

KIC 006387257

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})
006387257-01	OBS	No	2.734948	132.270925	173.7	32.819	12.0	24.6	2.38	6877	3.52	6015.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006387257-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_DIFFS

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

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

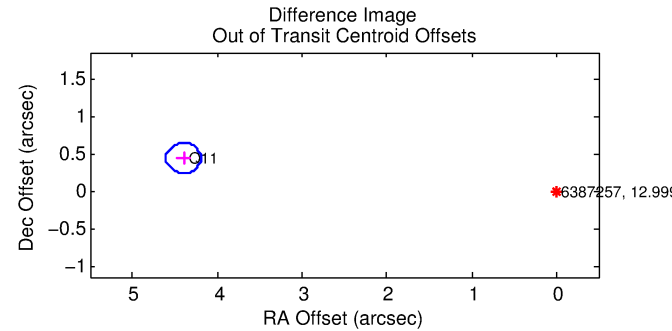
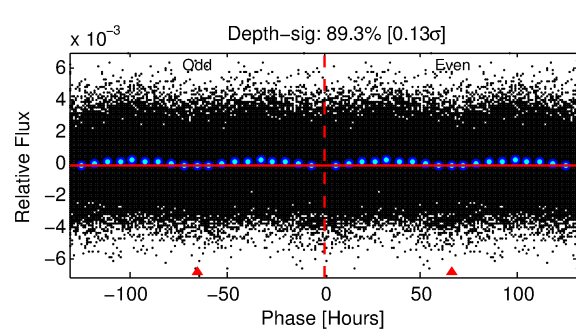
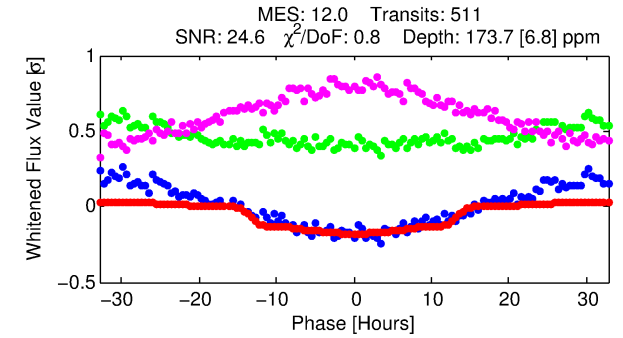
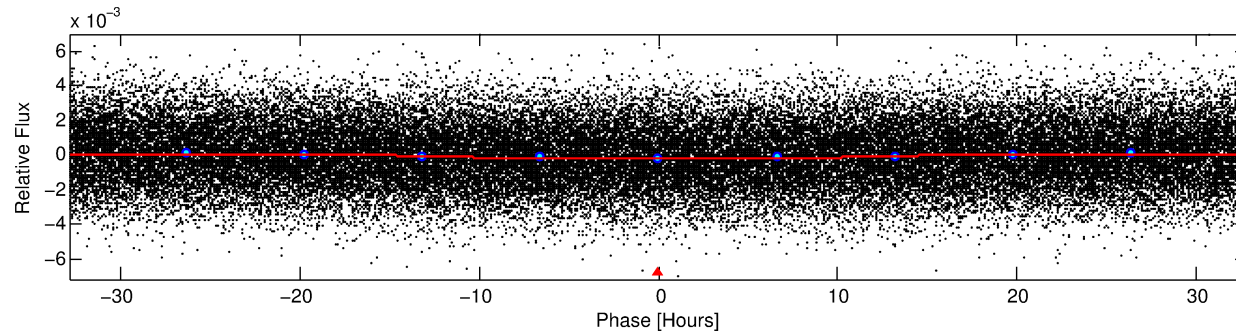
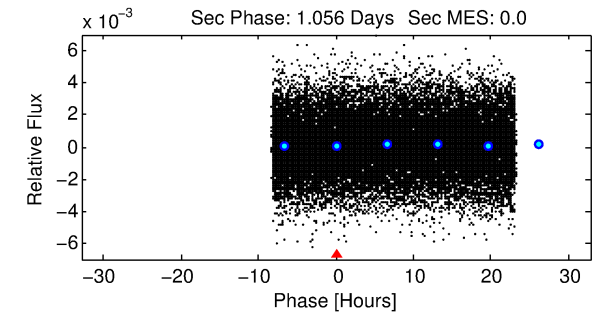
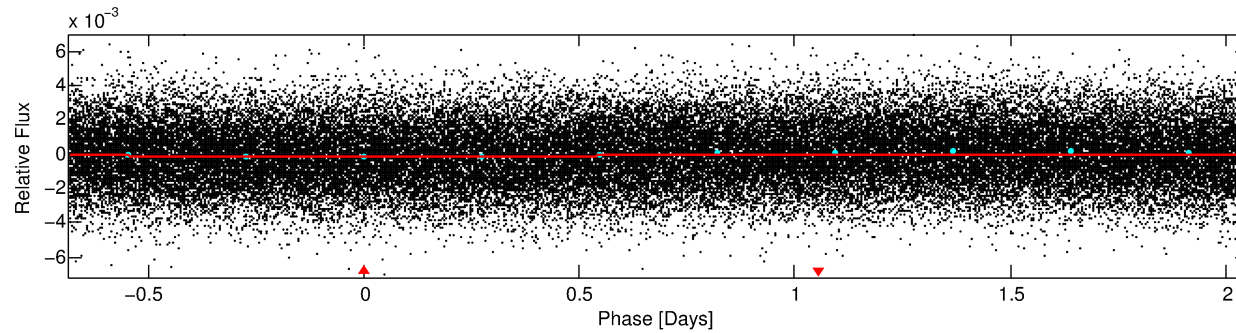
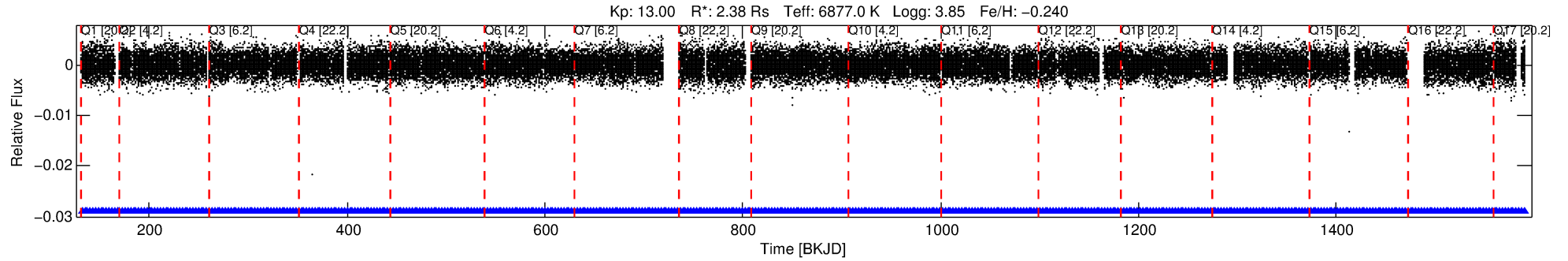
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006387257-01

No Significant Match Found

DV One-Page Summary

KIC: 6387257 Candidate: 1 of 1 Period: 2.735 d



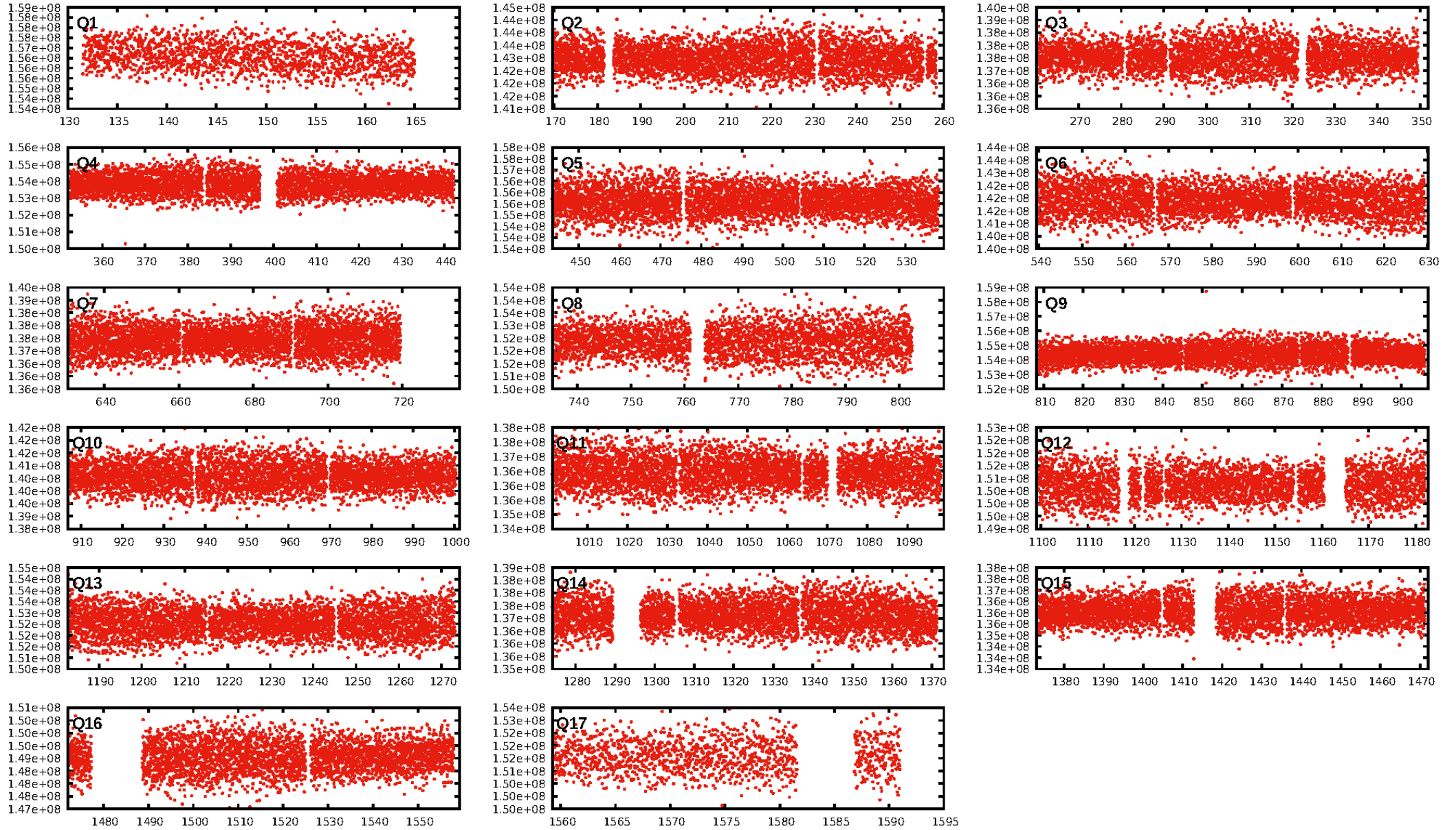
DV Fit Results:

Period = 2.73495 [0.00008] d
Epoch = 132.2709 [0.0235] BKJD
Rp/R* = 0.0136 [0.0005]
a/R* = 1.01 [0.00]
b = 0.85 [0.06]
Seff = 6015.12 [4315.48]
Teff = 2246 [403] K
Rp = 3.52 [1.49] Re
a = 0.0434 [0.0185] AU
Ag = N/A
Teffp = N/A

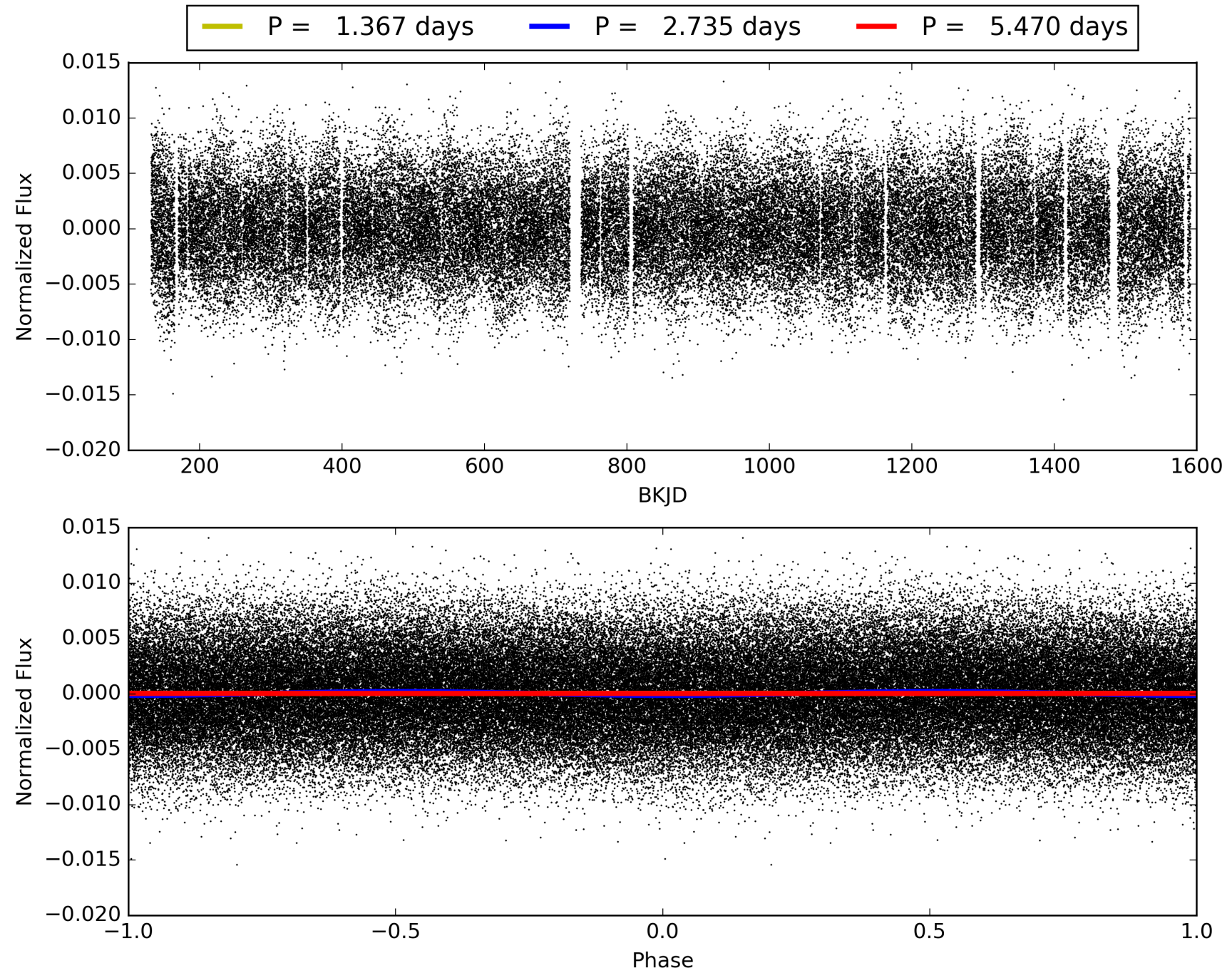
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [487/487]
GhostDiagnostic-chr: 2.287
Centroid-sig: 1.8%
Centroid-so: 0.202 arcsec [2.33σ]
OotOffset-rm: 4.418 arcsec [64.52σ]
KicOffset-rm: 4.367 arcsec [63.78σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006387257-01, PDC Light Curves

