

KIC 008780968

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})
008780968-01	OBS	3653.01	2.617281	132.391903	238304.1	9.691	5194.2	2421.9	2.65	5510	158.77	3888.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008780968-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_DV—MOD_ODDEVEN_ALT—DEEP_V_SHAPED—CENT_FEW_MEAS

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.

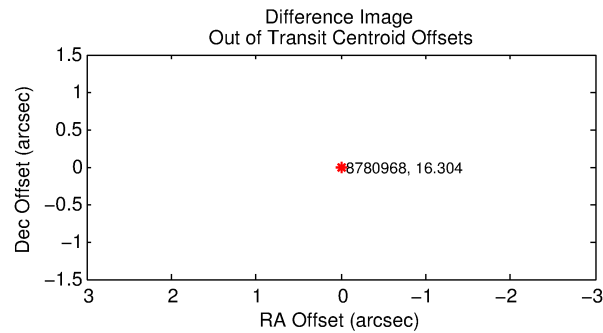
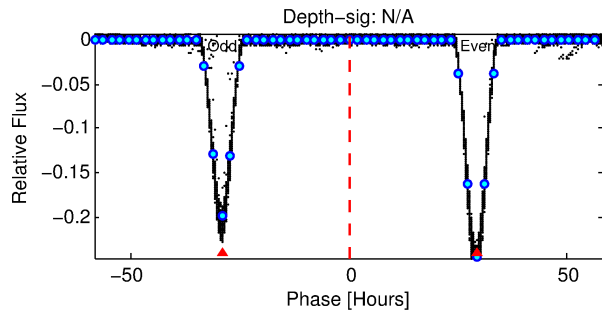
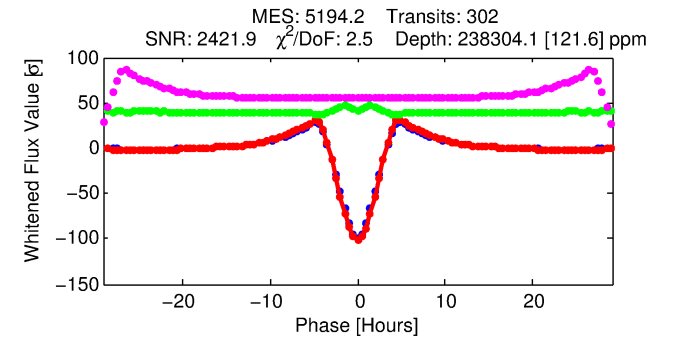
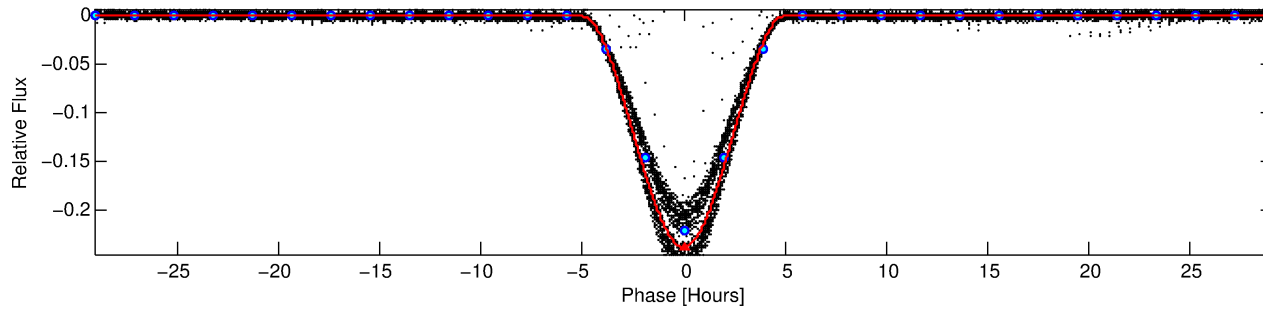
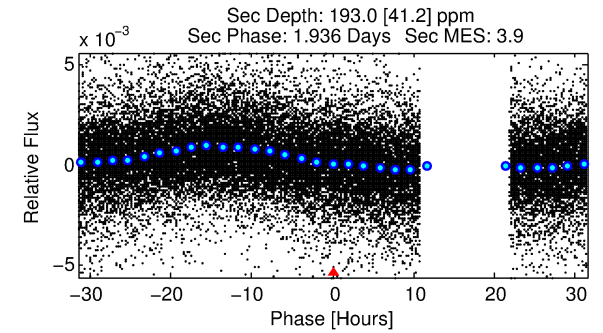
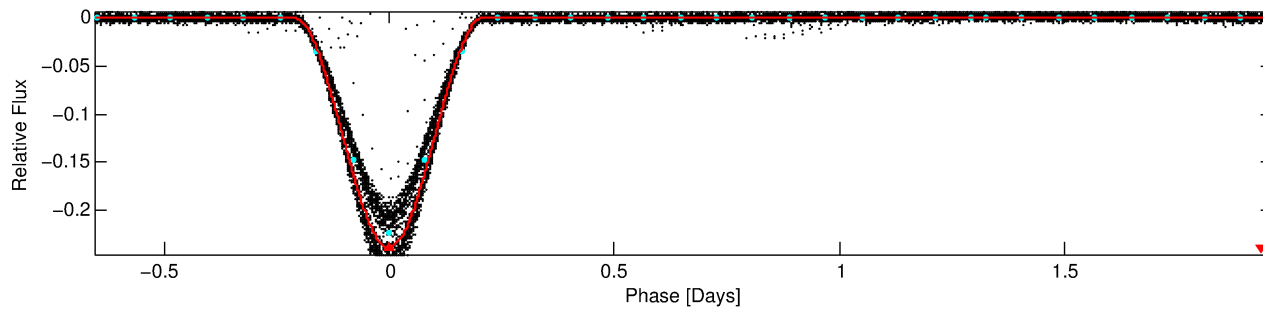
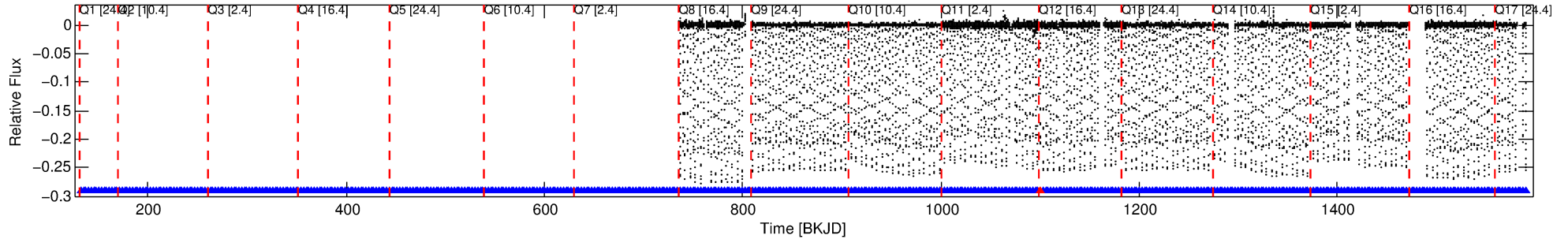
Ephemeris Match Information For 008780968-01

No Significant Match Found

DV One-Page Summary

KIC: 8780968 Candidate: 1 of 1 Period: 2.617 d
KOI: K03653.01 Corr: 0.991

Kp: 16.30 R*: 2.65 Rs Teff: 5510.0 K Logg: 3.64 Fe/H: -0.560



DV Fit Results:

Period = 2.61728 [0.00000] d
Epoch = 132.3919 [0.0001] BKJD
Rp/R* = 0.5493 [0.0135]
a/R* = 3.04 [0.01]
b = 0.70 [0.02]
Seff = 3888.26 [5734.43]
Teff = 2014 [742] K
Rp = 158.77 [112.81] Re
a = 0.0386 [0.0324] AU
Ag = 0.01 [0.01] [-106.78σ]
Teffp = 876 [59] K [-1.53σ]

