

KIC 008496883

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})
008496883-01	OBS	No	0.655443	131.908451	45.2	2.146	7.6	7.6	0.82	4855	0.69	1808.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008496883-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS

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

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

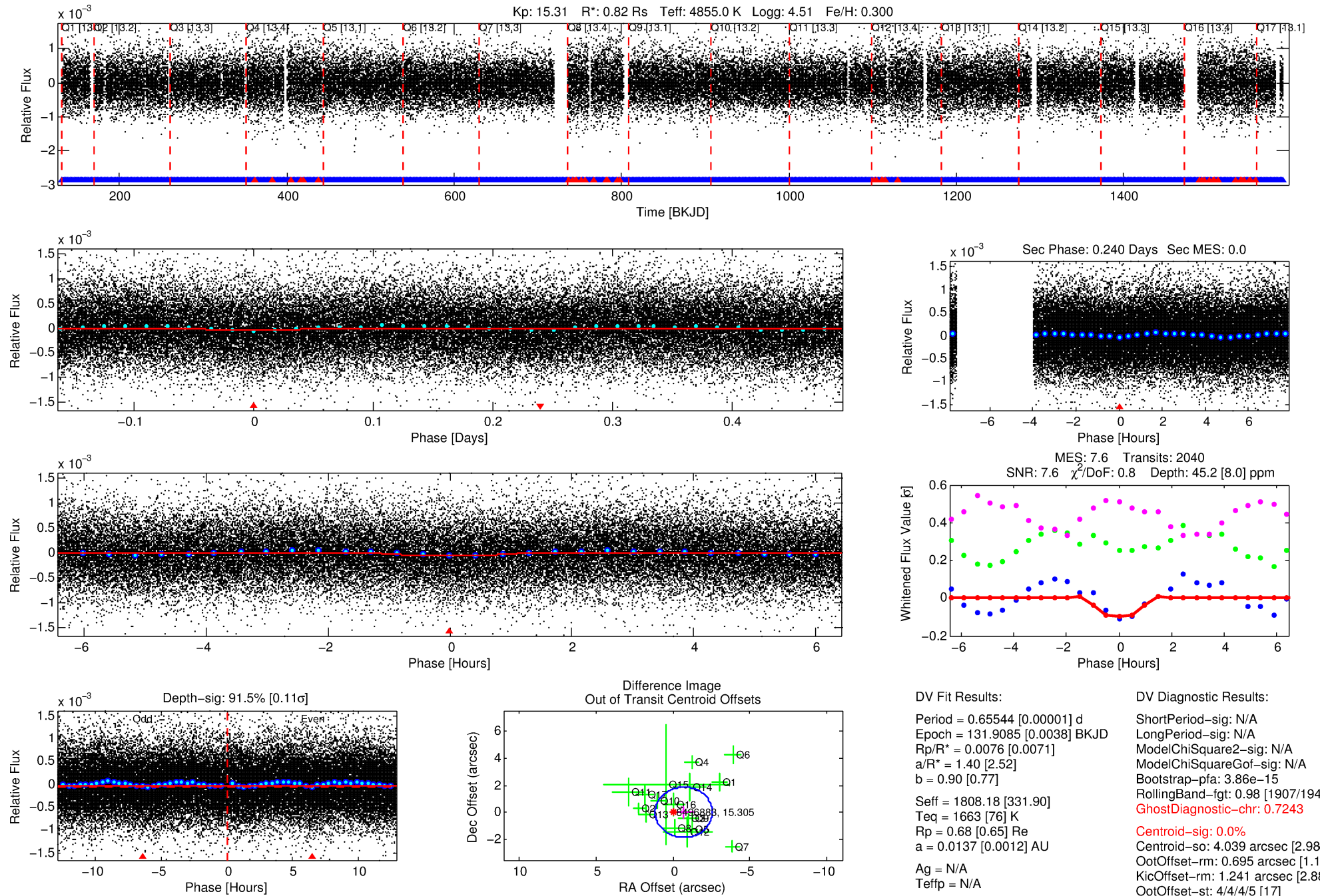
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008496883-01

No Significant Match Found

DV One-Page Summary

KIC: 8496883 Candidate: 1 of 1 Period: 0.655 d



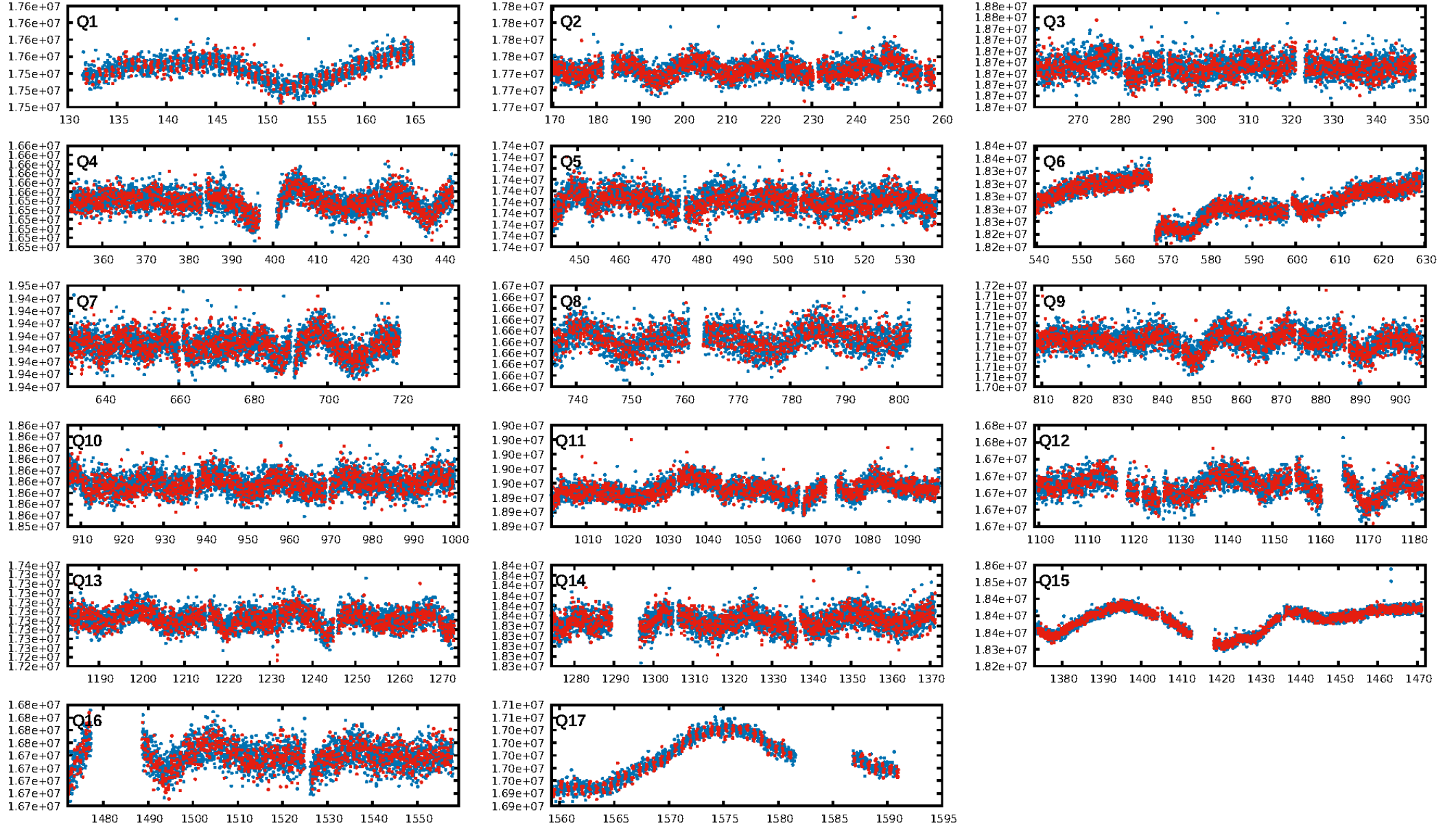
DV Fit Results:

Period = 0.65544 [0.00001] d
Epoch = 131.9085 [0.0038] BKJD
Rp/R* = 0.0076 [0.0071]
a/R* = 1.40 [2.52]
b = 0.90 [0.77]
Seff = 1808.18 [331.90]
Teff = 1663 [76] K
Rp = 0.68 [0.65] Re
a = 0.0137 [0.0012] AU
Ag = N/A
Teffp = N/A

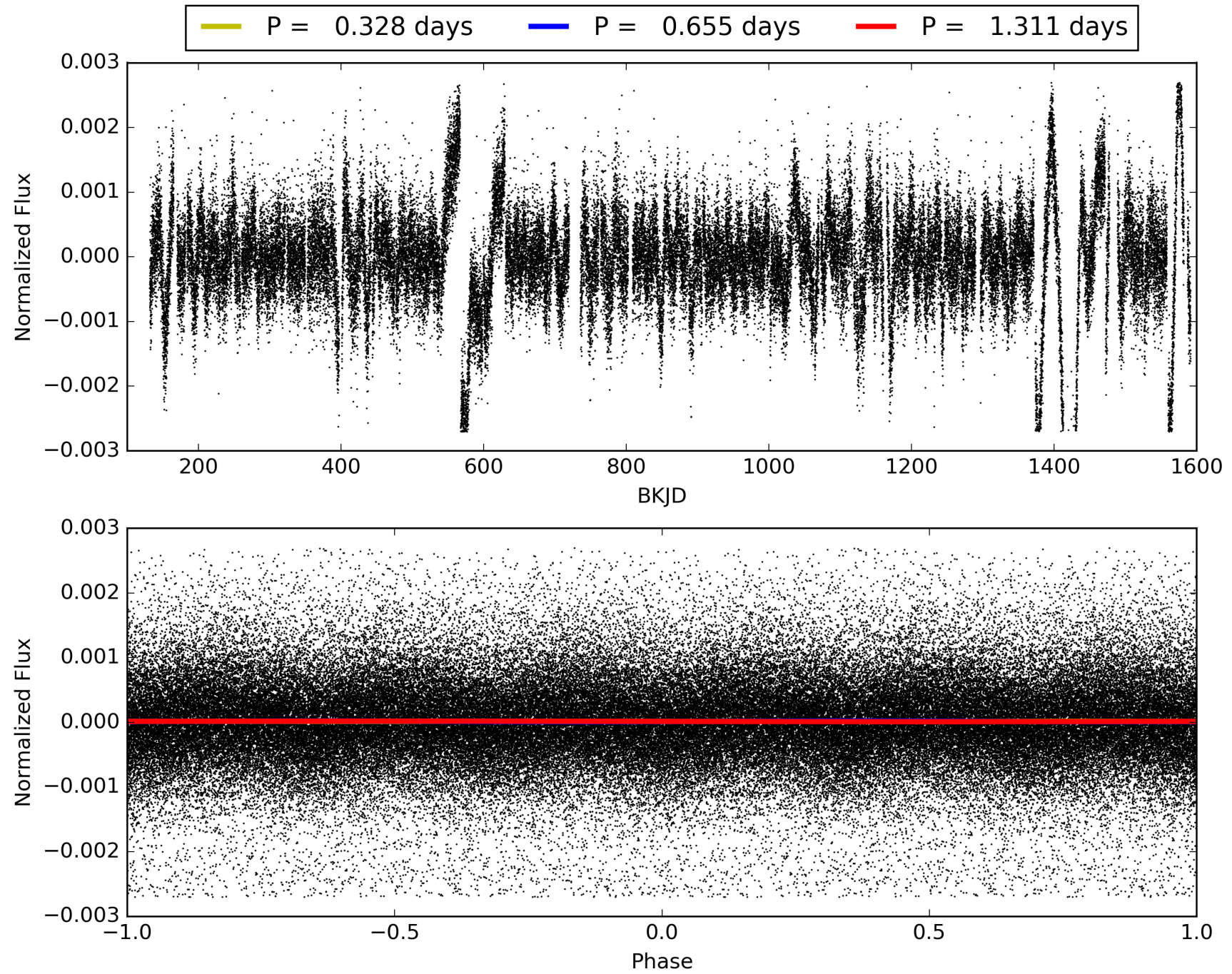
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.86e-15
RollingBand-fgt: 0.98 [1907/1948]
GhostDiagnostic-chr: 0.7243
Centroid-sig: 0.0%
Centroid-so: 4.039 arcsec [2.98 σ]
OotOffset-rm: 0.695 arcsec [1.12 σ]
KicOffset-rm: 1.241 arcsec [2.88 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.12 [2/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008496883-01, PDC Light Curves

