

KIC 007970760

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})
007970760-01	OBS	6943.01	7.649413	132.107051	236445.9	6.570	29184.5	23545.5	1.08	6387	53.48	288.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007970760-01	OBS	FP	0.00	0	1	0	0	MOD_SEC_DV—MOD_SEC_ALT

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.

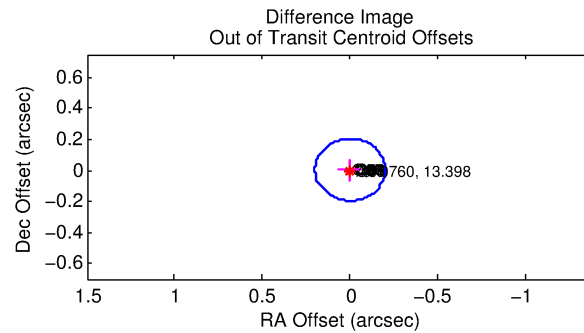
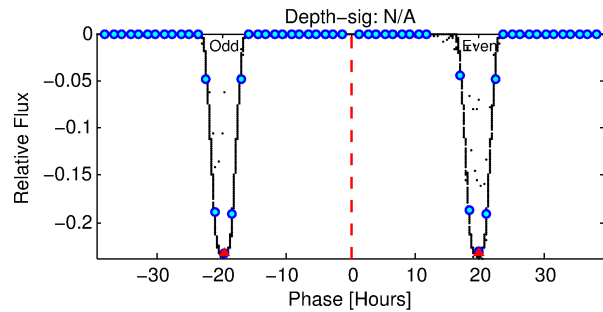
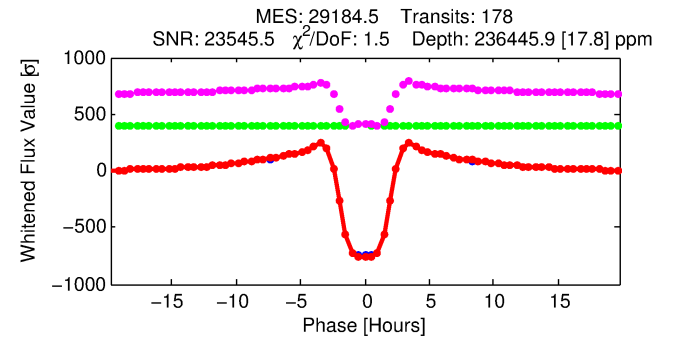
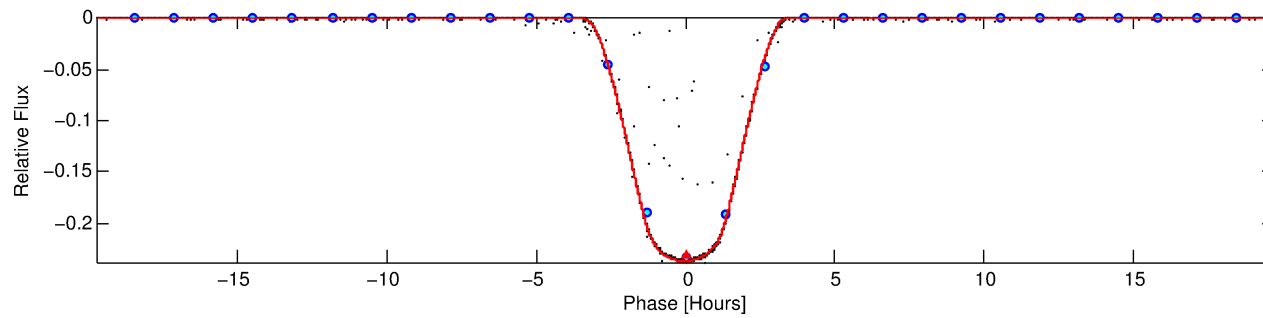
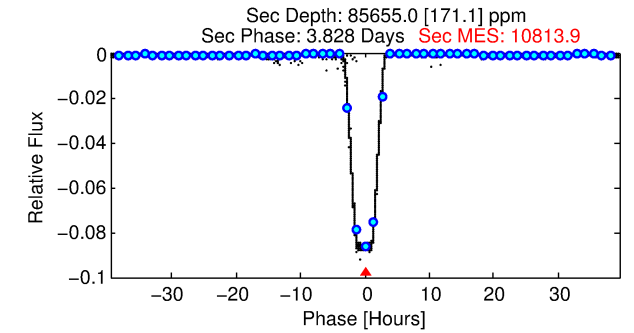
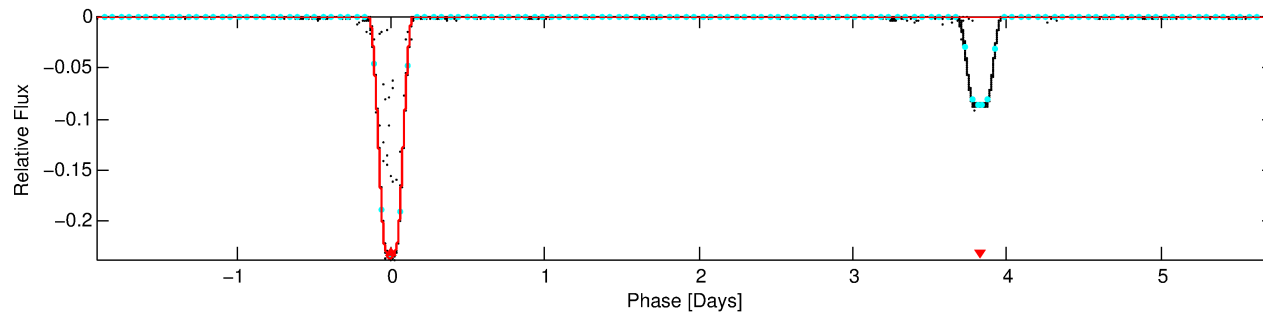
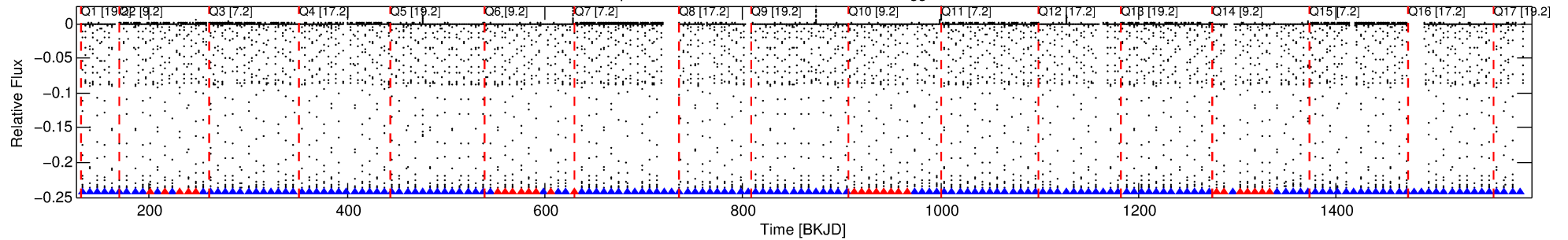
Ephemeris Match Information For 007970760-01

No Significant Match Found

DV One-Page Summary

KIC: 7970760 Candidate: 1 of 1 Period: 7.649 d
KOI: K06943.01 Corr: 1.000

Kp: 13.40 R*: 1.08 Rs Teff: 6387.0 K Logg: 4.40 Fe/H: -0.280



DV Fit Results:

Period = 7.64941 [0.00000] d
Epoch = 132.1071 [0.0000] BKJD
Rp/R* = 0.4555 [0.0000]
a/R* = 12.80 [0.00]
b = 0.24 [0.00]
Seff = 288.26 [111.90]
Teq = 1051 [102] K
Rp = 53.48 [16.80] Re
a = 0.0774 [0.0200] AU
Ag = 98.66 [36.17] [2.70σ]
Teffp = 5120 [164] K [21.1σ]

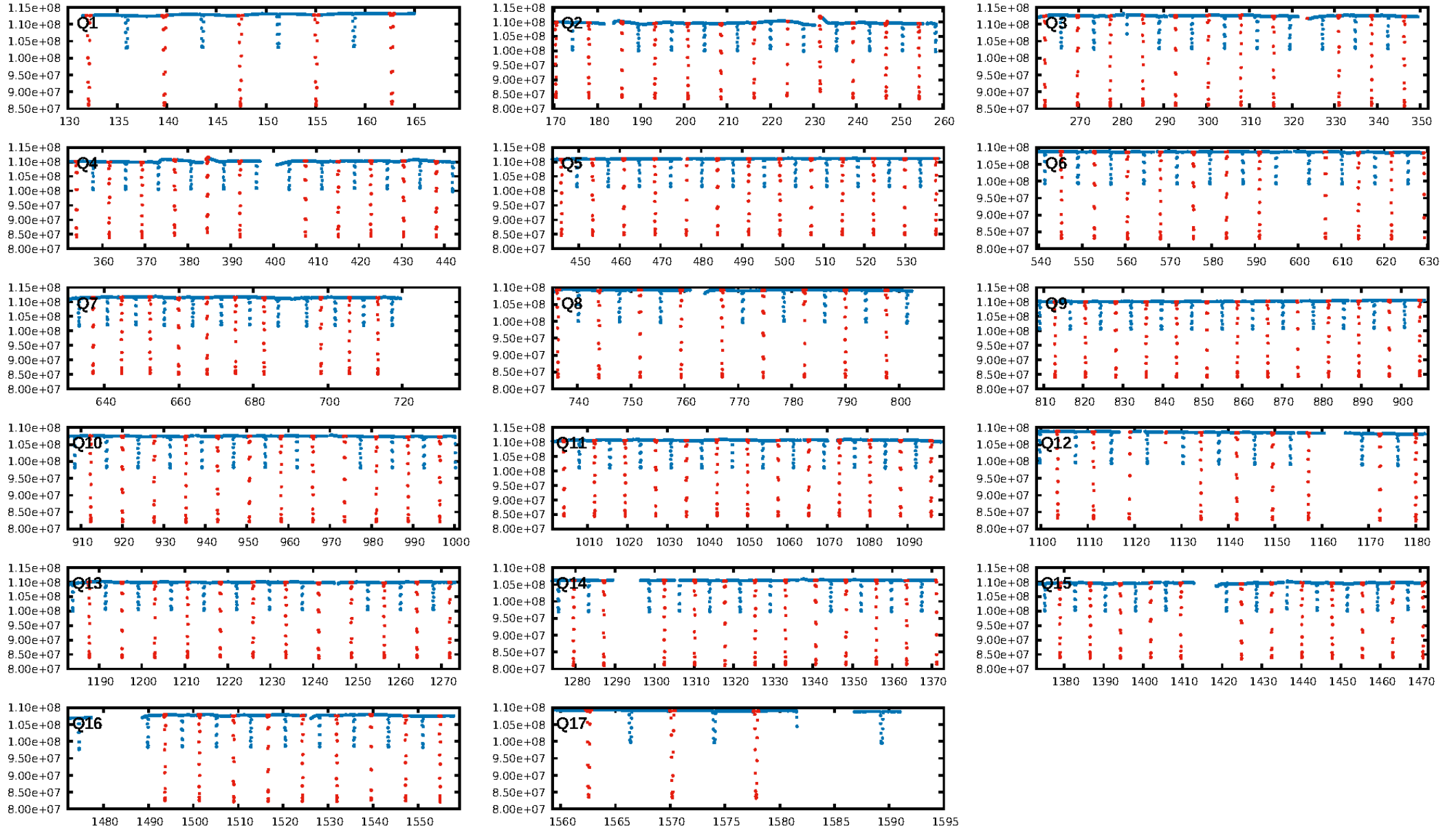
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.84 [142/170]
GhostDiagnostic-chr: 5.798
Centroid-sig: 0.0%
Centroid-so: 0.063 arcsec [184.90σ]
OotOffset-rm: 0.005 arcsec [0.08σ]
KicOffset-rm: 0.082 arcsec [1.18σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

