

KIC 006311891

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})
006311891-01	OBS	4627.01	7.517624	137.578960	163.3	2.487	9.0	10.2	0.92	5525	1.43	129.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006311891-01	OBS	PC	0.94	0	0	0	0	CENT_KIC_POS

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

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

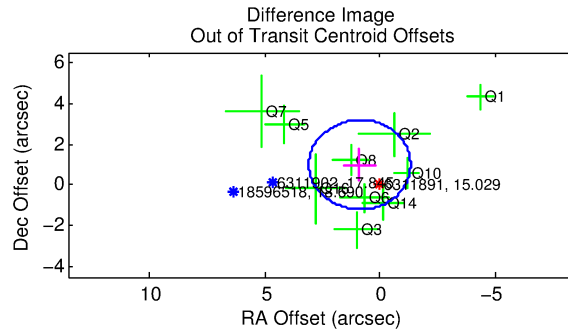
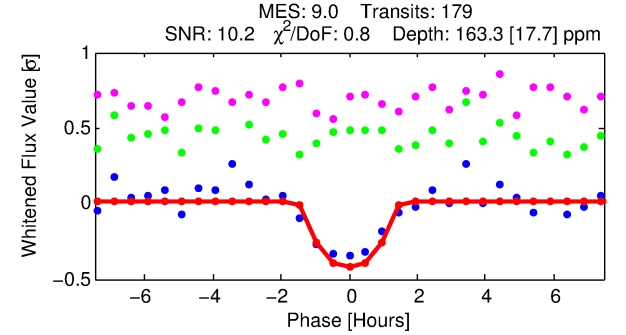
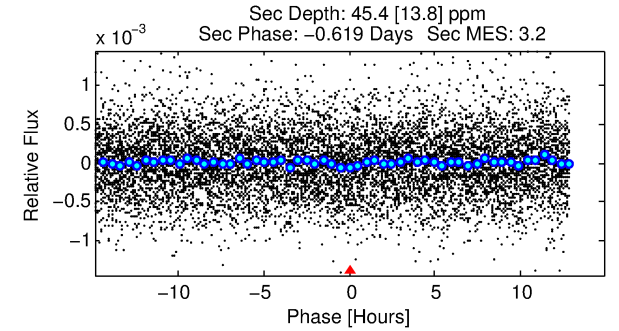
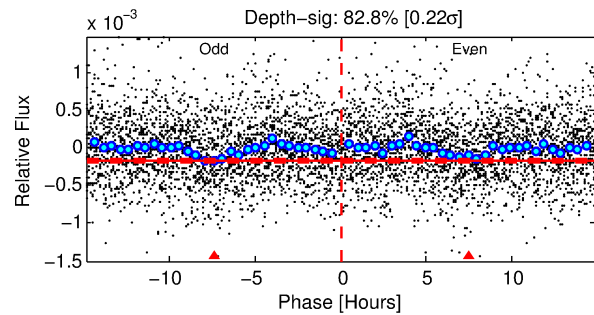
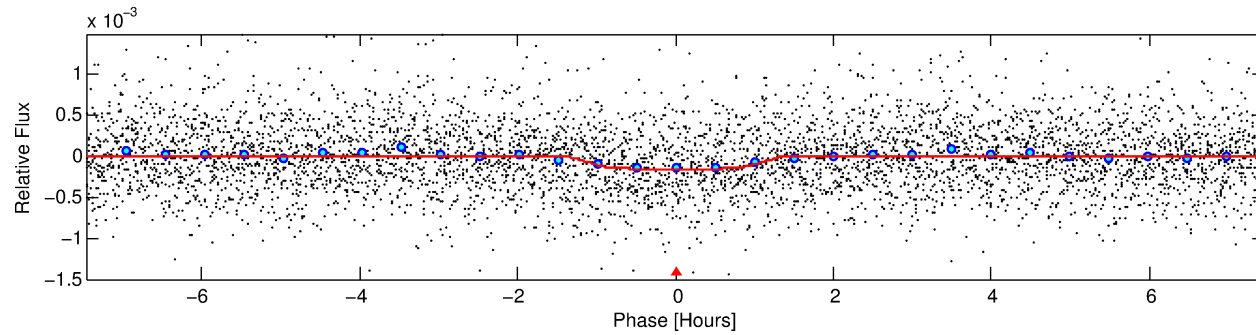
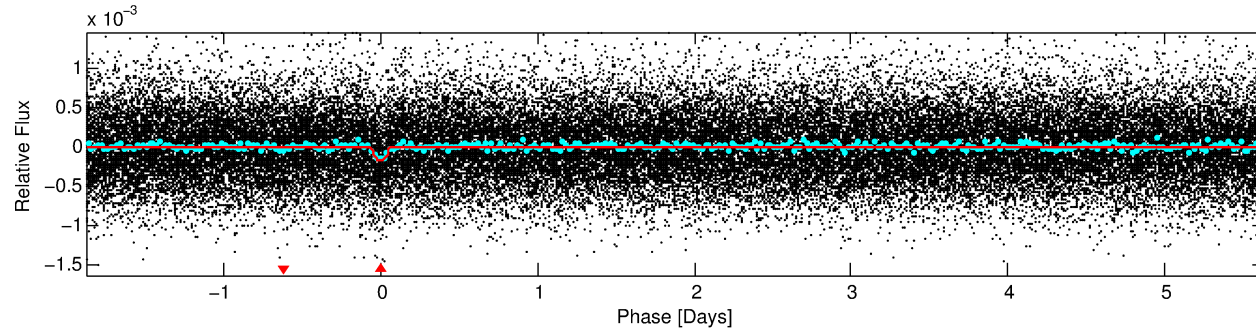
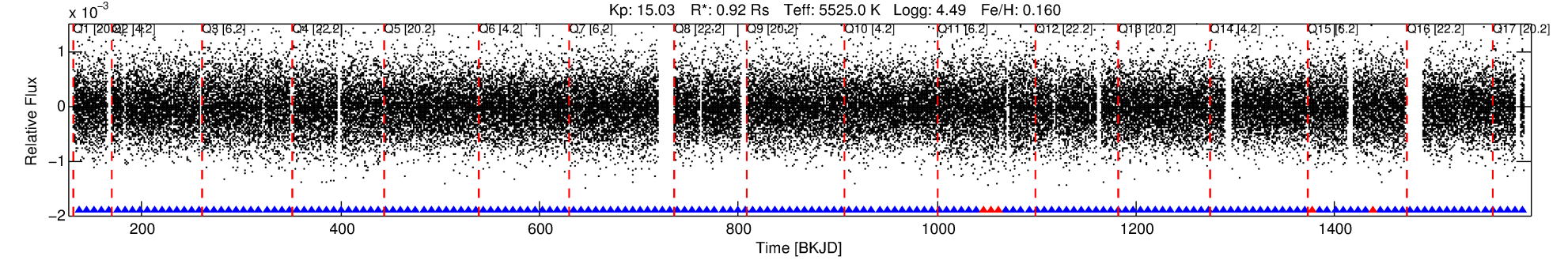
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006311891-01

No Significant Match Found

DV One-Page Summary

KIC: 6311891 Candidate: 1 of 1 Period: 7.518 d
KOI: K04627.01 Corr: 0.845



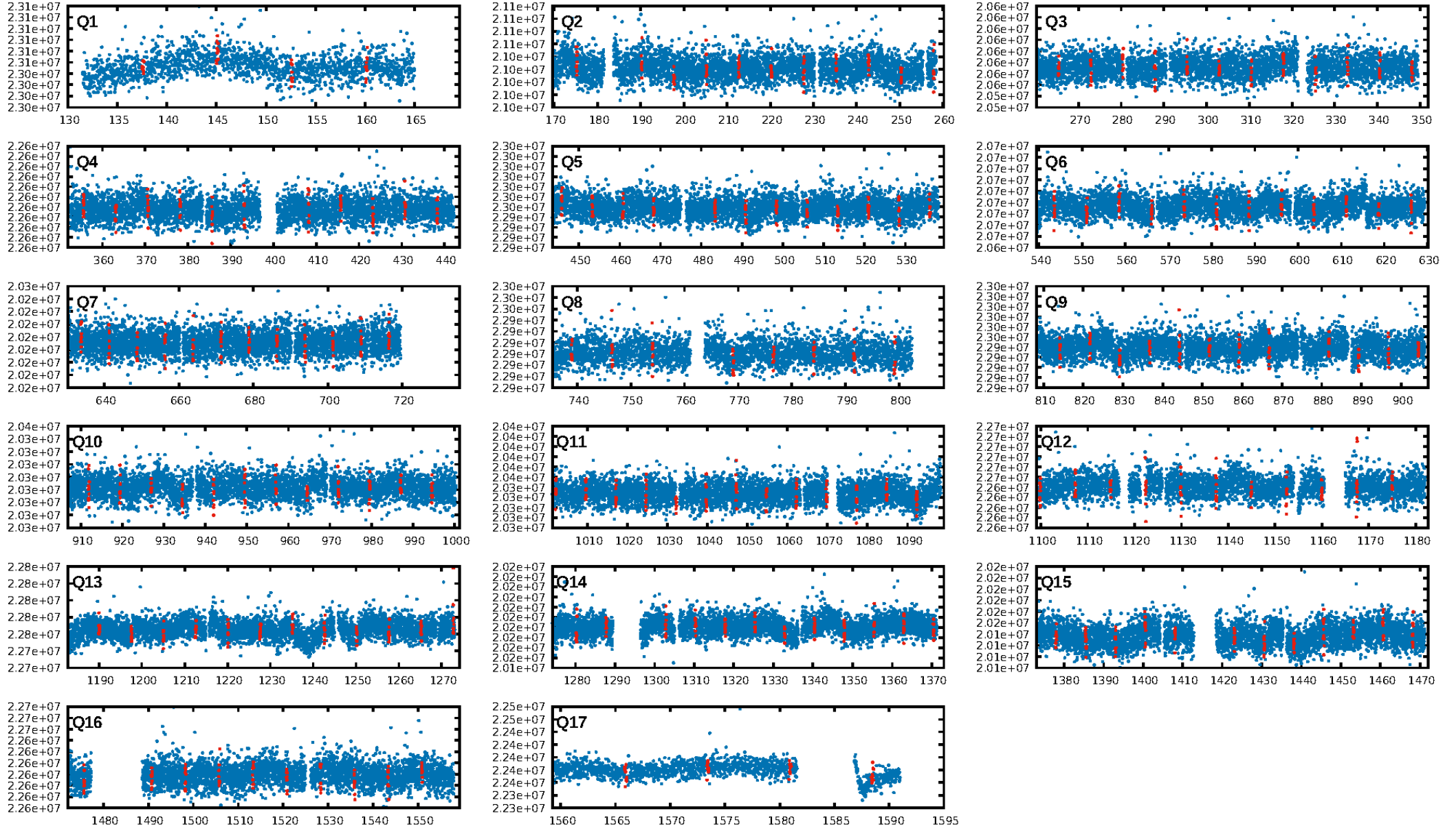
DV Fit Results:

Period = 7.51762 [0.00005] d
Epoch = 137.5790 [0.0056] BKJD
Rp/R* = 0.0142 [0.0104]
a/R* = 10.59 [34.55]
b = 0.91 [0.67]
Seff = 129.89 [24.69]
Teq = 861 [41] K
Rp = 1.43 [1.06] Re
a = 0.0740 [0.0084] AU
Ag = 67.37 [101.90] [0.65 σ]
Teffp = 3813 [1433] K [2.06 σ]

