

KIC 005020065

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})
005020065-01	OBS	No	0.553212	131.721917	0.9	6.393	9.5	0.2	1.28	6952	0.12	16709.04

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005020065-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—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.

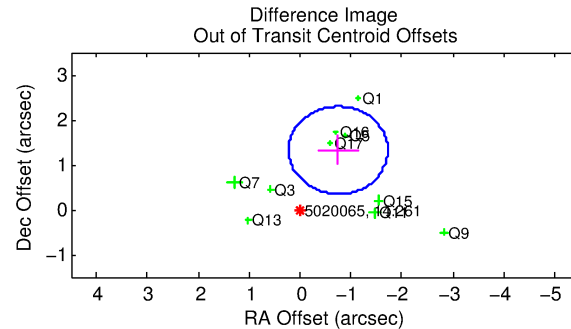
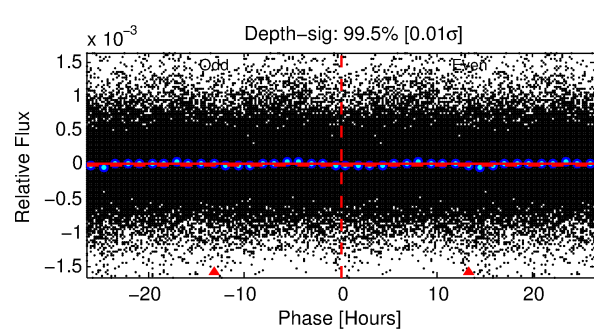
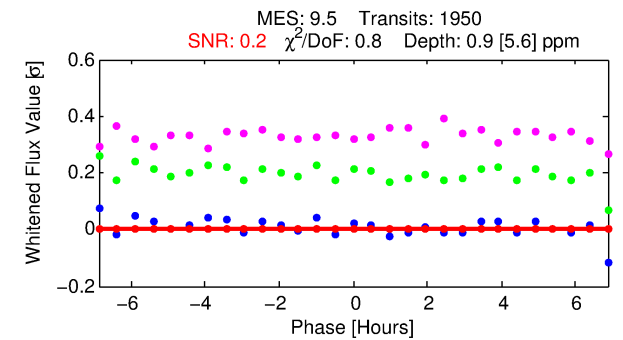
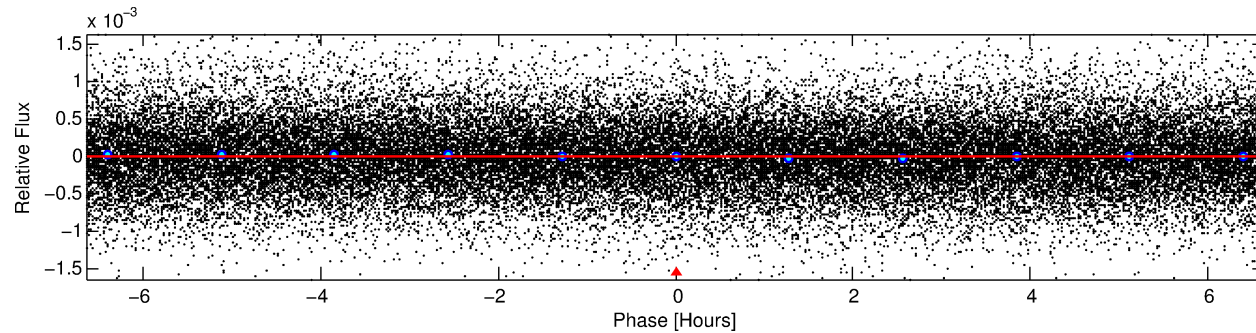
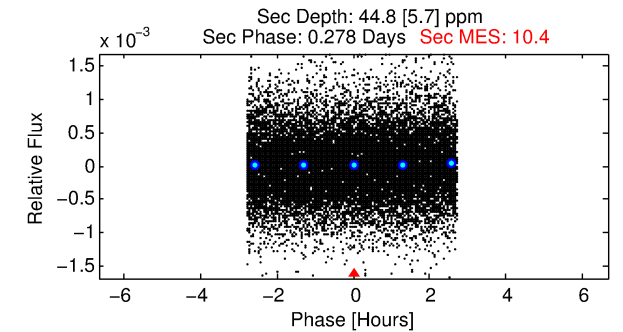
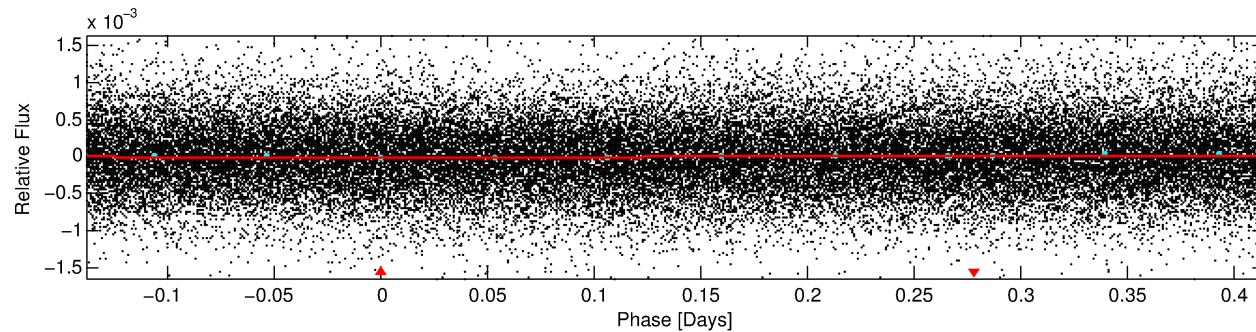
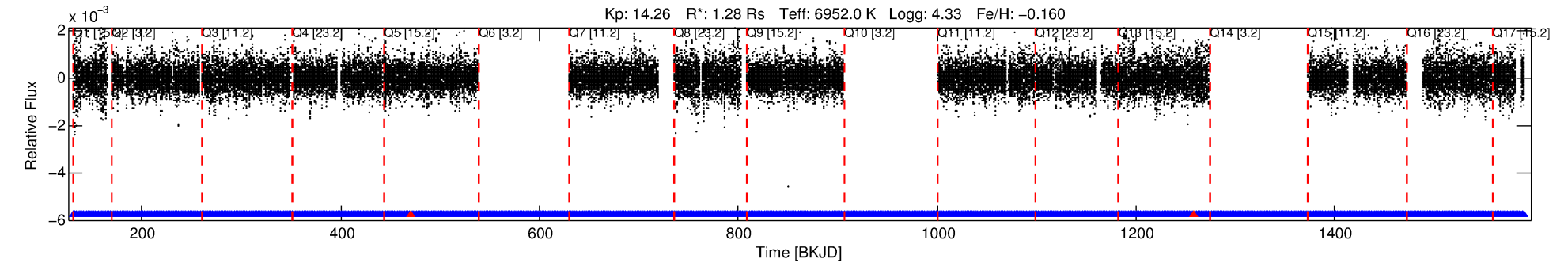
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005020065-01

No Significant Match Found

DV One-Page Summary

KIC: 5020065 Candidate: 1 of 1 Period: 0.553 d



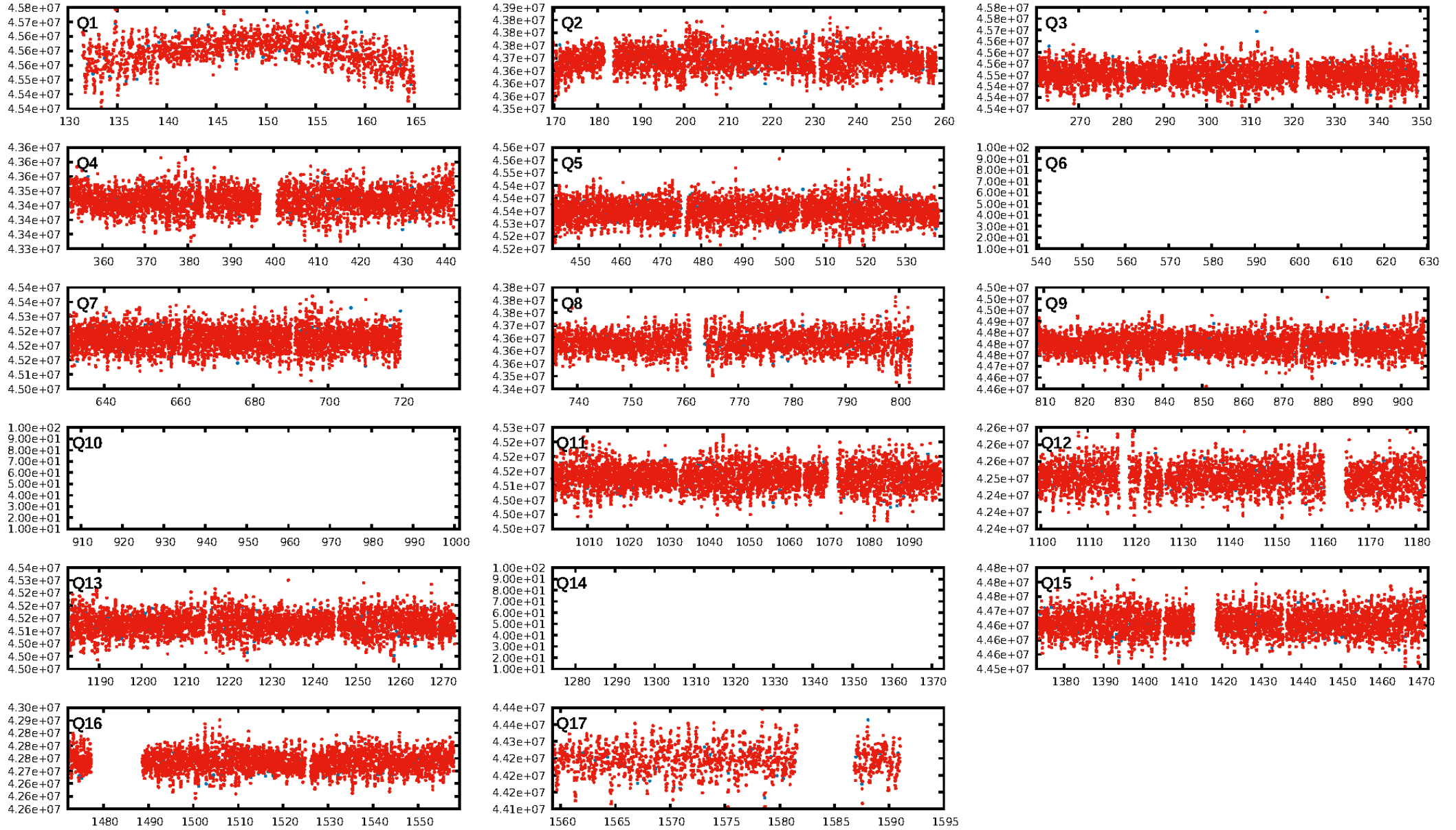
DV Fit Results:

Period = 0.55321 [0.00075] d
Epoch = 131.7219 [0.2028] BKJD
Rp/R* = 0.0009 [0.0220]
a/R* = 1.00 [0.59]
b = 0.40 [311.40]
Seff = 16709.04 [6368.78]
Teq = 2899 [276] K
Rp = 0.12 [3.08] Re
a = 0.0143 [0.0035] AU
Ag = 336.36 [16886.49] [0.02σ]
Teffp = 19196 [240924] K [0.07σ]

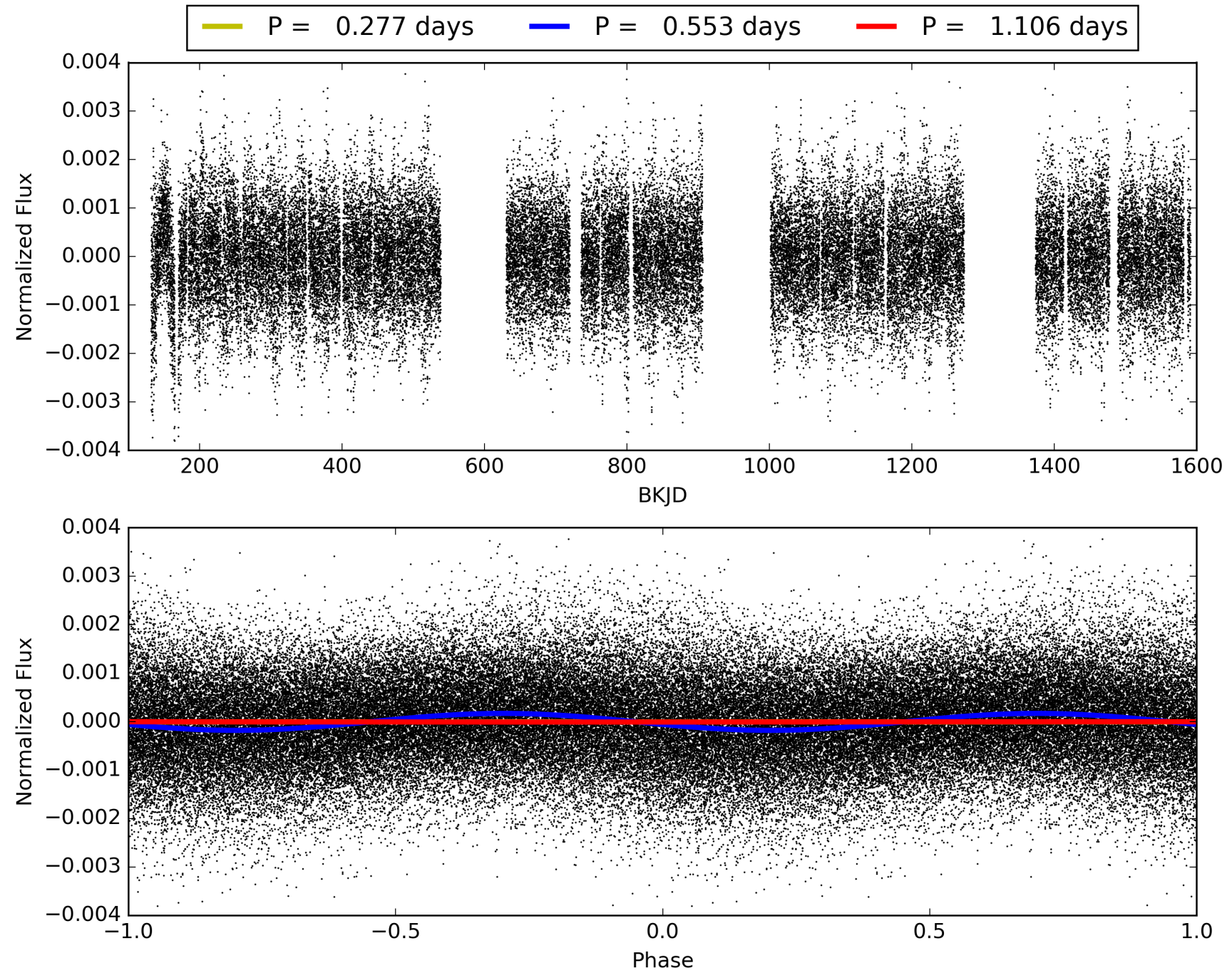
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1838/1840]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.518 arcsec [4.67σ]
KicOffset-rm: 1.372 arcsec [4.09σ]
OotOffset-st: 0/4/1/5 [10]
KicOffset-st: 0/4/1/5 [10]
DiffImageQuality-fgm: 0.50 [5/10]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 005020065-01, PDC Light Curves