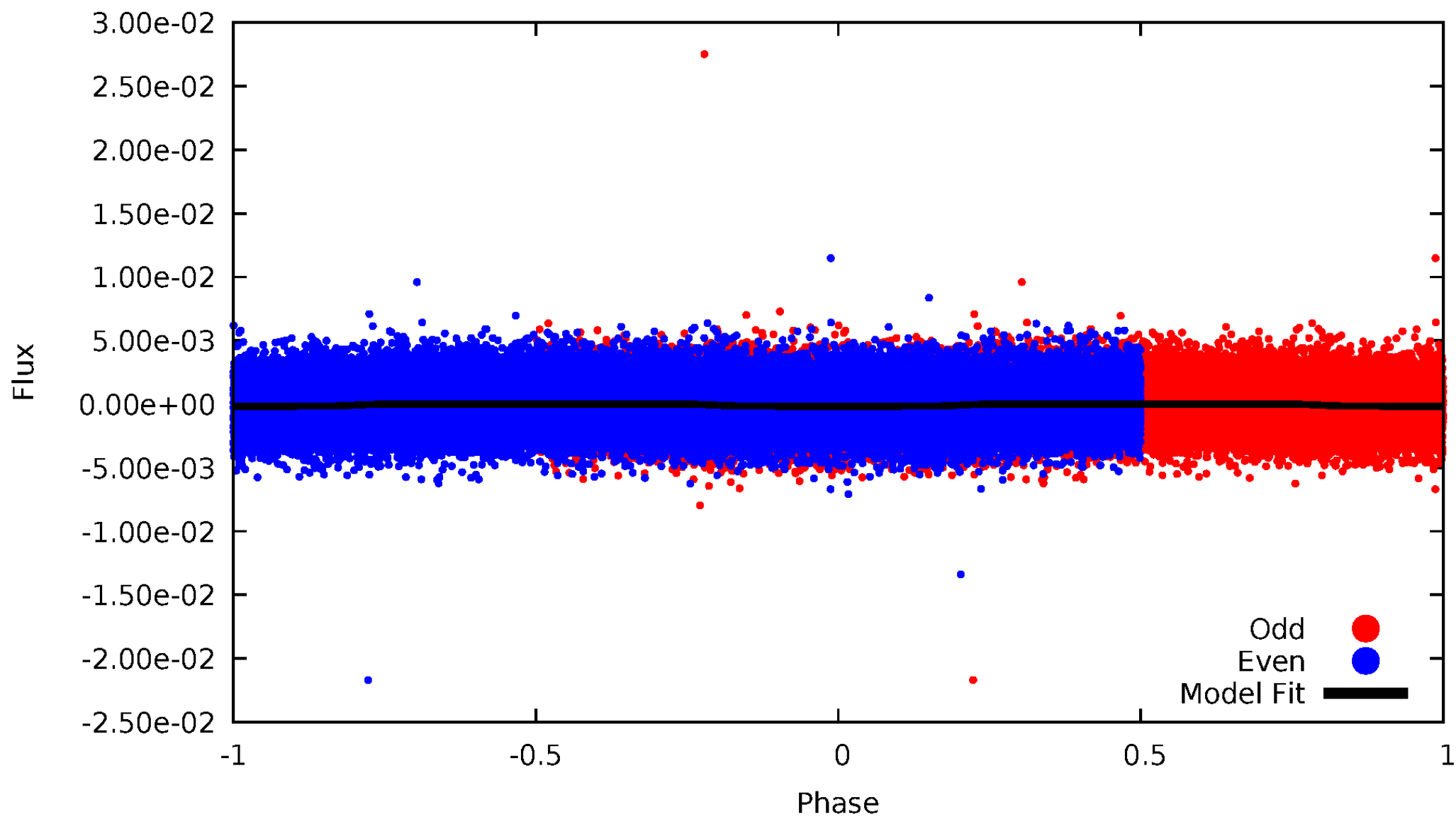


TCE 006387257-01



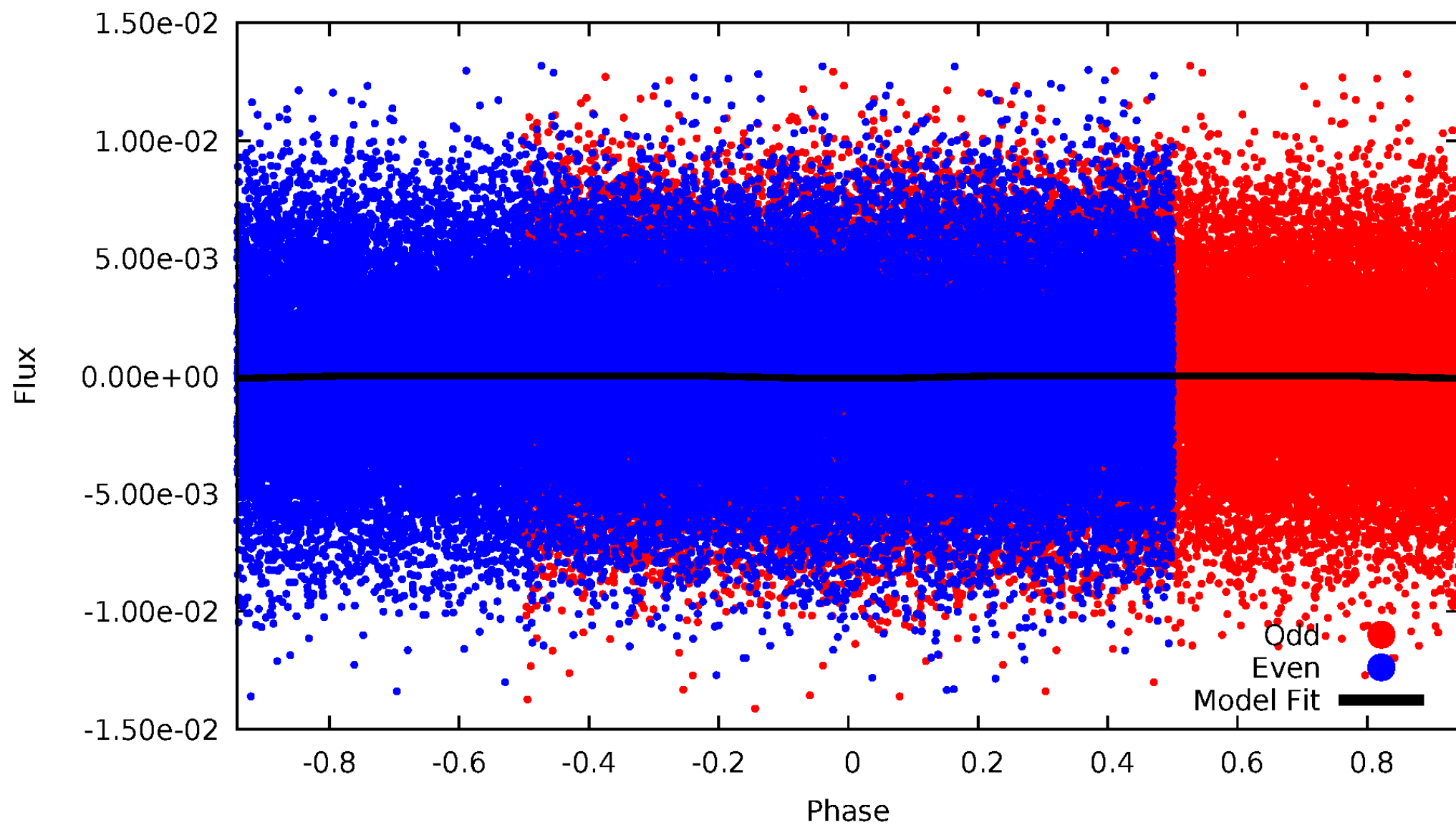
DV Odd/Even

TCE 006387257-01

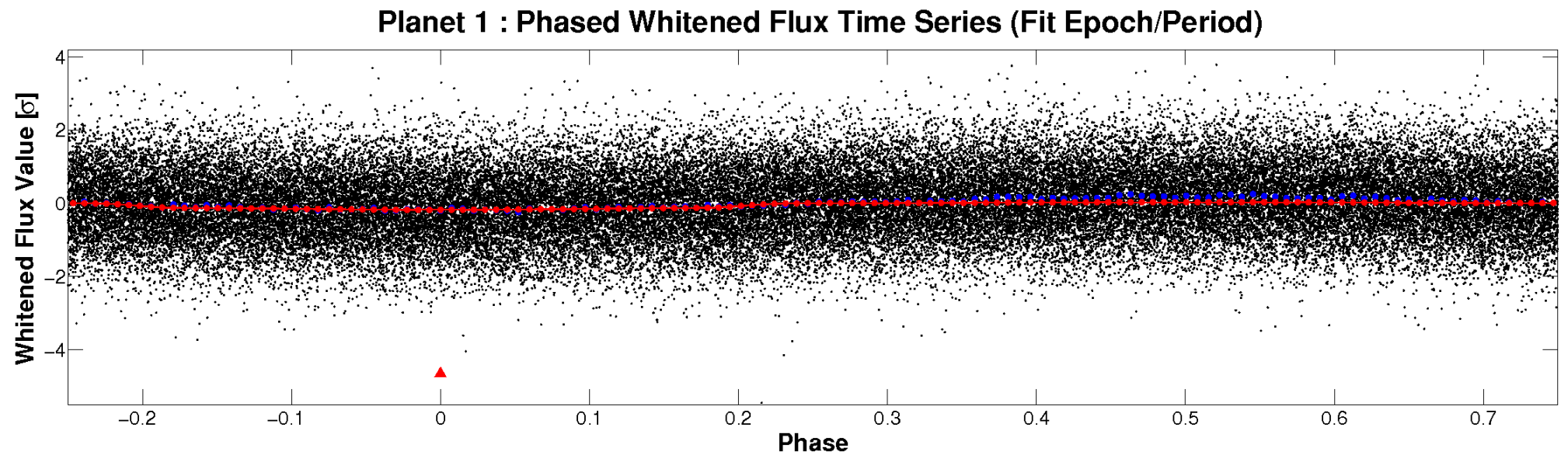
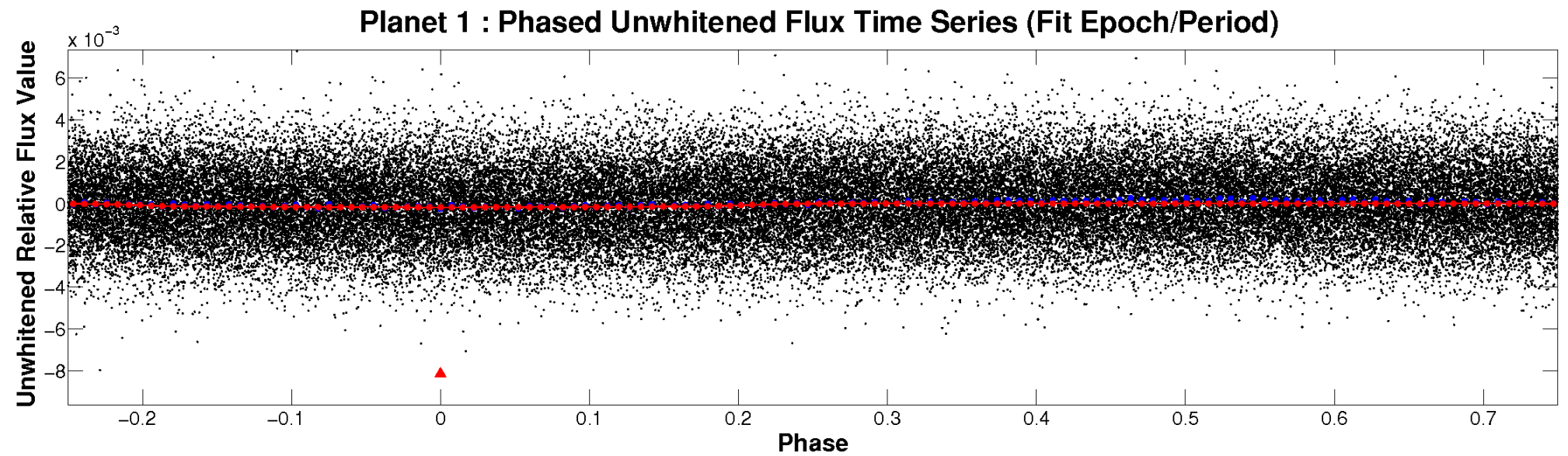