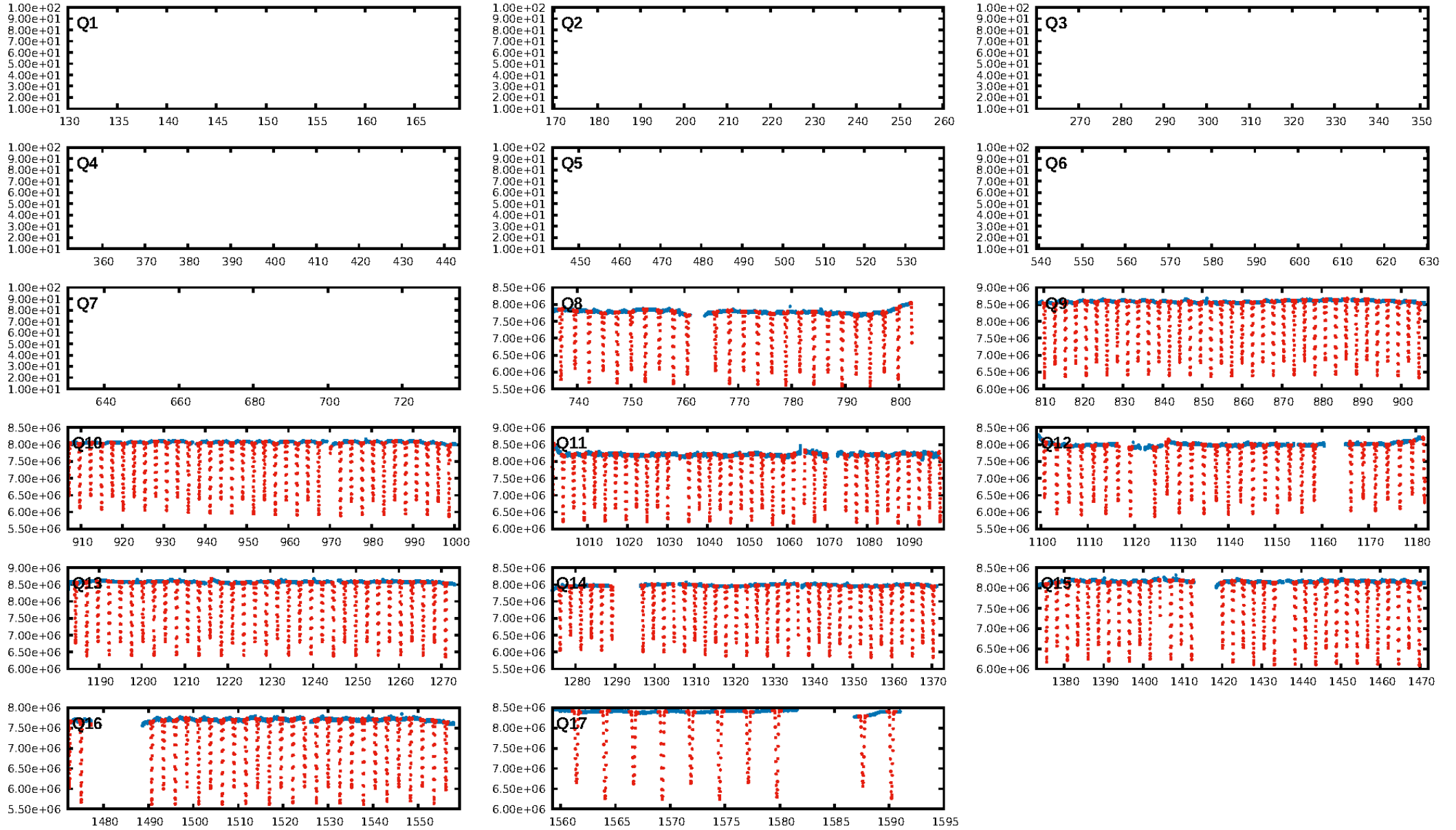
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [291/292]
GhostDiagnostic-chr: 2.111
Centroid-sig: N/A
Centroid-so: 2.827 arcsec [3768.02σ]
OotOffset-rm: N/A
KicOffset-rm: 0.203 arcsec [2.97σ]
OotOffset-st: 0/0/0 [0]
KicOffset-st: 2/2/3 [10]
DiffImageQuality-fgm: 1.00 [10/10]
DiffImageOverlap-fno: 1.00 [10/10]

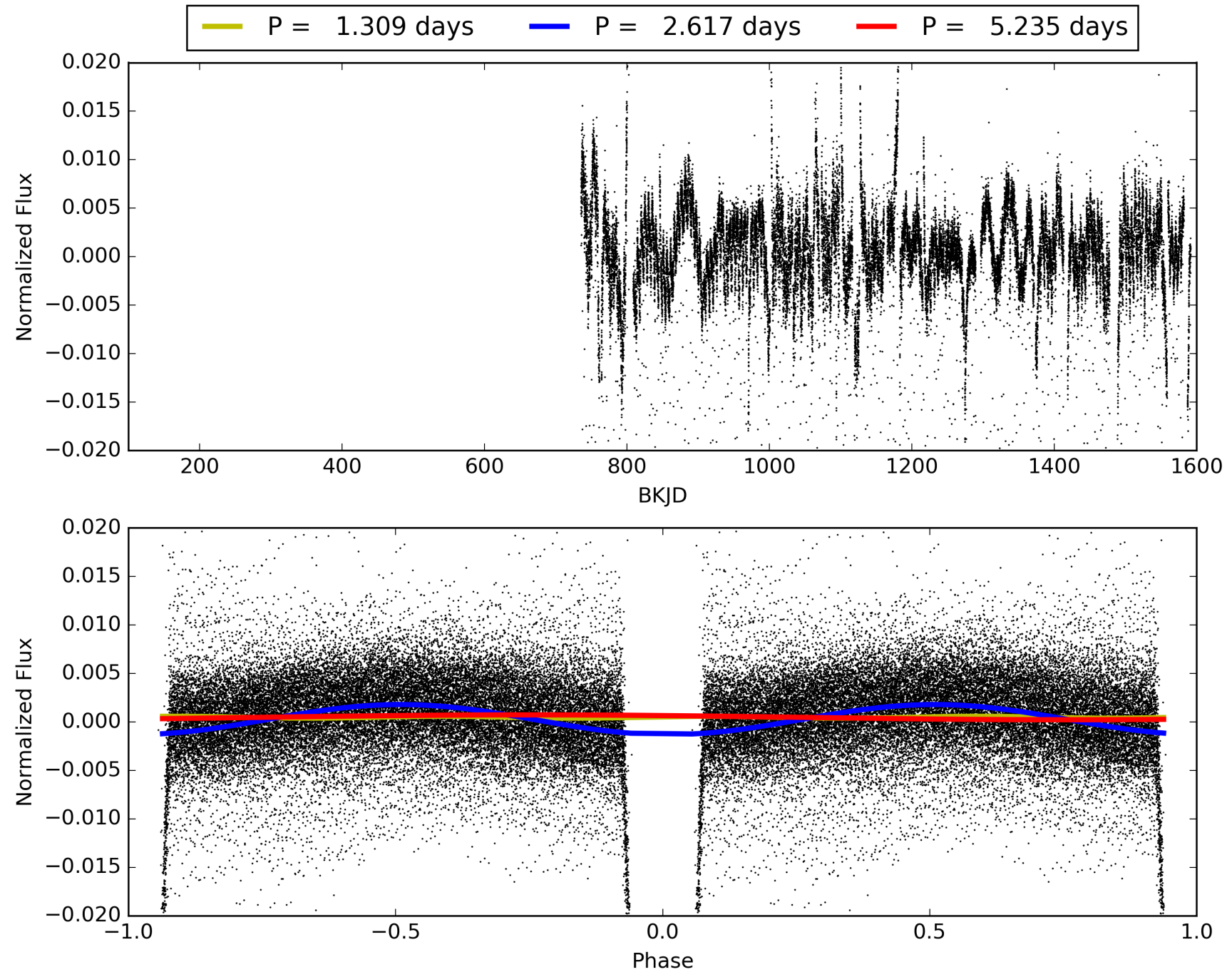
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 05:59:13 Z

