

KIC 011027624

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})
011027624-01	OBS	1439.01	394.625063	177.844590	1991.5	24.045	77.1	106.1	1.73	5910	7.77	2.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011027624-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

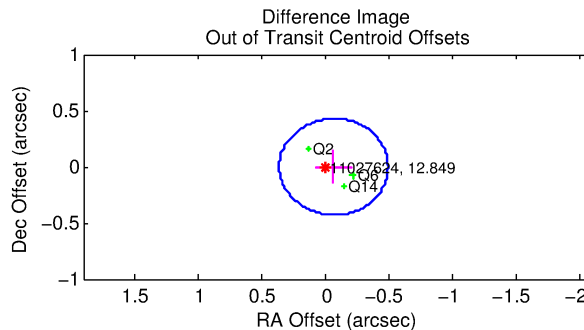
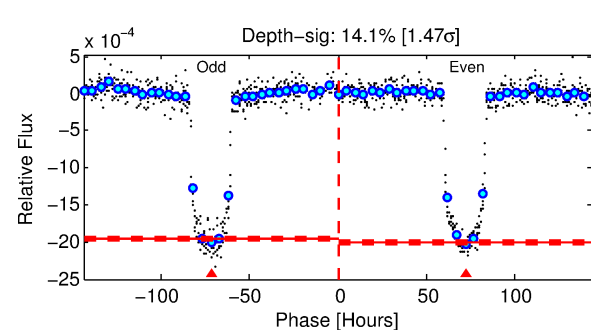
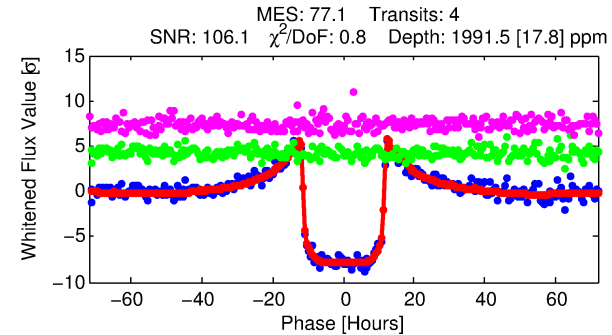
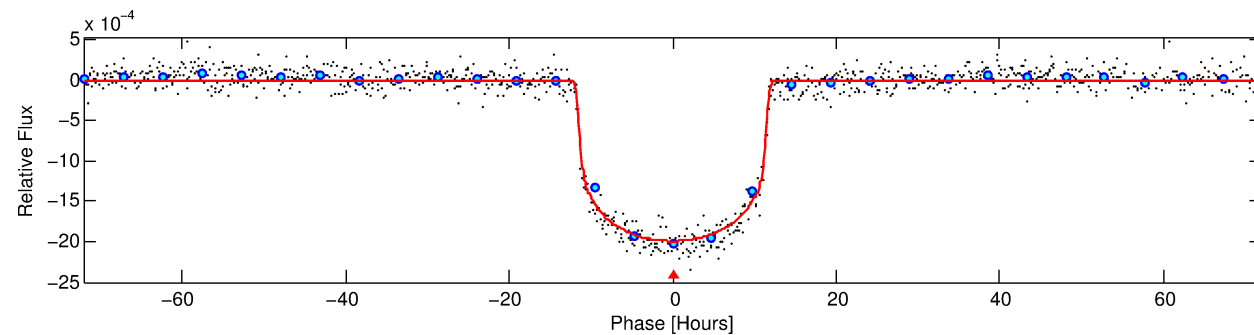
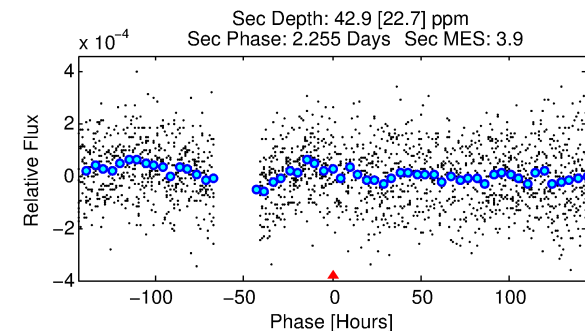
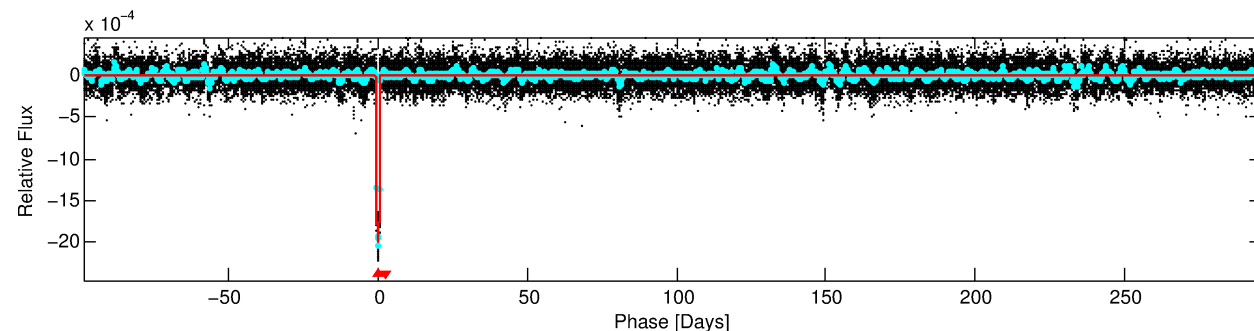
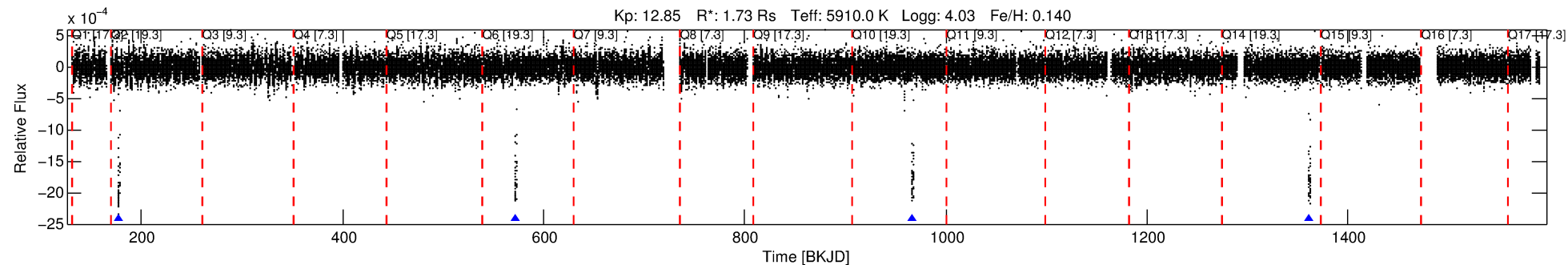
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011027624-01

No Significant Match Found

DV One-Page Summary

KIC: 11027624 Candidate: 1 of 1 Period: 394.625 d
KOI: K01439.01 Corr: 0.998



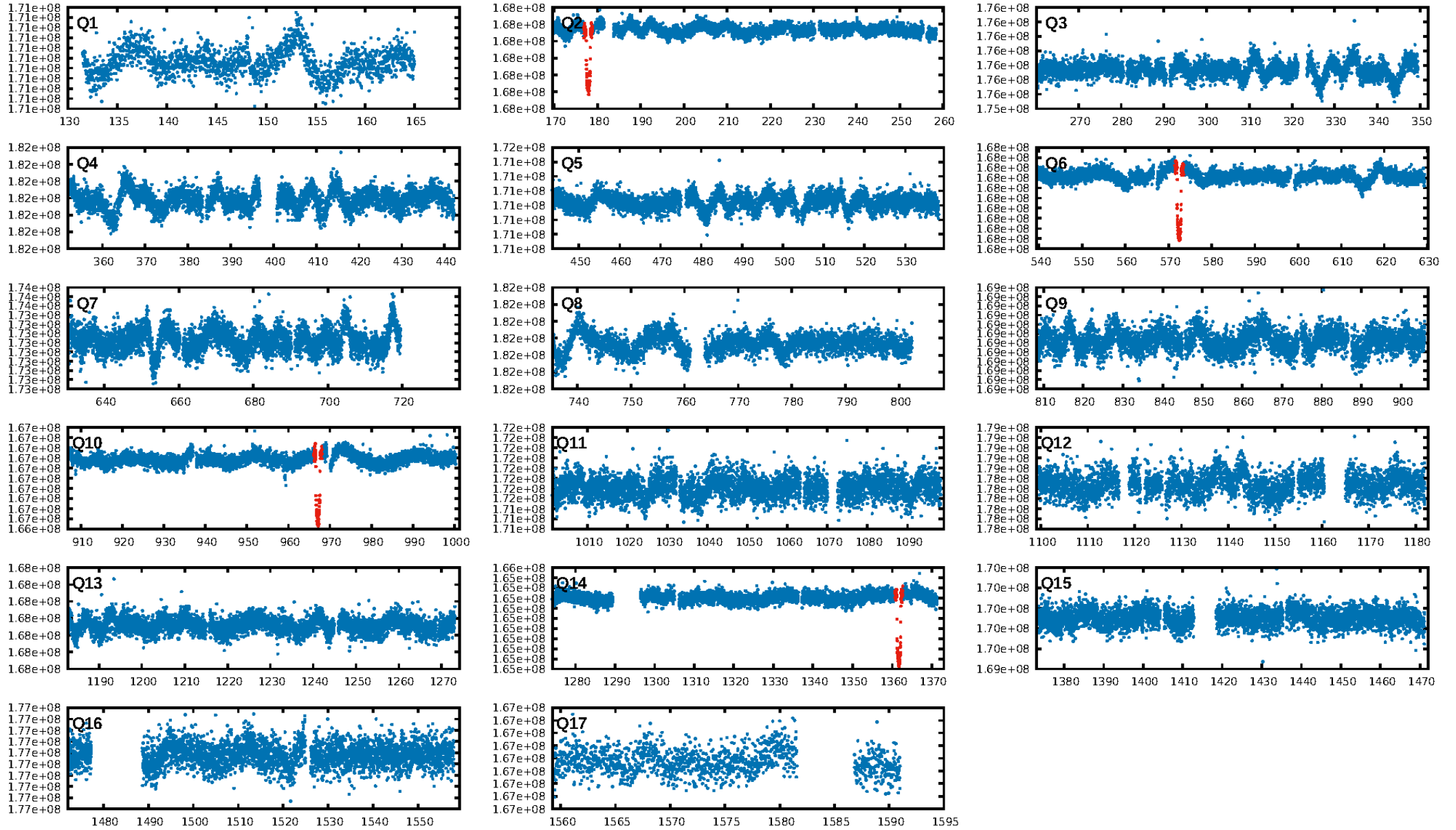
DV Fit Results:

Period = 394.62506 [0.00088] d
Epoch = 177.8446 [0.0017] BKJD
Rp/R* = 0.0412 [0.0006]
a/R* = 121.47 [7.12]
b = 0.38 [0.13]
Seff = 2.65 [0.93]
Teff = 325 [29] K
Rp = 7.77 [1.90] Re
a = 1.1084 [0.2458] AU
Ag = 479.91 [303.04] [1.58 σ]
Teffp = 2355 [316] K [6.40 σ]

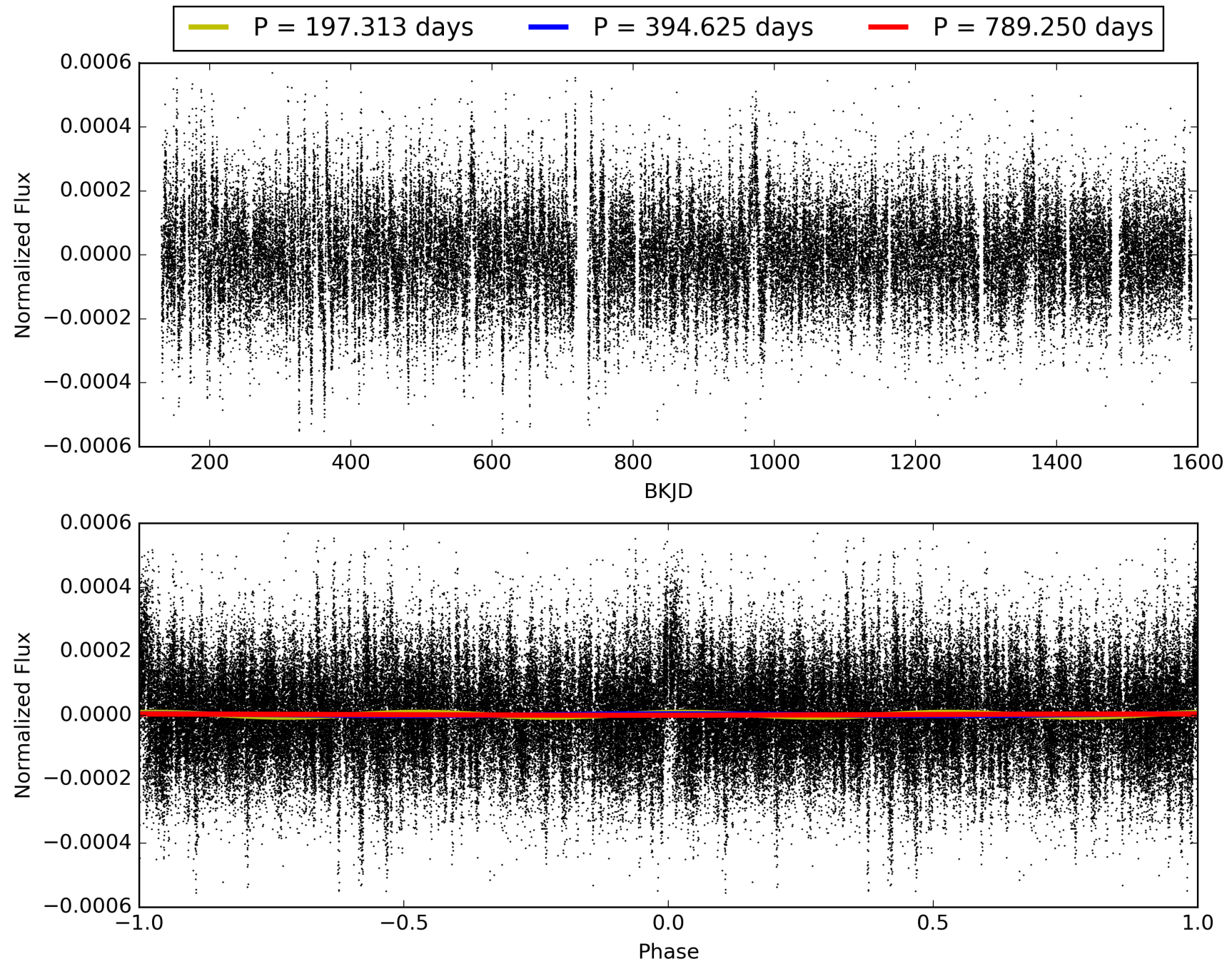
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 50.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 11.55
Centroid-sig: 46.9%
Centroid-so: 0.083 arcsec [1.19 σ]
OotOffset-rm: 0.069 arcsec [0.49 σ]
KicOffset-rm: 0.054 arcsec [0.47 σ]
OotOffset-st: 3/0/0/0 [3]
KicOffset-st: 3/0/0/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 011027624-01, PDC Light Curves

