

KIC 009479306

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})
009479306-01	OBS	4906.01	4.860750	135.773270	262.2	1.859	8.3	8.7	0.76	5541	1.44	173.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009479306-01	OBS	PC	1.00	0	0	0	0	CENT_FEW_MEAS

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 009479306-01

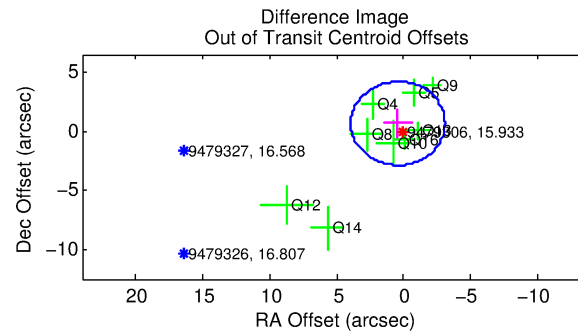
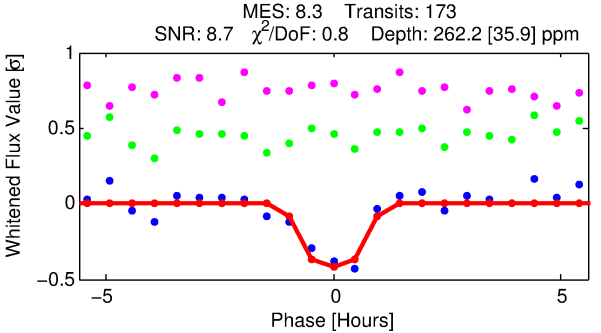
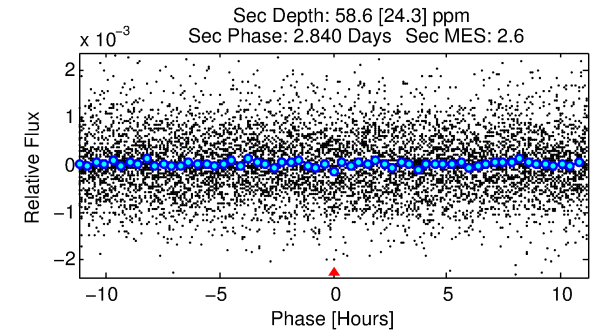
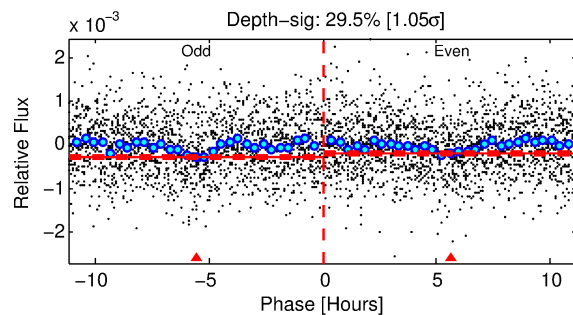
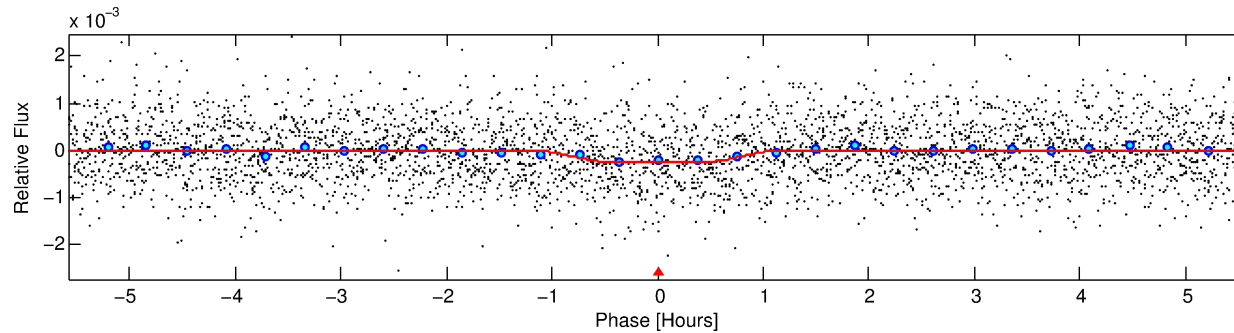
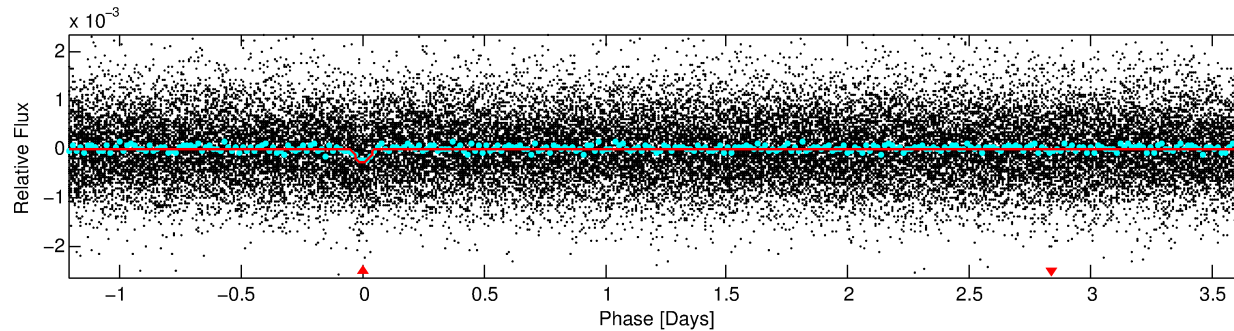
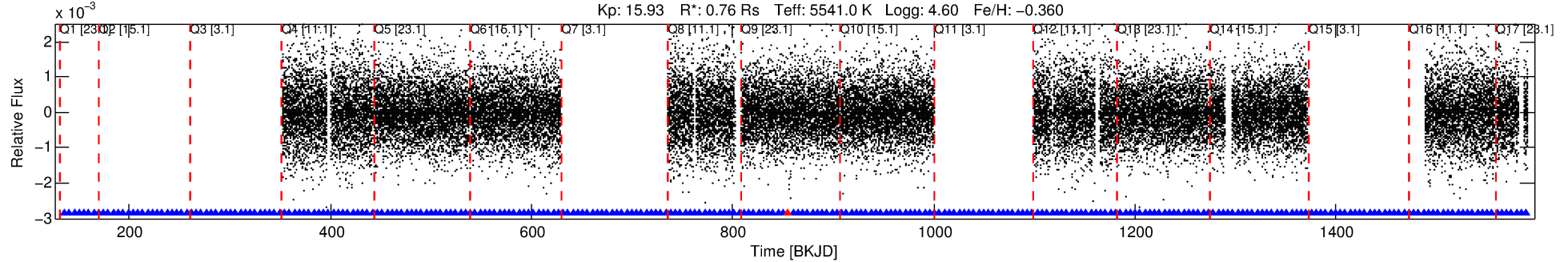
No Significant Match Found

DV One-Page Summary

KIC: 9479306 Candidate: 1 of 1 Period: 4.861 d

KOI: K04906.01 Corr: 0.951

Kp: 15.93 R*: 0.76 Rs Teff: 5541.0 K Logg: 4.60 Fe/H: -0.360



DV Fit Results:

Period = 4.86075 [0.00003] d
Epoch = 135.7733 [0.0048] BKJD
Rp/R* = 0.0174 [0.0166]
a/R* = 10.28 [44.70]
b = 0.88 [1.16]
Seff = 173.40 [50.90]
Teq = 925 [68] K
Rp = 1.43 [1.41] Re
a = 0.0528 [0.0096] AU
Ag = 43.72 [86.46] [0.49σ]
Teffp = 3679 [1808] K [1.52σ]

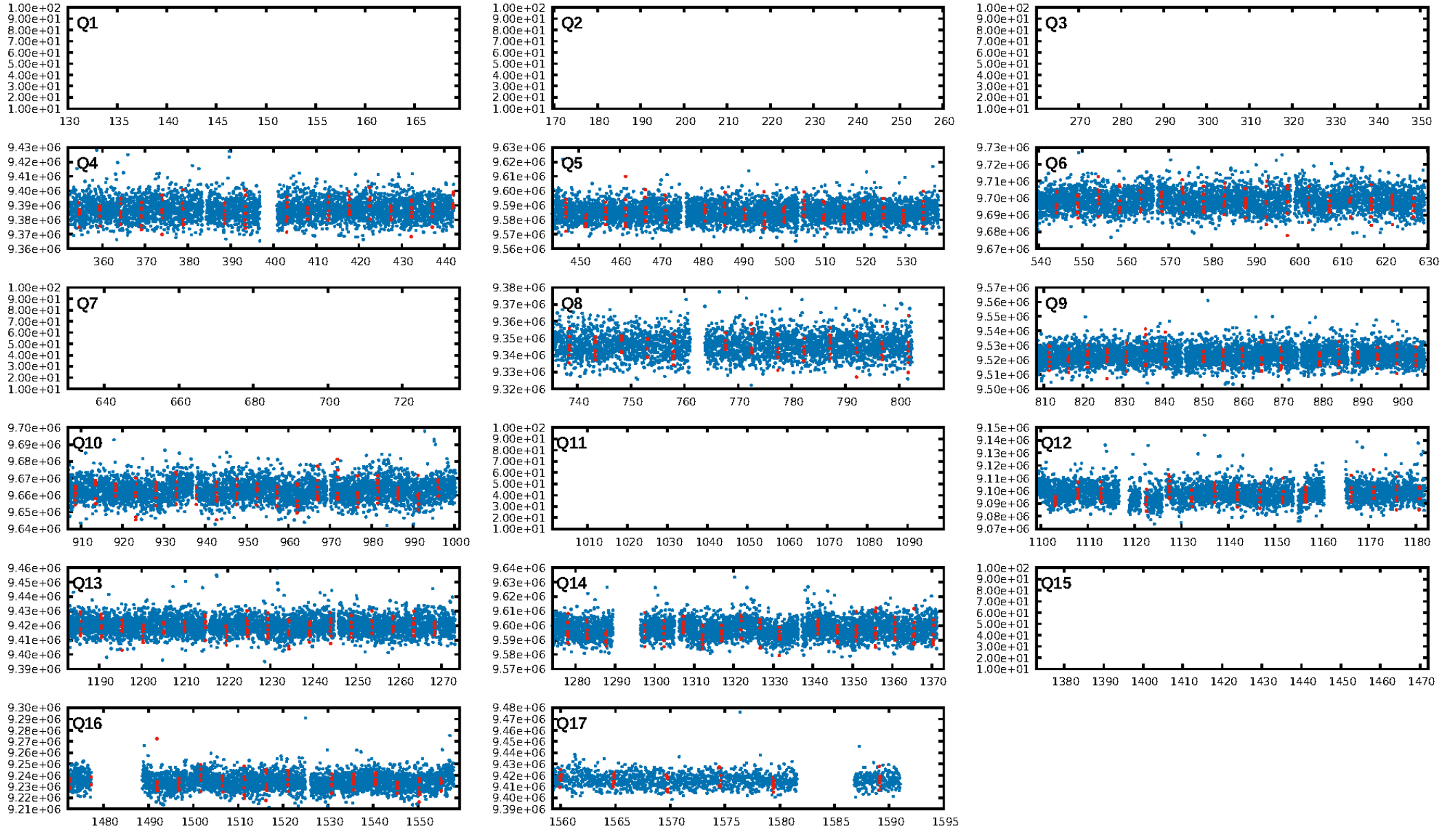
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.89e-17
RollingBand-fgt: 0.99 [166/167]
GhostDiagnostic-chr: 0.7626
Centroid-sig: 80.3%
Centroid-so: 0.191 arcsec [0.12σ]
OotOffset-rm: 0.779 arcsec [0.66σ]
KicOffset-rm: 0.804 arcsec [0.65σ]
OotOffset-st: 2/0/4/3 [9]
KicOffset-st: 2/0/4/3 [9]
DiffImageQuality-fgm: 0.00 [0/9]
DiffImageOverlap-fno: 1.00 [11/11]

