

KIC 003966801

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})
003966801-01	OBS	0494.01	25.695866	137.395699	1109.7	3.991	35.9	40.4	0.48	3787	1.70	2.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003966801-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

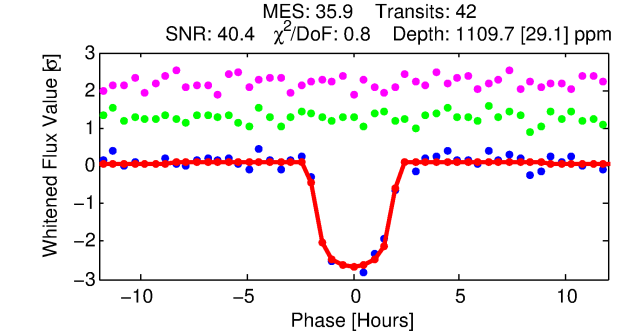
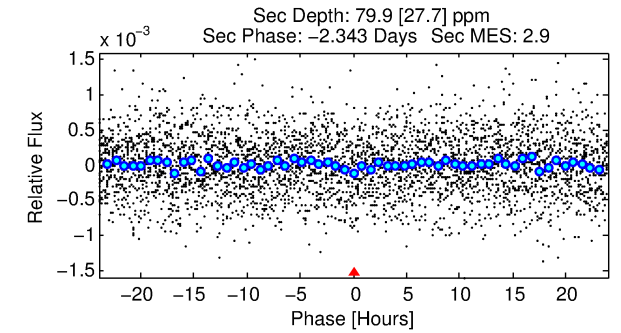
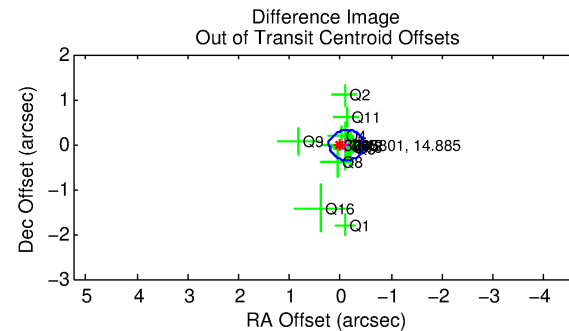
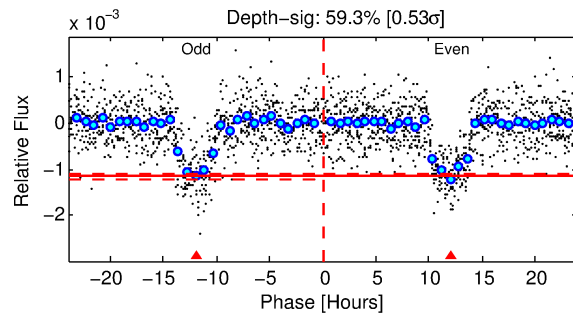
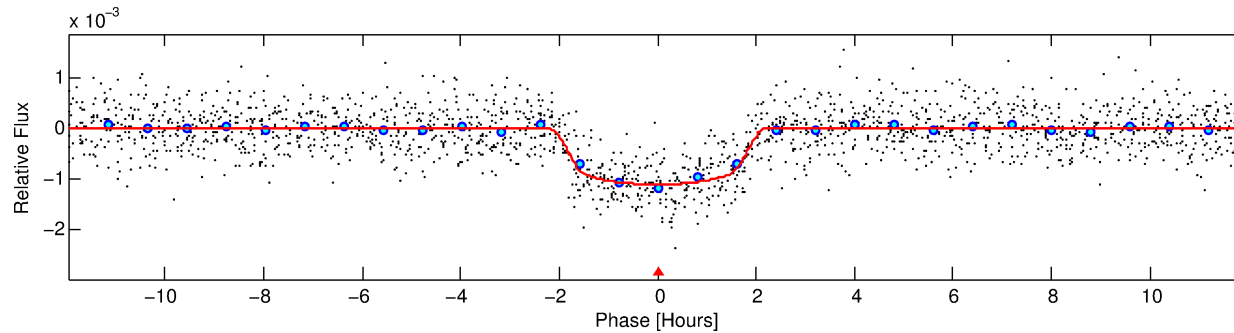
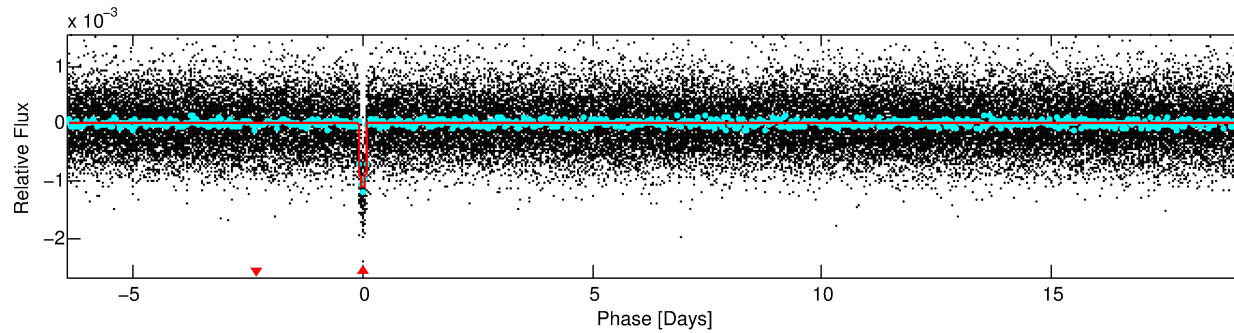
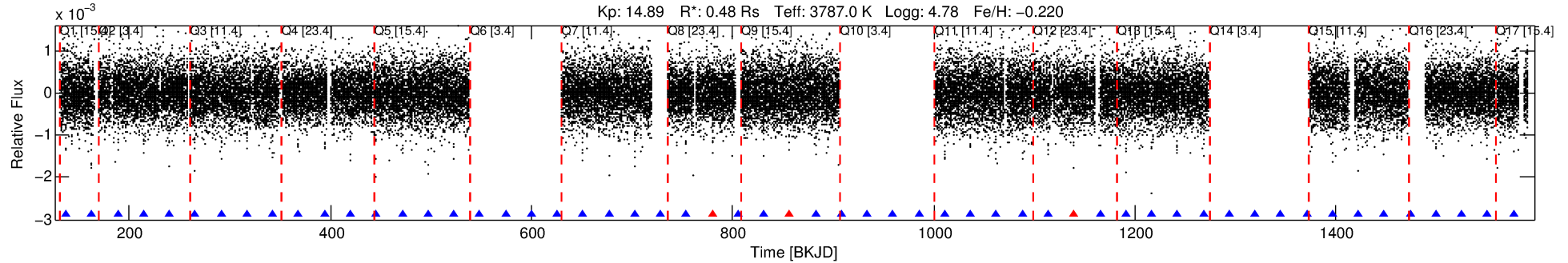
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003966801-01

No Significant Match Found

DV One-Page Summary

KIC: 3966801 Candidate: 1 of 1 Period: 25.696 d
KOI: K00494.01 Corr: 0.991



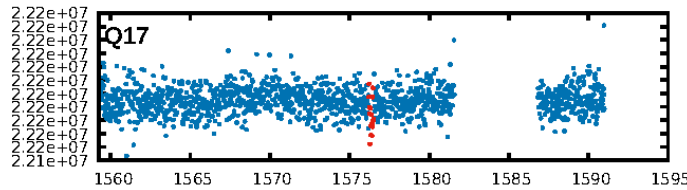
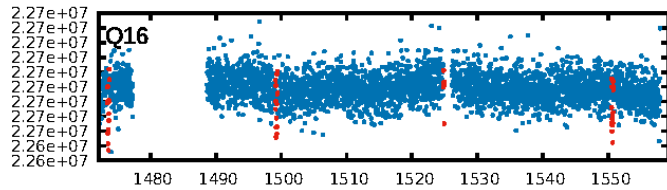
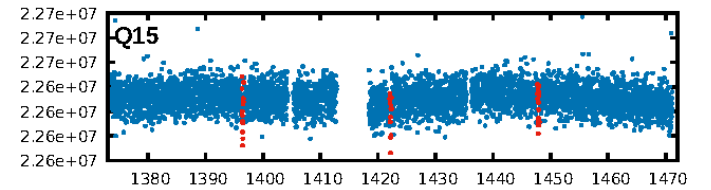
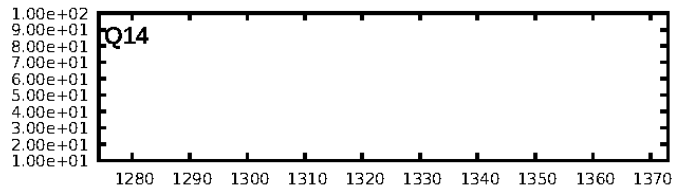
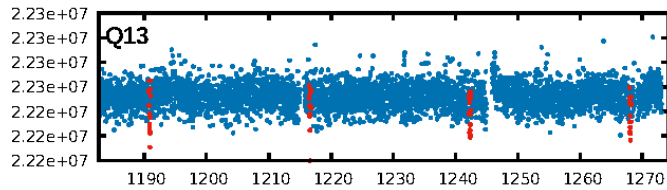
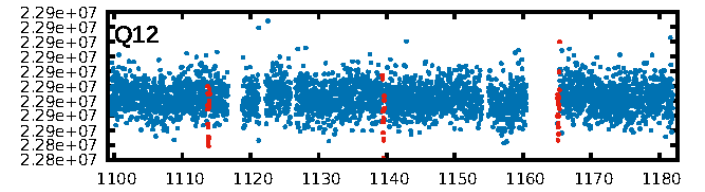
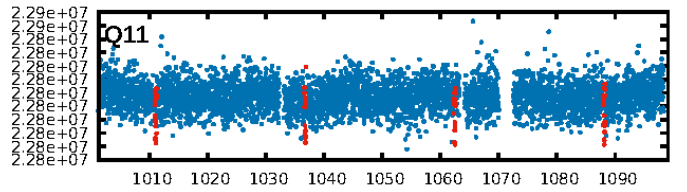
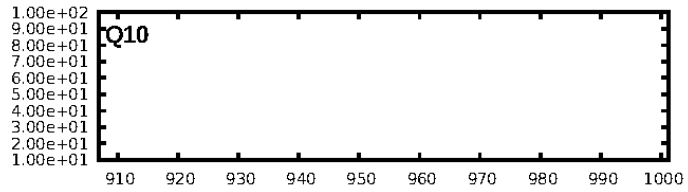
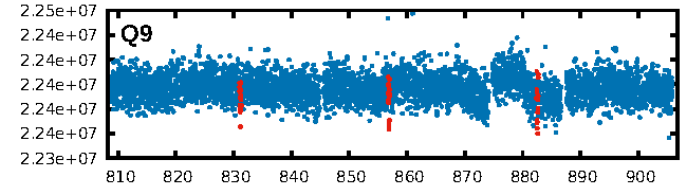
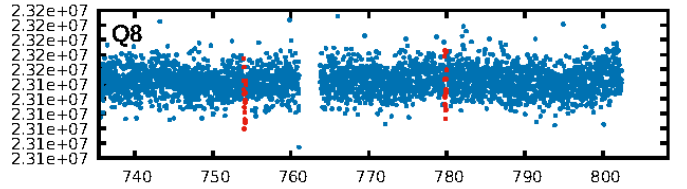
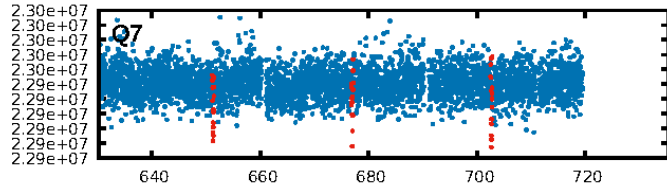
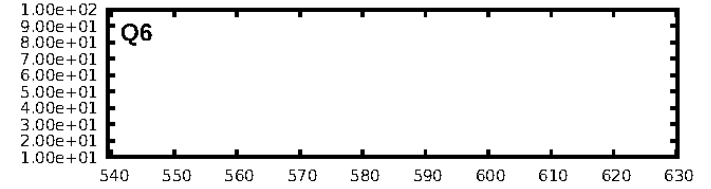
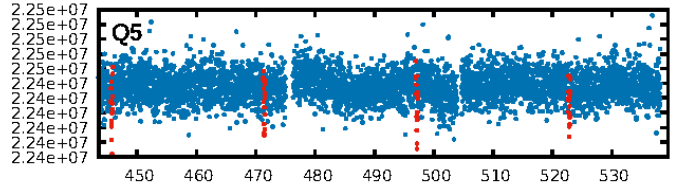
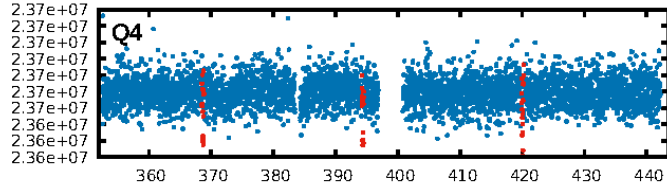
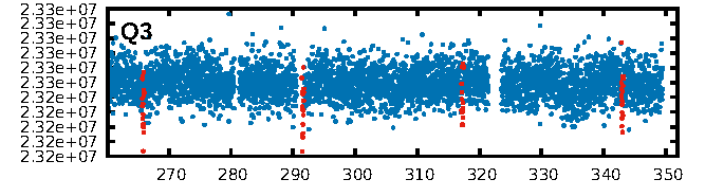
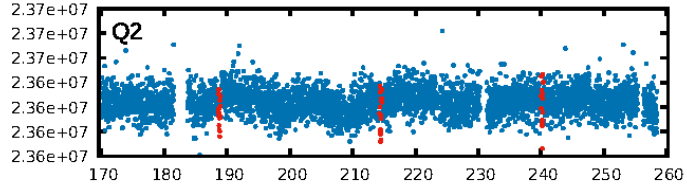
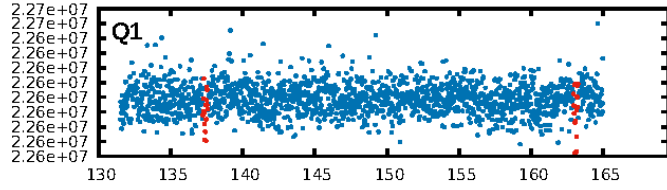
DV Fit Results:

