

KIC 004951030

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})
004951030-01	OBS	No	0.666649	132.223892	0.0	7.496	8.7	0.0	1.58	7275	0.03	21497.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004951030-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_DIFFS

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

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

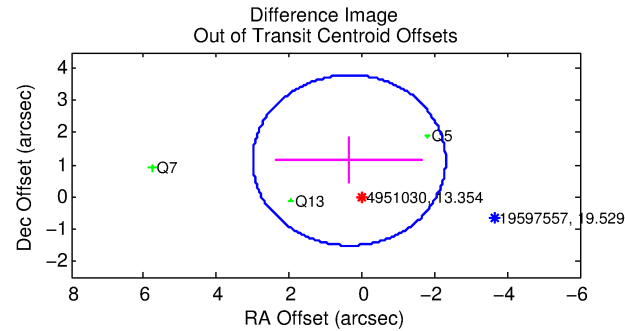
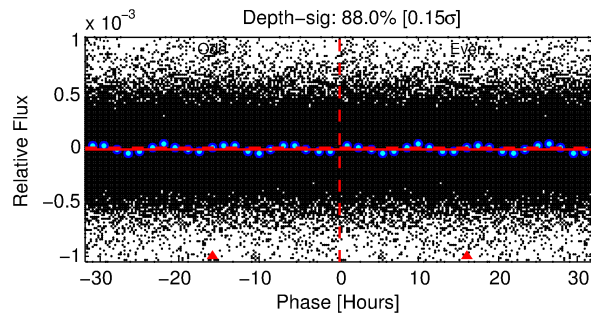
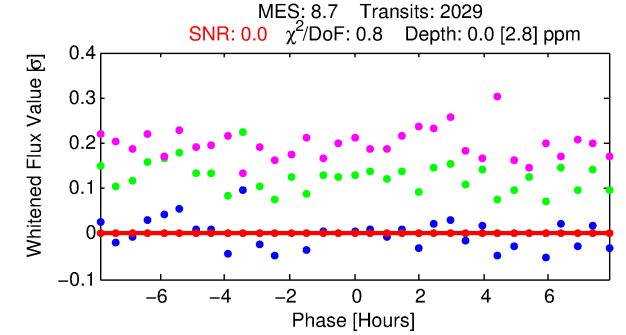
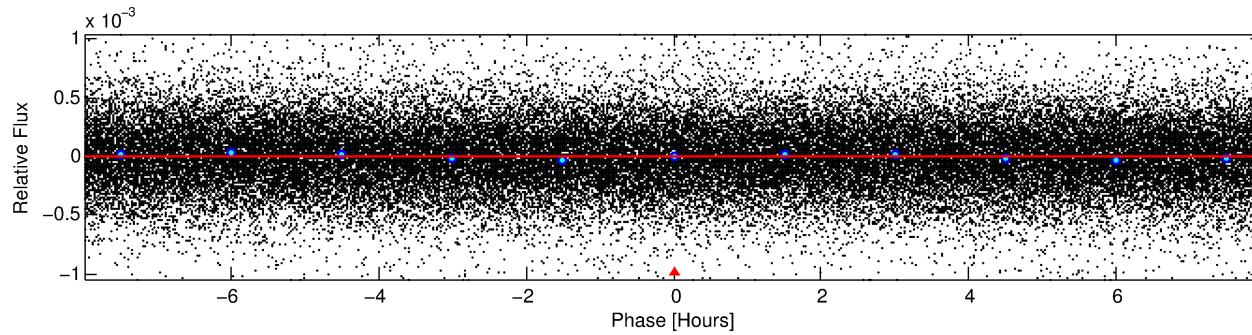
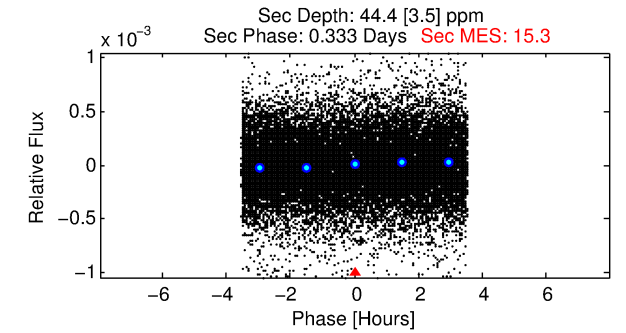
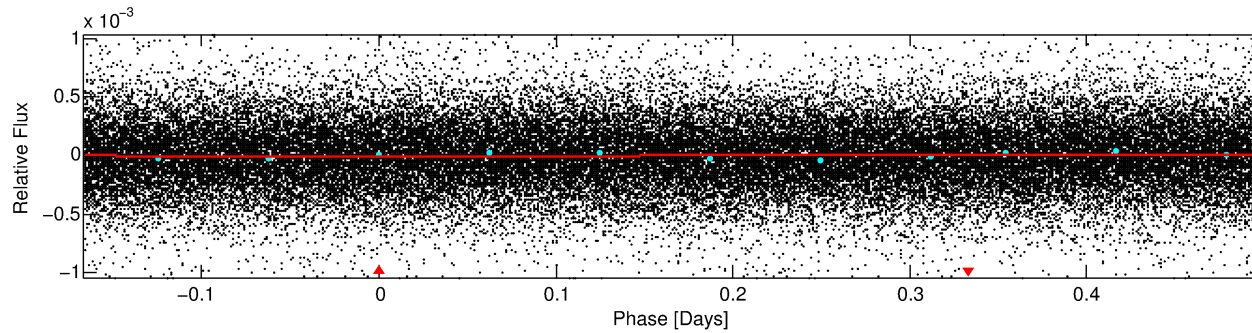
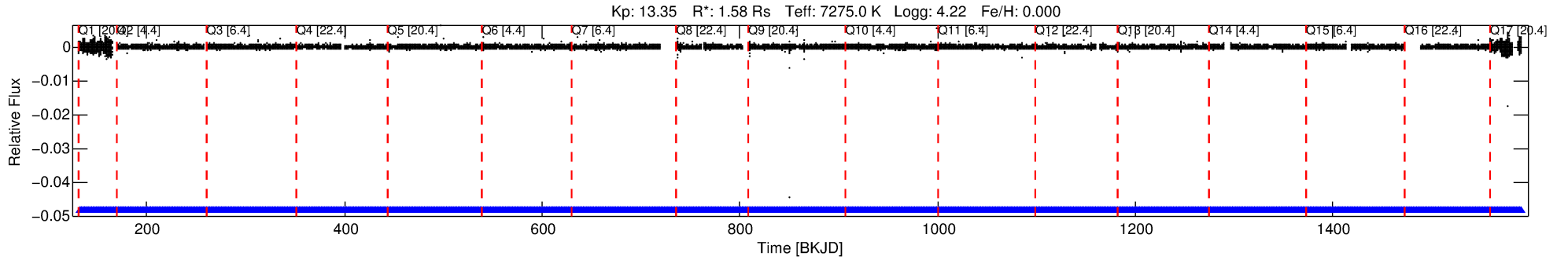
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004951030-01

No Significant Match Found

DV One-Page Summary

KIC: 4951030 Candidate: 1 of 1 Period: 0.667 d



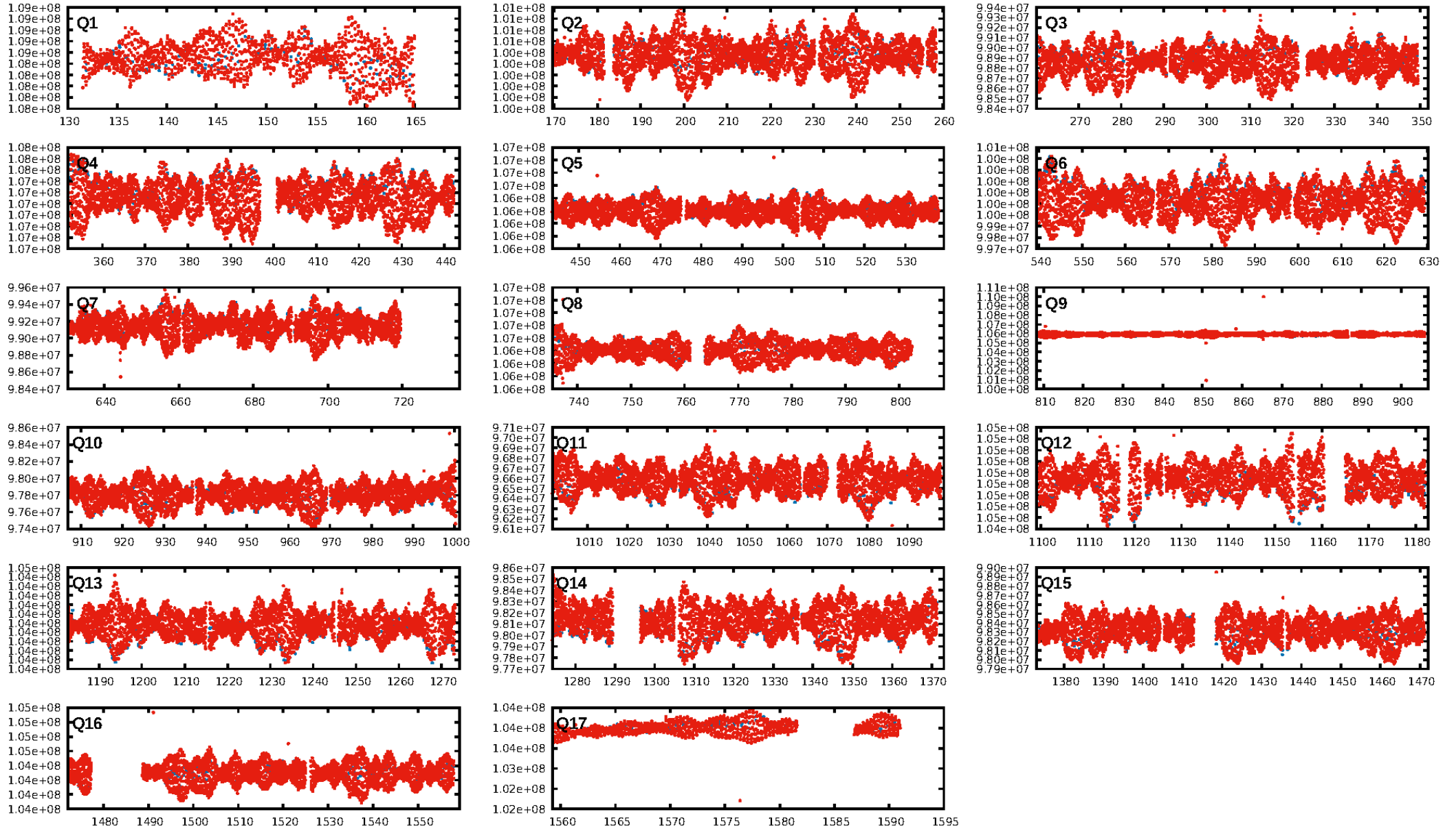
DV Fit Results:

Period = 0.66665 [0.00617] d
Epoch = 132.2239 [2.8080] BKJD
Rp/R* = 0.0002 [0.0624]
a/R* = 1.00 [18.01]
b = 0.30 [6012.36]
Seff = 21497.26 [9241.18]
Teq = 3088 [332] K
Rp = 0.03 [10.79] Re
a = 0.0171 [0.0047] AU
Ag = 6255.98 [3989687.07] [0.00σ]
Teffp = 42456 [6768921] K [0.01σ]

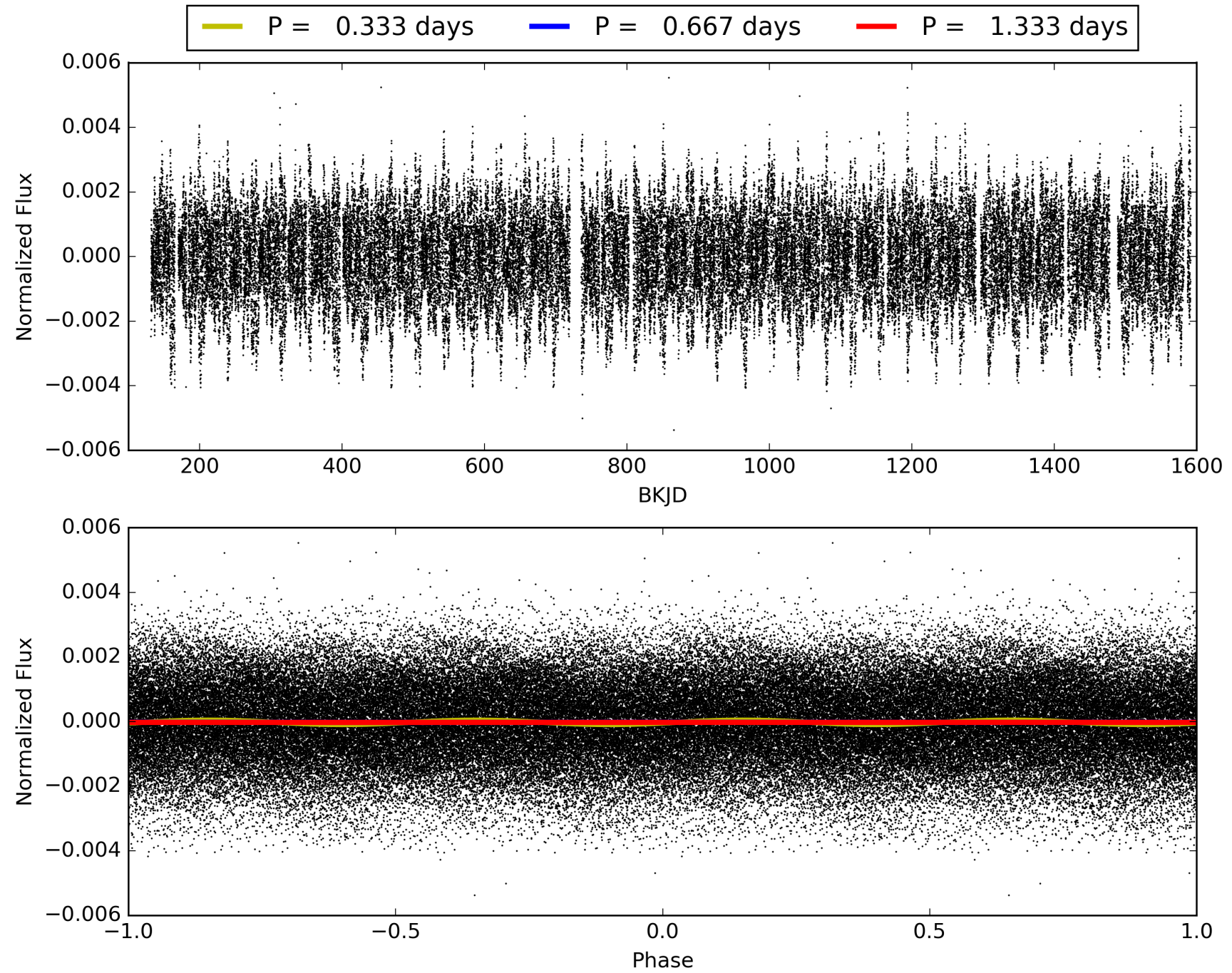
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1937/1937]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.187 arcsec [1.34σ]
KicOffset-rm: 1.182 arcsec [1.32σ]
OotOffset-st: 0/1/0/2 [3]
KicOffset-st: 0/1/0/2 [3]
DiffImageQuality-fgm: 0.00 [0/3]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 004951030-01, PDC Light Curves

