

KIC 008652939

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})
008652939-01	OBS	No	1.742951	132.428816	27.8	4.821	8.0	10.5	3.00	6468	1.66	13175.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008652939-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

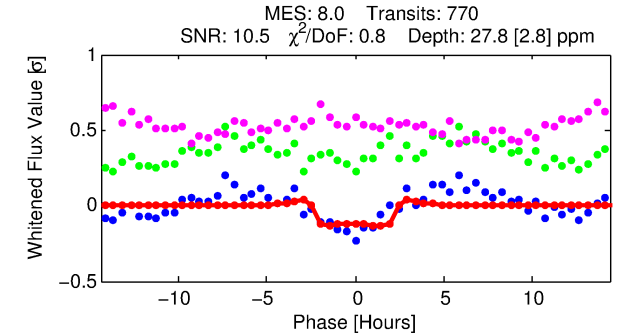
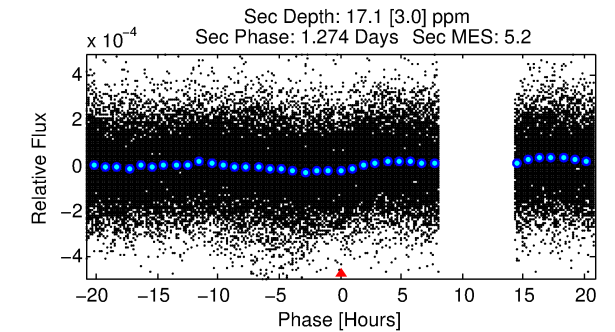
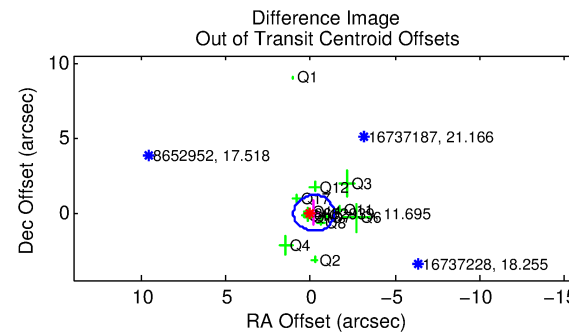
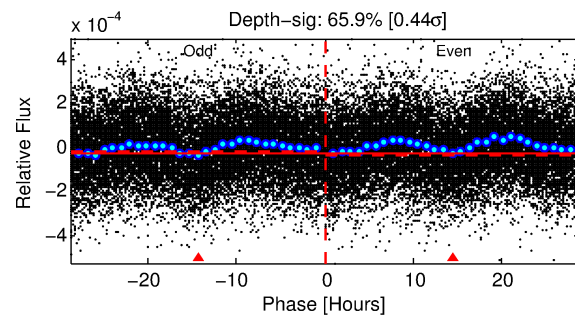
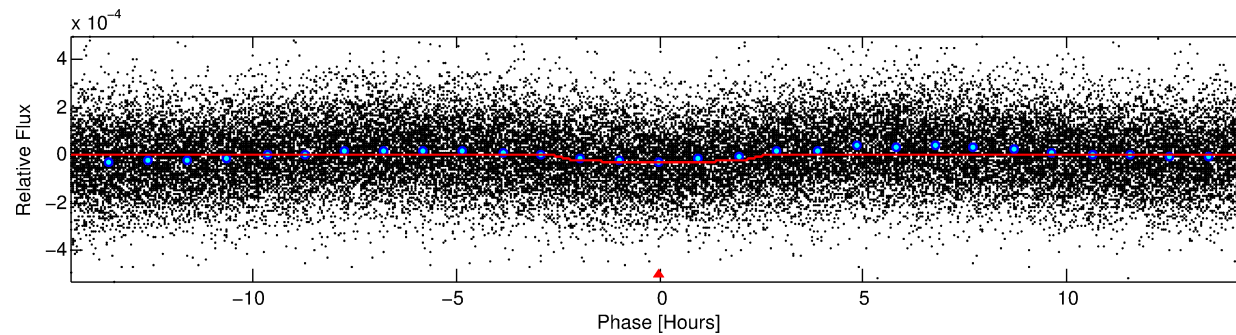
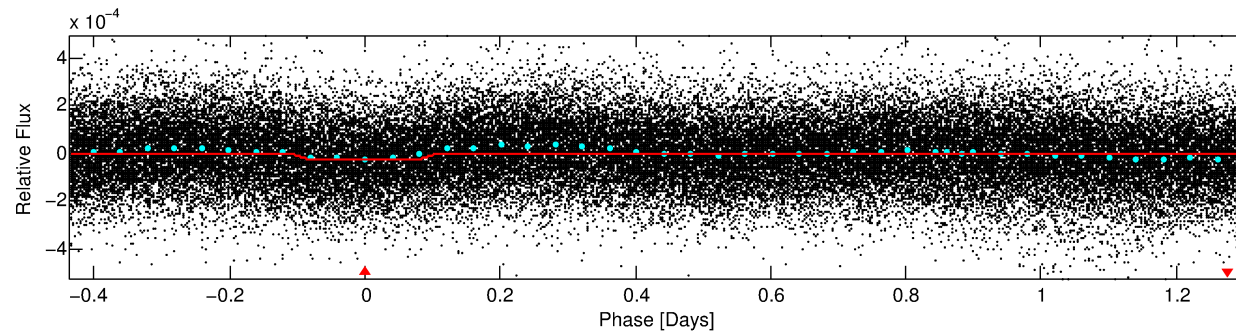
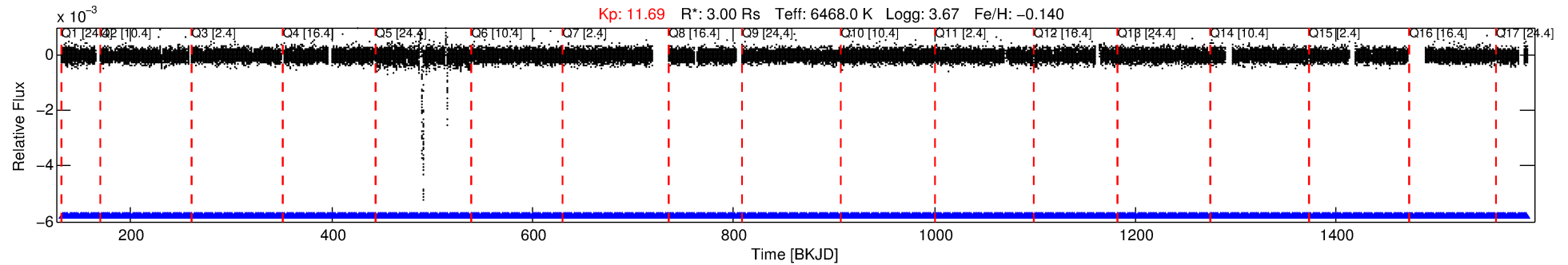
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008652939-01

No Significant Match Found

DV One-Page Summary

KIC: 8652939 Candidate: 1 of 1 Period: 1.743 d



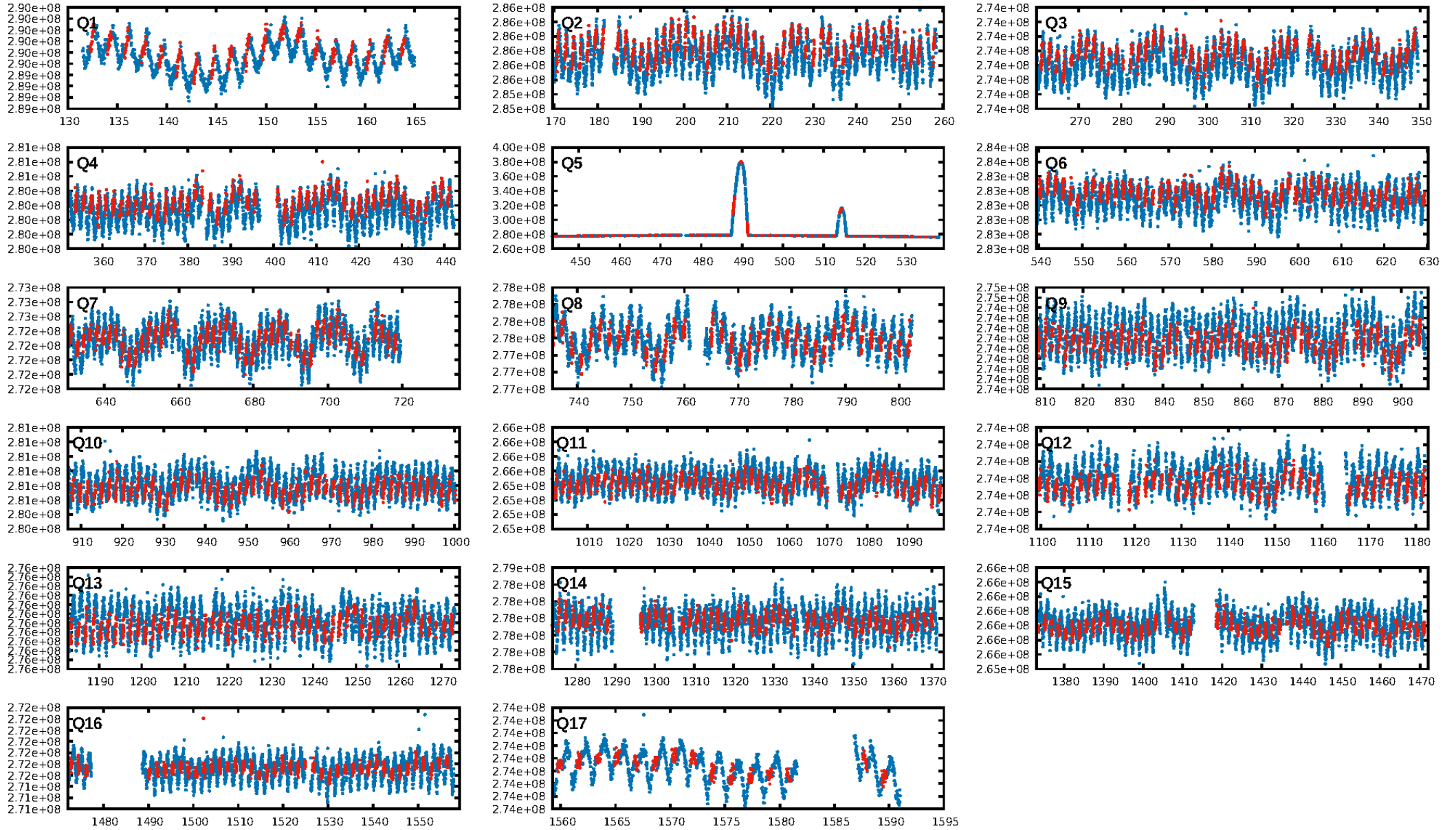
DV Fit Results:

Period = 1.74295 [0.00001] d
Epoch = 132.4288 [0.0033] BKJD
Rp/R* = 0.0051 [0.0009]
a/R* = 2.34 [1.67]
b = 0.61 [0.91]
Seff = 13175.63 [12349.30]
Teq = 2732 [640] K
Rp = 1.66 [0.98] Re
a = 0.0327 [0.0185] AU
Ag = 3.64 [3.65] [0.72 σ]
Teffp = 5835 [591] K [3.56 σ]

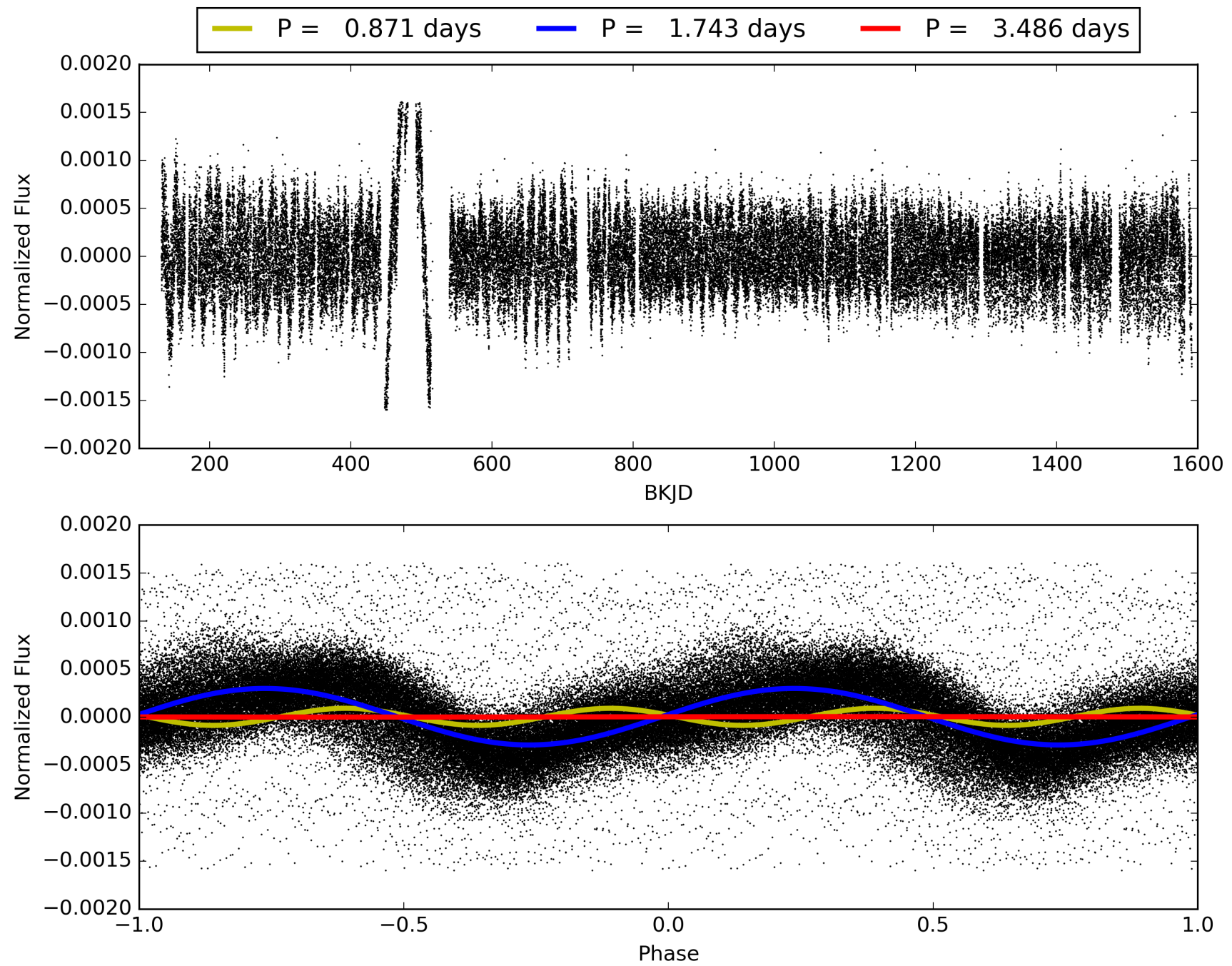
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.57e-12
RollingBand-fgt: 1.00 [736/736]
GhostDiagnostic-chr: 4.707
Centroid-sig: 18.3%
Centroid-so: 1.298 arcsec [1.24 σ]
OotOffset-rm: 0.195 arcsec [0.49 σ]
KicOffset-rm: 0.196 arcsec [0.33 σ]
OotOffset-st: 4/3/4/2 [13]
KicOffset-st: 4/3/4/2 [13]
DiffImageQuality-fgm: 0.46 [6/13]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008652939-01, PDC Light Curves

