

KIC 010661917

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
010661917-01	OBS	4901.01	1.231330	131.824400	15.5	4.037	10.5	10.6	1.73	6011	0.82	6826.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010661917-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_DV—MOD_SEC_ALT—HALO_GHOST—EPHEM_MATCH

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.

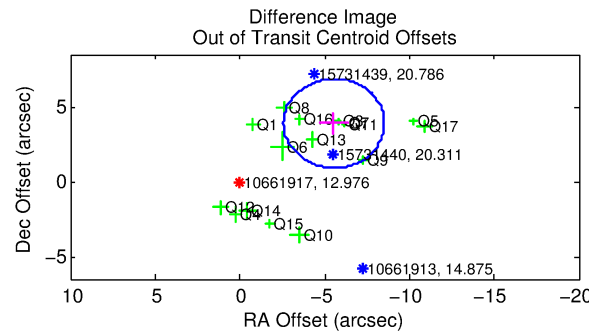
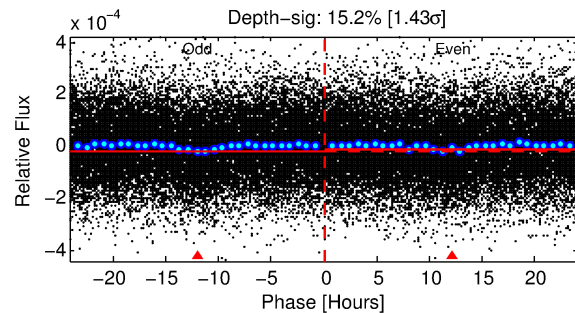
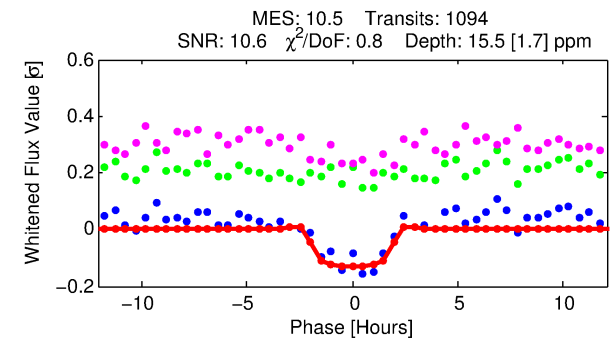
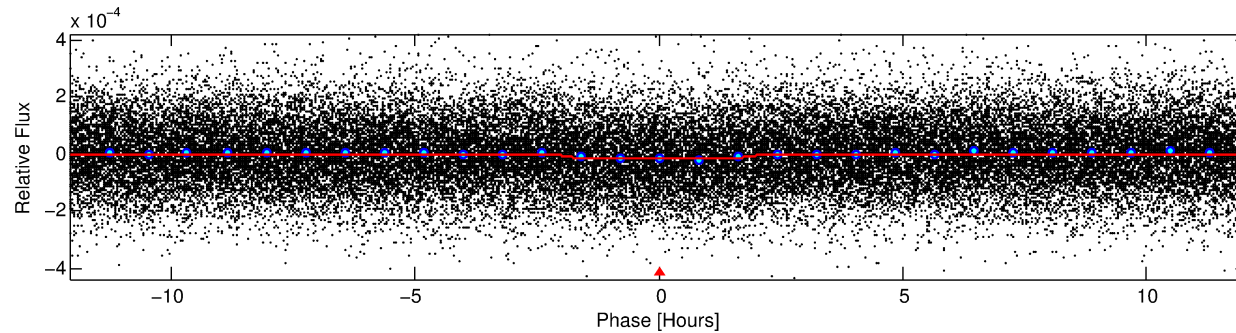
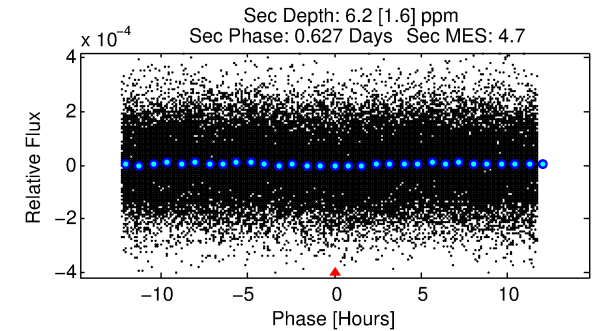
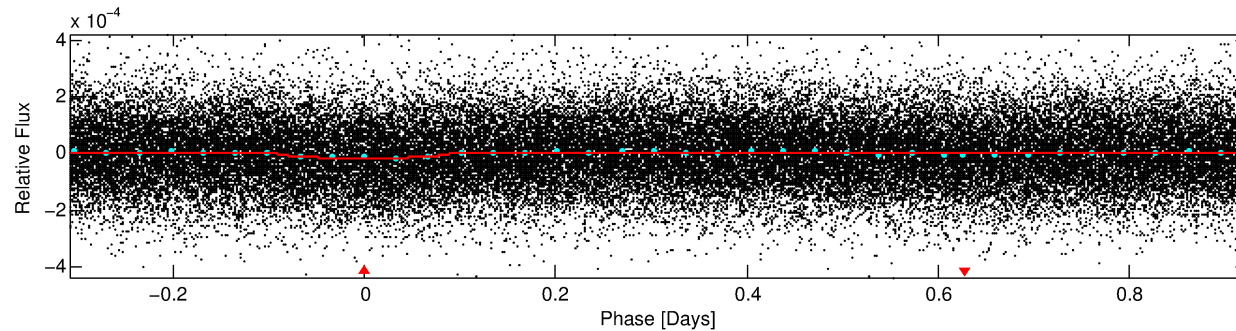
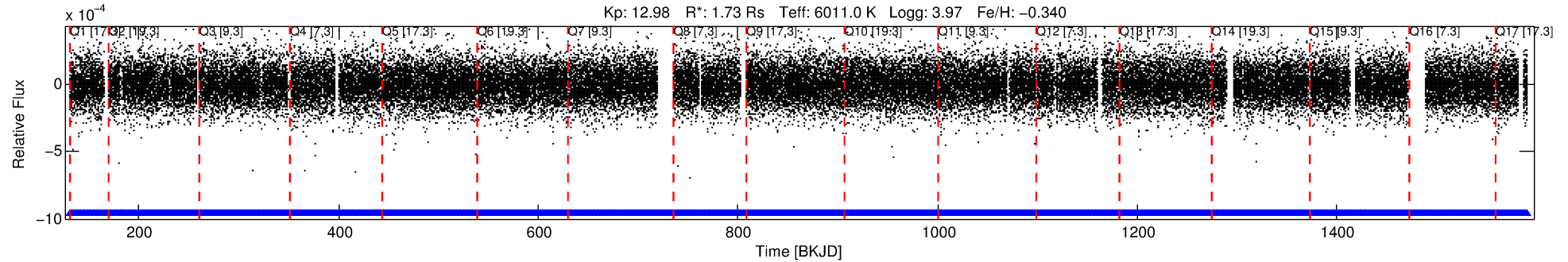
Ephemeris Match Information For 010661917-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
010661917-01	10661917	010661783-pri	10661783	1:1	129.0	26	19	9.59	12.98	13612.00	Direct-PRF	0	2.29	1.31

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant σ_P < 5.0 and σ_T < 5.0. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 10661917 Candidate: 1 of 1 Period: 1.231 d
KOI: K04901.01 Corr: 0.785



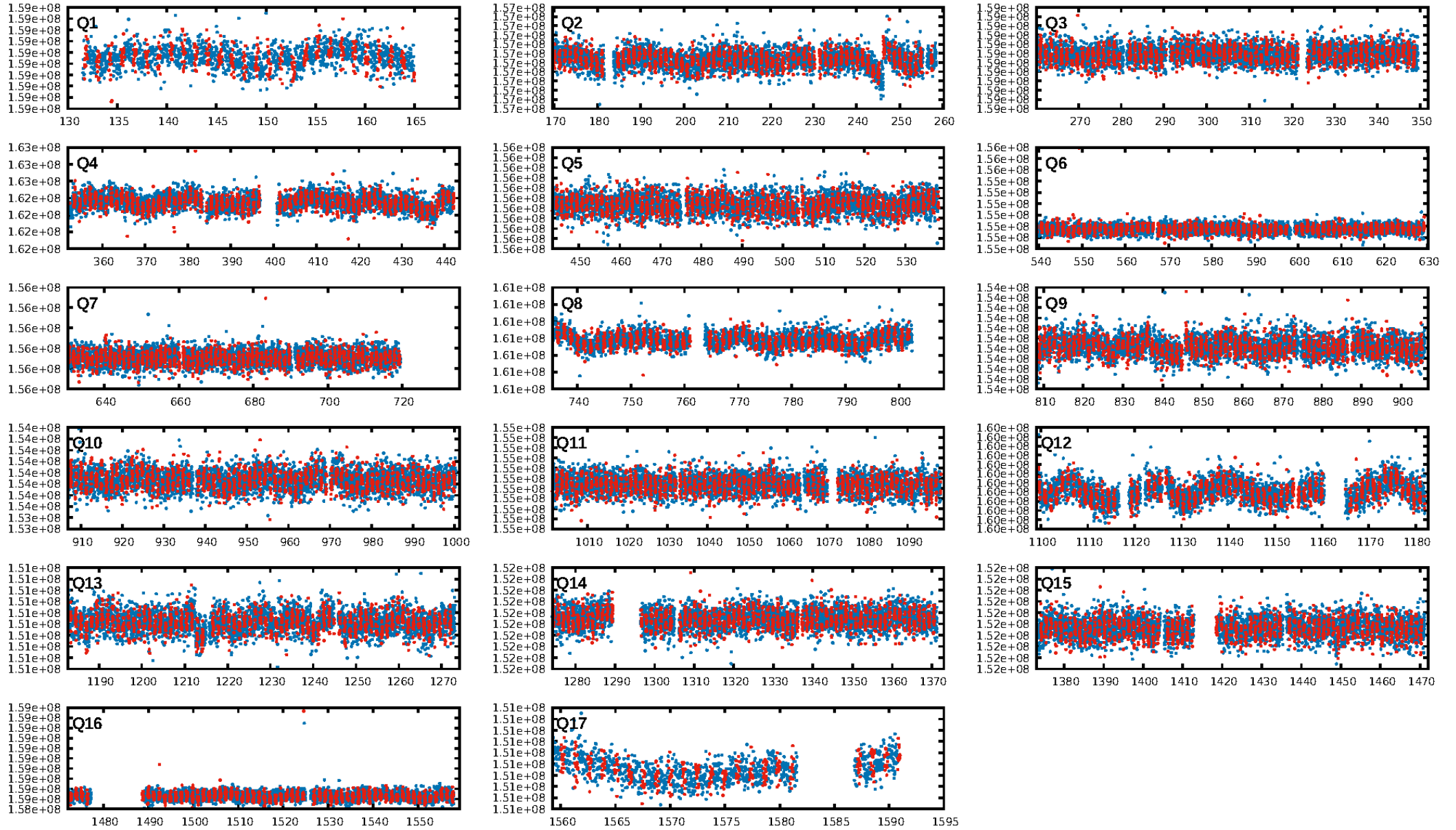
DV Fit Results:

Period = 1.23133 [0.00001] d
Epoch = 131.8244 [0.0045] BKJD
Rp/R* = 0.0043 [0.0016]
a/R* = 1.33 [1.16]
b = 0.92 [0.33]
Seff = 6826.73 [3429.63]
Teff = 2318 [291] K
Rp = 0.82 [0.39] Re
a = 0.0226 [0.0069] AU
Ag = 2.64 [2.40] [0.68σ]
Teffp = 4566 [886] K [2.41σ]

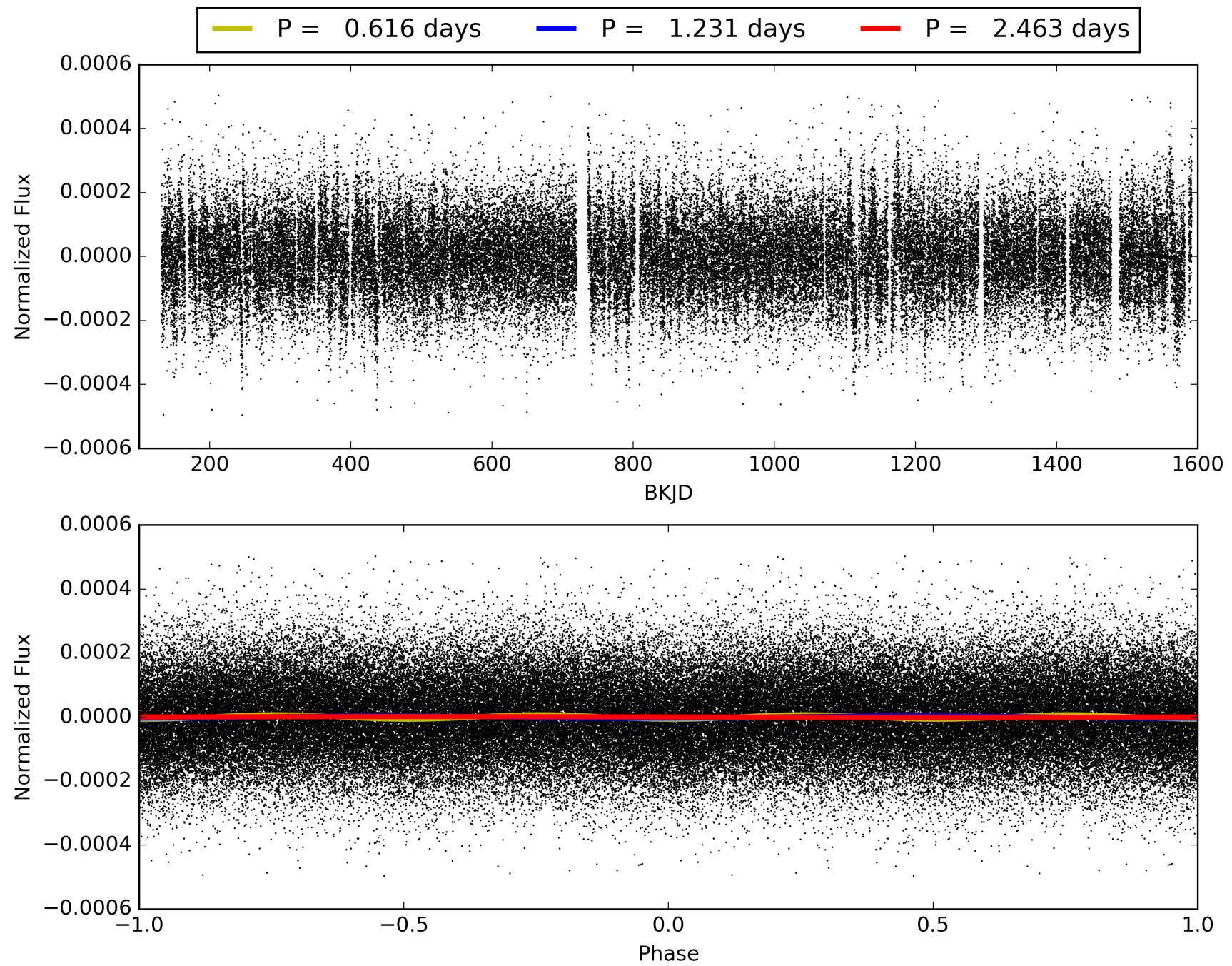
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.73e-23
RollingBand-fgt: 1.00 [1044/1044]
GhostDiagnostic-chr: -0.0712
Centroid-sig: 0.0%
Centroid-so: 3.504 arcsec [3.37σ]
OotOffset-rm: 6.776 arcsec [6.83σ]
KicOffset-rm: 6.440 arcsec [6.74σ]
OotOffset-st: 3/4/4/5 [16]
KicOffset-st: 3/4/4/5 [16]
DiffImageQuality-fgm: 0.00 [0/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010661917-01, PDC Light Curves

