

KIC 007047299

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})
007047299-01	OBS	5351.01	35.882272	165.532574	101001.9	3.958	3918.9	3279.9	0.81	5840	37.56	16.33

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007047299-01	OBS	FP	0.00	0	1	0	0	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 007047299-01

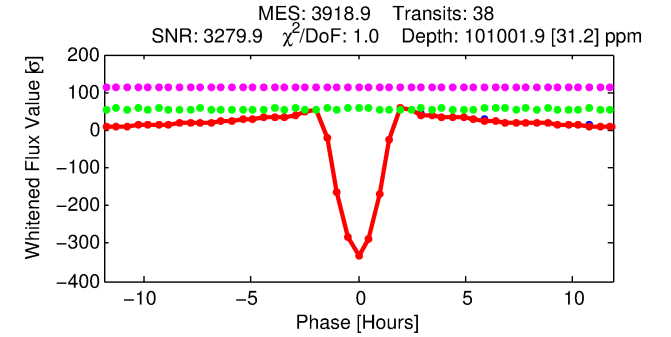
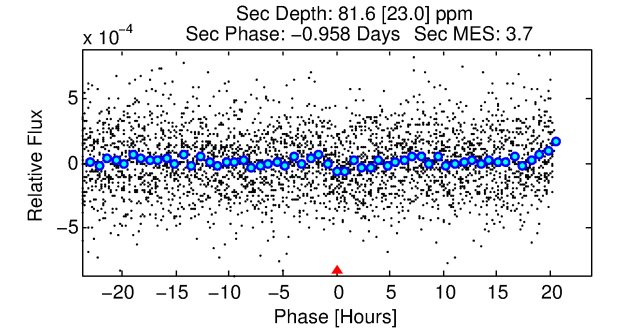
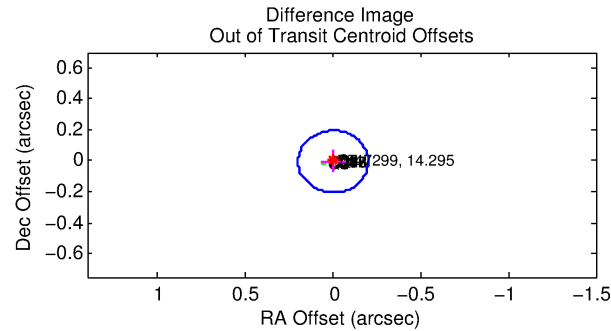
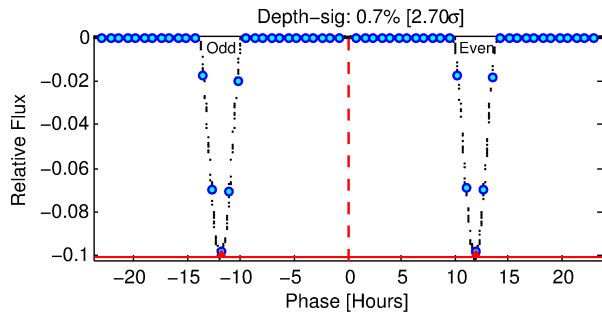
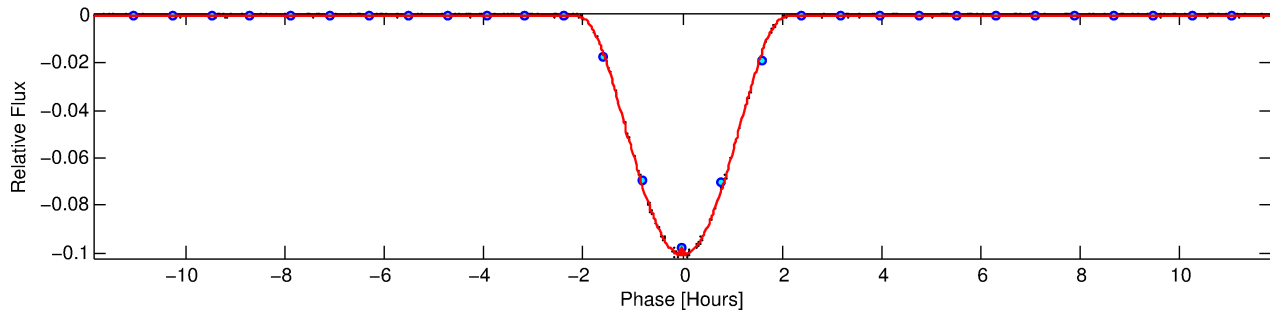
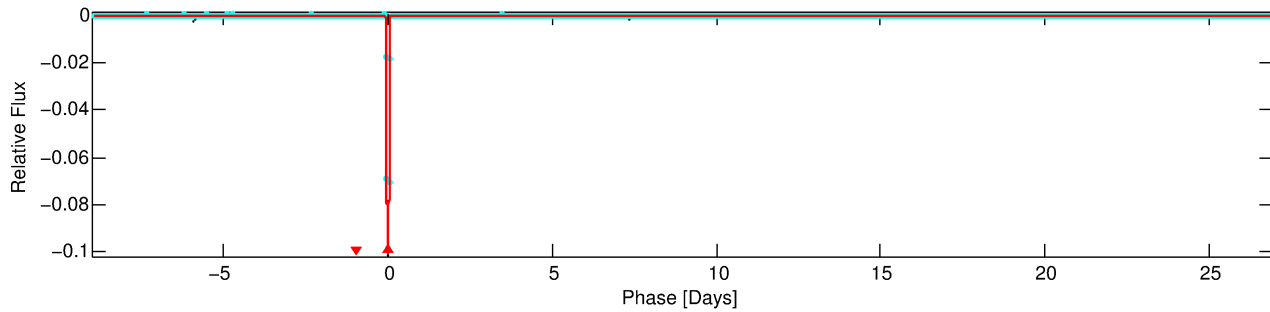
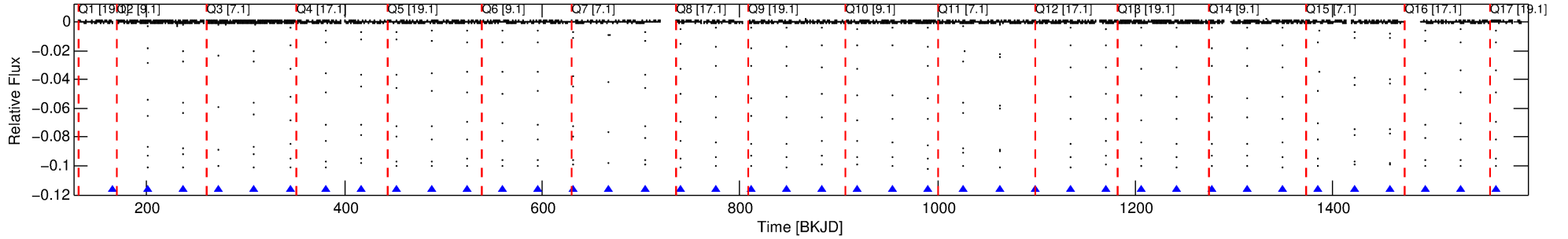
No Significant Match Found

DV One-Page Summary

KIC: 7047299 Candidate: 1 of 1 Period: 35.882 d

KOI: K05351.01 Corr: 0.999

Kp: 14.30 R*: 0.81 Rs Teff: 5840.0 K Logg: 4.57 Fe/H: -0.380



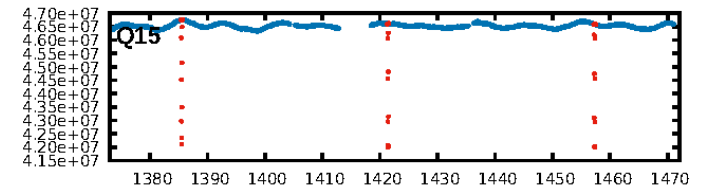
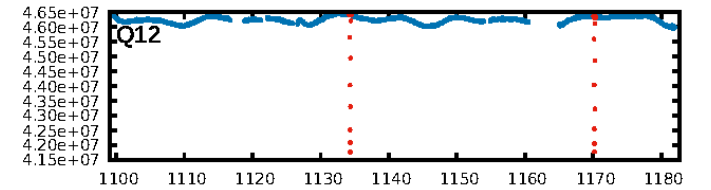
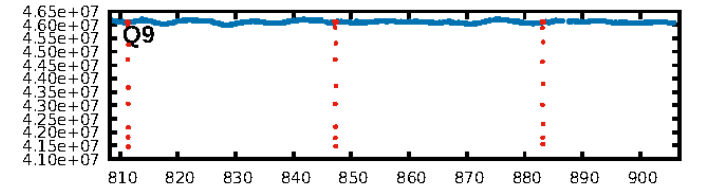
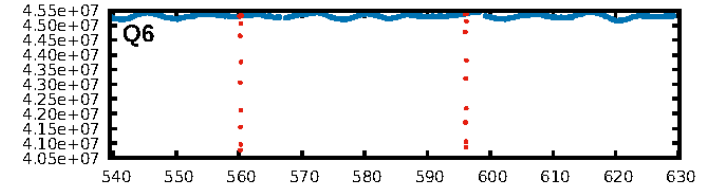
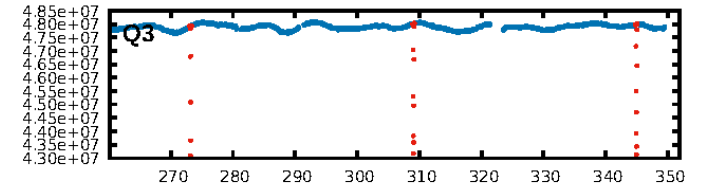
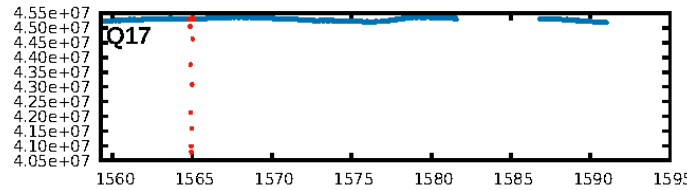
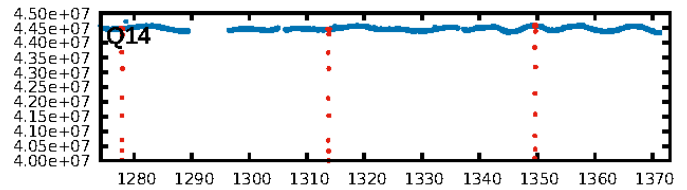
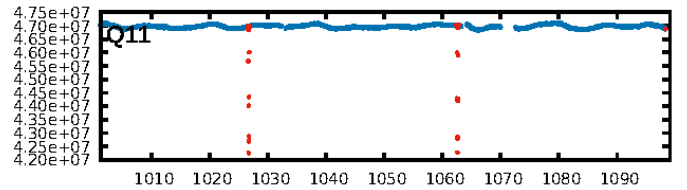
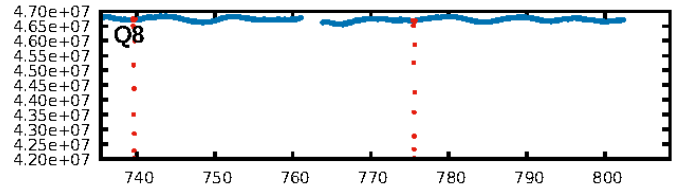
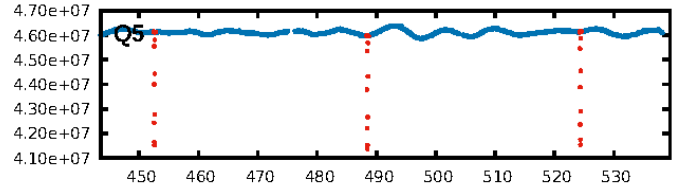
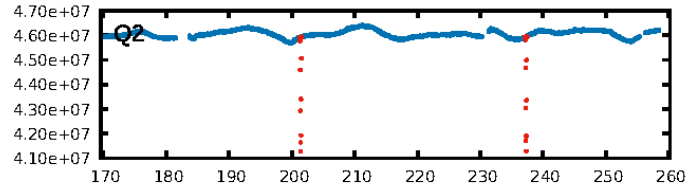
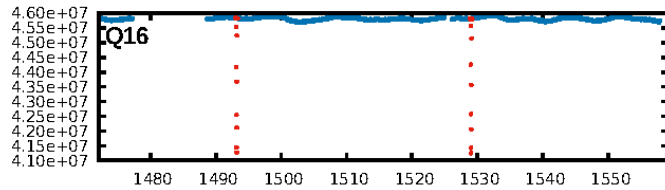
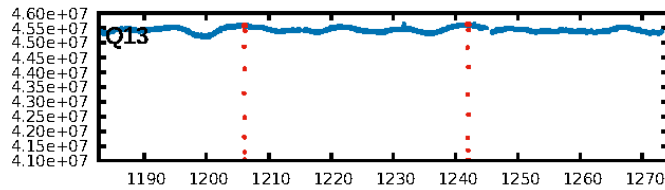
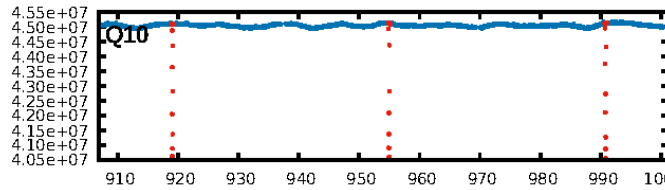
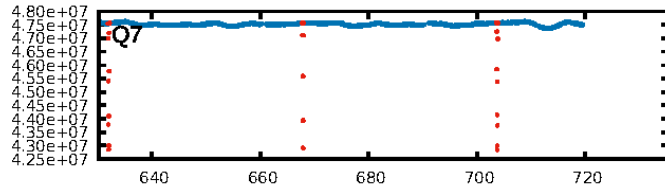
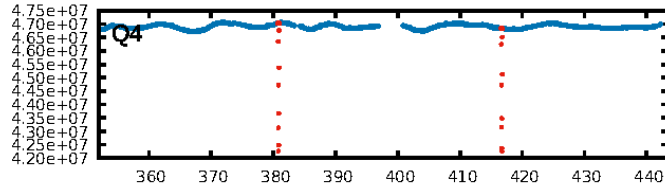
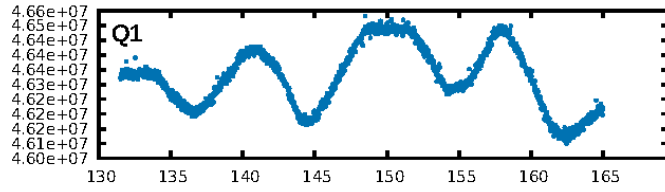
DV Fit Results:

Period = 35.88227 [0.00000] d
Epoch = 165.5326 [0.0000] BKJD
Rp/R* = 0.4239 [0.0092]
a/R* = 76.43 [0.04]
b = 0.90 [0.01]
Seff = 16.33 [5.79]
Teq = 513 [45] K
Rp = 37.56 [10.35] Re
a = 0.2051 [0.0474] AU
Ag = 1.34 [0.59] [0.57σ]
Teffp = 852 [65] K [4.28σ]

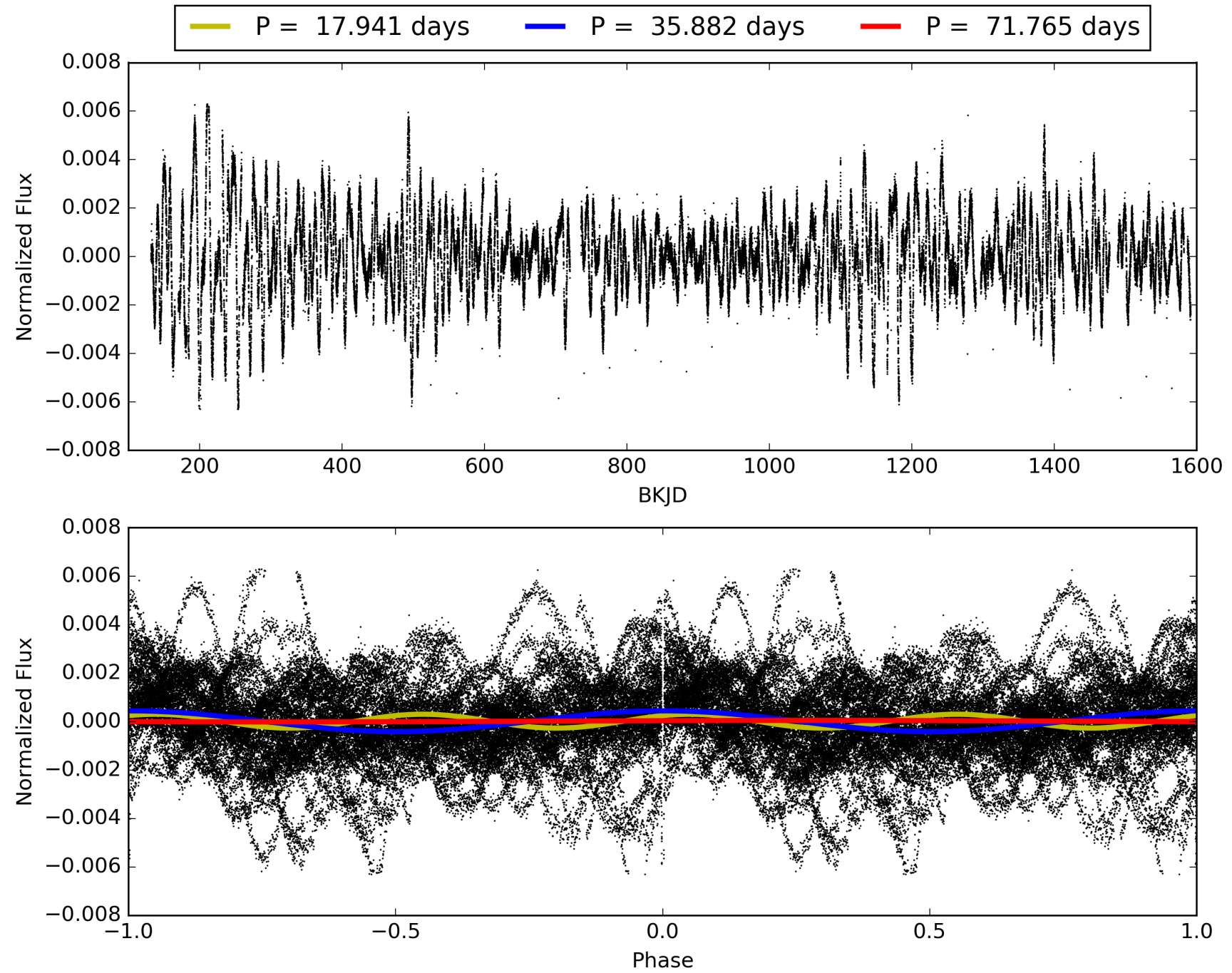
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [37/37]
GhostDiagnostic-chr: 4.567
Centroid-sig: 0.5%
Centroid-so: 0.110 arcsec [40.84σ]
OotOffset-rm: 0.005 arcsec [0.08σ]
KicOffset-rm: 0.137 arcsec [2.02σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [16/16]

