

KIC 008211521

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})
008211521-01	OBS	6992.01	1.694212	132.007492	75.4	3.987	10.9	11.5	0.72	5402	0.68	624.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008211521-01	OBS	FP	0.06	0	0	1	0	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.

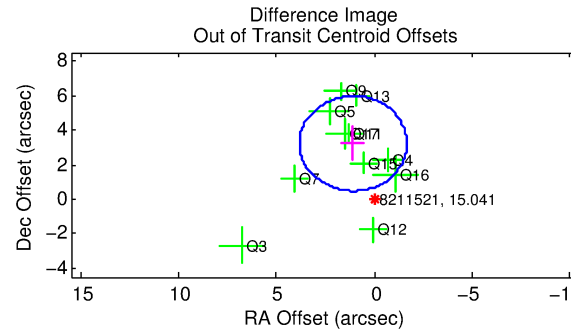
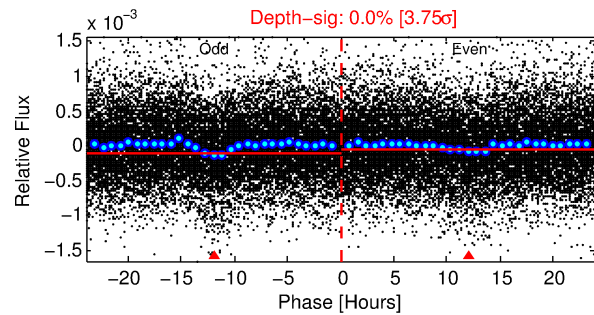
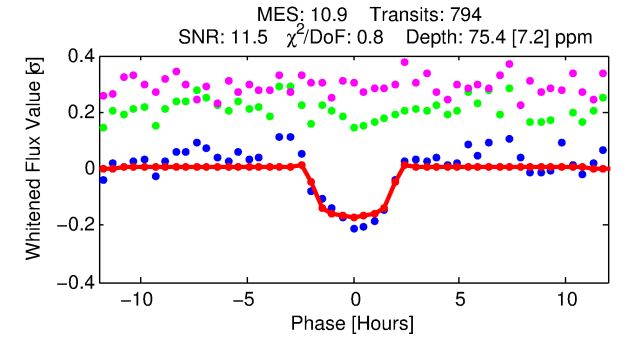
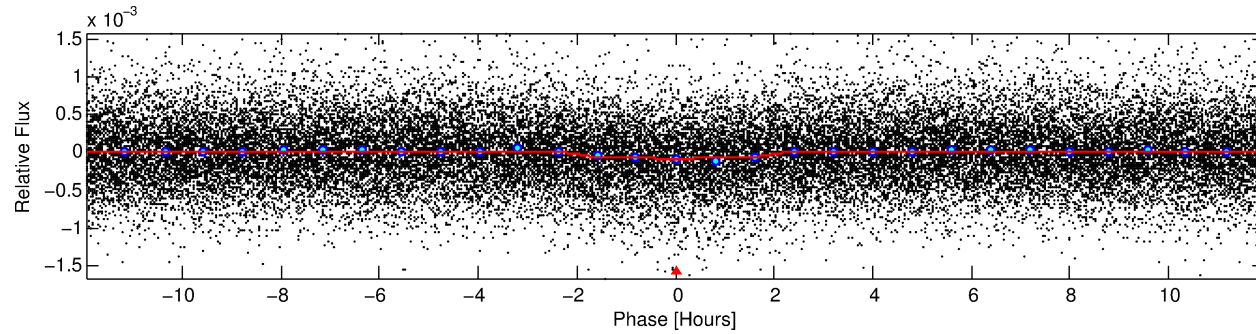
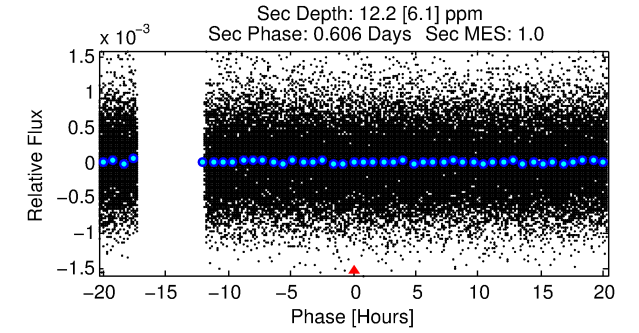
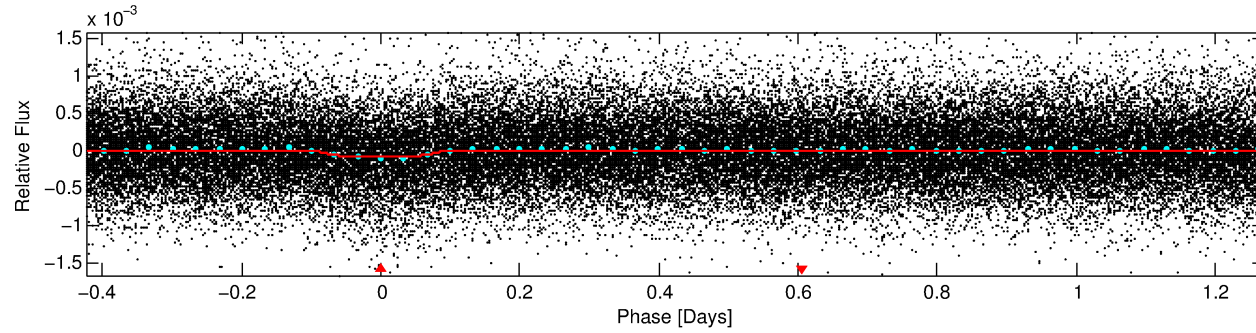
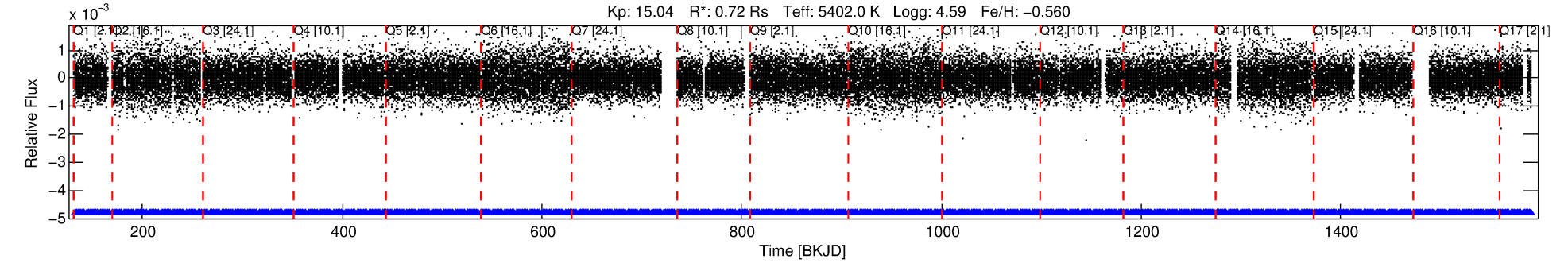
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008211521-01

No Significant Match Found

DV One-Page Summary

KIC: 8211521 Candidate: 1 of 1 Period: 1.694 d
KOI: K06992.01 Corr: 0.989



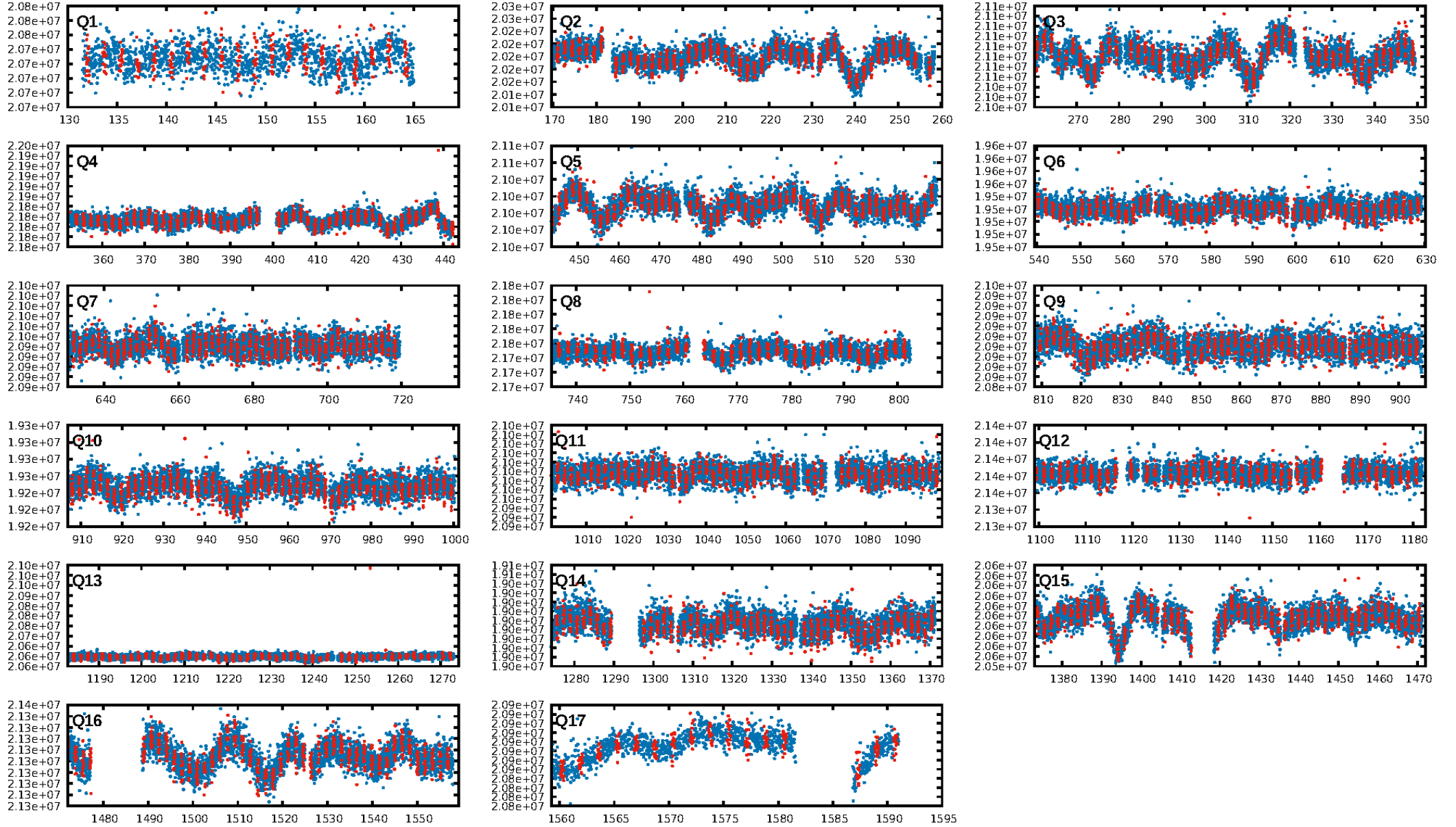
DV Fit Results:

Period = 1.69421 [0.00001] d
Epoch = 132.0075 [0.0045] BKJD
Rp/R* = 0.0087 [0.0050]
a/R* = 2.28 [4.58]
b = 0.77 [1.33]
Seff = 624.46 [120.69]
Teff = 1275 [62] K
Rp = 0.68 [0.40] Re
a = 0.0251 [0.0028] AU
Ag = 9.06 [11.38] [0.71σ]
Teffp = 3419 [1071] K [2.00σ]