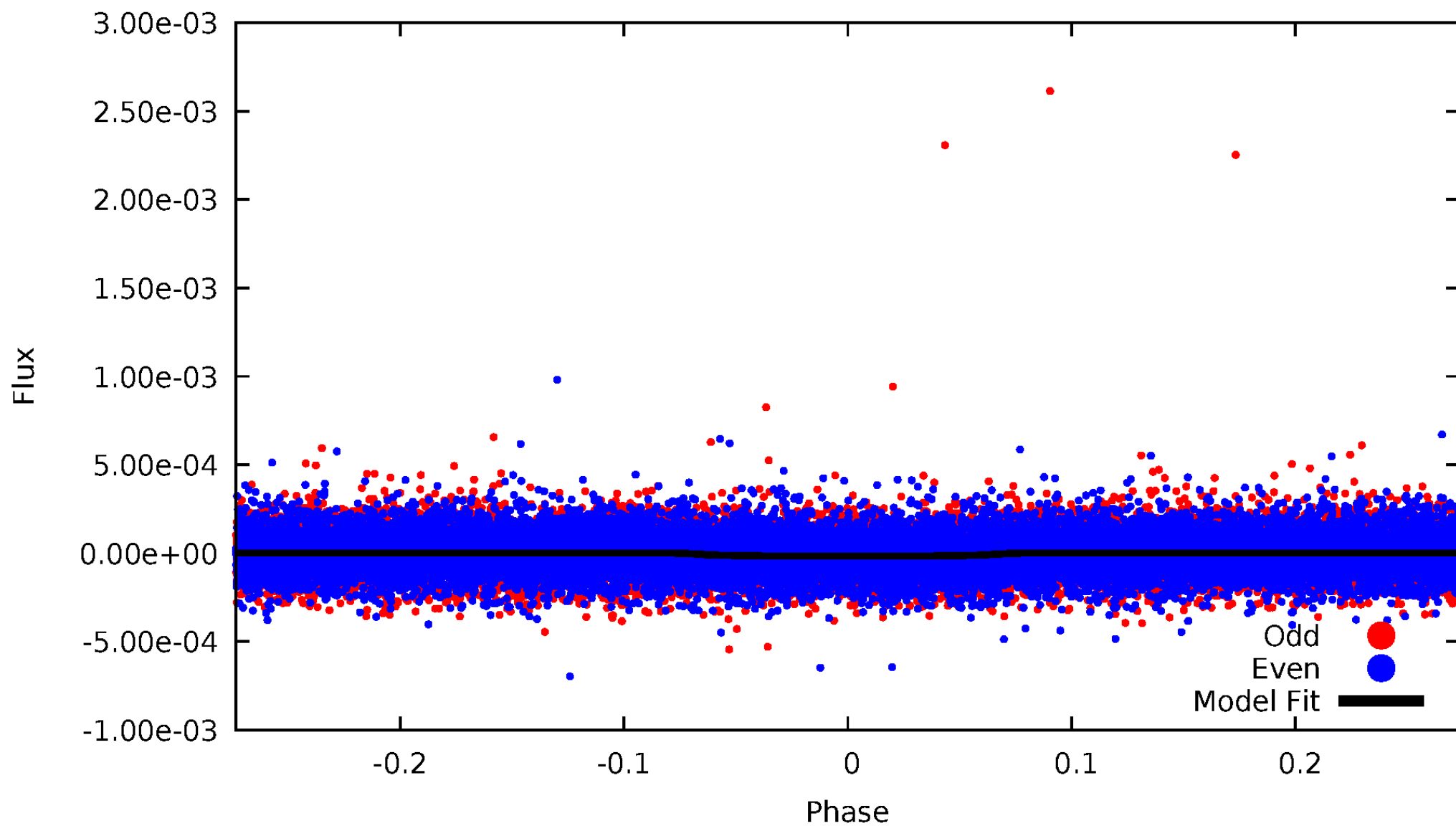


TCE 010661917-01



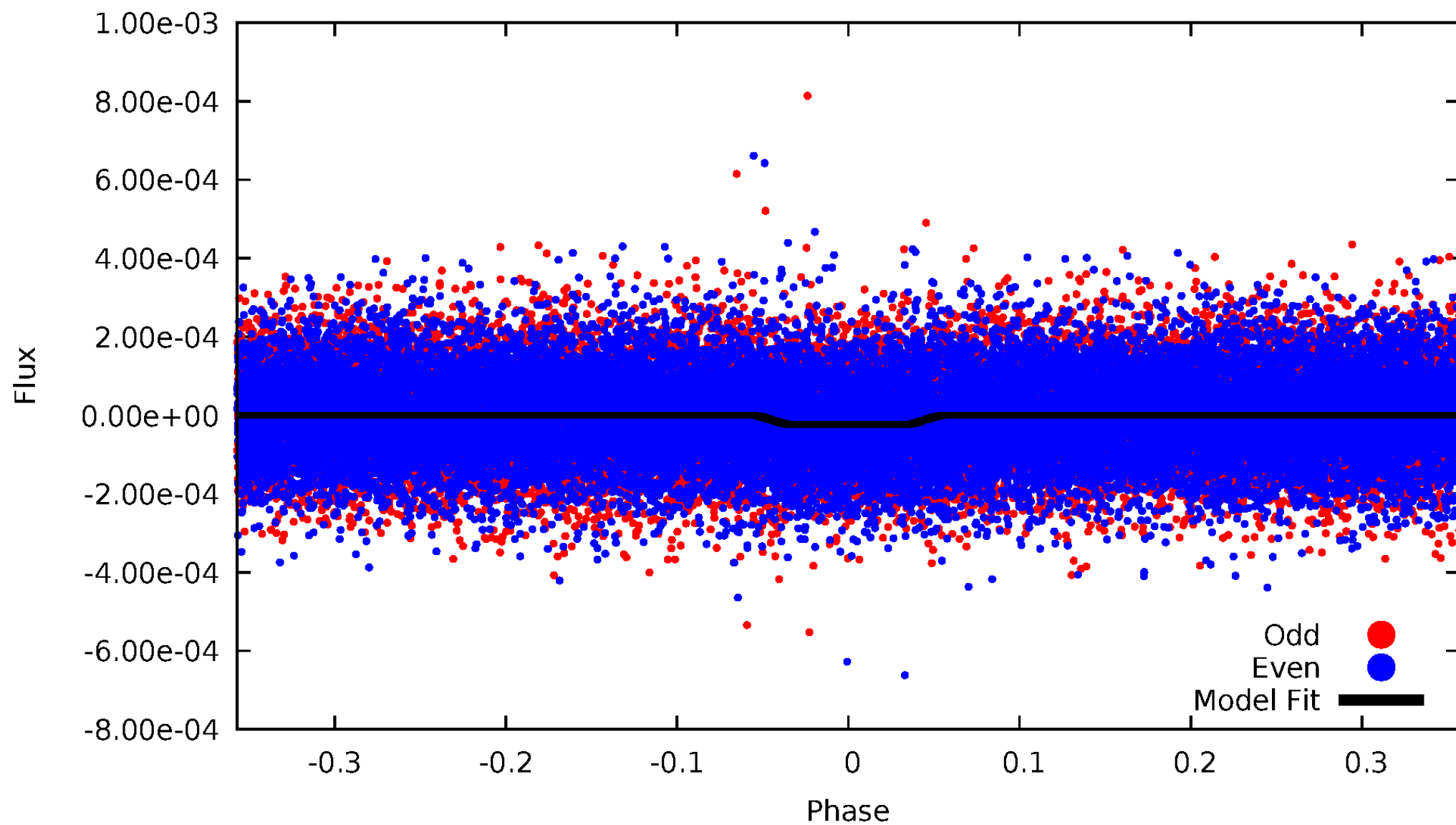
DV Odd/Even

TCE 010661917-01



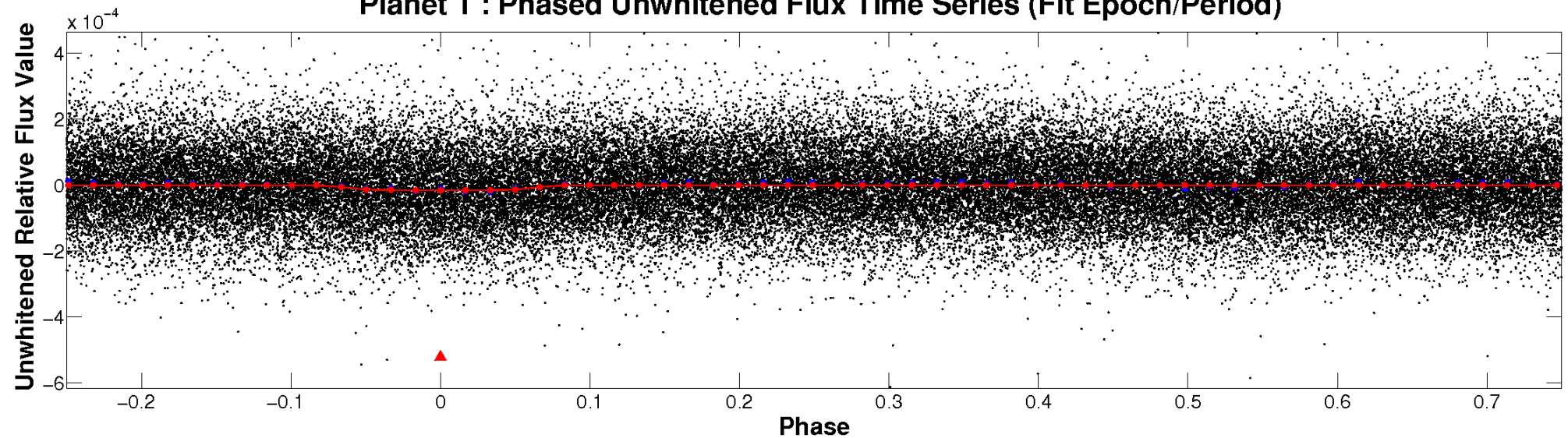
ALT Odd/Even

TCE 010661917-01

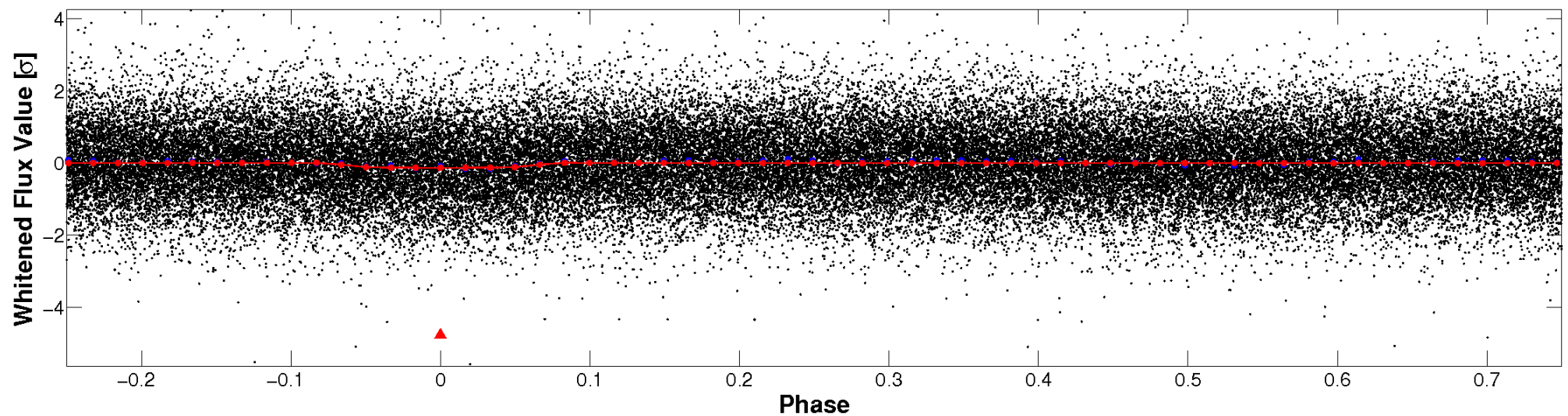


Non-Whitened Vs. Whitened Light Curve

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

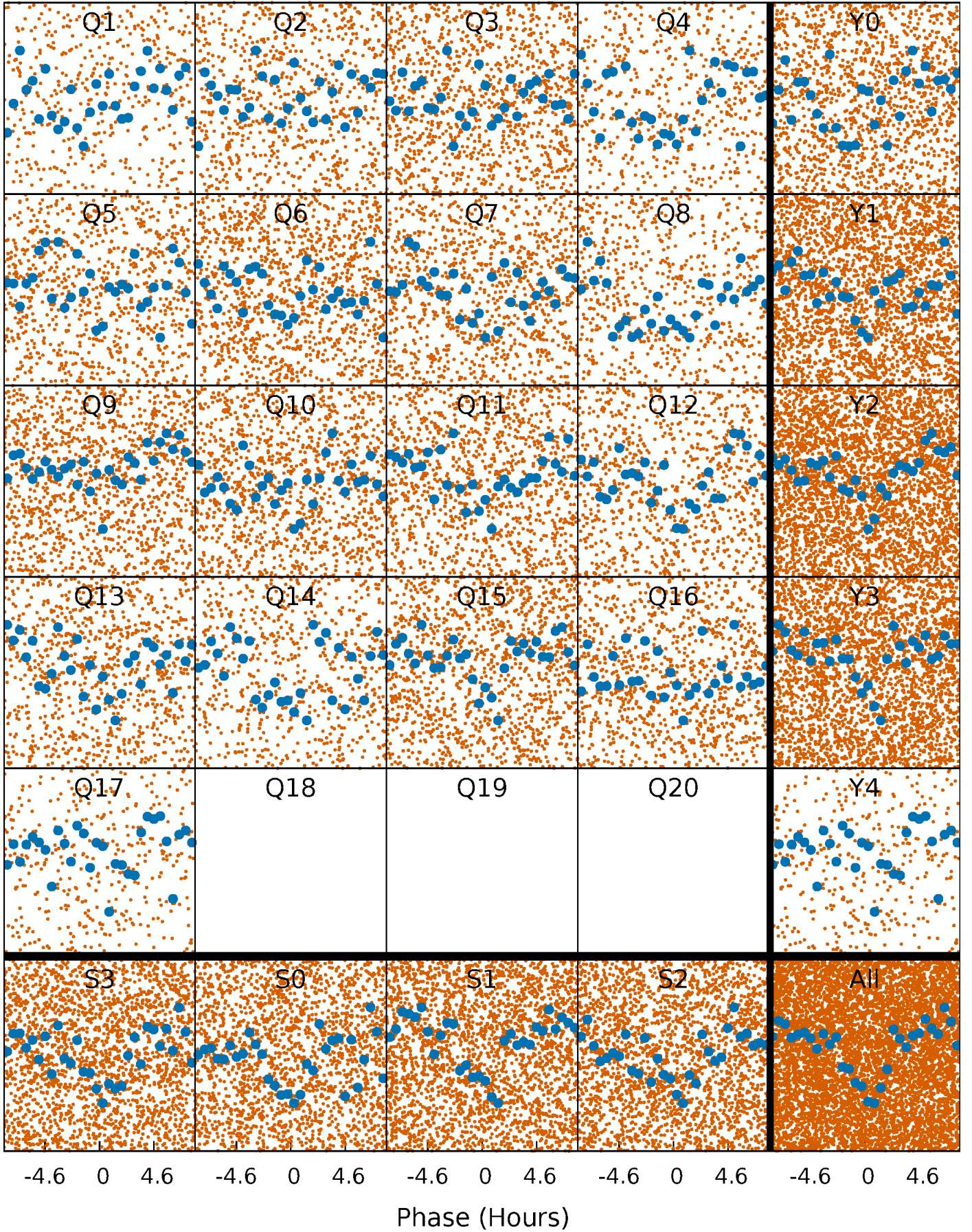


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



