

KIC 011662790

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})
011662790-01	OBS	No	0.644985	131.529759	25.5	1.668	8.2	7.1	0.83	5695	0.50	3204.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011662790-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—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.

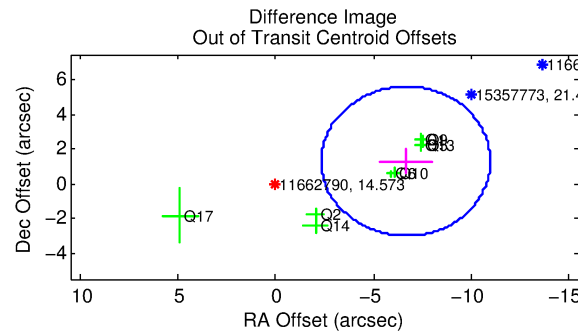
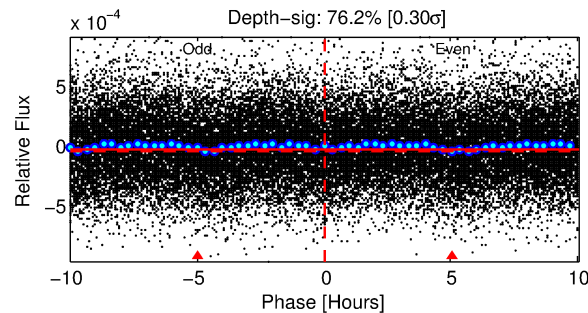
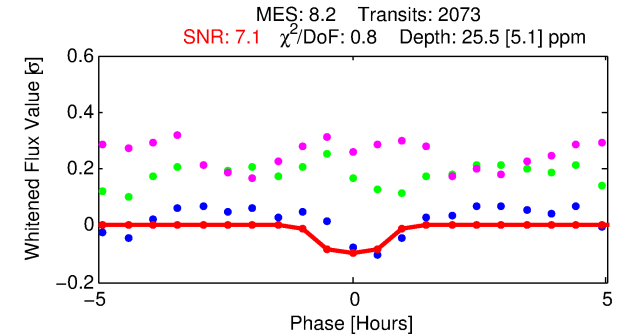
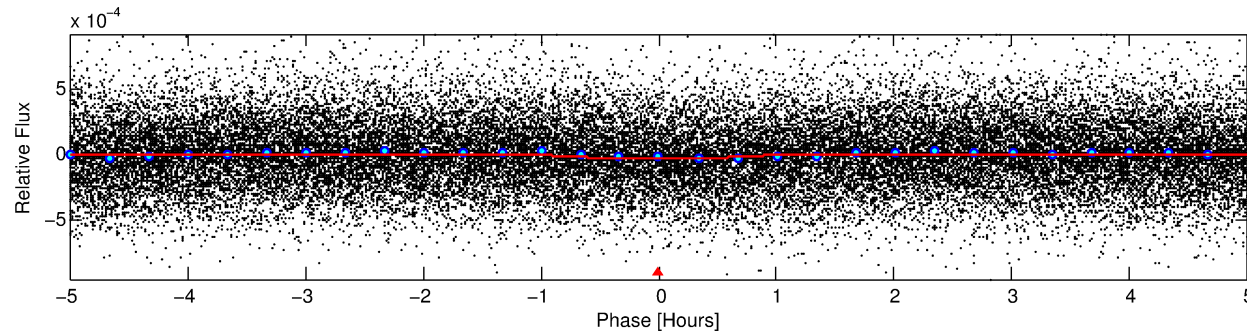
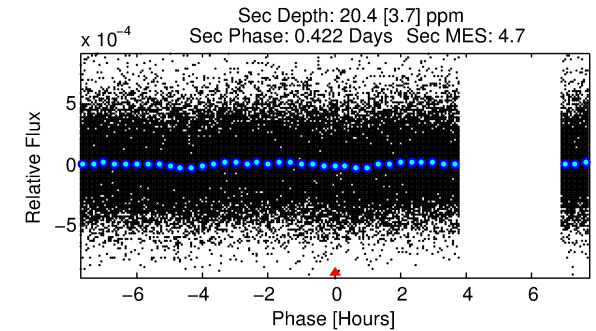
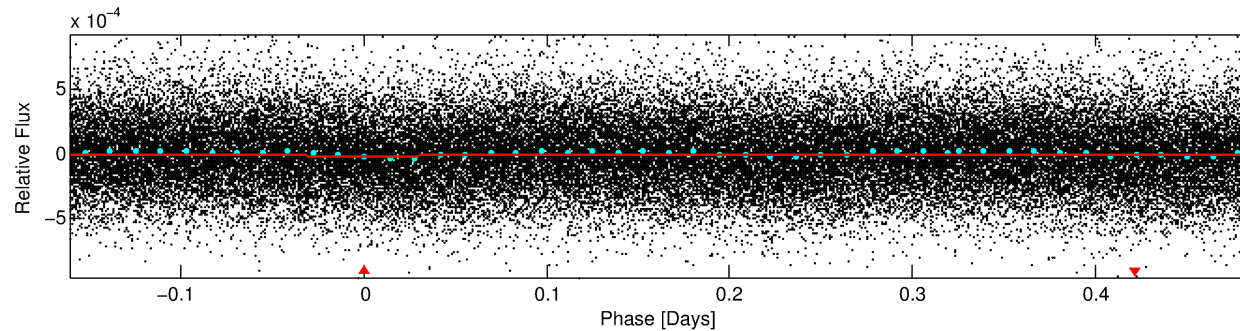
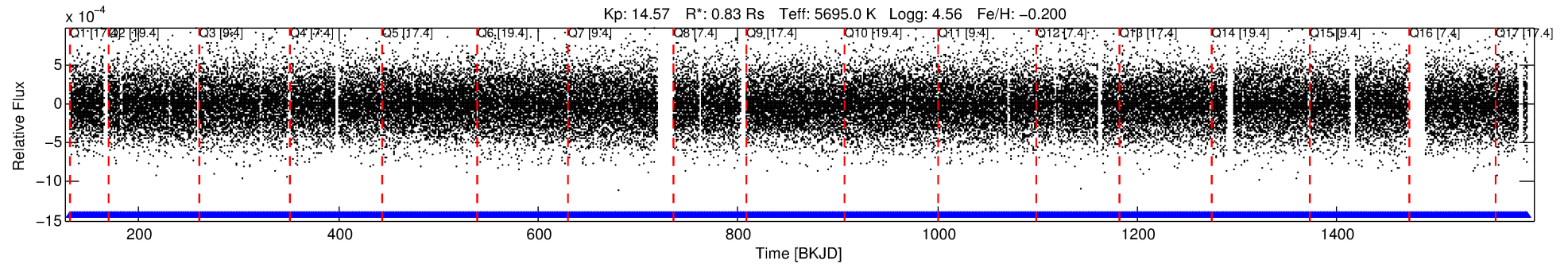
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011662790-01

No Significant Match Found

DV One-Page Summary

KIC: 11662790 Candidate: 1 of 1 Period: 0.645 d



DV Fit Results:

Period = 0.64498 [0.00002] d
Epoch = 131.5298 [0.0035] BKJD
Rp/R* = 0.0055 [0.0036]
a/R* = 1.61 [3.09]
b = 0.90 [0.66]
Seff = 3204.84 [1134.24]
Teff = 1919 [170] K
Rp = 0.50 [0.35] Re
a = 0.0142 [0.0033] AU
Ag = 9.07 [12.22] [0.66σ]
Teffp = 5147 [1686] K [1.91σ]

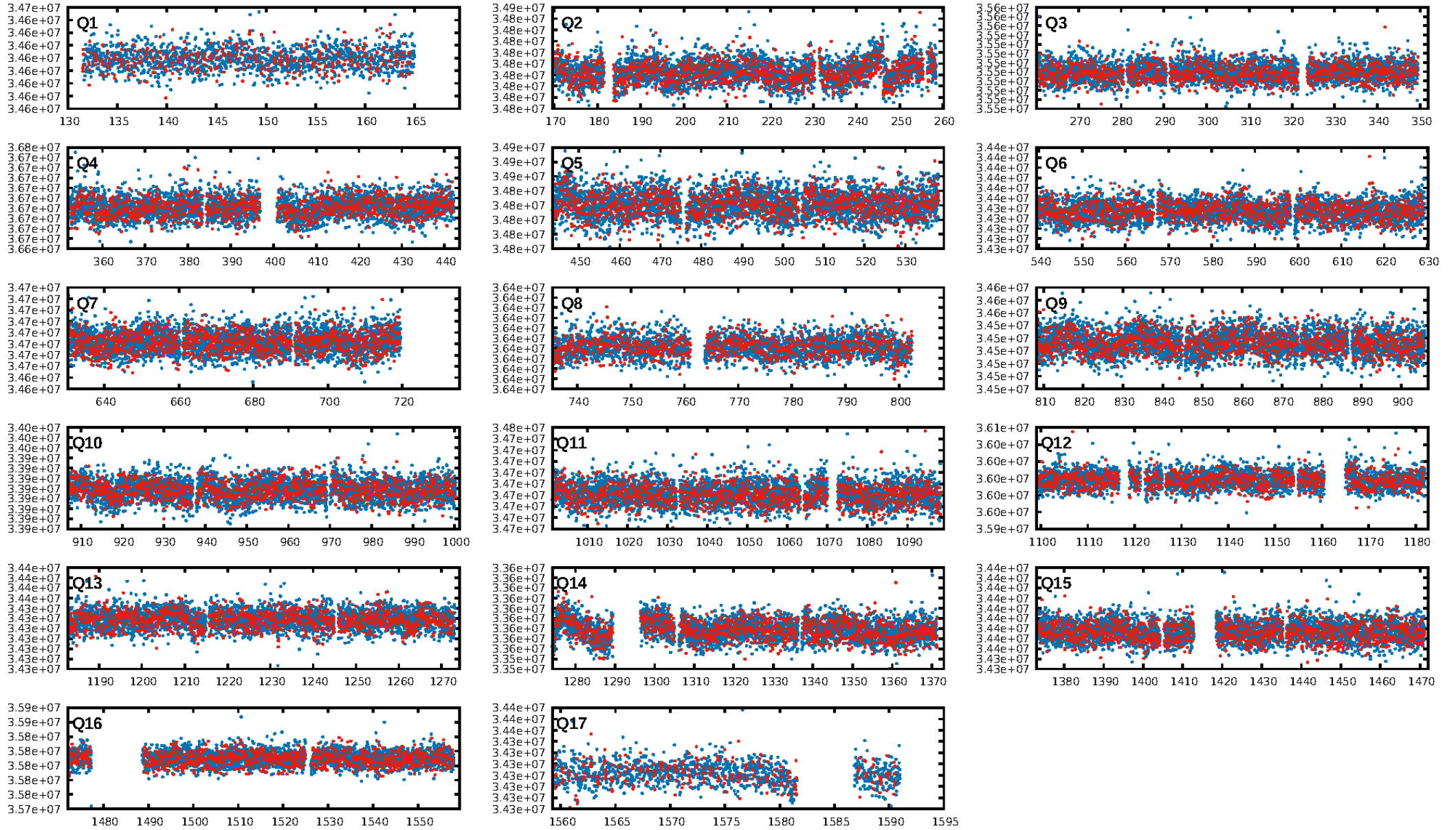
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.32e-16
RollingBand-fgt: 1.00 [1980/1980]
GhostDiagnostic-chr: 0.3106
Centroid-sig: 0.1%
Centroid-so: 6.072 arcsec [3.17σ]
OotOffset-rm: 6.778 arcsec [4.70σ]
KicOffset-rm: 6.775 arcsec [5.00σ]
OotOffset-st: 4/0/0/5 [9]
KicOffset-st: 4/0/0/5 [9]
DiffImageQuality-fgm: 0.67 [6/9]
DiffImageOverlap-fno: 1.00 [17/17]

