

KIC 004857845

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})
004857845-01	OBS	No	1.426222	131.766759	79.2	5.166	7.7	9.7	0.71	5209	0.89	678.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004857845-01	OBS	FP	0.00	1	0	0	0	LPP_DV—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.

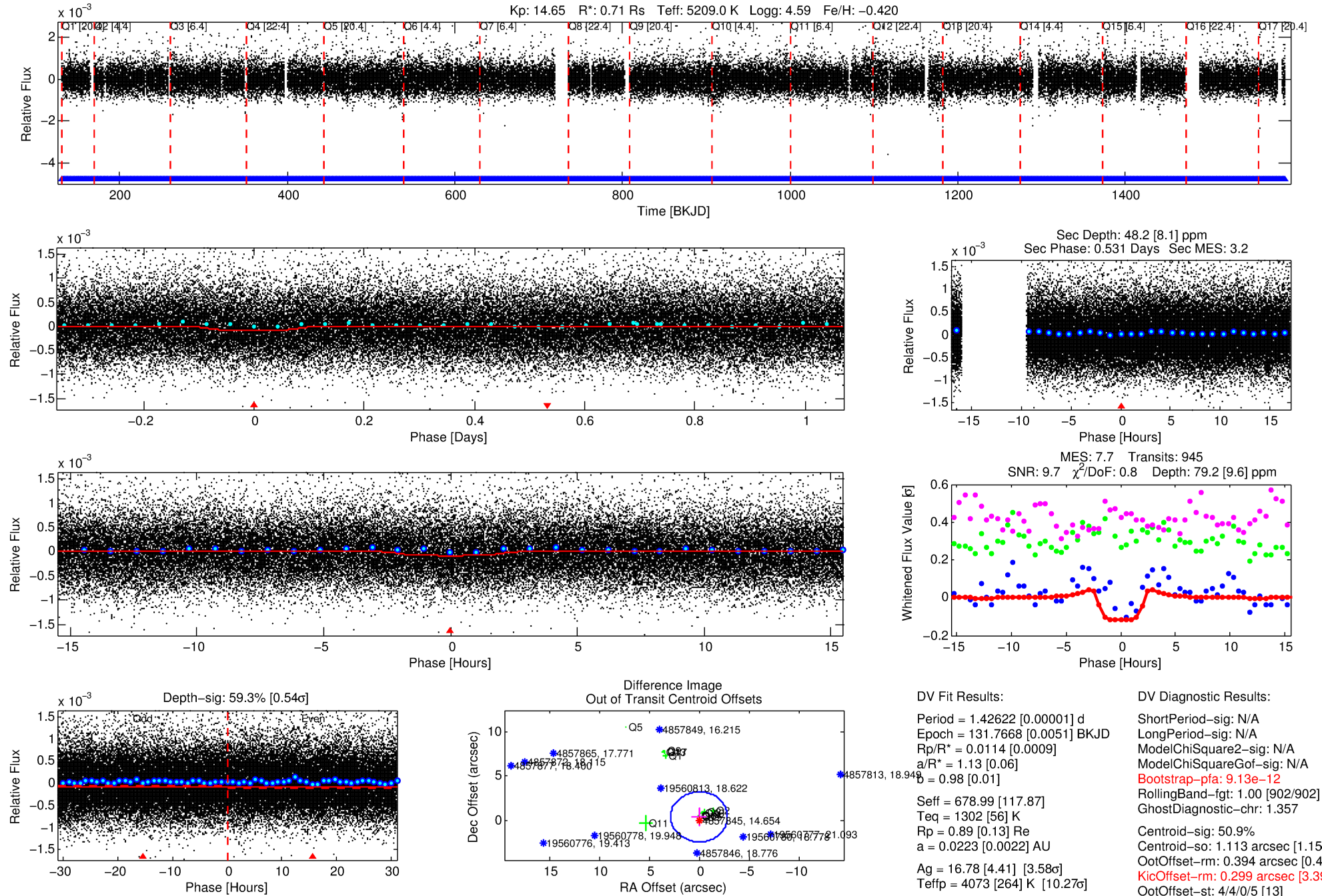
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004857845-01

No Significant Match Found

DV One-Page Summary

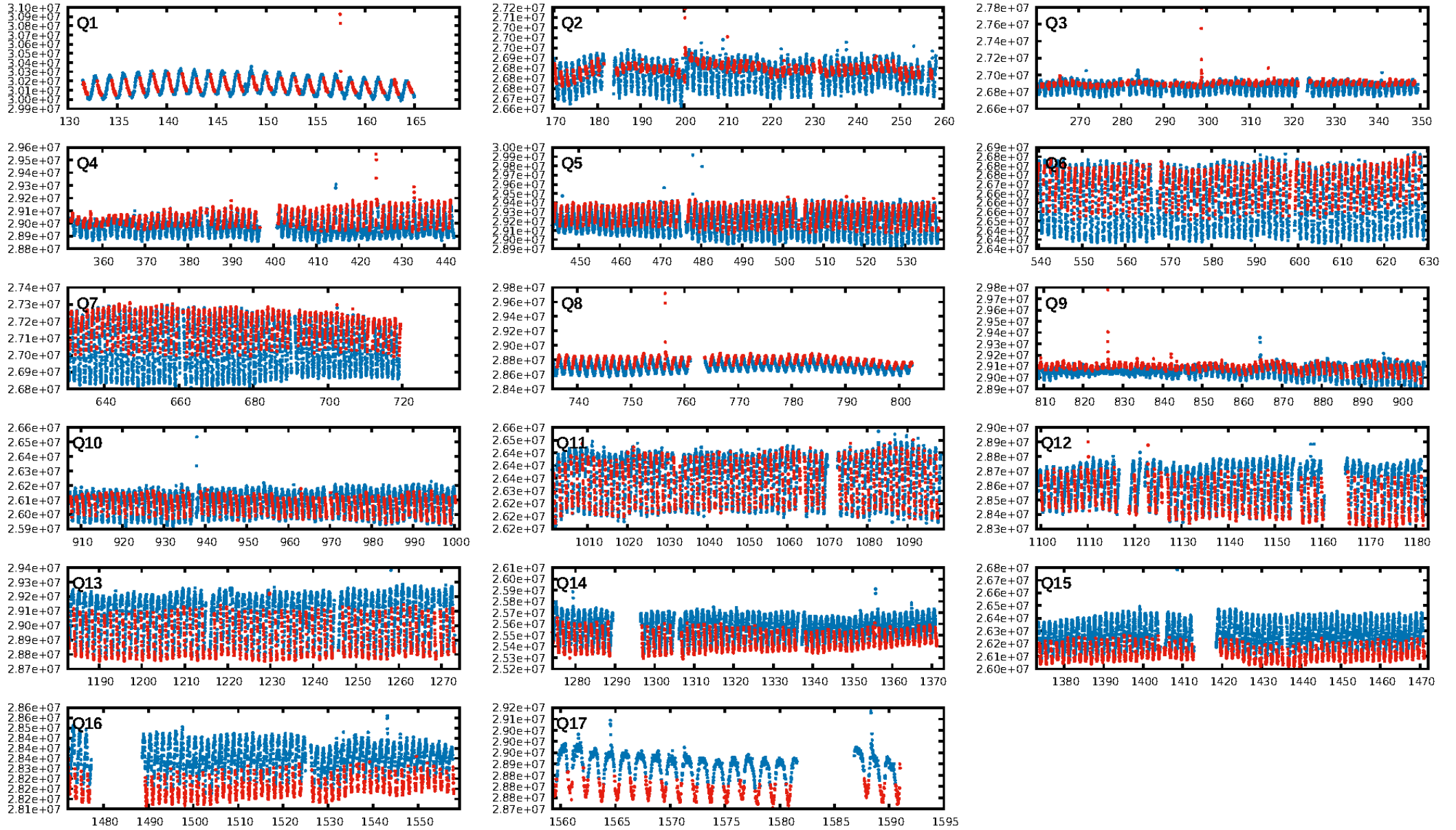
KIC: 4857845 Candidate: 1 of 1 Period: 1.426 d



