

KIC 003967501

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})
003967501-01	OBS	7677.01	43.077993	160.217657	2281.4	78.362	8.2	27.0	5.92	4766	55.08	269.03

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003967501-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED—CENT_SATURATED

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

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

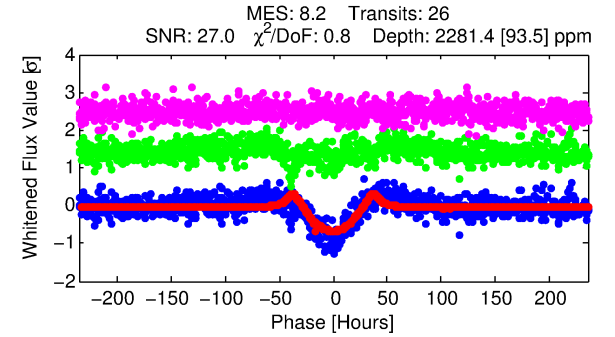
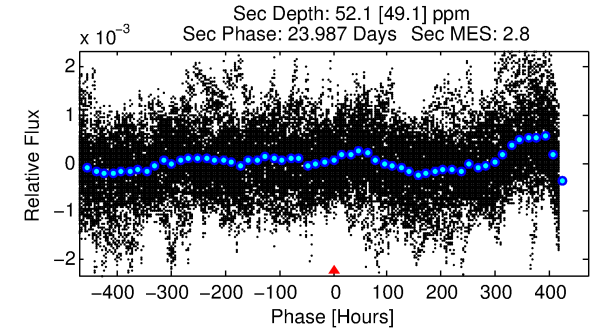
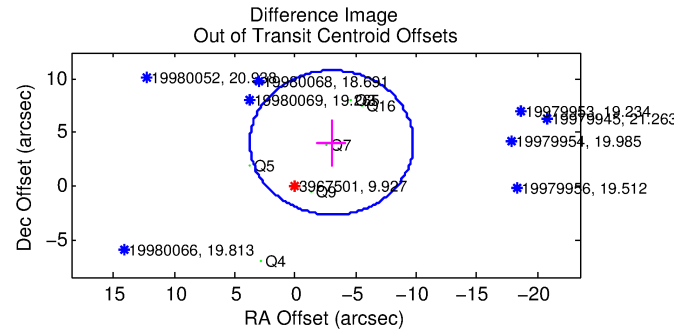
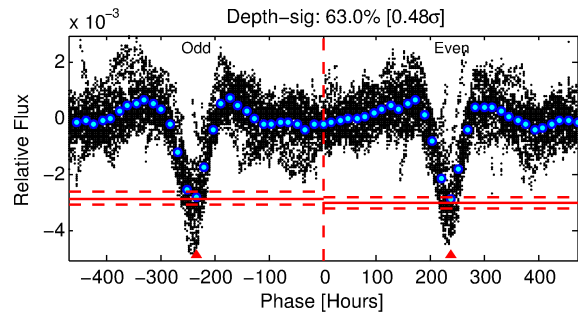
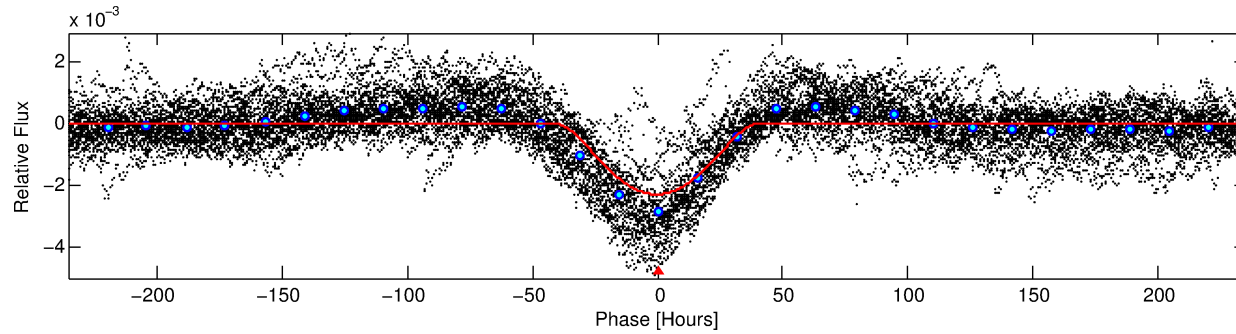
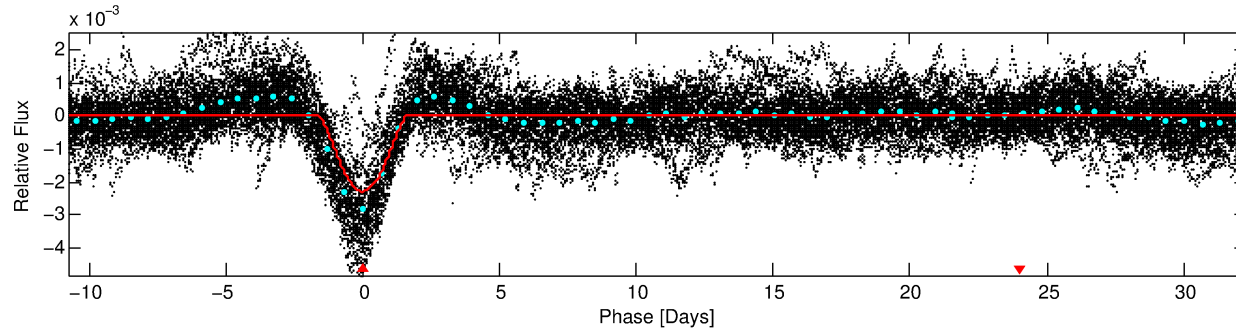
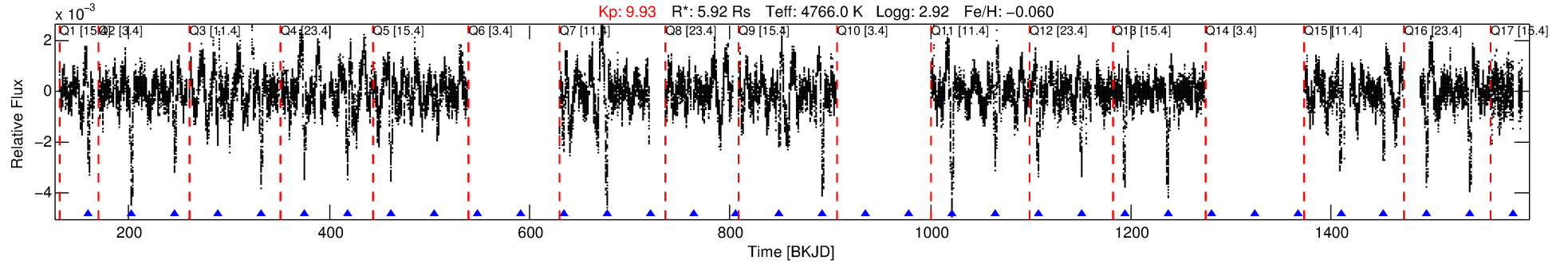
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003967501-01

No Significant Match Found

DV One-Page Summary

KIC: 3967501 Candidate: 1 of 1 Period: 43.078 d



DV Fit Results:

Period = 43.07799 [0.00197] d
Epoch = 160.2177 [0.0380] BKJD
Rp/R* = 0.0853 [0.0385]
a/R* = 2.07 [0.12]
b = 1.00 [0.06]
Seff = 269.03 [203.49]
Teq = 1033 [195] K
Rp = 55.08 [40.37] Re
a = 0.2452 [0.1229] AU
Ag = 0.57 [0.85] [-0.50 σ]
Teffp = 1386 [454] K [0.72 σ]