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

TCE 008780968-01, PDC Light Curves

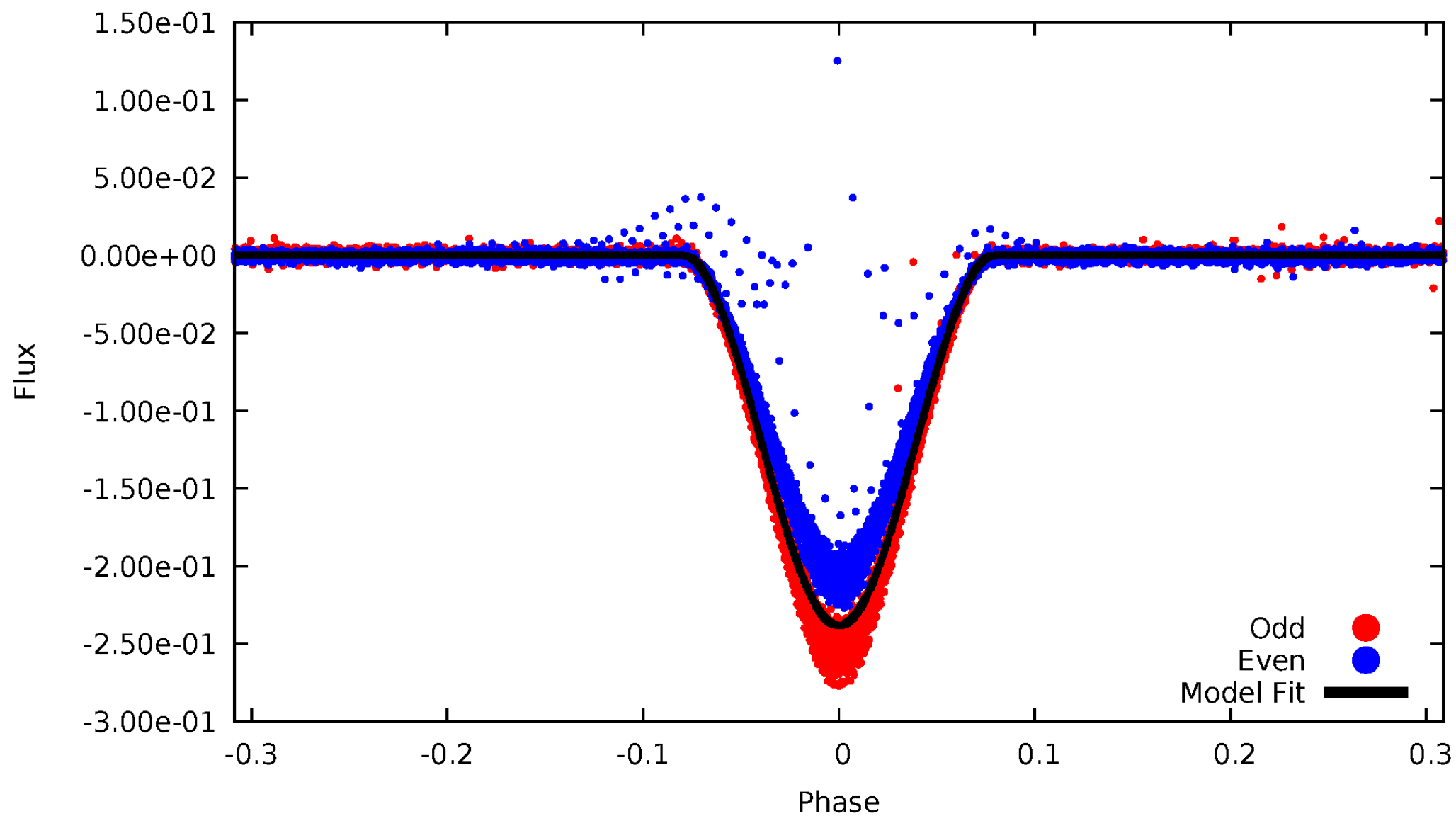


TCE 008780968-01



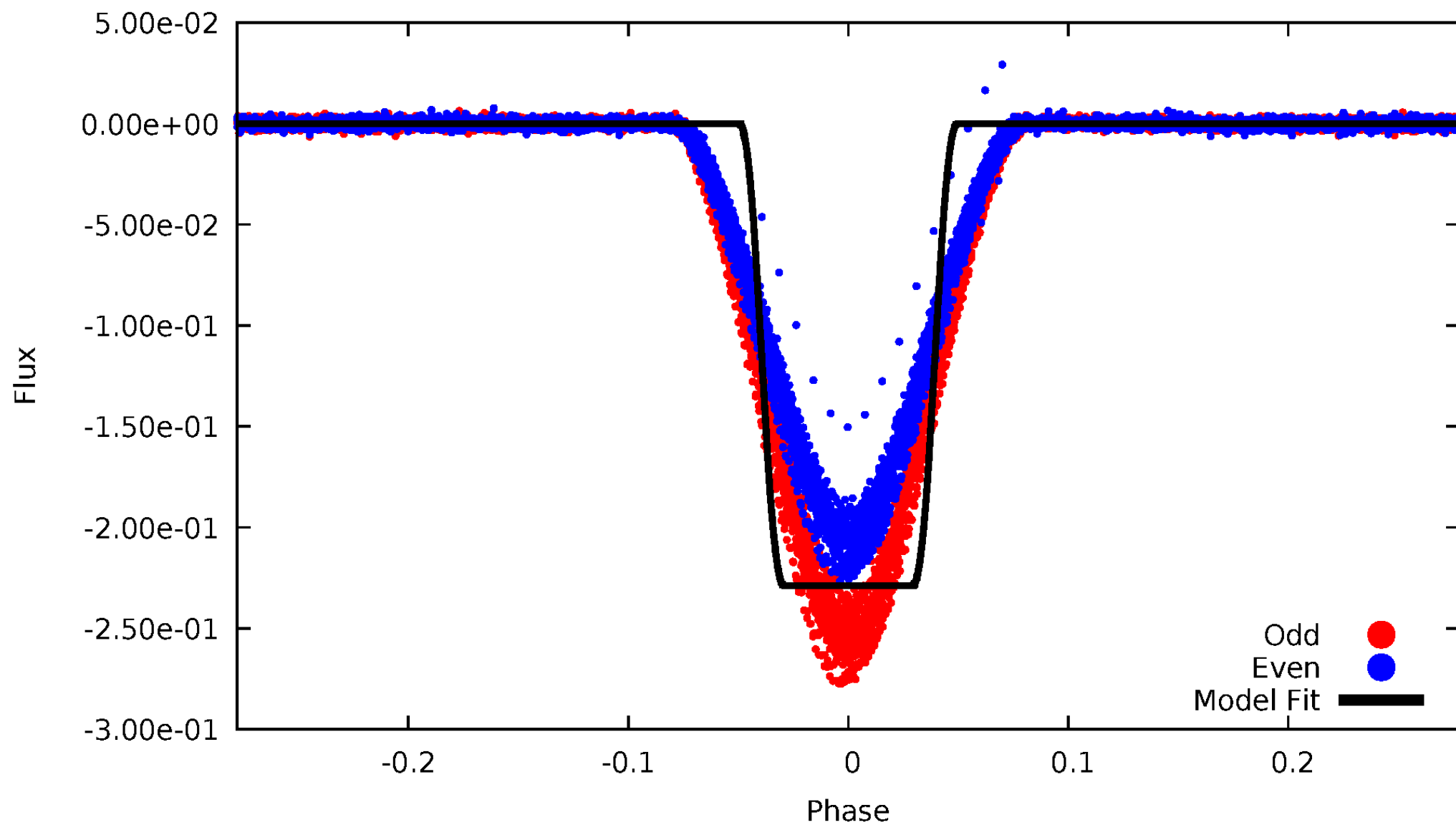
DV Odd/Even

TCE 008780968-01



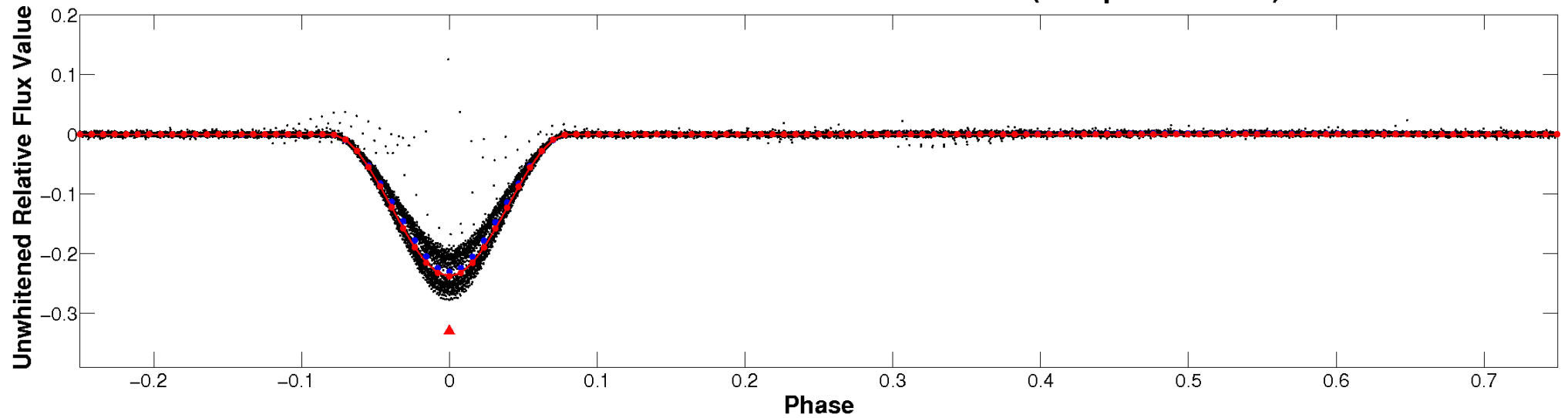
ALT Odd/Even

TCE 008780968-01

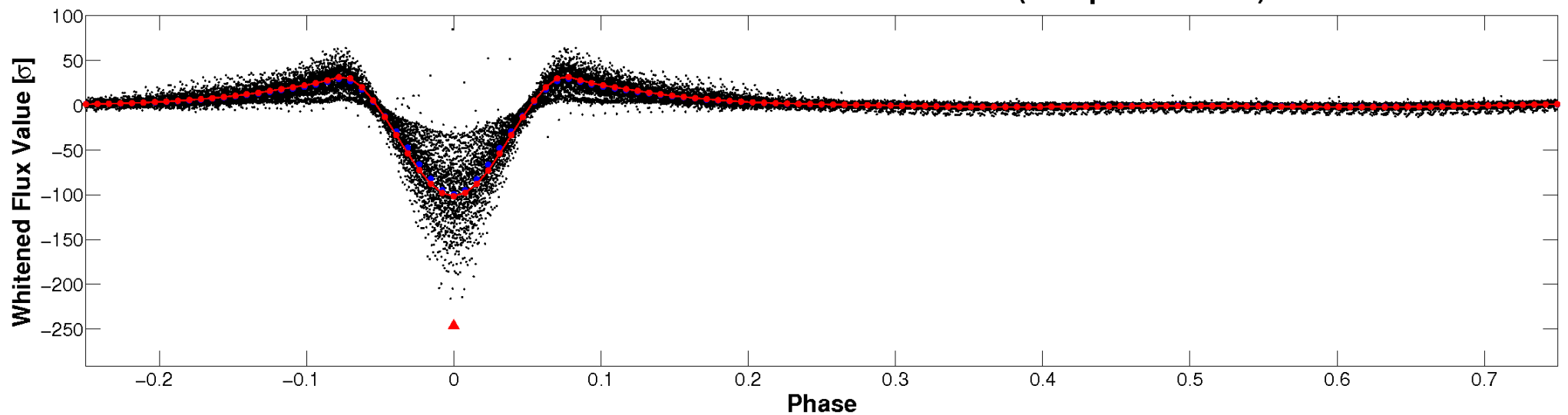


Non-Whitened Vs. Whitened Light Curve

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