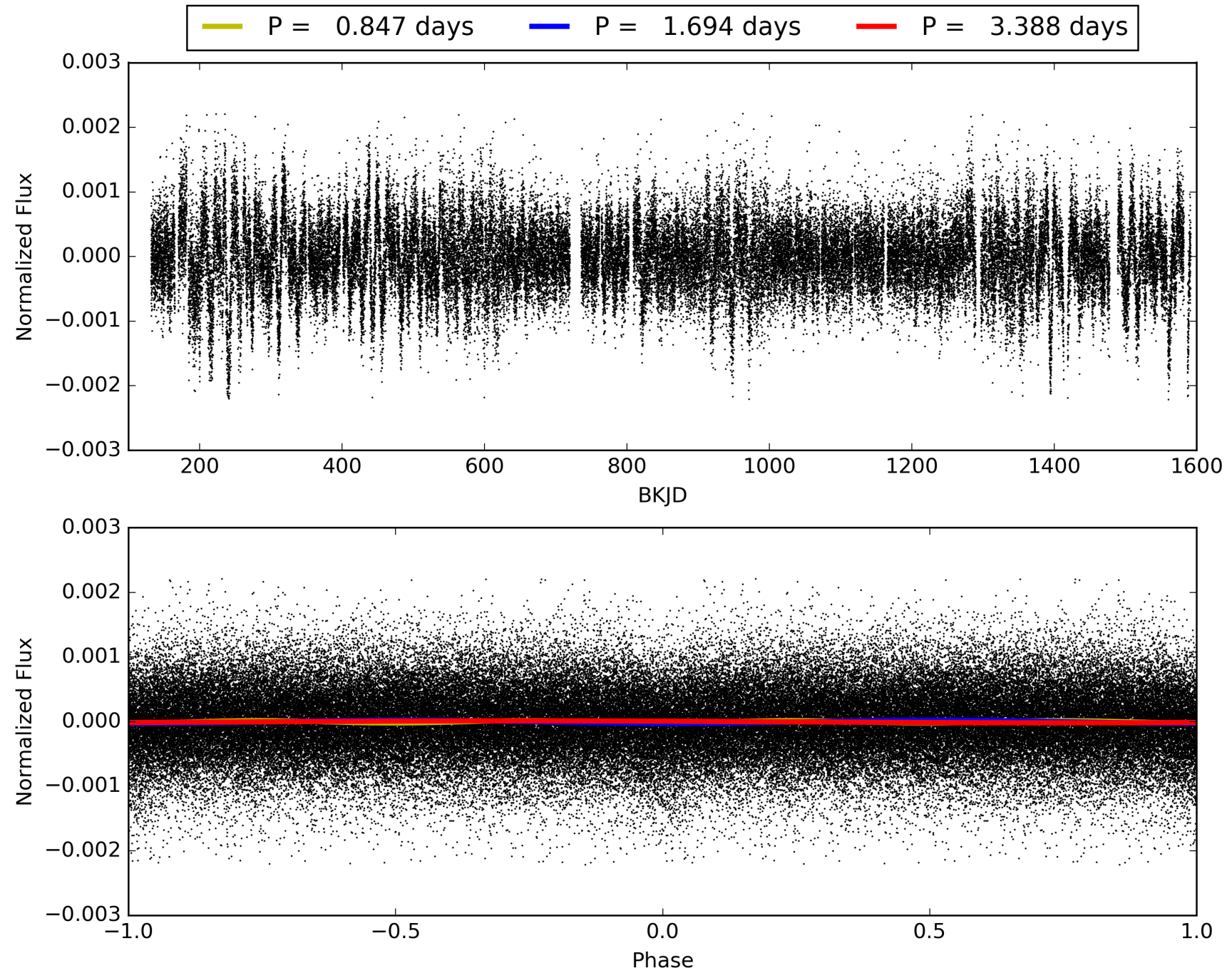
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.62e-27
RollingBand-fgt: 1.00 [758/758]
GhostDiagnostic-chr: -0.547
Centroid-sig: 0.0%
Centroid-so: 3.430 arcsec [2.88σ]
OotOffset-rm: 3.401 arcsec [3.71σ]
KicOffset-rm: 3.580 arcsec [3.95σ]
OotOffset-st: 0/4/3/4 [11]
KicOffset-st: 0/4/3/4 [11]
DiffImageQuality-fgm: 0.27 [3/11]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008211521-01, PDC Light Curves