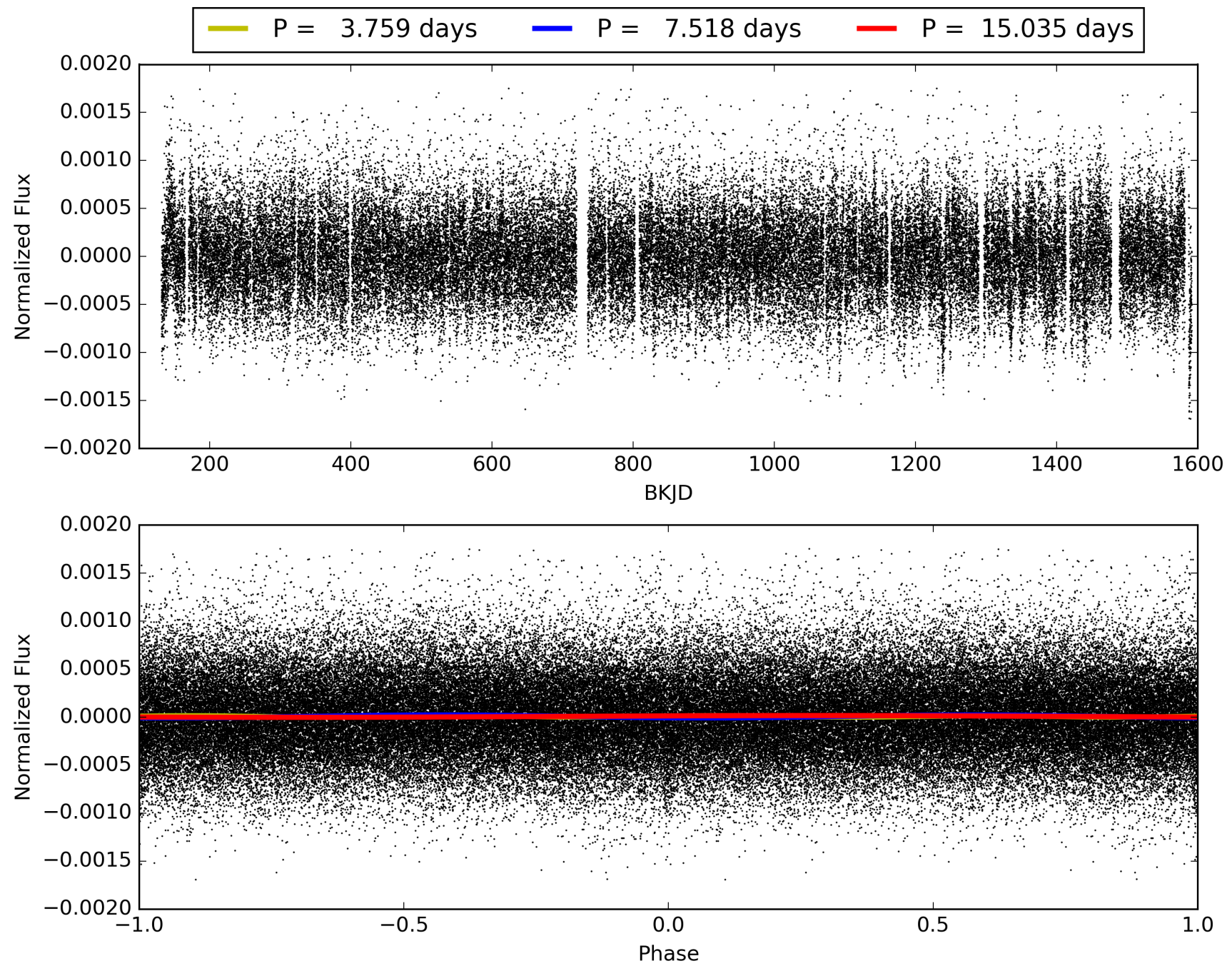
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.92e-18
RollingBand-fgt: 0.97 [166/171]
GhostDiagnostic-chr: 7.022
Centroid-sig: 42.3%
Centroid-so: 1.052 arcsec [0.72 σ]
OotOffset-rm: 1.332 arcsec [1.82 σ]
OotOffset-st: 4/2/2/2 [10]
KicOffset-rm: 1.023 arcsec [1.40 σ]
KicOffset-st: 4/2/2/2 [10]
DiffImageQuality-fgm: 0.50 [5/10]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006311891-01, PDC Light Curves