ALT Odd/Even

TCE 006387257-01

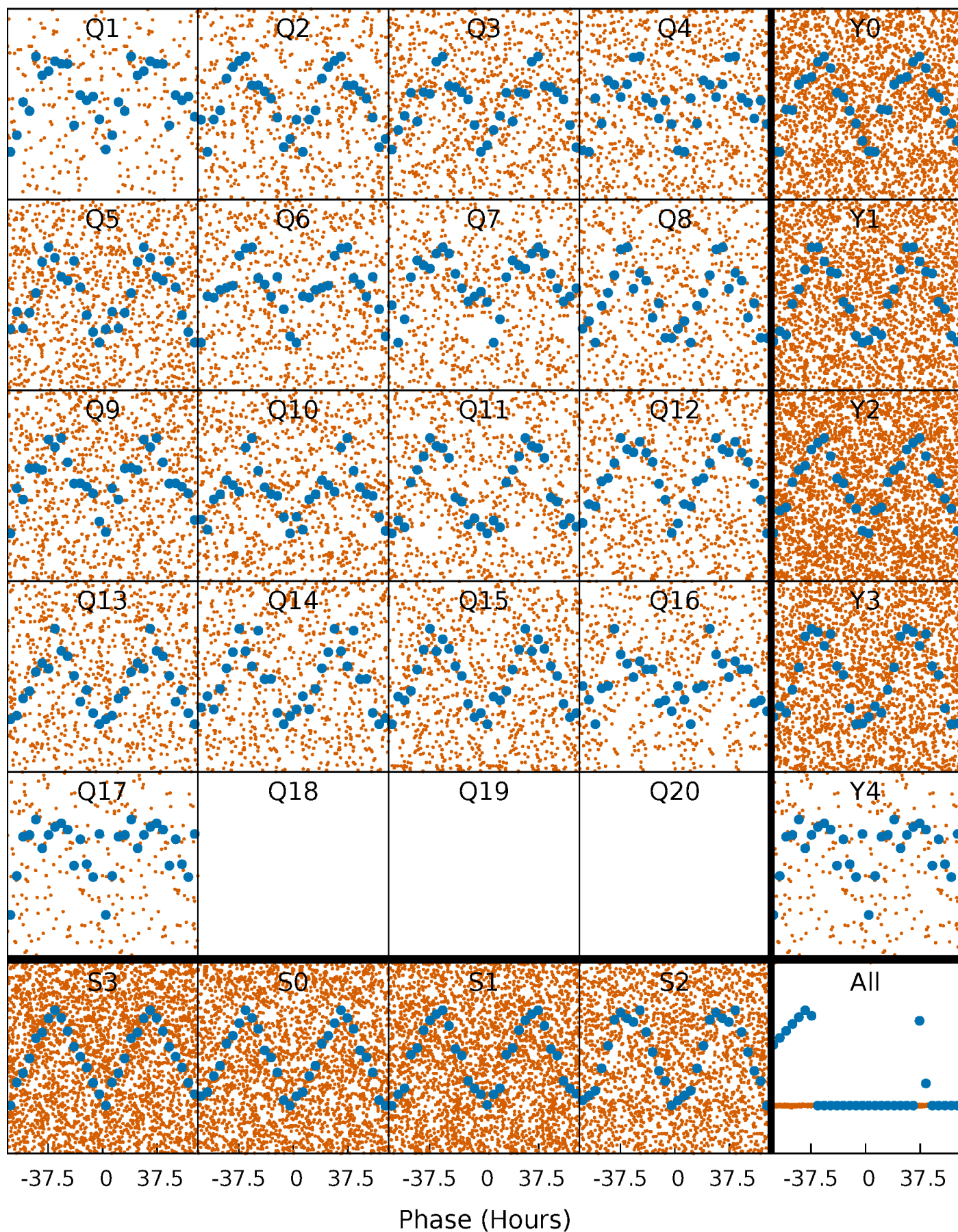


Non-Whitened Vs. Whitened Light Curve



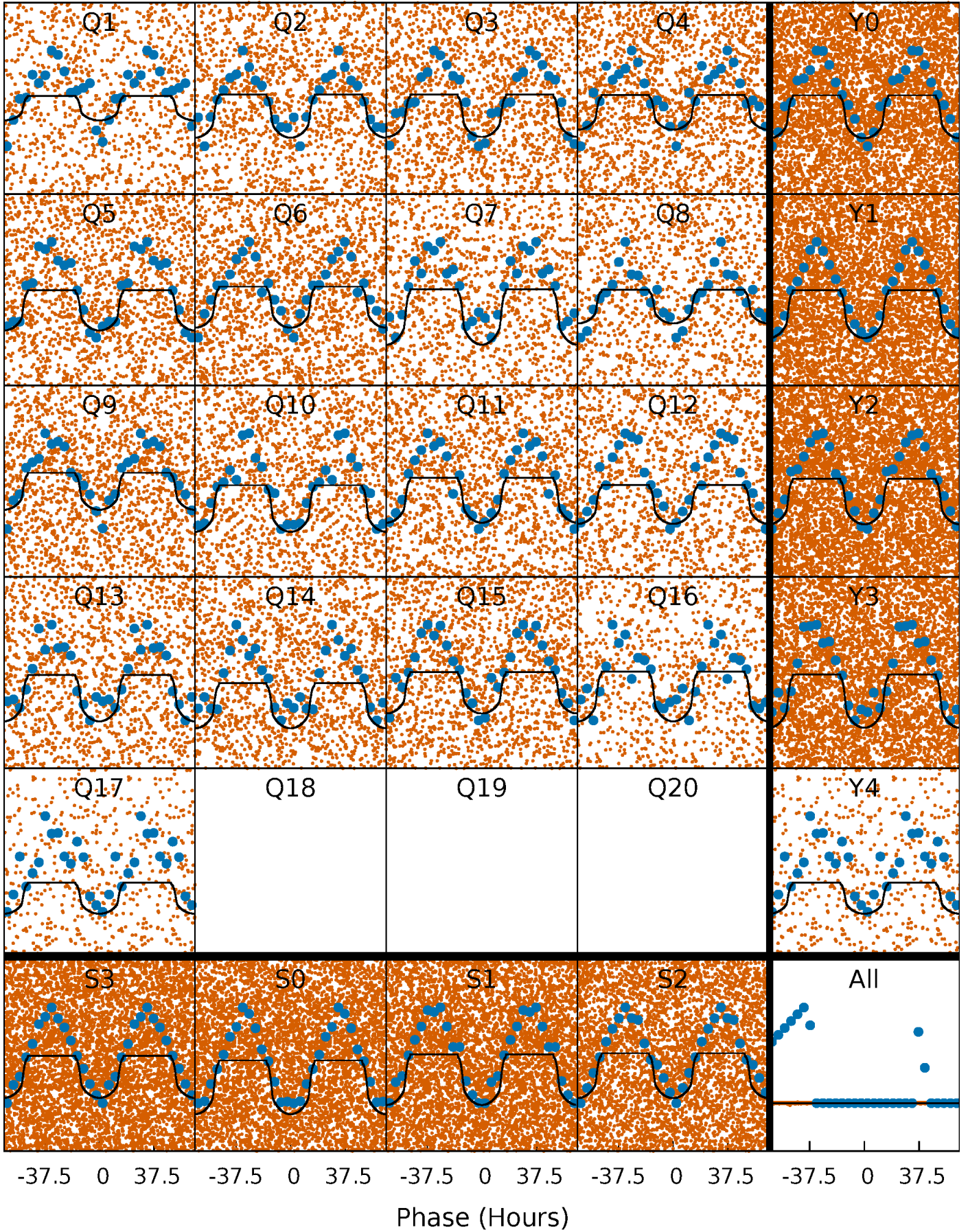
PDC Quarter-Phased Transit Curves

TCE 006387257-01 P= 2.734948 Days $T_0=132.270925$ (BKJD)



