

KIC 009020774

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})
009020774-01	OBS	No	1.052008	132.205760	1.8	8.951	8.7	0.2	4.50	11614	0.63	349904.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009020774-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

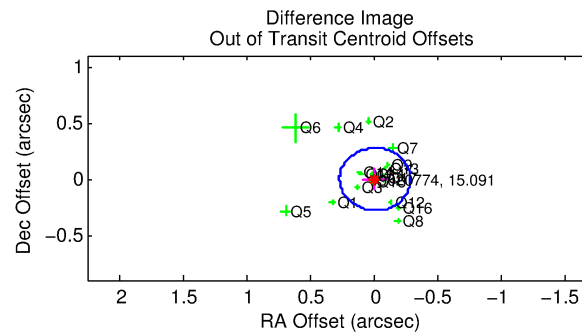
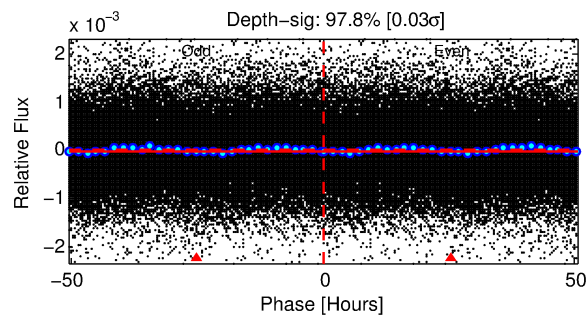
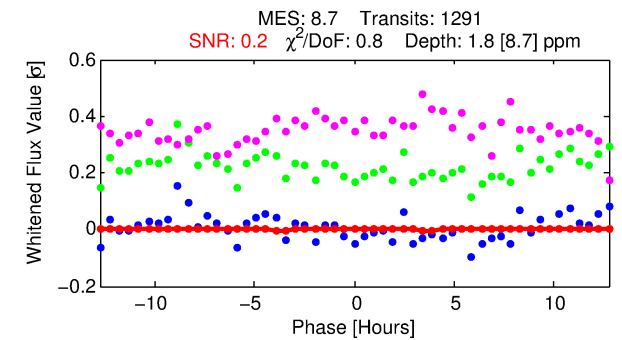
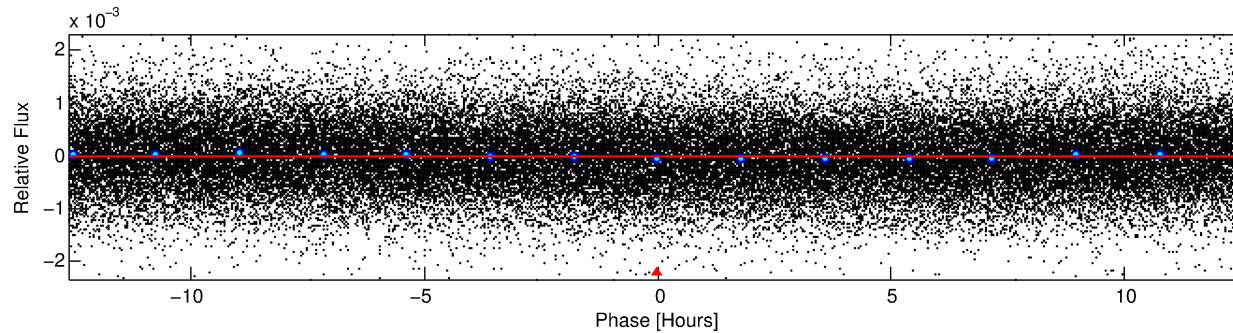
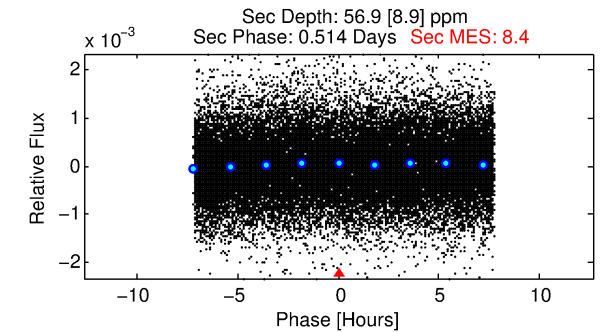
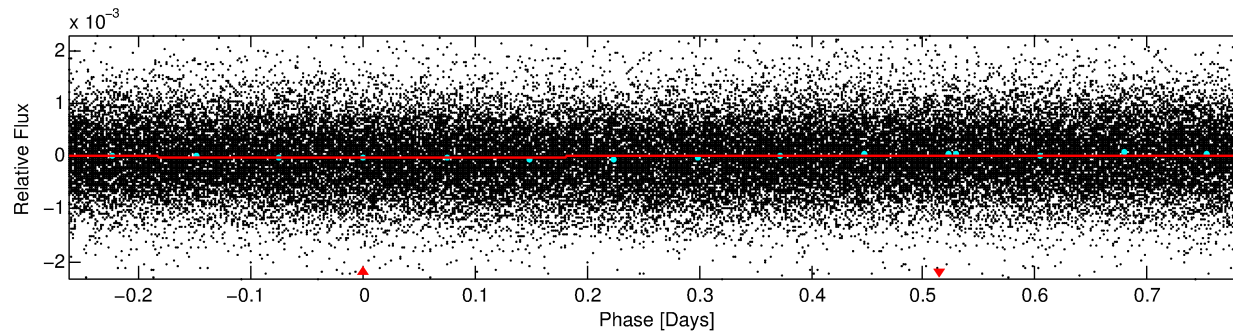
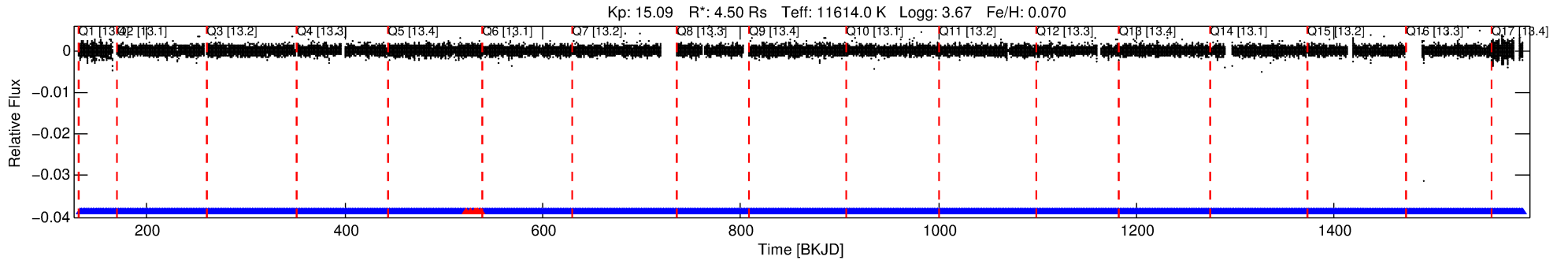
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009020774-01

No Significant Match Found

DV One-Page Summary

KIC: 9020774 Candidate: 1 of 1 Period: 1.052 d



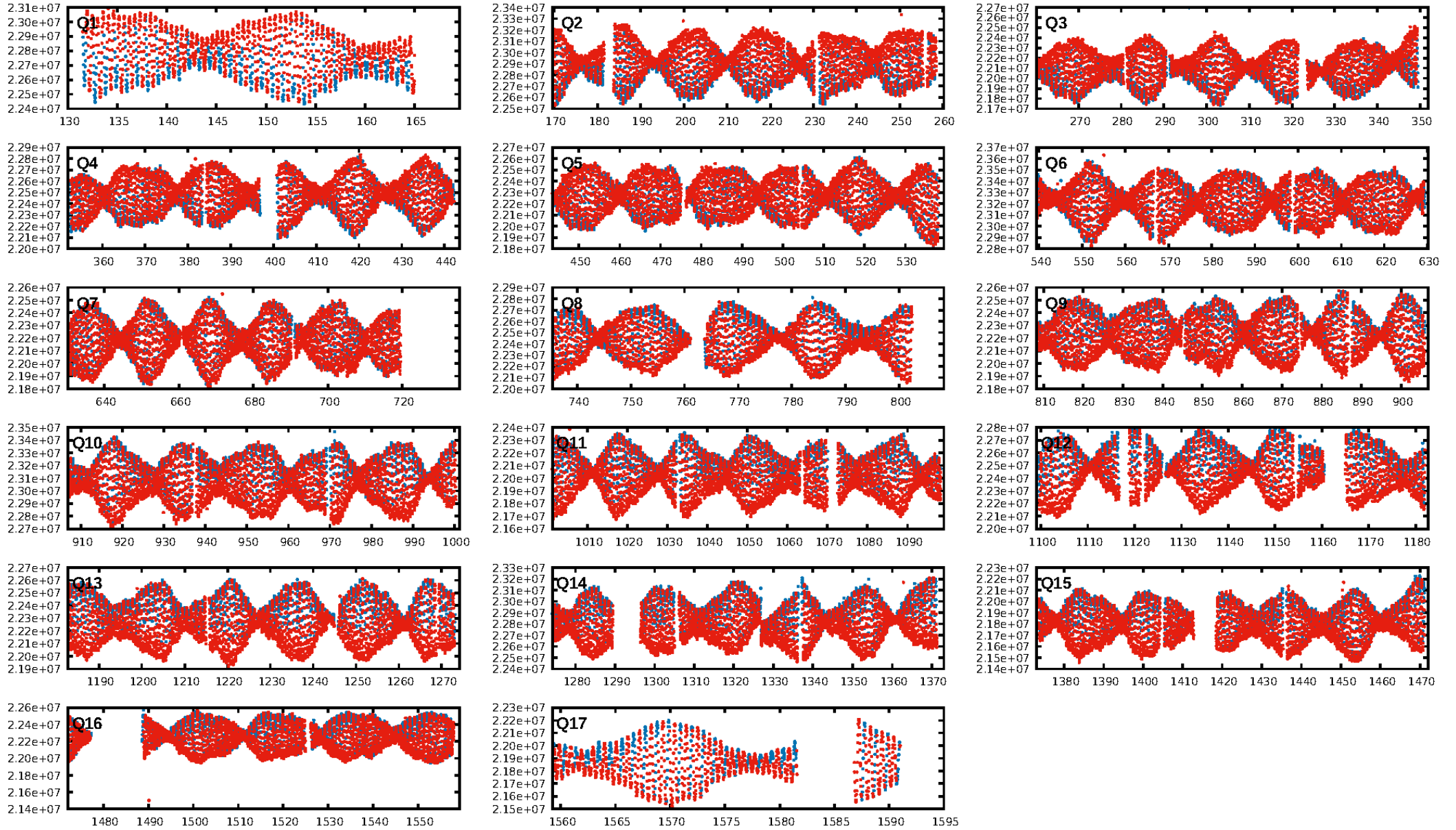
DV Fit Results:

Period = 1.05201 [0.00059] d
Epoch = 132.2058 [0.1394] BKJD
Rp/R* = 0.0013 [0.0217]
a/R* = 1.11 [29.12]
b = 0.24 [540.39]
Seff = 349904.49 [375049.85]
Teq = 6202 [1662] K
Rp = 0.63 [10.63] Re
a = 0.0307 [0.0168] AU
Ag = 74.30 [2508.08] [0.03σ]
Teffp = 28151 [237533] K [0.09σ]

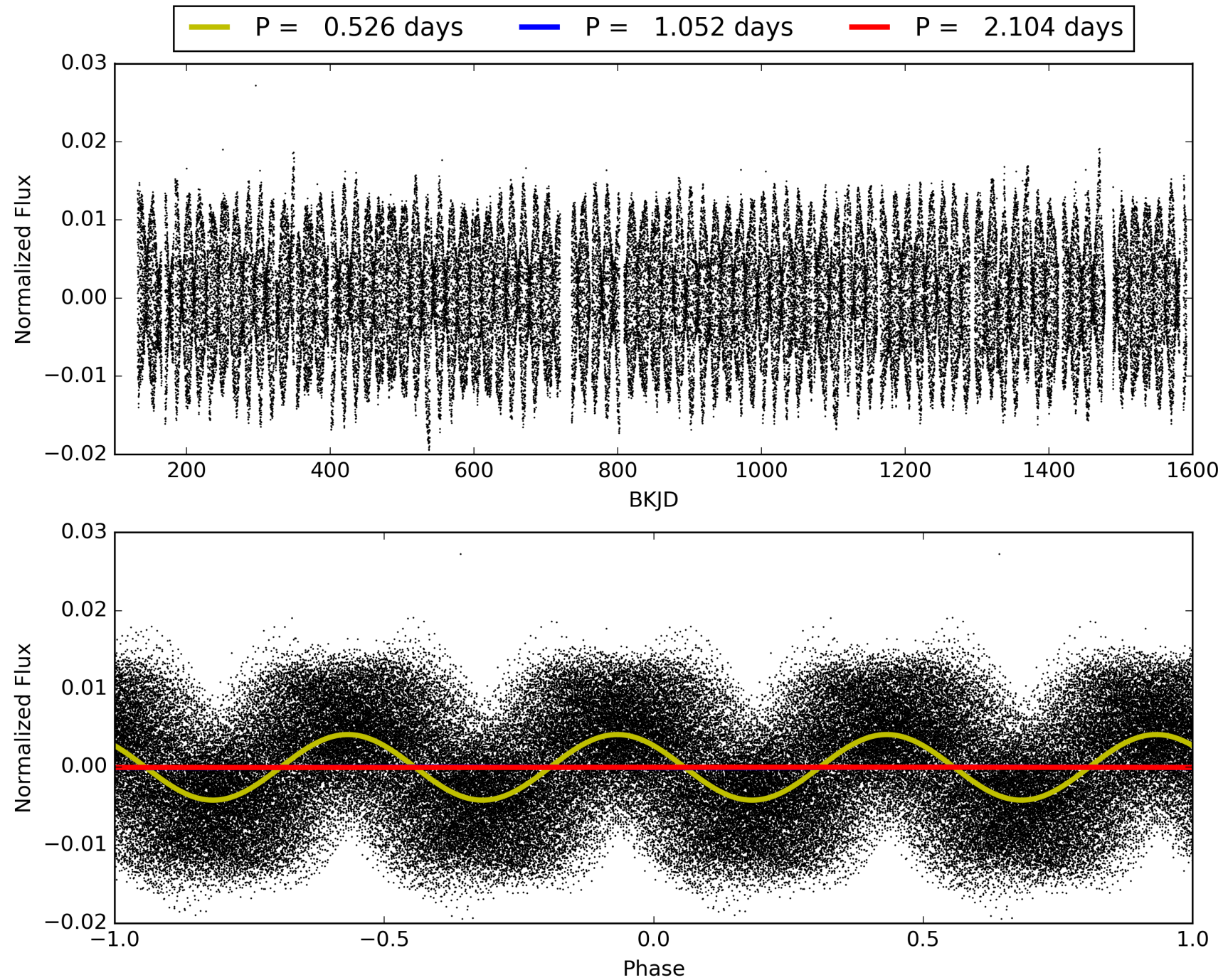
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [1227/1234]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.013 arcsec [0.14σ]
KicOffset-rm: 0.124 arcsec [1.43σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.29 [5/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 009020774-01, PDC Light Curves