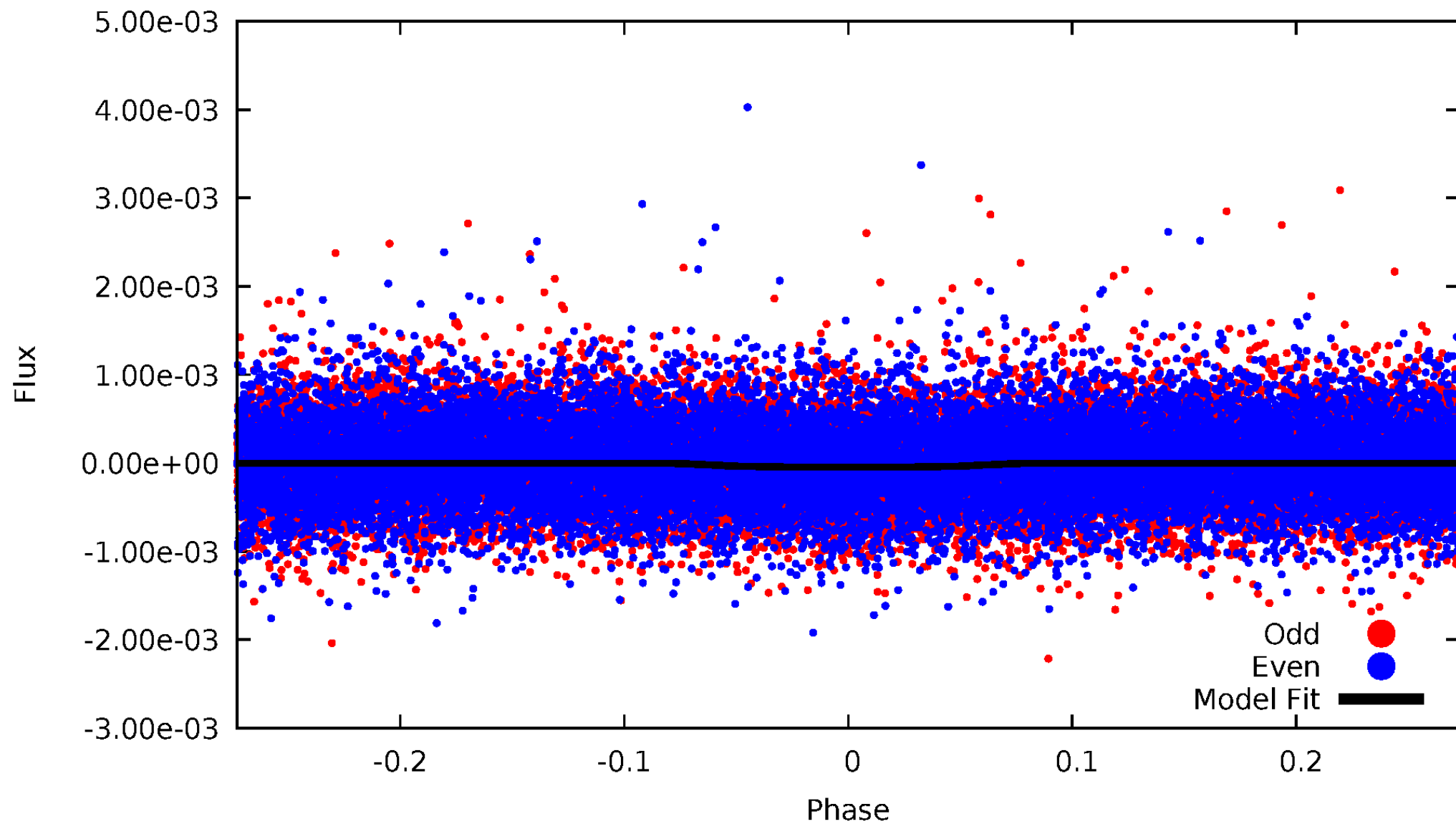


TCE 008496883-01



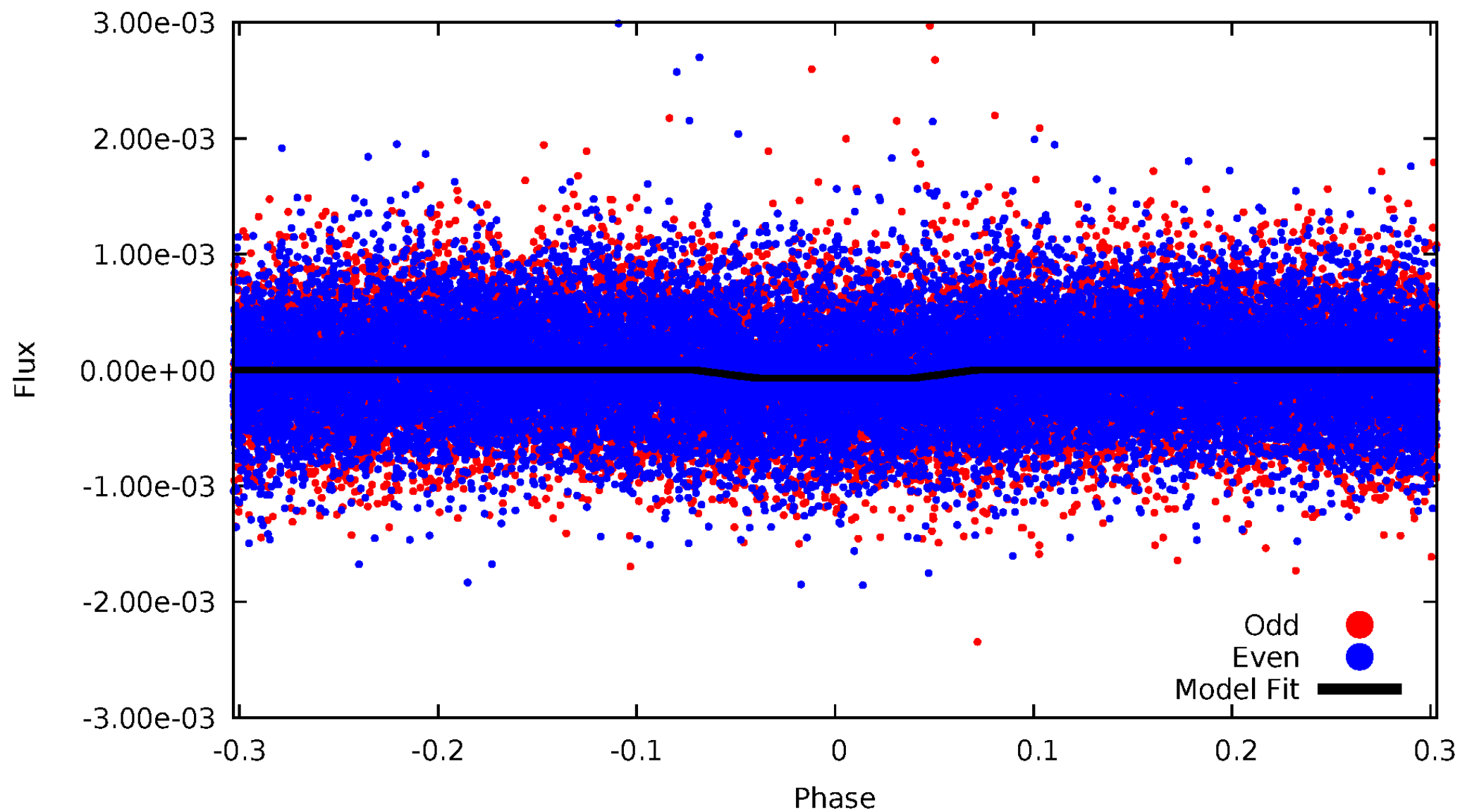
DV Odd/Even

TCE 008496883-01



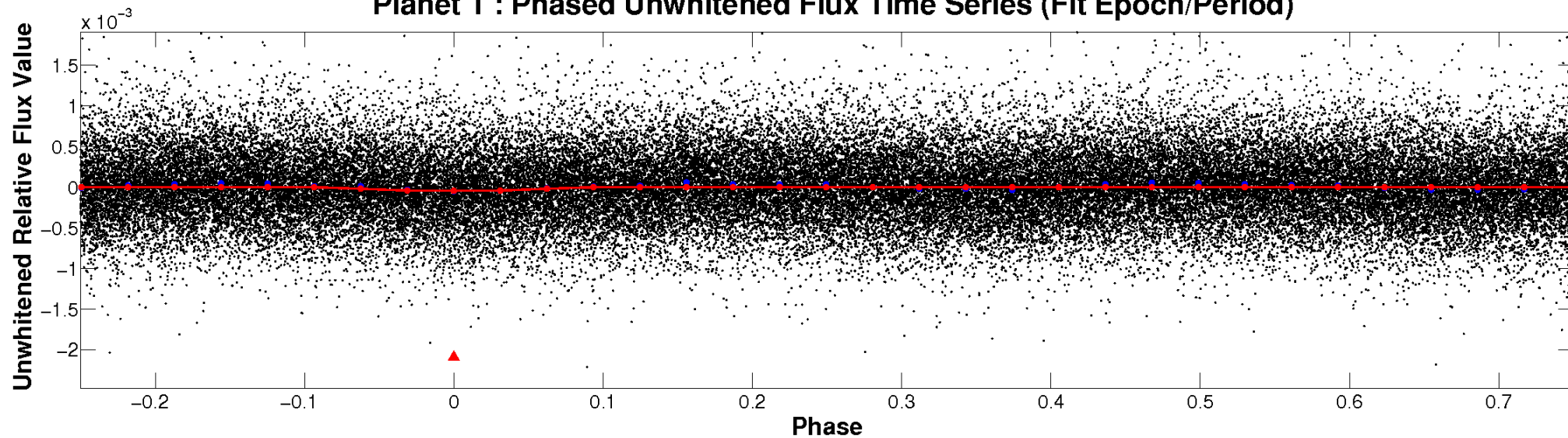
ALT Odd/Even

TCE 008496883-01

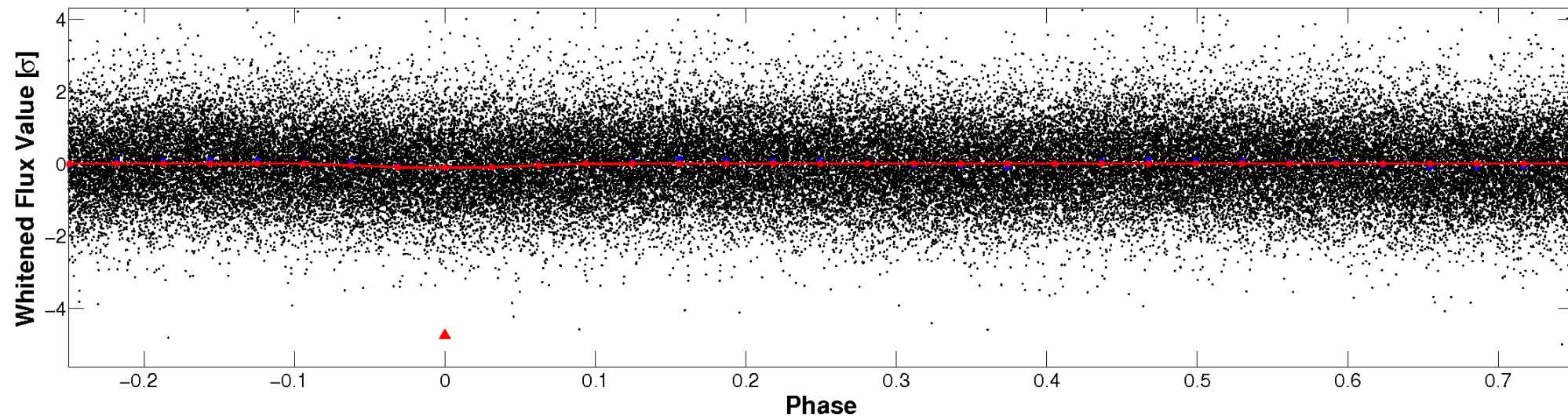


Non-Whitened Vs. Whitened Light Curve

