

KIC 006614630

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})
006614630-01	OBS	No	1.302994	132.621223	33.1	5.980	7.9	9.0	1.02	6306	0.71	2567.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006614630-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET

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

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

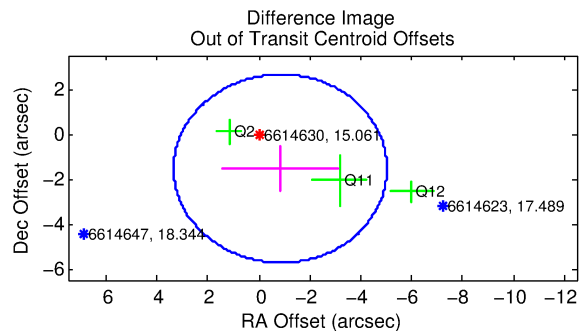
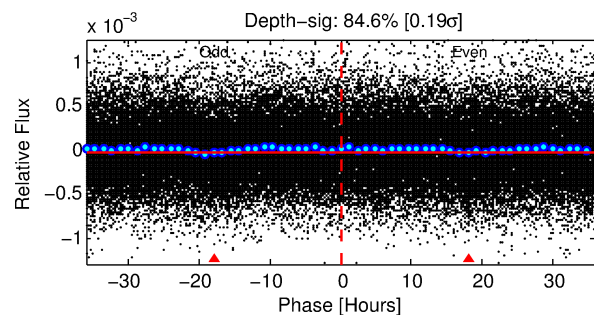
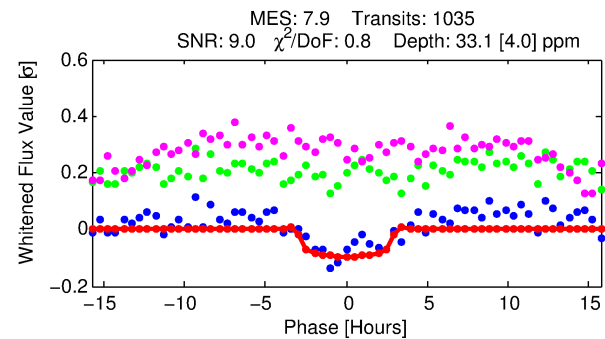
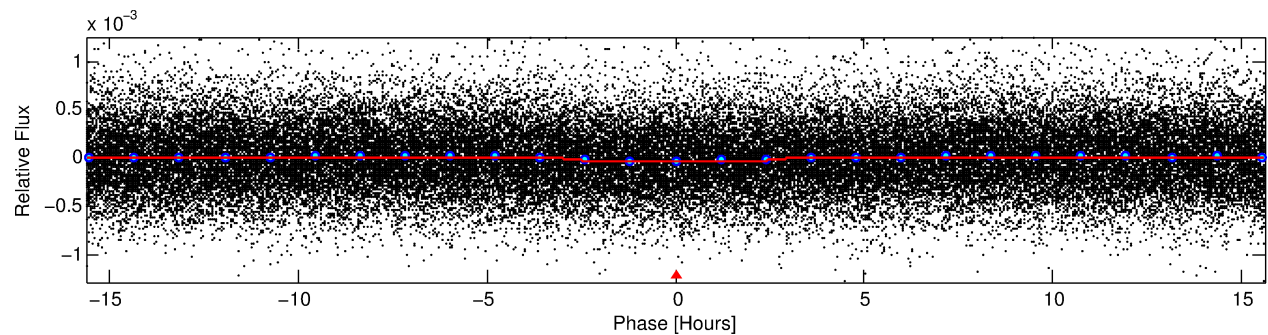
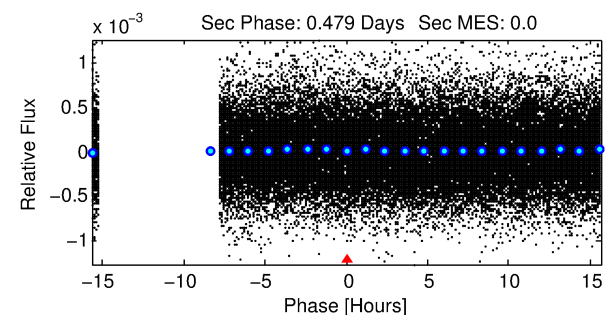
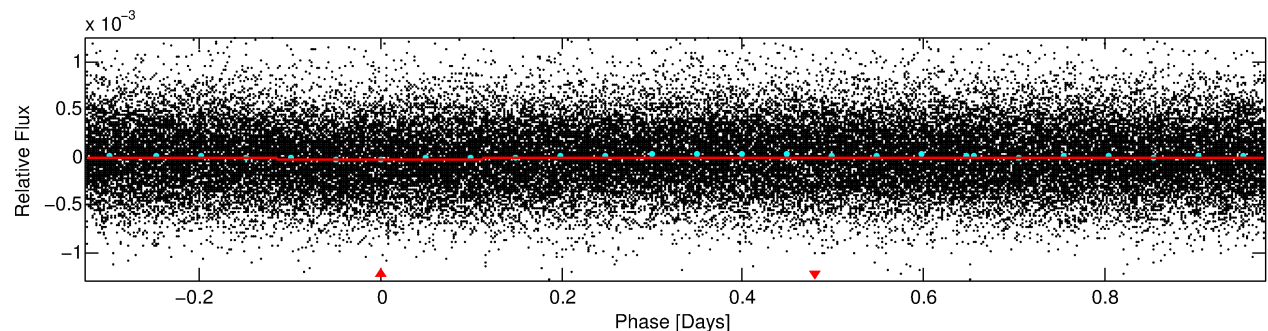
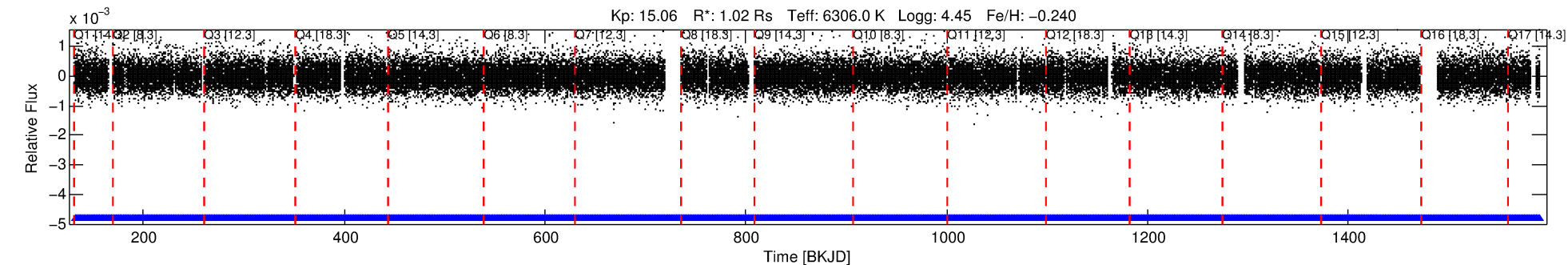
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006614630-01

No Significant Match Found

DV One-Page Summary

KIC: 6614630 Candidate: 1 of 1 Period: 1.303 d



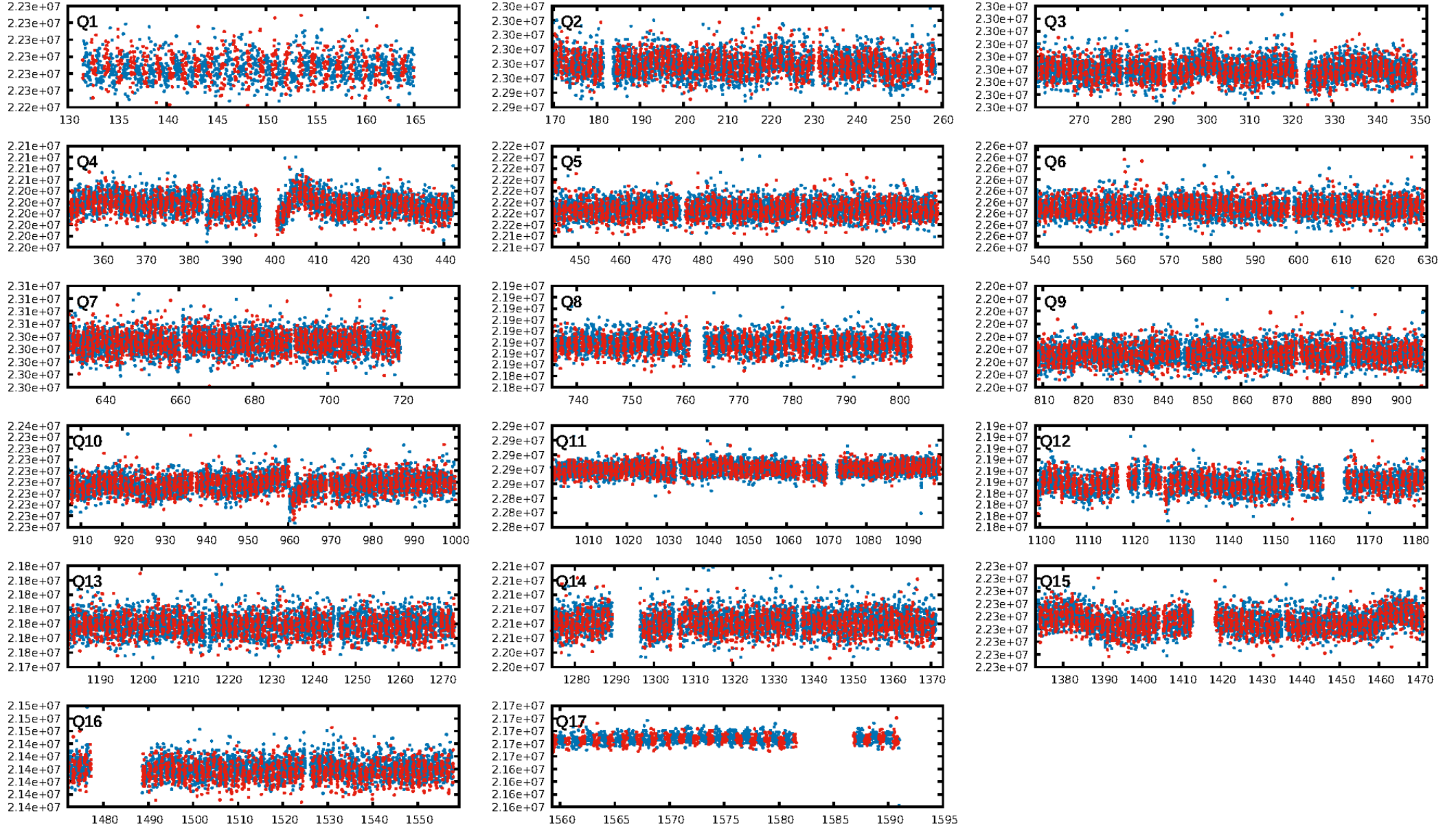
DV Fit Results:

Period = 1.30299 [0.00002] d
 Epoch = 132.6212 [0.0072] BKJD
 Rp/R* = 0.0063 [0.0025]
 a/R* = 1.15 [0.67]
 b = 0.93 [0.35]
 Seff = 2567.06 [1062.31]
 Teq = 1815 [188] K
 Rp = 0.71 [0.36] Re
 a = 0.0239 [0.0065] AU
 Ag = N/A
 Tefp = N/A