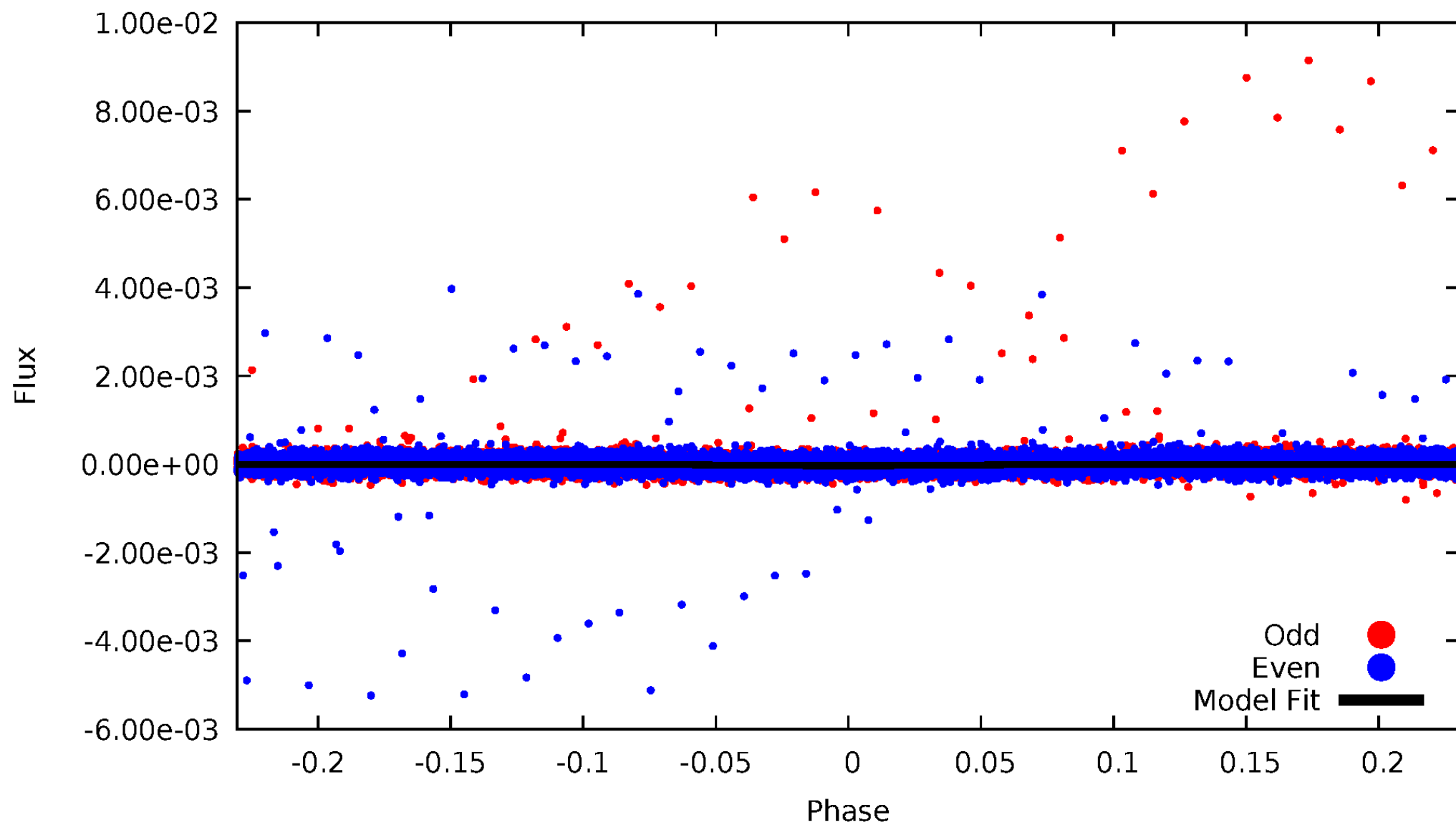


TCE 008652939-01



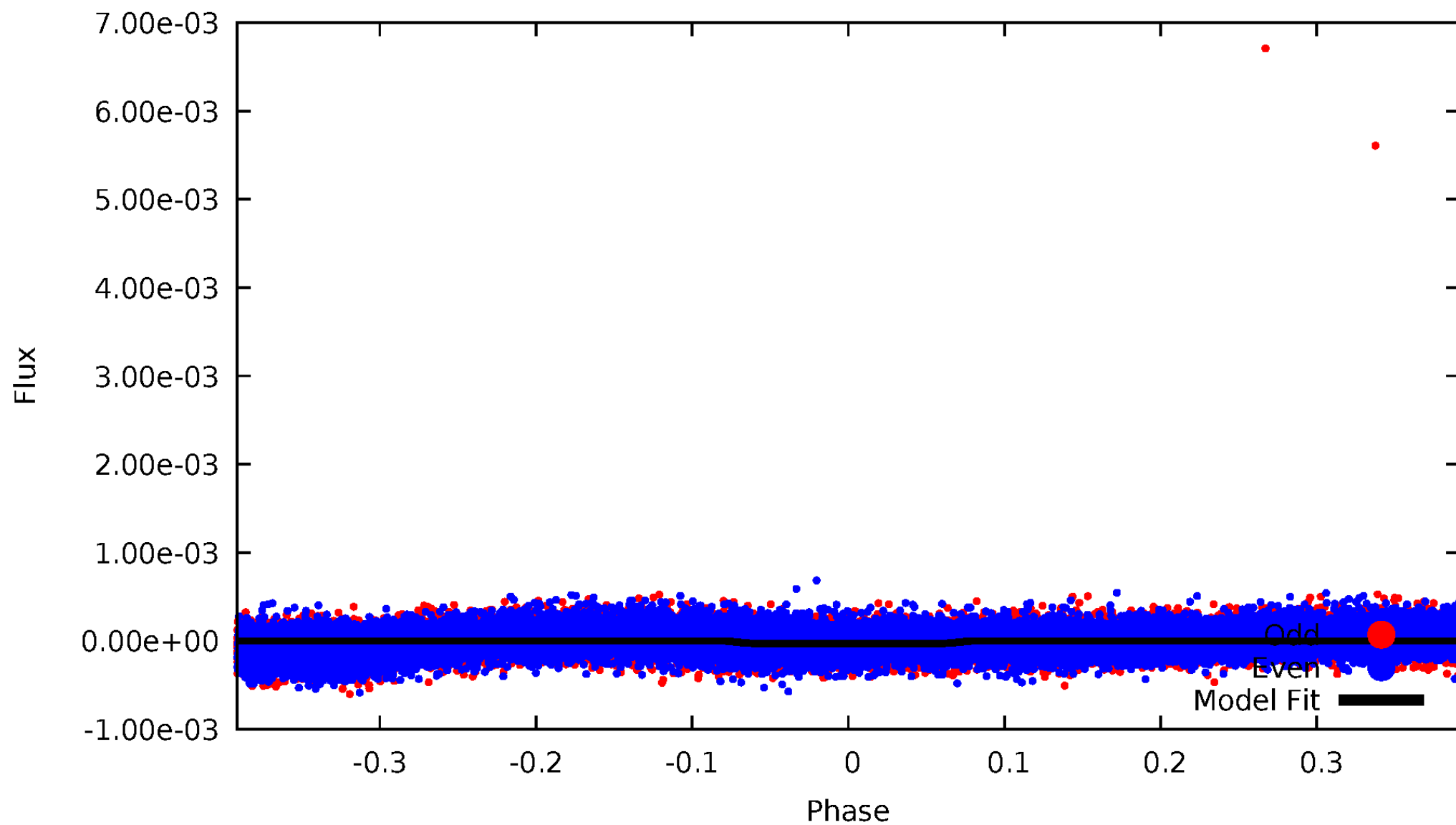
DV Odd/Even

TCE 008652939-01



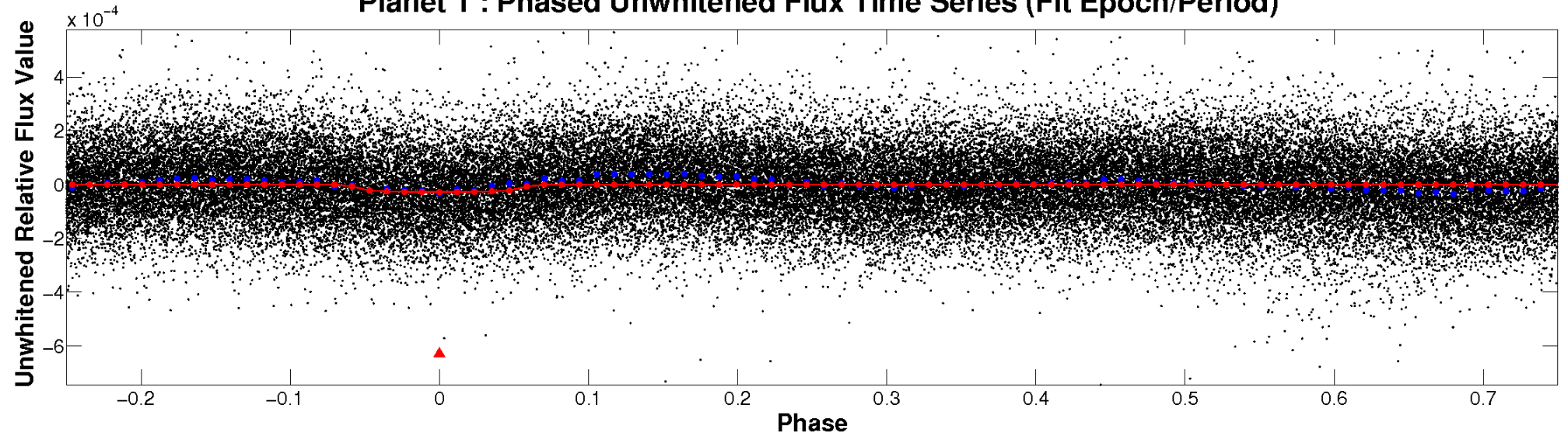
ALT Odd/Even

TCE 008652939-01

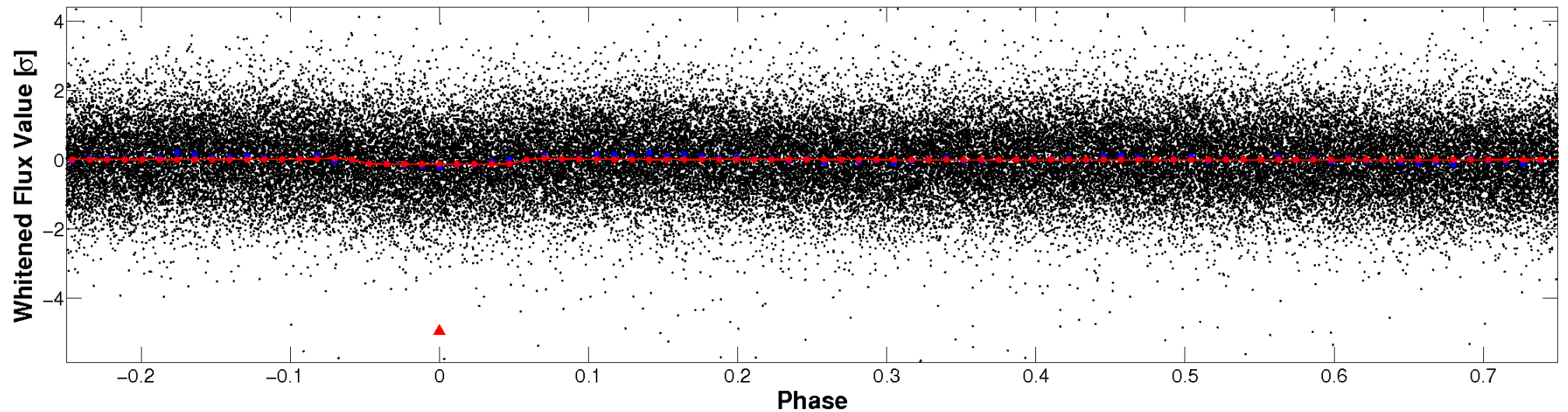


Non-Whitened Vs. Whitened Light Curve

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

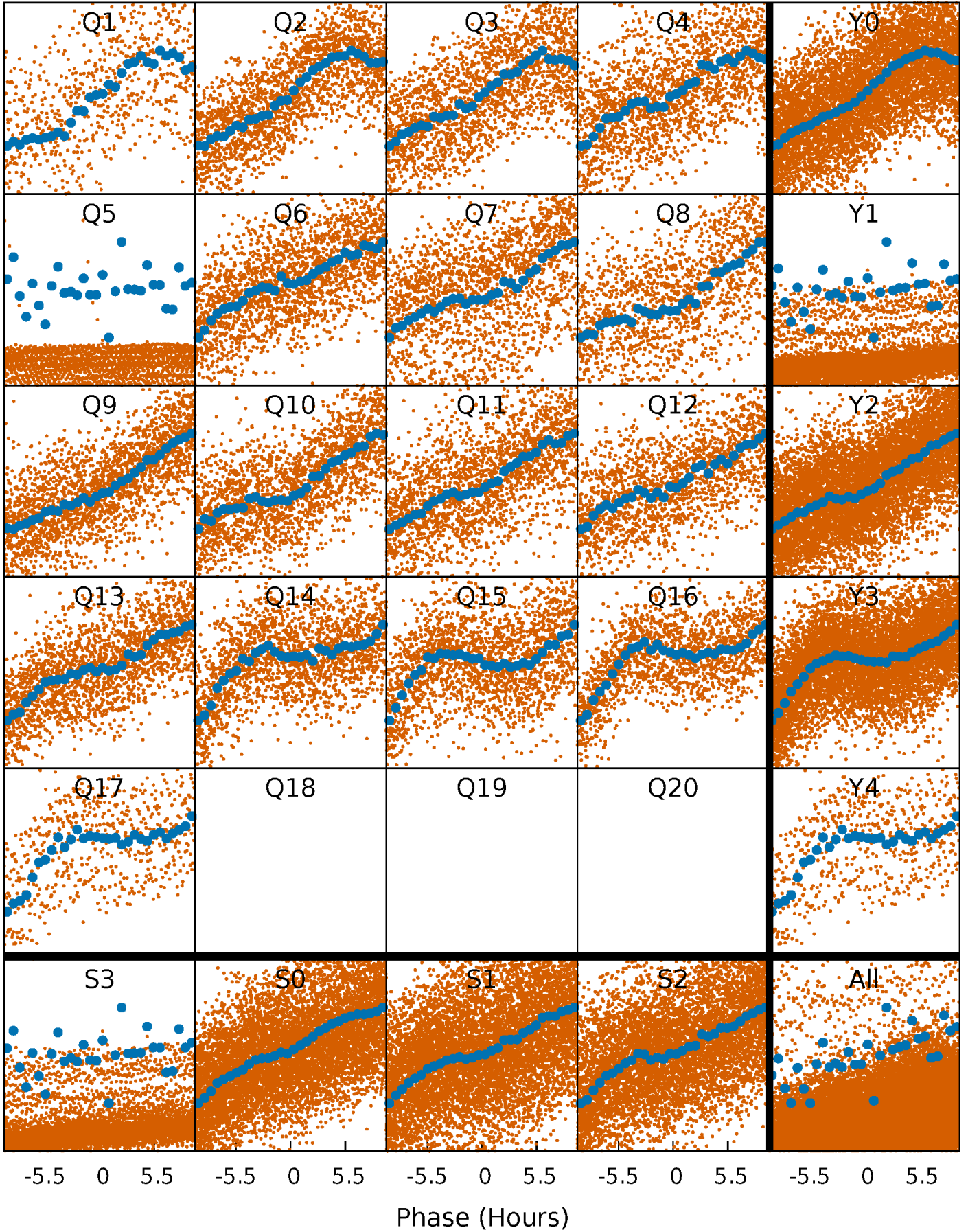