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

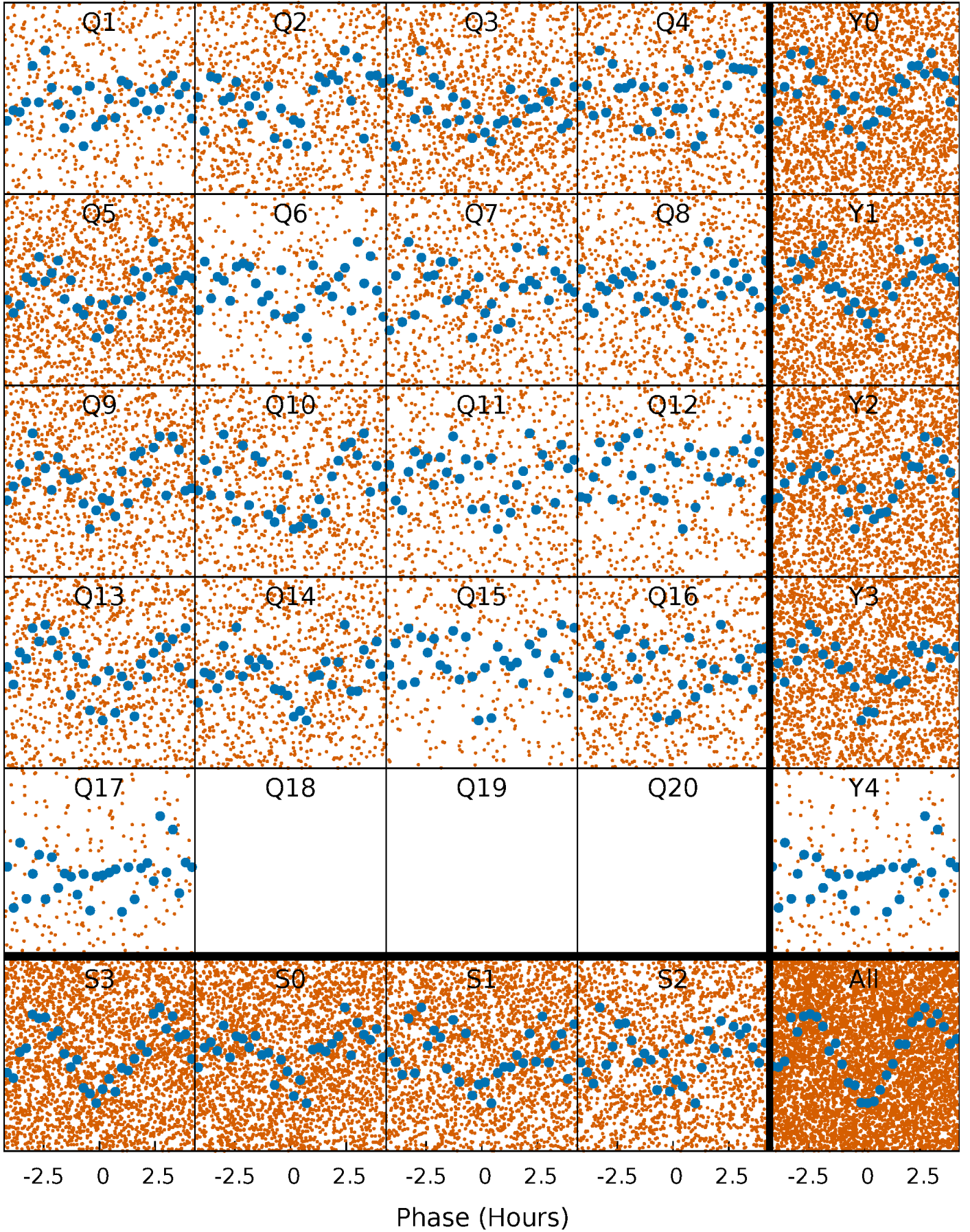


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



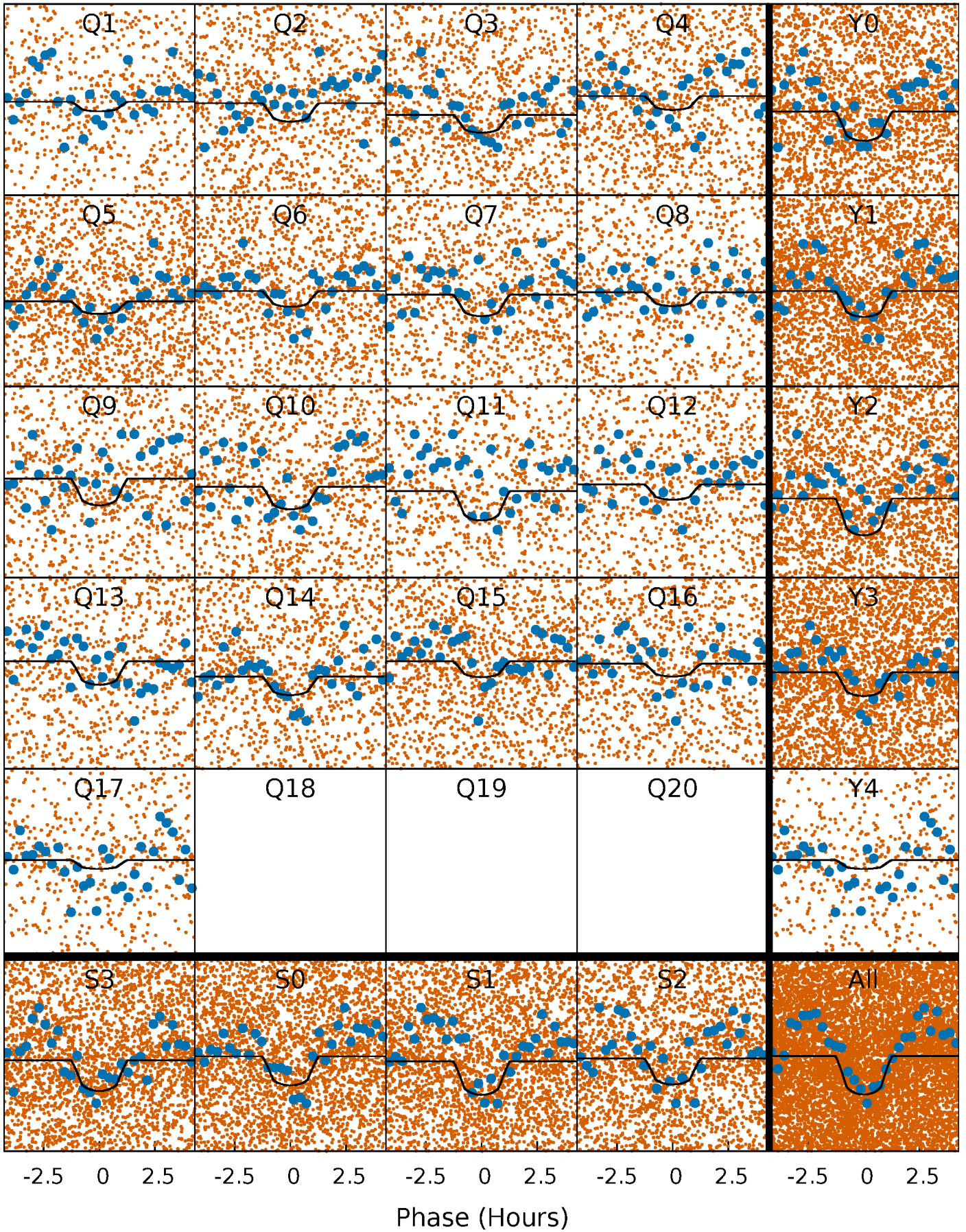
PDC Quarter-Phased Transit Curves

TCE 008496883-01 P= 0.655443 Days $T_0=131.908451$ (BKJD)



