

KIC 010226083

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})
010226083-01	OBS	No	0.940983	131.929505	30.3	7.745	9.3	12.3	2.22	7282	1.27	25205.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010226083-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

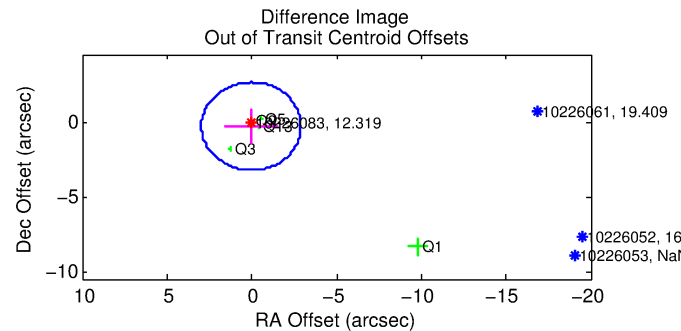
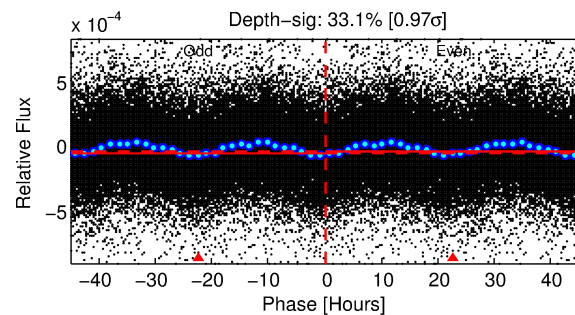
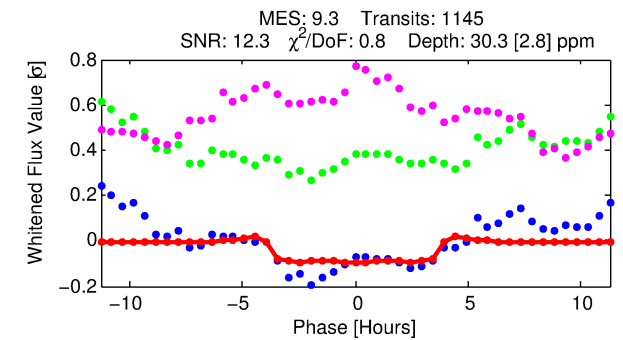
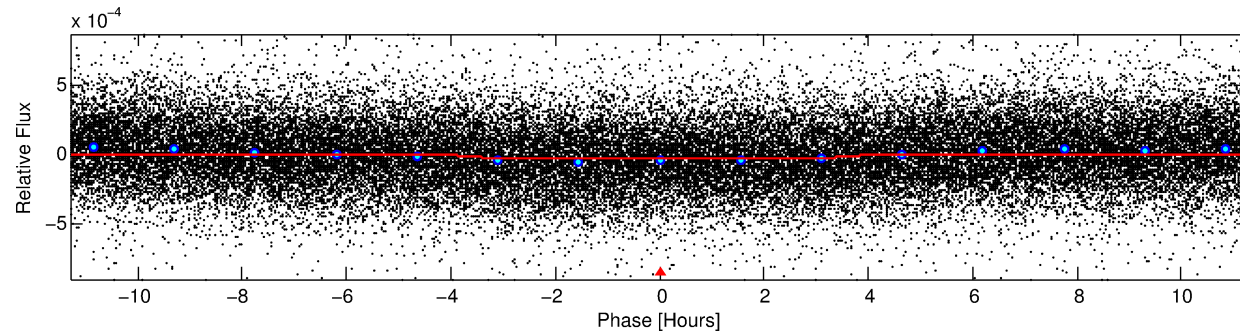
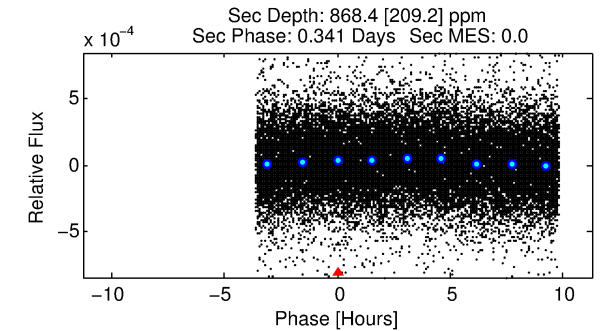
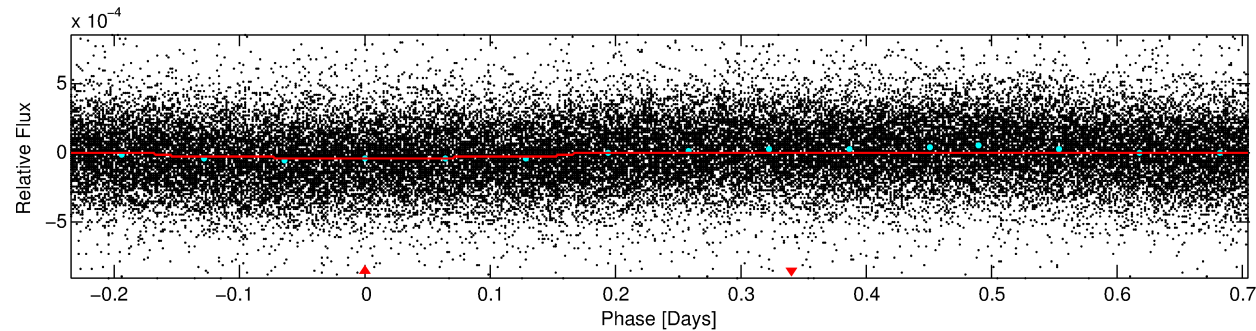
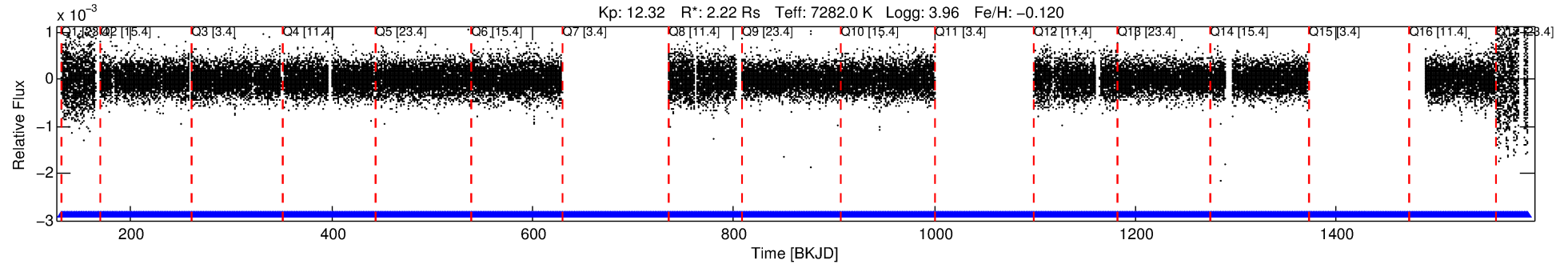
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010226083-01

No Significant Match Found

DV One-Page Summary

KIC: 10226083 Candidate: 1 of 1 Period: 0.941 d



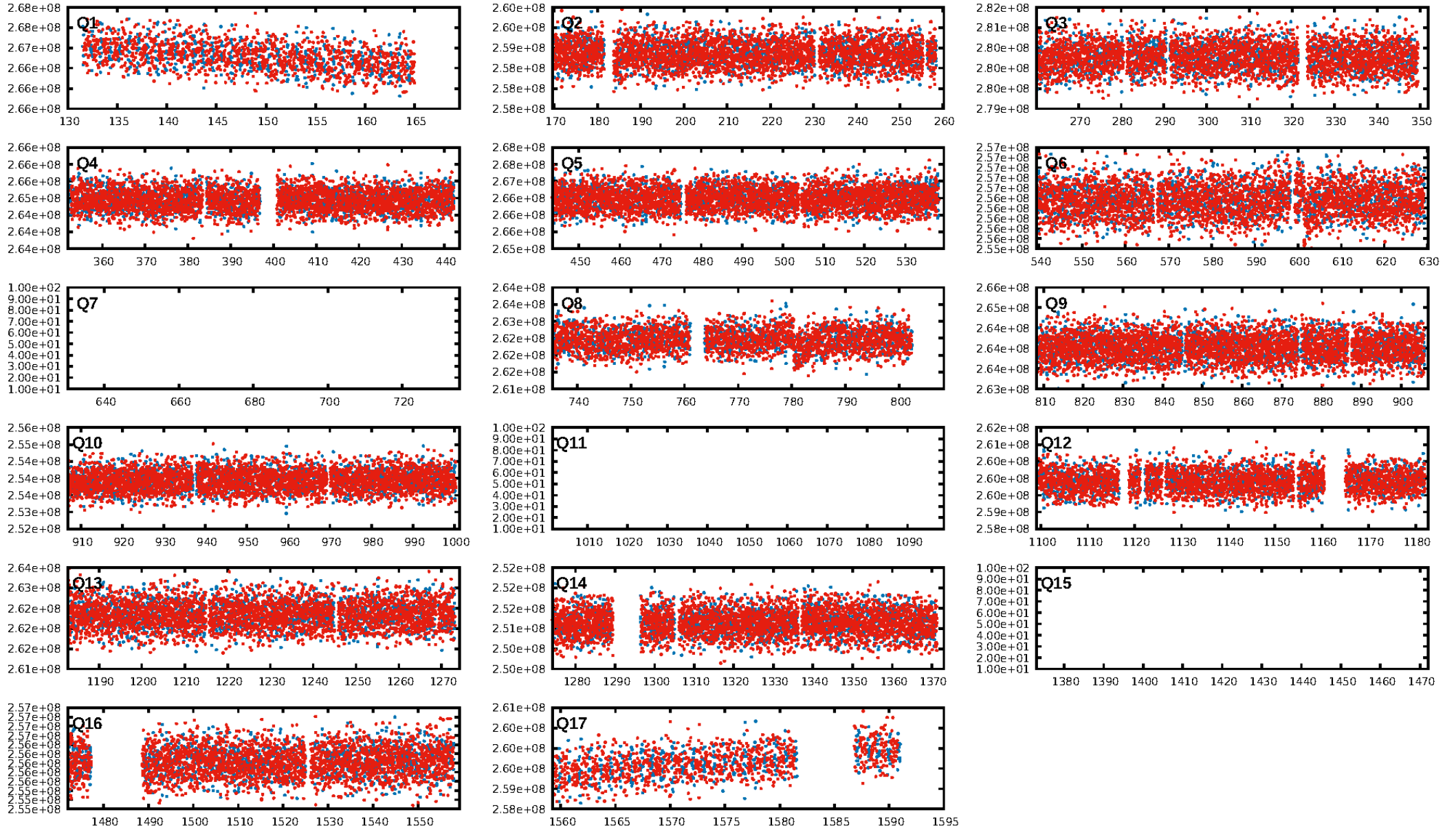
DV Fit Results:

Period = 0.94098 [0.00001] d
Epoch = 131.9295 [0.0047] BKJD
Rp/R* = 0.0053 [0.0040]
a/R* = 1.10 [0.84]
b = 0.57 [5.33]
Seff = 25205.85 [12412.93]
Teq = 3213 [396] K
Rp = 1.27 [1.06] Re
a = 0.0222 [0.0067] AU
Ag = 144.41 [231.23] [0.62σ]
Teffp = 17220 [6652] K [2.10σ]

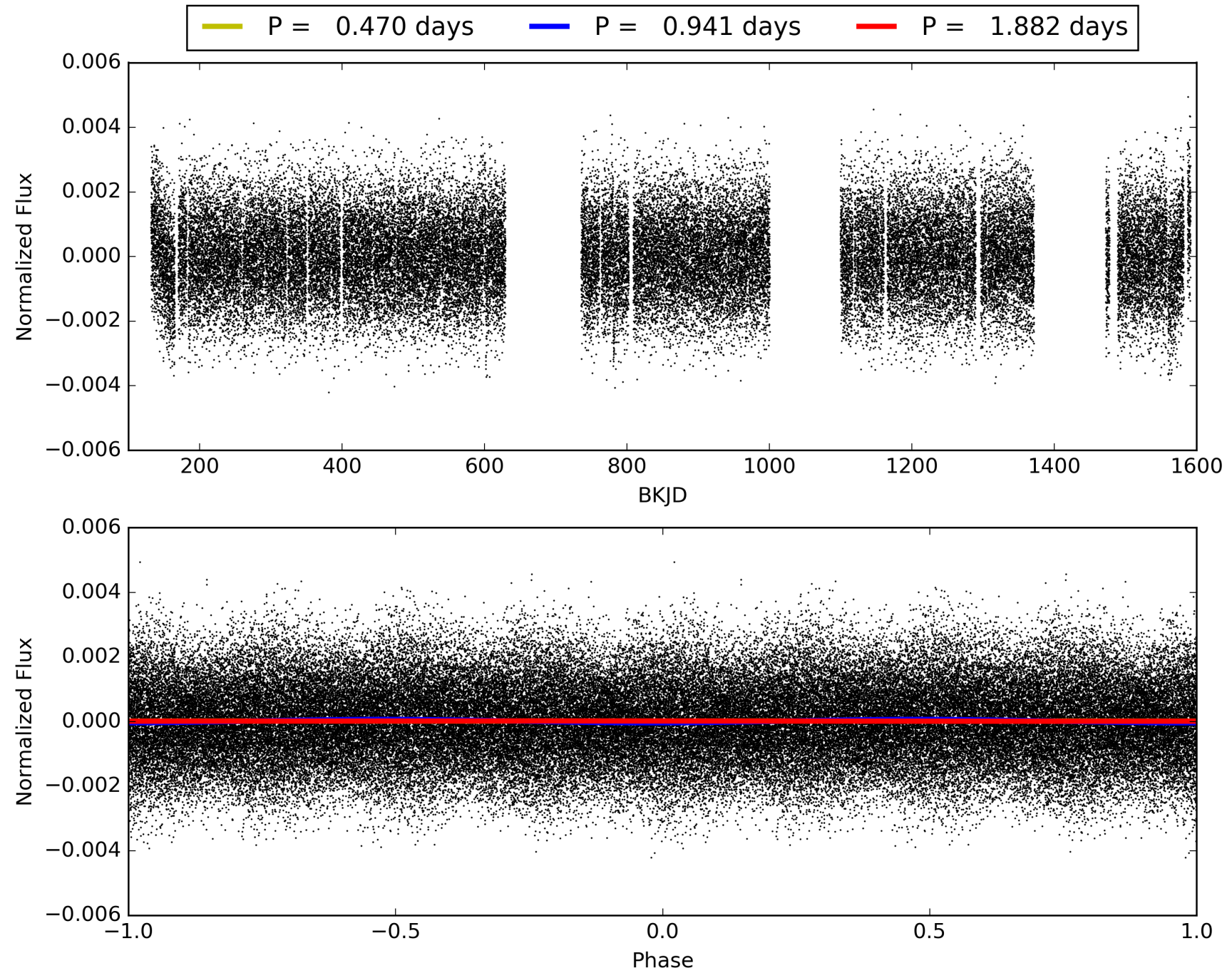
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1080/1080]
GhostDiagnostic-chr: 4.128
Centroid-sig: 5.2%
Centroid-so: 0.689 arcsec [1.77σ]
OotOffset-rm: 0.311 arcsec [0.32σ]
KicOffset-rm: 0.168 arcsec [0.25σ]
OotOffset-st: 0/1/0/4 [5]
KicOffset-st: 0/1/0/4 [5]
DiffImageQuality-fgm: 0.60 [3/5]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010226083-01, PDC Light Curves

