

KIC 011912941

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})
011912941-01	OBS	4481.01	3.747848	134.191672	118.5	3.504	11.6	11.9	1.00	6122	1.28	534.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011912941-01	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.

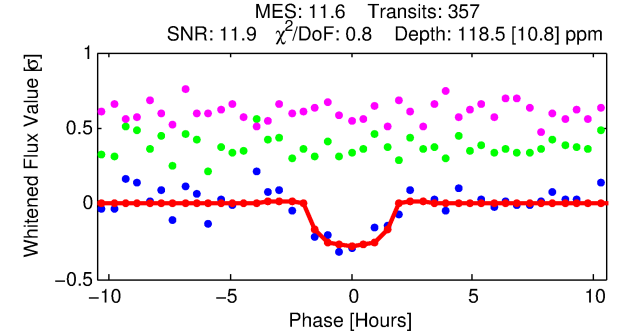
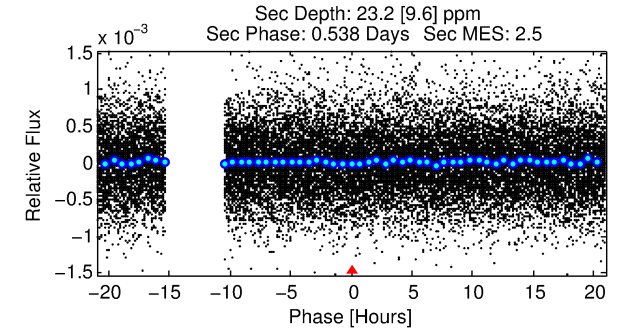
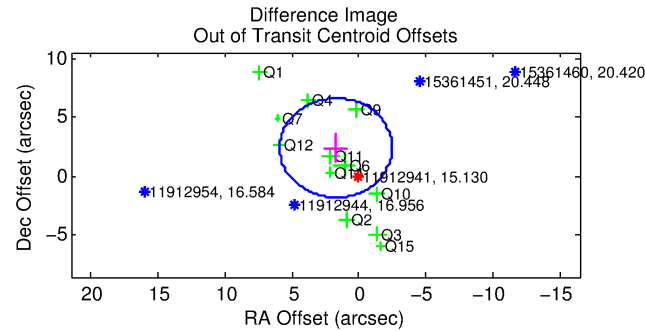
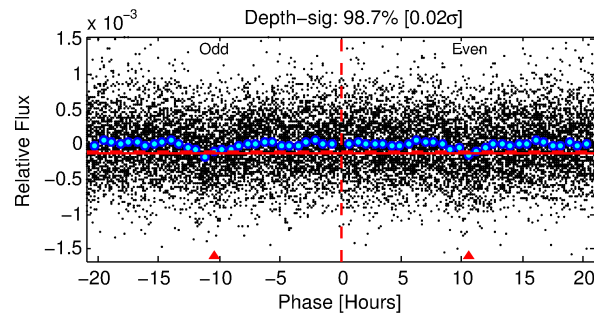
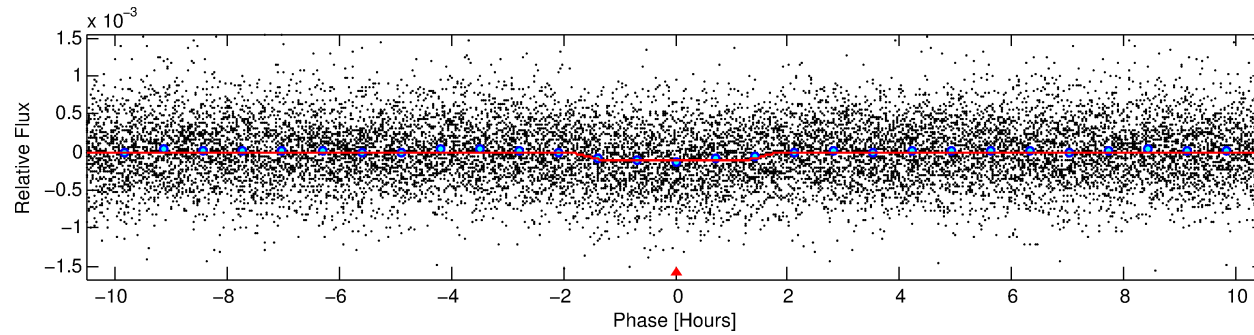
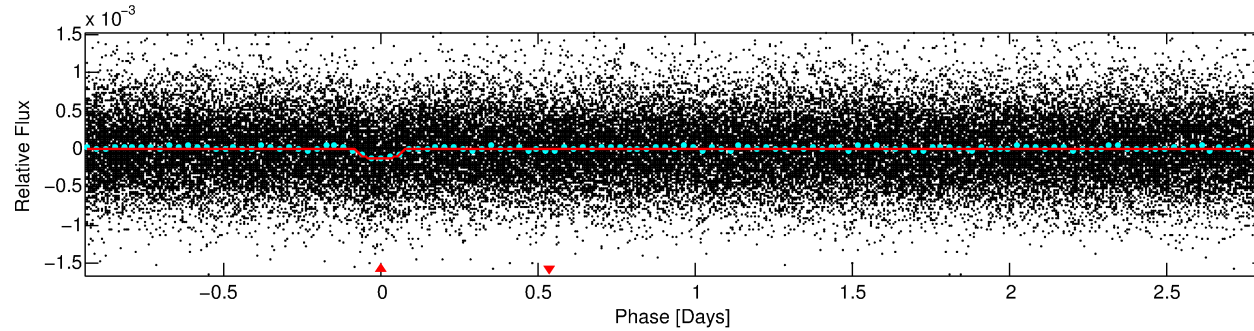
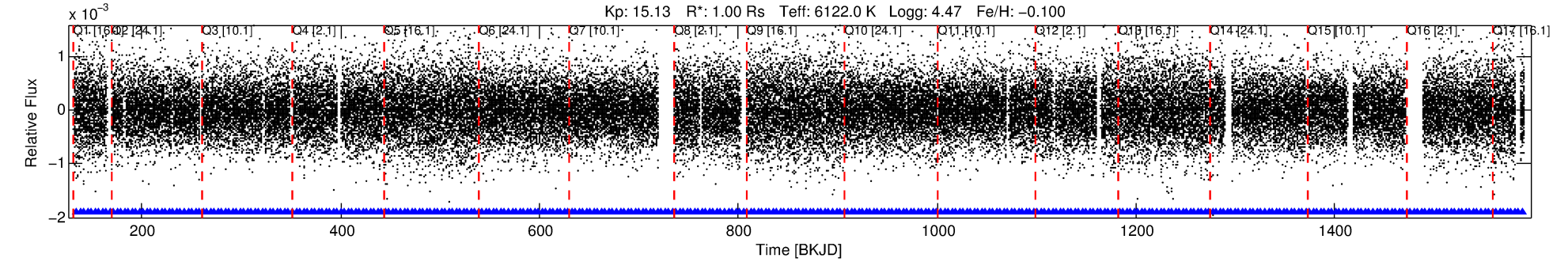
Ephemeris Match Information For 011912941-01

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
011912941-01	11912941	011913071-pri	11913071	1:1	189.7	28	38	9.53	15.13	1601.70	Direct-PRF	0	0.19	0.21

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: 11912941 Candidate: 1 of 1 Period: 3.748 d
KOI: K04481.01 Corr: 0.968



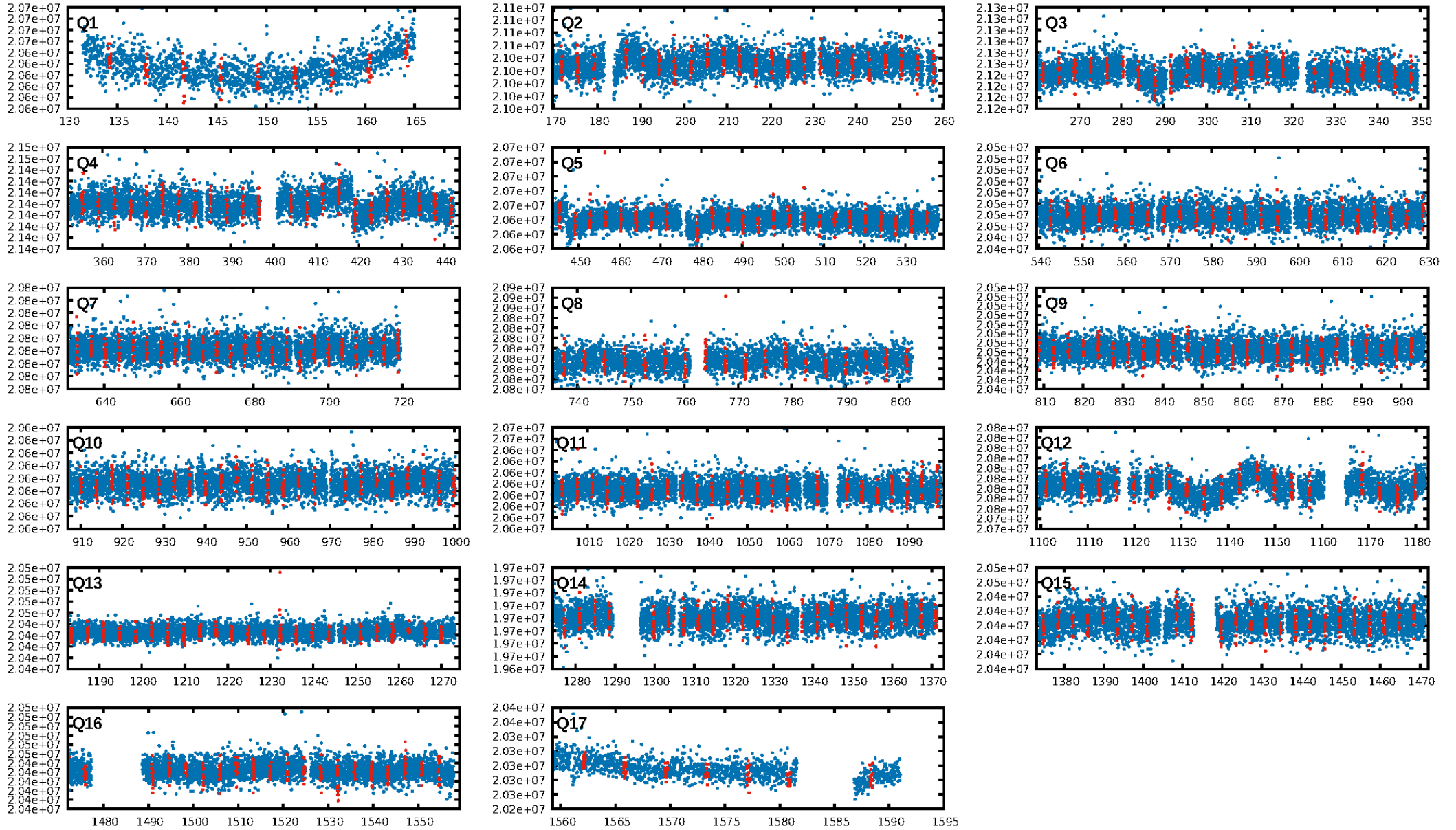
DV Fit Results:

Period = 3.74785 [0.00003] d
Epoch = 134.1917 [0.0046] BKJD
Rp/R* = 0.0118 [0.0049]
a/R* = 3.81 [7.81]
b = 0.91 [0.45]
Seff = 534.89 [209.26]
Teff = 1226 [120] K
Rp = 1.28 [0.65] Re
a = 0.0483 [0.0121] AU
Ag = 18.13 [17.99] [0.95σ]
Teffp = 3912 [913] K [2.92σ]

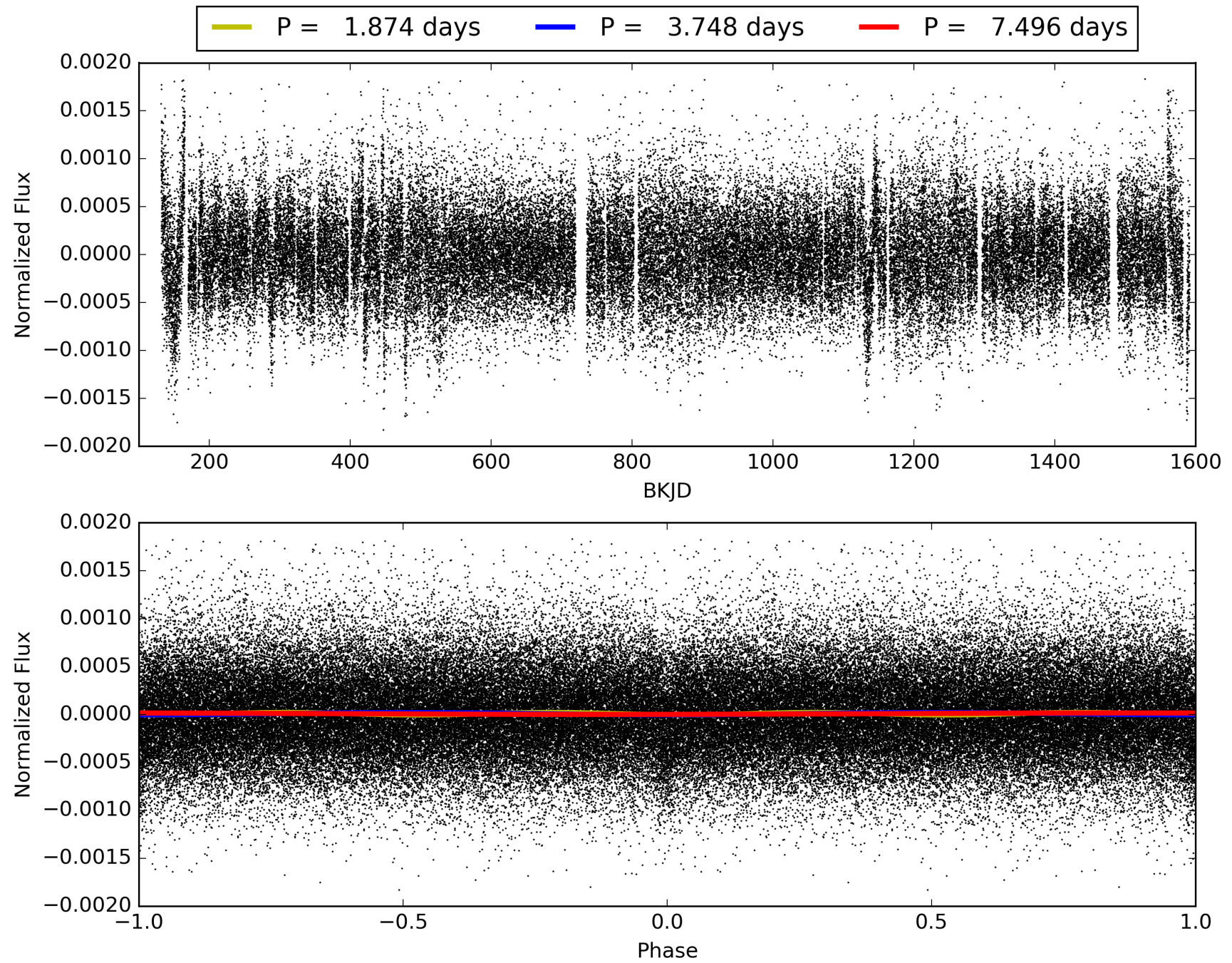
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.63e-30
RollingBand-fgt: 1.00 [341/341]
GhostDiagnostic-chr: -0.2379
Centroid-sig: 0.0%
Centroid-so: 3.688 arcsec [2.93σ]
OotOffset-rm: 2.964 arcsec [2.12σ]
KicOffset-rm: 4.072 arcsec [3.29σ]
OotOffset-st: 4/4/2/2 [12]
KicOffset-st: 4/4/2/2 [12]
DiffImageQuality-fgm: 0.00 [0/12]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011912941-01, PDC Light Curves