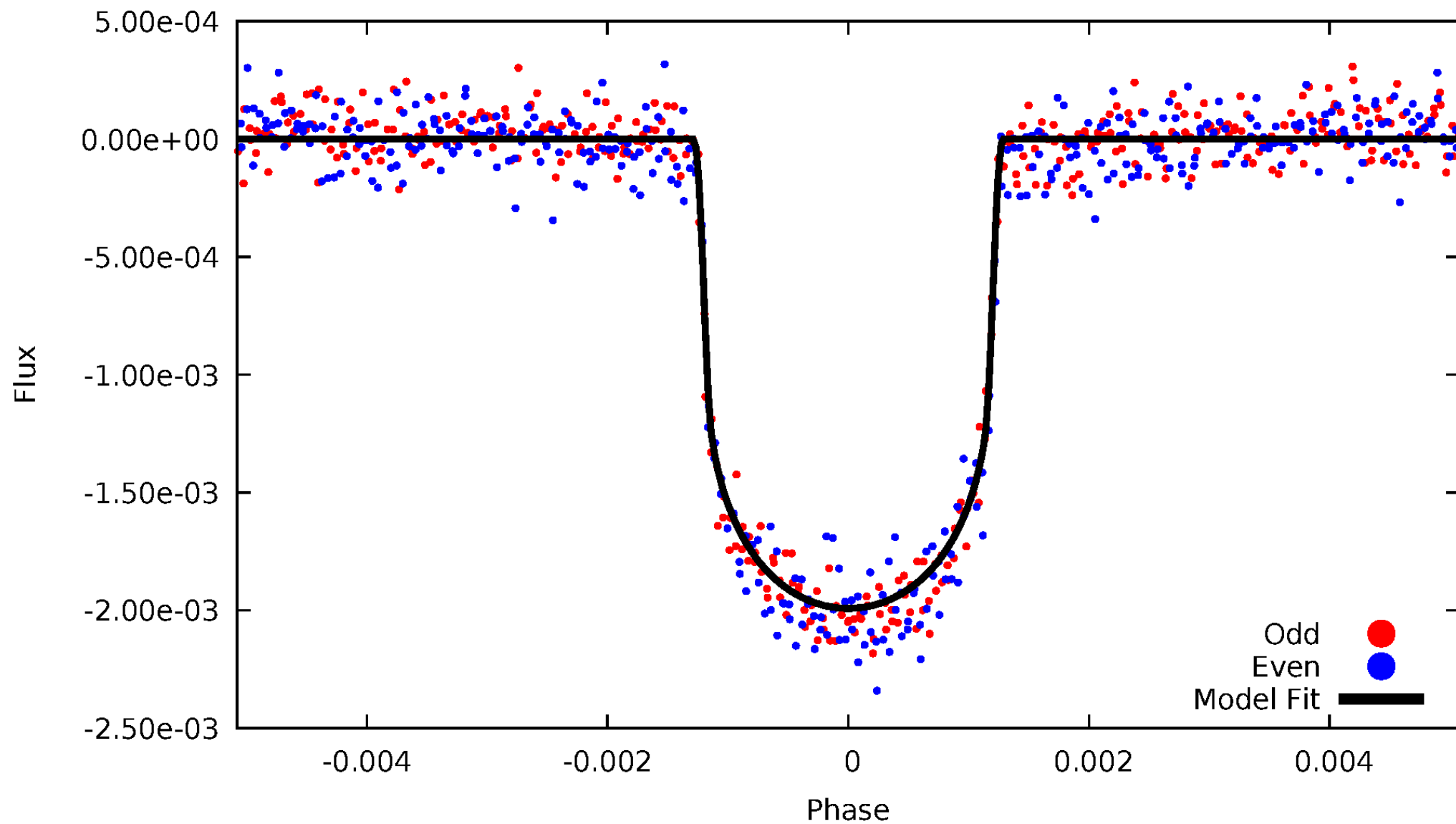


TCE 011027624-01



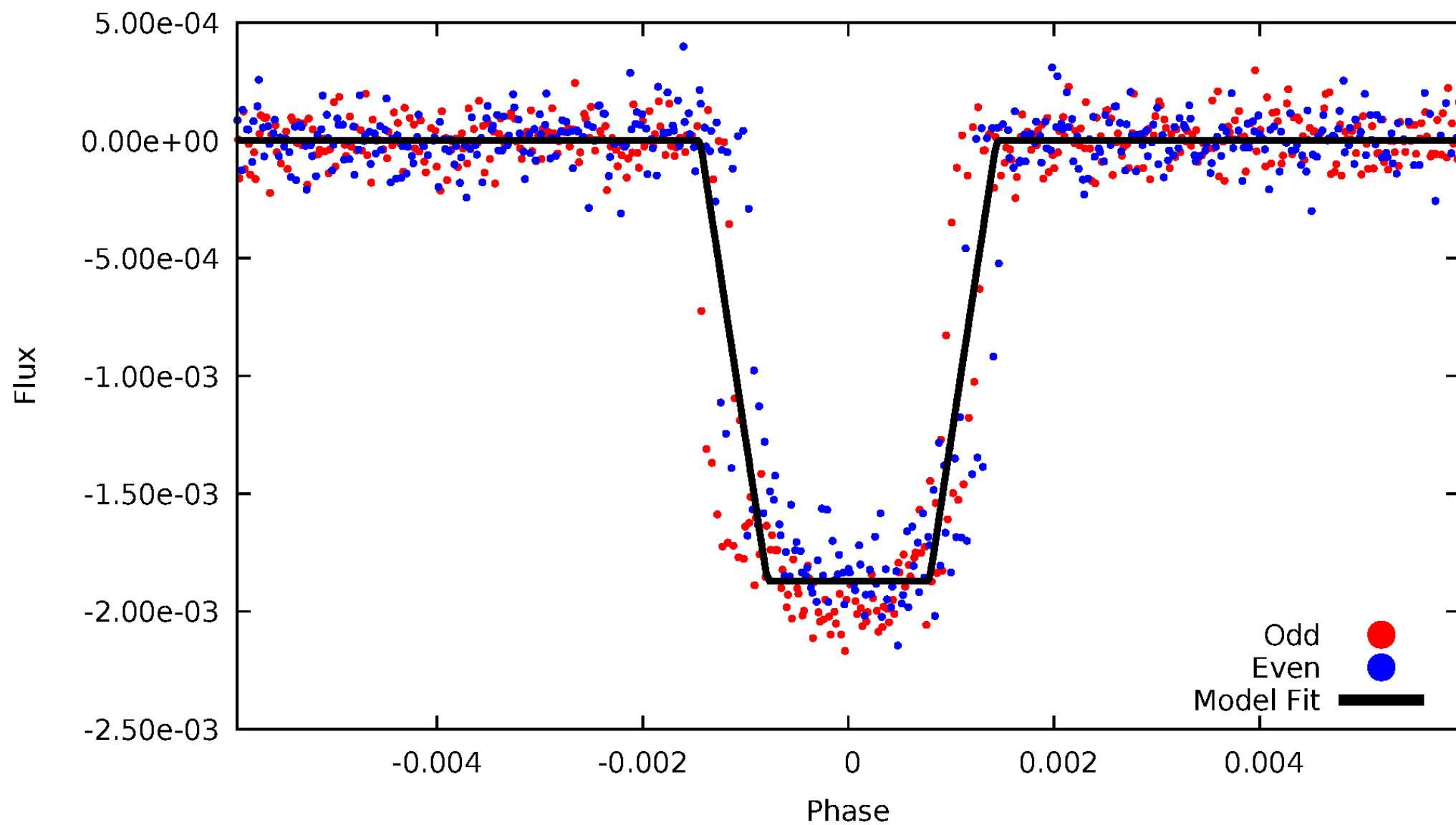
DV Odd/Even

TCE 011027624-01



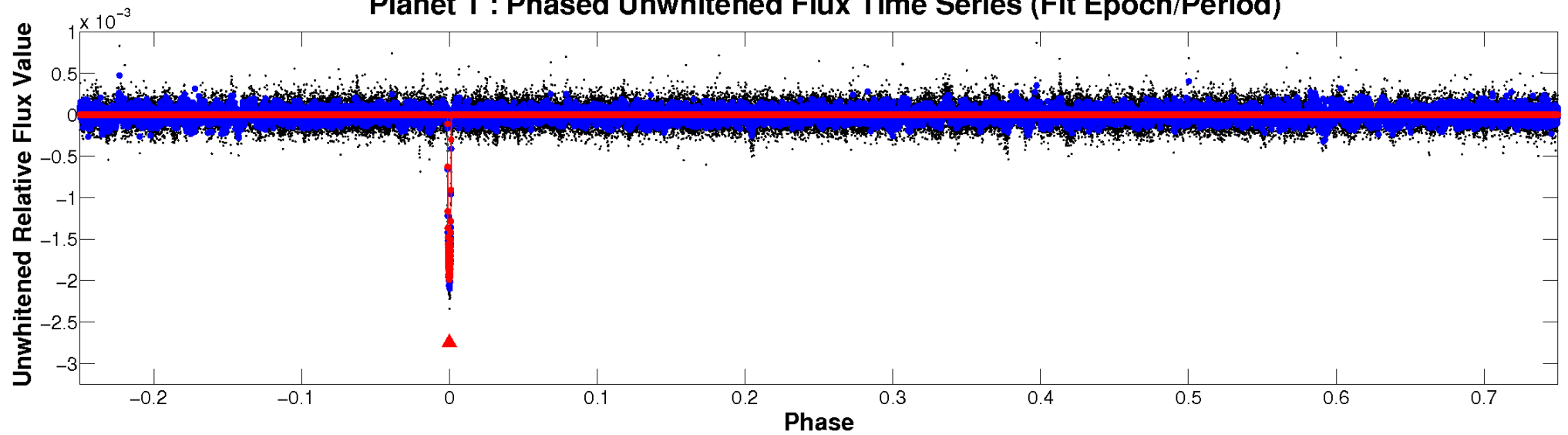
ALT Odd/Even

TCE 011027624-01

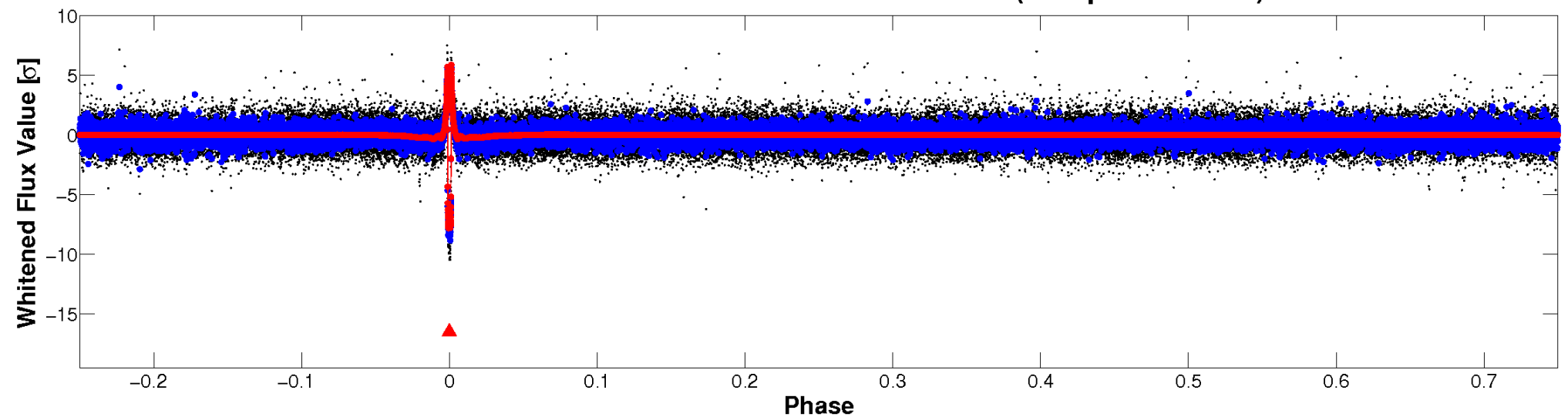


Non-Whitened Vs. Whitened Light Curve

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

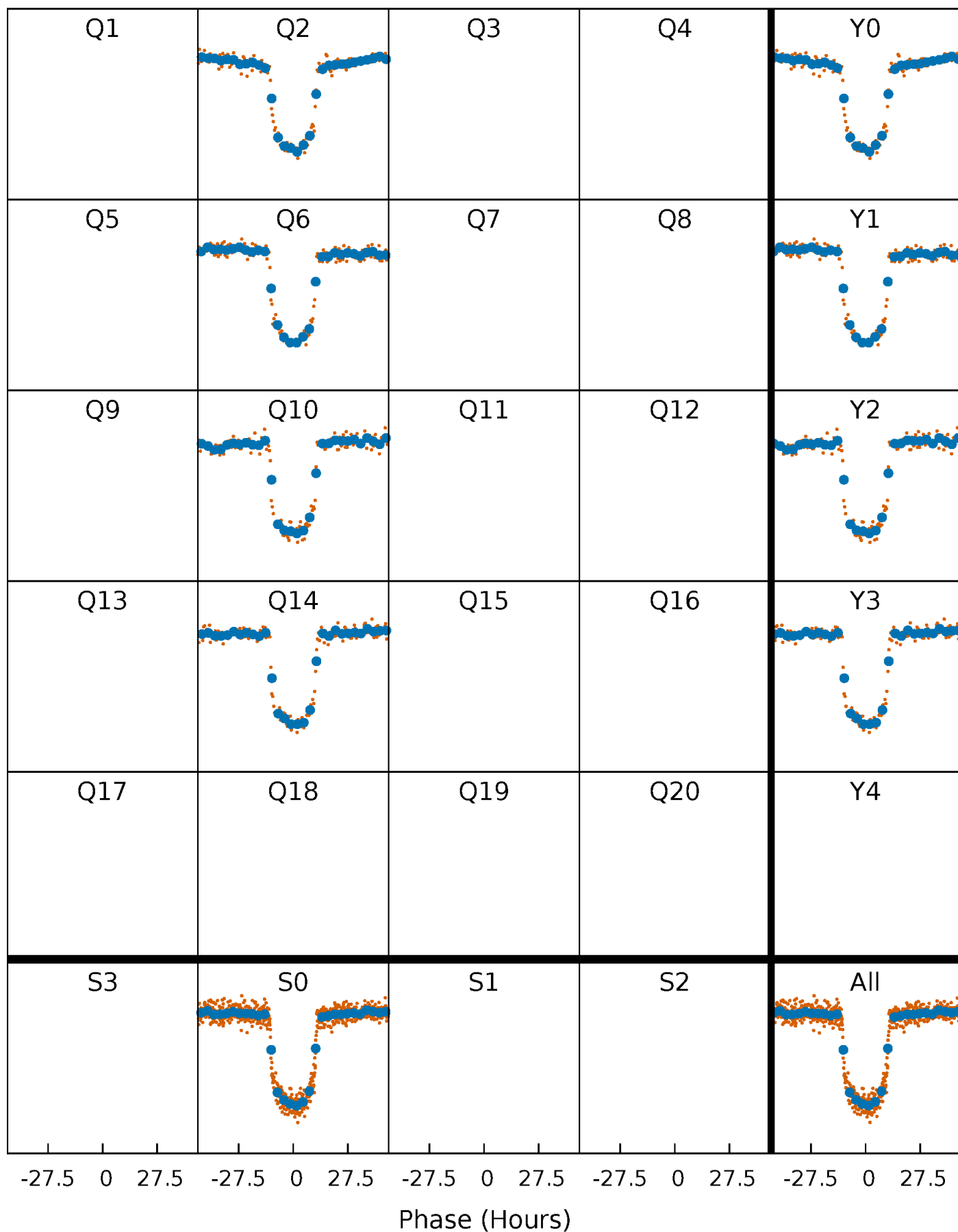


