

KIC 002301068

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})
002301068-01	OBS	6263.01	8.609636	134.393457	67.7	2.826	7.5	8.8	4.23	5418	5.04	1367.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002301068-01	OBS	PC	0.99	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.

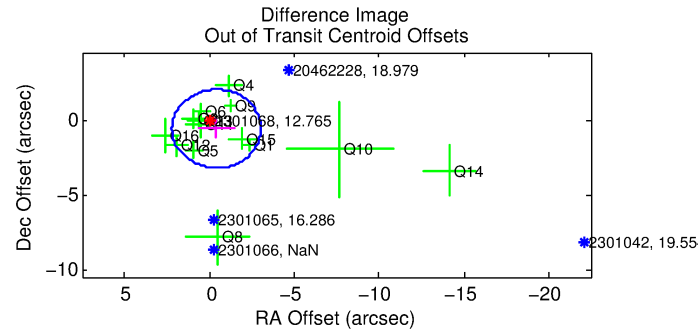
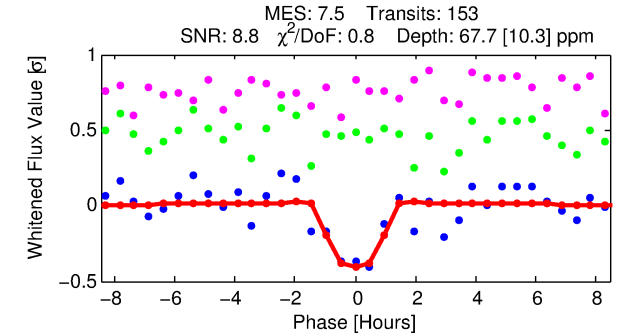
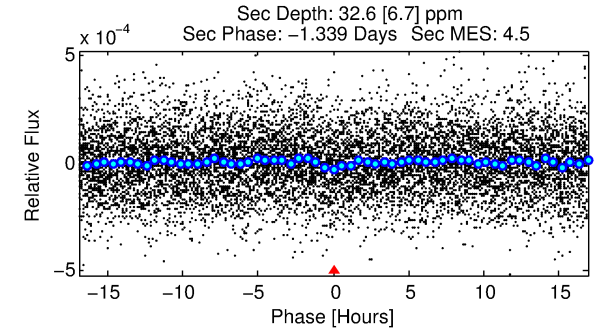
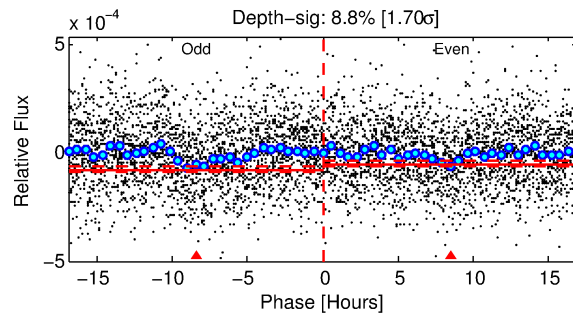
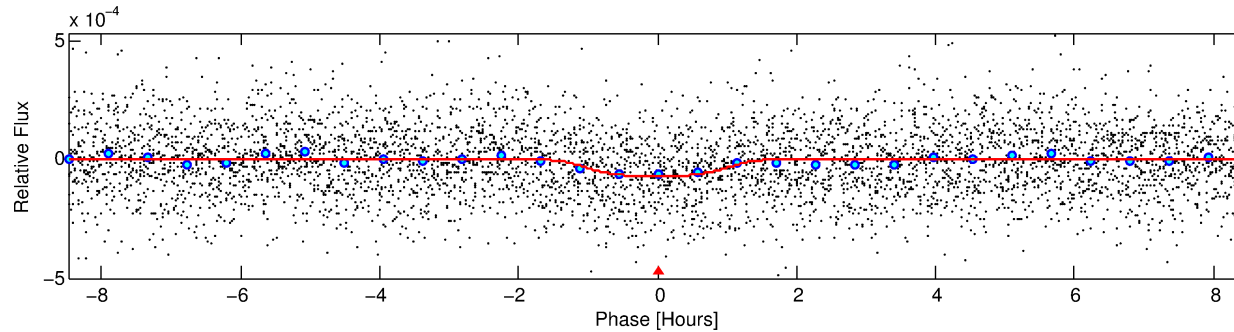
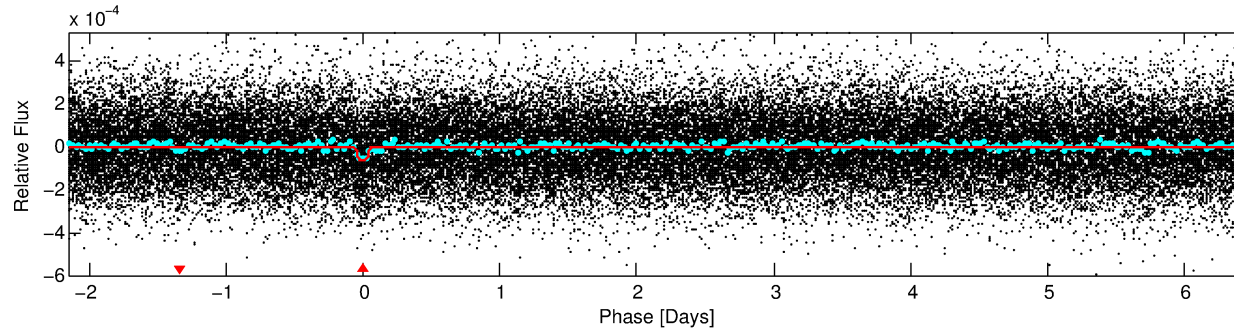
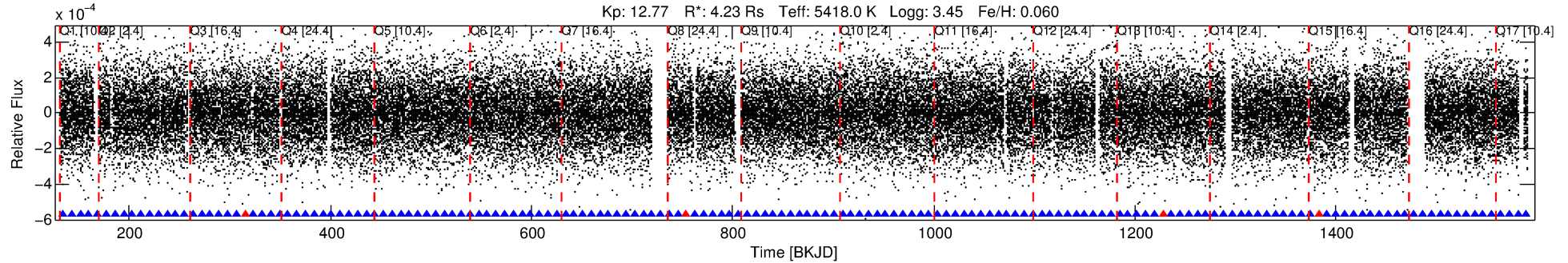
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002301068-01

No Significant Match Found

DV One-Page Summary

KIC: 2301068 Candidate: 1 of 1 Period: 8.610 d
KOI: K06263.01 Corr: 0.867



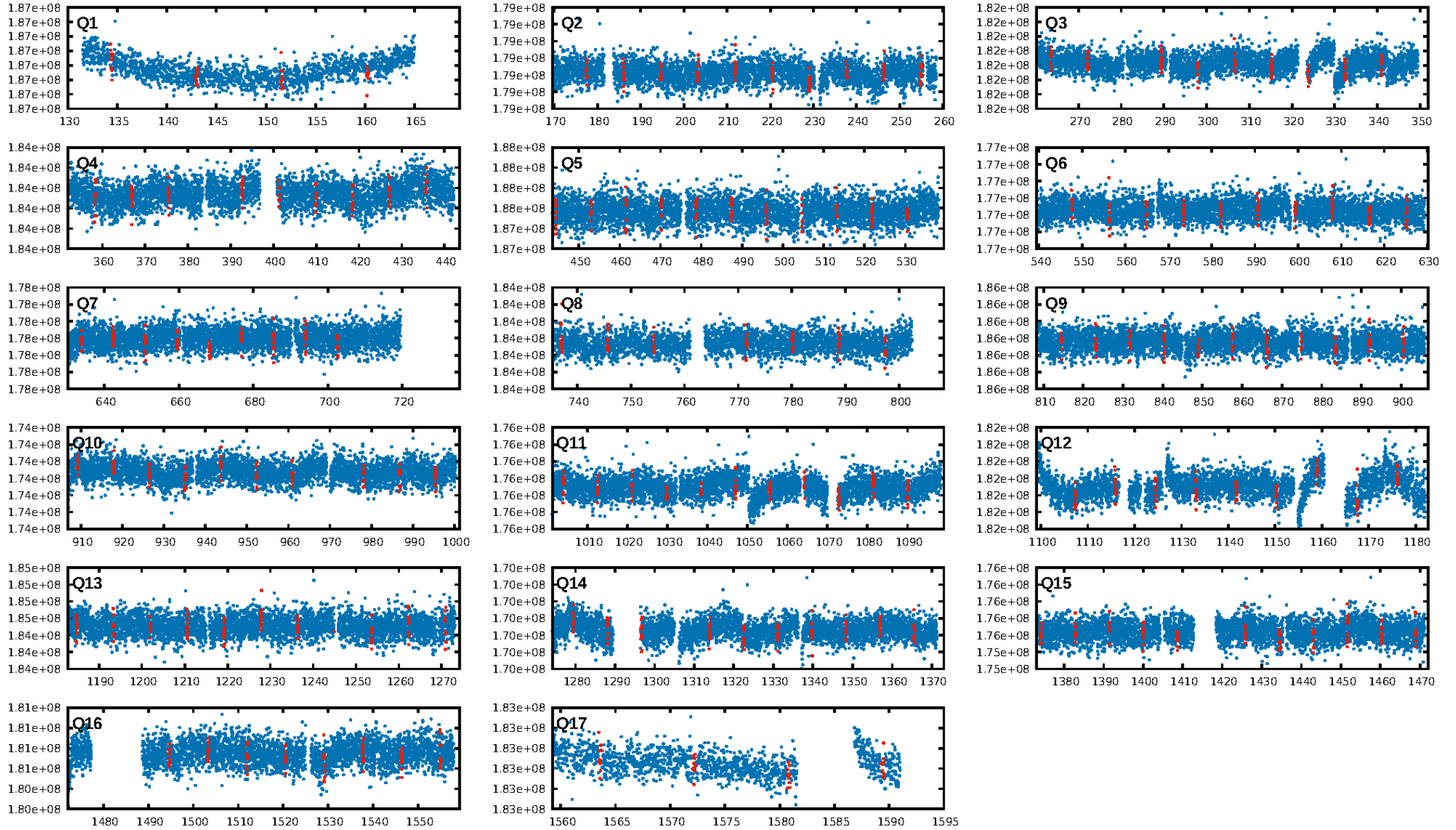
DV Fit Results:

Period = 8.60964 [0.00007] d
Epoch = 134.3935 [0.0070] BKJD
Rp/R* = 0.0109 [0.0012]
a/R* = 5.29 [1.54]
b = 0.99 [0.01]
Seff = 1367.84 [1984.88]
Teq = 1551 [563] K
Rp = 5.04 [3.77] Re
a = 0.1006 [0.0844] AU
Ag = 7.16 [10.56] [0.58 σ]
Teffp = 3921 [325] K [3.65 σ]

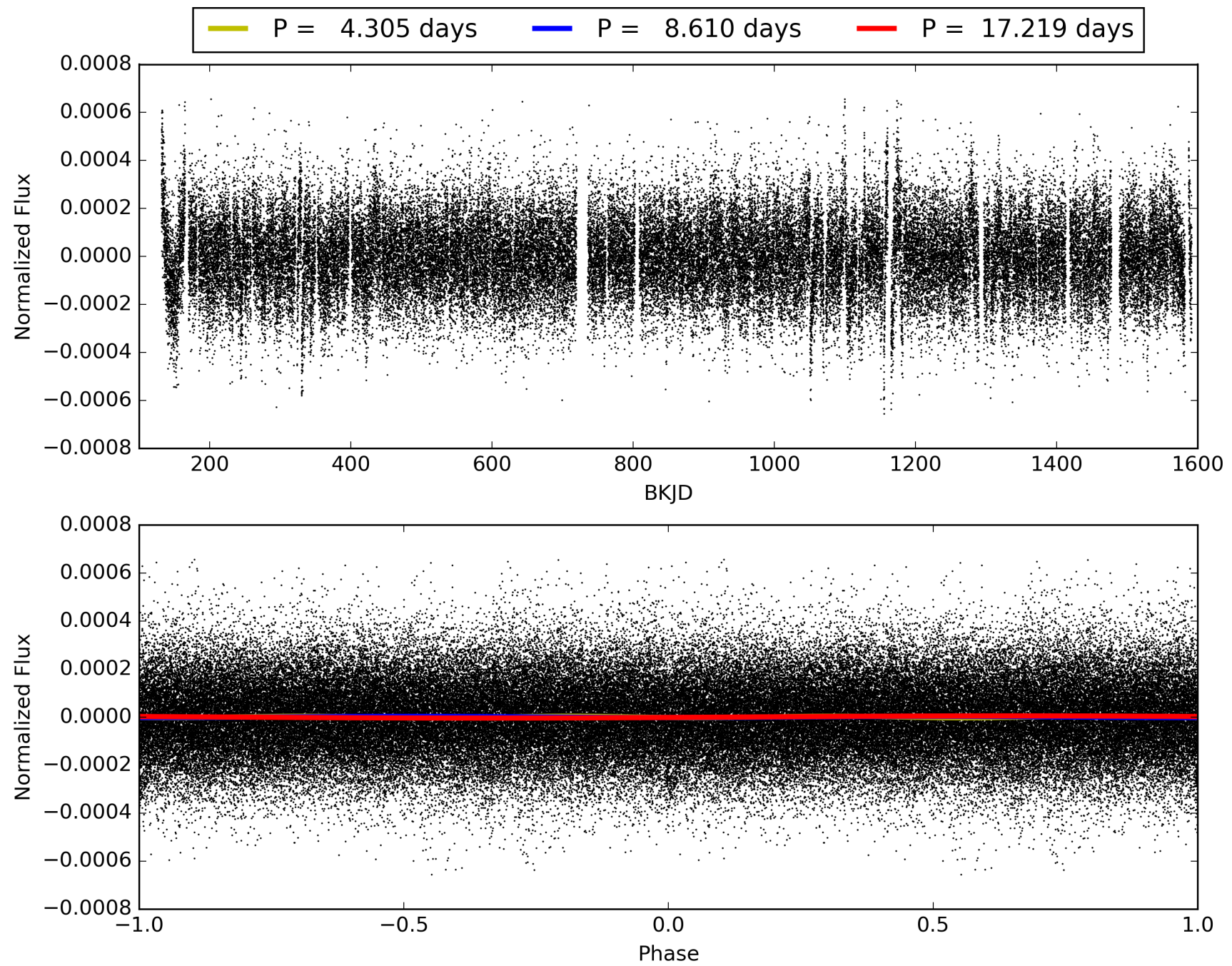
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.39e-13
RollingBand-fgt: 0.97 [141/145]
GhostDiagnostic-chr: 0.5552
Centroid-sig: 5.4%
Centroid-so: 1.865 arcsec [1.48 σ]
OotOffset-rm: 0.727 arcsec [0.83 σ]
KicOffset-rm: 0.760 arcsec [0.83 σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.71 [10/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 002301068-01, PDC Light Curves

