

KIC 007743464

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})
007743464-01	OBS	5417.01	55.249013	164.978806	205060.5	5.150	4942.5	3517.1	1.01	6063	67.93	14.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007743464-01	OBS	FP	0.00	0	1	0	0	MOD_ODDEVEN_DV—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.

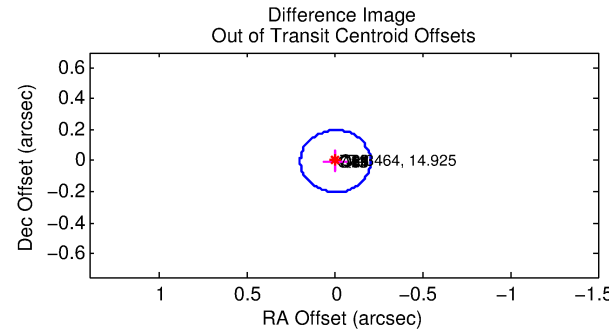
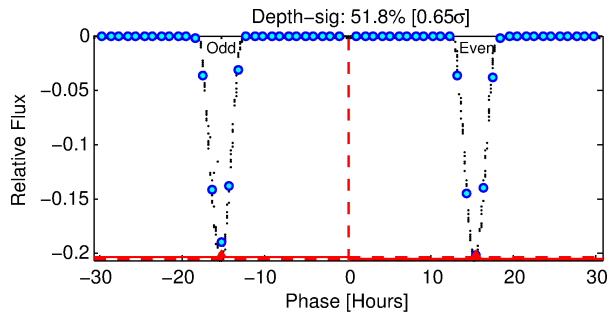
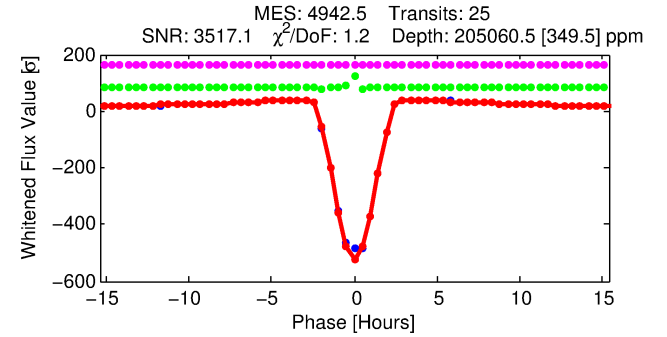
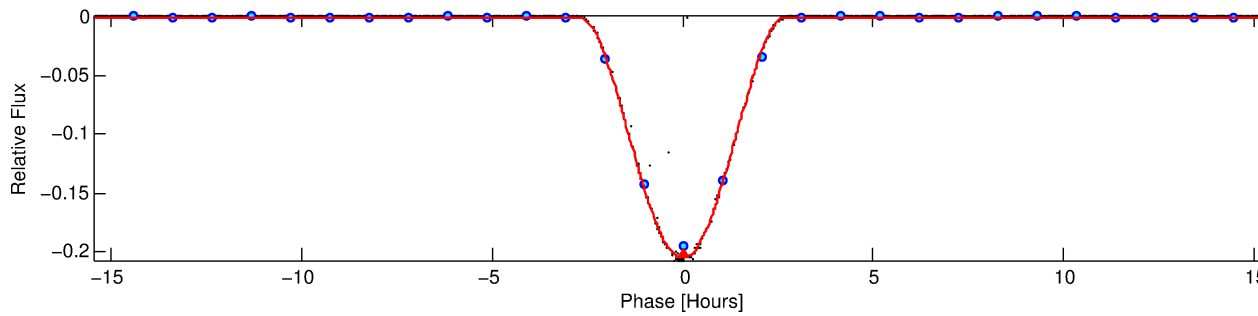
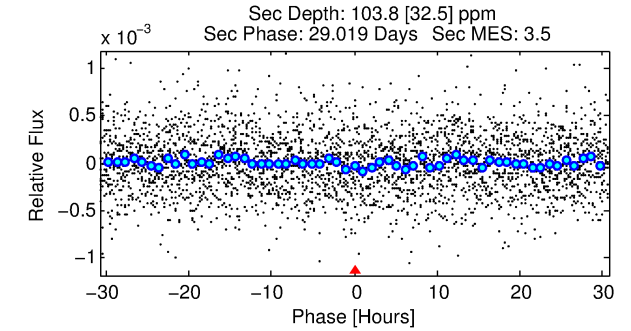
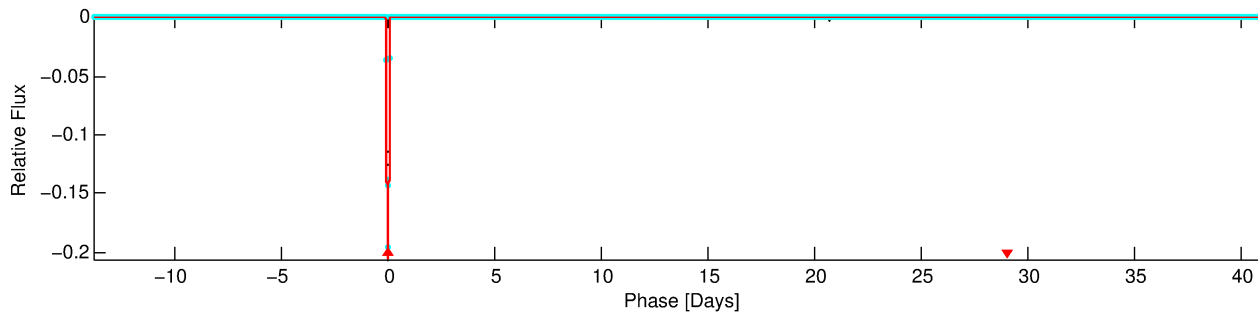
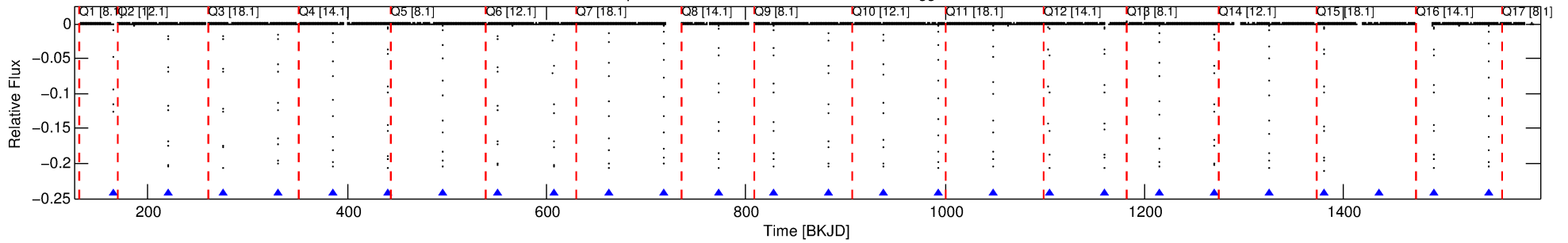
Ephemeris Match Information For 007743464-01

No Significant Match Found

DV One-Page Summary

KIC: 7743464 Candidate: 1 of 1 Period: 55.249 d
KOI: K05417.01 Corr: 1.000

Kp: 14.93 R*: 1.01 Rs Teff: 6063.0 K Logg: 4.48 Fe/H: 0.070



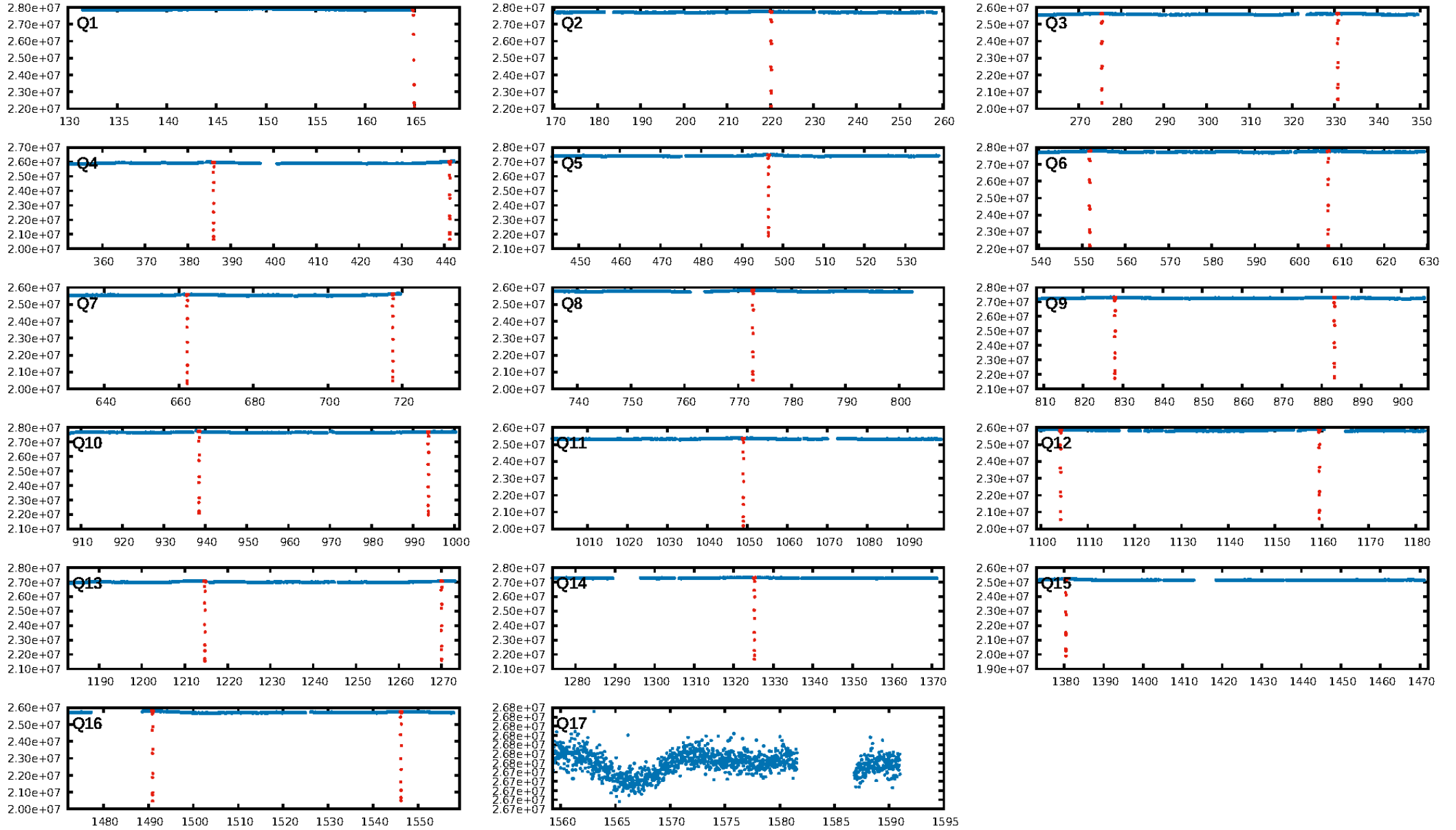
DV Fit Results:

Period = 55.24901 [0.00001] d
Epoch = 164.9788 [0.0001] BKJD
Rp/R* = 0.6151 [0.0490]
a/R* = 110.95 [1.40]
b = 0.88 [0.07]
Seff = 14.28 [6.06]
Teq = 496 [53] K
Rp = 67.93 [22.67] Re
a = 0.2947 [0.0803] AU
Ag = 1.08 [0.57] [0.13σ]
Teffp = 780 [75] K [3.11σ]