TCE 007047299-01, PDC Light Curves

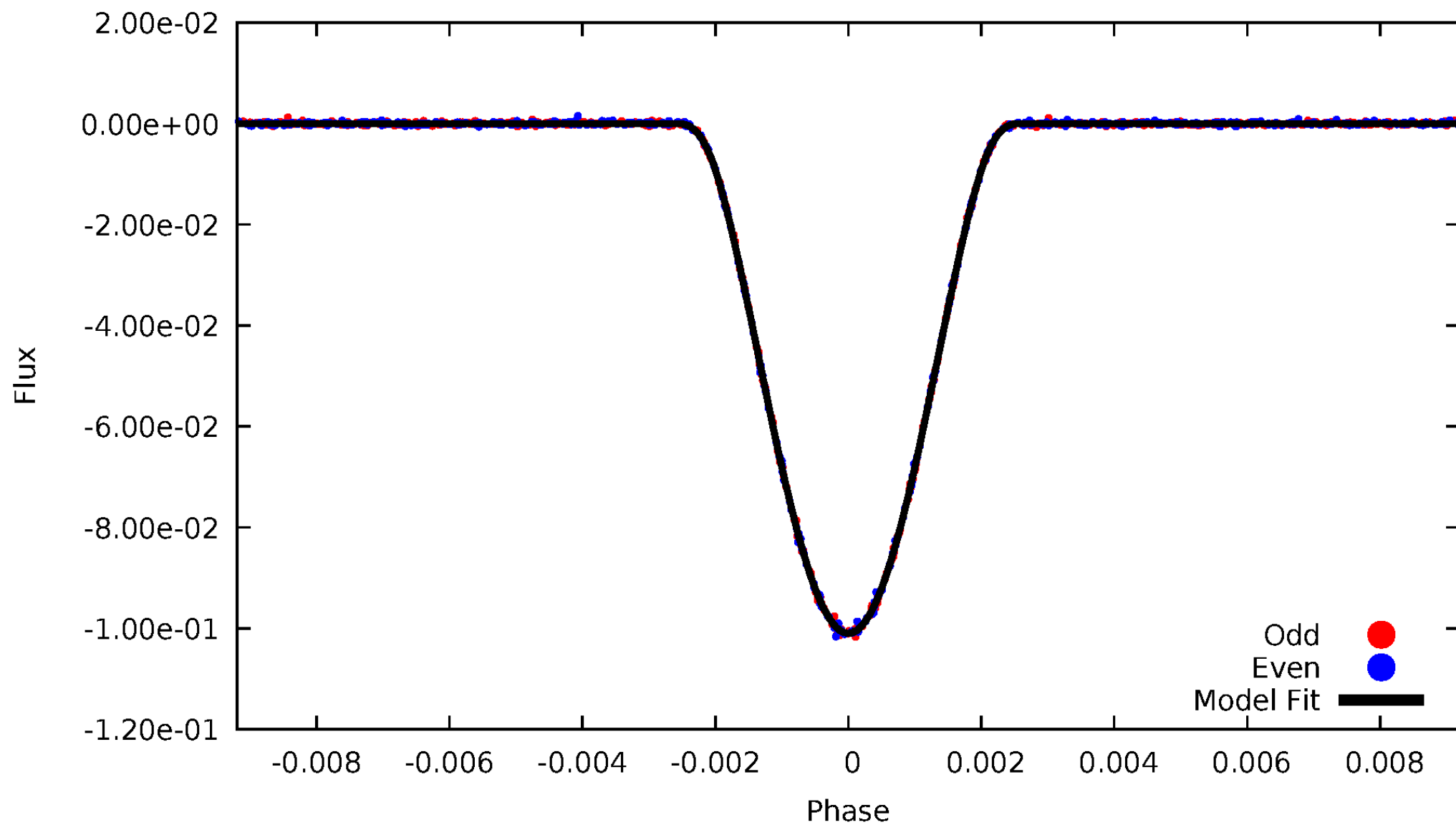


TCE 007047299-01



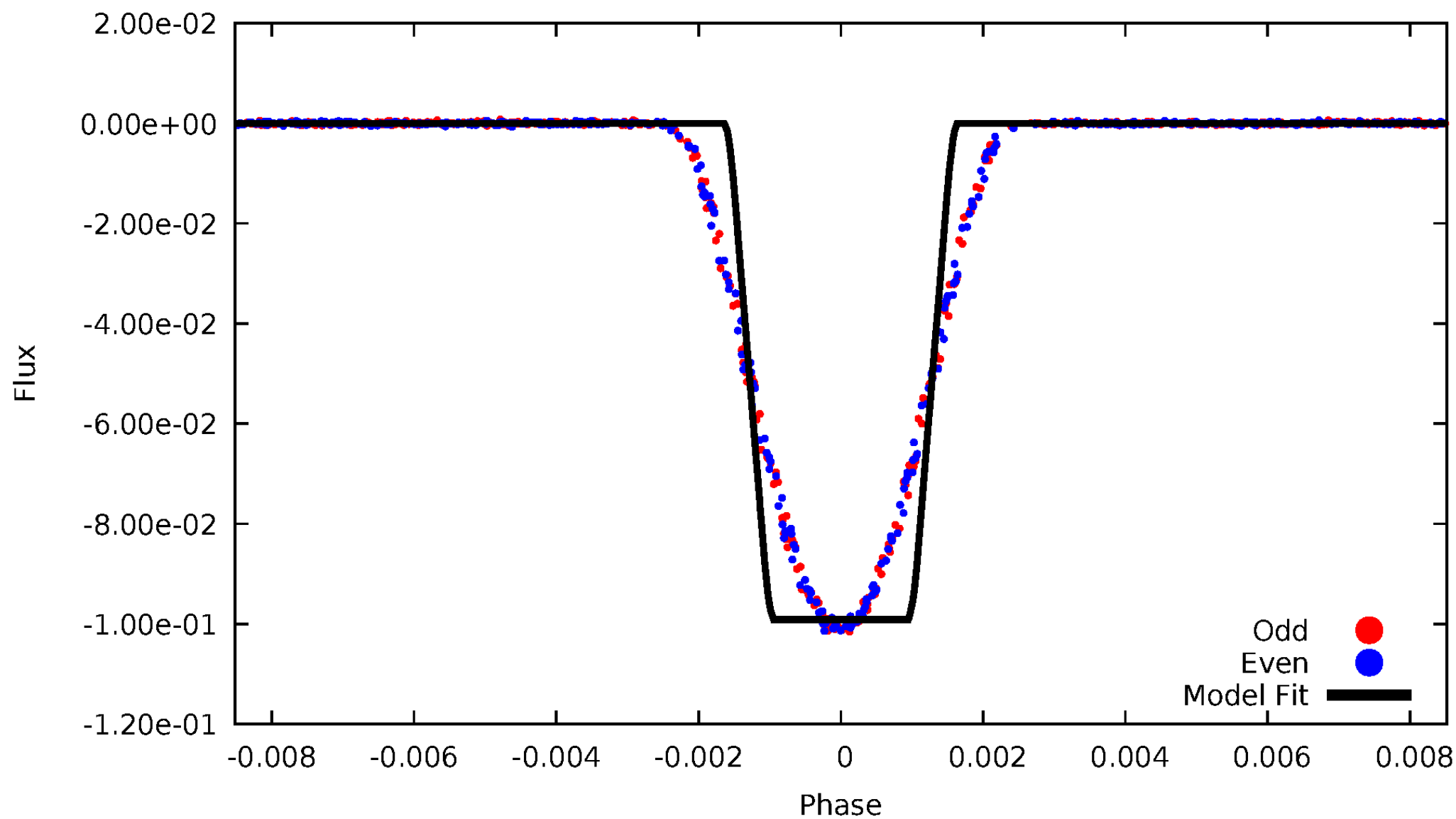
DV Odd/Even

TCE 007047299-01



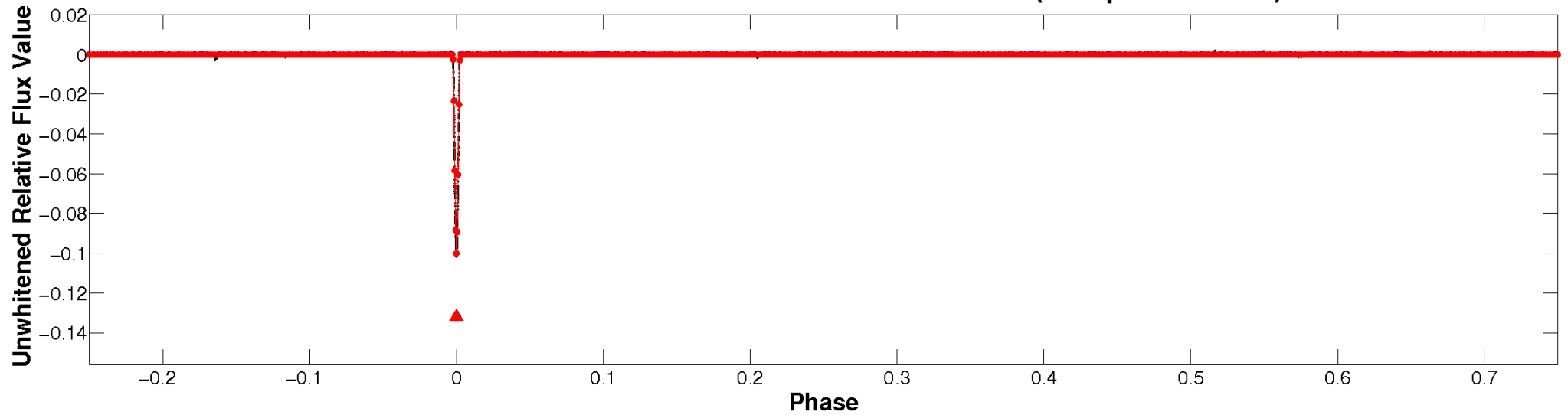
ALT Odd/Even

TCE 007047299-01

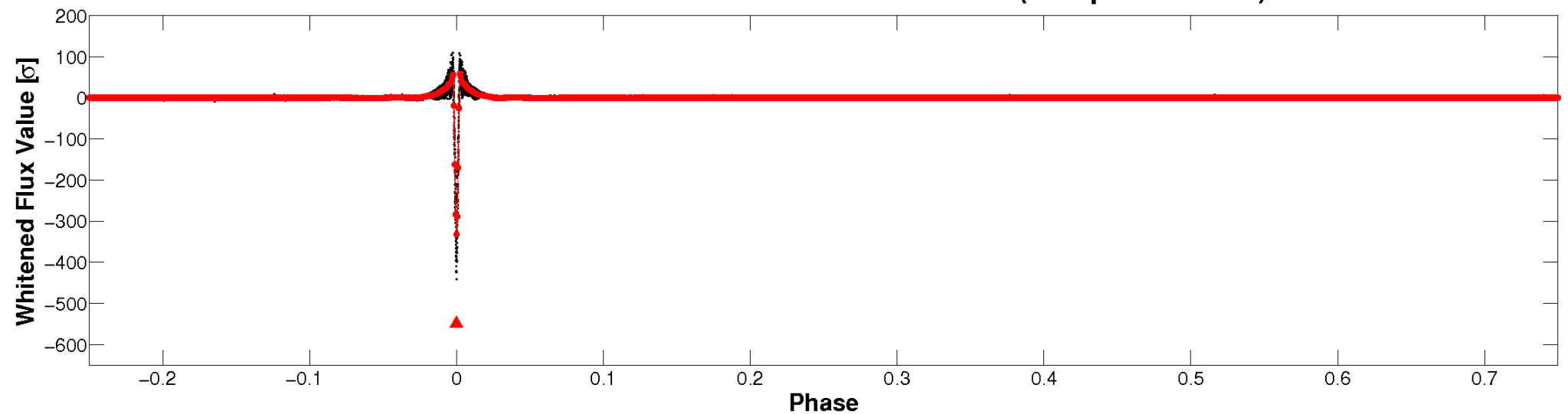


Non-Whitened Vs. Whitened Light Curve

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

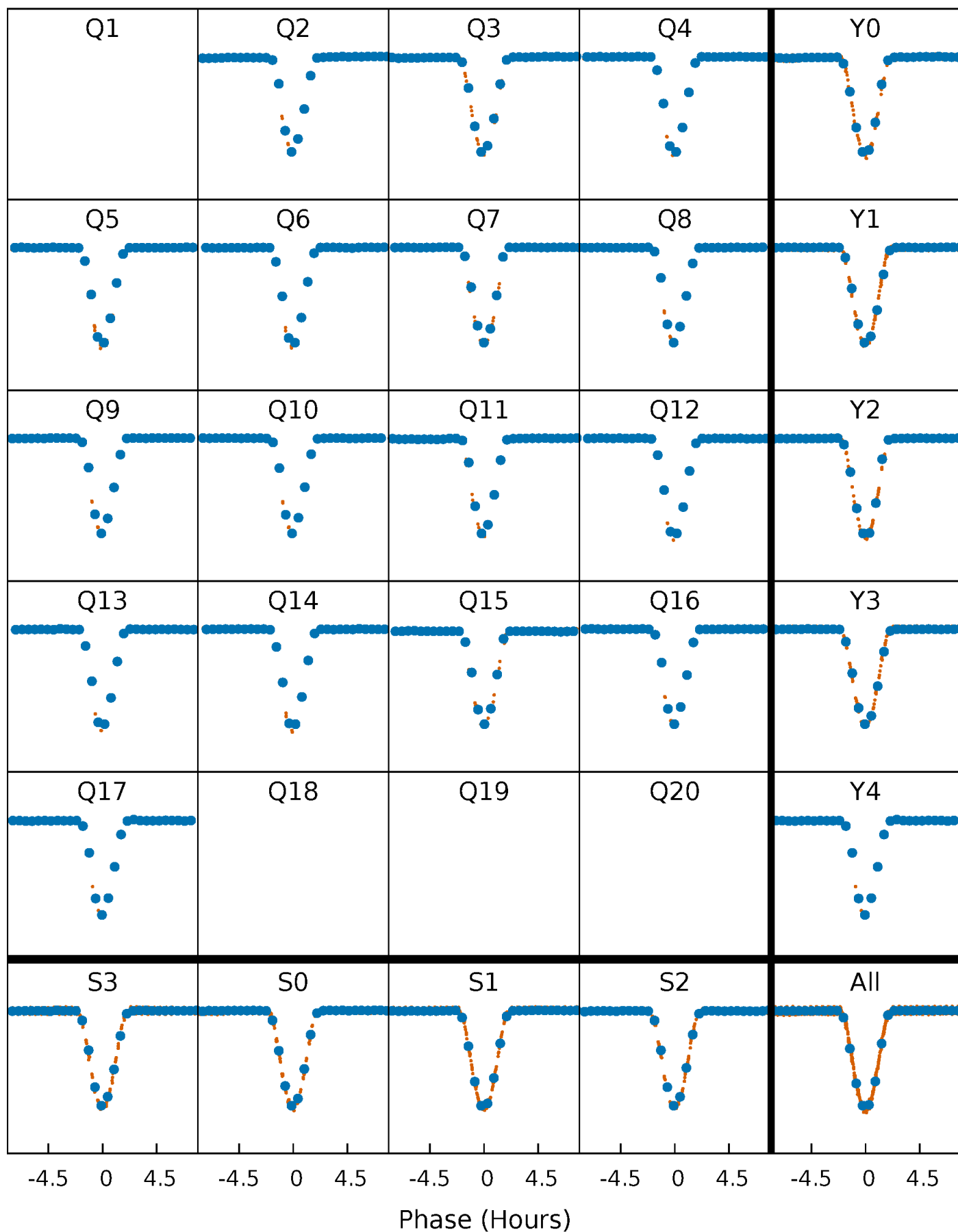


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



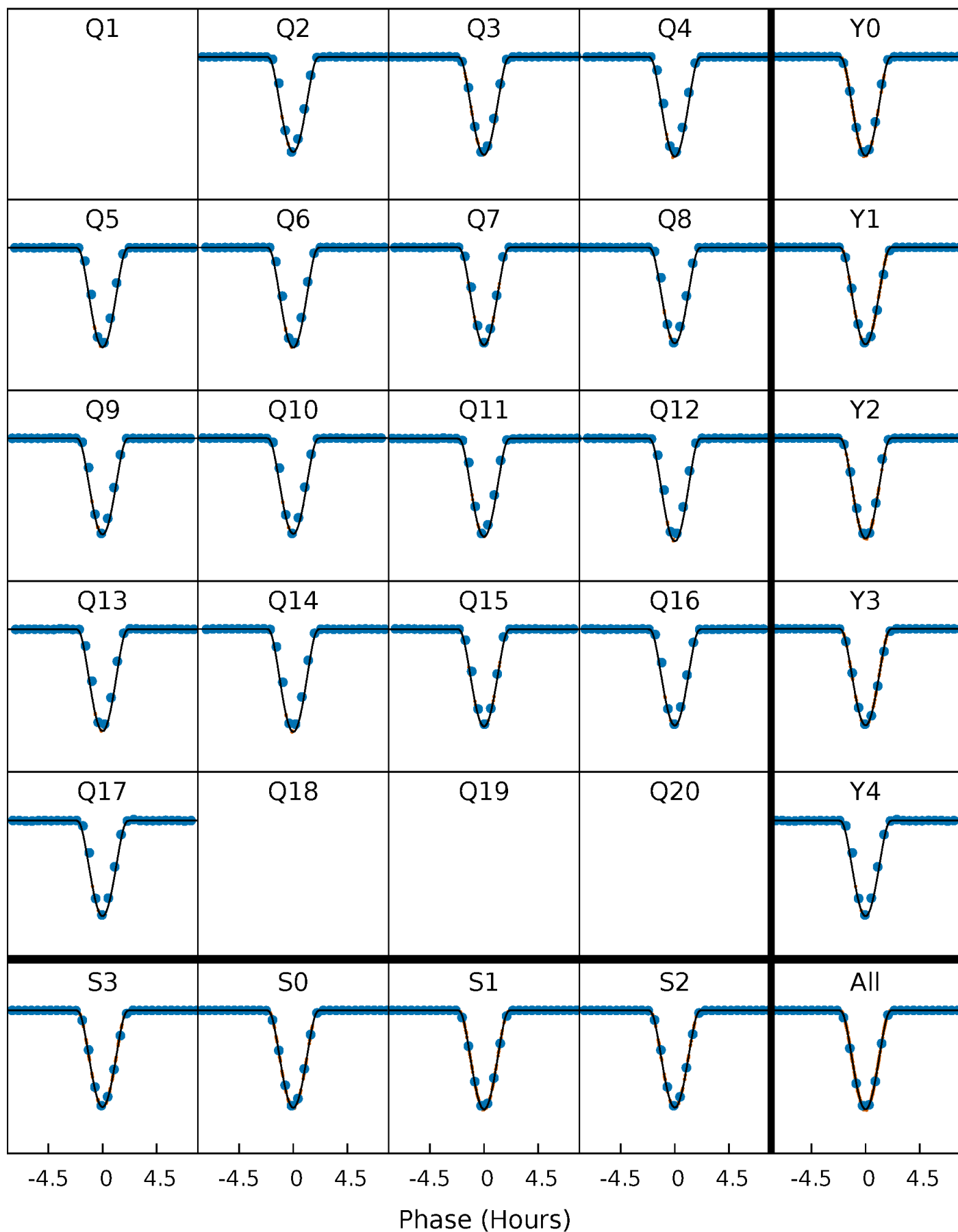
PDC Quarter-Phased Transit Curves

TCE 007047299-01 P= 35.882272 Days $T_0=165.532574$ (BKJD)