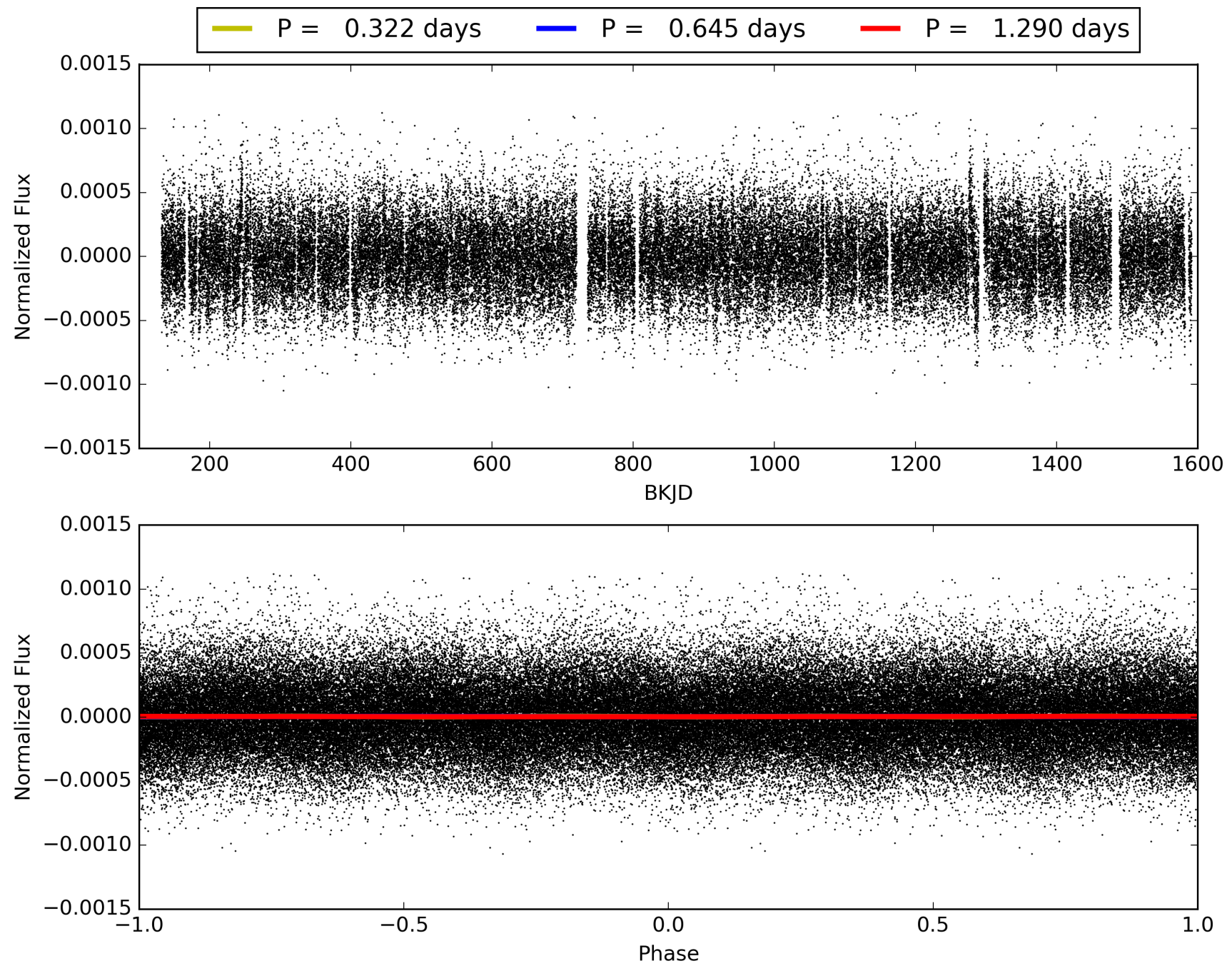
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:13:10 Z

