

KIC 004275739

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})
004275739-01	OBS	1317.01	2.171828	133.557734	42103.4	3.189	1758.7	1364.0	0.89	5650	26.78	699.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004275739-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—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.

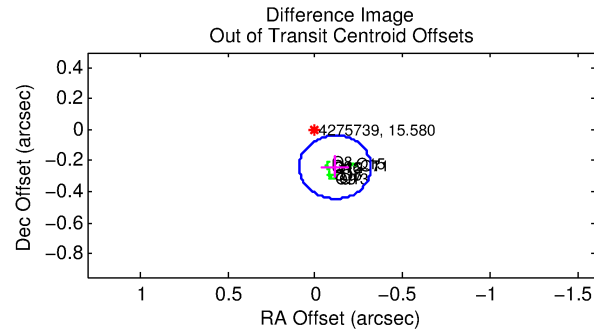
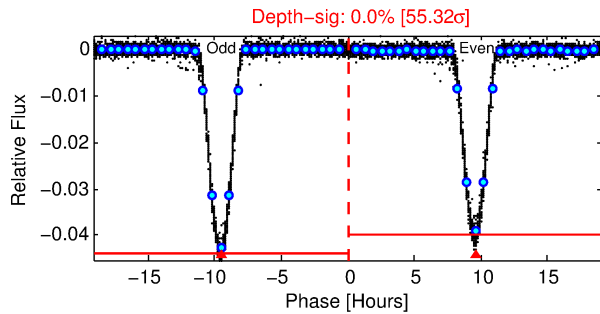
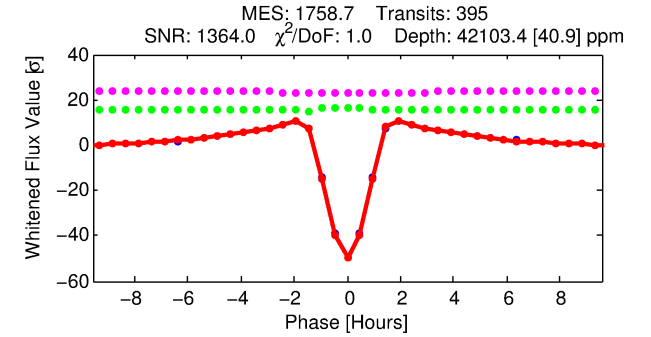
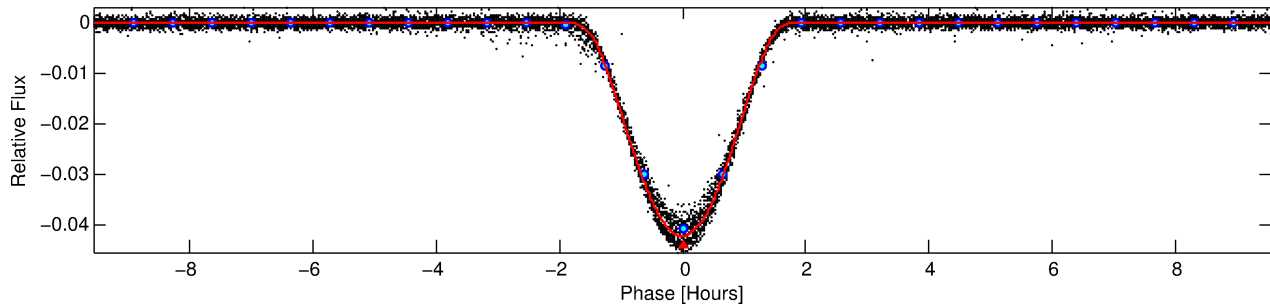
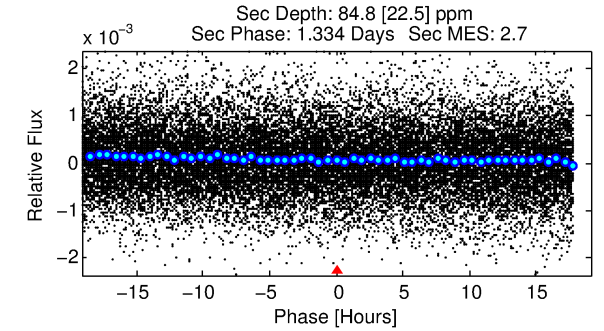
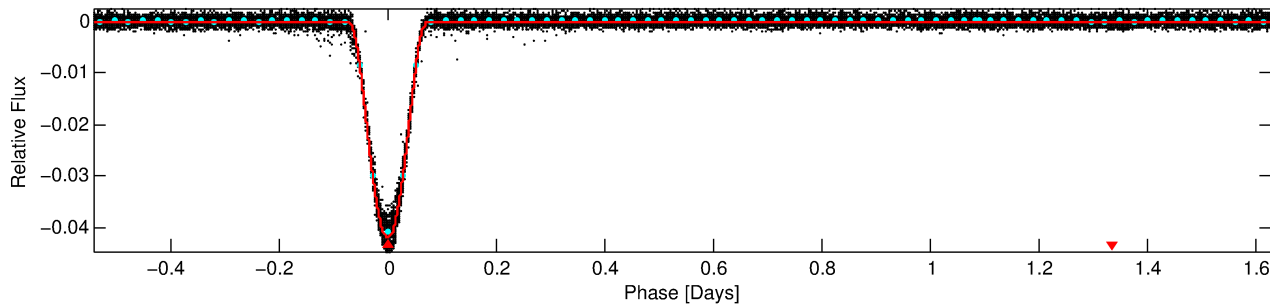
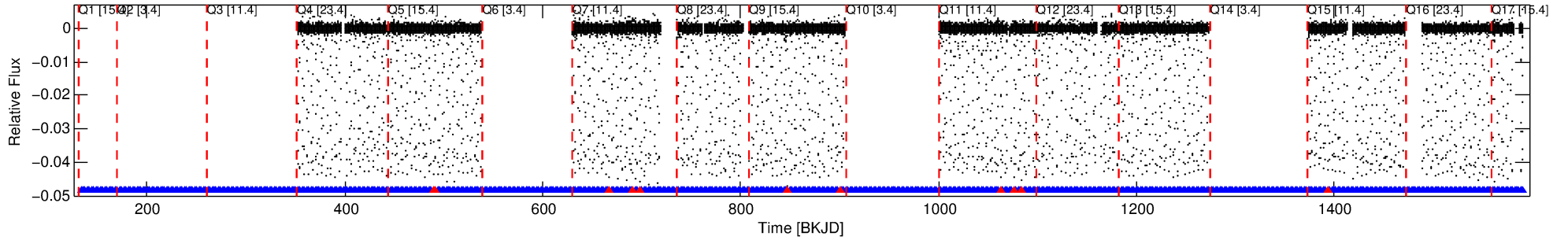
Ephemeris Match Information For 004275739-01

No Significant Match Found

DV One-Page Summary

KIC: 4275739 Candidate: 1 of 1 Period: 2.172 d
KOI: K01317.01 Corr: 0.996

Kp: 15.58 R*: 0.89 Rs Teff: 5650.0 K Logg: 4.51 Fe/H: -0.020



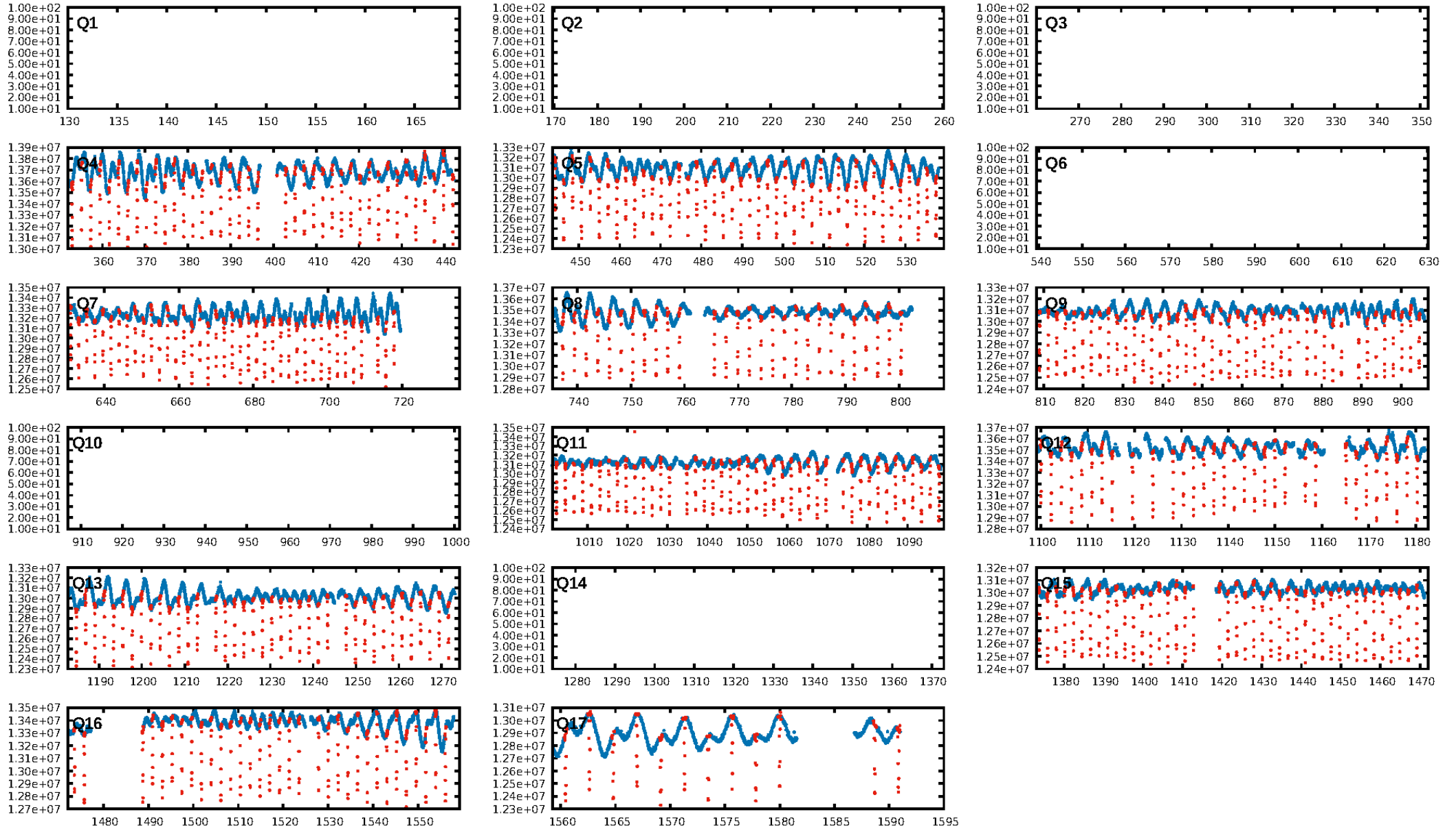
DV Fit Results:

Period = 2.17183 [0.00000] d
Epoch = 133.5577 [0.0000] BKJD
Rp/R* = 0.2754 [0.0068]
a/R* = 4.70 [0.01]
b = 0.92 [0.01]
Seff = 699.15 [259.80]
Teq = 1311 [122] K
Rp = 26.78 [7.42] Re
a = 0.0322 [0.0076] AU
Ag = 0.07 [0.03] [-31.43σ]
Teffp = 1033 [78] K [-1.93σ]

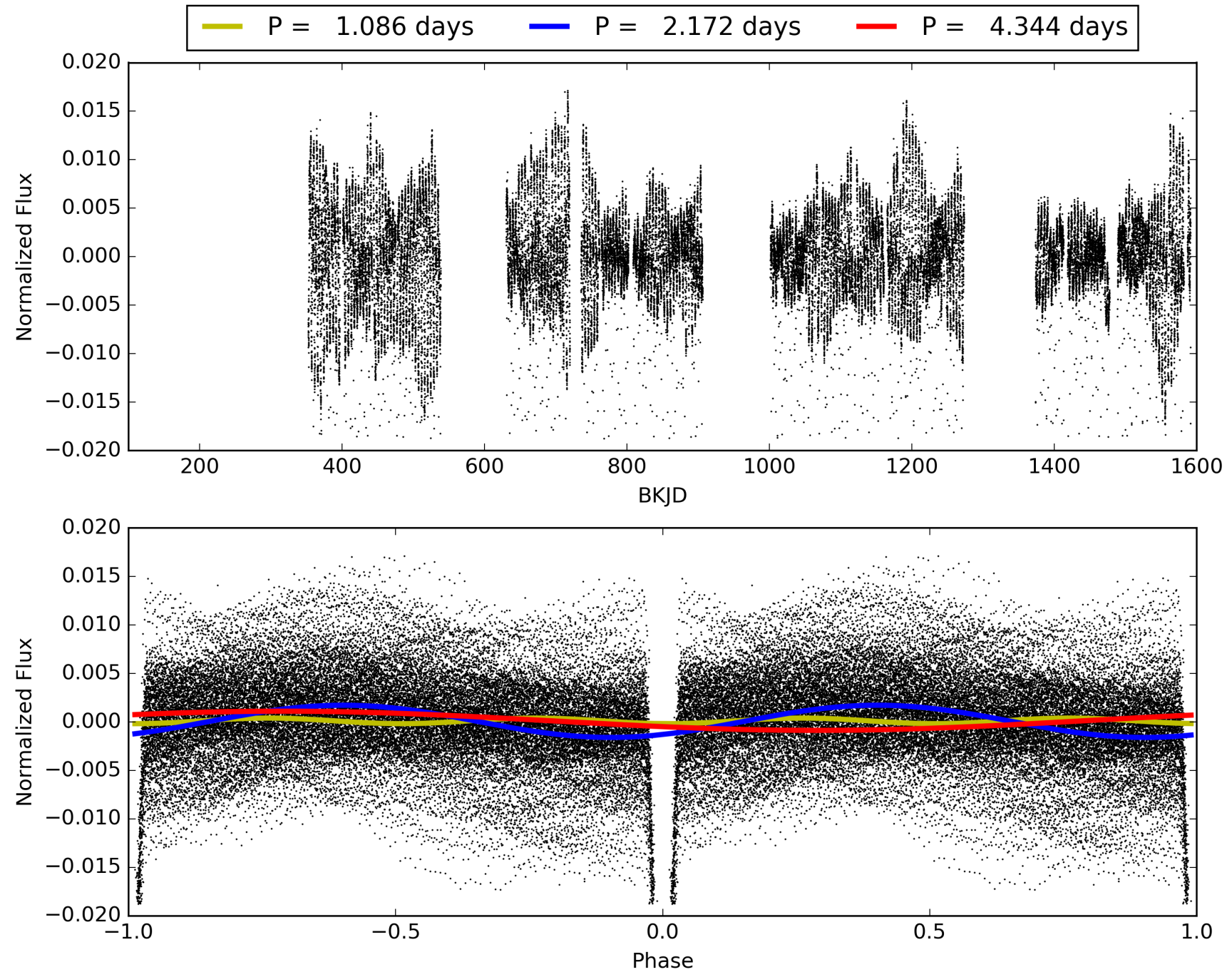
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.97 [372/383]
GhostDiagnostic-chr: 3.736
Centroid-sig: 0.0%
Centroid-so: 0.306 arcsec [42.71σ]
OotOffset-rm: 0.266 arcsec [3.91σ]
KicOffset-rm: 0.040 arcsec [0.58σ]
OotOffset-st: 0/3/4/4 [11]
KicOffset-st: 0/3/4/4 [11]
DiffImageQuality-fgm: 1.00 [11/11]
DiffImageOverlap-fno: 1.00 [11/11]