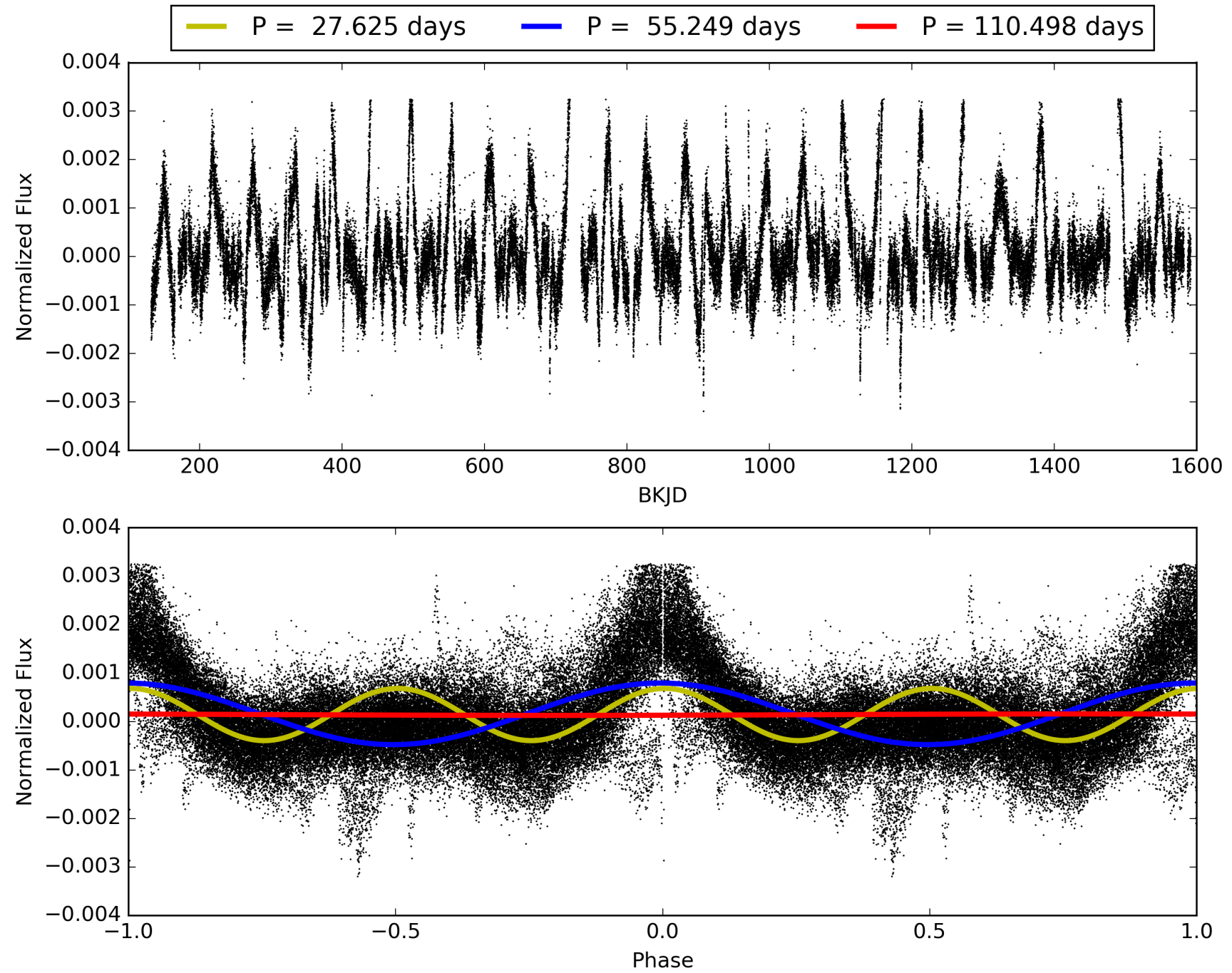
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 8.2%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [24/24]
GhostDiagnostic-chr: 4.139
Centroid-sig: 0.0%
Centroid-so: 0.123 arcsec [53.23σ]
OotOffset-rm: 0.004 arcsec [0.07σ]
KicOffset-rm: 0.115 arcsec [1.66σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 1.00 [15/15]
DiffImageOverlap-fno: 1.00 [15/15]

