

KIC 005213053

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})
005213053-01	OBS	No	0.635583	131.599998	33.3	2.177	9.1	7.7	0.83	5655	0.58	3207.44

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005213053-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—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.

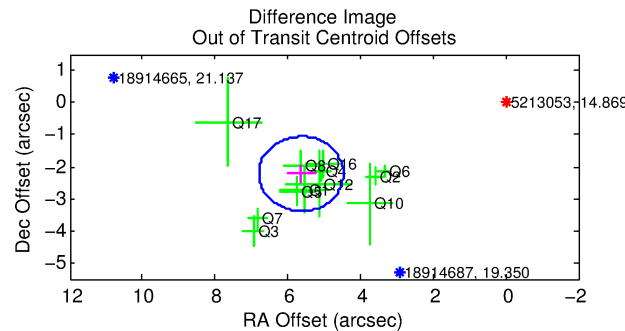
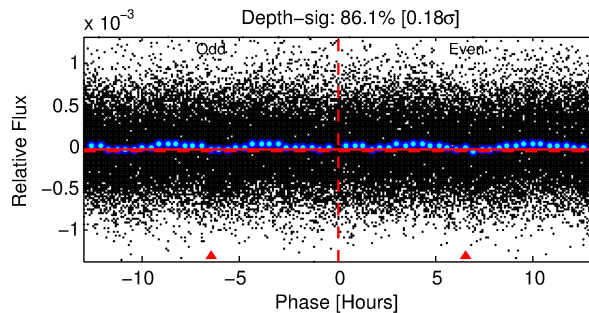
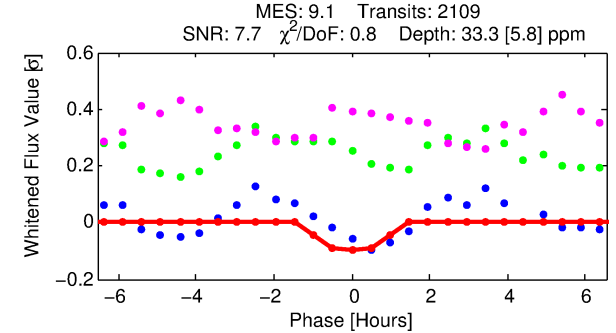
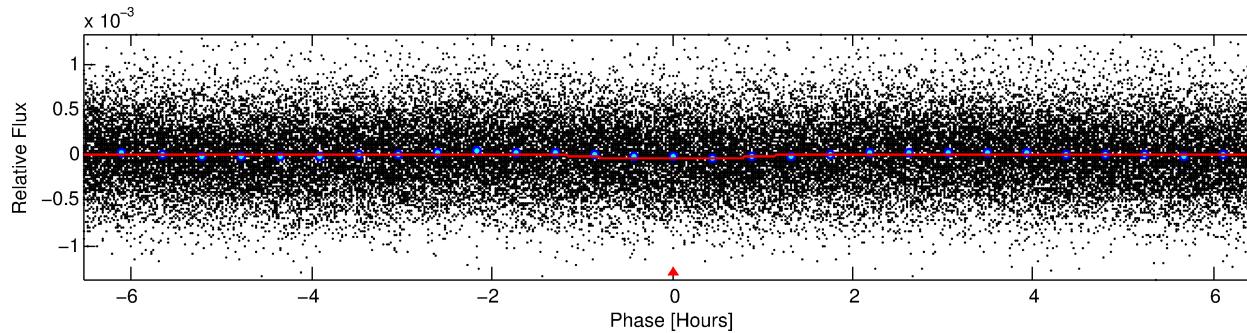
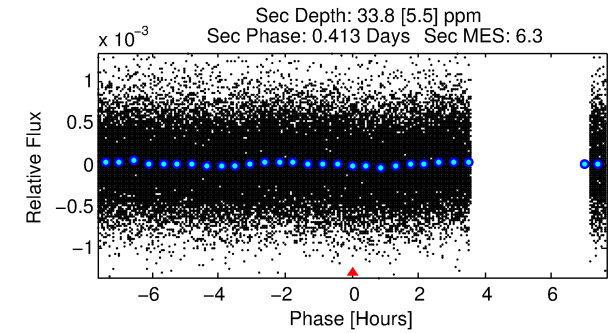
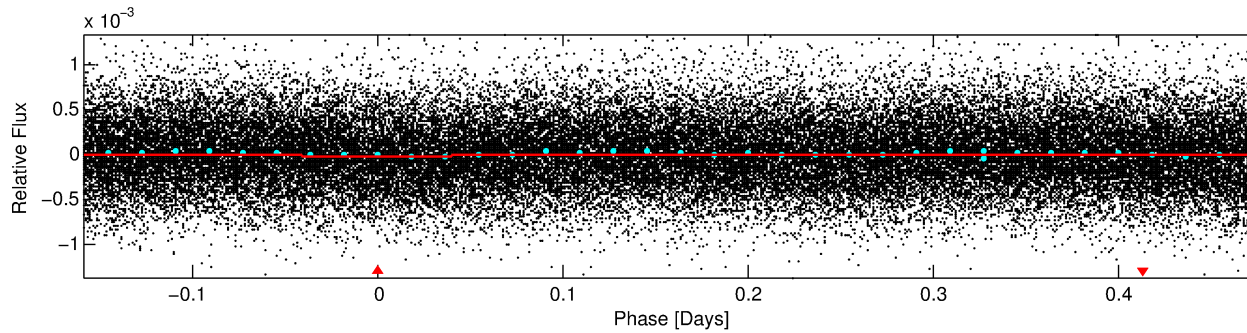
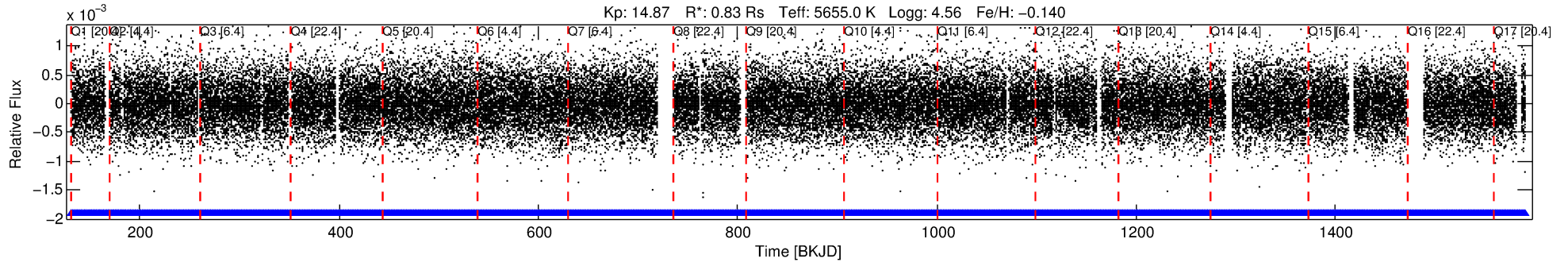
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005213053-01

No Significant Match Found

DV One-Page Summary

KIC: 5213053 Candidate: 1 of 1 Period: 0.636 d



DV Fit Results:

Period = 0.63558 [0.00001] d
Epoch = 131.6000 [0.0040] BKJD
Rp/R* = 0.0063 [0.0051]
a/R* = 1.36 [2.44]
b = 0.90 [0.80]
Seff = 3207.44 [1103.11]
Teff = 1919 [165] K
Rp = 0.58 [0.49] Re
a = 0.0141 [0.0031] AU
Ag = 11.14 [18.47] [0.55σ]
Teffp = 5420 [2210] K [1.58σ]

