

KIC 009650989

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})
009650989-01	OBS	3095.01	3.423932	132.877605	151.8	1.873	10.9	12.7	1.01	5788	1.50	510.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009650989-01	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.

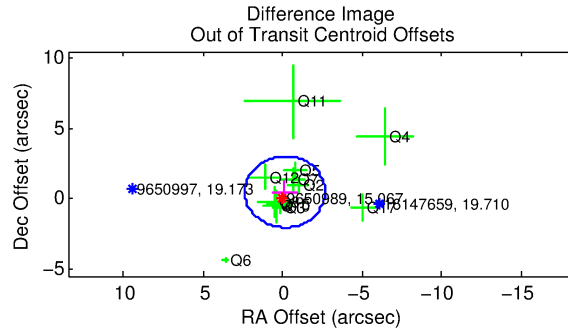
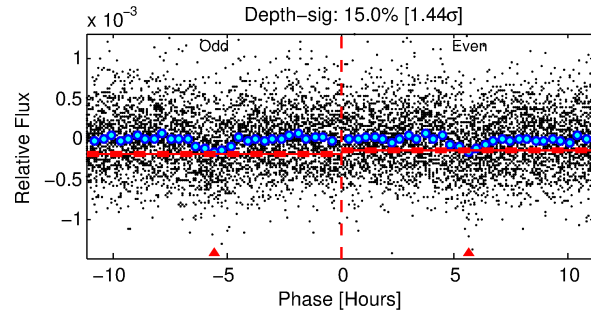
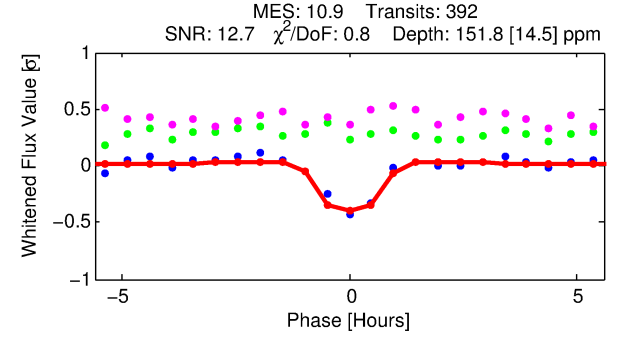
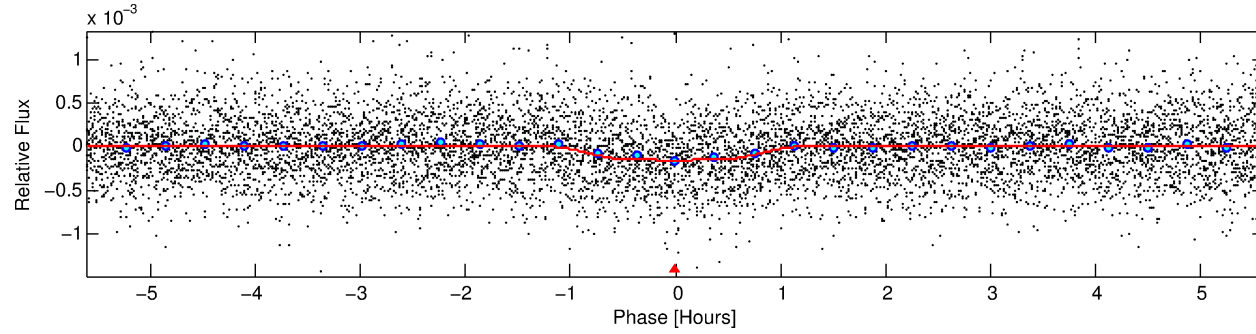
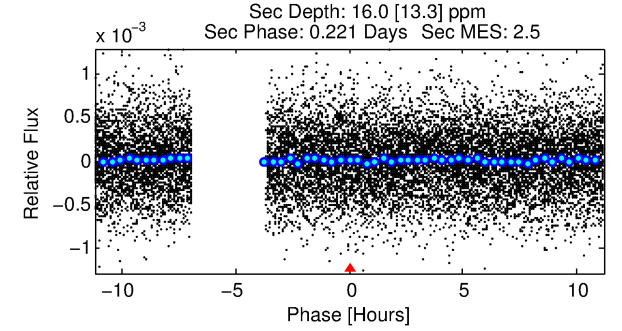
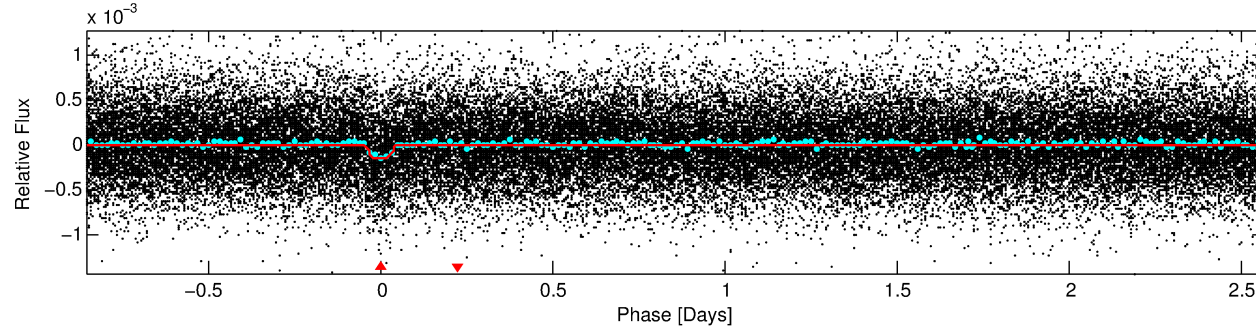
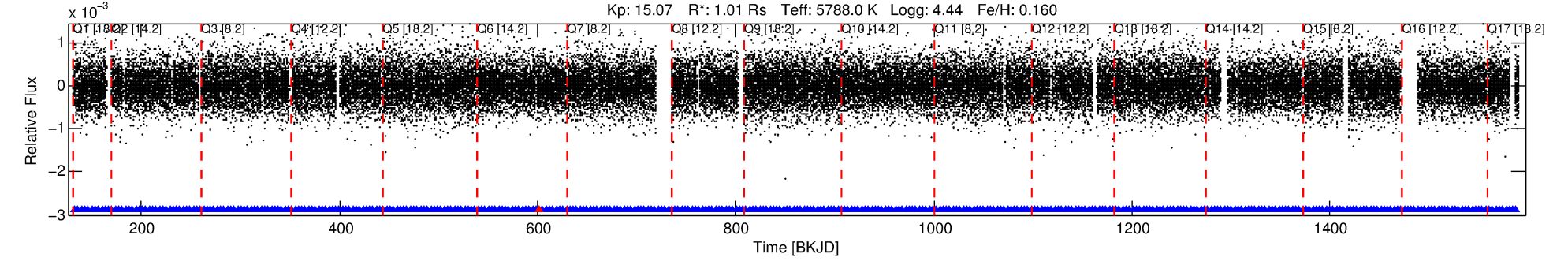
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009650989-01

No Significant Match Found

DV One-Page Summary

KIC: 9650989 Candidate: 1 of 1 Period: 3.424 d
KOI: K03095.01 Corr: 0.970



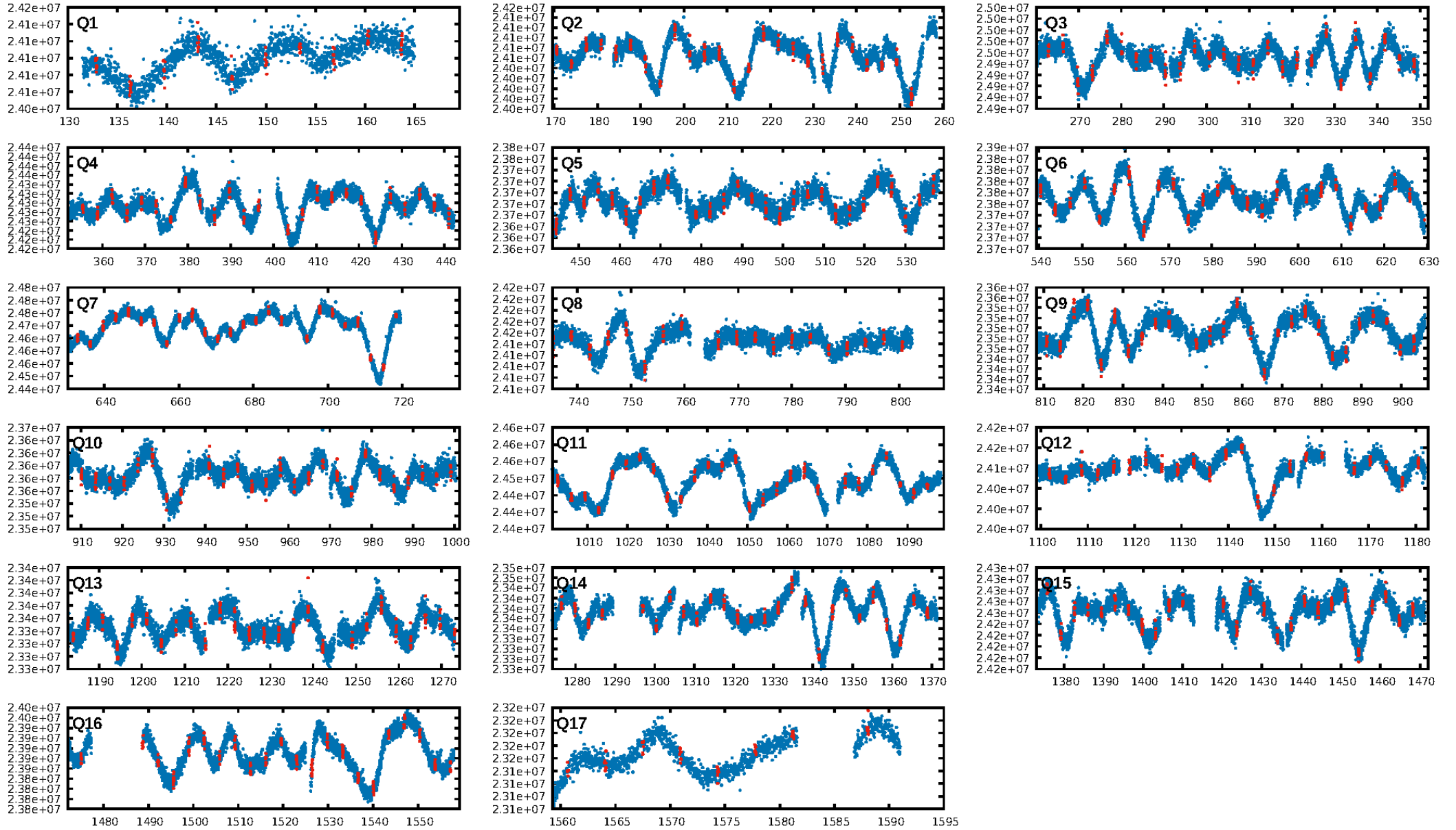
DV Fit Results:

Period = 3.42393 [0.00001] d
Epoch = 132.8776 [0.0025] BKJD
Rp/R* = 0.0136 [0.0074]
a/R* = 6.36 [16.08]
b = 0.91 [0.51]
Seff = 510.45 [111.93]
Teq = 1212 [66] K
Rp = 1.50 [0.86] Re
a = 0.0450 [0.0063] AU
Ag = 7.91 [10.98] [0.63σ]
Teffp = 3143 [1079] K [1.79σ]

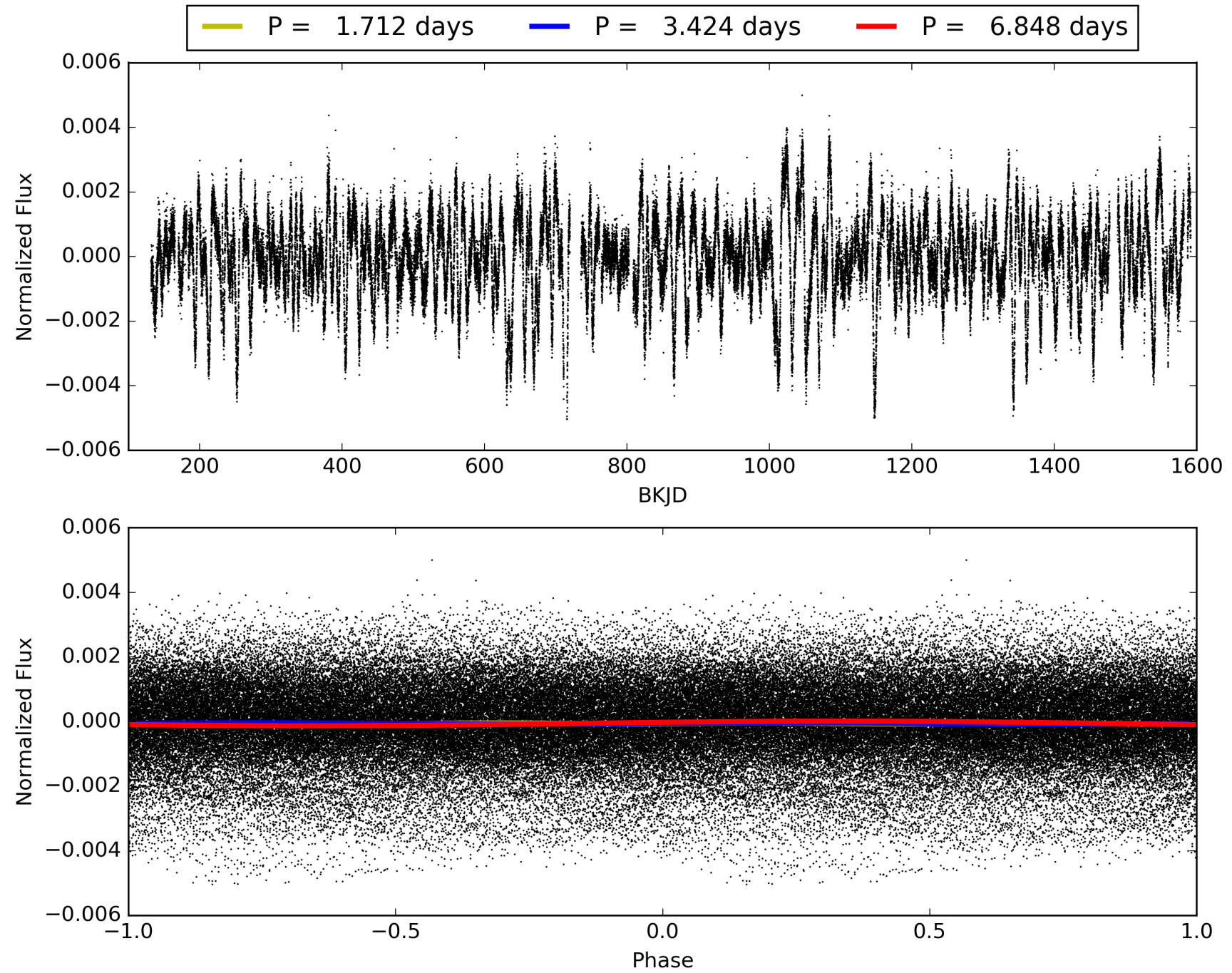
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.42e-27
RollingBand-fgt: 1.00 [373/374]
GhostDiagnostic-chr: 4.707
Centroid-sig: 10.6%
Centroid-so: 1.738 arcsec [1.63σ]
OotOffset-rm: 0.498 arcsec [0.59σ]
KicOffset-rm: 0.496 arcsec [0.60σ]
OotOffset-st: 3/4/3/2 [12]
KicOffset-st: 3/4/3/2 [12]
DiffImageQuality-fgm: 0.50 [6/12]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 009650989-01, PDC Light Curves