TCE 007743464-01, PDC Light Curves

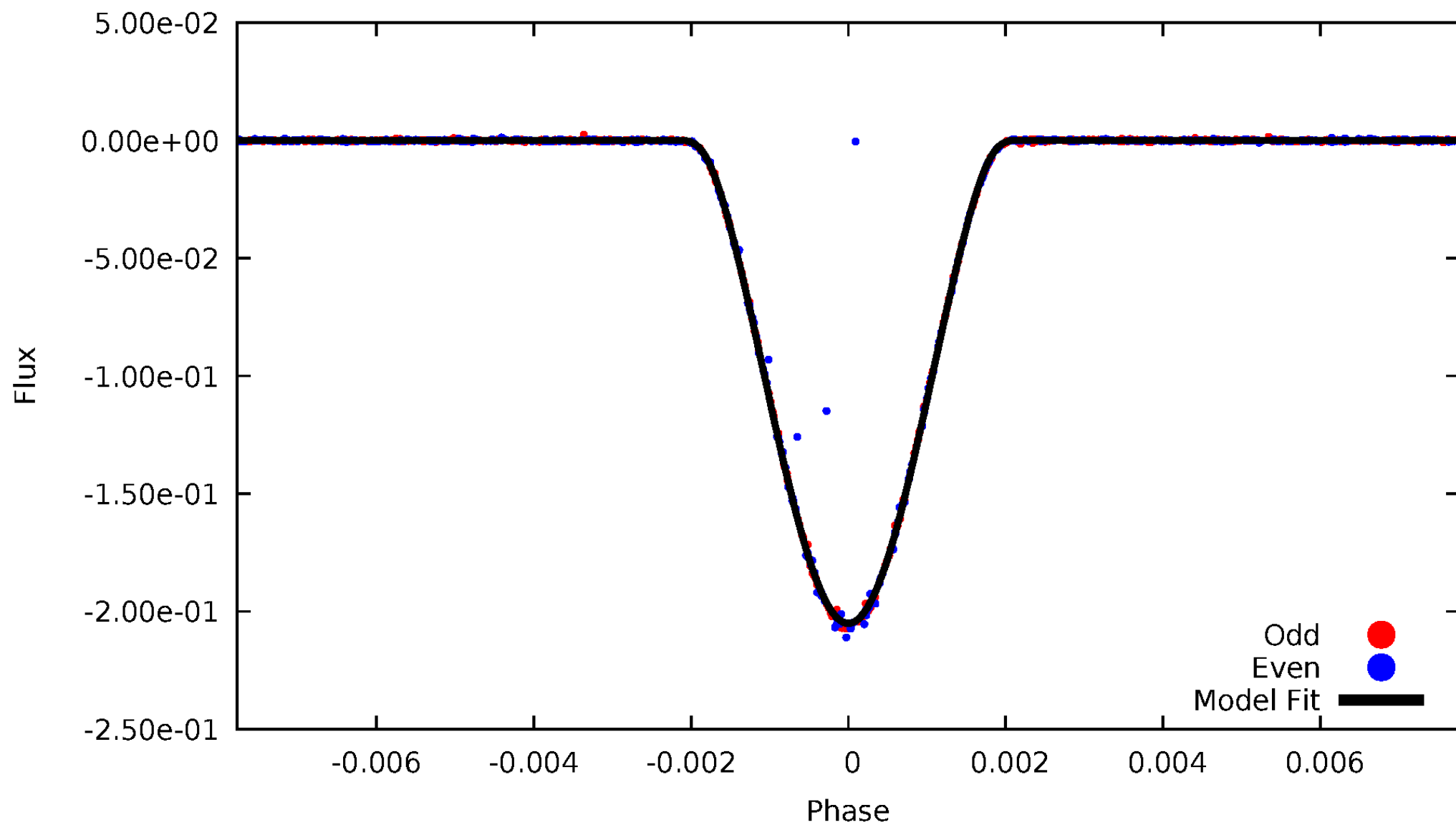


TCE 007743464-01



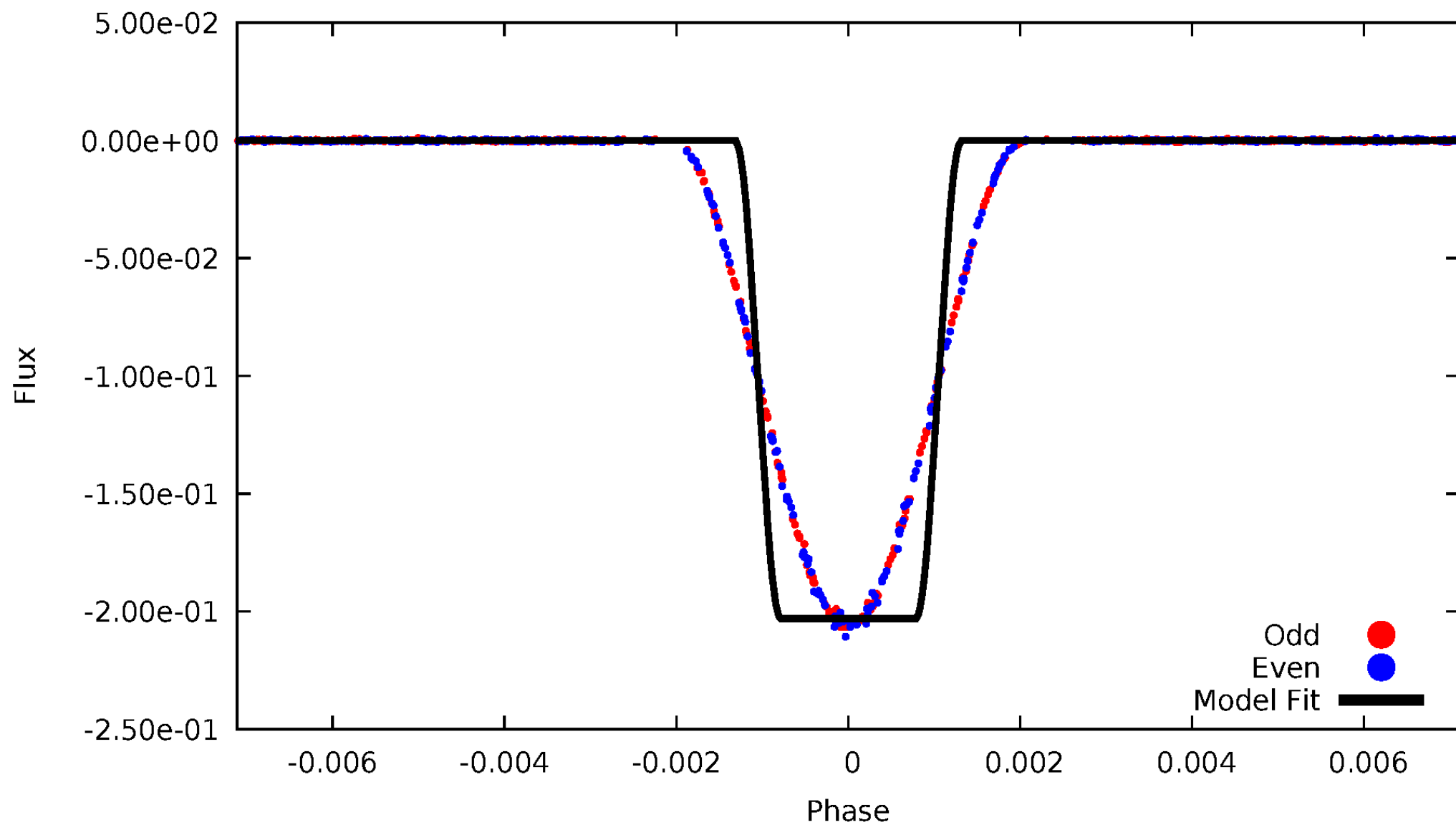
DV Odd/Even

TCE 007743464-01



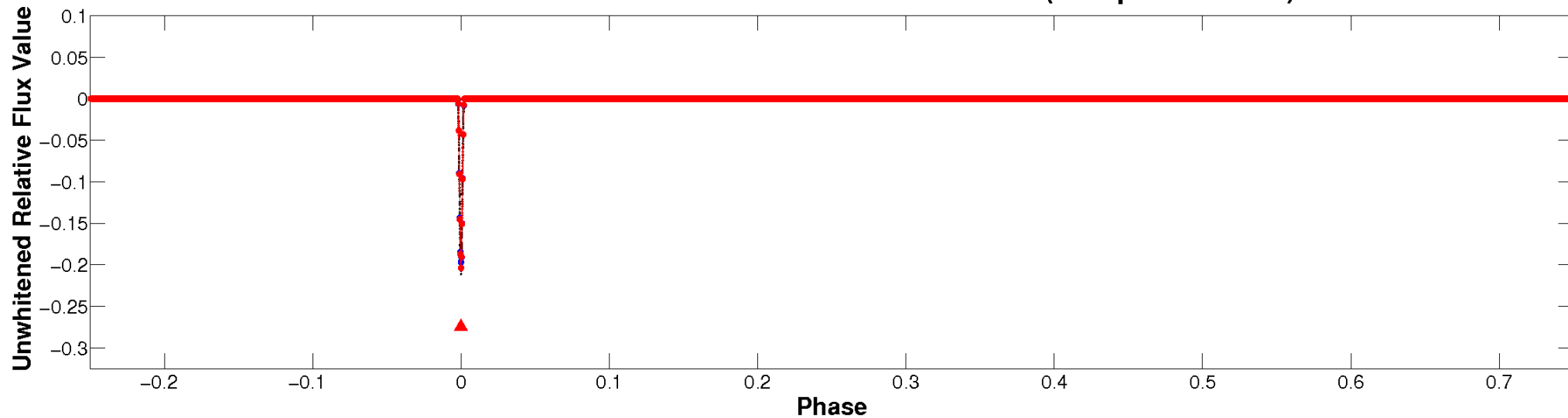
ALT Odd/Even

TCE 007743464-01

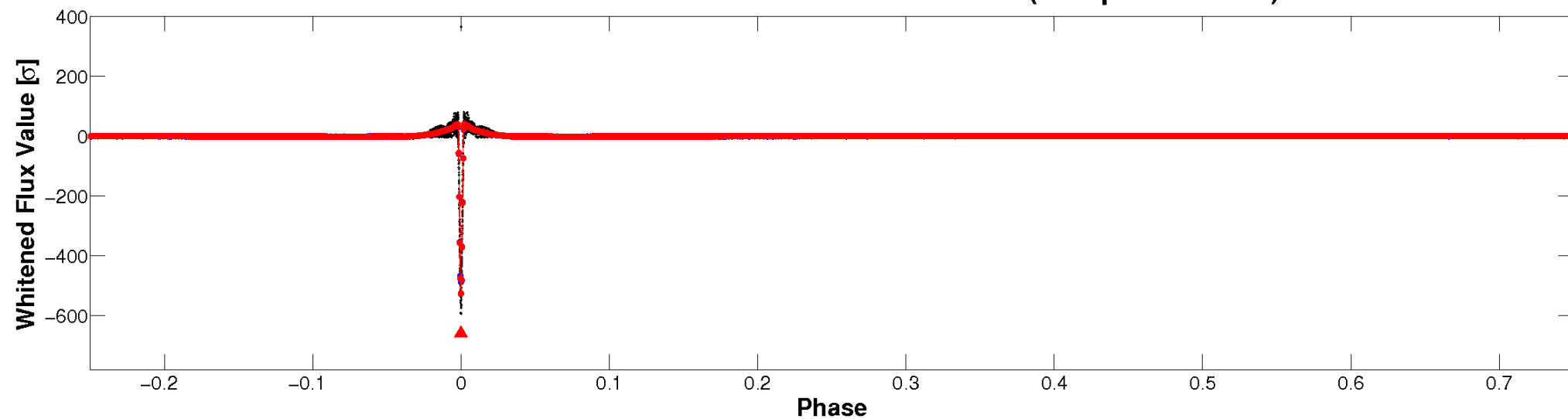


Non-Whitened Vs. Whitened Light Curve

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

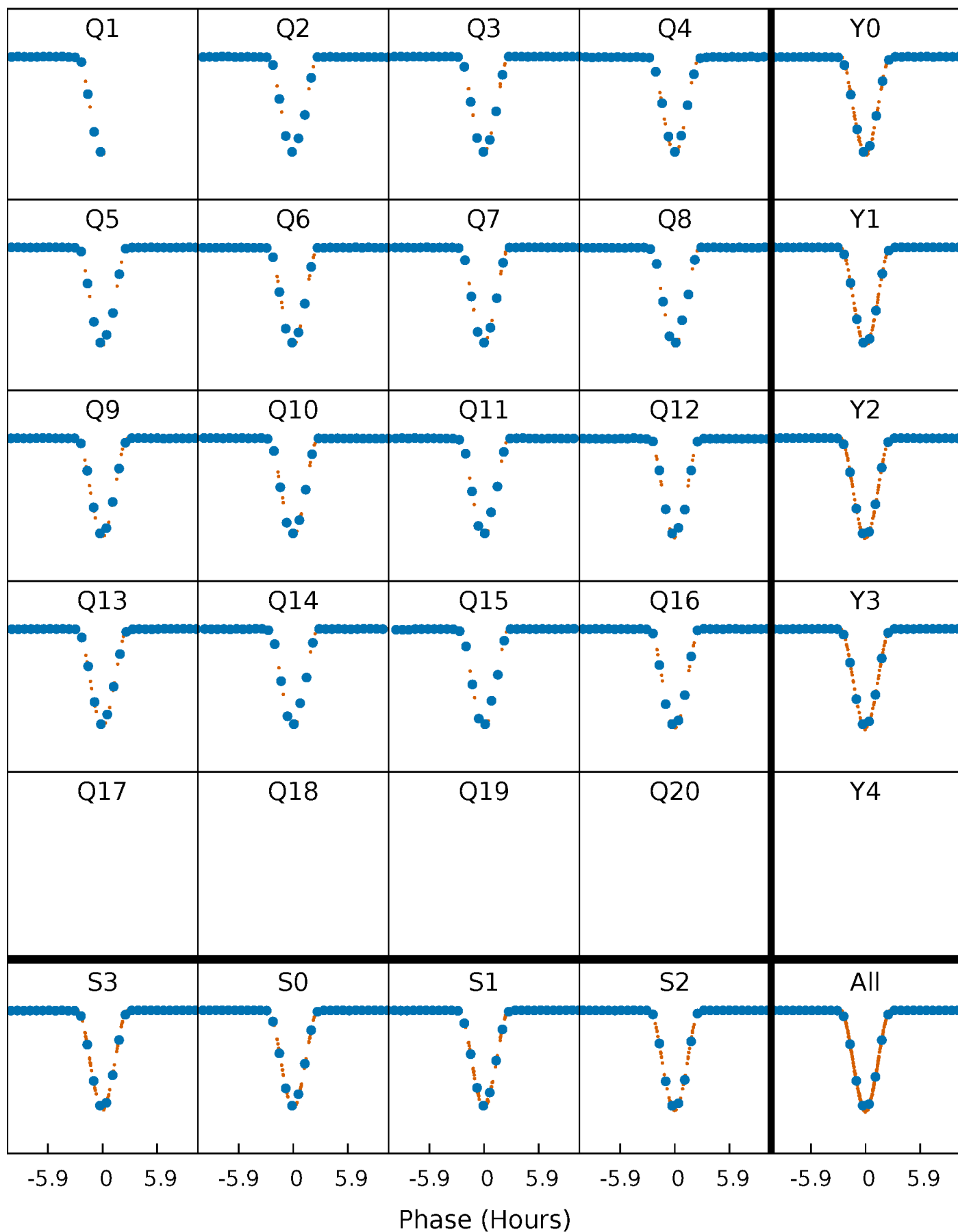


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



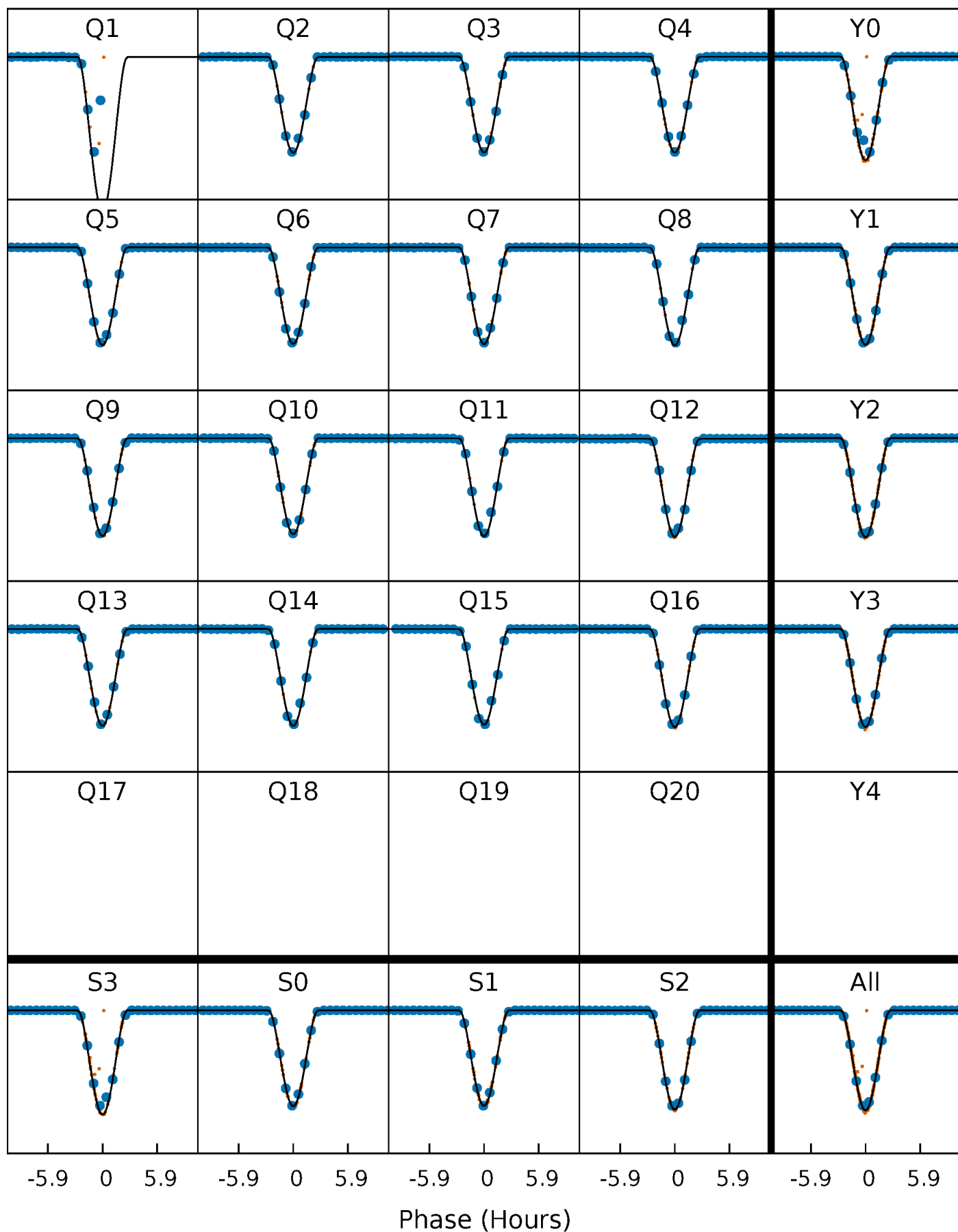
PDC Quarter-Phased Transit Curves

TCE 007743464-01 P= 55.249013 Days $T_0=164.978806$ (BKJD)