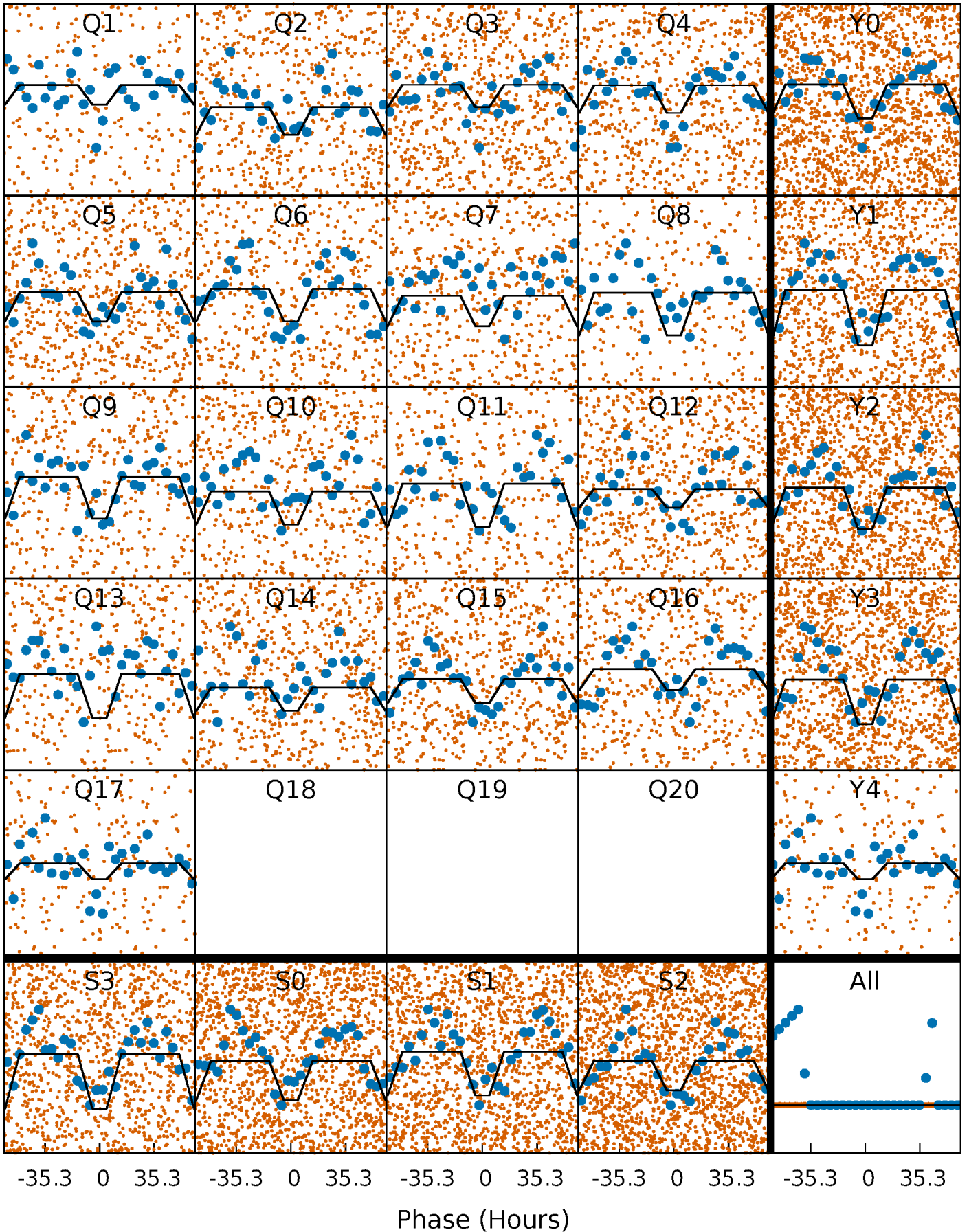
DV Quarter-Phased Transit Curves

TCE 006387257-01 P= 2.734948 Days $T_0=132.270925$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

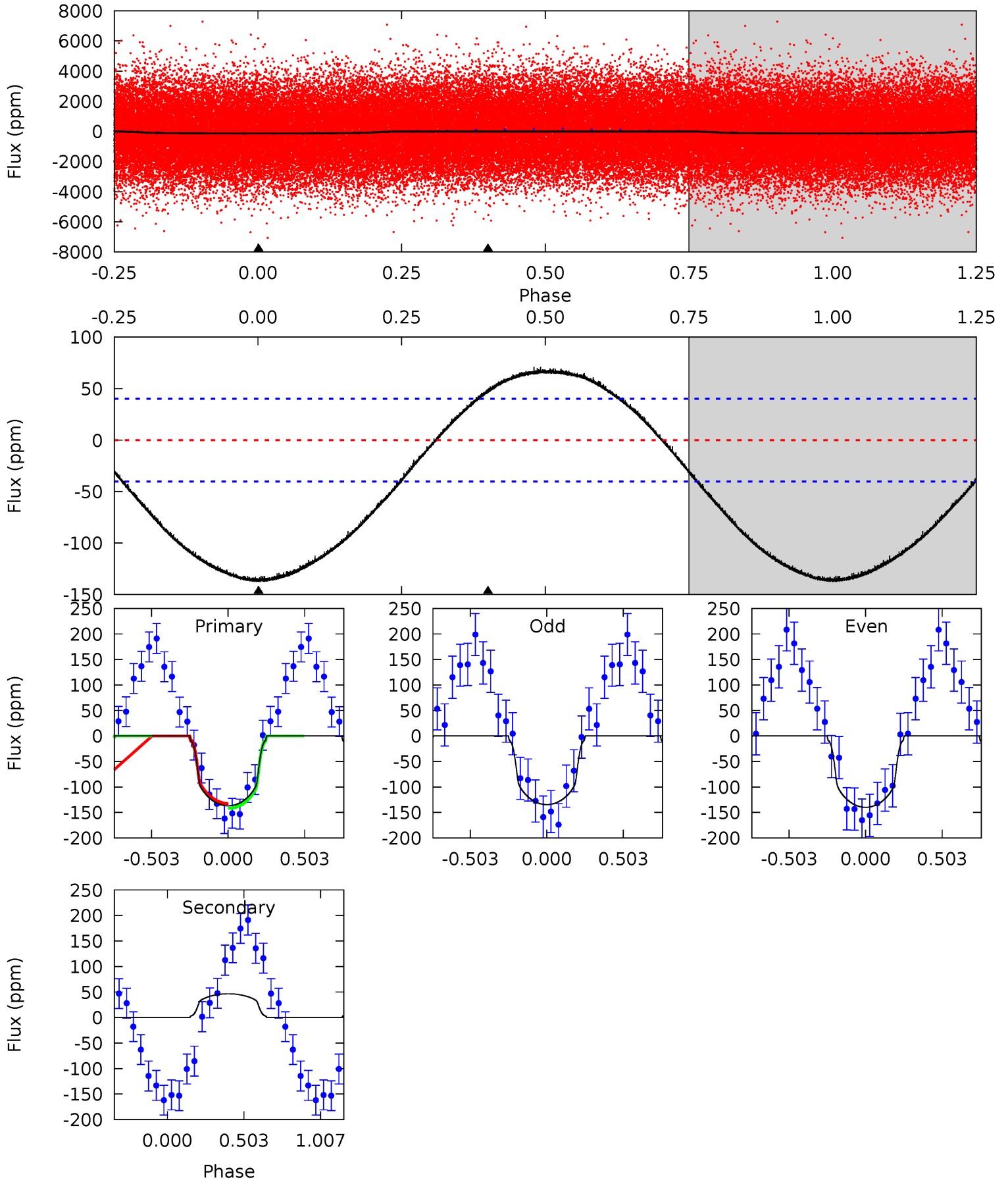
TCE 006387257-01 P= 2.734375 Days $T_0=132.452134$ (BKJD)



DV Model-Shift Uniqueness Test

006387257-01, P = 2.734948 Days, E = 129.535977 Days

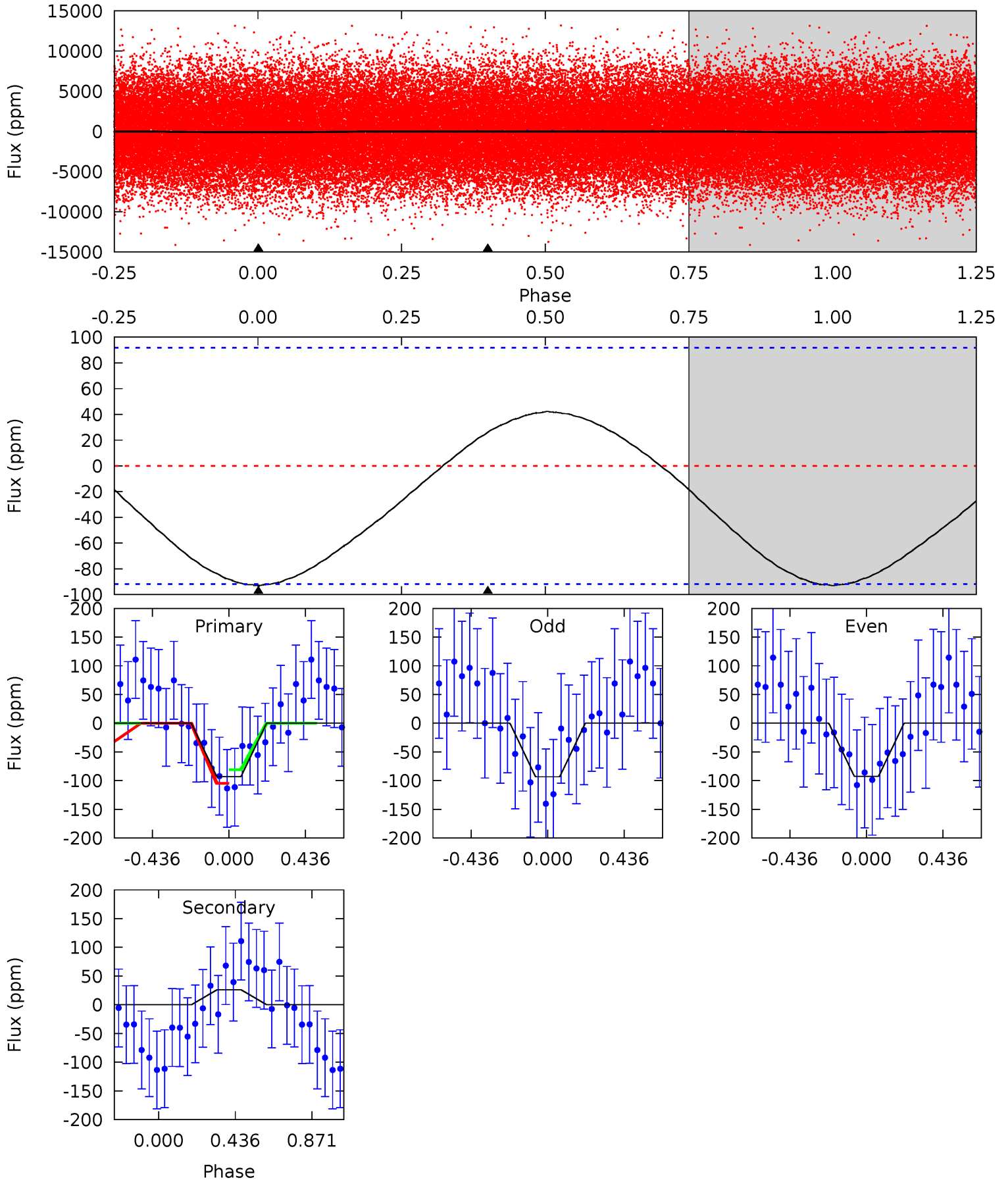
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.3	-4.87	0	0	4.21	0.67	1.93	14.3	14.3	-4.87	-4.87	0.28	1.21	0.34	0.49