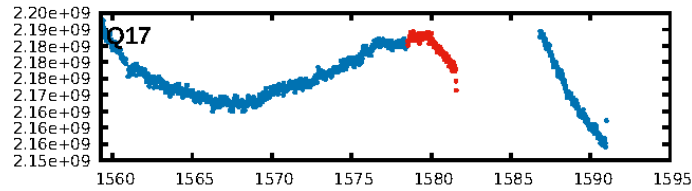
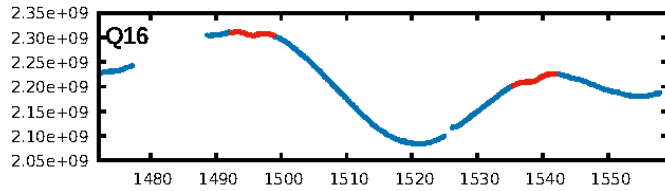
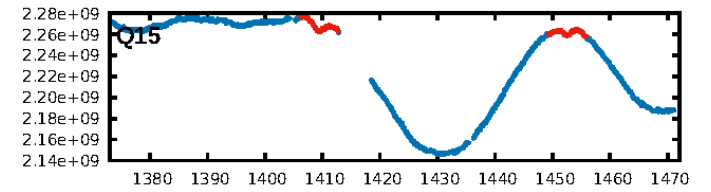
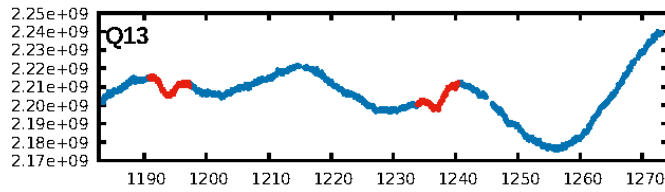
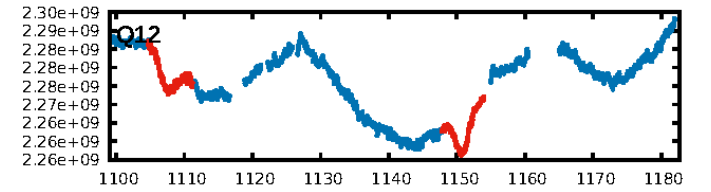
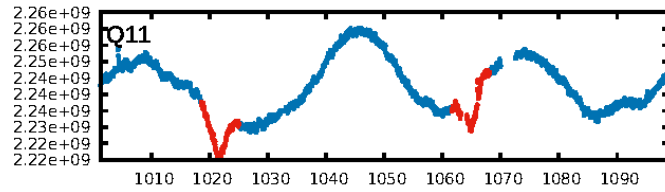
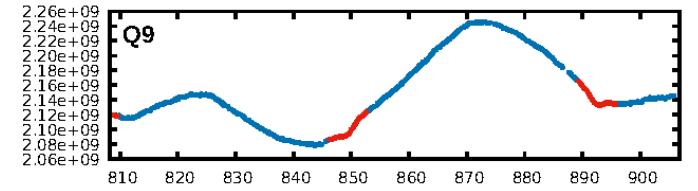
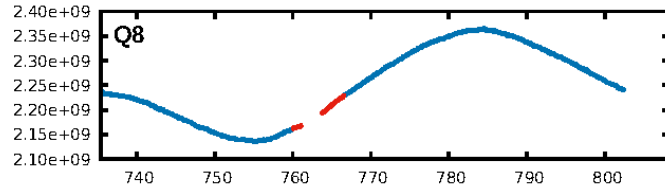
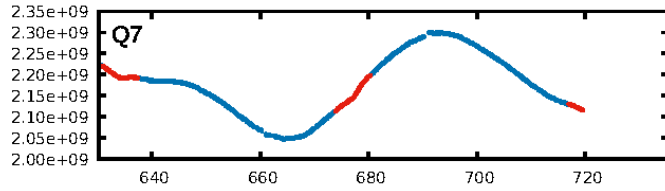
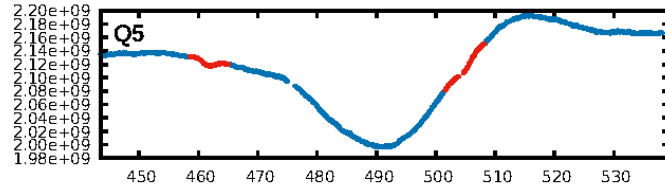
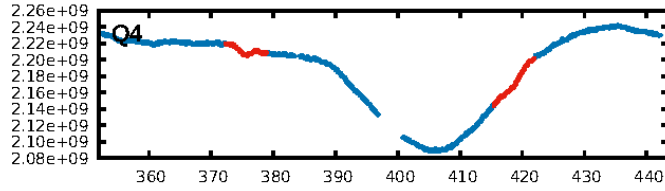
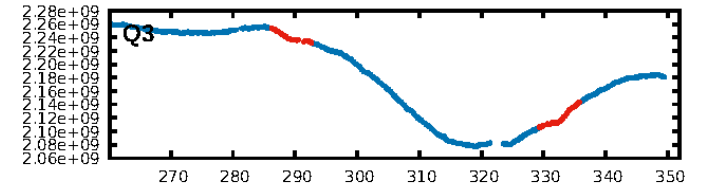
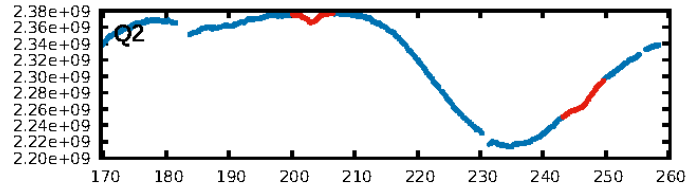
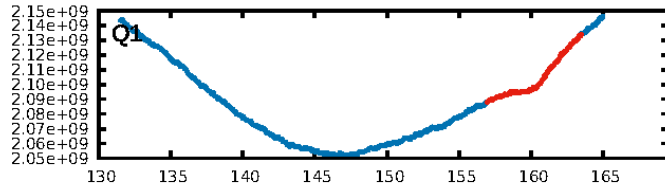
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.30e-14
RollingBand-fgt: 1.00 [24/24]
GhostDiagnostic-chr: N/A
Centroid-sig: 99.4%
Centroid-so: 0.631 arcsec [16.19 σ]
OotOffset-rm: 5.049 arcsec [2.25 σ]
KicOffset-rm: 3.235 arcsec [1.40 σ]
OotOffset-st: 0/2/2/2 [6]
KicOffset-st: 0/2/2/2 [6]
DiffImageQuality-fgm: 0.00 [0/6]
DiffImageOverlap-fno: 1.00 [6/6]

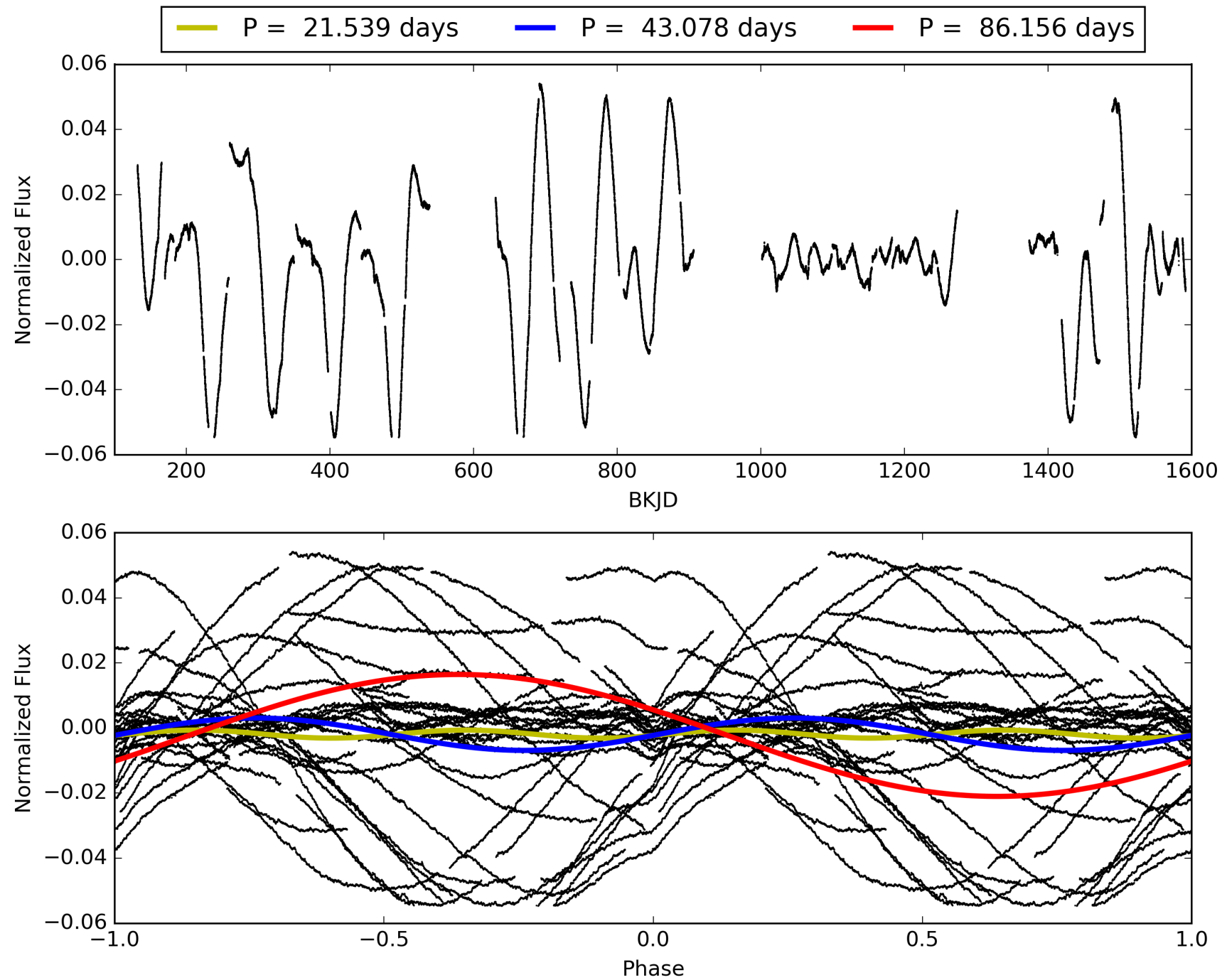
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:06:36 Z