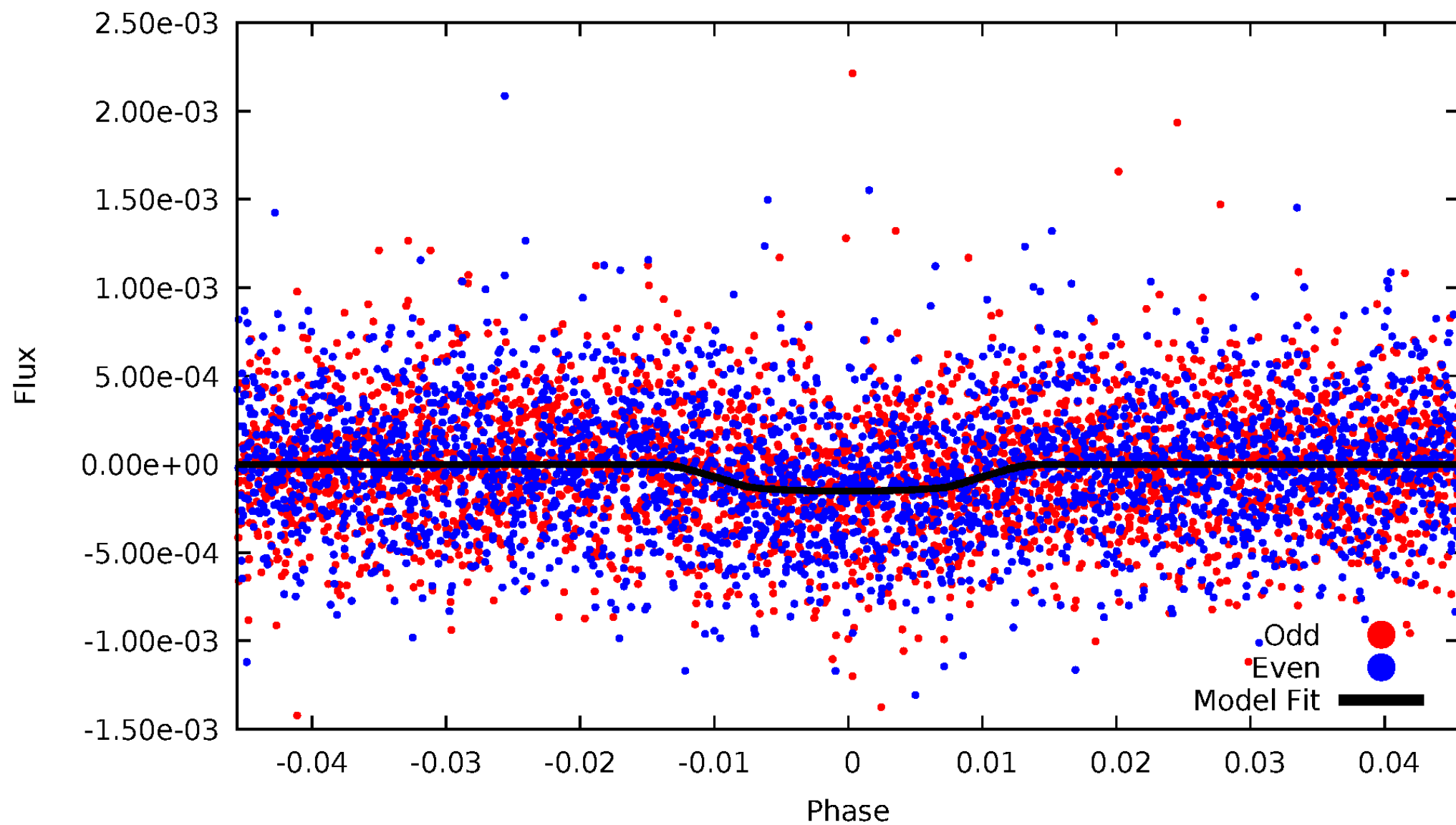


TCE 009650989-01



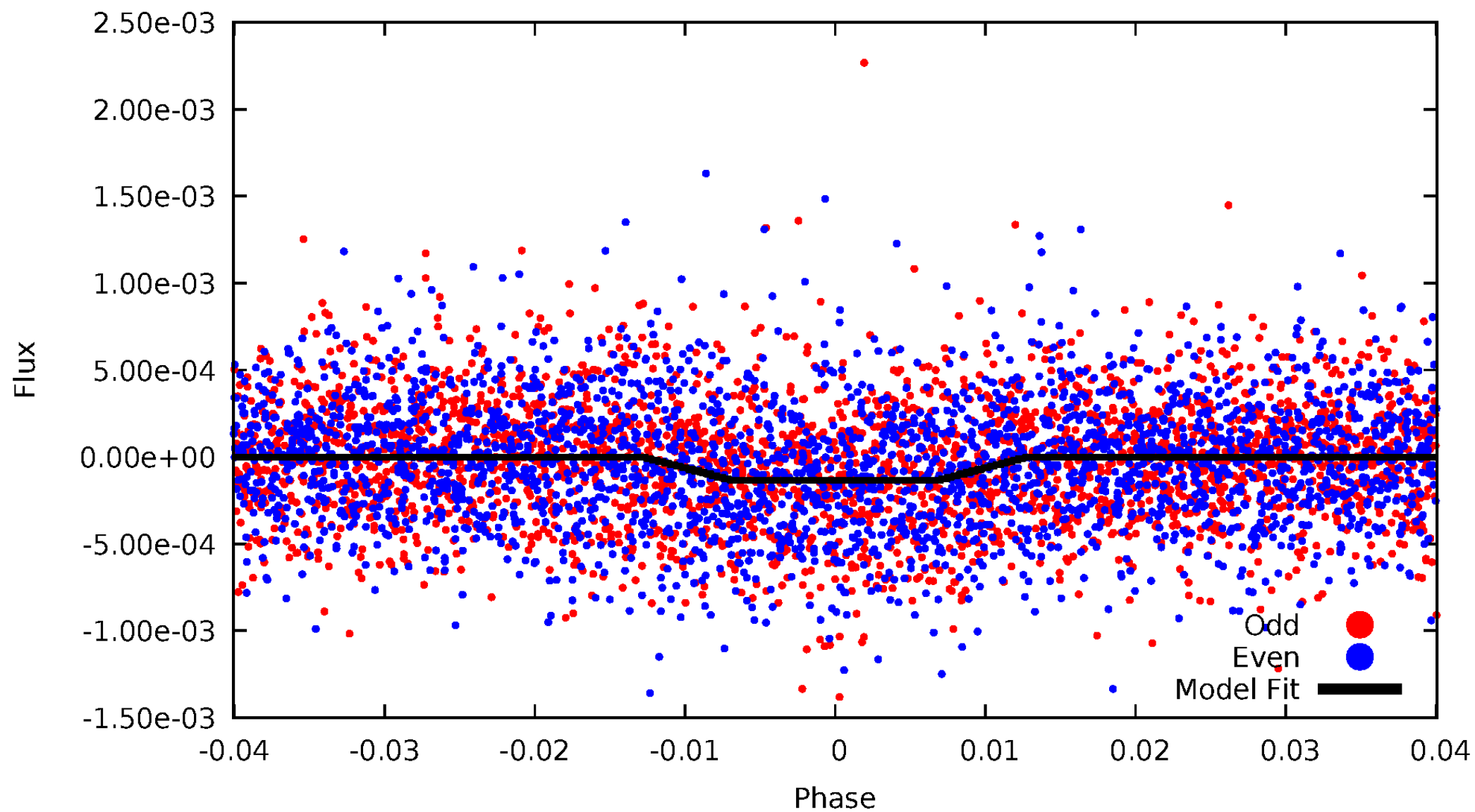
DV Odd/Even

TCE 009650989-01



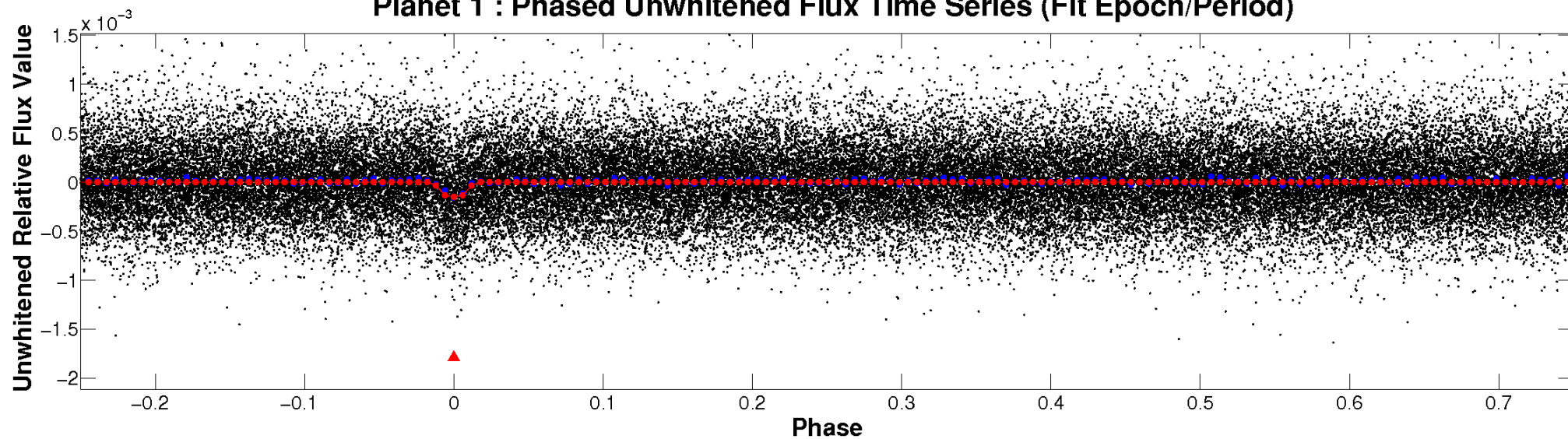
ALT Odd/Even

TCE 009650989-01

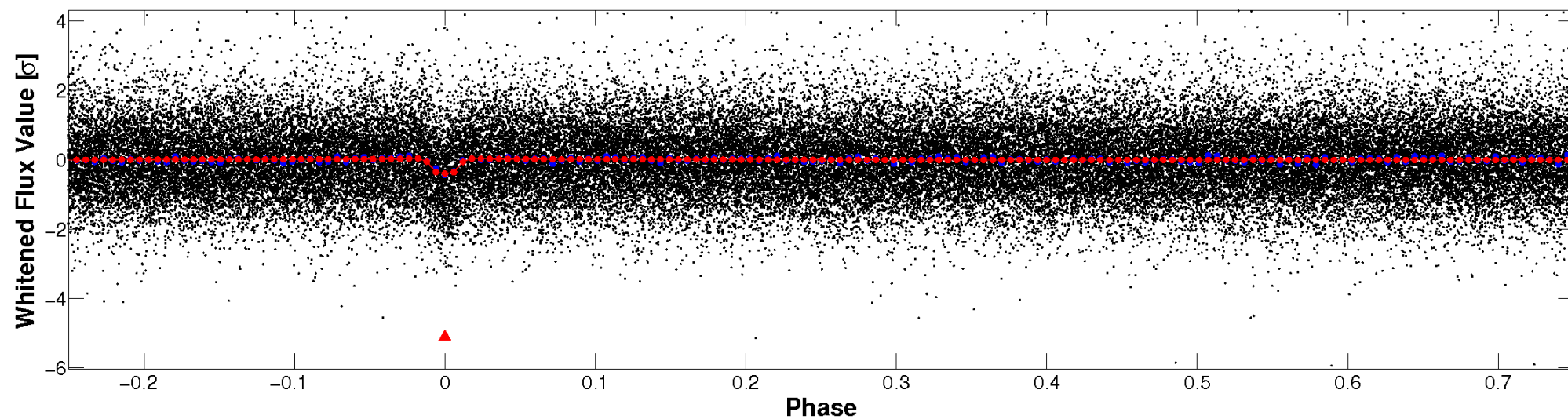


Non-Whitened Vs. Whitened Light Curve

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

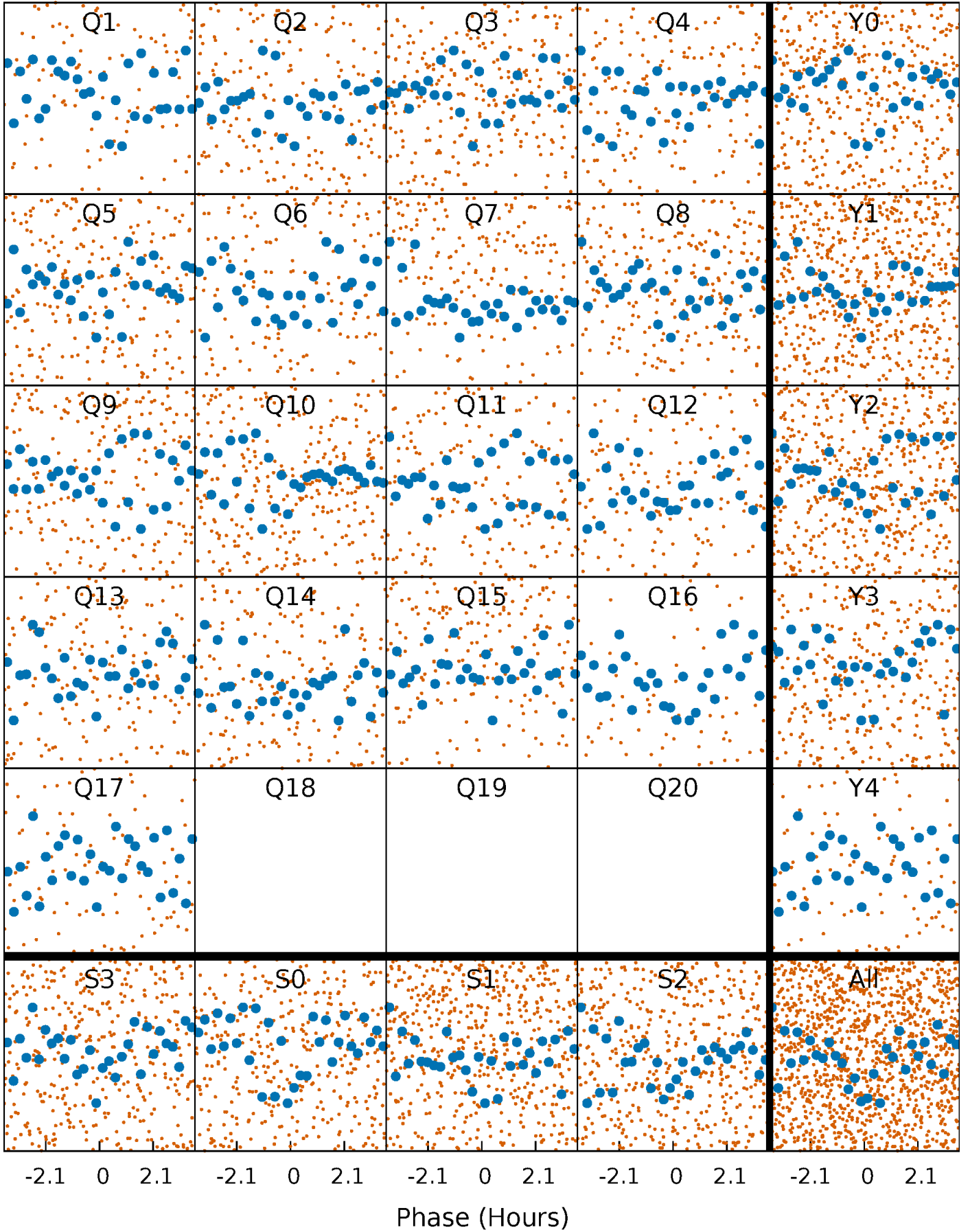


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