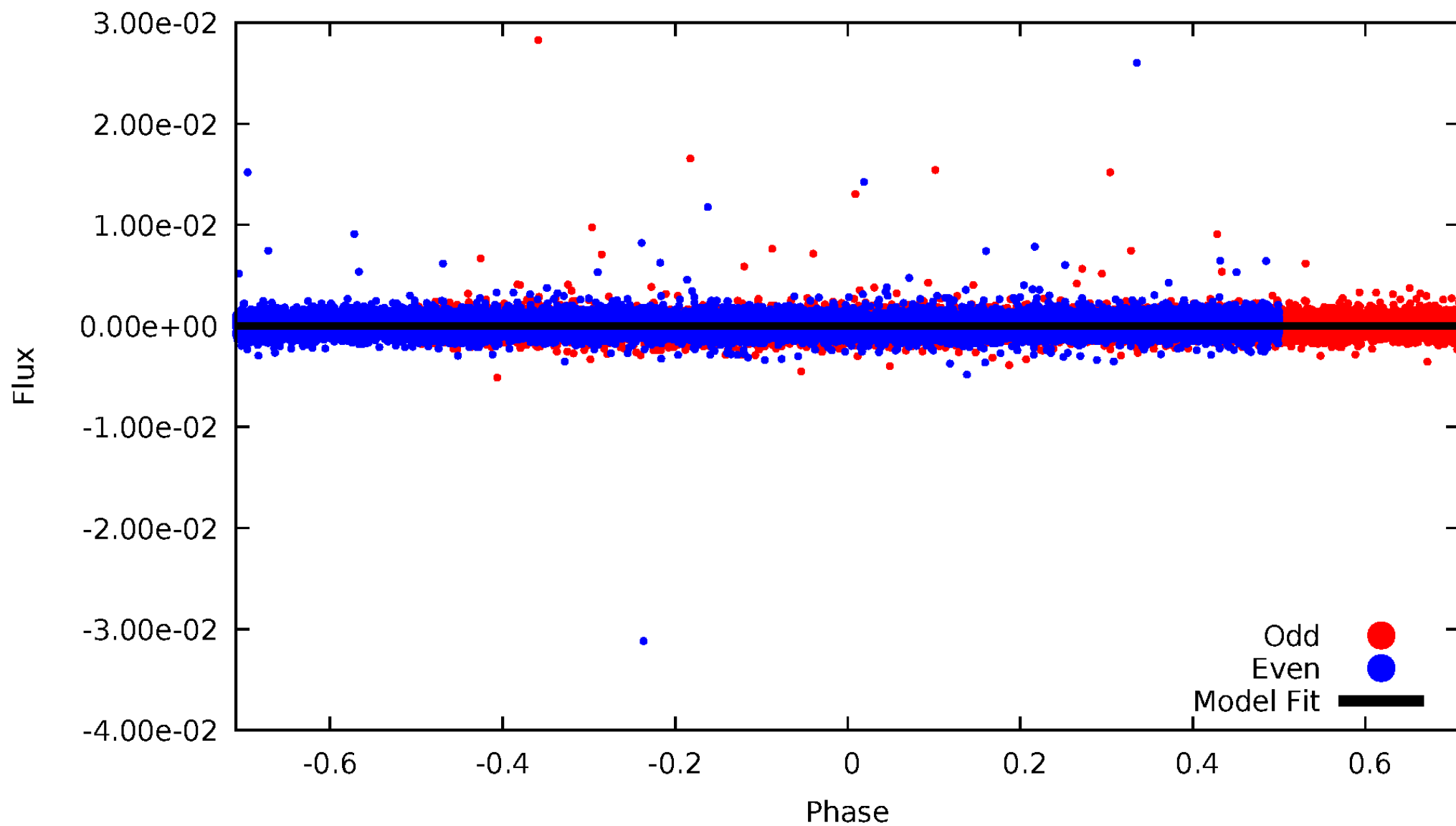


TCE 009020774-01



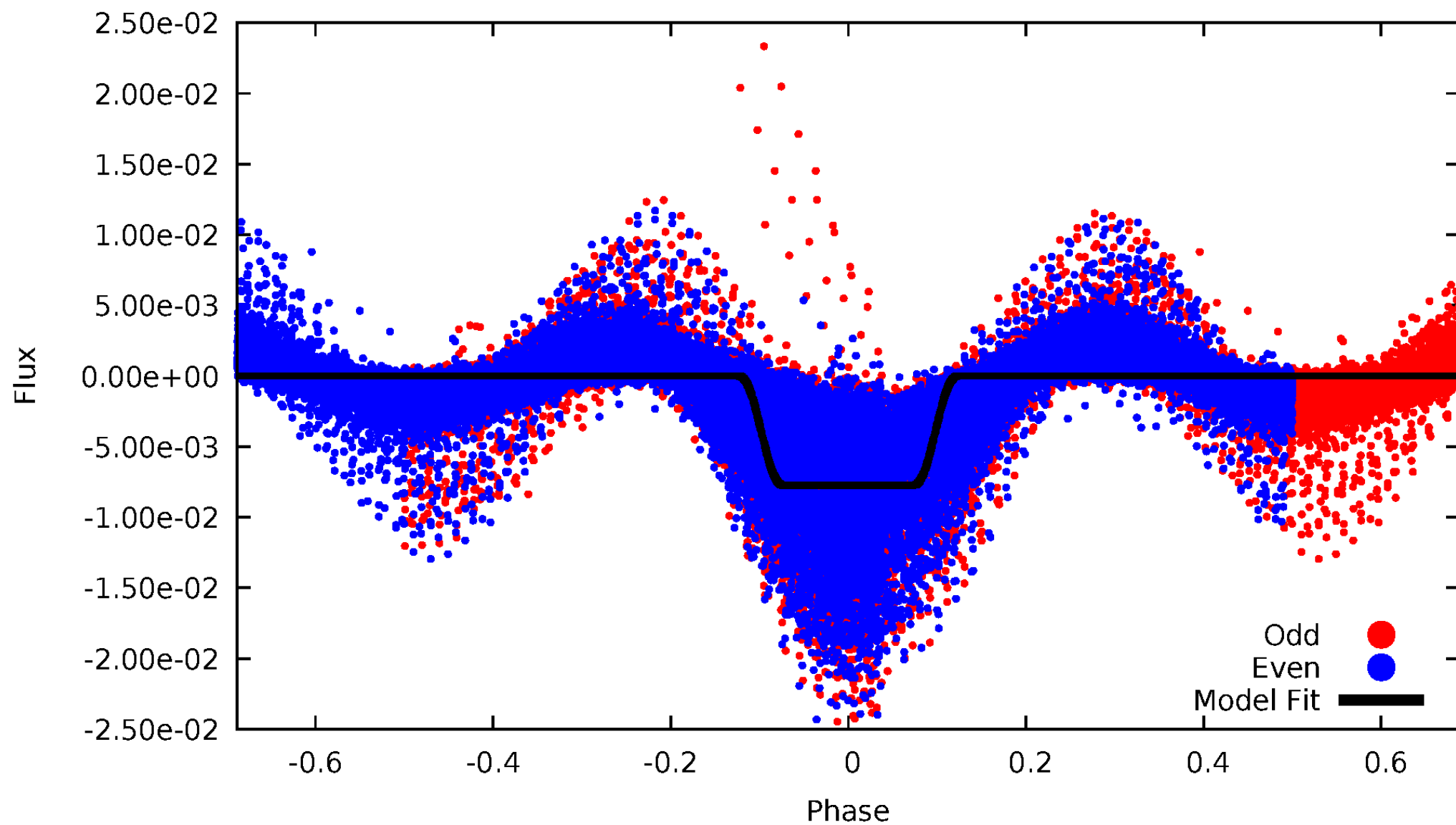
DV Odd/Even

TCE 009020774-01

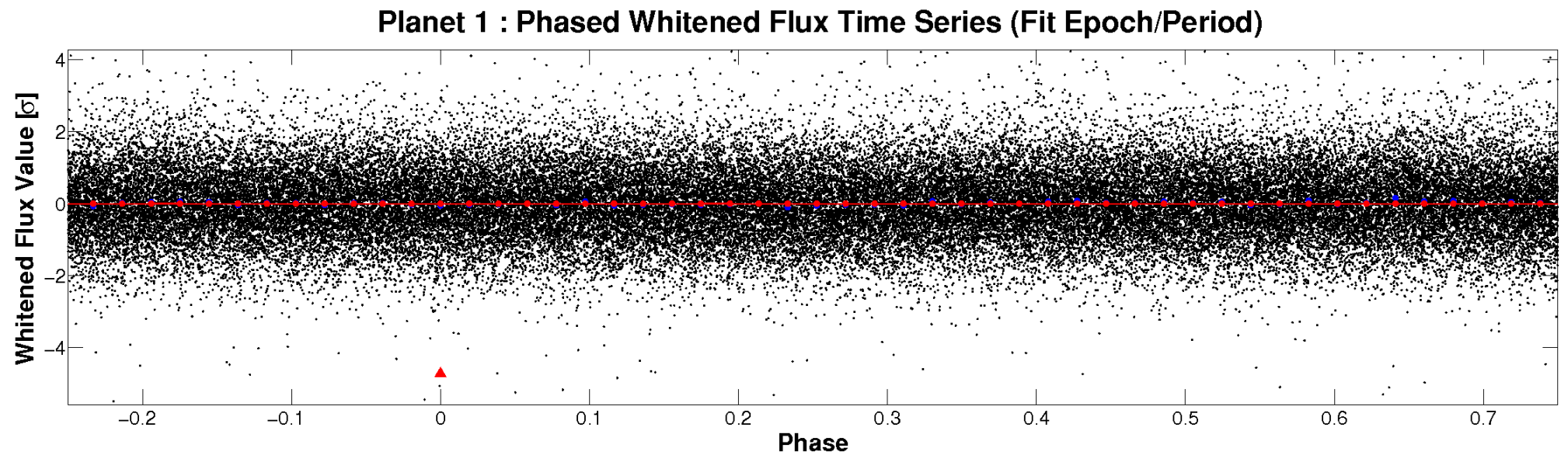
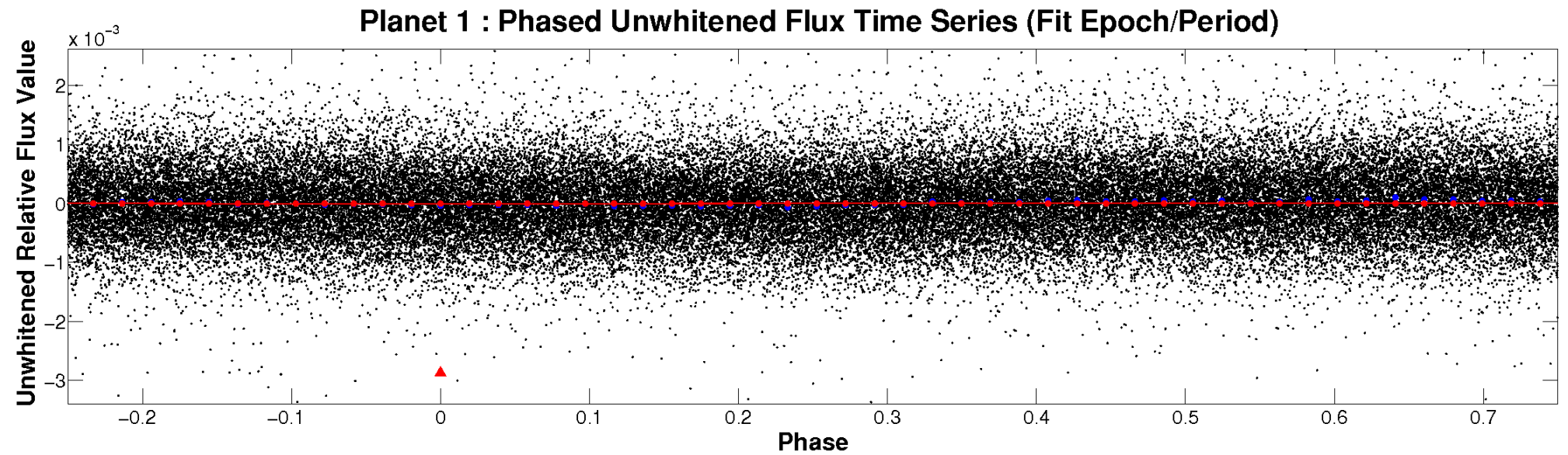