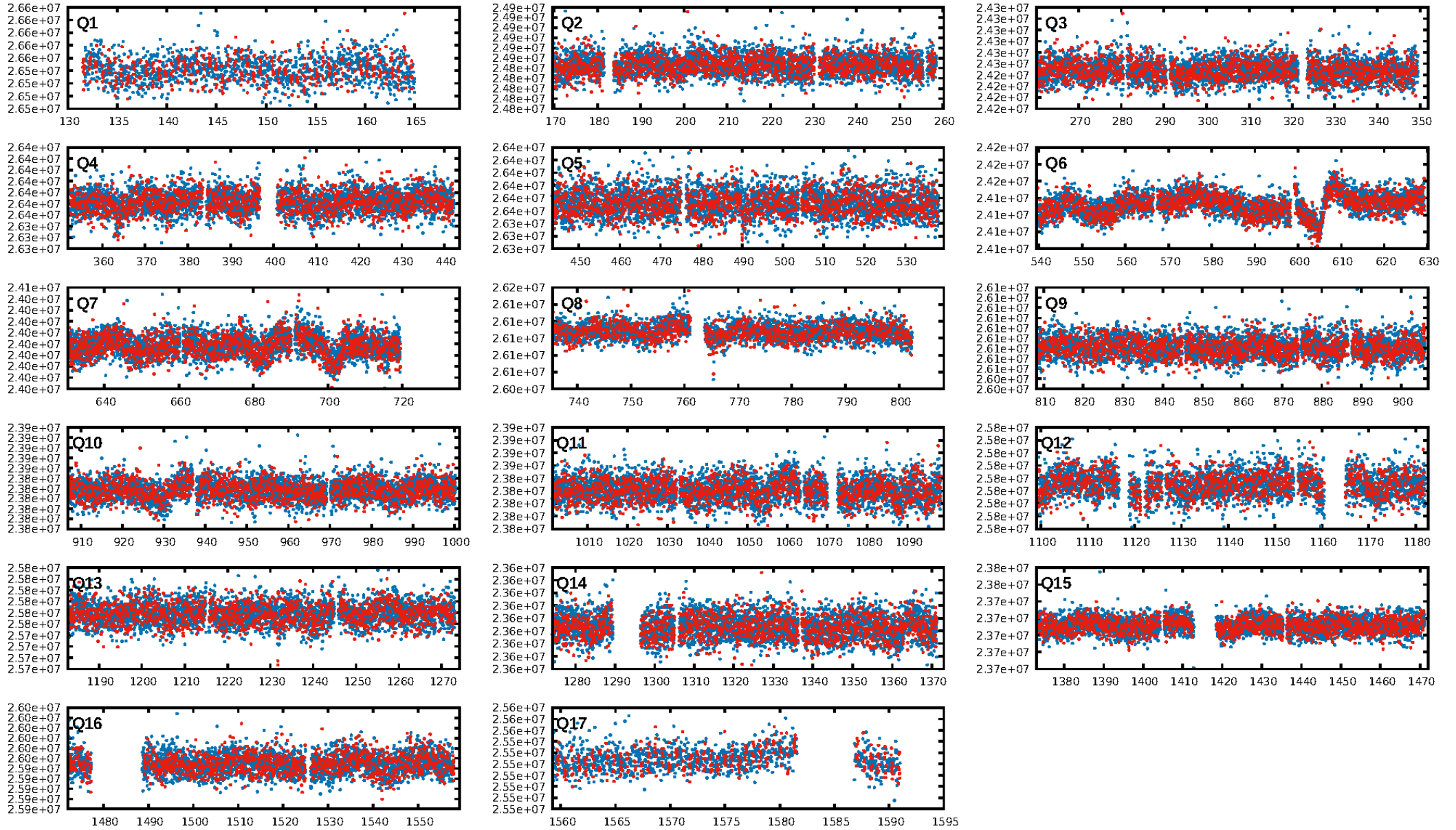
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.32e-20
RollingBand-fgt: 1.00 [2014/2014]
GhostDiagnostic-chr: 3.644
Centroid-sig: 0.0%
Centroid-so: 6.056 arcsec [2.84σ]
OotOffset-rm: 6.057 arcsec [15.61σ]
KicOffset-rm: 6.133 arcsec [16.47σ]
OotOffset-st: 3/2/4/3 [12]
KicOffset-st: 3/2/4/3 [12]
DiffImageQuality-fgm: 0.75 [9/12]
DiffImageOverlap-fno: 1.00 [17/17]

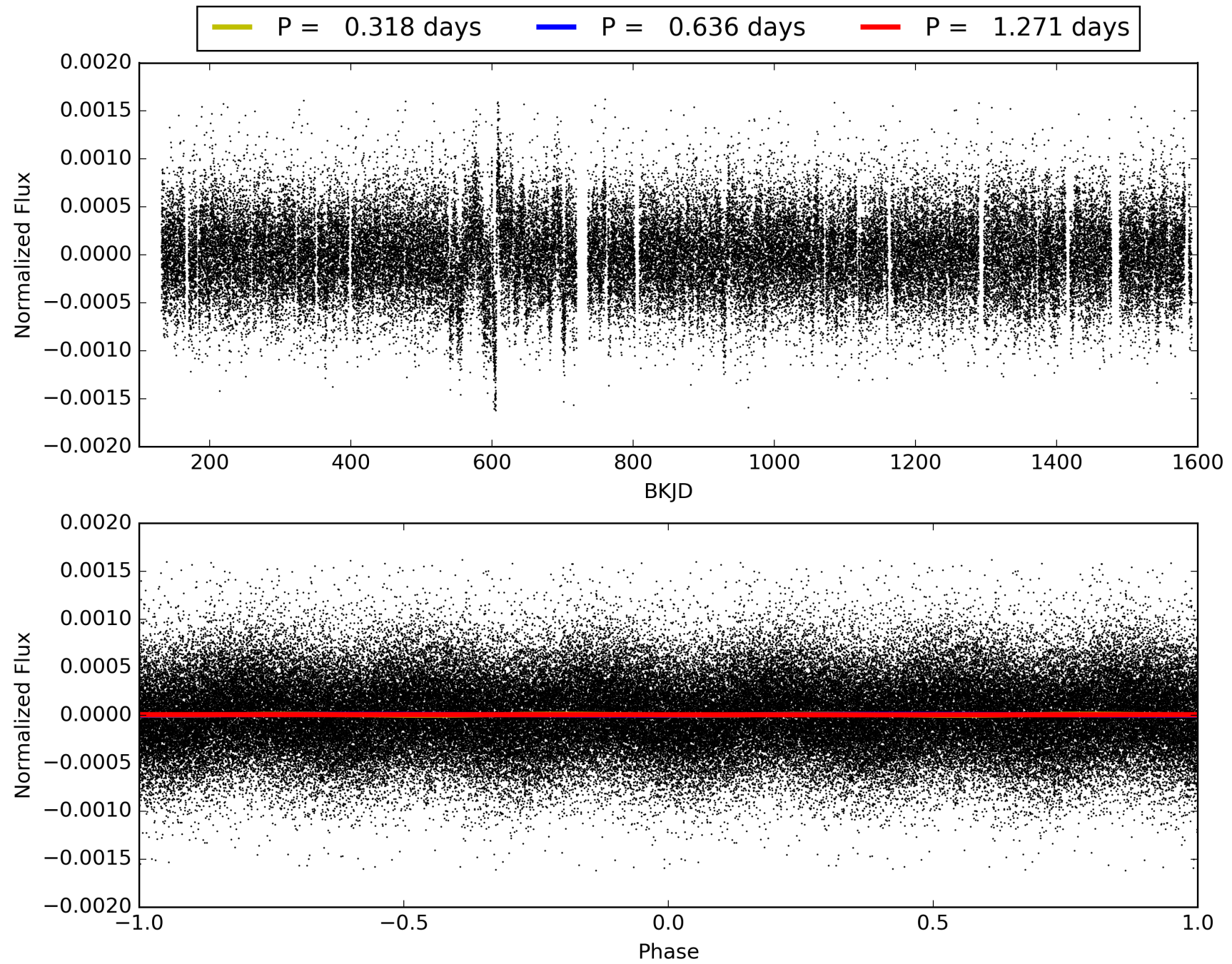
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 12:00:38 Z