Alt Model-Shift Uniqueness Test

006387257-01, P = 2.734375 Days, E = 129.717759 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.30	-1.21	0	0	4.25	0.78	0.49	4.30	4.30	-1.21	-1.21	0.02	1.29	0.31	0.54



Stellar Parameters For KIC 006387257

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6877^{+214}_{-285}	$3.849^{+0.416}_{-0.104}$	$-0.240^{+0.300}_{-0.300}$	$2.377^{+0.541}_{-1.005}$	$1.454^{+0.216}_{-0.324}$	$0.152^{+0.512}_{-0.059}$
	+3%/-4%	+11%/-3%	+125%/-125%	+23%/-42%	+15%/-22%	+336%/-39%
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 006387257-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	47 ± 10	$3.35^{+0.54}_{-0.80}$	3037^{+241}_{-361}	-4987^{+252}_{-266}	$-4.348^{+1.318}_{-2.841}$
Alt.	26 ± 22	$2.39^{+0.43}_{-0.54}$	3047^{+244}_{-373}	-5027^{+1431}_{-727}	$-4.426^{+3.856}_{-5.286}$

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

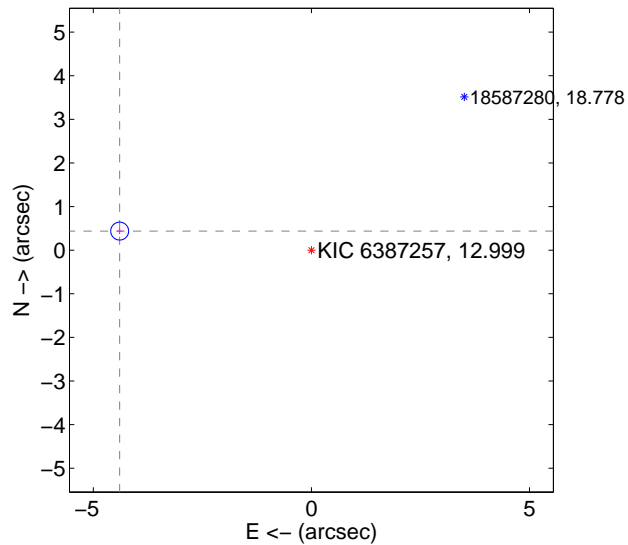
Supplemental centroid analysis for 006387257-01. Kepler magnitude: 13.00. Transit SNR 24.56

There are 0 quarters with good PRF difference image offsets

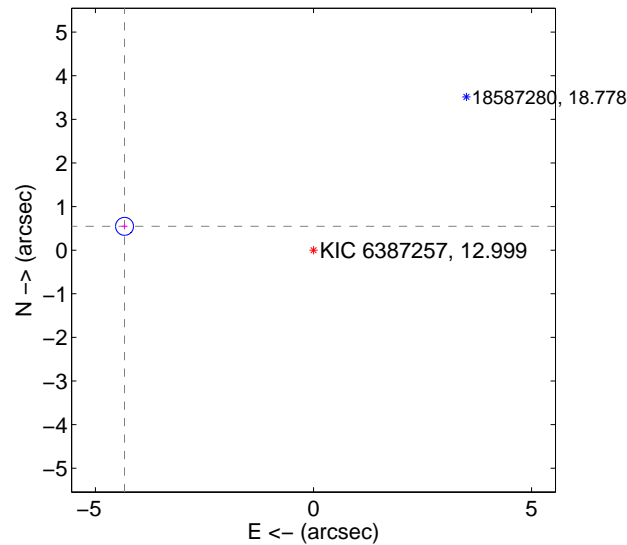
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.418 ± 0.068	64.52	4.396 ± 0.068	0.438 ± 0.069
PRF-fit source offset from KIC position	4.367 ± 0.068	63.78	4.333 ± 0.068	0.546 ± 0.069
photometric centroid source offset	0.20 ± 0.09	2.33	-0.01 ± 0.09	0.20 ± 0.09

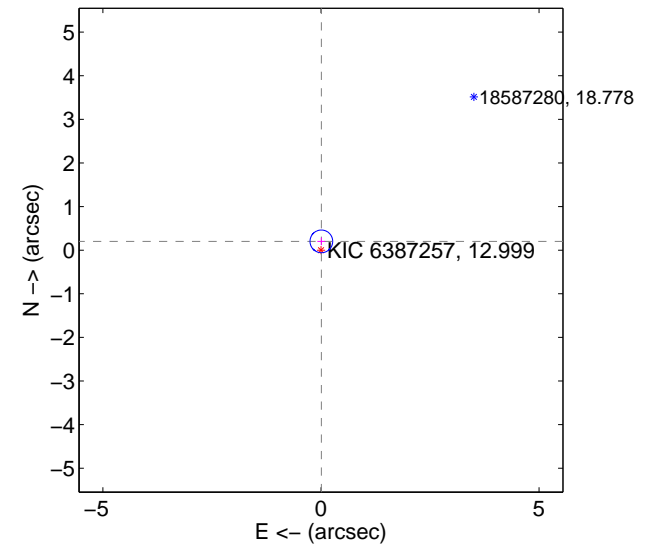
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

