

KIC 006522643

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})
006522643-01	OBS	No	0.714580	132.219765	42.9	1.019	7.8	7.1	5.60	5047	4.38	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006522643-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

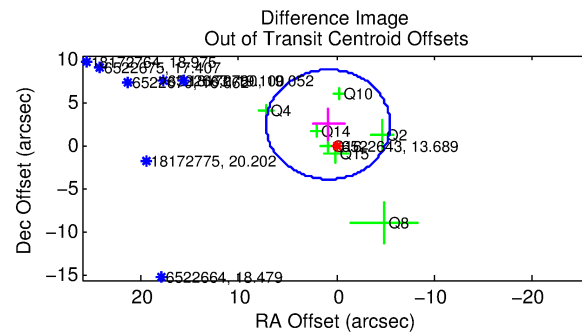
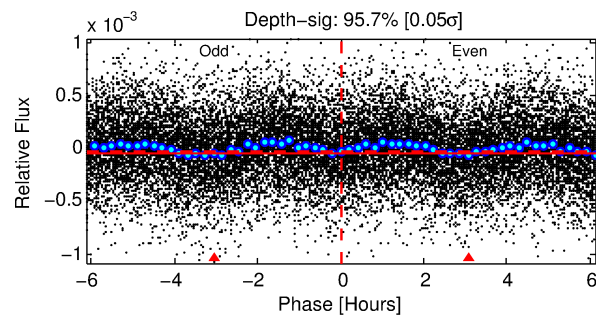
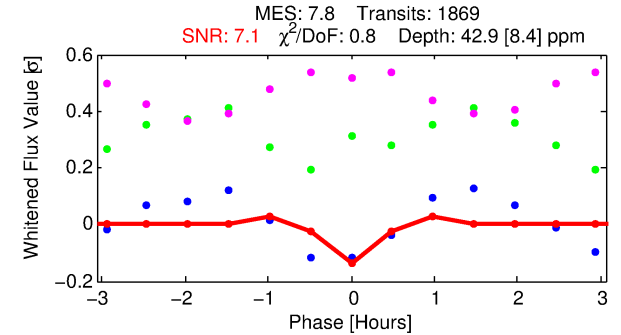
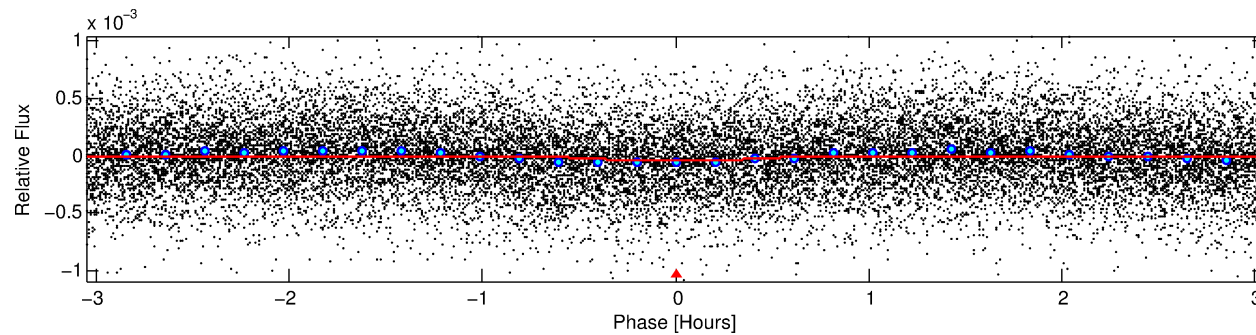
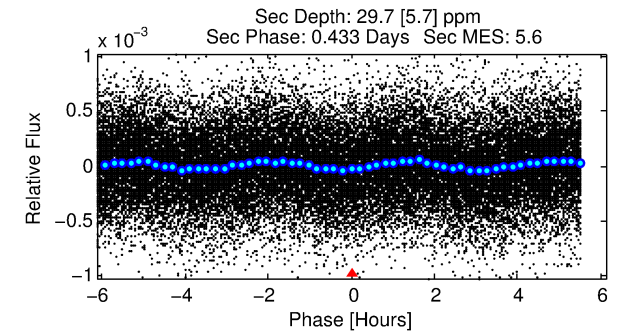
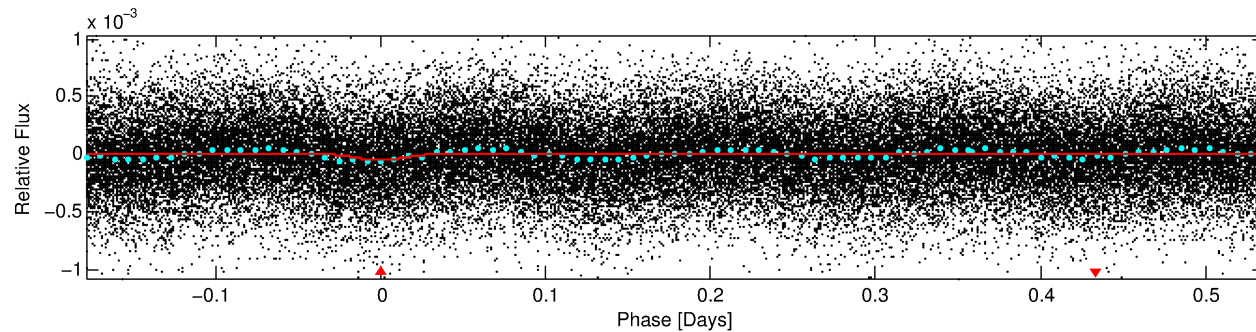
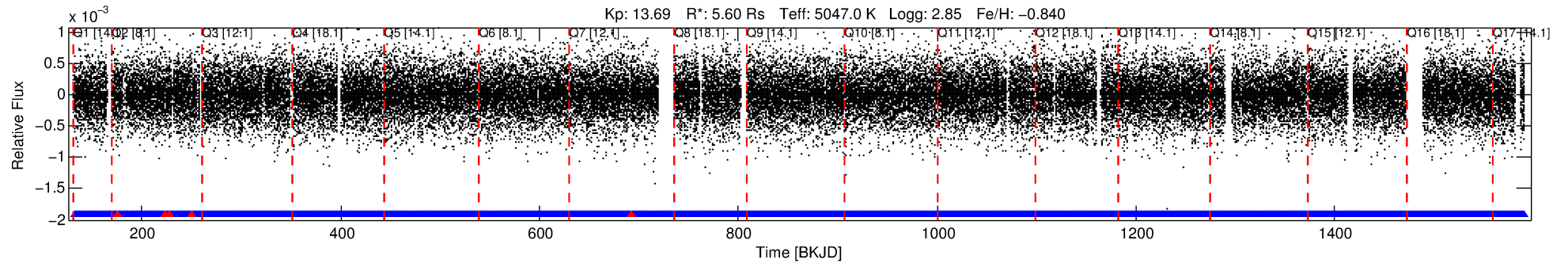
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006522643-01

No Significant Match Found

DV One-Page Summary

KIC: 6522643 Candidate: 1 of 1 Period: 0.715 d



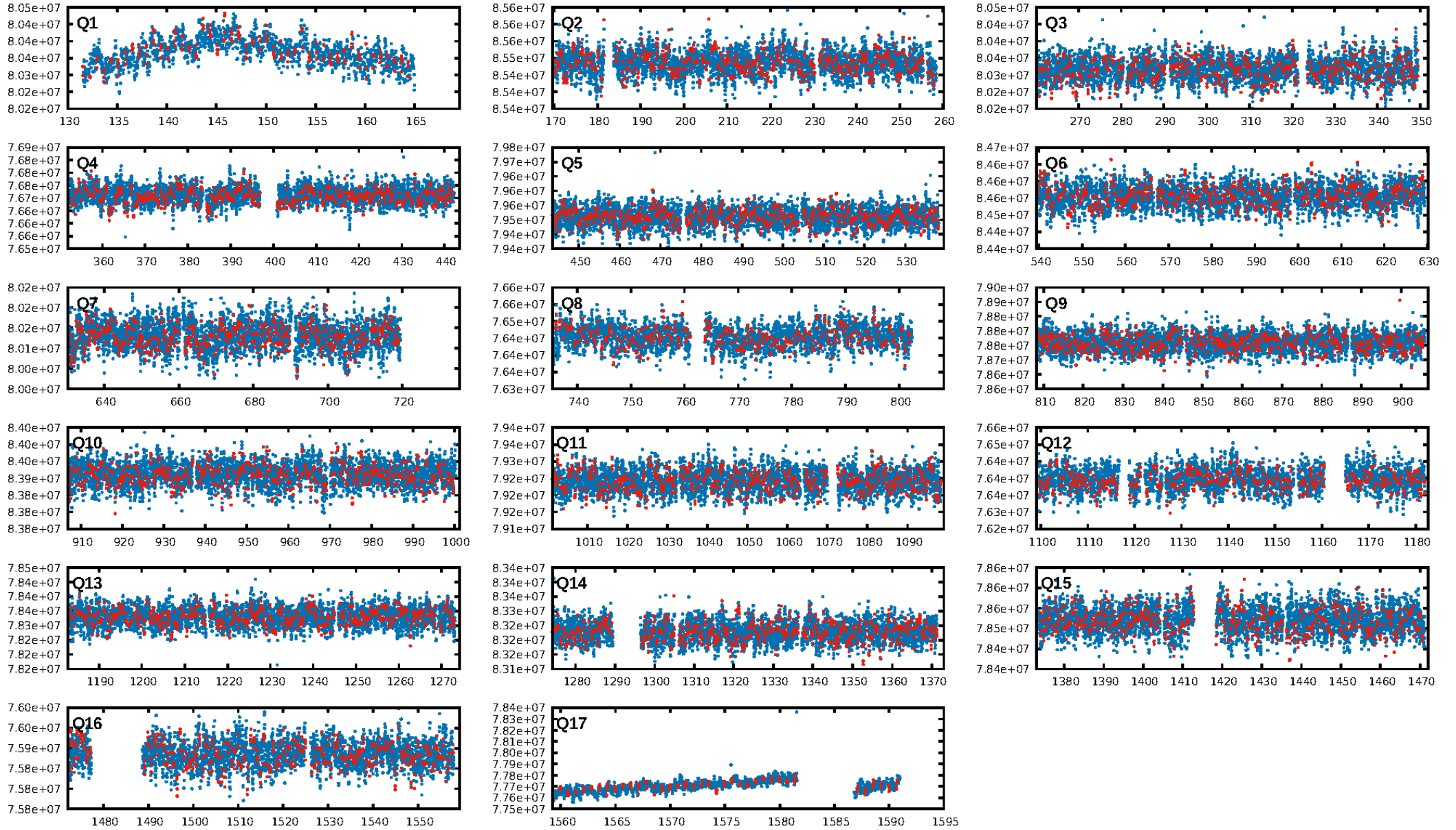
DV Fit Results:

Period = 0.71458 [0.00001] d
Epoch = 132.2198 [0.0017] BKJD
Rp/R* = 0.0072 [0.0027]
a/R* = 2.69 [3.68]
b = 0.89 [0.38]
Seff = N/A
Teq = N/A
Rp = 4.39 [1.94] Re
a = N/A
Ag = N/A
Teffp = N/A

