

KIC 011461433

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})
011461433-01	OBS	2399.01	1.916922	132.473982	89.5	1.655	15.7	15.8	0.87	5083	1.02	571.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011461433-01	OBS	PC	1.00	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.

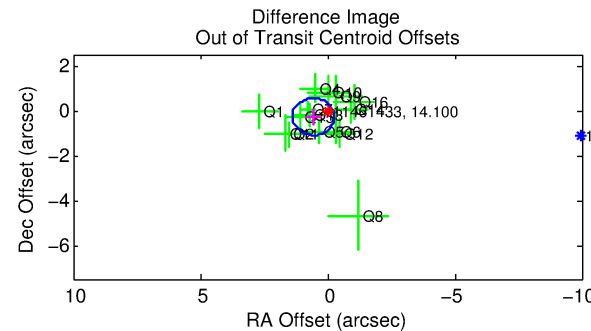
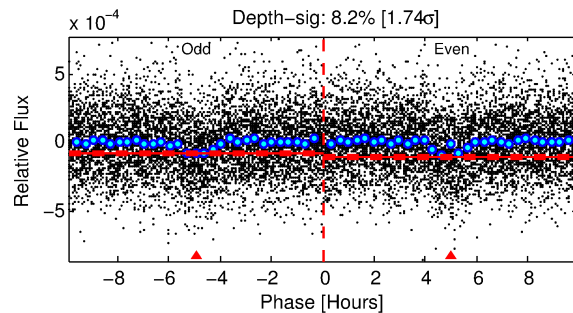
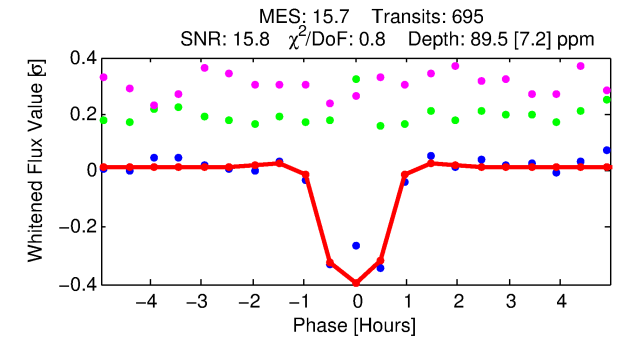
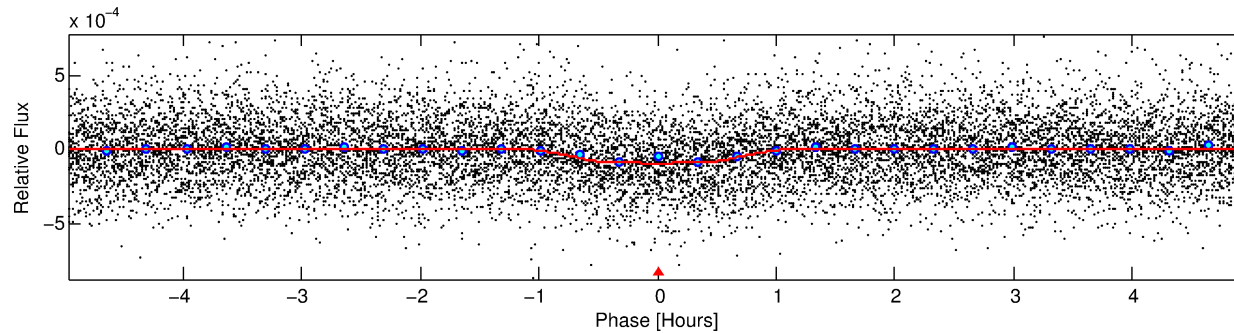
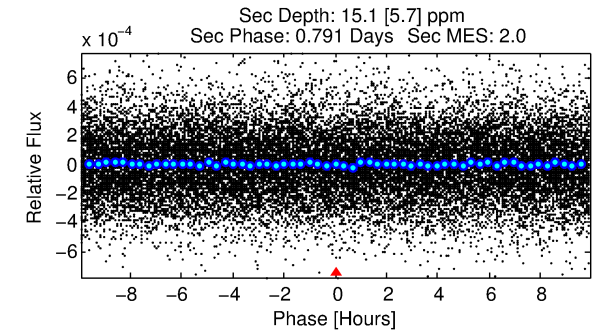
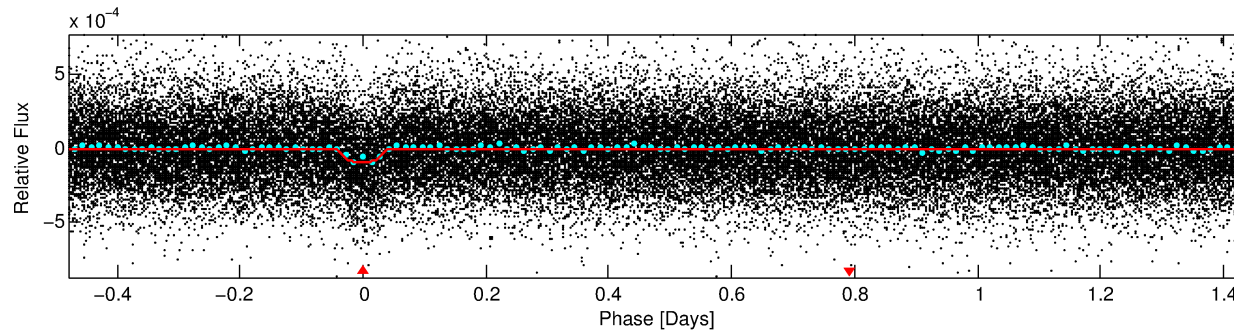
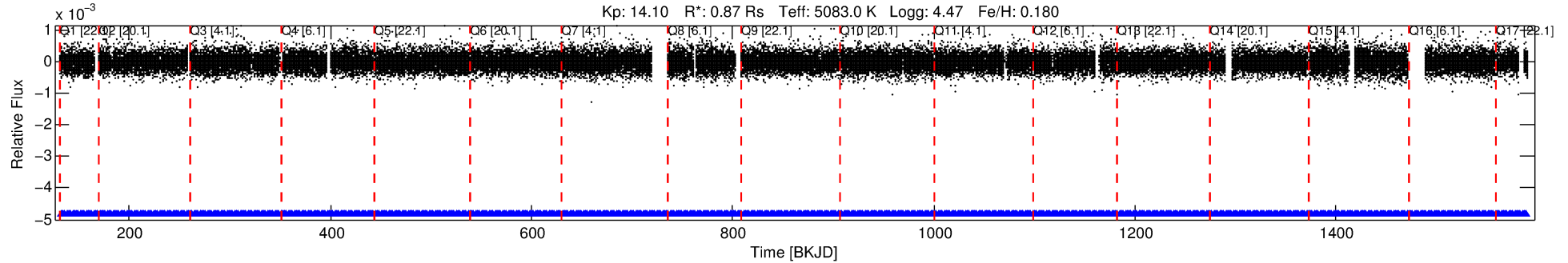
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011461433-01

No Significant Match Found

DV One-Page Summary

KIC: 11461433 Candidate: 1 of 1 Period: 1.917 d
KOI: K02399.01 Corr: 0.919



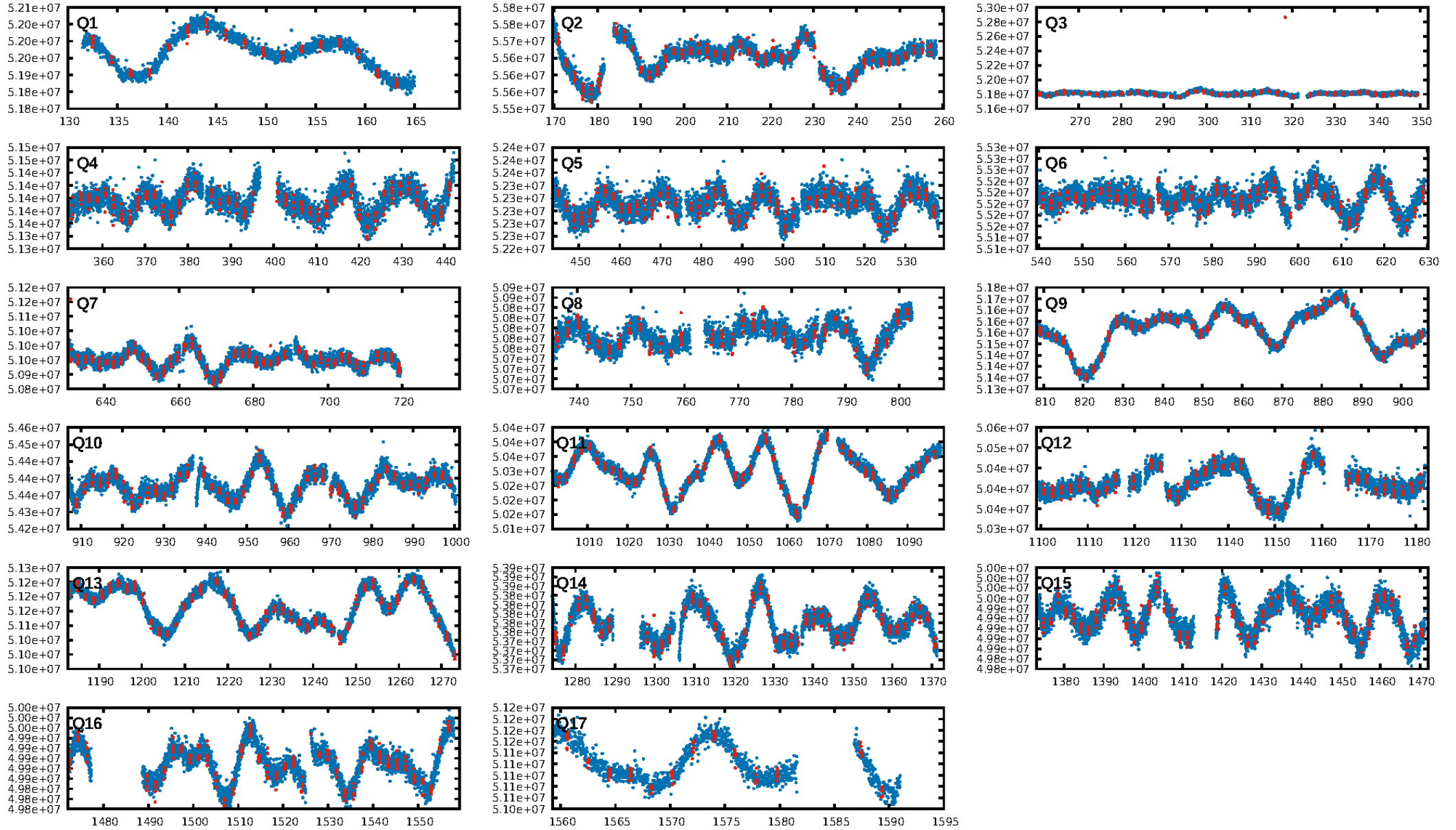
DV Fit Results:

Period = 1.91692 [0.00001] d
Epoch = 132.4740 [0.0016] BKJD
Rp/R* = 0.0107 [0.0056]
b = 0.91 [0.42]
Seff = 571.36 [87.64]
Teq = 1247 [48] K
Rp = 1.02 [0.54] Re
a = 0.0282 [0.0024] AU
Ag = 6.39 [7.12] [0.76σ]
Teffp = 3065 [848] K [2.14σ]