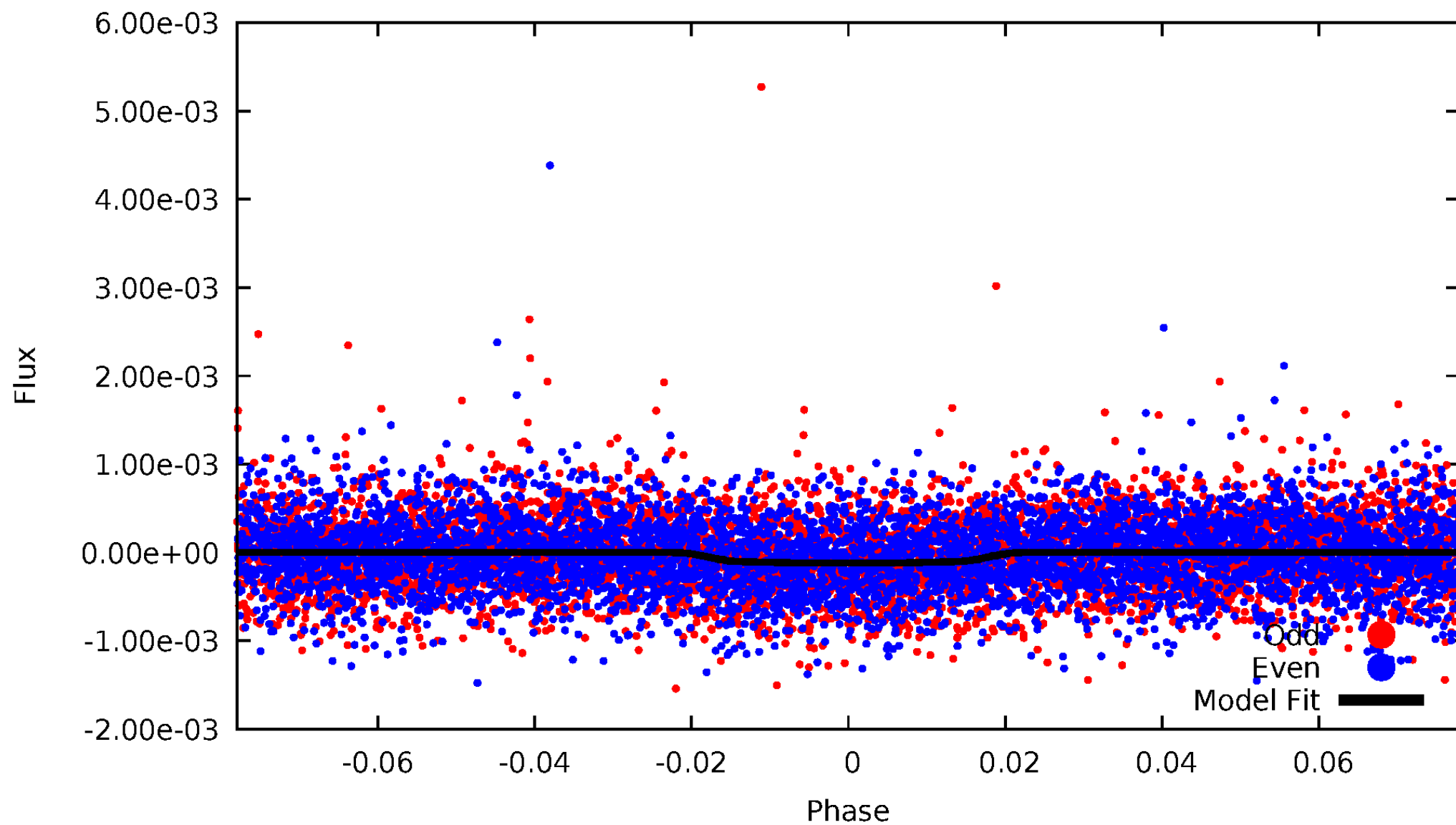


TCE 011912941-01



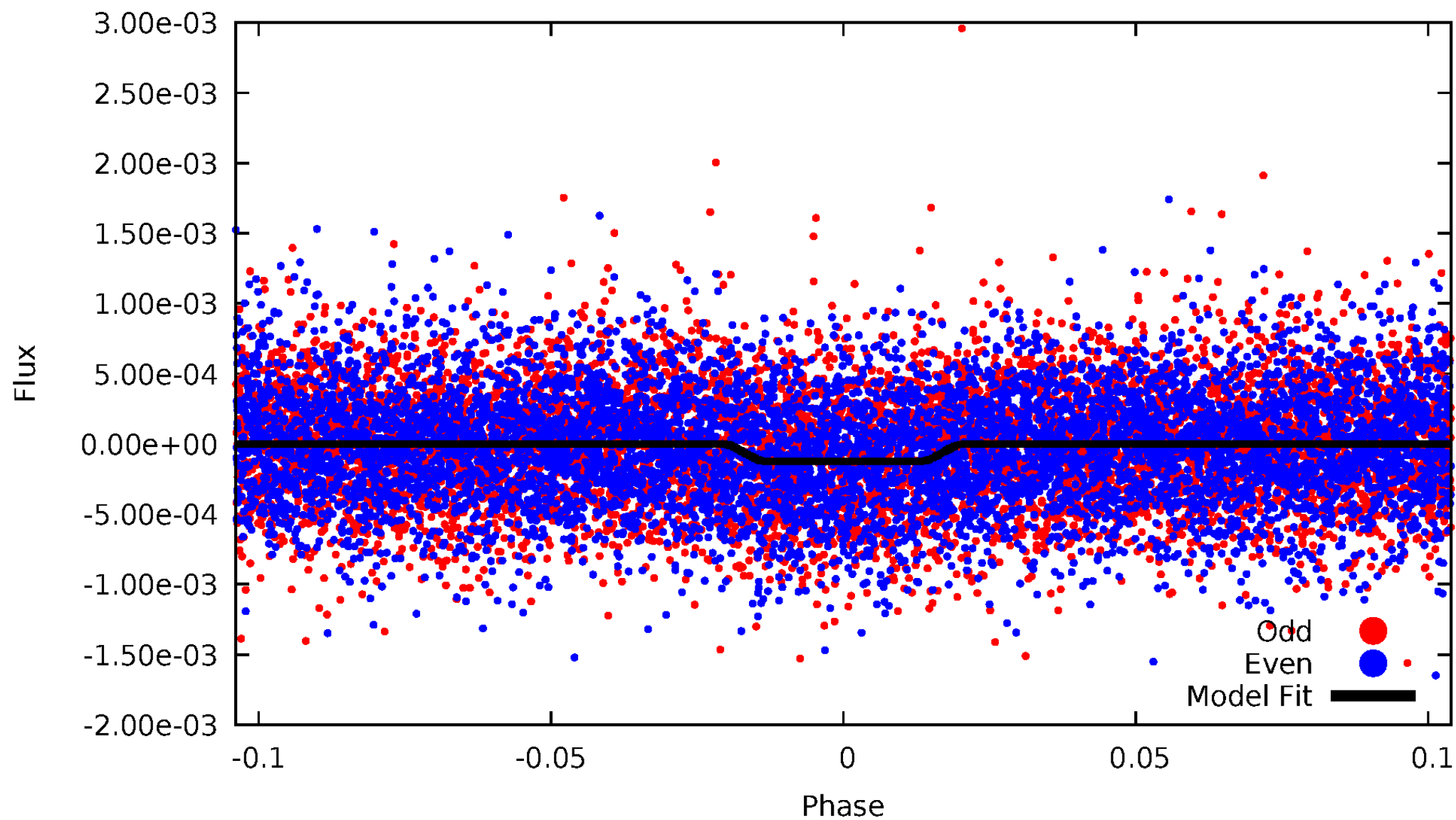
DV Odd/Even

TCE 011912941-01

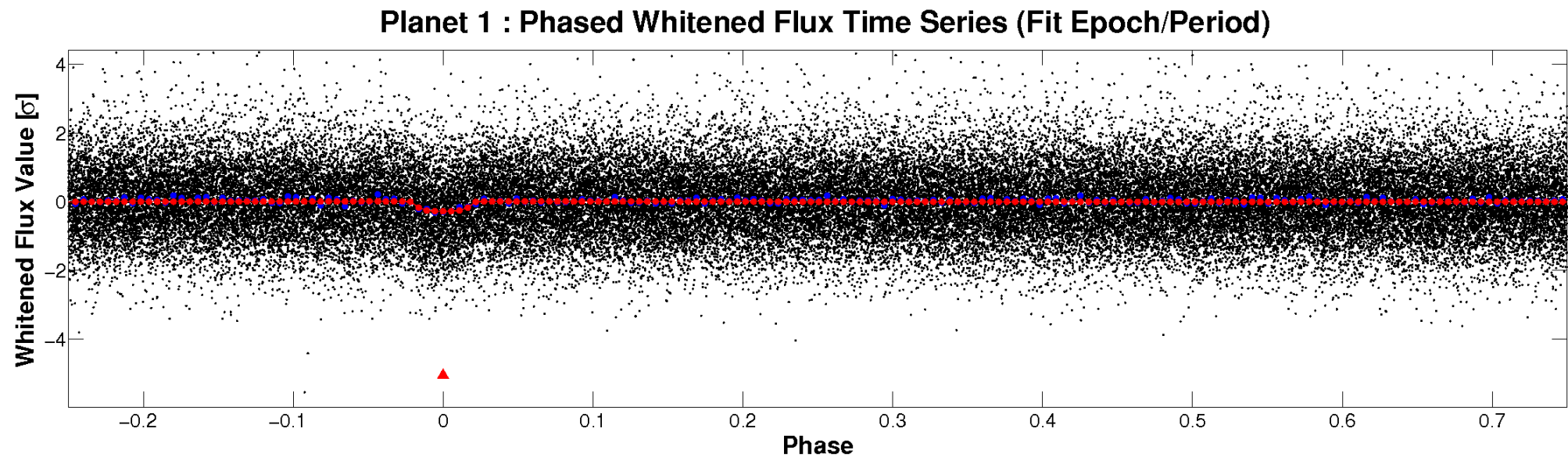
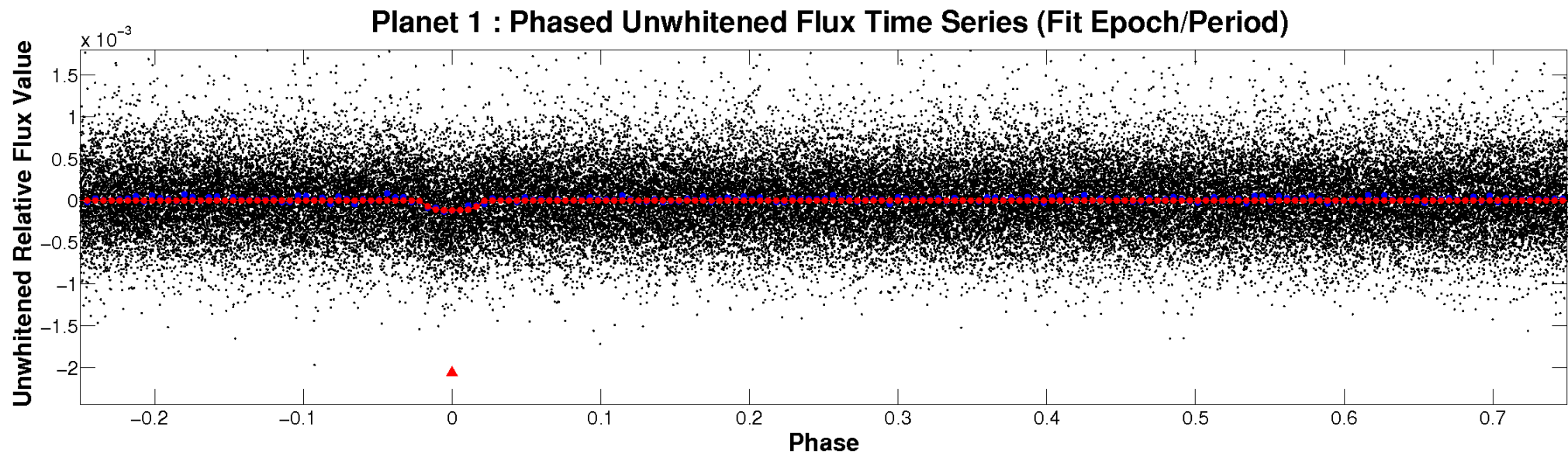