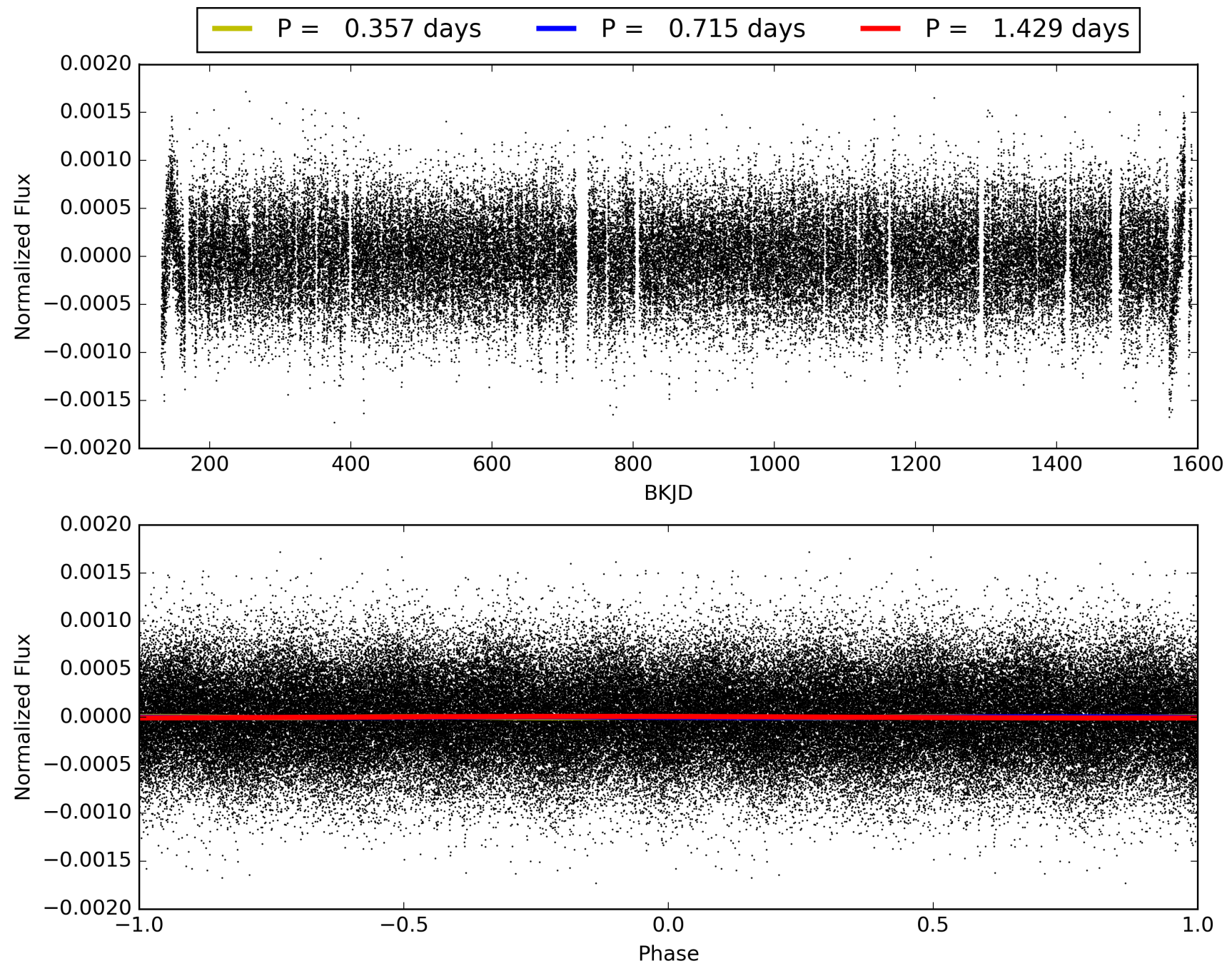
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.60e-12
RollingBand-fgt: 1.00 [1779/1784]
GhostDiagnostic-chr: 0.3937
Centroid-sig: 0.6%
Centroid-so: 2.165 arcsec [2.41σ]
OotOffset-rm: 2.641 arcsec [1.25σ]
KicOffset-rm: 2.483 arcsec [1.40σ]
OotOffset-st: 3/1/3/0 [7]
KicOffset-st: 3/1/3/0 [7]
DiffImageQuality-fgm: 0.29 [2/7]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006522643-01, PDC Light Curves