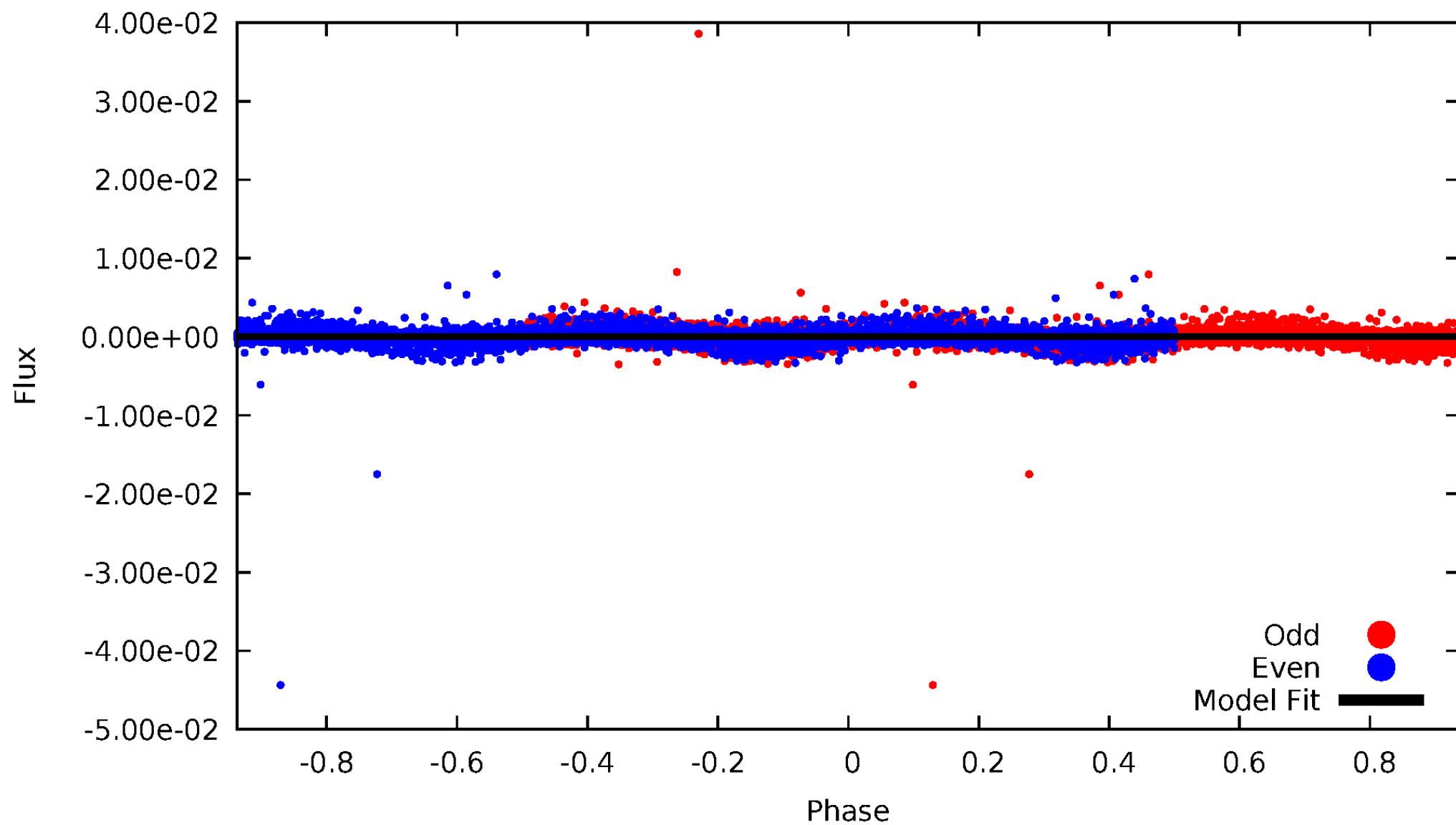


TCE 004951030-01



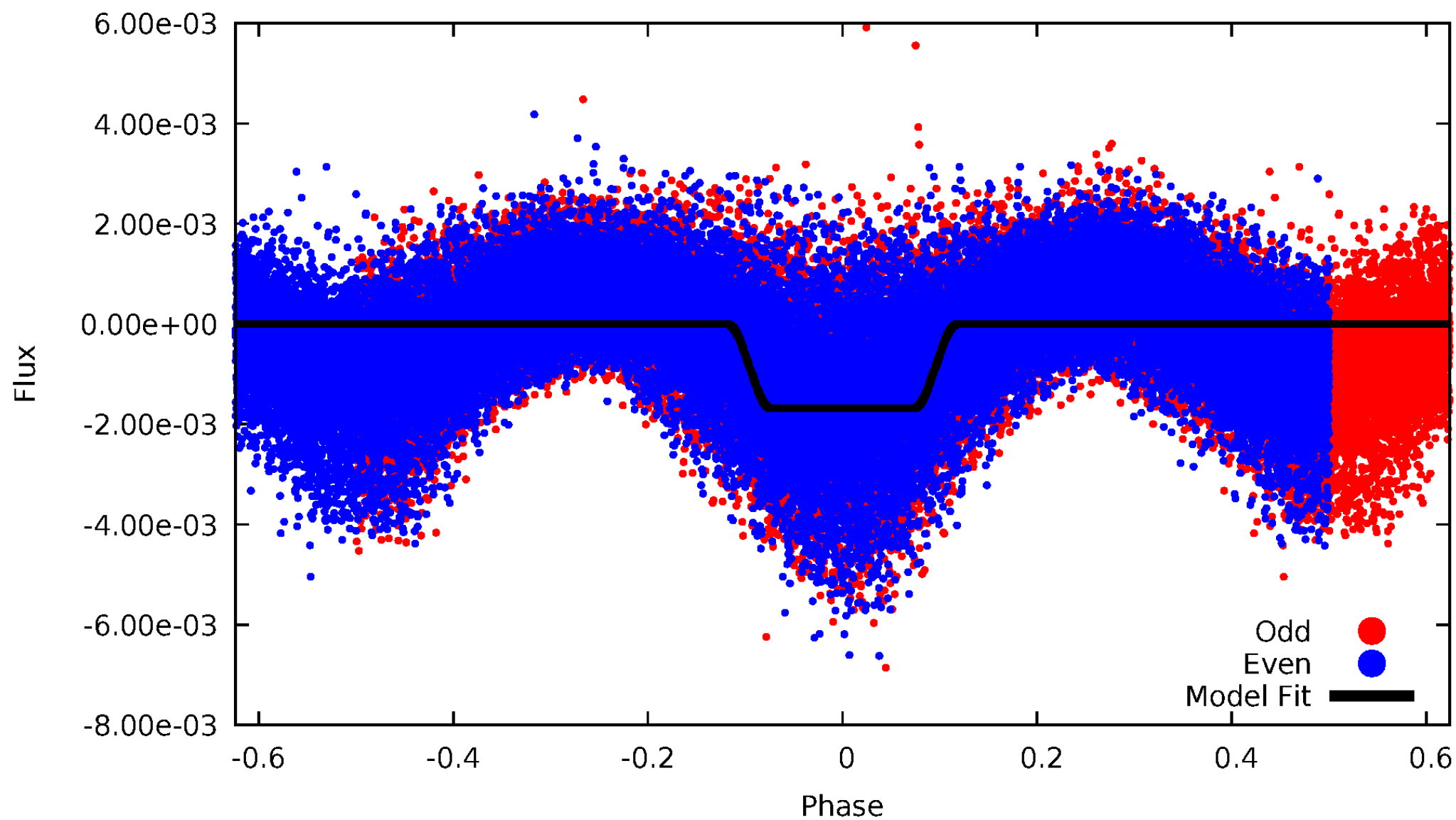
DV Odd/Even

TCE 004951030-01



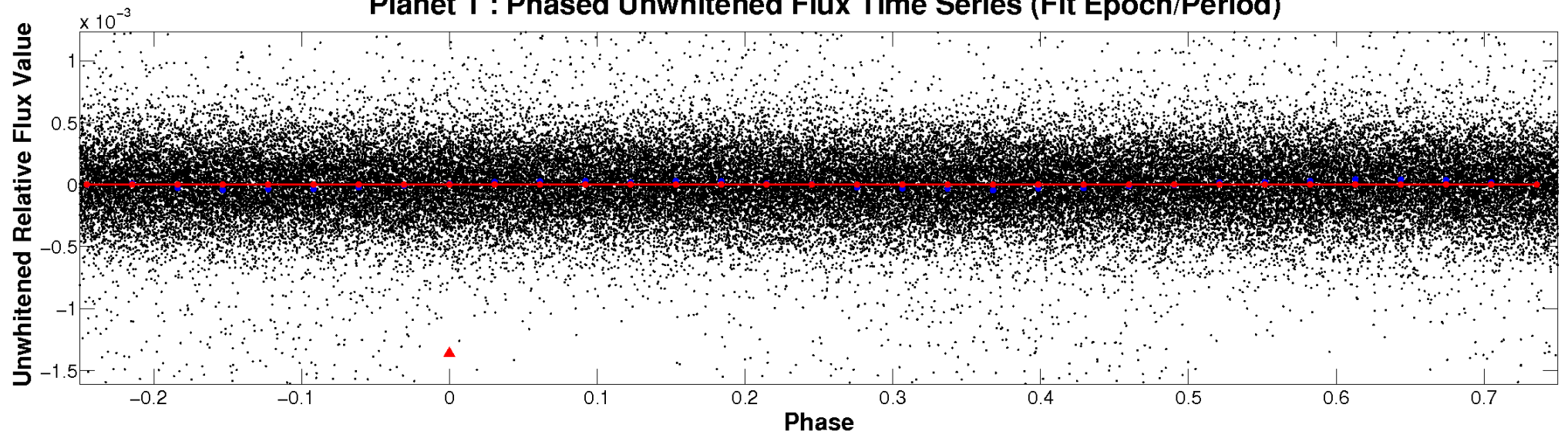
ALT Odd/Even

TCE 004951030-01

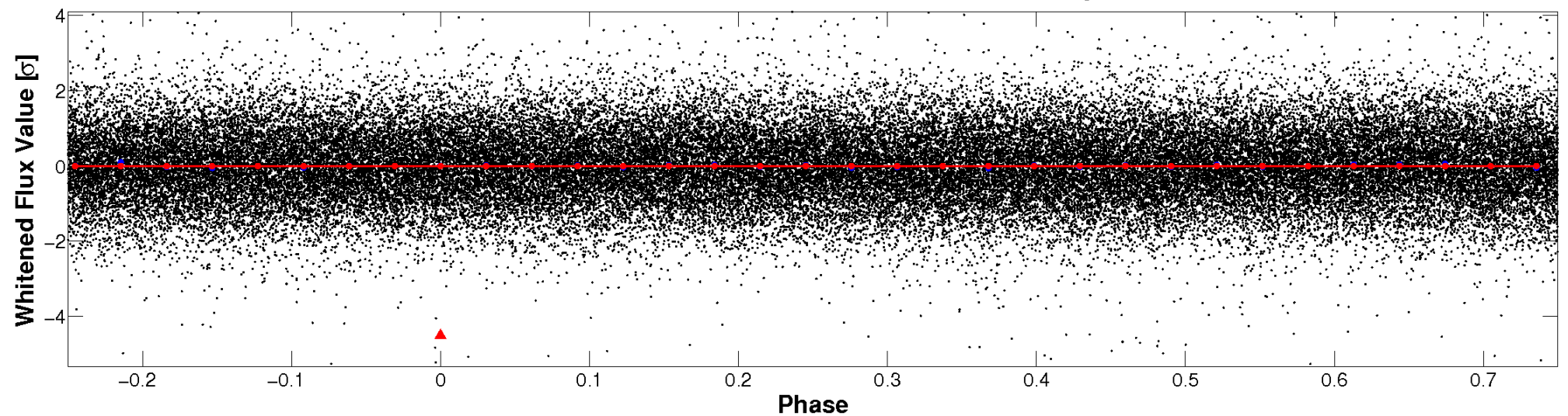


Non-Whitened Vs. Whitened Light Curve

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

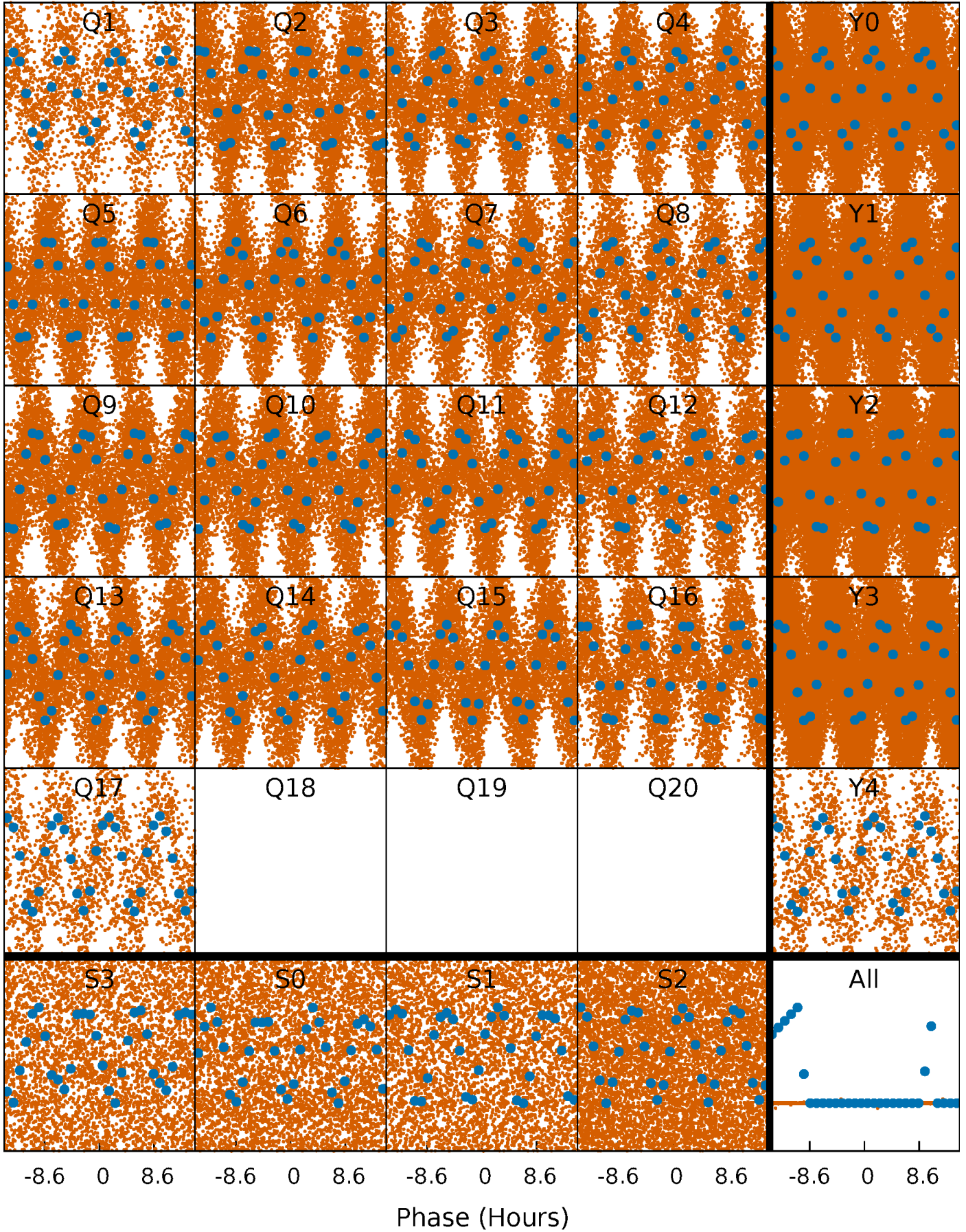


