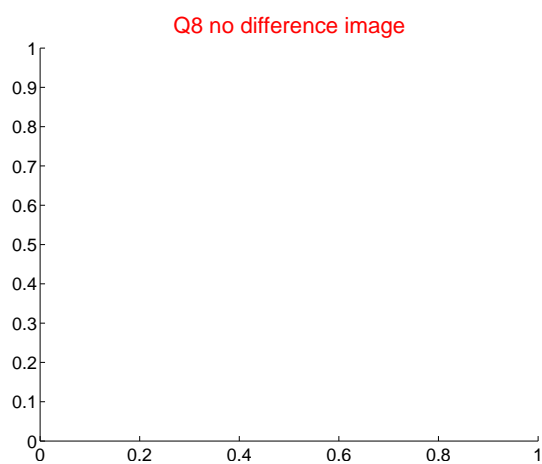
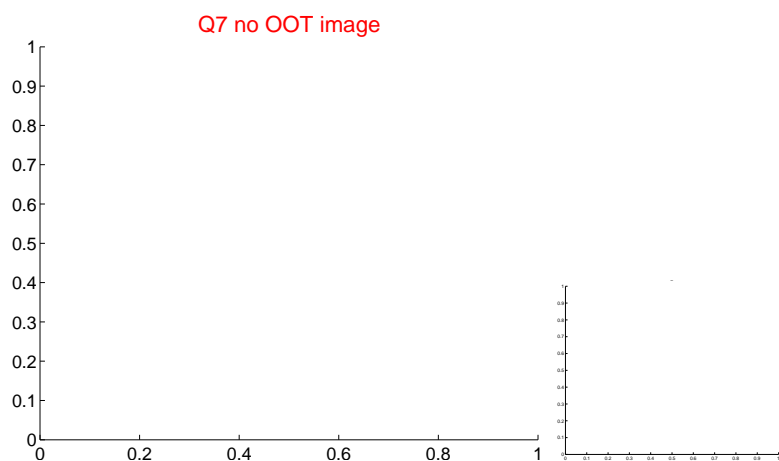
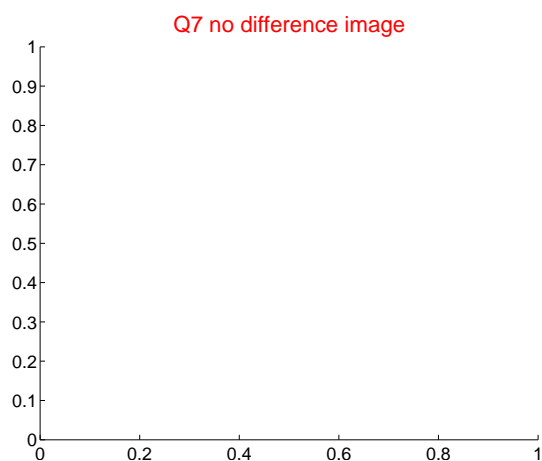