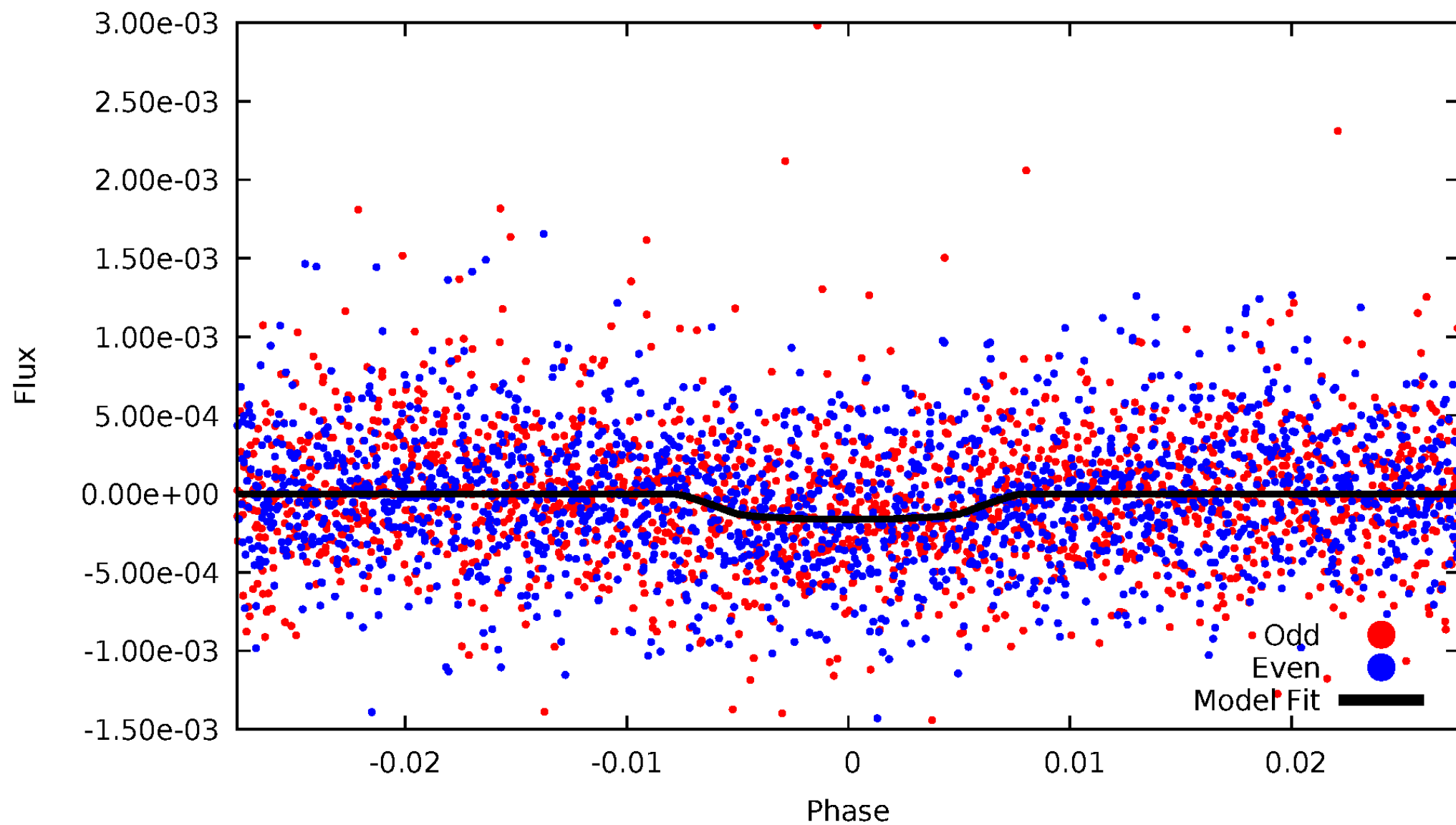


TCE 006311891-01



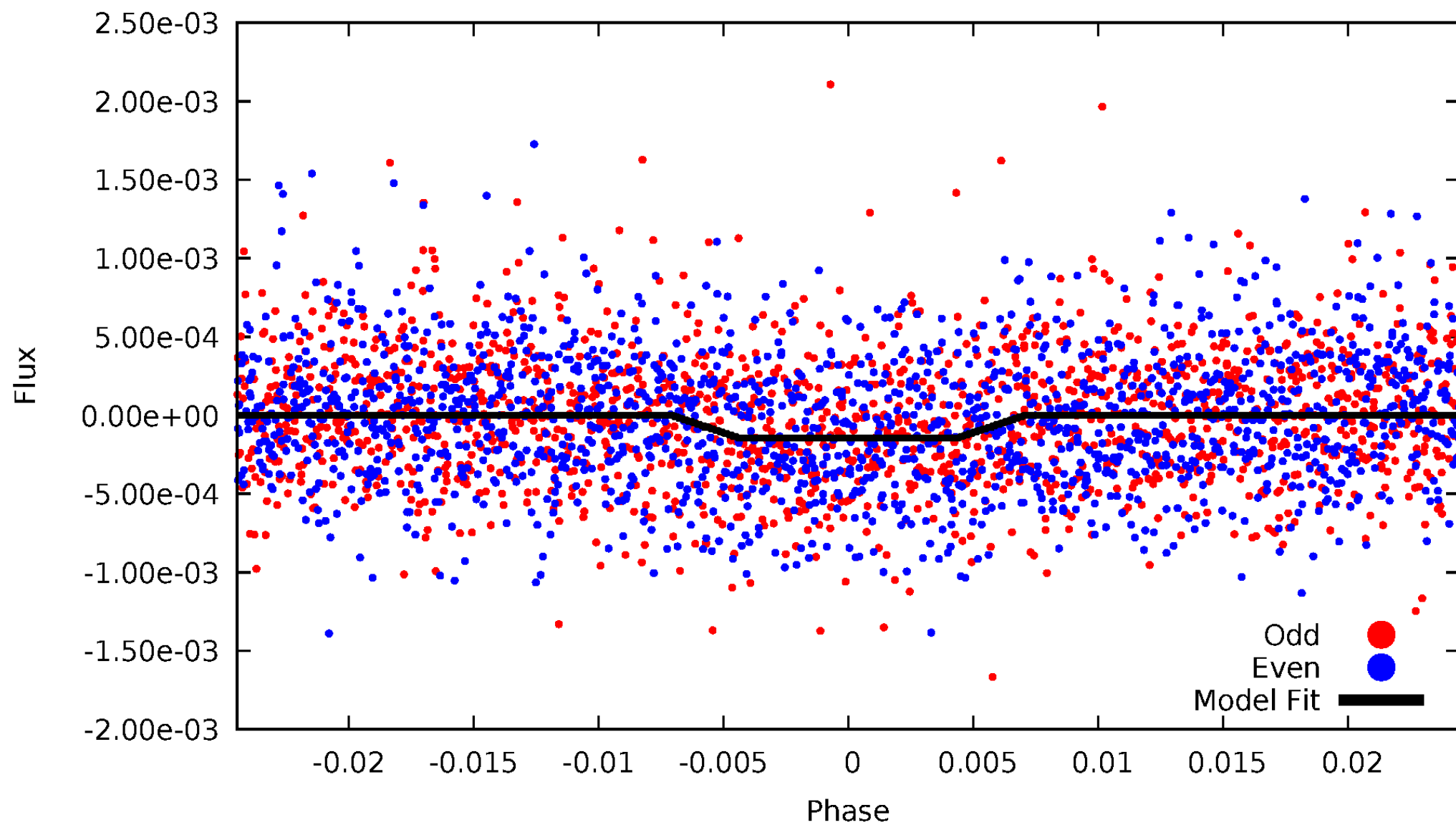
DV Odd/Even

TCE 006311891-01



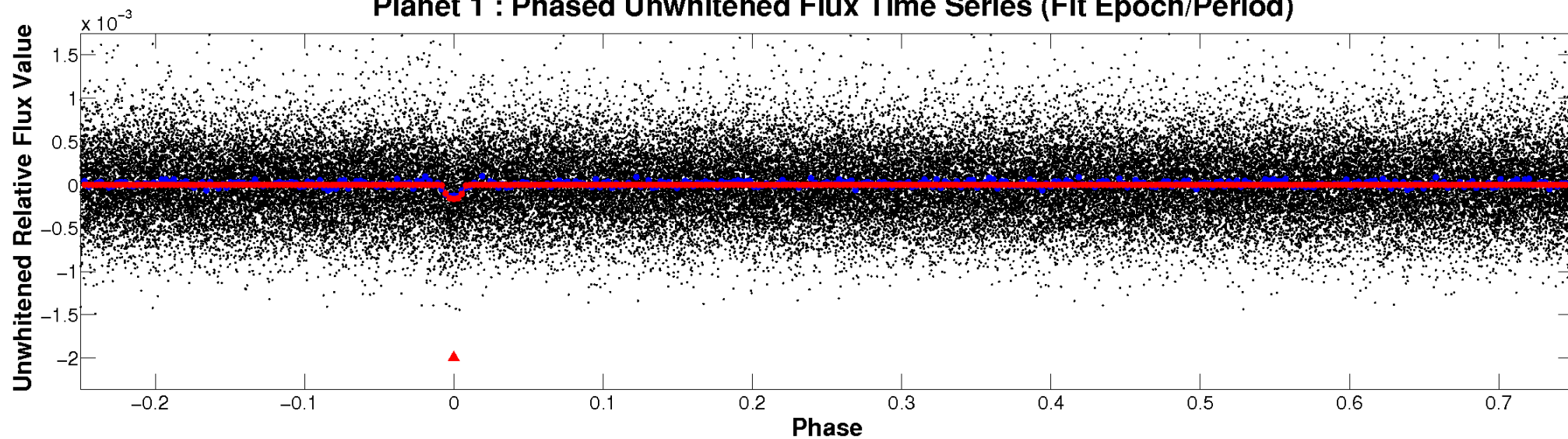
ALT Odd/Even

TCE 006311891-01

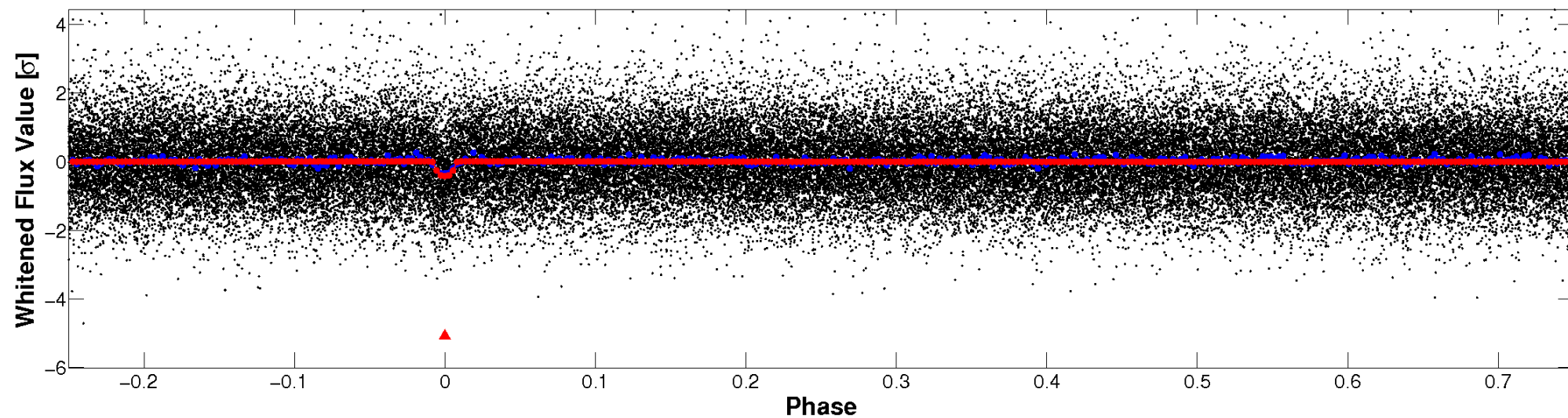


Non-Whitened Vs. Whitened Light Curve

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

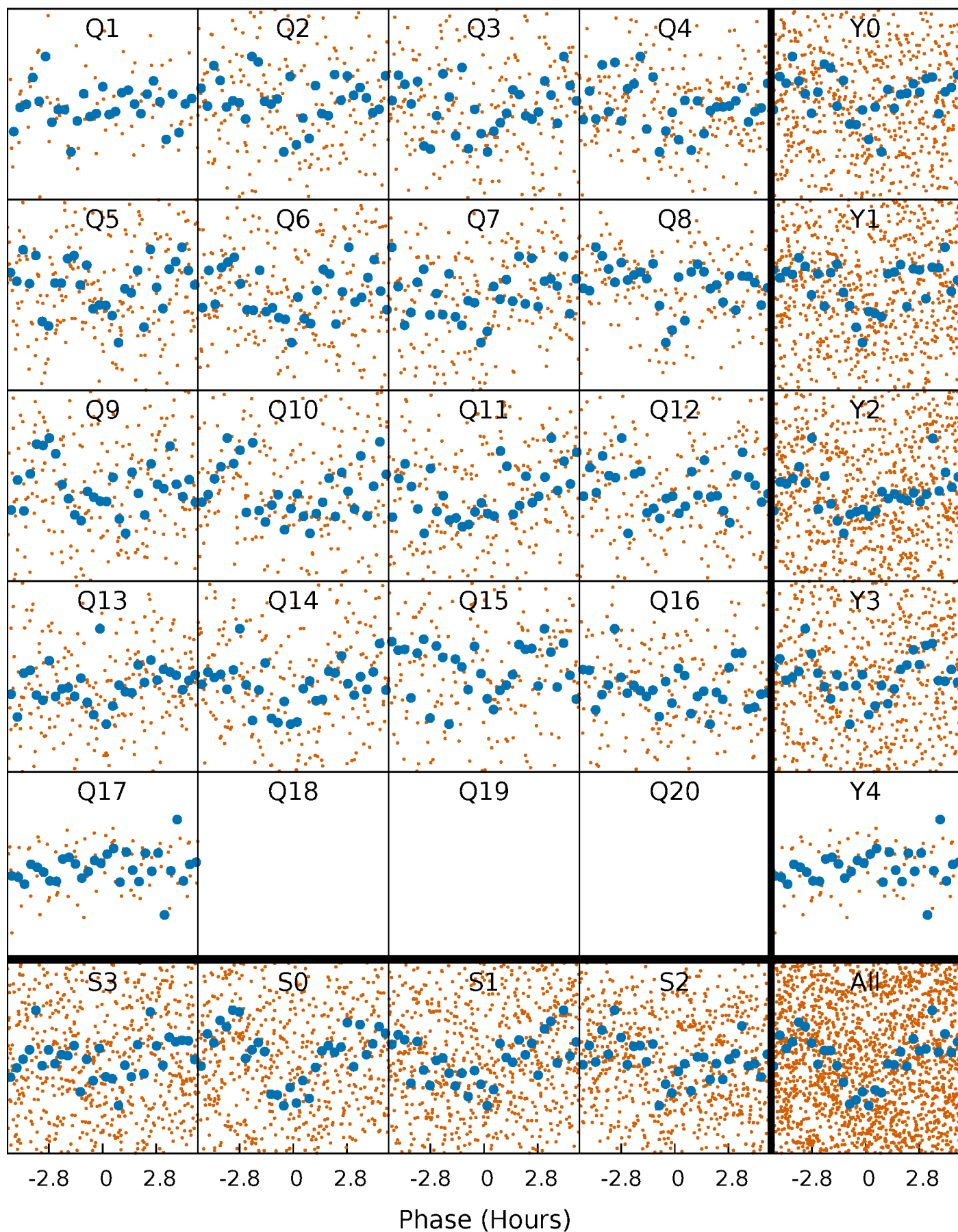


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



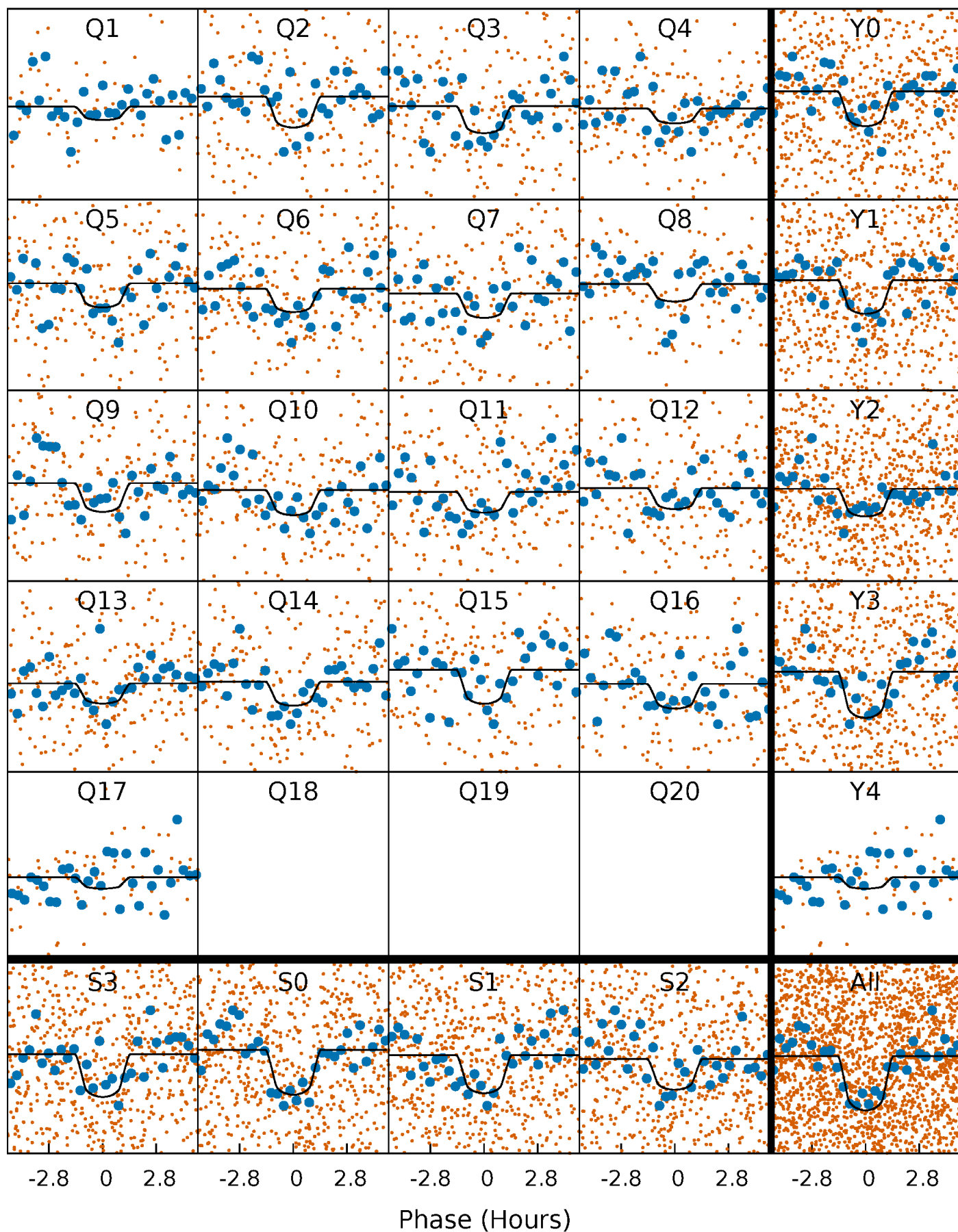
PDC Quarter-Phased Transit Curves

TCE 006311891-01 P= 7.517624 Days $T_0=137.578960$ (BKJD)