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



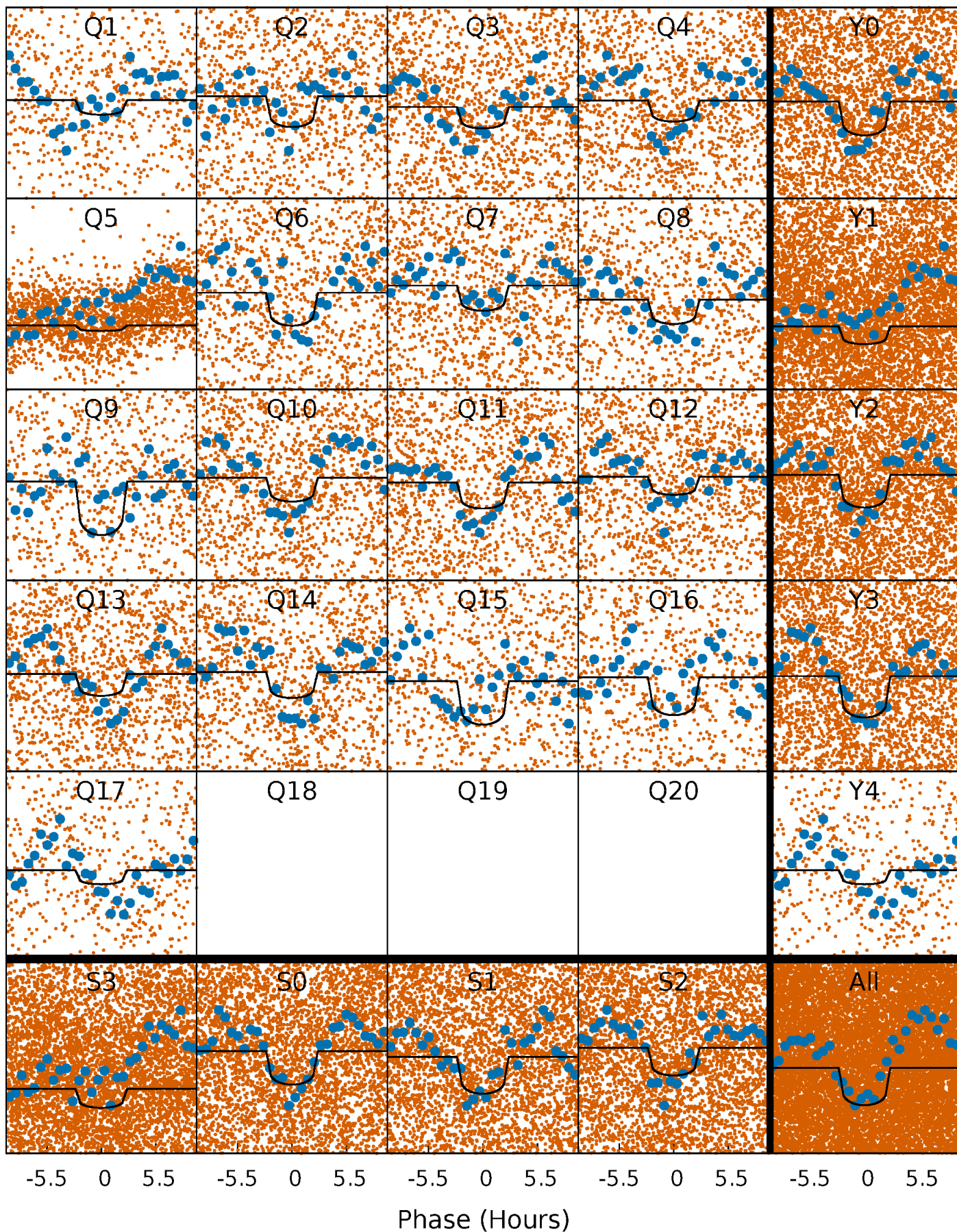
PDC Quarter-Phased Transit Curves

TCE 008652939-01 P= 1.742951 Days $T_0=132.428816$ (BKJD)



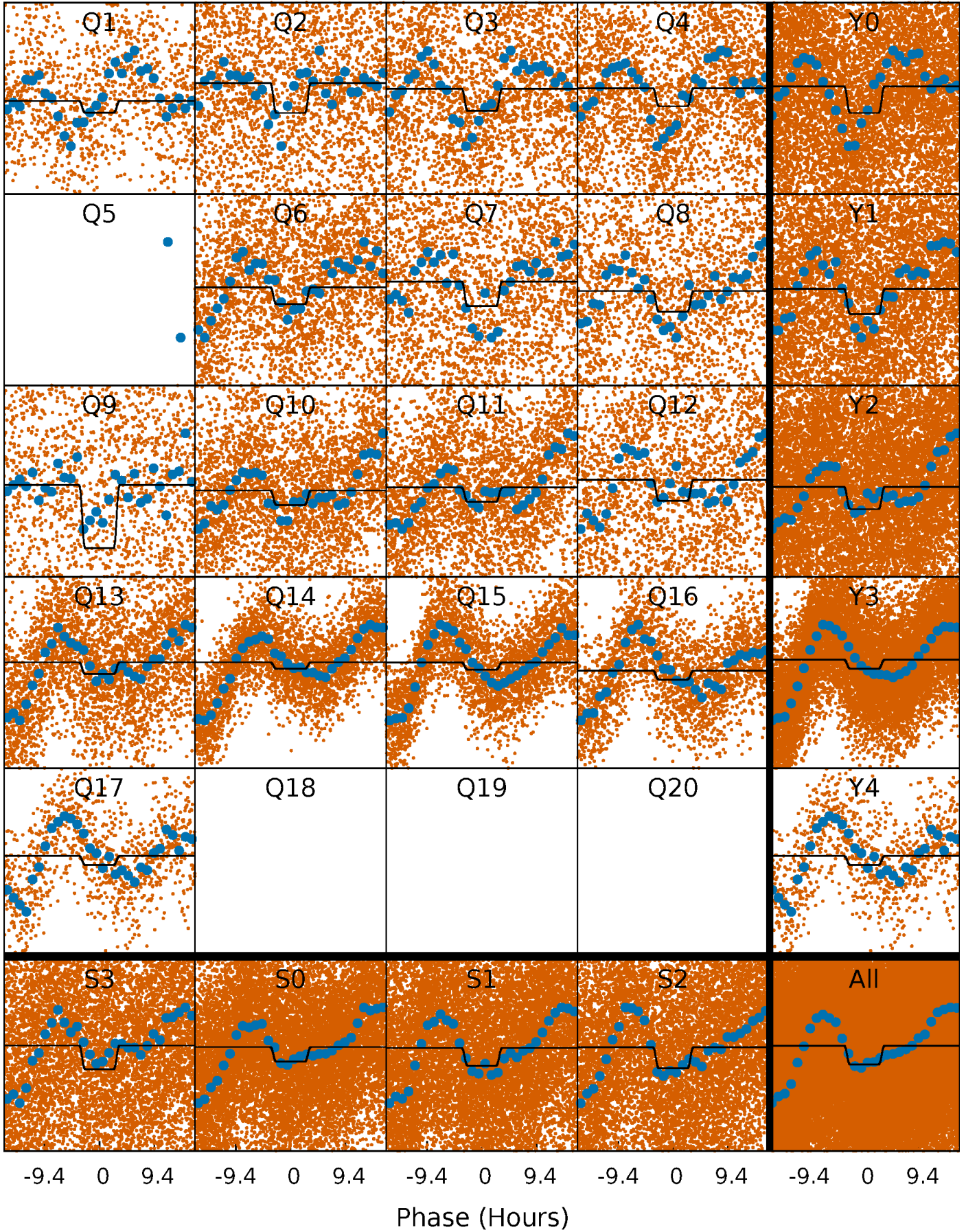
DV Quarter-Phased Transit Curves

TCE 008652939-01 P= 1.742951 Days $T_0=132.428816$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

