

KIC 008782626

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})
008782626-01	OBS	No	0.530788	131.650163	75.5	2.186	14.9	13.5	2.48	6356	2.48	48616.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008782626-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_SATURATED

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.

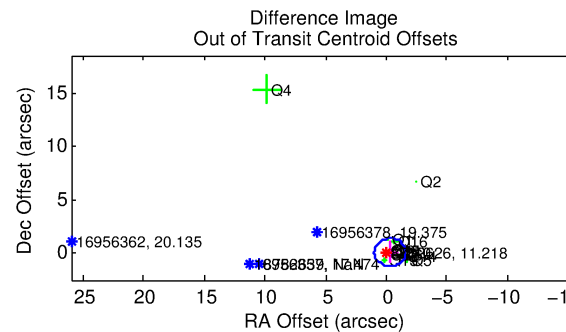
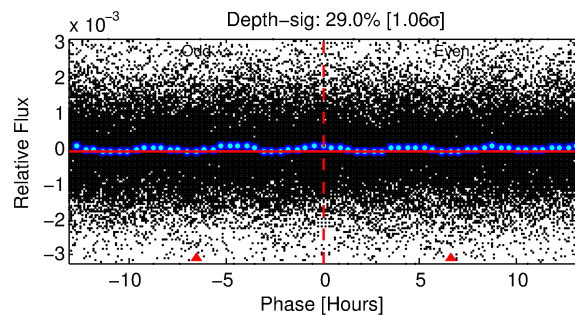
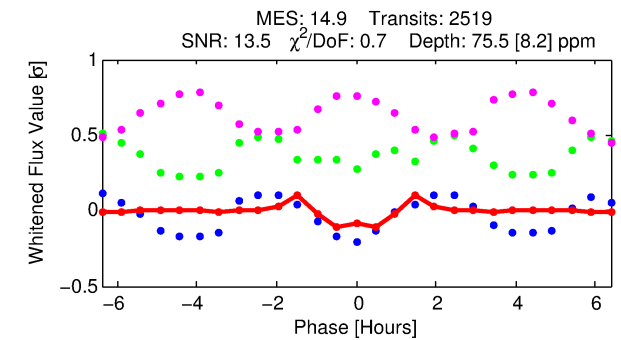
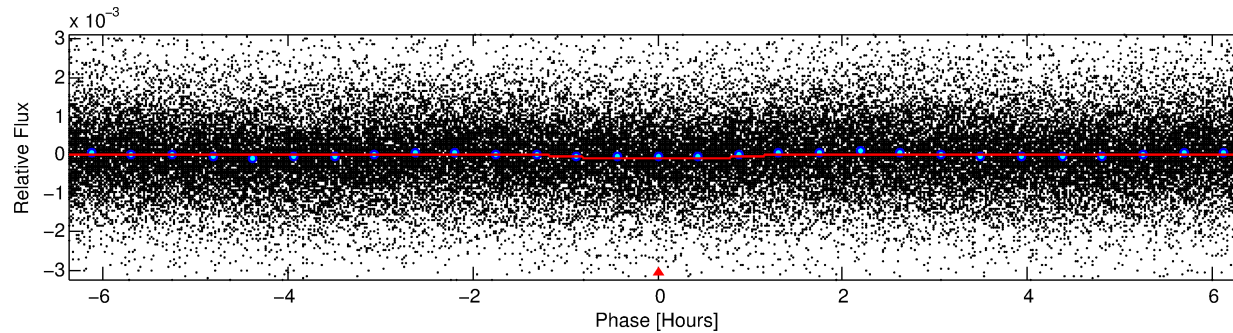
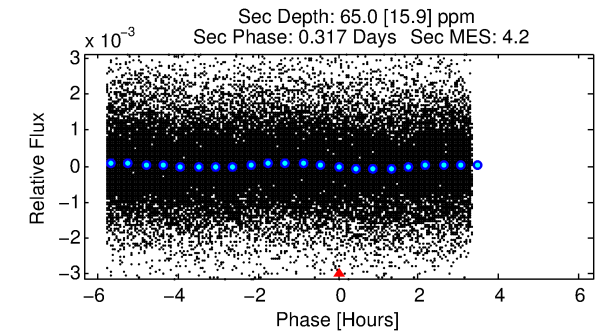
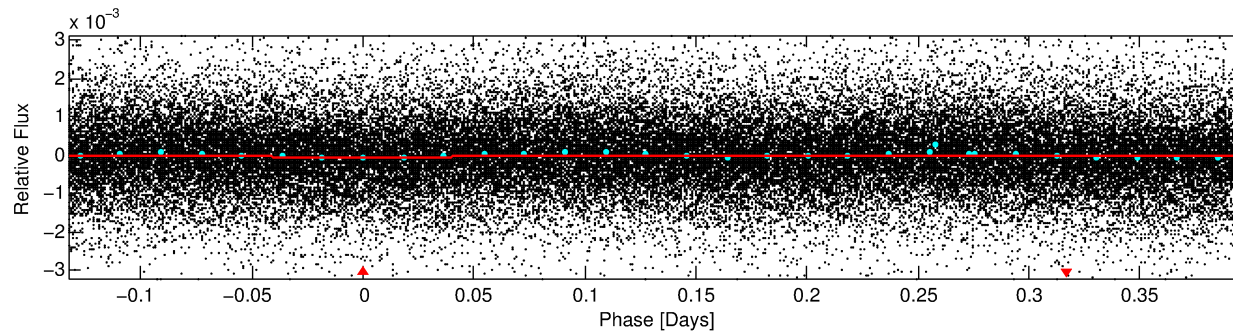
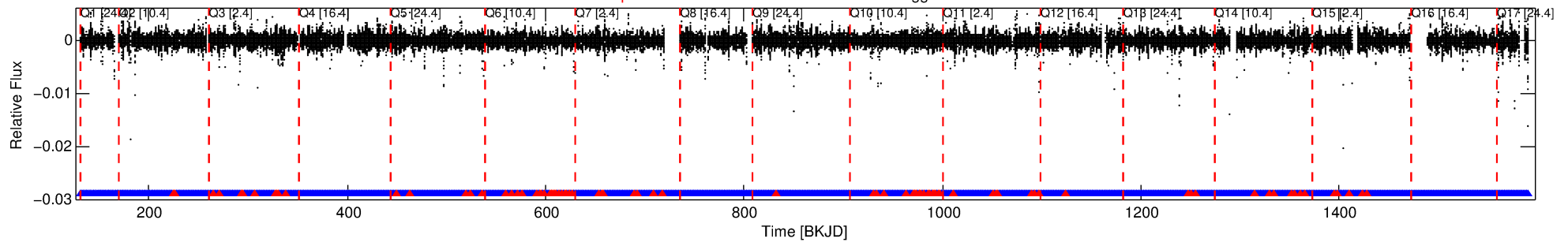
Ephemeris Match Information For 008782626-01

No Significant Match Found

DV One-Page Summary

KIC: 8782626 Candidate: 1 of 1 Period: 0.531 d

Kp: 11.22 R*: 2.48 Rs Teff: 6356.0 K Logg: 3.72 Fe/H: -0.700



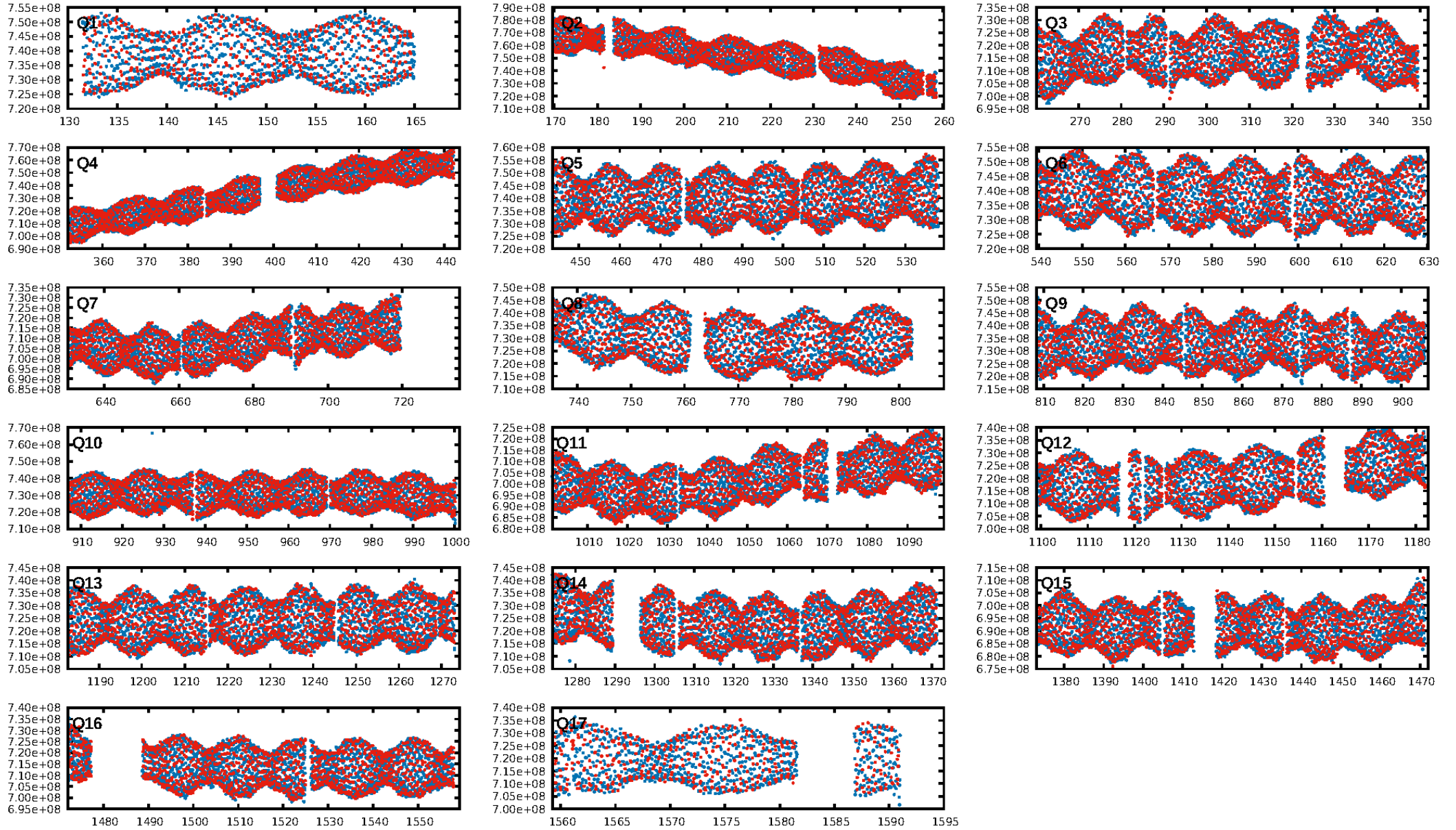
DV Fit Results:

Period = 0.53079 [0.00001] d
Epoch = 131.6502 [0.0009] BKJD
Rp/R* = 0.0092 [0.0017]
a/R* = 1.30 [0.54]
b = 0.88 [0.26]
Seff = 48616.72 [49834.11]
Teq = 3786 [970] K
Rp = 2.48 [1.48] Re
a = 0.0136 [0.0082] AU
Ag = 1.07 [1.19] [0.06σ]
Teffp = 5954 [690] K [1.82σ]

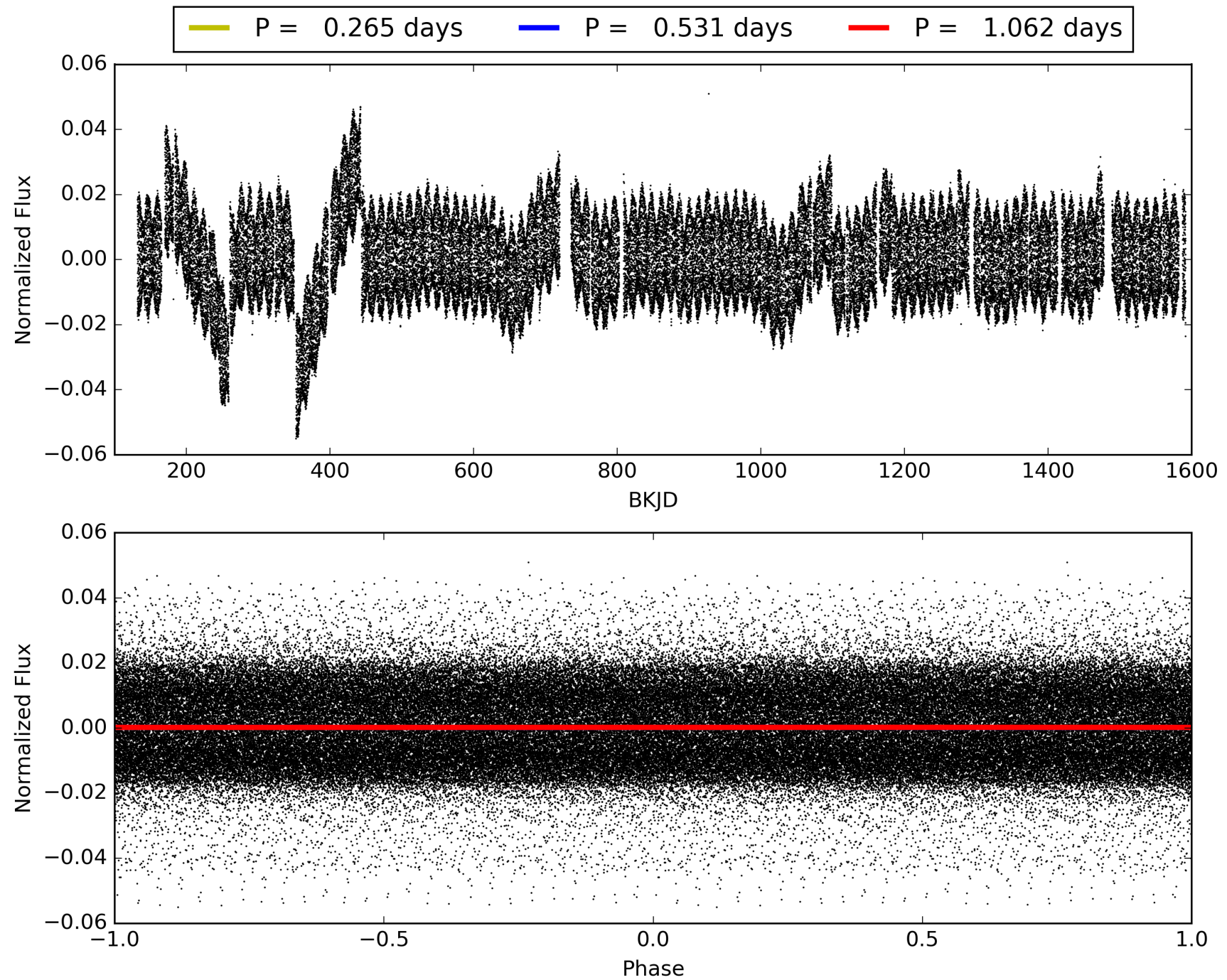
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.02e-34
RollingBand-fgt: 0.96 [2316/2406]
GhostDiagnostic-chr: 1
Centroid-sig: 0.1%
Centroid-so: 2.674 arcsec [7.22σ]
OotOffset-rm: 0.320 arcsec [0.74σ]
KicOffset-rm: 0.467 arcsec [0.69σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 0.50 [8/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008782626-01, PDC Light Curves