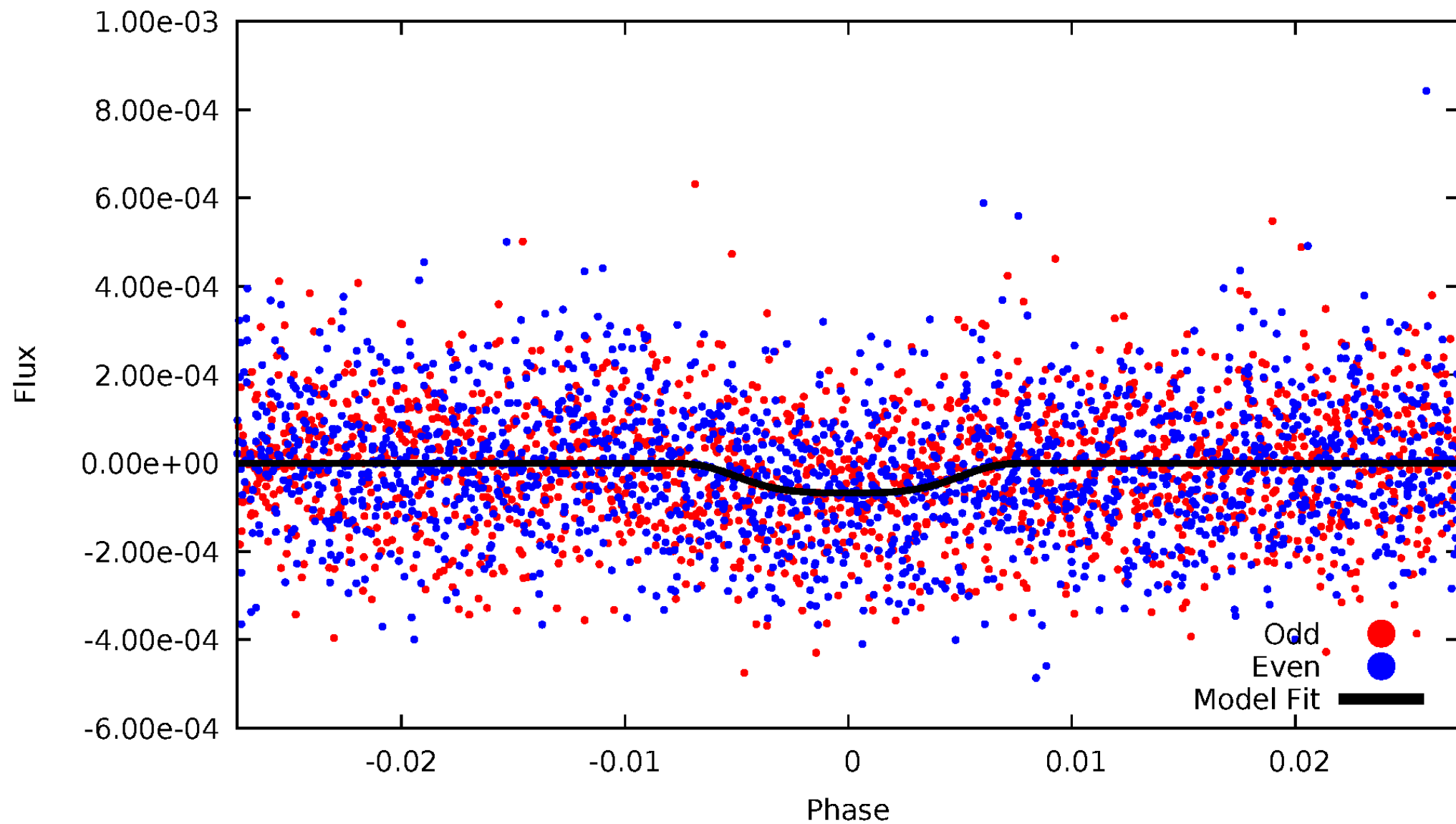


TCE 002301068-01



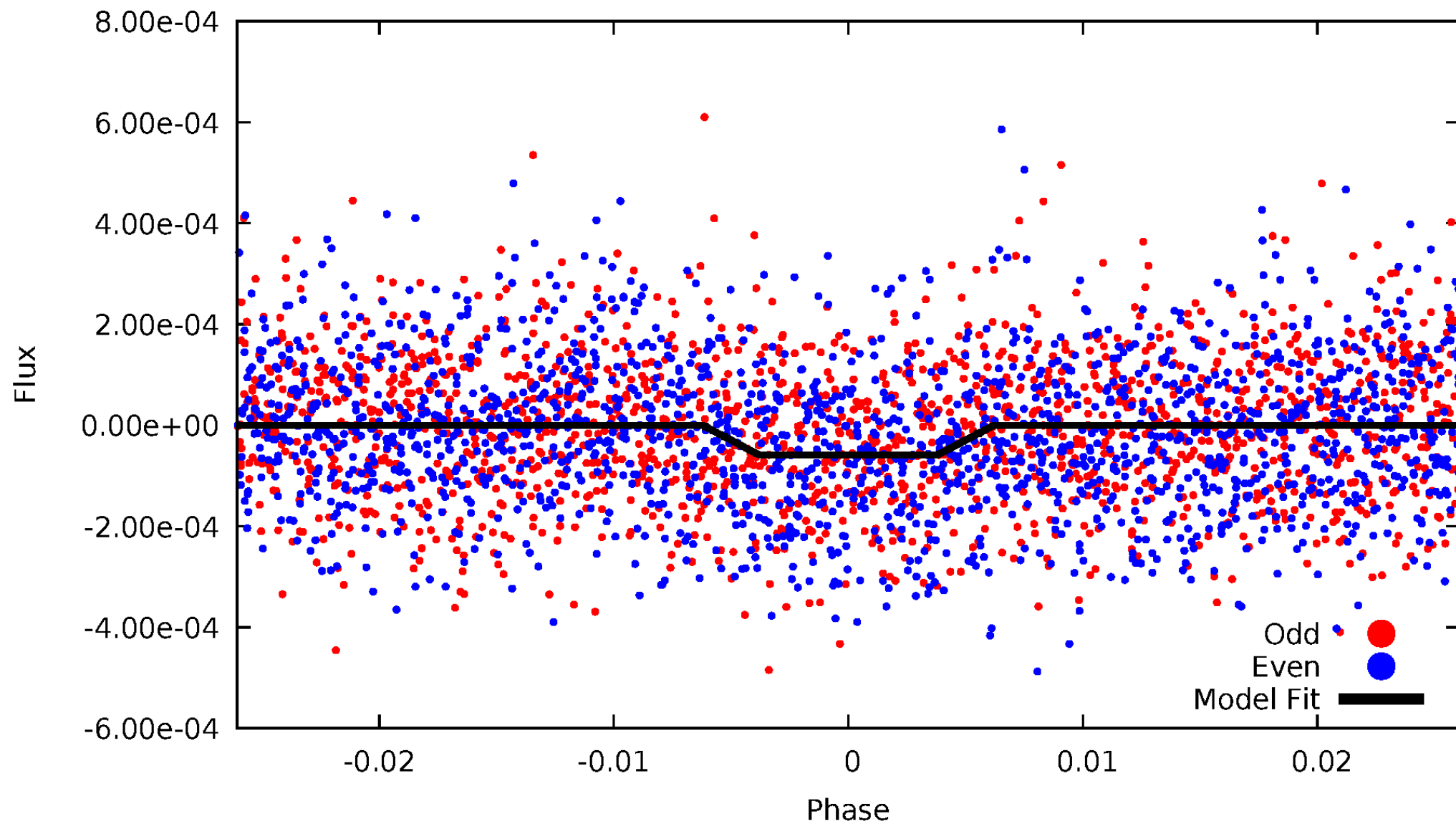
DV Odd/Even

TCE 002301068-01



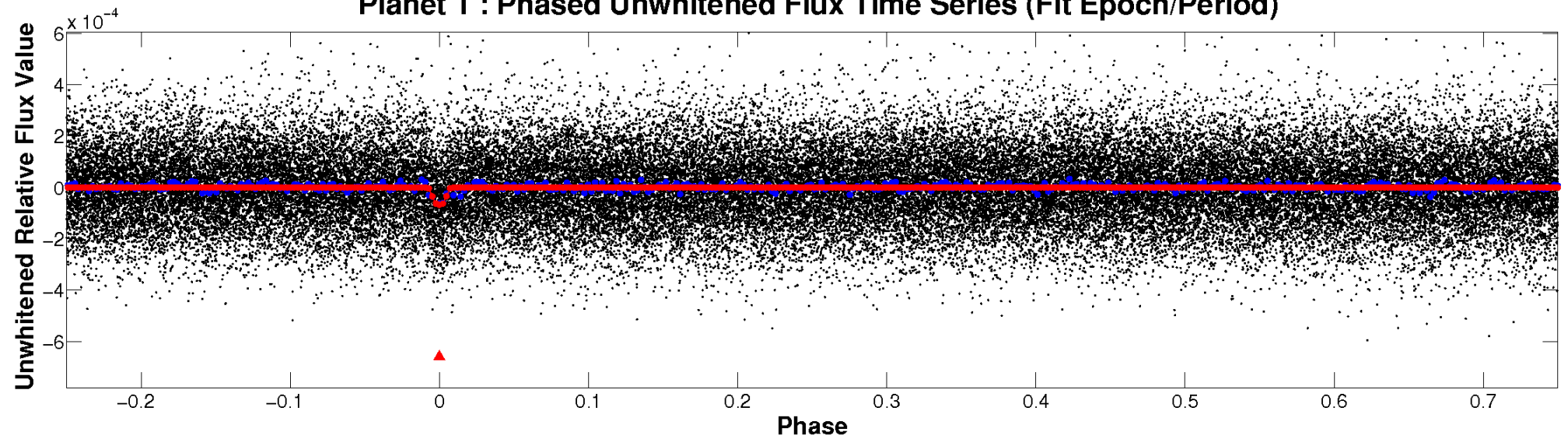
ALT Odd/Even

TCE 002301068-01

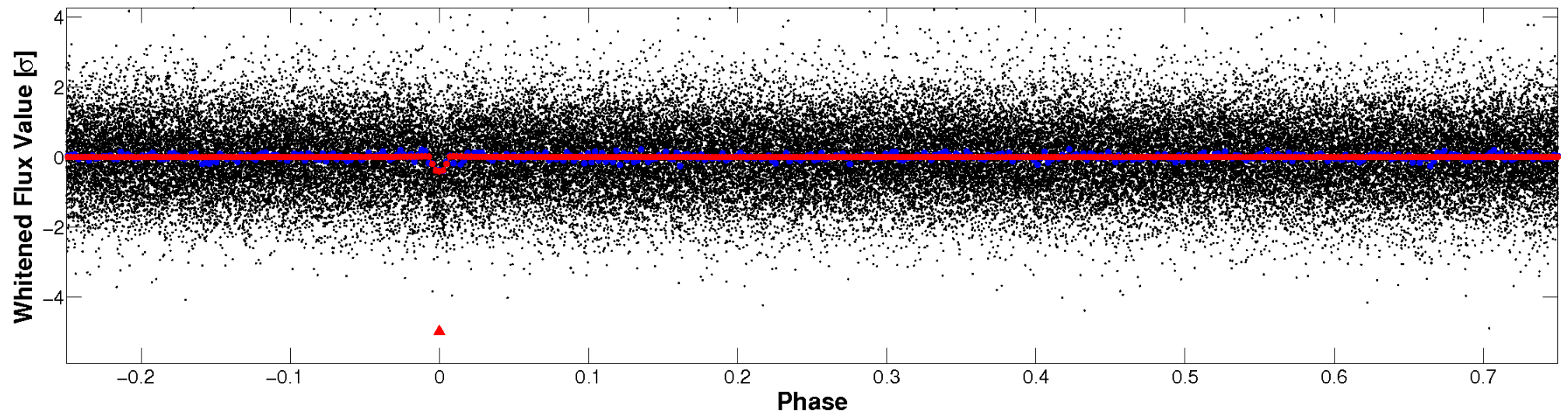


Non-Whitened Vs. Whitened Light Curve

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

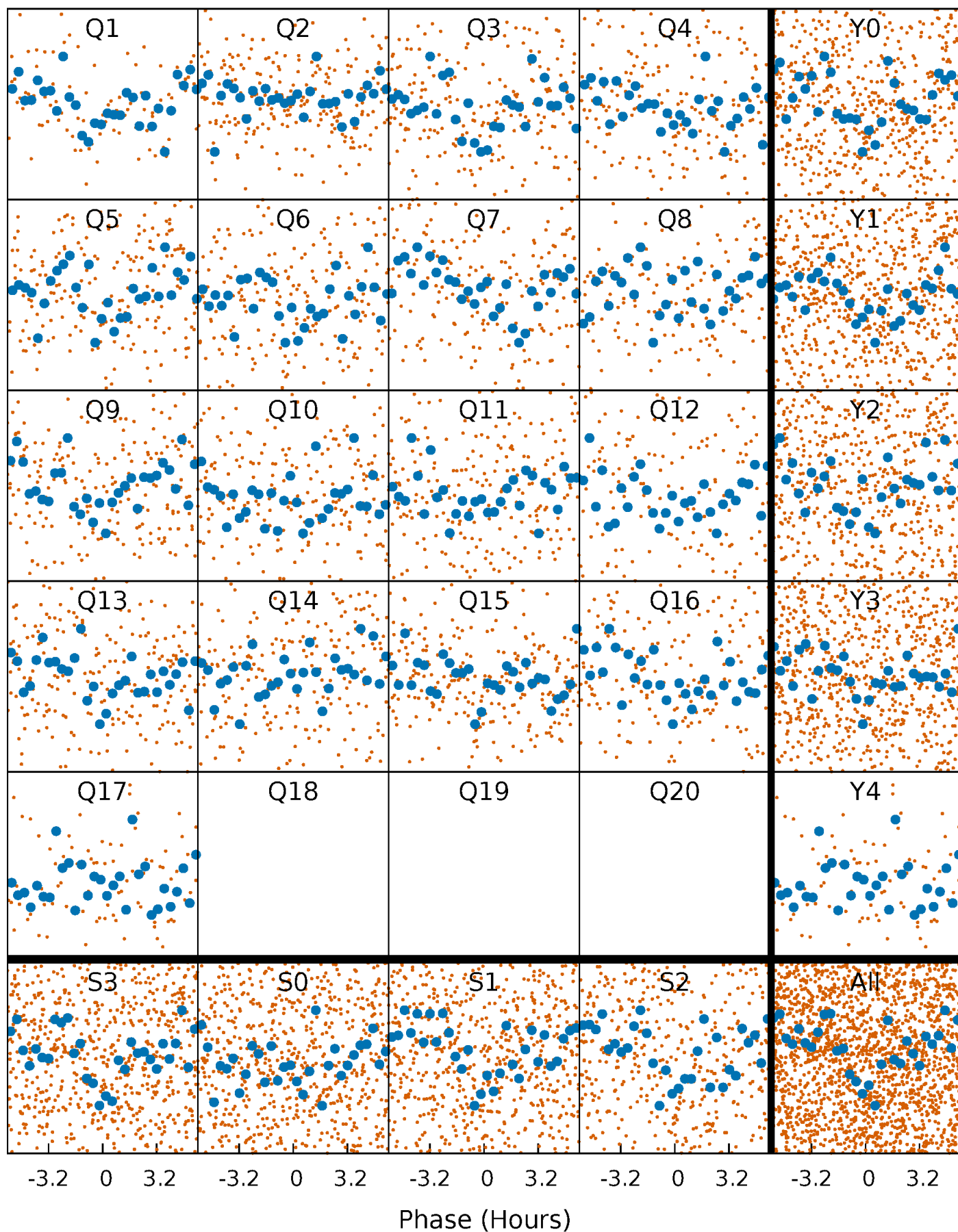


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



