

KIC 005819013

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})
005819013-01	OBS	No	4.018547	131.644025	51.5	26.529	11.3	11.2	2.71	6321	1.95	3389.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005819013-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV

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

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

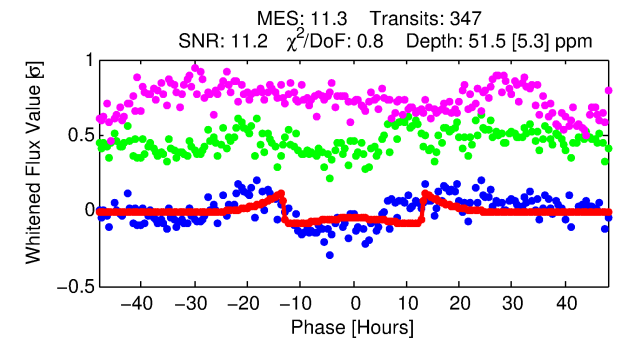
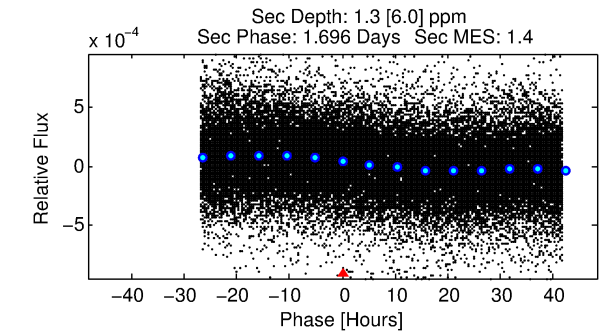
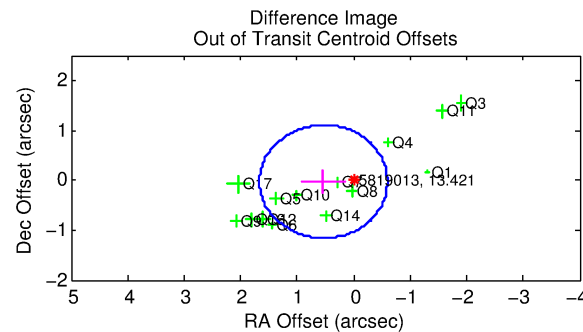
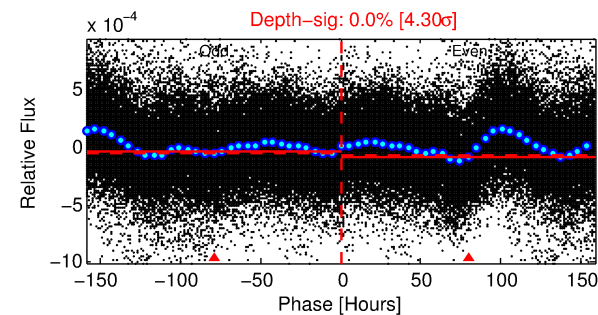
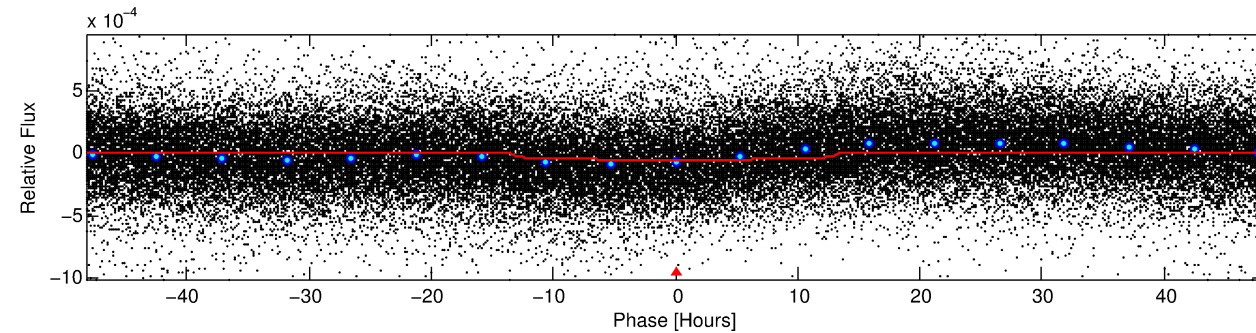
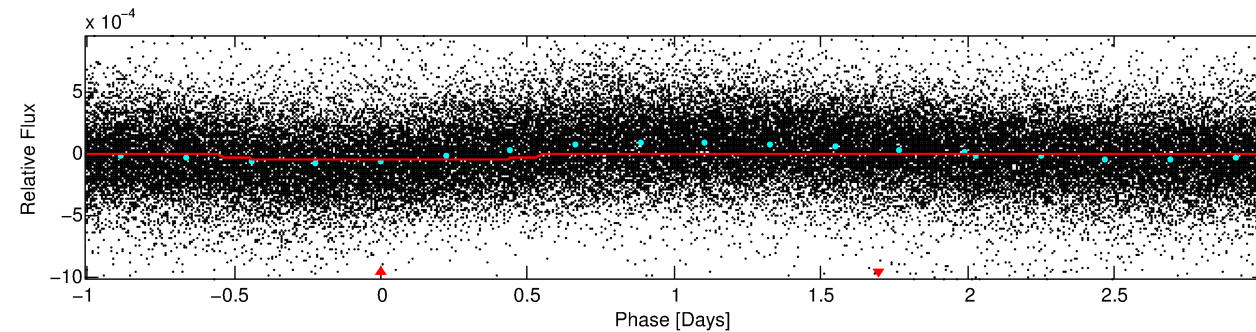
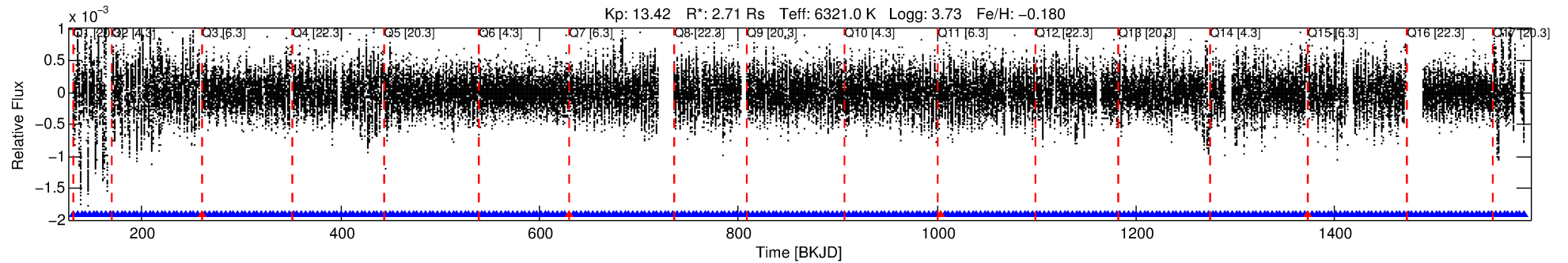
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005819013-01

No Significant Match Found

DV One-Page Summary

KIC: 5819013 Candidate: 1 of 1 Period: 4.019 d



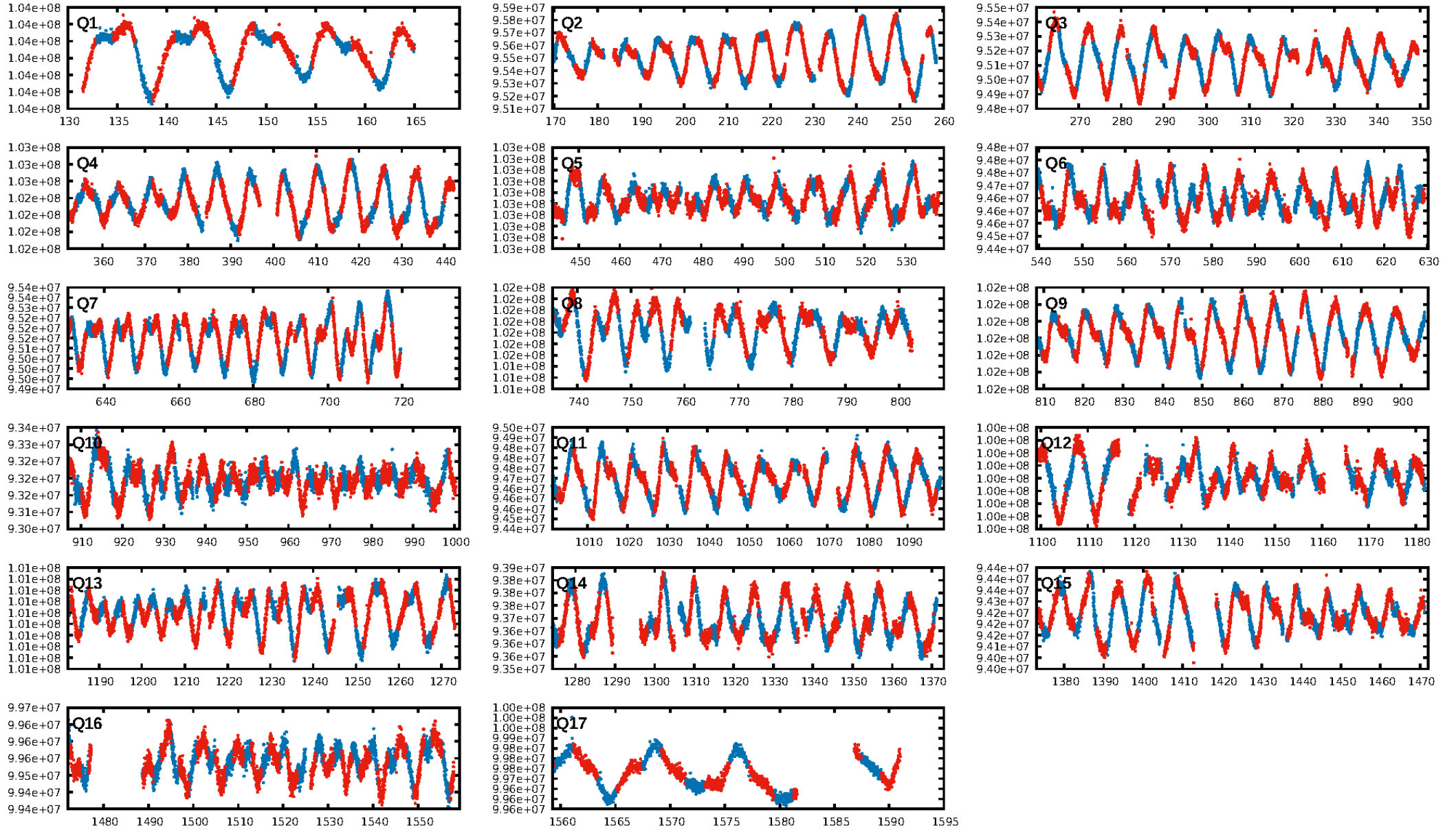
DV Fit Results:

Period = 4.01855 [0.00004] d
Epoch = 131.6440 [0.0065] BKJD
Rp/R* = 0.0066 [0.0024]
a/R* = 1.32 [1.08]
b = 0.01 [353.29]
Seff = 3389.52 [1912.19]
Teff = 1946 [274] K
Rp = 1.95 [1.02] Re
a = 0.0557 [0.0197] AU
Ag = 0.59 [2.75] [-0.15 σ]
Teffp = 2633 [3067] K [0.22 σ]

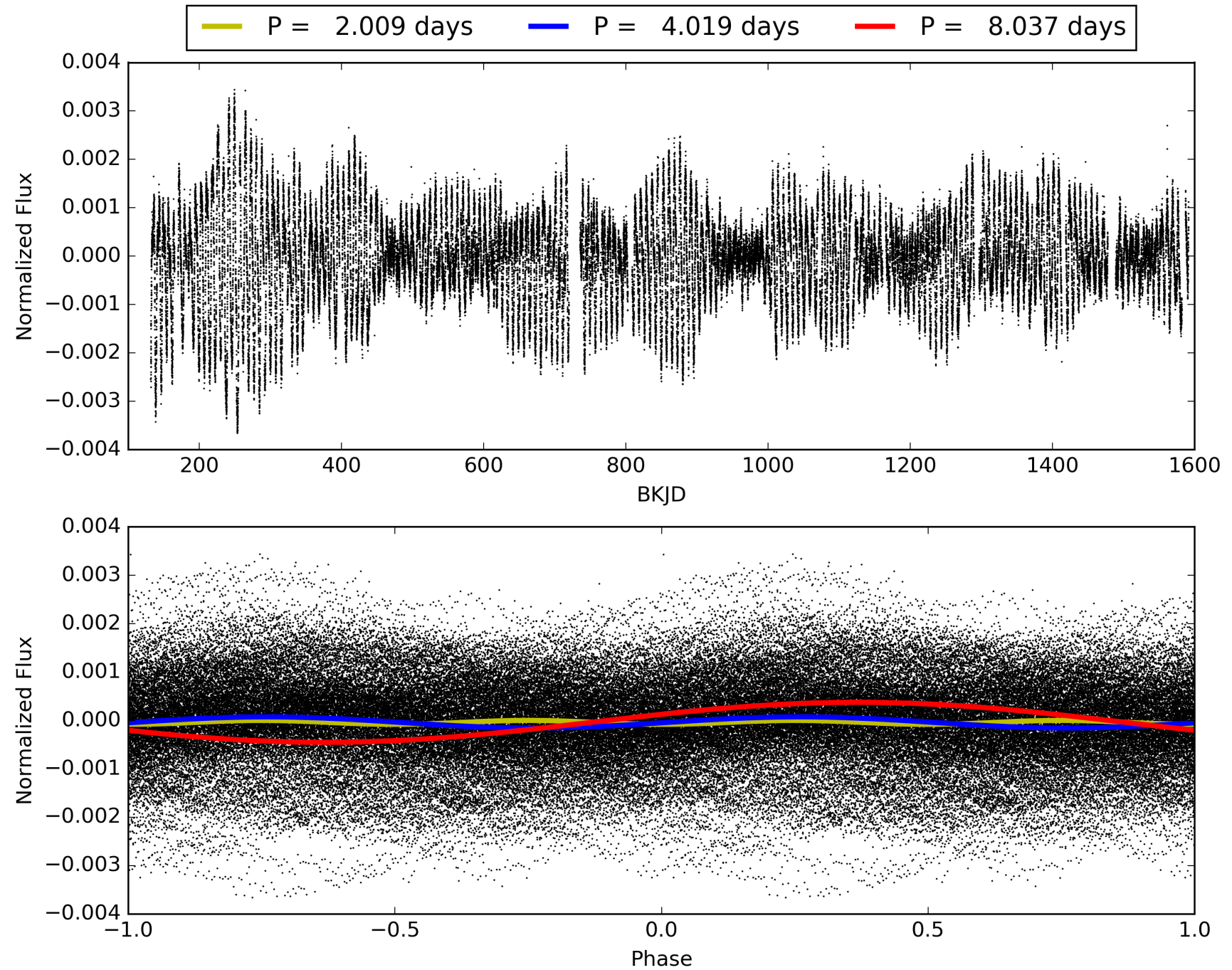
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.18e-41
RollingBand-fgt: 0.99 [327/331]
GhostDiagnostic-chr: 0.3205
Centroid-sig: 18.6%
Centroid-so: 0.200 arcsec [0.39 σ]
OotOffset-rm: 0.536 arcsec [1.42 σ]
KicOffset-rm: 0.626 arcsec [1.64 σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.64 [9/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 005819013-01, PDC Light Curves

