

KIC 005439660

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})
005439660-01	OBS	No	0.779739	131.612599	132.2	2.676	52.9	4.2	8.86	4801	11.08	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005439660-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV

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

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

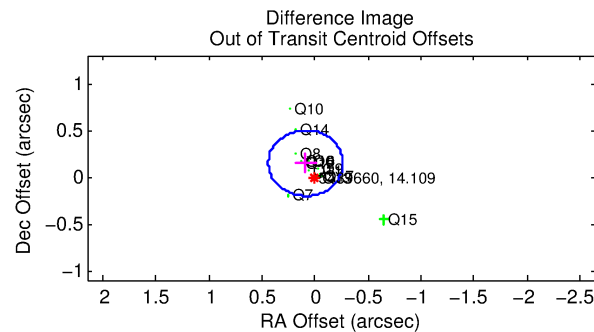
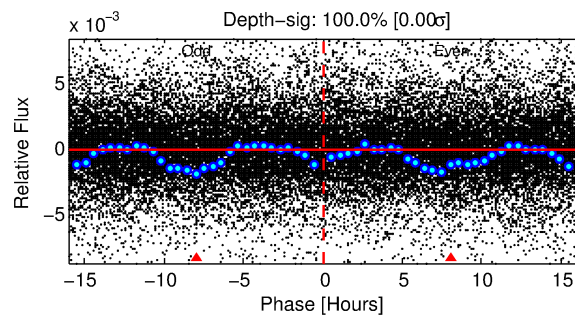
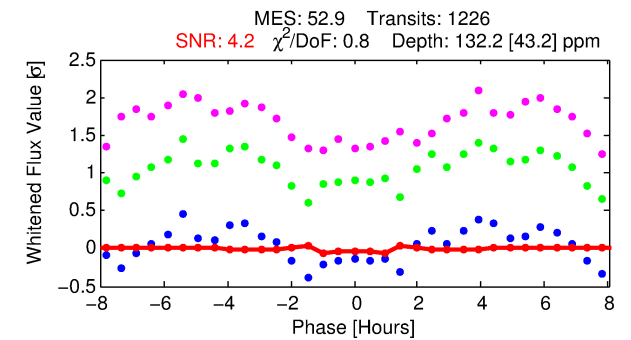
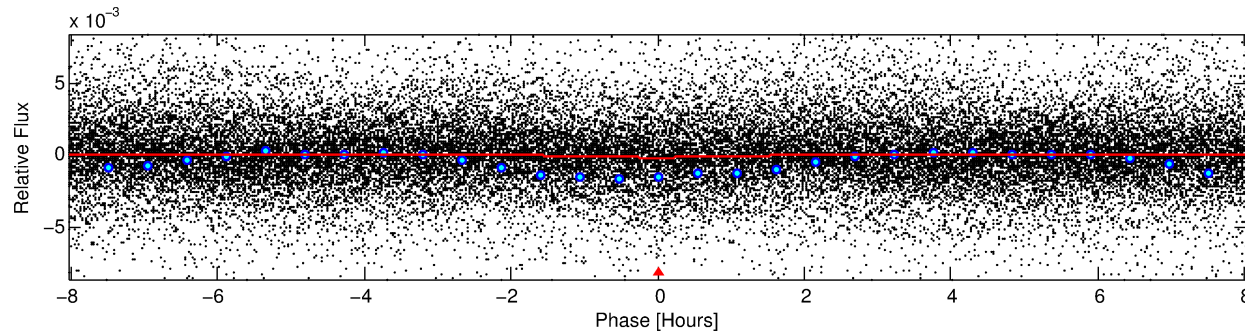
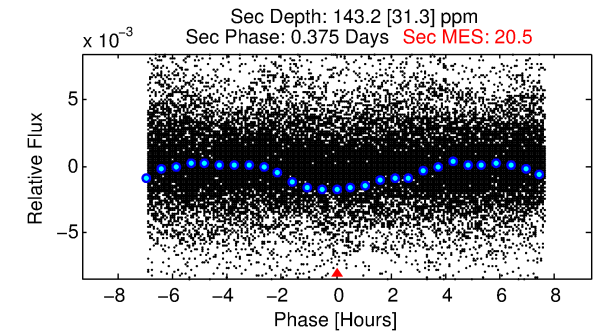
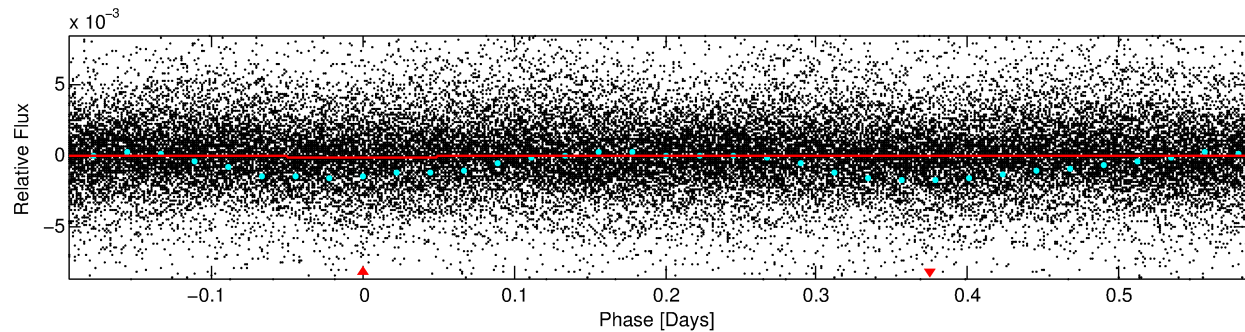
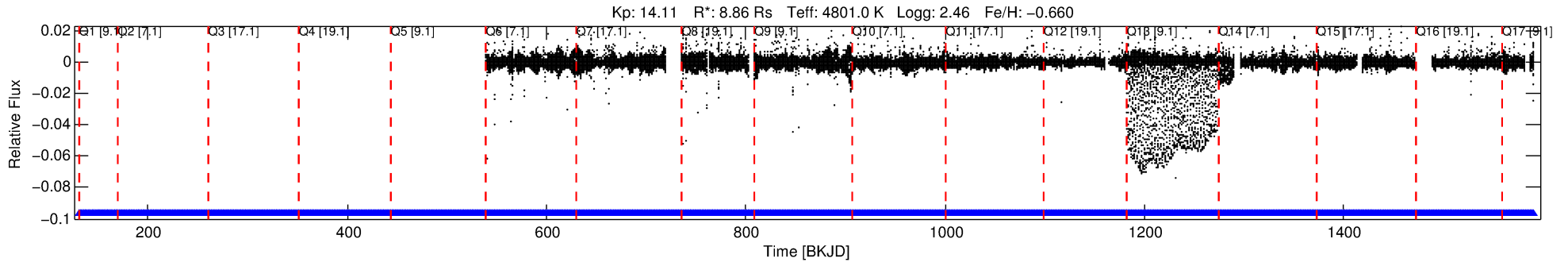
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005439660-01

No Significant Match Found

DV One-Page Summary

KIC: 5439660 Candidate: 1 of 1 Period: 0.780 d



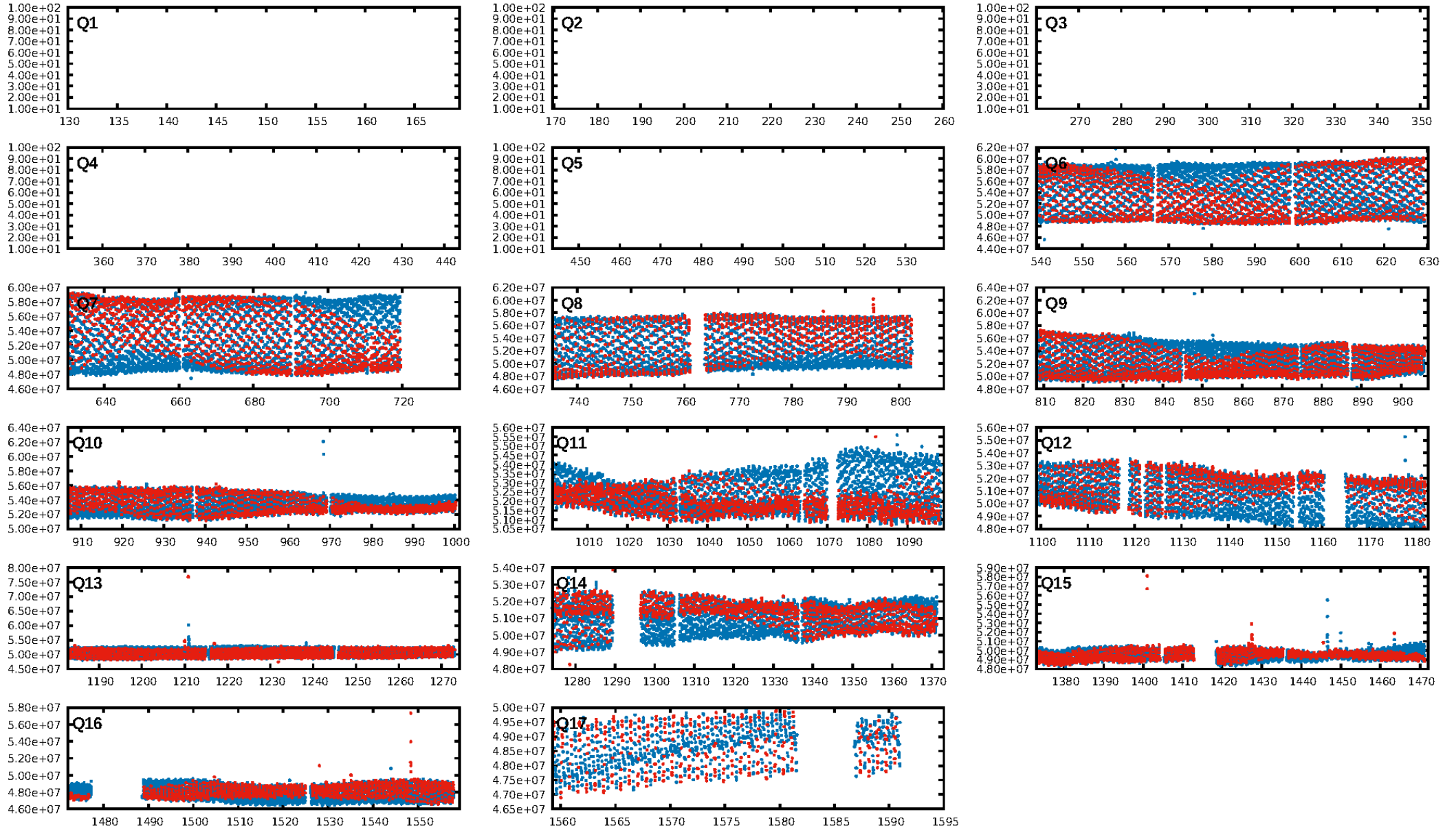
DV Fit Results:

Period = 0.77974 [0.00002] d
Epoch = 131.6126 [0.0034] BKJD
Rp/R* = 0.0115 [0.0107]
a/R* = 1.74 [4.08]
b = 0.75 [2.13]
Seff = N/A
Teq = N/A
Rp = 11.08 [12.09] Re
a = N/A
Ag = N/A
Teffp = N/A

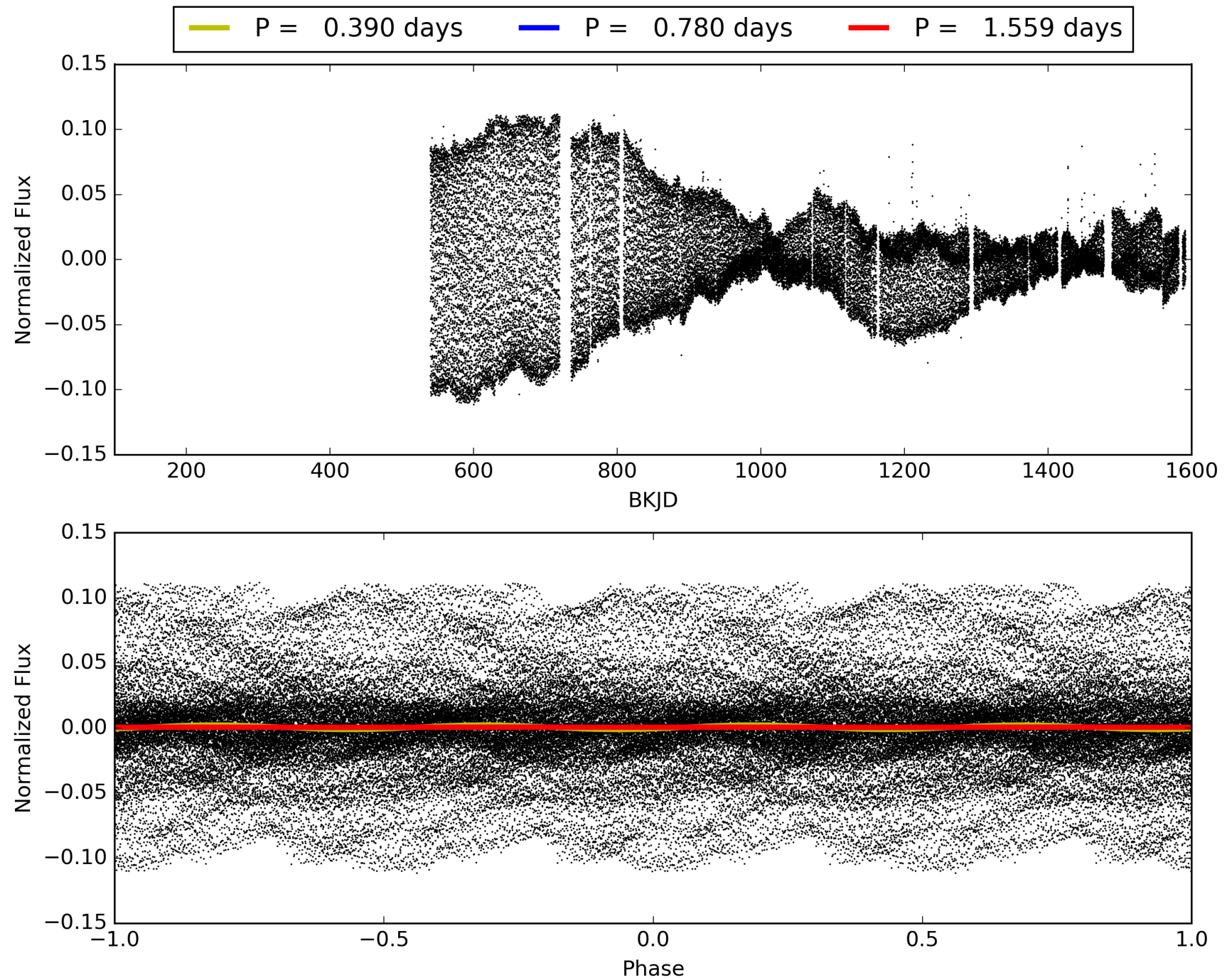
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.63e-11
RollingBand-fgt: 1.00 [1192/1192]
GhostDiagnostic-chr: -4.042
Centroid-sig: 2.2%
Centroid-so: 0.529 arcsec [1.77σ]
OotOffset-rm: 0.173 arcsec [1.48σ]
KicOffset-rm: 0.208 arcsec [1.76σ]
OotOffset-st: 3/3/3 [12]
KicOffset-st: 3/3/3 [12]
DiffImageQuality-fgm: 0.42 [5/12]
DiffImageOverlap-fno: 1.00 [12/12]