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

TCE 003967501-01, PDC Light Curves

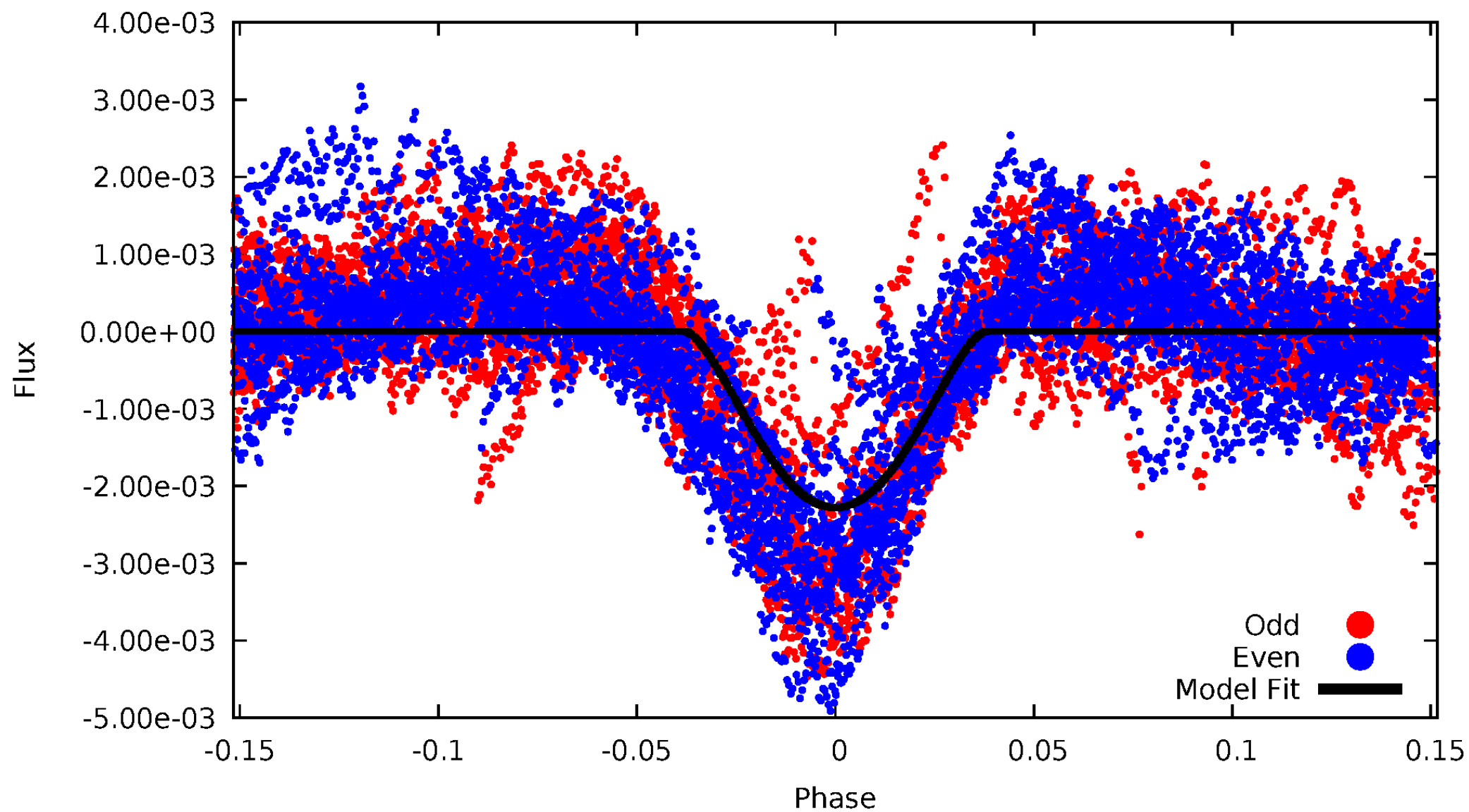


TCE 003967501-01



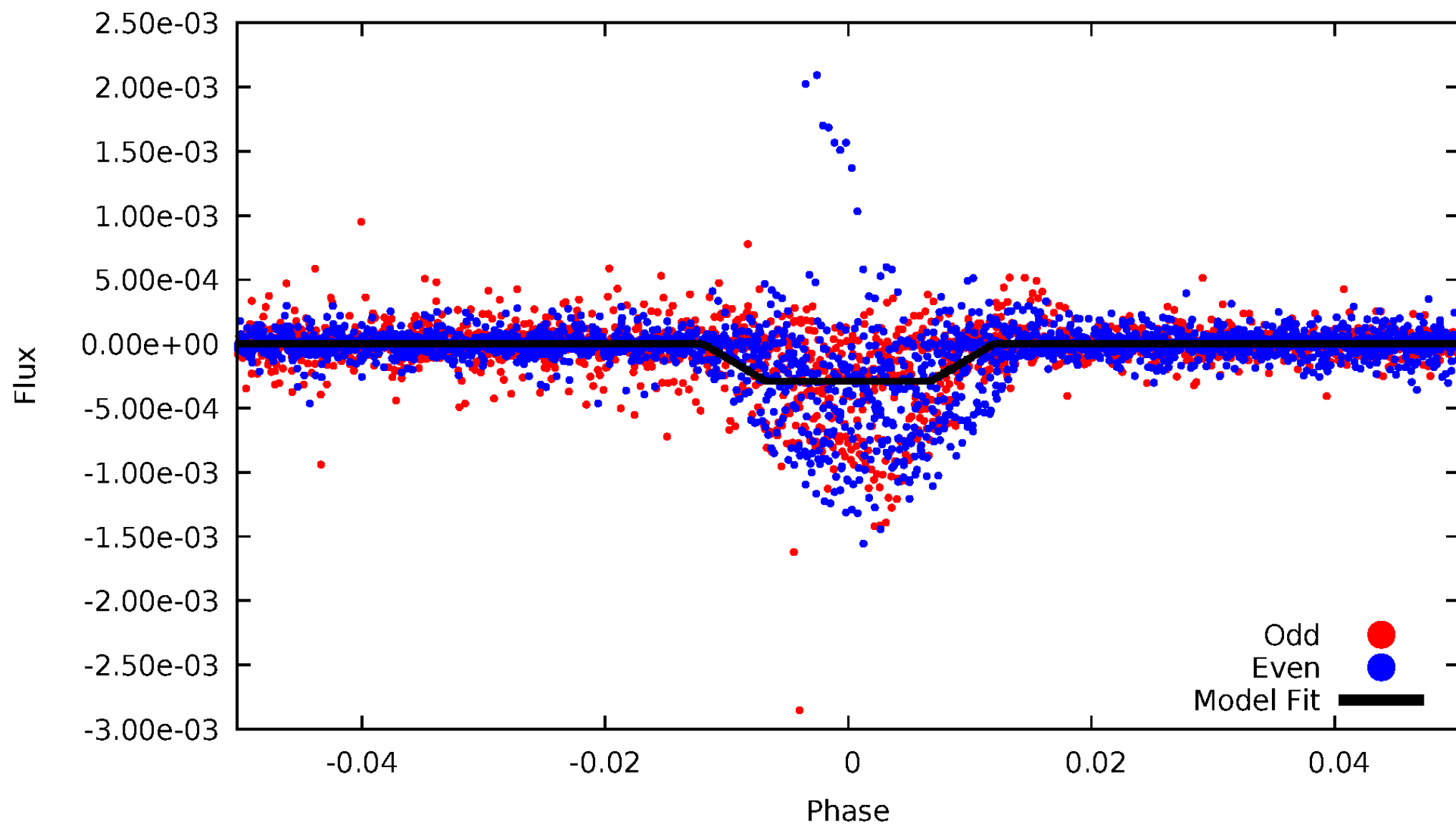
DV Odd/Even

TCE 003967501-01



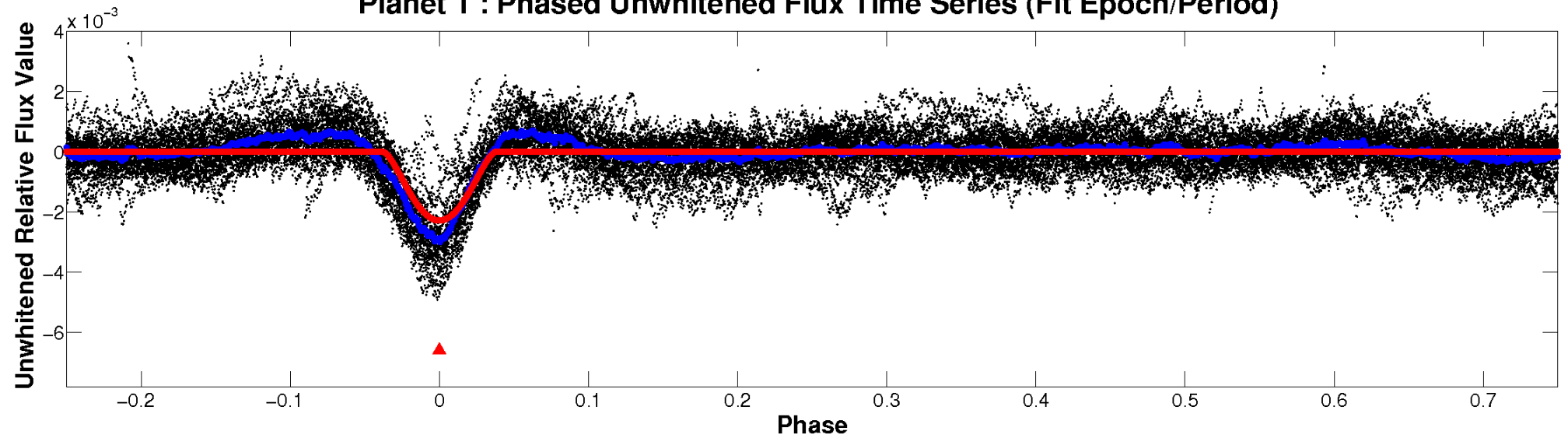
ALT Odd/Even

TCE 003967501-01

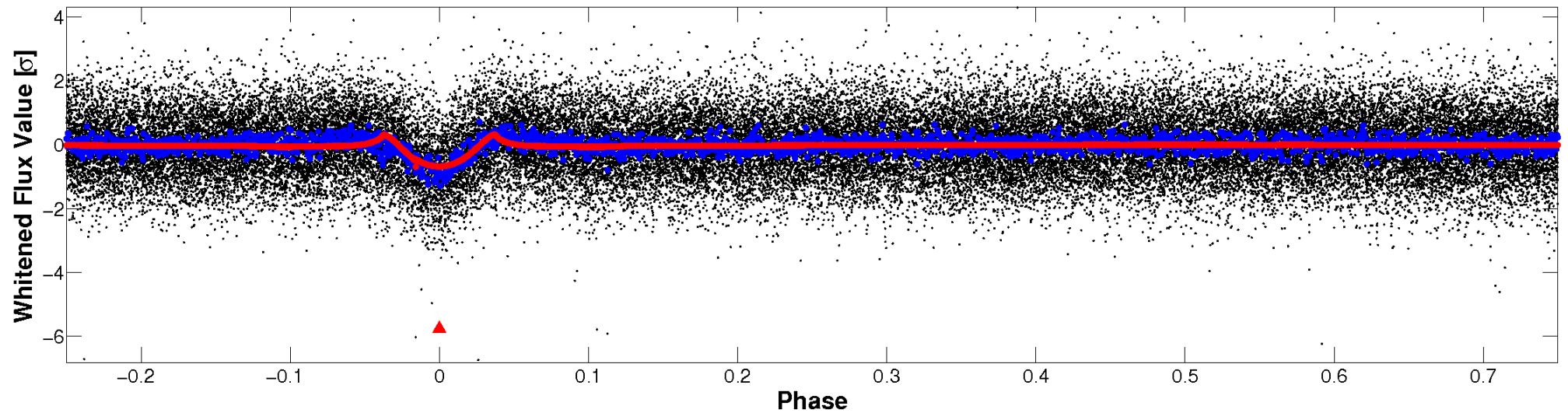


Non-Whitened Vs. Whitened Light Curve

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

