

KIC 009776186

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})
009776186-01	OBS	4543.01	1.489181	132.390388	577.2	2.132	9.6	10.6	1.00	5780	2.81	1534.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009776186-01	OBS	FP	0.28	0	0	1	0	CENT_RESOLVED_OFFSET

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.

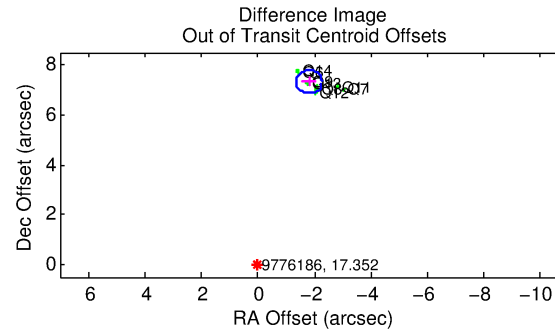
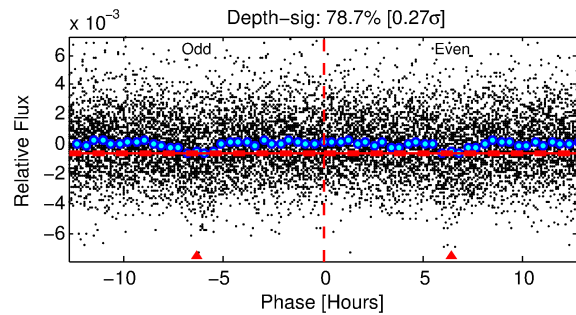
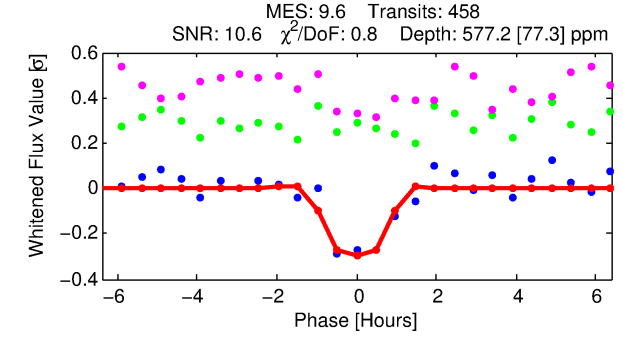
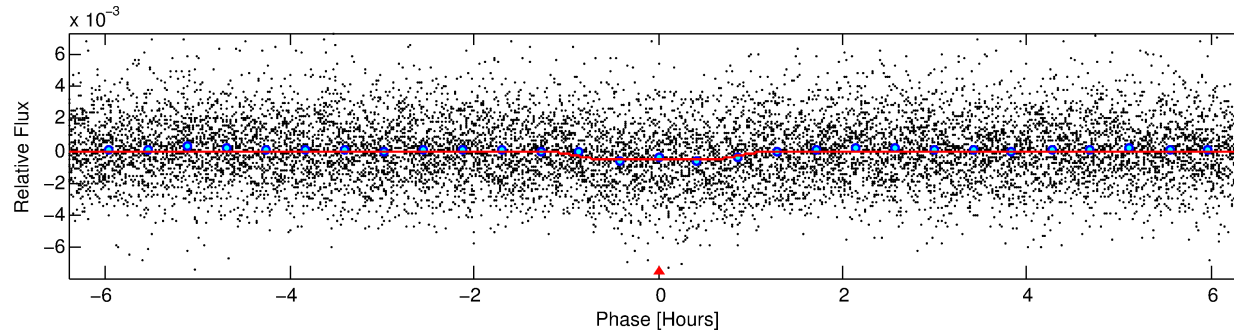
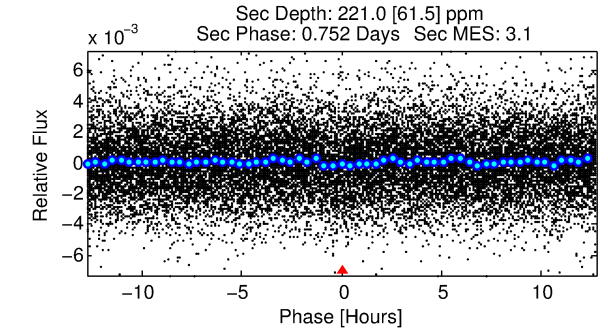
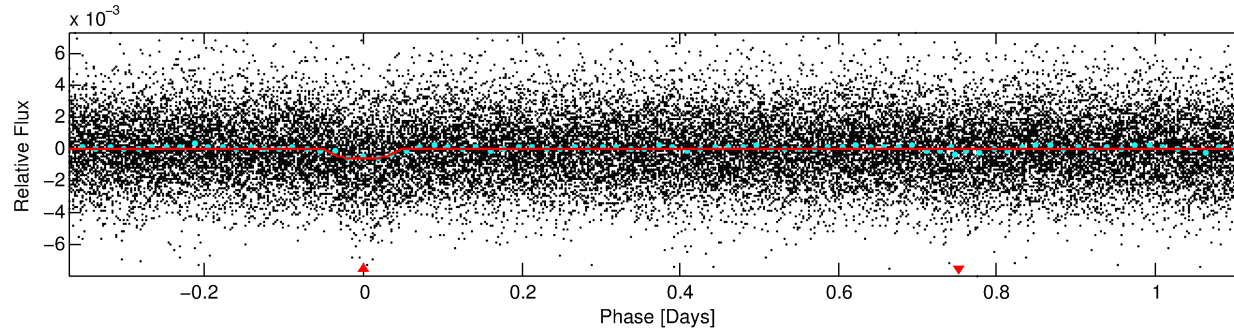
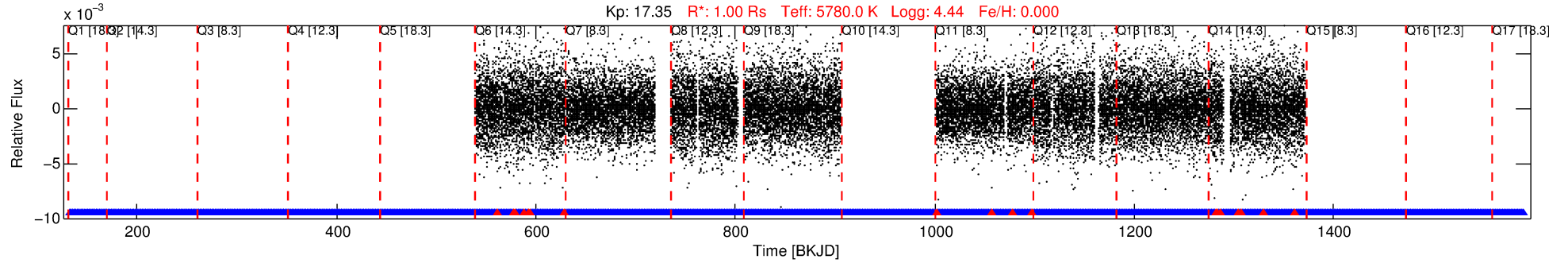
Ephemeris Match Information For 009776186-01

No Significant Match Found

DV One-Page Summary

KIC: 9776186 Candidate: 1 of 1 Period: 1.489 d

KOI: K04543.01 Corr: 0.870



DV Fit Results:

Period = 1.48918 [0.00001] d
Epoch = 132.3904 [0.0030] BKJD
Rp/R* = 0.0257 [0.0138]
a/R* = 2.98 [6.42]
b = 0.88 [0.65]
Seff = 1534.65 [0.02]
Teq = 1596 [0] K
Rp = 2.81 [1.50] Re
a = 0.0255 [0.0000] AU
Ag = 10.05 [11.10] [0.82σ]
Teffp = 4393 [1213] K [2.31σ]

