

KIC 011869052

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})
011869052-01	OBS	0120.01	20.545972	137.901911	175.8	2.161	93.6	21.1	1.26	5670	2.04	71.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011869052-01	OBS	PC	0.57	0	0	0	0	NO_COMMENT

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

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

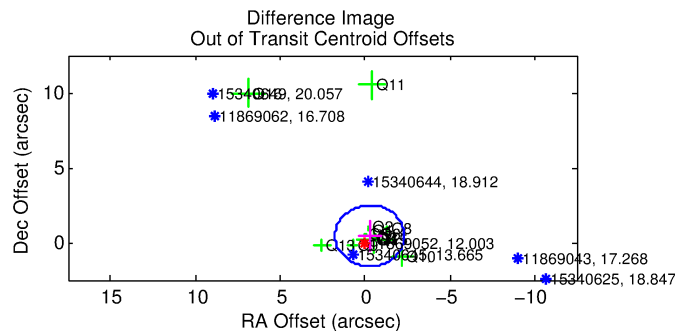
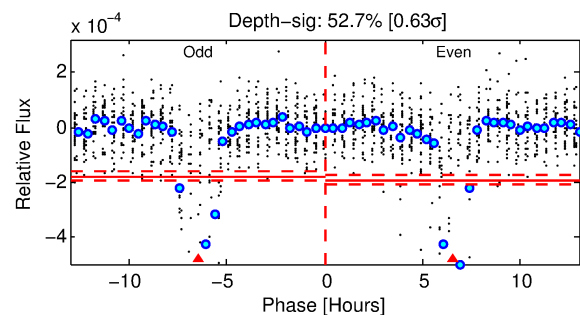
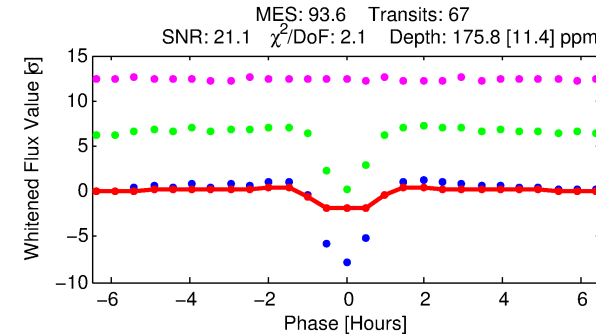
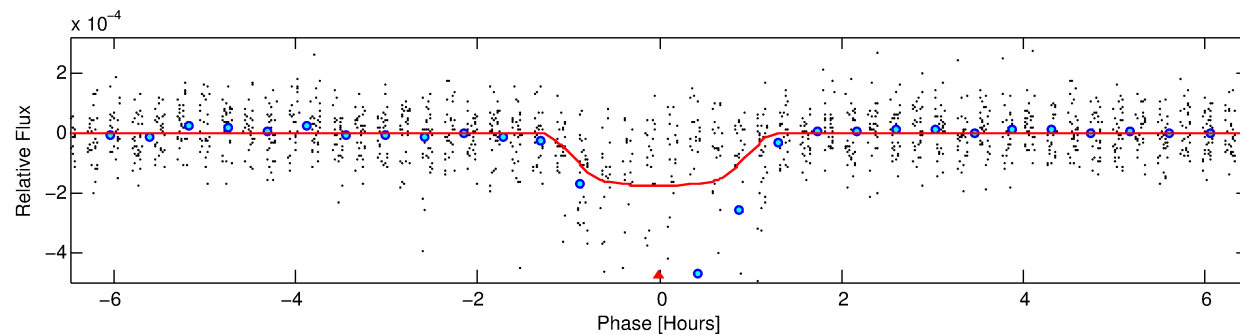
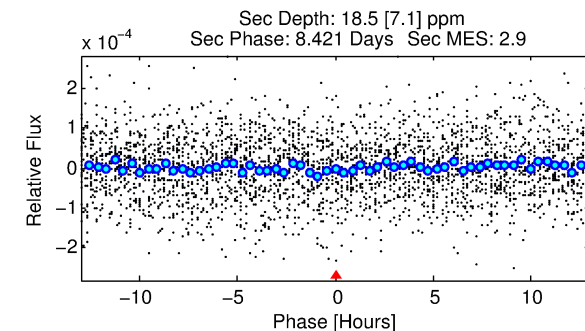
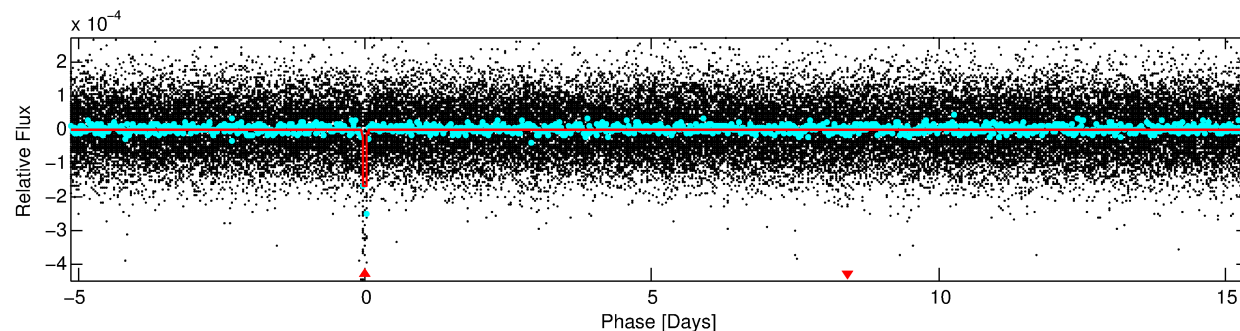
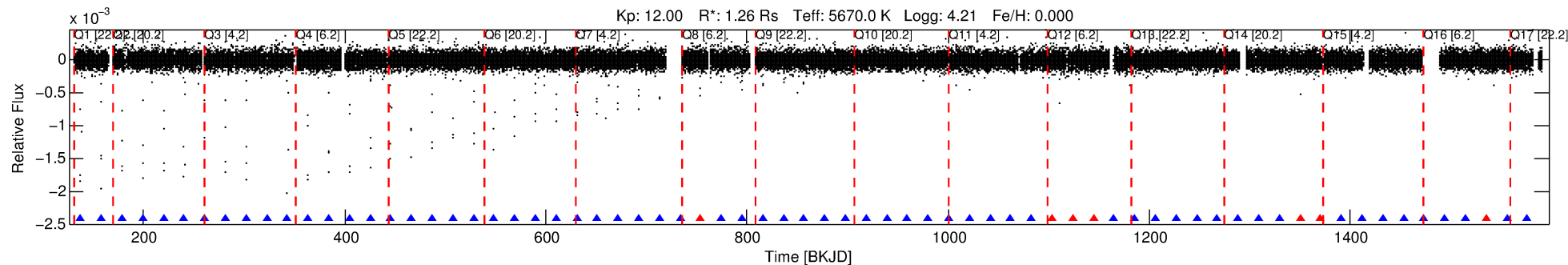
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011869052-01

No Significant Match Found

DV One-Page Summary

KIC: 11869052 Candidate: 1 of 1 Period: 20.546 d
KOI: K00120.01 Corr: 0.904



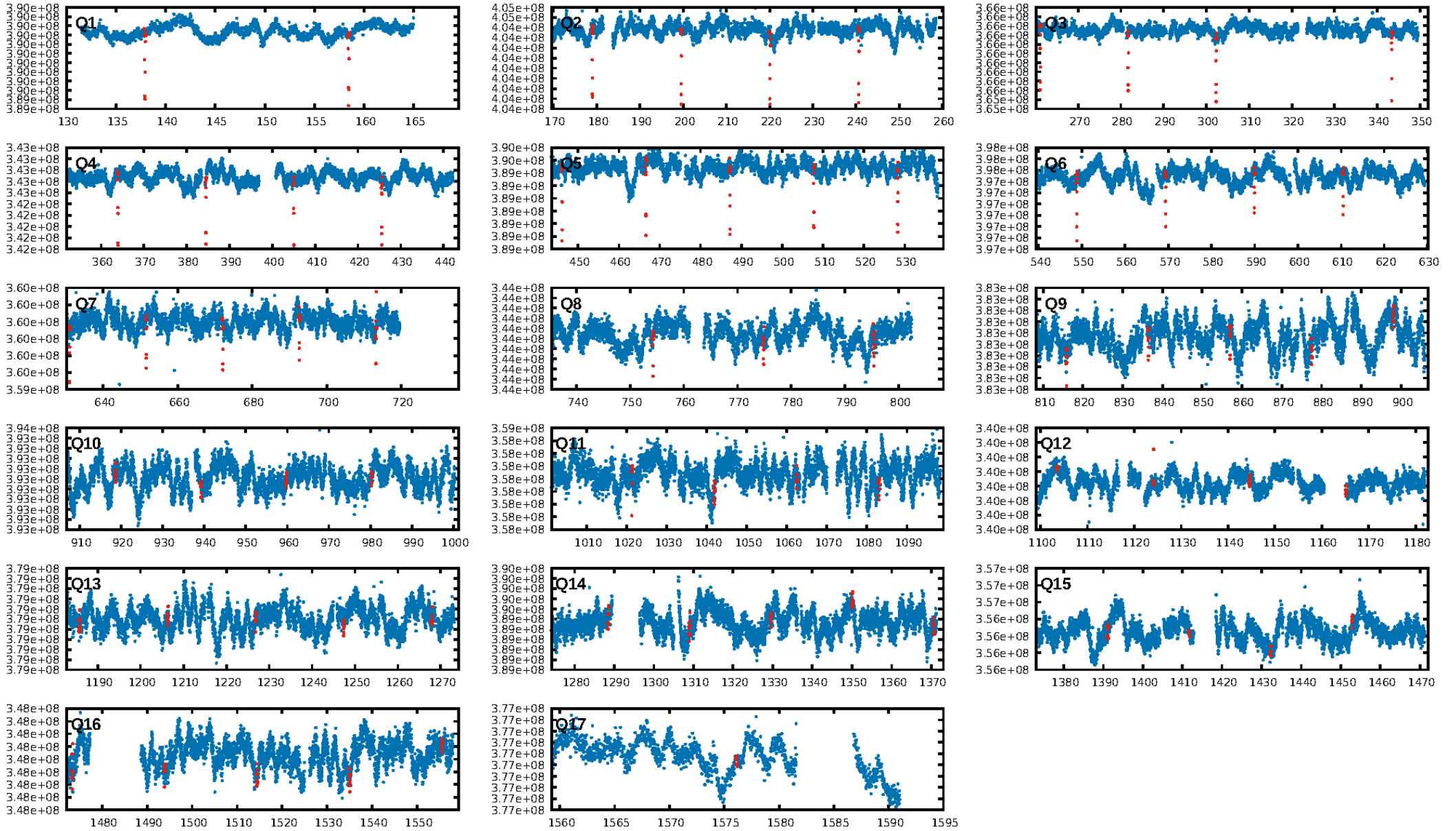
DV Fit Results:

Period = 20.54597 [0.00007] d
Epoch = 137.9019 [0.0028] BKJD
Rp/R* = 0.0148 [0.0074]
a/R* = 31.25 [75.06]
b = 0.92 [0.41]
Seff = 71.68 [32.52]
Teq = 742 [84] K
Rp = 2.04 [1.15] Re
a = 0.1437 [0.0364] AU
Ag = 50.28 [57.47] [0.86 σ]
Teffp = 3055 [829] K [2.78 σ]

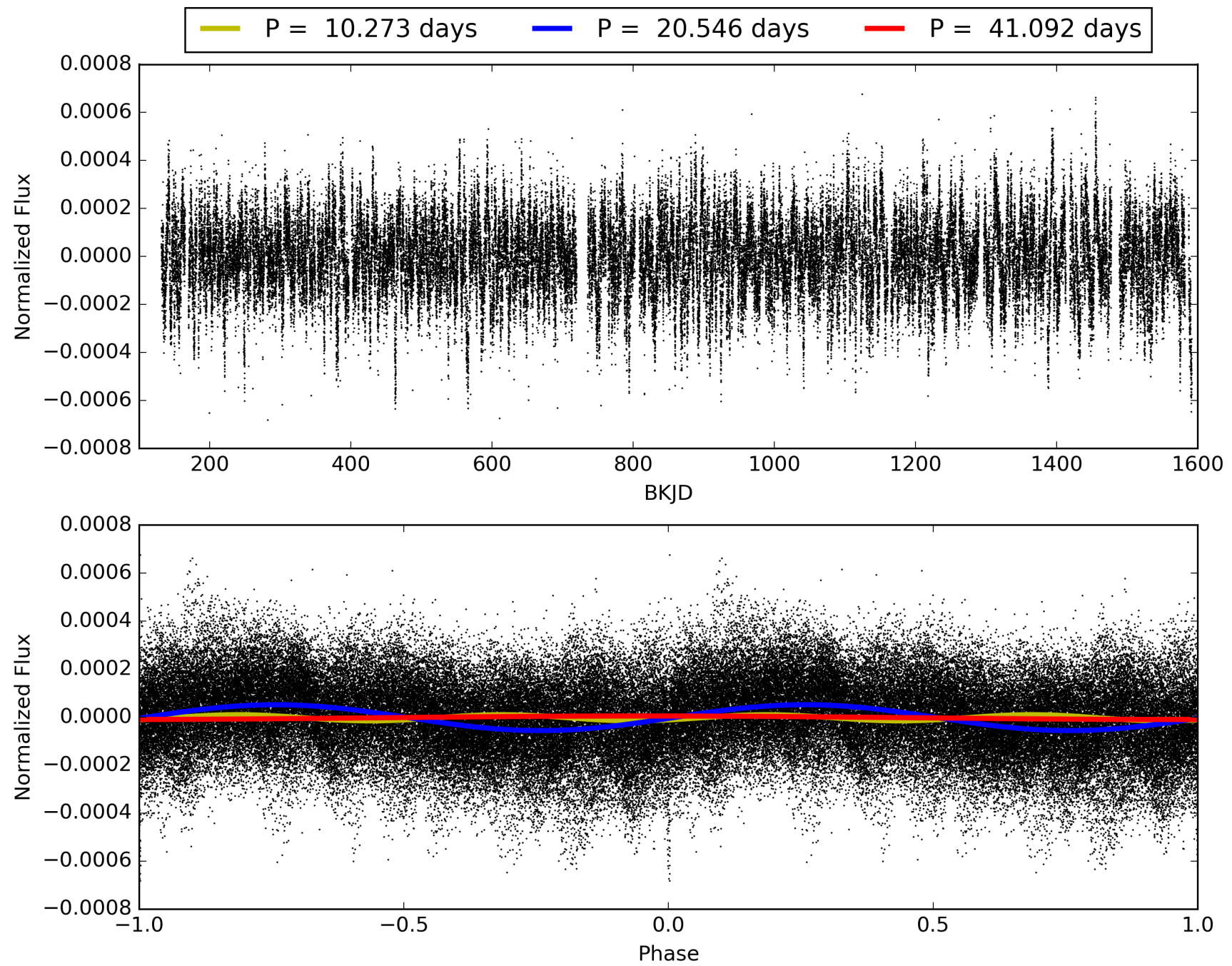
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGoF-sig: 0.6%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.89 [57/64]
GhostDiagnostic-chr: 4.225
Centroid-sig: 0.0%
Centroid-so: 1.242 arcsec [3.51 σ]
OotOffset-rm: 0.526 arcsec [0.77 σ]
KicOffset-rm: 0.351 arcsec [0.61 σ]
OotOffset-st: 3/4/3/4 [14]
KicOffset-st: 3/4/3/4 [14]
DiffImageQuality-fgm: 0.86 [12/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011869052-01, PDC Light Curves

