

KIC 005176131

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})
005176131-01	OBS	No	479.762443	354.870368	143.1	15.719	7.6	7.3	1.23	6217	1.61	1.34

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005176131-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS

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

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

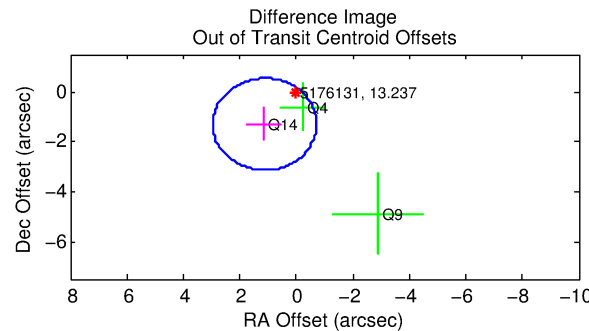
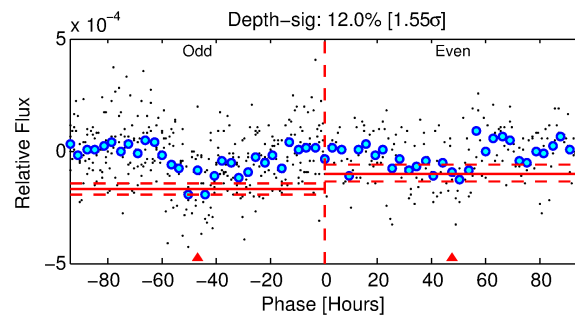
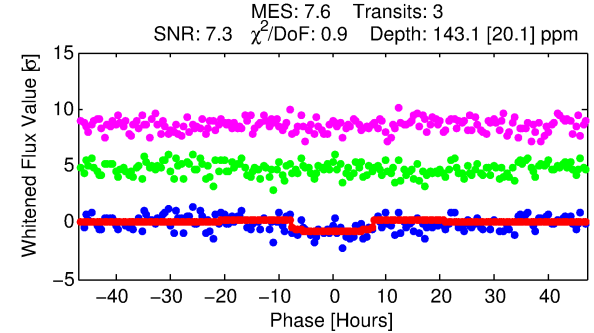
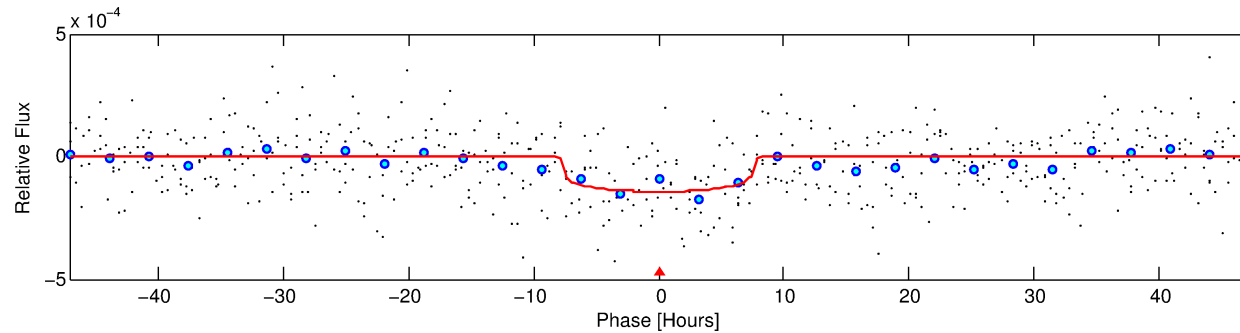
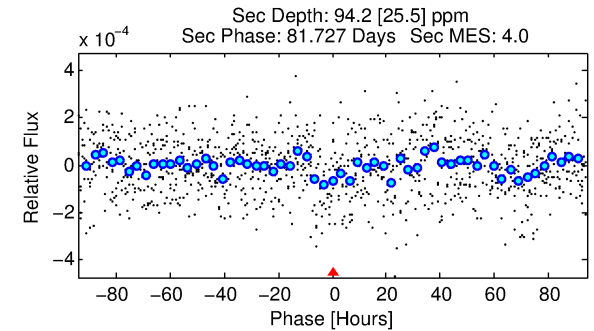
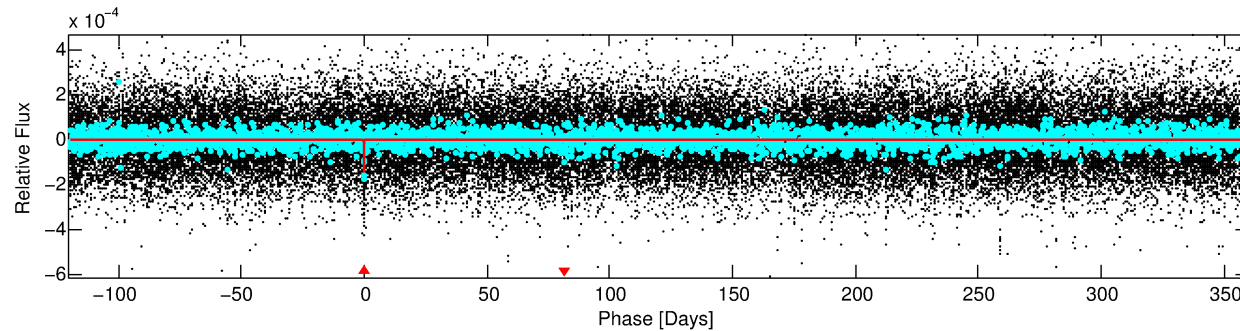
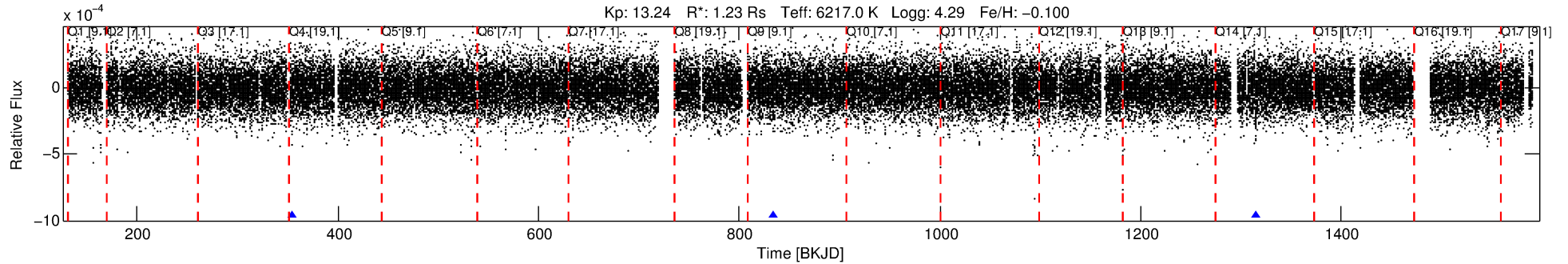
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005176131-01

No Significant Match Found

DV One-Page Summary

KIC: 5176131 Candidate: 1 of 1 Period: 479.762 d



DV Fit Results:

Period = 479.76244 [0.01825] d
Epoch = 354.8704 [0.0238] BKJD
Rp/R* = 0.0121 [0.0031]
a/R* = 147.30 [186.92]
b = 0.79 [0.61]
Seff = 1.34 [0.40]
Teq = 274 [20] K
Rp = 1.61 [0.54] Re
a = 1.2259 [0.2256] AU
Ag = 29888.86 [19155.30] [1.56σ]
Teffp = 5574 [827] K [6.41σ]

