

KIC 005350822

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})
005350822-01	OBS	No	326.676921	283.724065	463.8	5.527	10.3	6.5	0.80	5017	1.83	0.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005350822-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—HALO_GHOST

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

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

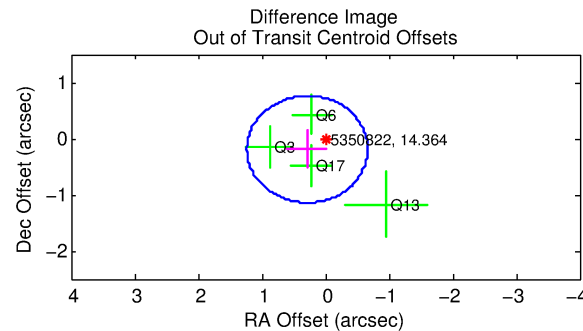
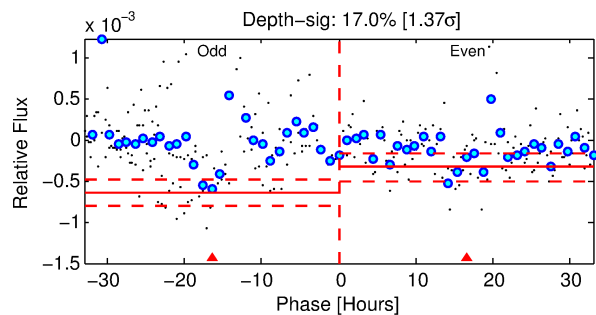
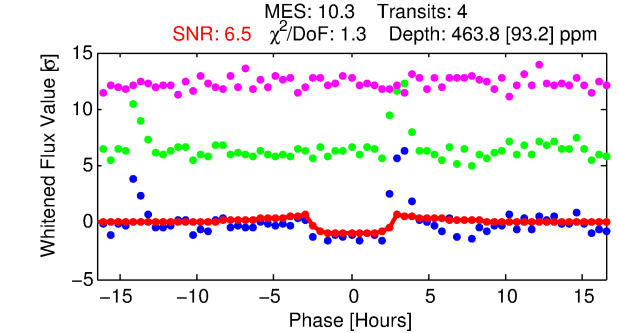
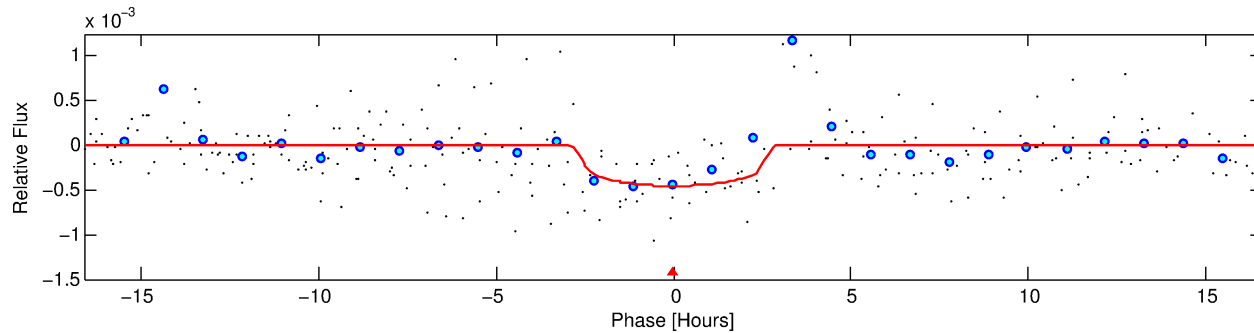
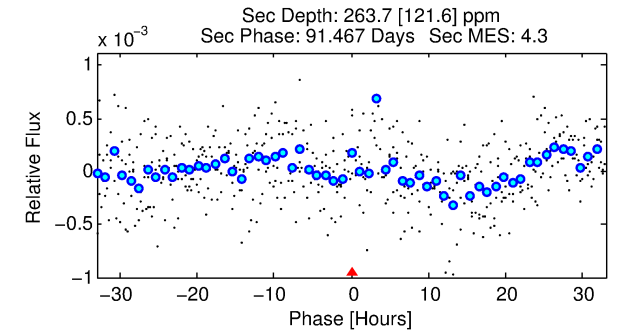
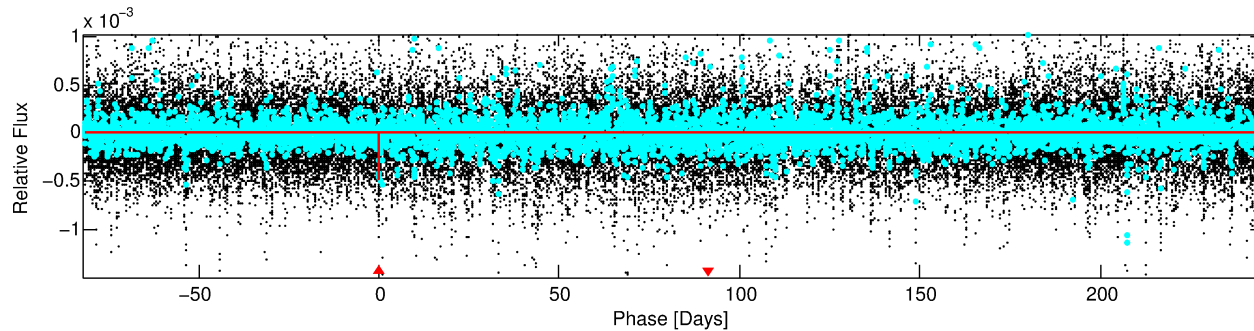
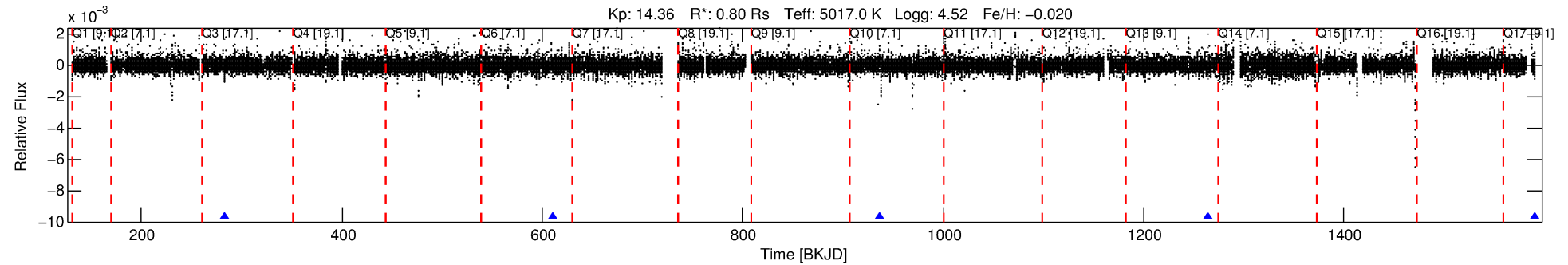
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005350822-01

No Significant Match Found

DV One-Page Summary

KIC: 5350822 Candidate: 1 of 1 Period: 326.677 d



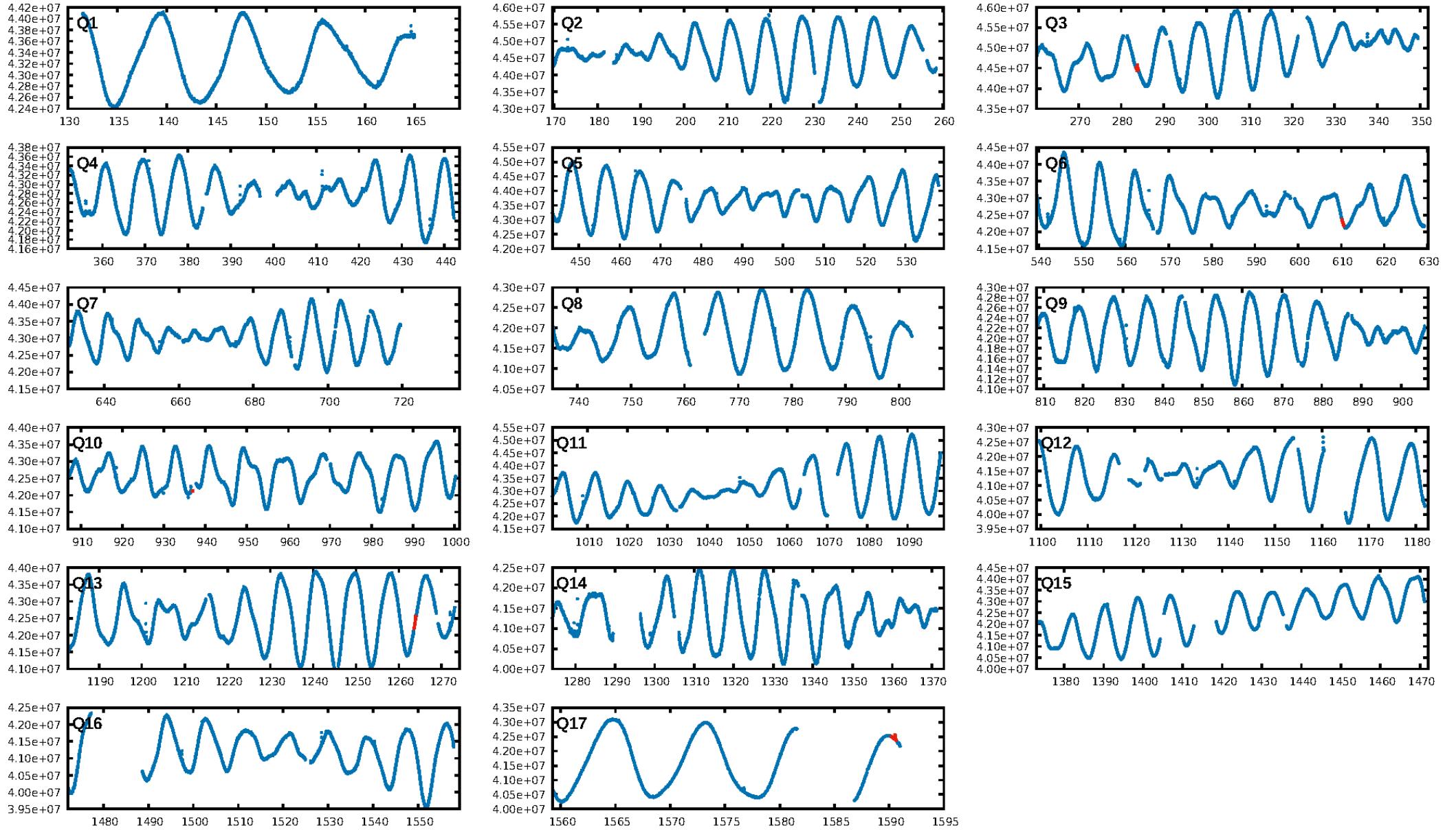
DV Fit Results:

Period = 326.67692 [0.00487] d
Epoch = 283.7241 [0.0123] BKJD
Rp/R* = 0.0210 [0.0319]
a/R* = 337.37 [1781.96]
b = 0.70 [4.00]
Seff = 0.50 [0.14]
Teff = 215 [15] K
Rp = 1.83 [2.78] Re
a = 0.8474 [0.1237] AU
Ag = 31192.79 [96211.91] [0.32 σ]
Teffp = 4410 [3392] K [1.24 σ]

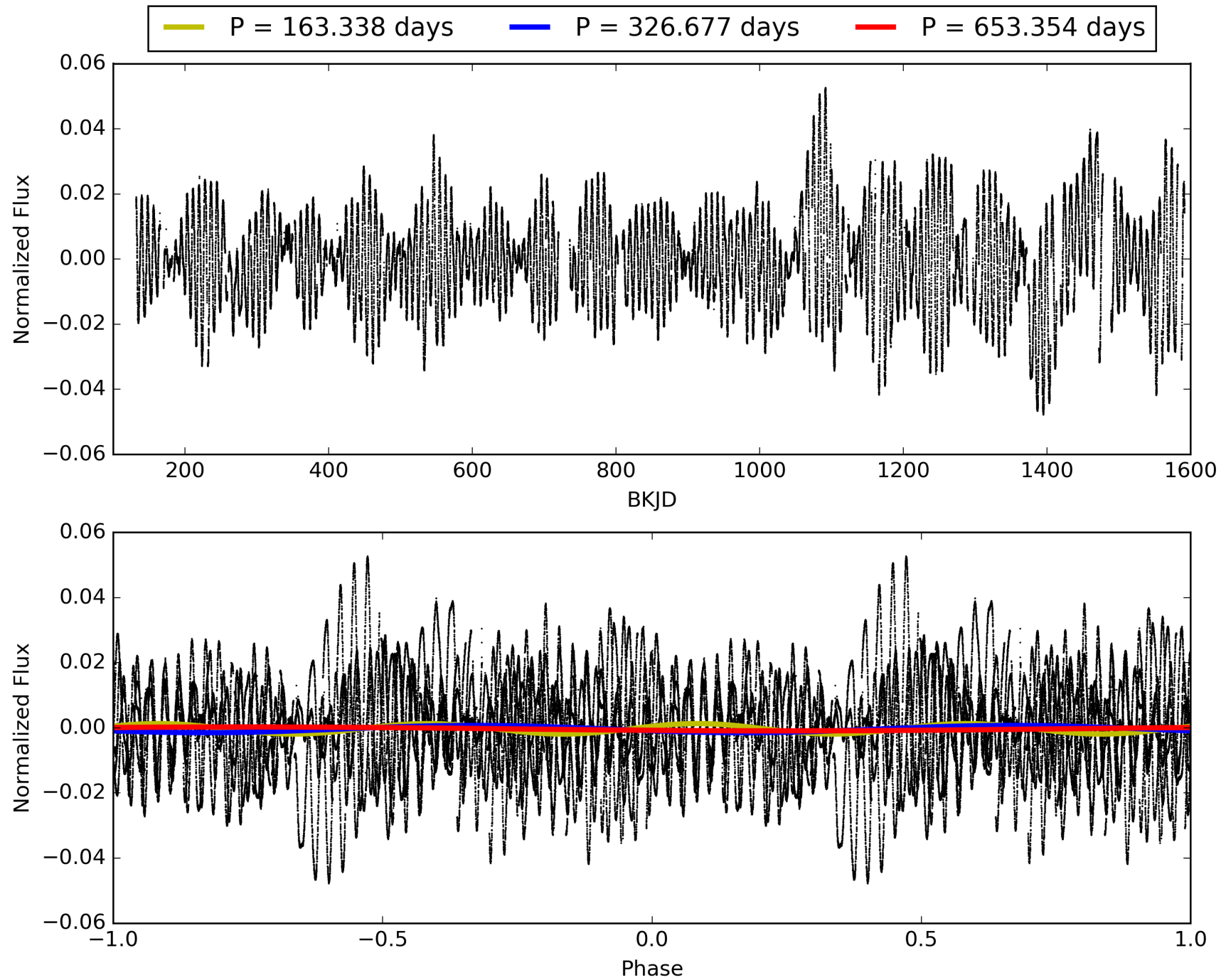
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.1%
ModelChiSquareGof-sig: 44.2%
Bootstrap-pfa: 8.88e-10
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.07161
Centroid-sig: 14.1%
Centroid-so: 1.335 arcsec [1.09 σ]
OotOffset-rm: 0.344 arcsec [1.09 σ]
KicOffset-rm: 0.459 arcsec [1.42 σ]
OotOffset-st: 1/1/0/2 [4]
KicOffset-st: 1/1/0/2 [4]
DiffImageQuality-fgm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 005350822-01, PDC Light Curves