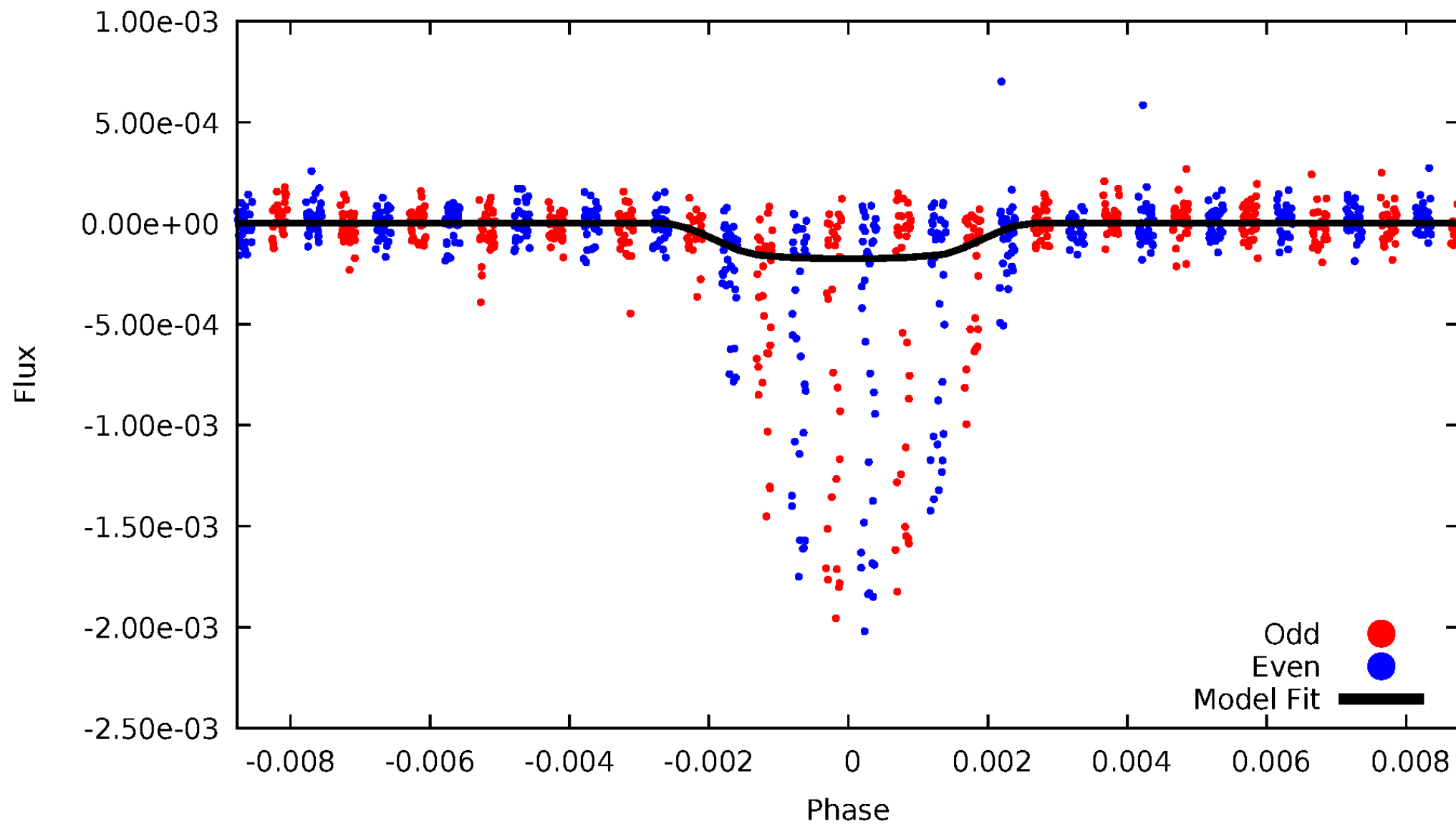


TCE 011869052-01



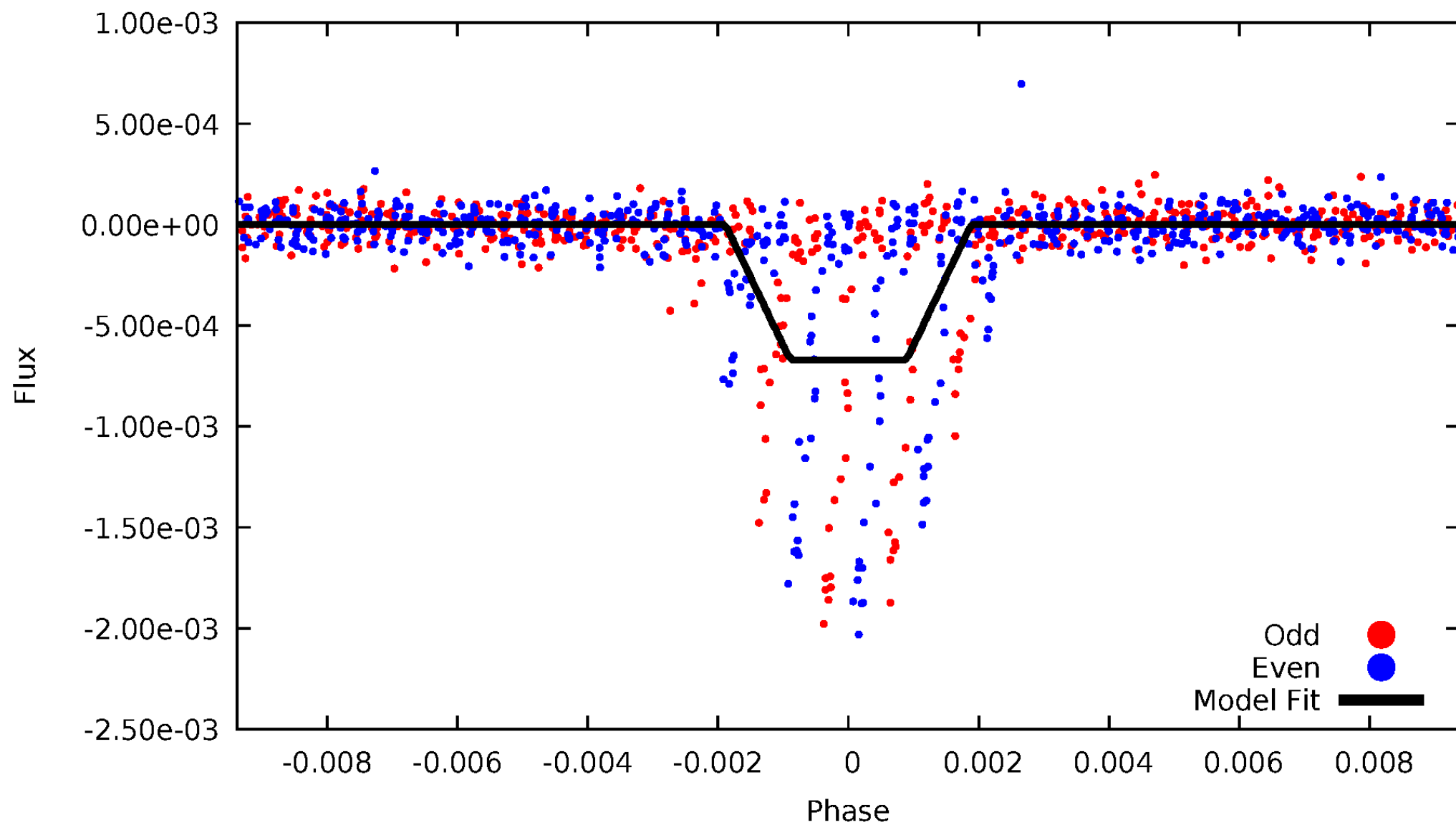
DV Odd/Even

TCE 011869052-01



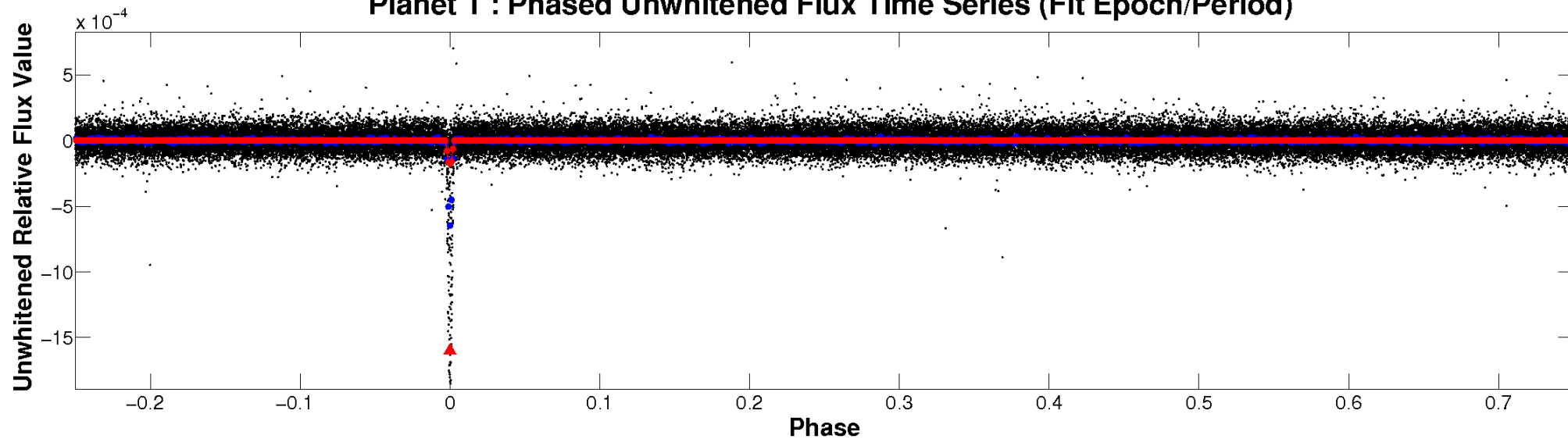
ALT Odd/Even

TCE 011869052-01

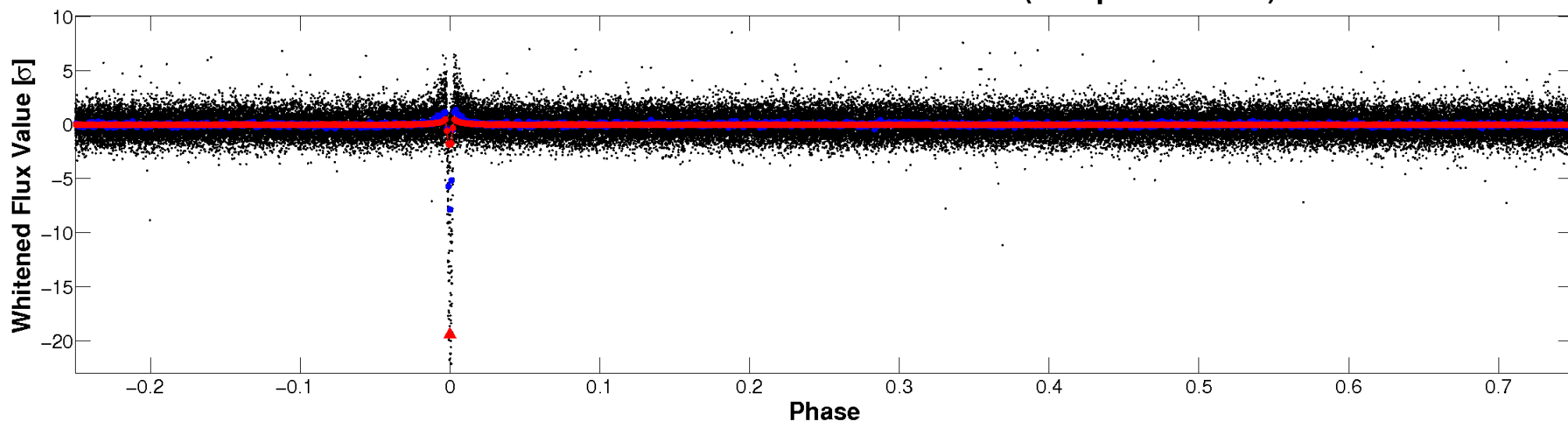


Non-Whitened Vs. Whitened Light Curve

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

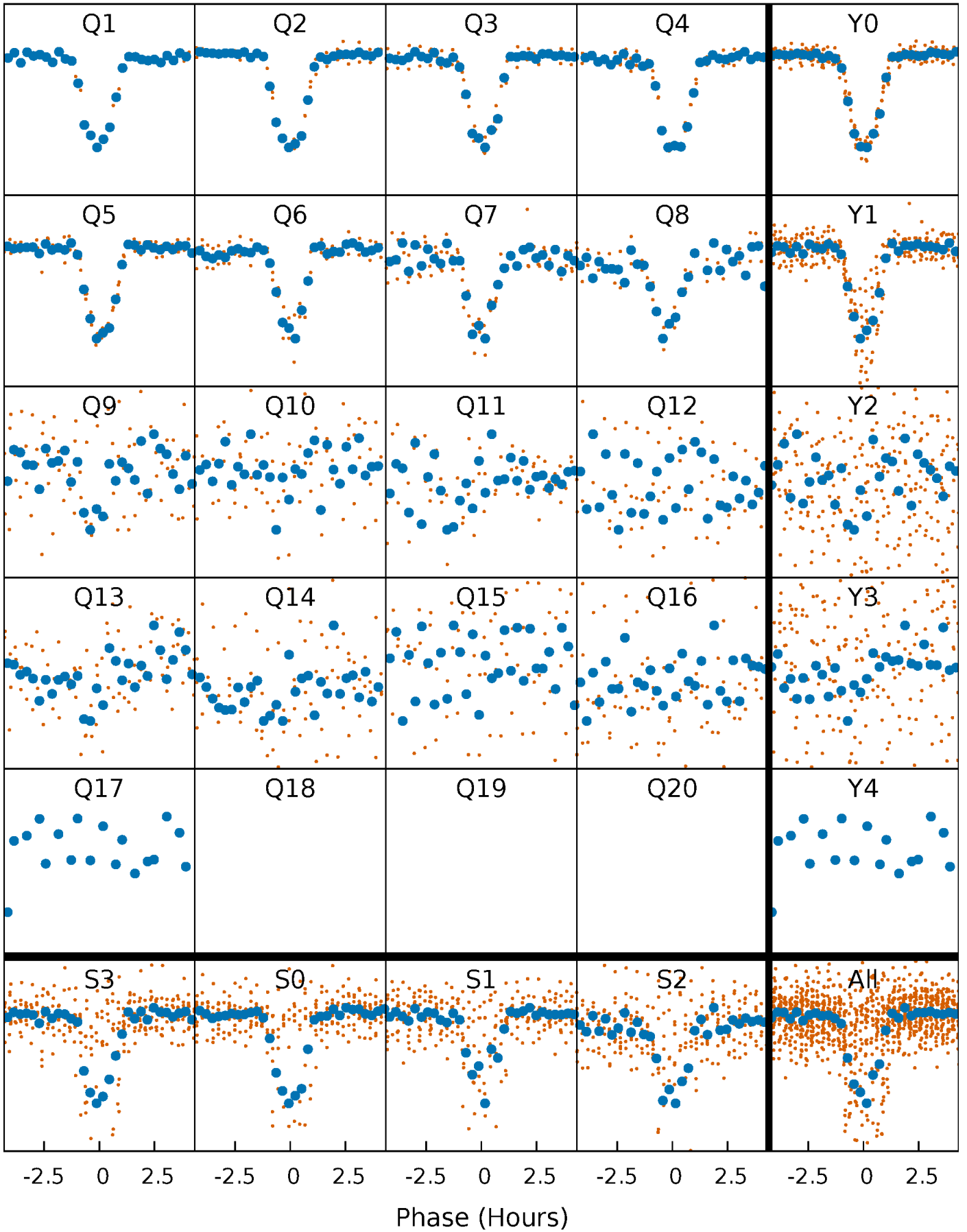