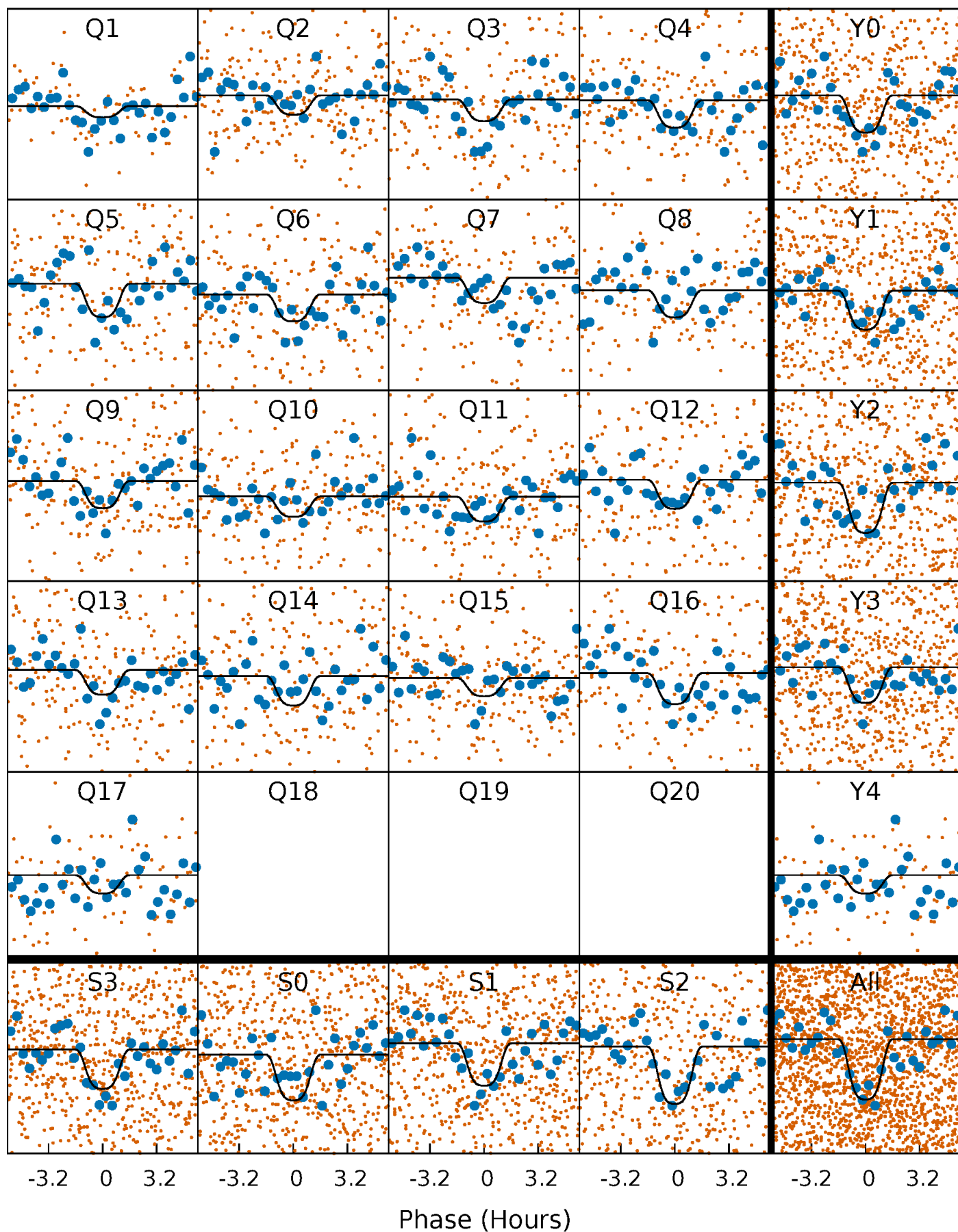
PDC Quarter-Phased Transit Curves

TCE 002301068-01 P= 8.609636 Days $T_0=134.393457$ (BKJD)



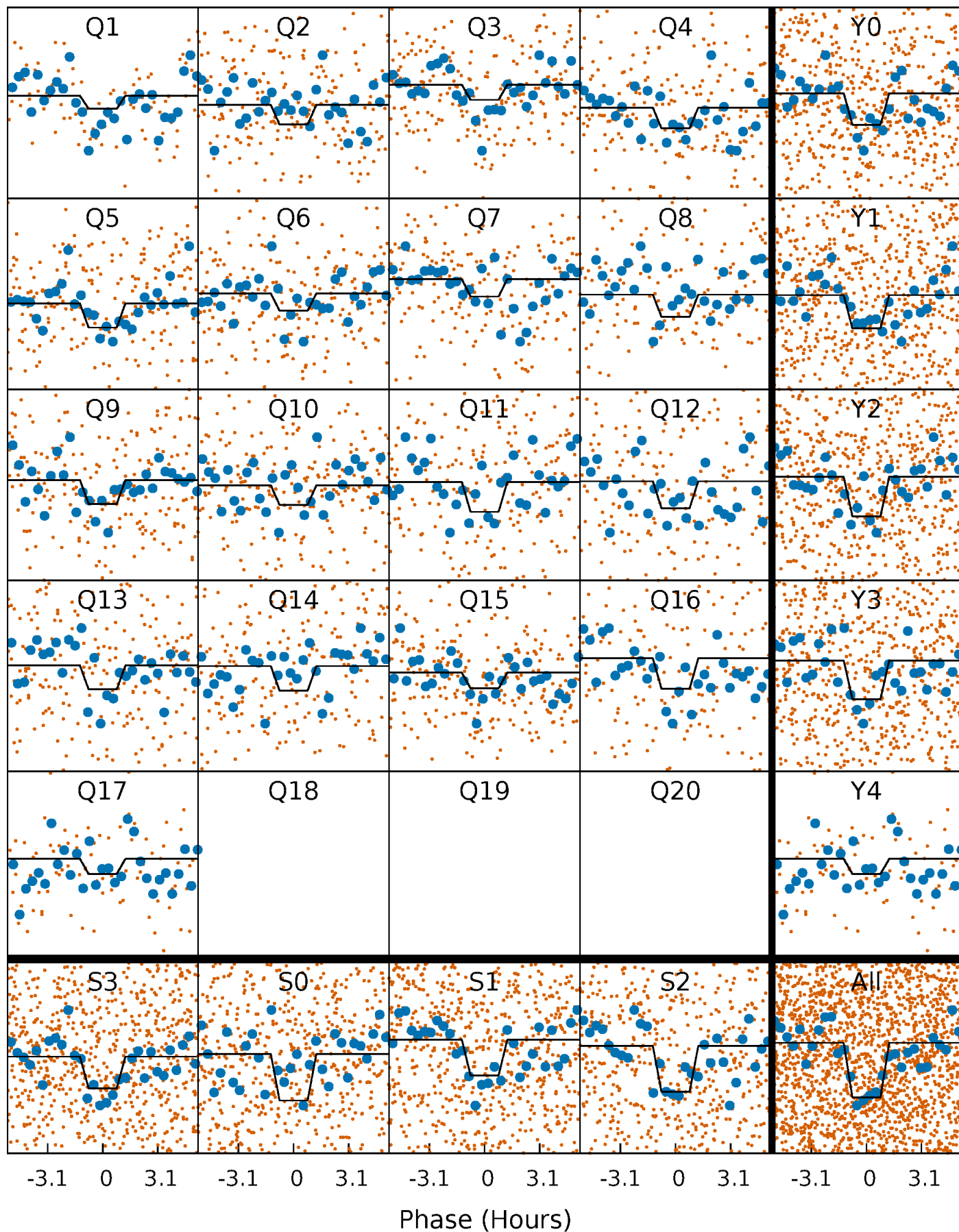
DV Quarter-Phased Transit Curves

TCE 002301068-01 P= 8.609636 Days $T_0=134.393457$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

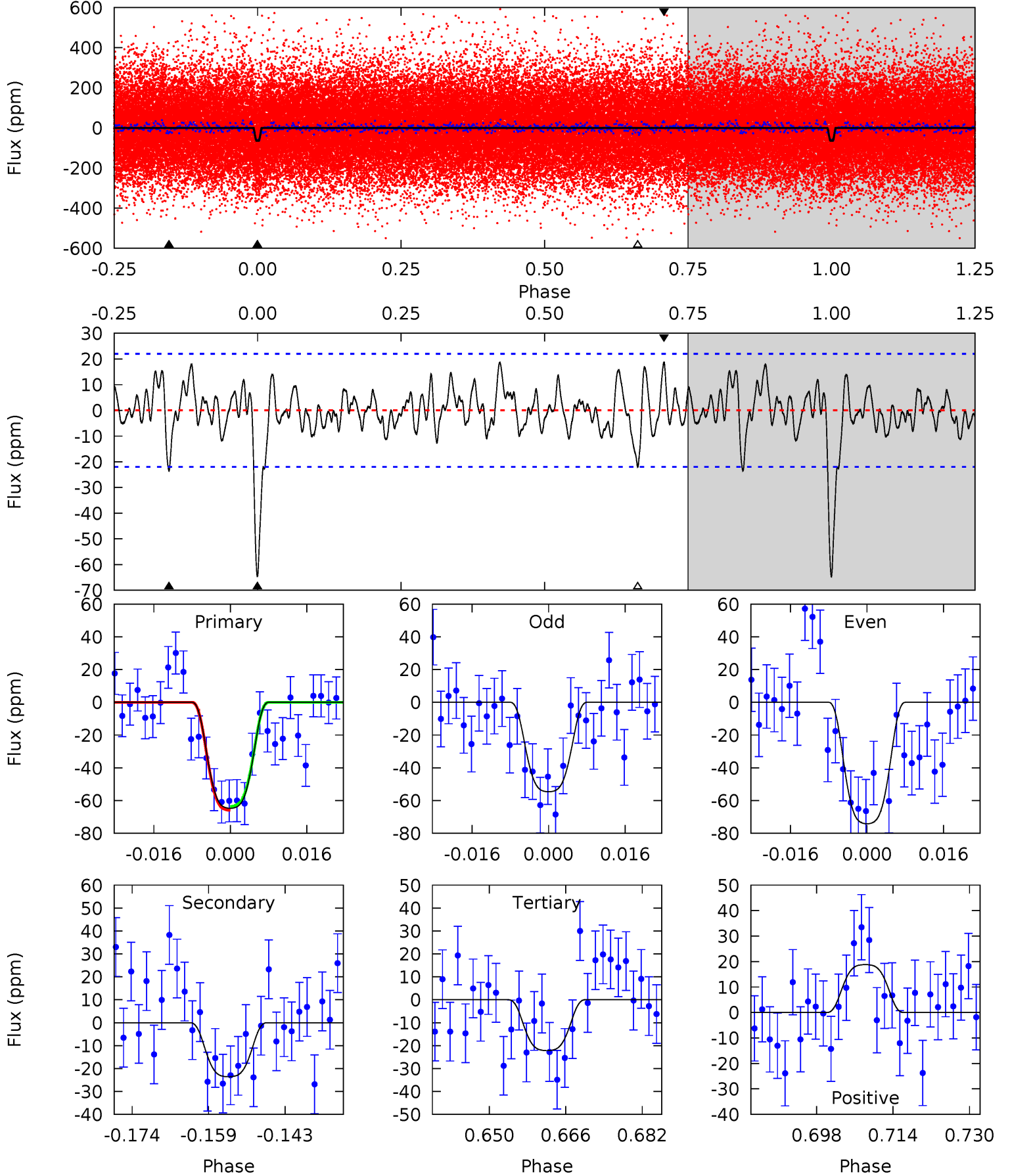
TCE 002301068-01 P= 8.609737 Days $T_0=134.382236$ (BKJD)