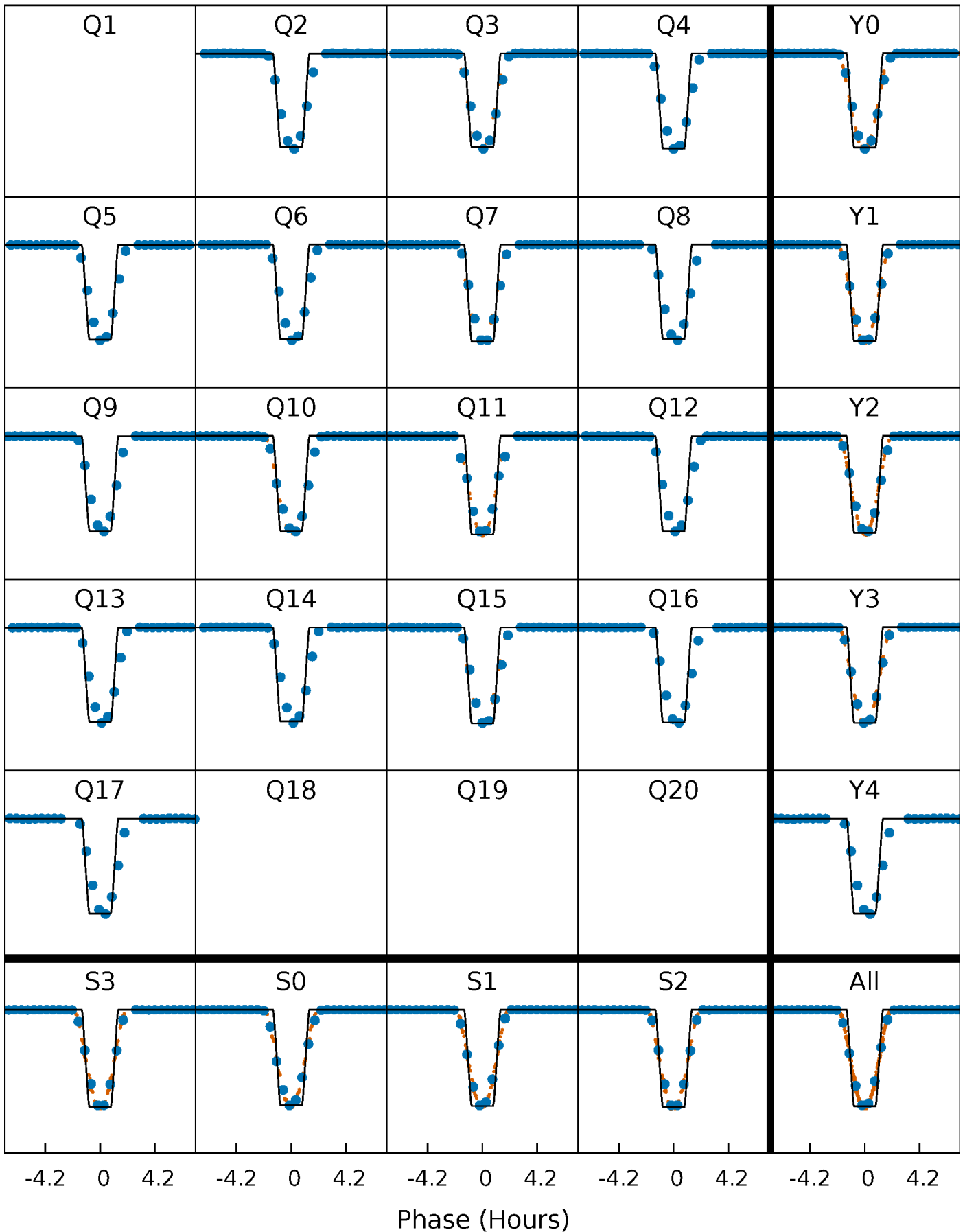
DV Quarter-Phased Transit Curves

TCE 007047299-01 P= 35.882272 Days $T_0=165.532574$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

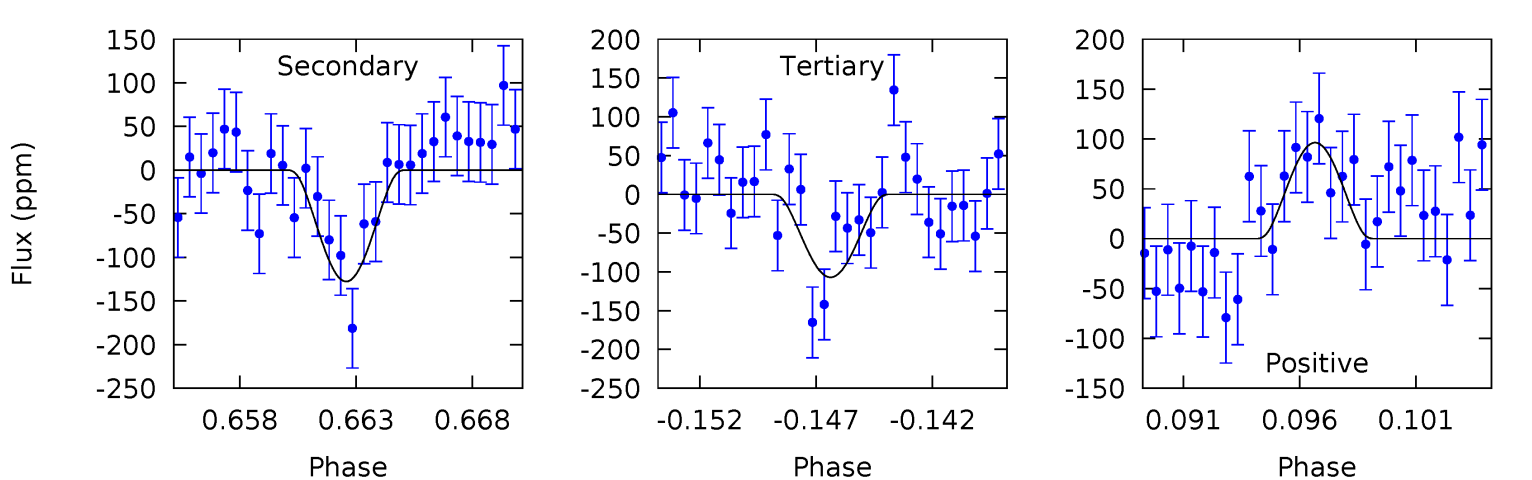
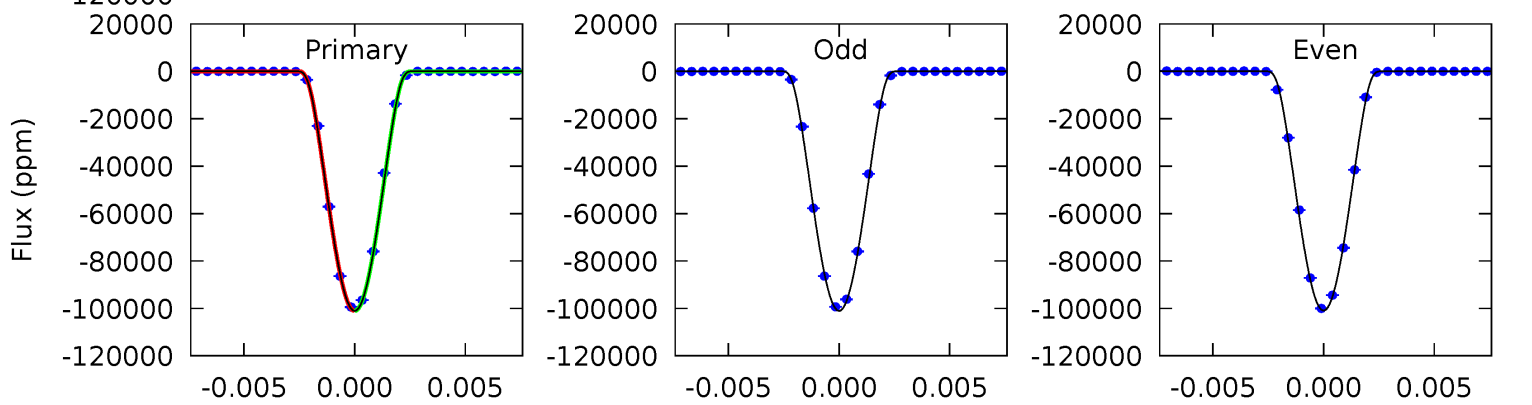
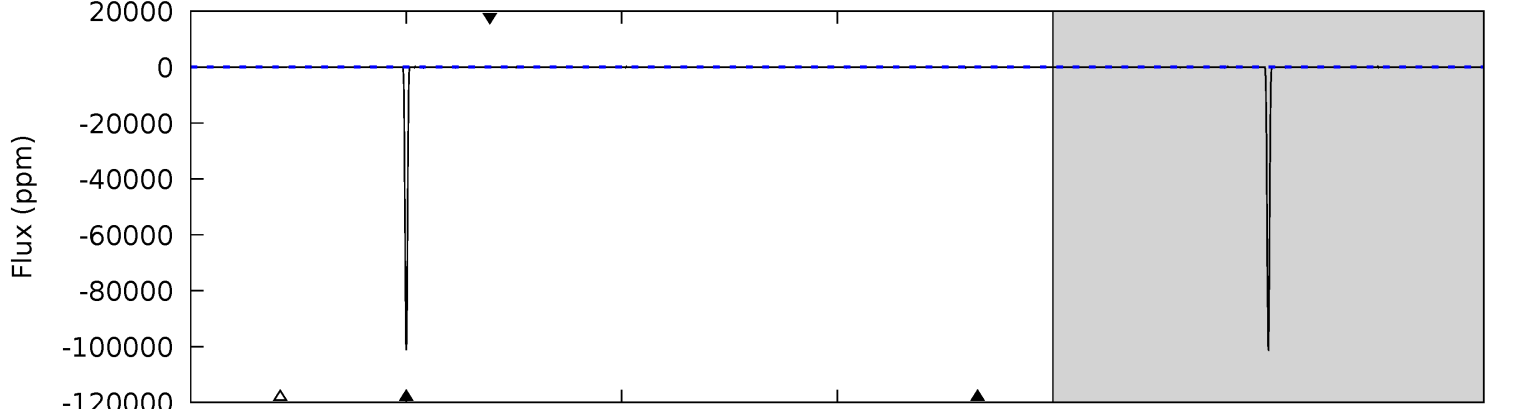
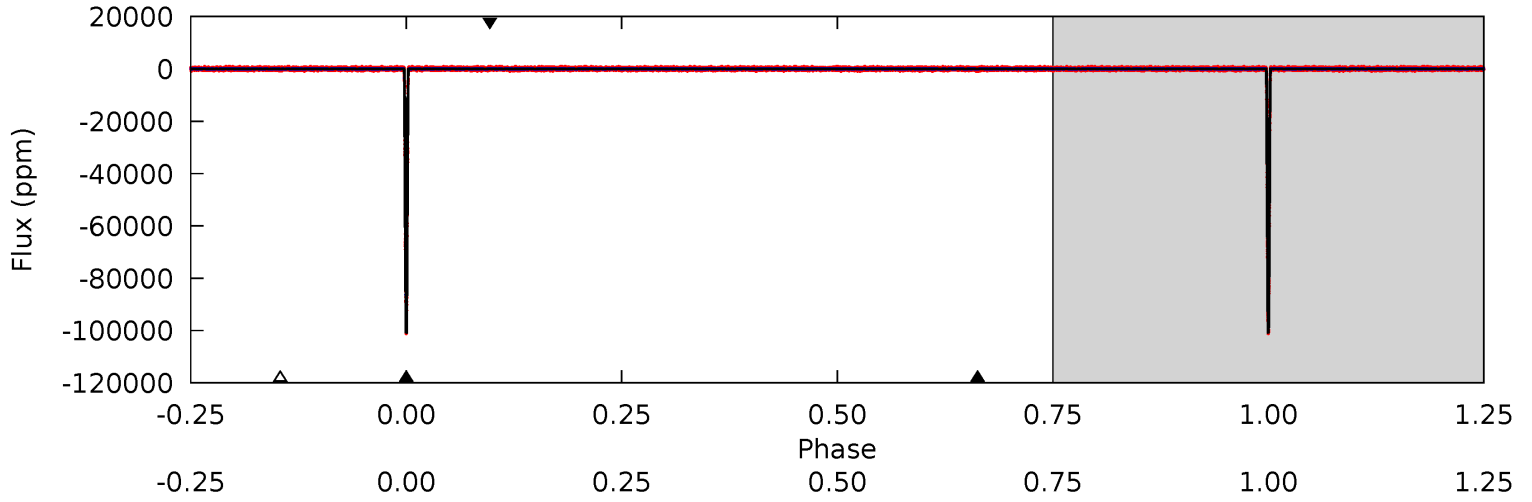
TCE 007047299-01 P= 35.882158 Days $T_0=165.534889$ (BKJD)