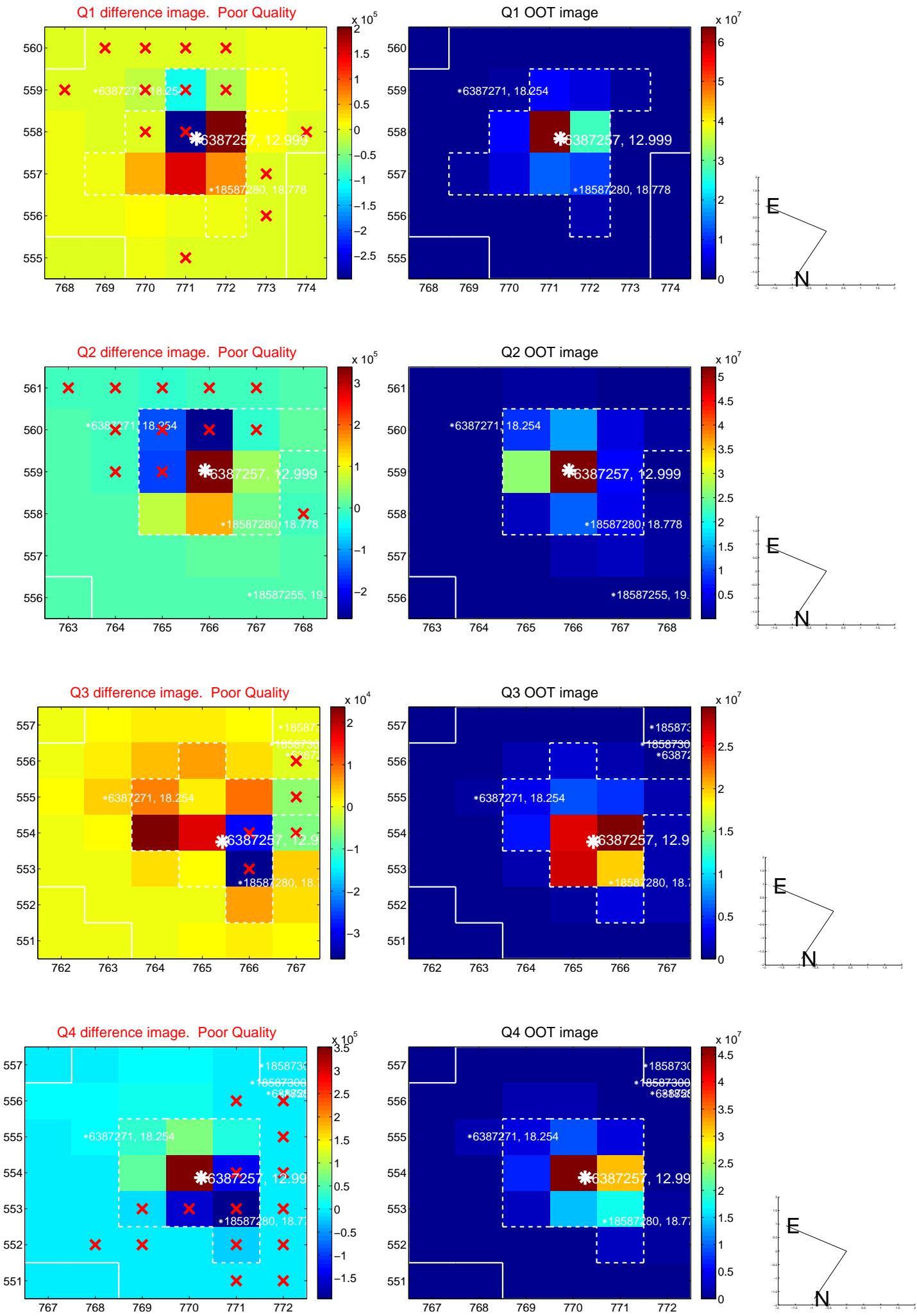


offset from photometric centroids

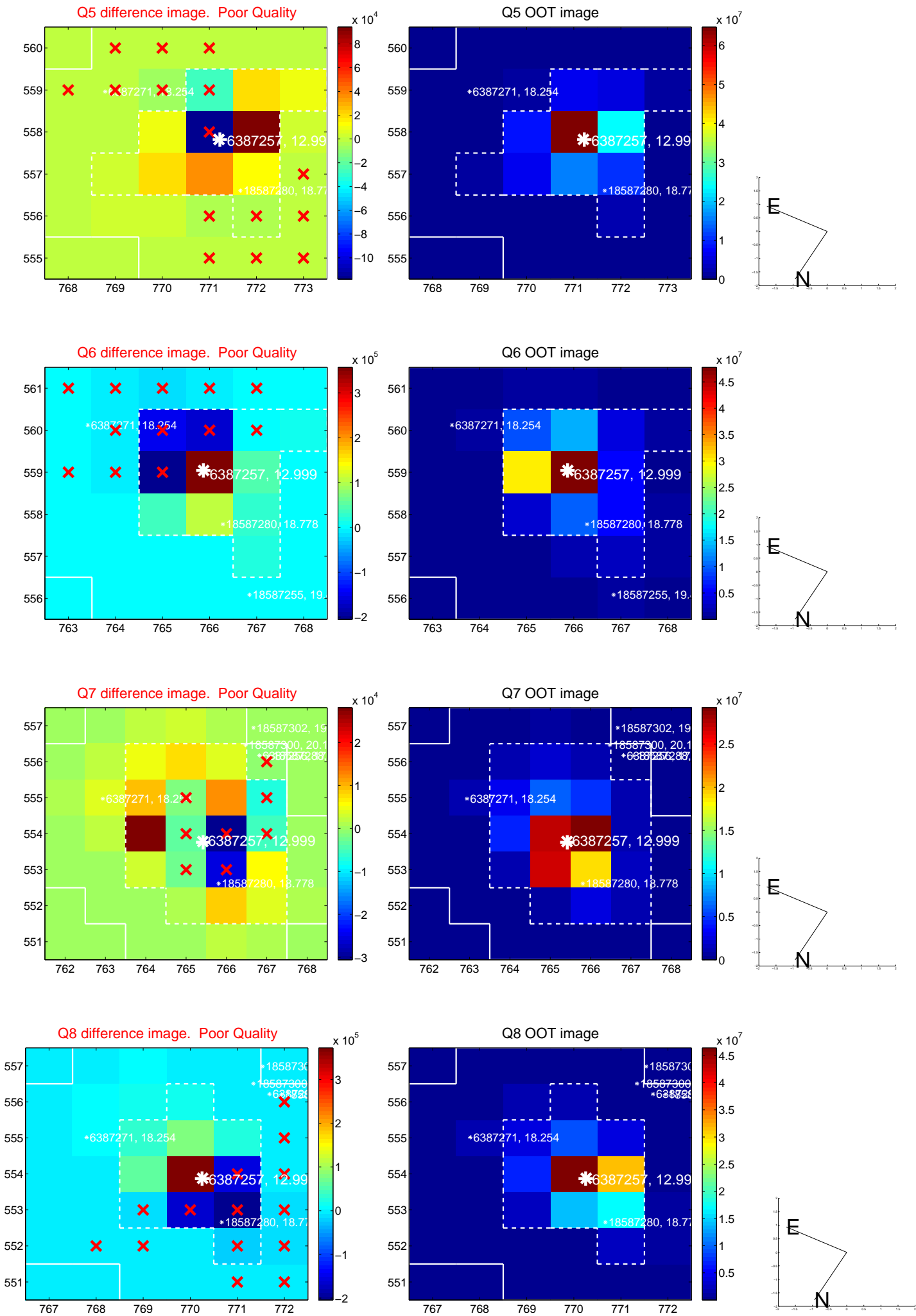


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

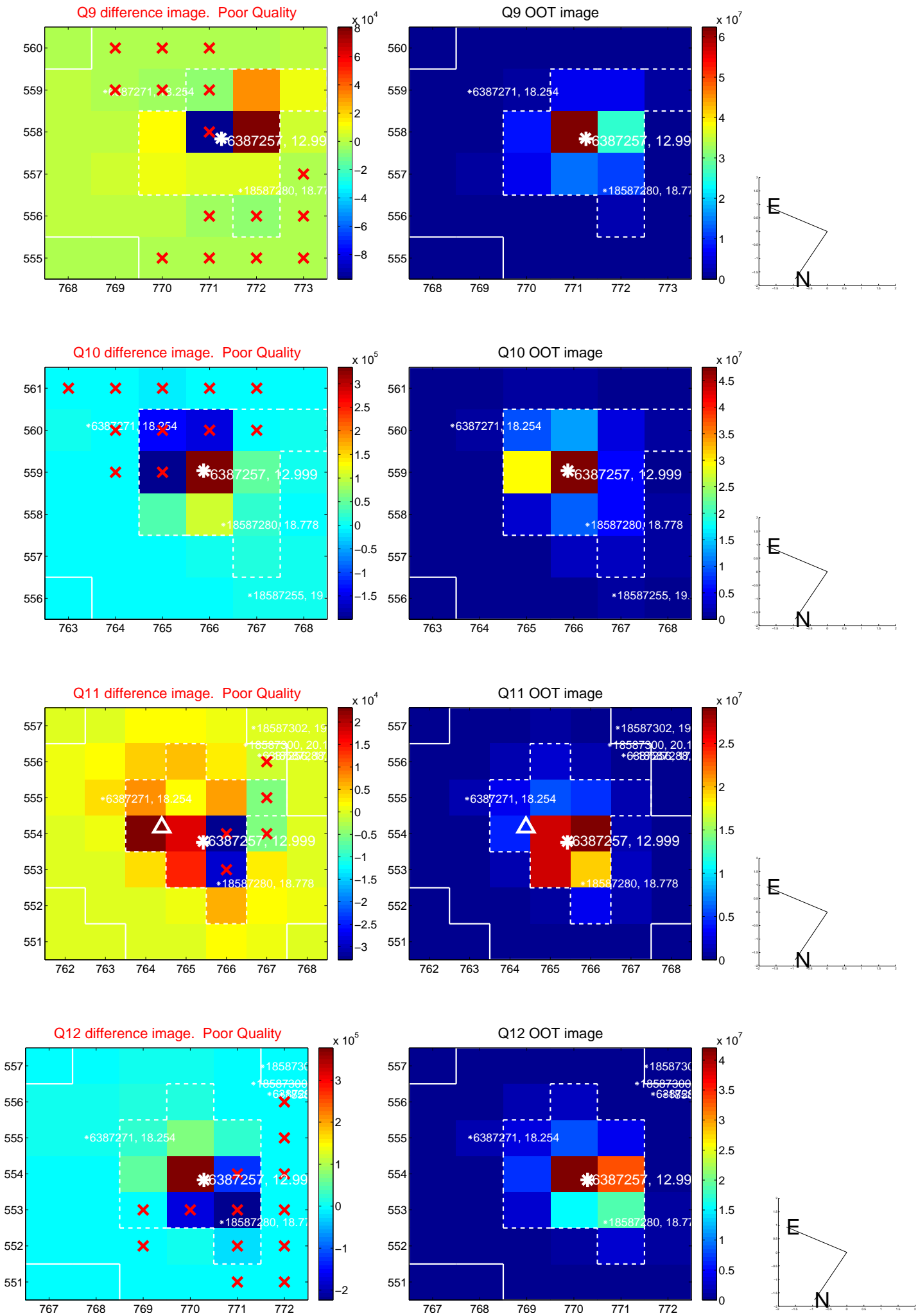
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



