

KIC 009153823

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})
009153823-01	OBS	6195.01	1.444488	132.310932	976.3	1.521	40.9	47.3	0.56	4569	1.77	289.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009153823-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL

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

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

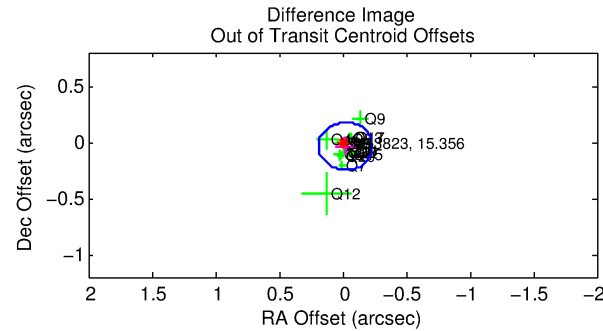
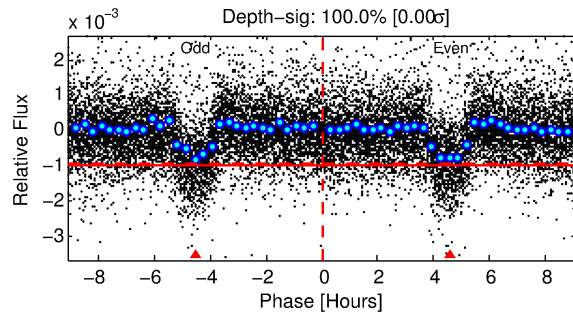
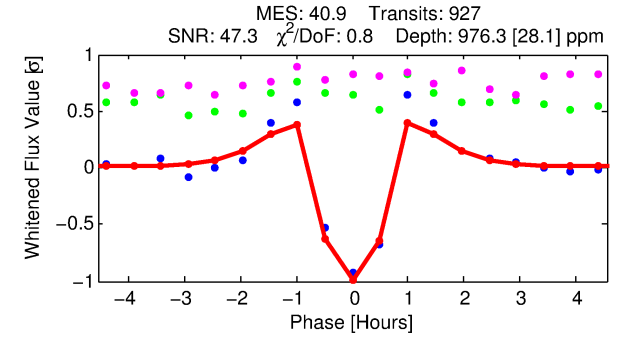
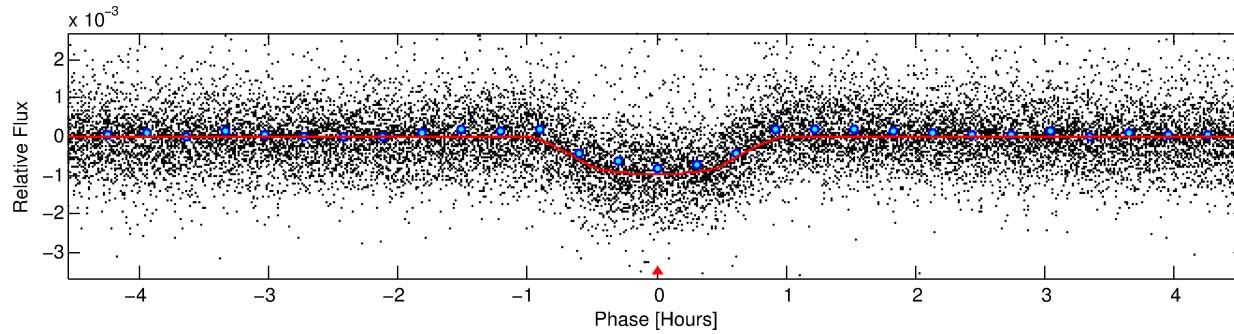
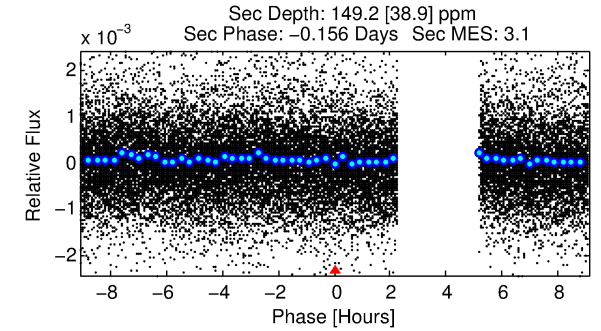
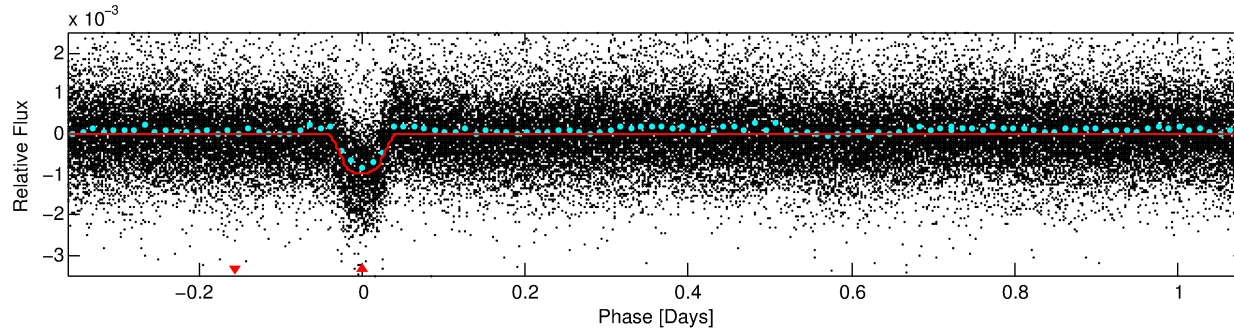
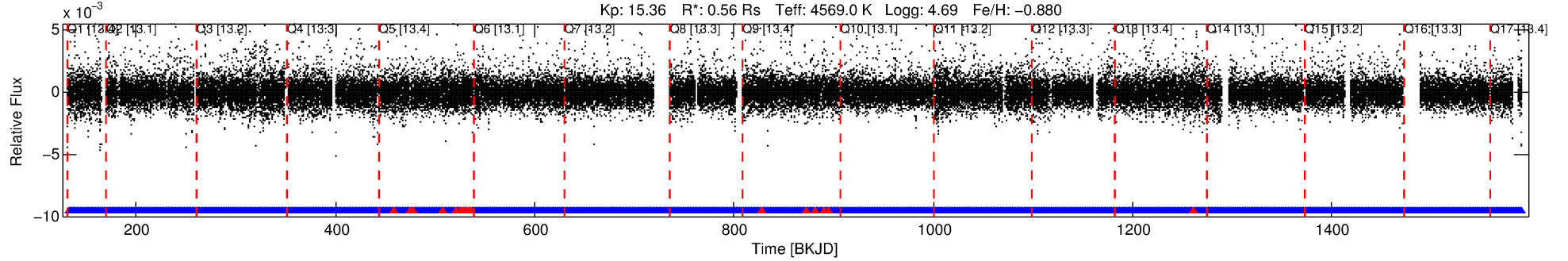
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009153823-01

No Significant Match Found

DV One-Page Summary

KIC: 9153823 Candidate: 1 of 1 Period: 1.444 d
KOI: K06195.01 Corr: 0.939



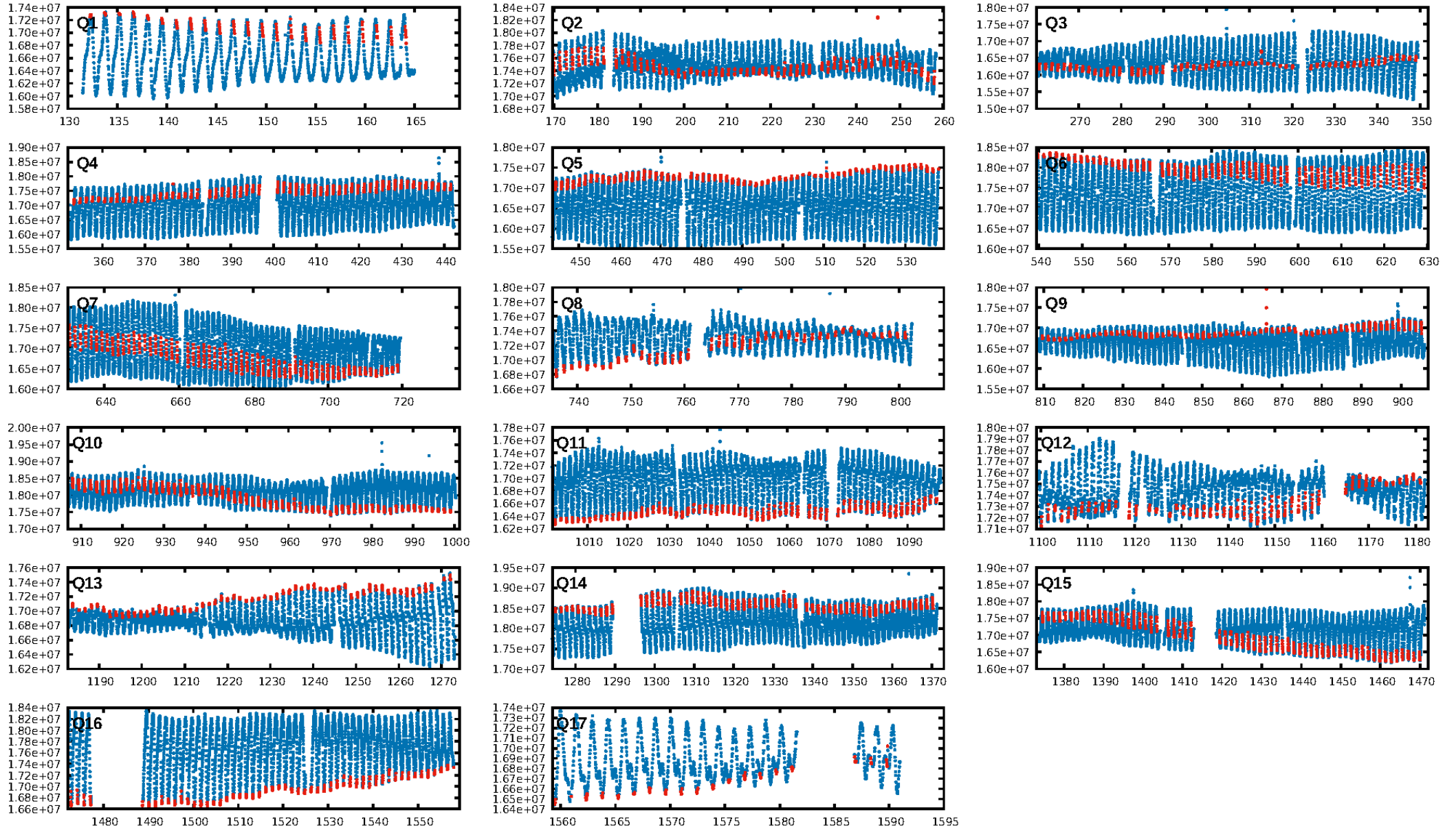
DV Fit Results:

Period = 1.44449 [0.00000] d
Epoch = 132.3109 [0.0003] BKJD
Rp/R* = 0.0290 [0.0074]
a/R* = 6.57 [5.62]
b = 0.50 [1.34]
Seff = 289.40 [44.84]
Teff = 1052 [41] K
Rp = 1.77 [0.48] Re
a = 0.0205 [0.0014] AU
Ag = 11.04 [6.44] [1.56σ]
Teffp = 2964 [436] K [4.37σ]

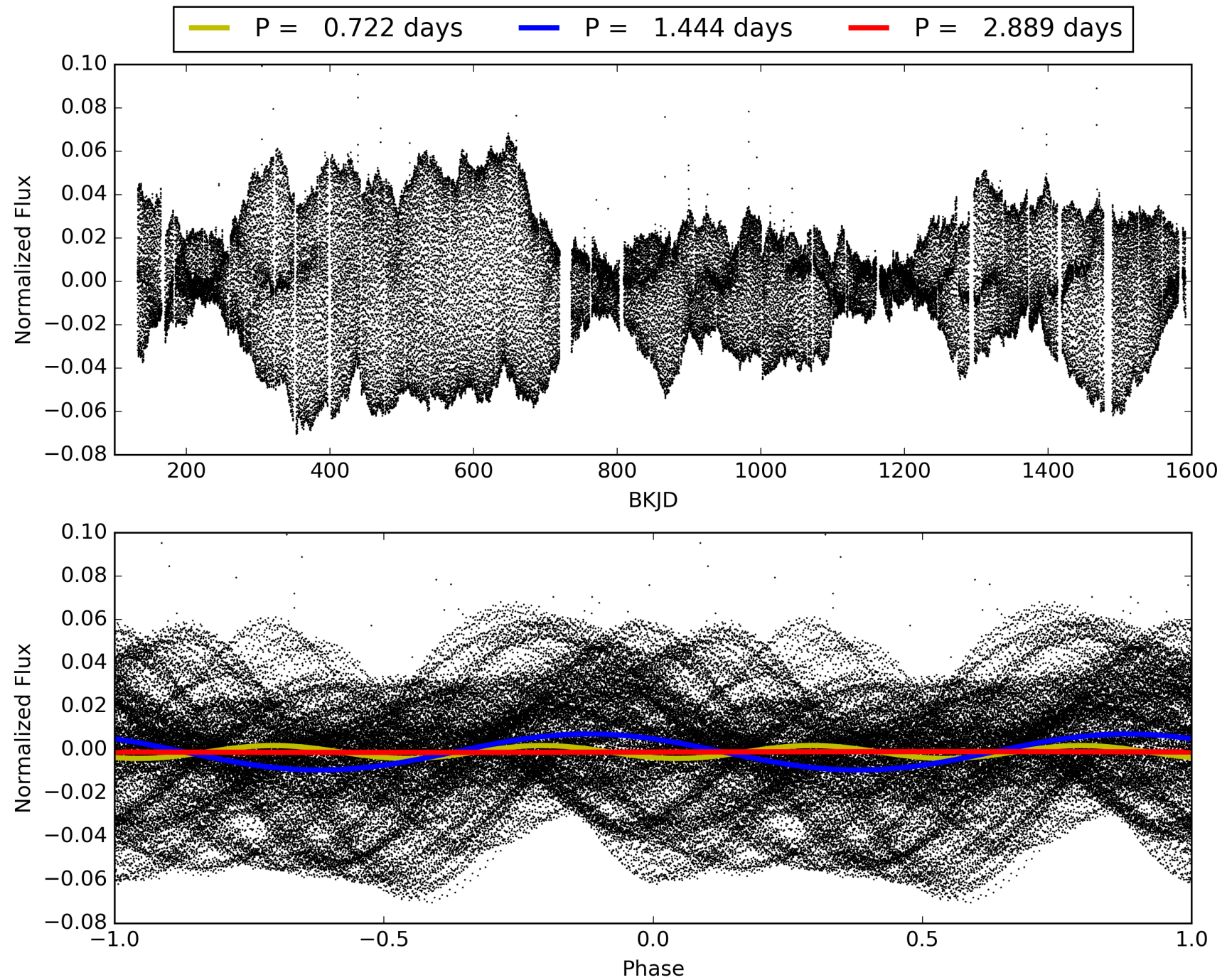
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.98 [868/886]
GhostDiagnostic-chr: 1.63
Centroid-sig: 0.0%
Centroid-so: 0.184 arcsec [1.14σ]
OotOffset-rm: 0.042 arcsec [0.60σ]
KicOffset-rm: 0.247 arcsec [3.26σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.65 [11/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 009153823-01, PDC Light Curves