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

TCE 011662790-01, PDC Light Curves

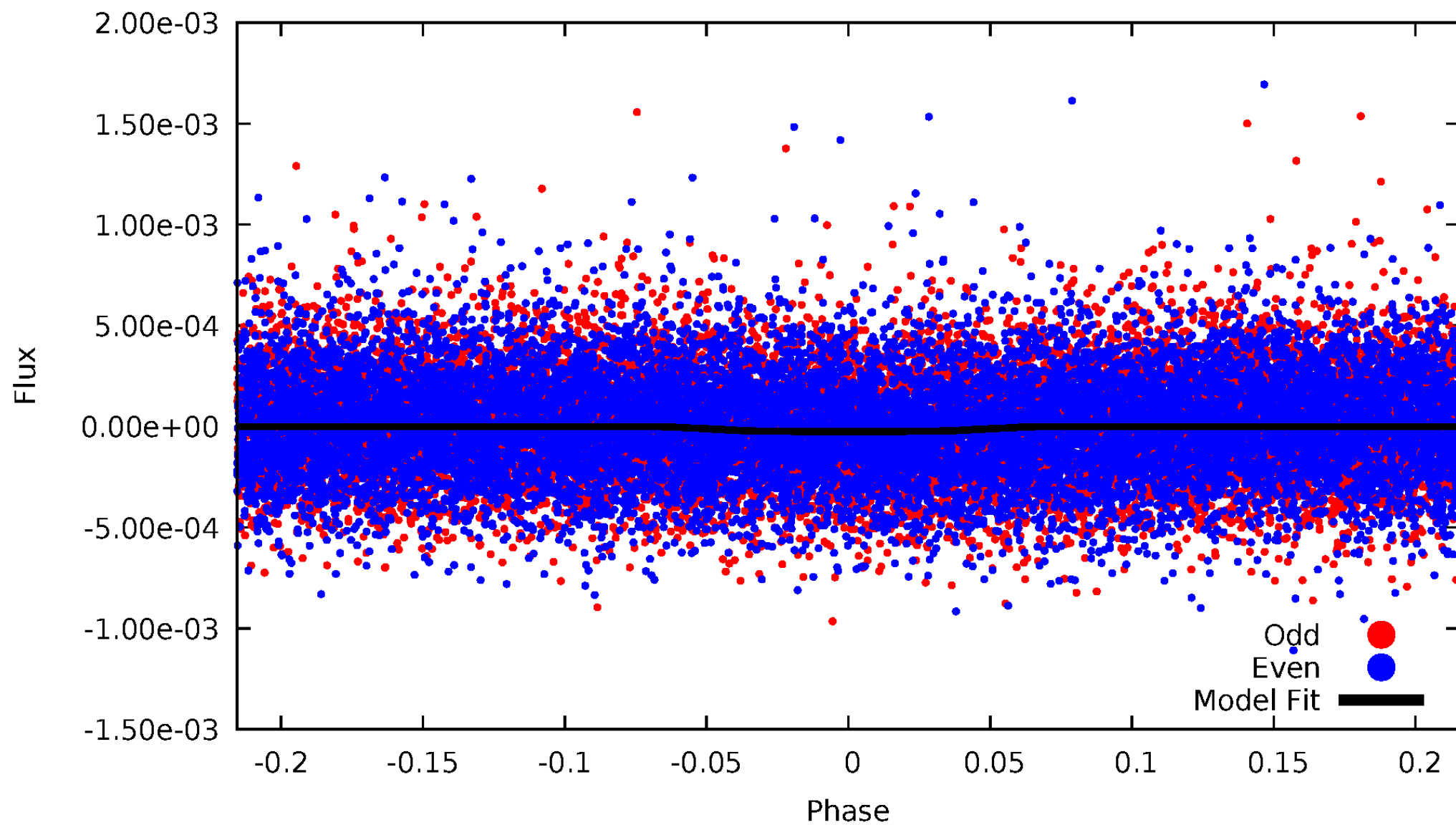


TCE 011662790-01



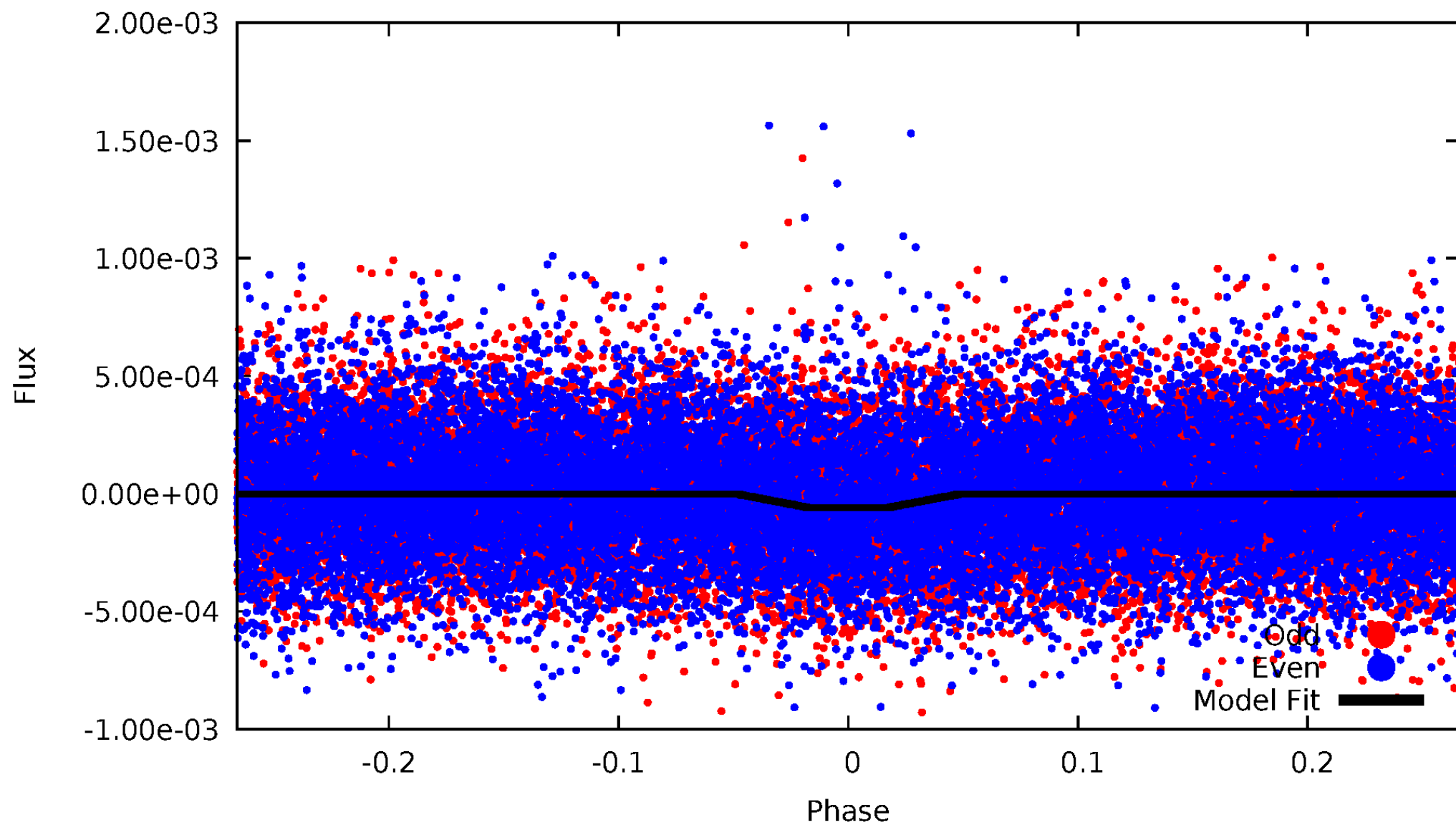
DV Odd/Even

TCE 011662790-01



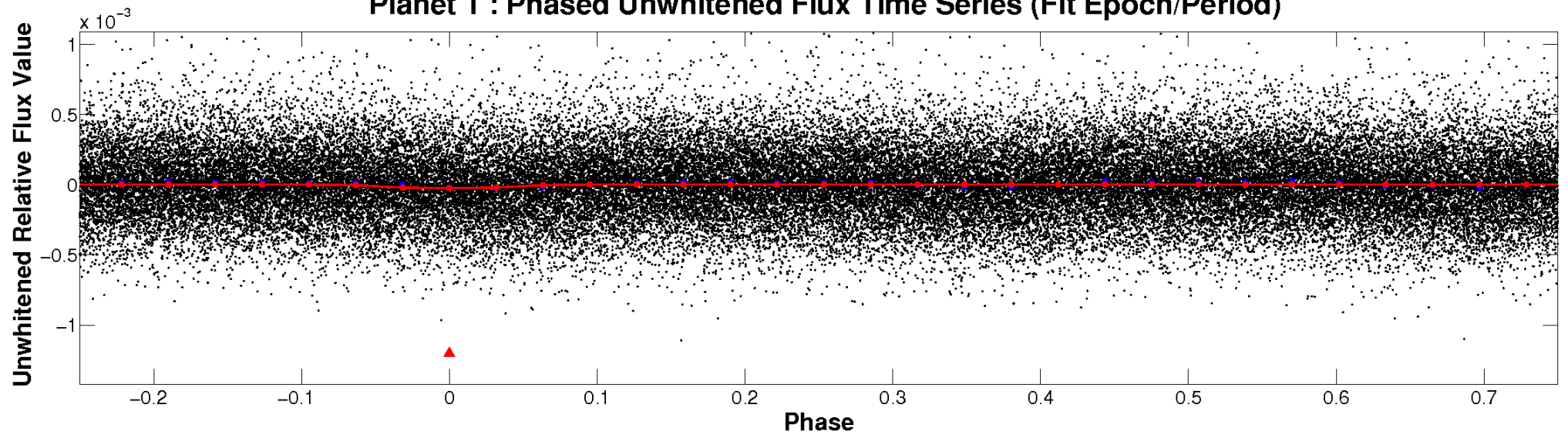
ALT Odd/Even

TCE 011662790-01

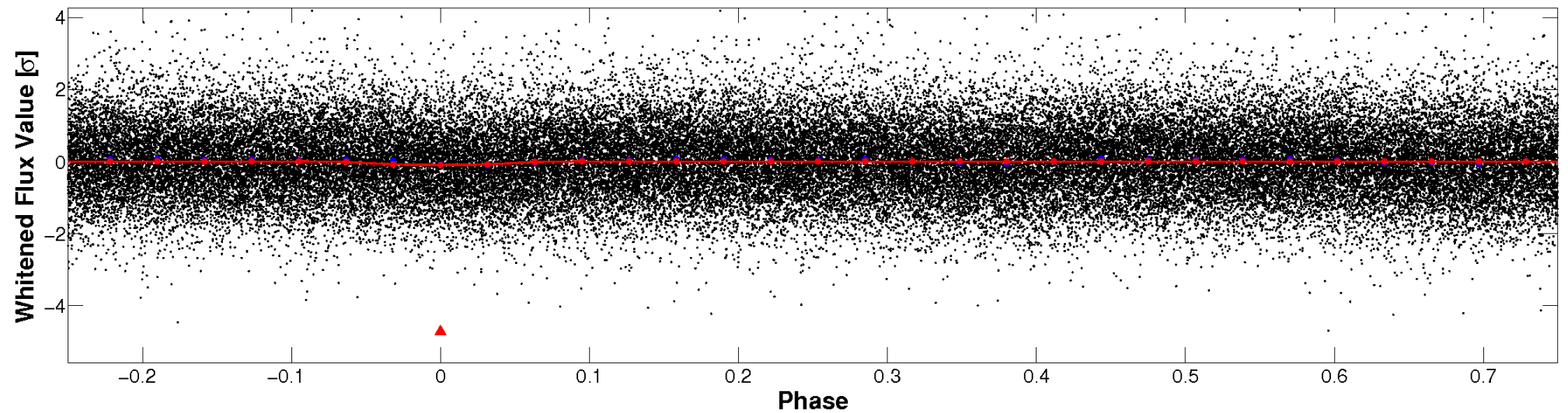


Non-Whitened Vs. Whitened Light Curve

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

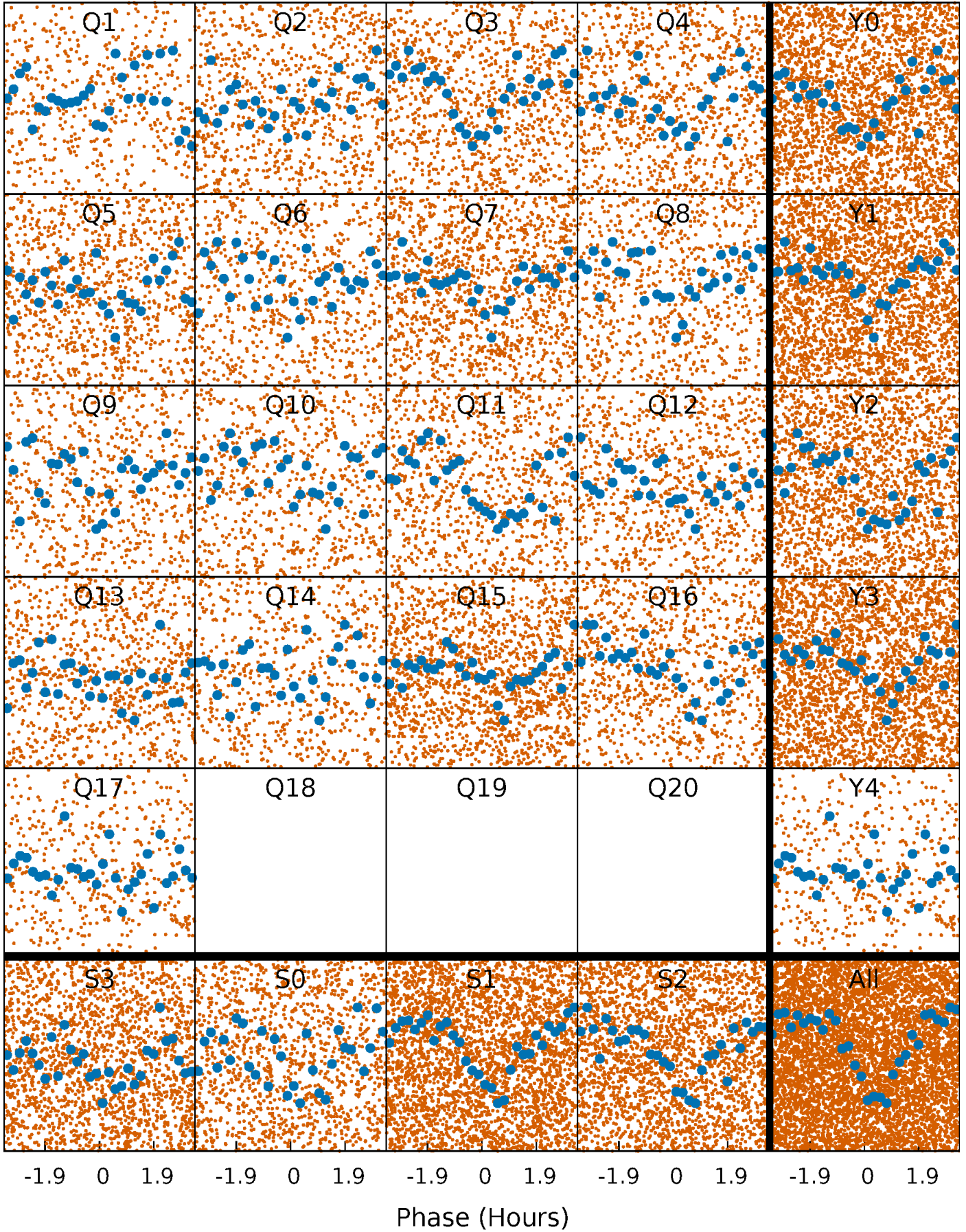


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



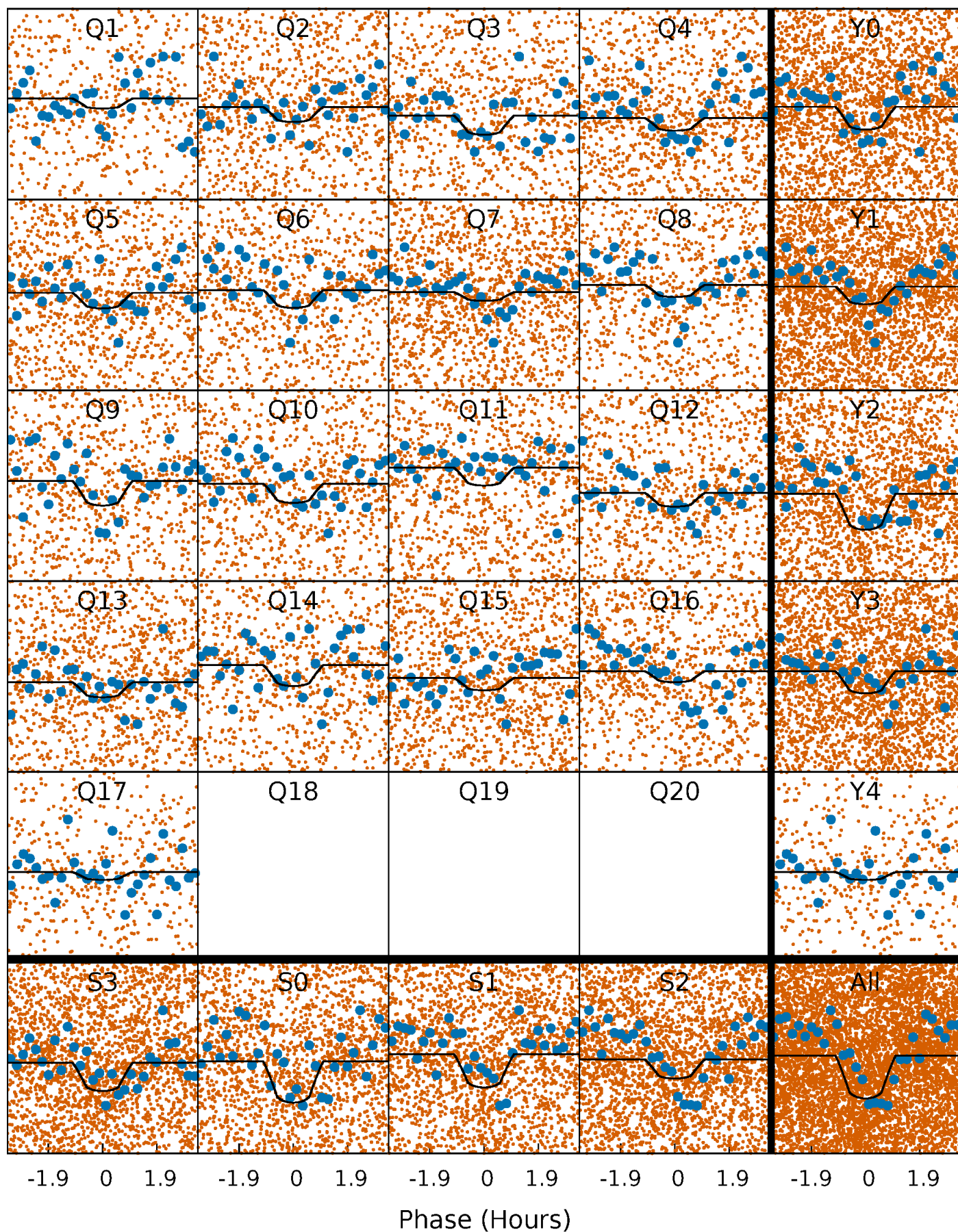
PDC Quarter-Phased Transit Curves

TCE 011662790-01 P= 0.644985 Days $T_0=131.529759$ (BKJD)