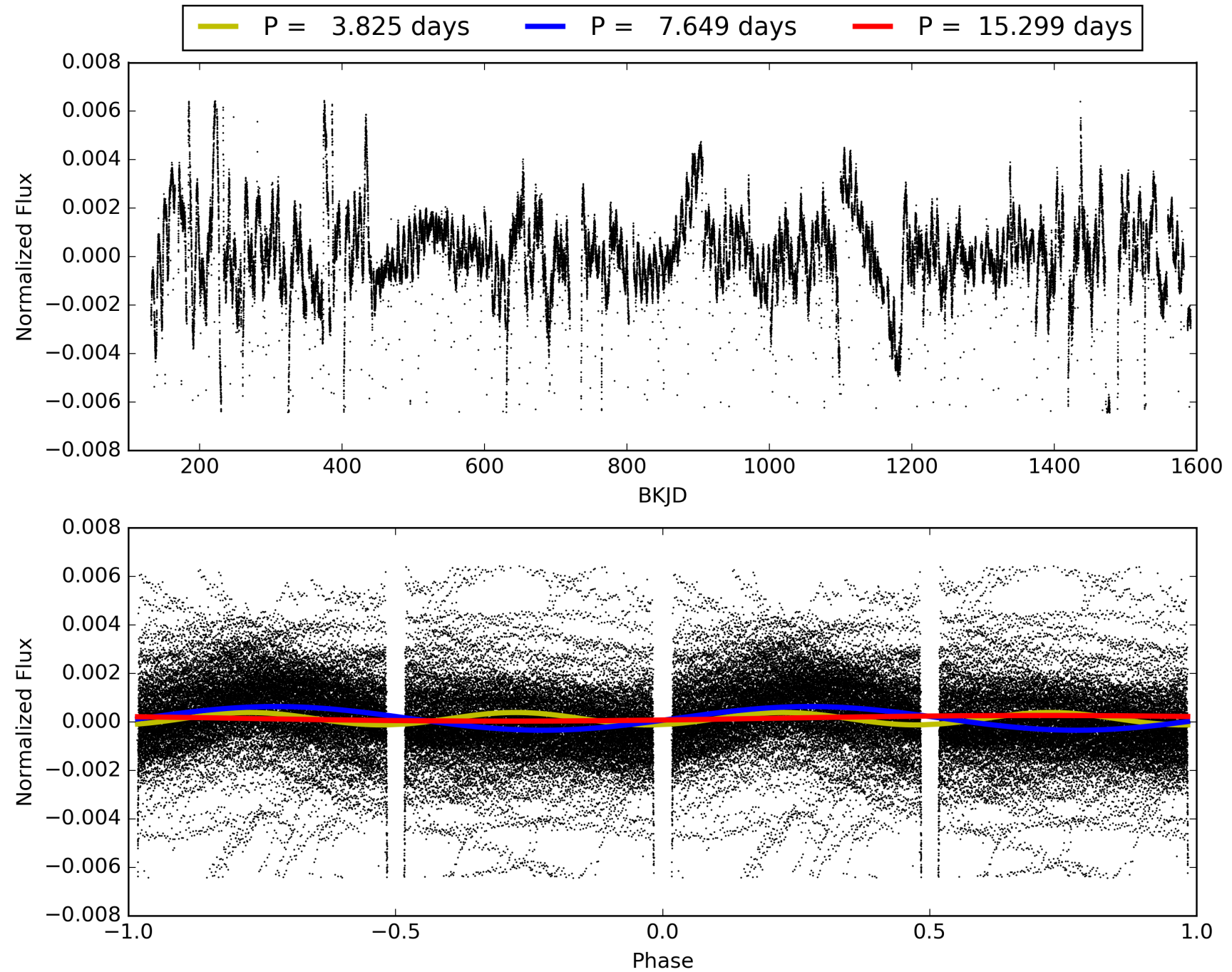
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 10:04:03 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007970760-01, PDC Light Curves