ALT Odd/Even

TCE 011912941-01

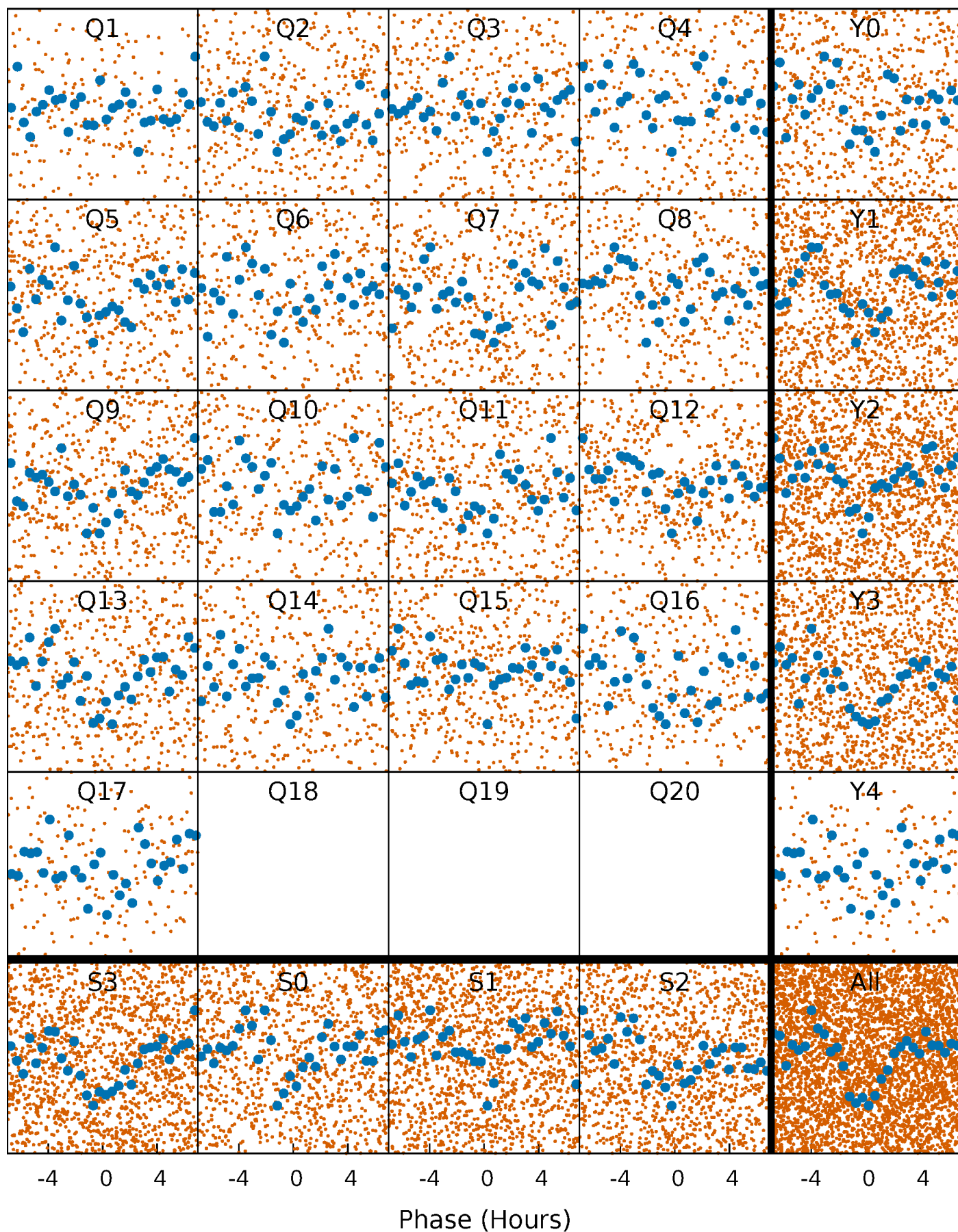


Non-Whitened Vs. Whitened Light Curve



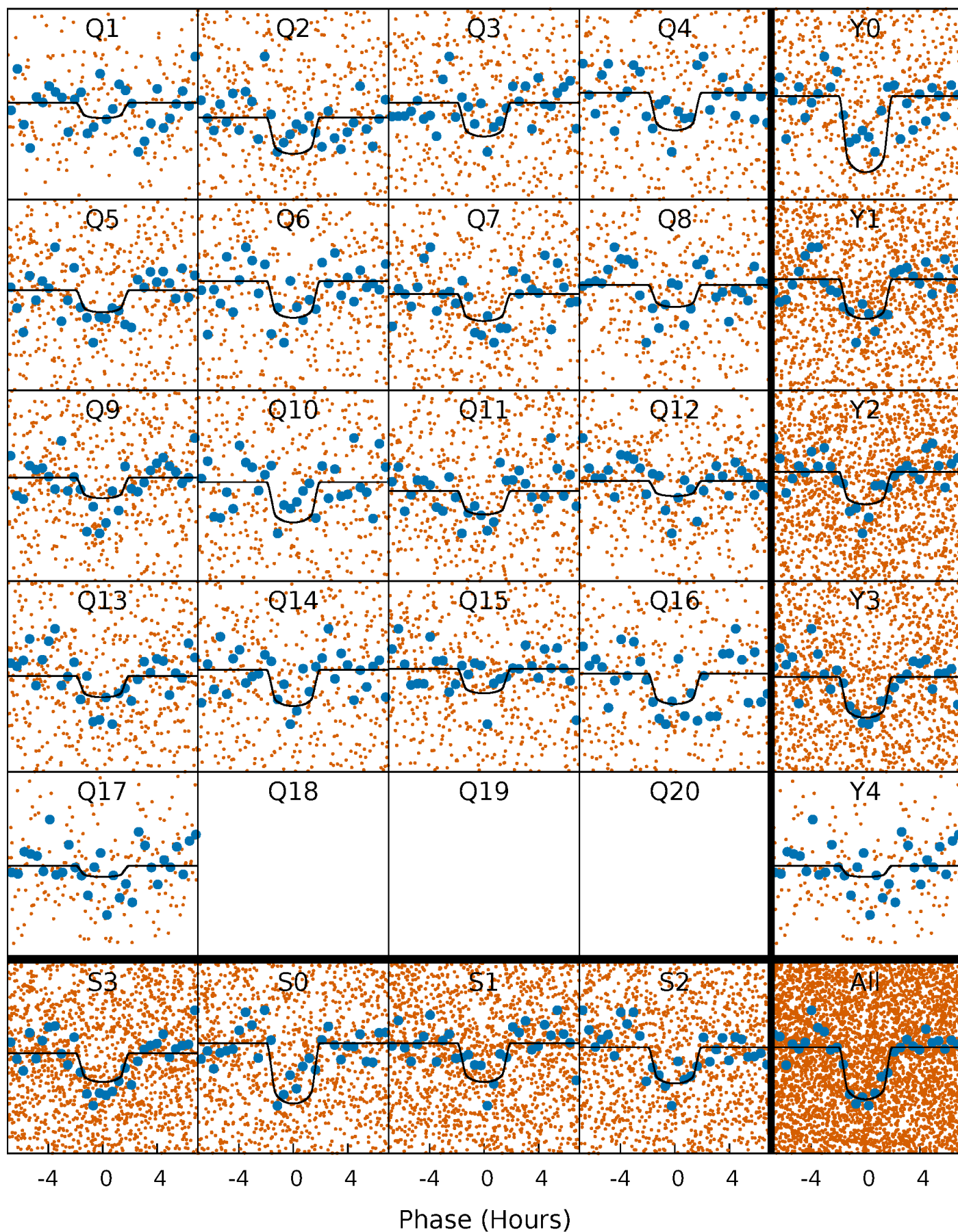
PDC Quarter-Phased Transit Curves

TCE 011912941-01 P= 3.747848 Days $T_0=134.191672$ (BKJD)



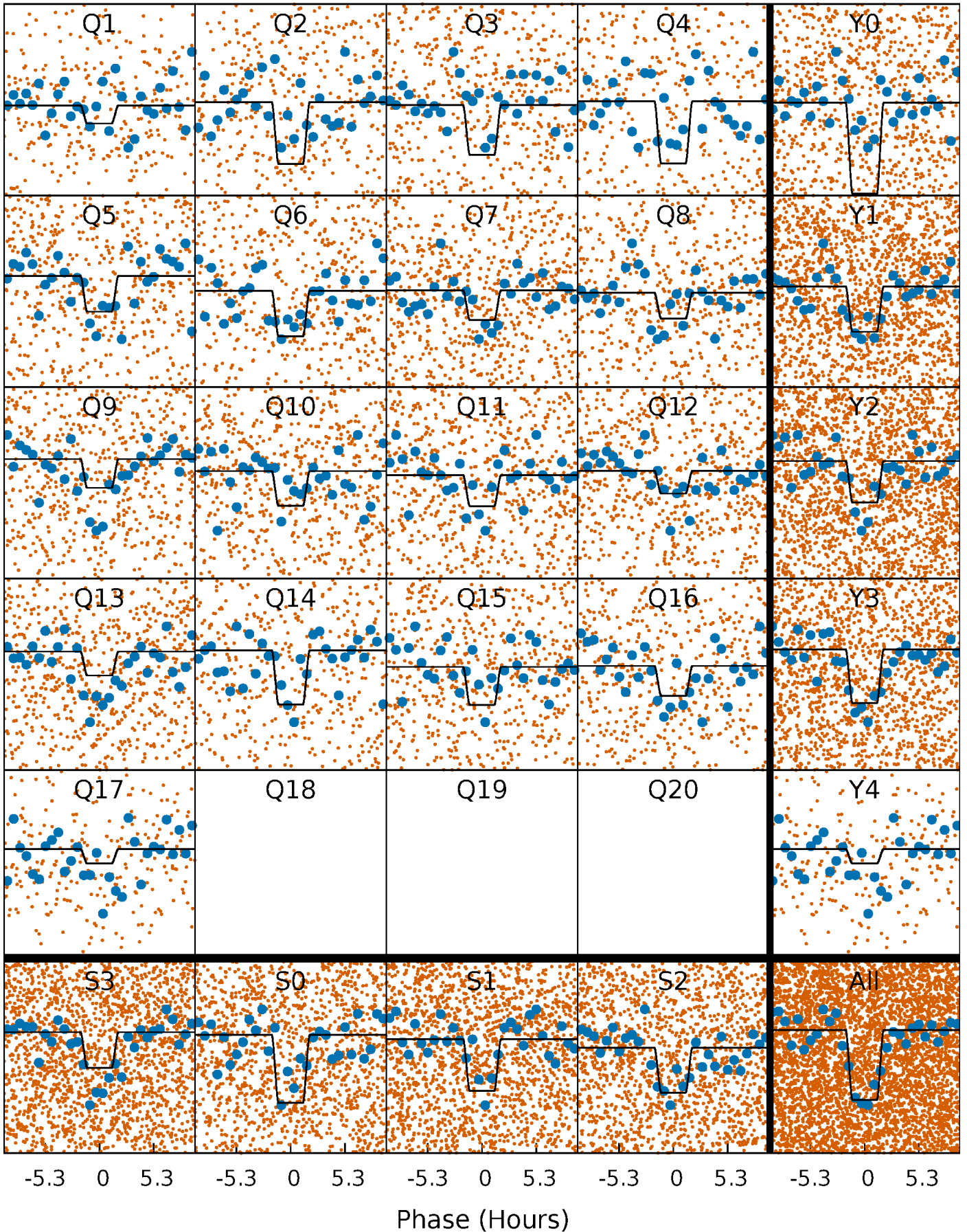
DV Quarter-Phased Transit Curves

TCE 011912941-01 P= 3.747848 Days $T_0=134.191672$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