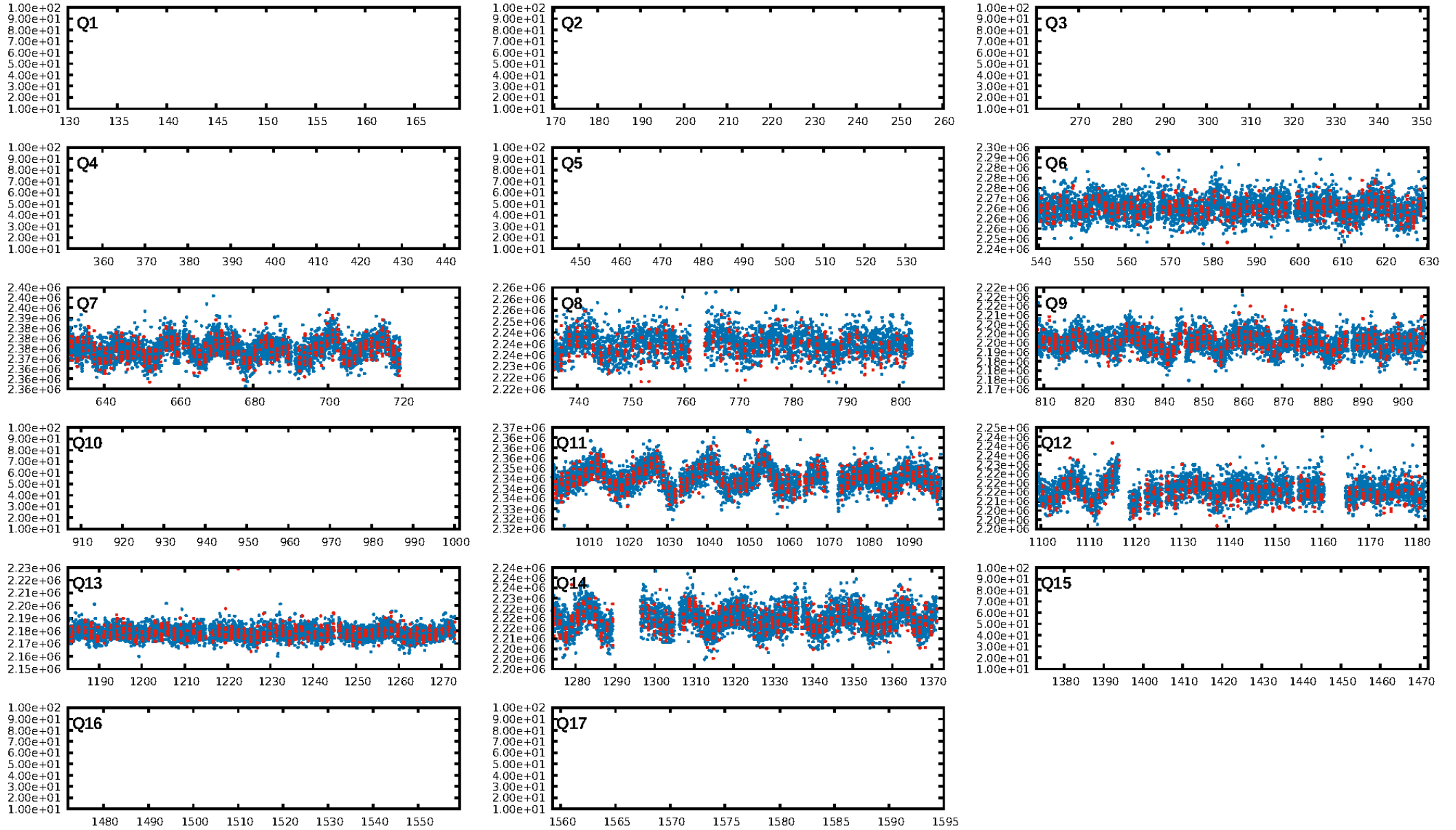
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.98e-22
RollingBand-fgt: 0.96 [440/458]
GhostDiagnostic-chr: -0.549
Centroid-sig: 0.0%
Centroid-so: 13.547 arcsec [13.70σ]
OotOffset-rm: 7.532 arcsec [48.93σ]
KicOffset-rm: 6.627 arcsec [84.79σ]
OotOffset-st: 2/2/2/2 [8]
KicOffset-st: 2/2/2/2 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [8/8]

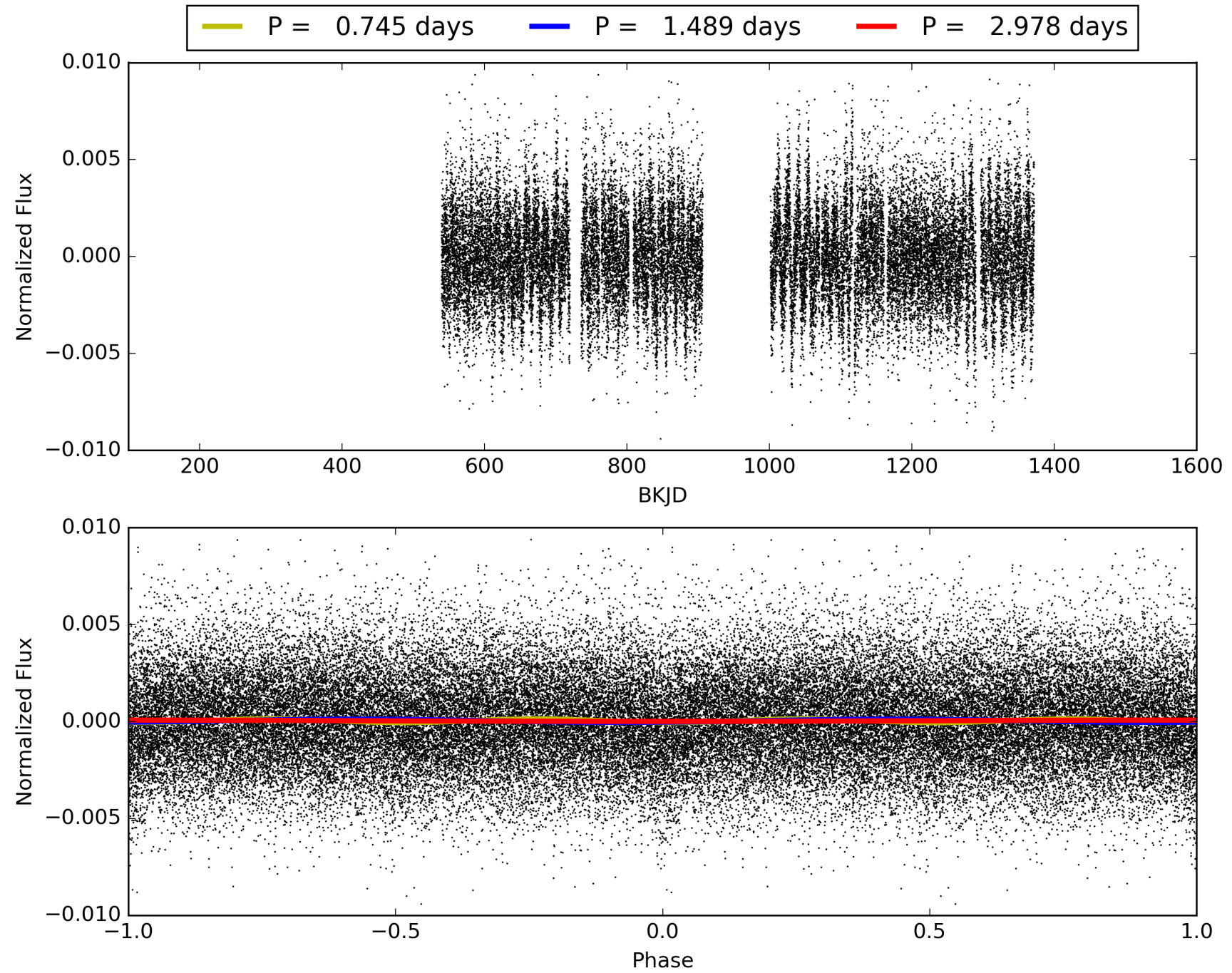
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:25:46 Z