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

TCE 005213053-01, PDC Light Curves

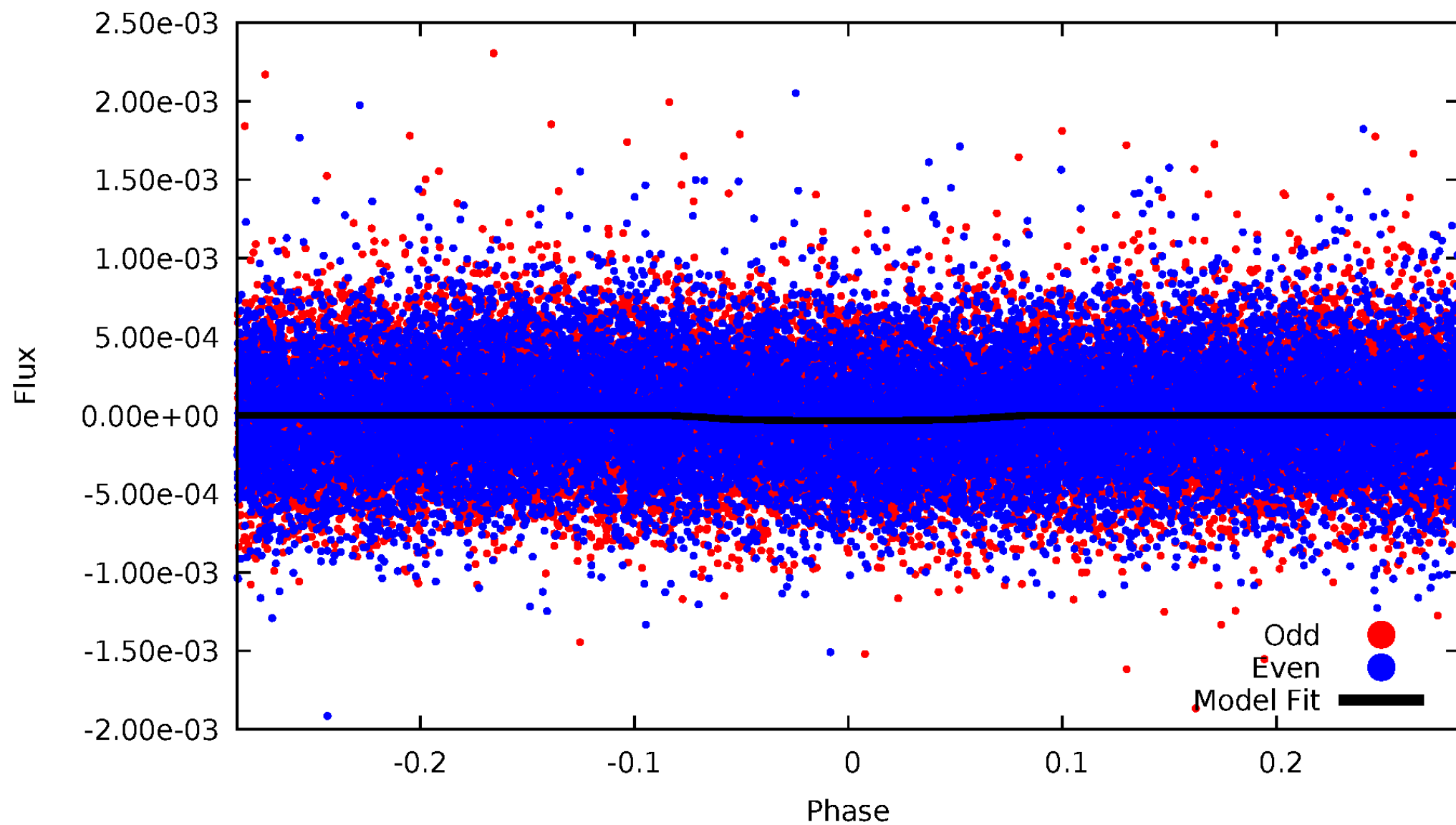


TCE 005213053-01



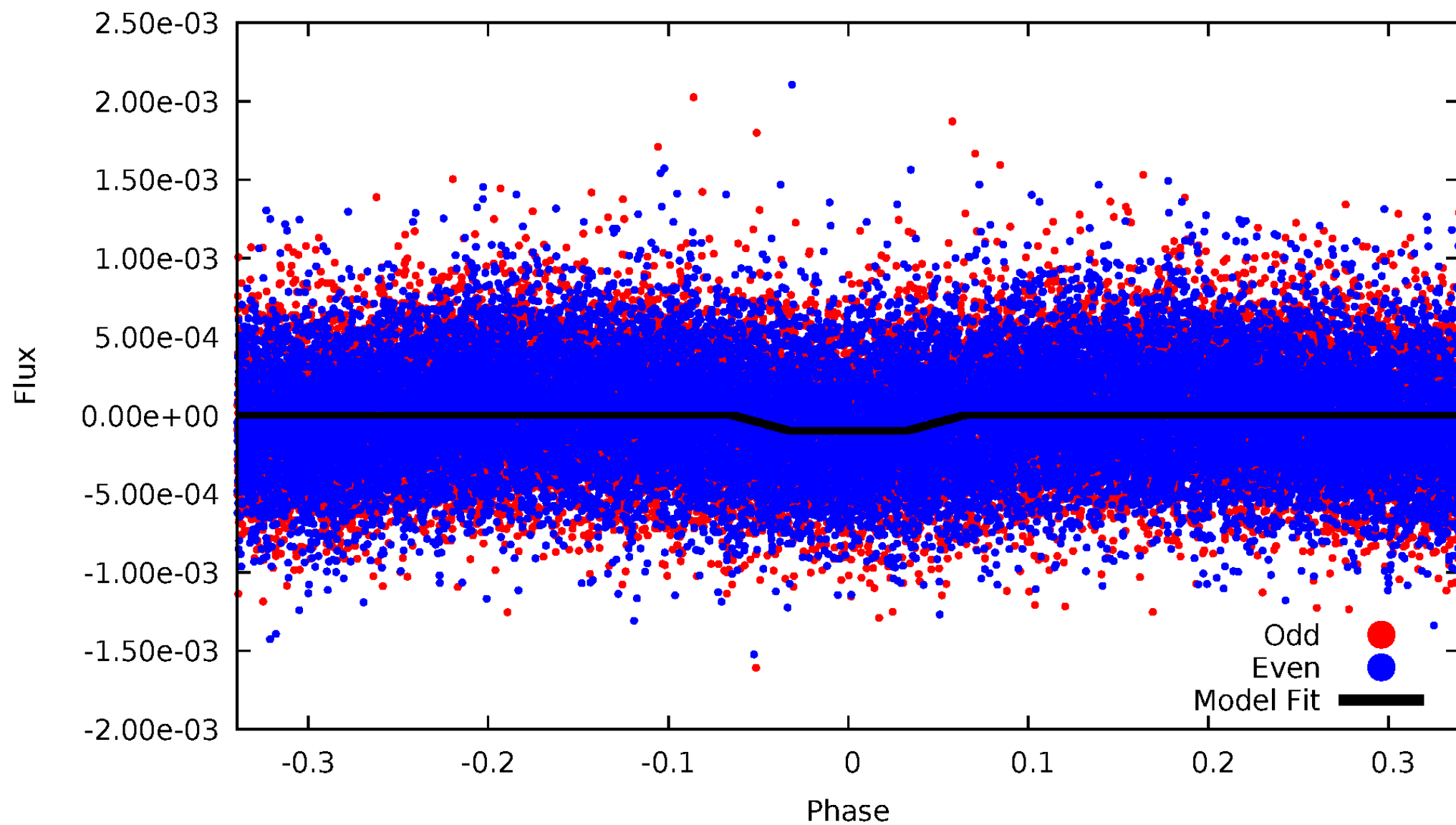
DV Odd/Even

TCE 005213053-01



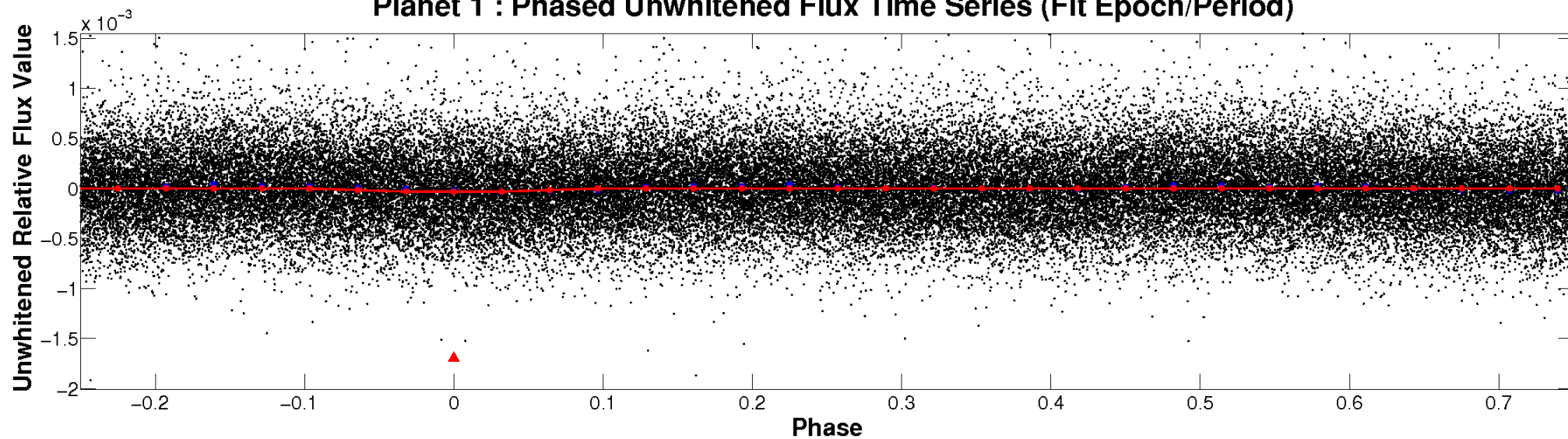
ALT Odd/Even

TCE 005213053-01

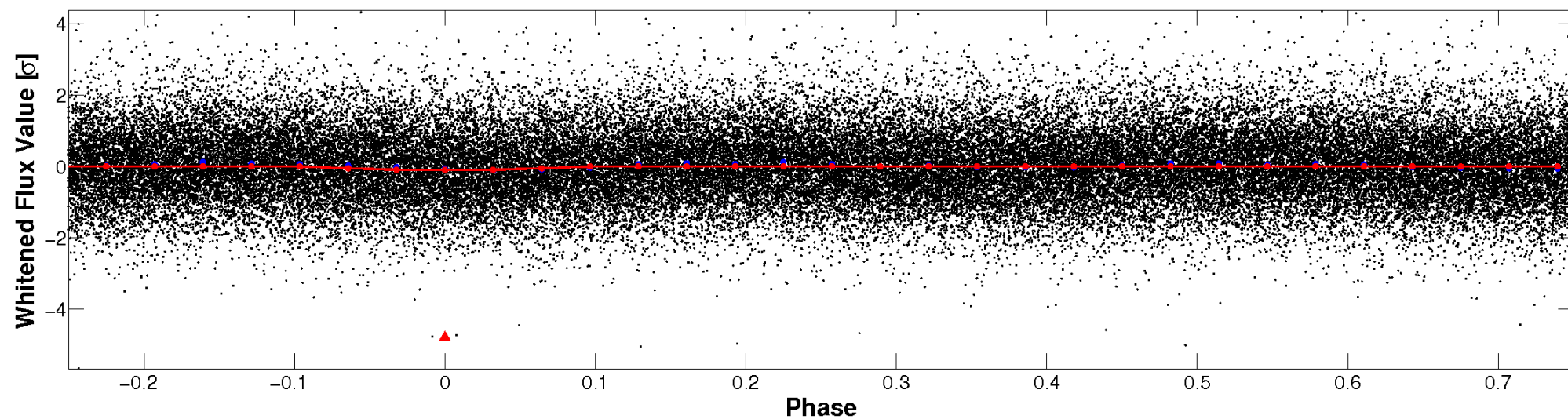