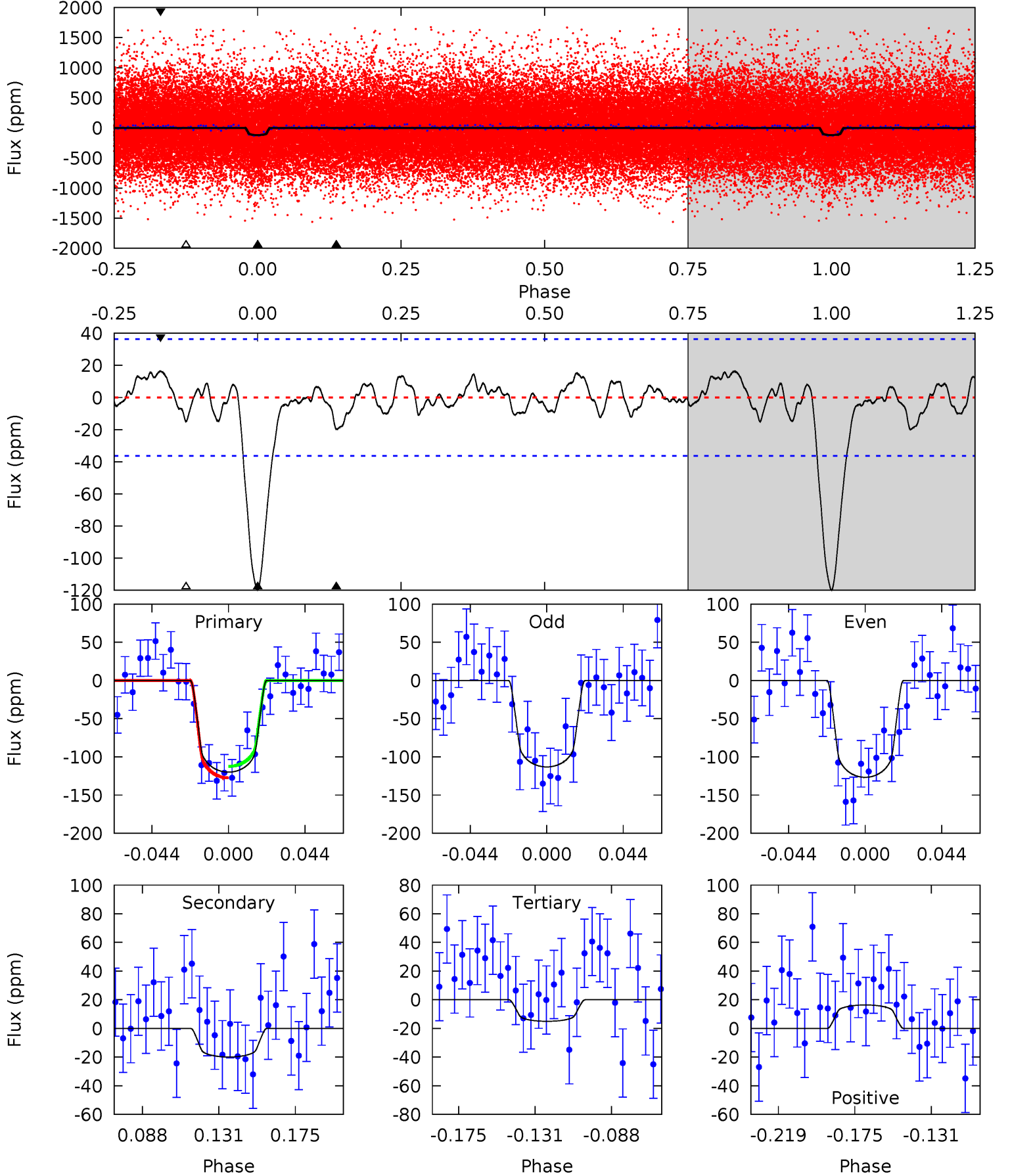
TCE 011912941-01 P= 3.747863 Days $T_0=134.183857$ (BKJD)



DV Model-Shift Uniqueness Test

011912941-01, P = 3.747848 Days, E = 130.443824 Days

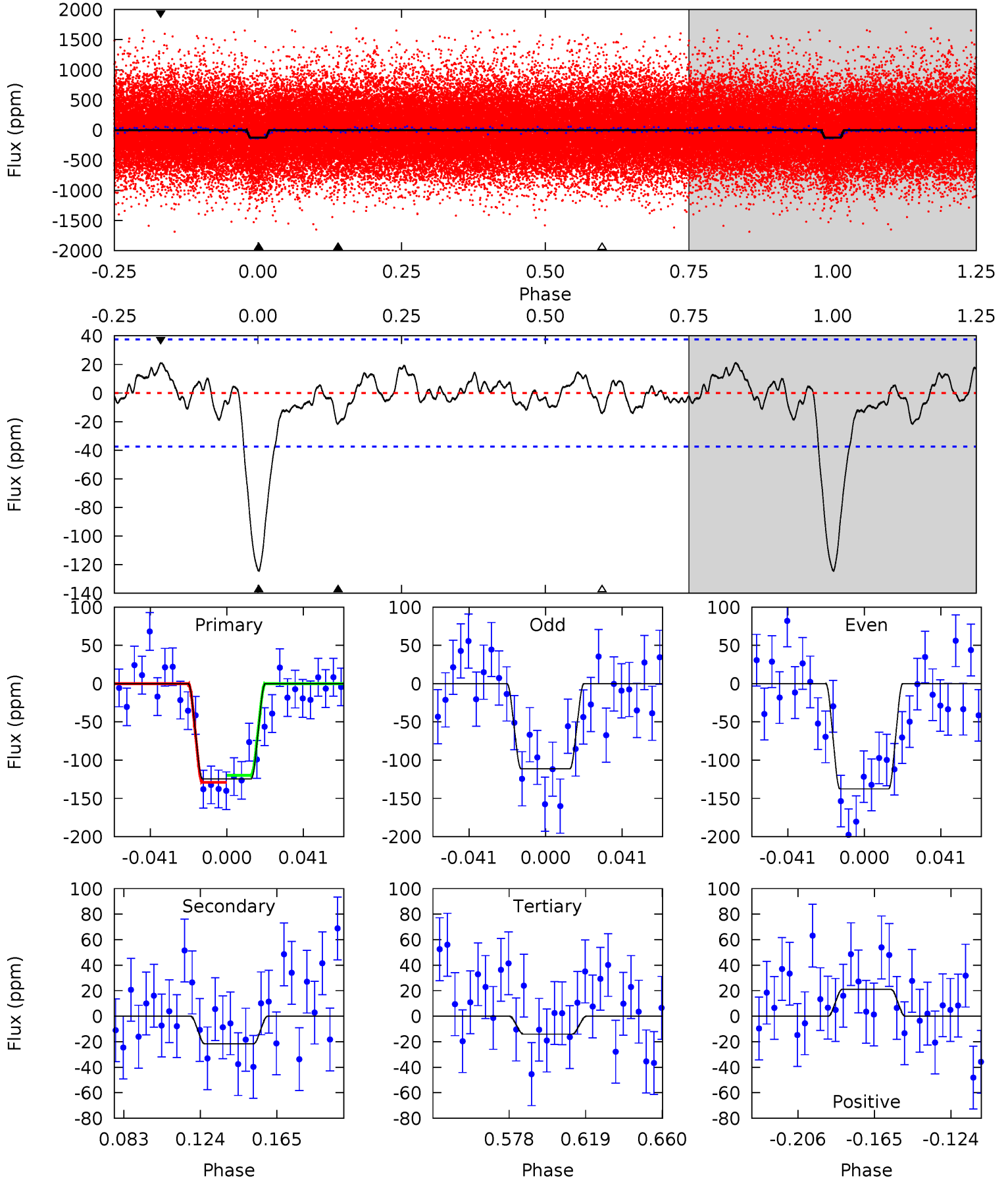
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.6	2.60	1.96	2.13	4.73	2.02	0.96	13.7	13.5	0.64	0.47	0.89	1.03	0.12	0.98



Alt Model-Shift Uniqueness Test

011912941-01, P = 3.747863 Days, E = 130.435994 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	2.74	1.78	2.66	4.75	2.04	1.06	14.0	13.1	0.96	0.08	1.66	1.00	0.14	0.58



Stellar Parameters For KIC 011912941

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6122^{+171}_{-214}	$4.471^{+0.050}_{-0.200}$	$-0.100^{+0.250}_{-0.350}$	$0.996^{+0.296}_{-0.118}$	$1.070^{+0.133}_{-0.148}$	$1.526^{+0.396}_{-0.763}$
	+3%/-3%	+1%/-4%	+250%/-350%	+30%/-12%	+12%/-14%	+26%/-50%
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 011912941-01 / KOI 4481.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-20 ± 8	$1.34^{+0.61}_{-0.53}$	1753^{+118}_{-91}	4007^{+899}_{-548}	13^{+25}_{-8}
Alt.	-22 ± 8	$1.29^{+0.61}_{-0.55}$	1752^{+120}_{-83}	4168^{+1175}_{-566}	17^{+36}_{-10}

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 $A_{obs} \gg 1.0$

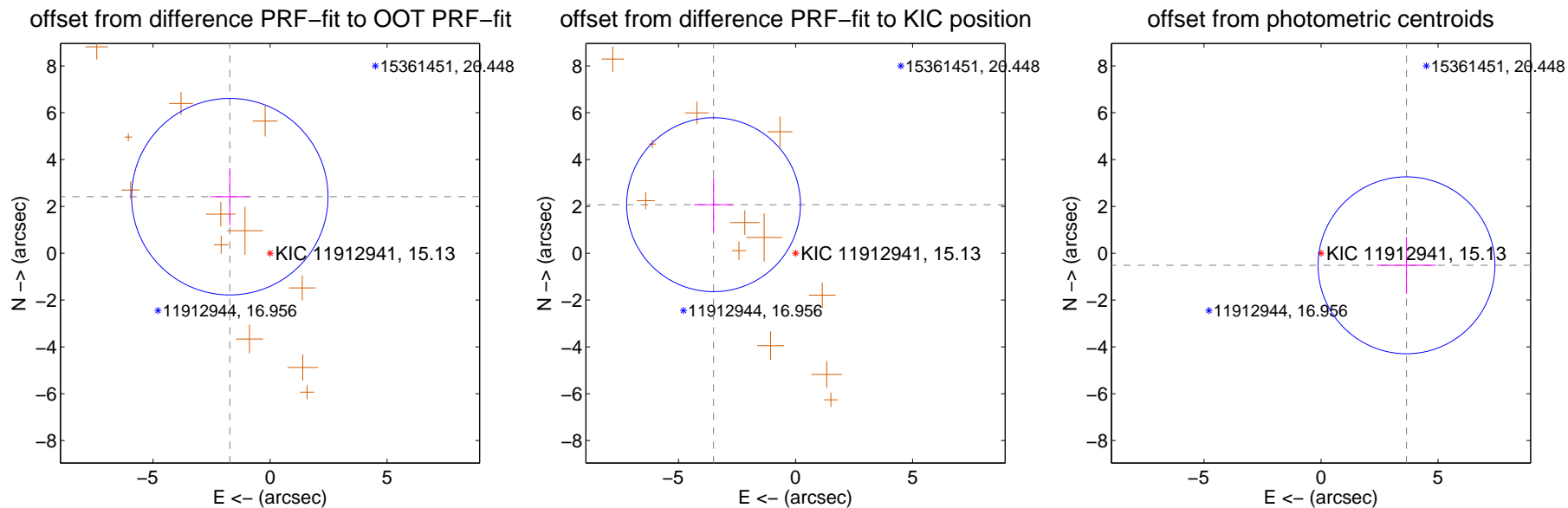
DV Centroid Data

Supplemental centroid analysis for 011912941-01. Kepler magnitude: 15.13. Transit SNR 11.89