TCE 004275739-01, PDC Light Curves

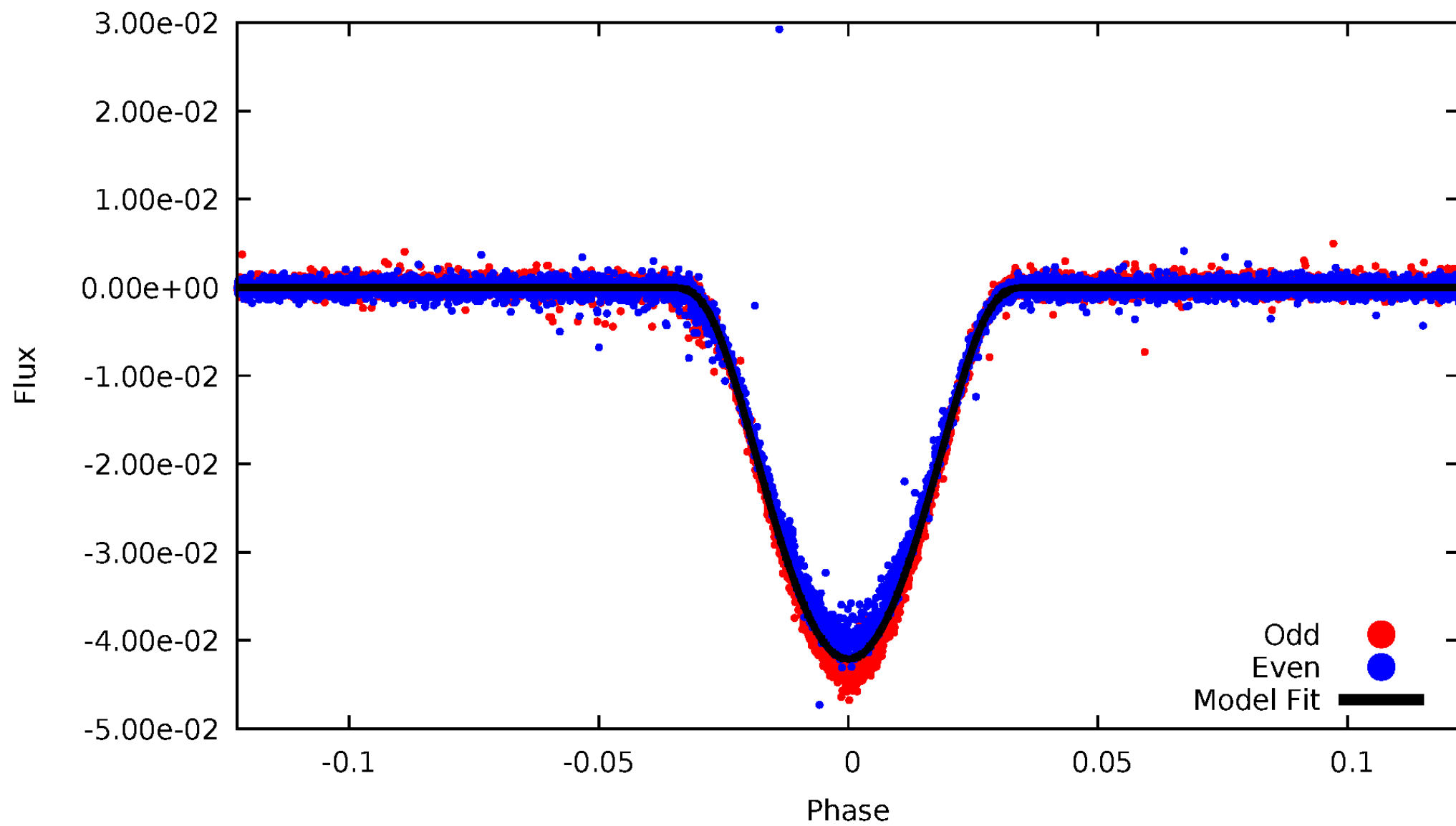


TCE 004275739-01



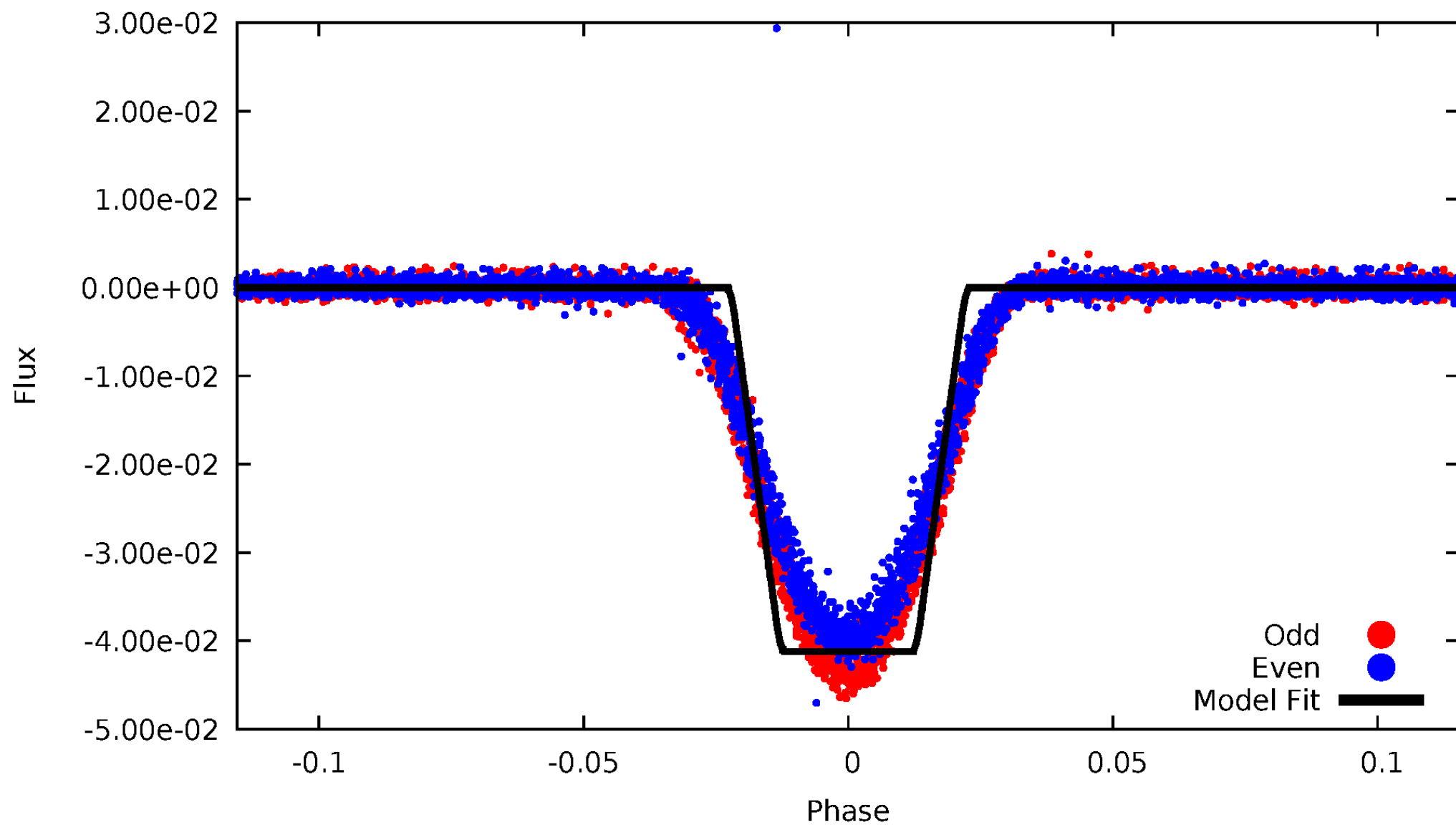
DV Odd/Even

TCE 004275739-01



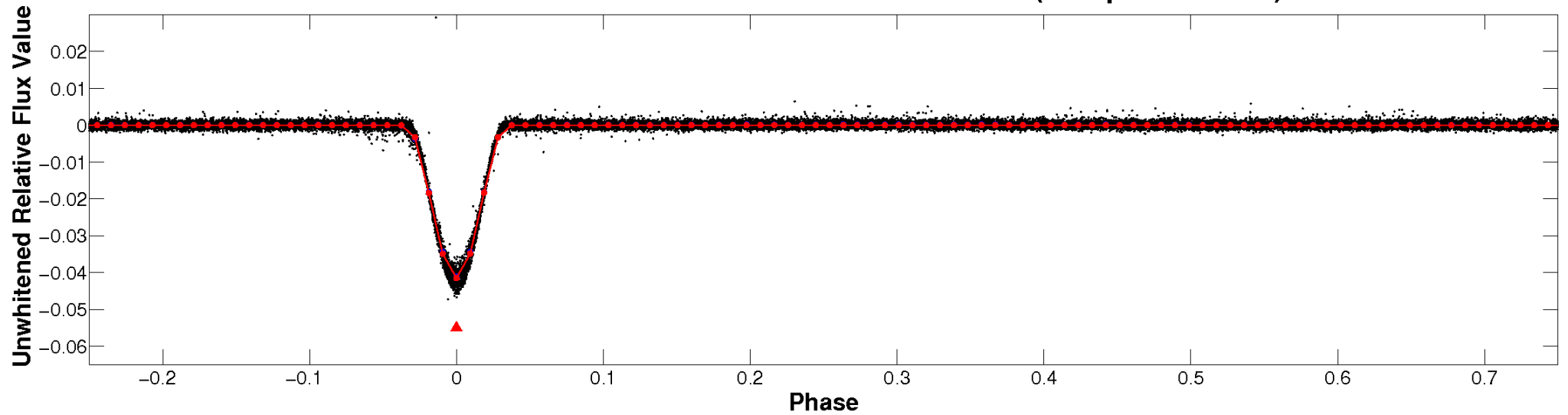
ALT Odd/Even

TCE 004275739-01

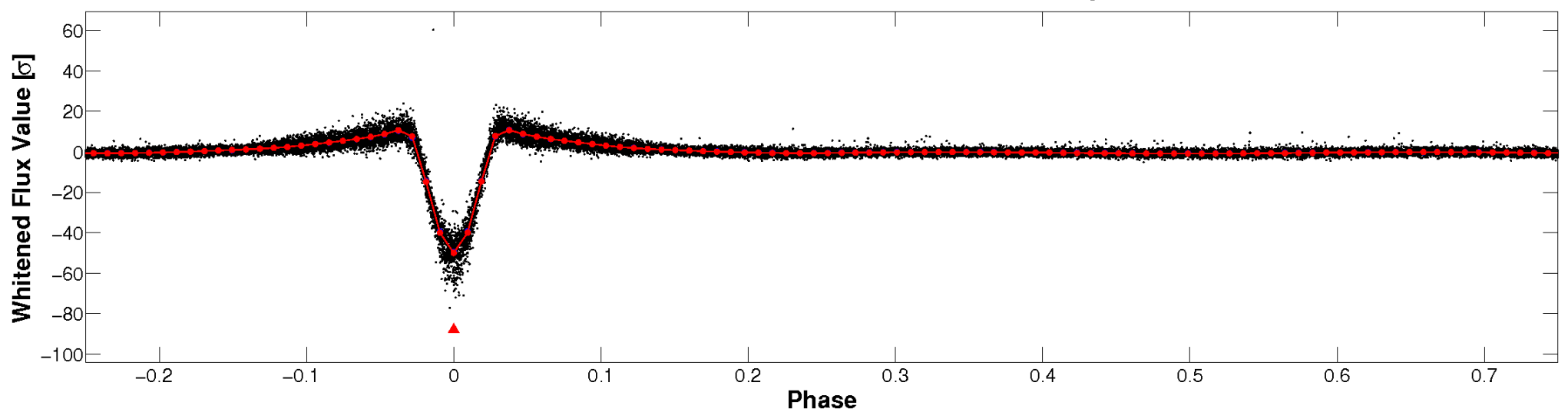


Non-Whitened Vs. Whitened Light Curve

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