Non-Whitened Vs. Whitened Light Curve

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

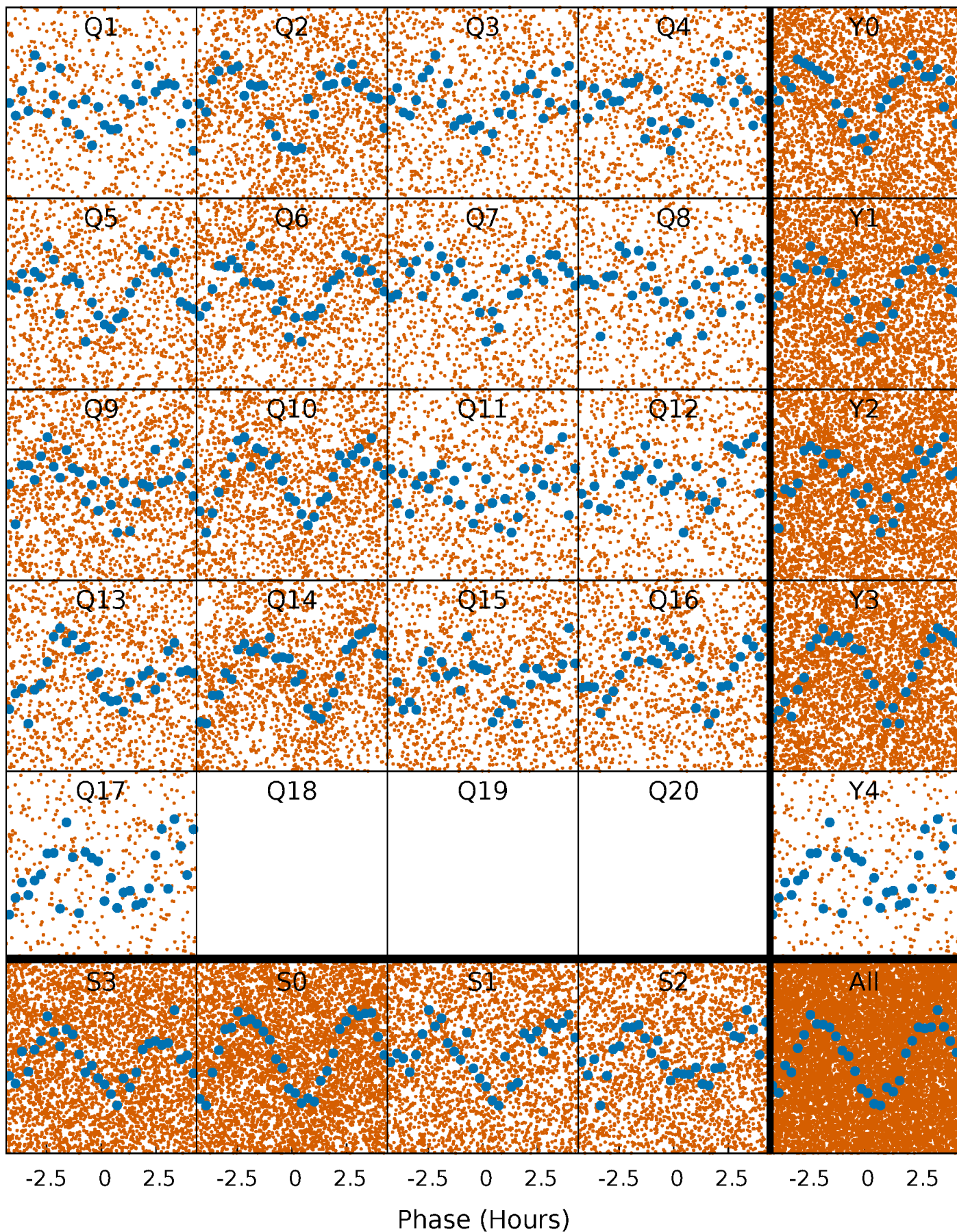


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



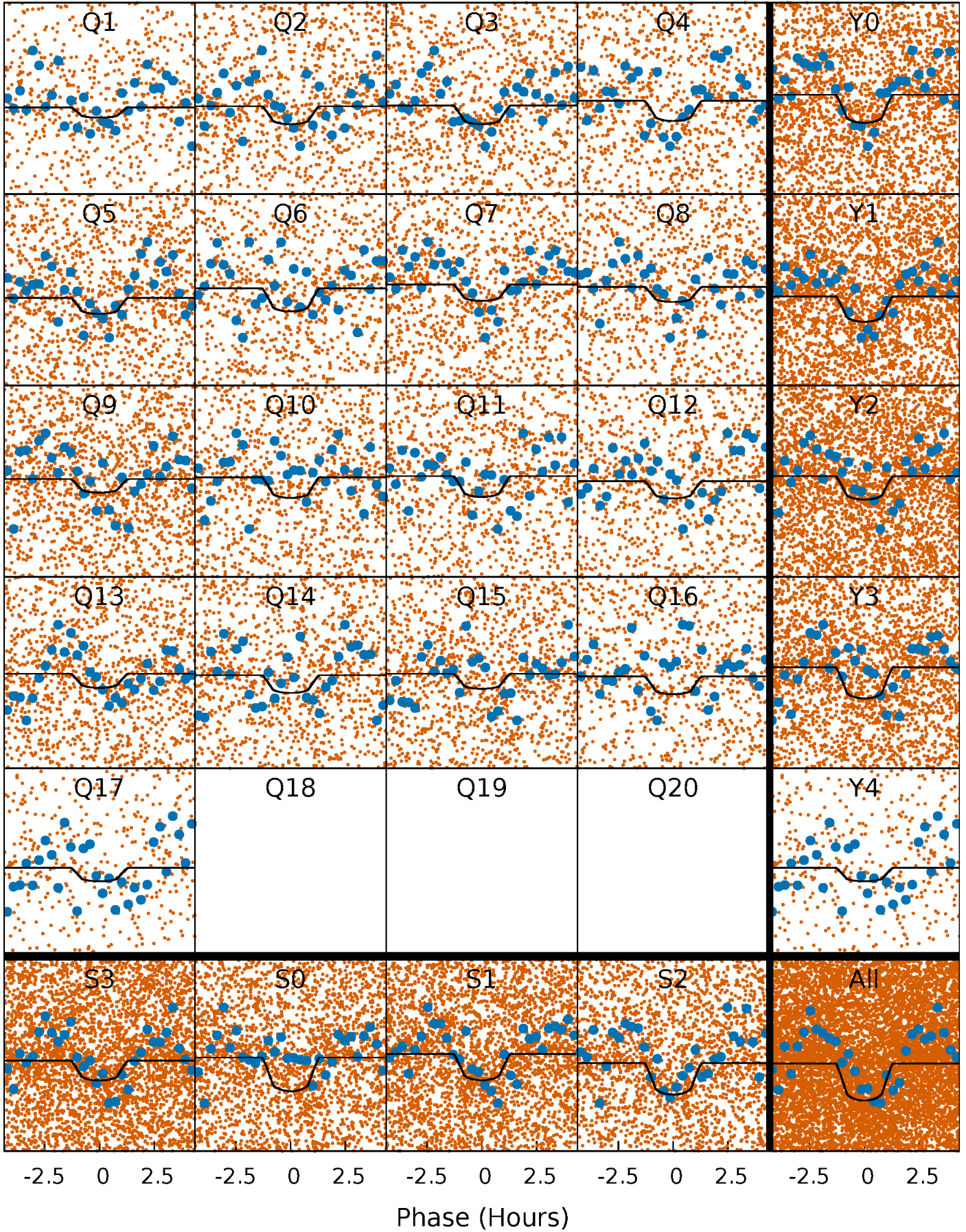
PDC Quarter-Phased Transit Curves

TCE 005213053-01 P= 0.635583 Days $T_0=131.599998$ (BKJD)