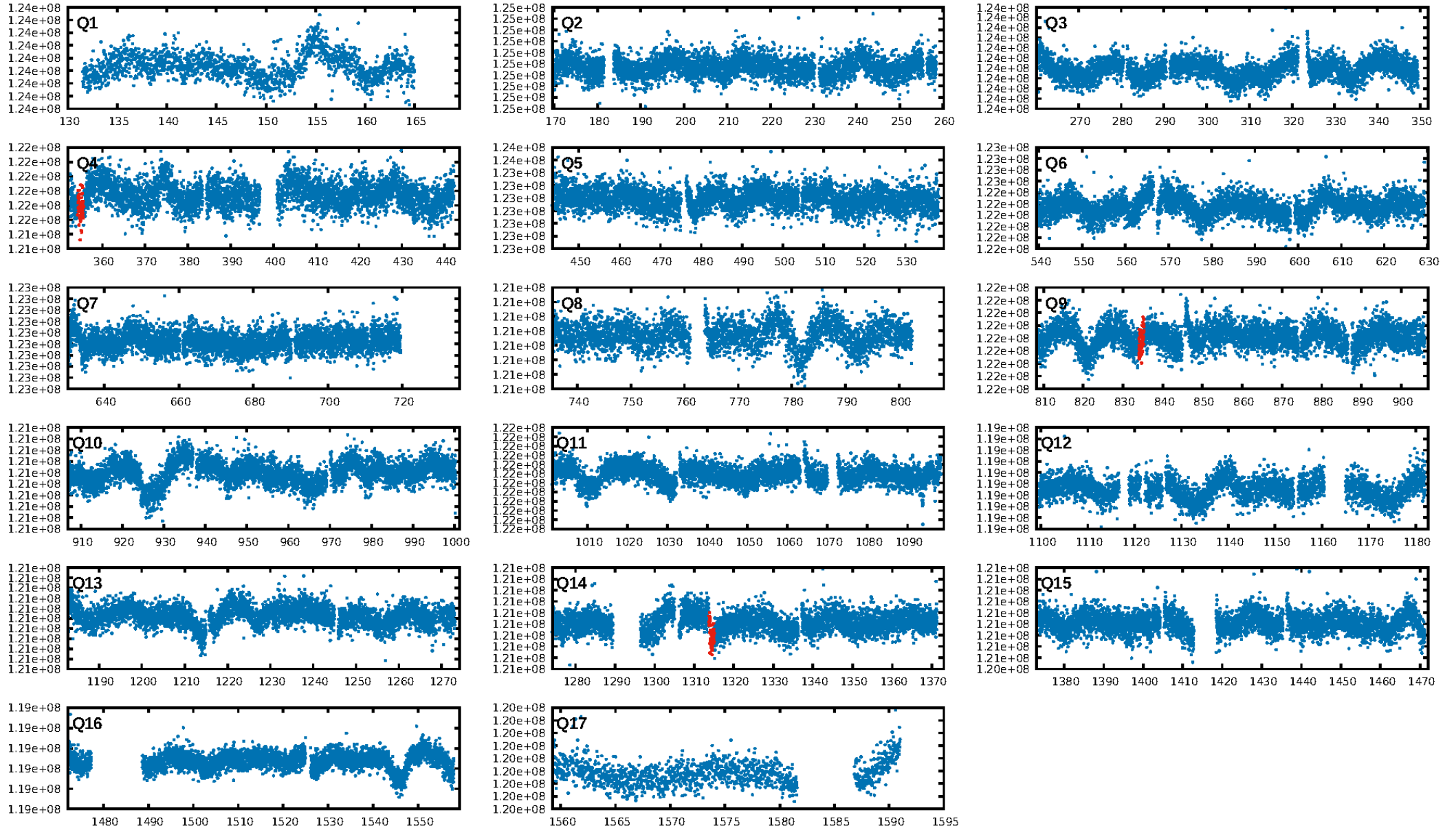
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 7.9%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 3.40e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.125
Centroid-sig: 67.3%
Centroid-so: 0.649 arcsec [0.47σ]
OotOffset-rm: 1.719 arcsec [2.81σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-rm: 1.601 arcsec [2.61σ]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

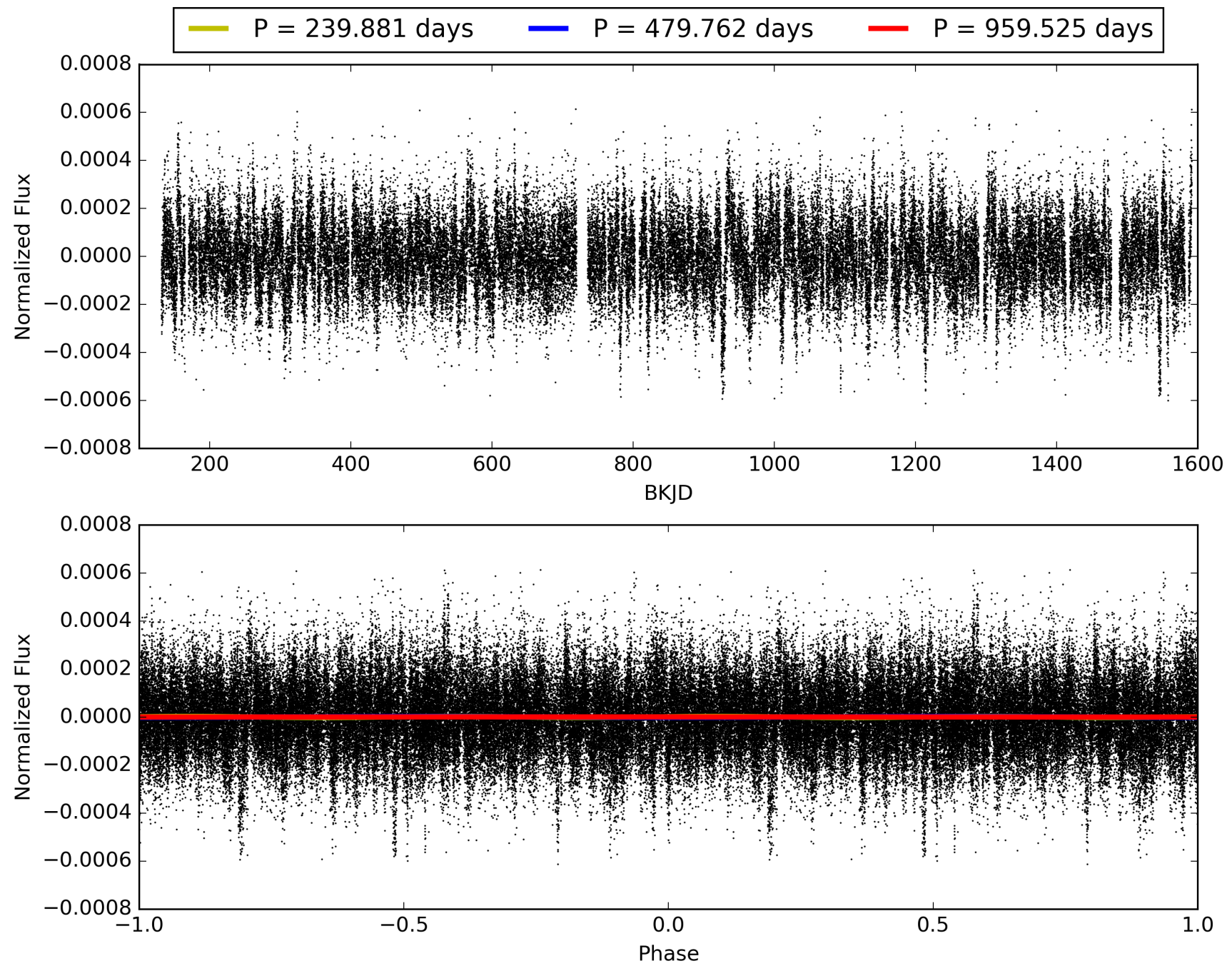
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 14:34:09 Z