Period = 25.69587 [0.00006] d
Epoch = 137.3957 [0.0020] BKJD
Rp/R* = 0.0326 [0.0053]
a/R* = 37.05 [28.40]
b = 0.71 [0.55]
Seff = 2.31 [0.67]
Teq = 314 [23] K
Rp = 1.70 [0.43] Re
a = 0.1348 [0.0200] AU
Ag = 276.70 [142.35] [1.94 σ]
Teffp = 1982 [259] K [6.42 σ]

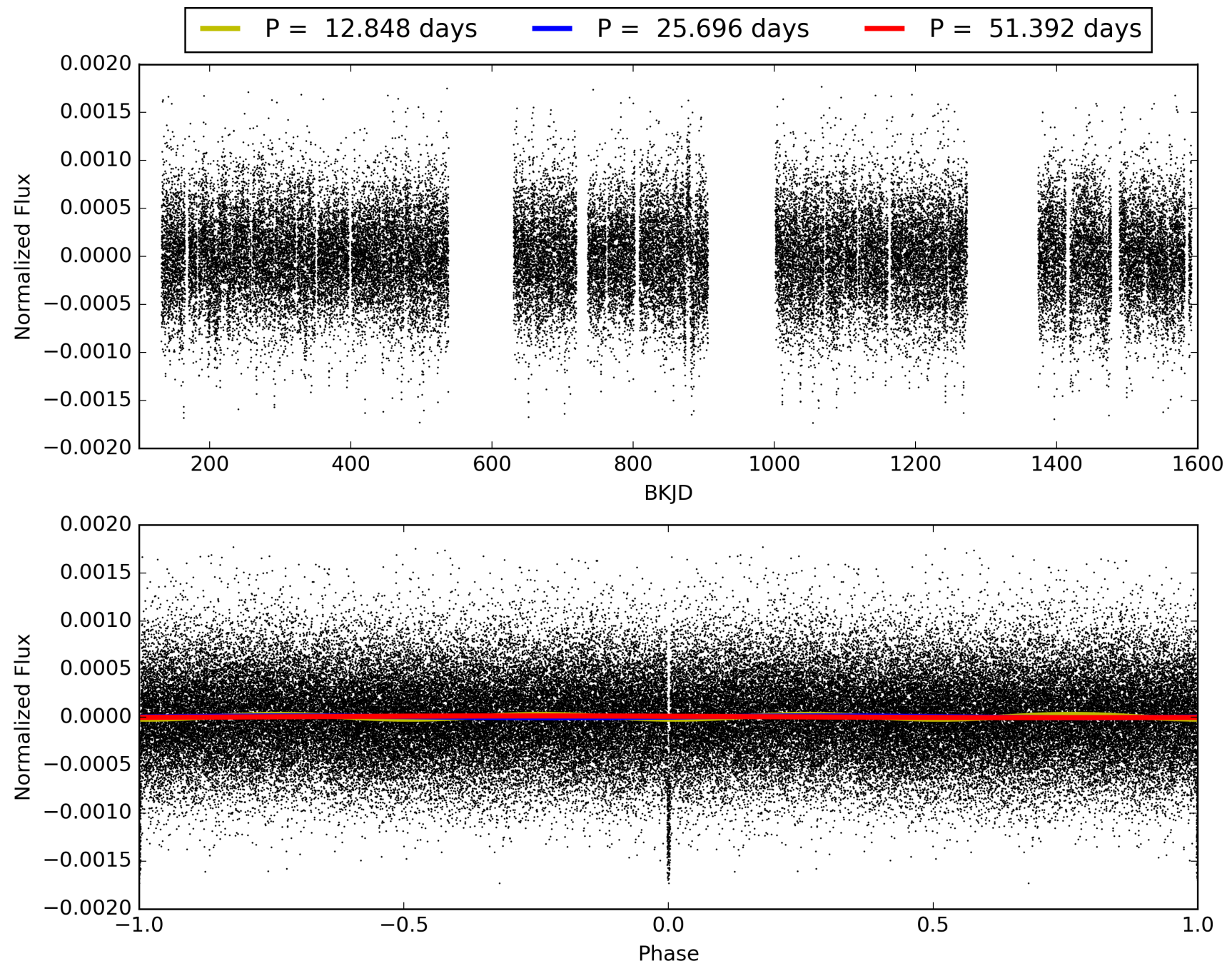
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 97.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.87e-284
RollingBand-fgt: 0.92 [36/39]
GhostDiagnostic-chr: 8.732
Centroid-sig: 89.6%
Centroid-so: 0.527 arcsec [1.20 σ]
OotOffset-rm: 0.116 arcsec [1.04 σ]
KicOffset-rm: 0.043 arcsec [0.29 σ]
OotOffset-st: 1/4/4/4 [13]
KicOffset-st: 1/4/4/4 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 003966801-01, PDC Light Curves