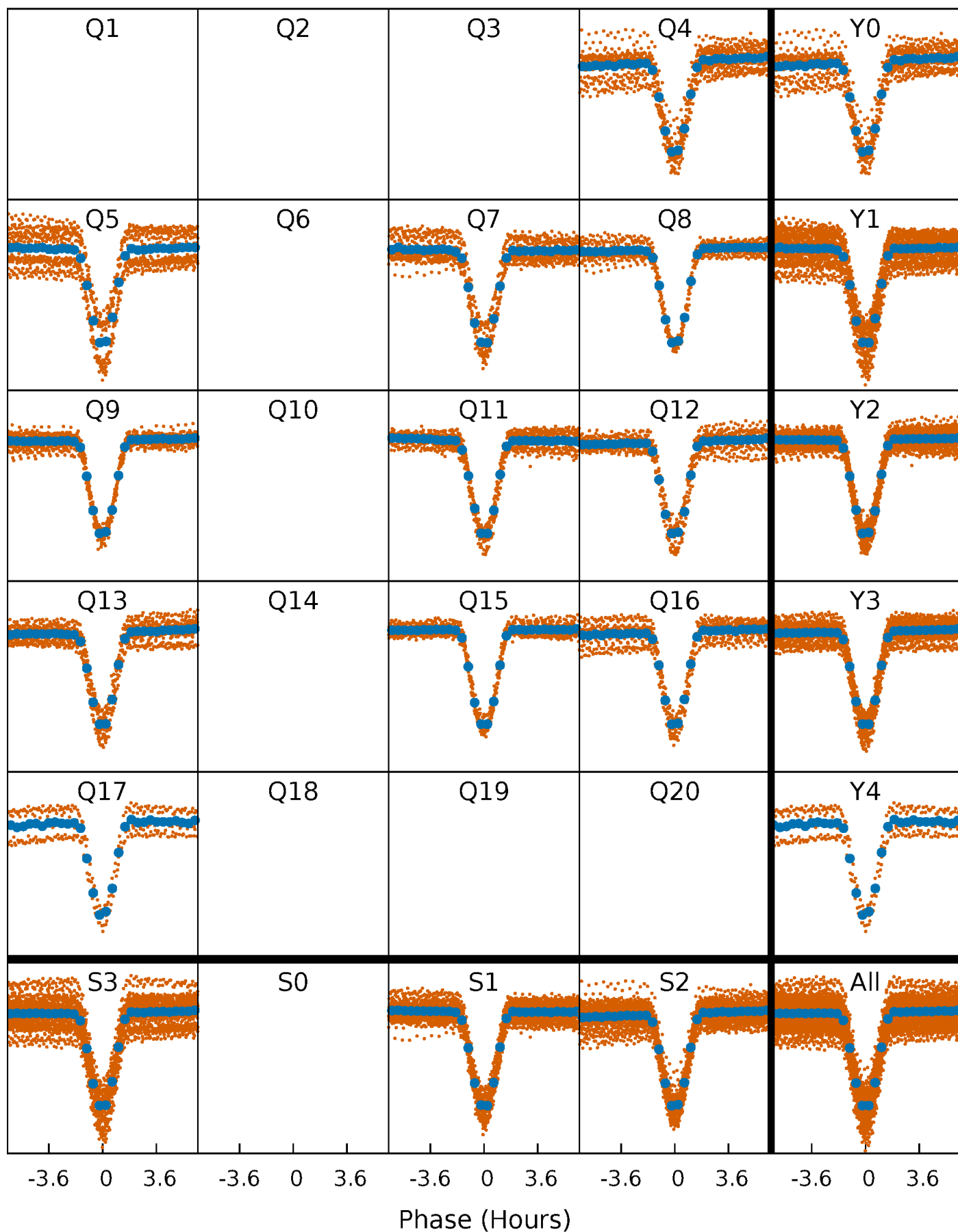


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



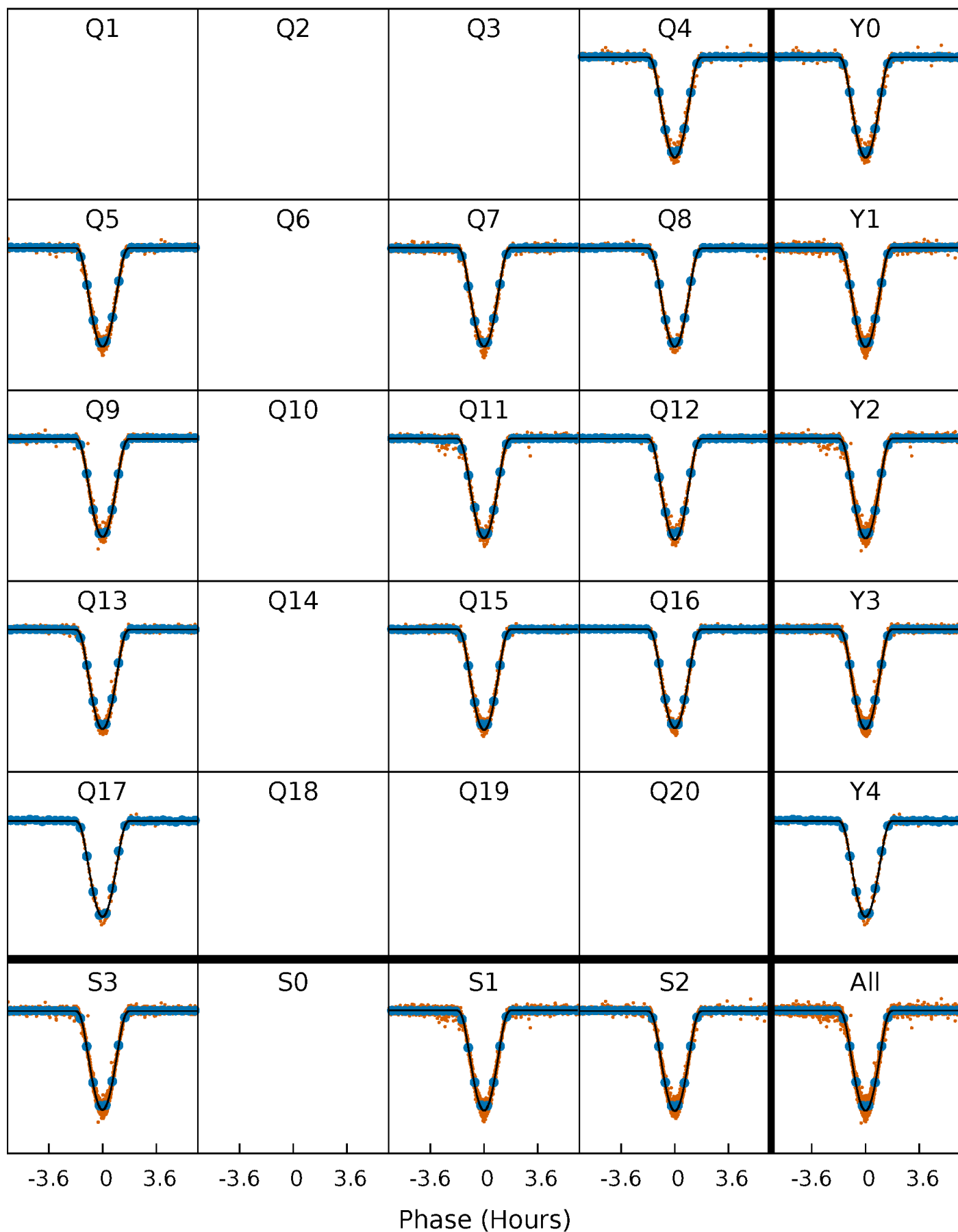
PDC Quarter-Phased Transit Curves

TCE 004275739-01 P= 2.171828 Days $T_0=133.557734$ (BKJD)



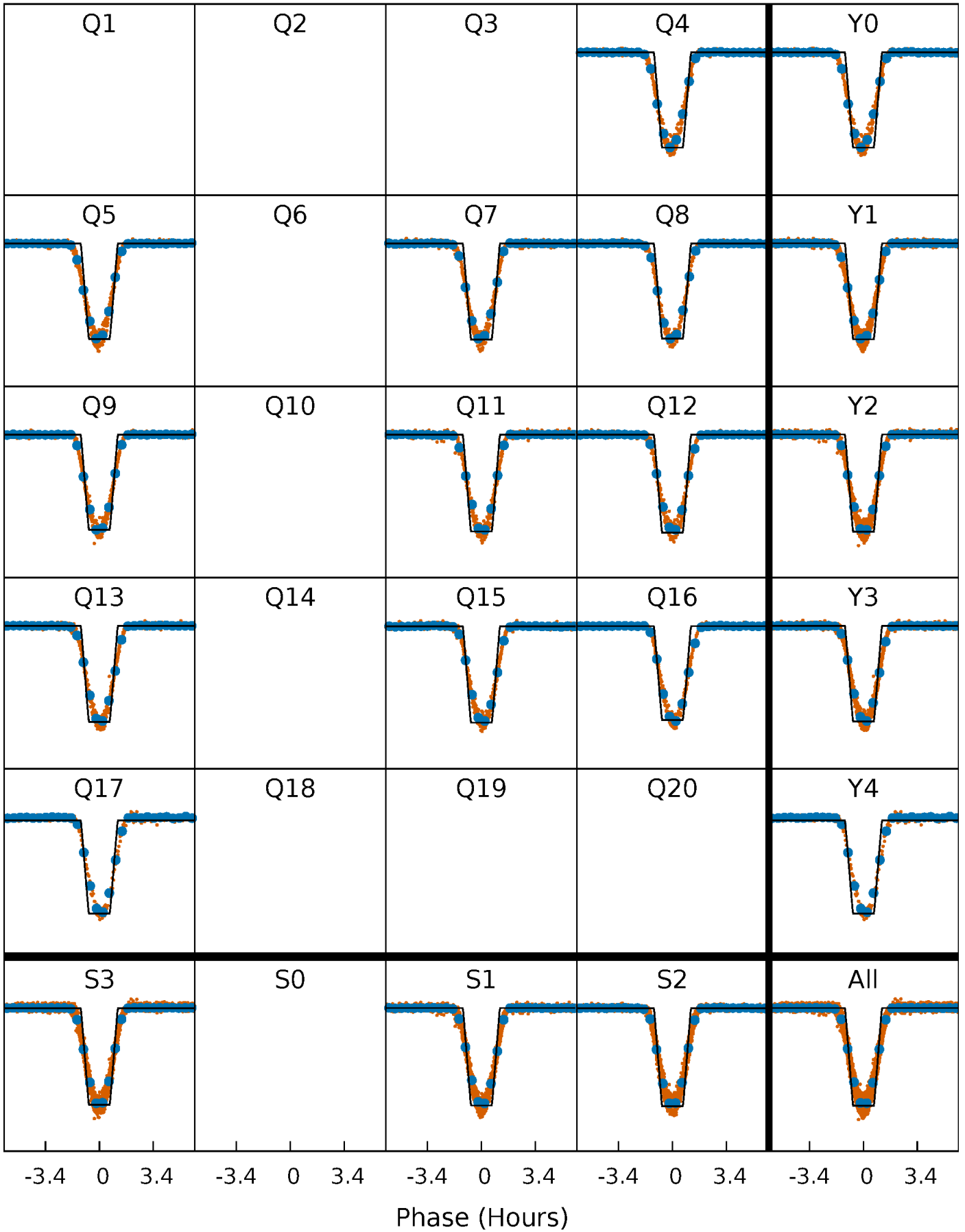
DV Quarter-Phased Transit Curves

TCE 004275739-01 P= 2.171828 Days $T_0=133.557734$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