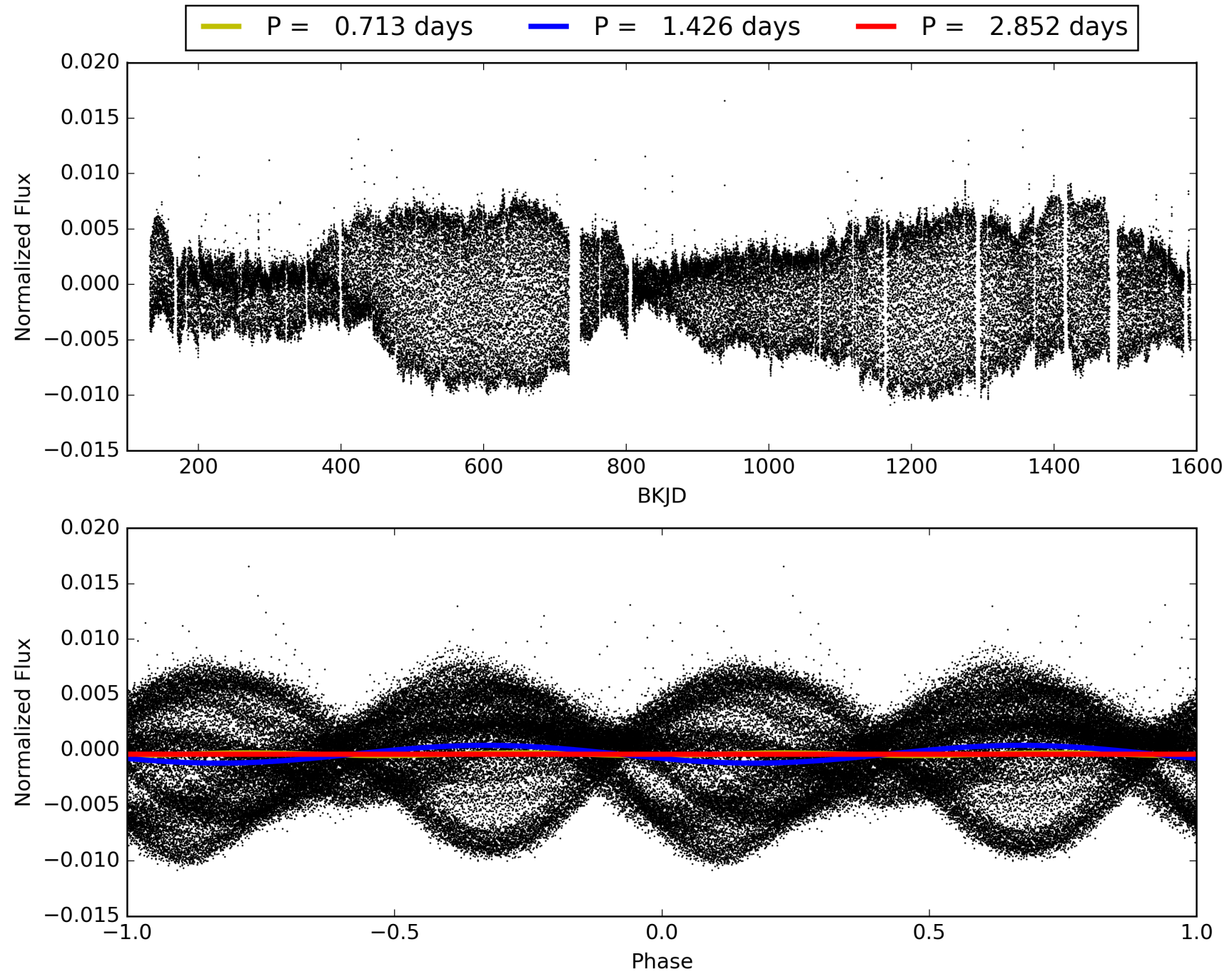
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 17:49:54 Z

