

KIC 005456319

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})
005456319-01	OBS	7728.01	0.937918	132.345390	35.8	3.212	9.2	9.5	0.81	5398	0.56	1504.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005456319-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET—HALO_GHOST

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

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

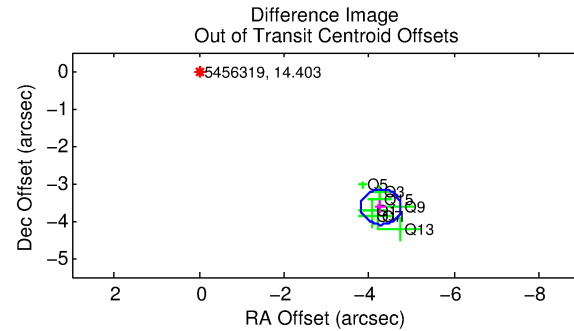
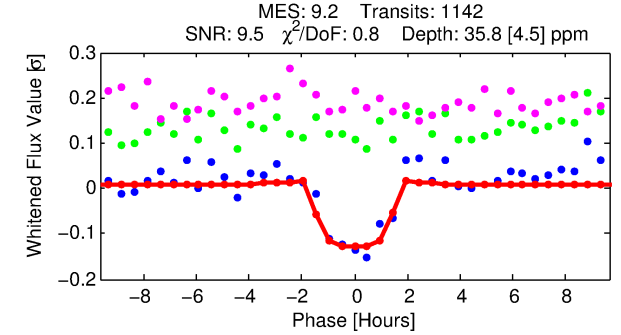
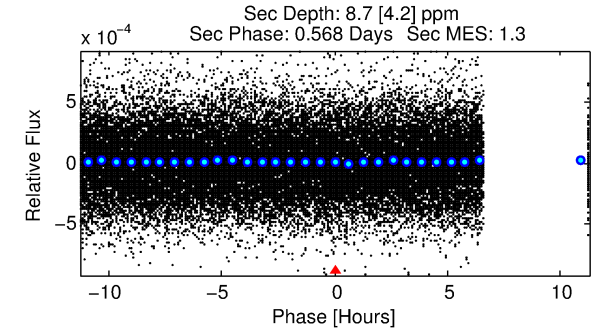
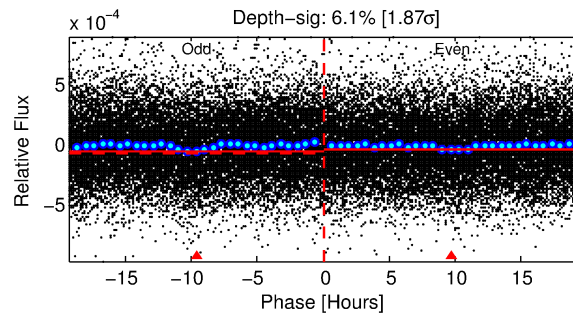
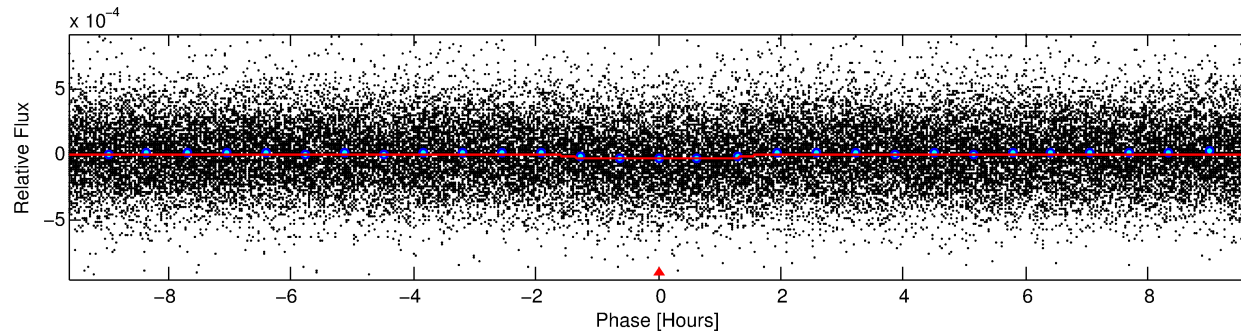
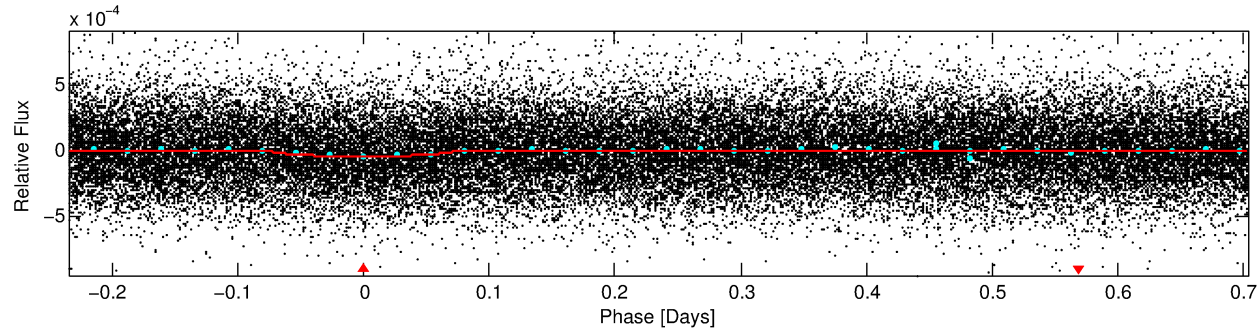
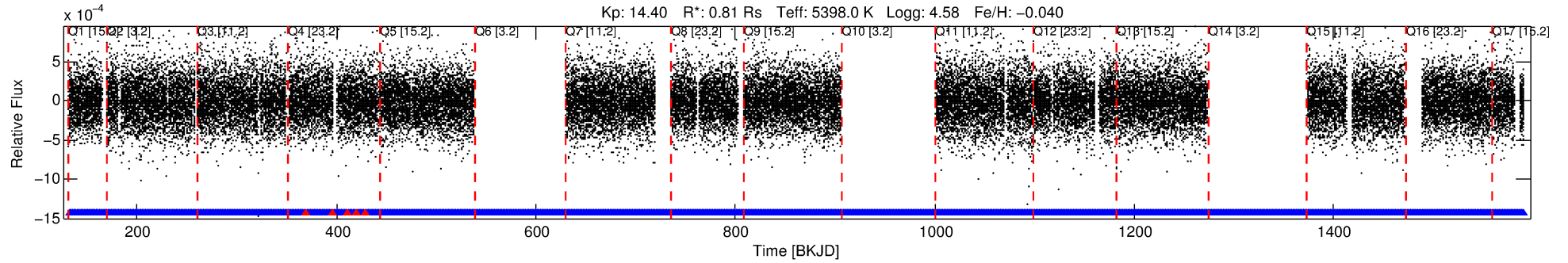
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005456319-01

No Significant Match Found

DV One-Page Summary

KIC: 5456319 Candidate: 1 of 1 Period: 0.938 d



DV Fit Results:

Period = 0.93792 [0.00001] d
Epoch = 132.3454 [0.0039] BKJD
Rp/R* = 0.0064 [0.0036]
a/R* = 1.46 [1.86]
b = 0.87 [0.70]
Seff = 1504.77 [389.16]
Teq = 1588 [103] K
Rp = 0.56 [0.33] Re
a = 0.0181 [0.0028] AU
Ag = 4.99 [6.16] [0.65 σ]
Teffp = 3669 [1119] K [1.85 σ]

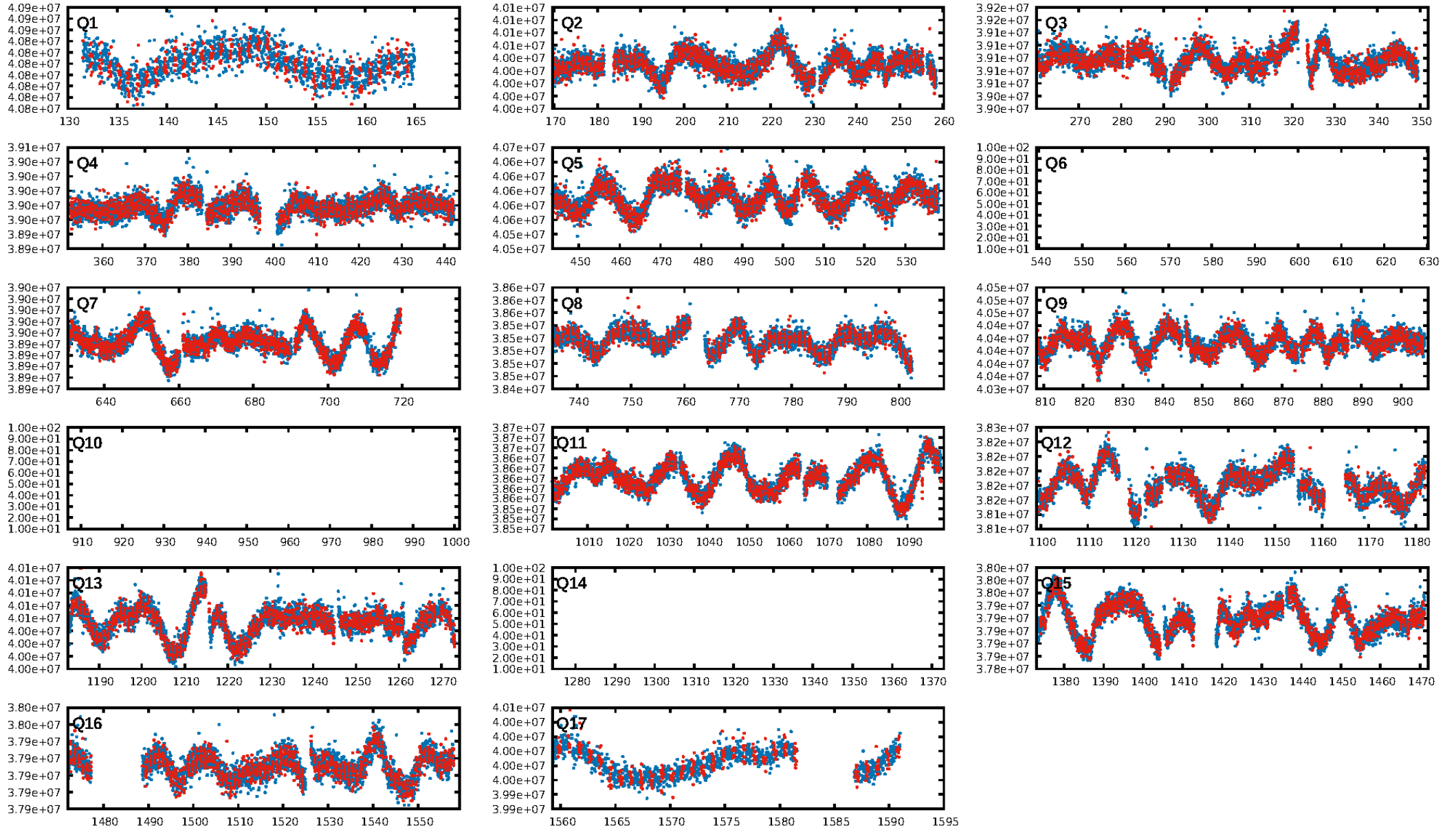
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.05e-19
RollingBand-fgt: 1.00 [1073/1078]
GhostDiagnostic-chr: -0.09951
Centroid-sig: 0.0%
Centroid-so: 11.603 arcsec [8.73 σ]
OotOffset-rm: 5.608 arcsec [35.39 σ]
KicOffset-rm: 5.755 arcsec [34.48 σ]
OotOffset-st: 0/4/0/4 [8]
KicOffset-st: 0/4/0/4 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [14/14]