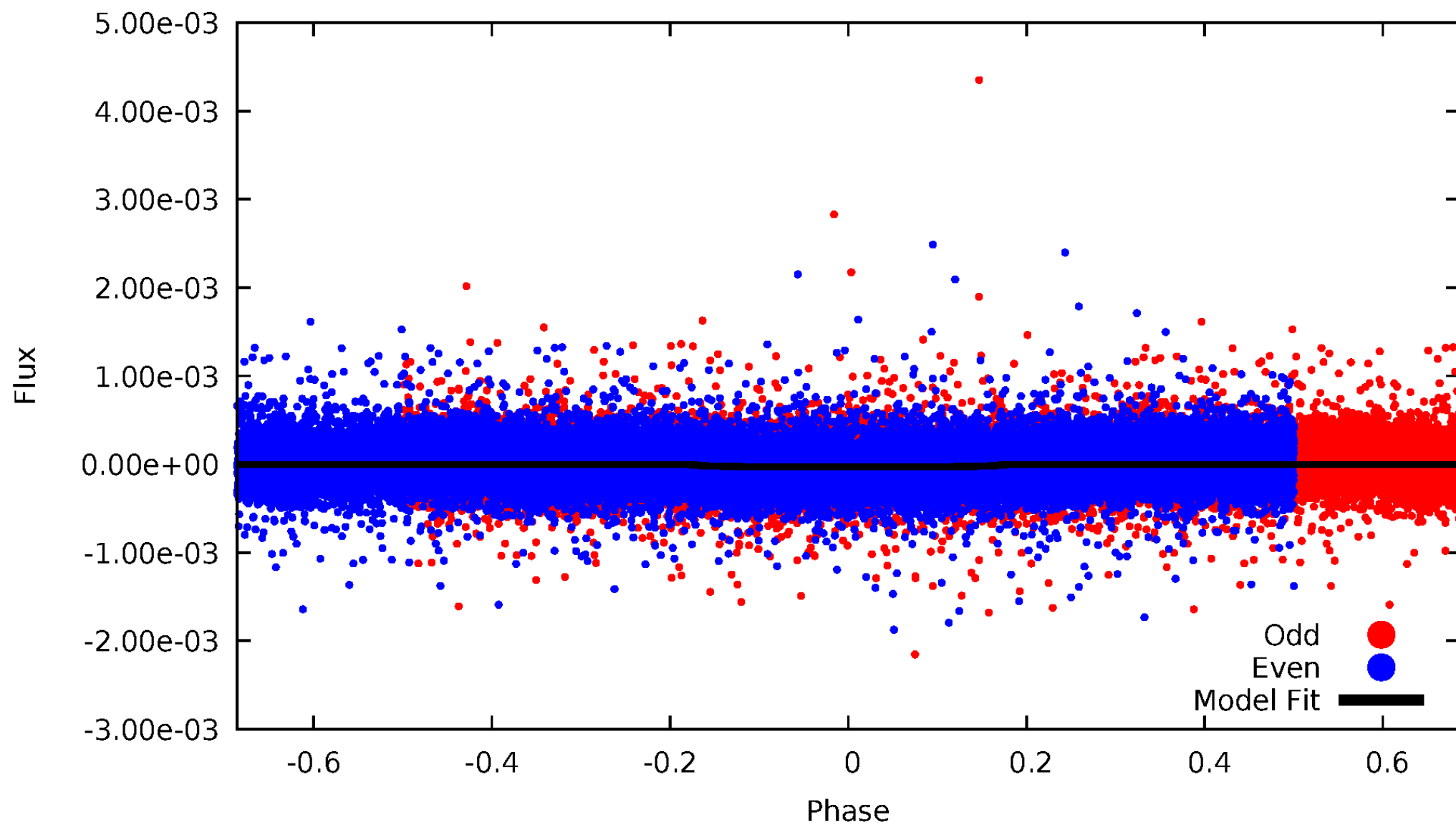


TCE 010226083-01



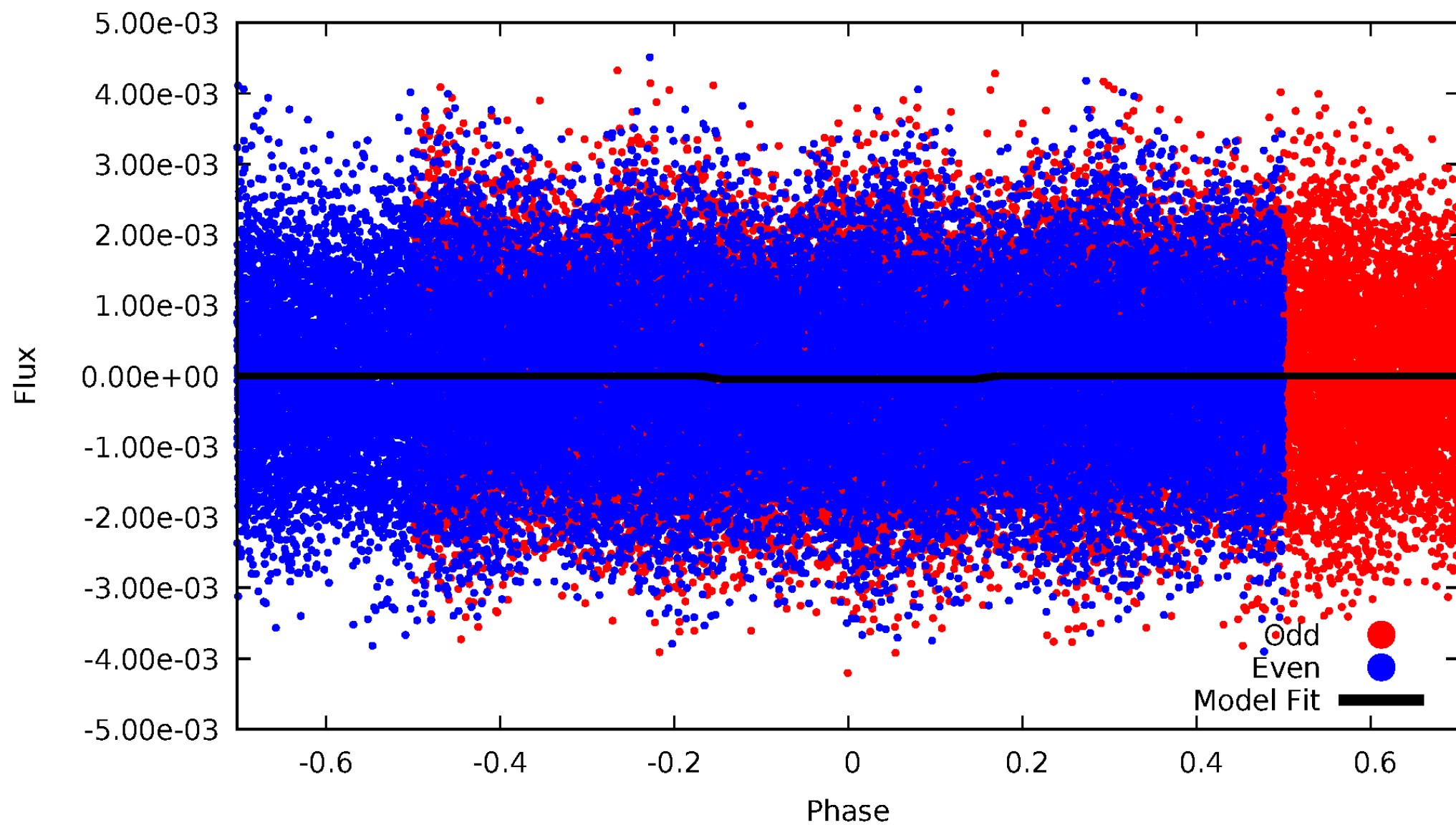
DV Odd/Even

TCE 010226083-01



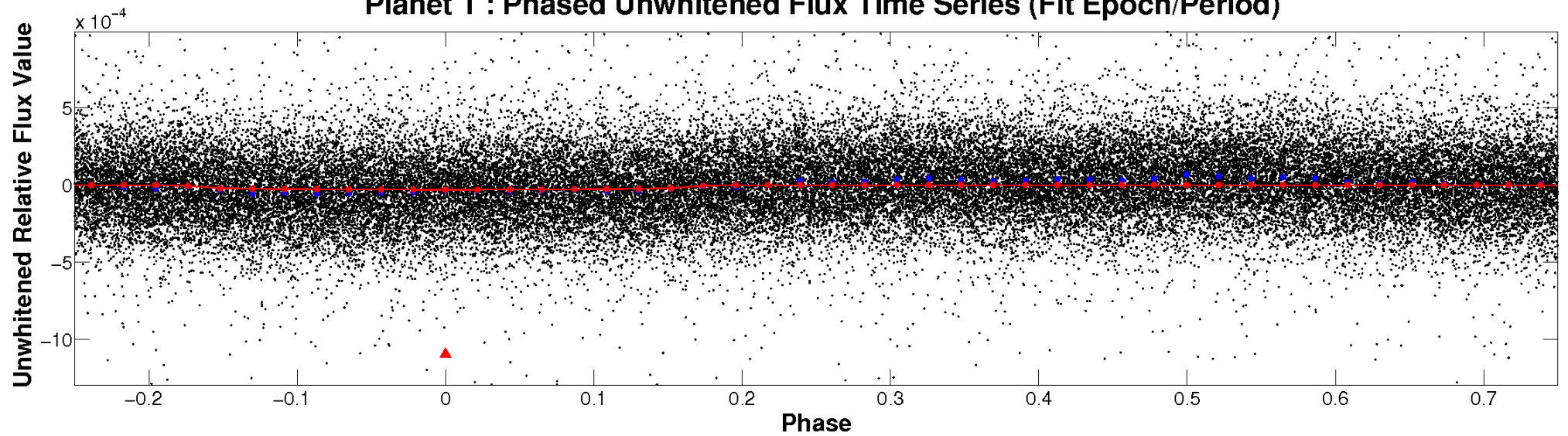
ALT Odd/Even

TCE 010226083-01

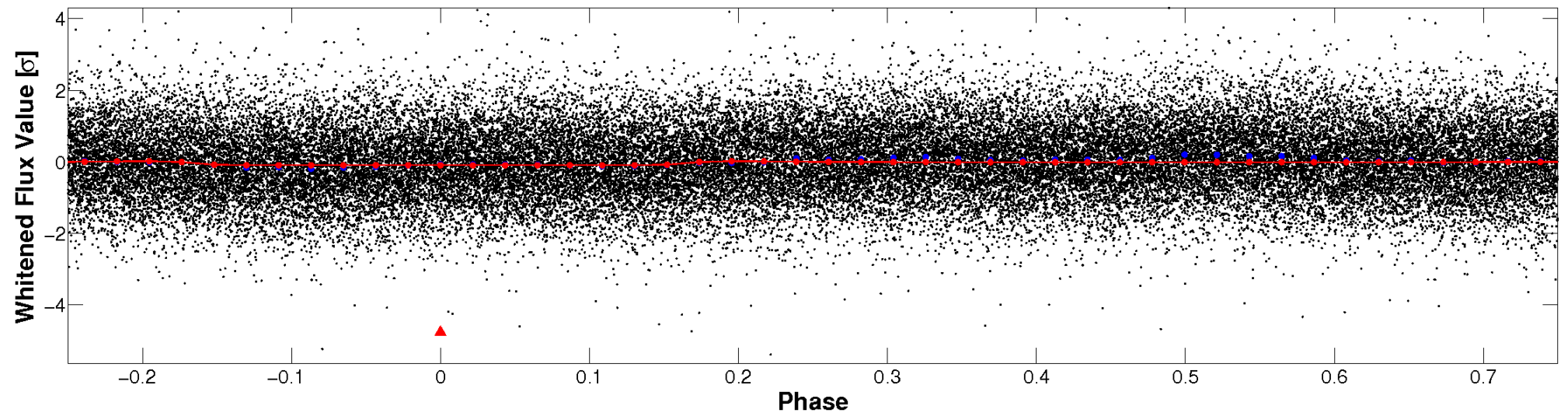


Non-Whitened Vs. Whitened Light Curve

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

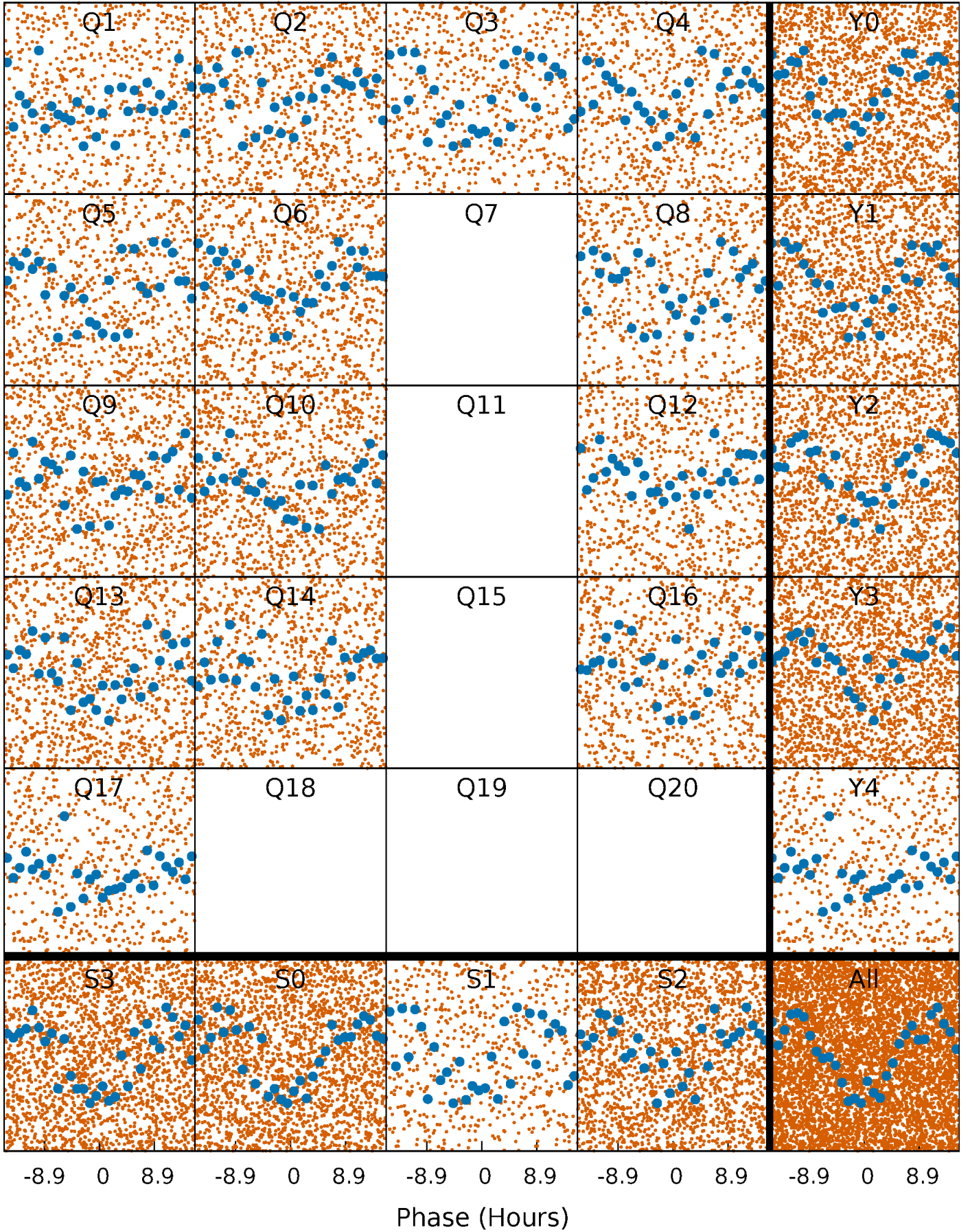


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