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

TCE 009776186-01, PDC Light Curves

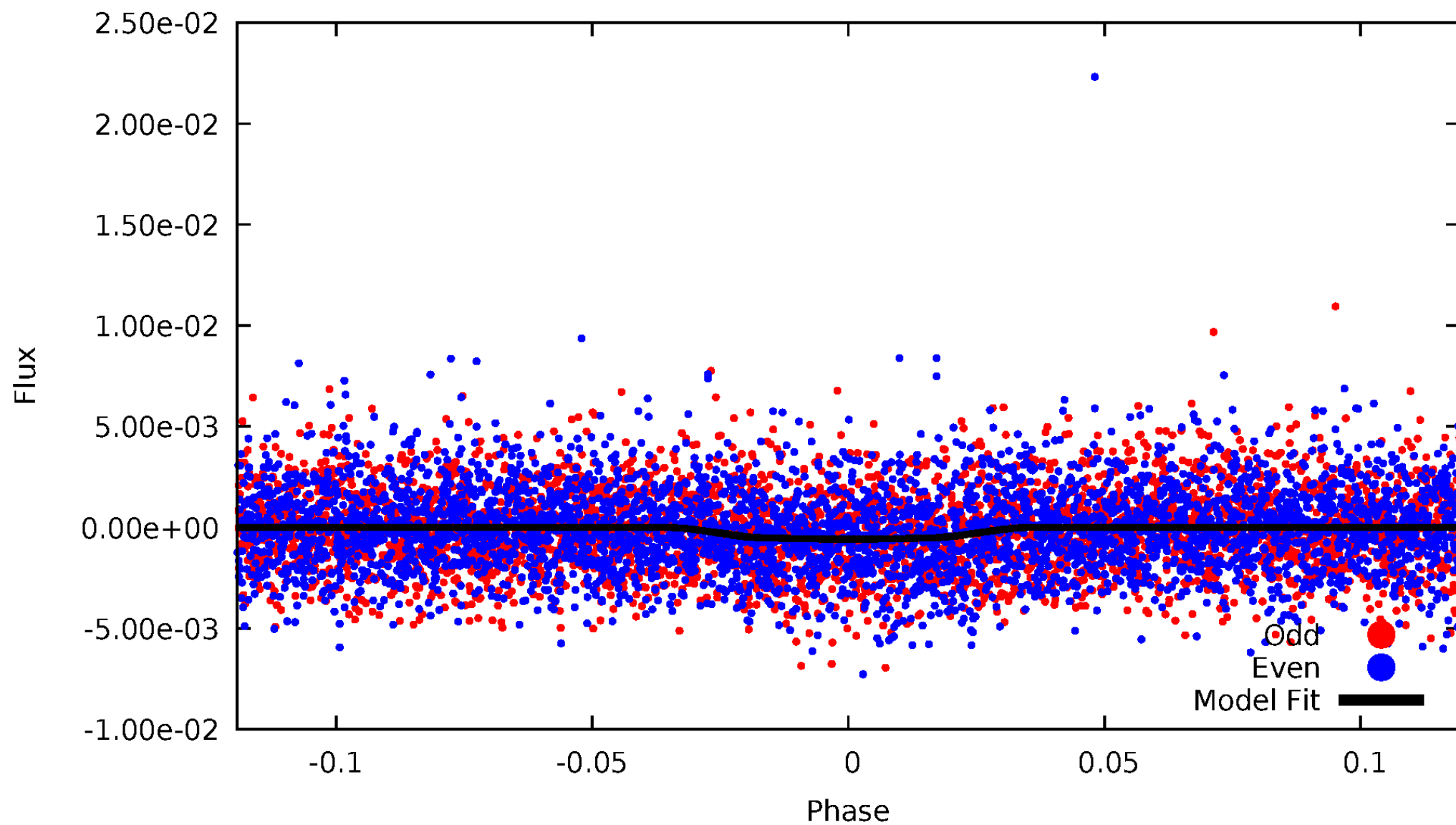


TCE 009776186-01



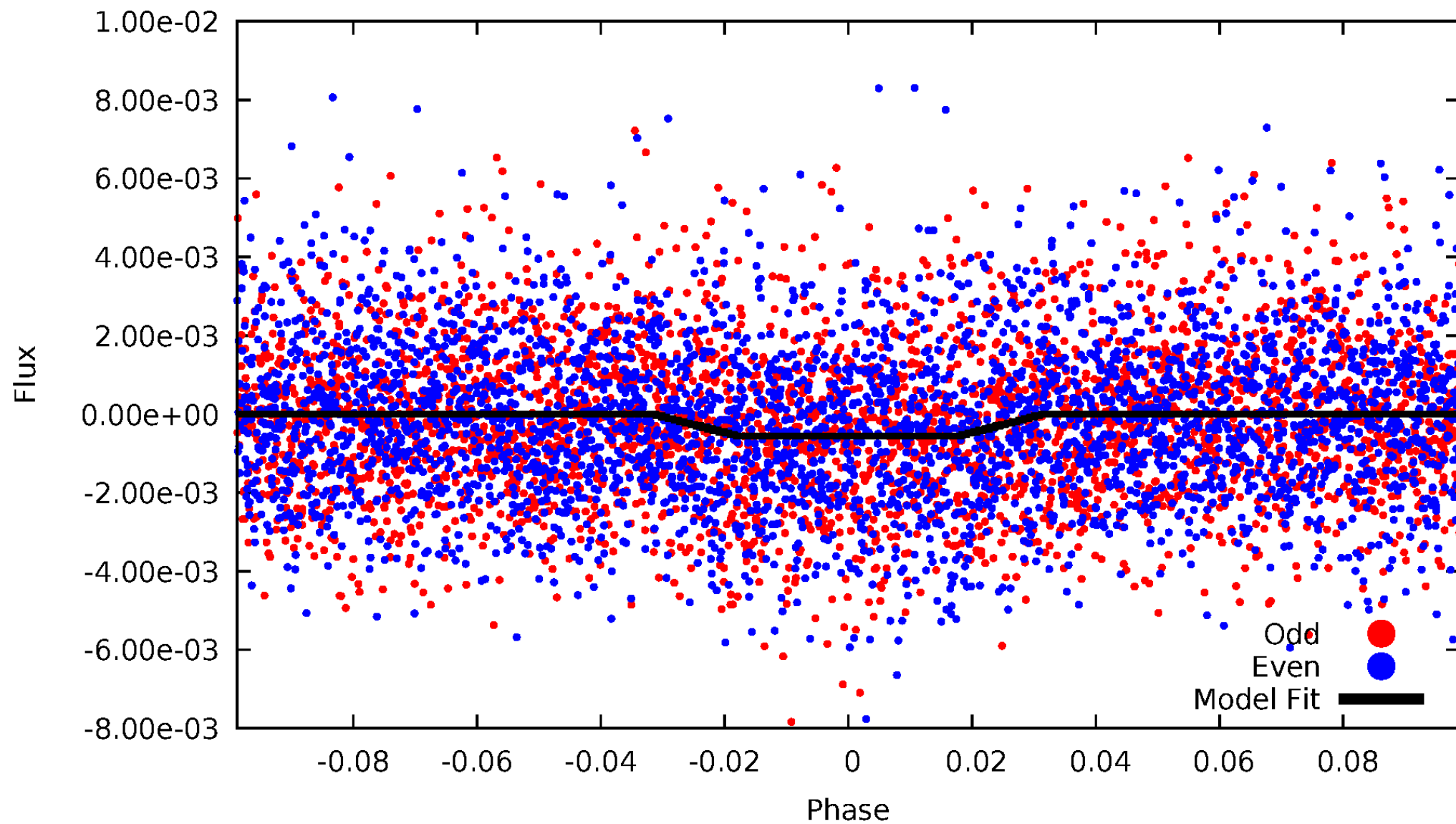
DV Odd/Even

TCE 009776186-01



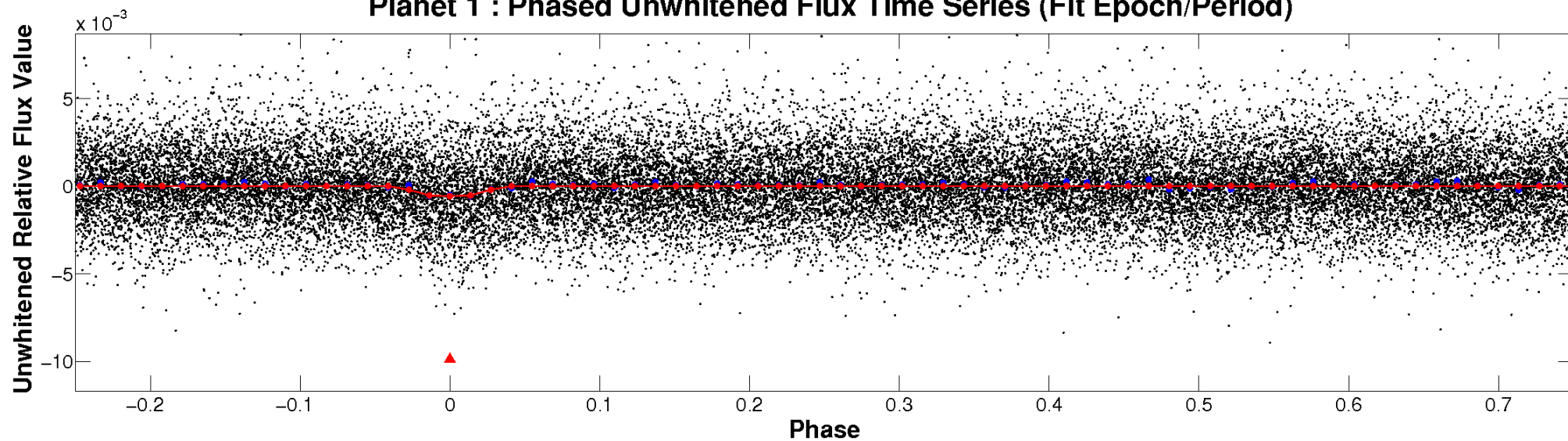
ALT Odd/Even

TCE 009776186-01

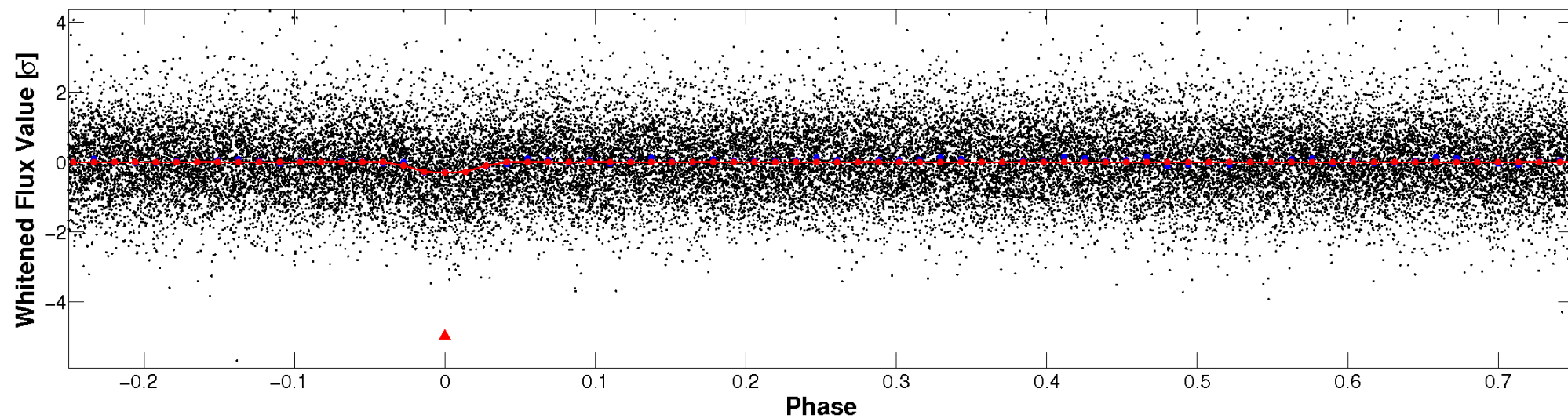


Non-Whitened Vs. Whitened Light Curve

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