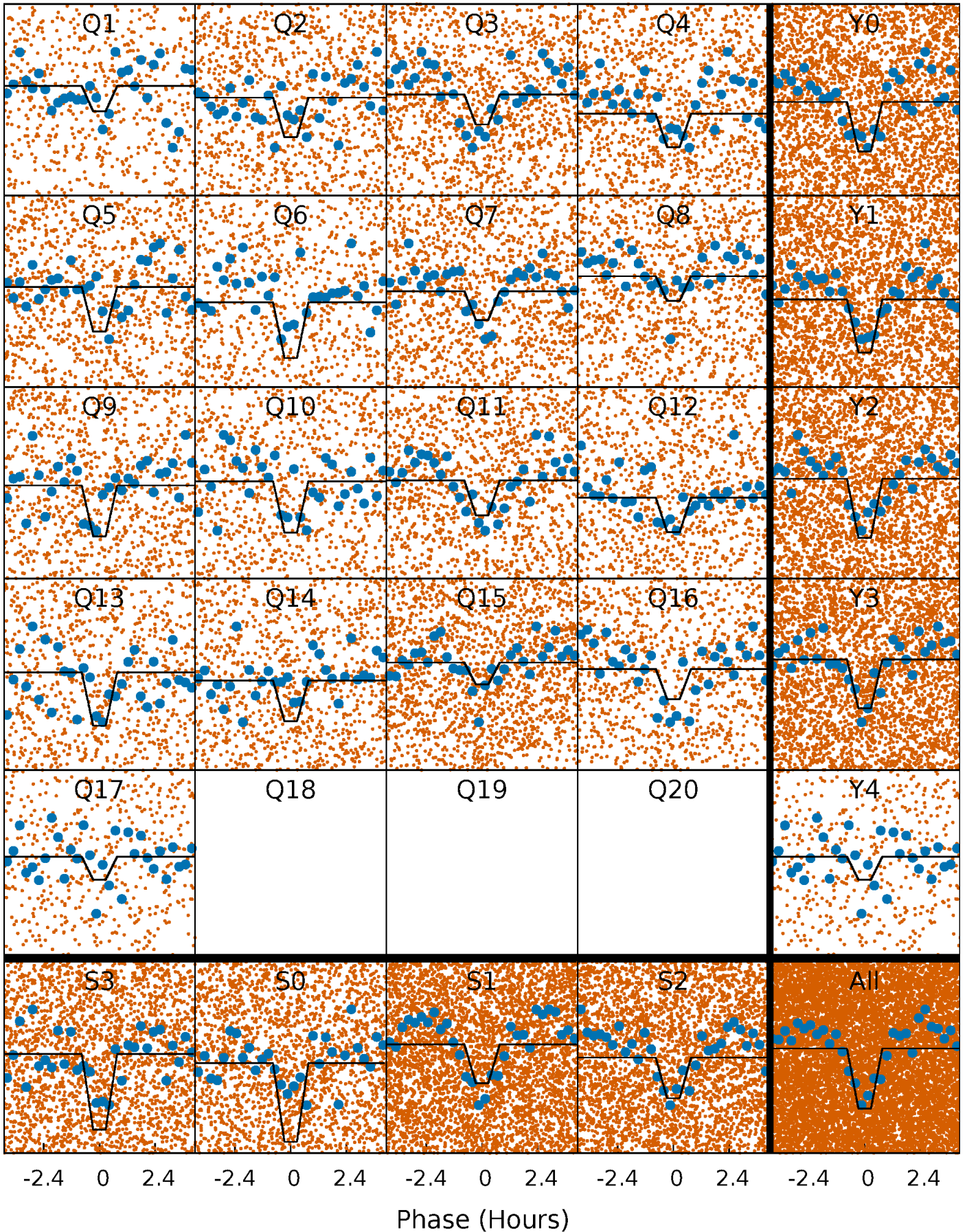
DV Quarter-Phased Transit Curves

TCE 011662790-01 P= 0.644985 Days $T_0=131.529759$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

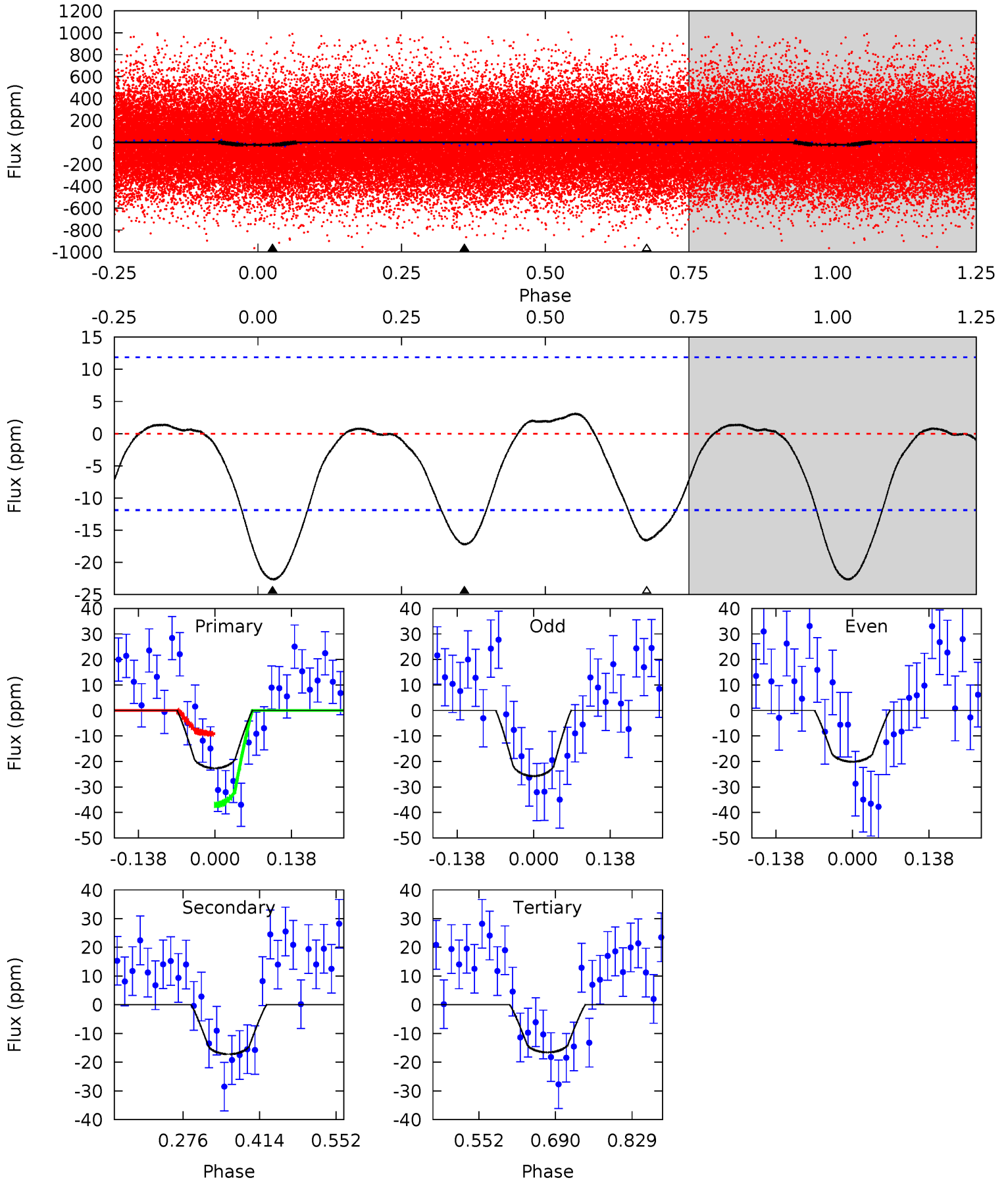
TCE 011662790-01 P= 0.645005 Days $T_0=131.524495$ (BKJD)