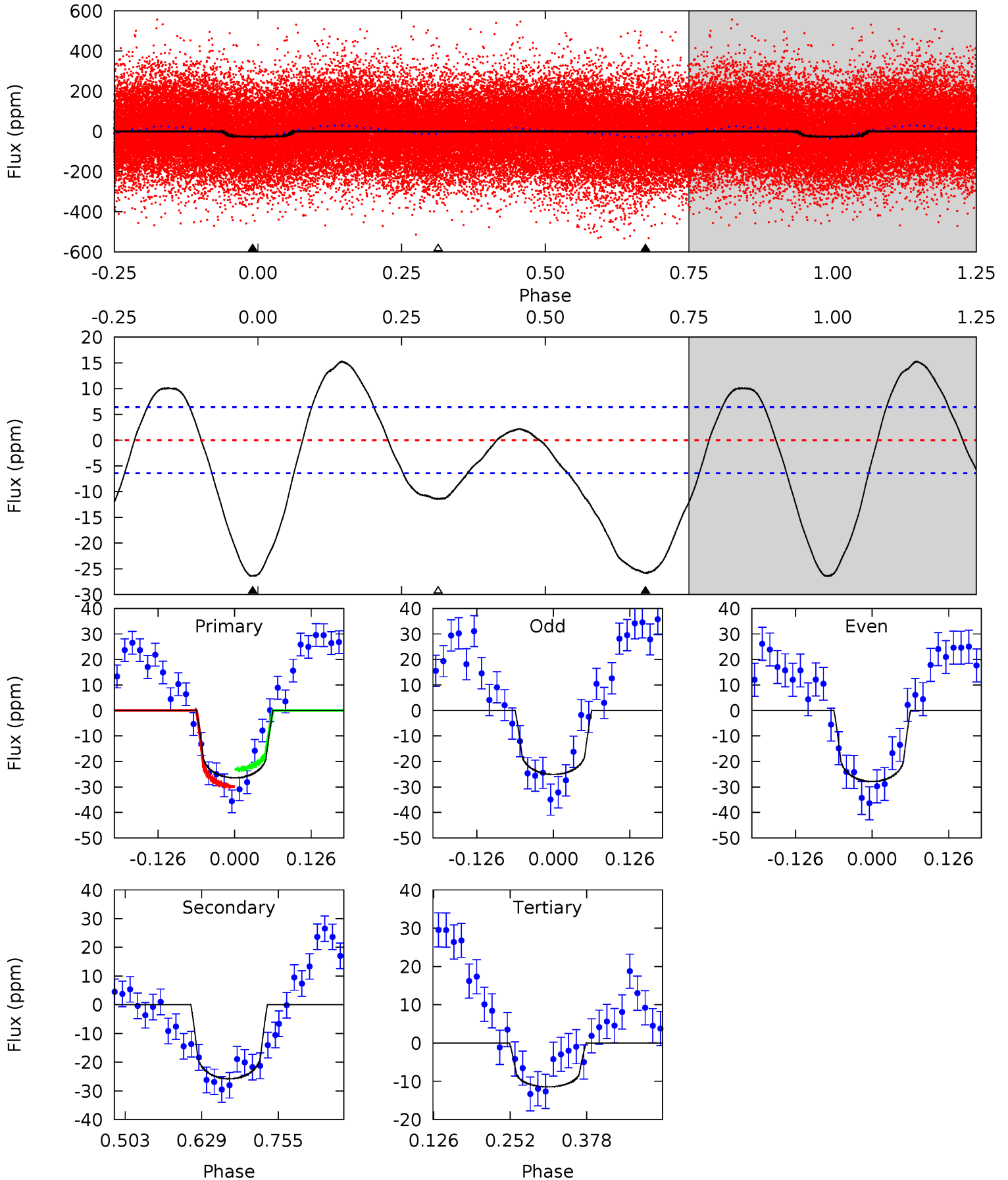
TCE 008652939-01 P= 1.742989 Days $T_0=132.482434$ (BKJD)



DV Model-Shift Uniqueness Test

008652939-01, P = 1.742951 Days, E = 130.685865 Days

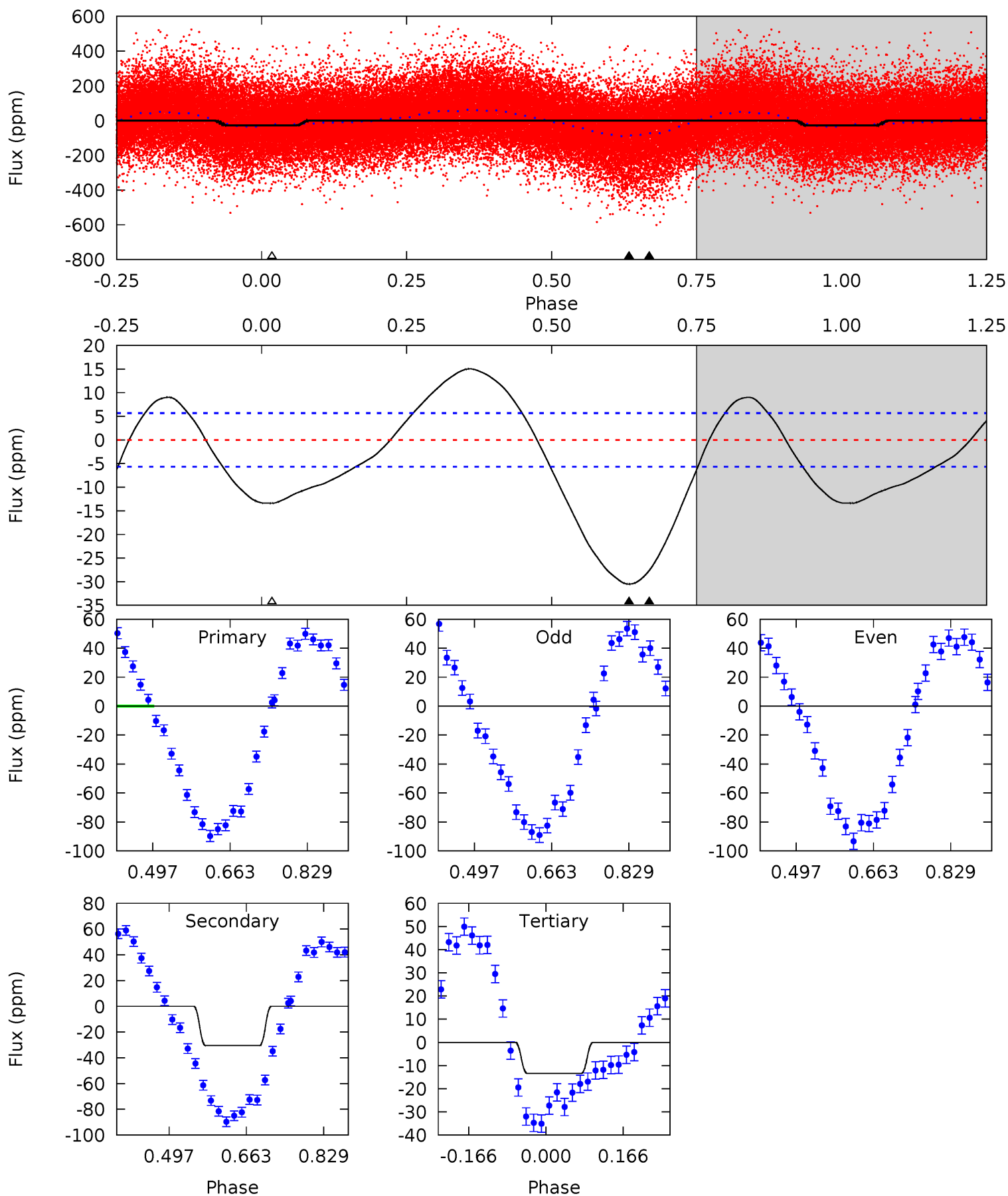
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.6	18.2	8.07	0	4.52	1.53	5.75	10.6	18.6	10.1	18.2	0.99	0.76	0.37	2.36



Alt Model-Shift Uniqueness Test

008652939-01, P = 1.742989 Days, E = 130.739445 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.7	23.9	10.5	0	4.46	1.39	7.39	11.2	21.7	13.4	23.9	1.08	1.00	0.33	1.74



Stellar Parameters For KIC 008652939

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6468^{+182}_{-228}	$3.671^{+0.552}_{-0.097}$	$-0.140^{+0.300}_{-0.300}$	$3.001^{+0.528}_{-1.688}$	$1.541^{+0.221}_{-0.411}$	$0.080^{+0.621}_{-0.023}$
	+3%/-4%	+15%/-3%	+214%/-214%	+18%/-56%	+14%/-27%	+773%/-29%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 008652939-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-26 ± 1	$1.50^{+0.46}_{-0.45}$	3687^{+301}_{-546}	6375^{+759}_{-559}	$6.885^{+6.543}_{-2.790}$
Alt.	-31 ± 1	$1.62^{+0.42}_{-0.48}$	3698^{+268}_{-545}	6452^{+650}_{-513}	$6.876^{+6.281}_{-2.438}$

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 $A_{\text{obs}} \gg 1.0$

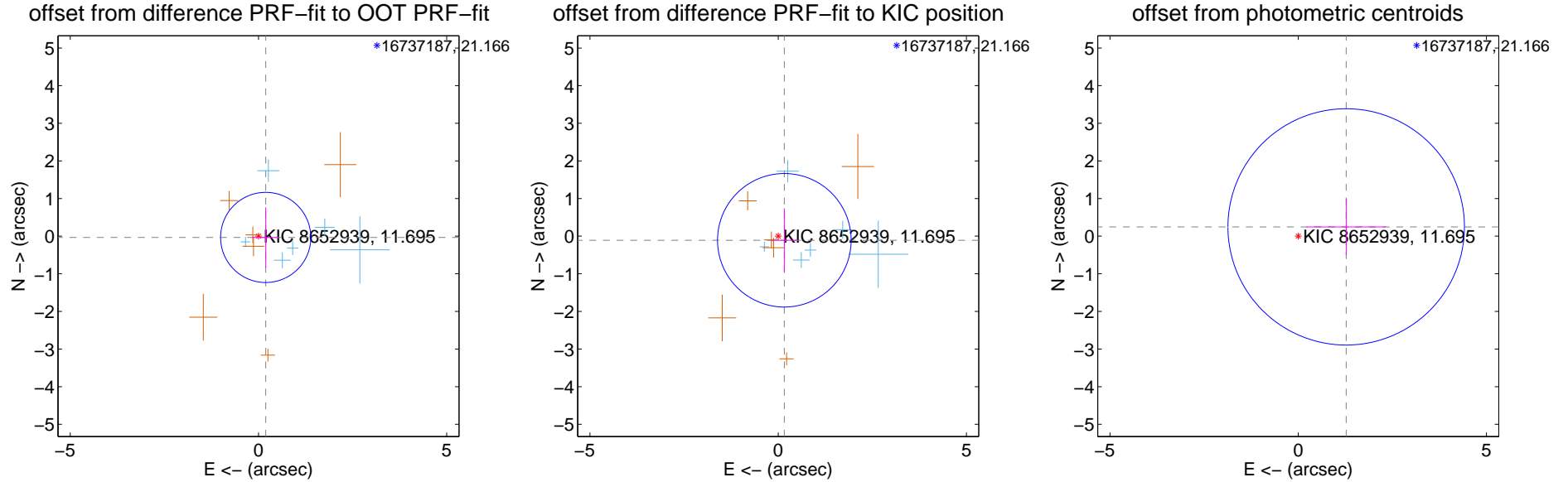
DV Centroid Data

Supplemental centroid analysis for 008652939-01. **Kepler magnitude: 11.70.** Transit SNR 10.55