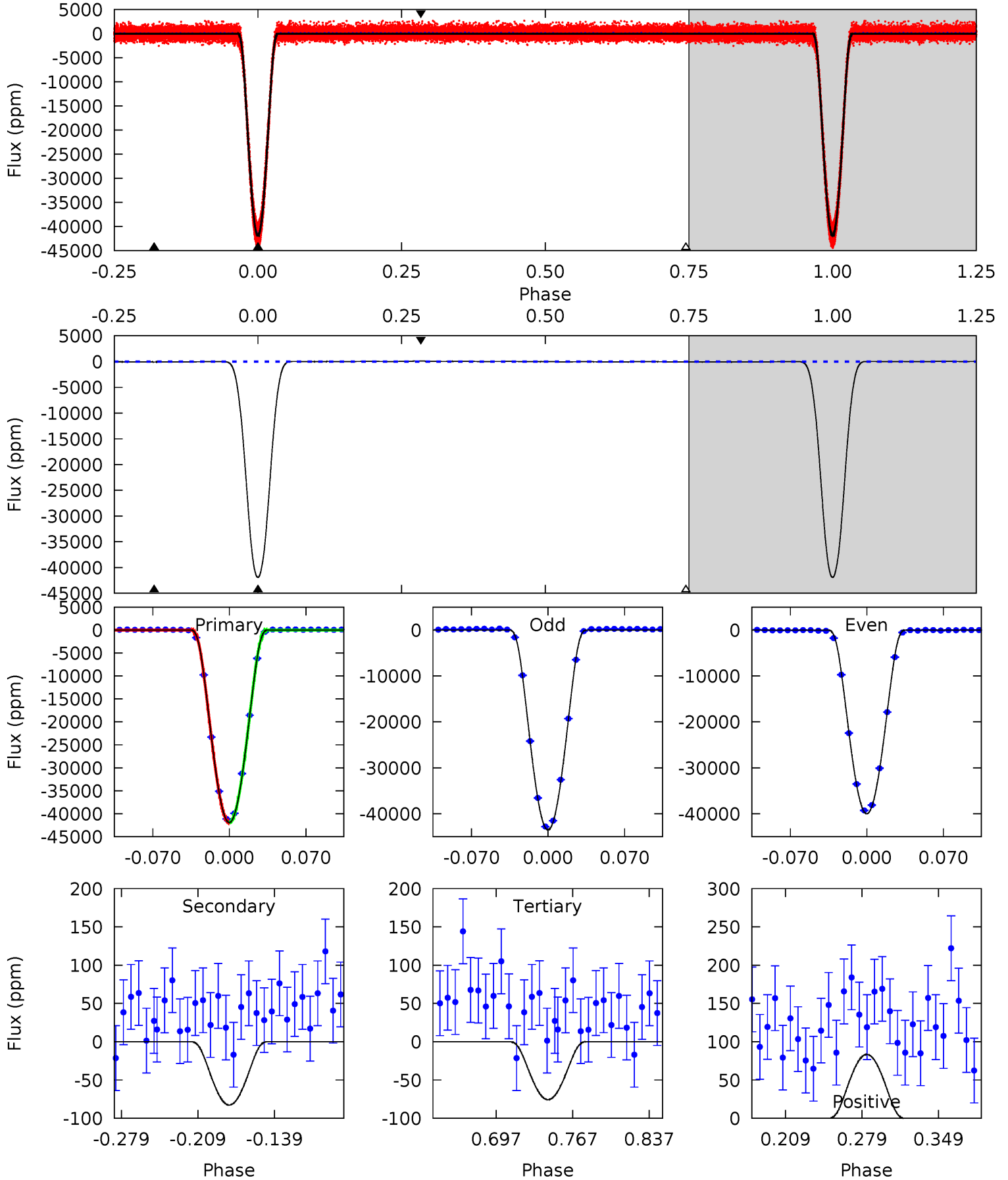
TCE 004275739-01 P= 2.171813 Days $T_0=133.563097$ (BKJD)



DV Model-Shift Uniqueness Test

004275739-01, P = 2.171828 Days, E = 133.557734 Days

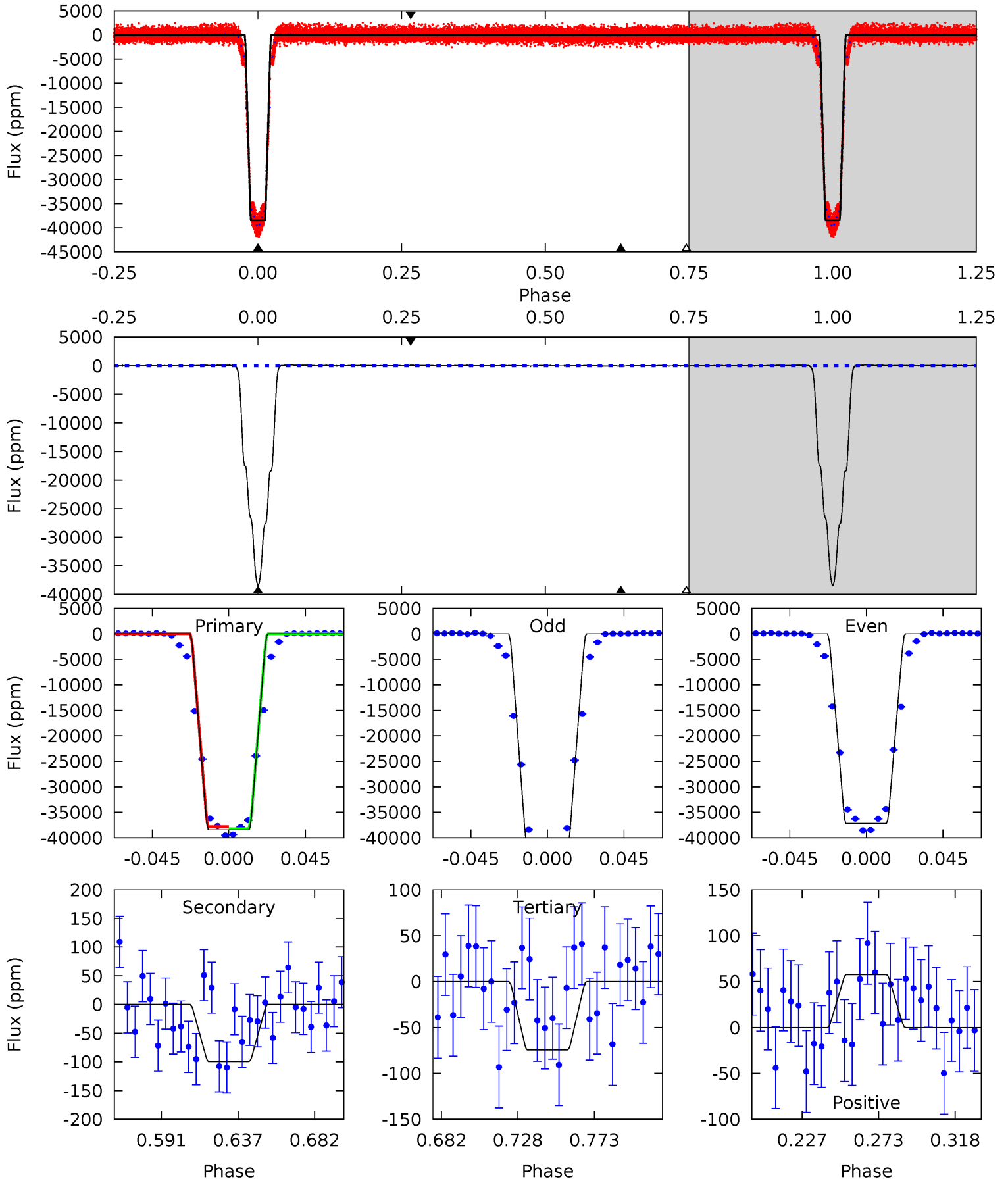
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3331	6.57	6.01	6.63	4.64	1.81	3.38	3325	3324	0.56	-0.06	144.6	0.99	0.00	2.12



Alt Model-Shift Uniqueness Test

004275739-01, P = 2.171813 Days, E = 133.563097 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1775	4.58	3.43	2.65	4.73	2.00	1.59	1771	1772	1.15	1.93	103.0	1.00	0.00	0



Stellar Parameters For KIC 004275739

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5650^{+186}_{-186}	$4.513^{+0.048}_{-0.192}$	$-0.020^{+0.250}_{-0.300}$	$0.891^{+0.246}_{-0.098}$	$0.944^{+0.104}_{-0.104}$	$1.879^{+0.465}_{-0.915}$
	+3%/-3%	+1%/-4%	+1250%/-1500%	+28%/-11%	+11%/-11%	+25%/-49%
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 004275739-01 / KOI 1317.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-83 ± 13	$27.53^{+4.02}_{-2.21}$	1872^{+125}_{-97}	-2352^{+69}_{-91}	$0.060^{+0.015}_{-0.016}$
Alt.	-99 ± 22	$20.55^{+2.80}_{-1.86}$	1880^{+125}_{-86}	-2261^{+89}_{-113}	$0.130^{+0.040}_{-0.038}$

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 $A_{obs} \gg 1.0$

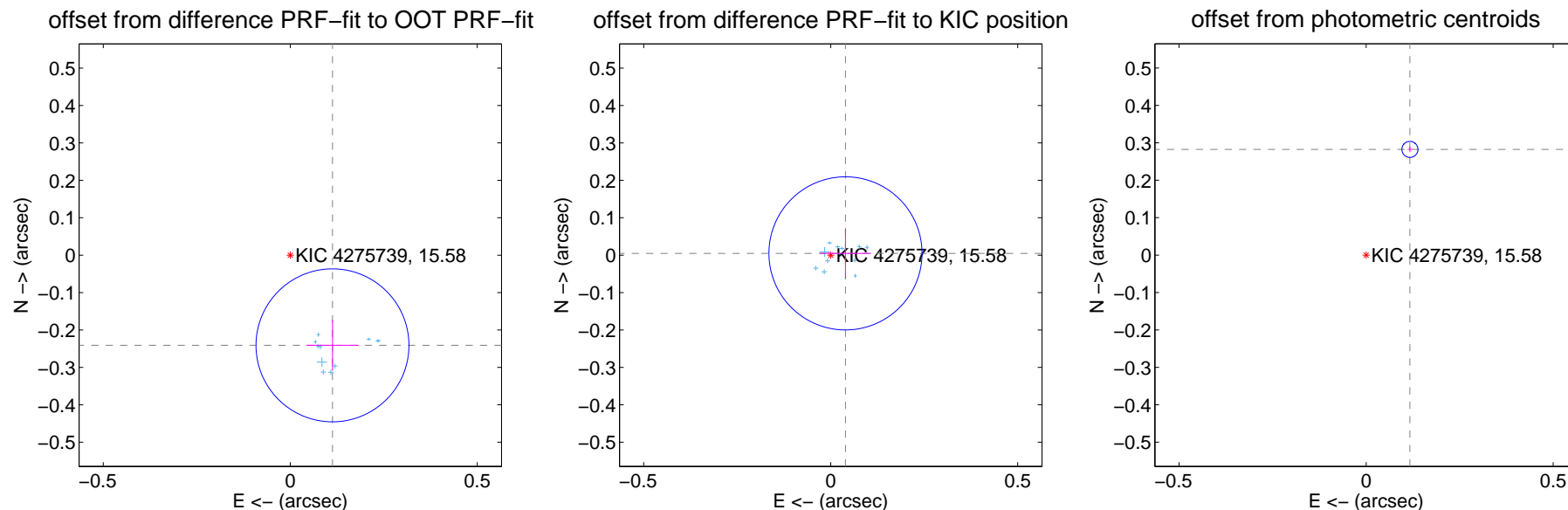
DV Centroid Data

Supplemental centroid analysis for 004275739-01. Kepler magnitude: 15.58. Transit SNR 1363.97