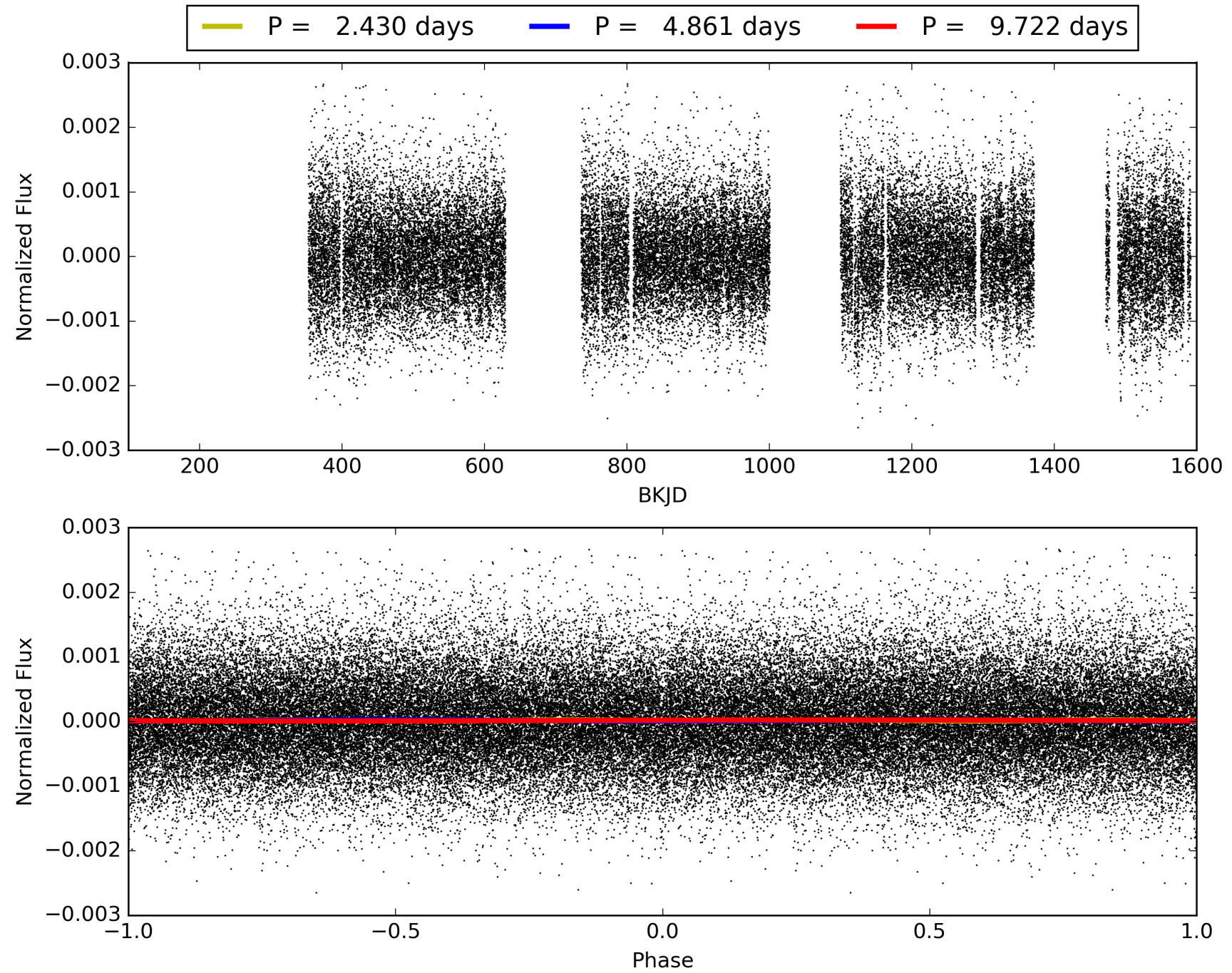
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 09:17:52 Z