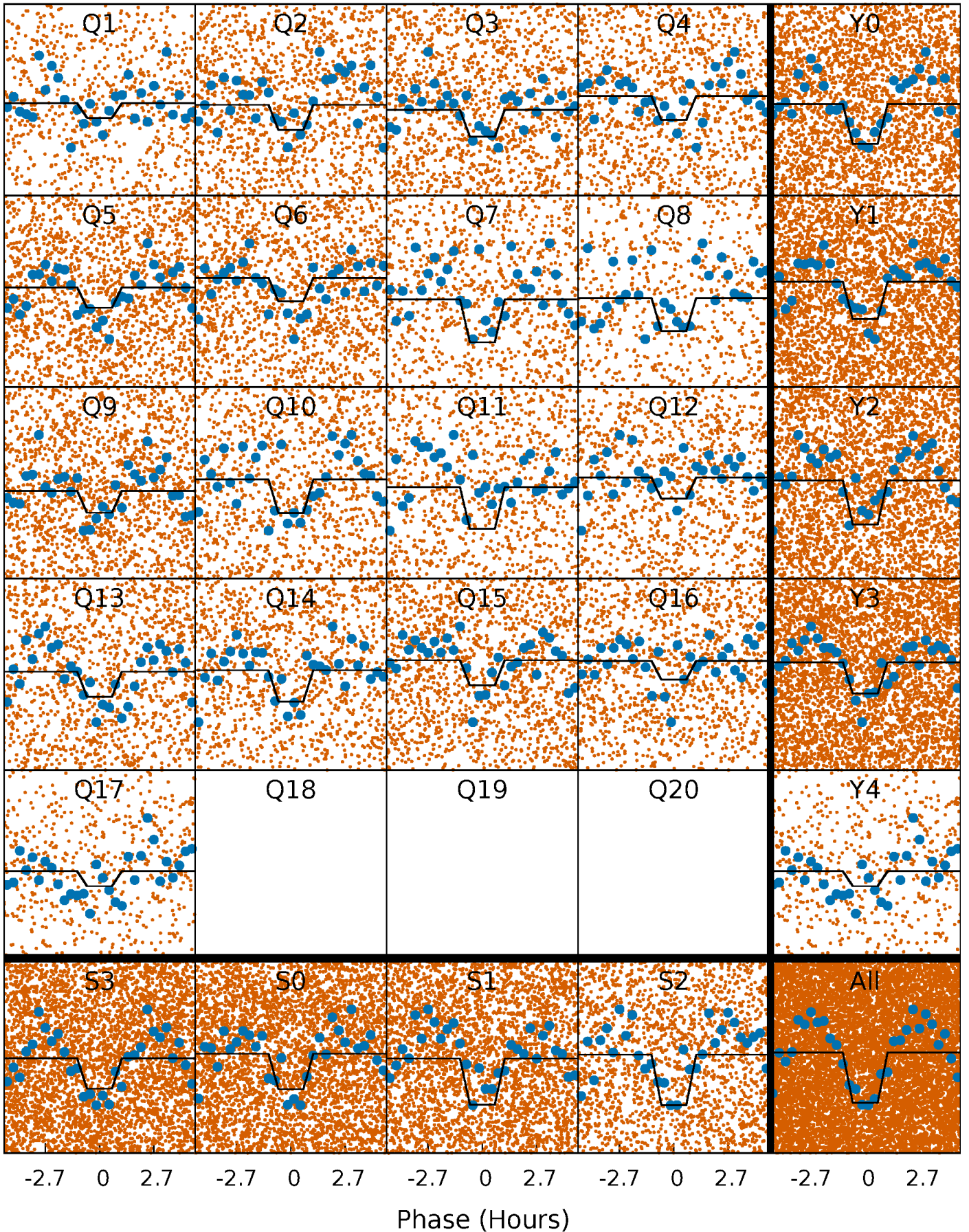
DV Quarter-Phased Transit Curves

TCE 008496883-01 P= 0.655443 Days $T_0=131.908451$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

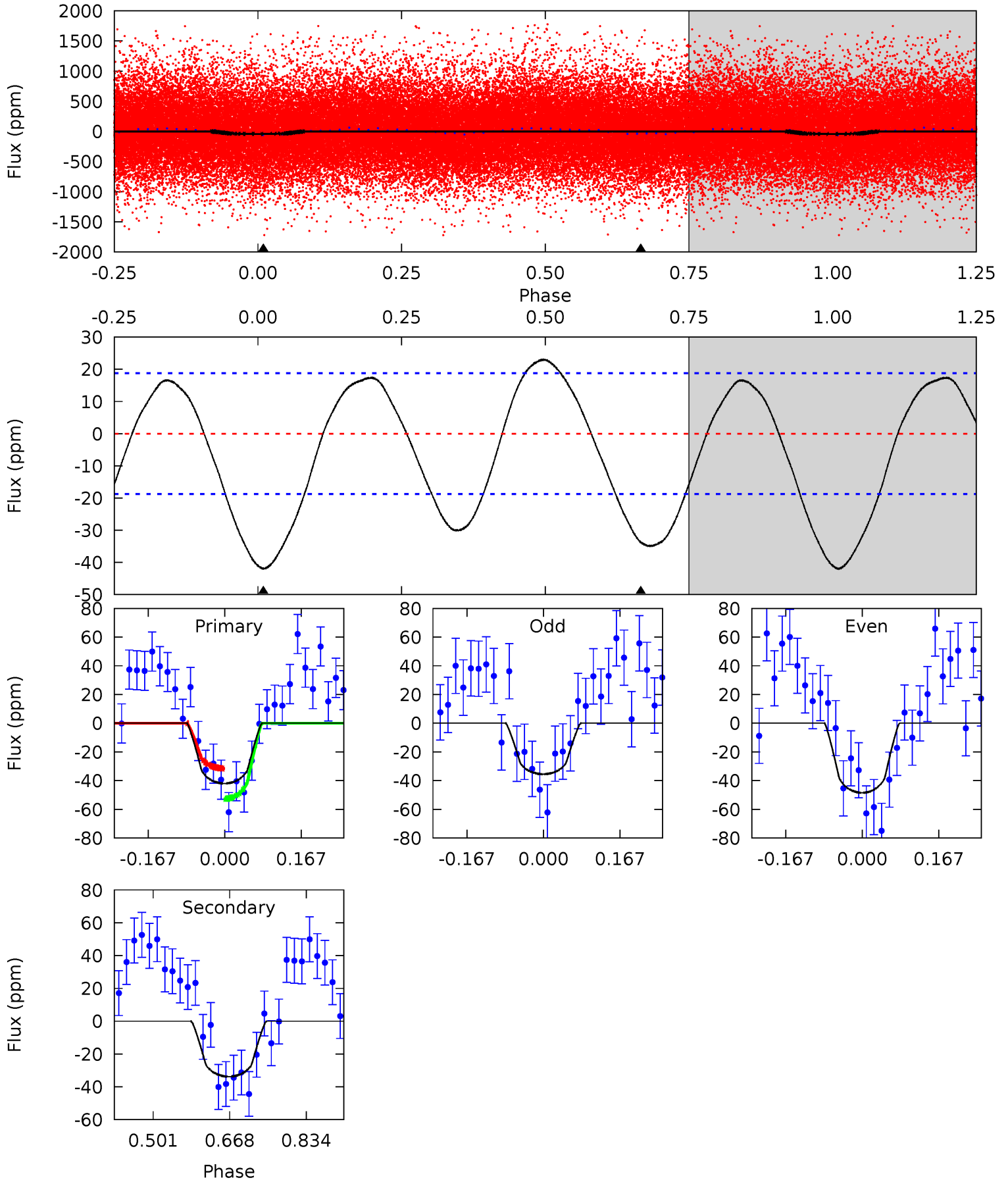
TCE 008496883-01 P= 0.655451 Days $T_0=131.905526$ (BKJD)



DV Model-Shift Uniqueness Test

008496883-01, P = 0.655443 Days, E = 131.253008 Days

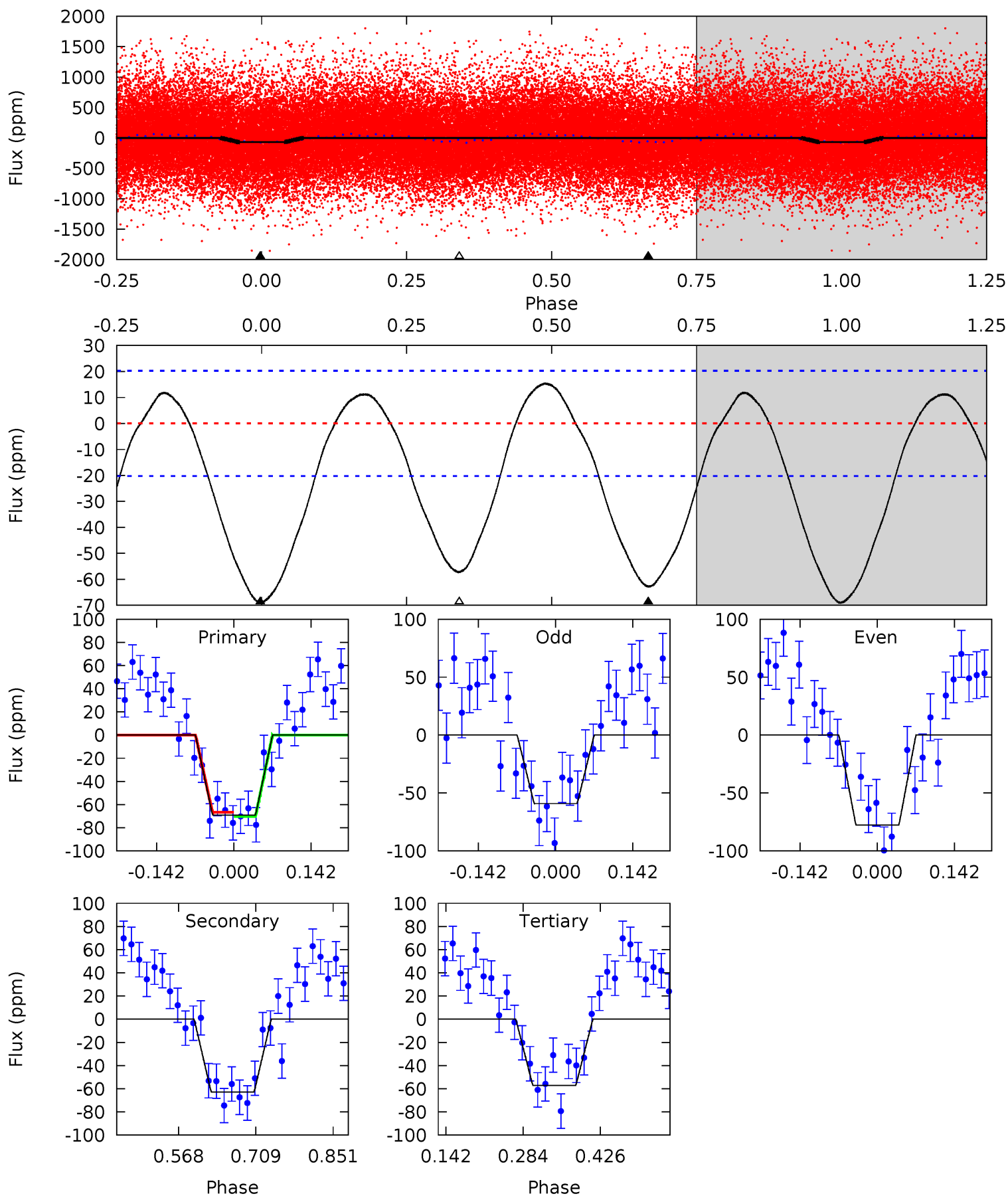
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.97	8.03	0	0	4.46	1.38	4.30	9.97	9.97	8.03	8.03	1.55	0.99	0.35	2.52



