

KIC 008733497

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})
008733497-01	OBS	3527.01	76.819849	188.125679	227848.0	5.163	3952.4	2447.5	0.77	5654	46.42	4.88

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008733497-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED

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.

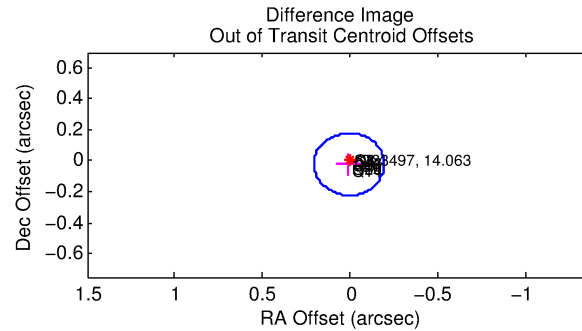
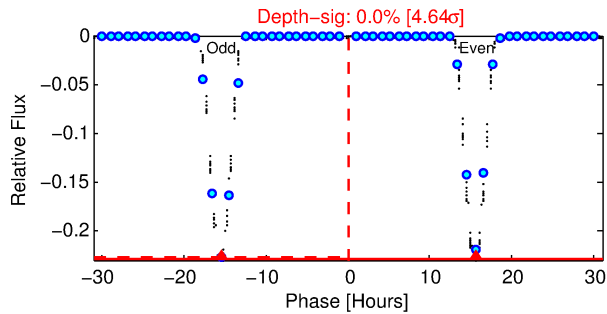
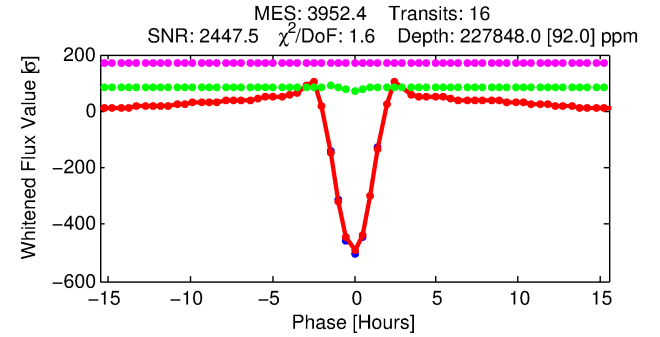
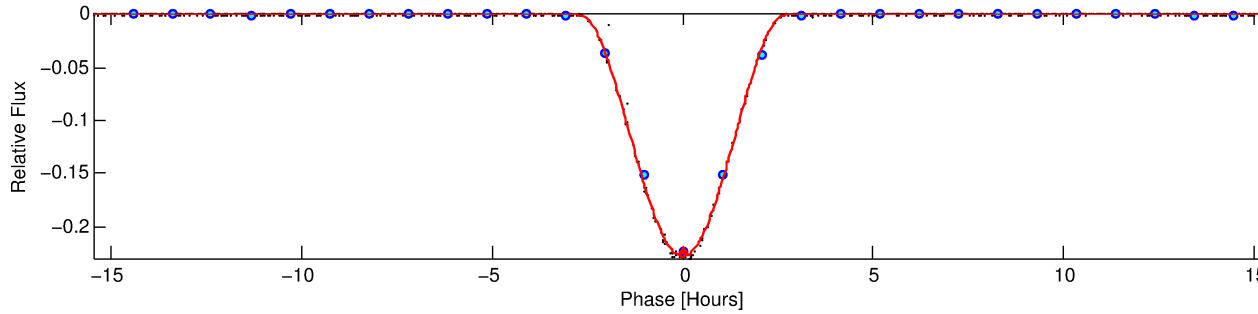
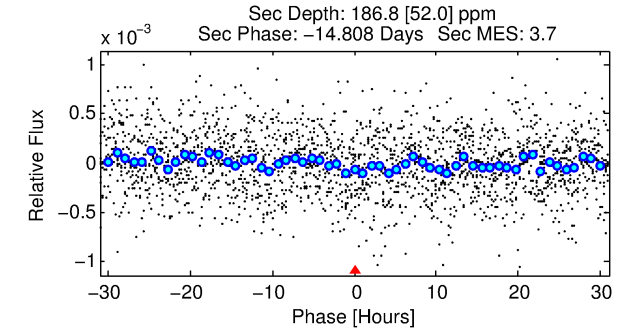
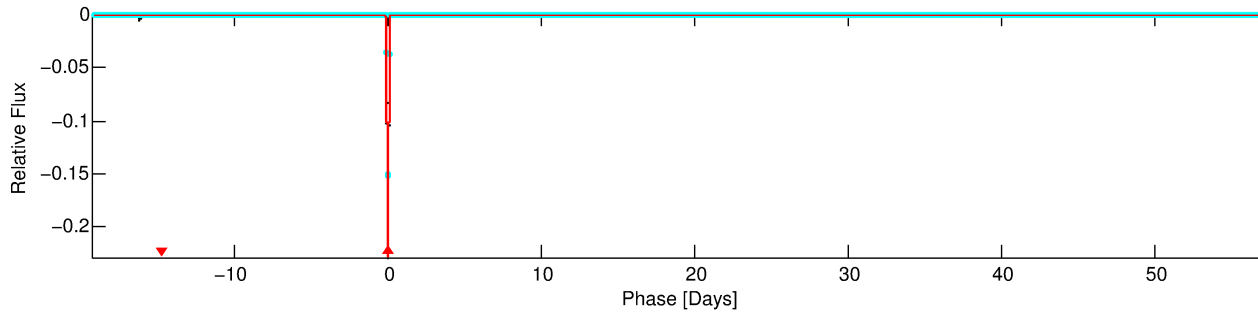
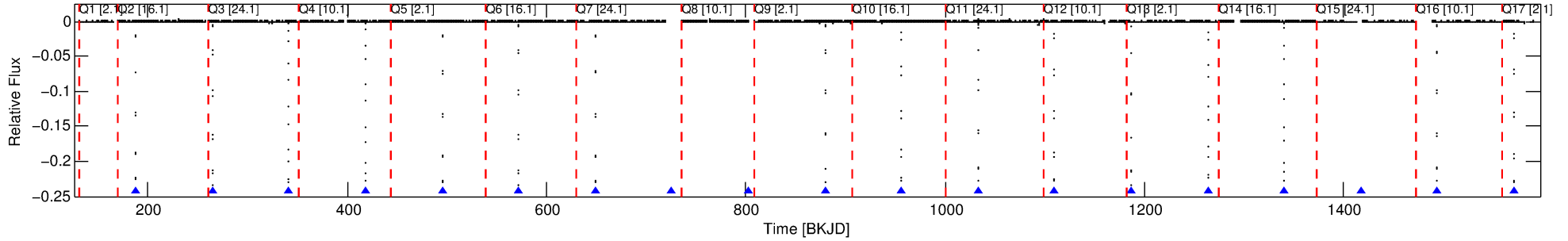
Ephemeris Match Information For 008733497-01

No Significant Match Found

DV One-Page Summary

KIC: 8733497 Candidate: 1 of 1 Period: 76.820 d
KOI: K03527.01 Corr: 0.996

Kp: 14.06 R*: 0.77 Rs Teff: 5654.0 K Logg: 4.59 Fe/H: -0.380



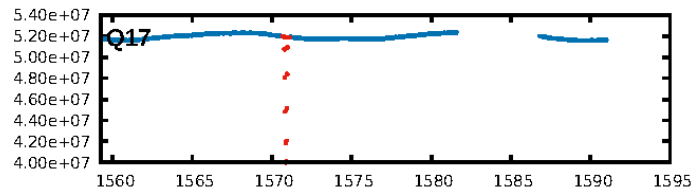
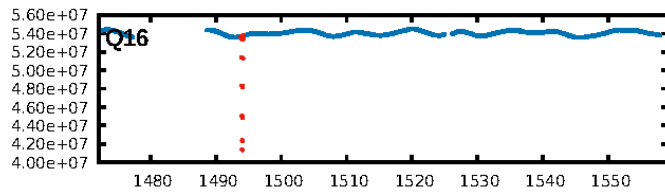
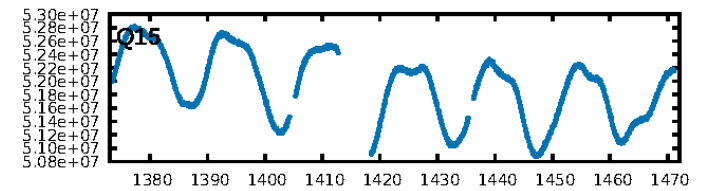
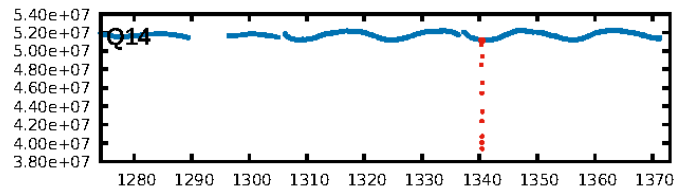
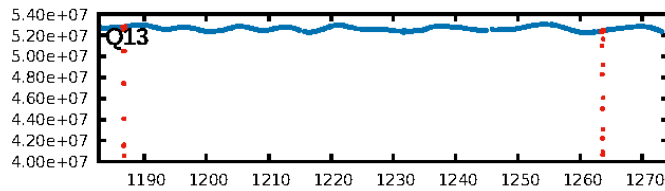
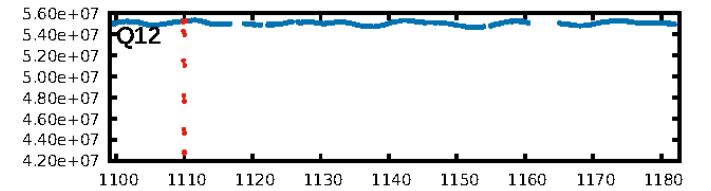
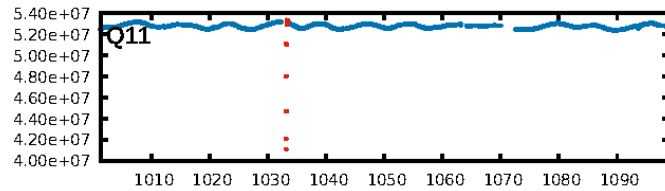
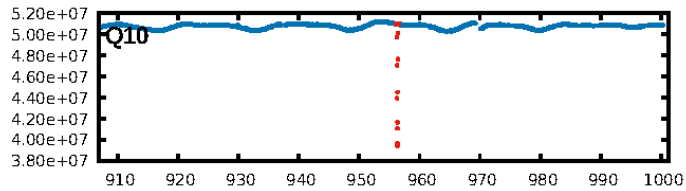
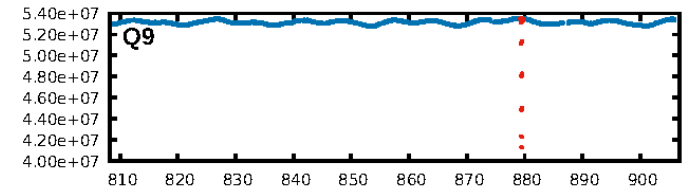
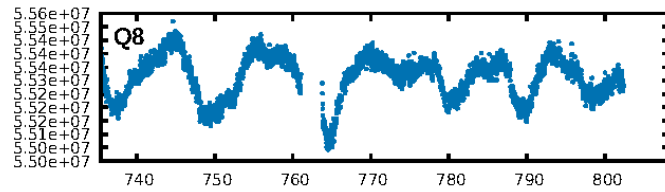
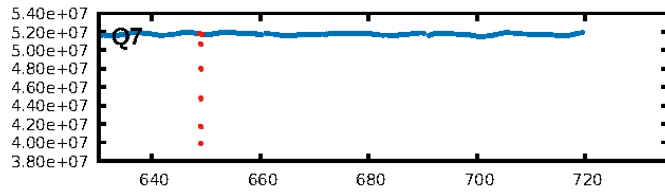
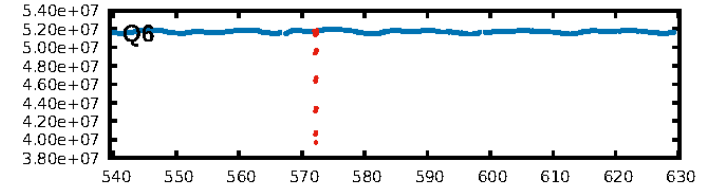
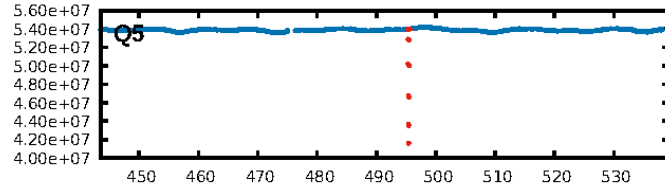
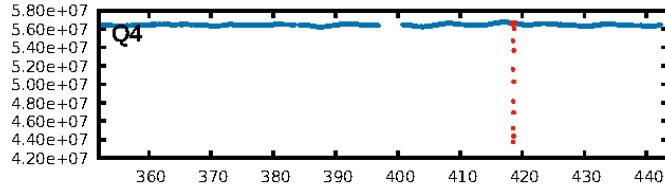
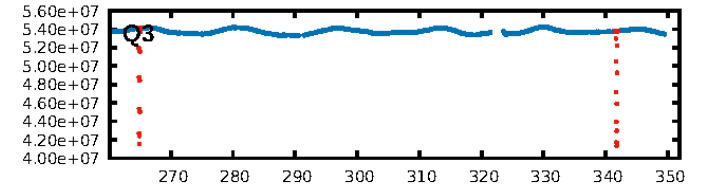
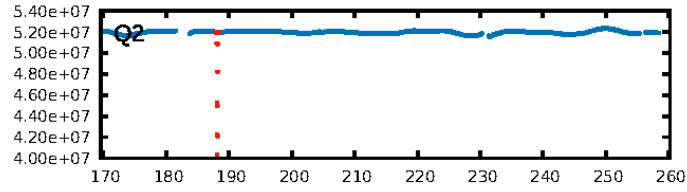
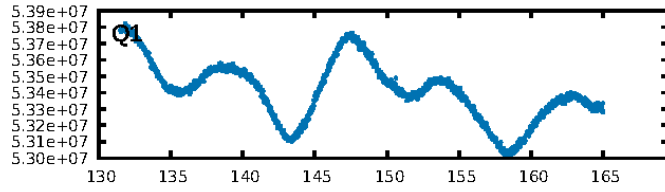
DV Fit Results:

Period = 76.81985 [0.00000] d
Epoch = 188.1257 [0.0000] BKJD
Rp/R* = 0.5496 [0.0220]
a/R* = 155.51 [0.68]
b = 0.73 [0.04]
Seff = 4.88 [1.48]
Teq = 379 [29] K
Rp = 46.42 [11.07] Re
a = 0.3351 [0.0656] AU
Ag = 5.36 [2.17] [2.01σ]
Teffp = 892 [69] K [6.87σ]

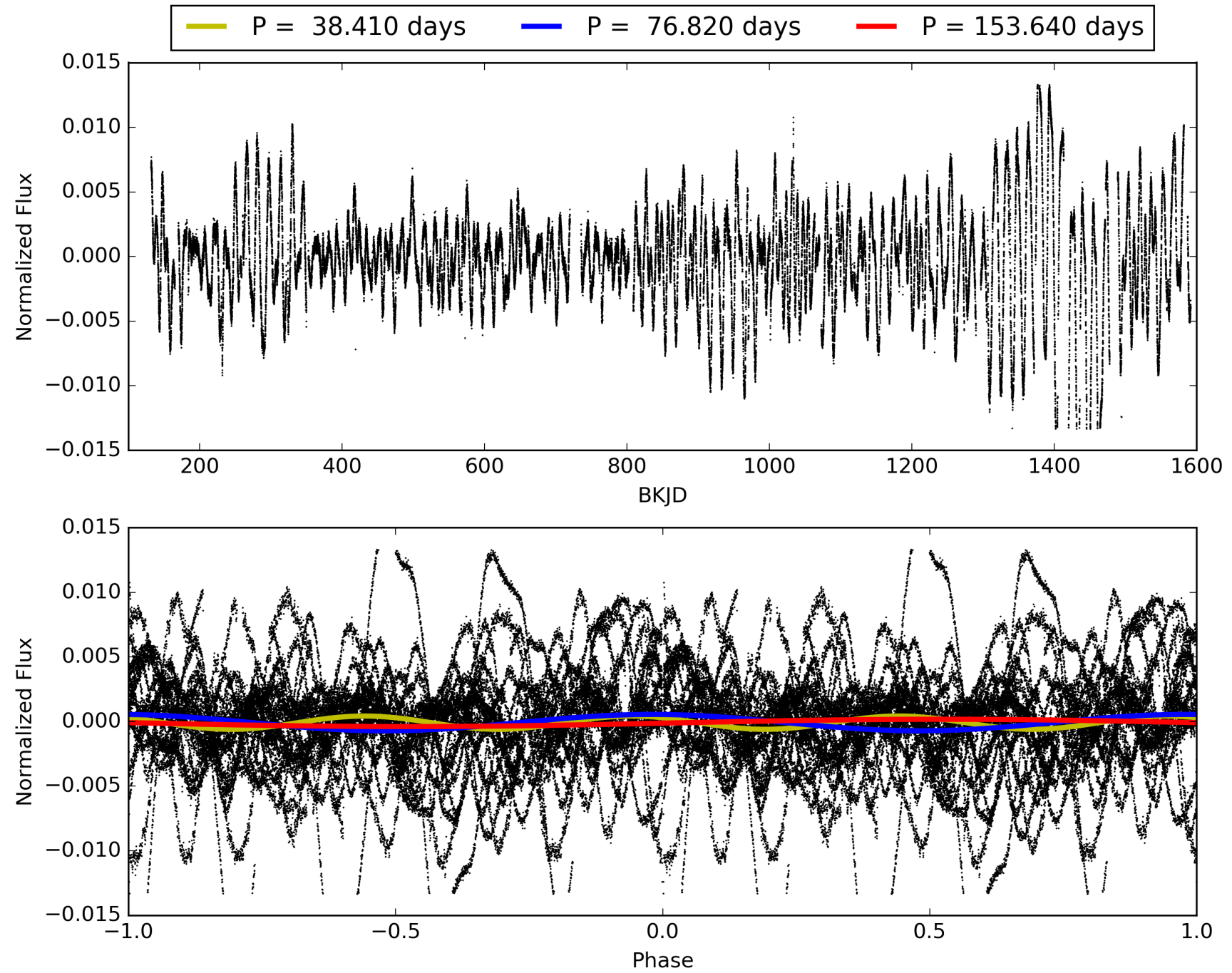
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 13.5%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [15/15]
GhostDiagnostic-chr: 3.755
Centroid-sig: 0.0%
Centroid-so: 0.134 arcsec [62.06σ]
OotOffset-rm: 0.024 arcsec [0.36σ]
KicOffset-rm: 0.092 arcsec [1.30σ]
OotOffset-st: 4/2/2/4 [12]
KicOffset-st: 4/2/2/4 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 1.00 [12/12]