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



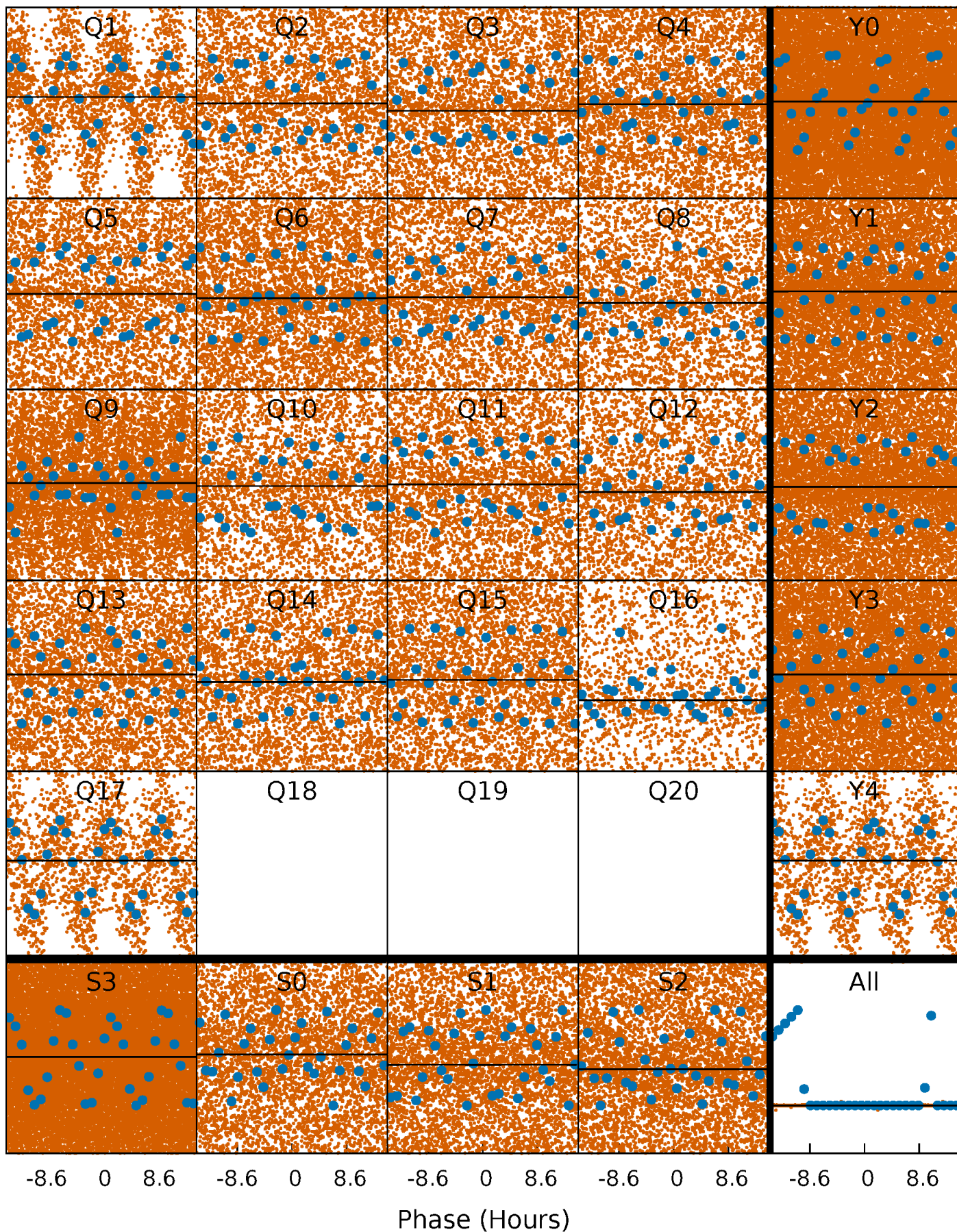
PDC Quarter-Phased Transit Curves

TCE 004951030-01 P= 0.666649 Days $T_0=132.223892$ (BKJD)



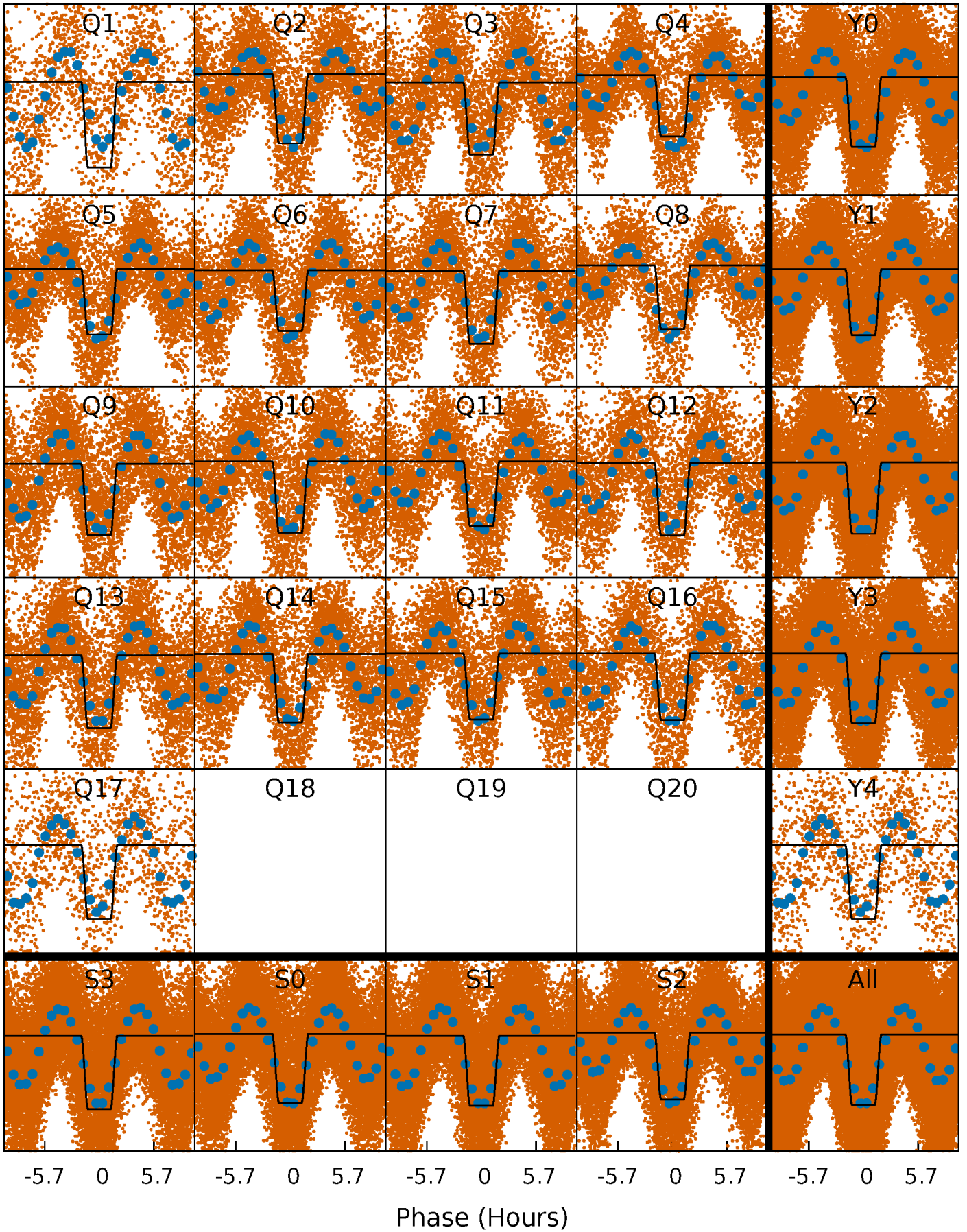
DV Quarter-Phased Transit Curves

TCE 004951030-01 P= 0.666649 Days $T_0=132.223892$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