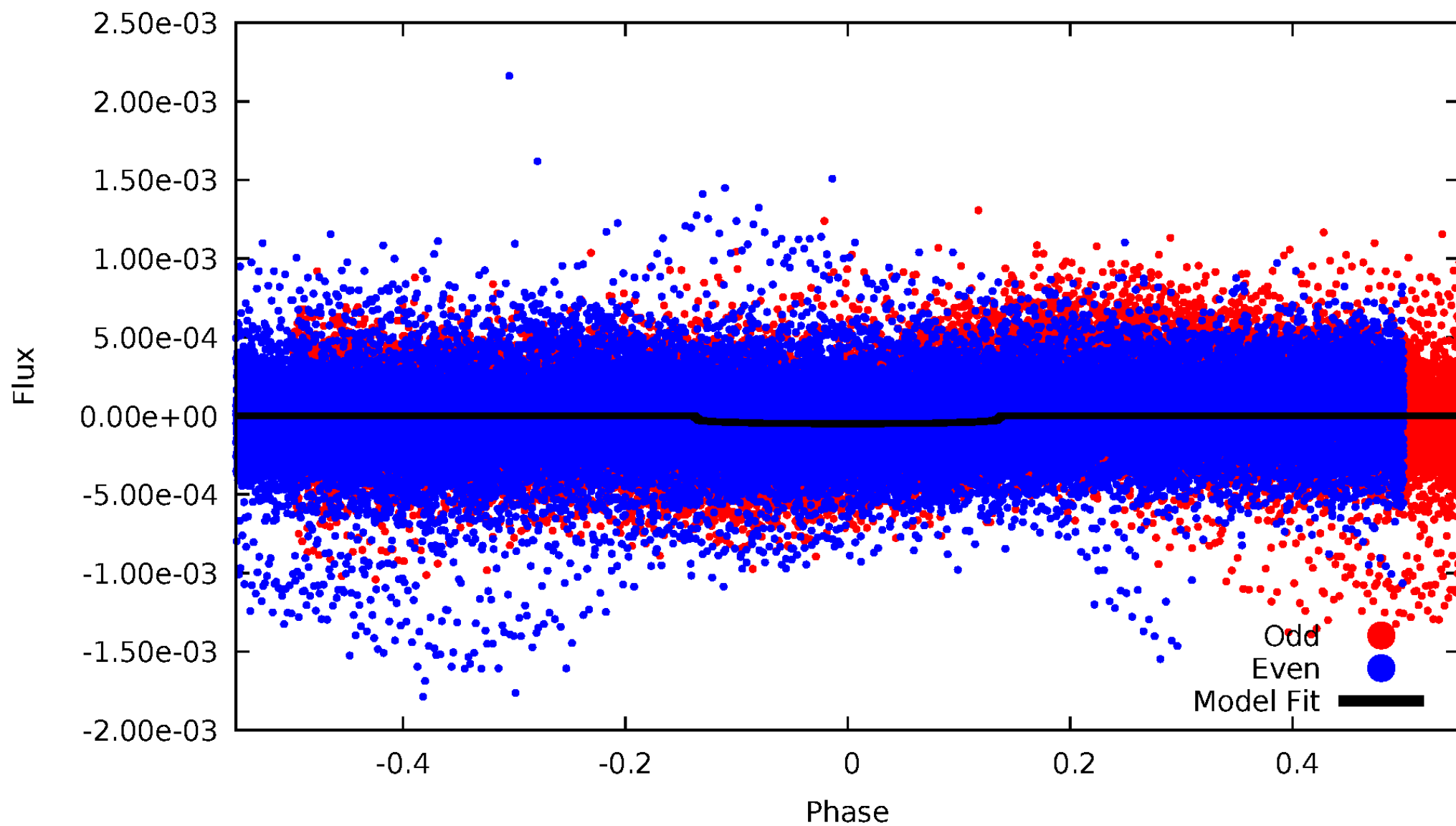


TCE 005819013-01



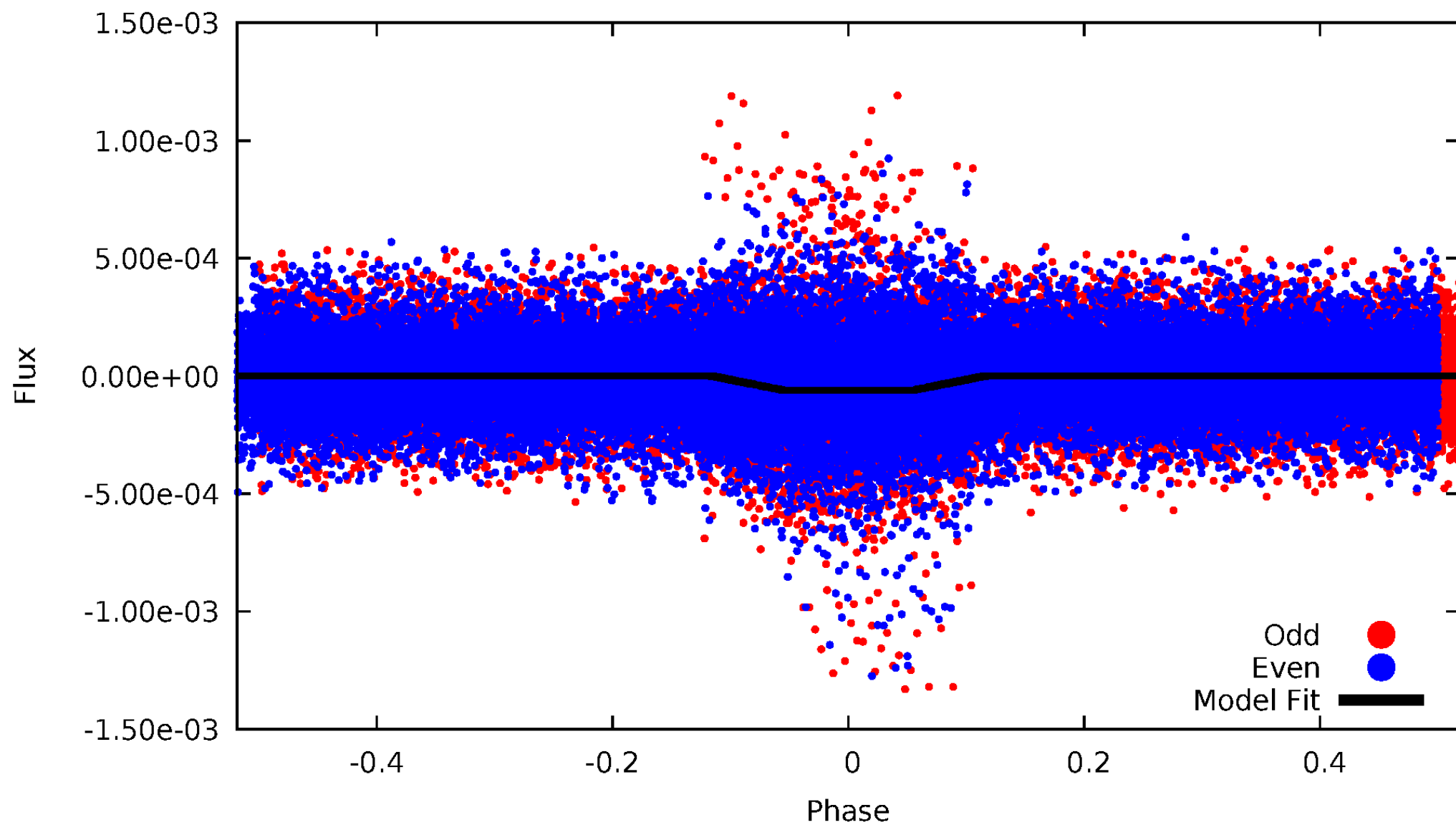
DV Odd/Even

TCE 005819013-01

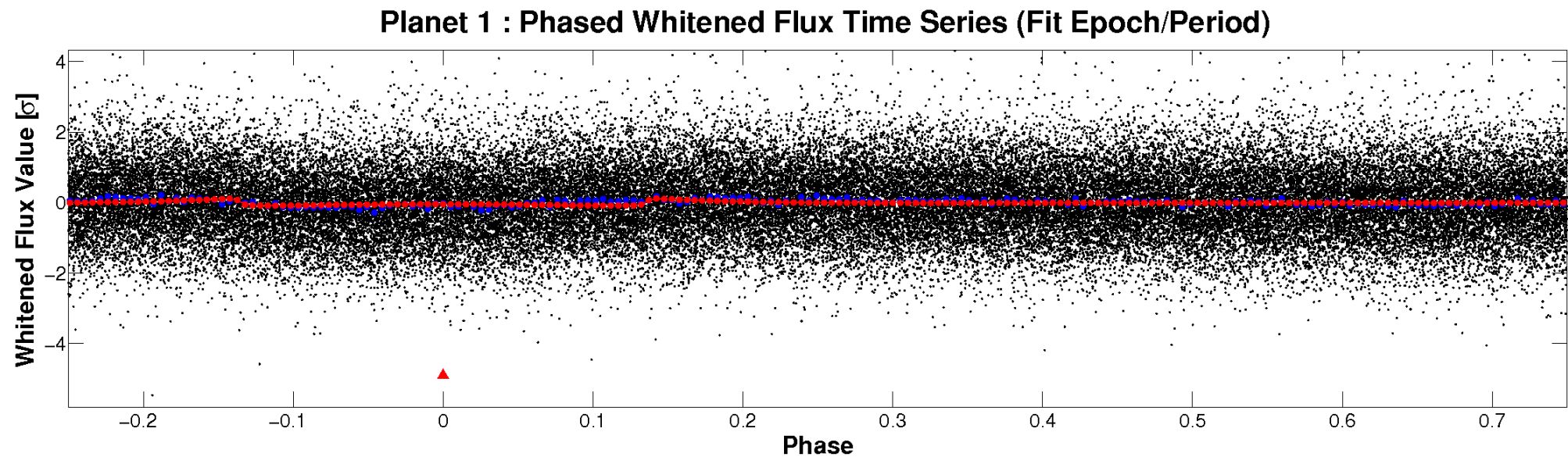
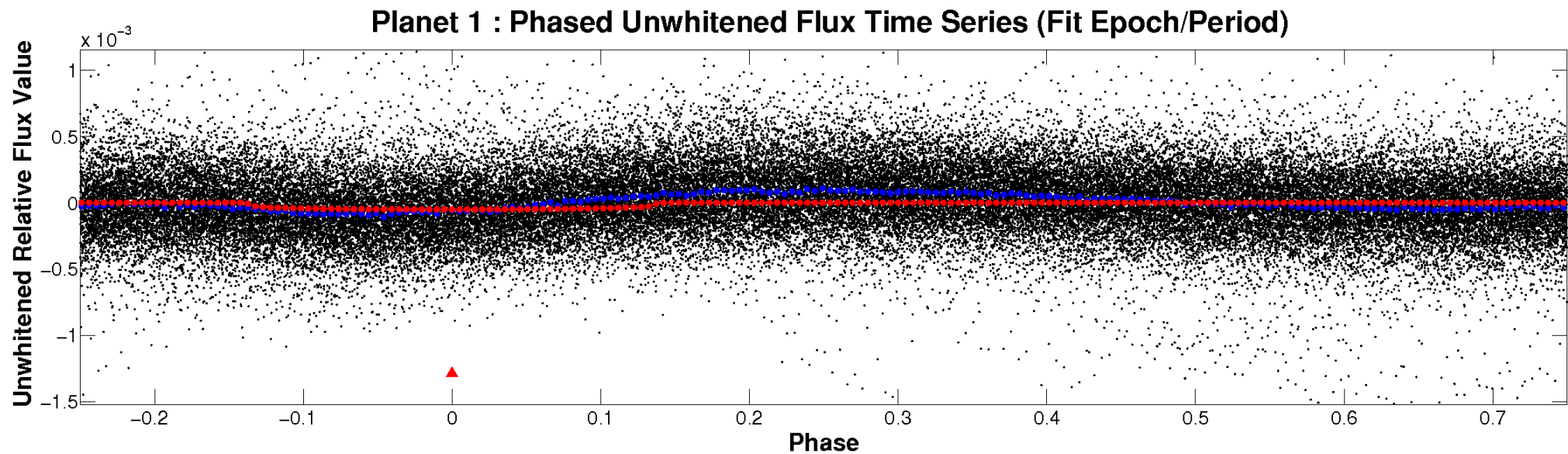