TCE 008733497-01, PDC Light Curves

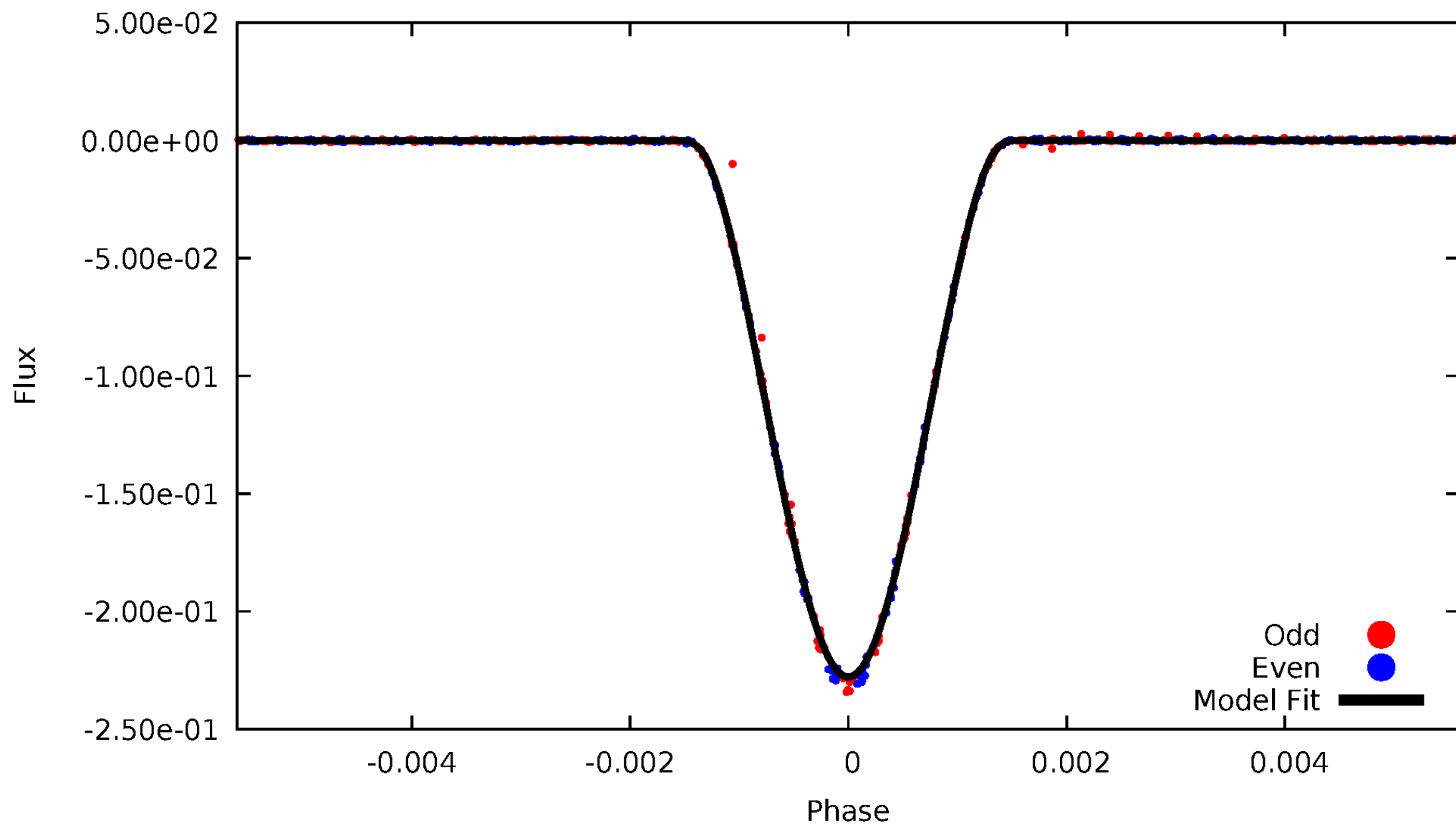


TCE 008733497-01



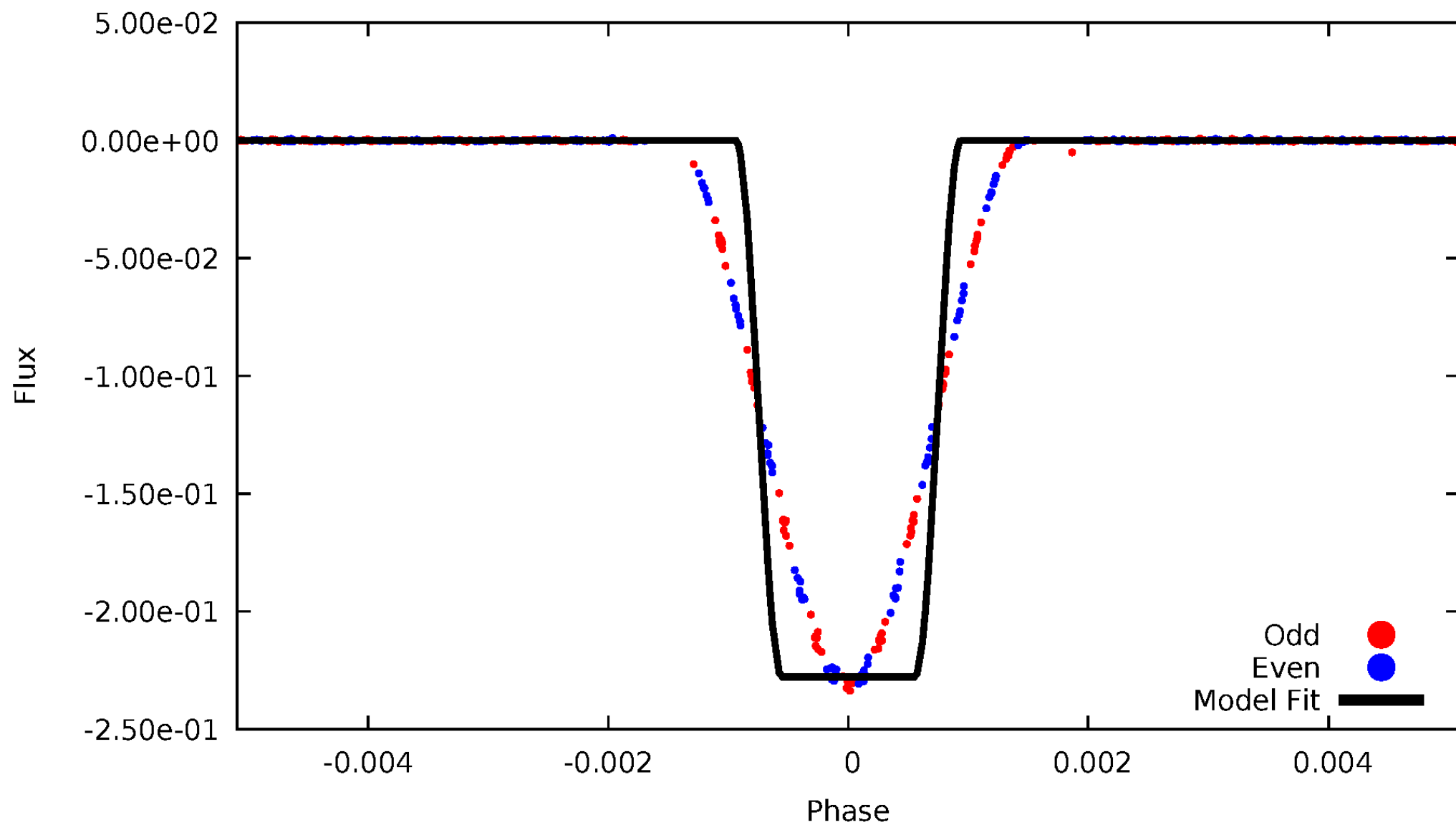
DV Odd/Even

TCE 008733497-01



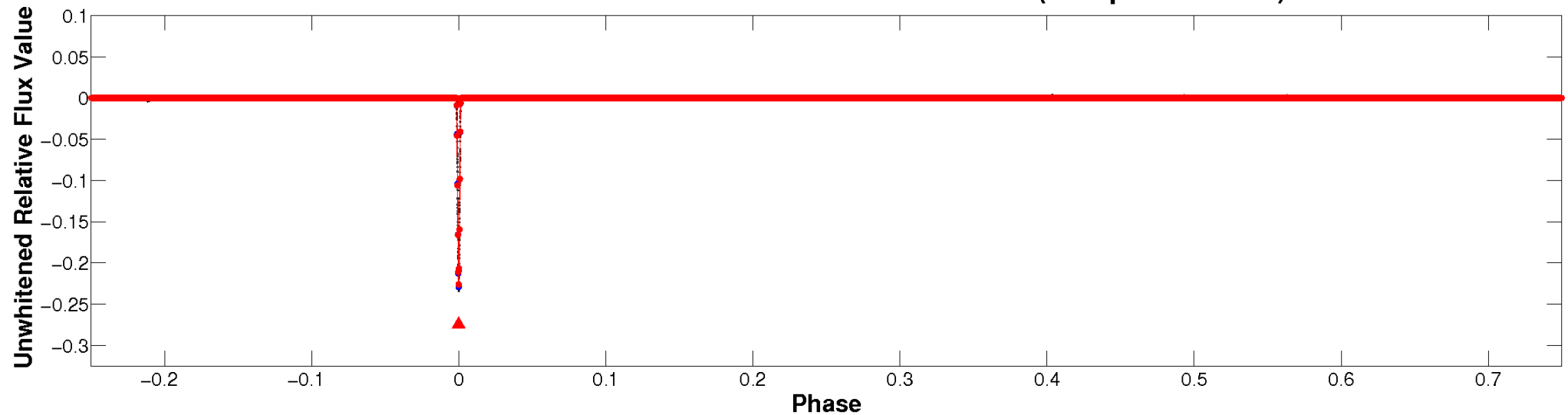
ALT Odd/Even

TCE 008733497-01

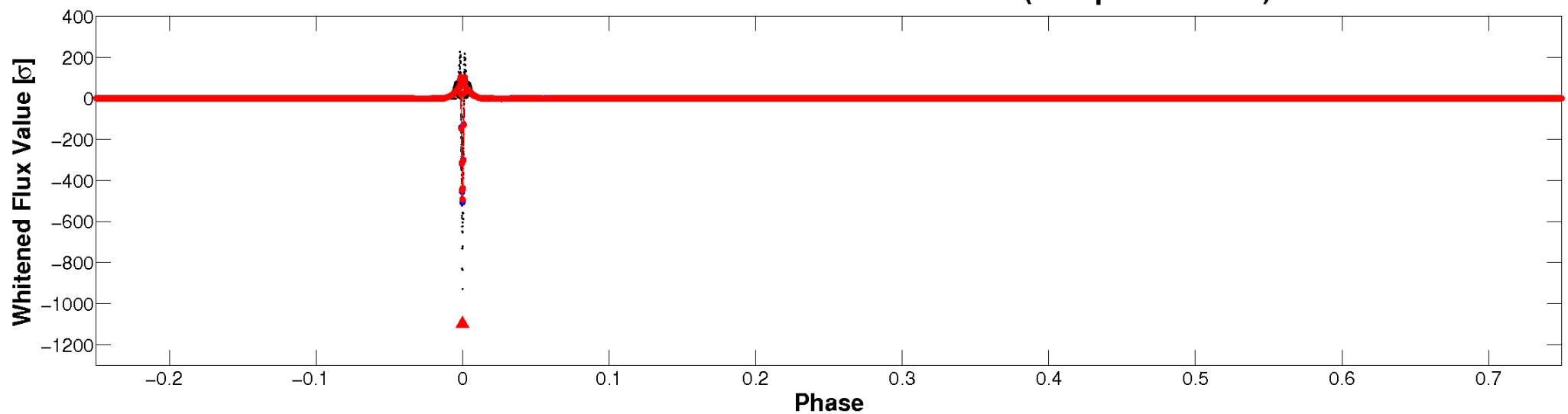


Non-Whitened Vs. Whitened Light Curve

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