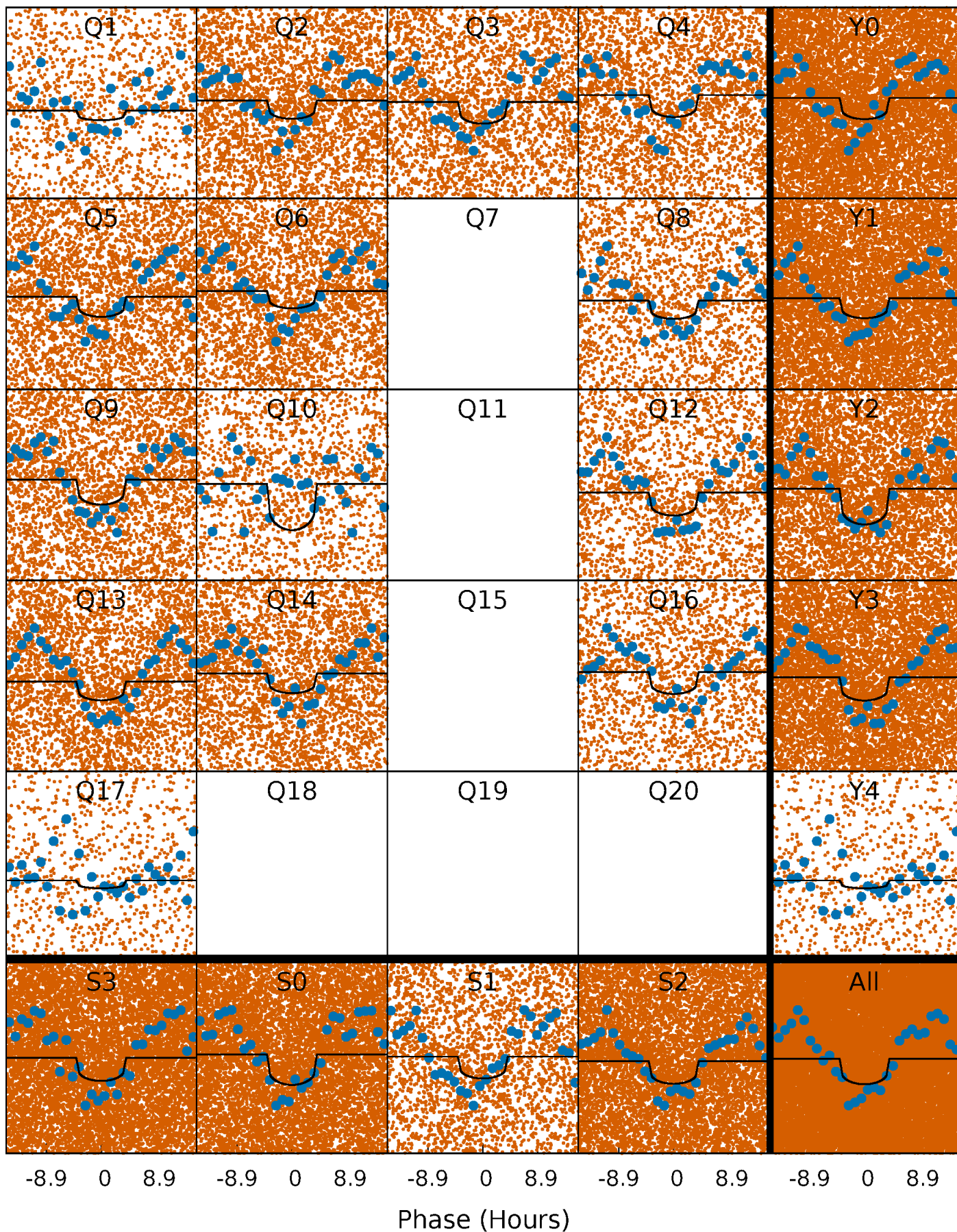
PDC Quarter-Phased Transit Curves

TCE 010226083-01 P= 0.940983 Days $T_0=131.929505$ (BKJD)



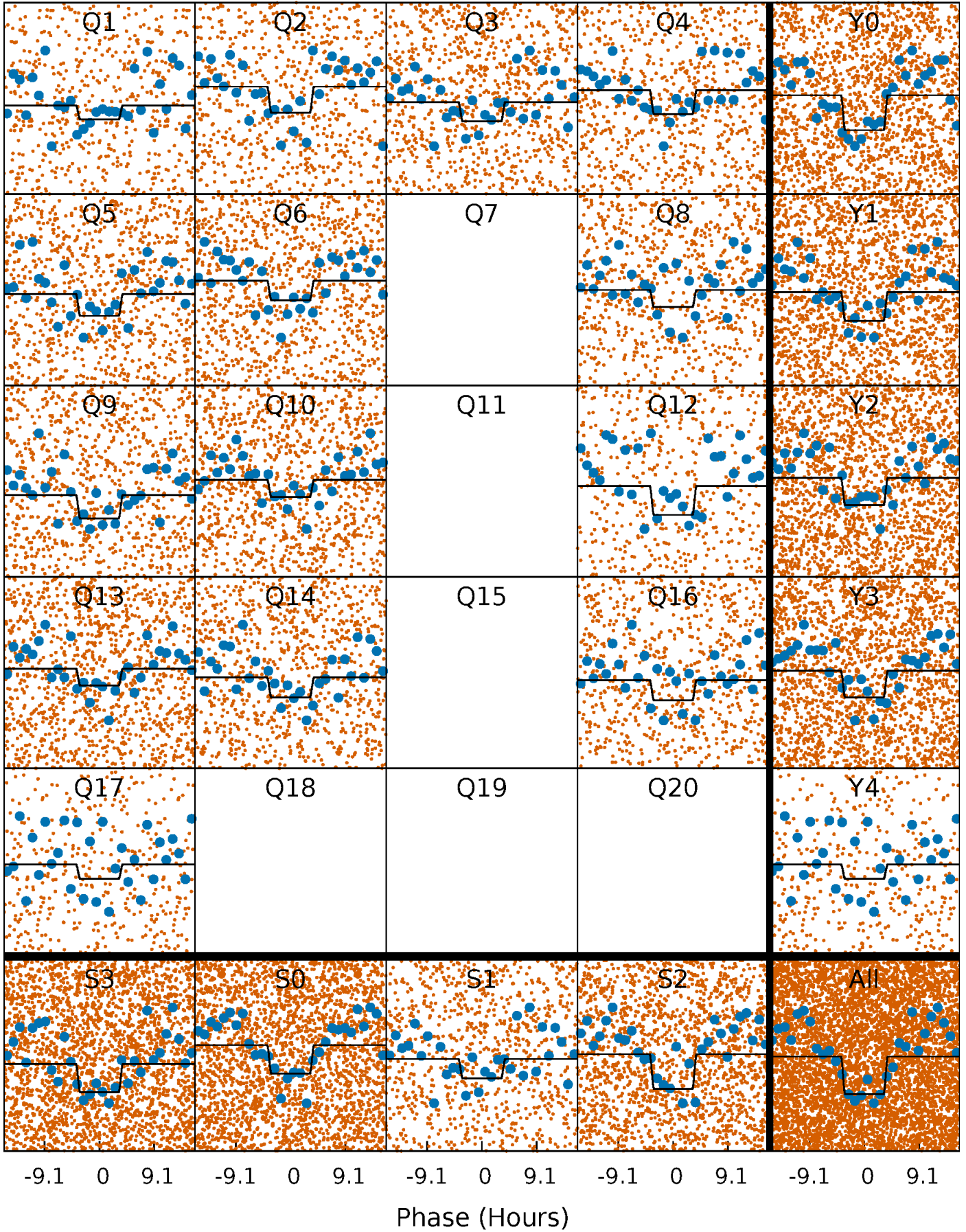
DV Quarter-Phased Transit Curves

TCE 010226083-01 P= 0.940983 Days $T_0=131.929505$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

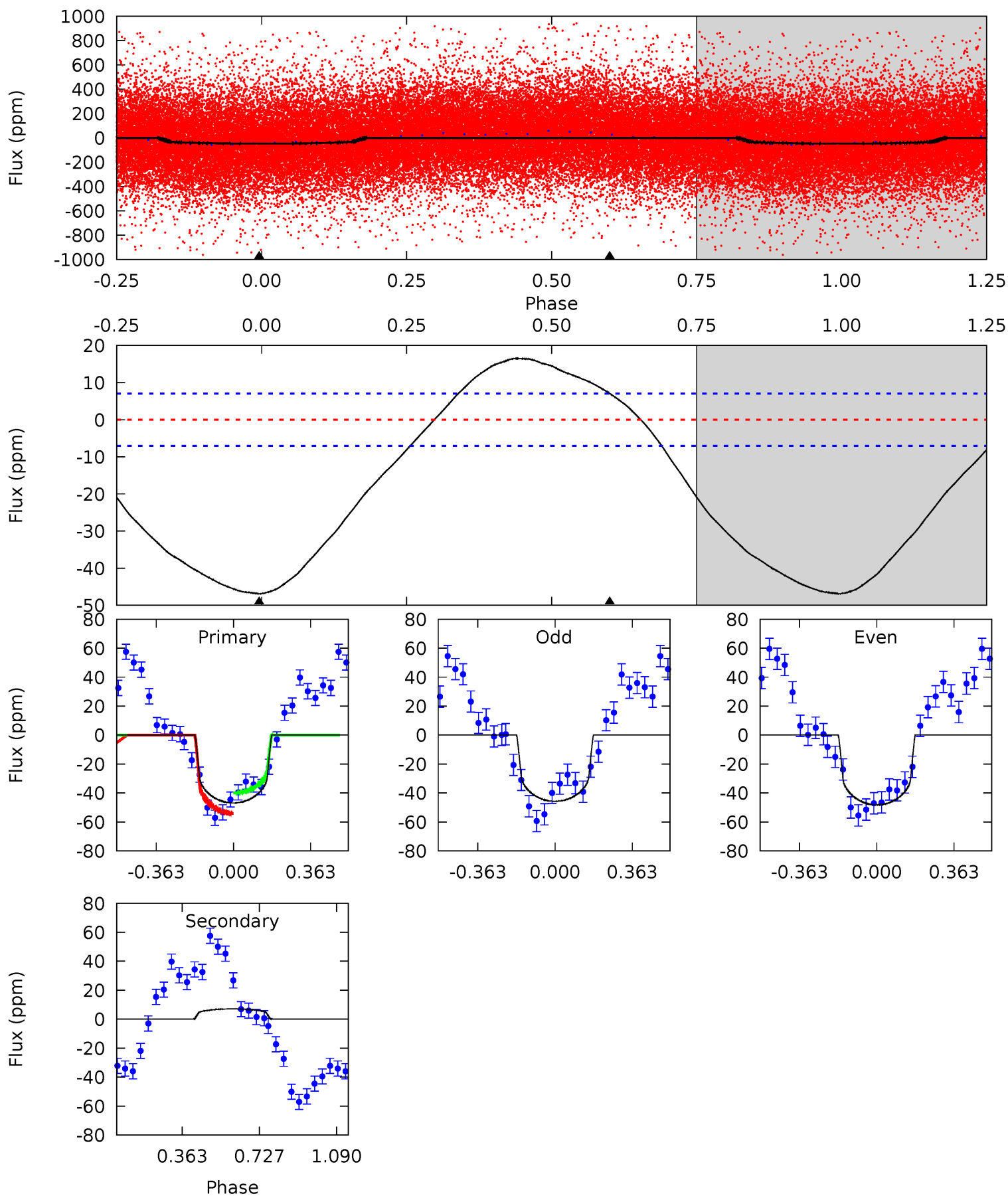
TCE 010226083-01 P= 0.940987 Days $T_0=131.908623$ (BKJD)