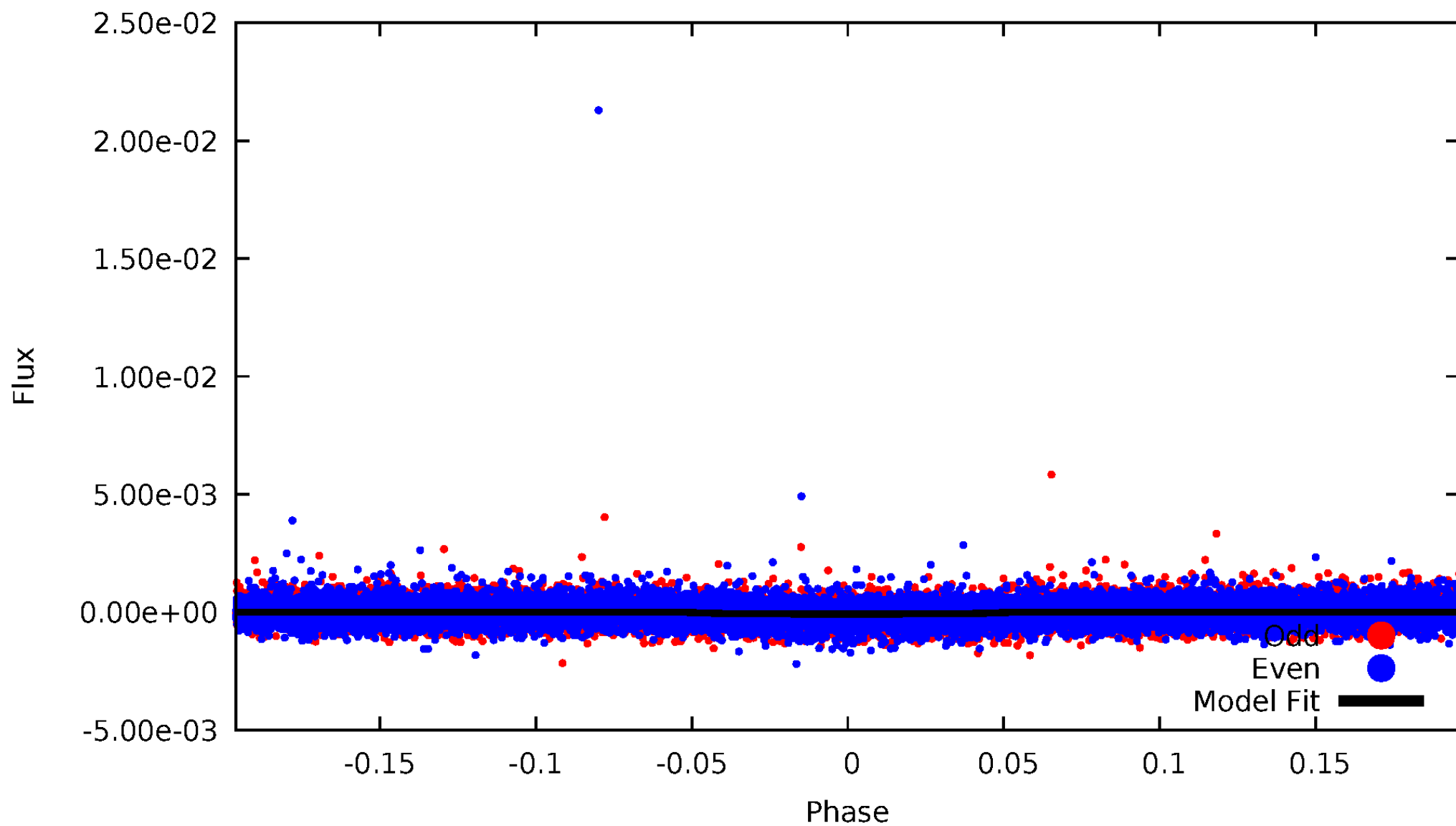


TCE 008211521-01



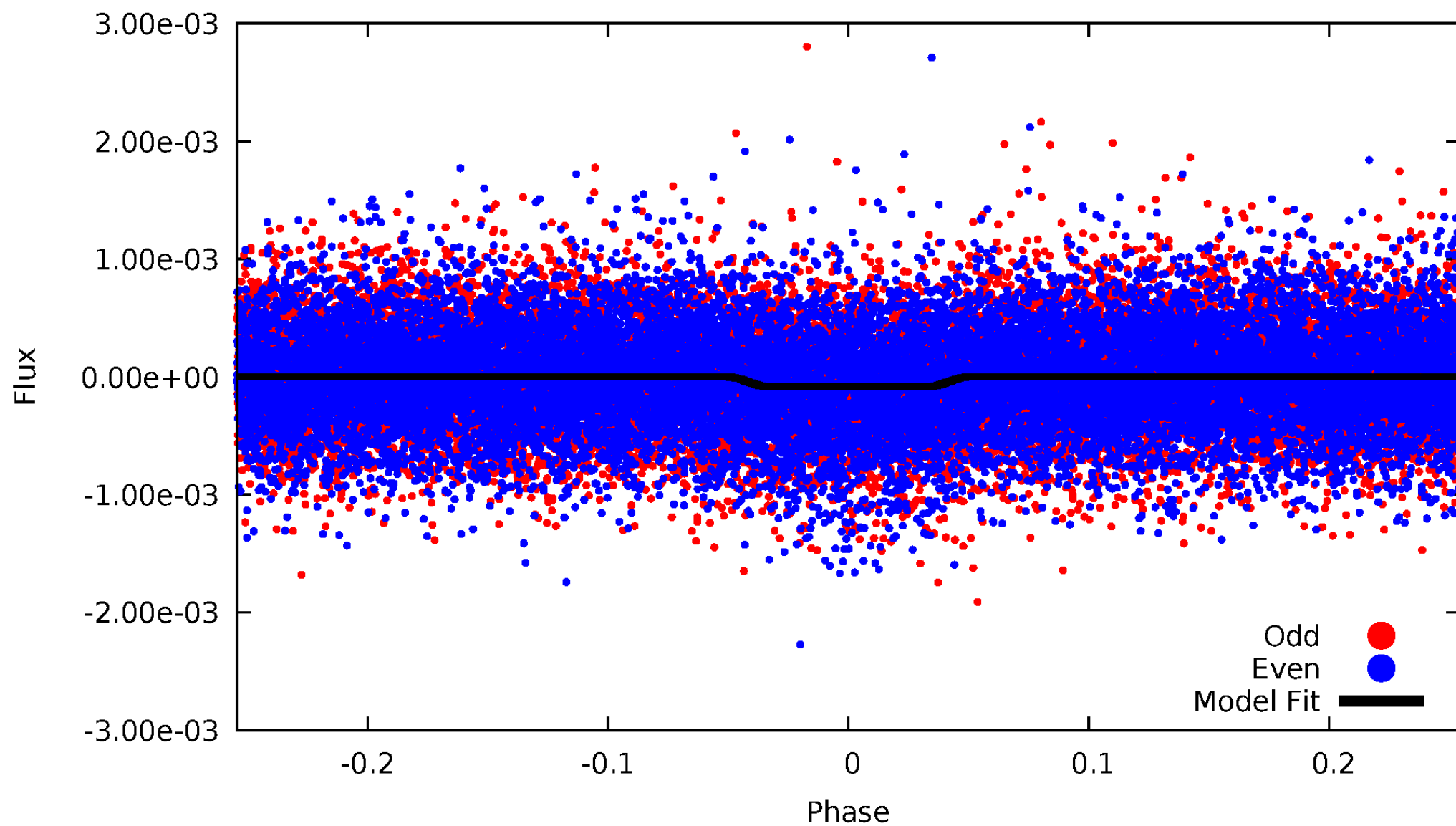
DV Odd/Even

TCE 008211521-01

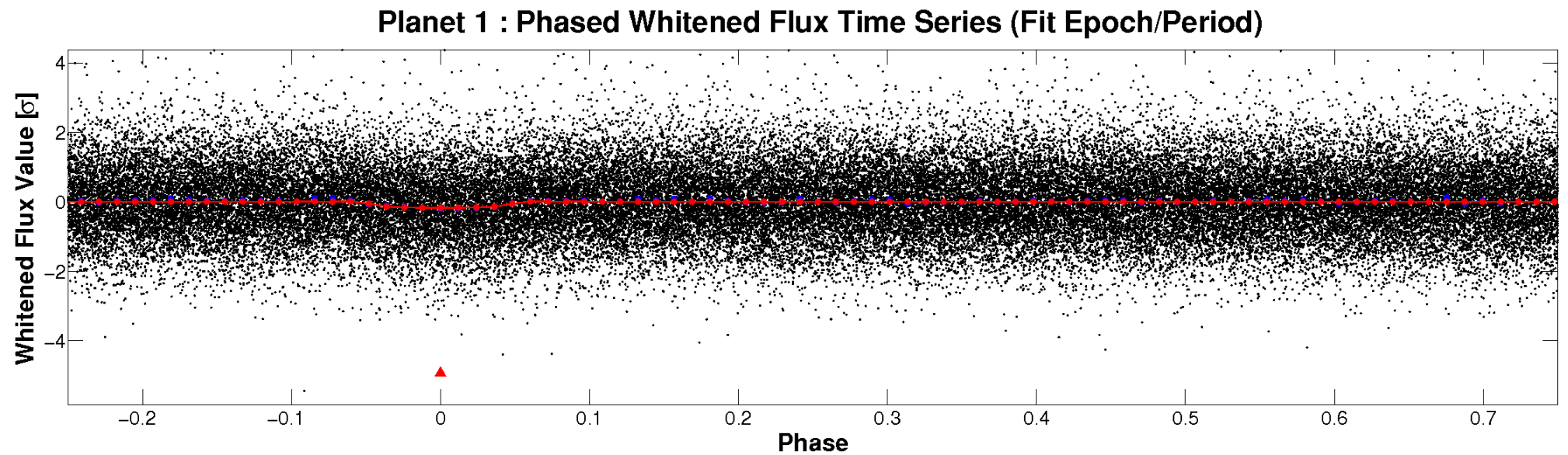
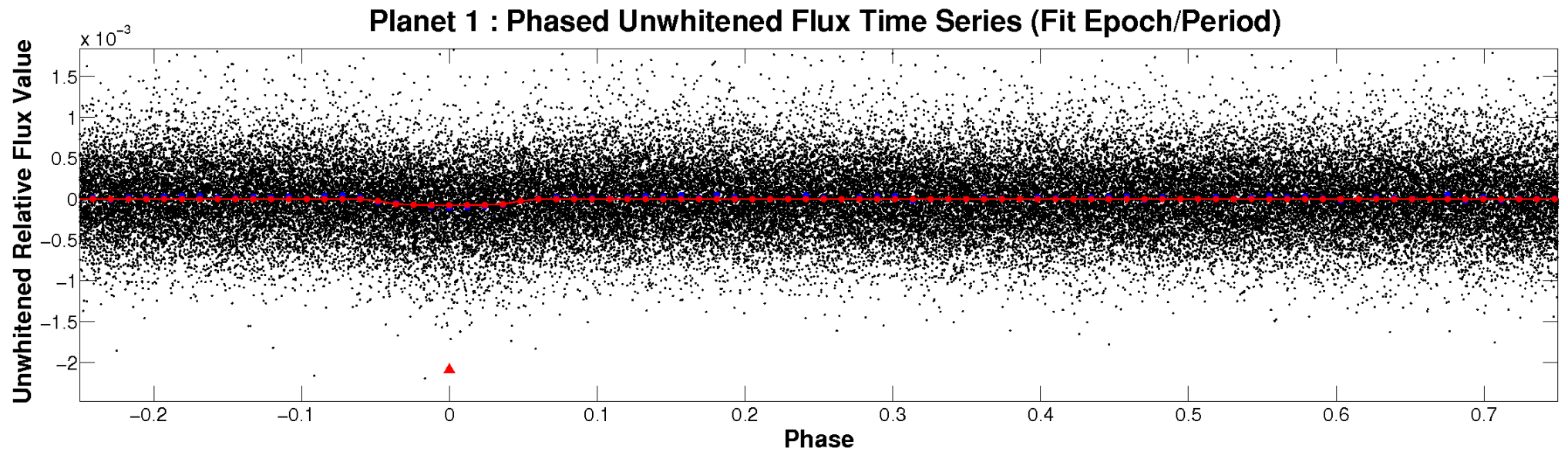


ALT Odd/Even

TCE 008211521-01

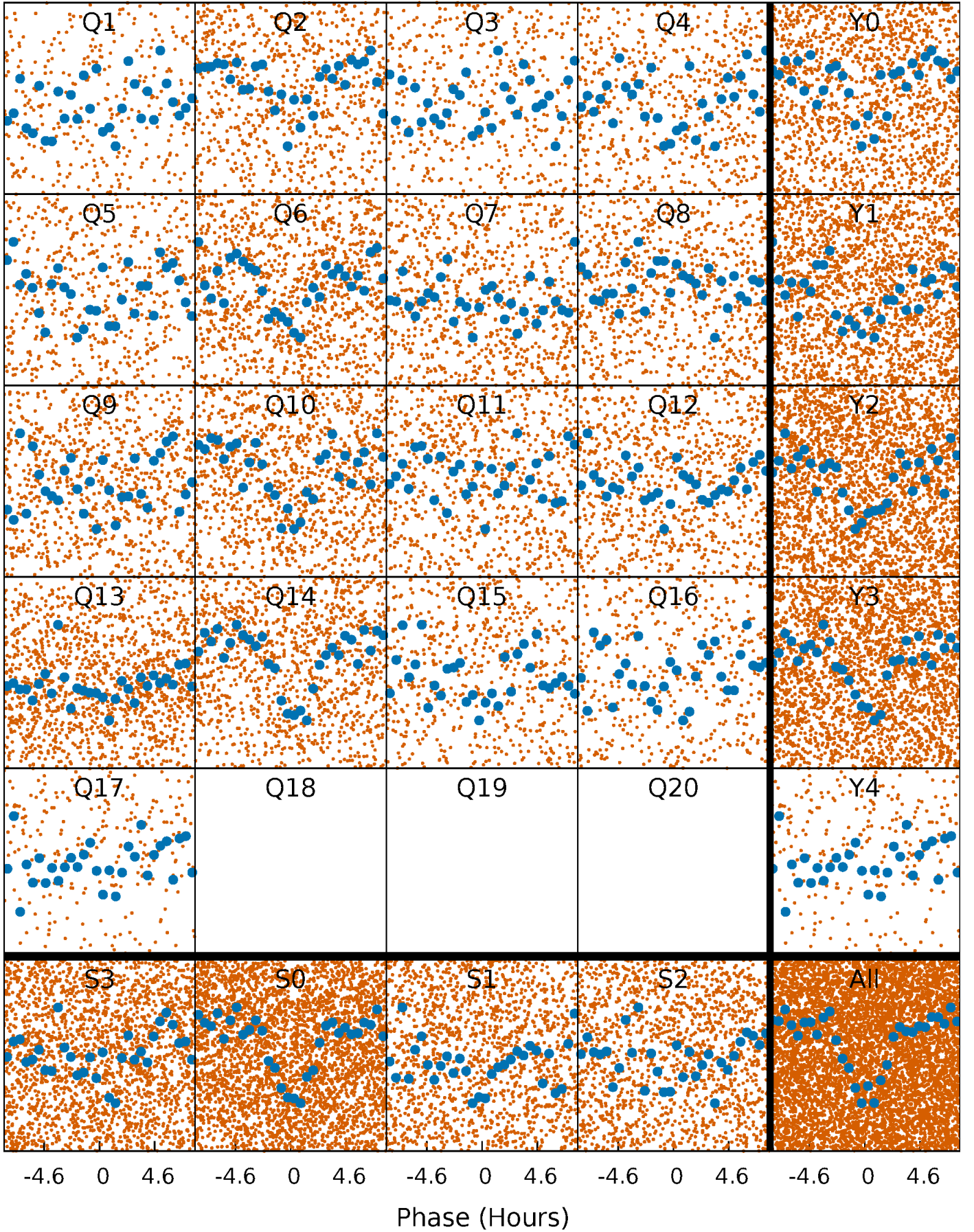


Non-Whitened Vs. Whitened Light Curve



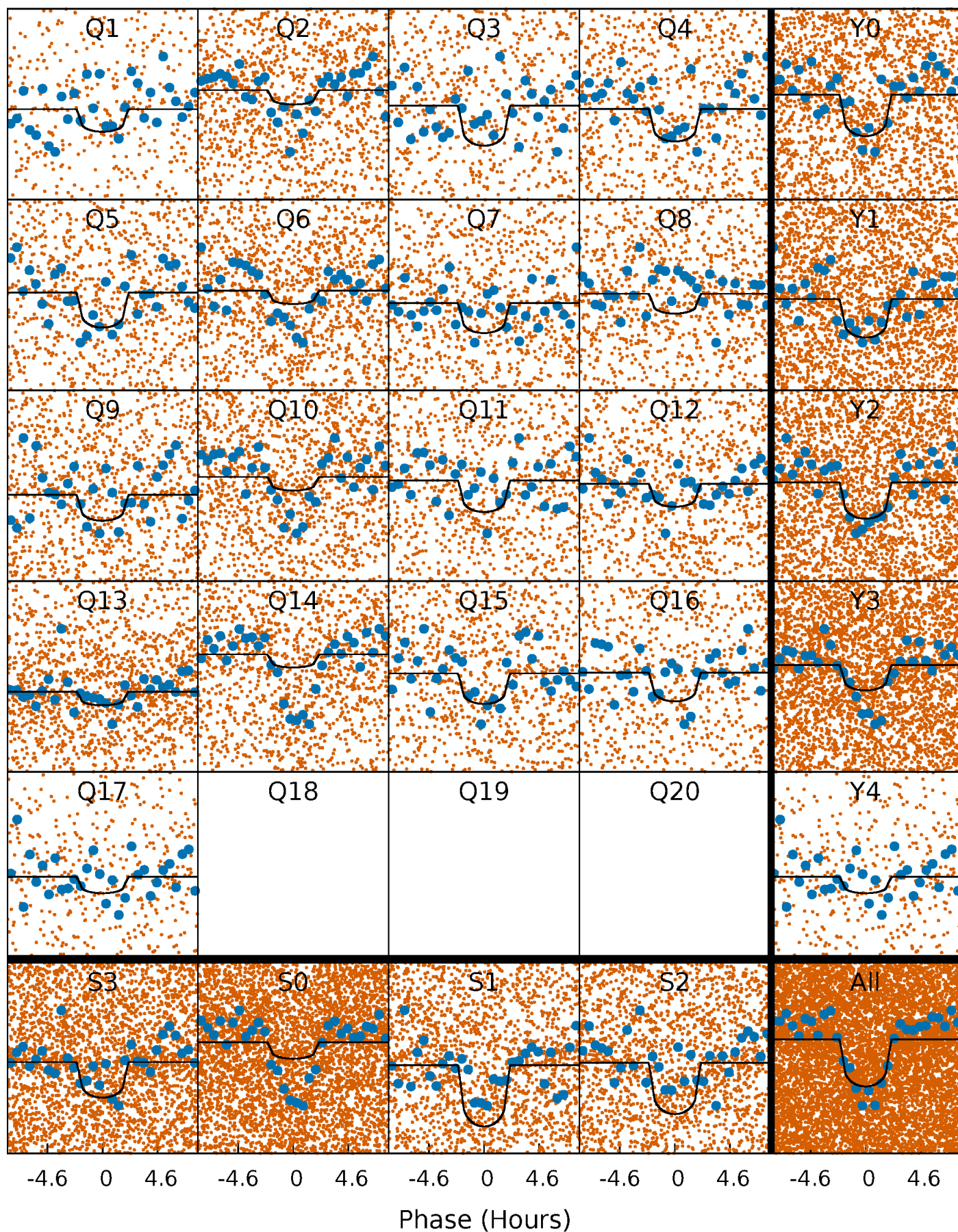
PDC Quarter-Phased Transit Curves

TCE 008211521-01 P= 1.694212 Days $T_0=132.007492$ (BKJD)