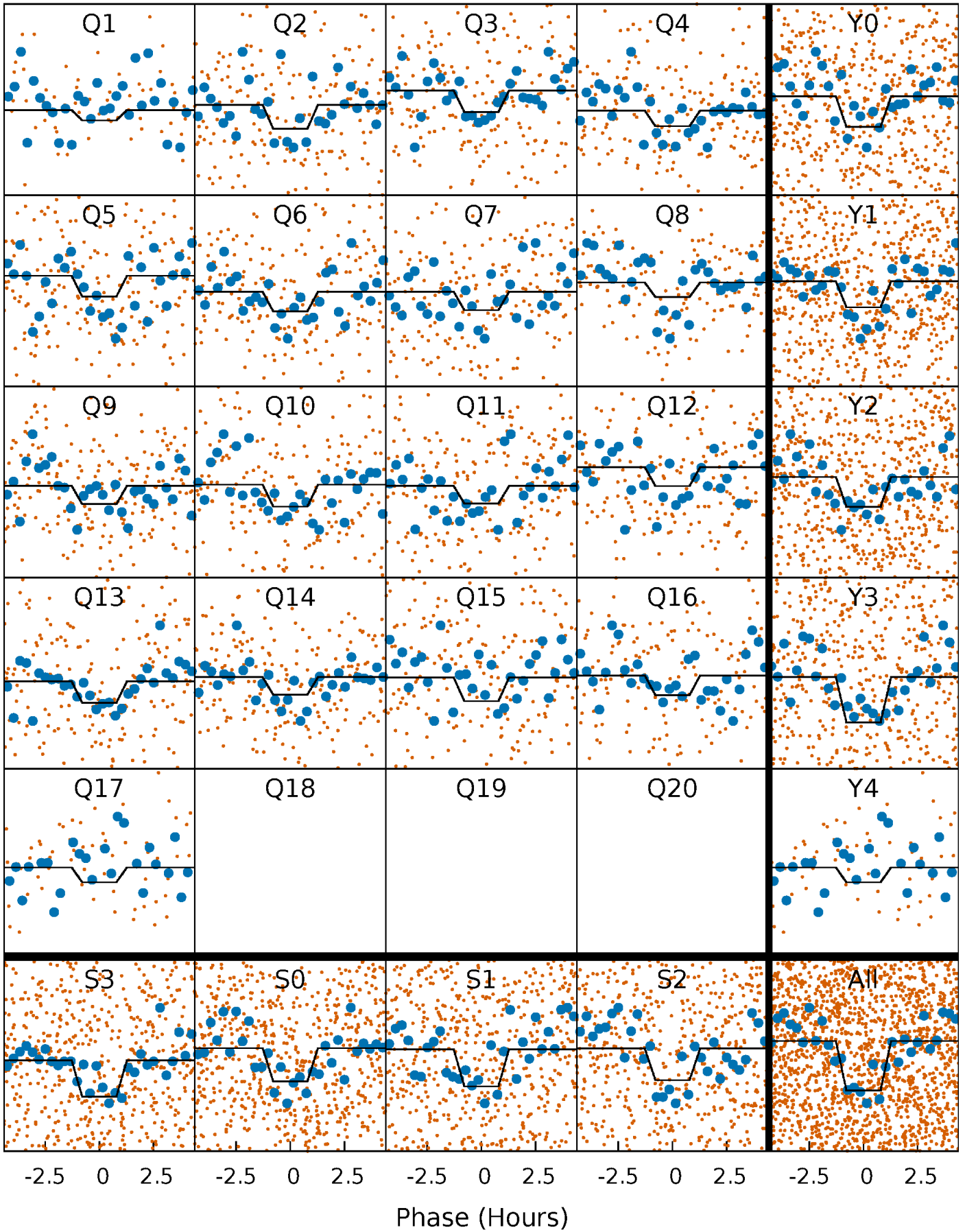
DV Quarter-Phased Transit Curves

TCE 006311891-01 P= 7.517624 Days $T_0=137.578960$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

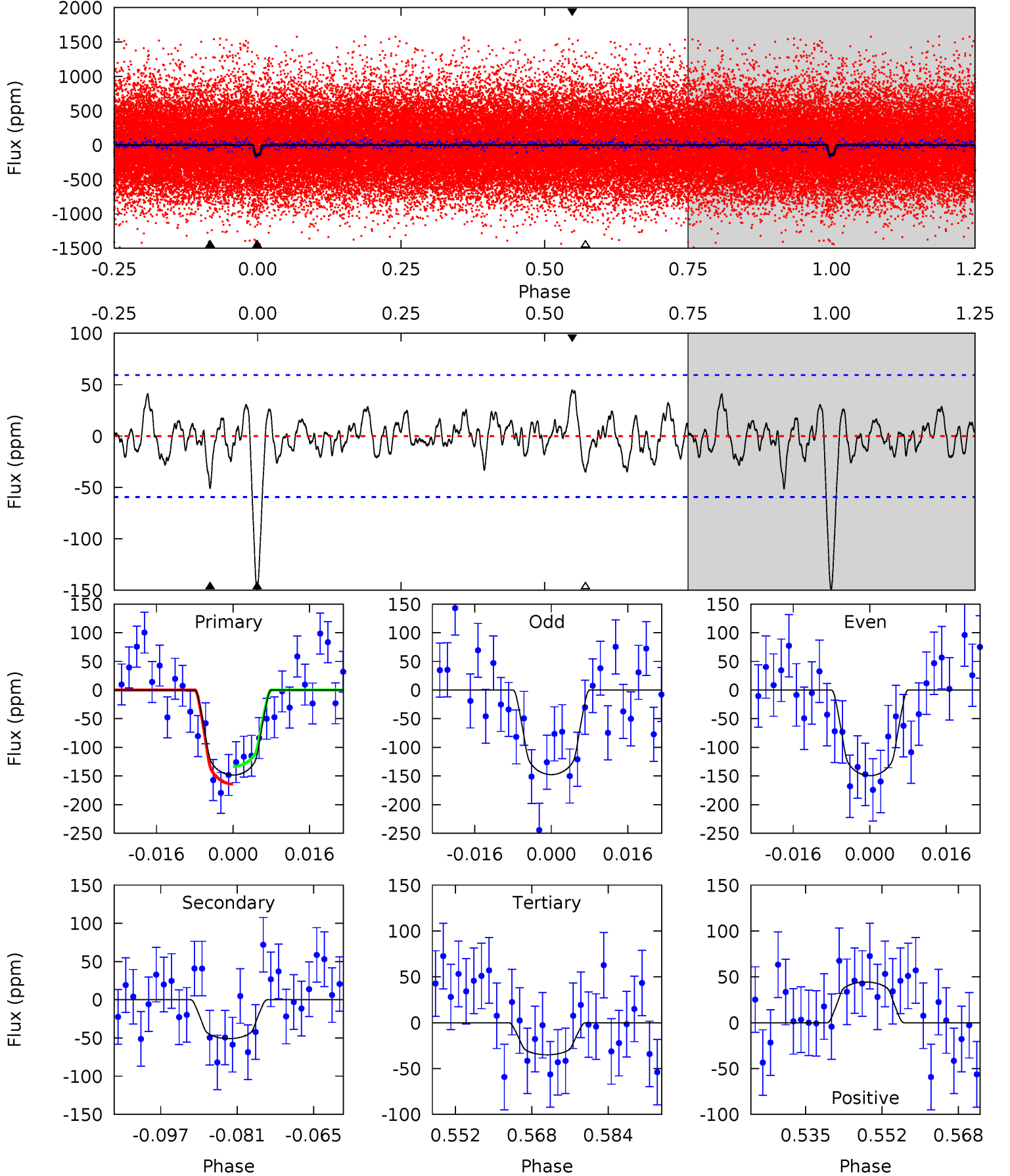
TCE 006311891-01 P= 7.517455 Days $T_0=137.586062$ (BKJD)



DV Model-Shift Uniqueness Test

006311891-01, P = 7.517624 Days, E = 130.061336 Days

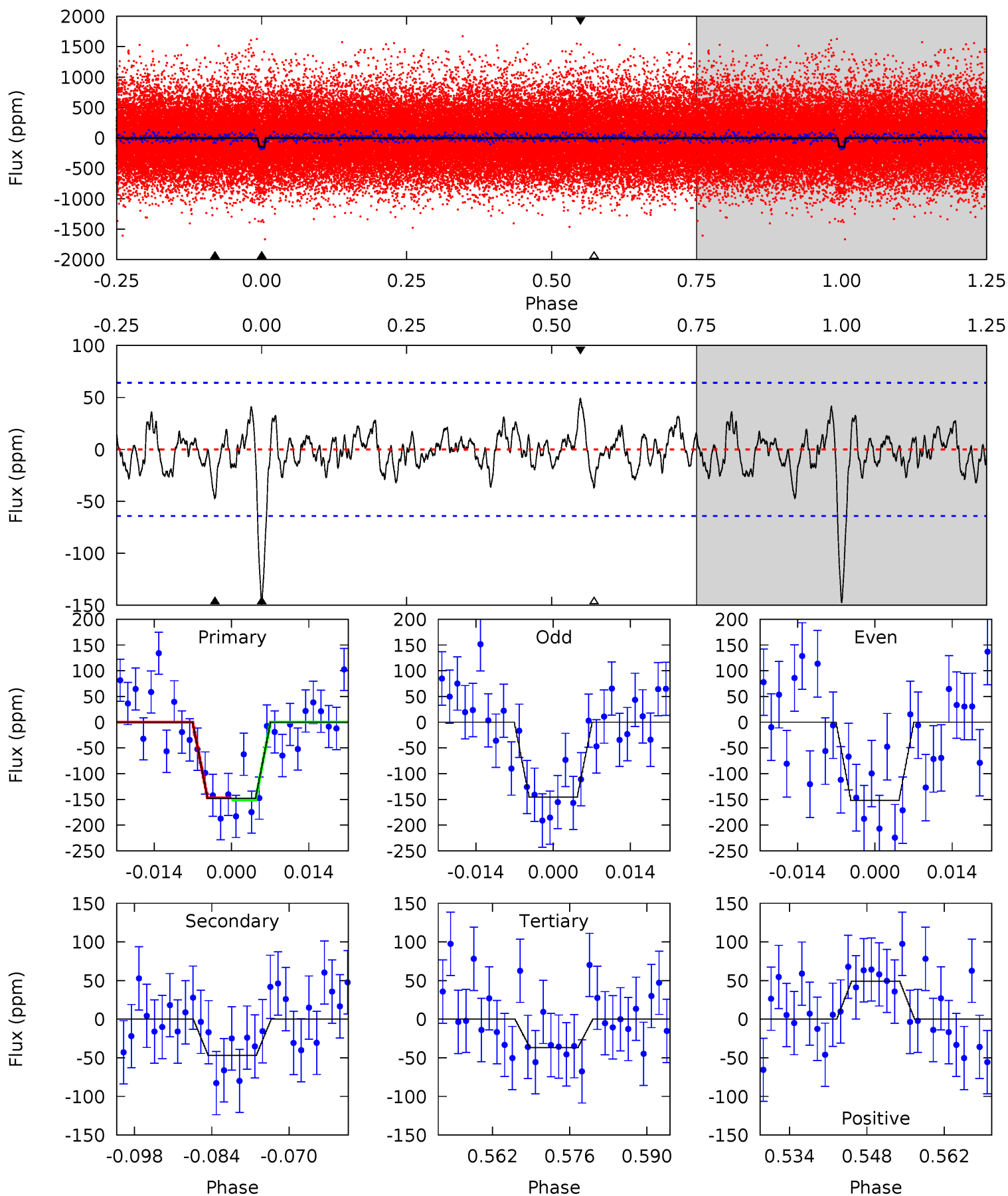
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	4.23	2.91	3.69	4.93	2.40	1.20	9.44	8.66	1.32	0.54	0.08	0.91	0.23	1.29