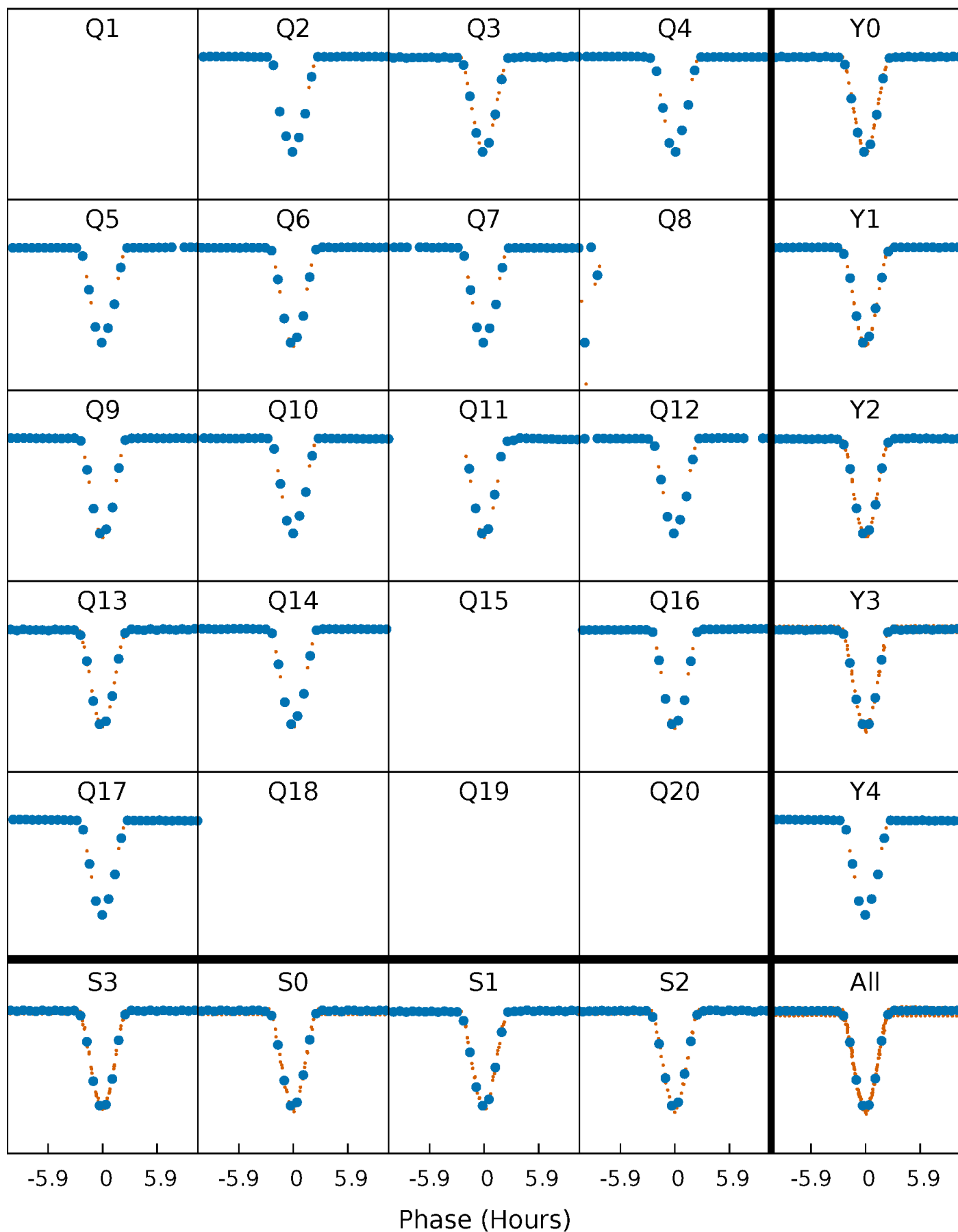


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



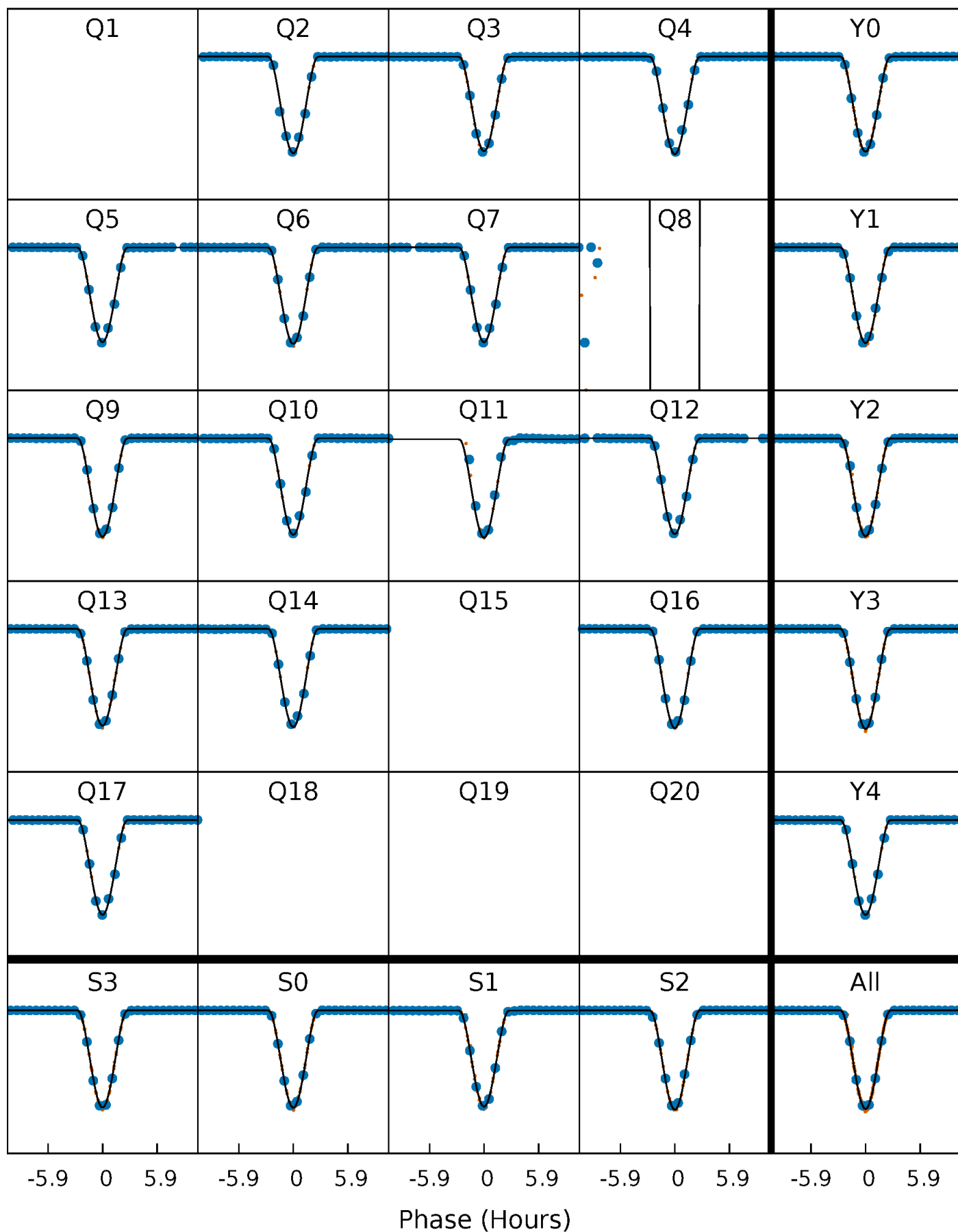
PDC Quarter-Phased Transit Curves

TCE 008733497-01 P= 76.819849 Days $T_0=188.125679$ (BKJD)



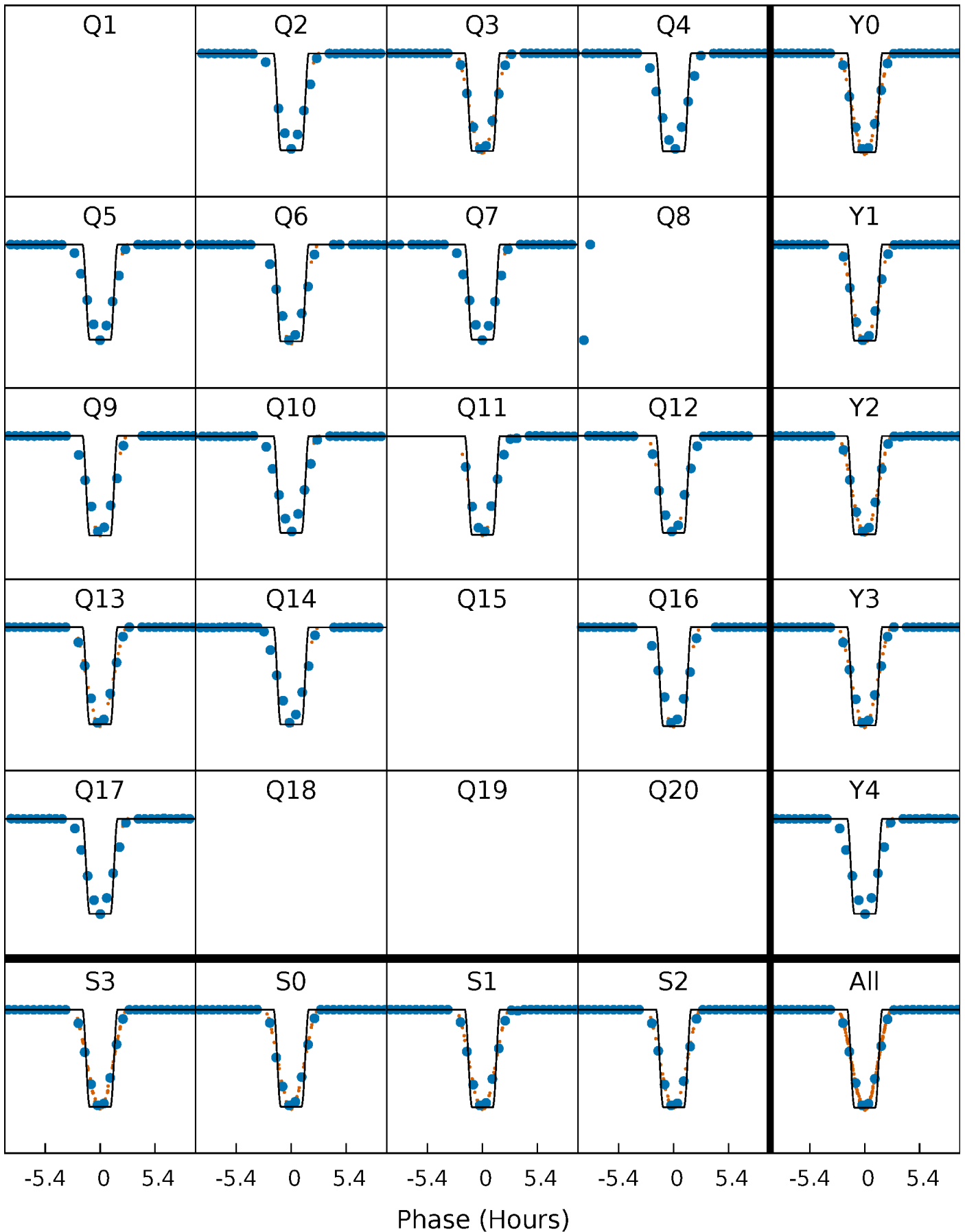
DV Quarter-Phased Transit Curves

TCE 008733497-01 P= 76.819849 Days $T_0=188.125679$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