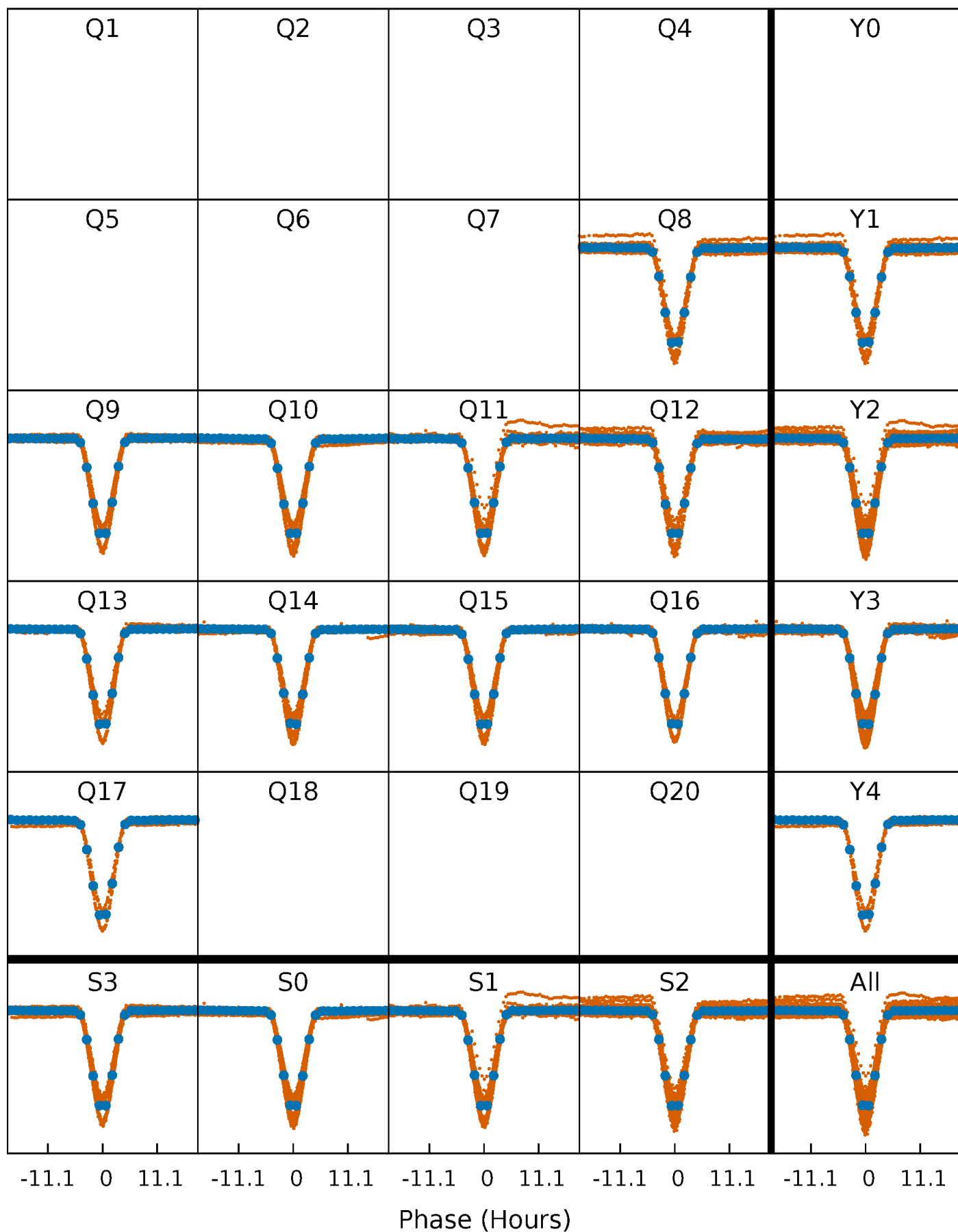


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



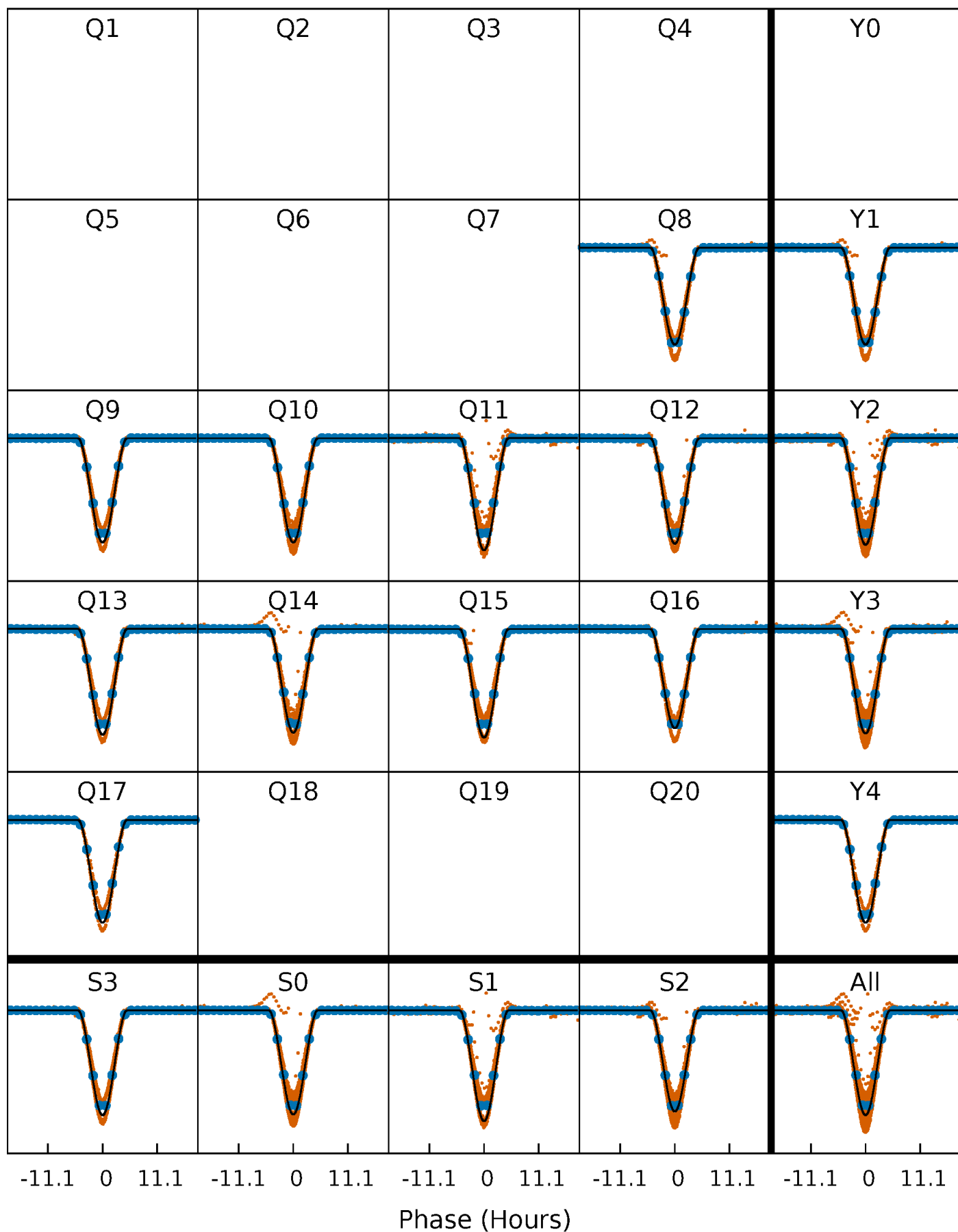
PDC Quarter-Phased Transit Curves

TCE 008780968-01 P= 2.617281 Days $T_0=132.391903$ (BKJD)



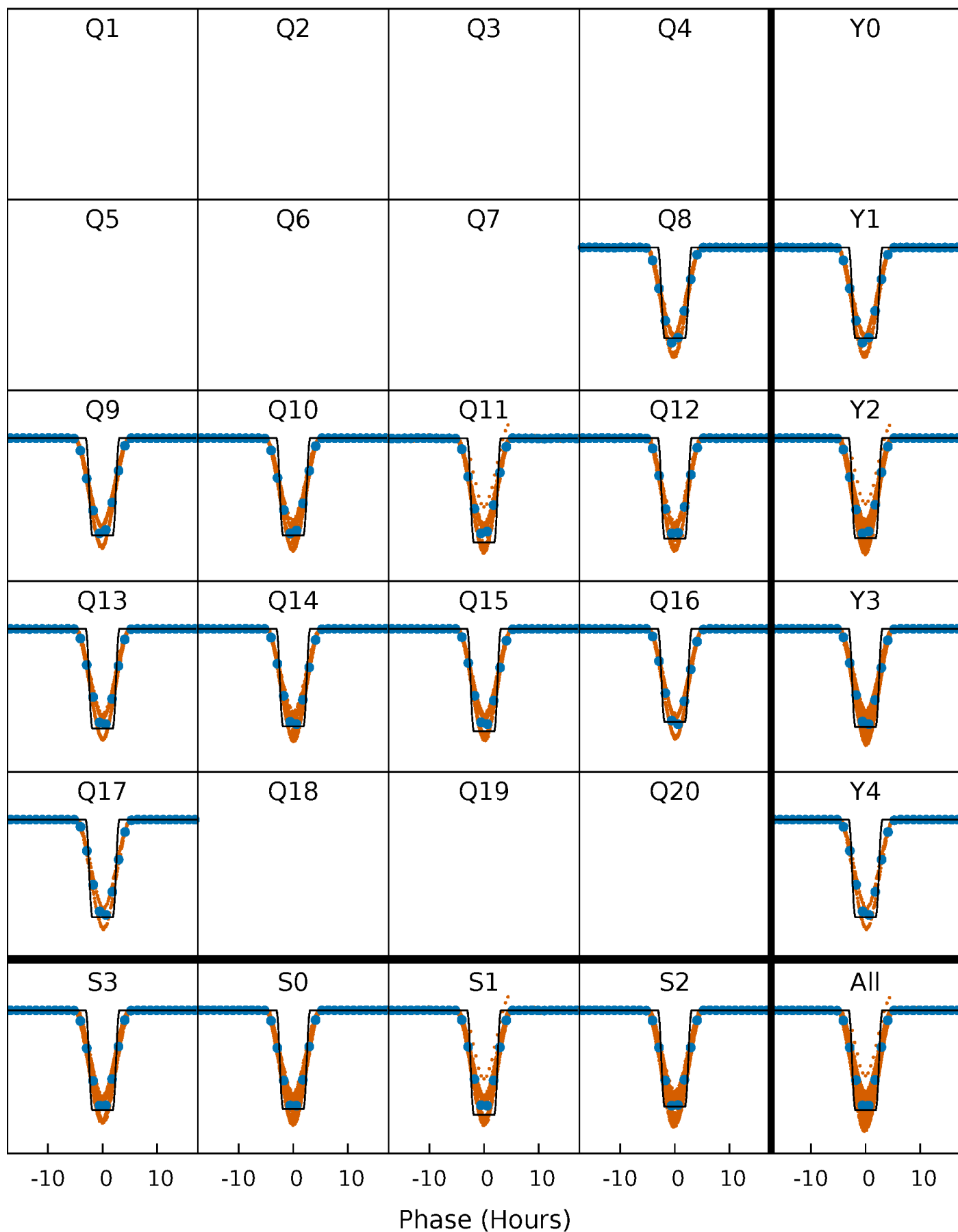
DV Quarter-Phased Transit Curves

TCE 008780968-01 P= 2.617281 Days $T_0=132.391903$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