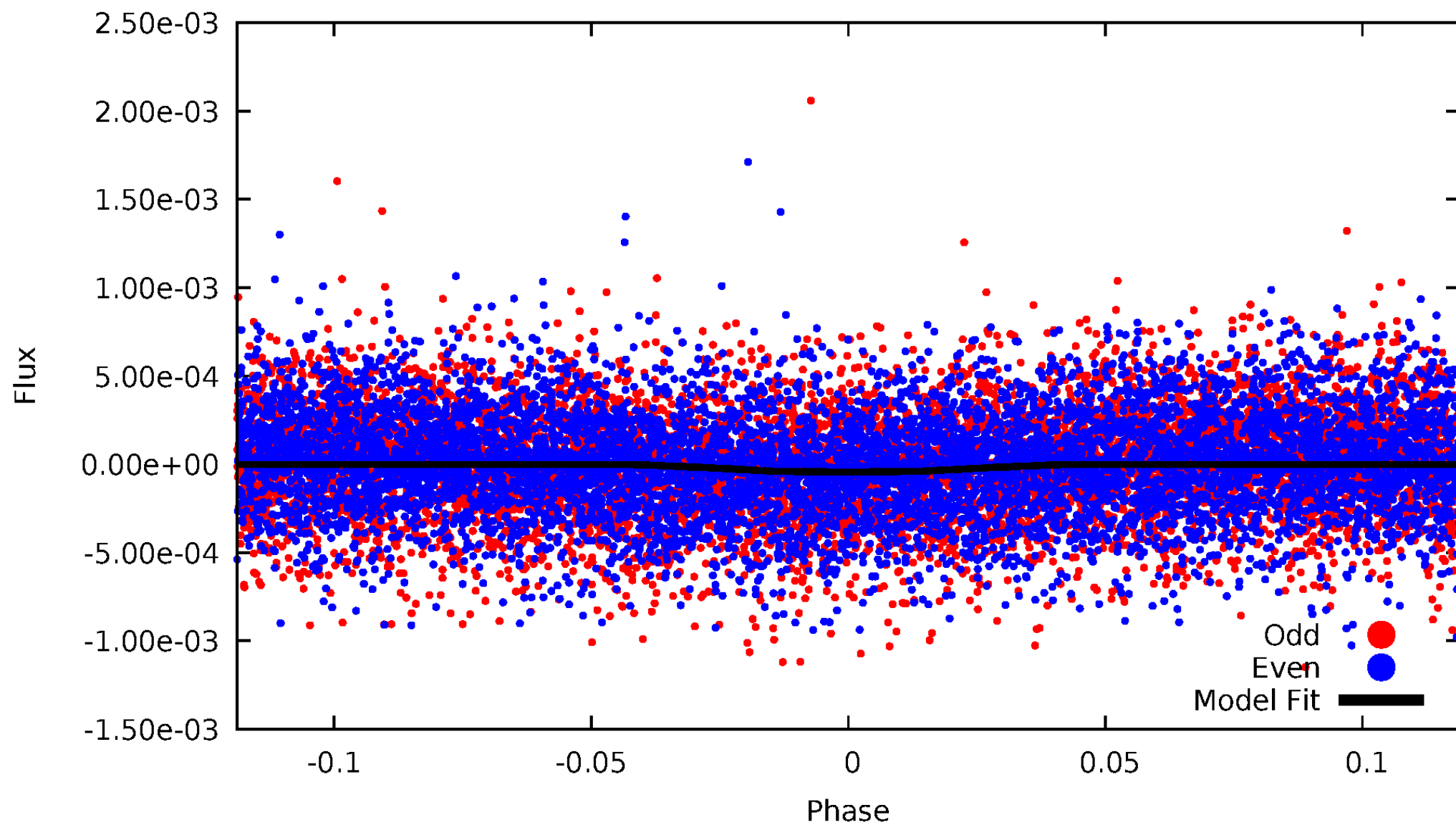


TCE 006522643-01



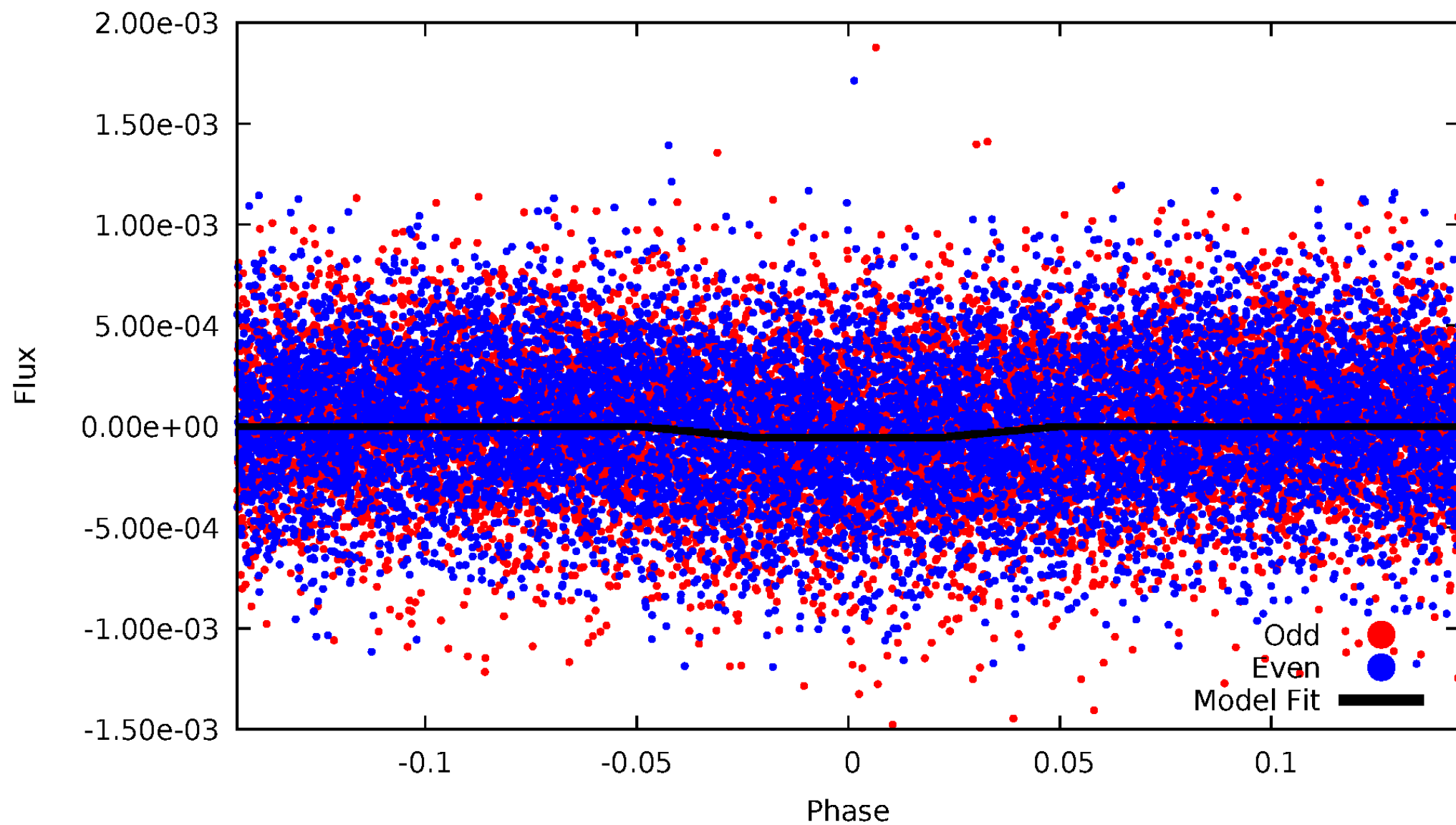
DV Odd/Even

TCE 006522643-01

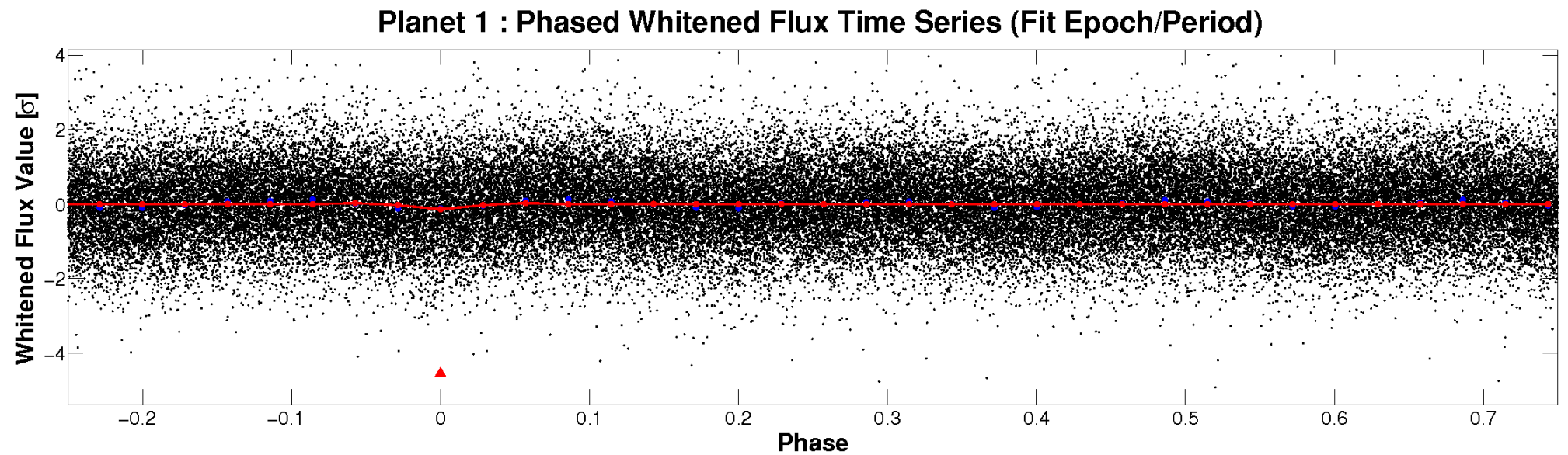
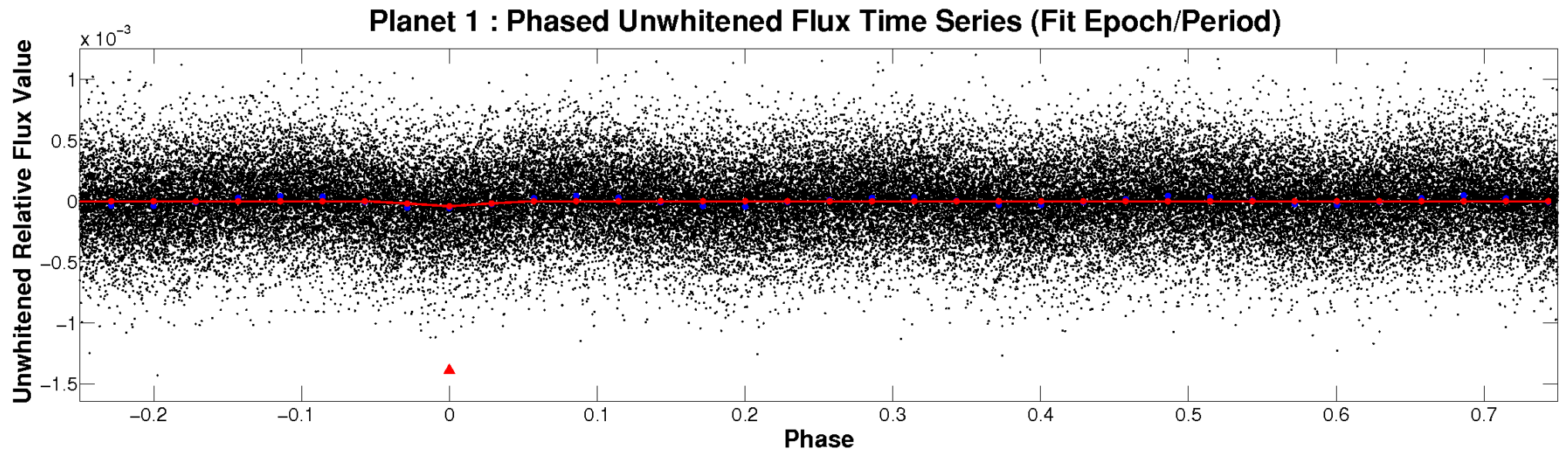


ALT Odd/Even

TCE 006522643-01

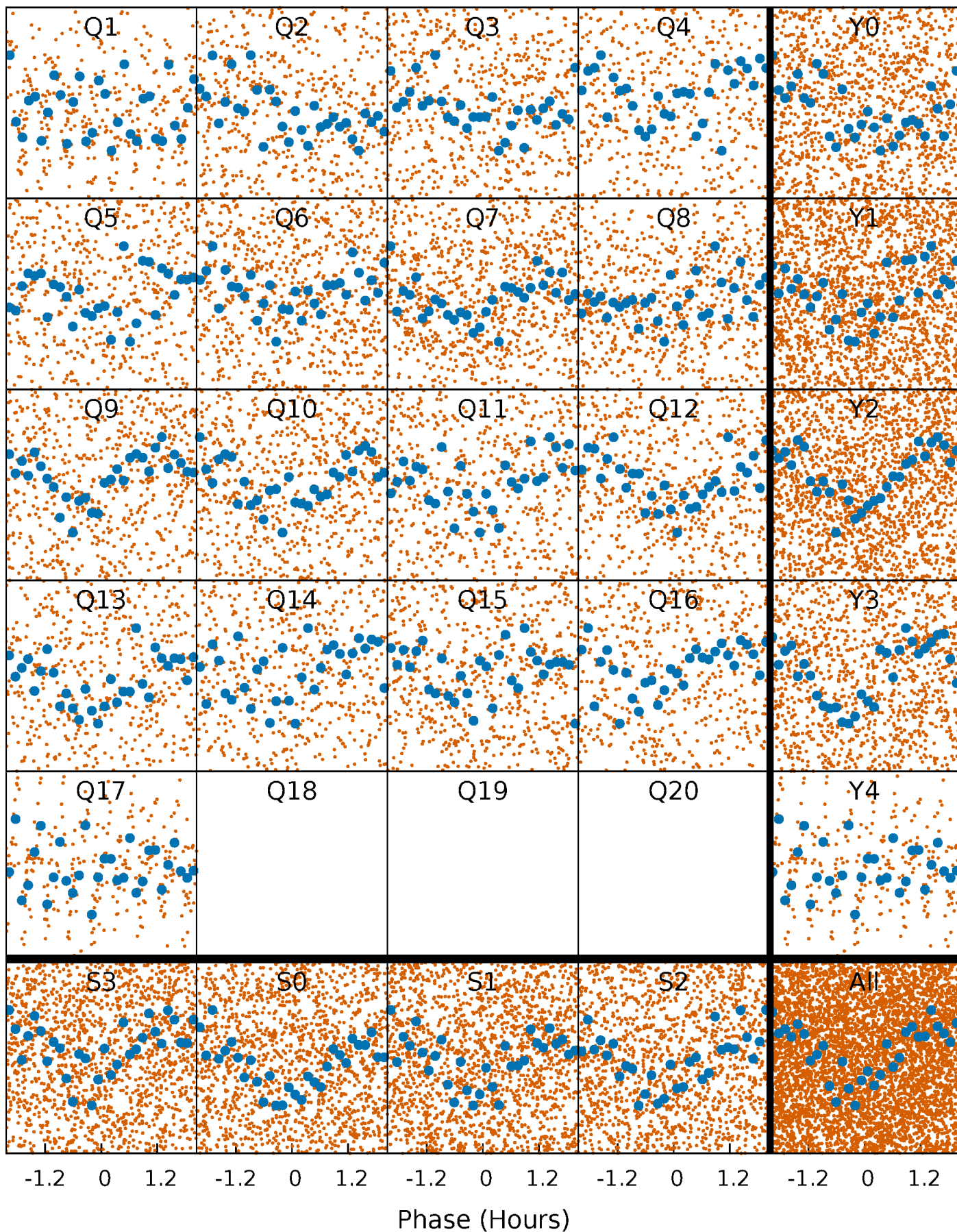


Non-Whitened Vs. Whitened Light Curve



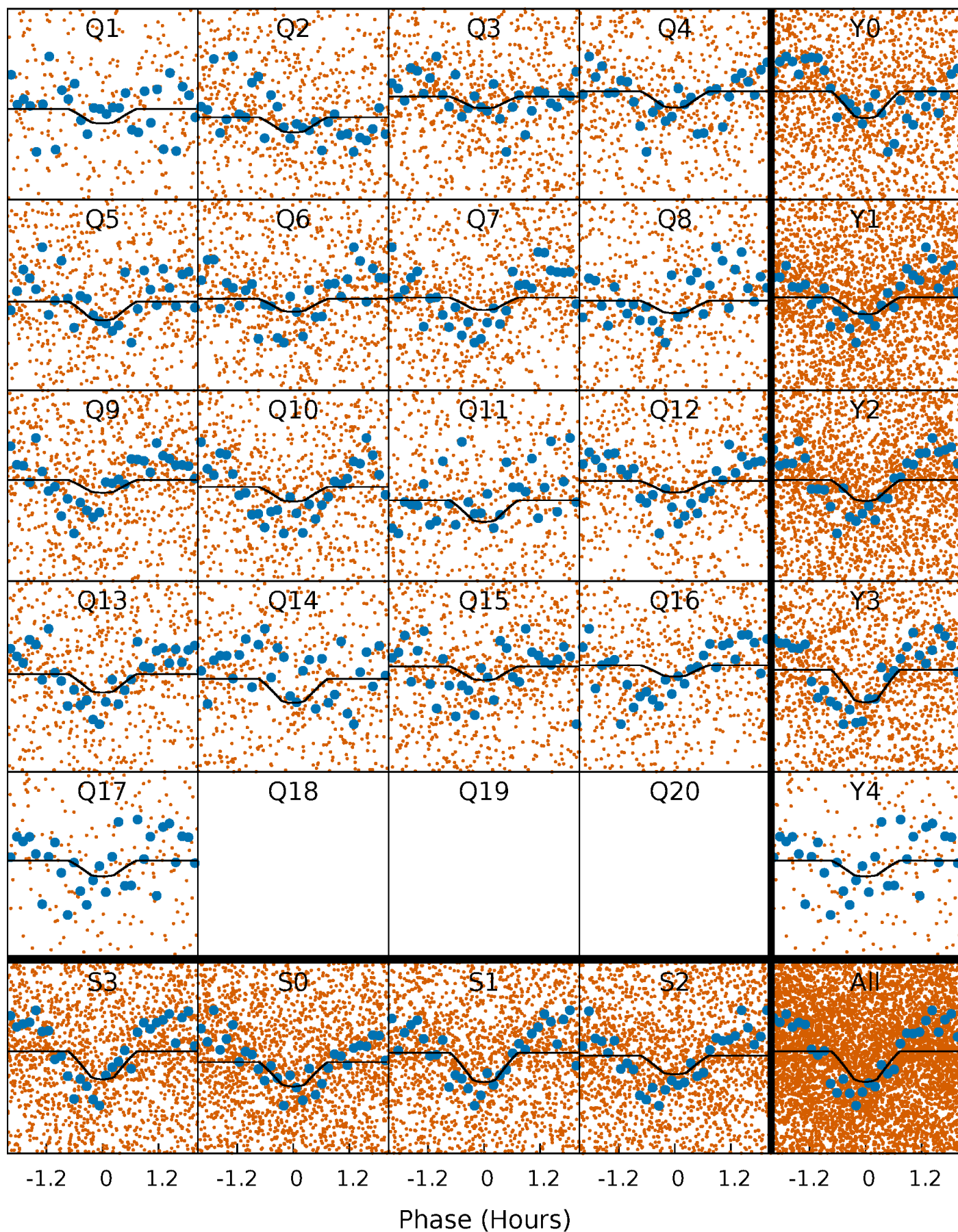
PDC Quarter-Phased Transit Curves

TCE 006522643-01 P= 0.714580 Days $T_0=132.219765$ (BKJD)