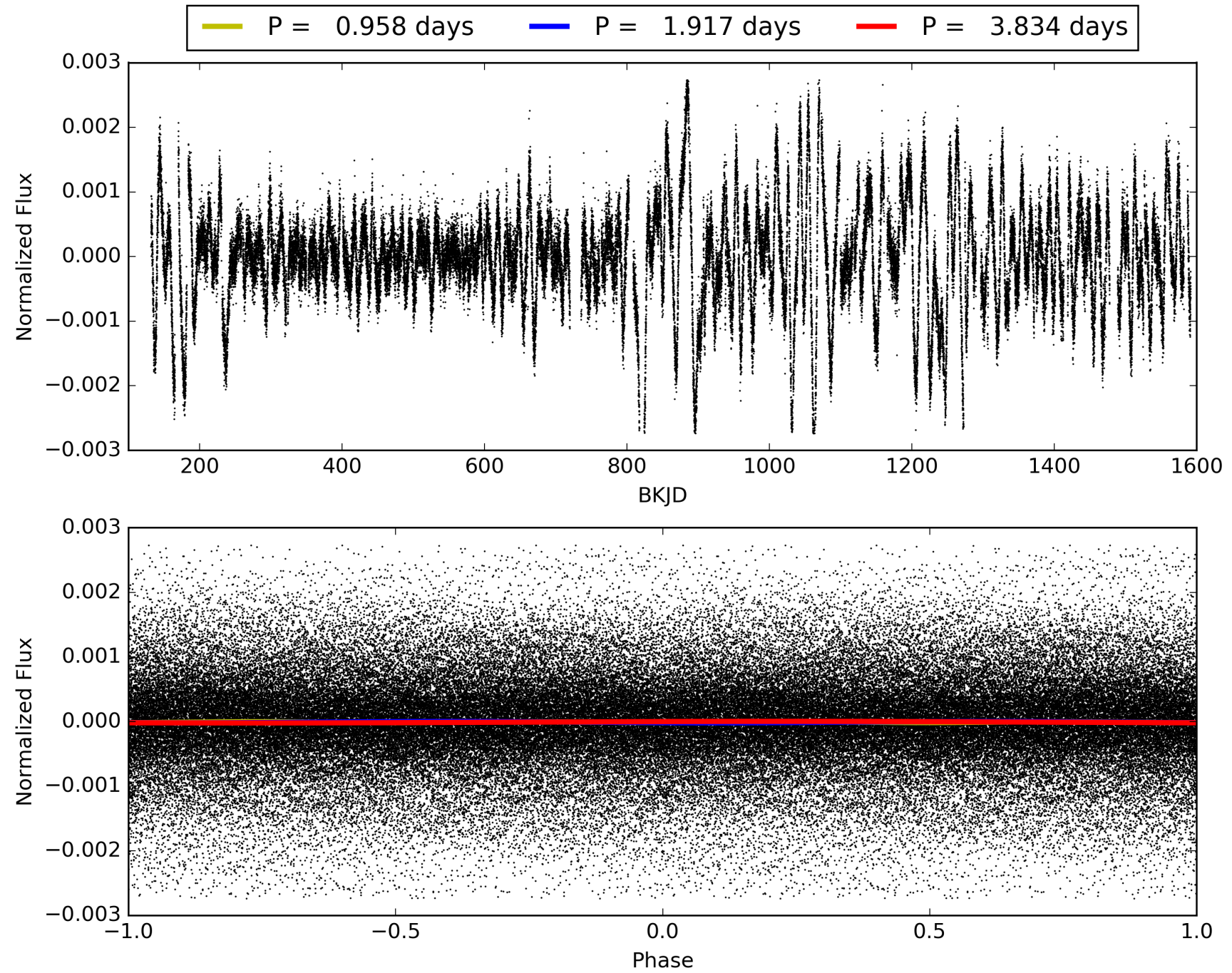
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.39e-52
RollingBand-fgt: 1.00 [665/665]
GhostDiagnostic-chr: 8.87
Centroid-sig: N/A
Centroid-so: 0.648 arcsec [0.93σ]
OotOffset-rm: 0.630 arcsec [2.30σ]
KicOffset-rm: 0.566 arcsec [1.90σ]
OotOffset-st: 4/3/4/4 [15]
KicOffset-st: 4/3/4/4 [15]
DiffImageQuality-fgm: 0.87 [13/15]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011461433-01, PDC Light Curves