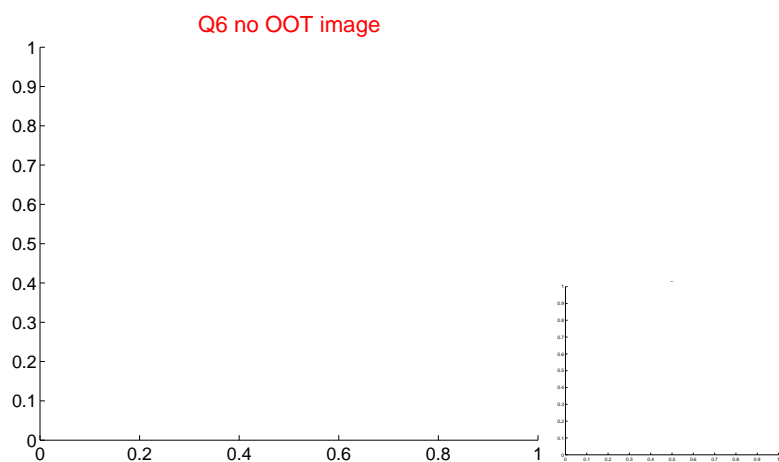
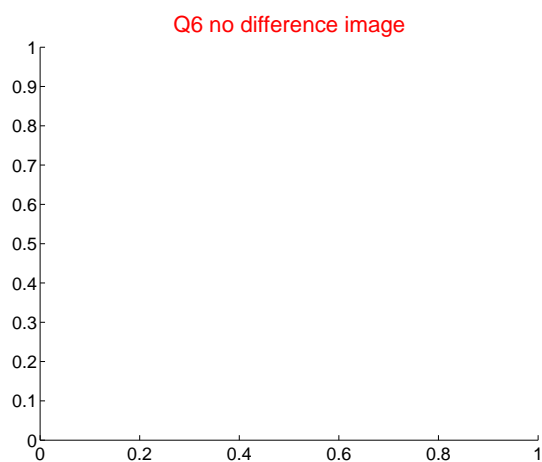
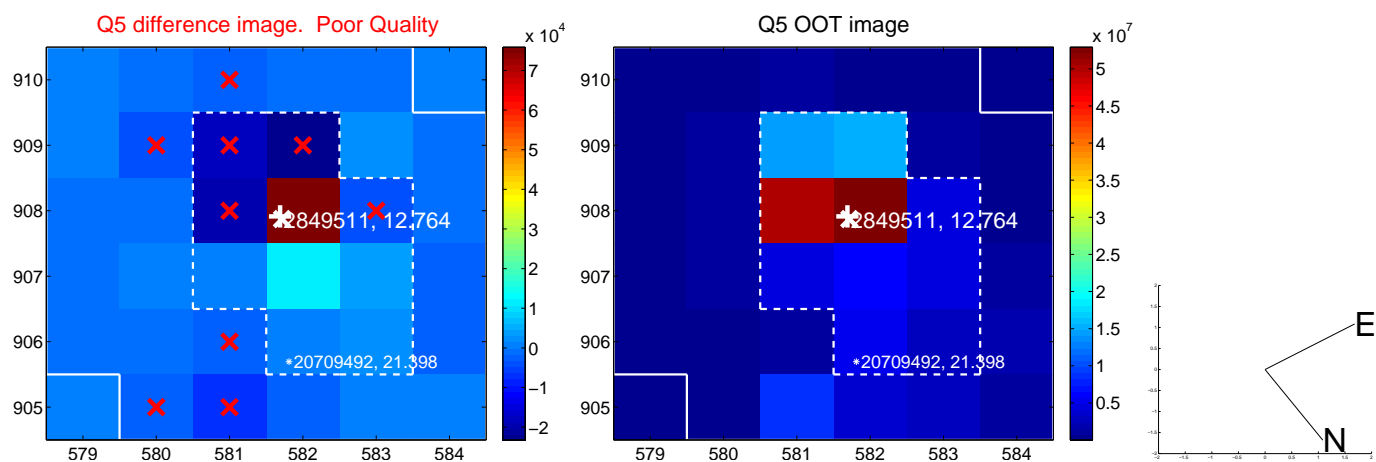