ALT Odd/Even

TCE 009020774-01

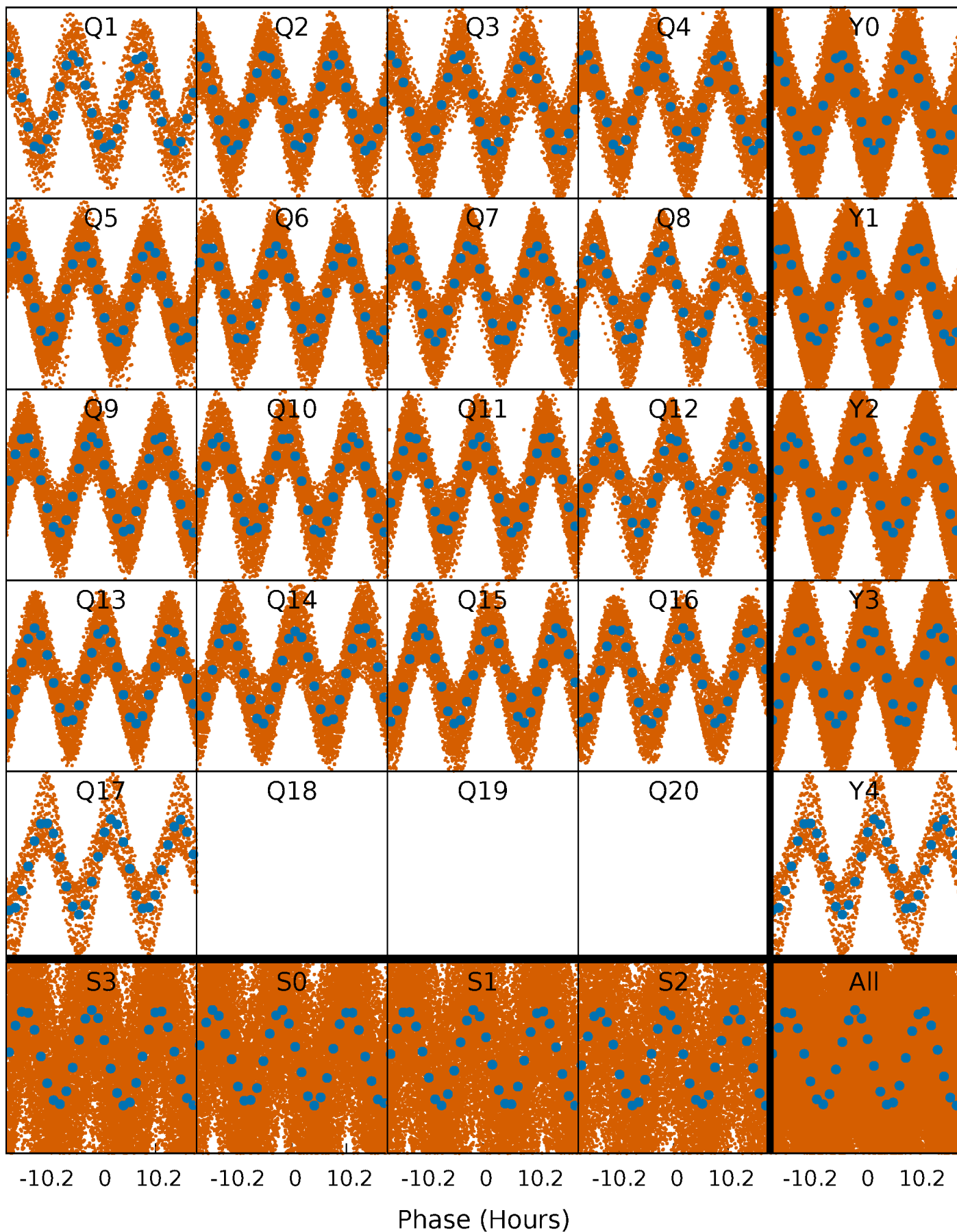


Non-Whitened Vs. Whitened Light Curve



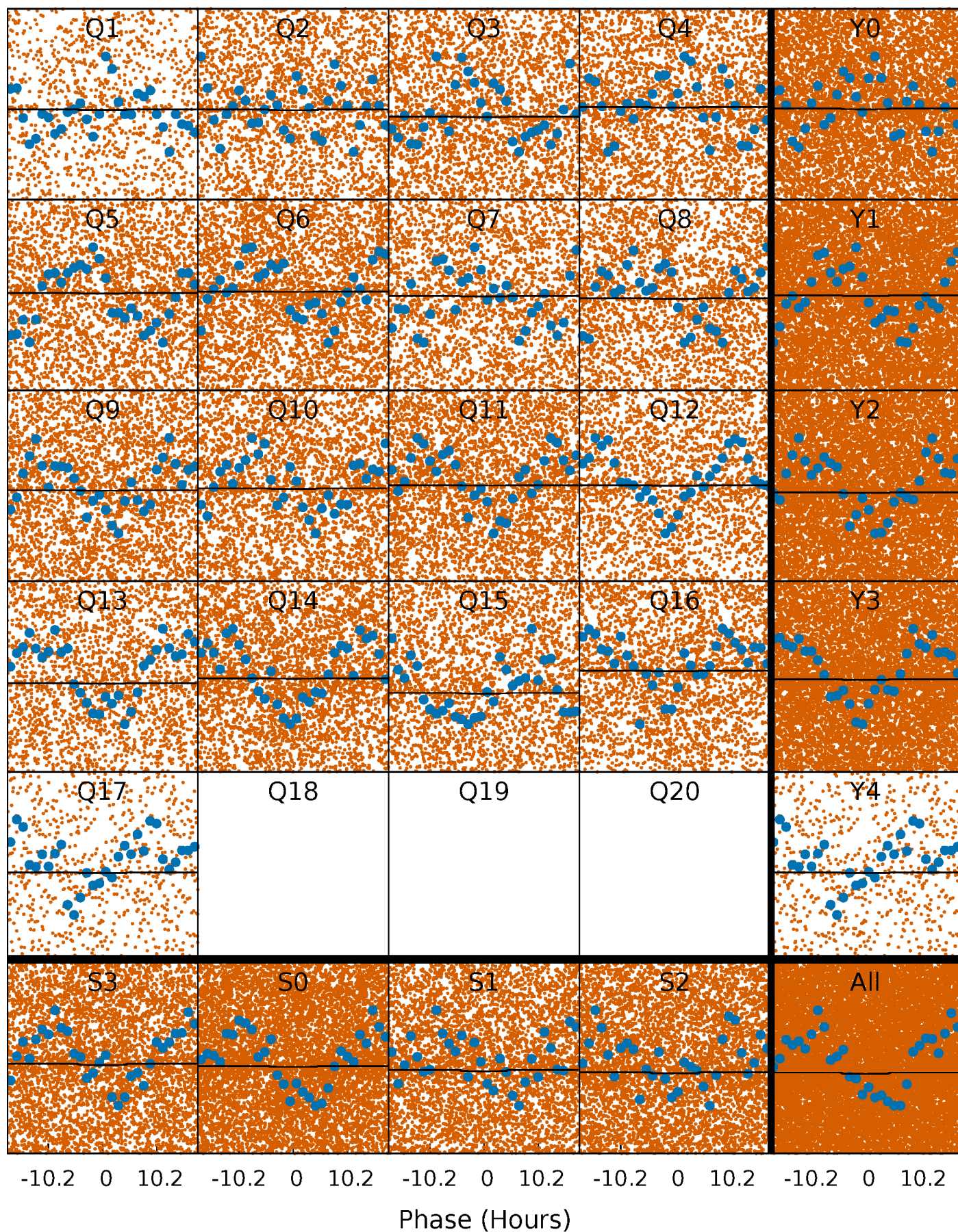
PDC Quarter-Phased Transit Curves

TCE 009020774-01 P= 1.052008 Days $T_0=132.205760$ (BKJD)



