

KIC 011922648

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})
011922648-01	OBS	7494.01	1.756407	132.057607	55.4	2.952	7.7	8.6	0.81	5696	0.64	825.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011922648-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH

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 011922648-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
011922648-01	11922648	7495.01	11922782	1:1	158.8	40	3	10.46	14.53	3375.30	Direct-PRF	0	2.52	1.64

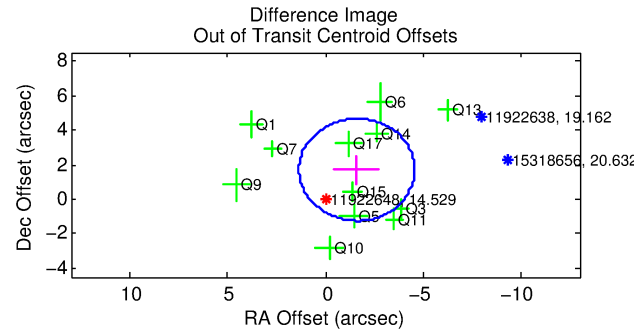
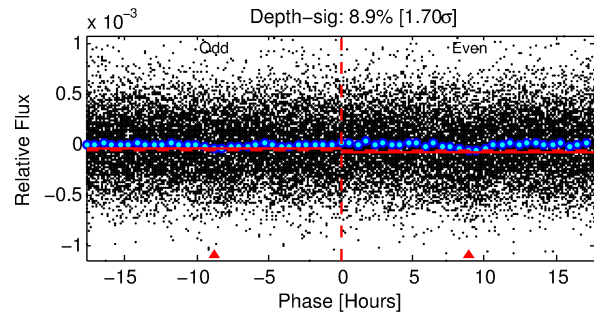
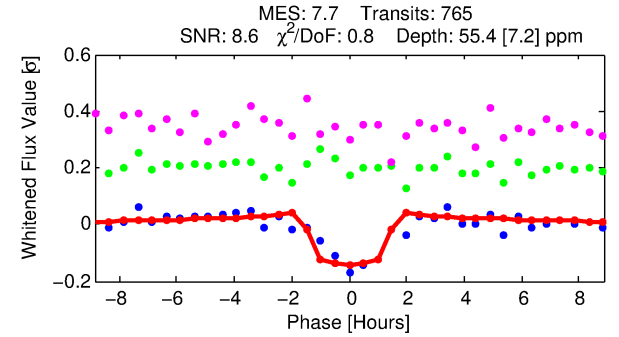
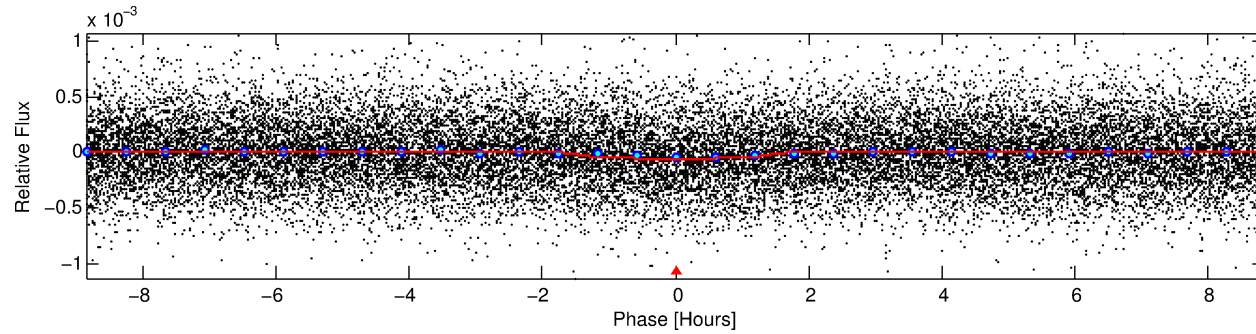
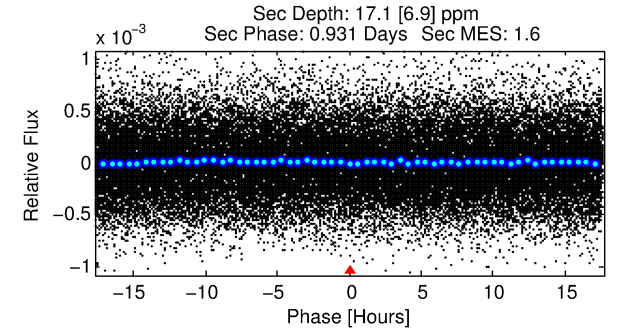
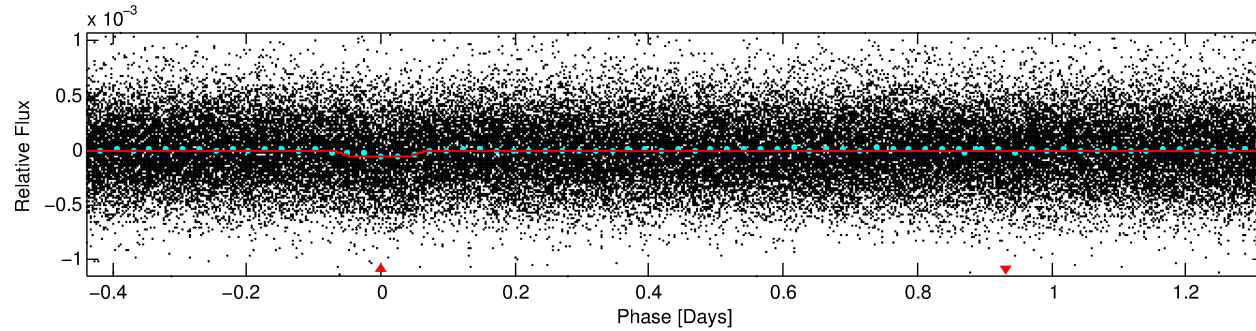
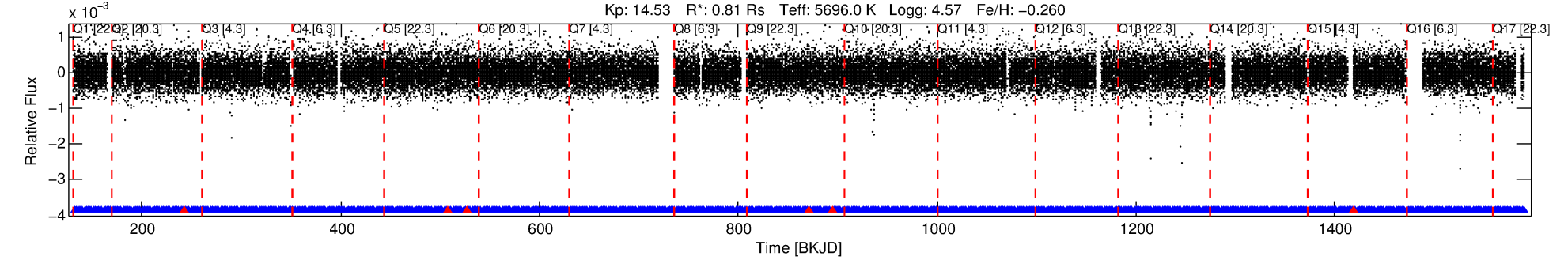
Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 11922648 Candidate: 1 of 1 Period: 1.756 d

KOI: K07494 Corr: No Ephemeris Match

Kp: 14.53 R*: 0.81 Rs Teff: 5696.0 K Logg: 4.57 Fe/H: -0.260



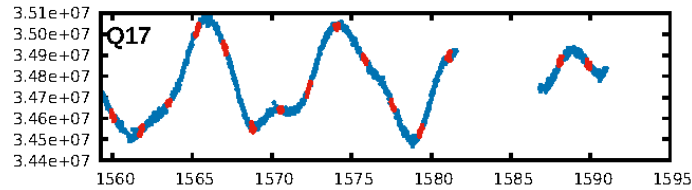
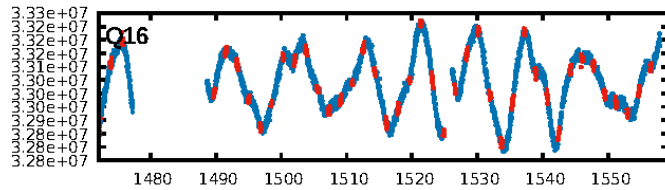
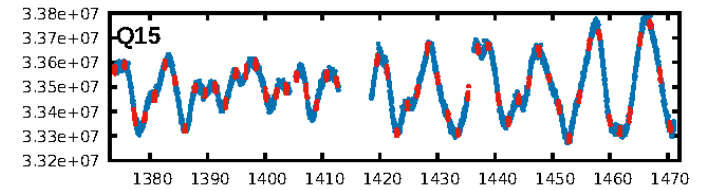
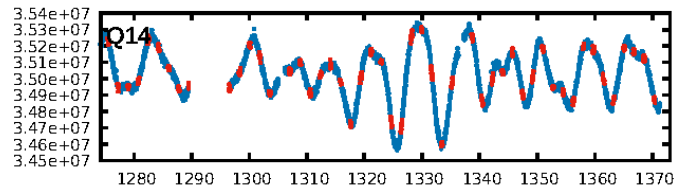
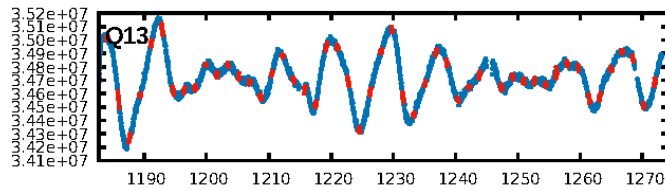
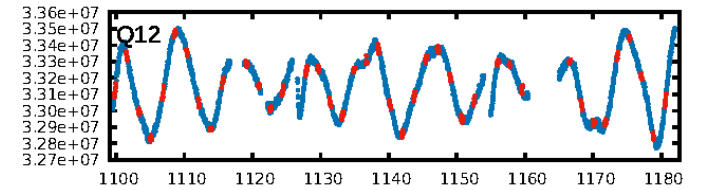
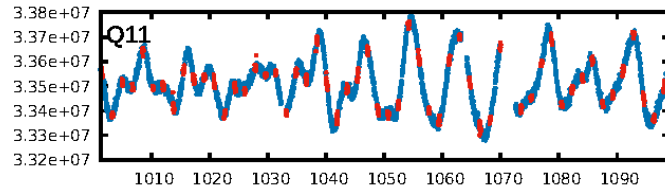
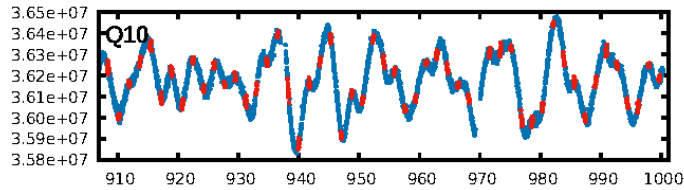
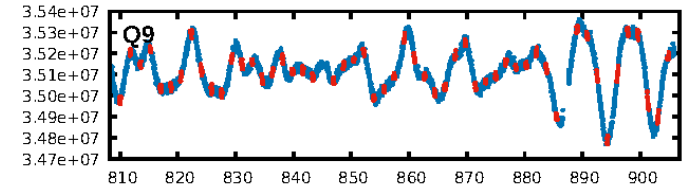
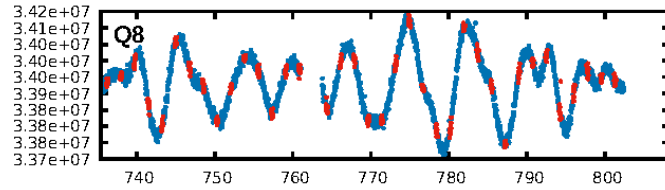
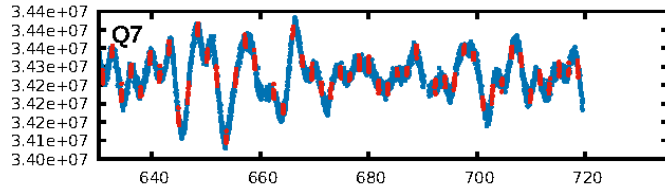
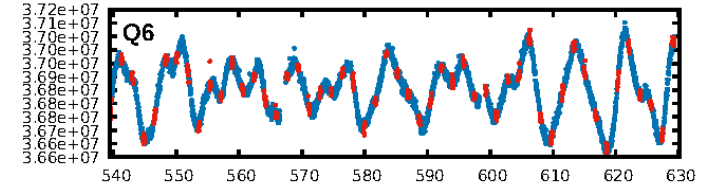
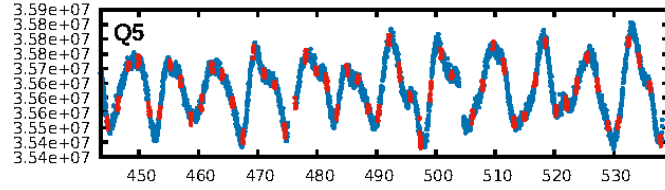
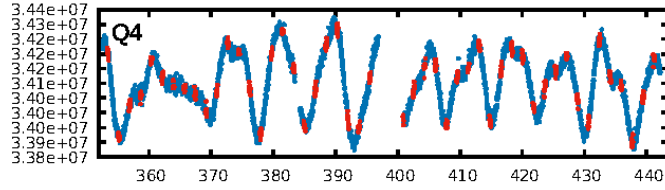
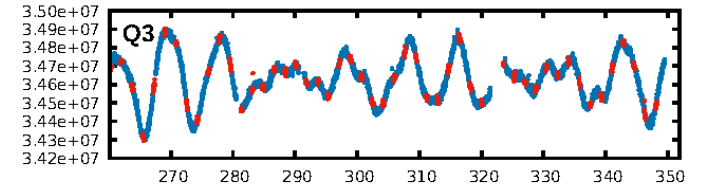
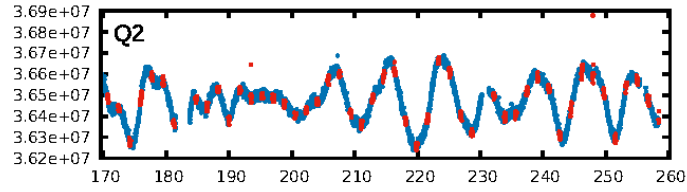
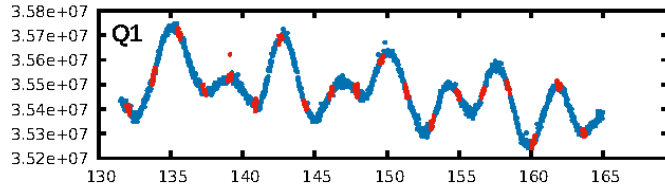
DV Fit Results:

Period = 1.75641 [0.00002] d
Epoch = 132.0576 [0.0040] BKJD
Rp/R* = 0.0072 [0.0029]
a/R* = 3.48 [5.61]
b = 0.68 [1.42]
Seff = 825.49 [283.45]
Teq = 1367 [117] K
Rp = 0.64 [0.31] Re
a = 0.0274 [0.0062] AU
Ag = 17.24 [16.34] [0.99σ]
Teffp = 4306 [965] K [3.02σ]

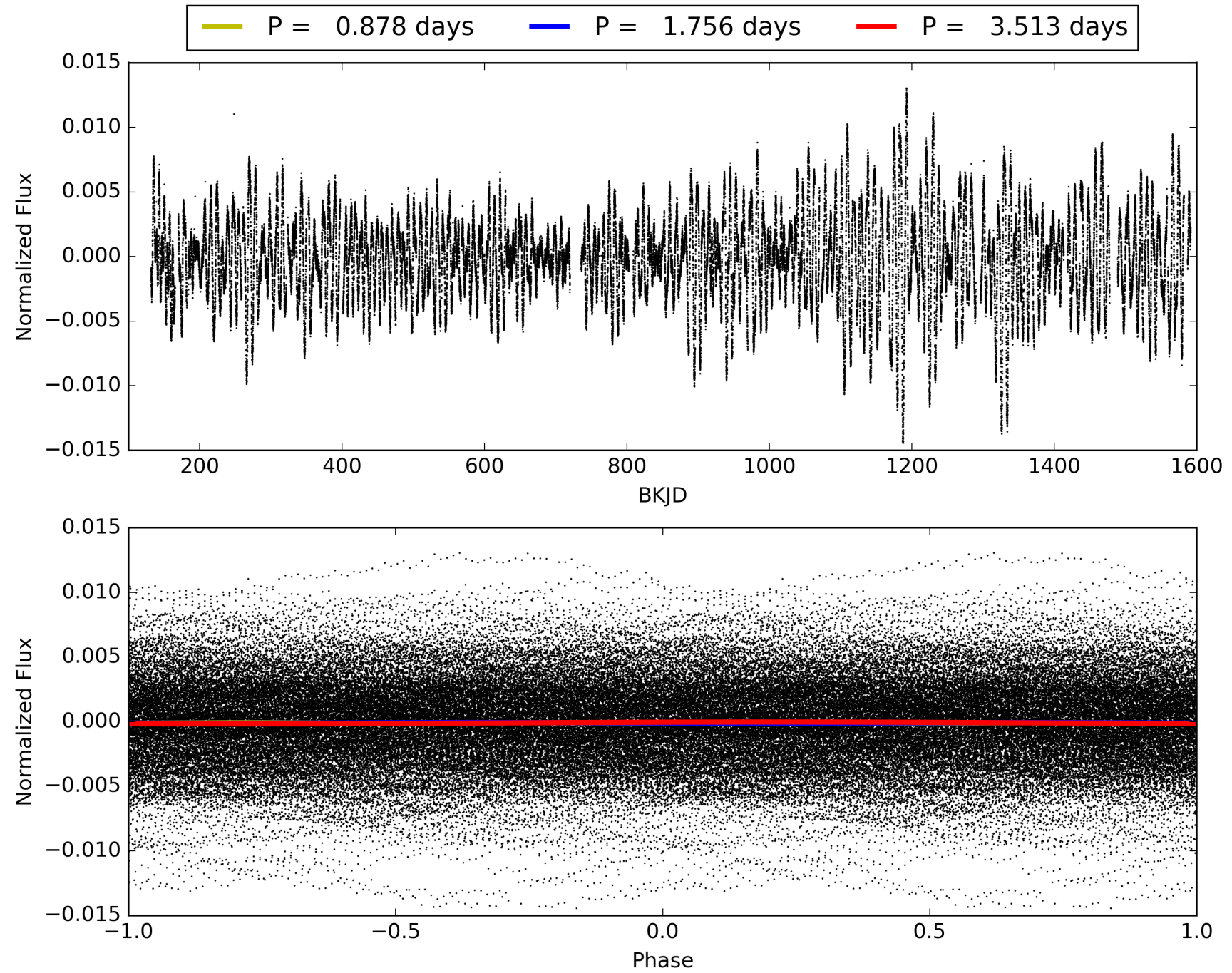
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.53e-14
RollingBand-fgt: 0.99 [725/731]
GhostDiagnostic-chr: -0.1755
Centroid-sig: 0.0%
Centroid-so: 7.158 arcsec [5.29σ]
OotOffset-rm: 2.340 arcsec [2.38σ]
KicOffset-rm: 2.538 arcsec [2.56σ]
OotOffset-st: 3/4/0/5 [12]
KicOffset-st: 3/4/0/5 [12]
DiffImageQuality-fgm: 0.08 [1/12]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011922648-01, PDC Light Curves