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

TCE 005176131-01, PDC Light Curves

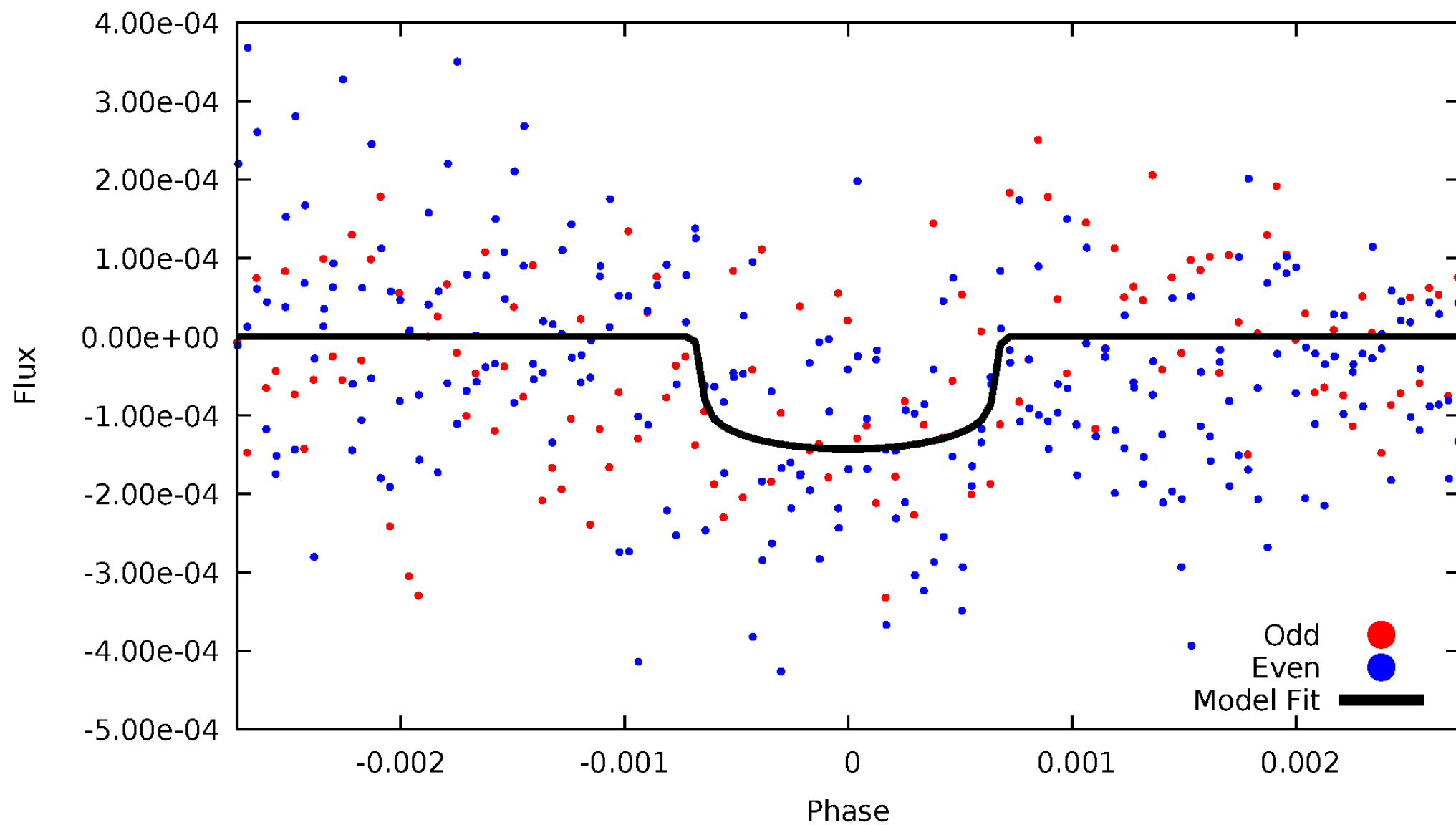


TCE 005176131-01



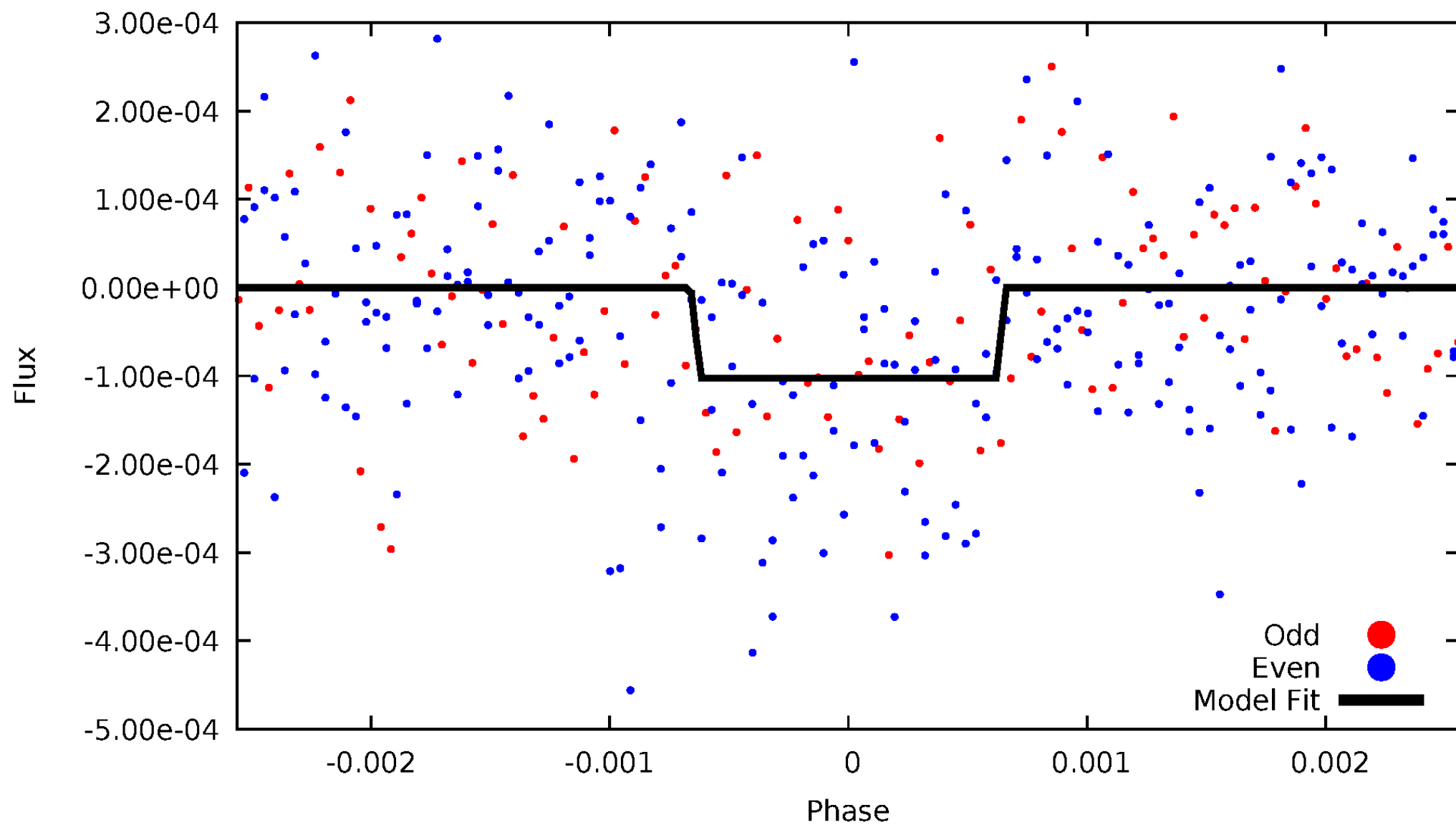
DV Odd/Even

TCE 005176131-01

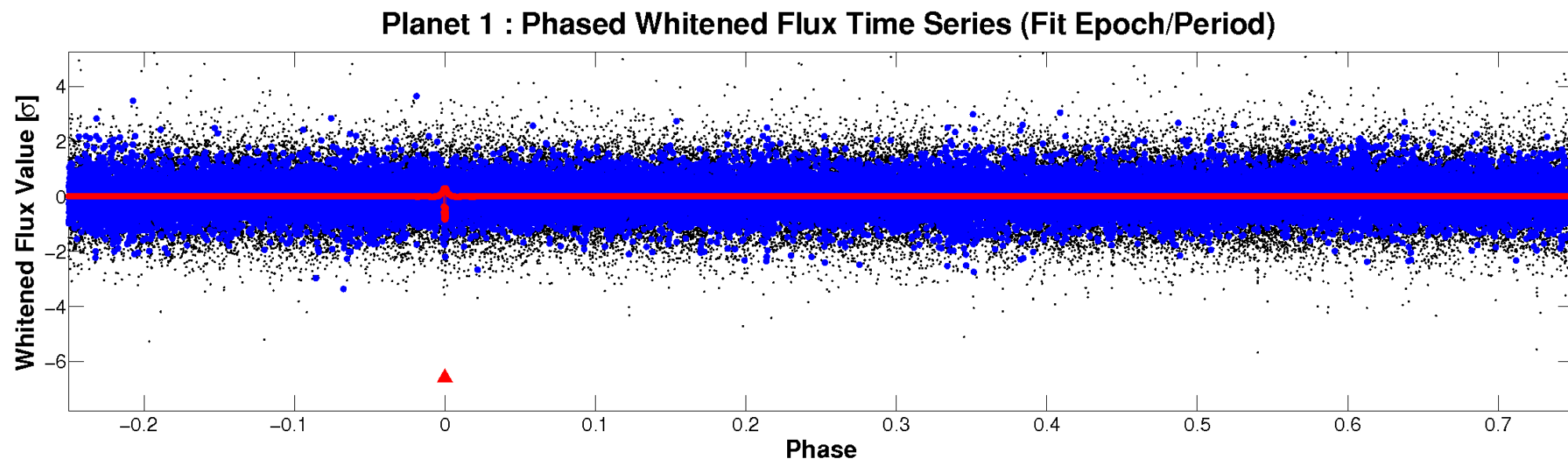
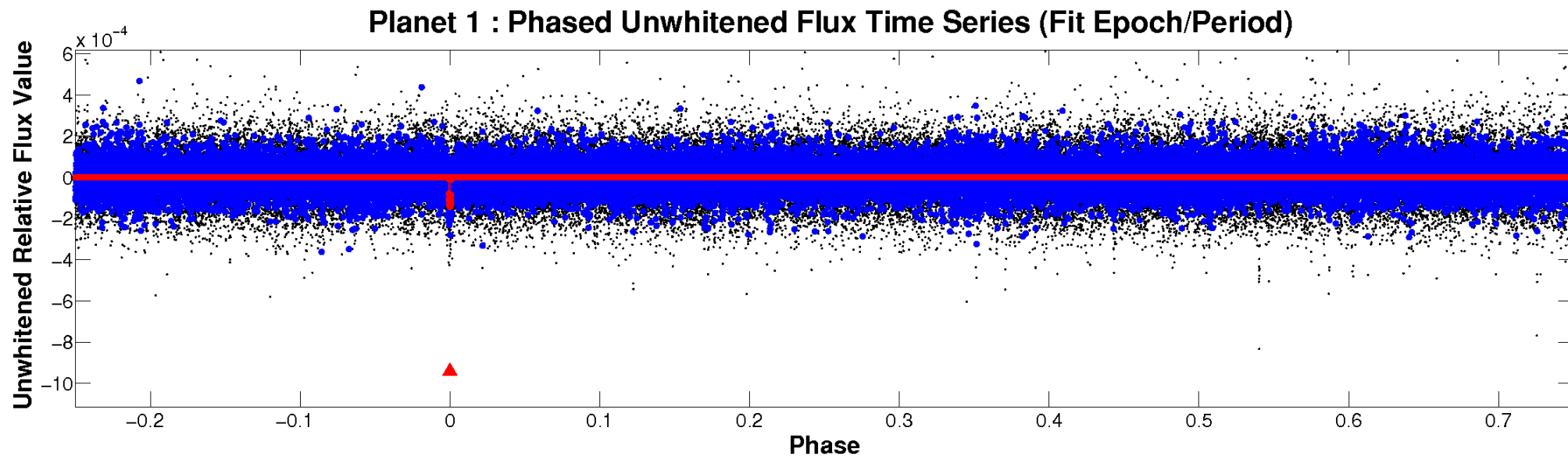