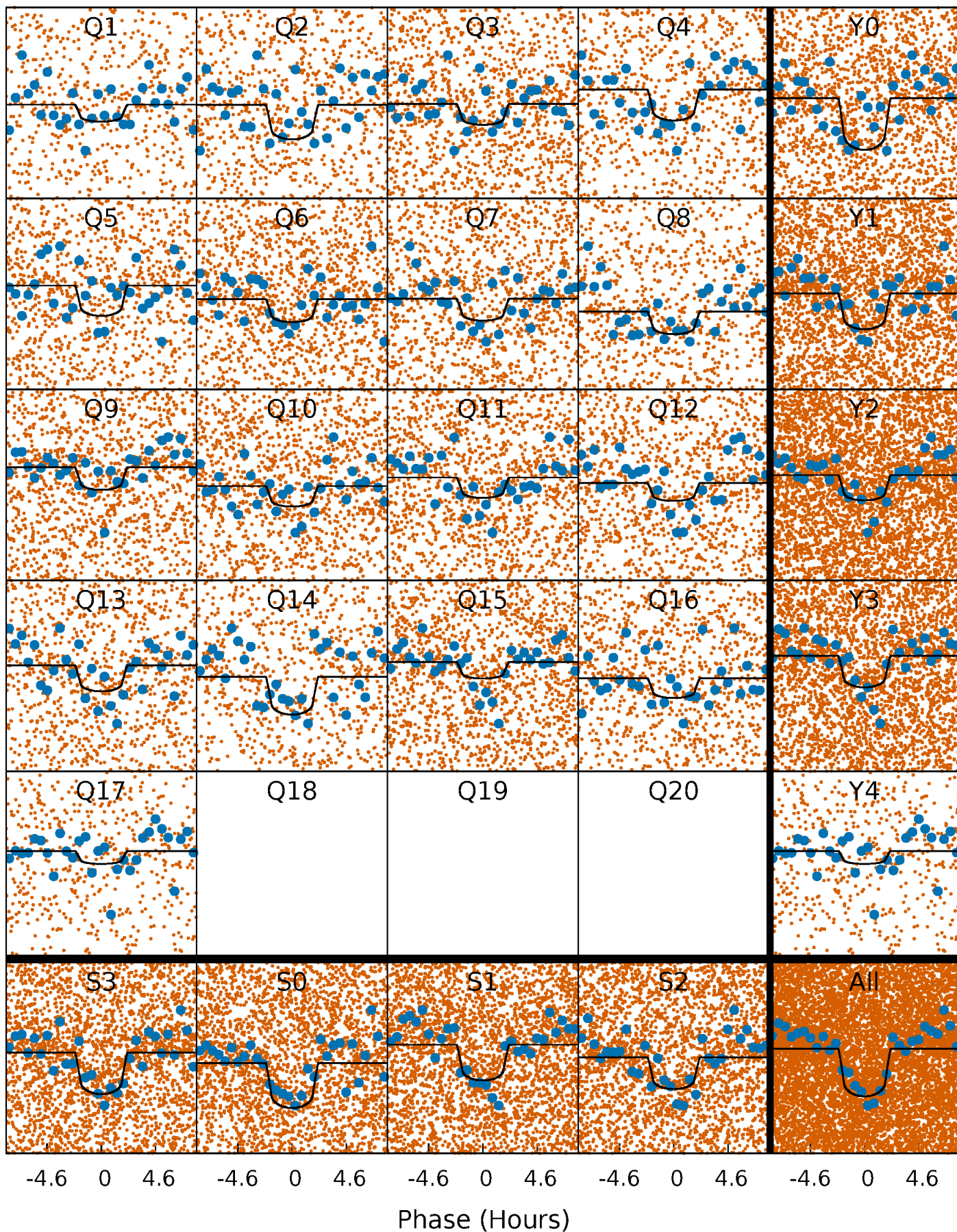
PDC Quarter-Phased Transit Curves

TCE 010661917-01 P= 1.231330 Days $T_0=131.824400$ (BKJD)



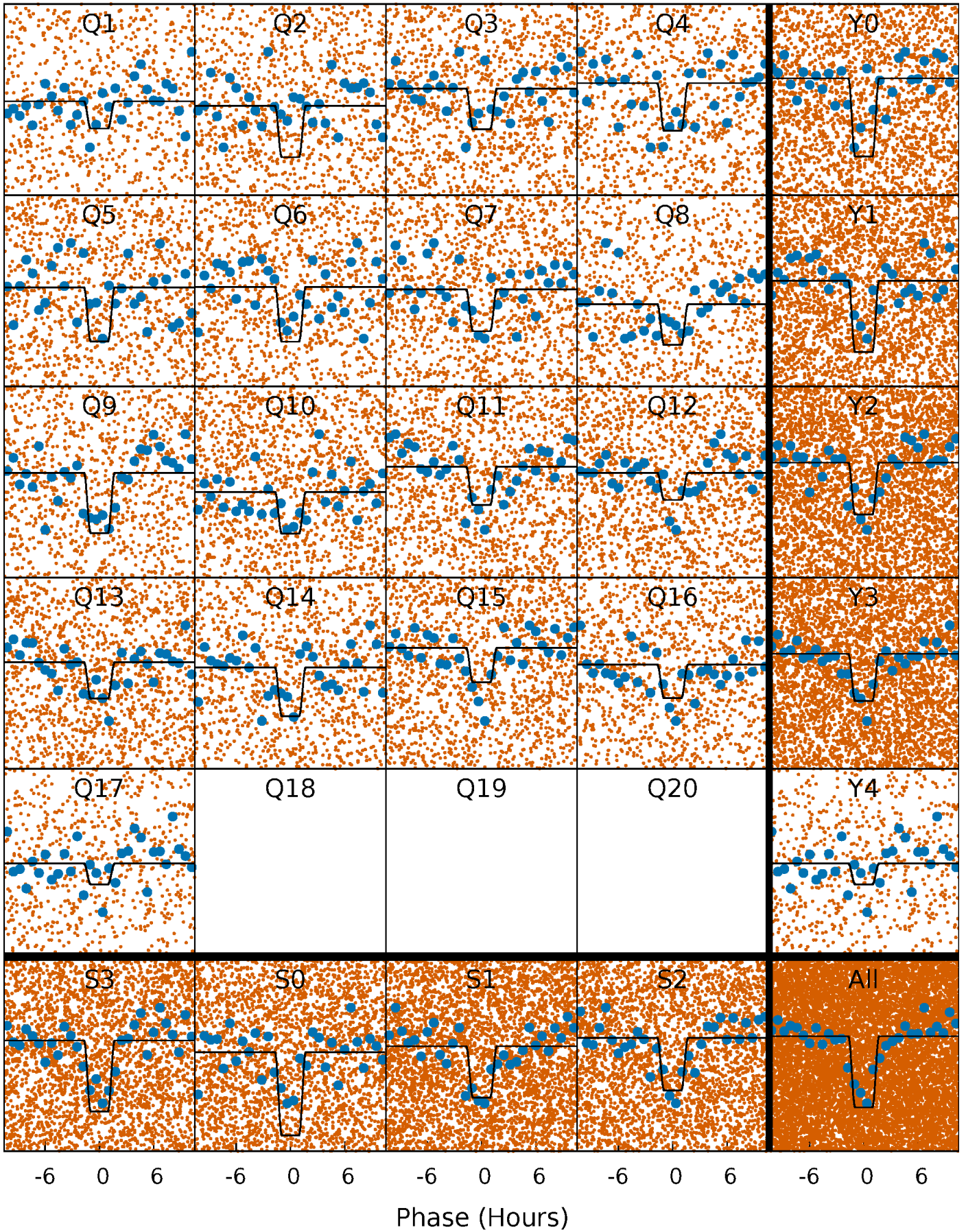
DV Quarter-Phased Transit Curves

TCE 010661917-01 P= 1.231330 Days $T_0=131.824400$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

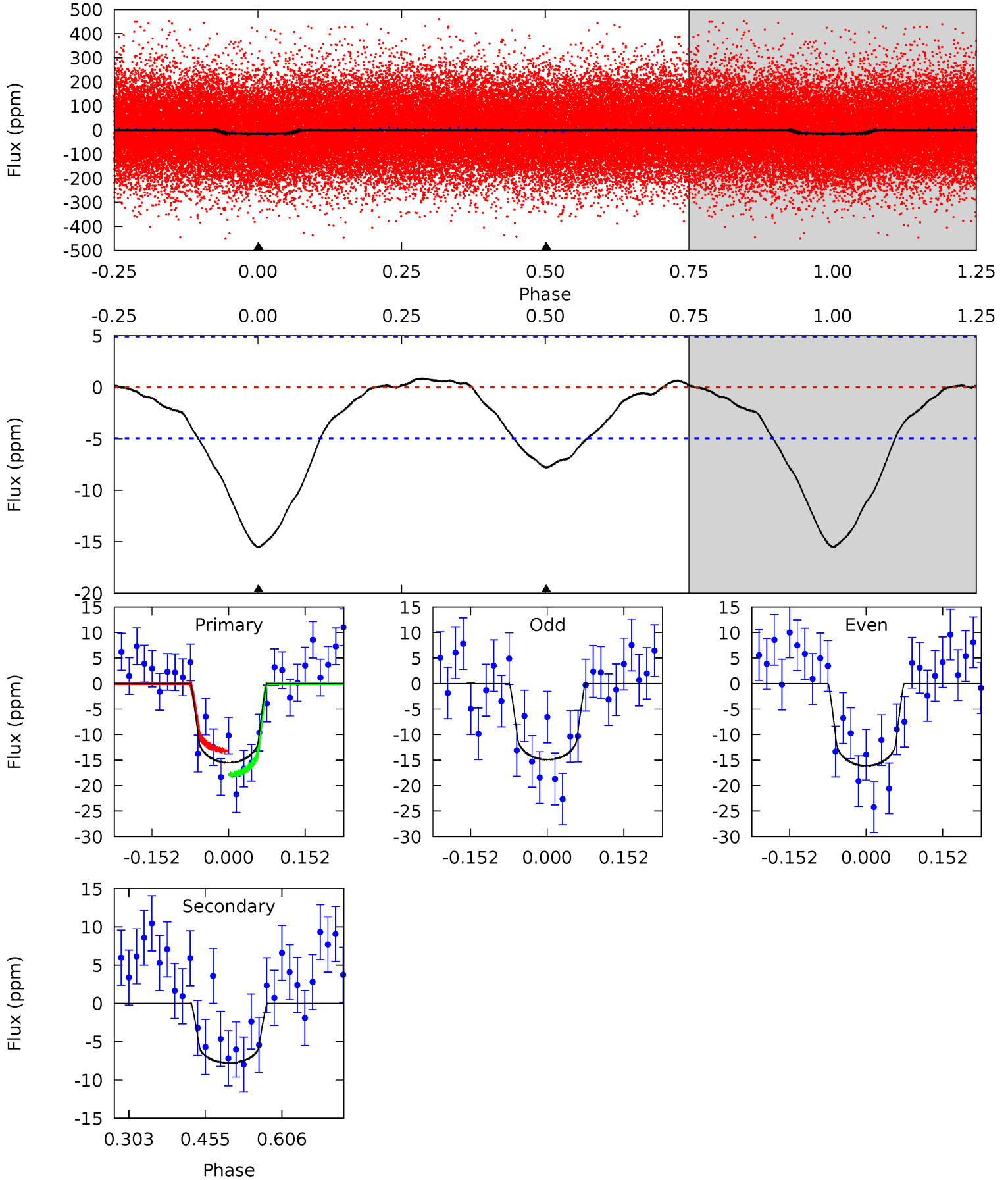
TCE 010661917-01 P= 1.231380 Days $T_0=131.798659$ (BKJD)