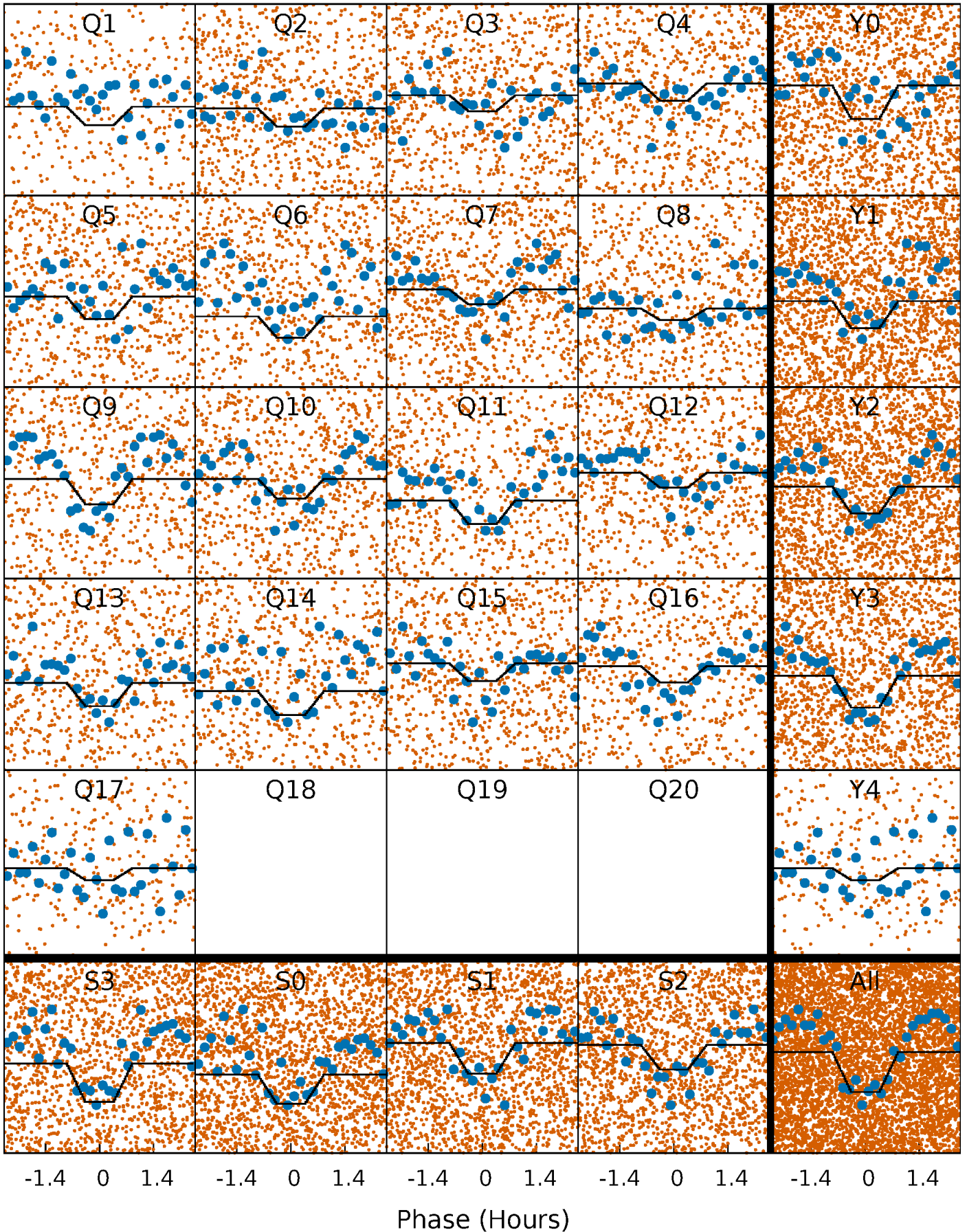
DV Quarter-Phased Transit Curves

TCE 006522643-01 P= 0.714580 Days $T_0=132.219765$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

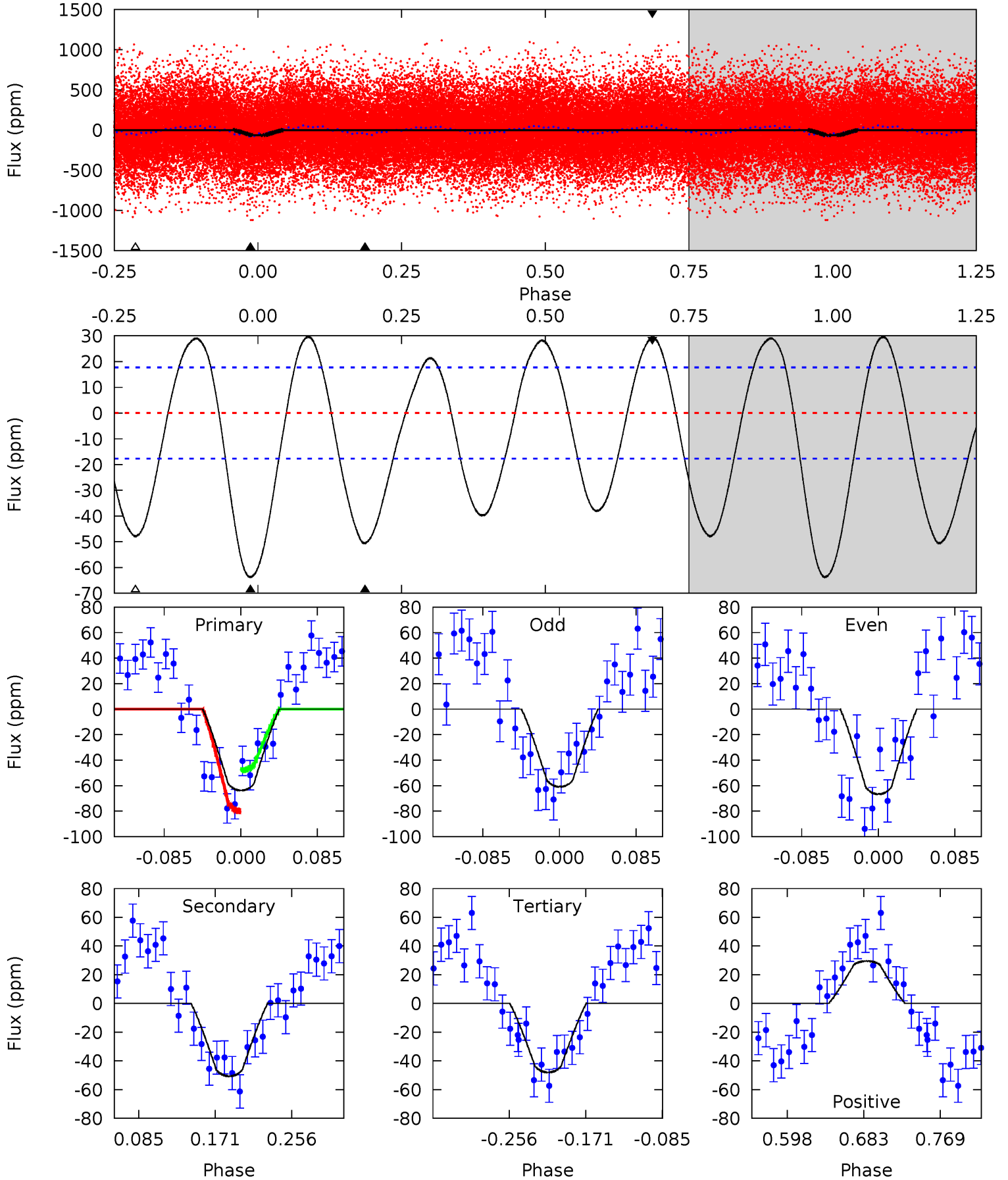
TCE 006522643-01 P= 0.714571 Days $T_0=132.219598$ (BKJD)



DV Model-Shift Uniqueness Test

006522643-01, P = 0.714580 Days, E = 131.505185 Days

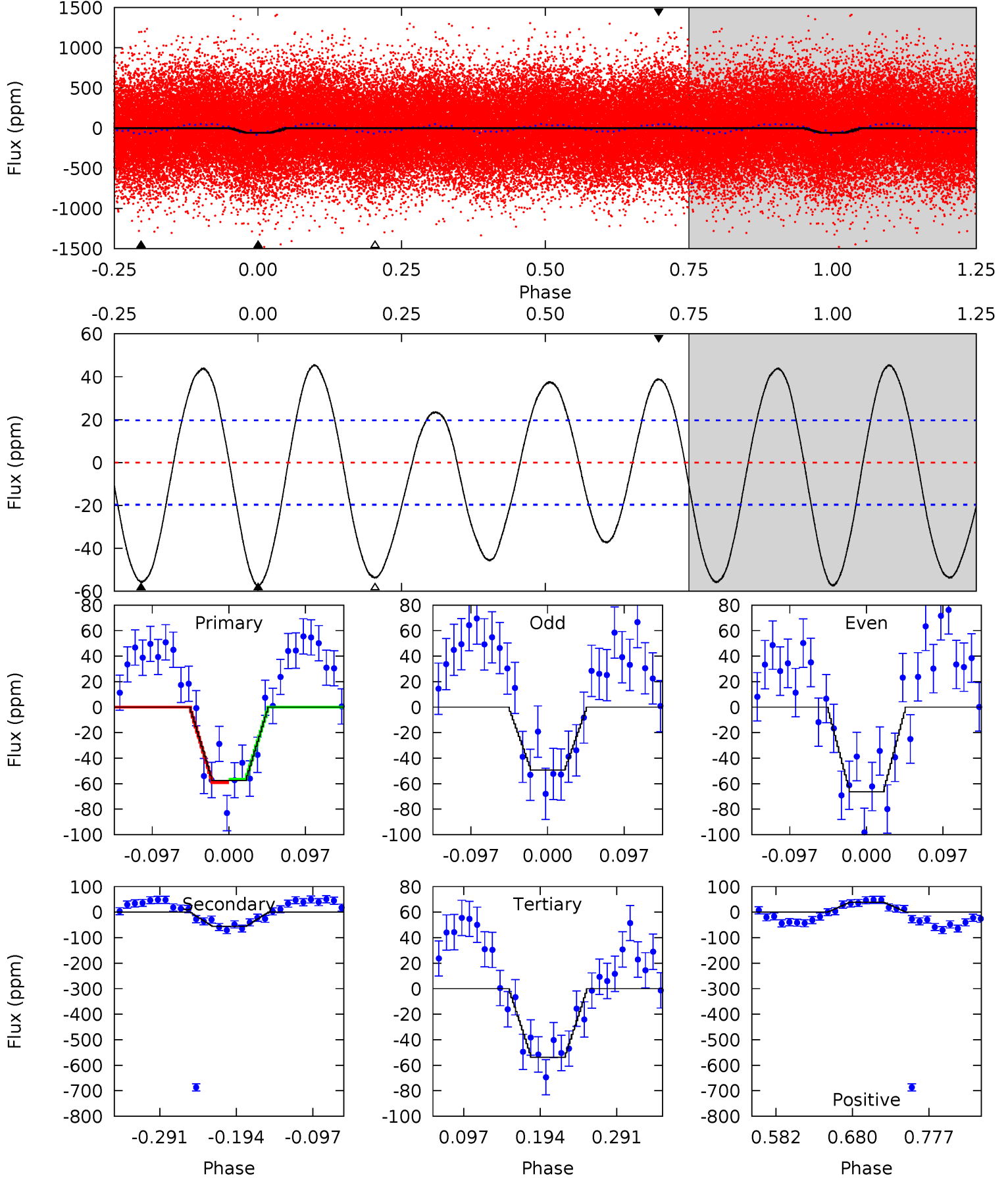
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.6	13.2	12.5	7.67	4.60	1.72	6.57	4.10	8.89	0.69	5.49	0.75	0.89	0.32	4.17