ALT Odd/Even

TCE 005176131-01

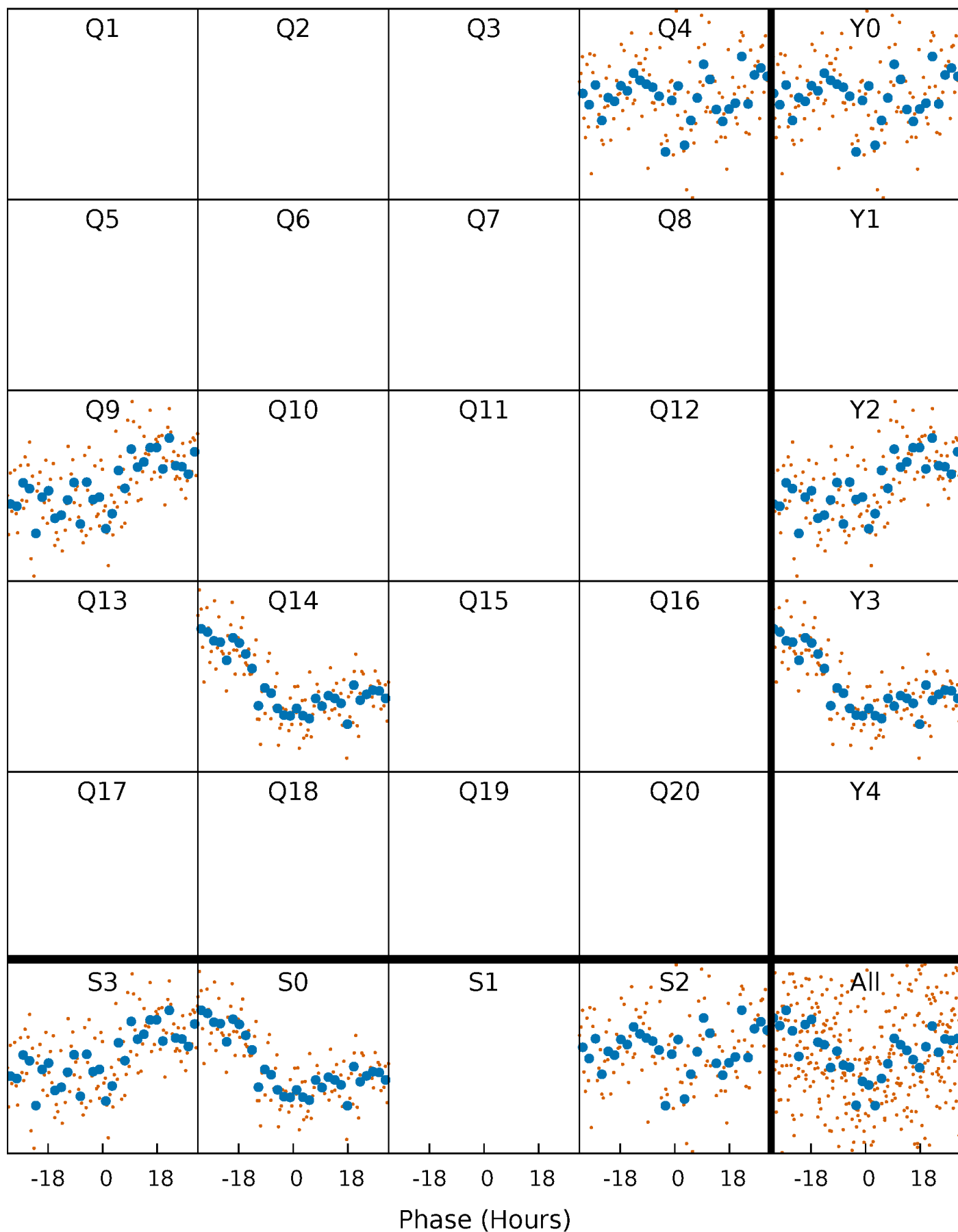


Non-Whitened Vs. Whitened Light Curve



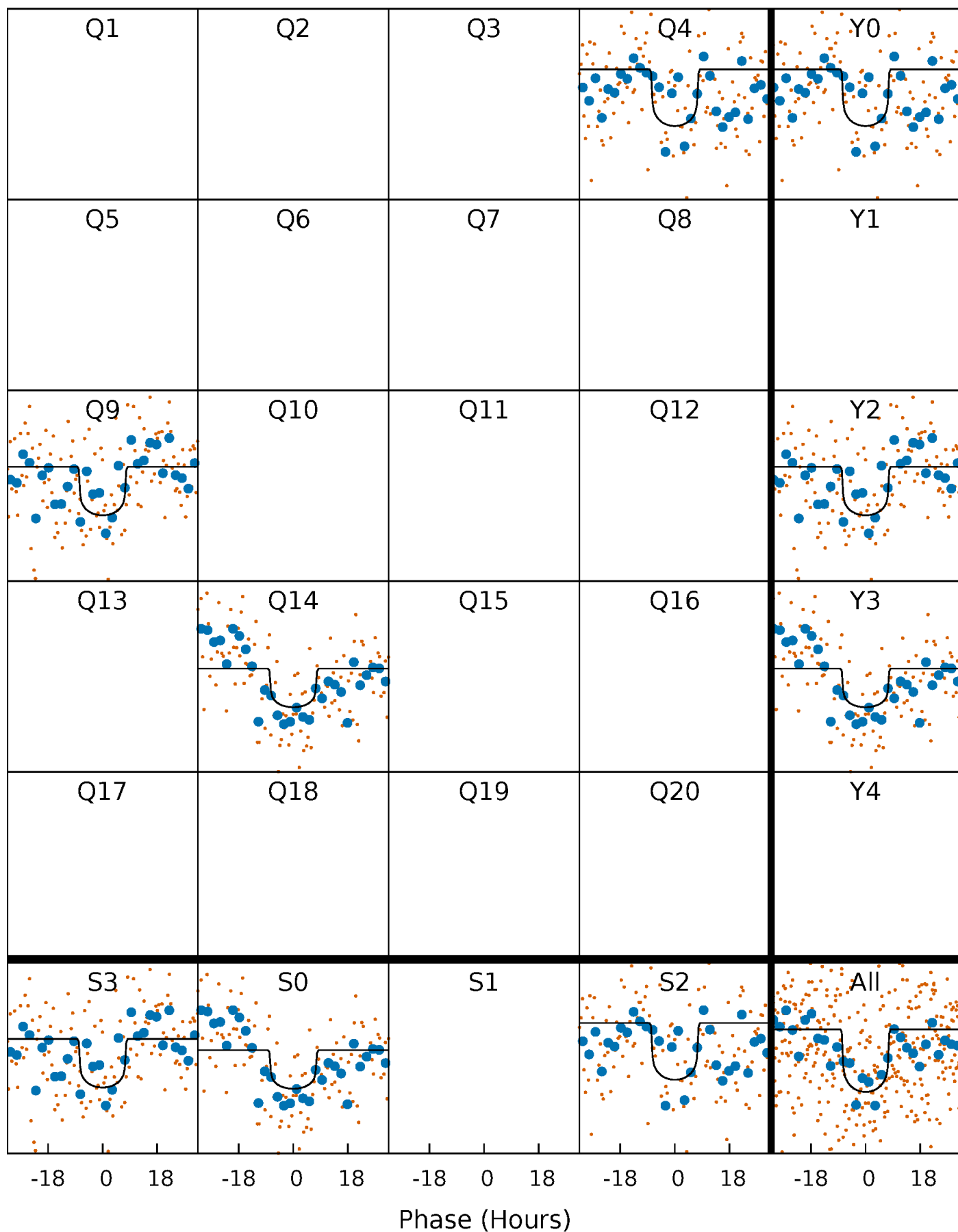
PDC Quarter-Phased Transit Curves

TCE 005176131-01 P=479.762444 Days $T_0=354.870368$ (BKJD)



