

KIC 005819157

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})
005819157-01	OBS	No	1.995823	133.417586	27.3	6.999	7.5	6.7	2.08	6372	1.24	5675.66

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005819157-01	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.

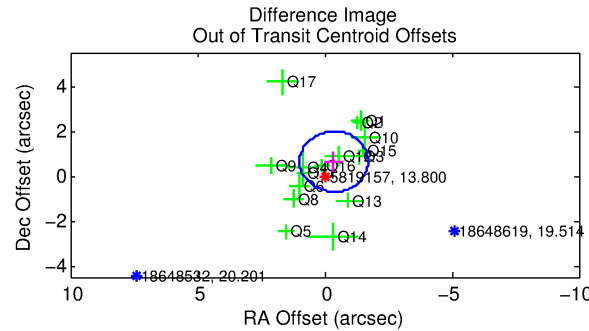
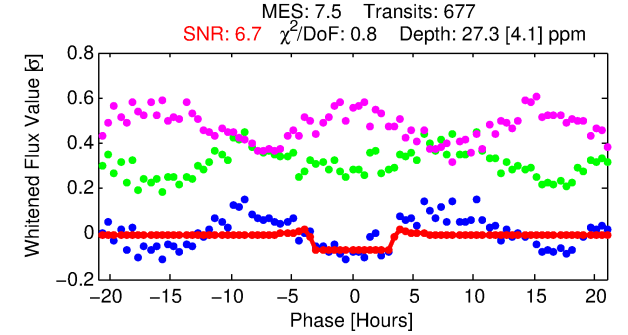
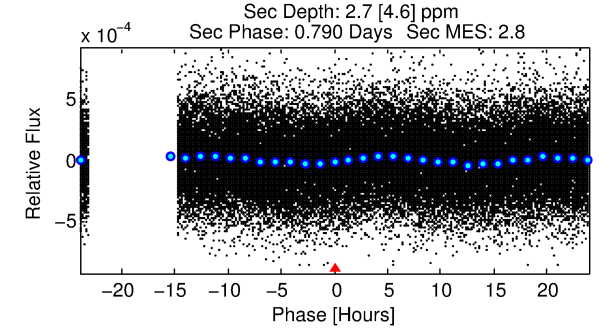
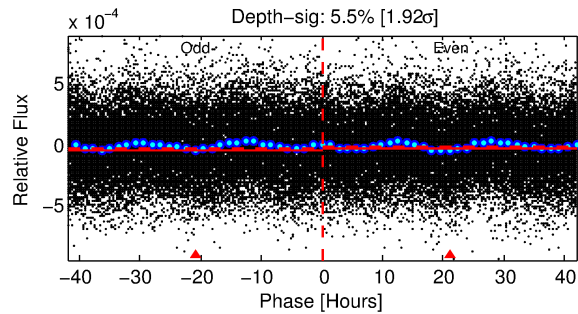
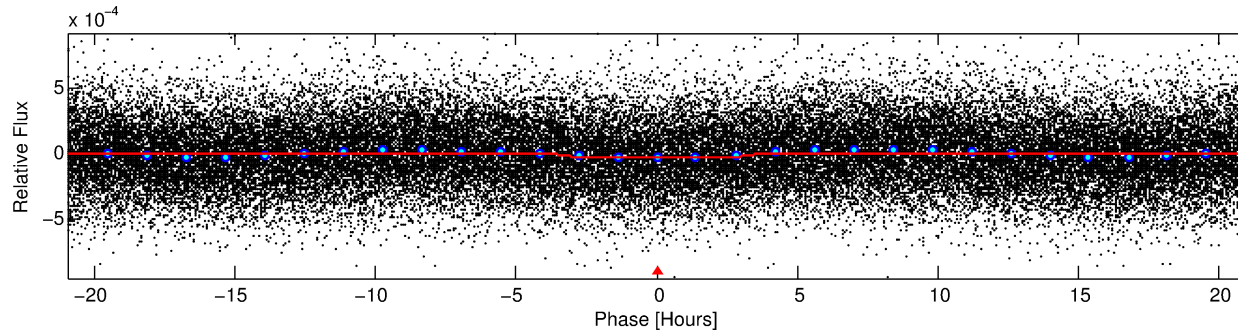
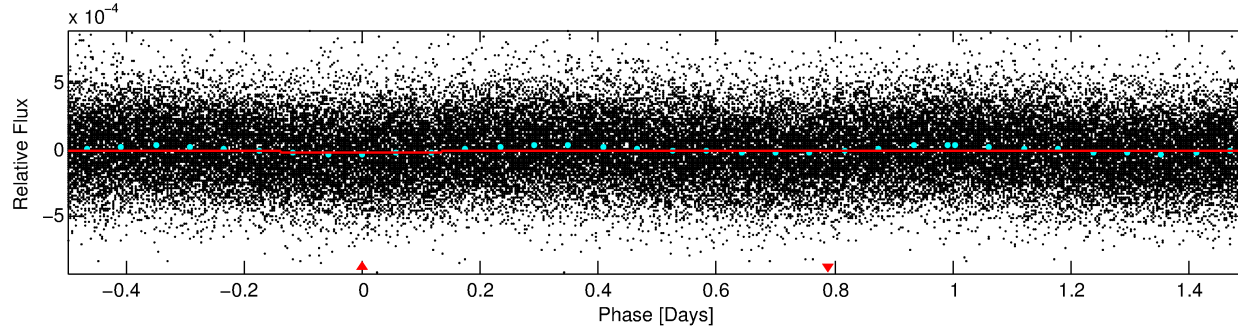
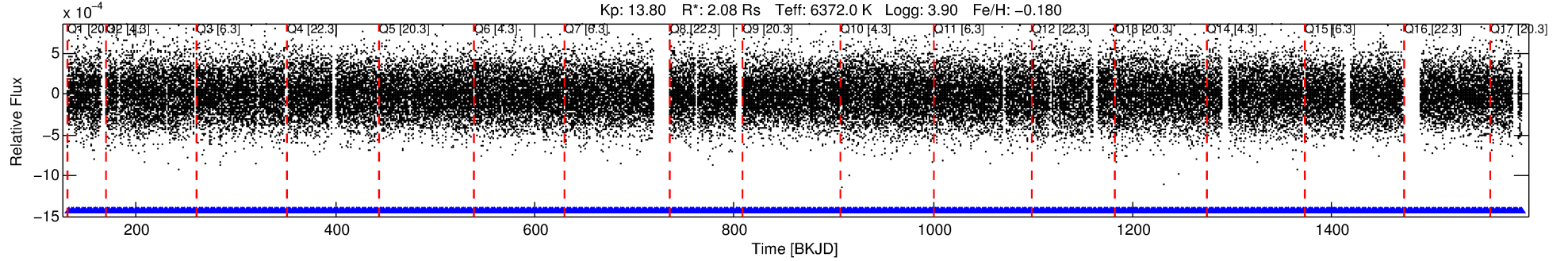
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005819157-01

No Significant Match Found

DV One-Page Summary

KIC: 5819157 Candidate: 1 of 1 Period: 1.996 d



DV Fit Results:

Period = 1.99582 [0.00003] d
 Epoch = 133.4176 [0.0075] BKJD
 Rp/R* = 0.0055 [0.0022]
 a/R* = 1.43 [1.63]
 b = 0.87 [0.63]
 Seff = 5675.66 [3956.42]
 Teq = 2213 [386] K
 Rp = 1.24 [0.72] Re
 a = 0.0336 [0.0141] AU
 Ag = 1.10 [2.16] [0.04 σ]
 Tefp = 3501 [1624] K [0.77 σ]

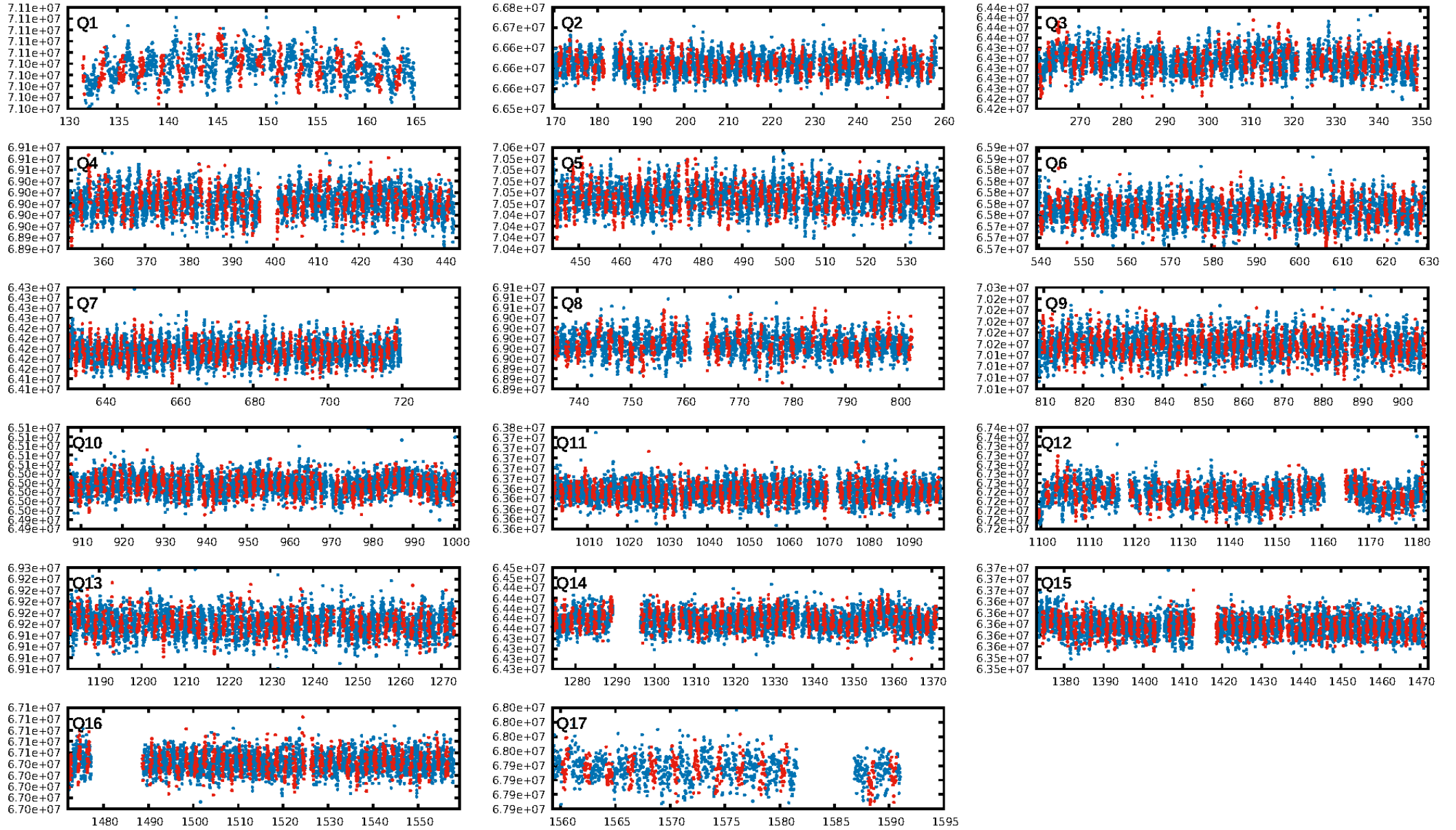
DV Diagnostic Results:

ShortPeriod-sig: N/A
 LongPeriod-sig: N/A
 ModelChiSquare2-sig: N/A
 ModelChiSquareGof-sig: N/A
 Bootstrap-pfa: 4.61e-10
 RollingBand-fgt: 1.00 [647/647]
 GhostDiagnostic-chr: 2.54
 Centroid-sig: 0.4%
 Centroid-so: 2.406 arcsec [2.12 σ]
 OotOffset-rm: 0.726 arcsec [1.62 σ]
 KicOffset-rm: 0.630 arcsec [1.48 σ]
 OotOffset-st: 4/3/4/5 [16]
 KicOffset-st: 4/3/4/5 [16]
 DiffImageQuality-fgm: 0.94 [15/16]
 DiffImageOverlap-fno: 1.00 [17/17]

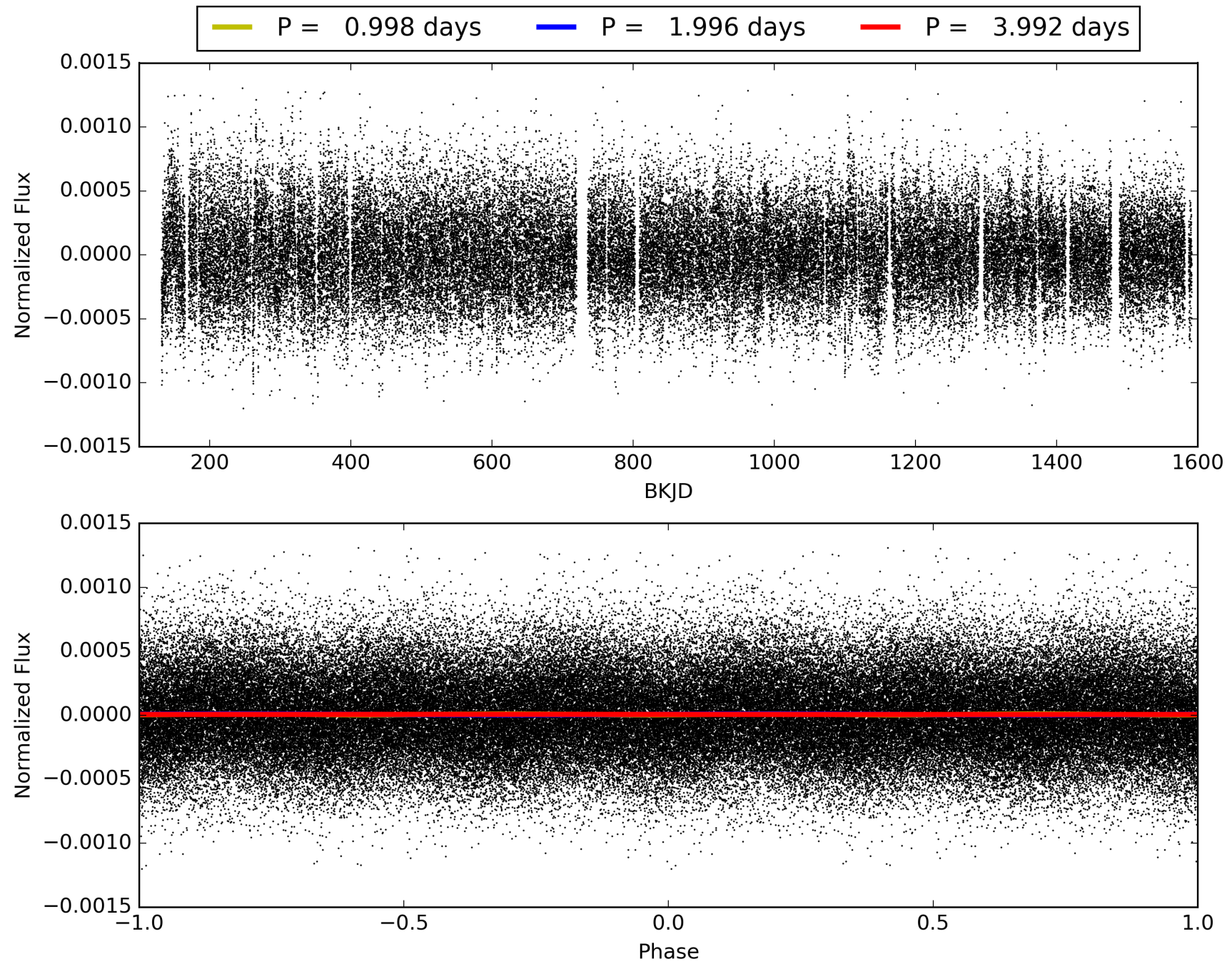
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:43:46 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005819157-01, PDC Light Curves