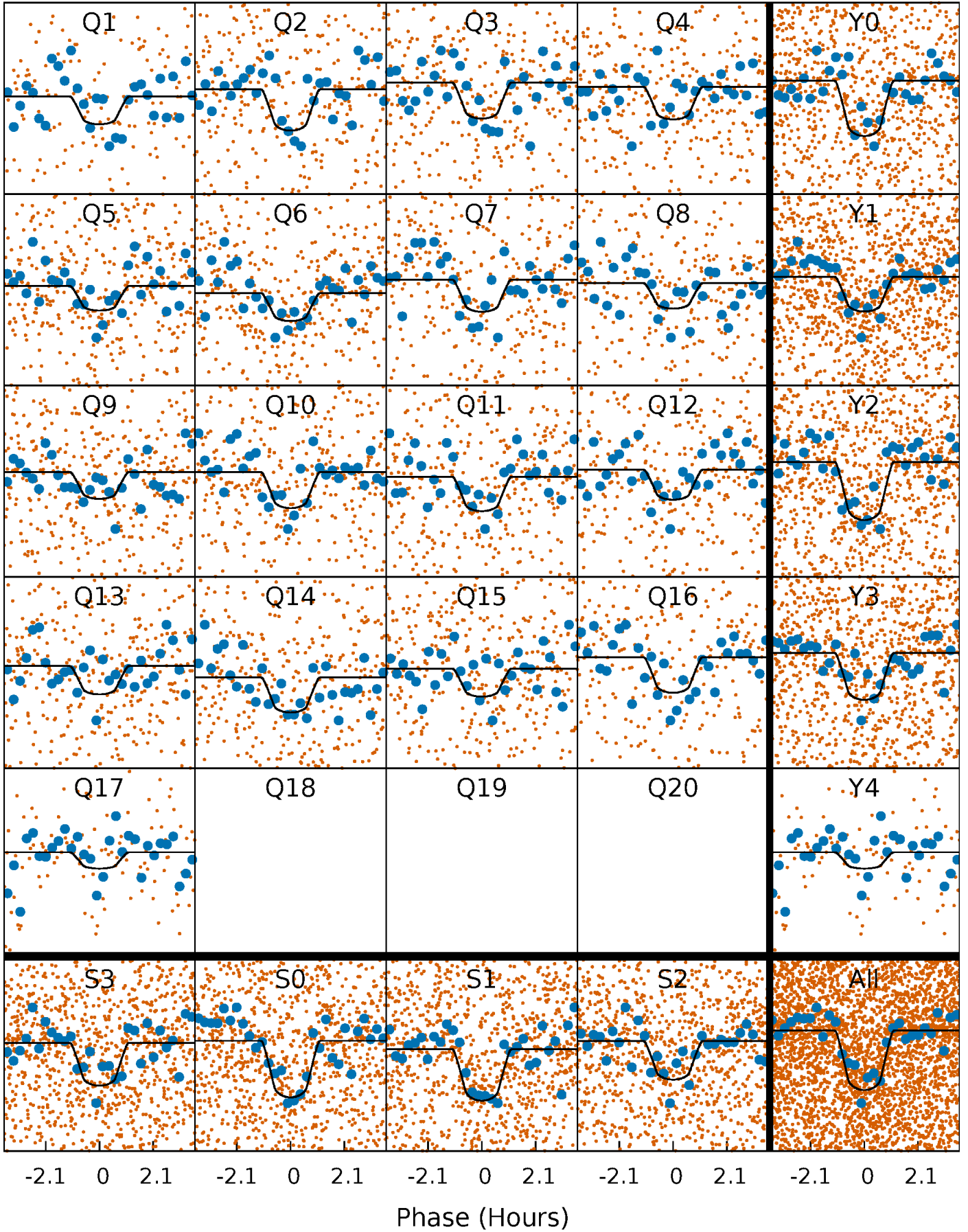
PDC Quarter-Phased Transit Curves

TCE 009650989-01 P= 3.423932 Days $T_0=132.877605$ (BKJD)



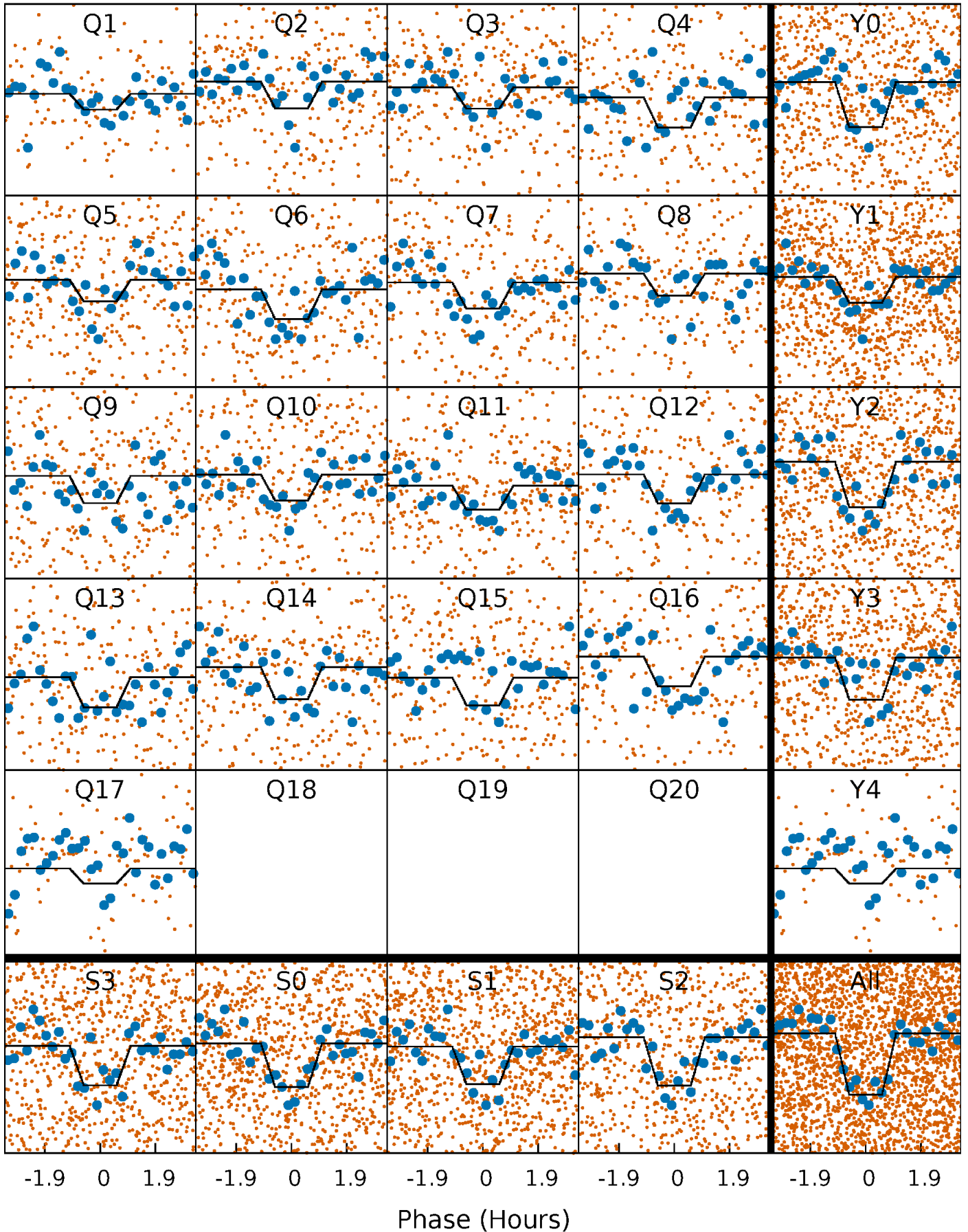
DV Quarter-Phased Transit Curves

TCE 009650989-01 $P = 3.423932$ Days $T_0 = 132.877605$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

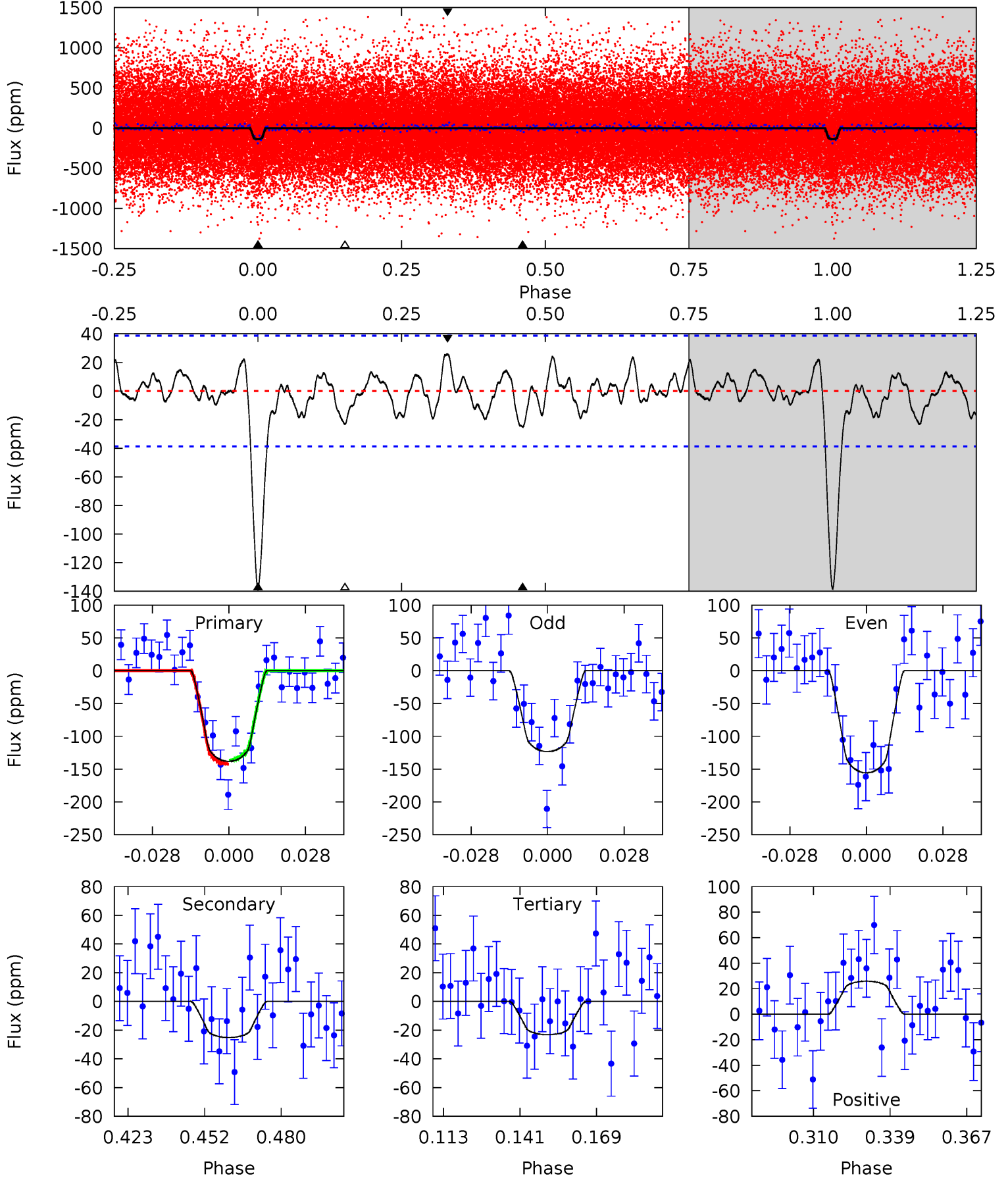
TCE 009650989-01 P= 3.423884 Days $T_0=132.887402$ (BKJD)