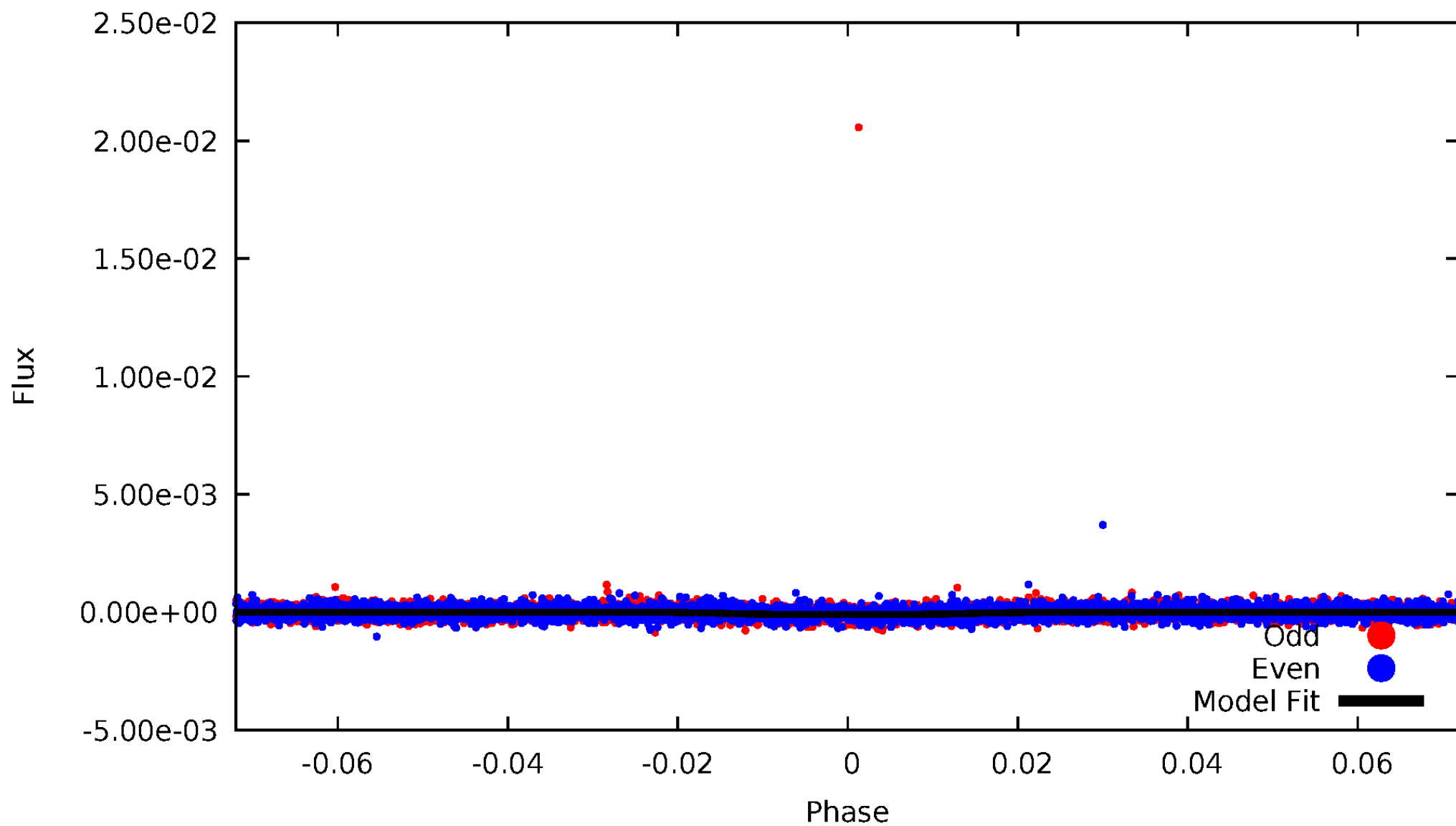


TCE 011461433-01



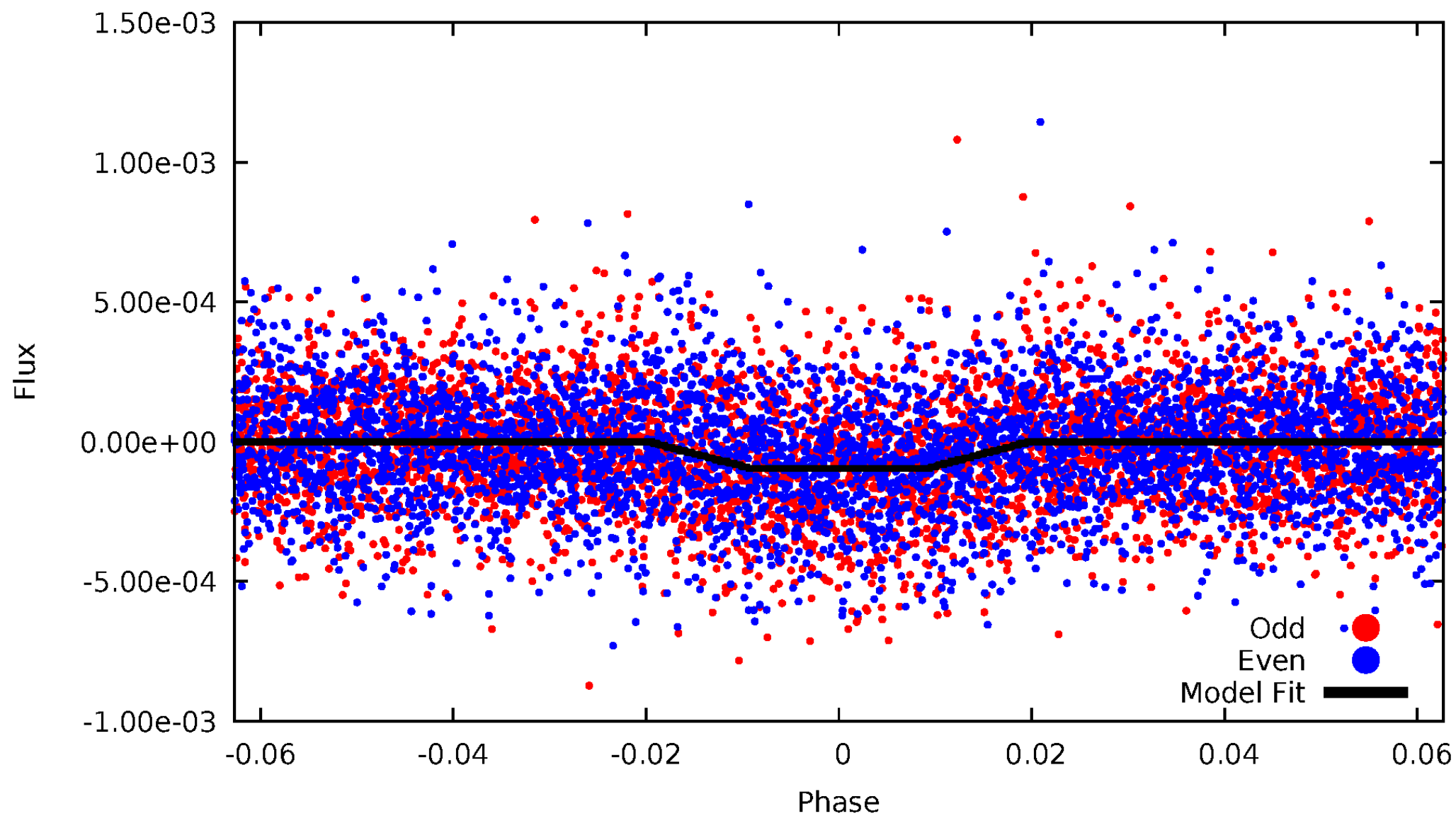
DV Odd/Even

TCE 011461433-01



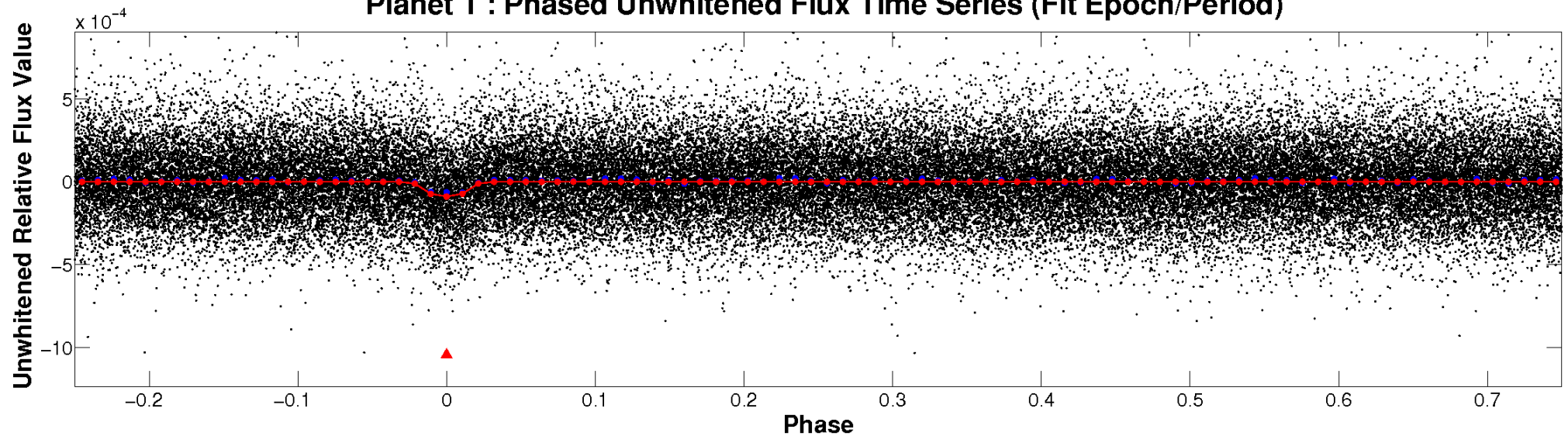
ALT Odd/Even

TCE 011461433-01

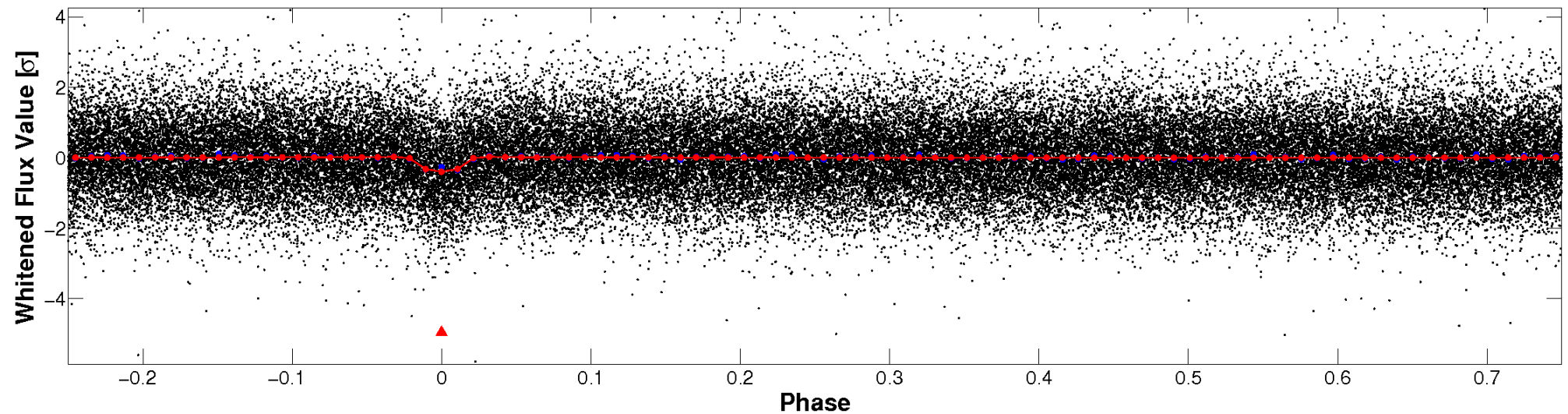


Non-Whitened Vs. Whitened Light Curve

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

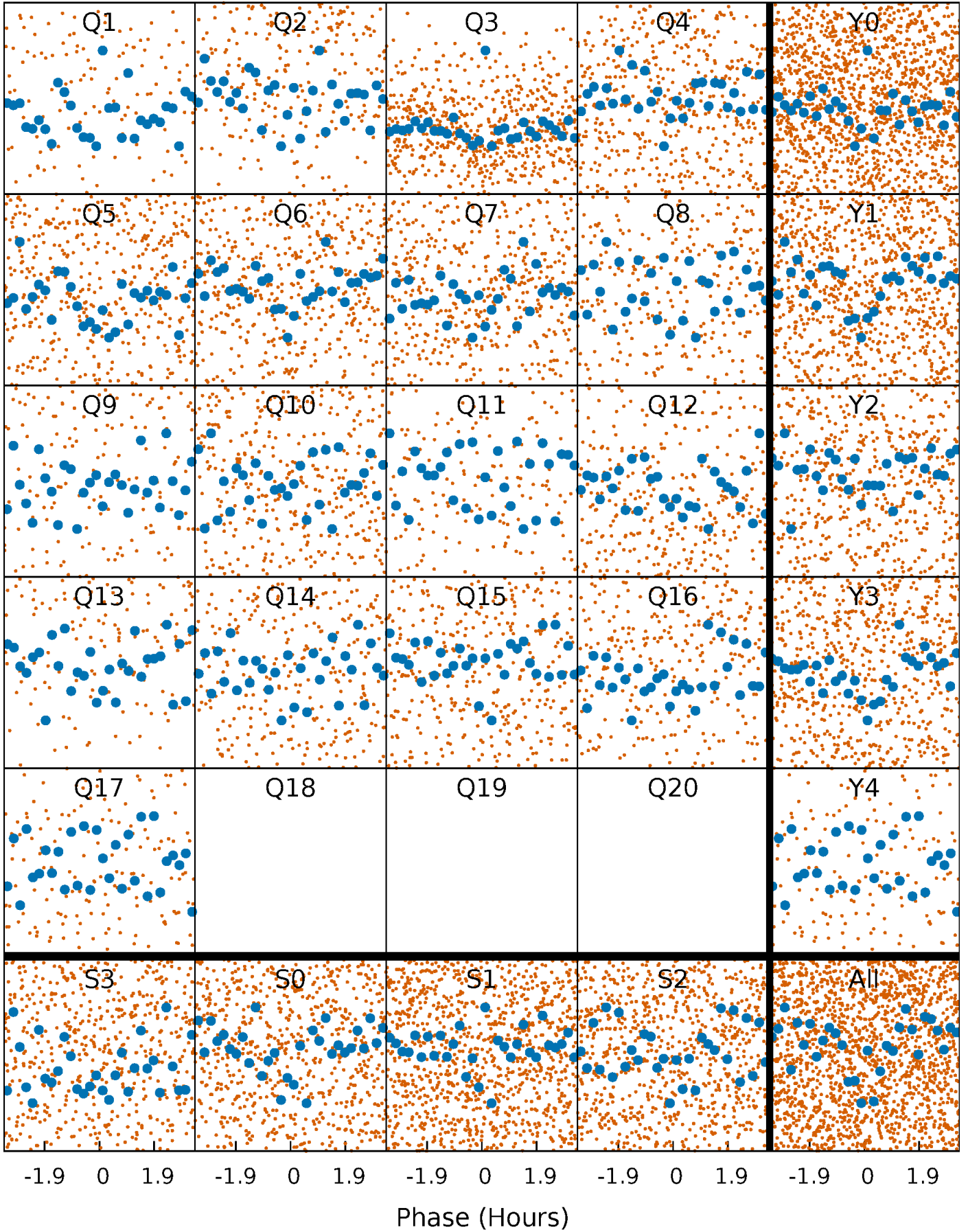


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



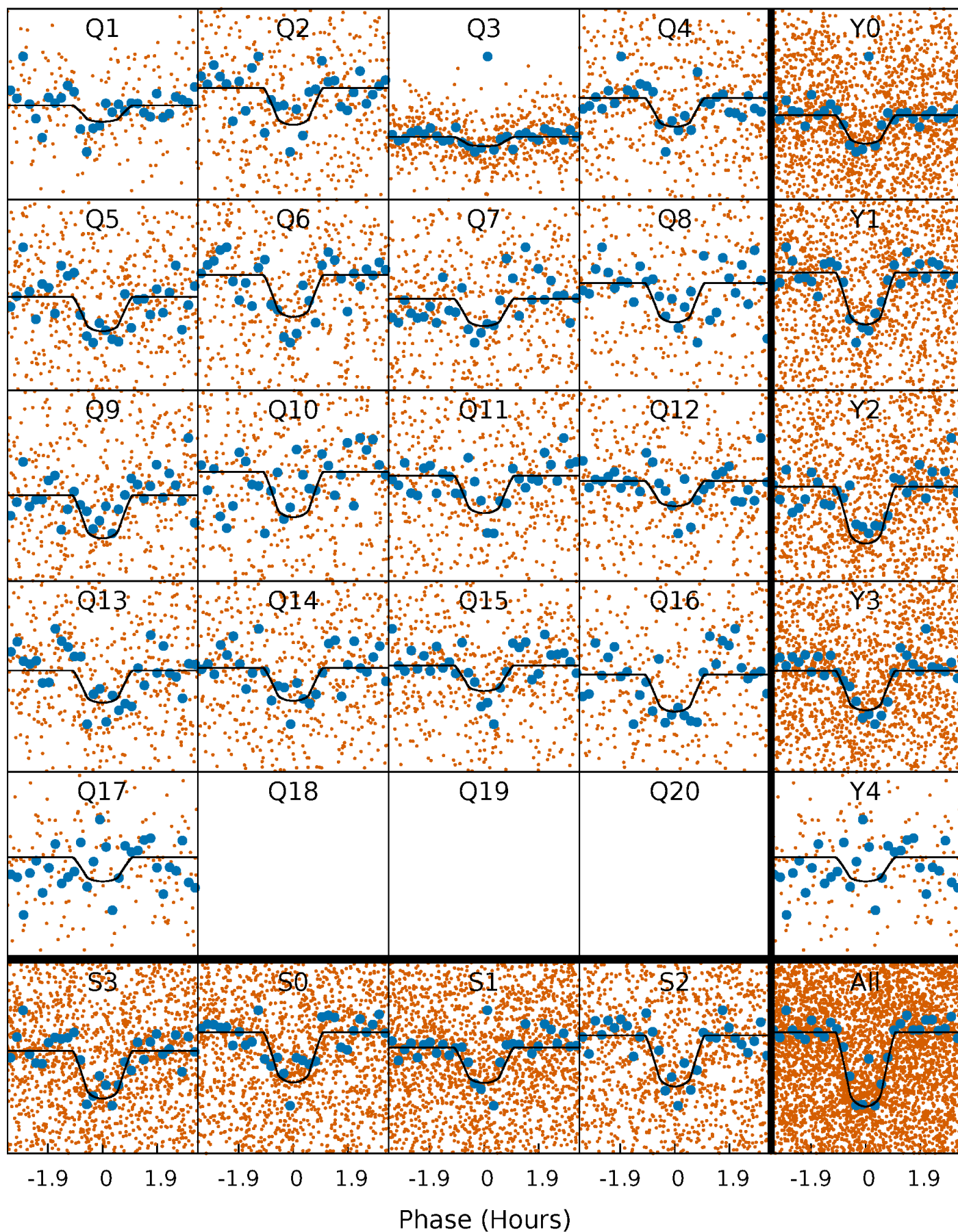
PDC Quarter-Phased Transit Curves

TCE 011461433-01 P= 1.916922 Days $T_0=132.473982$ (BKJD)