ALT Odd/Even

TCE 005819013-01

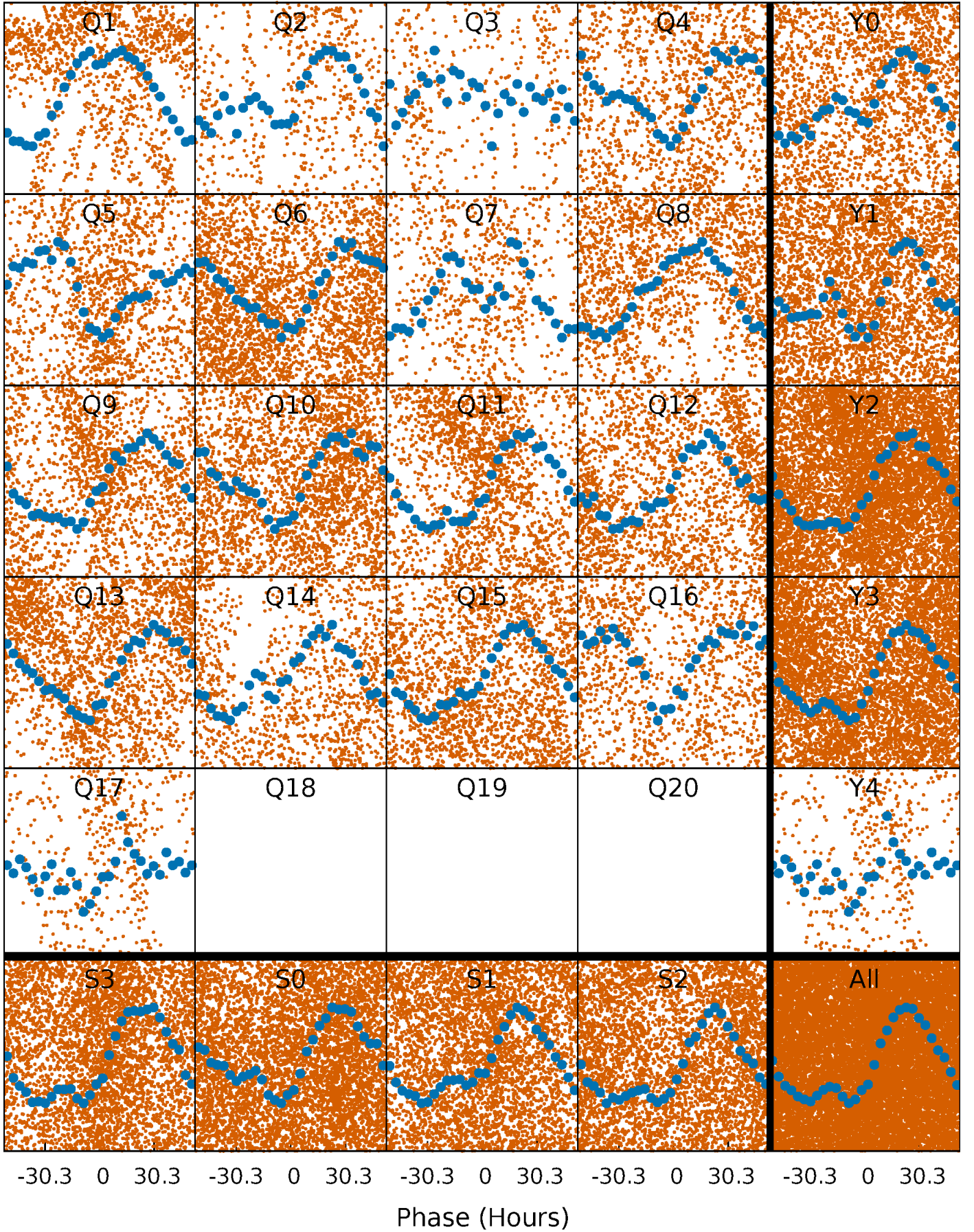


Non-Whitened Vs. Whitened Light Curve



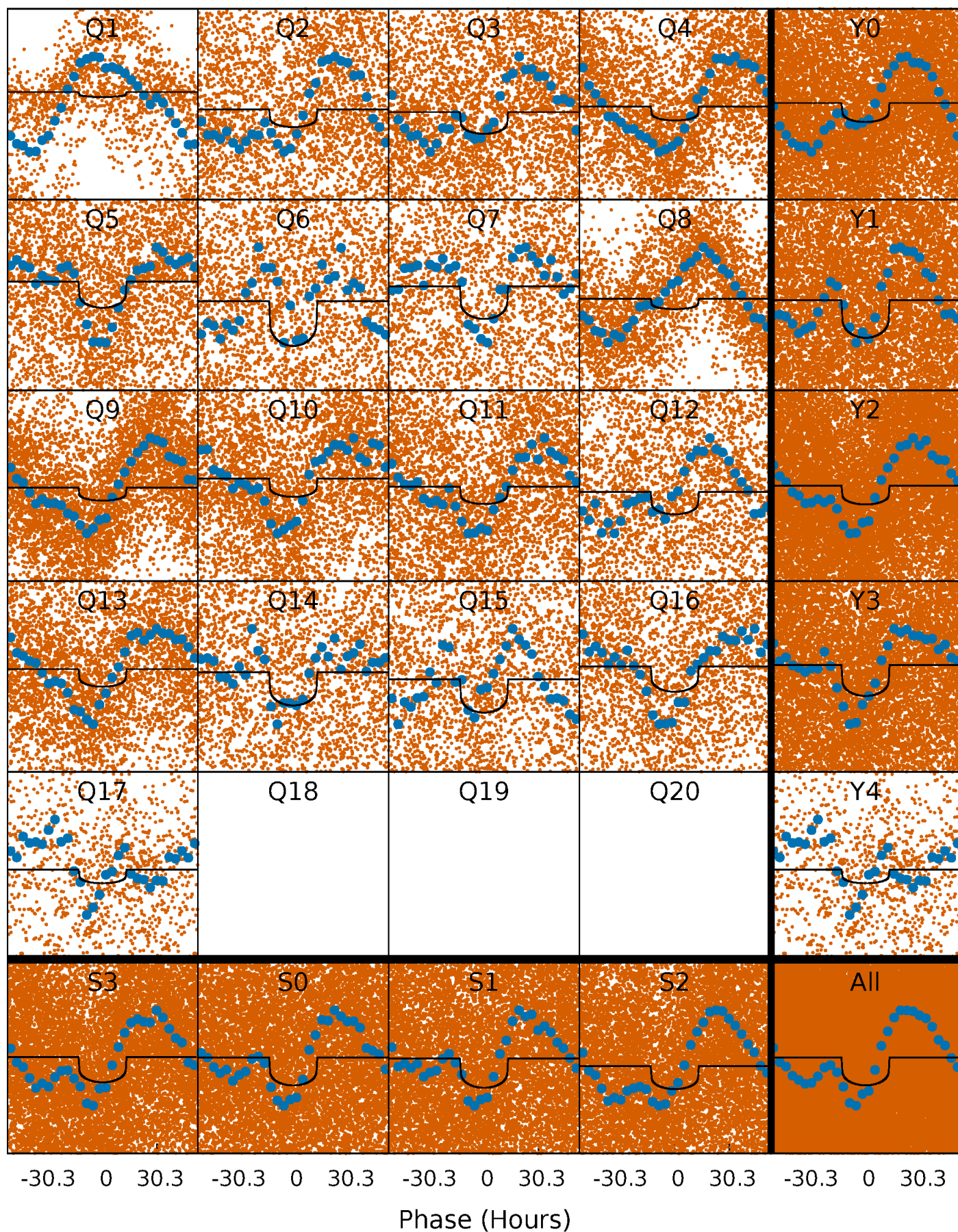
PDC Quarter-Phased Transit Curves

TCE 005819013-01 P= 4.018547 Days $T_0=131.644025$ (BKJD)



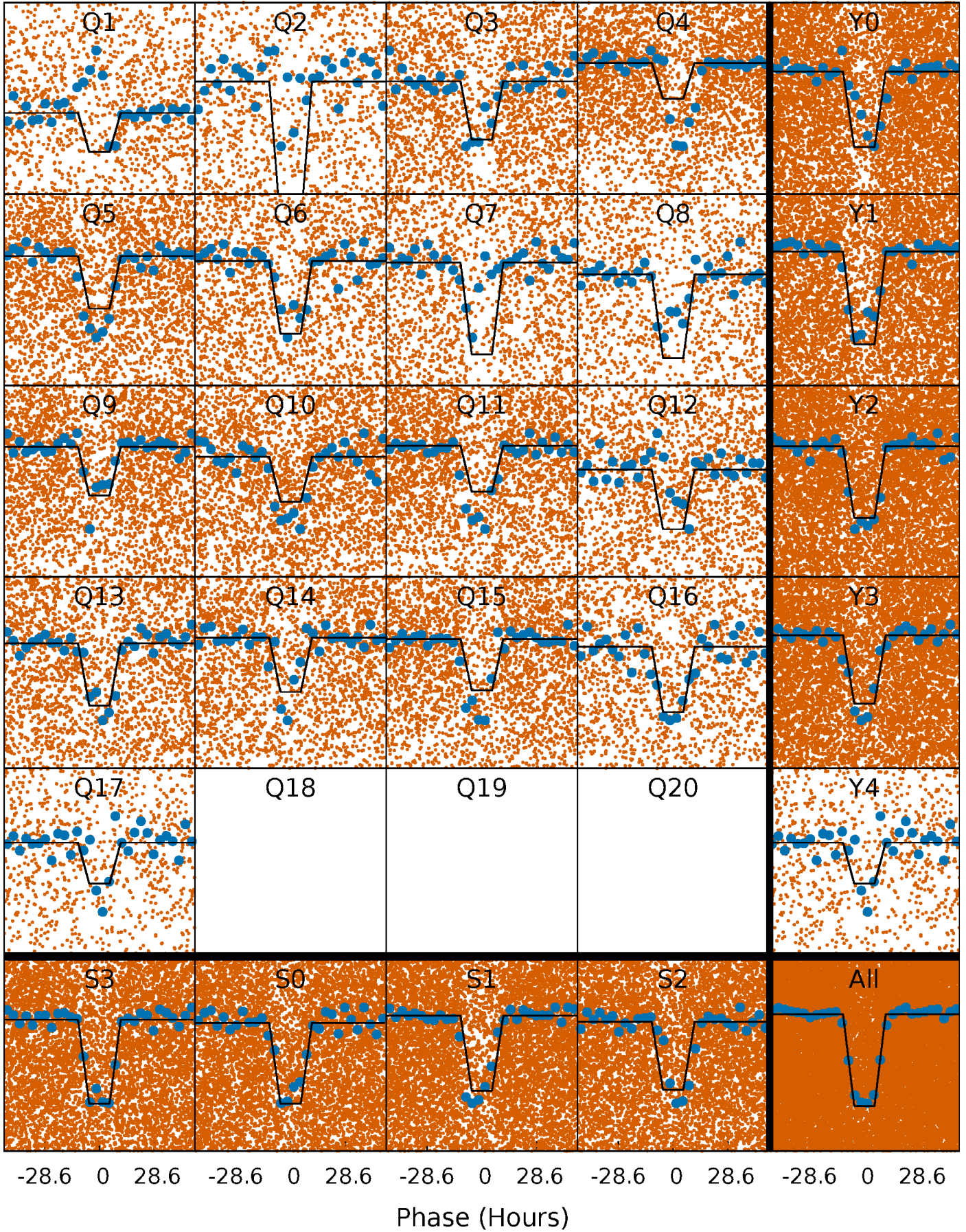
DV Quarter-Phased Transit Curves

TCE 005819013-01 P= 4.018547 Days $T_0=131.644025$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

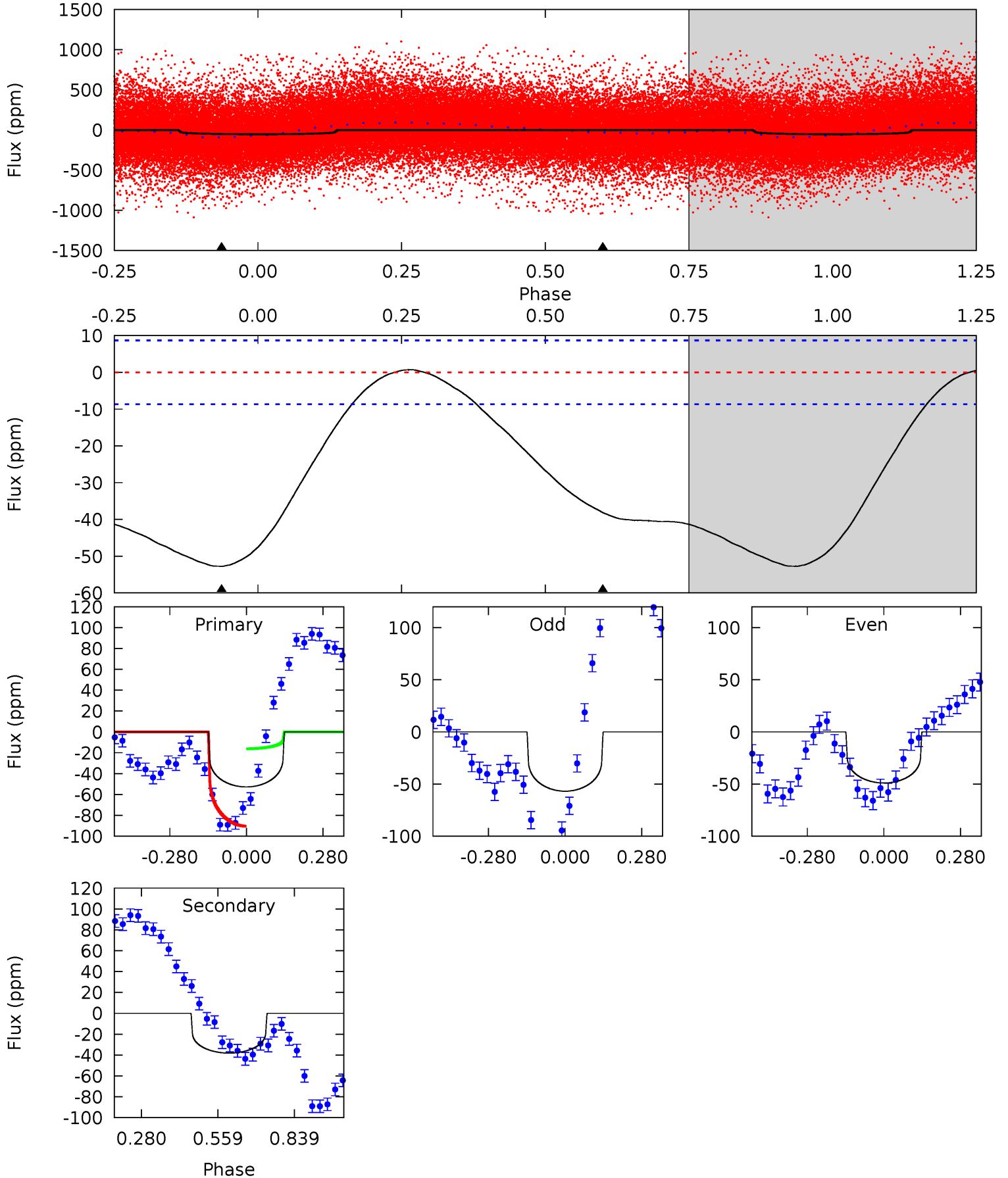
TCE 005819013-01 P= 4.017725 Days $T_0=131.617207$ (BKJD)