TCE 005439660-01, PDC Light Curves

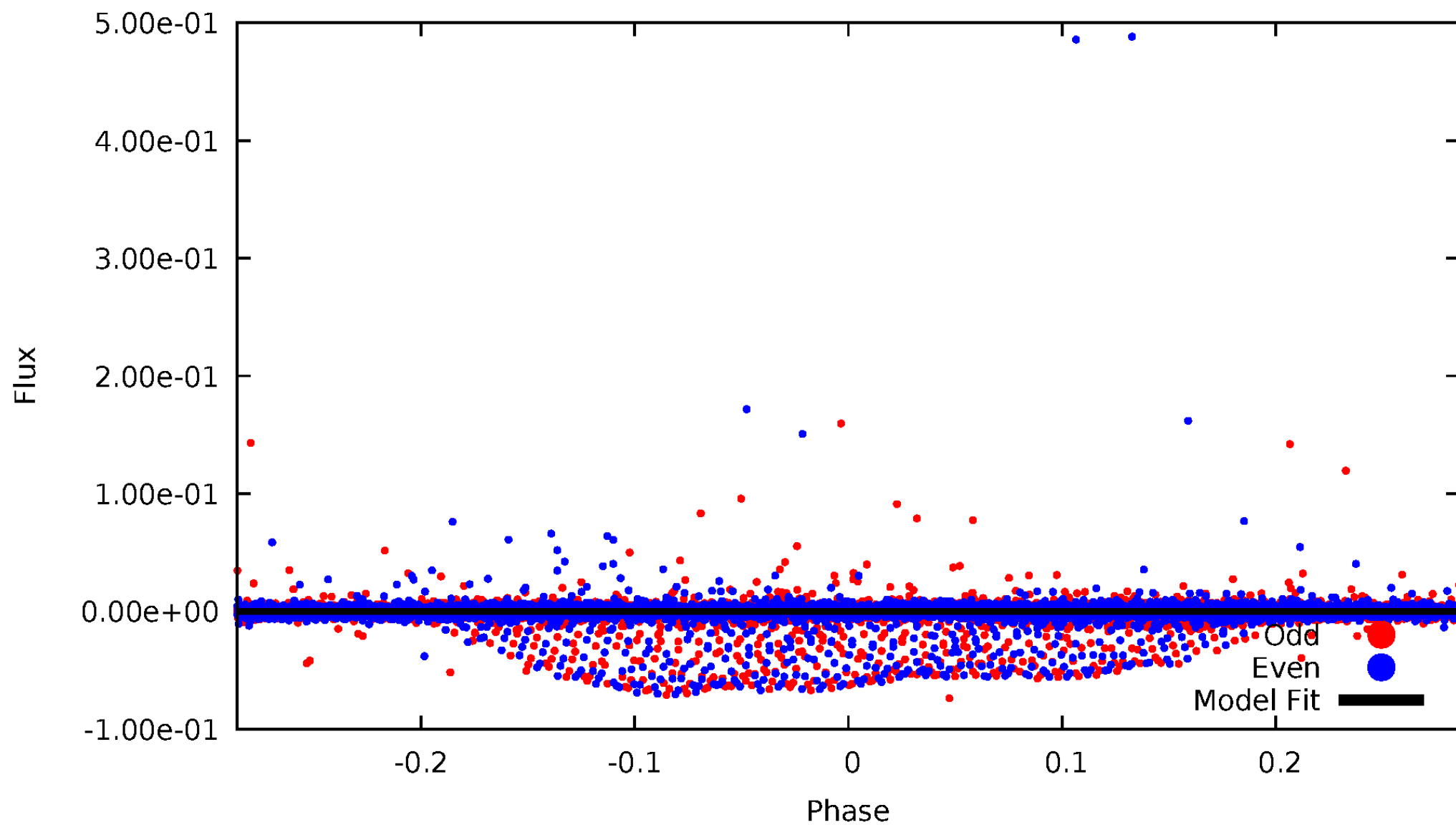


TCE 005439660-01



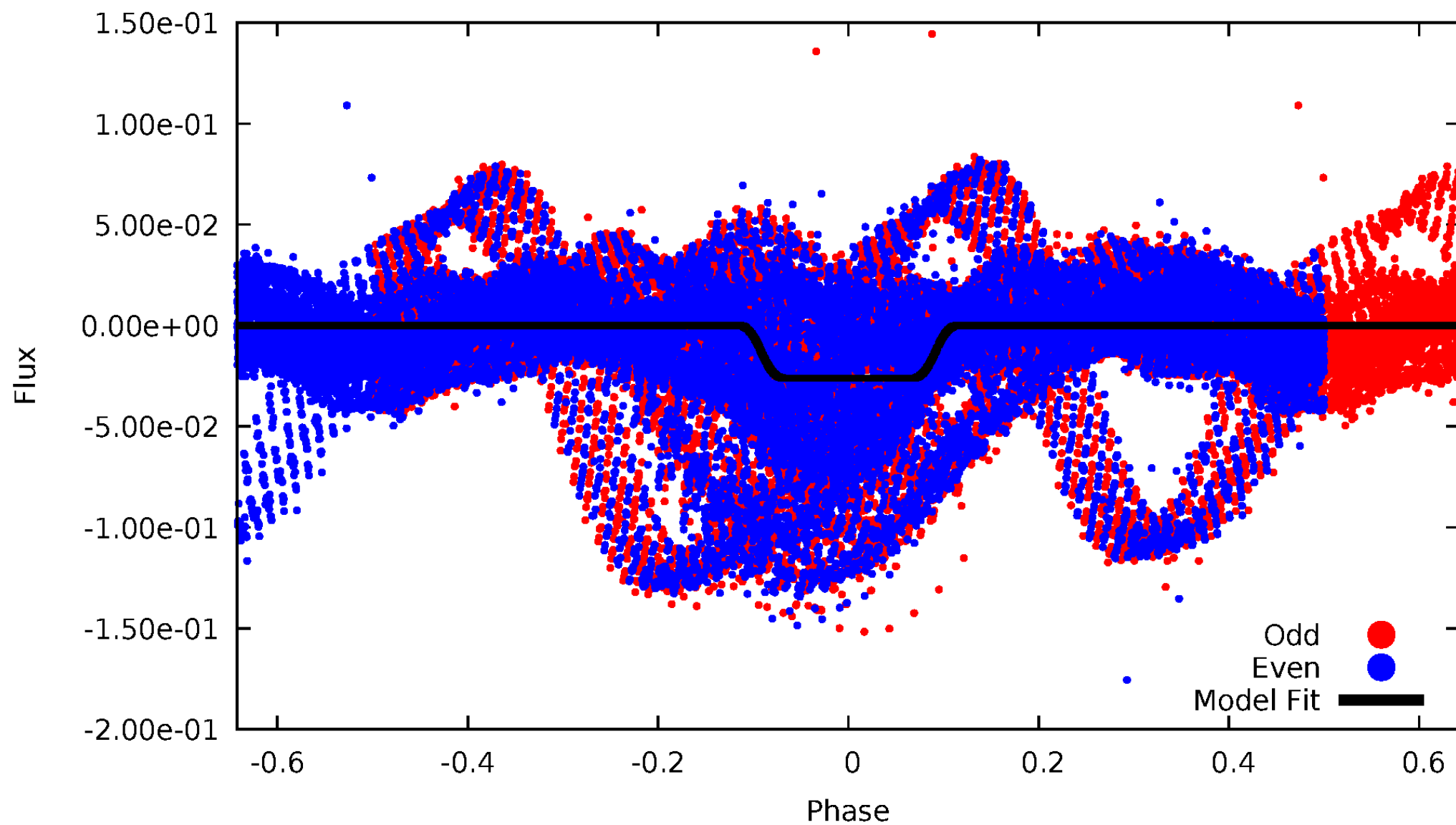
DV Odd/Even

TCE 005439660-01



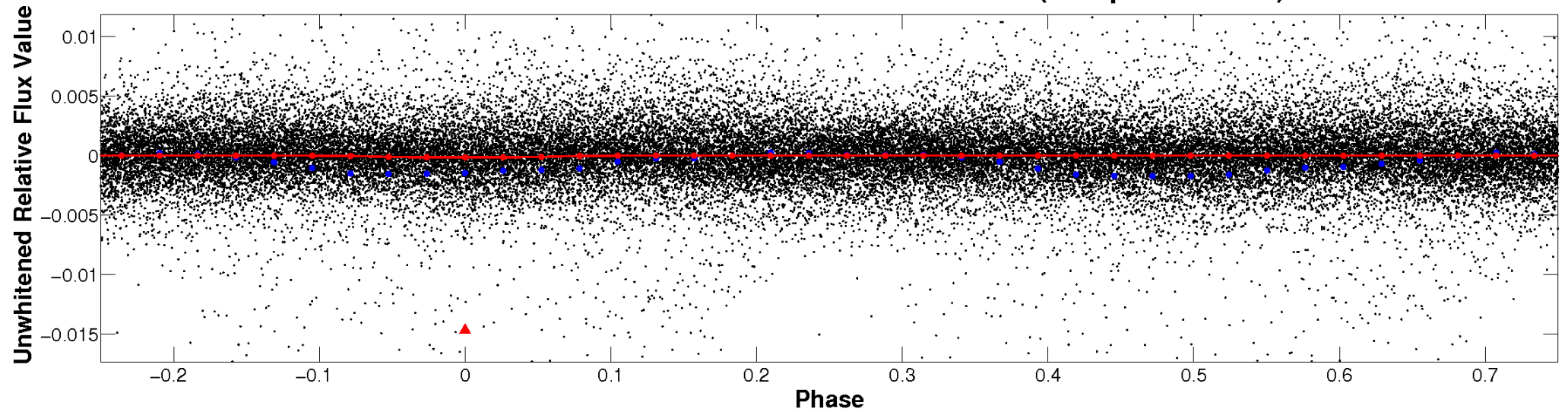
ALT Odd/Even

TCE 005439660-01

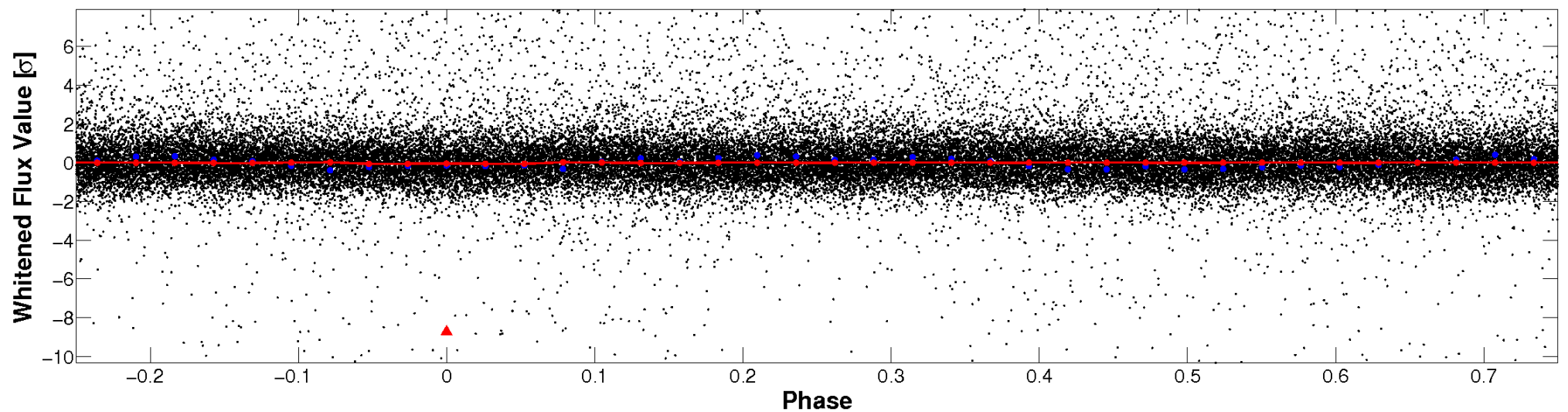


Non-Whitened Vs. Whitened Light Curve

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