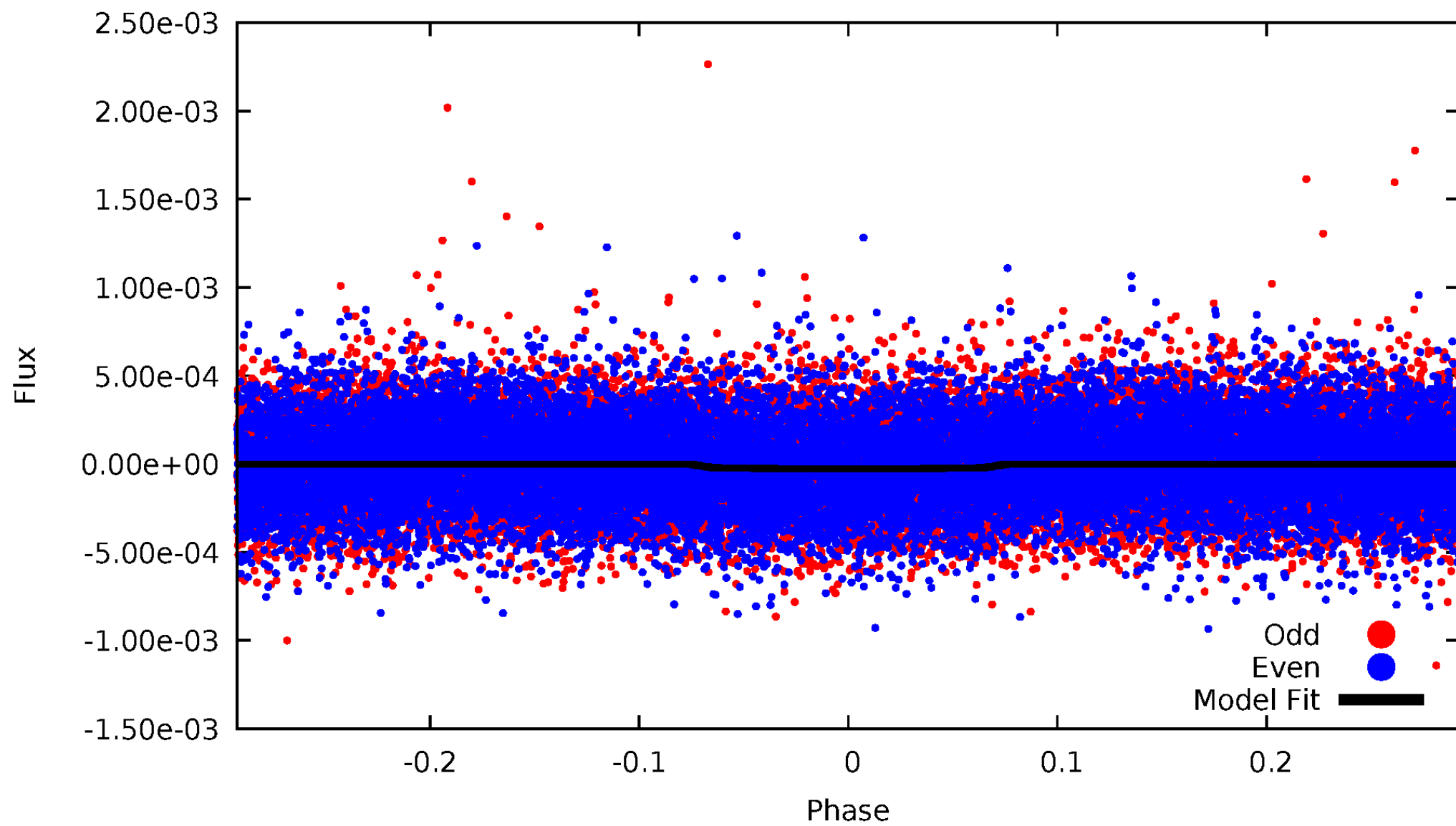


TCE 005819157-01



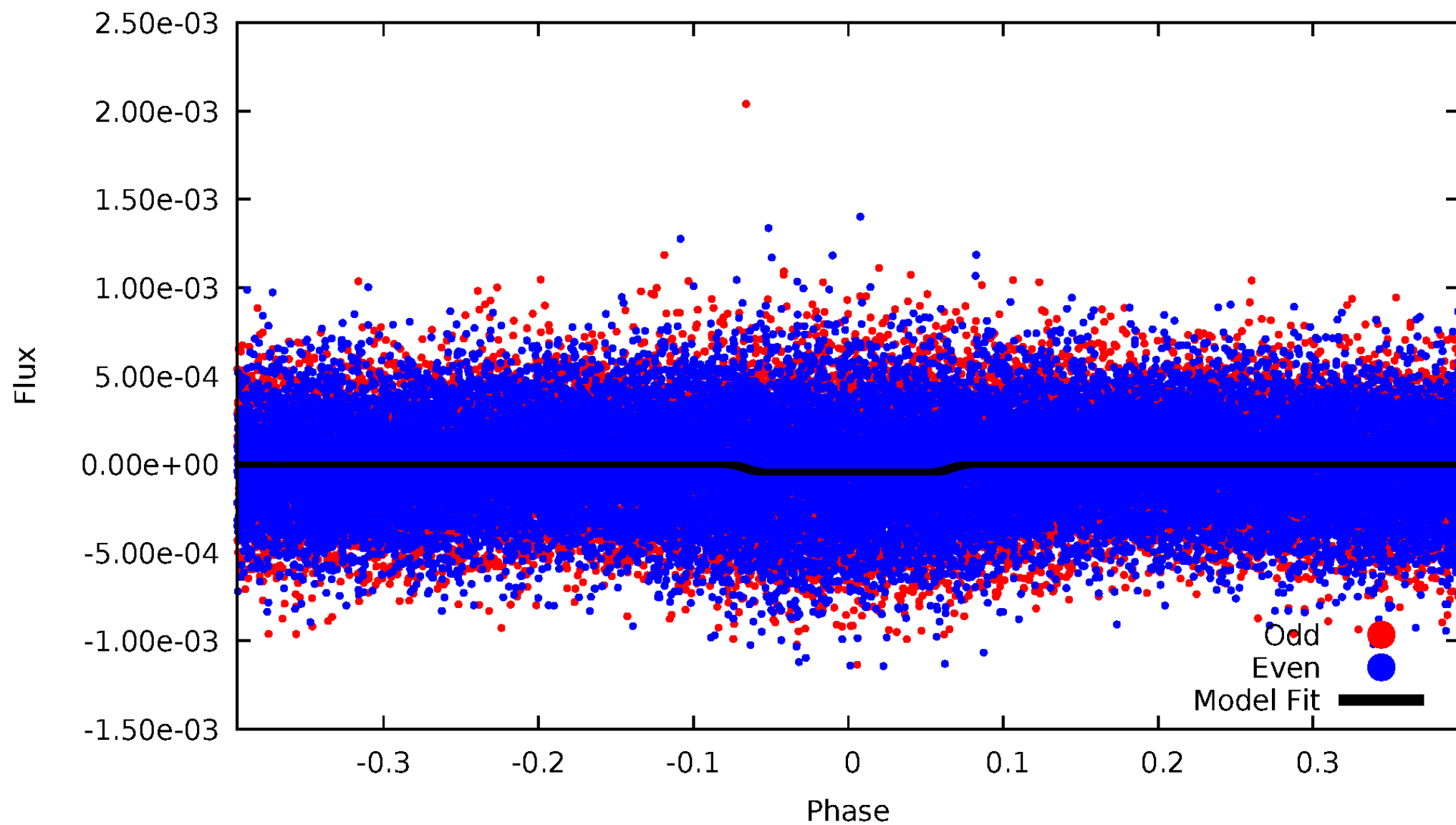
DV Odd/Even

TCE 005819157-01

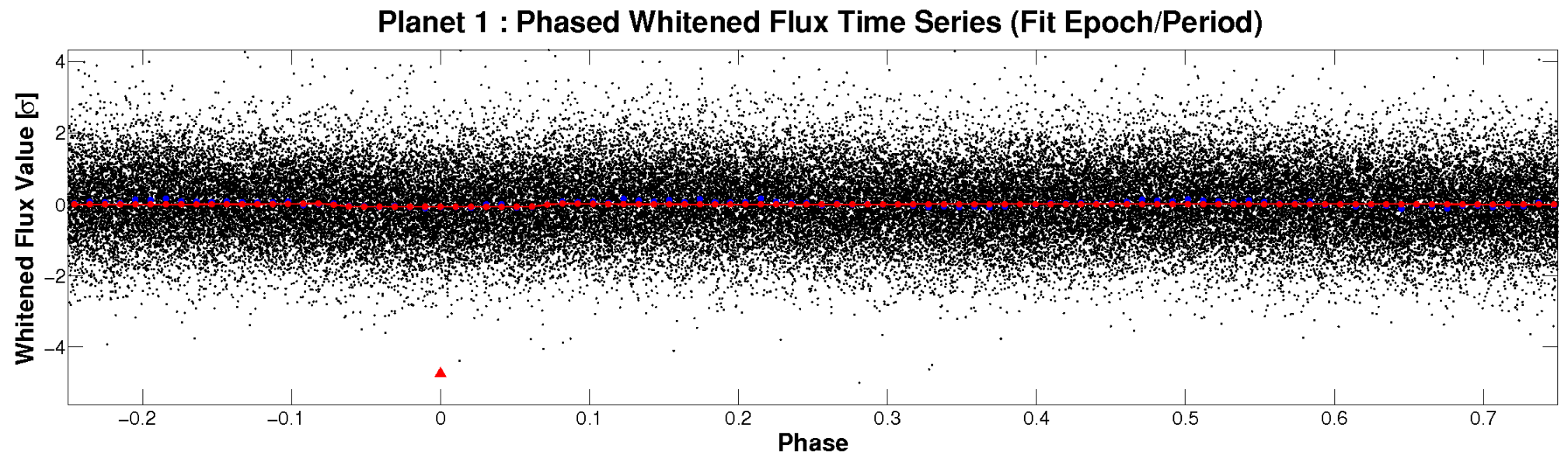
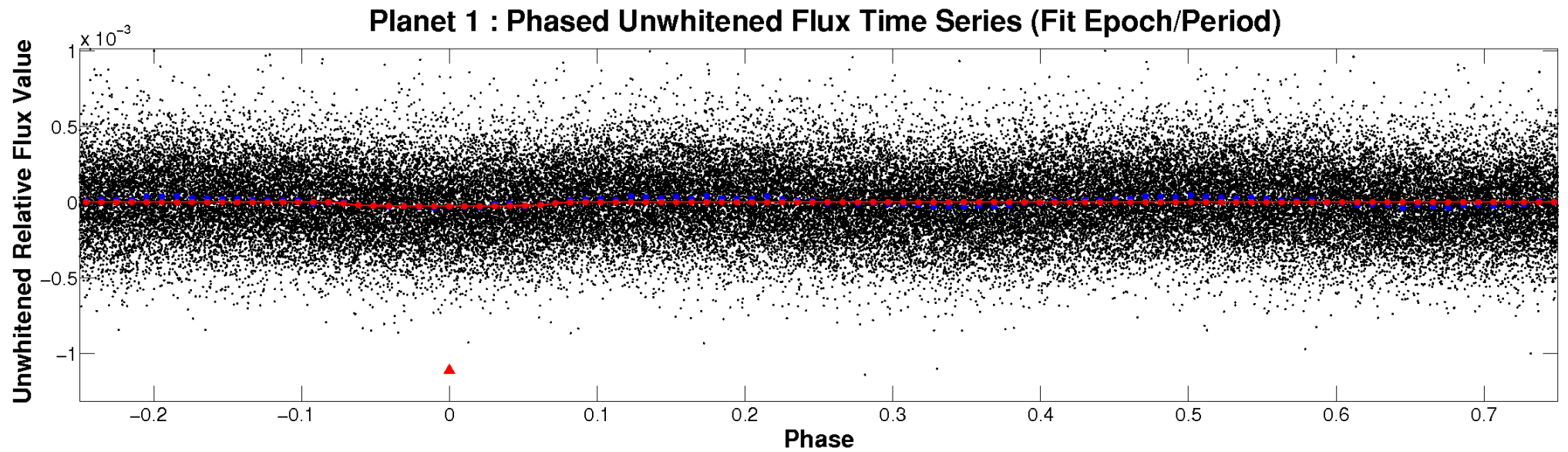