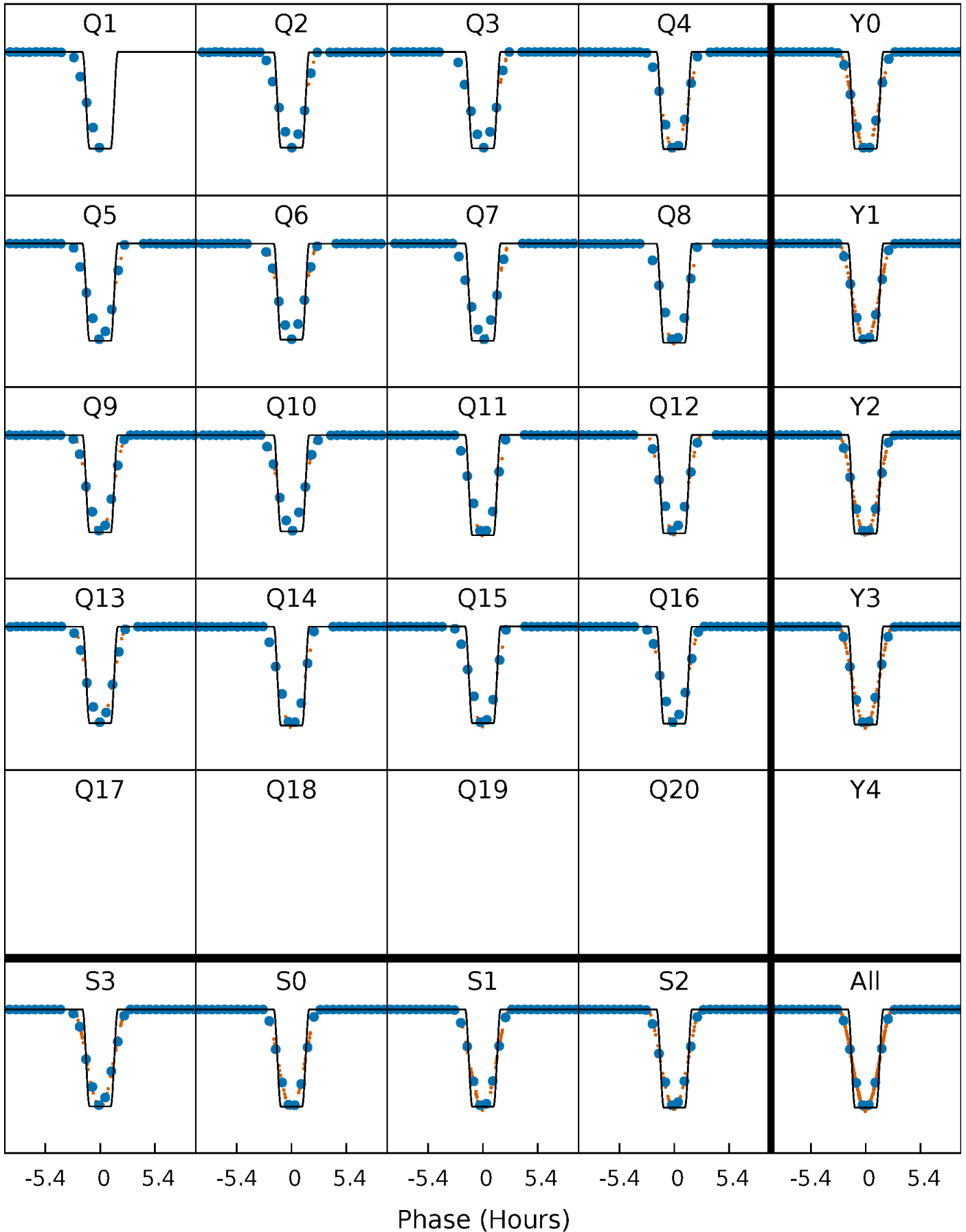
DV Quarter-Phased Transit Curves

TCE 007743464-01 P= 55.249013 Days $T_0=164.978806$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

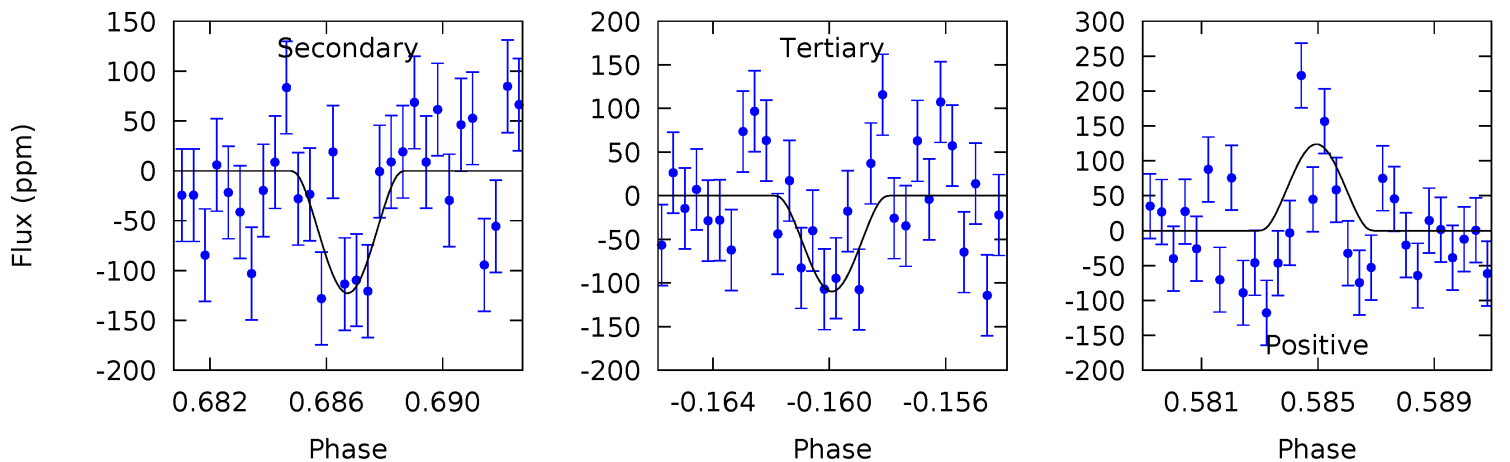
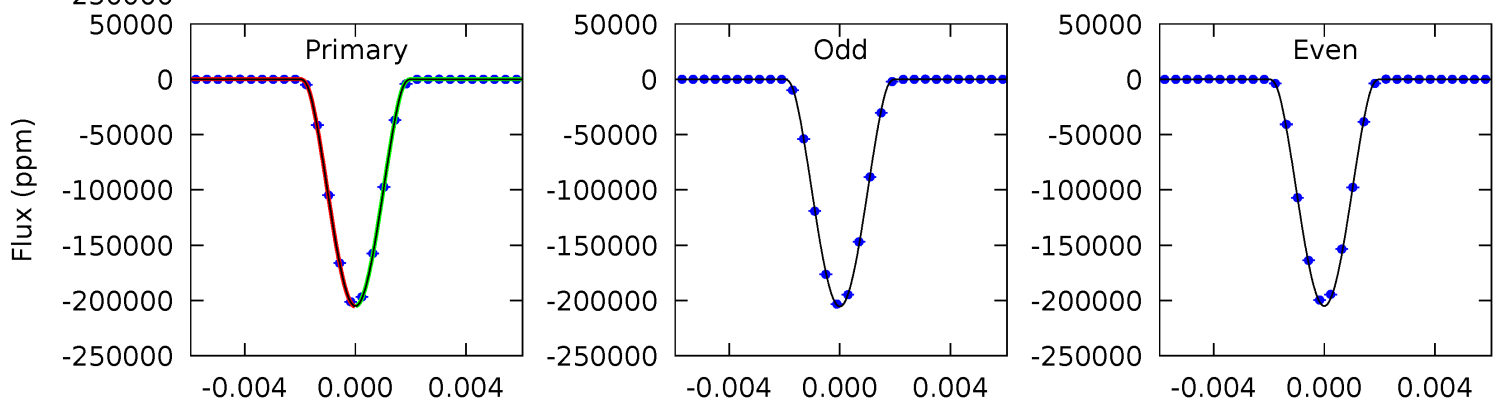
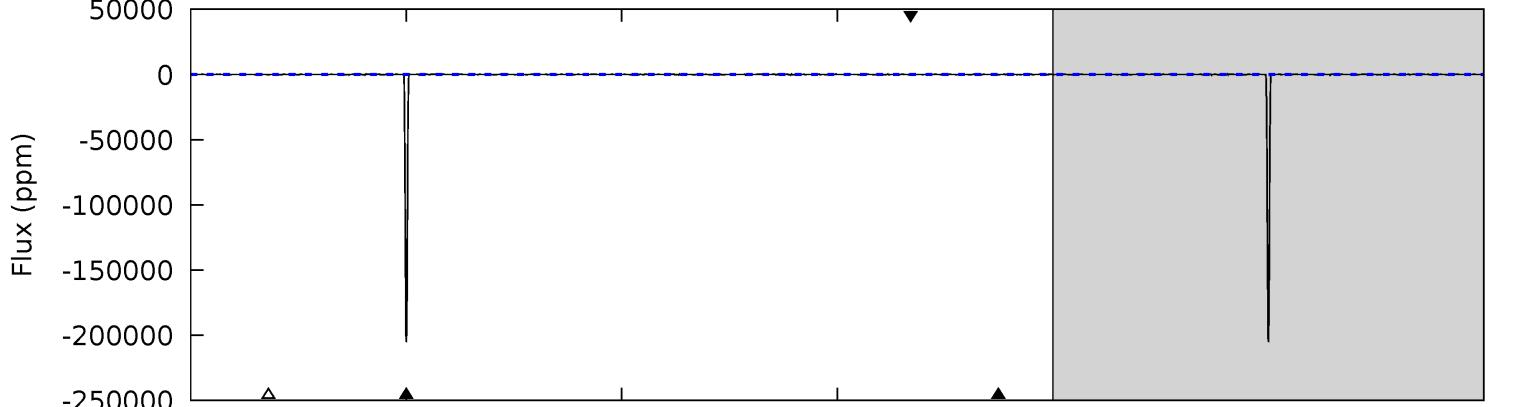
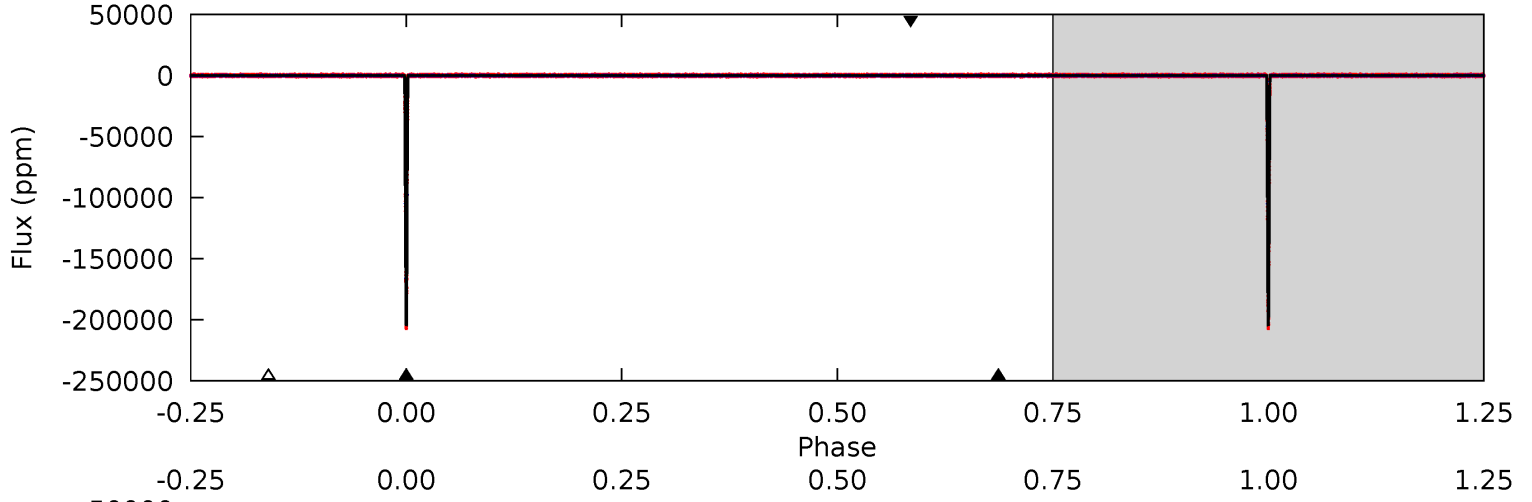
TCE 007743464-01 P= 55.249043 Days $T_0=164.978464$ (BKJD)