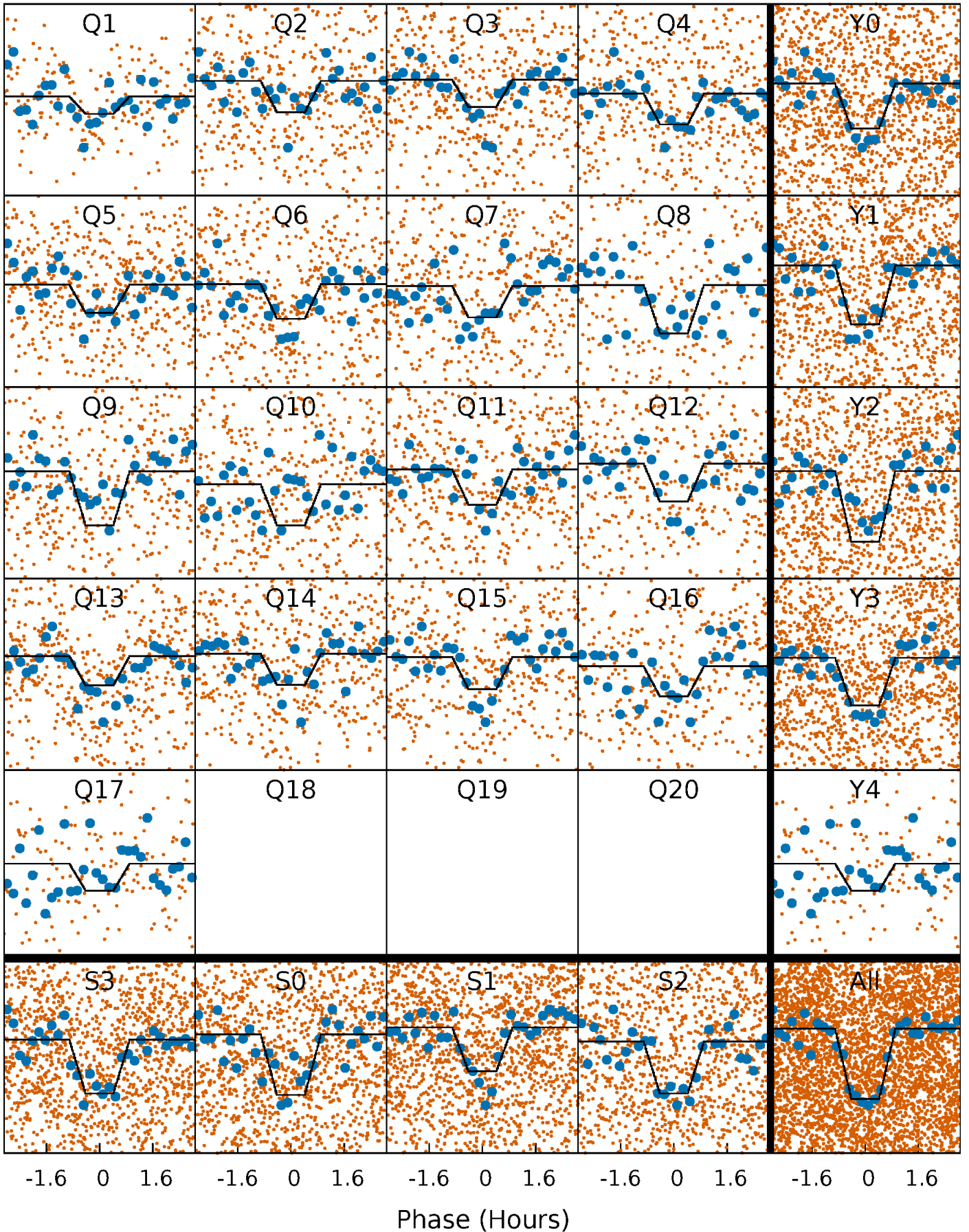
DV Quarter-Phased Transit Curves

TCE 011461433-01 P= 1.916922 Days $T_0=132.473982$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

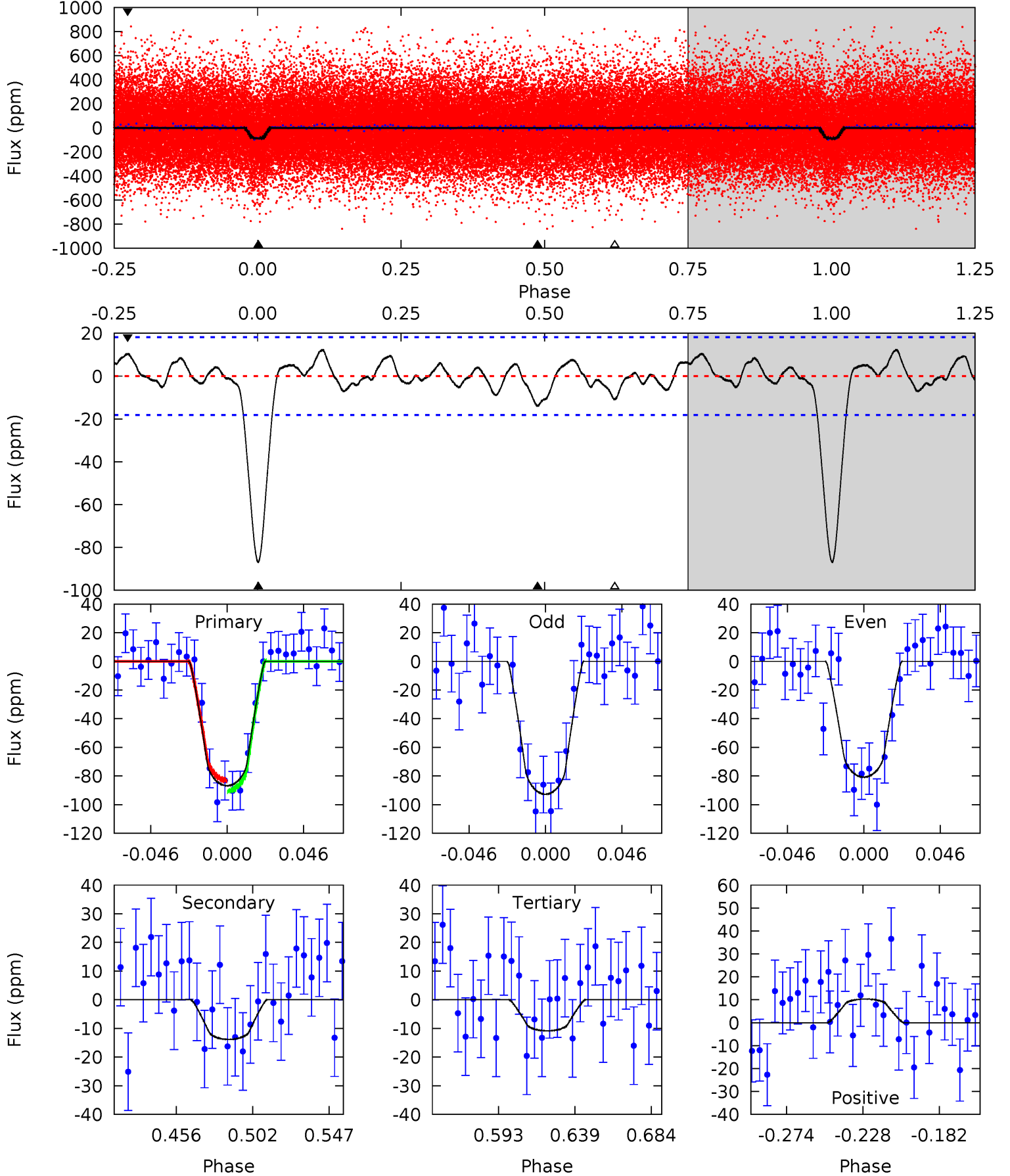
TCE 011461433-01 P= 1.916935 Days $T_0=132.470649$ (BKJD)



DV Model-Shift Uniqueness Test

011461433-01, P = 1.916922 Days, E = 130.557060 Days

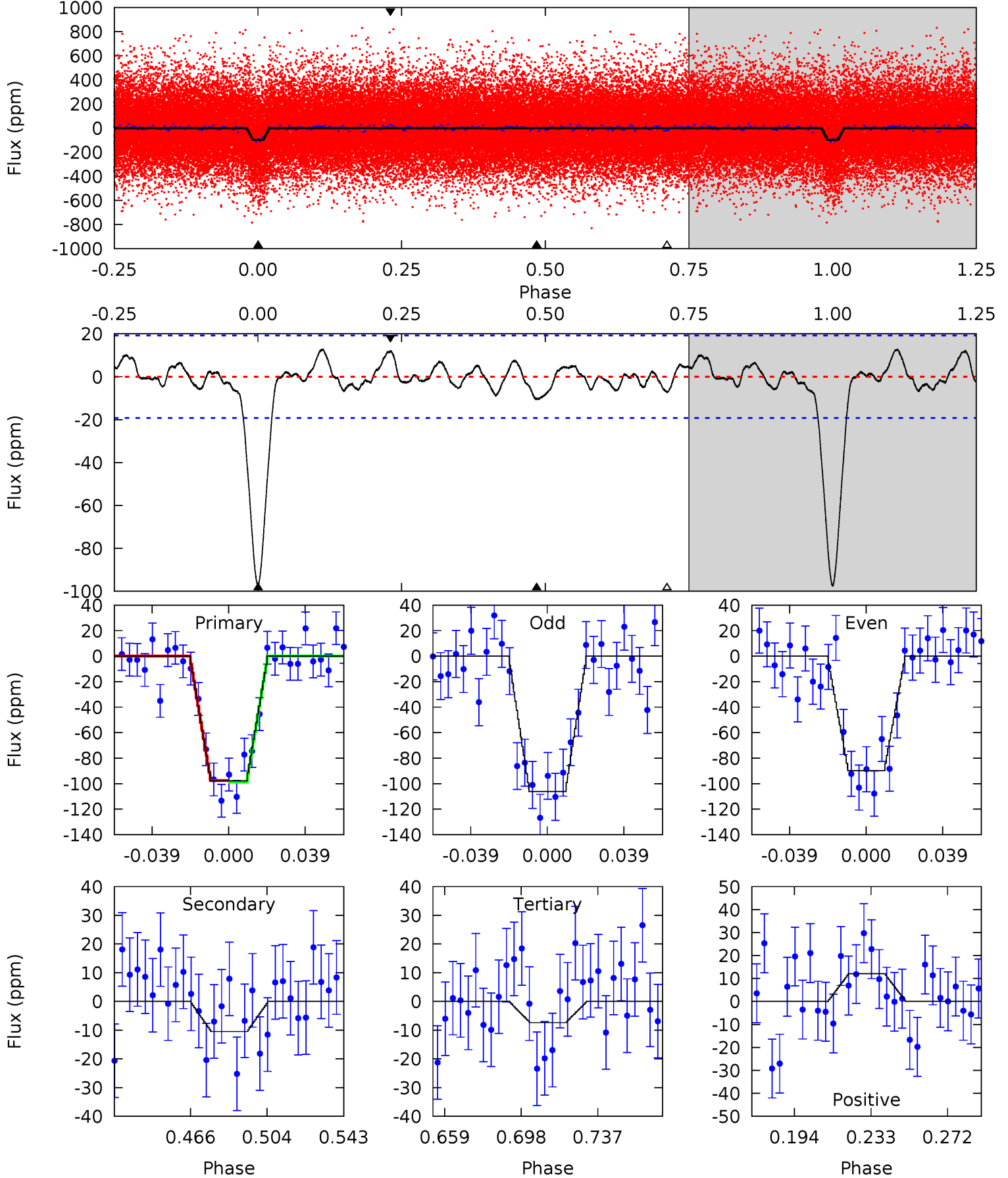
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.6	3.60	2.82	2.68	4.73	2.00	1.22	19.7	19.9	0.78	0.92	1.55	0.88	0.12	0.97