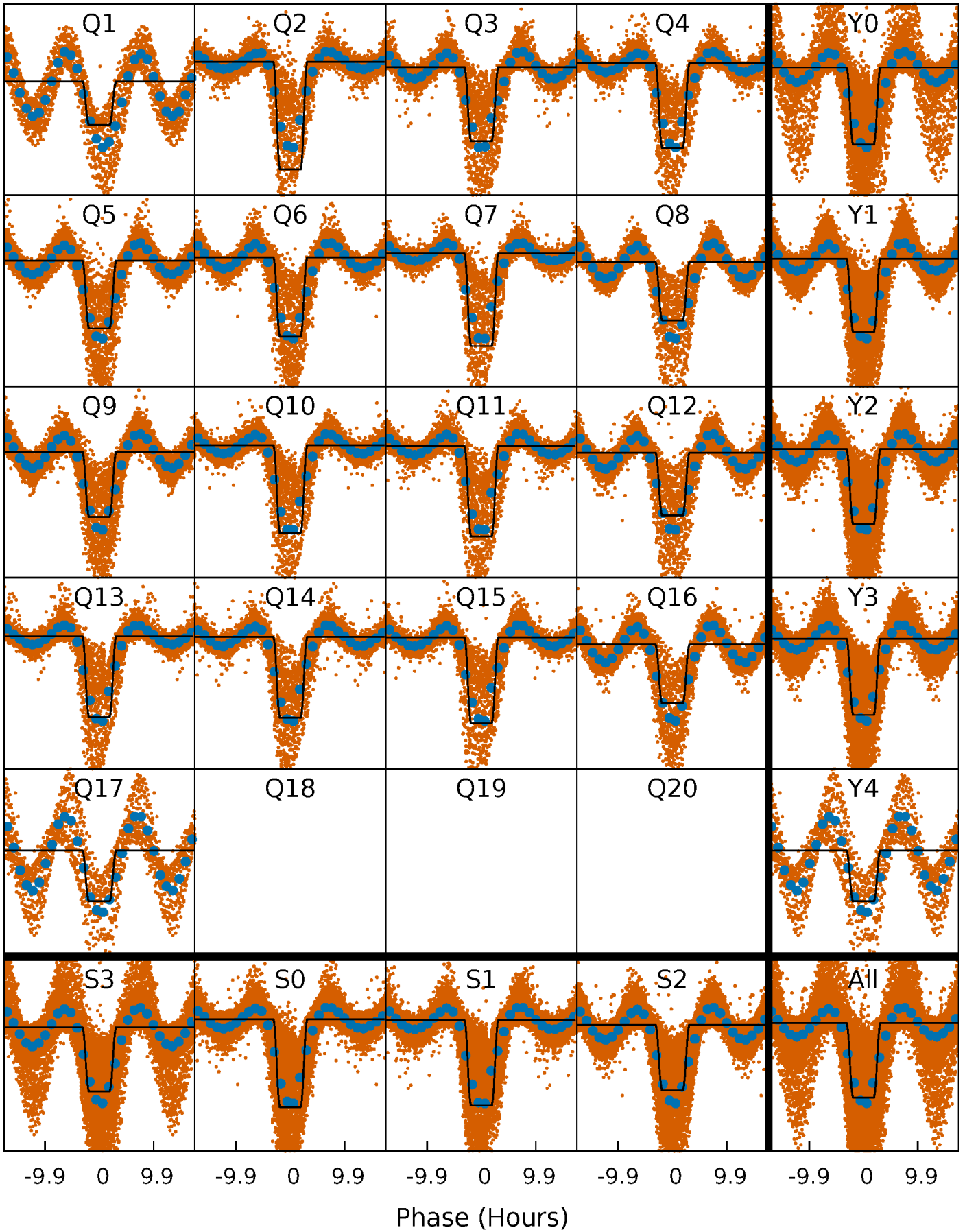
DV Quarter-Phased Transit Curves

TCE 009020774-01 P= 1.052008 Days $T_0=132.205760$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

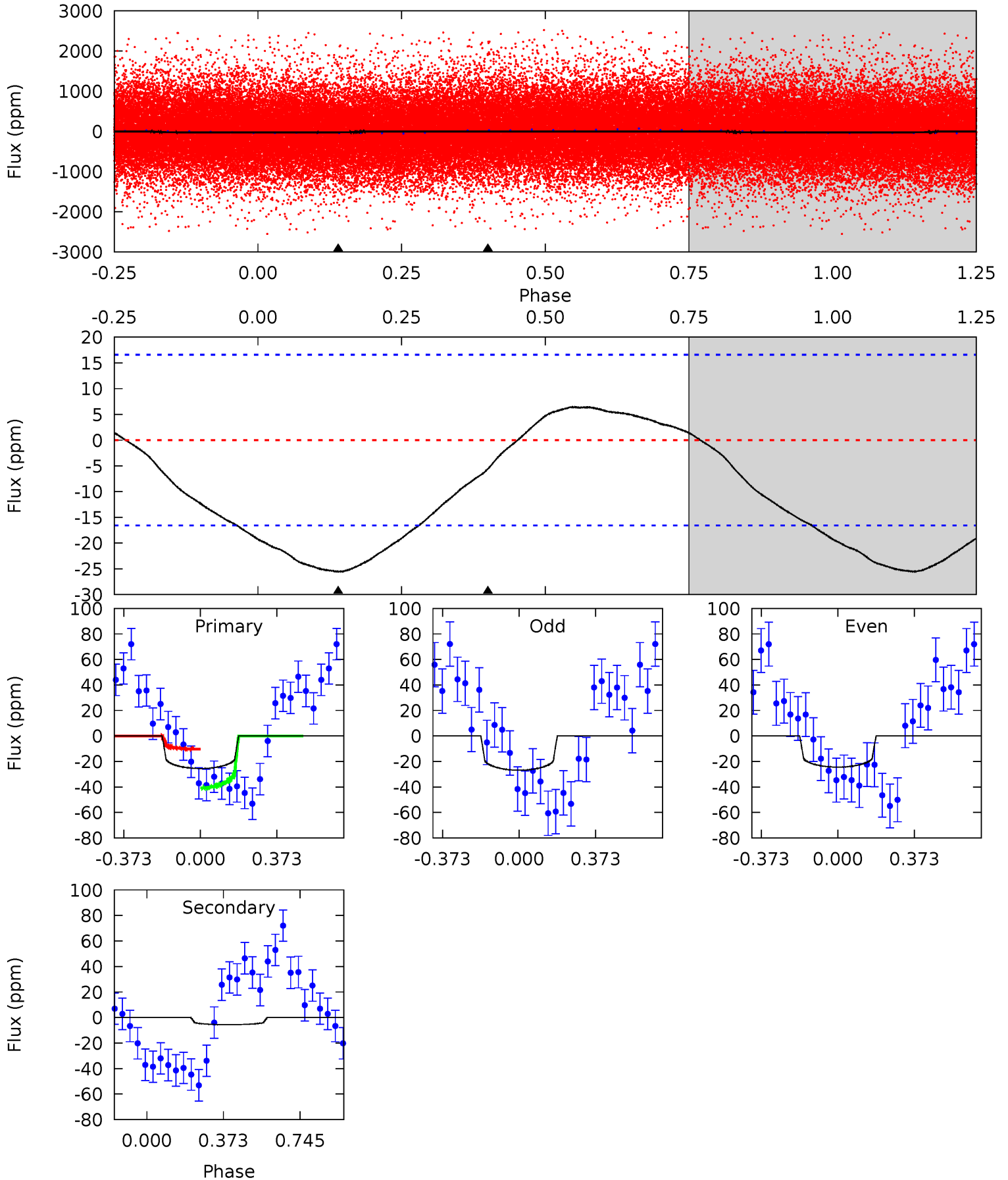
TCE 009020774-01 P= 1.052244 Days $T_0=132.214901$ (BKJD)



DV Model-Shift Uniqueness Test

009020774-01, P = 1.052008 Days, E = 131.153752 Days

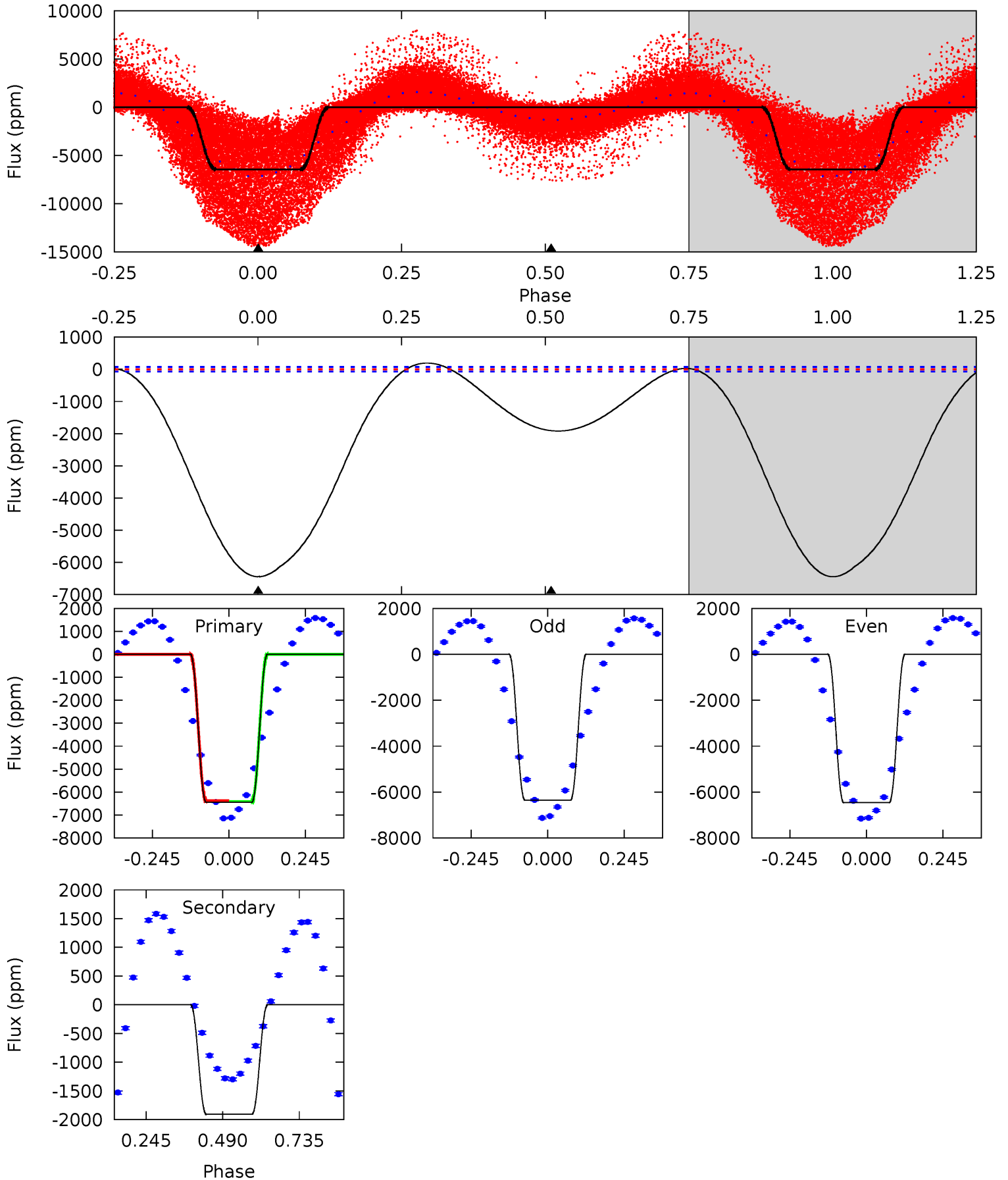
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.59	1.44	0	0	4.28	0.89	0.53	6.59	6.59	1.44	1.44	0.32	0.89	0.20	3.83