DV Model-Shift Uniqueness Test

002301068-01, P = 8.609636 Days, E = 125.783821 Days

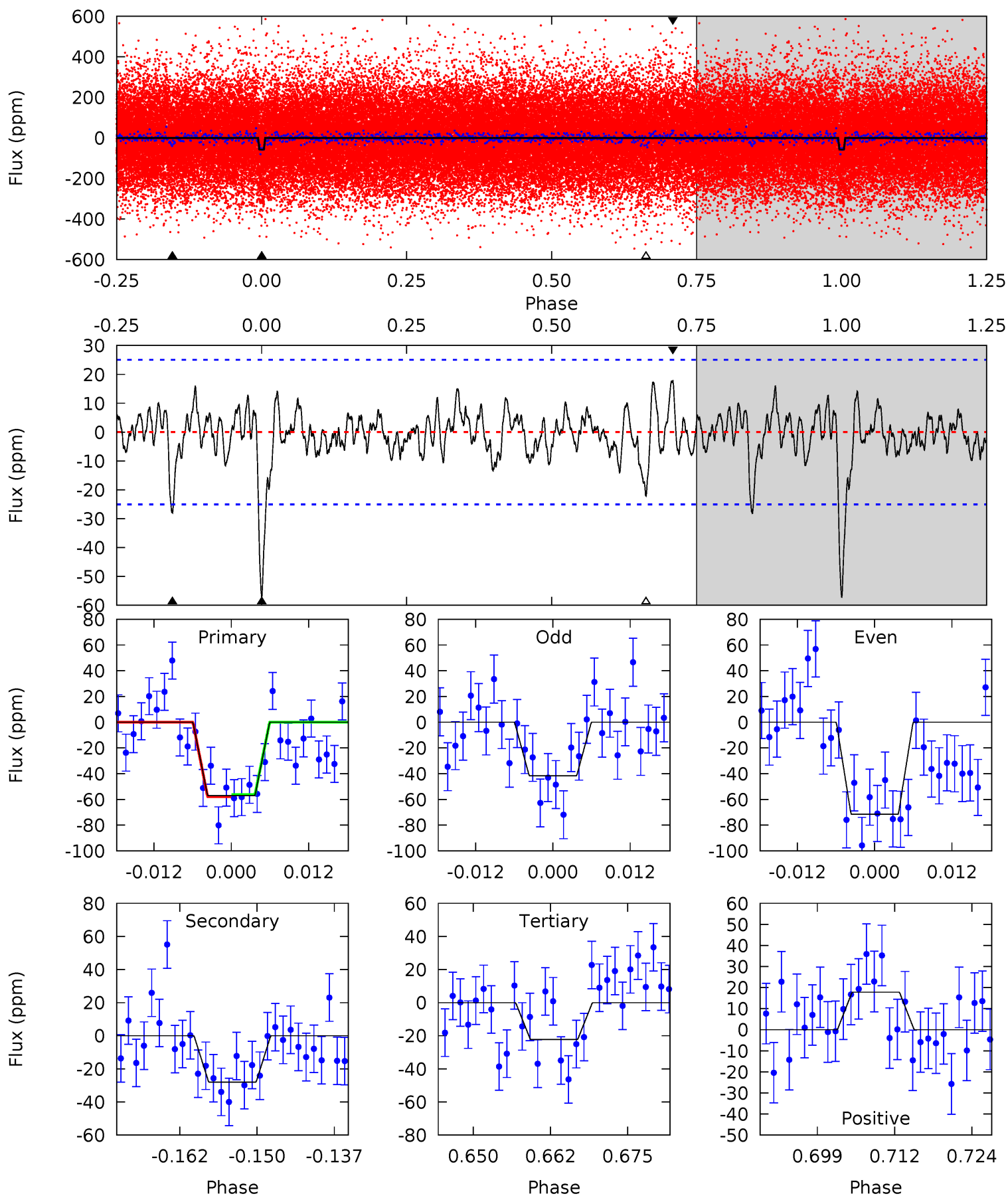
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.5	5.29	4.98	4.22	4.94	2.41	1.52	9.56	10.3	0.32	1.08	2.20	1.00	0.22	0.26



Alt Model-Shift Uniqueness Test

002301068-01, P = 8.609737 Days, E = 125.772499 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	5.58	4.42	3.54	4.98	2.50	1.25	6.93	7.81	1.16	2.04	2.96	1.12	0.24	0.16



Stellar Parameters For KIC 002301068

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5418^{+191}_{-171}	$3.447^{+0.884}_{-0.156}$	$0.060^{+0.250}_{-0.300}$	$4.233^{+0.785}_{-3.139}$	$1.830^{+0.160}_{-0.907}$	$0.034^{+0.962}_{-0.016}$
	+4%/-3%	+26%/-5%	+417%/-500%	+19%/-74%	+9%/-50%	+2830%/-47%
Source	PHO1	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 002301068-01 / KOI 6263.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-24 ± 4	$4.70^{+1.08}_{-1.75}$	2111^{+198}_{-396}	3892^{+245}_{-207}	$5.910^{+7.494}_{-2.134}$
Alt.	-28 ± 5	$3.19^{+0.96}_{-1.19}$	2121^{+188}_{-413}	4646^{+396}_{-347}	15^{+21}_{-6}

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

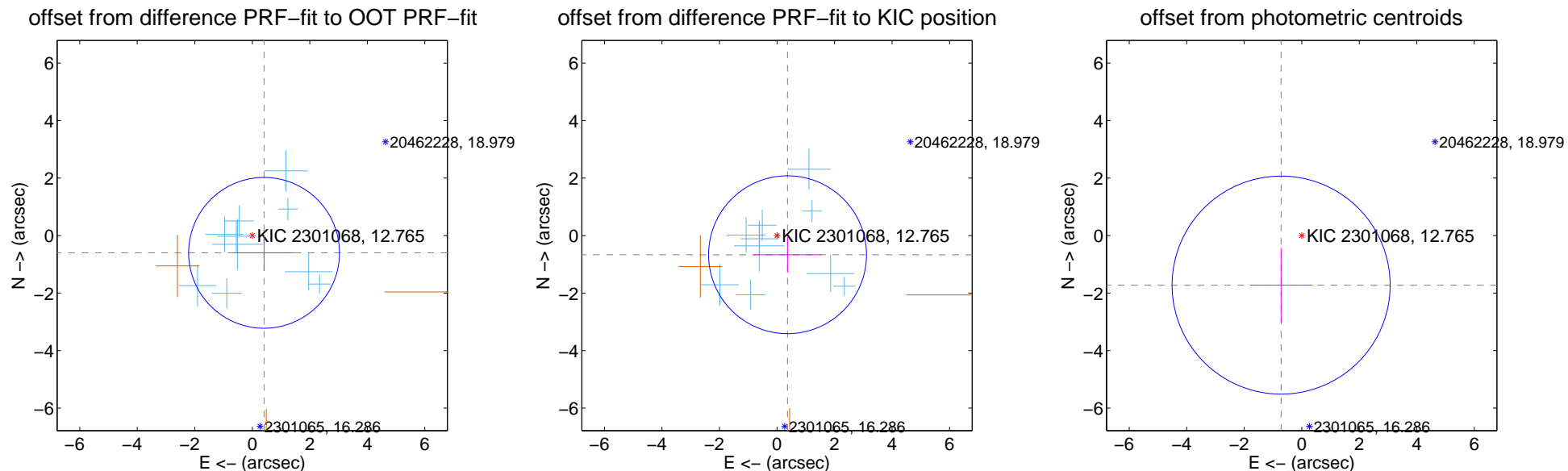
DV Centroid Data

Supplemental centroid analysis for 002301068-01. Kepler magnitude: 12.77. Transit SNR 8.81