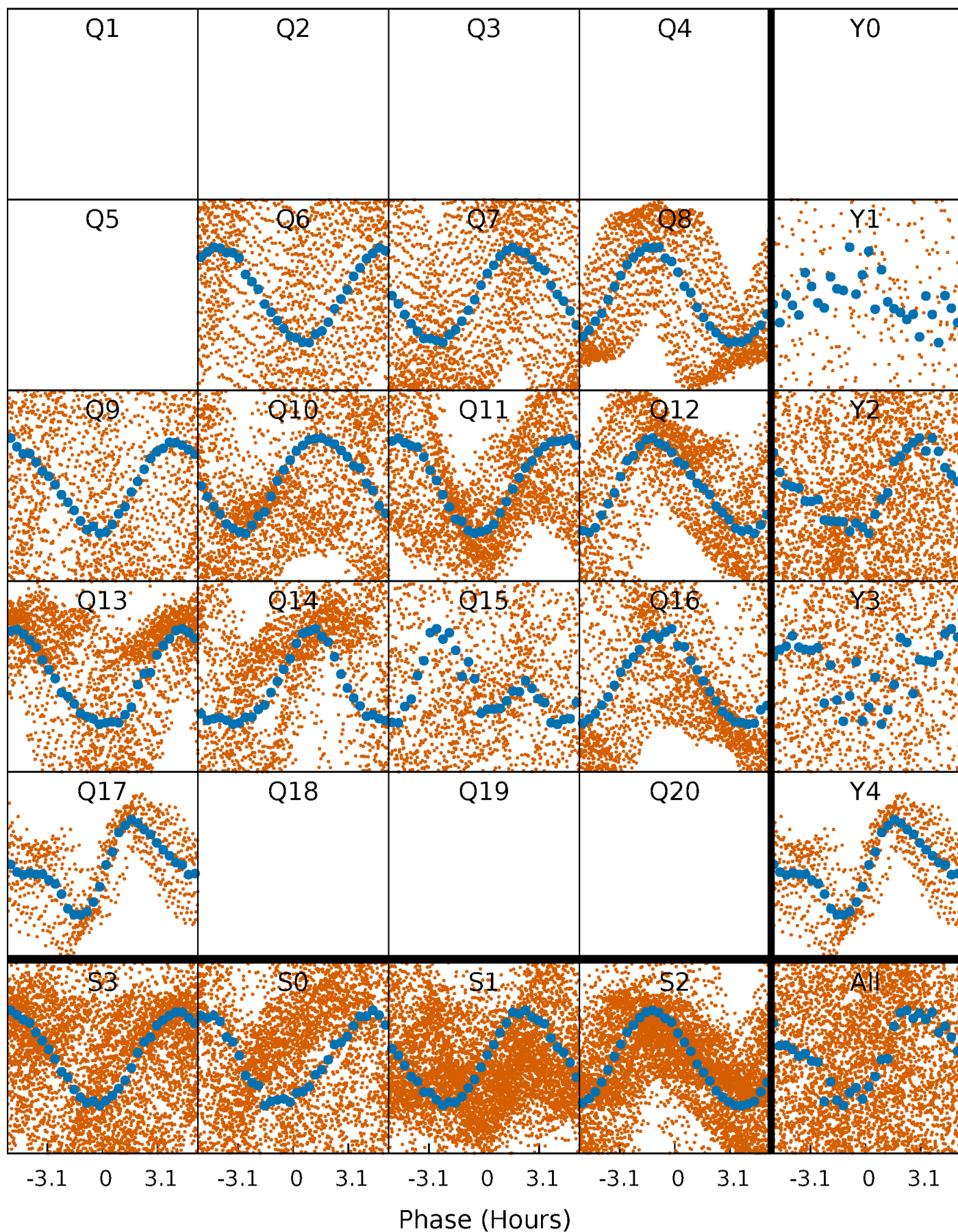


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



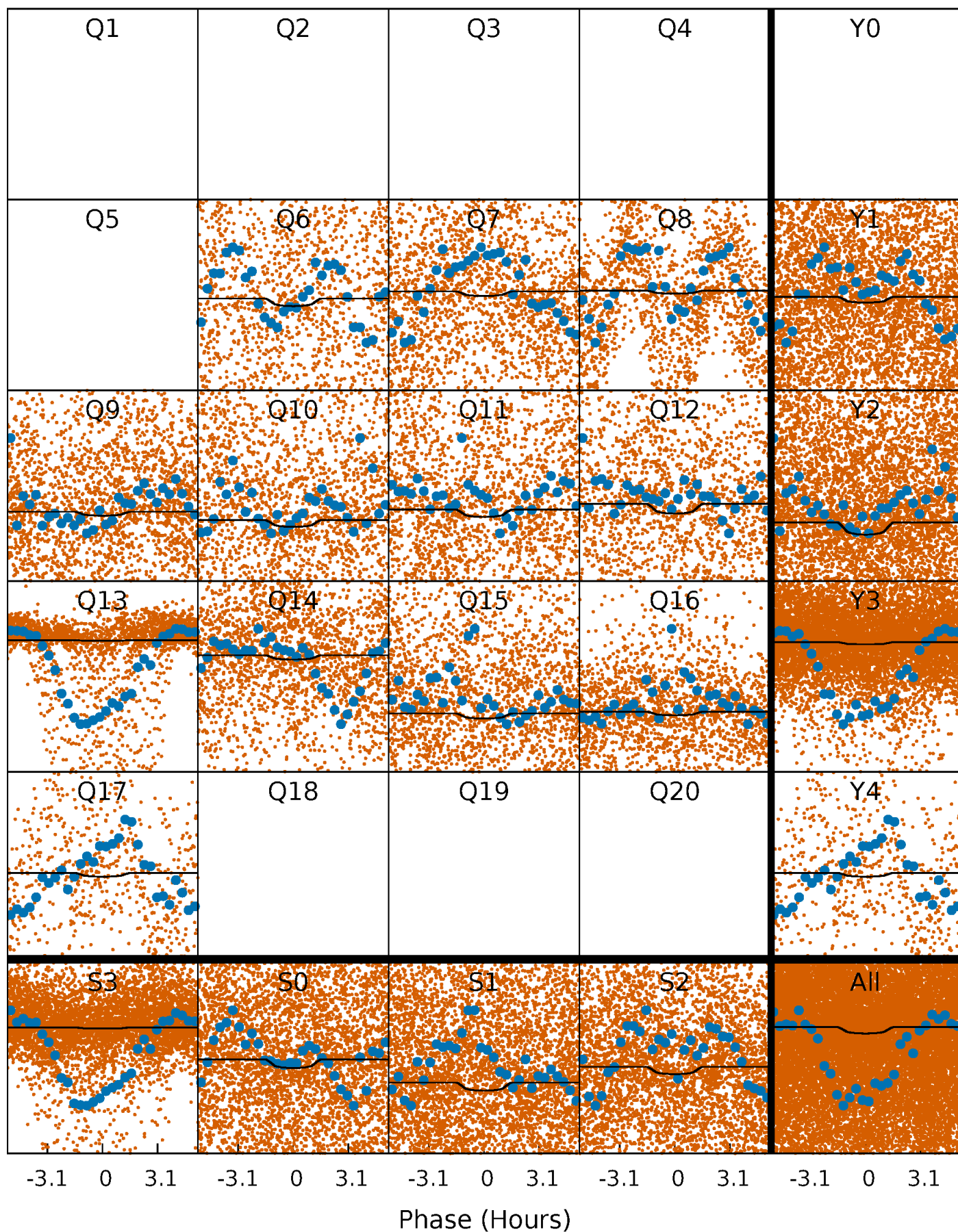
PDC Quarter-Phased Transit Curves

TCE 005439660-01 P= 0.779739 Days $T_0=131.612599$ (BKJD)



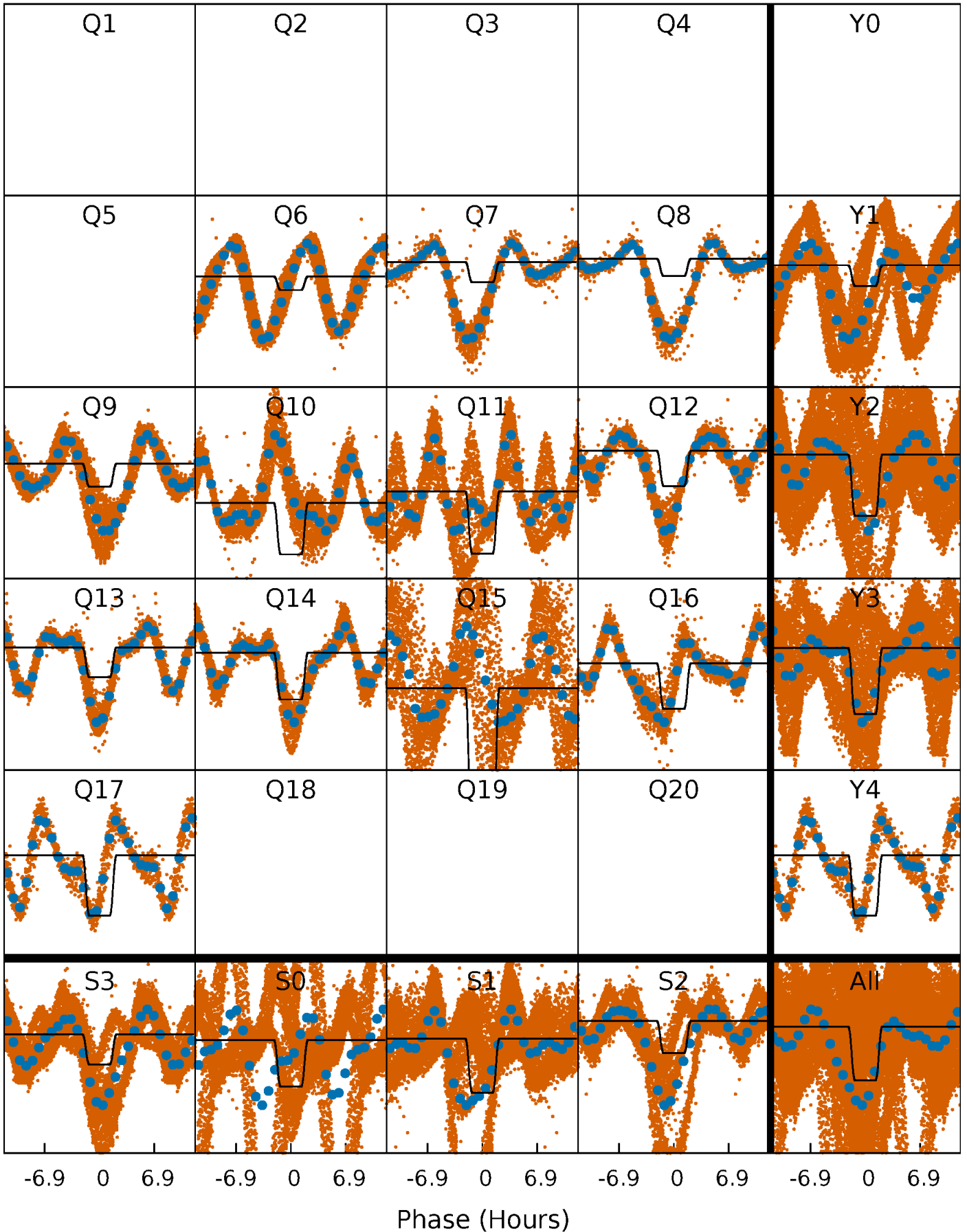
DV Quarter-Phased Transit Curves

TCE 005439660-01 P= 0.779739 Days $T_0=131.612599$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