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

TCE 004857845-01, PDC Light Curves

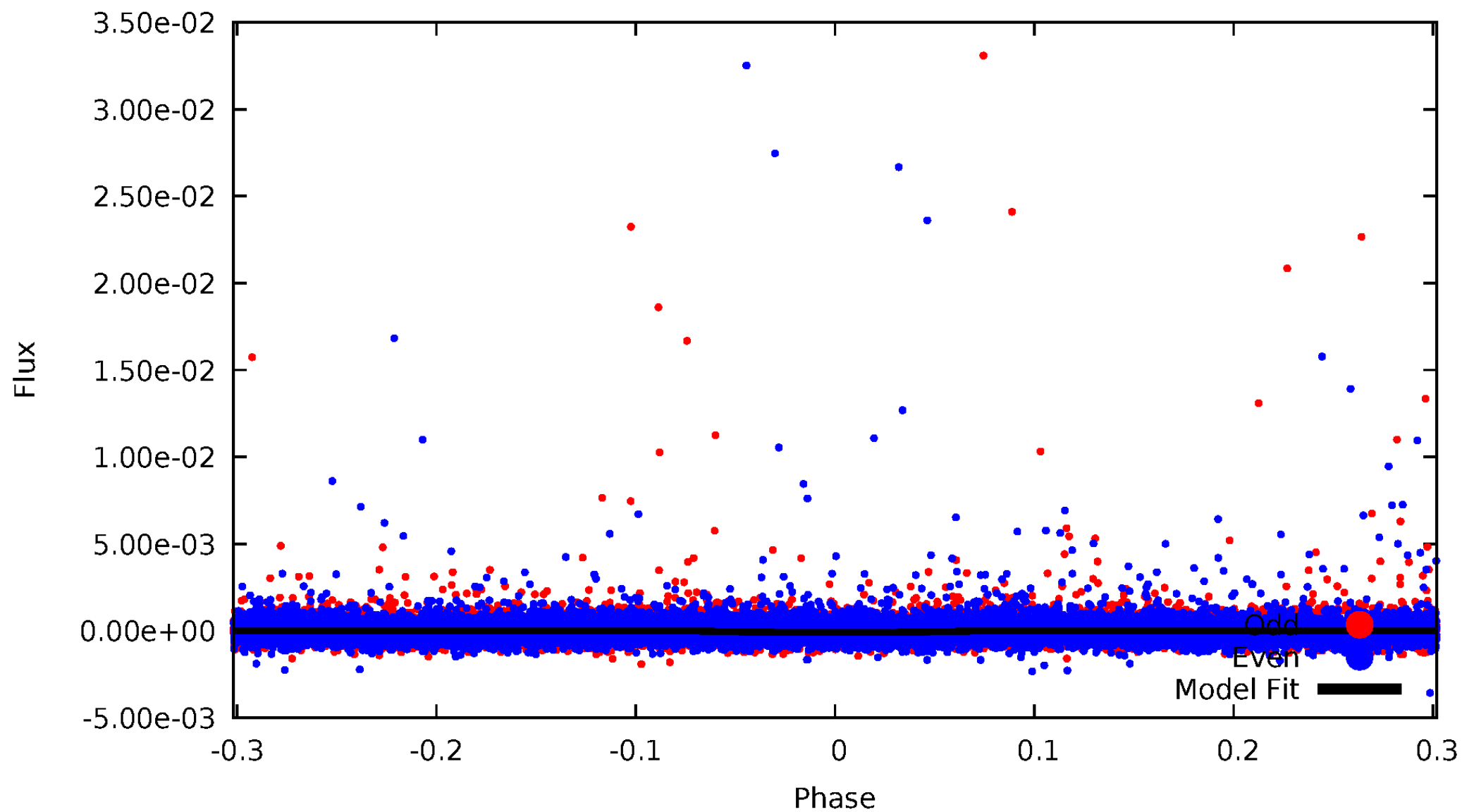


TCE 004857845-01



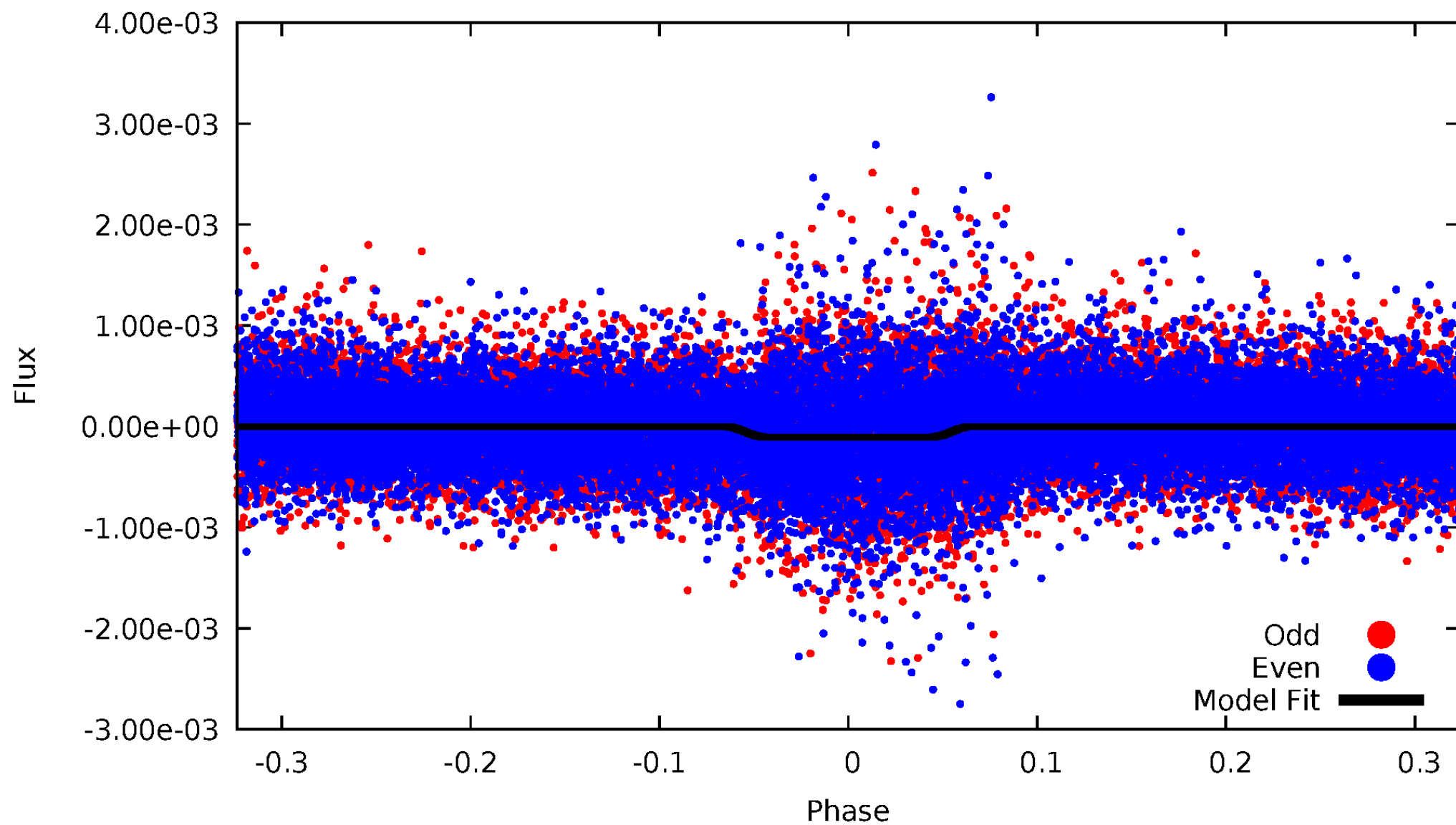
DV Odd/Even

TCE 004857845-01



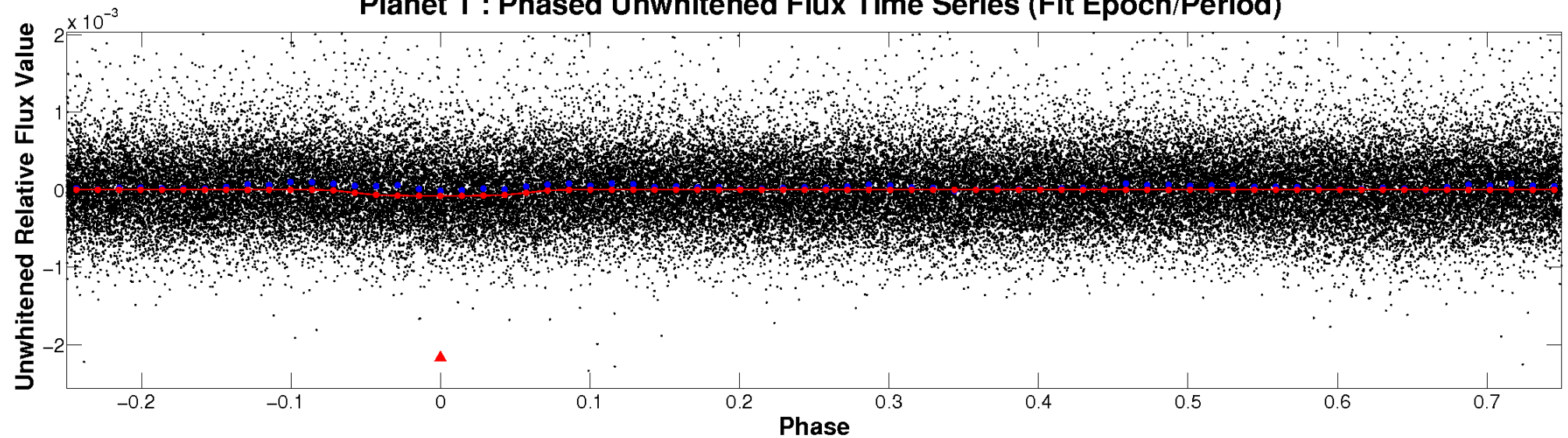
ALT Odd/Even

TCE 004857845-01

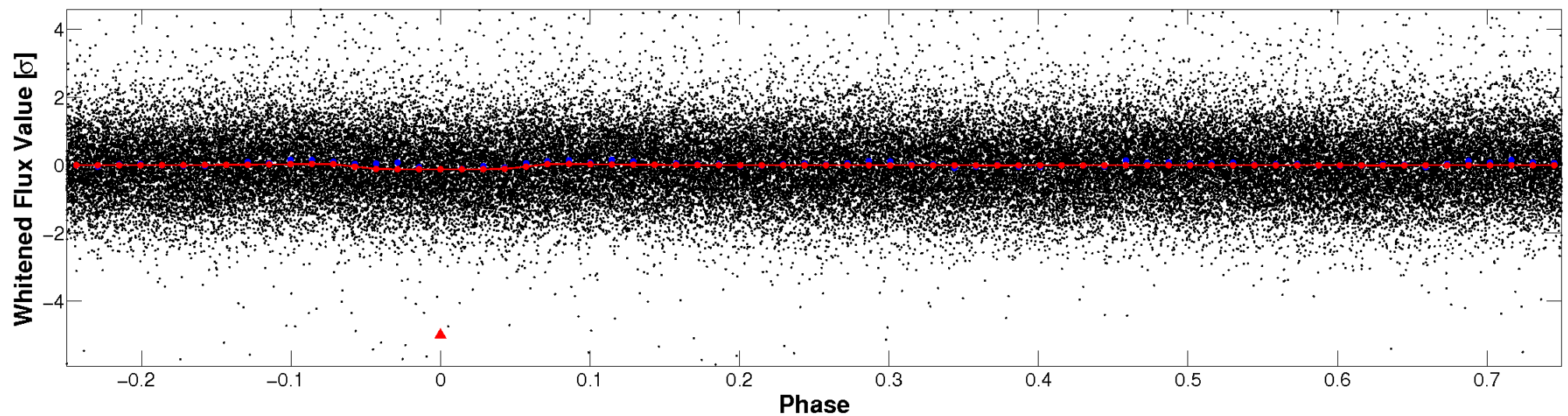


Non-Whitened Vs. Whitened Light Curve

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

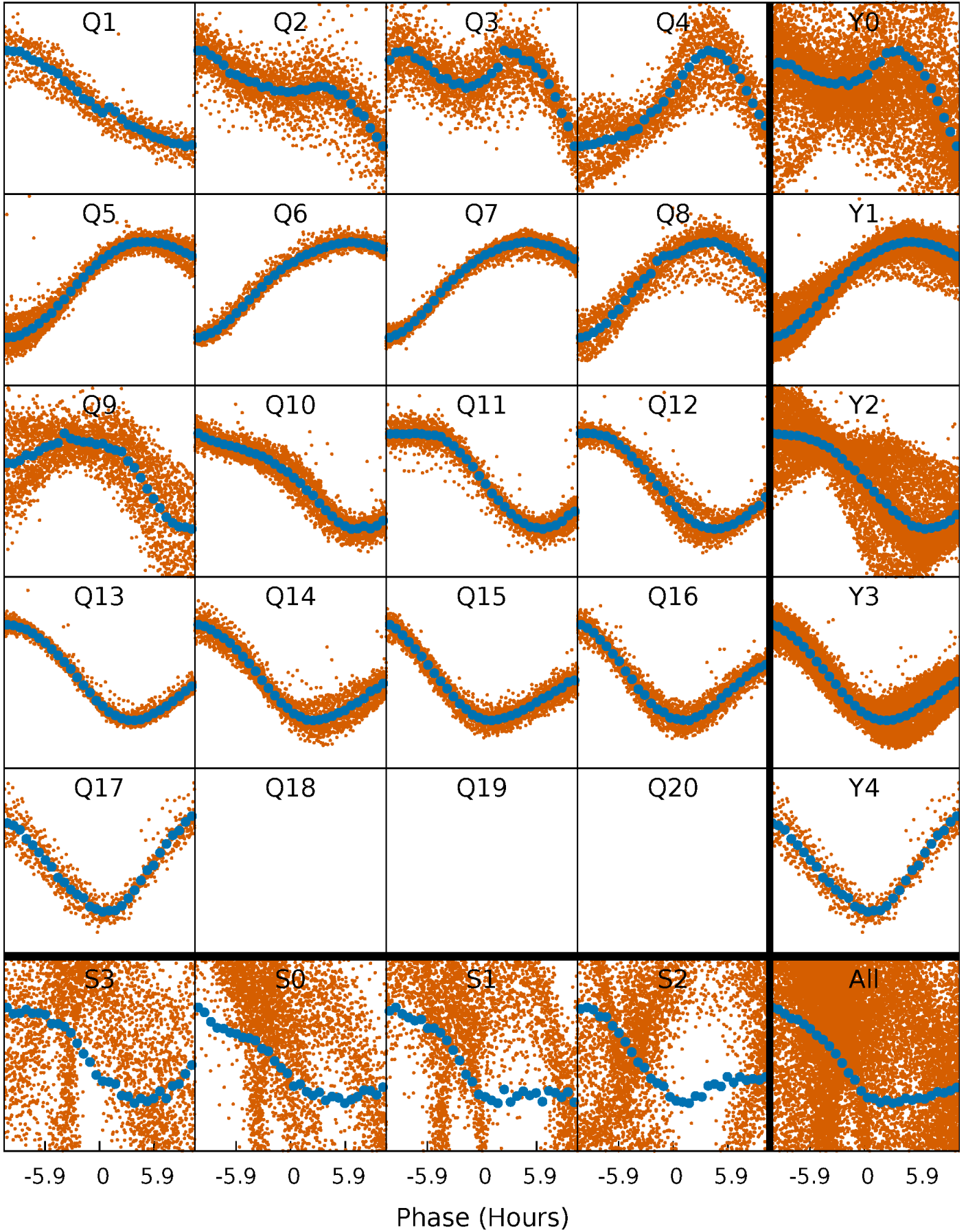