Alt Model-Shift Uniqueness Test

008496883-01, P = 0.655451 Days, E = 131.250075 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.3	13.9	12.7	0	4.49	1.47	5.56	2.61	15.3	1.23	13.9	2.06	0.97	0.18	0.38



Stellar Parameters For KIC 008496883

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4855^{+144}_{-144}	$4.506^{+0.082}_{-0.075}$	$0.300^{+0.150}_{-0.300}$	$0.825^{+0.062}_{-0.076}$	$0.795^{+0.054}_{-0.054}$	$1.995^{+0.709}_{-0.447}$
	+3%/-3%	+2%/-2%	+50%/-100%	+8%/-9%	+7%/-7%	+36%/-22%
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 008496883-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-34 ± 4	$0.83^{+0.62}_{-0.53}$	2322^{+95}_{-91}	4040^{+2192}_{-768}	$5.227^{+31.100}_{-3.559}$
Alt.	-63 ± 5	$0.85^{+0.62}_{-0.52}$	2322^{+94}_{-86}	4478^{+2492}_{-812}	$9.080^{+49.978}_{-6.047}$

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 $A_{obs} \gg 1.0$

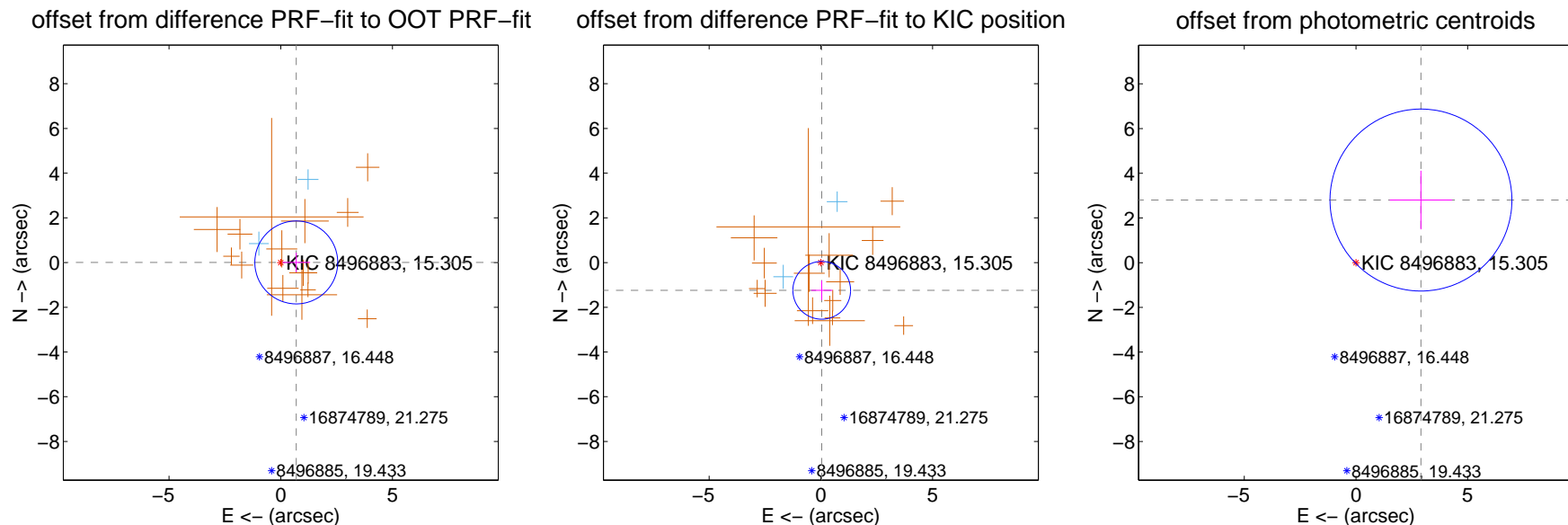
DV Centroid Data

Supplemental centroid analysis for 008496883-01. Kepler magnitude: 15.30. Transit SNR 7.64

There are 2 quarters with good PRF difference image offsets

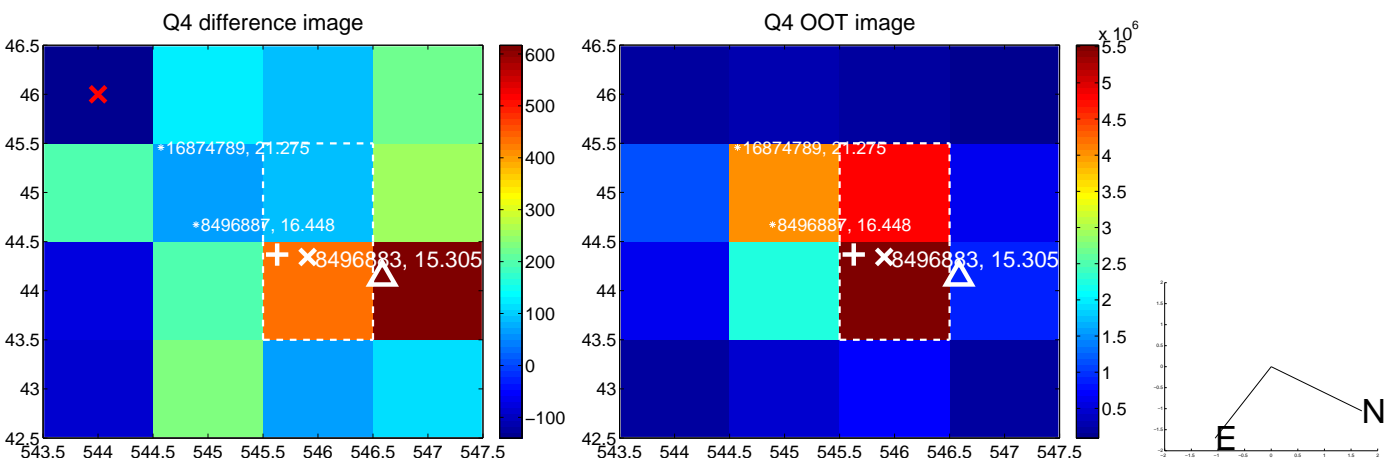
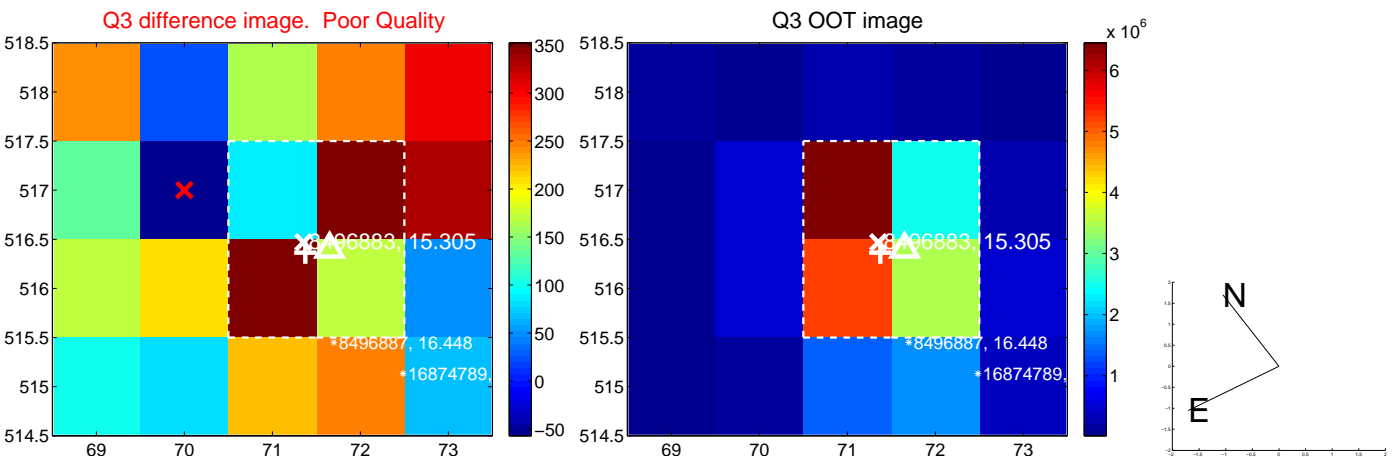
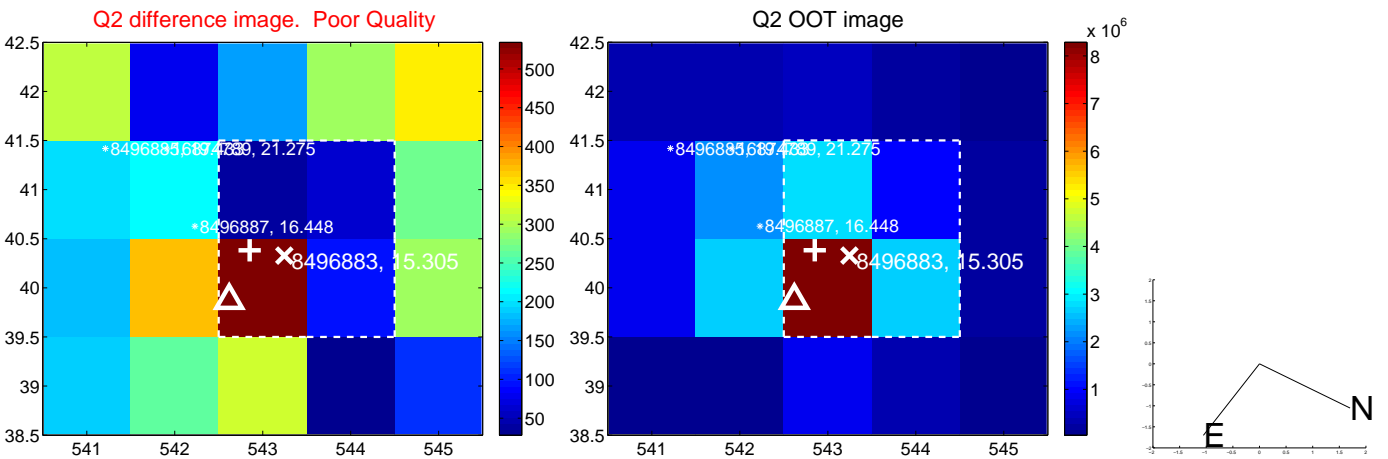
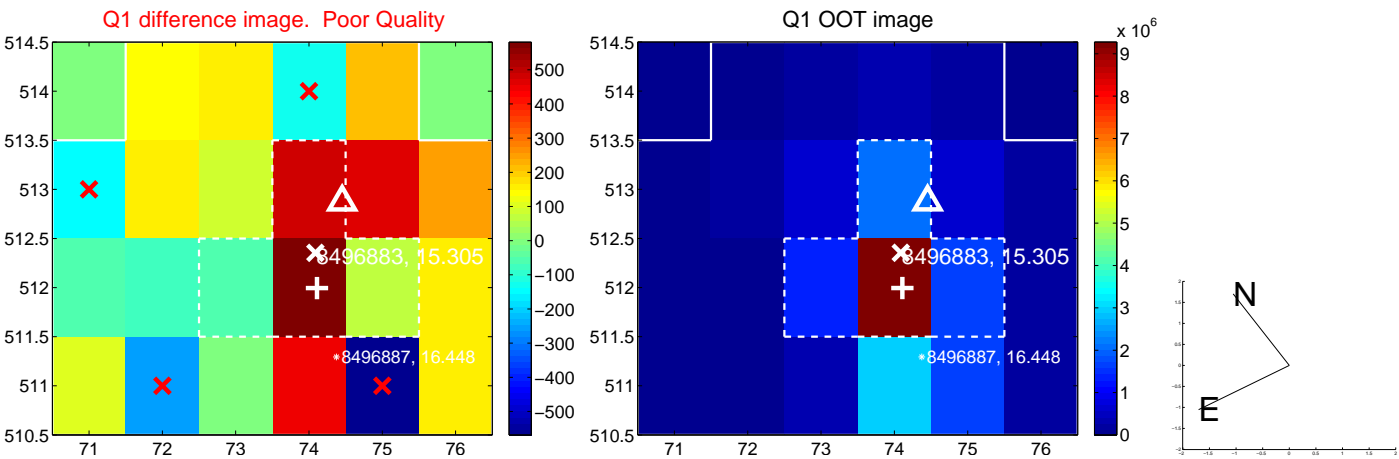
The direct PRF centroid is offset from the target star catalog position by about 1.47 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.695 ± 0.618	1.12	-0.695 ± 0.618	0.007 ± 0.434
PRF-fit source offset from KIC position	1.241 ± 0.430	2.88	-0.038 ± 0.475	-1.240 ± 0.432
photometric centroid source offset	4.04 ± 1.36	2.98	-2.91 ± 1.40	2.80 ± 1.31