Alt Model-Shift Uniqueness Test

006311891-01, P = 7.517455 Days, E = 130.068607 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	3.64	2.84	3.81	4.96	2.46	1.13	8.59	7.62	0.80	-0.17	0.25	0.87	0.25	0.16



Stellar Parameters For KIC 006311891

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5525^{+74}_{-83}	$4.488^{+0.045}_{-0.105}$	$0.160^{+0.150}_{-0.150}$	$0.923^{+0.112}_{-0.056}$	$0.957^{+0.044}_{-0.059}$	$1.712^{+0.294}_{-0.529}$
	+1%/-2%	+1%/-2%	+94%/-94%	+12%/-6%	+5%/-6%	+17%/-31%
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 006311891-01 / KOI 4627.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-51 ± 12	$1.52^{+1.06}_{-0.91}$	1210^{+42}_{-31}	4090^{+1919}_{-699}	65^{+349}_{-43}
Alt.	-47 ± 13	$1.47^{+0.97}_{-0.93}$	1210^{+40}_{-31}	4075^{+2064}_{-673}	62^{+387}_{-40}

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 $A_{\text{obs}} \gg 1.0$

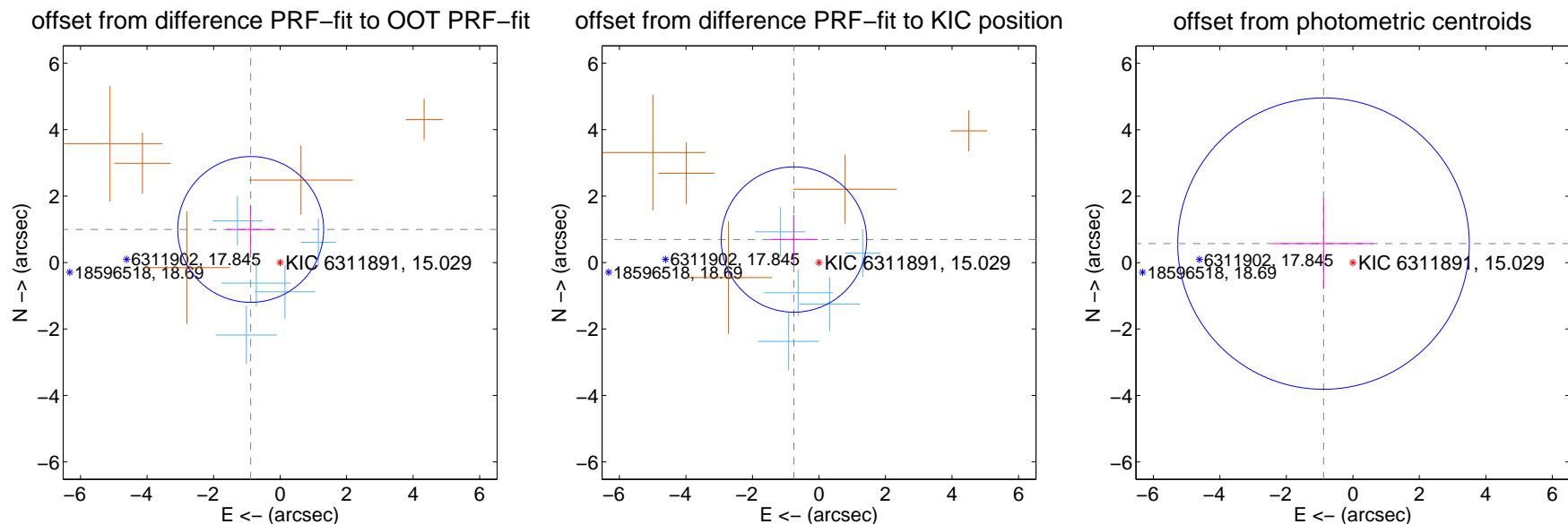
DV Centroid Data

Supplemental centroid analysis for 006311891-01. Kepler magnitude: 15.03. Transit SNR 10.19

There are 5 quarters with good PRF difference image offsets

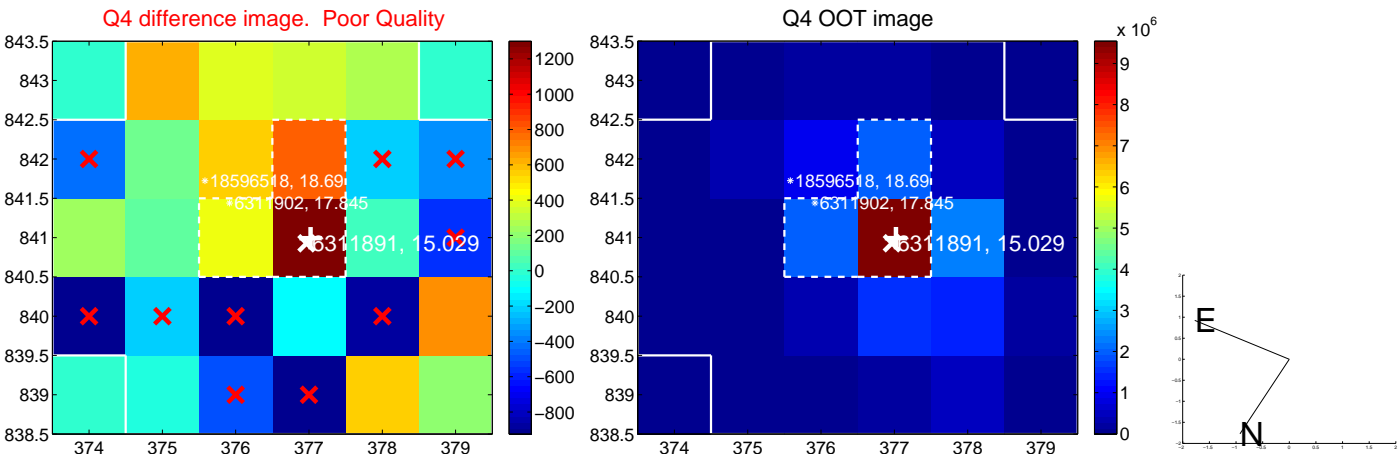
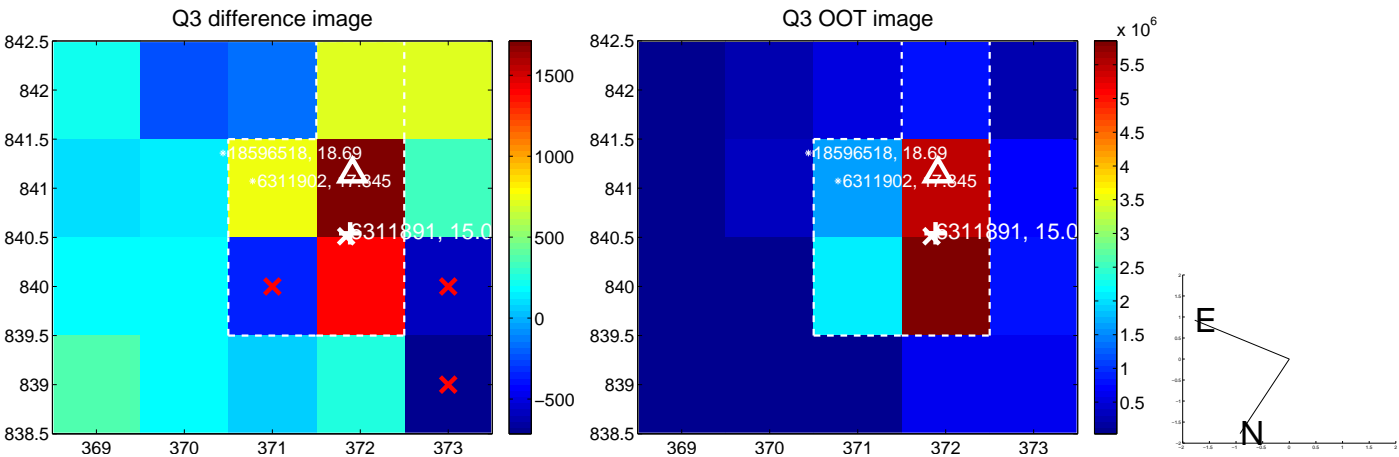
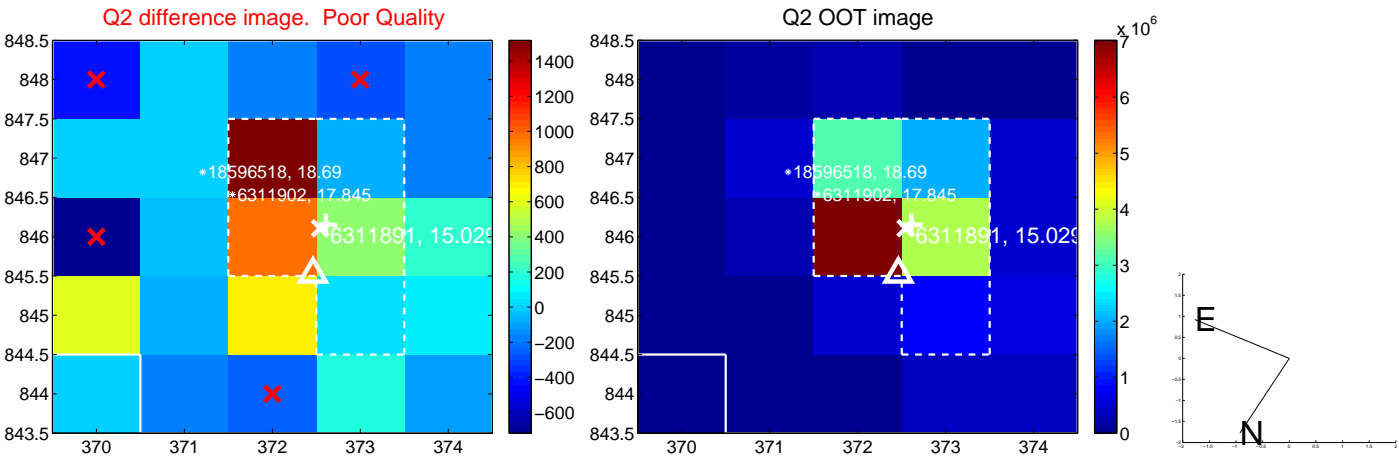
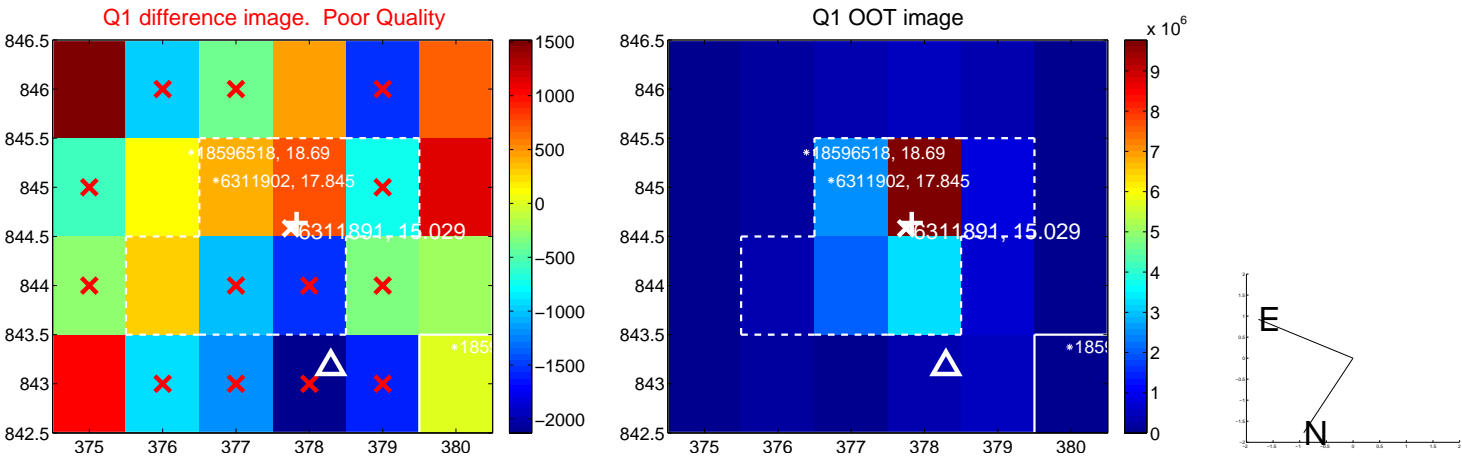
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.332 ± 0.731	1.82	0.884 ± 0.717	0.996 ± 0.742
PRF-fit source offset from KIC position	1.023 ± 0.729	1.40	0.754 ± 0.721	0.692 ± 0.738
photometric centroid source offset	1.05 ± 1.46	0.72	0.88 ± 1.50	0.57 ± 1.37