DV Model-Shift Uniqueness Test

010226083-01, P = 0.940983 Days, E = 130.988522 Days

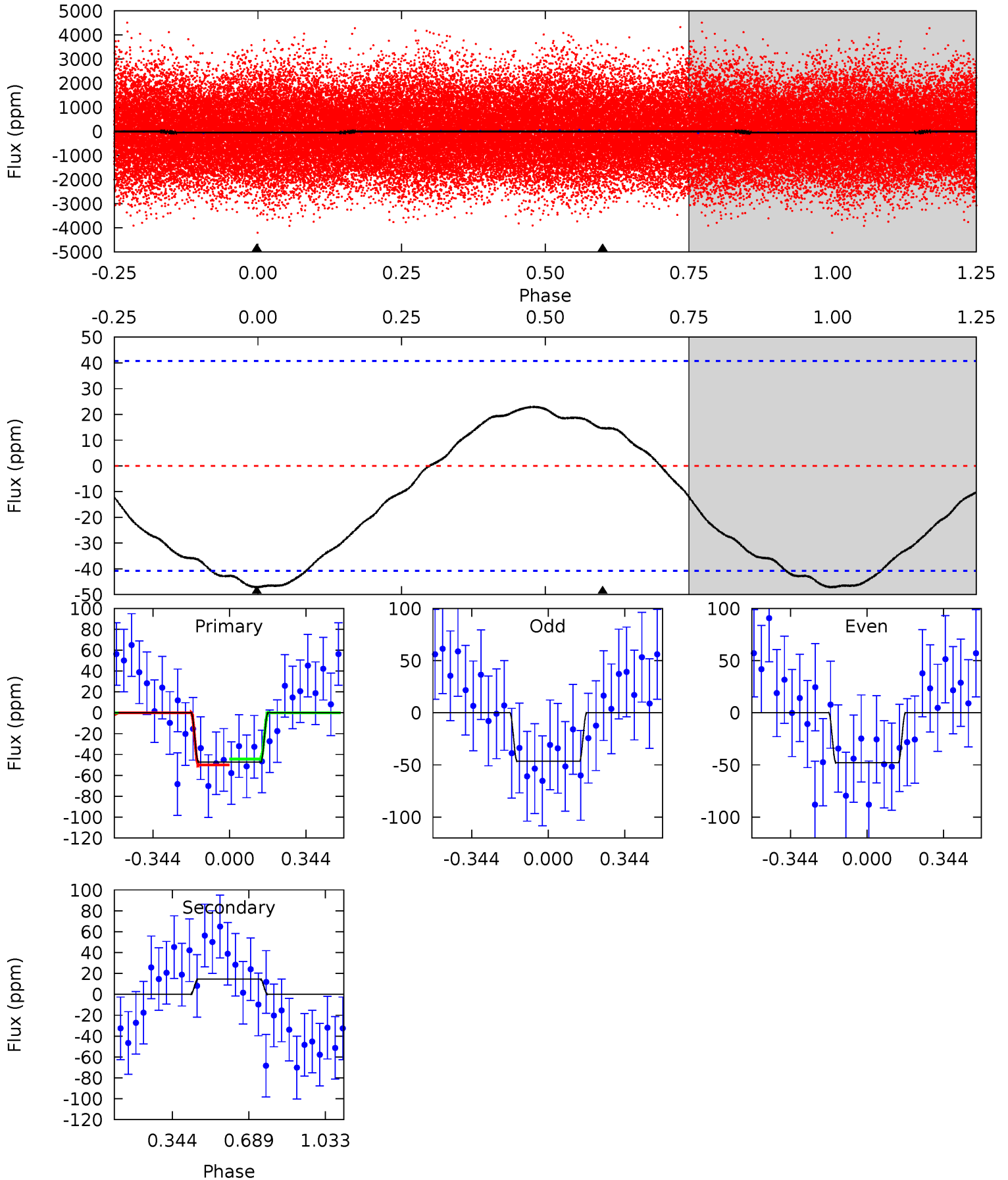
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.6	-4.33	0	0	4.29	0.91	3.07	28.6	28.6	-4.33	-4.33	0.75	1.03	0.26	4.33



Alt Model-Shift Uniqueness Test

010226083-01, P = 0.940987 Days, E = 130.967636 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.98	-1.54	0	0	4.30	0.95	0.61	4.98	4.98	-1.54	-1.54	0.07	0.99	0.33	0.29



Stellar Parameters For KIC 010226083

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7282^{+228}_{-330}	$3.961^{+0.260}_{-0.140}$	$-0.120^{+0.250}_{-0.350}$	$2.216^{+0.560}_{-0.746}$	$1.636^{+0.184}_{-0.316}$	$0.212^{+0.353}_{-0.085}$
	+3%/-5%	+7%/-4%	+208%/-292%	+25%/-34%	+11%/-19%	+167%/-40%
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 010226083-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	7 ± 2	$1.21^{+1.00}_{-0.73}$	4410^{+345}_{-370}	-5359^{+788}_{-3153}	$-1.291^{+0.931}_{-7.040}$
Alt.	15 ± 9	$1.67^{+1.01}_{-0.87}$	4414^{+336}_{-399}	-5368^{+882}_{-2253}	$-1.222^{+0.906}_{-4.707}$

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

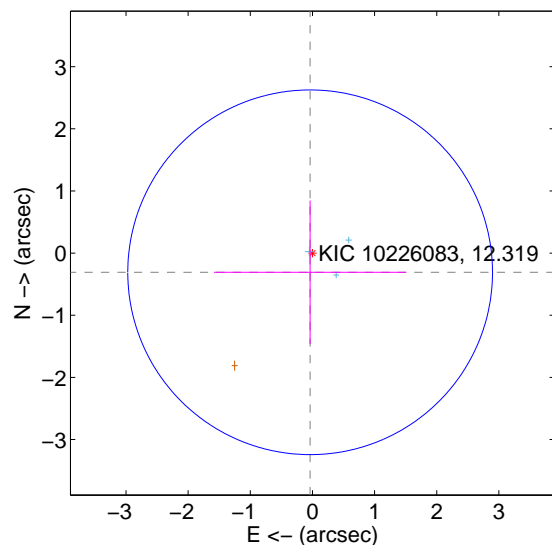
Supplemental centroid analysis for 010226083-01. Kepler magnitude: 12.32. Transit SNR 12.30

There are 3 quarters with good PRF difference image offsets

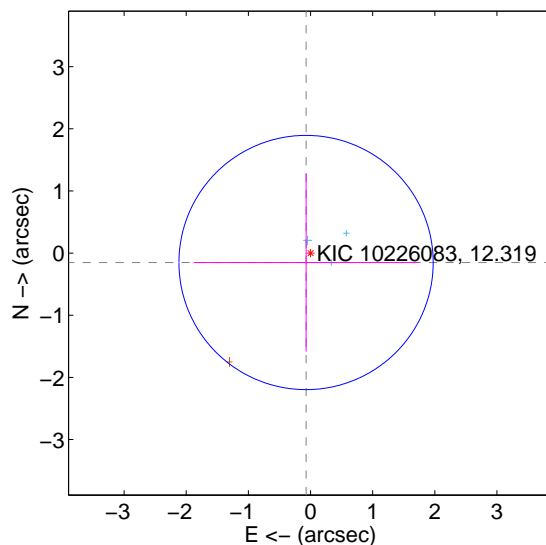
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.311 ± 0.978	0.32	0.037 ± 1.547	-0.309 ± 1.153
PRF-fit source offset from KIC position	0.168 ± 0.682	0.25	0.072 ± 1.809	-0.151 ± 1.435
photometric centroid source offset	0.69 ± 0.39	1.77	-0.66 ± 0.39	0.18 ± 0.37

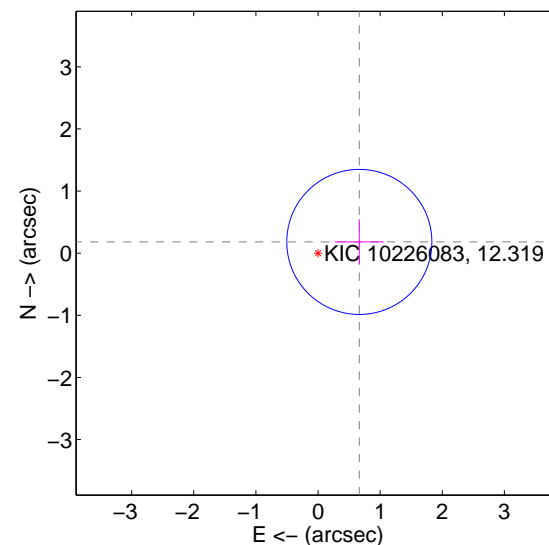
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