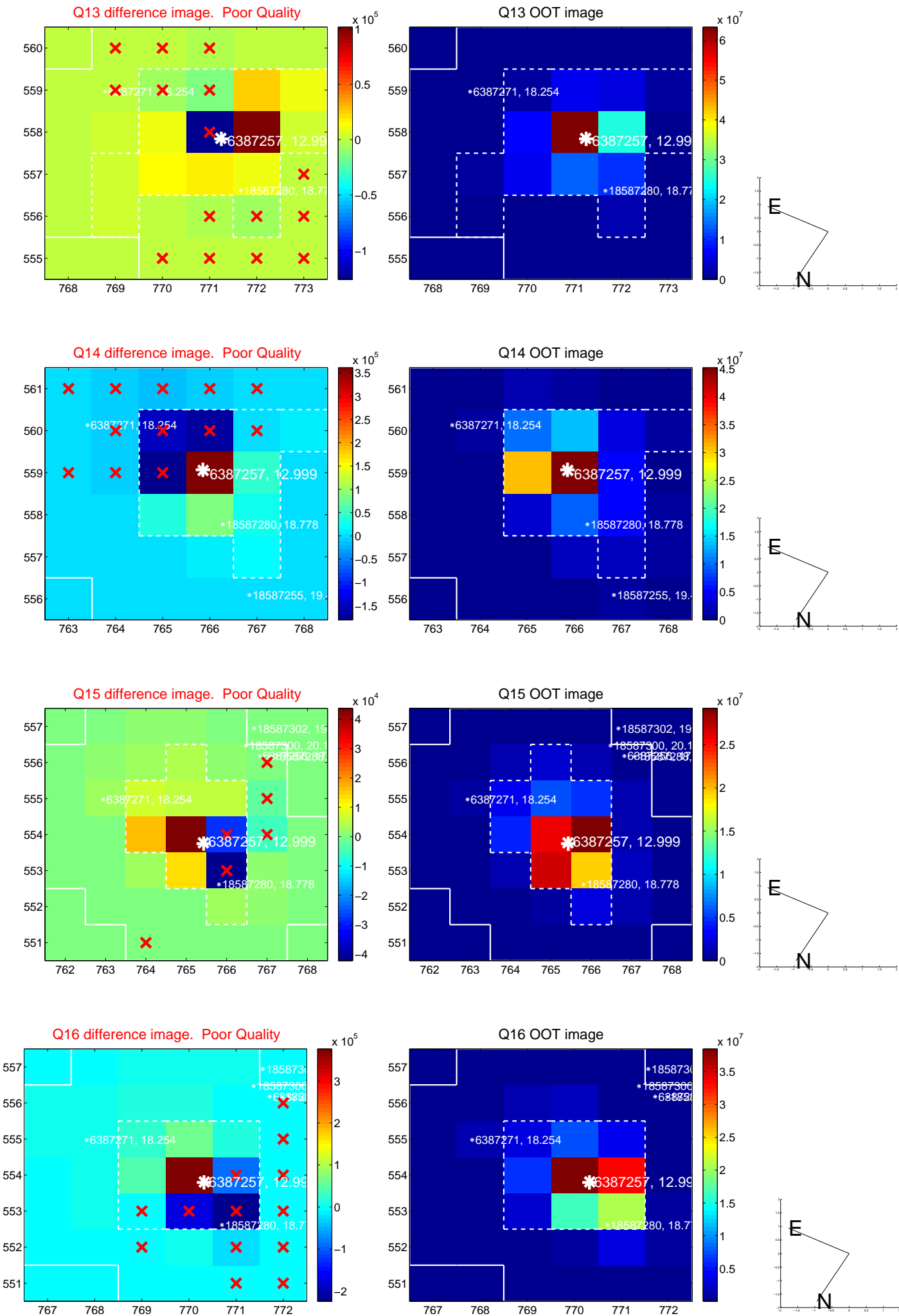
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



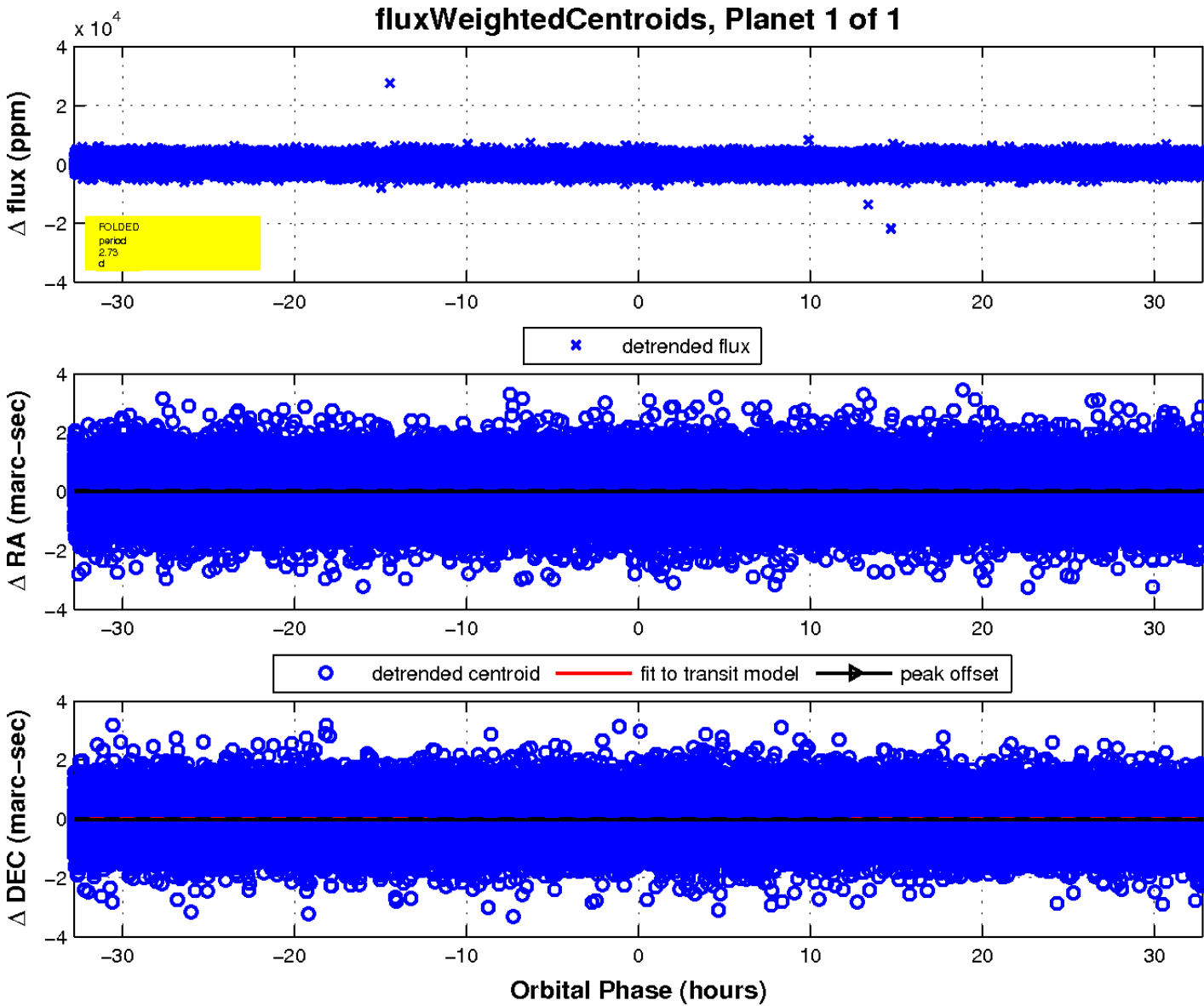
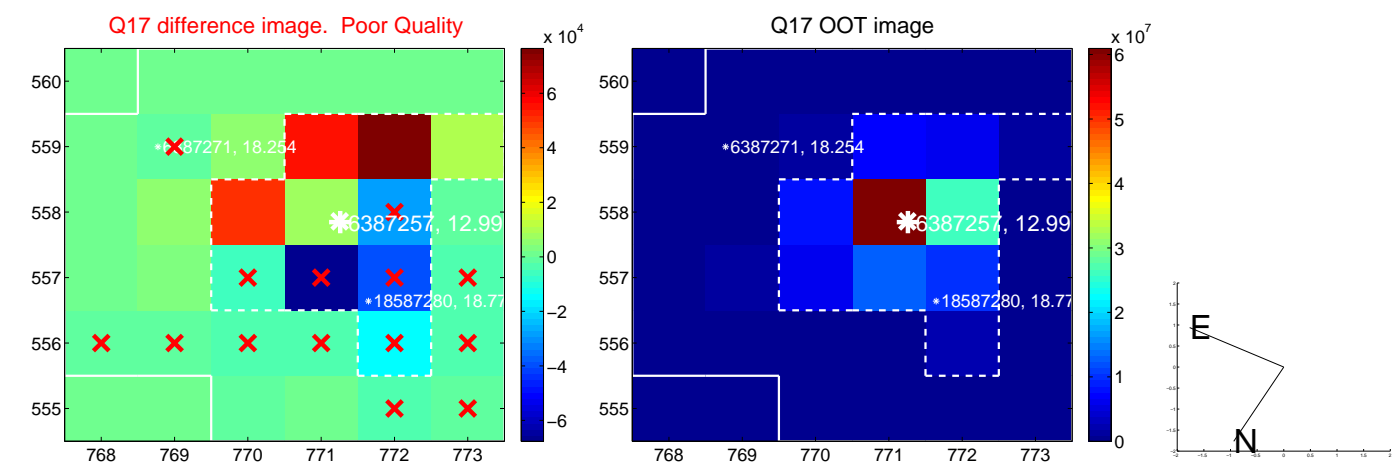
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