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



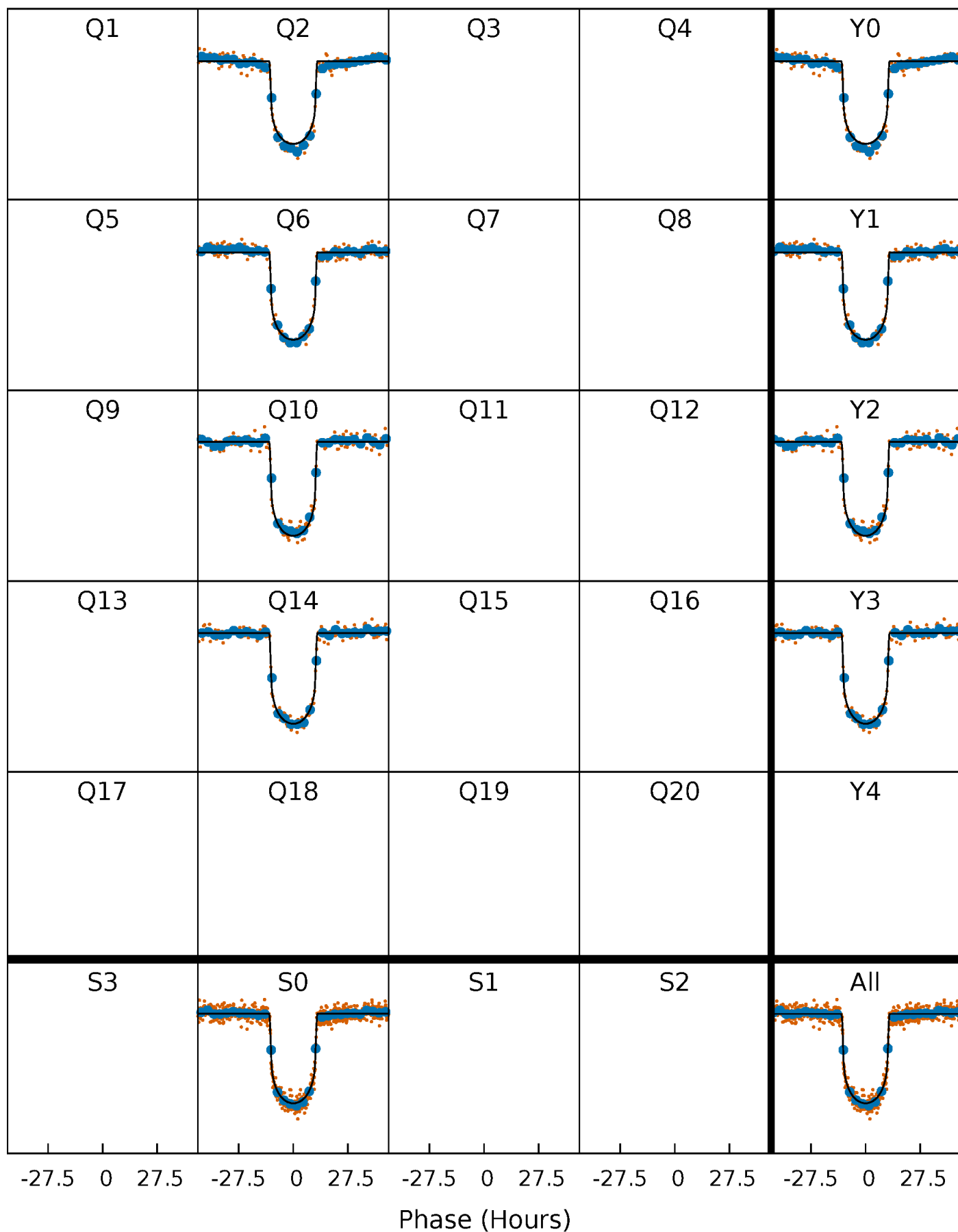
PDC Quarter-Phased Transit Curves

TCE 011027624-01 P=394.625063 Days $T_0=177.844590$ (BKJD)



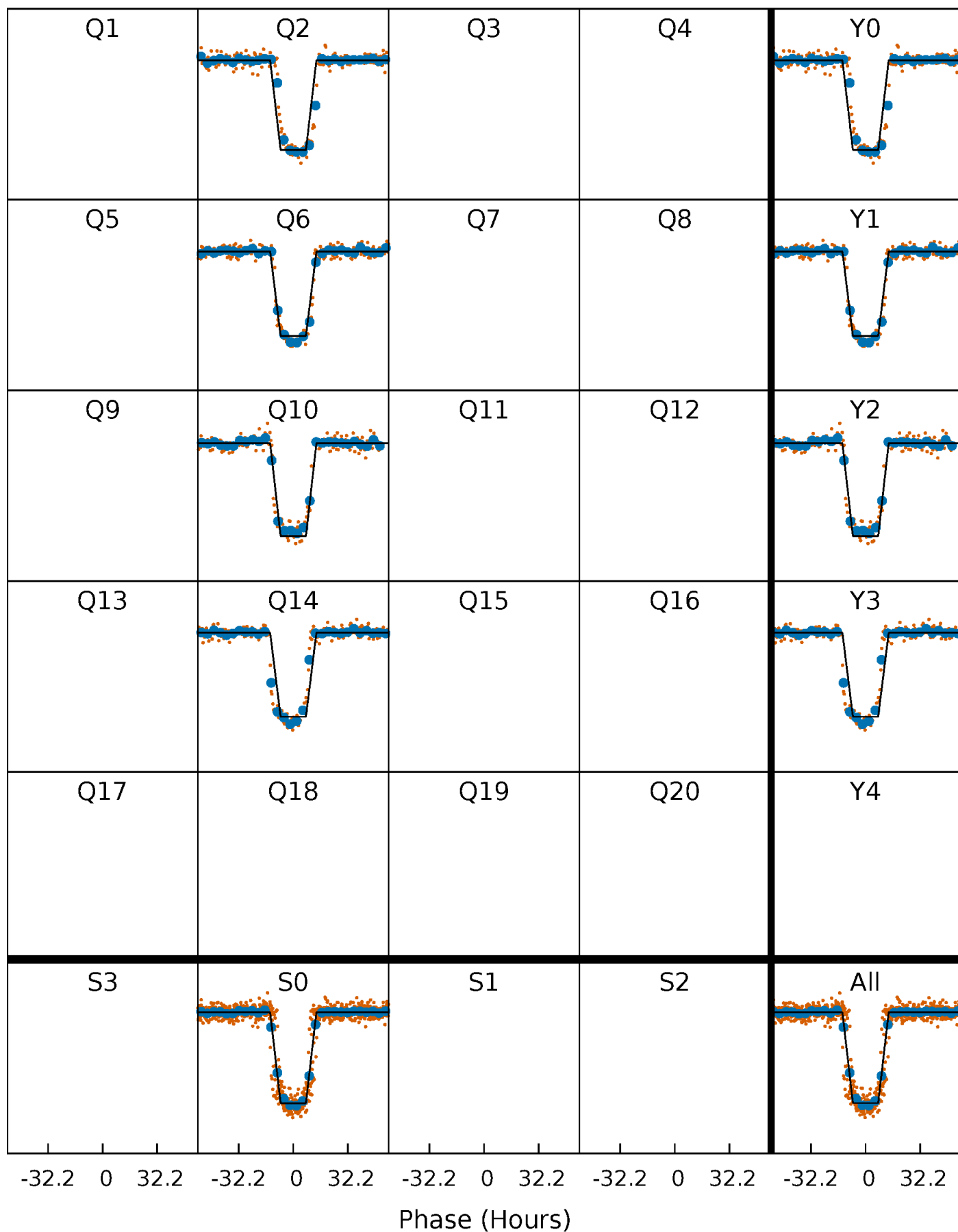
DV Quarter-Phased Transit Curves

TCE 011027624-01 P=394.625063 Days $T_0=177.844590$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