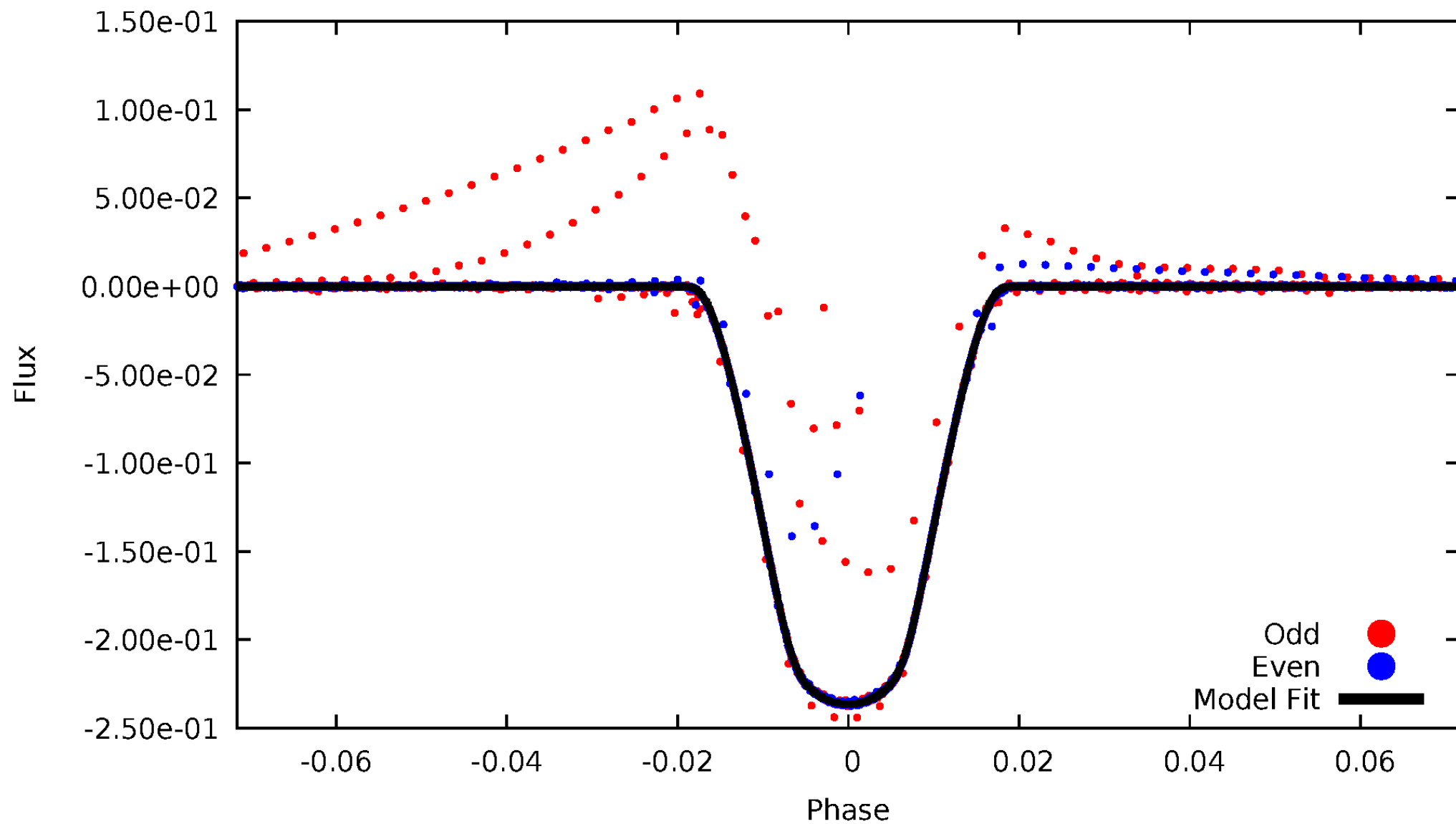


TCE 007970760-01



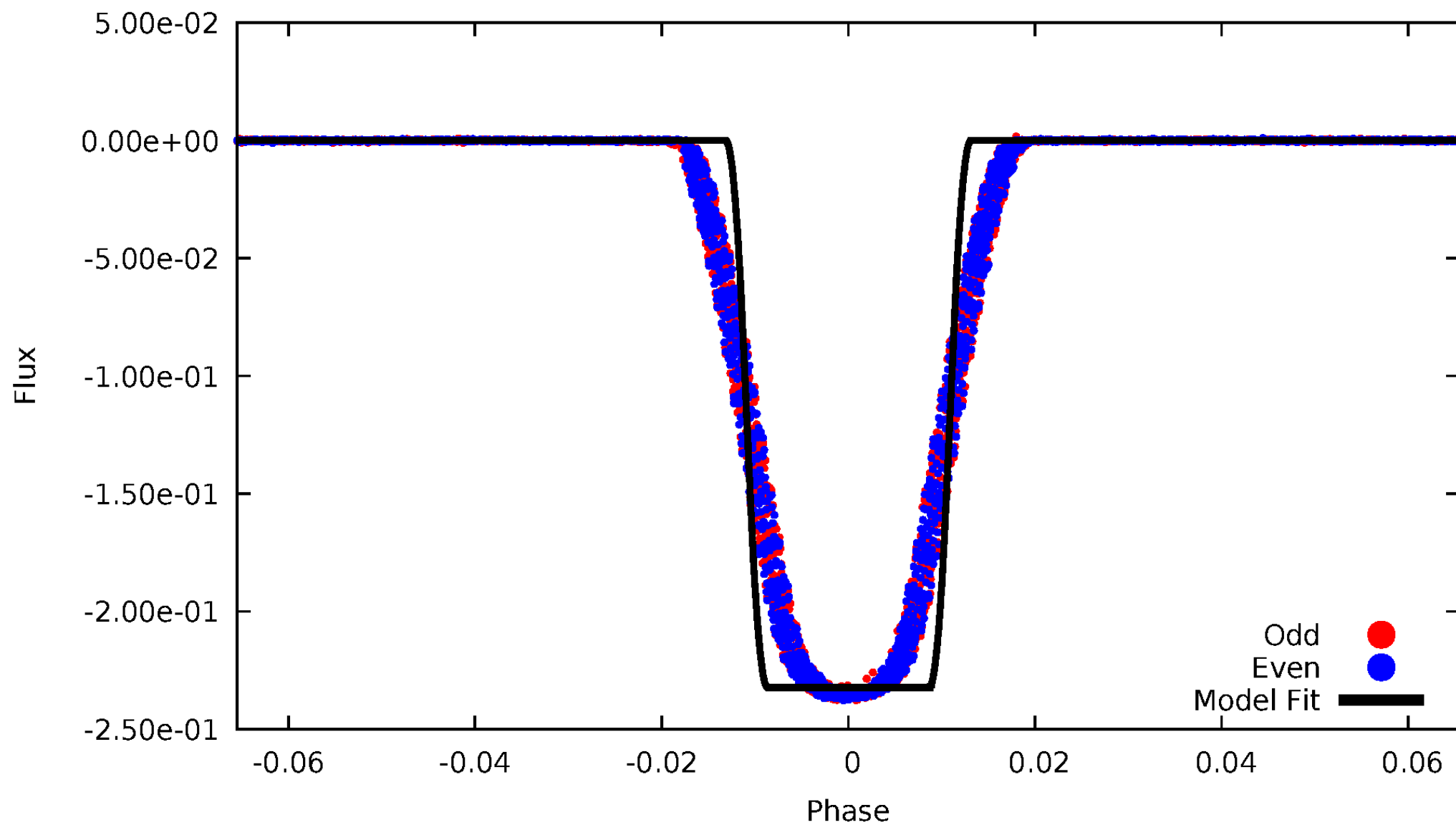
DV Odd/Even

TCE 007970760-01



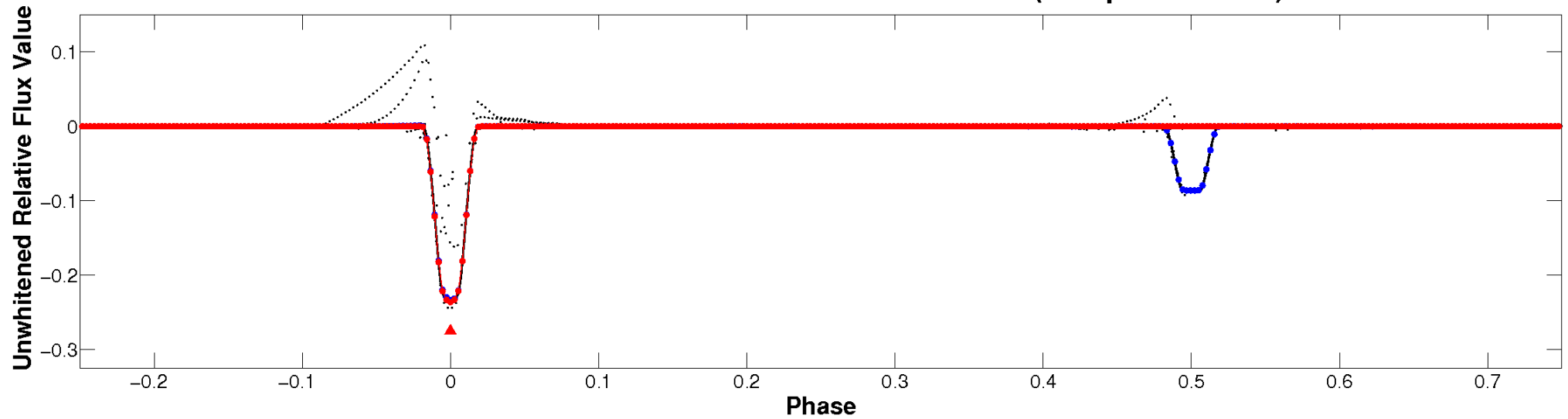
ALT Odd/Even

TCE 007970760-01

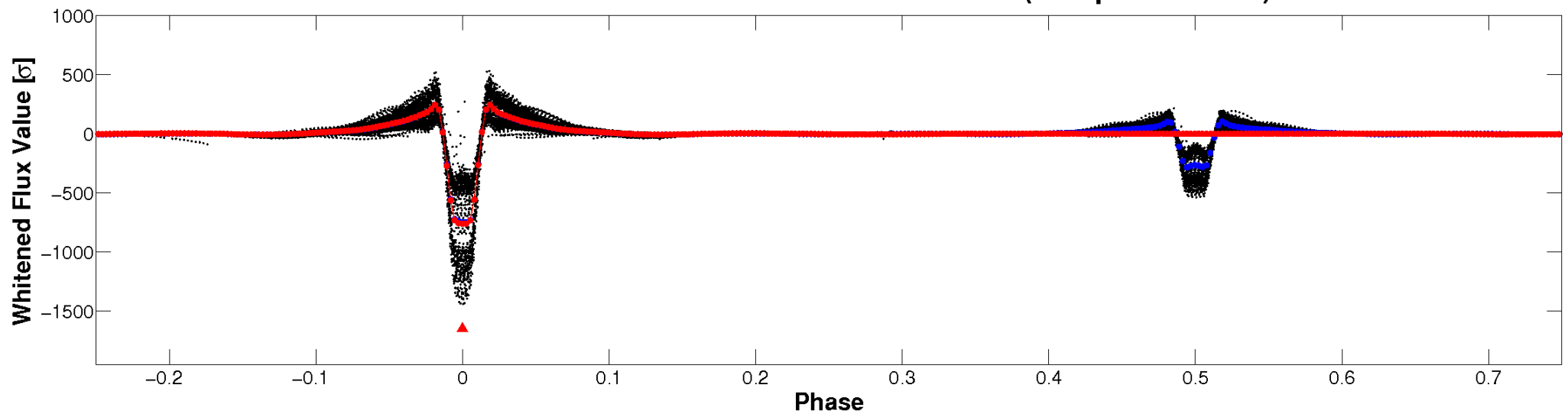


Non-Whitened Vs. Whitened Light Curve

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

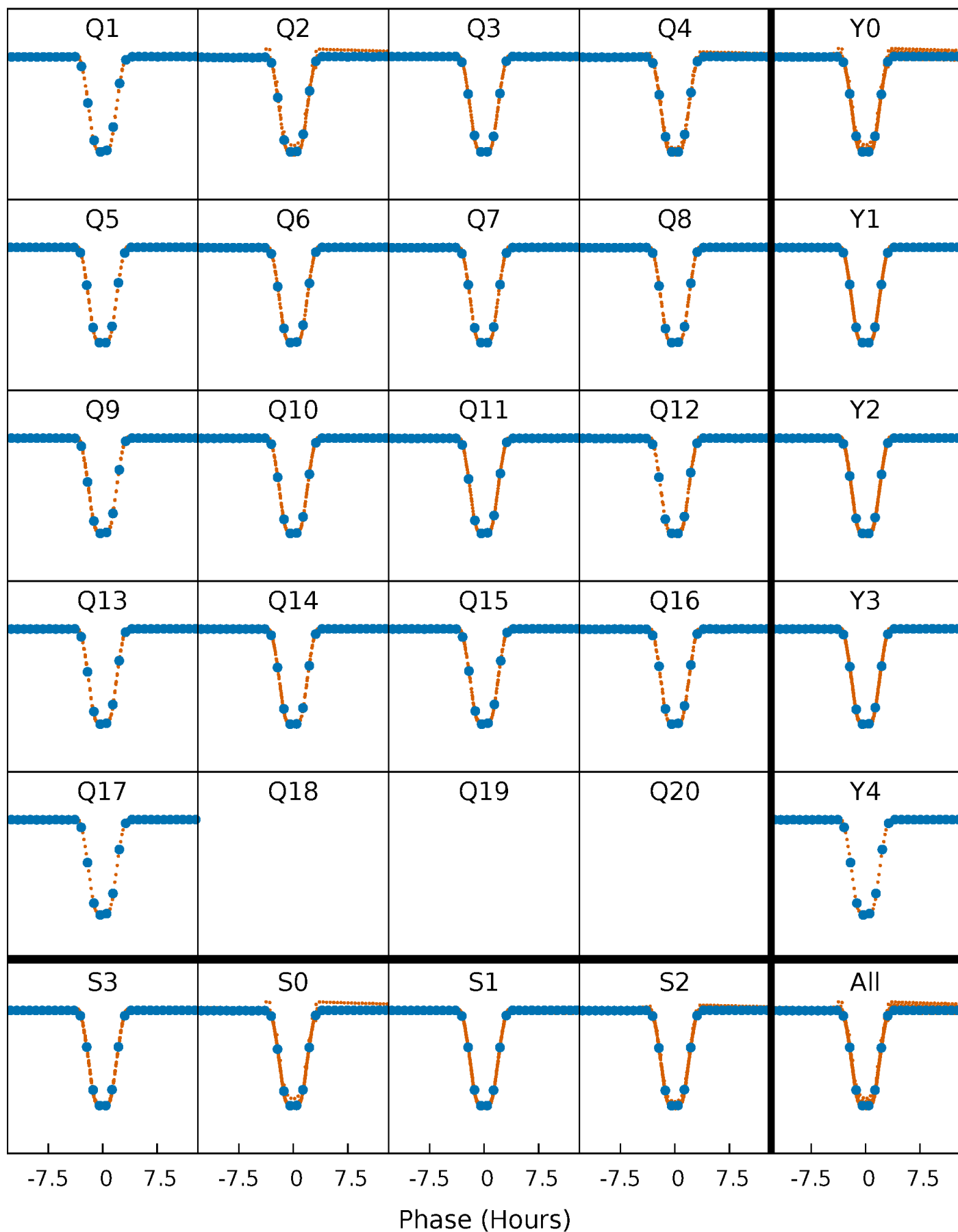


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