DV Model-Shift Uniqueness Test

007743464-01, P = 55.249013 Days, E = 109.729793 Days

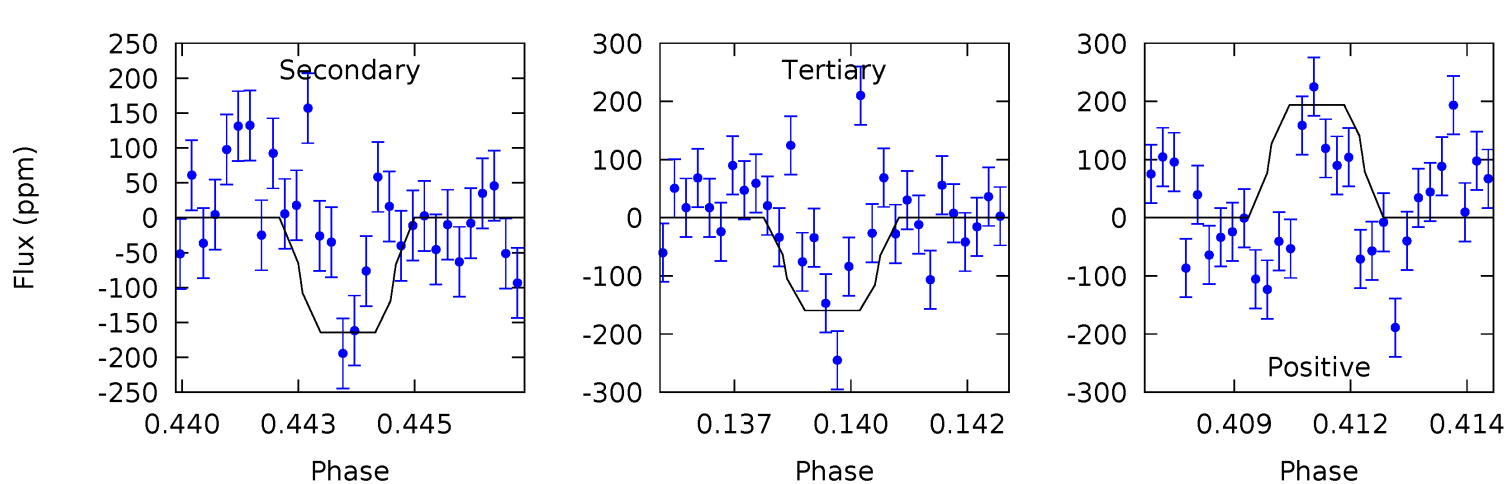
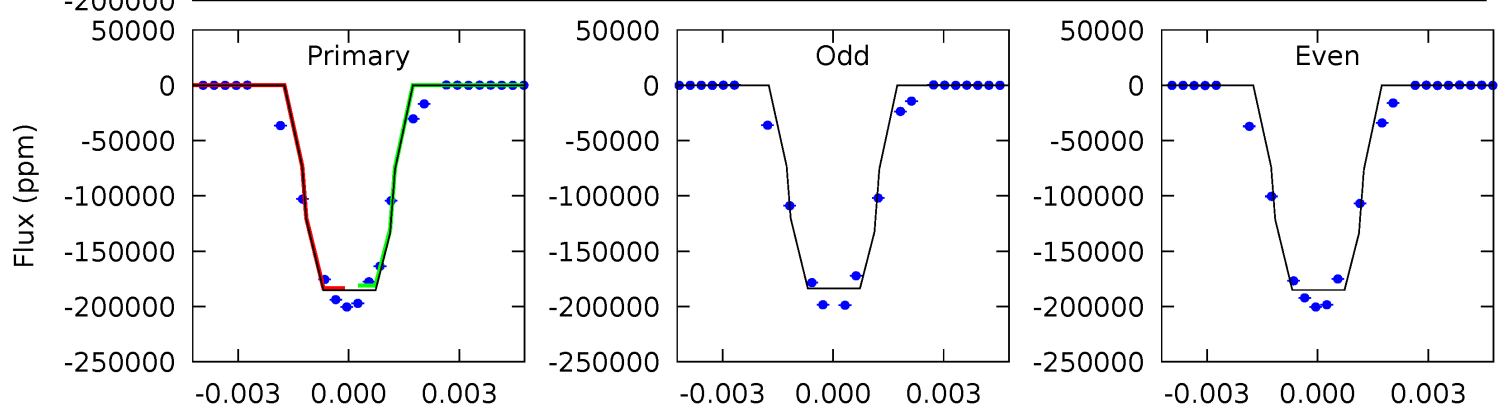
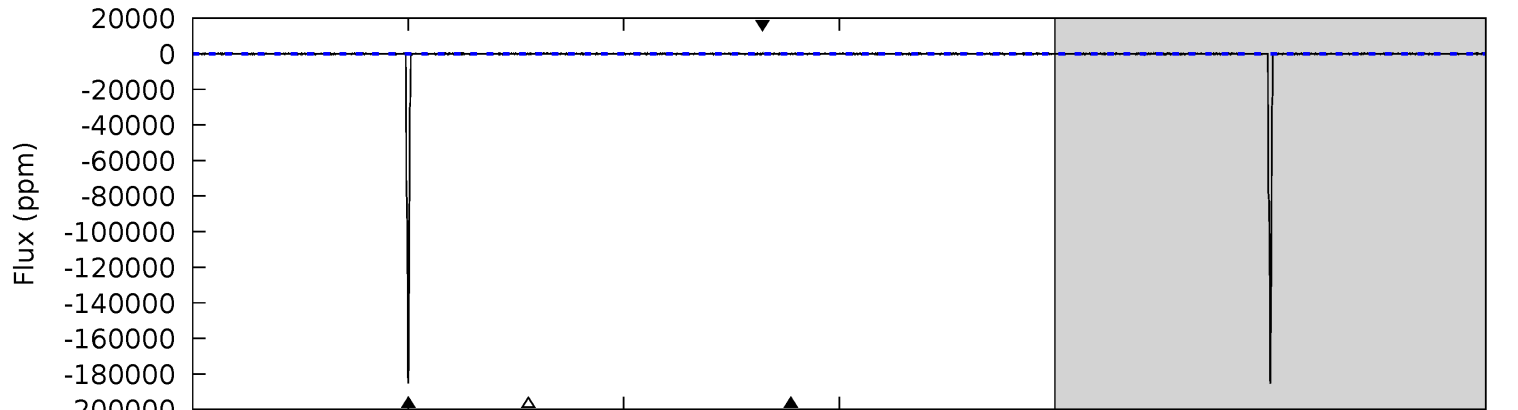
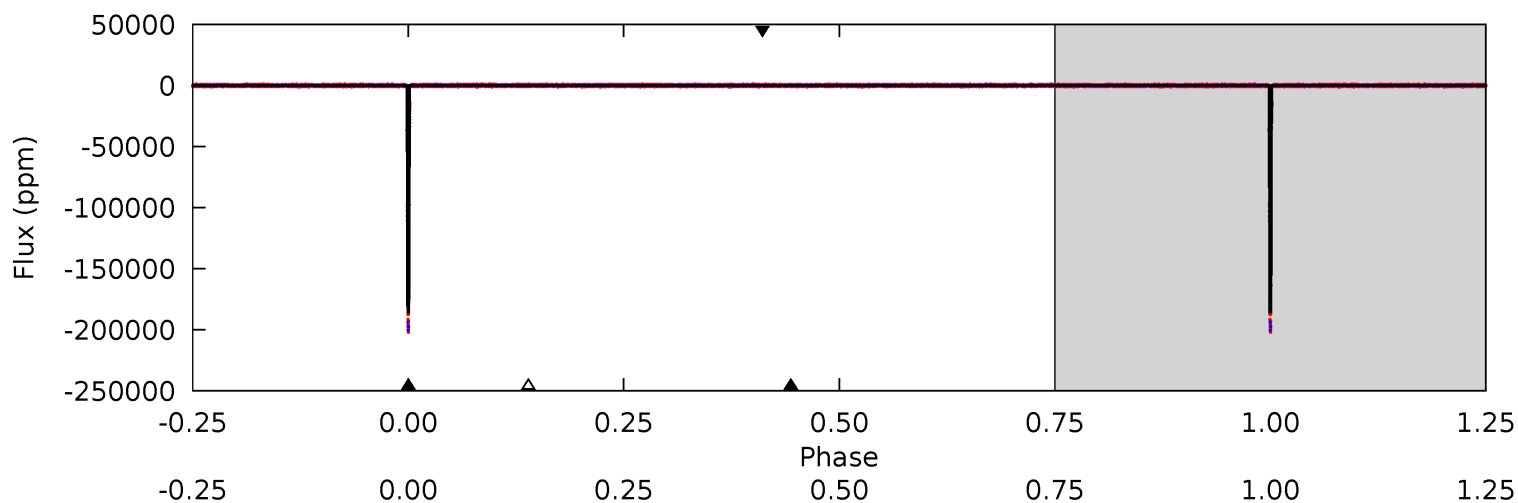
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9798	5.86	5.24	5.92	5.19	2.86	1.88	9792	9792	0.62	-0.06	13.1	0.98	0.00	0



Alt Model-Shift Uniqueness Test

007743464-01, P = 55.249043 Days, E = 109.729421 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4508	3.99	3.88	4.71	5.28	3.01	9.96	4504	4504	0.12	-0.72	18.8	1.00	0.00	0



Stellar Parameters For KIC 007743464

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6063^{+191}_{-233}	$4.476^{+0.040}_{-0.216}$	$0.070^{+0.250}_{-0.300}$	$1.012^{+0.328}_{-0.109}$	$1.117^{+0.132}_{-0.162}$	$1.519^{+0.341}_{-0.807}$
	+3%/-4%	+1%/-5%	+357%/-429%	+32%/-11%	+12%/-15%	+22%/-53%
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 007743464-01 / KOI 5417.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-123 ± 21	$70.95^{+12.21}_{-7.76}$	709^{+53}_{-35}	1786^{+63}_{-69}	$1.110^{+0.376}_{-0.324}$
Alt.	-164 ± 41	$52.14^{+10.15}_{-7.44}$	711^{+54}_{-39}	1995^{+81}_{-86}	$2.749^{+1.289}_{-0.997}$