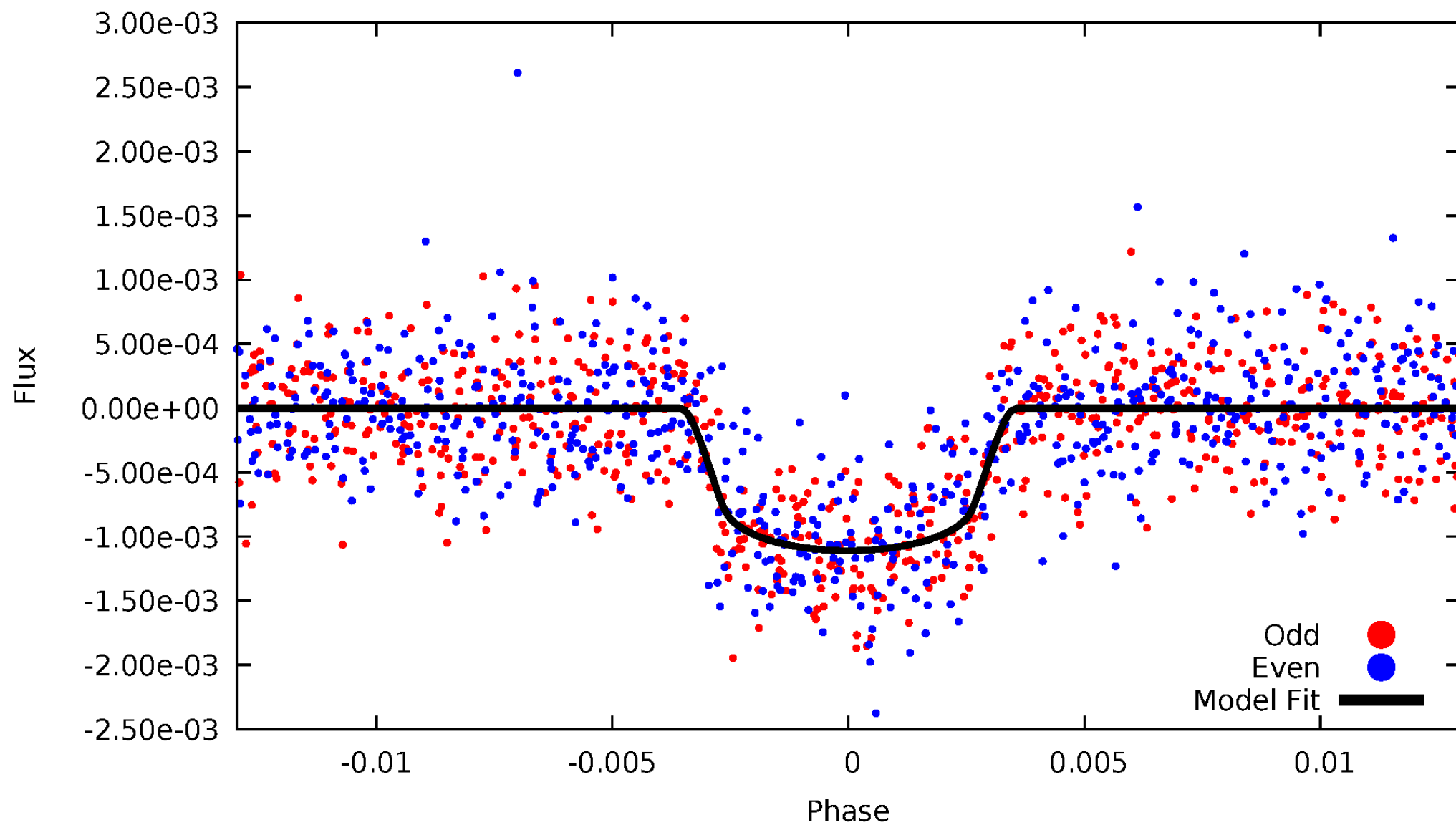


TCE 003966801-01



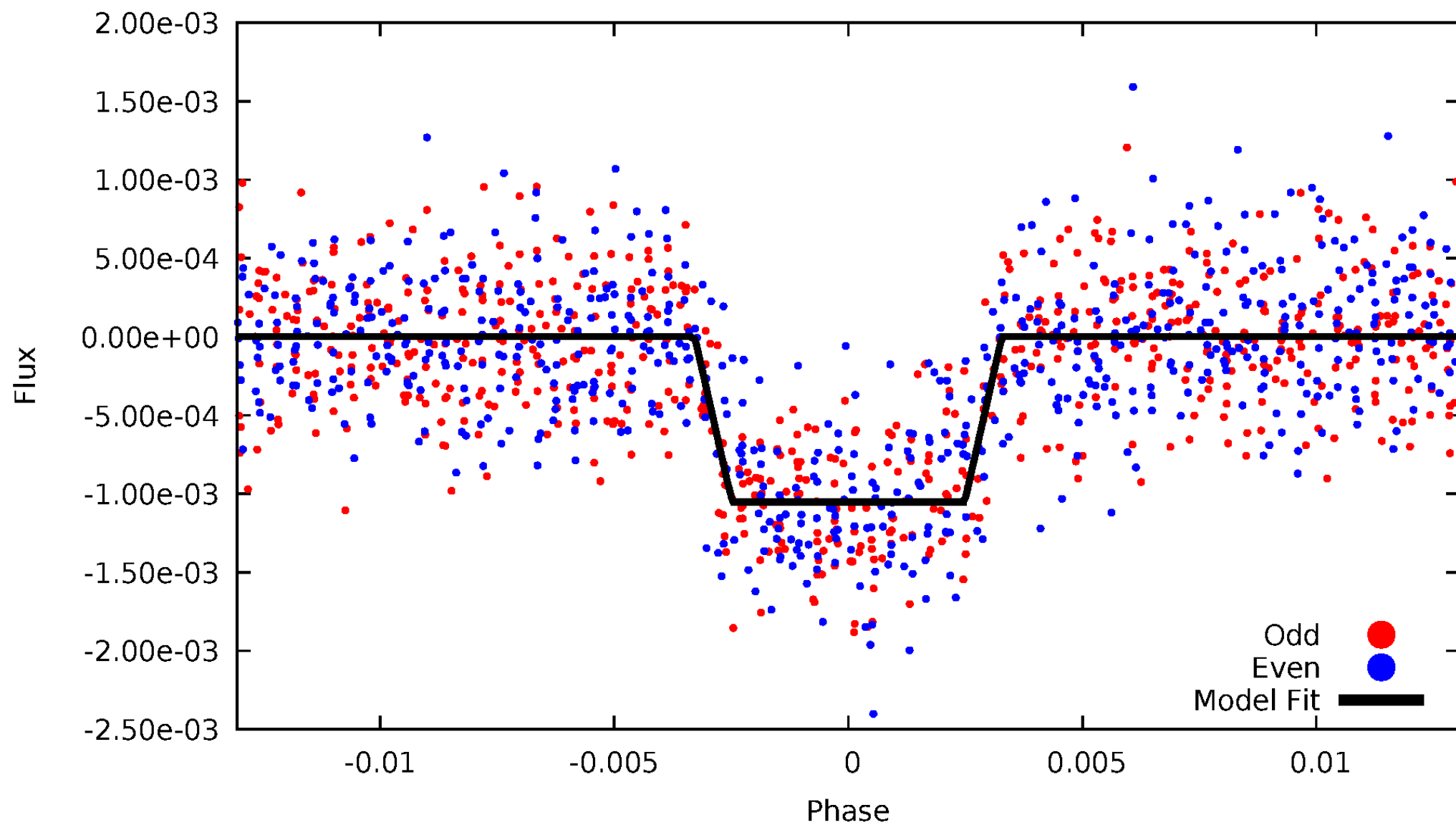
DV Odd/Even

TCE 003966801-01



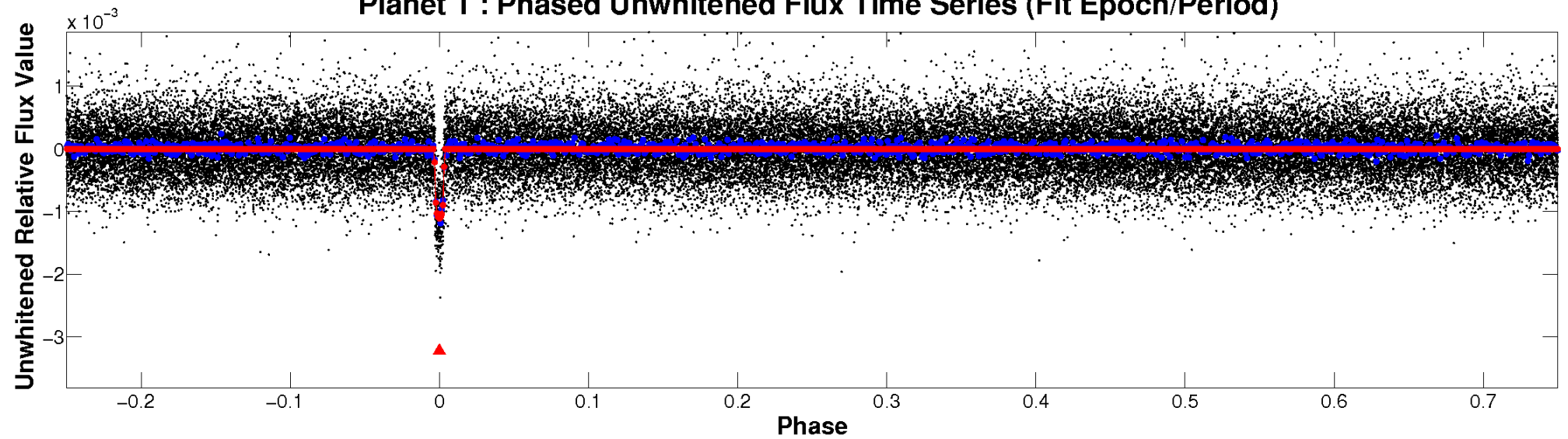
ALT Odd/Even

TCE 003966801-01

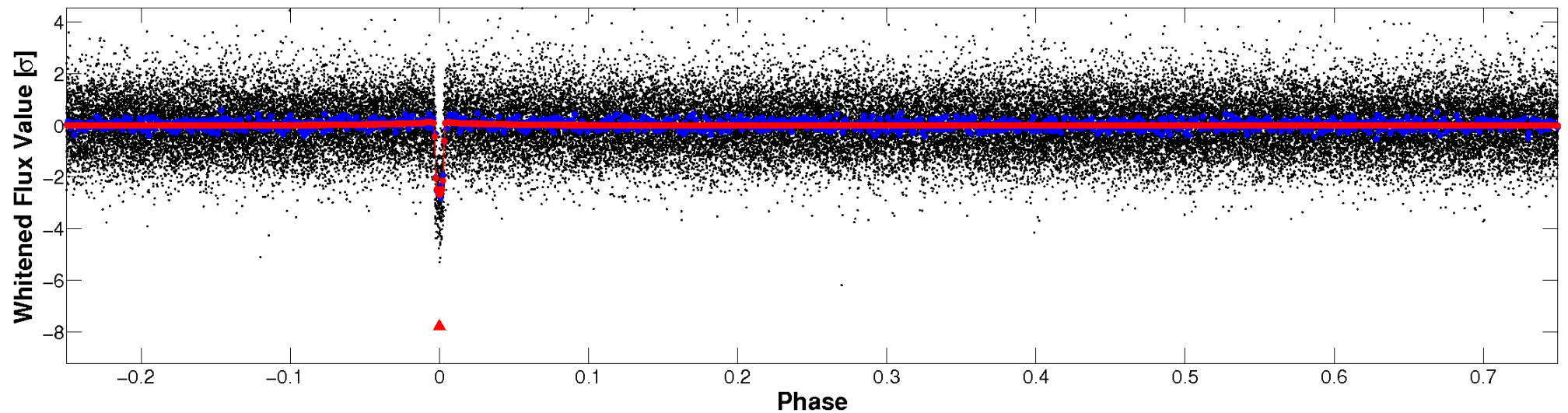


Non-Whitened Vs. Whitened Light Curve

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

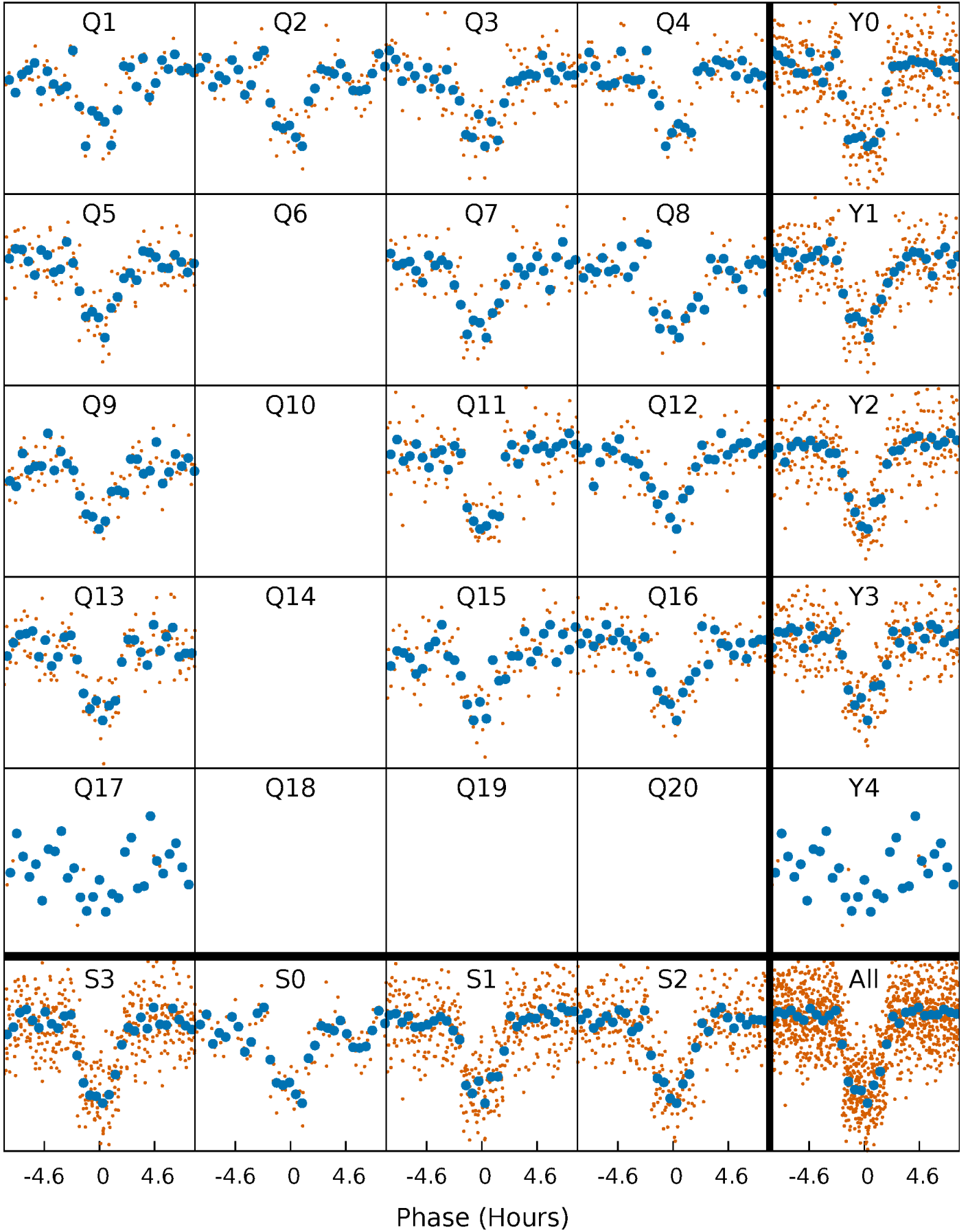