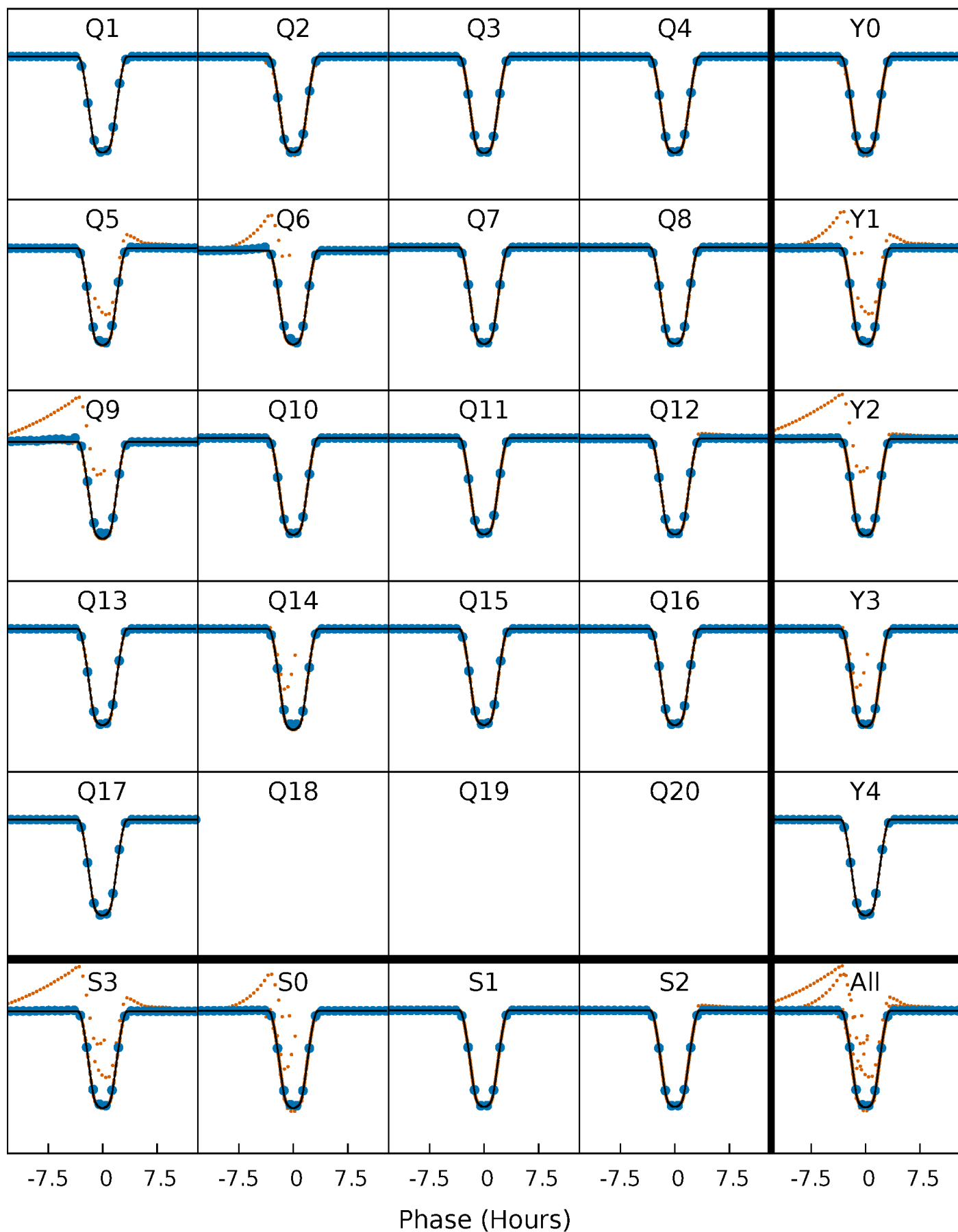
PDC Quarter-Phased Transit Curves

TCE 007970760-01 P= 7.649413 Days $T_0=132.107051$ (BKJD)



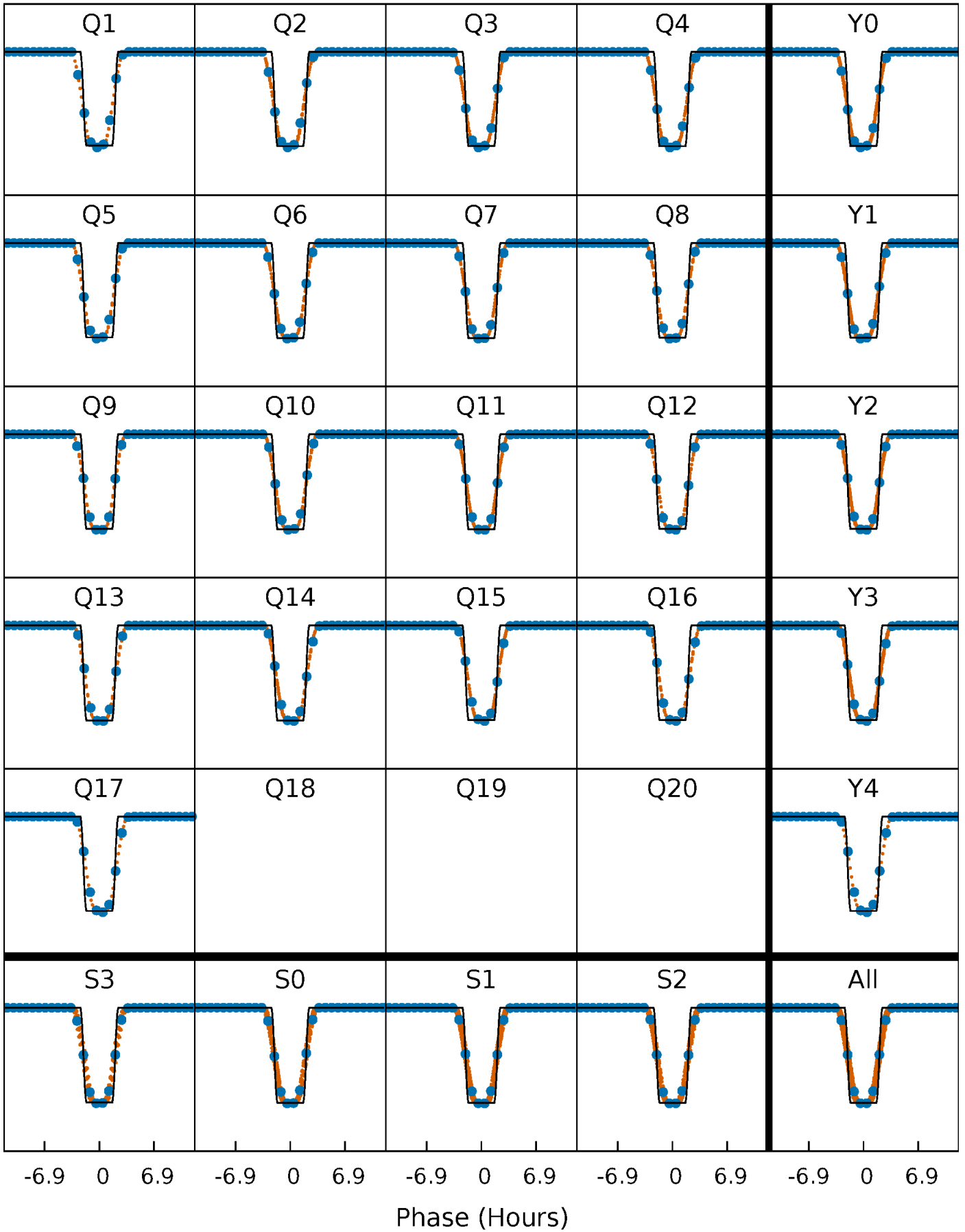
DV Quarter-Phased Transit Curves

TCE 007970760-01 P= 7.649413 Days $T_0=132.107051$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

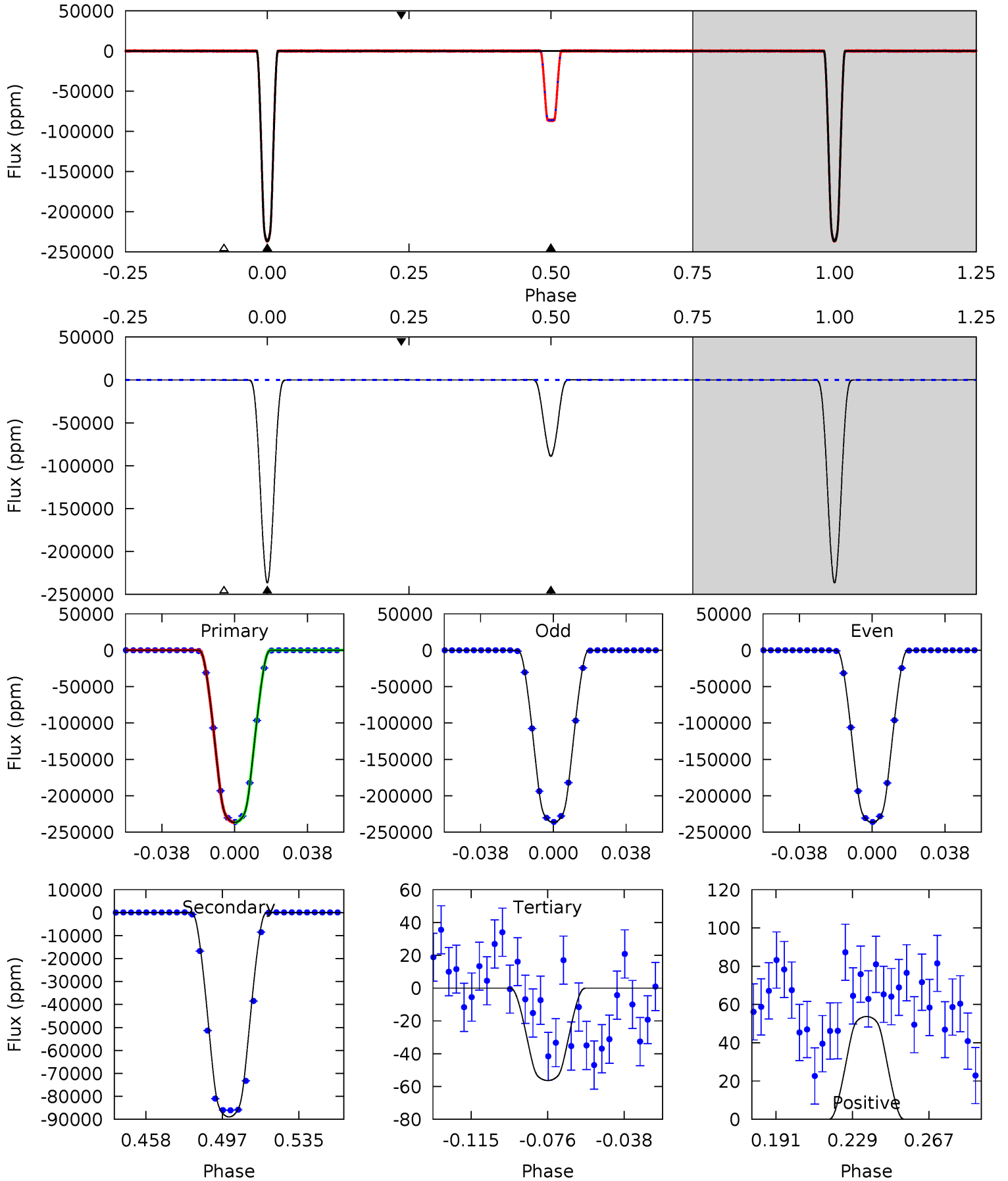
TCE 007970760-01 P= 7.649311 Days $T_0=132.116681$ (BKJD)