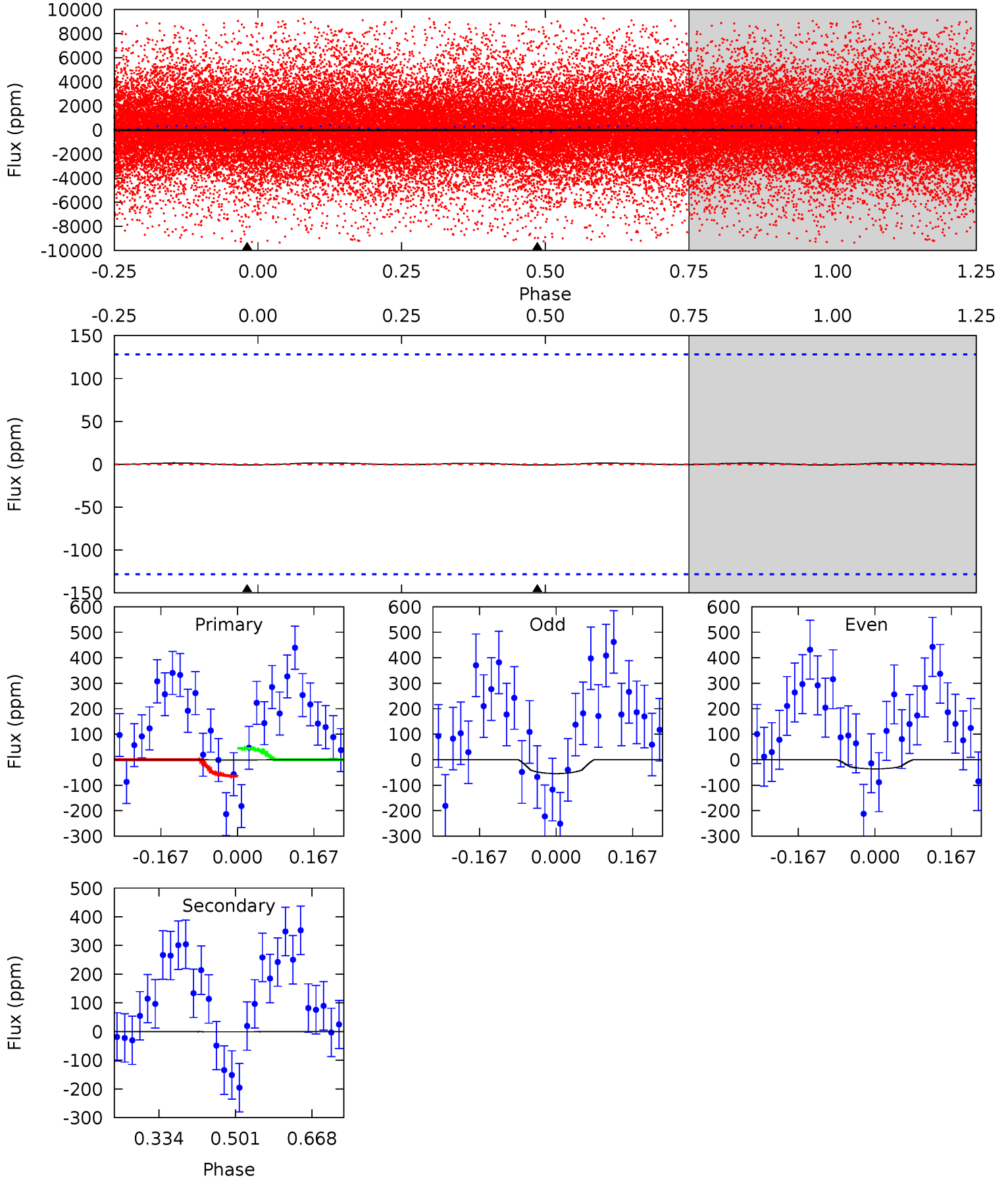
TCE 005439660-01 $P = 0.781464$ Days $T_0 = 131.532642$ (BKJD)



DV Model-Shift Uniqueness Test

005439660-01, P = 0.779739 Days, E = 131.612599 Days

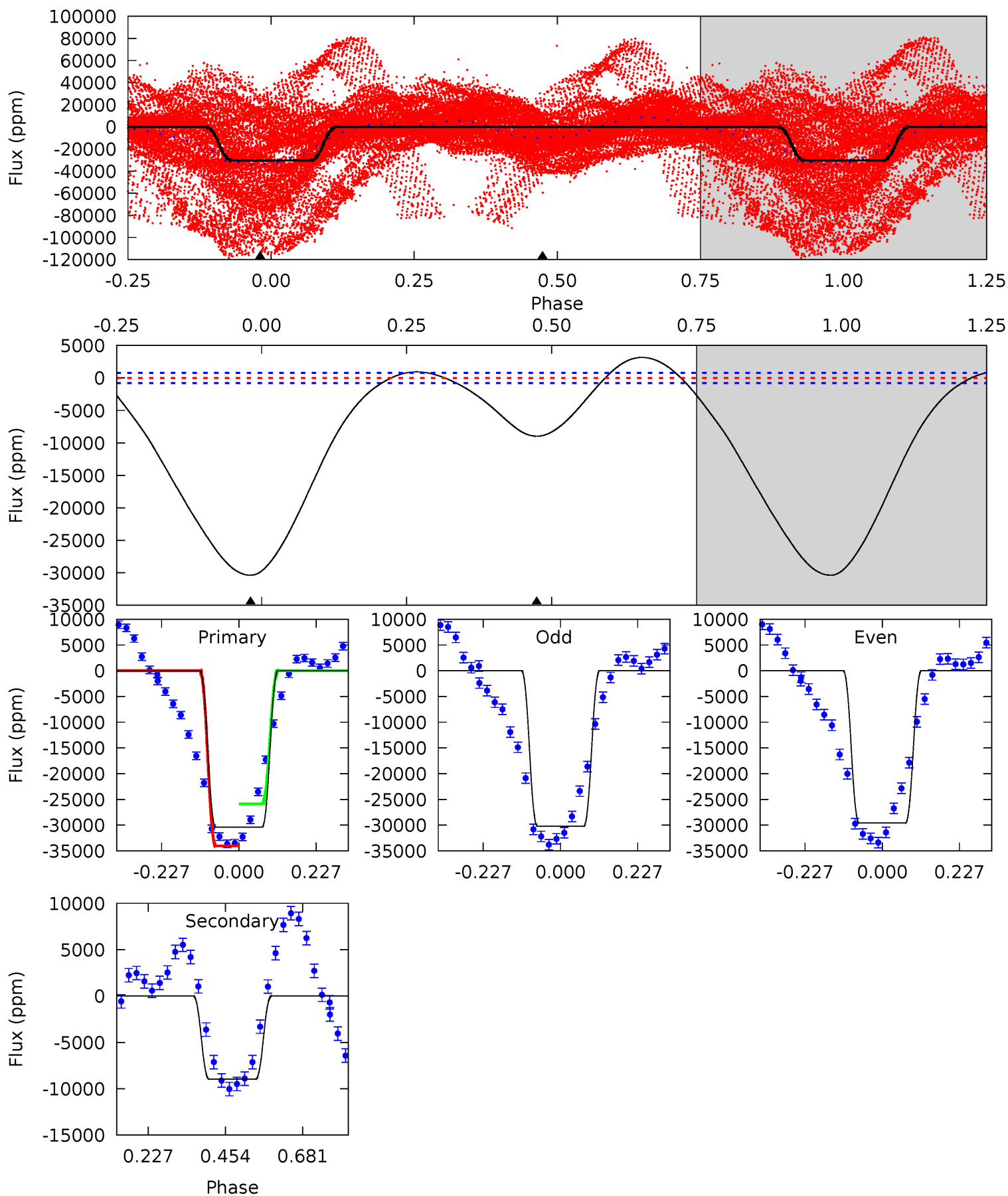
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.03	0.03	0	0	4.46	1.38	0.02	0.03	0.03	0.03	0.03	0.32	11.6	0.64	0.35



Alt Model-Shift Uniqueness Test

005439660-01, P = 0.781464 Days, E = 131.532642 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
171.2	50.6	0	0	4.39	1.21	6.88	171.2	171.2	50.6	50.6	1.82	1.26	0.09	22.9



Stellar Parameters For KIC 005439660

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4801^{+158}_{-101}	$2.459^{+0.372}_{-0.248}$	$-0.660^{+0.300}_{-0.250}$	$8.856^{+5.044}_{-2.716}$	$0.823^{+0.483}_{-0.027}$	$0.002^{+0.004}_{-0.001}$
	+3%/-2%	+15%/-10%	+45%/-38%	+57%/-31%	+59%/-3%	+234%/-61%
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 005439660-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1 ± 29	$13.60^{+11.16}_{-8.49}$	7000^{+865}_{-757}	-5637^{+718}_{-817}	$-0.000^{+0.036}_{-0.039}$
Alt.	-8973 ± 177	$155.72^{+45.50}_{-32.02}$	6971^{+785}_{-762}	-5334^{+642}_{-663}	$0.053^{+0.034}_{-0.019}$