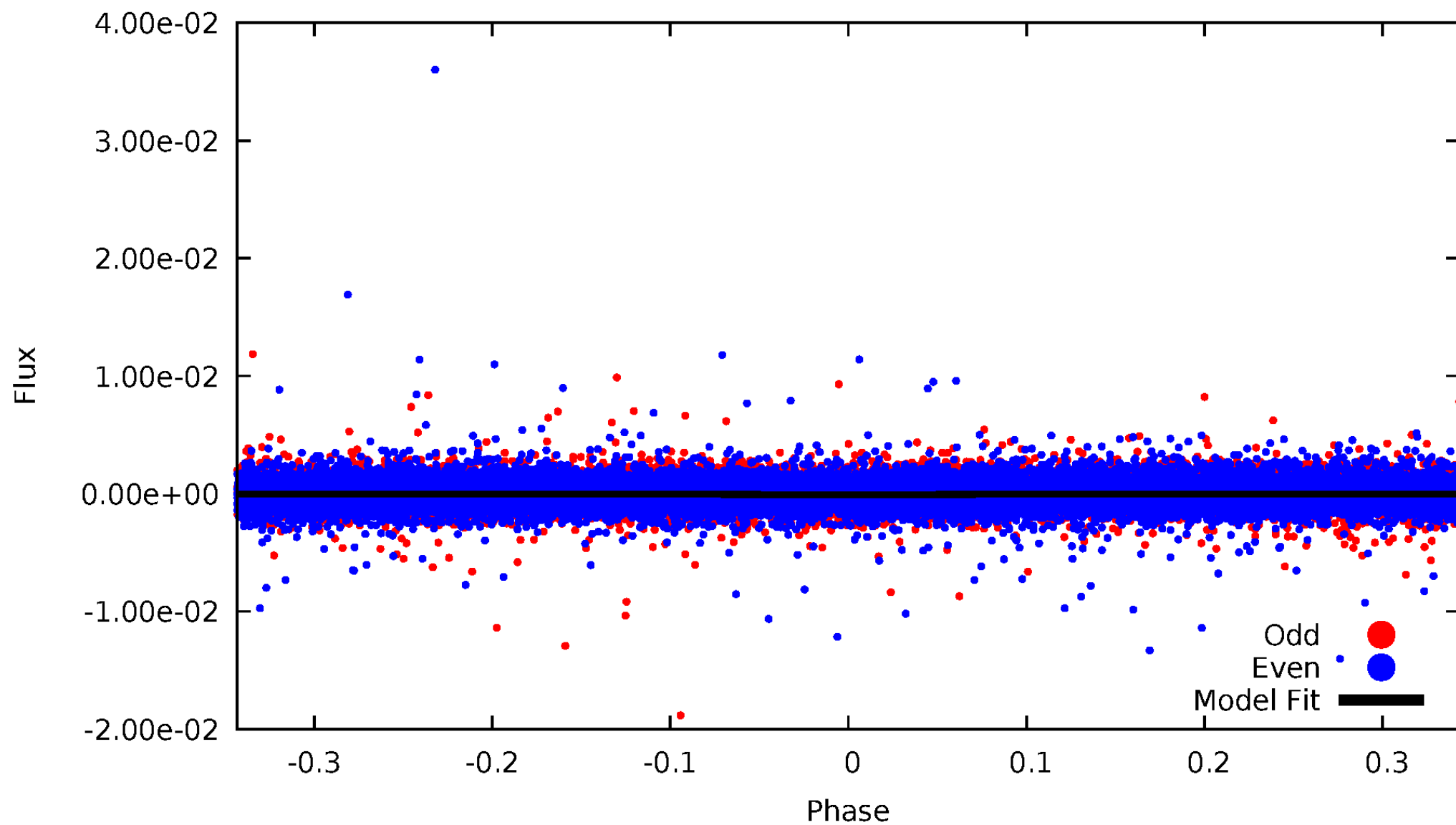


TCE 008782626-01



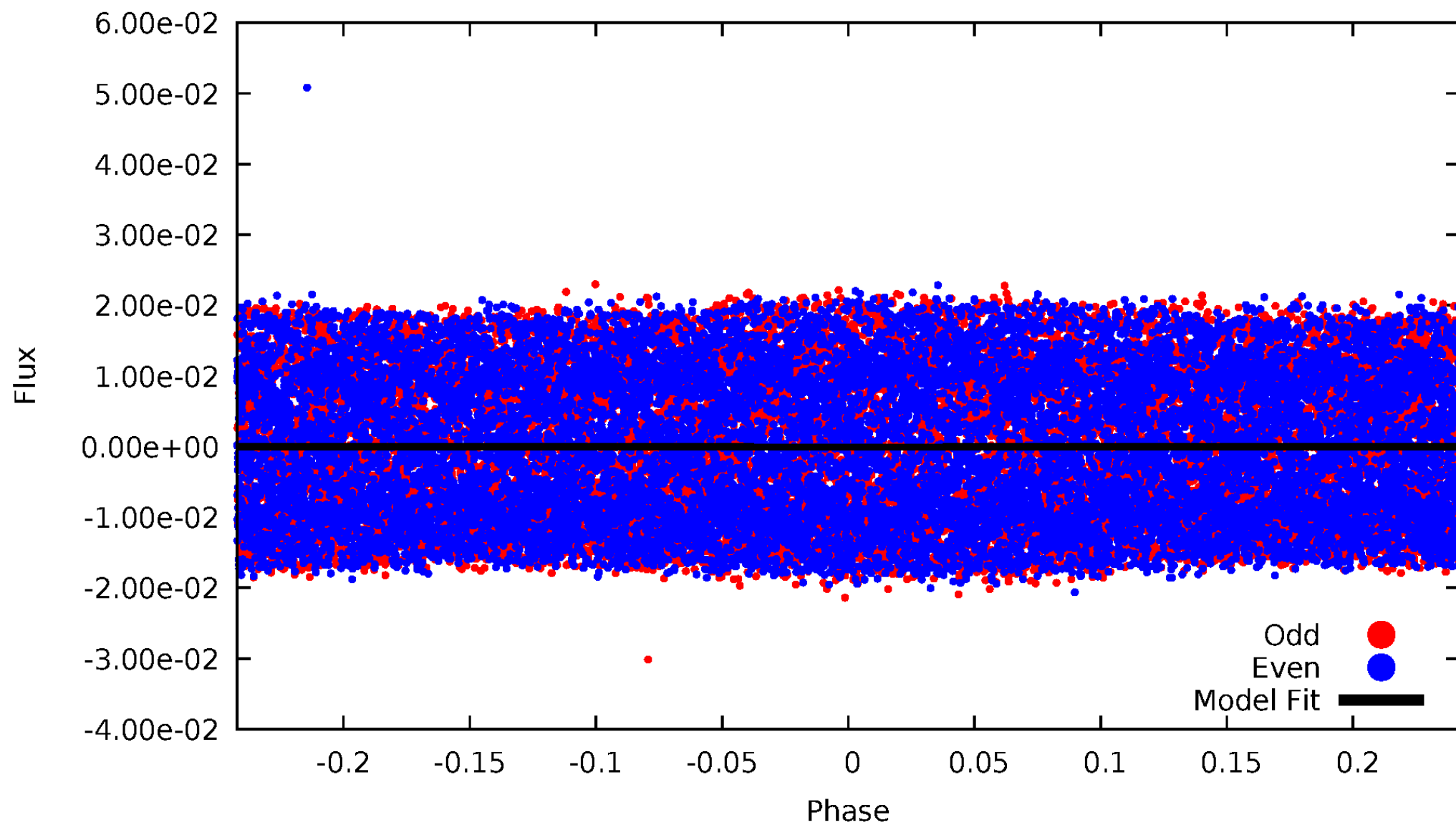
DV Odd/Even

TCE 008782626-01



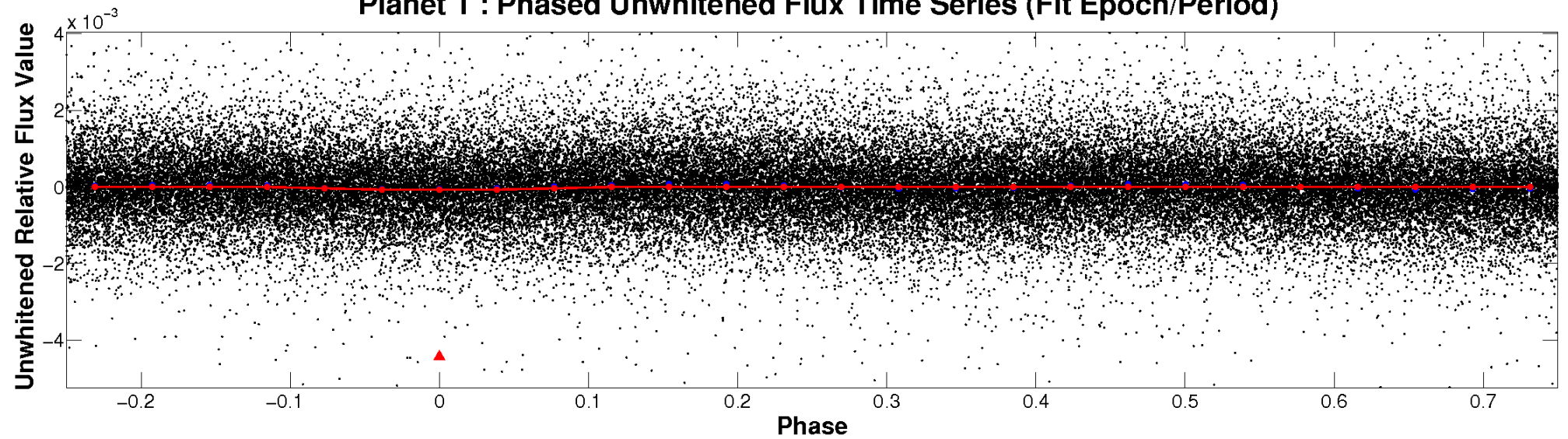
ALT Odd/Even

TCE 008782626-01

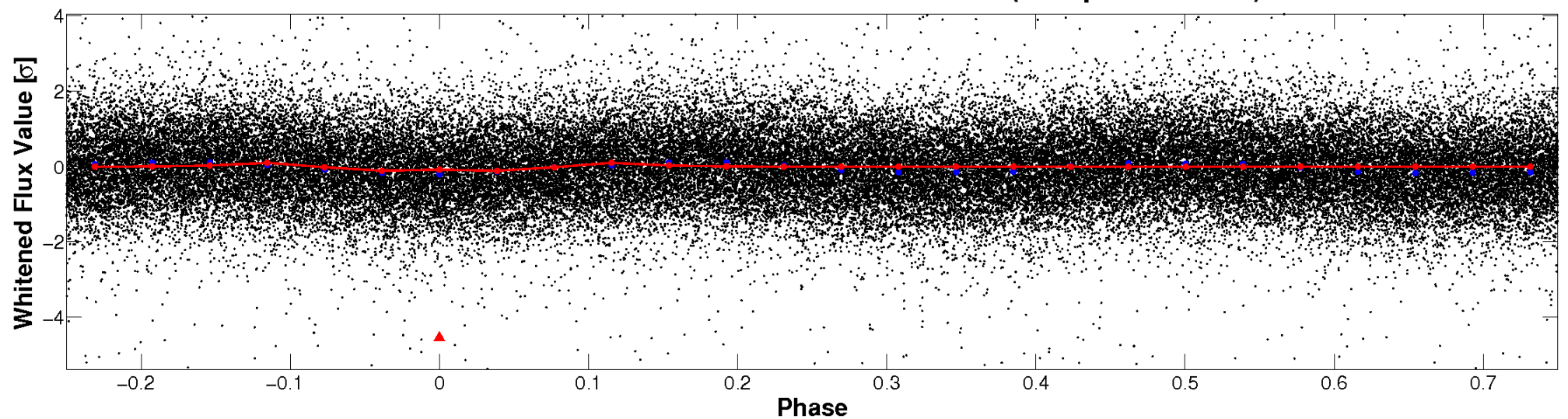


Non-Whitened Vs. Whitened Light Curve

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

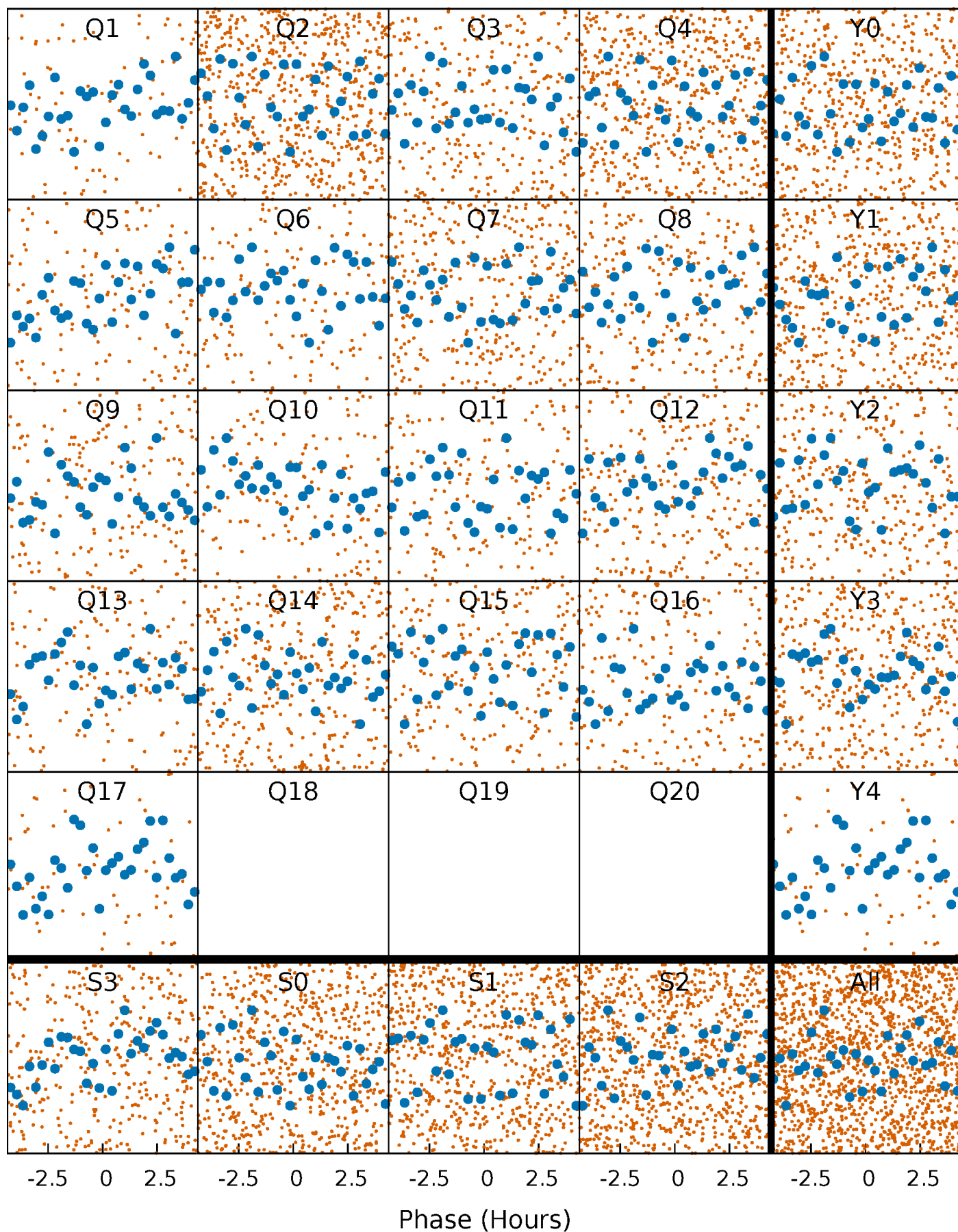


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