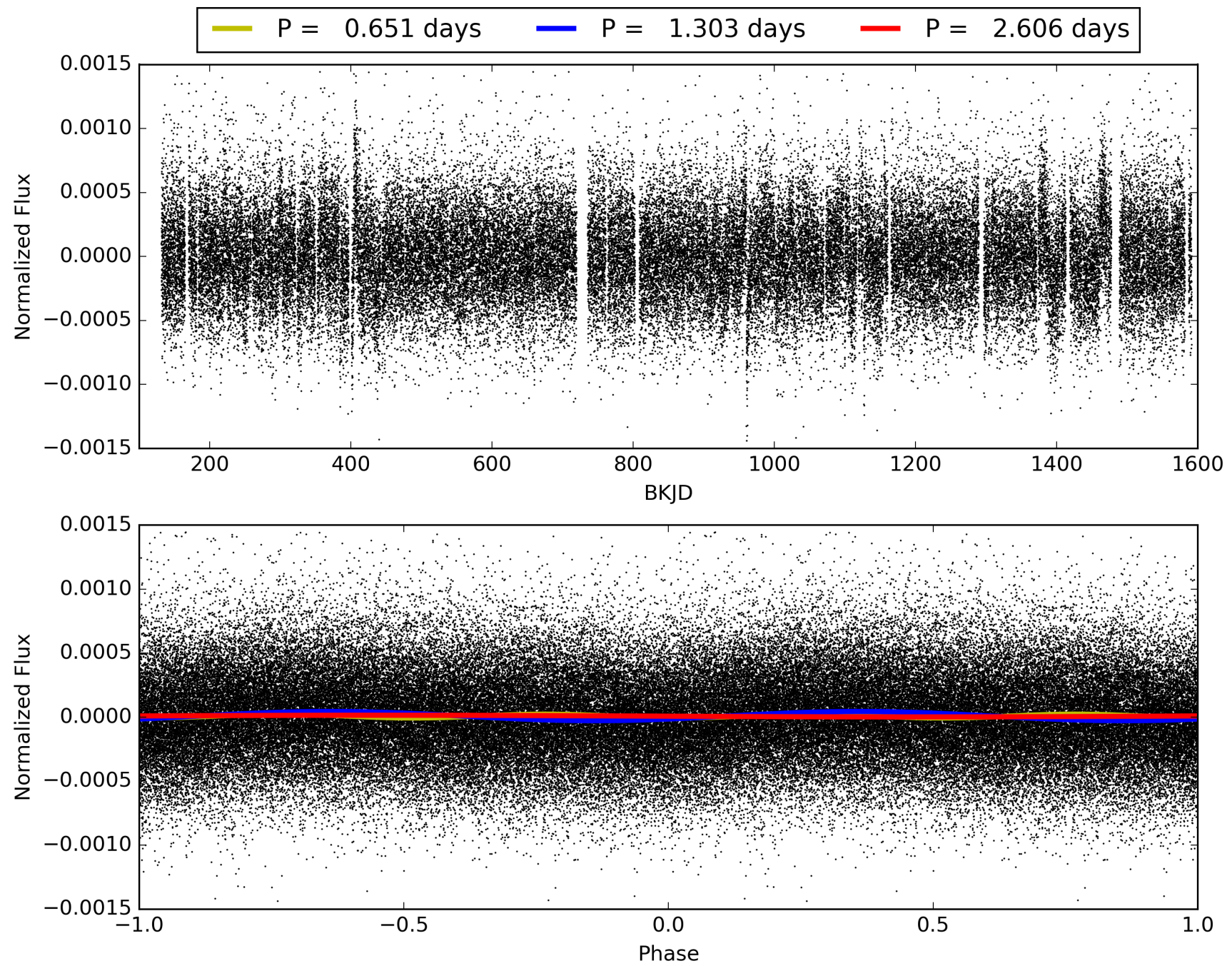
DV Diagnostic Results:

ShortPeriod-sig: N/A
 LongPeriod-sig: N/A
 ModelChiSquare2-sig: N/A
 ModelChiSquareGof-sig: N/A
 Bootstrap-pfa: 2.03e-18
 RollingBand-fgt: 1.00 [988/988]
 GhostDiagnostic-chr: -0.2523
 Centroid-sig: 0.0%
 Centroid-so: 5.414 arcsec [3.13σ]
 OotOffset-rm: 1.759 arcsec [1.26σ]
 KicOffset-rm: 1.844 arcsec [1.25σ]
 OotOffset-st: 1/1/1/0 [3]
 KicOffset-st: 1/1/1/0 [3]
 DiffImageQuality-fgm: 0.33 [1/3]
 DiffImageOverlap-fno: 1.00 [17/17]