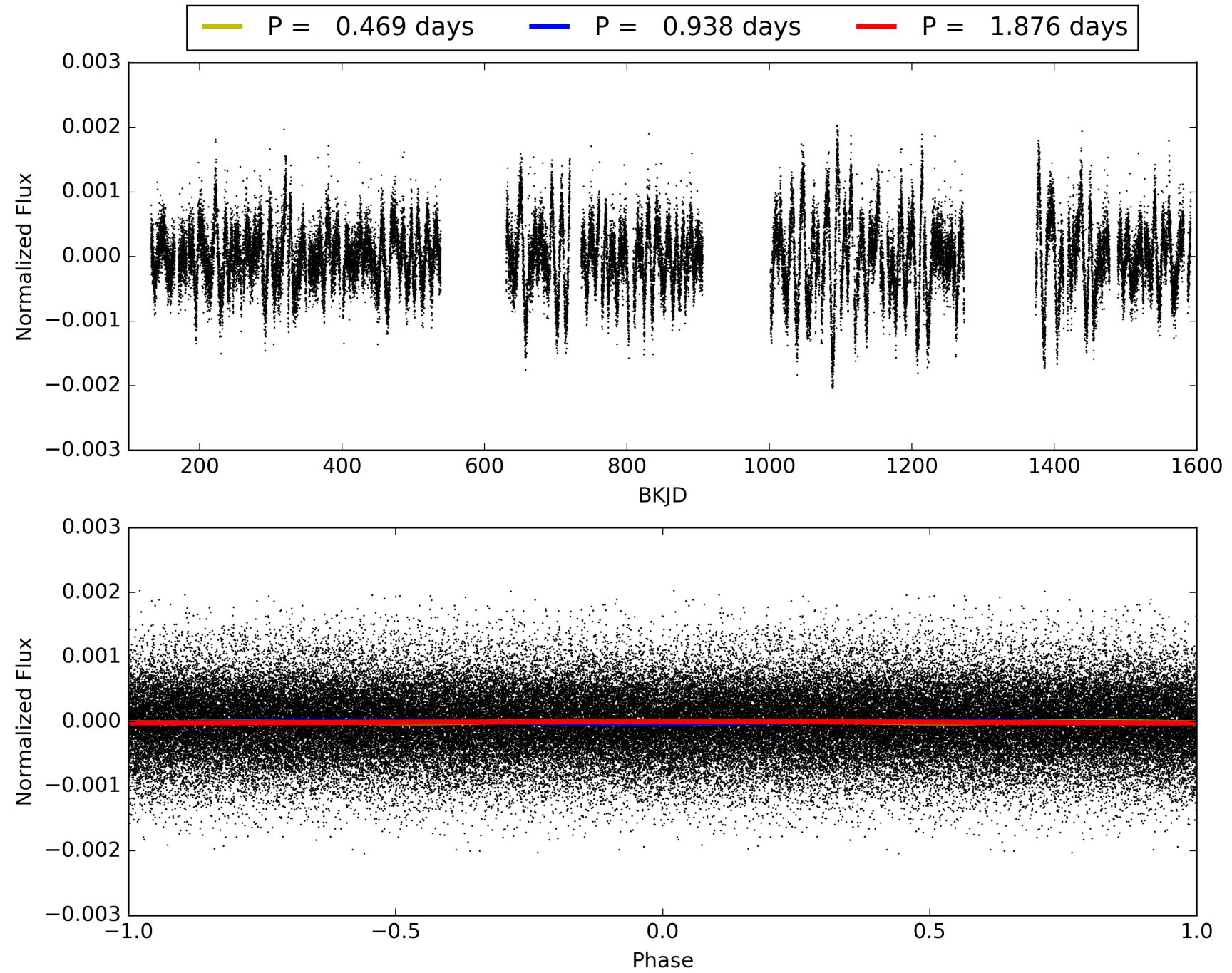
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 00:59:56 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005456319-01, PDC Light Curves