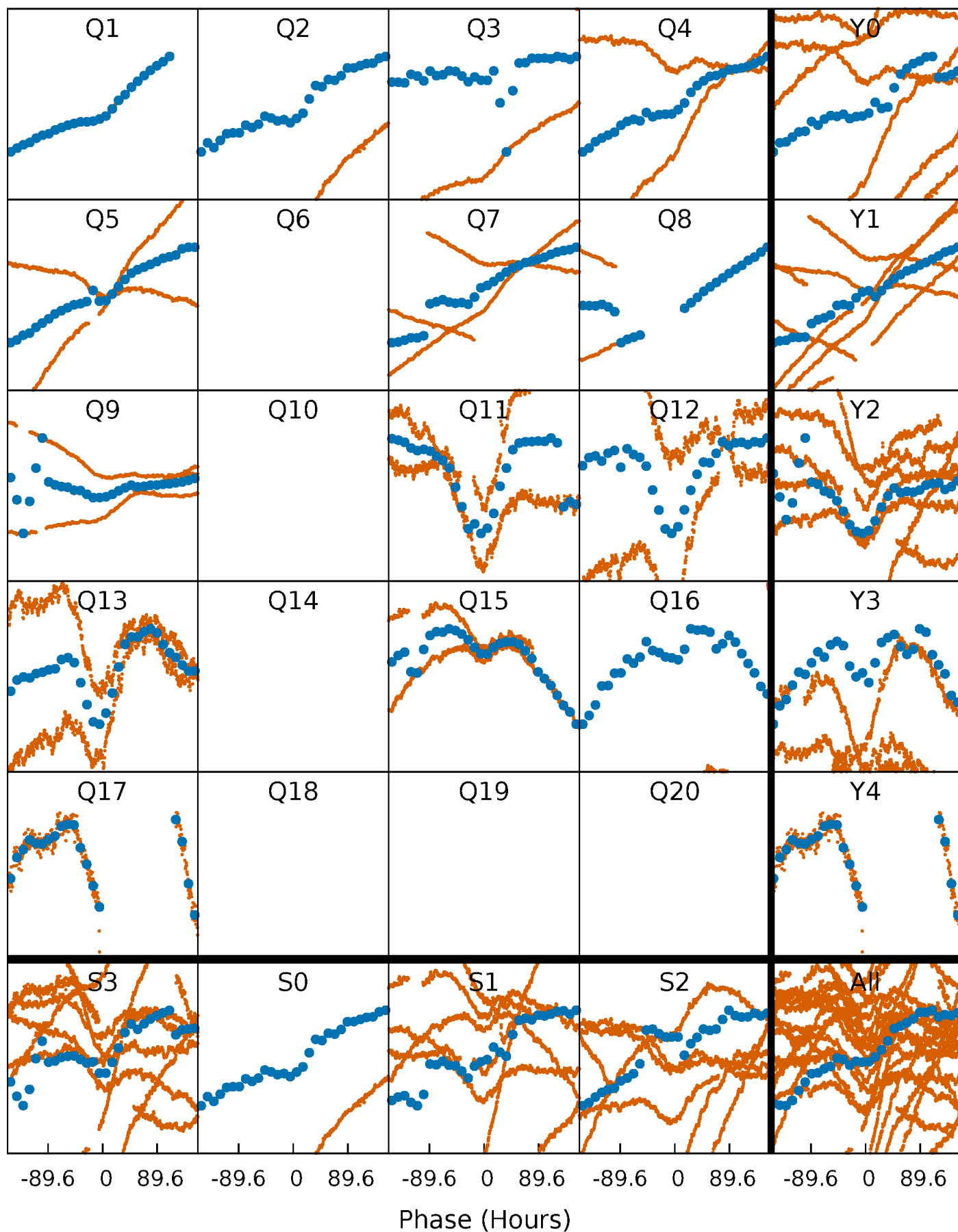


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



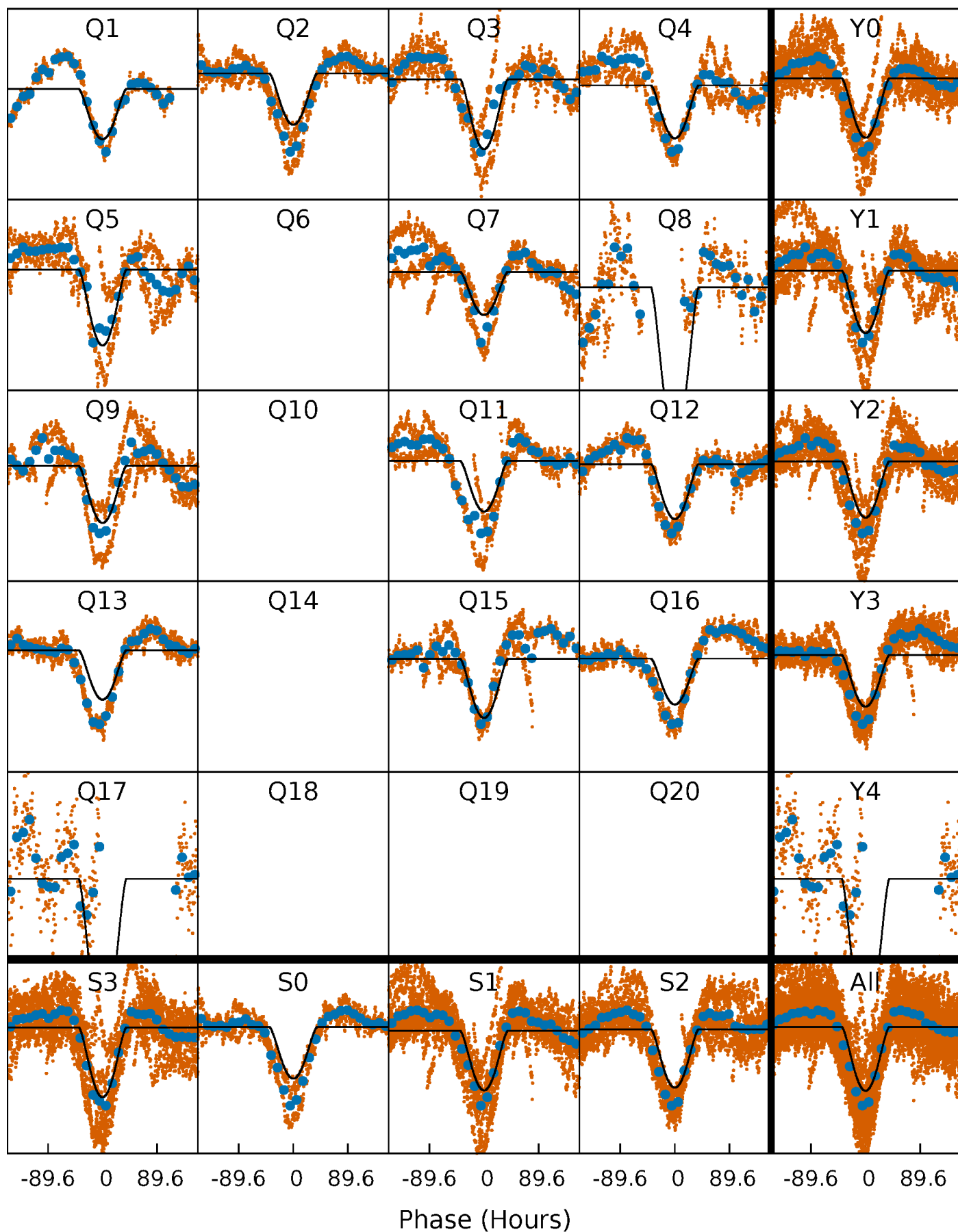
PDC Quarter-Phased Transit Curves

TCE 003967501-01 P= 43.077993 Days $T_0=160.217657$ (BKJD)



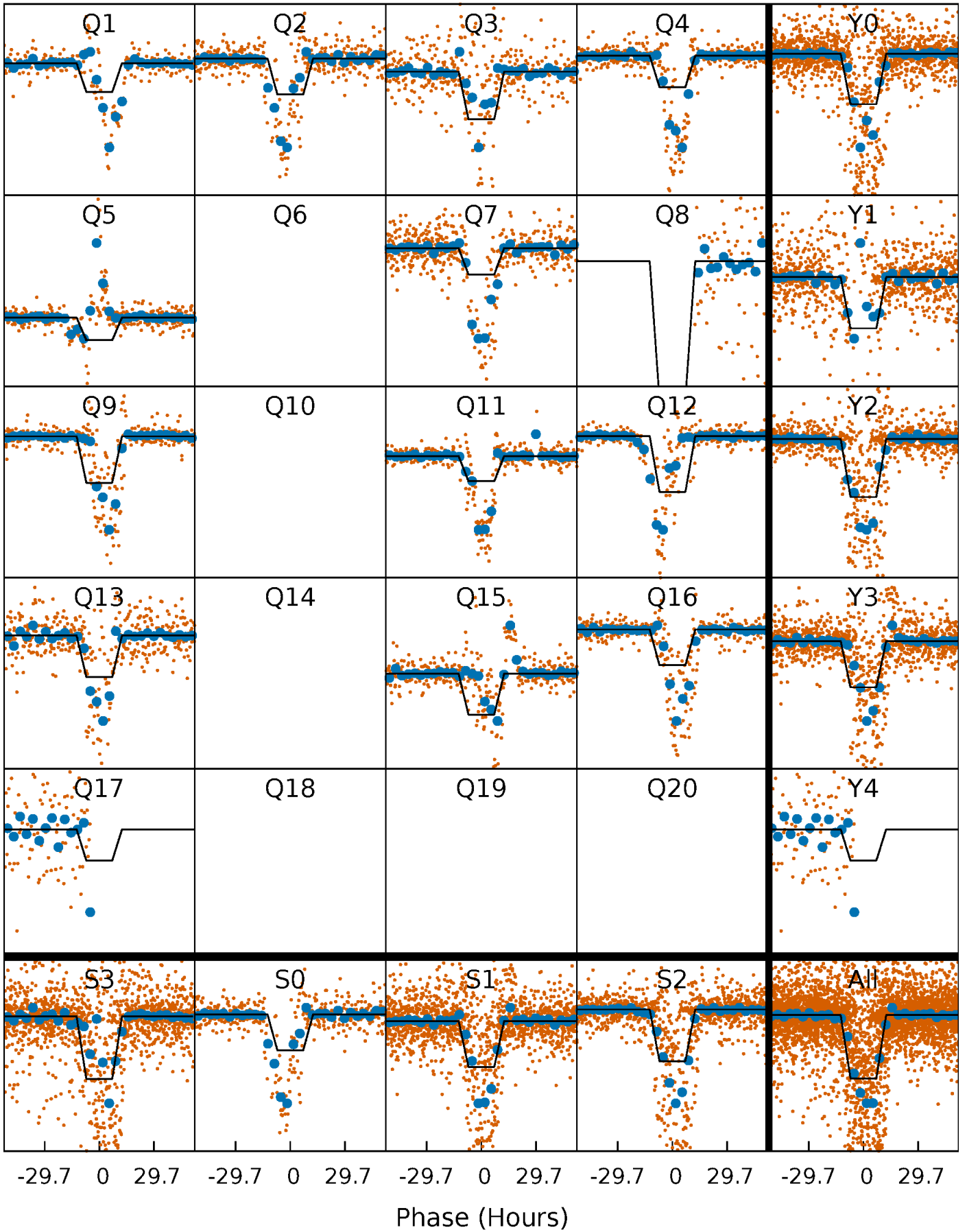
DV Quarter-Phased Transit Curves

TCE 003967501-01 P= 43.077993 Days $T_0=160.217657$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