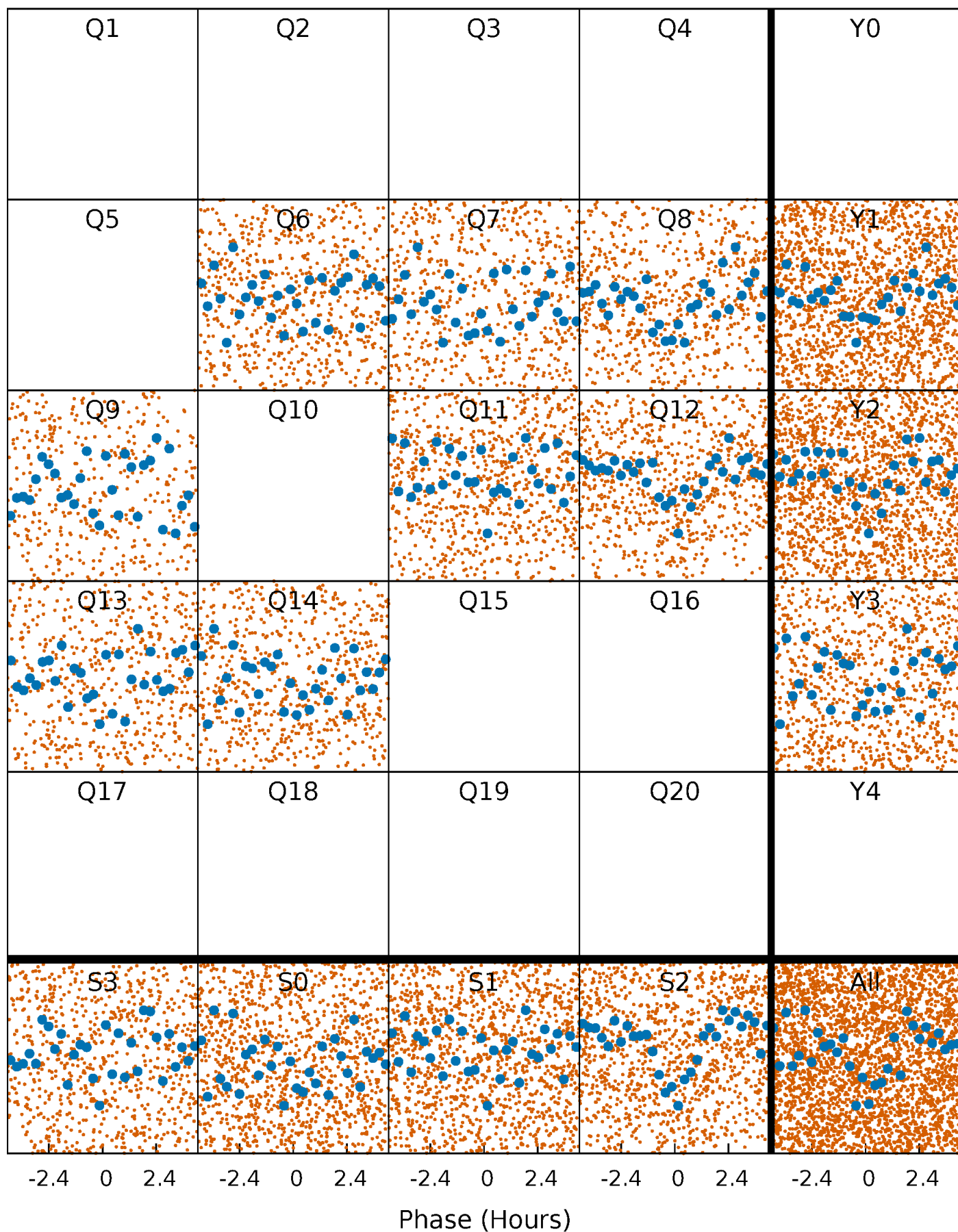


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



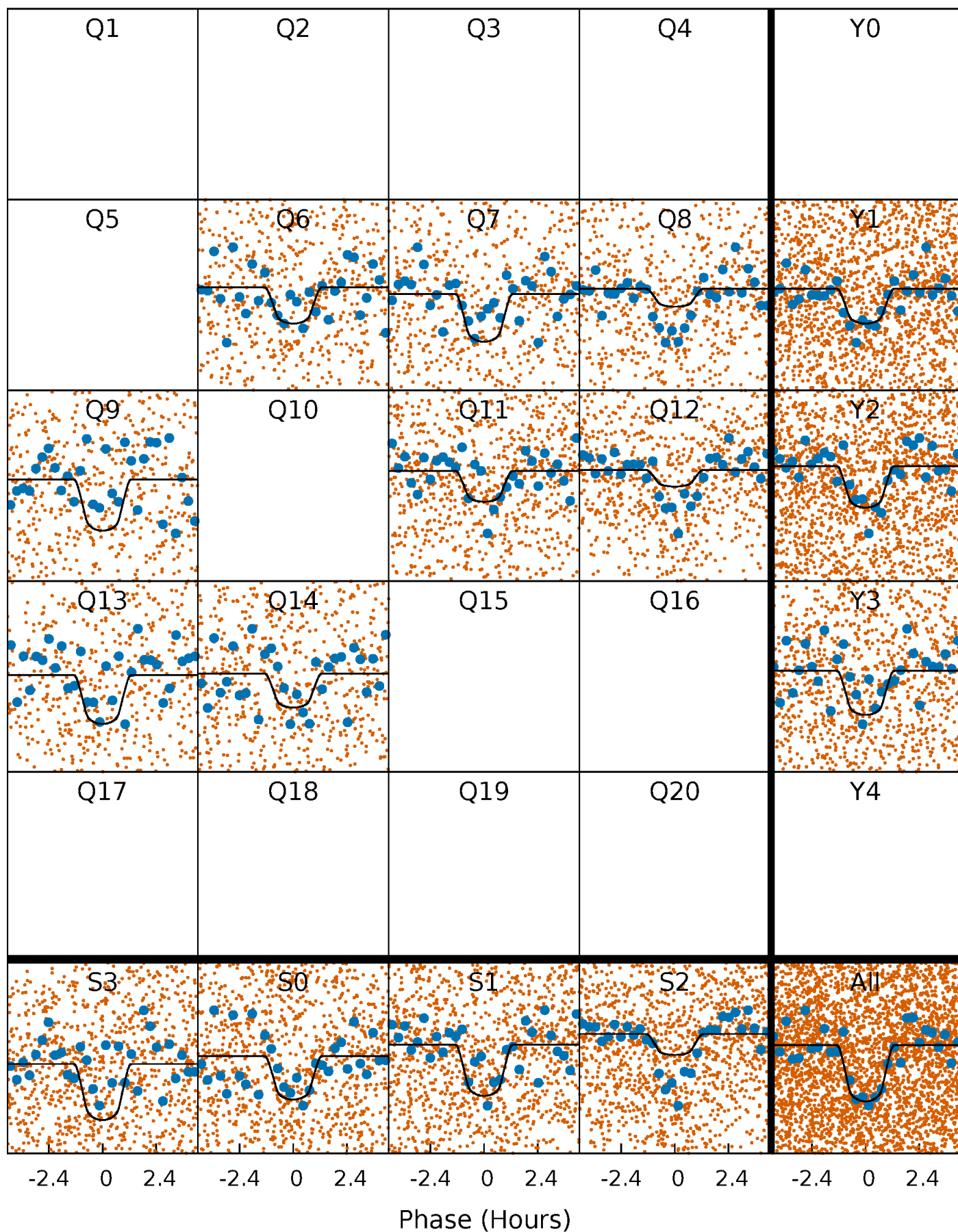
PDC Quarter-Phased Transit Curves

TCE 009776186-01 P= 1.489181 Days $T_0=132.390388$ (BKJD)



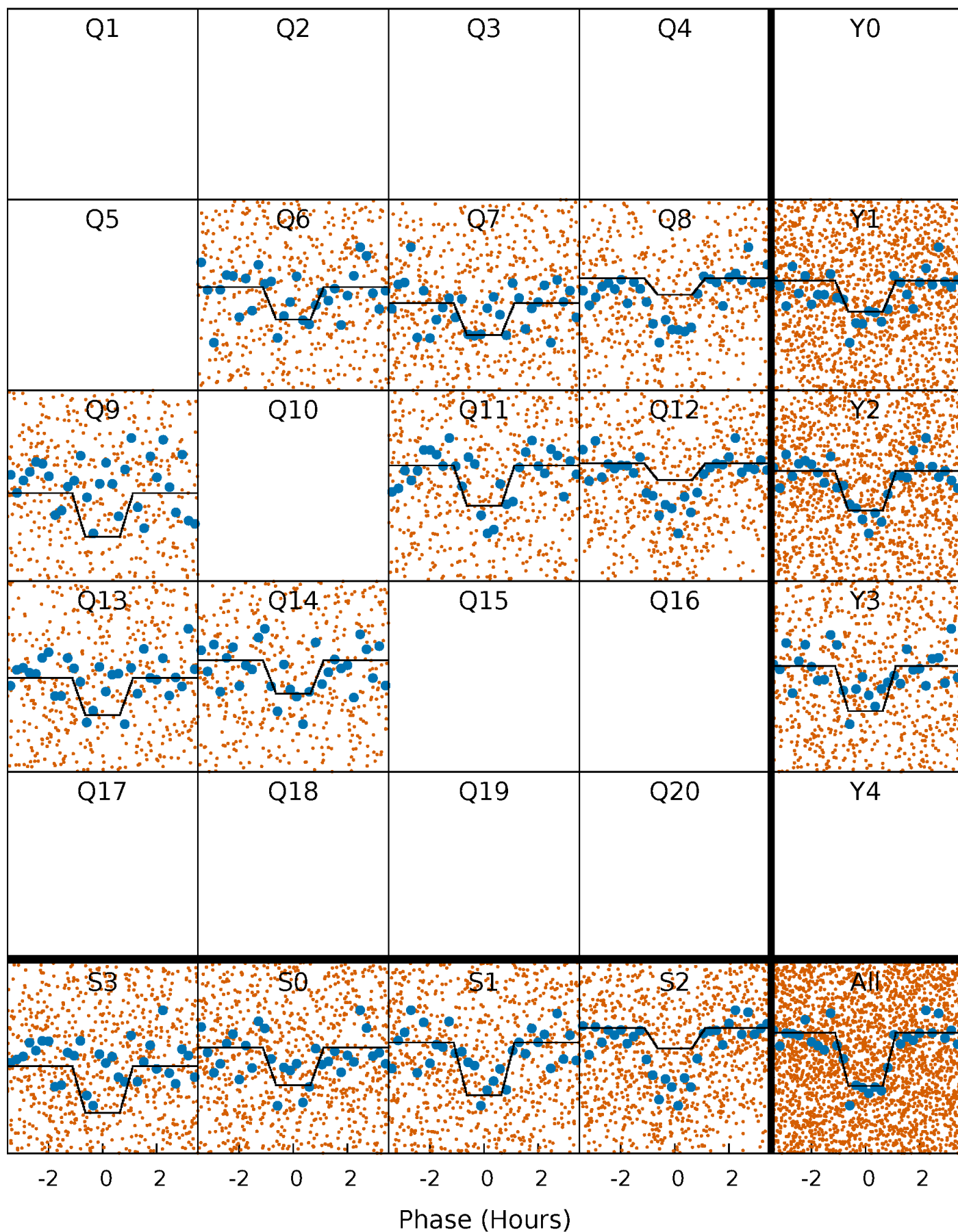
DV Quarter-Phased Transit Curves

TCE 009776186-01 P= 1.489181 Days $T_0=132.390388$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