Alt Model-Shift Uniqueness Test

011461433-01, P = 1.916935 Days, E = 130.553714 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.2	2.60	1.82	3.00	4.76	2.07	1.10	22.4	21.2	0.77	-0.40	2.02	1.01	0.12	0.16



Stellar Parameters For KIC 011461433

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5083^{+83}_{-76}	$4.468^{+0.083}_{-0.033}$	$0.180^{+0.150}_{-0.150}$	$0.872^{+0.042}_{-0.072}$	$0.815^{+0.053}_{-0.028}$	$1.730^{+0.582}_{-0.202}$
	+2%/-1%	+2%/-1%	+83%/-83%	+5%/-8%	+7%/-3%	+34%/-12%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 011461433-01 / KOI 2399.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-14 ± 4	$1.05^{+0.46}_{-0.49}$	1736^{+42}_{-54}	3393^{+831}_{-443}	$5.542^{+14.169}_{-3.143}$
Alt.	-10 ± 4	$0.95^{+0.53}_{-0.48}$	1731^{+40}_{-45}	3320^{+864}_{-484}	$4.947^{+14.531}_{-3.104}$

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 $A_{obs} \gg 1.0$

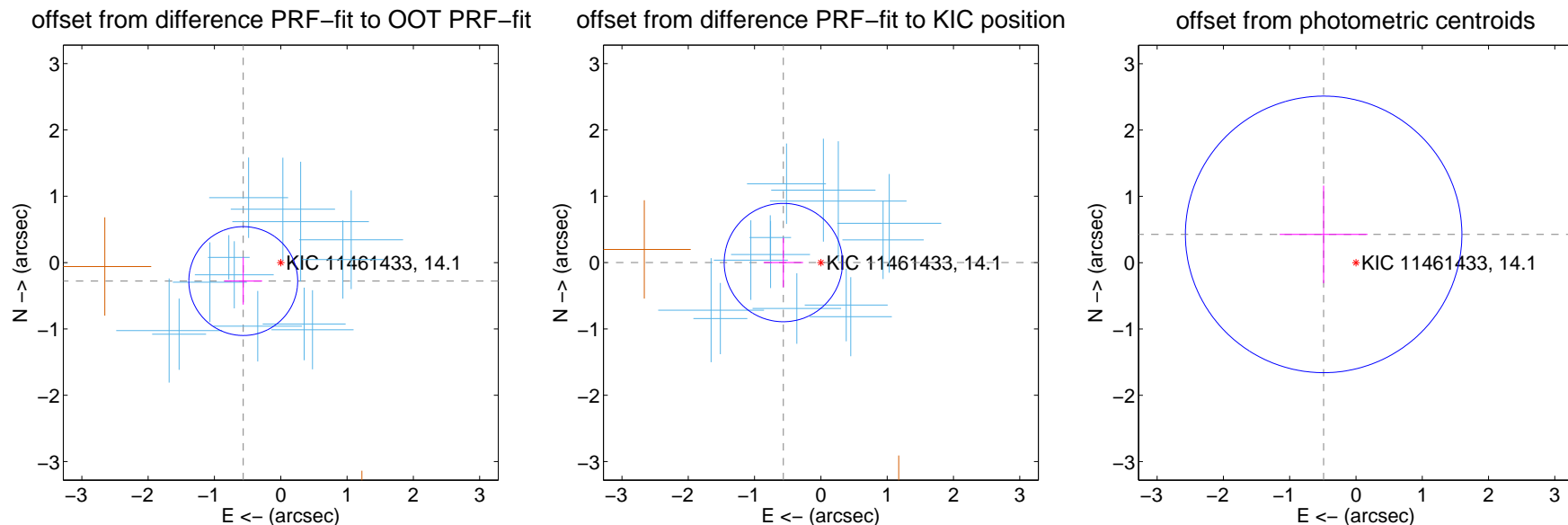
DV Centroid Data

Supplemental centroid analysis for 011461433-01. Kepler magnitude: 14.10. Transit SNR 15.84

There are 13 quarters with good PRF difference image offsets

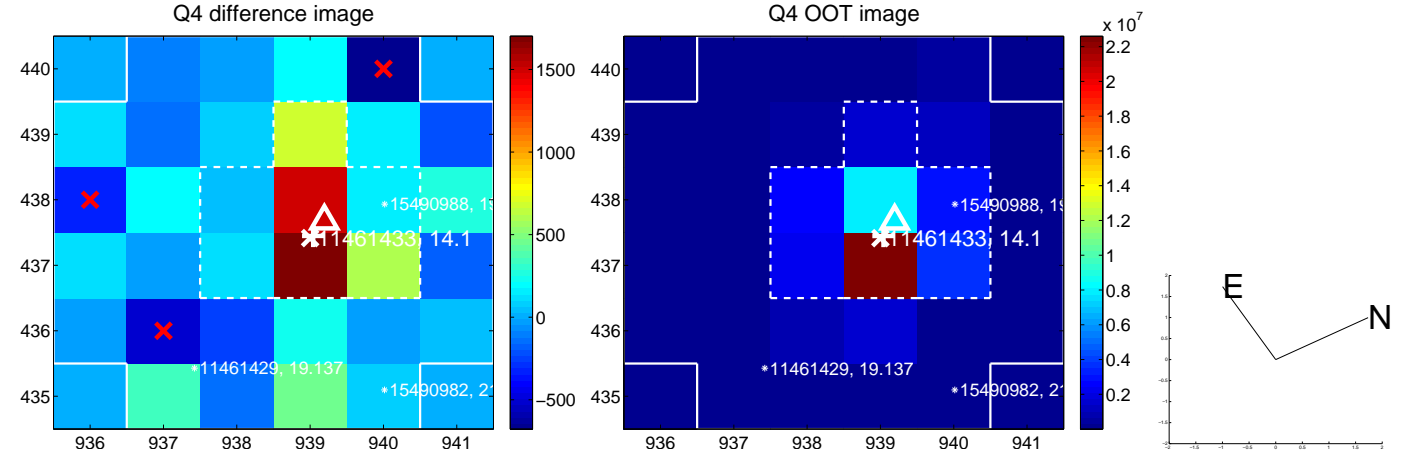
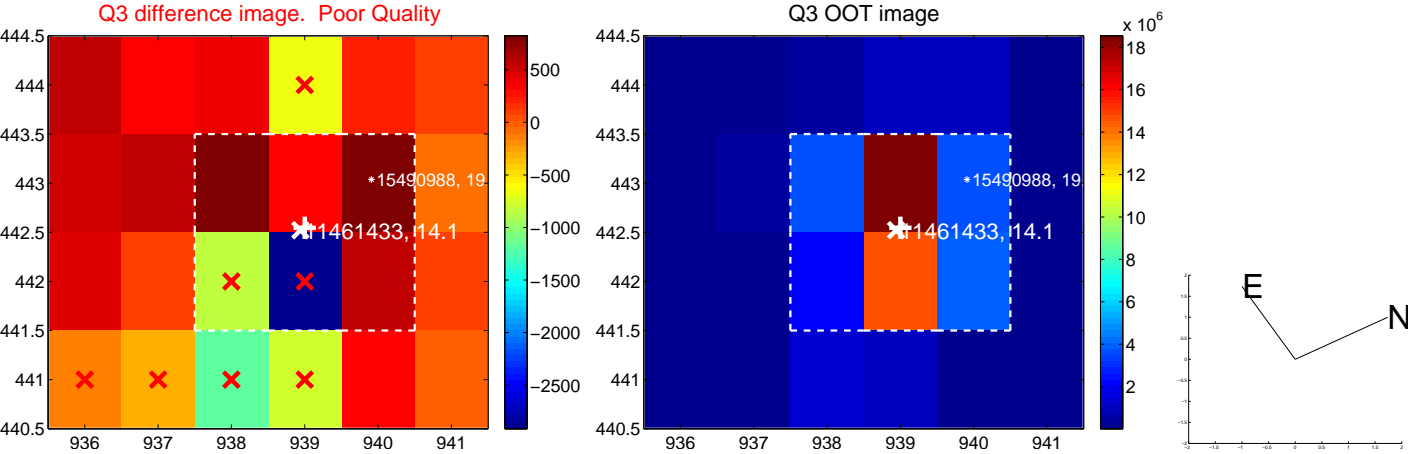
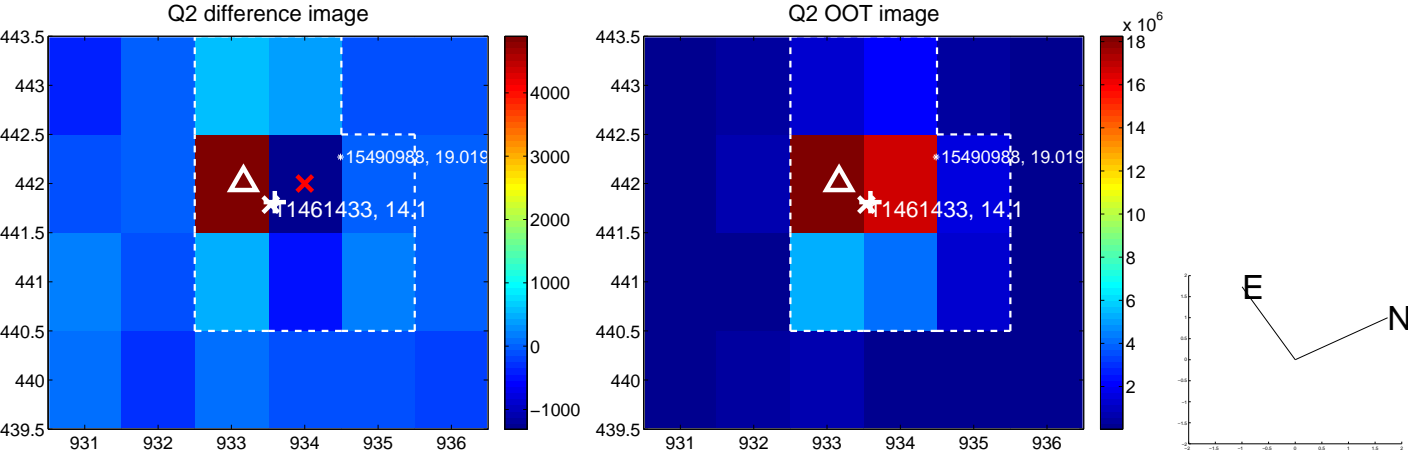
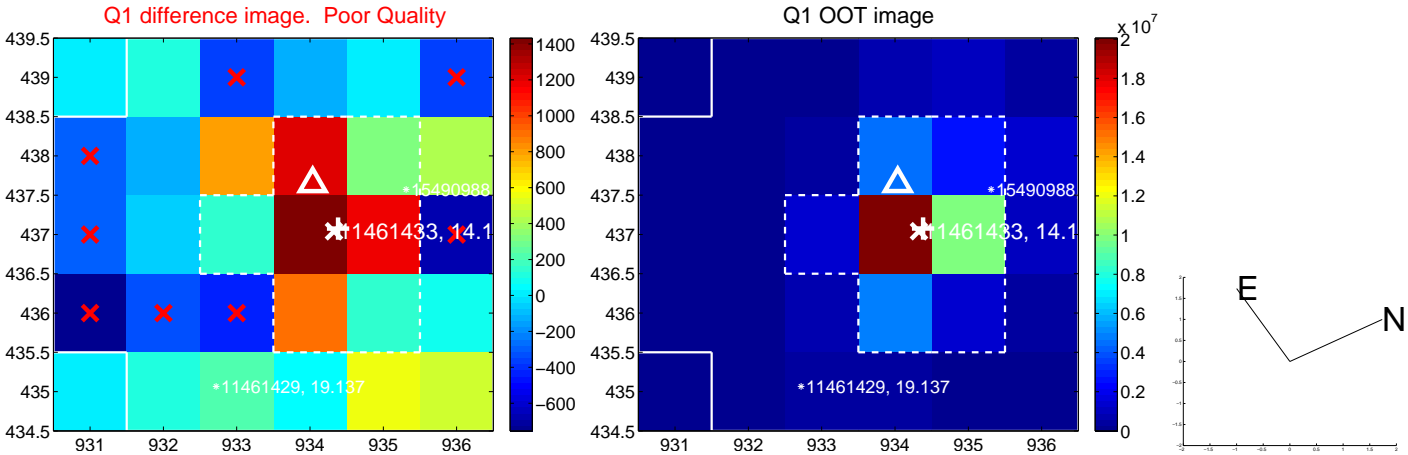
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.630 ± 0.274	2.30	0.566 ± 0.286	-0.279 ± 0.357
PRF-fit source offset from KIC position	0.566 ± 0.297	1.90	0.566 ± 0.297	0.000 ± 0.372
photometric centroid source offset	0.65 ± 0.70	0.93	0.49 ± 0.66	0.43 ± 0.74