ALT Odd/Even

TCE 005819157-01

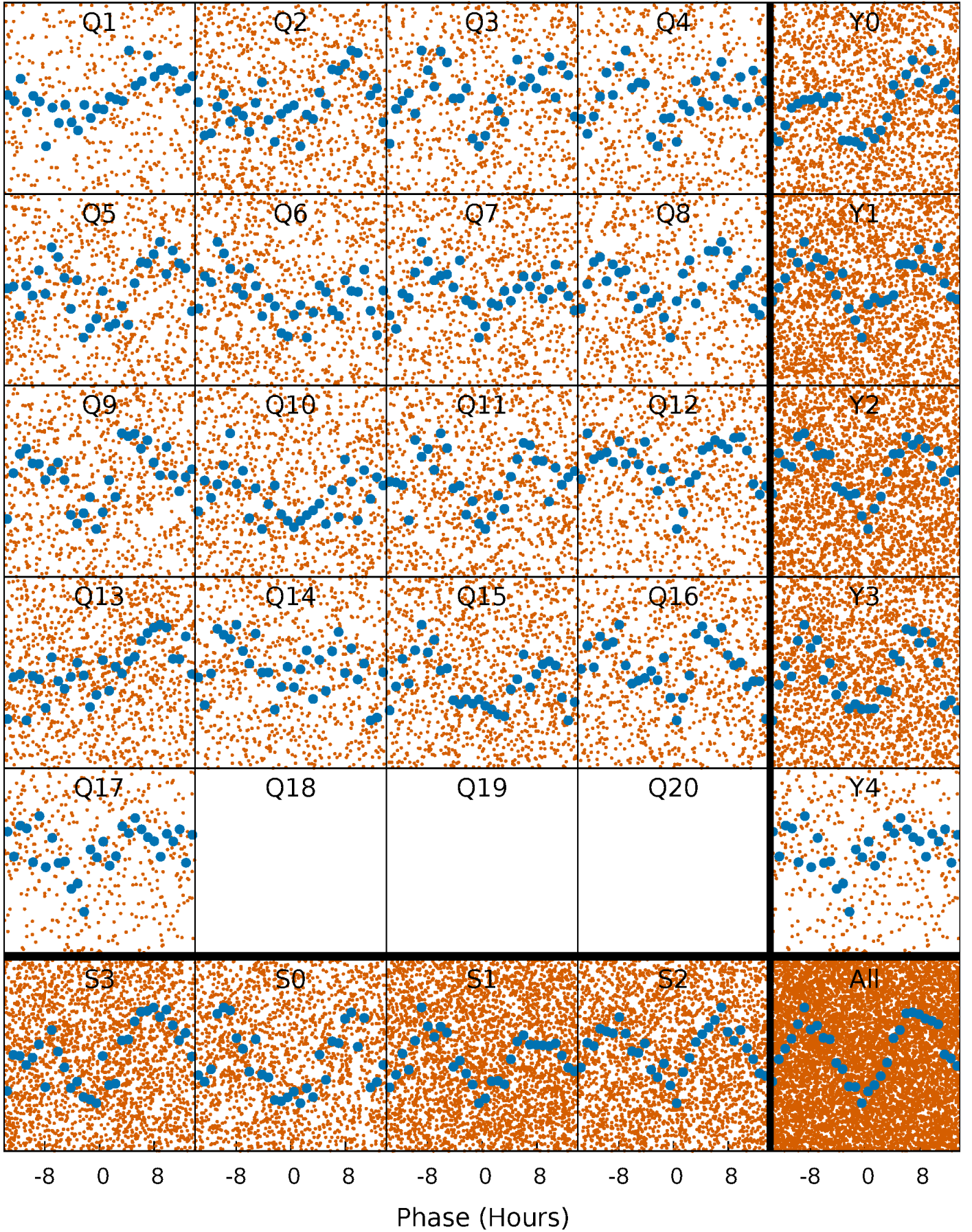


Non-Whitened Vs. Whitened Light Curve



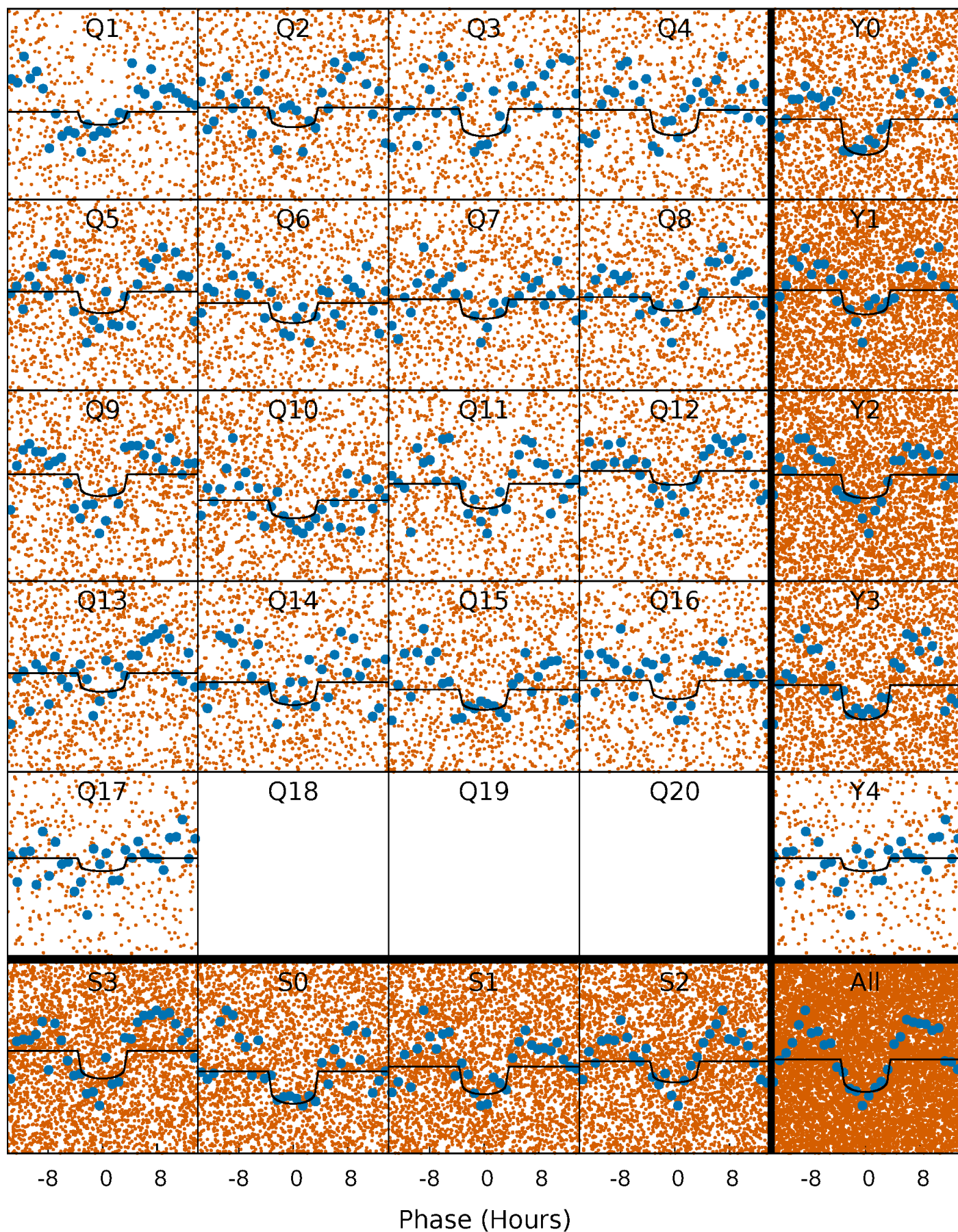
PDC Quarter-Phased Transit Curves

TCE 005819157-01 P= 1.995823 Days $T_0=133.417586$ (BKJD)



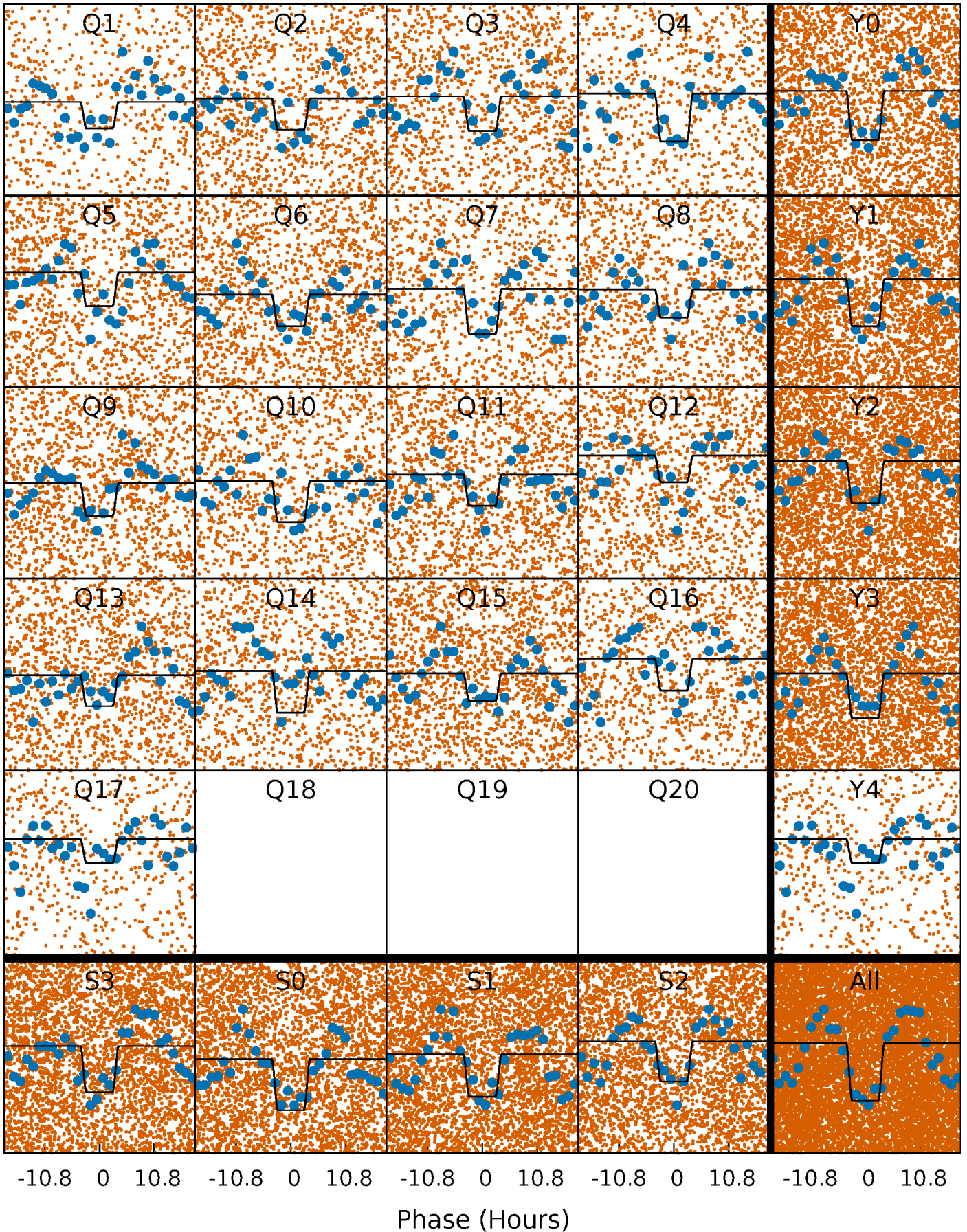
DV Quarter-Phased Transit Curves

TCE 005819157-01 P= 1.995823 Days $T_0=133.417586$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

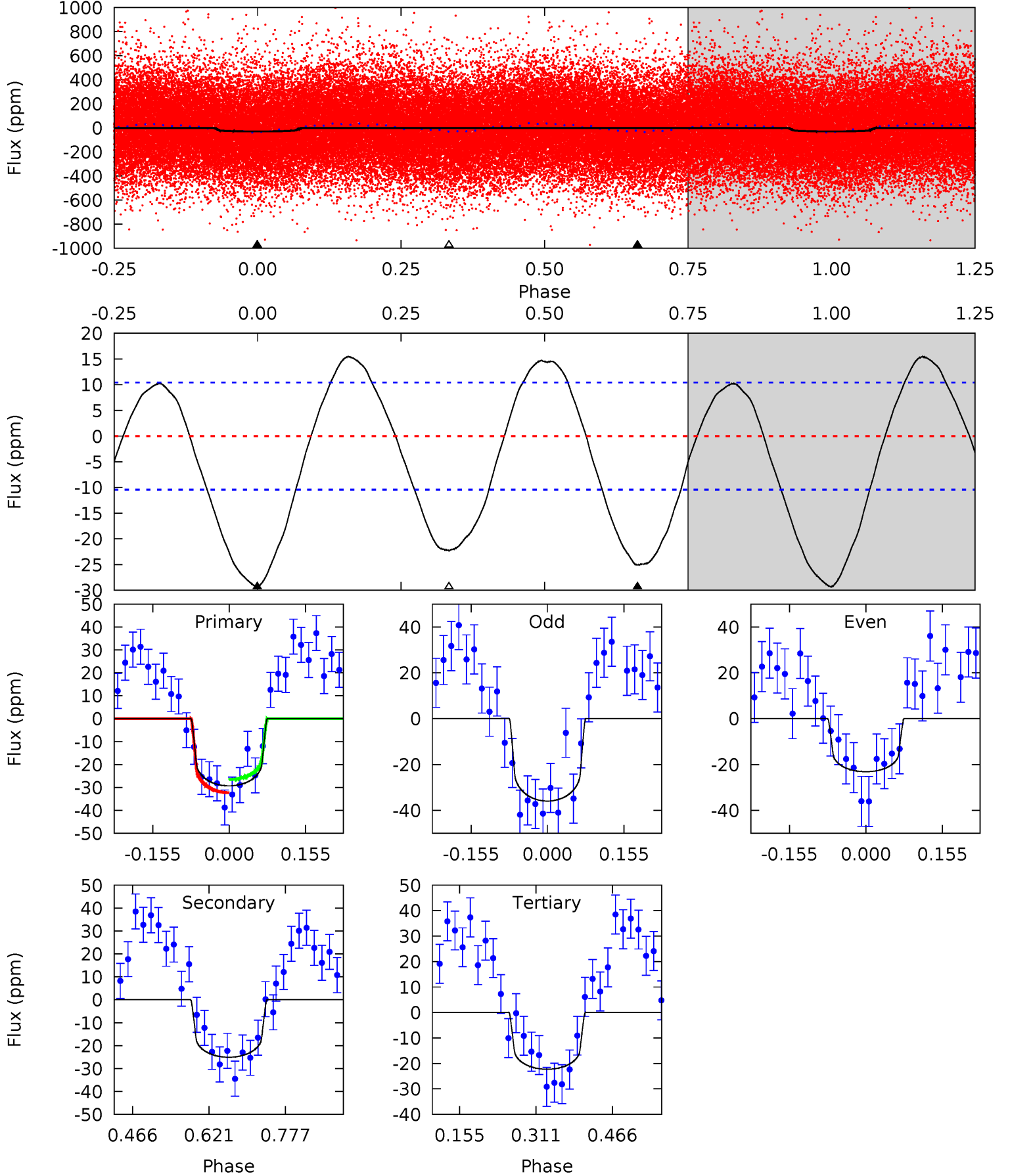
TCE 005819157-01 P= 1.995792 Days $T_0=133.416955$ (BKJD)



