

KIC 004829935

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})
004829935-01	OBS	2395.01	16.932967	132.152747	510.1	1.588	17.2	21.1	1.09	6310	3.16	93.54

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004829935-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_OFFSET

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.

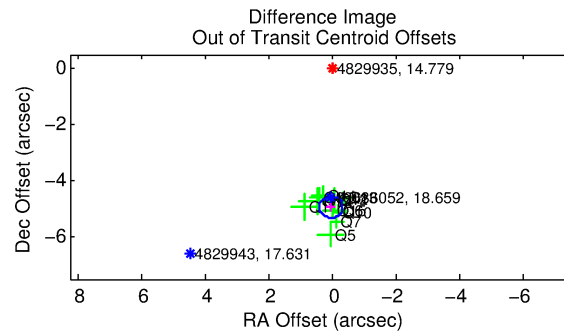
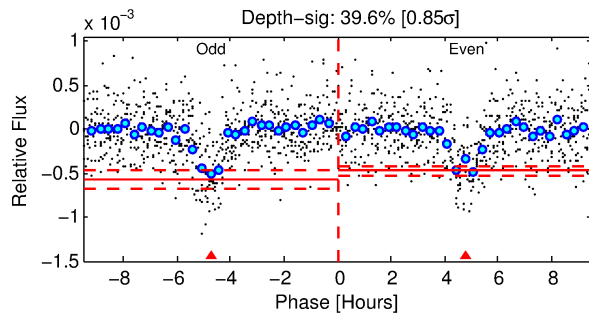
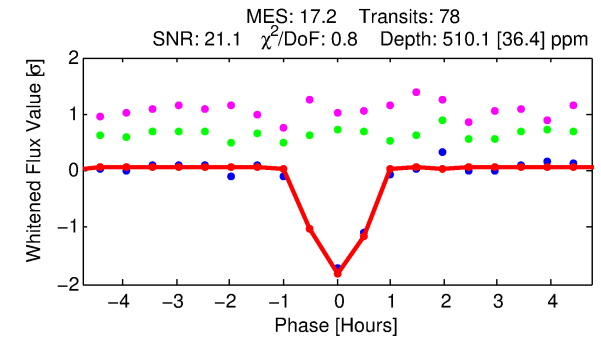
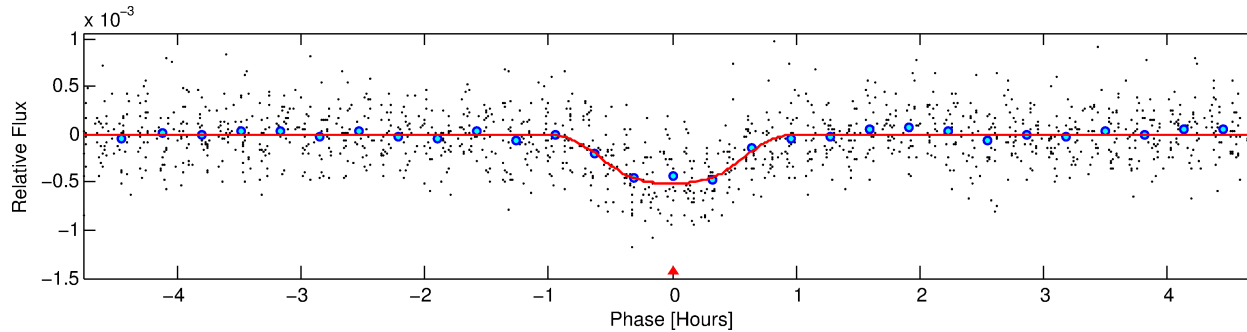
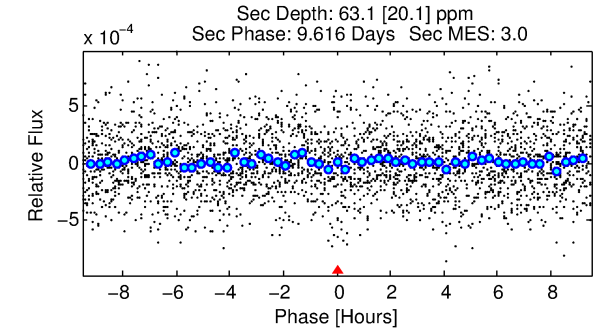
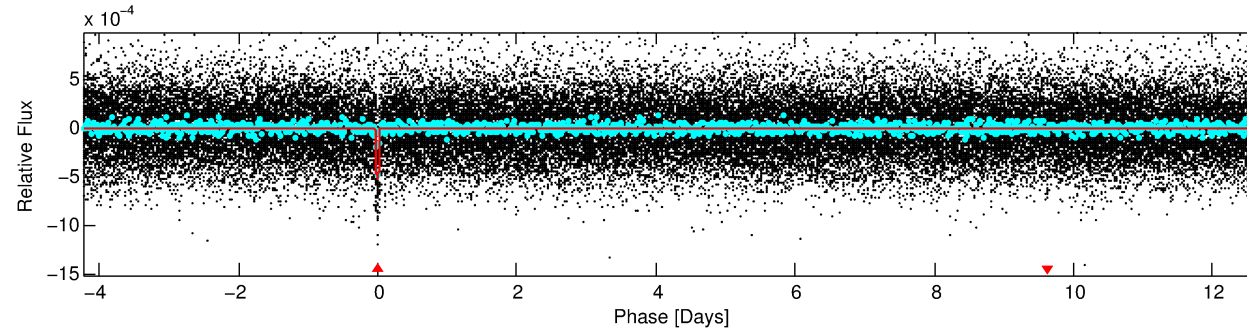
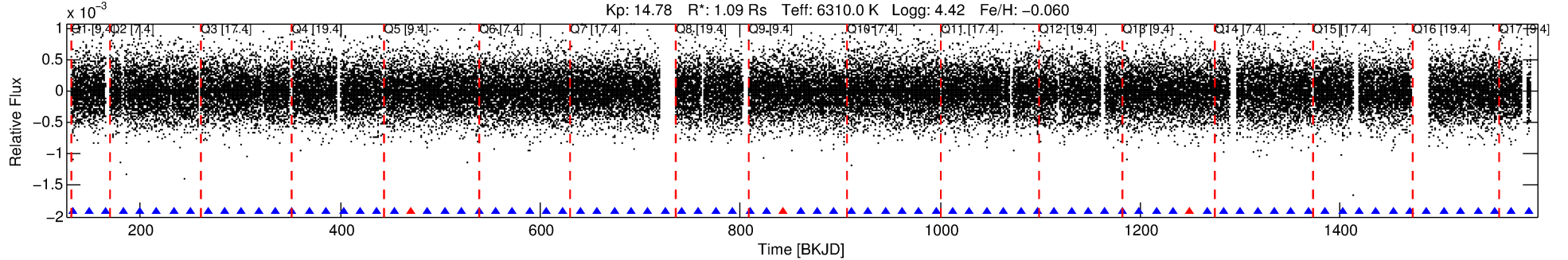
Ephemeris Match Information For 004829935-01

No Significant Match Found

DV One-Page Summary

KIC: 4829935 Candidate: 1 of 1 Period: 16.933 d
KOI: K02395.01 Corr: 0.888

Kp: 14.78 R*: 1.09 Rs Teff: 6310.0 K Logg: 4.42 Fe/H: -0.060



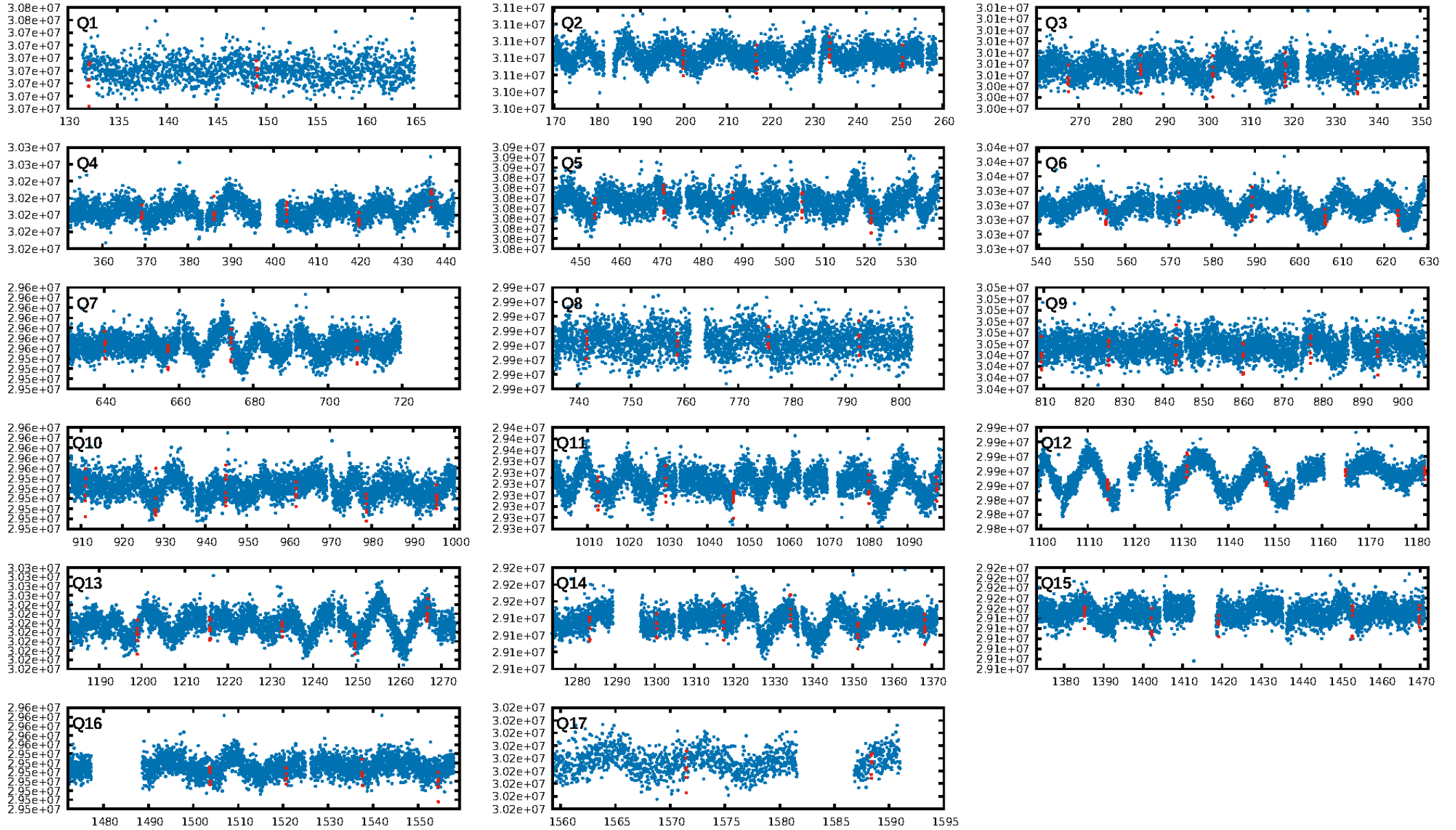
DV Fit Results:

Period = 16.93297 [0.00004] d
Epoch = 132.1527 [0.0020] BKJD
Rp/R* = 0.0265 [0.0020]
a/R* = 29.28 [7.87]
b = 0.96 [0.02]
Seff = 93.54 [37.82]
Teq = 793 [80] K
Rp = 3.16 [1.03] Re
a = 0.1349 [0.0353] AU
Ag = 63.17 [32.54] [1.91σ]
Teffp = 3457 [332] K [7.80σ]