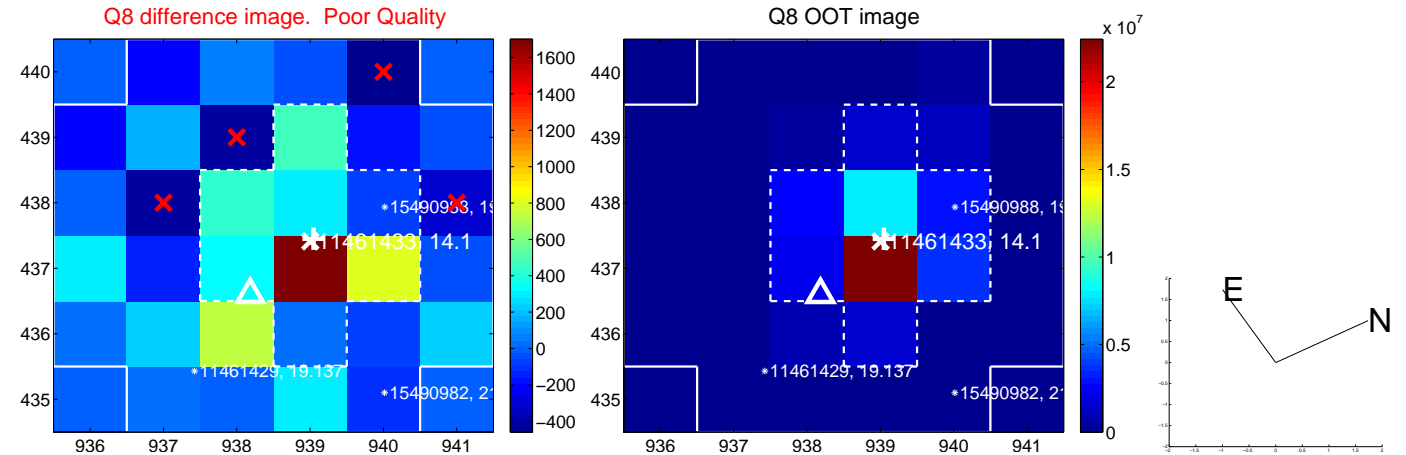
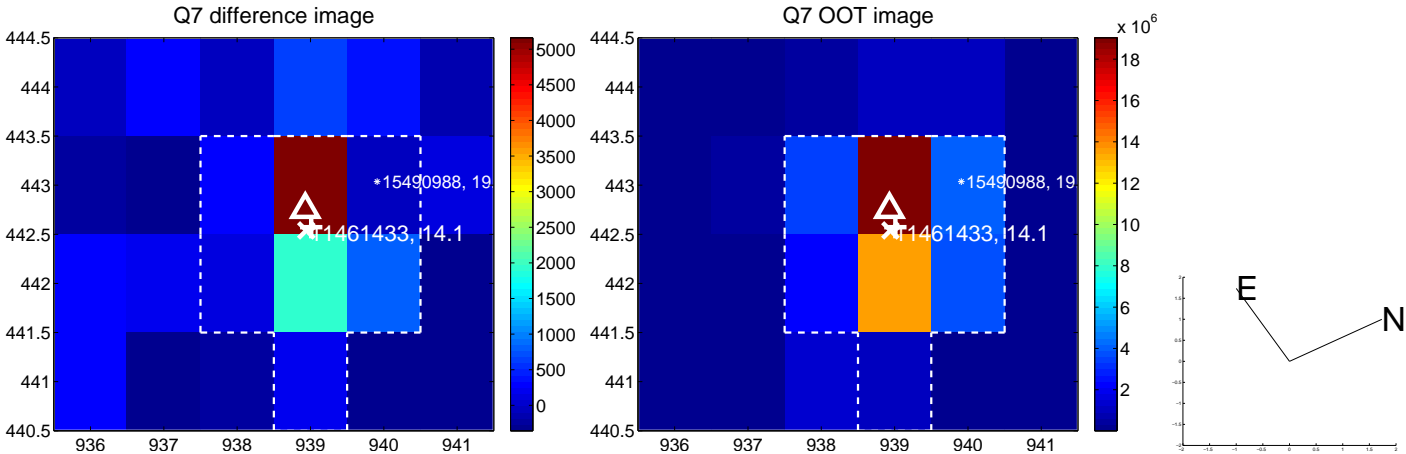
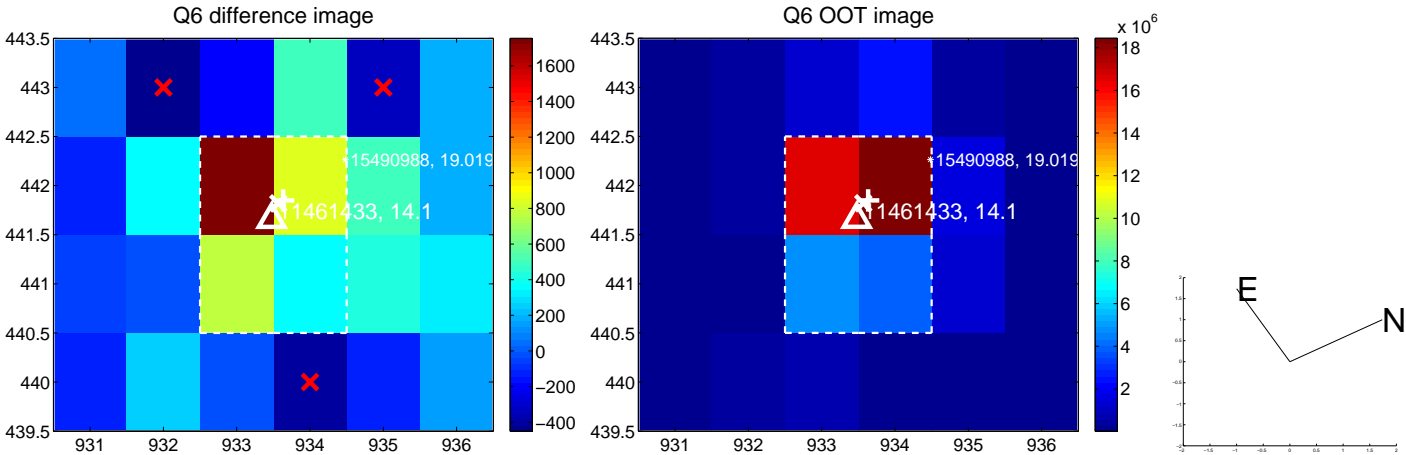
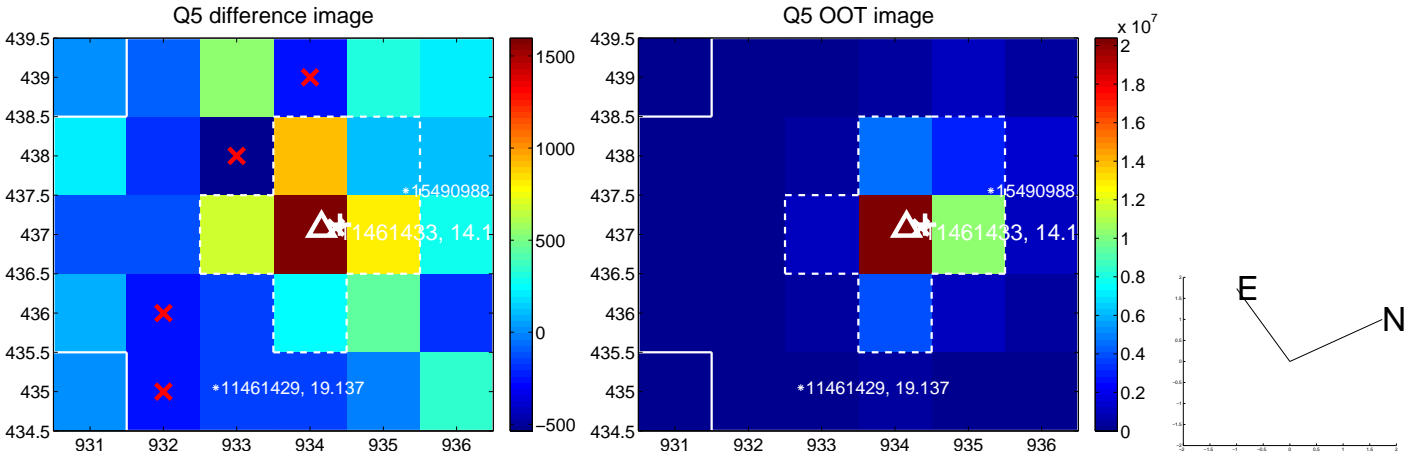