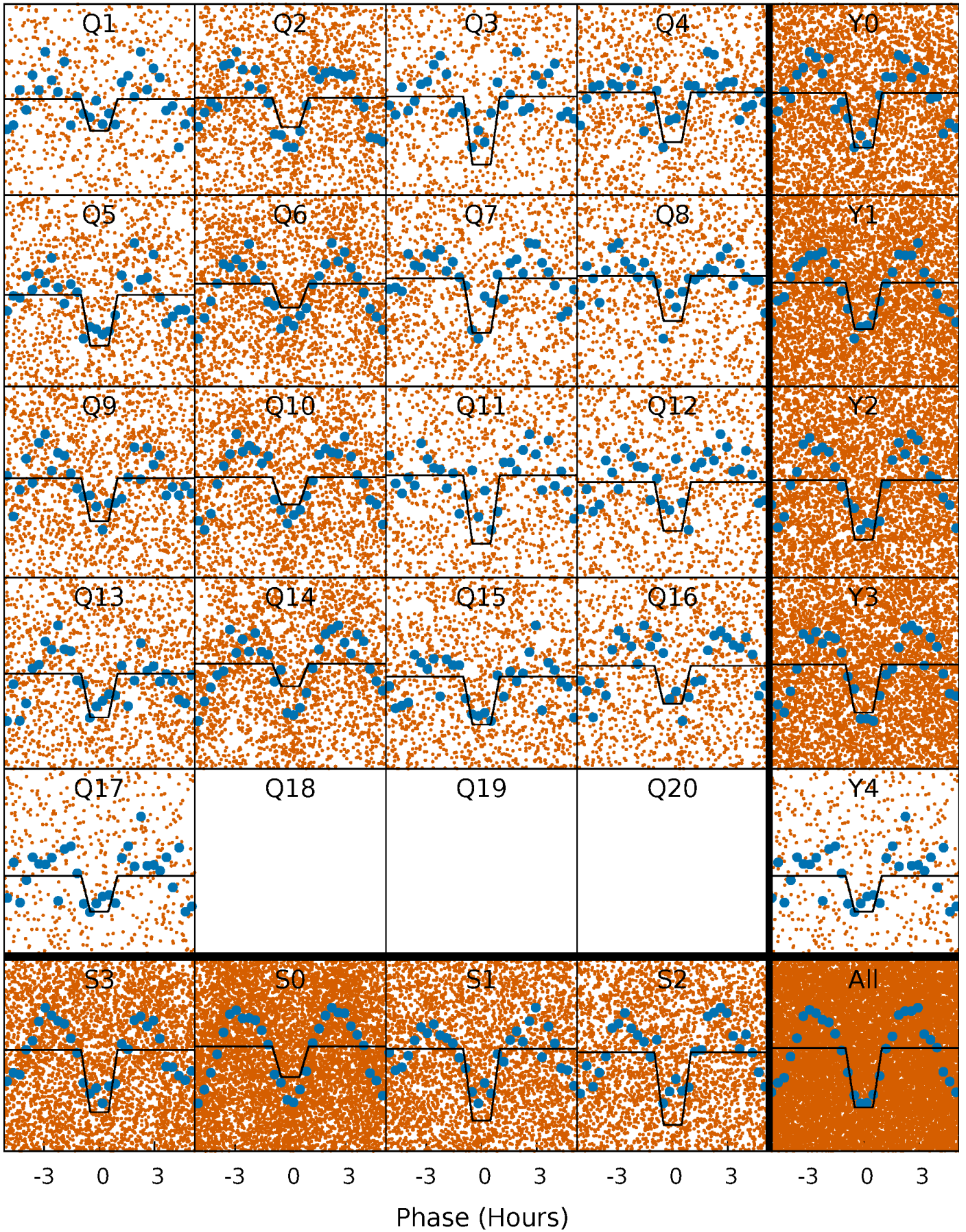
DV Quarter-Phased Transit Curves

TCE 005213053-01 P= 0.635583 Days $T_0=131.599998$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

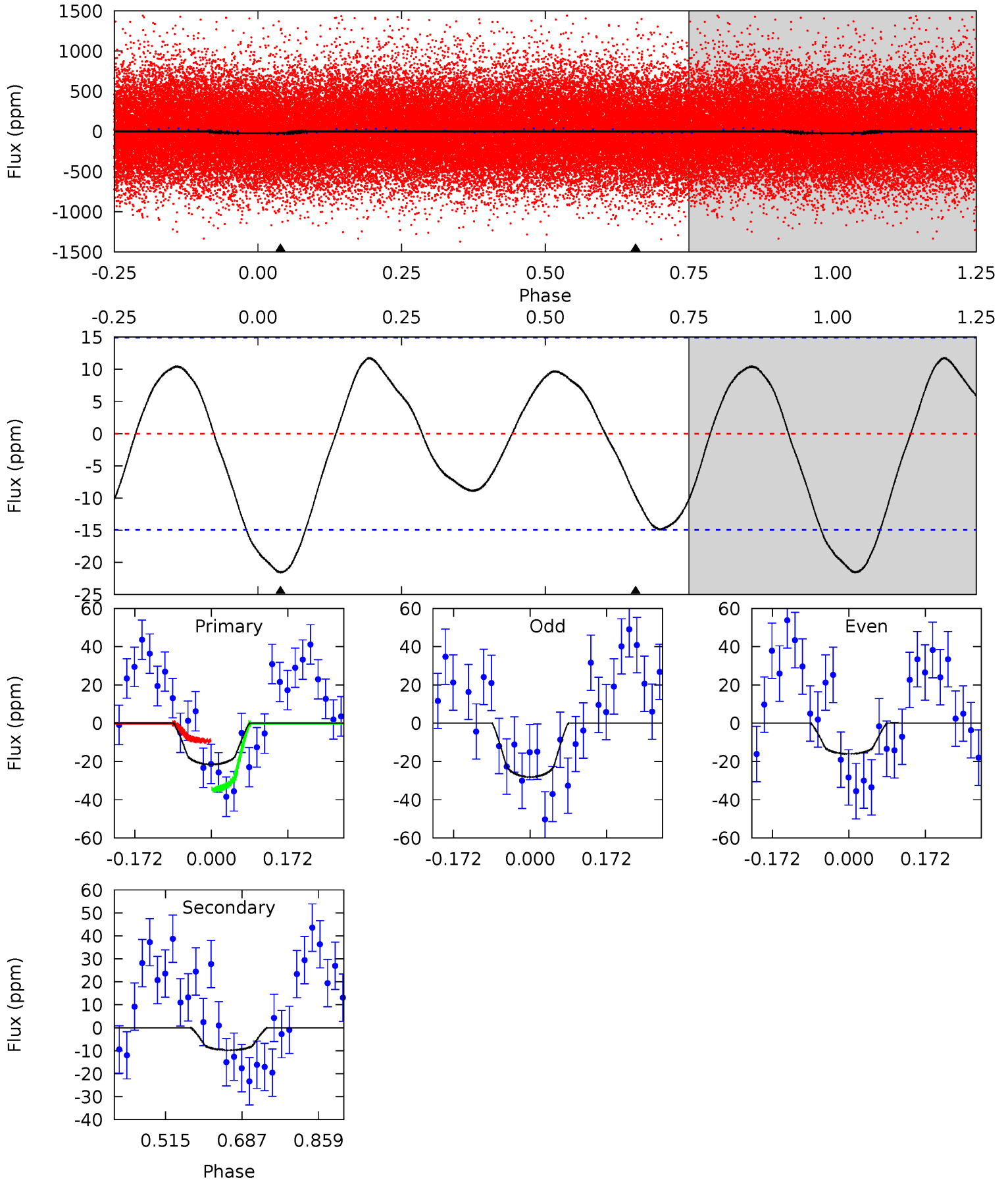
TCE 005213053-01 P= 0.635605 Days $T_0=131.599010$ (BKJD)