Alt Model-Shift Uniqueness Test

006522643-01, P = 0.714571 Days, E = 131.505027 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	13.0	12.5	9.08	4.57	1.66	6.84	0.86	4.30	0.47	3.91	1.98	0.96	0.44	0.28



Stellar Parameters For KIC 006522643

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5047^{+126}_{-88}	$2.849^{+0.030}_{-0.030}$	$-0.840^{+0.300}_{-0.250}$	$5.596^{+1.351}_{-0.142}$	$0.806^{+0.435}_{-0.023}$	$0.006^{+0.001}_{-0.001}$
	+2%/-2%	+1%/-1%	+36%/-30%	+24%/-3%	+54%/-3%	+9%/-21%
Source	PHO1	AST71	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 006522643-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-51 ± 4	$4.50^{+1.73}_{-1.75}$	6098^{+178}_{-129}	-2615^{+8152}_{-1700}	$0.294^{+0.484}_{-0.139}$
Alt.	-56 ± 4	$4.62^{+1.63}_{-1.59}$	6099^{+169}_{-128}	2825^{+2551}_{-7085}	$0.310^{+0.411}_{-0.139}$

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

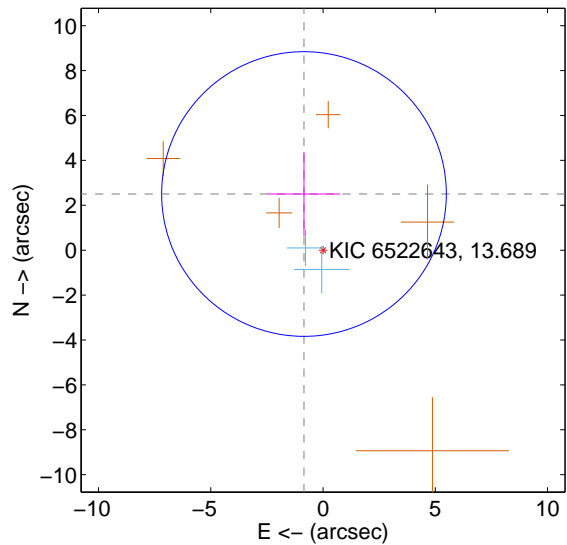
Supplemental centroid analysis for 006522643-01. Kepler magnitude: 13.69. Transit SNR 7.08

There are 2 quarters with good PRF difference image offsets

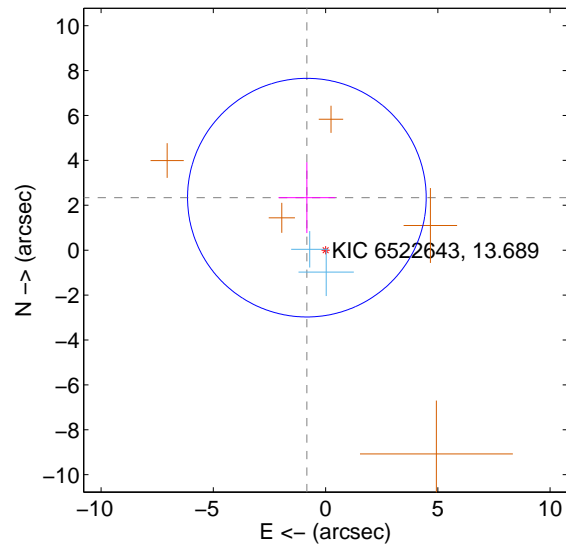
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.641 ± 2.113	1.25	0.848 ± 1.617	2.501 ± 1.871
PRF-fit source offset from KIC position	2.483 ± 1.771	1.40	0.833 ± 1.264	2.339 ± 1.576
photometric centroid source offset	2.16 ± 0.90	2.41	-2.16 ± 0.90	-0.13 ± 0.77

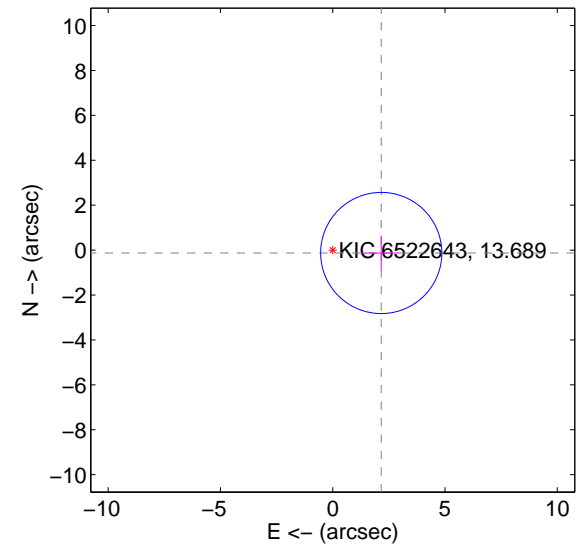
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

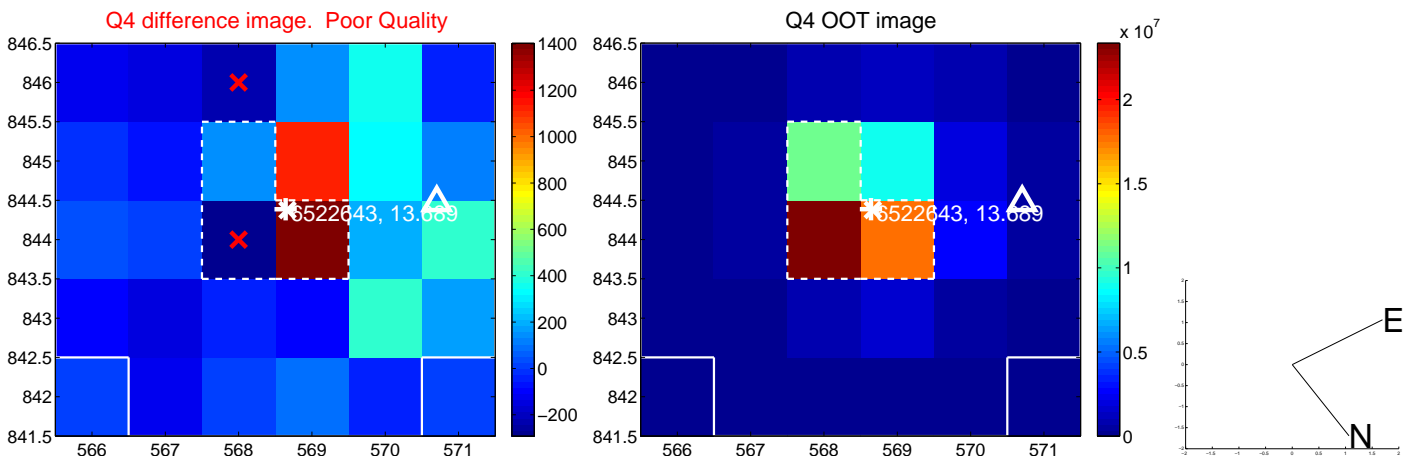
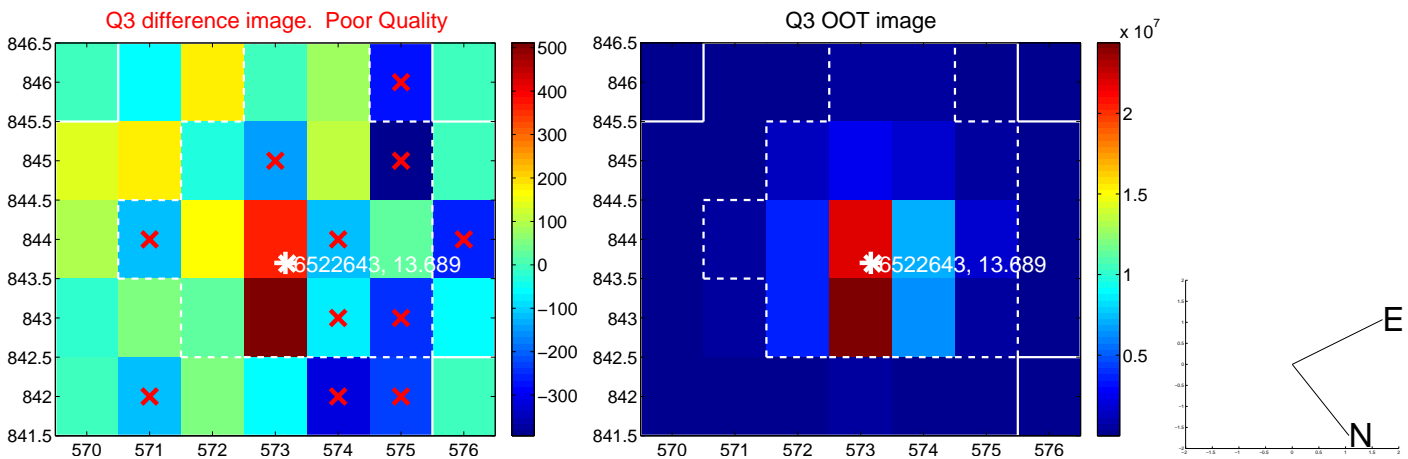
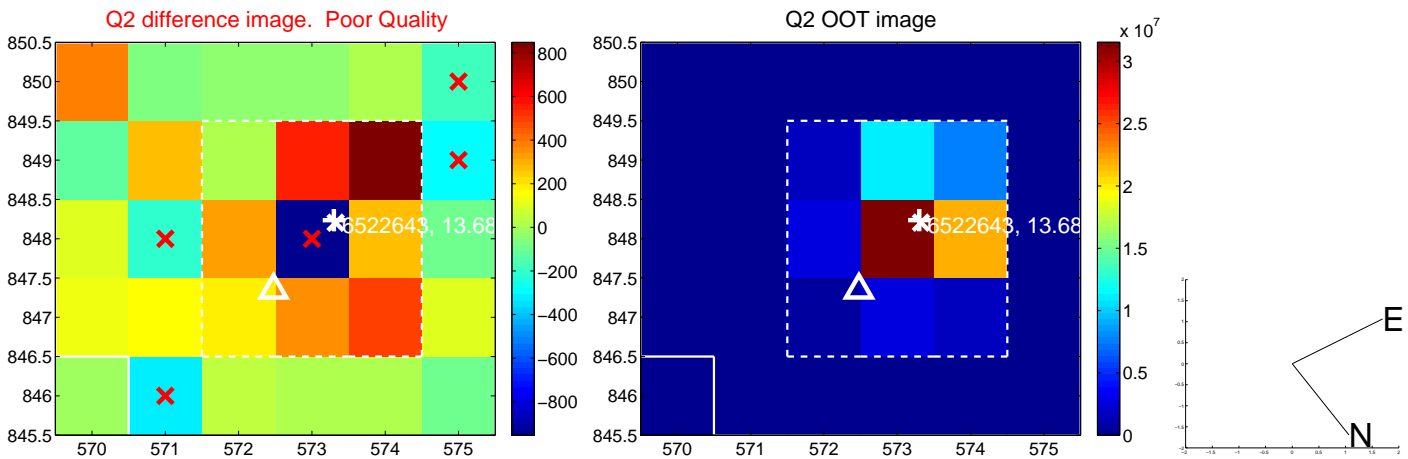
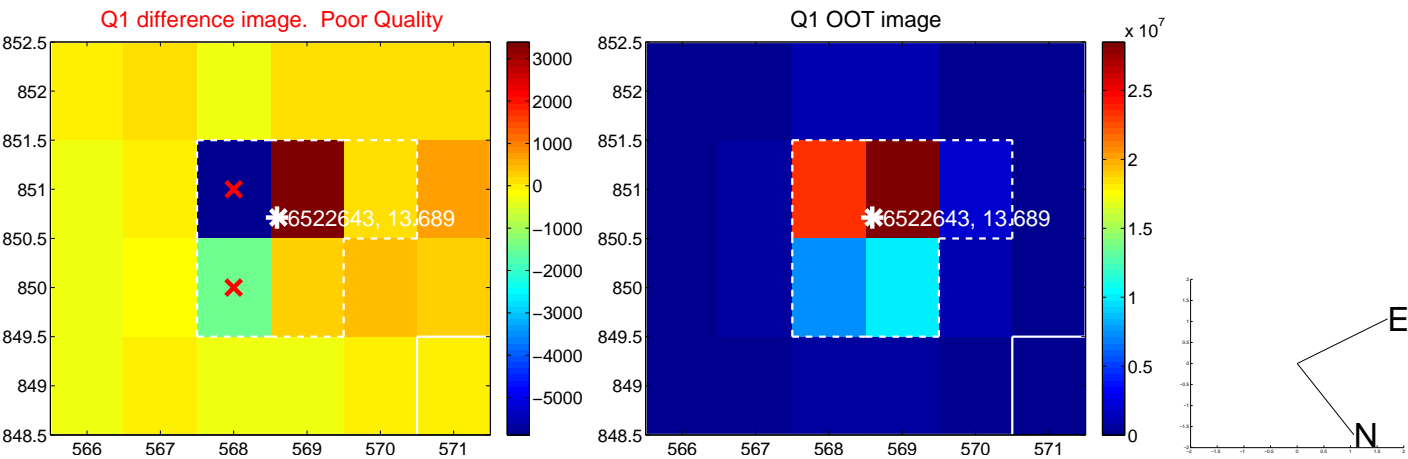