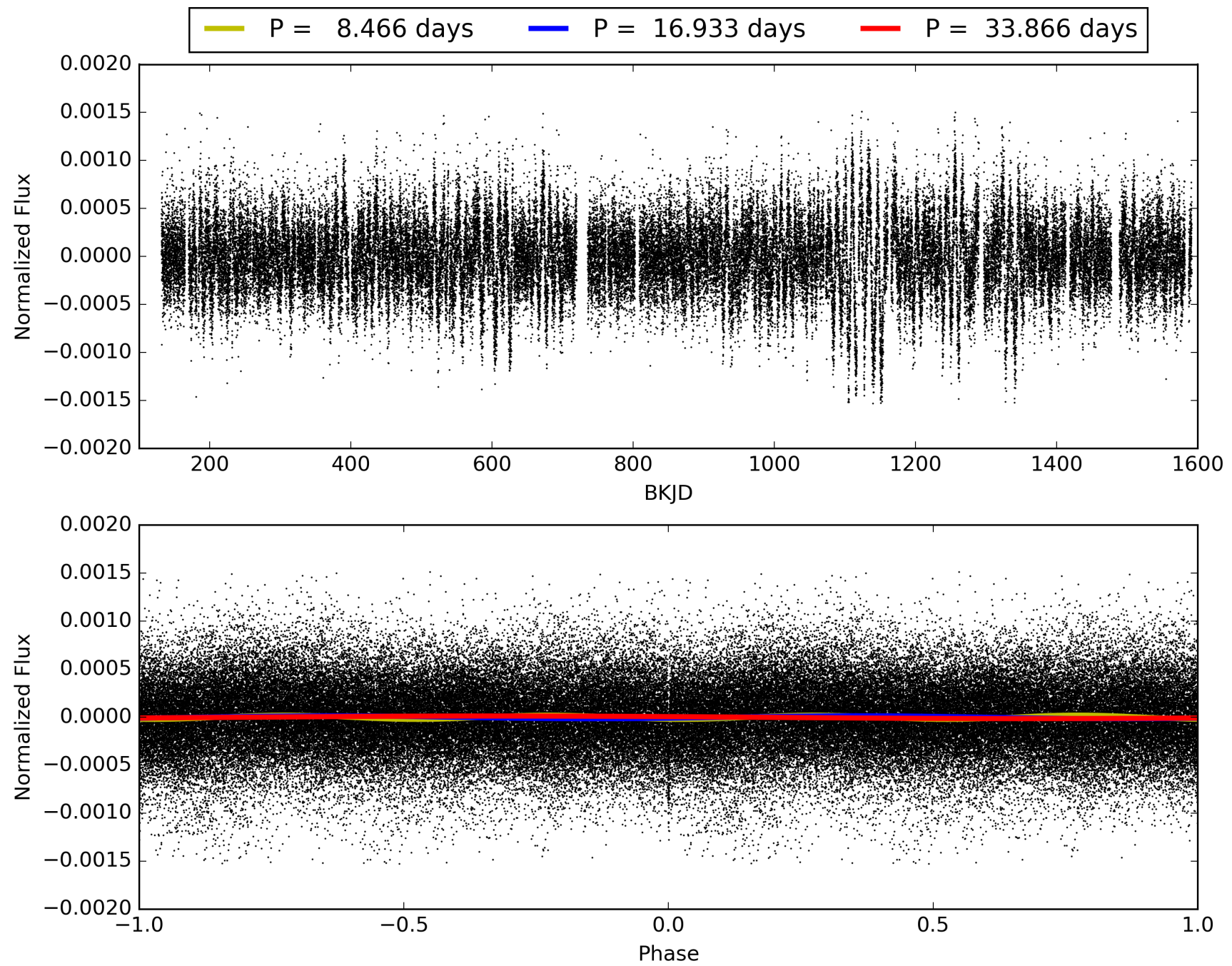
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 72.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.90e-62
RollingBand-fgt: 0.96 [71/74]
GhostDiagnostic-chr: 0.6281
Centroid-sig: 0.0%
Centroid-so: 6.792 arcsec [10.49σ]
OotOffset-rm: 4.950 arcsec [39.46σ]
KicOffset-rm: 4.969 arcsec [39.04σ]
OotOffset-st: 3/3/1/5 [12]
KicOffset-st: 3/3/1/5 [12]
DiffImageQuality-fgm: 0.92 [11/12]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 004829935-01, PDC Light Curves