DV Model-Shift Uniqueness Test

005819013-01, P = 4.018547 Days, E = 127.625478 Days

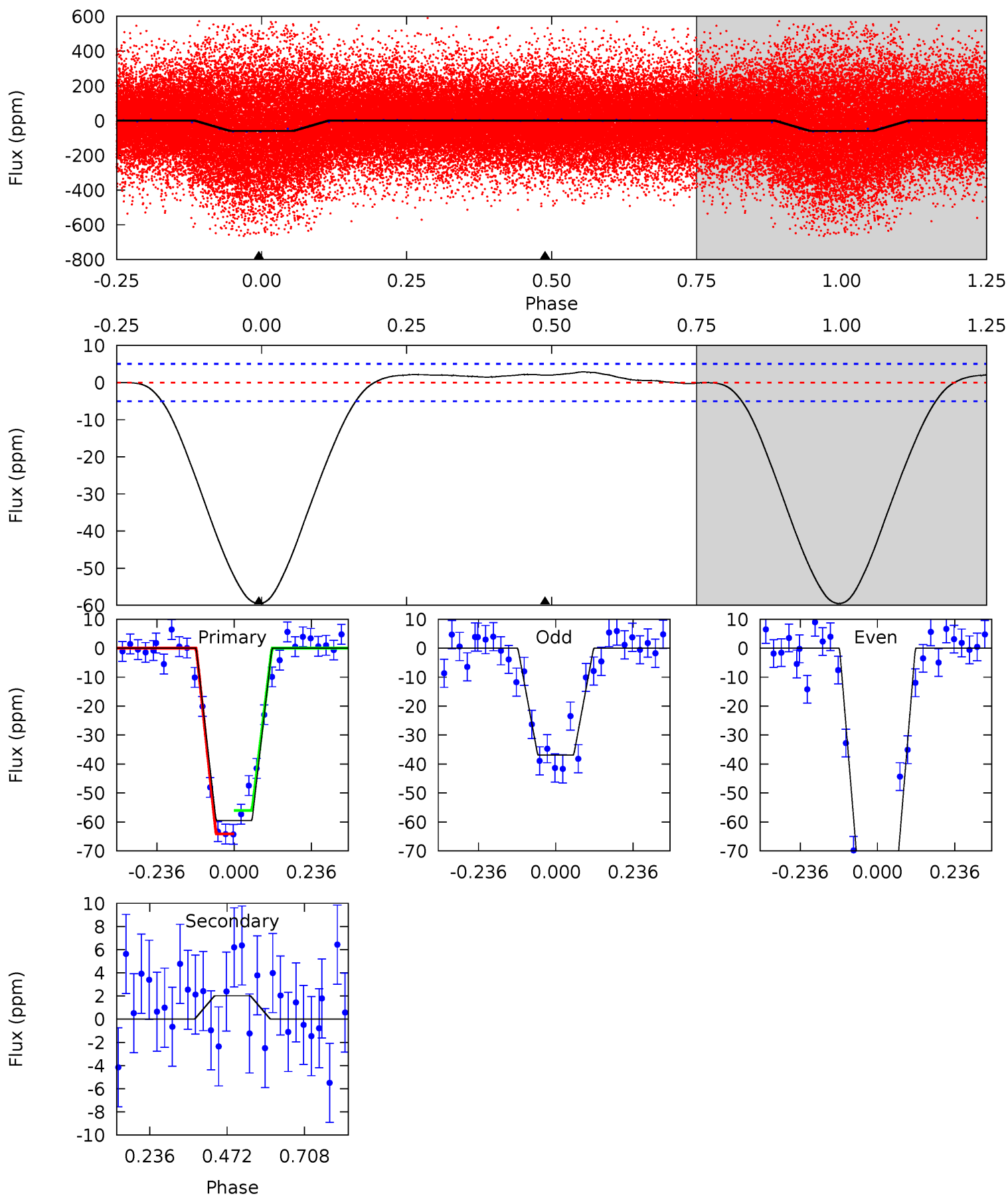
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.5	19.1	0	0	4.34	1.08	0.38	26.5	26.5	19.1	19.1	1.98	0.77	0.01	20.0



Alt Model-Shift Uniqueness Test

005819013-01, P = 4.017725 Days, E = 131.617207 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.8	-1.75	0	0	4.38	1.18	0.90	51.8	51.8	-1.75	-1.75	20.3	0.93	0.05	3.51



Stellar Parameters For KIC 005819013

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6321^{+173}_{-173}	$3.726^{+0.320}_{-0.080}$	$-0.180^{+0.300}_{-0.250}$	$2.712^{+0.445}_{-1.037}$	$1.427^{+0.241}_{-0.294}$	$0.101^{+0.226}_{-0.028}$
	+3%/-3%	+9%/-2%	+167%/-139%	+16%/-38%	+17%/-21%	+224%/-27%
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 005819013-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-38 ± 2	$1.84^{+0.78}_{-0.71}$	2661^{+162}_{-246}	6053^{+1620}_{-811}	20^{+28}_{-10}
Alt.	2 ± 1	$2.17^{+0.76}_{-0.73}$	2658^{+156}_{-229}	-3428^{+280}_{-365}	$-0.722^{+0.466}_{-0.903}$

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

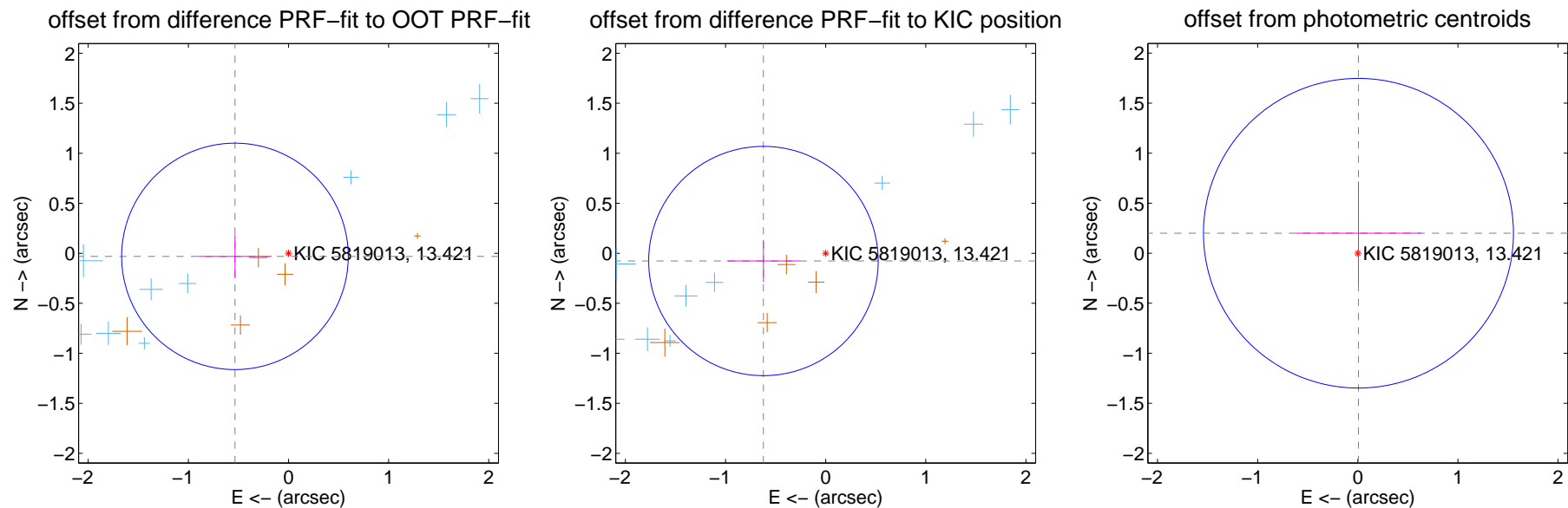
DV Centroid Data

Supplemental centroid analysis for 005819013-01. Kepler magnitude: 13.42. Transit SNR 11.23

There are 9 quarters with good PRF difference image offsets

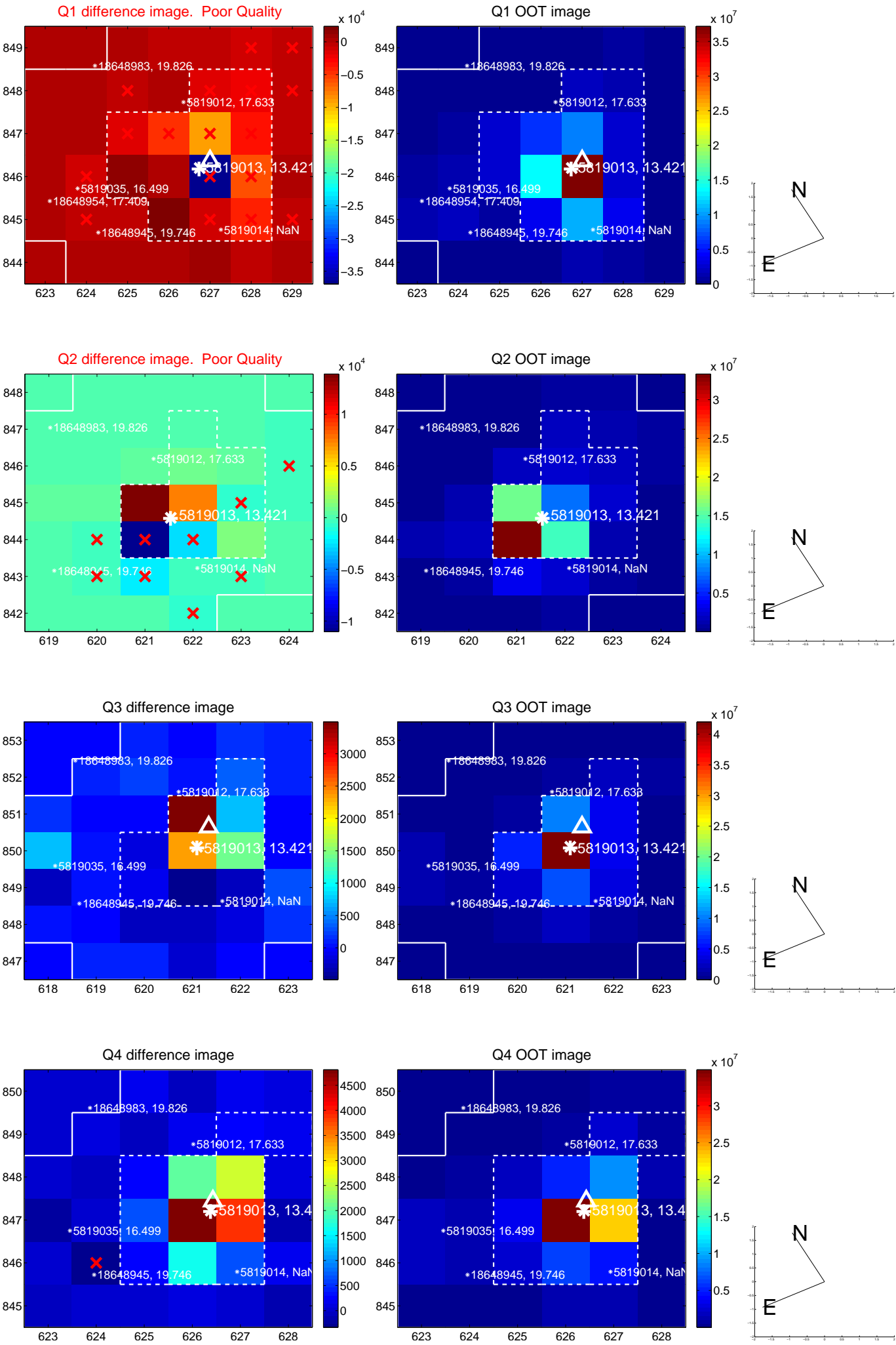
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.536 ± 0.377	1.42	0.535 ± 0.368	-0.031 ± 0.217
PRF-fit source offset from KIC position	0.626 ± 0.382	1.64	0.621 ± 0.363	-0.077 ± 0.210
photometric centroid source offset	0.20 ± 0.52	0.39	-0.01 ± 0.62	0.20 ± 0.52