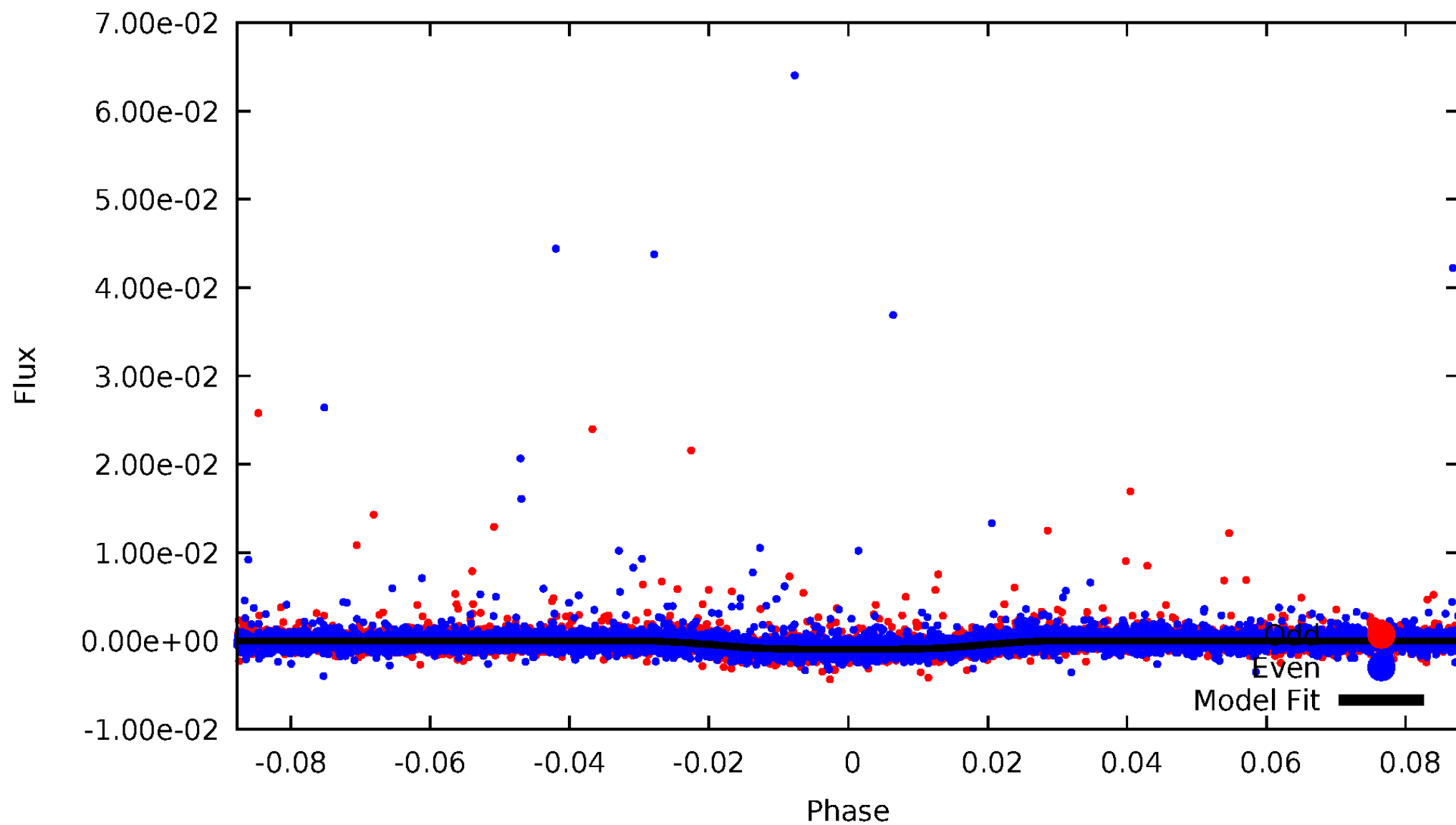


TCE 009153823-01



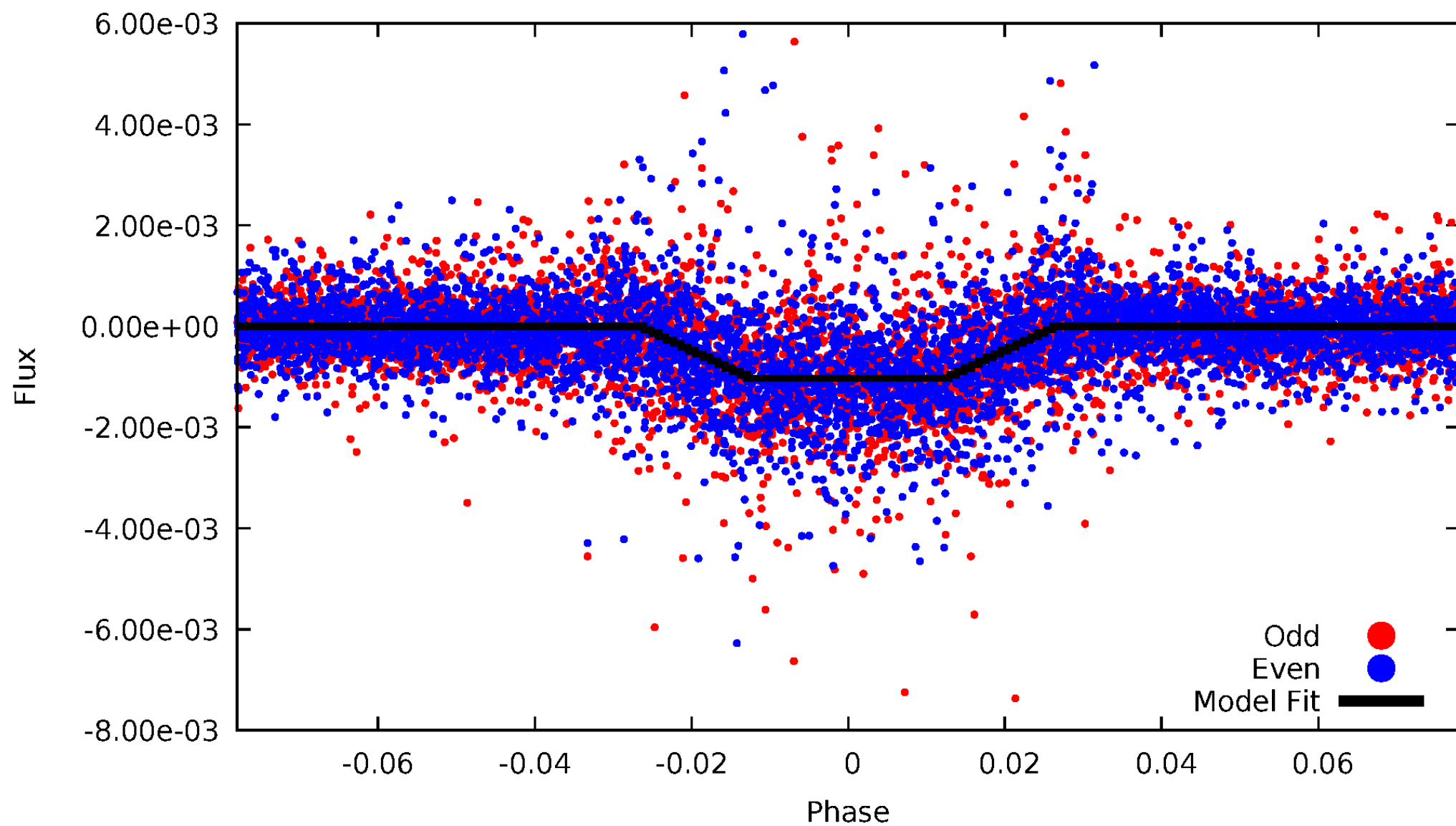
DV Odd/Even

TCE 009153823-01



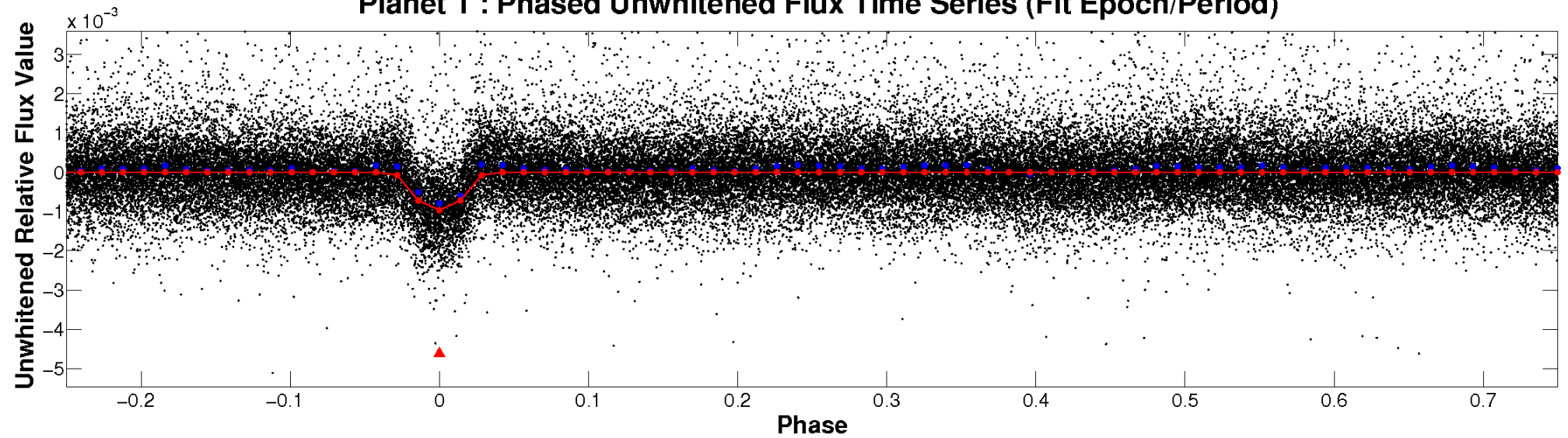
ALT Odd/Even

TCE 009153823-01

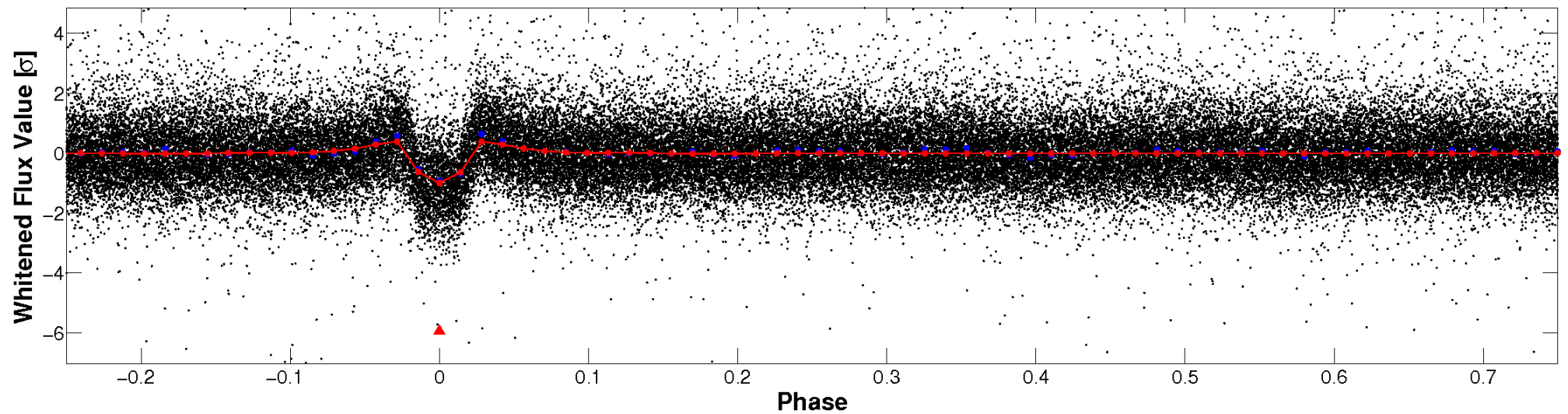


Non-Whitened Vs. Whitened Light Curve

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

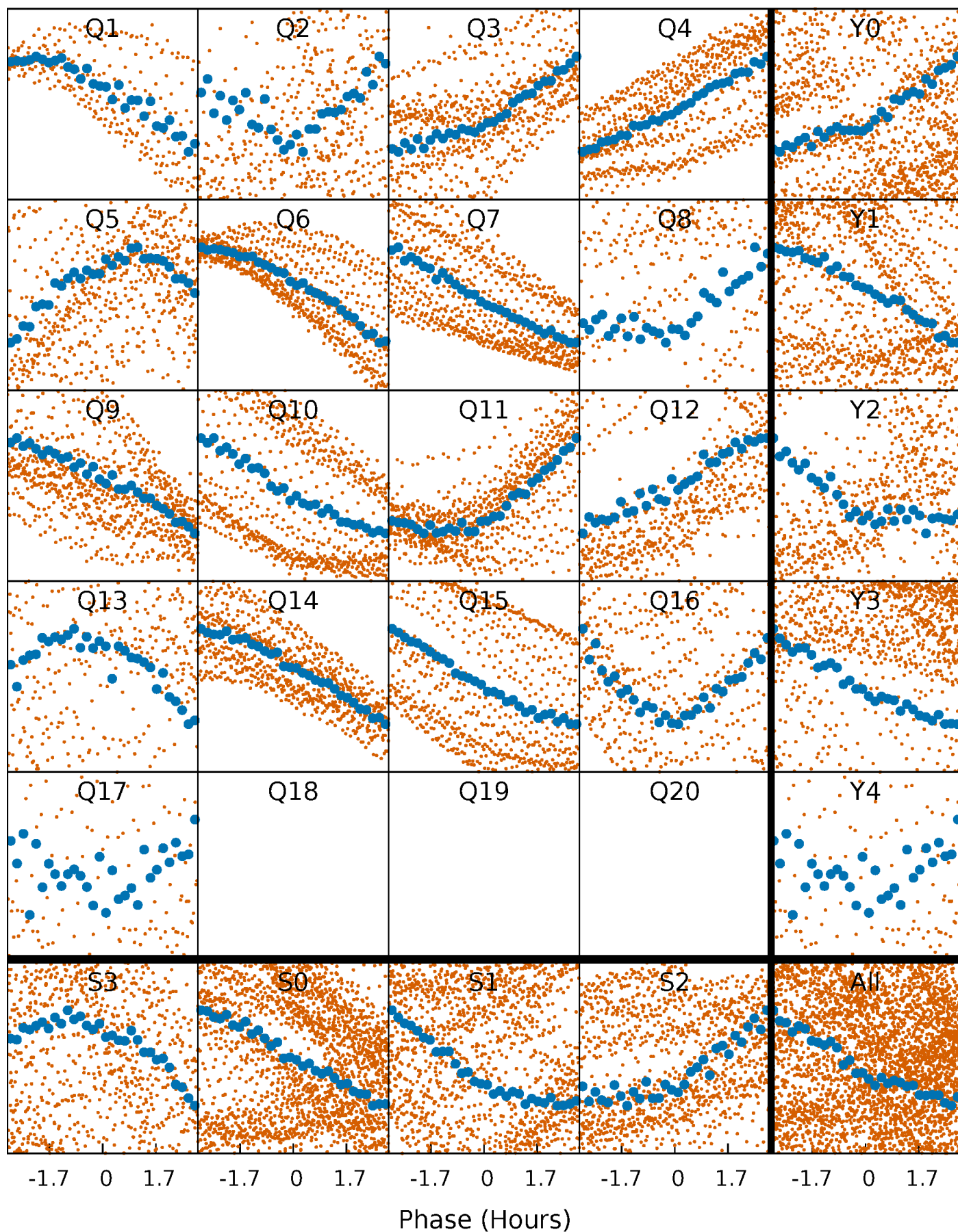


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