Alt Model-Shift Uniqueness Test

009020774-01, P = 1.052244 Days, E = 131.162657 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
394.9	116.8	0	0	4.37	1.16	10.1	394.9	394.9	116.8	116.8	3.14	1.10	0.03	0



Stellar Parameters For KIC 009020774

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	11614^{+441}_{-1767}	$3.674^{+0.520}_{-0.130}$	$0.070^{+0.100}_{-0.600}$	$4.495^{+0.634}_{-2.535}$	$3.472^{+0.069}_{-1.357}$	$0.054^{+0.422}_{-0.018}$
	+4%/-15%	+14%/-4%	+143%/-857%	+14%/-56%	+2%/-39%	+783%/-33%
Source	KIC0	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 009020774-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-6 ± 4	$6.19^{+8.05}_{-4.33}$	8023^{+1084}_{-1454}	-5240^{+10628}_{-1000}	$0.052^{+0.528}_{-0.045}$
Alt.	-1907 ± 16	$39.22^{+12.41}_{-13.29}$	8116^{+1028}_{-1379}	5844^{+1794}_{-1731}	$0.619^{+0.745}_{-0.259}$

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 $A_{obs} \gg 1.0$

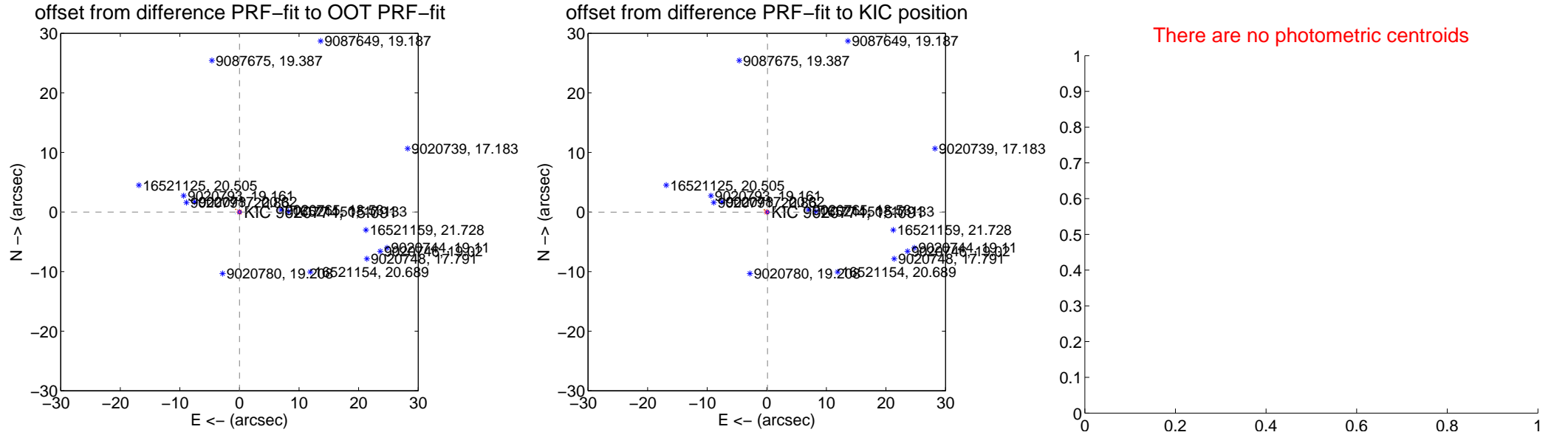
DV Centroid Data

Supplemental centroid analysis for 009020774-01. Kepler magnitude: 15.09. Transit SNR 0.25

There are 5 quarters with good PRF difference image offsets

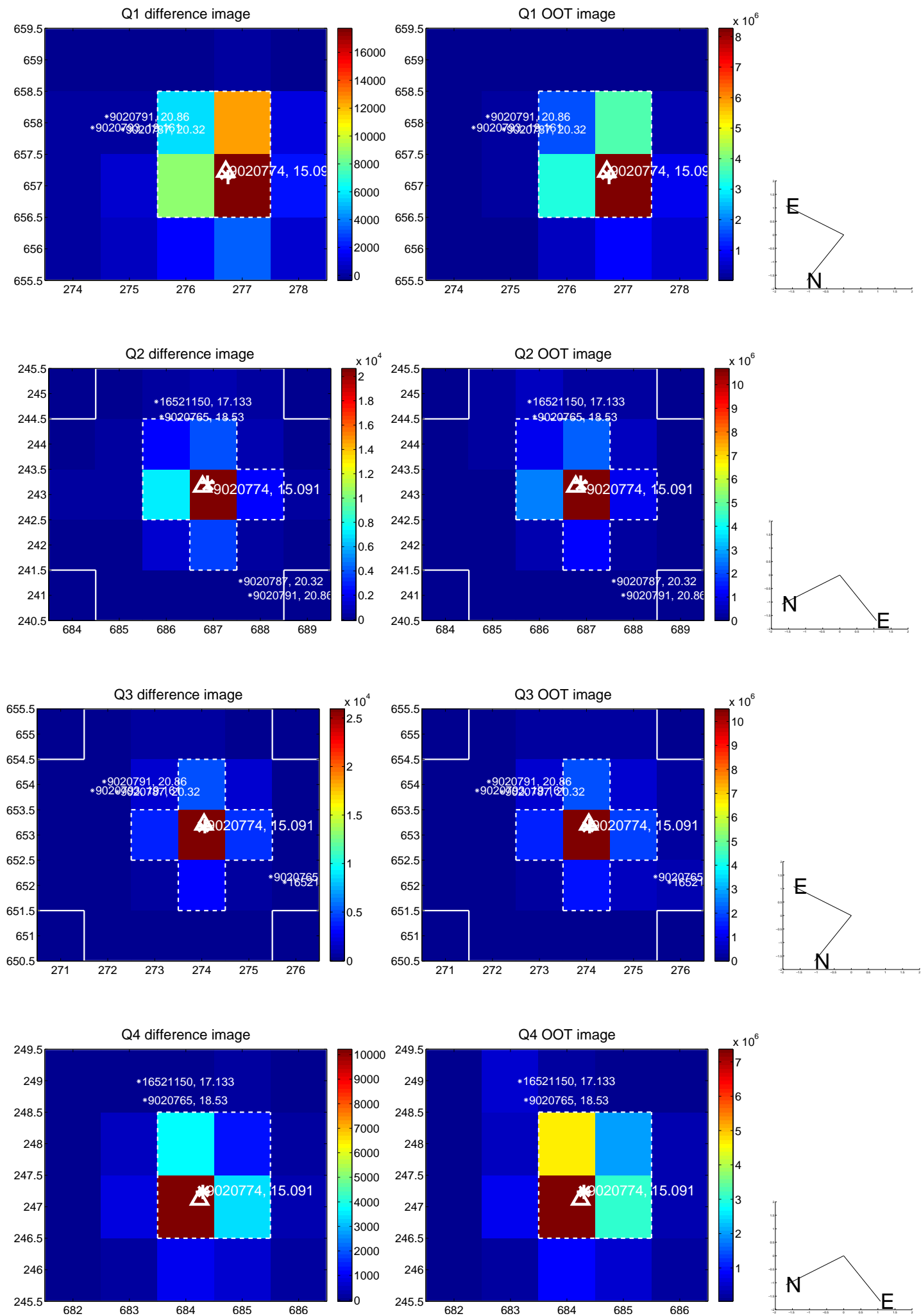
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.013 ± 0.093	0.14	-0.013 ± 0.091	-0.003 ± 0.093
PRF-fit source offset from KIC position	0.124 ± 0.087	1.43	-0.122 ± 0.086	-0.023 ± 0.088
photometric centroid source offset	—	—	—	—