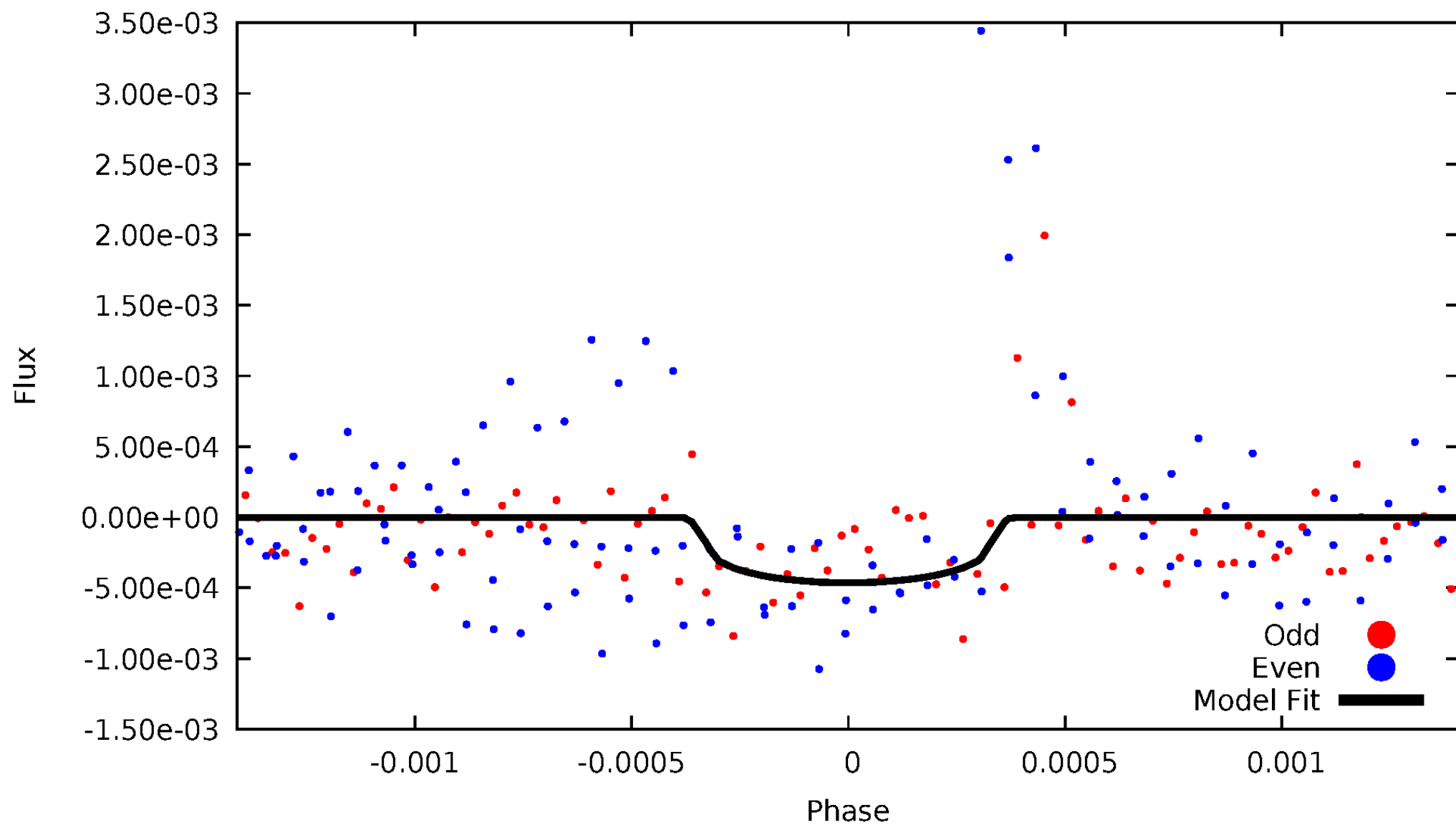


TCE 005350822-01



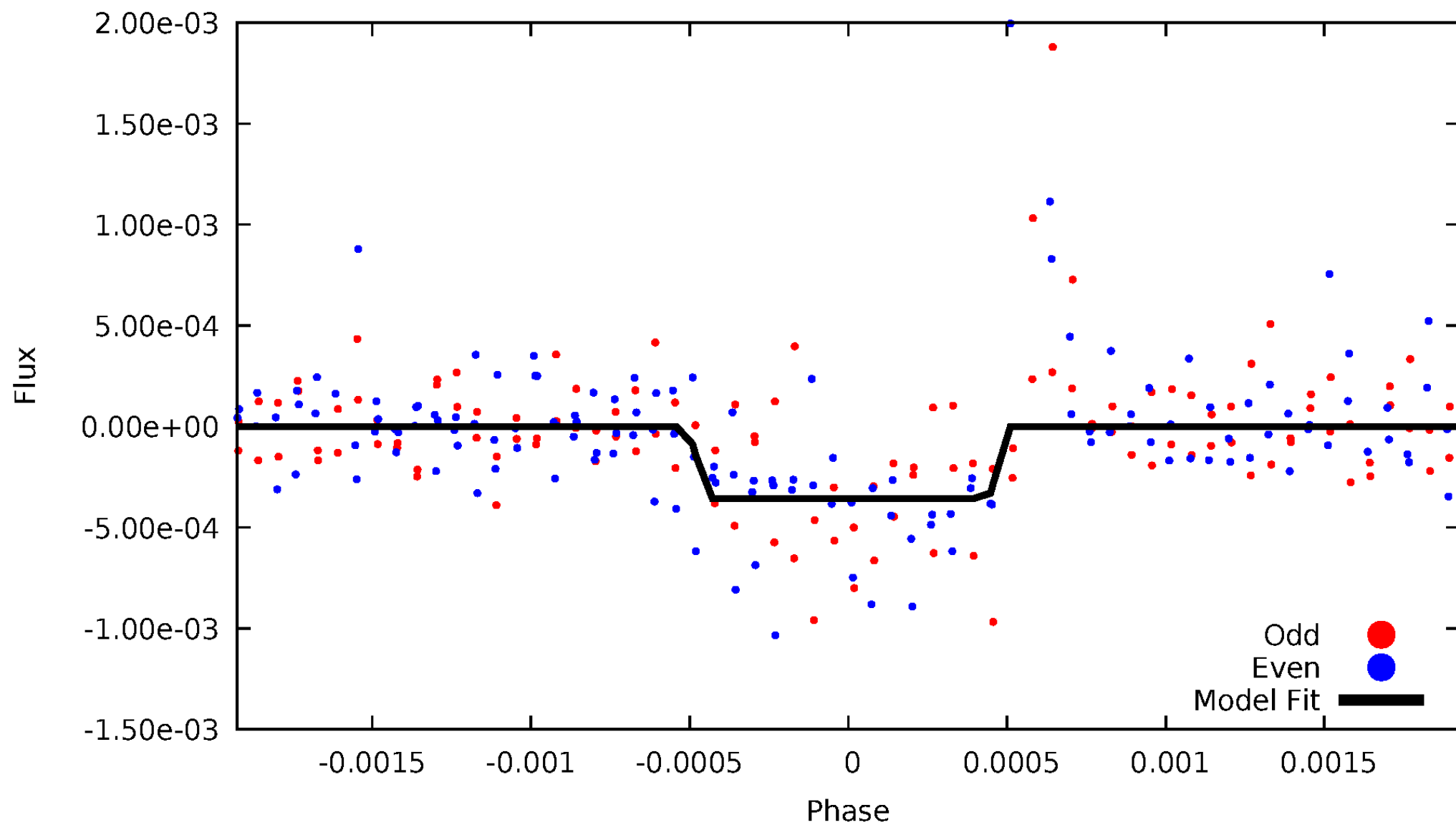
DV Odd/Even

TCE 005350822-01



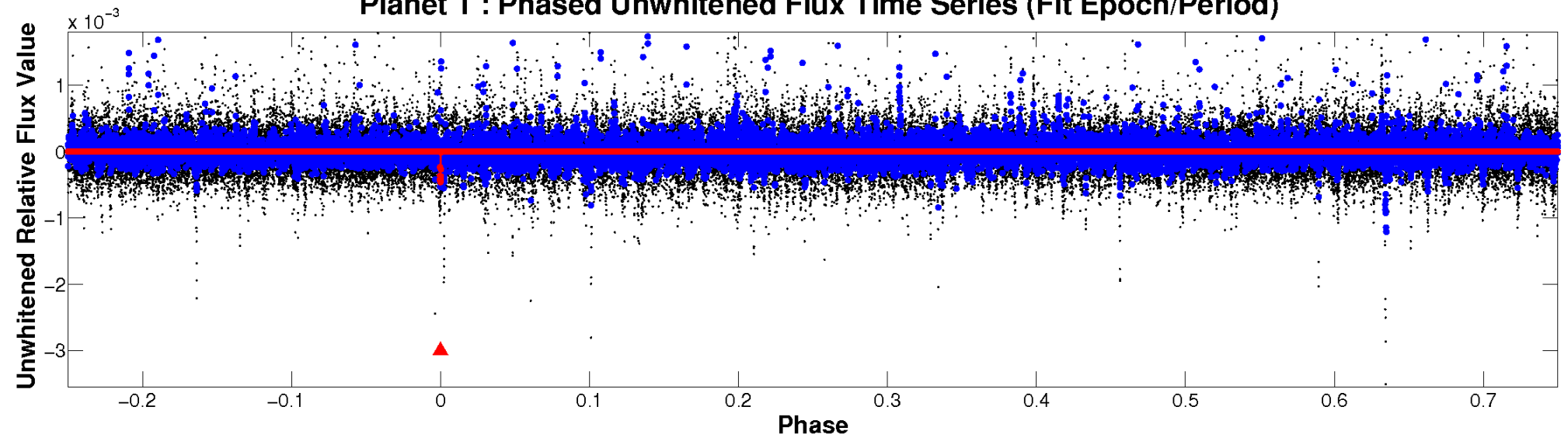
ALT Odd/Even

TCE 005350822-01

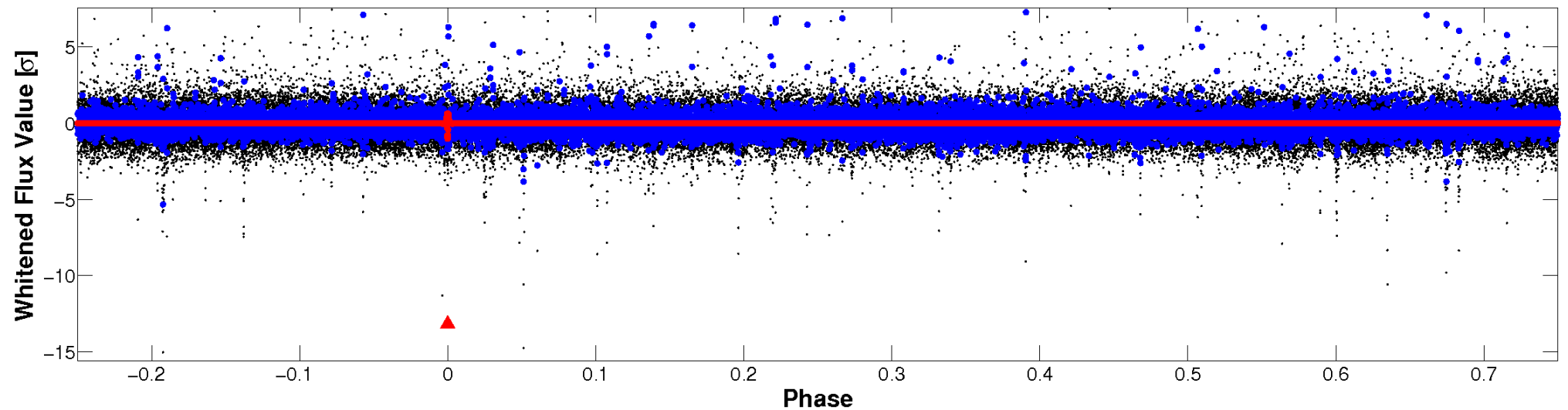


Non-Whitened Vs. Whitened Light Curve