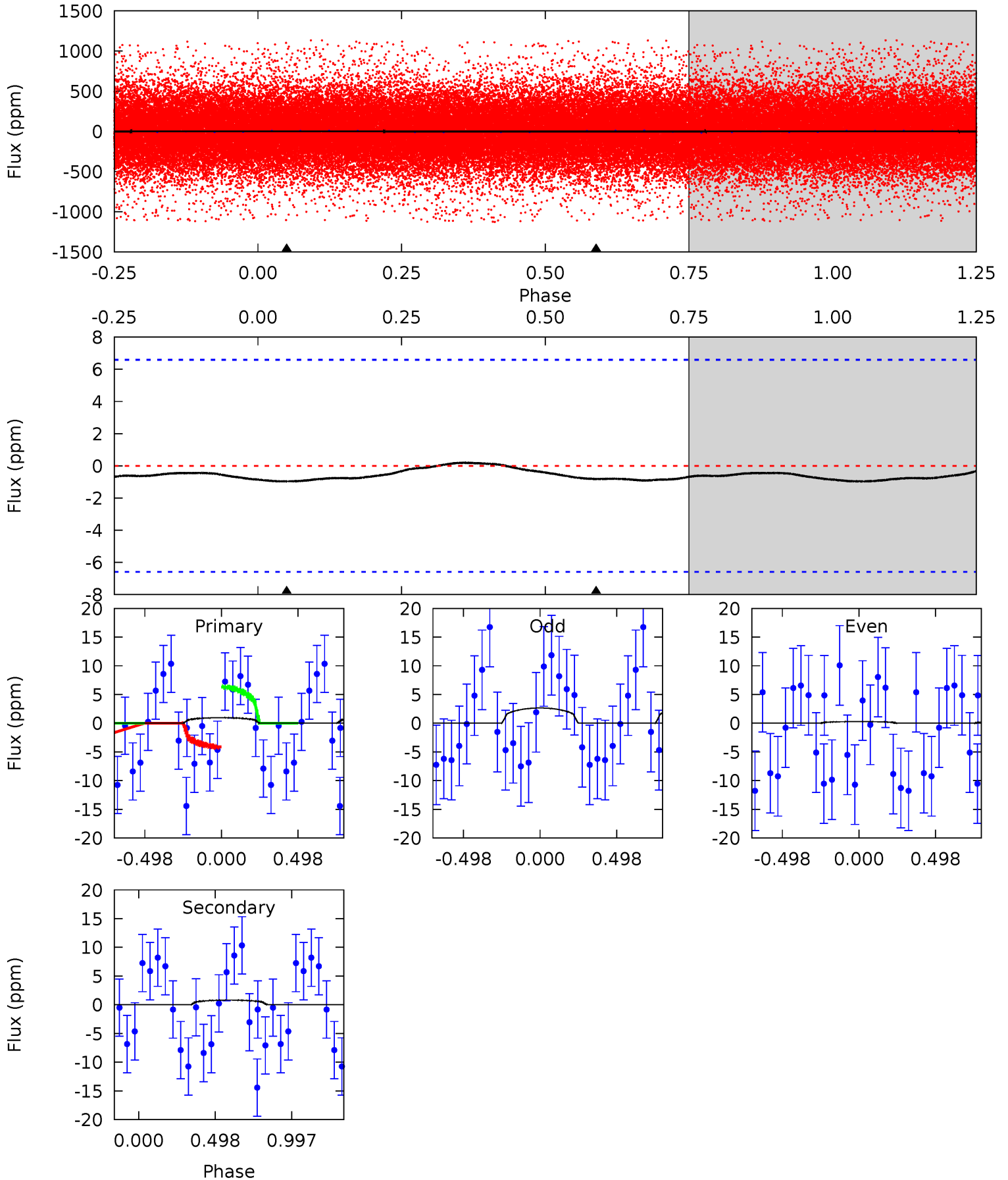
TCE 004951030-01 P= 0.666487 Days $T_0=132.145357$ (BKJD)



DV Model-Shift Uniqueness Test

004951030-01, P = 0.666649 Days, E = 130.890594 Days

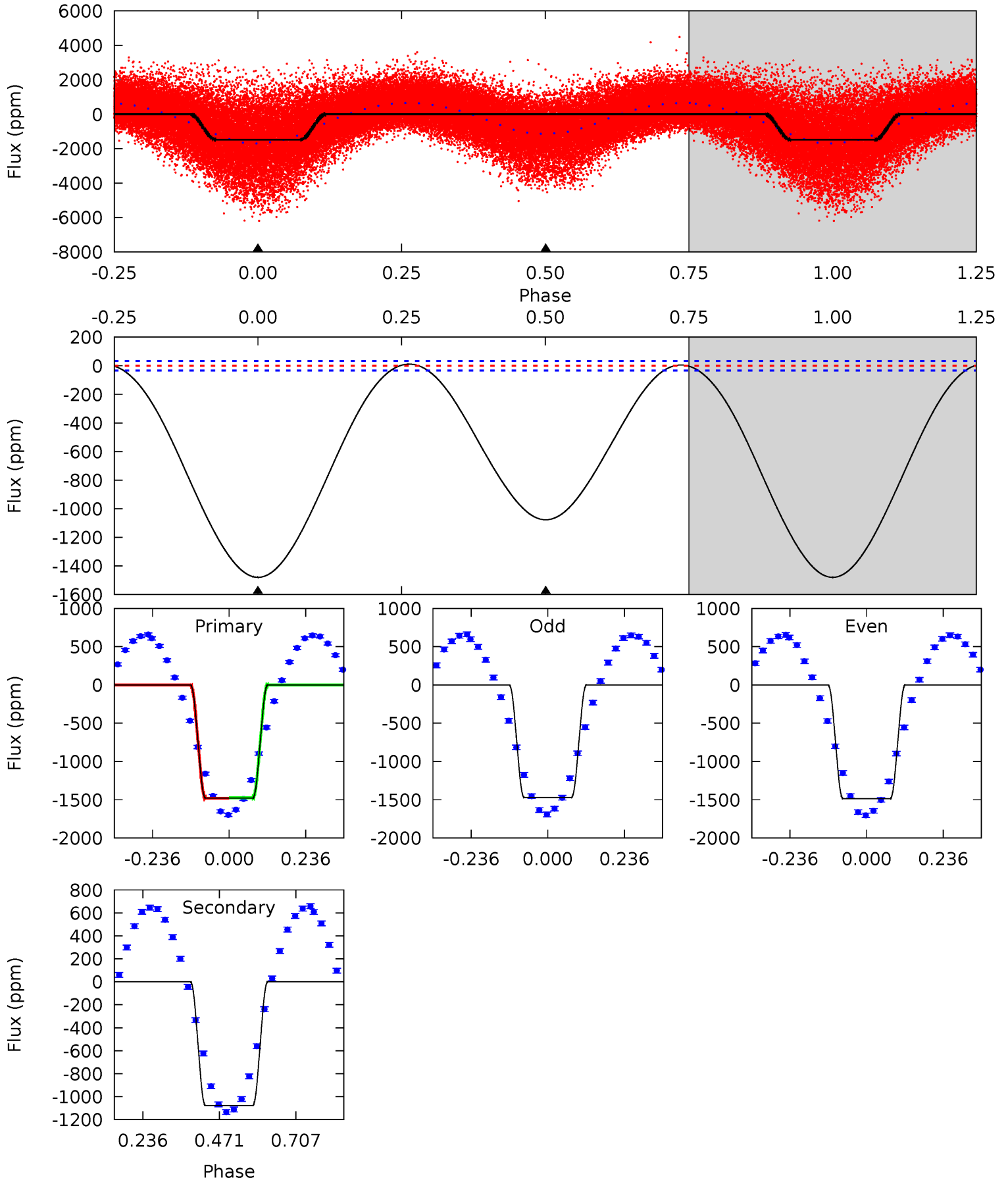
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.62	0.52	0	0	4.22	0.68	0.15	0.62	0.62	0.52	0.52	0.77	0.04	0.17	0.69



Alt Model-Shift Uniqueness Test

004951030-01, P = 0.666487 Days, E = 131.478870 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
191.8	139.6	0	0	4.38	1.19	2.45	191.8	191.8	139.6	139.6	1.05	1.06	0.01	0.33



Stellar Parameters For KIC 004951030

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7275^{+200}_{-343}	$4.216^{+0.087}_{-0.203}$	$0.000^{+0.200}_{-0.350}$	$1.585^{+0.542}_{-0.271}$	$1.504^{+0.233}_{-0.211}$	$0.532^{+0.259}_{-0.278}$
	+3%/-5%	+2%/-5%	+inf%/-inf%	+34%/-17%	+15%/-14%	+49%/-52%
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 004951030-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1 ± 2	$7.72^{+8.28}_{-5.45}$	4358^{+304}_{-237}	-3868^{+202}_{-197}	$0.001^{+0.018}_{-0.002}$
Alt.	-1077 ± 8	$11.17^{+9.88}_{-7.39}$	4374^{+368}_{-268}	4945^{+4672}_{-1773}	$1.343^{+10.974}_{-0.959}$

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 $A_{obs} \gg 1.0$

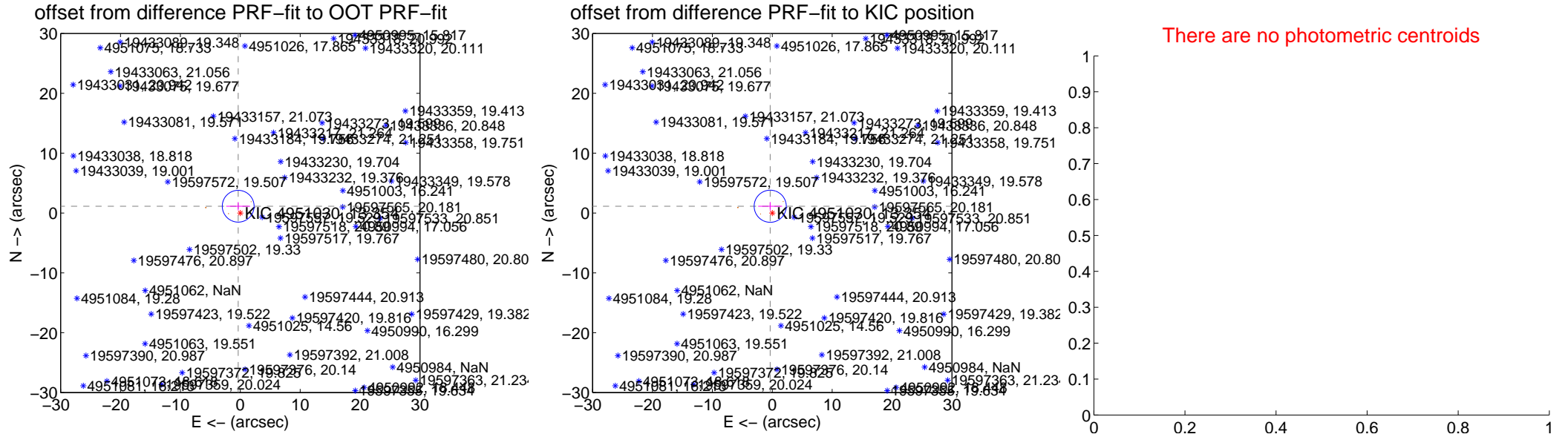
DV Centroid Data

Supplemental centroid analysis for 004951030-01. Kepler magnitude: 13.35. Transit SNR 0.02