DV Model-Shift Uniqueness Test

005213053-01, P = 0.635583 Days, E = 130.964415 Days

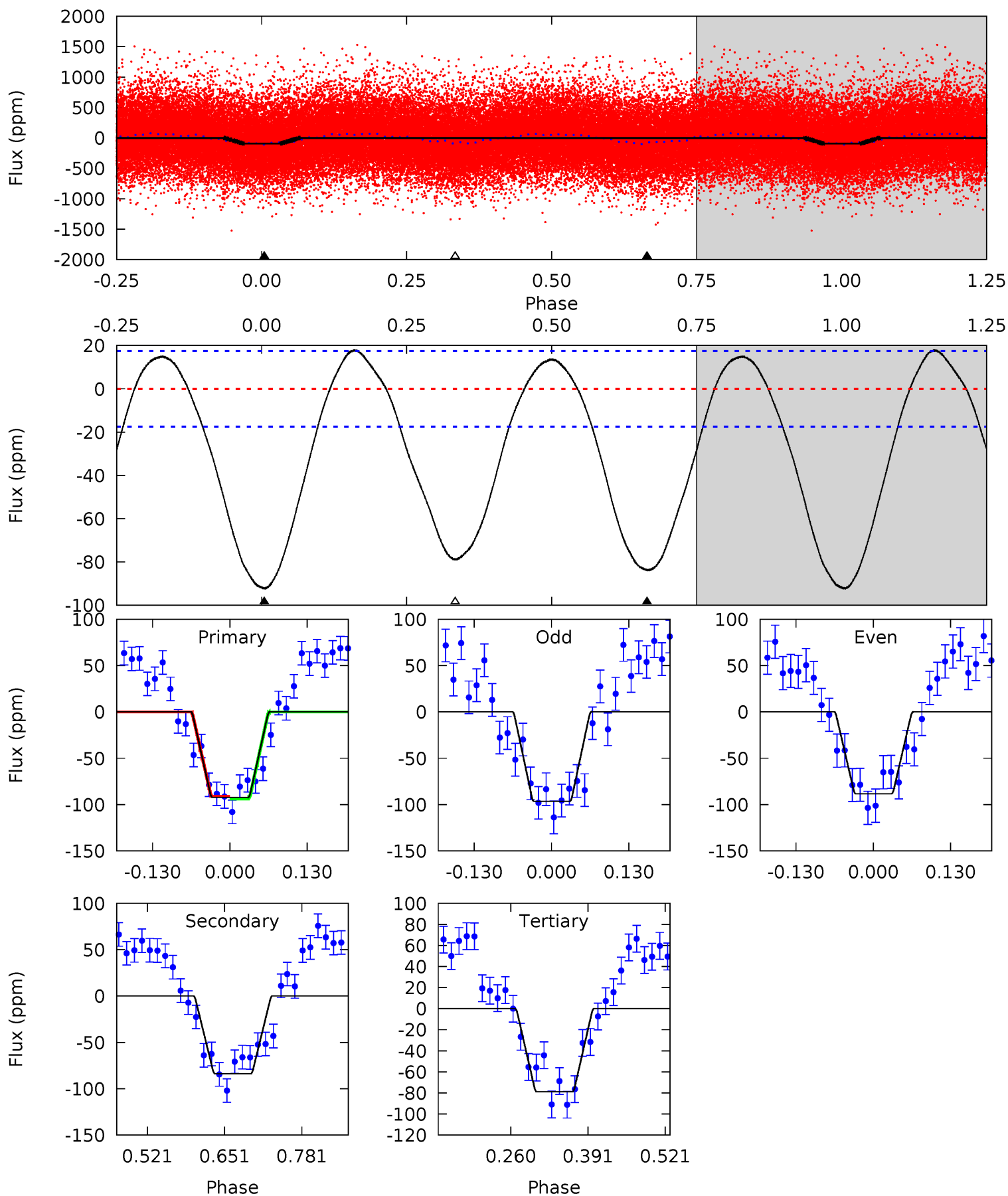
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.41	2.90	0	0	4.45	1.37	1.99	6.41	6.41	2.90	2.90	1.80	0.78	0.35	3.83



Alt Model-Shift Uniqueness Test

005213053-01, P = 0.635605 Days, E = 130.963405 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.8	21.6	20.3	0	4.51	1.51	8.57	3.45	23.8	1.27	21.6	1.06	0.99	0.16	0.38



Stellar Parameters For KIC 005213053

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5655^{+169}_{-169}	$4.561^{+0.033}_{-0.176}$	$-0.140^{+0.300}_{-0.300}$	$0.833^{+0.220}_{-0.073}$	$0.926^{+0.094}_{-0.104}$	$2.253^{+0.398}_{-1.080}$
	+3%/-3%	+1%/-4%	+214%/-214%	+26%/-9%	+10%/-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 005213053-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-10 ± 3	$0.70^{+0.45}_{-0.41}$	2740^{+164}_{-114}	3916^{+1758}_{-842}	$2.200^{+10.121}_{-1.502}$
Alt.	-84 ± 4	$0.98^{+0.47}_{-0.49}$	2758^{+164}_{-132}	5370^{+2190}_{-867}	$9.310^{+27.581}_{-5.065}$

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 $A_{obs} \gg 1.0$

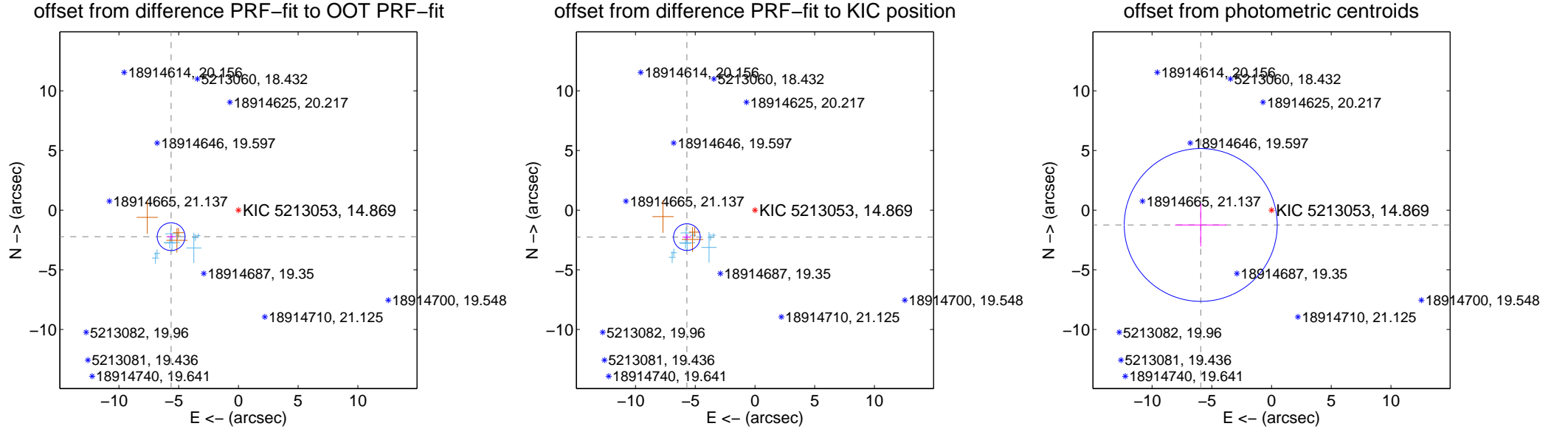
DV Centroid Data

Supplemental centroid analysis for 005213053-01. Kepler magnitude: 14.87. Transit SNR 7.68

There are 9 quarters with good PRF difference image offsets

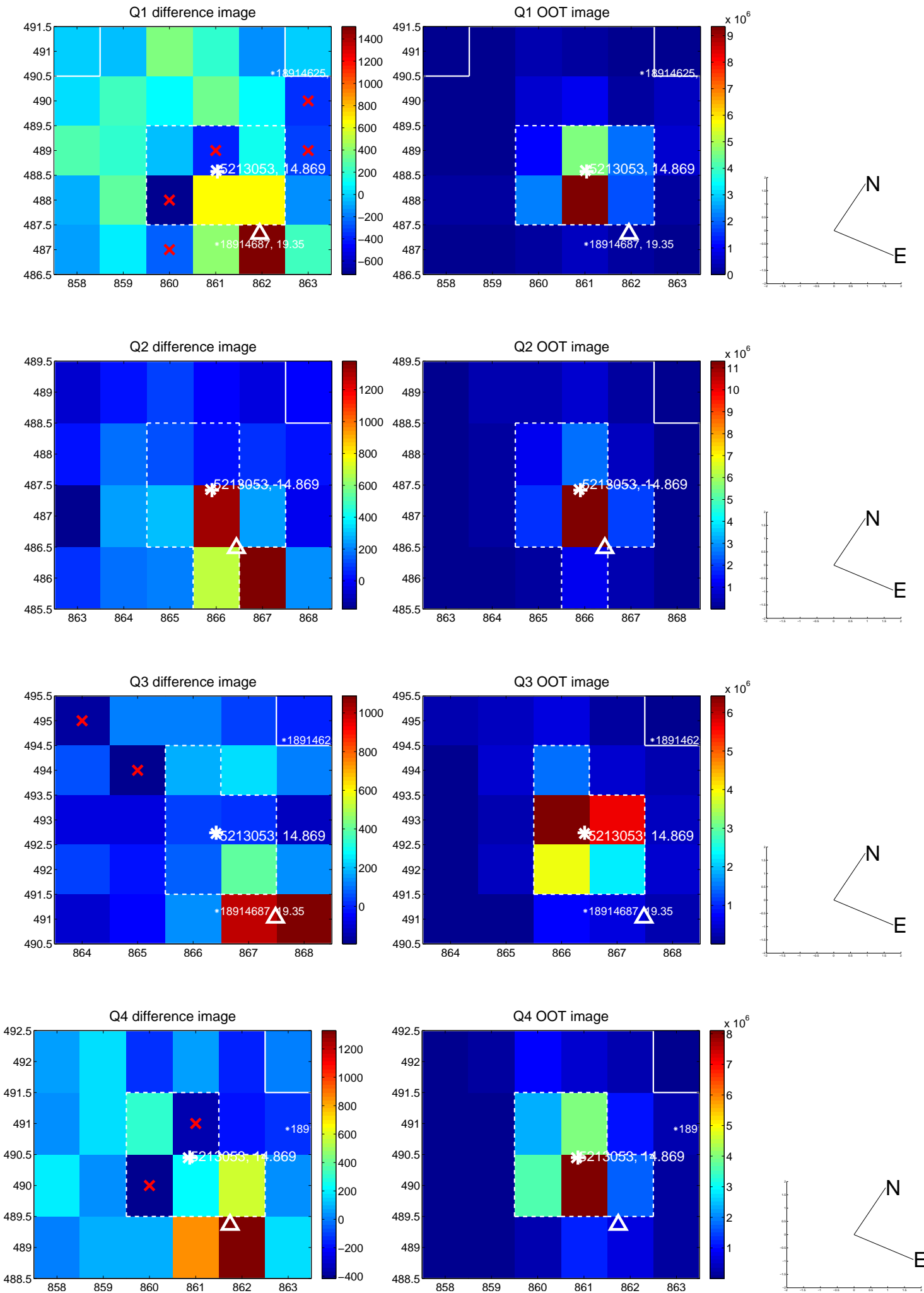
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.057 ± 0.388	15.61	5.635 ± 0.383	-2.224 ± 0.274
PRF-fit source offset from KIC position	6.133 ± 0.372	16.47	5.702 ± 0.383	-2.260 ± 0.252
photometric centroid source offset	6.06 ± 2.13	2.84	5.93 ± 2.15	-1.24 ± 1.80