DV Model-Shift Uniqueness Test

010661917-01, P = 1.231330 Days, E = 130.593070 Days

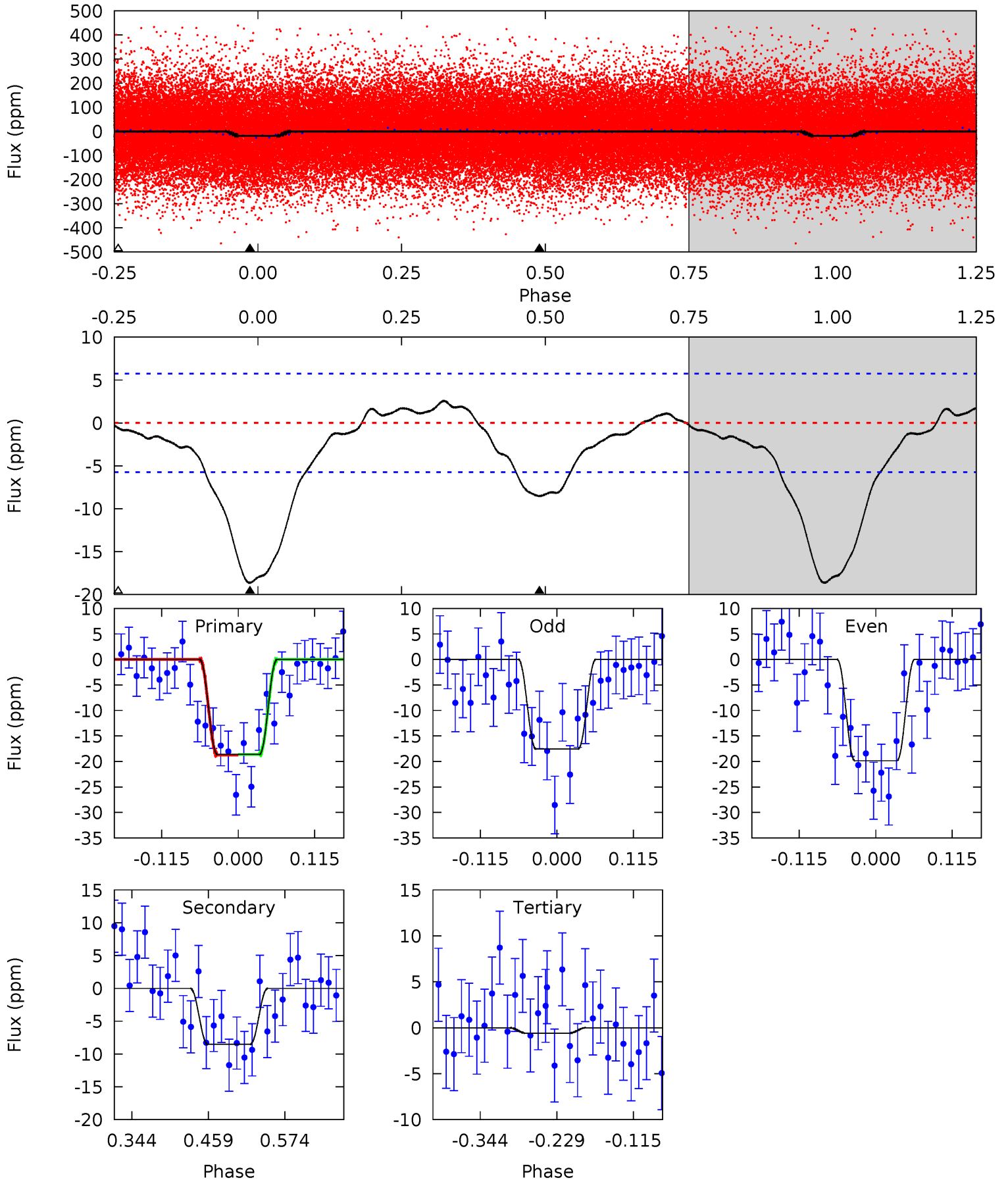
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.1	7.05	0	0	4.48	1.43	0.70	14.1	14.1	7.05	7.05	0.55	0.99	0.05	2.12



Alt Model-Shift Uniqueness Test

010661917-01, P = 1.231380 Days, E = 130.567279 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	6.73	0.47	0	4.54	1.58	1.20	14.2	14.7	6.27	6.73	0.91	0.95	0.12	0.05



Stellar Parameters For KIC 010661917

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6011^{+180}_{-162}	$3.971^{+0.287}_{-0.102}$	$-0.340^{+0.350}_{-0.250}$	$1.730^{+0.363}_{-0.544}$	$1.021^{+0.166}_{-0.150}$	$0.278^{+0.506}_{-0.100}$
	+3%/-3%	+7%/-3%	+103%/-74%	+21%/-31%	+16%/-15%	+182%/-36%
Source	PHO1	FLK73	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 010661917-01 / KOI 4901.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-8 ± 1	$0.78^{+0.30}_{-0.29}$	3185^{+214}_{-269}	4833^{+1039}_{-625}	$3.717^{+5.648}_{-1.859}$
Alt.	-9 ± 1	$0.88^{+0.32}_{-0.29}$	3193^{+191}_{-268}	4668^{+887}_{-554}	$3.054^{+3.905}_{-1.409}$

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 $A_{obs} \gg 1.0$

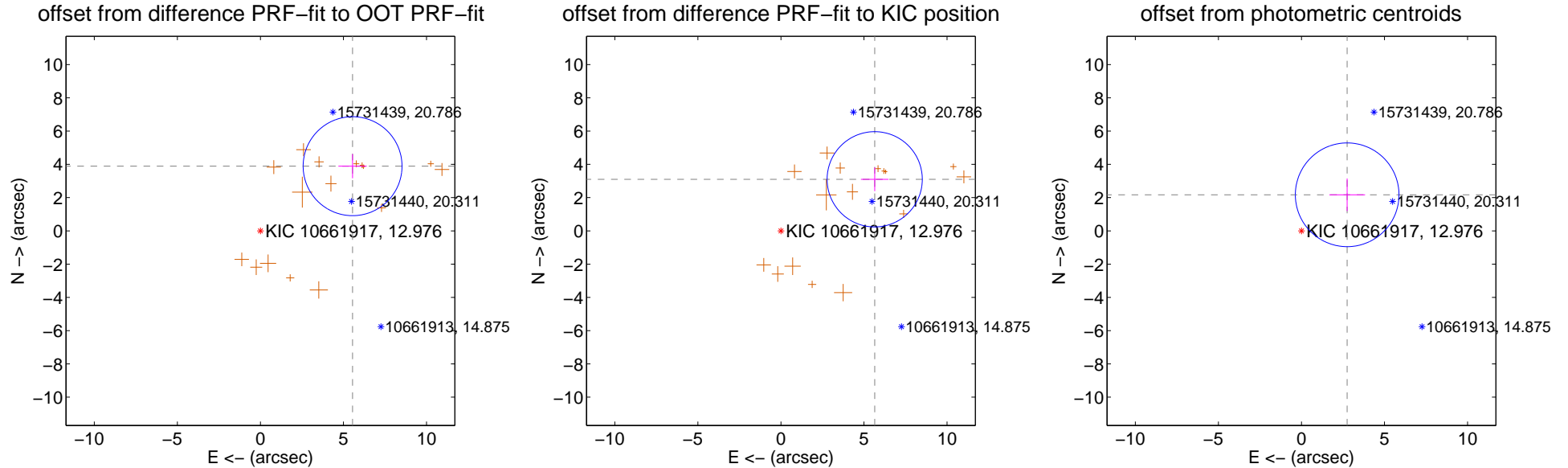
DV Centroid Data

Supplemental centroid analysis for 010661917-01. Kepler magnitude: 12.98. Transit SNR 10.61

There are 0 quarters with good PRF difference image offsets

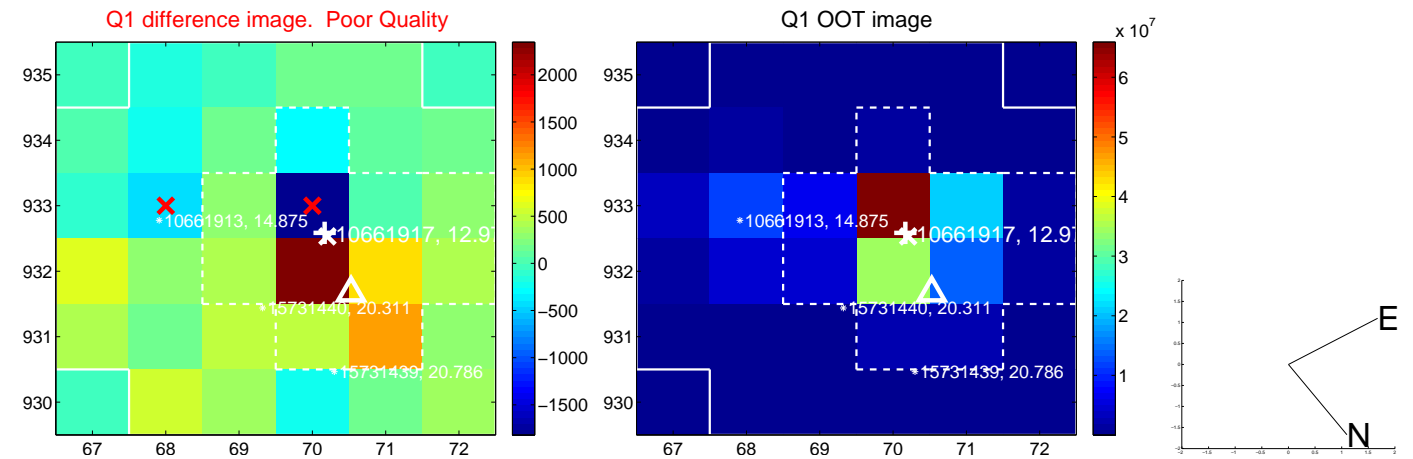
The direct PRF centroid is offset from the target star catalog position by about 0.45 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.776 ± 0.992	6.83	-5.548 ± 0.853	3.890 ± 0.724
PRF-fit source offset from KIC position	6.440 ± 0.955	6.74	-5.644 ± 0.831	3.101 ± 0.711
photometric centroid source offset	3.50 ± 1.04	3.37	-2.75 ± 1.08	2.17 ± 0.98