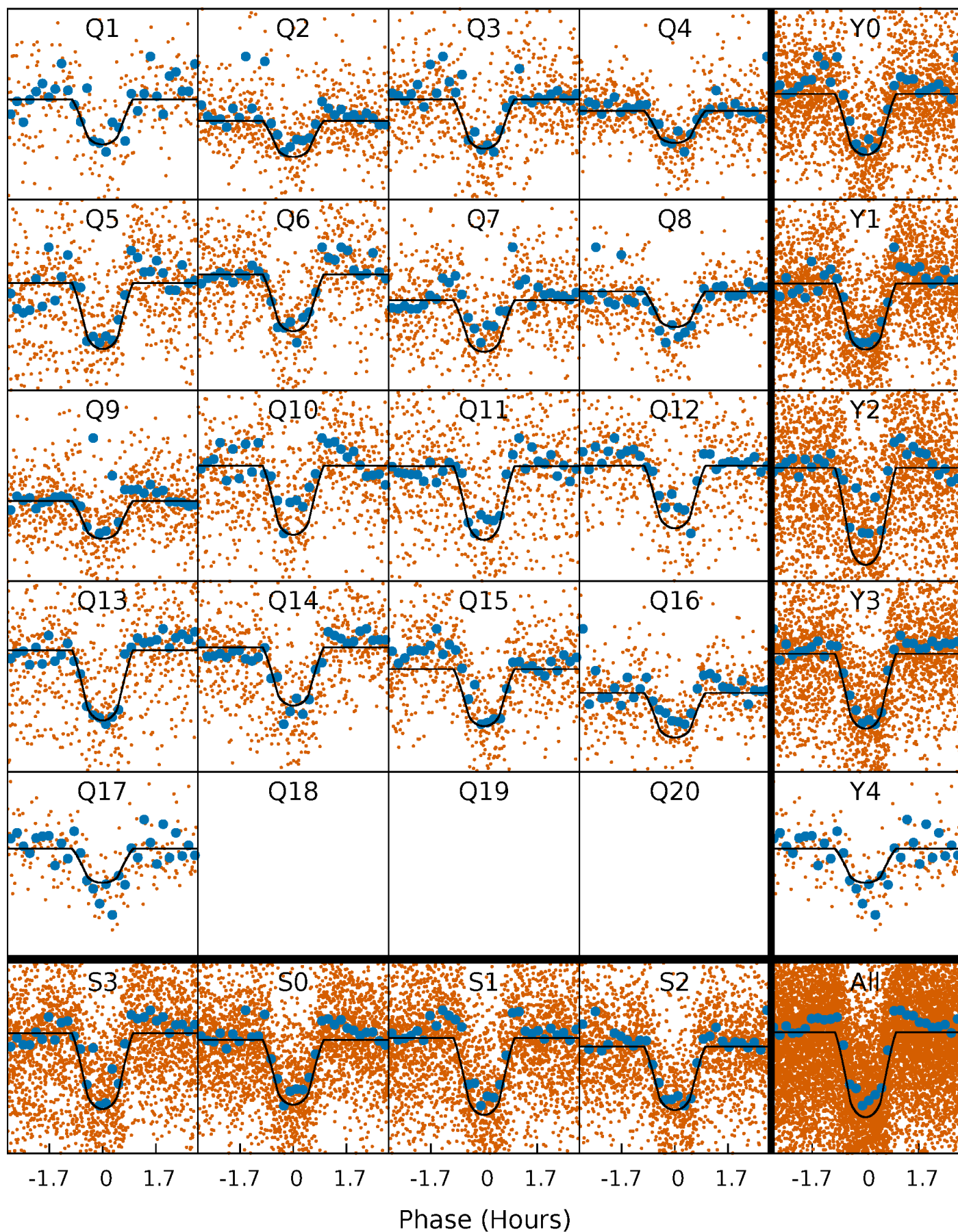
PDC Quarter-Phased Transit Curves

TCE 009153823-01 P= 1.444488 Days $T_0=132.310932$ (BKJD)



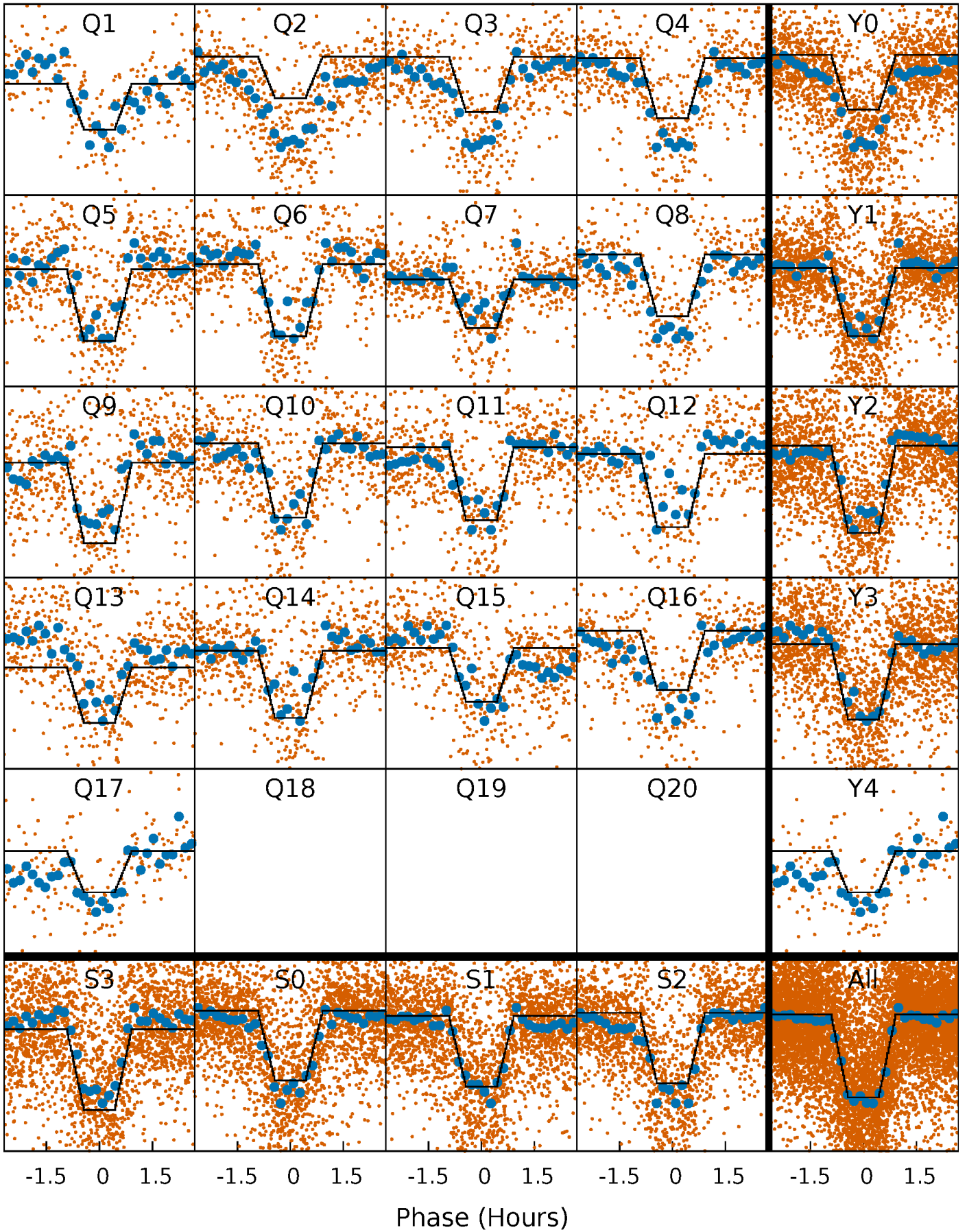
DV Quarter-Phased Transit Curves

TCE 009153823-01 P= 1.444488 Days $T_0=132.310932$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

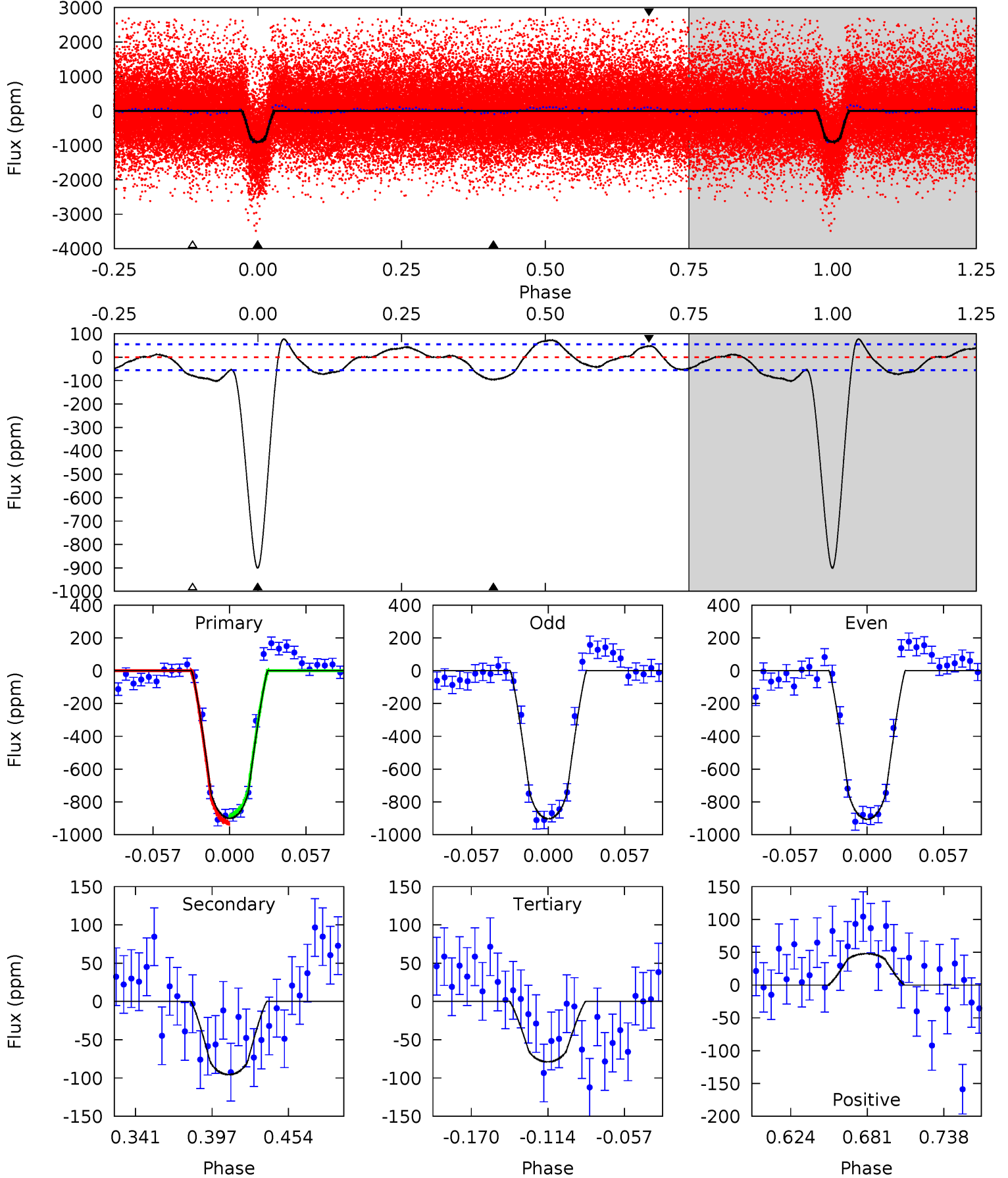
TCE 009153823-01 P= 1.444489 Days $T_0=132.310459$ (BKJD)