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



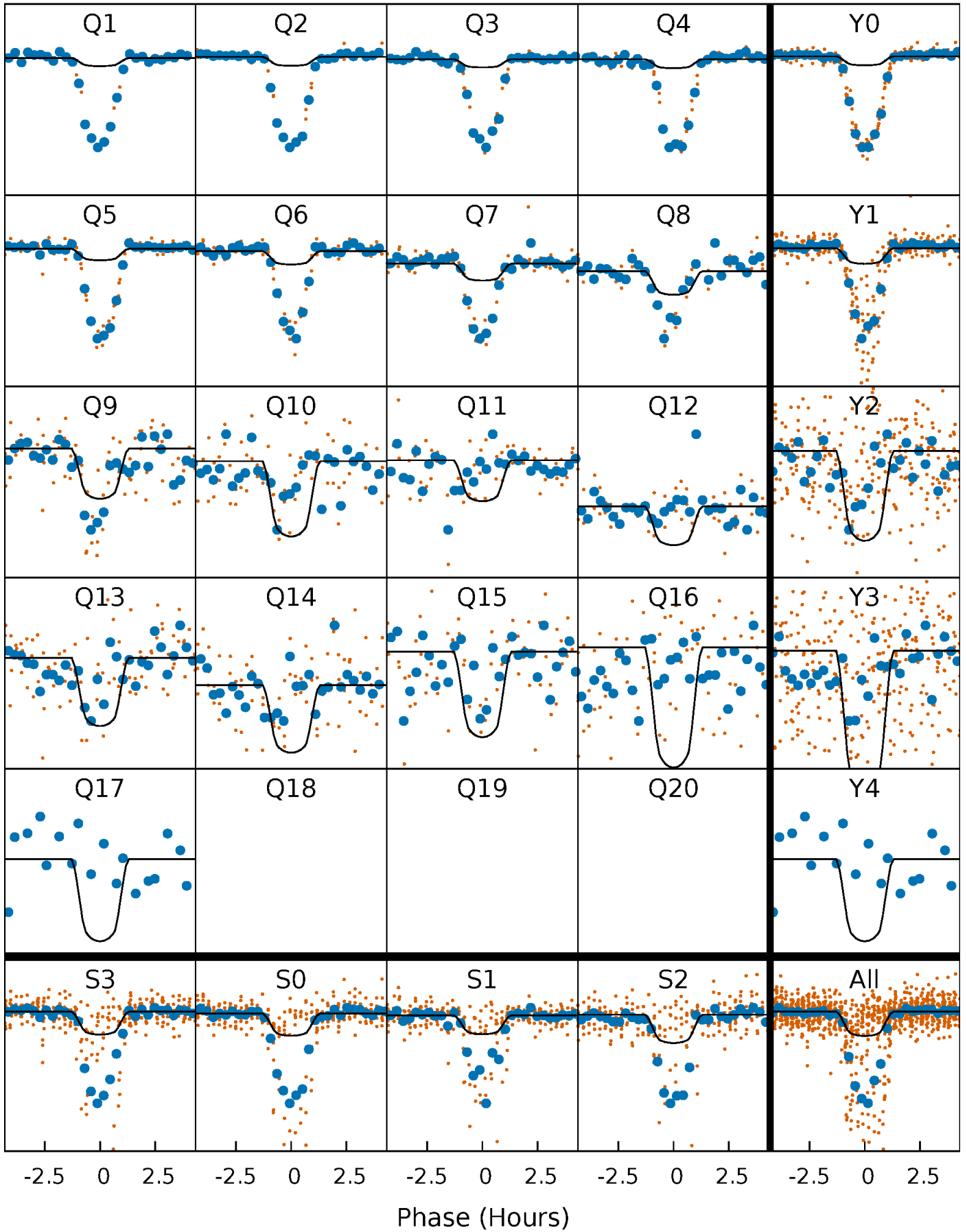
PDC Quarter-Phased Transit Curves

TCE 011869052-01 P= 20.545972 Days $T_0=137.901911$ (BKJD)



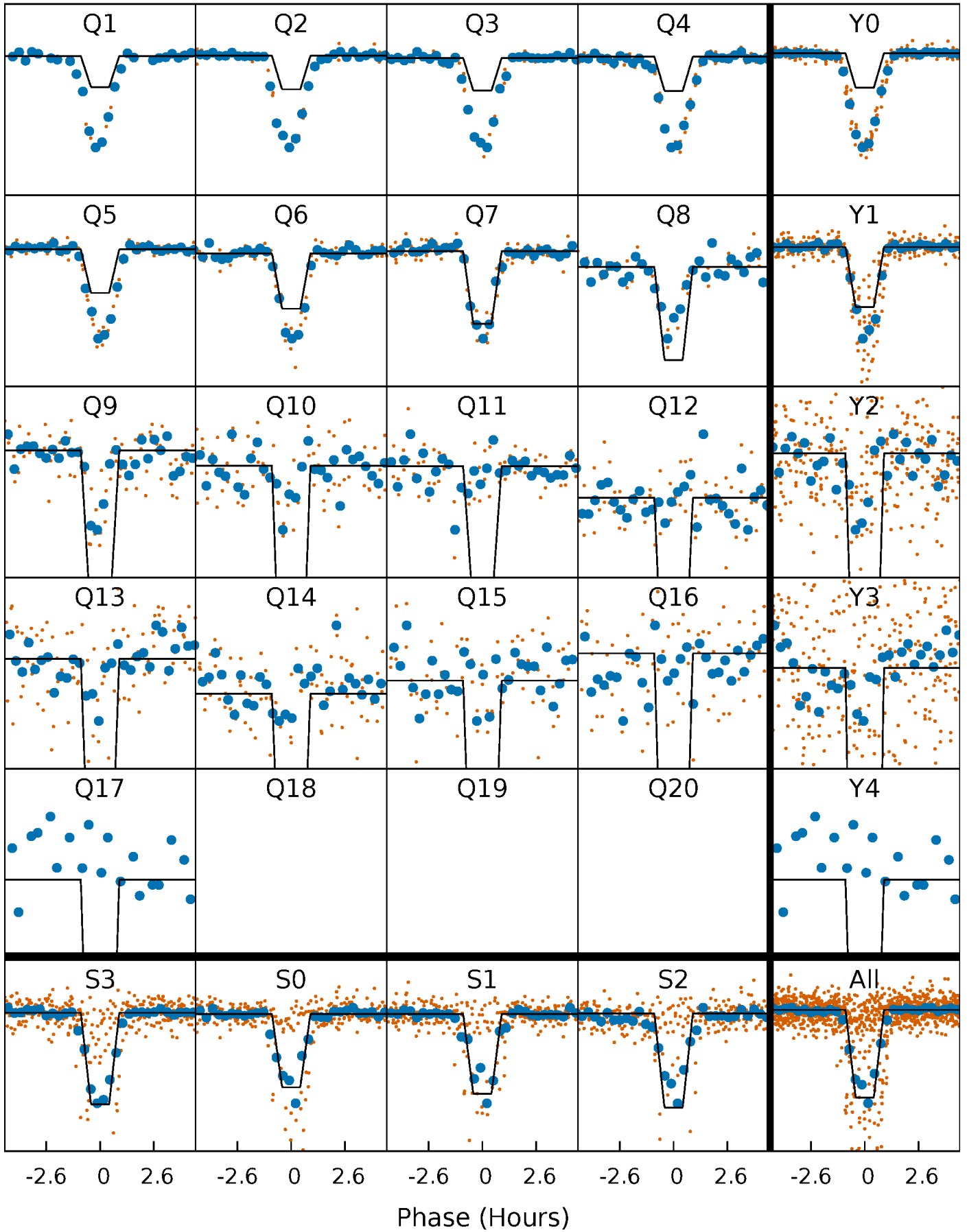
DV Quarter-Phased Transit Curves

TCE 011869052-01 P= 20.545972 Days $T_0=137.901911$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