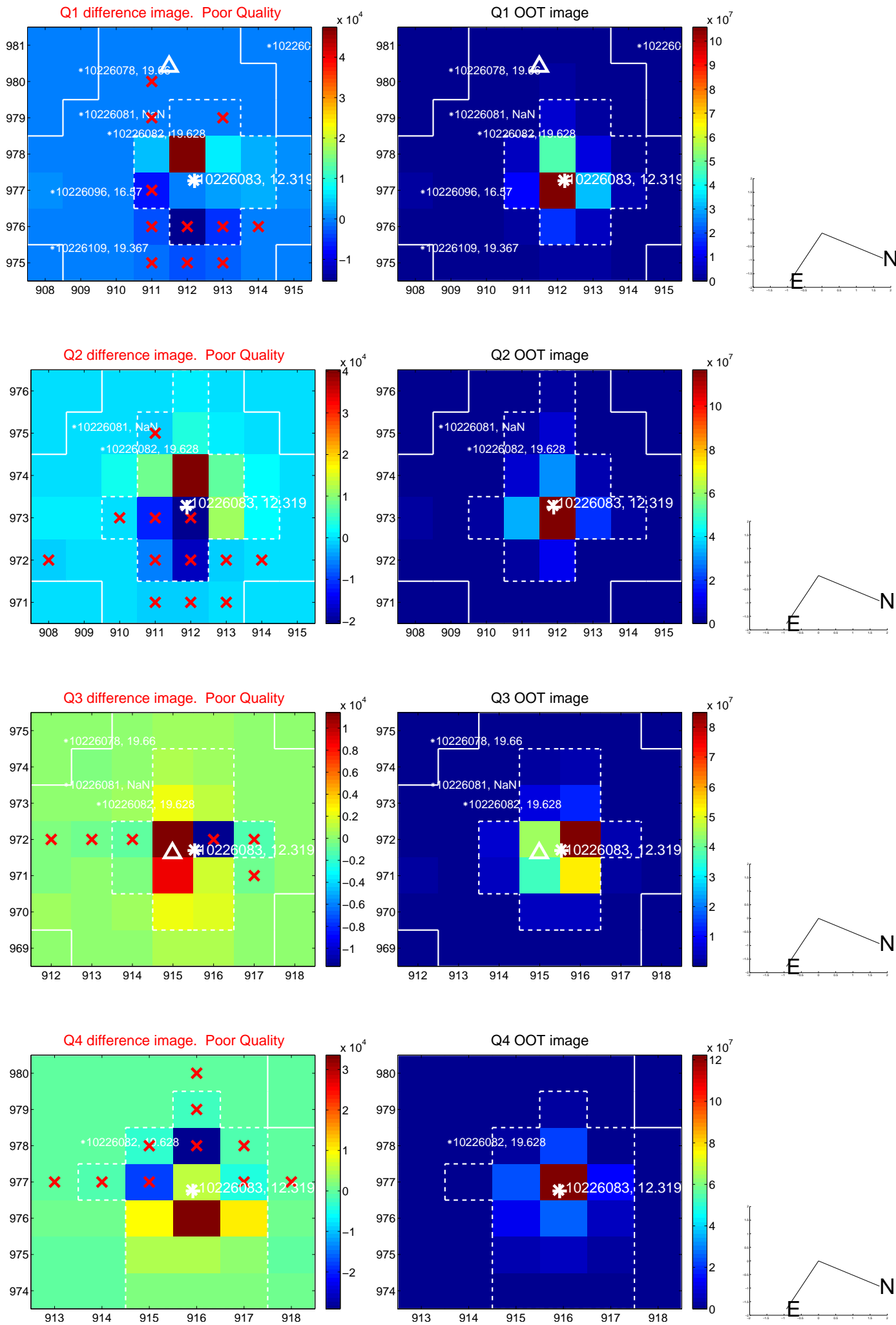


offset from photometric centroids

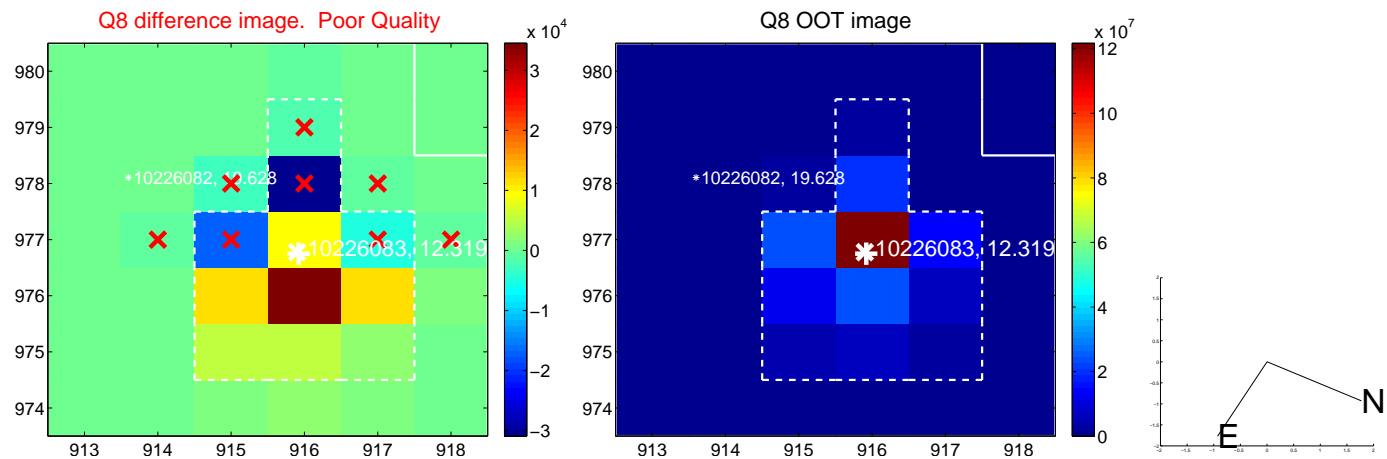
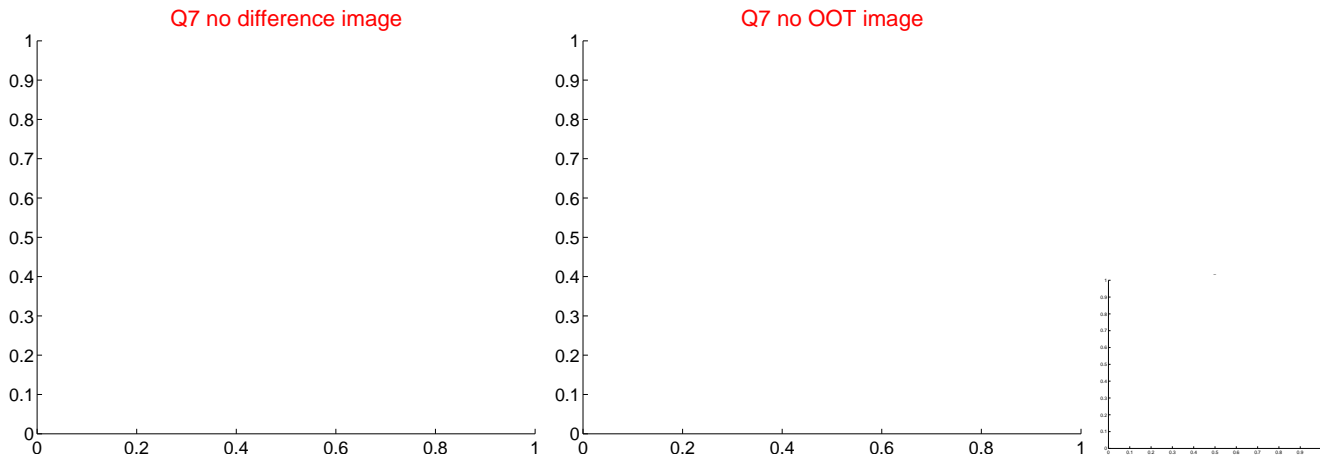
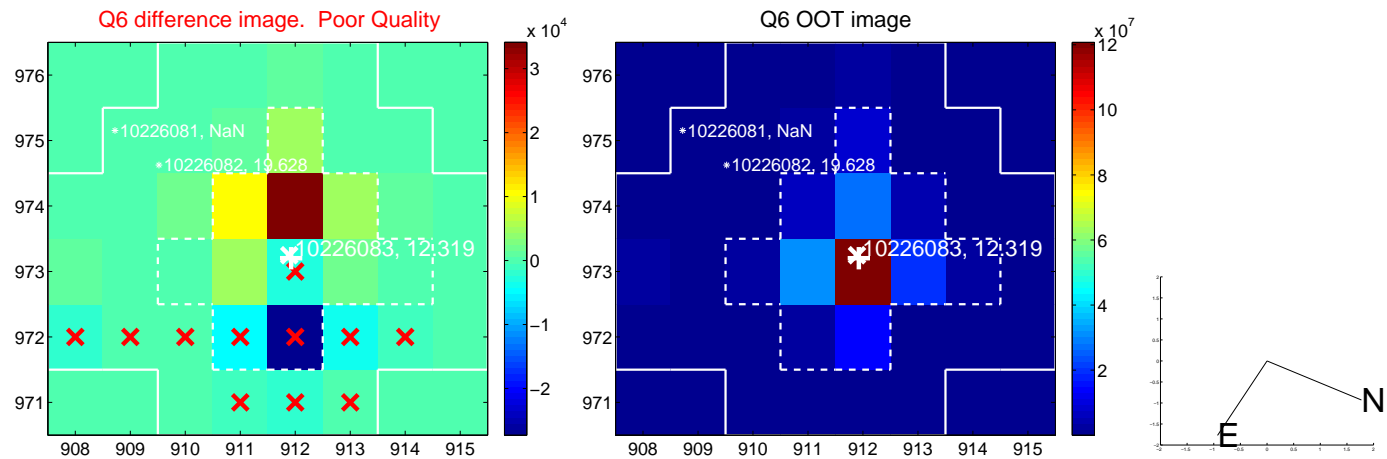
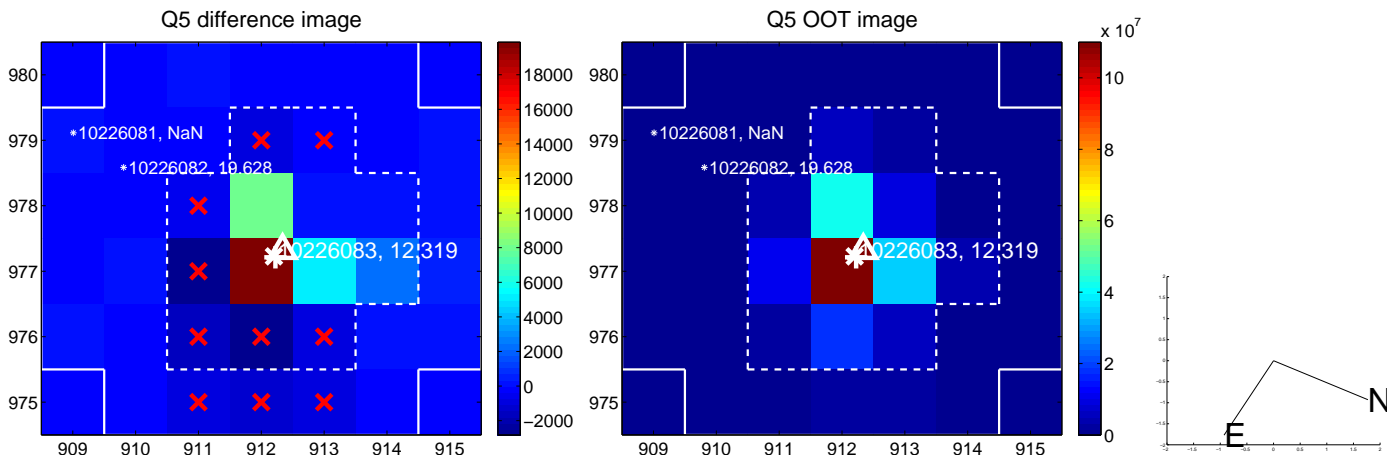