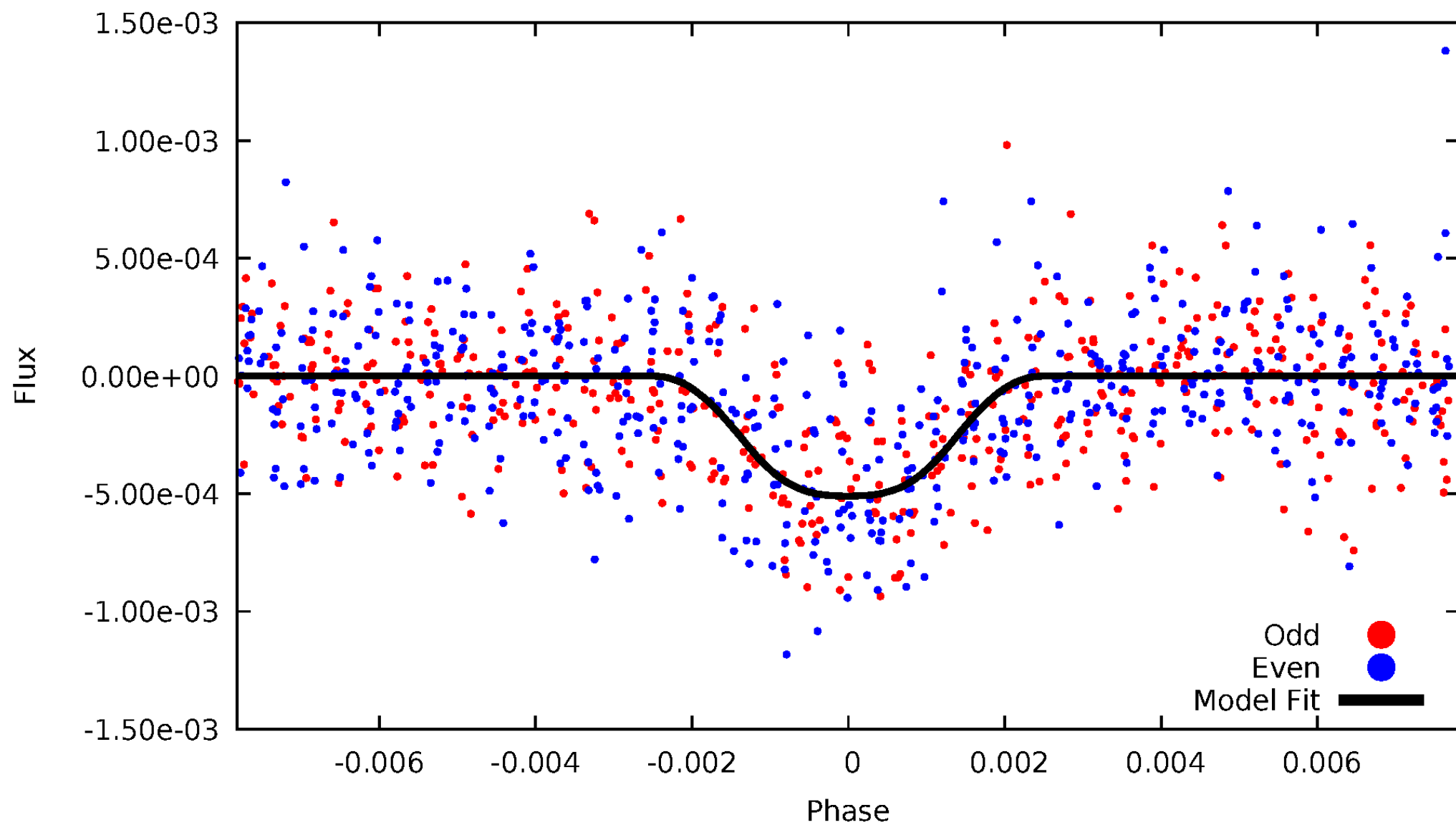


TCE 004829935-01



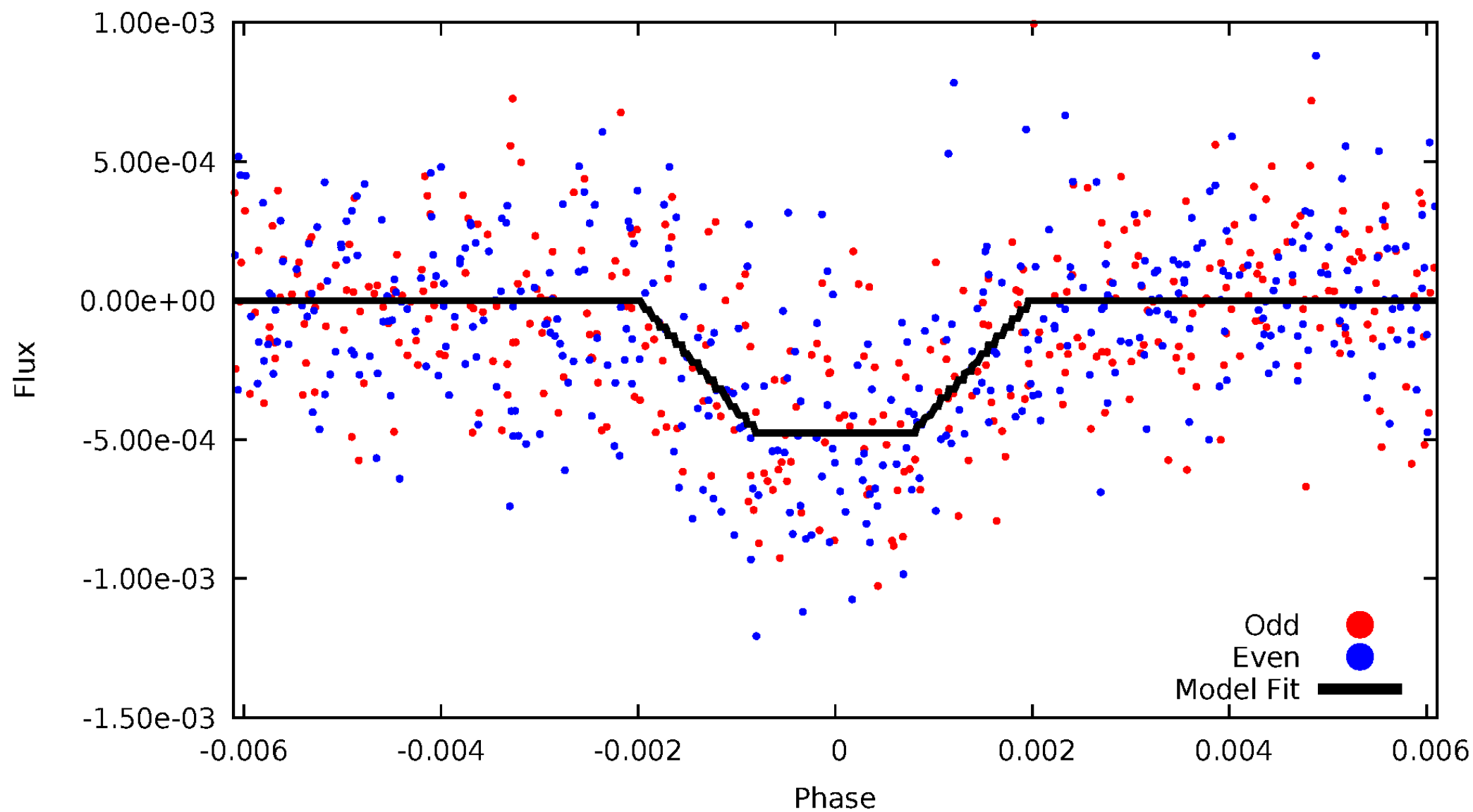
DV Odd/Even

TCE 004829935-01



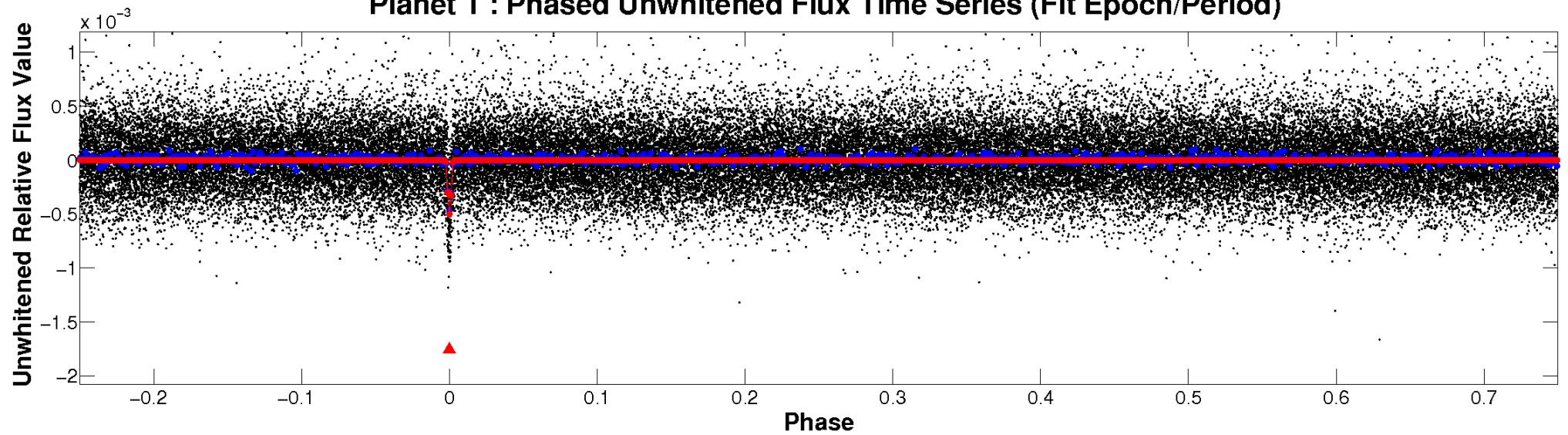
ALT Odd/Even

TCE 004829935-01

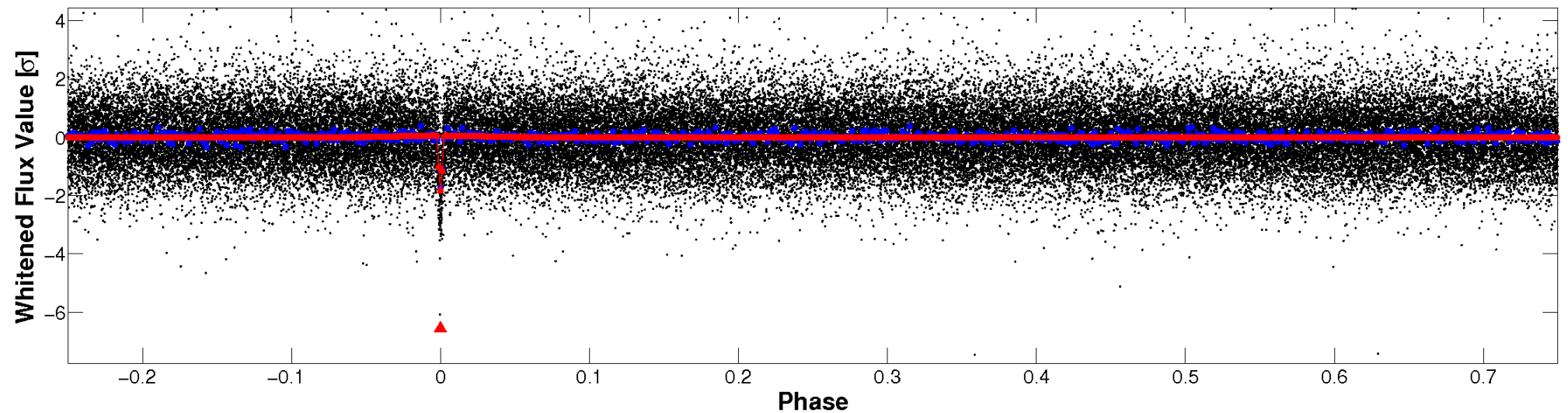


Non-Whitened Vs. Whitened Light Curve

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

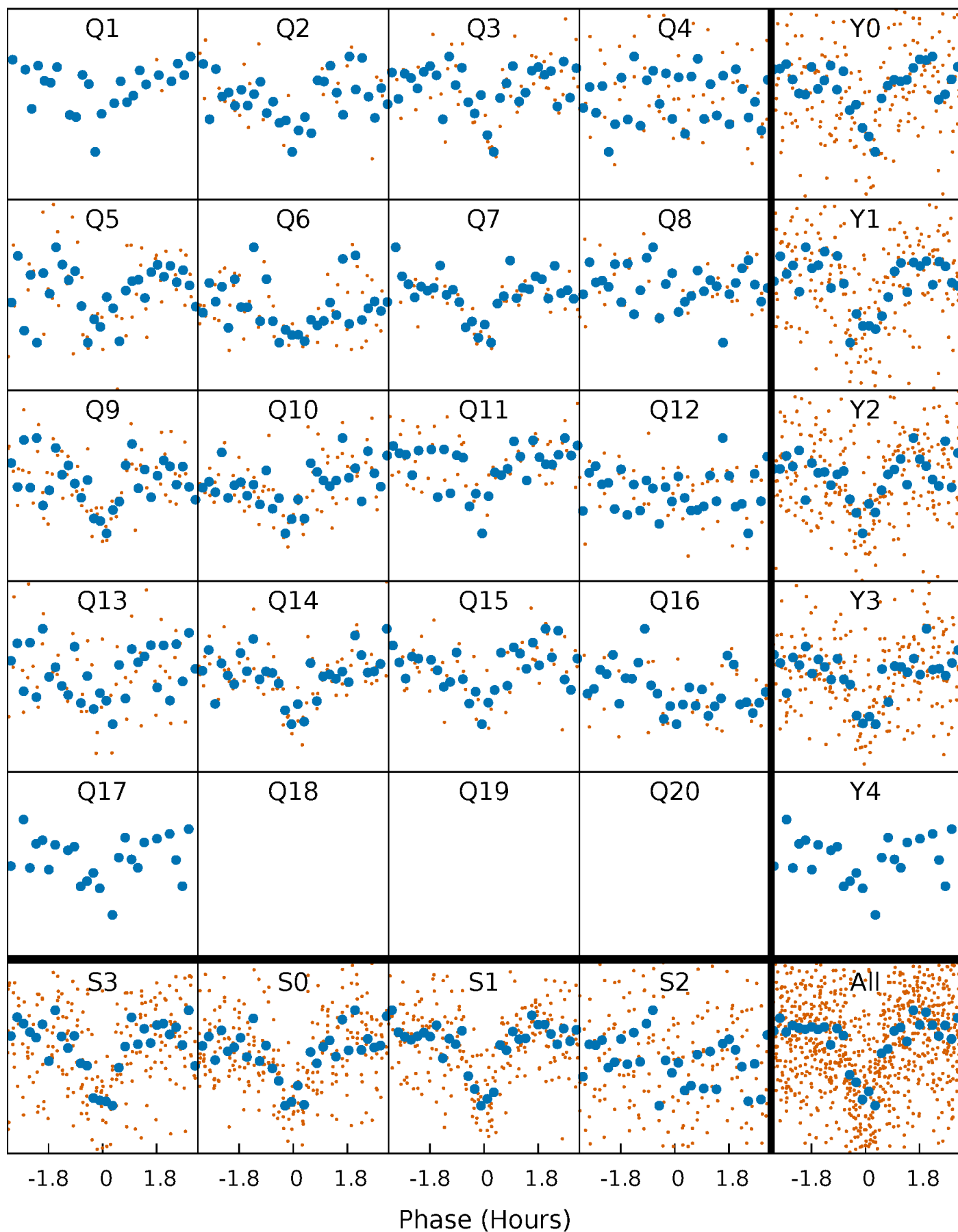


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



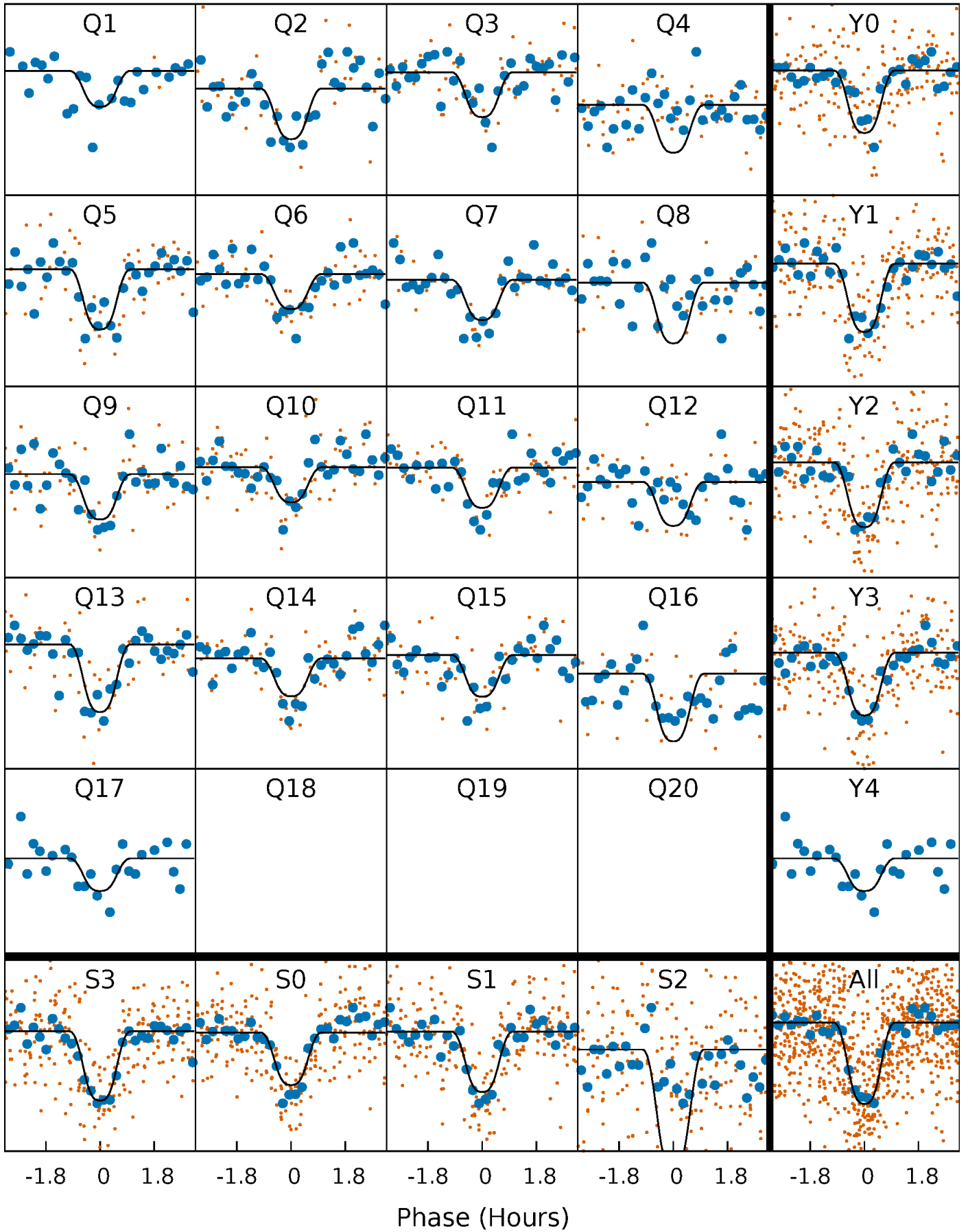
PDC Quarter-Phased Transit Curves

TCE 004829935-01 P= 16.932967 Days $T_0=132.152747$ (BKJD)



