

KIC 006862750

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})
006862750-01	OBS	No	0.566791	131.854167	18.9	1.160	8.1	1.8	0.90	5790	0.47	4548.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006862750-01	OBS	FP	0.00	1	0	0	1	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS—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.

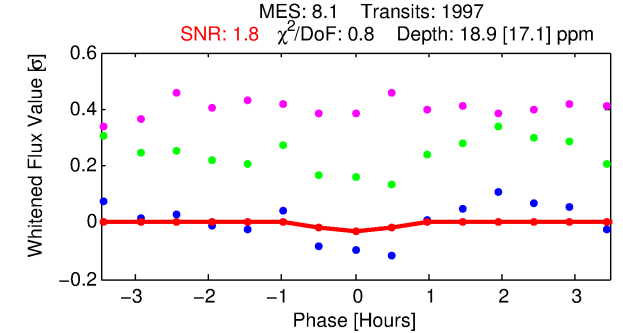
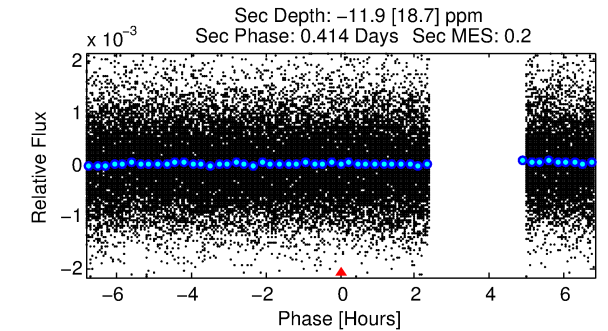
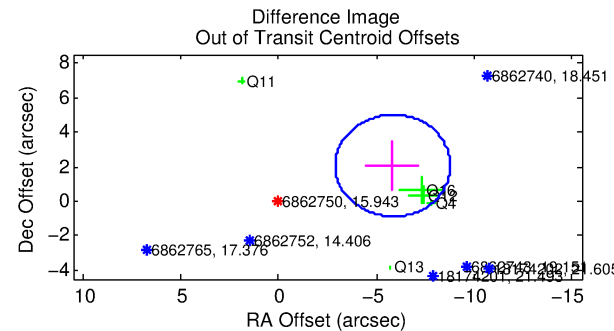
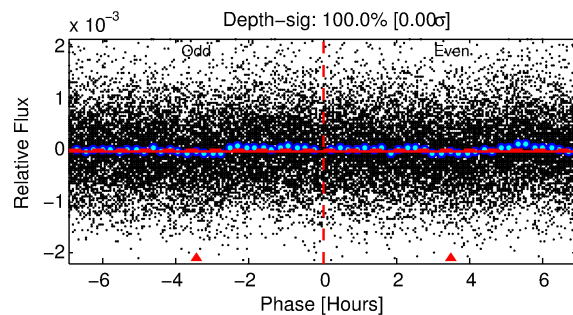
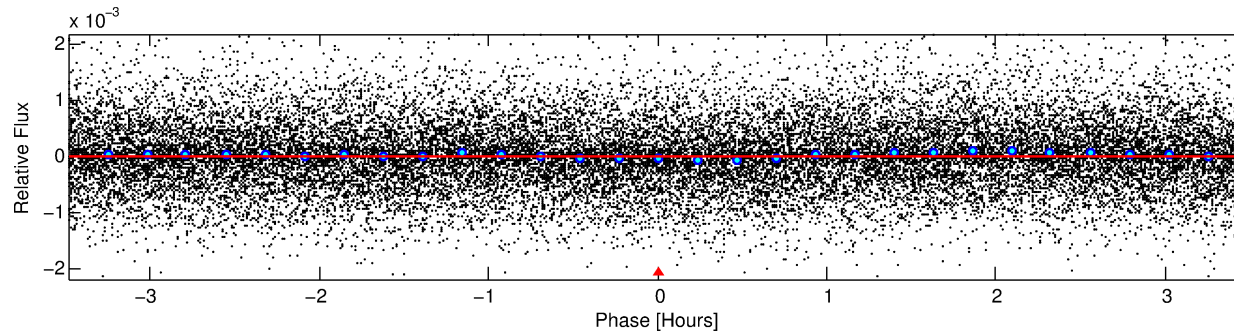
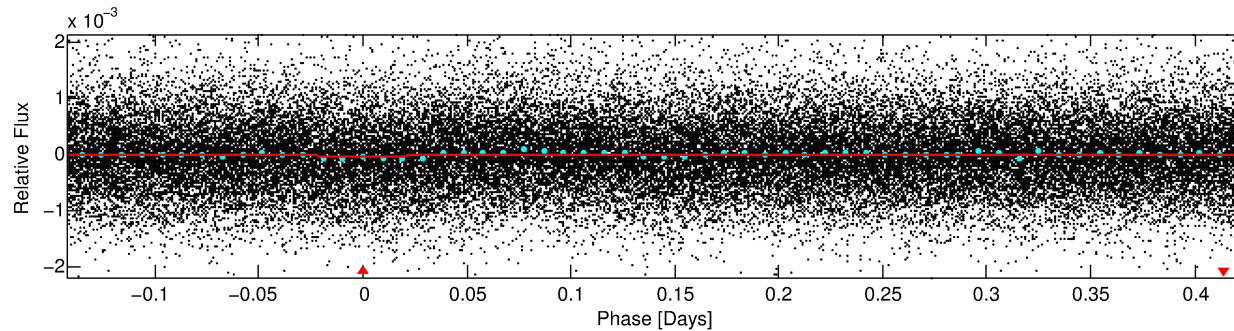
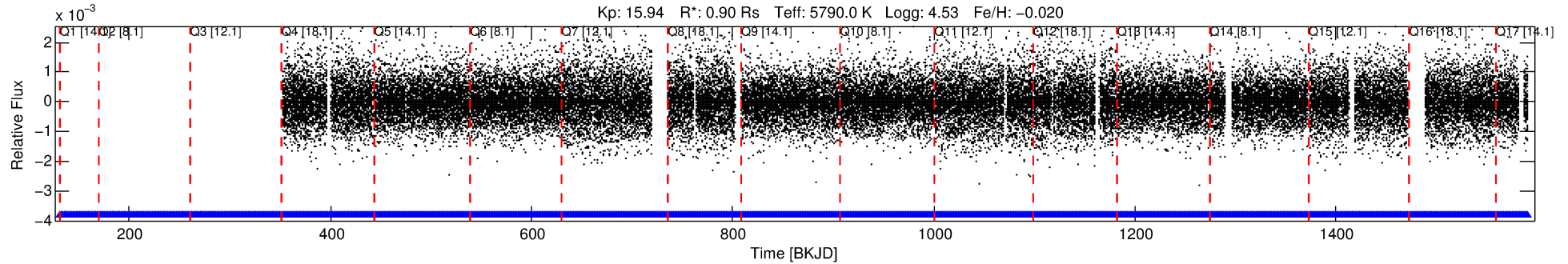
Ephemeris Match Information For 006862750-01

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
006862750-01	6862750	4020.01	7038096	1:1	3918.6	-407	8	14.65	15.94	12.47	Col-Anomaly	1	1.93	4.75

Notes: P₁:P₂ 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. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ 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: 6862750 Candidate: 1 of 1 Period: 0.567 d



DV Fit Results:

Period = 0.56679 [0.00007] d
Epoch = 131.8542 [0.0109] BKJD
Rp/R* = 0.0048 [0.0071]
a/R* = 1.91 [9.73]
b = 0.90 [1.51]
Seff = 4548.55 [1790.87]
Teq = 2094 [206] K
Rp = 0.47 [0.71] Re
a = 0.0134 [0.0033] AU
Ag = N/A
Teffp = N/A

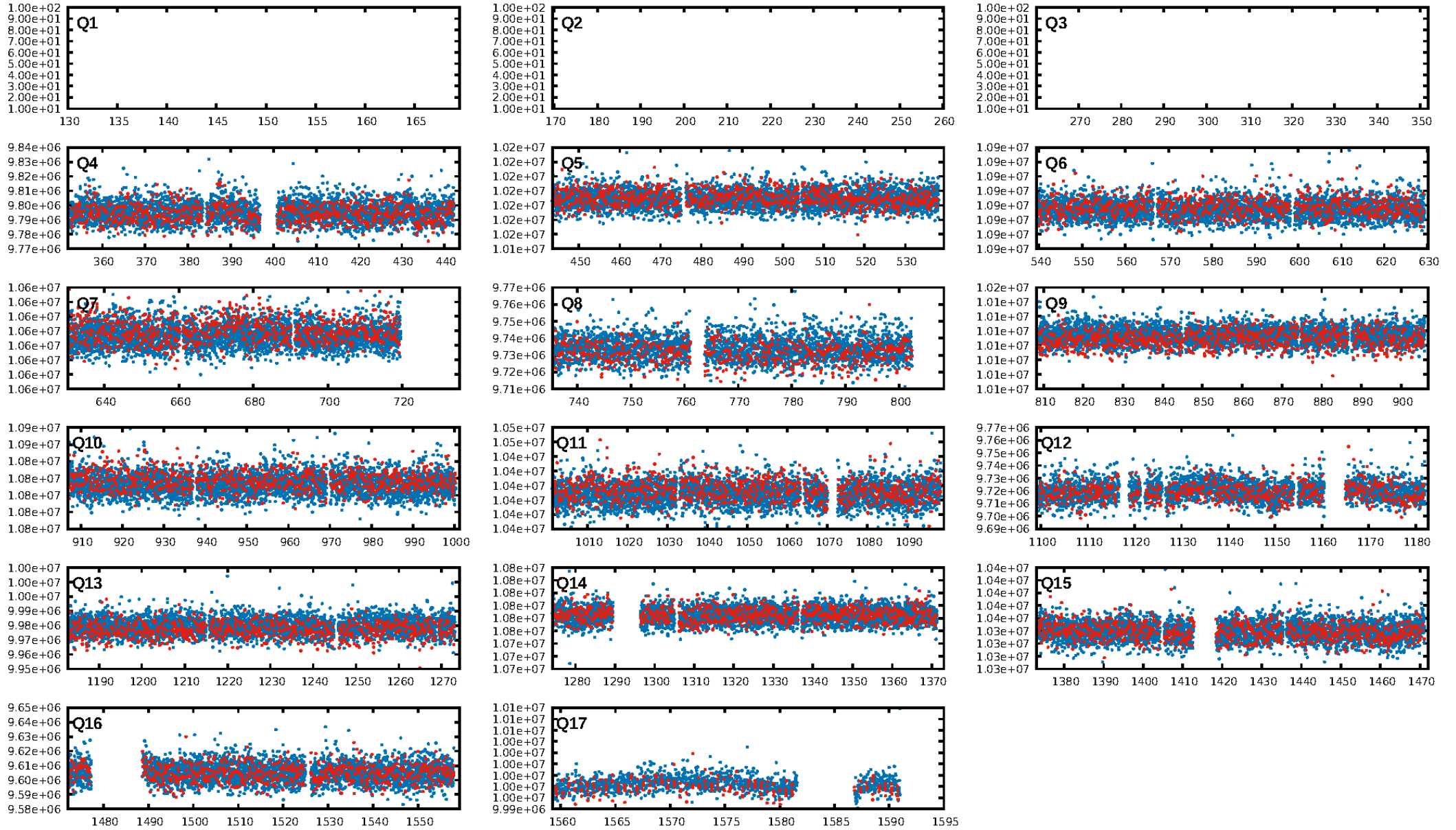
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.10e-17
RollingBand-fgt: 1.00 [1950/1950]
GhostDiagnostic-chr: -4.194
Centroid-sig: 3.0%
Centroid-so: 9.183 arcsec [1.95σ]
OotOffset-rm: 6.184 arcsec [6.30σ]
KicOffset-rm: 7.191 arcsec [2.77σ]
OotOffset-st: 0/1/3/1 [5]
KicOffset-st: 0/1/3/1 [5]
DiffImageQuality-fgm: 0.00 [0/5]
DiffImageOverlap-fno: 1.00 [14/14]