DV Model-Shift Uniqueness Test

007047299-01, P = 35.882272 Days, E = 129.650302 Days

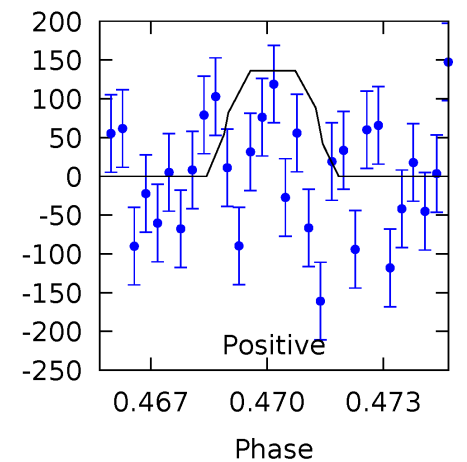
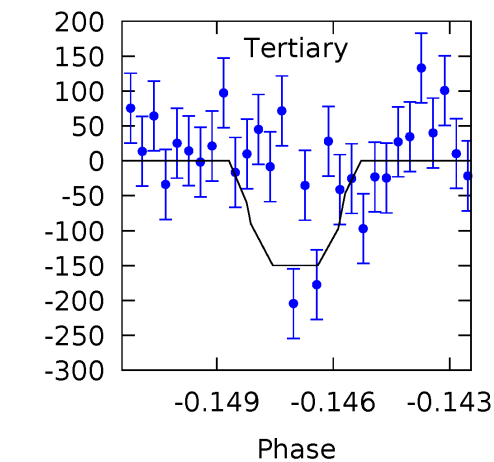
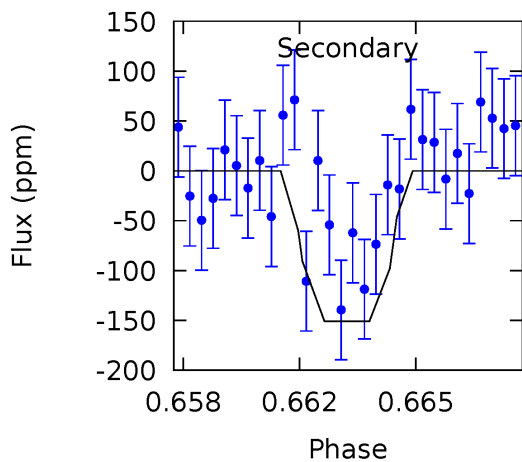
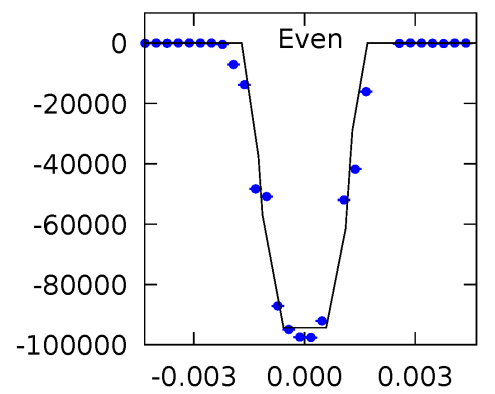
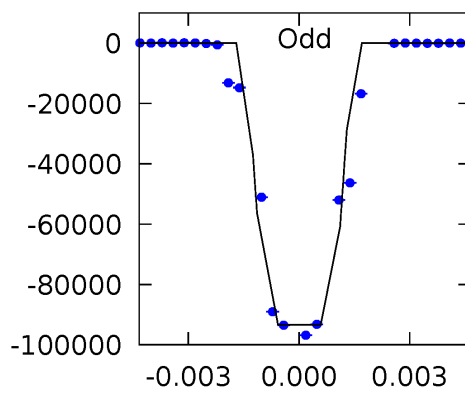
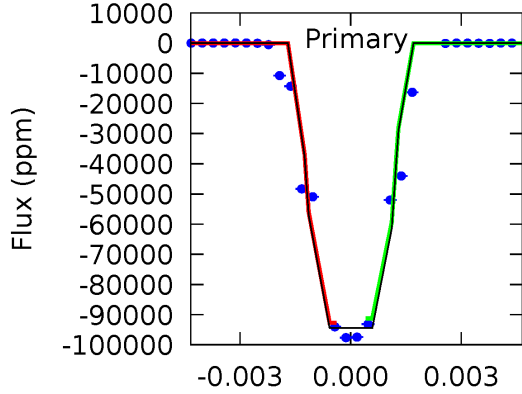
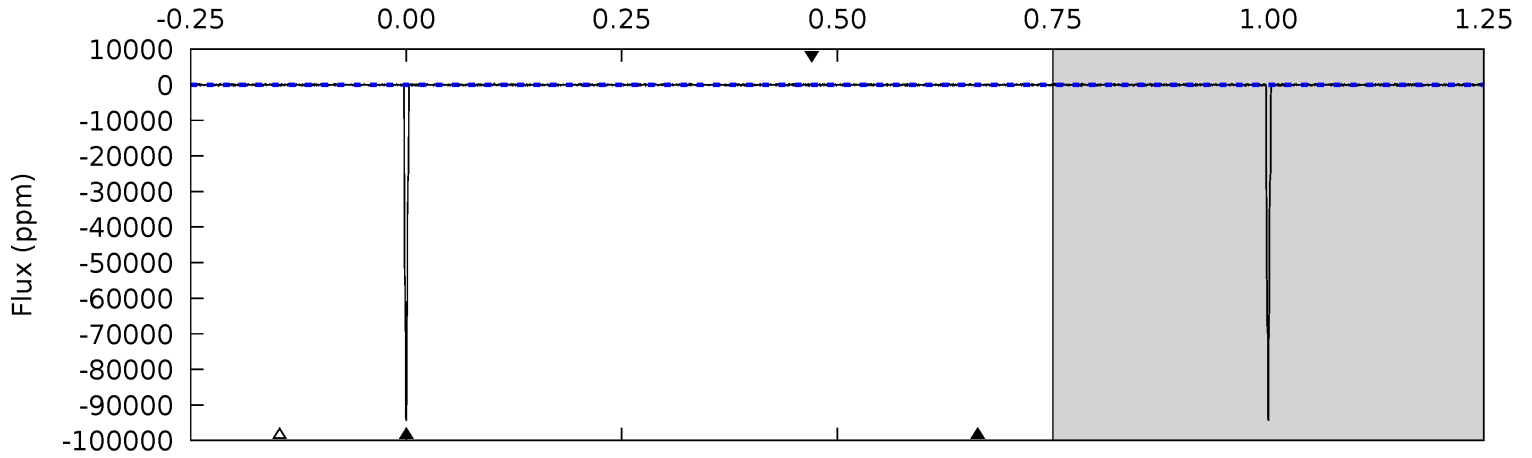
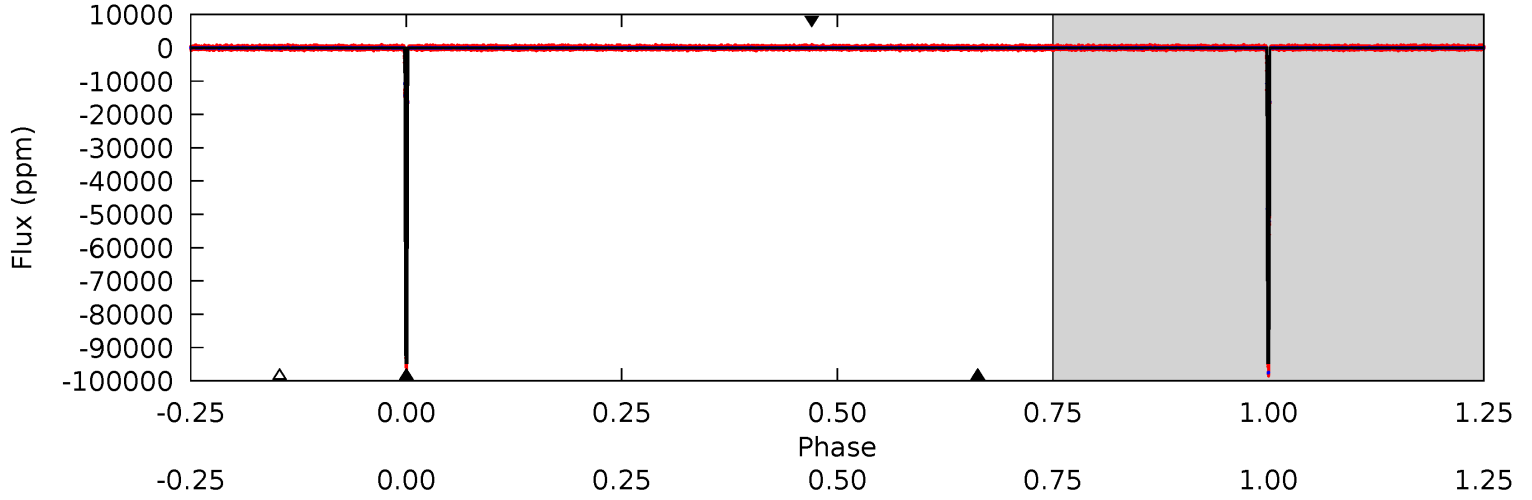
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7750	9.79	8.20	7.38	5.16	2.80	2.12	7741	7742	1.59	2.41	6.04	1.00	0.00	0.49



Alt Model-Shift Uniqueness Test

007047299-01, P = 35.882158 Days, E = 129.652731 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2902	4.64	4.60	4.18	5.24	2.94	1.19	2898	2898	0.03	0.45	15.6	1.00	0.00	0



Stellar Parameters For KIC 007047299

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5840^{+161}_{-161}	$4.570^{+0.035}_{-0.184}$	$-0.380^{+0.300}_{-0.300}$	$0.812^{+0.223}_{-0.060}$	$0.898^{+0.099}_{-0.099}$	$2.362^{+0.438}_{-1.164}$
	+3%/-3%	+1%/-4%	+79%/-79%	+27%/-7%	+11%/-11%	+19%/-49%
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 007047299-01 / KOI 5351.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-128 ± 13	$38.56^{+5.72}_{-2.69}$	732^{+46}_{-31}	1930^{+35}_{-39}	$1.914^{+0.367}_{-0.443}$
Alt.	-151 ± 33	$28.85^{+4.14}_{-2.21}$	733^{+43}_{-32}	2107^{+56}_{-70}	$3.986^{+1.148}_{-1.150}$