There are 0 quarters with good PRF difference image offsets

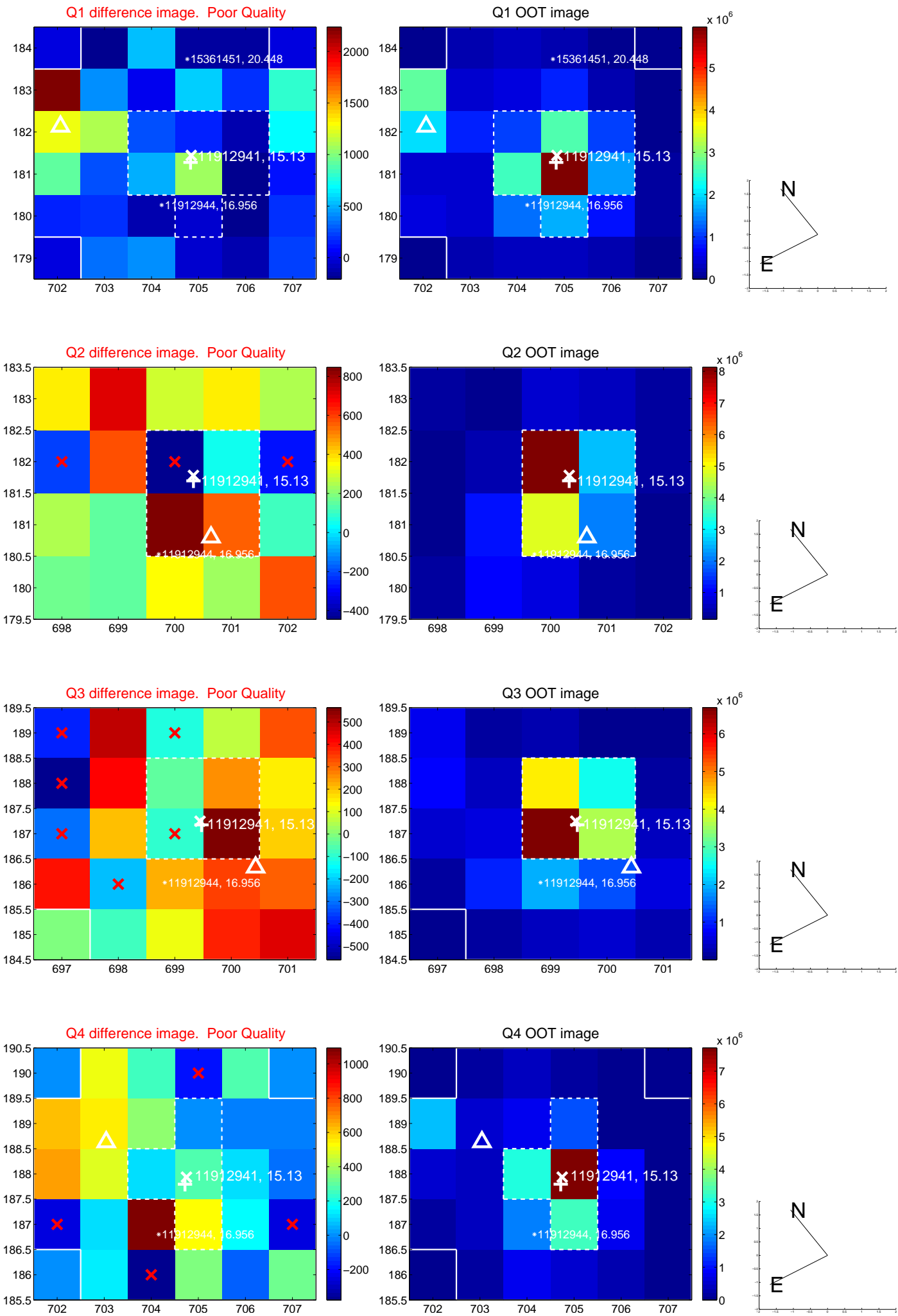
The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.964 ± 1.399	2.12	1.720 ± 0.844	2.414 ± 1.220
PRF-fit source offset from KIC position	4.072 \pm 1.238	3.29	3.505 ± 0.844	2.072 ± 1.157
photometric centroid source offset	3.69 ± 1.26	2.93	-3.65 ± 1.26	-0.52 ± 1.22