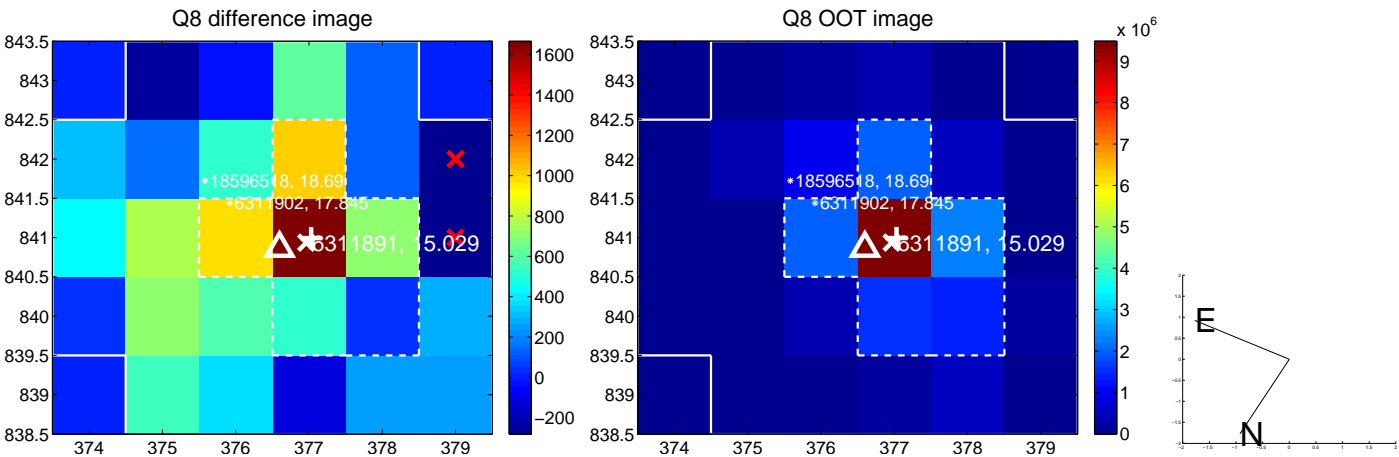
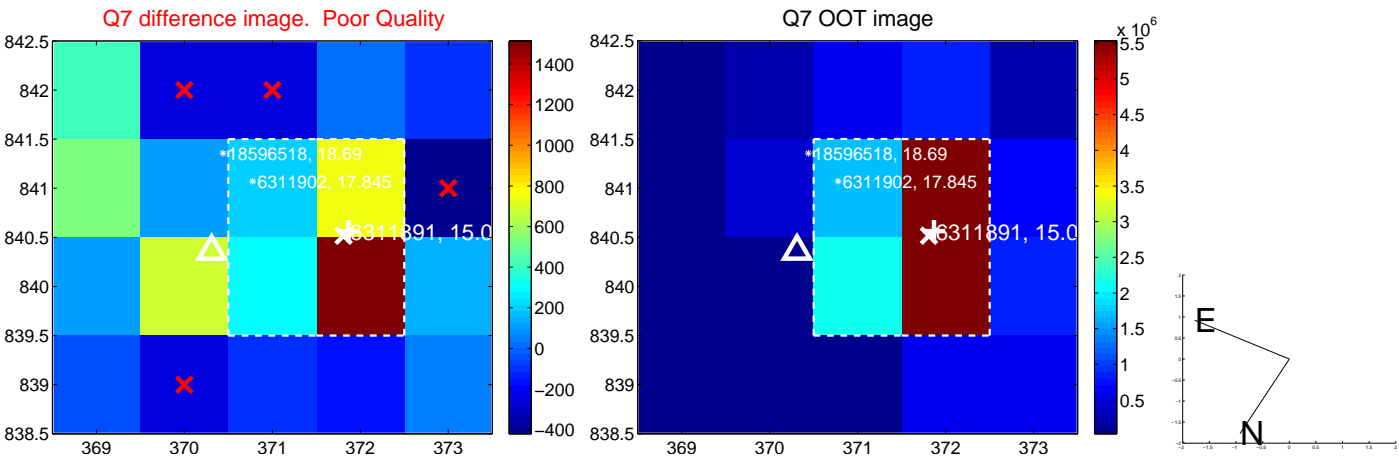
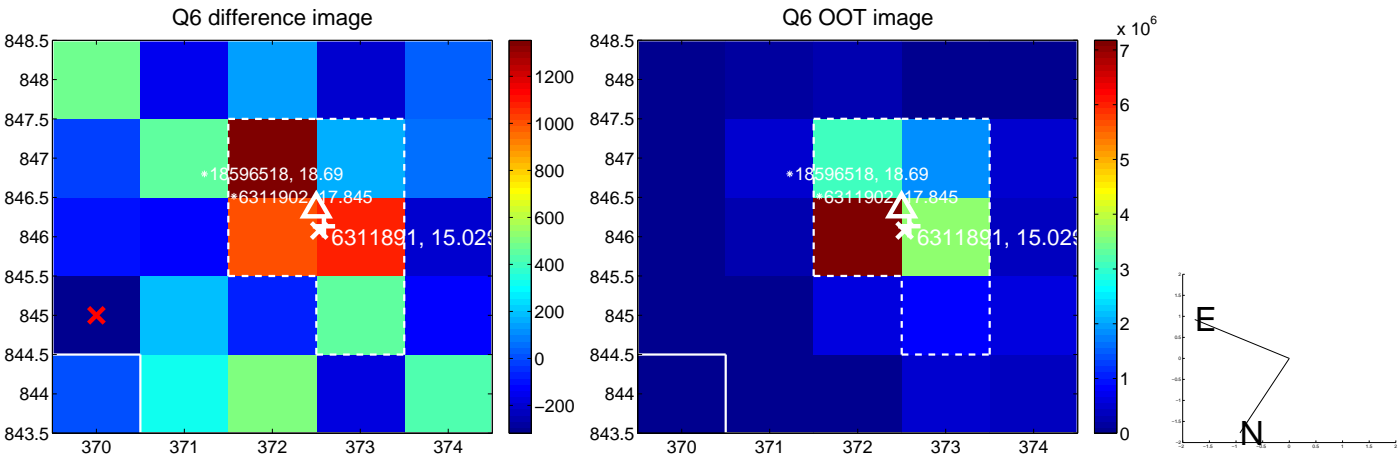
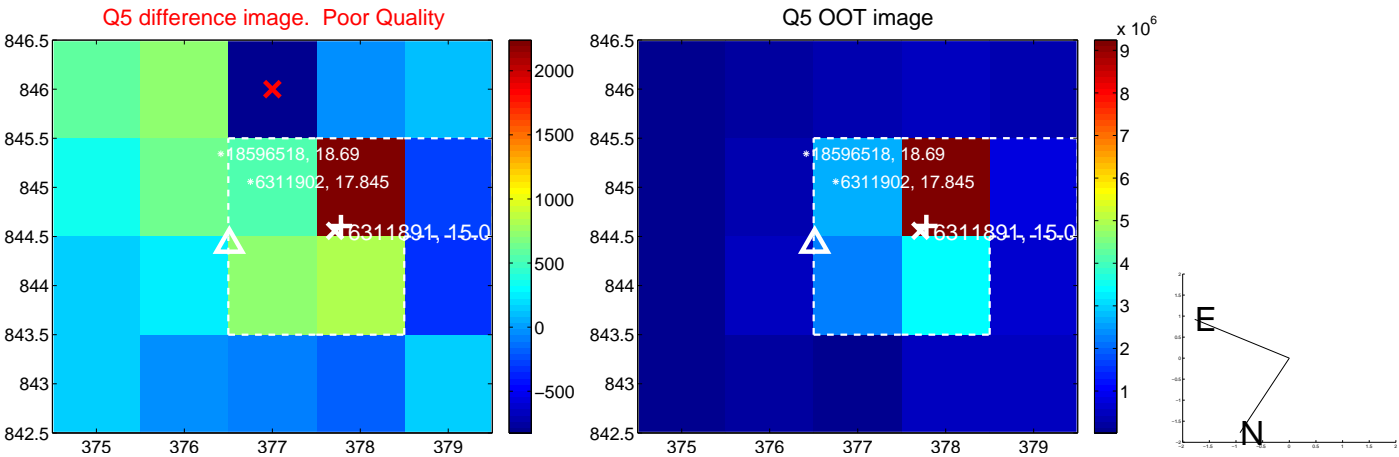