There are 11 quarters with good PRF difference image offsets

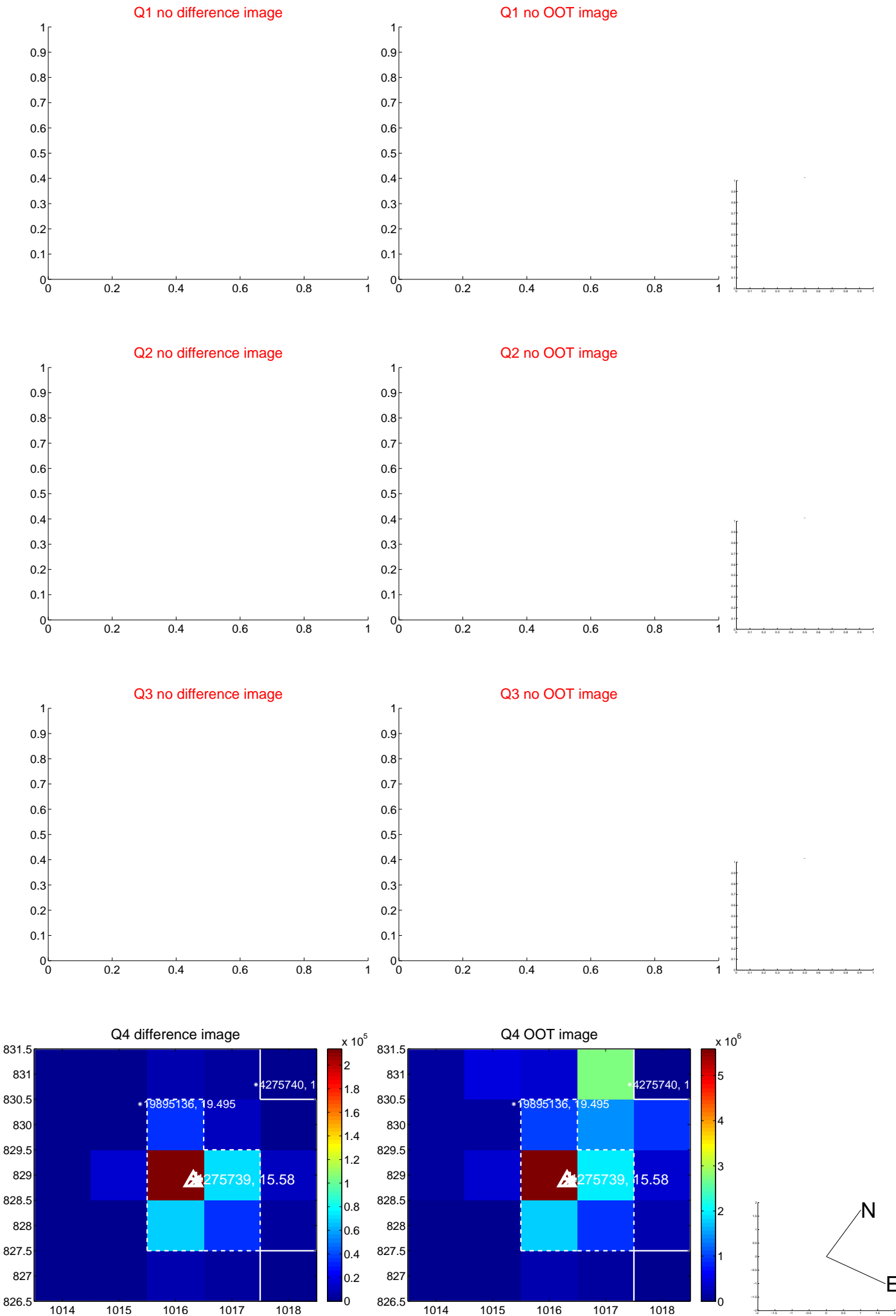
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.266 ± 0.068	3.91	-0.113 ± 0.070	-0.241 ± 0.068
PRF-fit source offset from KIC position	0.040 ± 0.068	0.58	-0.039 ± 0.068	0.005 ± 0.068
photometric centroid source offset	0.31 ± 0.01	42.71	-0.12 ± 0.01	0.28 ± 0.01

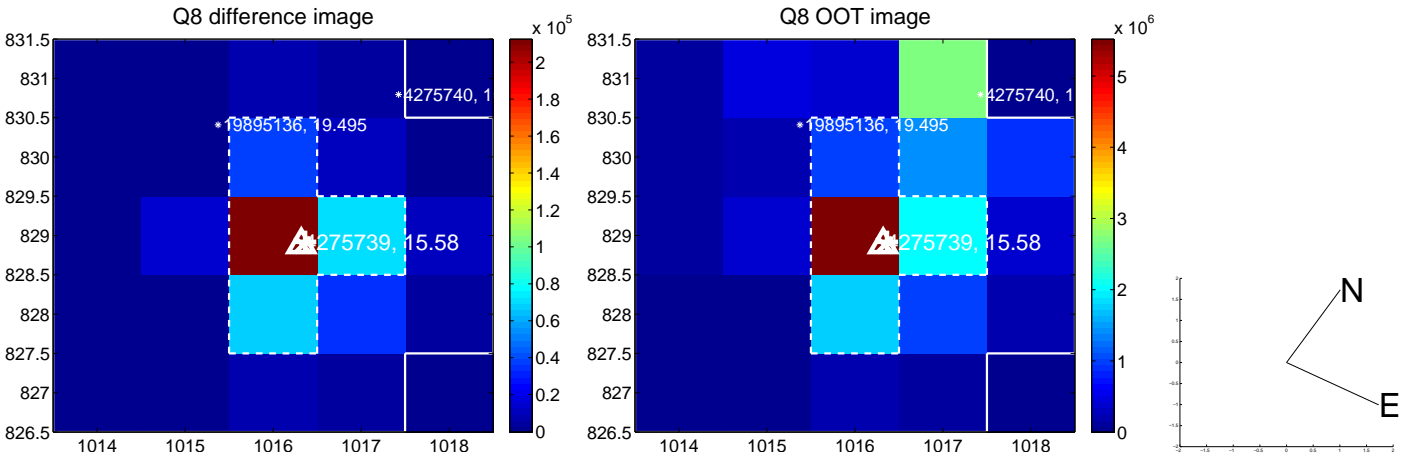
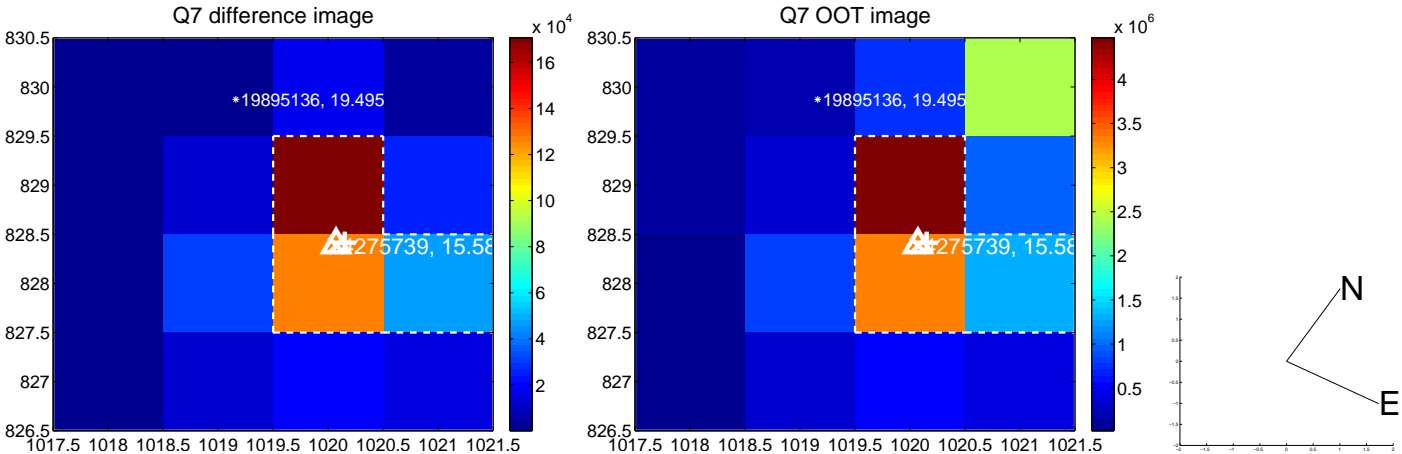
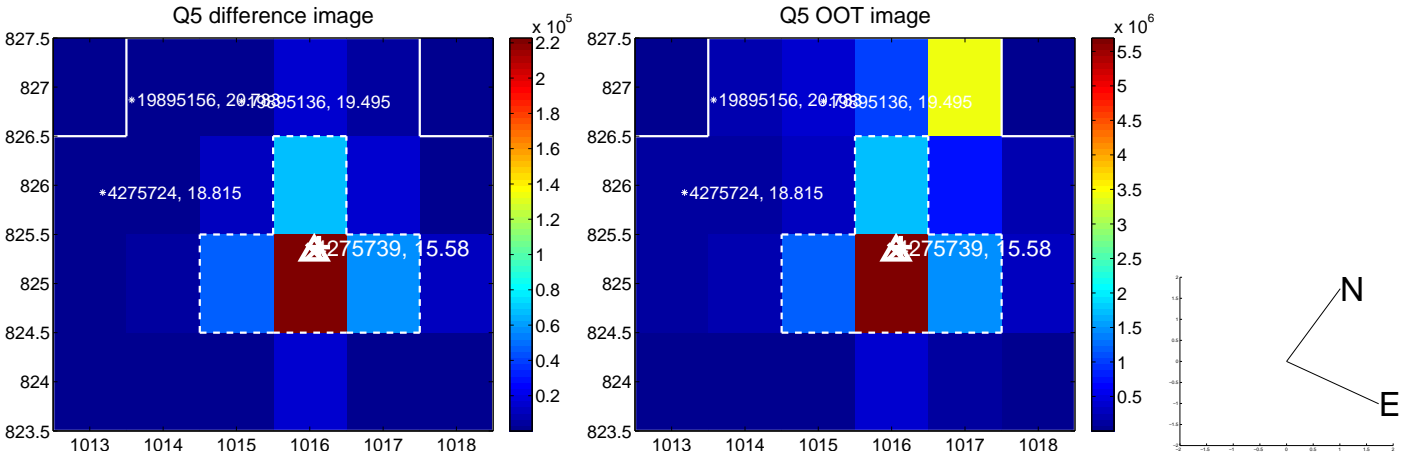