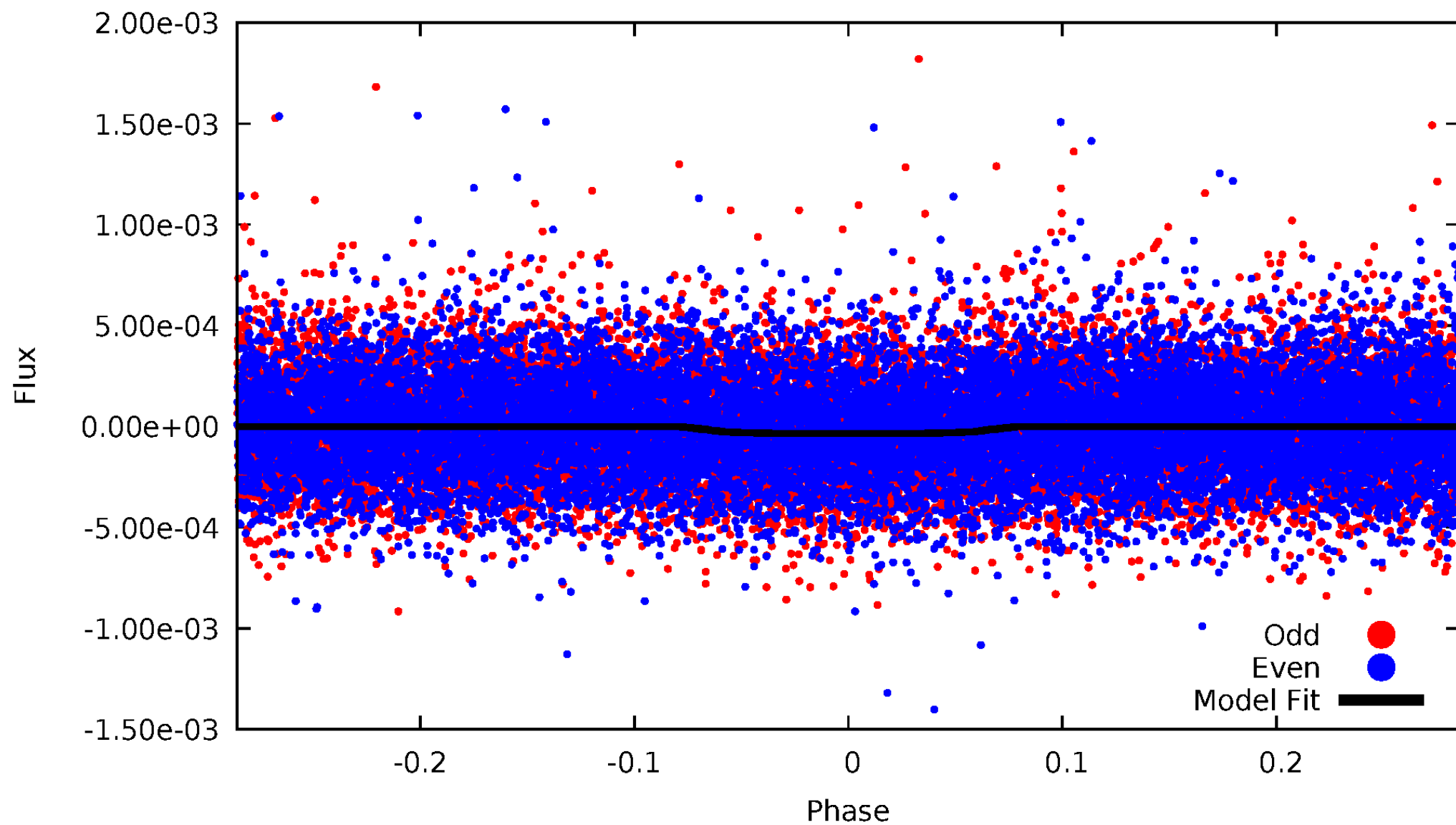


TCE 005456319-01



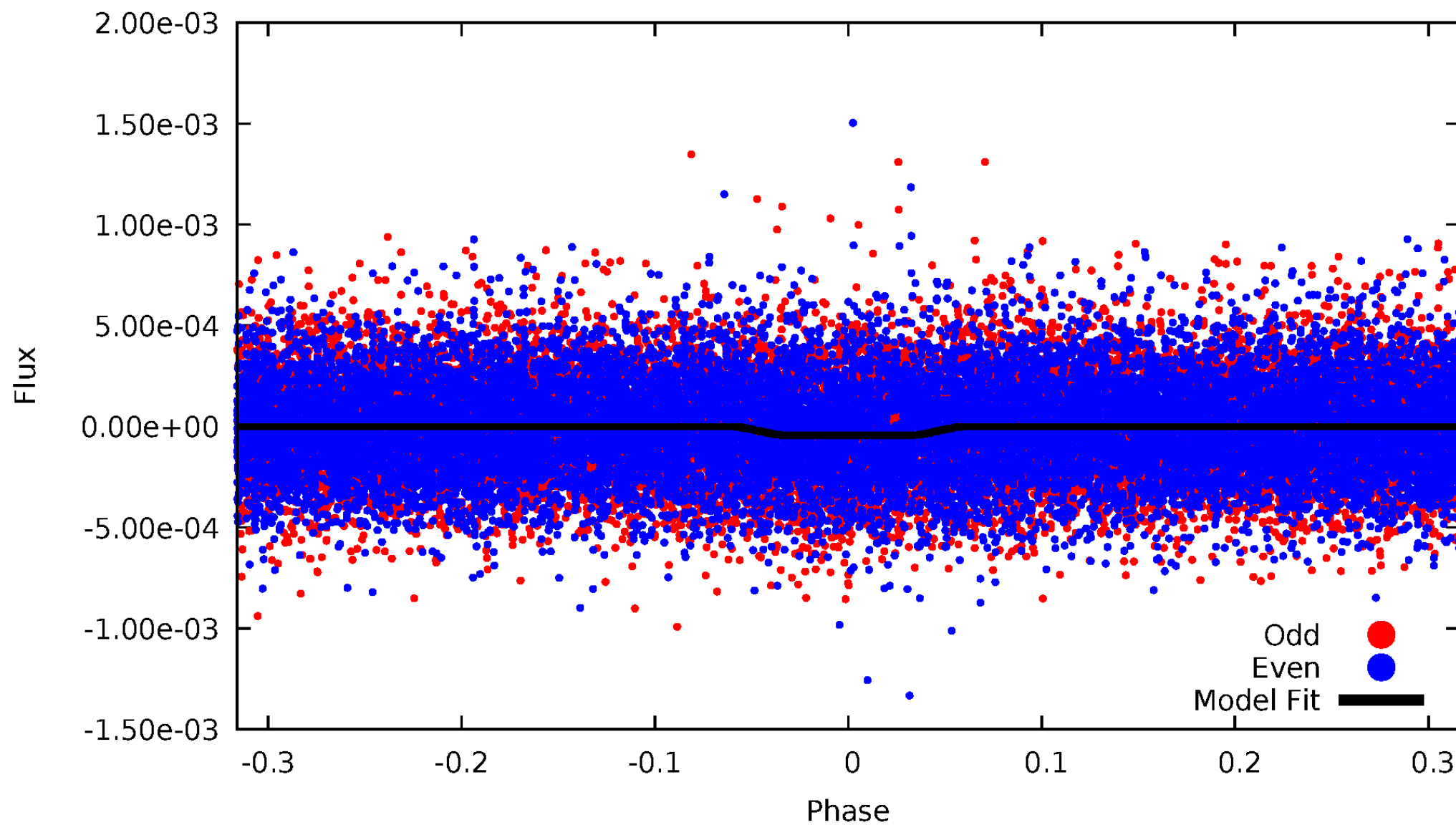
DV Odd/Even

TCE 005456319-01

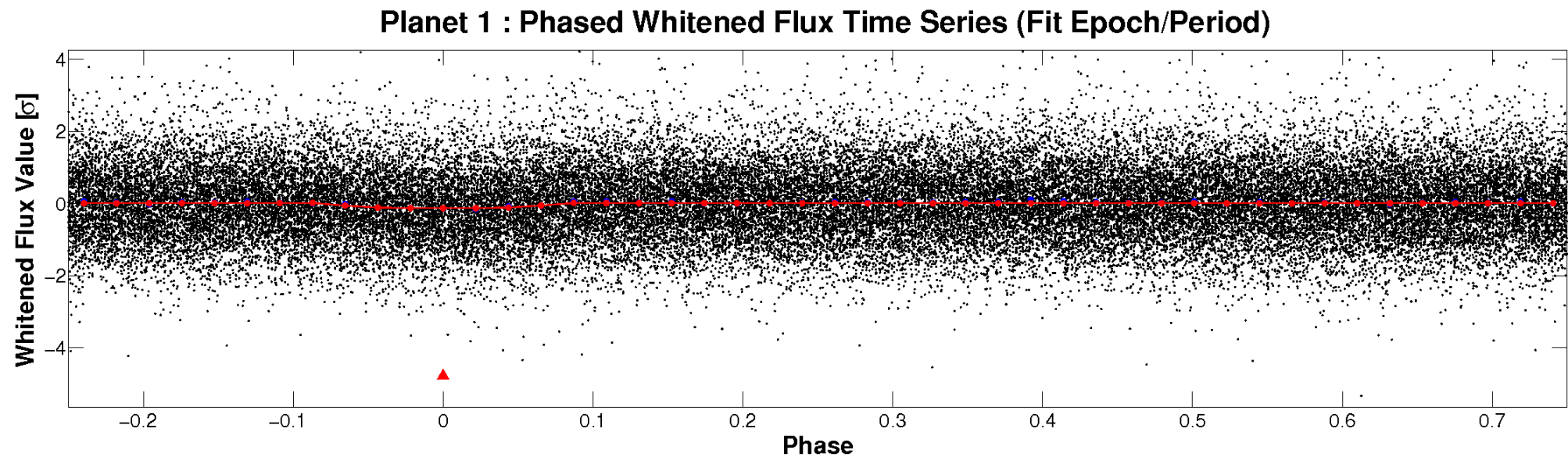
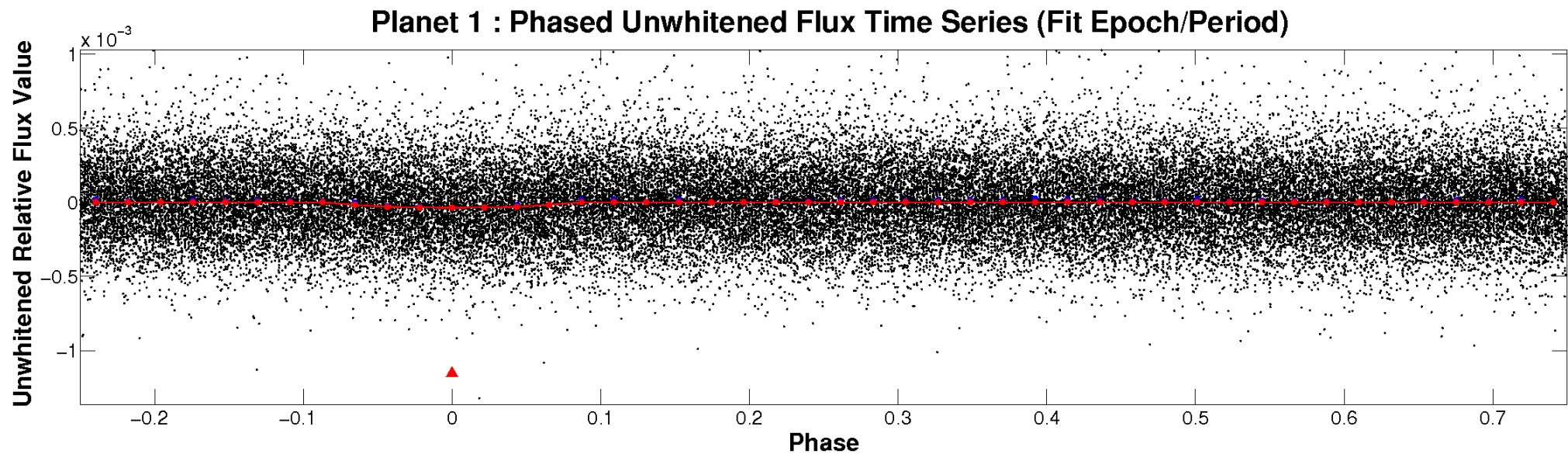