DV Model-Shift Uniqueness Test

007970760-01, P = 7.649413 Days, E = 124.457638 Days

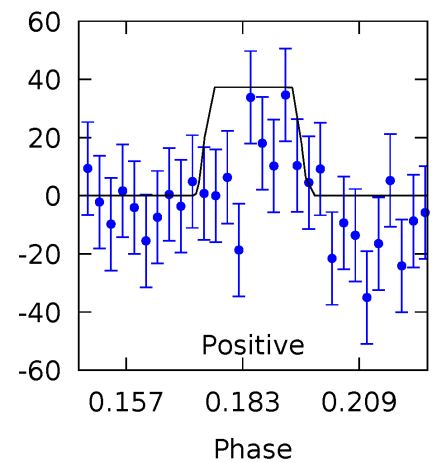
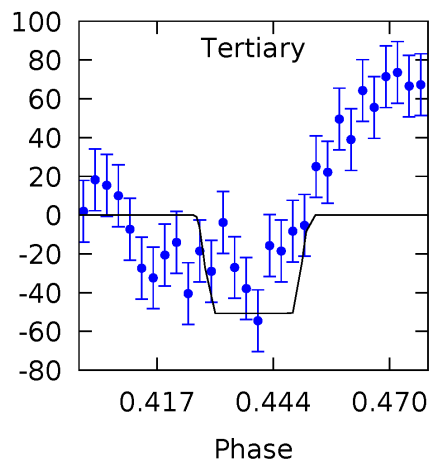
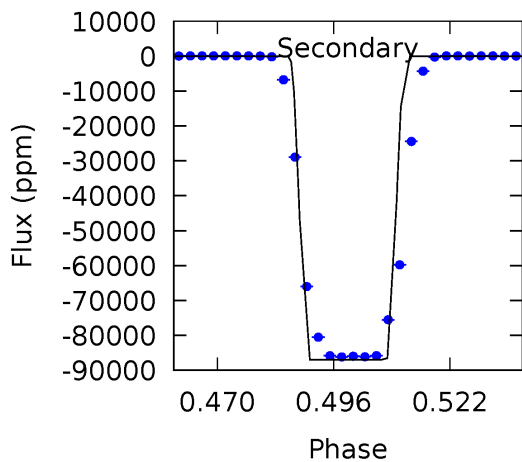
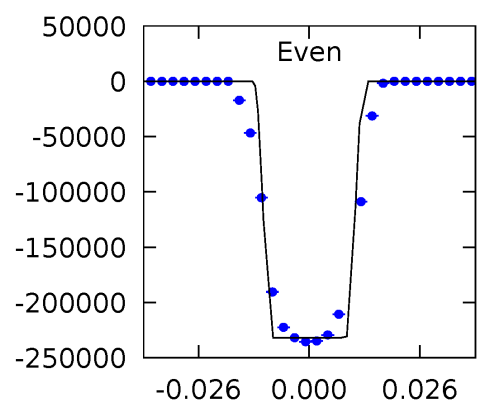
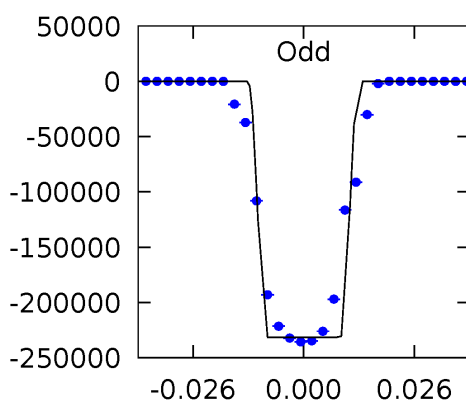
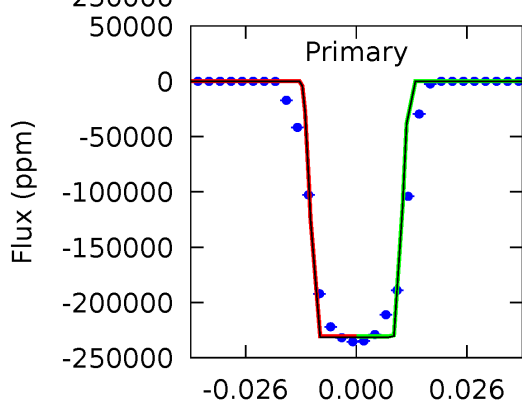
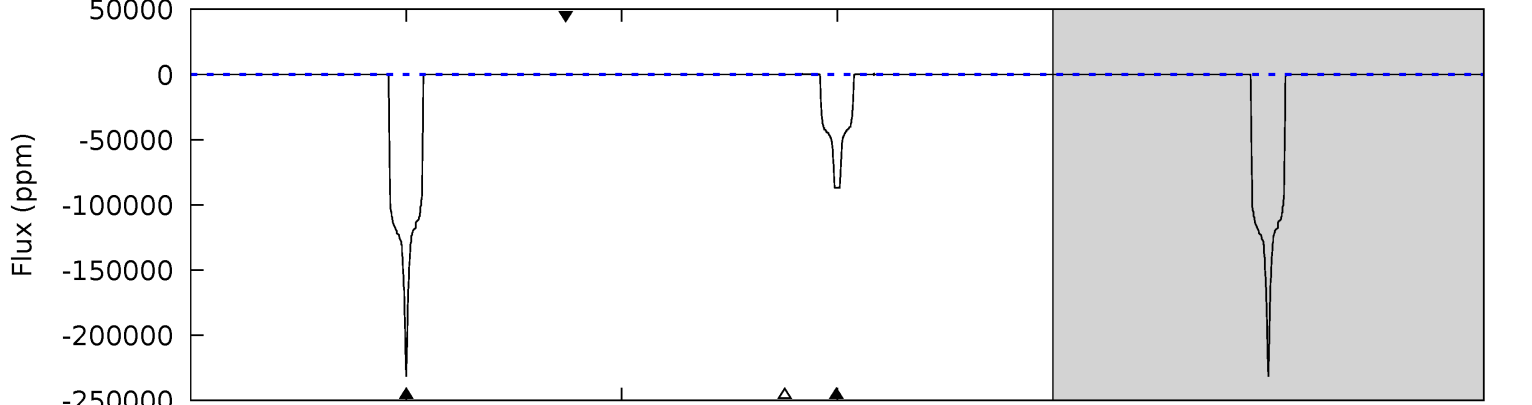
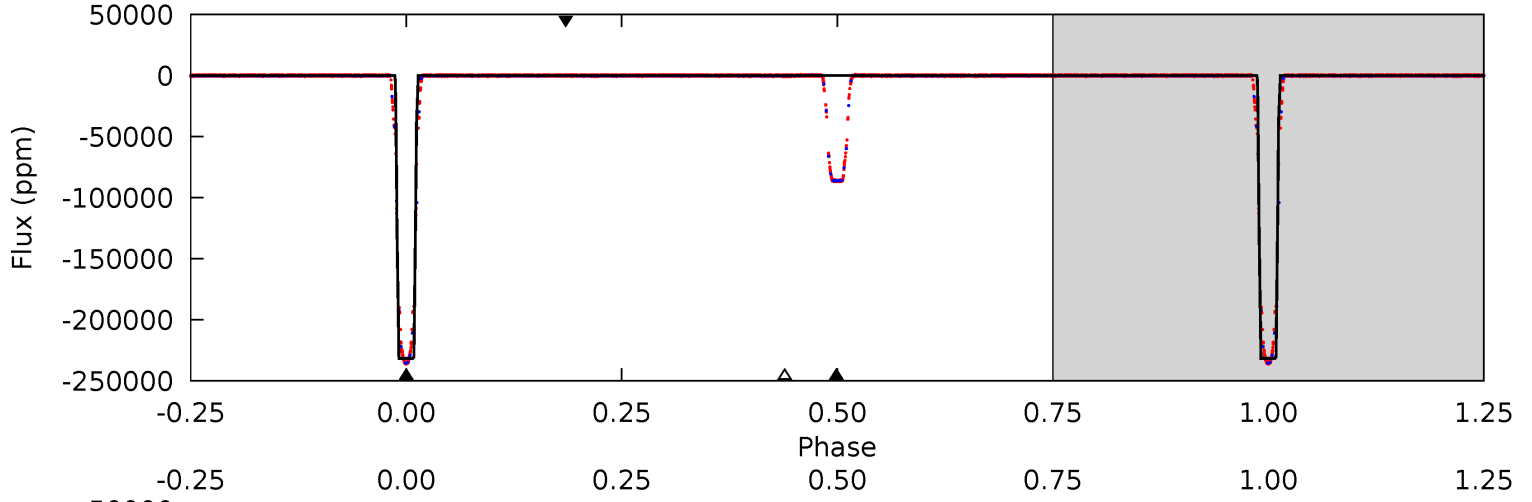
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48148	18110	11.5	10.9	4.76	2.07	6.81	48137	48138	18098	18099	0.49	0.98	0.00	0



Alt Model-Shift Uniqueness Test

007970760-01, P = 7.649311 Days, E = 124.467370 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18807	7064	4.11	3.03	4.84	2.22	1.35	18803	18804	7060	7061	7.40	1.00	0.00	0



Stellar Parameters For KIC 007970760

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6387^{+157}_{-204}	$4.398^{+0.084}_{-0.196}$	$-0.280^{+0.250}_{-0.300}$	$1.076^{+0.338}_{-0.121}$	$1.051^{+0.172}_{-0.114}$	$1.187^{+0.442}_{-0.625}$
	+2%/-3%	+2%/-4%	+89%/-107%	+31%/-11%	+16%/-11%	+37%/-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 007970760-01 / KOI 6943.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-88960 ± 5	$53.75^{+8.94}_{-4.01}$	1484^{+102}_{-73}	5336^{+118}_{-160}	109^{+18}_{-25}
Alt.	-86962 ± 12	$57.01^{+10.04}_{-4.33}$	1482^{+106}_{-71}	5168^{+101}_{-133}	95^{+15}_{-22}