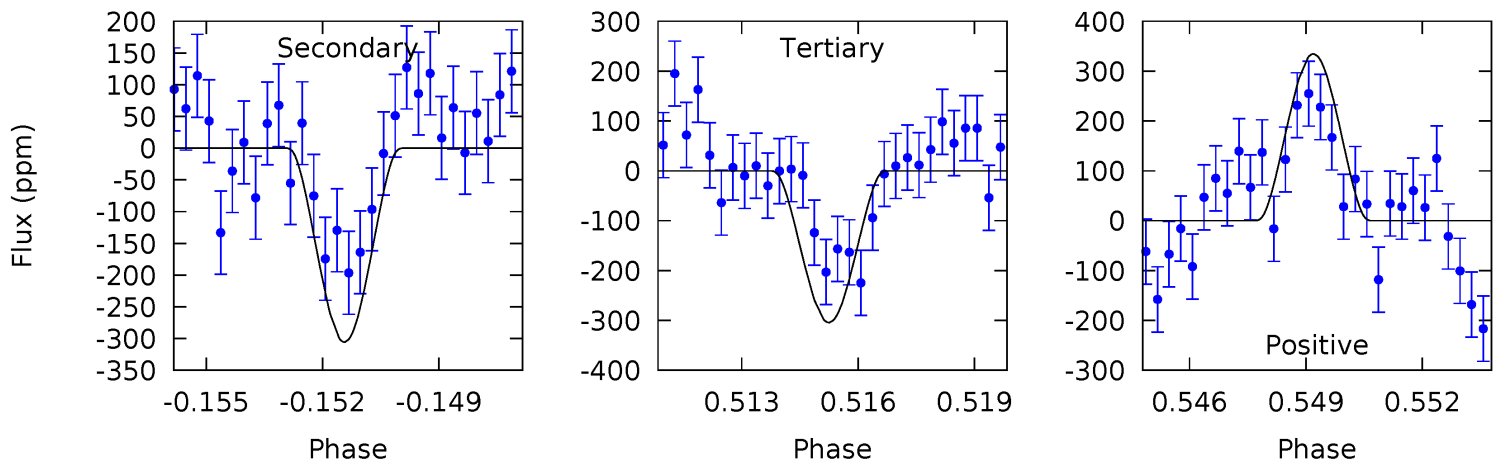
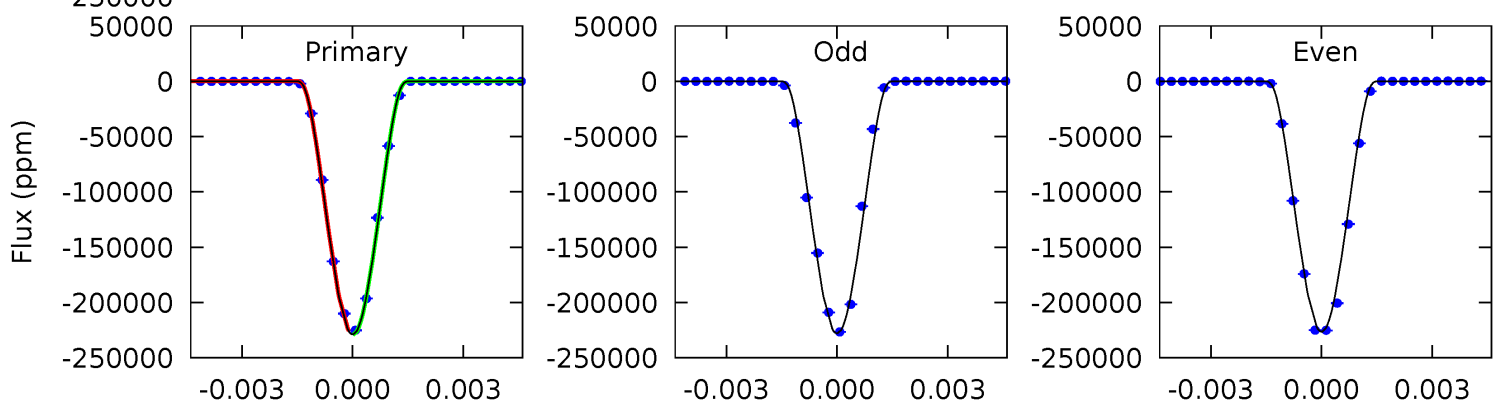
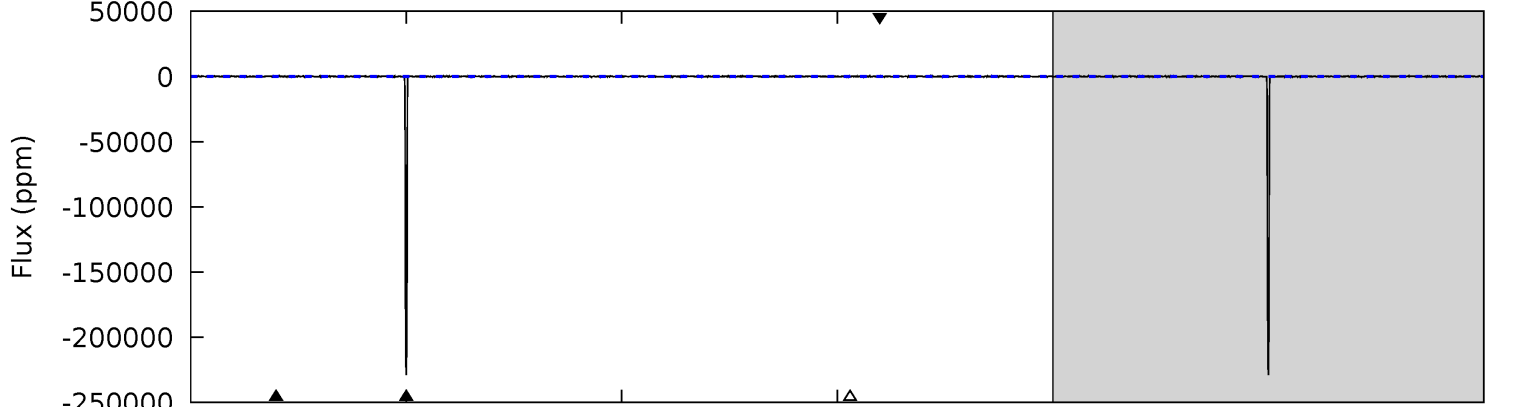
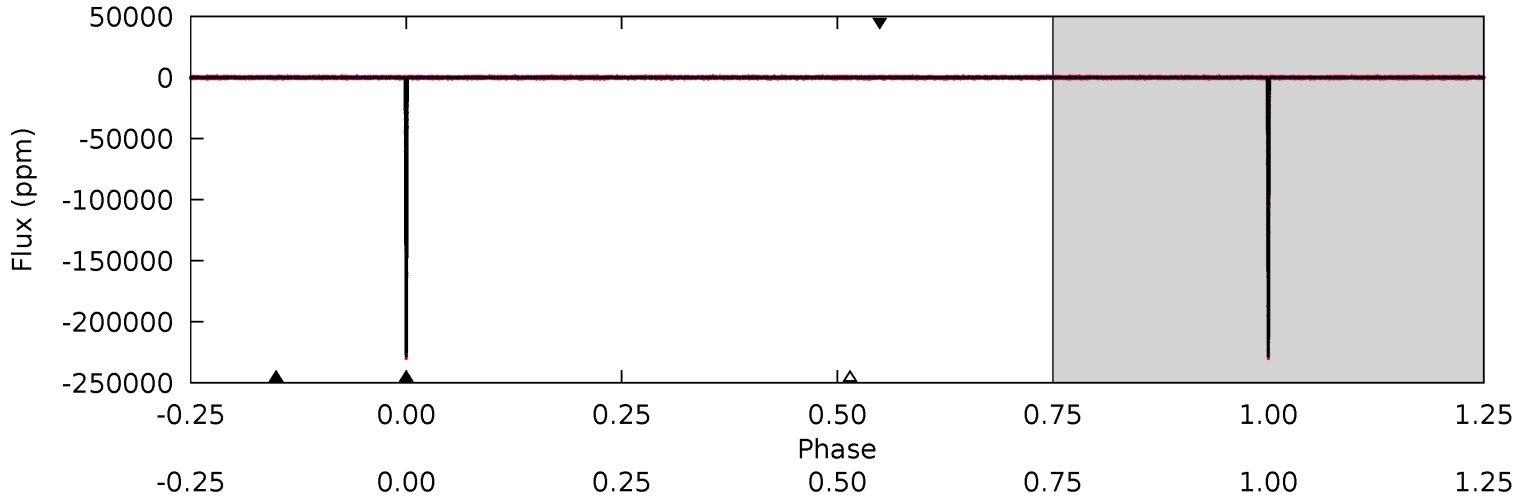
TCE 008733497-01 P= 76.819883 Days $T_0=188.125423$ (BKJD)