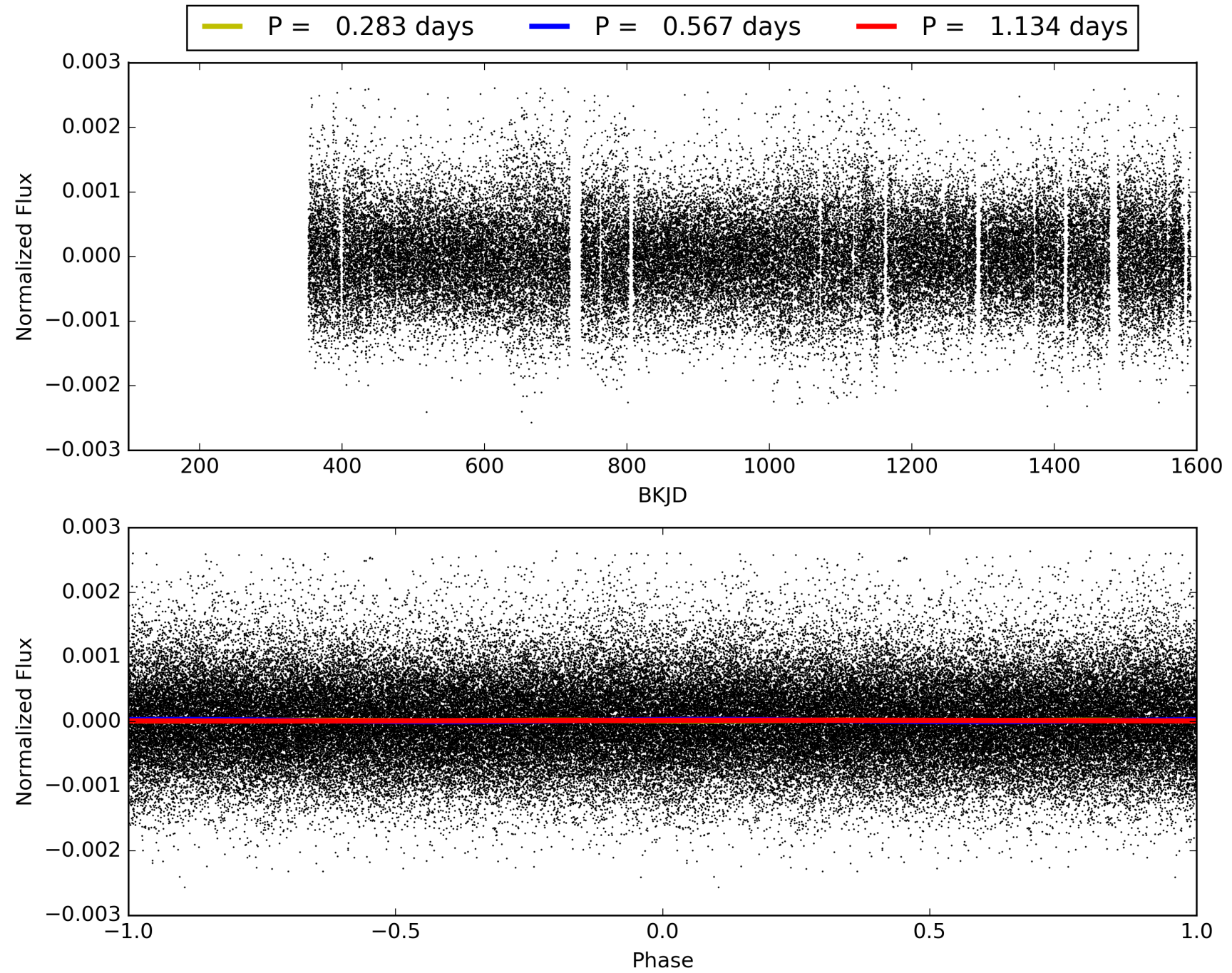
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:34:00 Z