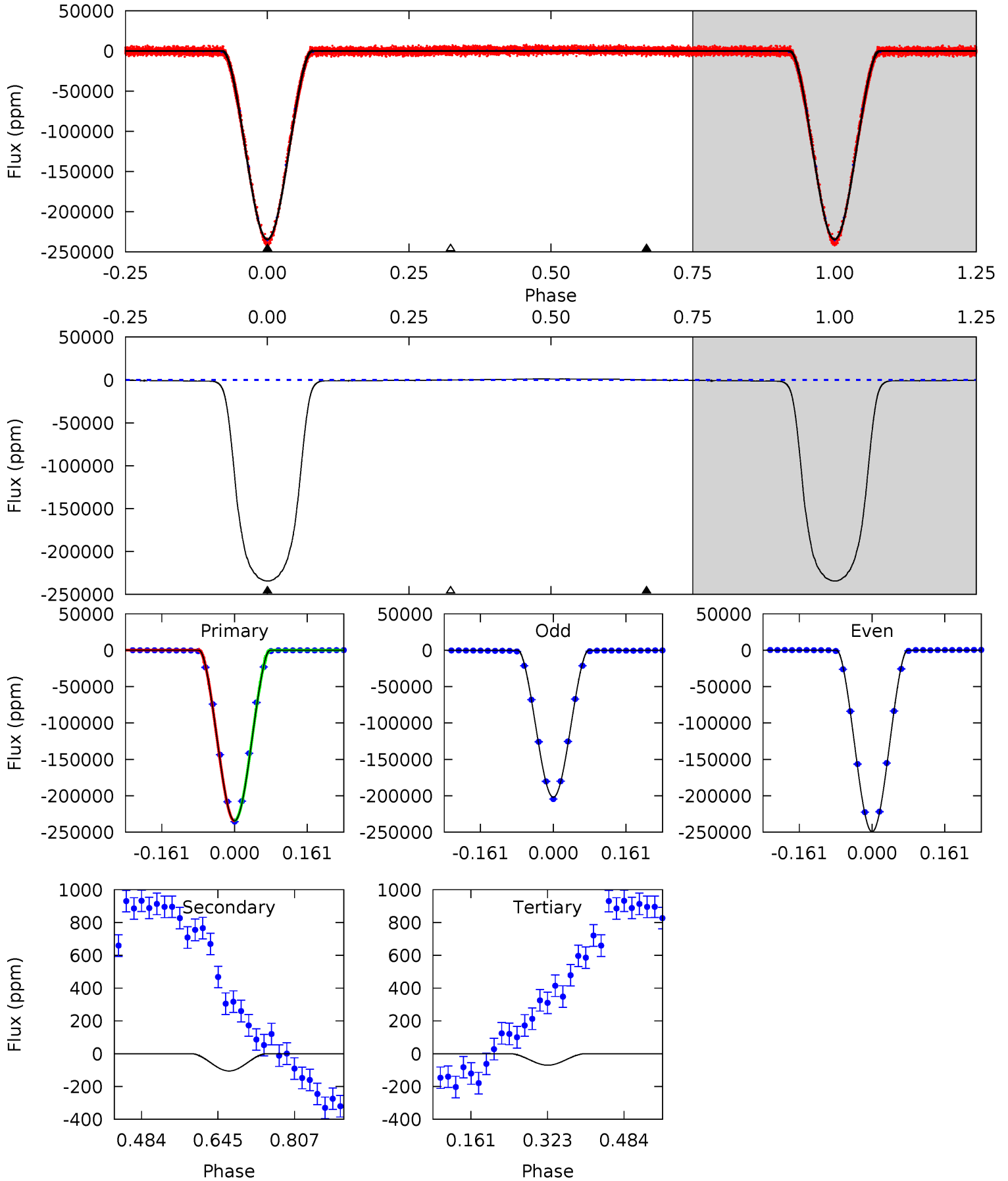
TCE 008780968-01 $P = 2.617235$ Days $T_0 = 132.410188$ (BKJD)



DV Model-Shift Uniqueness Test

008780968-01, P = 2.617281 Days, E = 132.391903 Days

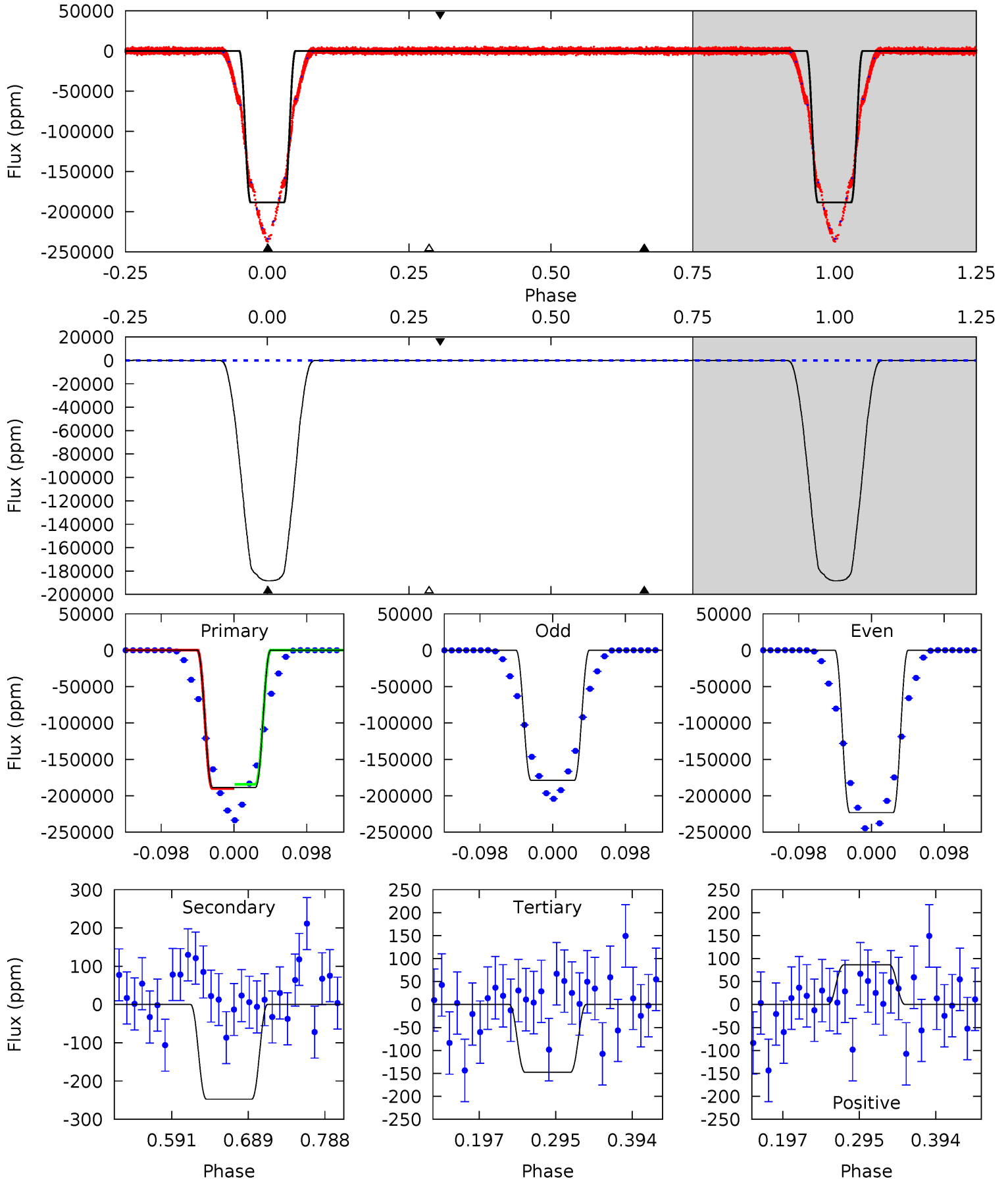
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7005	3.15	2.09	0	4.46	1.40	20.3	7003	7005	1.05	3.15	970.3	0.97	0.01	0



Alt Model-Shift Uniqueness Test

008780968-01, P = 2.617235 Days, E = 132.410188 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3313	4.35	2.60	1.52	4.57	1.65	1.24	3311	3312	1.75	2.83	679.4	0.98	0.00	0



Stellar Parameters For KIC 008780968

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5510^{+219}_{-197}	$3.641^{+0.904}_{-0.226}$	$-0.560^{+0.350}_{-0.250}$	$2.649^{+1.013}_{-1.881}$	$1.119^{+0.201}_{-0.326}$	$0.085^{+1.869}_{-0.058}$
	+4%/-4%	+25%/-6%	+62%/-45%	+38%/-71%	+18%/-29%	+2203%/-68%
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 008780968-01 / KOI 3653.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-105 ± 33	$149.84^{+37.26}_{-54.79}$	2723^{+345}_{-524}	-2914^{+323}_{-208}	$0.004^{+0.006}_{-0.002}$
Alt.	-247 ± 57	$129.54^{+33.42}_{-45.19}$	2721^{+333}_{-508}	-2901^{+314}_{-204}	$0.012^{+0.016}_{-0.005}$