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 $A_{obs} \gg 1.0$

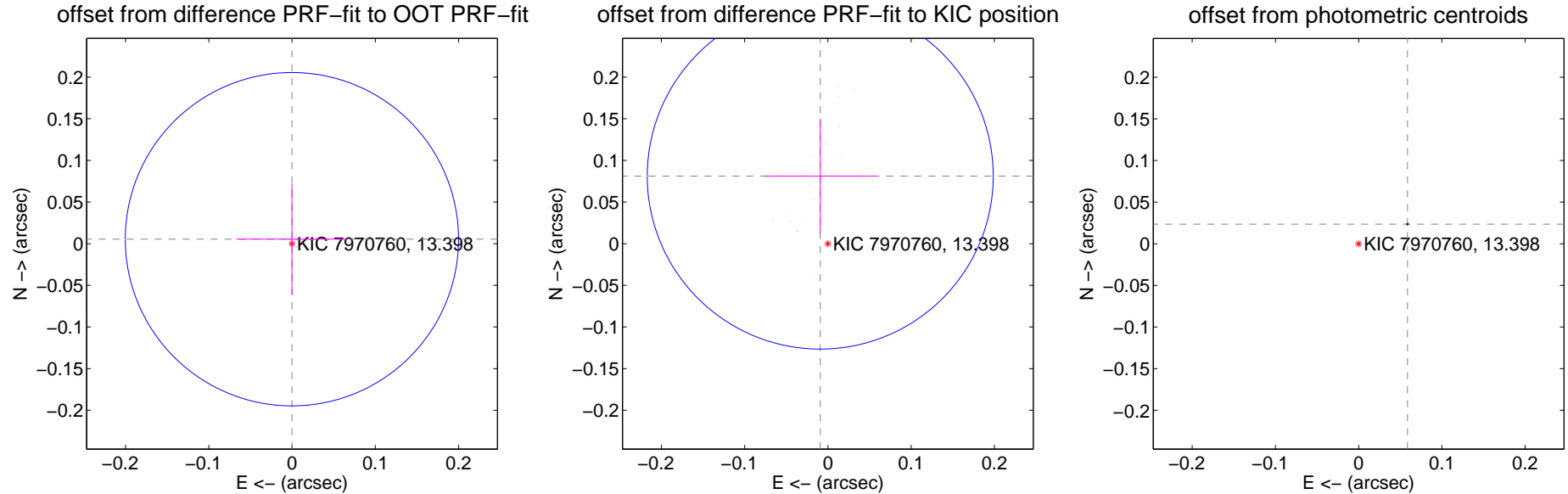
DV Centroid Data

Supplemental centroid analysis for 007970760-01. Kepler magnitude: 13.40. Transit SNR 23545.55

There are 17 quarters with good PRF difference image offsets

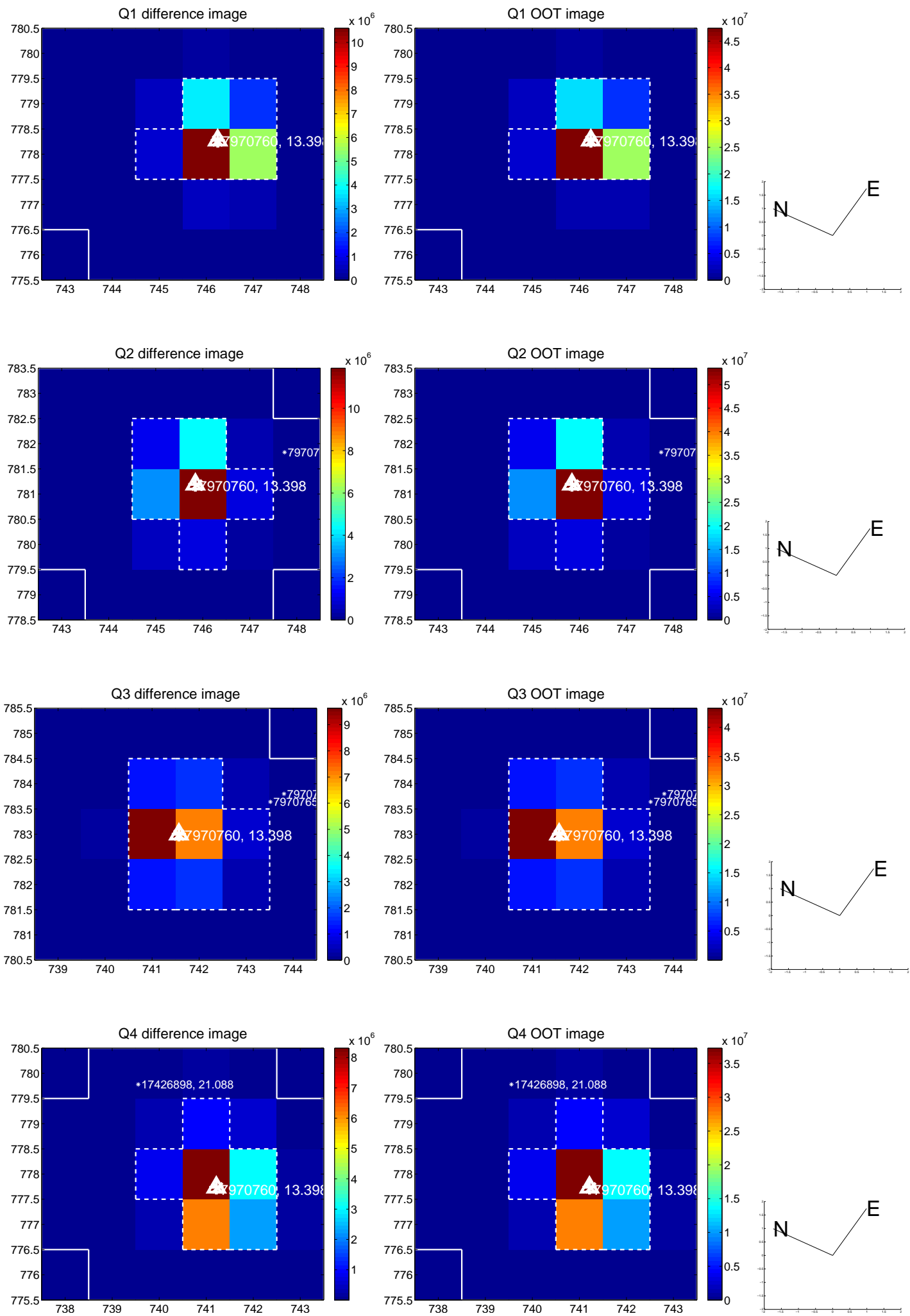
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.005 ± 0.067	0.08	0.000 ± 0.067	0.005 ± 0.067
PRF-fit source offset from KIC position	0.082 ± 0.069	1.18	0.009 ± 0.067	0.081 ± 0.069
photometric centroid source offset	0.06 ± 0.00	184.90	-0.06 ± 0.00	0.02 ± 0.00

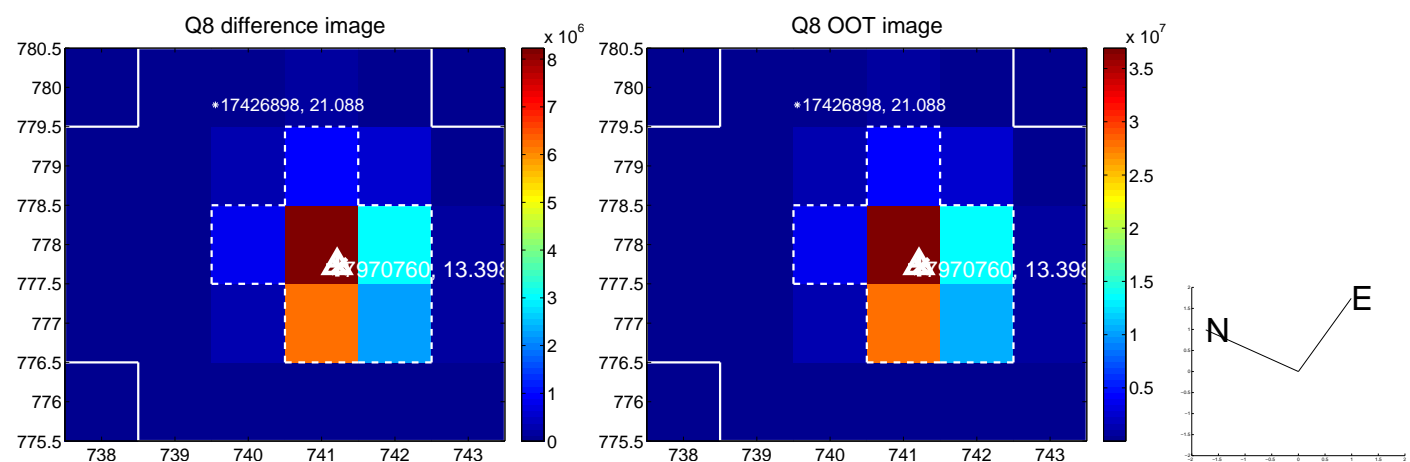
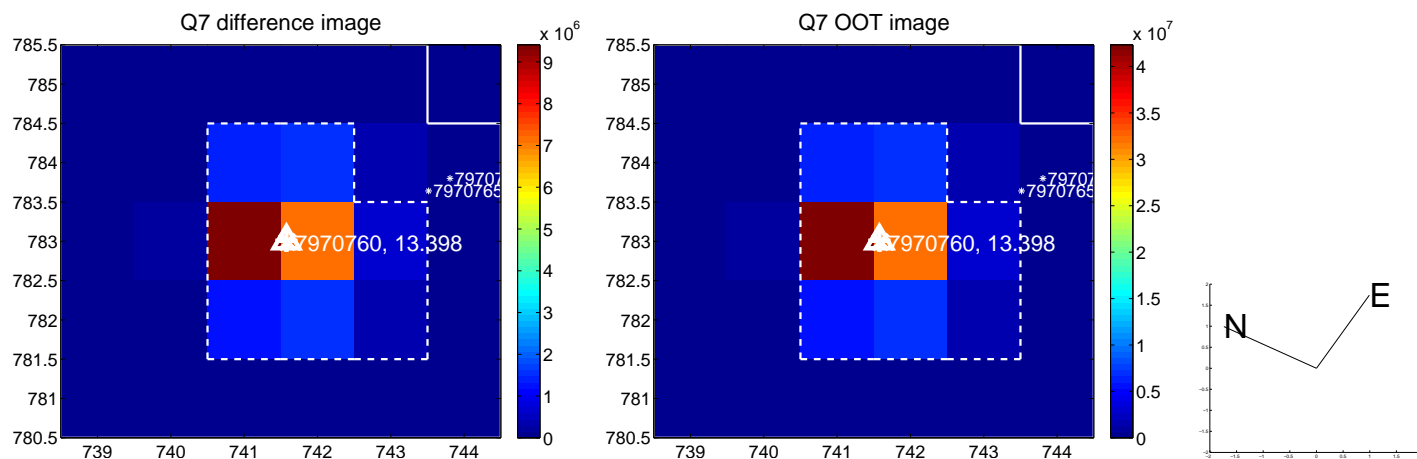
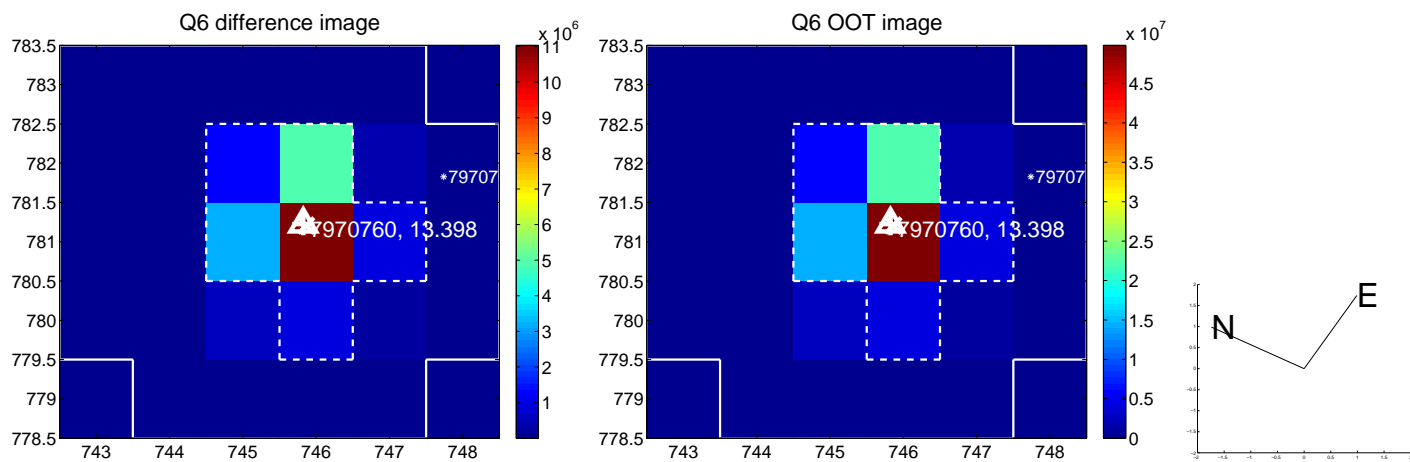
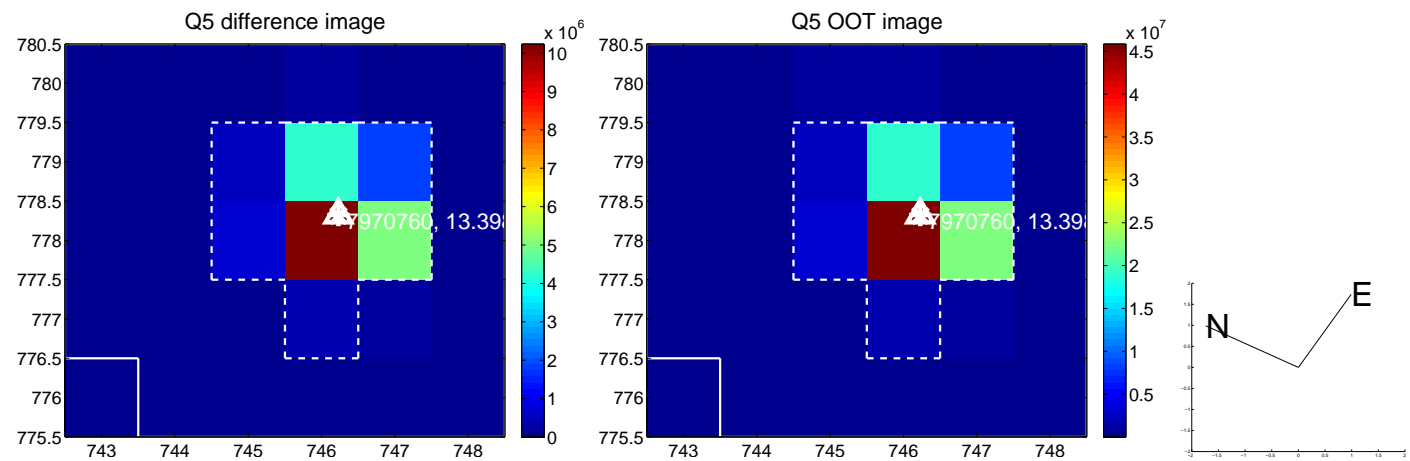