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

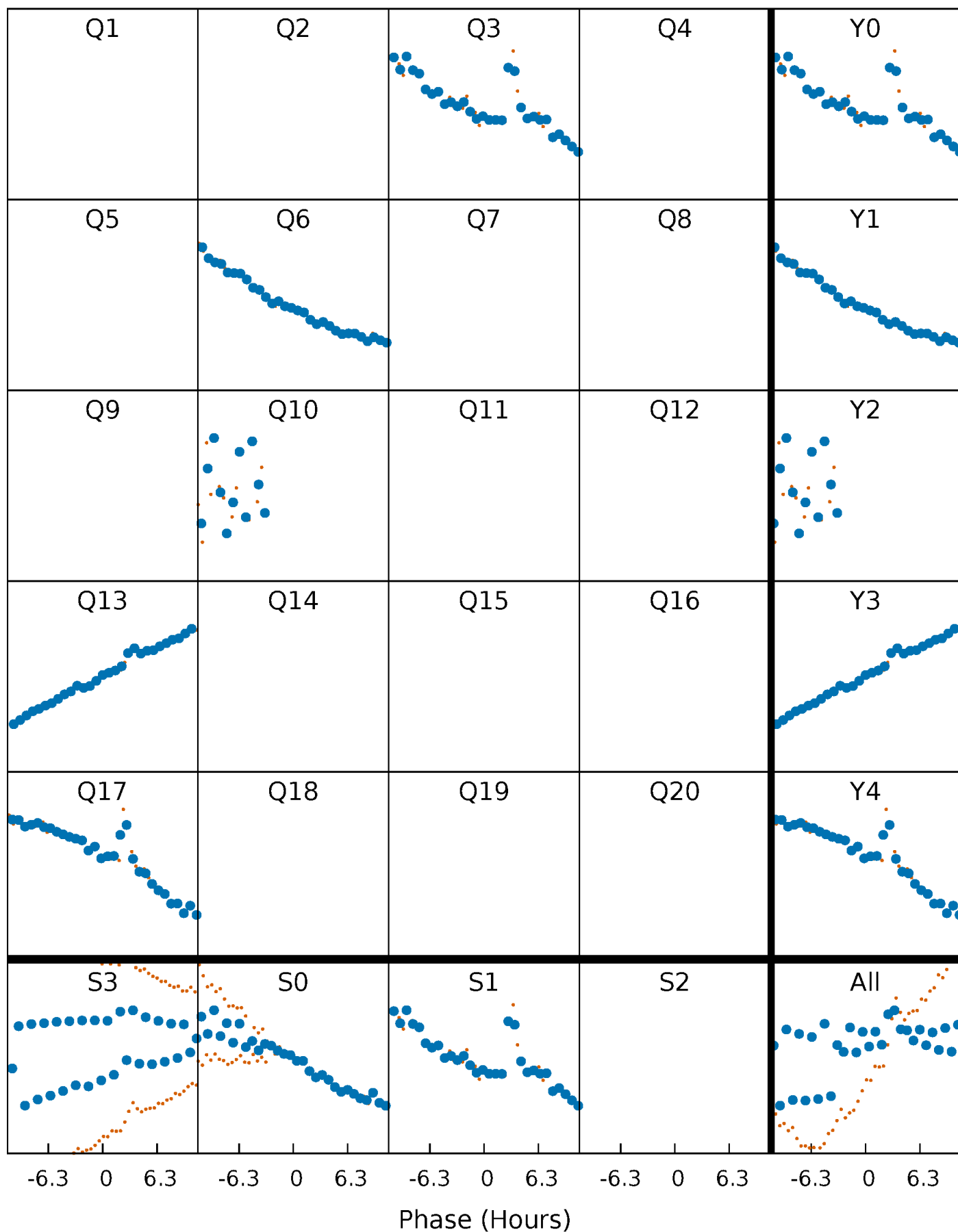


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



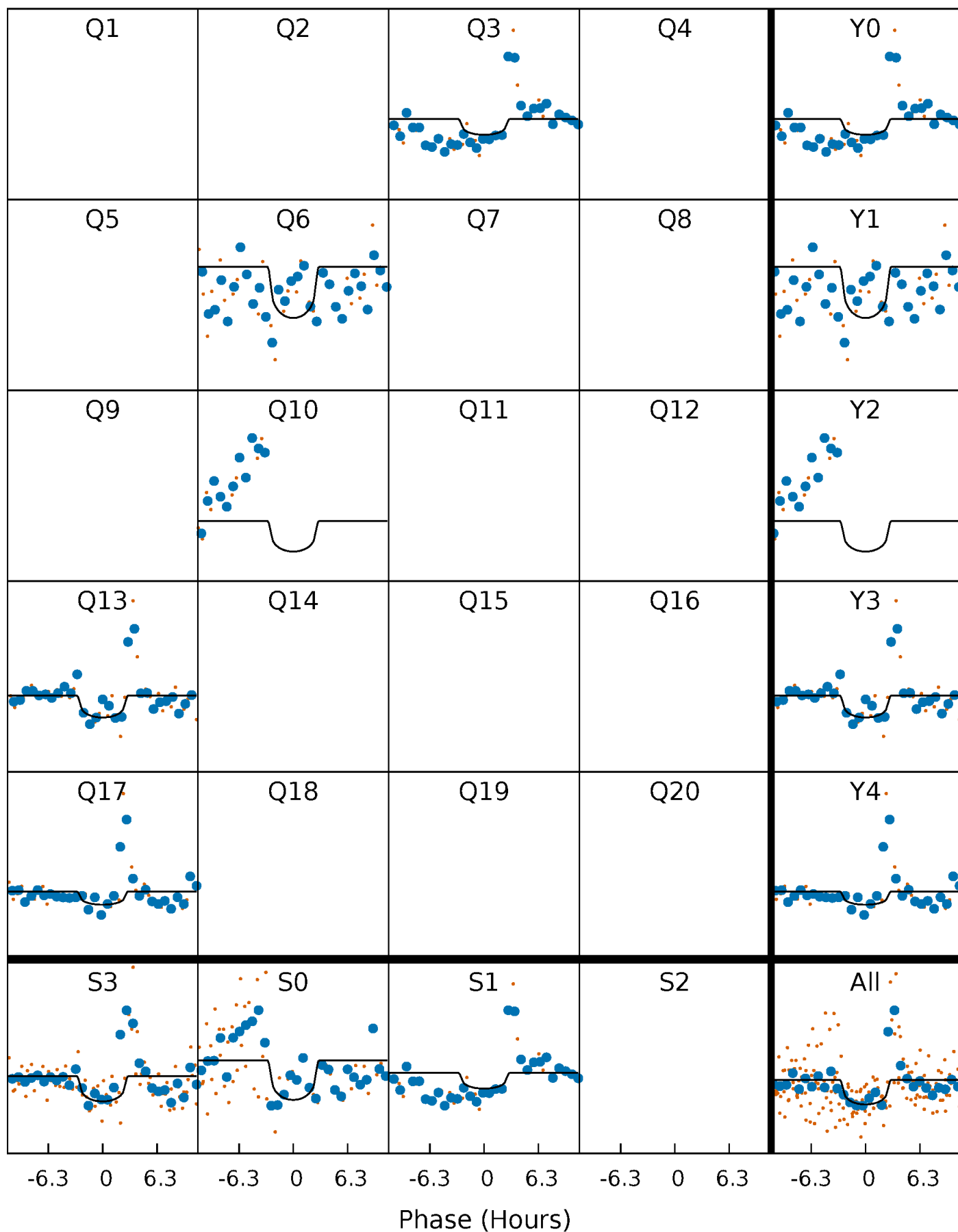
PDC Quarter-Phased Transit Curves

TCE 005350822-01 P=326.676921 Days $T_0=283.724065$ (BKJD)