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



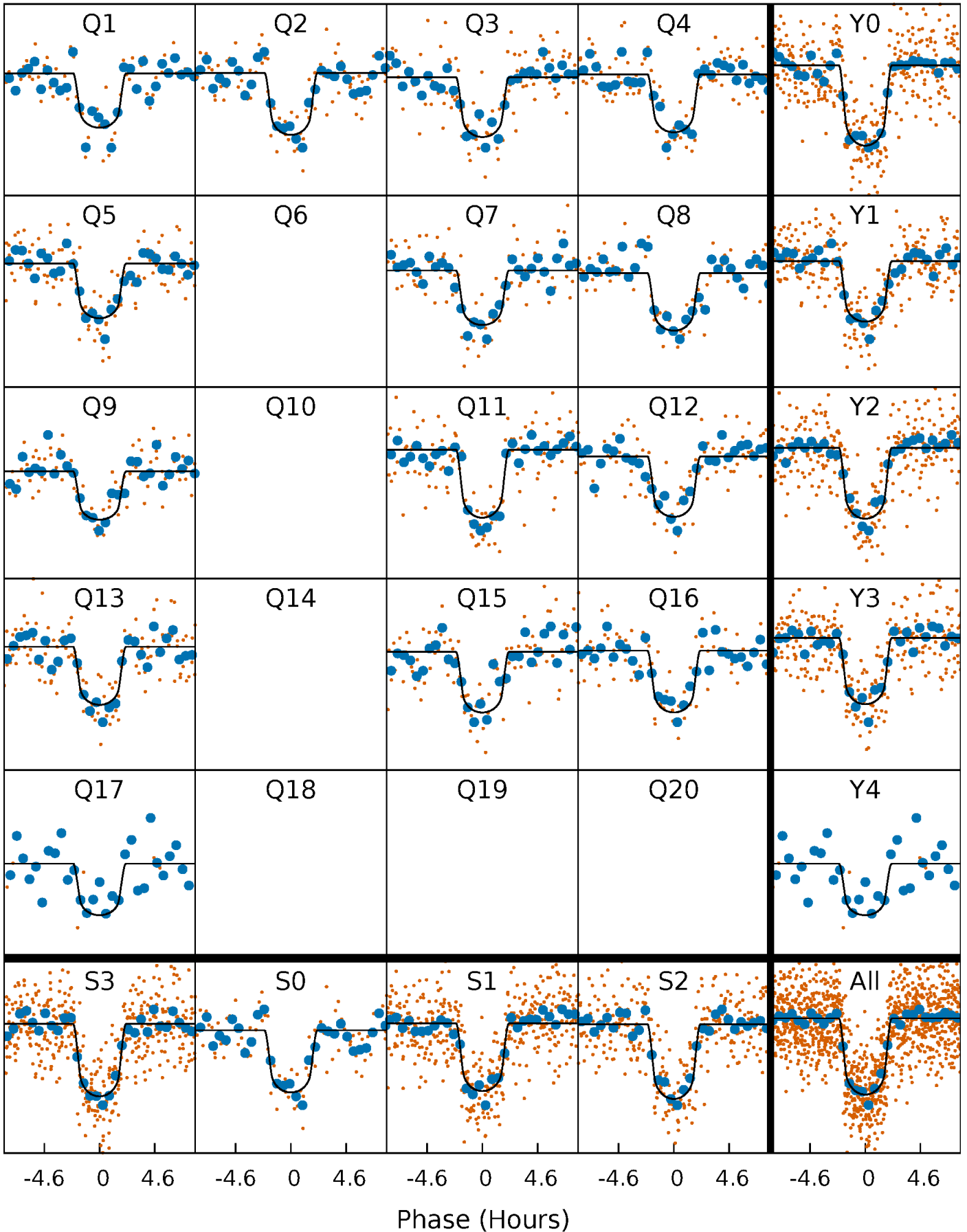
PDC Quarter-Phased Transit Curves

TCE 003966801-01 P= 25.695866 Days $T_0=137.395699$ (BKJD)



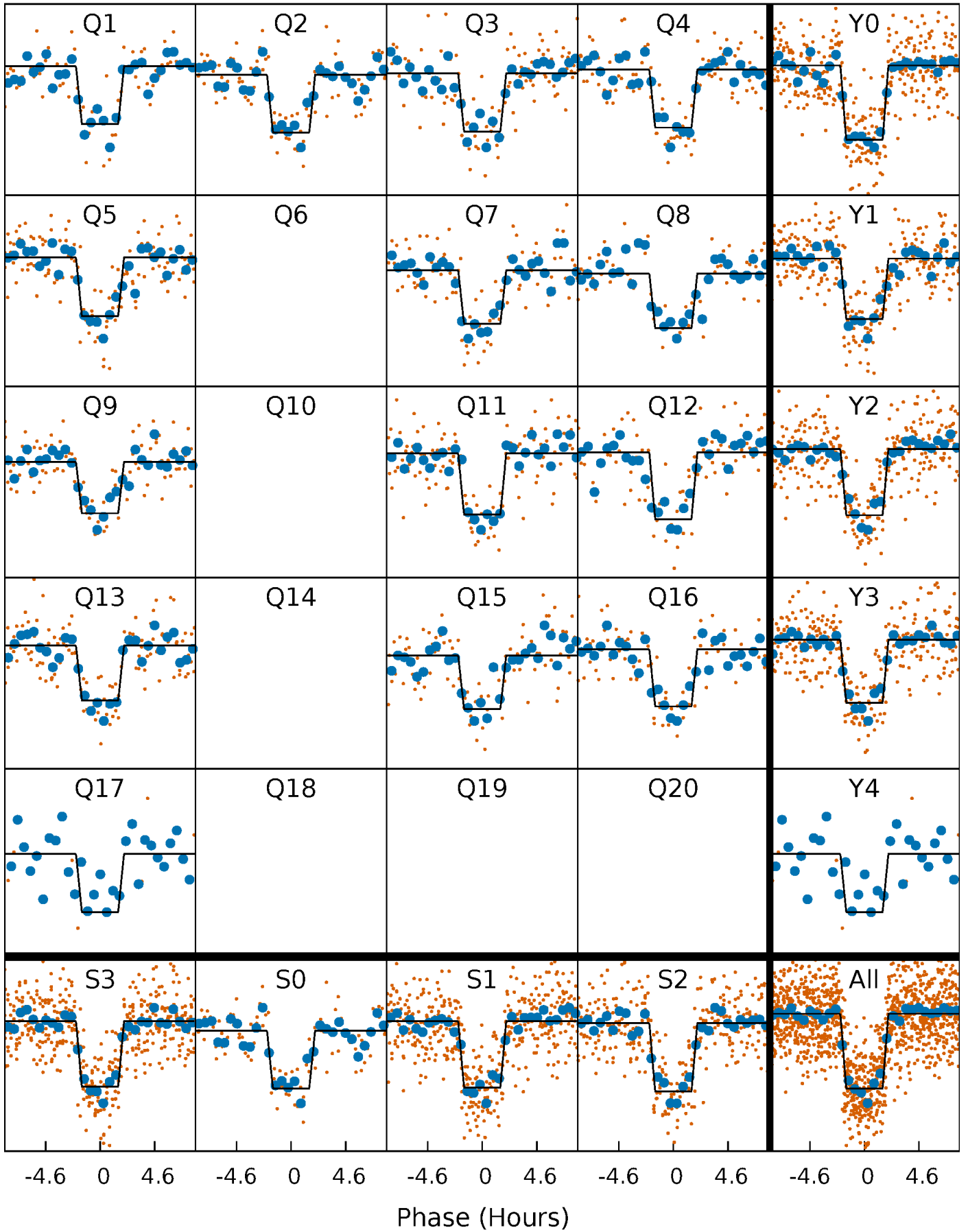
DV Quarter-Phased Transit Curves

TCE 003966801-01 P= 25.695866 Days $T_0=137.395699$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