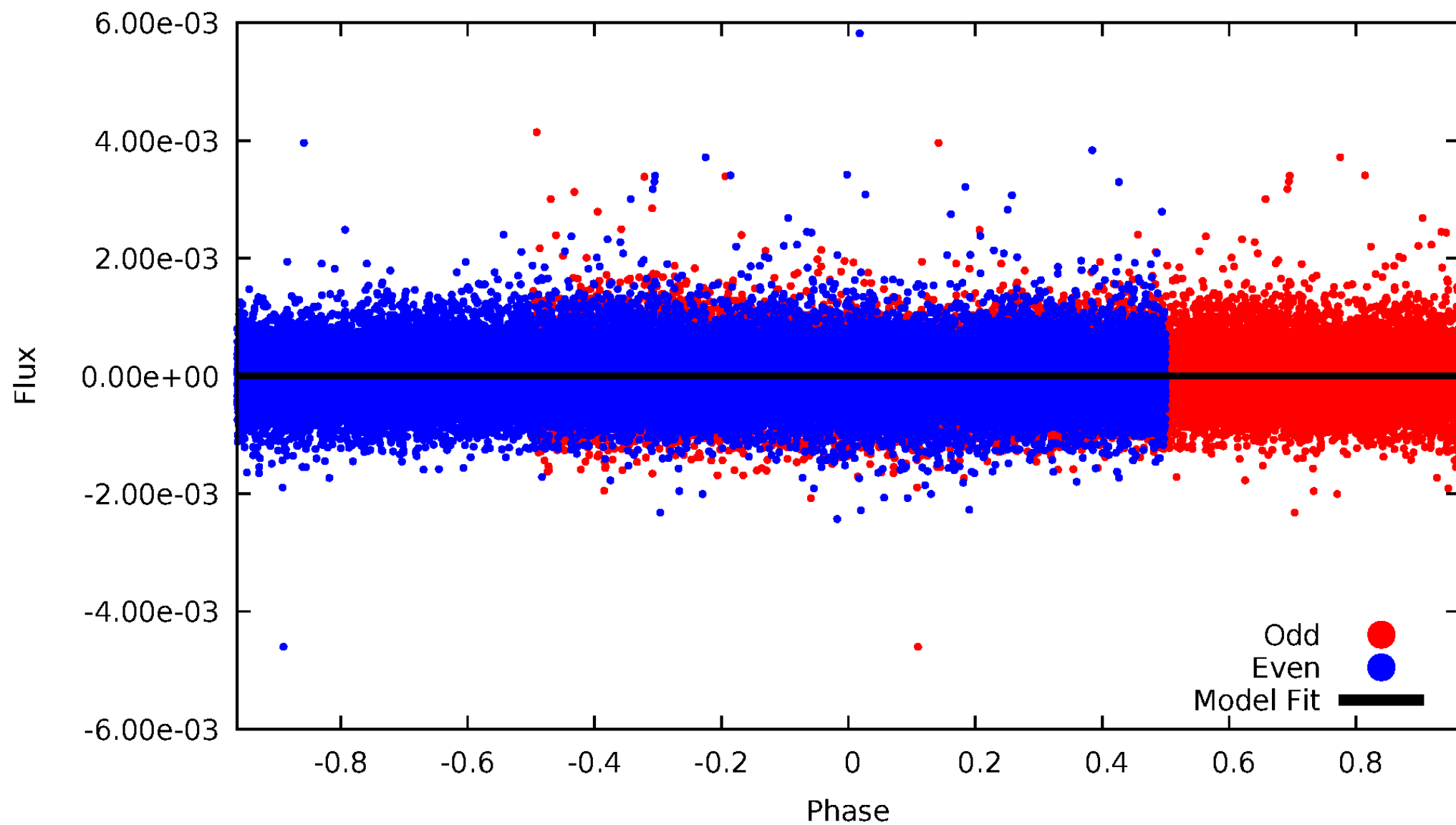


TCE 005020065-01



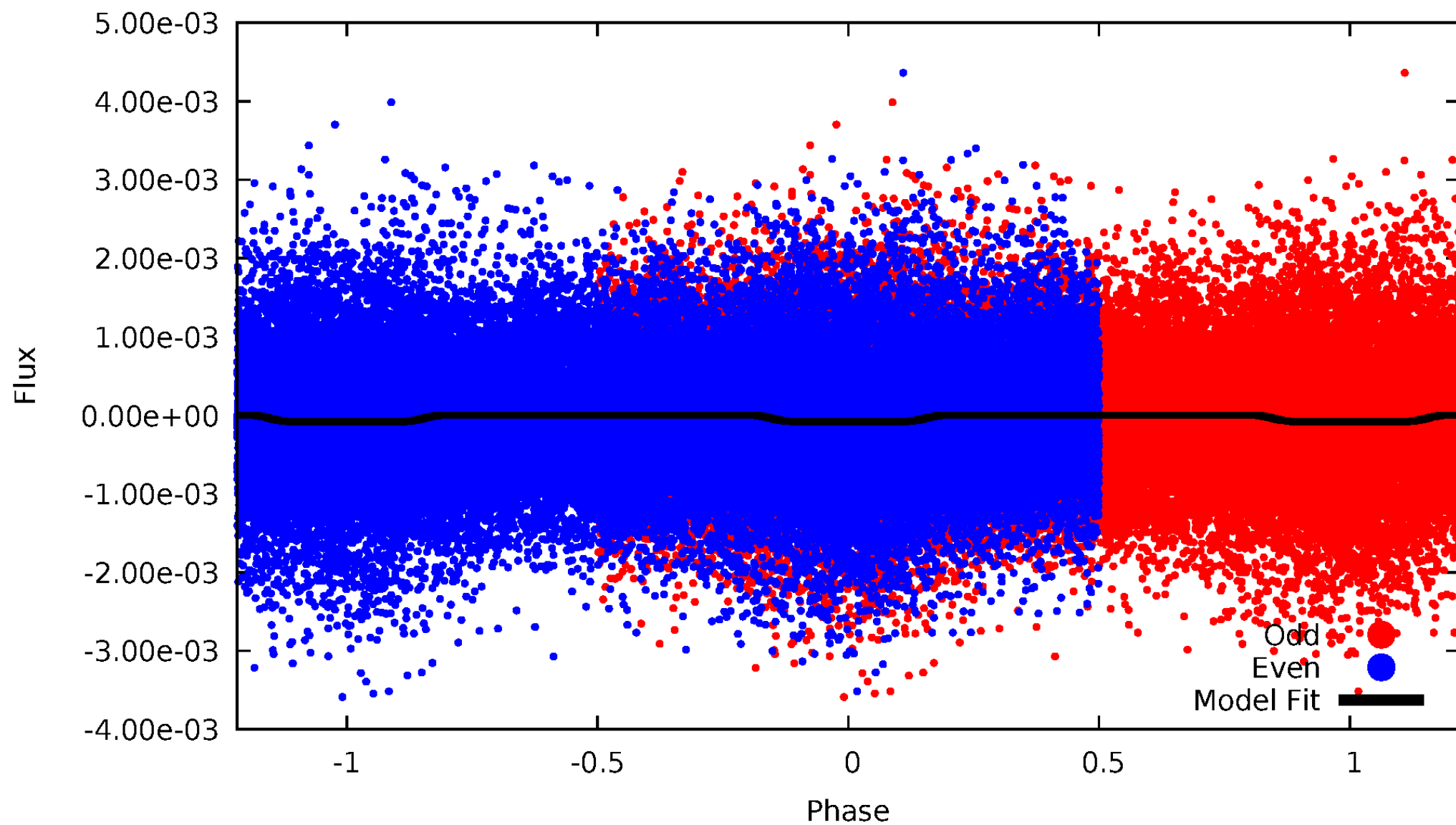
DV Odd/Even

TCE 005020065-01



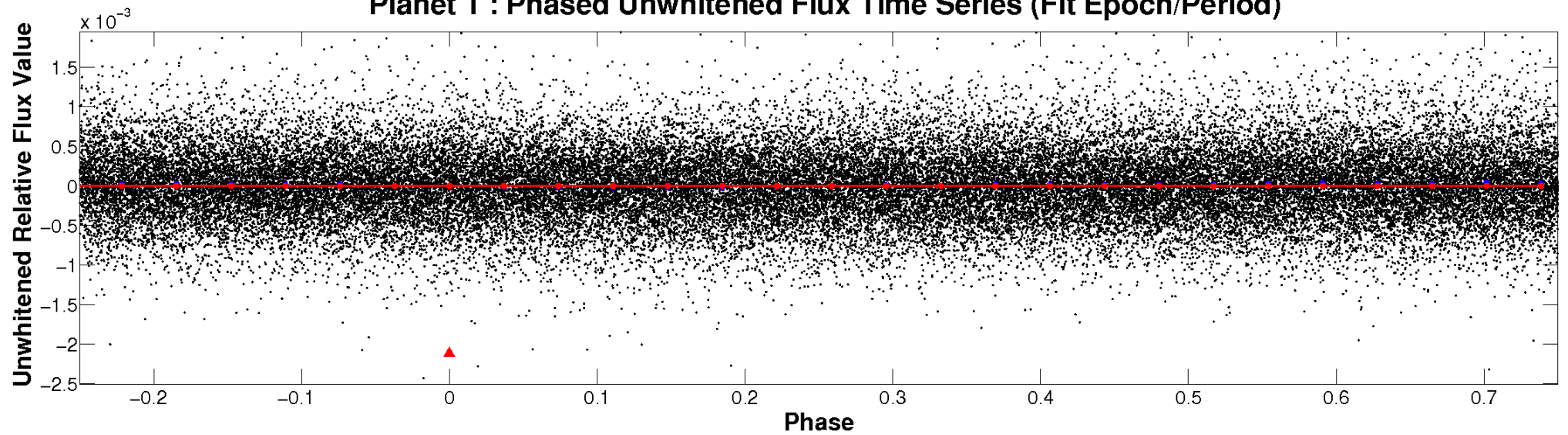
ALT Odd/Even

TCE 005020065-01

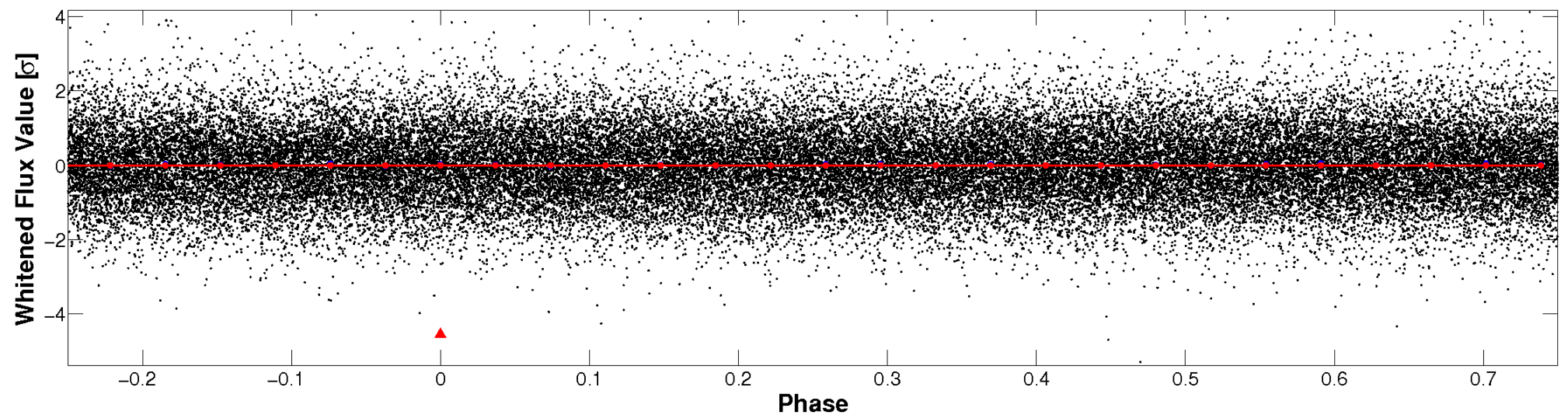


Non-Whitened Vs. Whitened Light Curve

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

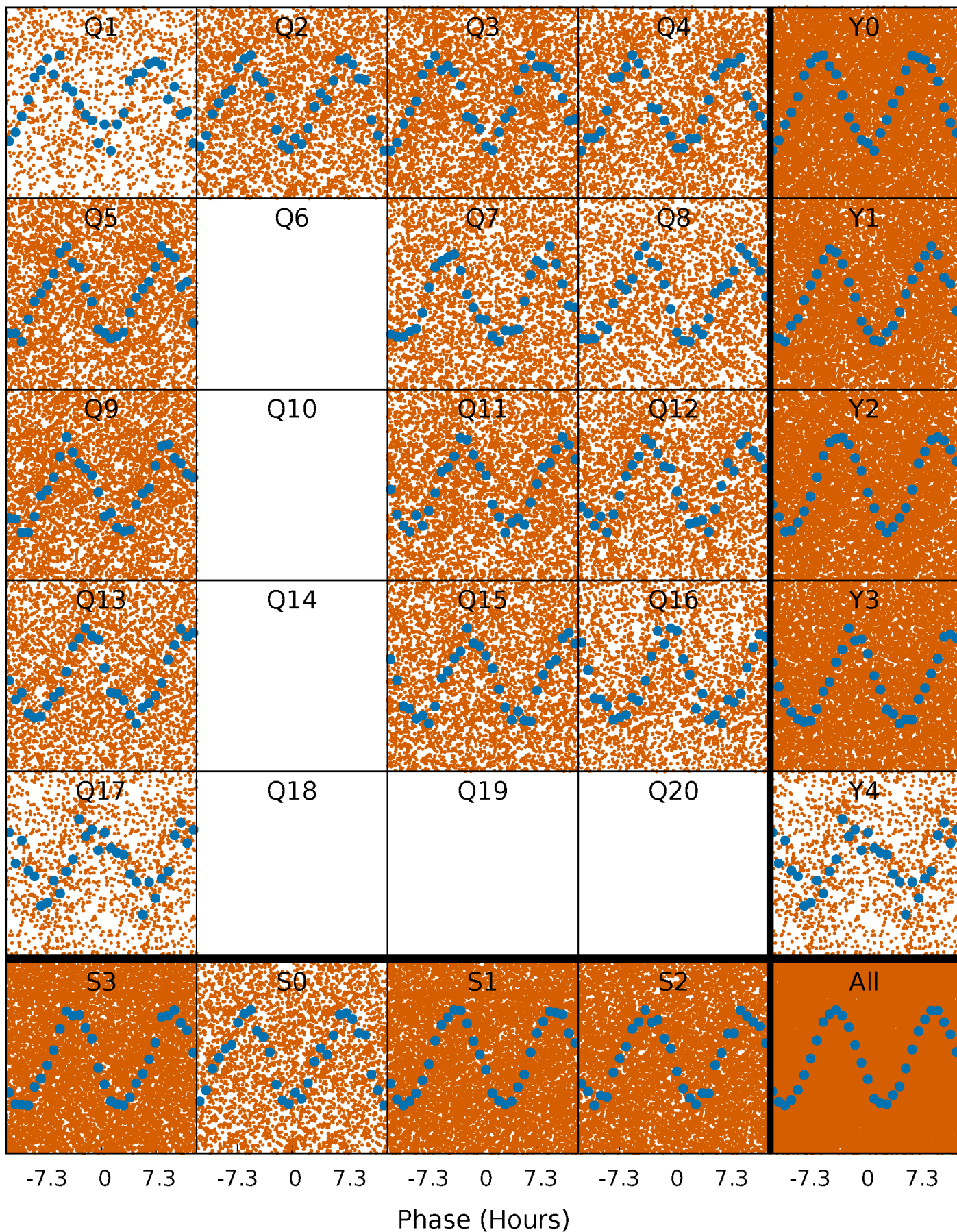