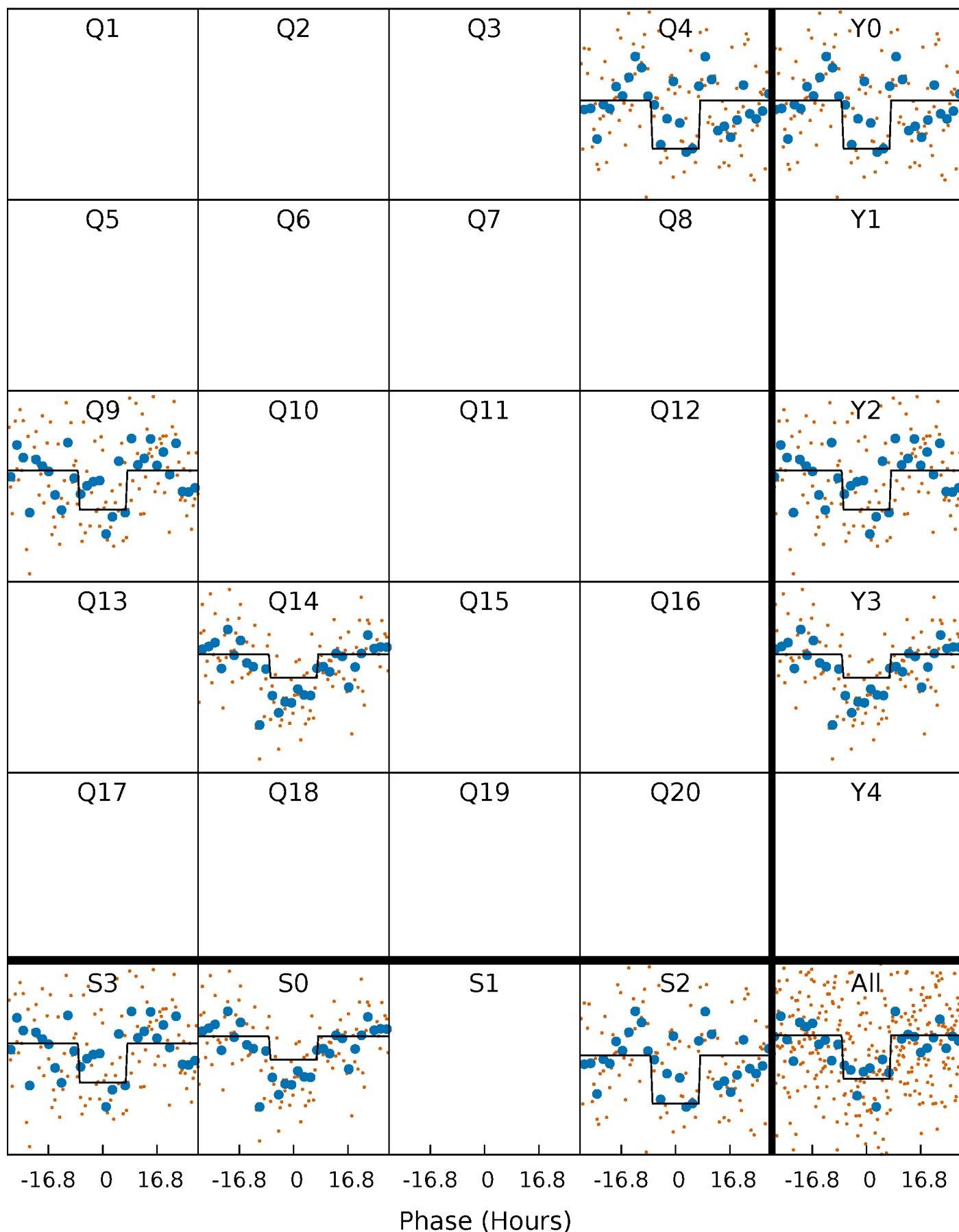
DV Quarter-Phased Transit Curves

TCE 005176131-01 P=479.762444 Days $T_0=354.870368$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

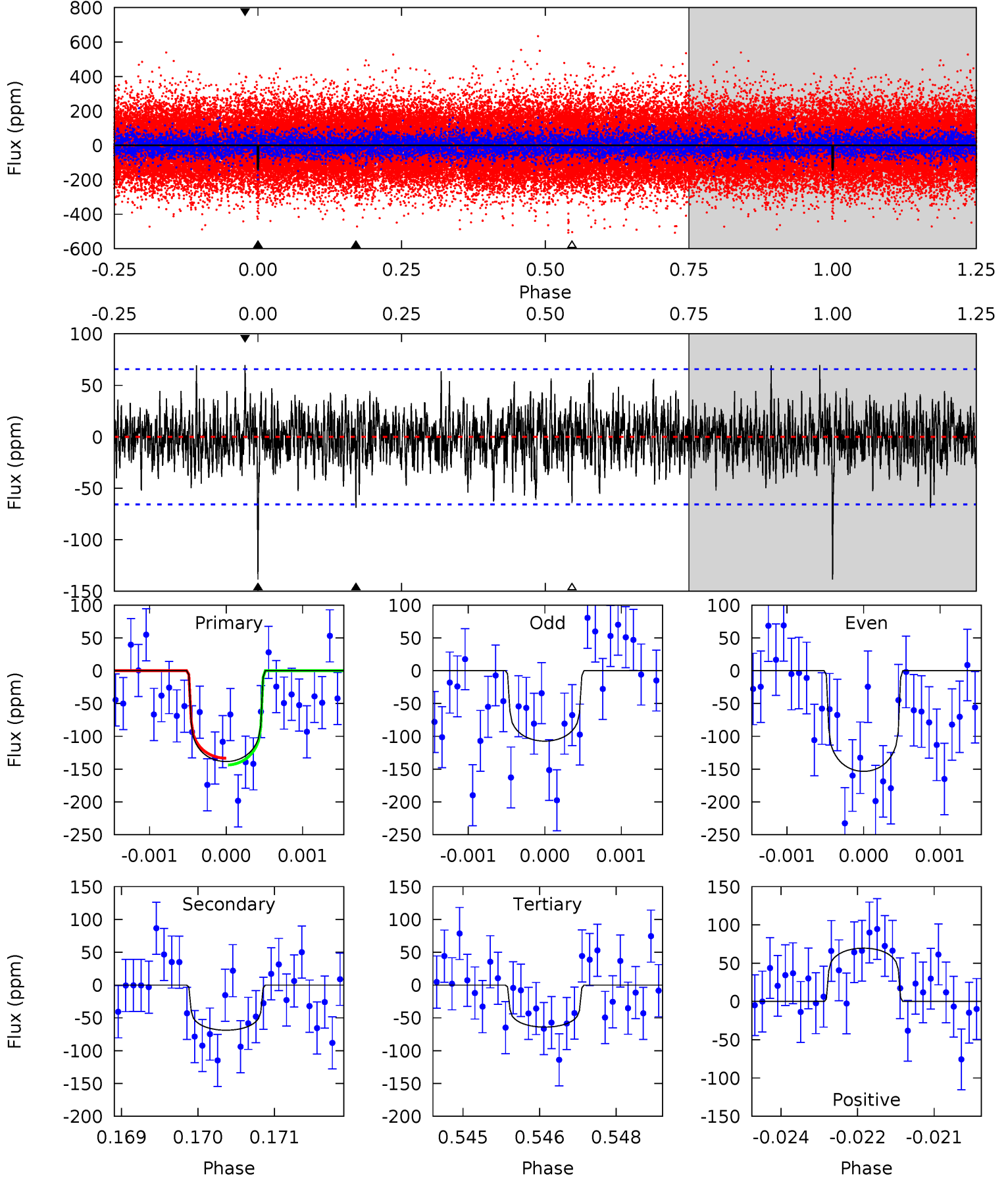
TCE 005176131-01 P=479.752744 Days $T_0=354.878303$ (BKJD)