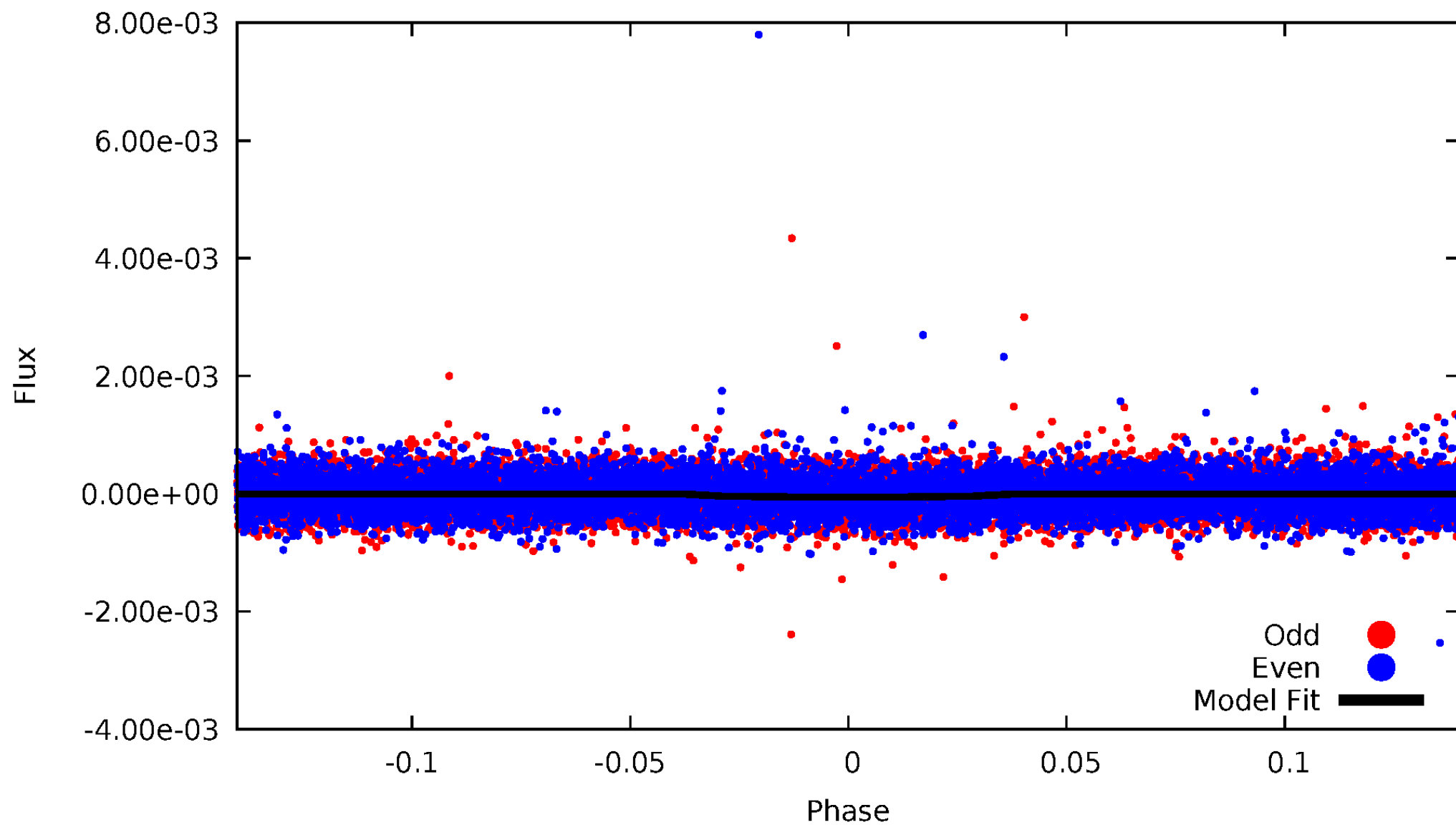


TCE 011922648-01



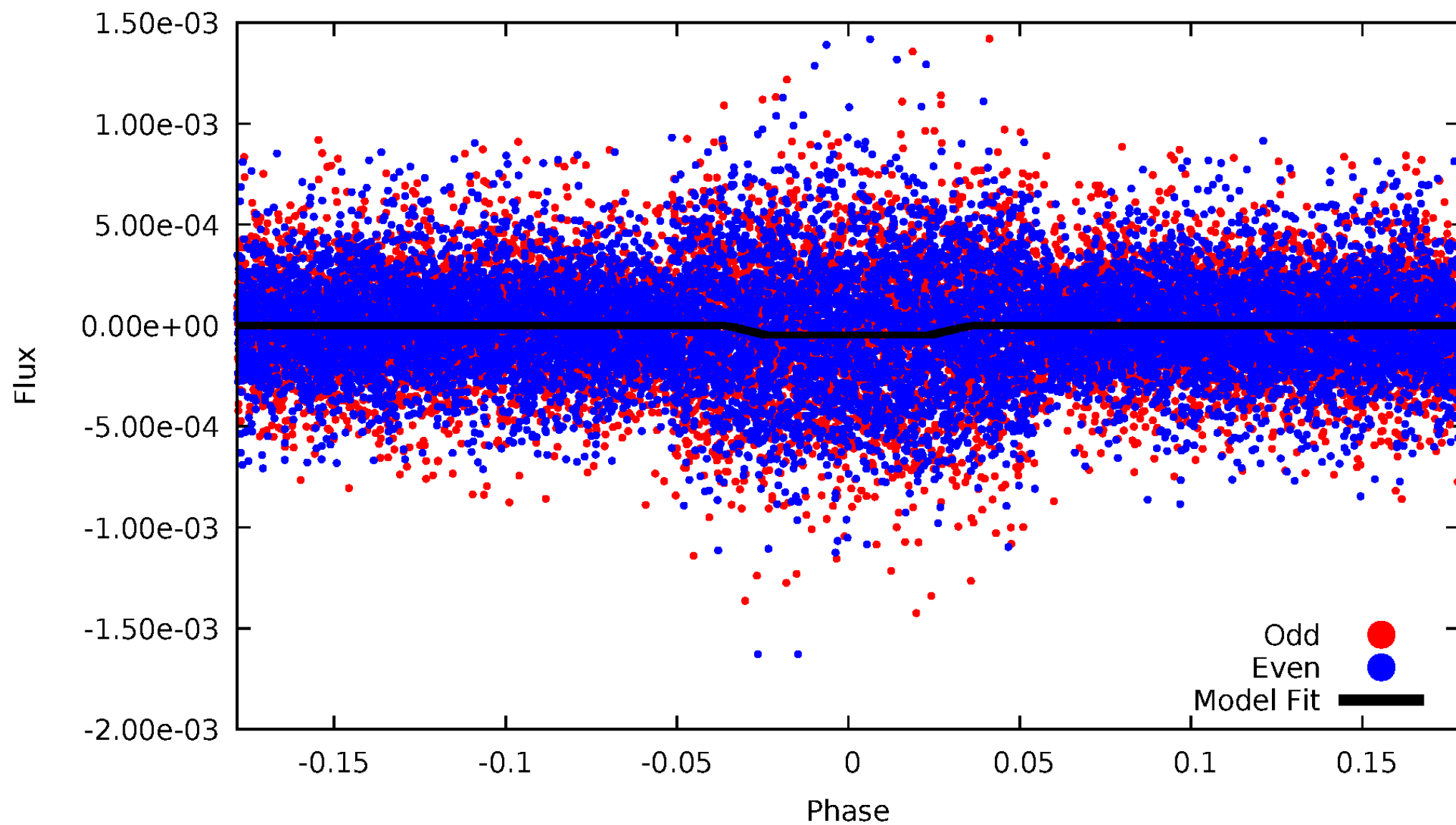
DV Odd/Even

TCE 011922648-01



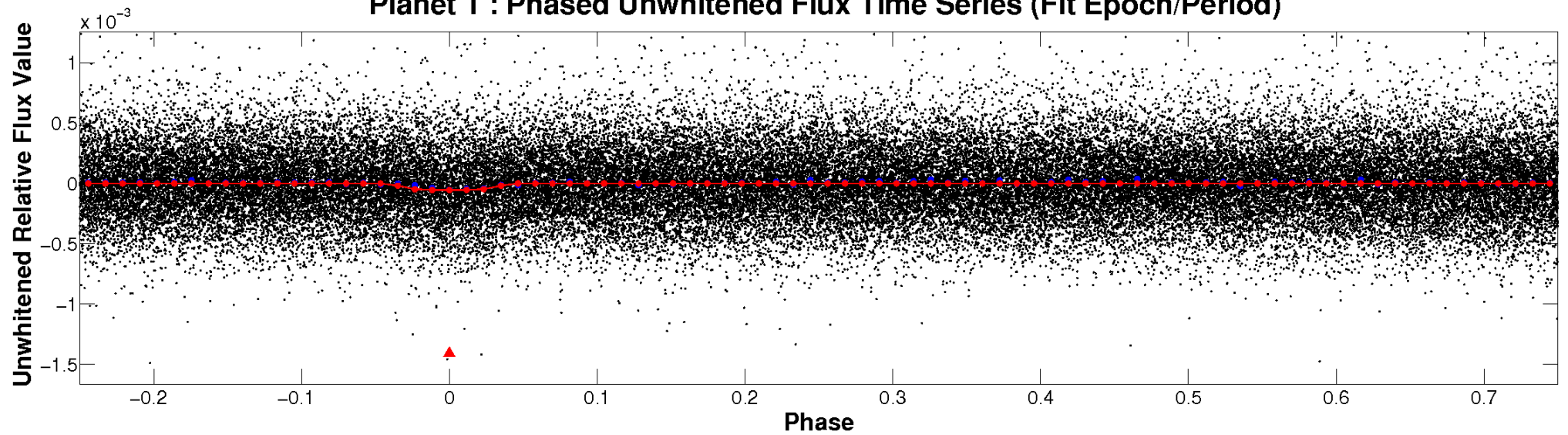
ALT Odd/Even

TCE 011922648-01

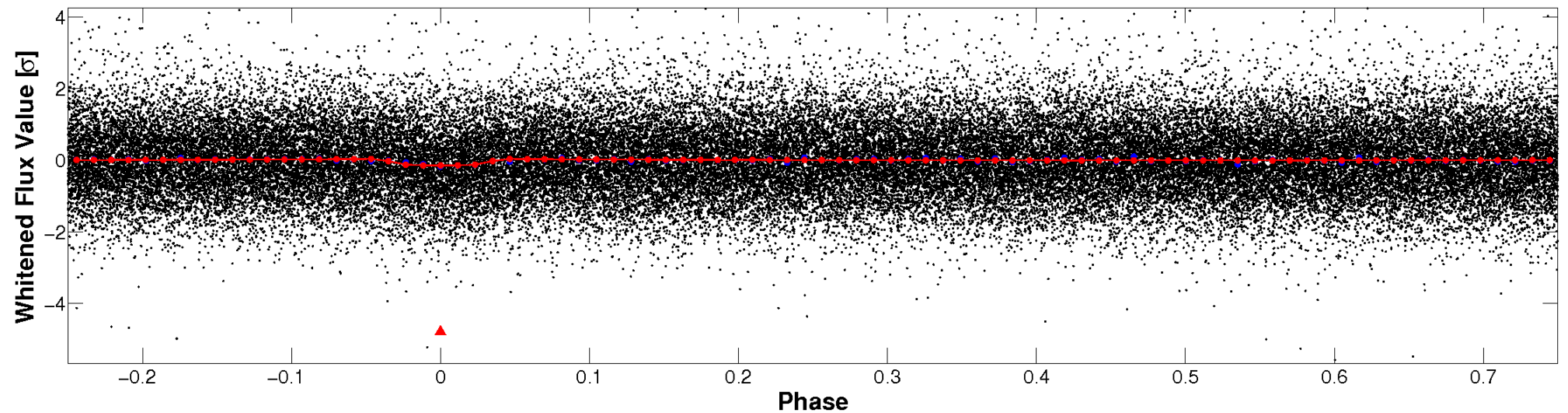


Non-Whitened Vs. Whitened Light Curve

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

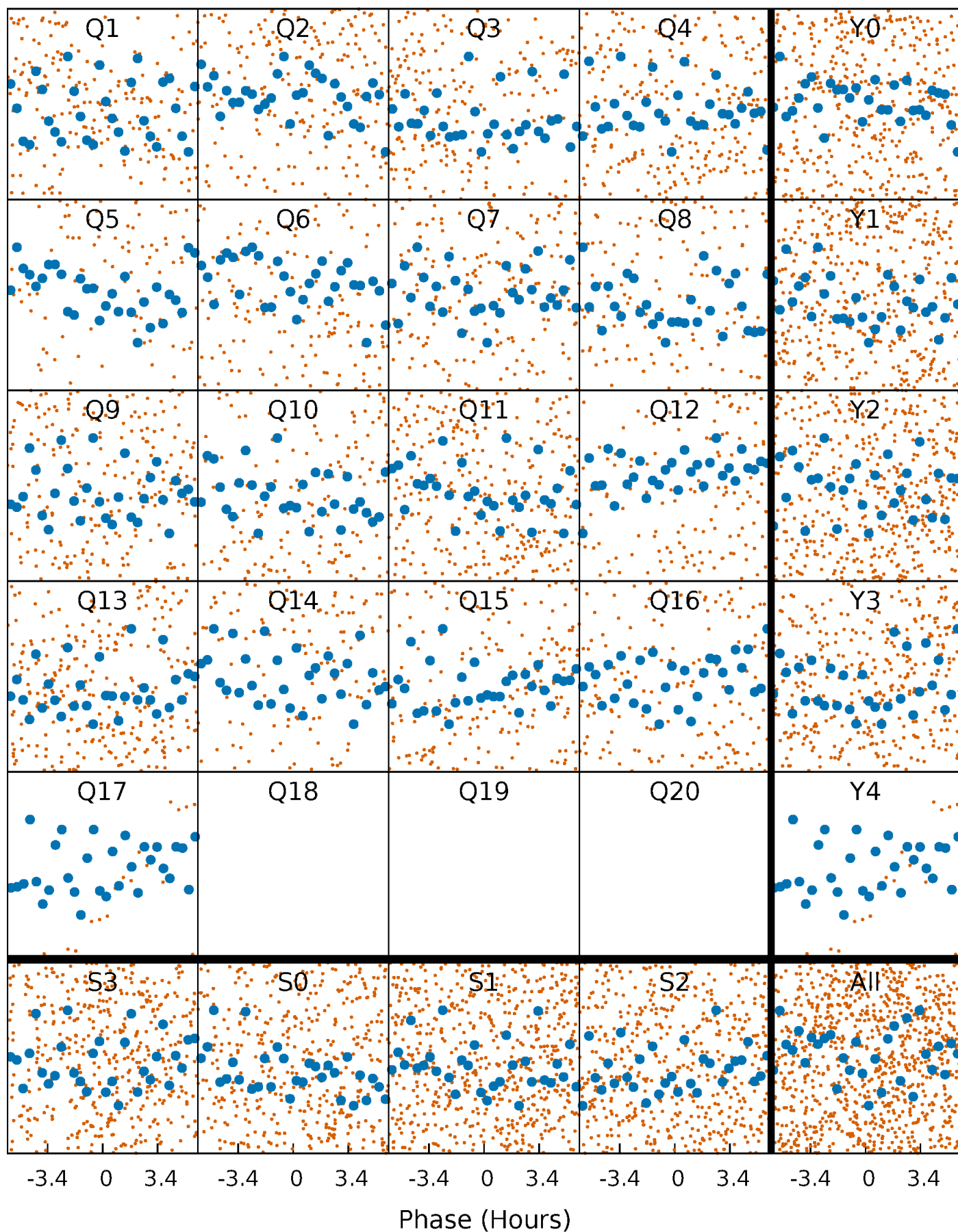


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