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



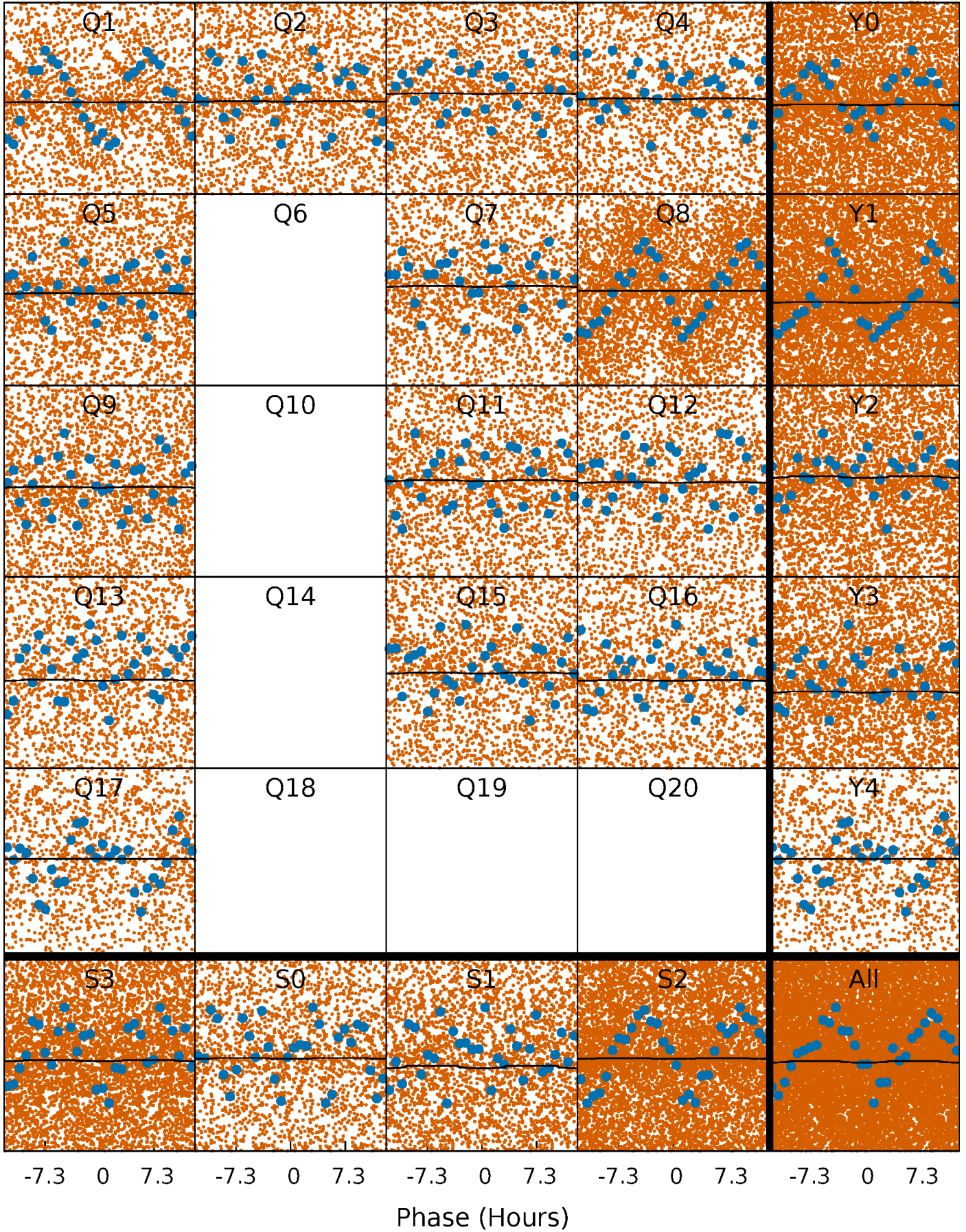
PDC Quarter-Phased Transit Curves

TCE 005020065-01 P= 0.553212 Days $T_0=131.721917$ (BKJD)



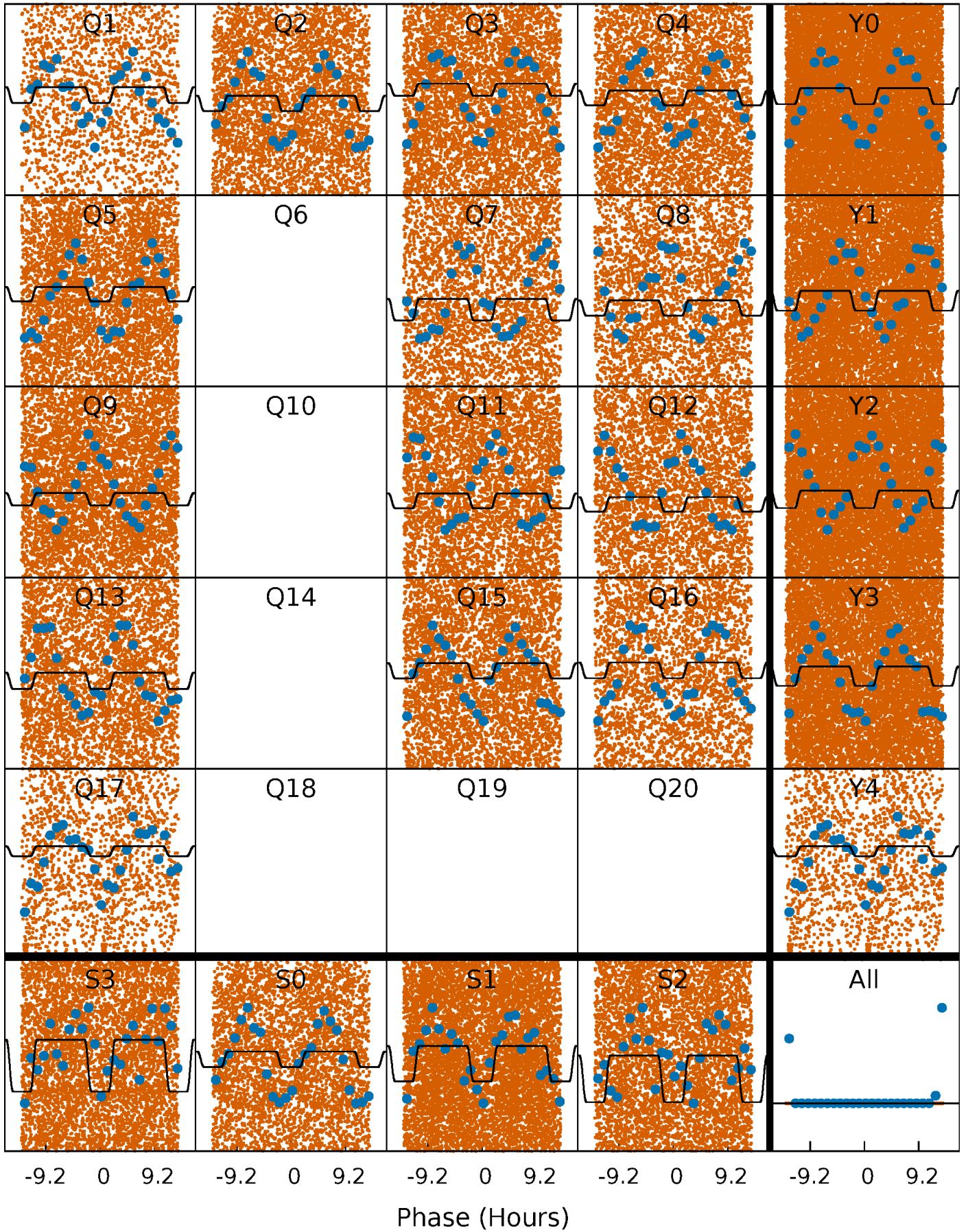
DV Quarter-Phased Transit Curves

TCE 005020065-01 P= 0.553212 Days $T_0=131.721917$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