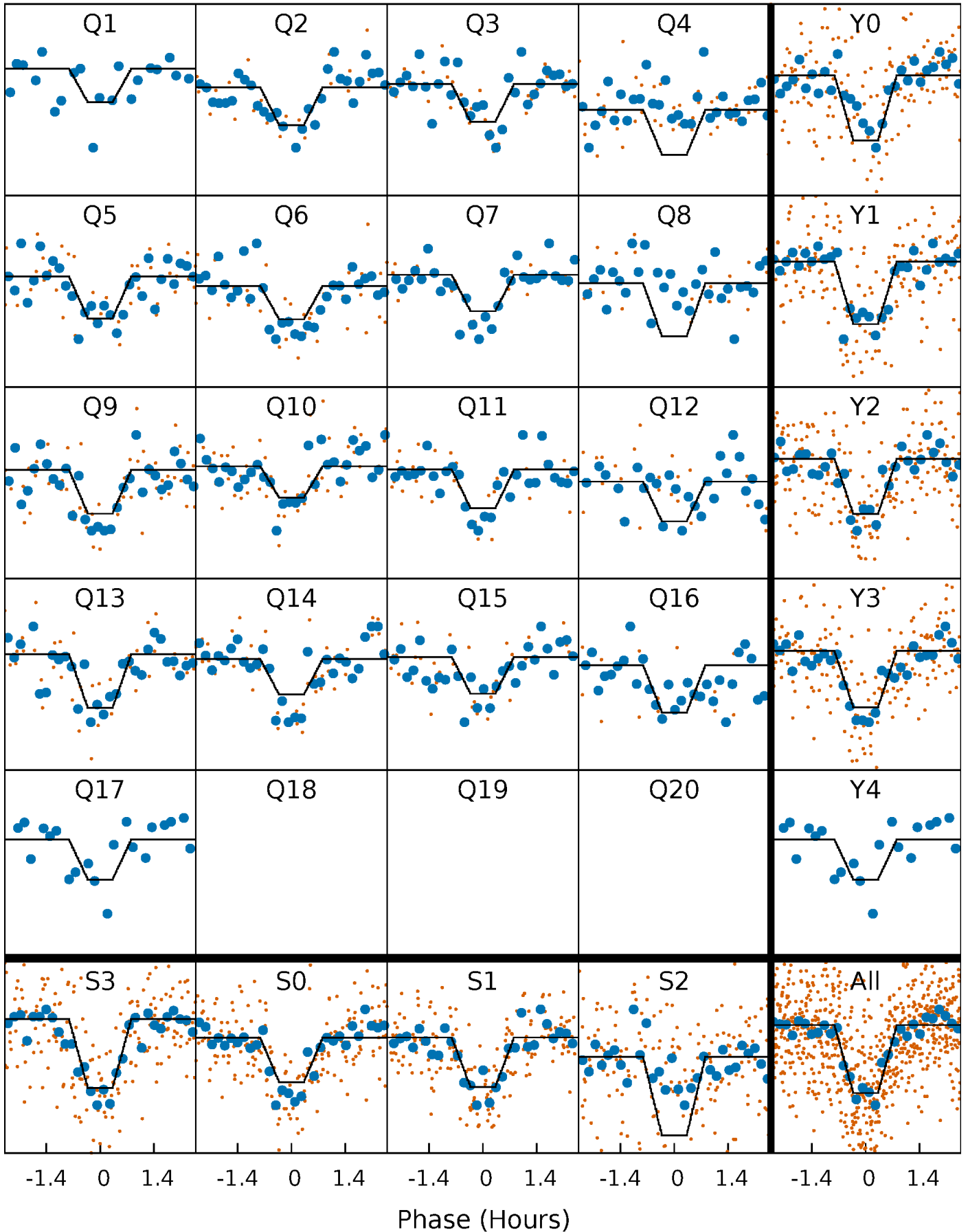
DV Quarter-Phased Transit Curves

TCE 004829935-01 P= 16.932967 Days $T_0=132.152747$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

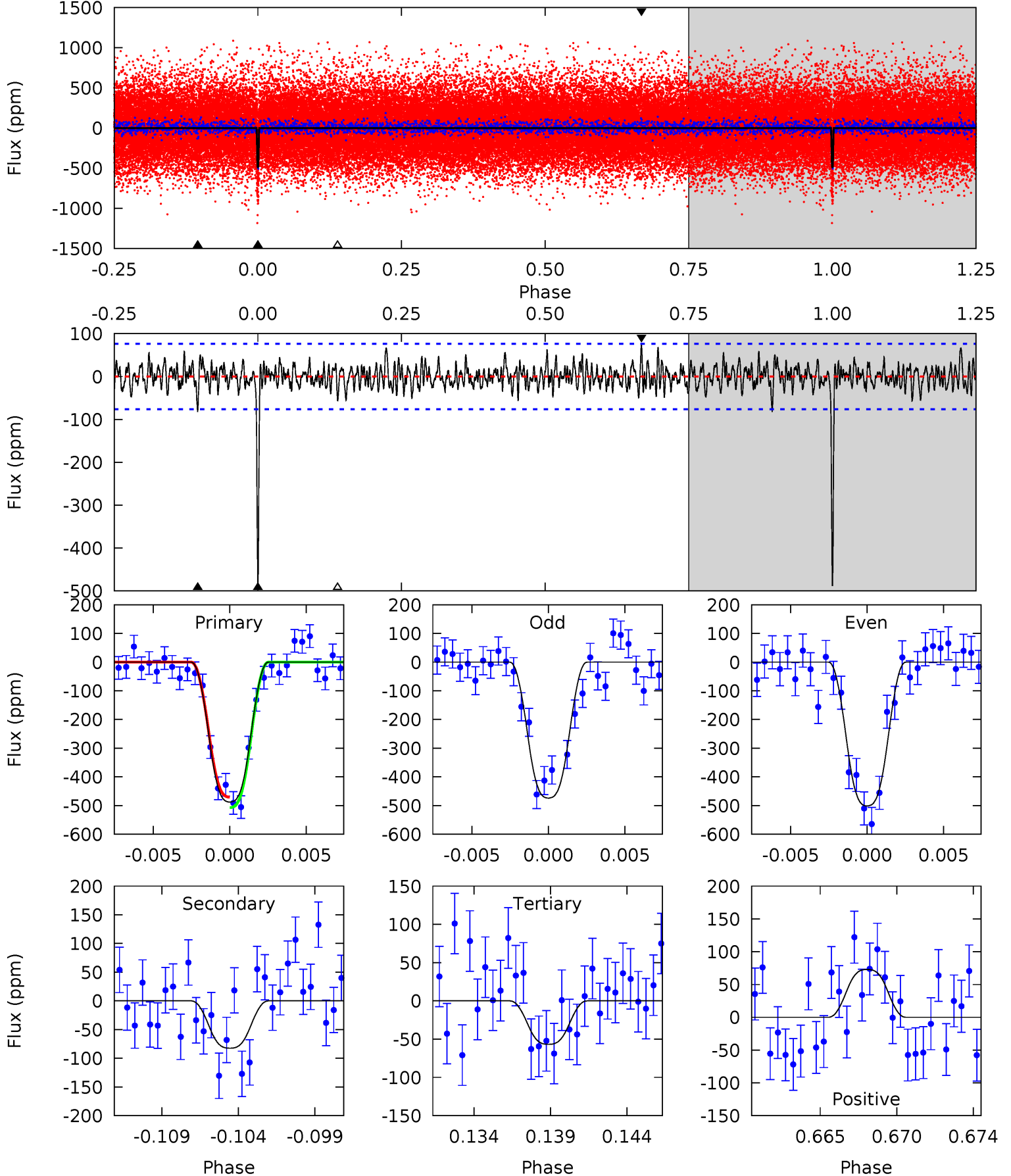
TCE 004829935-01 P= 16.932994 Days $T_0=132.151690$ (BKJD)



DV Model-Shift Uniqueness Test

004829935-01, $P = 16.932967$ Days, $E = 115.219780$ Days

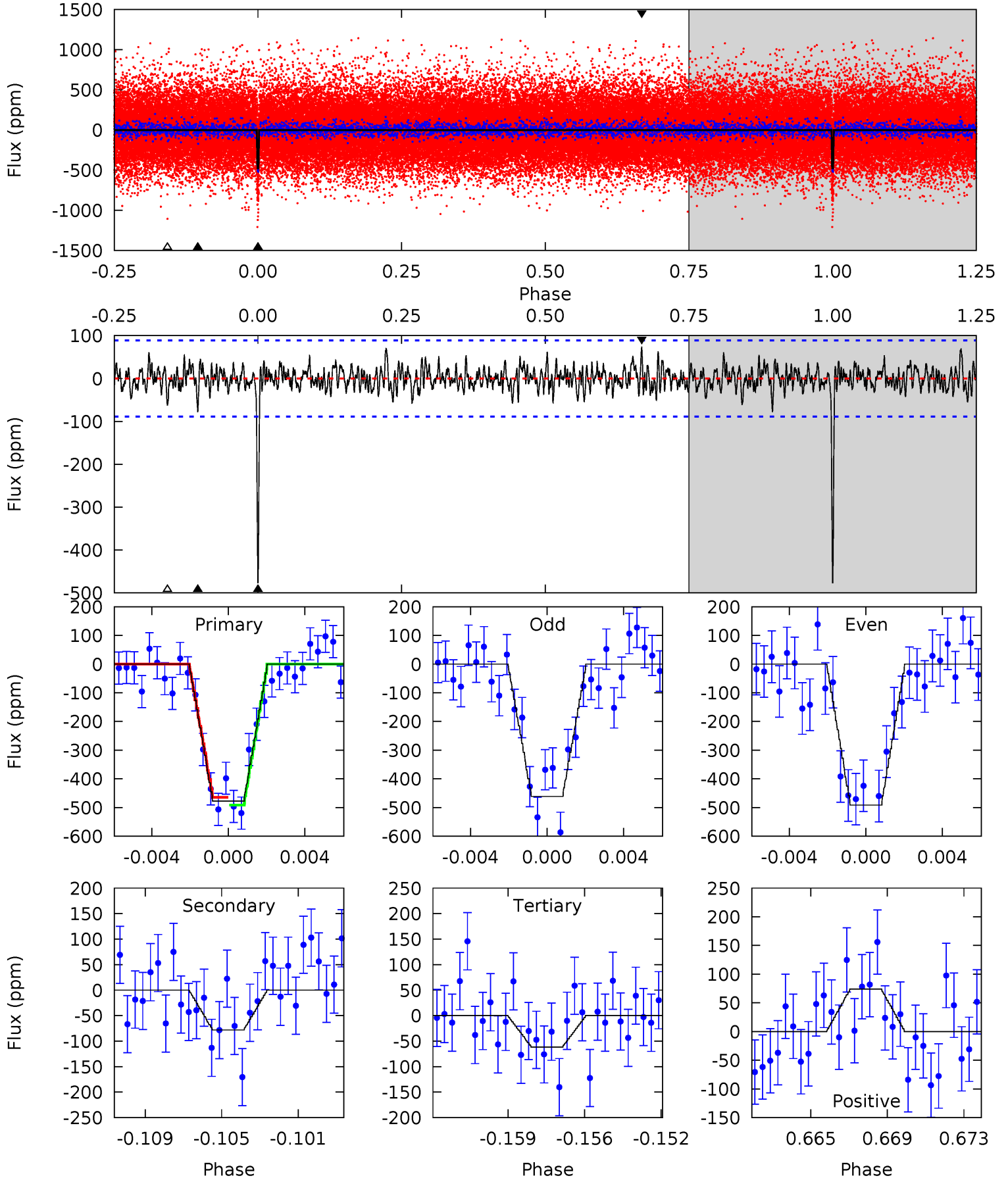
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.0	5.58	3.84	4.93	5.16	2.81	1.42	29.2	28.1	1.74	0.65	0.92	0.92	0.13	1.23