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

TCE 009479306-01, PDC Light Curves

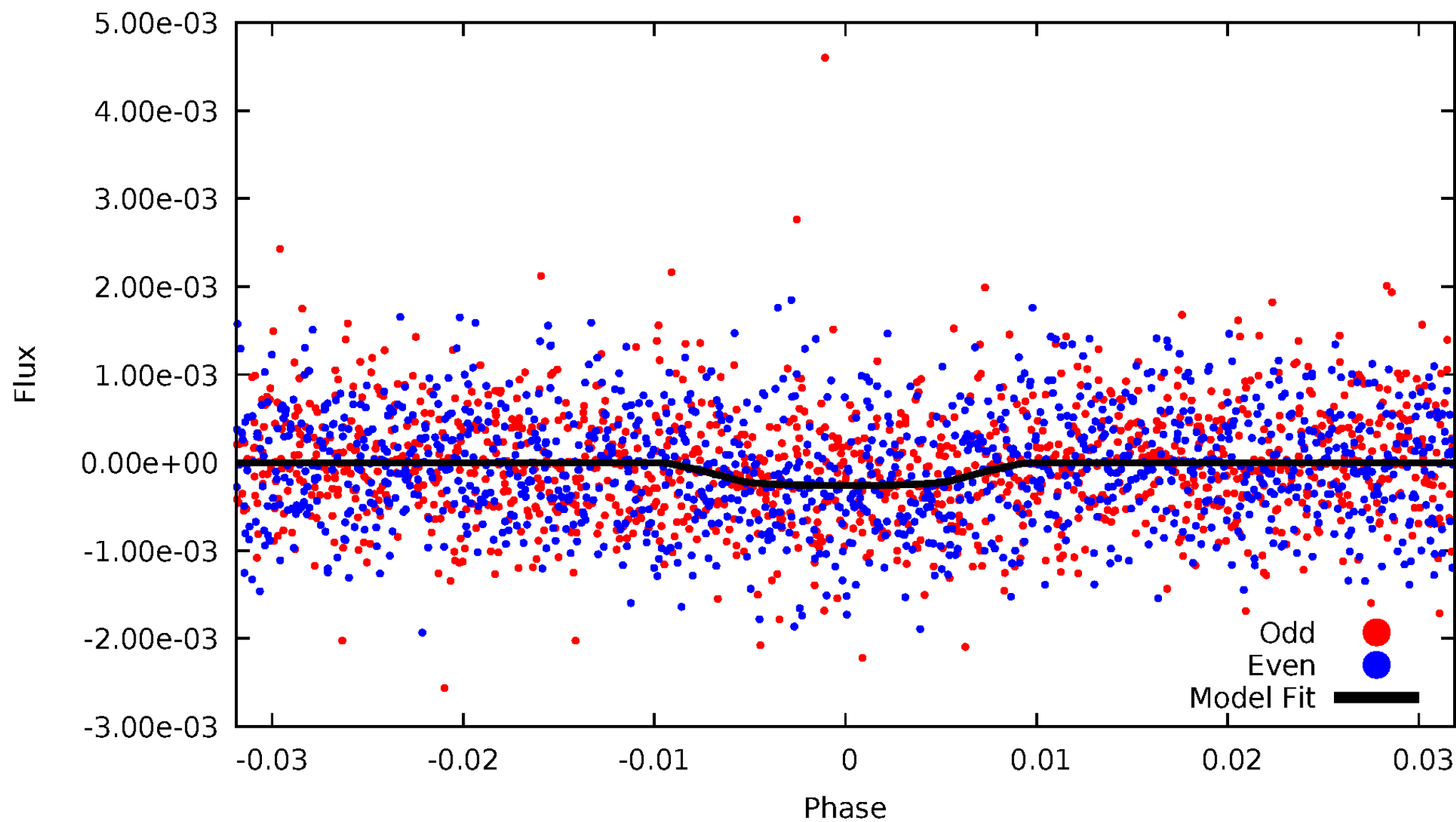


TCE 009479306-01



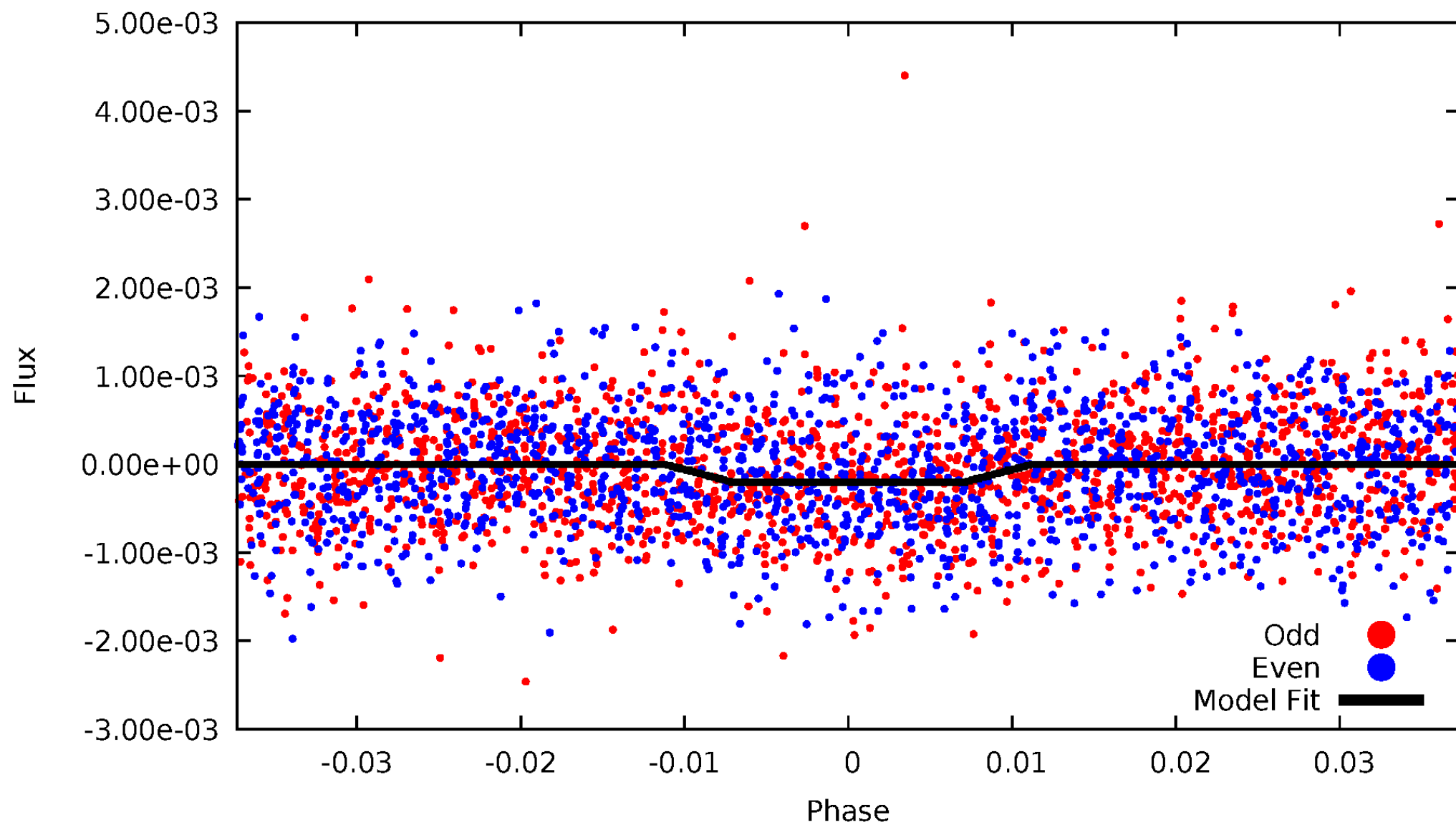
DV Odd/Even

TCE 009479306-01



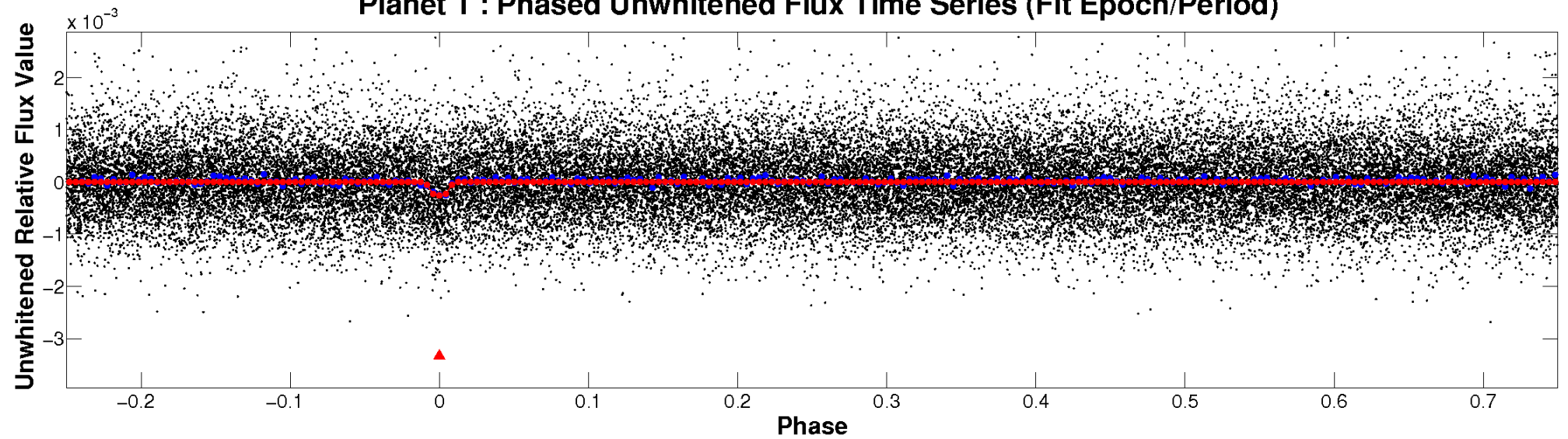
ALT Odd/Even

TCE 009479306-01

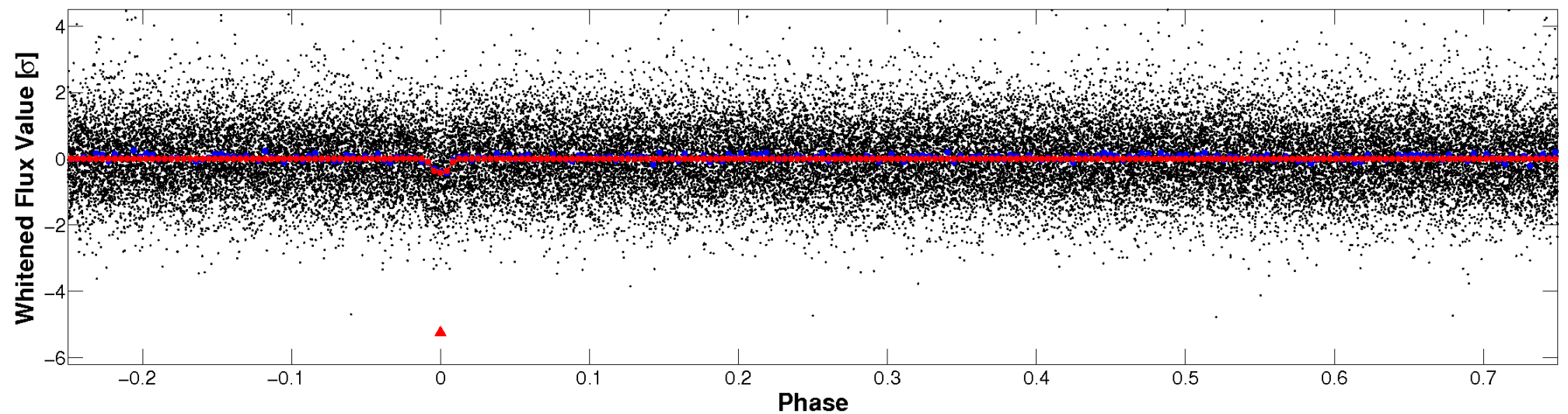


Non-Whitened Vs. Whitened Light Curve

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

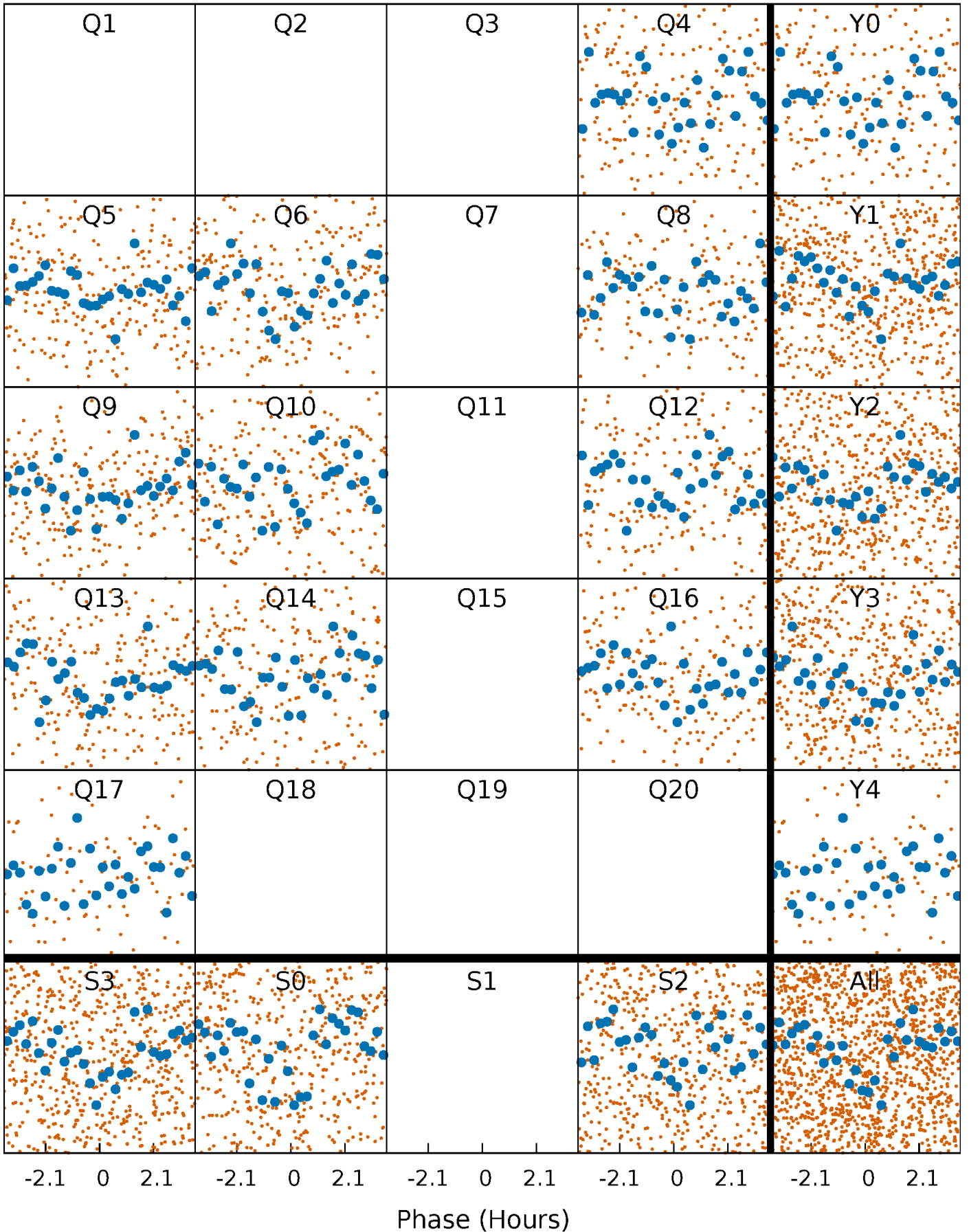