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

TCE 006862750-01, PDC Light Curves

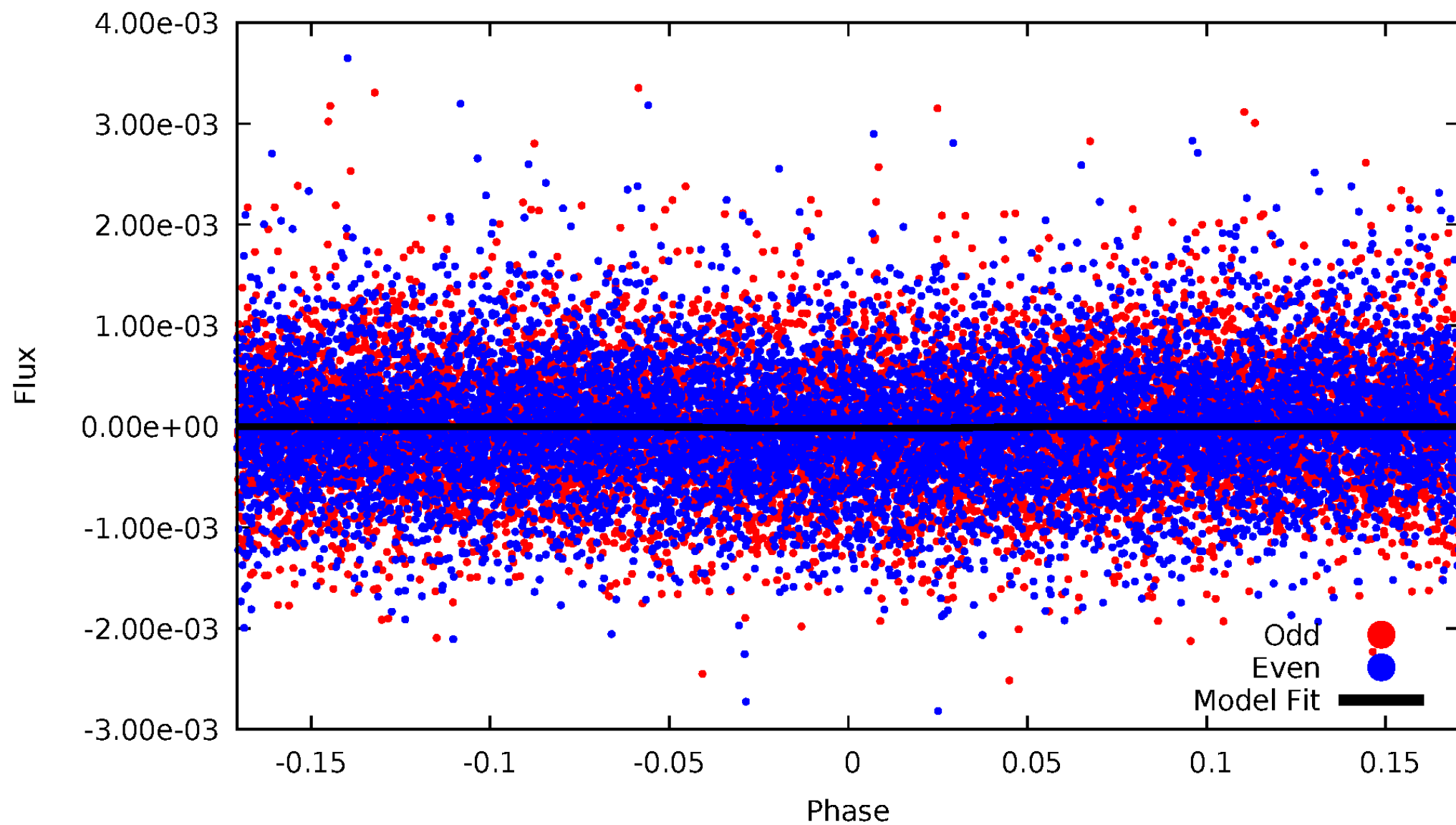


TCE 006862750-01



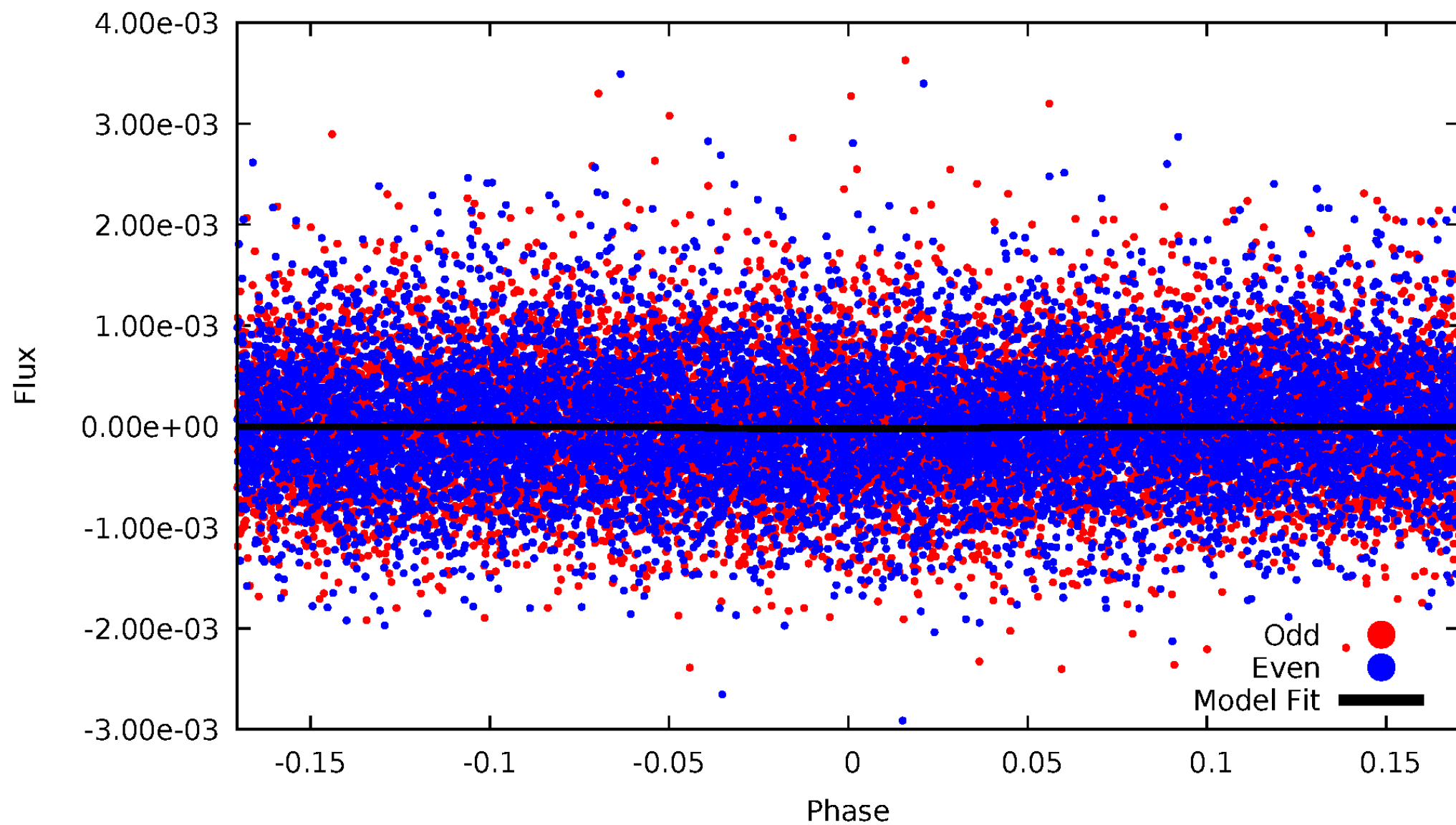
DV Odd/Even

TCE 006862750-01

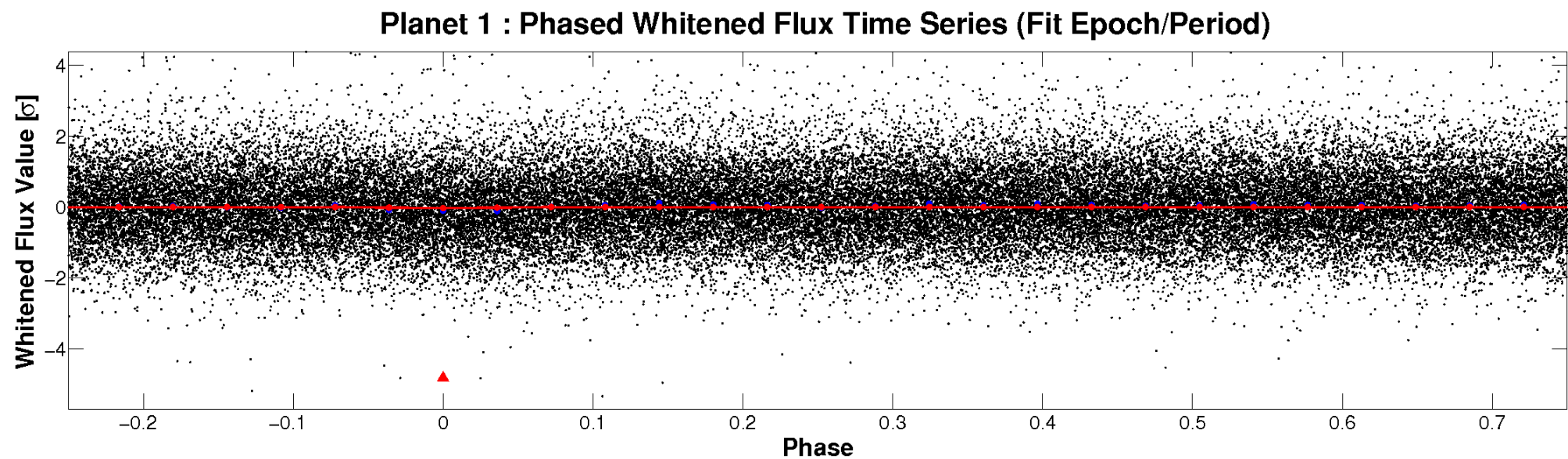
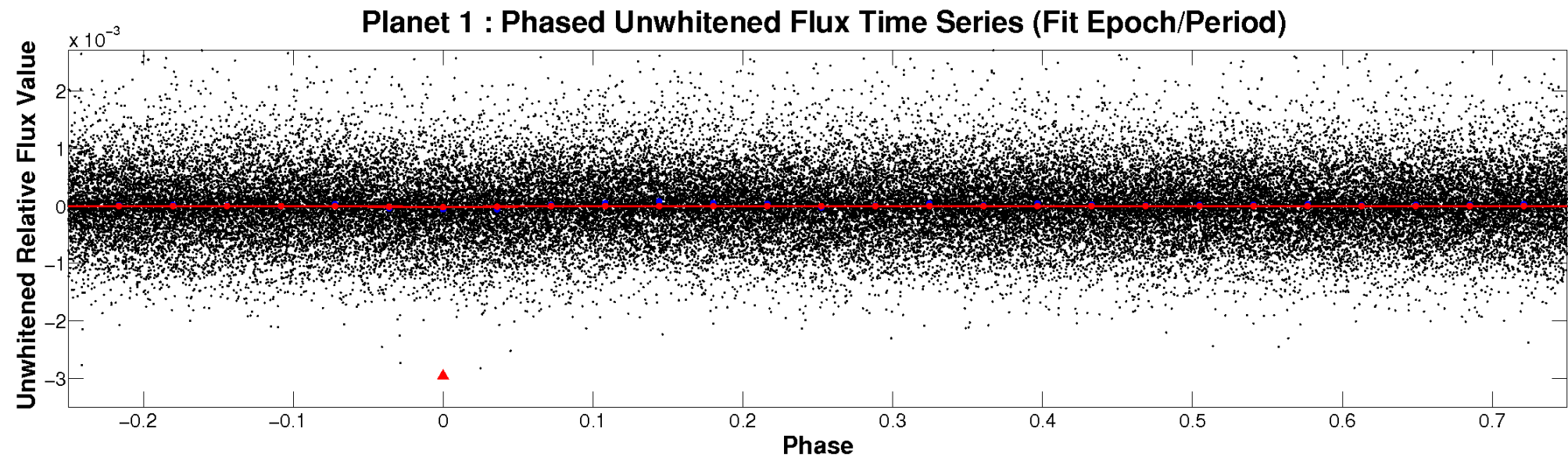