TCE 006614630-01, PDC Light Curves

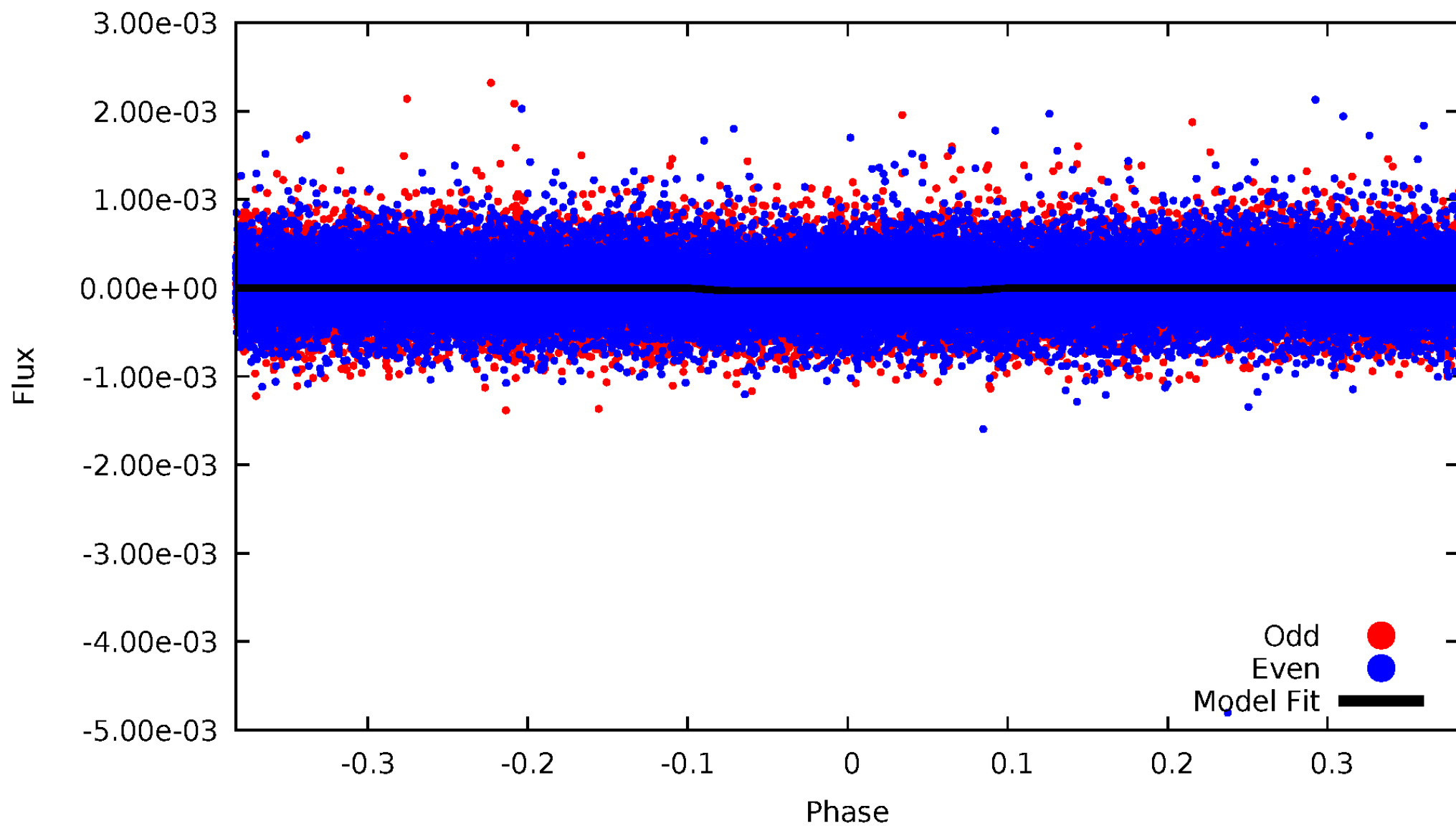


TCE 006614630-01



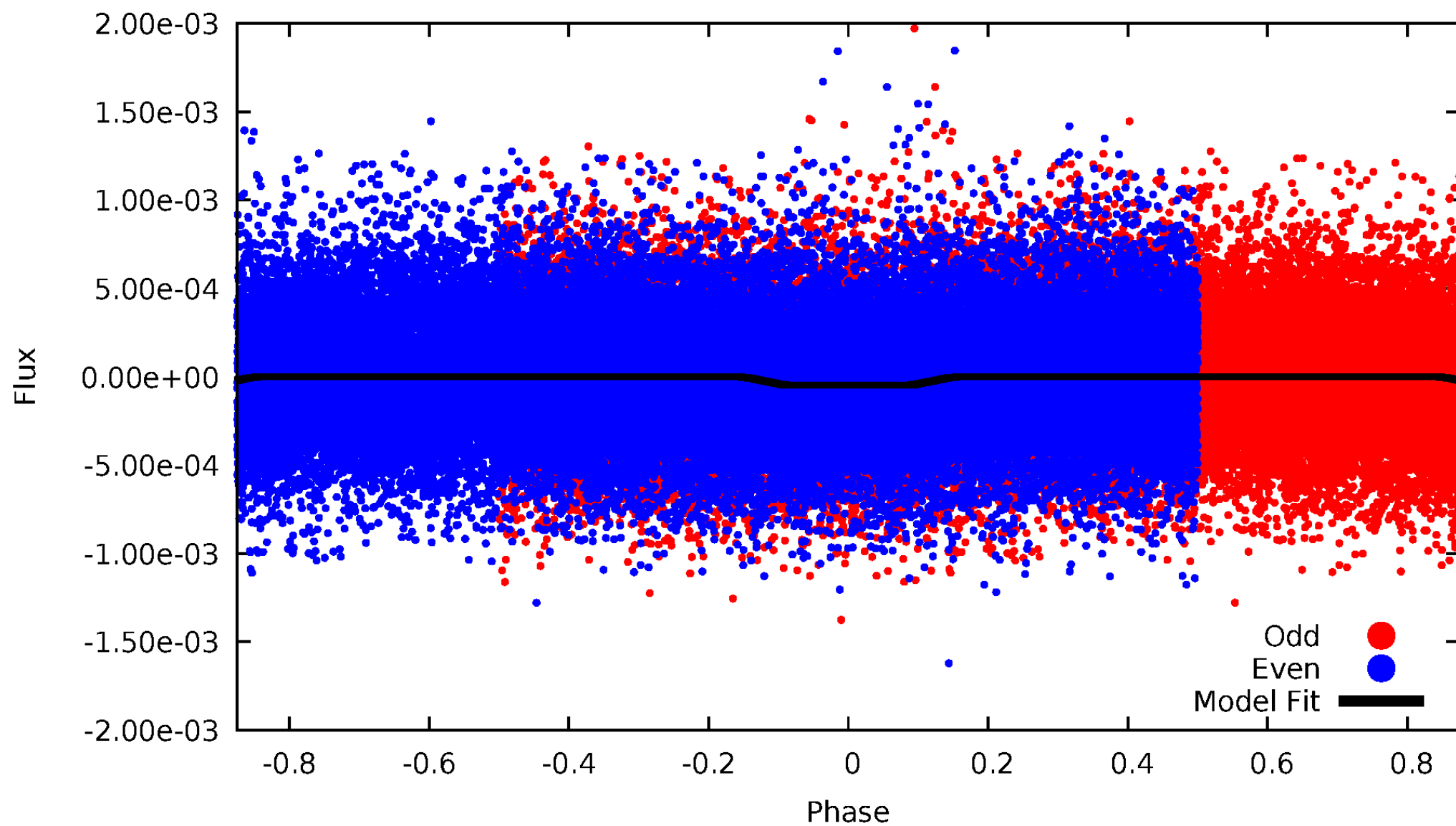
DV Odd/Even

TCE 006614630-01



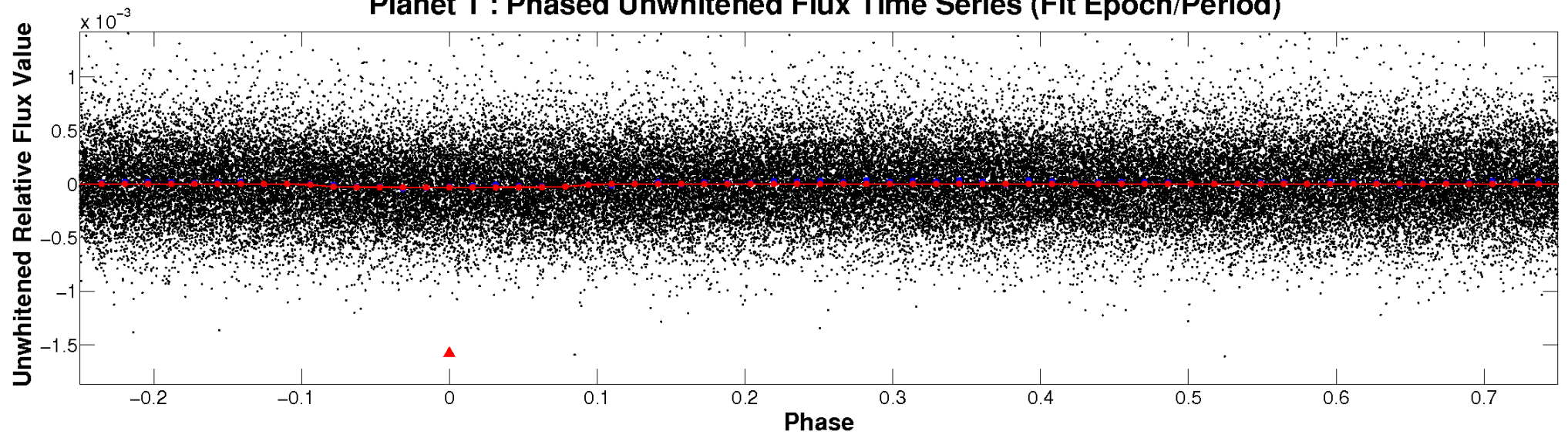
ALT Odd/Even

TCE 006614630-01

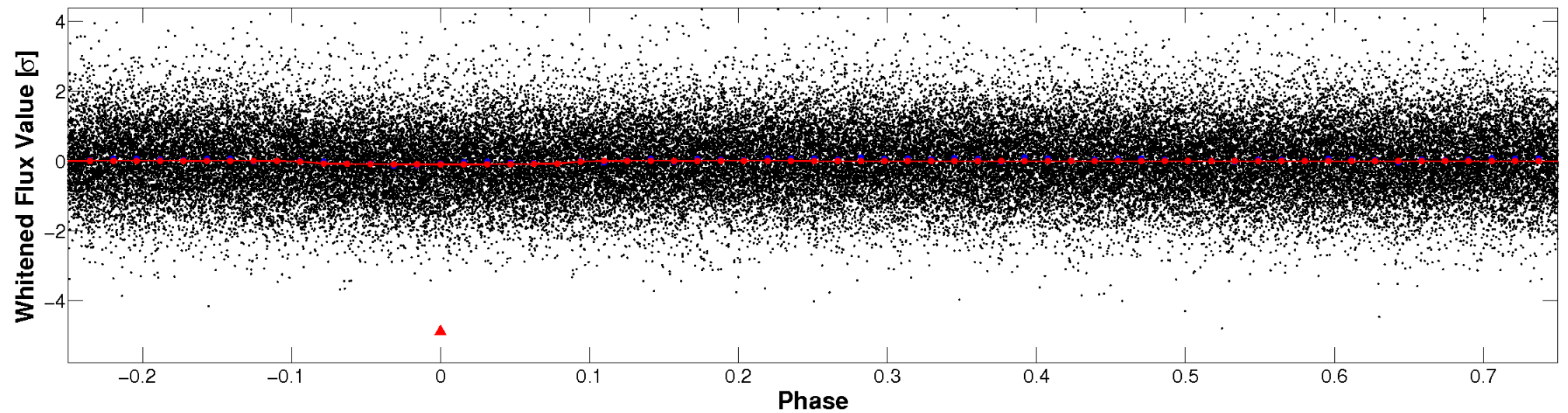


Non-Whitened Vs. Whitened Light Curve

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

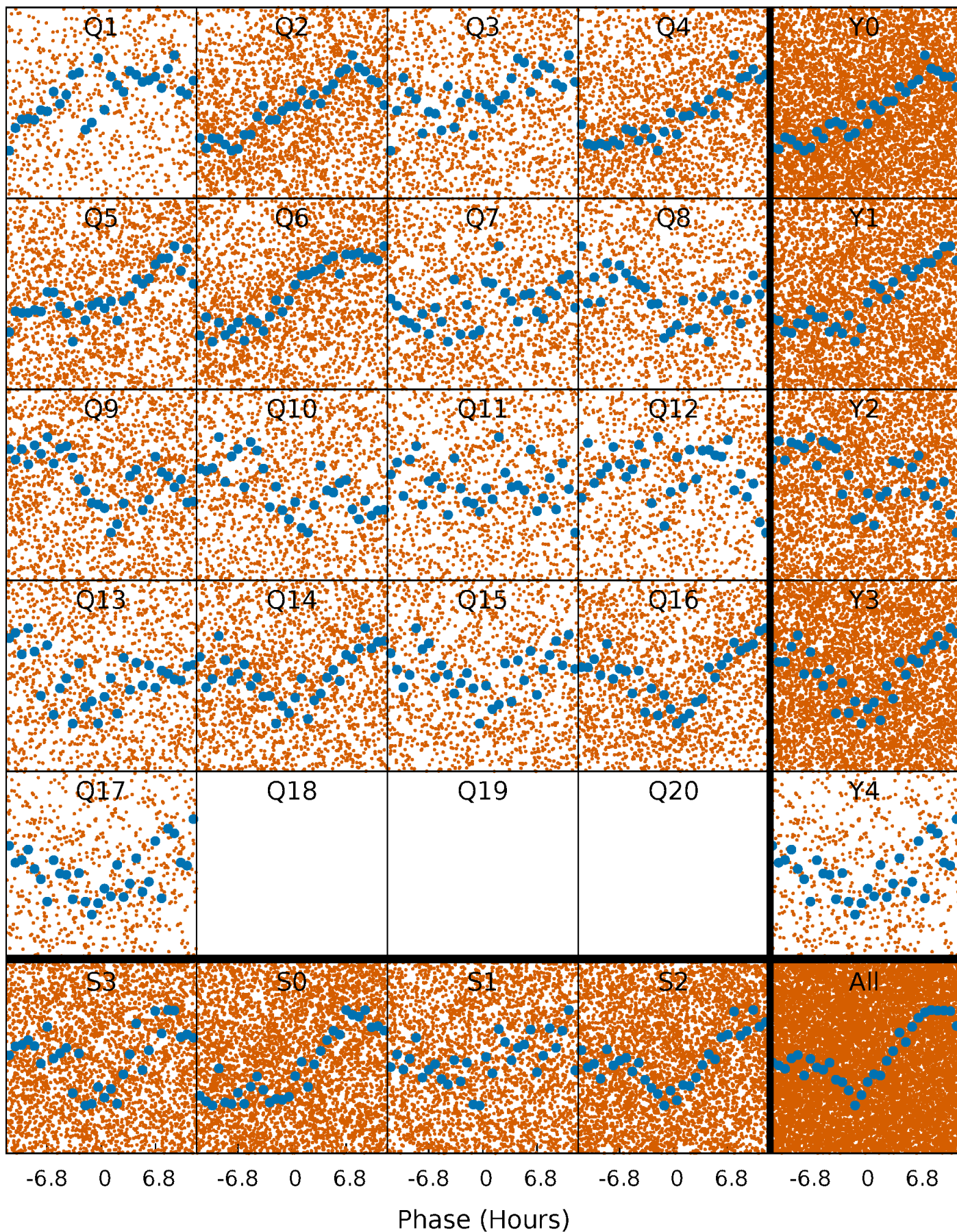


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



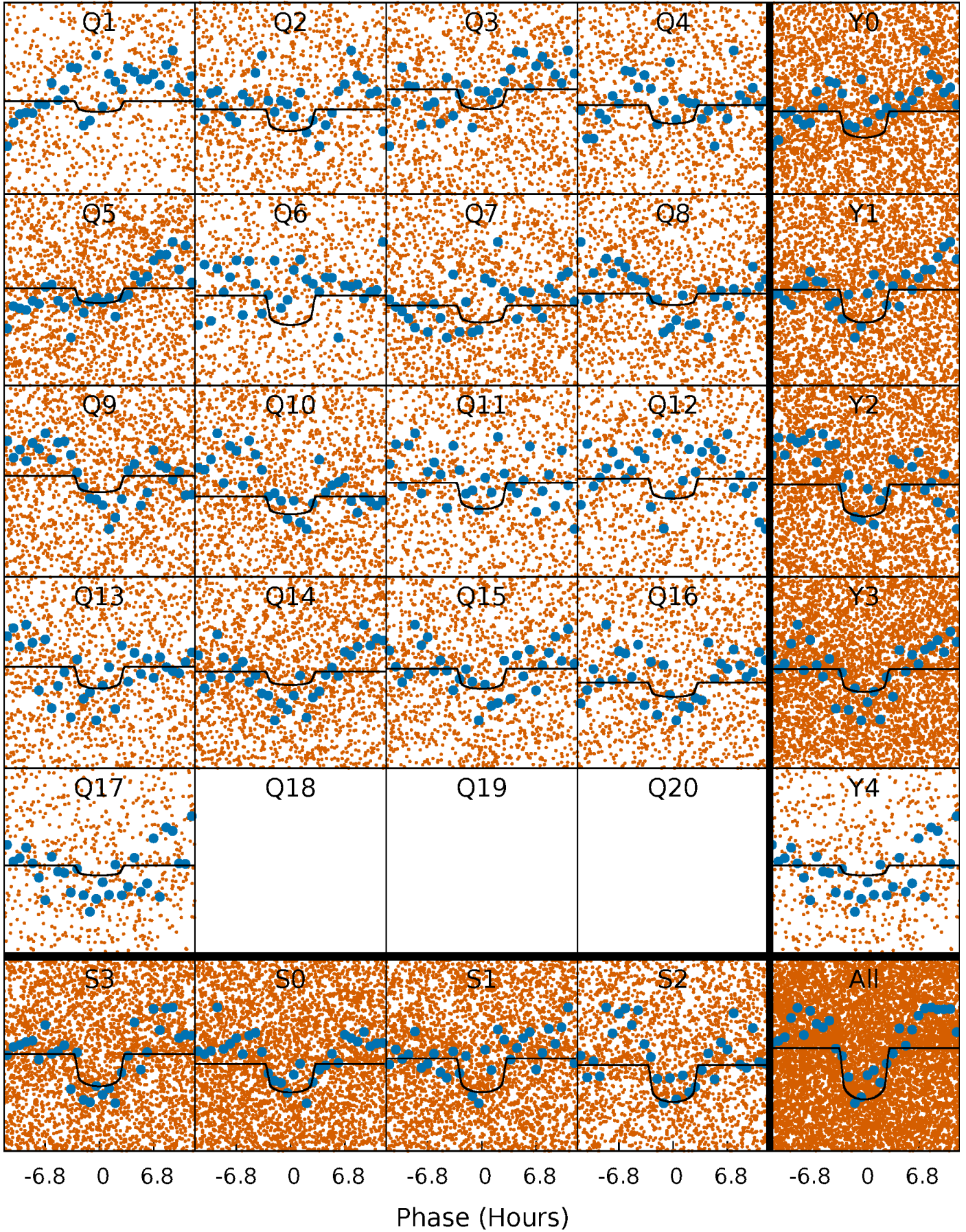
PDC Quarter-Phased Transit Curves

TCE 006614630-01 P= 1.302994 Days $T_0=132.621223$ (BKJD)