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

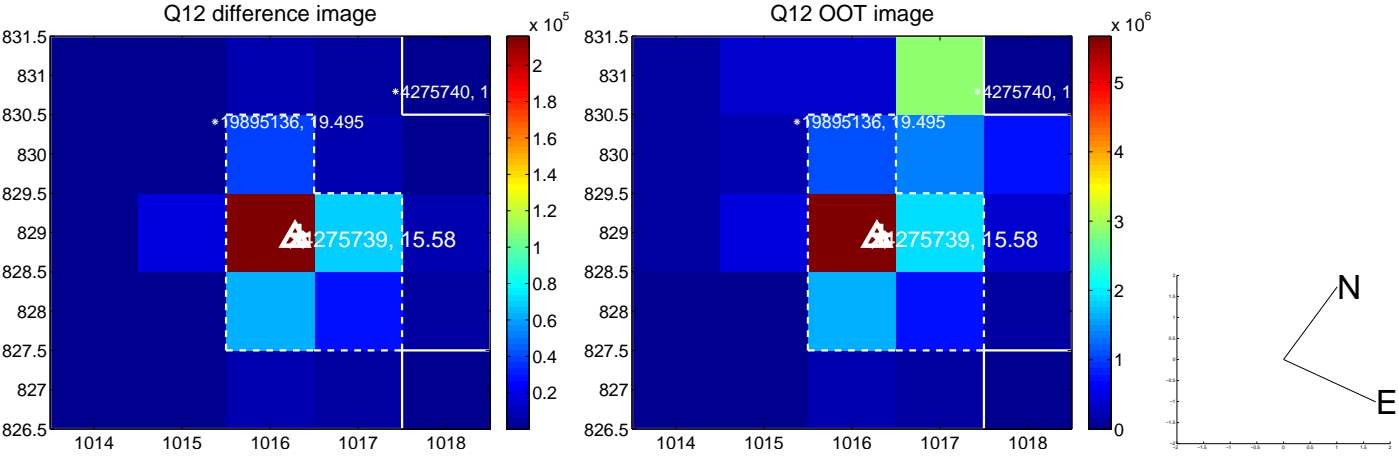
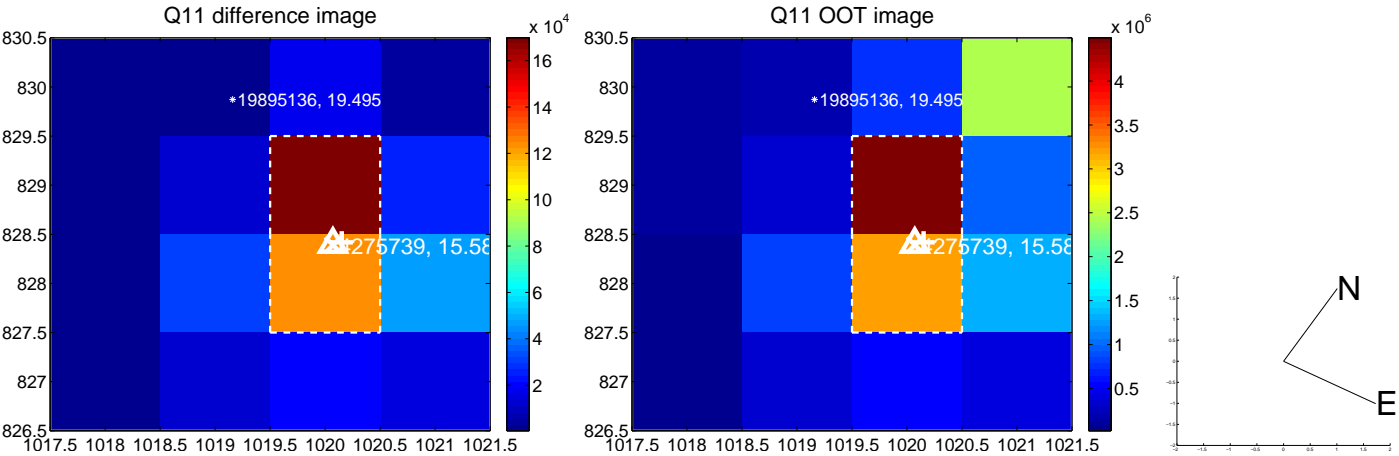
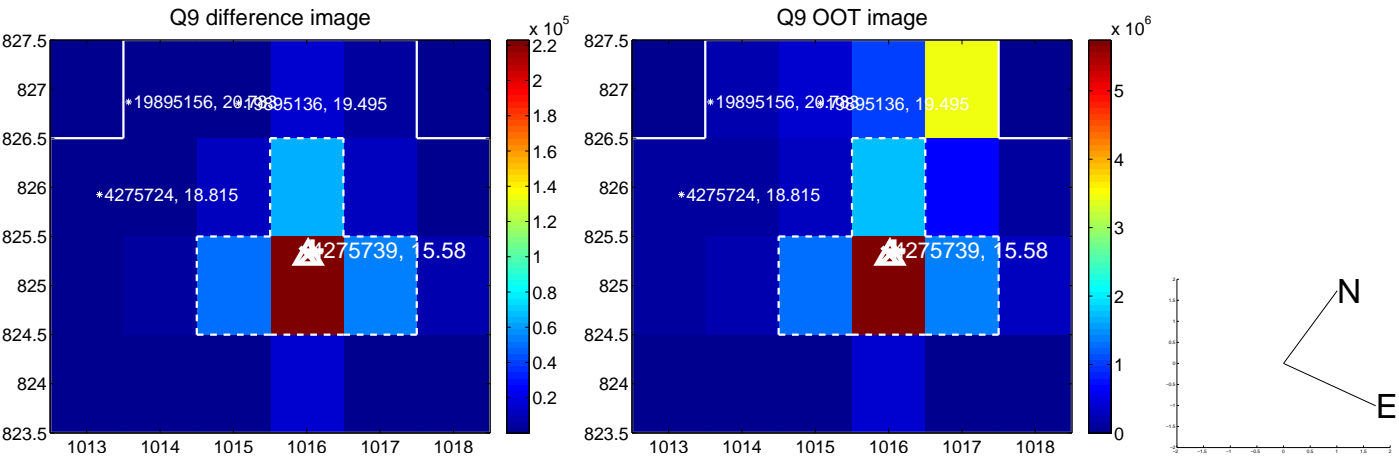
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