There are 0 quarters with good PRF difference image offsets

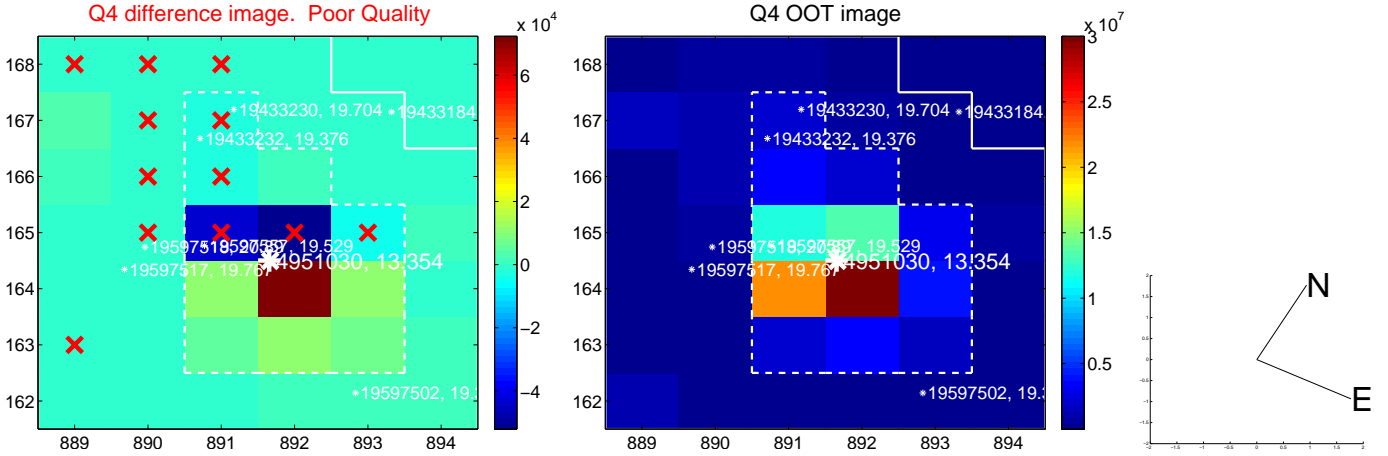
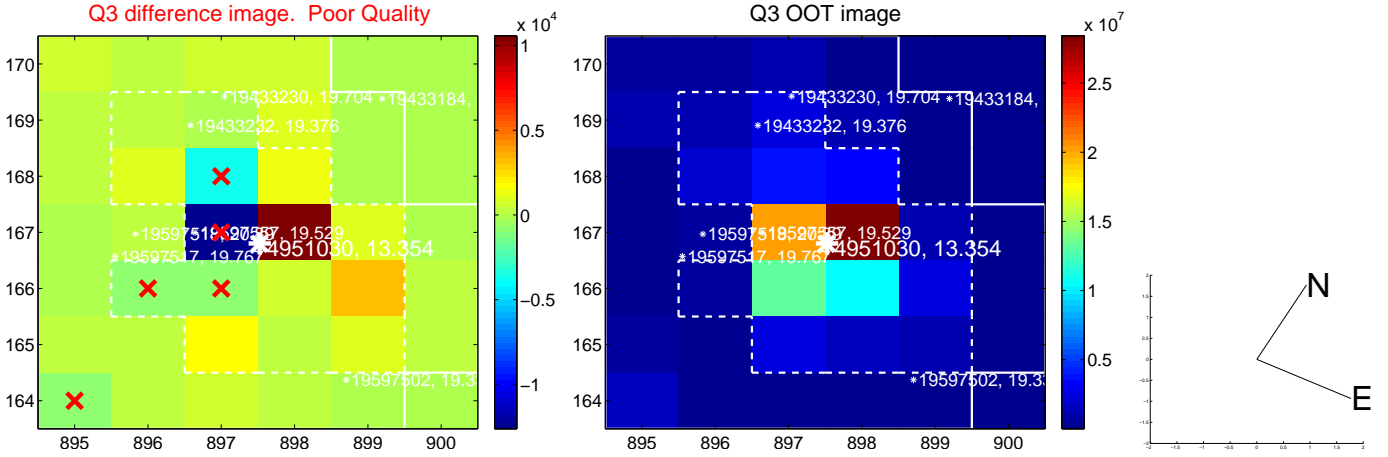
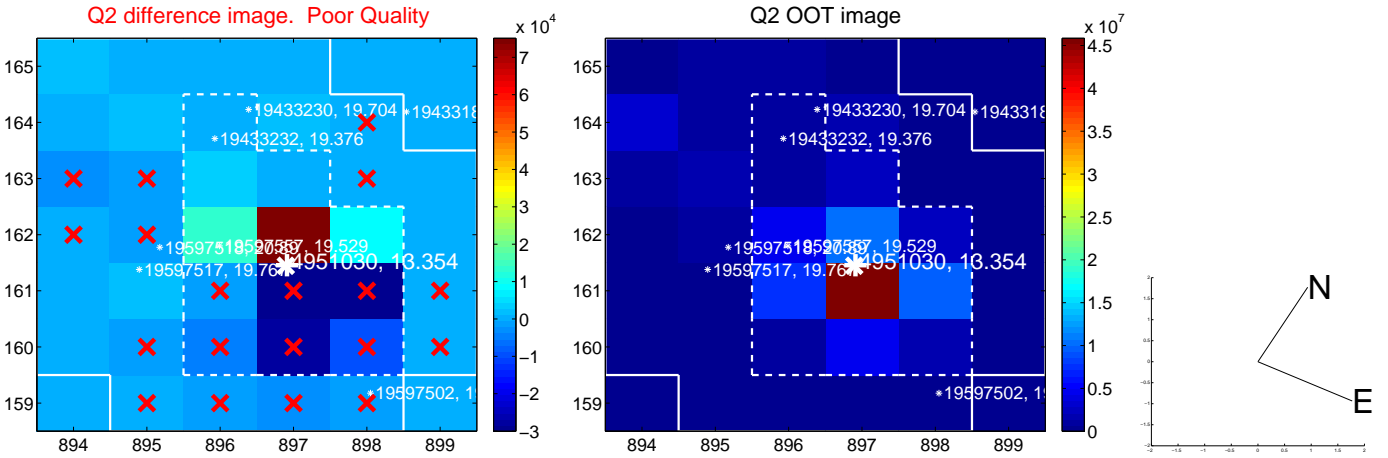
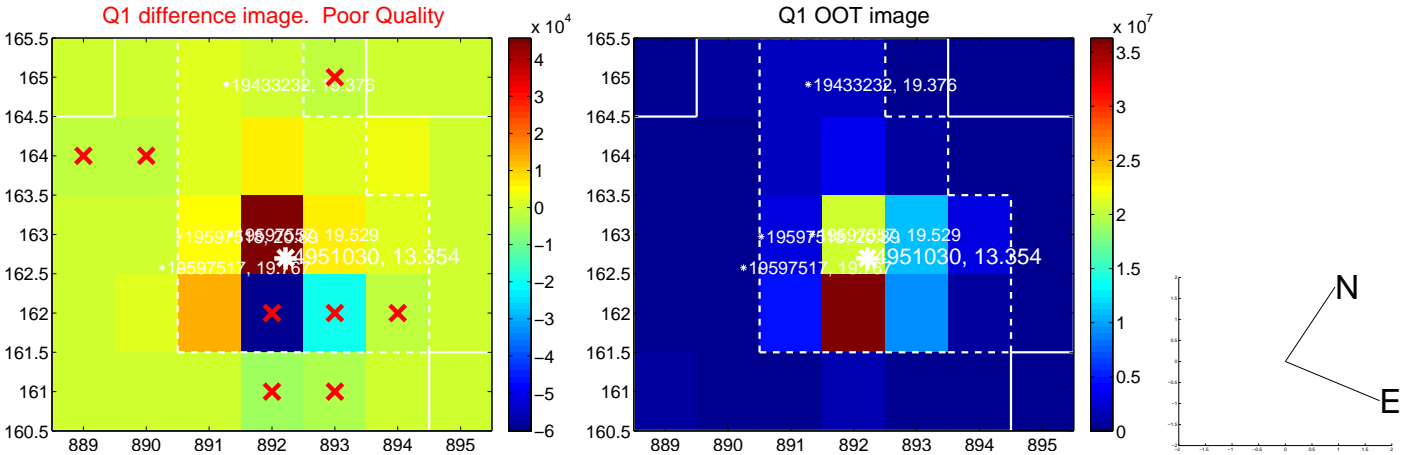
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.187 ± 0.885	1.34	0.350 ± 2.002	1.135 ± 0.691
PRF-fit source offset from KIC position	1.182 ± 0.894	1.32	0.341 ± 2.002	1.131 ± 0.713
photometric centroid source offset	—	—	—	—