ALT Odd/Even

TCE 005456319-01

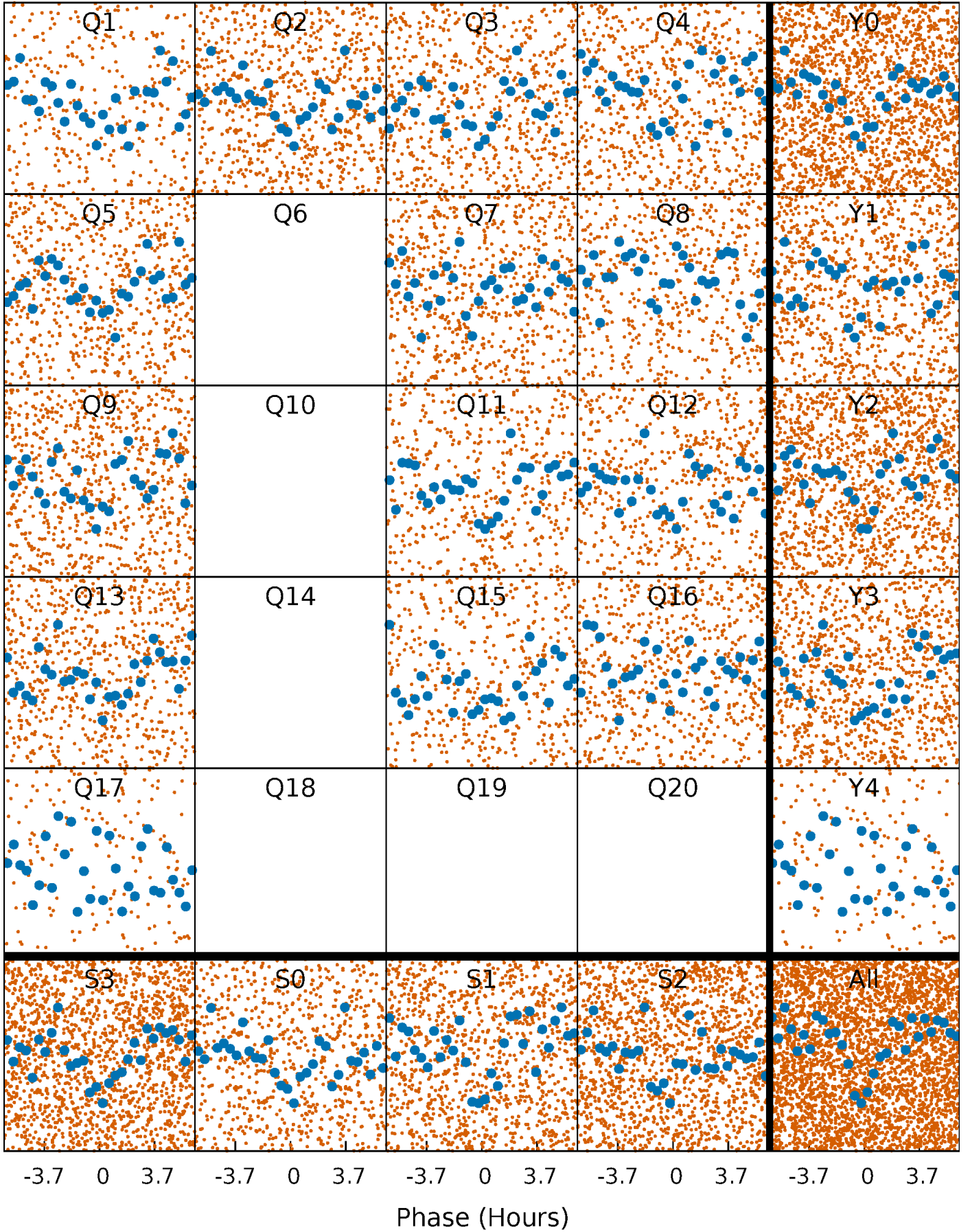


Non-Whitened Vs. Whitened Light Curve



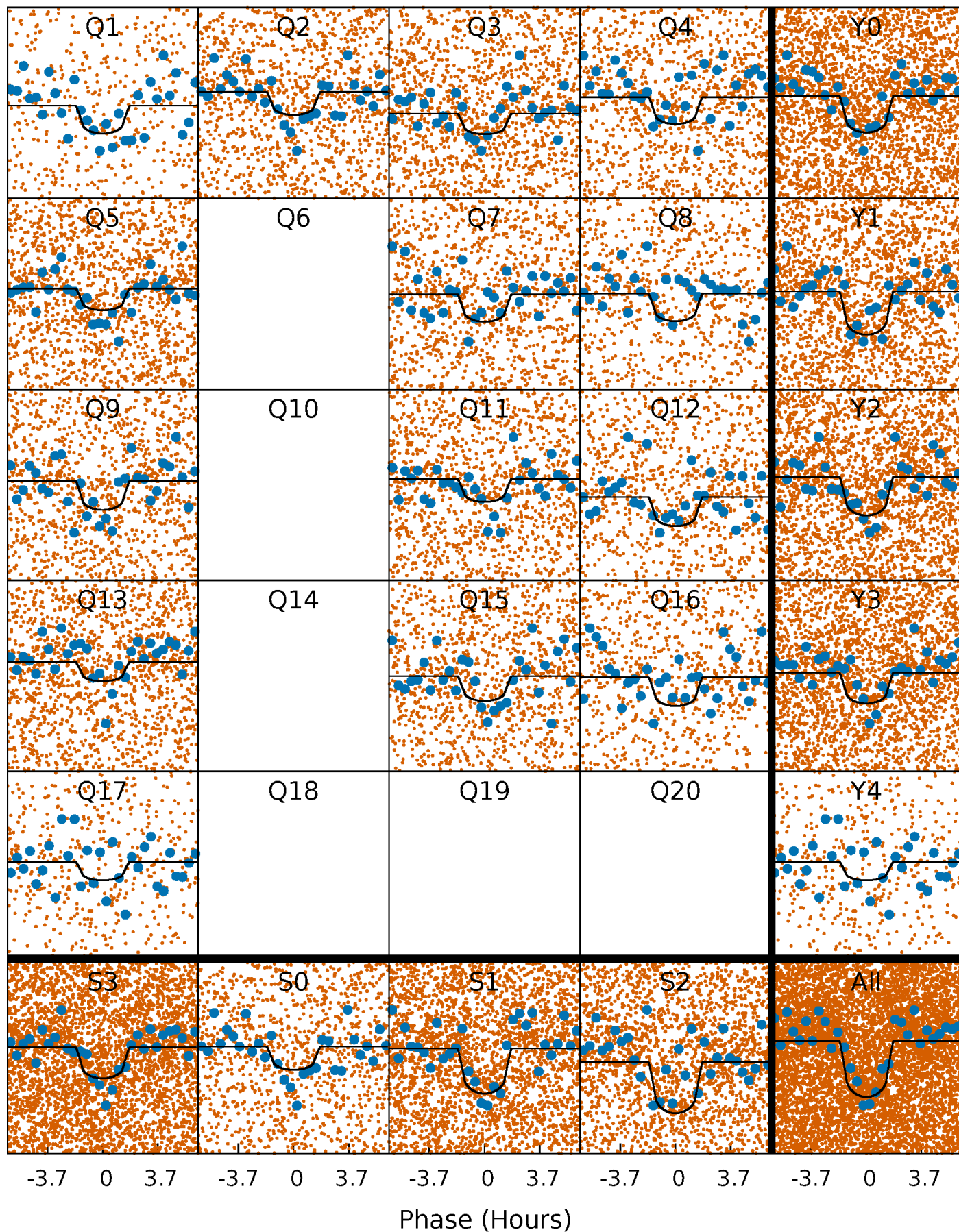
PDC Quarter-Phased Transit Curves

TCE 005456319-01 P= 0.937918 Days $T_0=132.345390$ (BKJD)



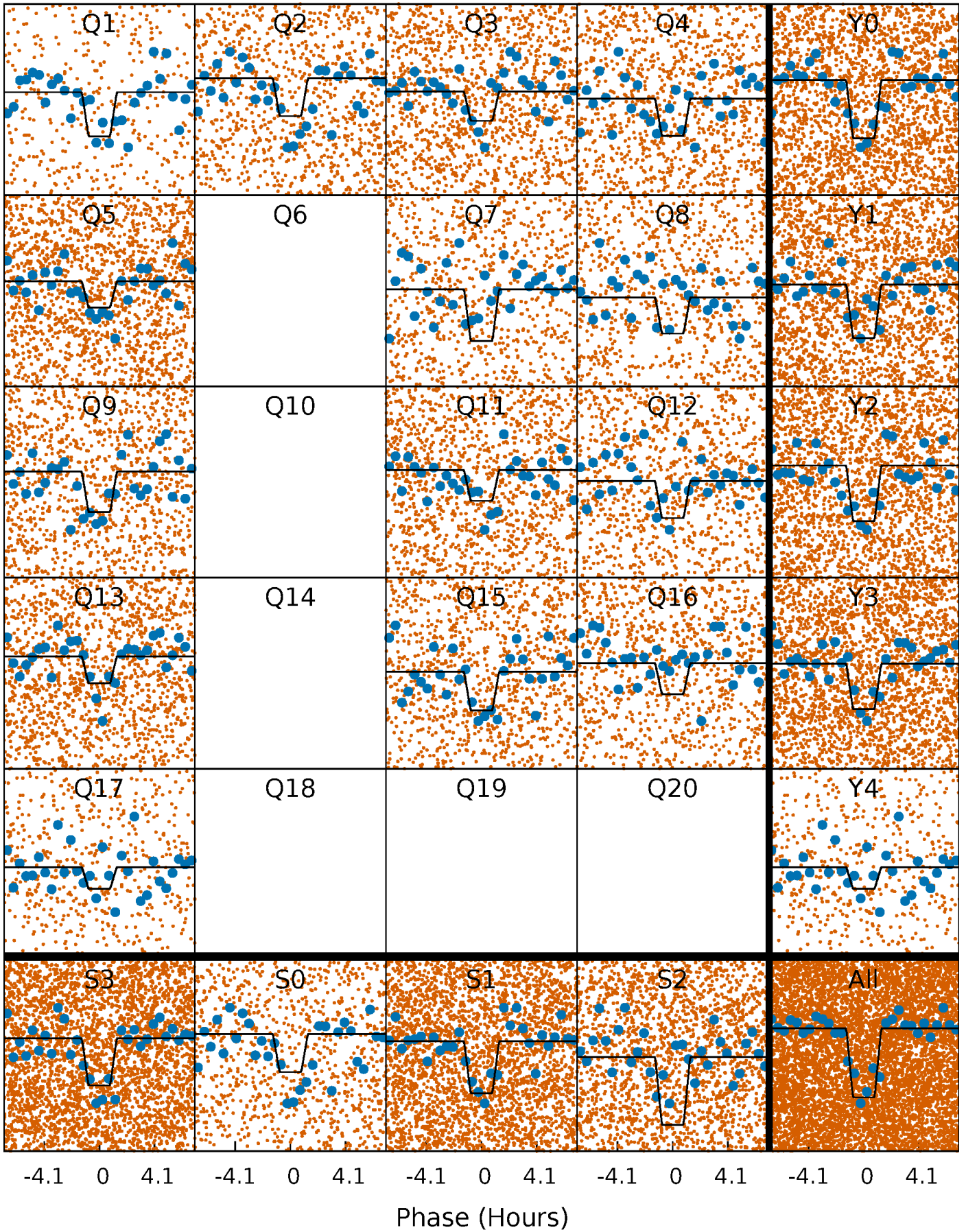
DV Quarter-Phased Transit Curves

TCE 005456319-01 P= 0.937918 Days $T_0=132.345390$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

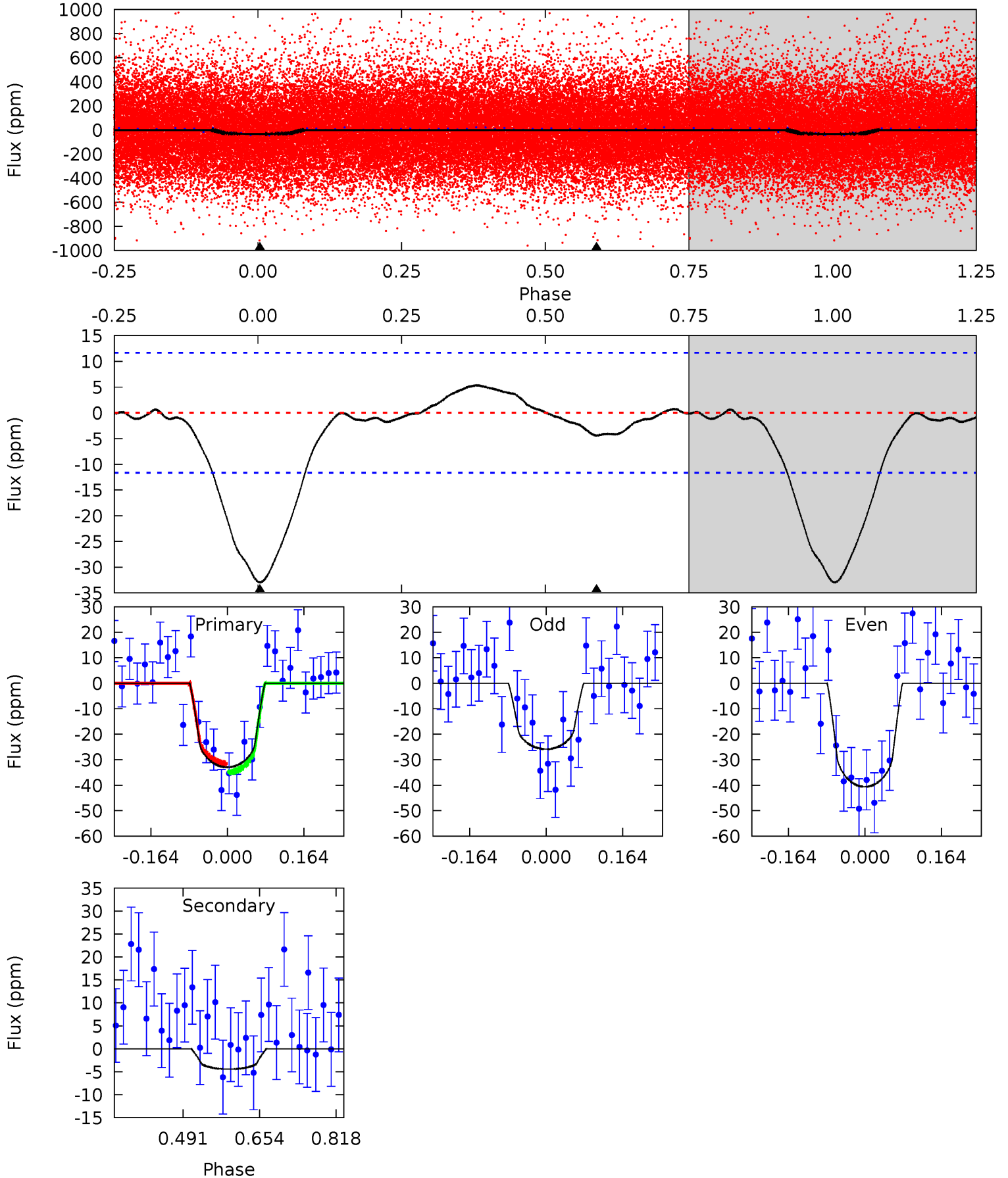
TCE 005456319-01 P= 0.937933 Days $T_0=132.337291$ (BKJD)