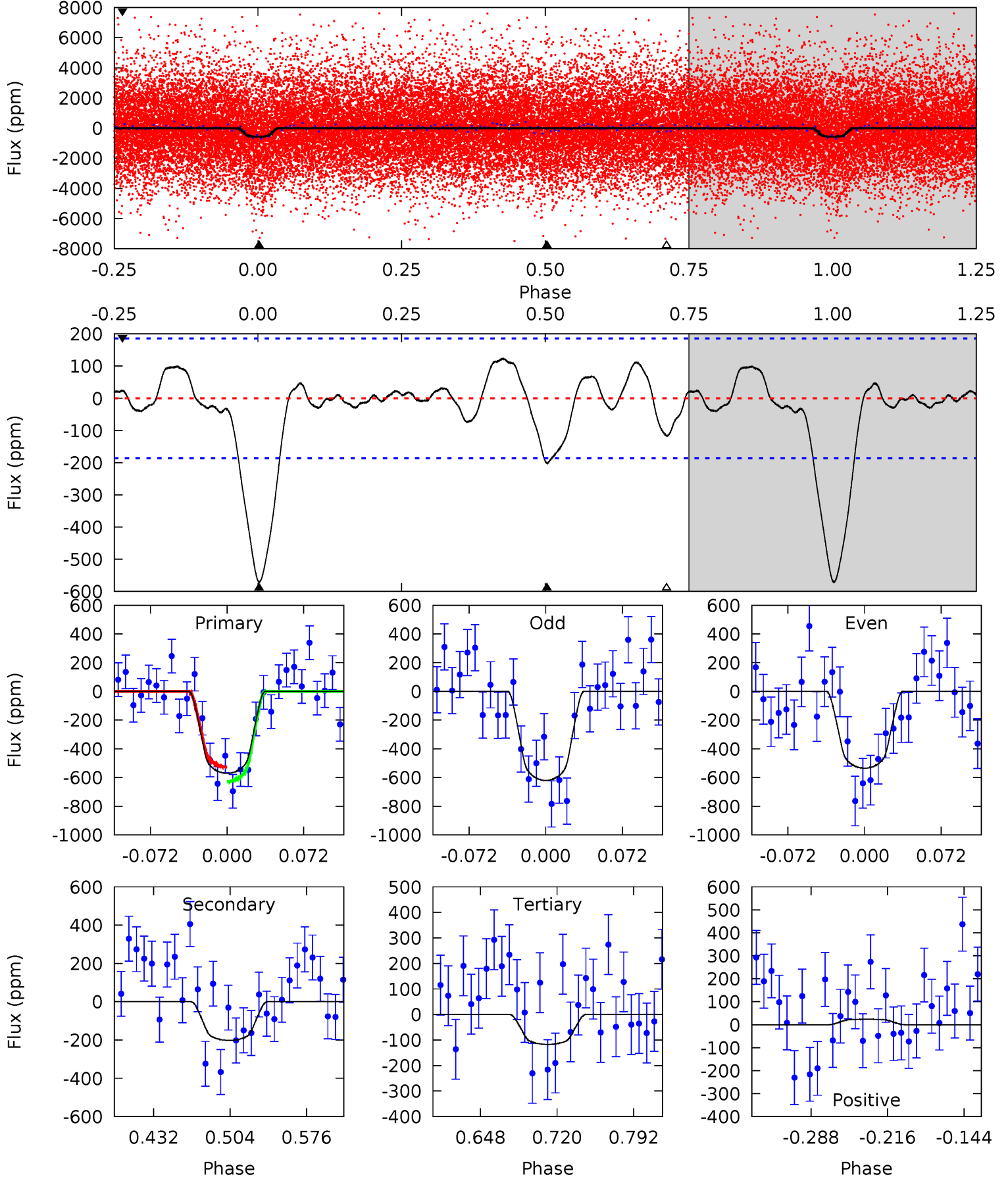
TCE 009776186-01 P= 1.489212 Days $T_0=132.377489$ (BKJD)



DV Model-Shift Uniqueness Test

009776186-01, P = 1.489181 Days, E = 132.390388 Days

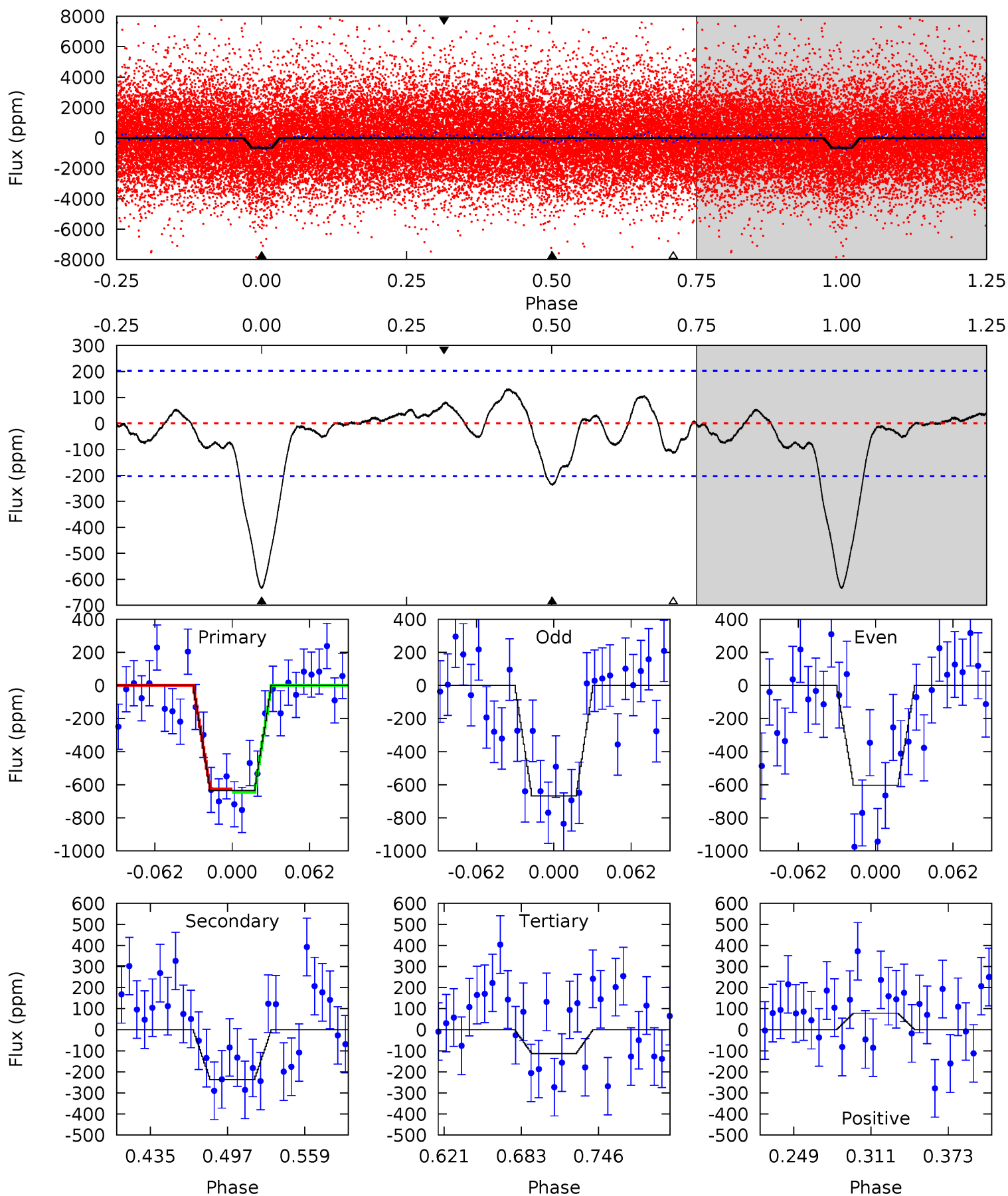
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.2	5.03	2.92	0.59	4.63	1.80	1.26	11.3	13.6	2.11	4.44	1.06	0.96	0.18	1.27



Alt Model-Shift Uniqueness Test

009776186-01, P = 1.489212 Days, E = 132.377489 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.6	5.44	2.61	1.81	4.66	1.87	1.26	12.0	12.8	2.83	3.63	0.74	0.99	0.17	0.25



Stellar Parameters For KIC 009776186

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5780^{+1}_{-1}	$4.438^{+1.000}_{-1.000}$	$0.000^{+1.000}_{-1.000}$	$1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$	$-1.000^{+1.000}_{-1.000}$
	+0%/-0%	+23%/-23%	+inf%/-inf%	+100%/-100%	+100%/-100%	+100%/-100%
Source	Solar	Solar	Solar	Solar		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 009776186-01 / KOI 4543.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-202 ± 40	$2.84^{+1.59}_{-1.53}$	2235^{+98}_{-106}	4430^{+1751}_{-704}	$8.814^{+31.282}_{-5.171}$
Alt.	-237 ± 43	$2.51^{+1.52}_{-1.24}$	2231^{+110}_{-105}	4791^{+1772}_{-849}	13^{+38}_{-8}