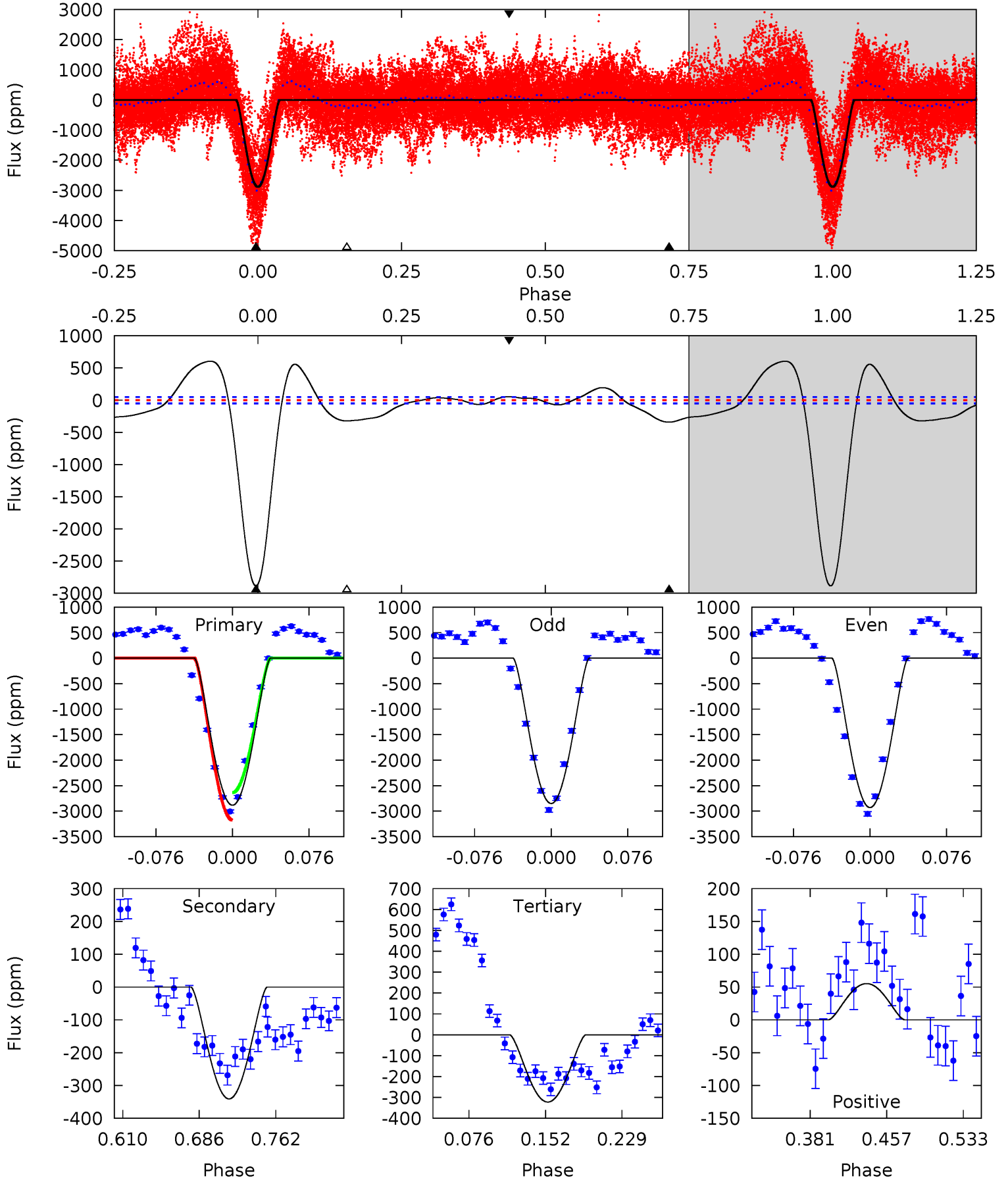
TCE 003967501-01 P= 43.078872 Days $T_0=160.150534$ (BKJD)



DV Model-Shift Uniqueness Test

003967501-01, P = 43.077993 Days, E = 117.139664 Days

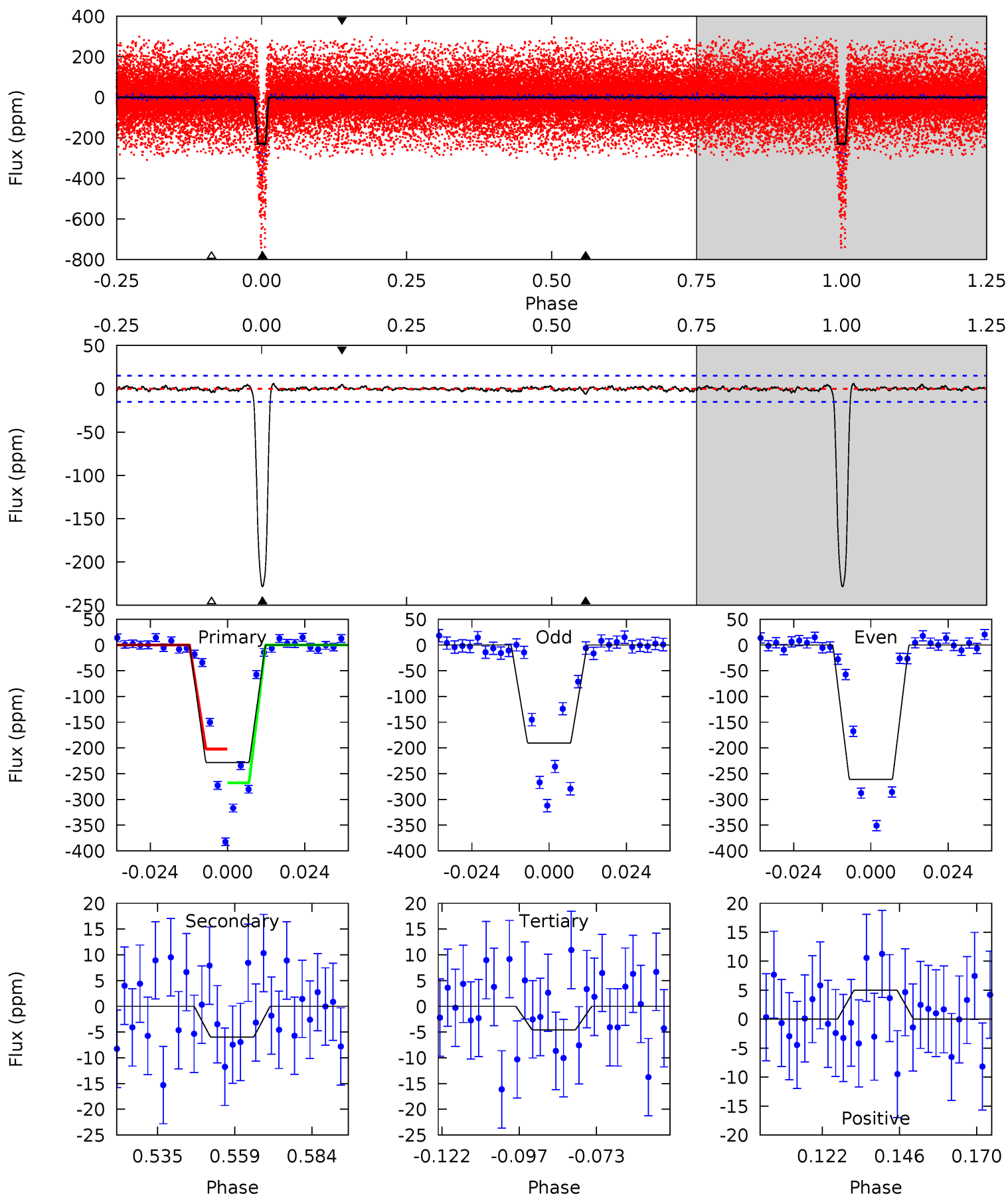
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
272.9	32.3	30.5	5.23	4.62	1.77	19.5	242.4	267.6	1.77	27.0	3.77	0.92	0.17	24.9



Alt Model-Shift Uniqueness Test

003967501-01, P = 43.078872 Days, E = 117.071662 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
73.5	1.92	1.47	1.61	4.85	2.25	0.49	72.0	71.8	0.45	0.32	11.5	0.91	0.03	0



Stellar Parameters For KIC 003967501

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4766^{+131}_{-107}	$2.919^{+0.418}_{-0.342}$	$-0.060^{+0.250}_{-0.200}$	$5.915^{+3.417}_{-2.278}$	$1.059^{+0.338}_{-0.113}$	$0.007^{+0.026}_{-0.005}$
	+3%/-2%	+14%/-12%	+417%/-333%	+58%/-39%	+32%/-11%	+355%/-74%
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 003967501-01 / KOI 7677.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-341 ± 11	$56.55^{+31.48}_{-28.46}$	1442^{+204}_{-177}	2831^{+625}_{-302}	$3.743^{+11.397}_{-2.209}$
Alt.	-6 ± 3	$21.97^{+25.60}_{-14.81}$	1440^{+197}_{-156}	1849^{+922}_{-3951}	$0.393^{+2.828}_{-0.329}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