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



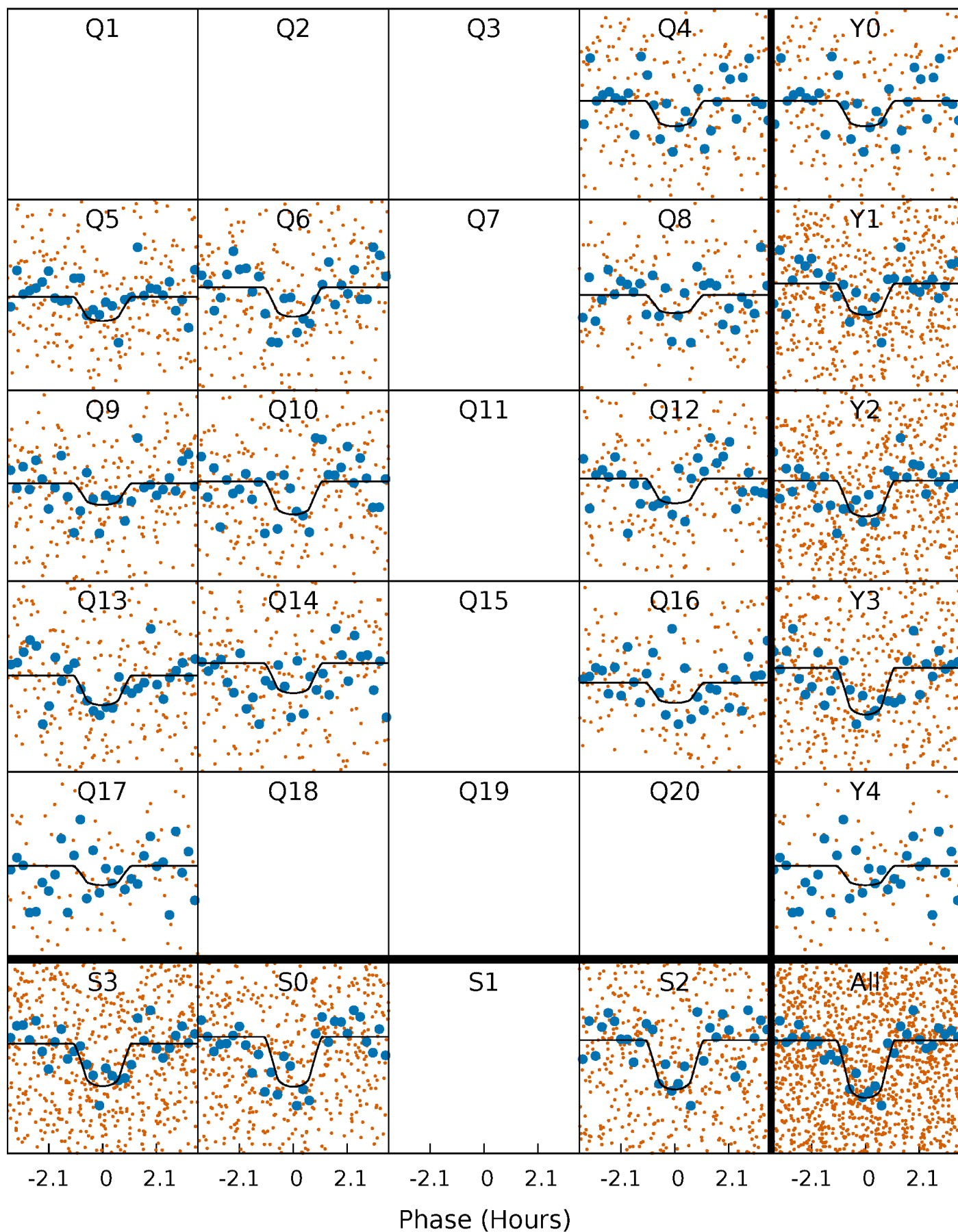
PDC Quarter-Phased Transit Curves

TCE 009479306-01 P= 4.860750 Days $T_0=135.773270$ (BKJD)



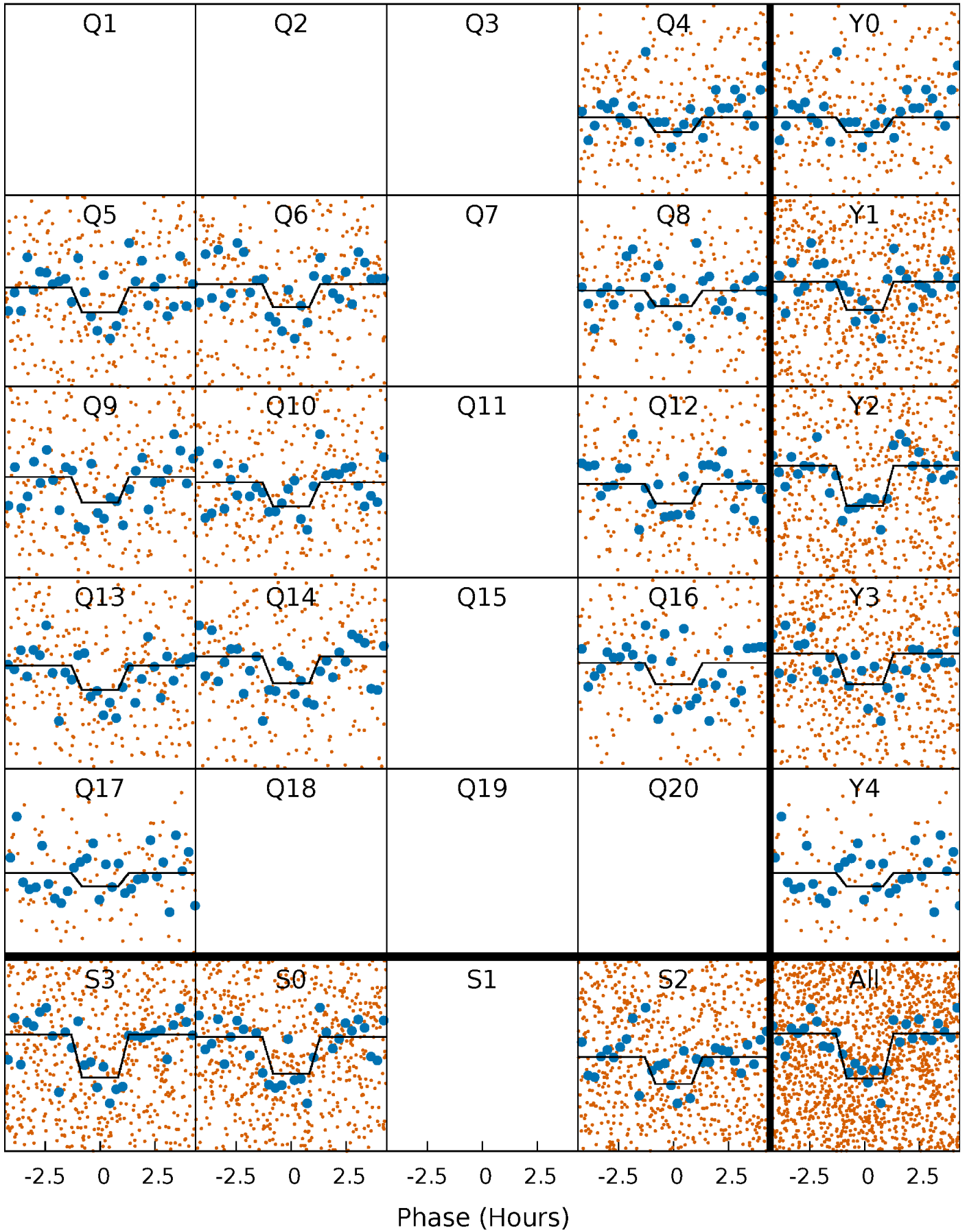
DV Quarter-Phased Transit Curves

TCE 009479306-01 P= 4.860750 Days $T_0=135.773270$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

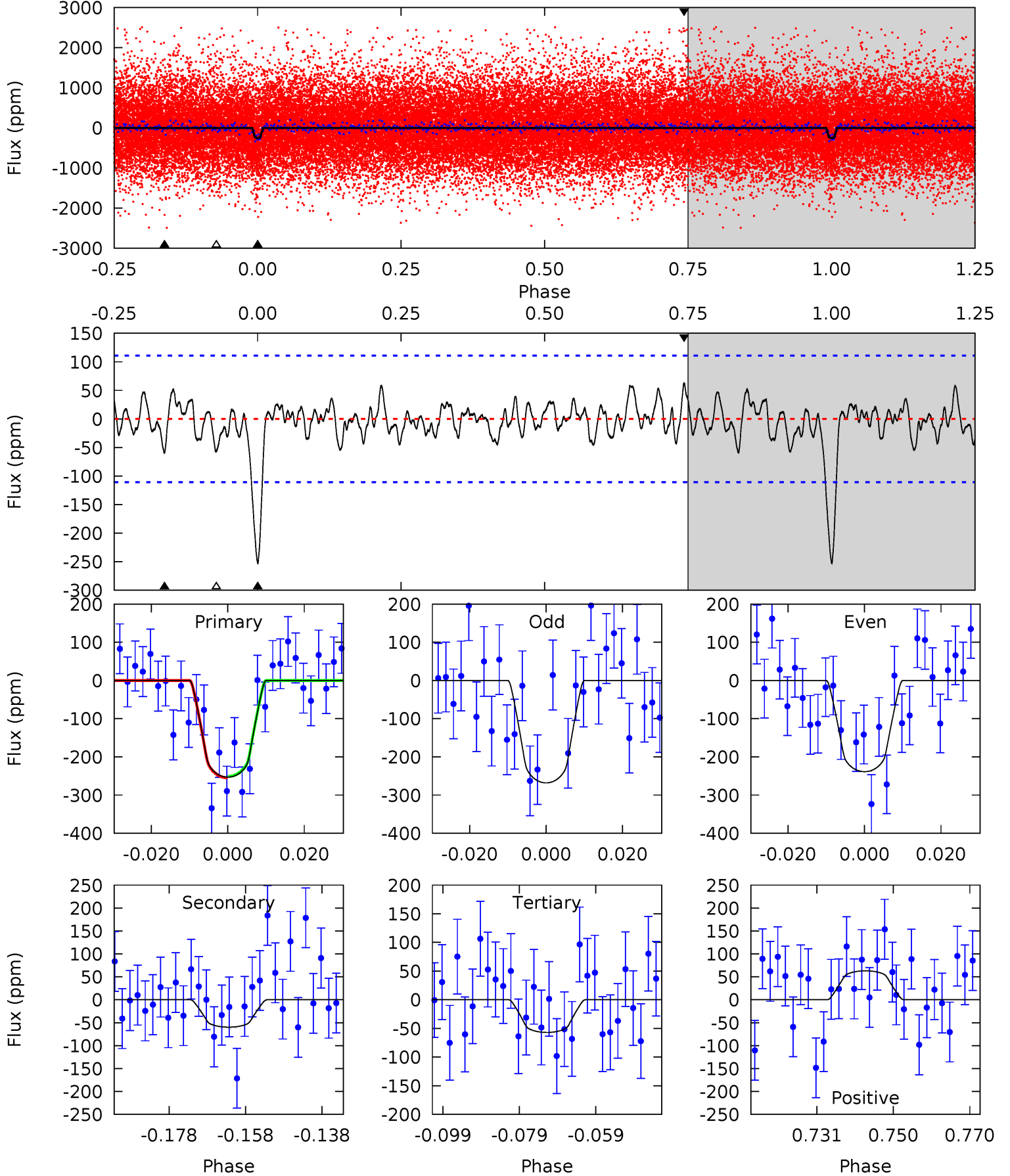
TCE 009479306-01 P= 4.860644 Days $T_0=135.780983$ (BKJD)