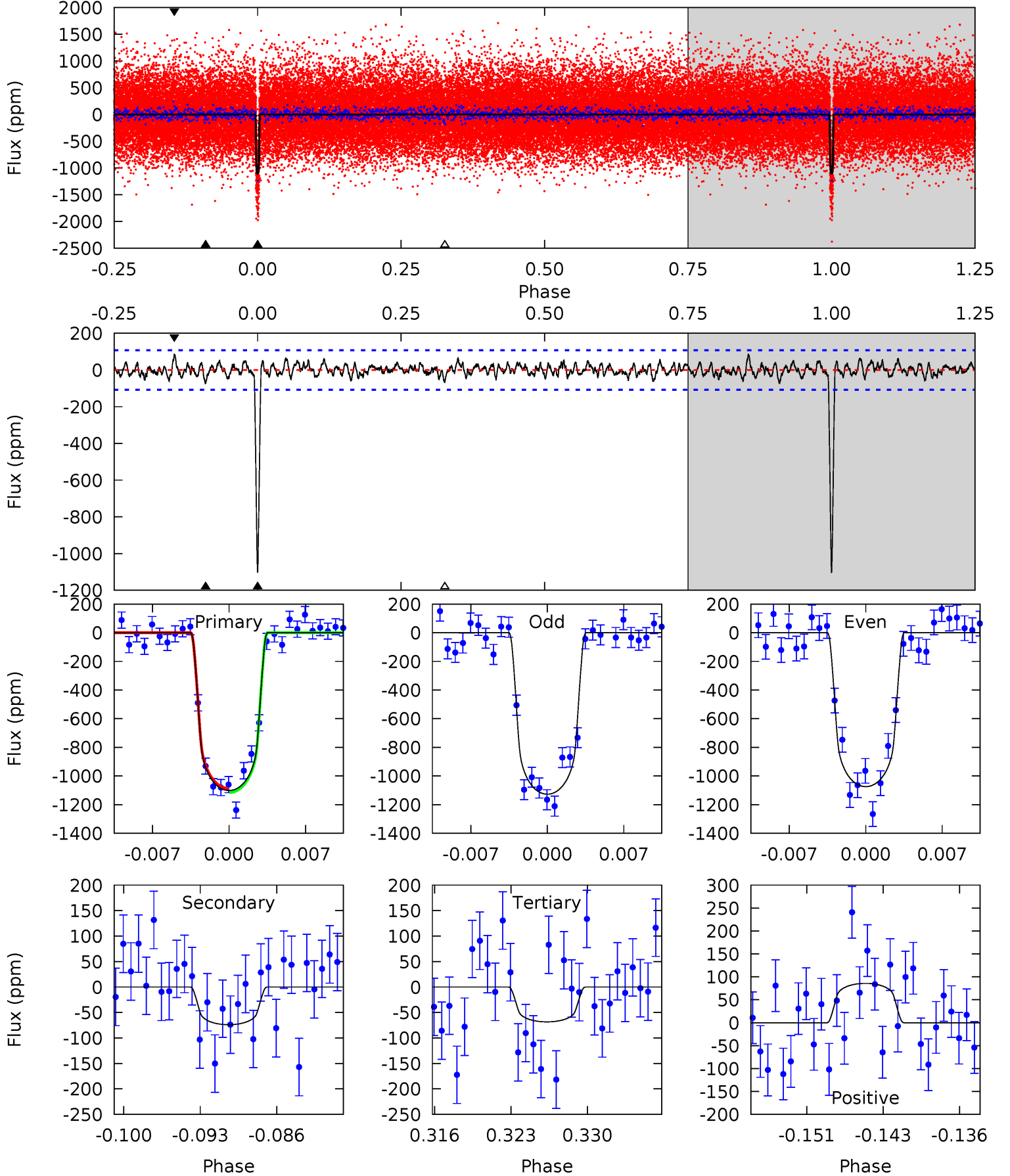
TCE 003966801-01 P= 25.695916 Days $T_0=137.394911$ (BKJD)



DV Model-Shift Uniqueness Test

003966801-01, P = 25.695866 Days, E = 111.699833 Days

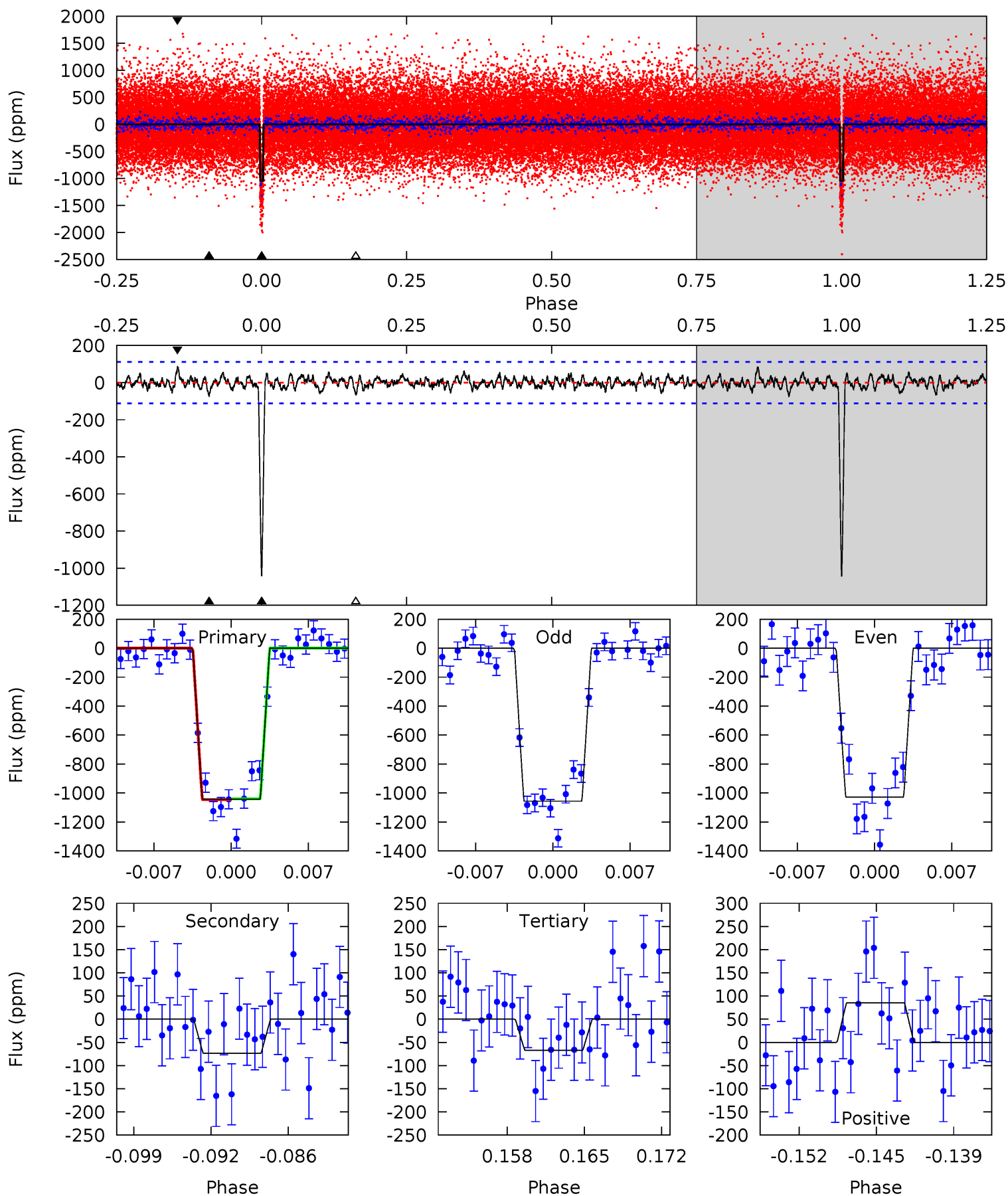
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
52.1	3.50	3.24	4.05	5.09	2.69	1.11	48.8	48.0	0.26	-0.56	1.25	0.99	0.07	0.66



Alt Model-Shift Uniqueness Test

003966801-01, $P = 25.695916$ Days, $E = 111.698995$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
47.6	3.35	3.06	3.89	5.11	2.72	1.00	44.5	43.7	0.28	-0.55	0.64	0.98	0.08	0.14



Stellar Parameters For KIC 003966801

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	3787^{+163}_{-204}	$4.775^{+0.096}_{-0.056}$	$-0.220^{+0.200}_{-0.150}$	$0.477^{+0.061}_{-0.092}$	$0.496^{+0.057}_{-0.093}$	$6.420^{+3.669}_{-1.563}$
	+4%/-5%	+2%/-1%	+91%/-68%	+13%/-19%	+11%/-19%	+57%/-24%
Source	SPE5	SPE5	SPE5	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003966801-01 / KOI 0494.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-74 ± 21	$1.66^{+0.32}_{-0.32}$	435^{+24}_{-26}	2567^{+186}_{-180}	261^{+161}_{-94}
Alt.	-73 ± 22	$1.67^{+0.31}_{-0.30}$	436^{+24}_{-26}	2552^{+182}_{-165}	255^{+152}_{-97}

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 $A_{obs} \gg 1.0$

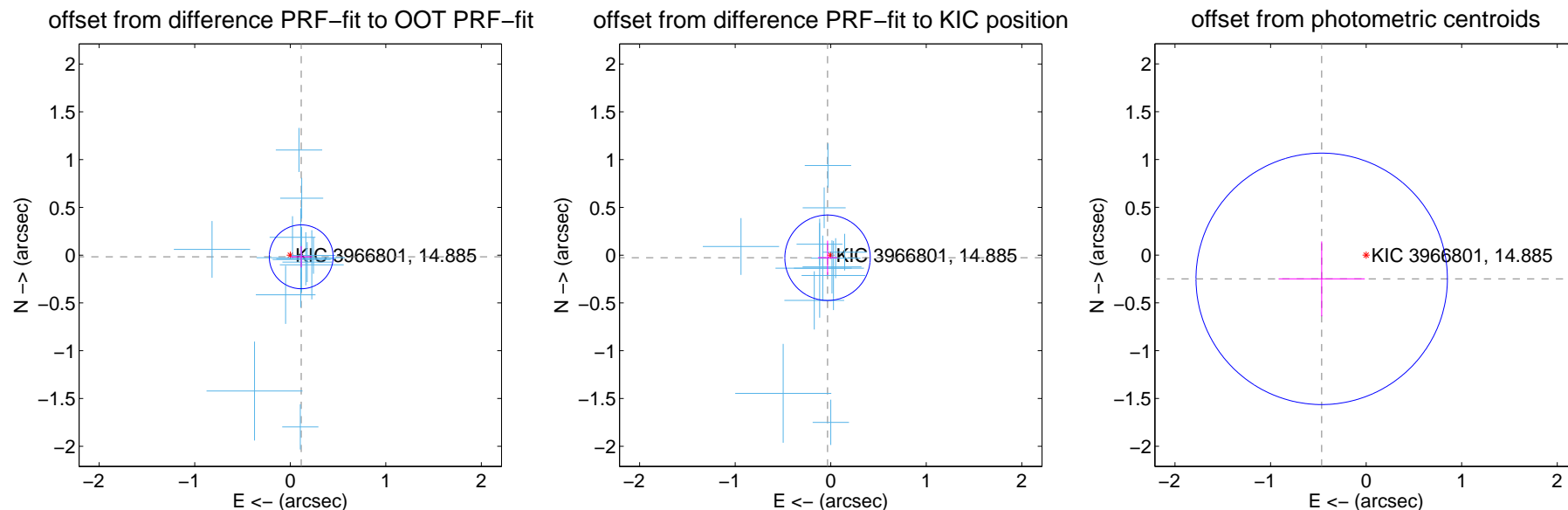
DV Centroid Data

Supplemental centroid analysis for 003966801-01. Kepler magnitude: 14.88. Transit SNR 40.41