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 $A_{obs} \gg 1.0$

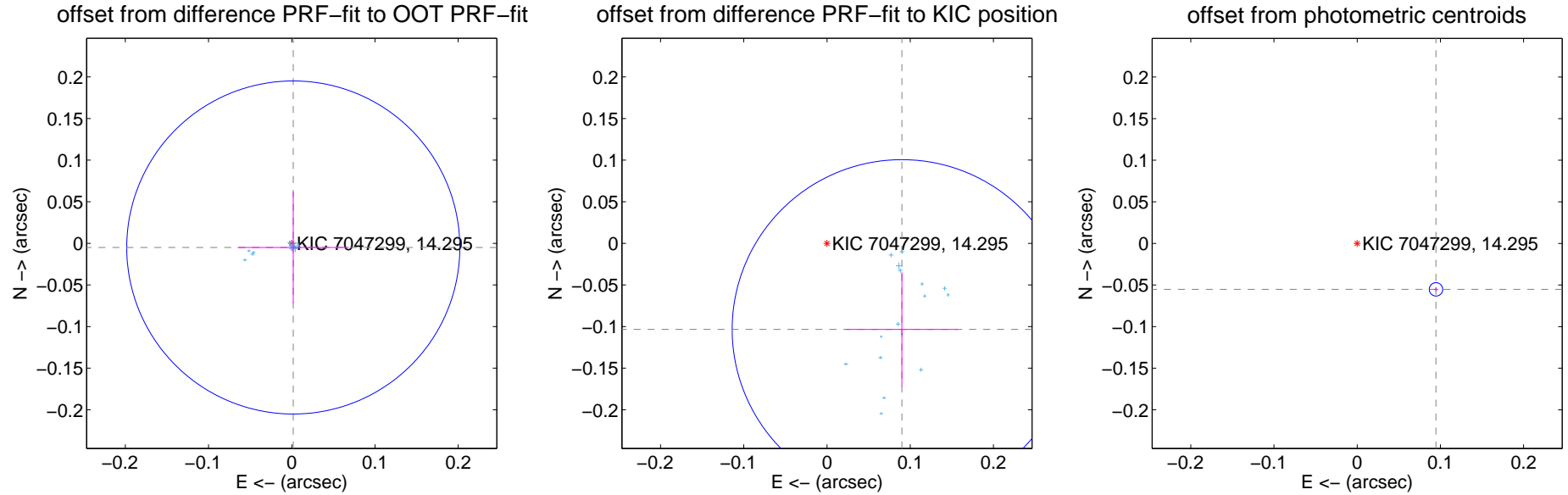
DV Centroid Data

Supplemental centroid analysis for 007047299-01. Kepler magnitude: 14.29. Transit SNR 3279.92

There are 16 quarters with good PRF difference image offsets

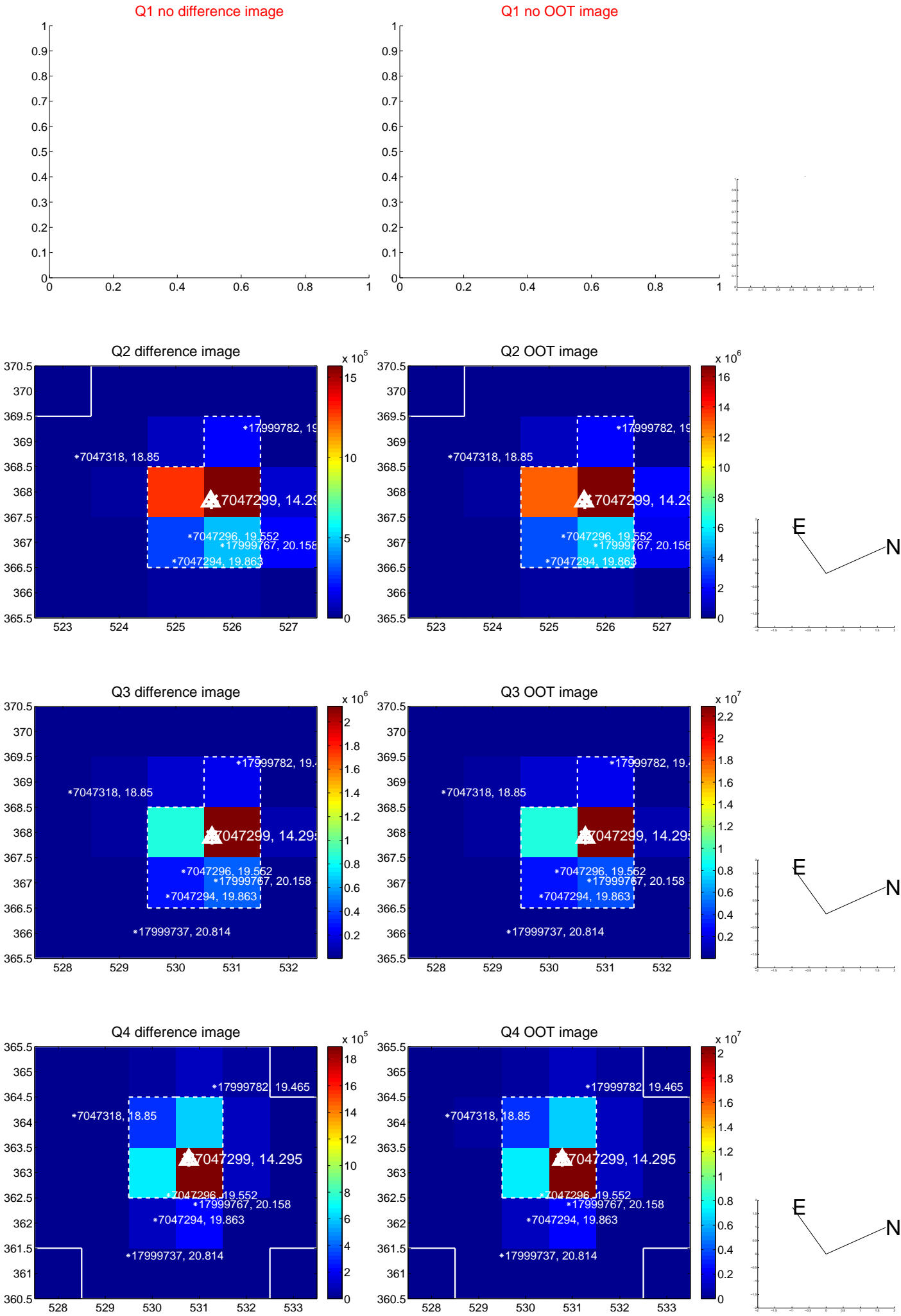
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.005 ± 0.067	0.08	-0.002 ± 0.067	-0.005 ± 0.067
PRF-fit source offset from KIC position	0.137 ± 0.068	2.02	-0.090 ± 0.067	-0.103 ± 0.069
photometric centroid source offset	0.11 ± 0.00	40.84	-0.09 ± 0.00	-0.06 ± 0.00

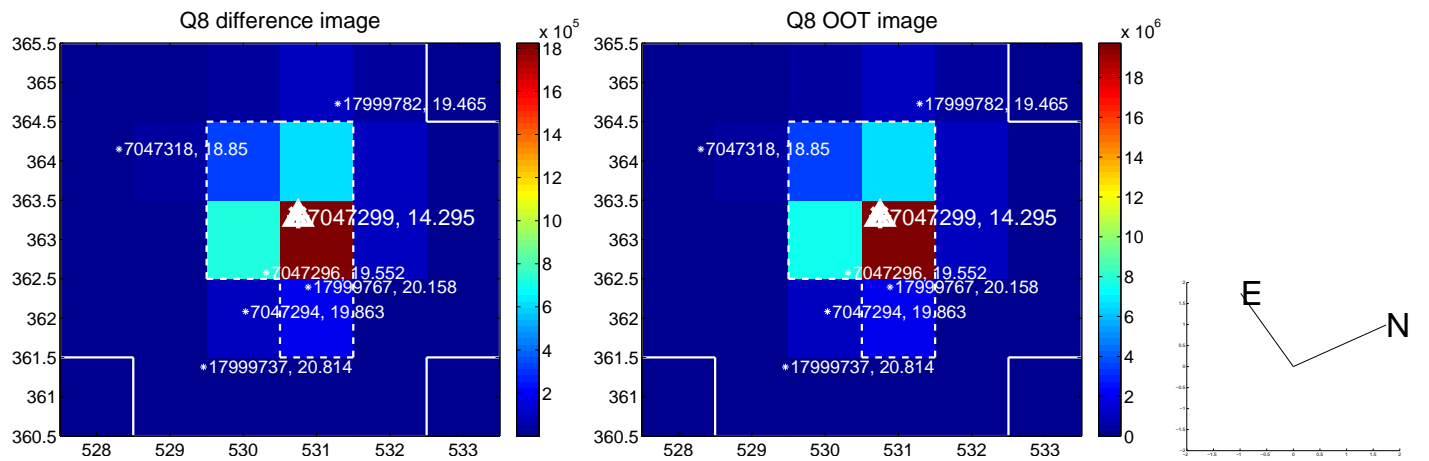
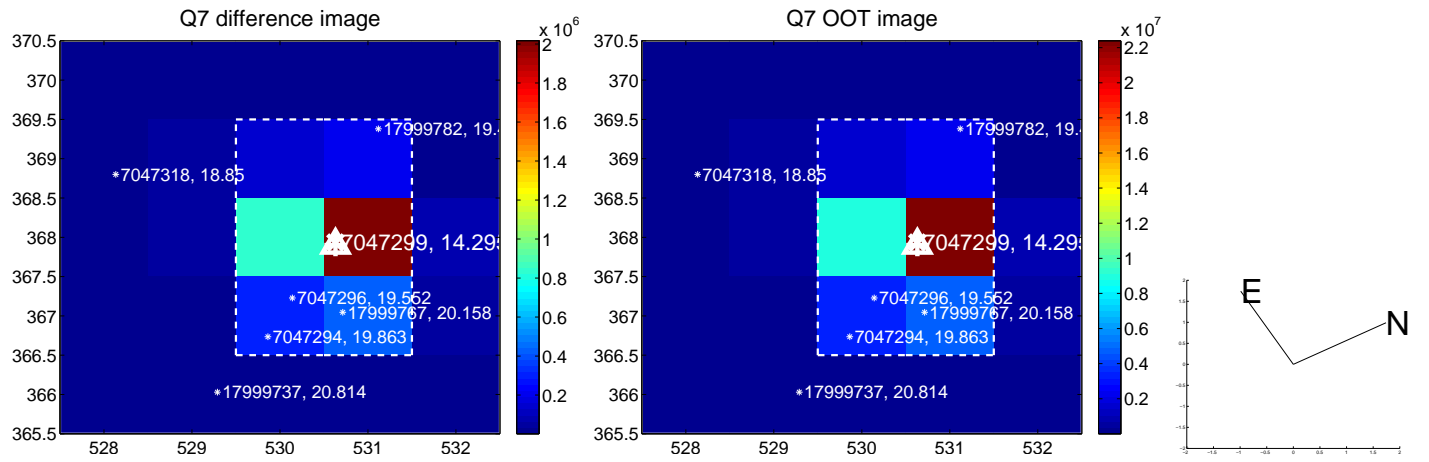
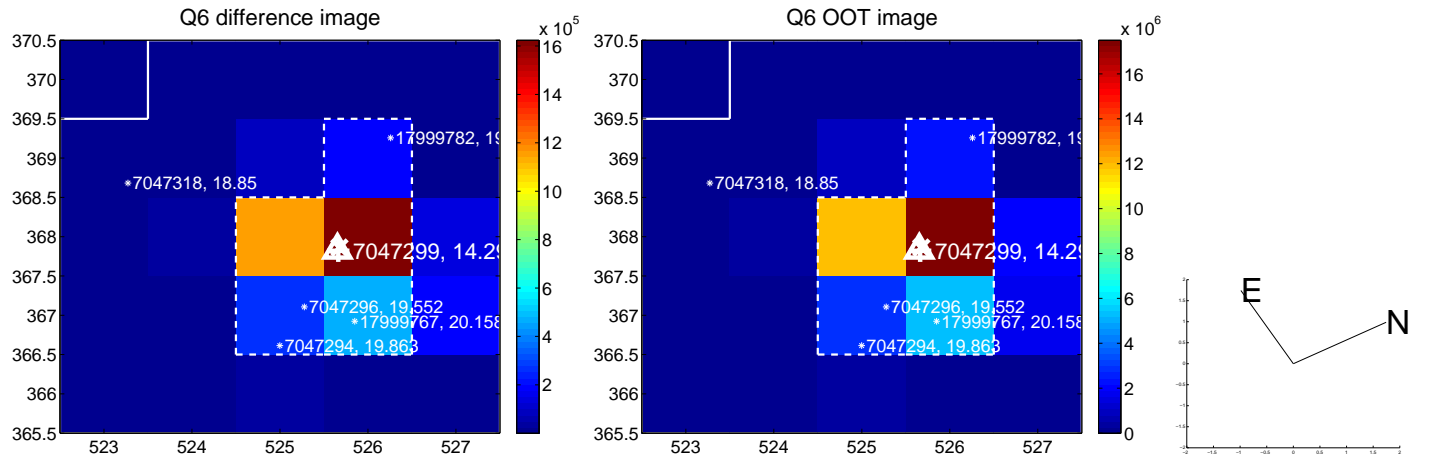
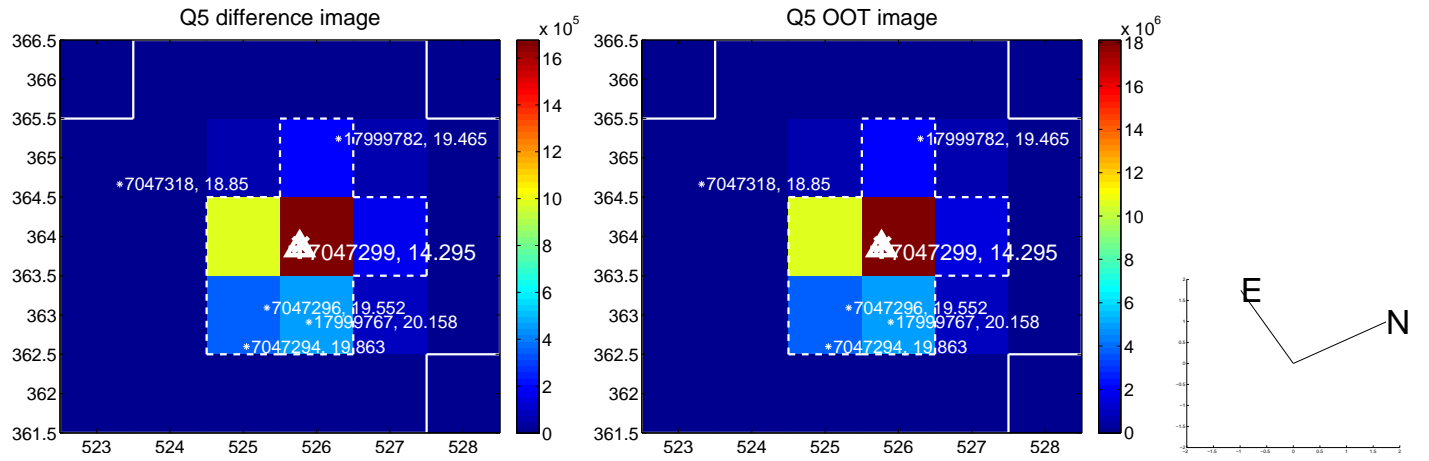