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

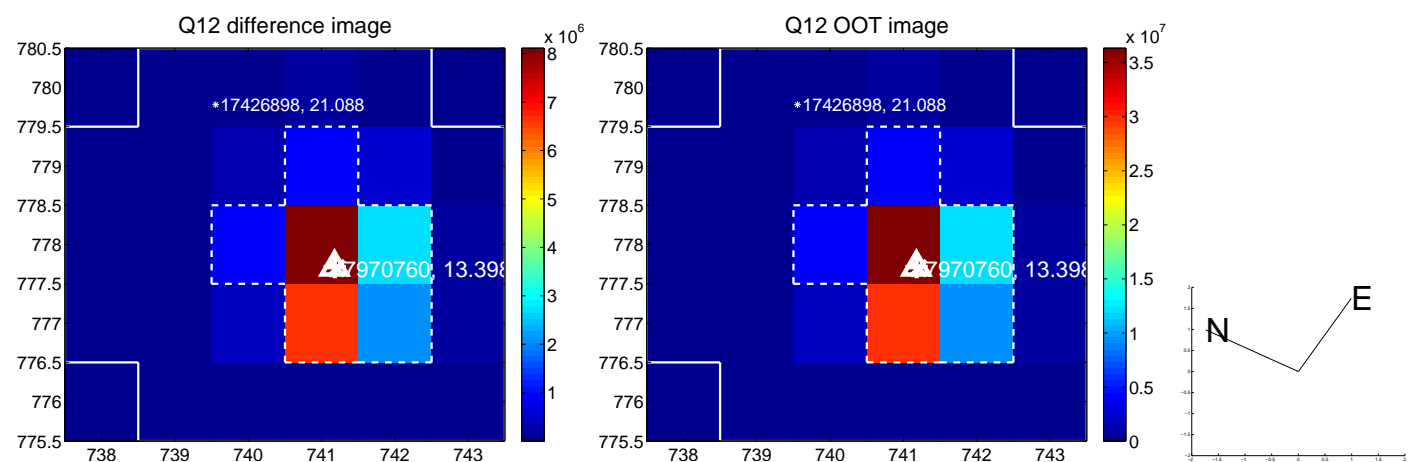
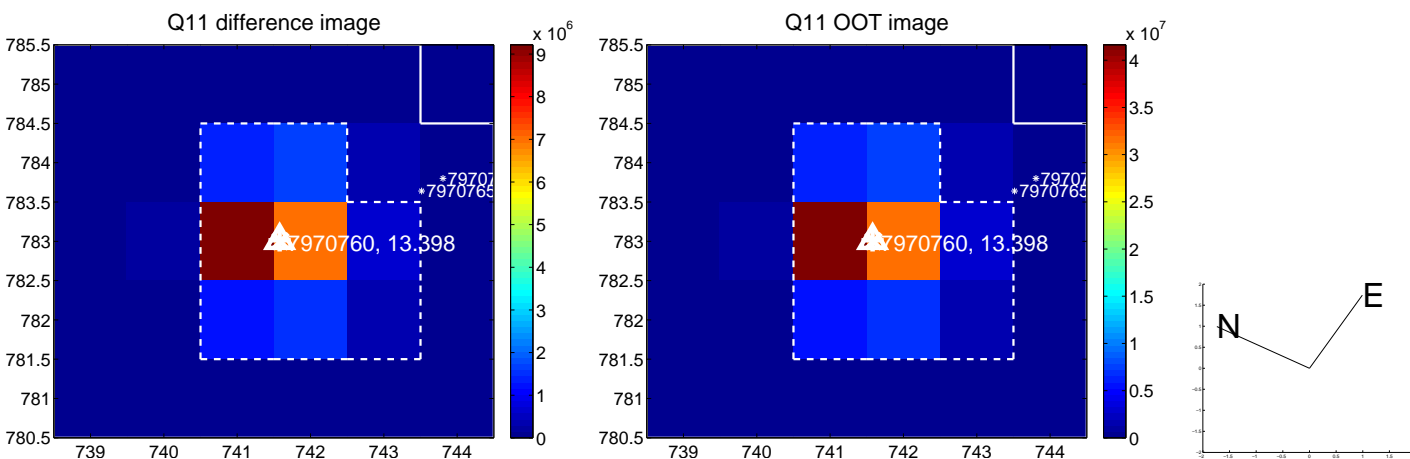
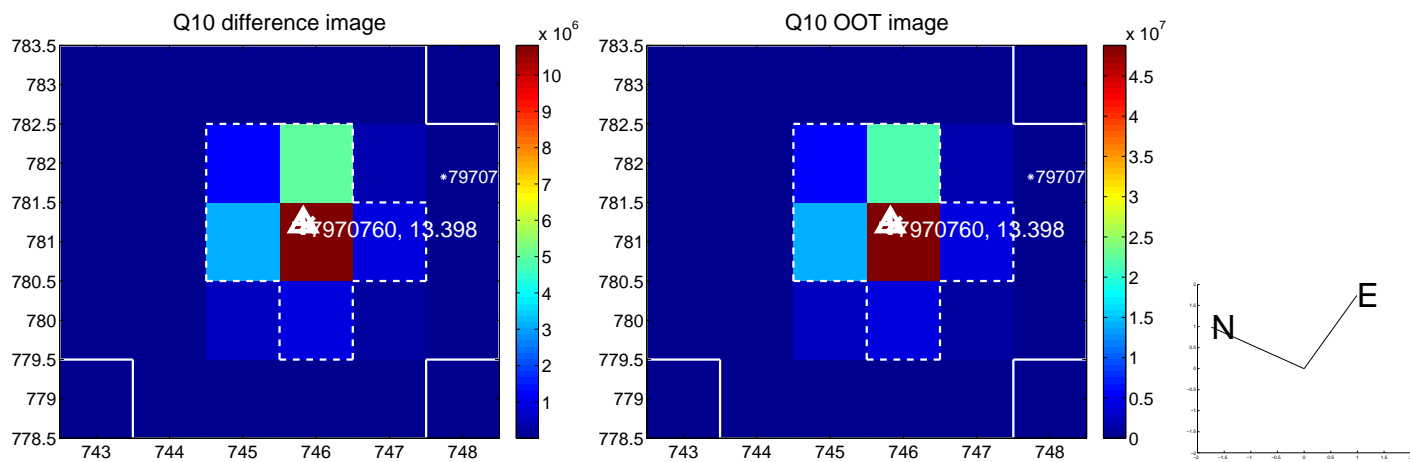
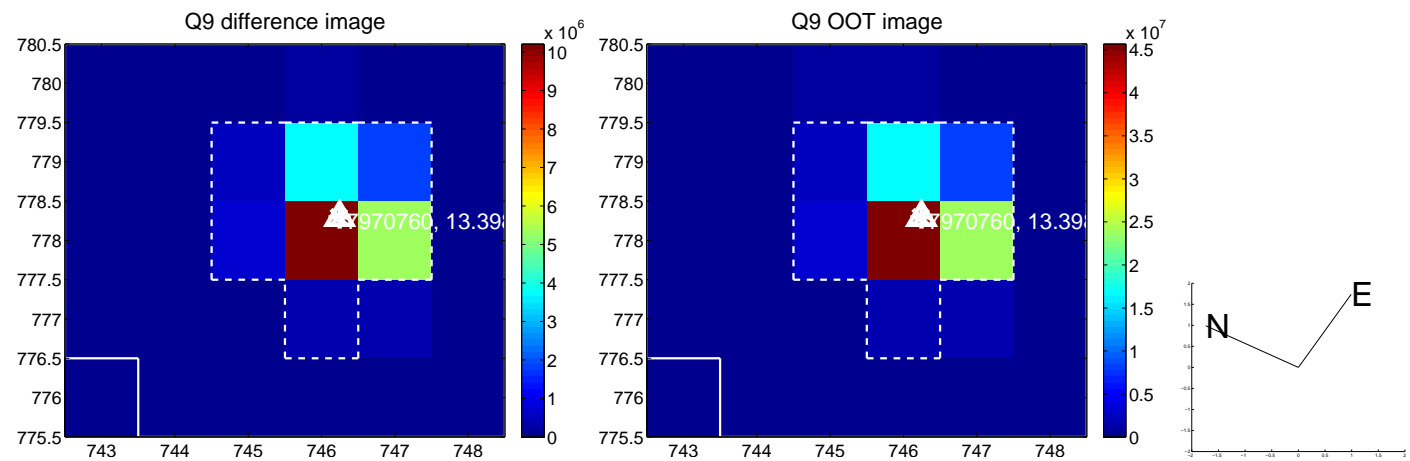
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