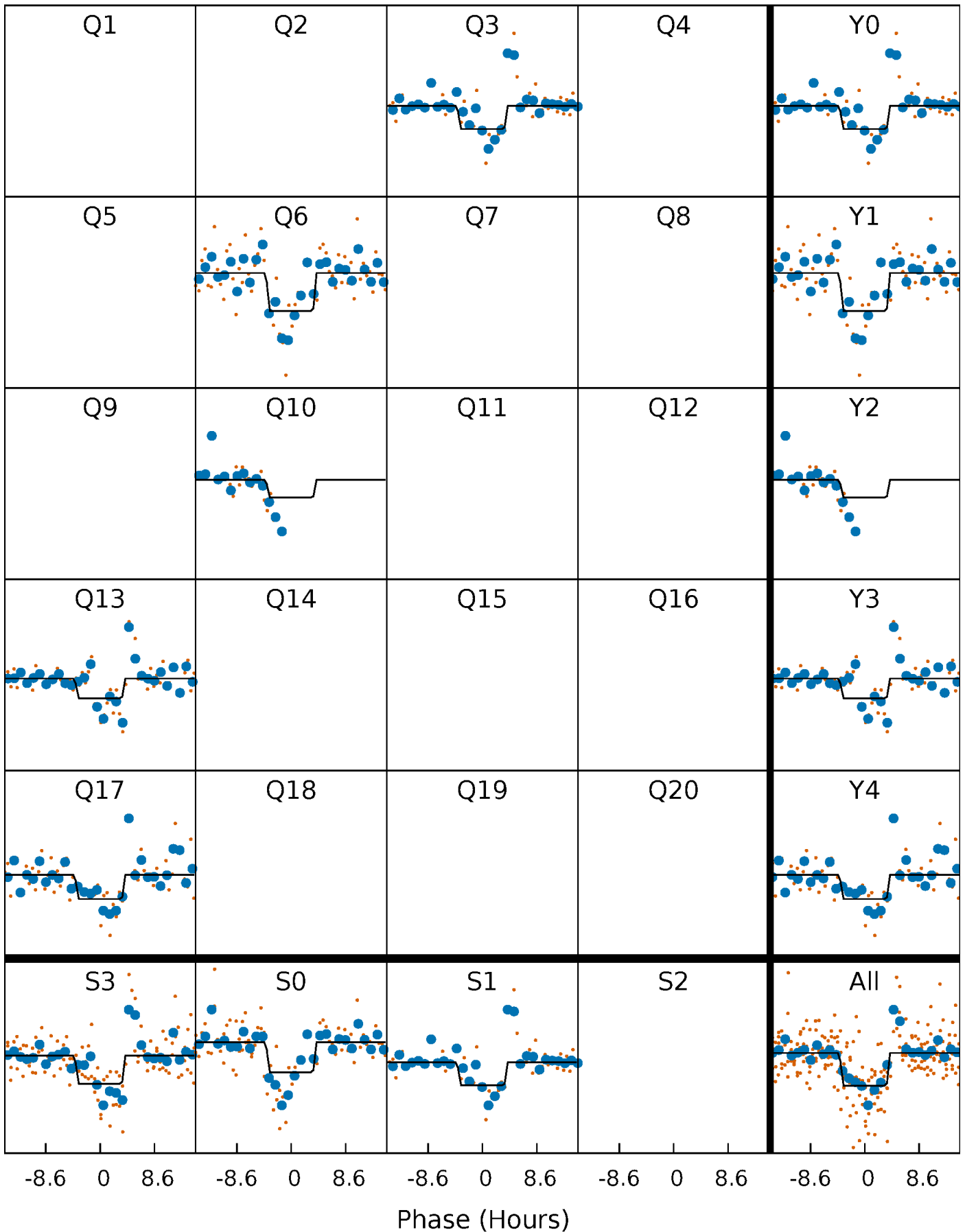
DV Quarter-Phased Transit Curves

TCE 005350822-01 P=326.676921 Days $T_0=283.724065$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

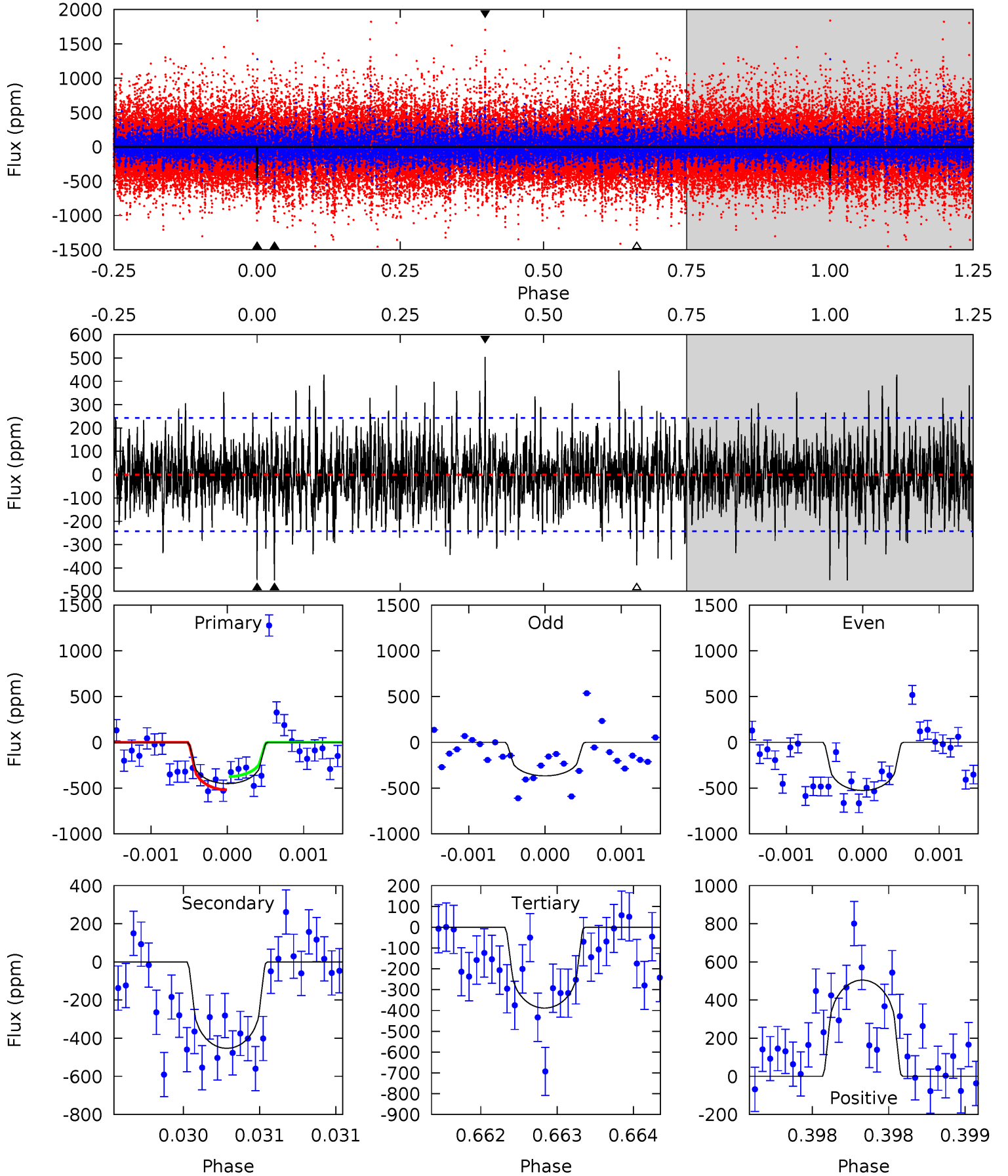
TCE 005350822-01 P=326.671324 Days $T_0=283.678217$ (BKJD)