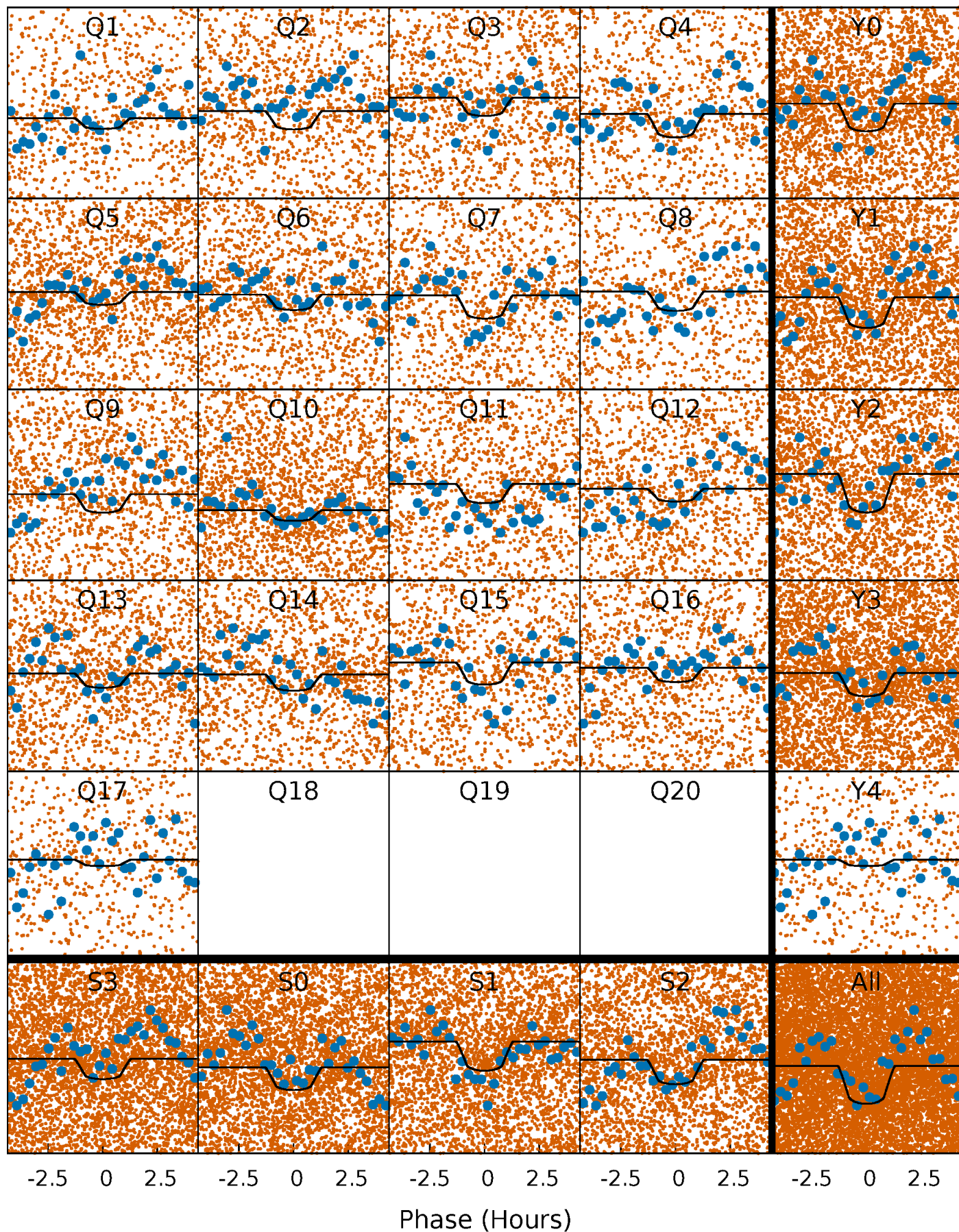
PDC Quarter-Phased Transit Curves

TCE 008782626-01 P= 0.530788 Days $T_0=131.650163$ (BKJD)



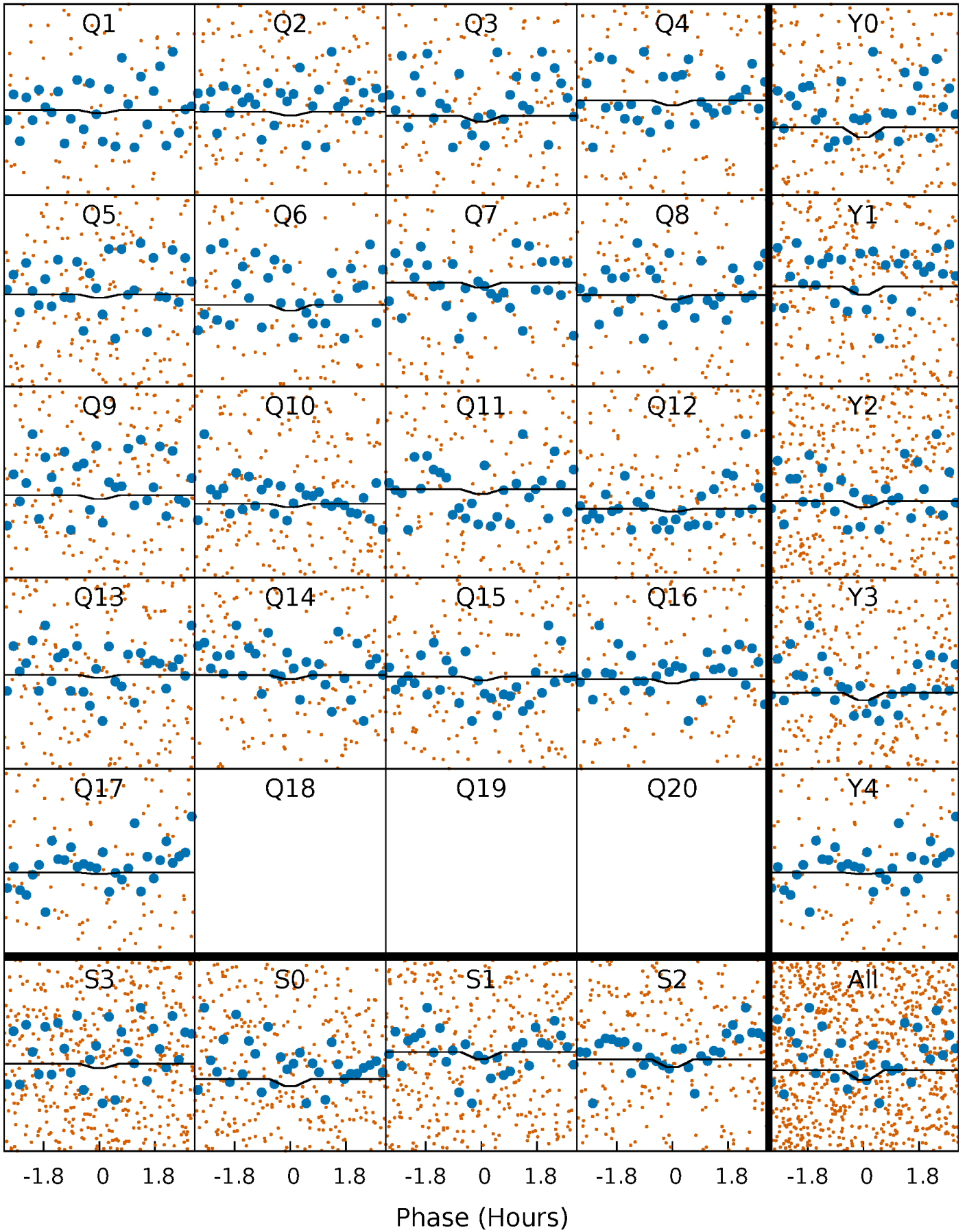
DV Quarter-Phased Transit Curves

TCE 008782626-01 P= 0.530788 Days $T_0=131.650163$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

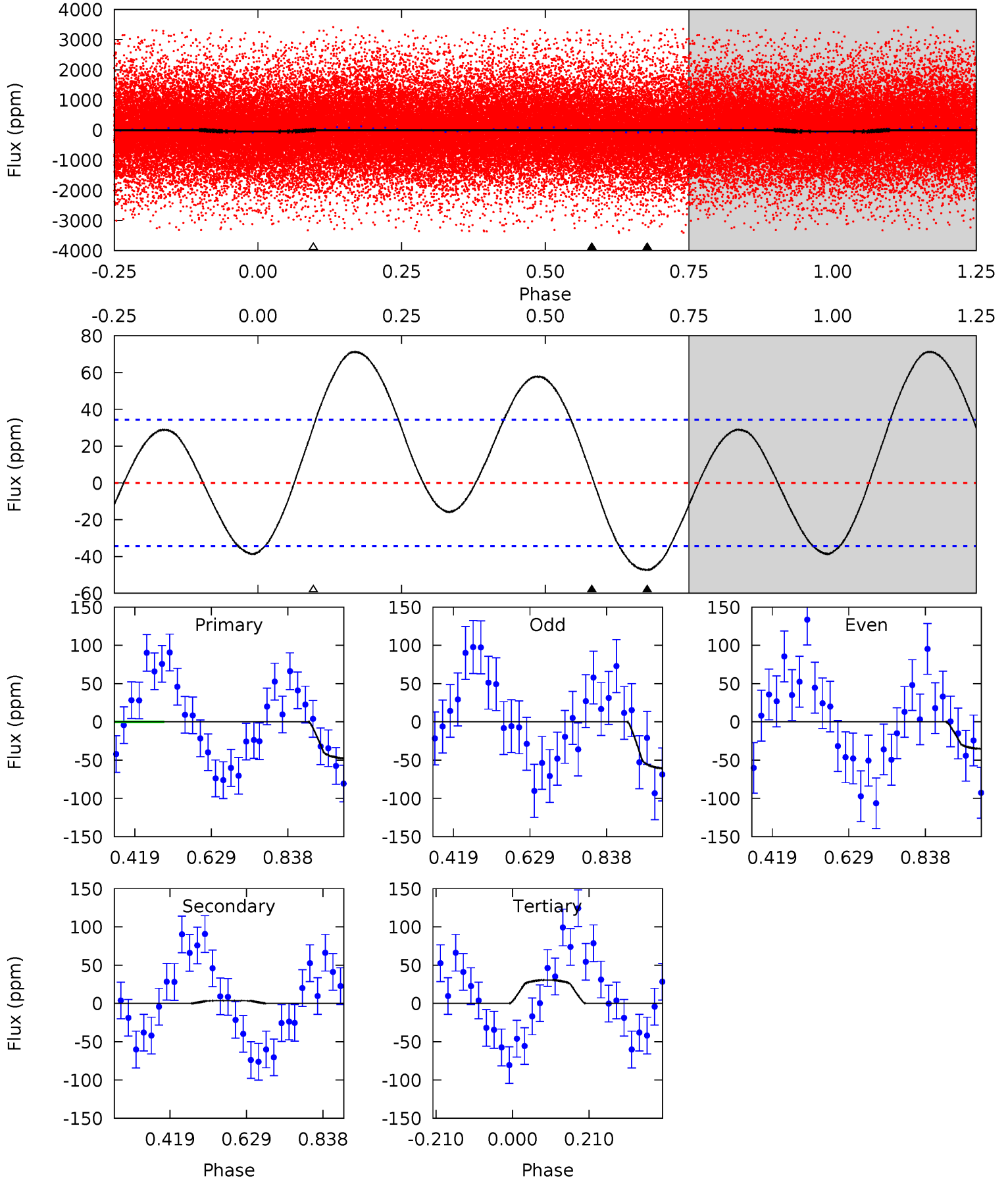
TCE 008782626-01 P= 0.530787 Days $T_0=131.642416$ (BKJD)