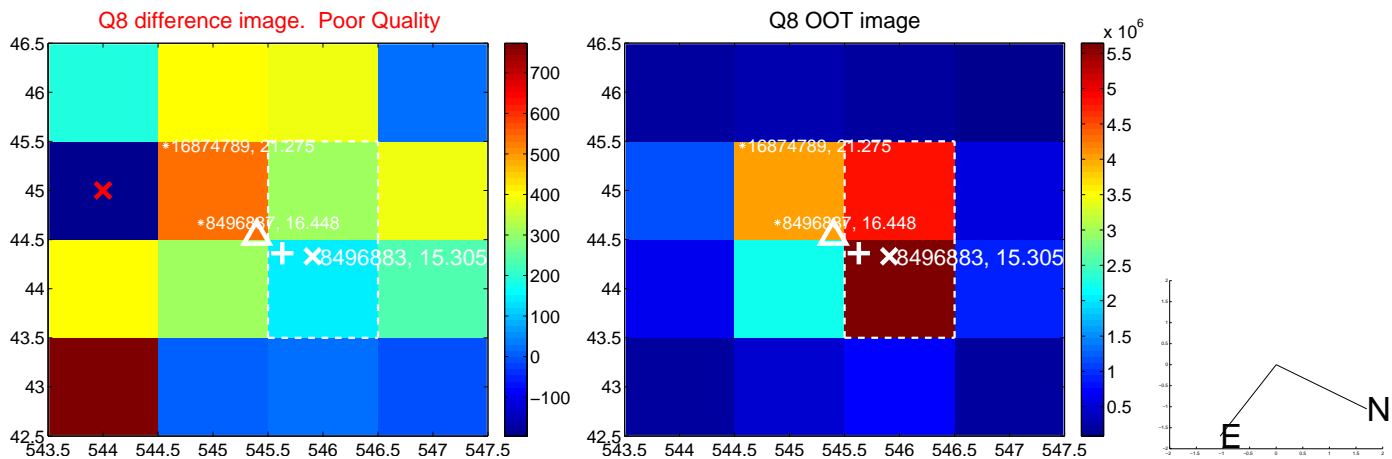
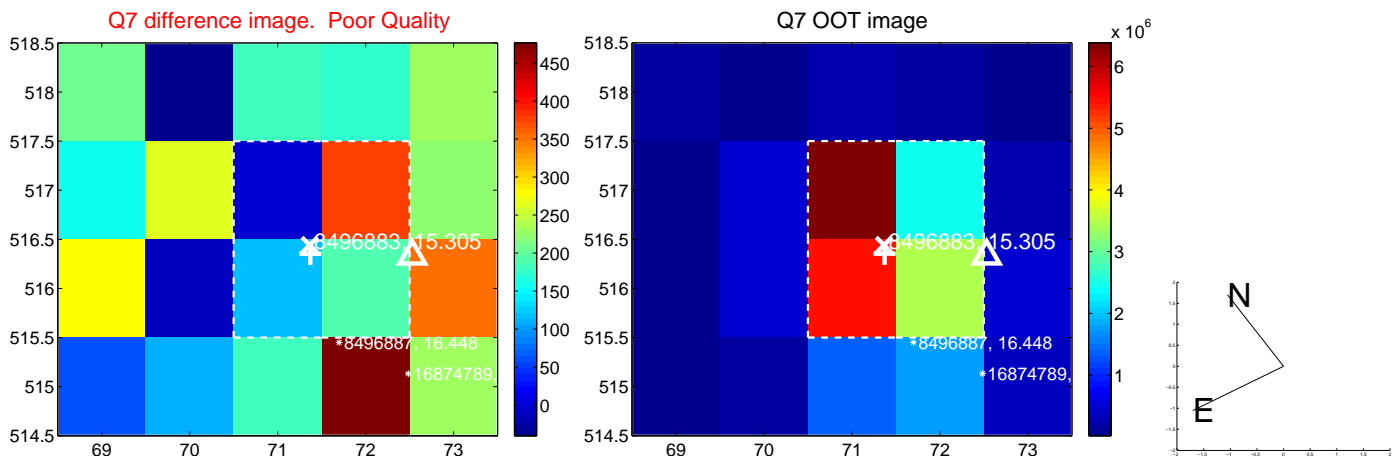
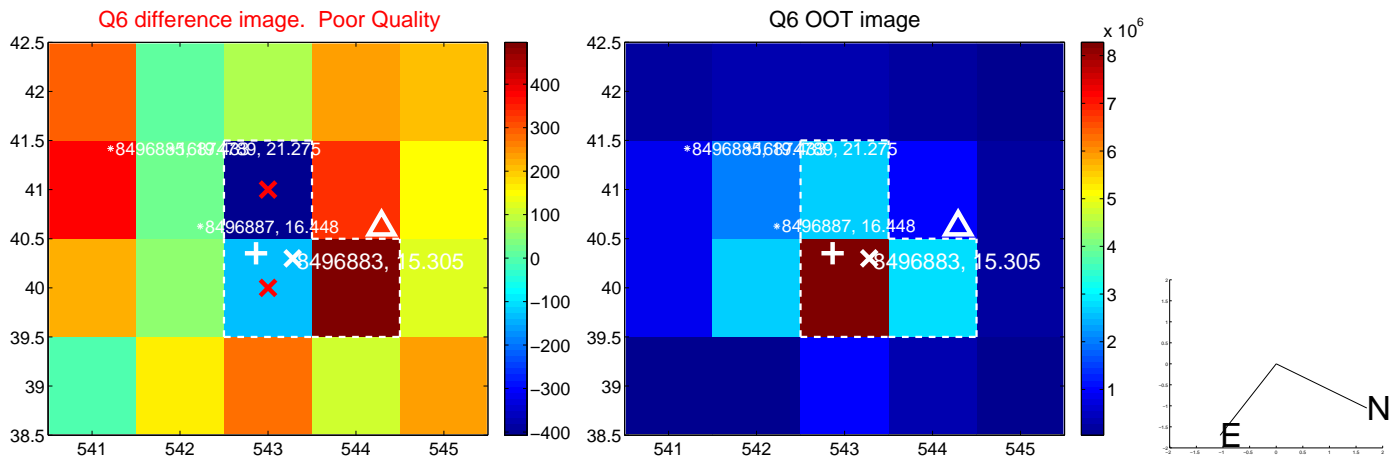
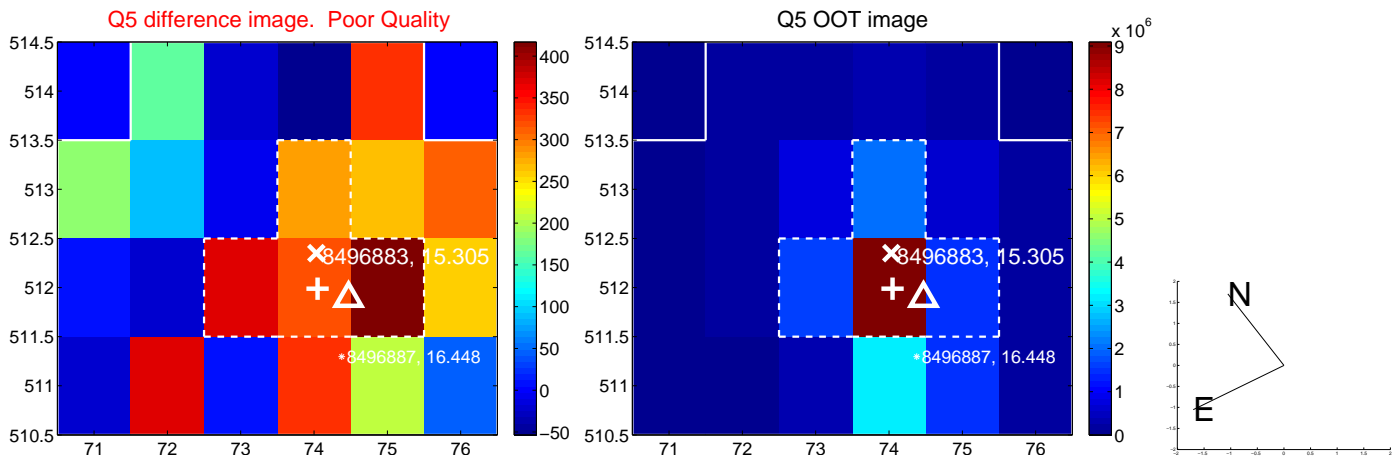