DV Model-Shift Uniqueness Test

009153823-01, P = 1.444488 Days, E = 130.866444 Days

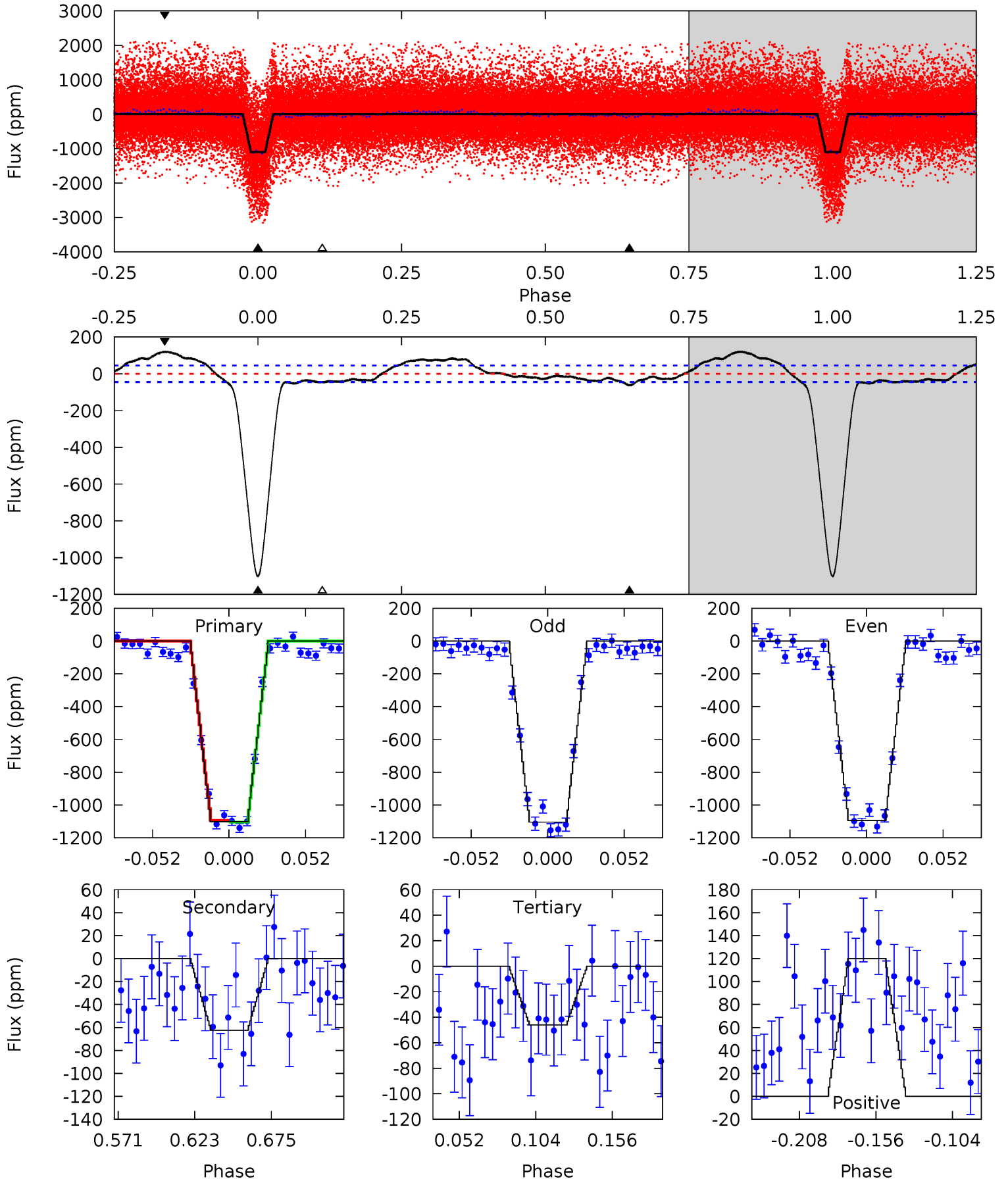
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
76.0	8.06	6.65	4.03	4.68	1.91	3.53	69.3	71.9	1.40	4.03	0.13	0.87	0.08	1.86



Alt Model-Shift Uniqueness Test

009153823-01, P = 1.444489 Days, E = 130.865970 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
115.7	6.57	4.84	12.6	4.70	1.94	5.36	110.9	103.1	1.72	-6.05	0.55	1.00	0.10	0



Stellar Parameters For KIC 009153823

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4569^{+137}_{-137}	$4.686^{+0.054}_{-0.031}$	$-0.880^{+0.300}_{-0.300}$	$0.559^{+0.040}_{-0.044}$	$0.553^{+0.046}_{-0.027}$	$4.456^{+1.020}_{-0.572}$
	+3%/-3%	+1%/-1%	+34%/-34%	+7%/-8%	+8%/-5%	+23%/-13%
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 009153823-01 / KOI 6195.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-96 ± 12	$1.75^{+0.42}_{-0.47}$	1466^{+48}_{-52}	3158^{+341}_{-226}	$7.492^{+6.245}_{-2.973}$
Alt.	-62 ± 10	$1.93^{+0.47}_{-0.43}$	1460^{+48}_{-47}	2851^{+244}_{-182}	$3.808^{+2.654}_{-1.357}$

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

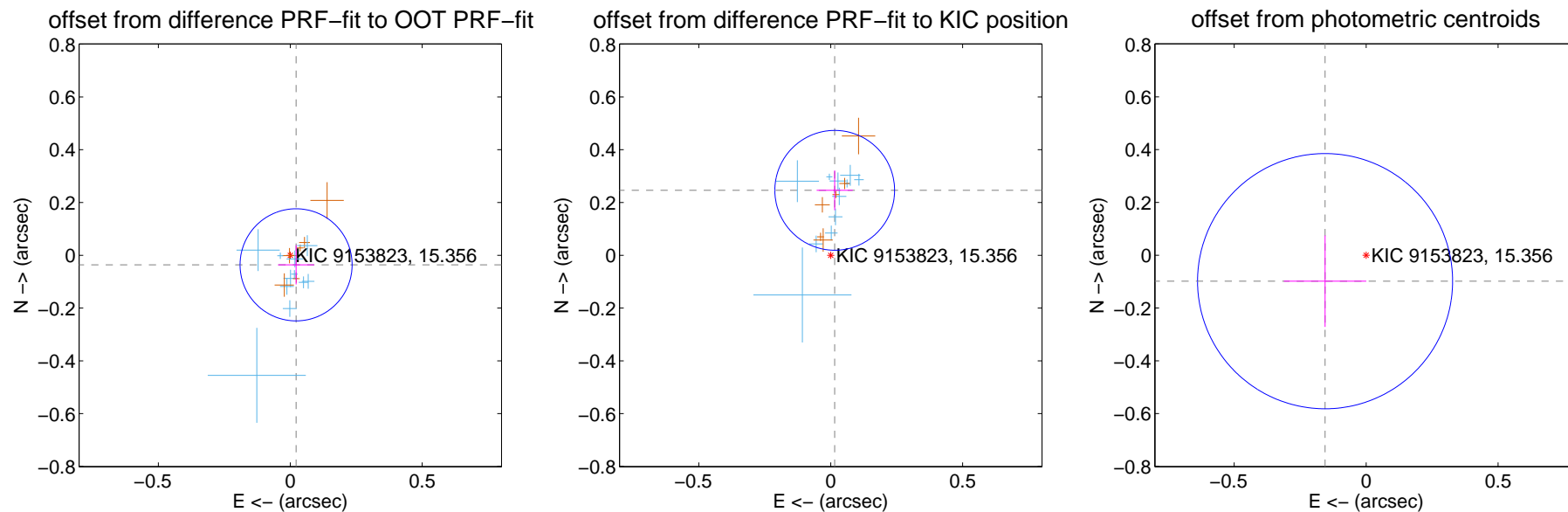
DV Centroid Data

Supplemental centroid analysis for 009153823-01. Kepler magnitude: 15.36. Transit SNR 47.29