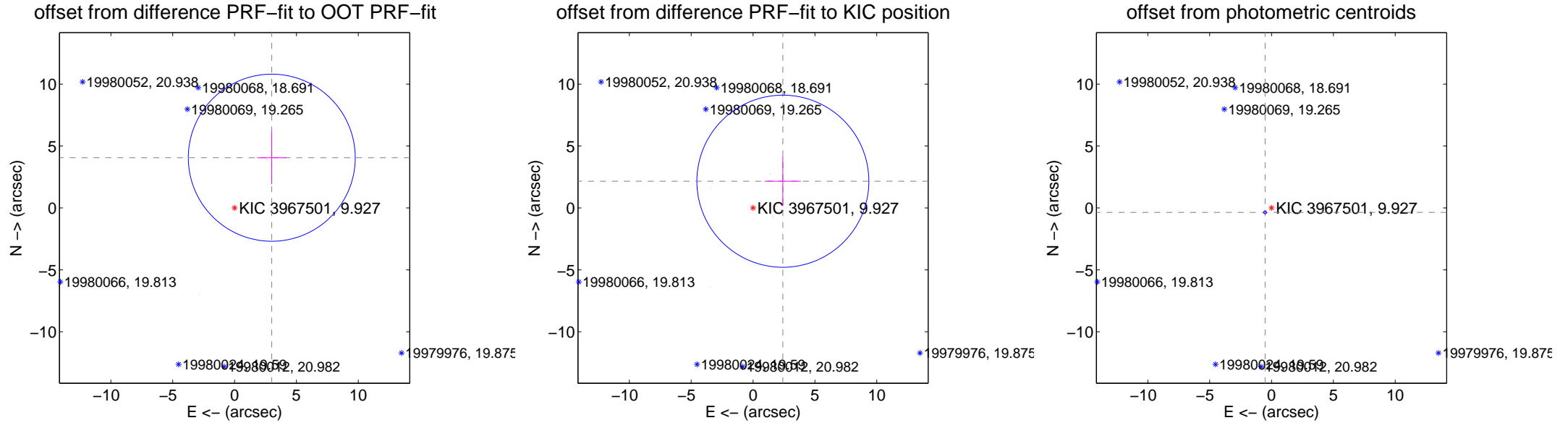
DV Centroid Data

Supplemental centroid analysis for 003967501-01. **Kepler magnitude: 9.93.** Transit SNR 26.98

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.99 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.049 ± 2.249	2.25	-3.007 ± 1.182	4.056 ± 2.130
PRF-fit source offset from KIC position	3.235 ± 2.316	1.40	-2.410 ± 1.460	2.158 ± 2.003
photometric centroid source offset	0.63 ± 0.04	16.19	0.52 ± 0.03	-0.36 ± 0.06



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.

Q1 no difference image



Q1 no OOT image



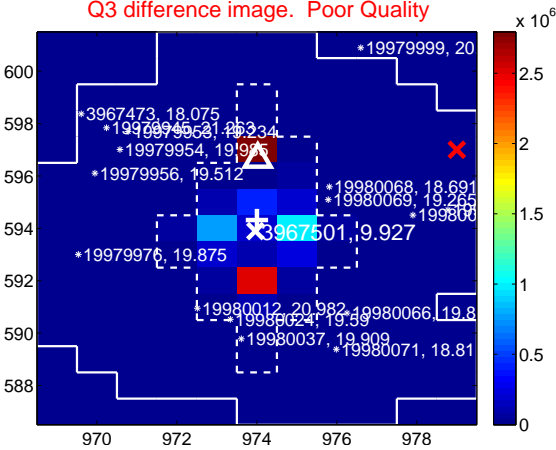
Q2 no difference image



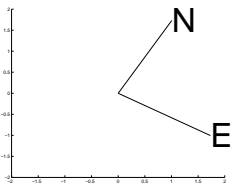
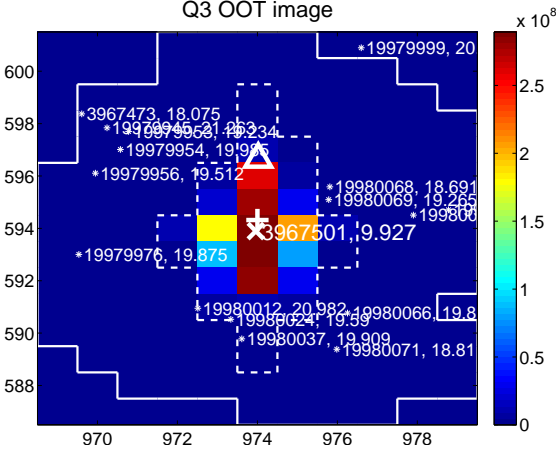
Q2 no OOT image



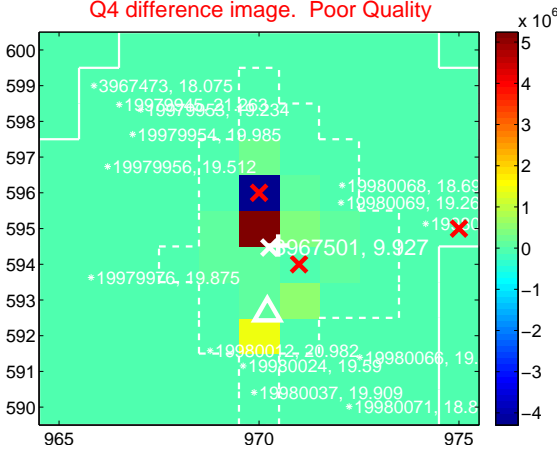
Q3 difference image. Poor Quality



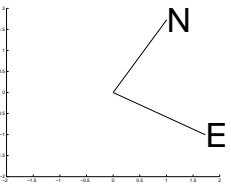
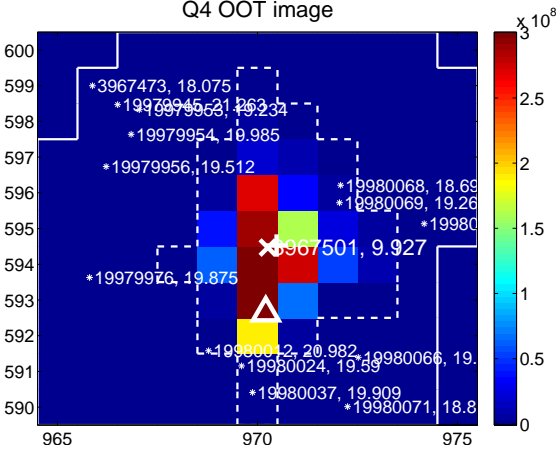
Q3 OOT image