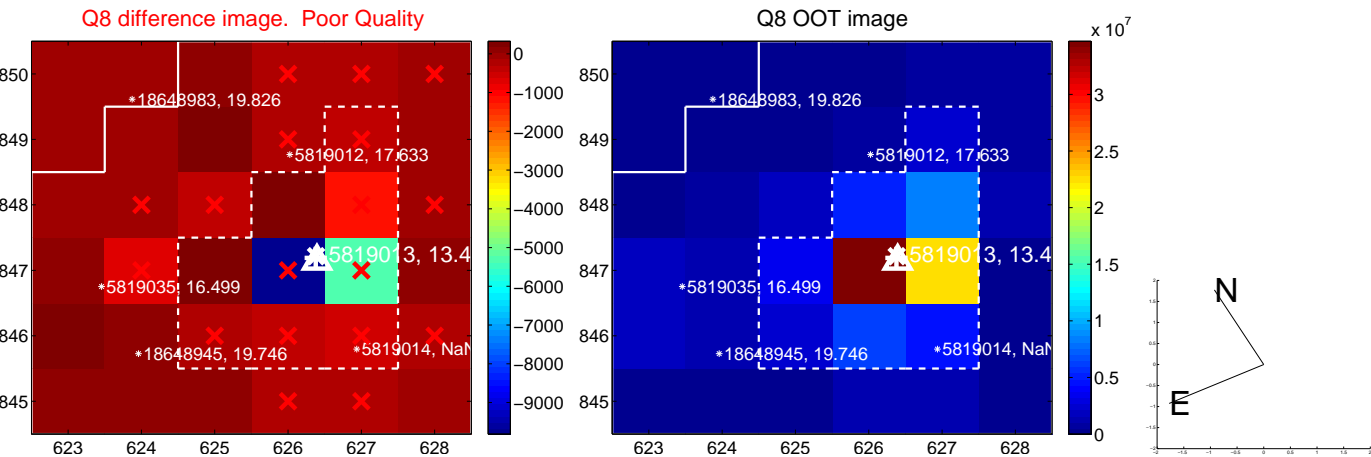
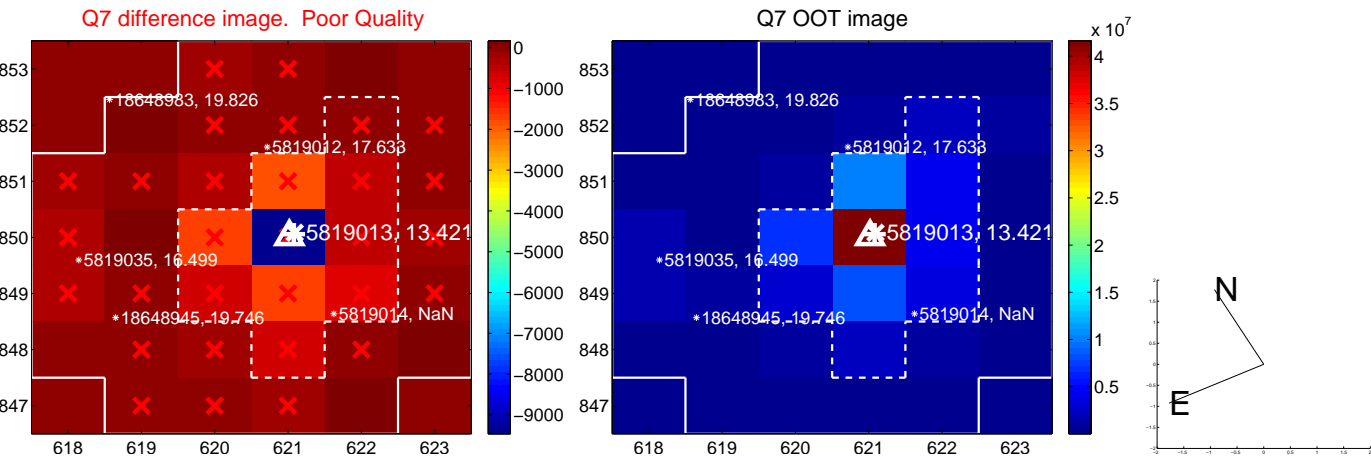
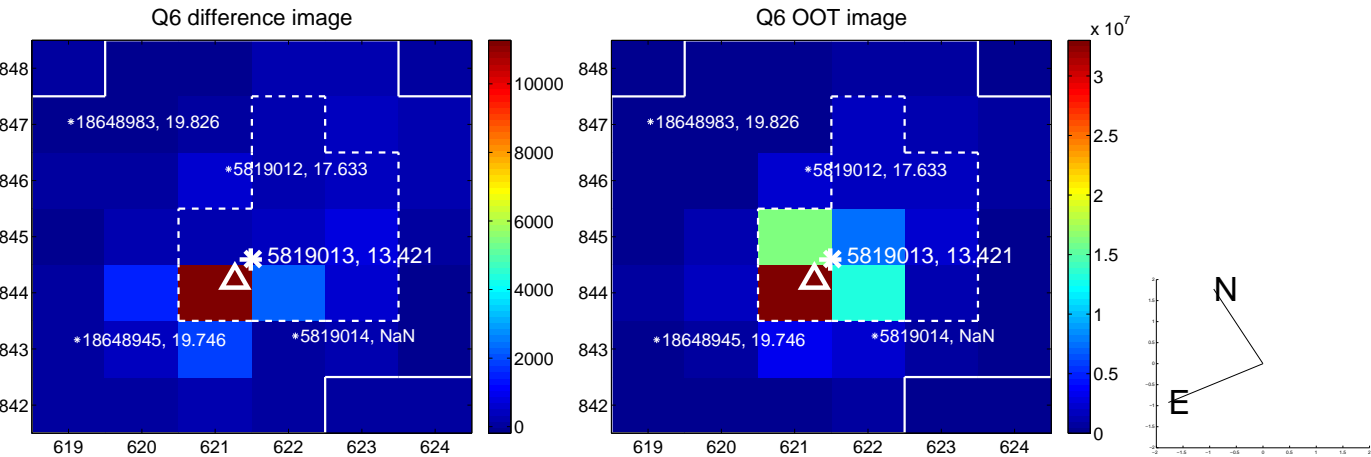
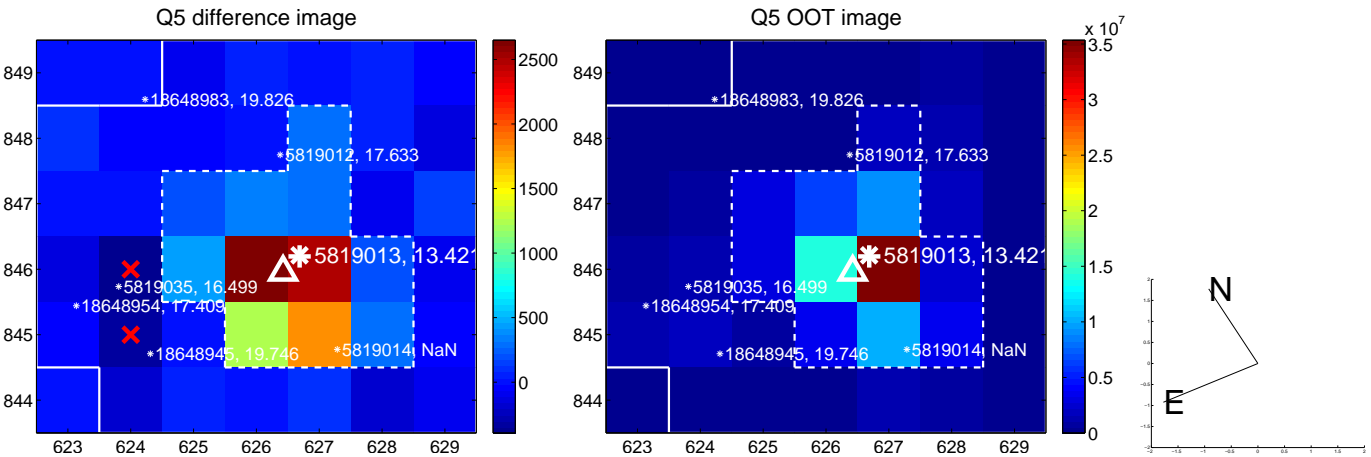