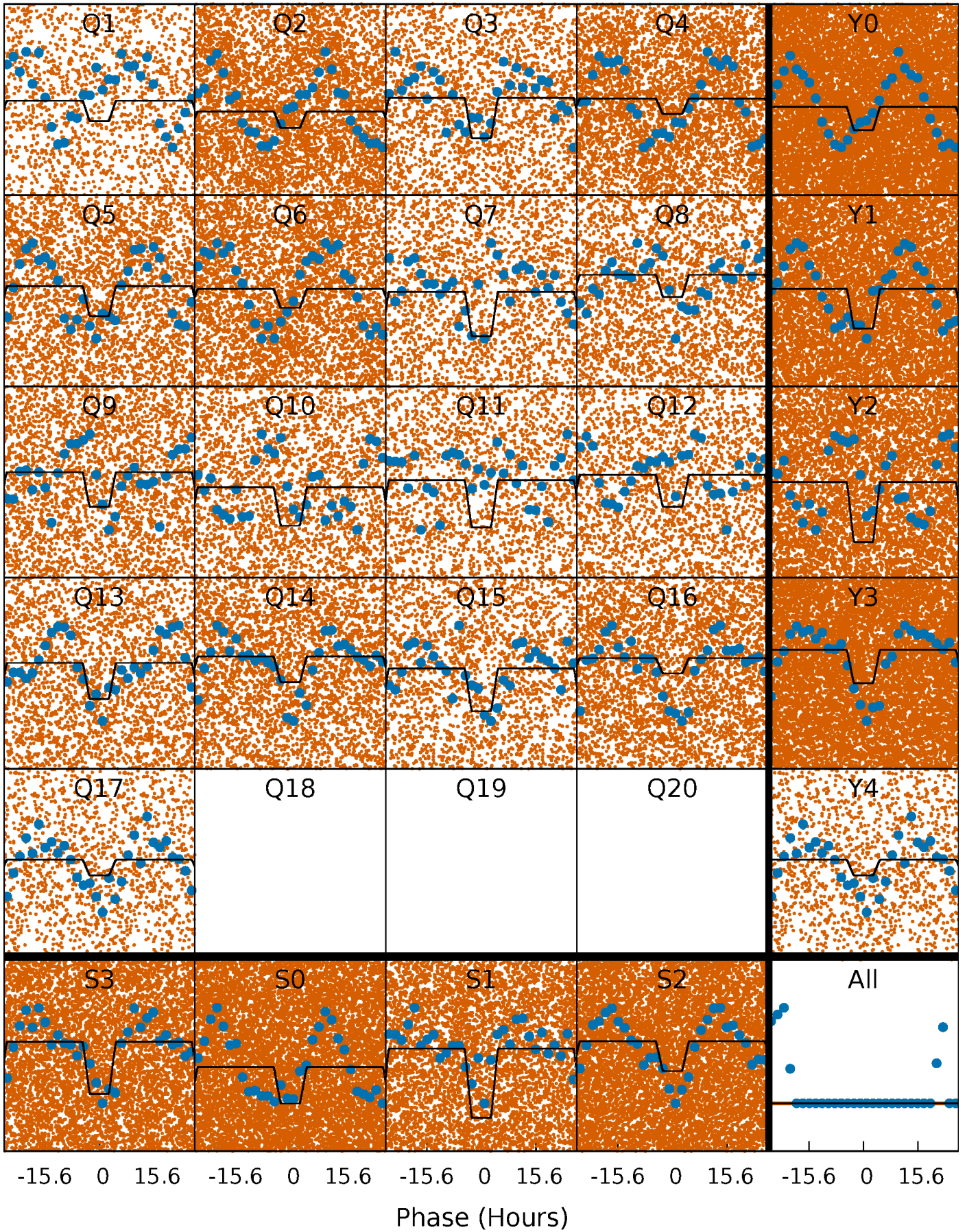
DV Quarter-Phased Transit Curves

TCE 006614630-01 P= 1.302994 Days $T_0=132.621223$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

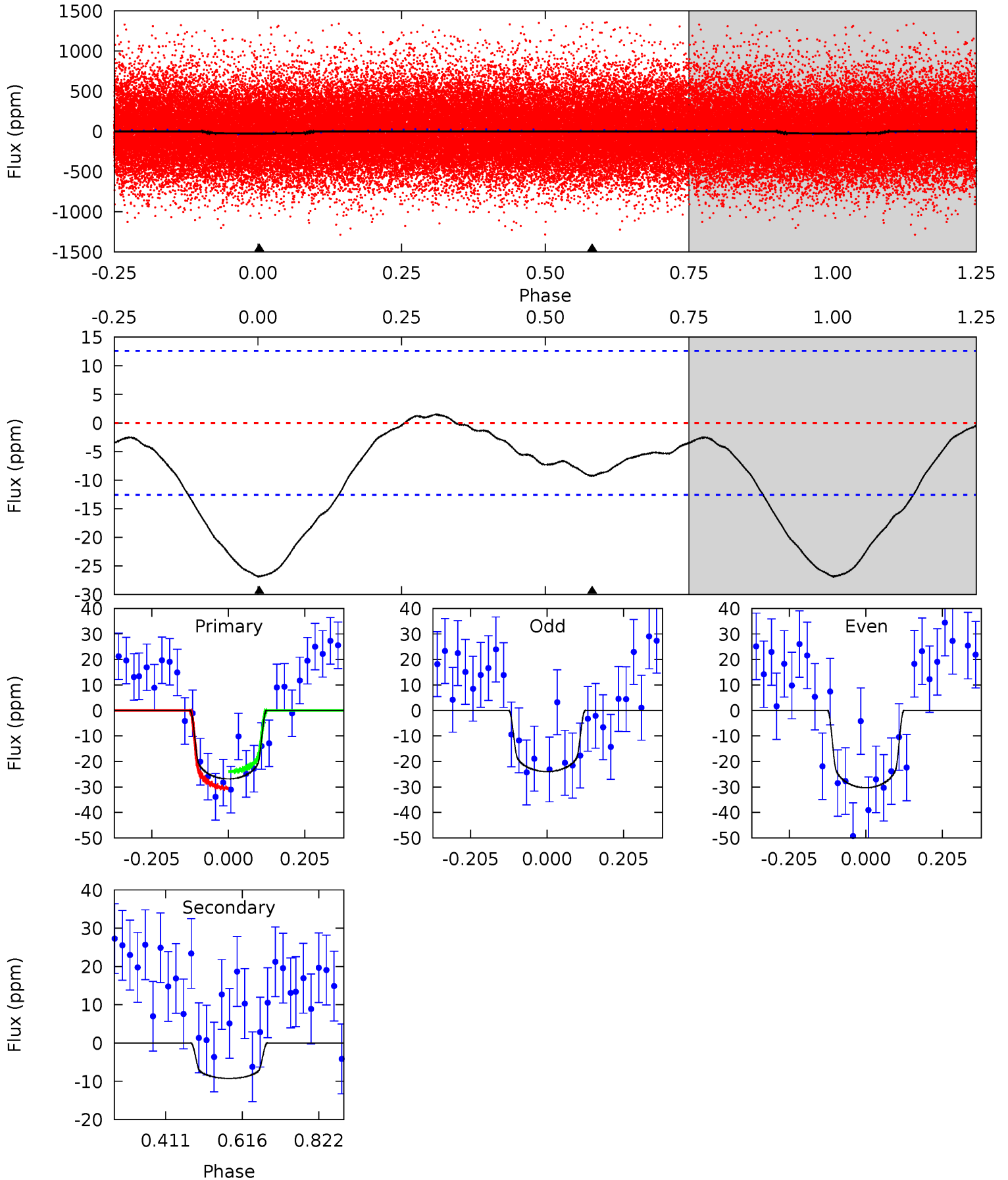
TCE 006614630-01 P= 1.303013 Days $T_0=132.536439$ (BKJD)