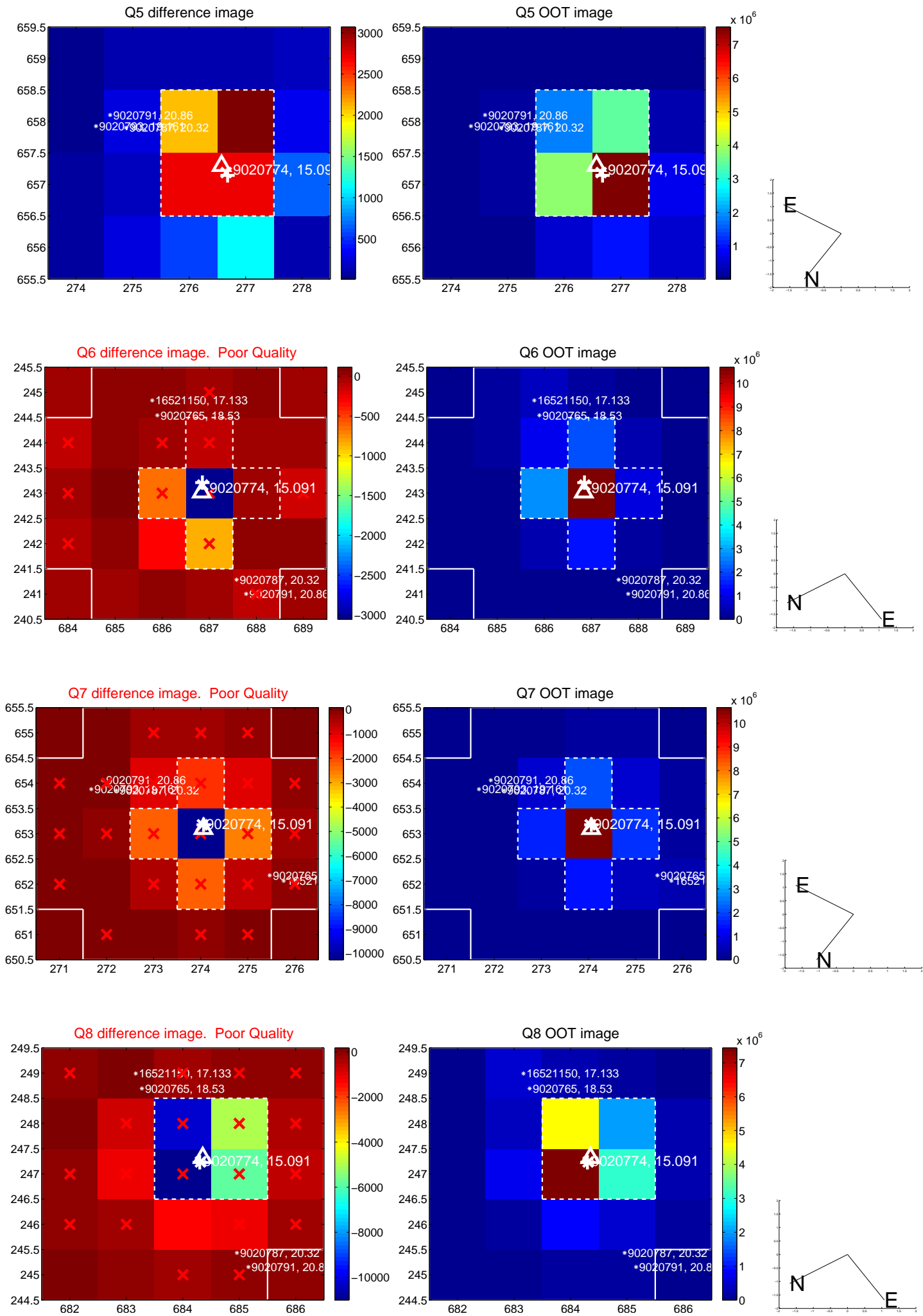


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

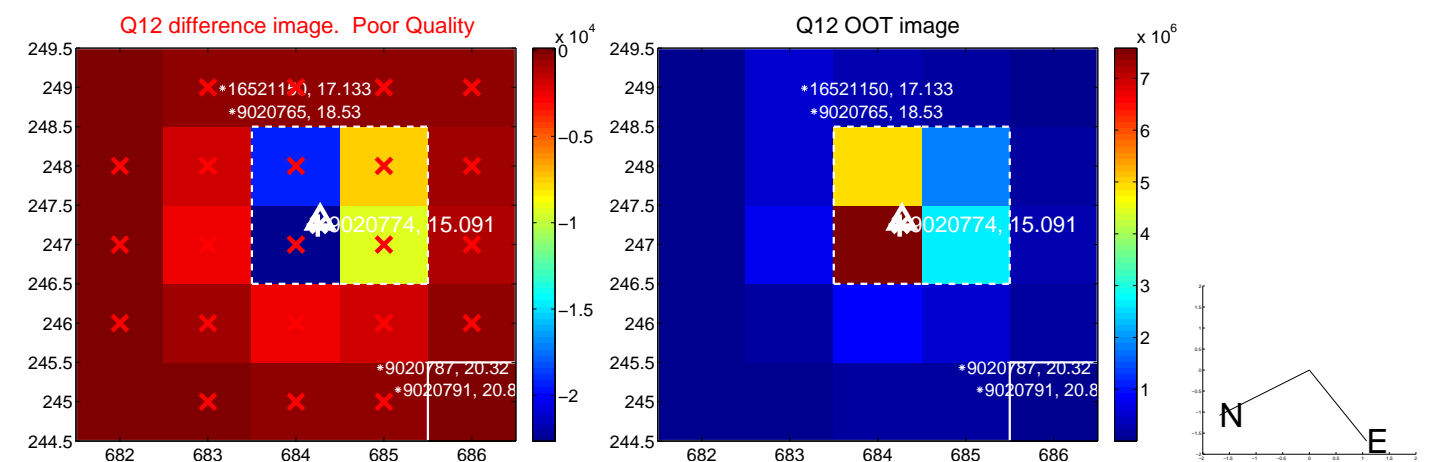
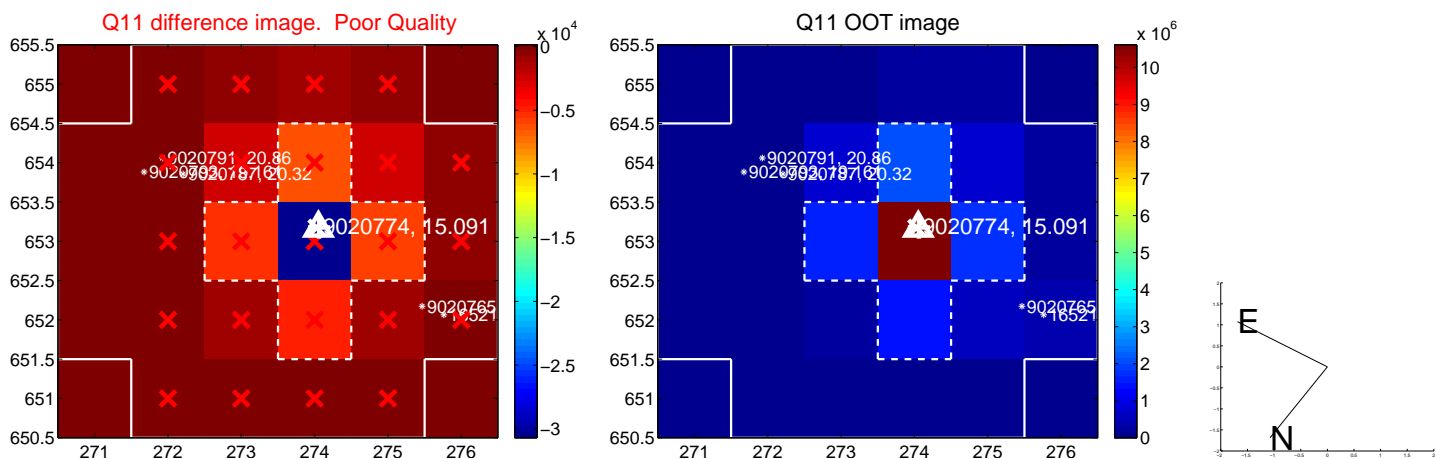
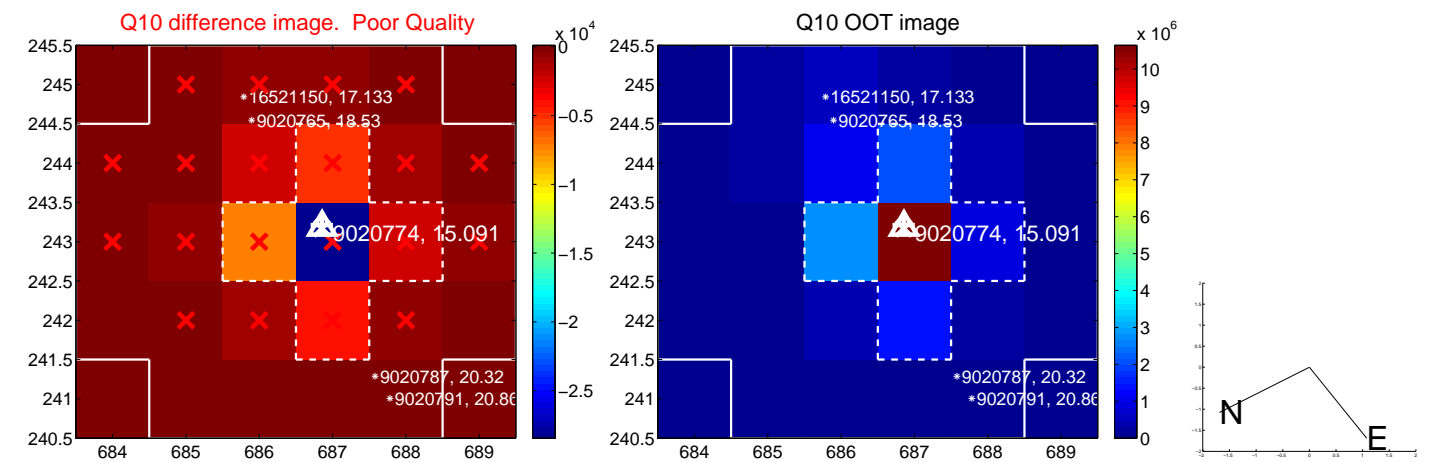
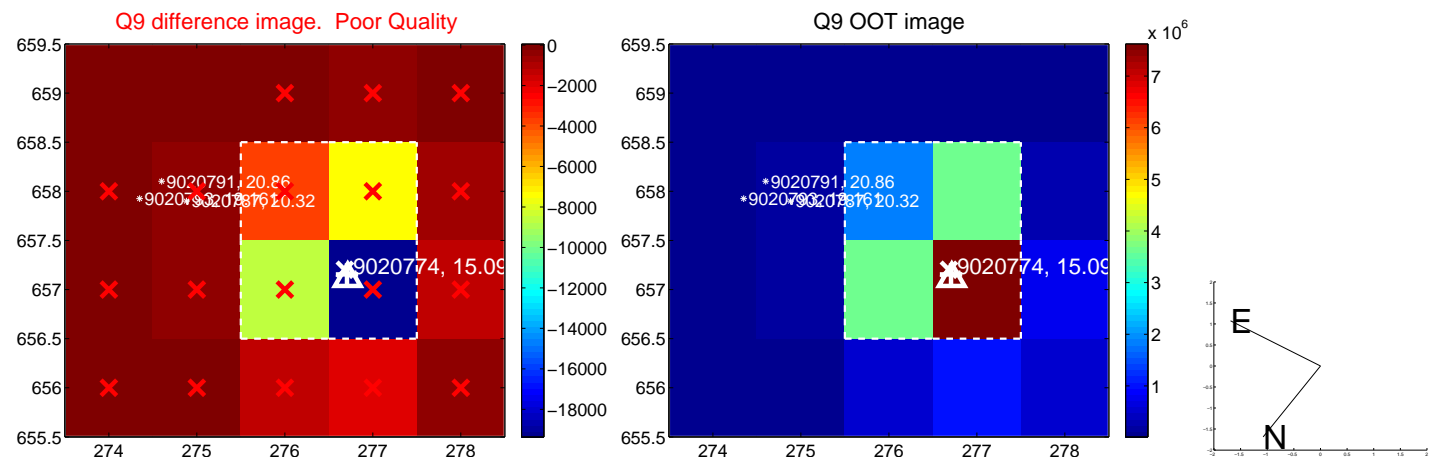
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