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

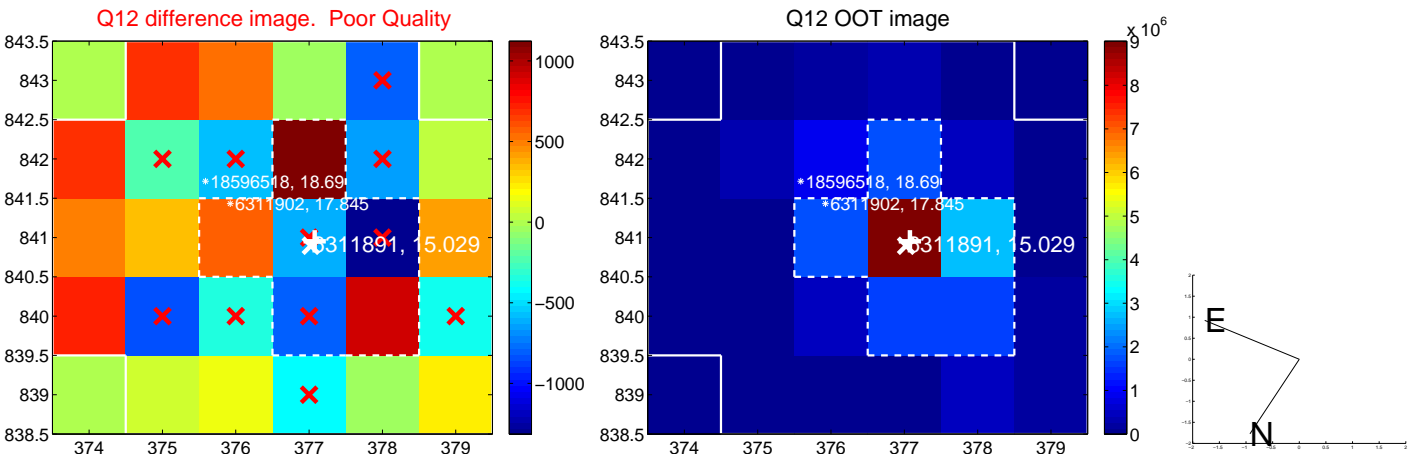
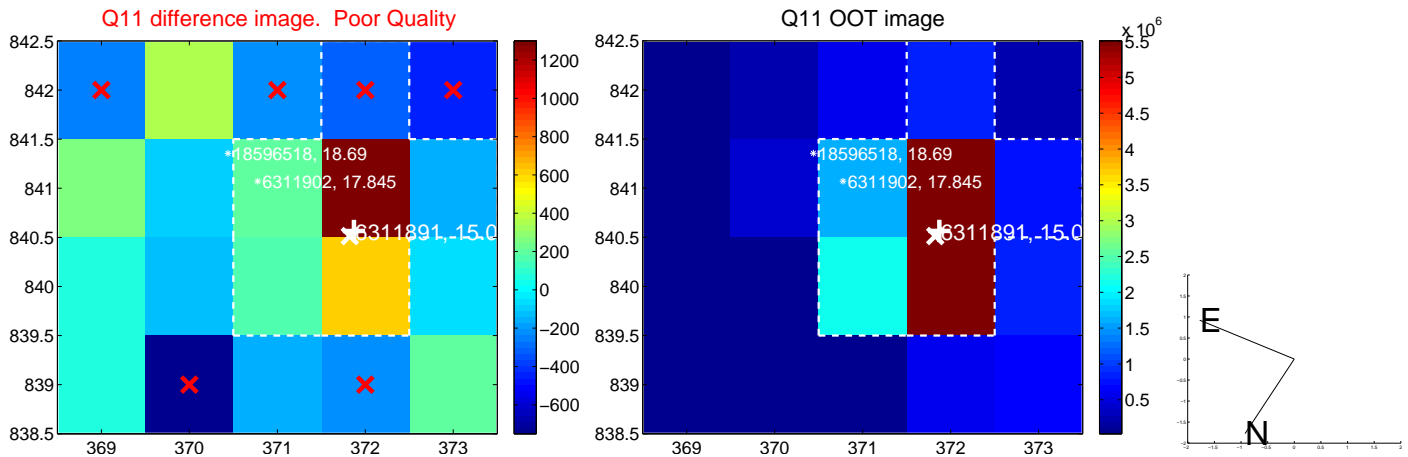
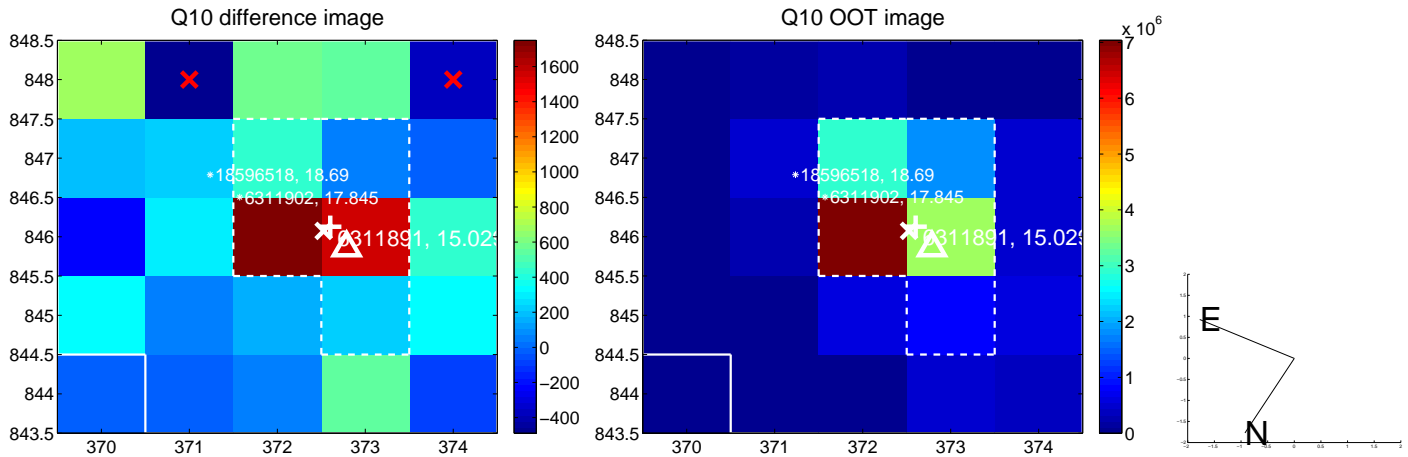
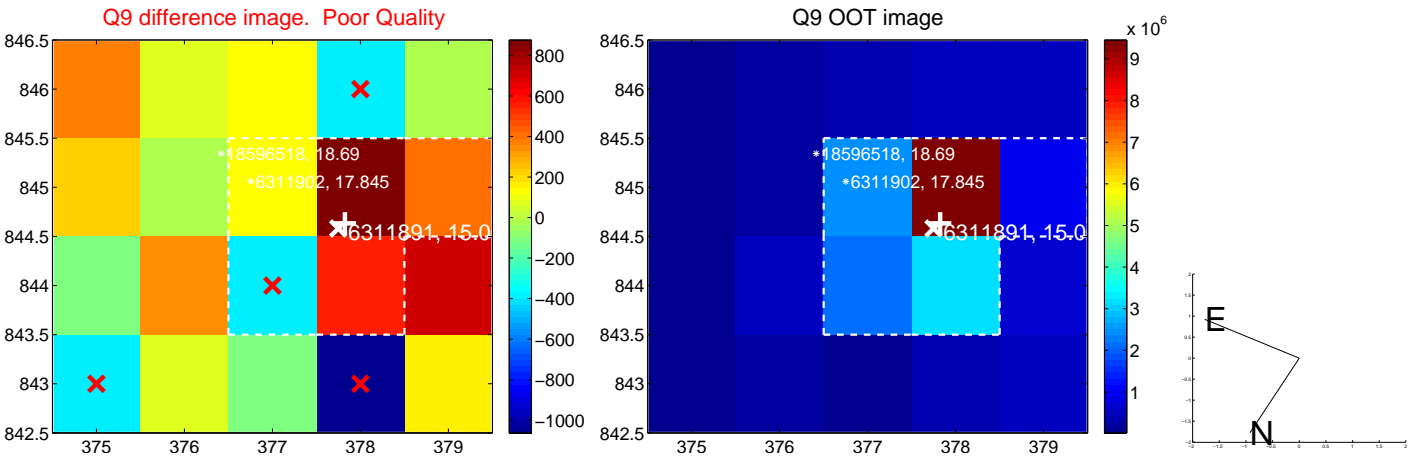
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