ALT Odd/Even

TCE 006862750-01

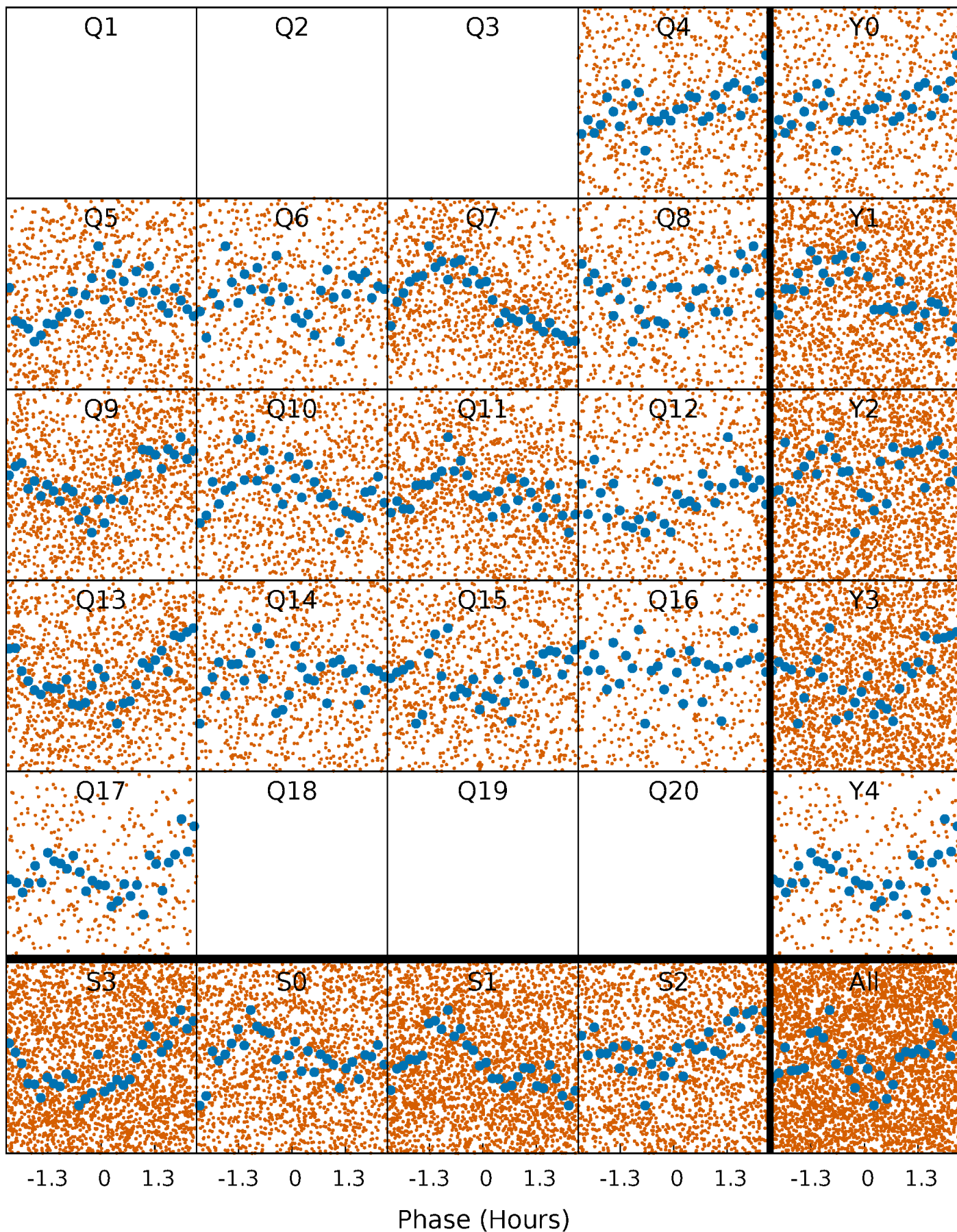


Non-Whitened Vs. Whitened Light Curve



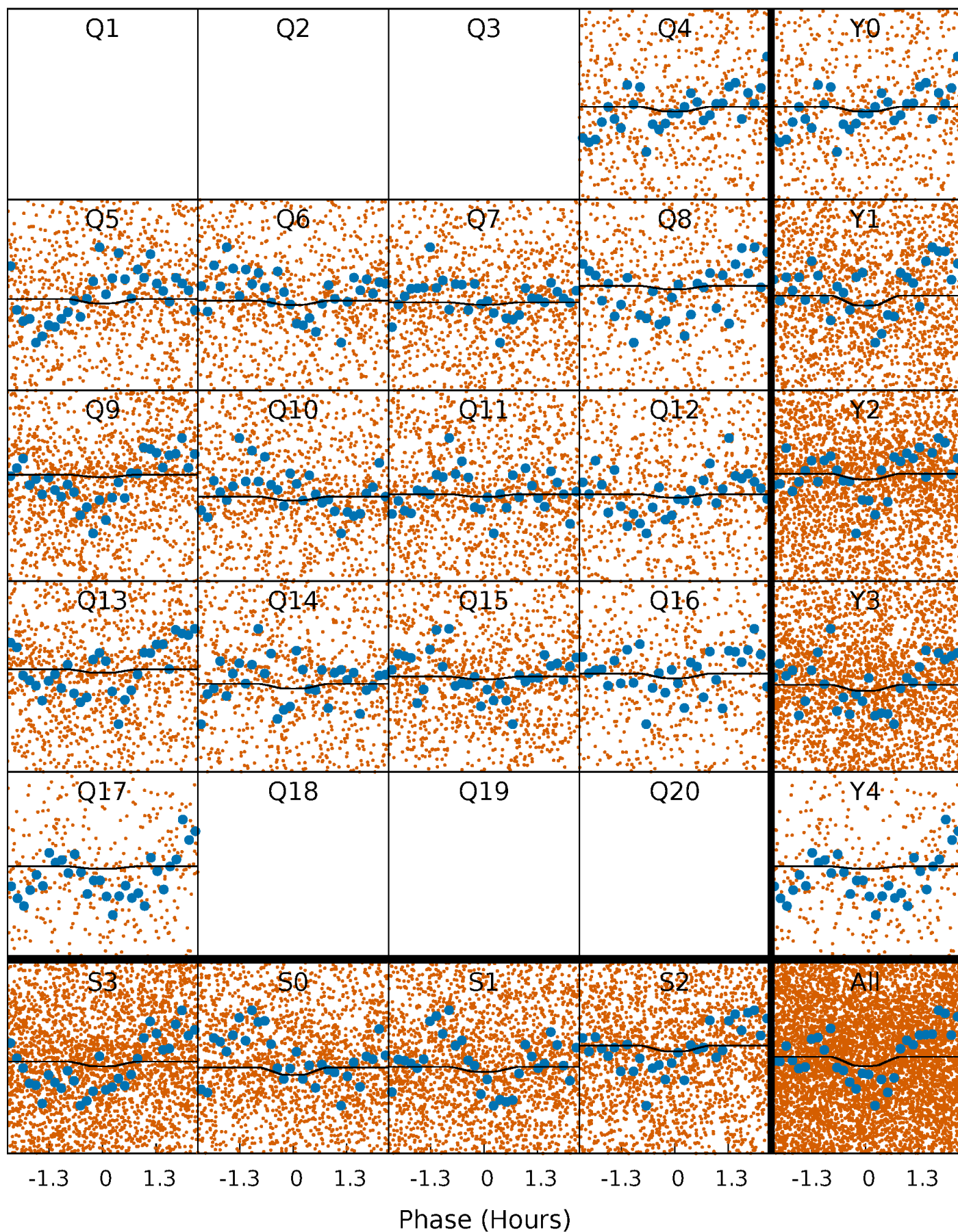
PDC Quarter-Phased Transit Curves

TCE 006862750-01 P= 0.566791 Days $T_0=131.854167$ (BKJD)



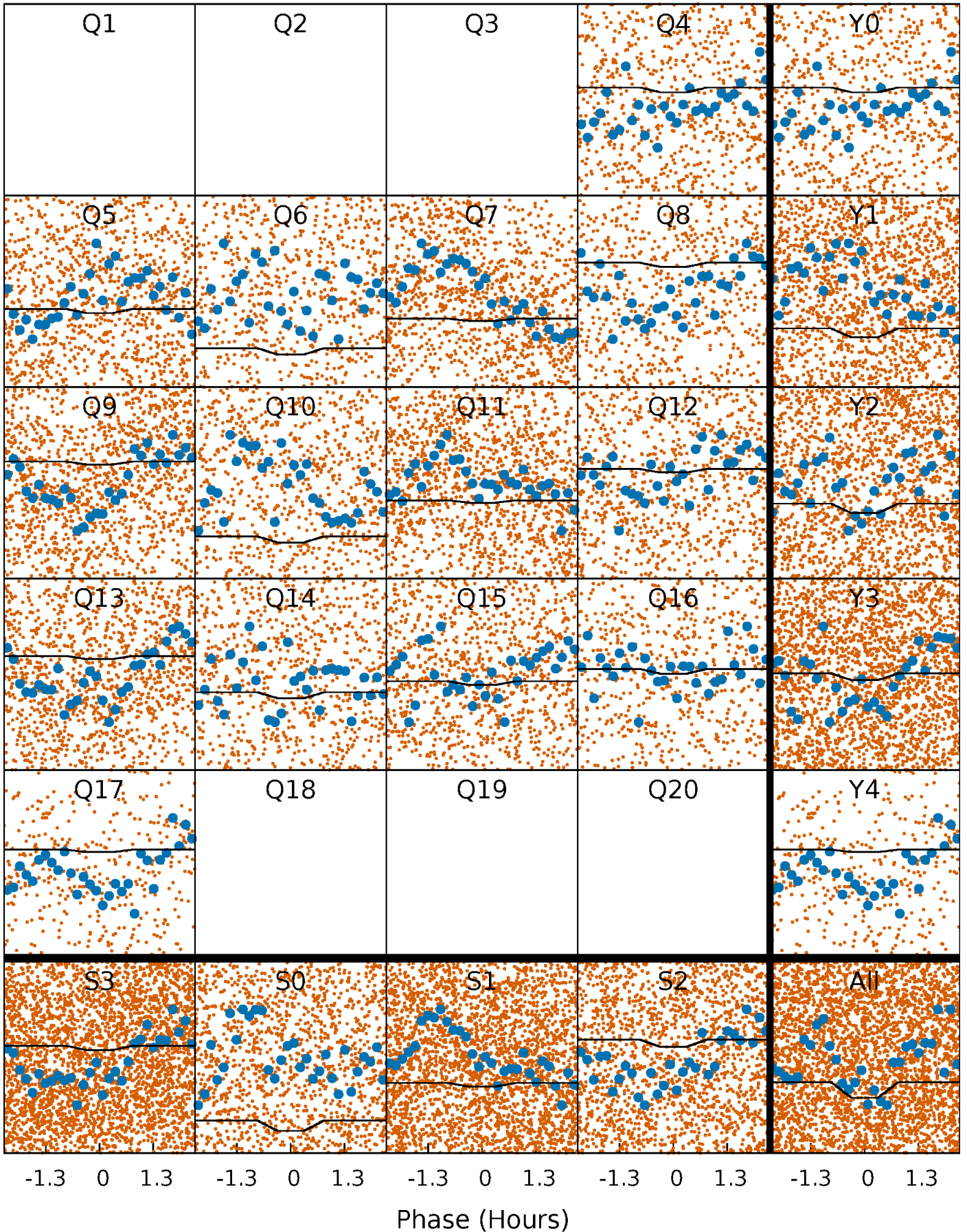
DV Quarter-Phased Transit Curves

TCE 006862750-01 P= 0.566791 Days $T_0=131.854167$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

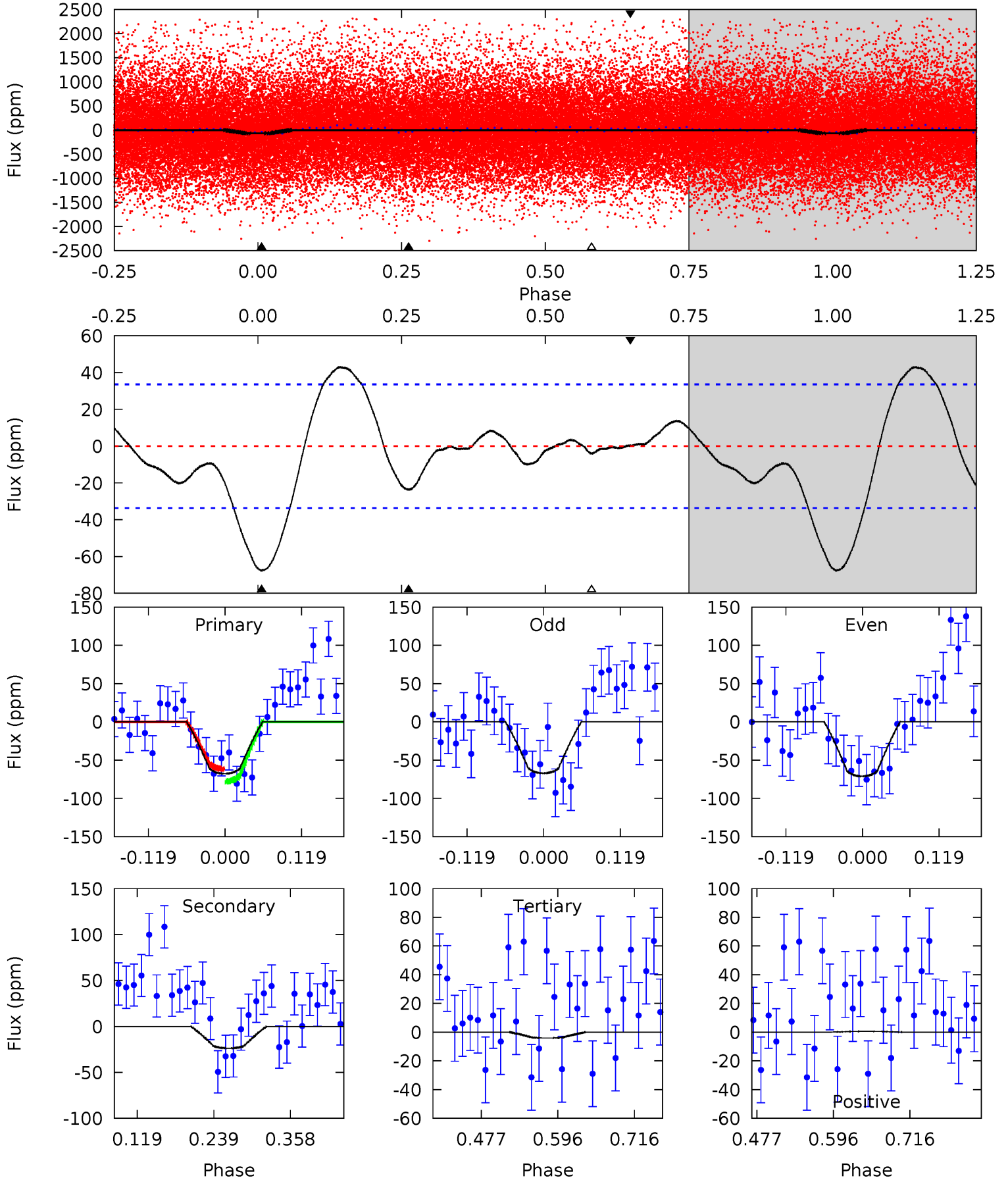
TCE 006862750-01 P= 0.566794 Days $T_0=131.854247$ (BKJD)