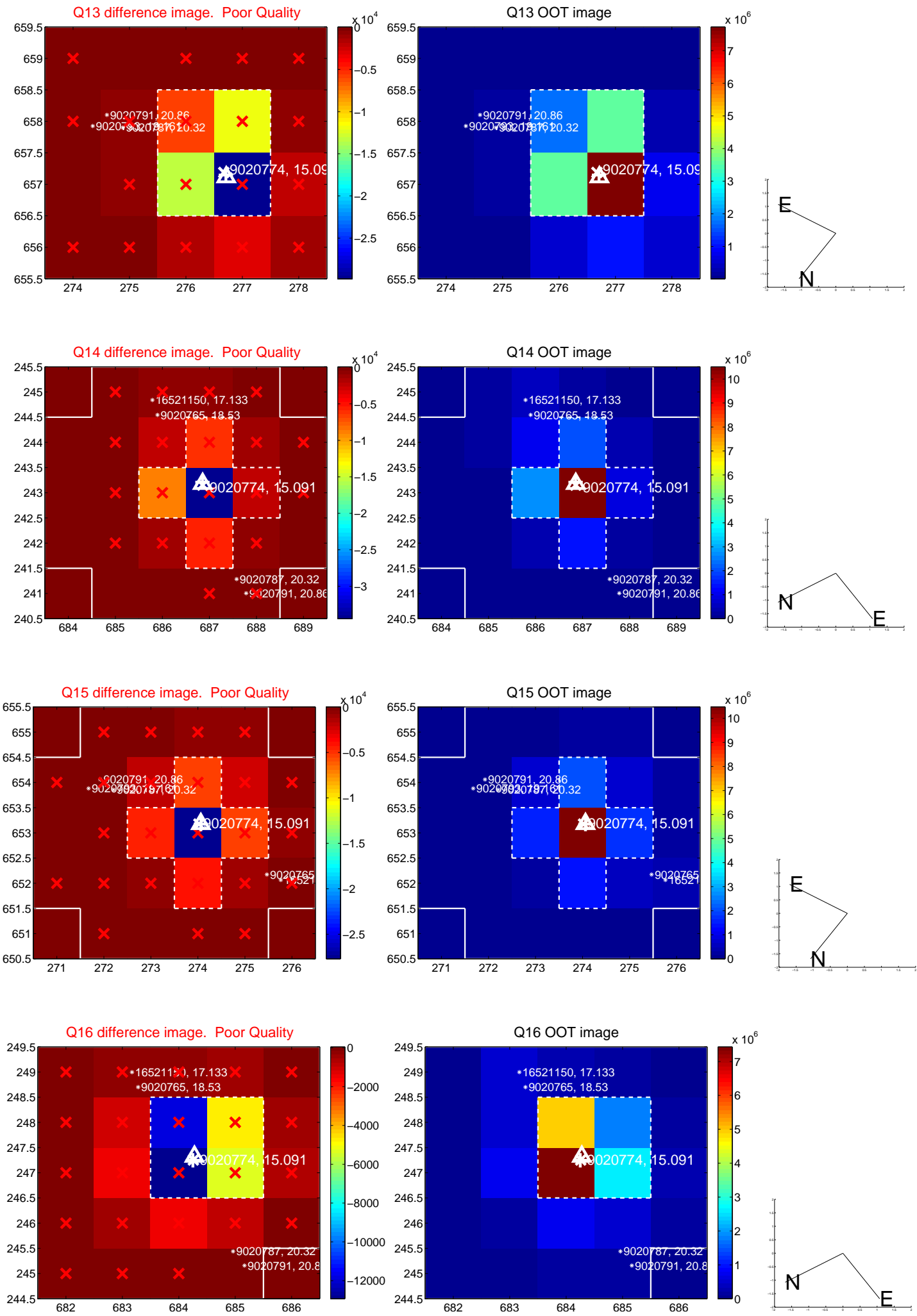
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



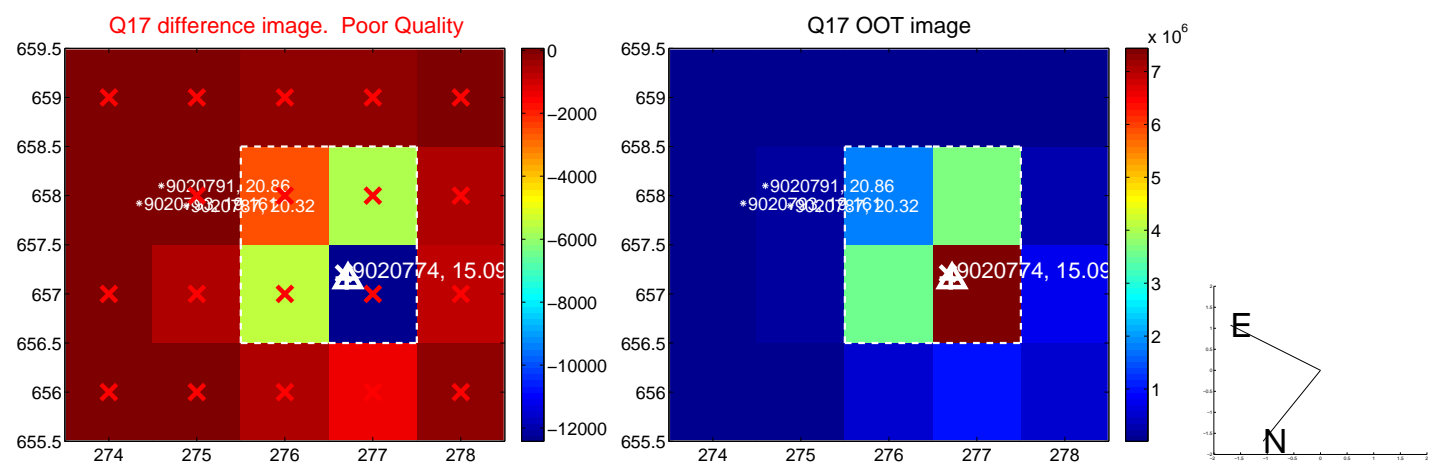
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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folded centroid time series figure for this object.

UKIRT Image

Declination