DV Model-Shift Uniqueness Test

005456319-01, P = 0.937918 Days, E = 131.407472 Days

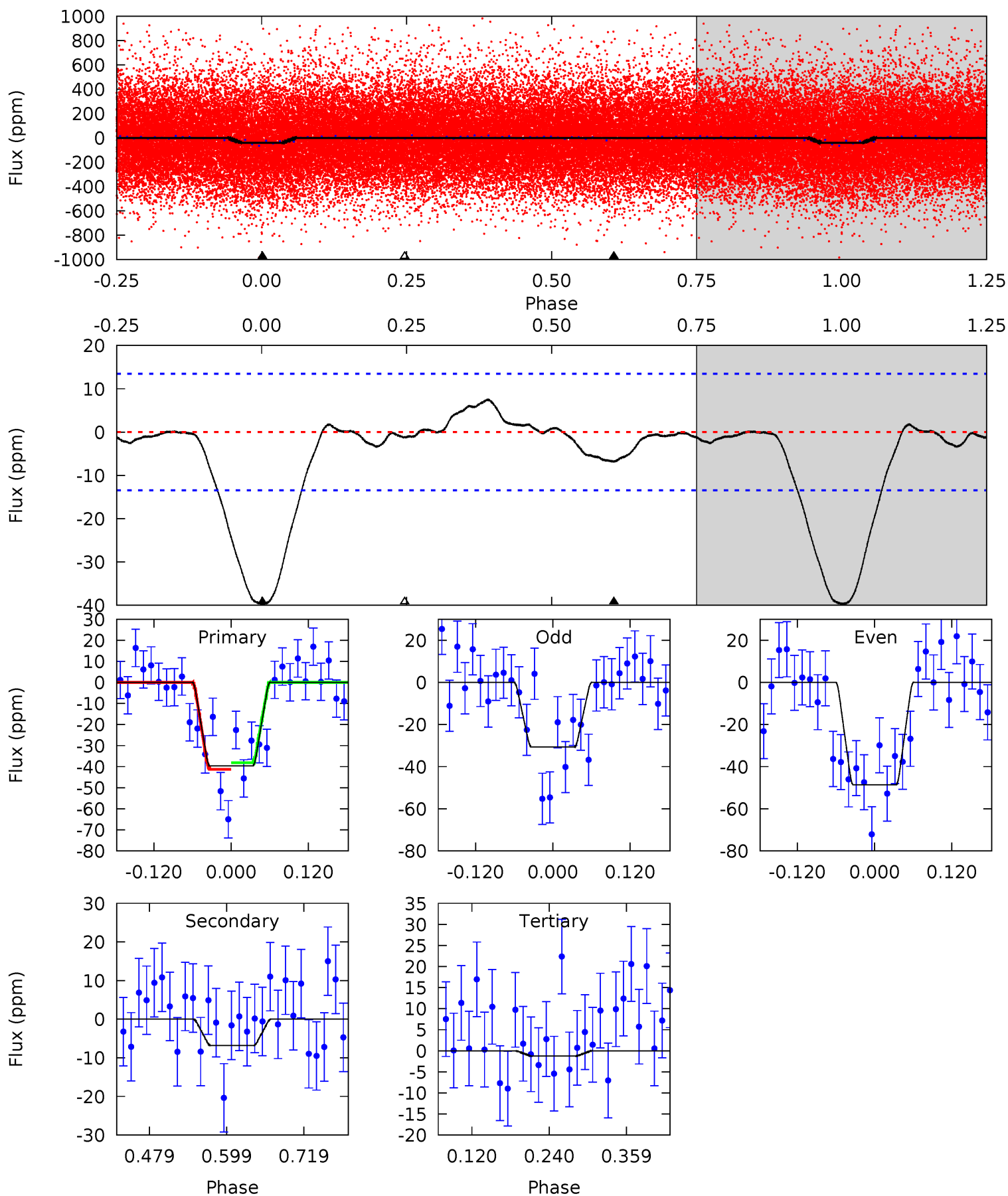
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	1.70	0	0	4.46	1.39	0.93	12.6	12.6	1.70	1.70	2.83	0.97	0.14	0.68



Alt Model-Shift Uniqueness Test

005456319-01, P = 0.937933 Days, E = 131.399358 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	2.29	0.42	0	4.53	1.56	0.87	12.9	13.4	1.87	2.29	3.02	0.93	0.16	0.53



Stellar Parameters For KIC 005456319

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5398^{+160}_{-160}	$4.580^{+0.030}_{-0.127}$	$-0.040^{+0.300}_{-0.300}$	$0.805^{+0.147}_{-0.063}$	$0.902^{+0.073}_{-0.097}$	$2.441^{+0.407}_{-0.902}$
	+3%/-3%	+1%/-3%	+750%/-750%	+18%/-8%	+8%/-11%	+17%/-37%
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 005456319-01 / KOI 7728.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-4 ± 3	$0.58^{+0.34}_{-0.29}$	2259^{+97}_{-88}	3436^{+1053}_{-789}	$2.199^{+7.076}_{-1.613}$
Alt.	-7 ± 3	$0.62^{+0.31}_{-0.32}$	2253^{+103}_{-86}	3643^{+1234}_{-646}	$3.182^{+10.034}_{-2.111}$

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

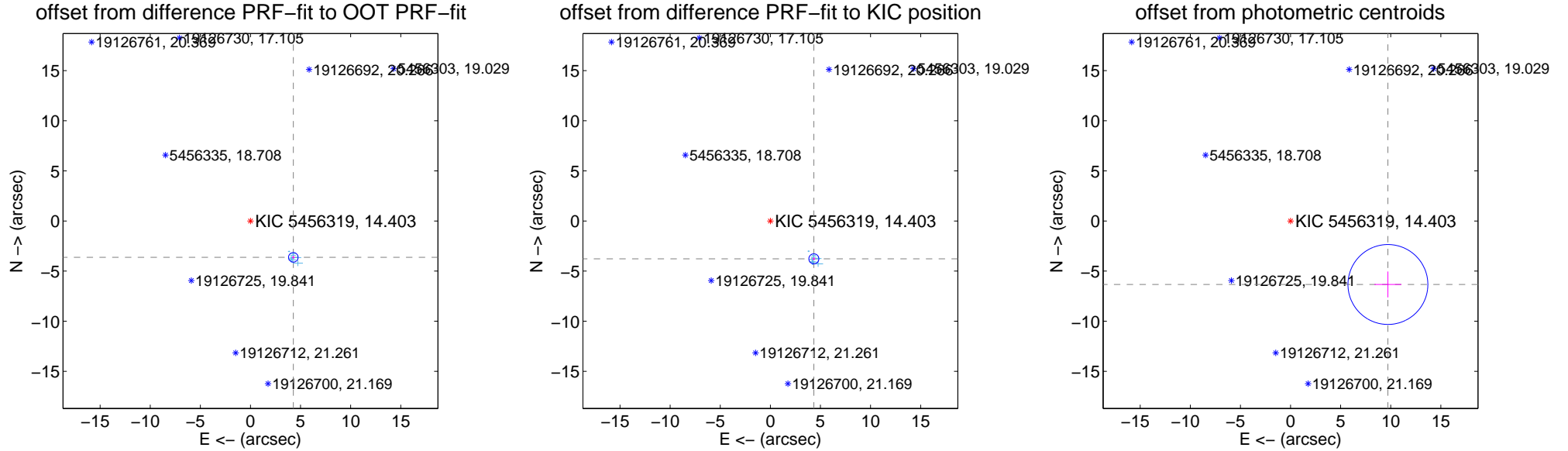
DV Centroid Data

Supplemental centroid analysis for 005456319-01. Kepler magnitude: 14.40. Transit SNR 9.55