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

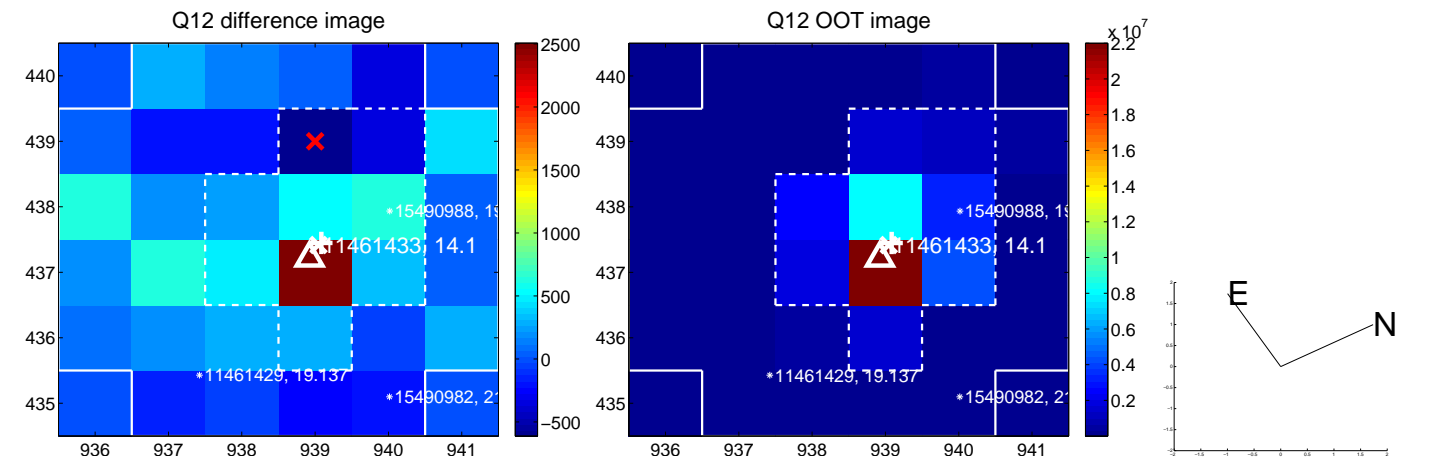
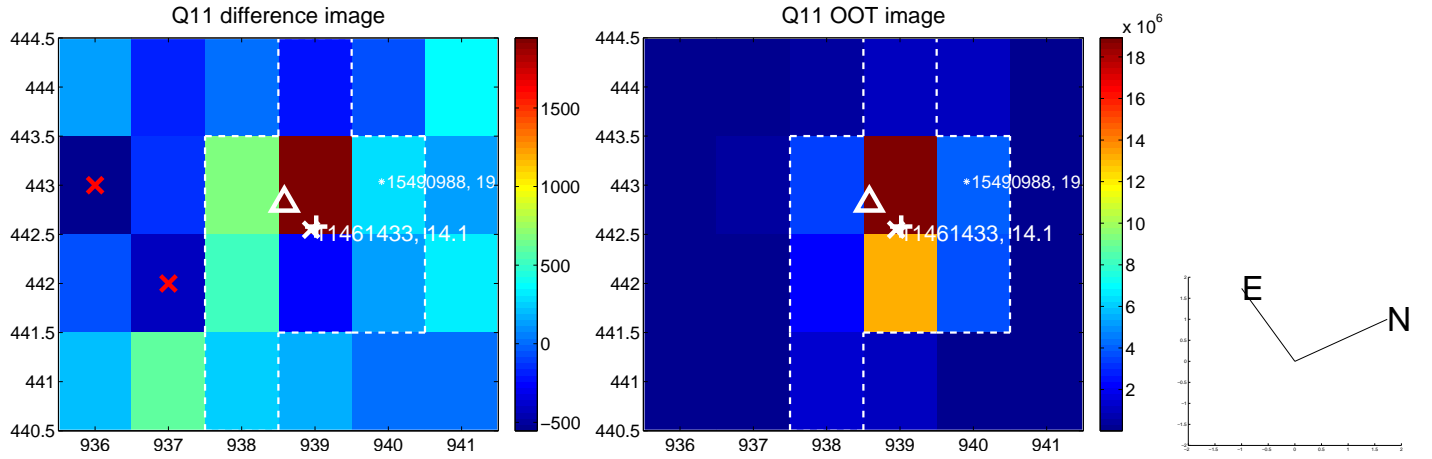
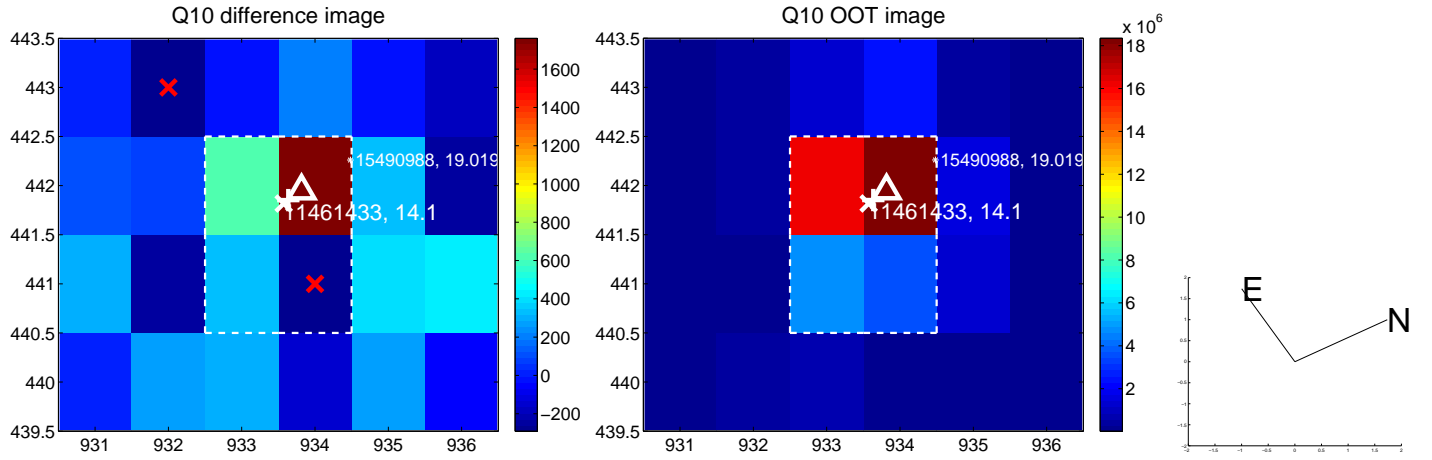
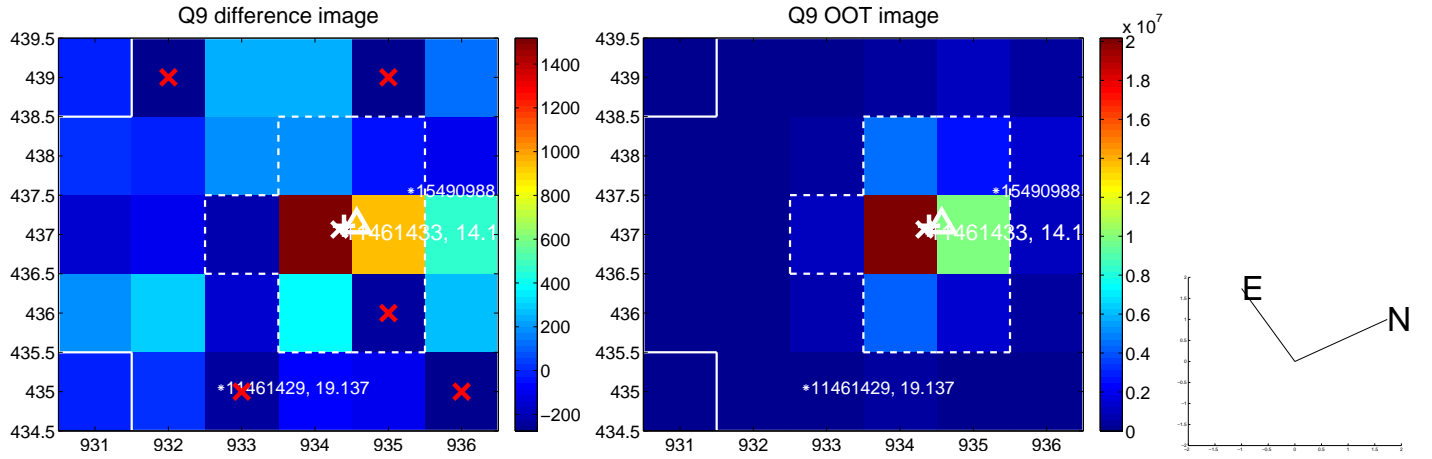
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