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

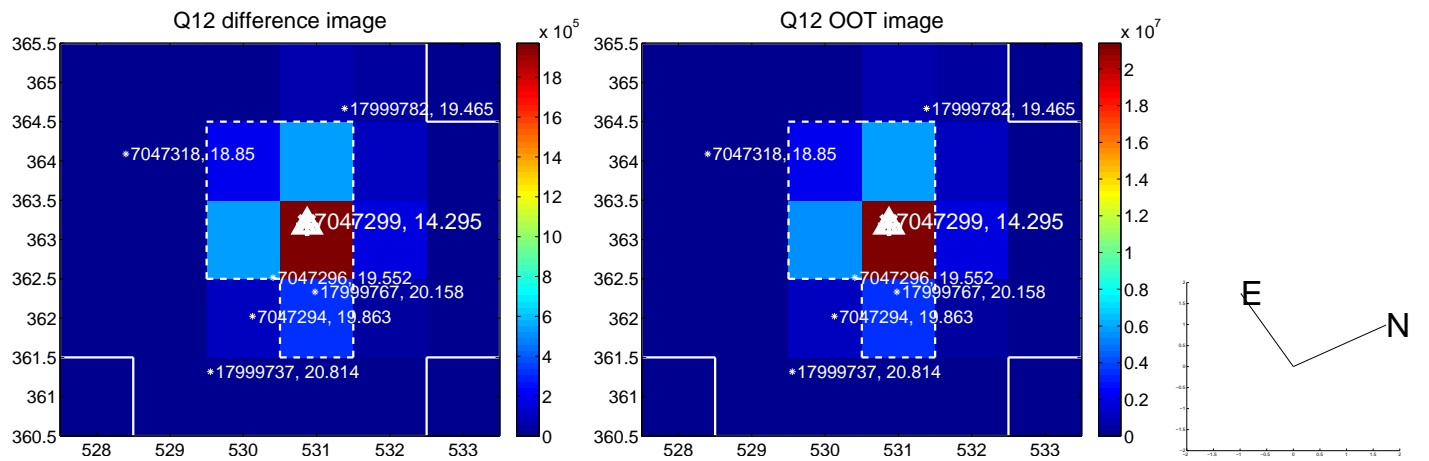
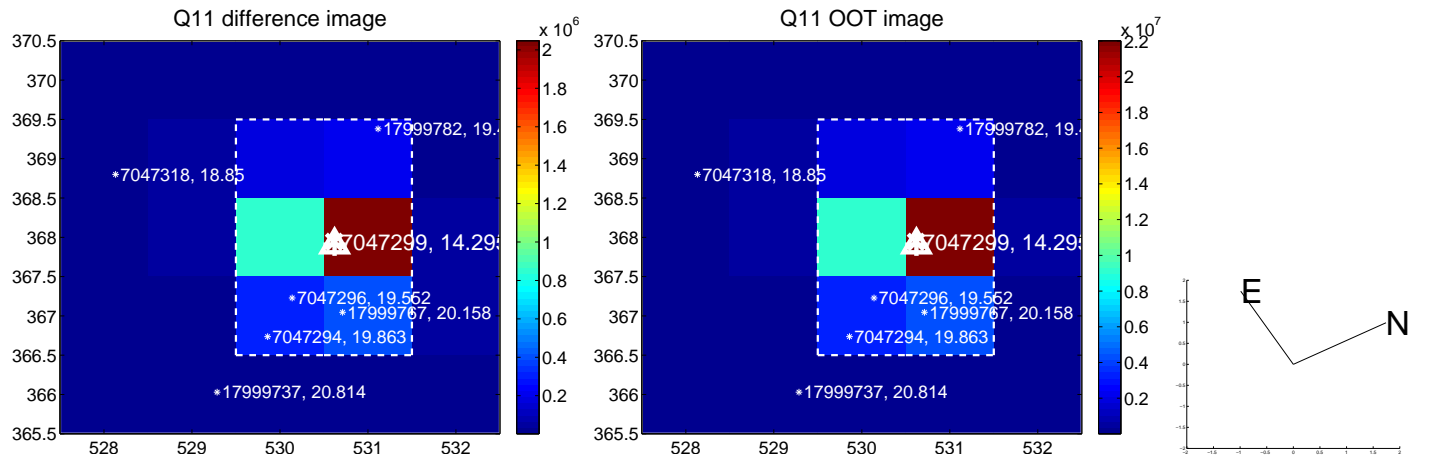
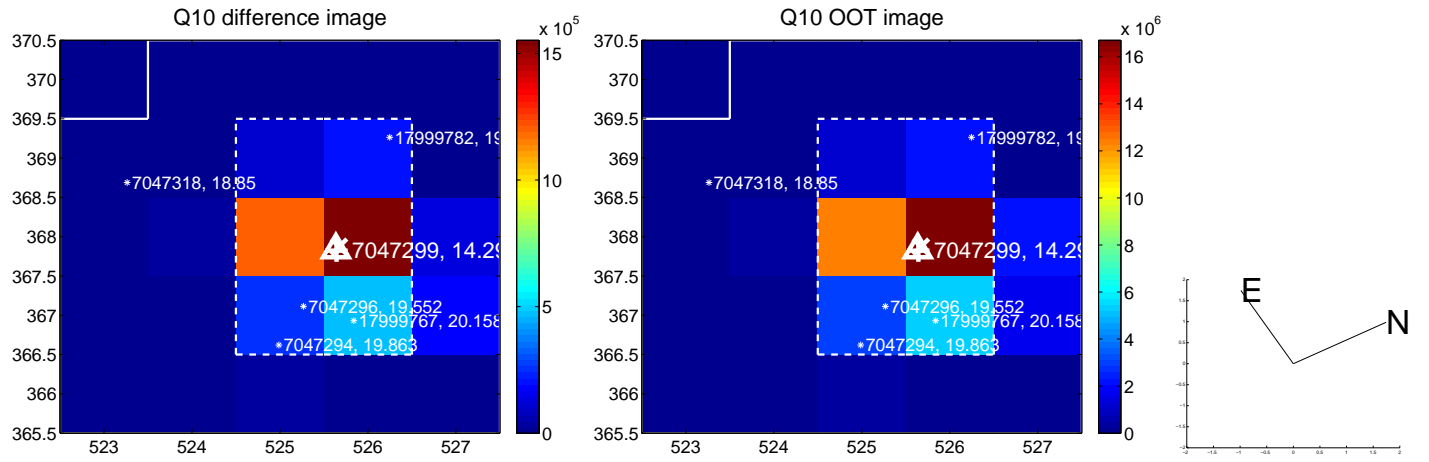
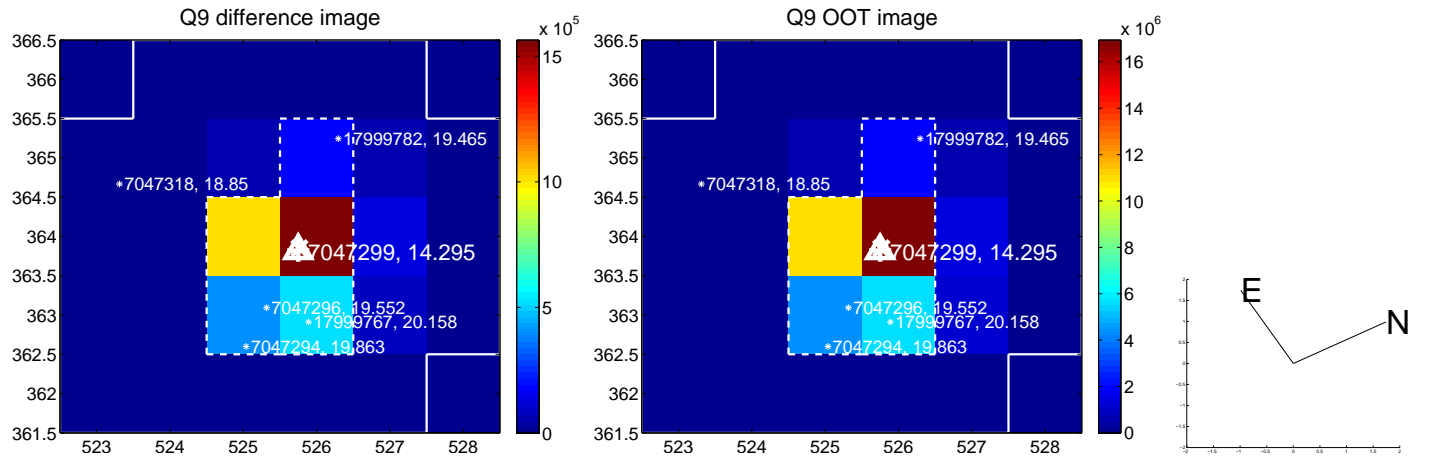
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