DV Model-Shift Uniqueness Test

005819157-01, P = 1.995823 Days, E = 131.421763 Days

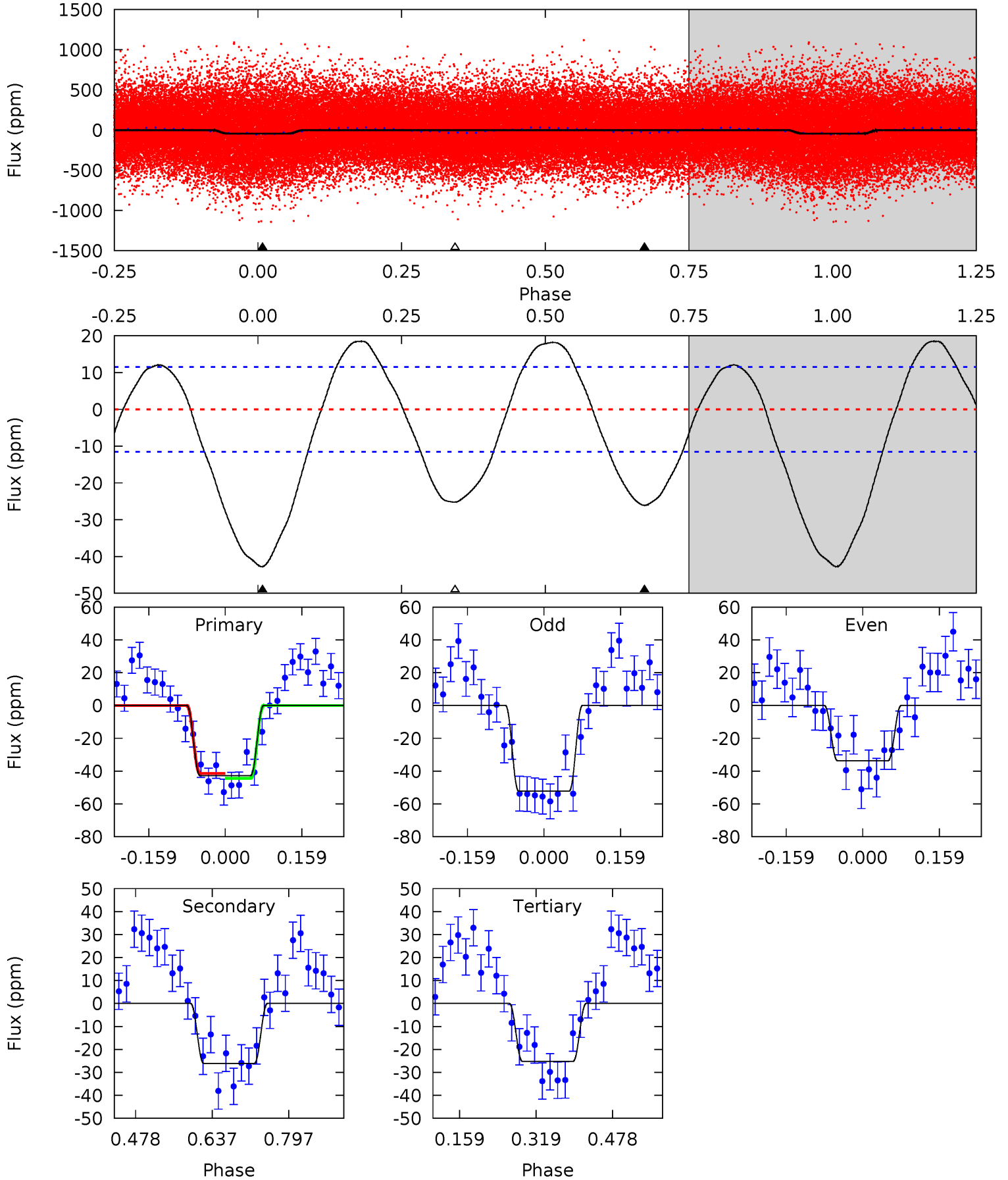
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	10.7	9.55	0	4.47	1.42	5.74	3.01	12.6	1.19	10.7	2.74	0.97	0.35	1.25



Alt Model-Shift Uniqueness Test

005819157-01, P = 1.995792 Days, E = 131.421163 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	10.1	9.77	0	4.47	1.41	6.10	6.78	16.6	0.33	10.1	3.59	0.89	0.30	0.58



Stellar Parameters For KIC 005819157

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6372^{+204}_{-227}	$3.904^{+0.405}_{-0.135}$	$-0.180^{+0.250}_{-0.300}$	$2.081^{+0.512}_{-0.878}$	$1.266^{+0.205}_{-0.251}$	$0.198^{+0.645}_{-0.082}$
	+3%/-4%	+10%/-3%	+139%/-167%	+25%/-42%	+16%/-20%	+326%/-41%
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 005819157-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-25 ± 2	$1.14^{+0.57}_{-0.50}$	3028^{+249}_{-363}	6035^{+2159}_{-937}	12^{+23}_{-7}
Alt.	-26 ± 3	$1.43^{+0.67}_{-0.50}$	3053^{+221}_{-331}	5493^{+1199}_{-737}	$7.852^{+10.360}_{-4.138}$

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

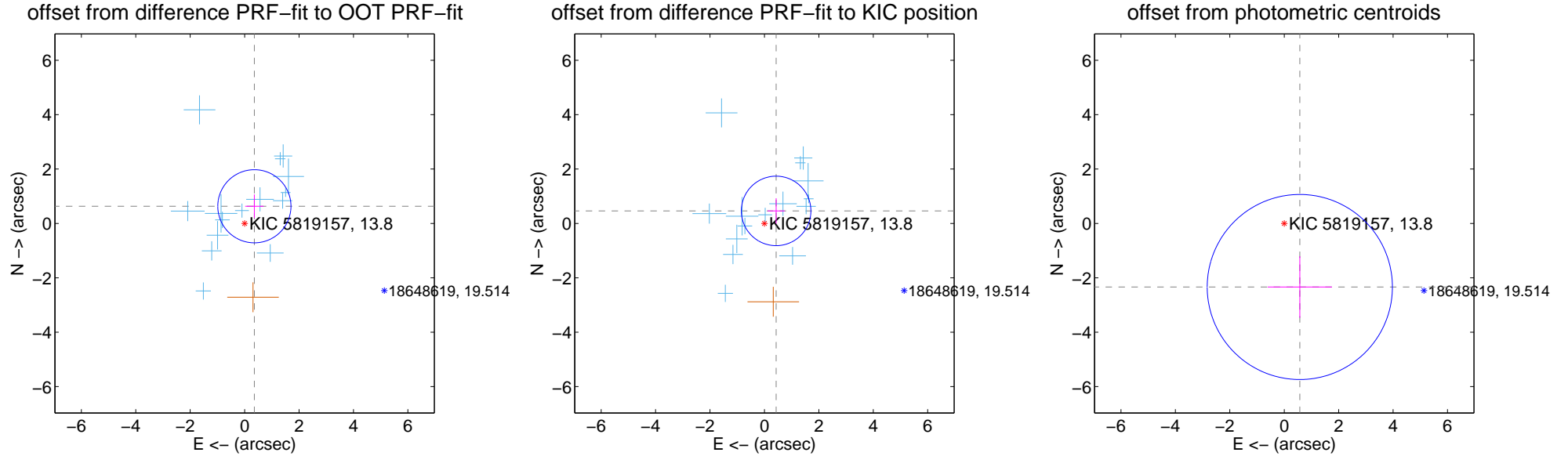
DV Centroid Data

Supplemental centroid analysis for 005819157-01. Kepler magnitude: 13.80. Transit SNR 6.74

There are 15 quarters with good PRF difference image offsets

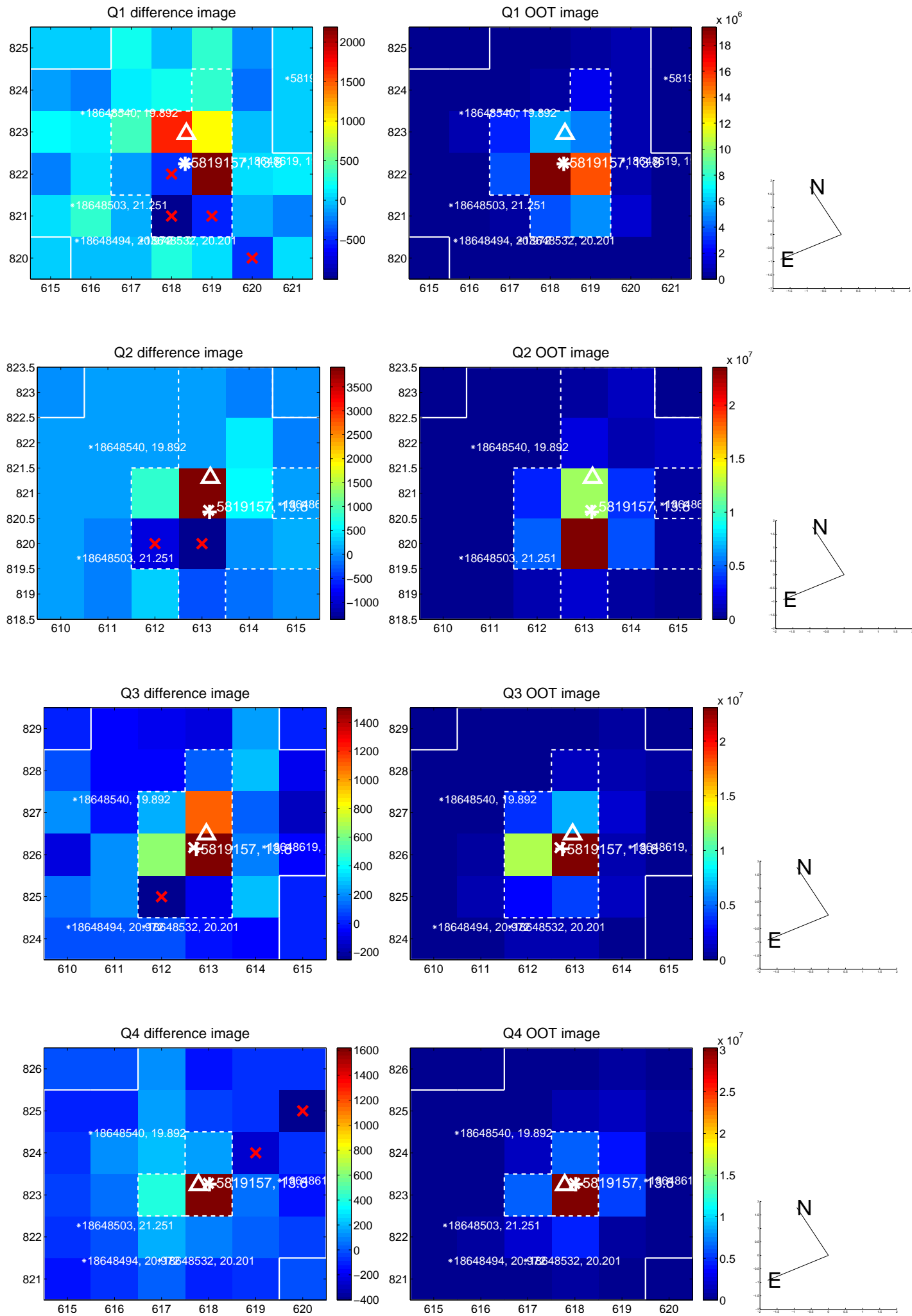
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.726 ± 0.448	1.62	-0.359 ± 0.337	0.631 ± 0.432
PRF-fit source offset from KIC position	0.630 ± 0.426	1.48	-0.429 ± 0.316	0.461 ± 0.464
photometric centroid source offset	2.41 ± 1.13	2.12	-0.57 ± 1.18	-2.34 ± 1.13