There are 8 quarters with good PRF difference image offsets

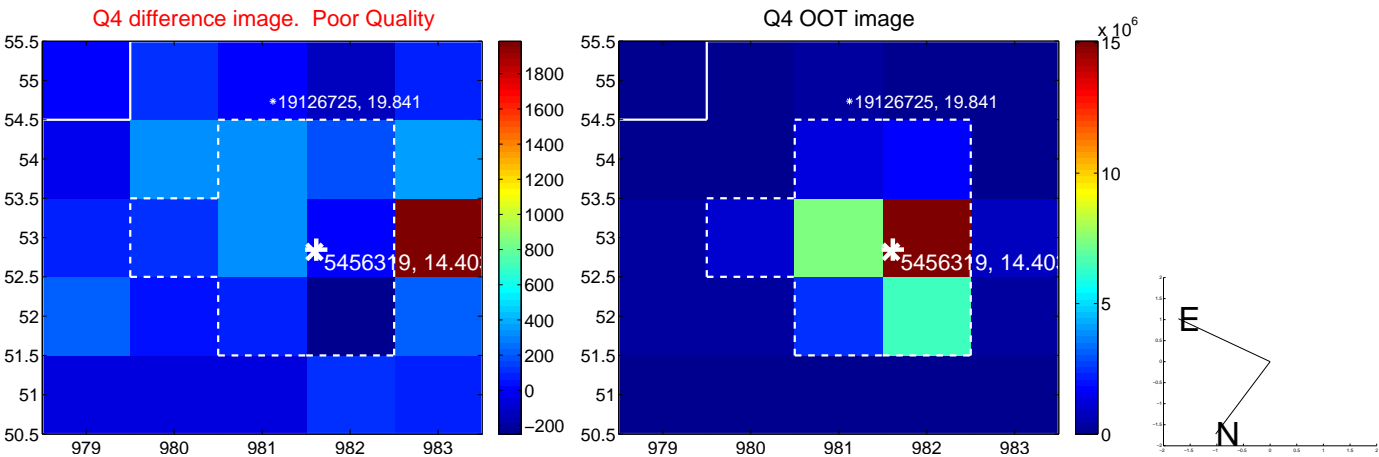
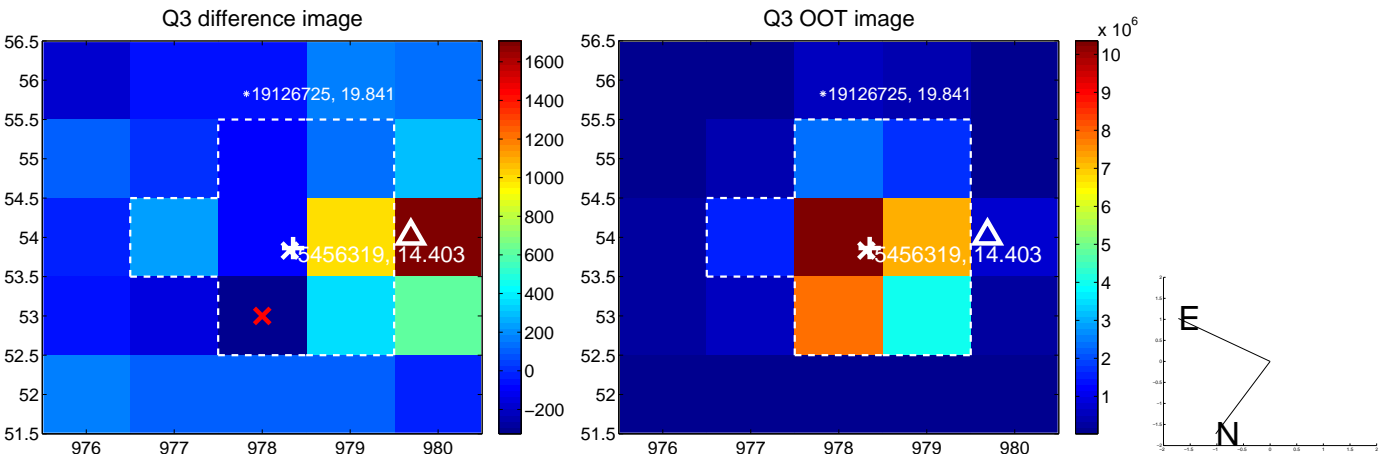
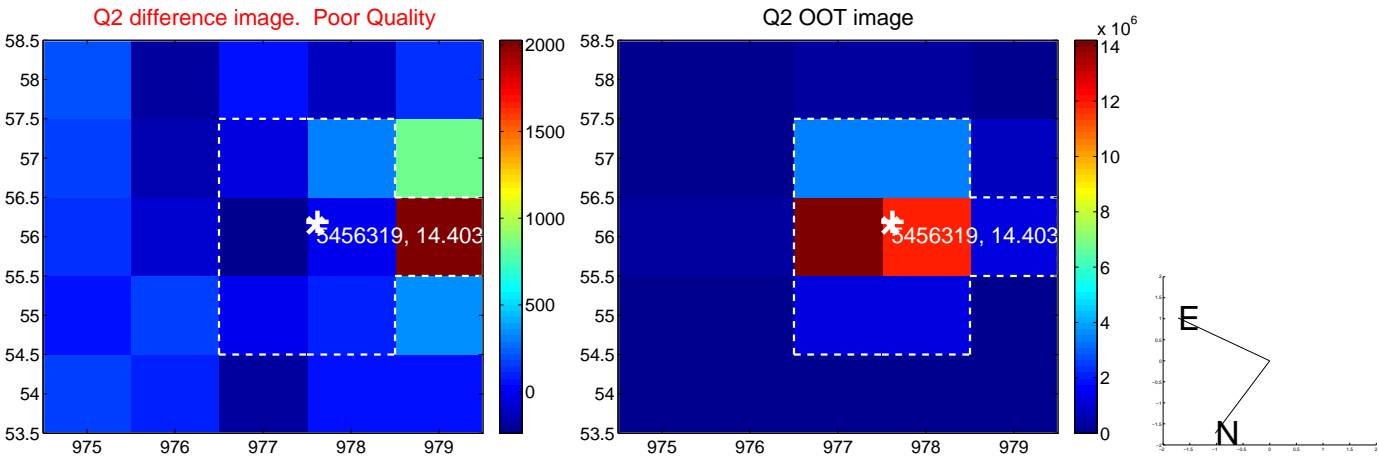
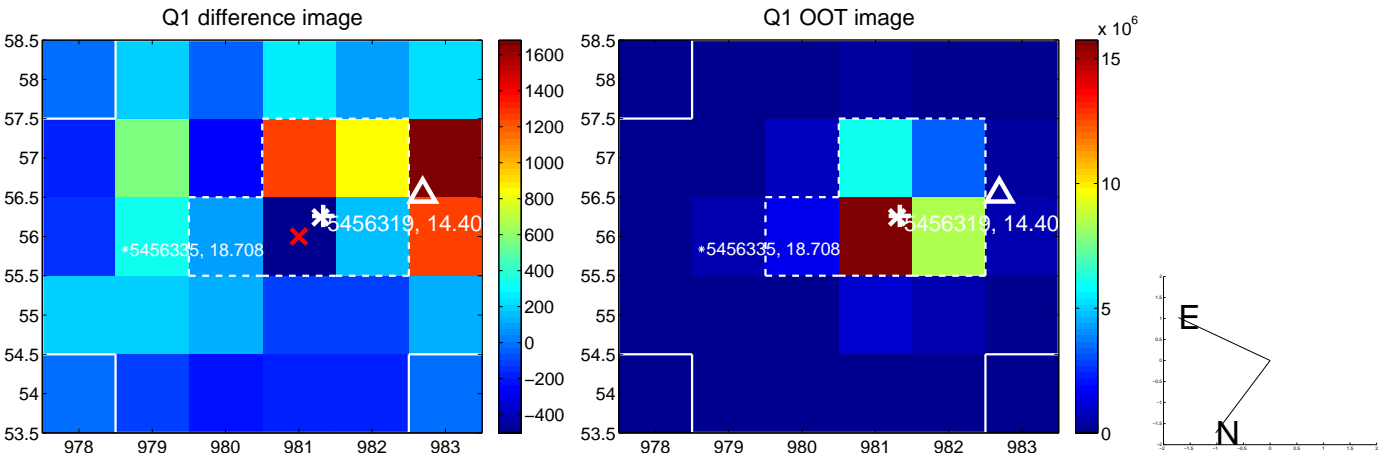
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.608 ± 0.158	35.39	-4.278 ± 0.119	-3.627 ± 0.147
PRF-fit source offset from KIC position	5.755 ± 0.167	34.48	-4.343 ± 0.127	-3.777 ± 0.145
photometric centroid source offset	11.60 ± 1.33	8.73	-9.72 ± 1.34	-6.34 ± 1.29

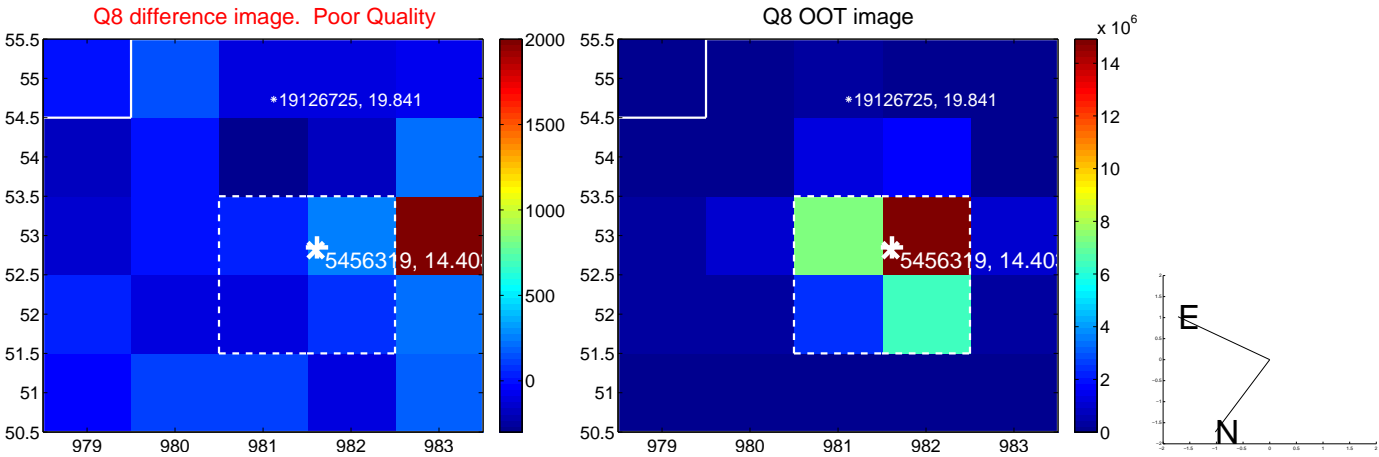
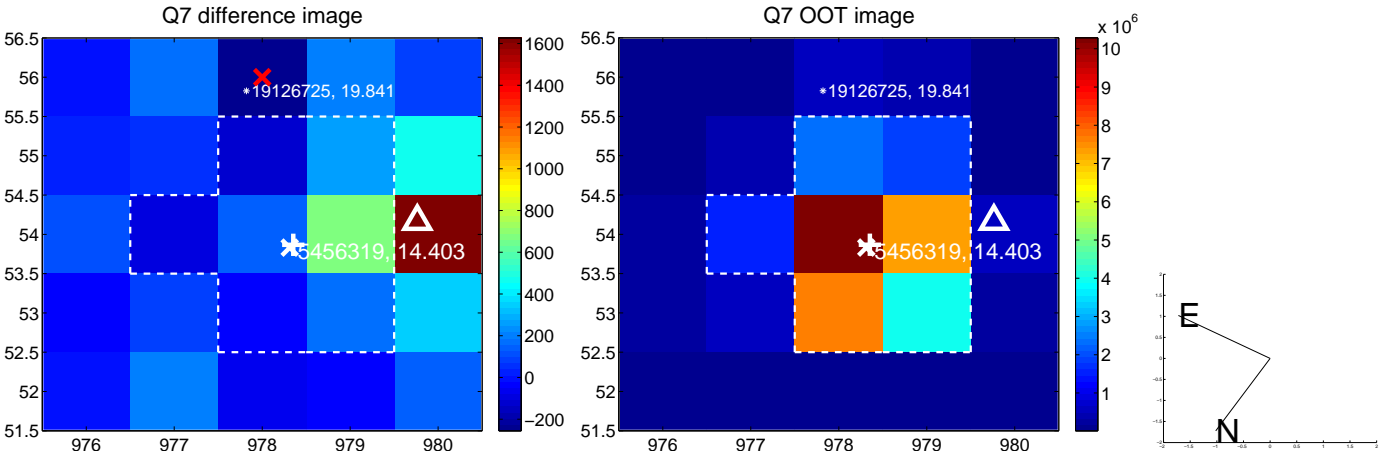
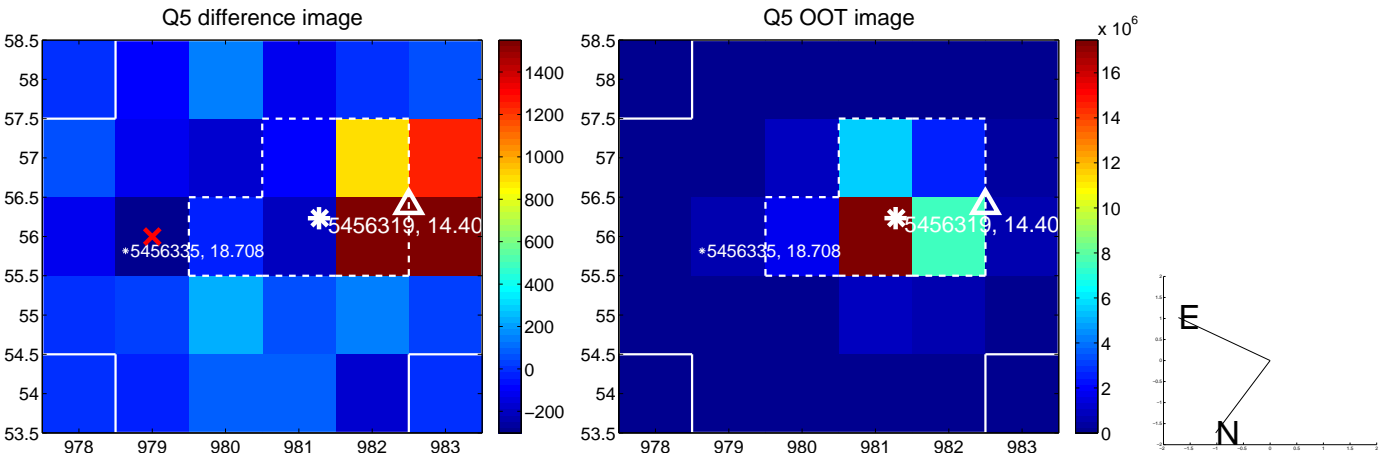