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

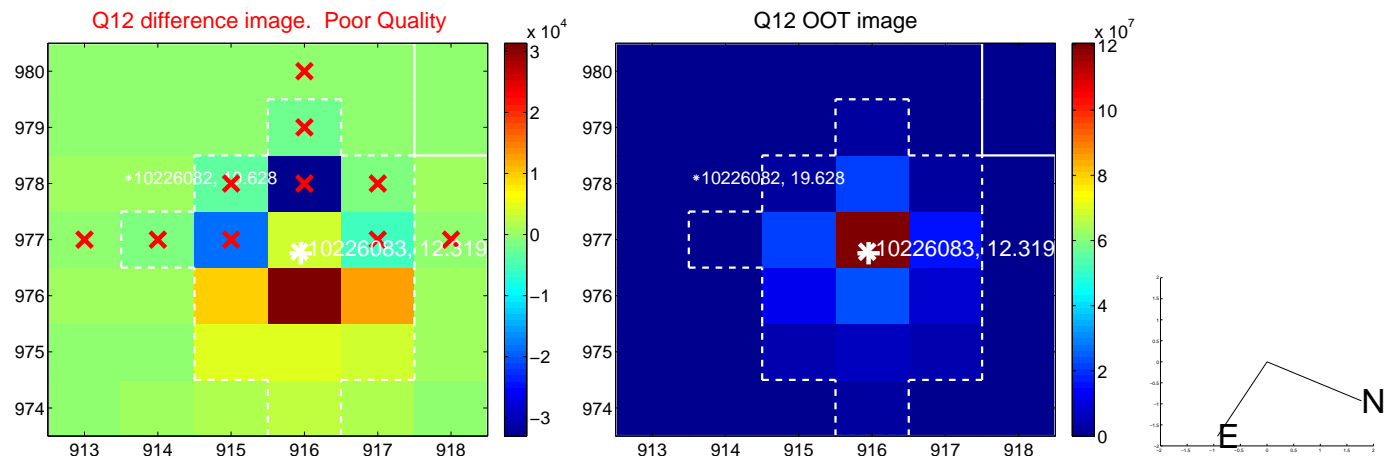
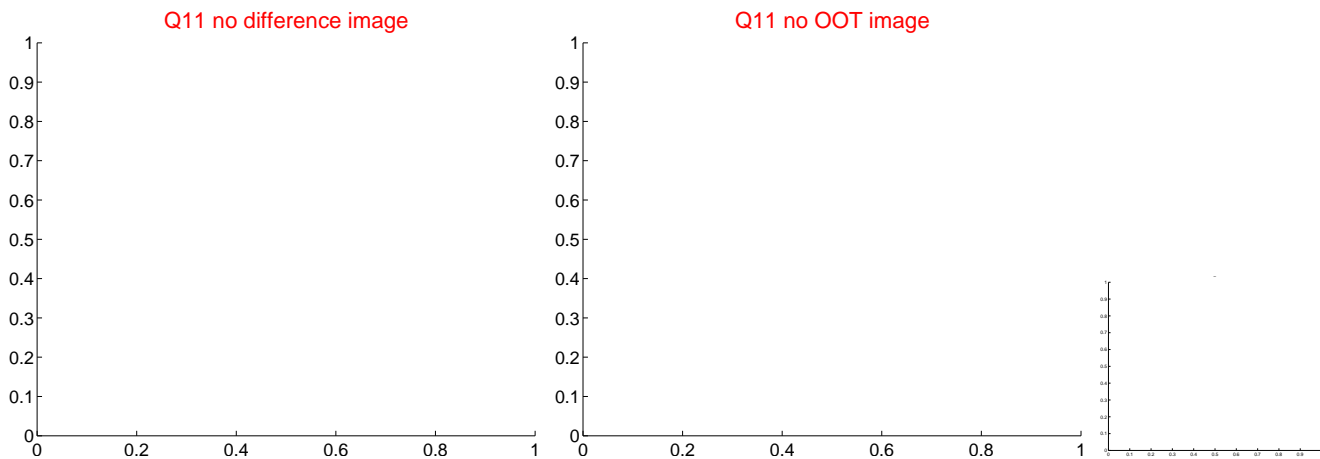
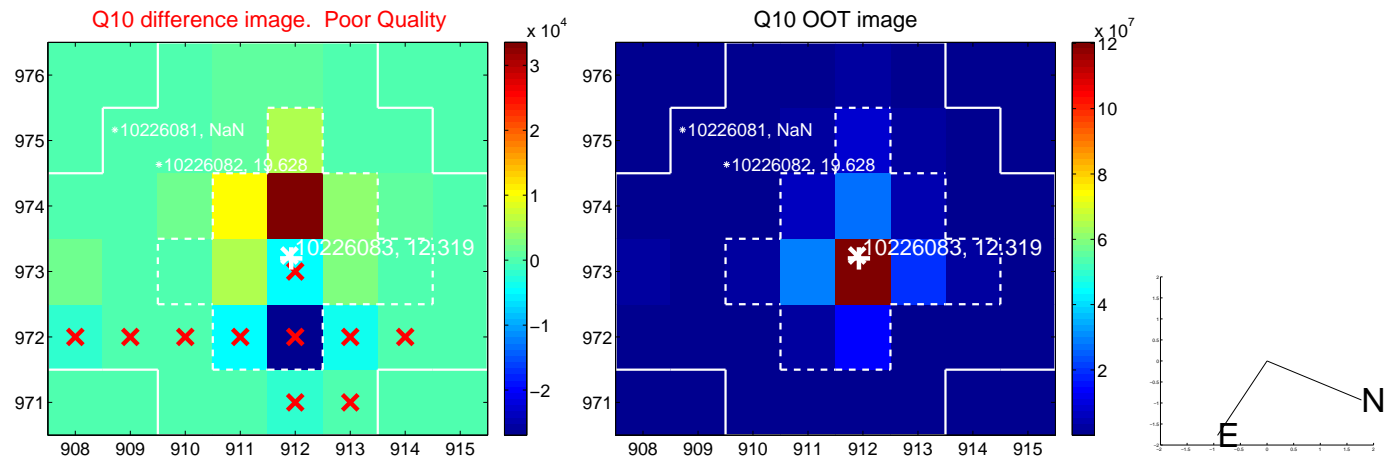
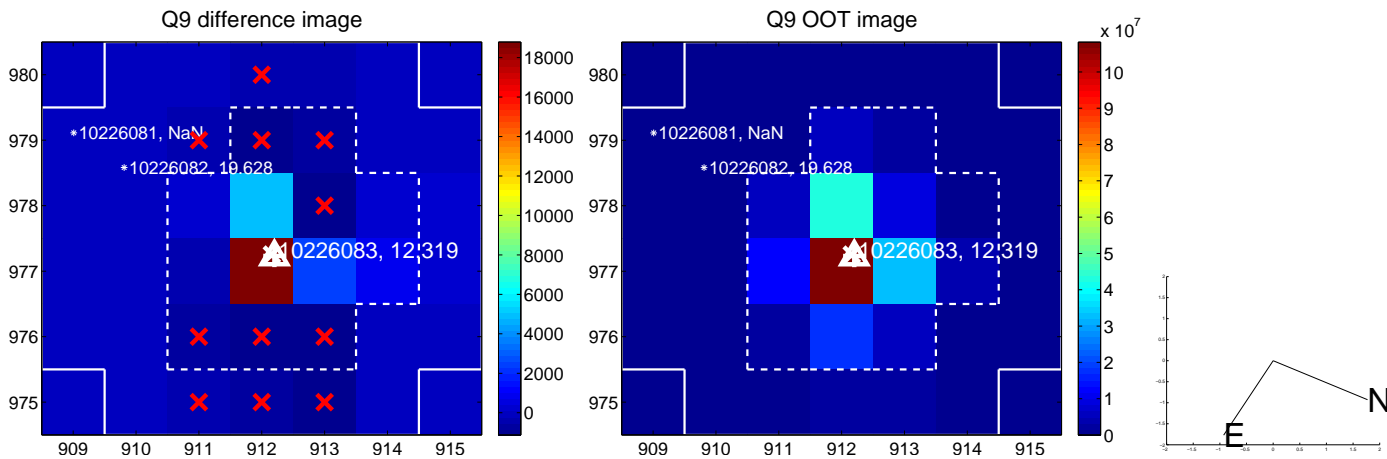
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