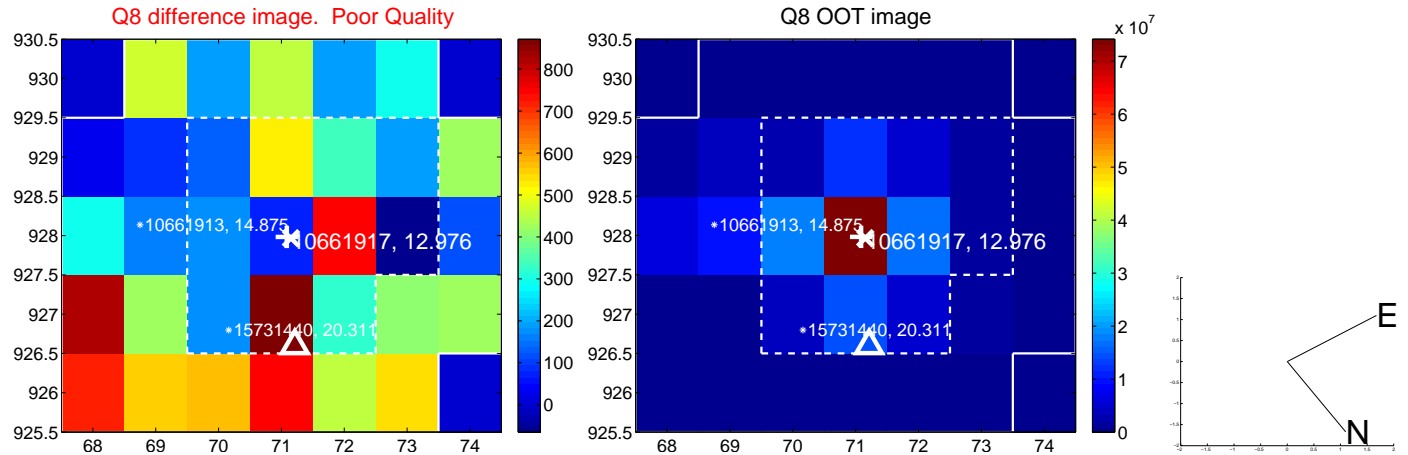
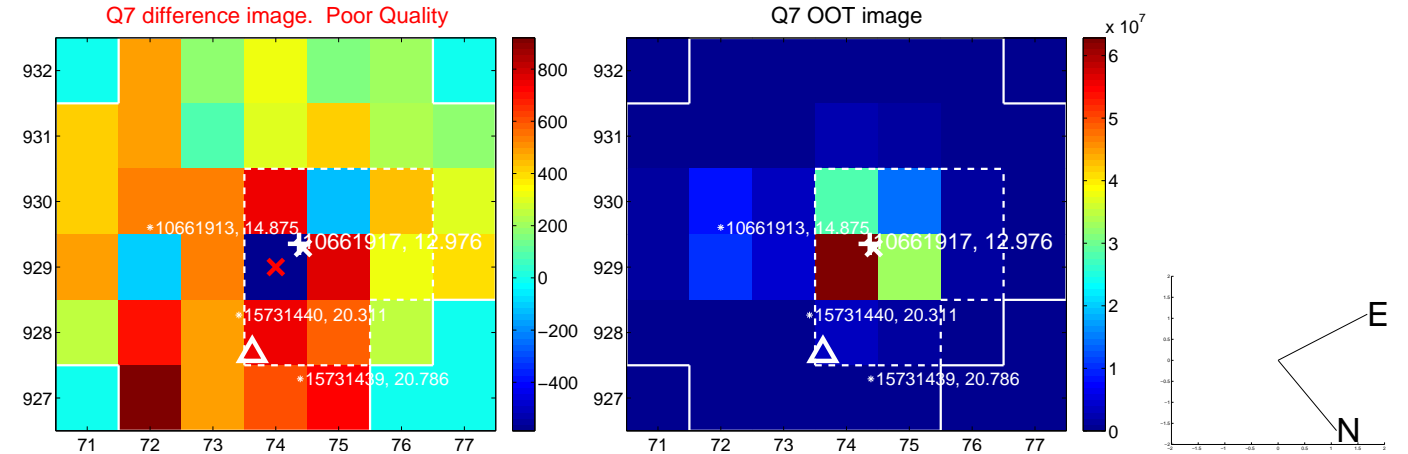
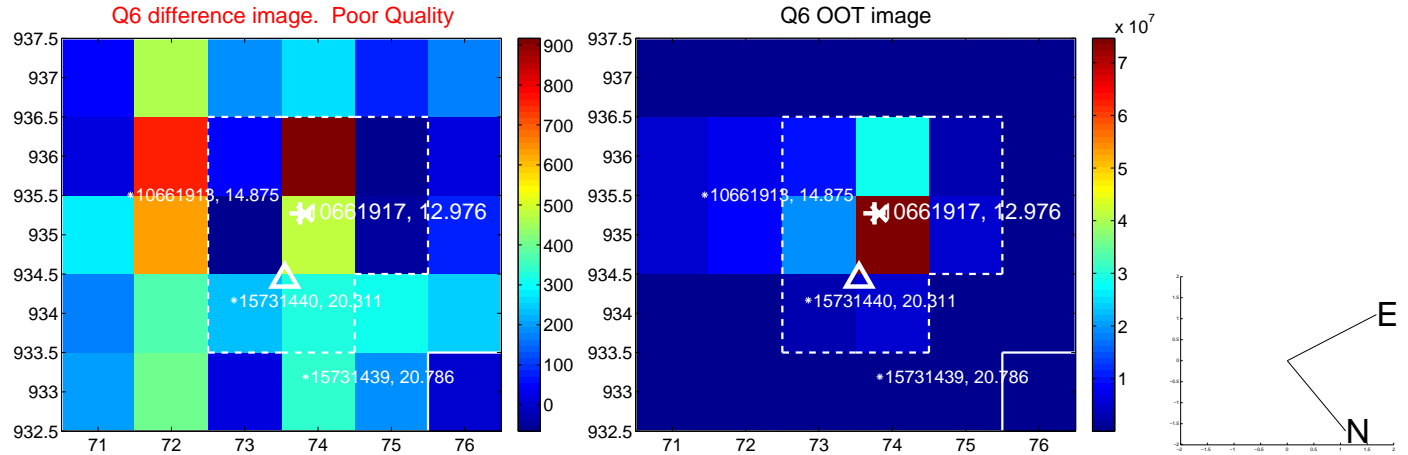
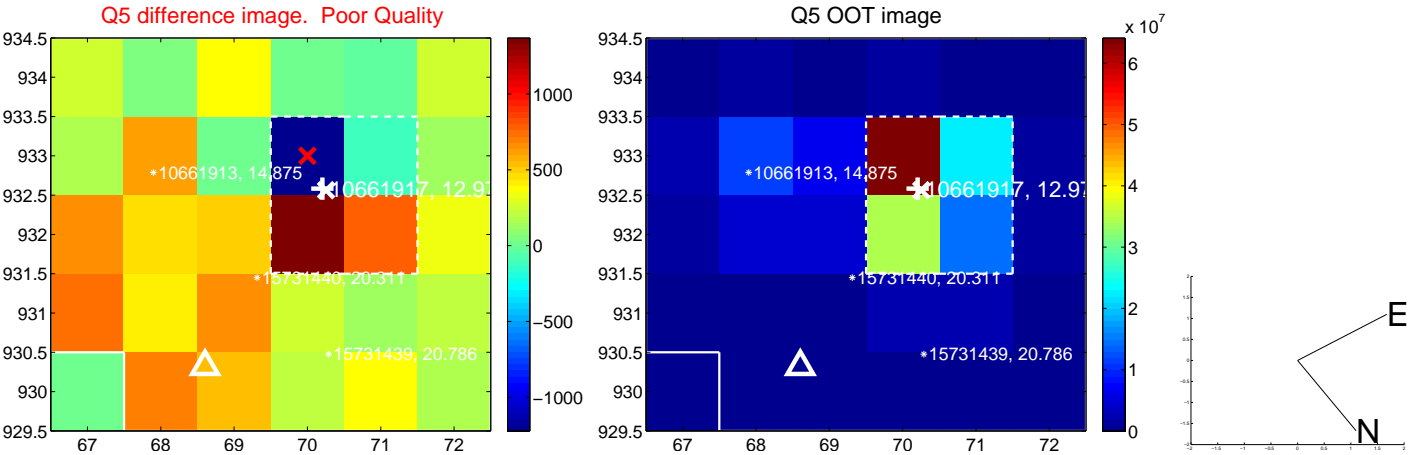