DV Model-Shift Uniqueness Test

009650989-01, P = 3.423932 Days, E = 129.453673 Days

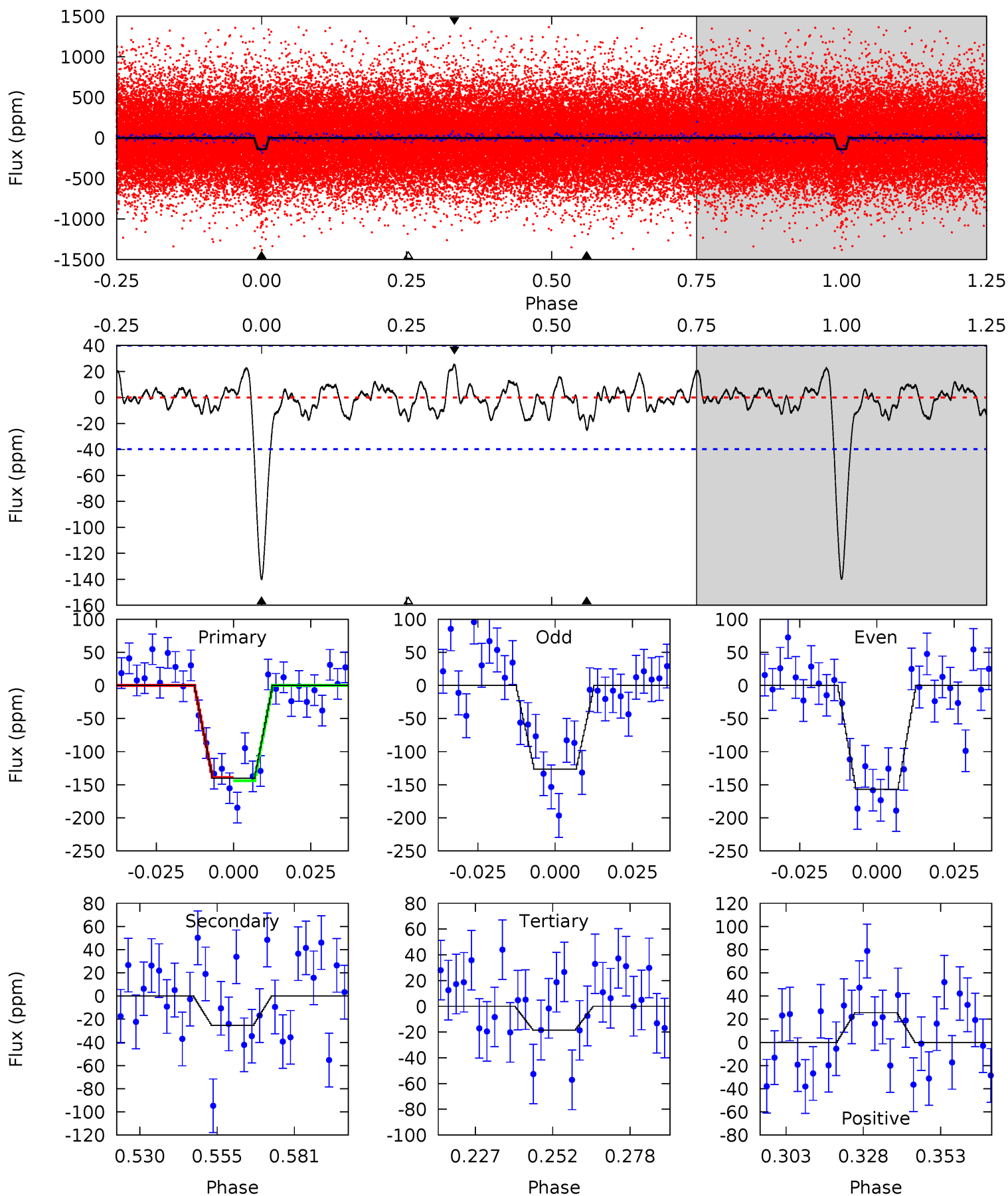
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	3.13	2.88	3.22	4.82	2.19	1.24	14.3	14.0	0.25	-0.09	2.02	0.94	0.16	0.38



Alt Model-Shift Uniqueness Test

009650989-01, P = 3.423884 Days, E = 129.463518 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.0	3.07	2.25	3.12	4.85	2.24	1.04	14.8	13.9	0.82	-0.05	1.85	1.00	0.15	0.30



Stellar Parameters For KIC 009650989

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5788^{+78}_{-86}	$4.442^{+0.051}_{-0.119}$	$0.160^{+0.150}_{-0.150}$	$1.015^{+0.161}_{-0.069}$	$1.038^{+0.056}_{-0.068}$	$1.398^{+0.277}_{-0.482}$
	+1%/-1%	+1%/-3%	+94%/-94%	+16%/-7%	+5%/-7%	+20%/-35%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 009650989-01 / KOI 3095.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-25 ± 8	$1.58^{+0.91}_{-0.71}$	1705^{+68}_{-51}	3761^{+1027}_{-525}	10^{+26}_{-6}
Alt.	-25 ± 8	$1.38^{+0.88}_{-0.75}$	1706^{+75}_{-50}	4003^{+1477}_{-661}	15^{+57}_{-10}

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 $A_{obs} \gg 1.0$

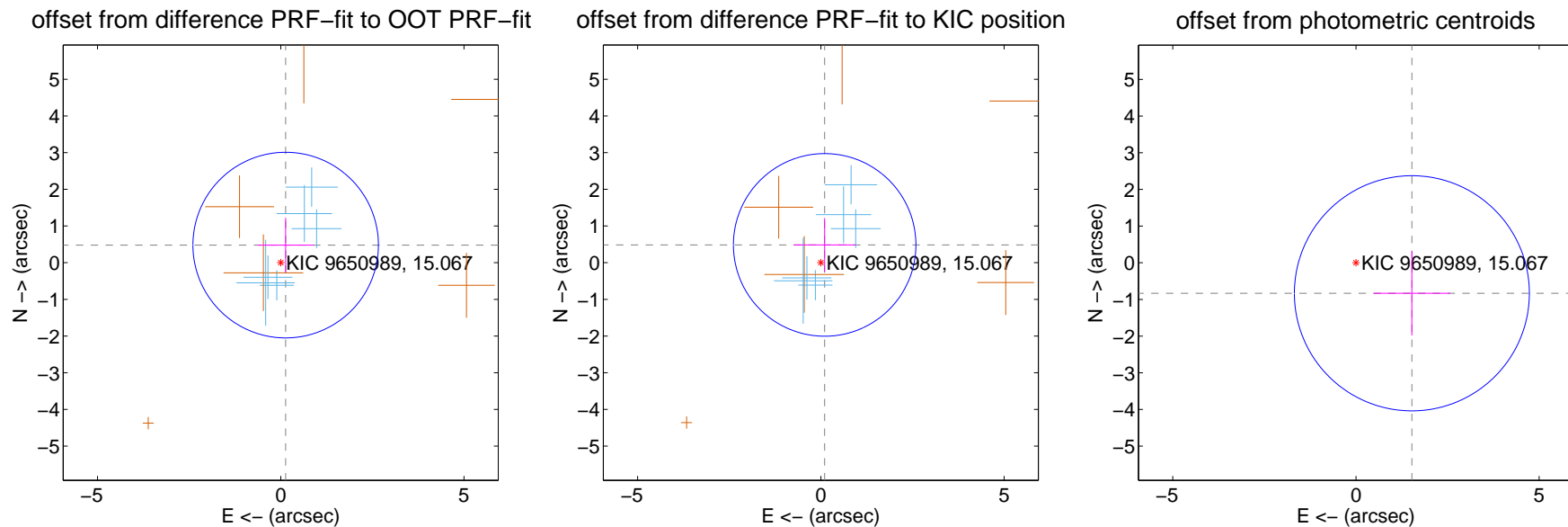
DV Centroid Data

Supplemental centroid analysis for 009650989-01. Kepler magnitude: 15.07. Transit SNR 12.66