DV Model-Shift Uniqueness Test

005350822-01, P = 326.676921 Days, E = 283.724065 Days

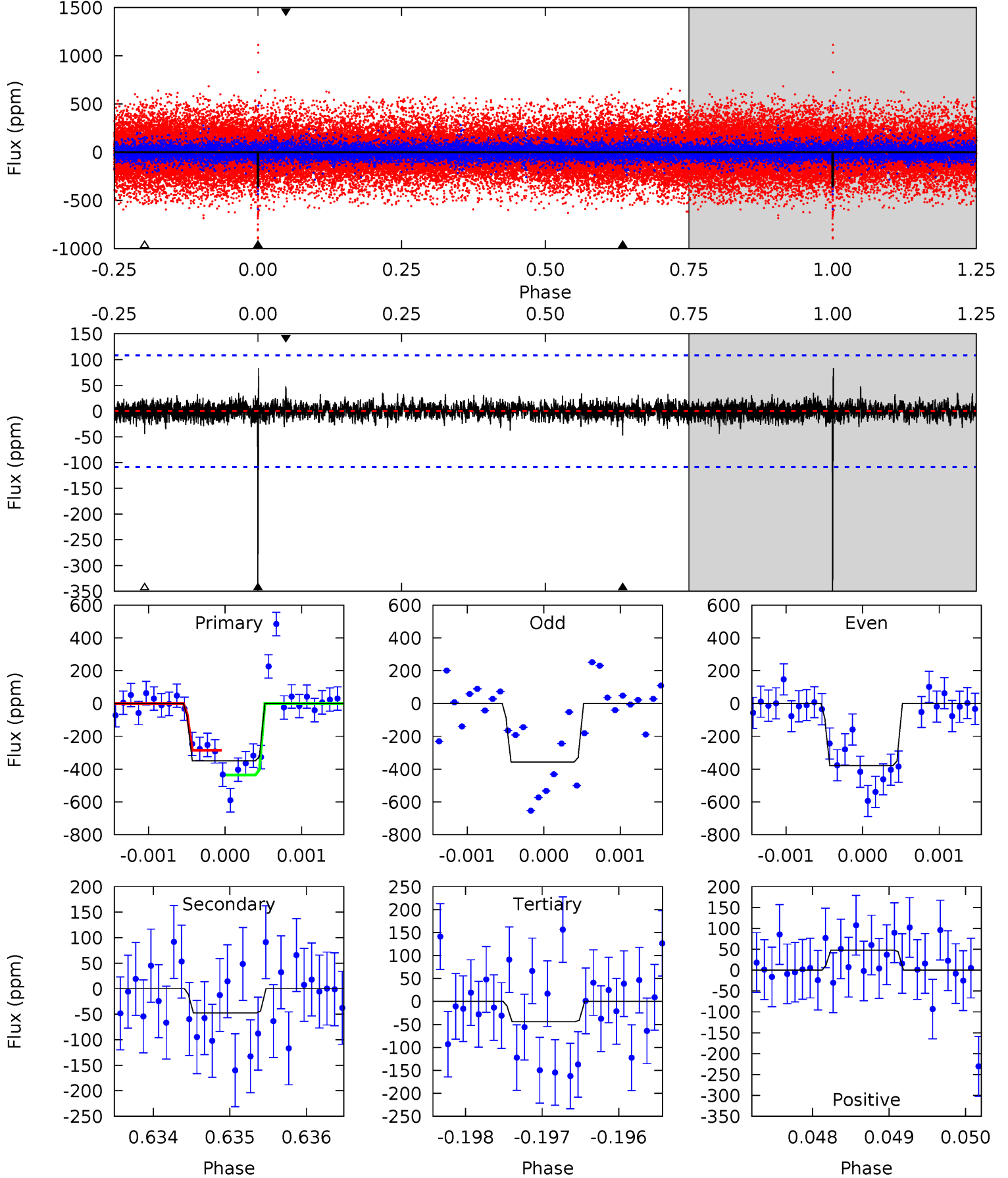
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	10.3	8.81	11.4	5.51	3.38	2.29	1.42	-1.21	1.46	-1.17	1.72	1.04	0.53	1.63



Alt Model-Shift Uniqueness Test

005350822-01, $P = 326.671324$ Days, $E = 283.678217$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	2.38	2.22	2.41	5.45	3.29	0.46	15.4	15.2	0.16	-0.03	0.58	1.25	0.19	3.84



Stellar Parameters For KIC 005350822

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5017^{+151}_{-136}	$4.516^{+0.080}_{-0.161}$	$-0.020^{+0.300}_{-0.250}$	$0.797^{+0.093}_{-0.084}$	$0.760^{+0.095}_{-0.055}$	$2.117^{+0.678}_{-0.622}$
	+3%/-3%	+2%/-4%	+1500%/-1250%	+12%/-11%	+12%/-7%	+32%/-29%
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 005350822-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-453 ± 44	$2.59^{+2.64}_{-1.71}$	303^{+15}_{-12}	4424^{+3006}_{-966}	$26934^{+222529}_{-20411}$
Alt.	-47 ± 20	$2.64^{+2.37}_{-1.86}$	304^{+13}_{-14}	3007^{+1514}_{-494}	2479^{+26870}_{-1834}

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 $A_{obs} \gg 1.0$

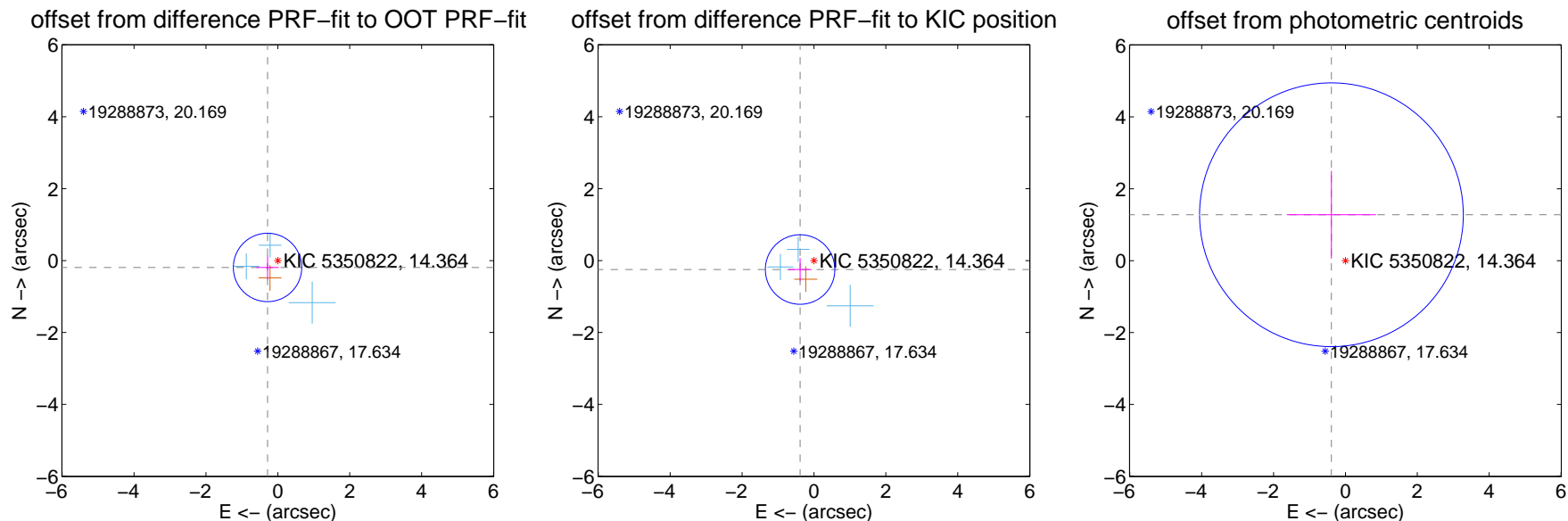
DV Centroid Data

Supplemental centroid analysis for 005350822-01. Kepler magnitude: 14.36. Transit SNR 6.49

There are 3 quarters with good PRF difference image offsets

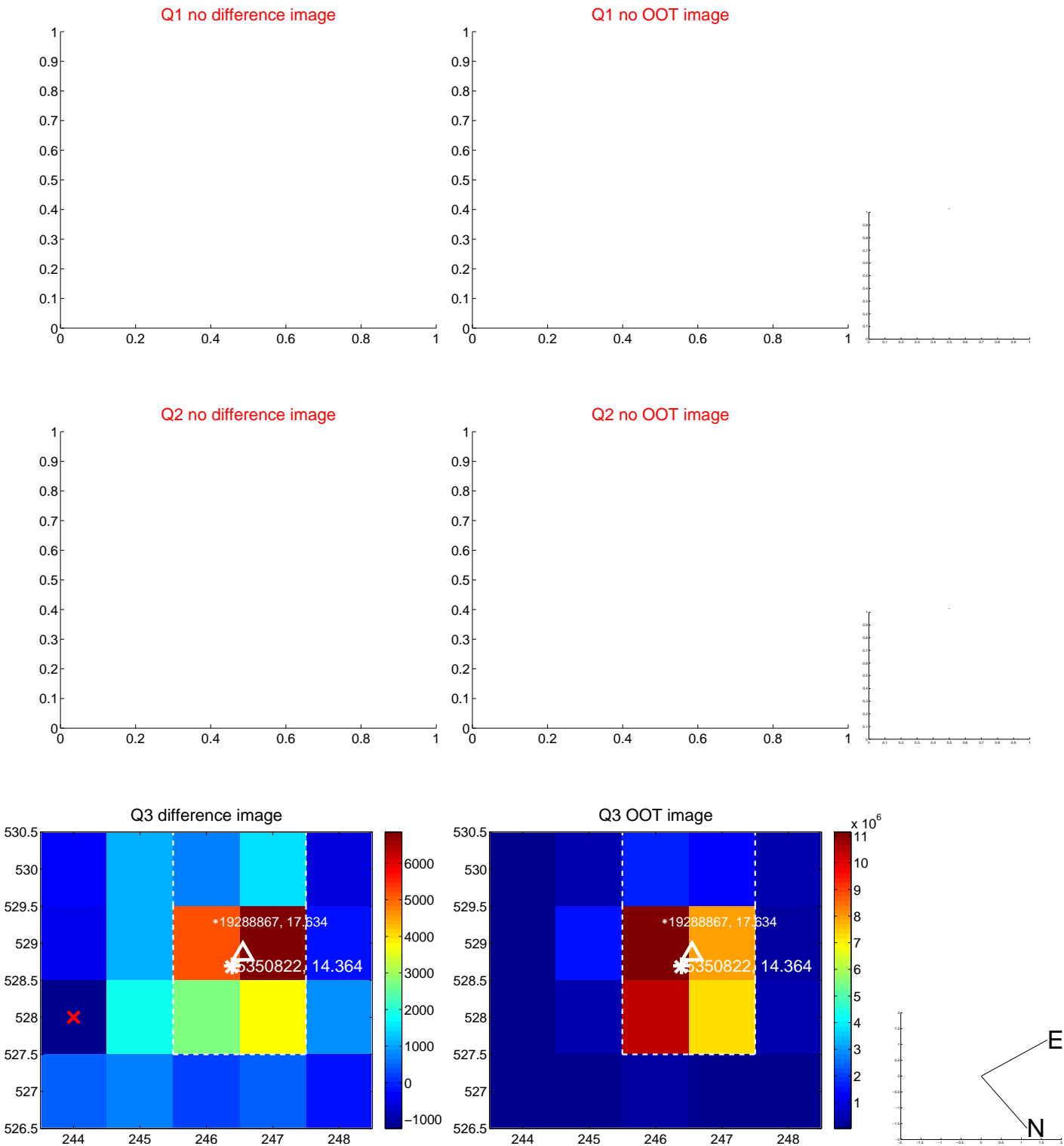
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.344 ± 0.317	1.09	0.287 ± 0.312	-0.191 ± 0.328
PRF-fit source offset from KIC position	0.459 ± 0.322	1.42	0.386 ± 0.325	-0.248 ± 0.315
photometric centroid source offset	1.33 ± 1.22	1.09	0.39 ± 1.24	1.28 ± 1.22