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

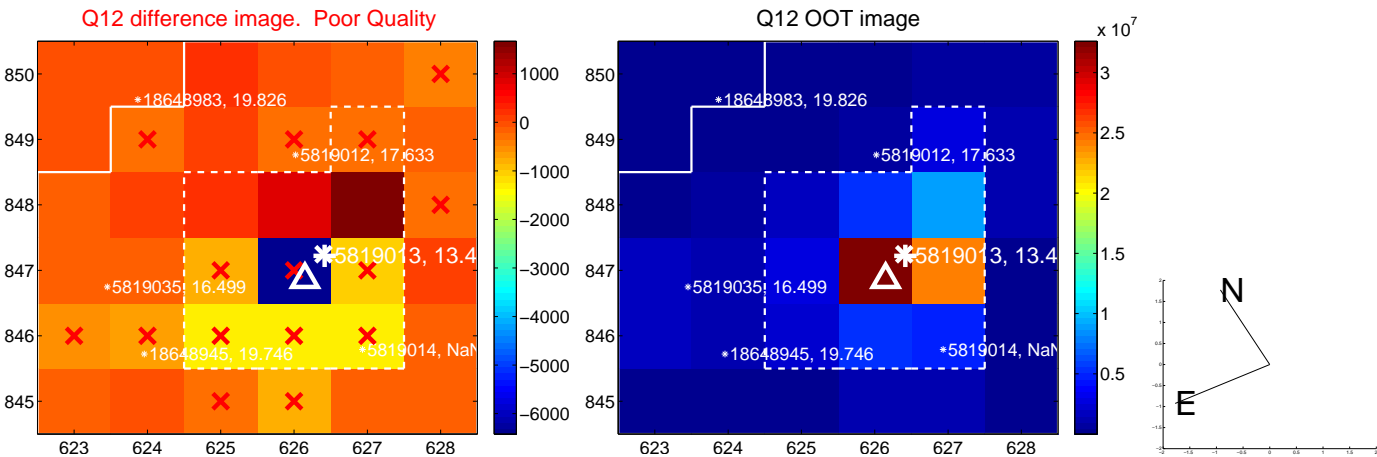
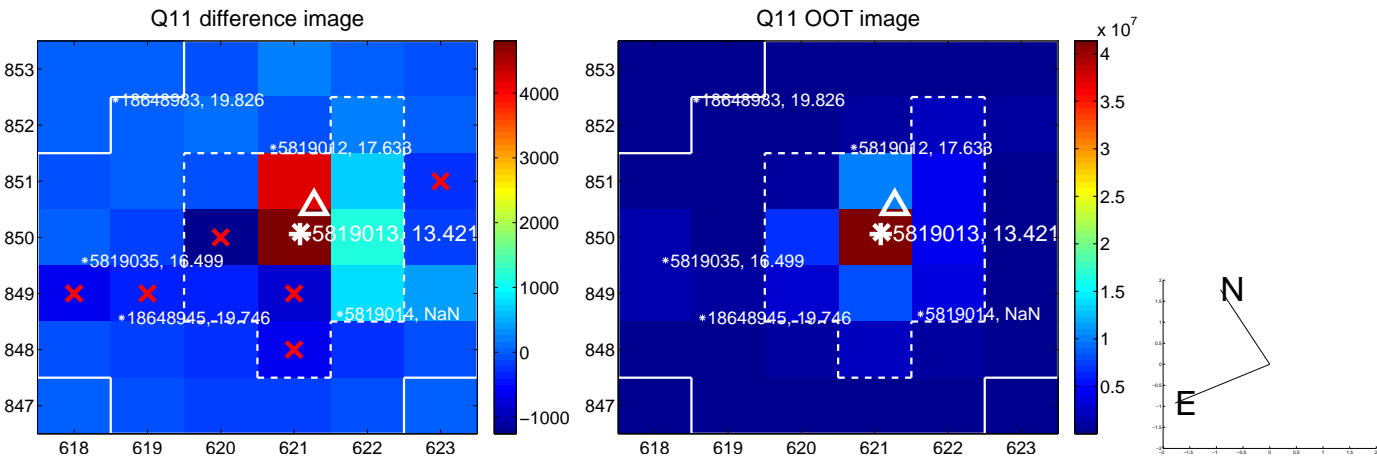
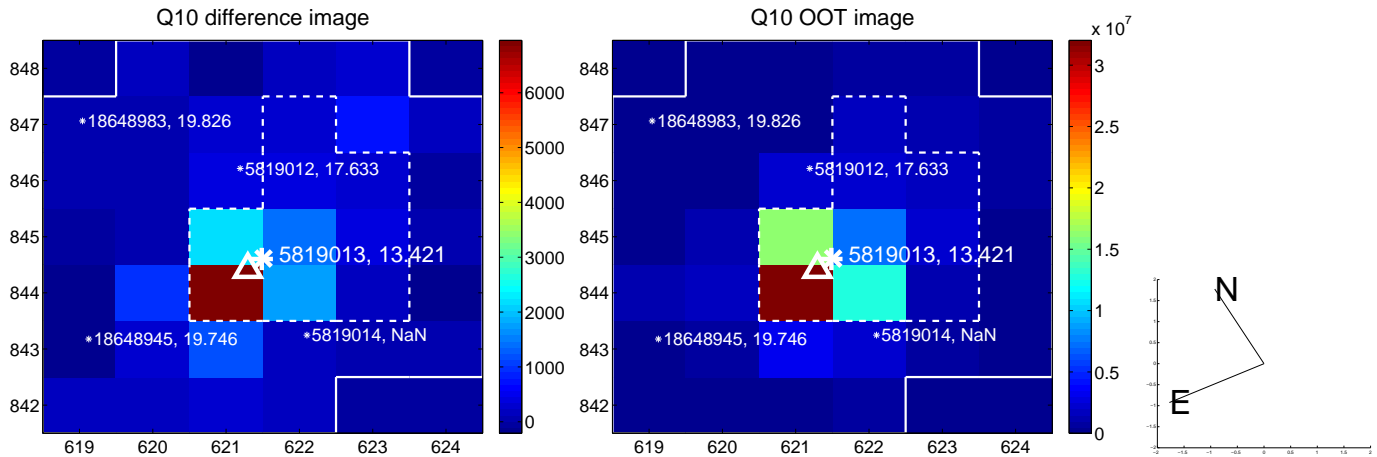
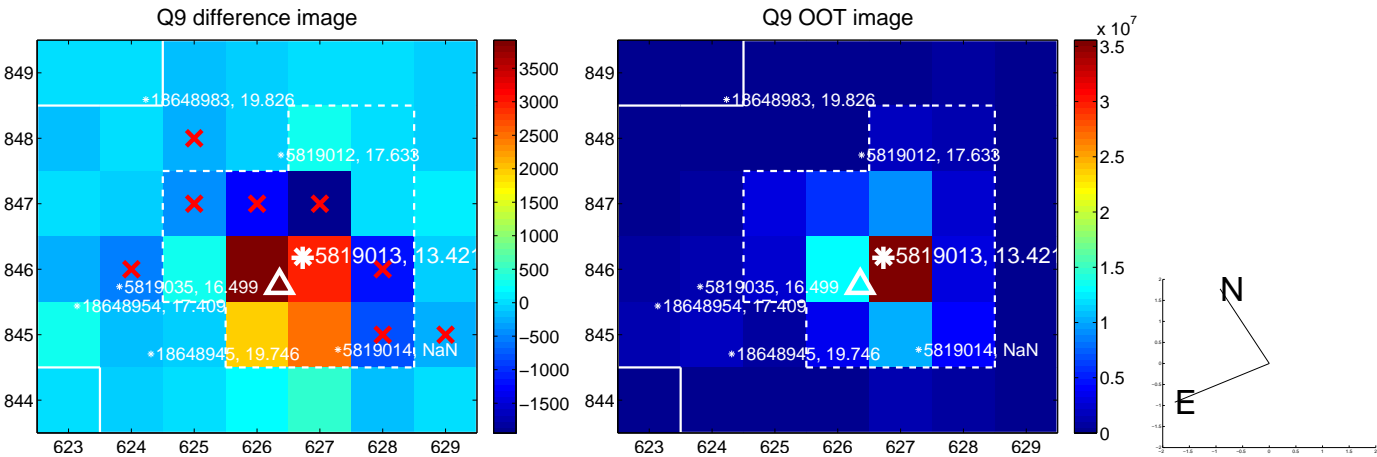
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