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

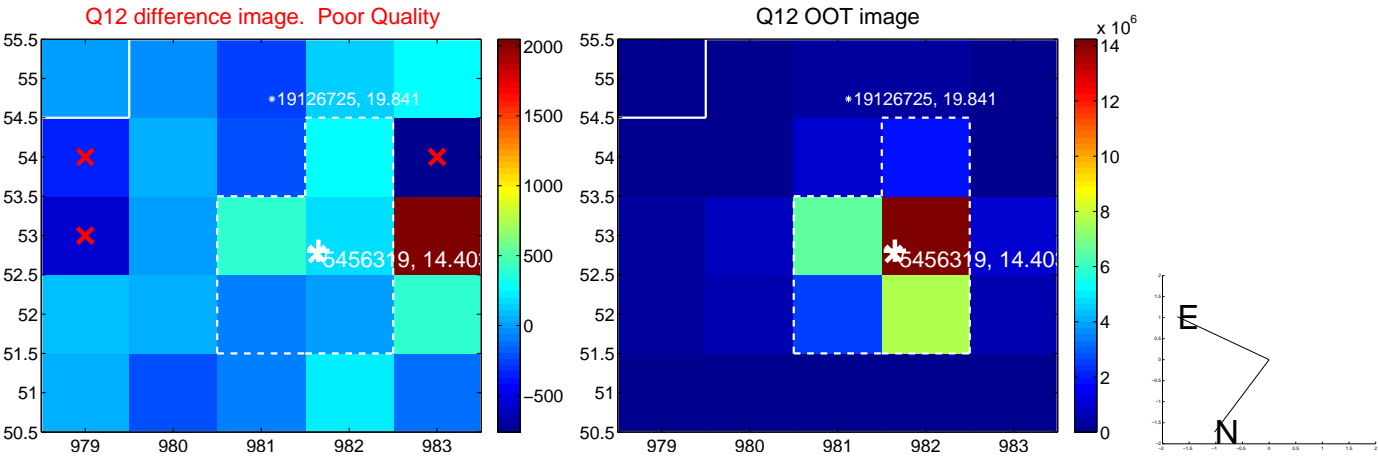
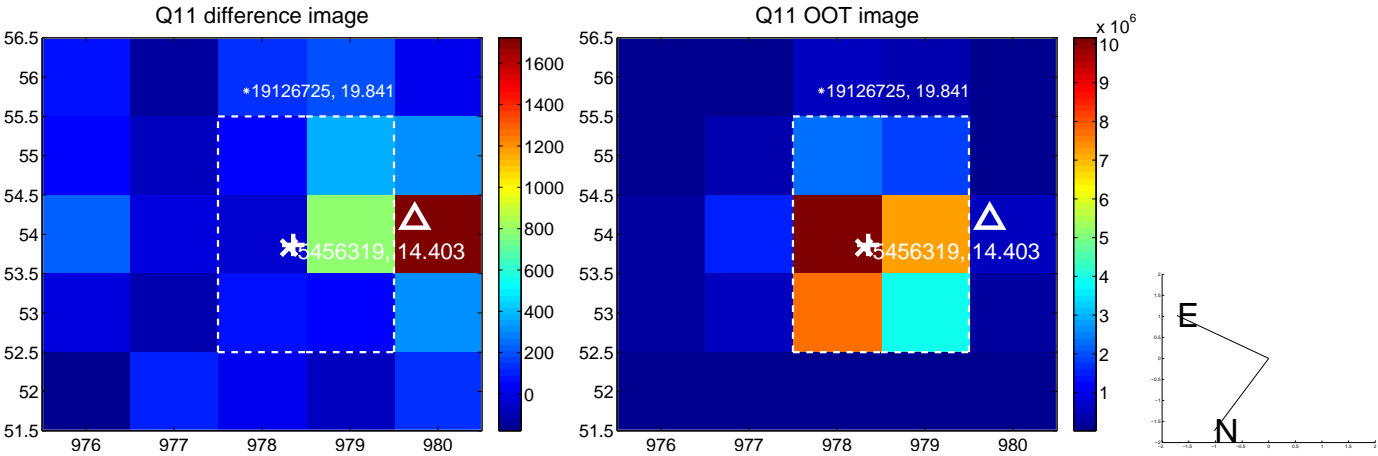
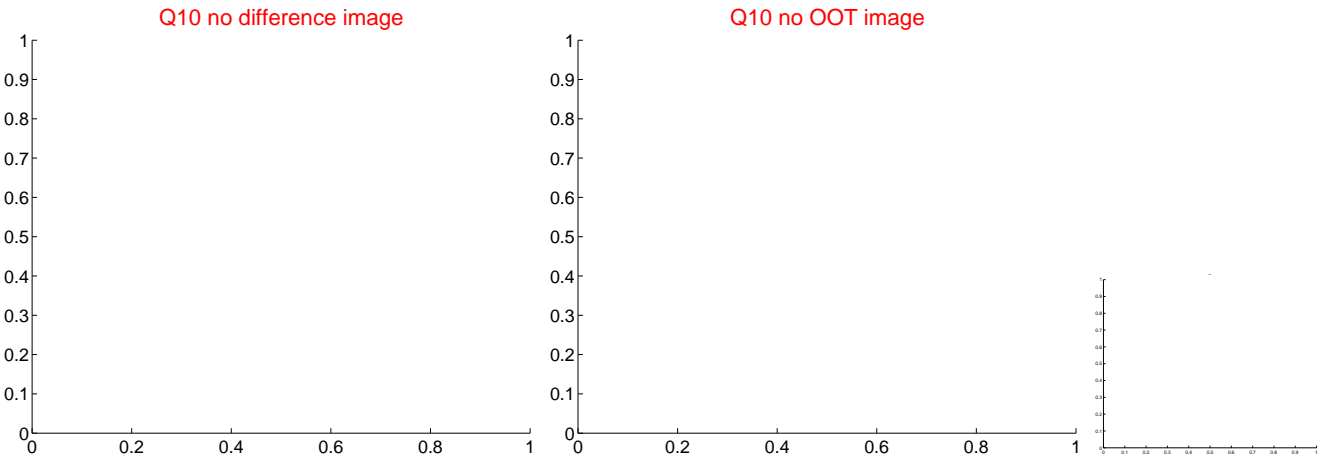
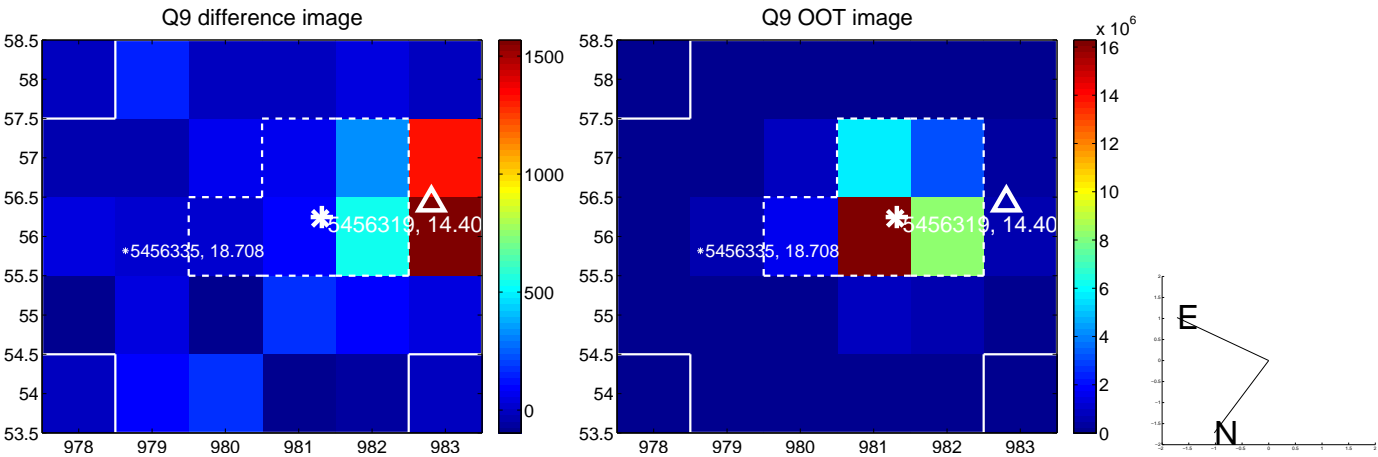
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