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



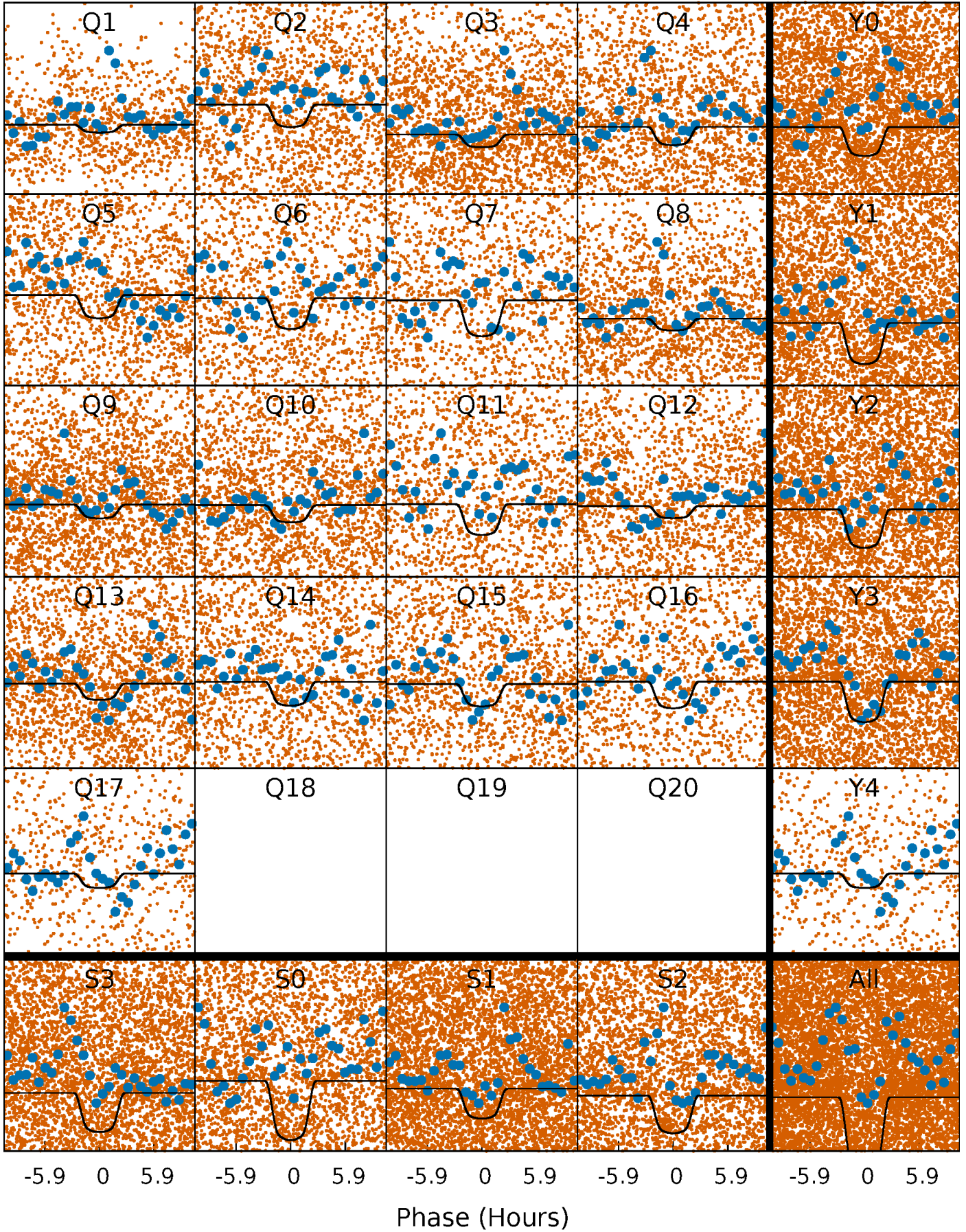
PDC Quarter-Phased Transit Curves

TCE 004857845-01 P= 1.426222 Days $T_0=131.766759$ (BKJD)



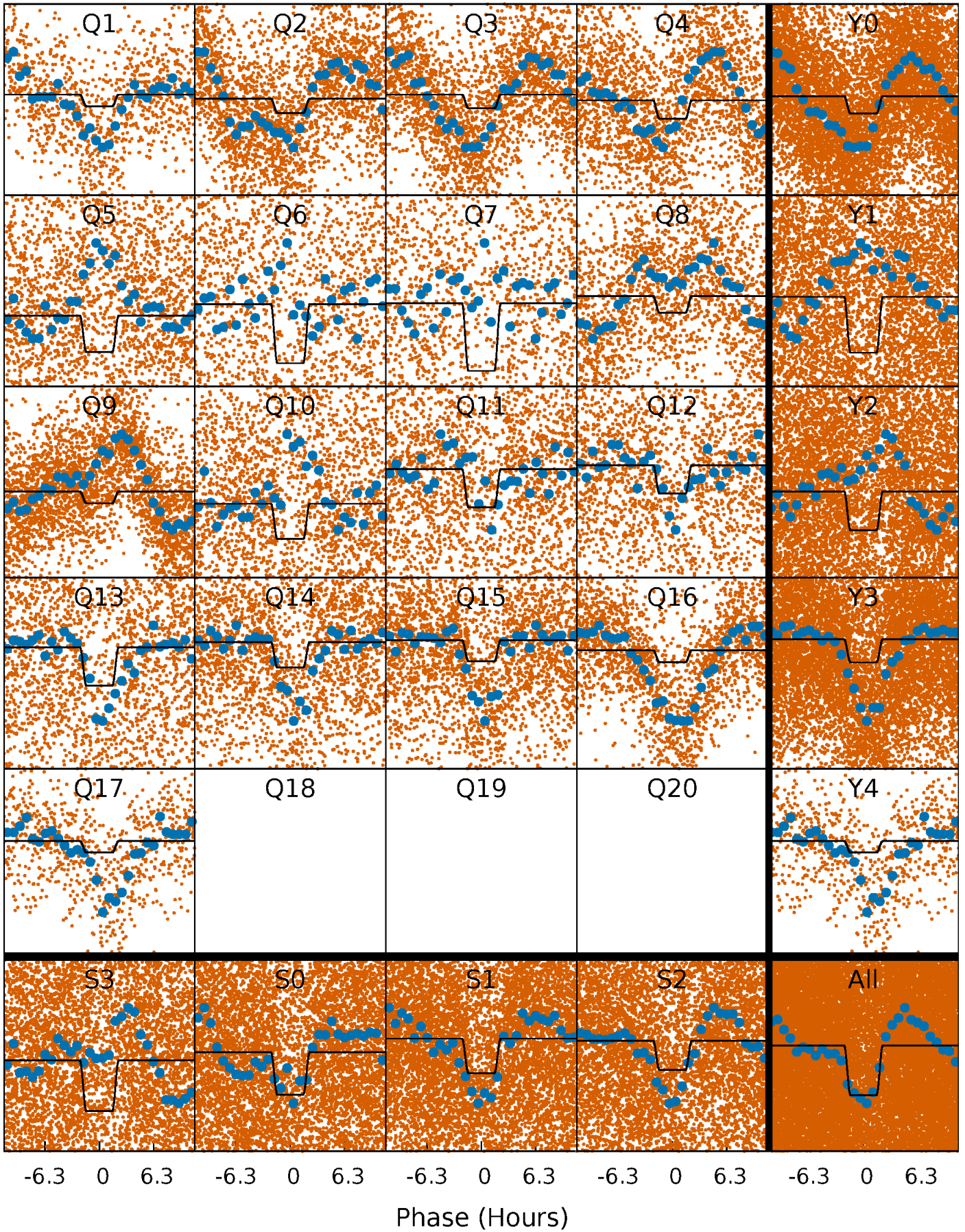
DV Quarter-Phased Transit Curves

TCE 004857845-01 P= 1.426222 Days $T_0=131.766759$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

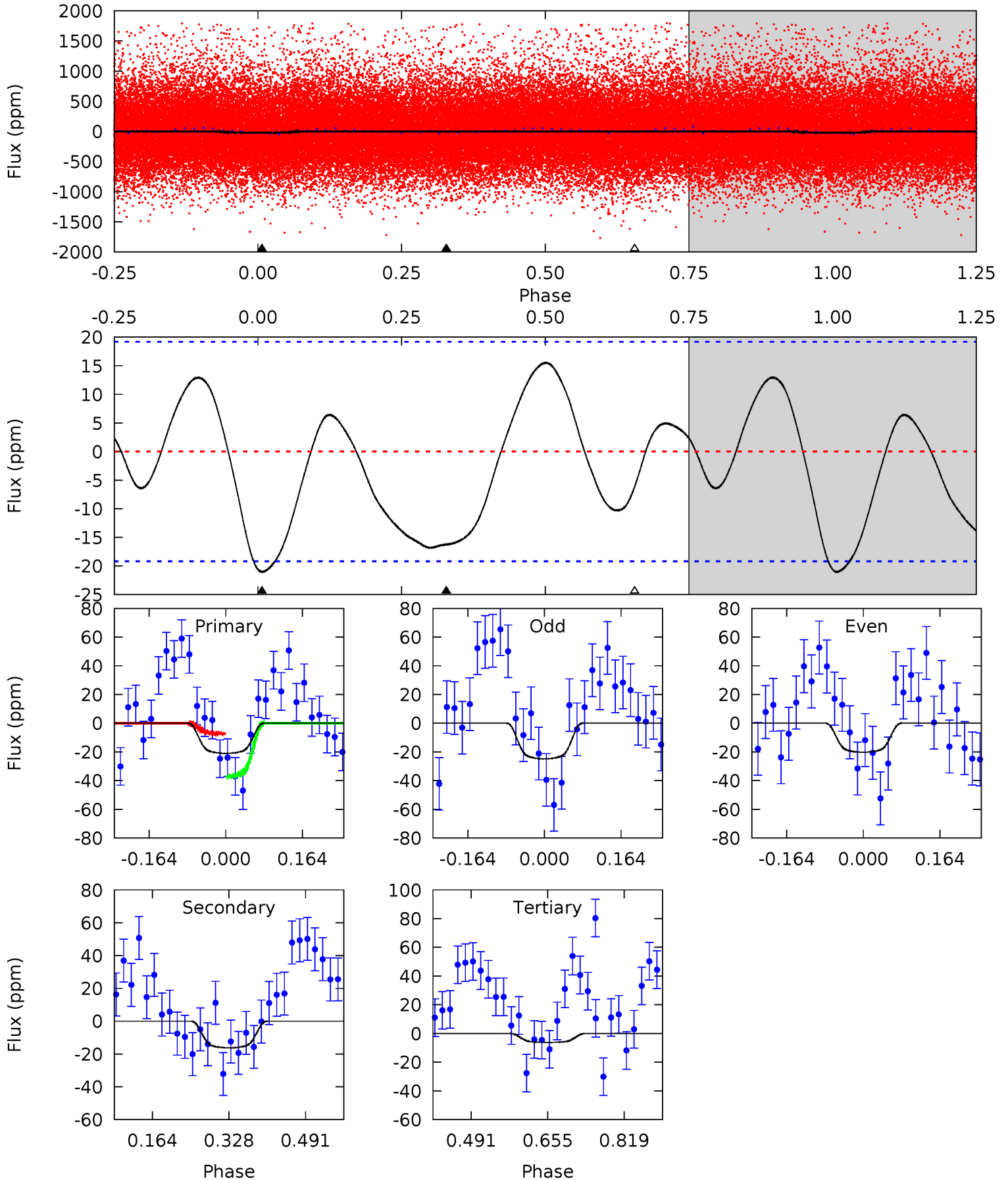
TCE 004857845-01 P= 1.426206 Days $T_0=131.771611$ (BKJD)