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 $A_{obs} \gg 1.0$

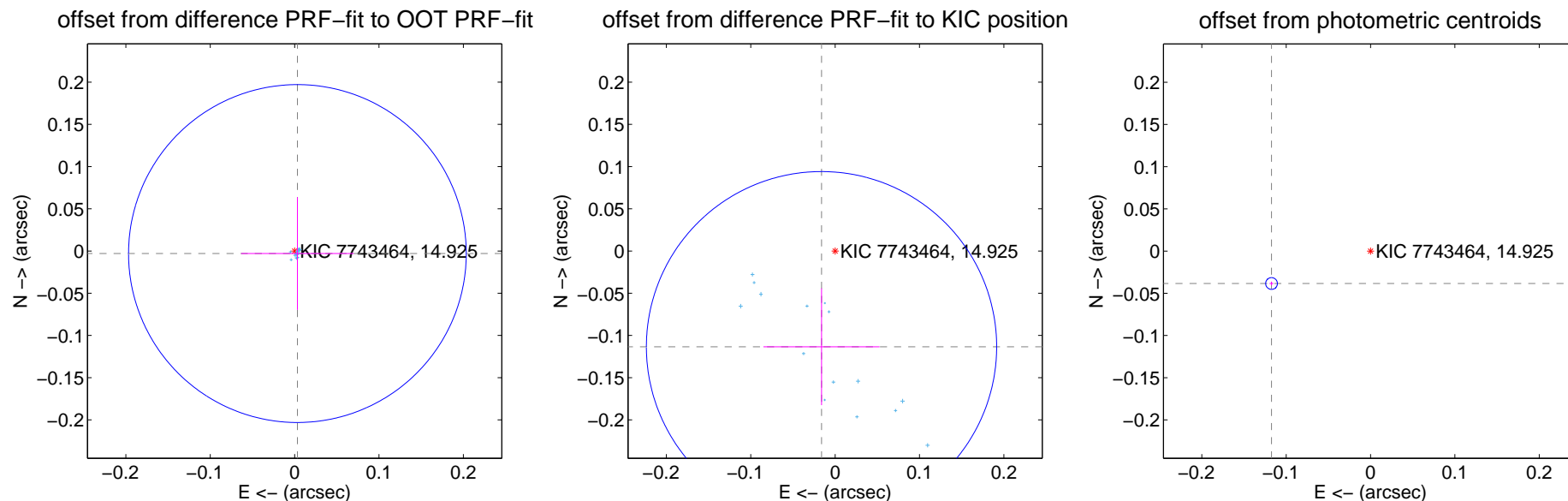
DV Centroid Data

Supplemental centroid analysis for 007743464-01. Kepler magnitude: 14.93. Transit SNR 3517.11

There are 15 quarters with good PRF difference image offsets

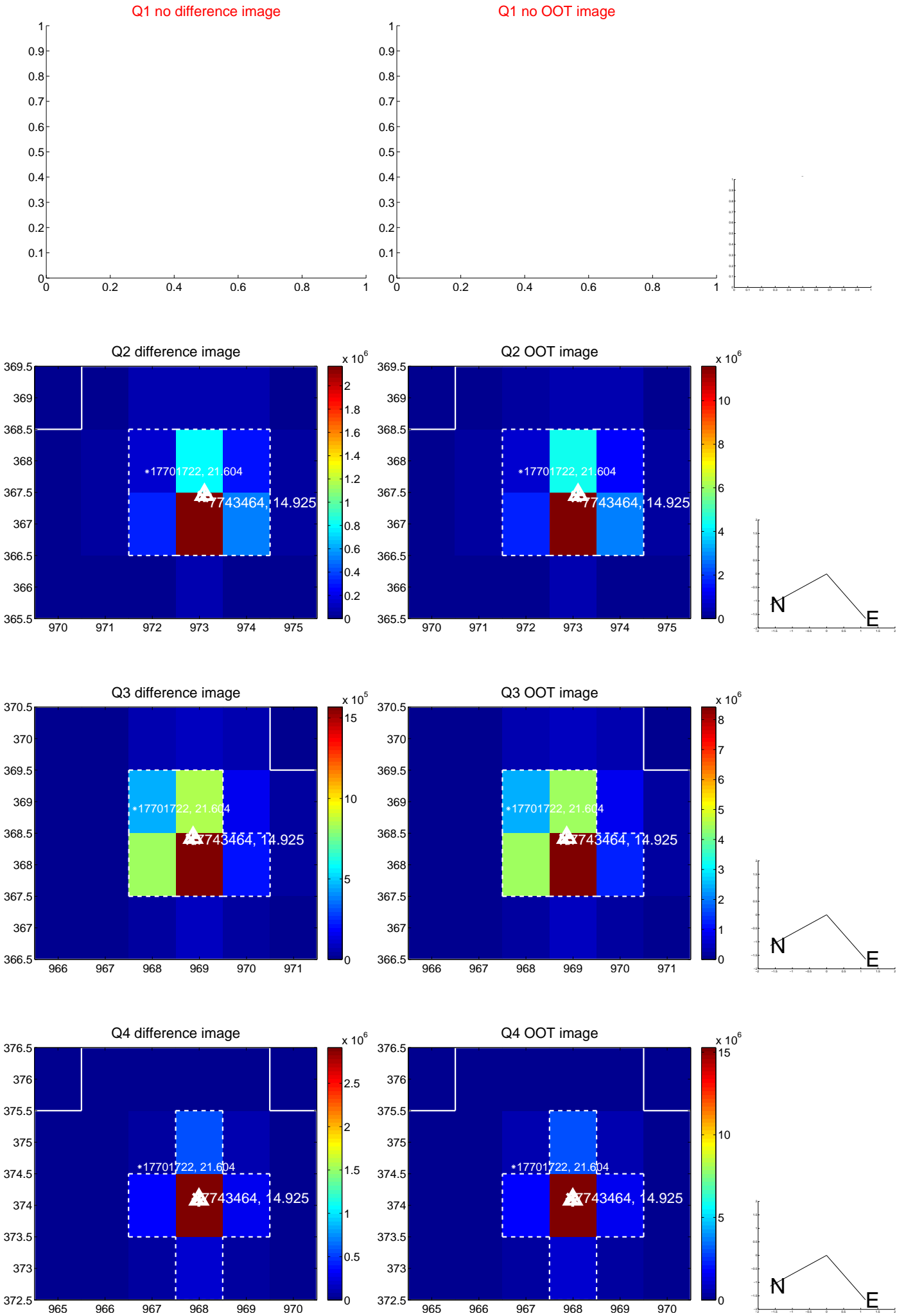
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.004 ± 0.067	0.07	-0.003 ± 0.067	-0.003 ± 0.067
PRF-fit source offset from KIC position	0.115 ± 0.069	1.66	0.016 ± 0.069	-0.113 ± 0.069
photometric centroid source offset	0.12 ± 0.00	53.23	0.12 ± 0.00	-0.04 ± 0.00

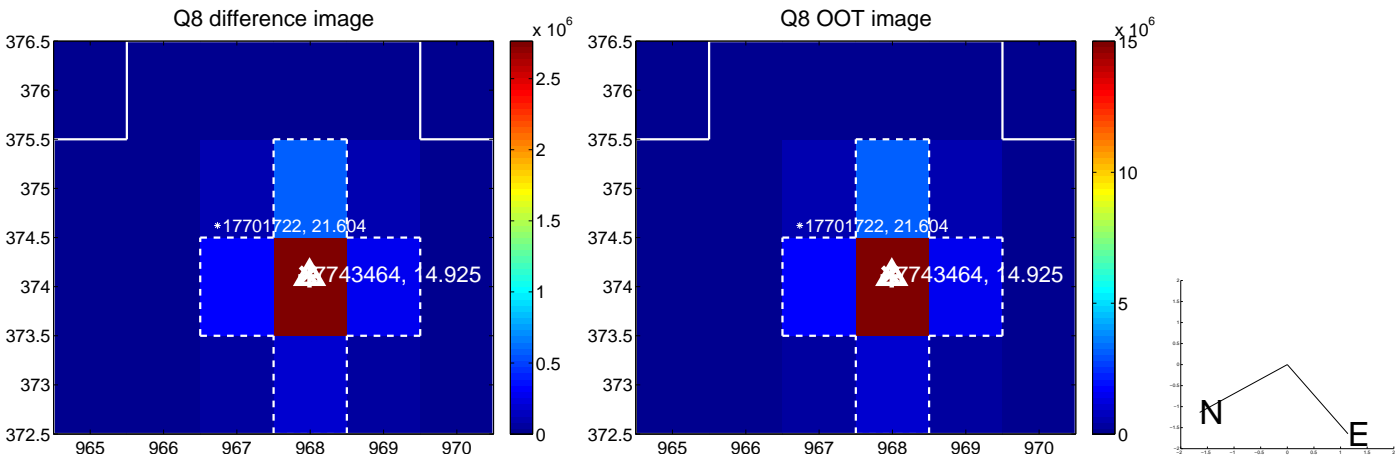
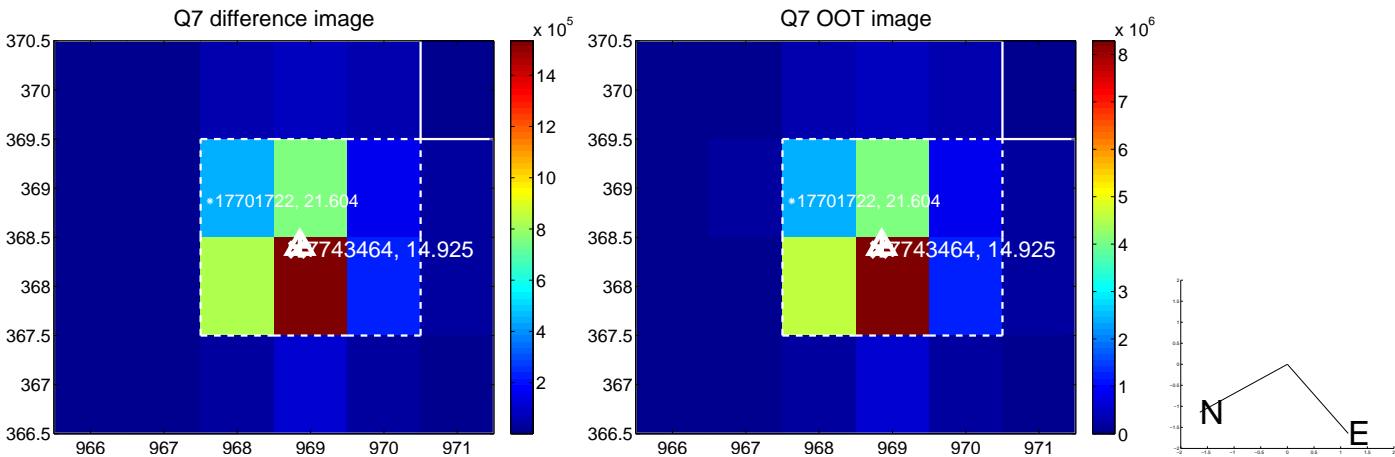
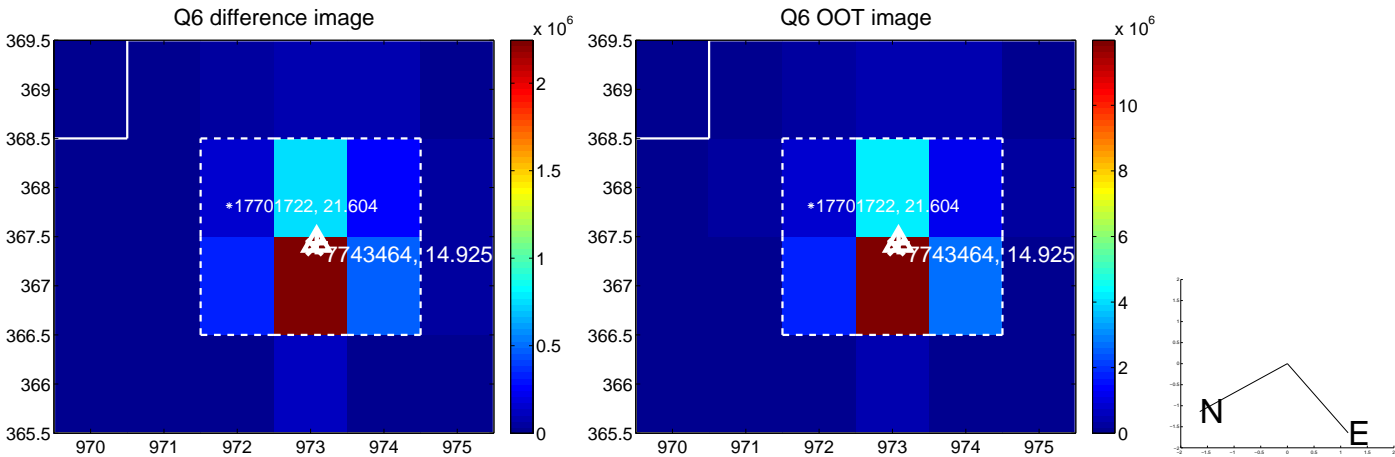
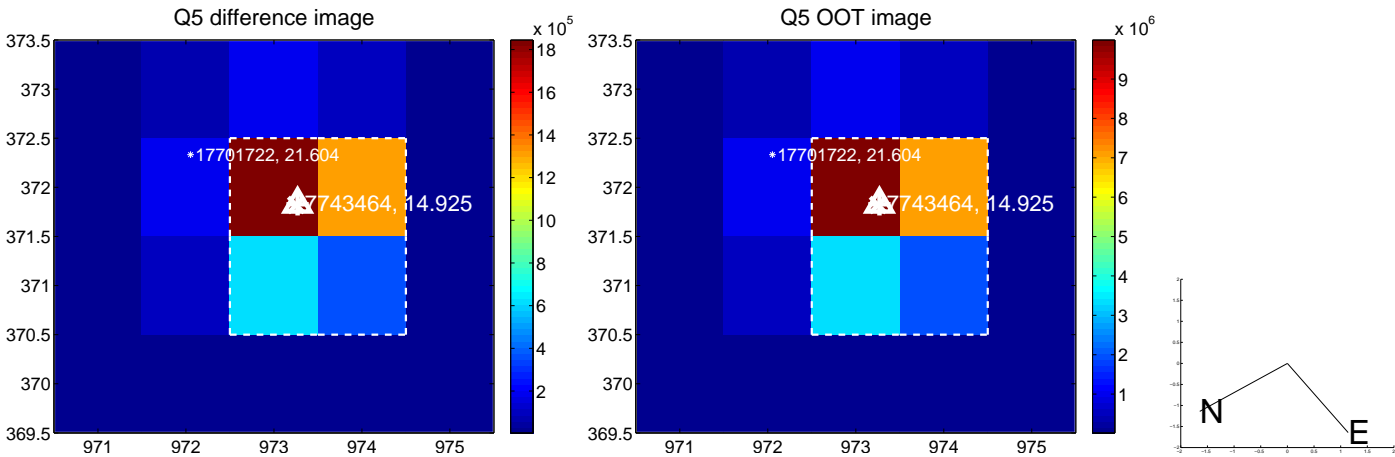