DV Model-Shift Uniqueness Test

011662790-01, $P = 0.644985$ Days, $E = 130.884774$ Days

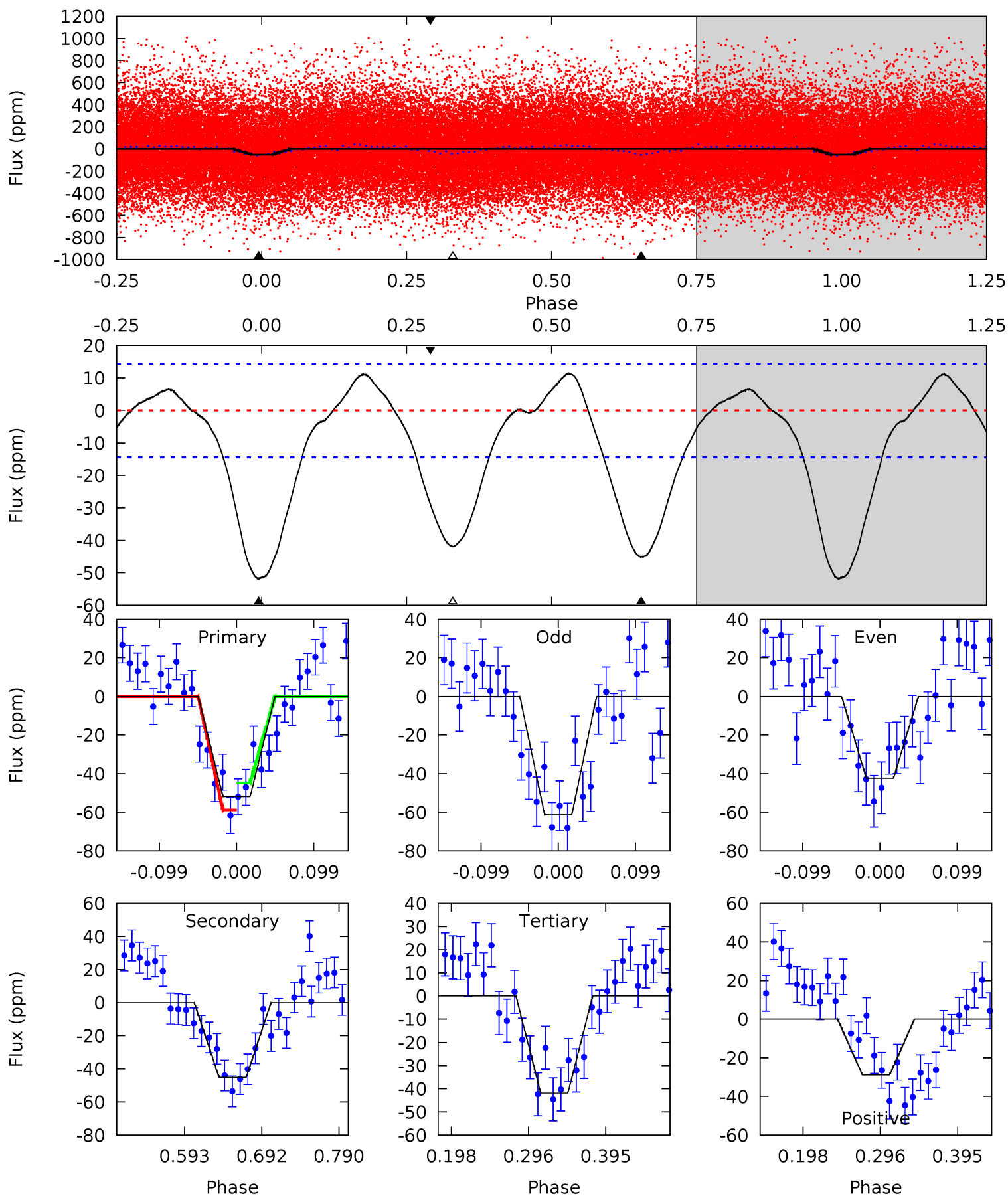
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.57	6.52	6.27	0	4.50	1.48	2.44	2.30	8.57	0.24	6.52	1.07	0.87	0.12	5.27



Alt Model-Shift Uniqueness Test

011662790-01, P = 0.645005 Days, E = 130.879490 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.4	14.3	13.3	-9.18	4.57	1.65	4.74	3.14	25.6	1.01	23.5	3.00	0.95	0.18	2.23



Stellar Parameters For KIC 011662790

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5695^{+152}_{-152}	$4.564^{+0.035}_{-0.184}$	$-0.200^{+0.300}_{-0.300}$	$0.827^{+0.229}_{-0.076}$	$0.918^{+0.092}_{-0.112}$	$2.287^{+0.411}_{-1.105}$
	+3%/-3%	+1%/-4%	+150%/-150%	+28%/-9%	+10%/-12%	+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 011662790-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-17 ± 3	$0.54^{+0.35}_{-0.30}$	2747^{+169}_{-114}	4859^{+2426}_{-867}	$6.229^{+26.742}_{-3.880}$
Alt.	-45 ± 3	$0.74^{+0.37}_{-0.35}$	2752^{+172}_{-121}	5337^{+1886}_{-876}	$9.002^{+22.965}_{-5.003}$

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 $A_{obs} \gg 1.0$

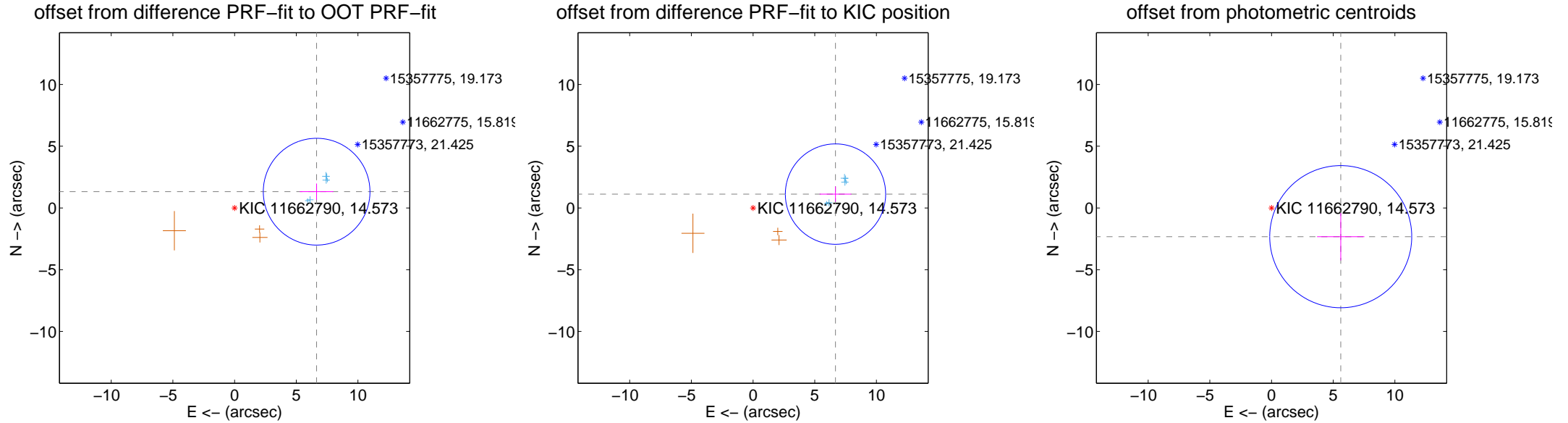
DV Centroid Data

Supplemental centroid analysis for 011662790-01. Kepler magnitude: 14.57. Transit SNR 7.05

There are 6 quarters with good PRF difference image offsets

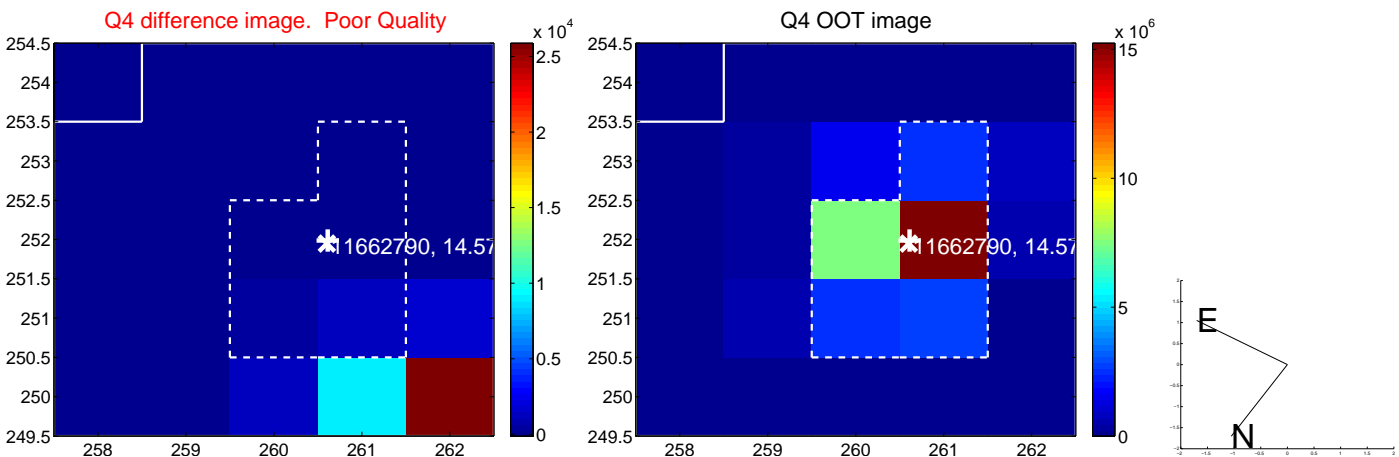
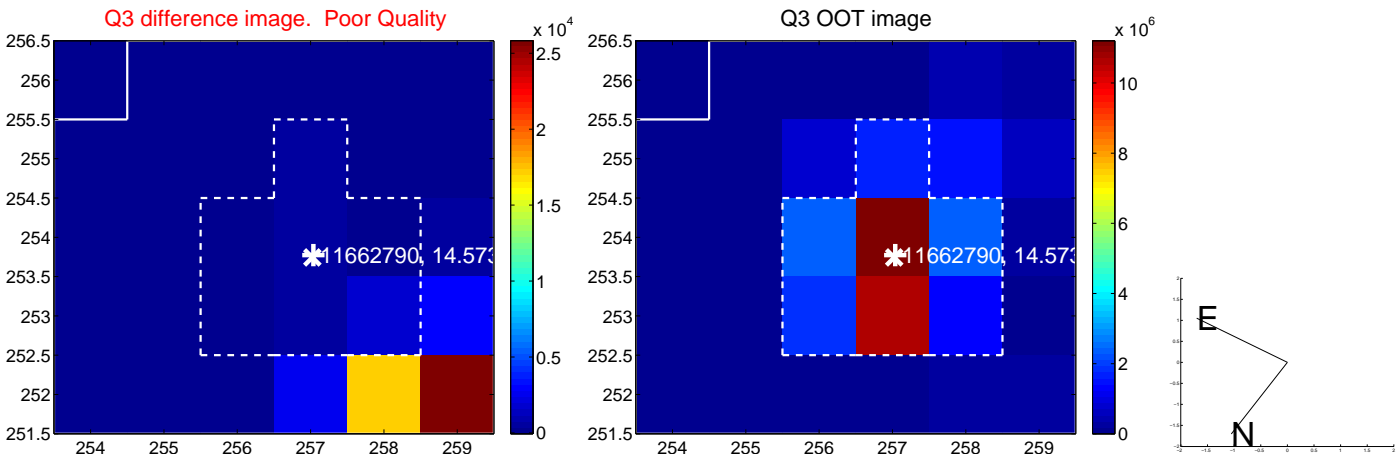
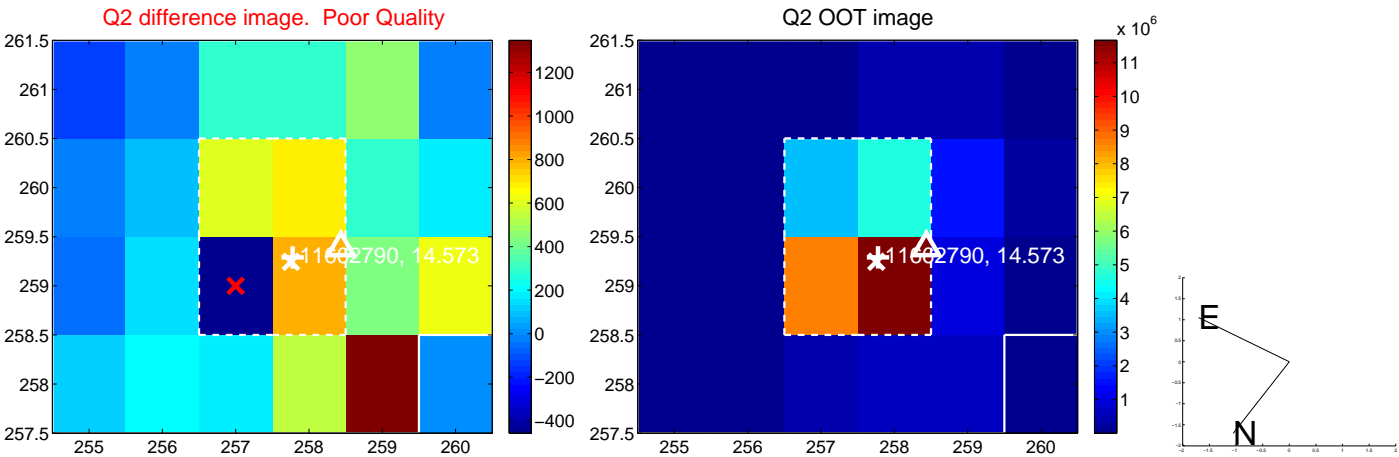
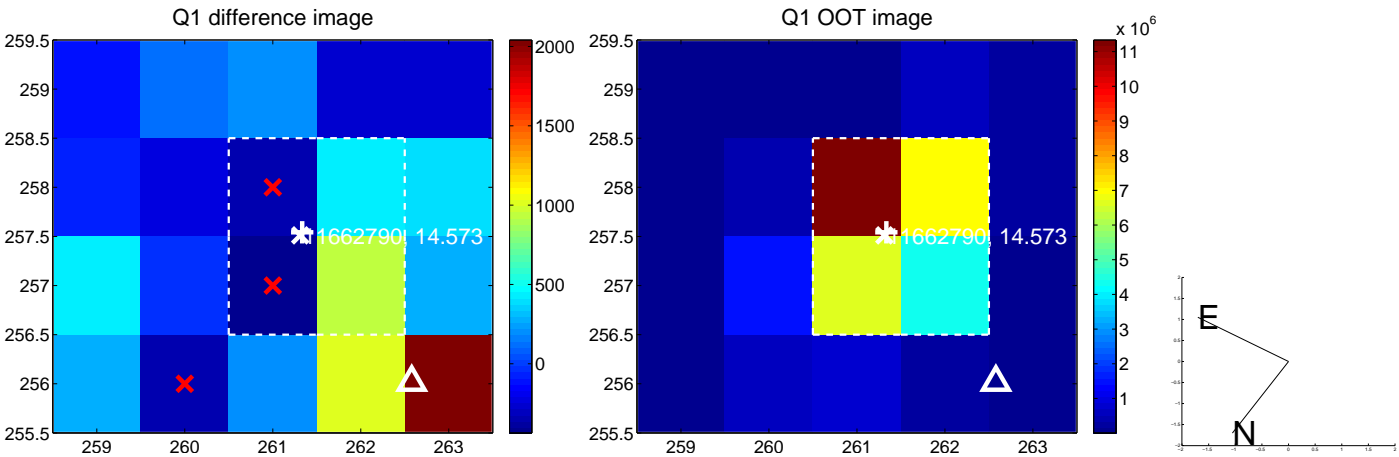
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.778 ± 1.441	4.70	-6.649 ± 1.359	1.317 ± 0.663
PRF-fit source offset from KIC position	6.775 ± 1.355	5.00	-6.682 ± 1.288	1.121 ± 0.616
photometric centroid source offset	6.07 ± 1.92	3.17	-5.61 ± 1.92	-2.33 ± 1.92