DV Model-Shift Uniqueness Test

004857845-01, P = 1.426222 Days, E = 130.340537 Days

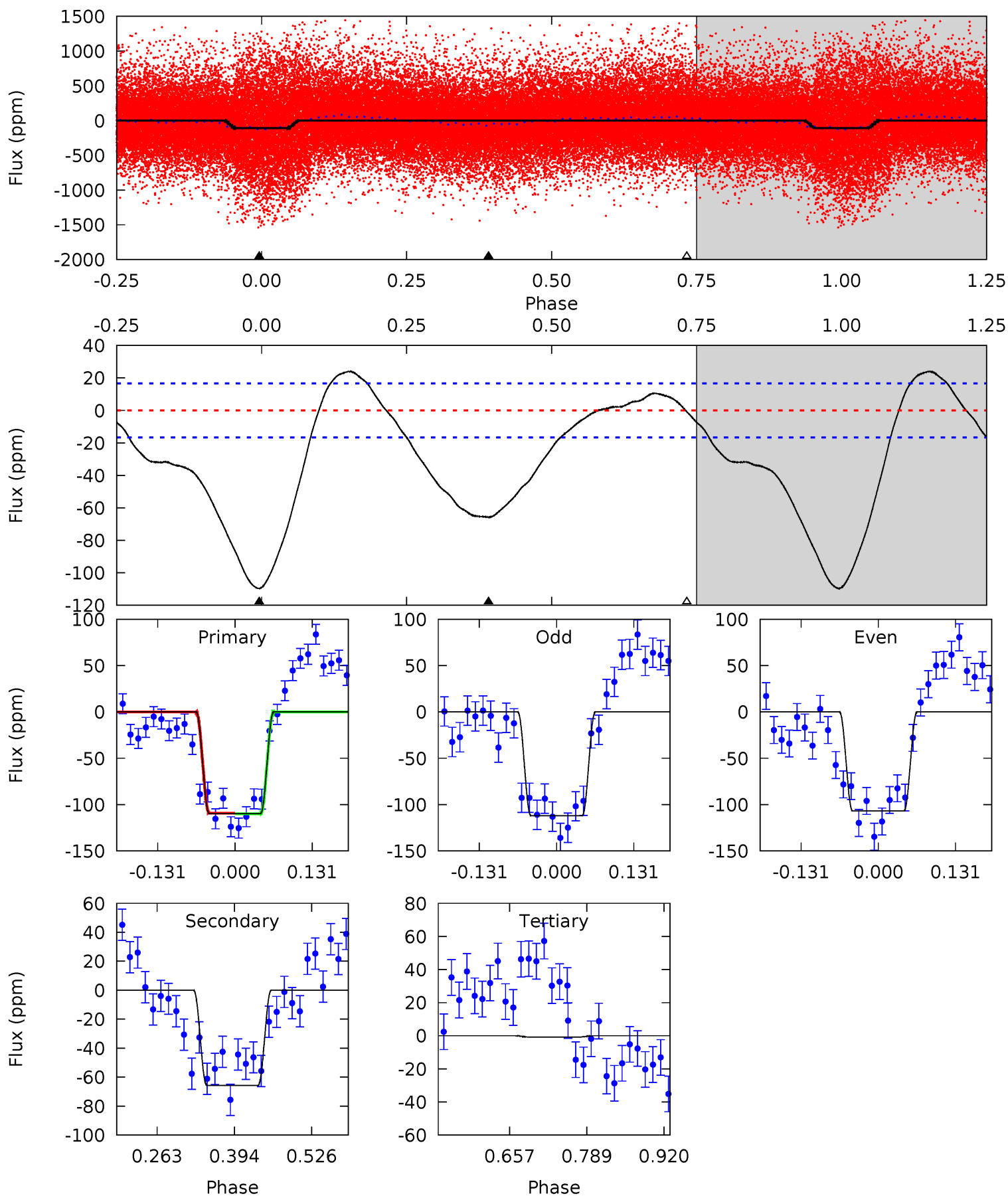
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.89	3.78	1.44	0	4.46	1.39	1.69	3.45	4.89	2.34	3.78	0.54	-0.67	0.42	3.53



Alt Model-Shift Uniqueness Test

004857845-01, P = 1.426206 Days, E = 130.345405 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.7	17.8	0.21	0	4.51	1.51	4.43	29.5	29.7	17.6	17.8	0.68	1.09	0.18	0.11



Stellar Parameters For KIC 004857845

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5209^{+155}_{-155}	$4.590^{+0.055}_{-0.061}$	$-0.420^{+0.350}_{-0.300}$	$0.715^{+0.091}_{-0.068}$	$0.724^{+0.086}_{-0.058}$	$2.795^{+0.674}_{-0.596}$
	+3%/-3%	+1%/-1%	+83%/-71%	+13%/-10%	+12%/-8%	+24%/-21%
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 004857845-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-16 ± 4	$0.88^{+0.09}_{-0.08}$	1819^{+72}_{-67}	3506^{+195}_{-219}	$5.542^{+2.184}_{-1.684}$
Alt.	-66 ± 4	$0.80^{+0.08}_{-0.08}$	1820^{+74}_{-69}	4720^{+234}_{-204}	28^{+7}_{-5}

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

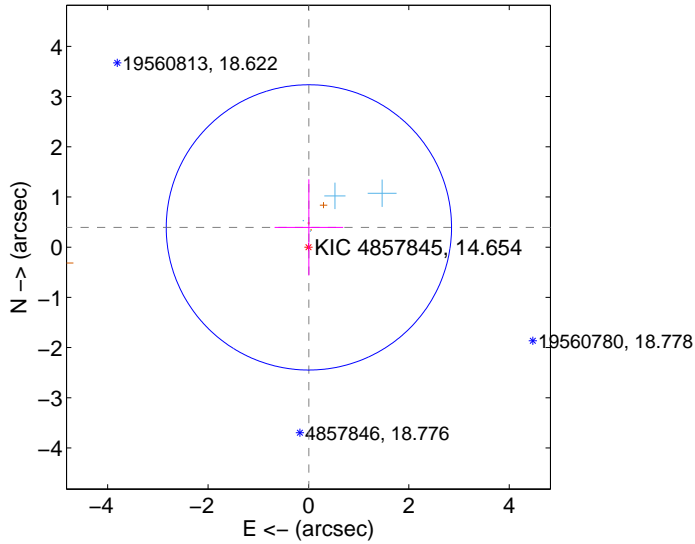
Supplemental centroid analysis for 004857845-01. Kepler magnitude: 14.65. Transit SNR 9.67

There are 9 quarters with good PRF difference image offsets

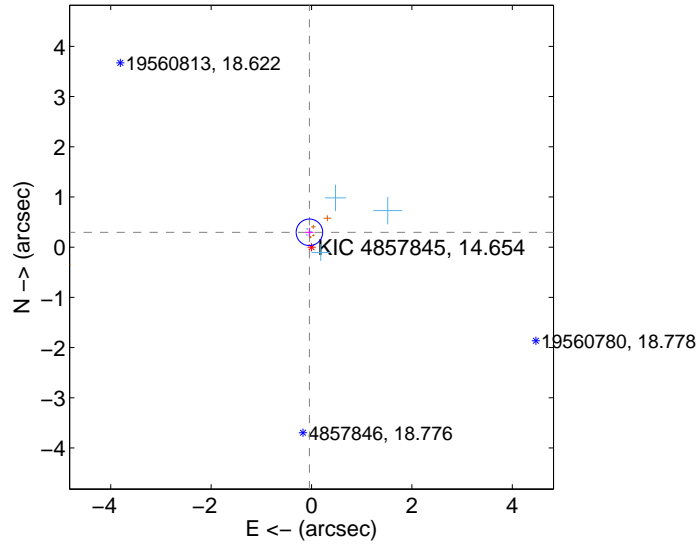
The OOT PRF centroid is offset from the target star catalog position by about 8.17 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.394 ± 0.947	0.42	-0.009 ± 0.684	0.394 ± 0.958
PRF-fit source offset from KIC position	0.299 ± 0.088	3.39	0.042 ± 0.080	0.296 ± 0.088
photometric centroid source offset	1.11 ± 0.97	1.15	0.53 ± 0.83	-0.98 ± 1.00