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 $A_{obs} \gg 1.0$

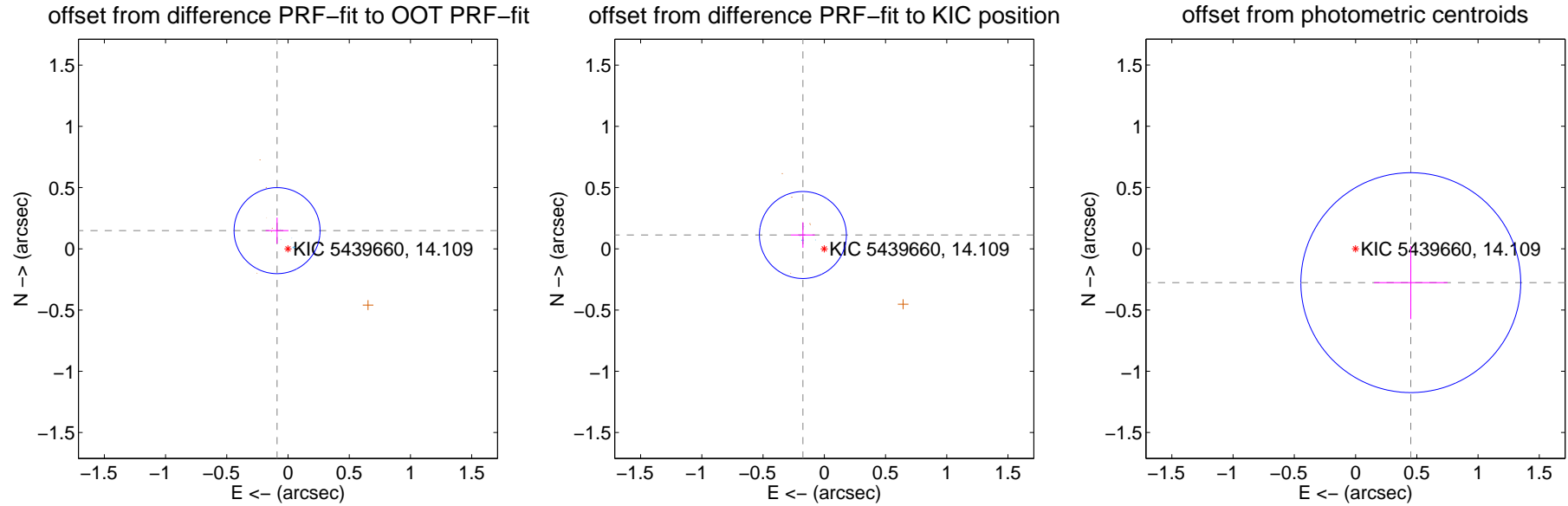
DV Centroid Data

Supplemental centroid analysis for 005439660-01. Kepler magnitude: 14.11. Transit SNR 4.22

There are 5 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.173 ± 0.117	1.48	0.089 ± 0.094	0.148 ± 0.106
PRF-fit source offset from KIC position	0.208 ± 0.118	1.76	0.175 ± 0.098	0.113 ± 0.104
photometric centroid source offset	0.53 ± 0.30	1.77	-0.45 ± 0.30	-0.28 ± 0.30