There are 10 quarters with good PRF difference image offsets

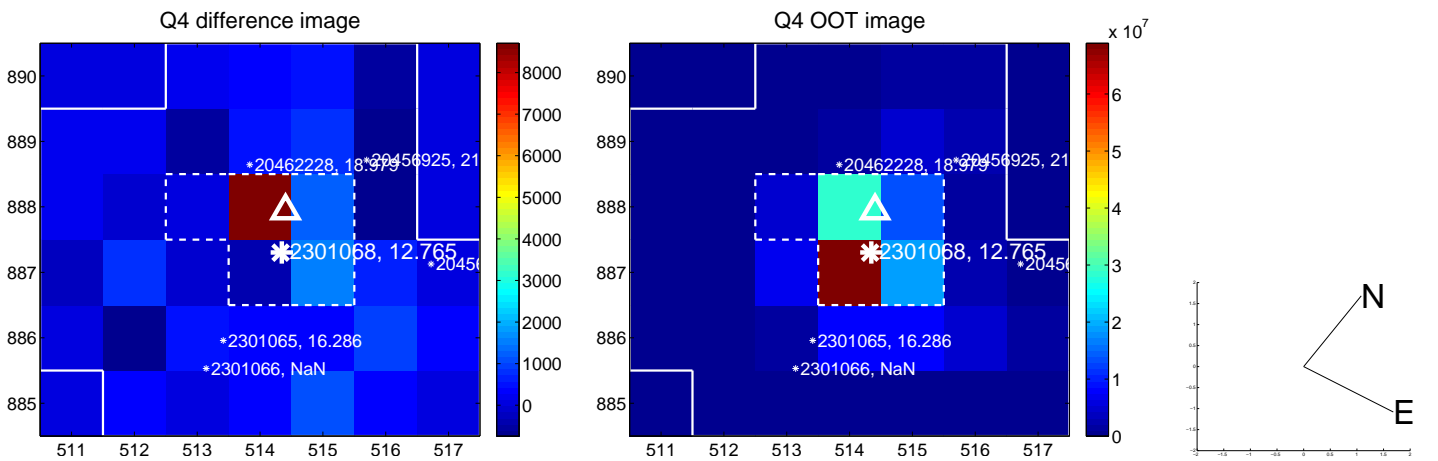
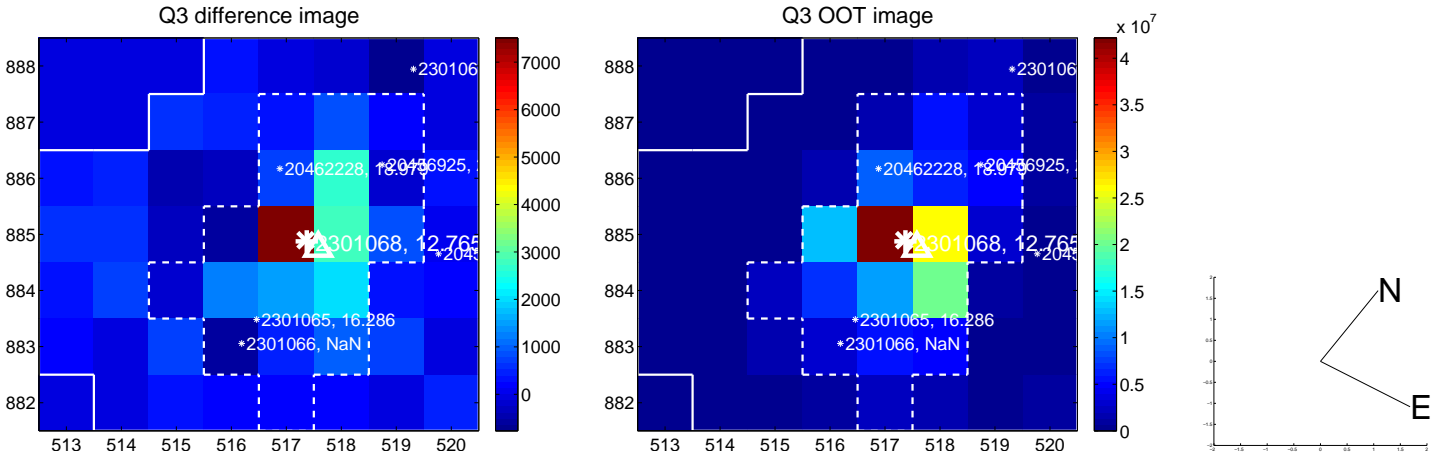
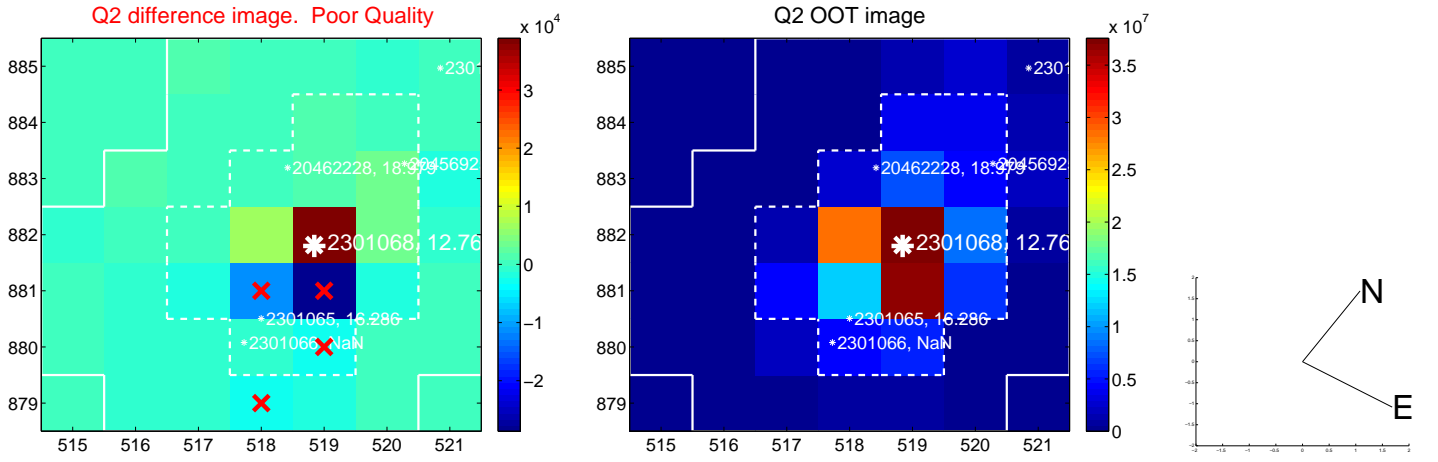
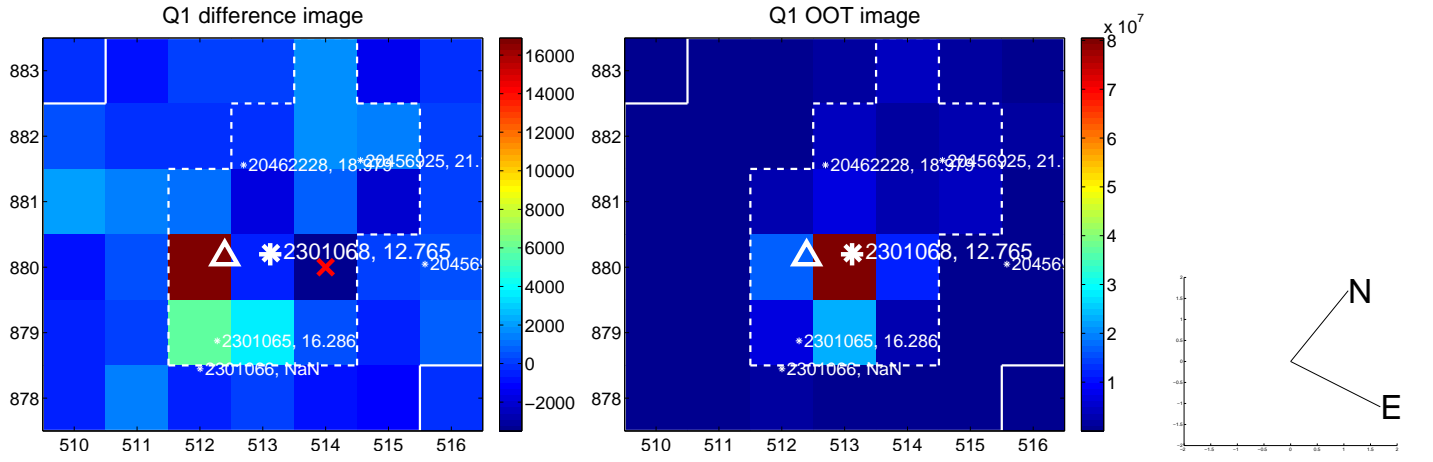
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.727 ± 0.874	0.83	-0.409 ± 1.050	-0.600 ± 0.627
PRF-fit source offset from KIC position	0.760 ± 0.915	0.83	-0.366 ± 1.187	-0.666 ± 0.625
photometric centroid source offset	1.87 ± 1.26	1.48	0.72 ± 1.09	-1.72 ± 1.29