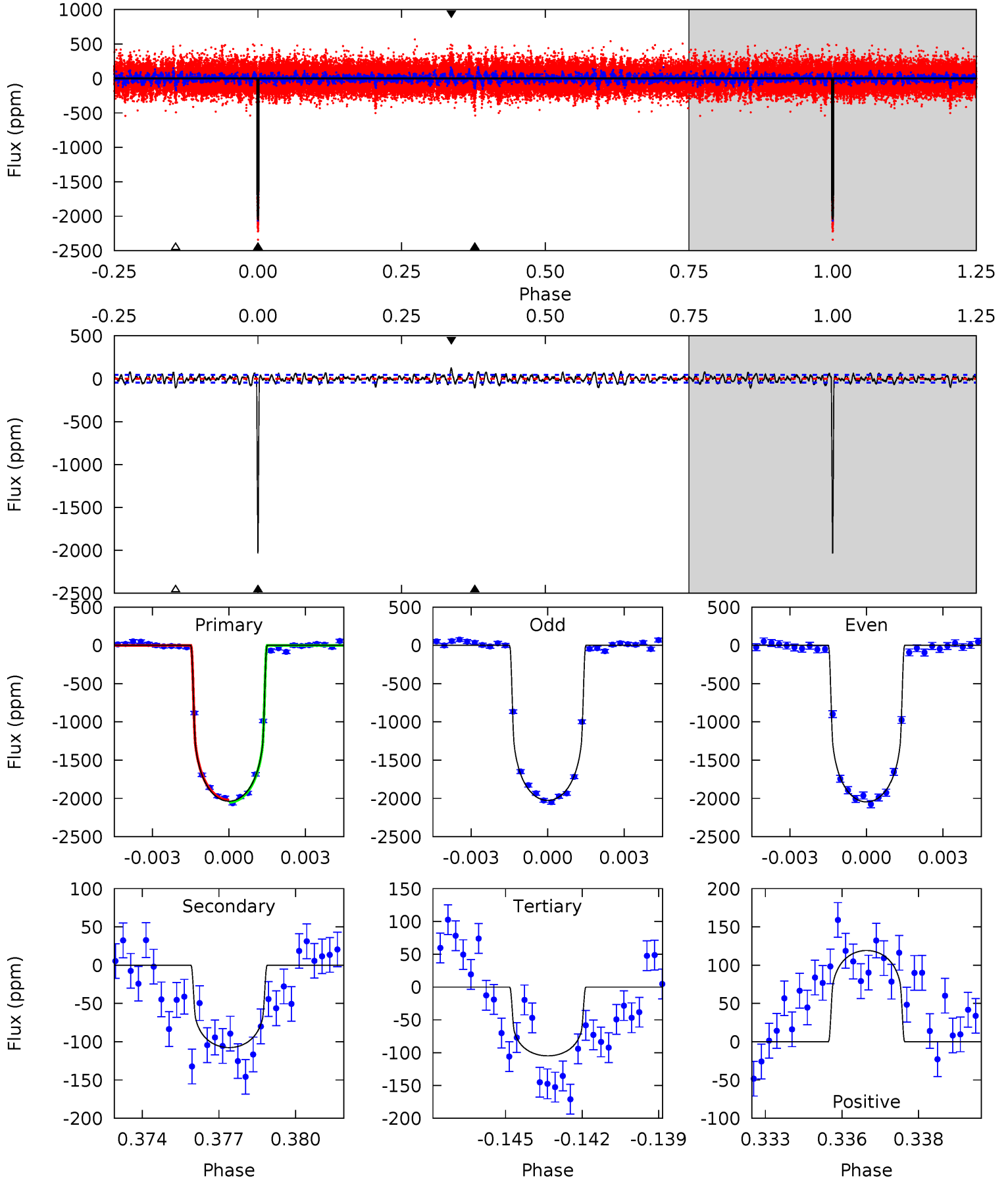
TCE 011027624-01 P=394.687834 Days $T_0=177.749278$ (BKJD)



DV Model-Shift Uniqueness Test

011027624-01, P = 394.625063 Days, E = 177.844590 Days

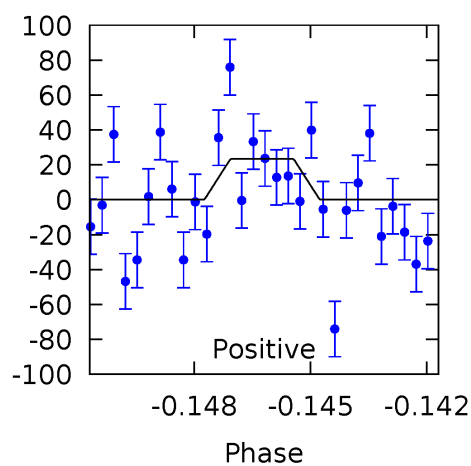
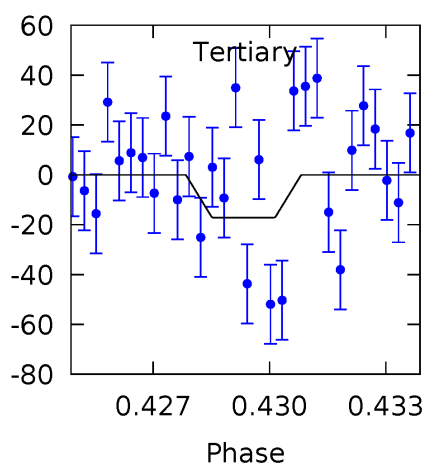
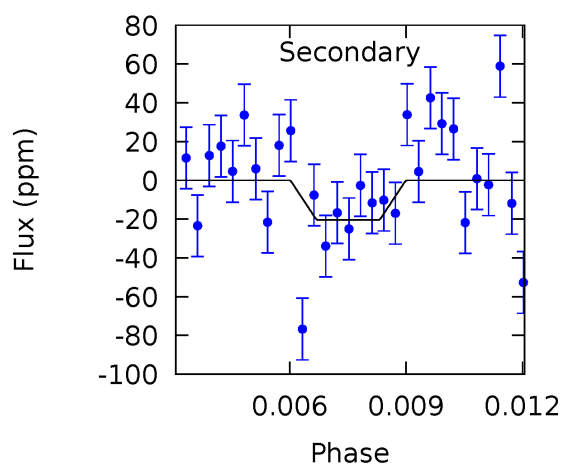
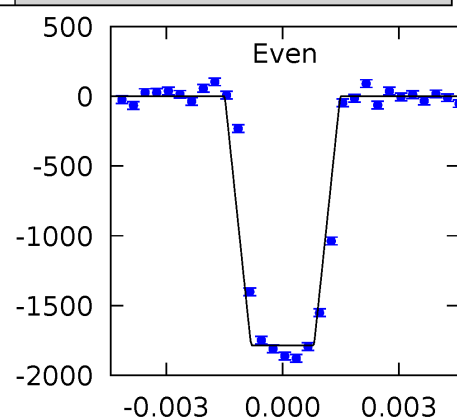
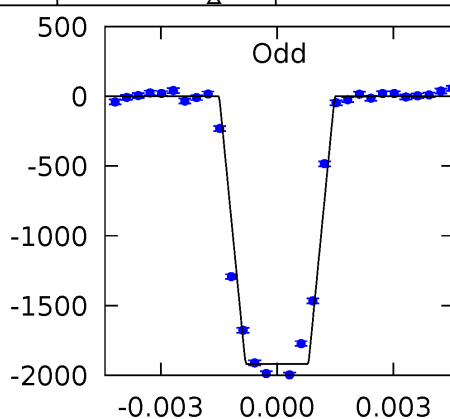
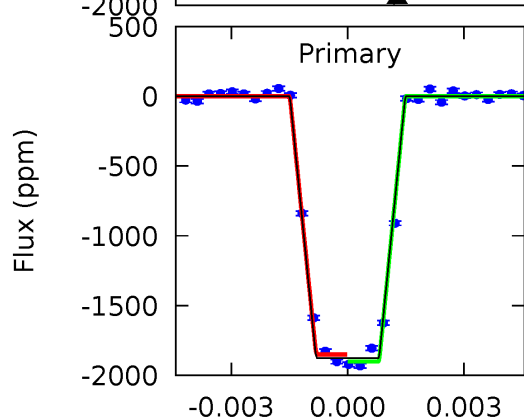
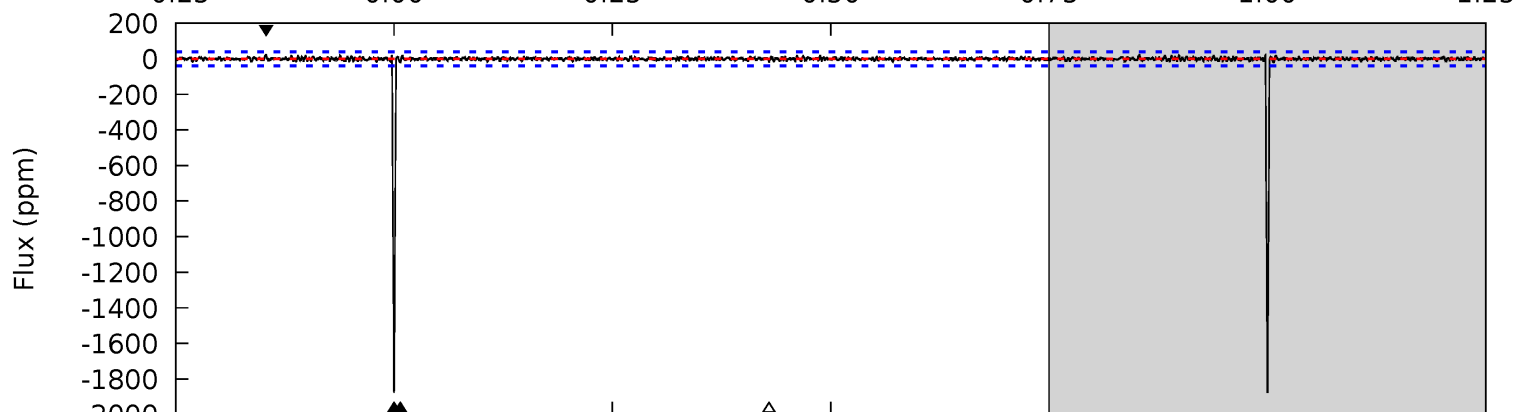
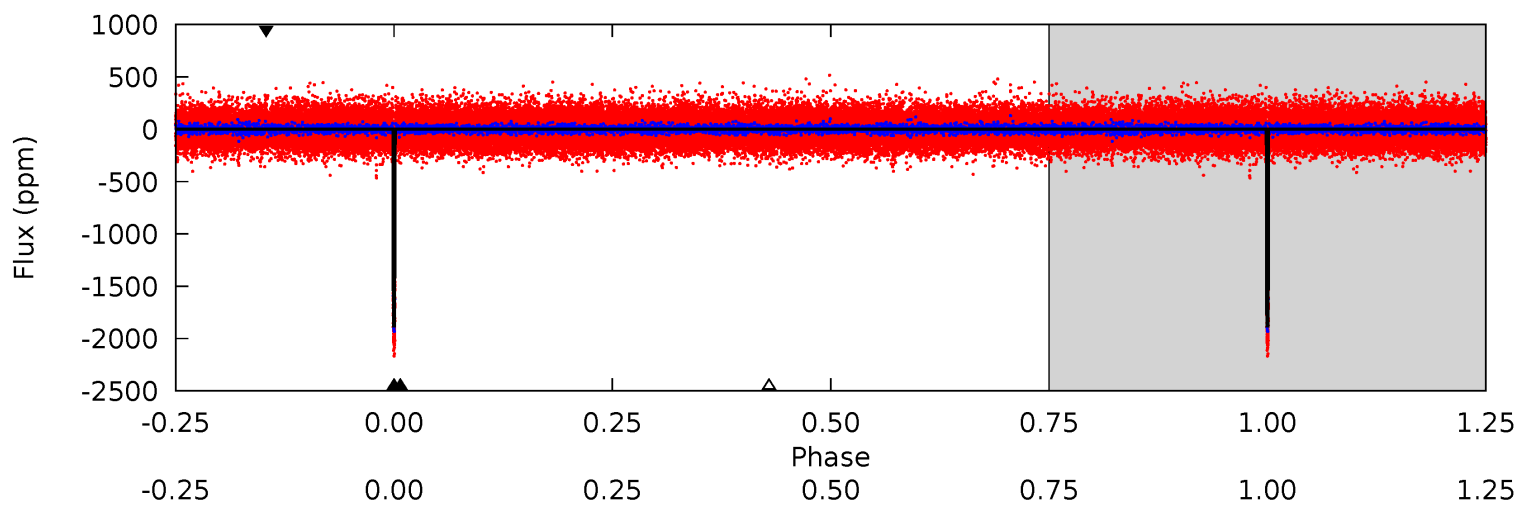
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
243.0	12.8	12.5	14.2	5.28	3.01	3.63	230.5	228.8	0.33	-1.38	1.13	1.00	0.06	1.67