DV Model-Shift Uniqueness Test

008733497-01, P = 76.819849 Days, E = 111.305830 Days

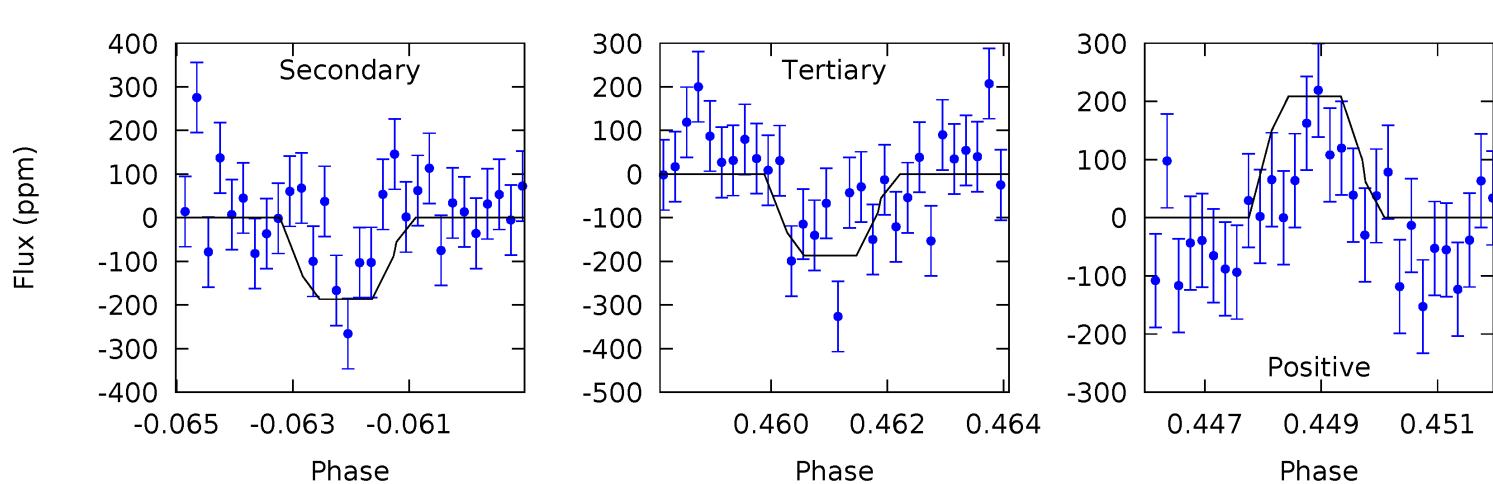
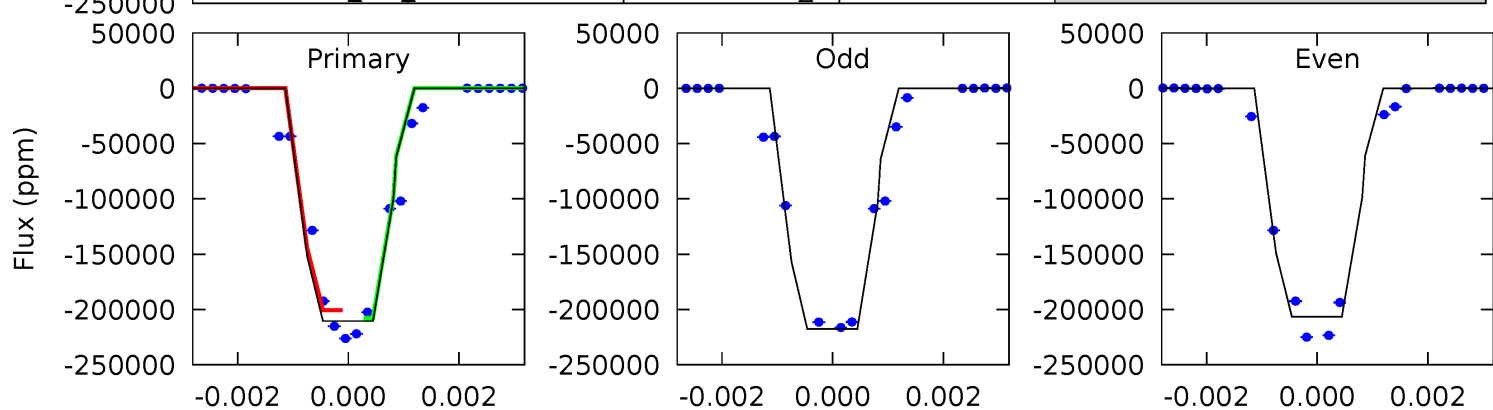
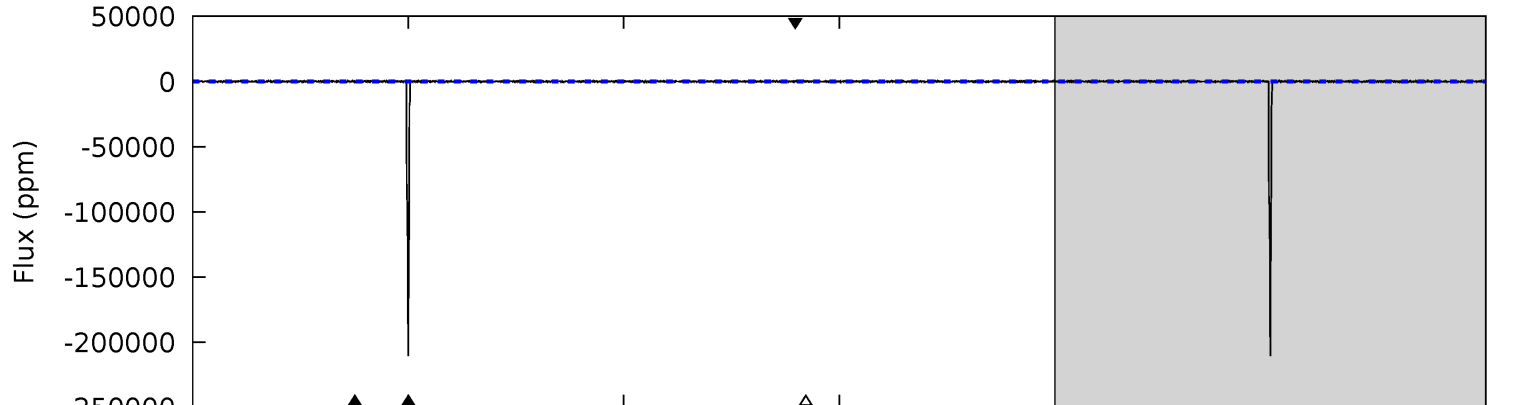
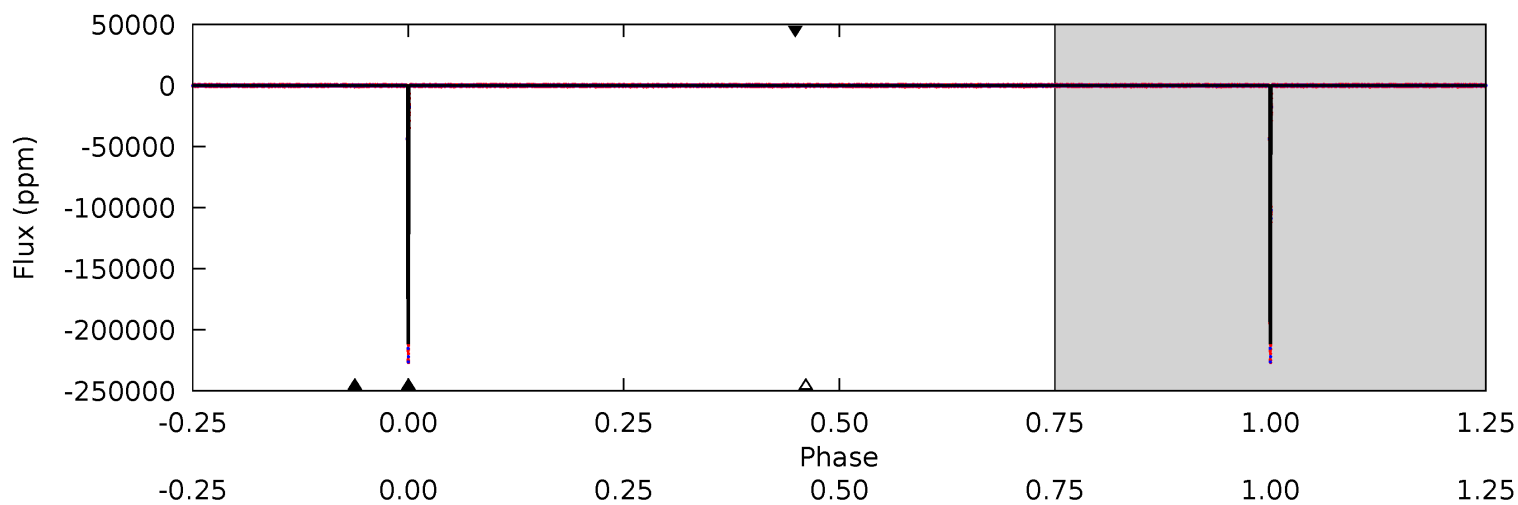
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7621	10.2	10.1	11.1	5.25	2.96	2.94	7611	7610	0.04	-0.96	26.3	1.00	0.00	0



Alt Model-Shift Uniqueness Test

008733497-01, P = 76.819883 Days, E = 111.305540 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4367	3.87	3.87	4.32	5.34	3.11	14.5	4363	4363	0.00	-0.45	119.5	1.00	0.00	0



Stellar Parameters For KIC 008733497

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5654^{+152}_{-152}	$4.590^{+0.036}_{-0.153}$	$-0.380^{+0.300}_{-0.300}$	$0.774^{+0.182}_{-0.061}$	$0.865^{+0.088}_{-0.097}$	$2.625^{+0.409}_{-1.160}$
	+3%/-3%	+1%/-3%	+79%/-79%	+24%/-8%	+10%/-11%	+16%/-44%
Source	PHO1	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 008733497-01 / KOI 3527.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-306 ± 30	$48.13^{+6.09}_{-3.81}$	541^{+29}_{-21}	2000^{+36}_{-37}	$8.043^{+1.577}_{-1.649}$
Alt.	-186 ± 48	$41.32^{+5.25}_{-3.32}$	540^{+27}_{-23}	1959^{+55}_{-68}	$6.607^{+2.253}_{-2.029}$

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 $A_{obs} \gg 1.0$

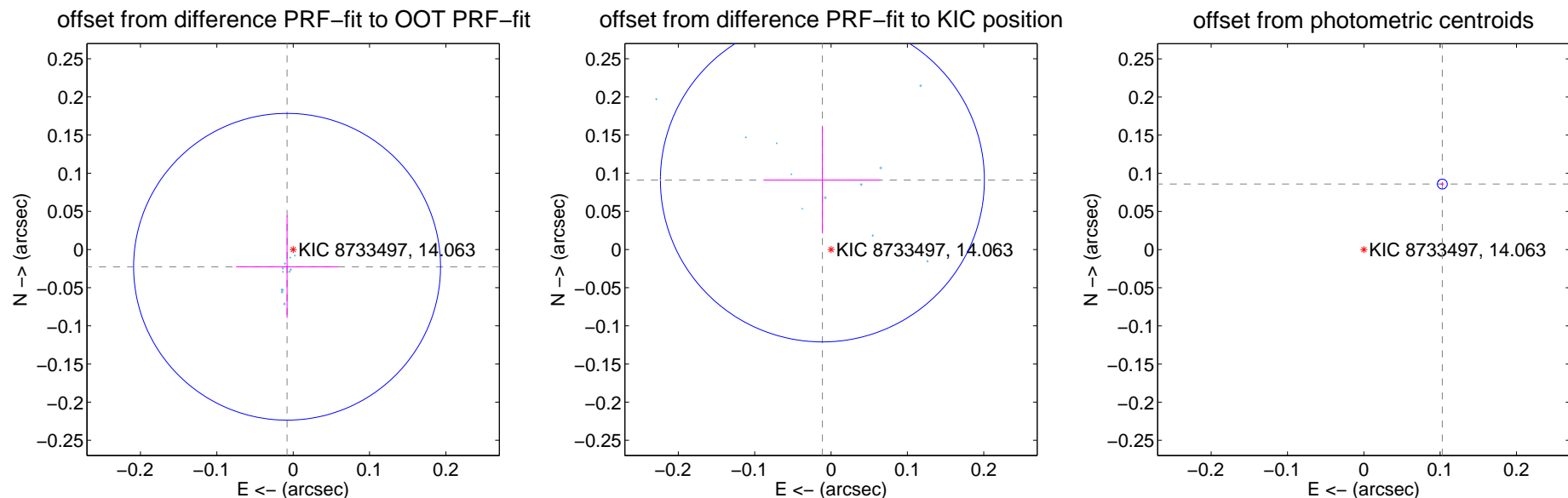
DV Centroid Data

Supplemental centroid analysis for 008733497-01. Kepler magnitude: 14.06. Transit SNR 2447.47

There are 12 quarters with good PRF difference image offsets

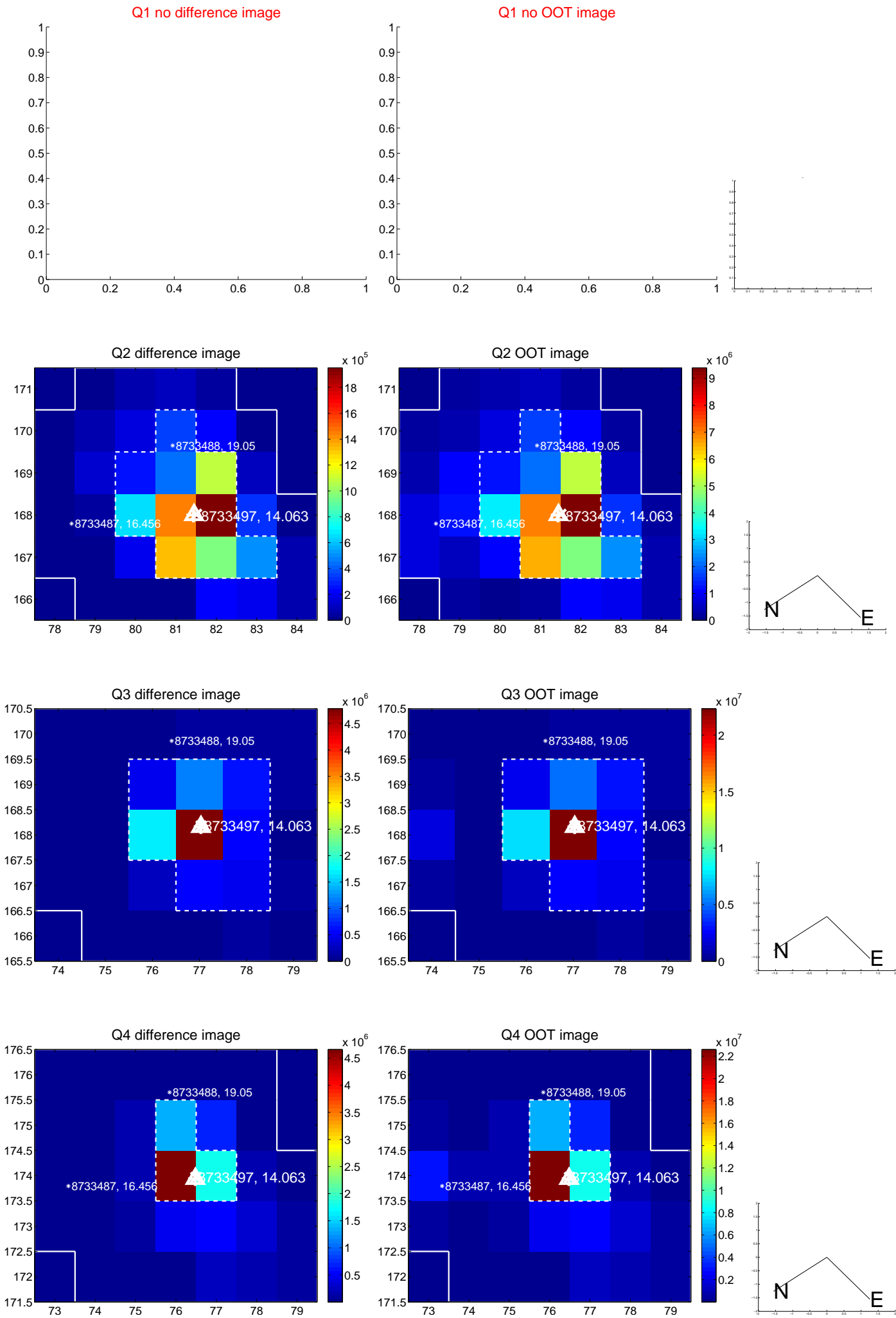
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.024 ± 0.067	0.36	0.008 ± 0.067	-0.023 ± 0.067
PRF-fit source offset from KIC position	0.092 ± 0.071	1.30	0.011 ± 0.076	0.091 ± 0.070
photometric centroid source offset	0.13 ± 0.00	62.06	-0.10 ± 0.00	0.09 ± 0.00