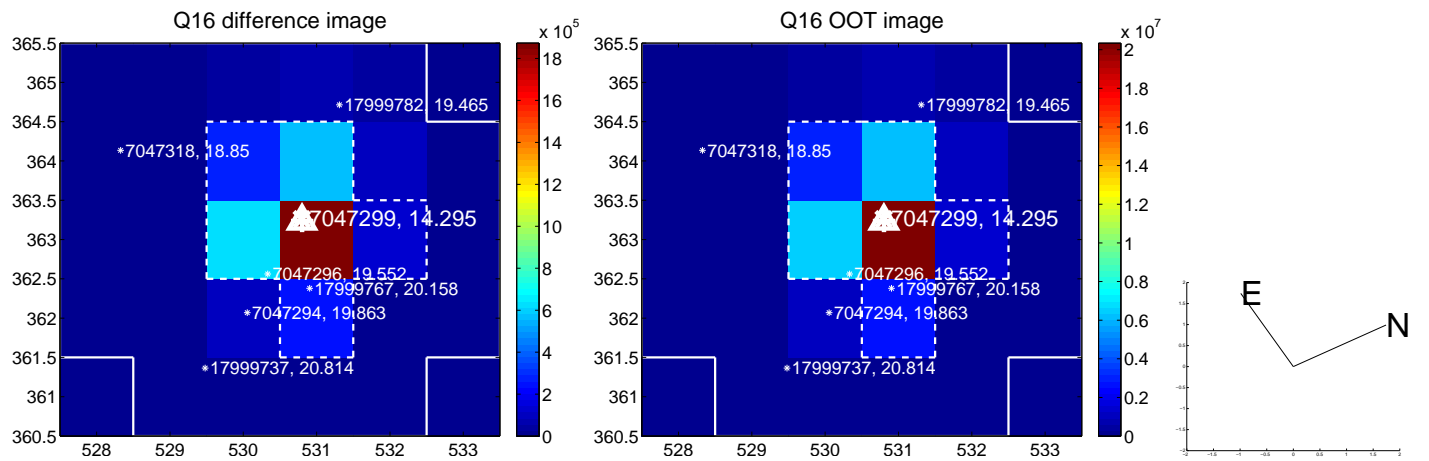
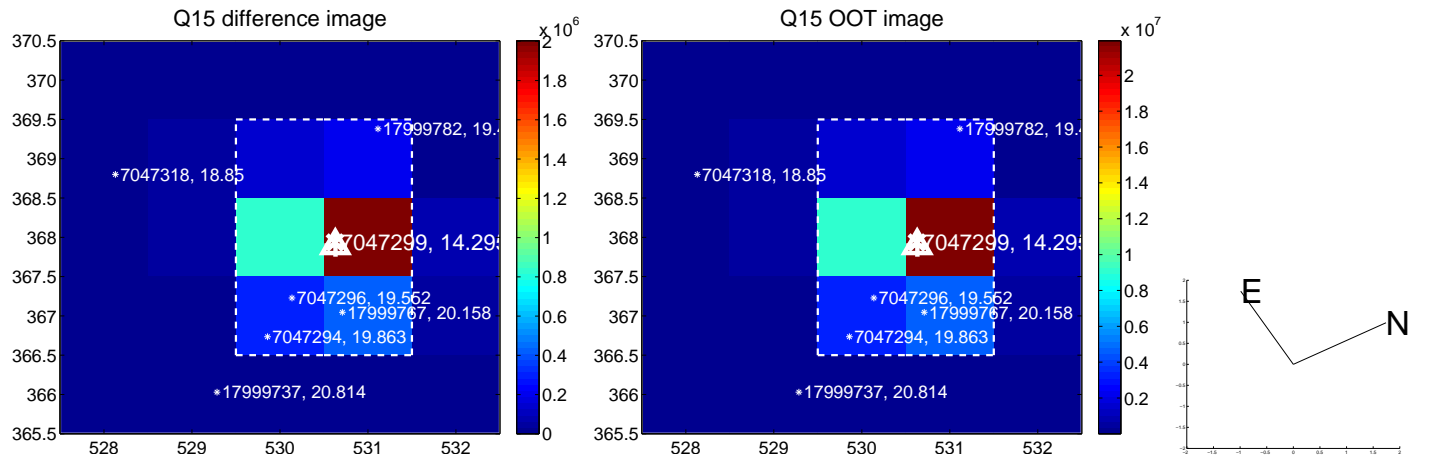
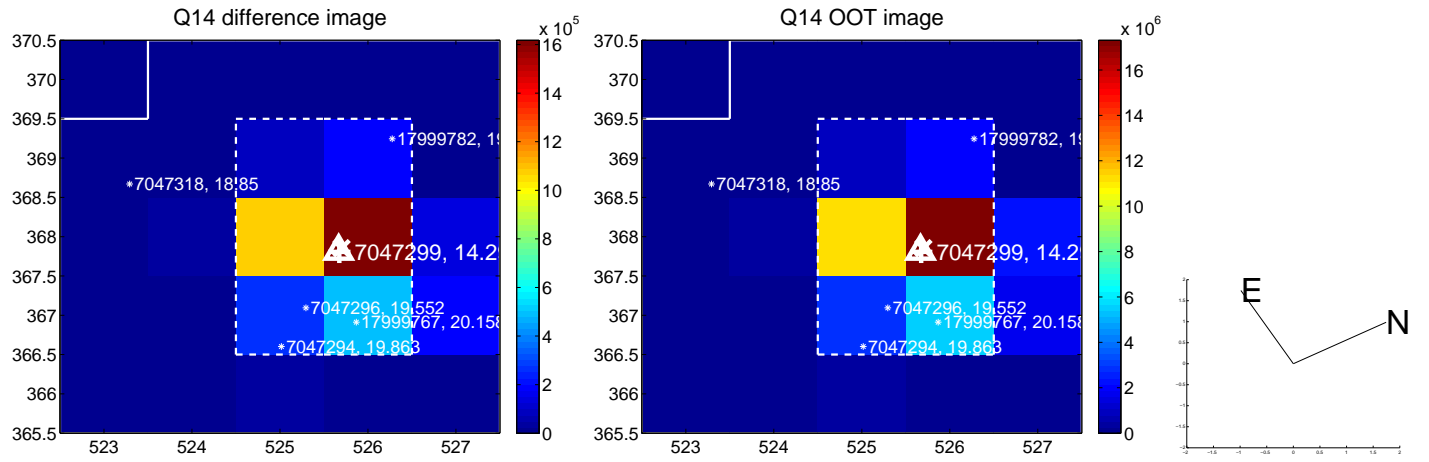
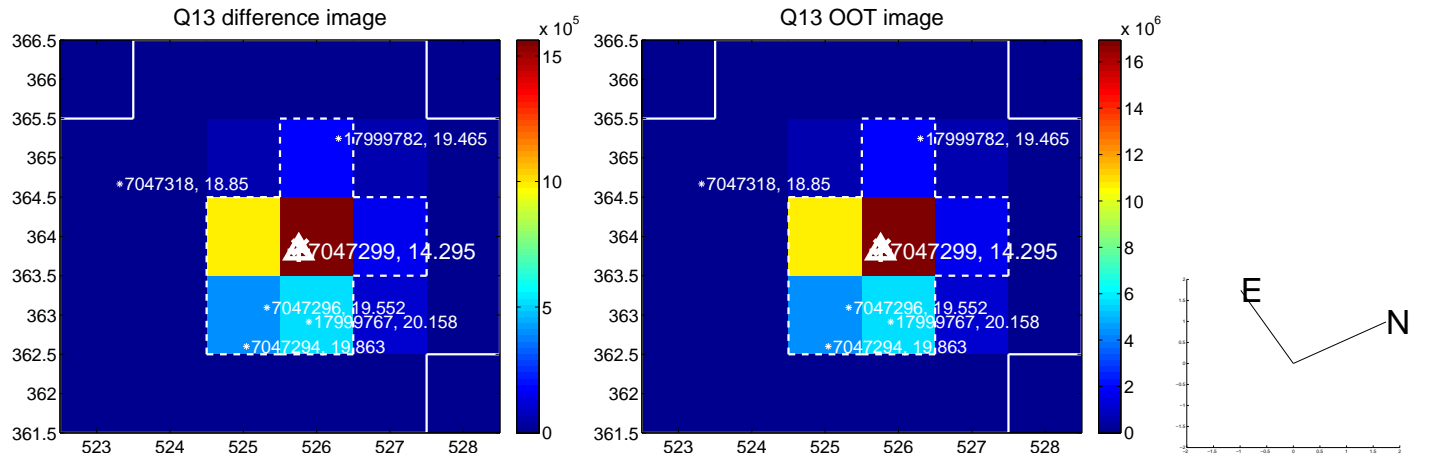
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



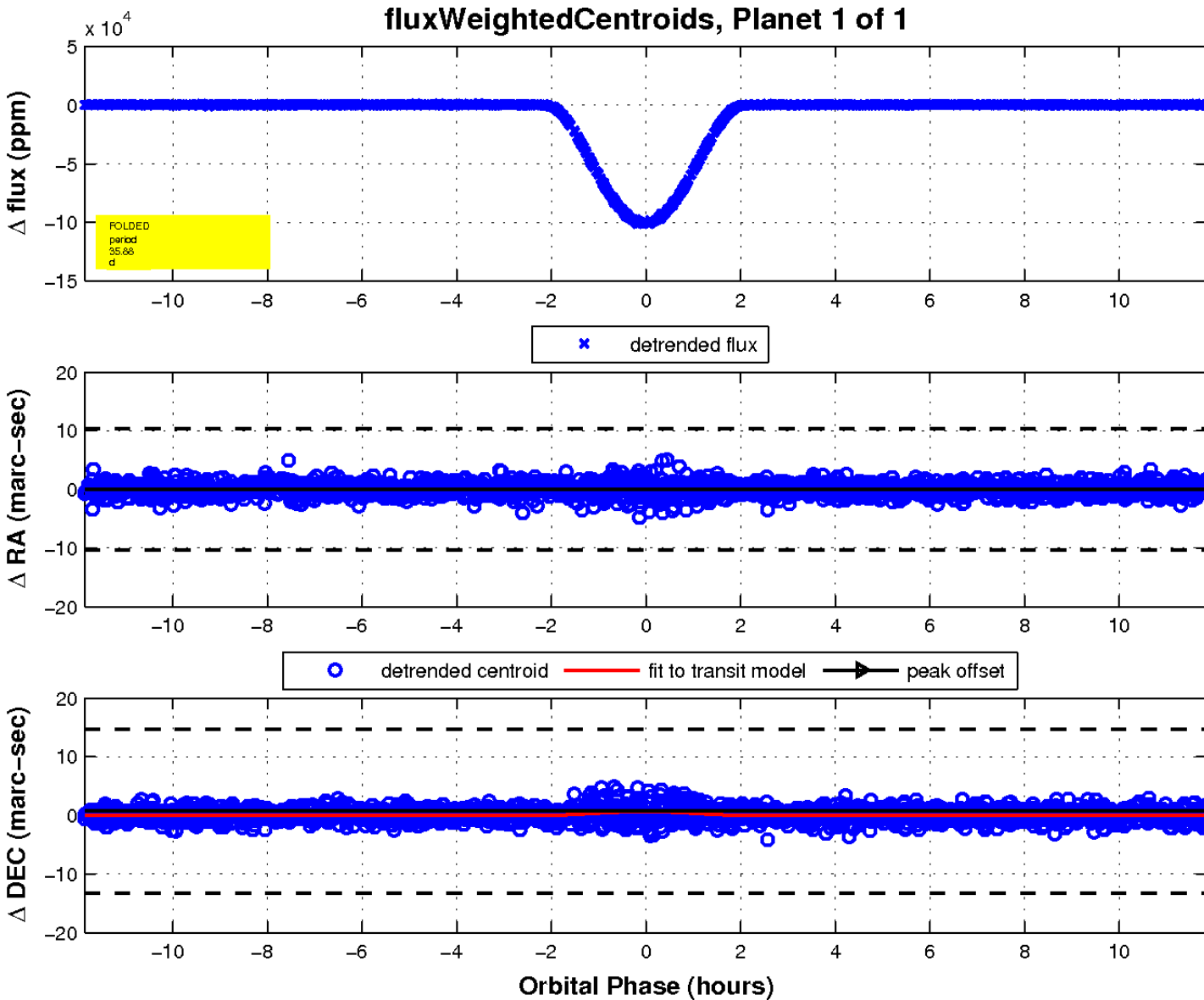
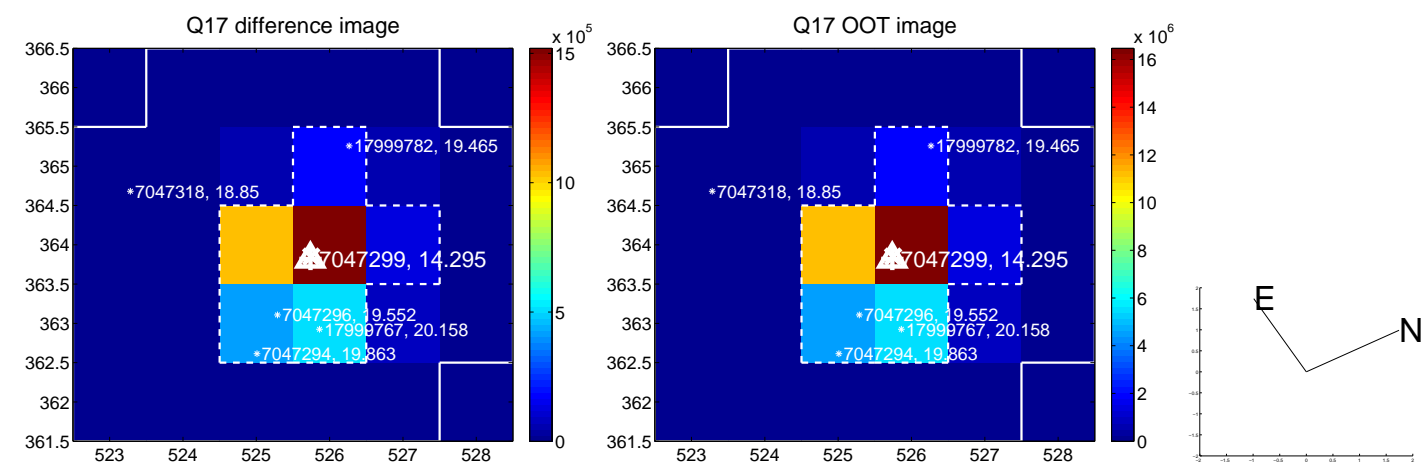
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