DV Model-Shift Uniqueness Test

006614630-01, P = 1.302994 Days, E = 131.318229 Days

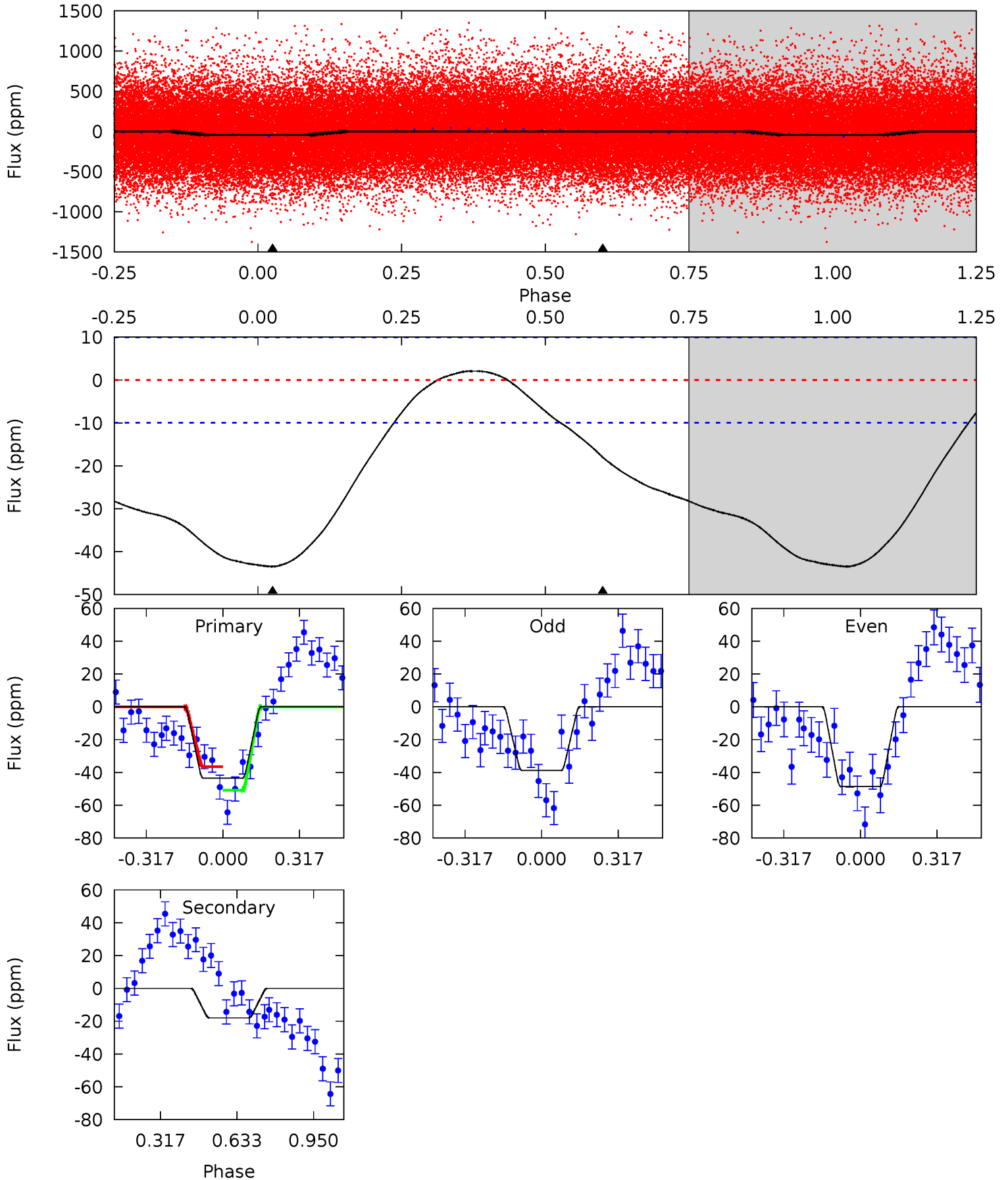
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.42	3.24	0	0	4.41	1.27	0.47	9.42	9.42	3.24	3.24	1.11	0.96	0.05	1.14



Alt Model-Shift Uniqueness Test

006614630-01, P = 1.303013 Days, E = 131.233426 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.9	7.80	0	0	4.32	1.00	0.96	18.9	18.9	7.80	7.80	2.12	0.99	0.05	3.15



Stellar Parameters For KIC 006614630

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6306^{+175}_{-219}	$4.454^{+0.056}_{-0.210}$	$-0.240^{+0.250}_{-0.300}$	$1.019^{+0.335}_{-0.112}$	$1.073^{+0.144}_{-0.144}$	$1.428^{+0.421}_{-0.777}$
	+3%/-3%	+1%/-5%	+104%/-125%	+33%/-11%	+13%/-13%	+29%/-54%
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 006614630-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-9 ± 3	$0.75^{+0.31}_{-0.29}$	2592^{+187}_{-140}	4455^{+1015}_{-627}	$5.098^{+8.567}_{-2.749}$
Alt.	-18 ± 2	$0.80^{+0.35}_{-0.30}$	2589^{+202}_{-131}	4971^{+1310}_{-674}	$8.511^{+13.803}_{-4.292}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

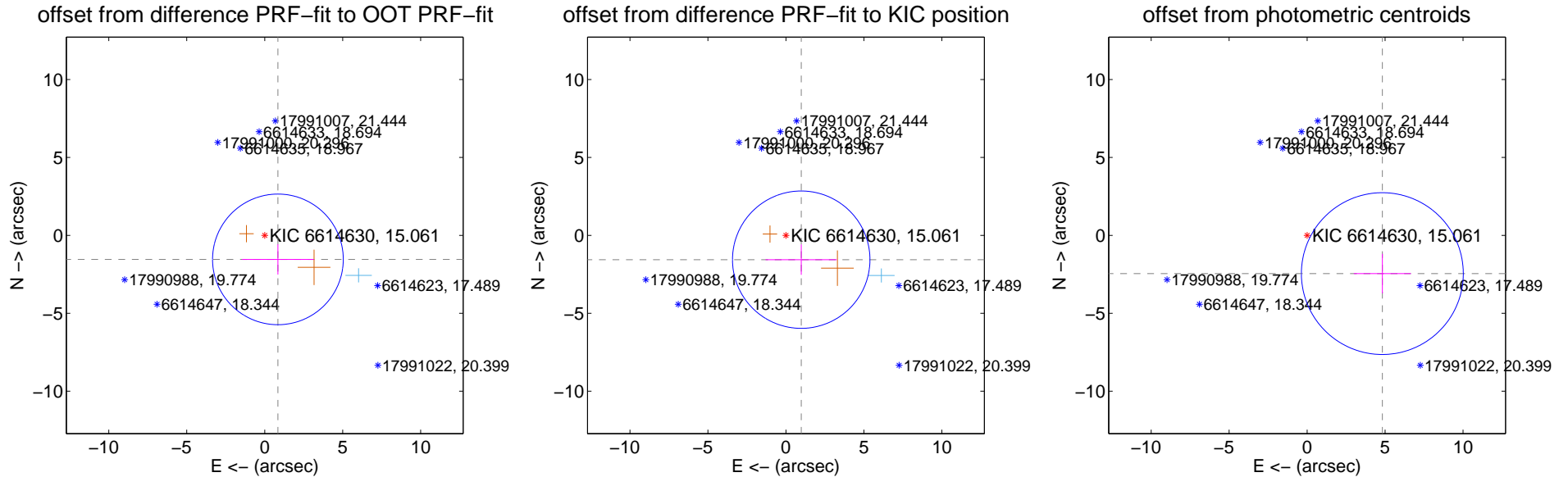
DV Centroid Data

Supplemental centroid analysis for 006614630-01. Kepler magnitude: 15.06. Transit SNR 9.03

There are 1 quarters with good PRF difference image offsets

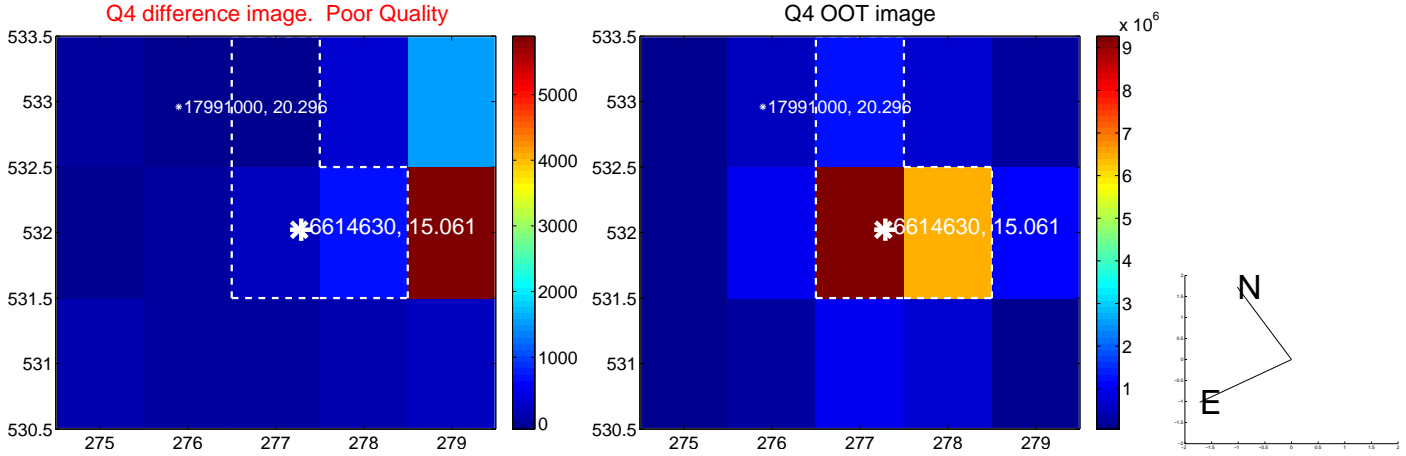
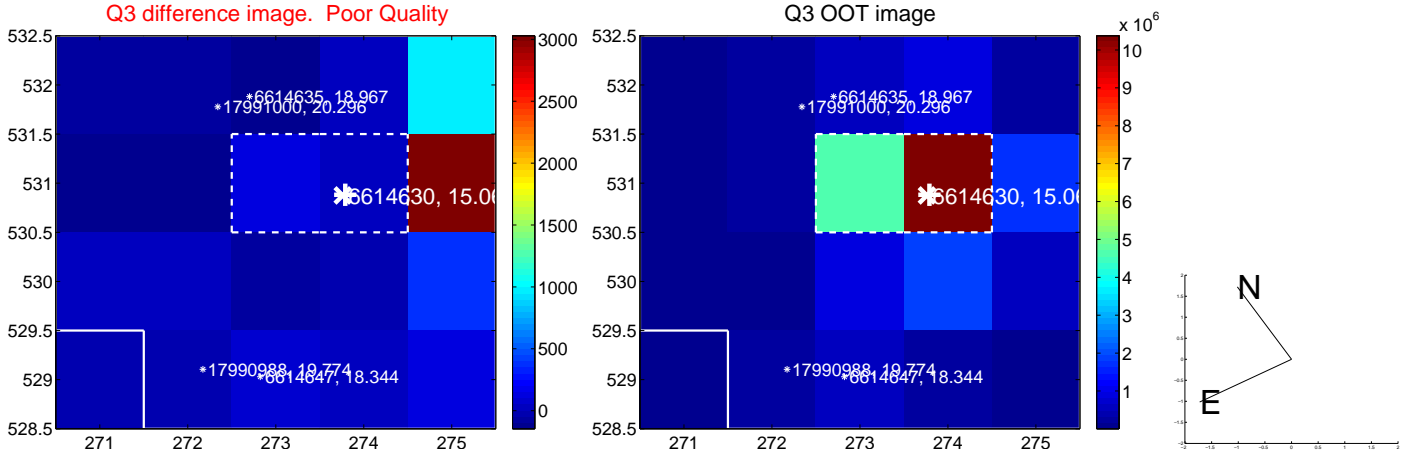
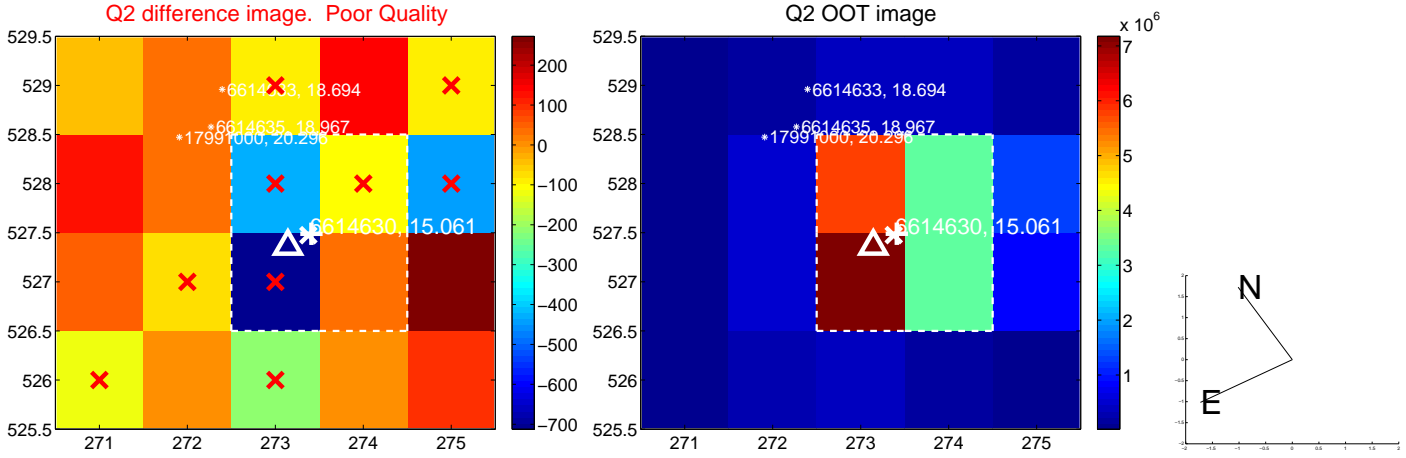
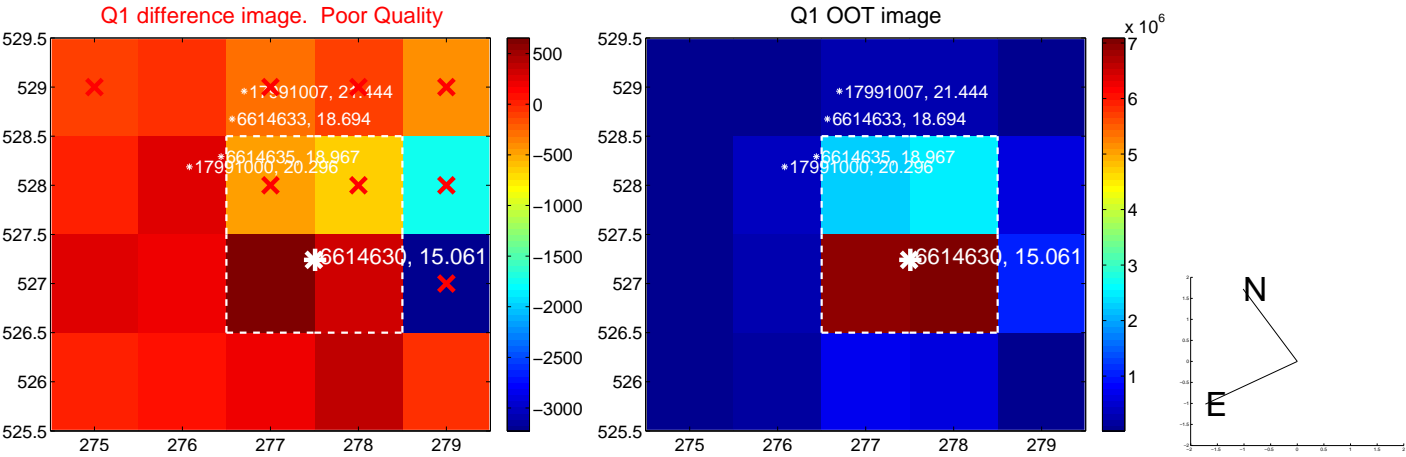
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.759 ± 1.398	1.26	-0.847 ± 2.298	-1.542 ± 0.974
PRF-fit source offset from KIC position	1.844 ± 1.470	1.25	-0.982 ± 2.286	-1.561 ± 0.972
photometric centroid source offset	5.41 ± 1.73	3.13	-4.83 ± 1.83	-2.45 ± 1.26