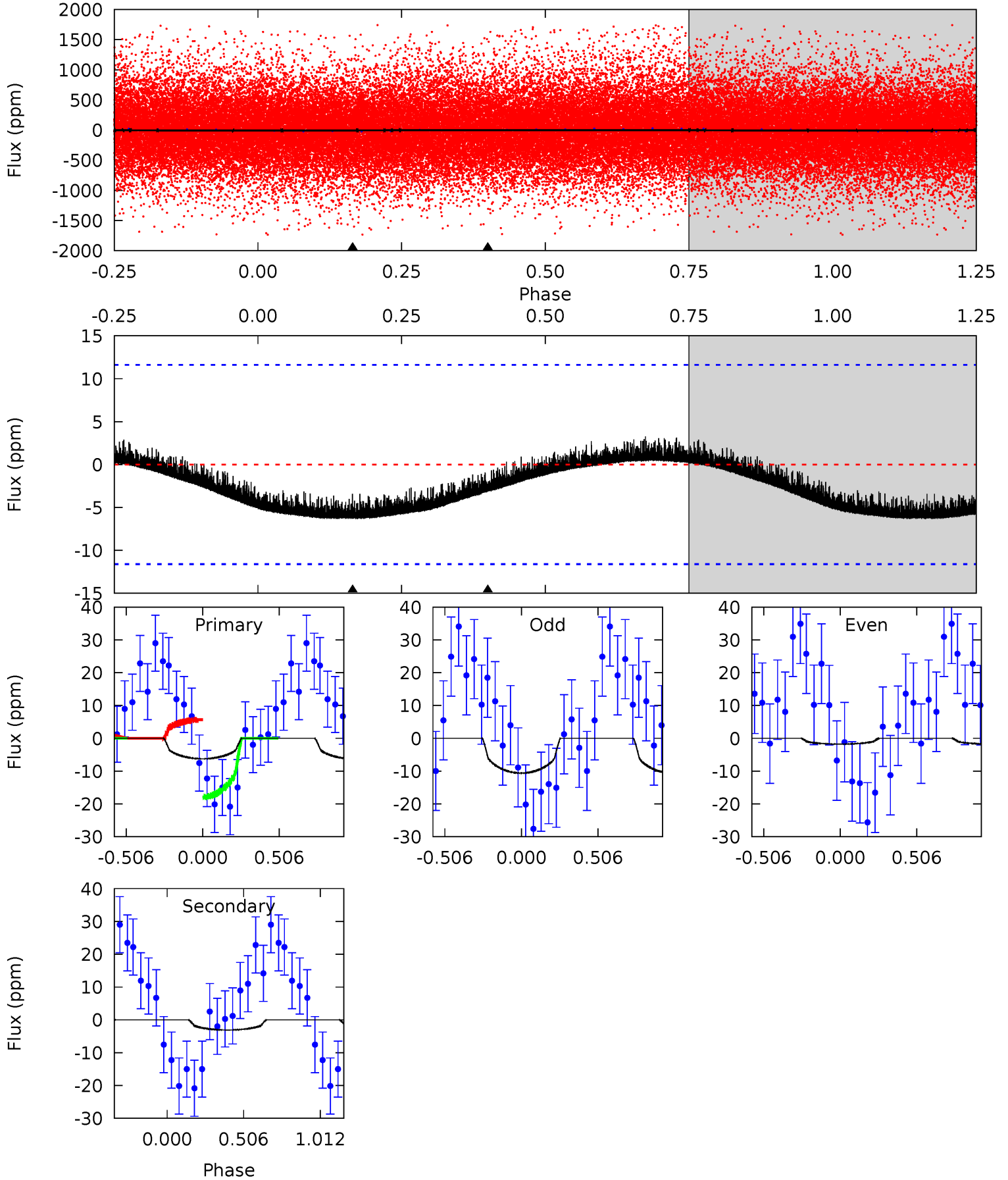
TCE 005020065-01 P= 0.553045 Days $T_0=131.811033$ (BKJD)



DV Model-Shift Uniqueness Test

005020065-01, P = 0.553212 Days, E = 131.168705 Days

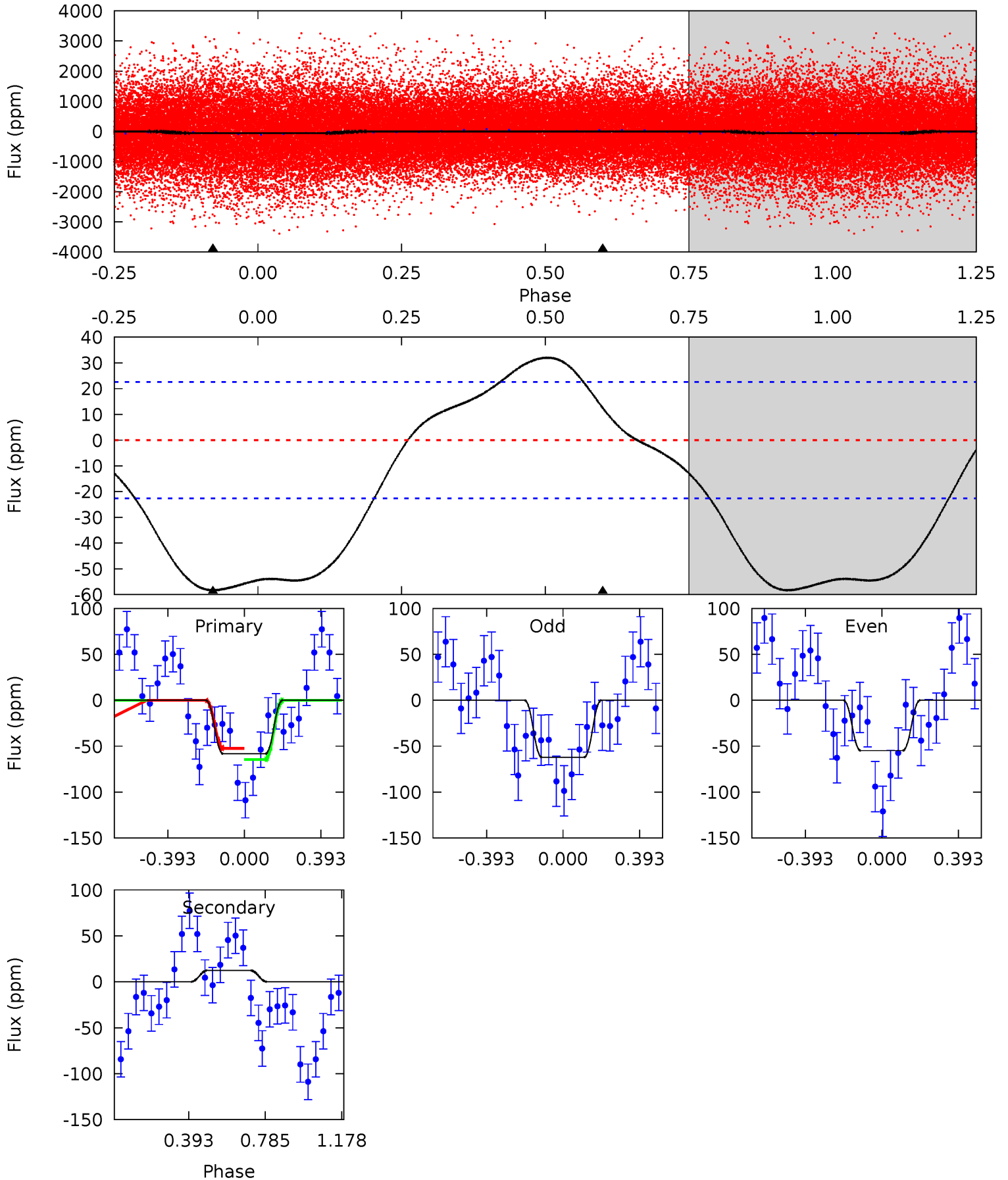
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.27	1.13	0	0	4.21	0.66	0.19	2.27	2.27	1.13	1.13	1.59	-0.49	0.34	2.20



Alt Model-Shift Uniqueness Test

005020065-01, P = 0.553045 Days, E = 131.257988 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.0	-2.35	0	0	4.27	0.85	1.65	11.0	11.0	-2.35	-2.35	0.68	1.35	0.35	1.01



Stellar Parameters For KIC 005020065

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6952^{+168}_{-288}	$4.331^{+0.060}_{-0.180}$	$-0.160^{+0.250}_{-0.350}$	$1.280^{+0.391}_{-0.156}$	$1.296^{+0.191}_{-0.174}$	$0.870^{+0.235}_{-0.448}$
	+2%/-4%	+1%/-4%	+156%/-219%	+31%/-12%	+15%/-13%	+27%/-52%
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 005020065-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-3 ± 3	$2.44^{+2.36}_{-1.75}$	4102^{+276}_{-206}	-3601^{+7478}_{-233}	$0.047^{+0.584}_{-0.045}$
Alt.	12 ± 5	$2.85^{+2.77}_{-1.91}$	4116^{+283}_{-237}	-4087^{+289}_{-1119}	$-0.153^{+0.118}_{-1.158}$

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 $A_{obs} \gg 1.0$

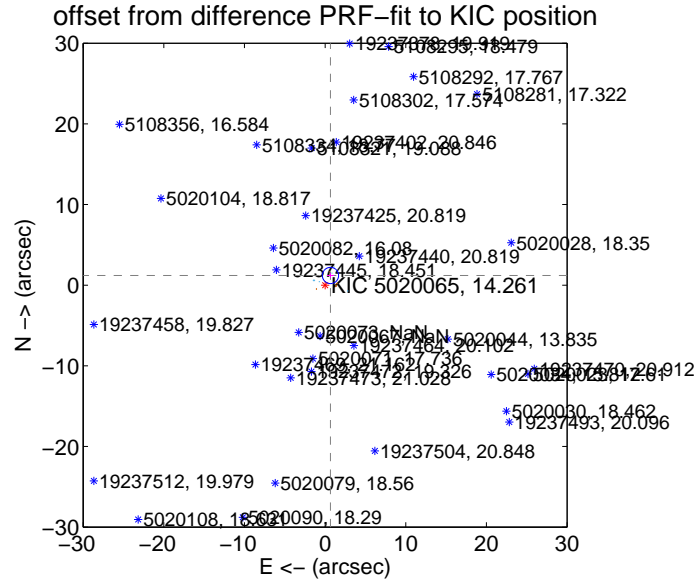
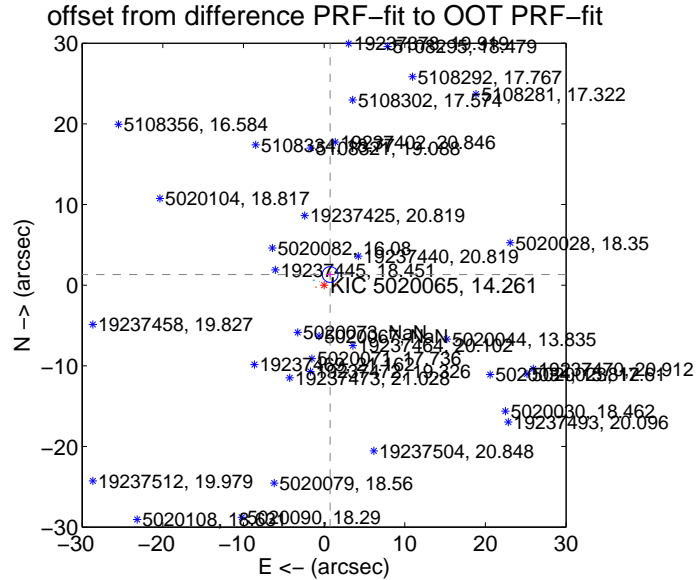
DV Centroid Data

Supplemental centroid analysis for 005020065-01. Kepler magnitude: 14.26. Transit SNR 0.19