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.

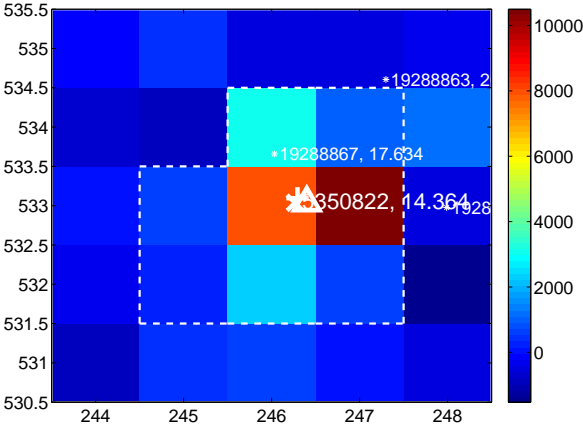
Q5 no difference image



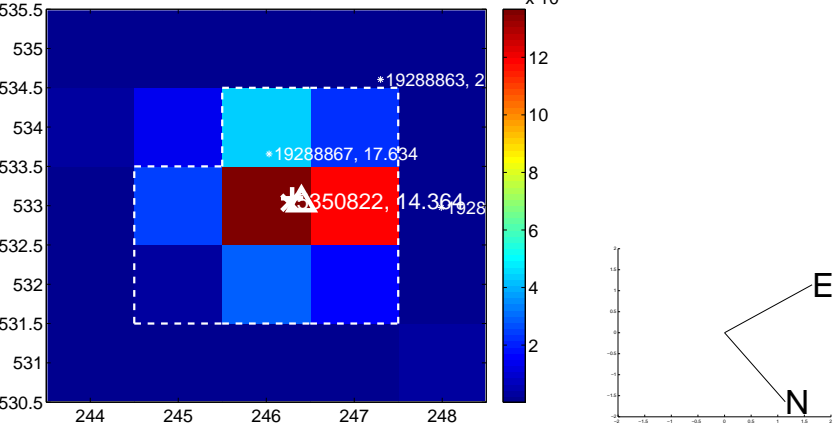
Q5 no OOT image



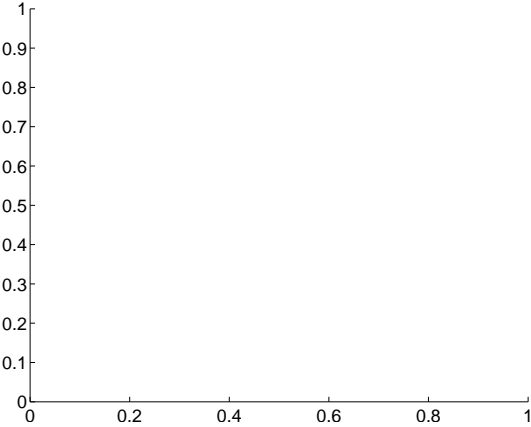
Q6 difference image



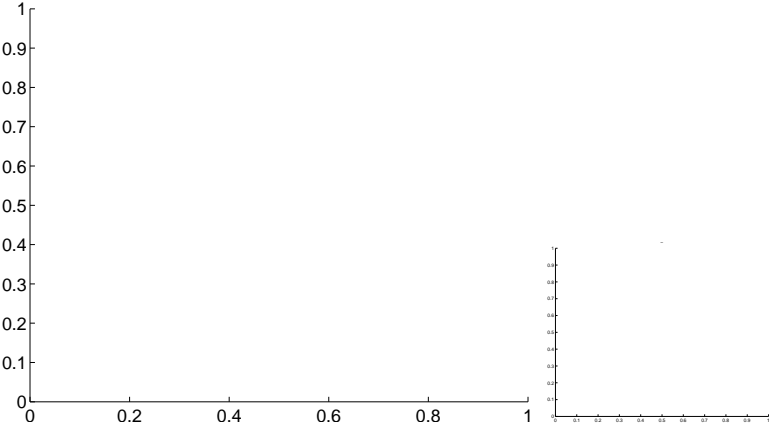
Q6 OOT image



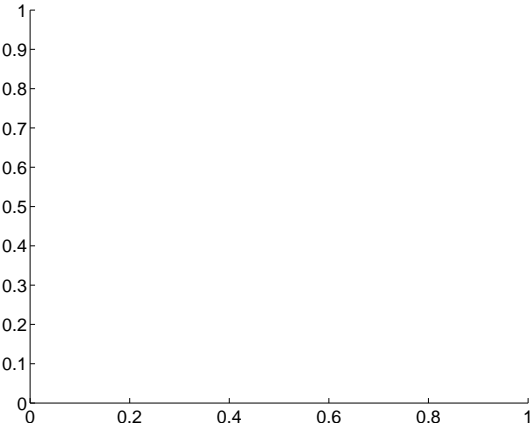
Q7 no difference image



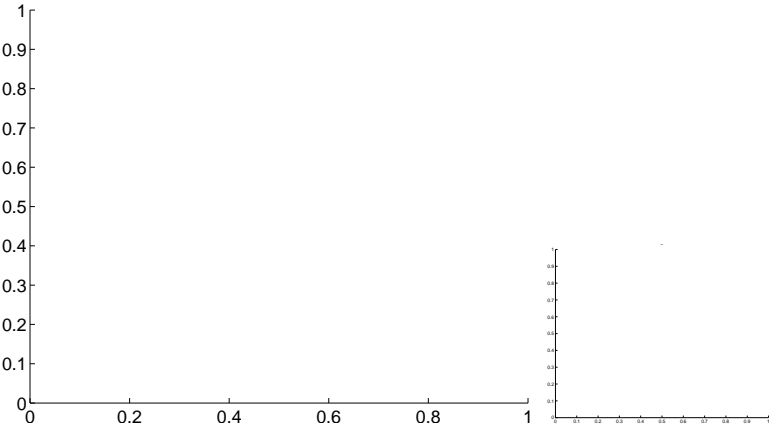
Q7 no OOT image