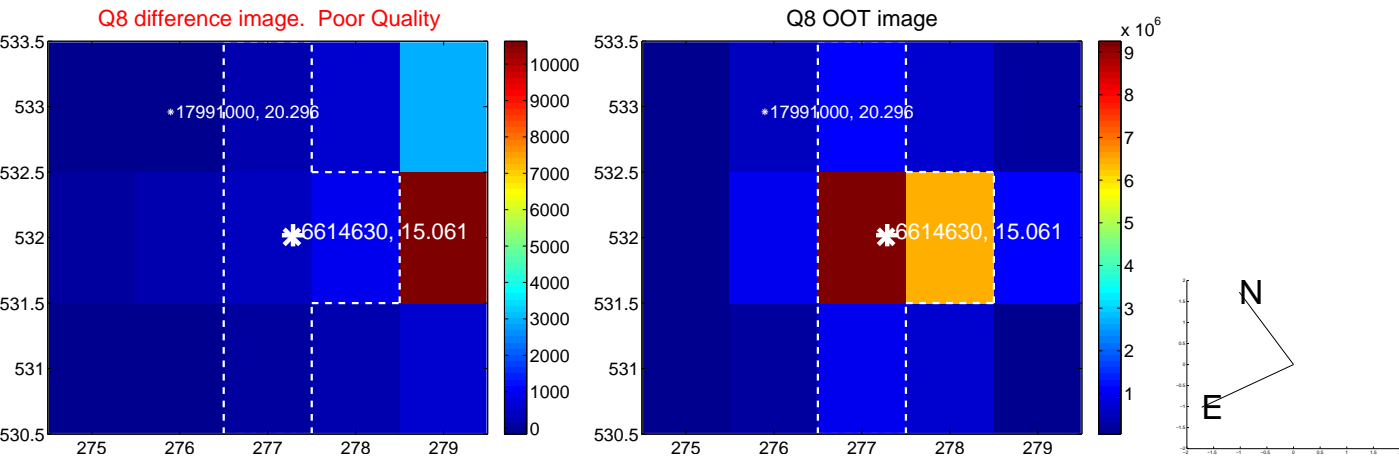
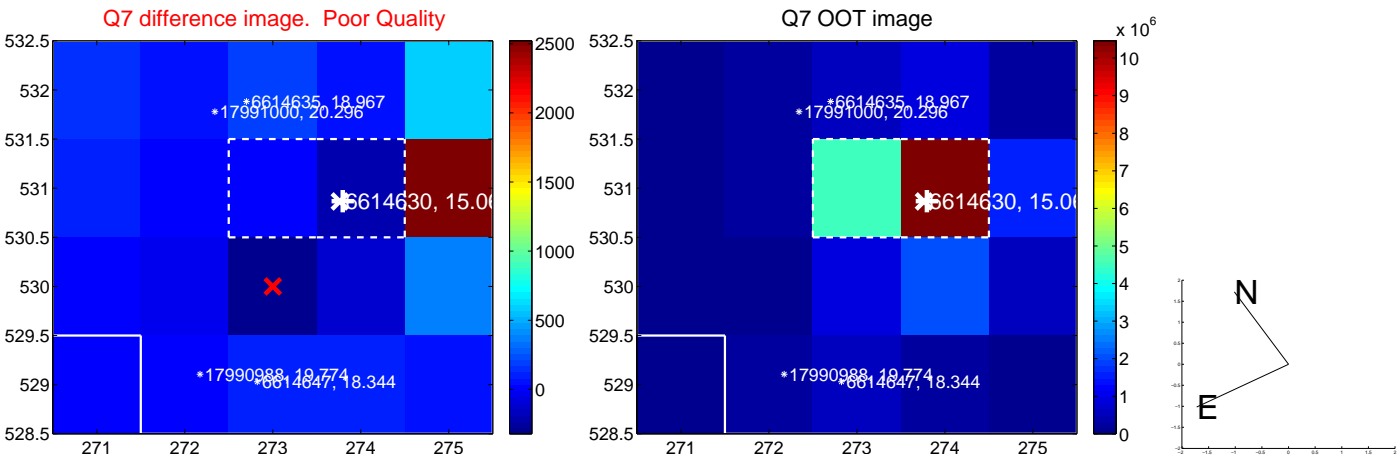
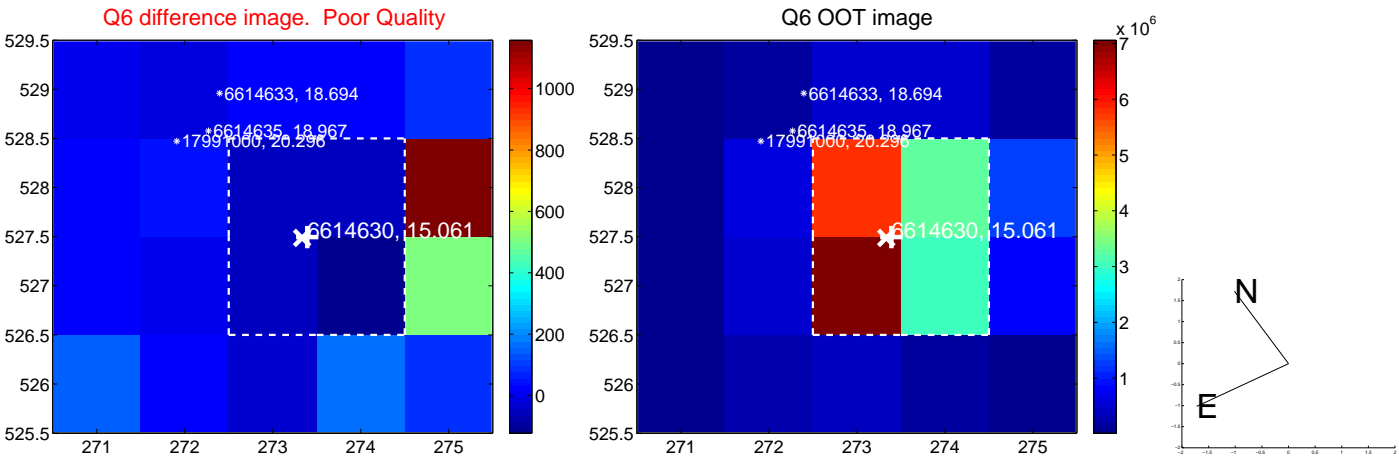
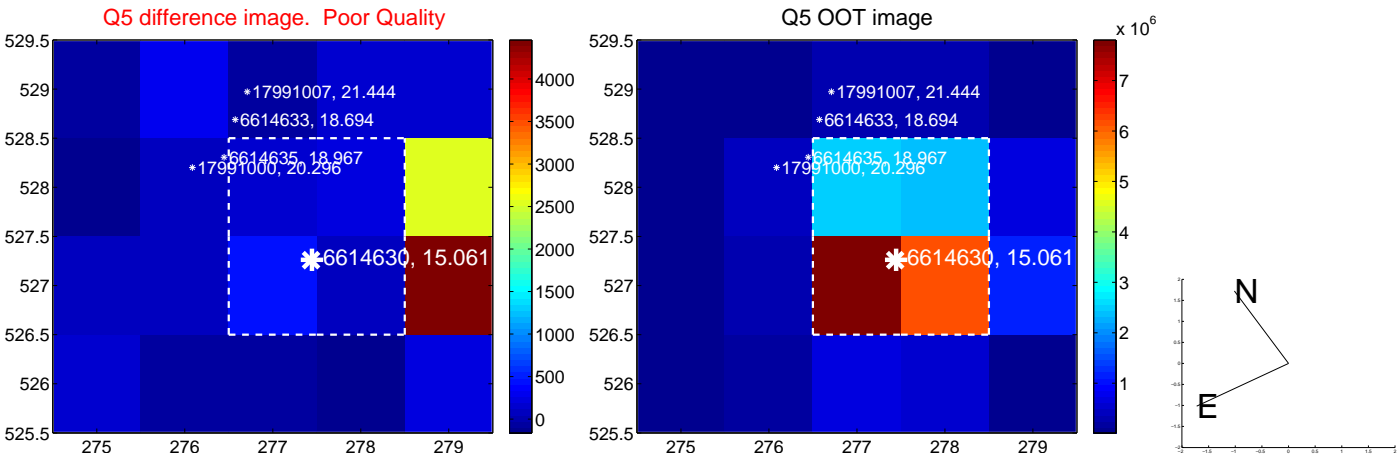