DV Model-Shift Uniqueness Test

008782626-01, P = 0.530788 Days, E = 131.119375 Days

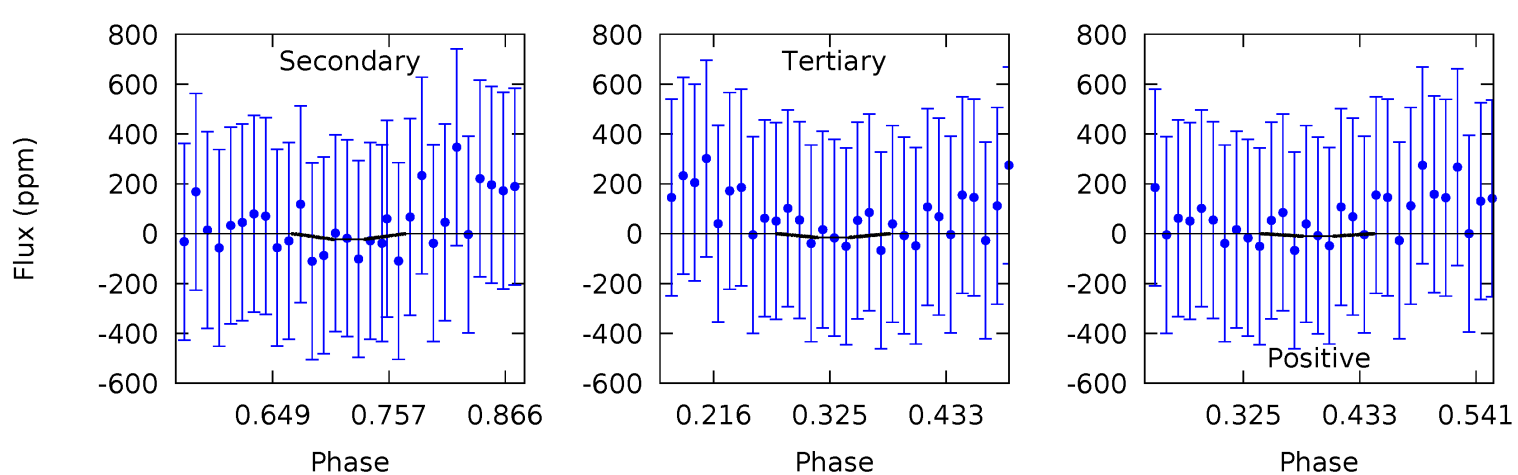
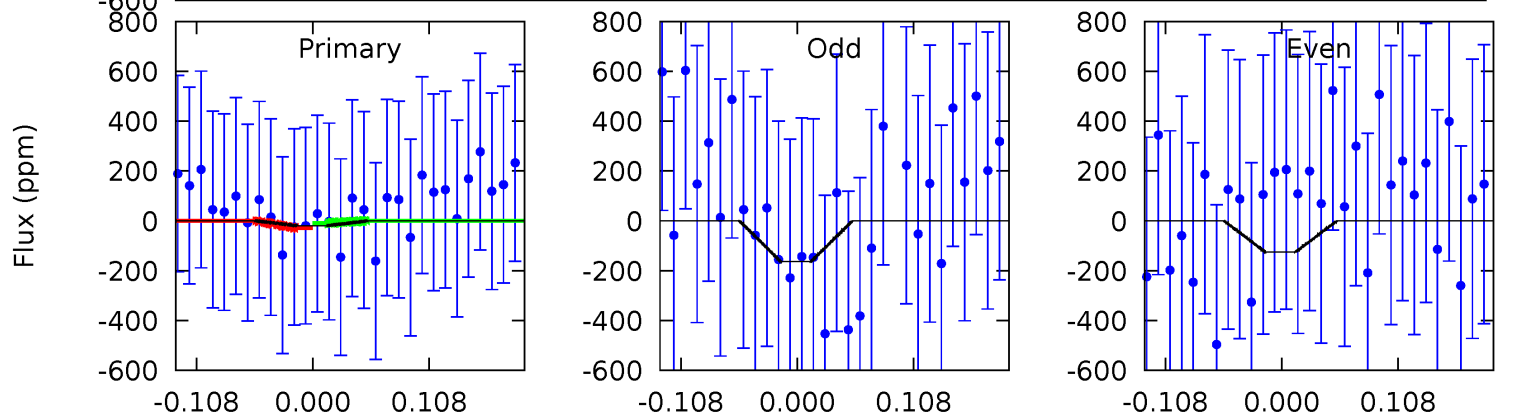
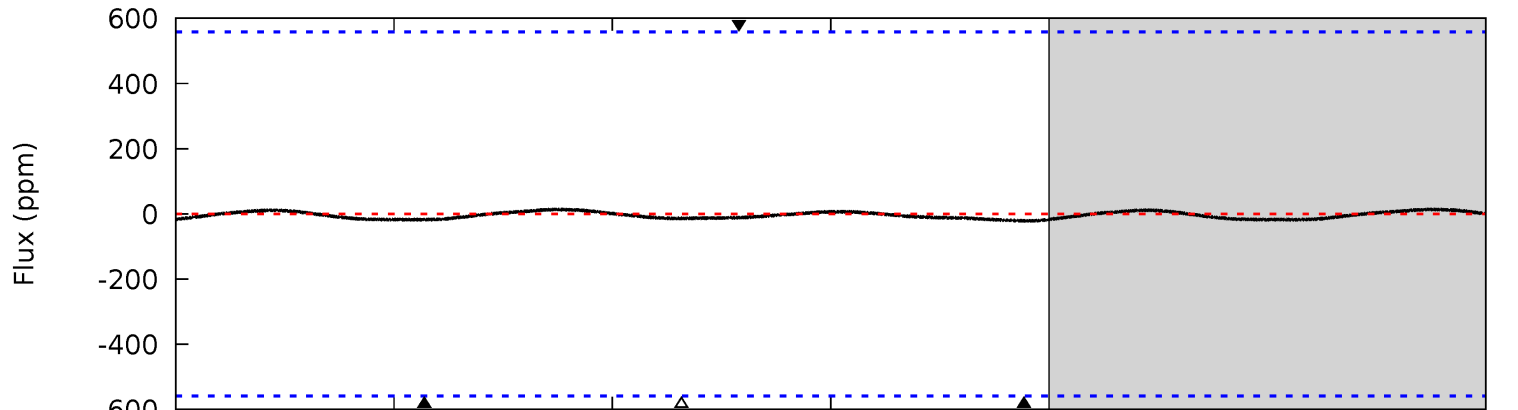
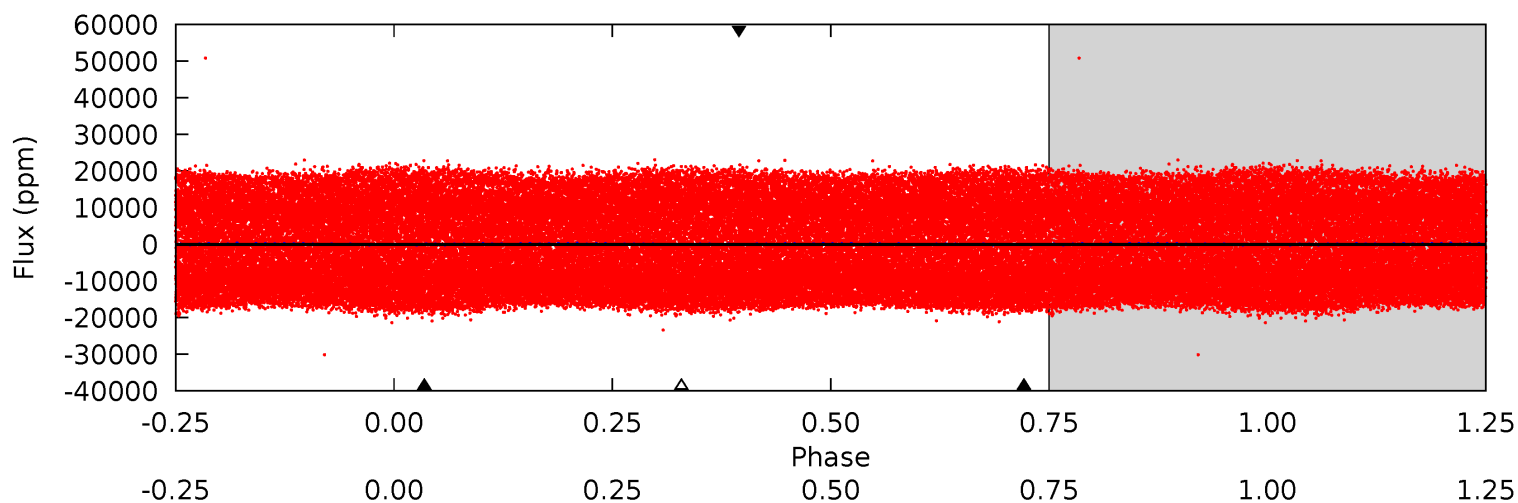
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.11	-0.48	-3.93	0	4.41	1.25	4.56	10.0	6.11	3.45	-0.48	1.64	1.04	0.60	0.68