Alt Model-Shift Uniqueness Test

004829935-01, P = 16.932994 Days, E = 115.218696 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.0	4.58	3.60	4.34	5.20	2.89	1.23	24.4	23.6	0.98	0.24	0.88	0.89	0.13	0.81



Stellar Parameters For KIC 004829935

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6310^{+174}_{-239}	$4.417^{+0.054}_{-0.202}$	$-0.060^{+0.250}_{-0.300}$	$1.095^{+0.346}_{-0.123}$	$1.143^{+0.157}_{-0.157}$	$1.225^{+0.353}_{-0.652}$
	+3%/-4%	+1%/-5%	+417%/-500%	+32%/-11%	+14%/-14%	+29%/-53%
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 004829935-01 / KOI 2395.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-82 ± 15	$3.28^{+0.53}_{-0.38}$	1130^{+76}_{-54}	3996^{+190}_{-189}	74^{+24}_{-21}
Alt.	-78 ± 17	$2.71^{+0.50}_{-0.37}$	1128^{+84}_{-61}	4233^{+269}_{-242}	103^{+39}_{-34}

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

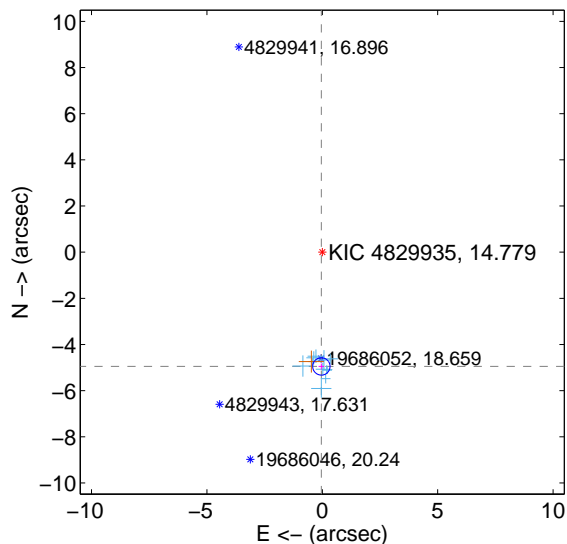
Supplemental centroid analysis for 004829935-01. Kepler magnitude: 14.78. Transit SNR 21.08

There are 11 quarters with good PRF difference image offsets

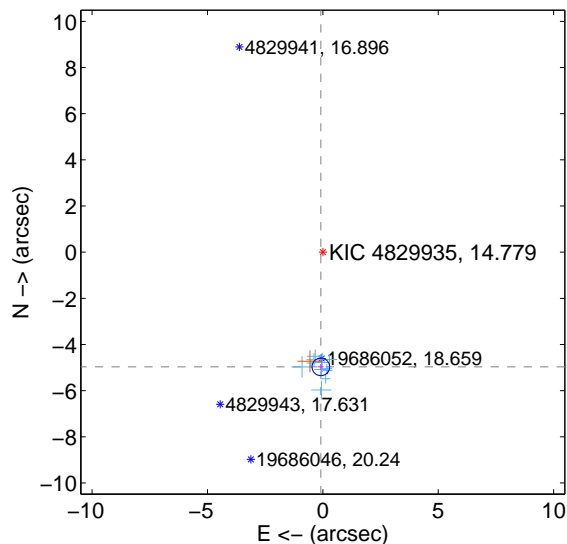
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.950 ± 0.125	39.46	0.041 ± 0.119	-4.950 ± 0.125
PRF-fit source offset from KIC position	4.969 ± 0.127	39.04	0.086 ± 0.125	-4.968 ± 0.128
photometric centroid source offset	6.79 ± 0.65	10.49	0.11 ± 0.56	-6.79 ± 0.65

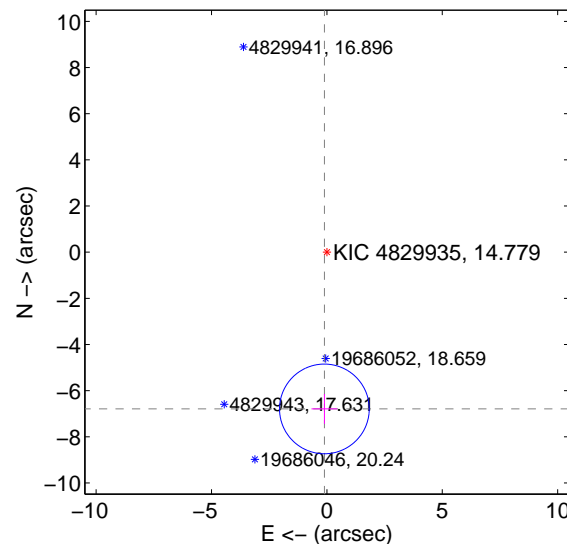
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

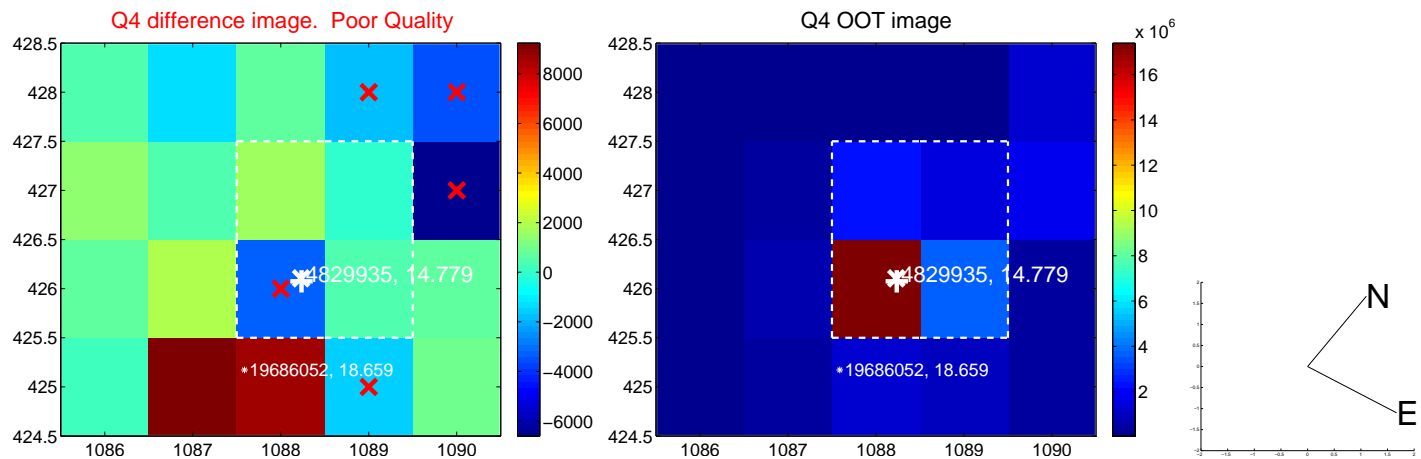
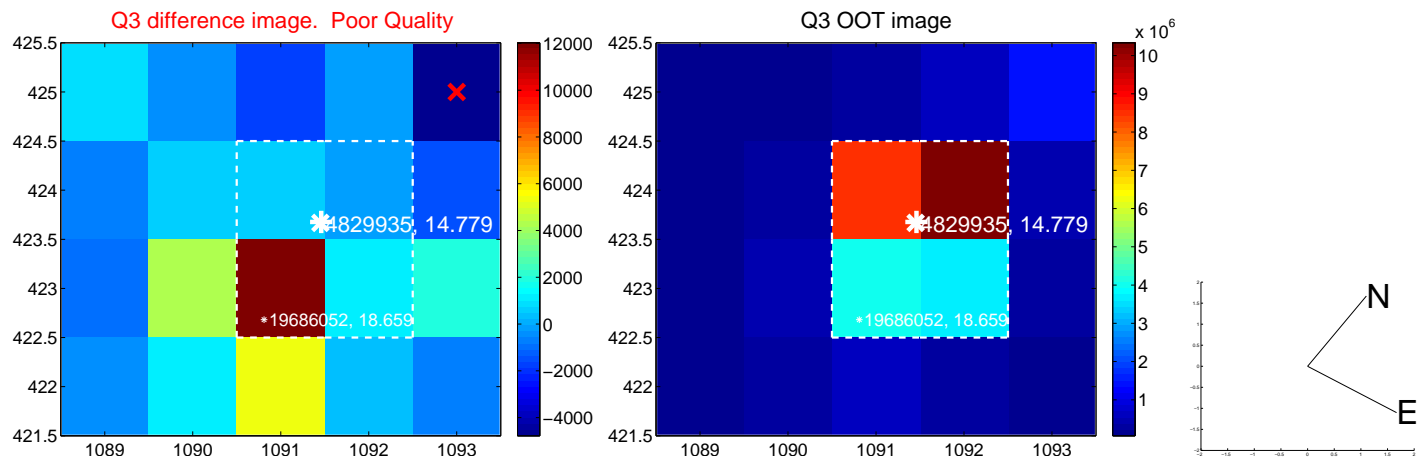
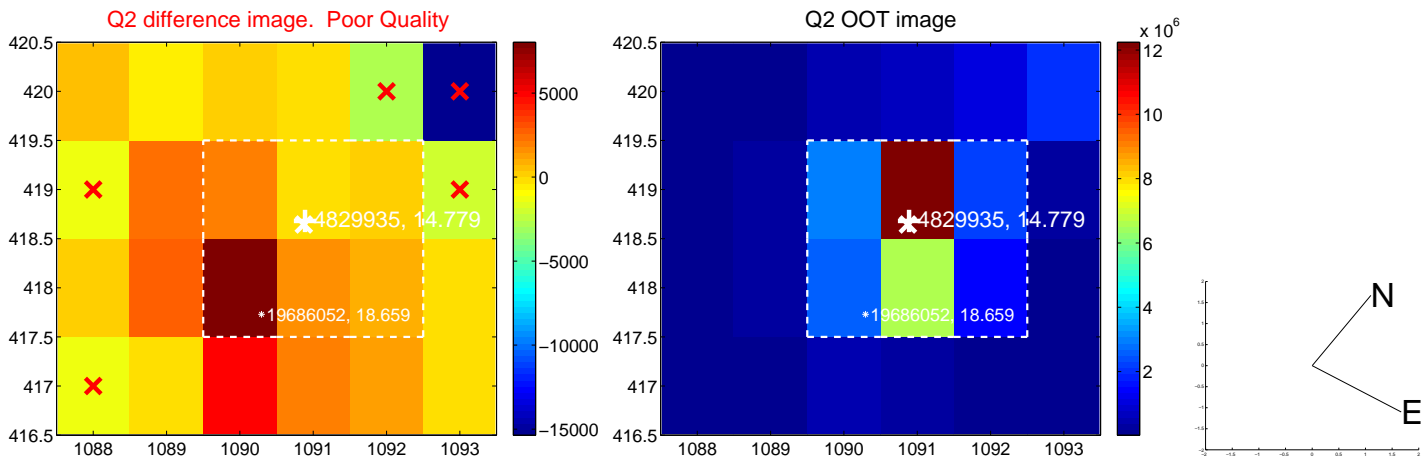
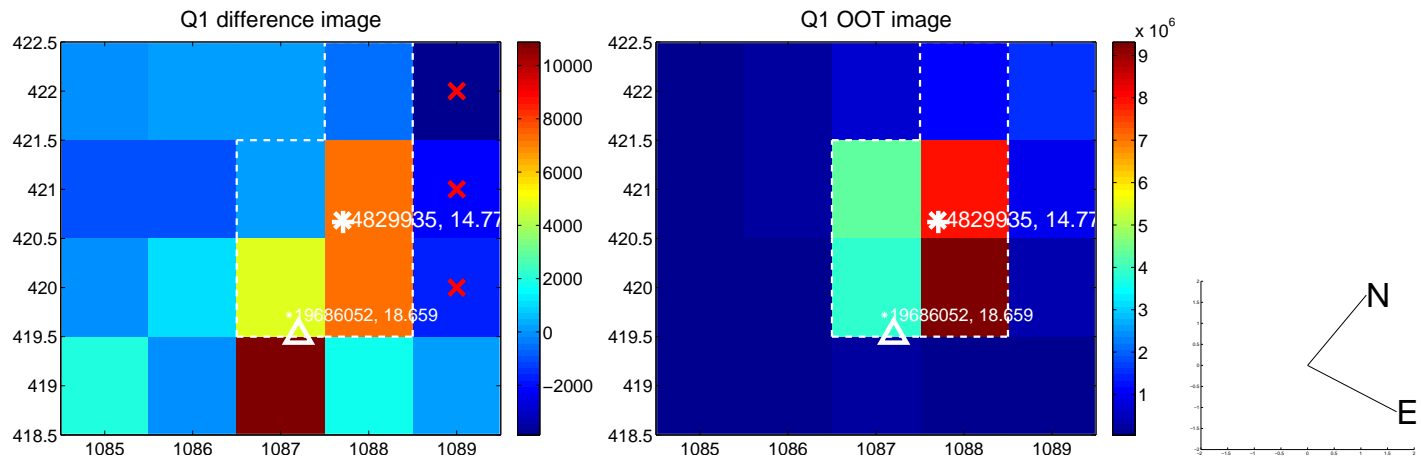