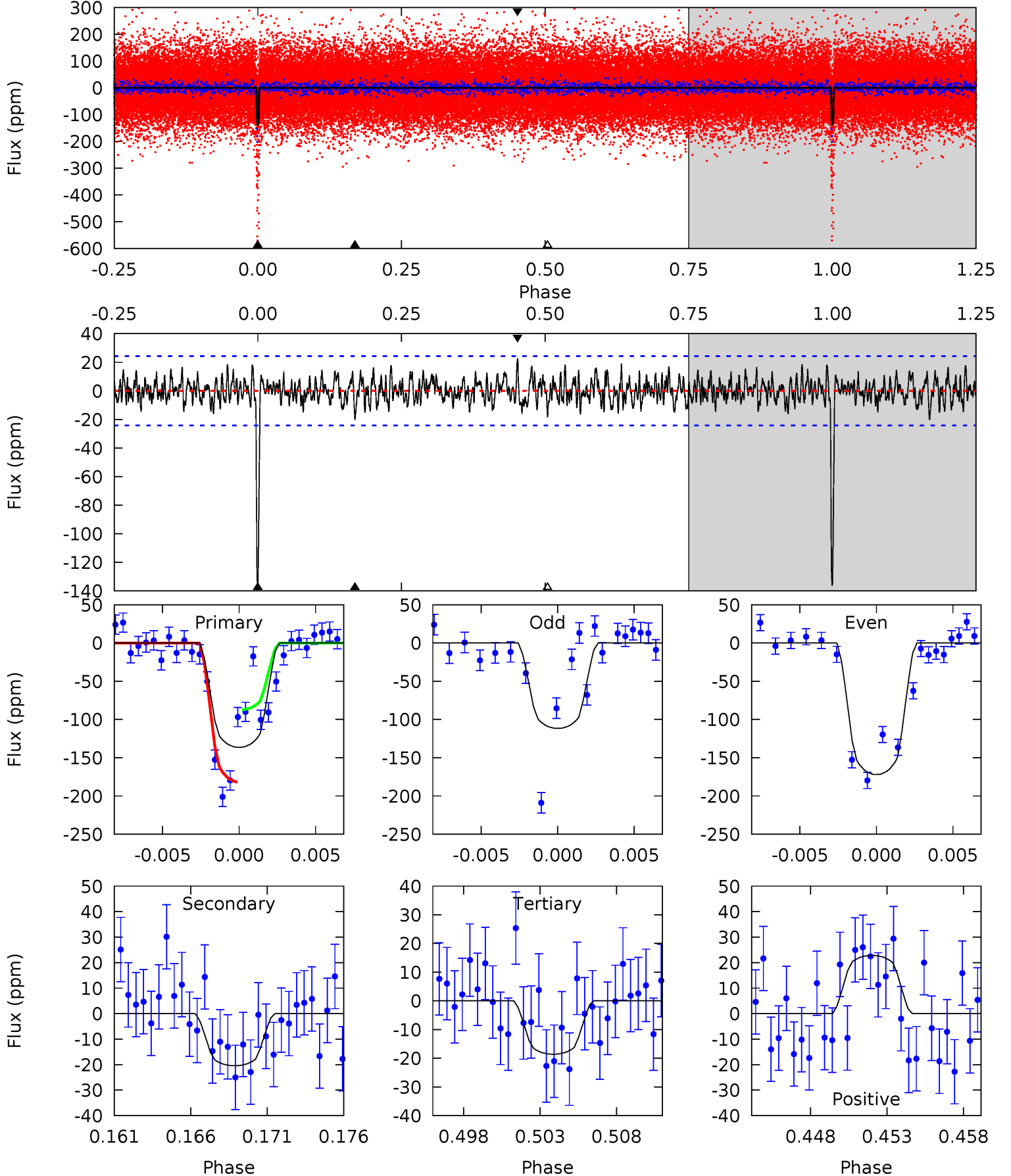
TCE 011869052-01 P= 20.545685 Days $T_0=137.906243$ (BKJD)



DV Model-Shift Uniqueness Test

011869052-01, P = 20.545972 Days, E = 117.355939 Days

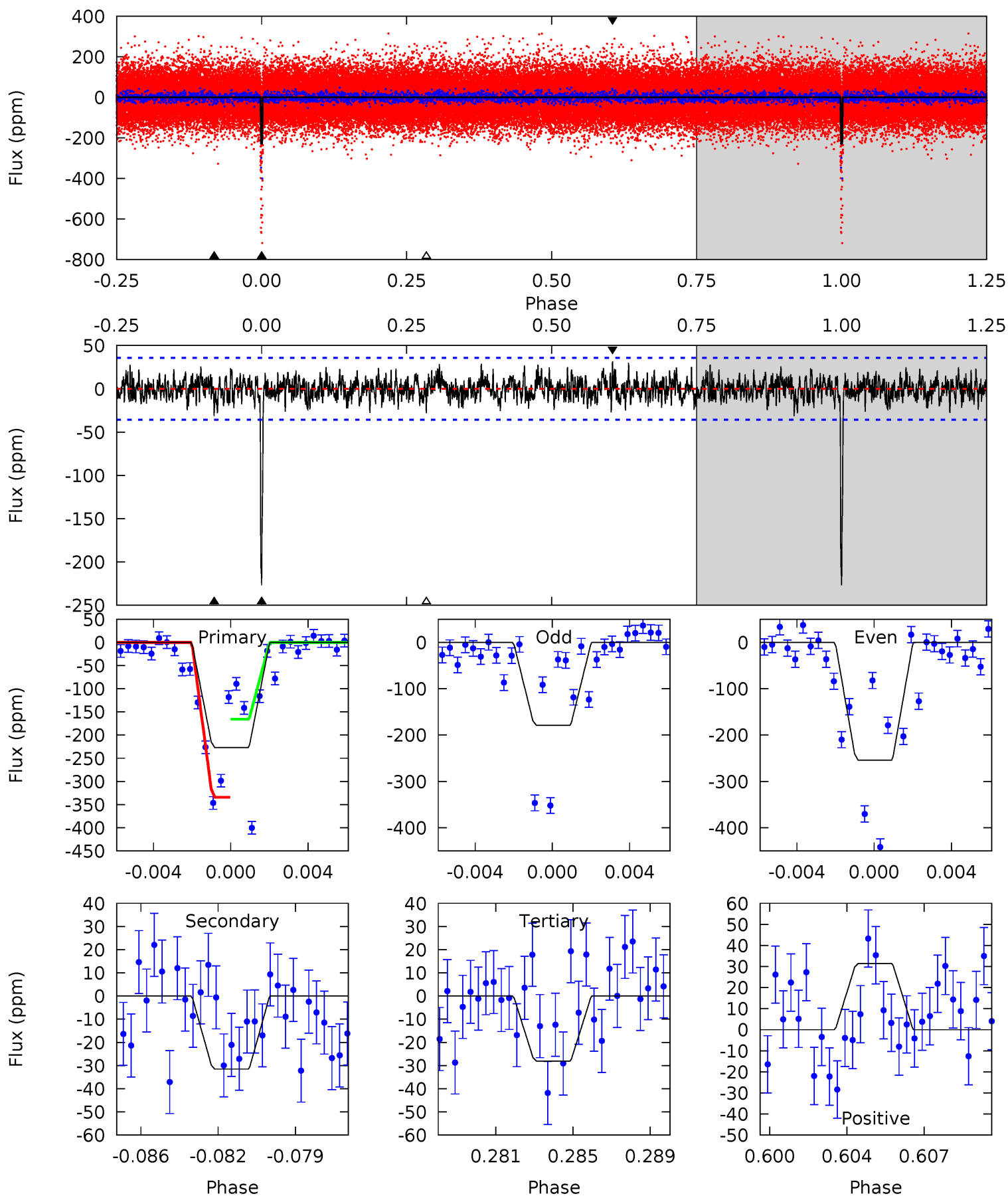
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.0	4.34	3.95	4.85	5.16	2.80	1.43	25.1	24.2	0.39	-0.51	6.24	2.65	0.14	0



Alt Model-Shift Uniqueness Test

011869052-01, $P = 20.545685$ Days, $E = 117.360558$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.1	4.59	4.09	4.58	5.21	2.90	1.37	29.0	28.5	0.50	0.01	5.57	2.33	0.12	0



Stellar Parameters For KIC 011869052

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5670^{+280}_{-229}	$4.206^{+0.241}_{-0.130}$	$0.000^{+0.300}_{-0.250}$	$1.264^{+0.298}_{-0.328}$	$0.937^{+0.151}_{-0.088}$	$0.653^{+0.800}_{-0.273}$
	+5%/-4%	+6%/-3%	+inf%/-inf%	+24%/-26%	+16%/-9%	+122%/-42%
Source	PHO1	FLK73	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 011869052-01 / KOI 0120.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-20 ± 5	$1.95^{+1.03}_{-0.87}$	1028^{+82}_{-85}	3619^{+857}_{-469}	64^{+141}_{-40}
Alt.	-32 ± 7	$3.52^{+1.17}_{-1.10}$	1027^{+83}_{-85}	3215^{+383}_{-268}	30^{+34}_{-14}

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

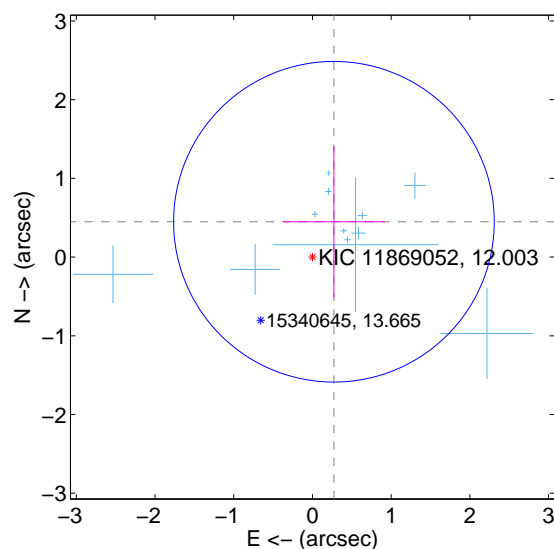
Supplemental centroid analysis for 011869052-01. Kepler magnitude: 12.00. Transit SNR 21.14

There are 12 quarters with good PRF difference image offsets

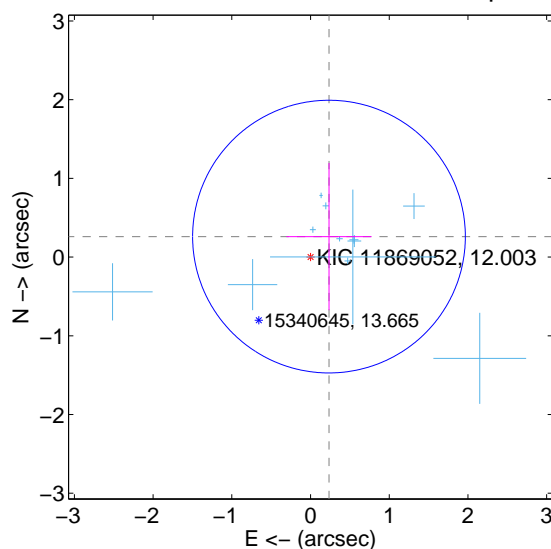
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.526 ± 0.679	0.77	-0.273 ± 0.649	0.449 ± 0.964
PRF-fit source offset from KIC position	0.351 ± 0.578	0.61	-0.235 ± 0.541	0.260 ± 0.935
photometric centroid source offset	1.24 ± 0.35	3.51	-1.18 ± 0.35	0.38 ± 0.38