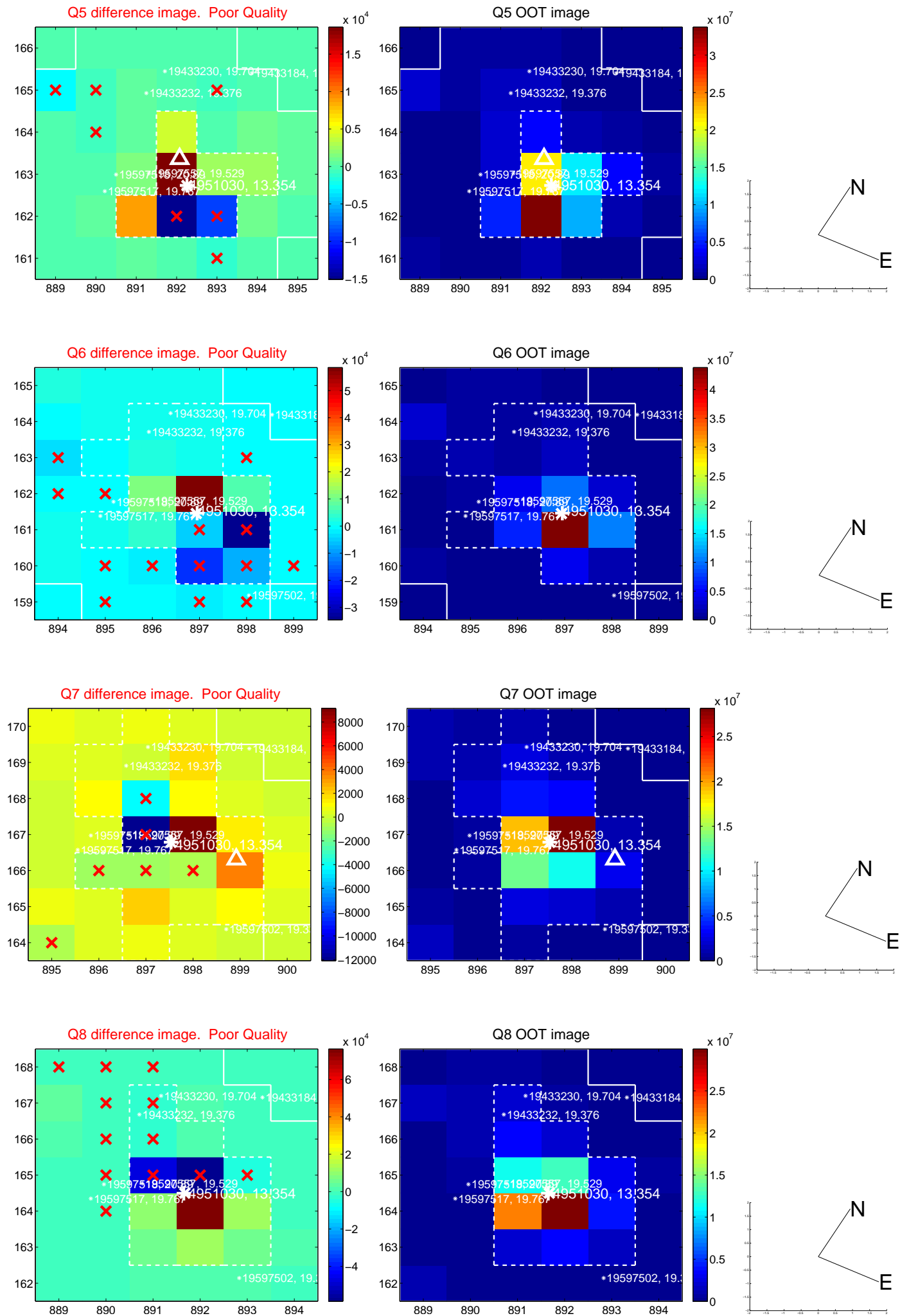


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

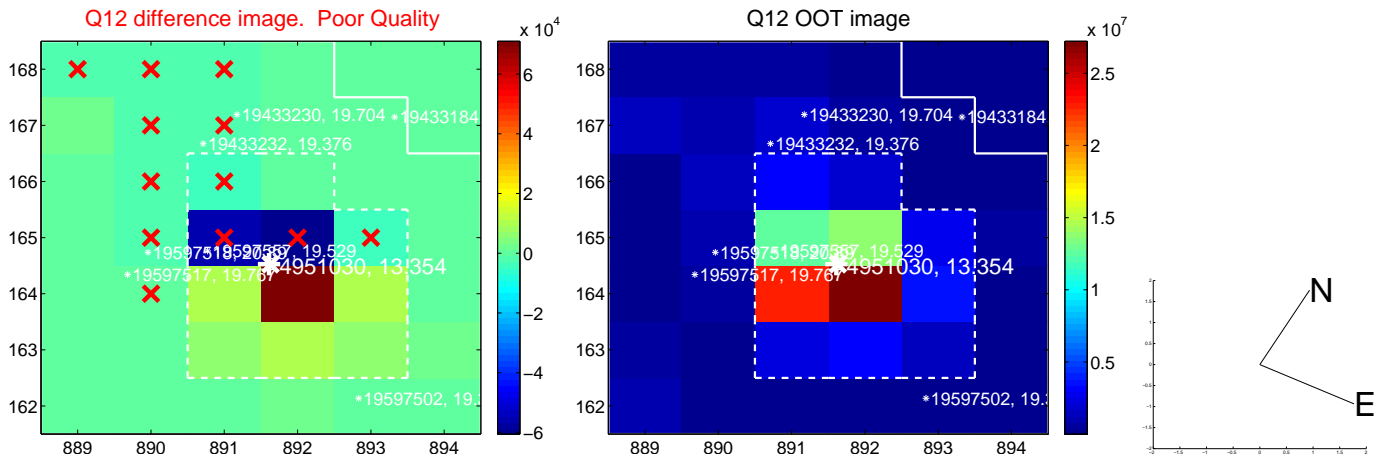
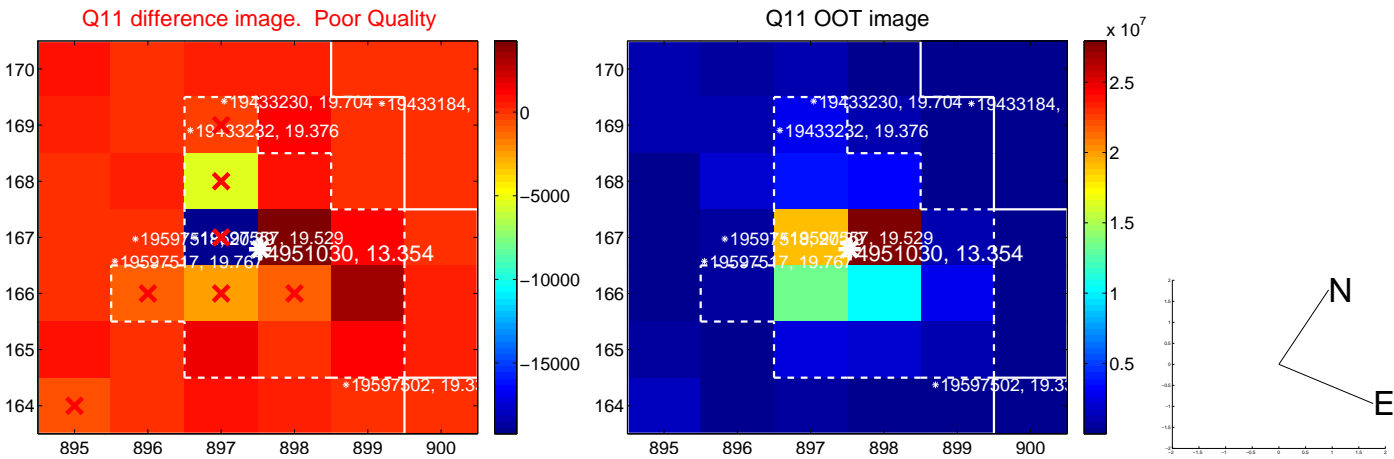
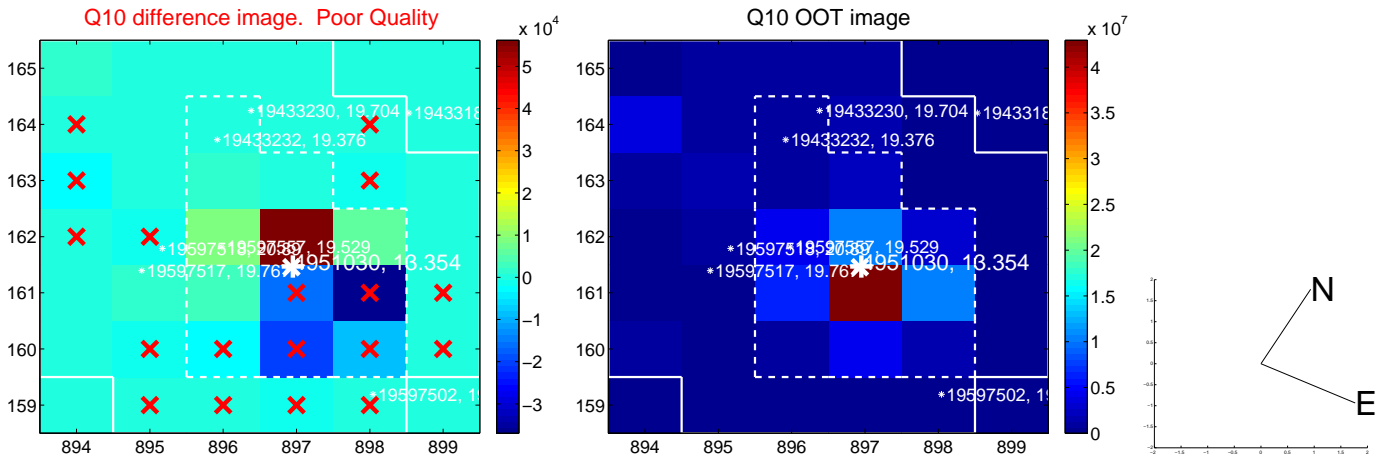
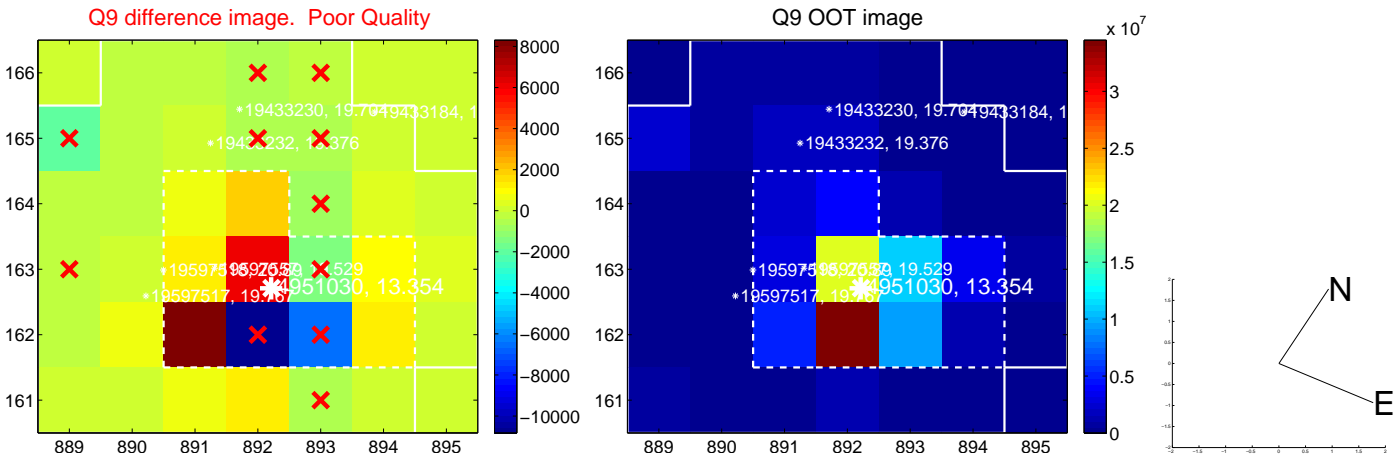
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