Alt Model-Shift Uniqueness Test

008782626-01, P = 0.530787 Days, E = 131.111629 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.16	0.19	0.13	-0.08	4.55	1.61	0.07	0.03	0.24	0.06	0.27	0.16	0.06	0.39	0.08



Stellar Parameters For KIC 008782626

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6356^{+170}_{-189}	$3.724^{+0.616}_{-0.154}$	$-0.700^{+0.300}_{-0.300}$	$2.475^{+0.600}_{-1.401}$	$1.184^{+0.164}_{-0.304}$	$0.110^{+0.981}_{-0.049}$
	+3%/-3%	+17%/-4%	+43%/-43%	+24%/-57%	+14%/-26%	+892%/-45%
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 008782626-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	4 ± 8	$2.28^{+0.82}_{-0.76}$	5158^{+481}_{-824}	-4620^{+667}_{-405}	$-0.065^{+0.140}_{-0.207}$
Alt.	-23 ± 123	$1.85^{+0.69}_{-0.56}$	5130^{+469}_{-751}	4844^{+3706}_{-12120}	$0.768^{+4.391}_{-3.365}$

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 $A_{obs} \gg 1.0$

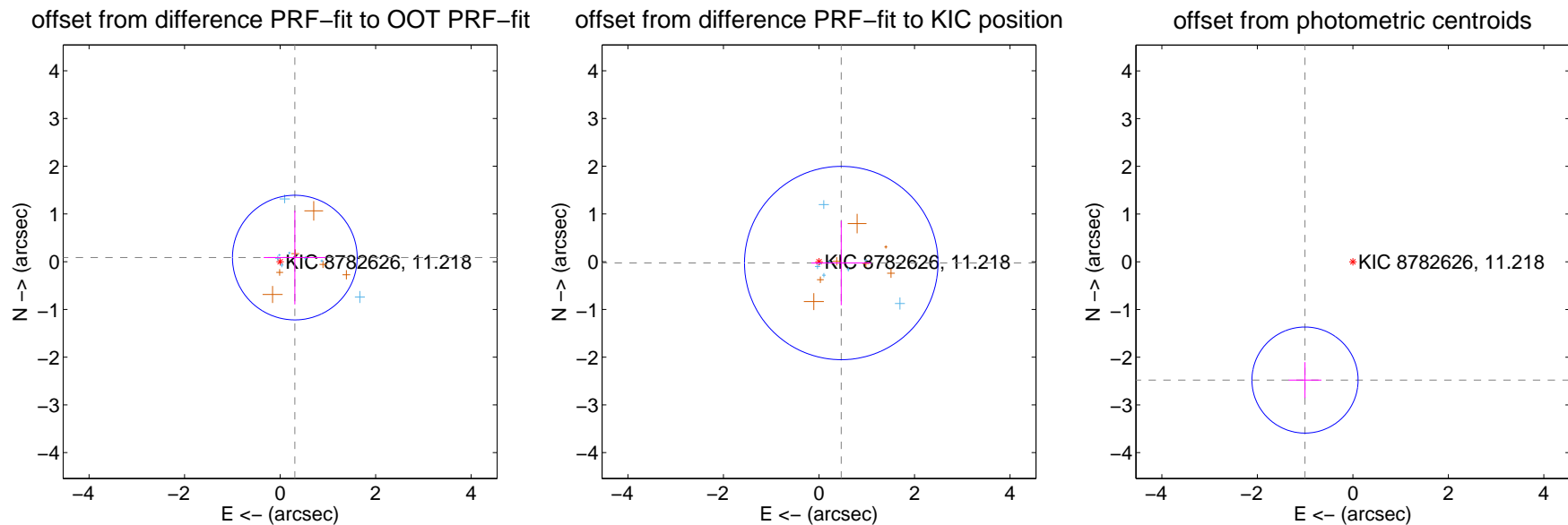
DV Centroid Data

Supplemental centroid analysis for 008782626-01. **Kepler magnitude: 11.22.** Transit SNR 13.54

There are 8 quarters with good PRF difference image offsets

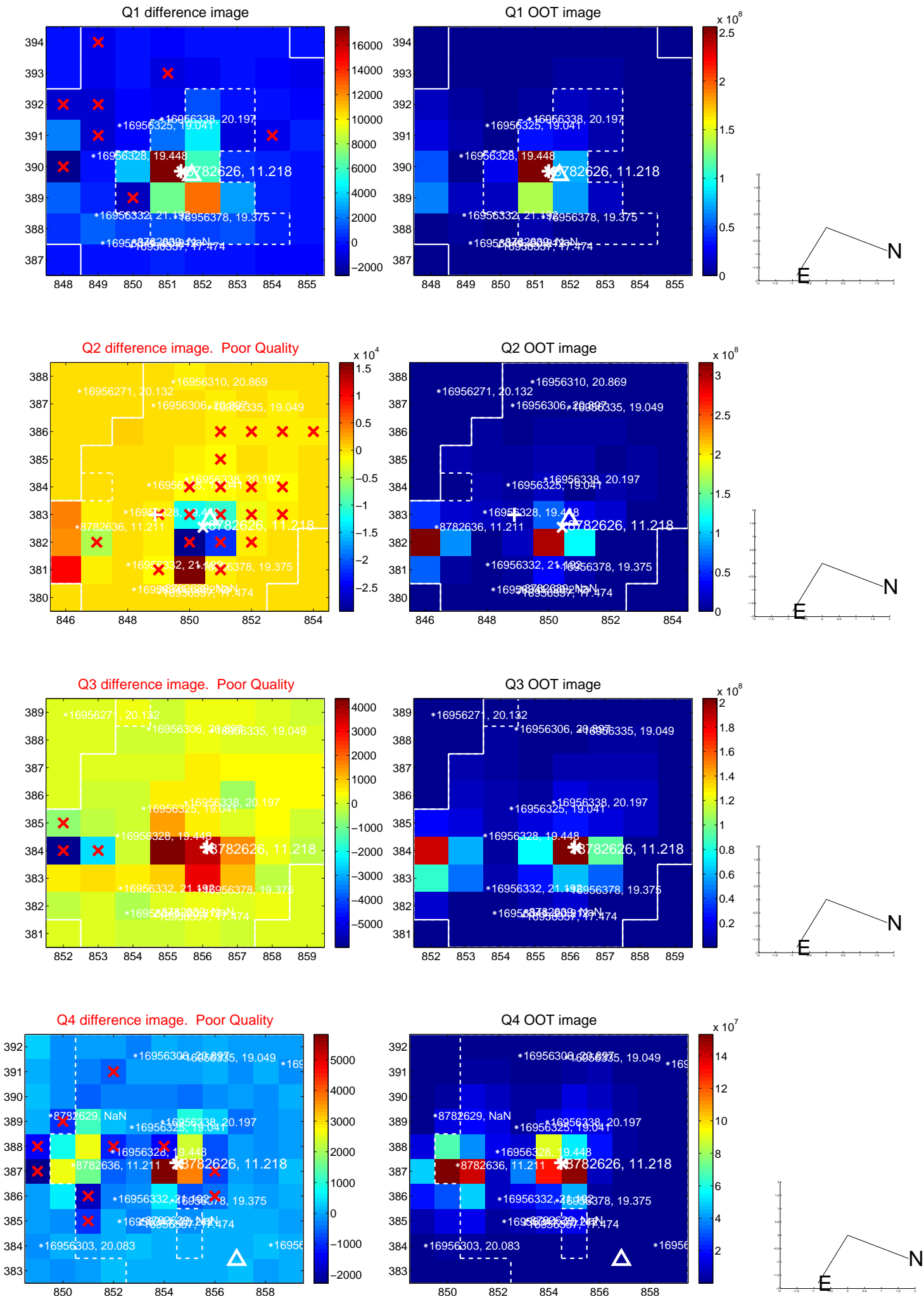
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.320 ± 0.435	0.74	-0.308 ± 0.652	0.086 ± 0.983
PRF-fit source offset from KIC position	0.467 ± 0.675	0.69	-0.466 ± 0.626	-0.028 ± 0.885
photometric centroid source offset	2.67 ± 0.37	7.22	1.00 ± 0.34	-2.48 ± 0.37