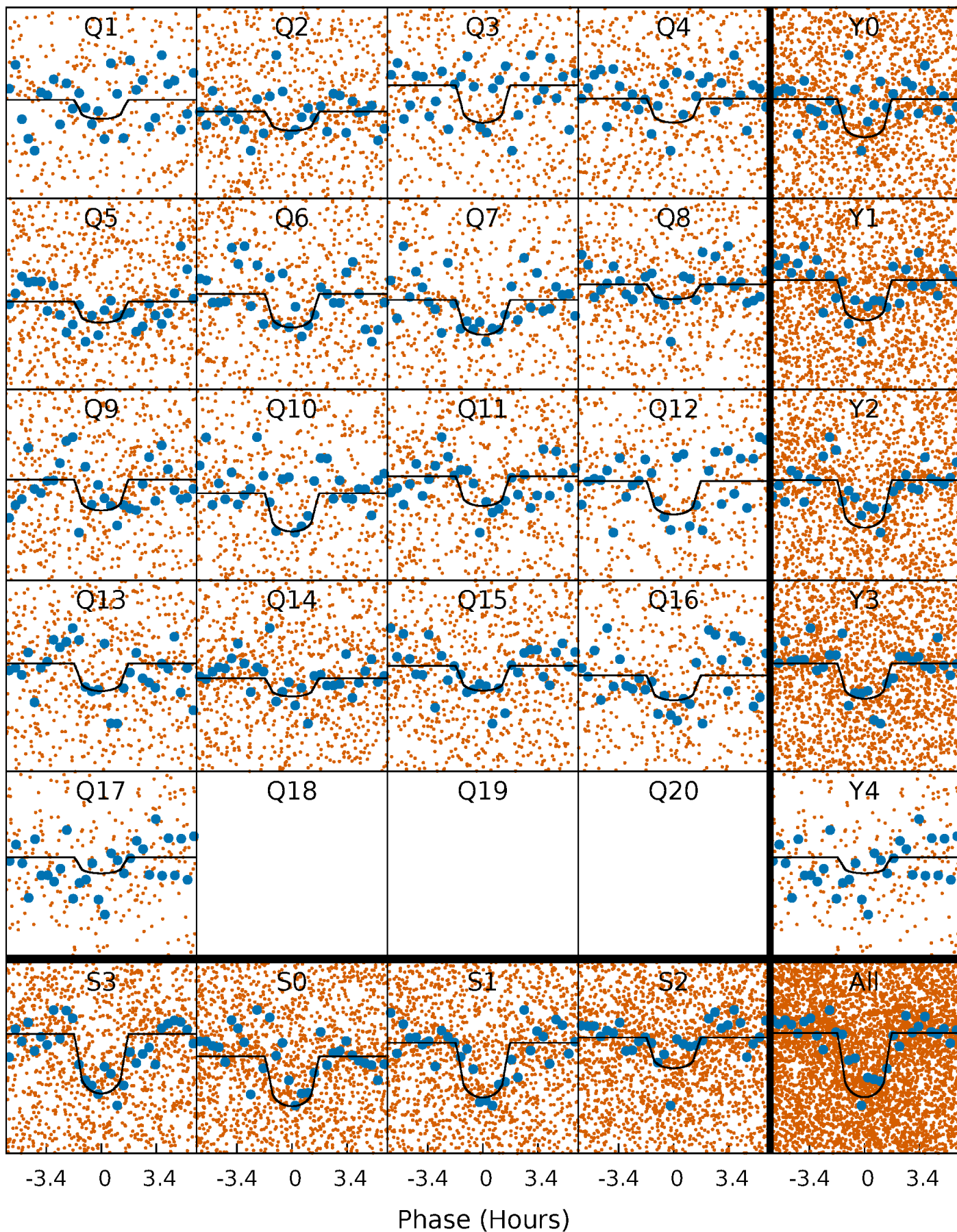
PDC Quarter-Phased Transit Curves

TCE 011922648-01 P= 1.756407 Days $T_0=132.057607$ (BKJD)



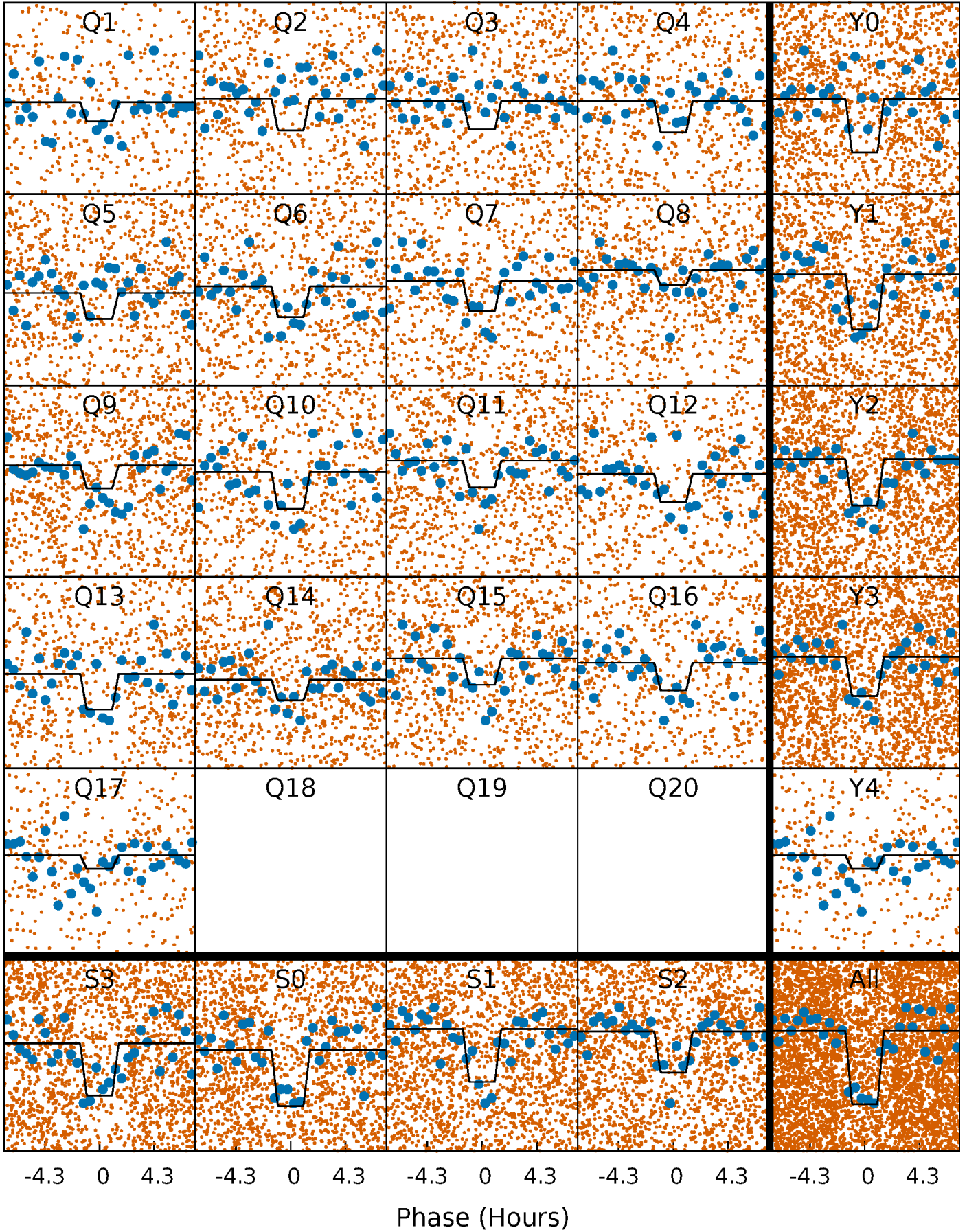
DV Quarter-Phased Transit Curves

TCE 011922648-01 P= 1.756407 Days $T_0=132.057607$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

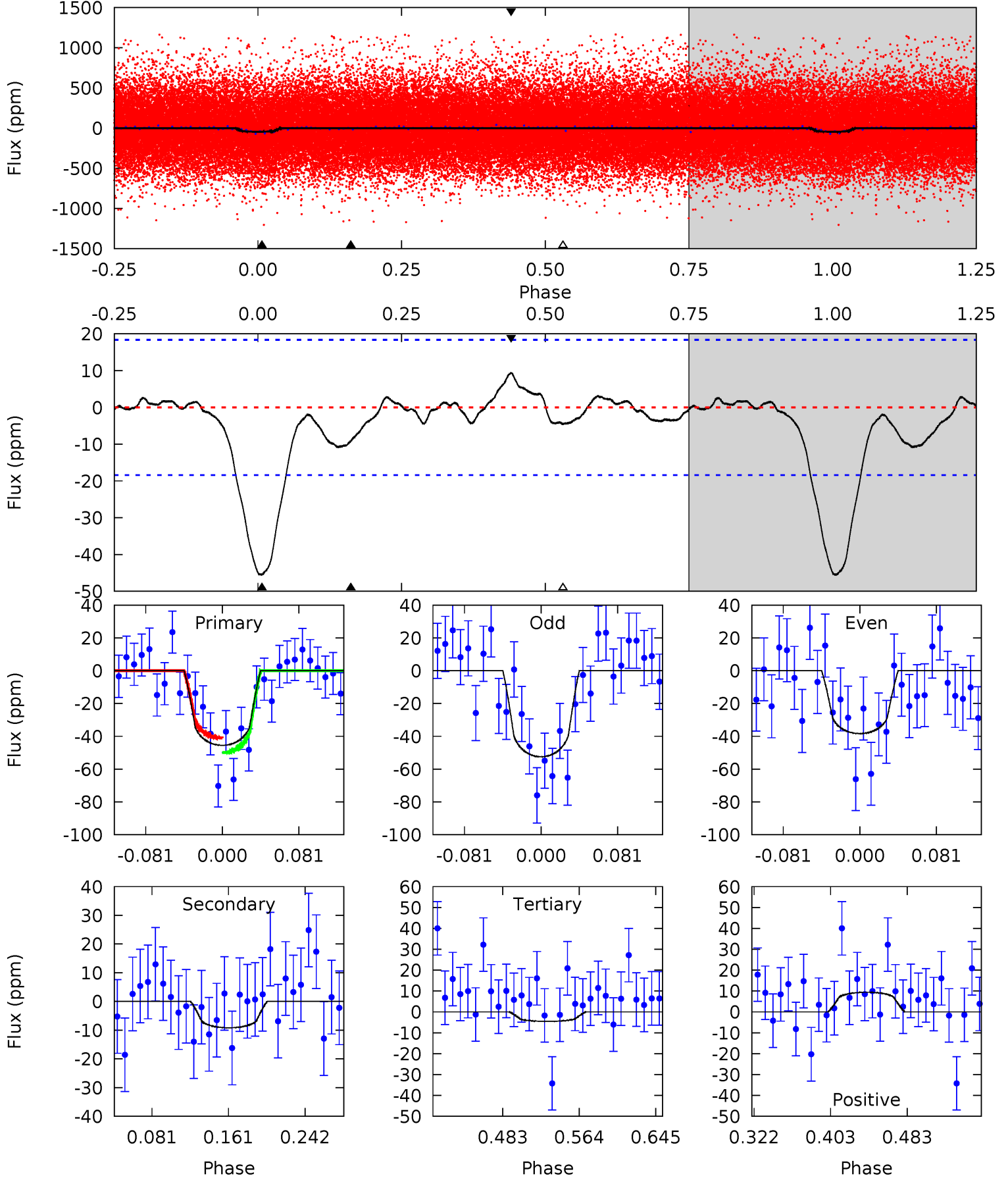
TCE 011922648-01 P= 1.756450 Days $T_0=132.040073$ (BKJD)