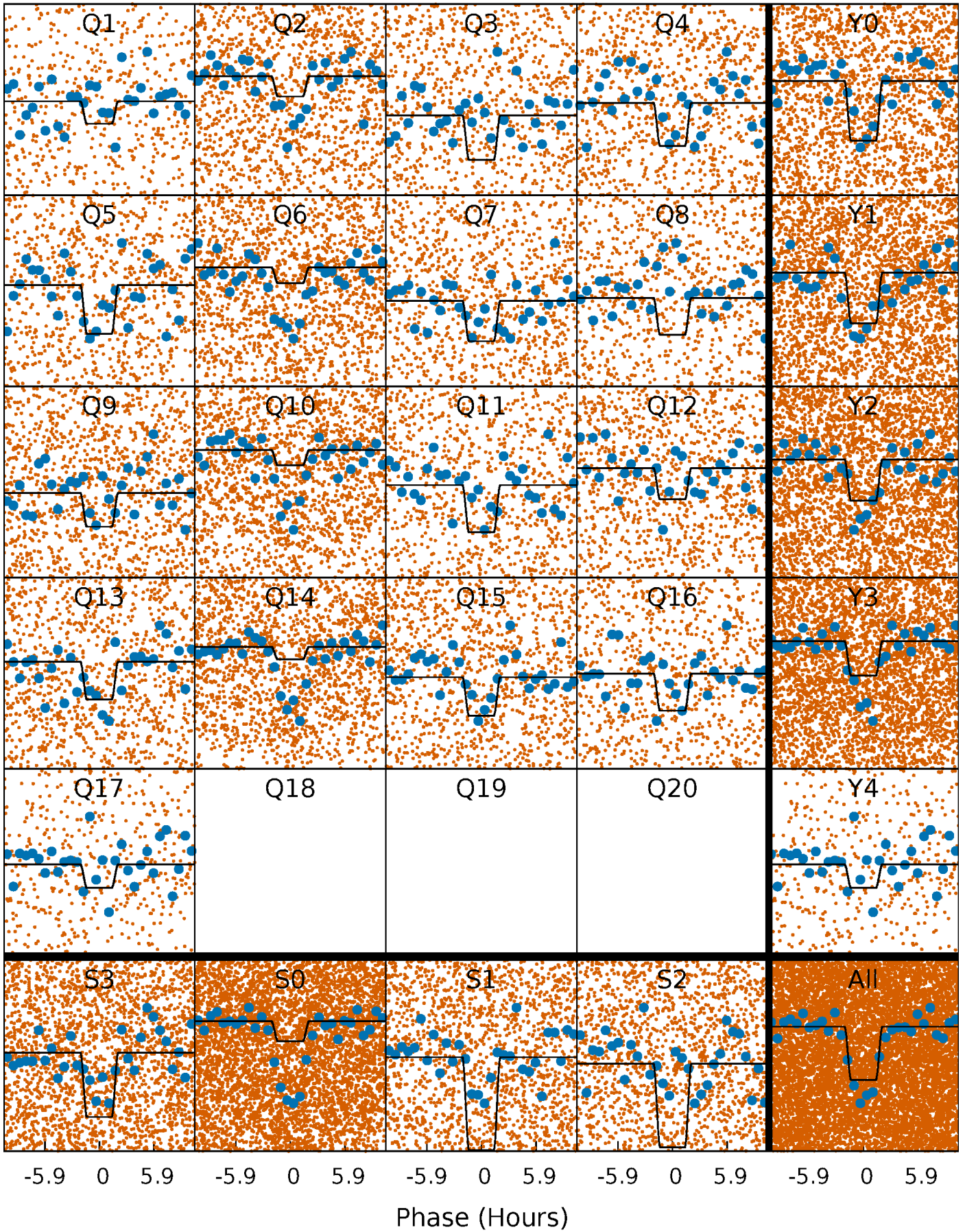
DV Quarter-Phased Transit Curves

TCE 008211521-01 P= 1.694212 Days $T_0=132.007492$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

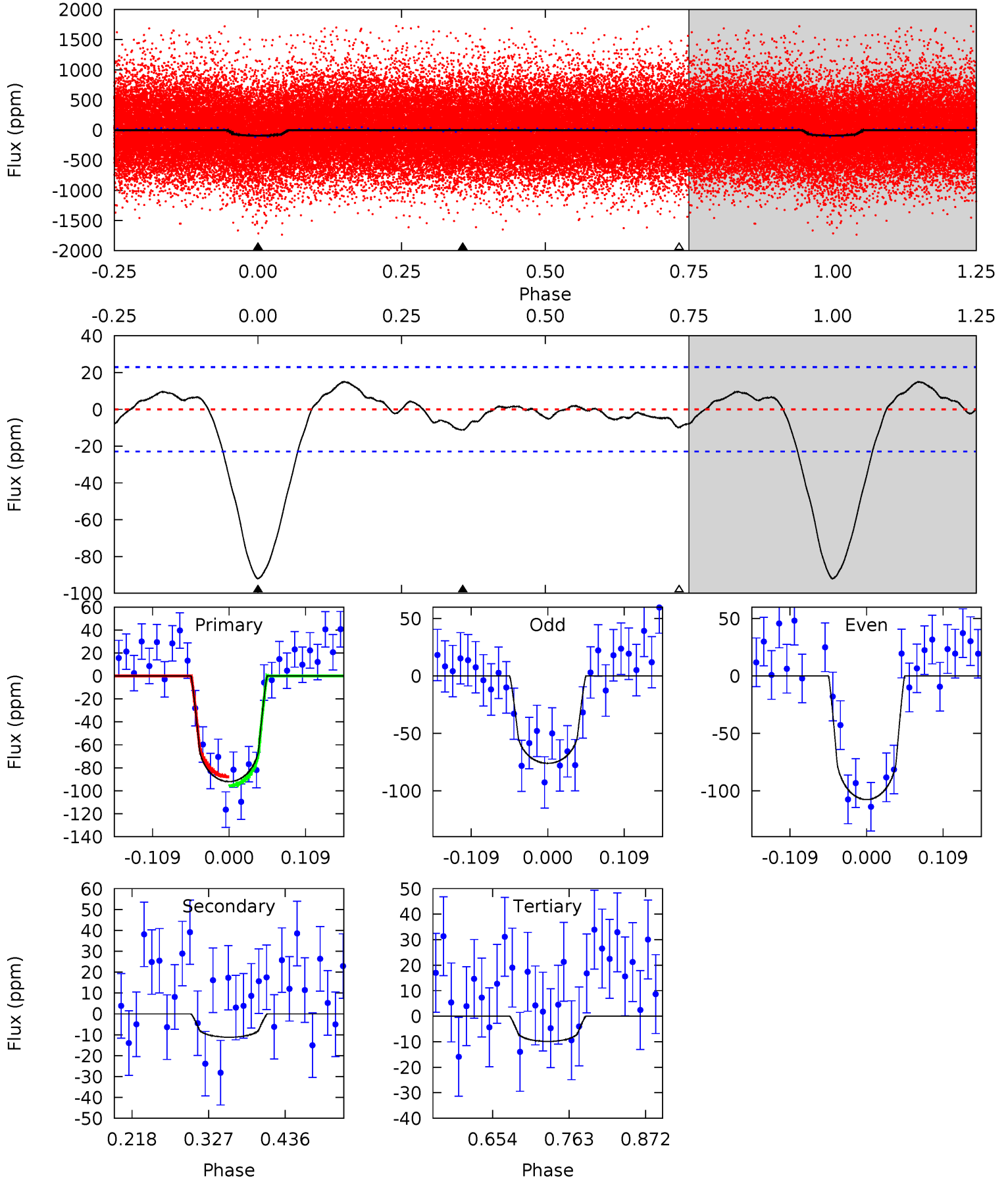
TCE 008211521-01 P= 1.694228 Days $T_0=132.003691$ (BKJD)



DV Model-Shift Uniqueness Test

008211521-01, P = 1.694212 Days, E = 130.313280 Days

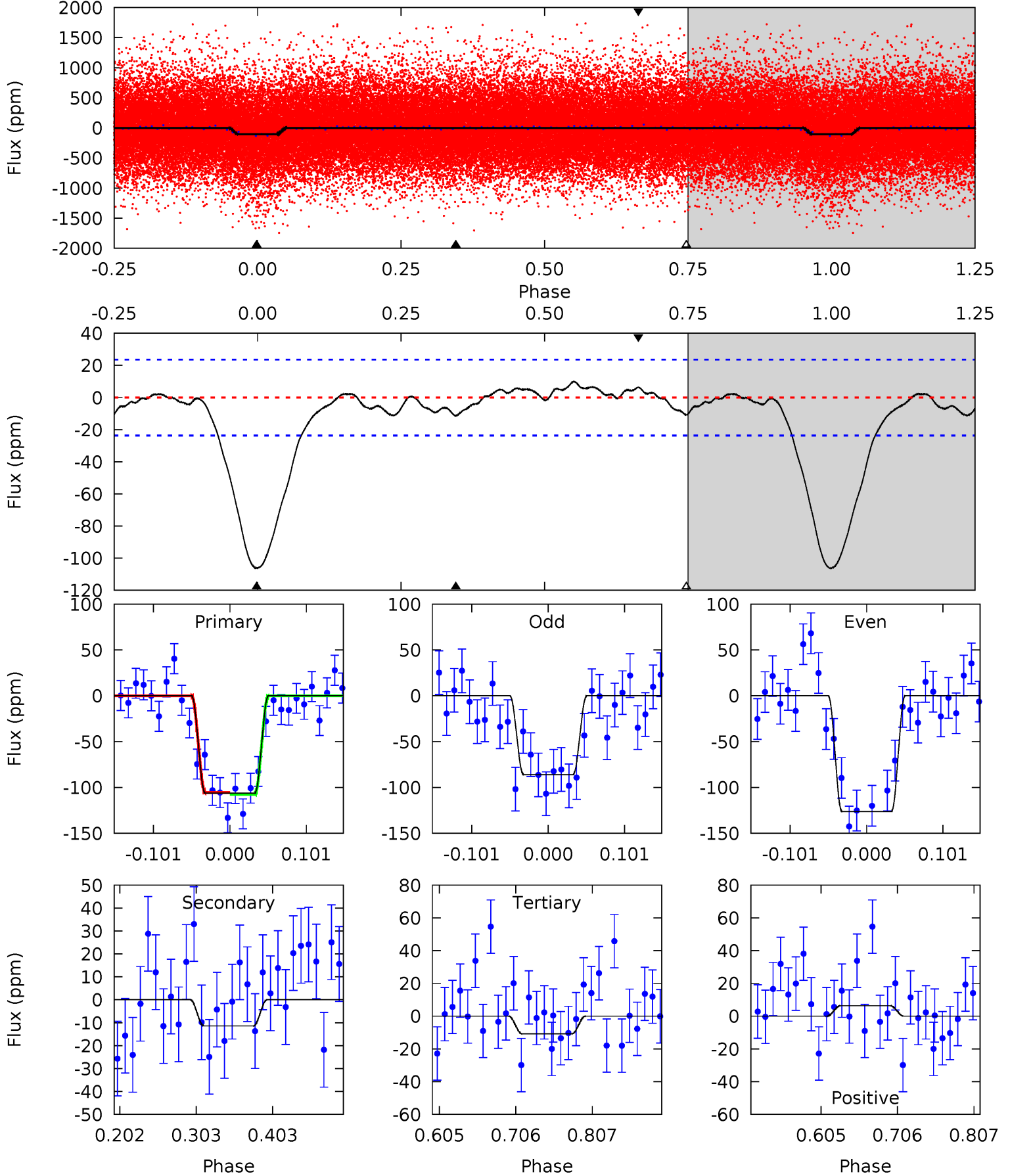
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.2	2.22	1.96	0	4.55	1.60	1.21	16.3	18.2	0.26	2.22	3.14	1.15	0.14	0.77