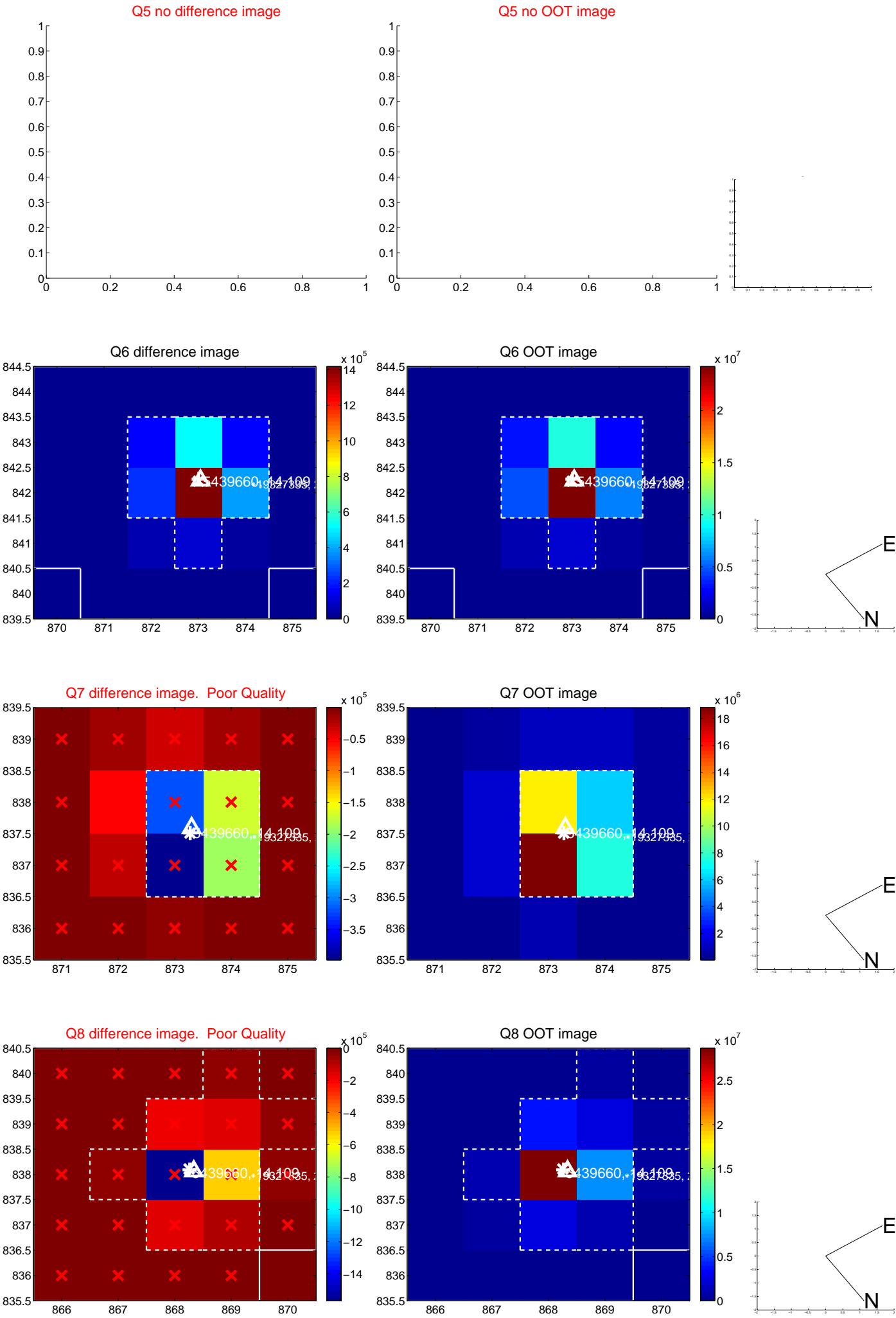


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

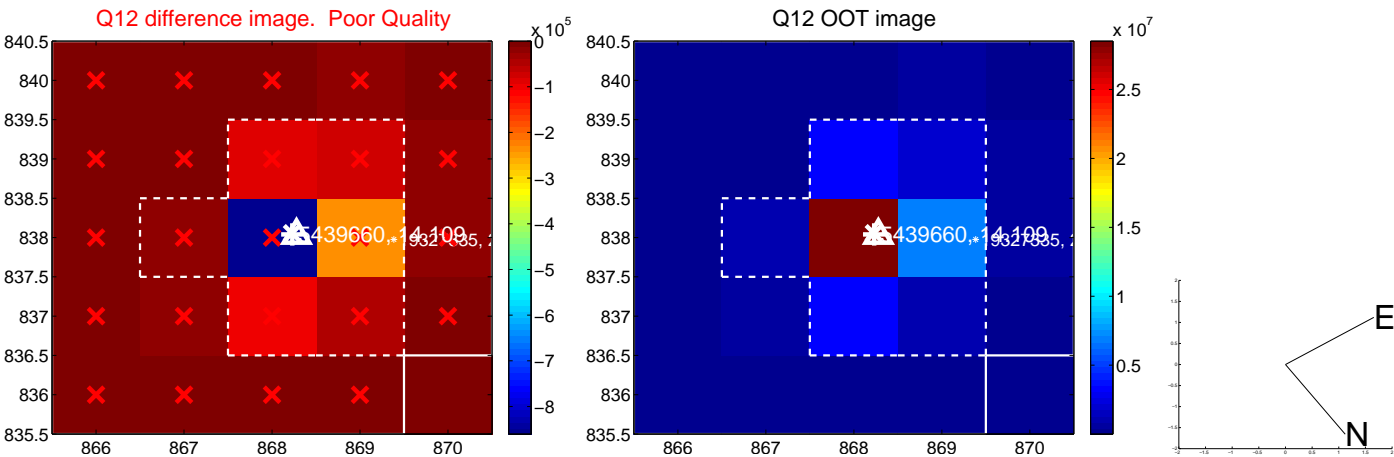
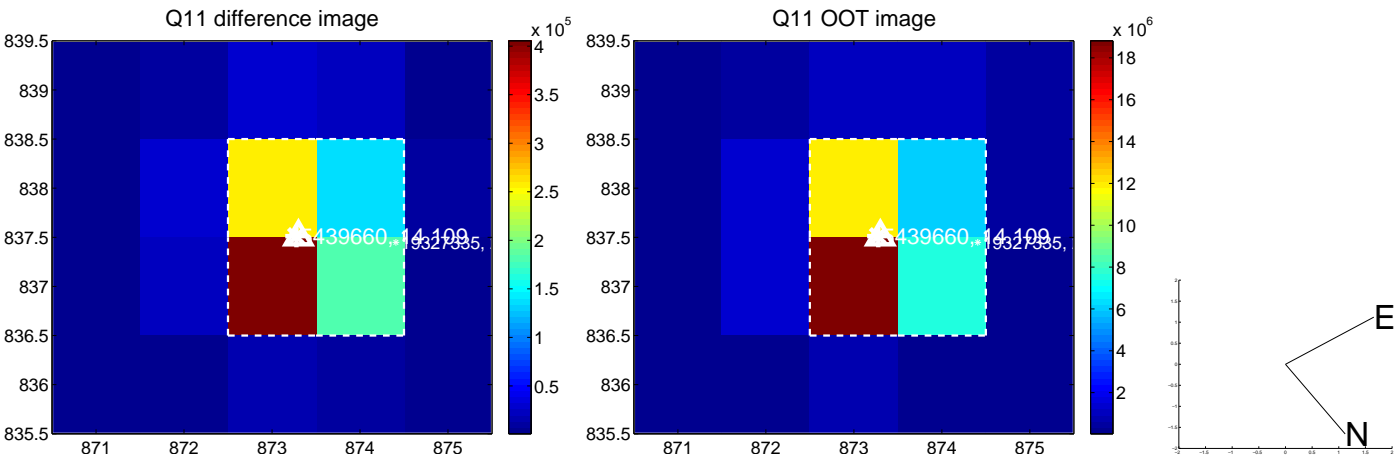
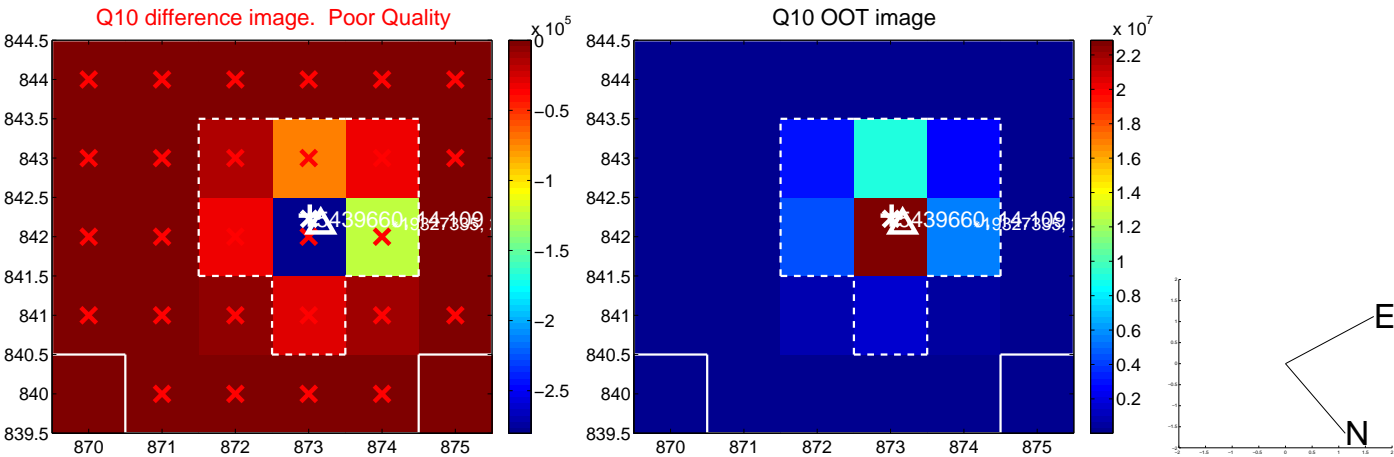
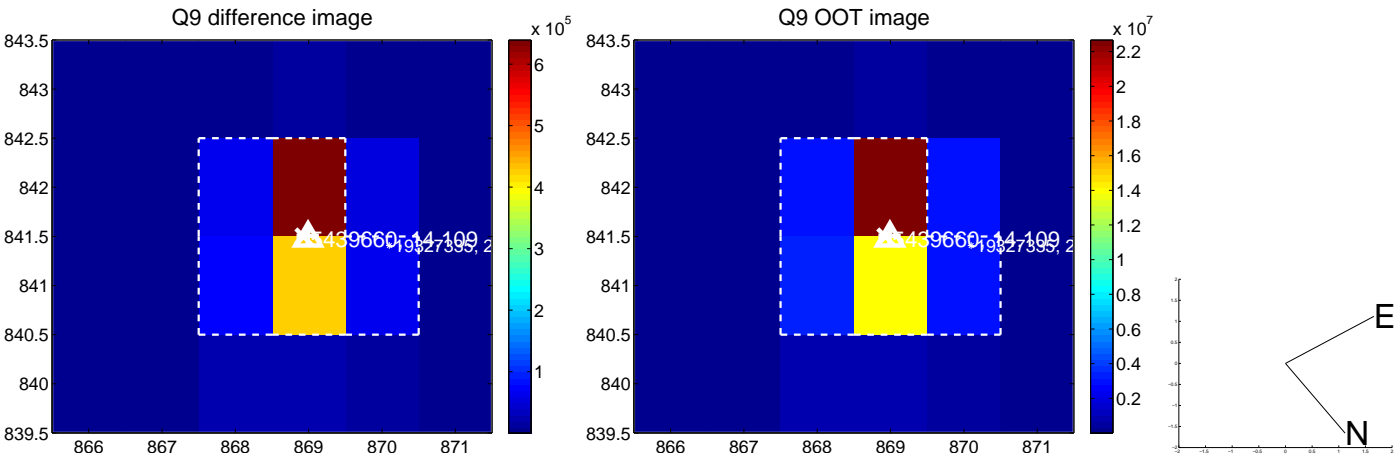
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



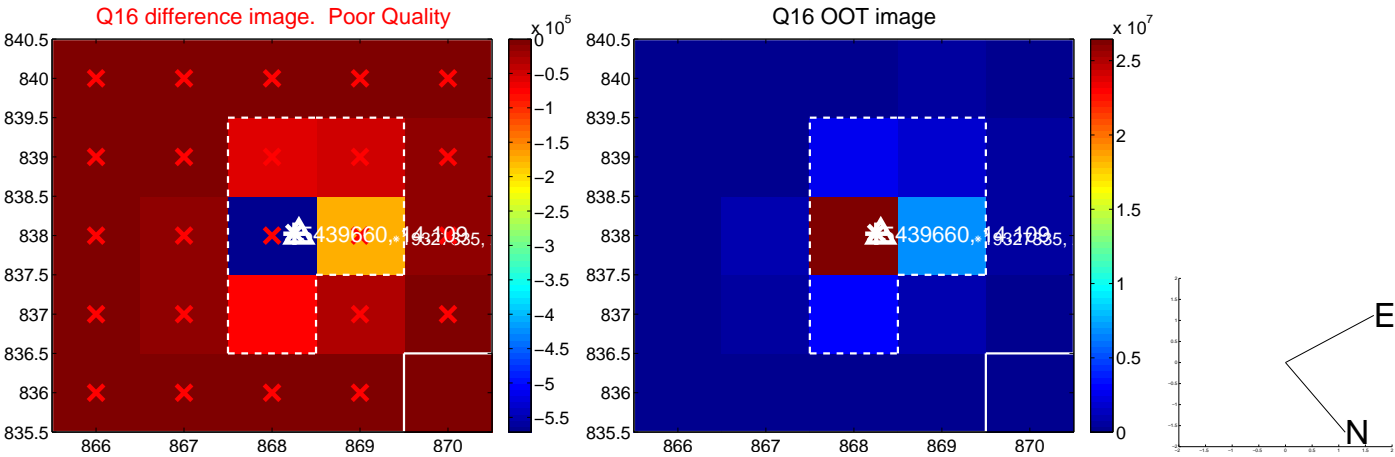
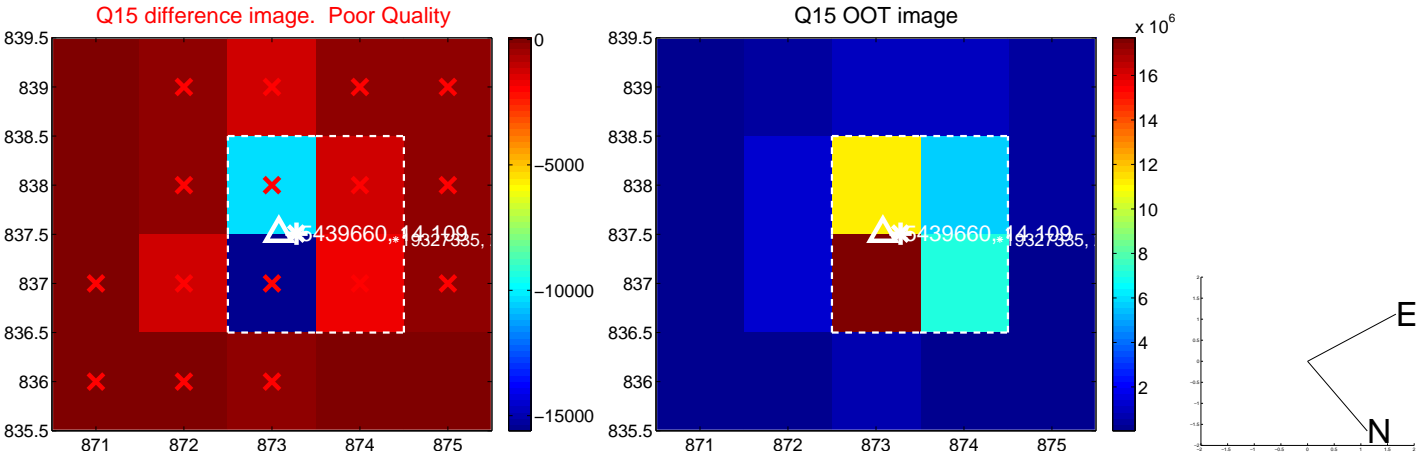
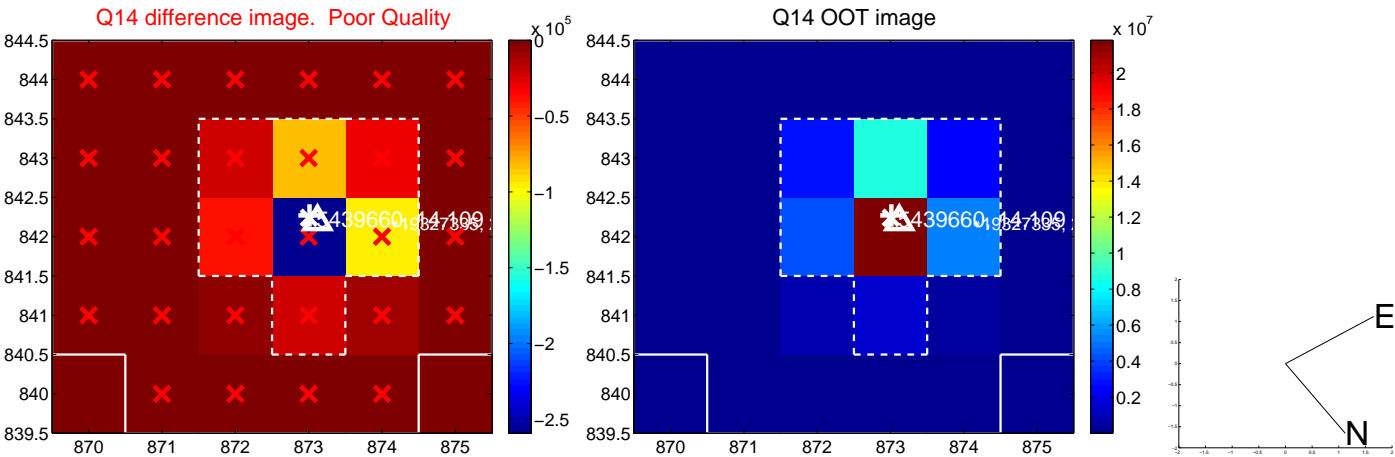
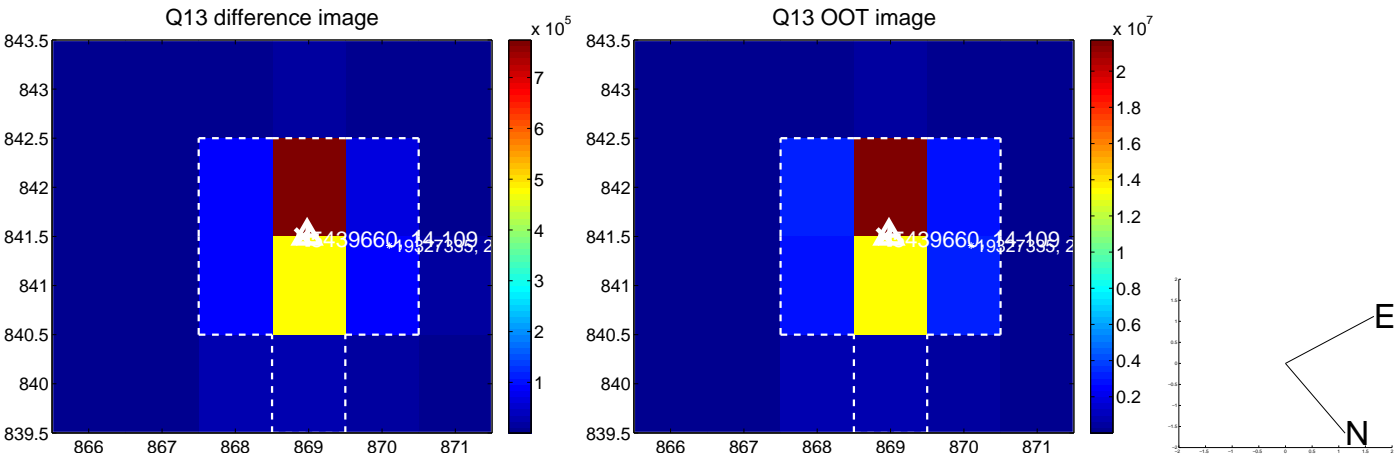
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