There are 6 quarters with good PRF difference image offsets

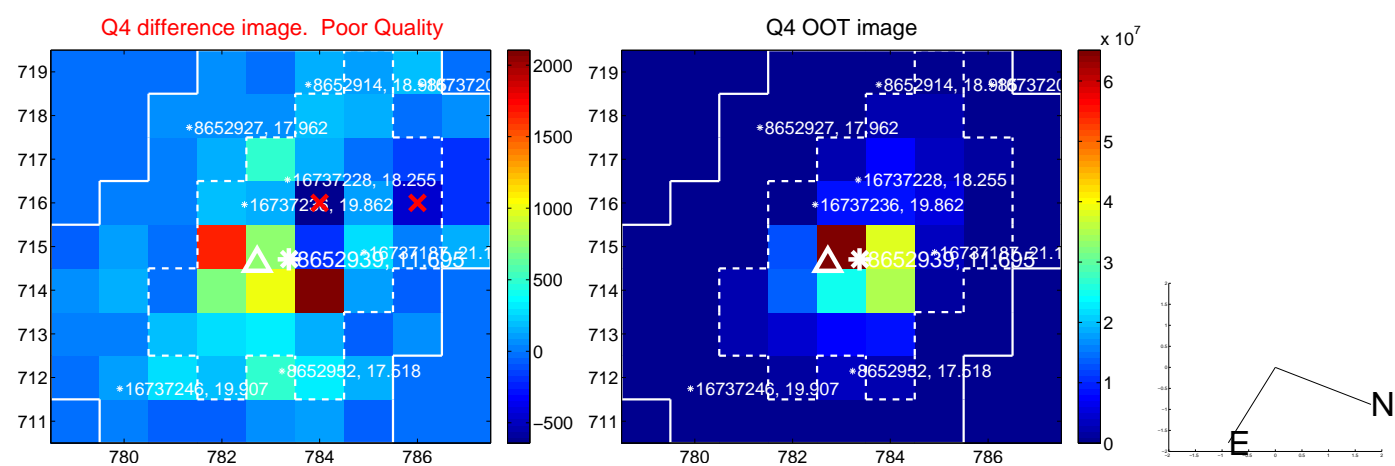
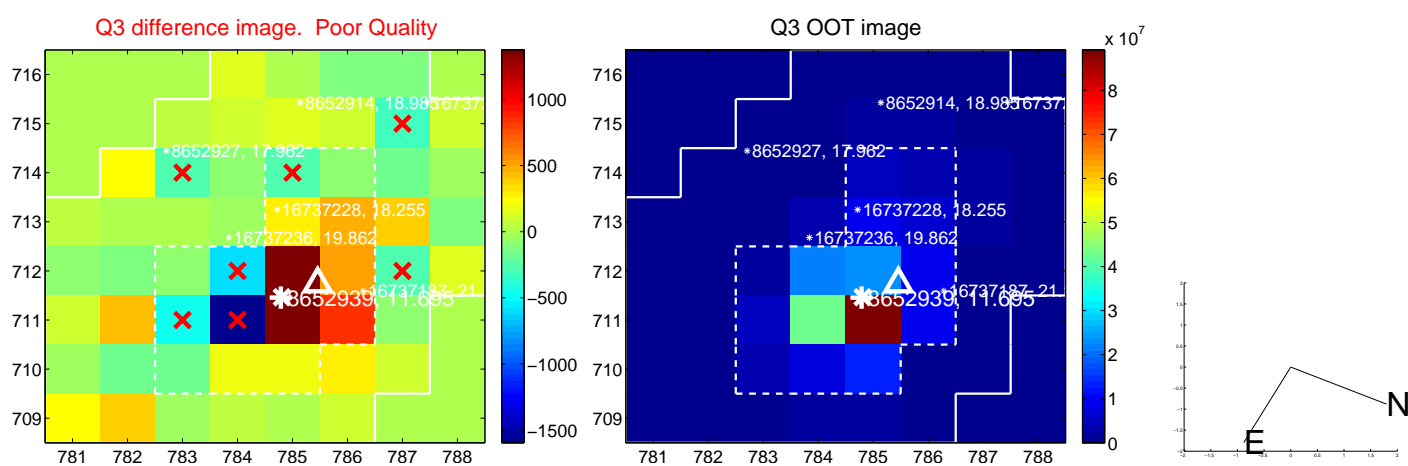
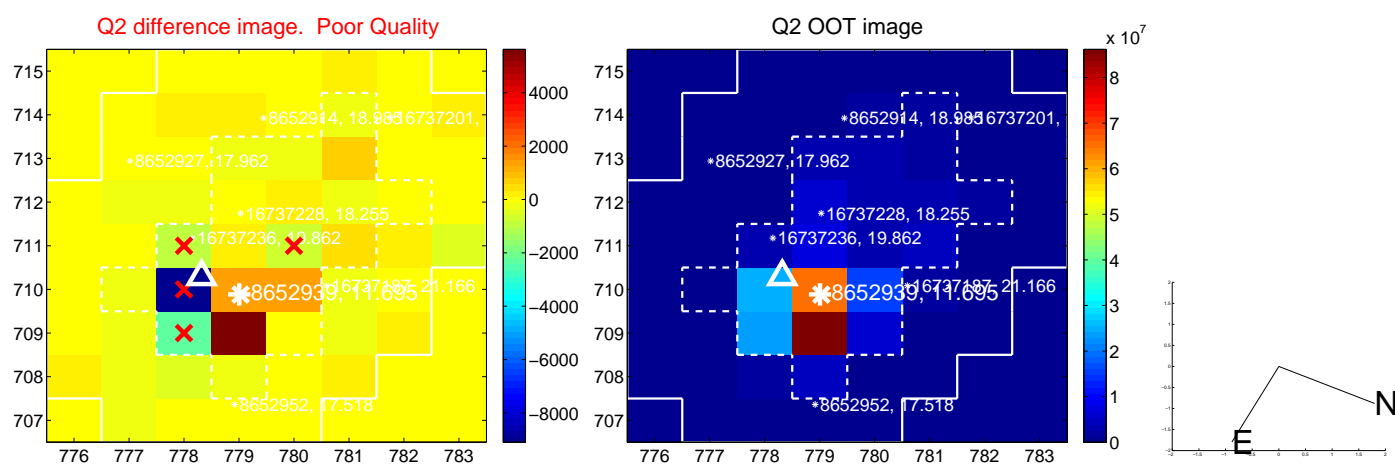
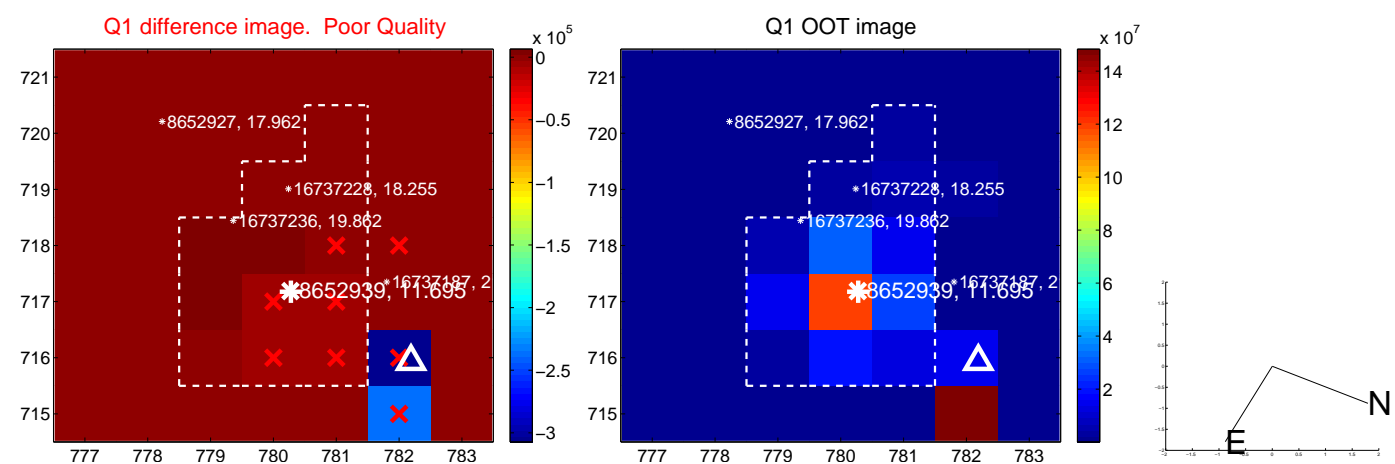
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.195 ± 0.399	0.49	-0.192 ± 0.363	-0.033 ± 0.801
PRF-fit source offset from KIC position	0.196 ± 0.591	0.33	-0.163 ± 0.348	-0.109 ± 0.848
photometric centroid source offset	1.30 ± 1.05	1.24	-1.27 ± 1.06	0.25 ± 0.75