There are 13 quarters with good PRF difference image offsets

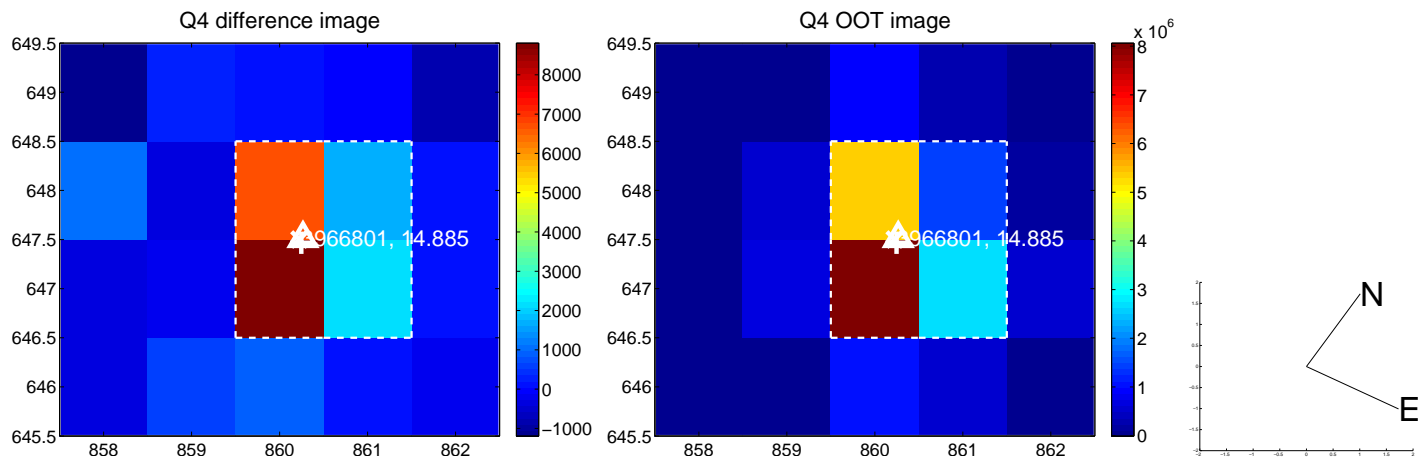
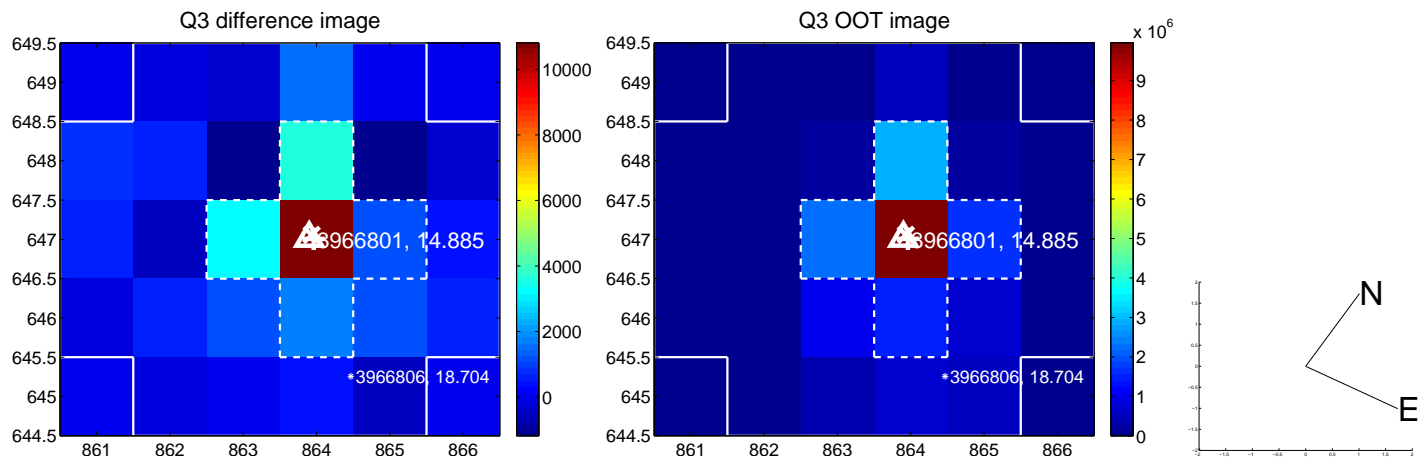
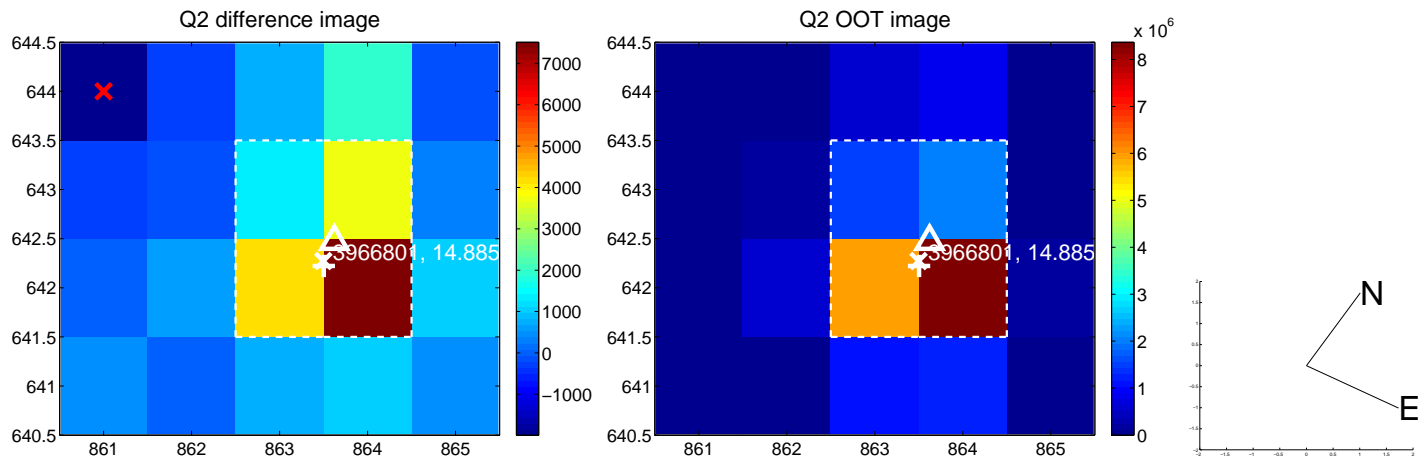
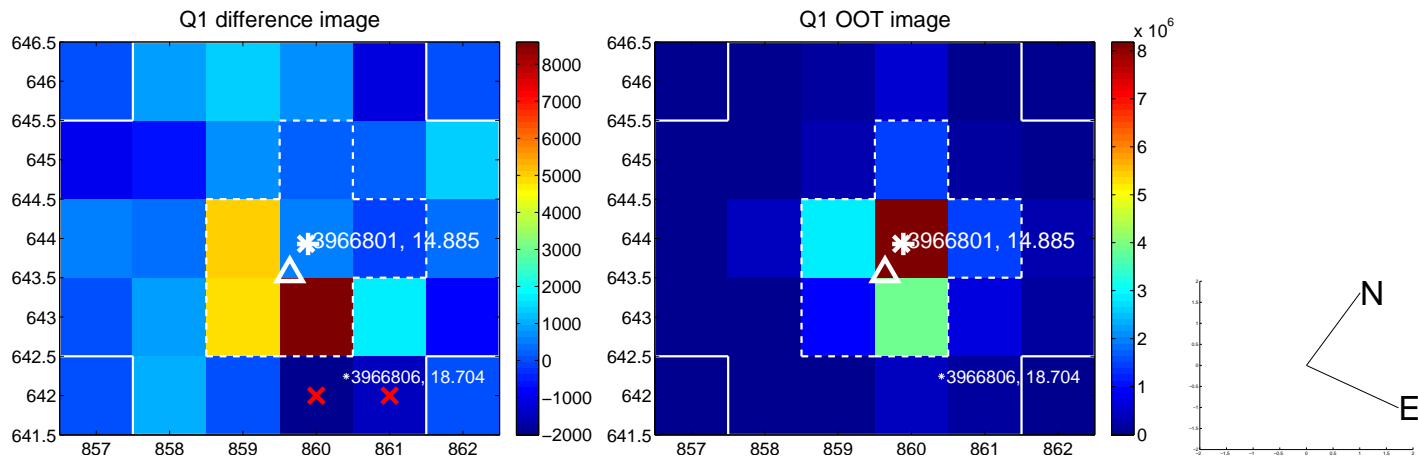
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.116 ± 0.111	1.04	-0.115 ± 0.111	-0.017 ± 0.111
PRF-fit source offset from KIC position	0.043 ± 0.149	0.29	0.033 ± 0.100	-0.027 ± 0.179
photometric centroid source offset	0.53 ± 0.44	1.20	0.46 ± 0.45	-0.25 ± 0.39