DV Model-Shift Uniqueness Test

011922648-01, P = 1.756407 Days, E = 130.301200 Days

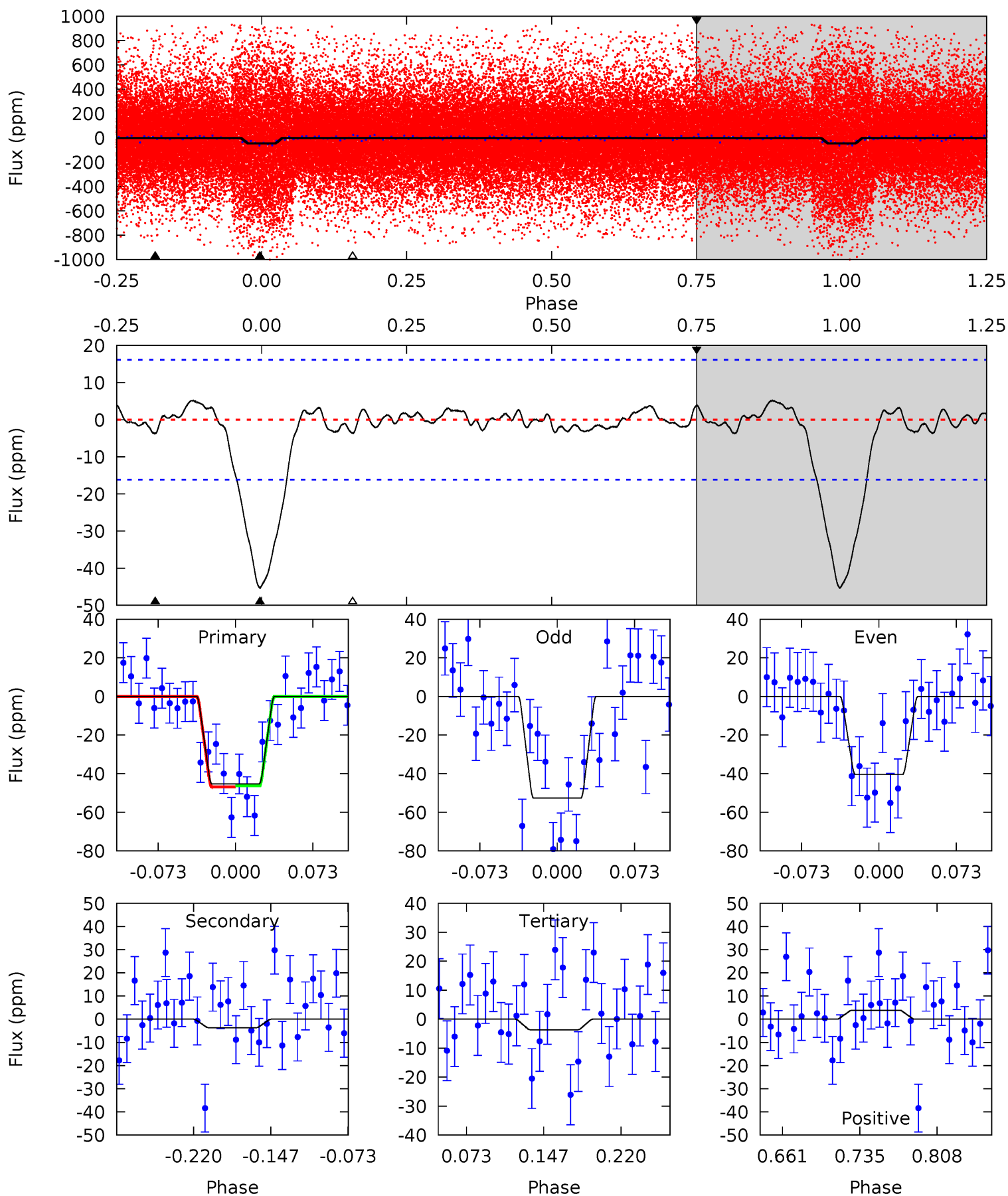
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	2.30	1.14	2.36	4.61	1.75	0.72	10.3	9.05	1.16	-0.06	1.78	0.87	0.17	1.12



Alt Model-Shift Uniqueness Test

011922648-01, P = 1.756450 Days, E = 130.283623 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	1.05	1.05	1.10	4.63	1.79	0.56	11.9	11.9	0.01	-0.05	1.76	0.98	0.10	0.08



Stellar Parameters For KIC 011922648

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5696^{+154}_{-154}	$4.570^{+0.044}_{-0.176}$	$-0.260^{+0.300}_{-0.300}$	$0.812^{+0.222}_{-0.069}$	$0.902^{+0.099}_{-0.099}$	$2.373^{+0.418}_{-1.135}$
	+3%/-3%	+1%/-4%	+115%/-115%	+27%/-8%	+11%/-11%	+18%/-48%
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 011922648-01 / KOI 7494.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-9 ± 4	$0.67^{+0.27}_{-0.27}$	1945^{+118}_{-83}	3950^{+865}_{-574}	$8.303^{+15.227}_{-5.118}$
Alt.	-4 ± 3	$0.64^{+0.26}_{-0.29}$	1943^{+124}_{-81}	3388^{+942}_{-1106}	$3.320^{+10.099}_{-2.852}$

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 $A_{obs} \gg 1.0$

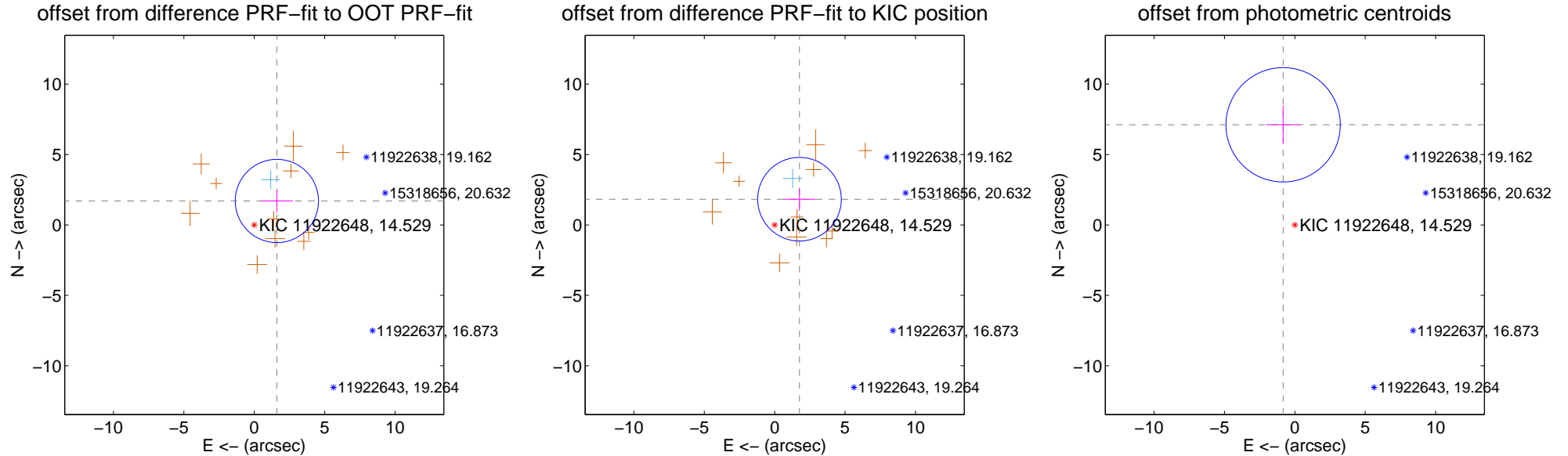
DV Centroid Data

Supplemental centroid analysis for 011922648-01. Kepler magnitude: 14.53. Transit SNR 8.57