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

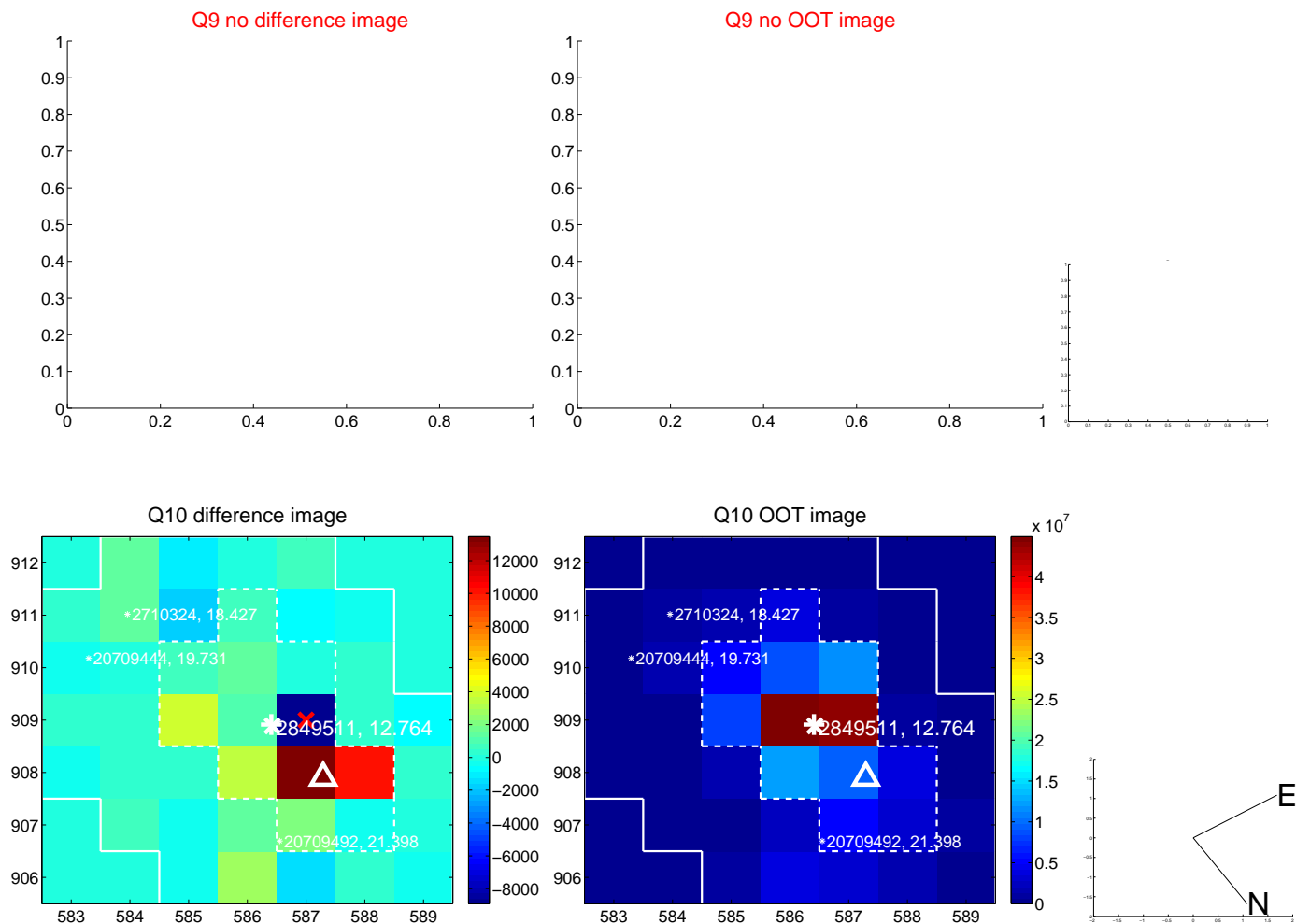
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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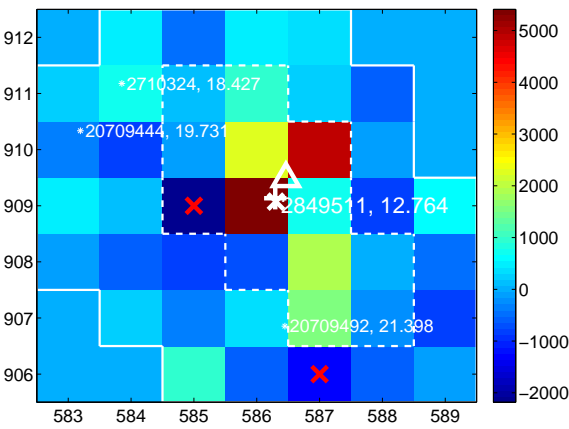
Q13 no difference image



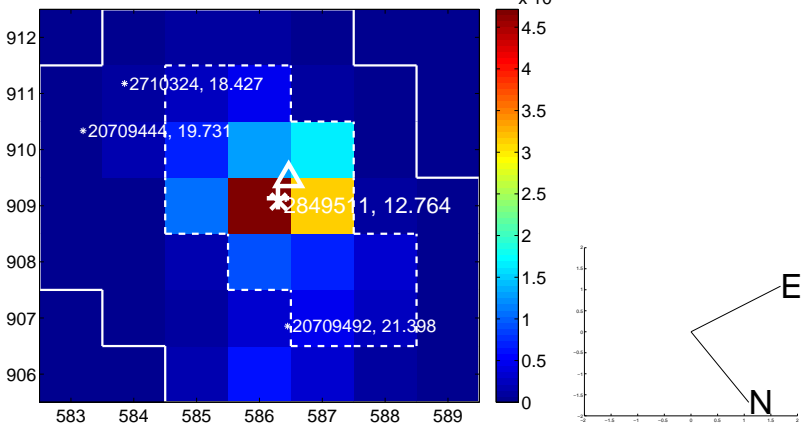
Q13 no OOT image



Q14 difference image



Q14 OOT image



Q15 no difference image



Q15 no OOT image



Q16 no difference image



Q16 no OOT image



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