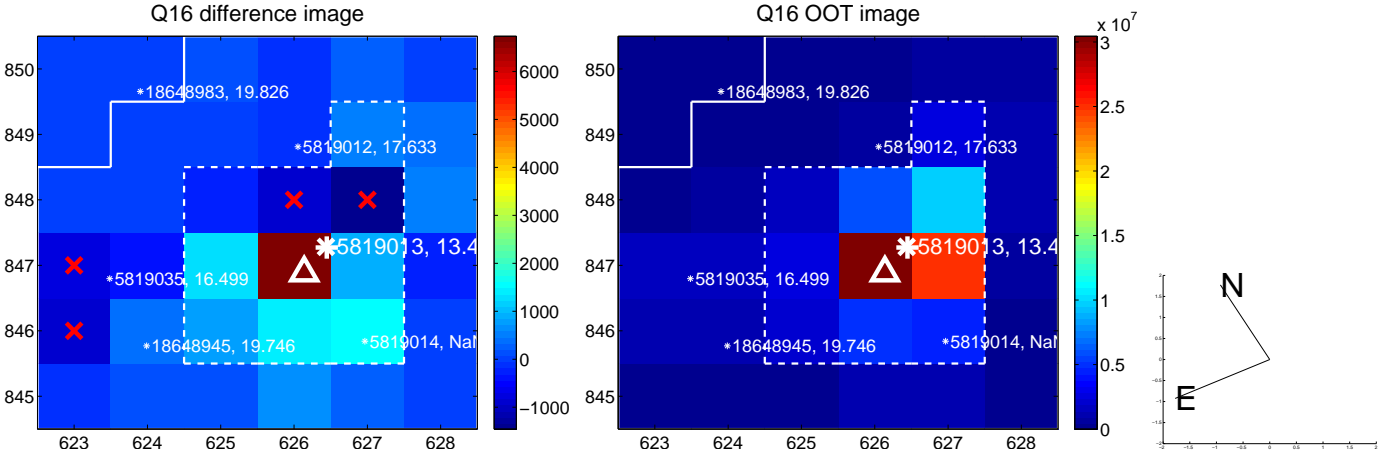
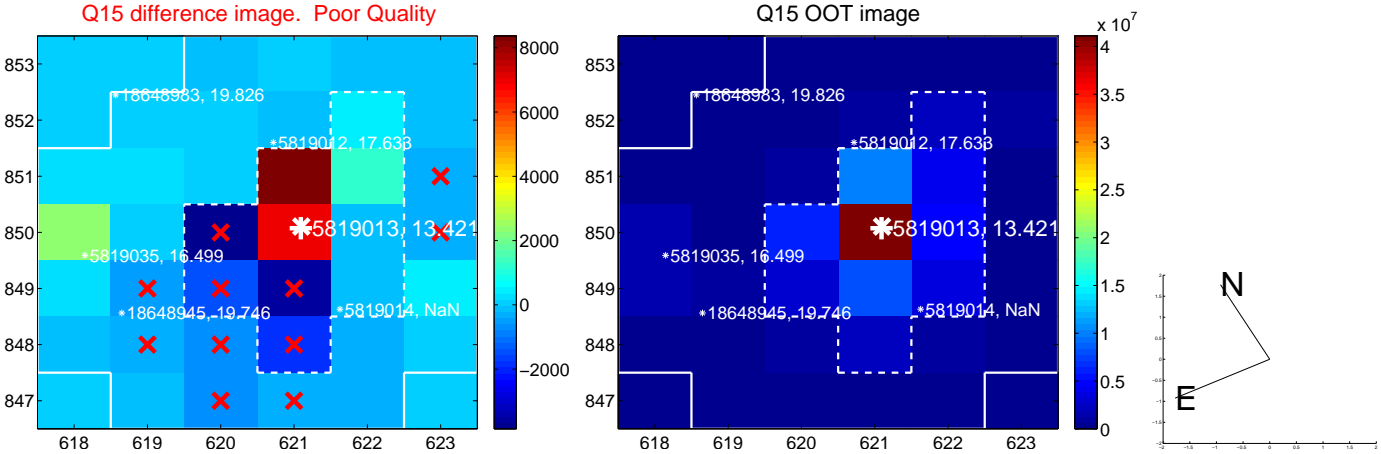
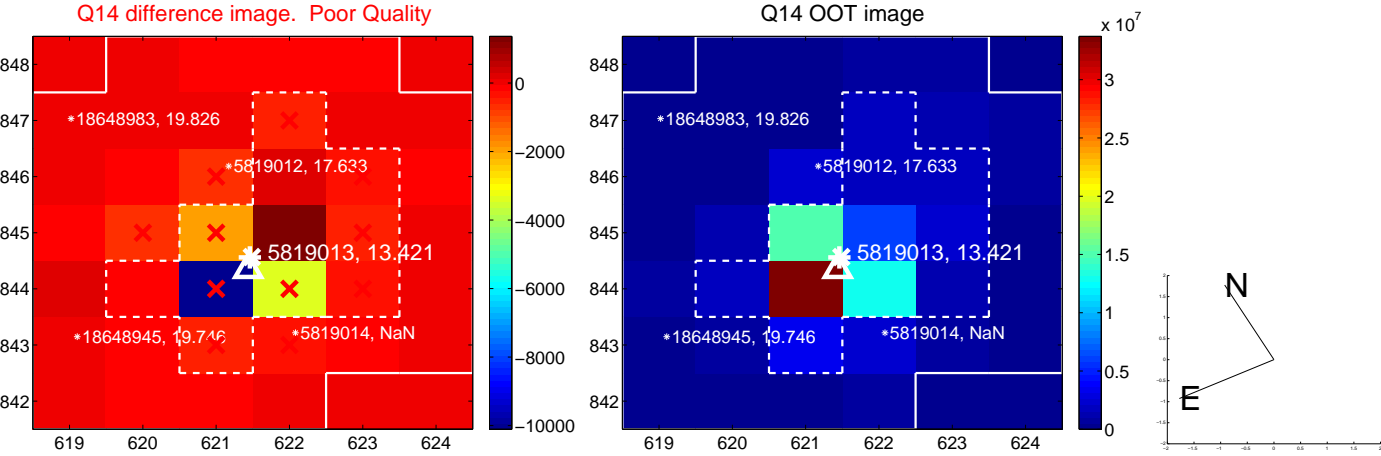
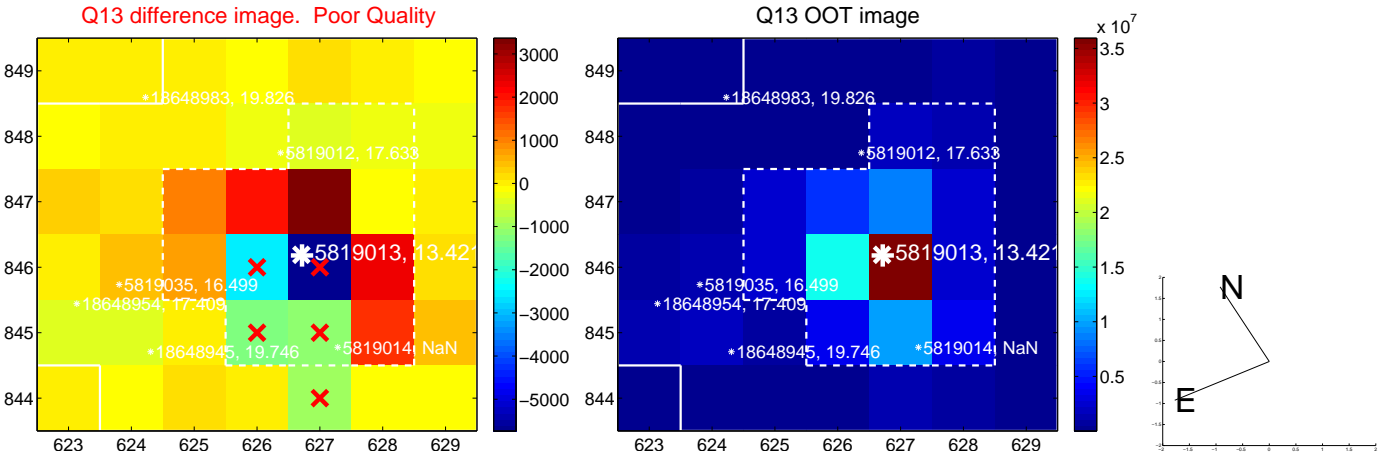
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



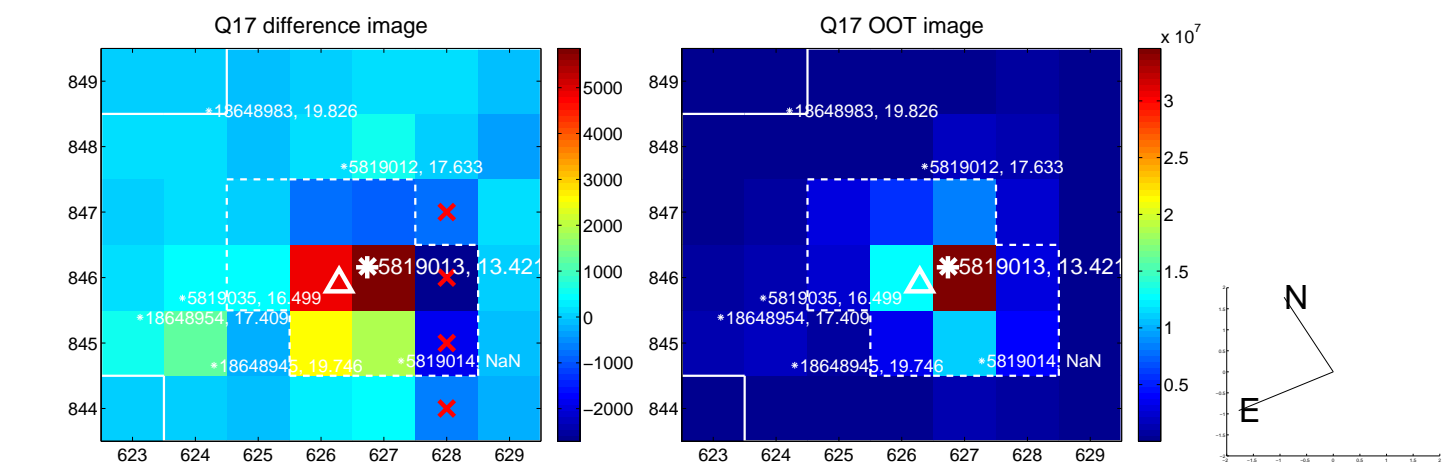
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



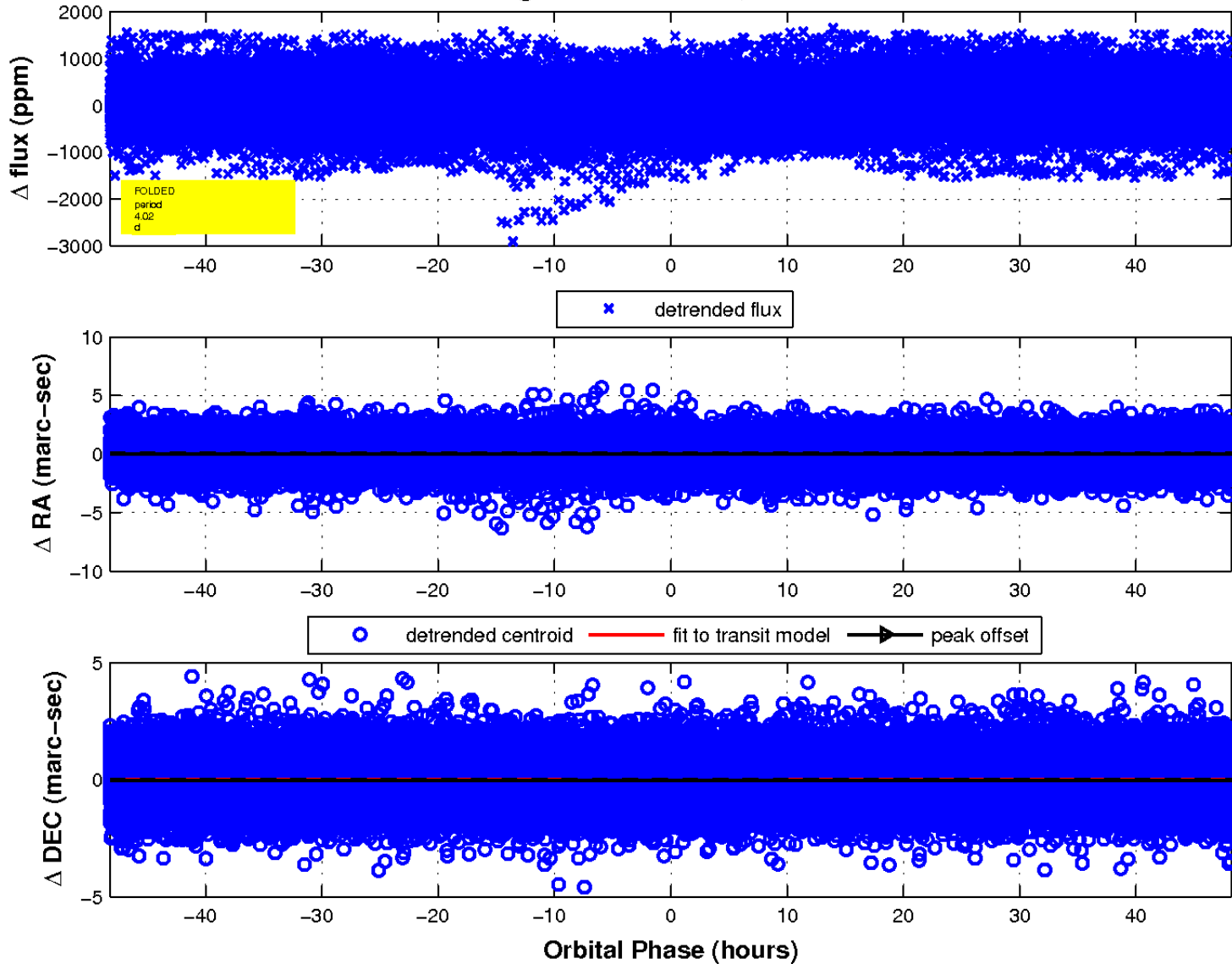
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