DV Model-Shift Uniqueness Test

009479306-01, P = 4.860750 Days, E = 135.773270 Days

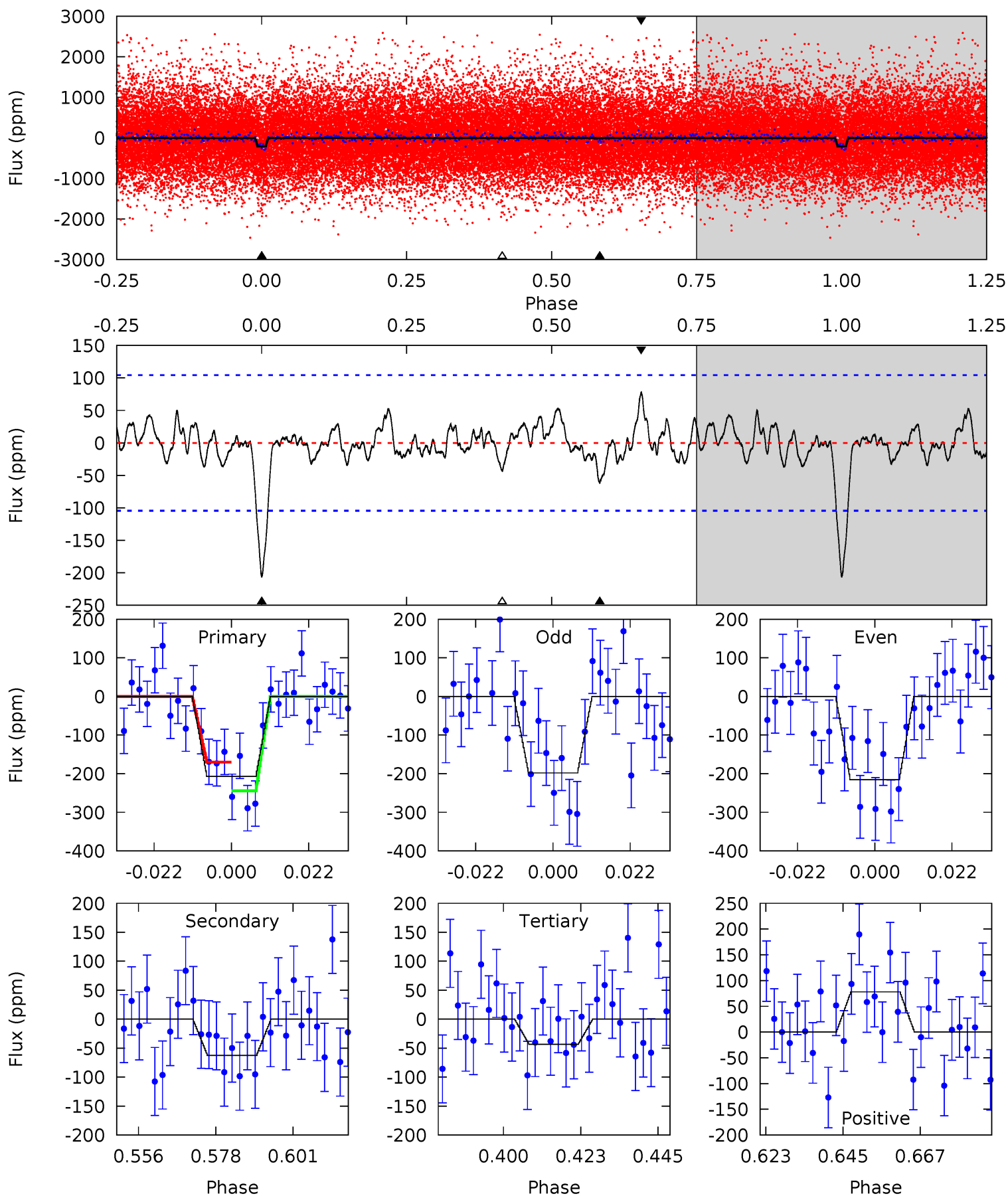
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	2.64	2.52	2.79	4.89	2.33	0.99	8.65	8.38	0.12	-0.15	0.65	0.89	0.20	0.08



Alt Model-Shift Uniqueness Test

009479306-01, P = 4.860644 Days, E = 135.780983 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.66	2.92	2.03	3.64	4.87	2.29	0.96	7.63	6.02	0.89	-0.71	0.41	0.91	0.27	1.74



Stellar Parameters For KIC 009479306

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5541^{+198}_{-198}	$4.600^{+0.034}_{-0.136}$	$-0.360^{+0.300}_{-0.300}$	$0.757^{+0.169}_{-0.056}$	$0.839^{+0.089}_{-0.089}$	$2.730^{+0.504}_{-1.093}$
	+4%/-4%	+1%/-3%	+83%/-83%	+22%/-7%	+11%/-11%	+18%/-40%
Source	KIC0	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 009479306-01 / KOI 4906.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-60 ± 23	$1.72^{+1.35}_{-0.95}$	1315^{+72}_{-60}	3731^{+1525}_{-654}	28^{+139}_{-20}
Alt.	-63 ± 21	$1.57^{+1.26}_{-1.01}$	1315^{+65}_{-56}	3926^{+2089}_{-723}	37^{+284}_{-27}

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 $A_{obs} \gg 1.0$

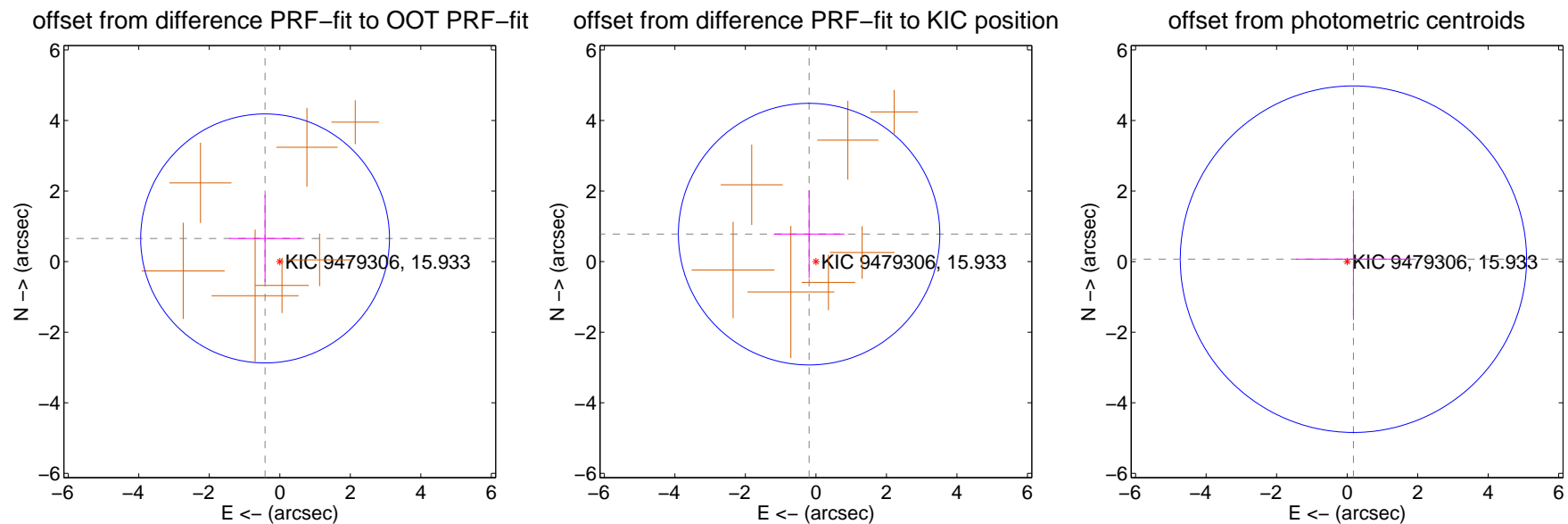
DV Centroid Data

Supplemental centroid analysis for 009479306-01. Kepler magnitude: 15.93. Transit SNR 8.74