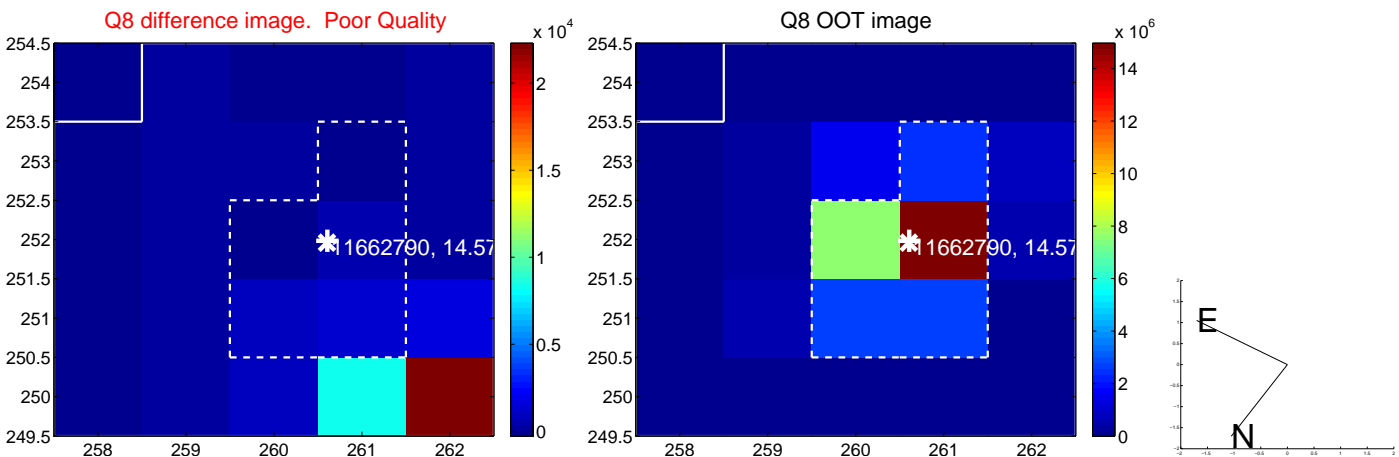
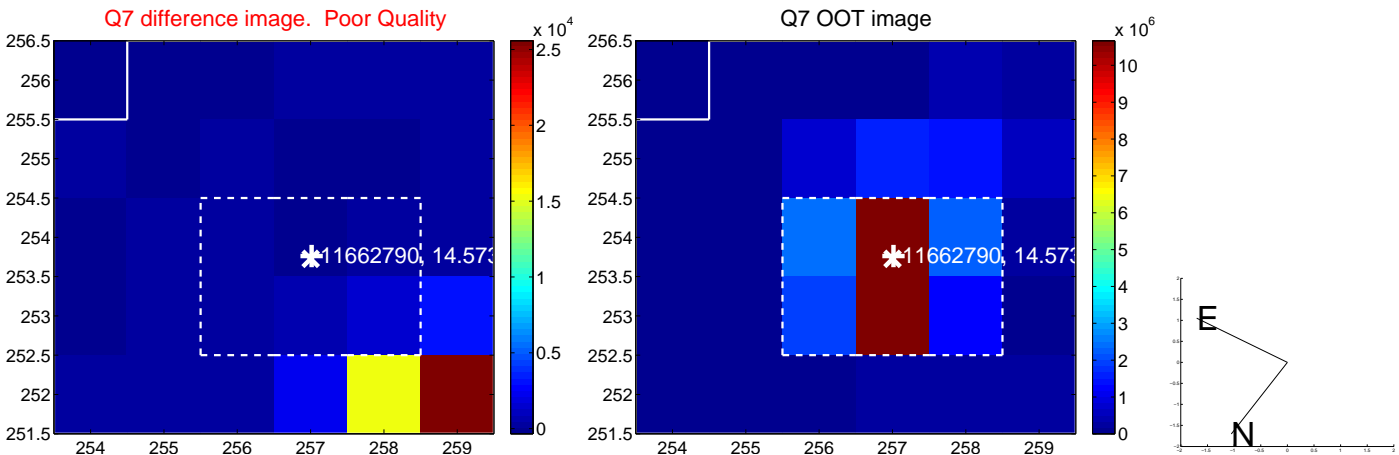
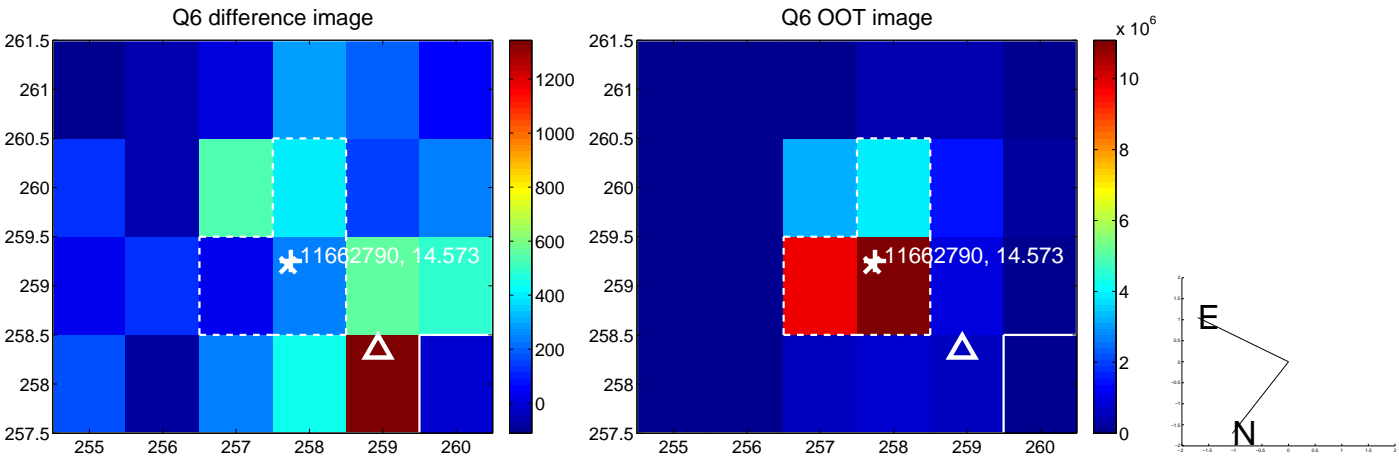
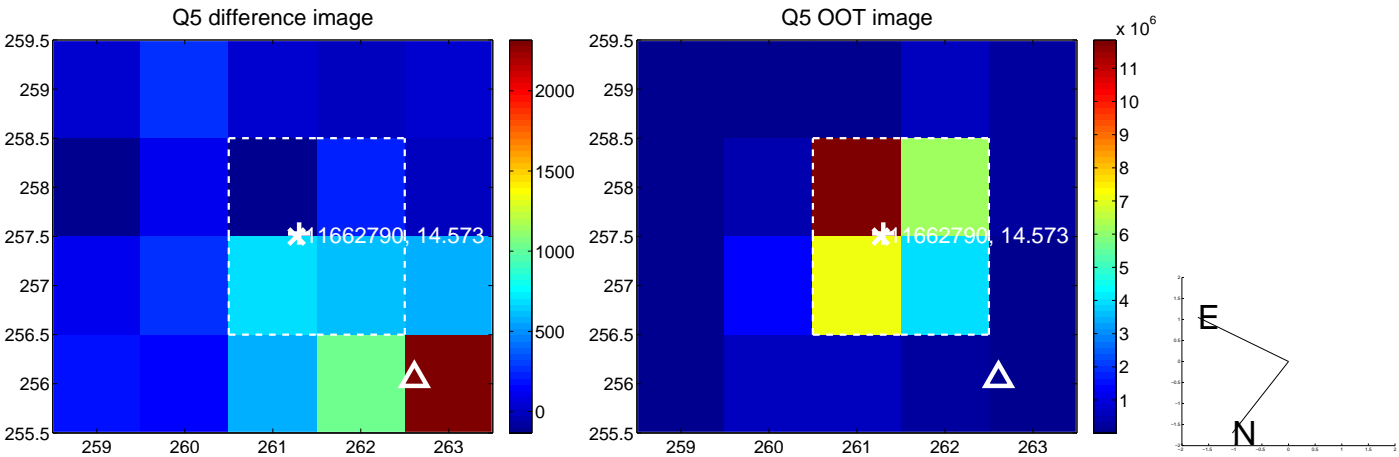