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 $A_{obs} \gg 1.0$

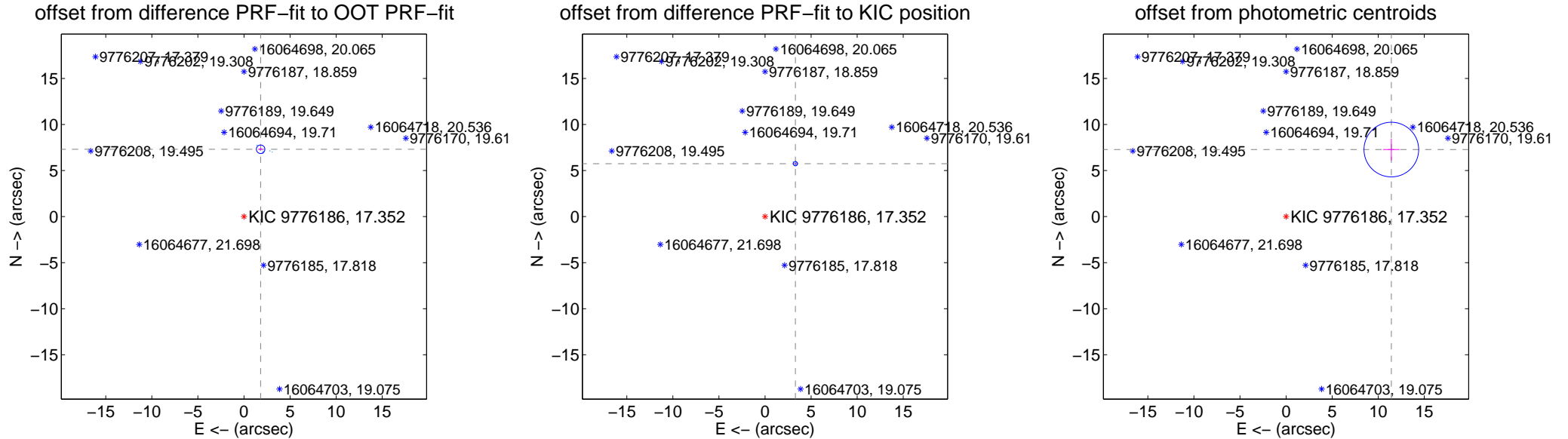
DV Centroid Data

Supplemental centroid analysis for 009776186-01. Kepler magnitude: 17.35. Transit SNR 10.62

There are 8 quarters with good PRF difference image offsets

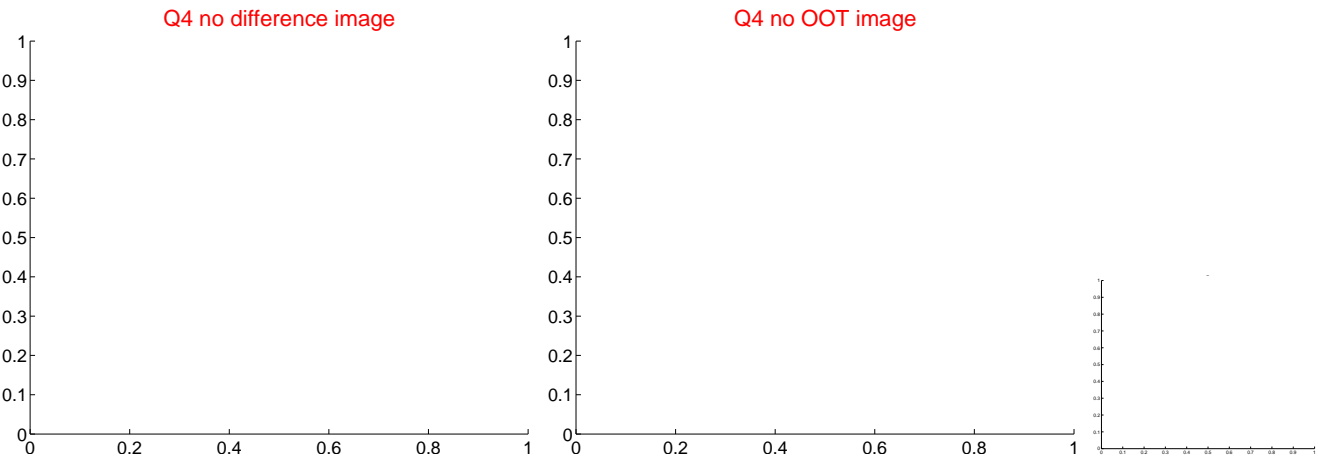
The OOT PRF centroid is offset from the target star catalog position by about 2.78 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.532 ± 0.154	48.93	-1.807 ± 0.258	7.312 ± 0.145
PRF-fit source offset from KIC position	6.627 ± 0.078	84.79	-3.297 ± 0.069	5.748 ± 0.081
photometric centroid source offset	13.55 ± 0.99	13.70	-11.42 ± 0.90	7.28 ± 1.18