Alt Model-Shift Uniqueness Test

008211521-01, P = 1.694228 Days, E = 130.309463 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.5	2.20	2.09	1.23	4.56	1.64	0.97	18.4	19.3	0.11	0.97	3.90	1.35	0.09	0.19



Stellar Parameters For KIC 008211521

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5402^{+162}_{-146}	$4.591^{+0.056}_{-0.077}$	$-0.560^{+0.350}_{-0.300}$	$0.717^{+0.102}_{-0.068}$	$0.731^{+0.082}_{-0.052}$	$2.793^{+0.655}_{-0.702}$
	+3%/-3%	+1%/-2%	+62%/-54%	+14%/-9%	+11%/-7%	+23%/-25%
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 008211521-01 / KOI 6992.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-11 ± 5	$0.71^{+0.38}_{-0.35}$	1791^{+75}_{-69}	3636^{+1160}_{-573}	$7.126^{+23.235}_{-4.492}$
Alt.	-11 ± 5	$0.75^{+0.39}_{-0.39}$	1789^{+72}_{-64}	3578^{+1184}_{-564}	$6.674^{+24.413}_{-4.287}$

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

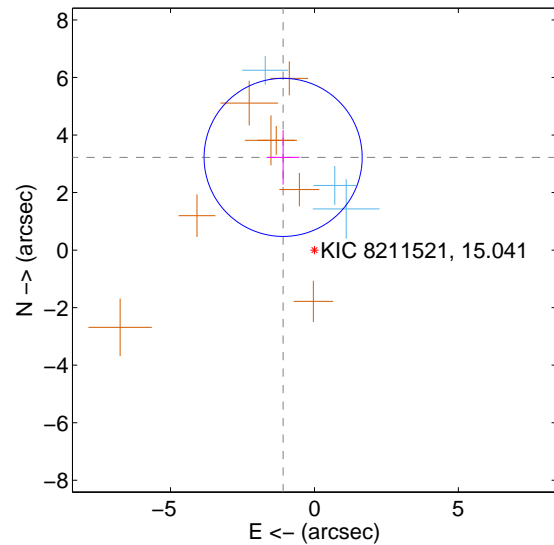
Supplemental centroid analysis for 008211521-01. Kepler magnitude: 15.04. Transit SNR 11.55

There are 3 quarters with good PRF difference image offsets

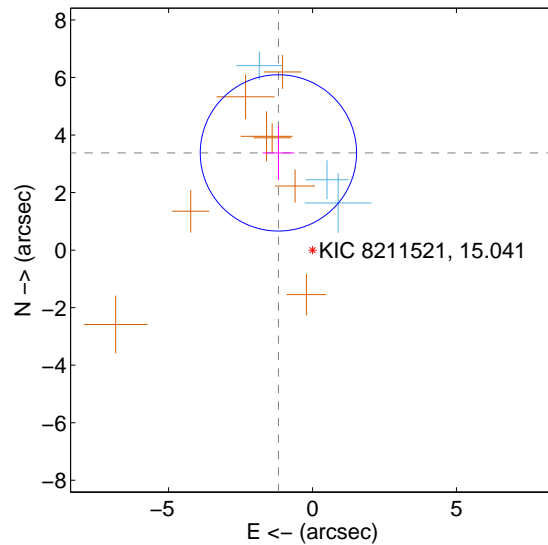
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.401 ± 0.916	3.71	1.088 ± 0.573	3.222 ± 0.947
PRF-fit source offset from KIC position	3.580 ± 0.905	3.95	1.186 ± 0.549	3.377 ± 0.940
photometric centroid source offset	3.43 ± 1.19	2.88	0.98 ± 1.22	3.29 ± 1.19

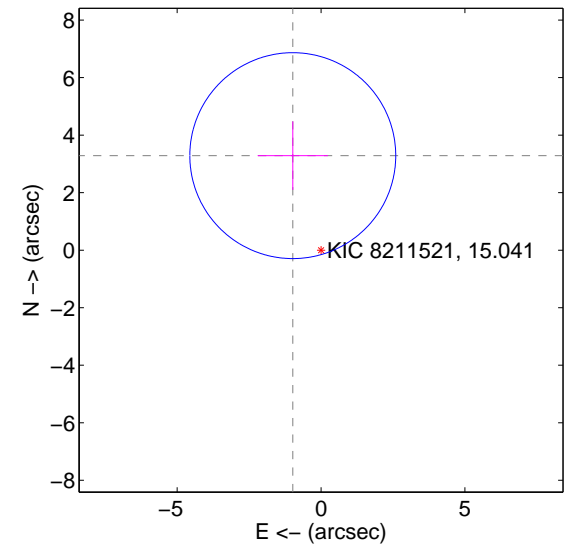
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

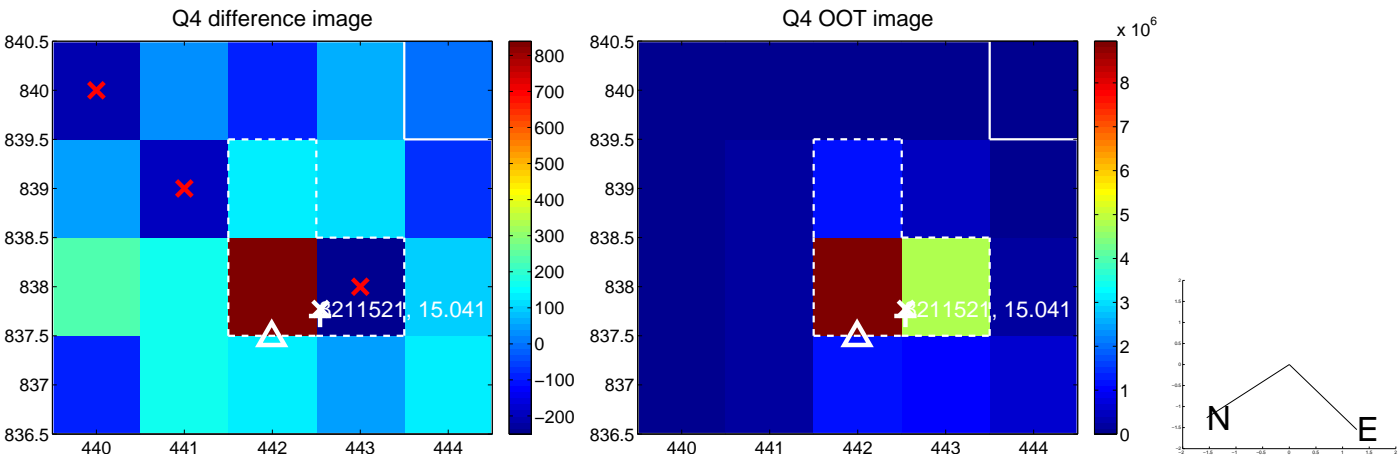
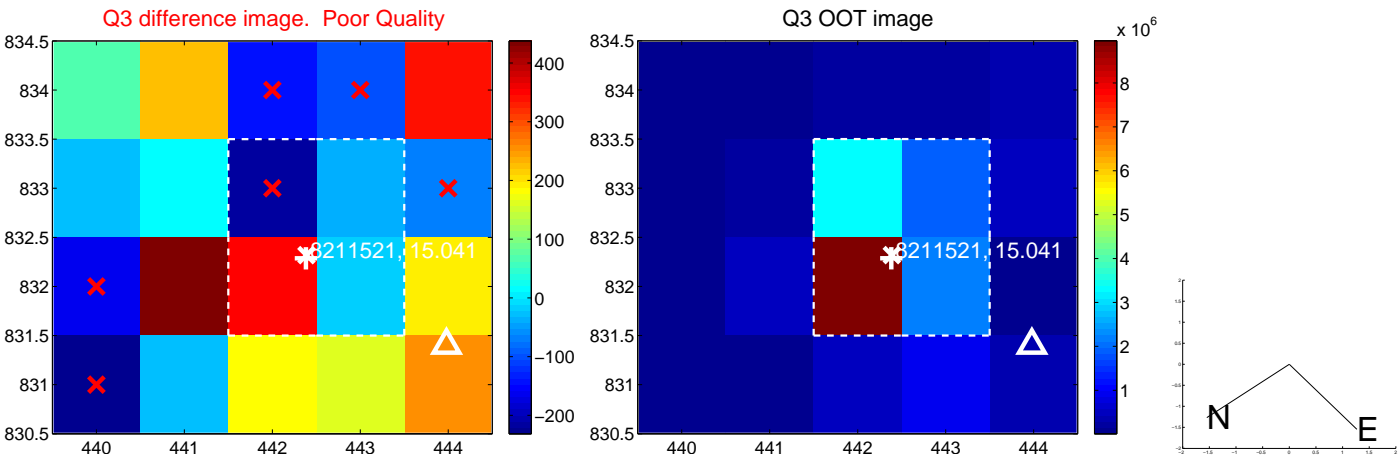
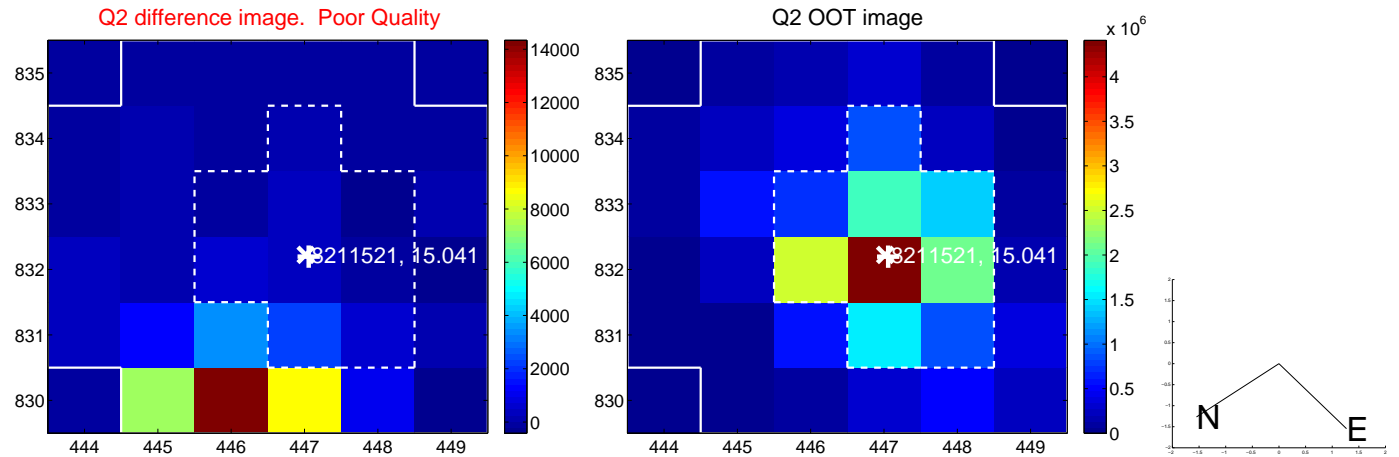
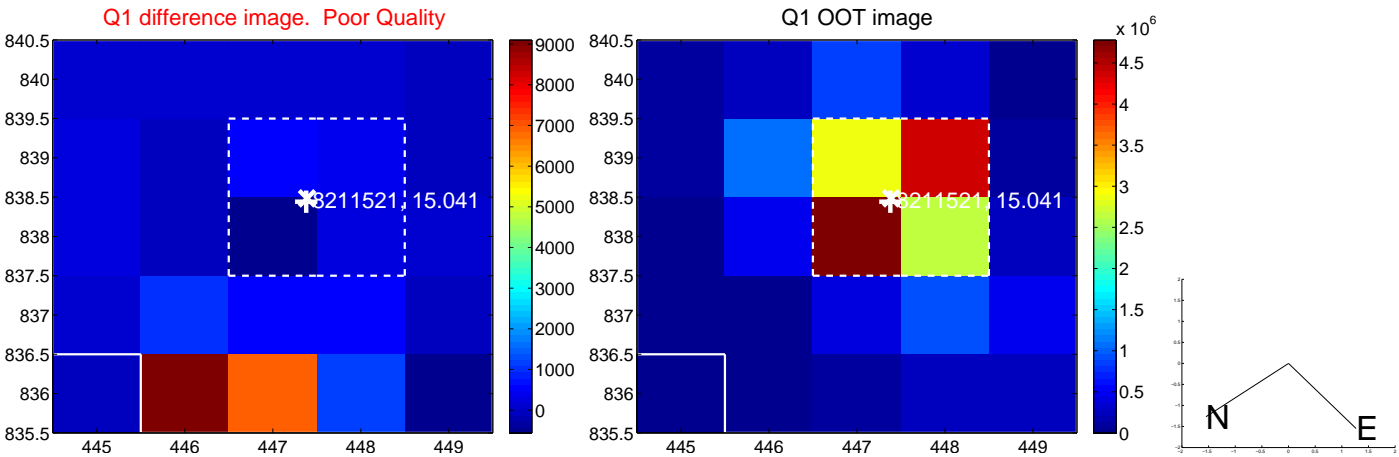