There are 1 quarters with good PRF difference image offsets

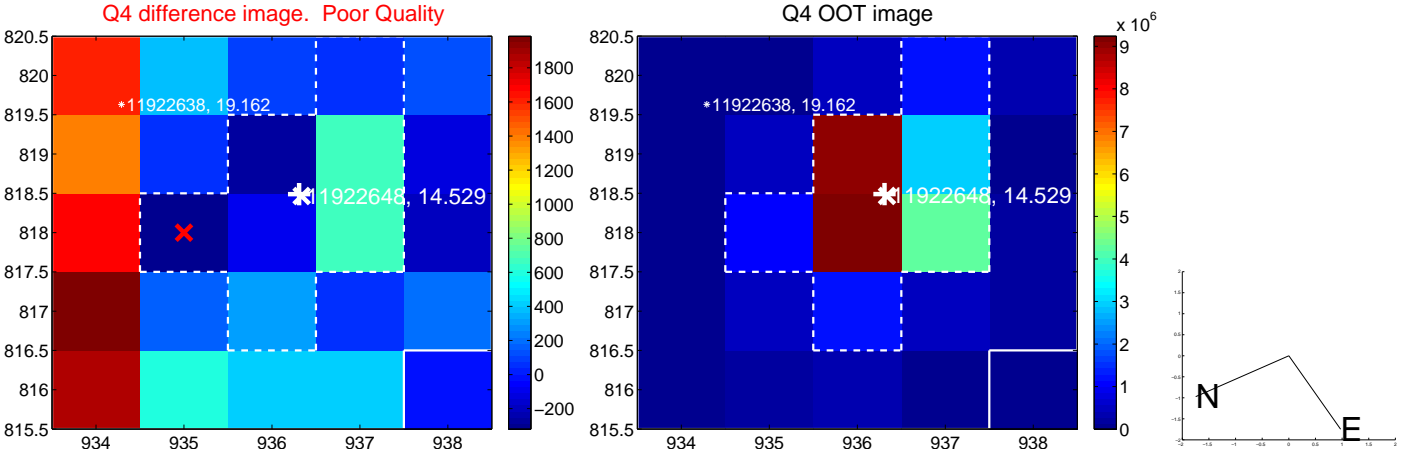
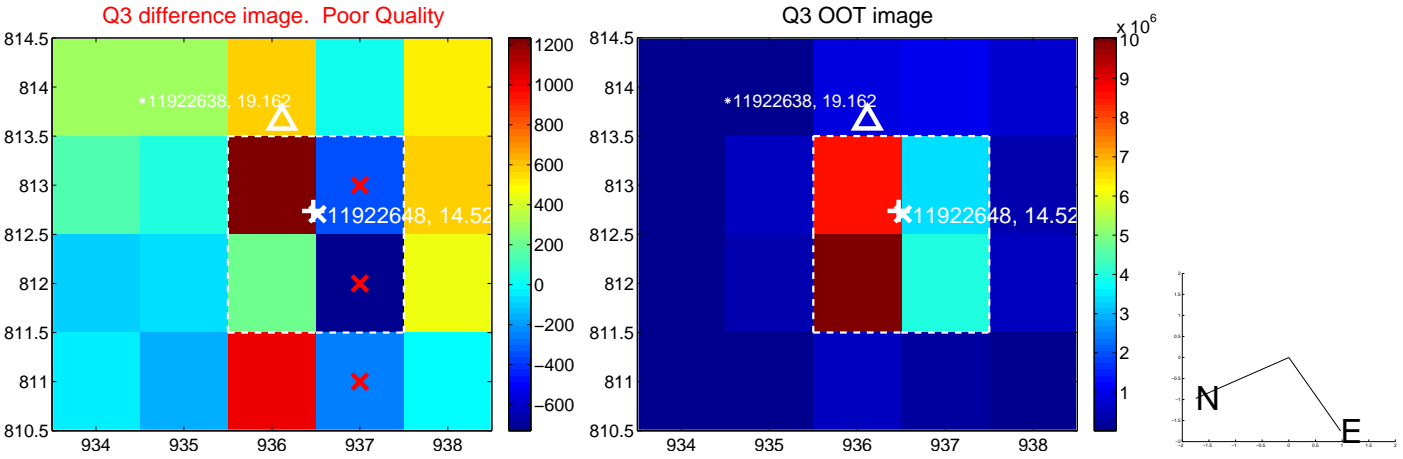
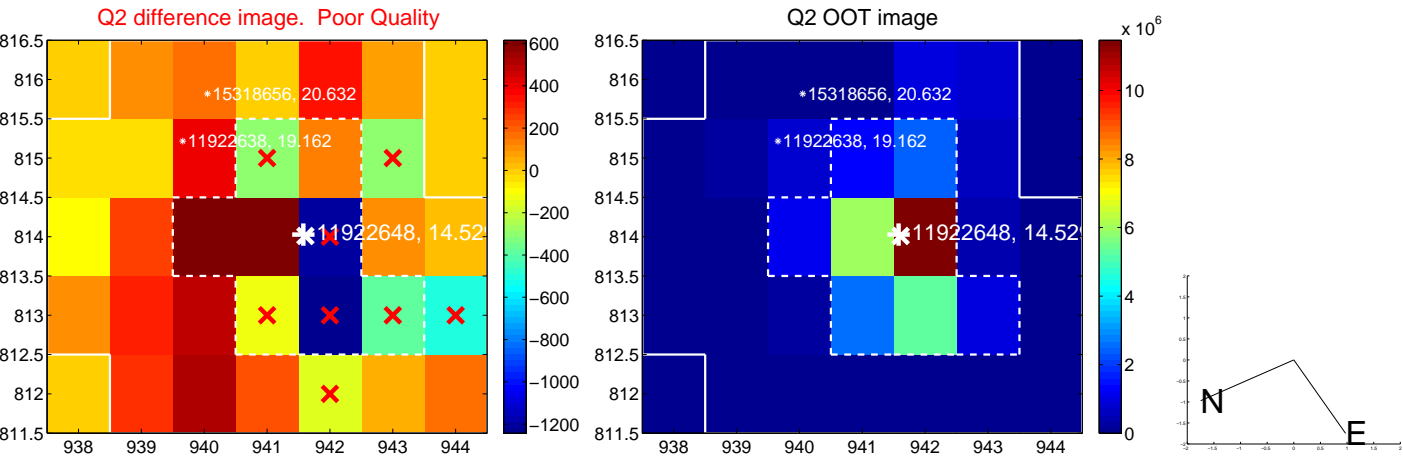
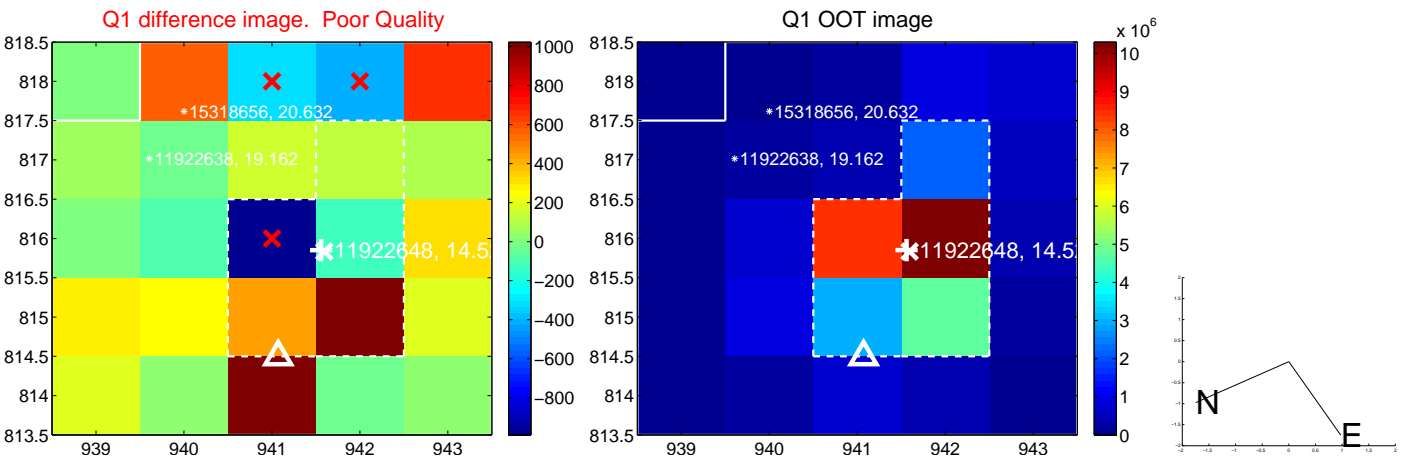
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.340 ± 0.985	2.38	-1.607 ± 1.142	1.702 ± 0.819
PRF-fit source offset from KIC position	2.538 ± 0.990	2.56	-1.761 ± 1.146	1.827 ± 0.818
photometric centroid source offset	7.16 ± 1.35	5.29	0.83 ± 1.21	7.11 ± 1.35

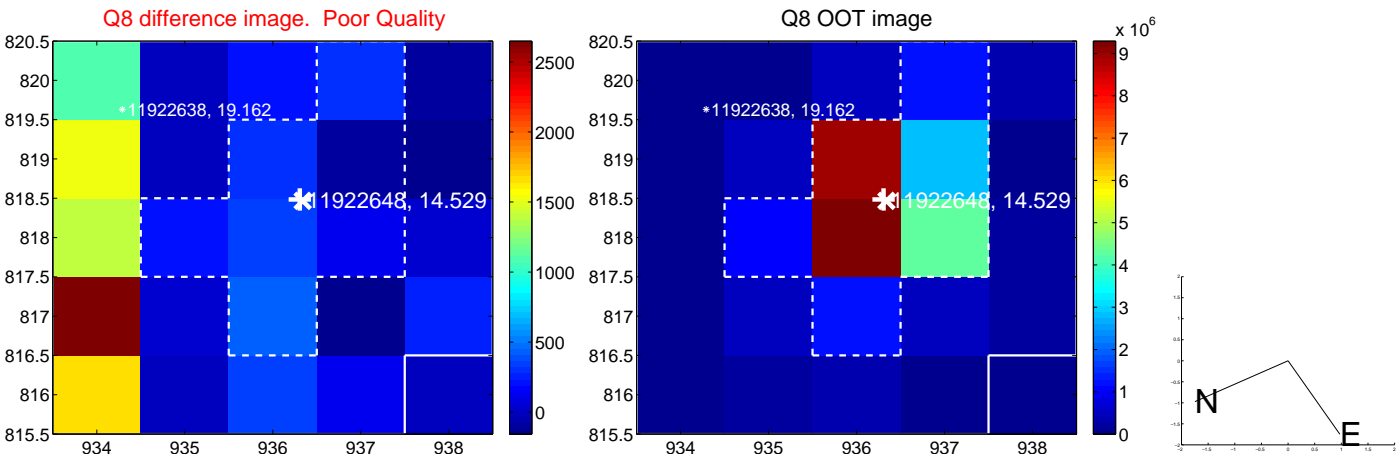
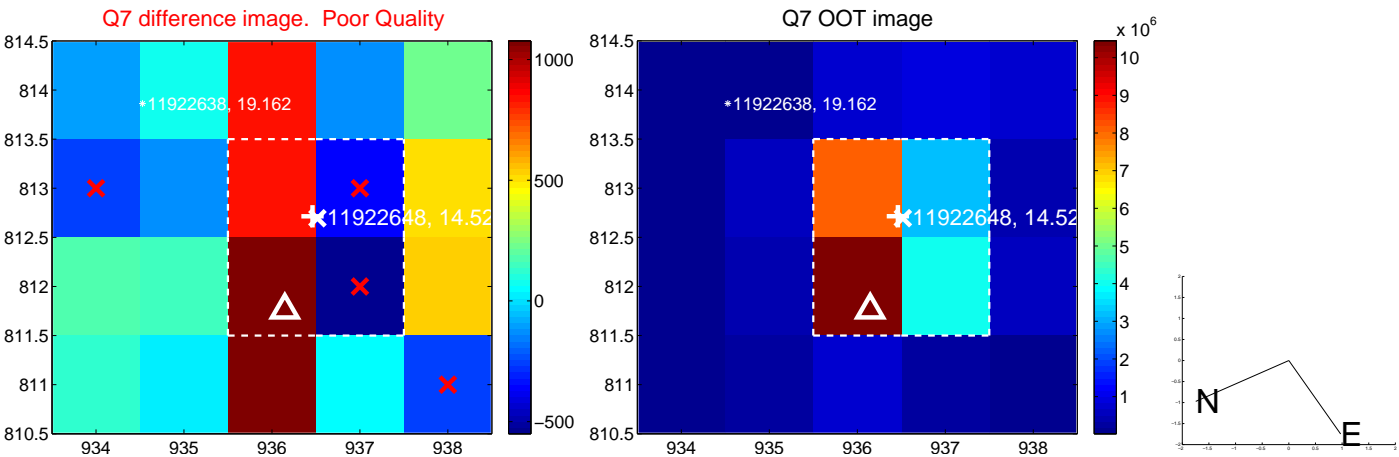
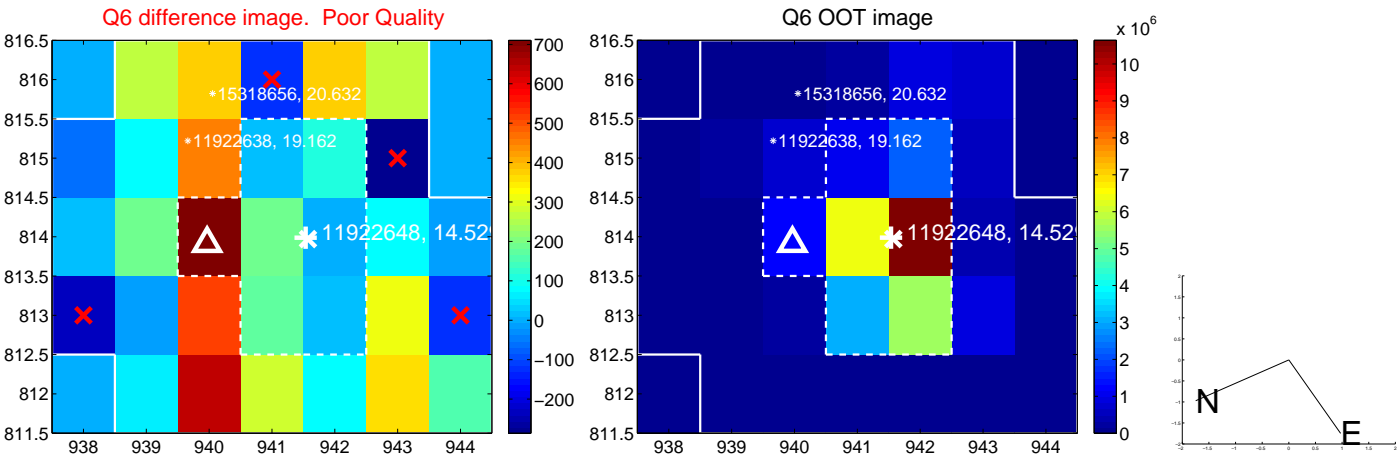
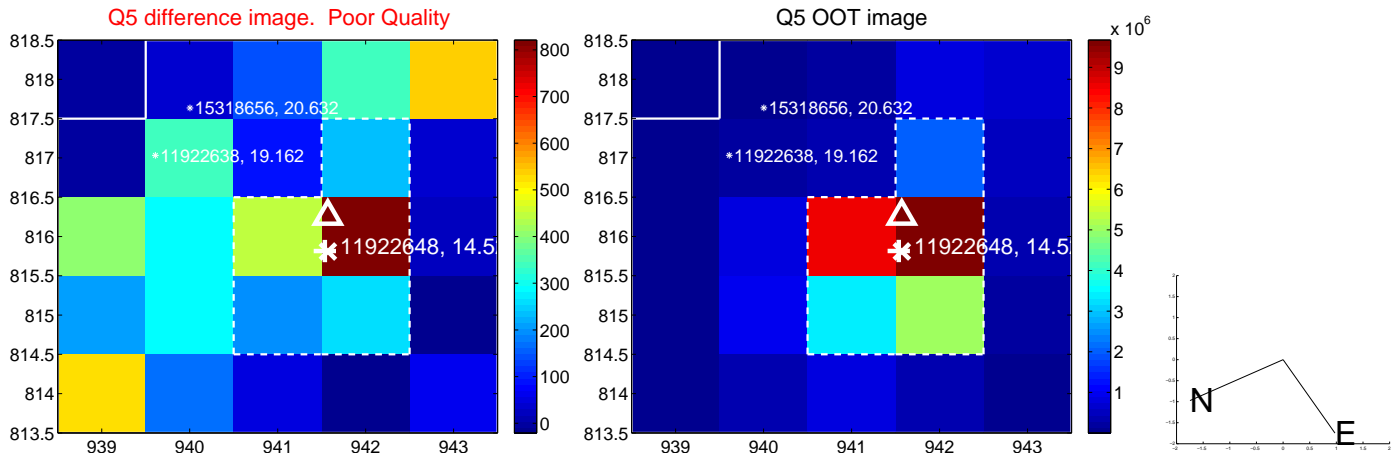