There are 6 quarters with good PRF difference image offsets

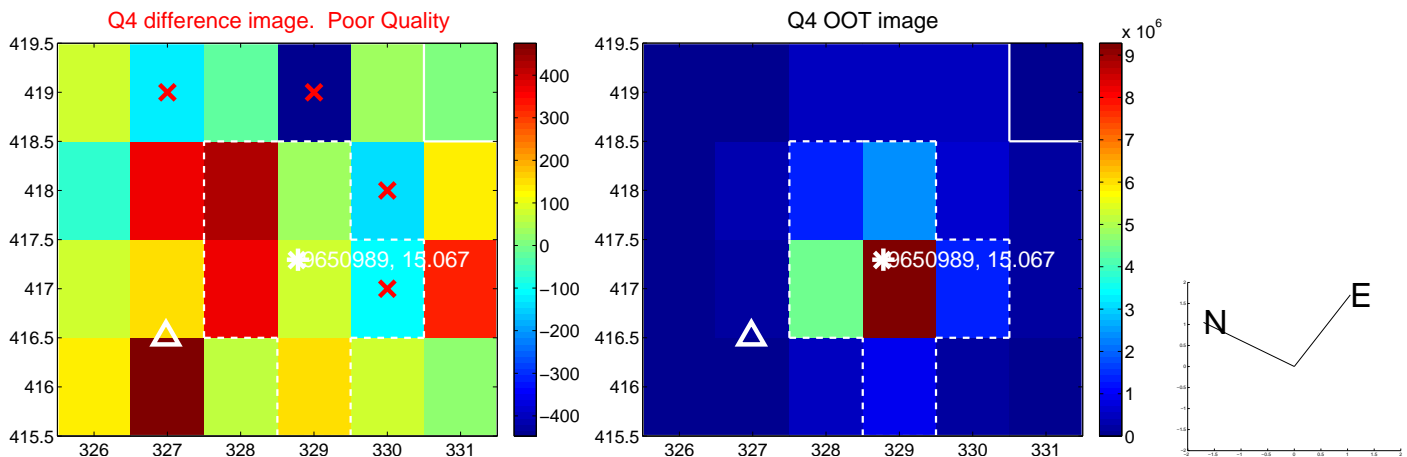
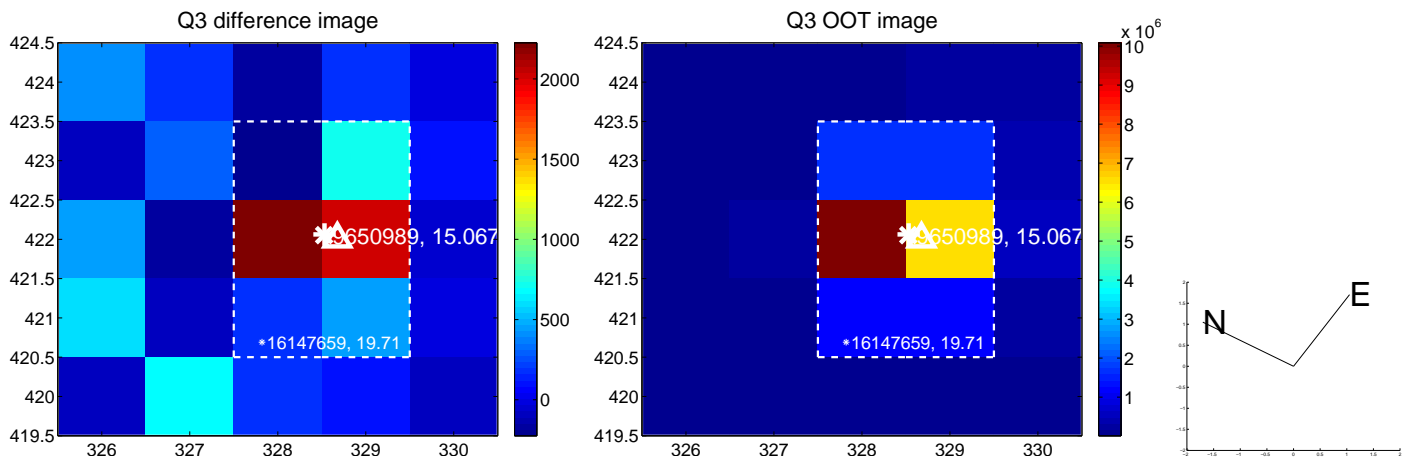
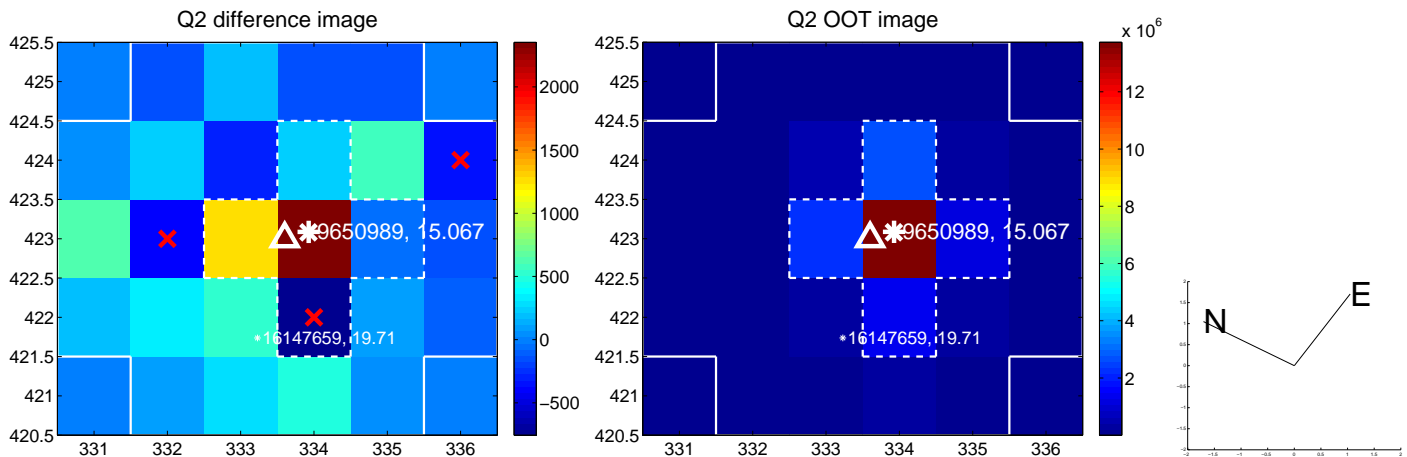
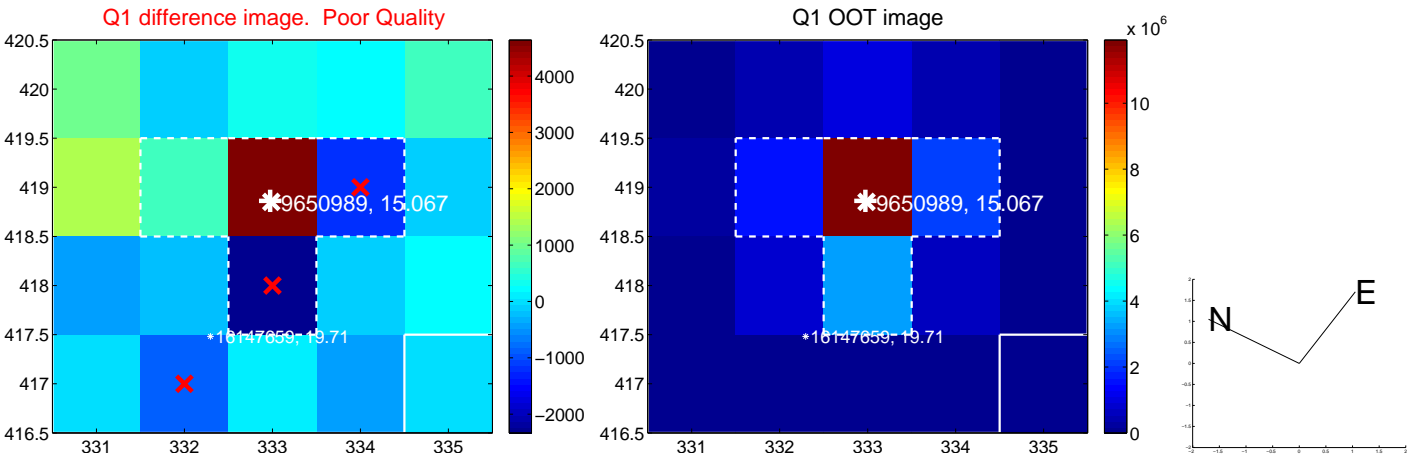
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.498 ± 0.844	0.59	-0.134 ± 0.762	0.480 ± 0.744
PRF-fit source offset from KIC position	0.496 ± 0.830	0.60	-0.104 ± 0.849	0.485 ± 0.733
photometric centroid source offset	1.74 ± 1.07	1.63	-1.53 ± 1.04	-0.83 ± 1.15