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

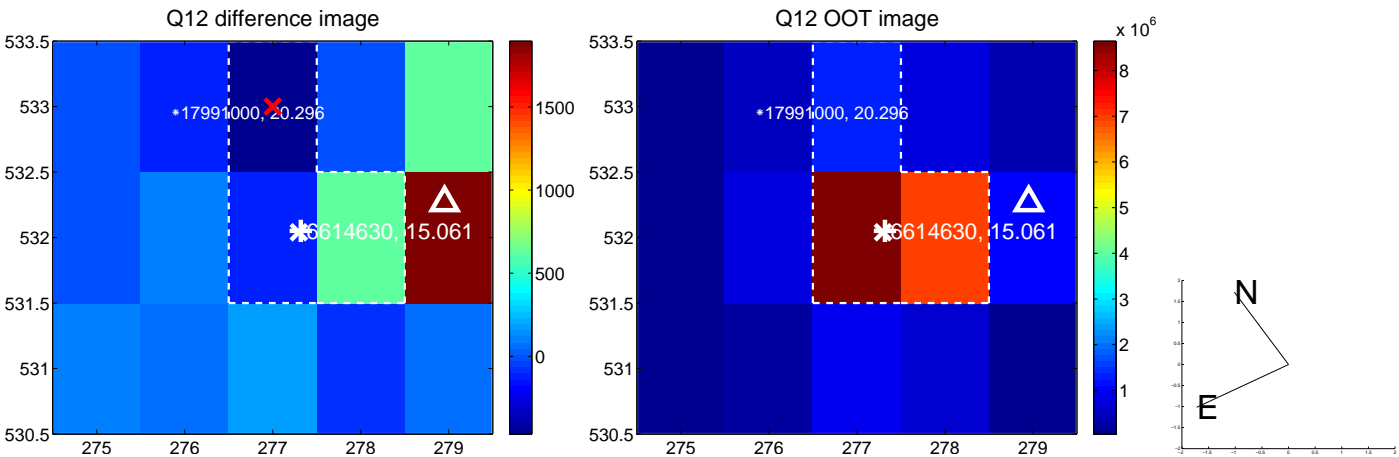
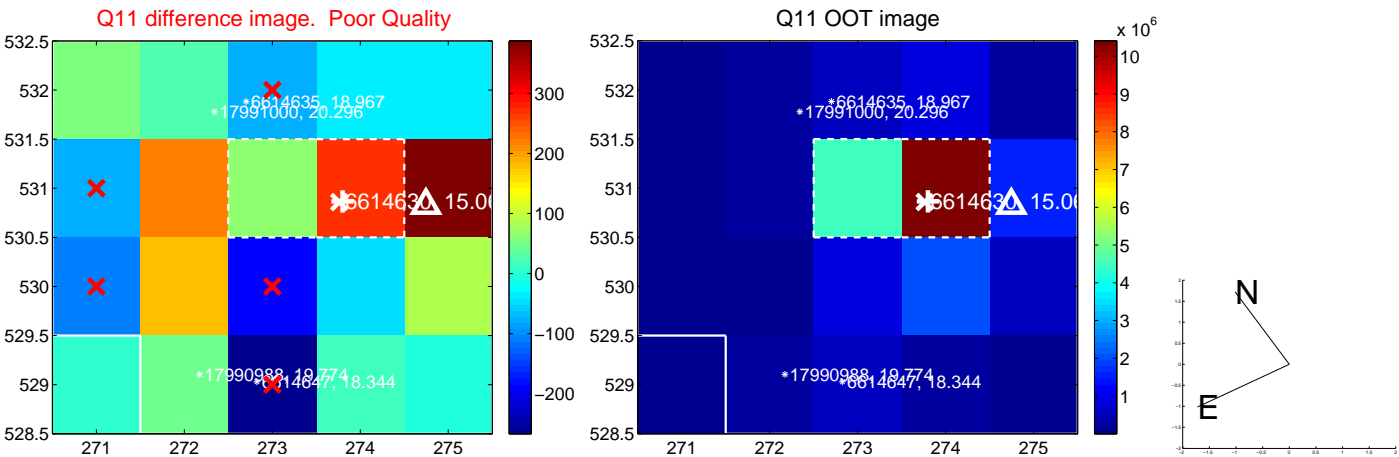
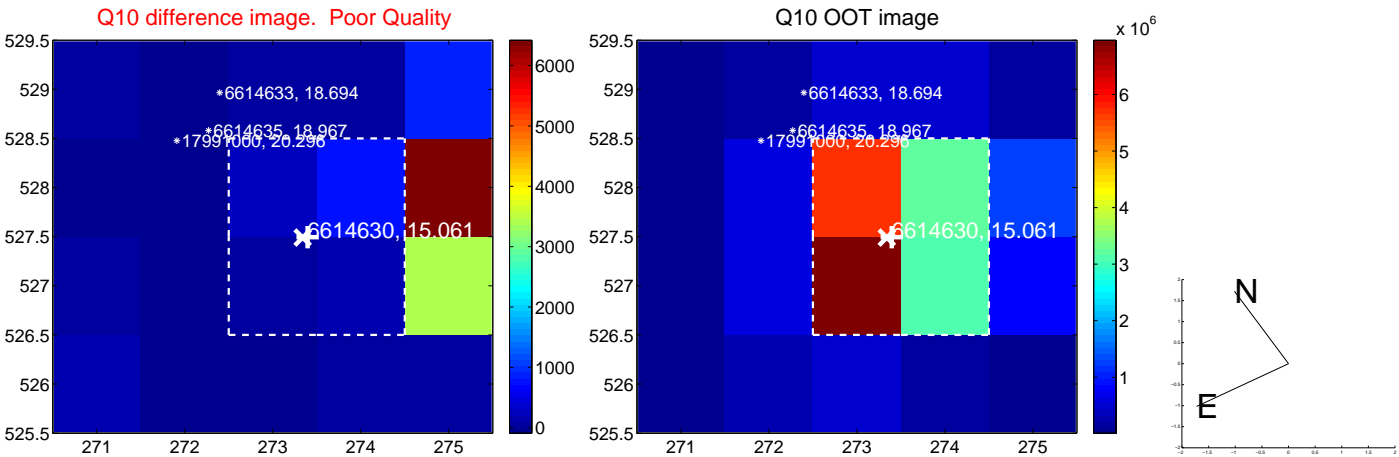
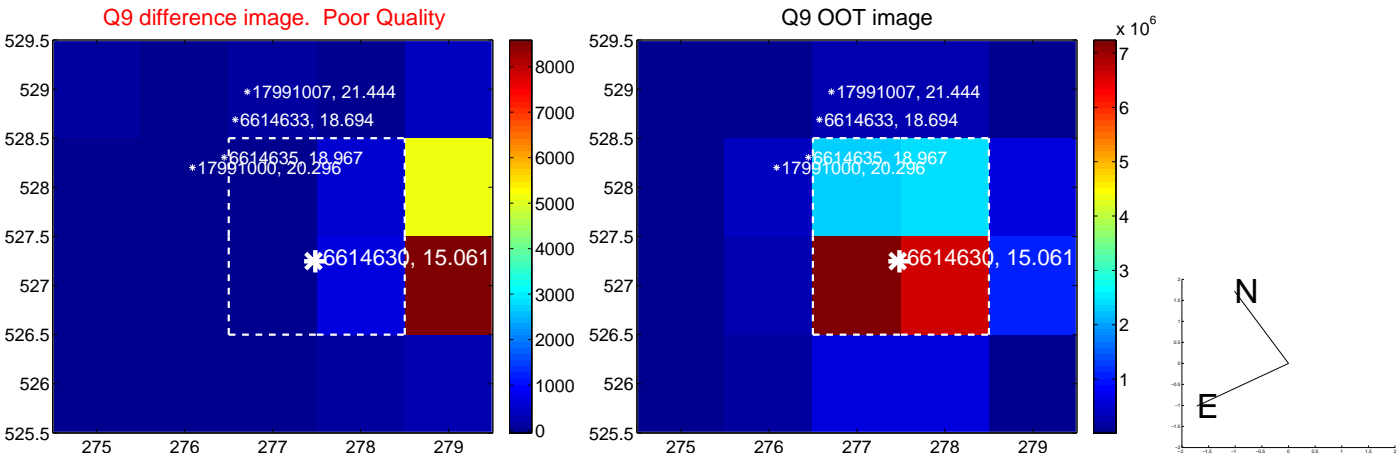
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