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

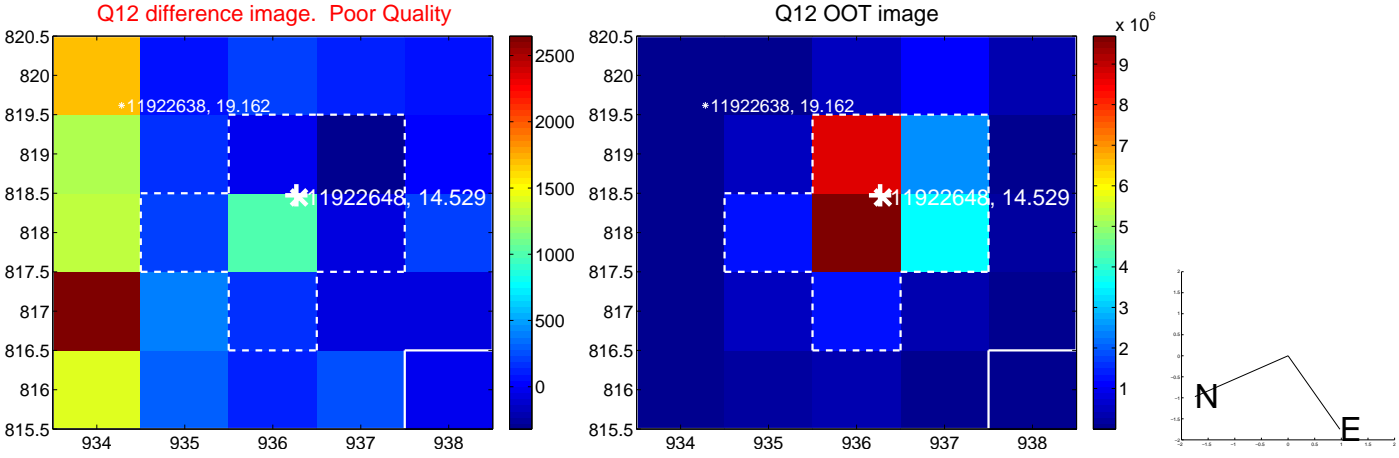
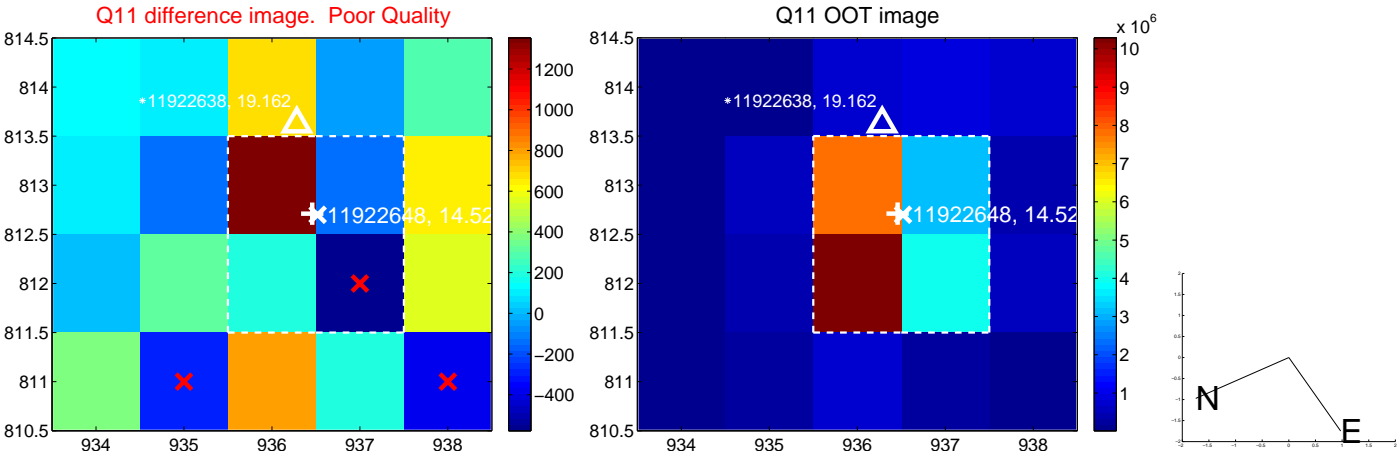
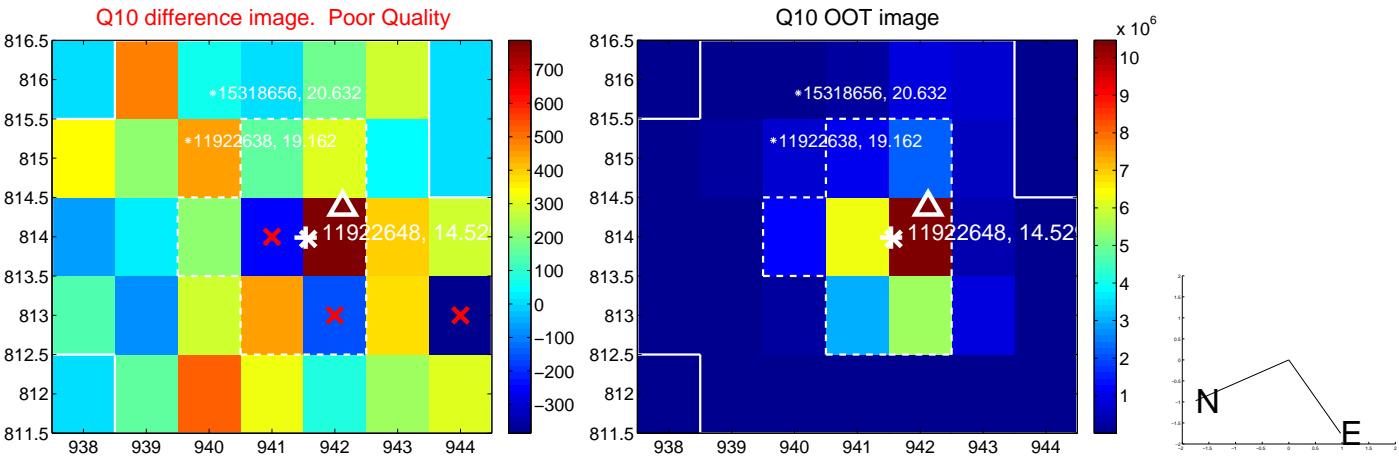
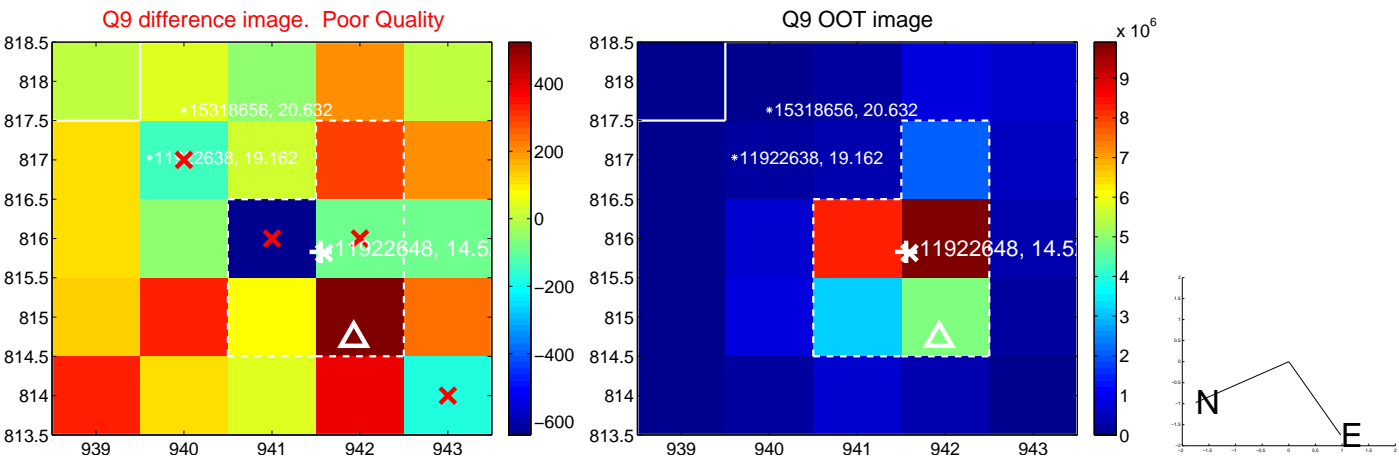
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