Alt Model-Shift Uniqueness Test

011027624-01, P = 394.687834 Days, E = 177.749278 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
251.9	2.74	2.30	3.14	5.26	2.98	0.74	249.6	248.7	0.44	-0.40	9.27	1.00	0.01	3.36



Stellar Parameters For KIC 011027624

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5910^{+107}_{-119}	$4.030^{+0.196}_{-0.084}$	$0.140^{+0.150}_{-0.150}$	$1.727^{+0.281}_{-0.422}$	$1.164^{+0.143}_{-0.120}$	$0.319^{+0.335}_{-0.096}$
	+2%/-2%	+5%/-2%	+107%/-107%	+16%/-24%	+12%/-10%	+105%/-30%
Source	SPE59	SPE59	SPE59	DSEP		

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

Secondary Eclipse Parameters for KIC 011027624-01 / KOI 1439.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-108 ± 8	$7.67^{+0.70}_{-0.95}$	449^{+21}_{-28}	3460^{+65}_{-60}	1259^{+376}_{-212}
Alt.	-20 ± 7	$8.06^{+0.77}_{-1.05}$	450^{+21}_{-27}	2694^{+113}_{-155}	217^{+97}_{-84}

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

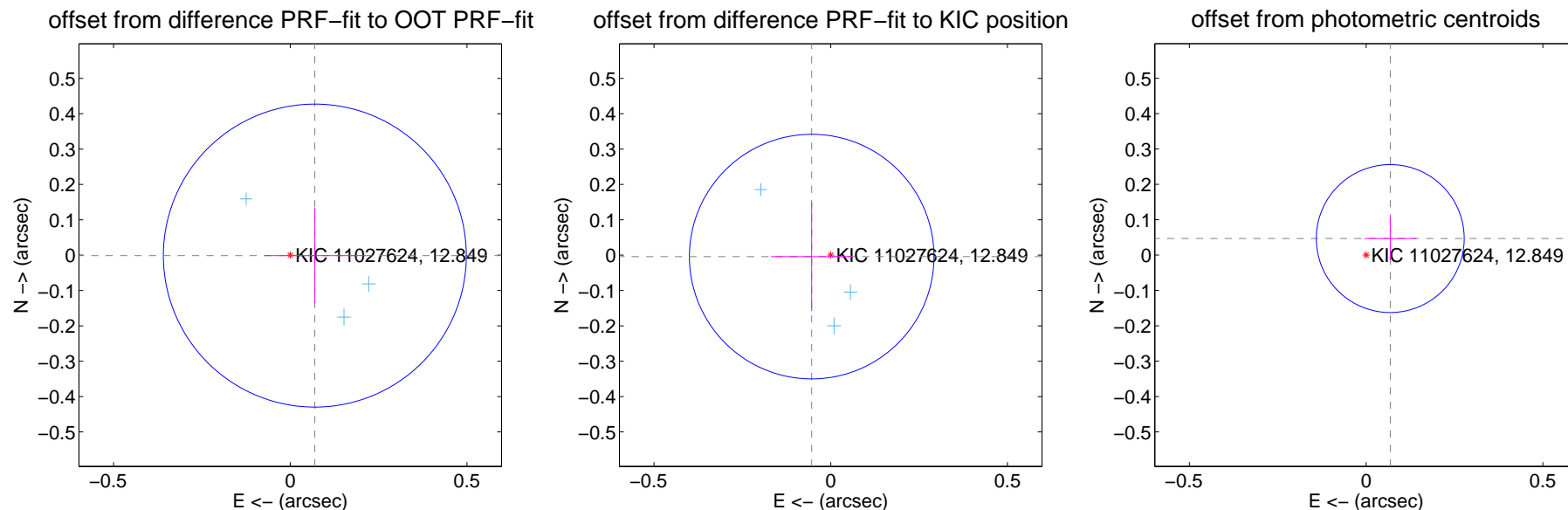
DV Centroid Data

Supplemental centroid analysis for 011027624-01. Kepler magnitude: 12.85. Transit SNR 106.05