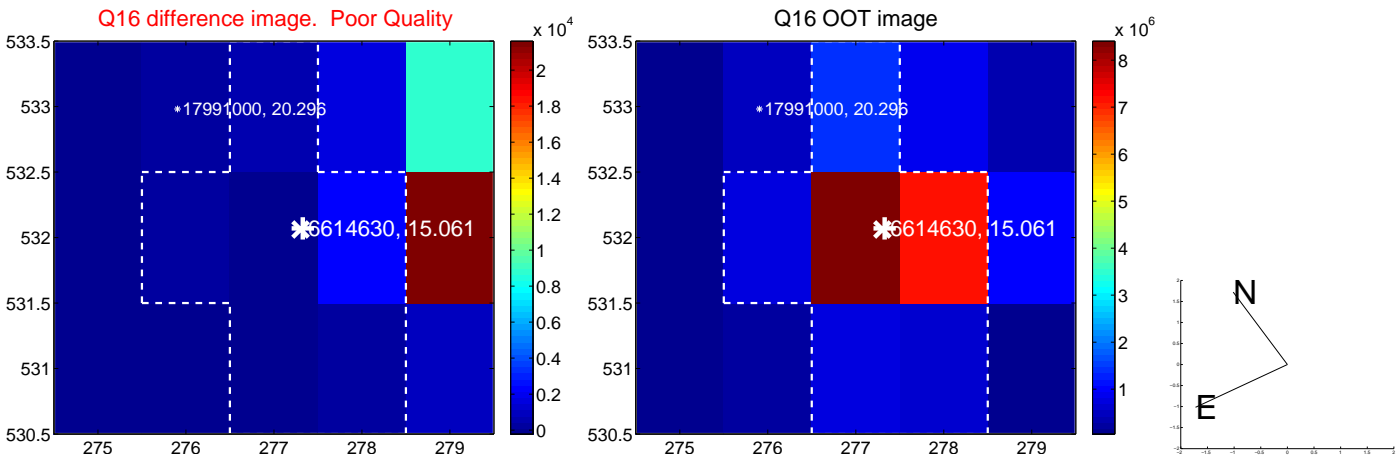
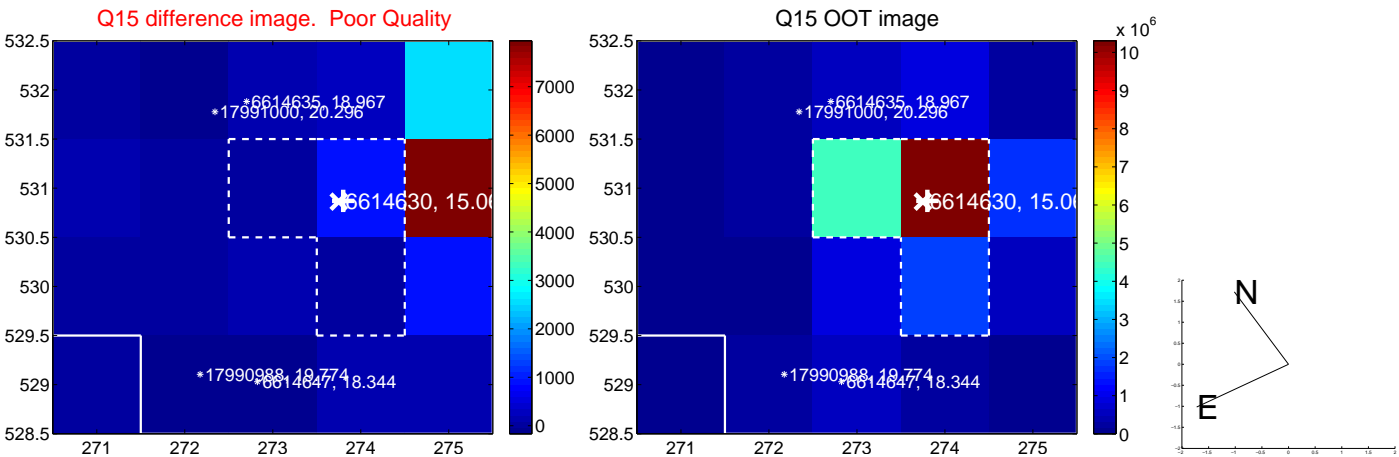
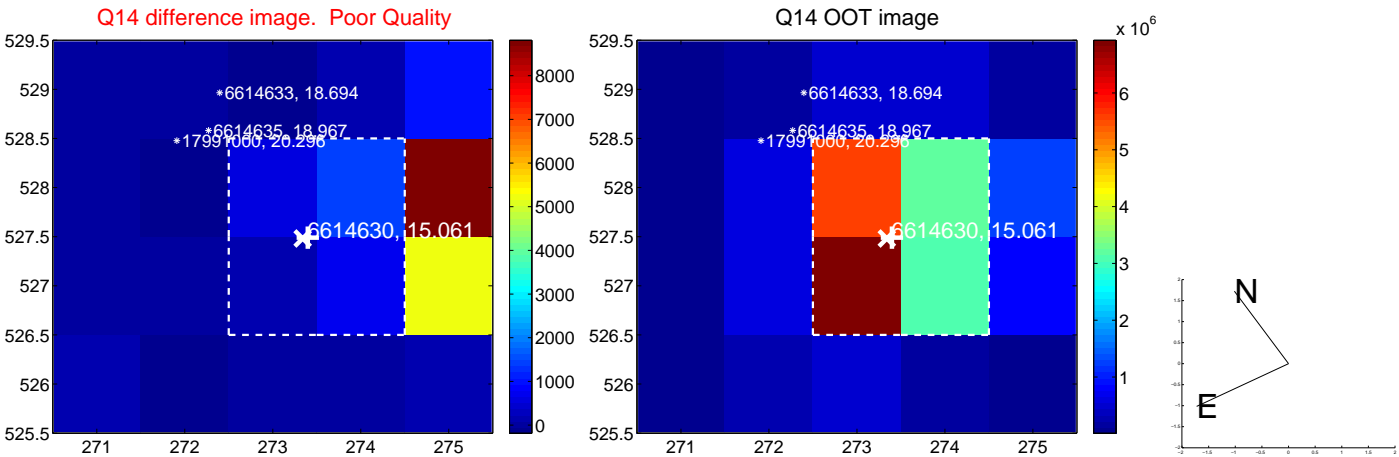
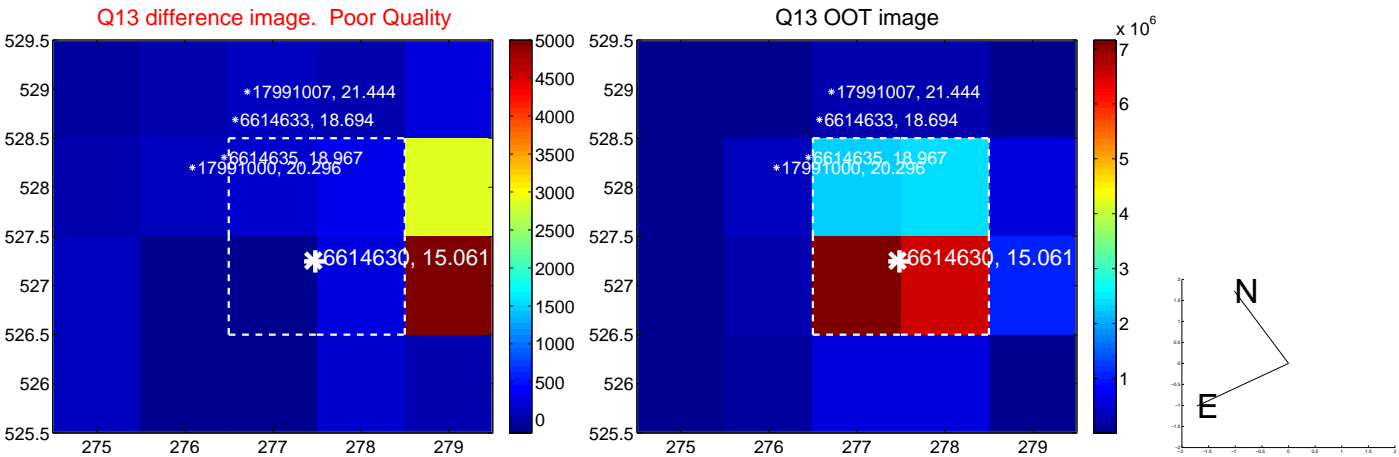
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



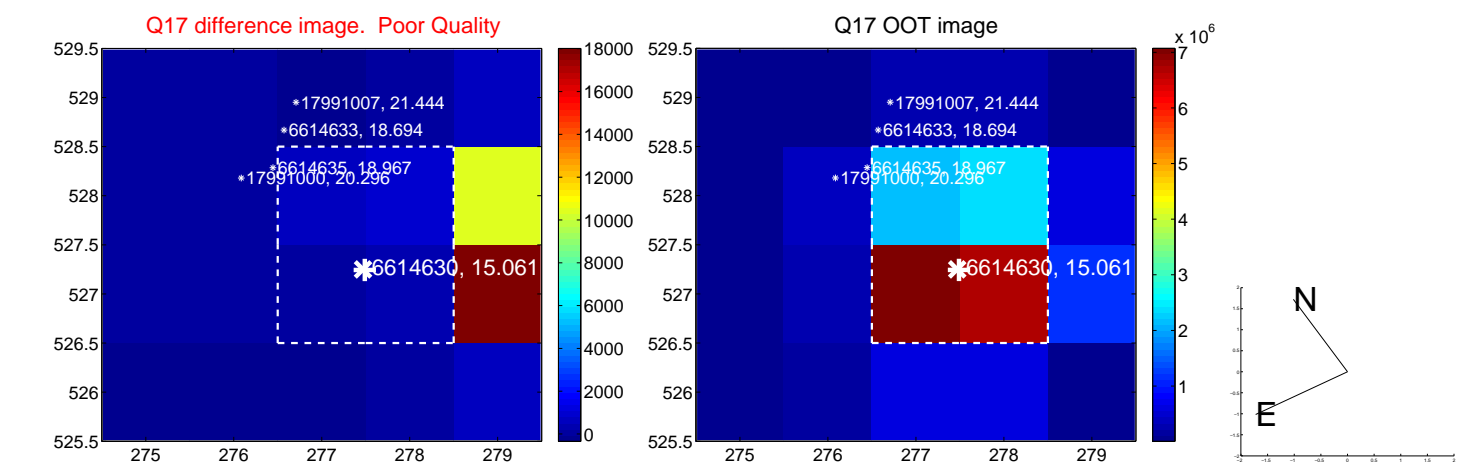
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



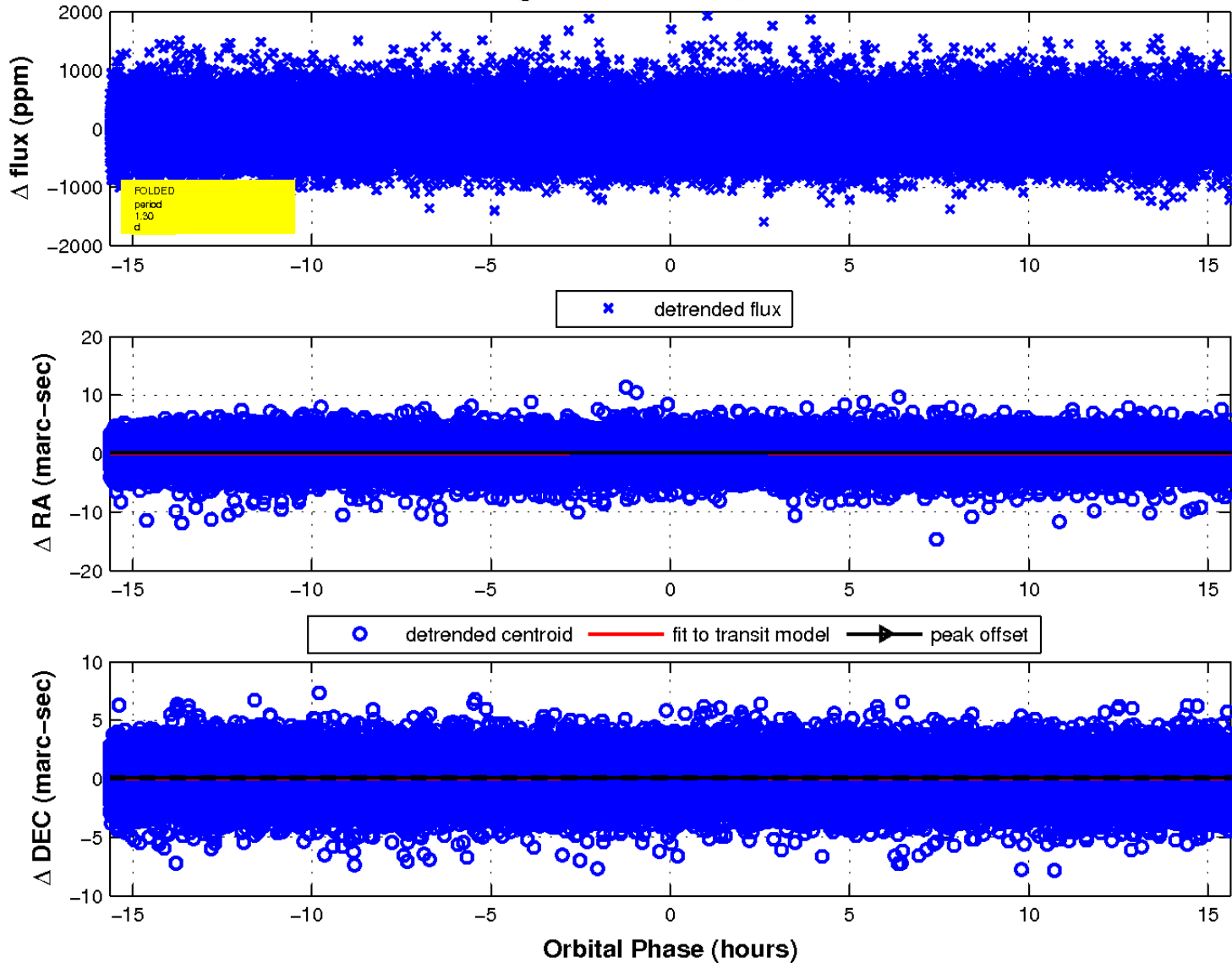
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