offset from photometric centroids

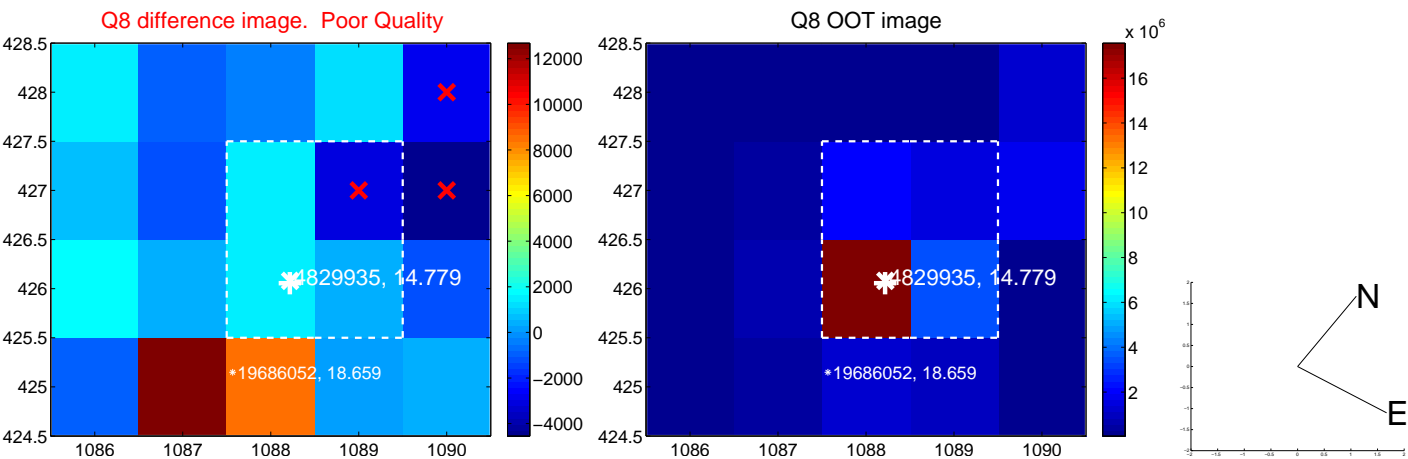
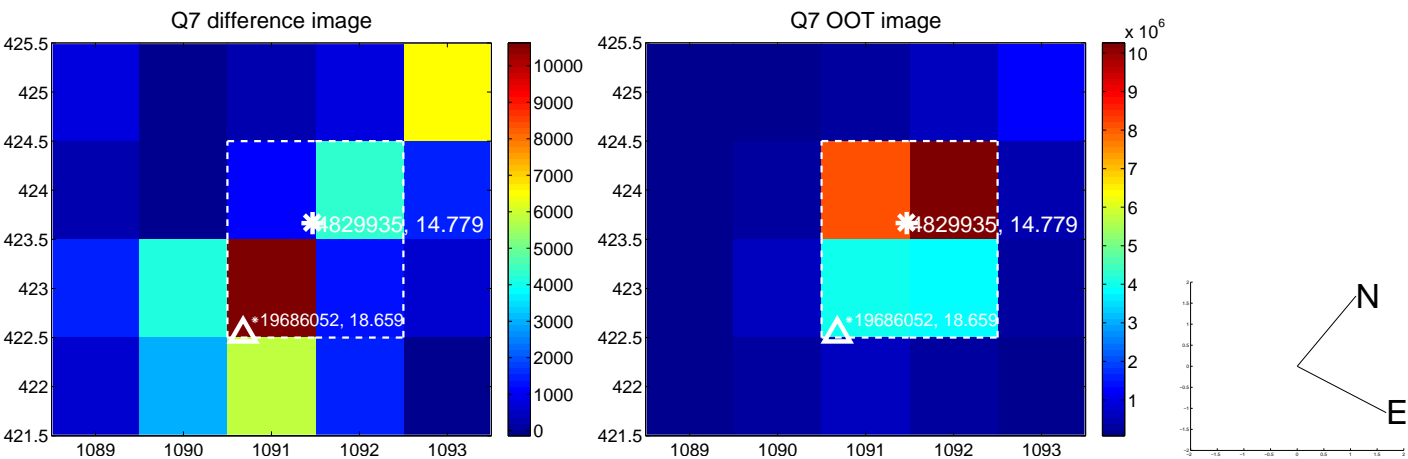
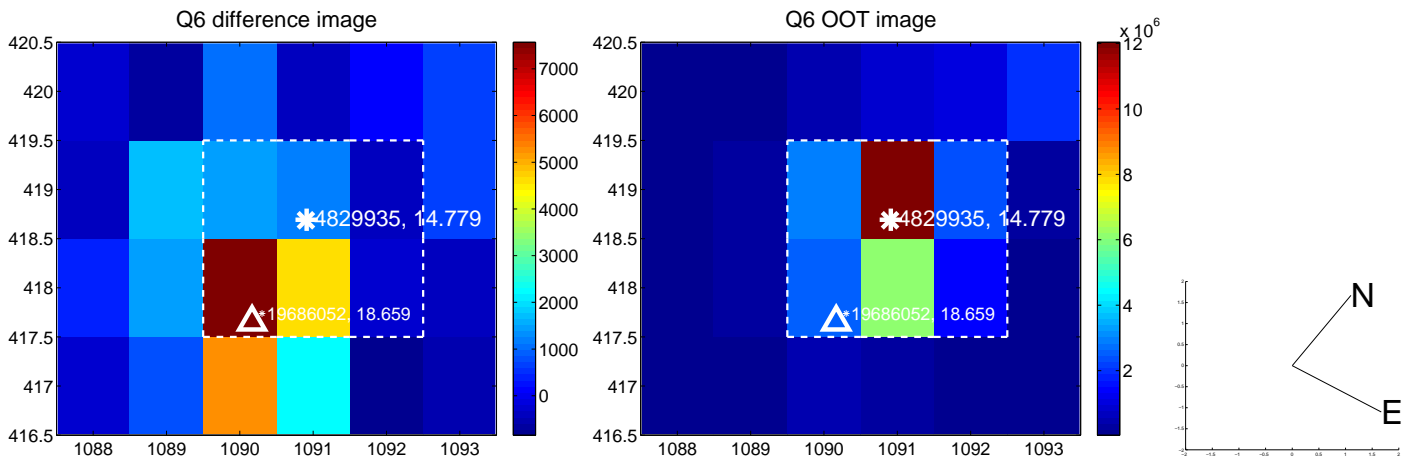
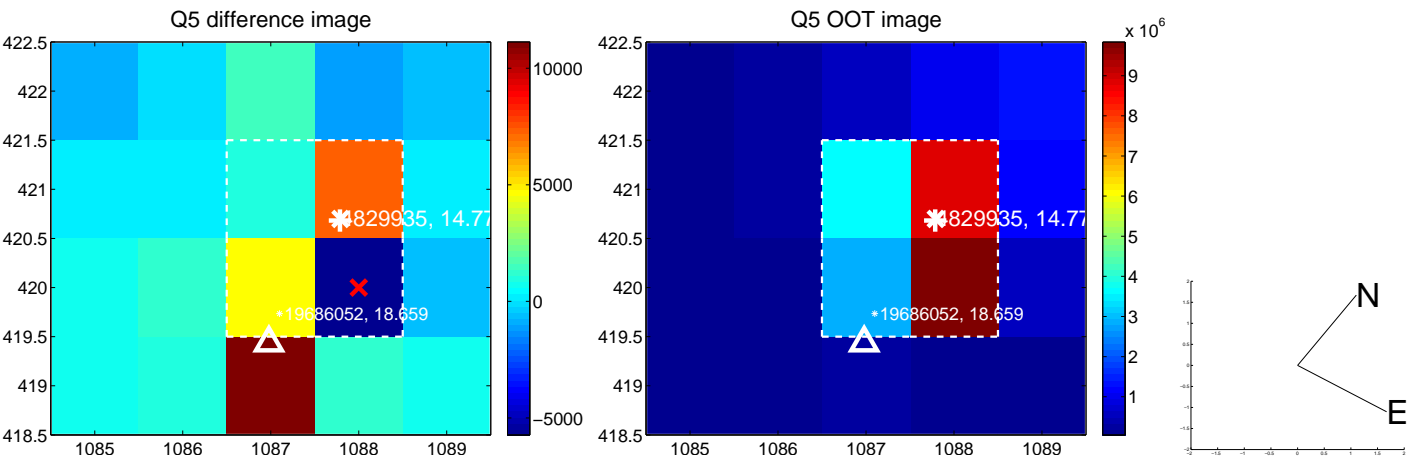