DV Model-Shift Uniqueness Test

005176131-01, P = 479.762444 Days, E = 354.870368 Days

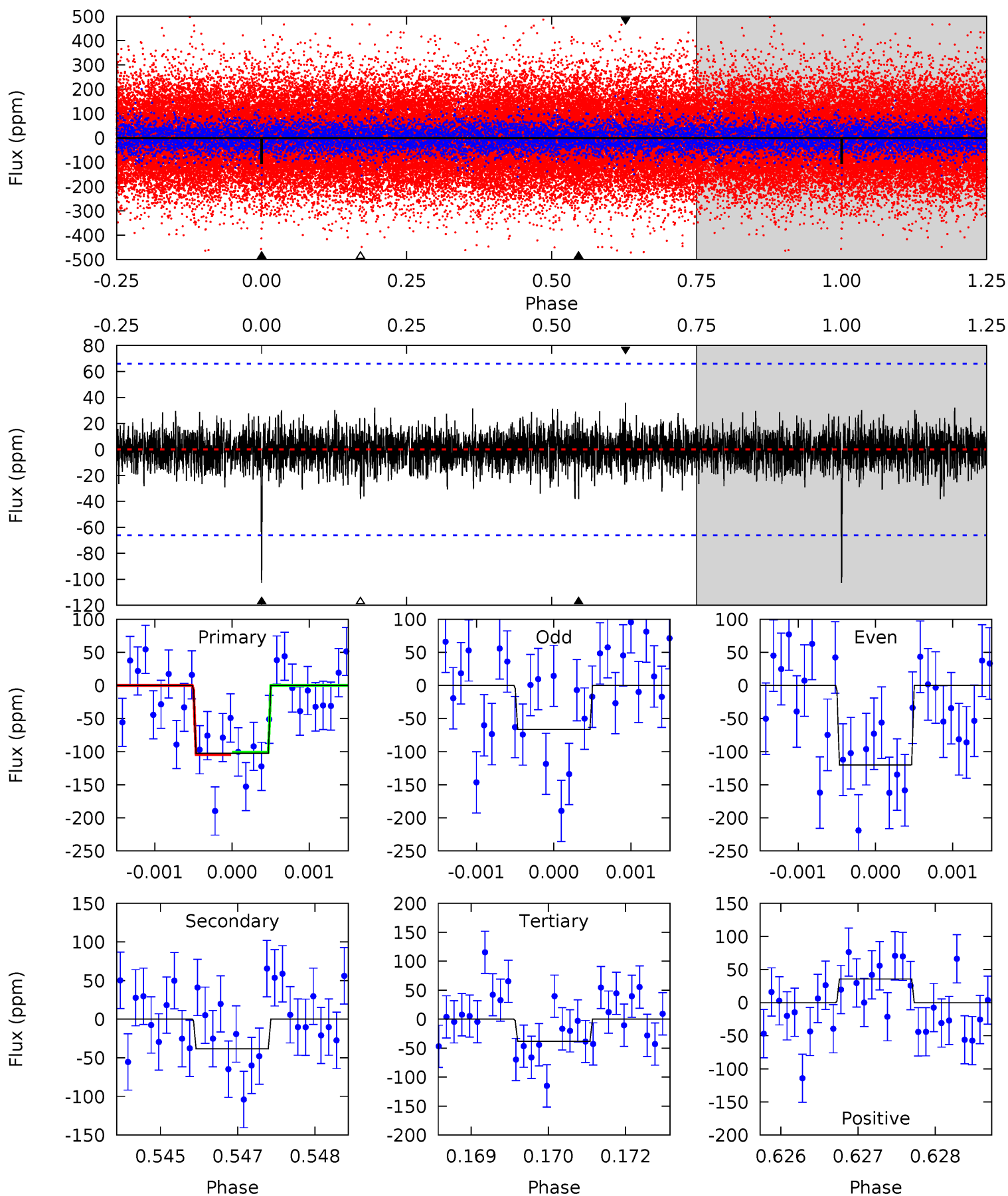
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	5.65	5.26	5.71	5.39	3.19	1.51	6.10	5.65	0.39	-0.06	1.77	1.21	0.33	0.43



Alt Model-Shift Uniqueness Test

005176131-01, P = 479.752744 Days, E = 354.878303 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.40	3.13	3.13	2.92	5.40	3.21	0.78	5.27	5.48	0.00	0.21	2.07	1.54	0.26	0.15



Stellar Parameters For KIC 005176131

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6217^{+168}_{-187}	$4.290^{+0.135}_{-0.149}$	$-0.100^{+0.250}_{-0.300}$	$1.225^{+0.265}_{-0.217}$	$1.064^{+0.158}_{-0.119}$	$0.816^{+0.522}_{-0.342}$
	+3%/-3%	+3%/-3%	+250%/-300%	+22%/-18%	+15%/-11%	+64%/-42%
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 005176131-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-69 ± 12	$1.62^{+0.46}_{-0.42}$	382^{+23}_{-20}	5182^{+809}_{-509}	21775^{+18842}_{-9000}
Alt.	-38 ± 12	$1.36^{+0.42}_{-0.44}$	386^{+23}_{-24}	4982^{+884}_{-601}	17112^{+19293}_{-8166}

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

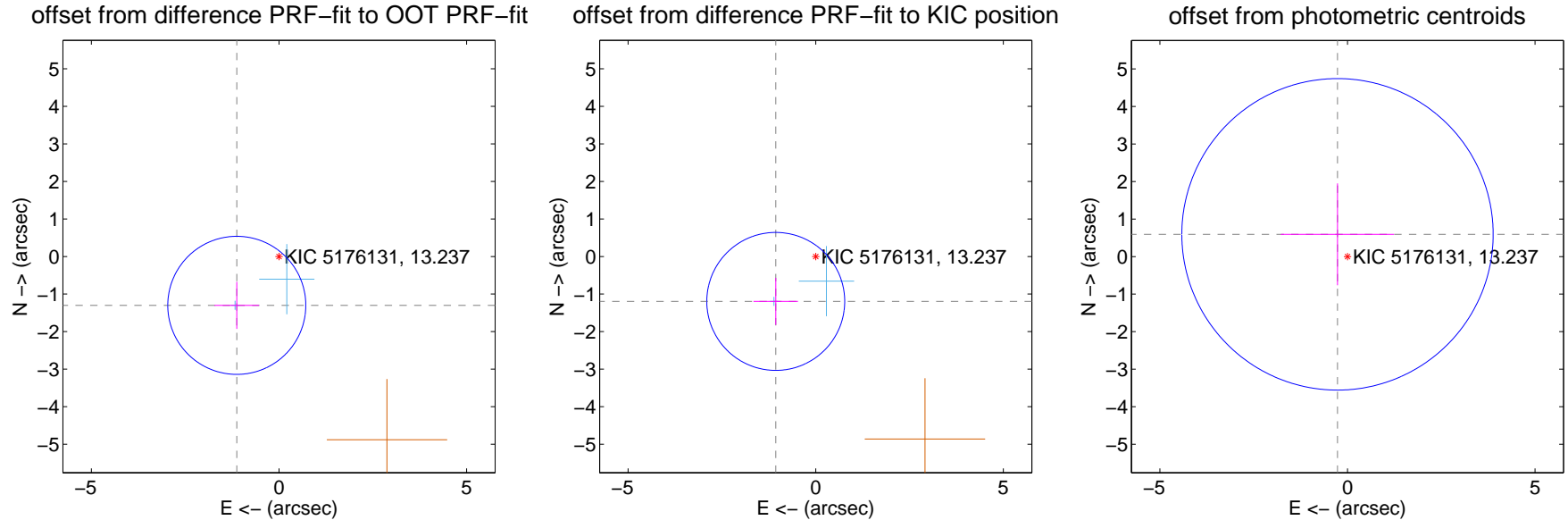
DV Centroid Data

Supplemental centroid analysis for 005176131-01. Kepler magnitude: 13.24. Transit SNR 7.33