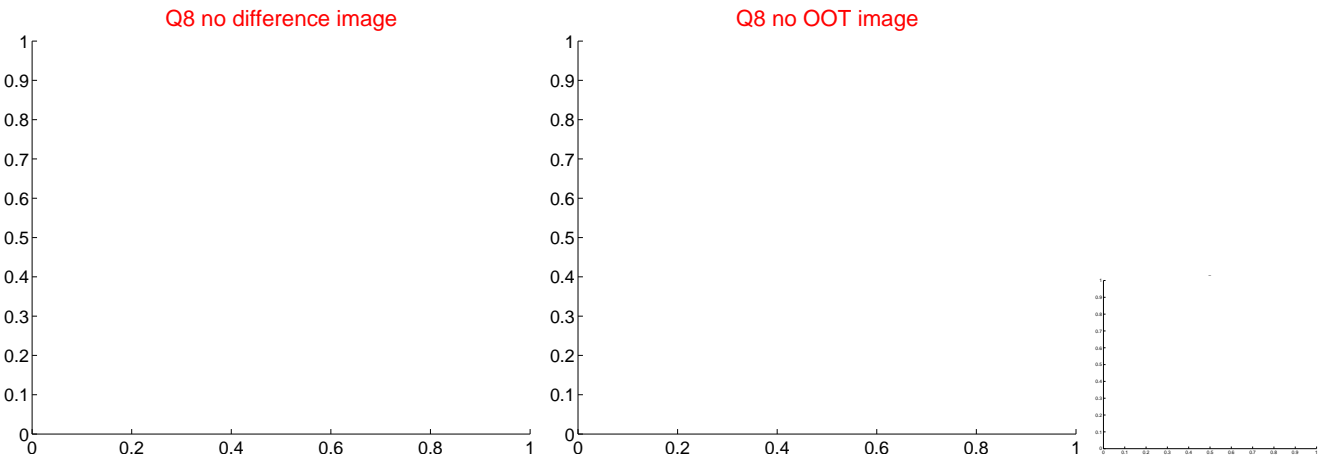
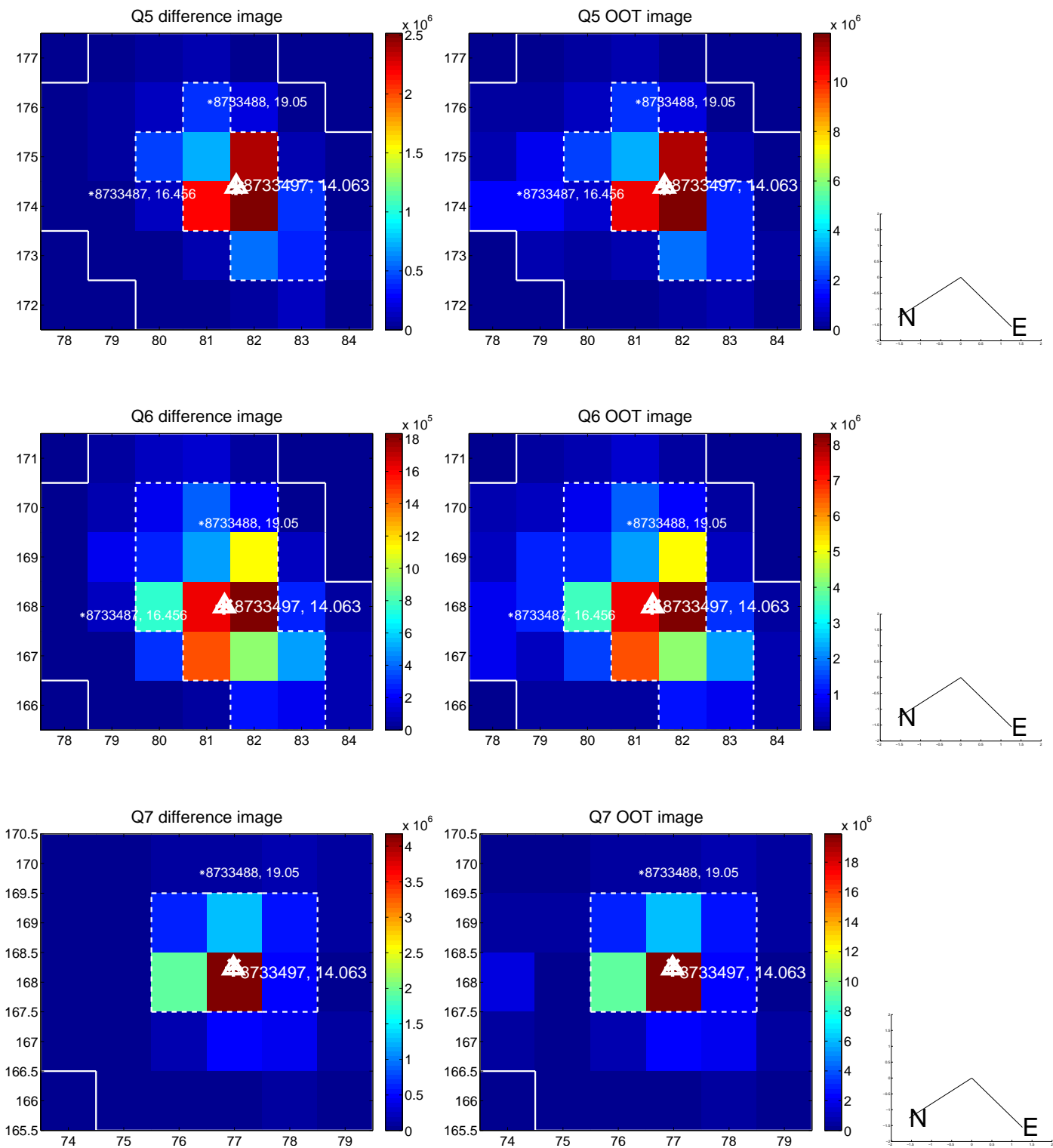


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

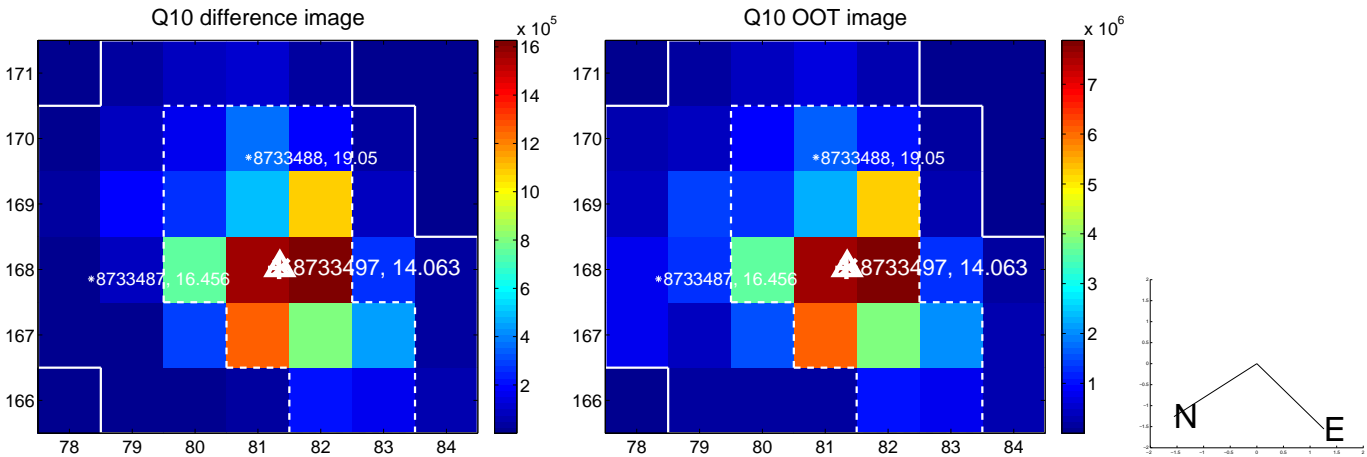
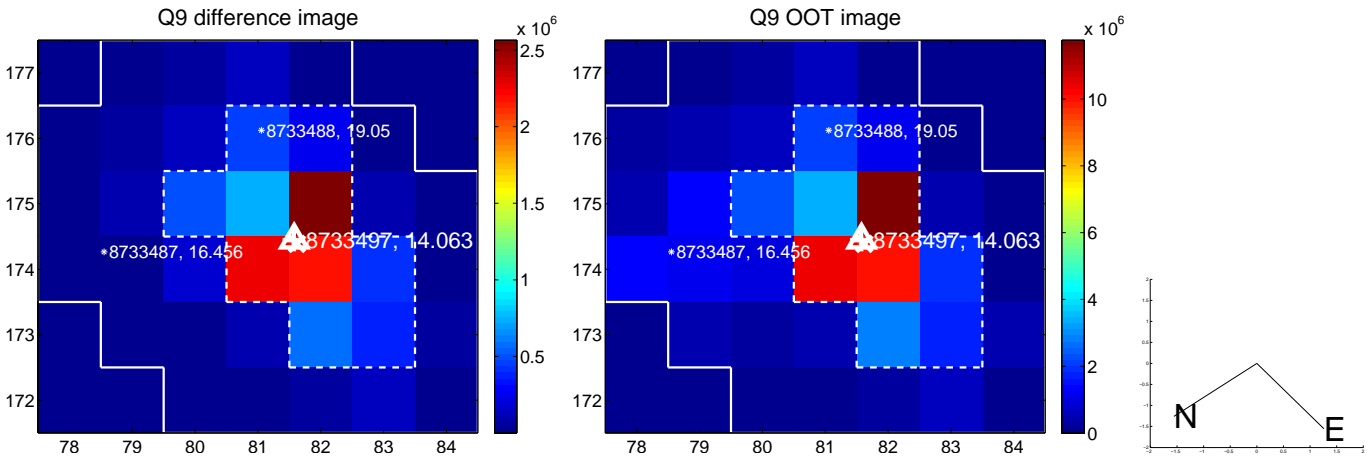
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