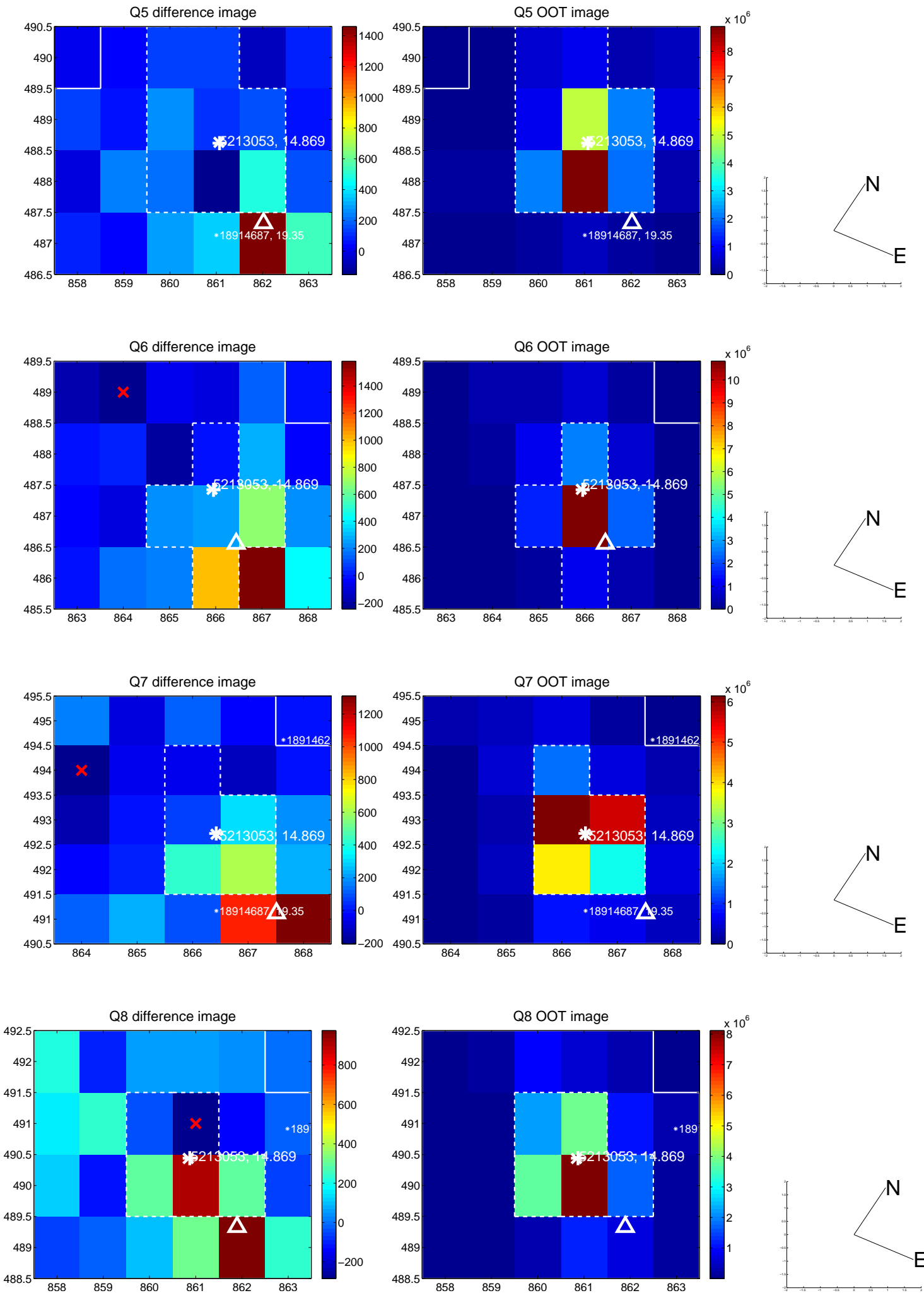


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

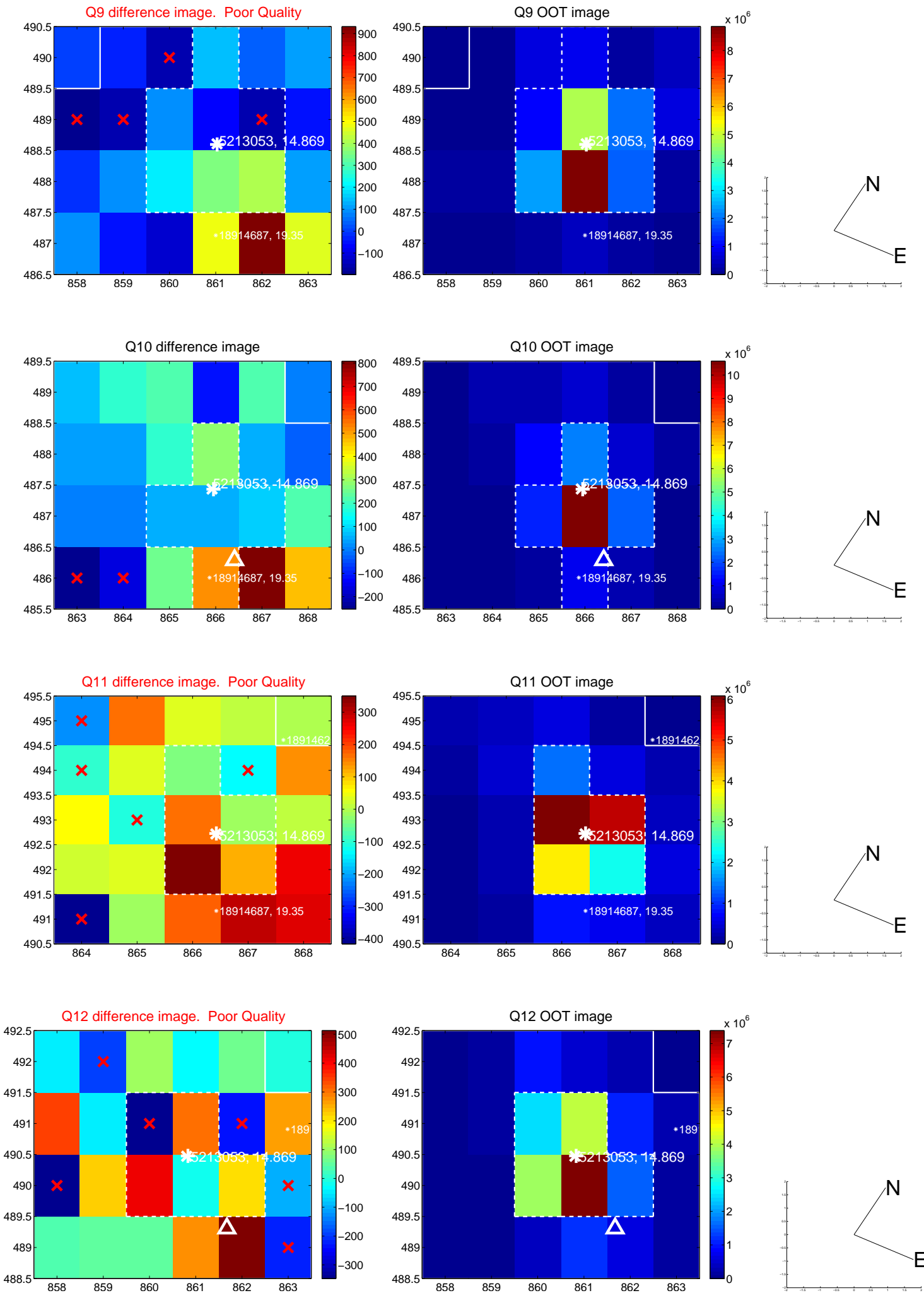
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