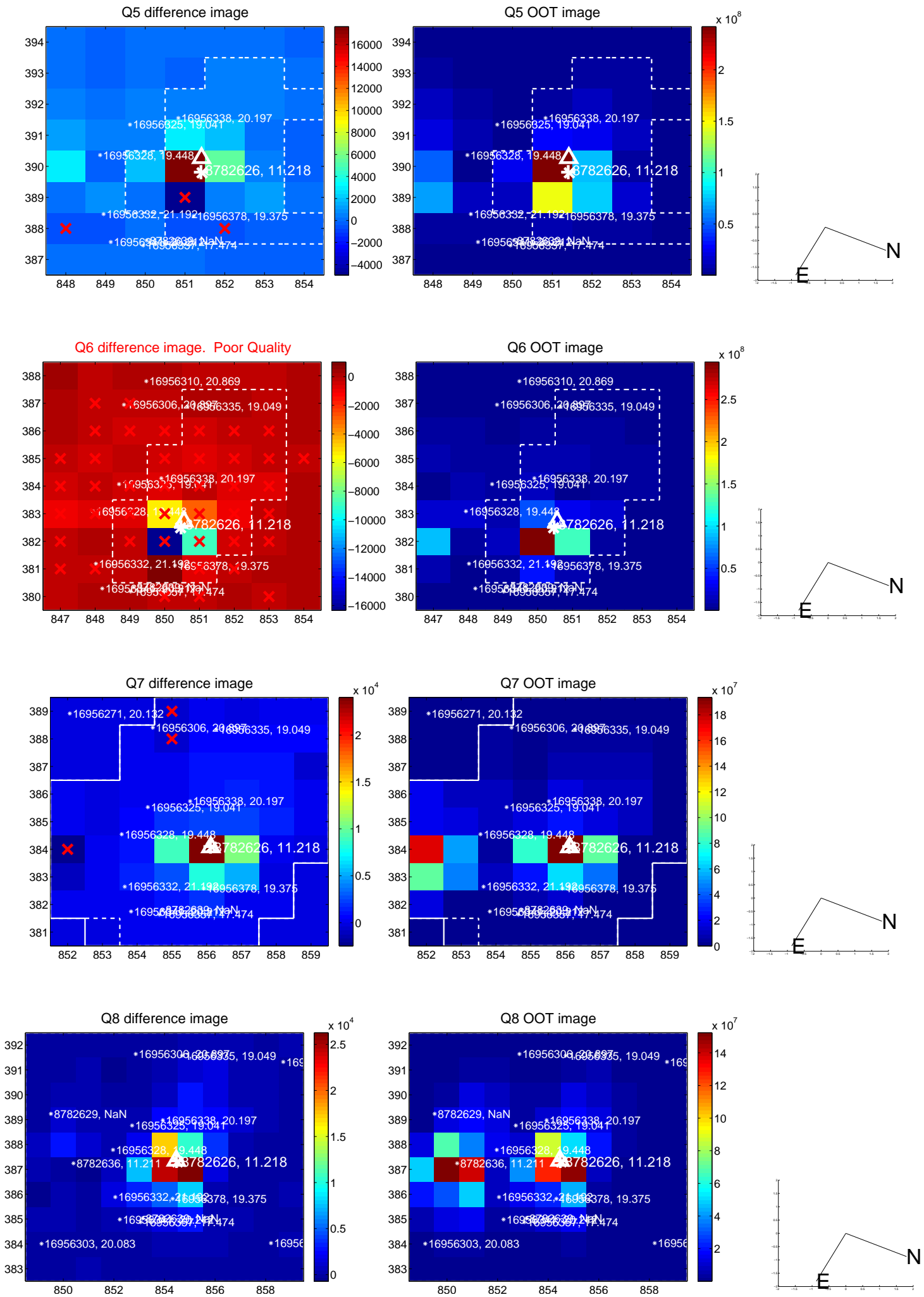


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

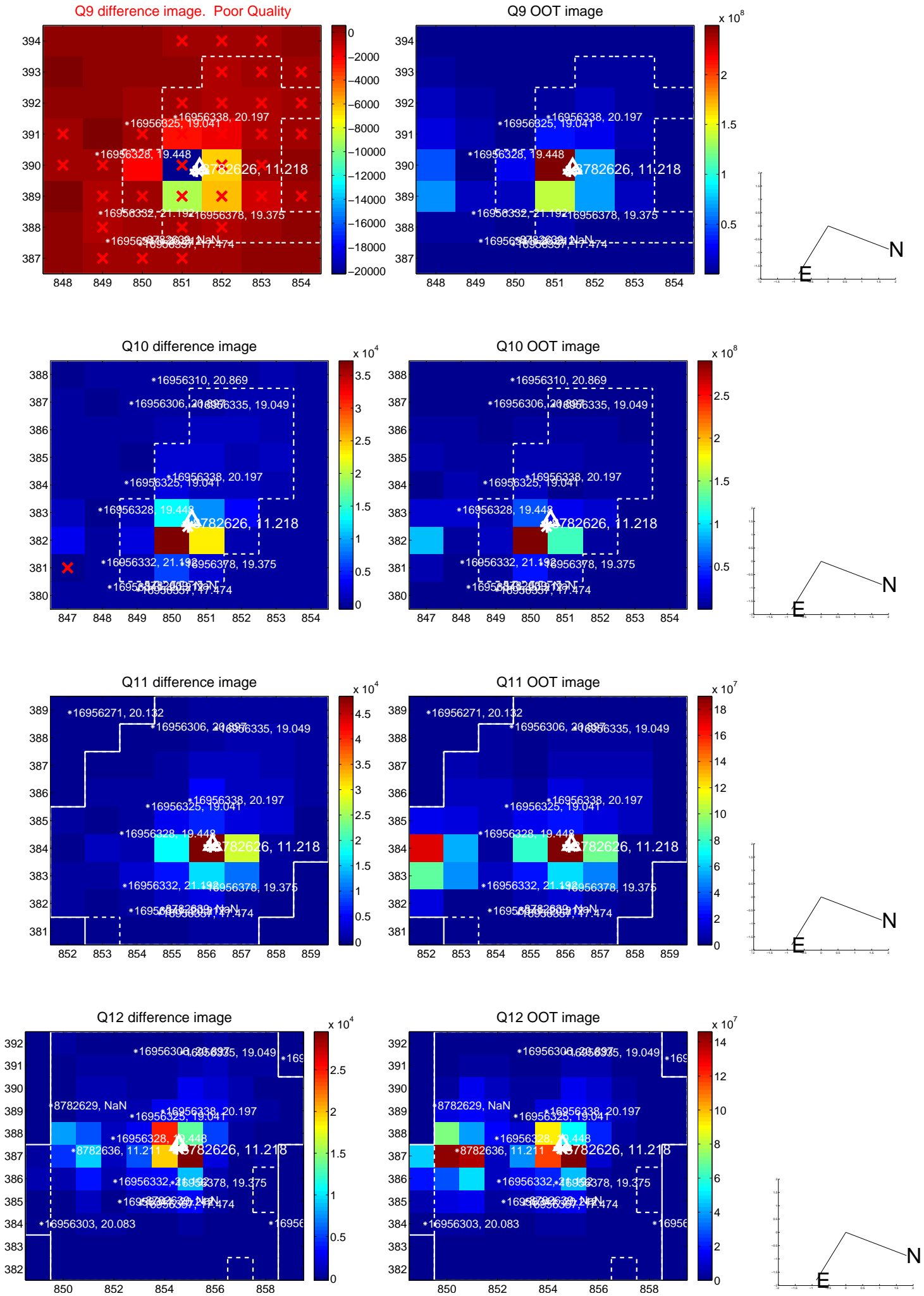
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