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

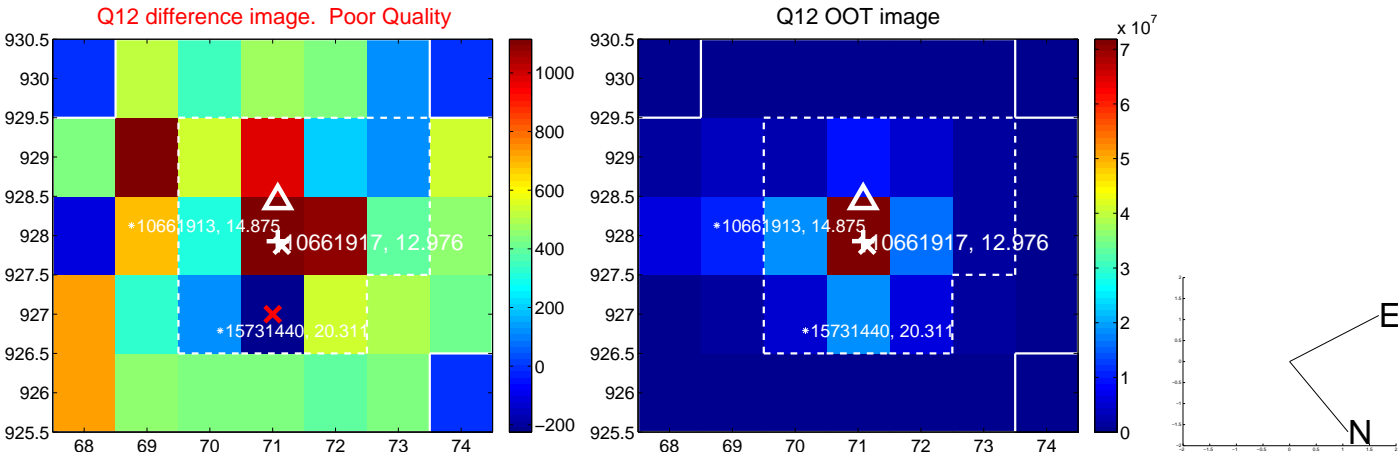
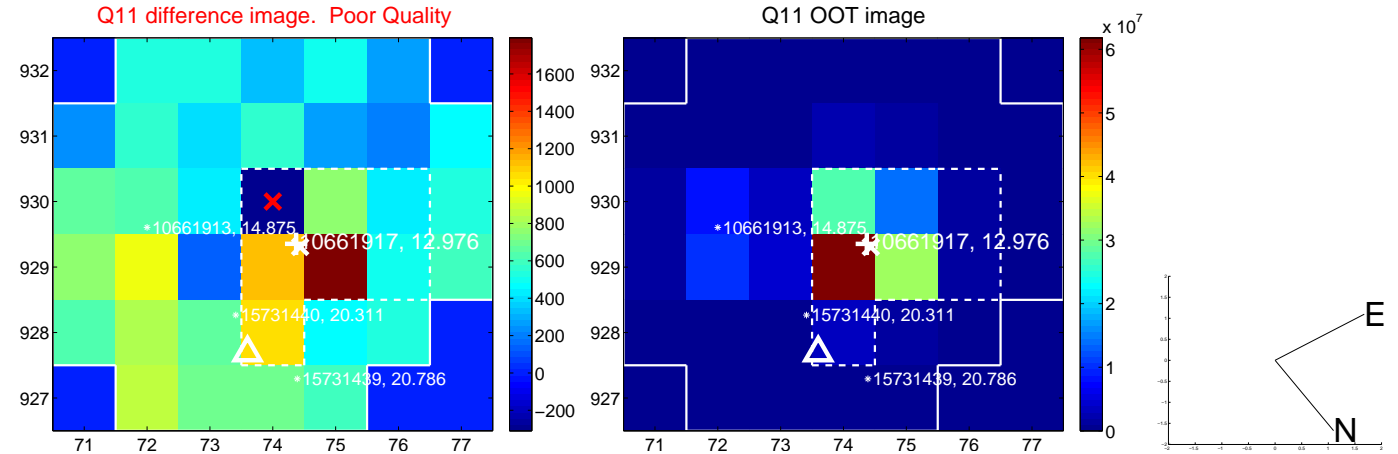
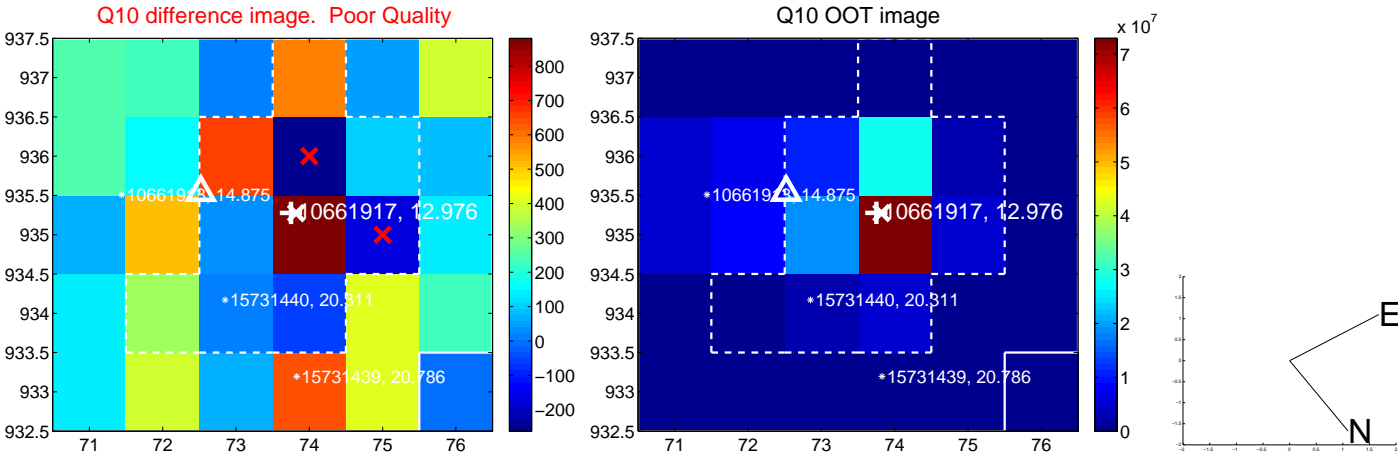
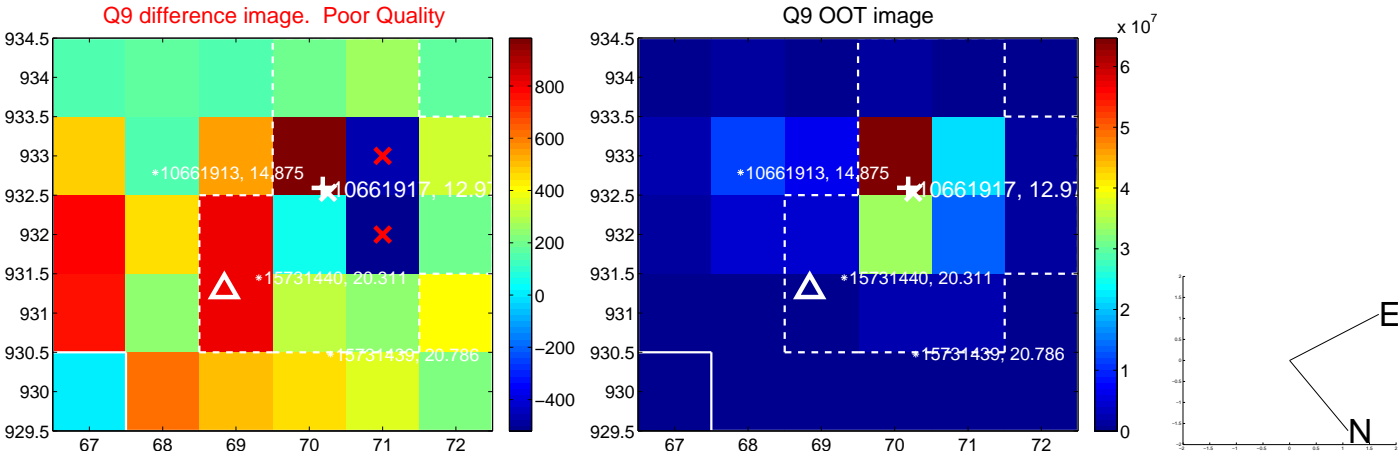
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