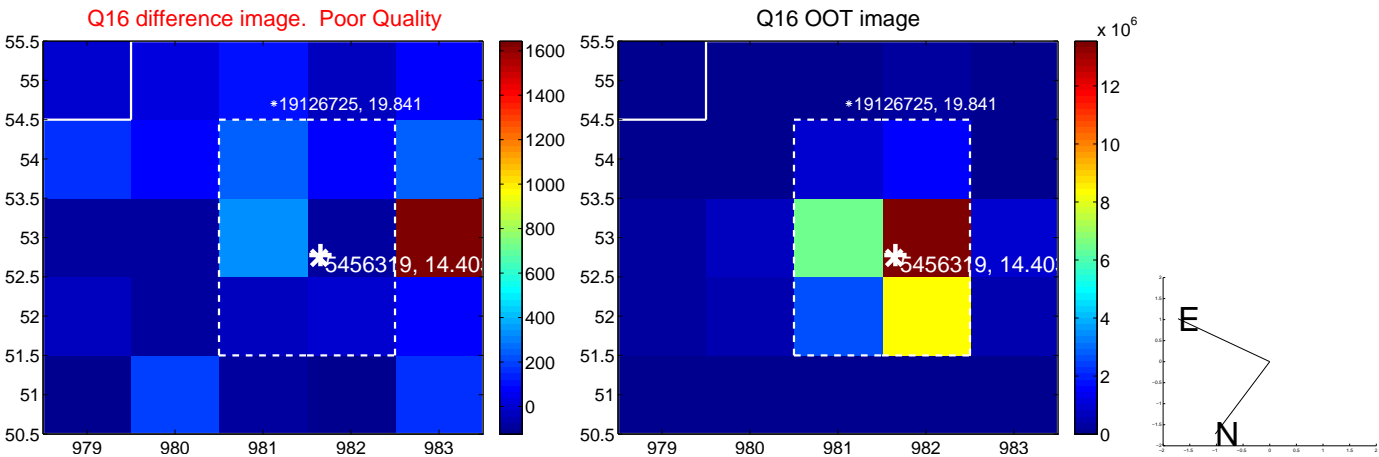
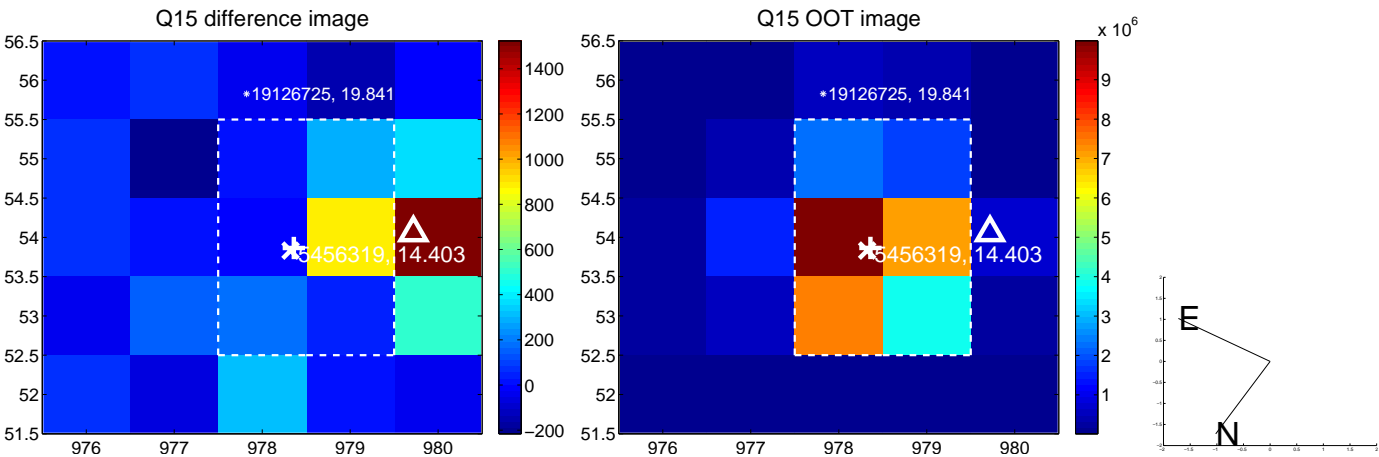
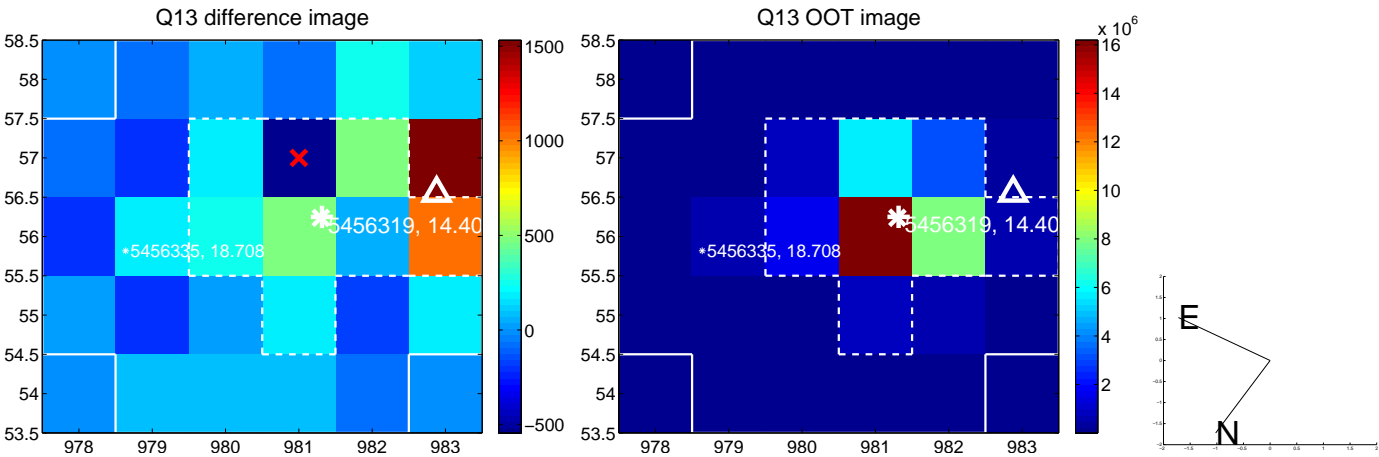
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



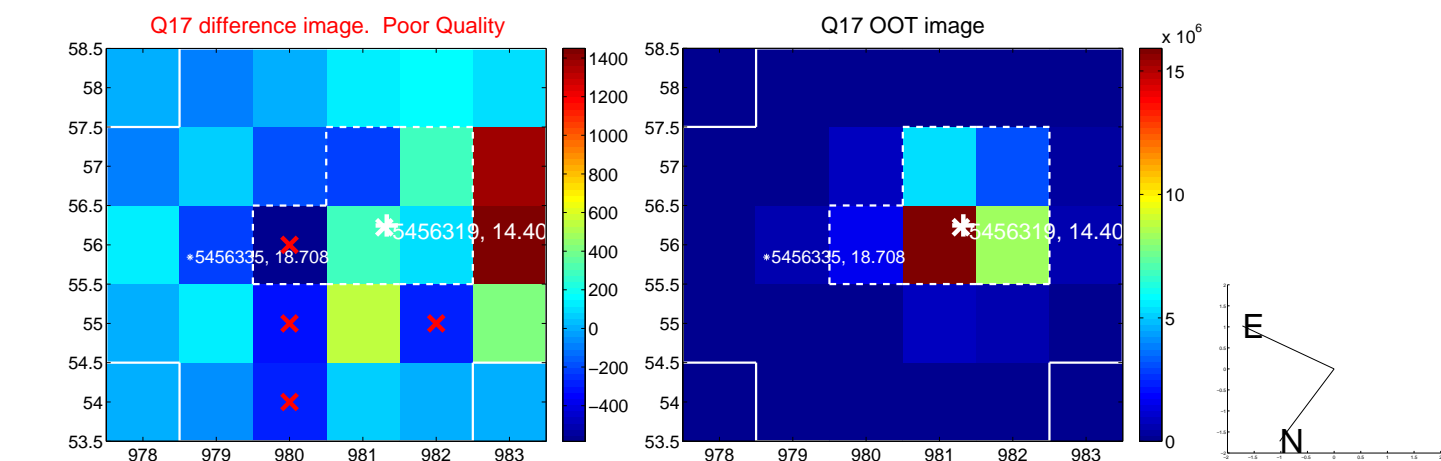
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



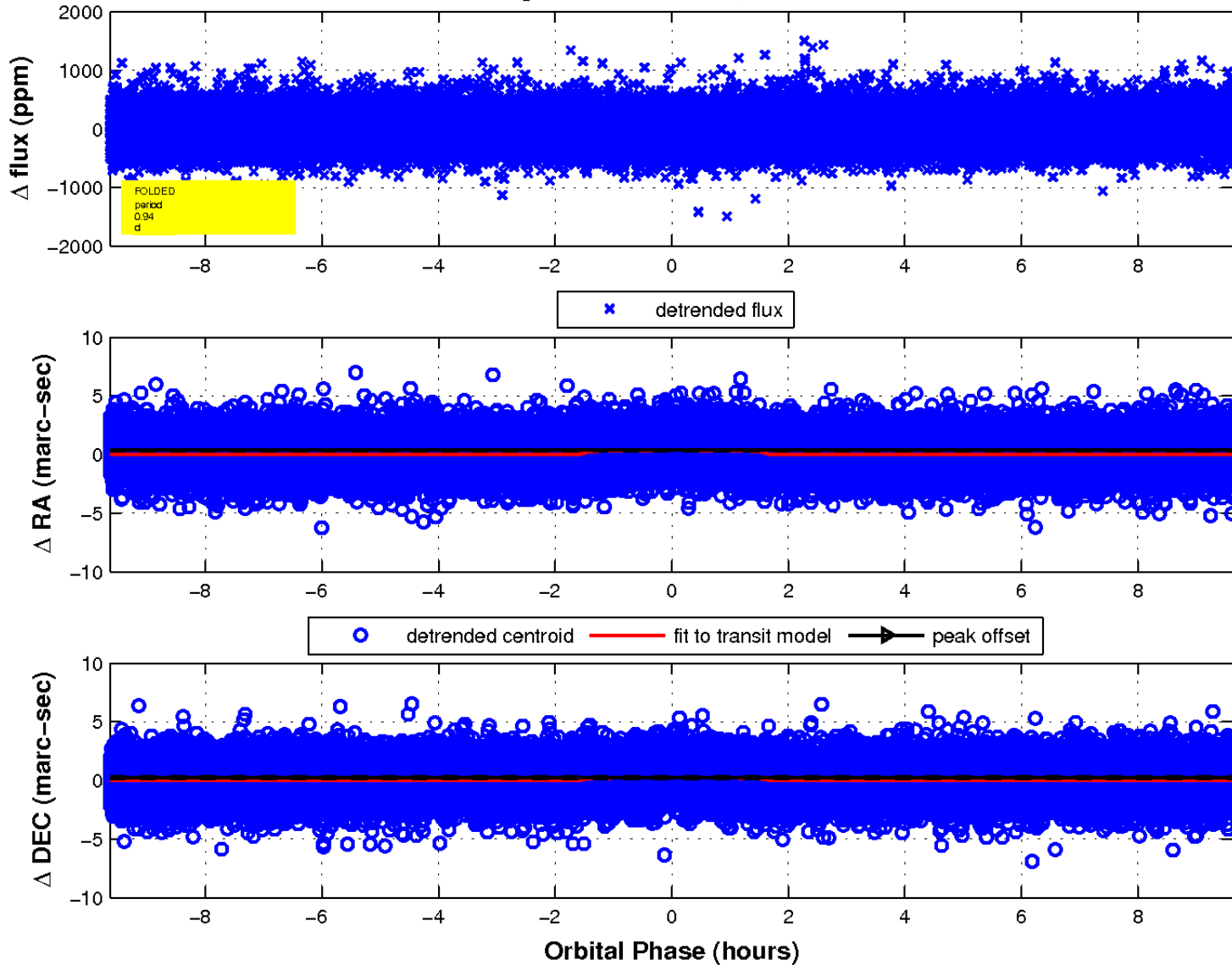
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