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 $A_{obs} \gg 1.0$

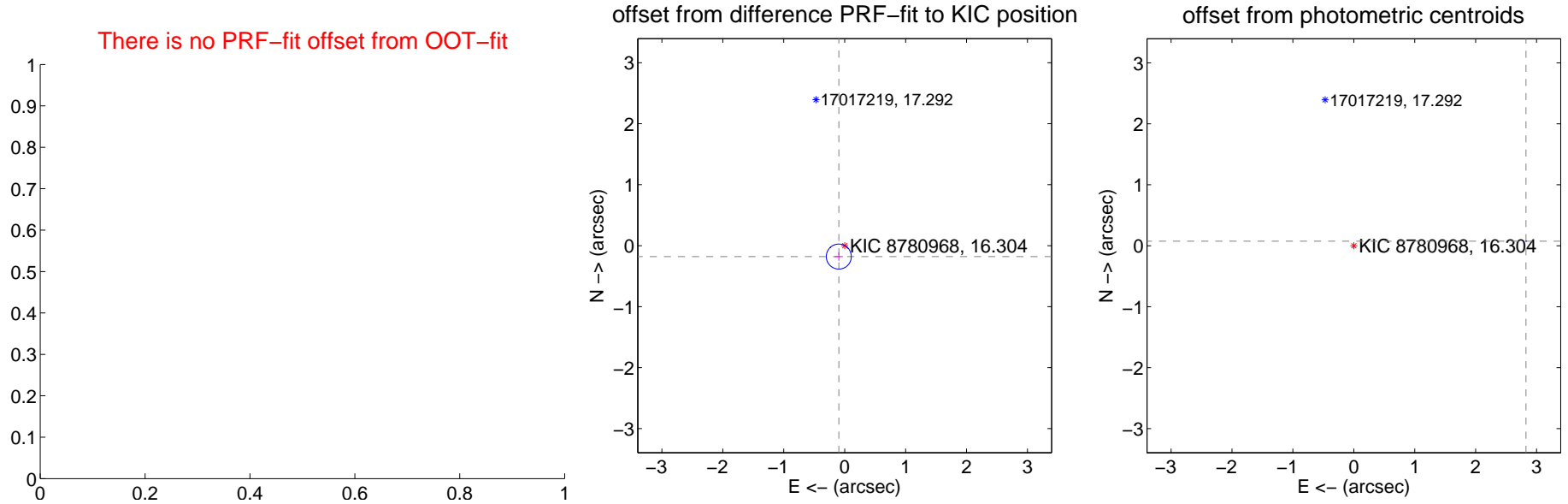
DV Centroid Data

Supplemental centroid analysis for 008780968-01. Kepler magnitude: 16.30. Transit SNR 2421.86

There are 10 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	0.203 ± 0.068	2.97	0.096 ± 0.067	-0.179 ± 0.069
photometric centroid source offset	2.83 ± 0.00	3768.02	-2.83 ± 0.00	0.08 ± 0.00