There are 0 quarters with good PRF difference image offsets

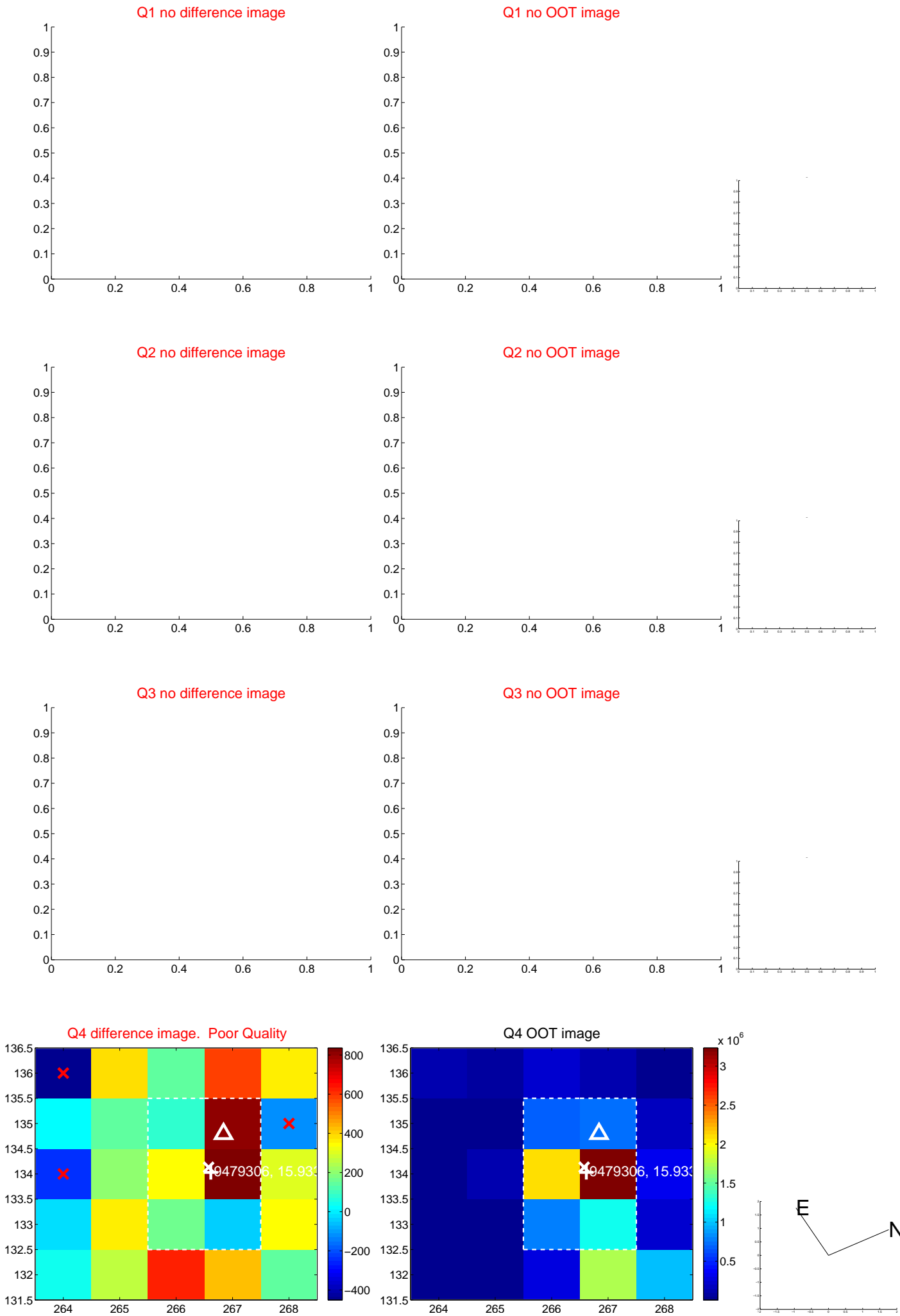
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.779 ± 1.176	0.66	0.418 ± 1.015	0.658 ± 1.236
PRF-fit source offset from KIC position	0.804 ± 1.236	0.65	0.194 ± 1.003	0.780 ± 1.249
photometric centroid source offset	0.19 ± 1.64	0.12	-0.18 ± 1.62	0.07 ± 1.72

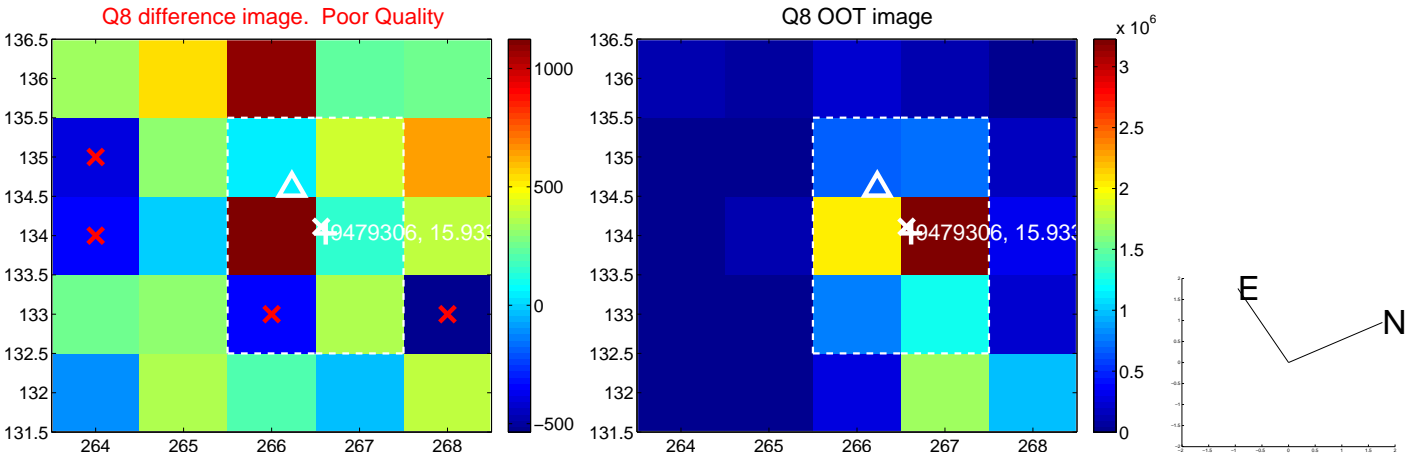
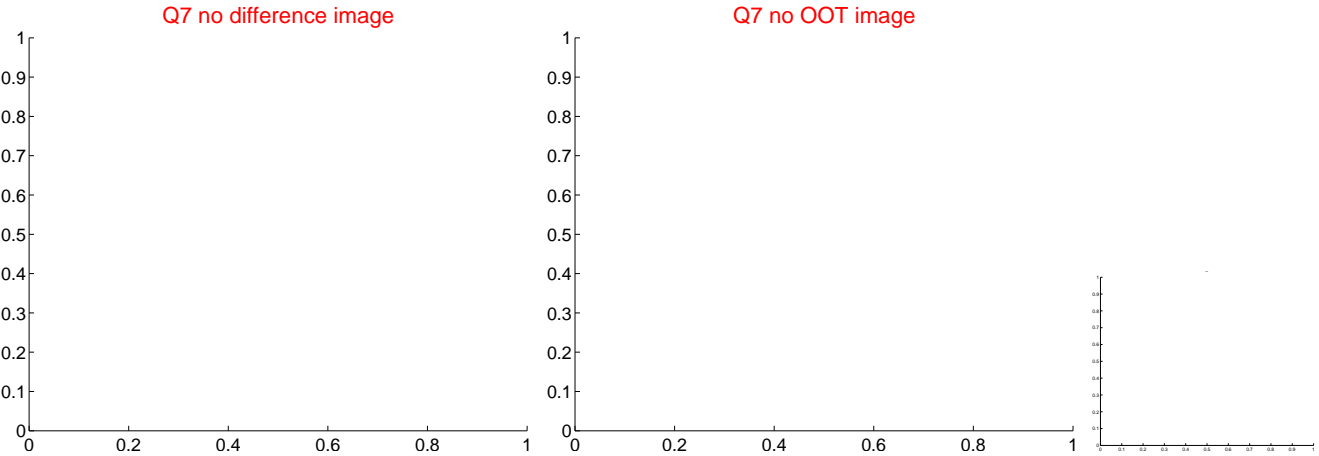
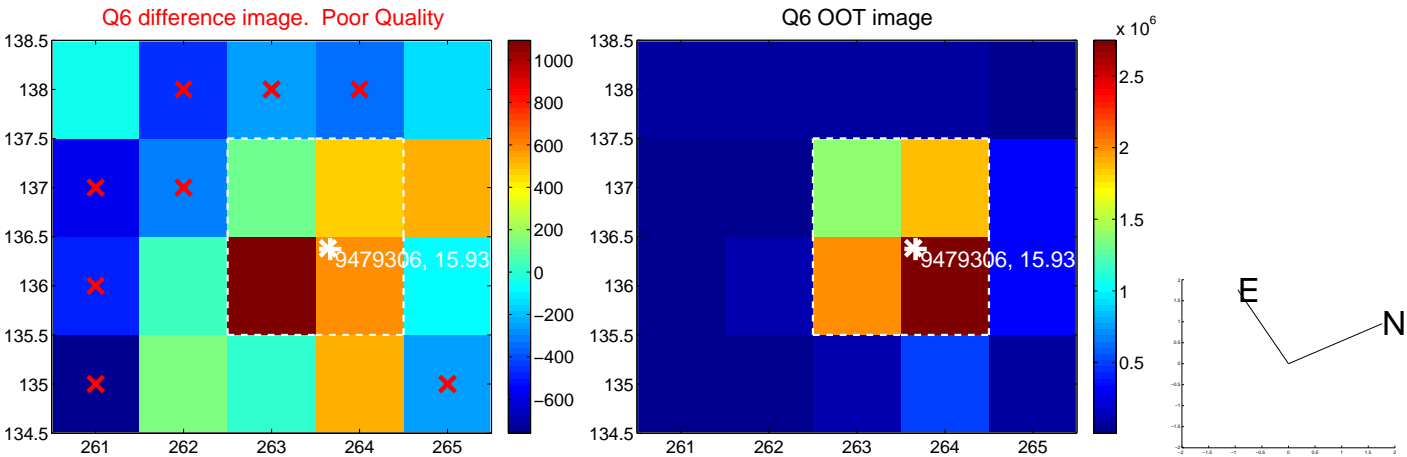
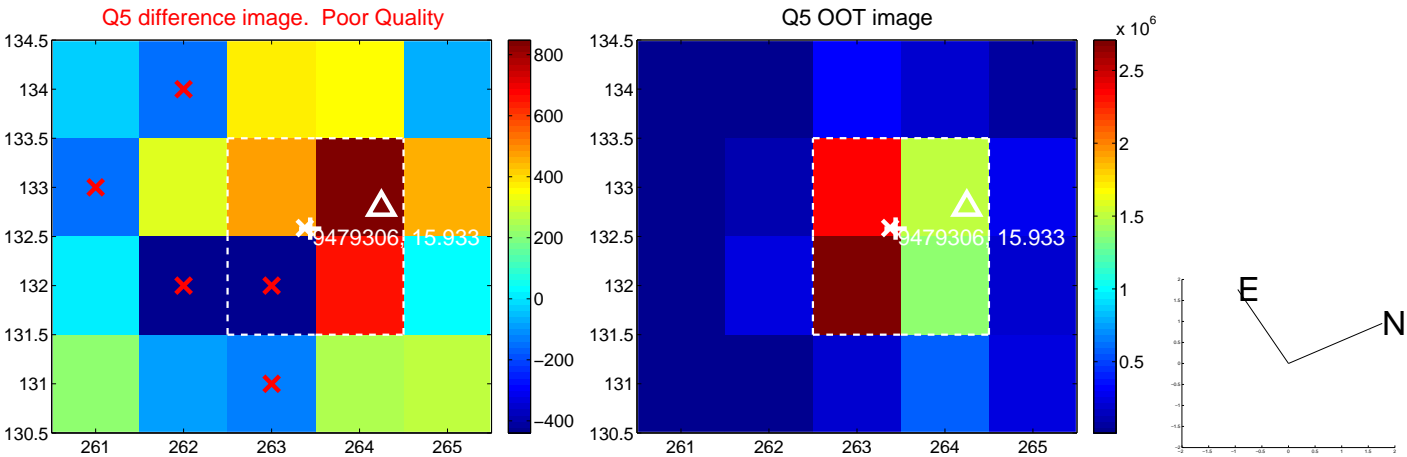