DV Model-Shift Uniqueness Test

006862750-01, P = 0.566791 Days, E = 131.854167 Days

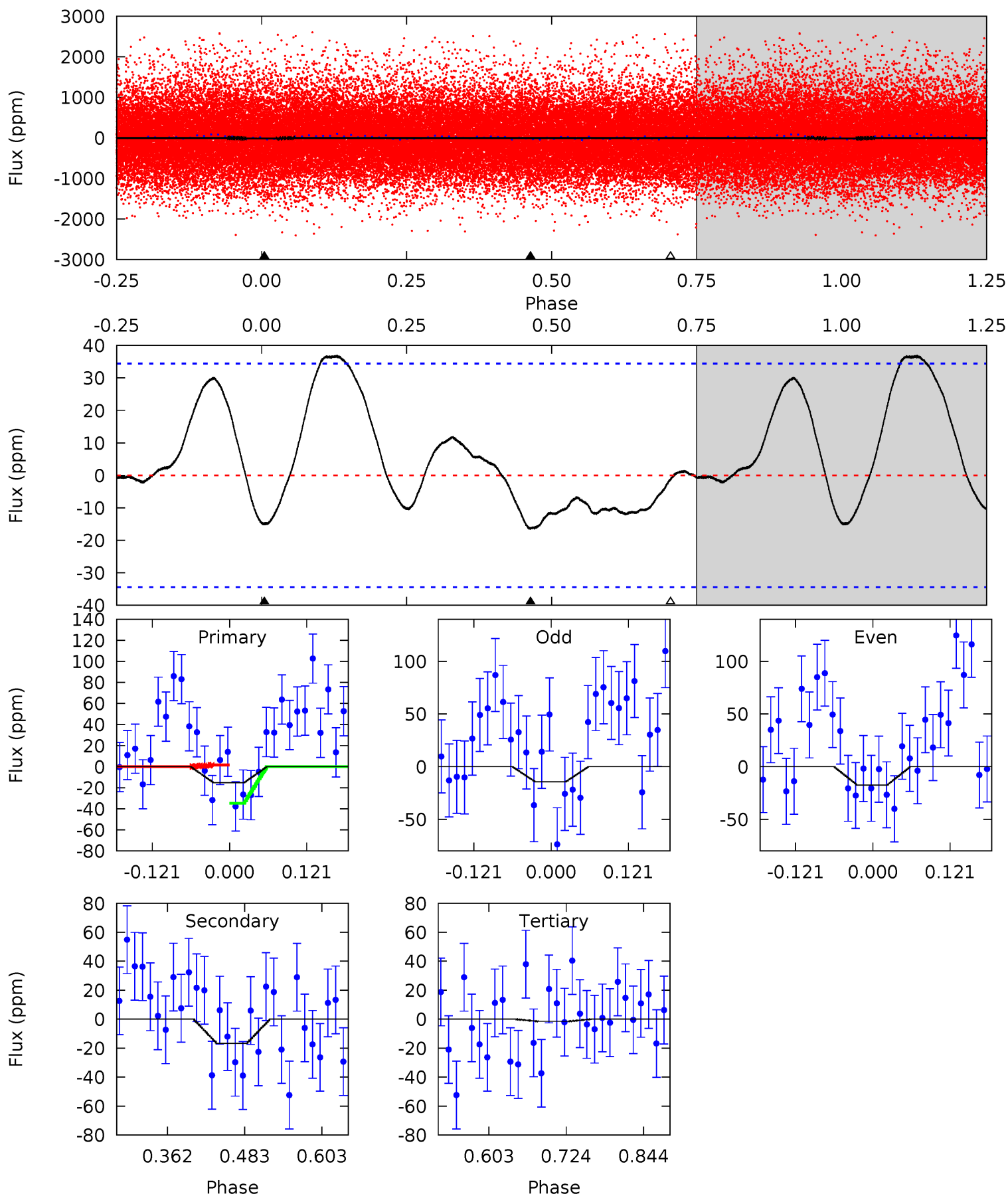
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.12	3.19	0.55	0.07	4.53	1.56	1.51	8.56	9.05	2.64	3.12	0.27	0.99	0.39	1.11



Alt Model-Shift Uniqueness Test

006862750-01, P = 0.566794 Days, E = 131.854247 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.01	2.19	0.20	0	4.53	1.55	1.66	1.82	2.01	2.00	2.19	0.19	0.40	0.69	2.18



Stellar Parameters For KIC 006862750

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5790^{+184}_{-204}	$4.528^{+0.036}_{-0.204}$	$-0.020^{+0.250}_{-0.300}$	$0.900^{+0.260}_{-0.087}$	$0.998^{+0.116}_{-0.127}$	$1.926^{+0.377}_{-0.982}$
	+3%/-4%	+1%/-5%	+1250%/-1500%	+29%/-10%	+12%/-13%	+20%/-51%
Source	KIC0	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 006862750-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-24 ± 7	$0.71^{+0.63}_{-0.49}$	3008^{+179}_{-154}	4867^{+4347}_{-1208}	$4.574^{+44.332}_{-3.441}$
Alt.	-17 ± 8	$0.76^{+0.64}_{-0.48}$	3018^{+200}_{-159}	4353^{+2755}_{-1205}	$2.589^{+16.246}_{-1.918}$

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 $A_{obs} \gg 1.0$

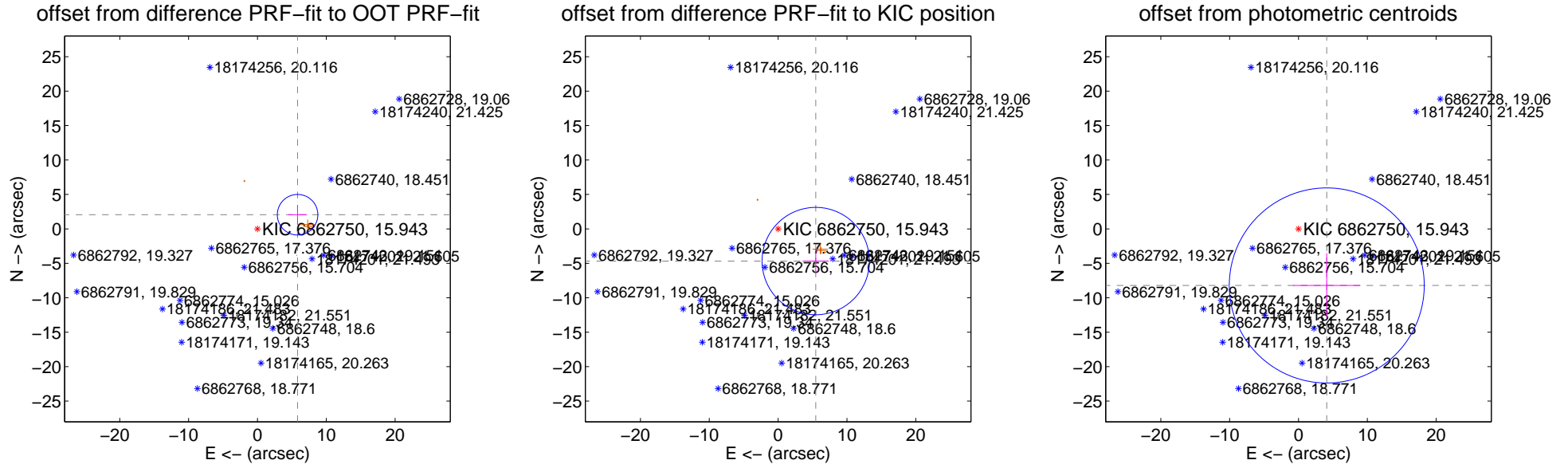
DV Centroid Data

Supplemental centroid analysis for 006862750-01. Kepler magnitude: 15.94. Transit SNR 1.81

There are 0 quarters with good PRF difference image offsets

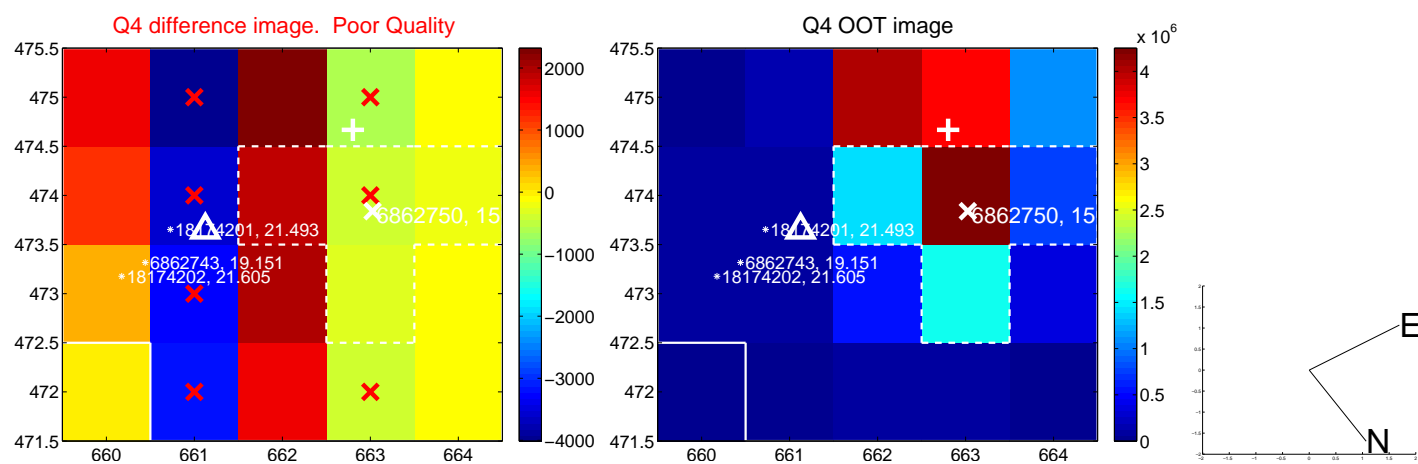
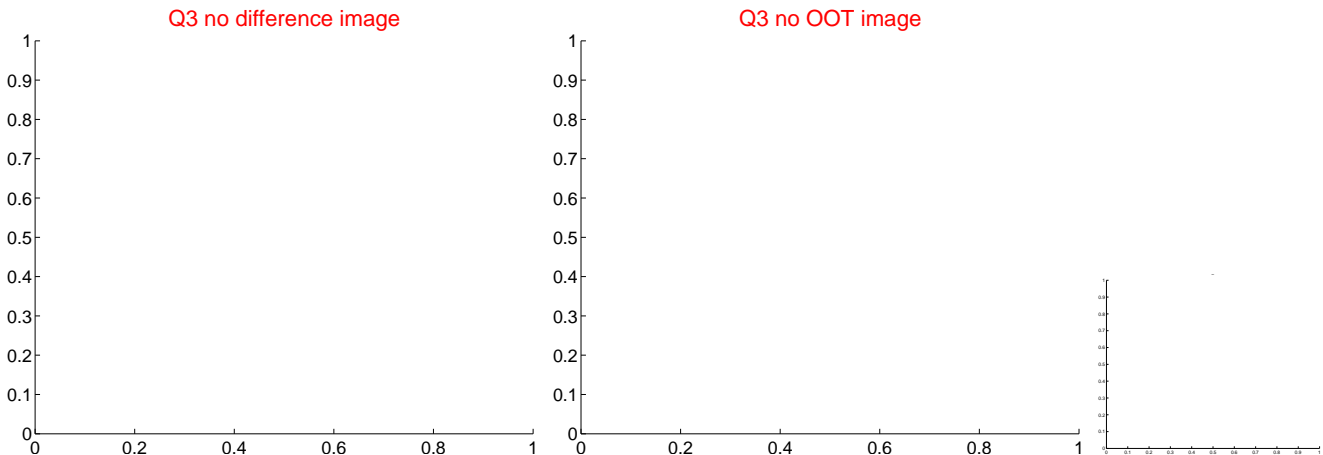
The OOT PRF centroid is offset from the target star catalog position by about 3.75 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.184 \pm 0.981	6.30	-5.831 \pm 1.344	2.057 \pm 1.416
PRF-fit source offset from KIC position	7.191 \pm 2.599	2.77	-5.466 \pm 1.913	-4.673 \pm 1.807
photometric centroid source offset	9.18 \pm 4.72	1.95	-4.11 \pm 4.88	-8.21 \pm 4.68