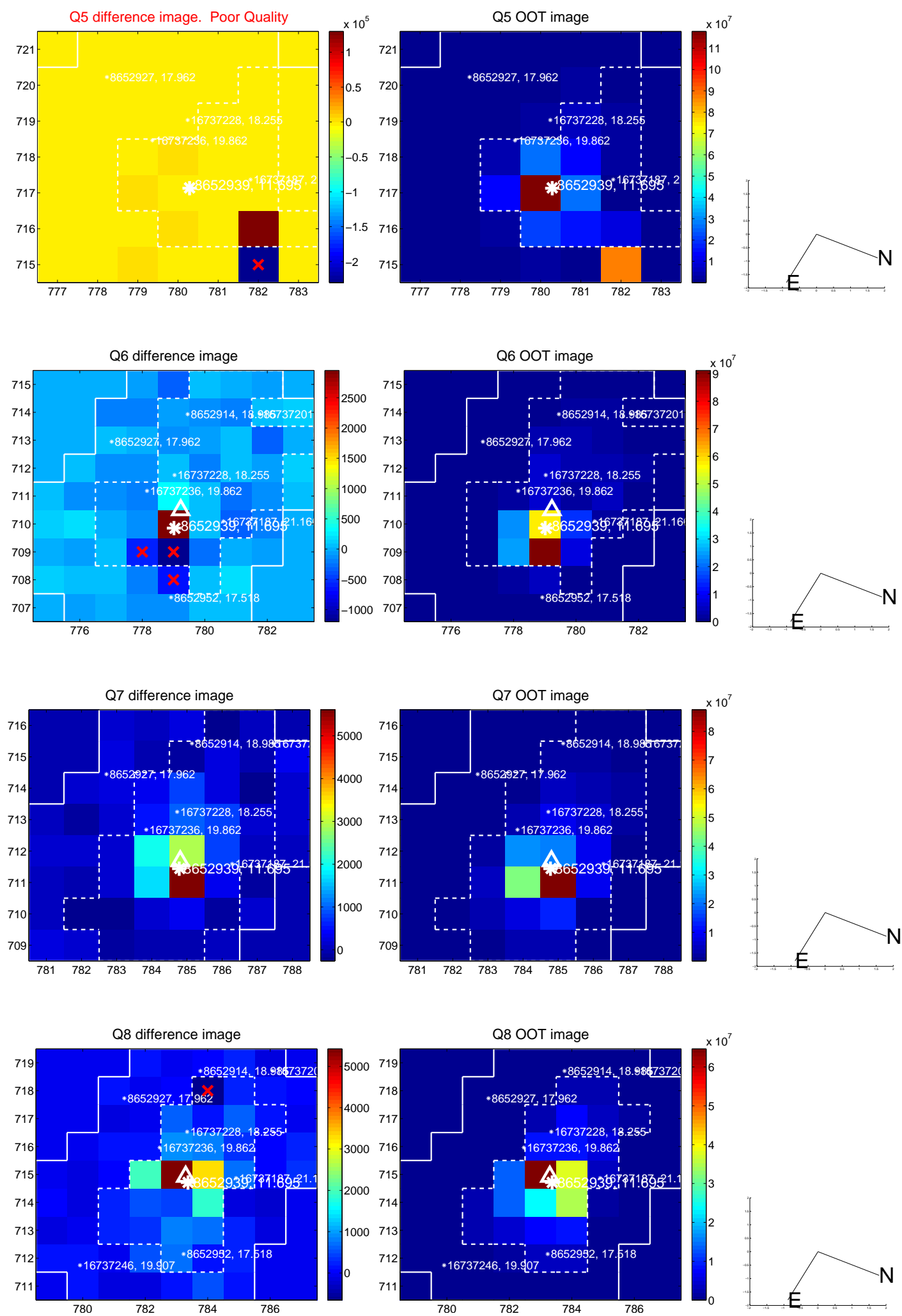


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

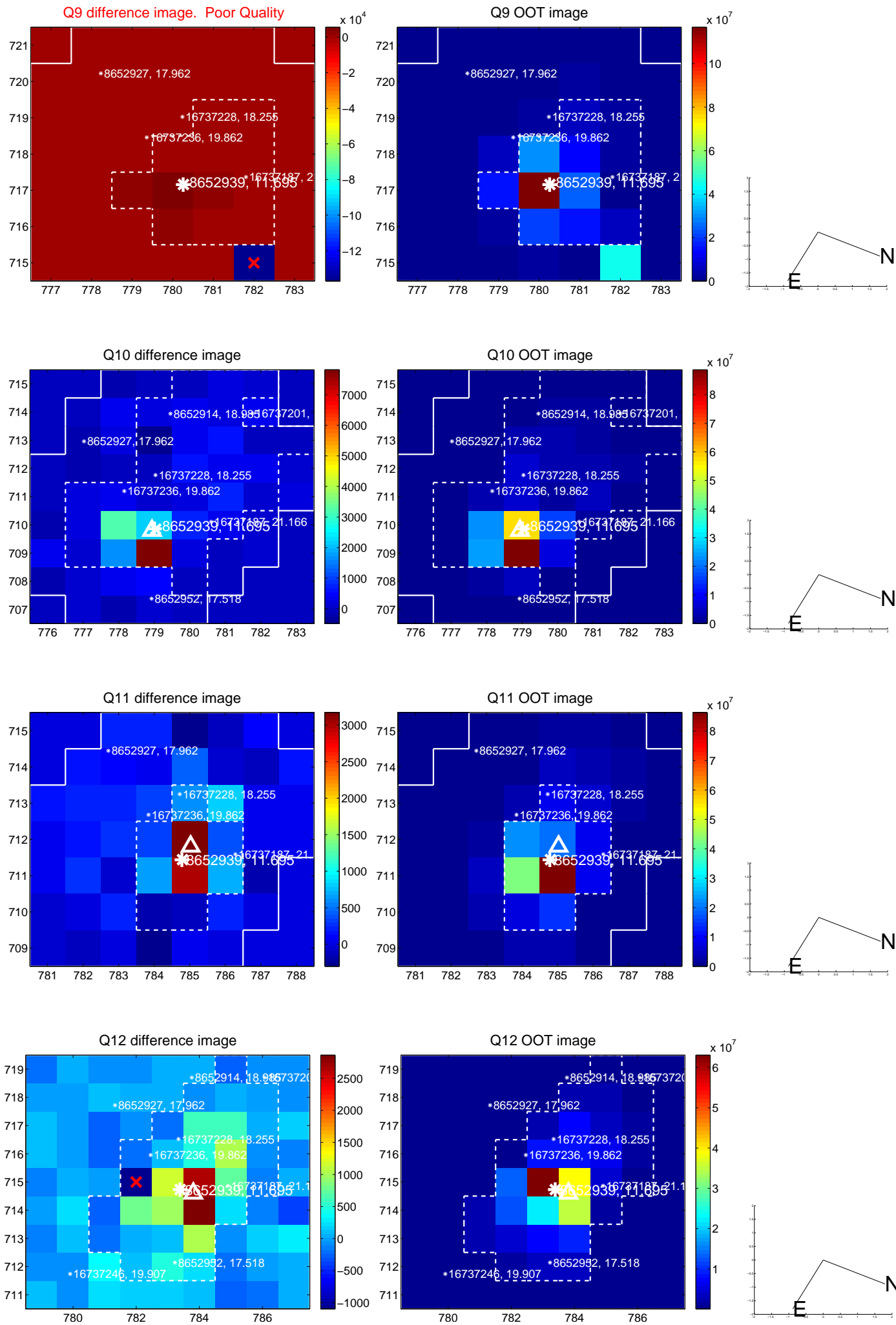
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



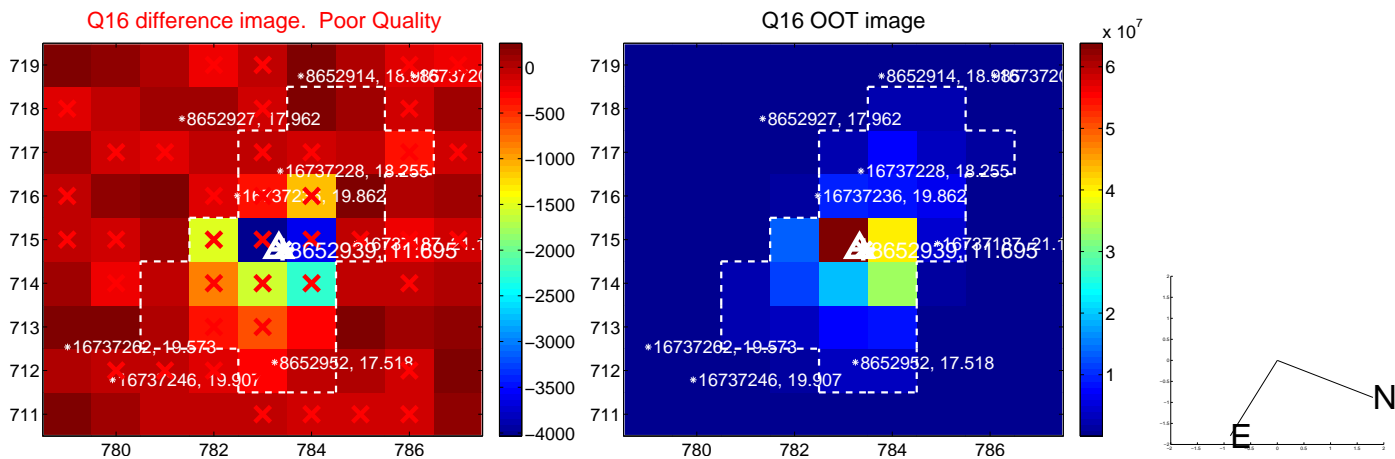
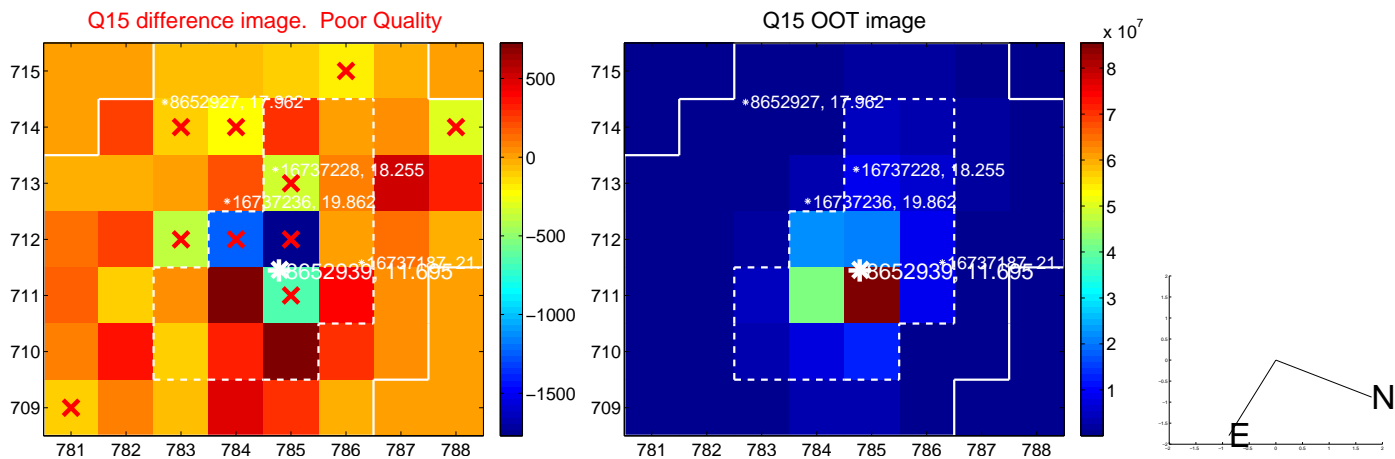
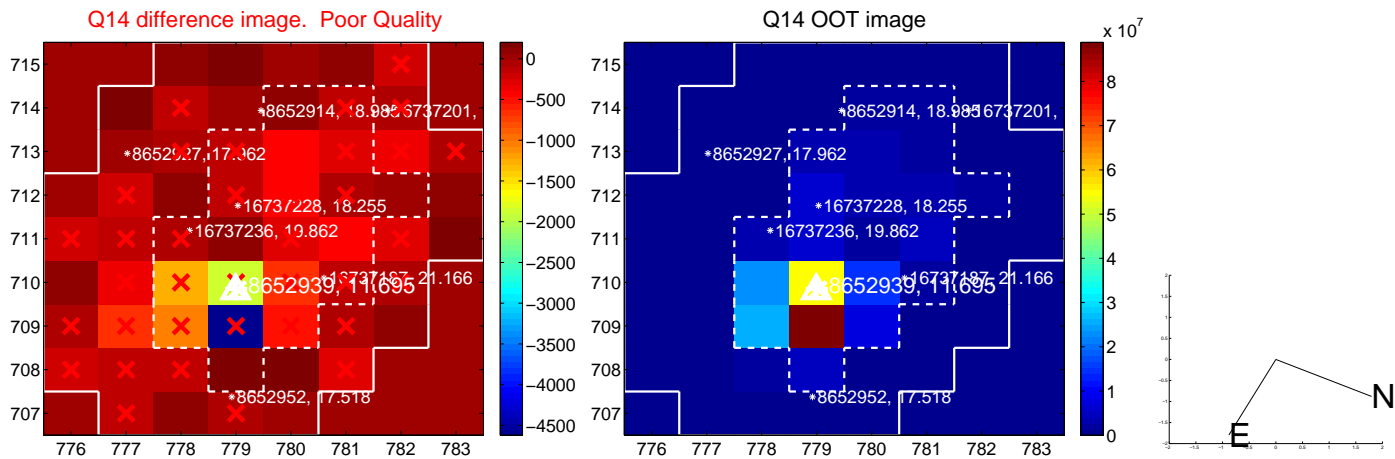
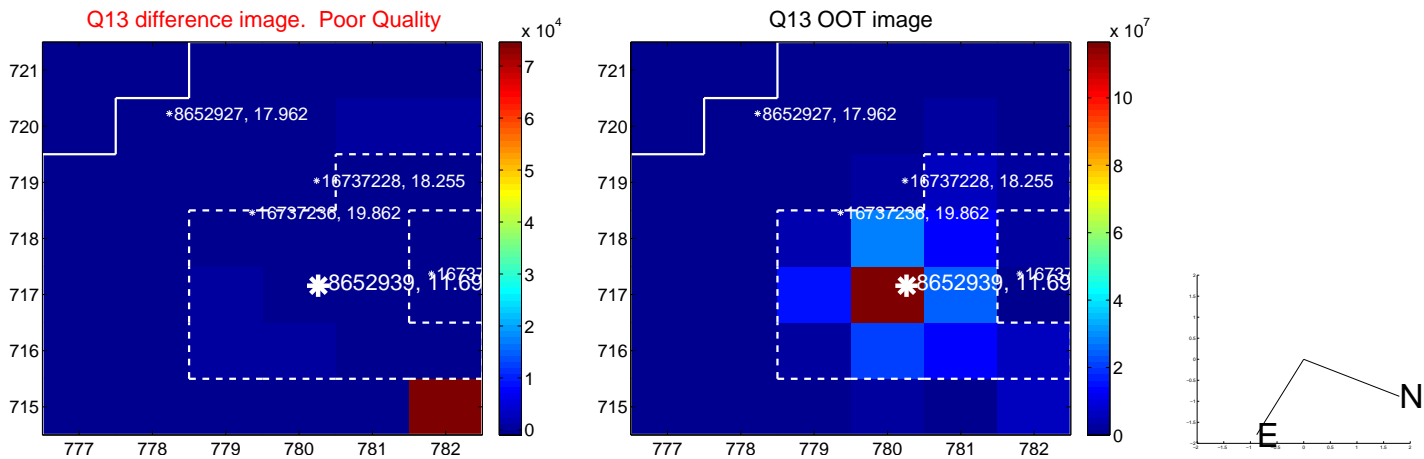
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