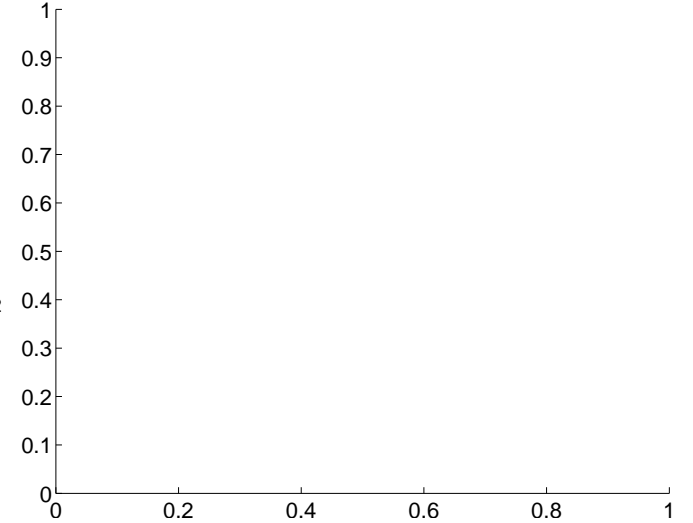
There are 5 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.518 \pm 0.325	4.67	-0.750 \pm 0.380	1.320 \pm 0.306
PRF-fit source offset from KIC position	1.372 \pm 0.335	4.09	-0.665 \pm 0.433	1.200 \pm 0.301
photometric centroid source offset	—	—	—	—

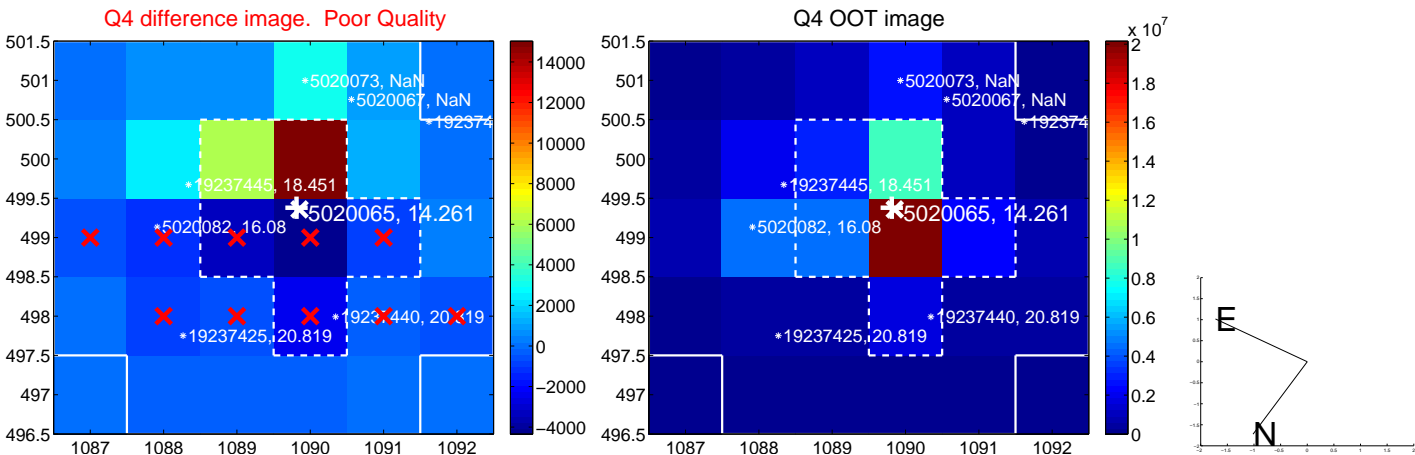
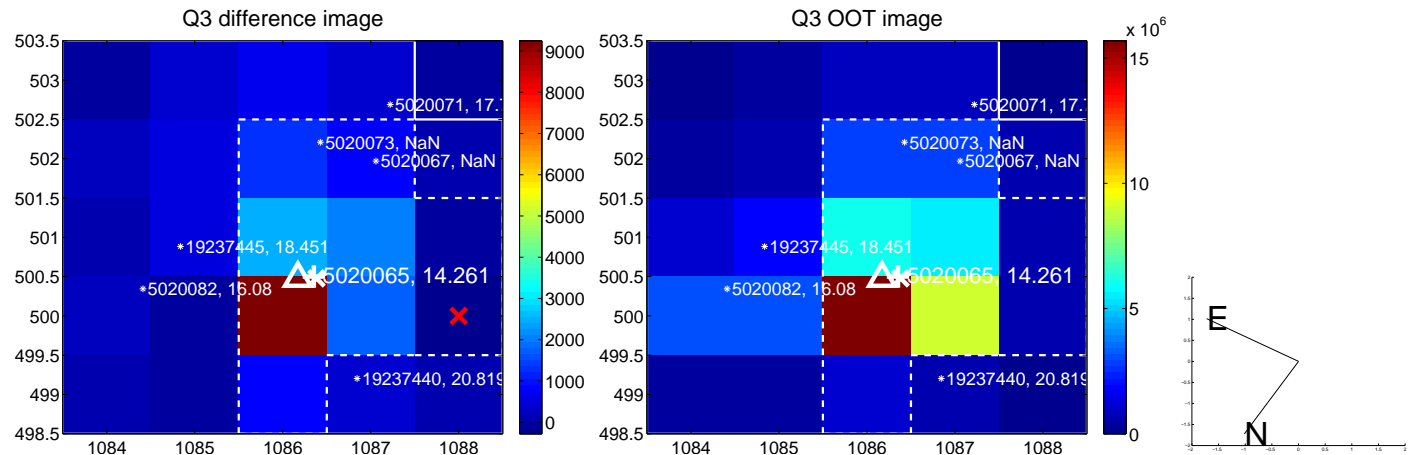
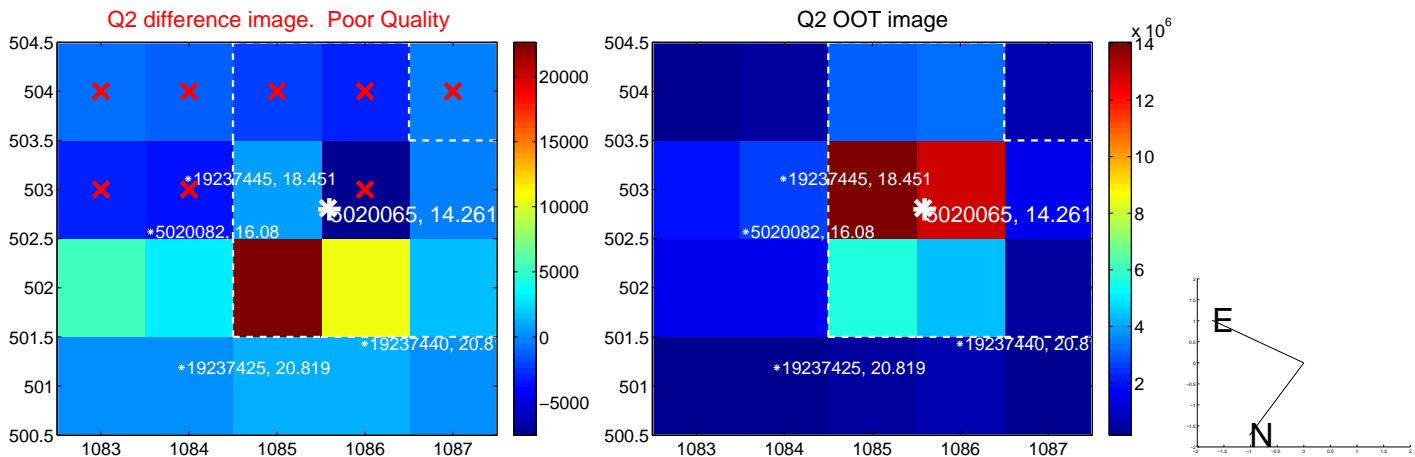
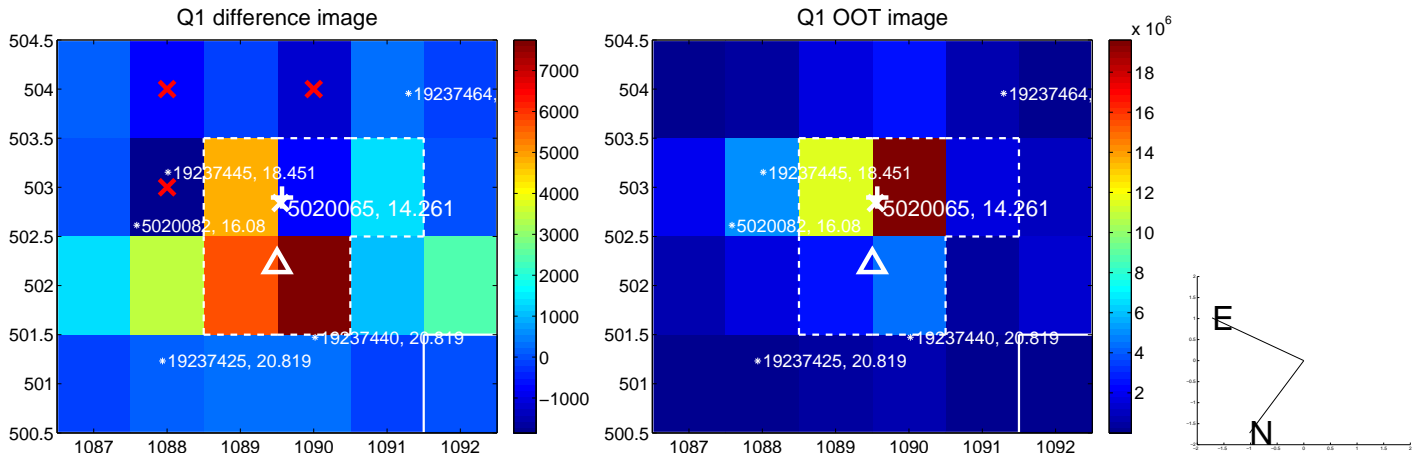