offset from photometric centroids

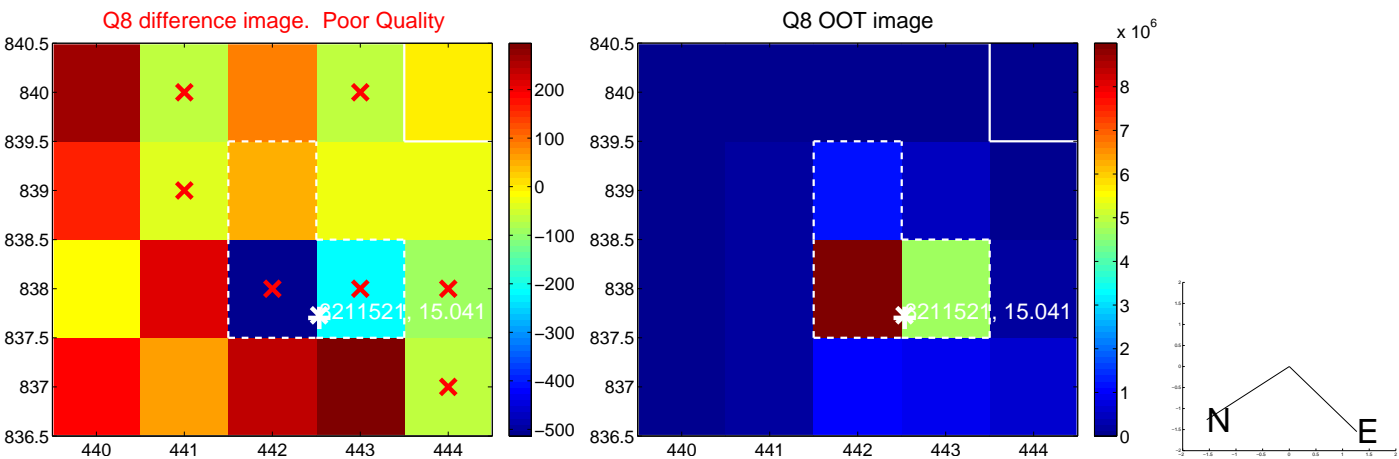
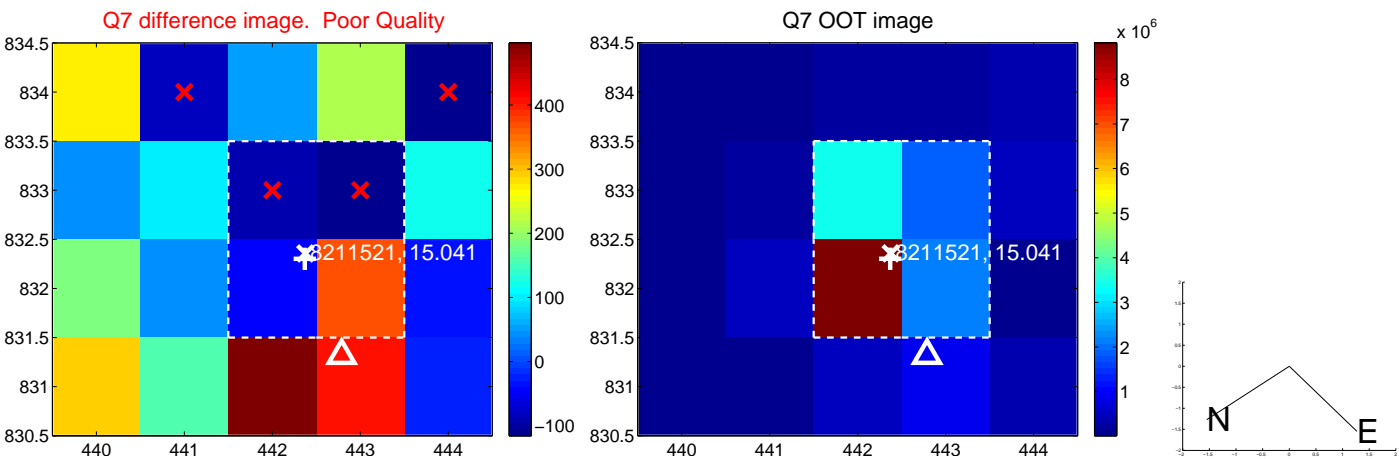
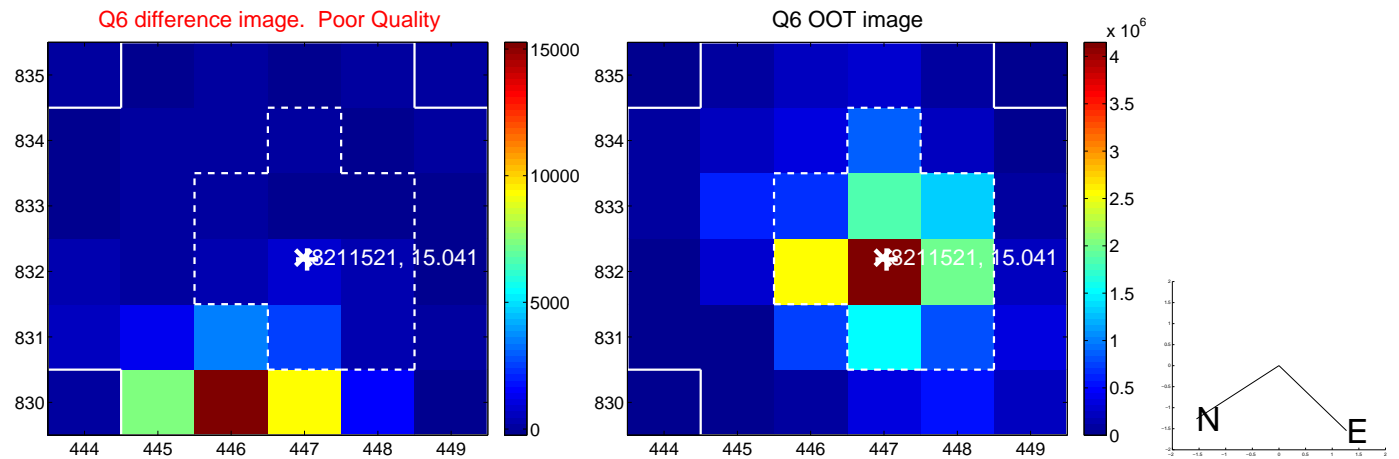
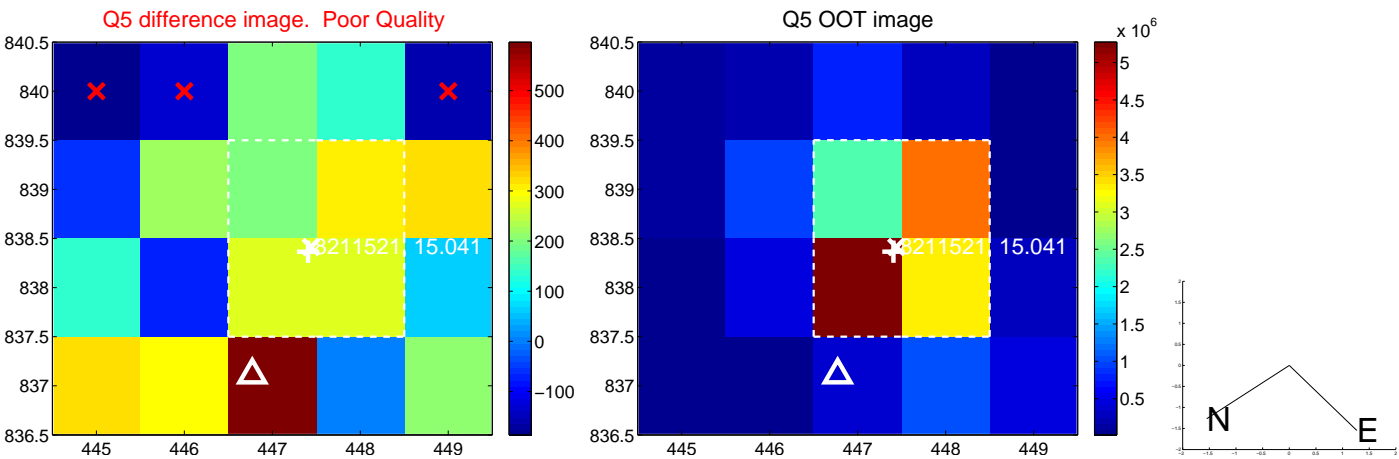