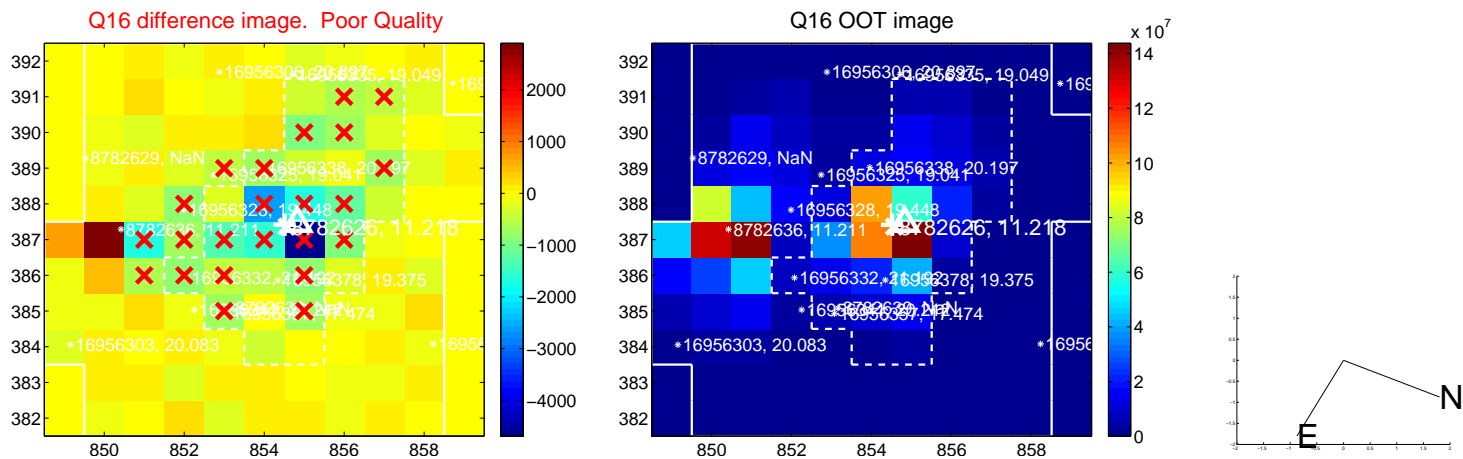
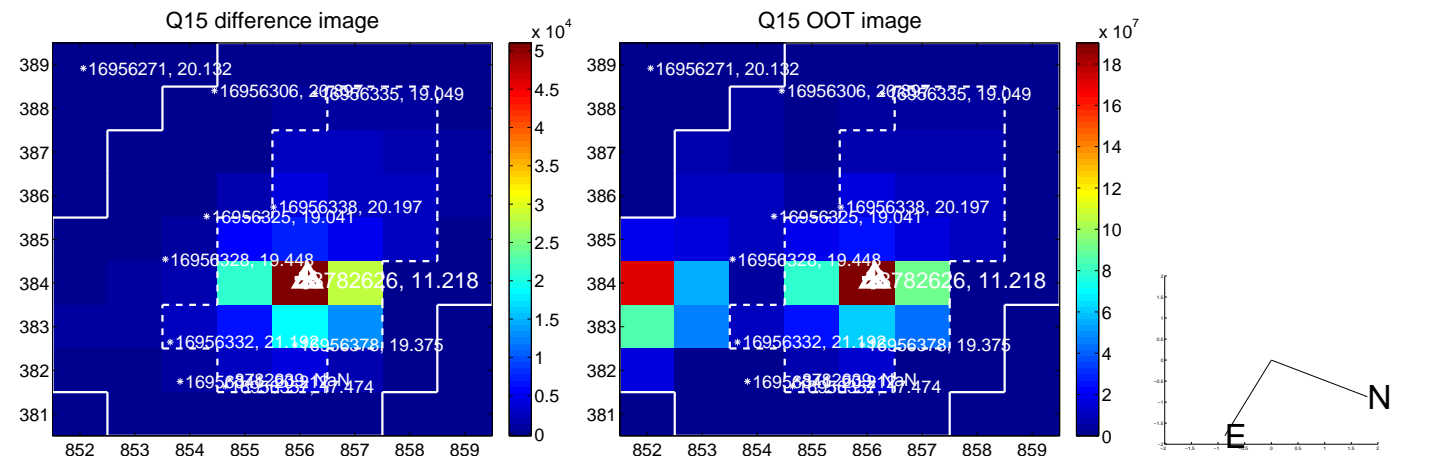
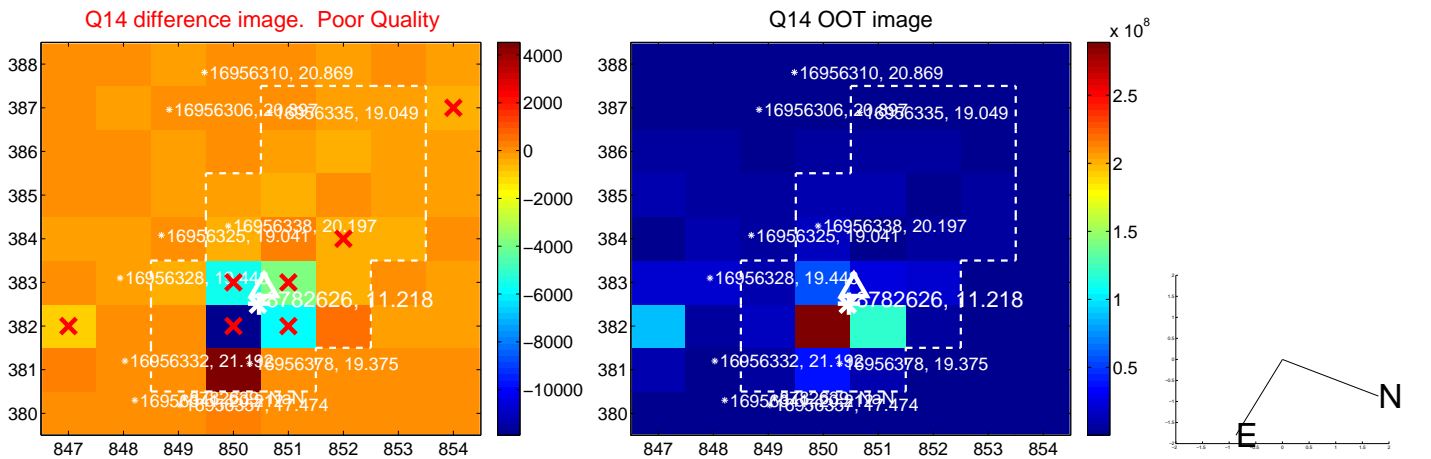
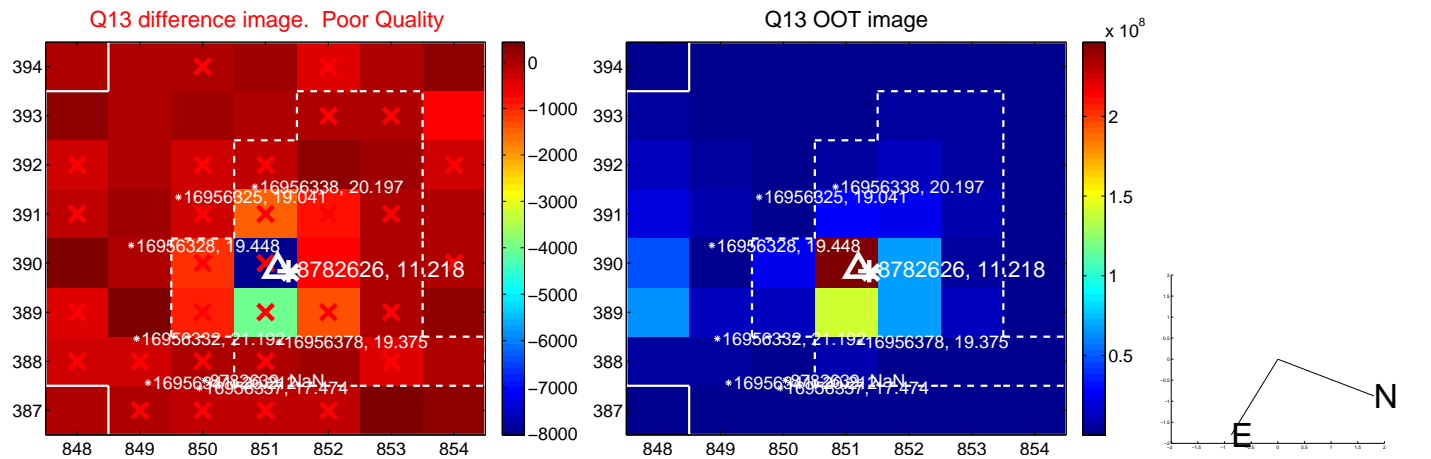
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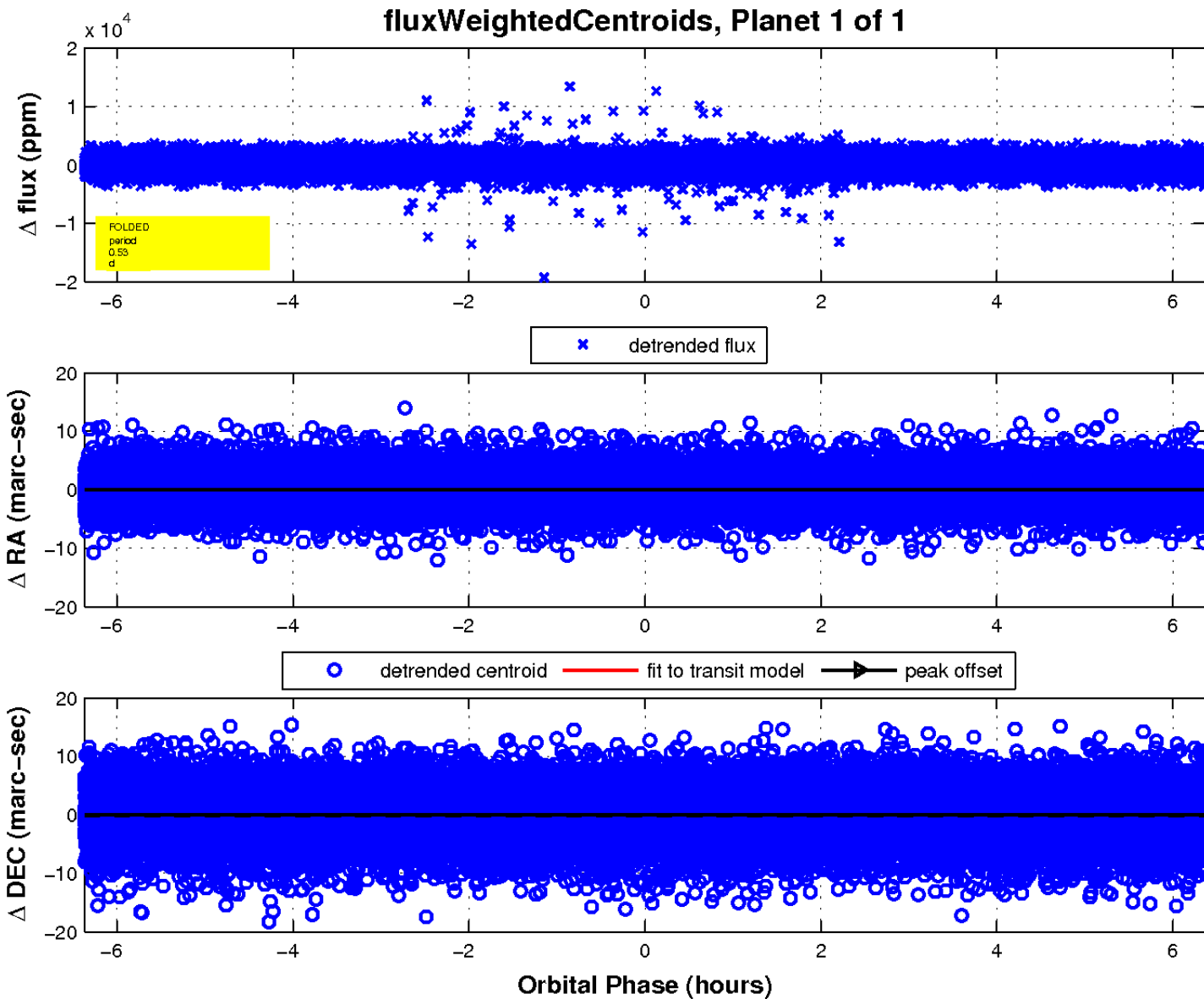
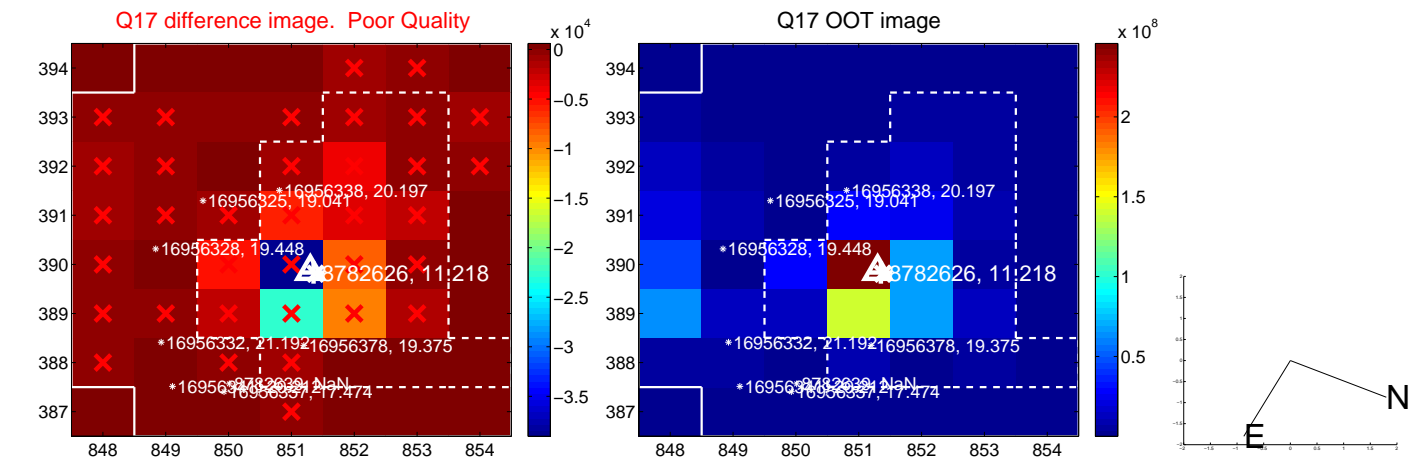
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UKIRT Image

Declination