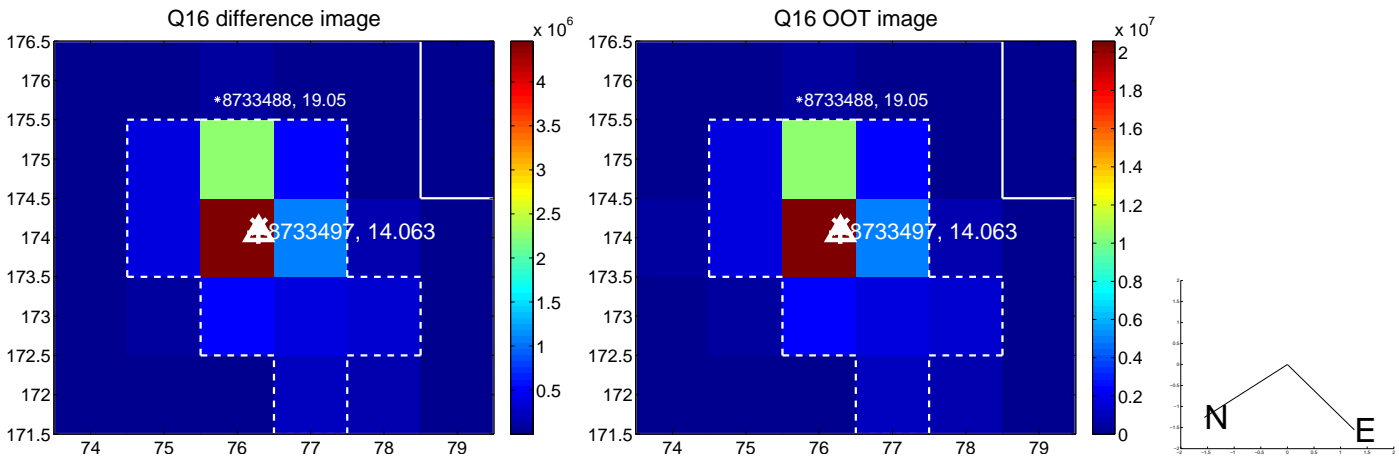
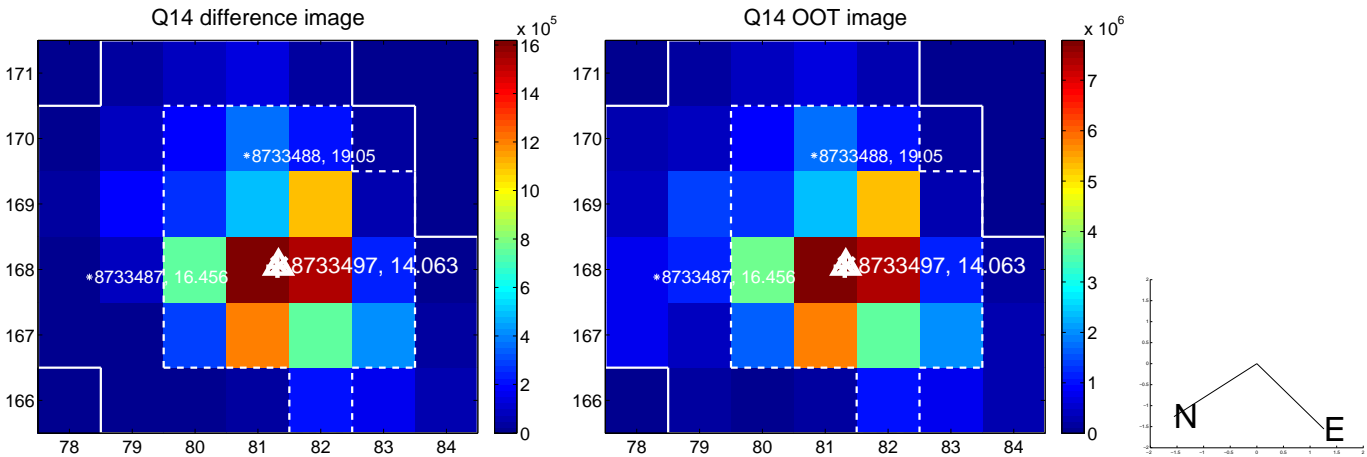
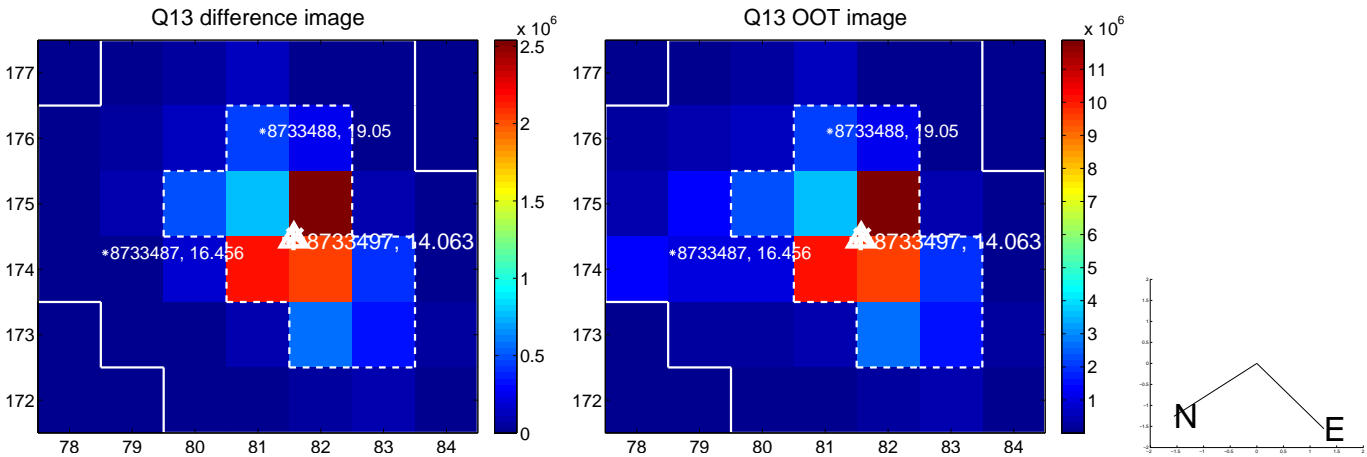
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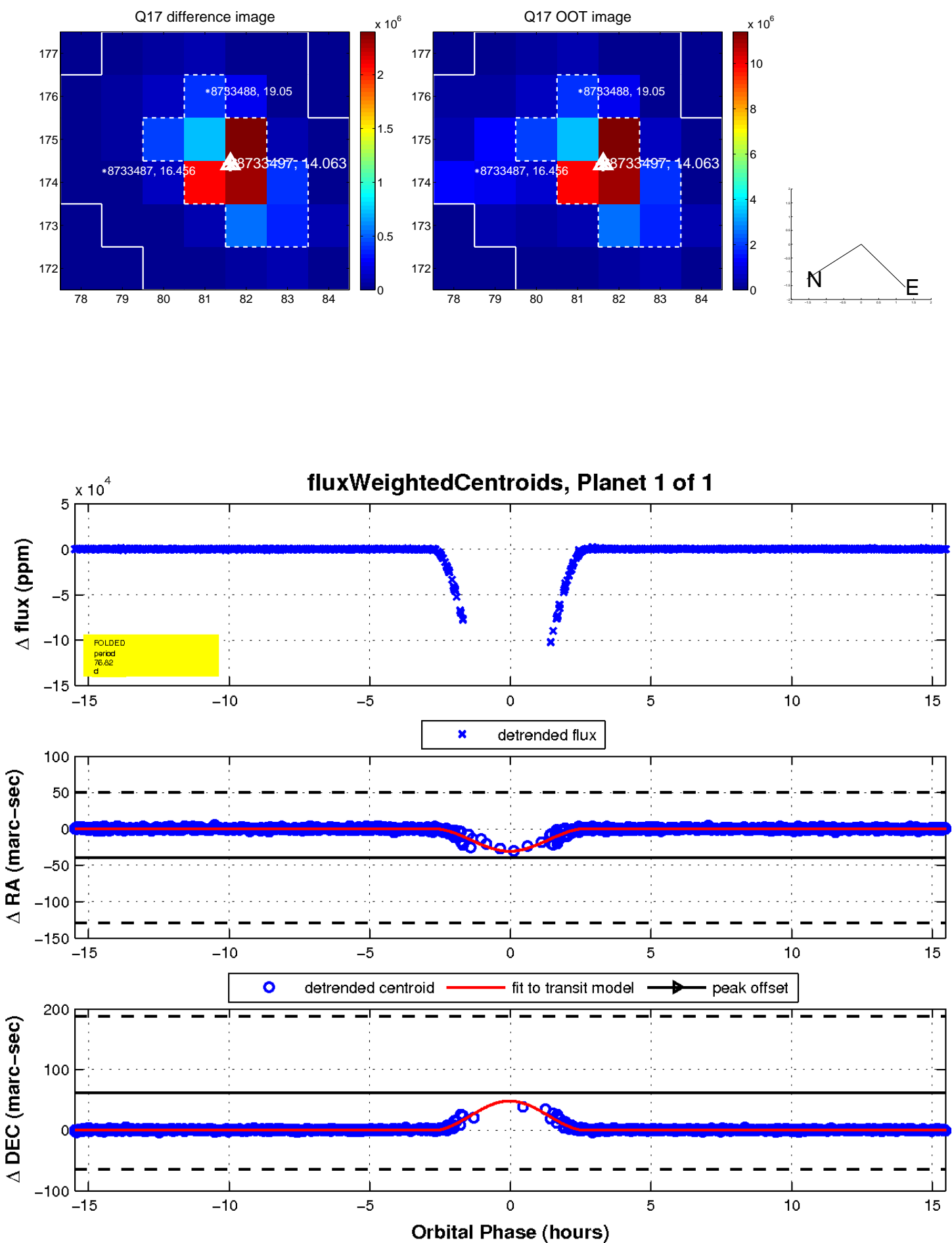
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This panel shows a deep-field astronomical image of a star field. A blue grid is overlaid on the image, and a red bounding box highlights a specific region. The image is oriented with North at the top. The red bounding box is located in the upper right quadrant of the image. The text '00.0 20.0 30.0 44.57.40.050.0' is visible in the lower right corner, likely indicating coordinates or a scale.

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