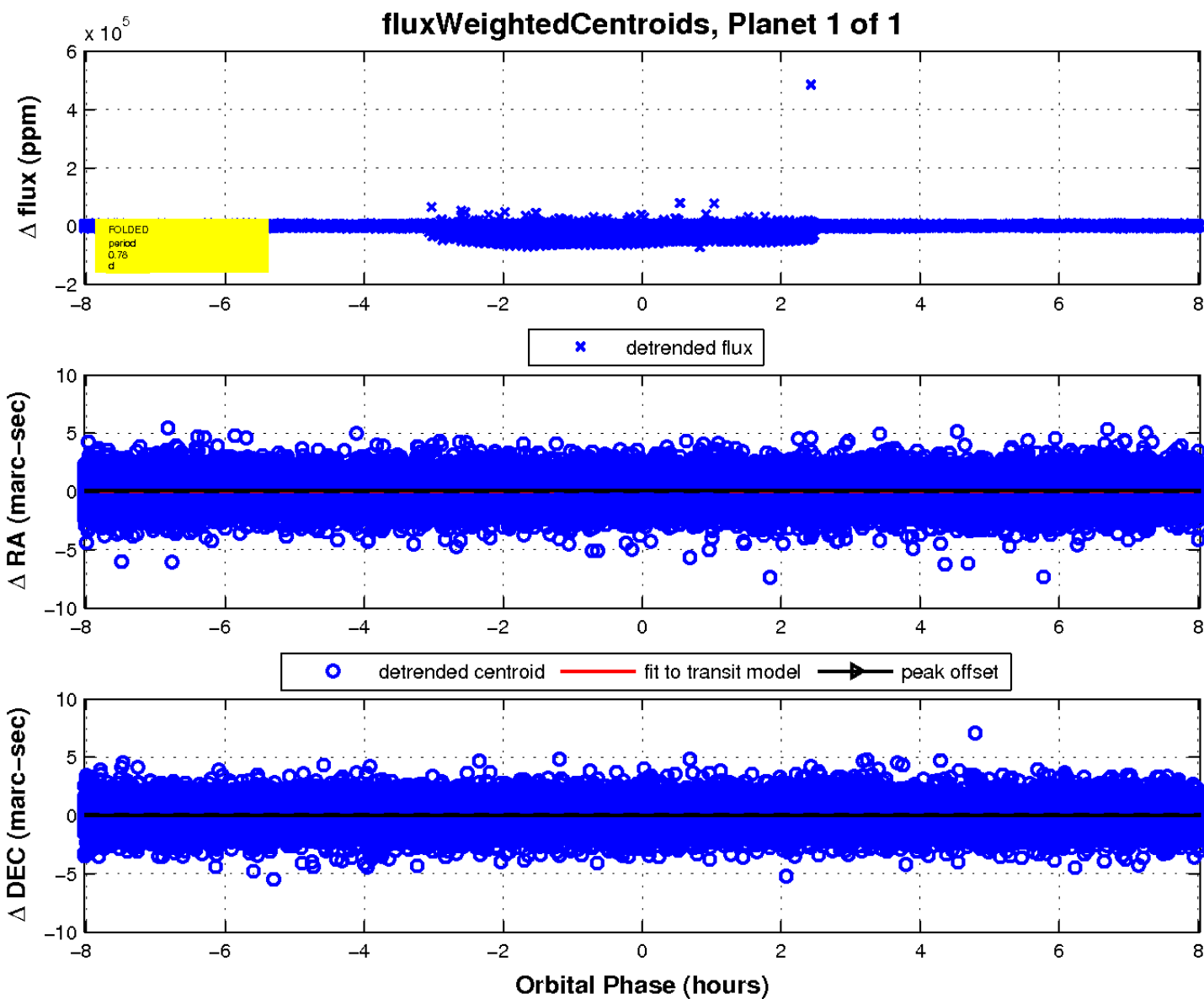
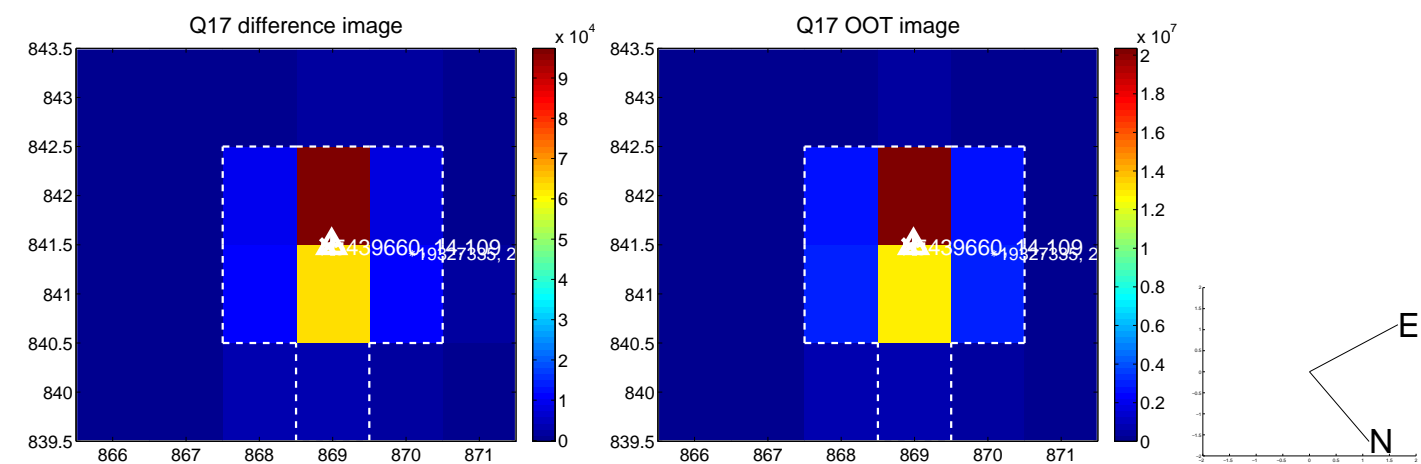
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UKIRT Image

Declination