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

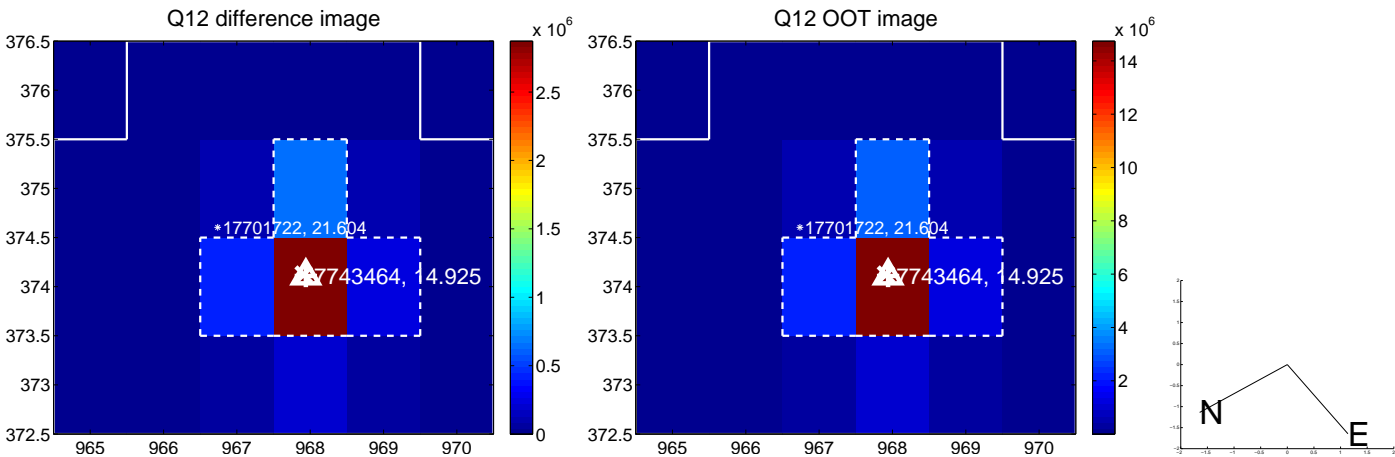
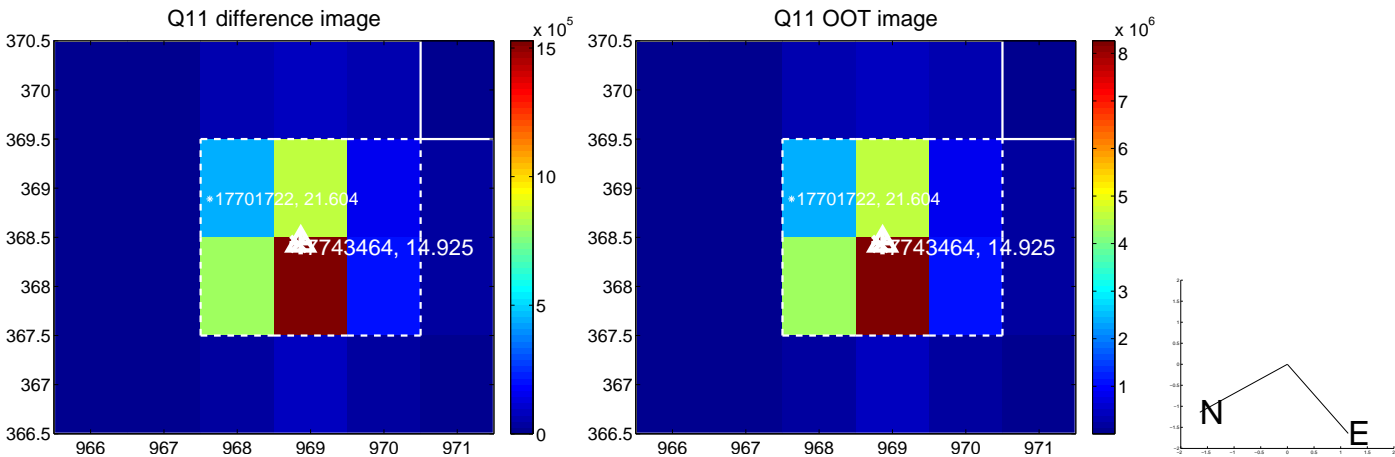
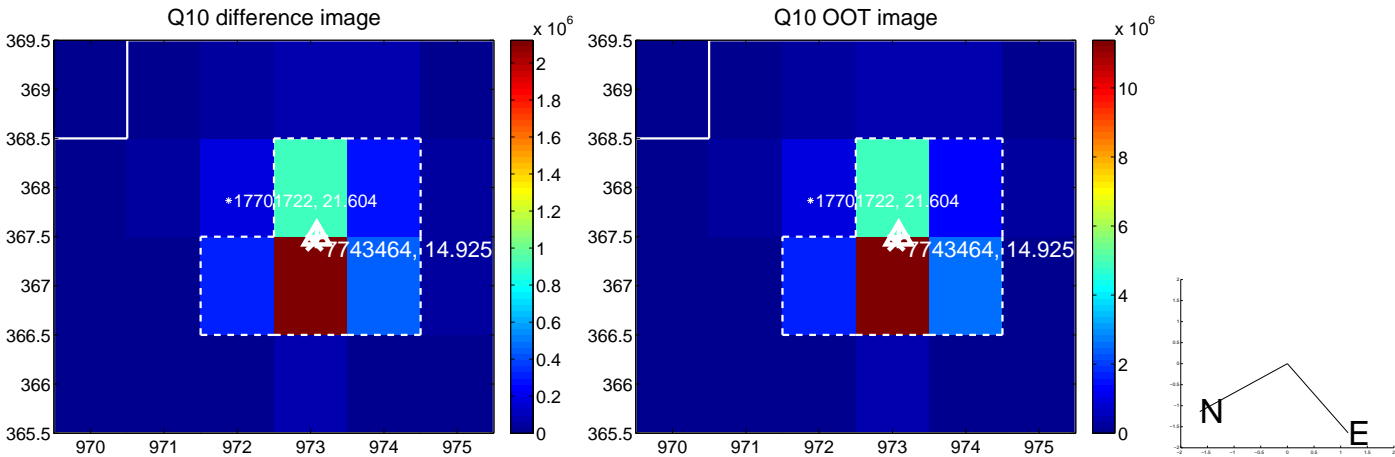
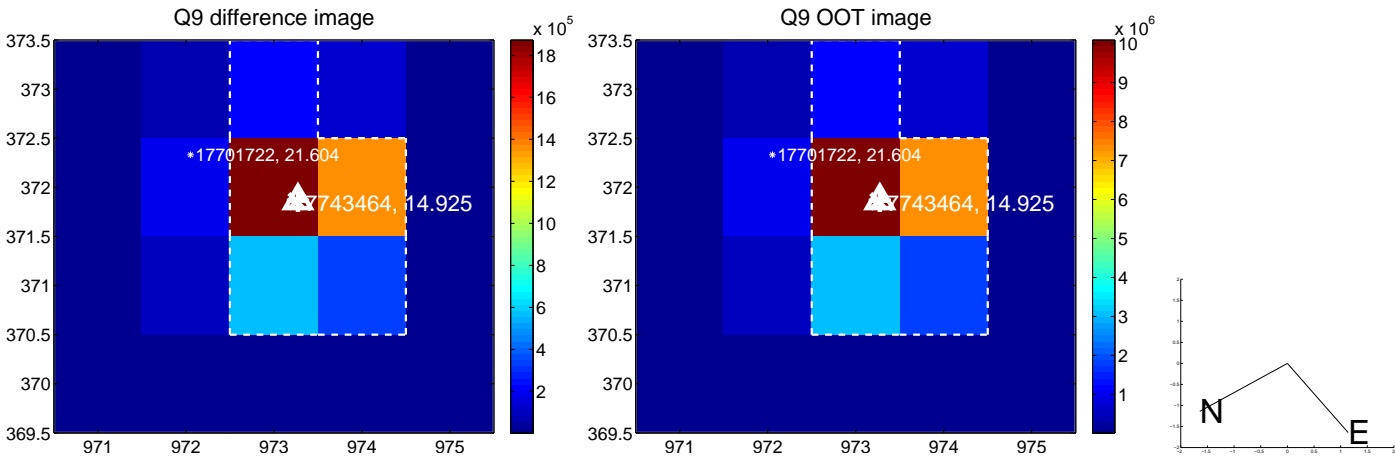
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