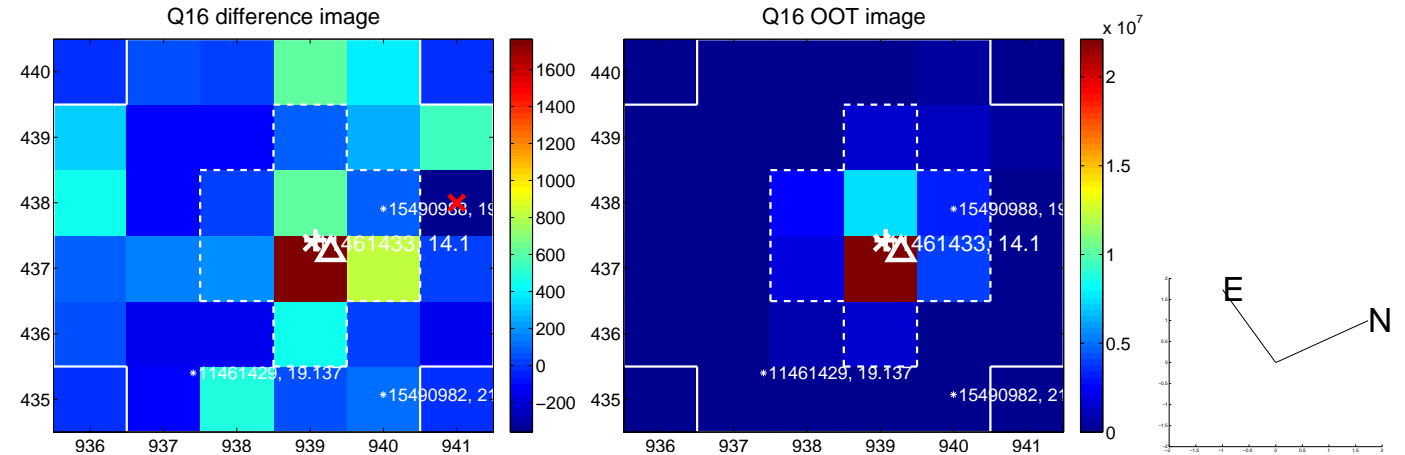
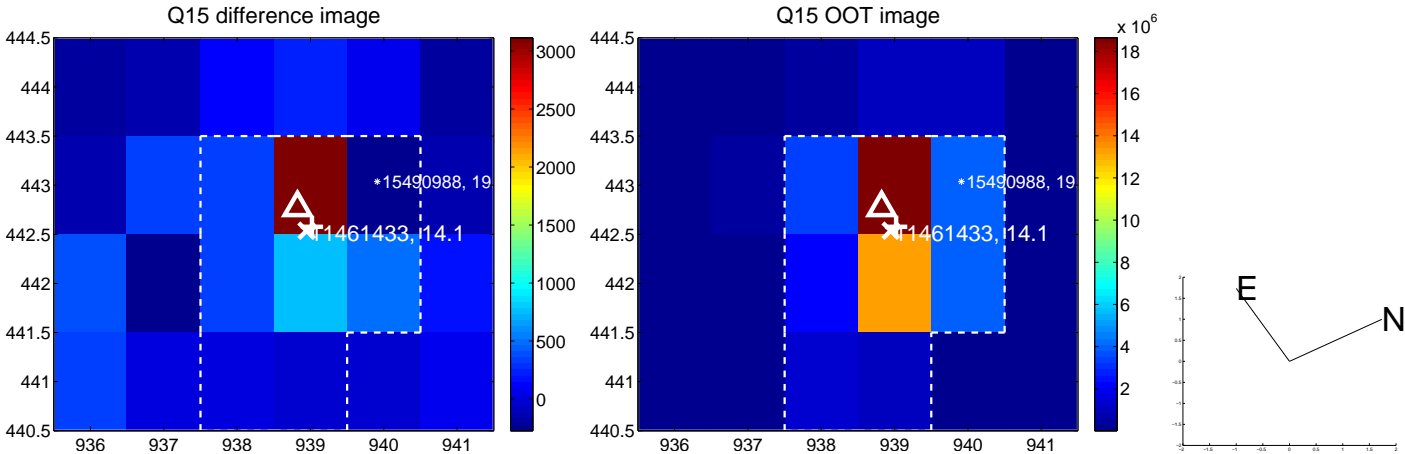
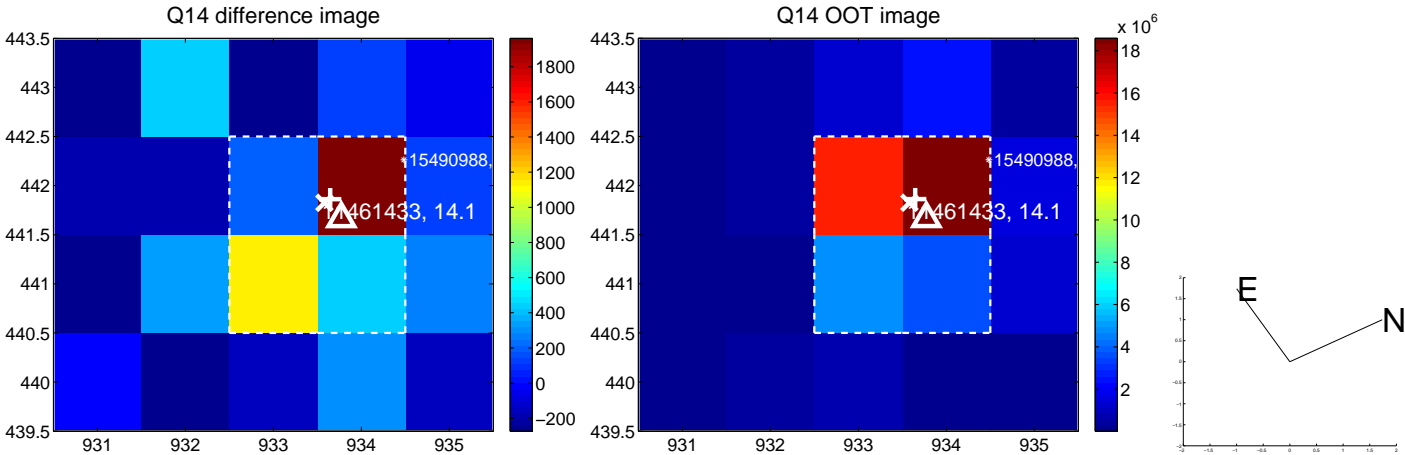
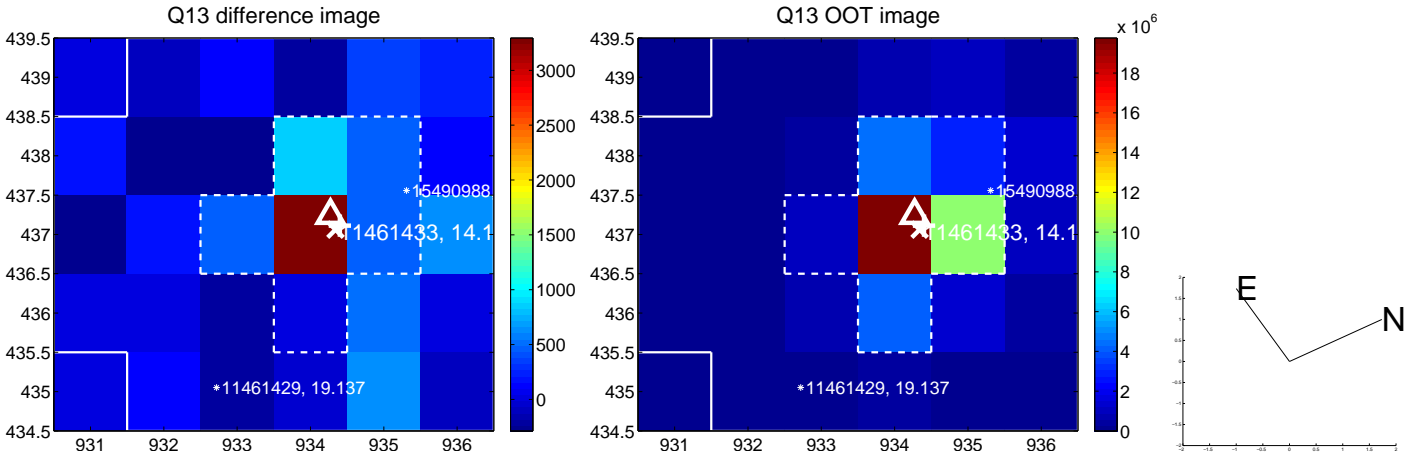
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



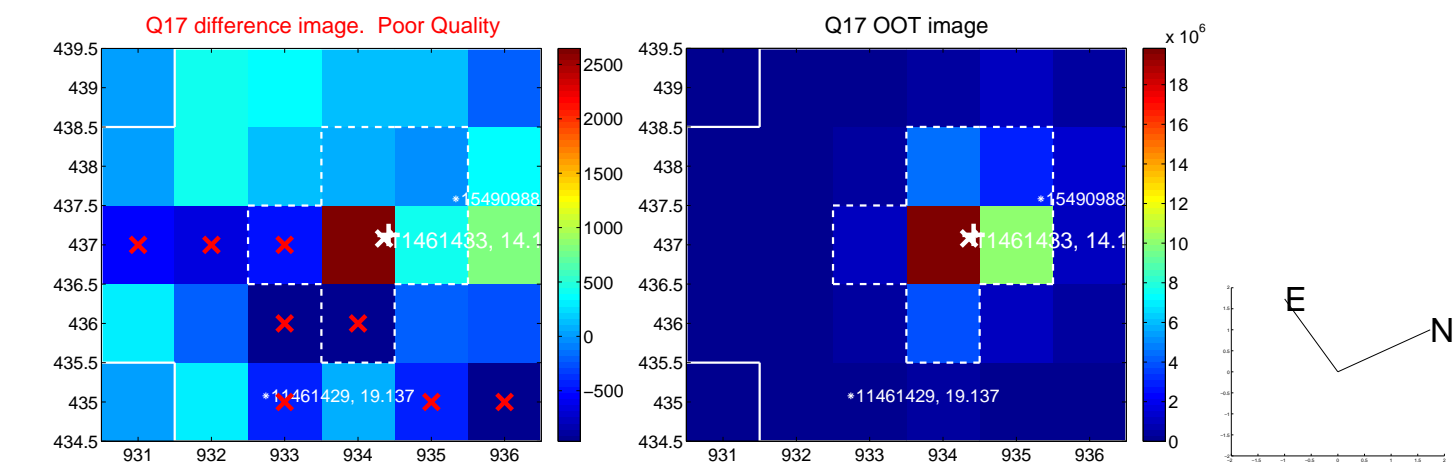
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



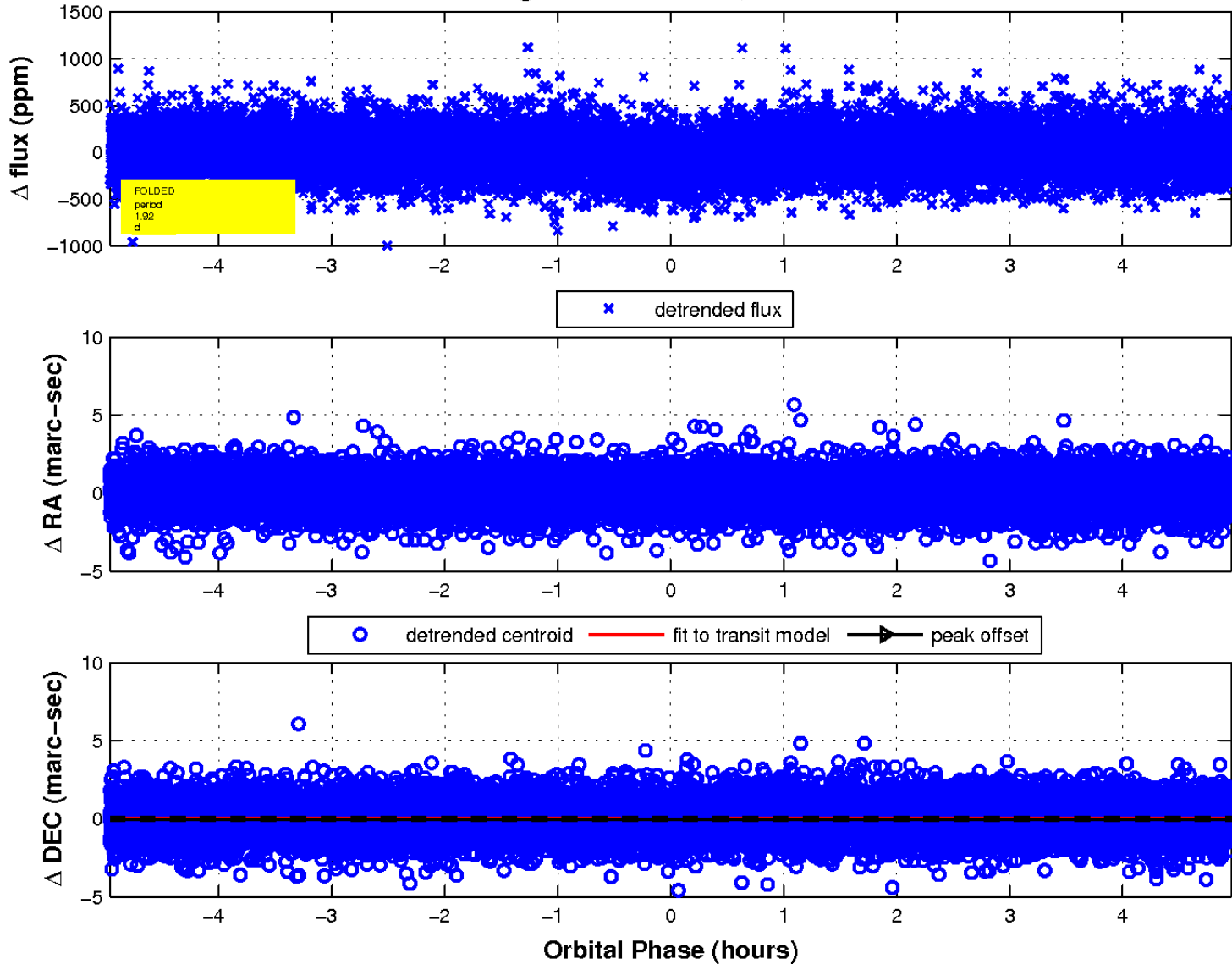
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