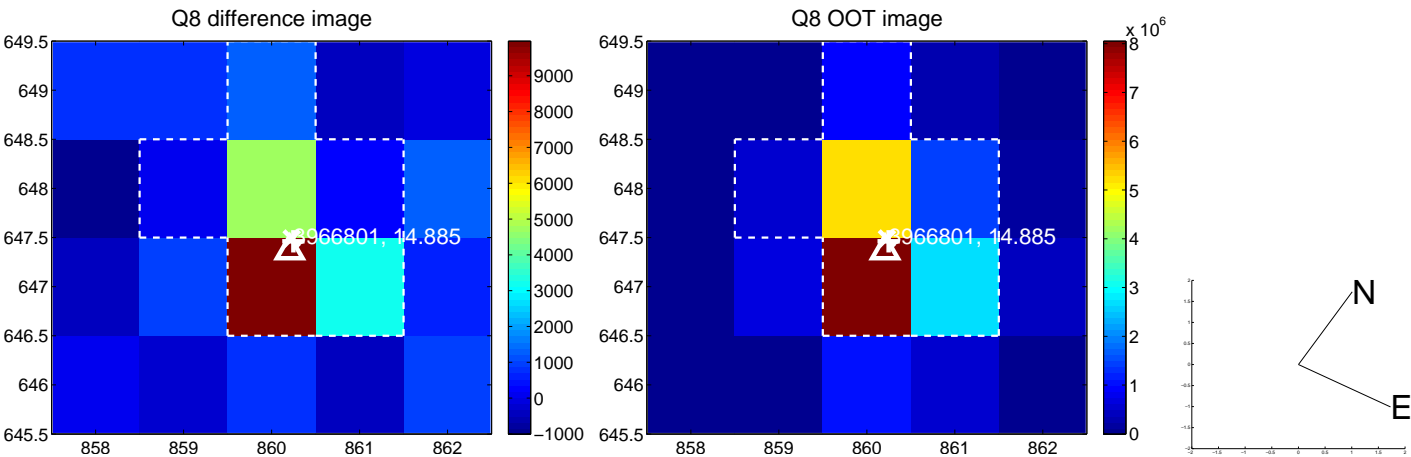
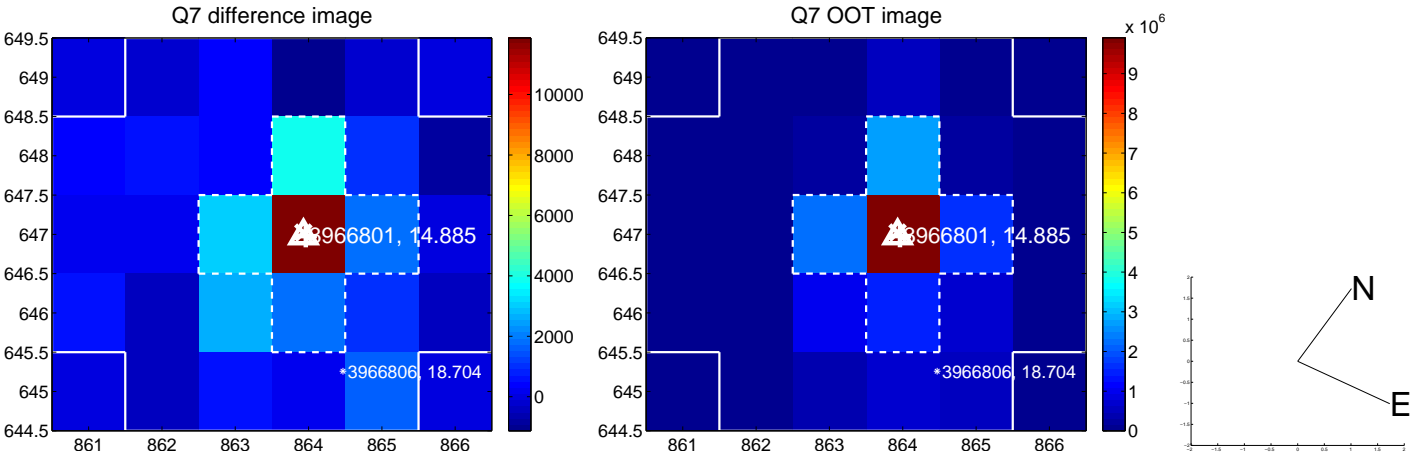
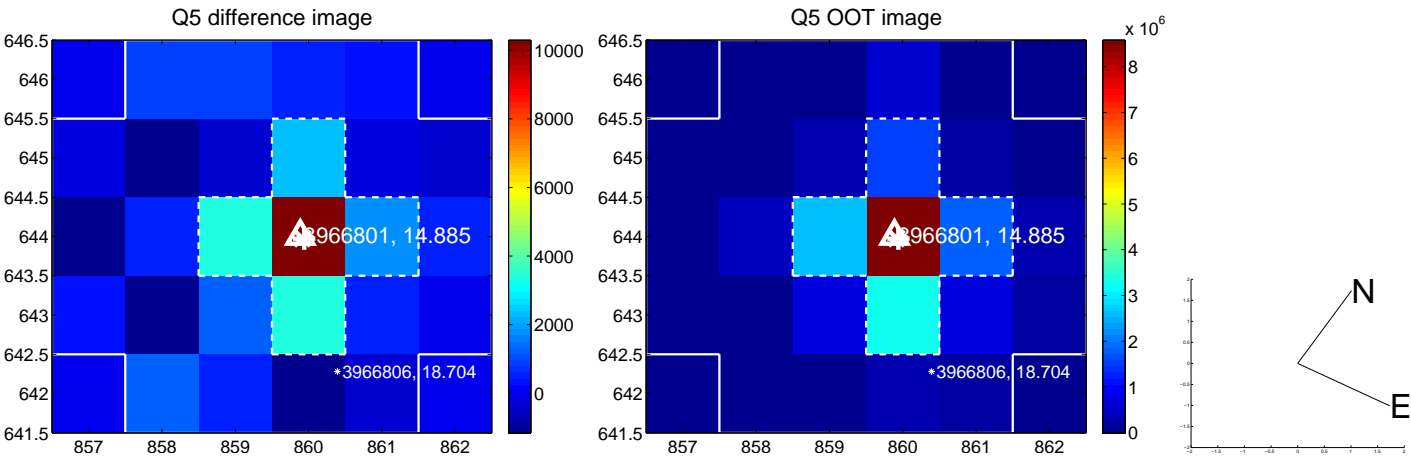


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

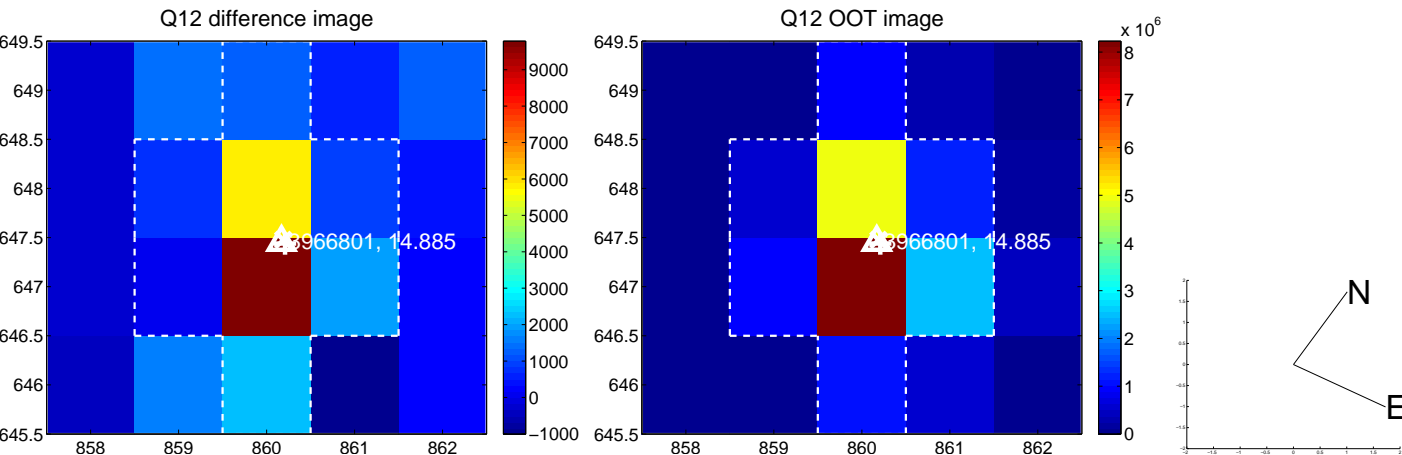
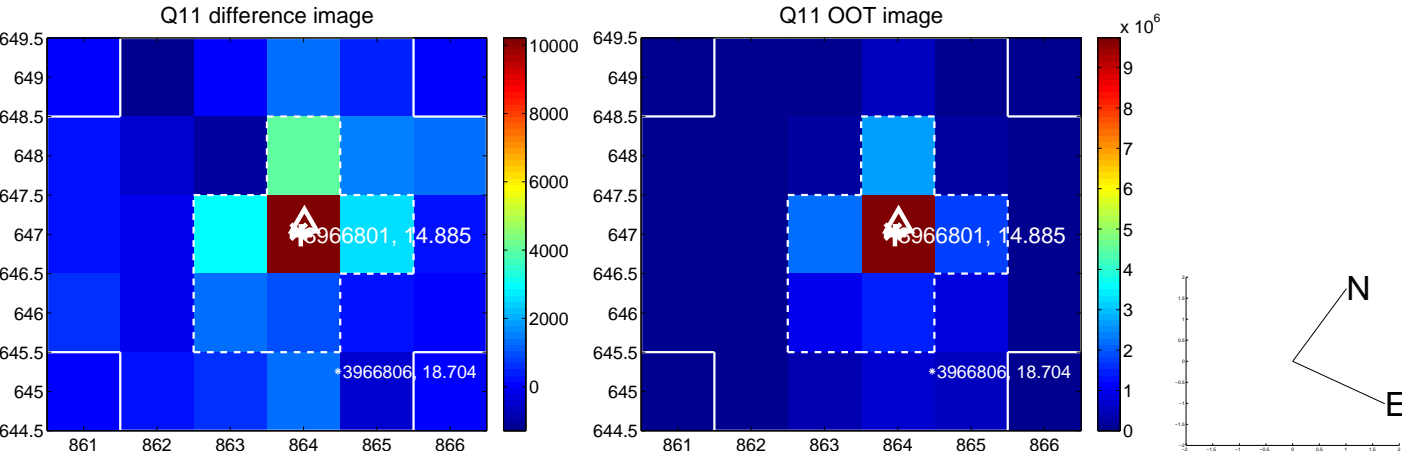
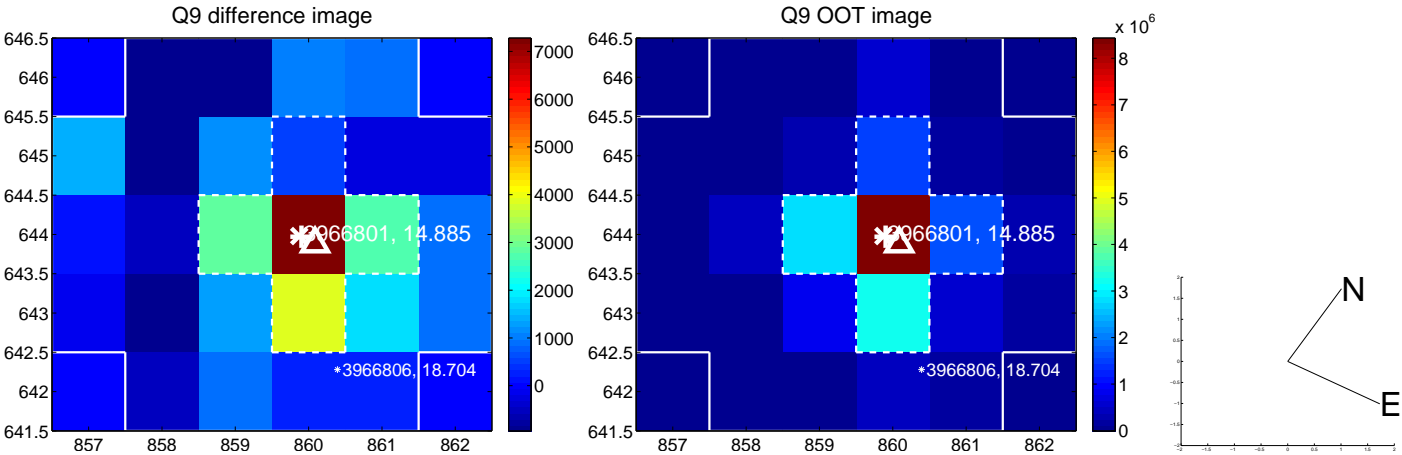
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