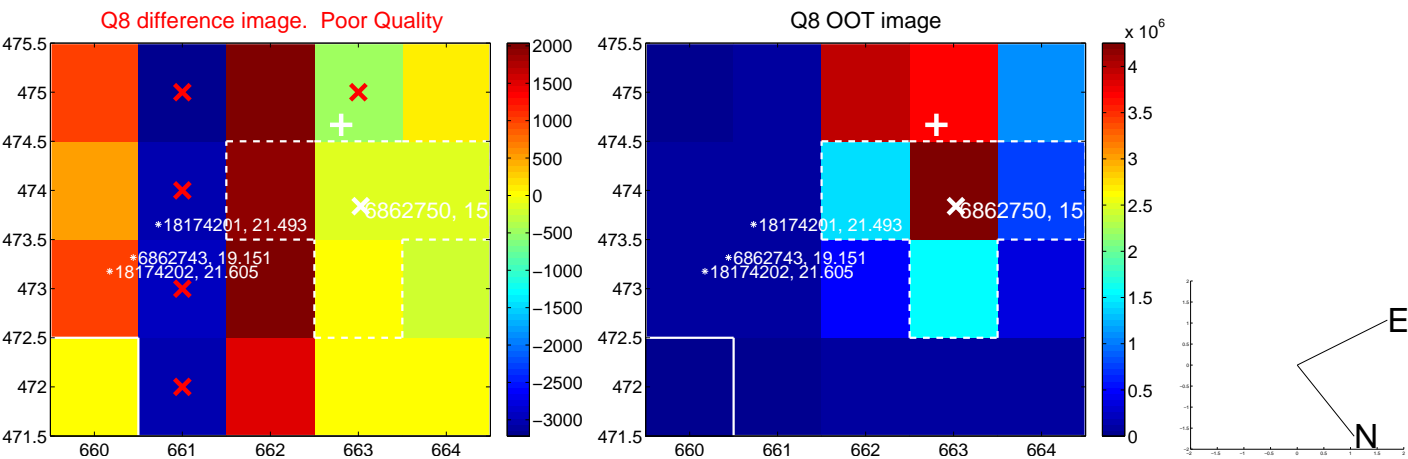
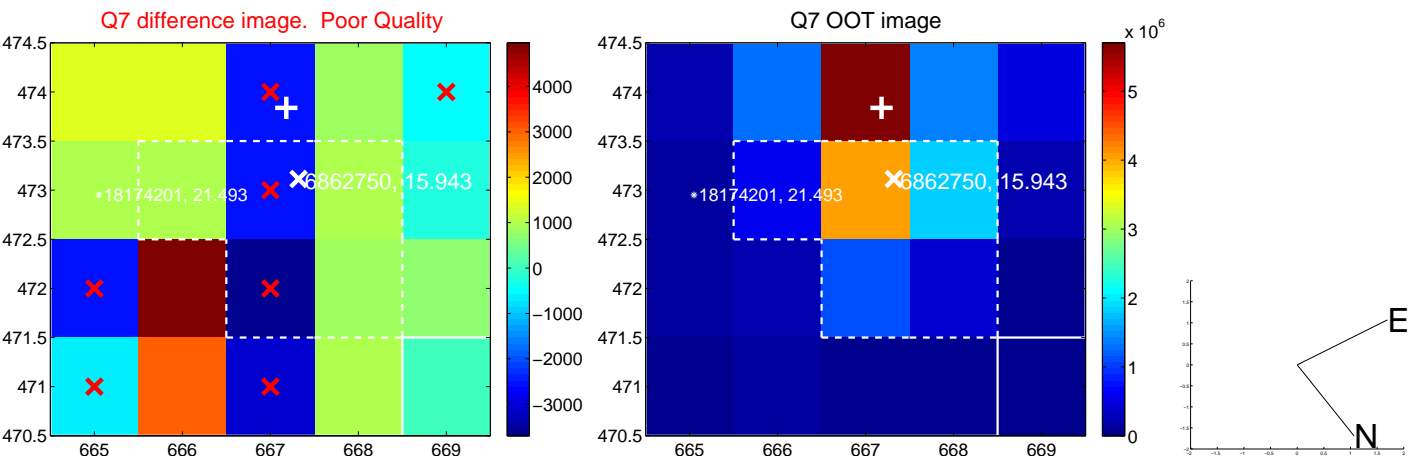
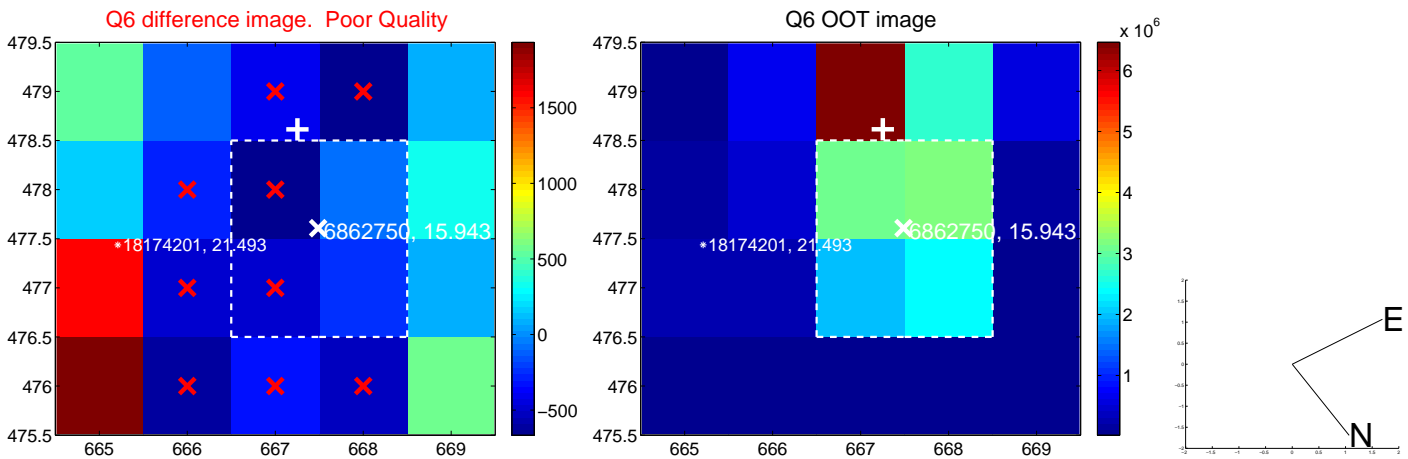
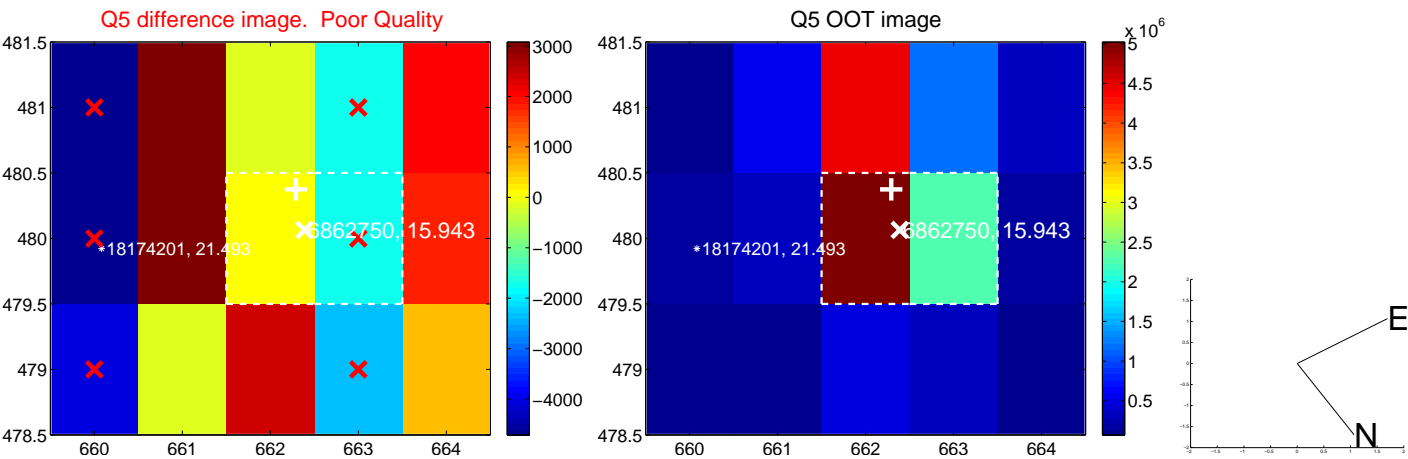


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000 are from the UKIRT catalog.