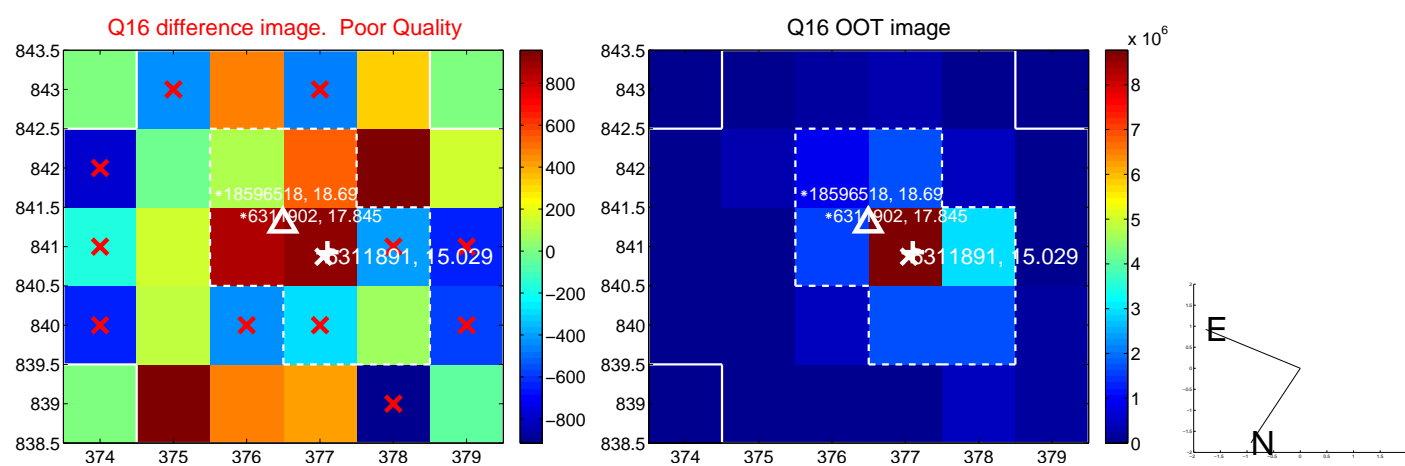
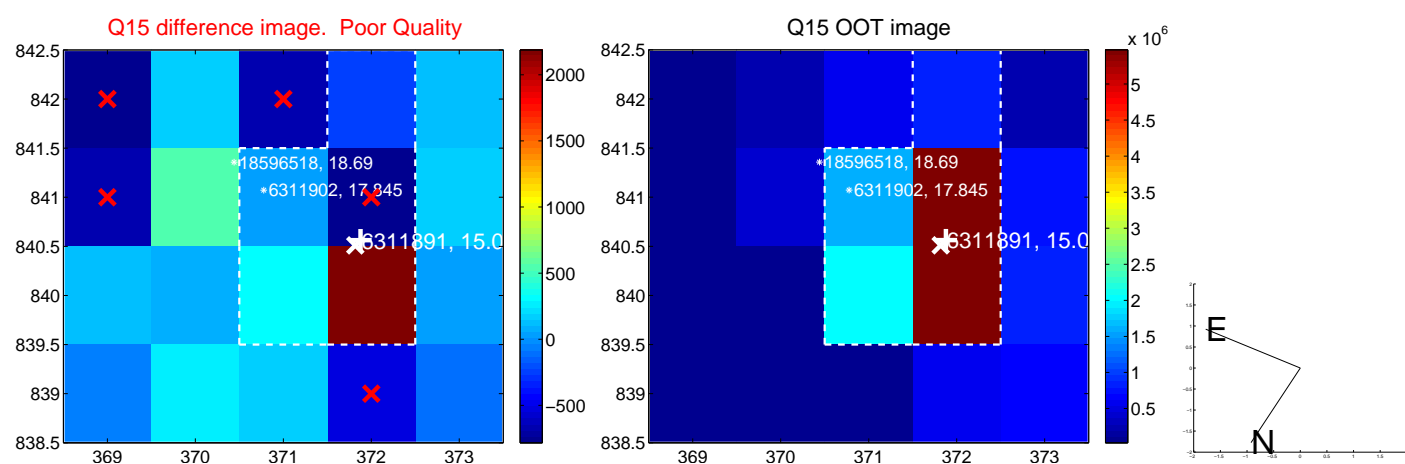
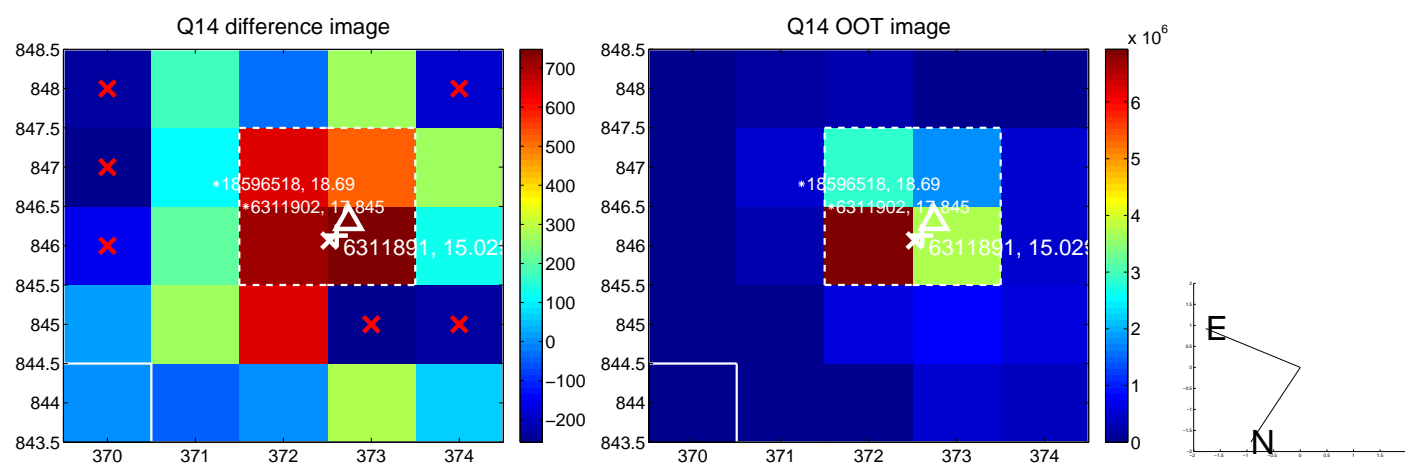
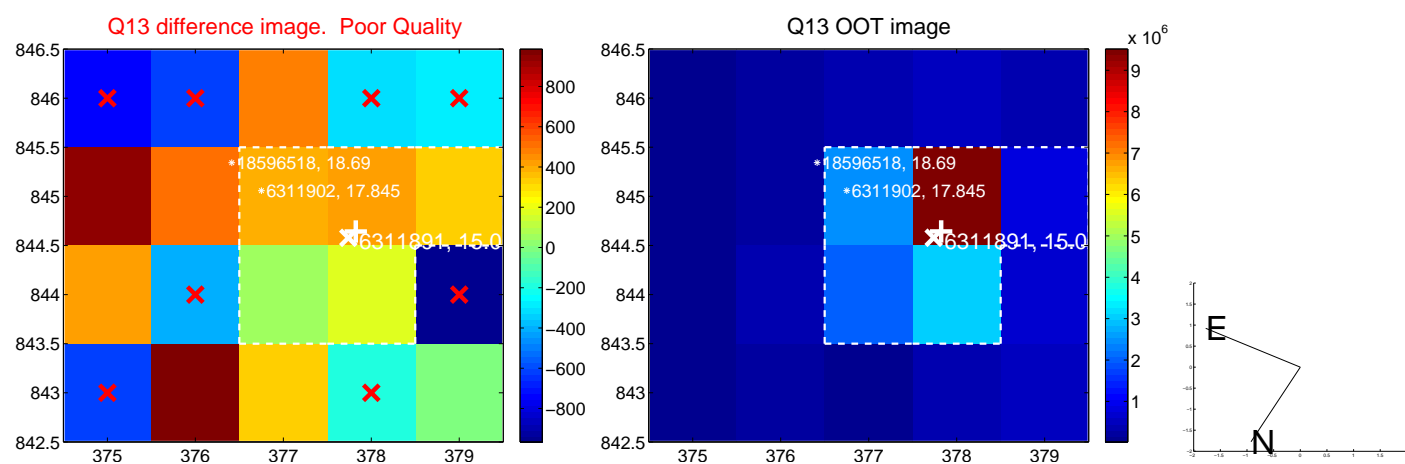
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



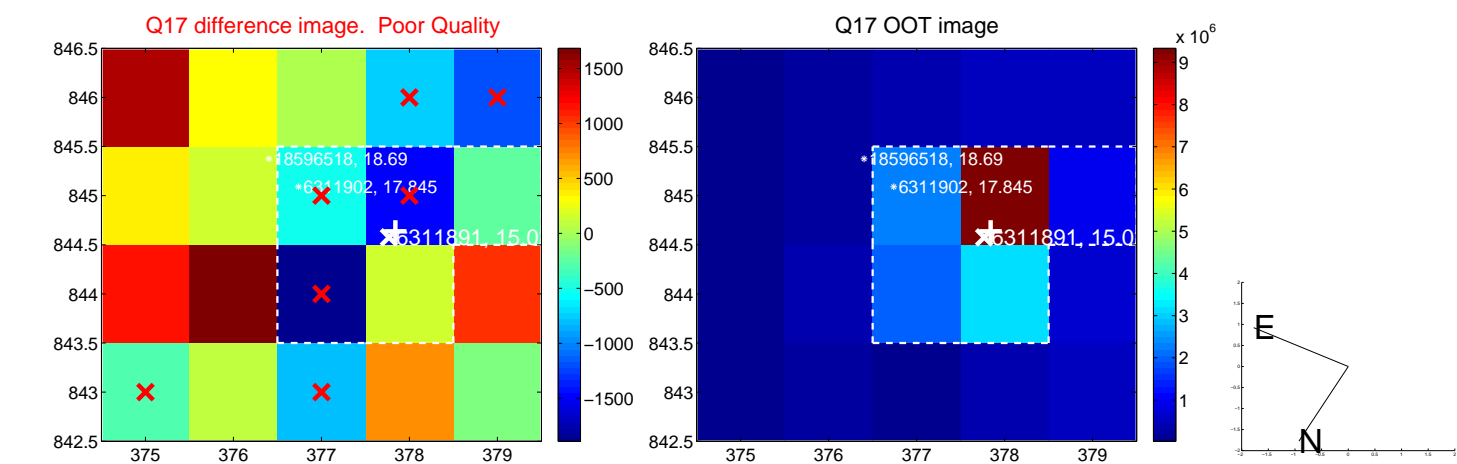
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



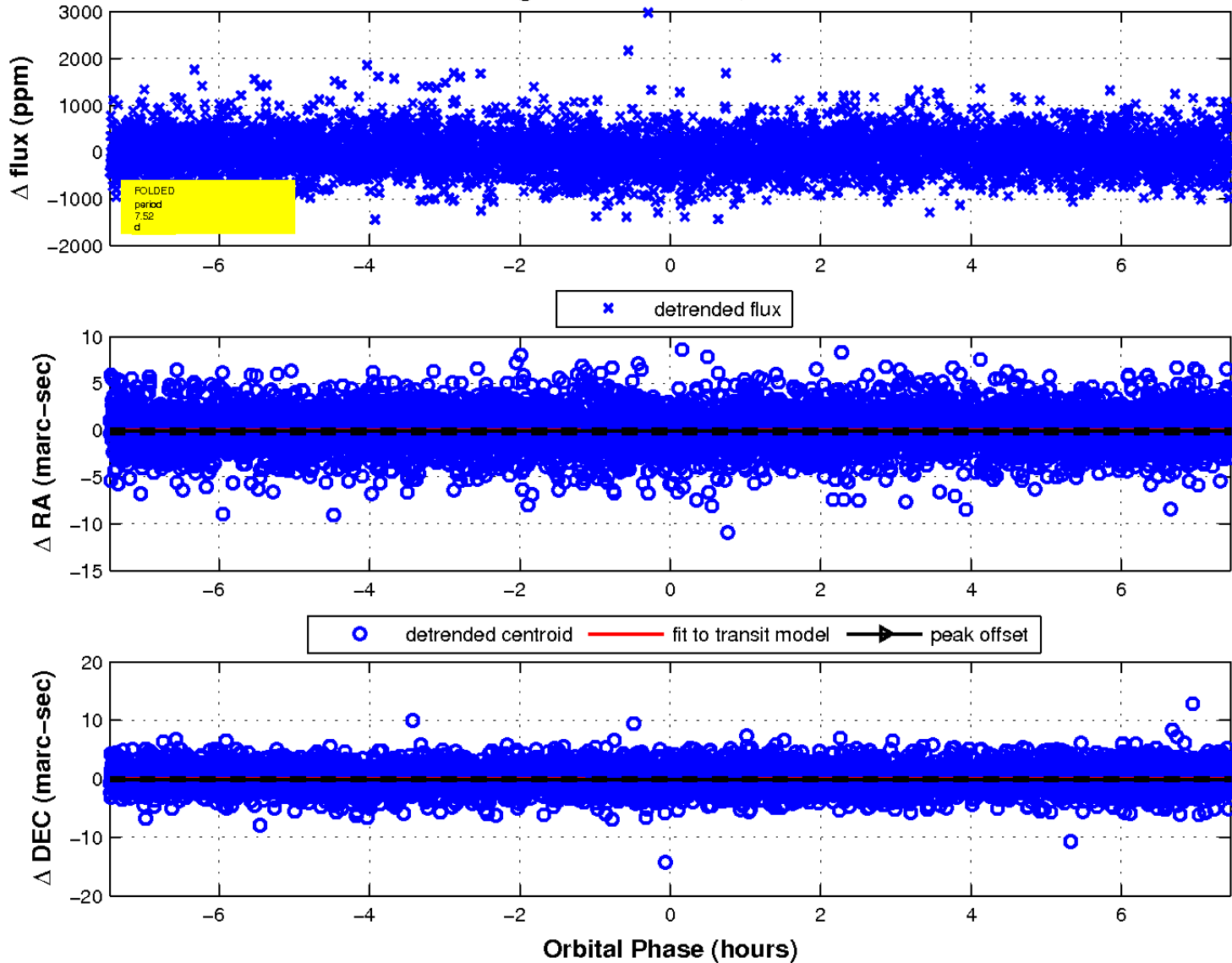
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