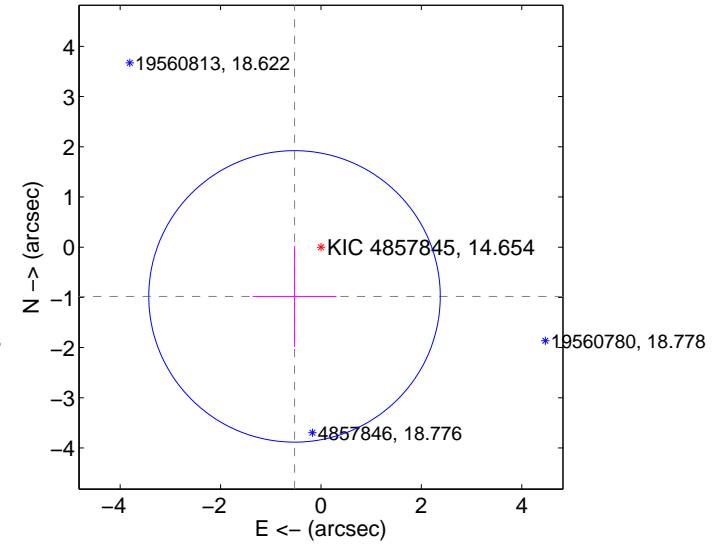
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