There are 3 quarters with good PRF difference image offsets

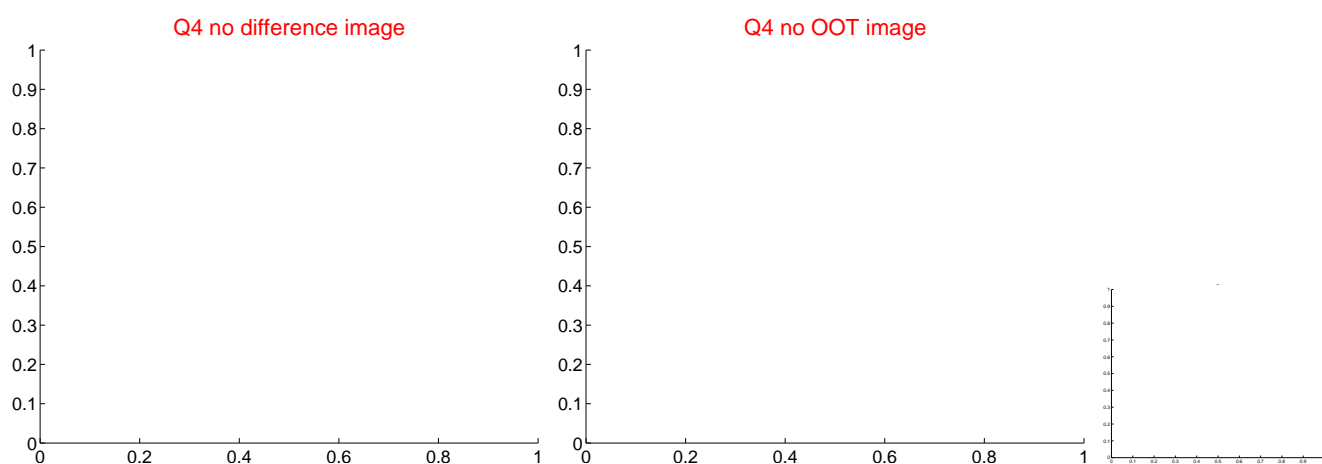
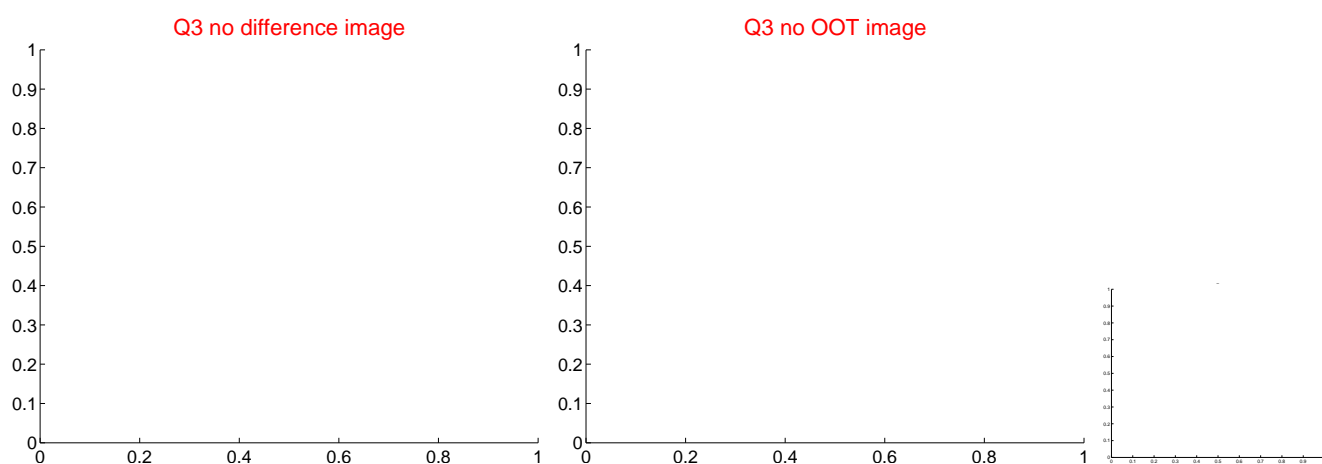
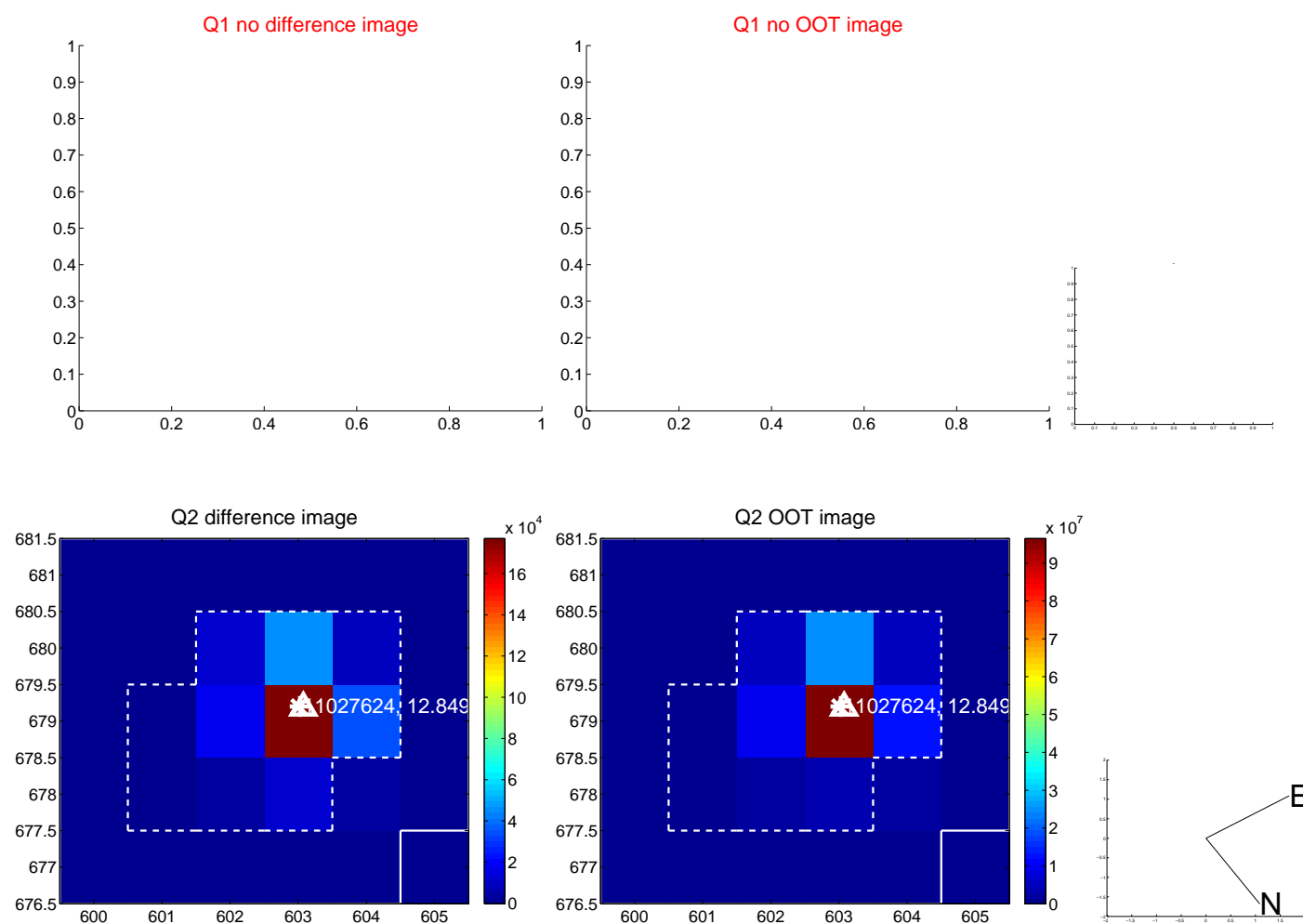
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.069 ± 0.143	0.49	-0.069 ± 0.143	-0.001 ± 0.135
PRF-fit source offset from KIC position	0.054 ± 0.115	0.47	0.054 ± 0.115	-0.004 ± 0.154
photometric centroid source offset	0.08 ± 0.07	1.19	-0.07 ± 0.07	0.05 ± 0.06