There are 11 quarters with good PRF difference image offsets

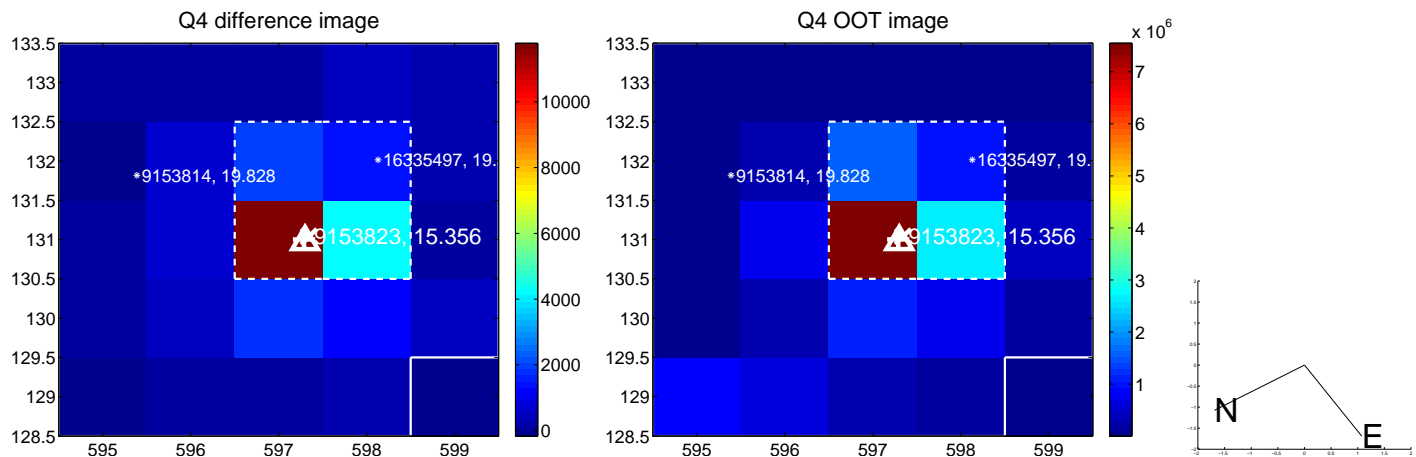
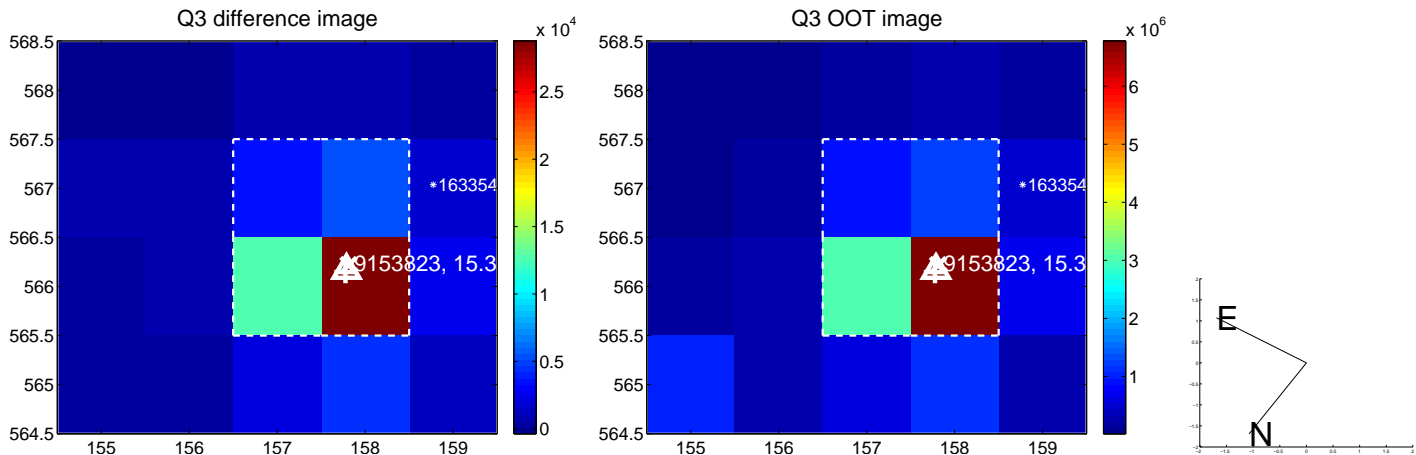
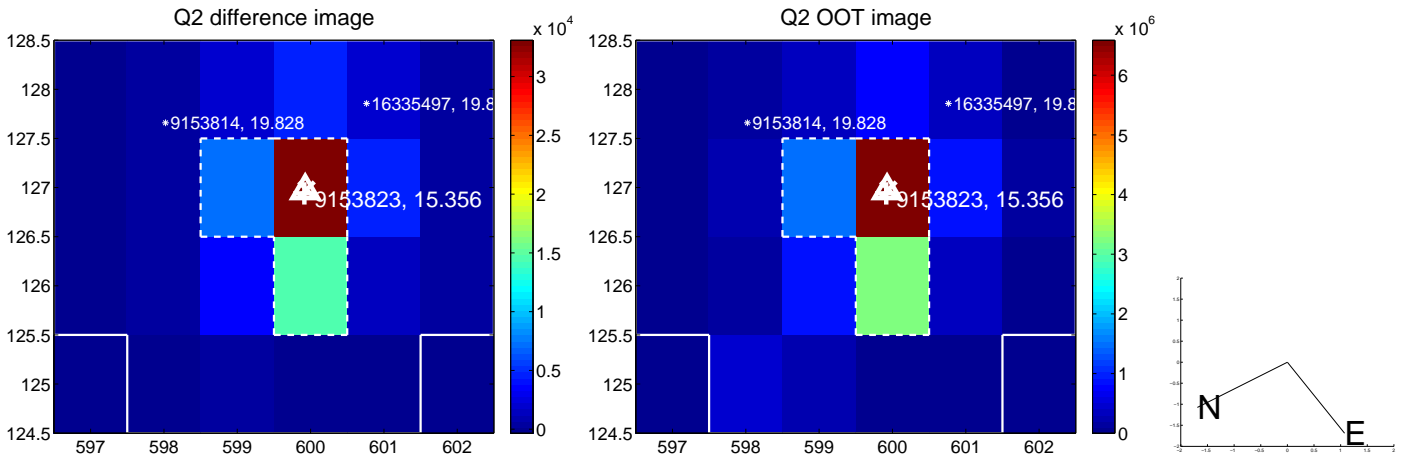
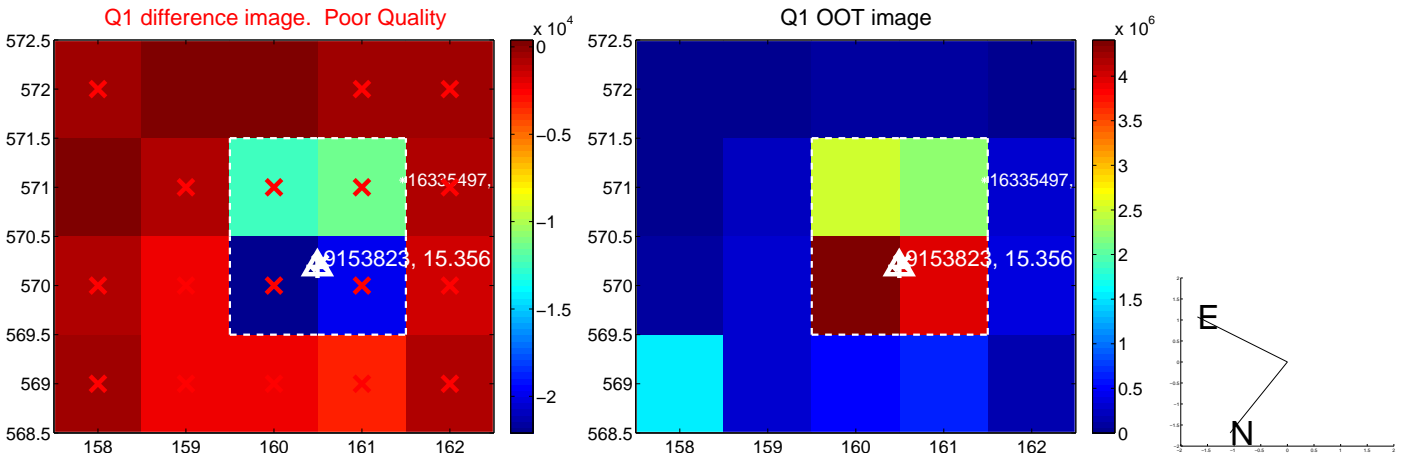
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.042 ± 0.071	0.60	-0.022 ± 0.069	-0.036 ± 0.074
PRF-fit source offset from KIC position	0.247 ± 0.076	3.26	-0.015 ± 0.068	0.246 ± 0.075
photometric centroid source offset	0.18 ± 0.16	1.14	0.16 ± 0.16	-0.10 ± 0.17

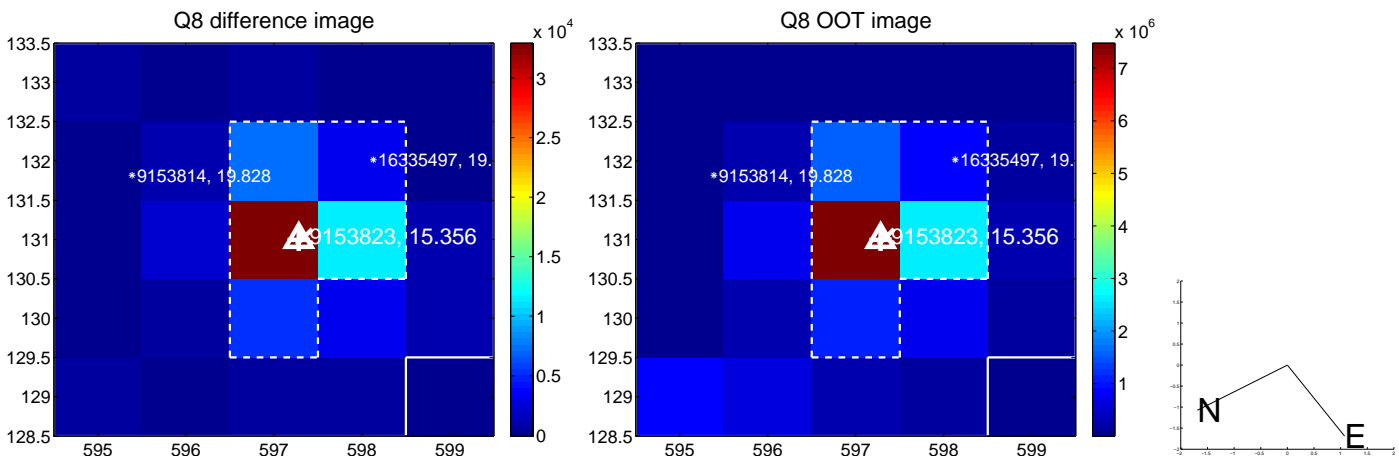
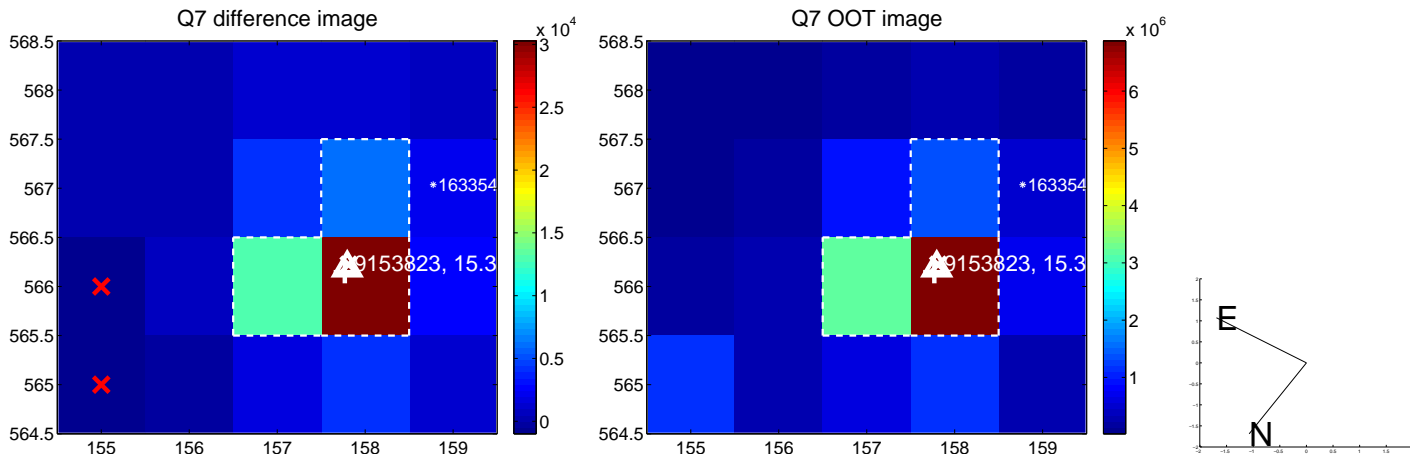
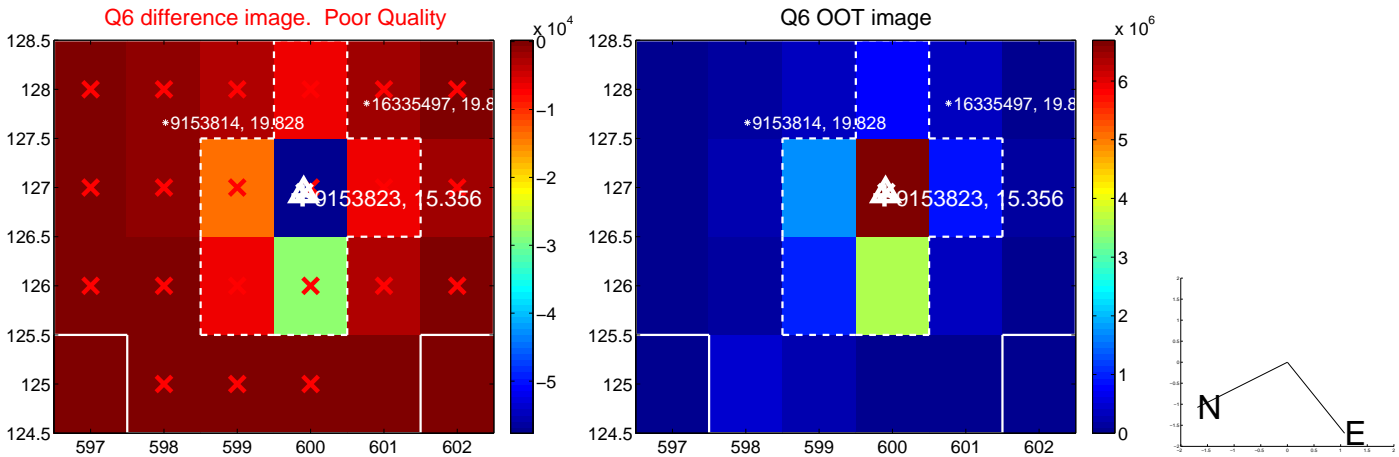
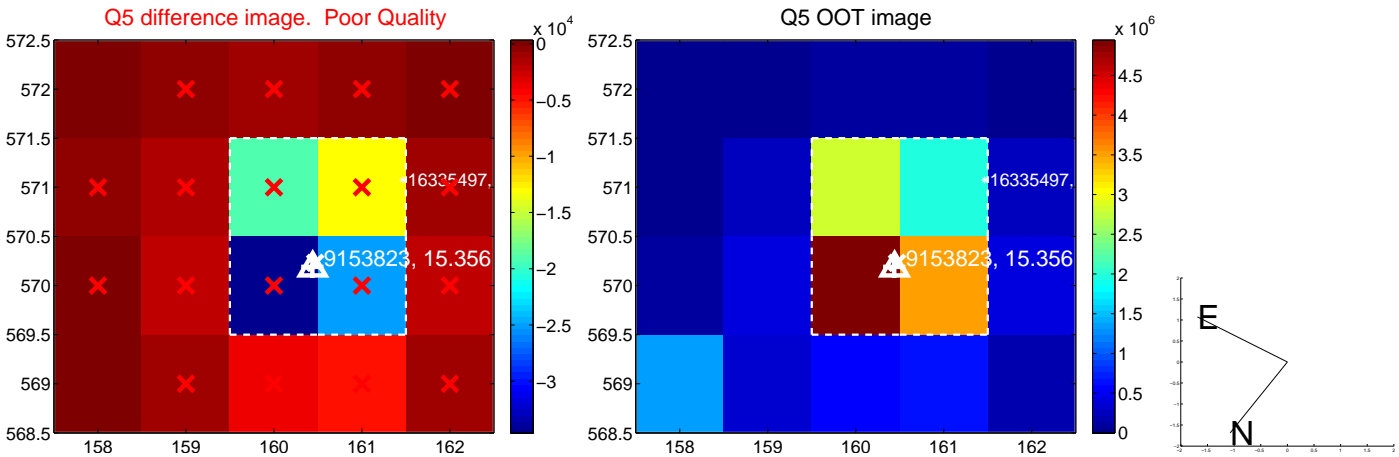