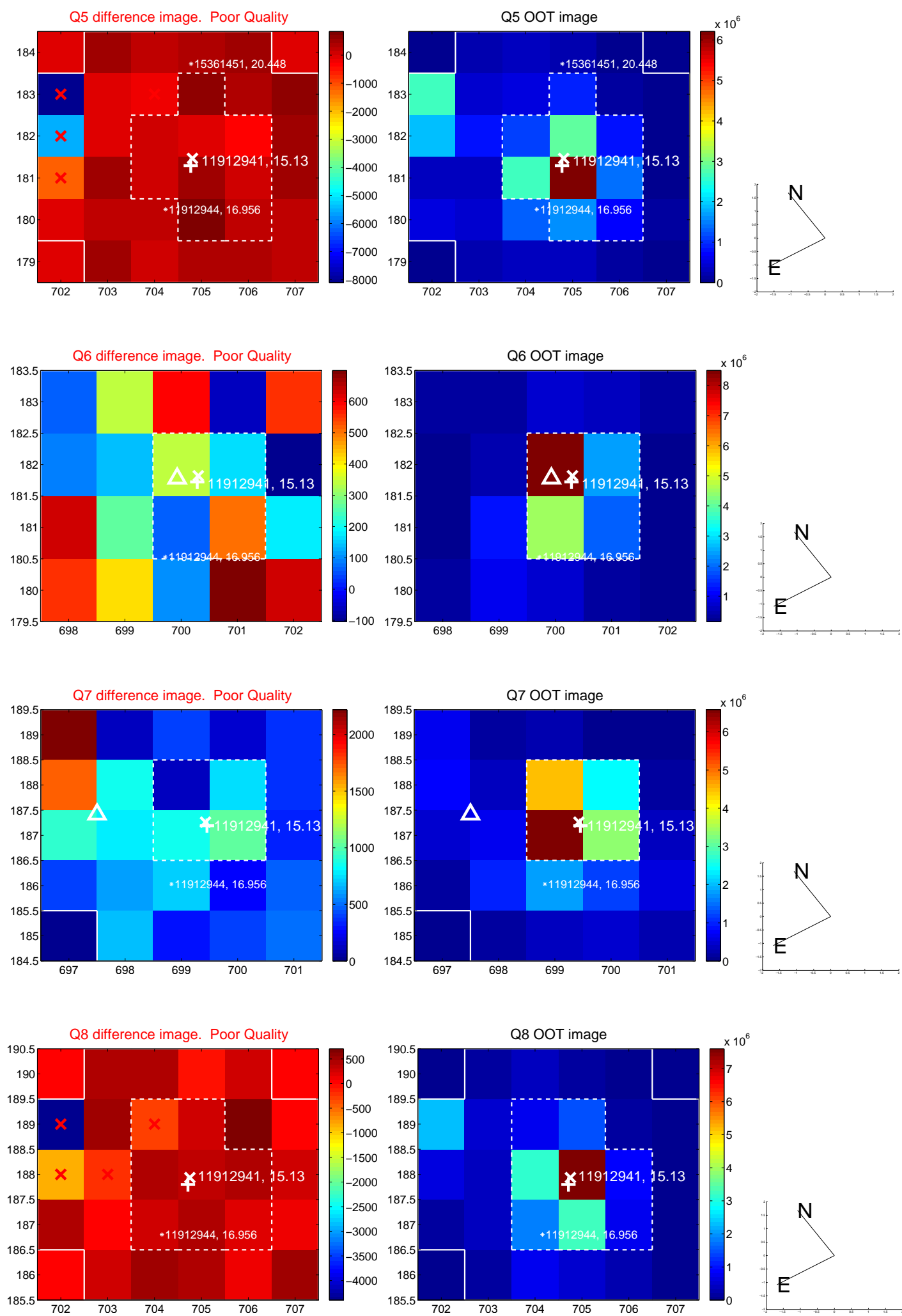


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

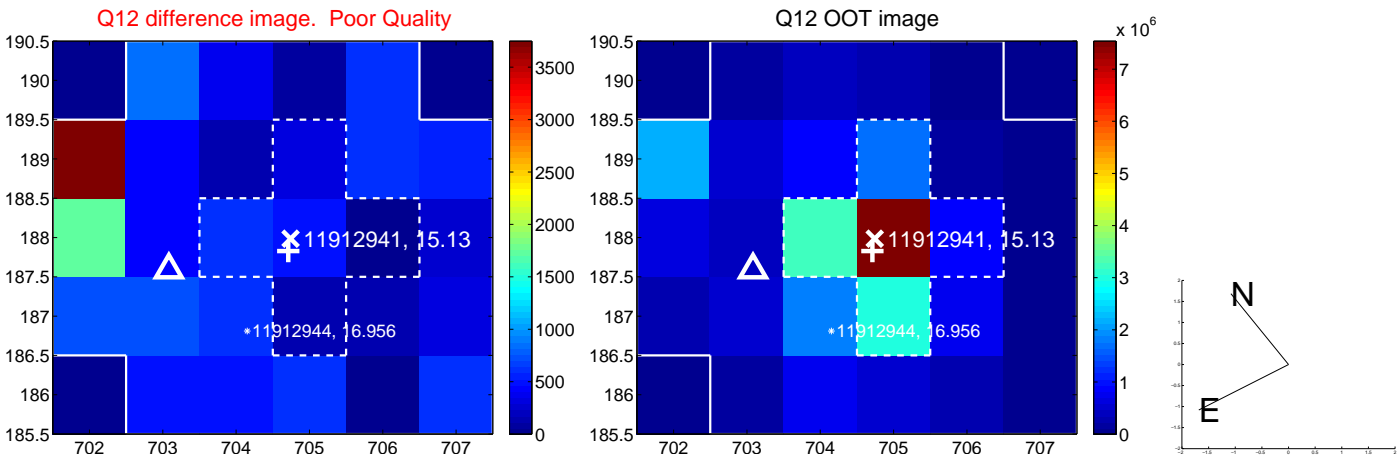
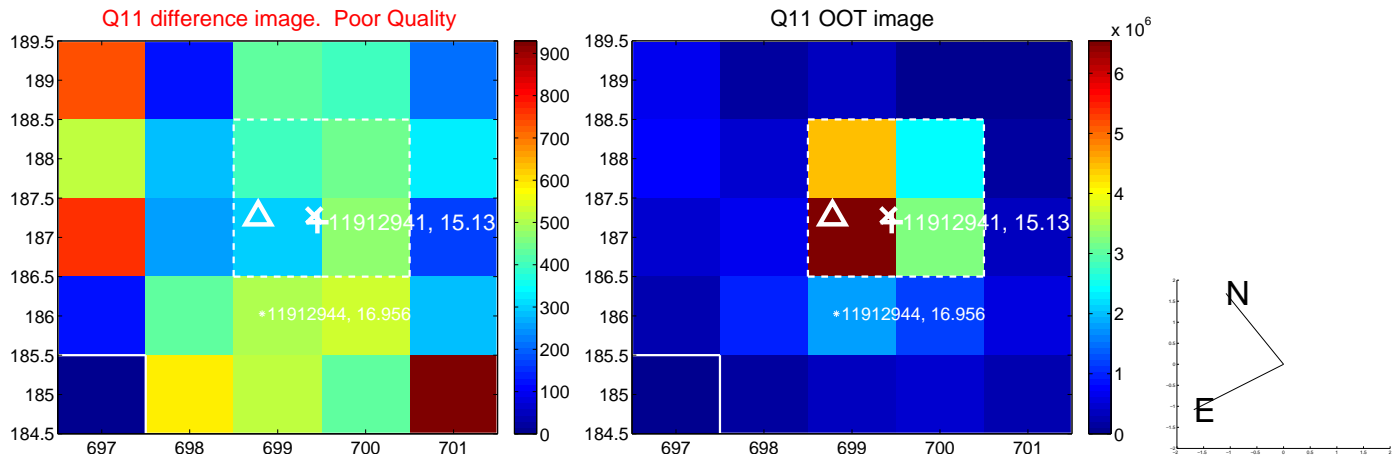
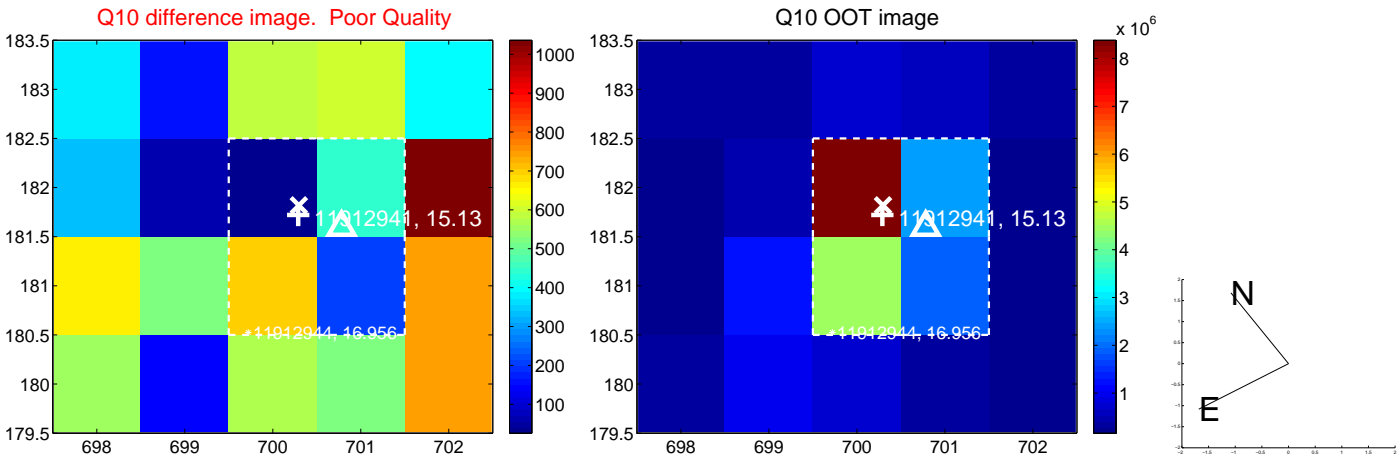
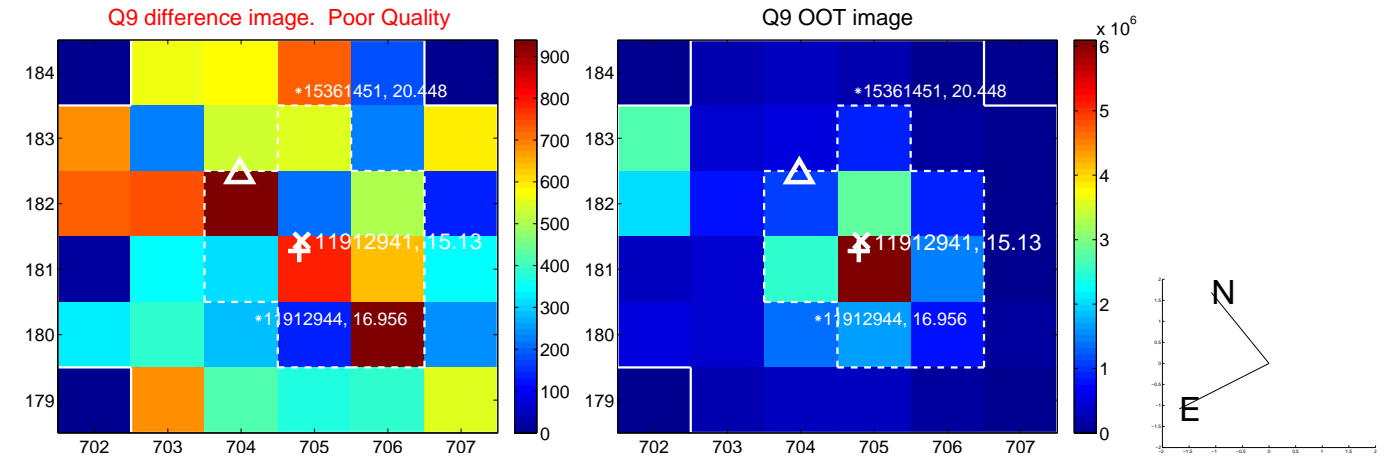
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