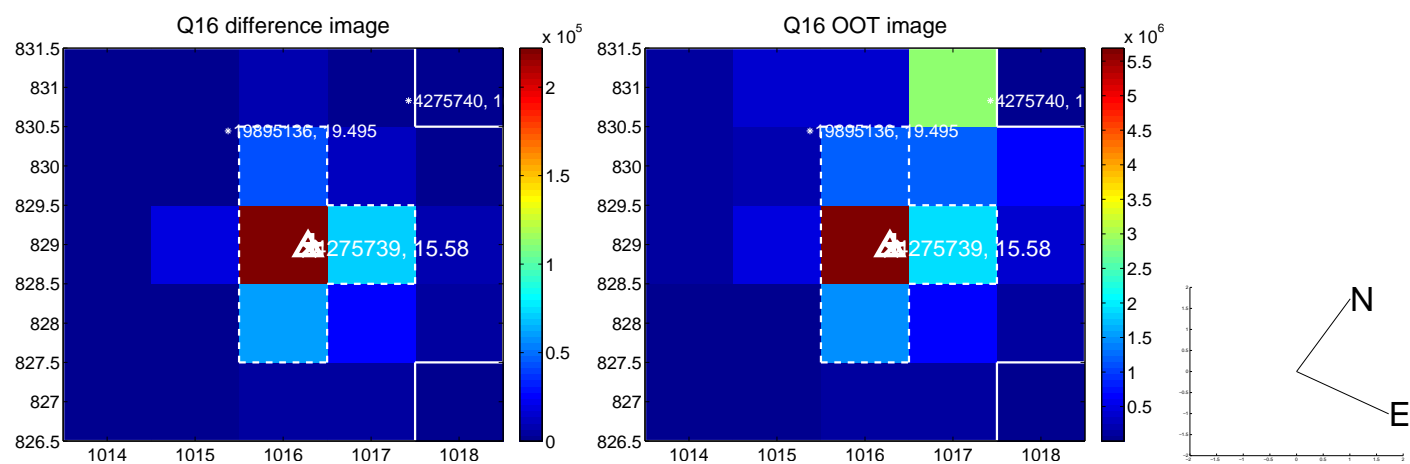
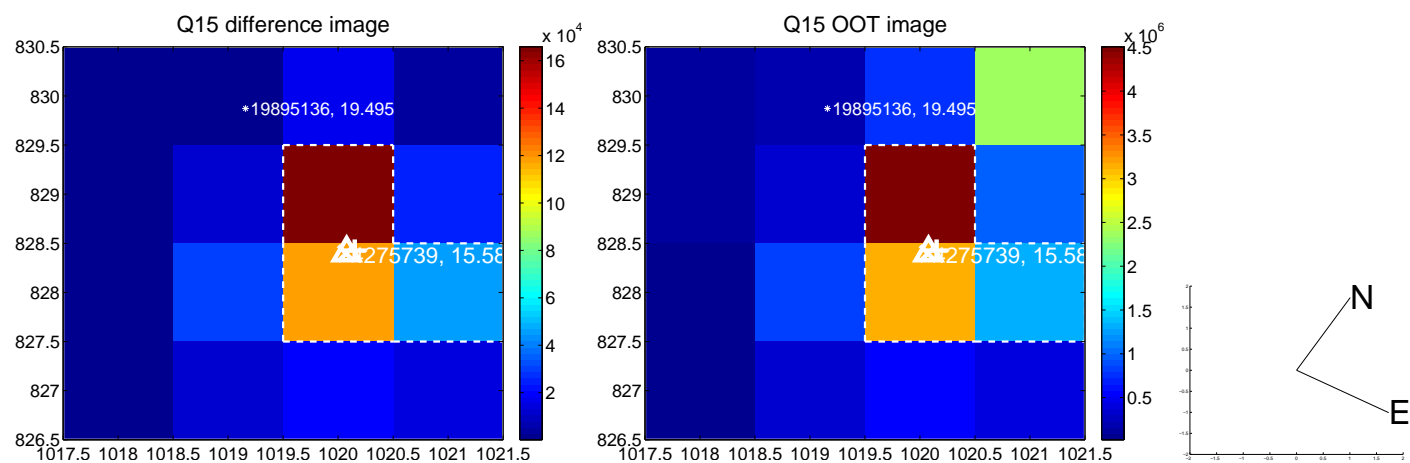
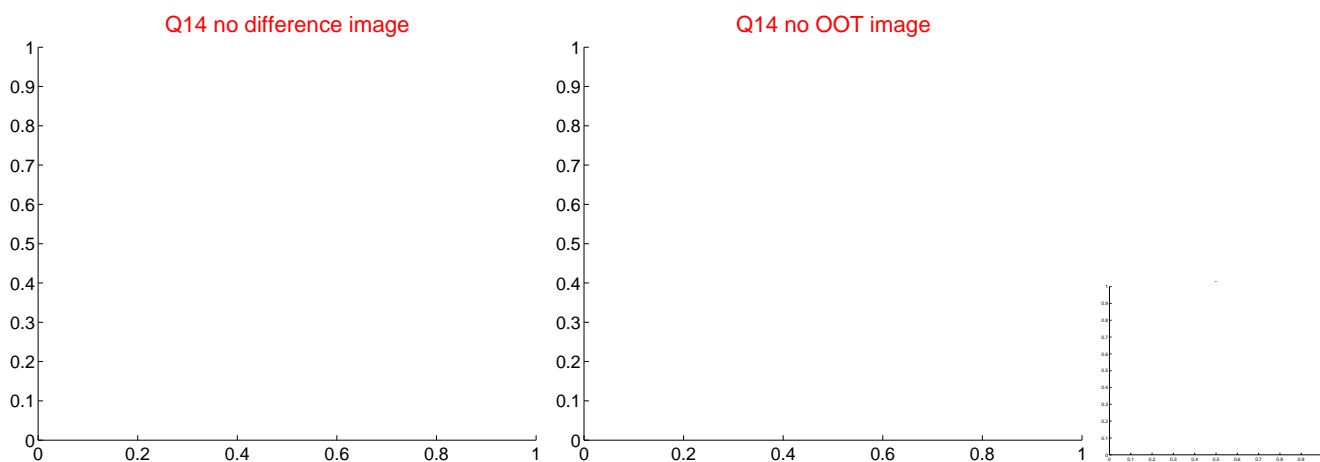
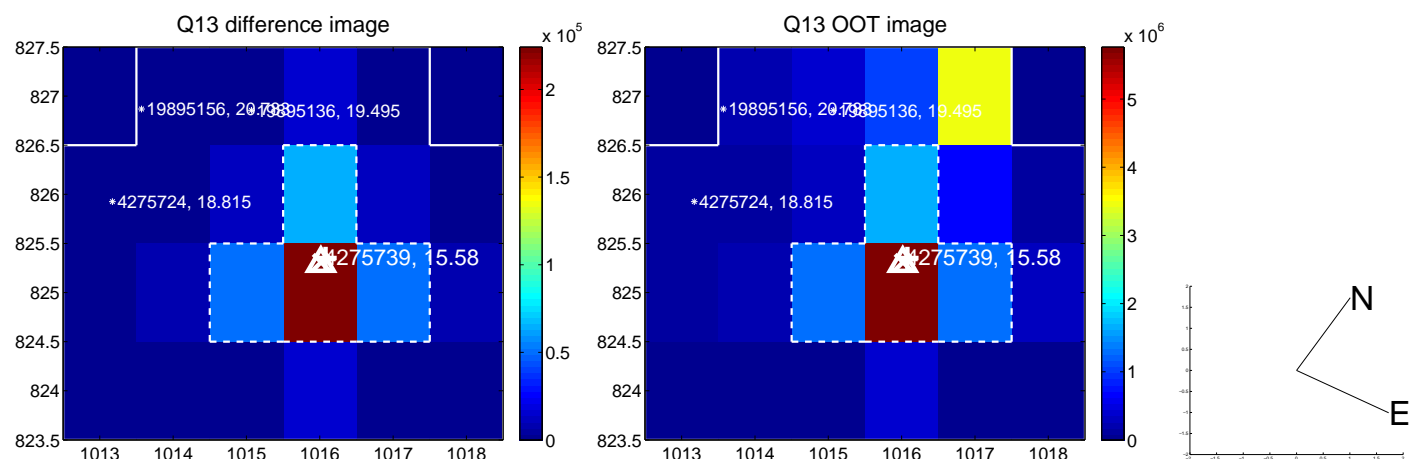
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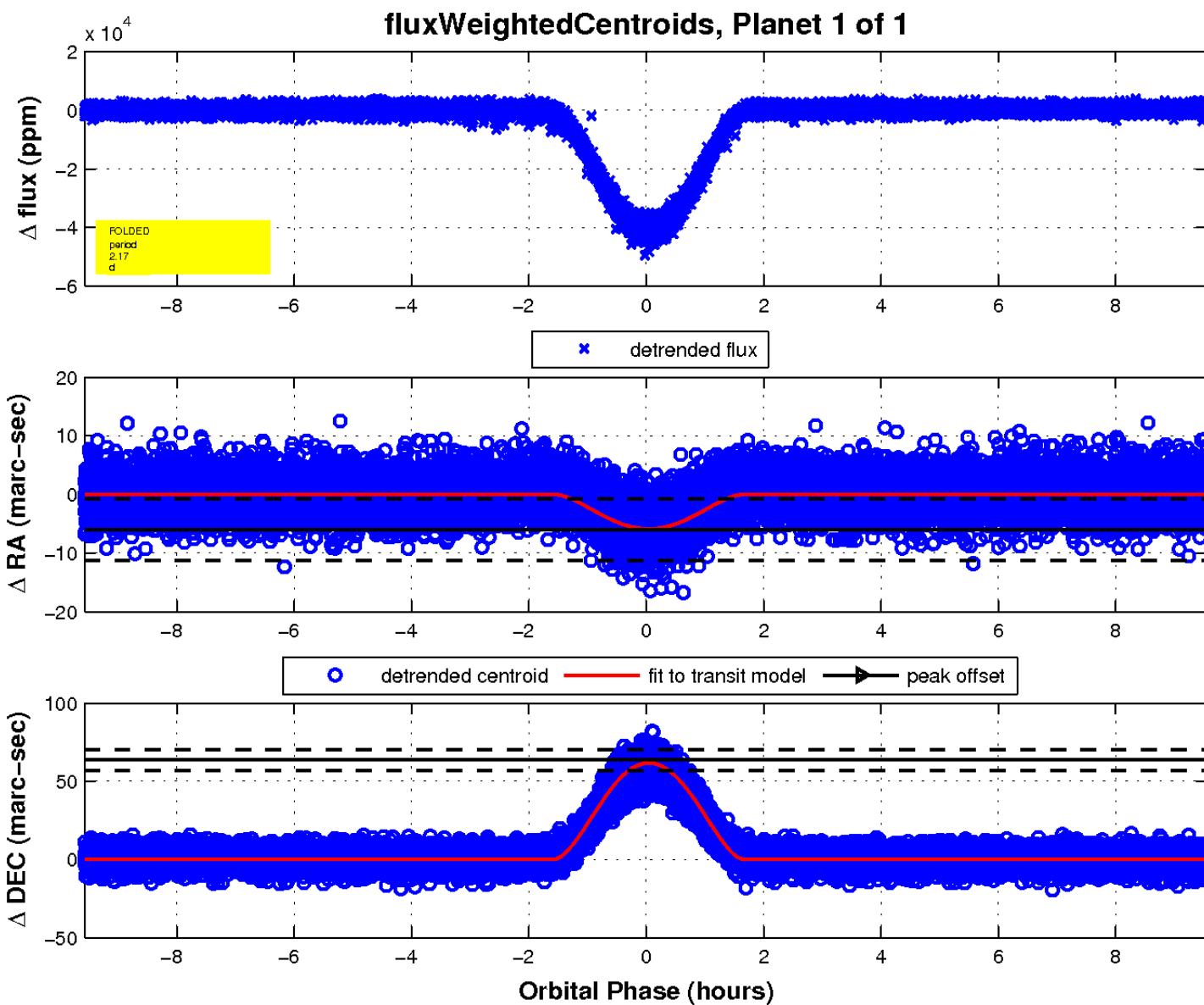
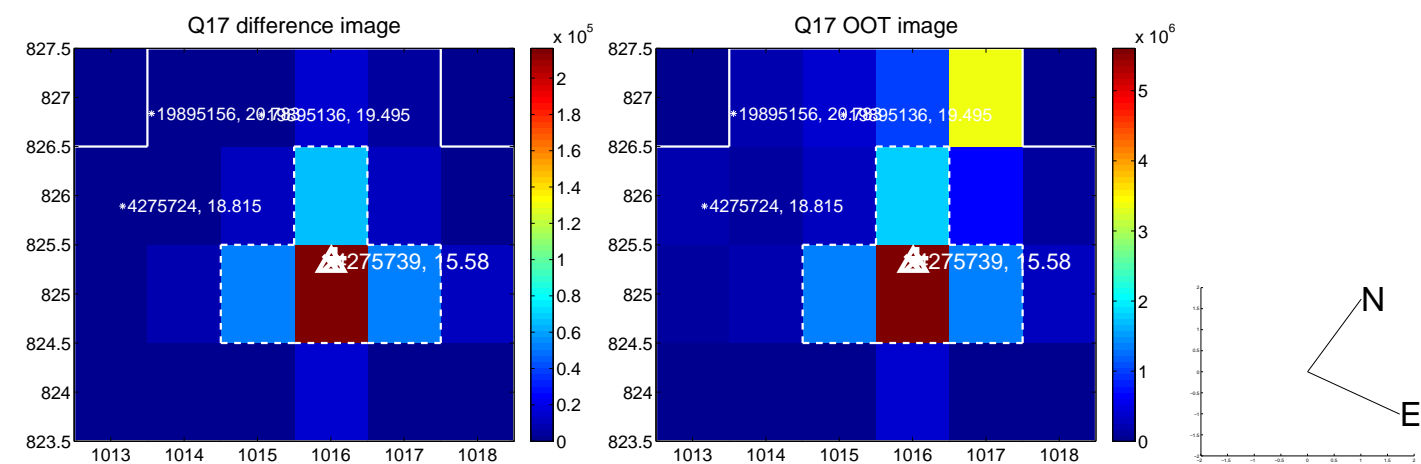
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UKIRT Image

Declination