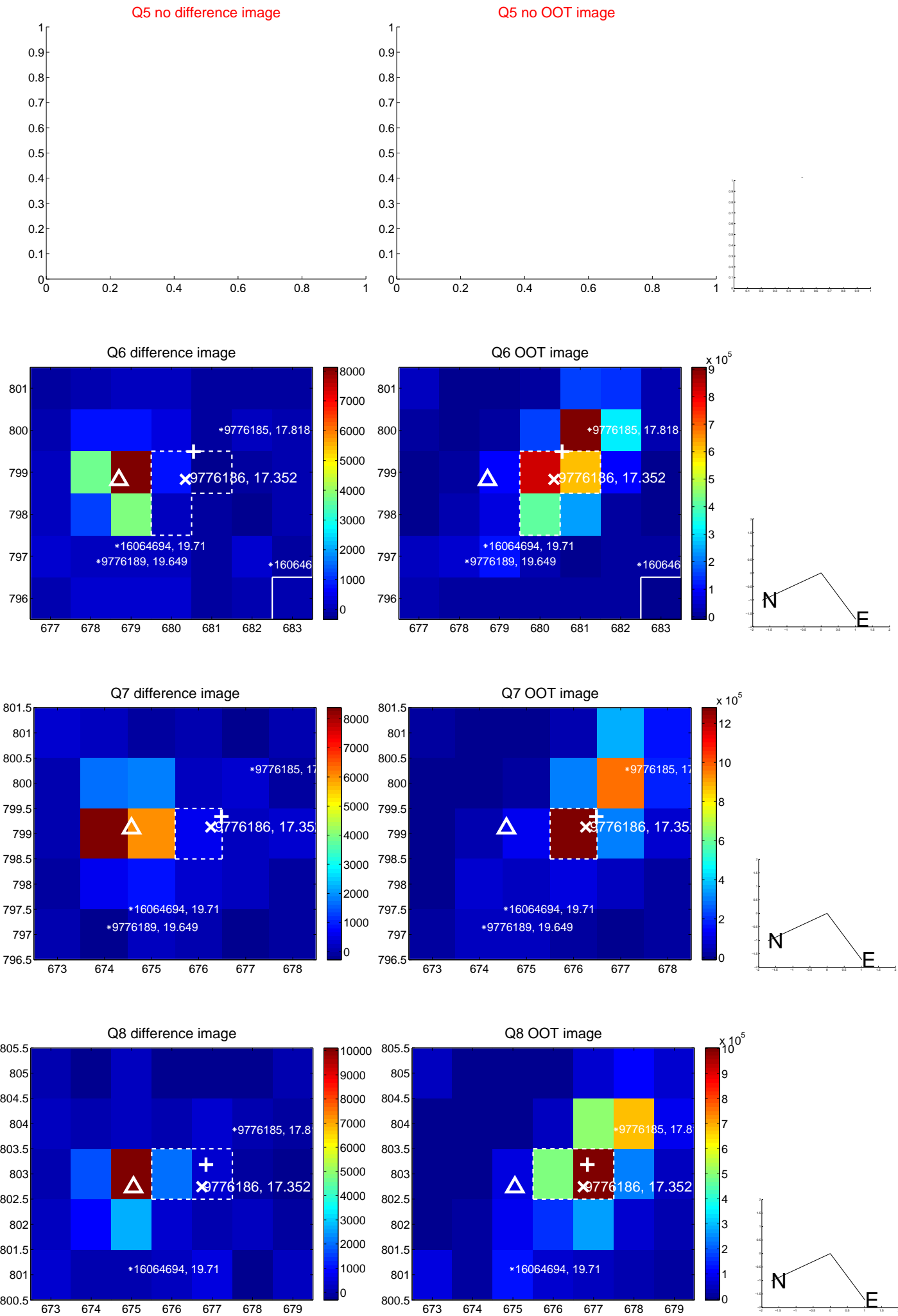


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

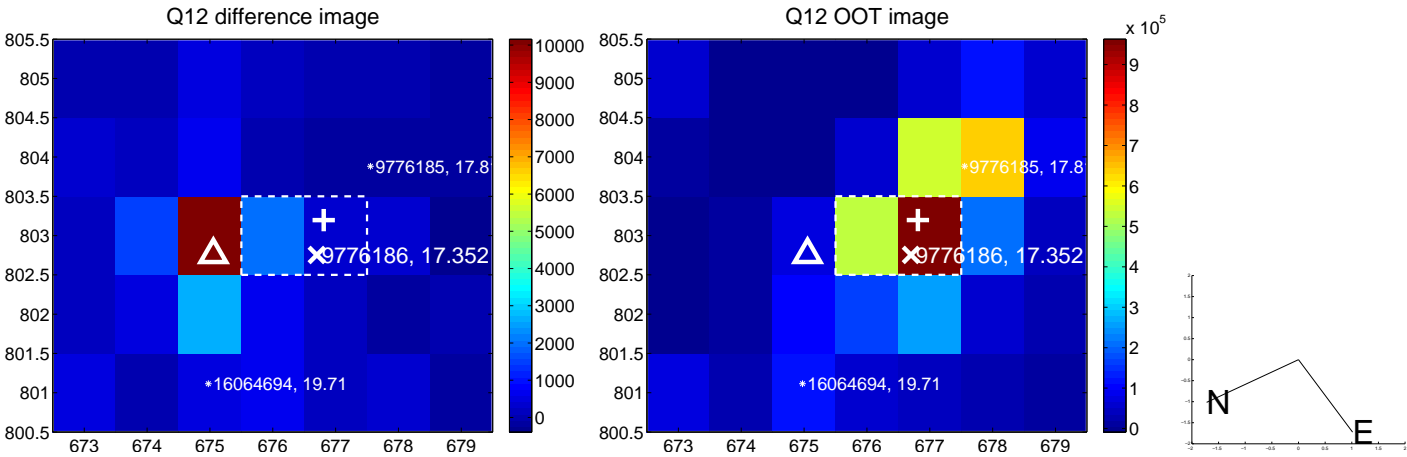
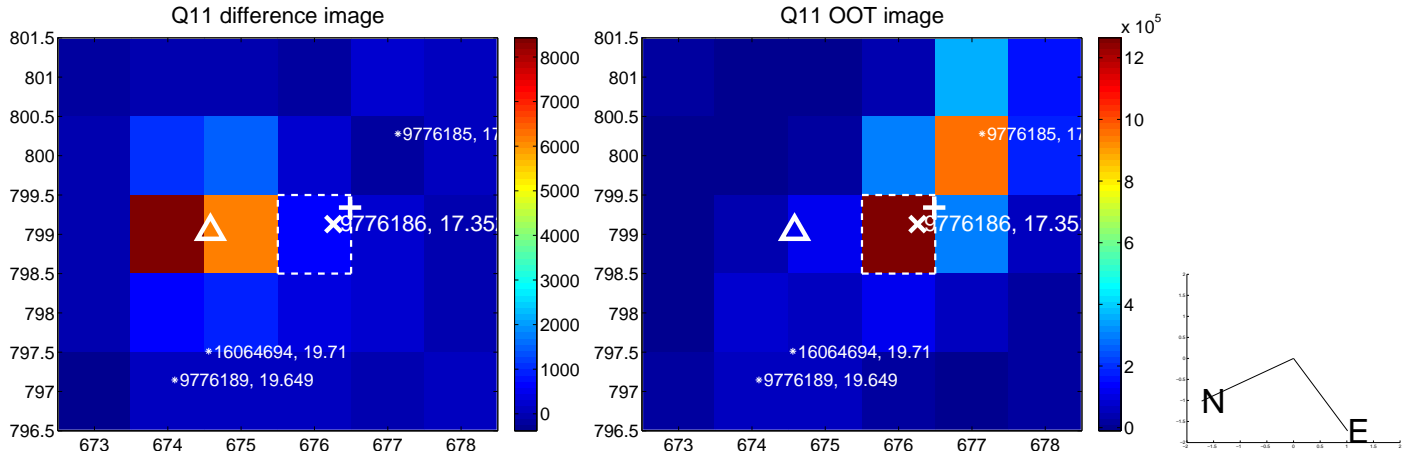
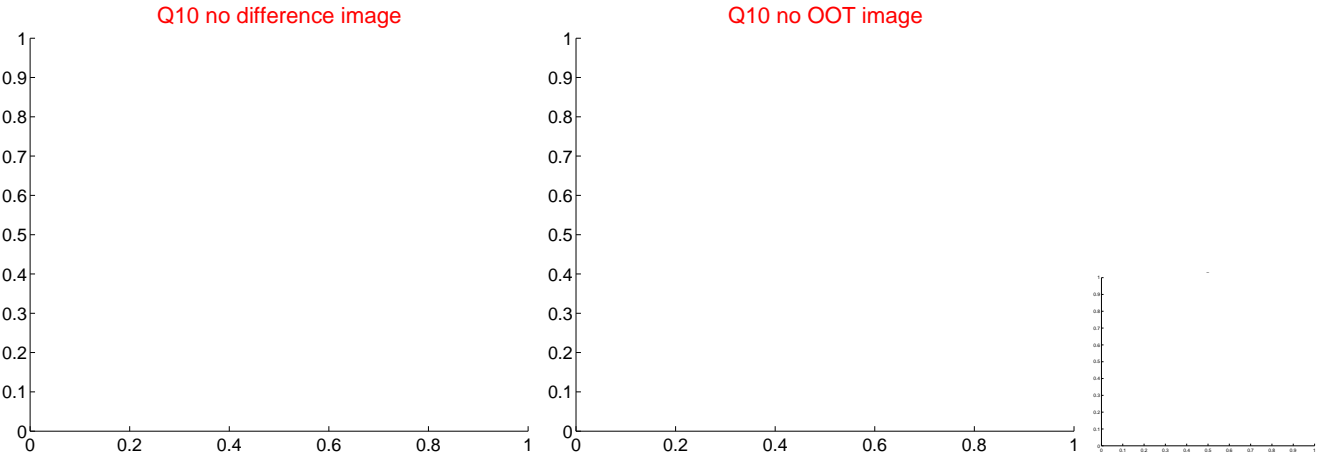
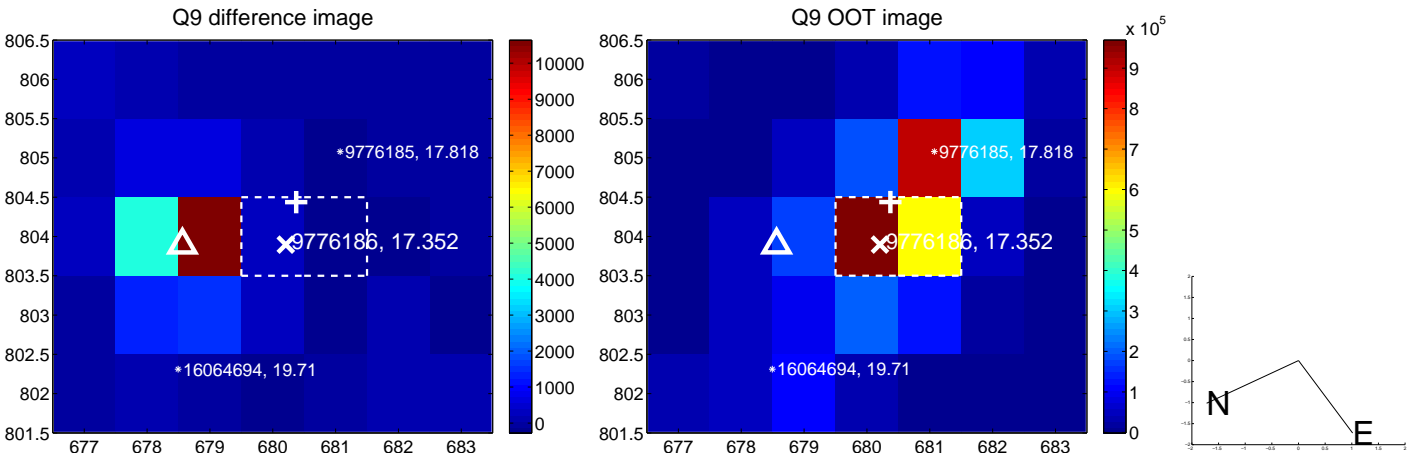
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