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

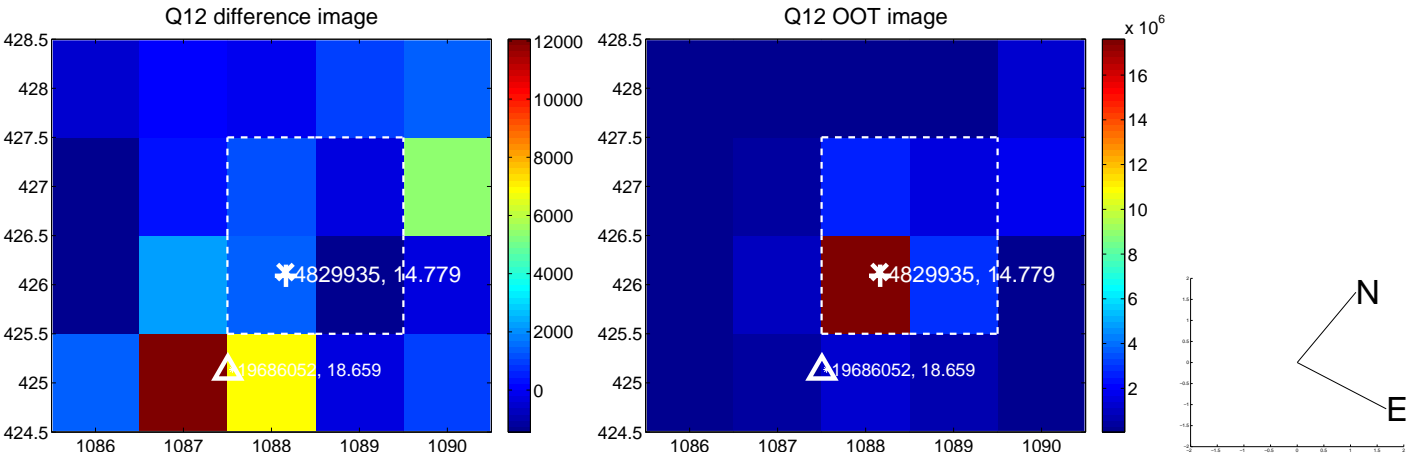
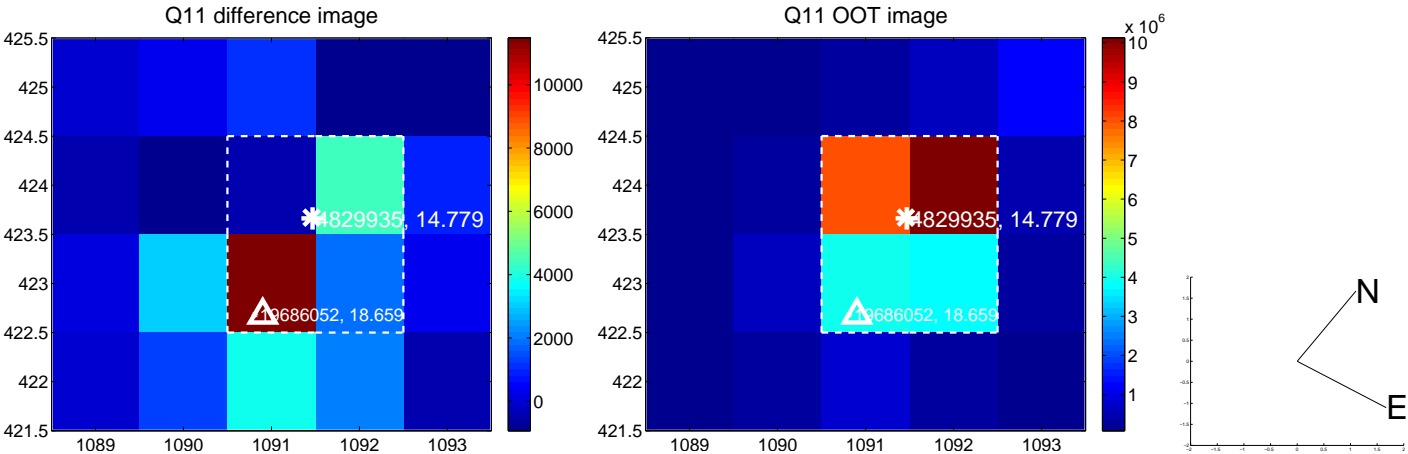
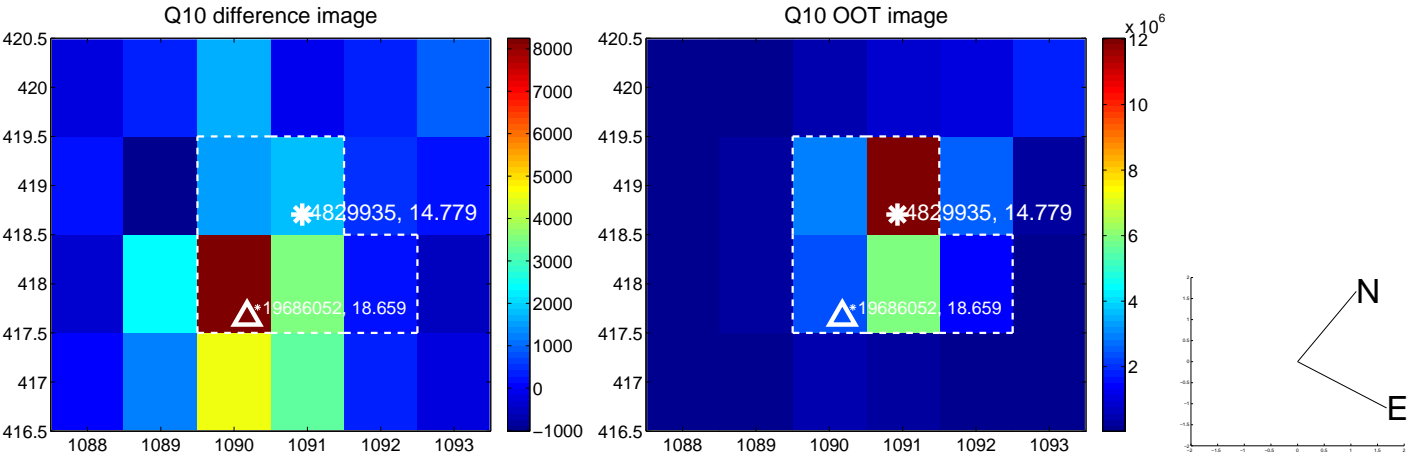
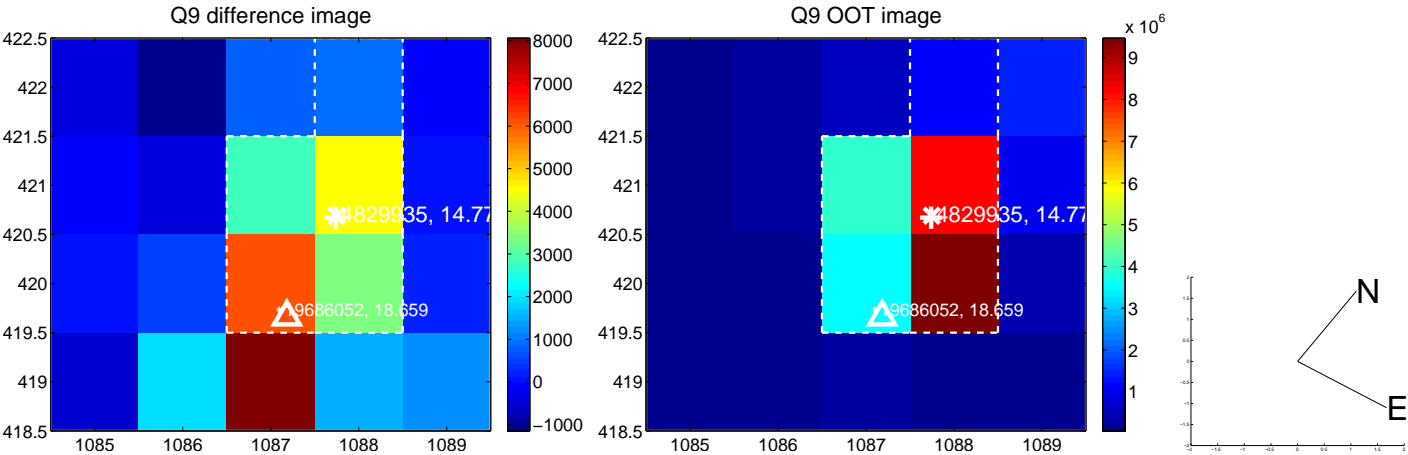
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