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

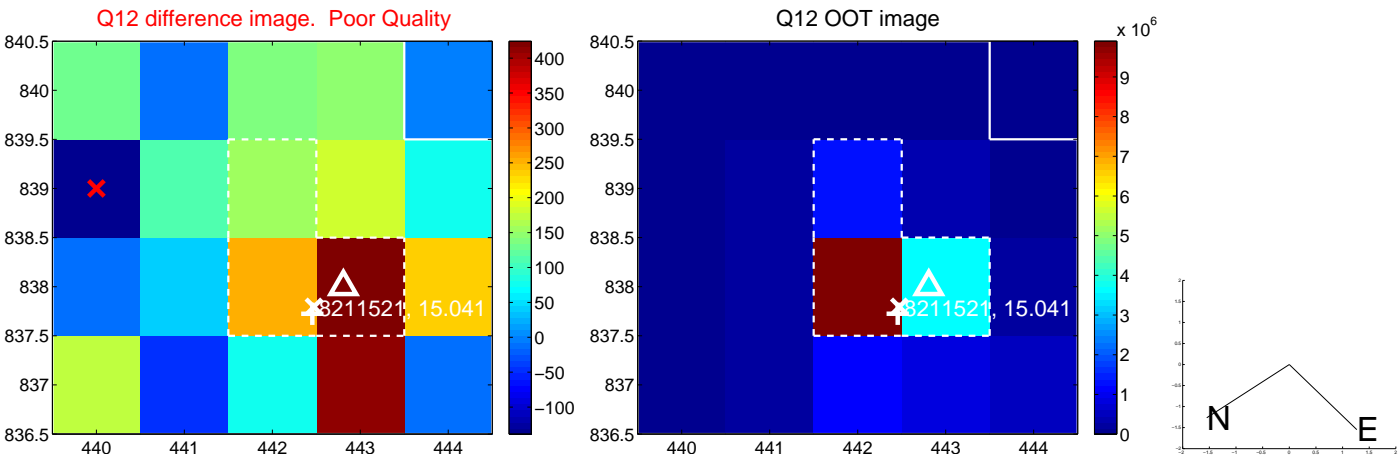
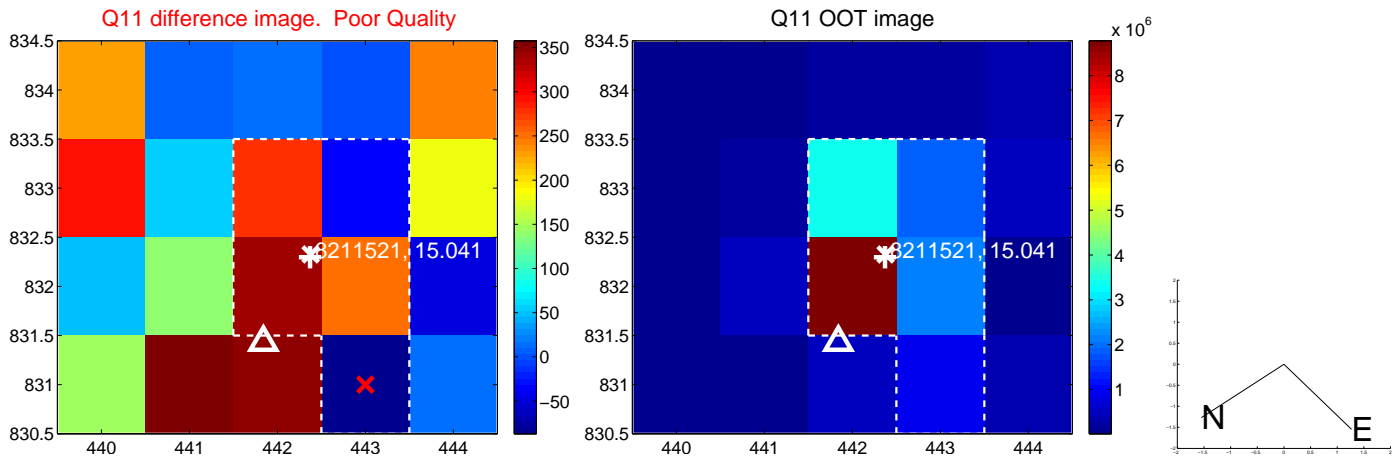
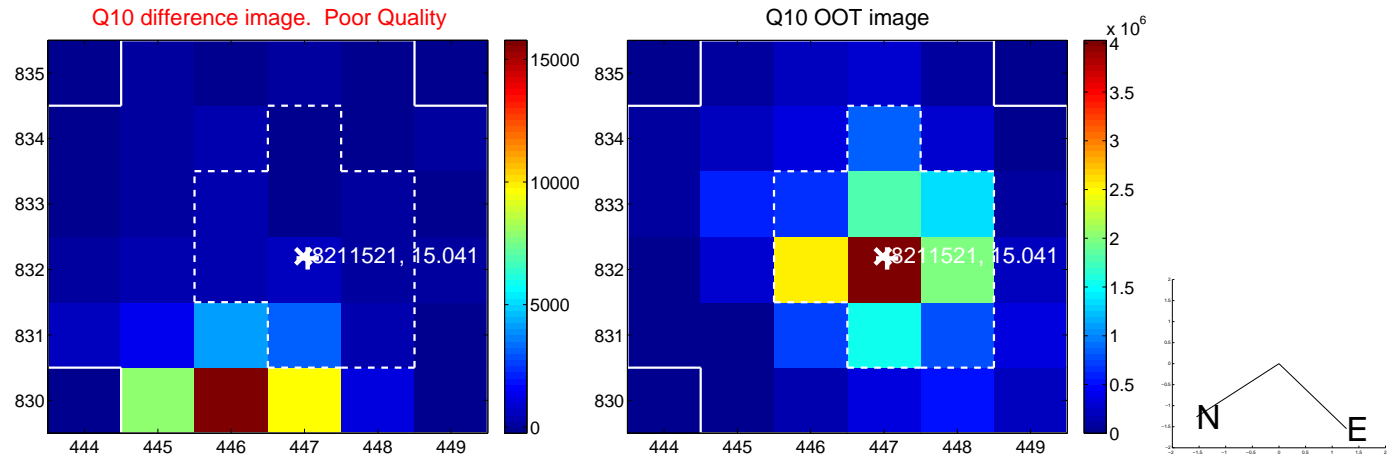
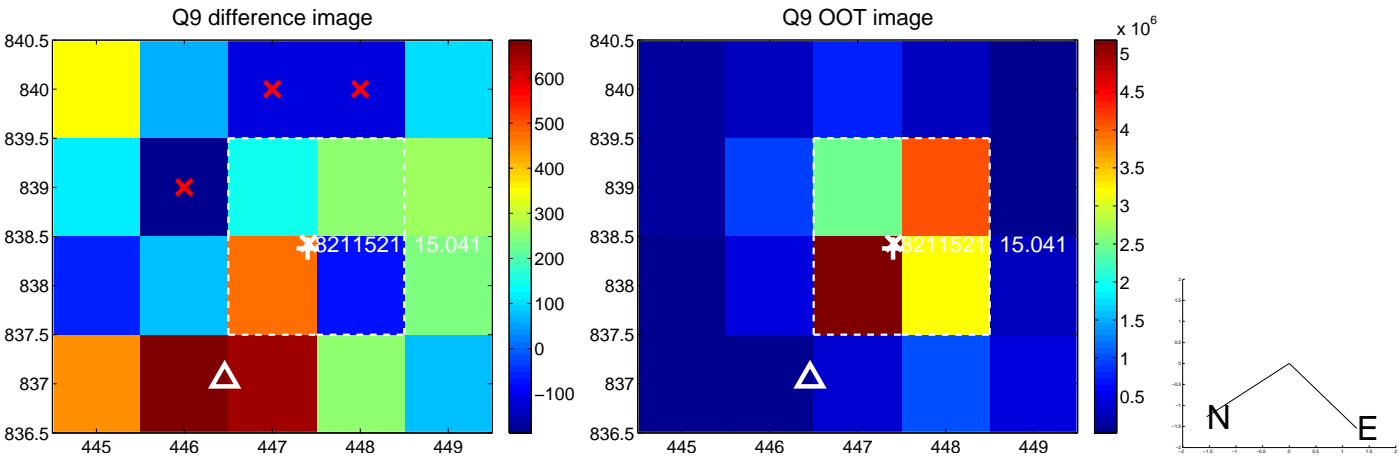
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