offset from photometric centroids

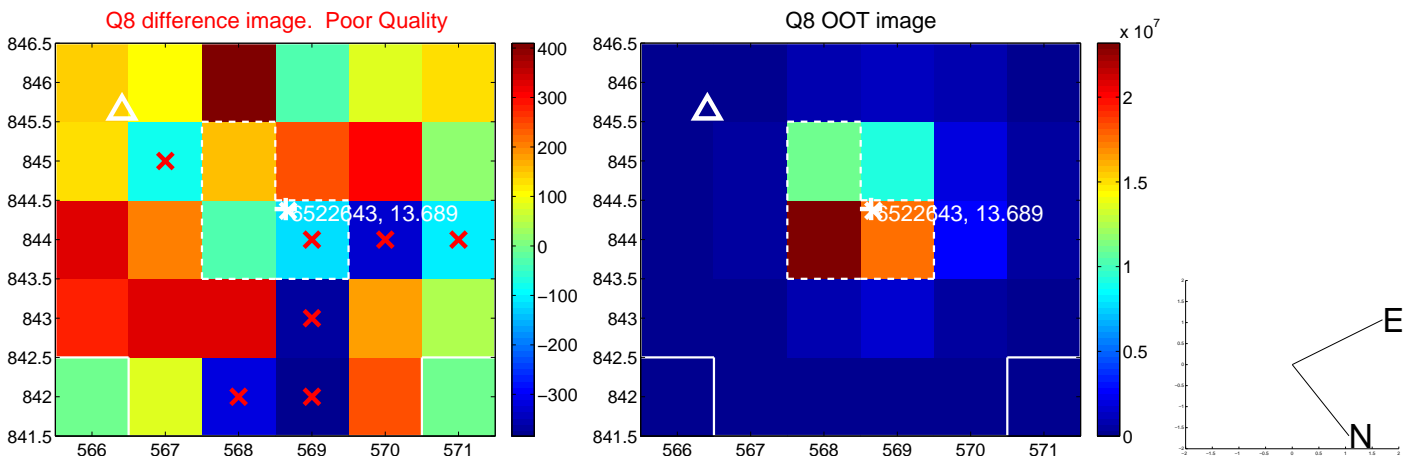
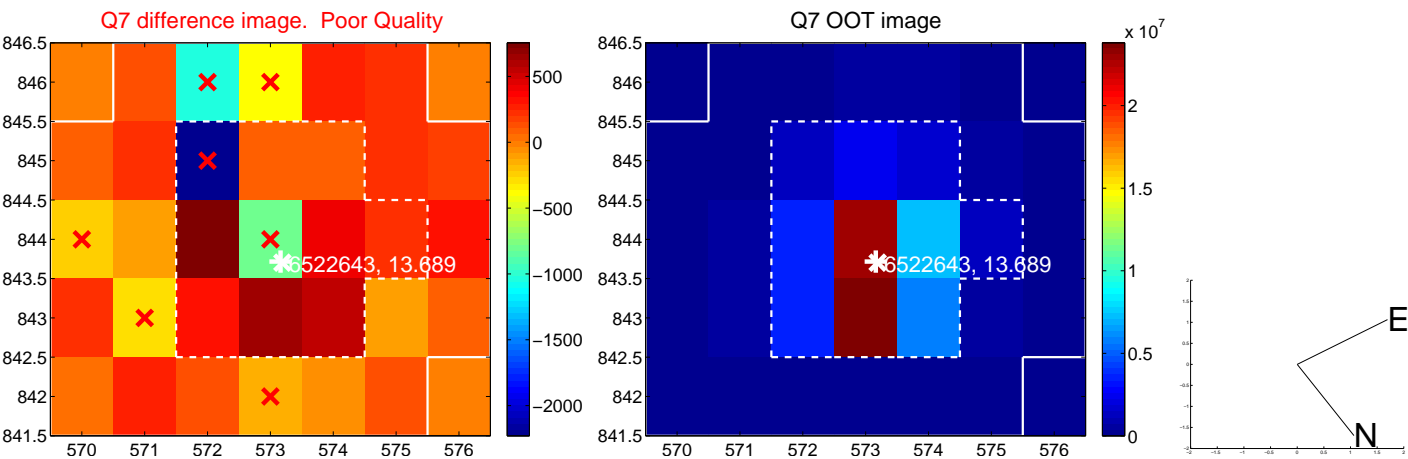
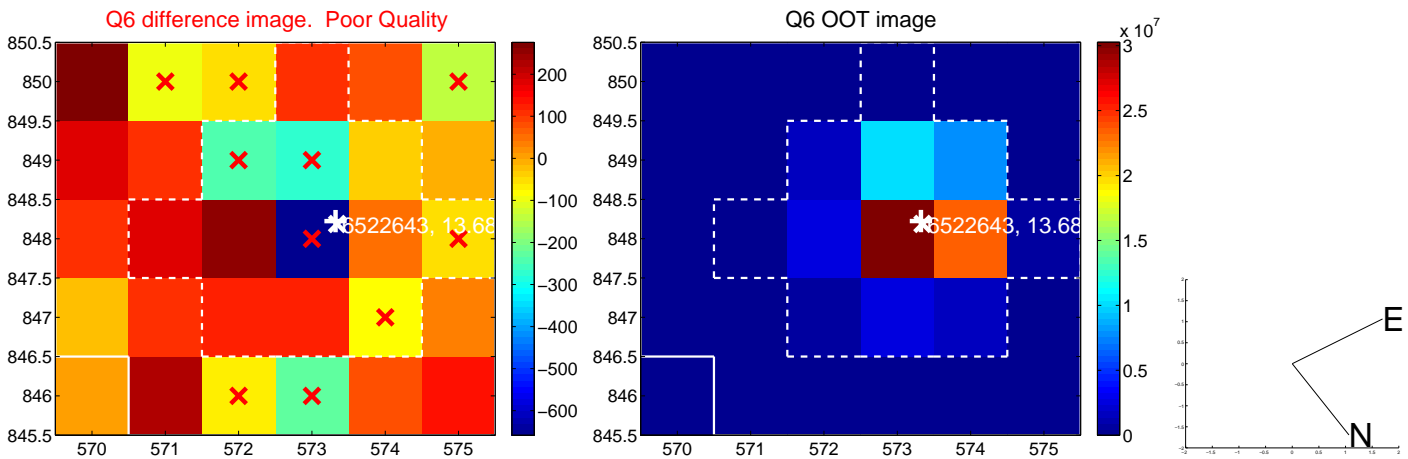
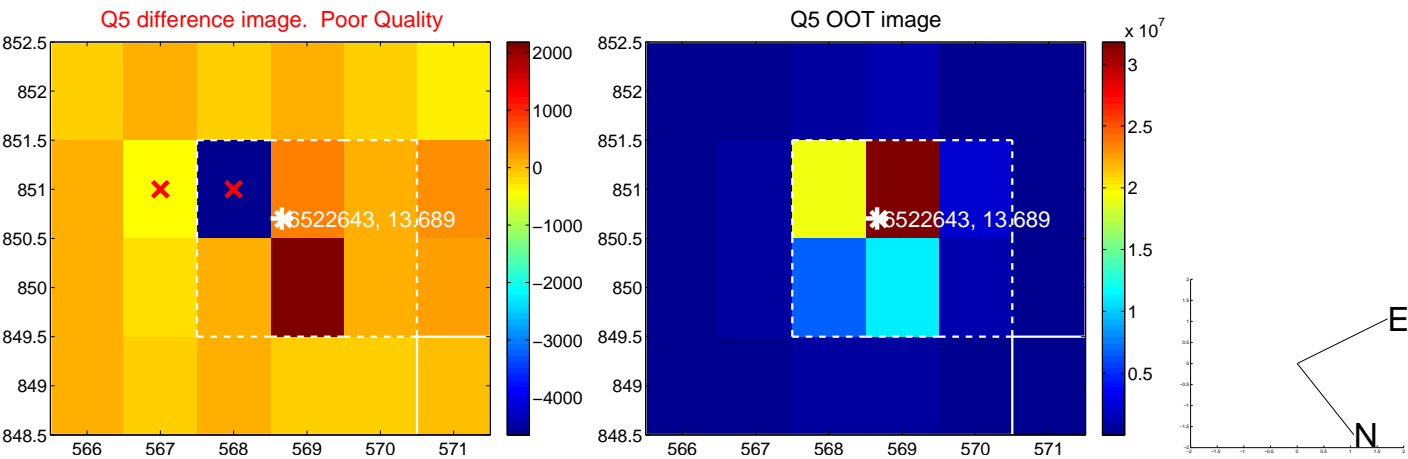