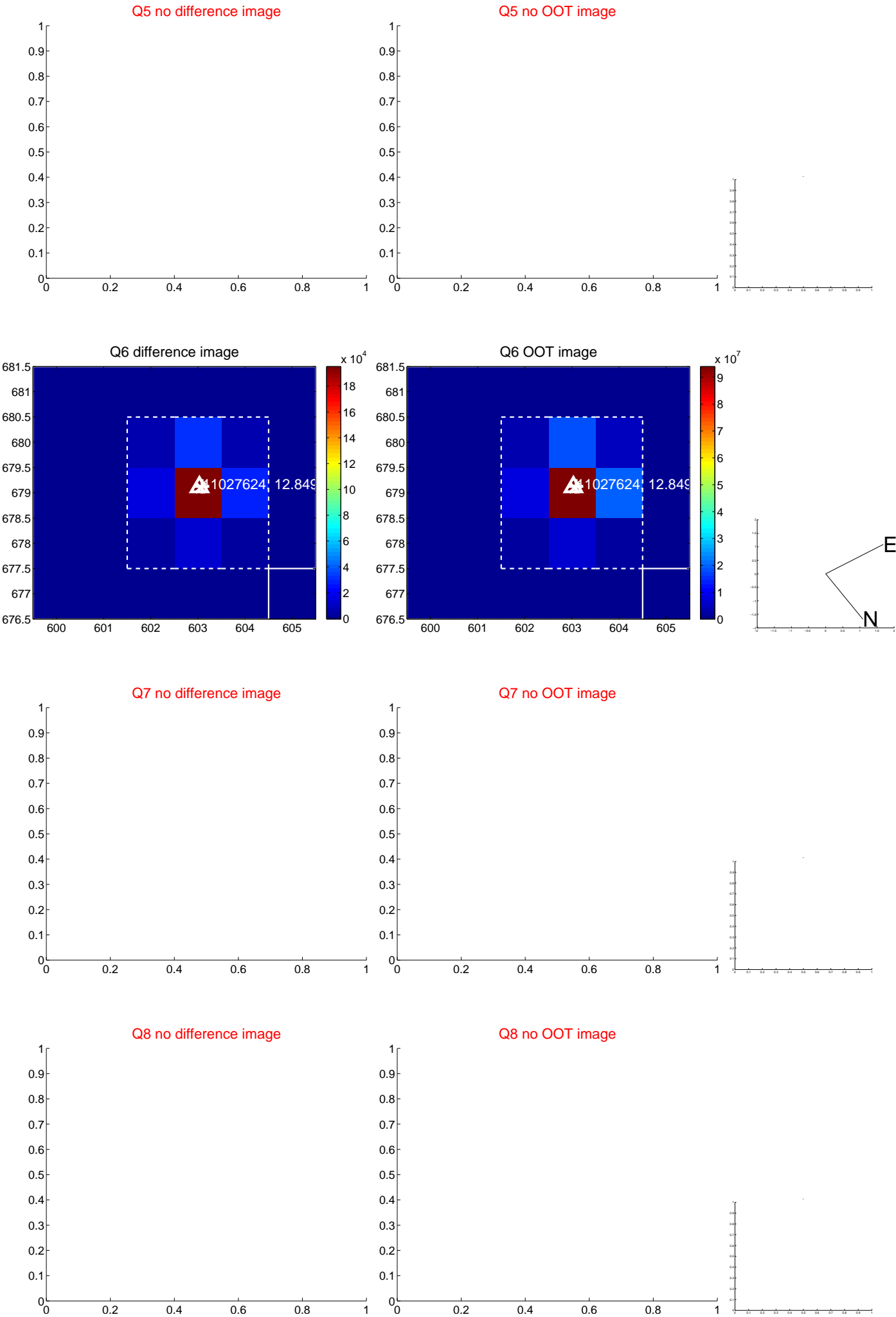


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



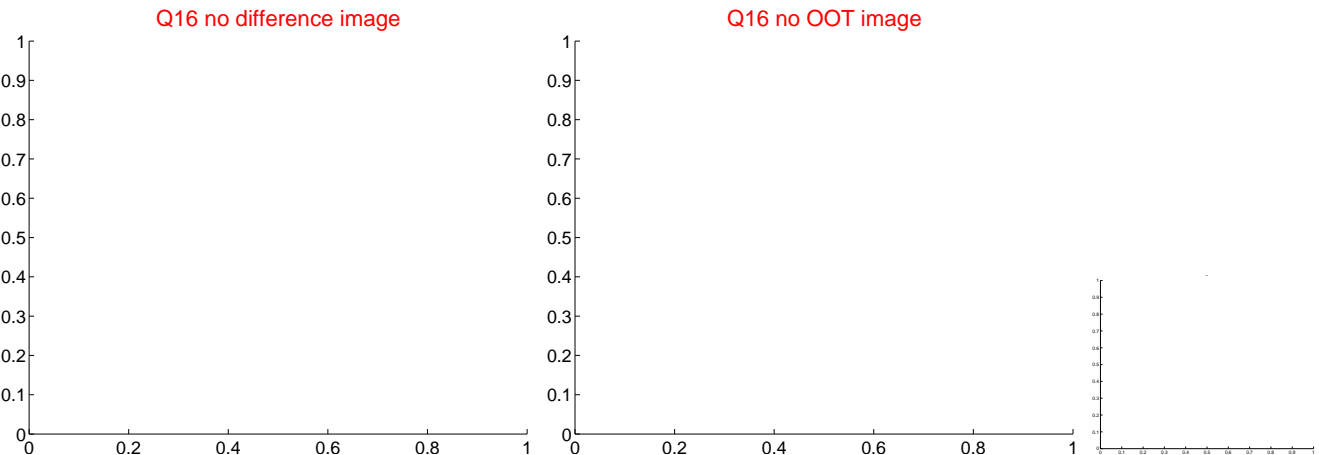
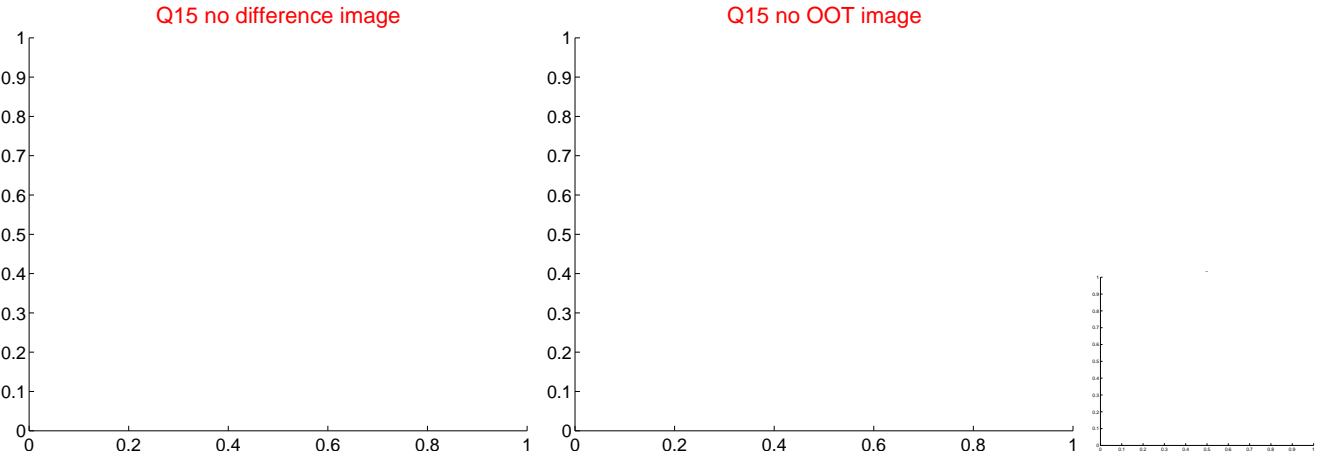
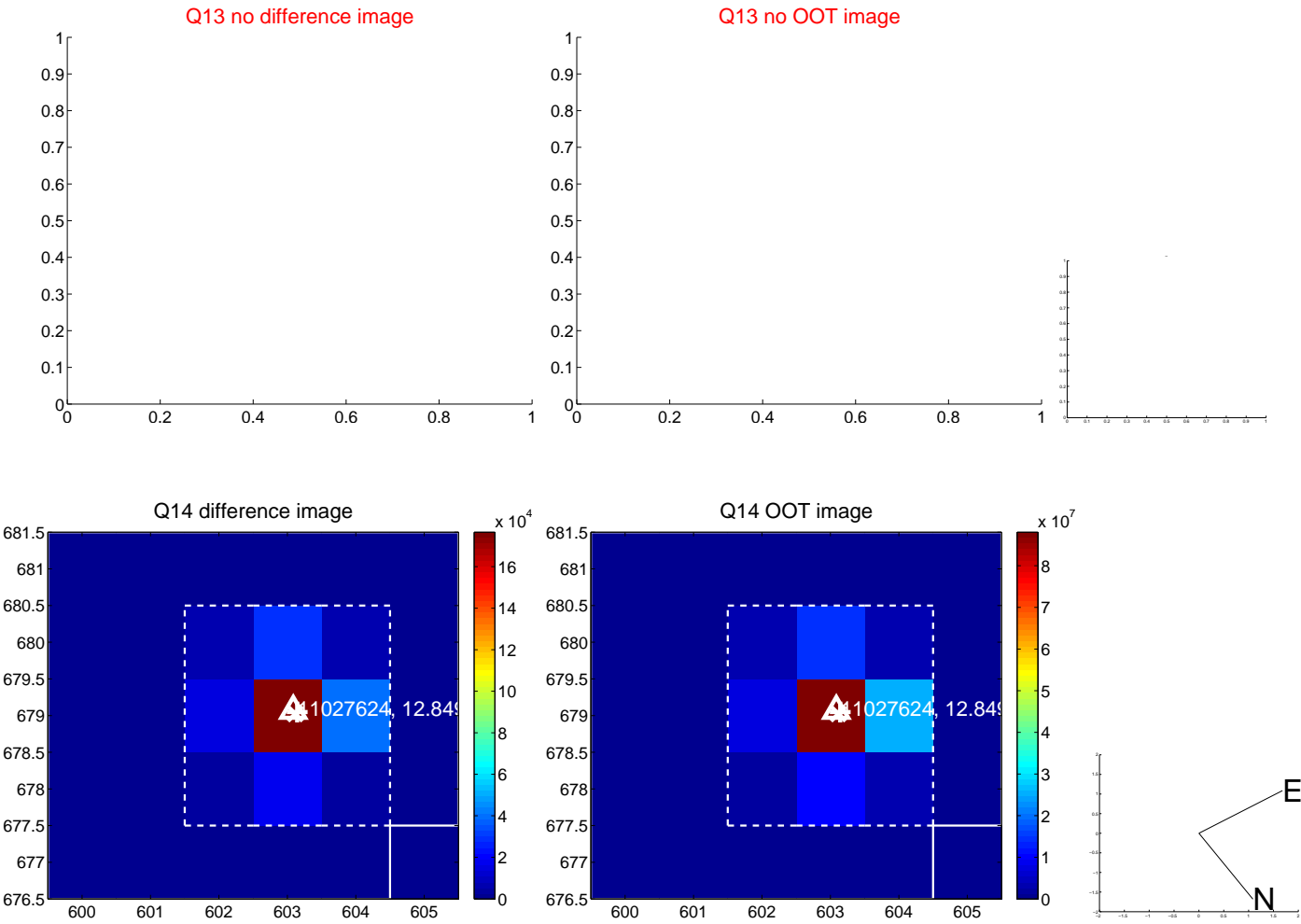
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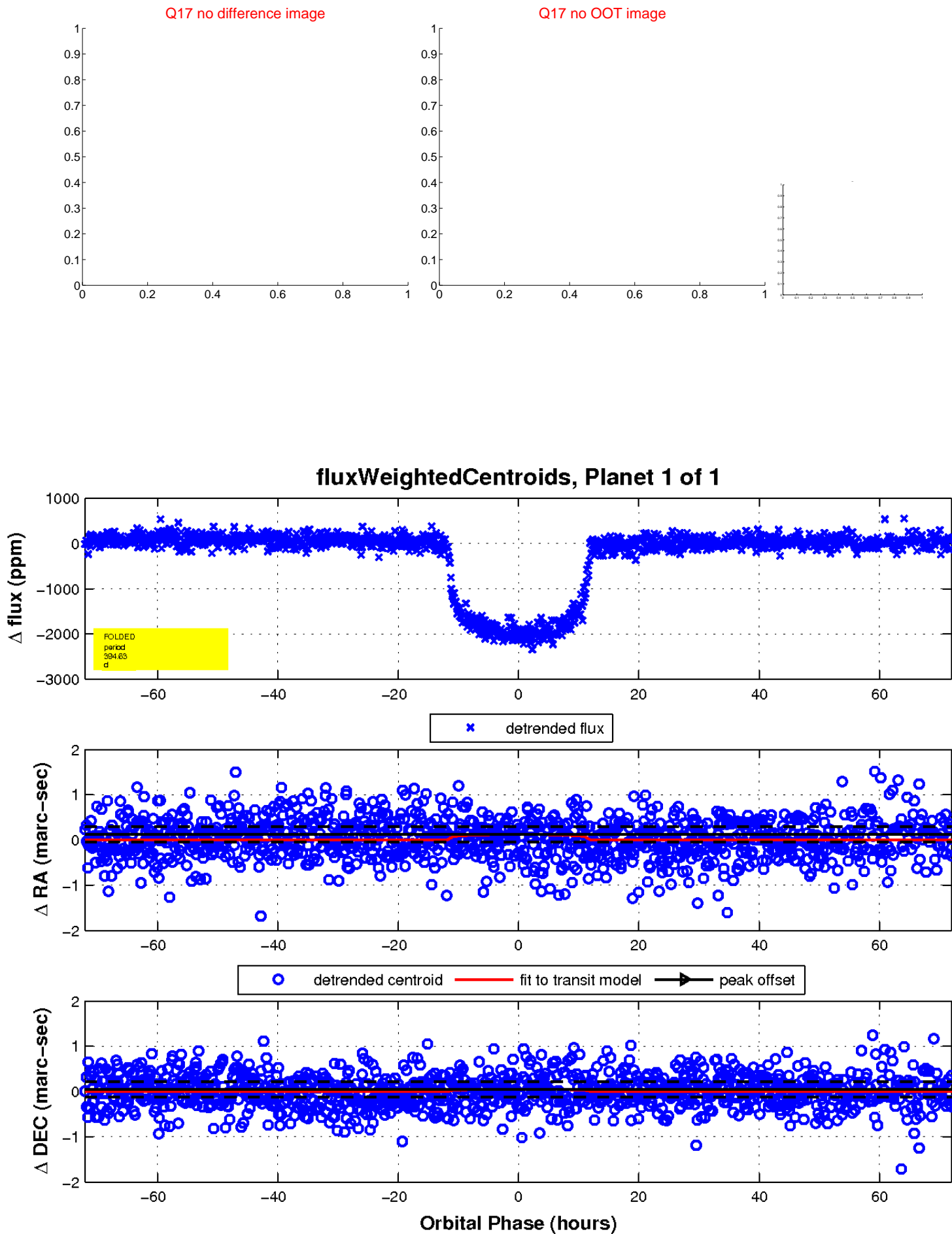
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UKIRT Image