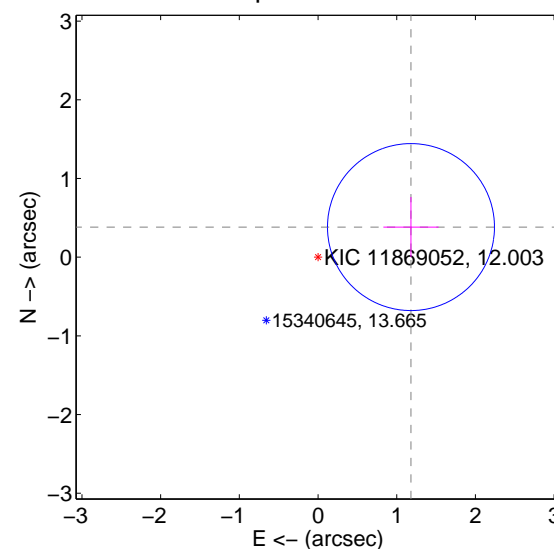
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

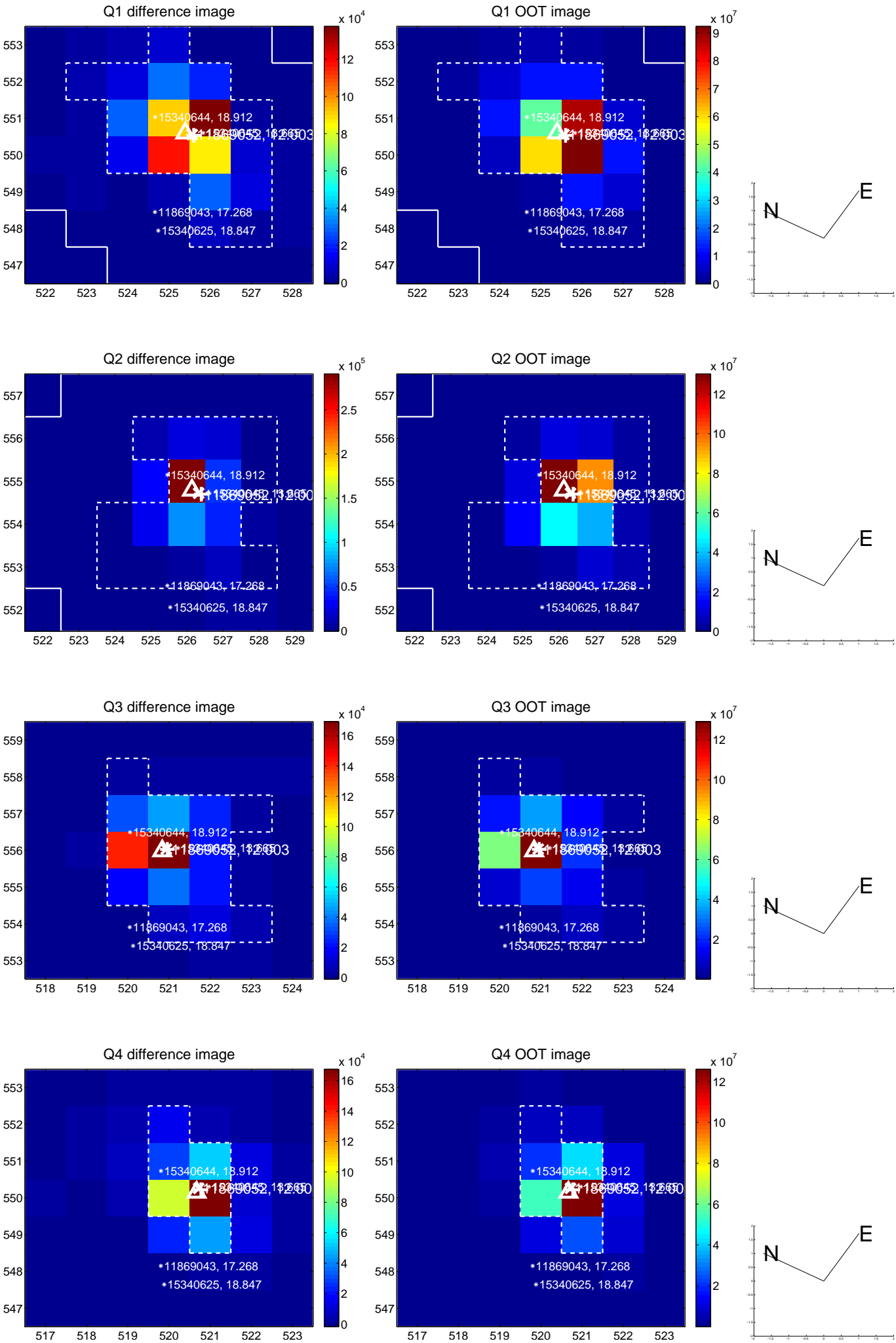


offset from photometric centroids

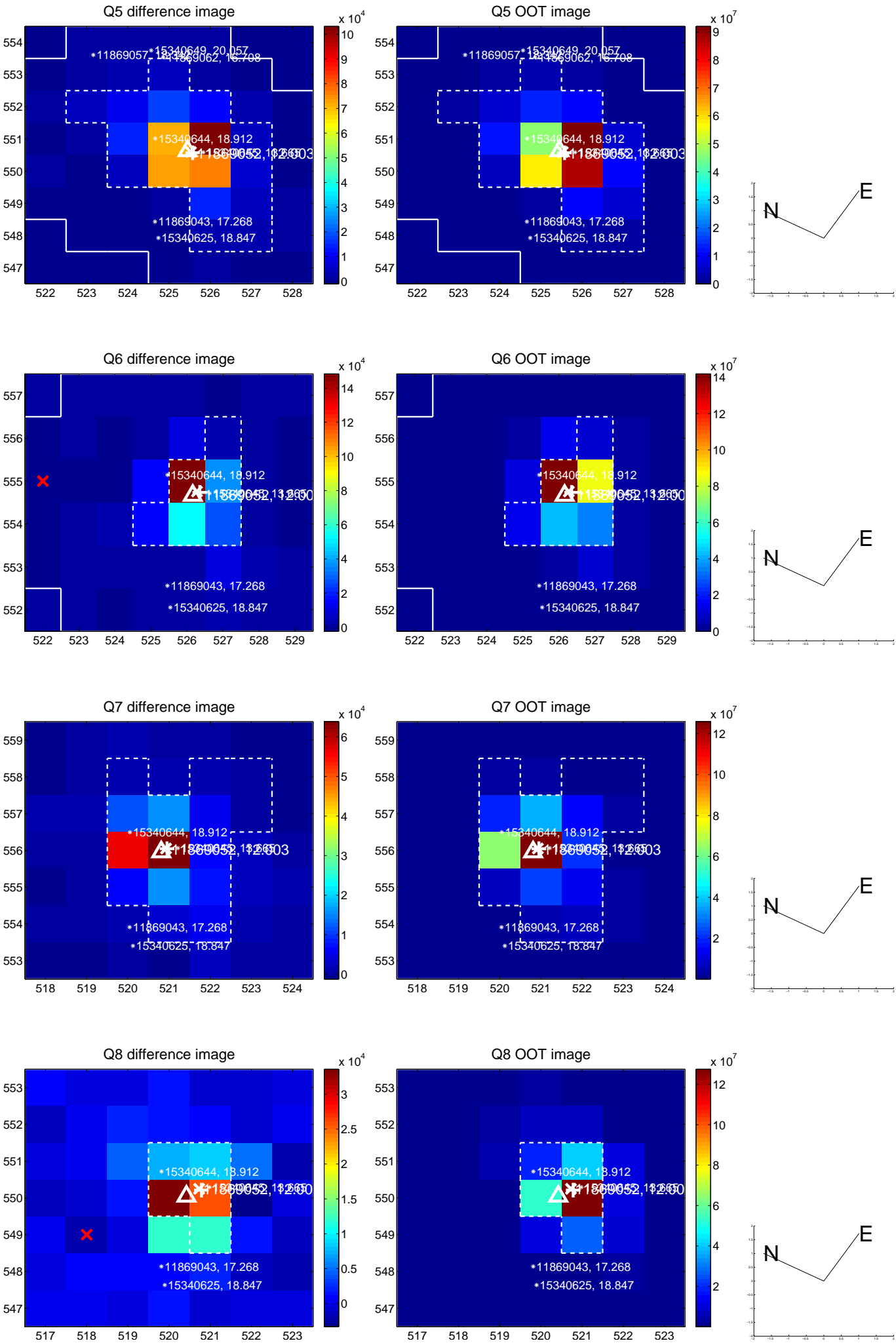


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