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

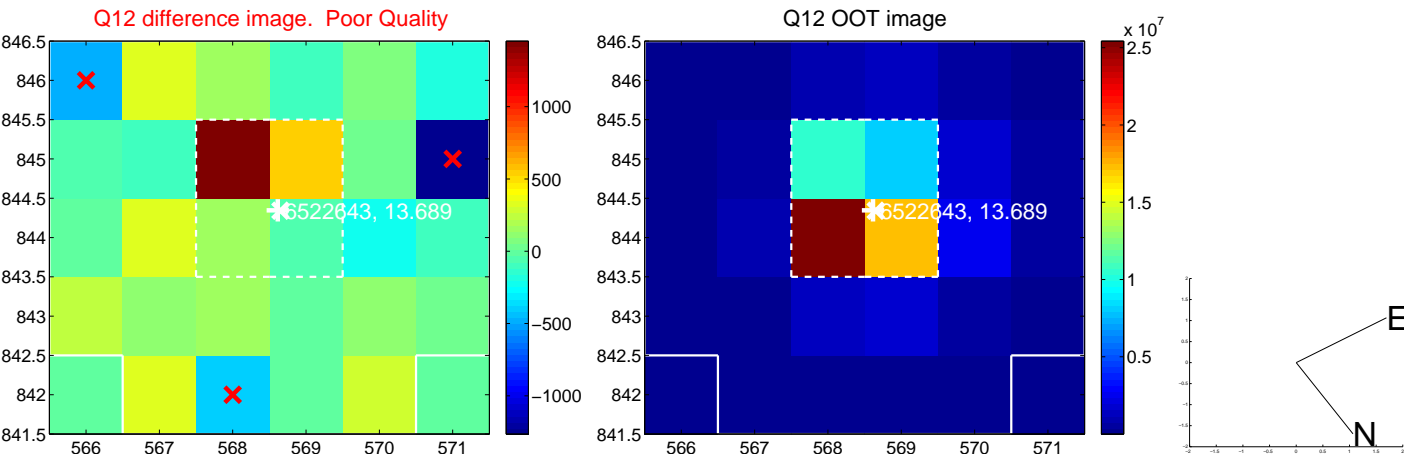
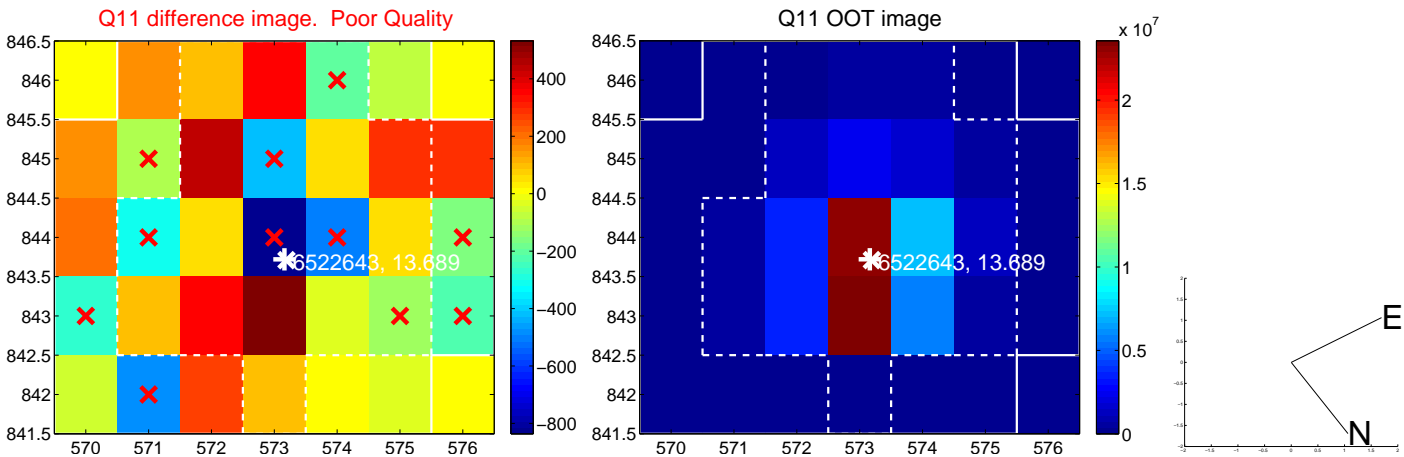
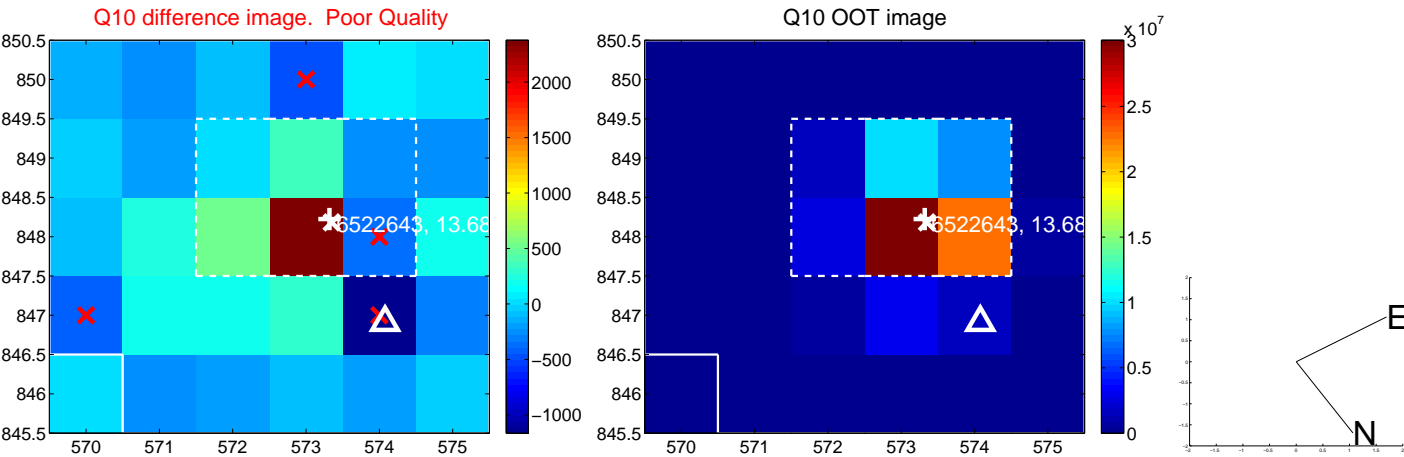
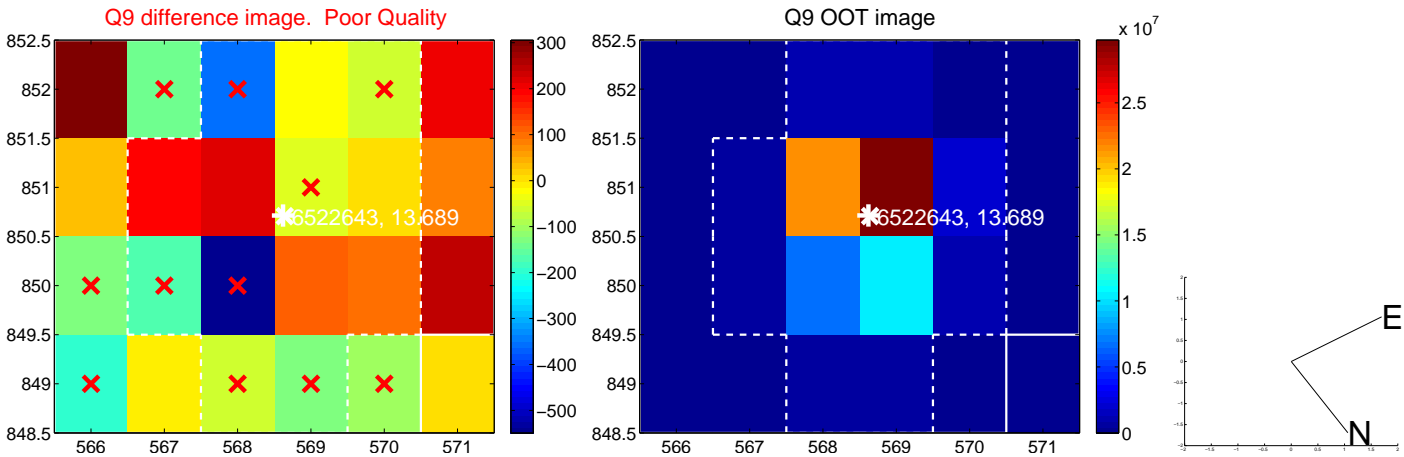
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