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

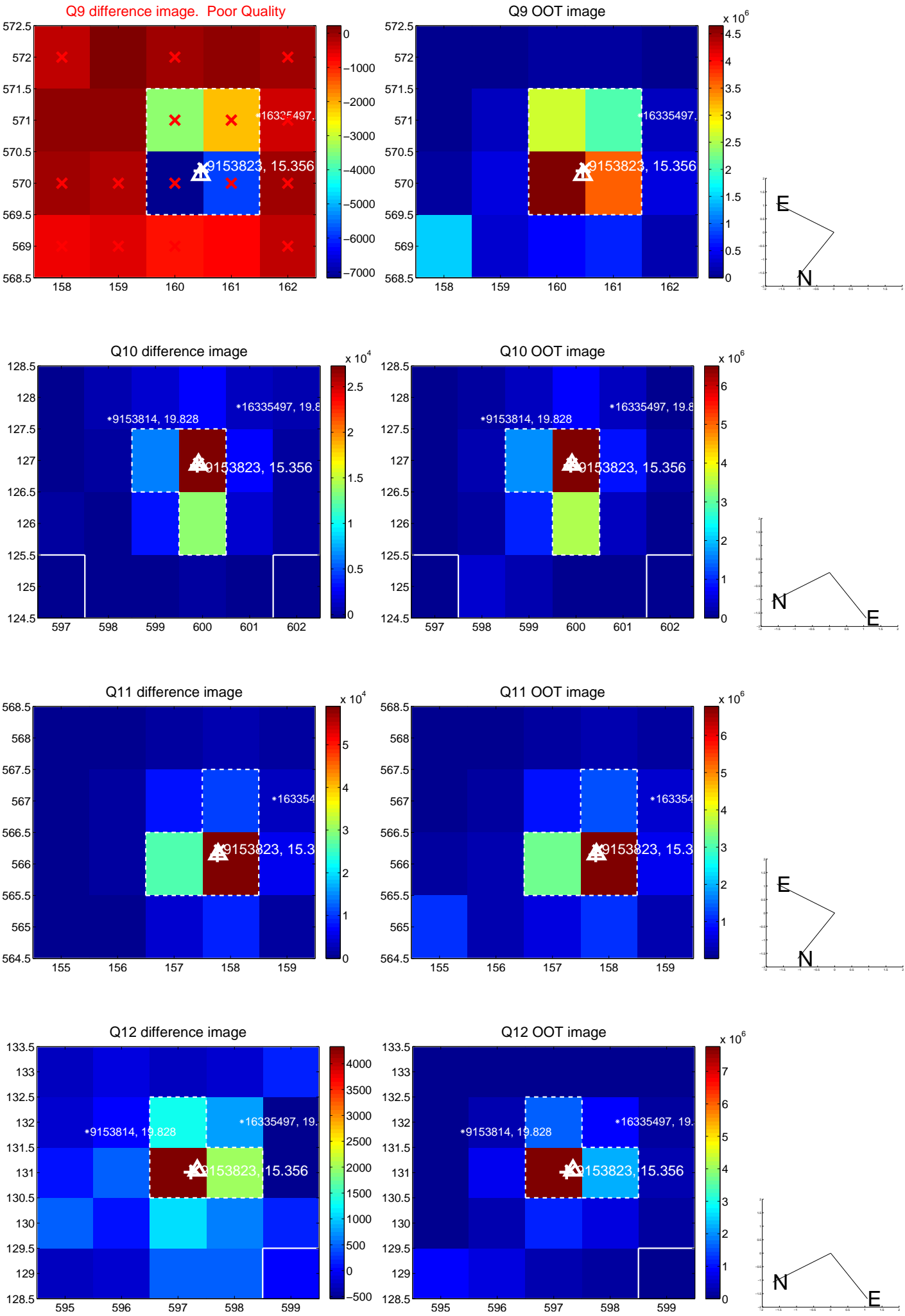
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