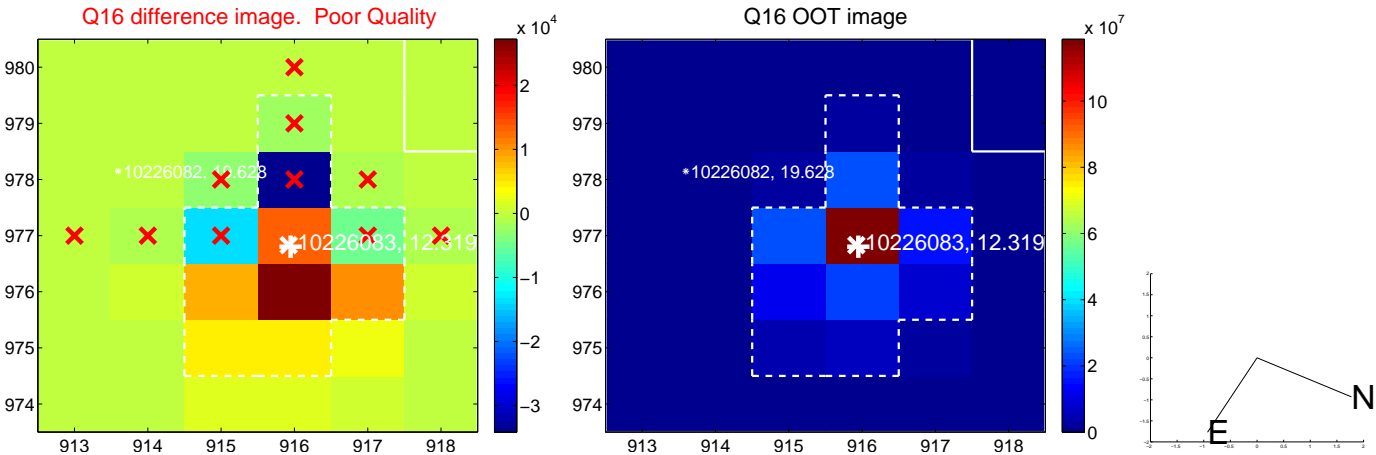
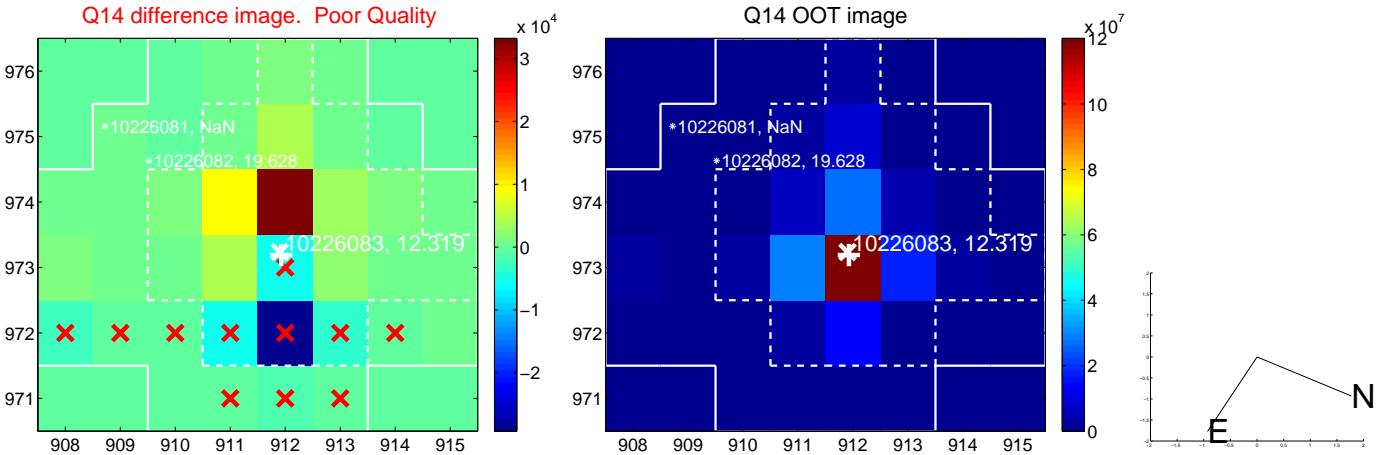
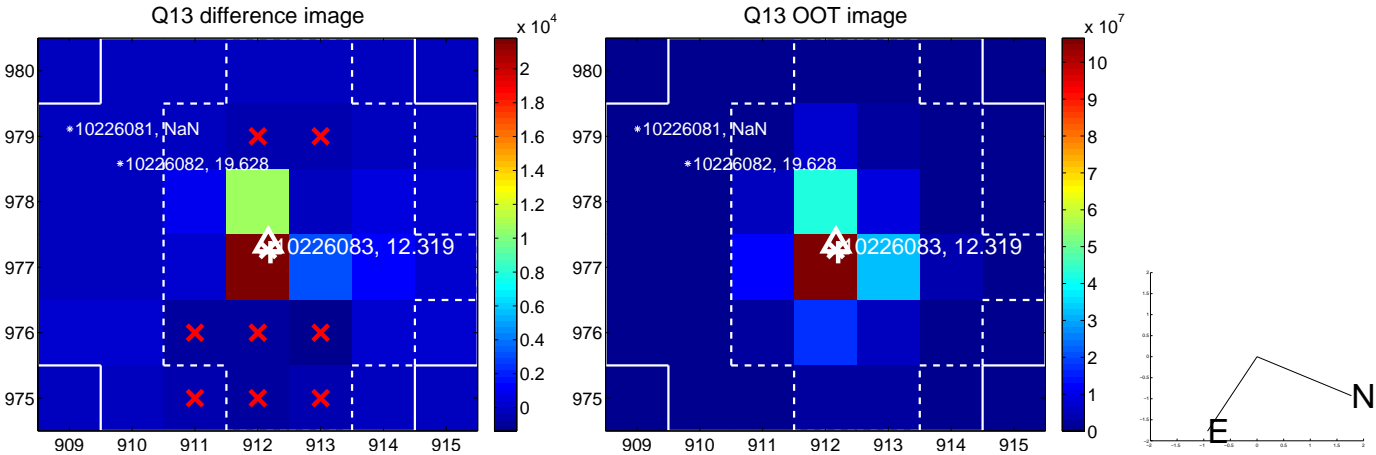
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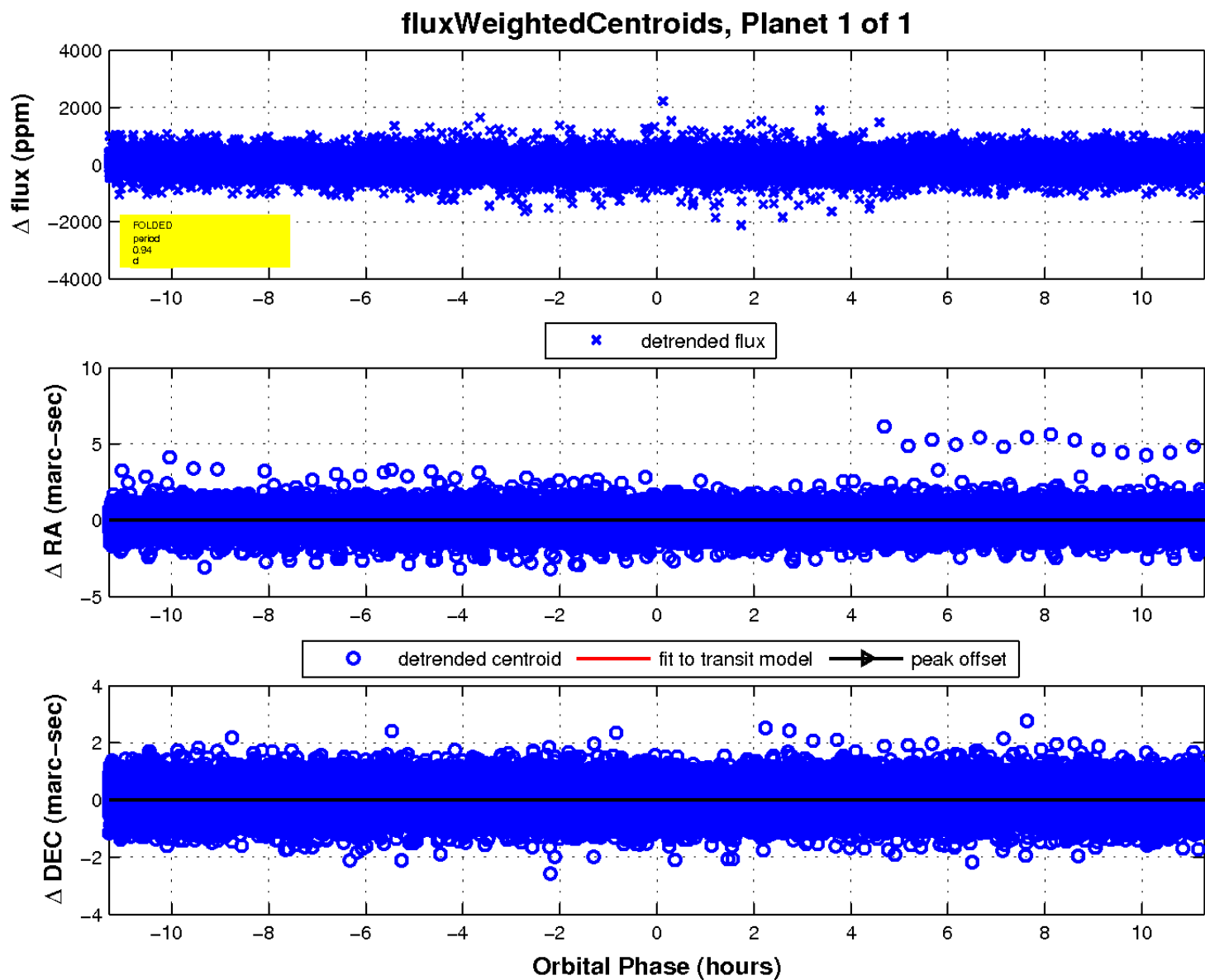
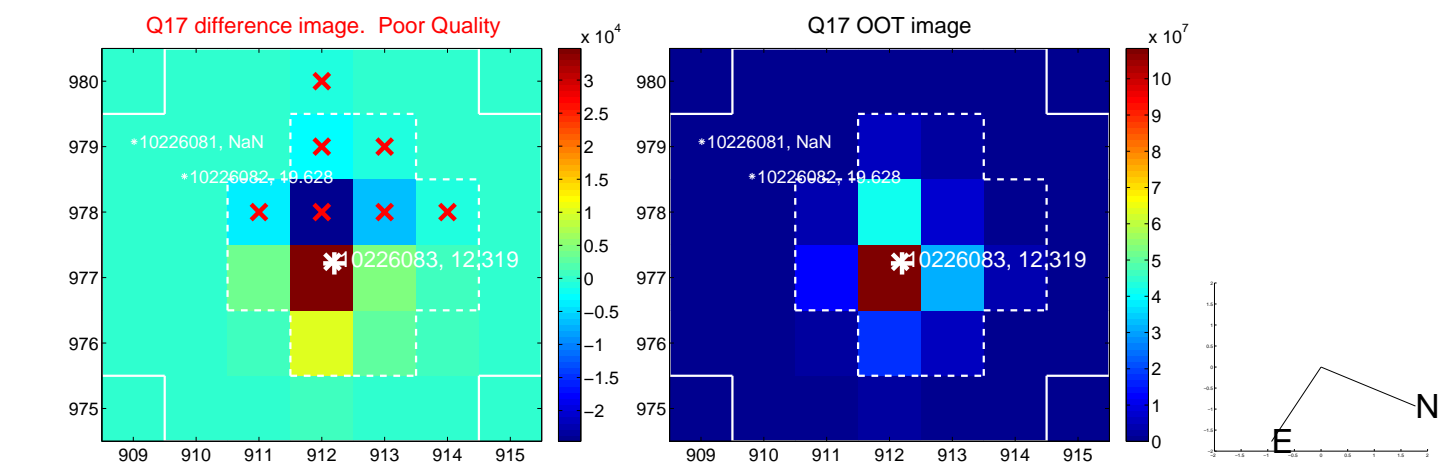
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UKIRT Image