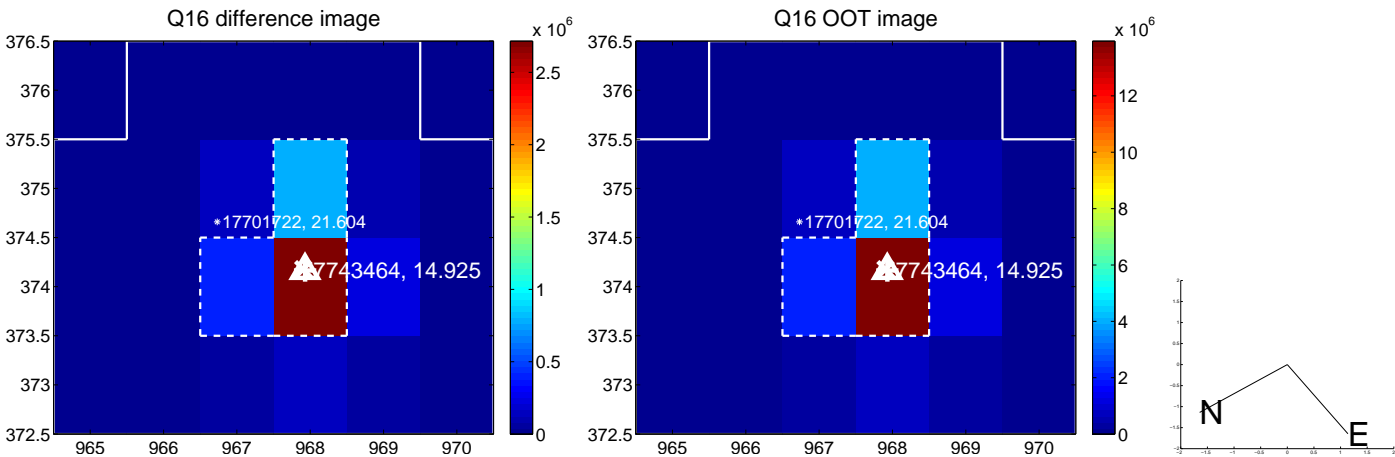
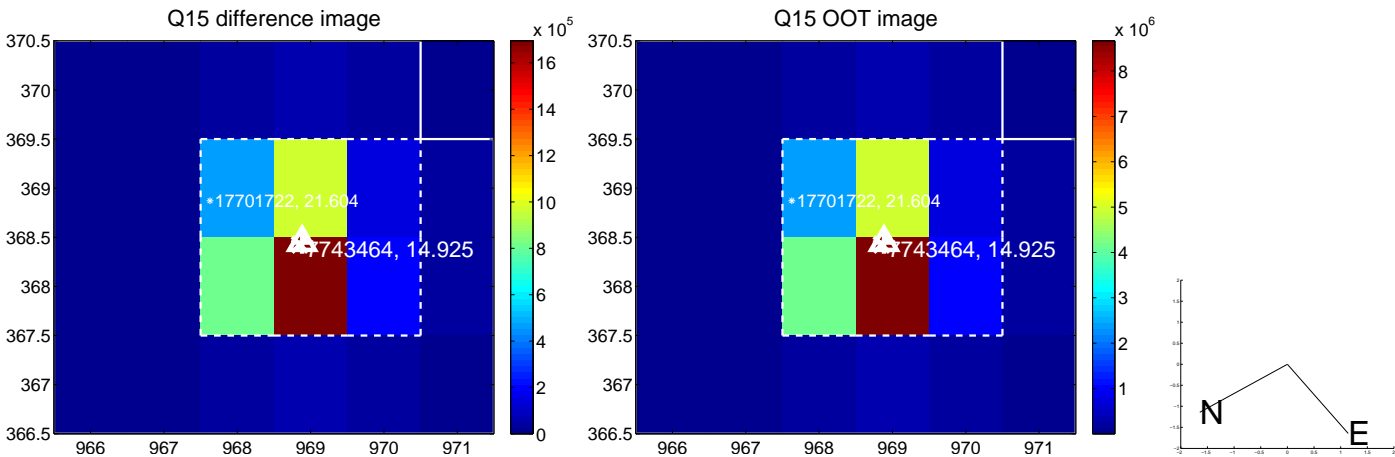
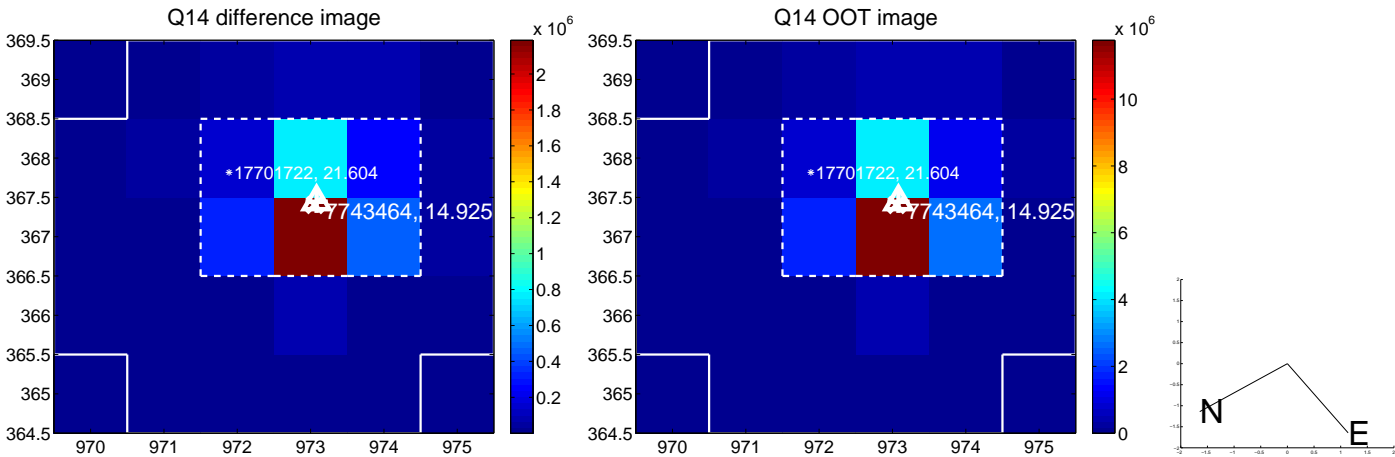
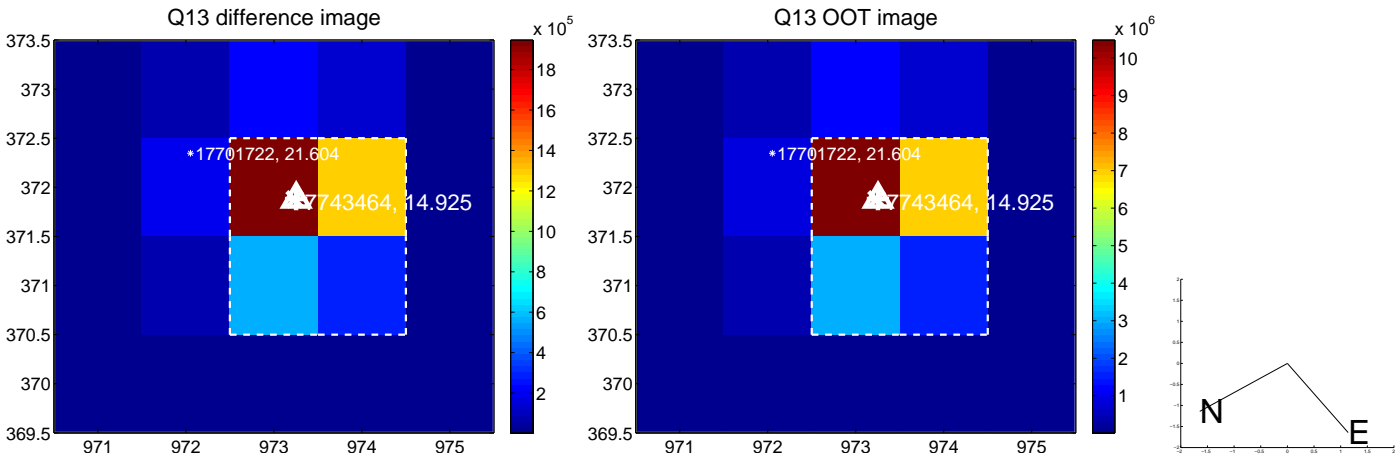
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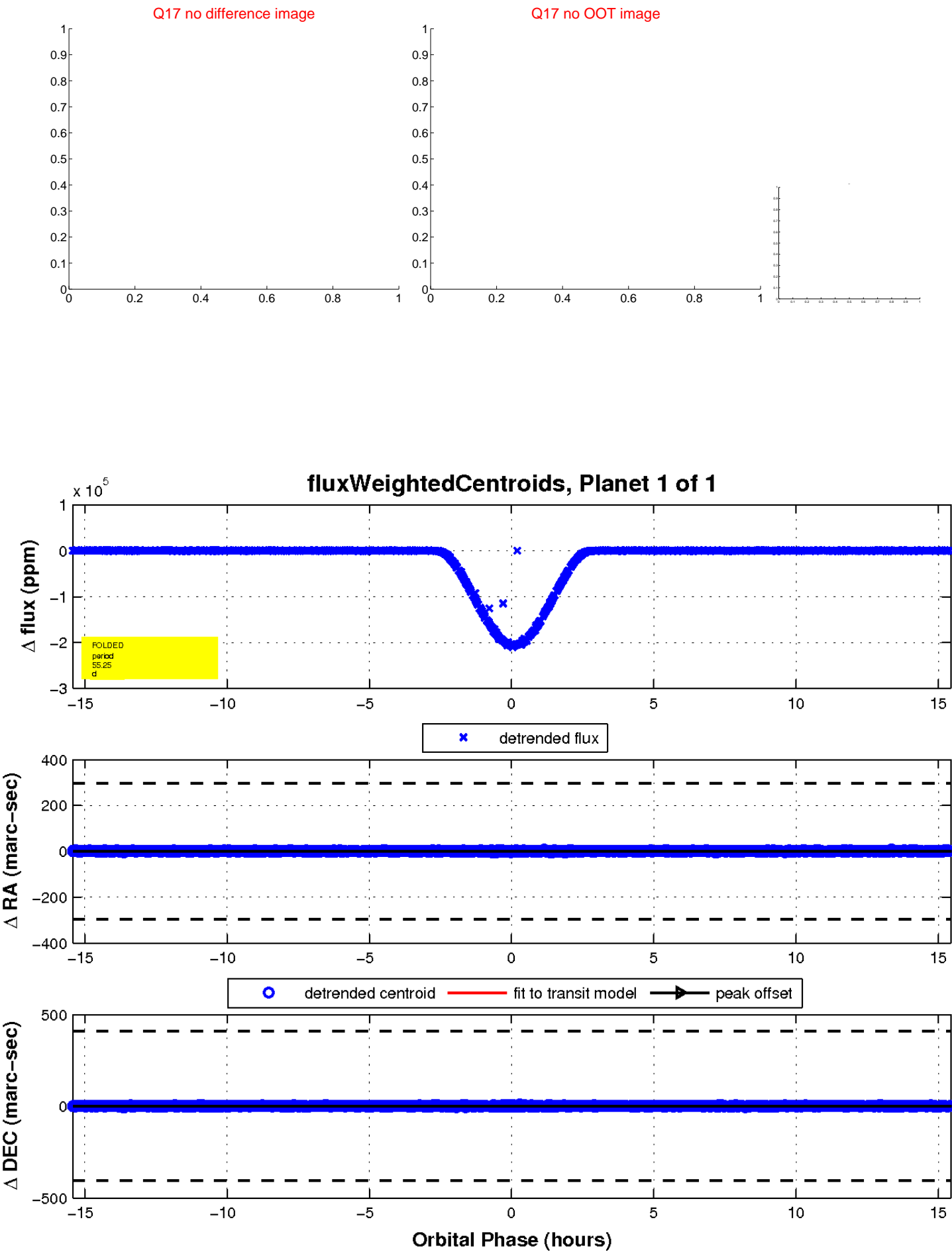
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UKIRT Image

Declination