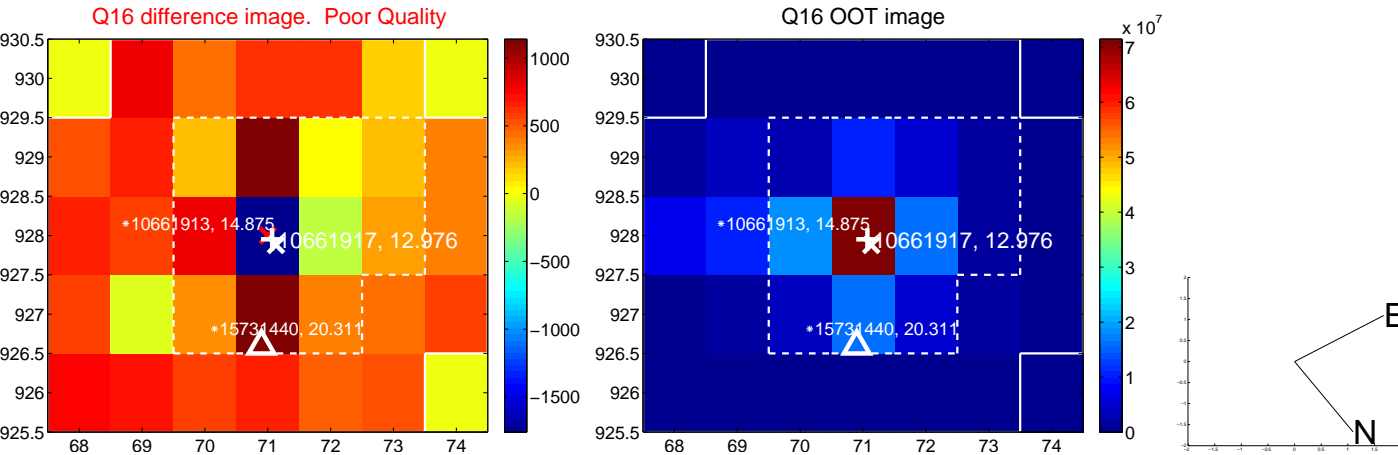
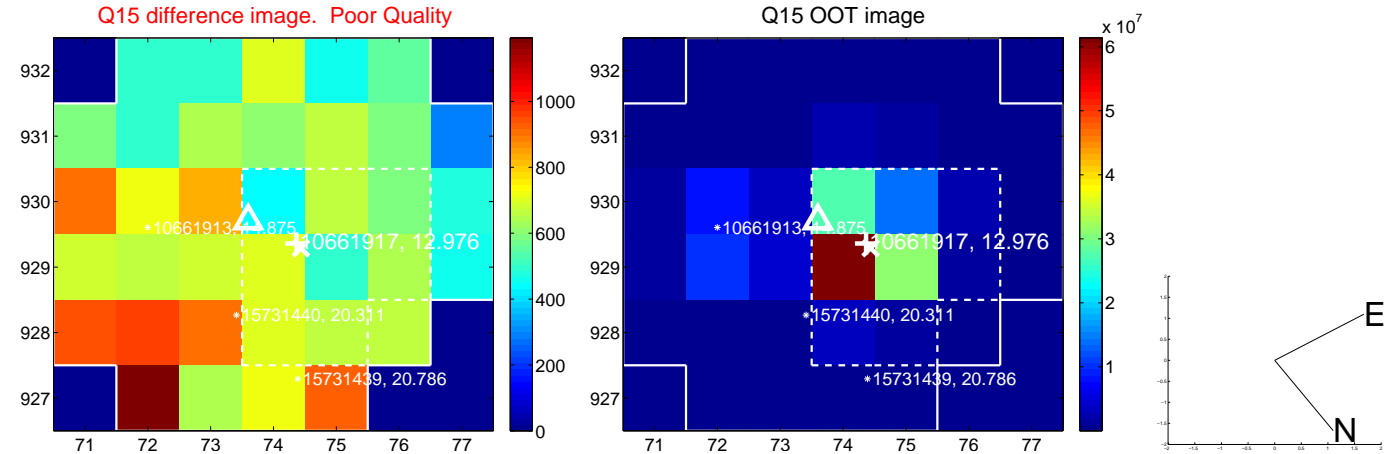
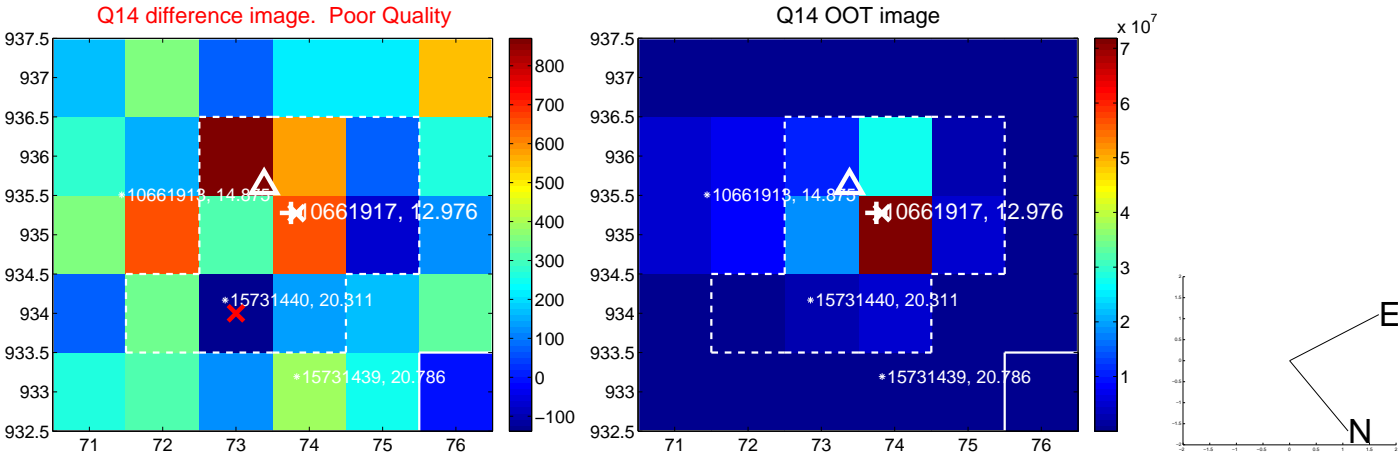
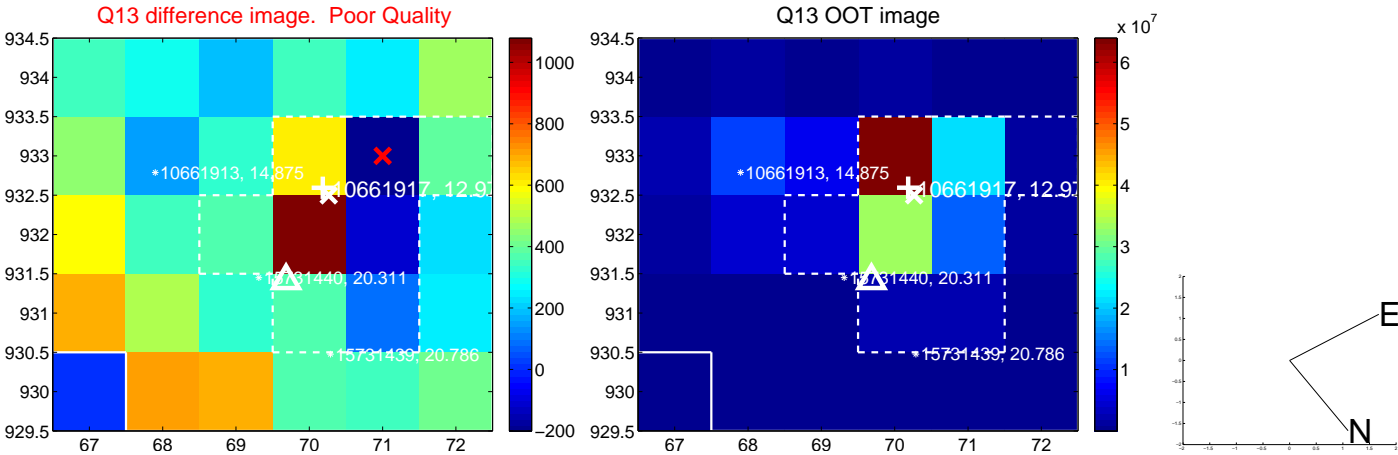
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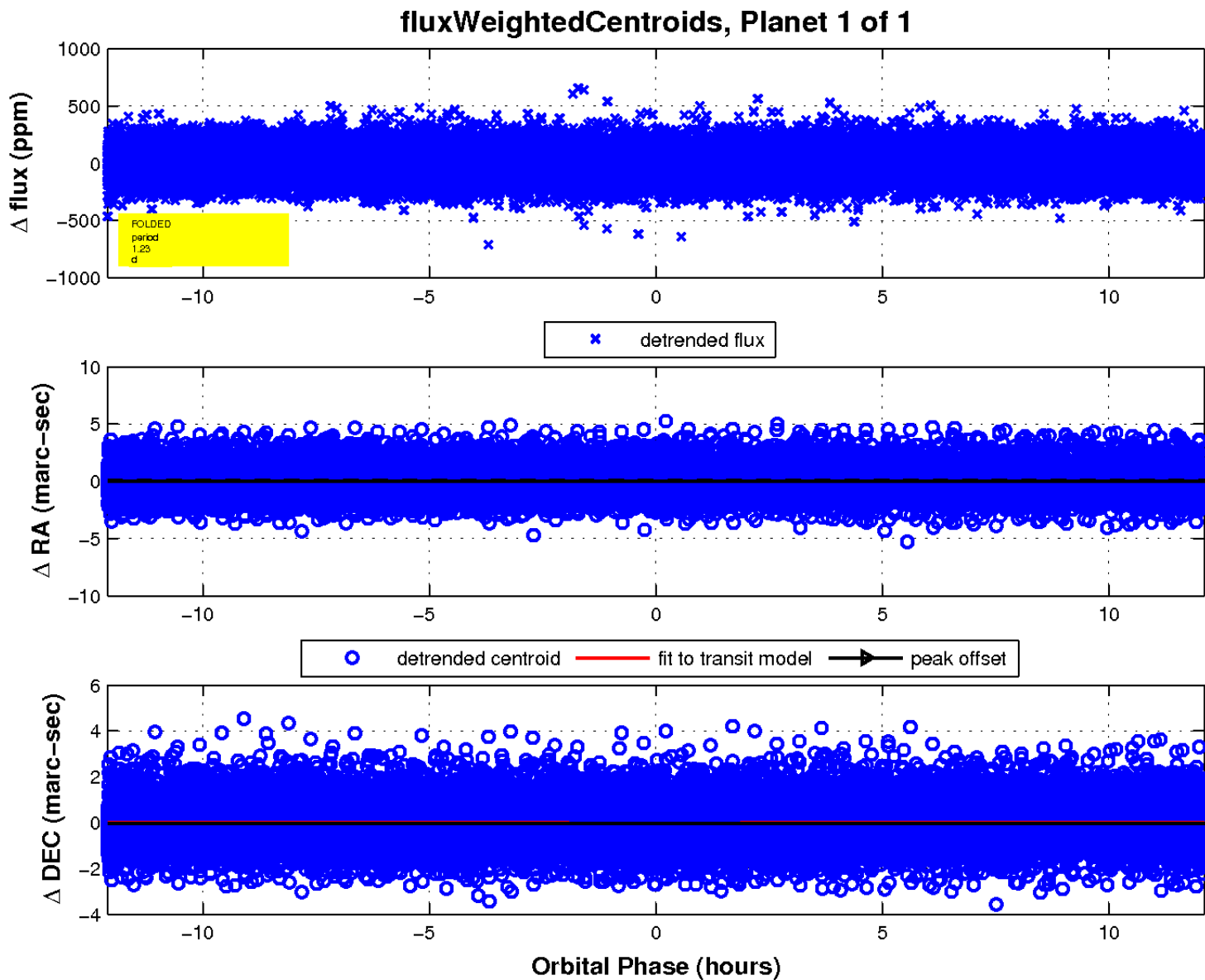
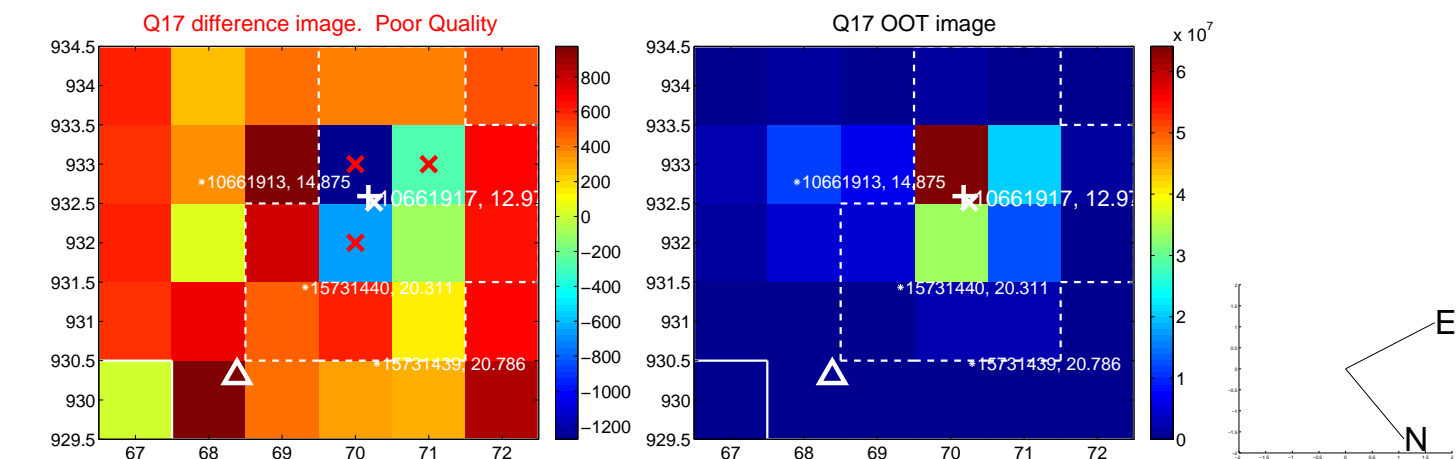
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UKIRT Image

Declination