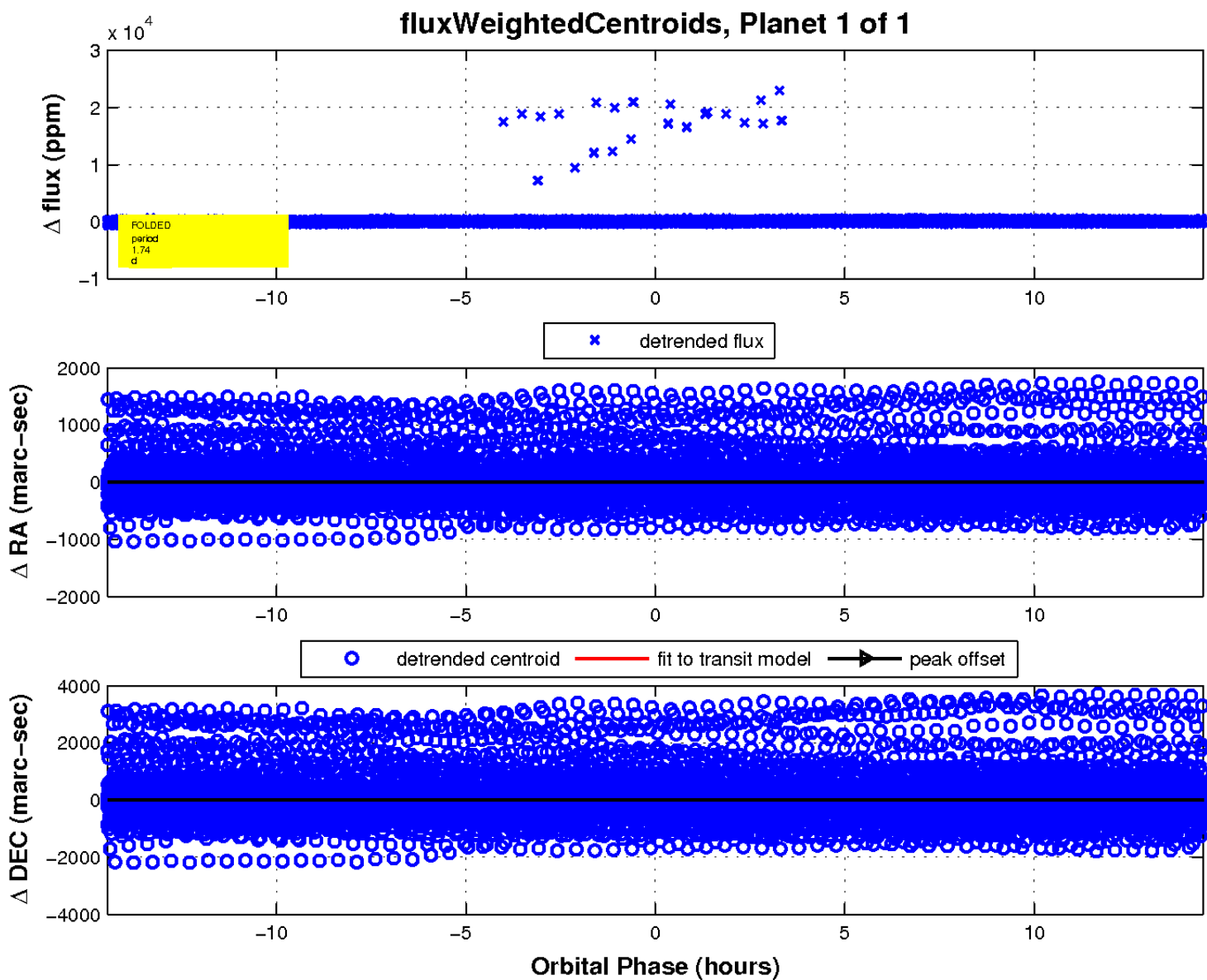
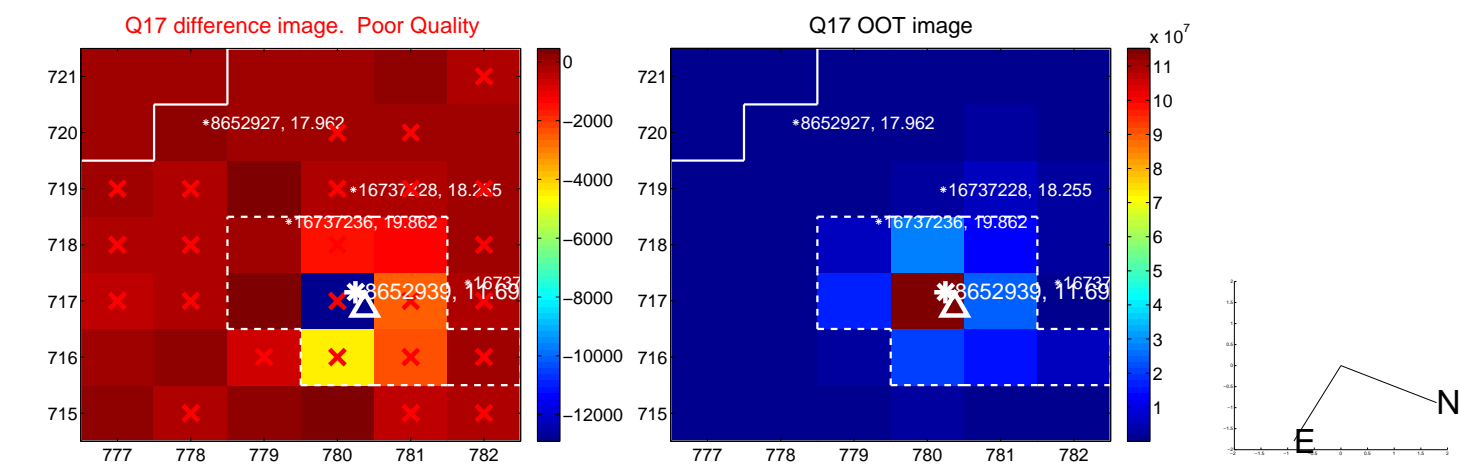
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UKIRT Image

Declination