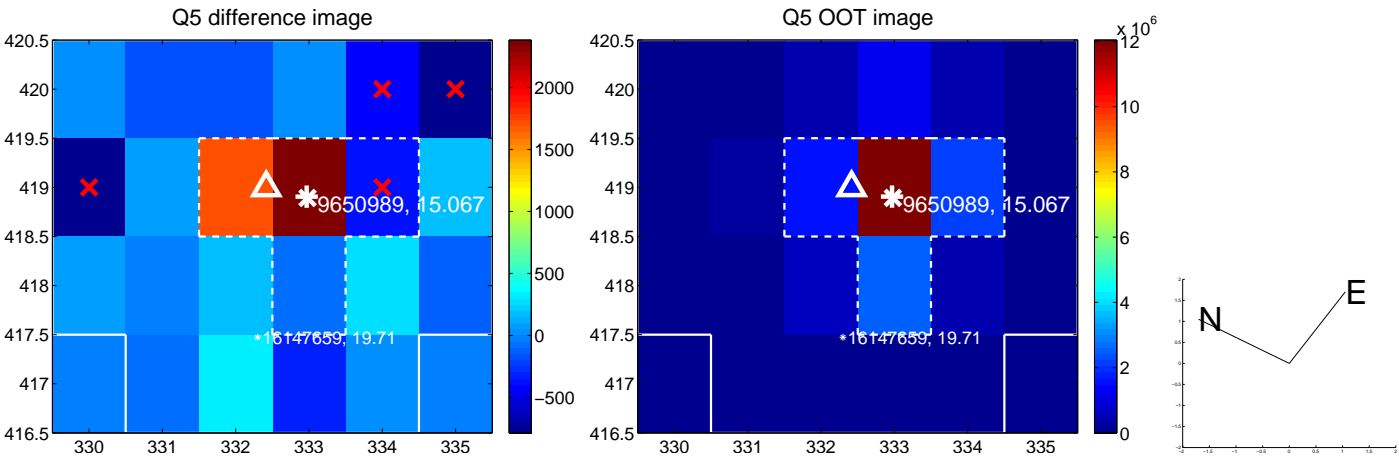


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

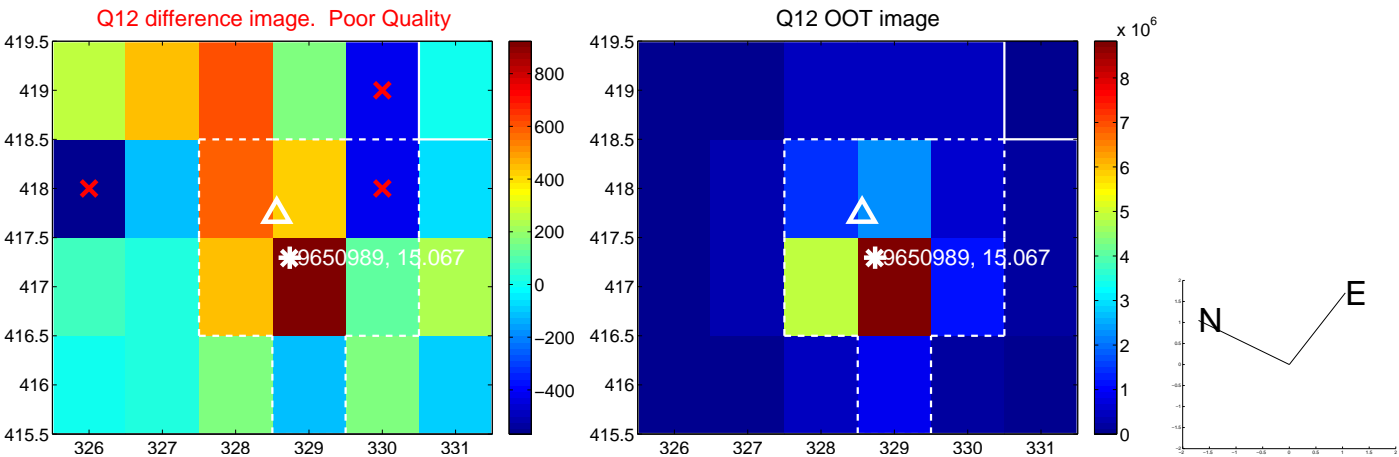
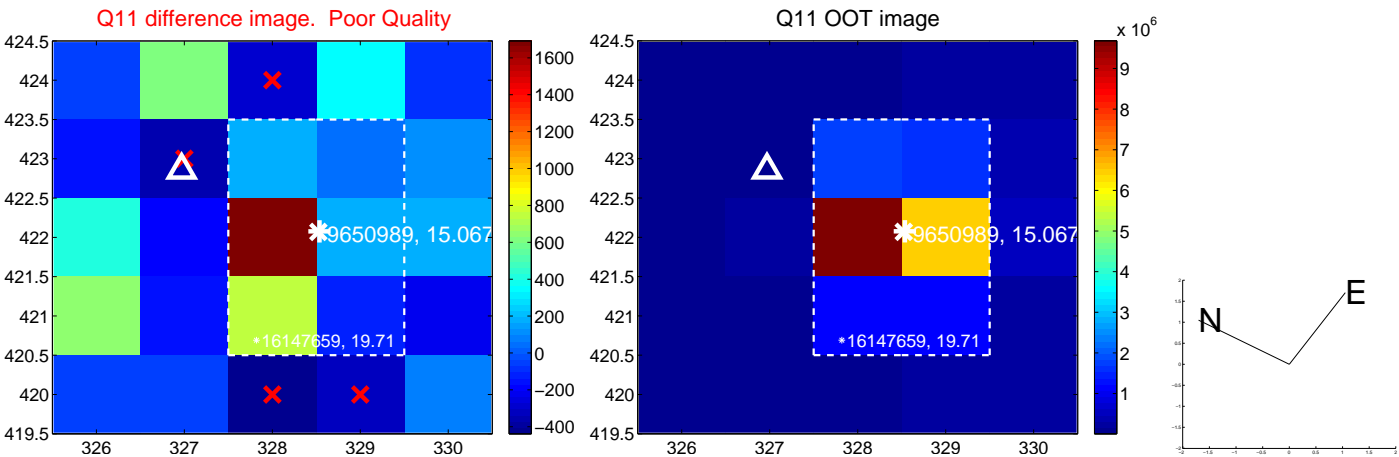
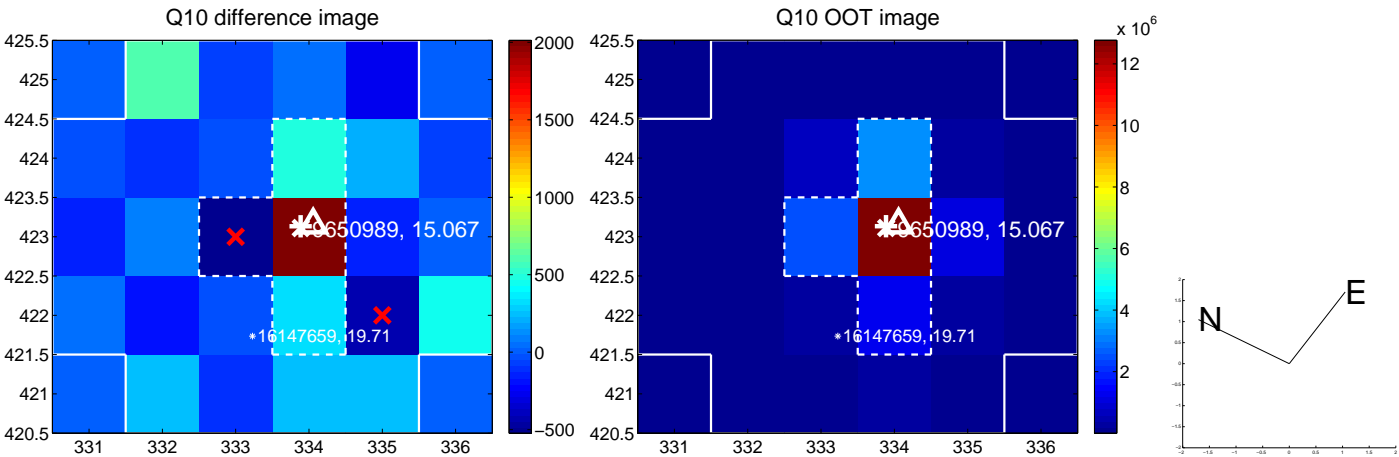
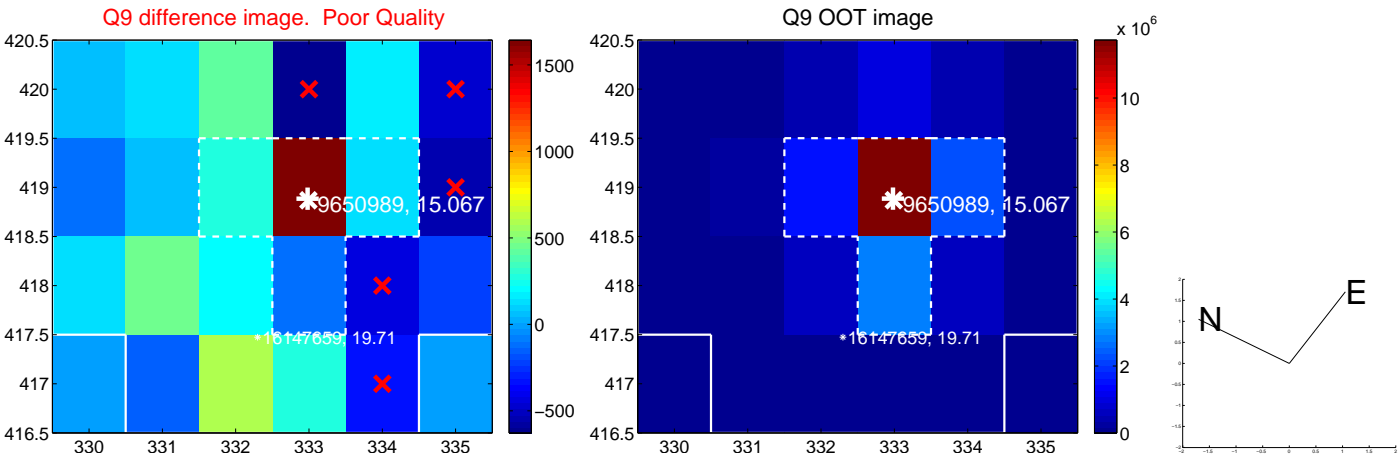
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