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

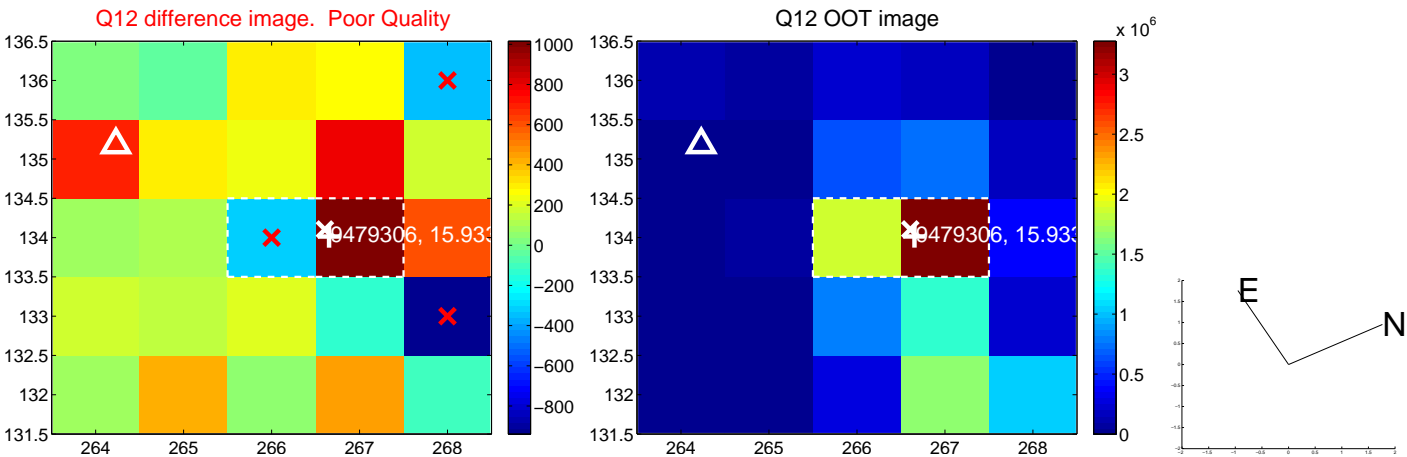
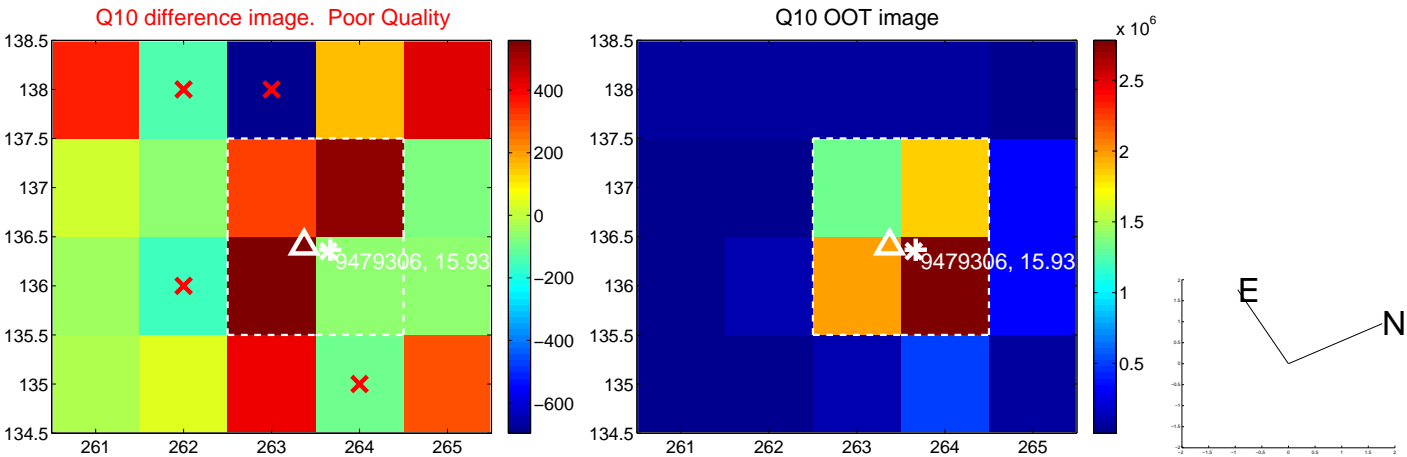
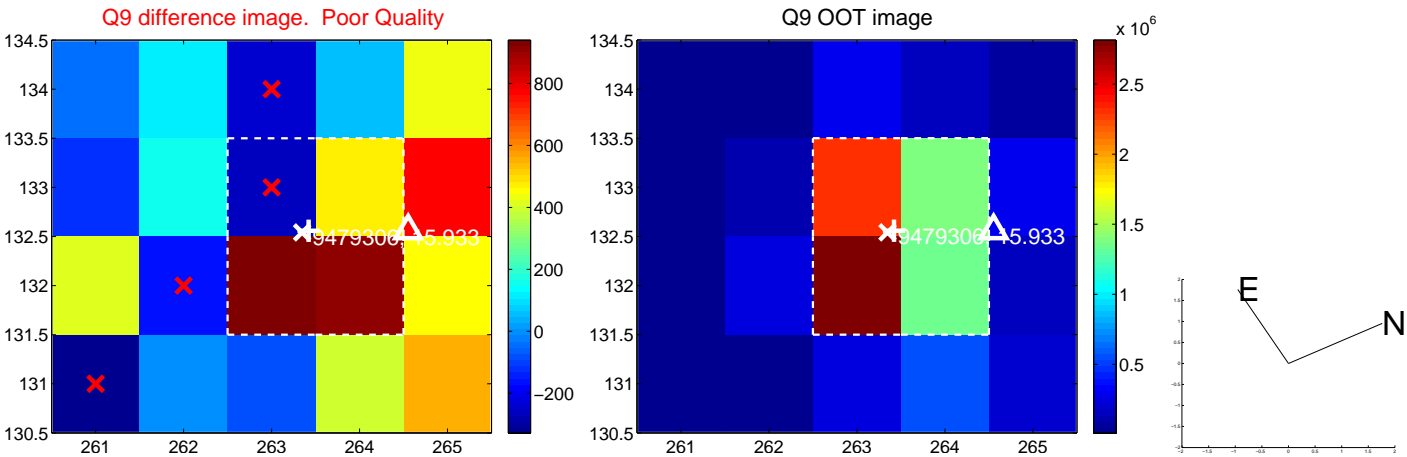
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