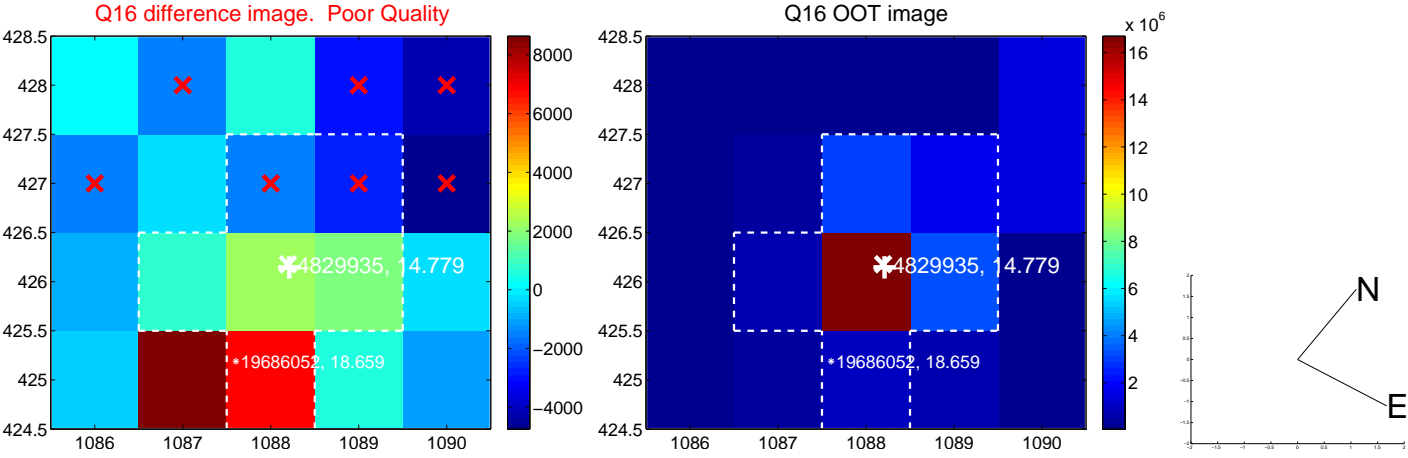
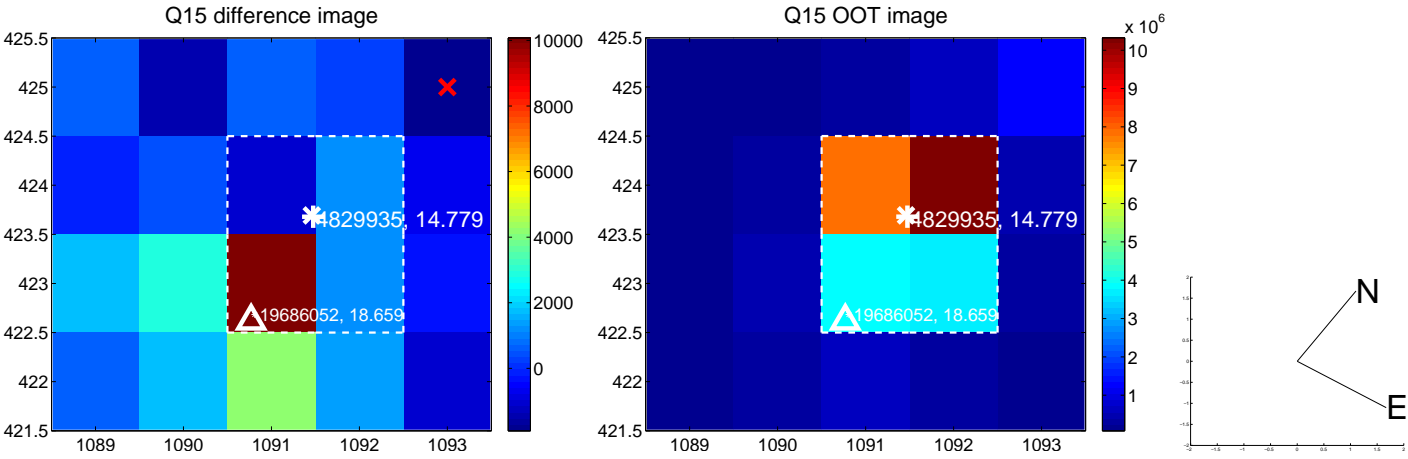
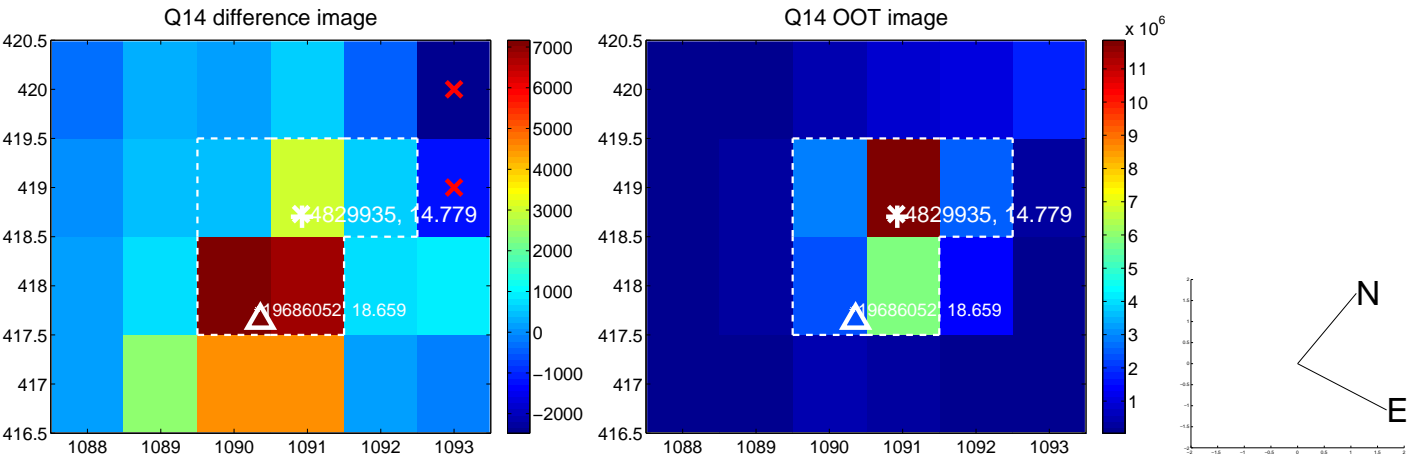
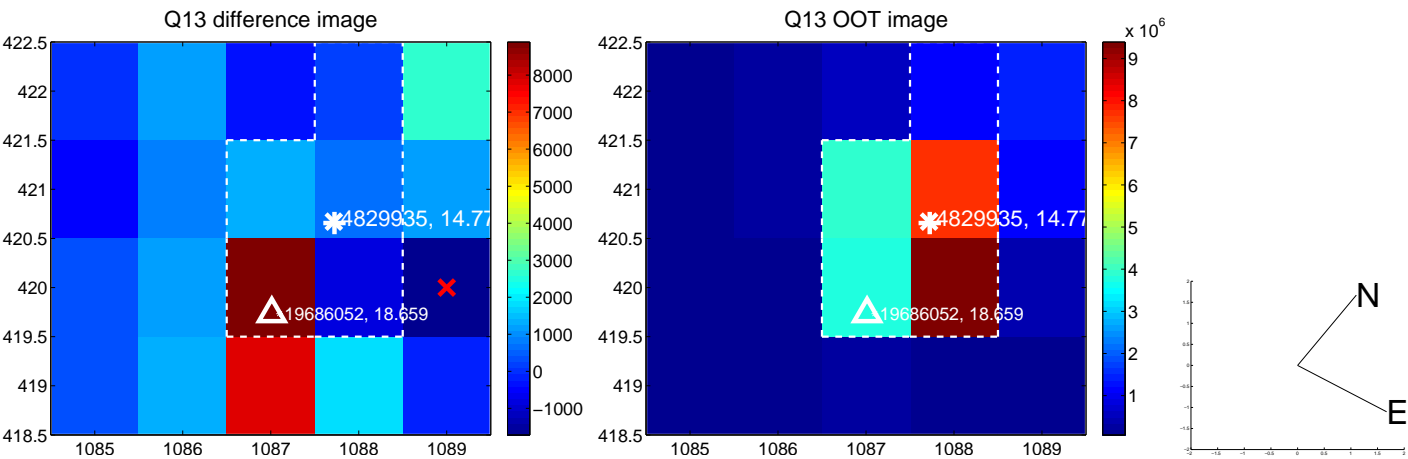
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



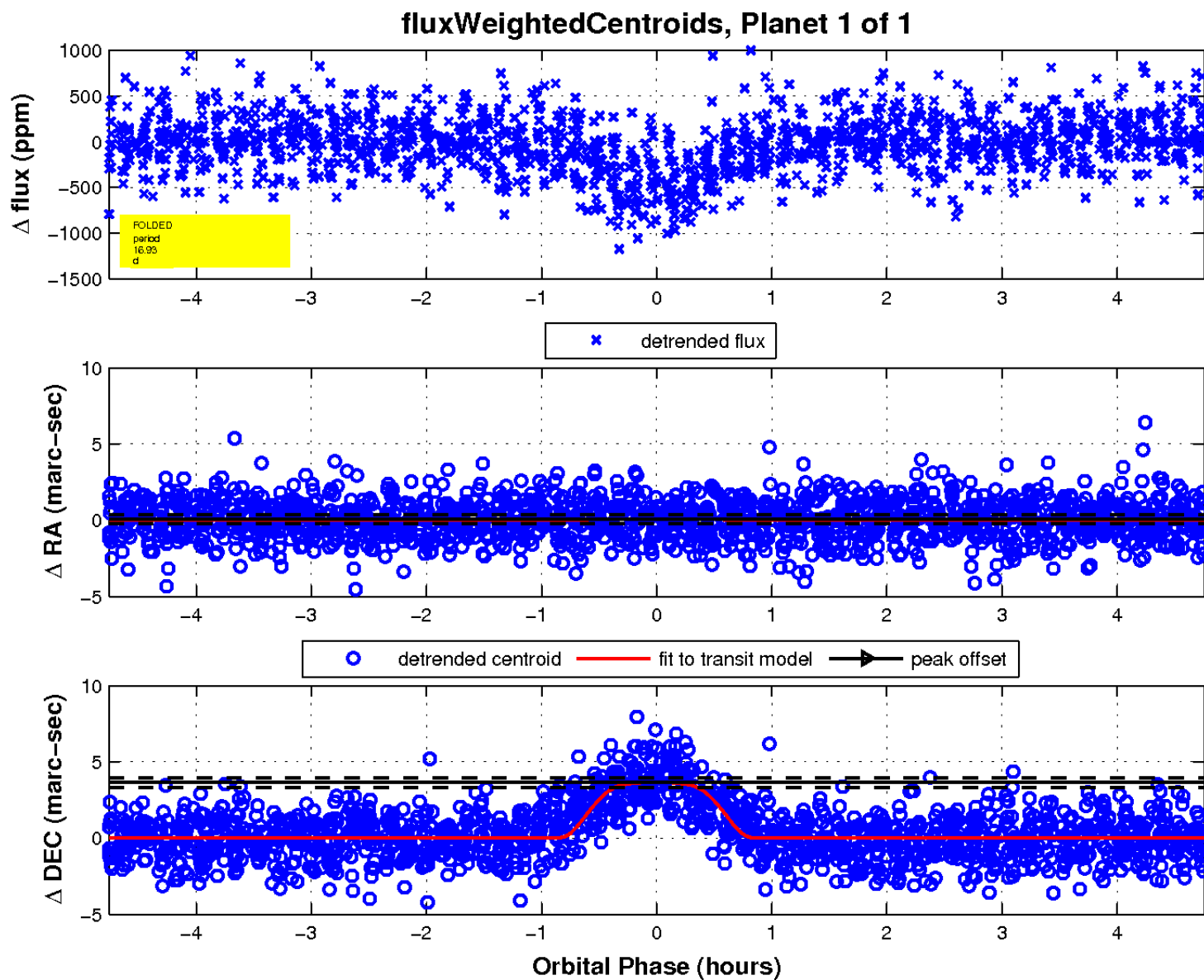
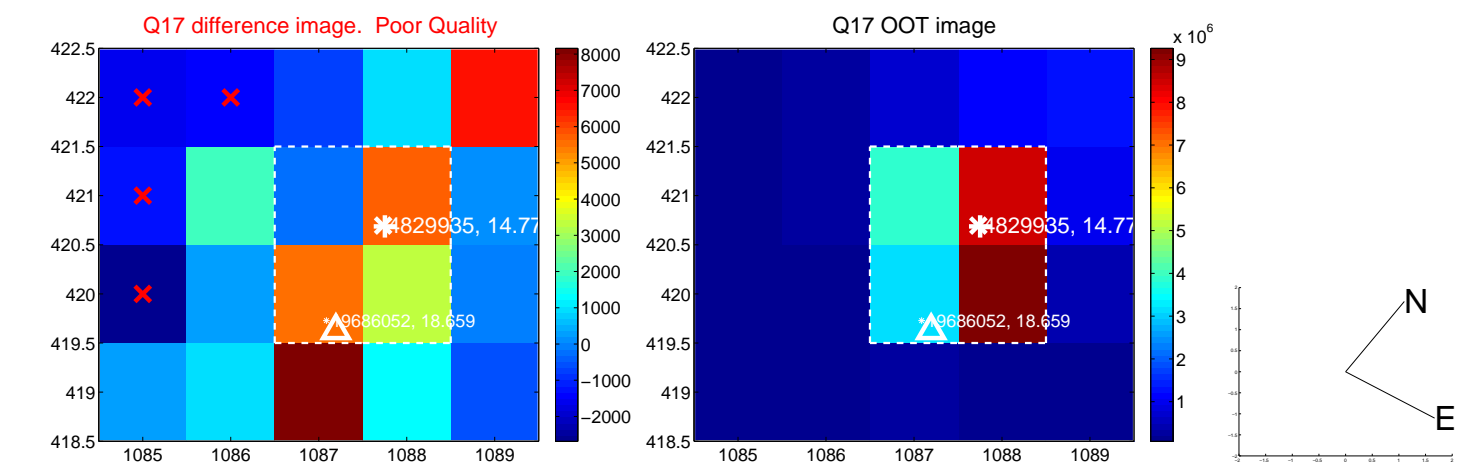
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