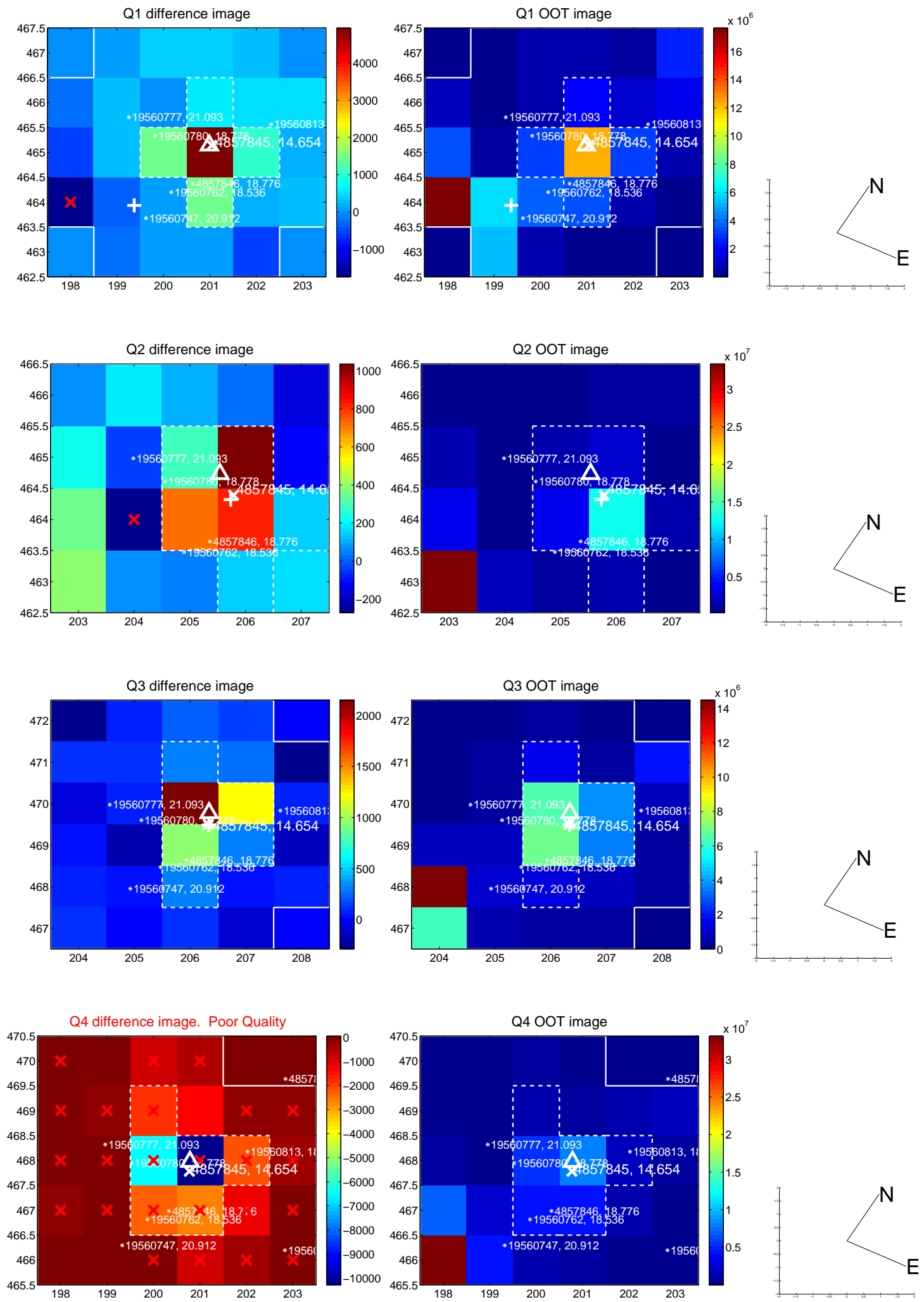


offset from photometric centroids

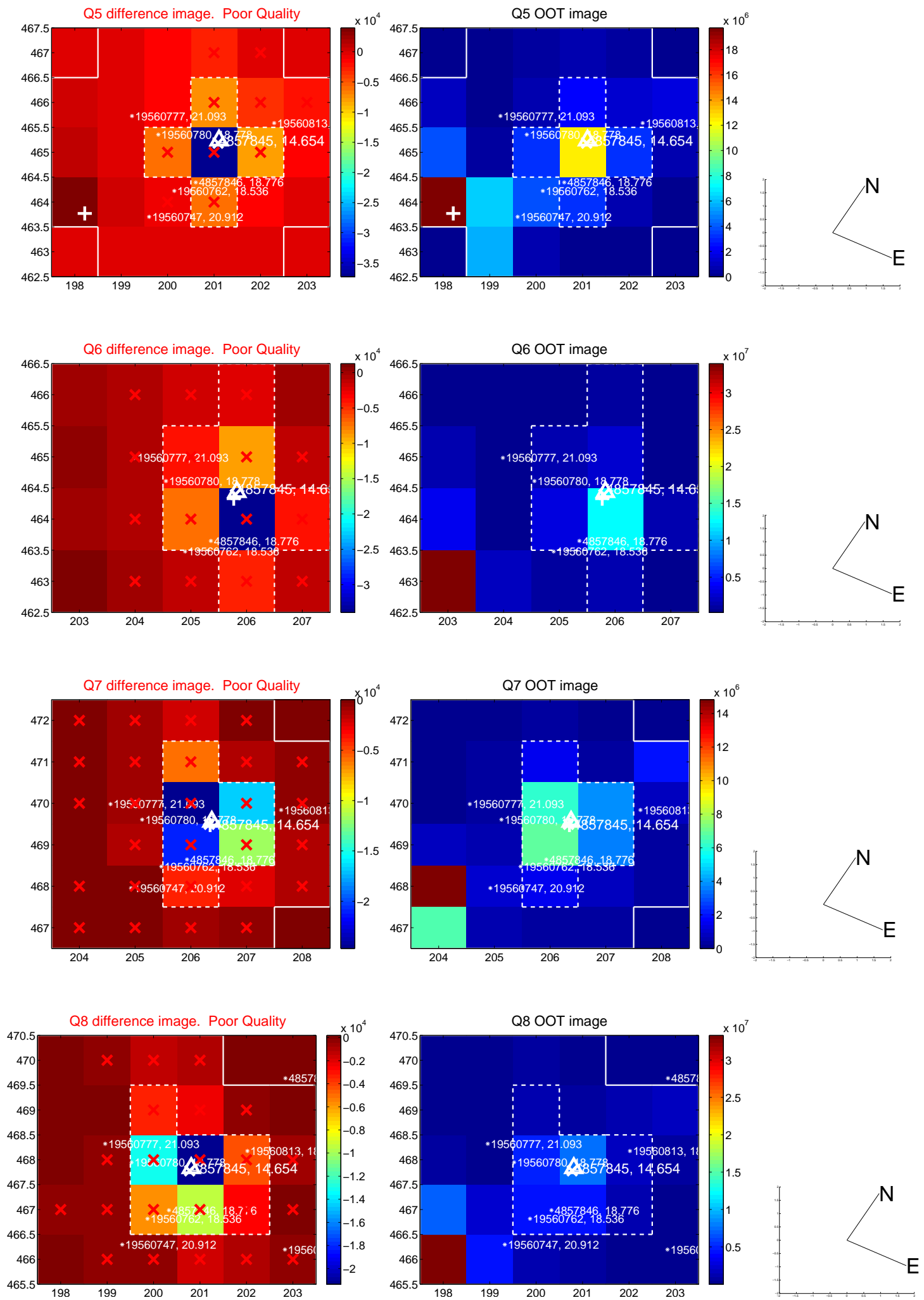


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

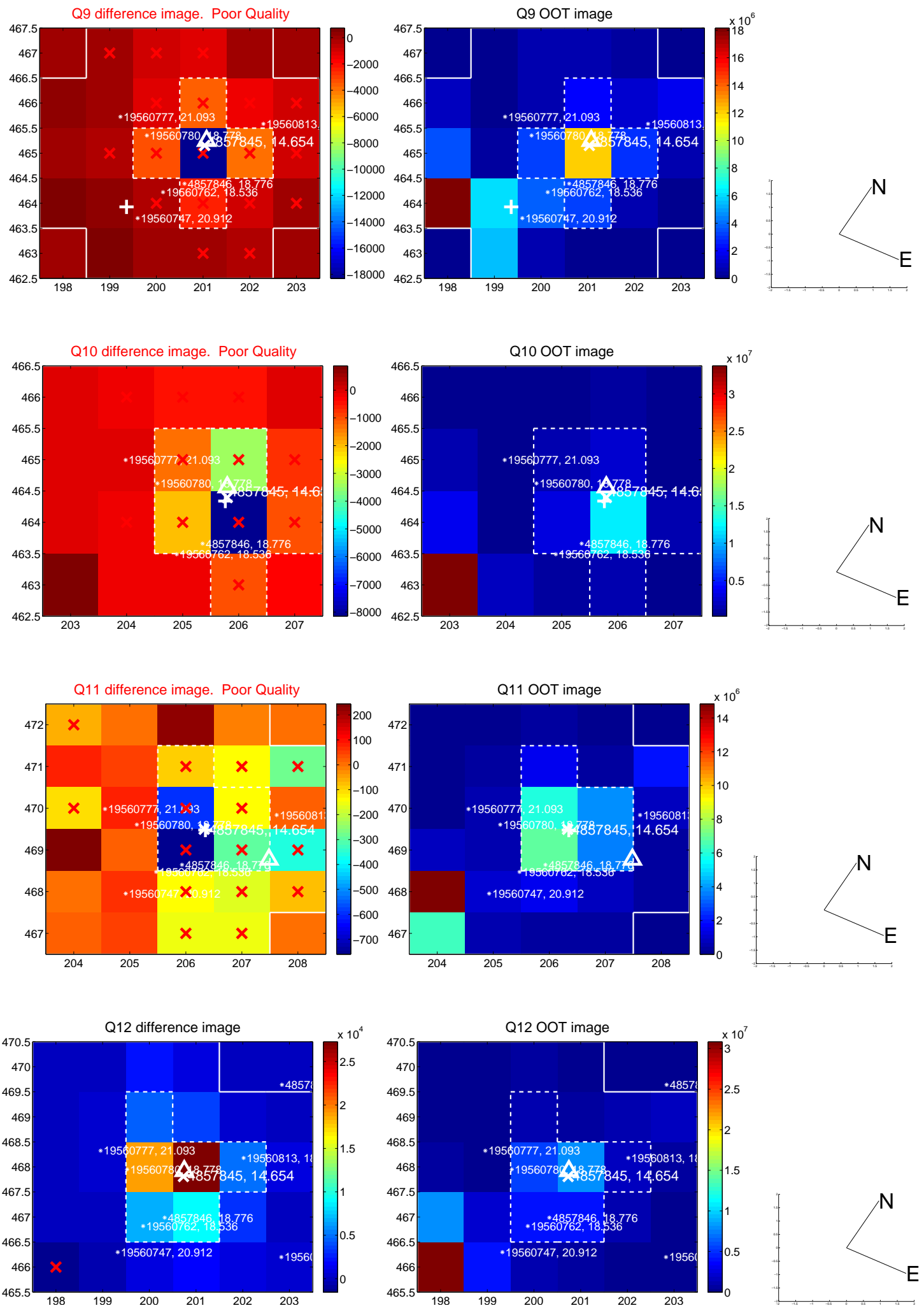
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



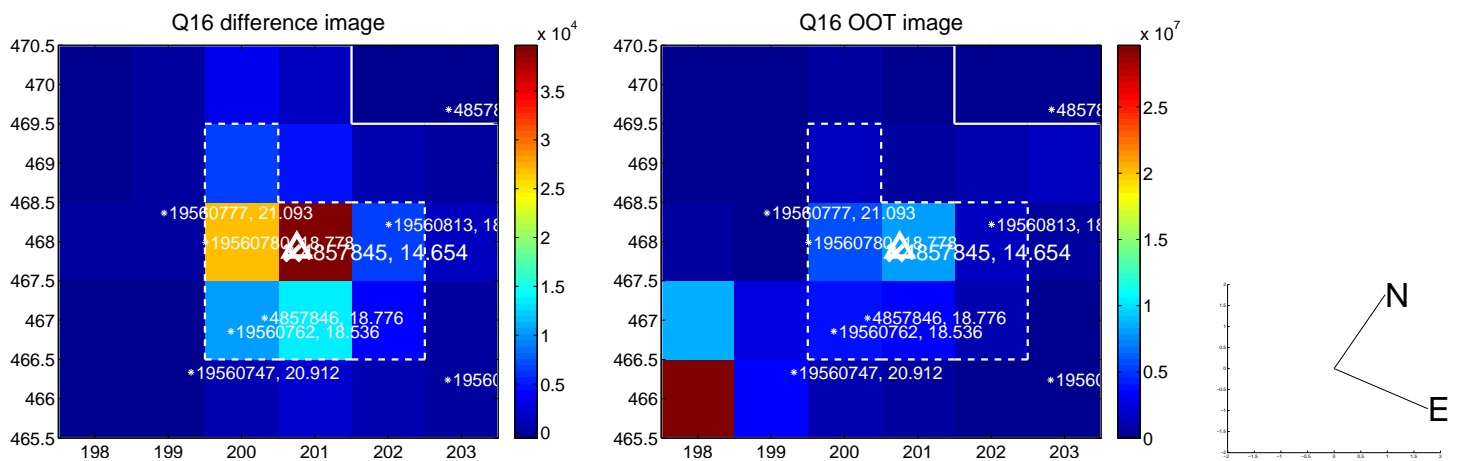
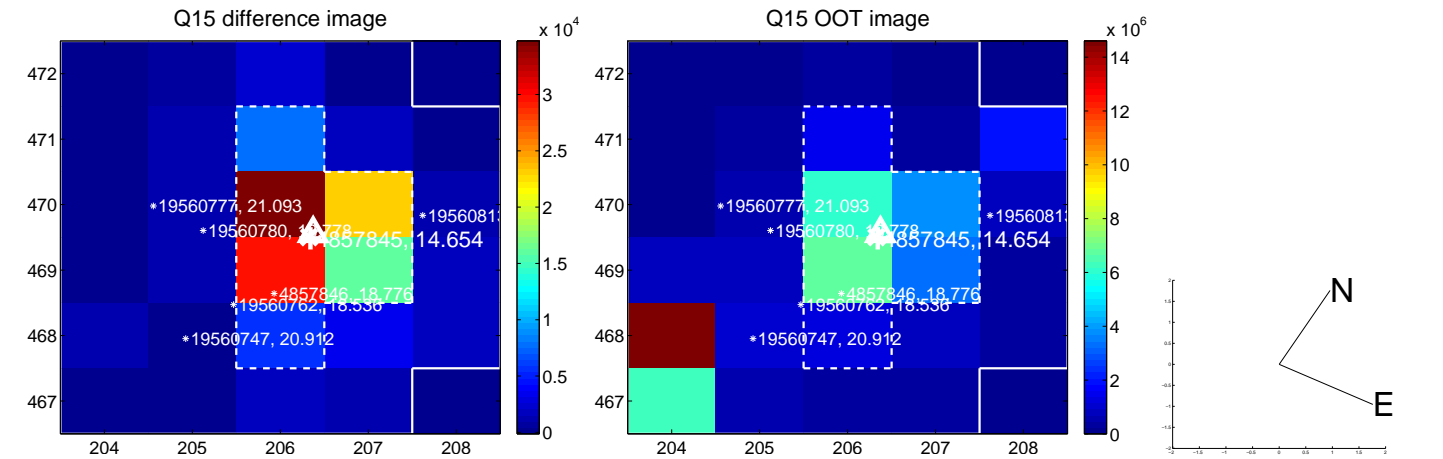
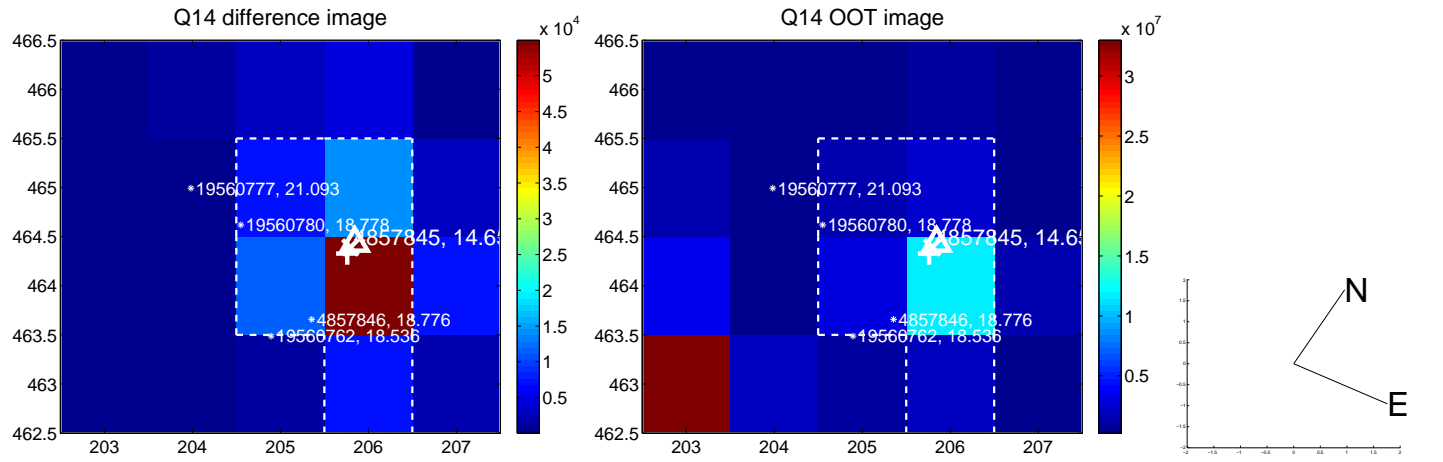
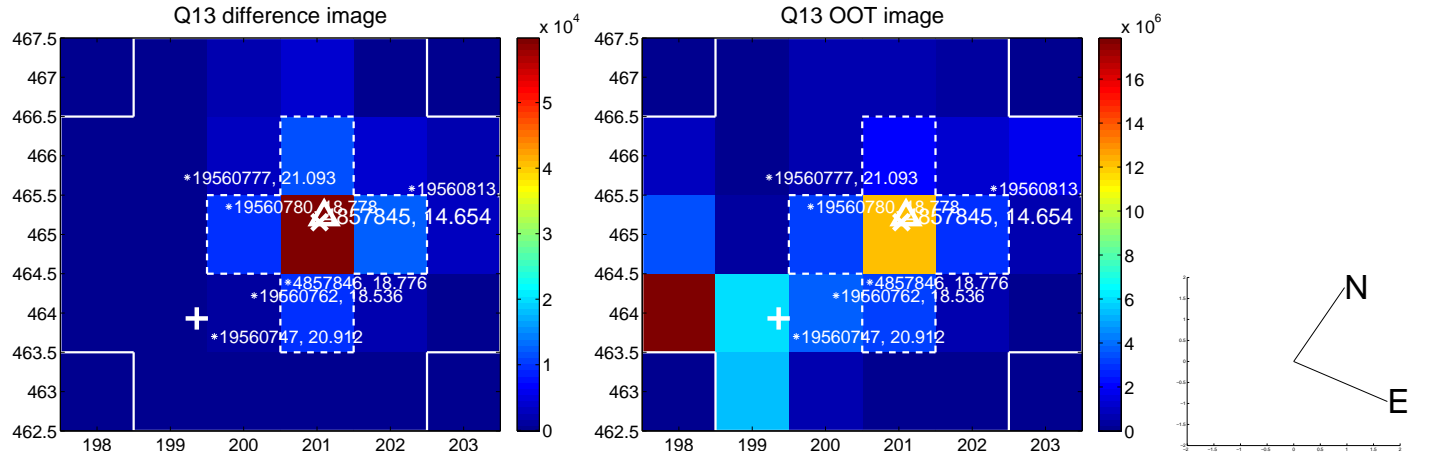
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