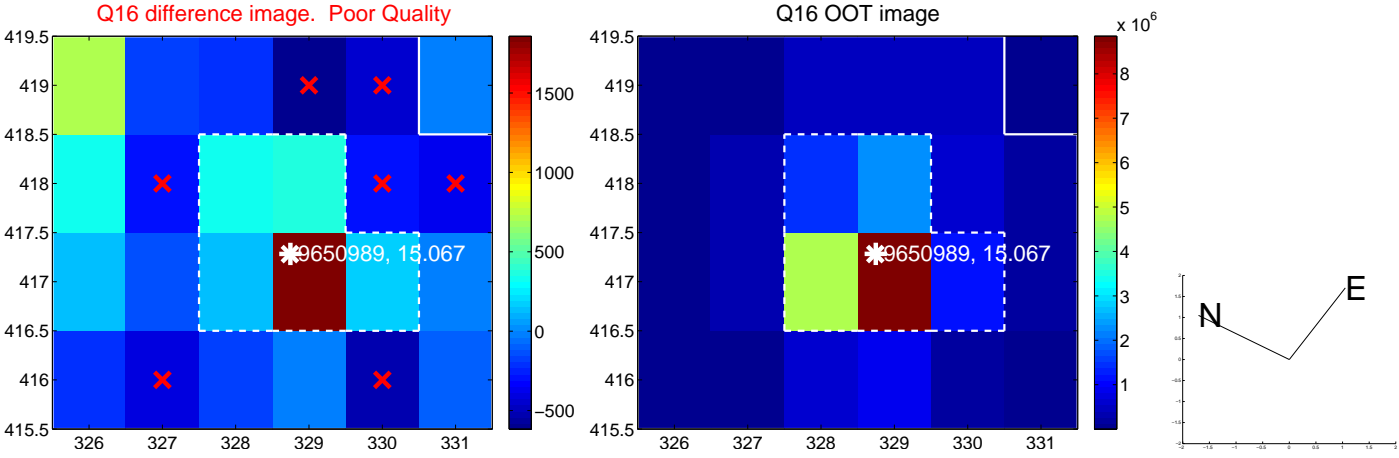
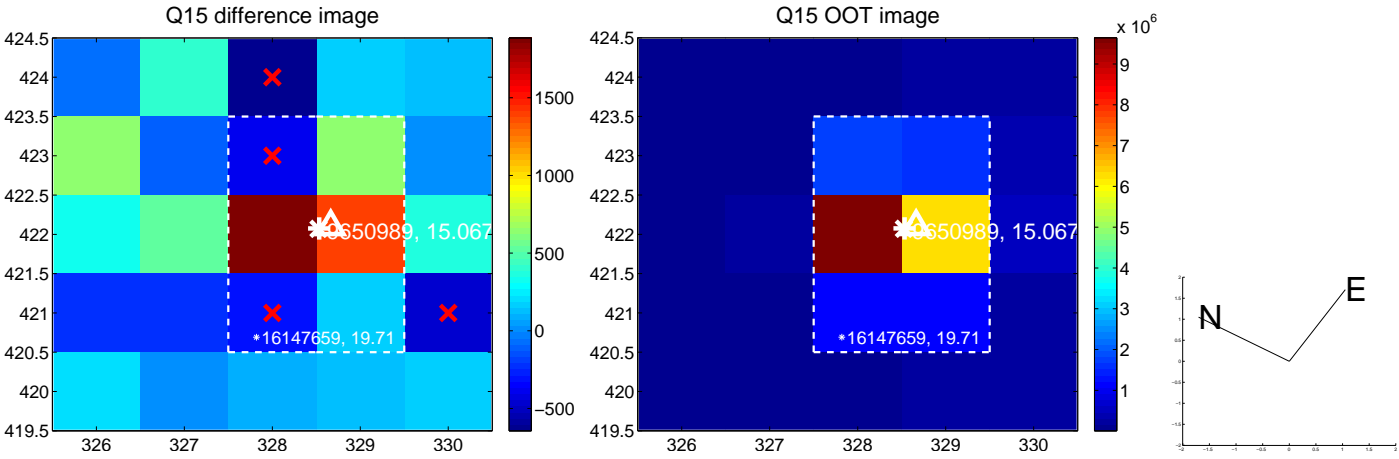
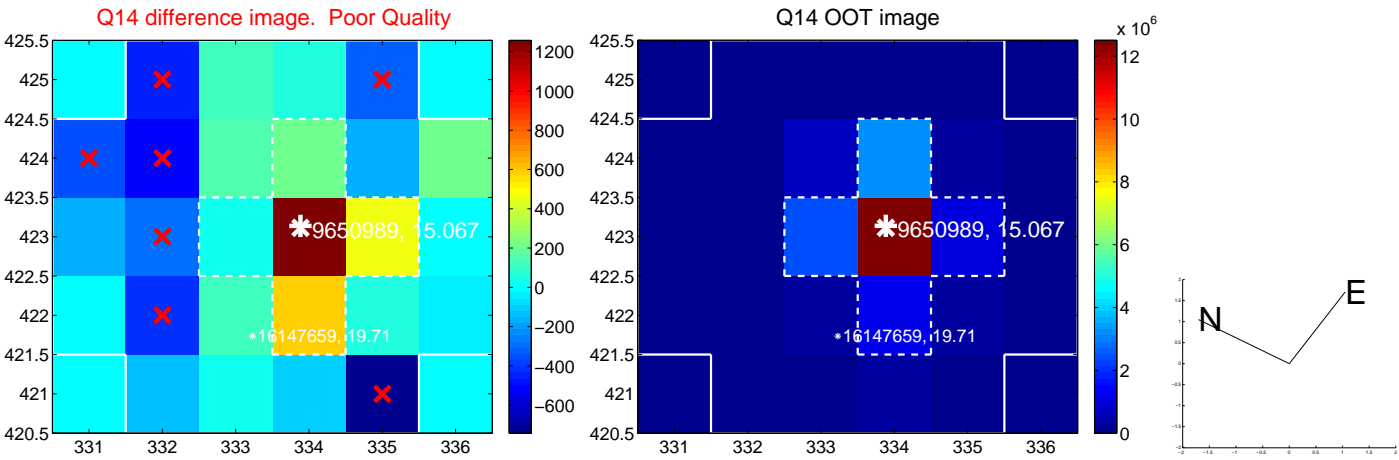
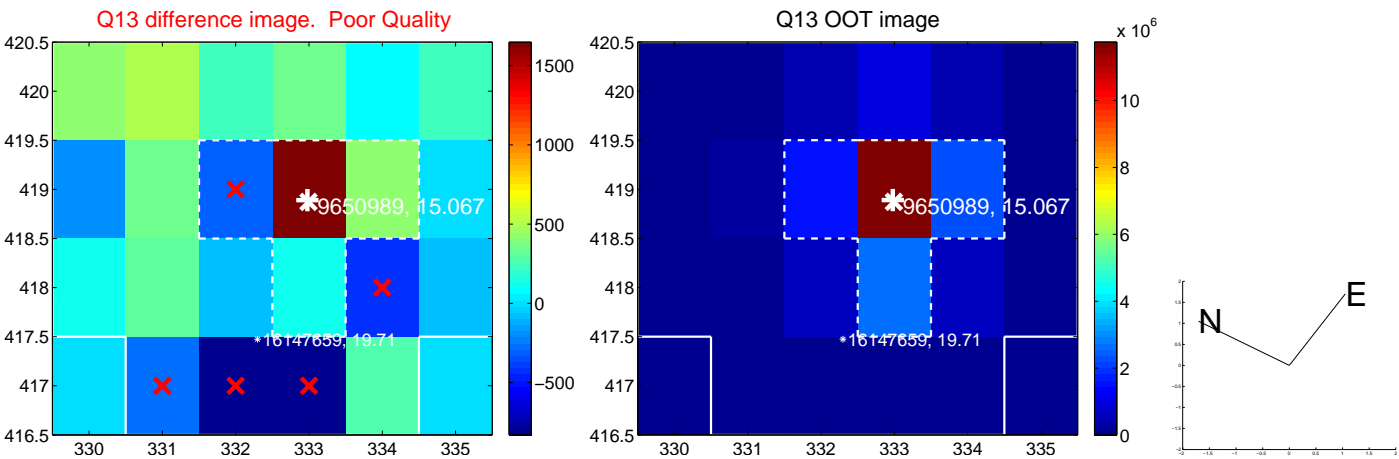
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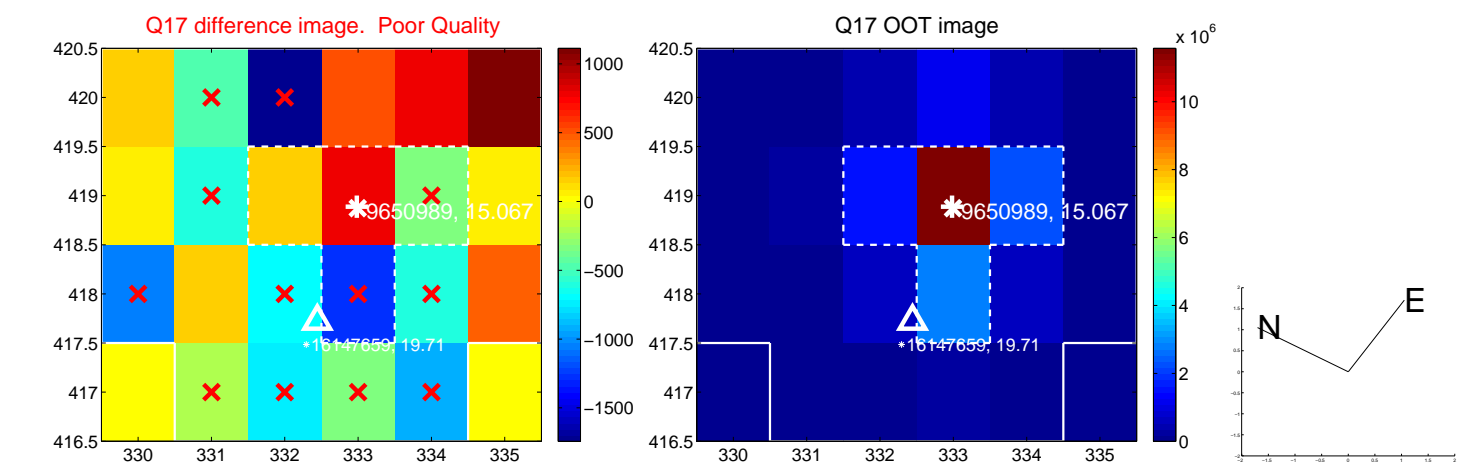
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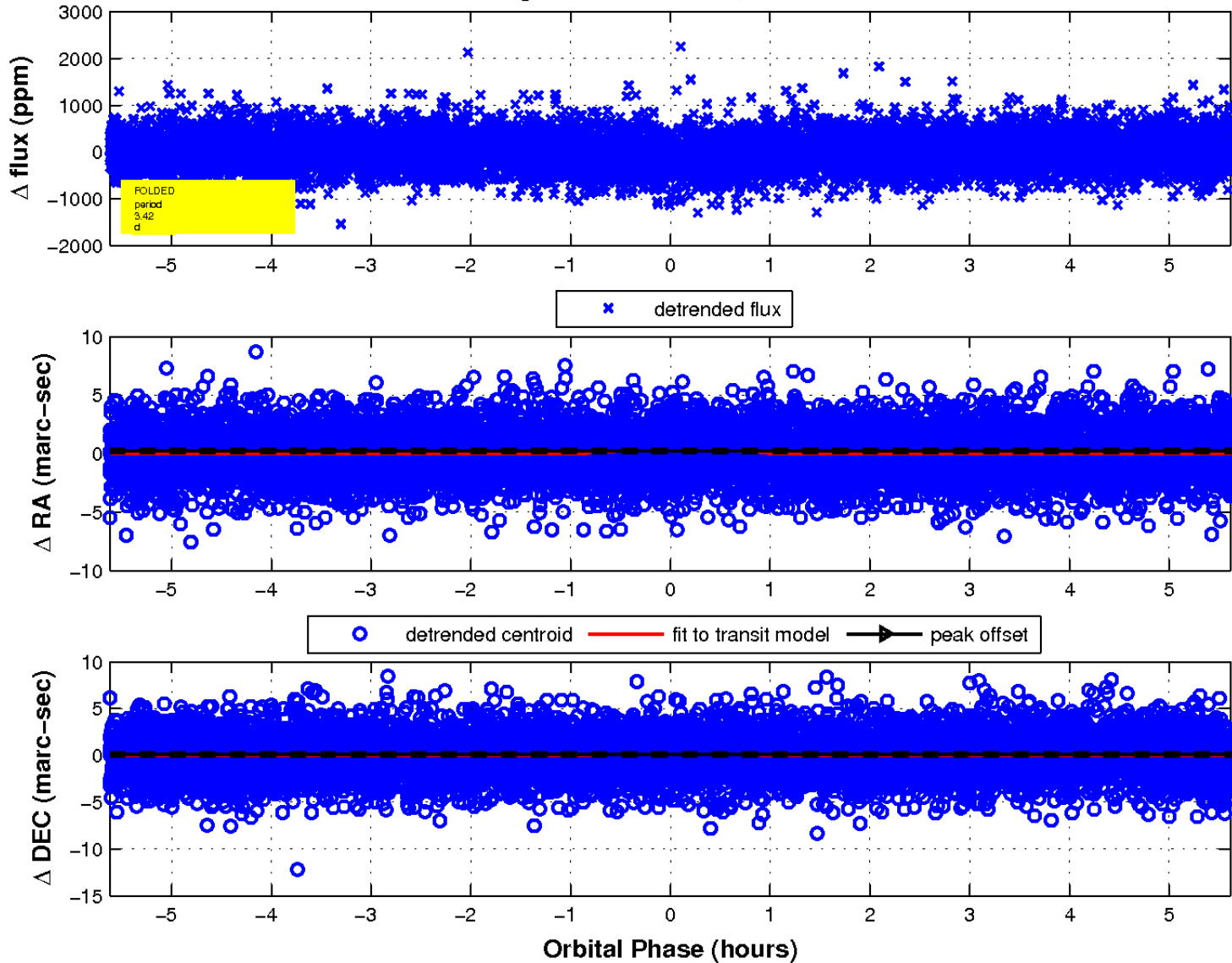
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