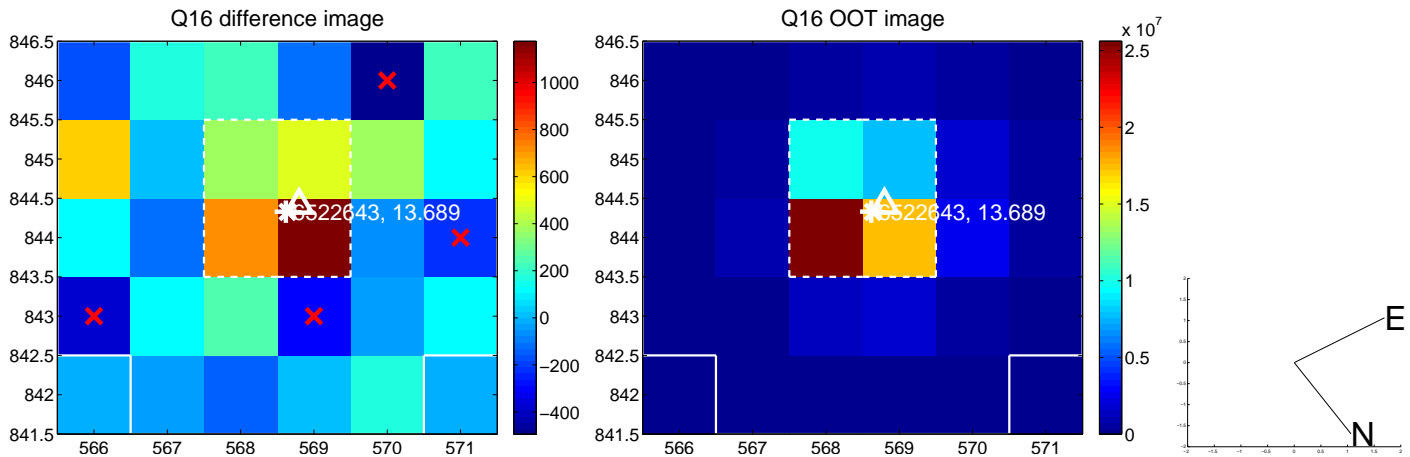
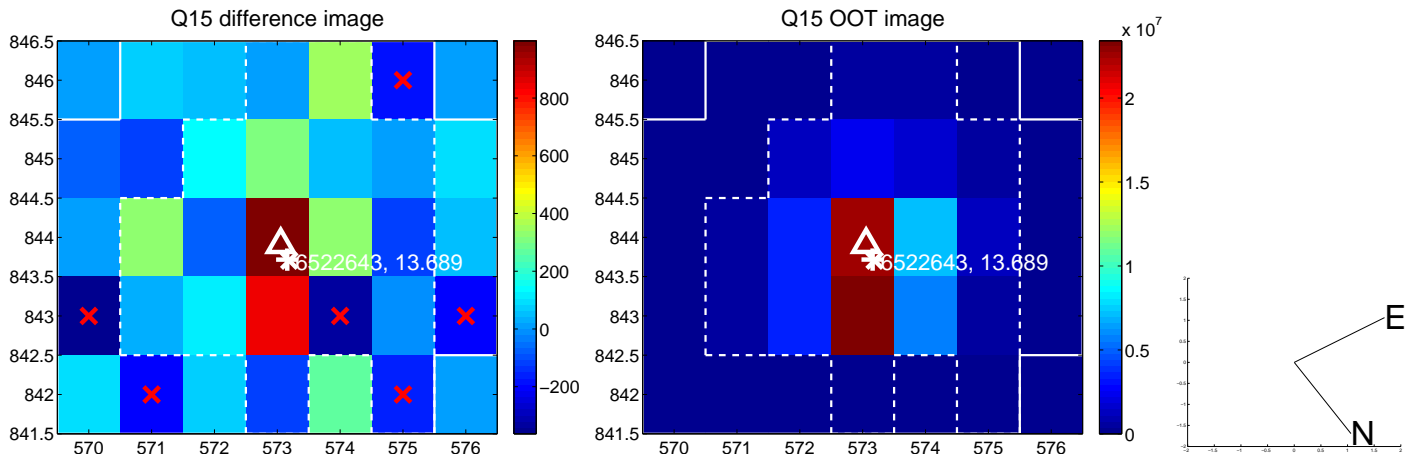
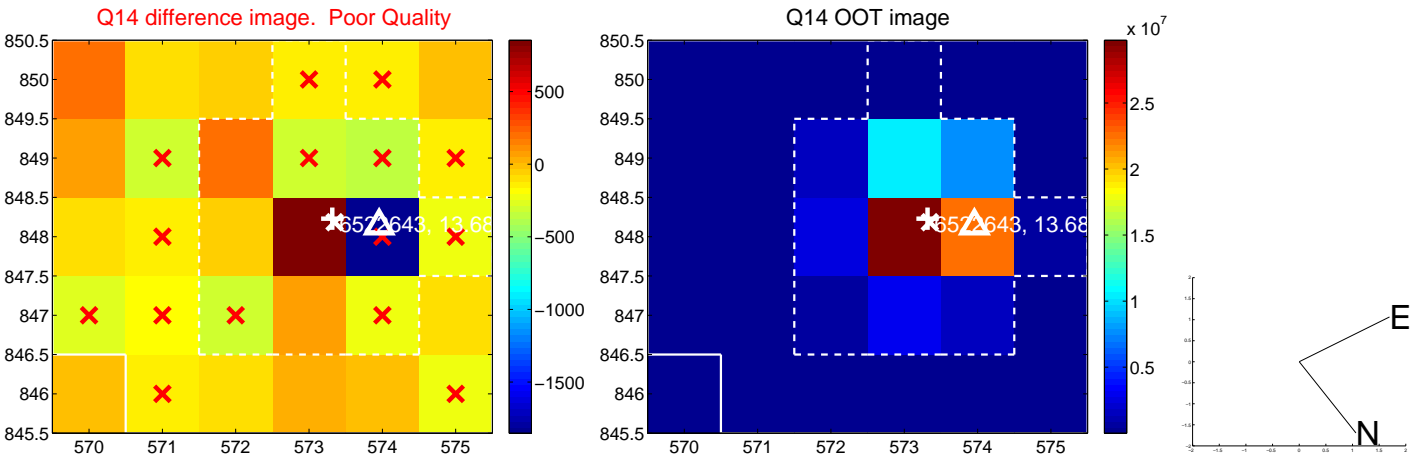
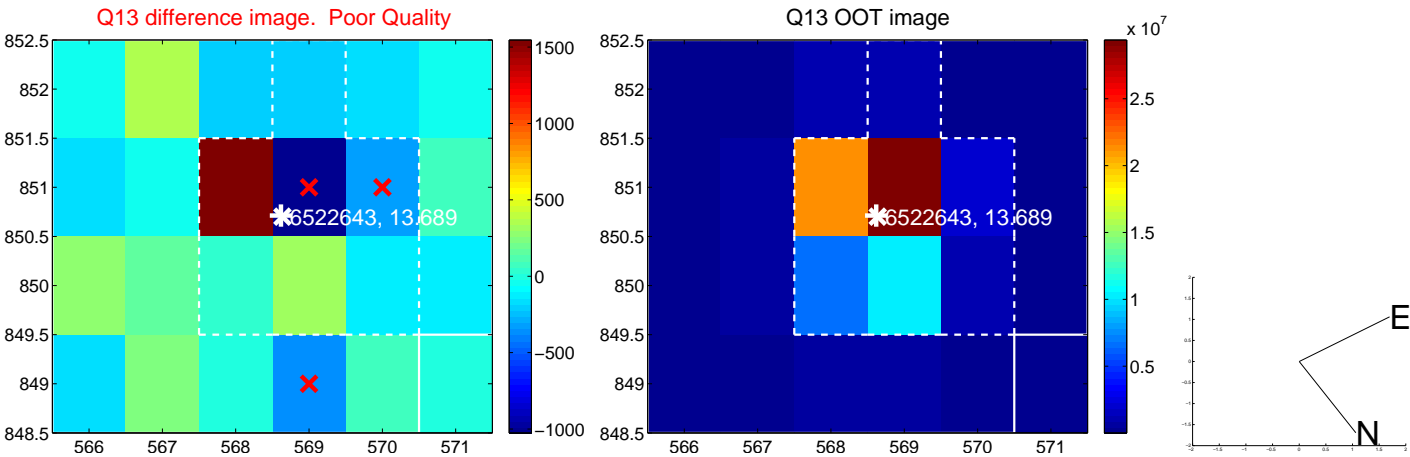
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



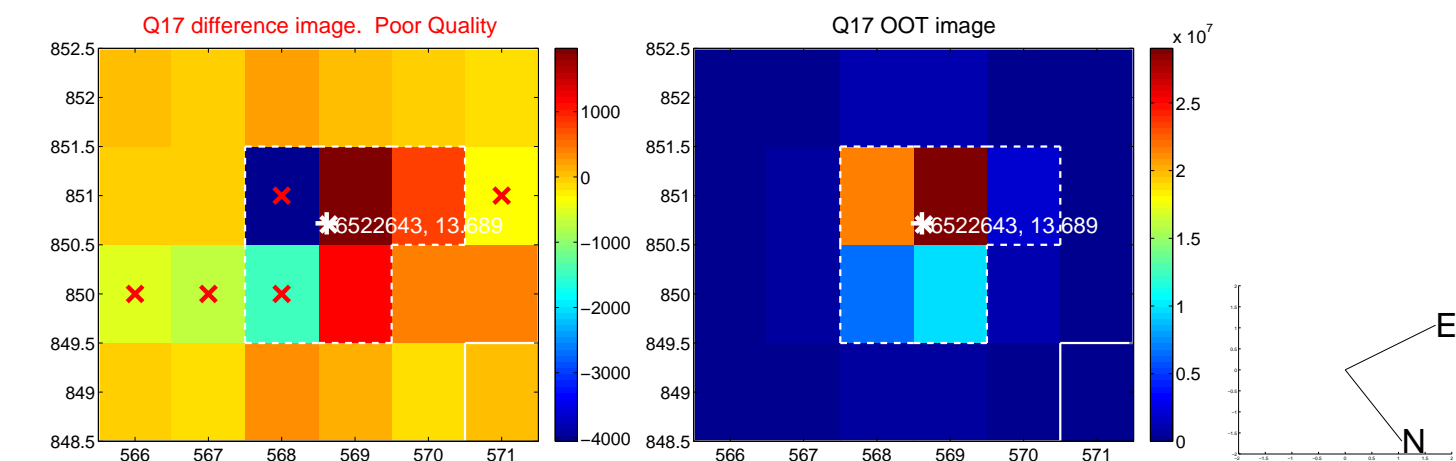
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



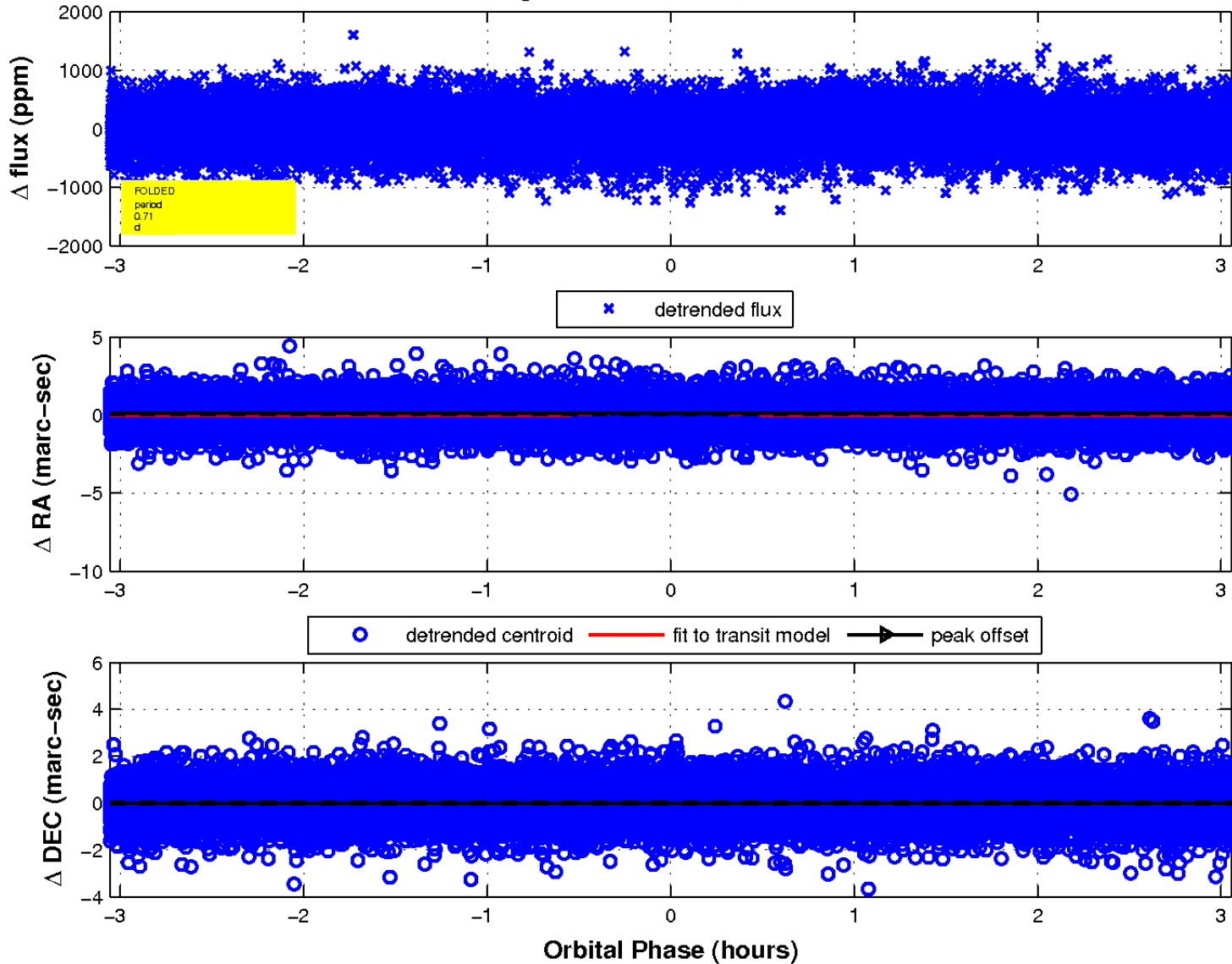
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