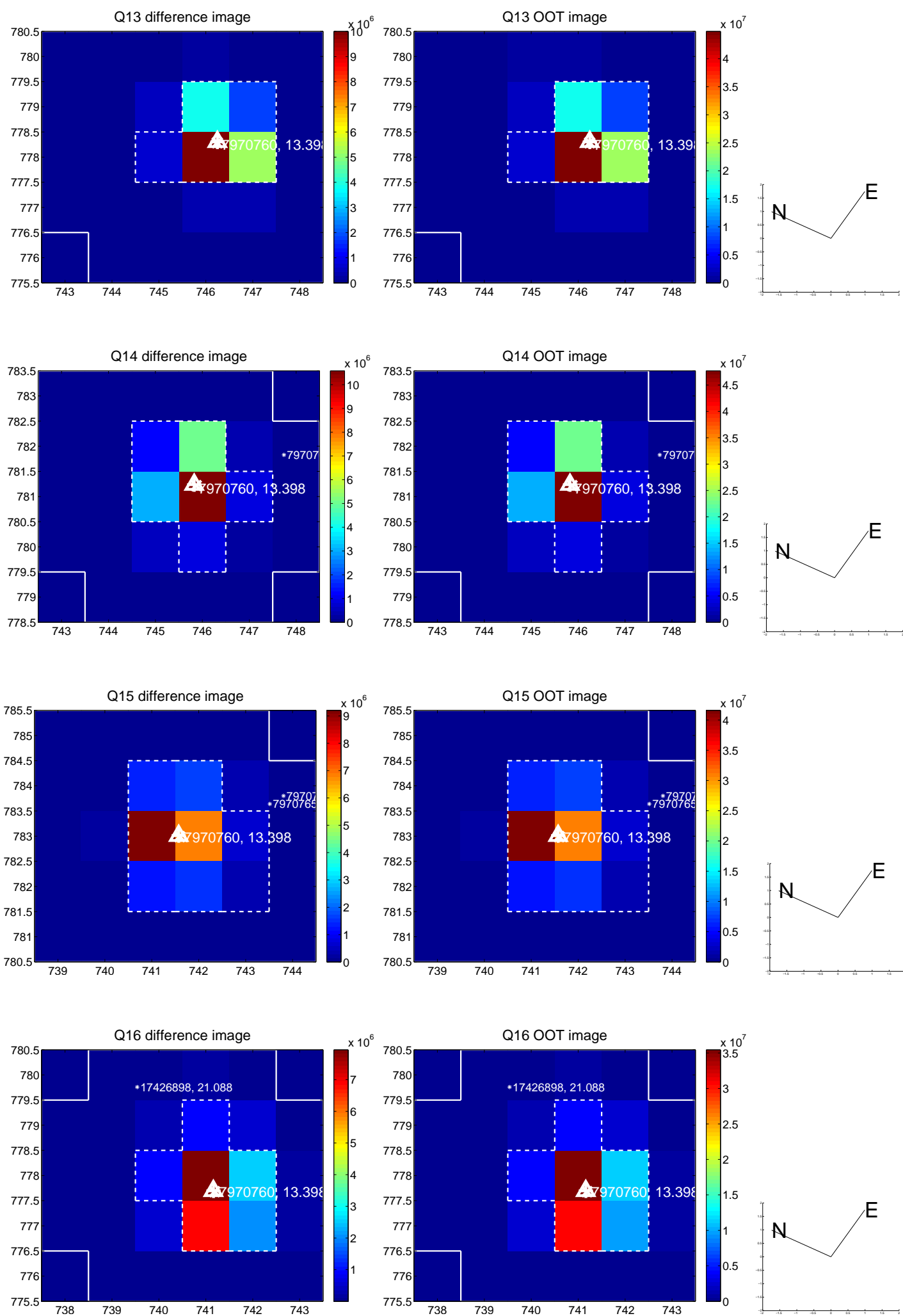
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



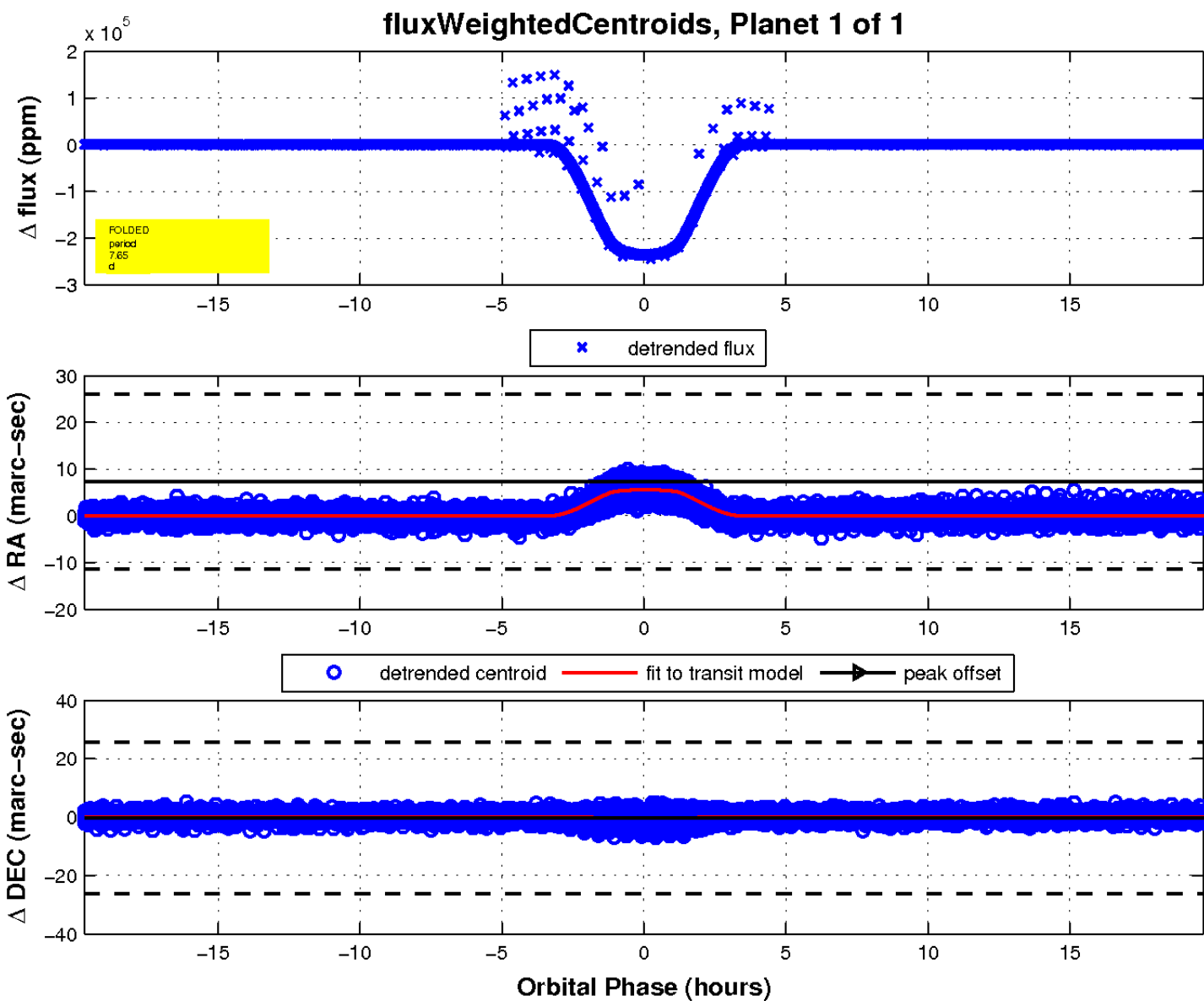
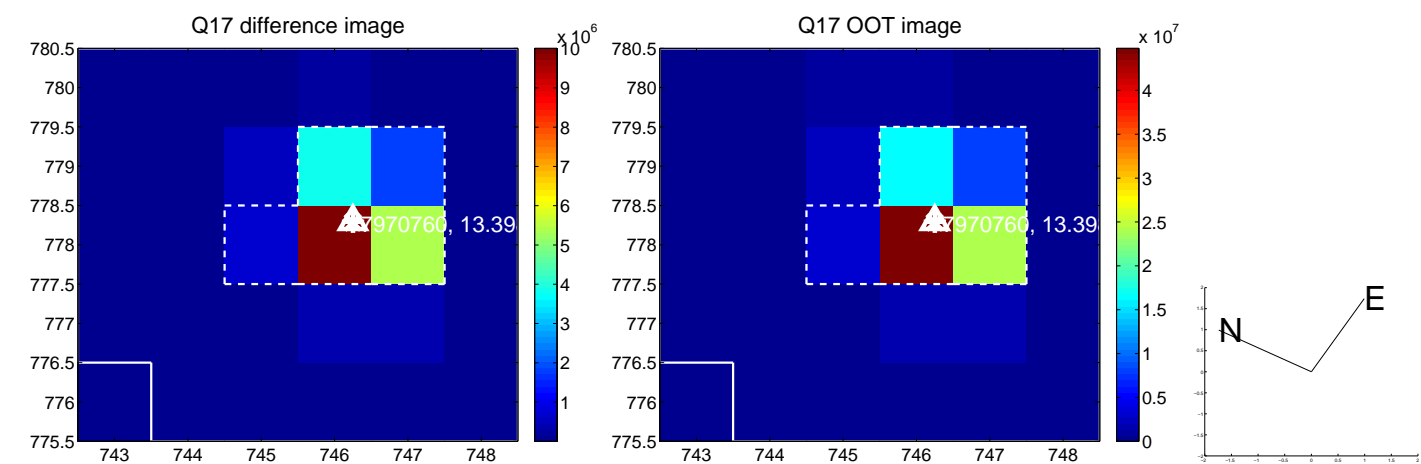
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UKIRT Image

Declination