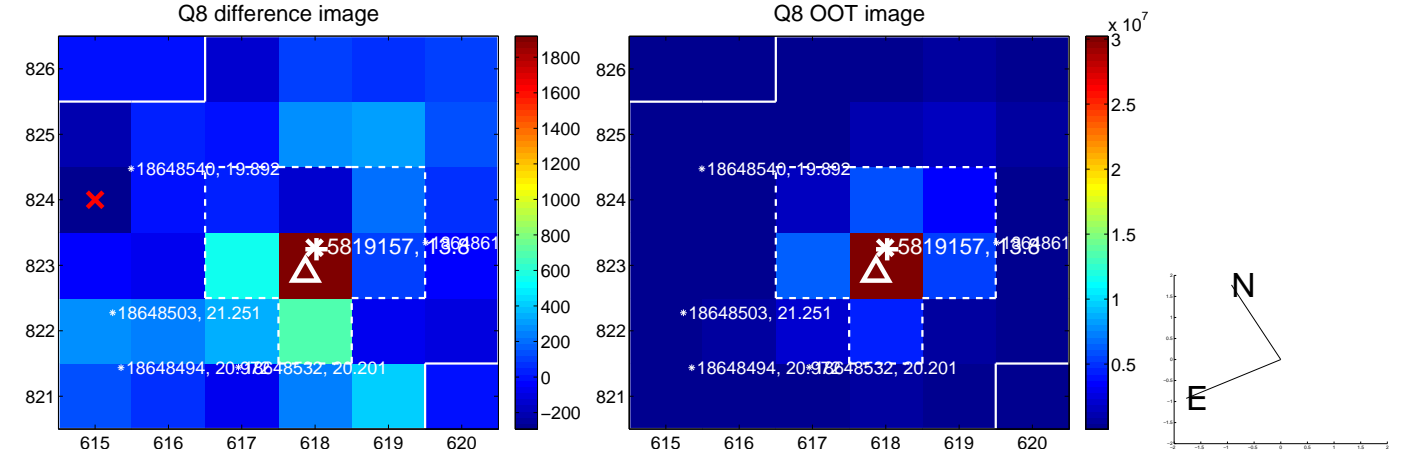
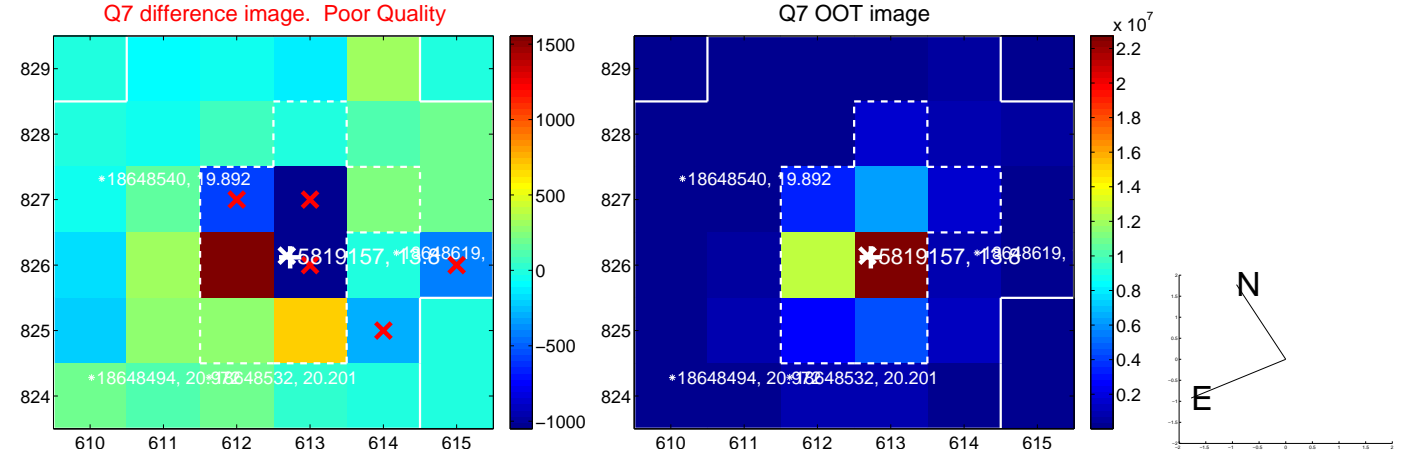
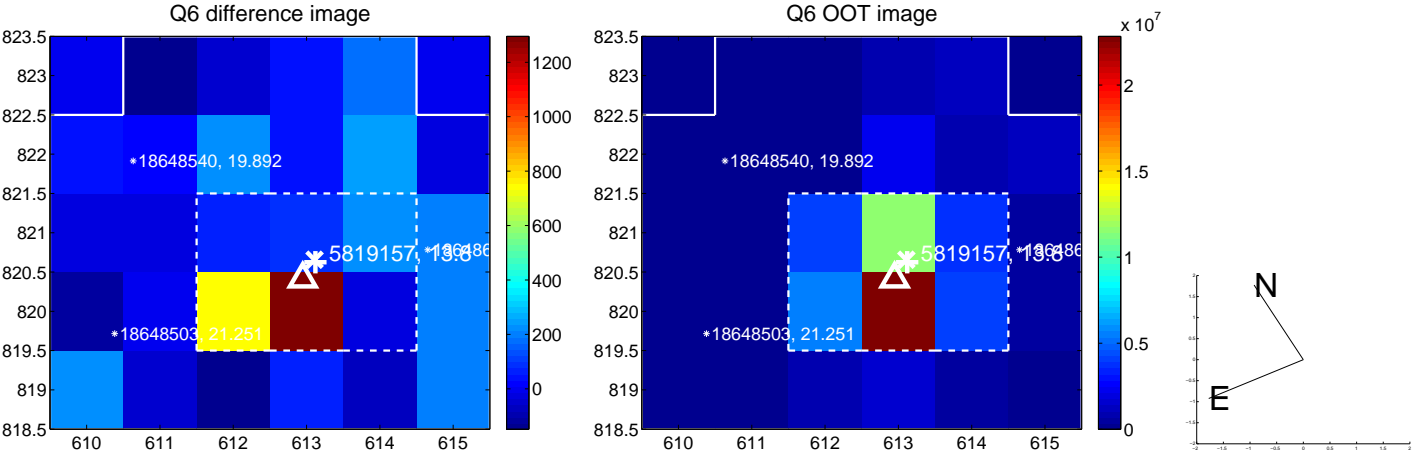
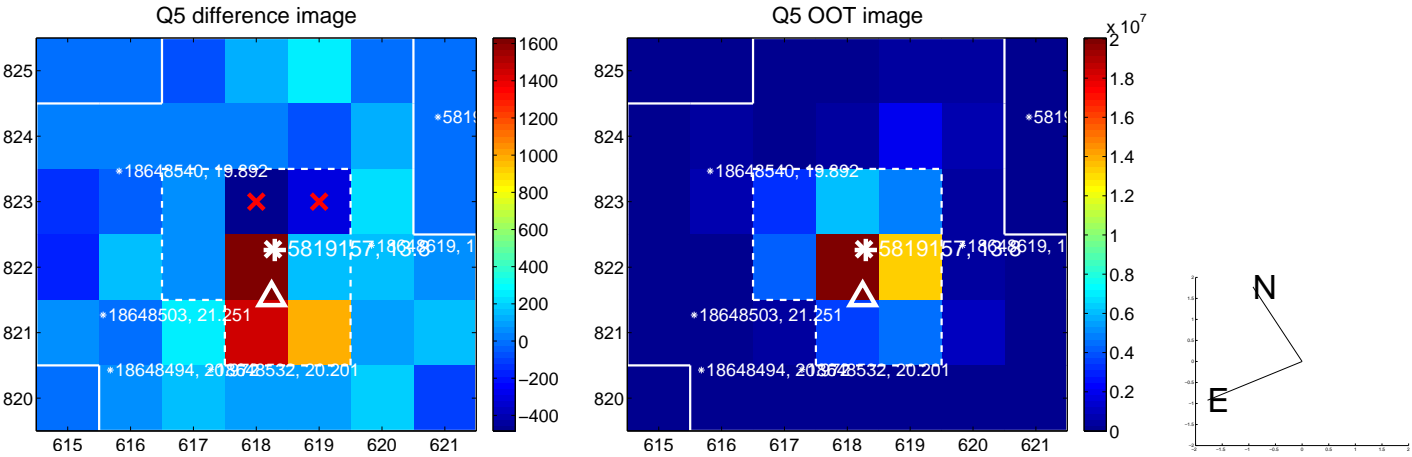