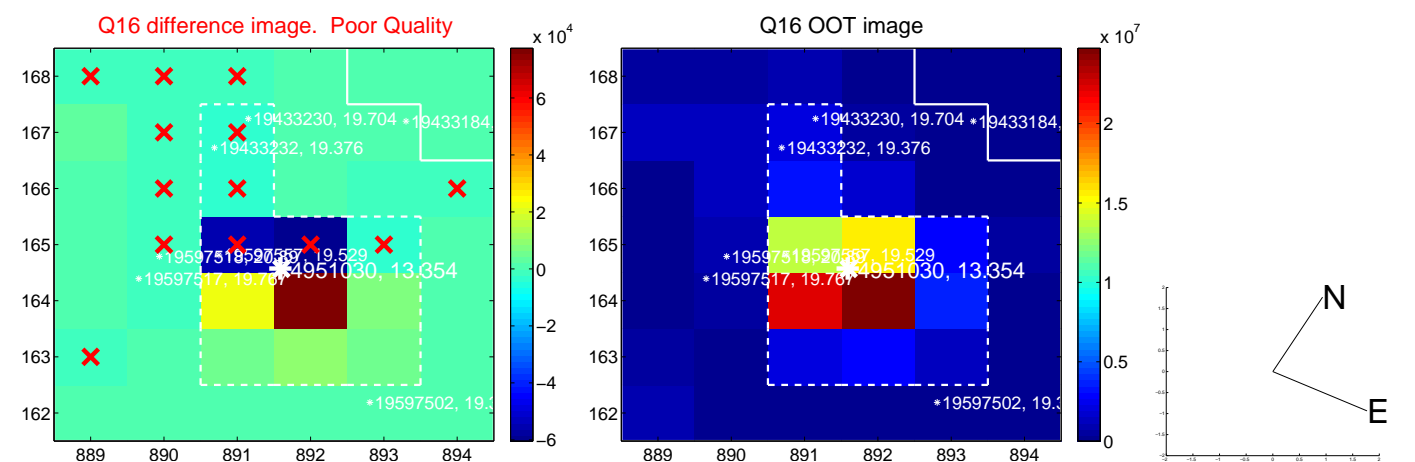
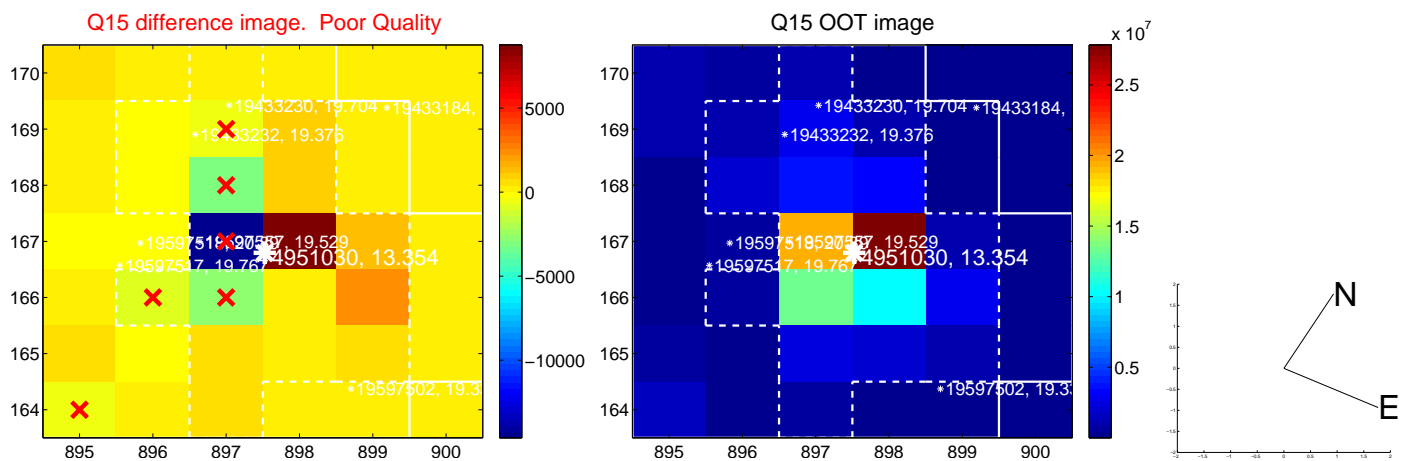
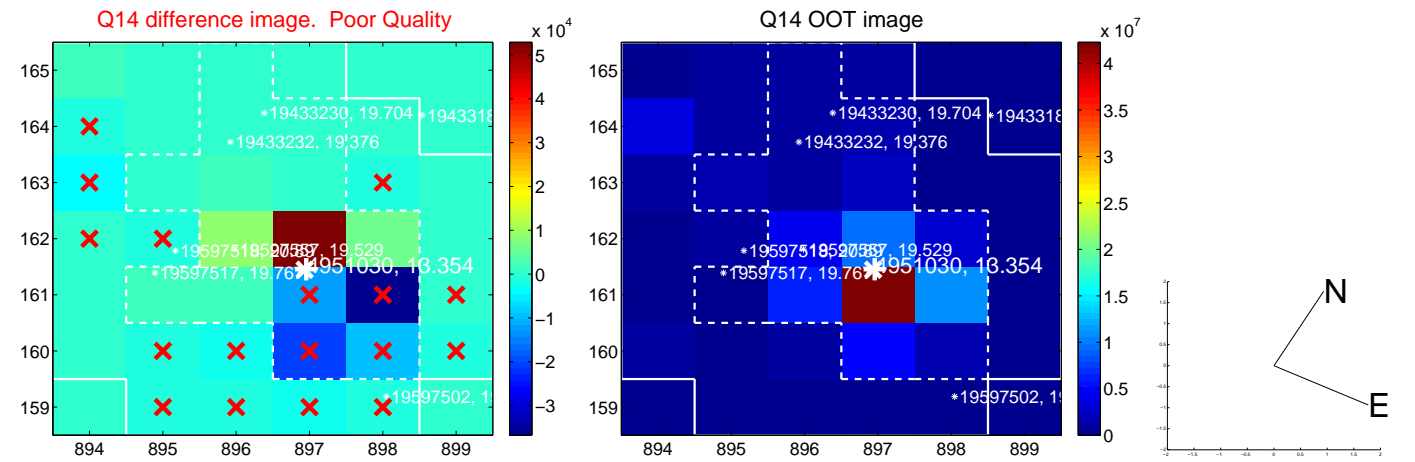
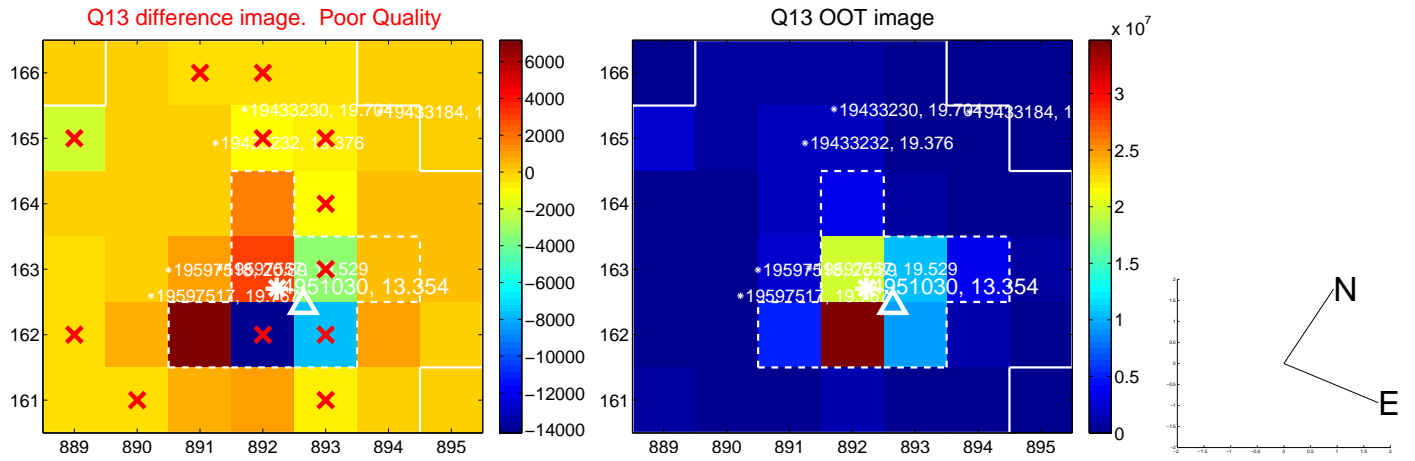
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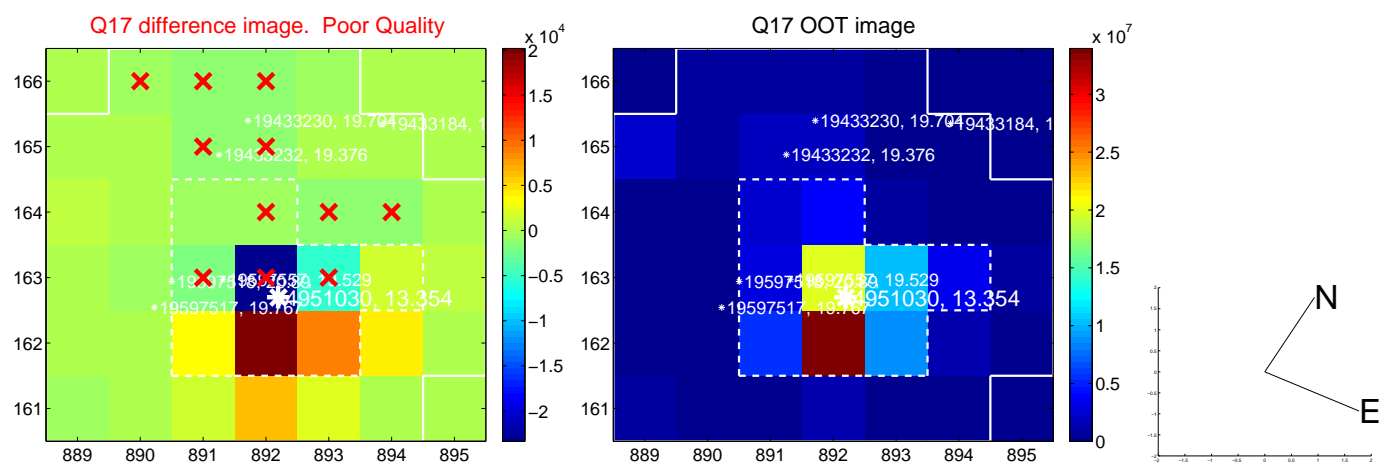
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folded centroid time series figure for this object.

UKIRT Image

Declination