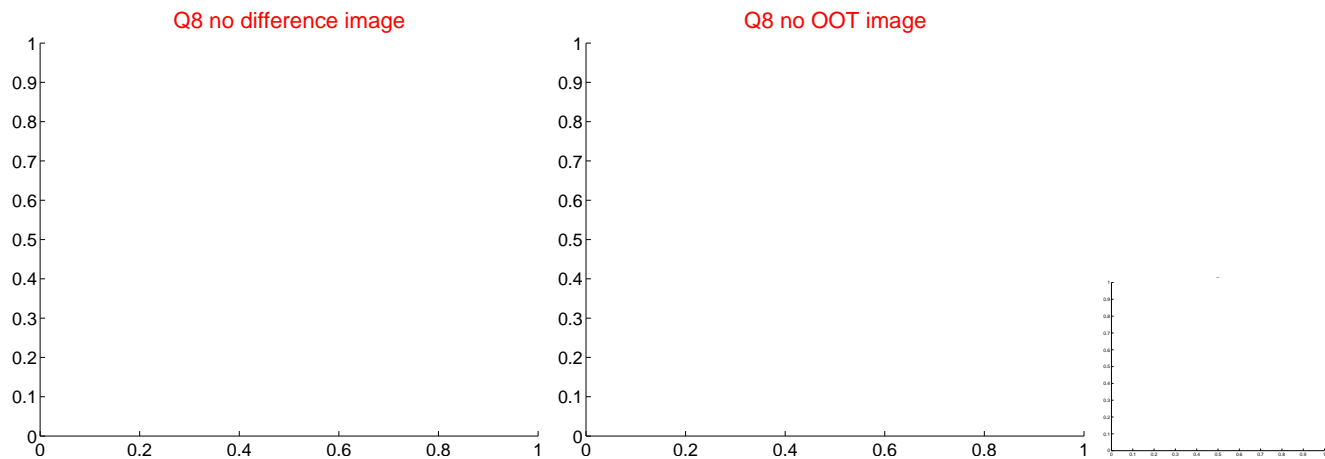
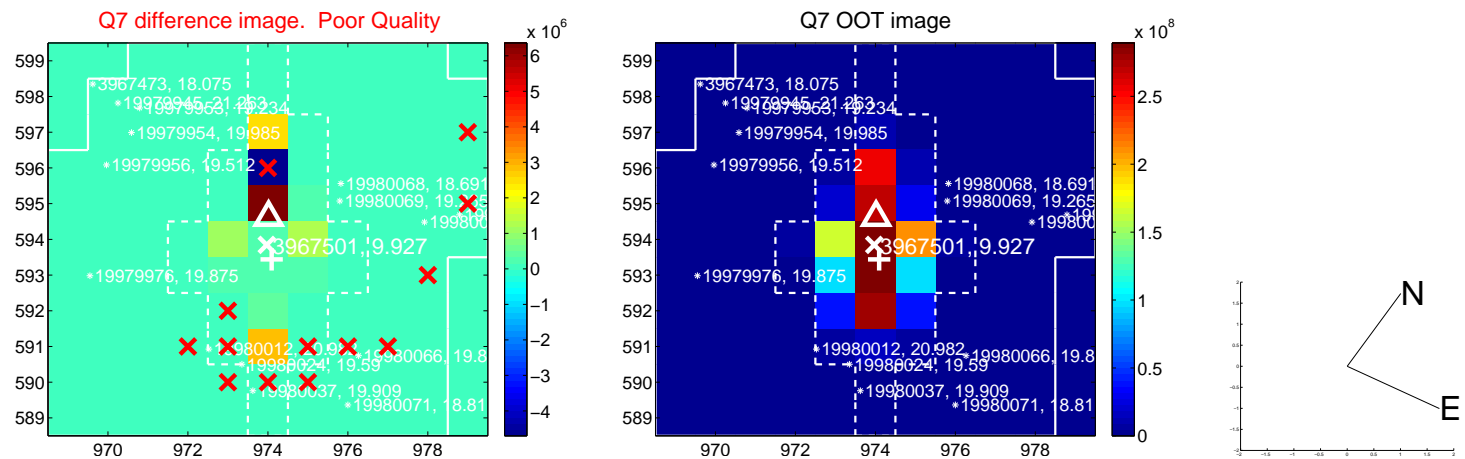
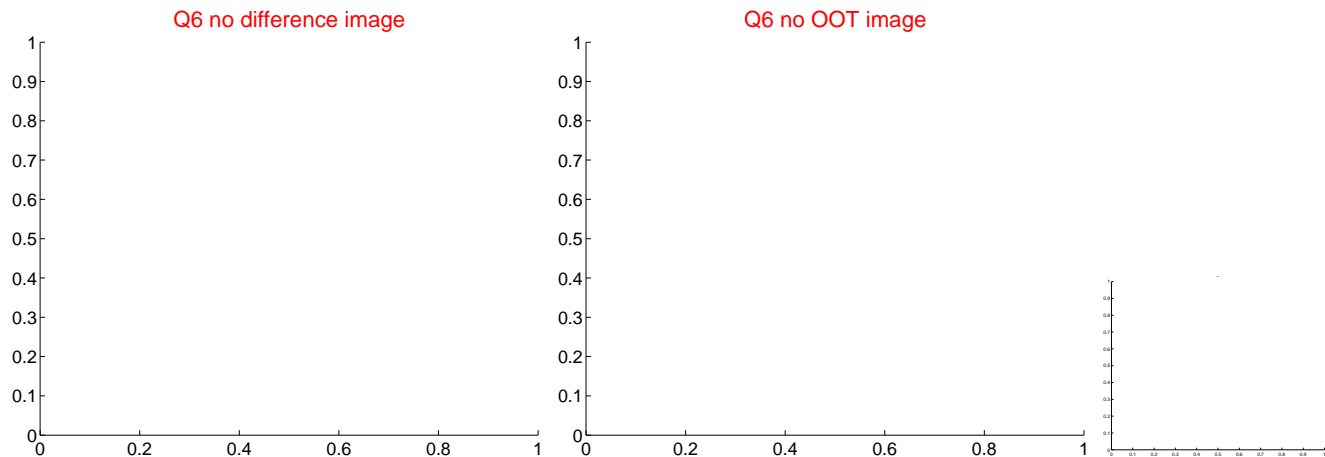
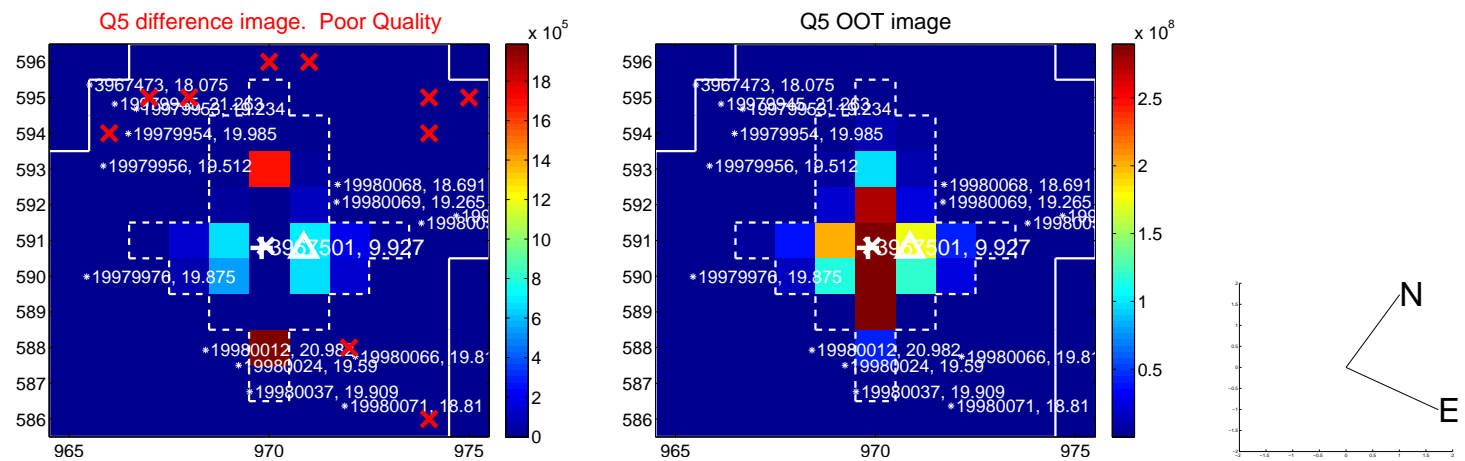
Q4 difference image. Poor Quality



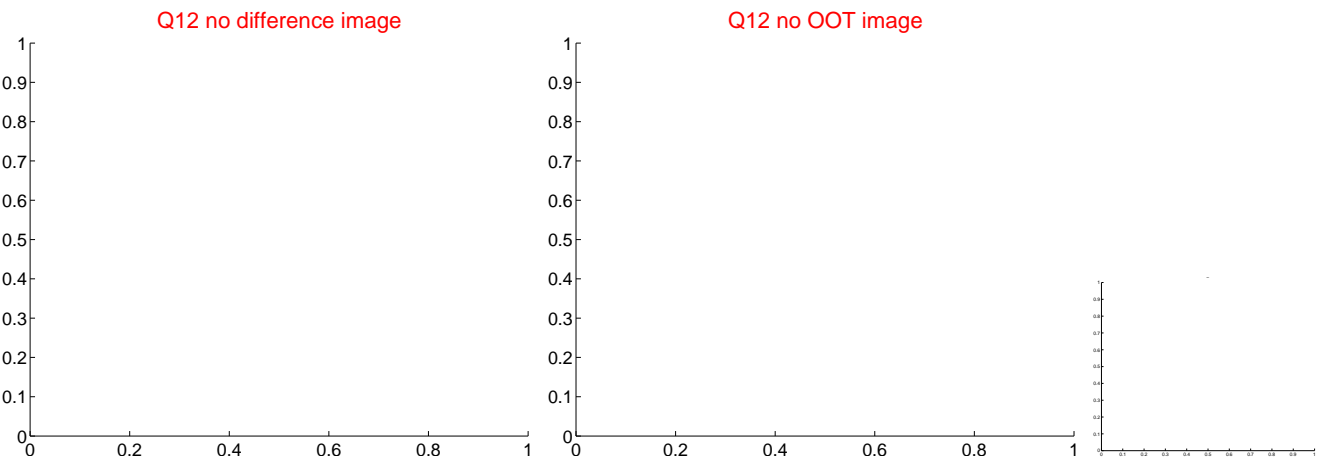
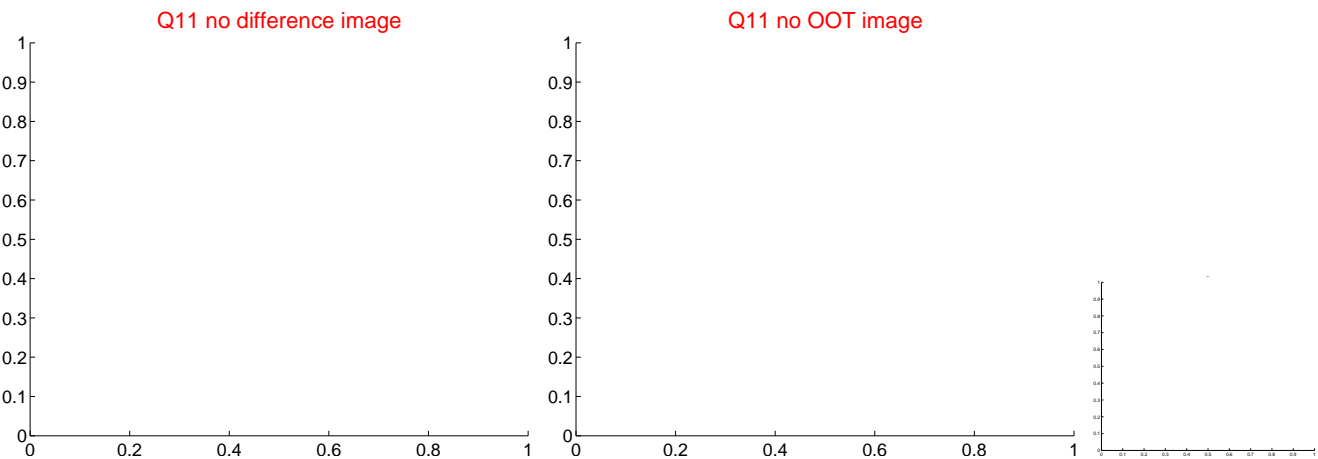
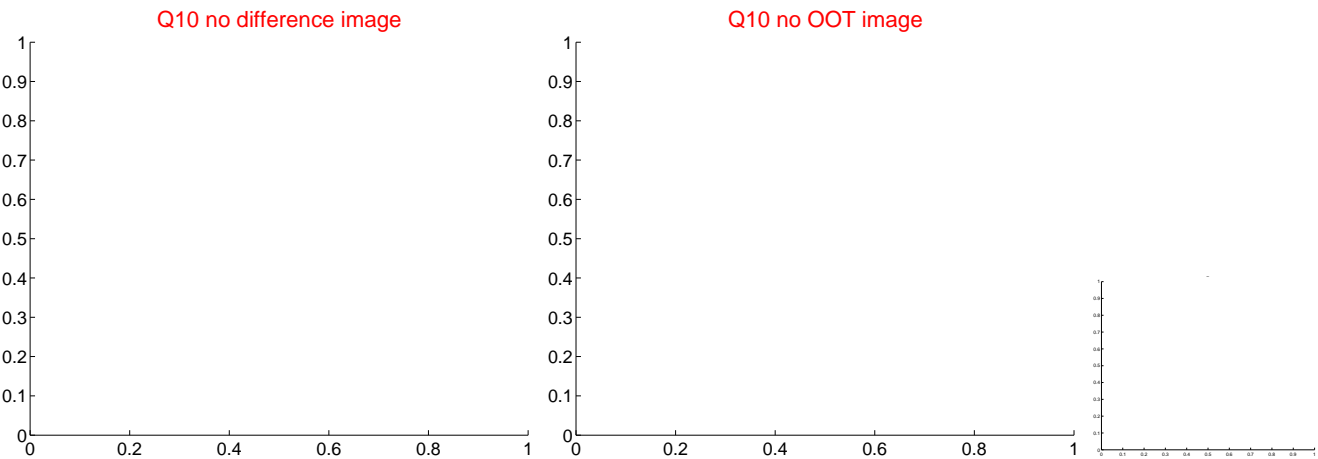
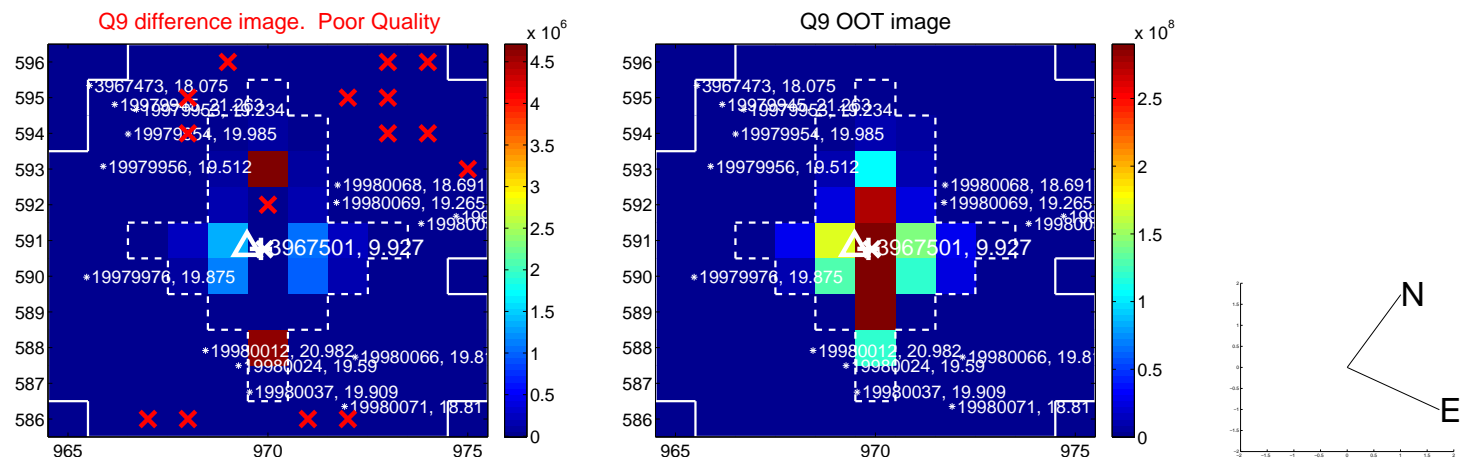
Q4 OOT image