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

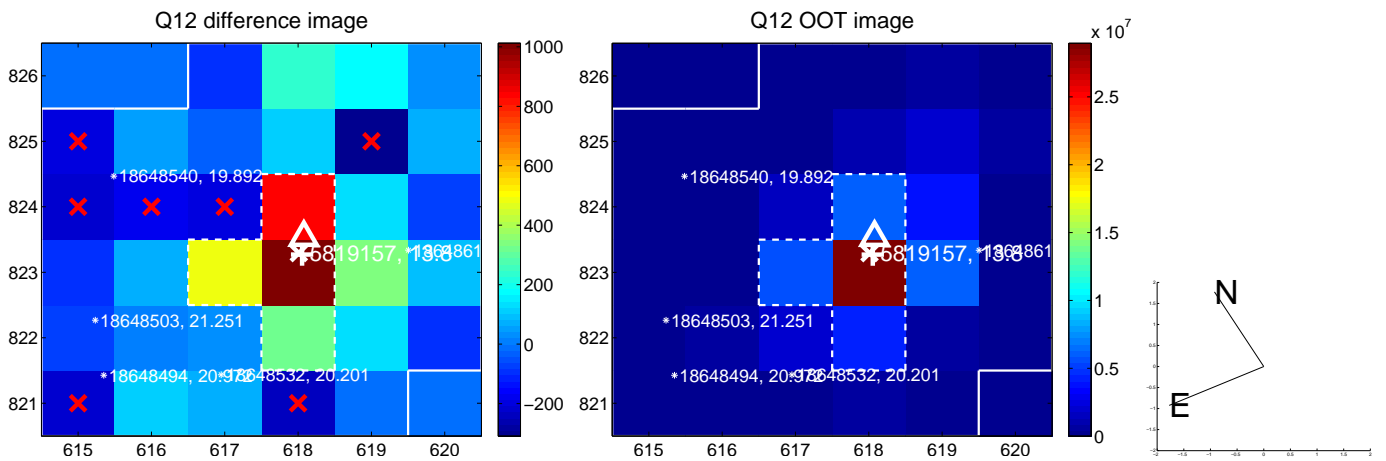
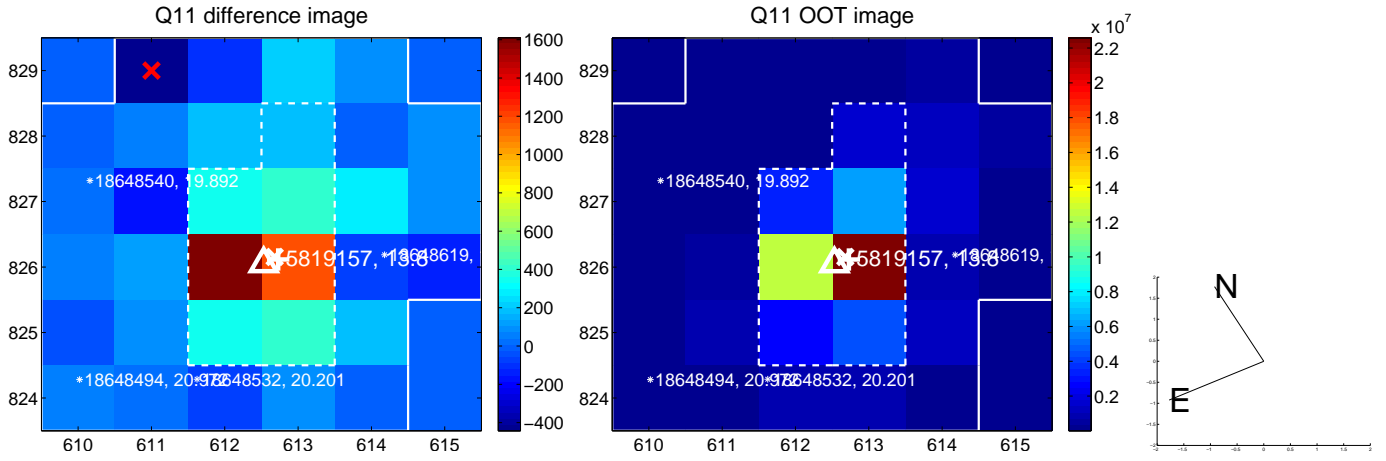
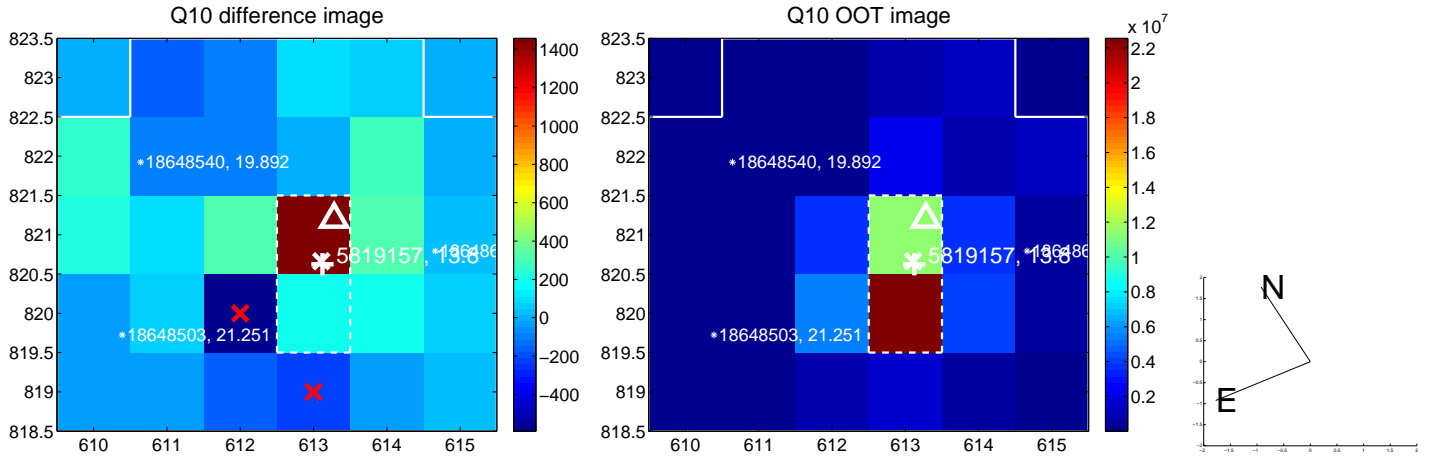
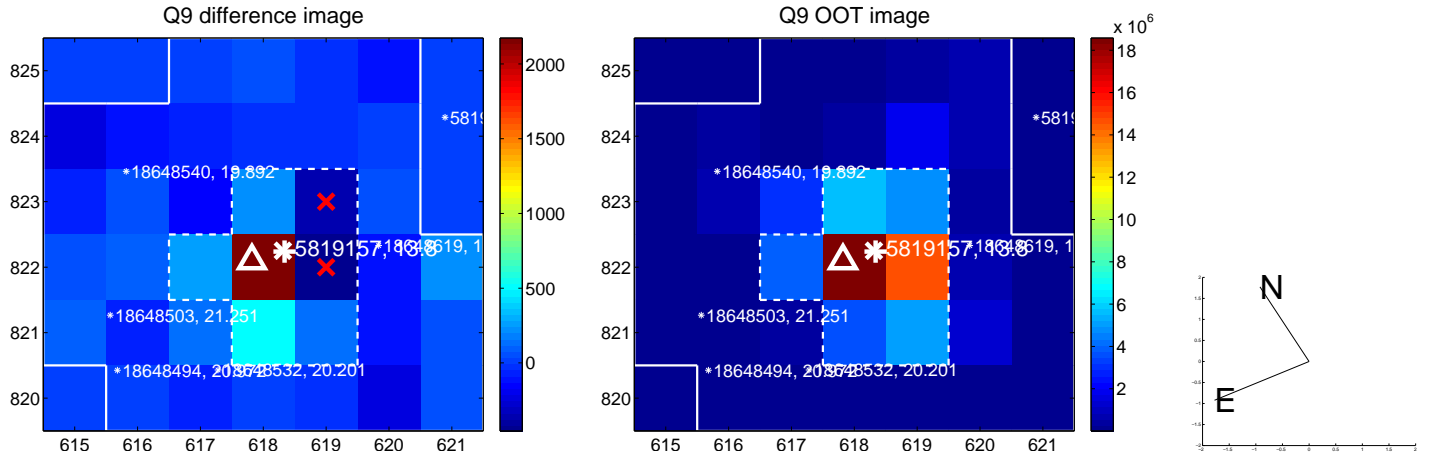
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