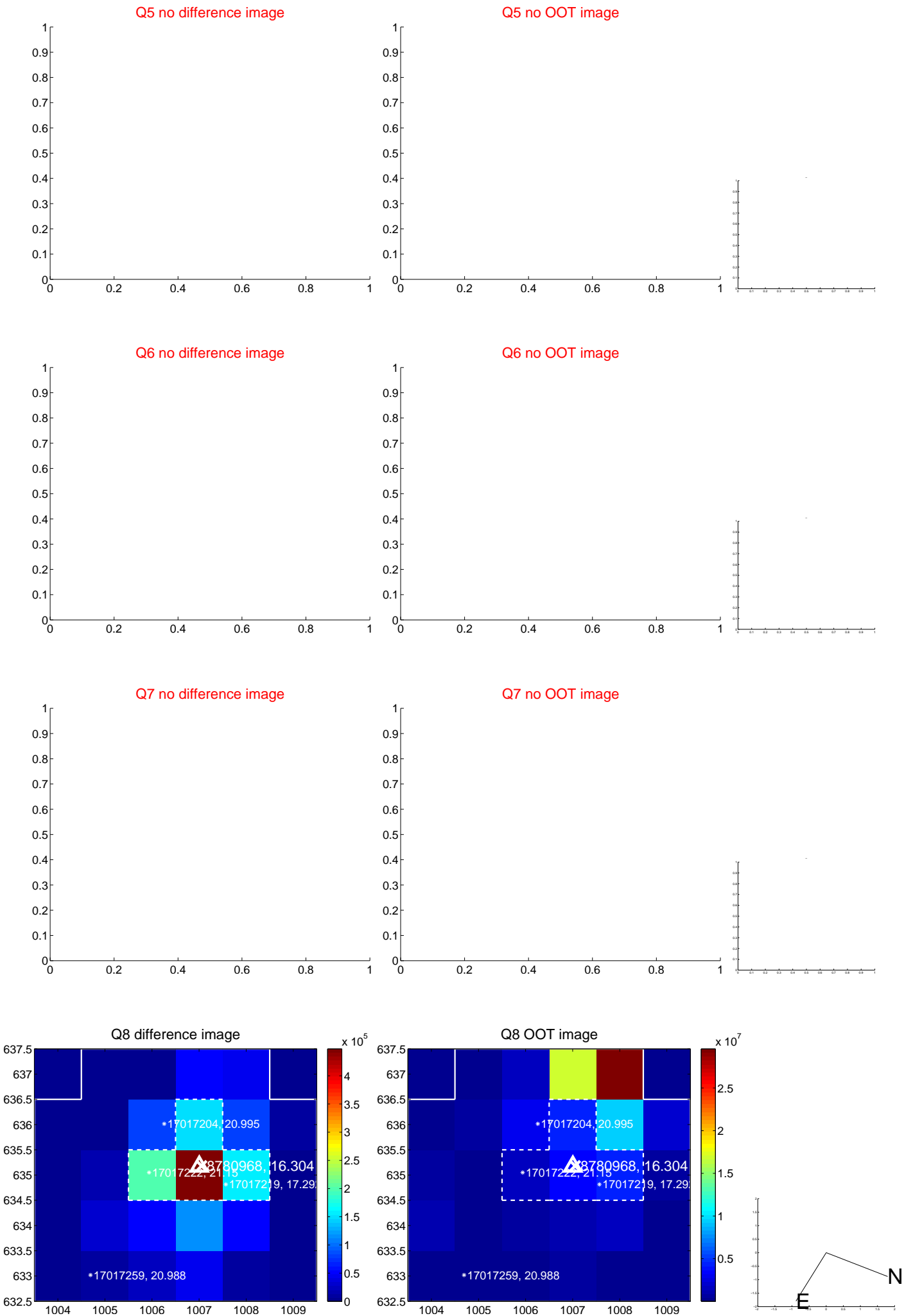


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

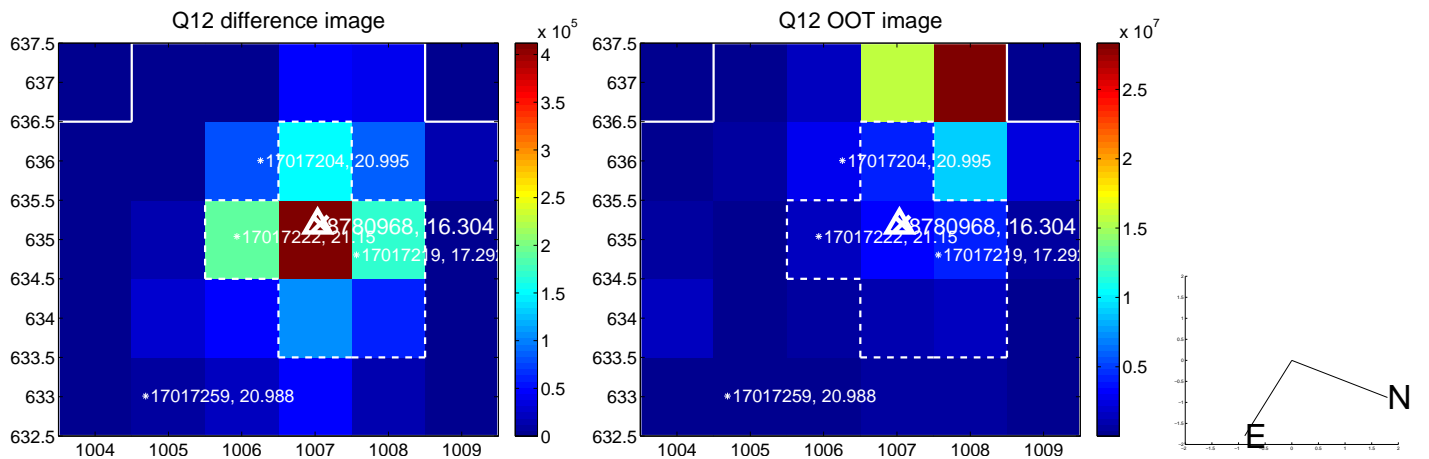
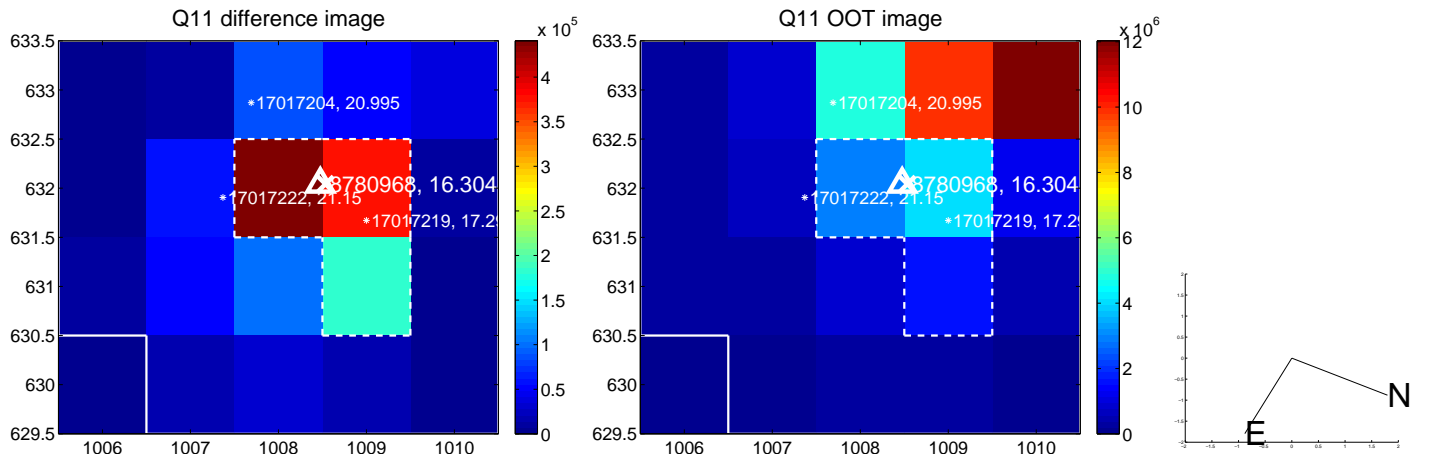
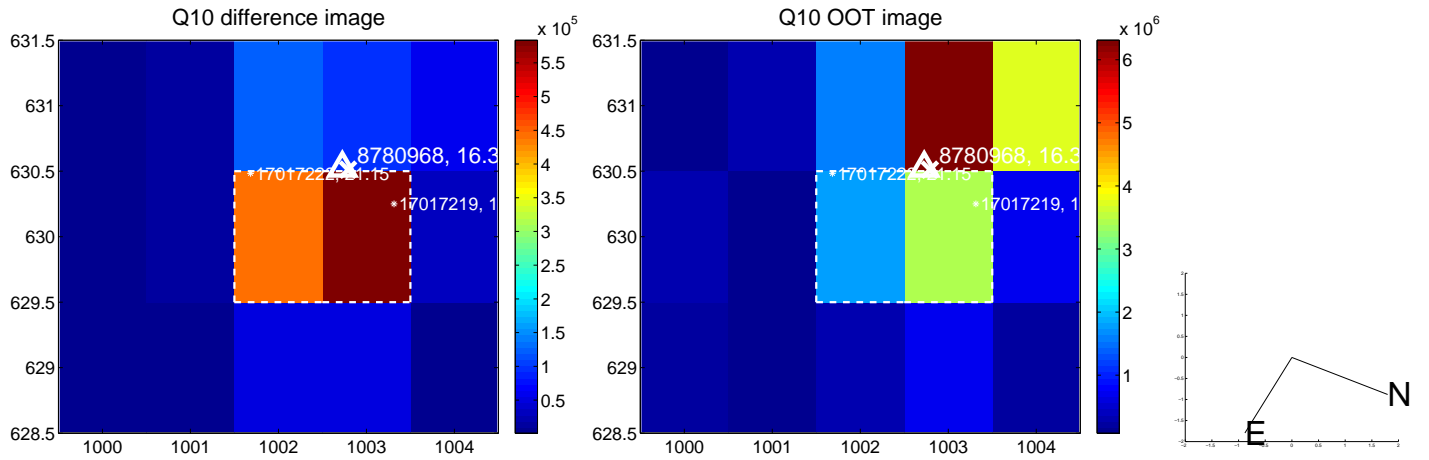
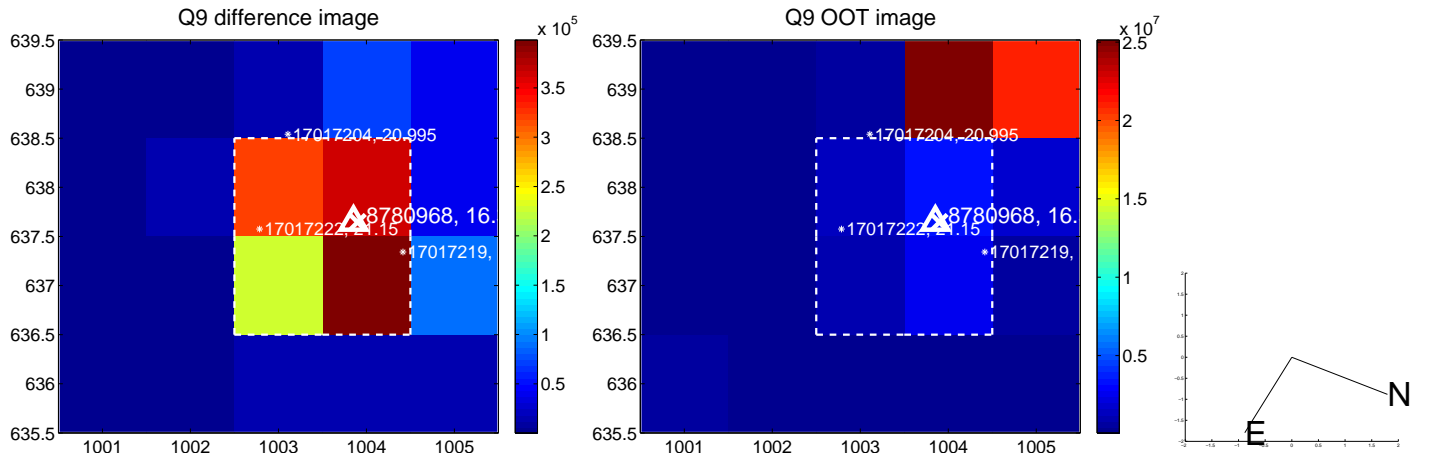
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