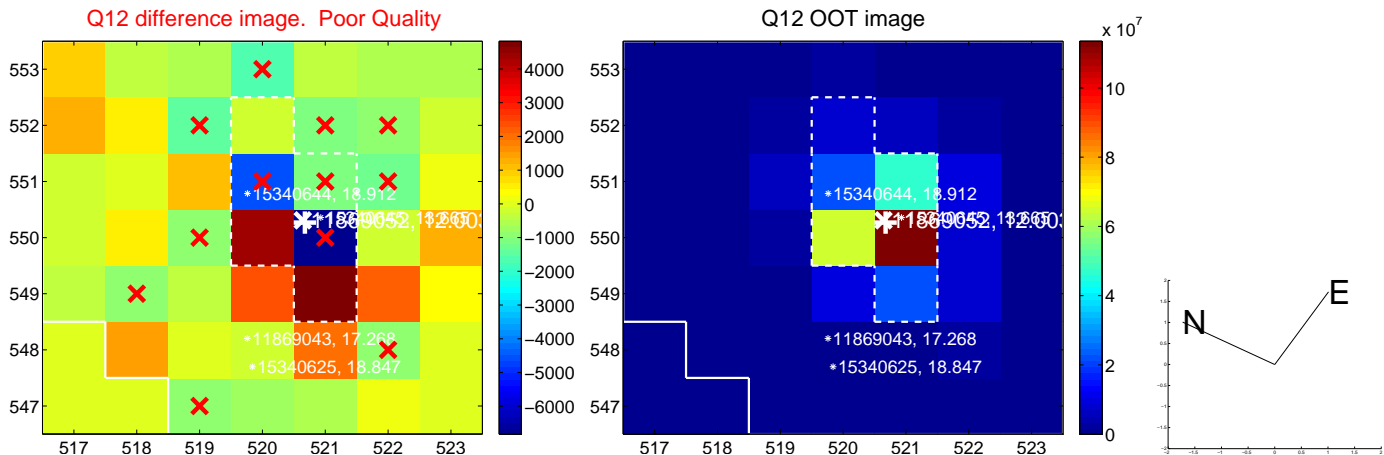
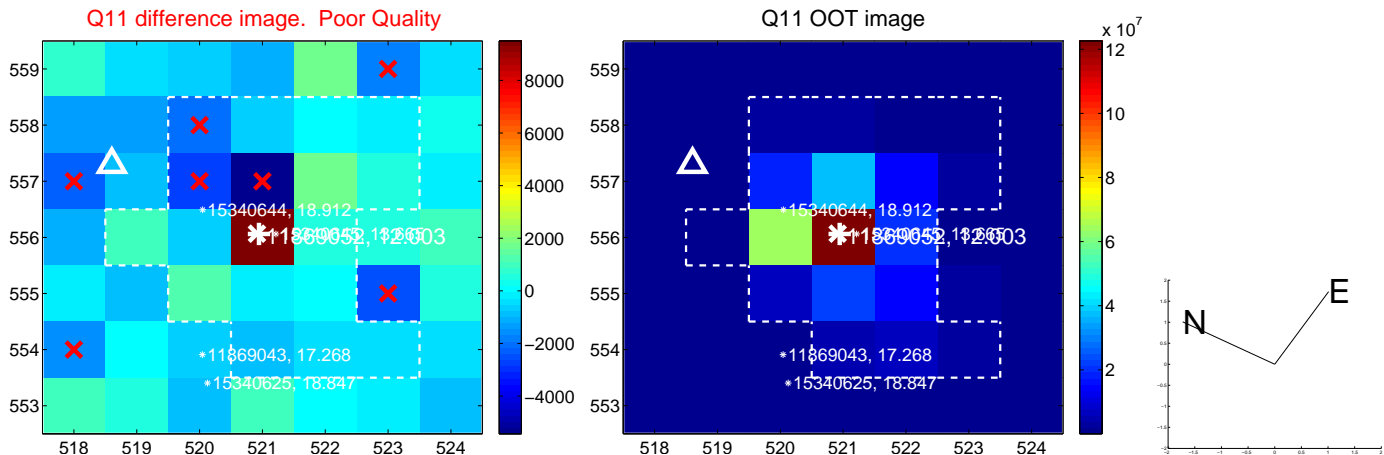
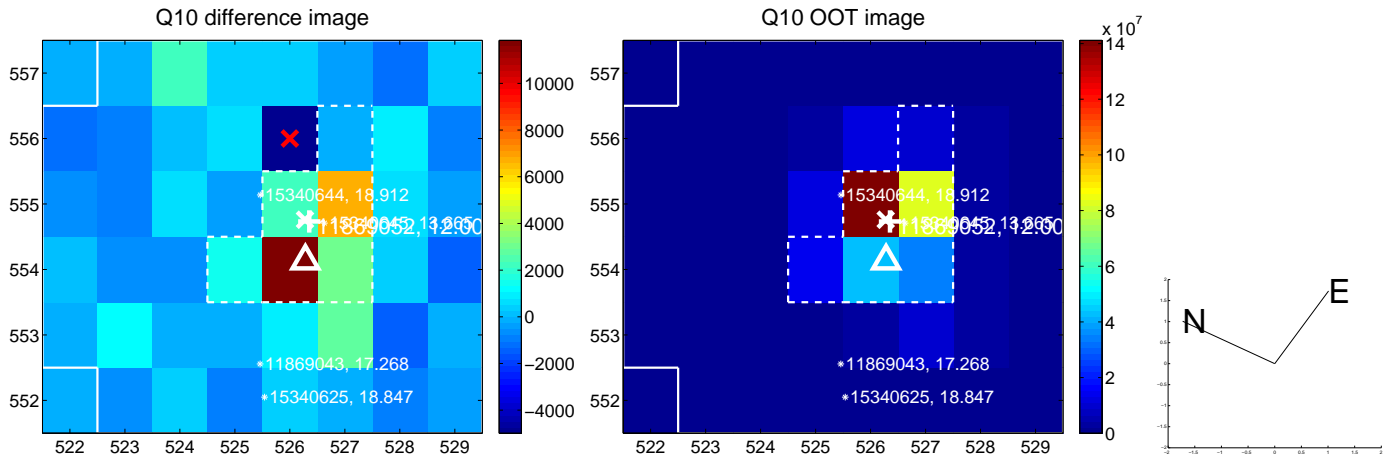
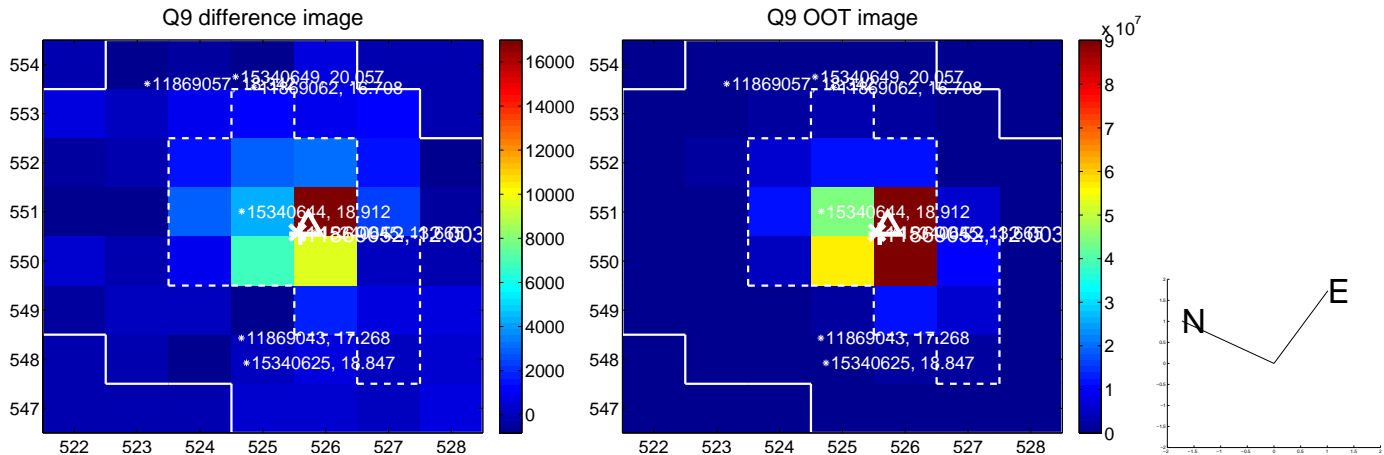
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