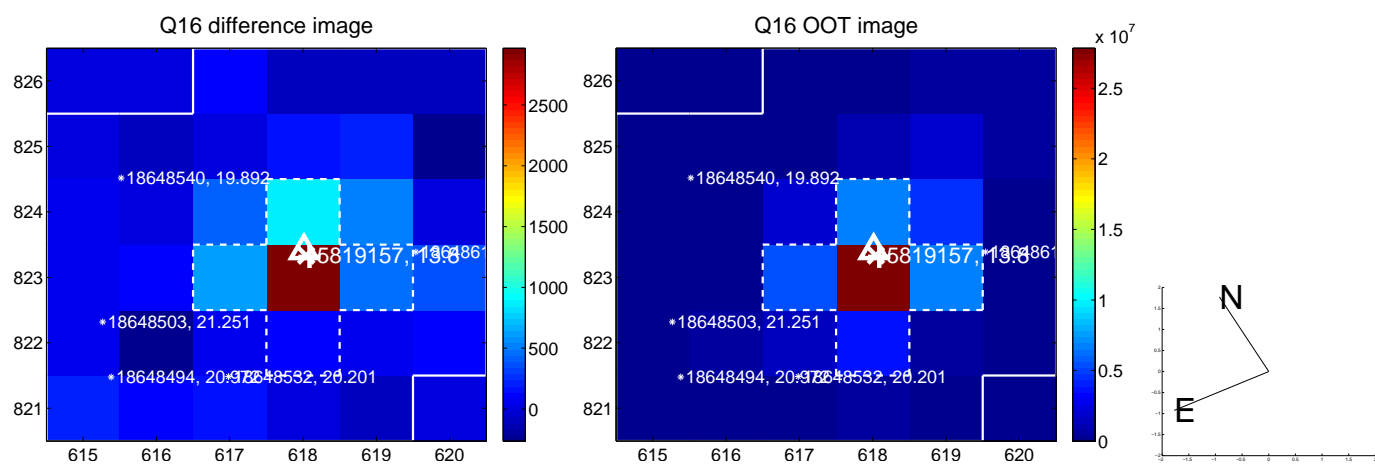
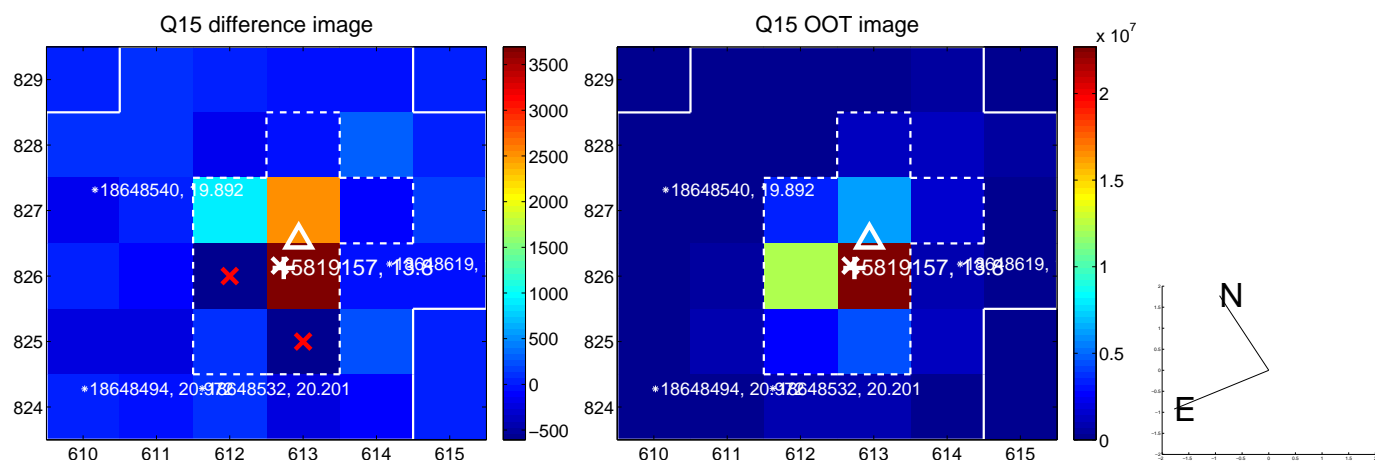
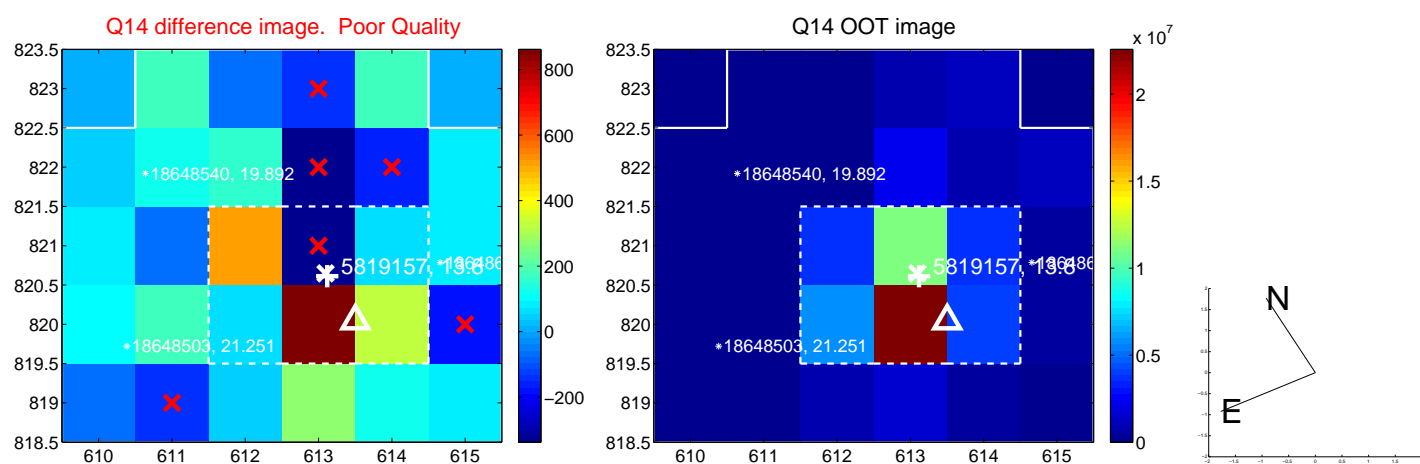
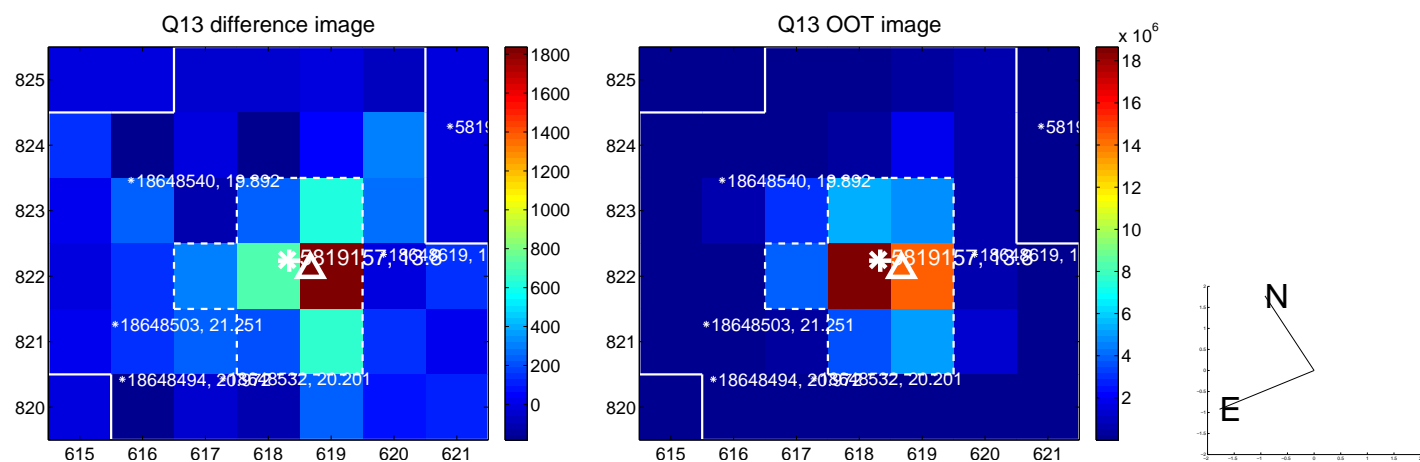
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



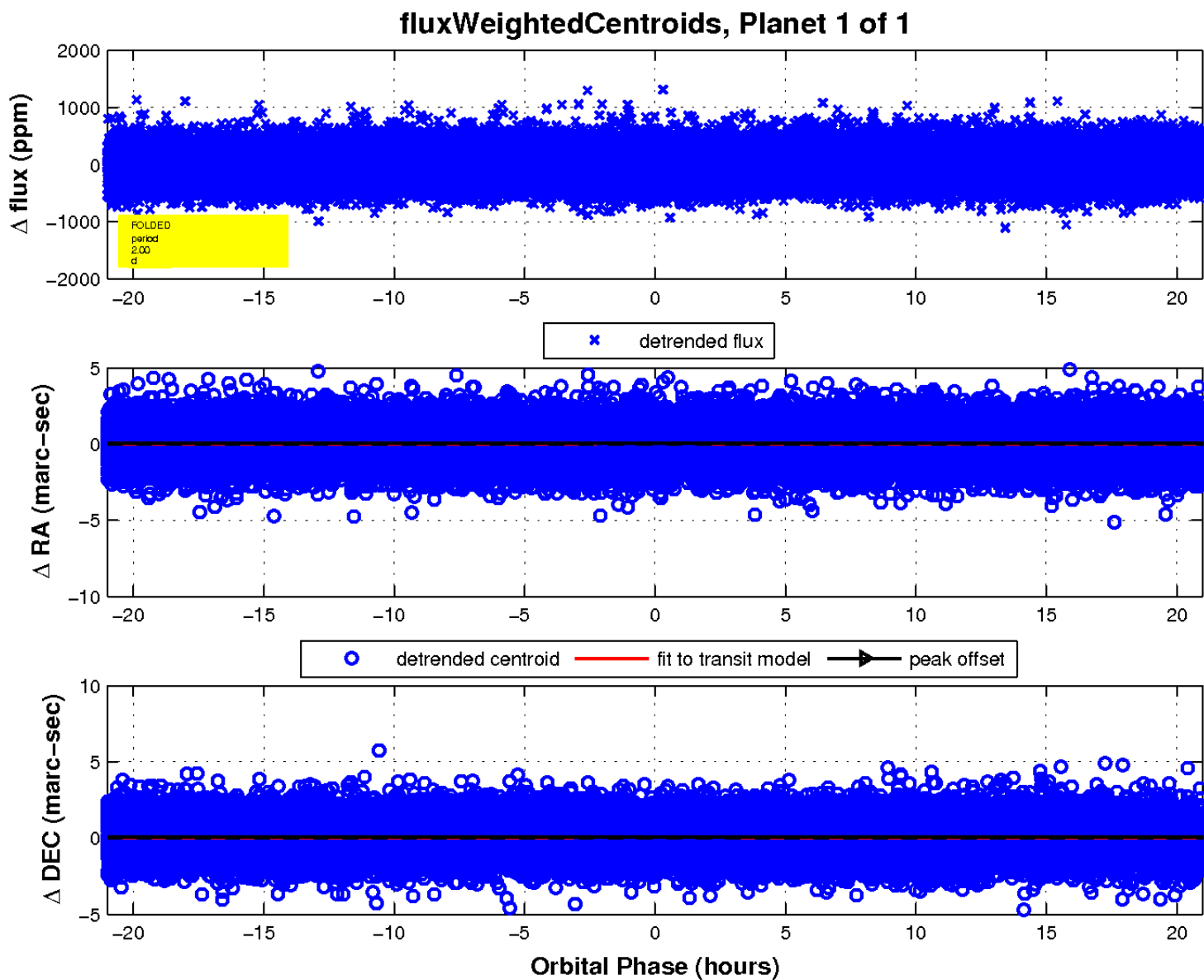
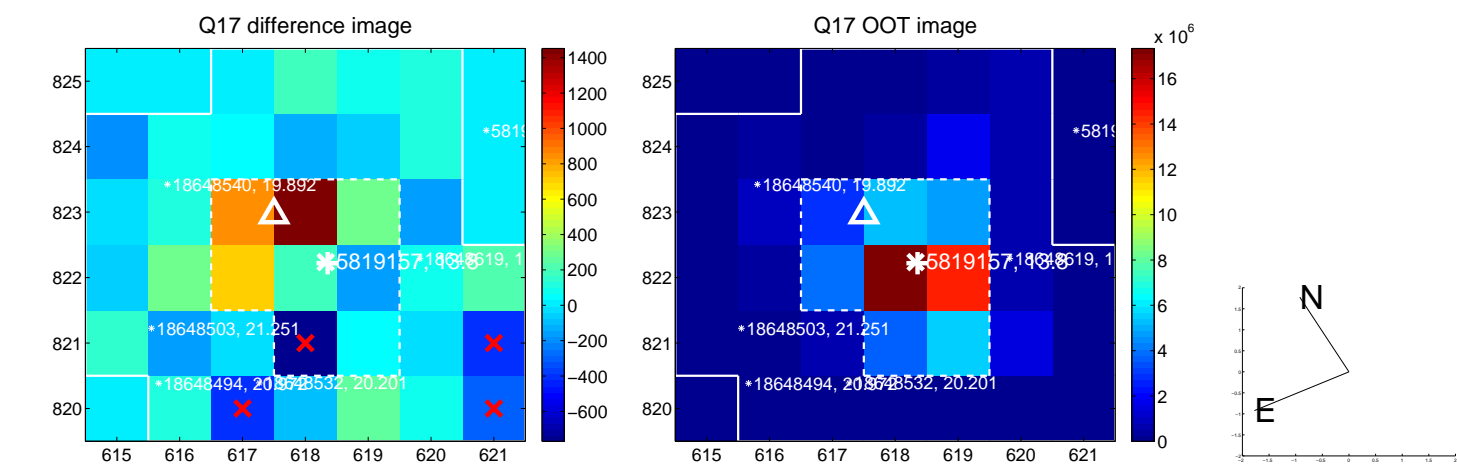
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