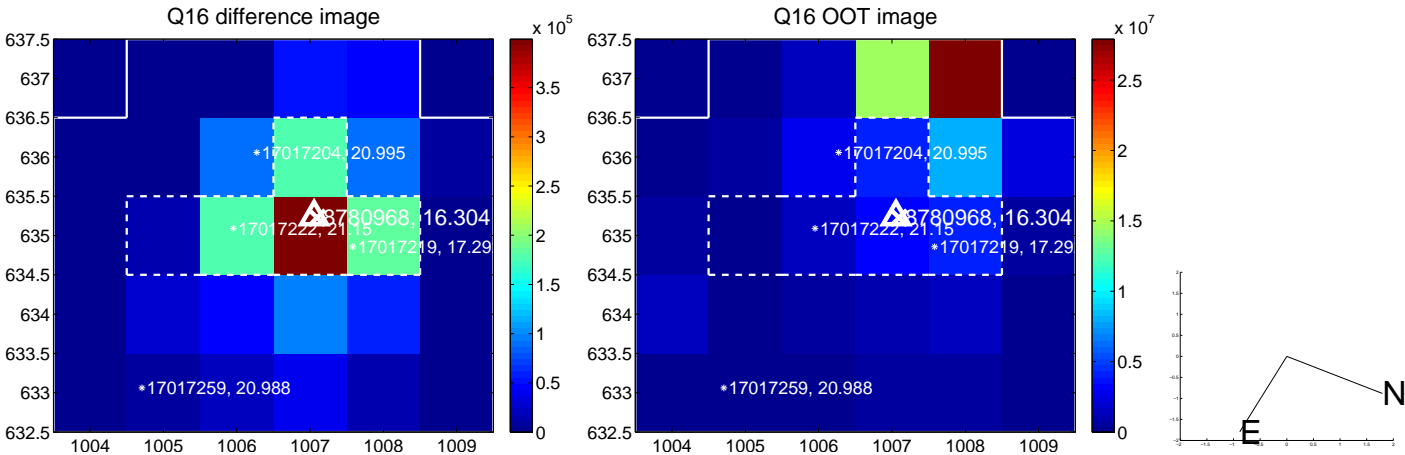
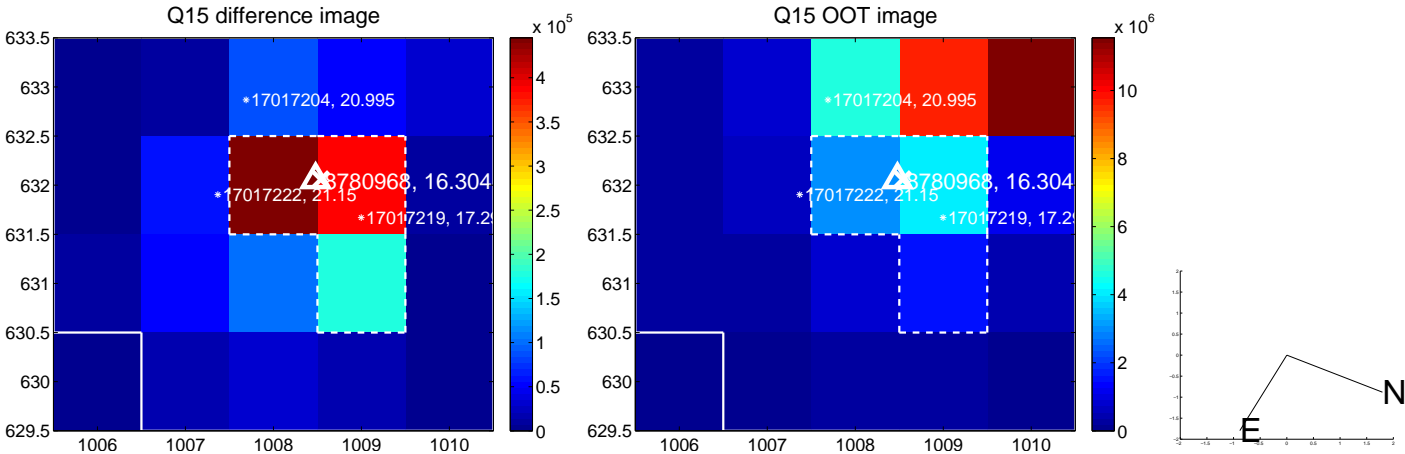
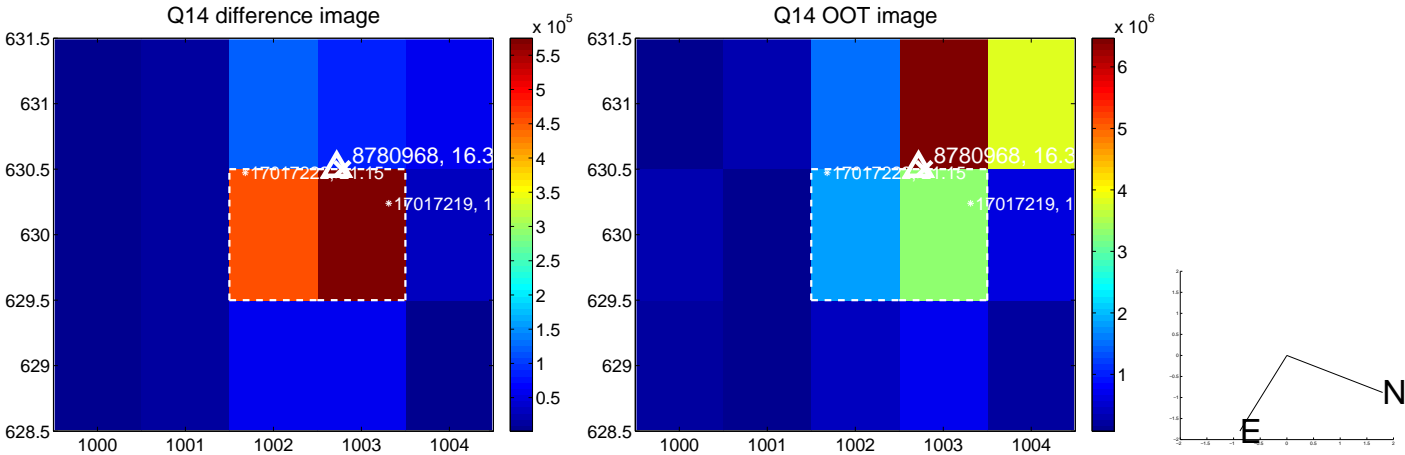
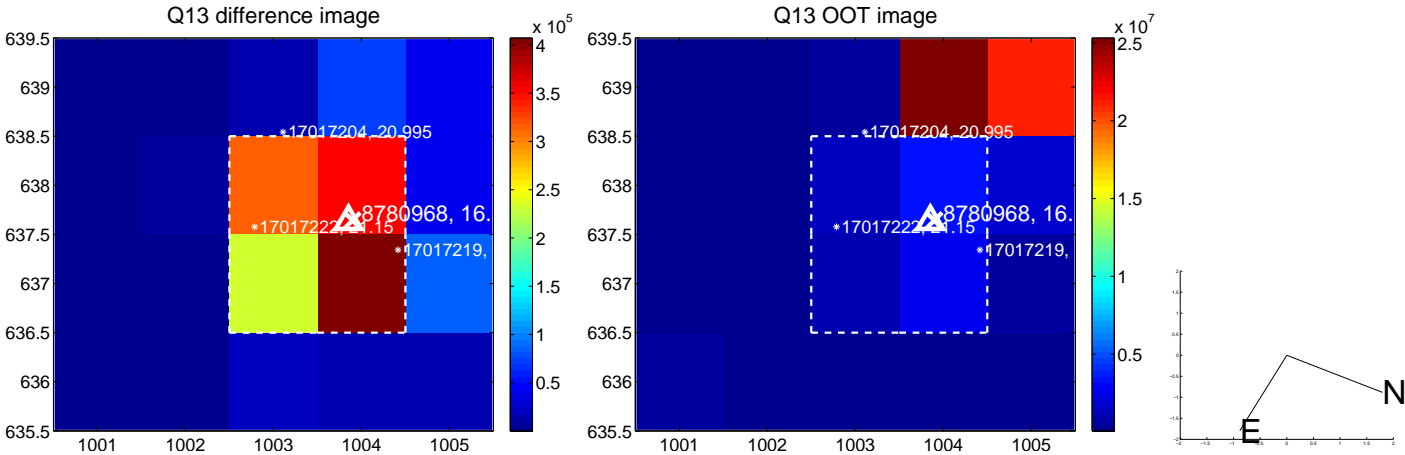
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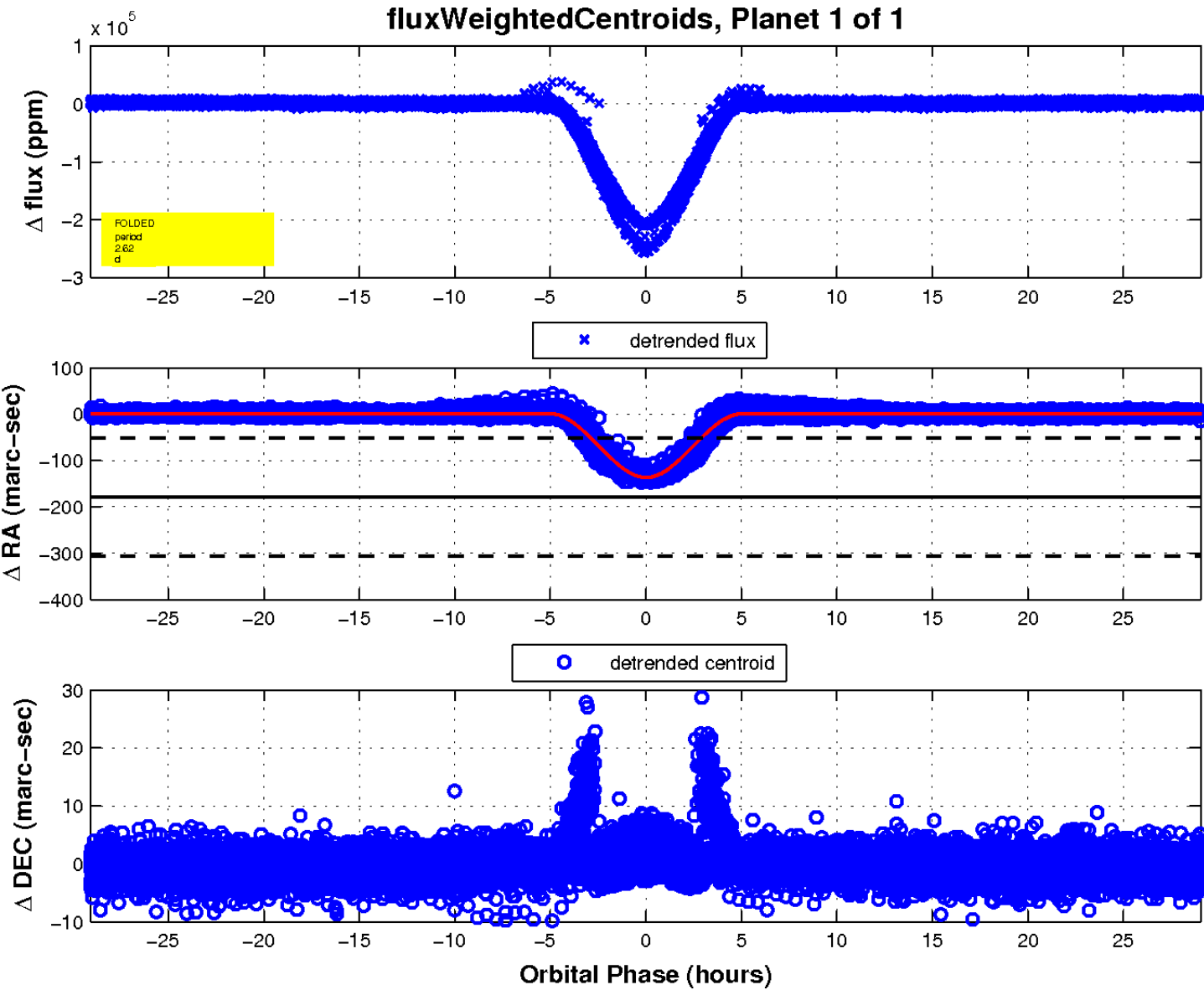
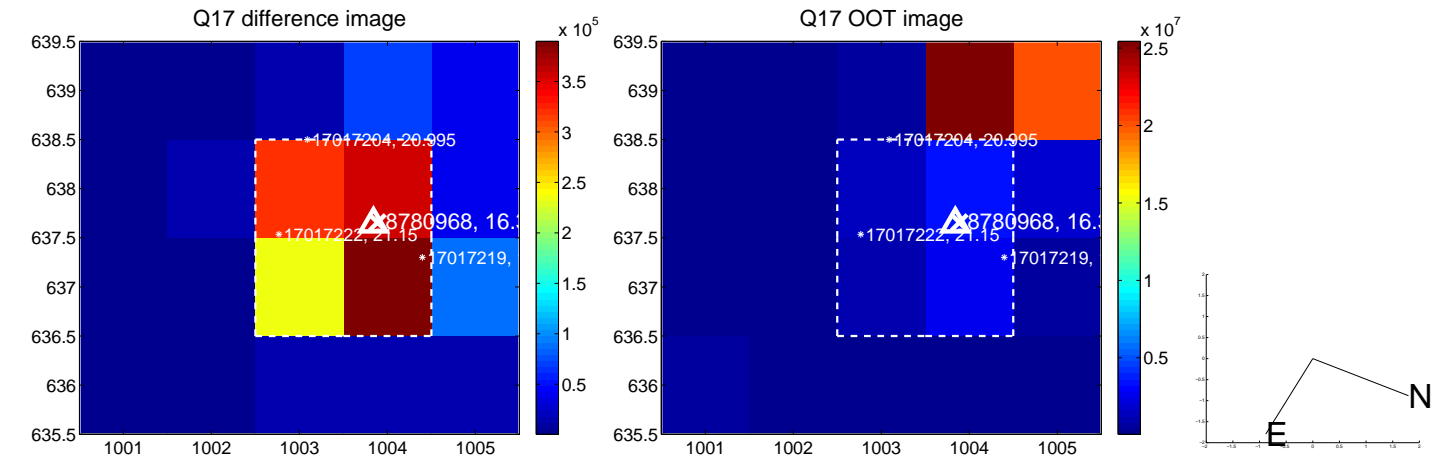
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UKIRT Image

Declination