There are 2 quarters with good PRF difference image offsets

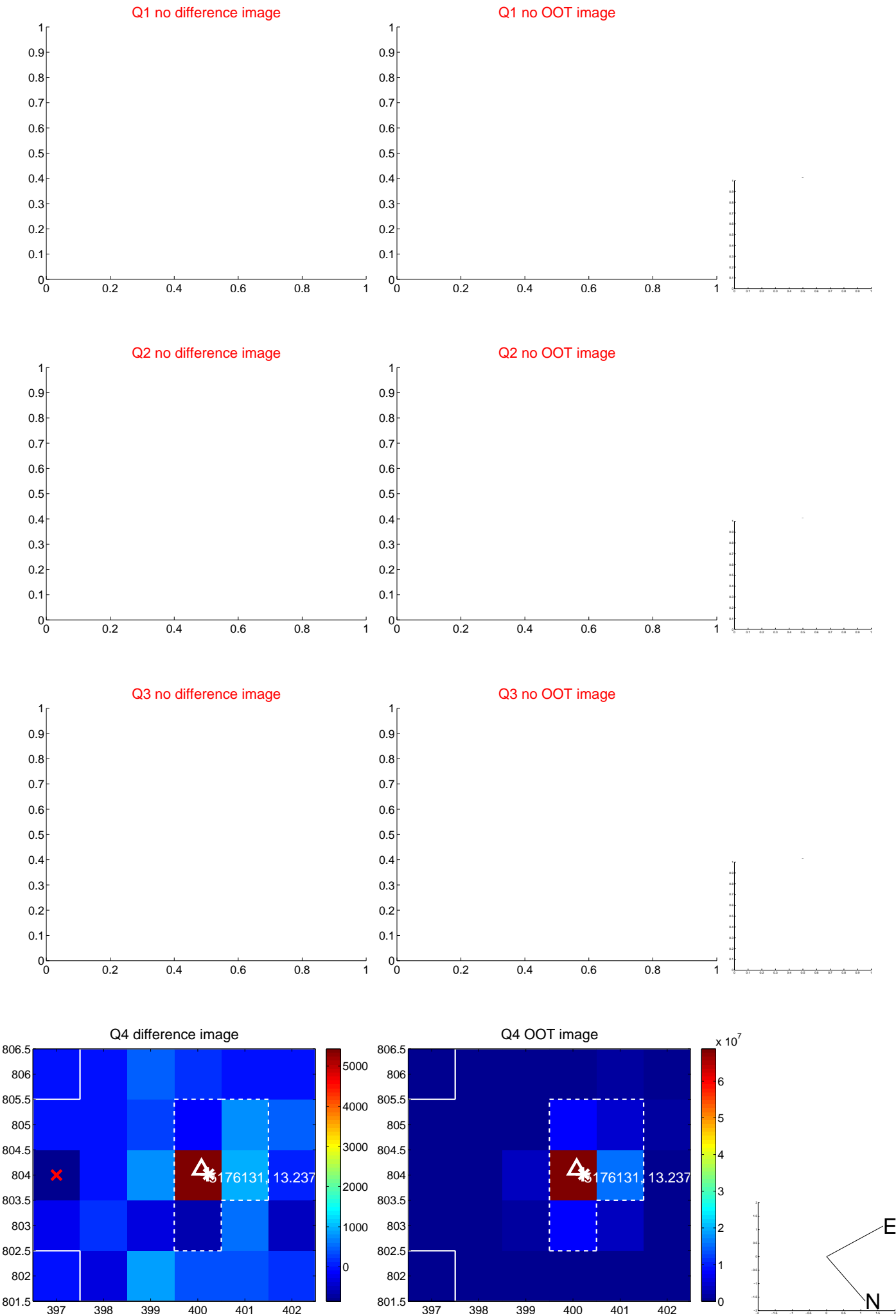
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.719 ± 0.613	2.81	1.125 ± 0.593	-1.300 ± 0.627
PRF-fit source offset from KIC position	1.601 ± 0.612	2.61	1.065 ± 0.593	-1.195 ± 0.627
photometric centroid source offset	0.65 ± 1.38	0.47	0.27 ± 1.51	0.59 ± 1.36



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.

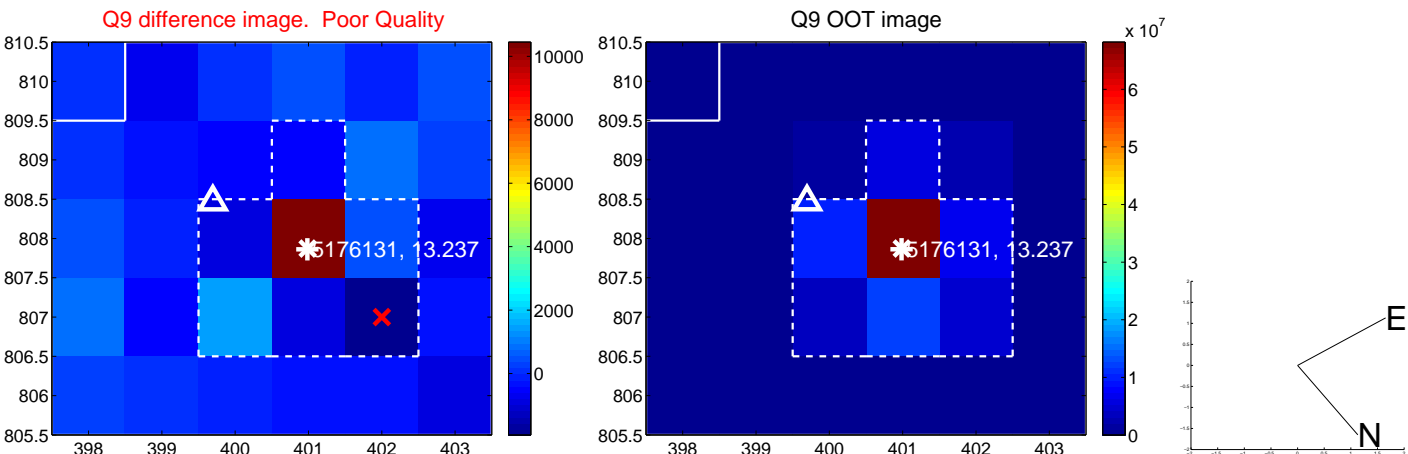
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