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

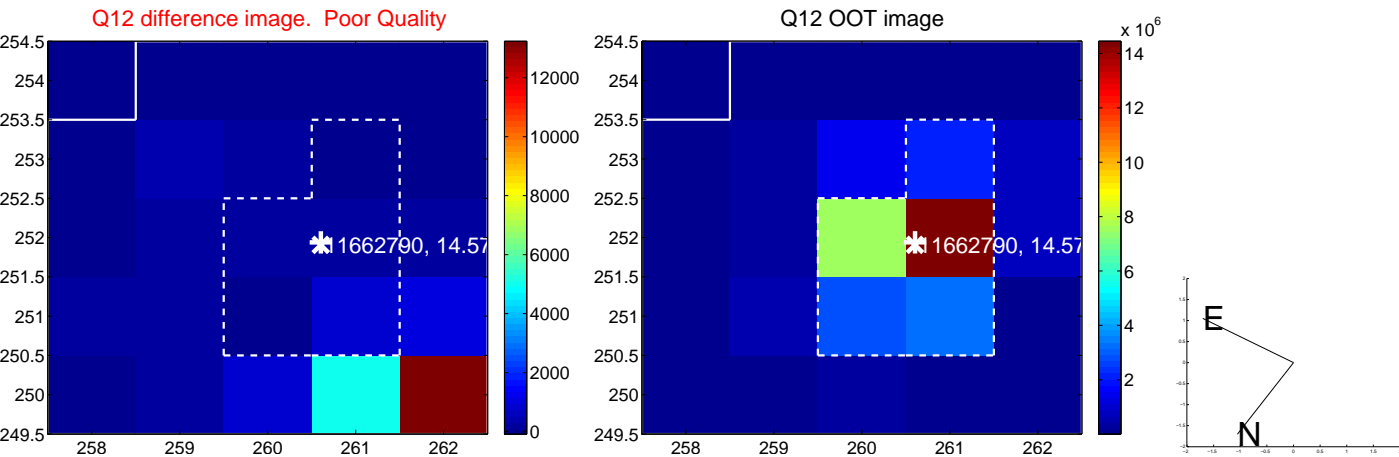
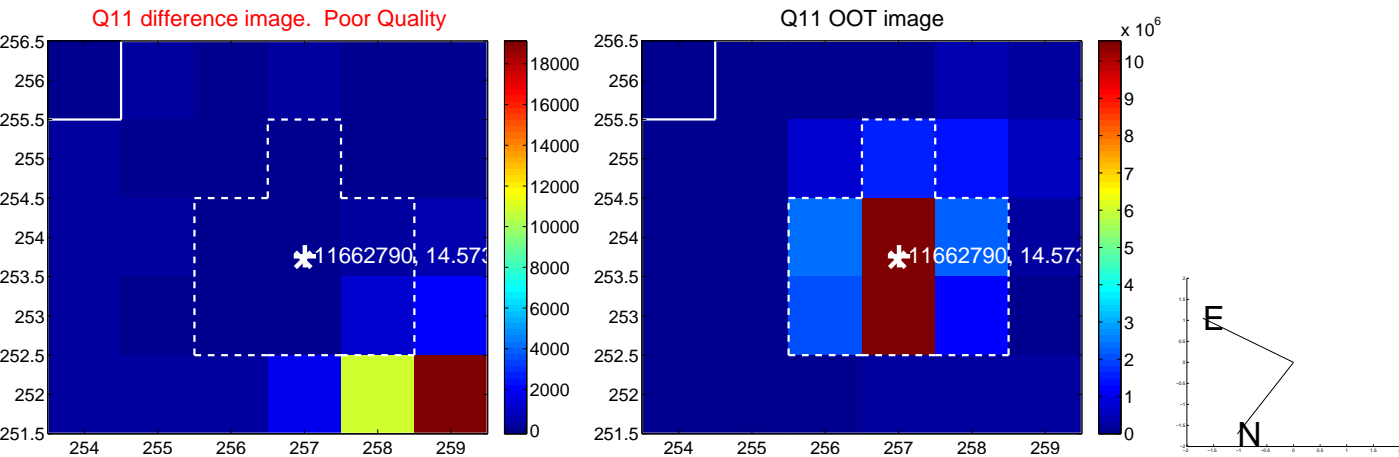
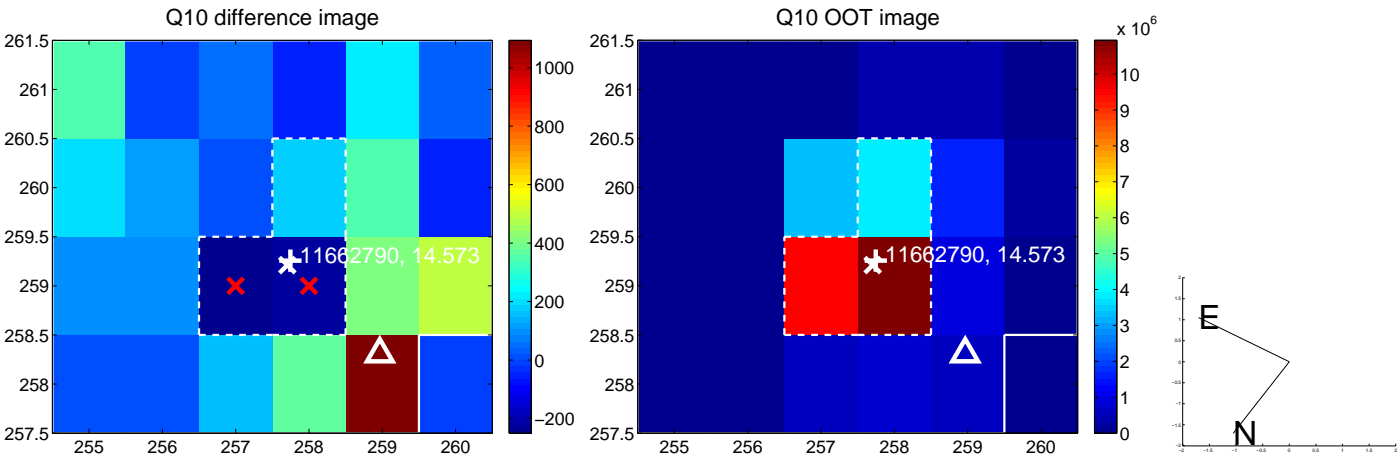
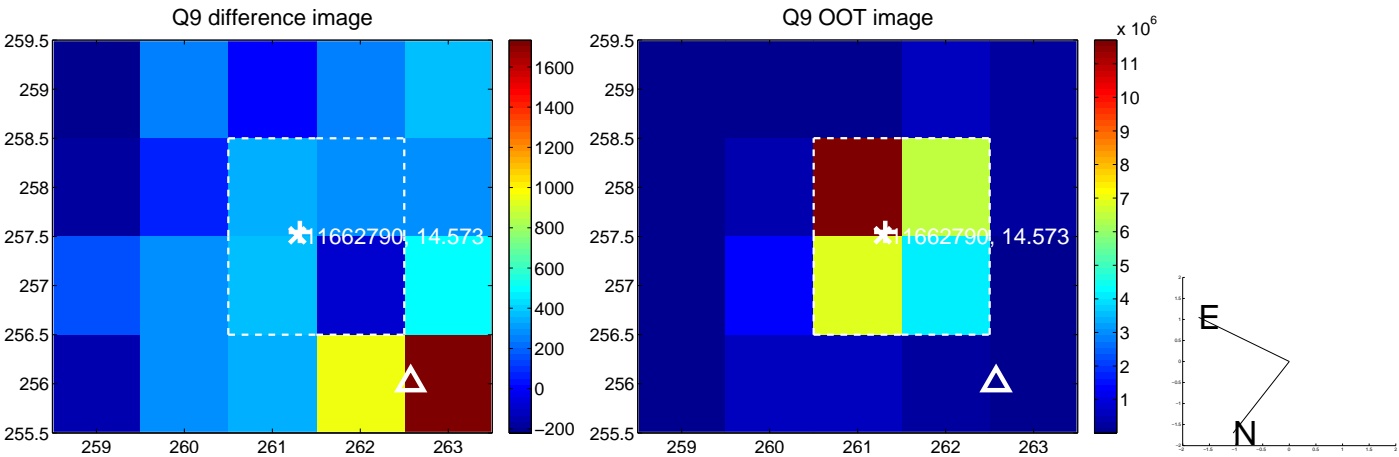
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