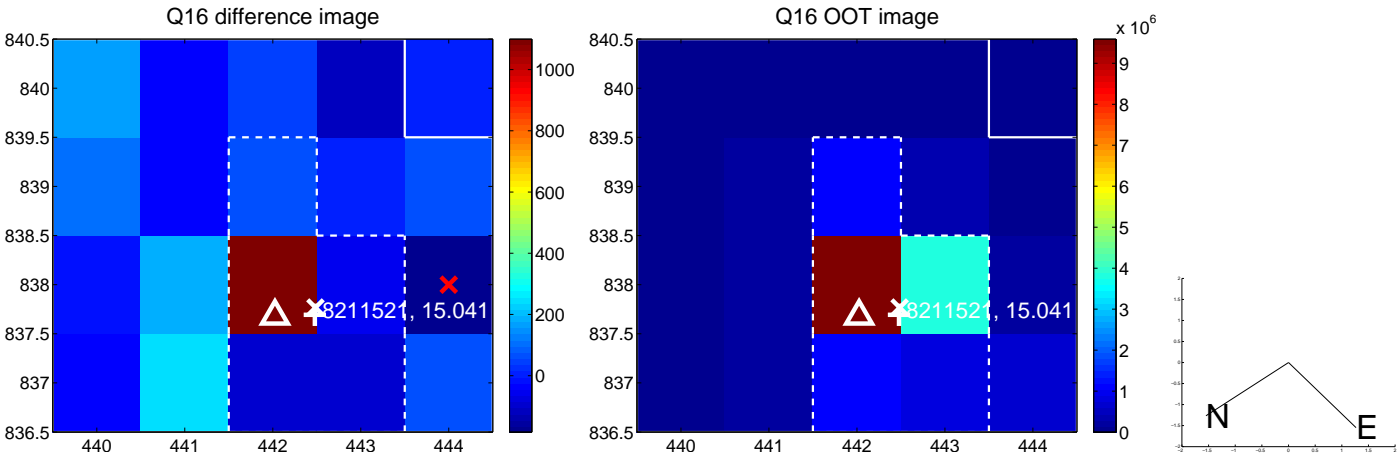
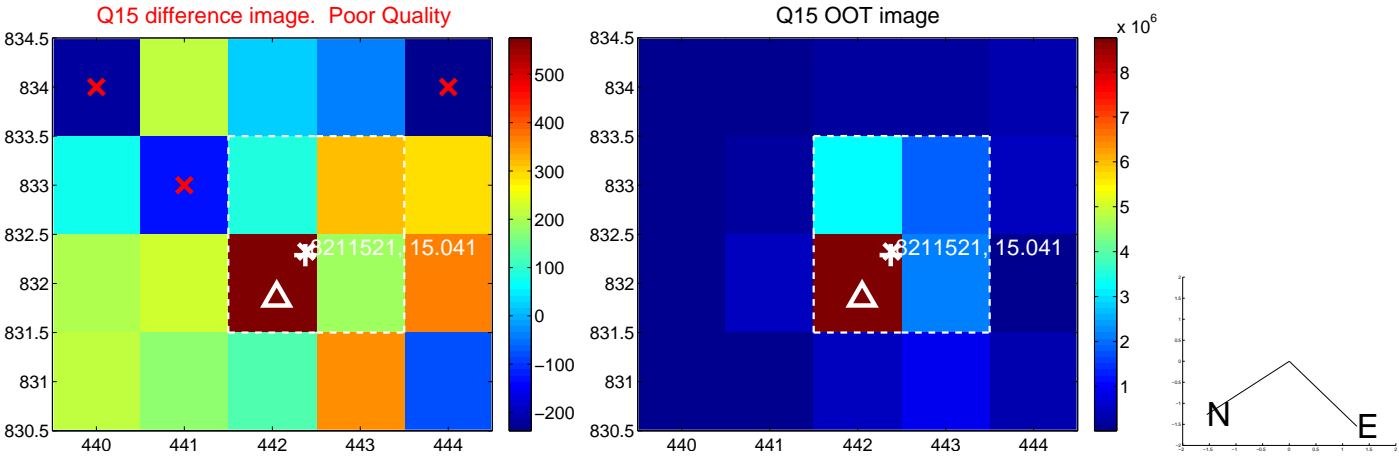
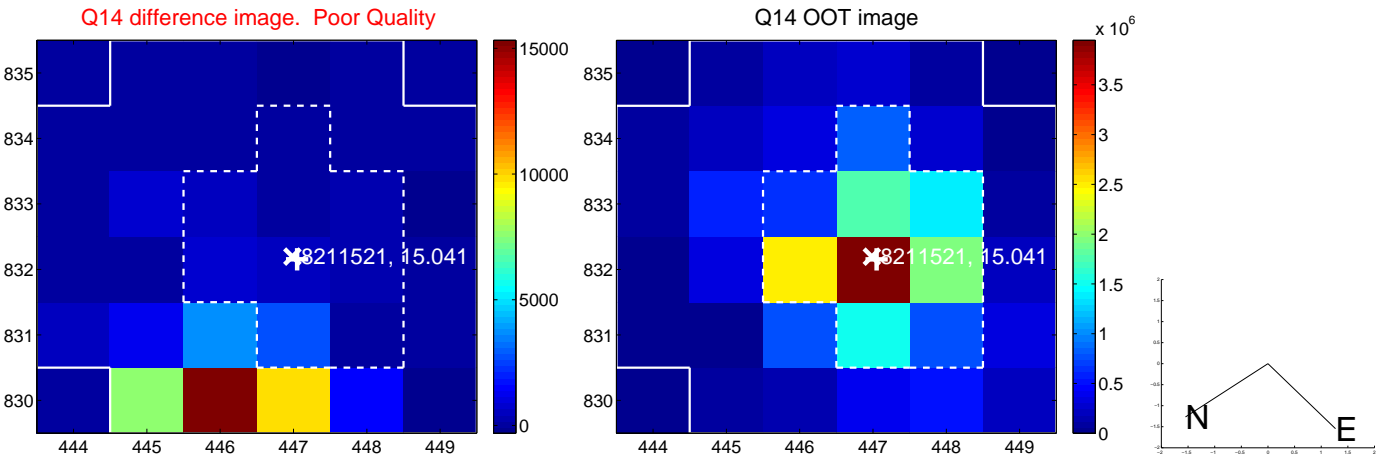
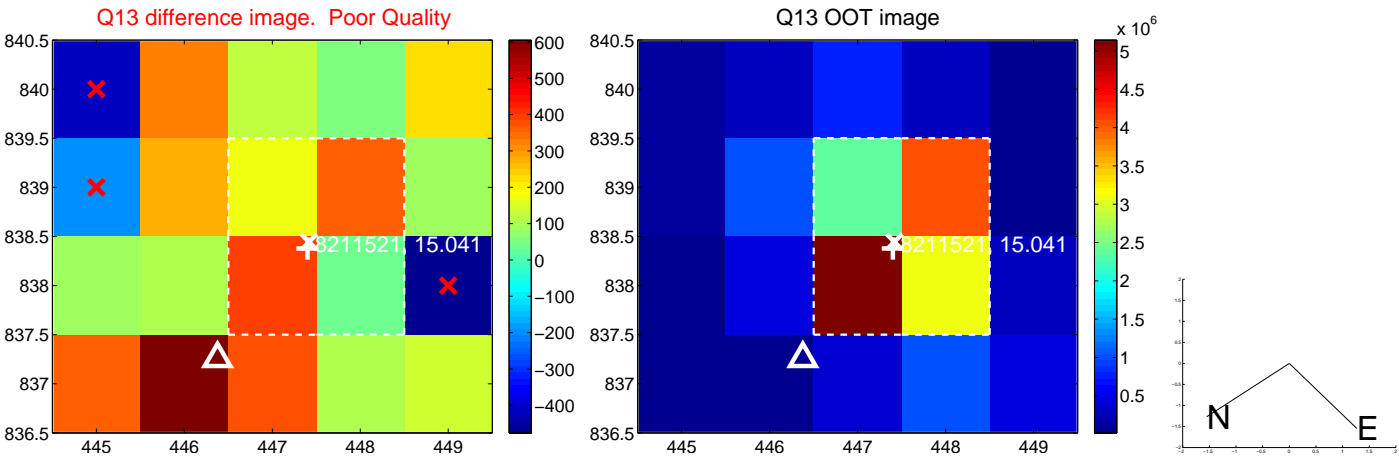
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



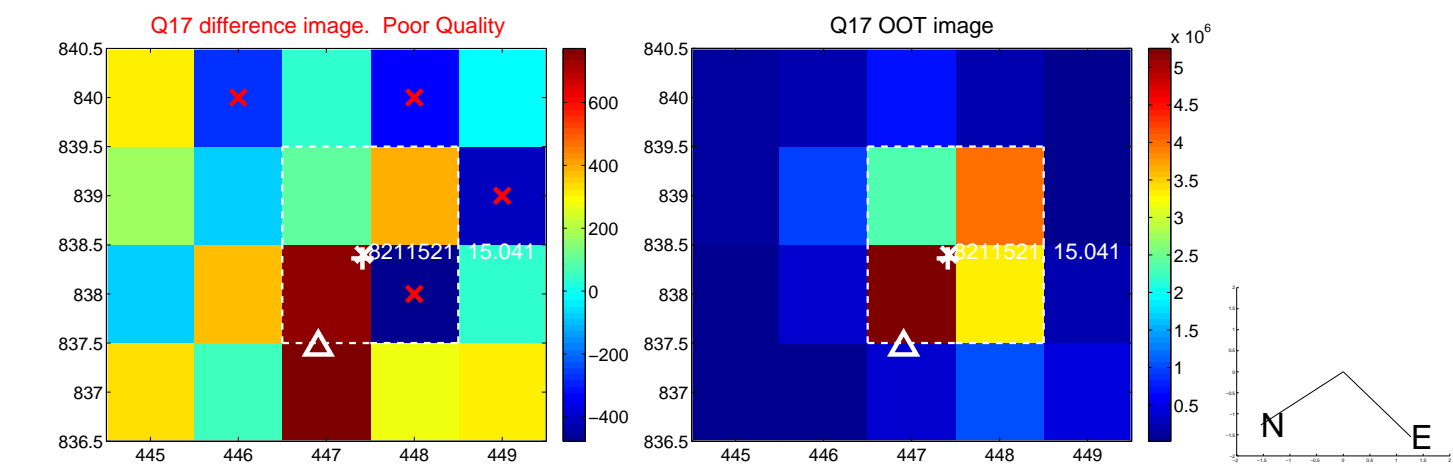
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



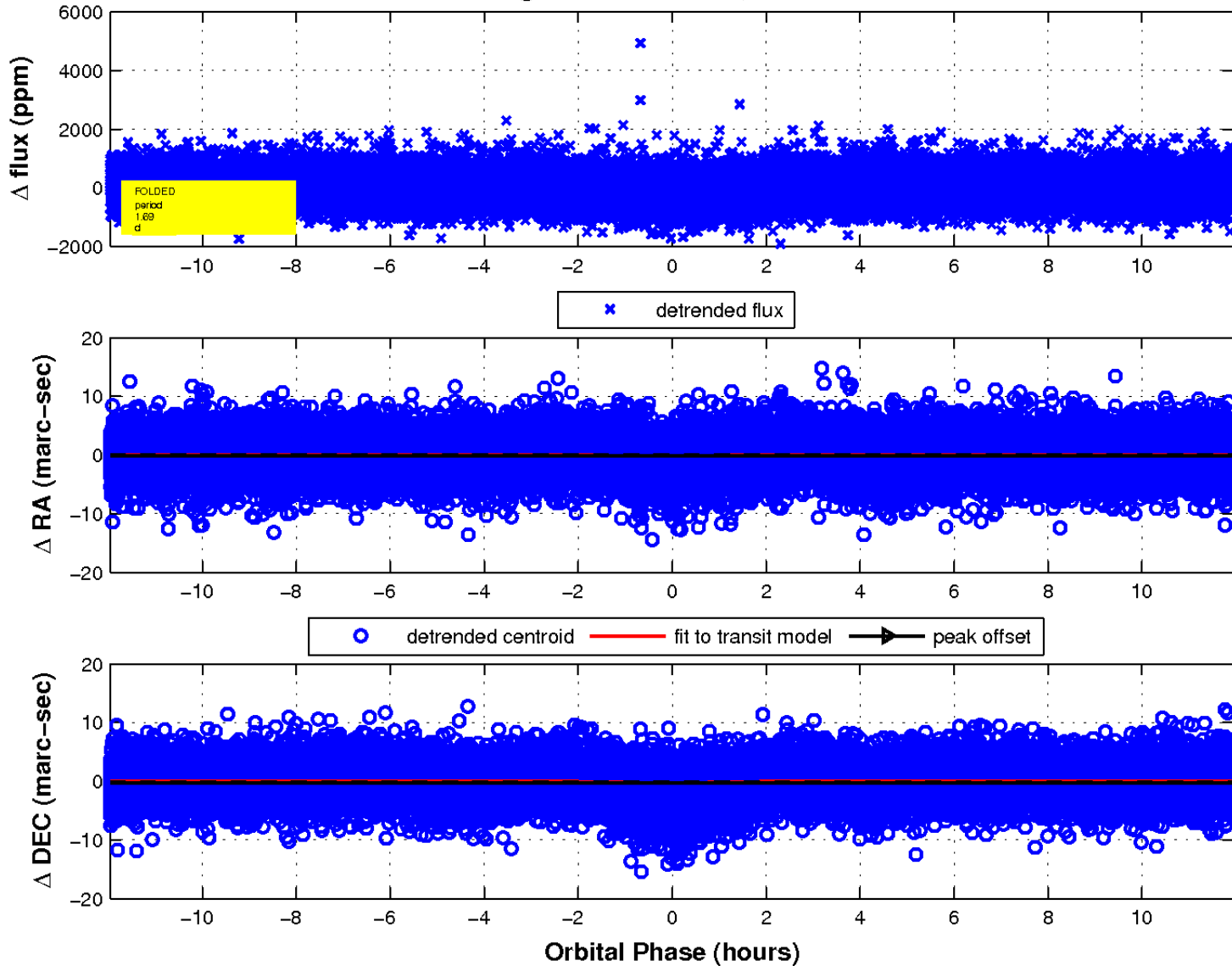
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