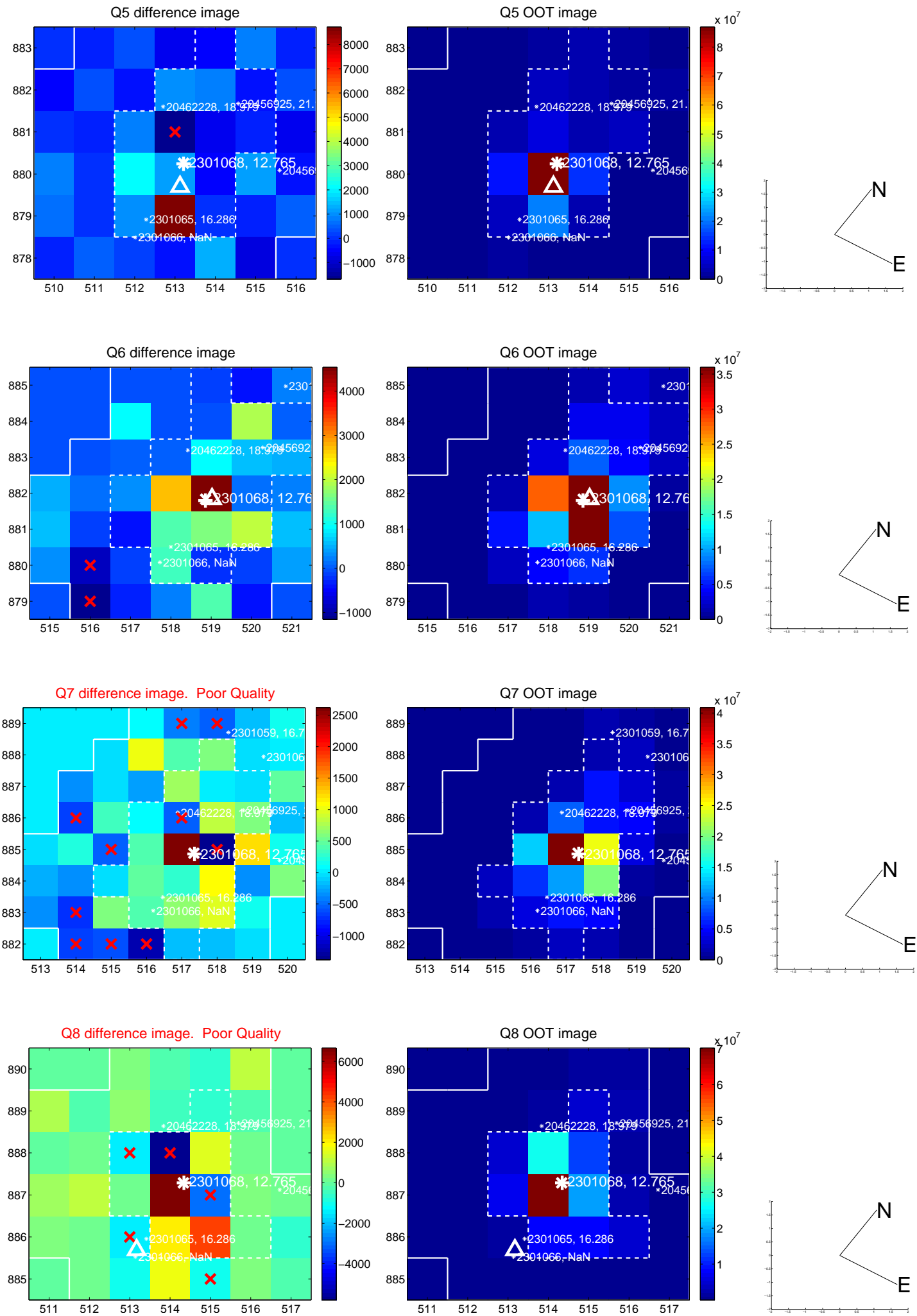


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

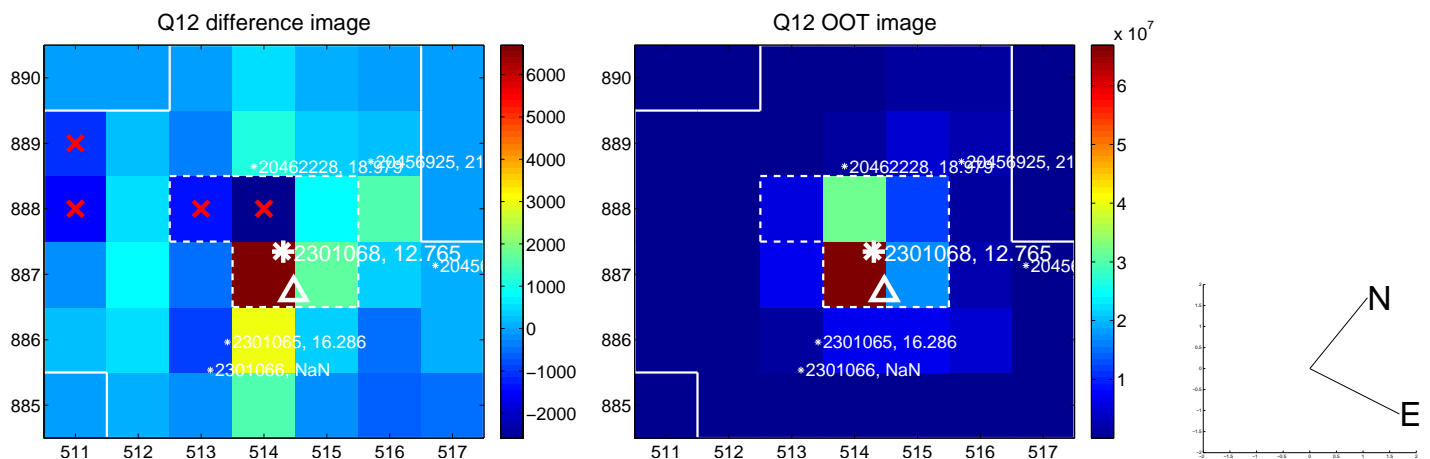
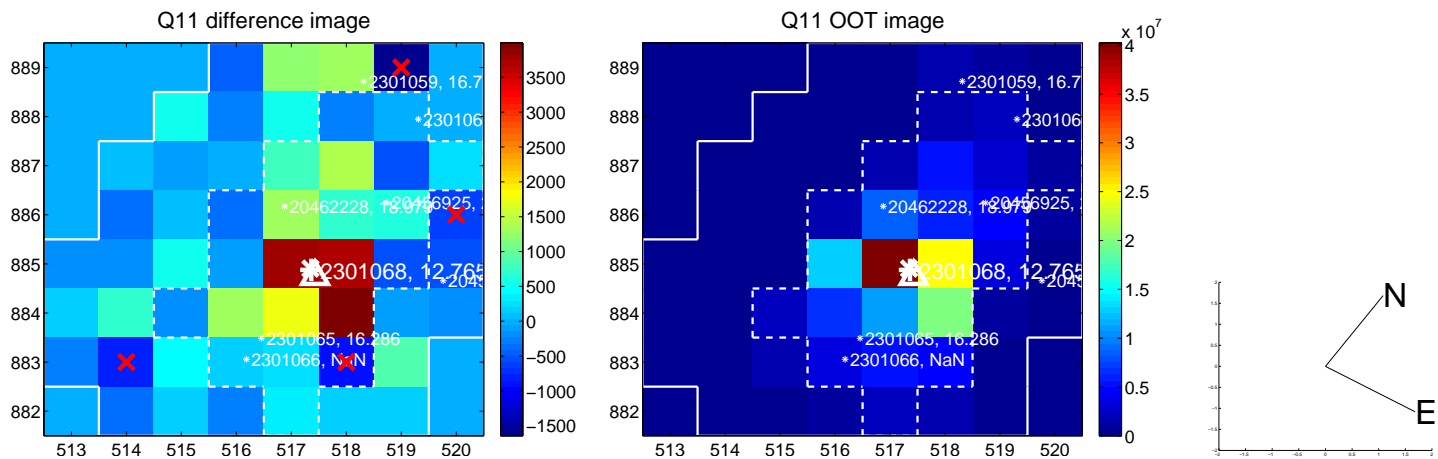
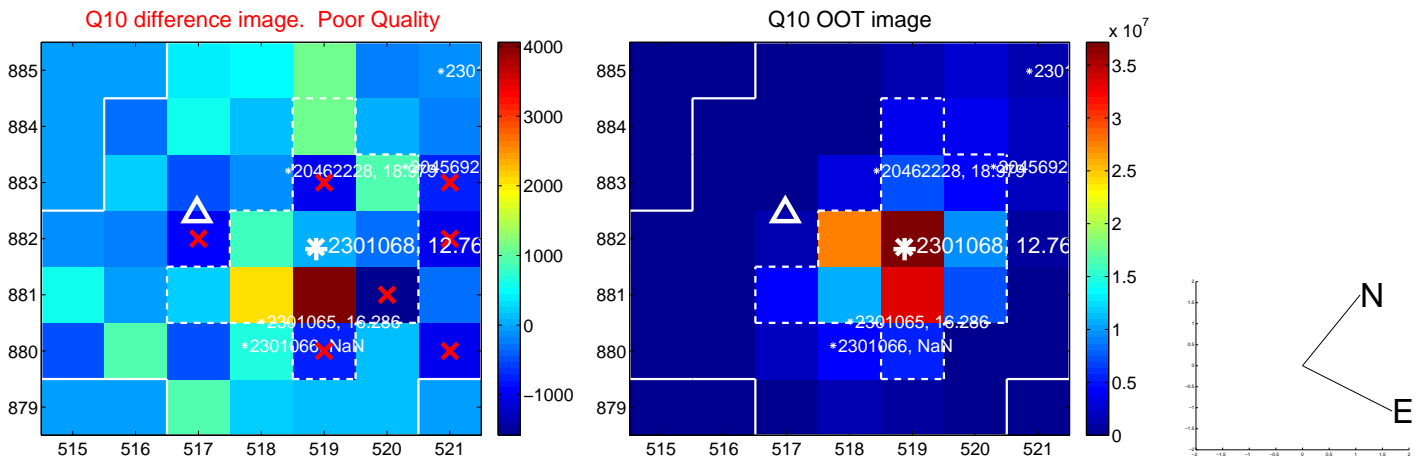
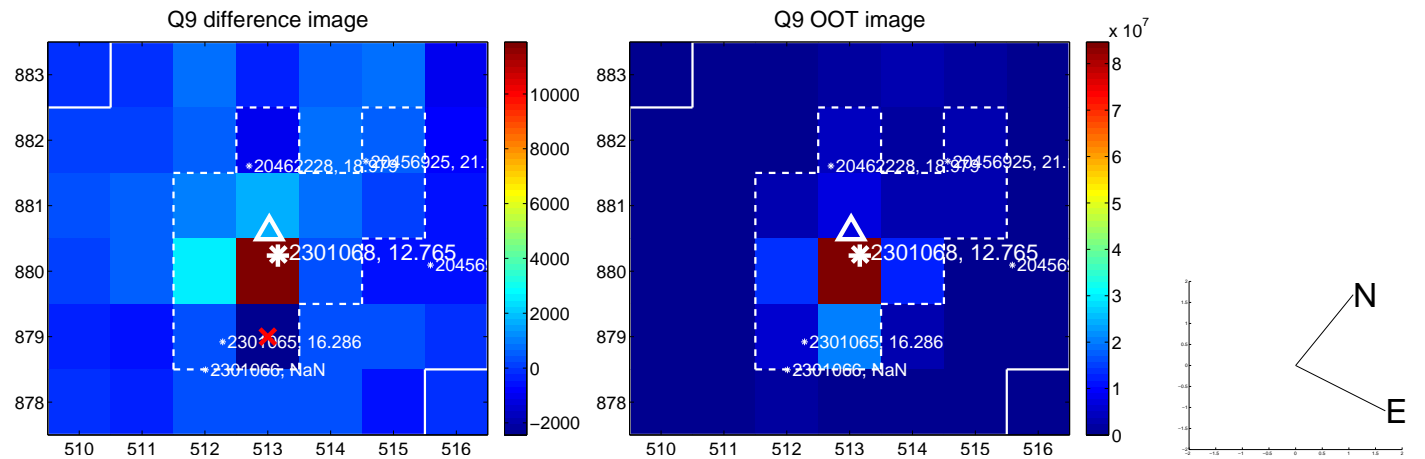
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