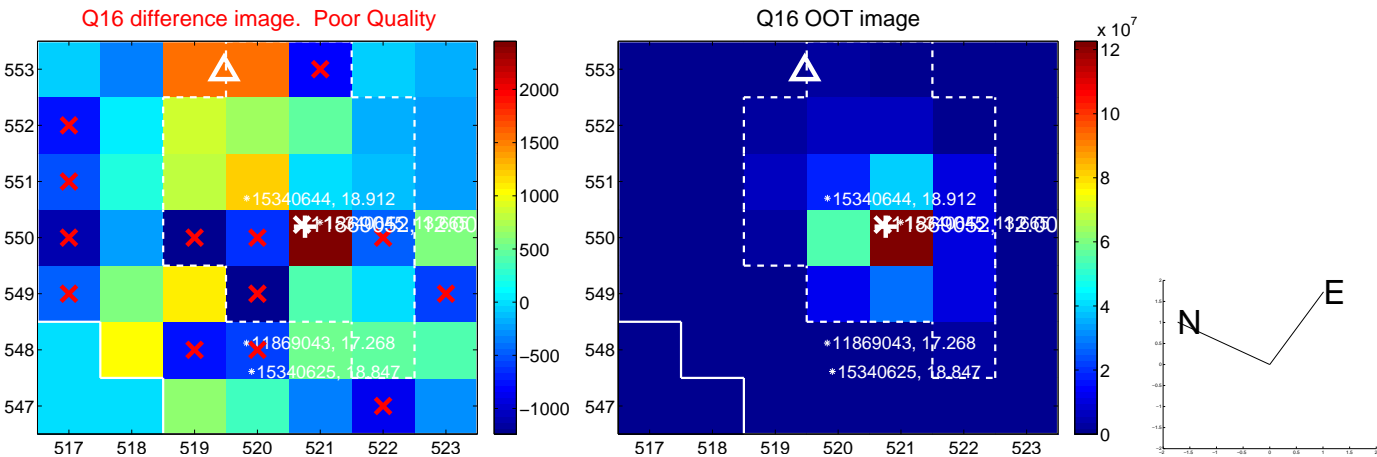
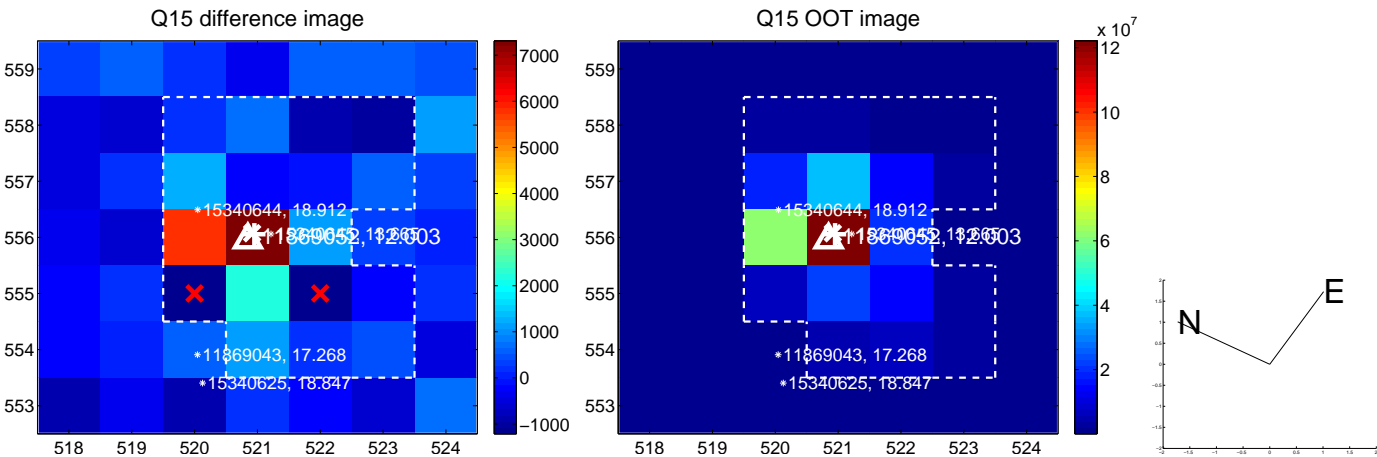
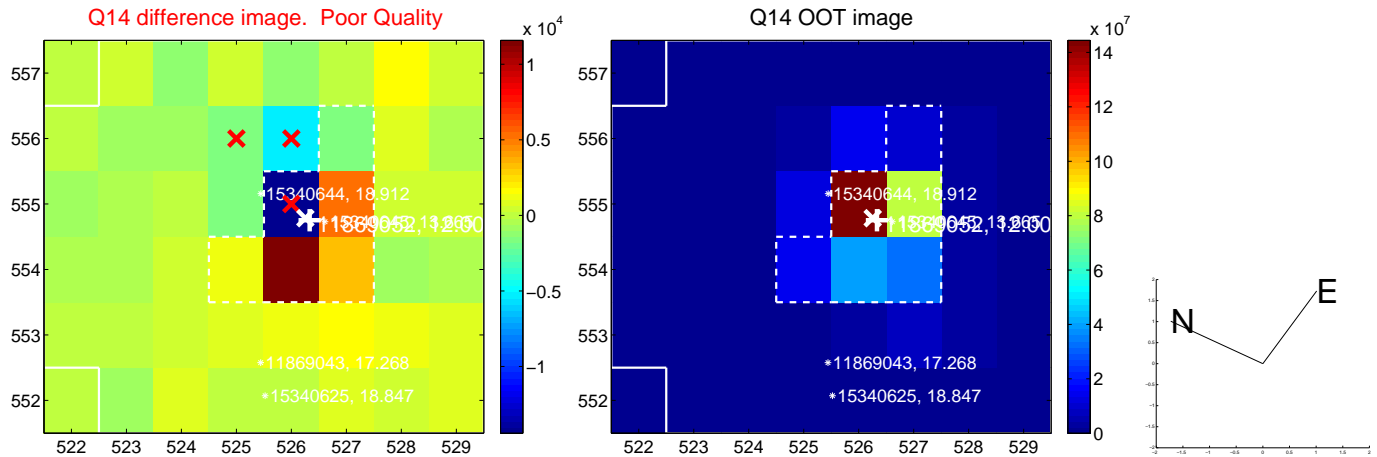
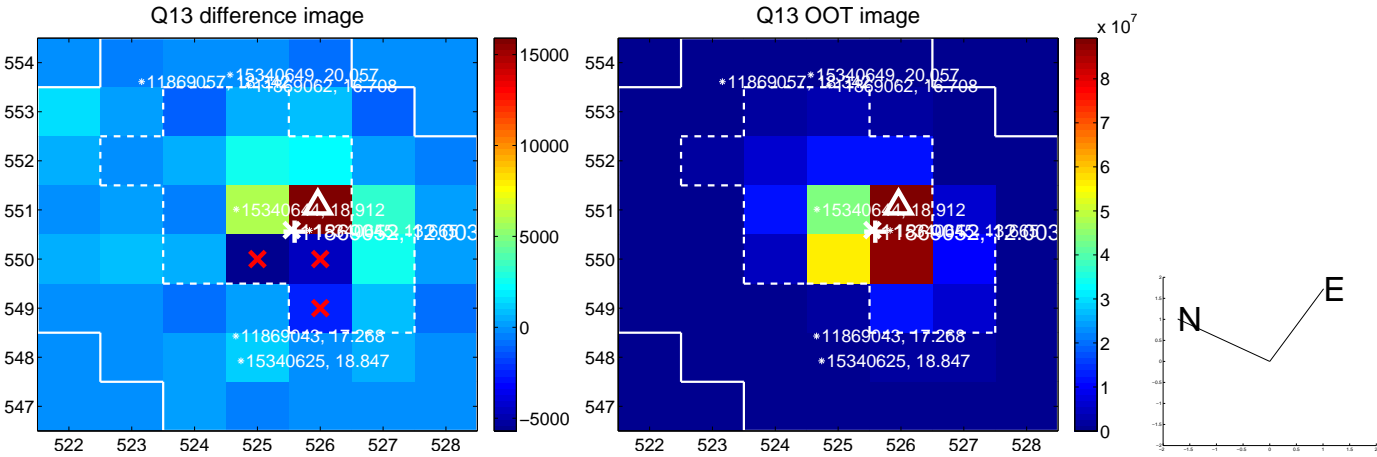
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



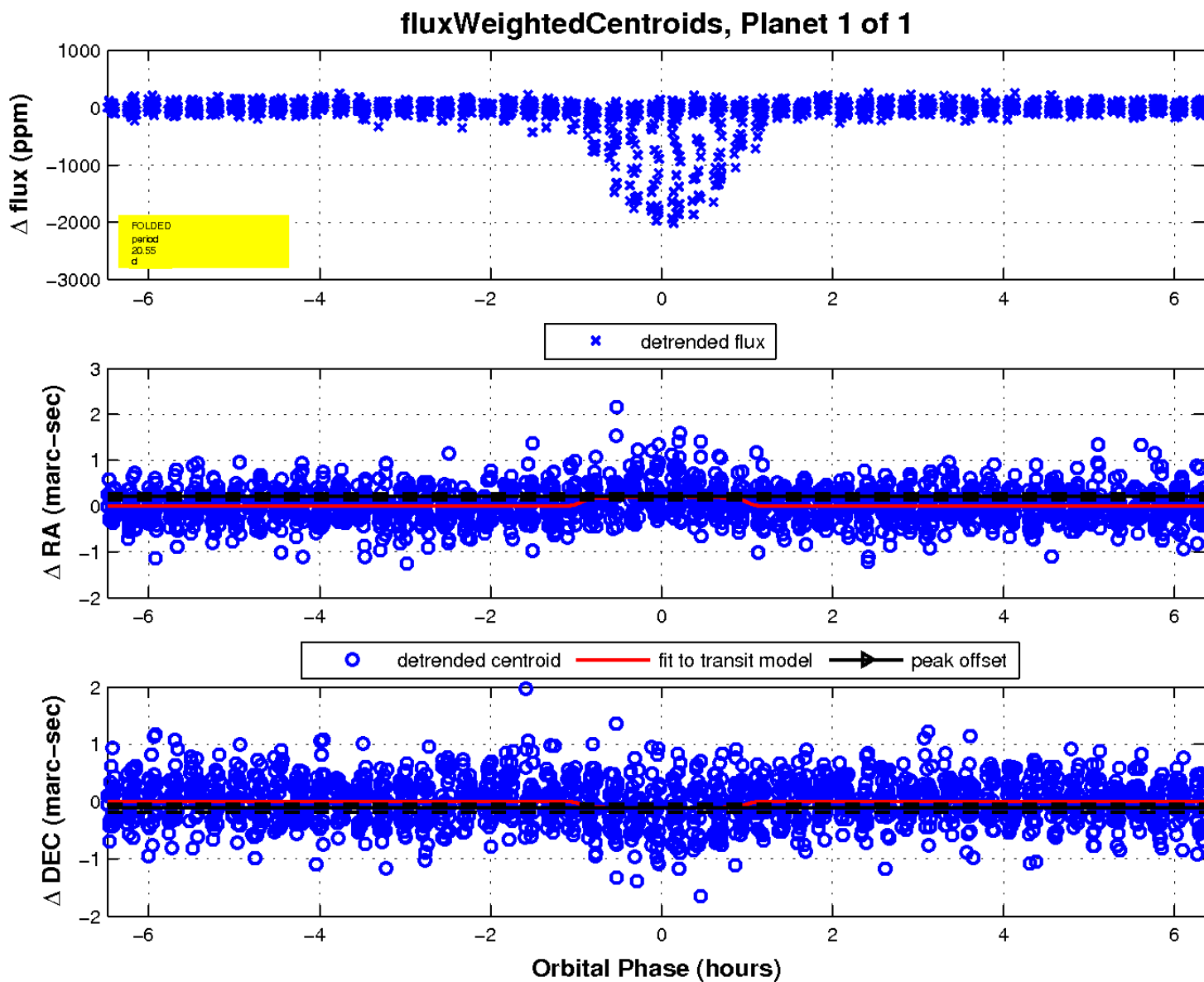
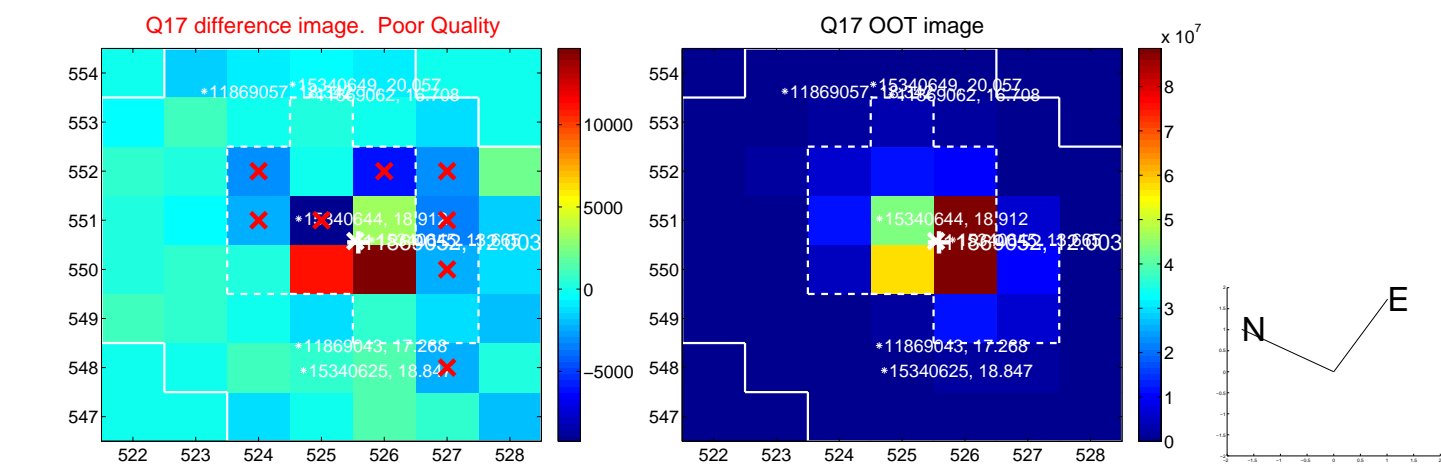
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UKIRT Image

Declination