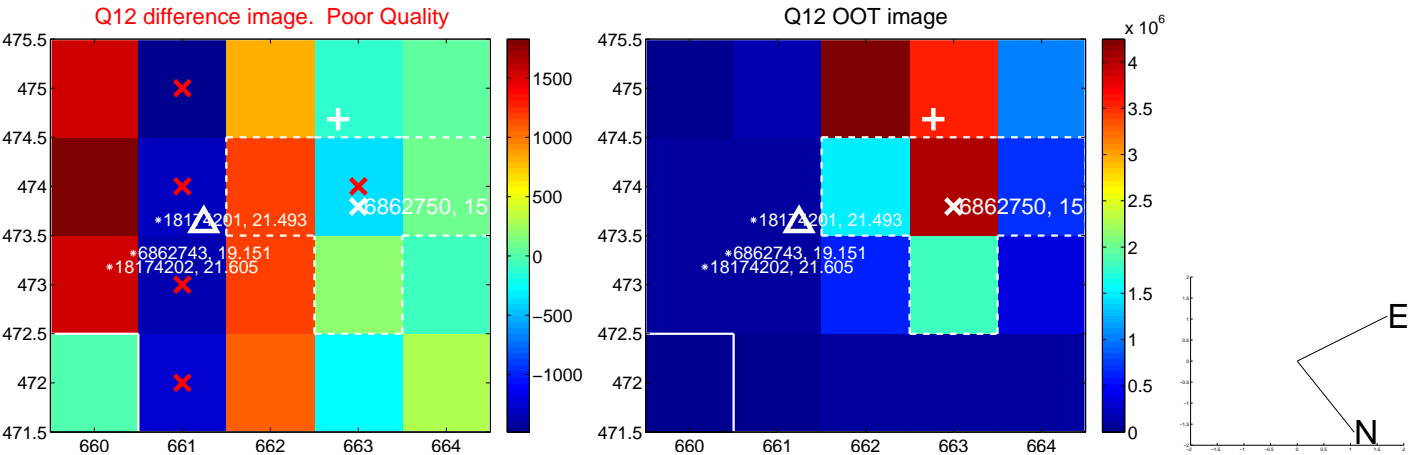
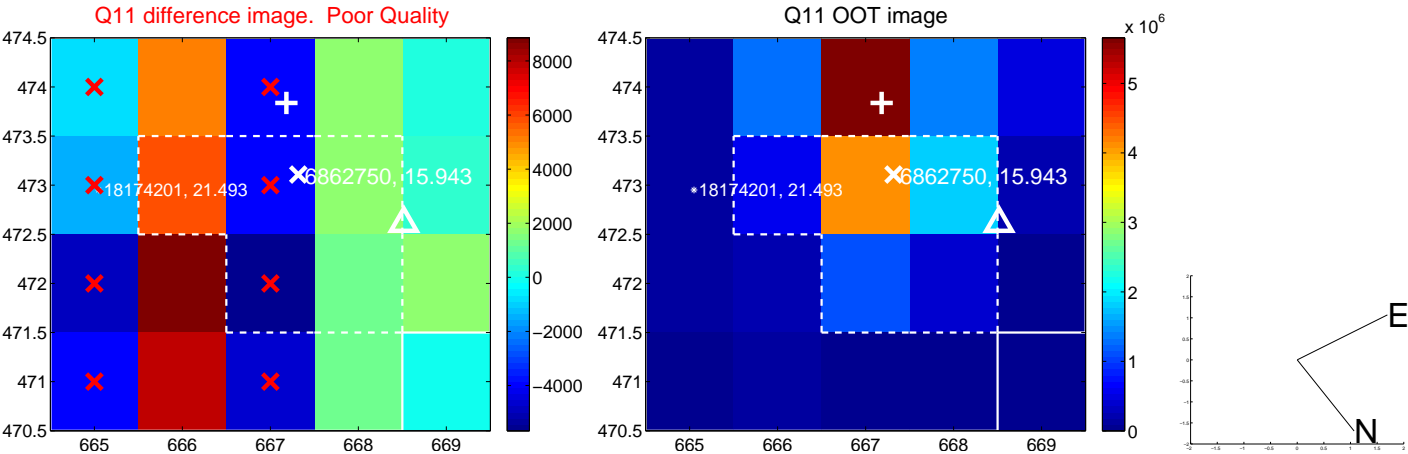
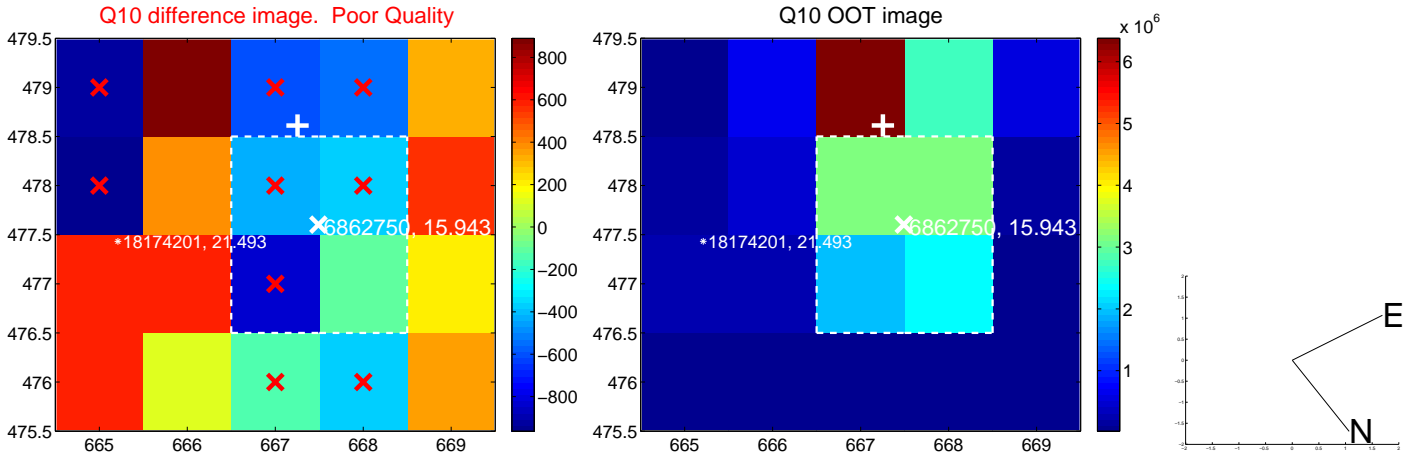
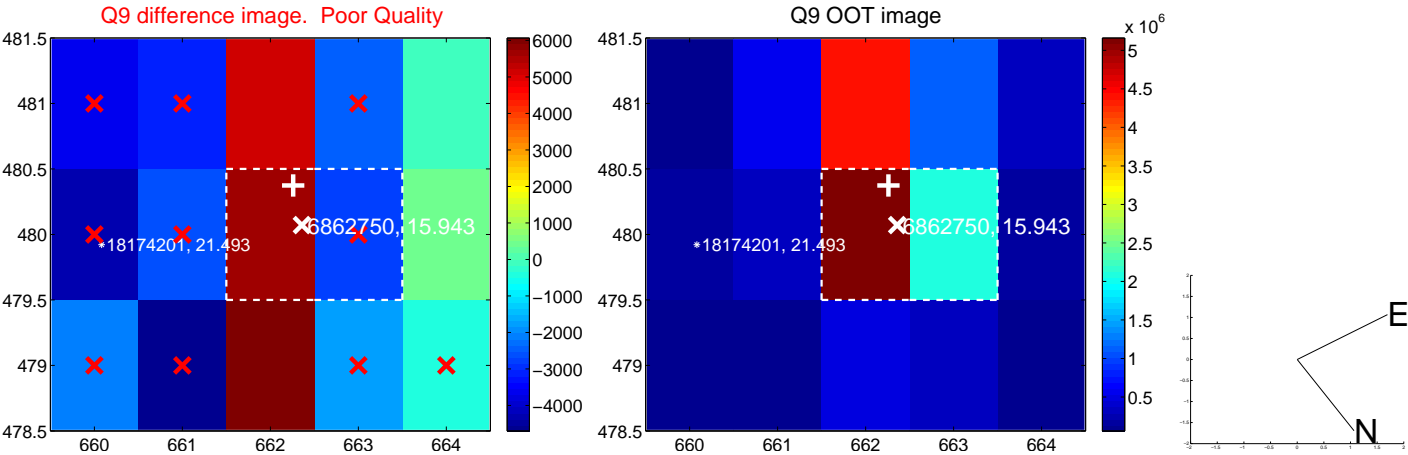
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