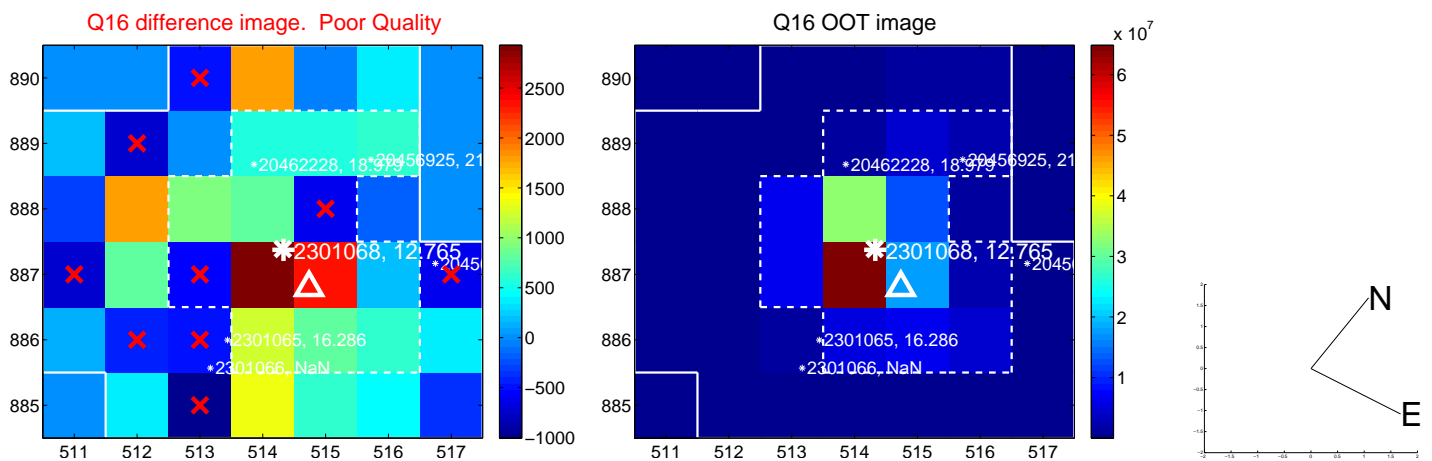
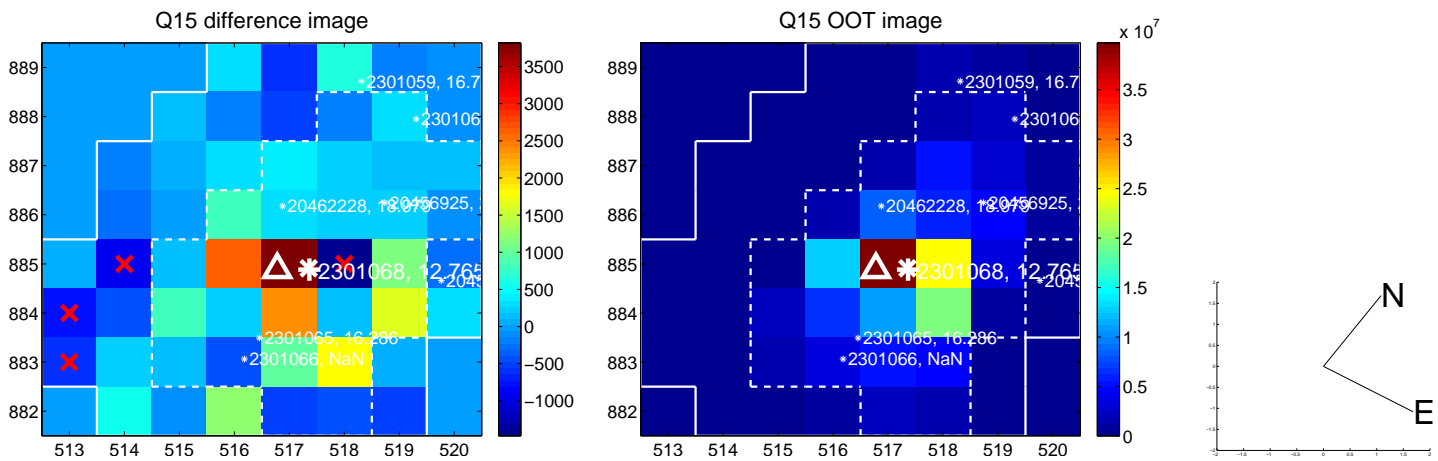
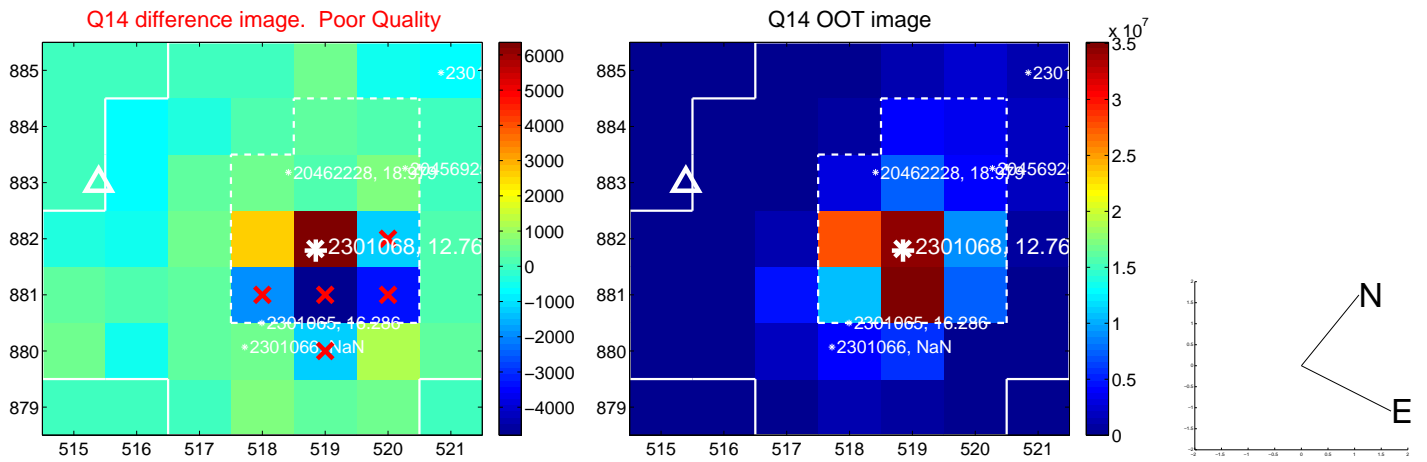
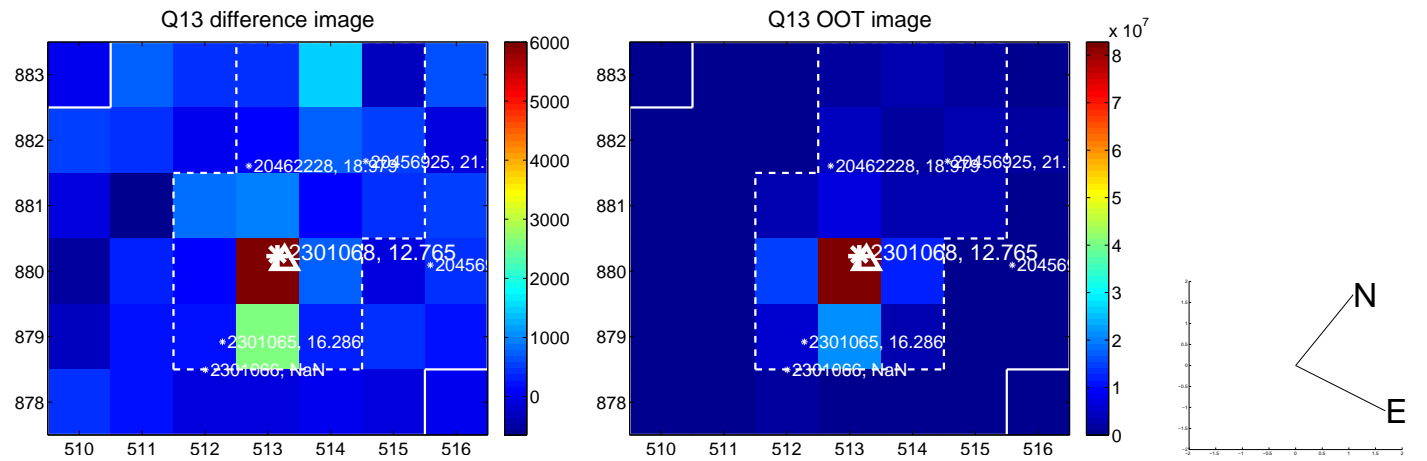
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



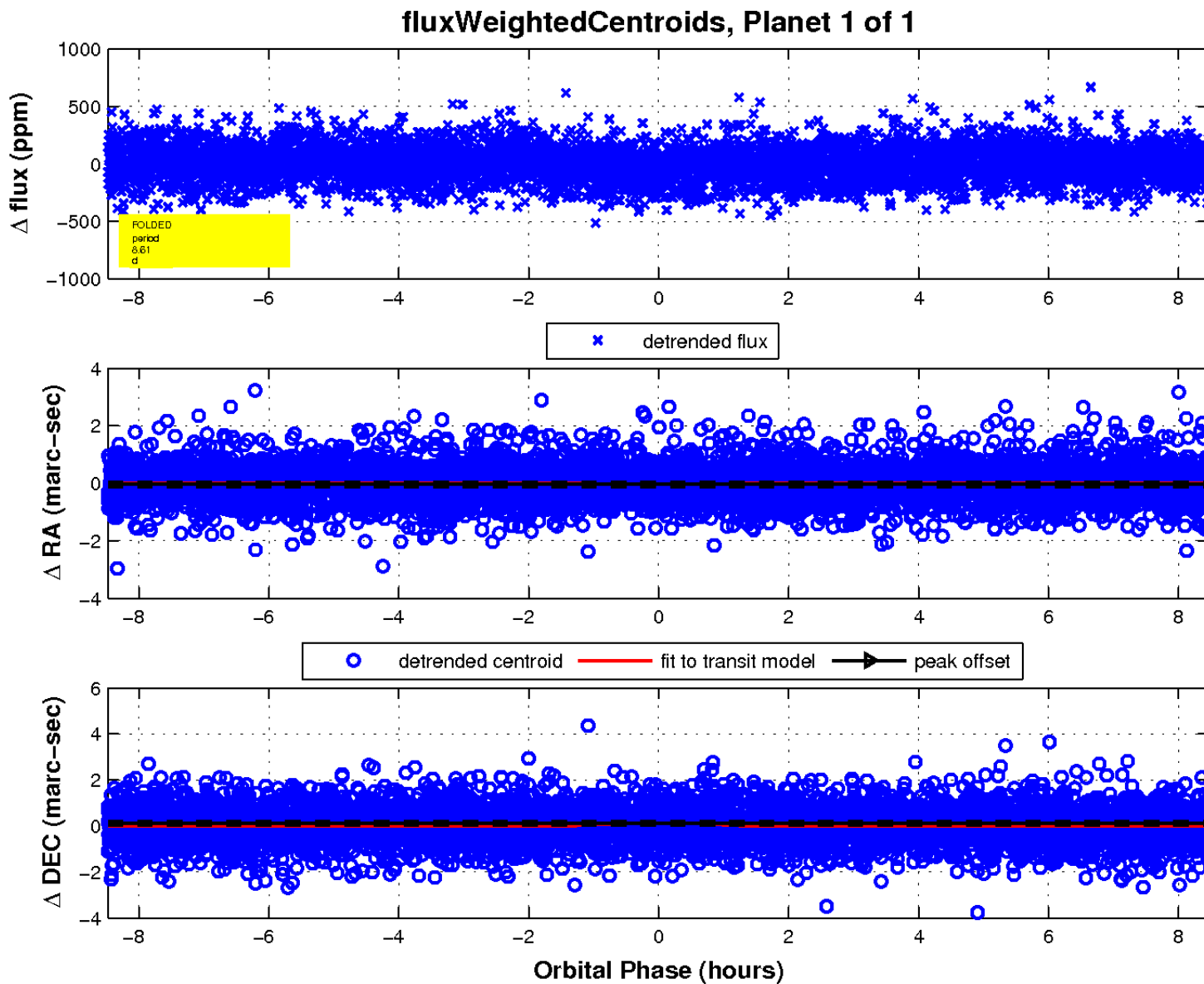
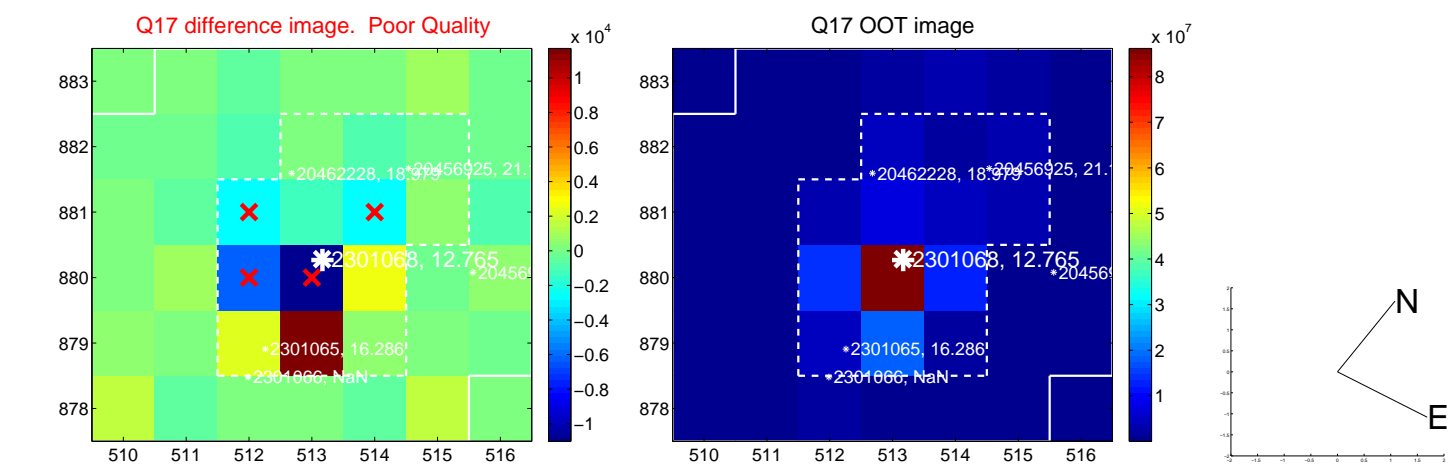
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