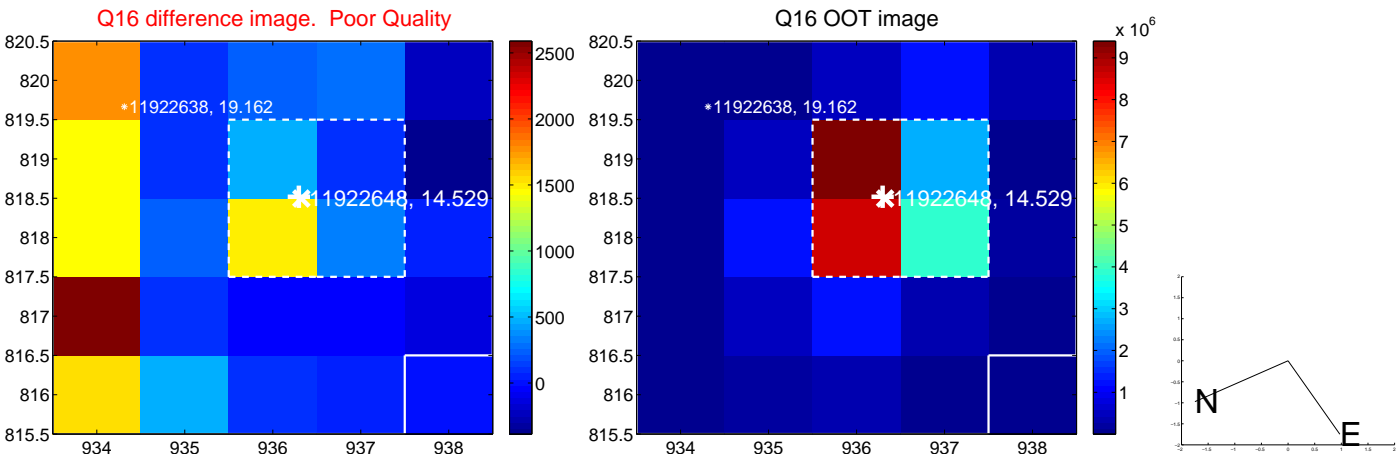
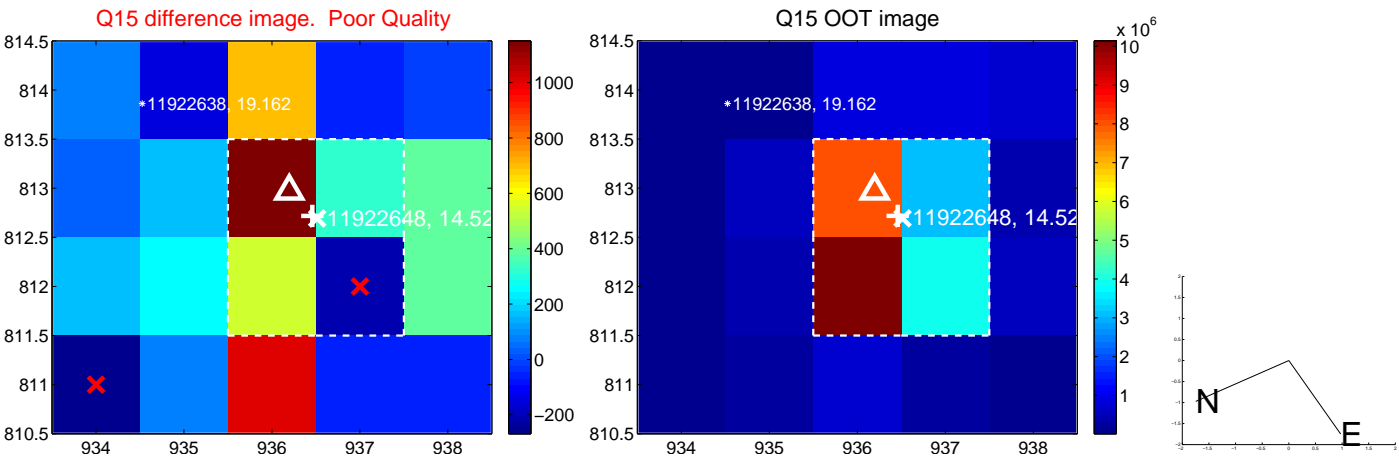
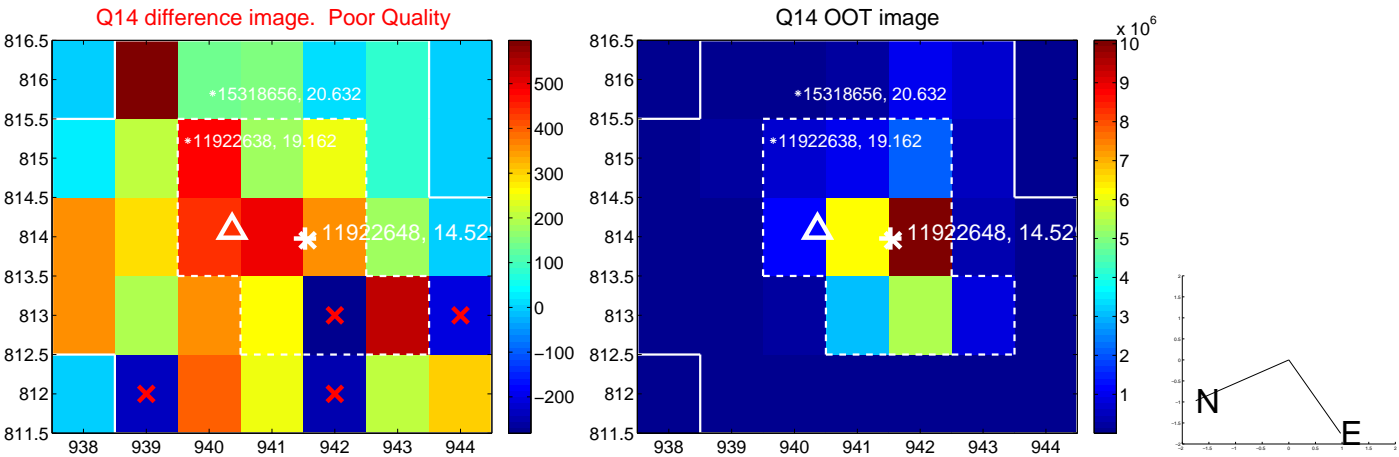
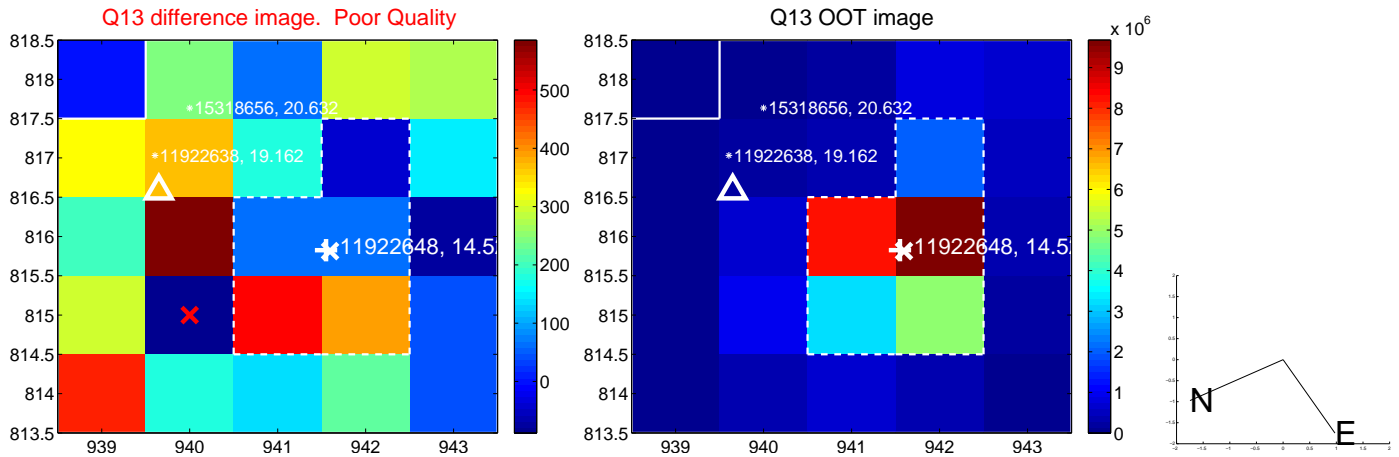
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



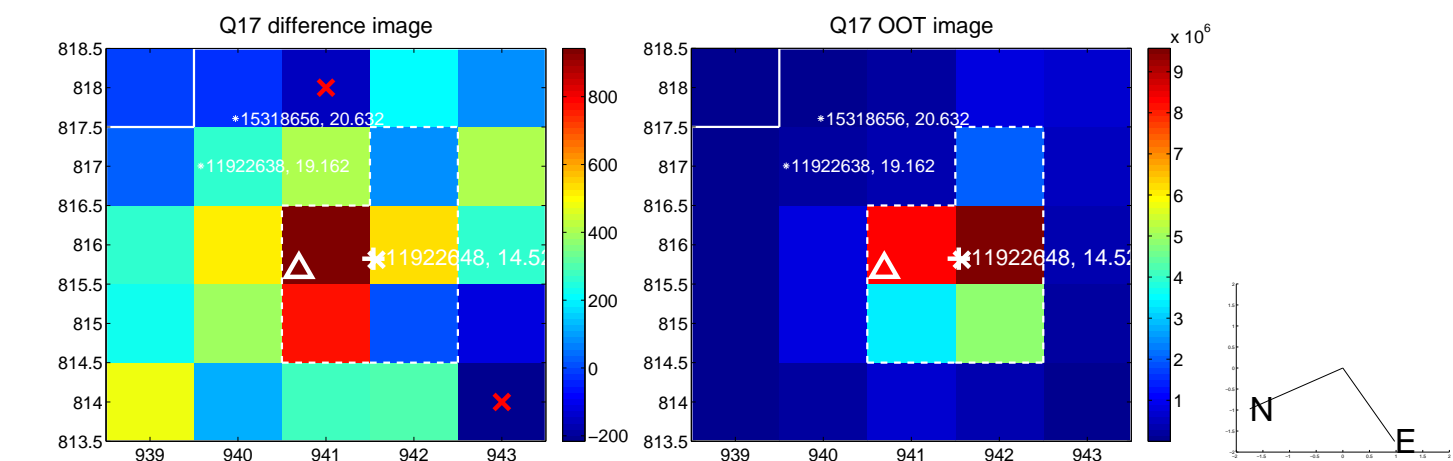
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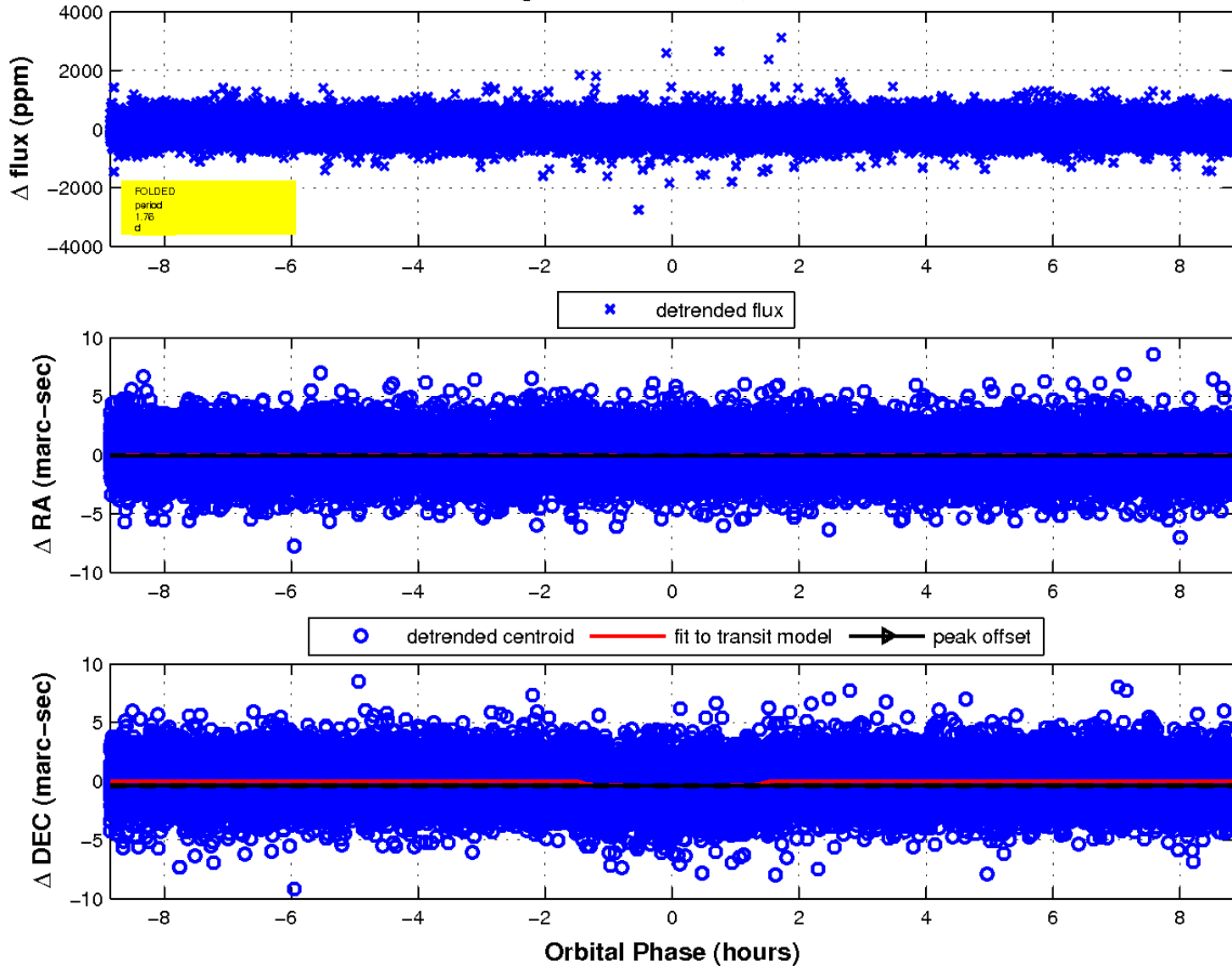
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