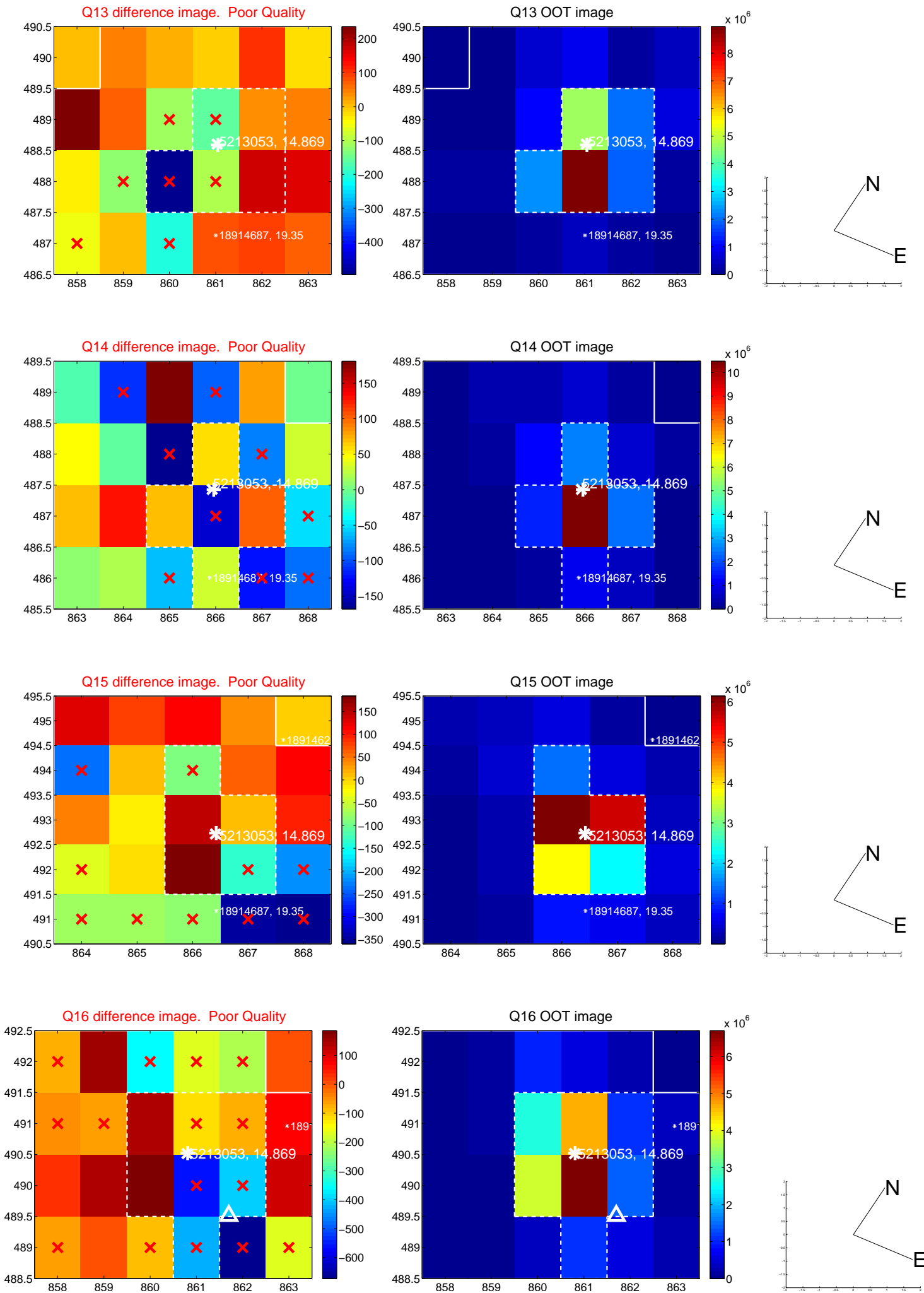
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



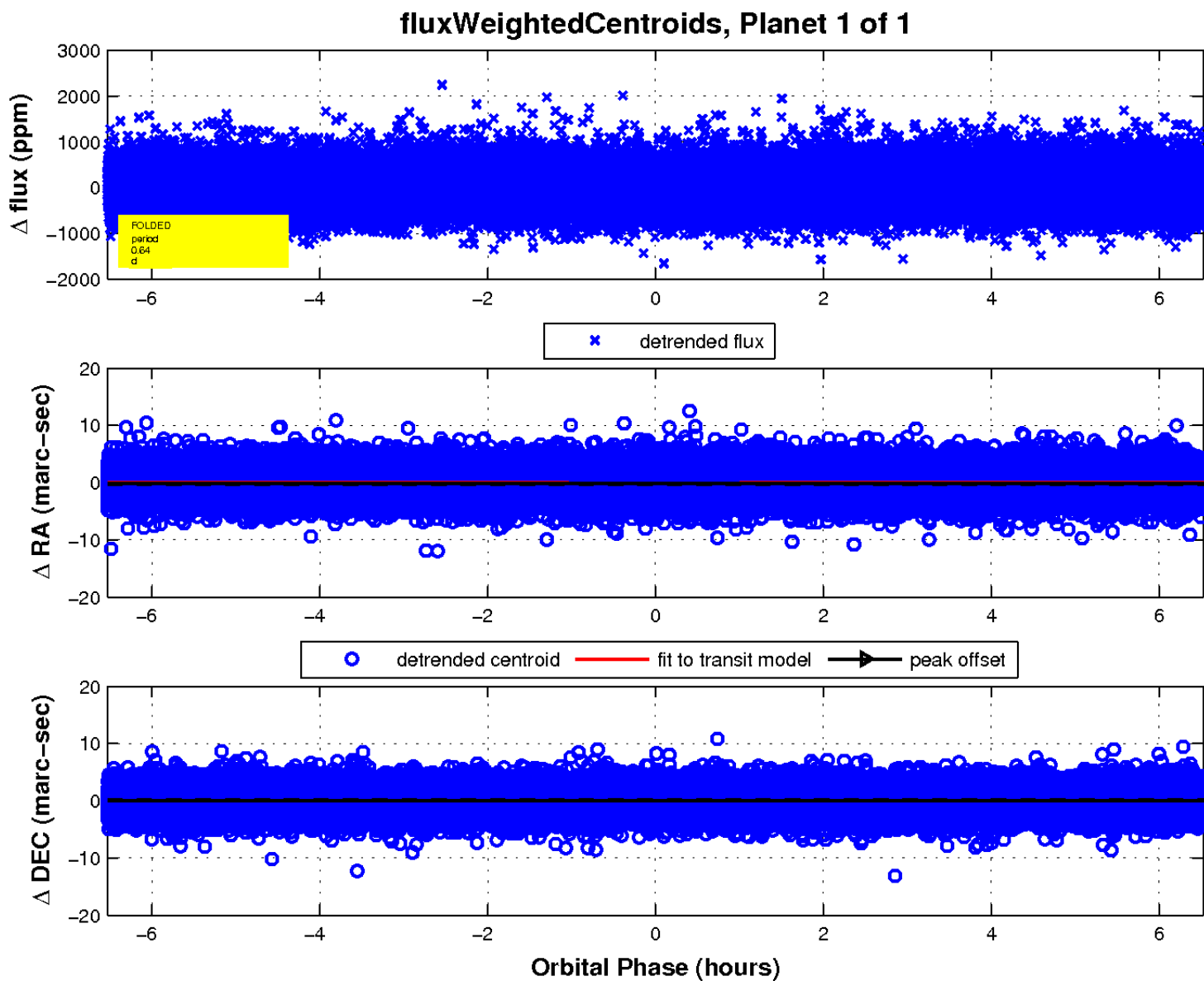
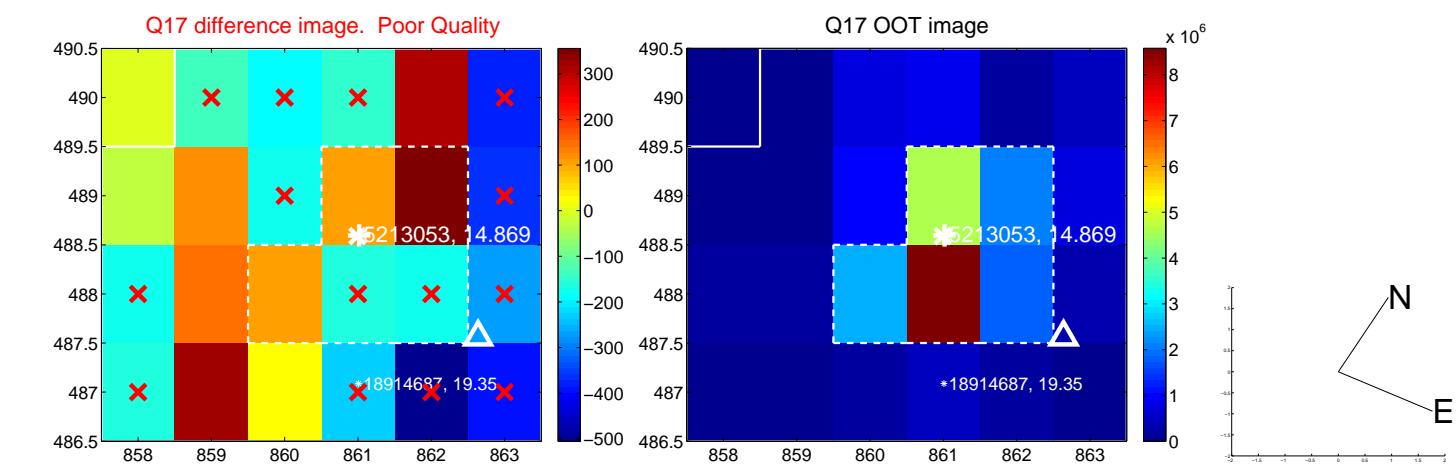
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