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

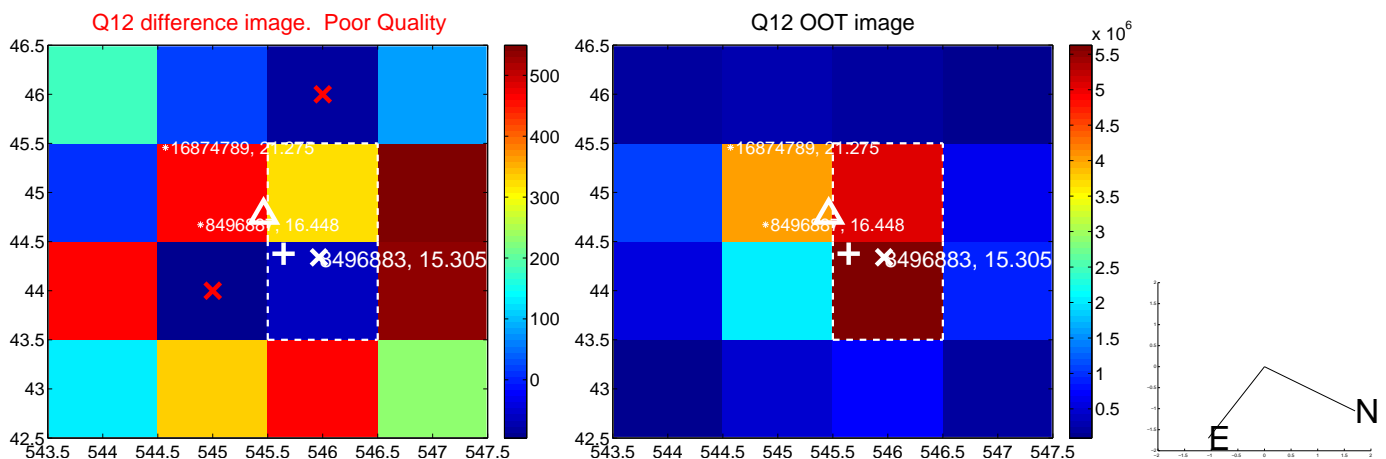
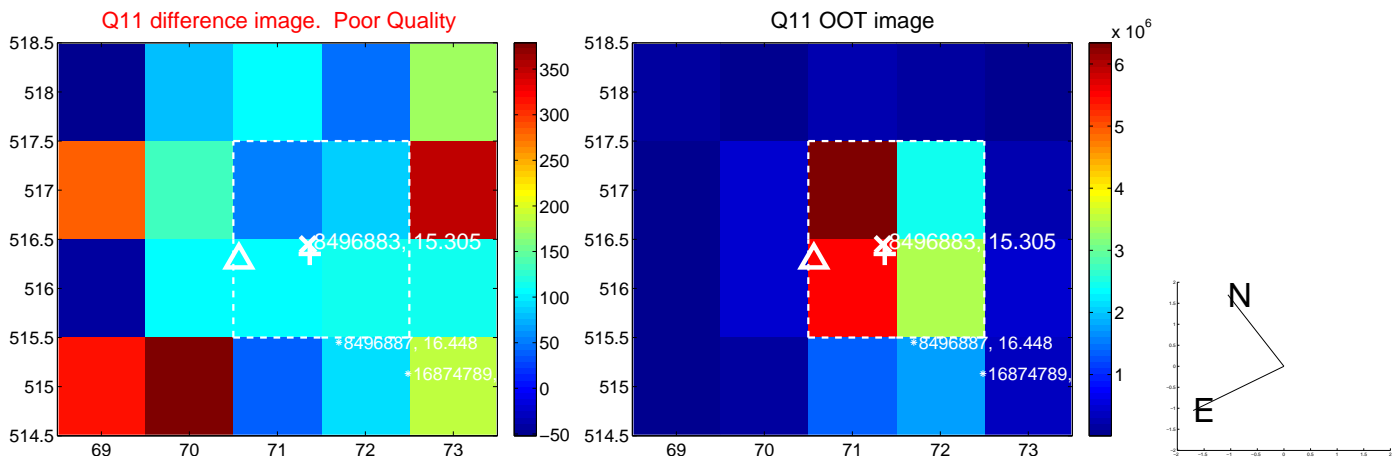
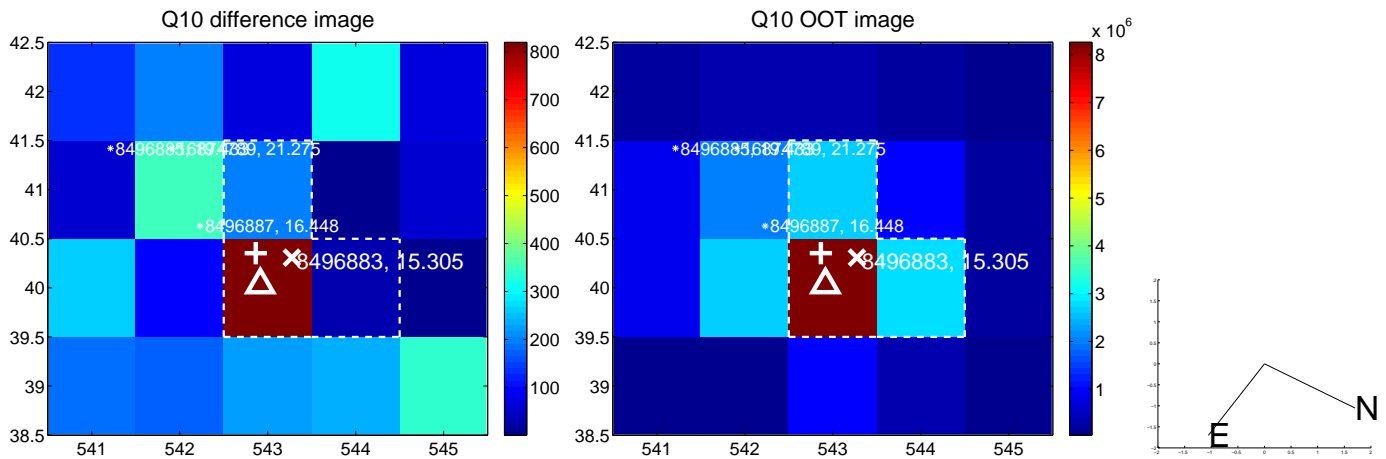
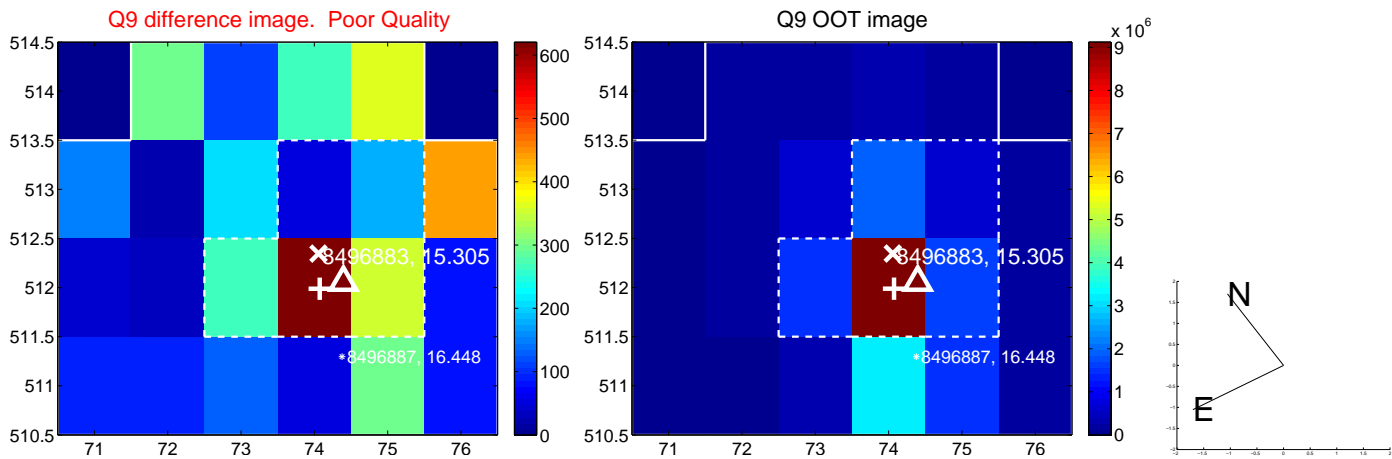
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