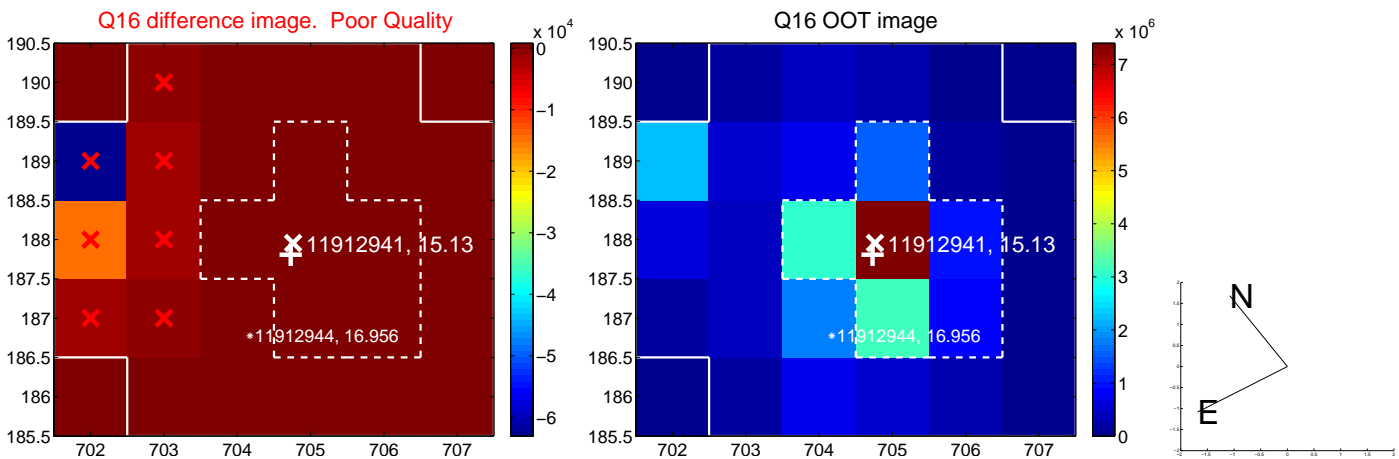
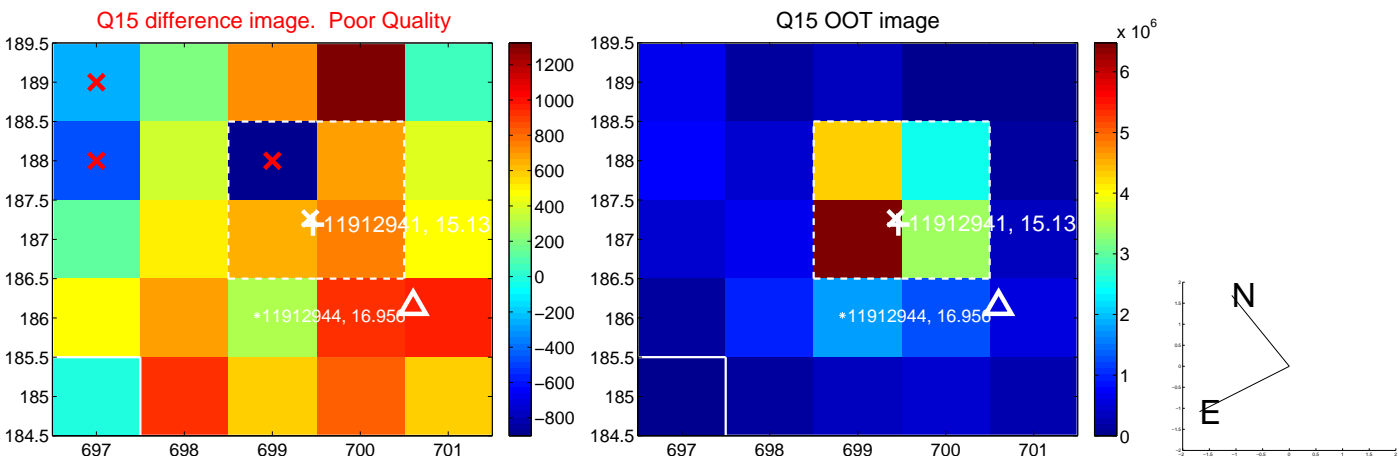
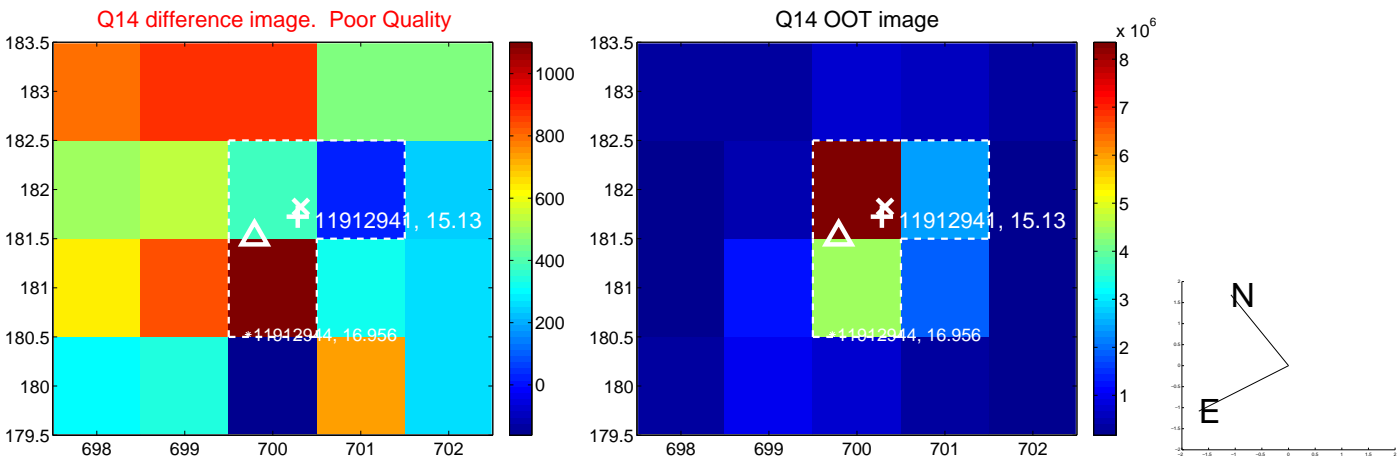
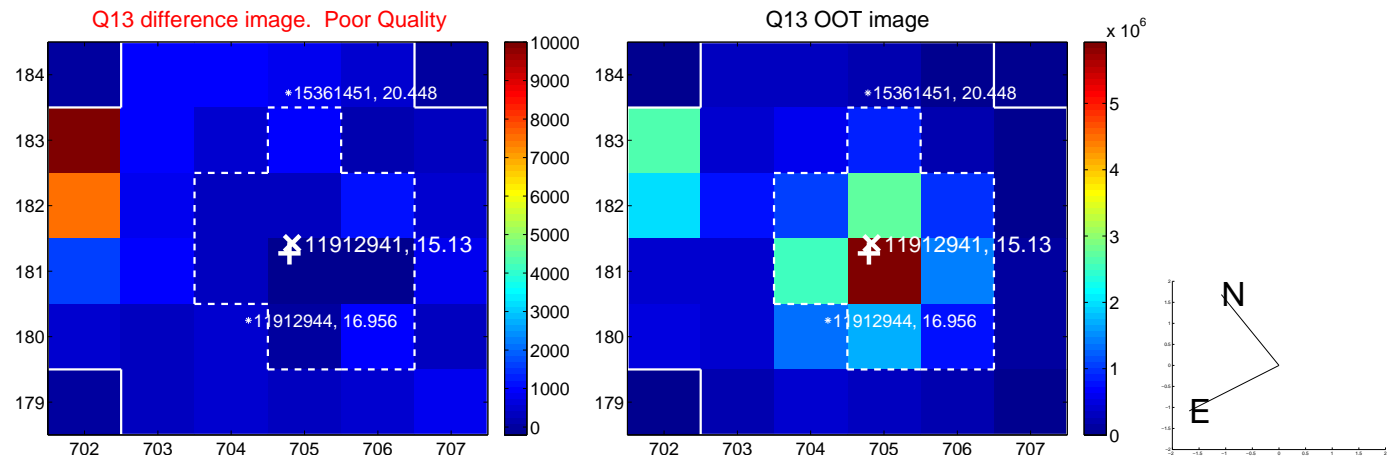
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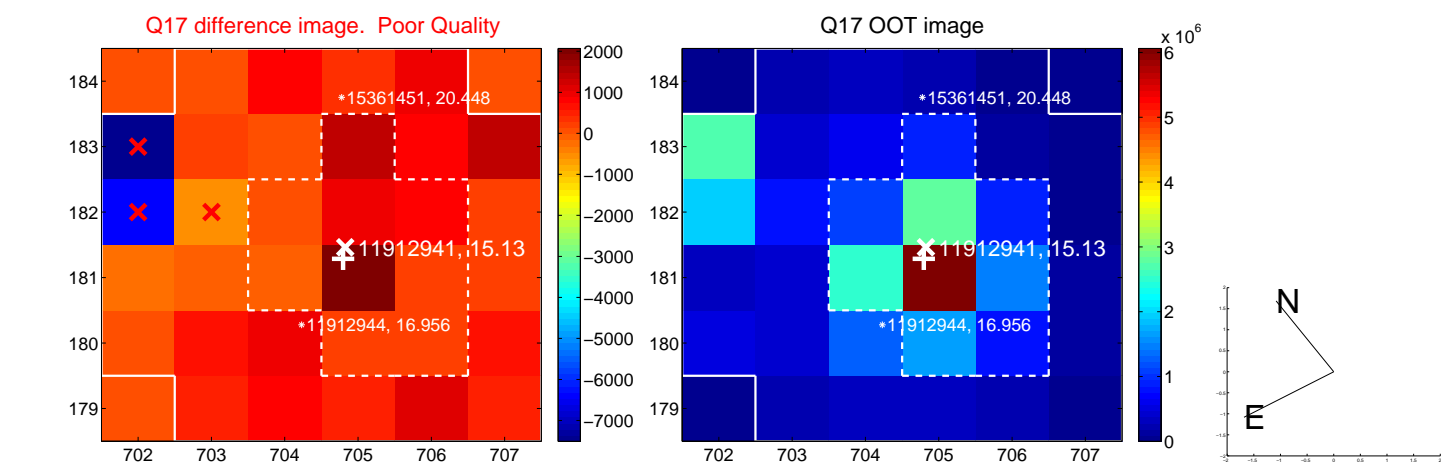
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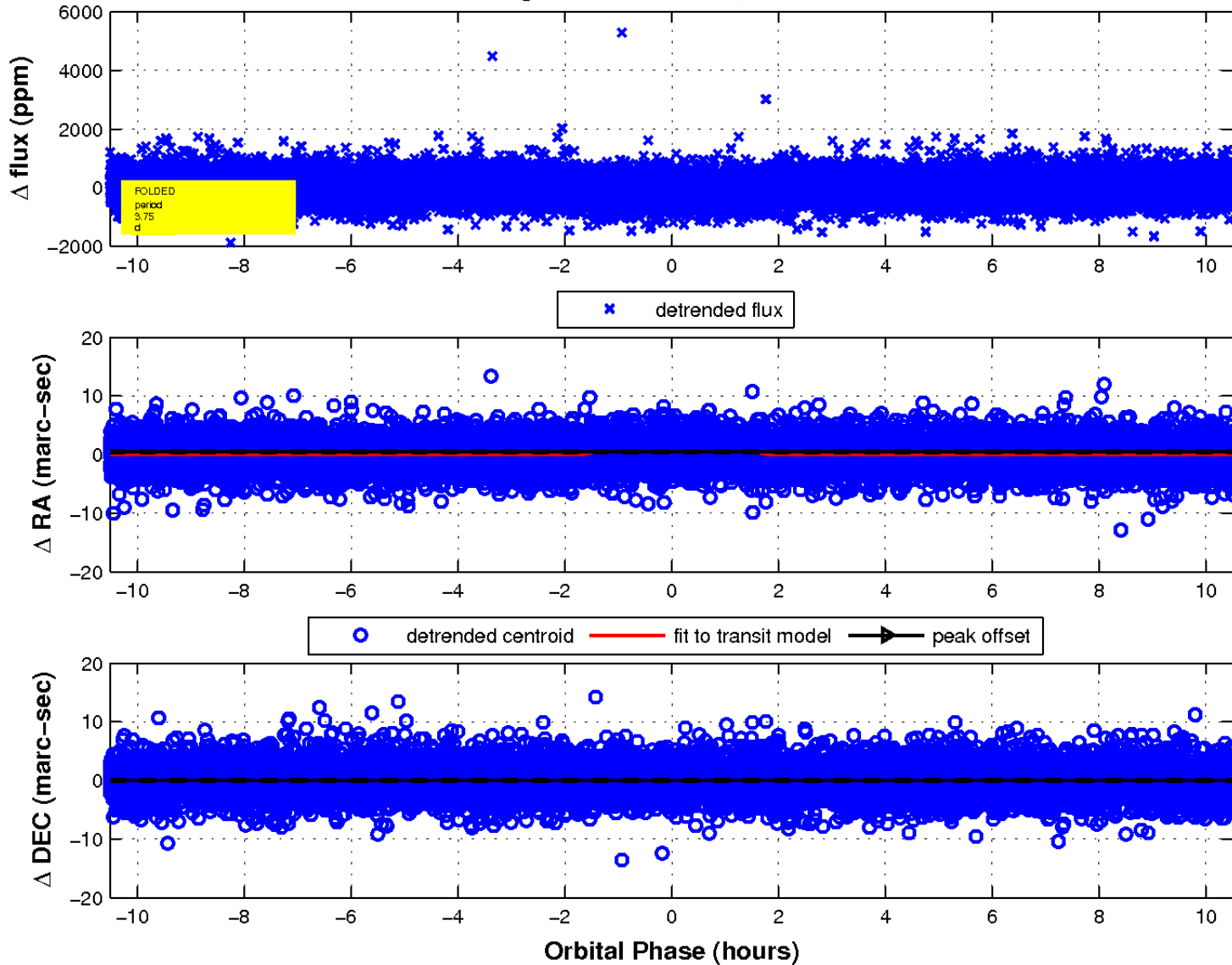
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