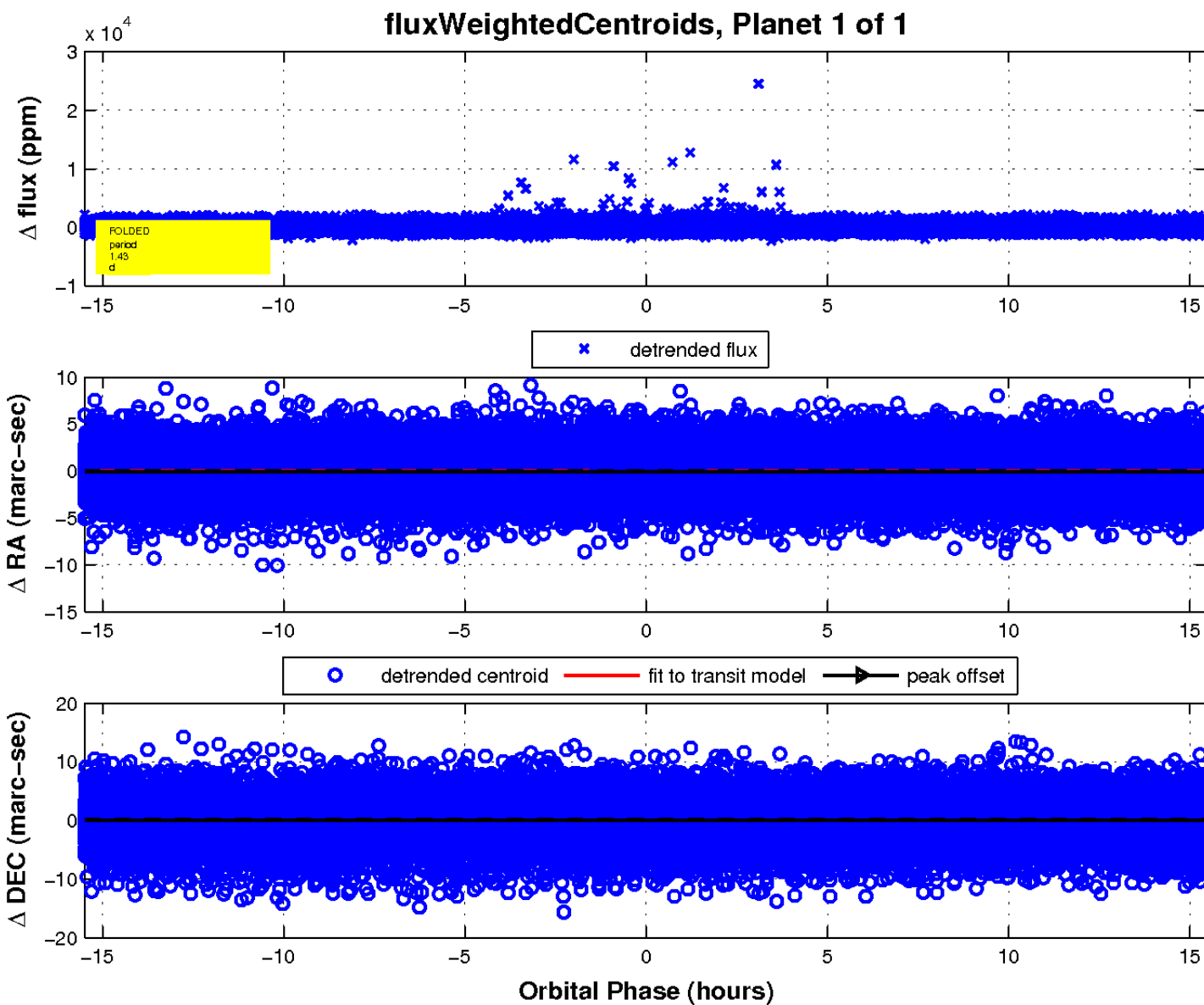
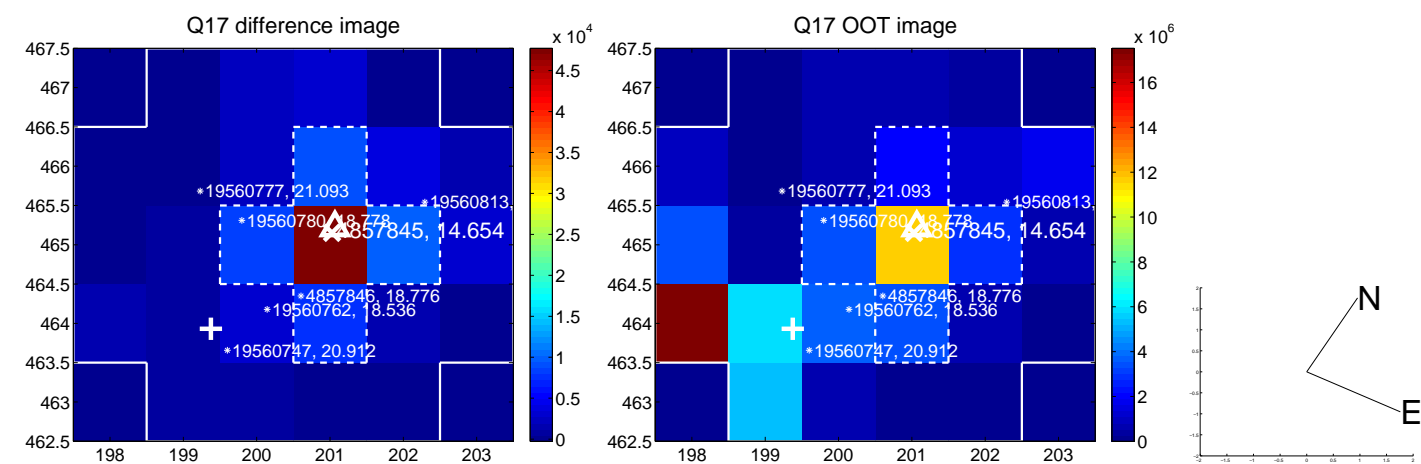
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UKIRT Image