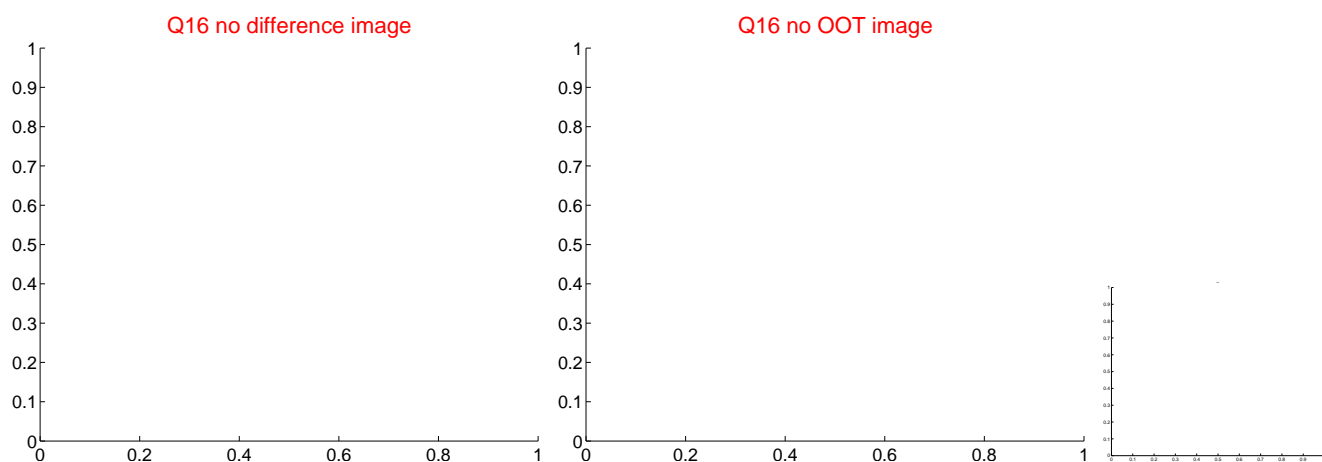
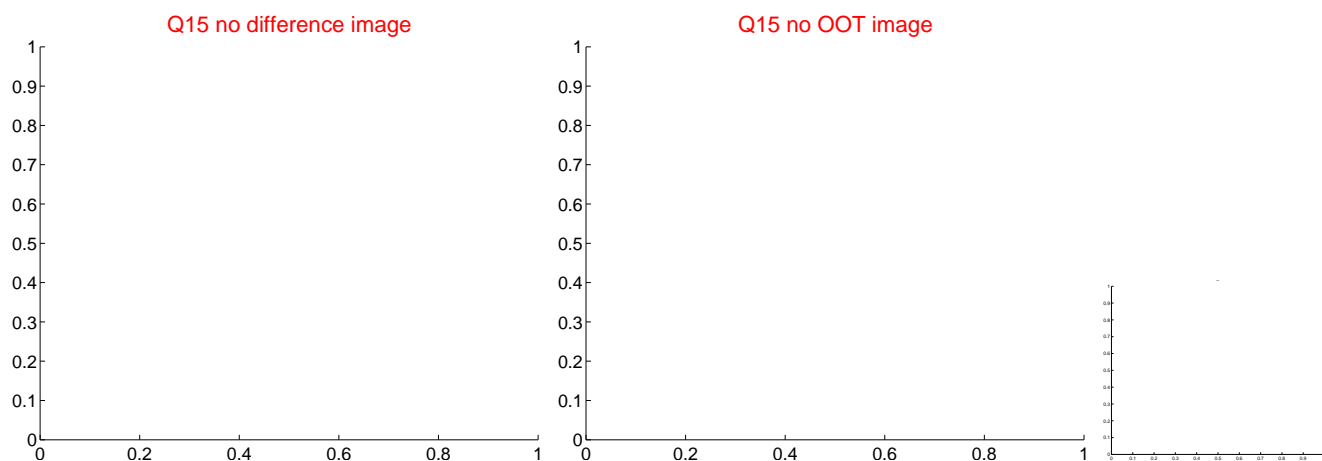
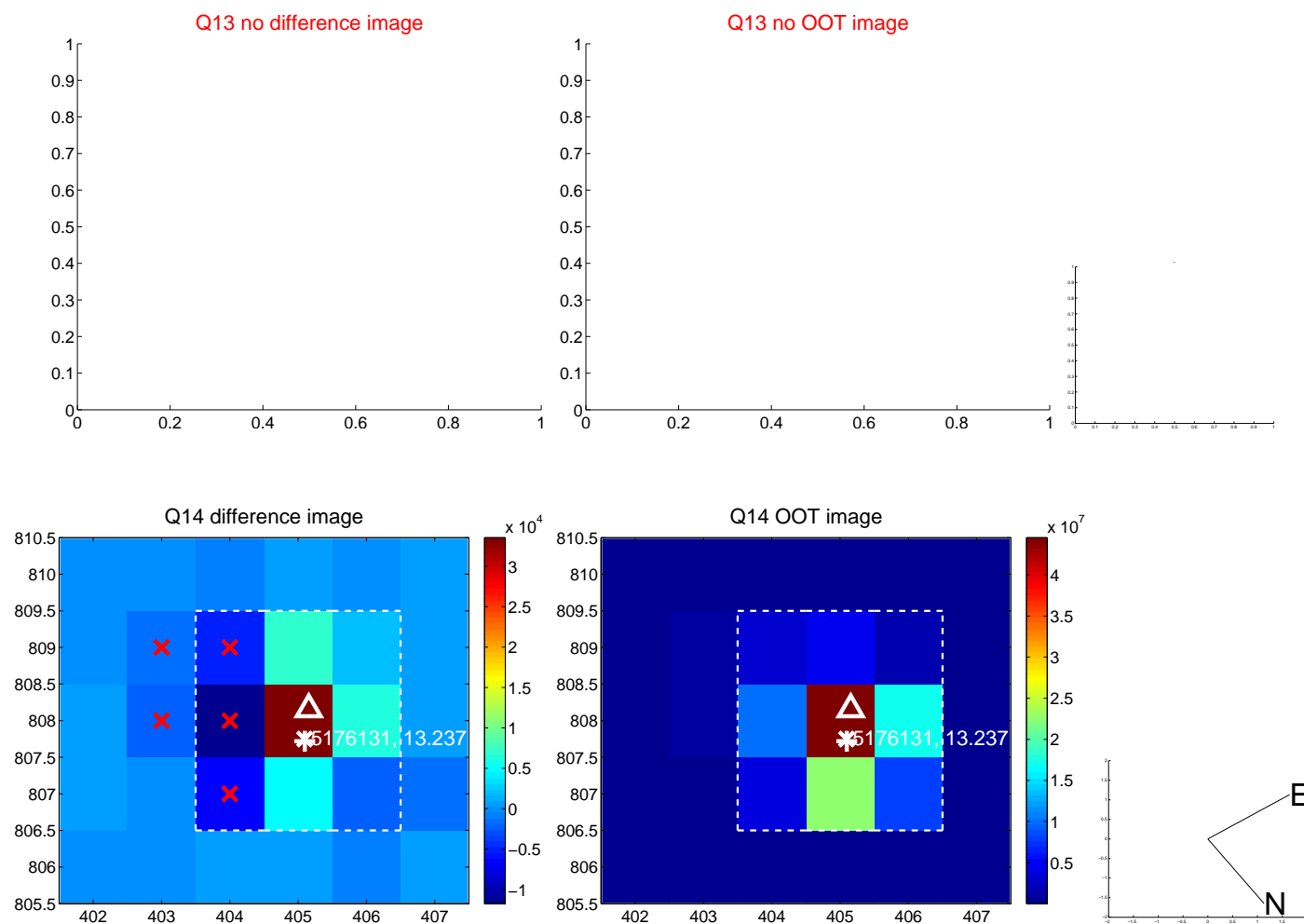
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



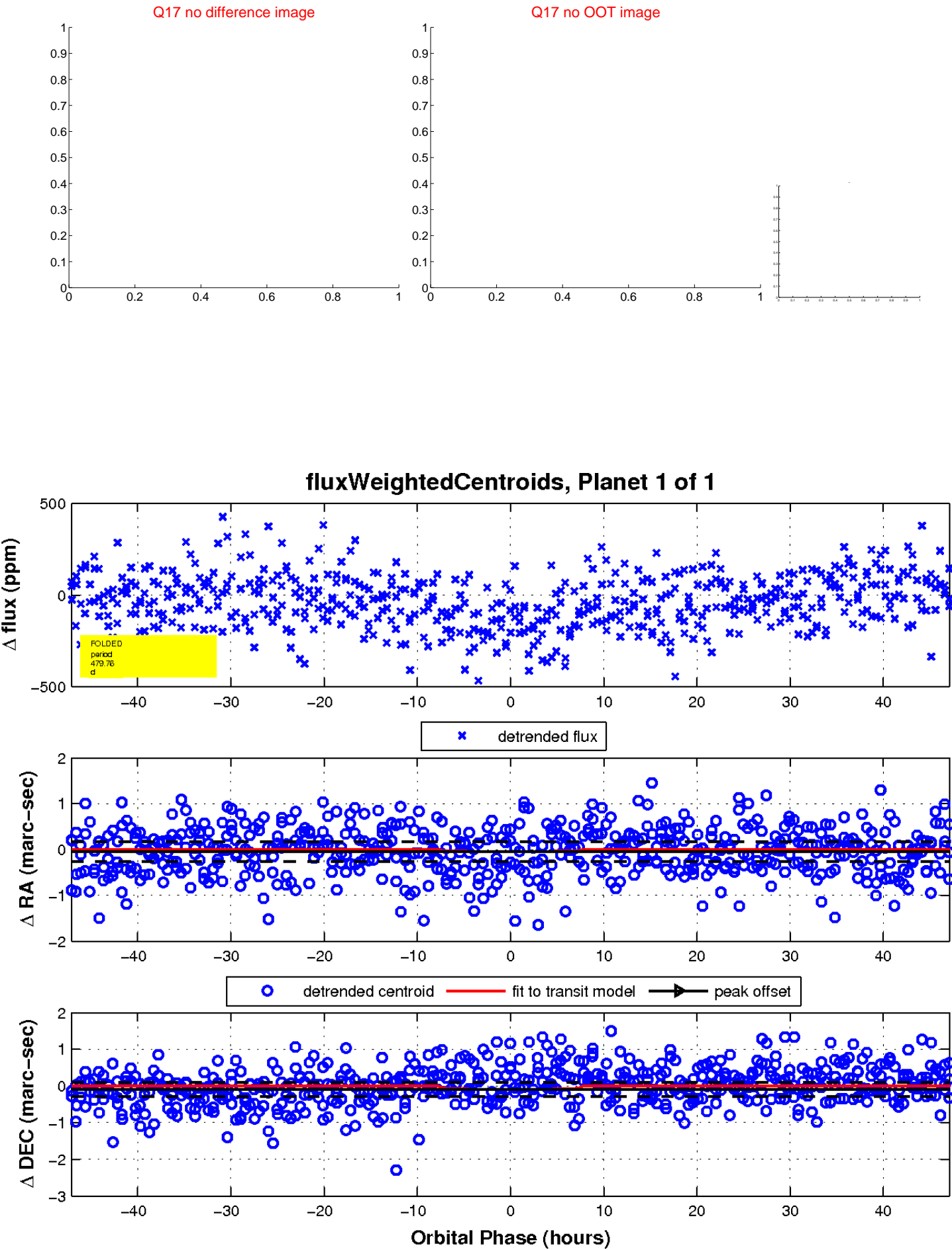
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