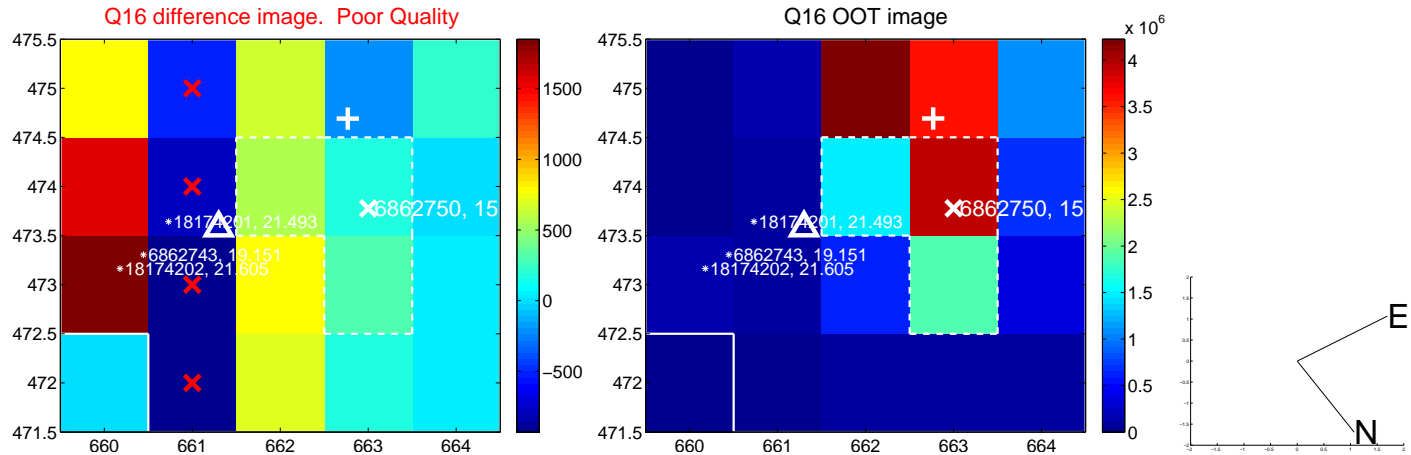
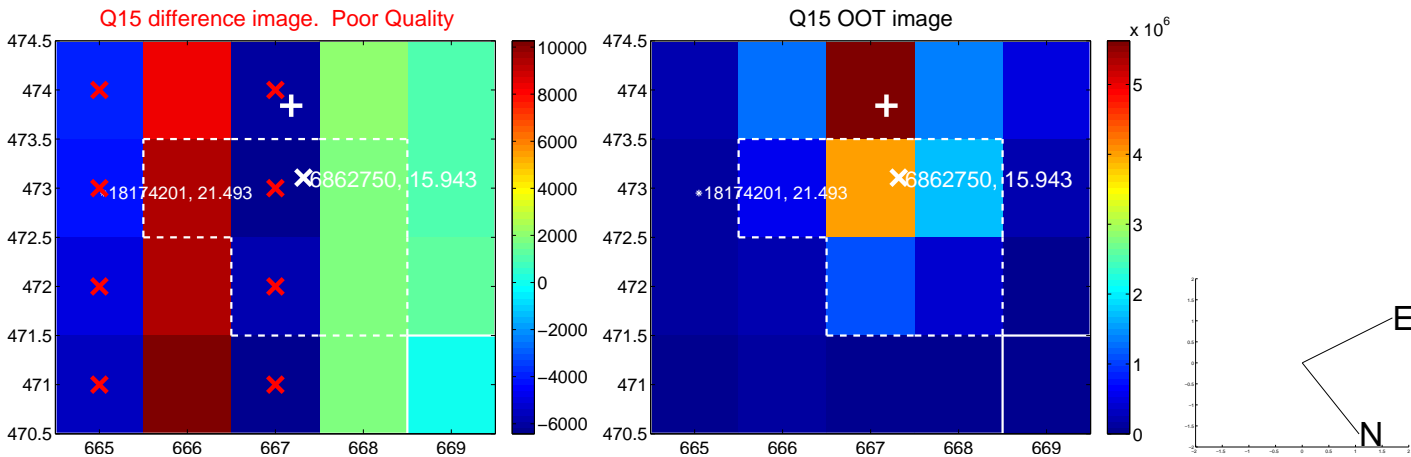
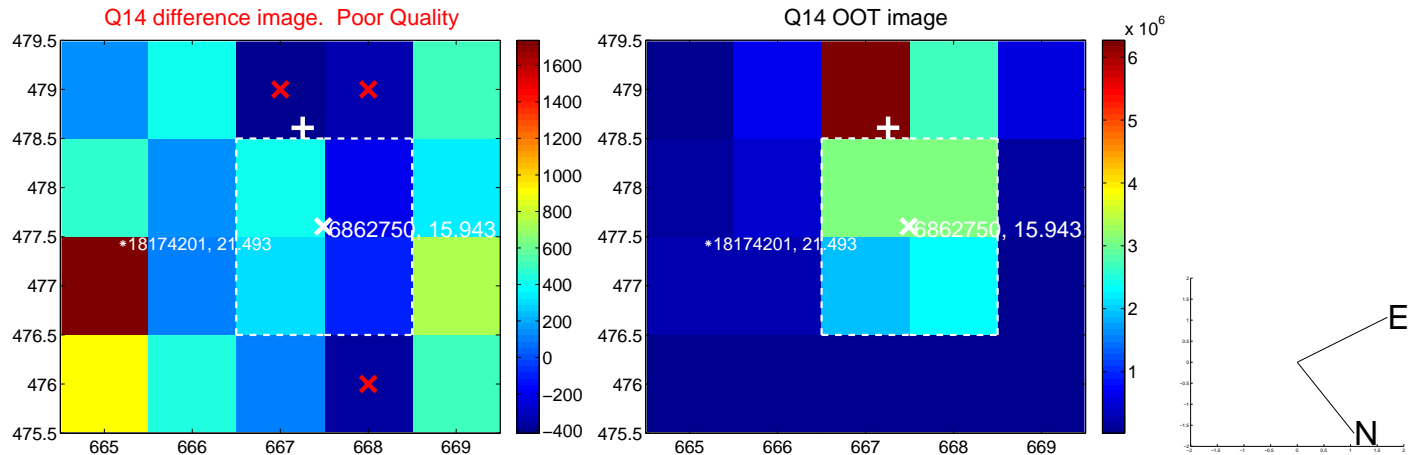
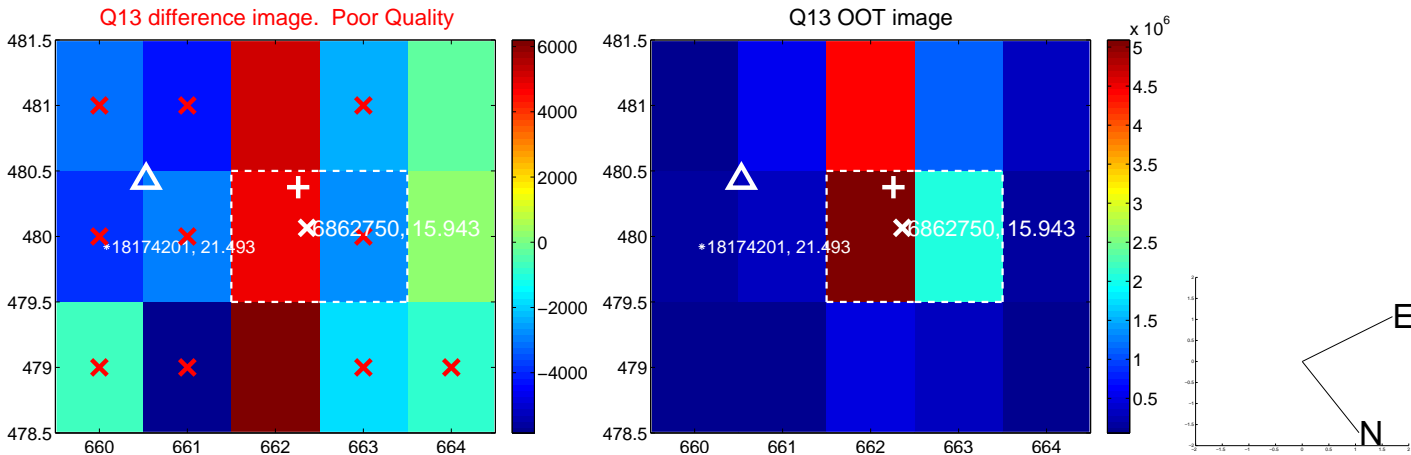
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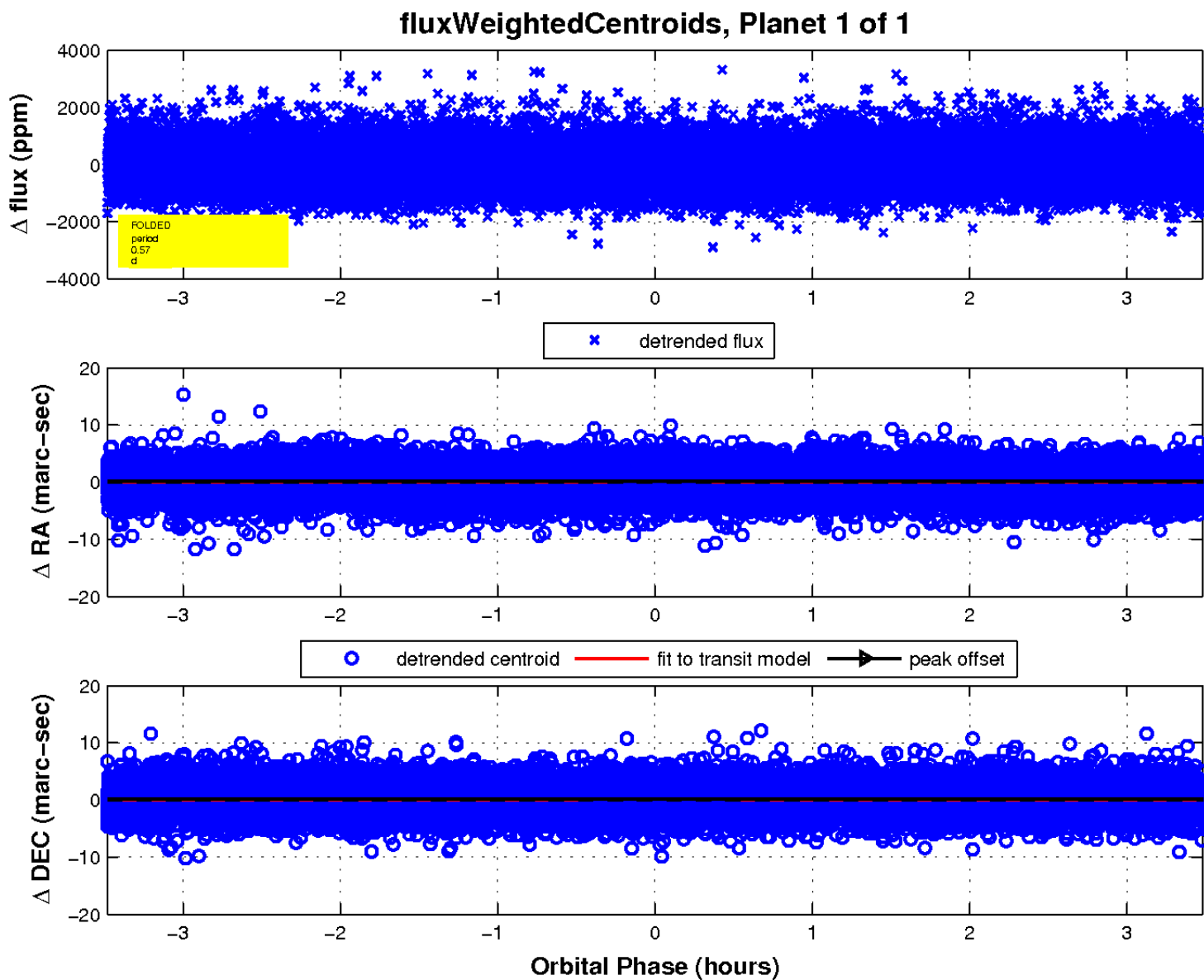
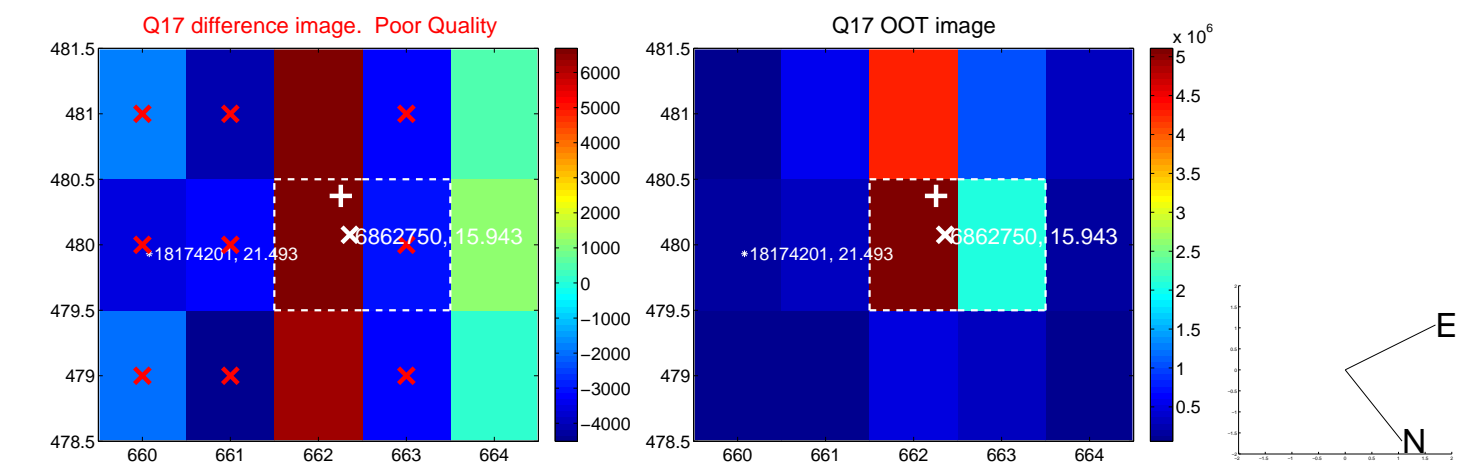
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UKIRT Image

Declination