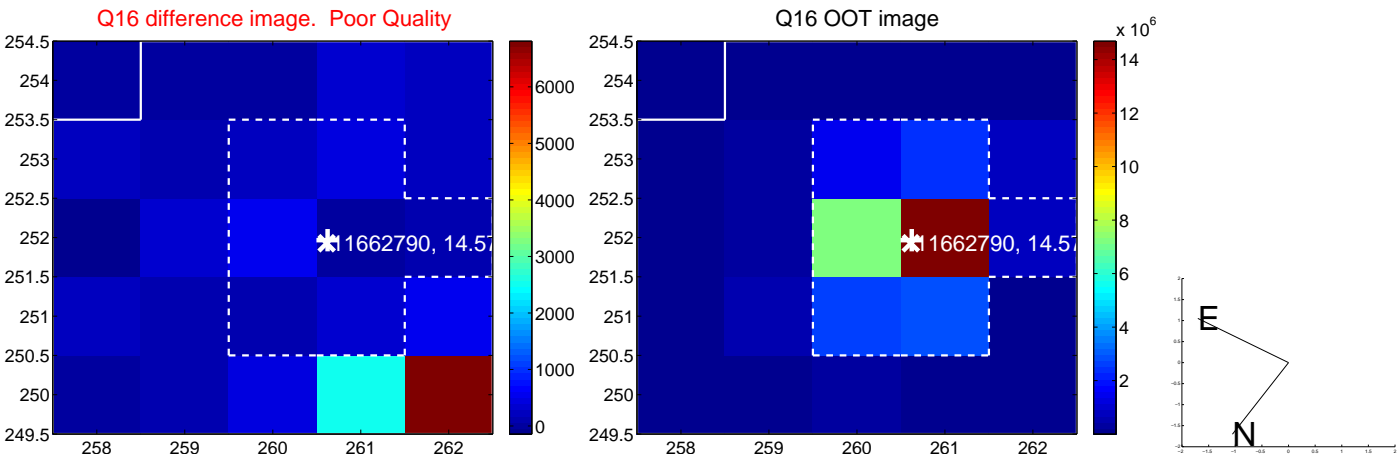
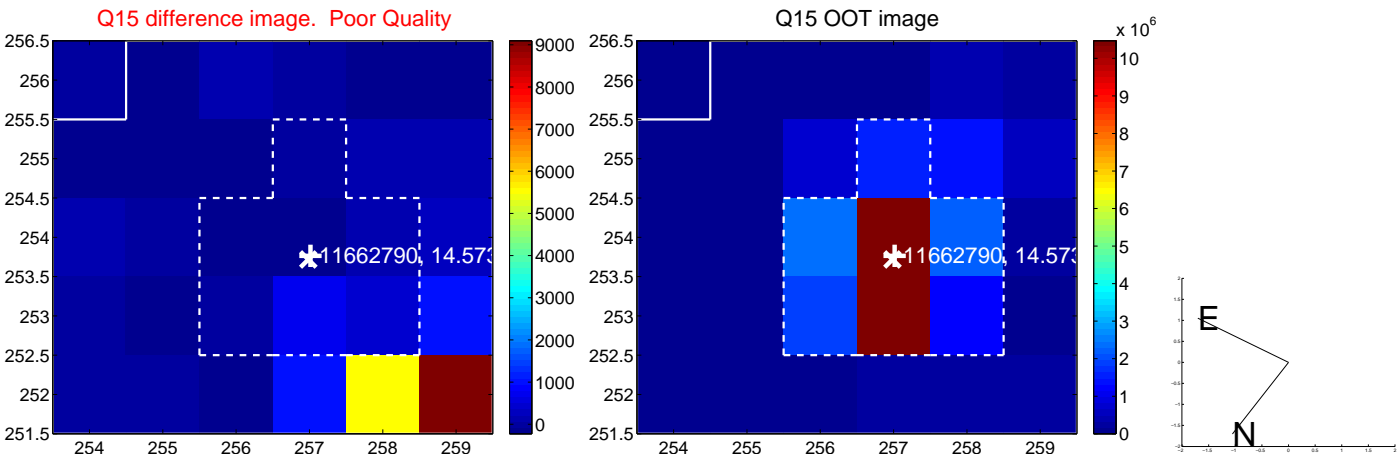
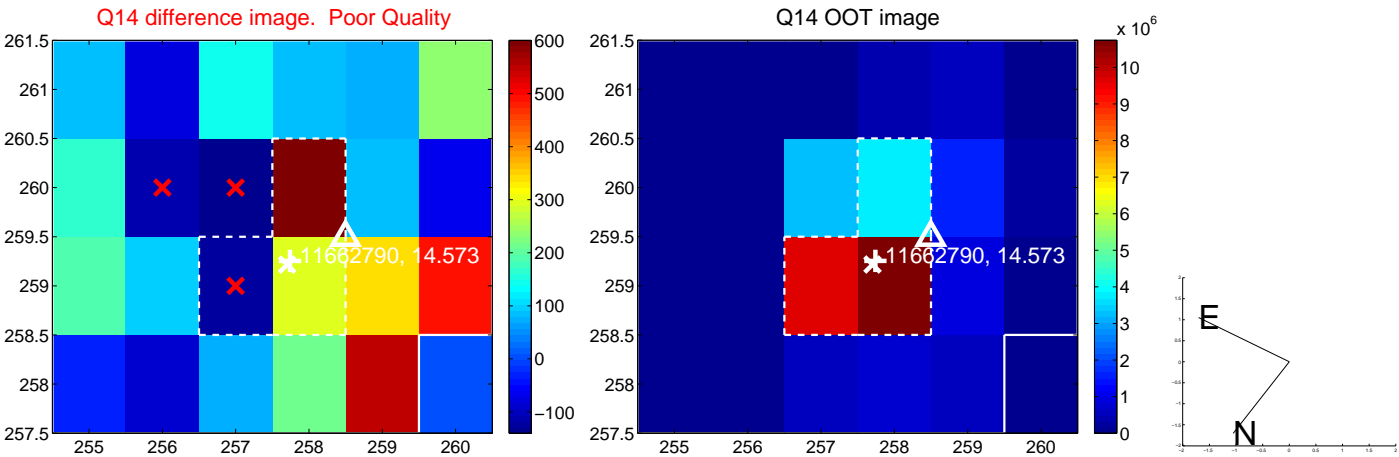
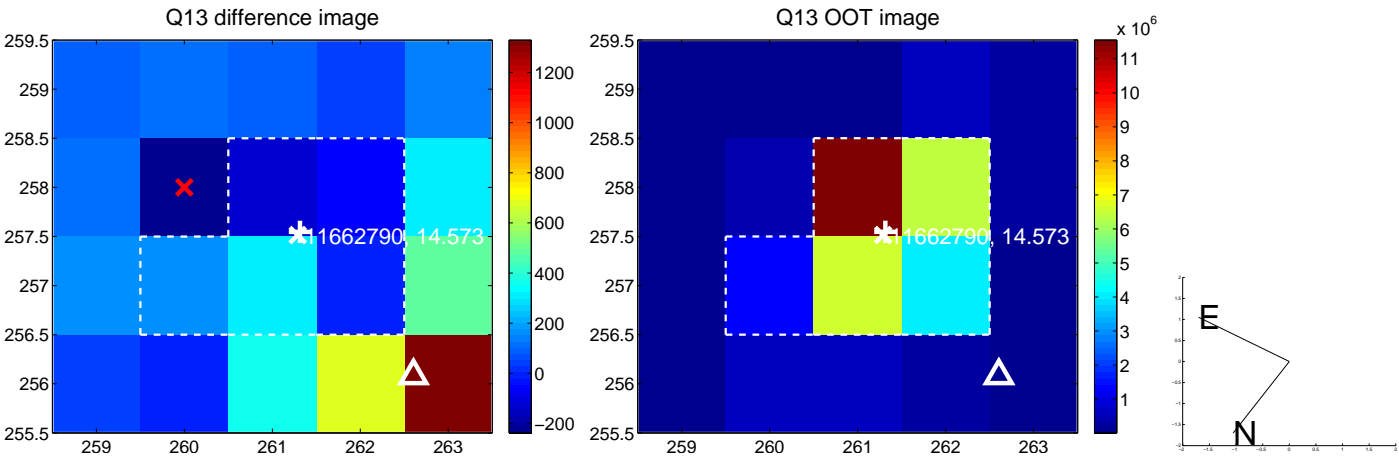
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



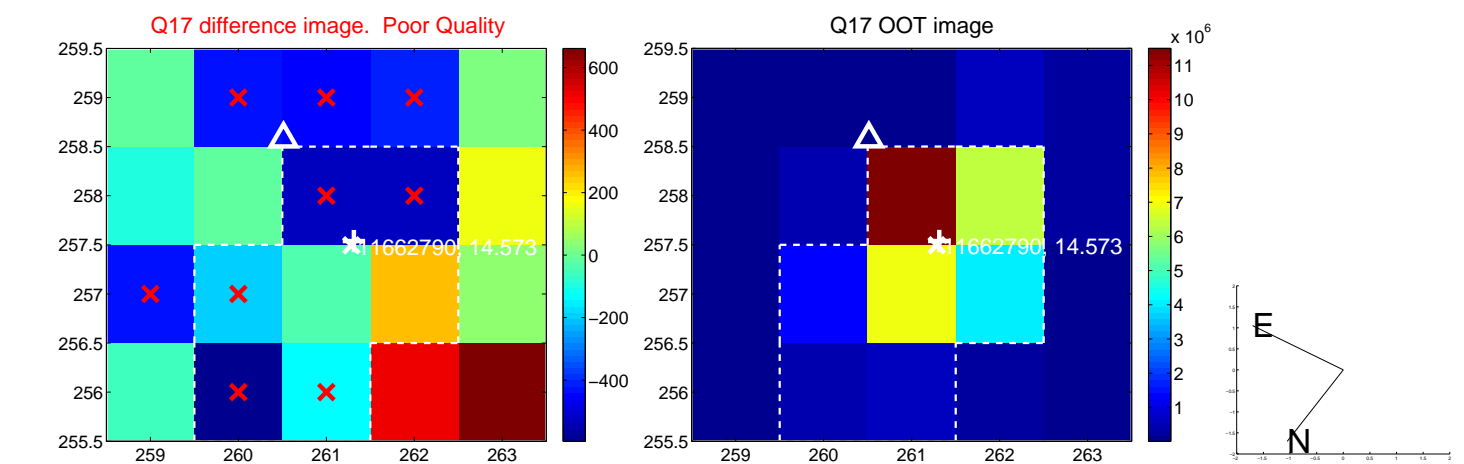
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



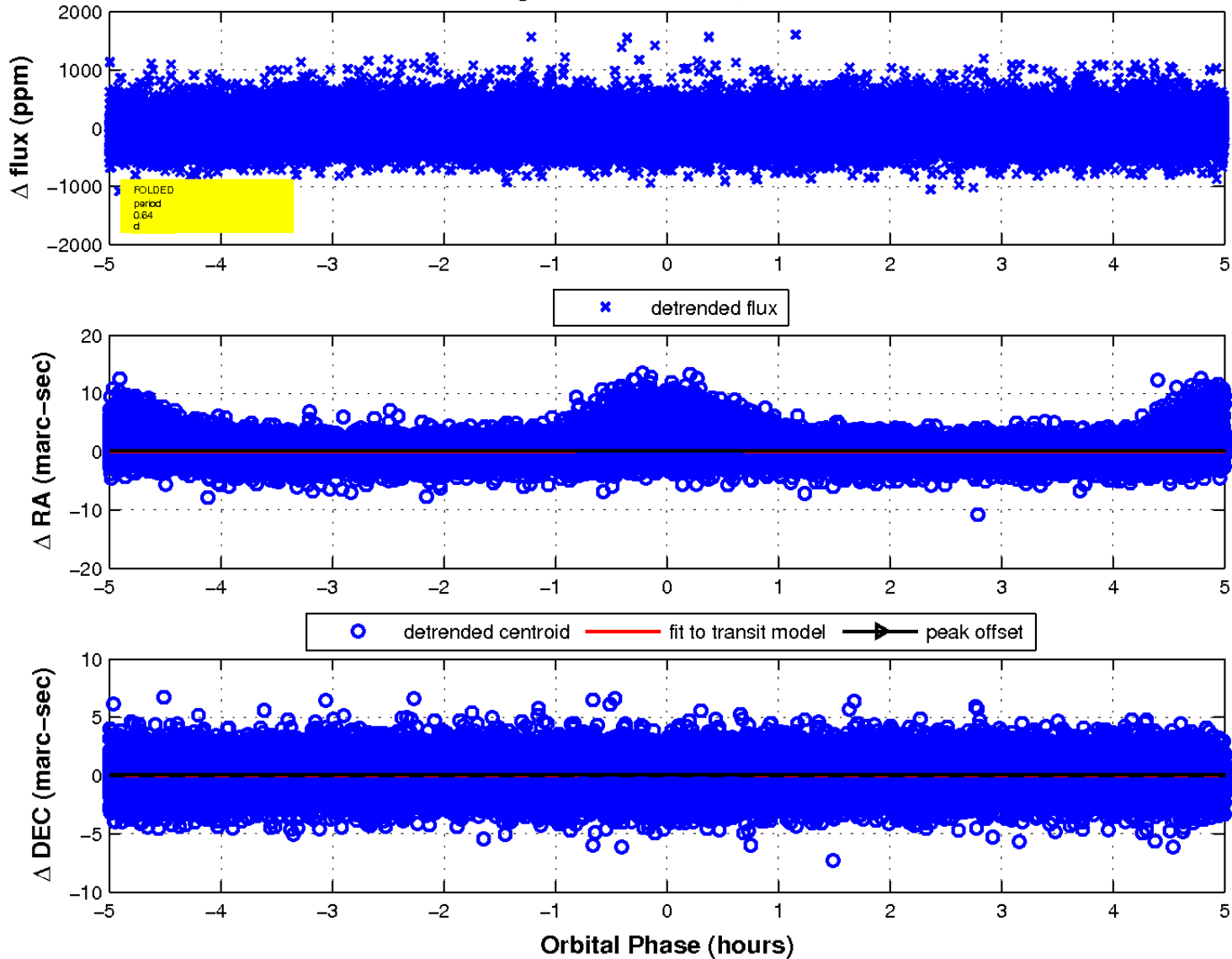
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