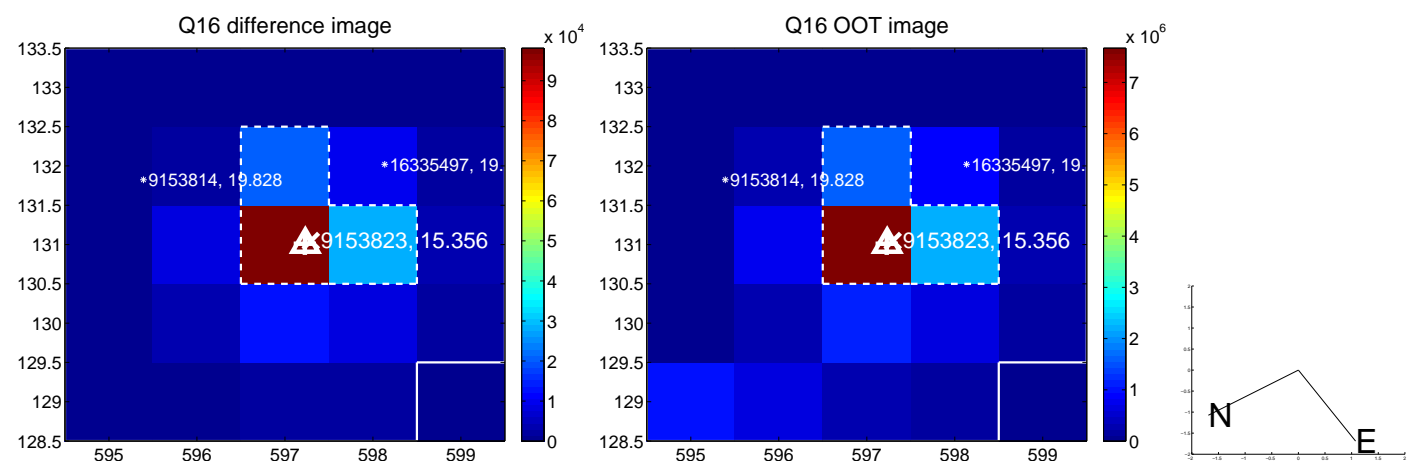
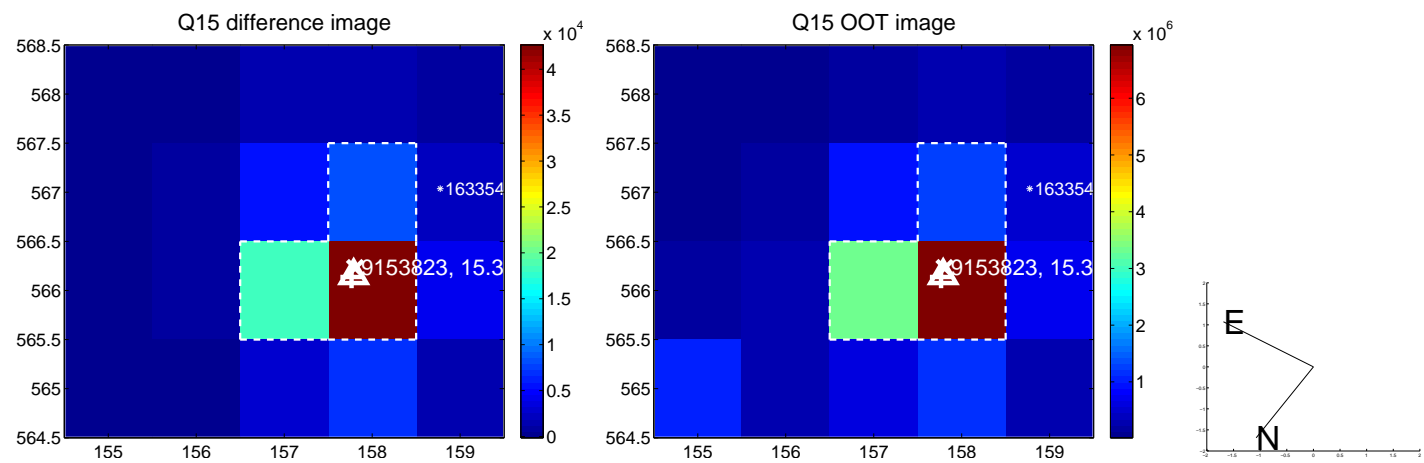
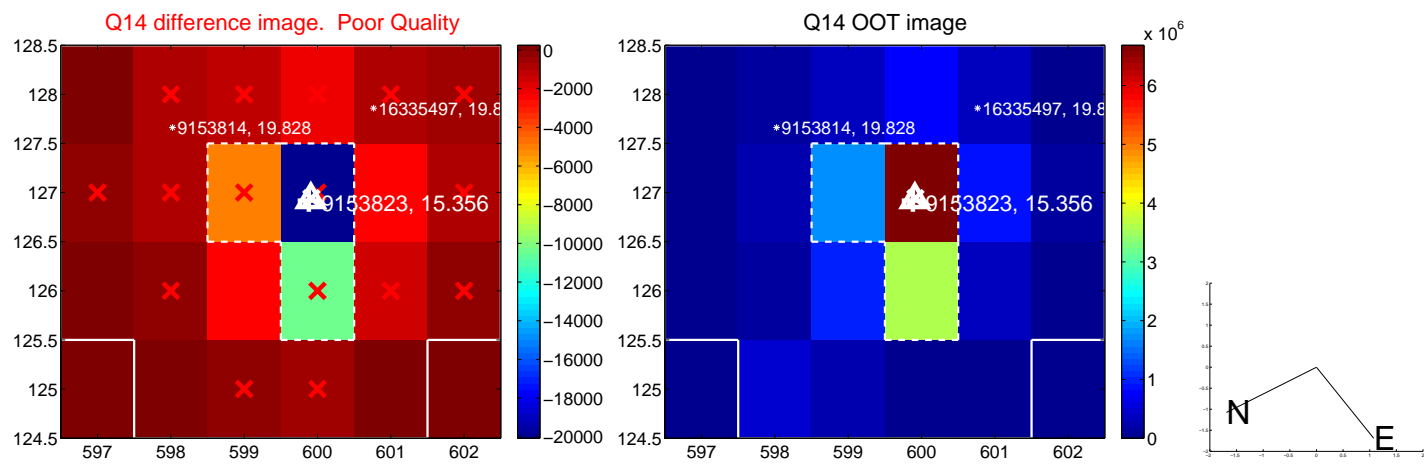
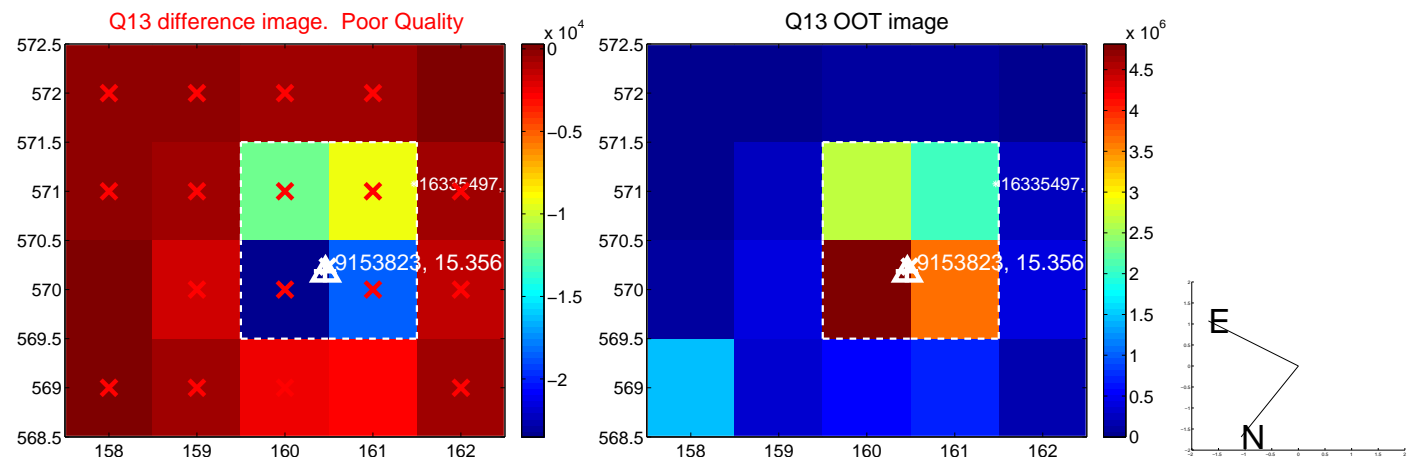
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



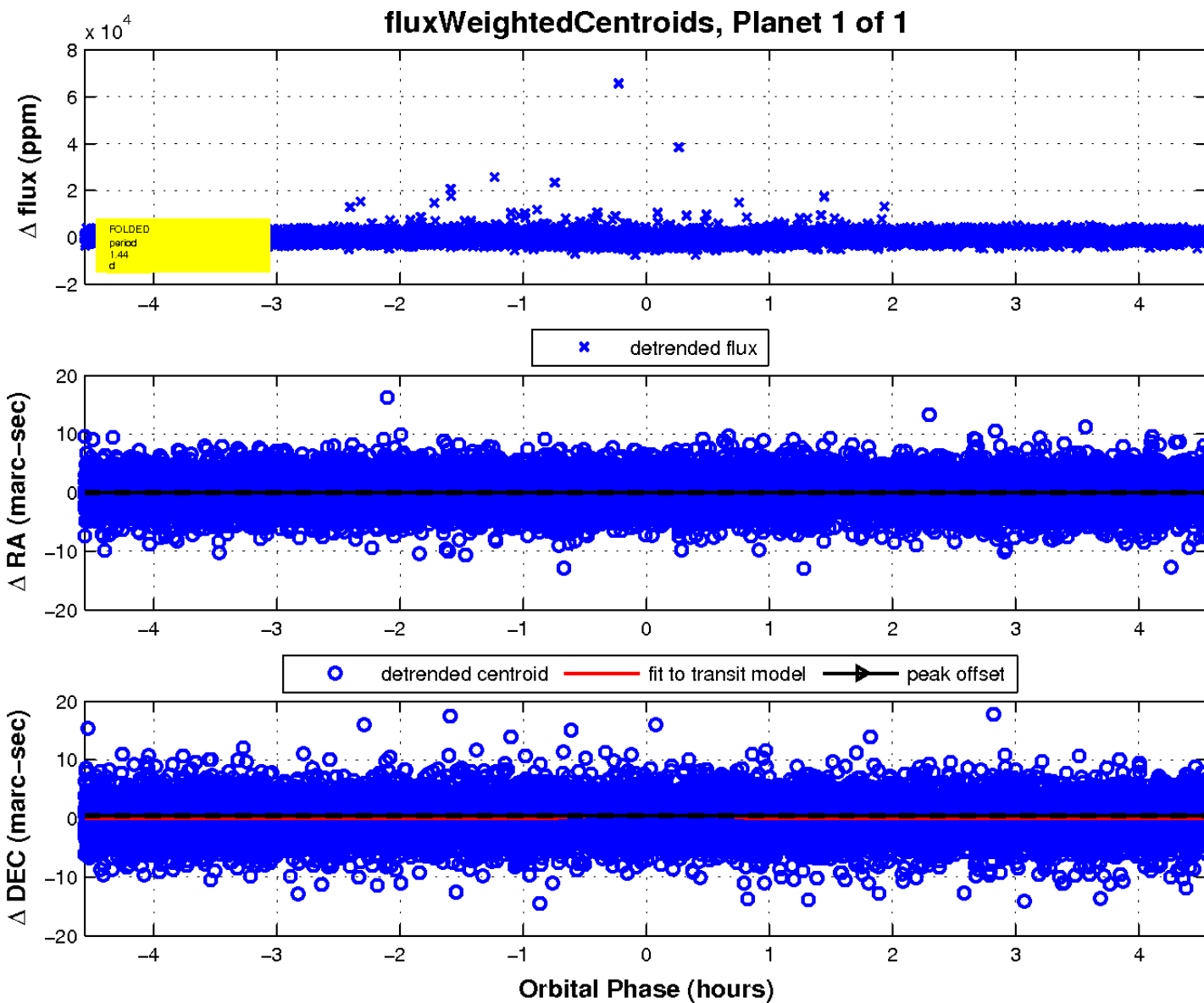
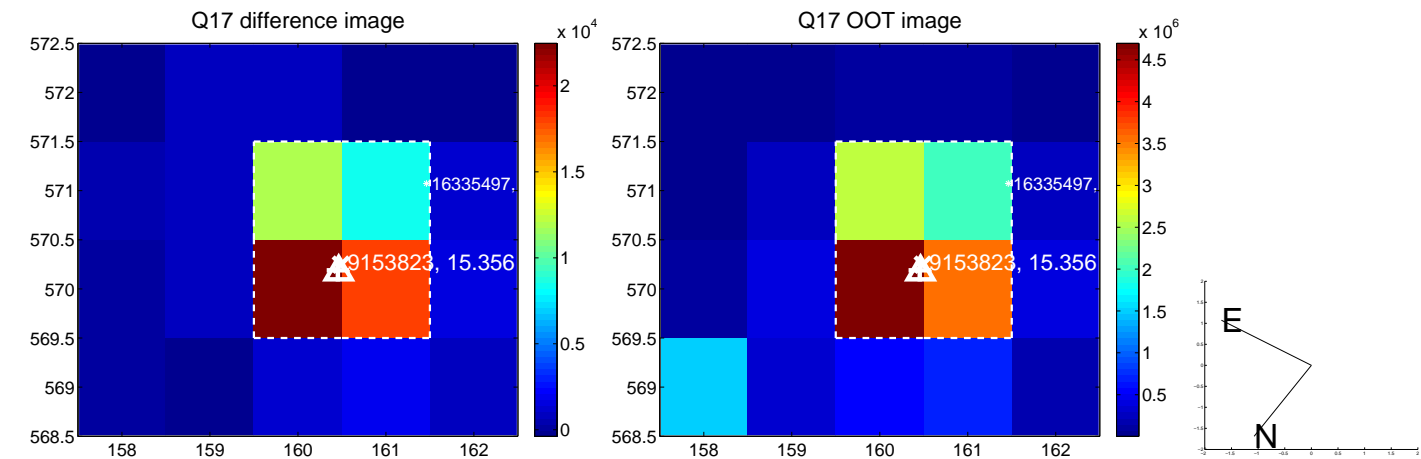
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