There are no photometric centroids

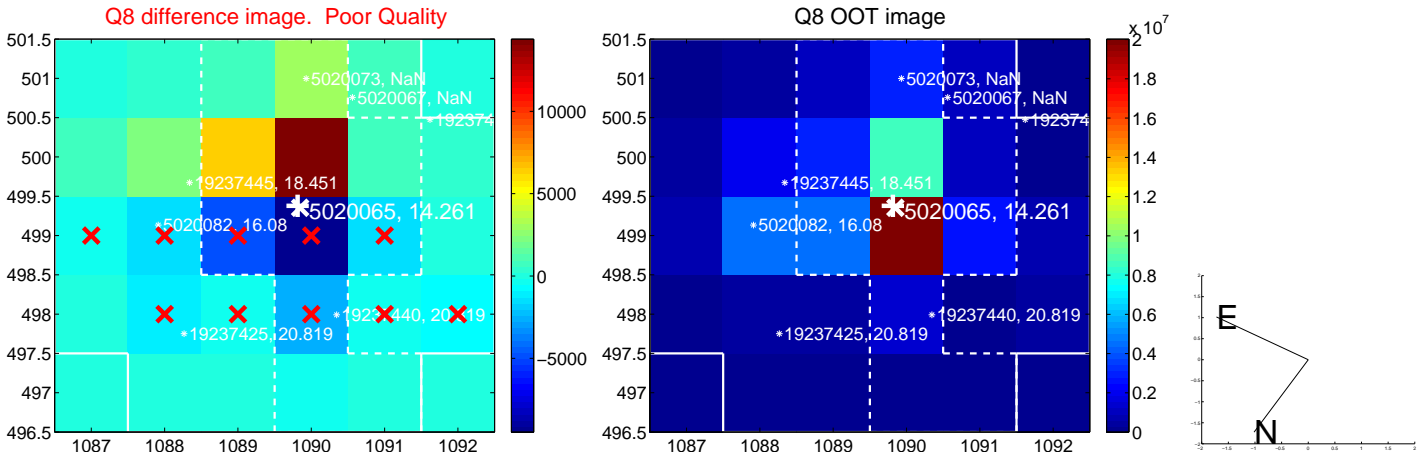
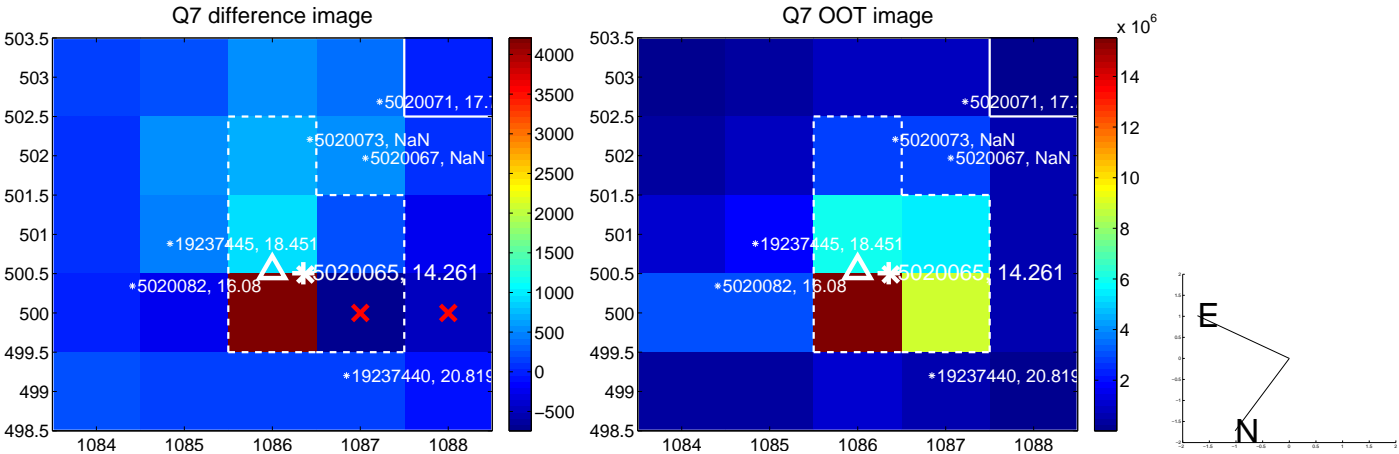
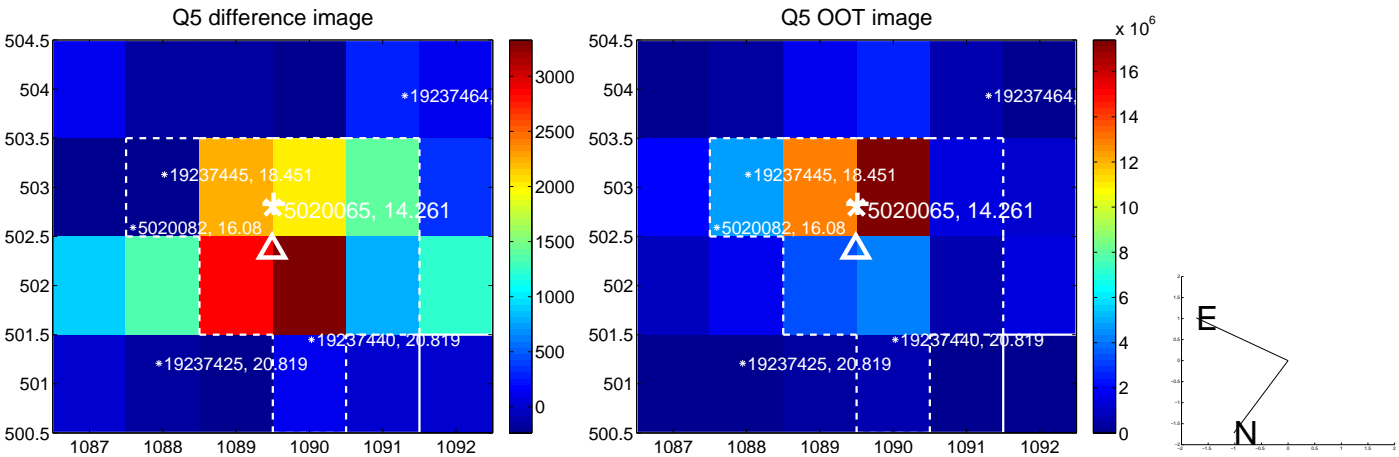


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

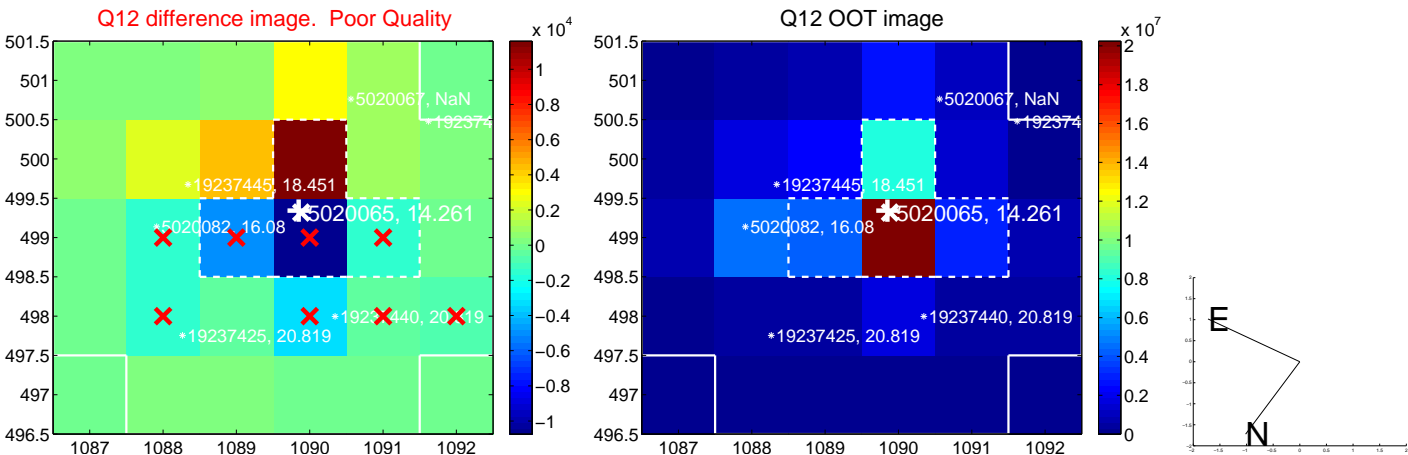
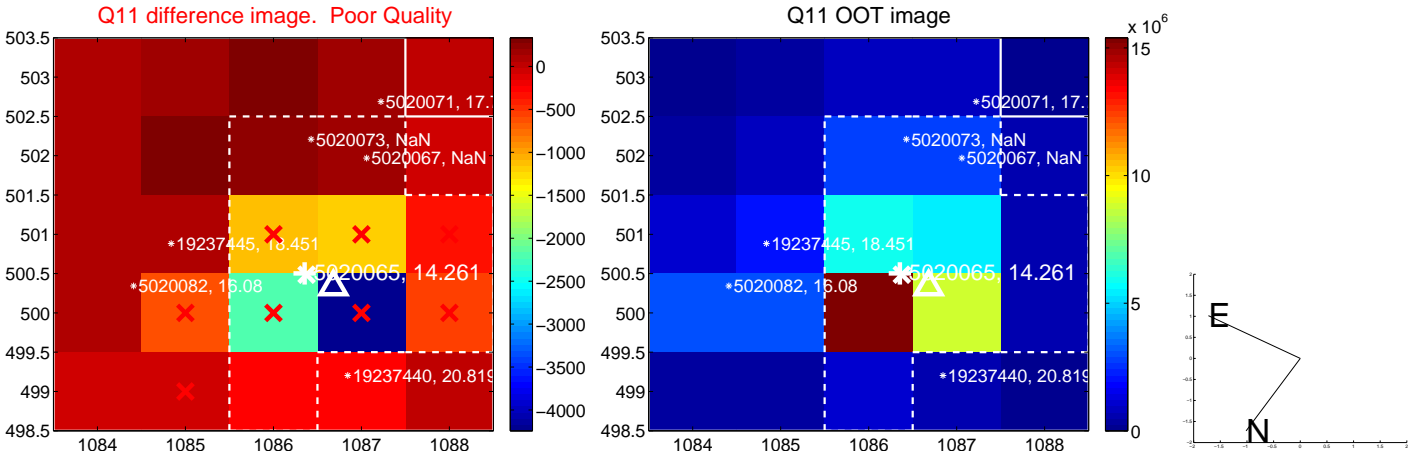
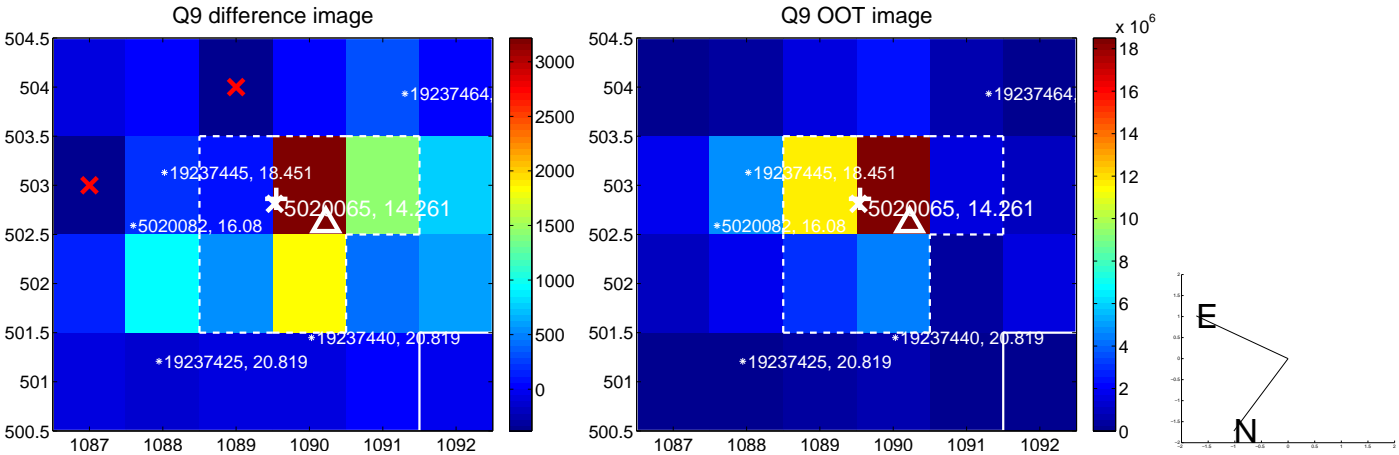
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