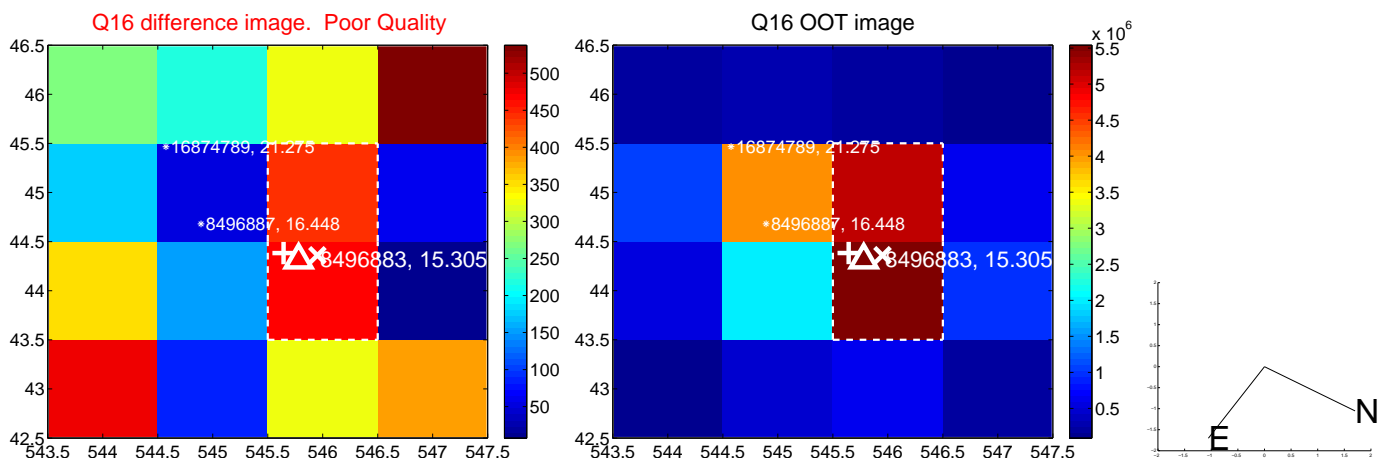
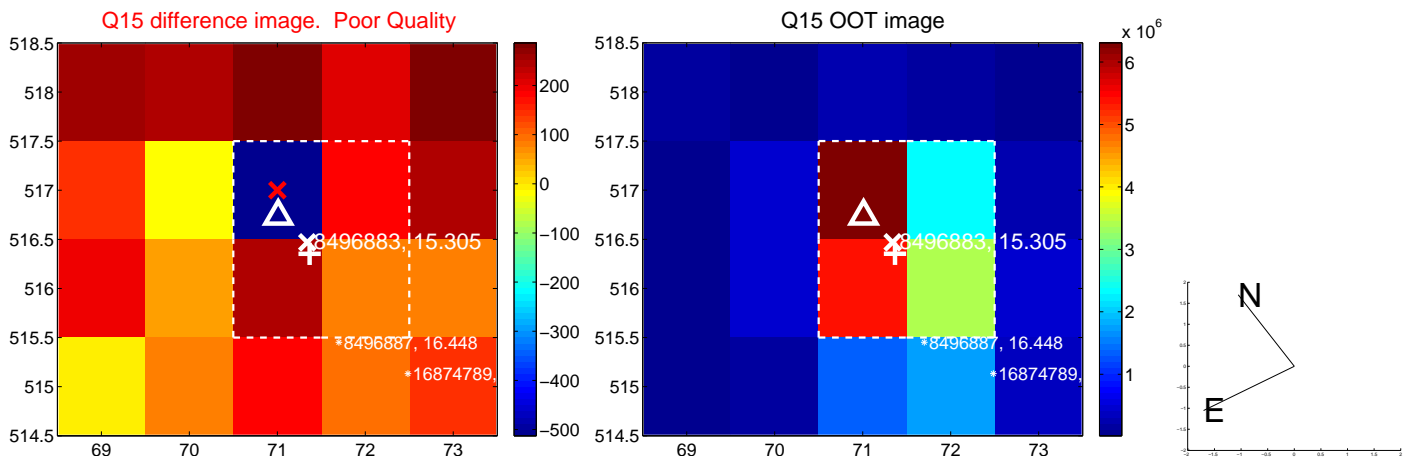
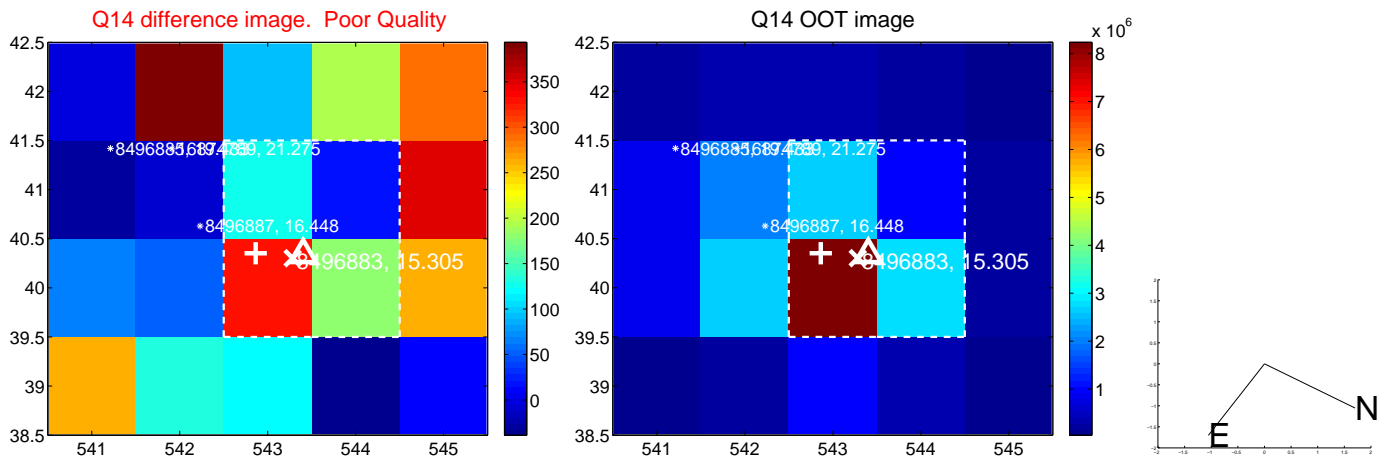
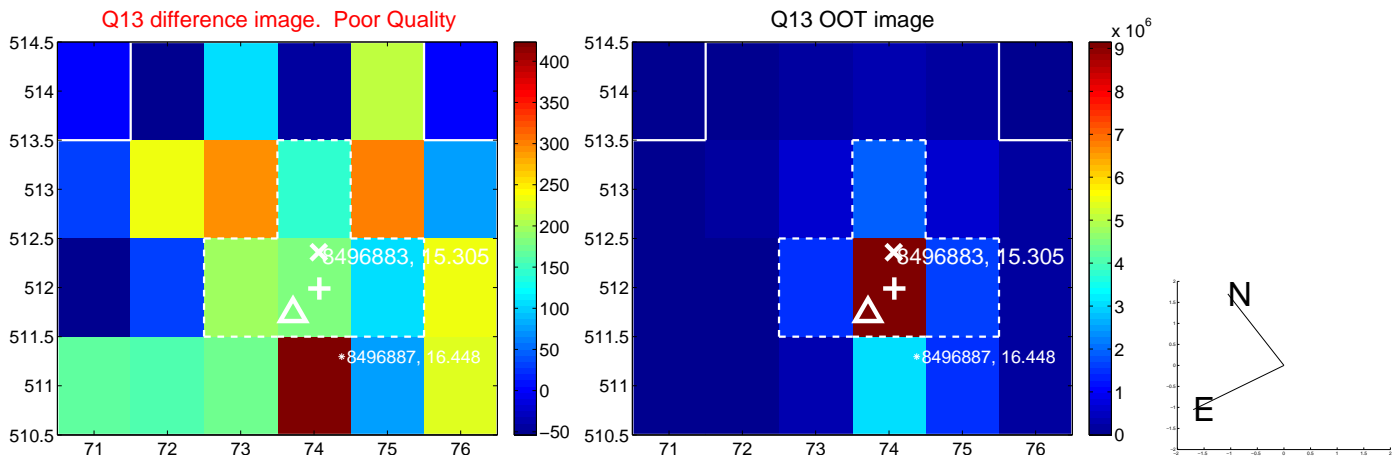
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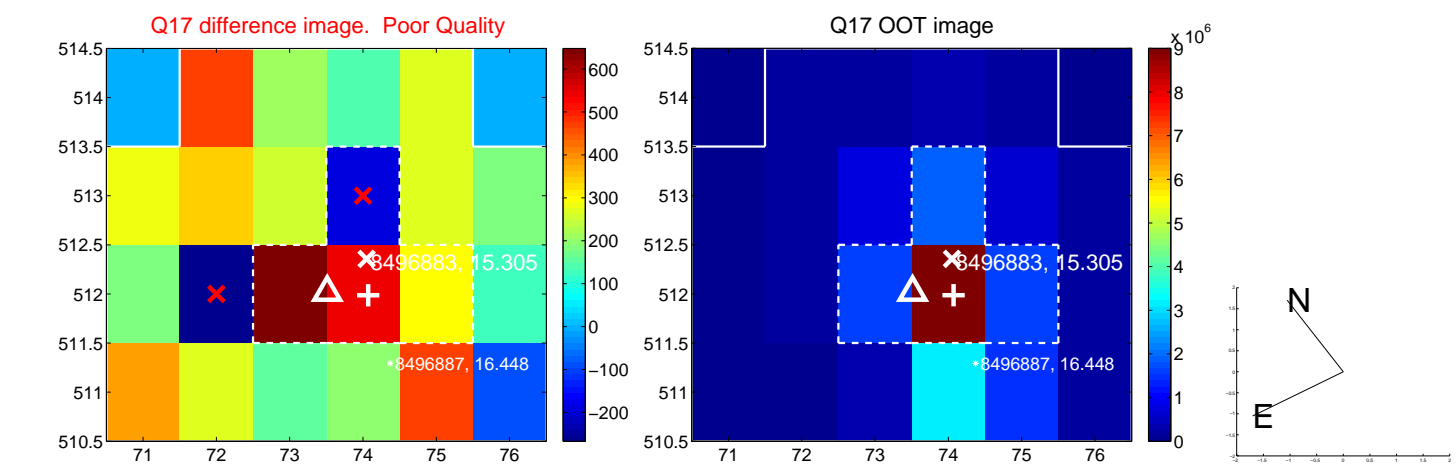
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



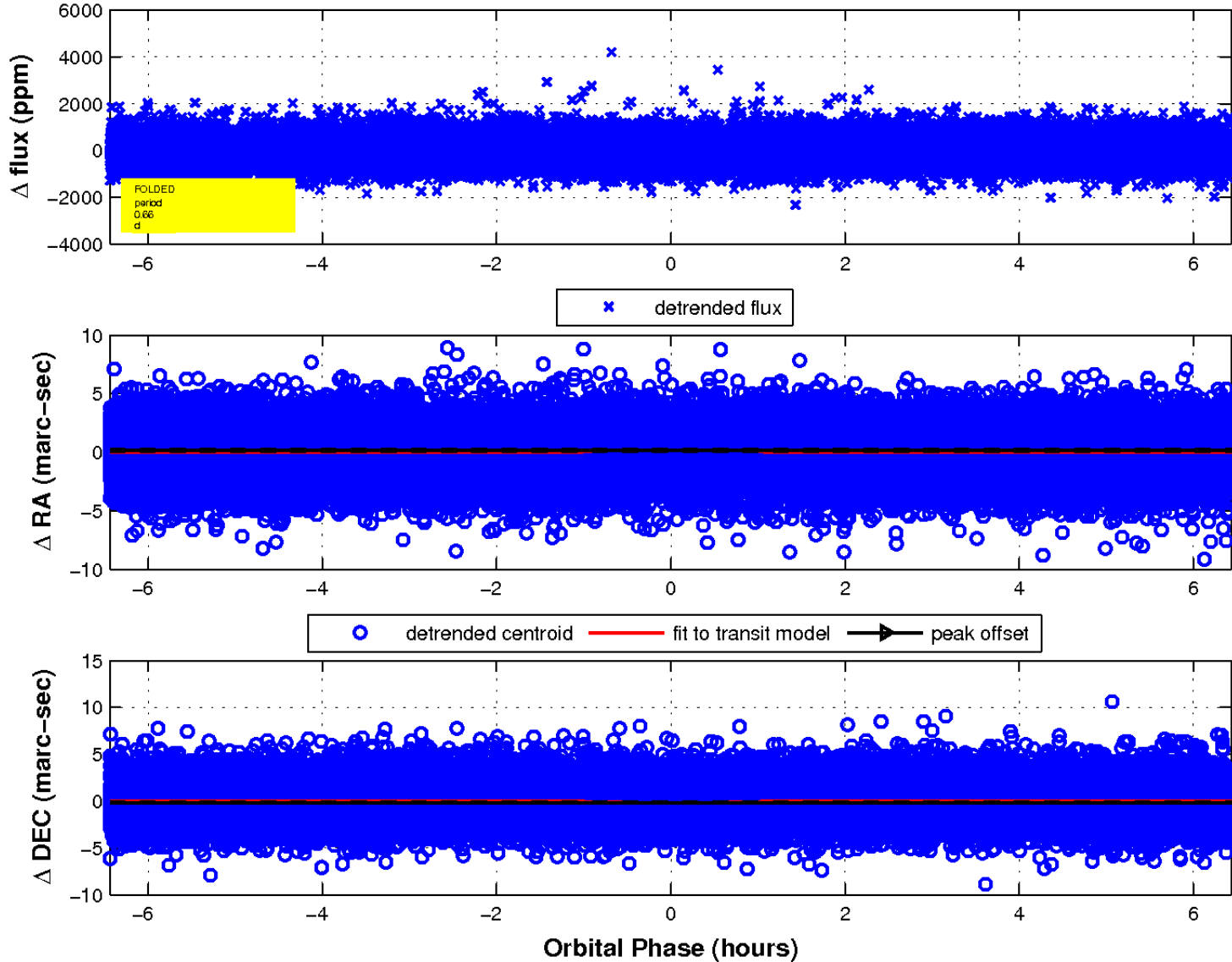
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