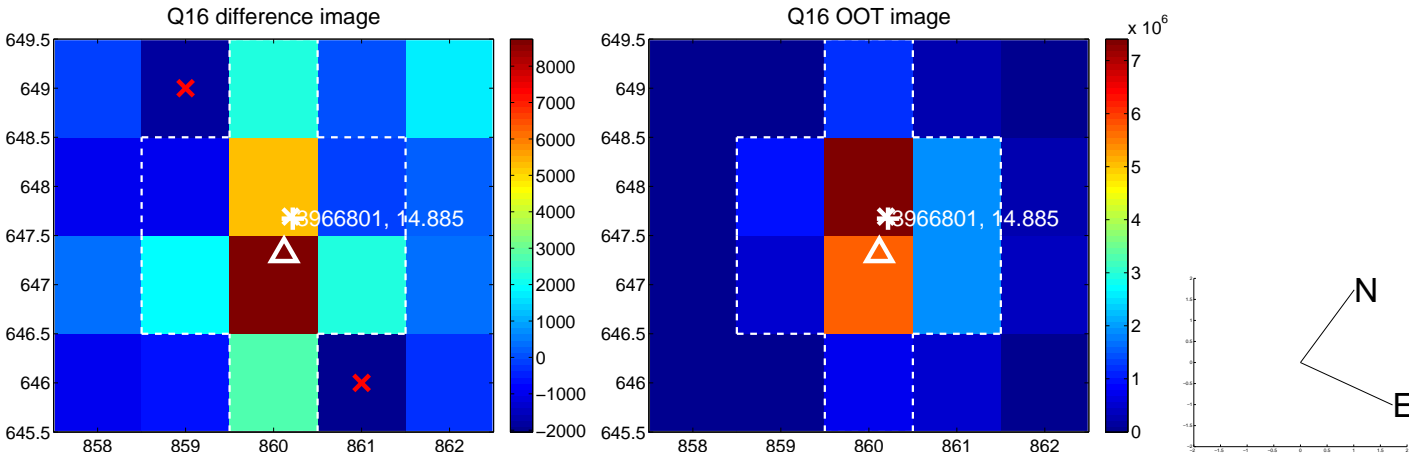
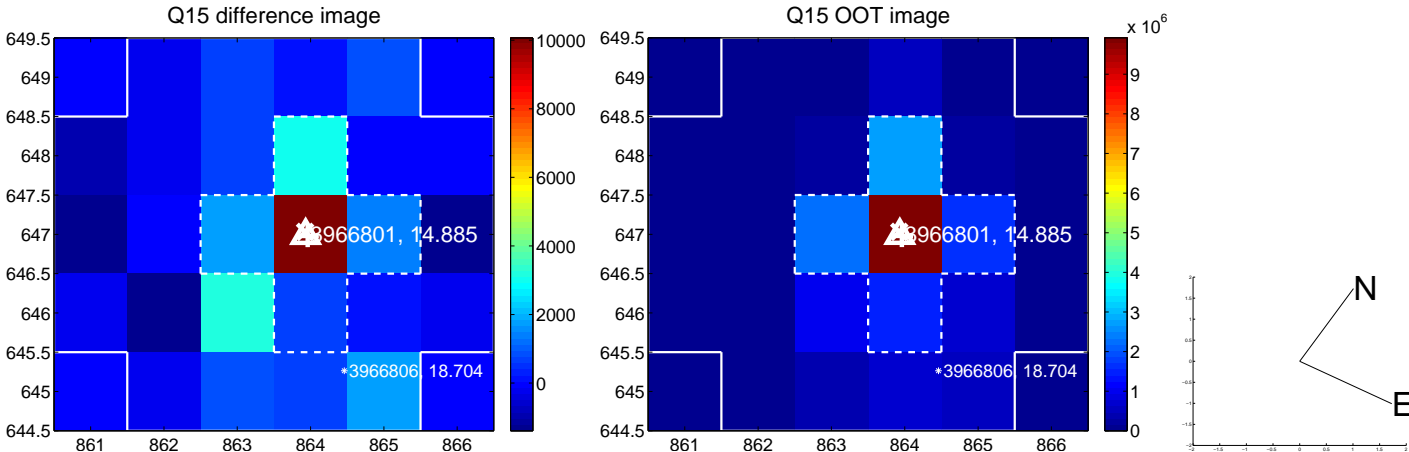
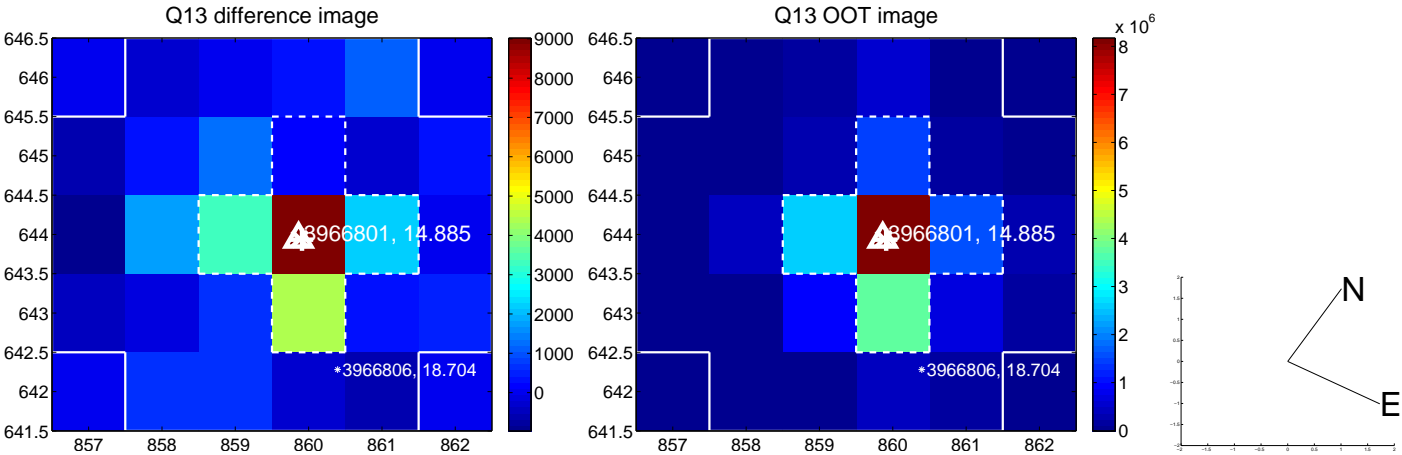
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



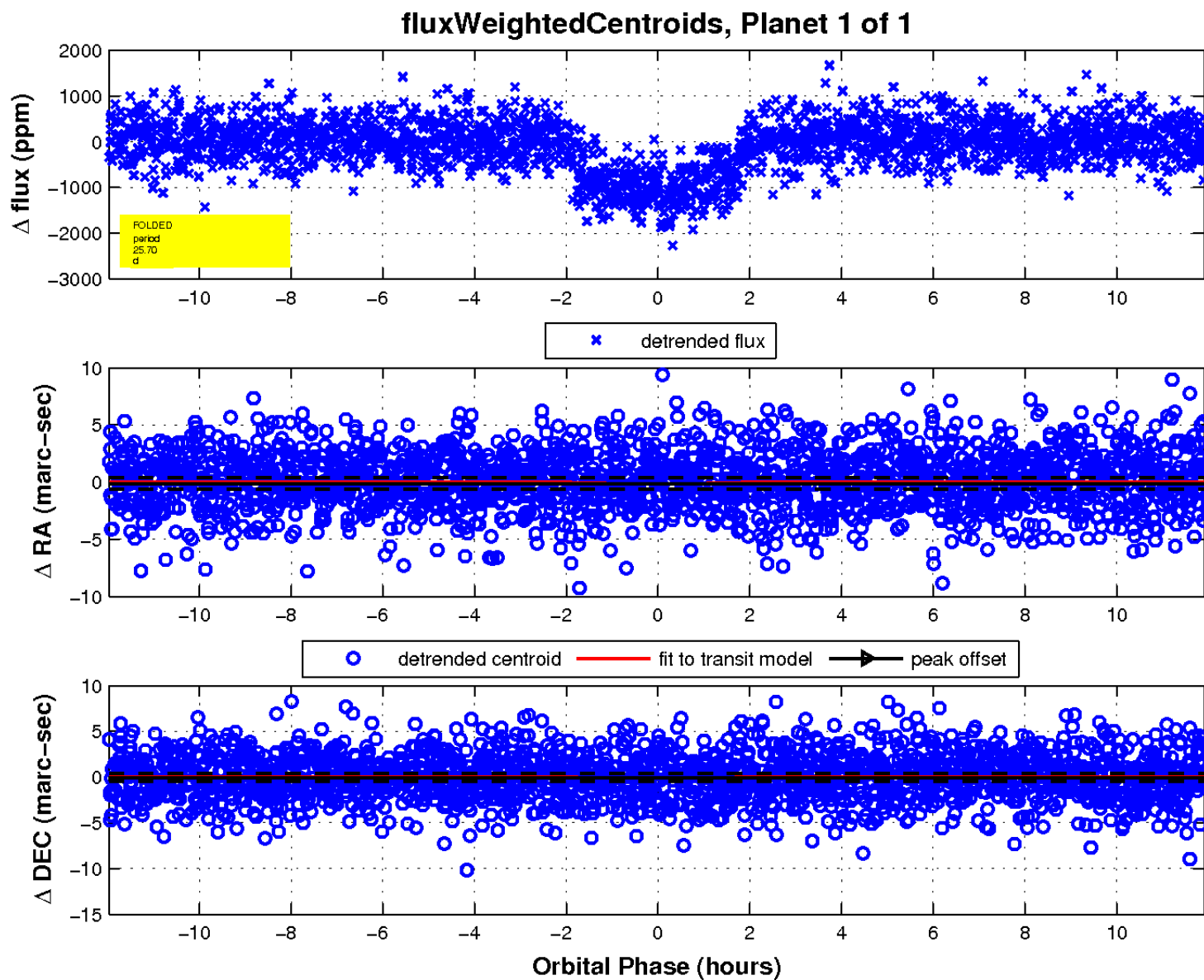
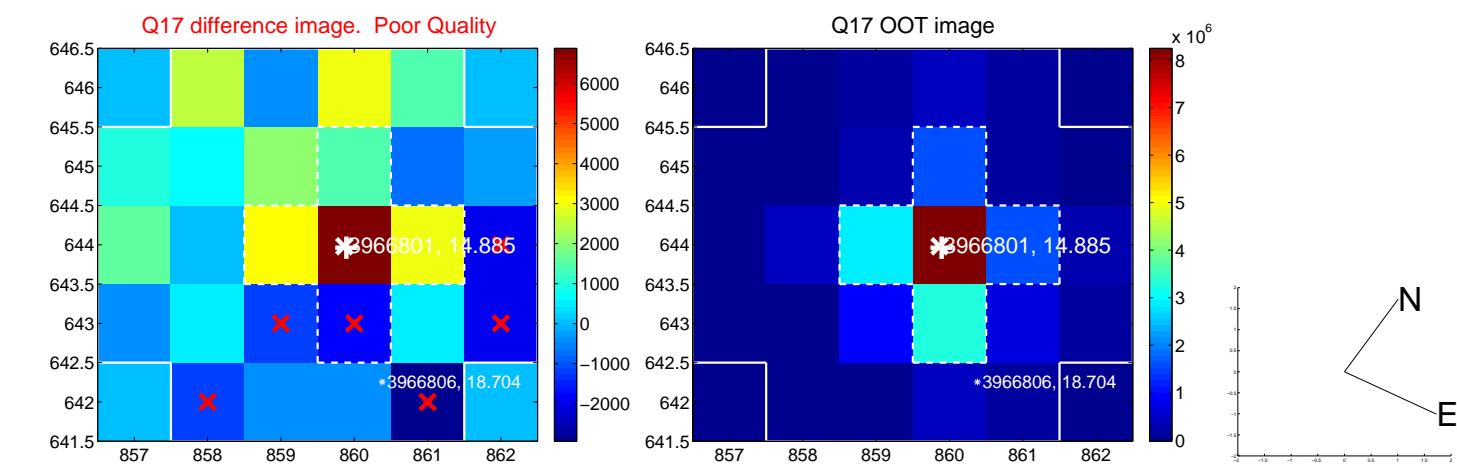
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UKIRT Image

Declination