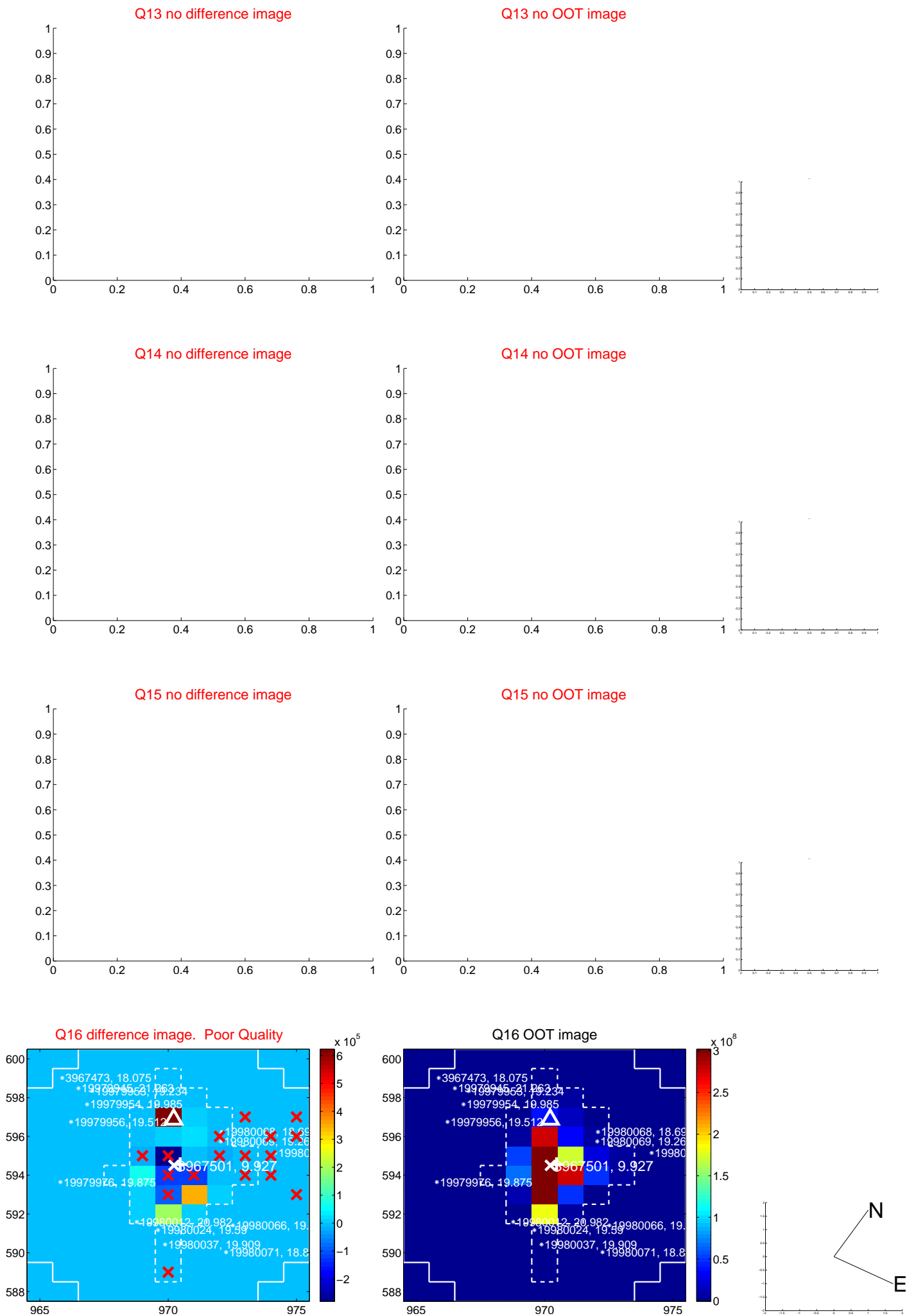
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



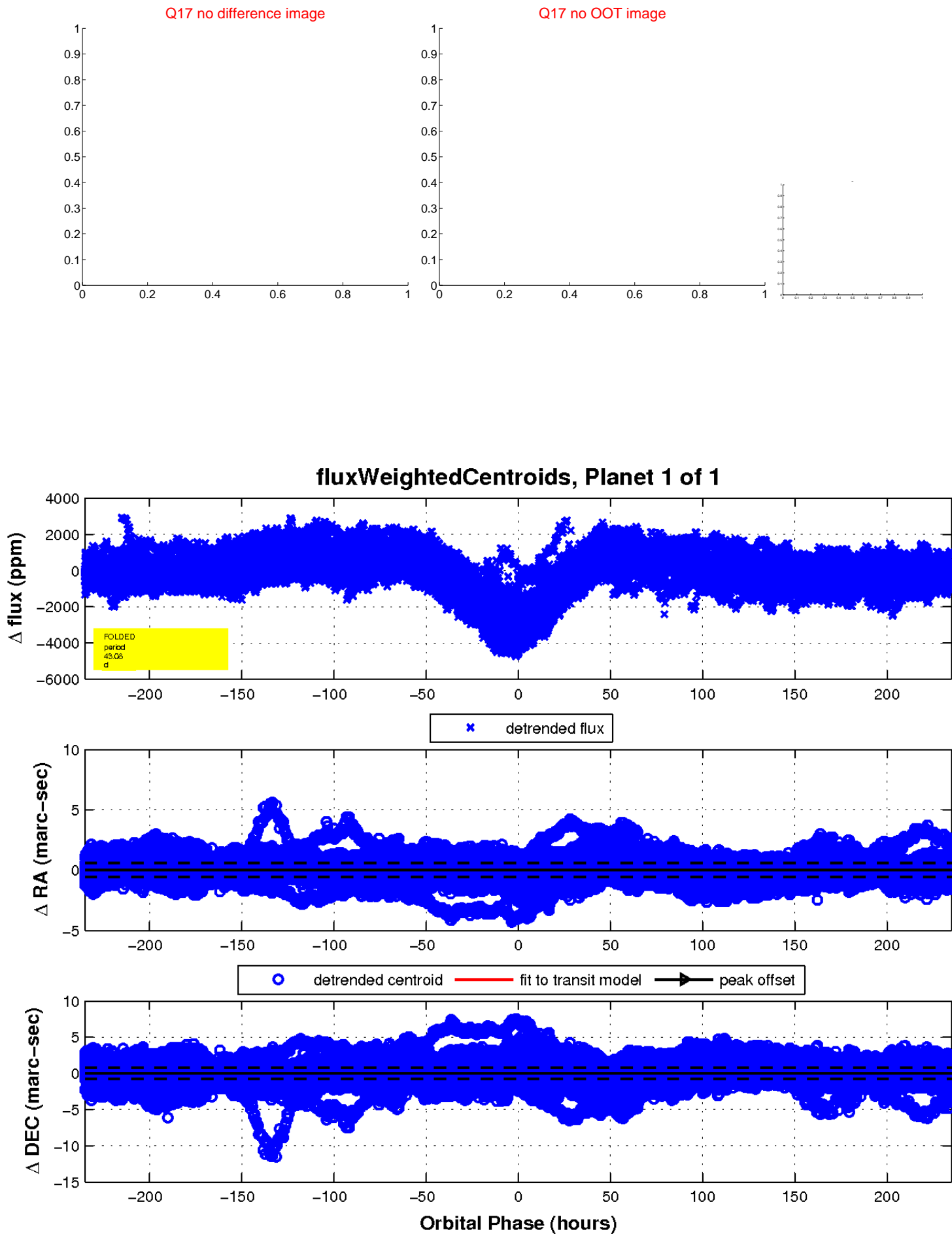
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