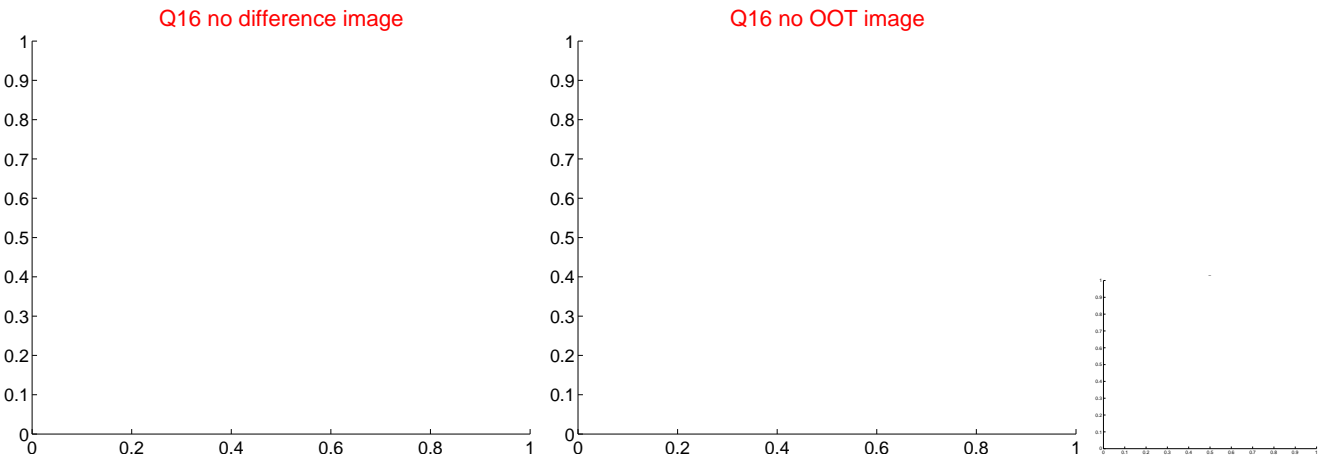
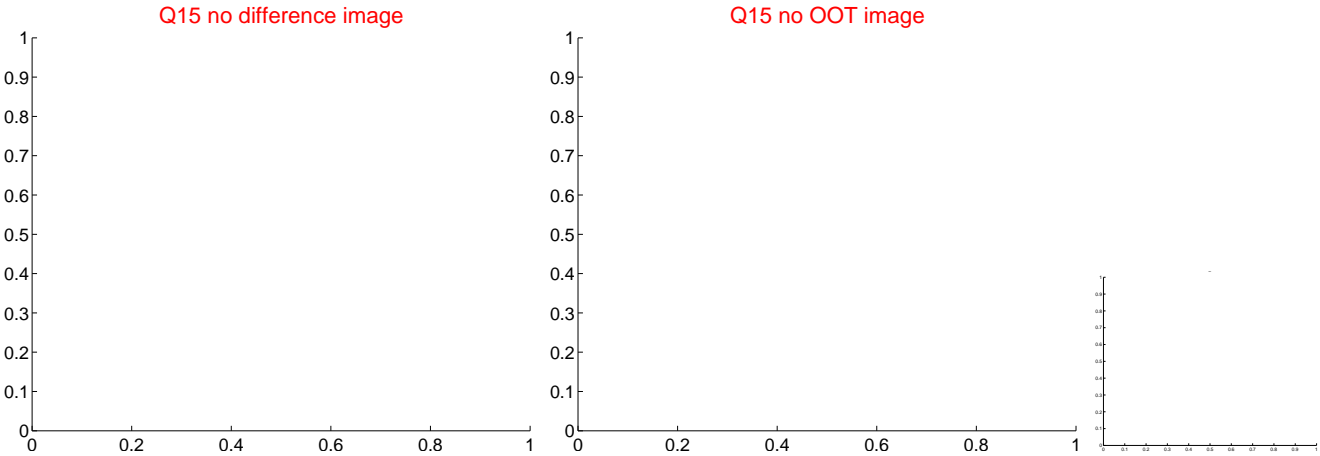
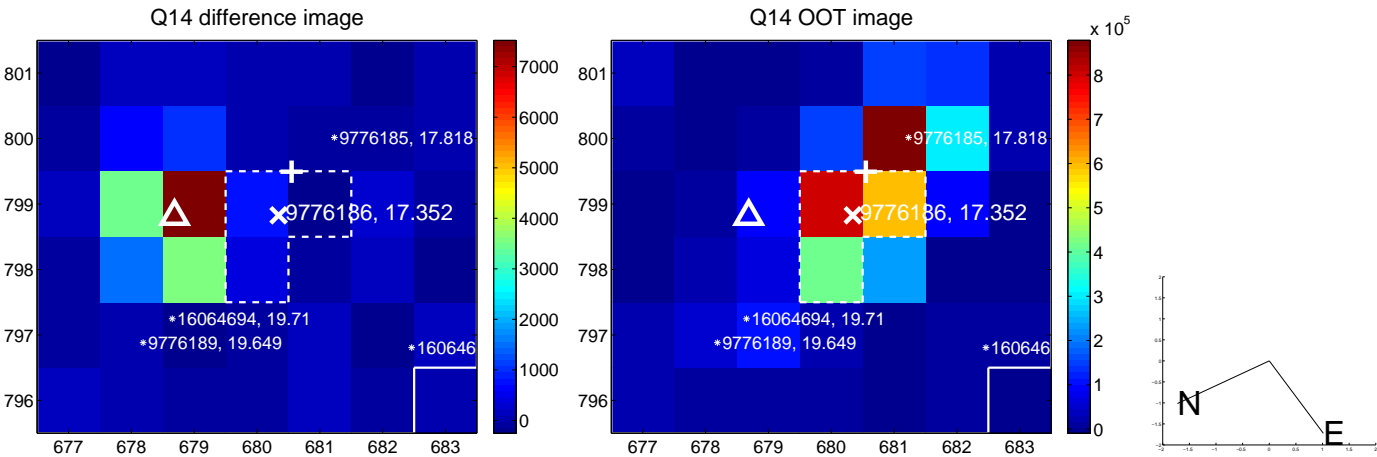
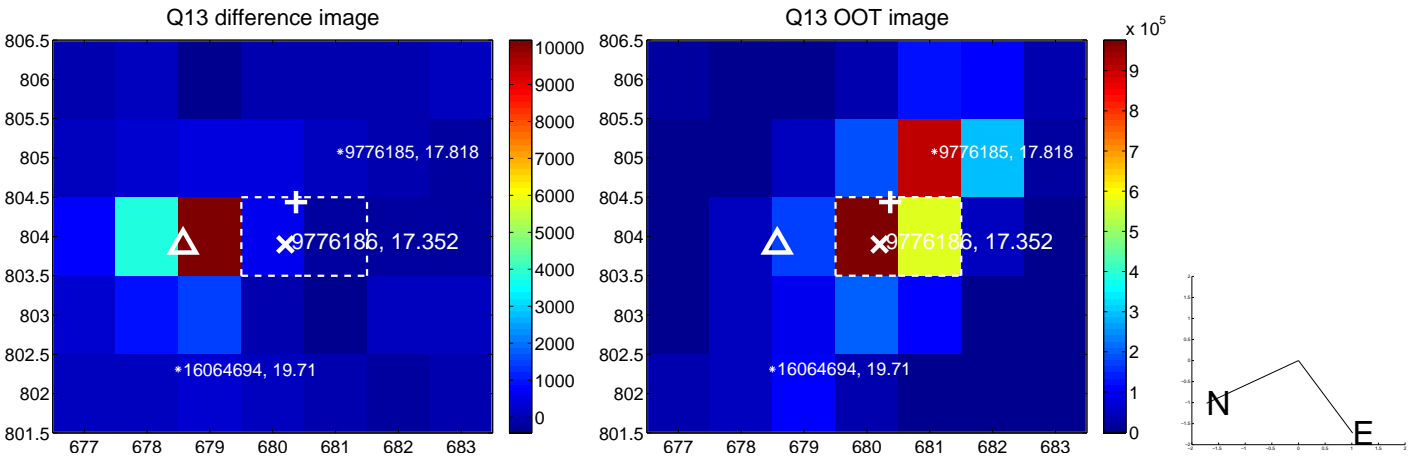
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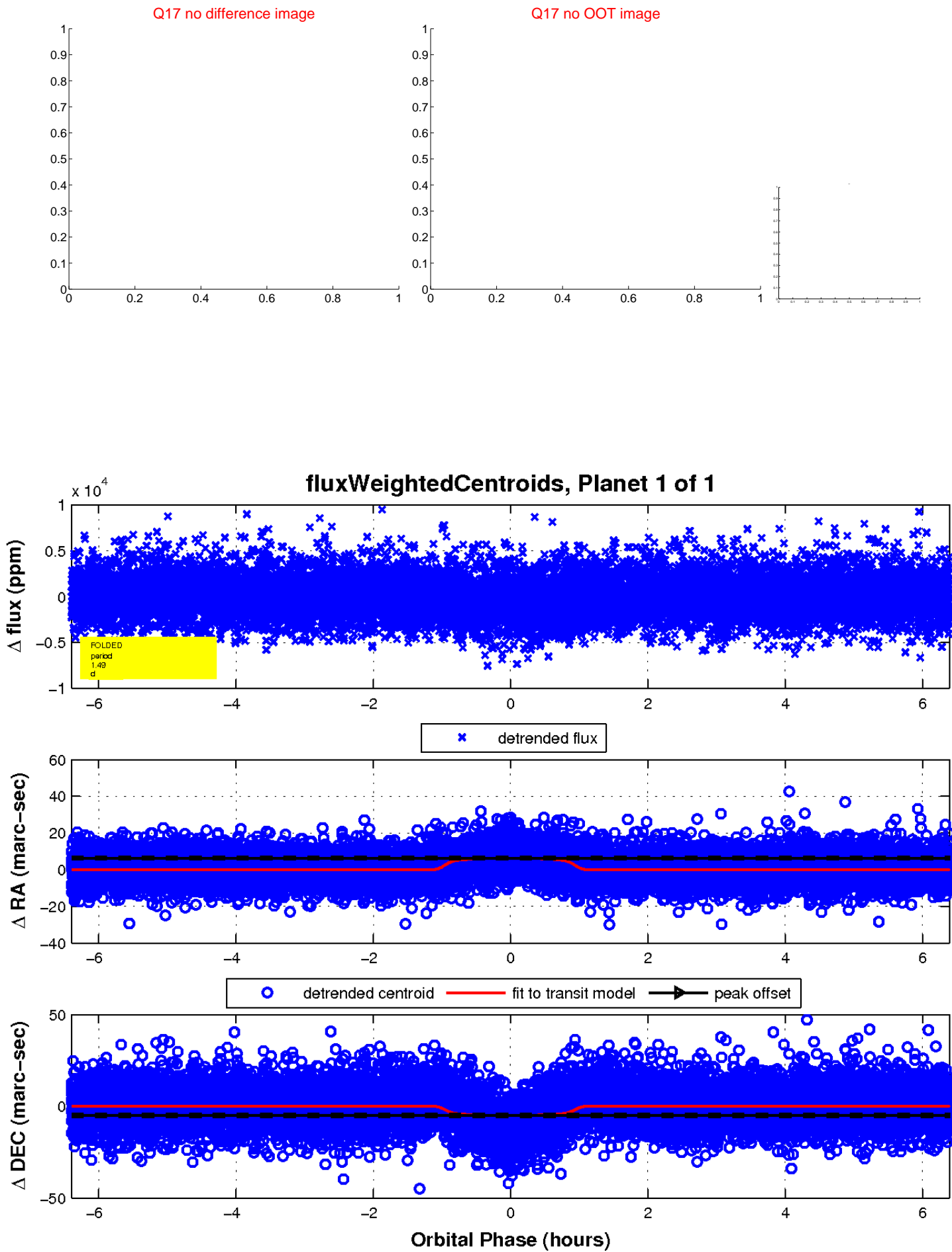
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UKIRT Image

Declination