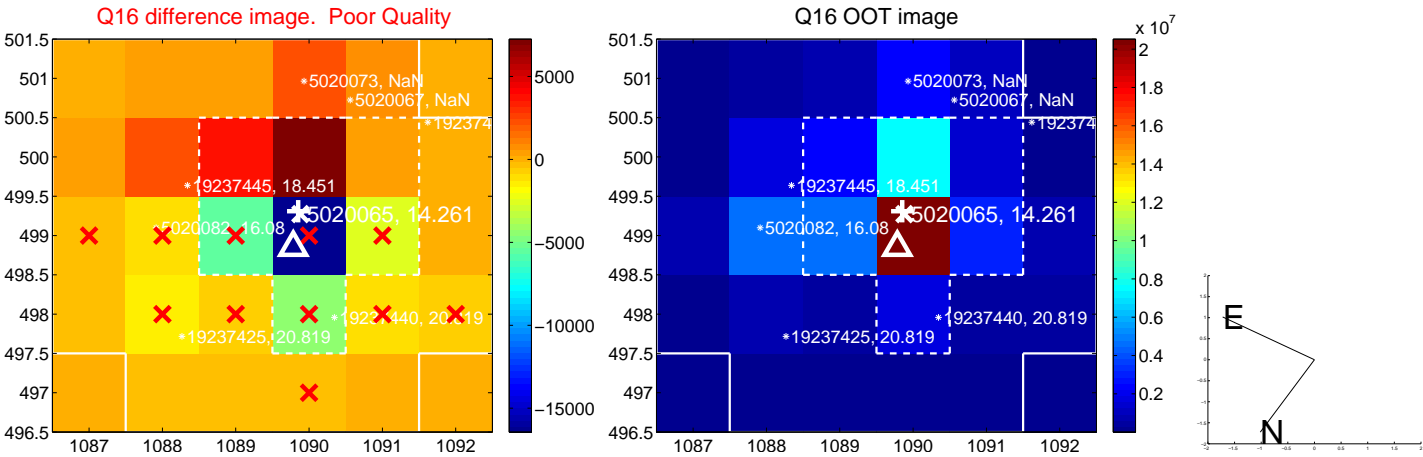
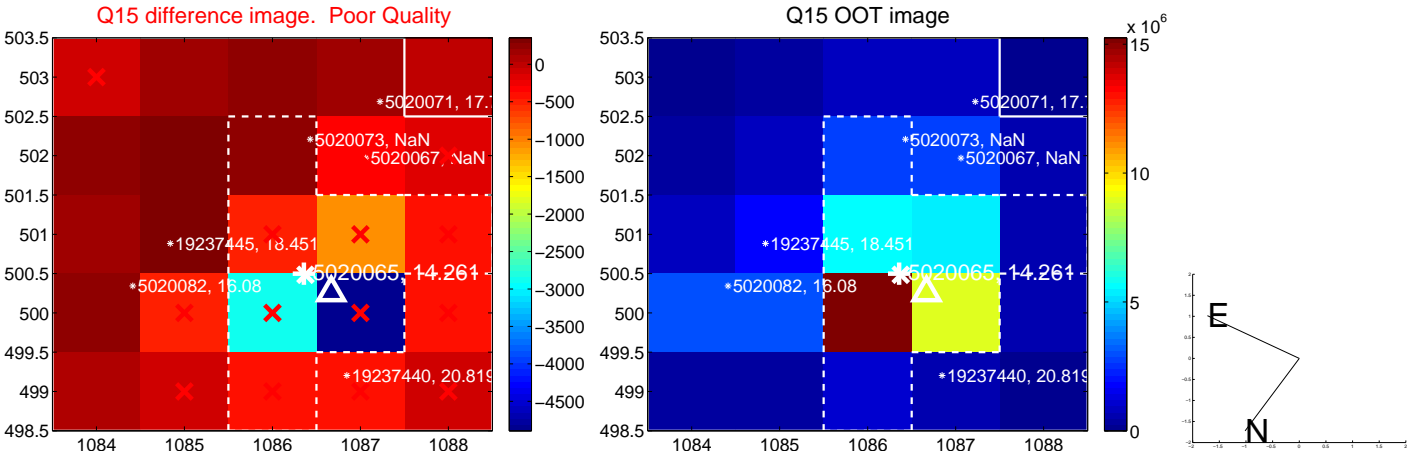
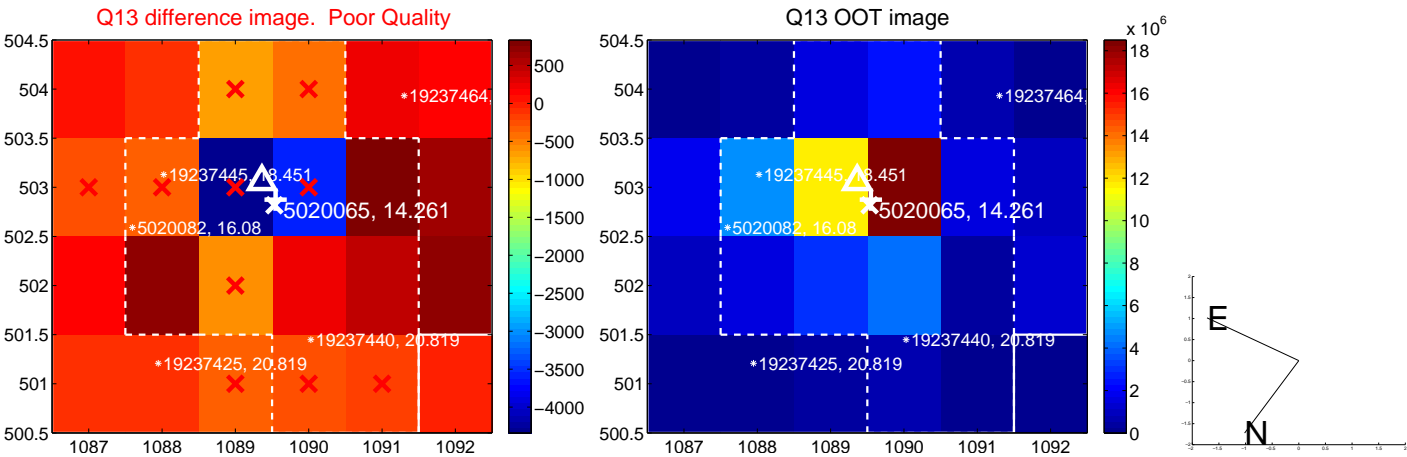
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



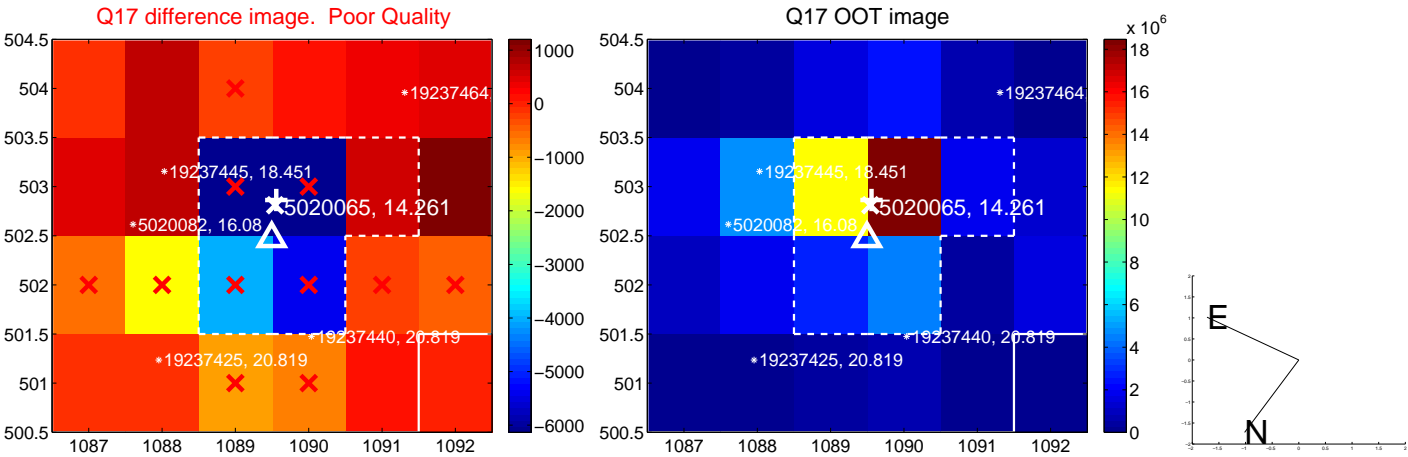
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



folded centroid time series figure for this object.

UKIRT Image

Declination