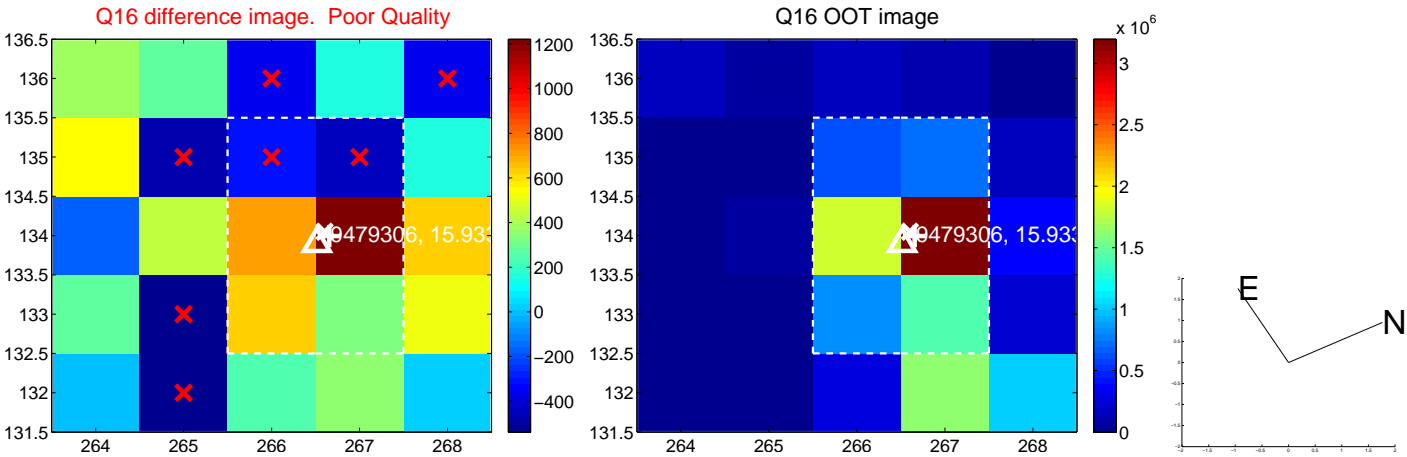
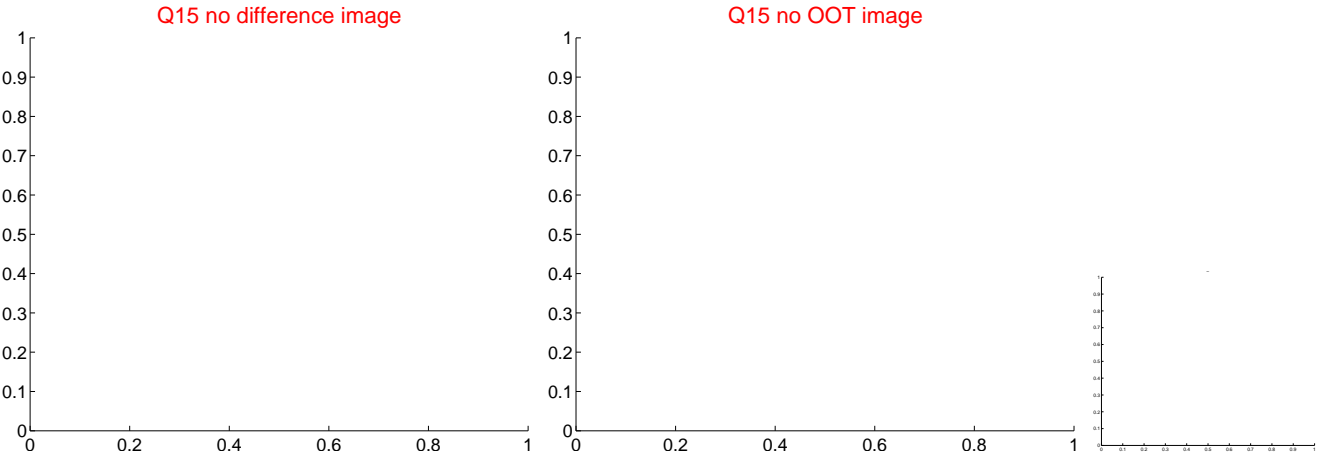
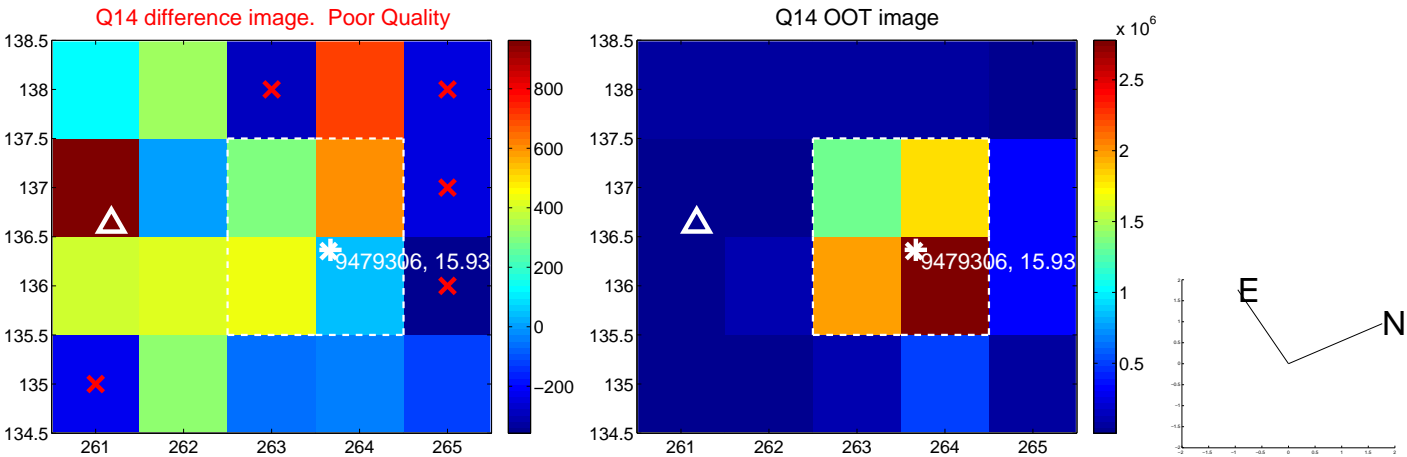
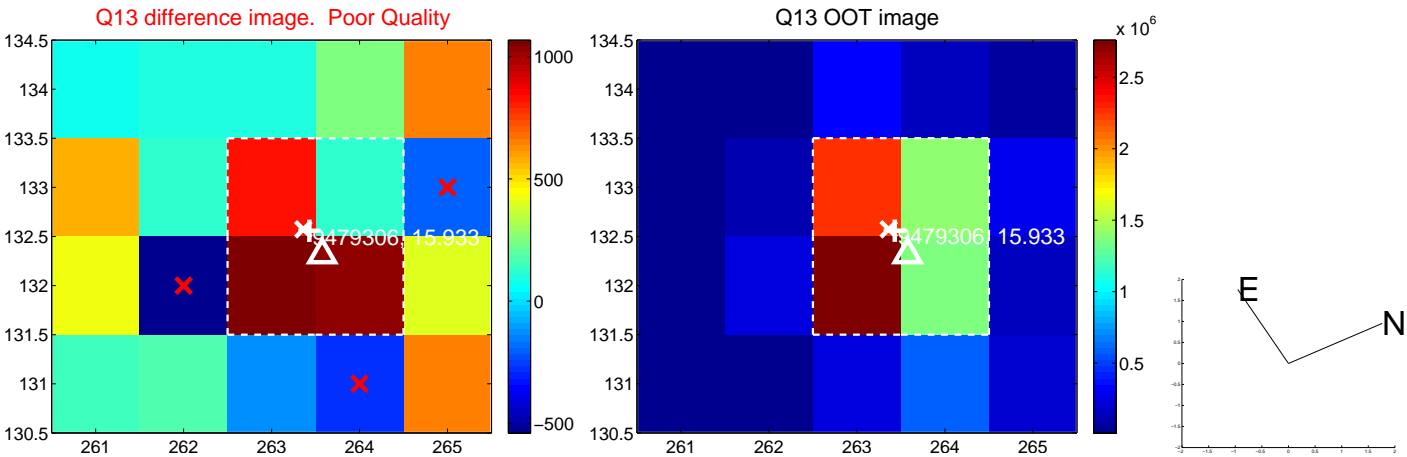
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



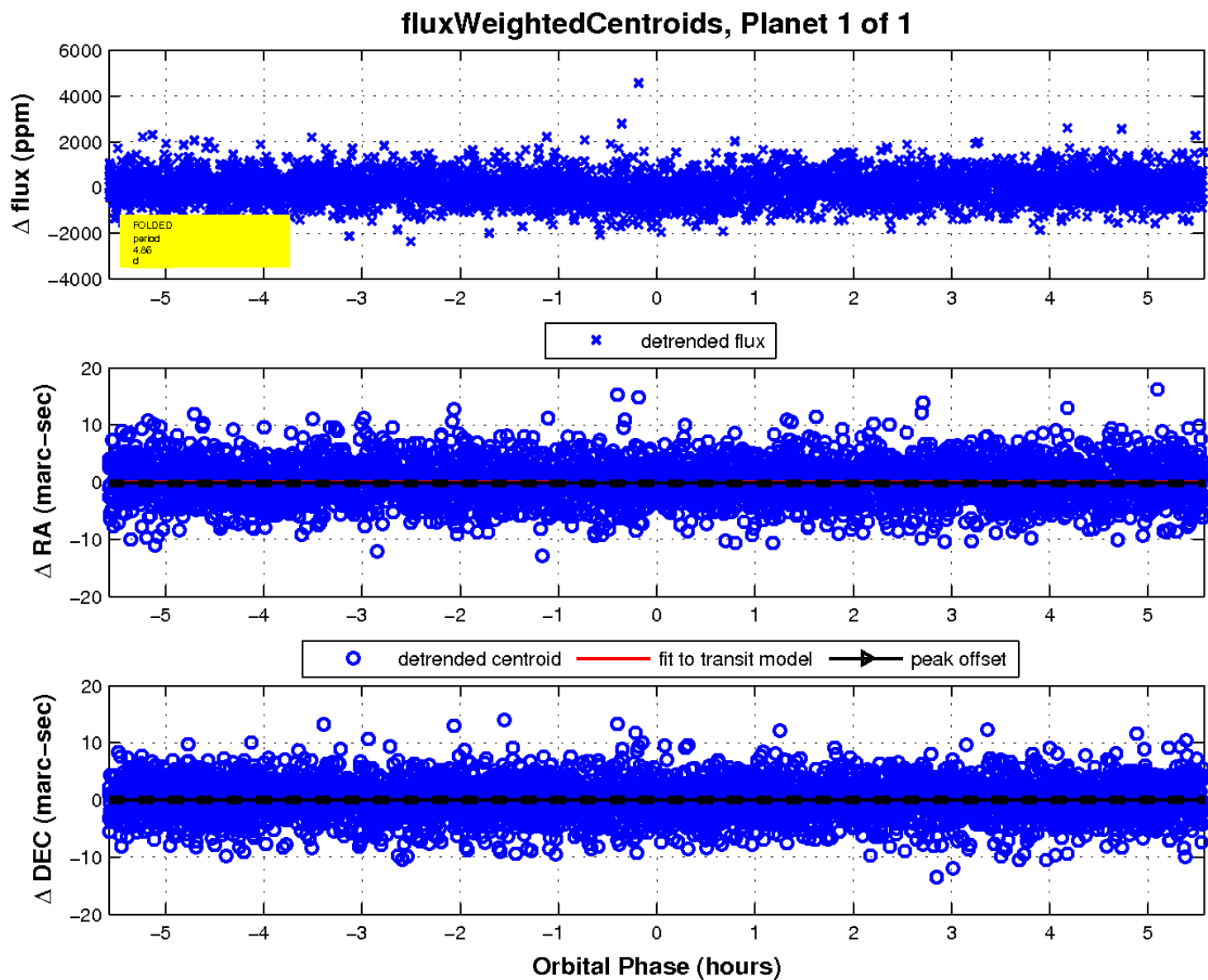
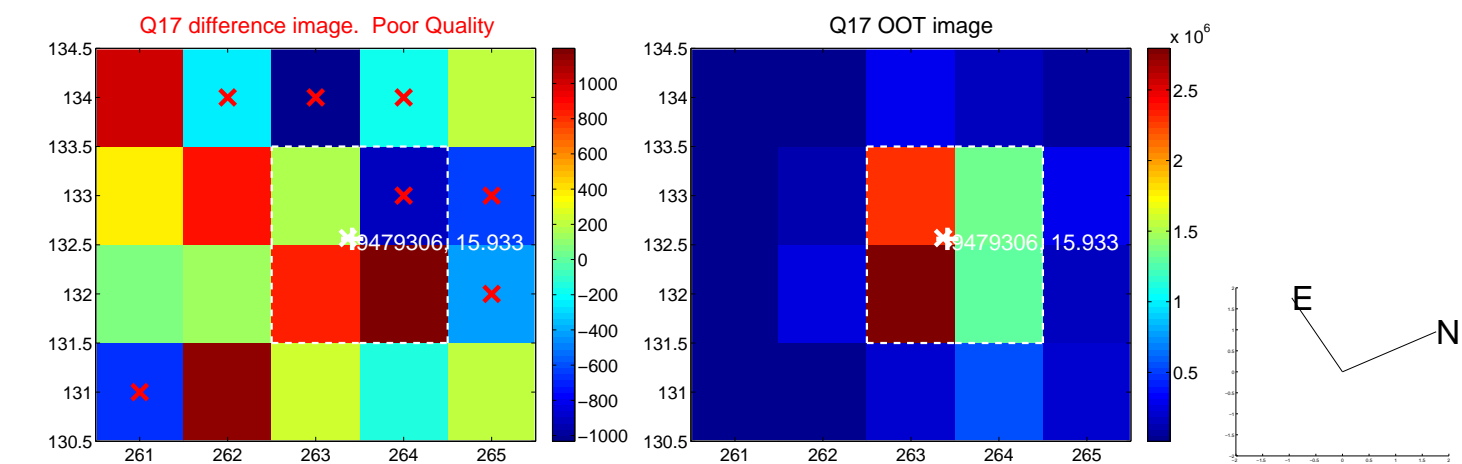
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