Q8 no difference image



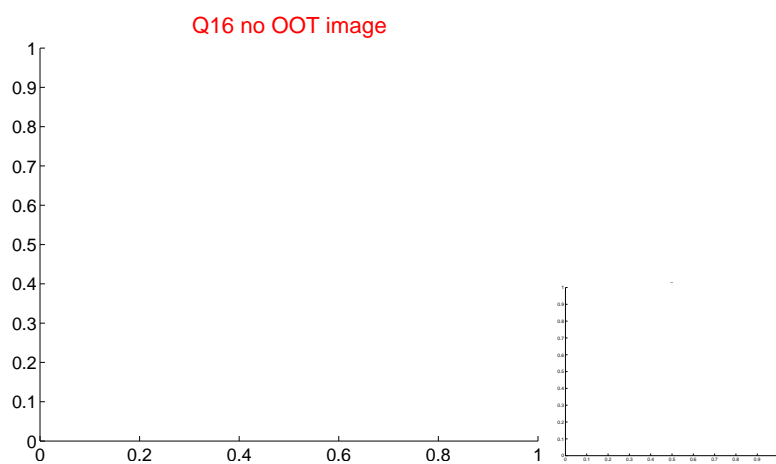
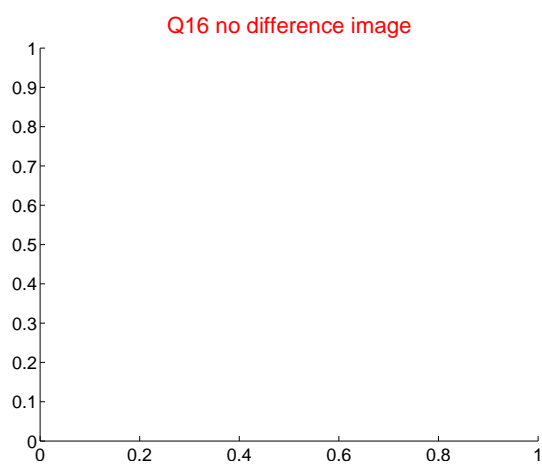
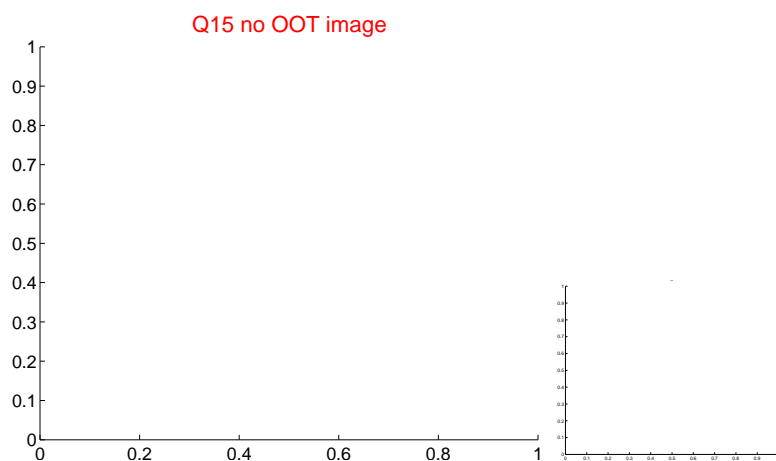
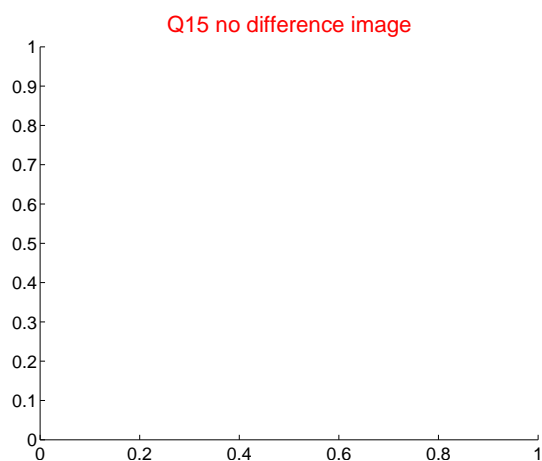
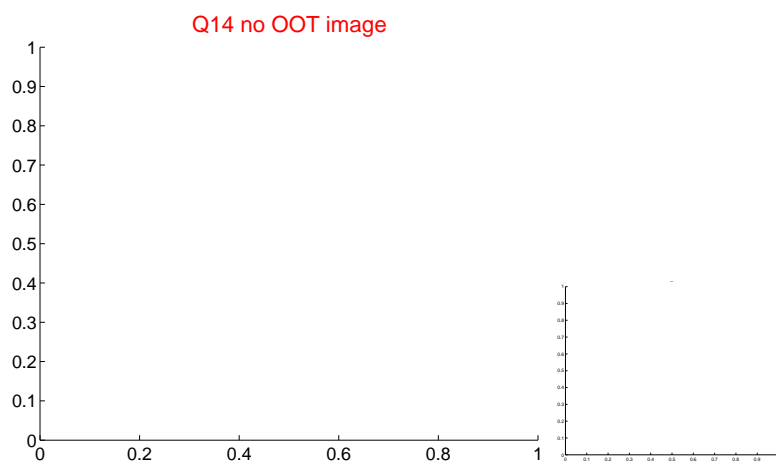
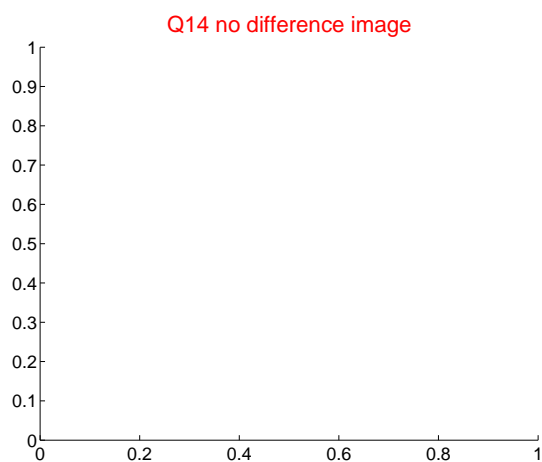
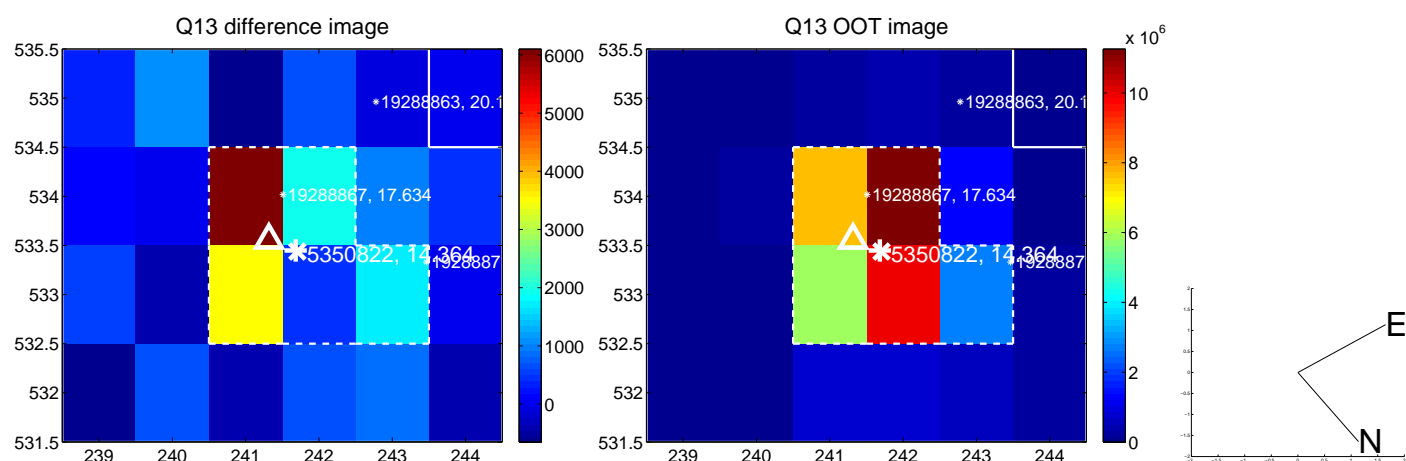
Q8 no OOT image



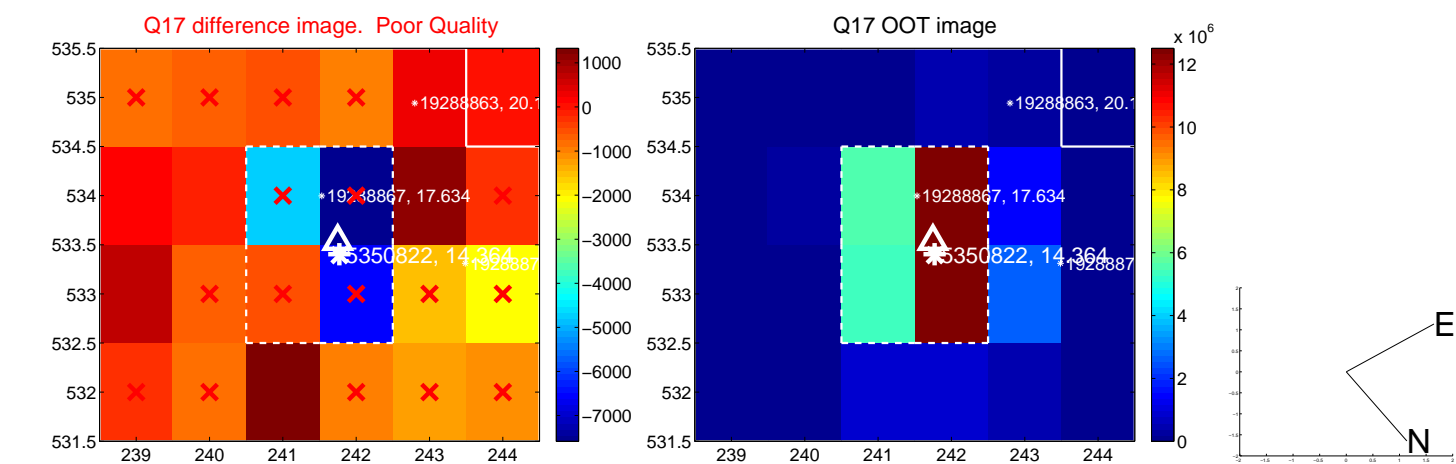
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



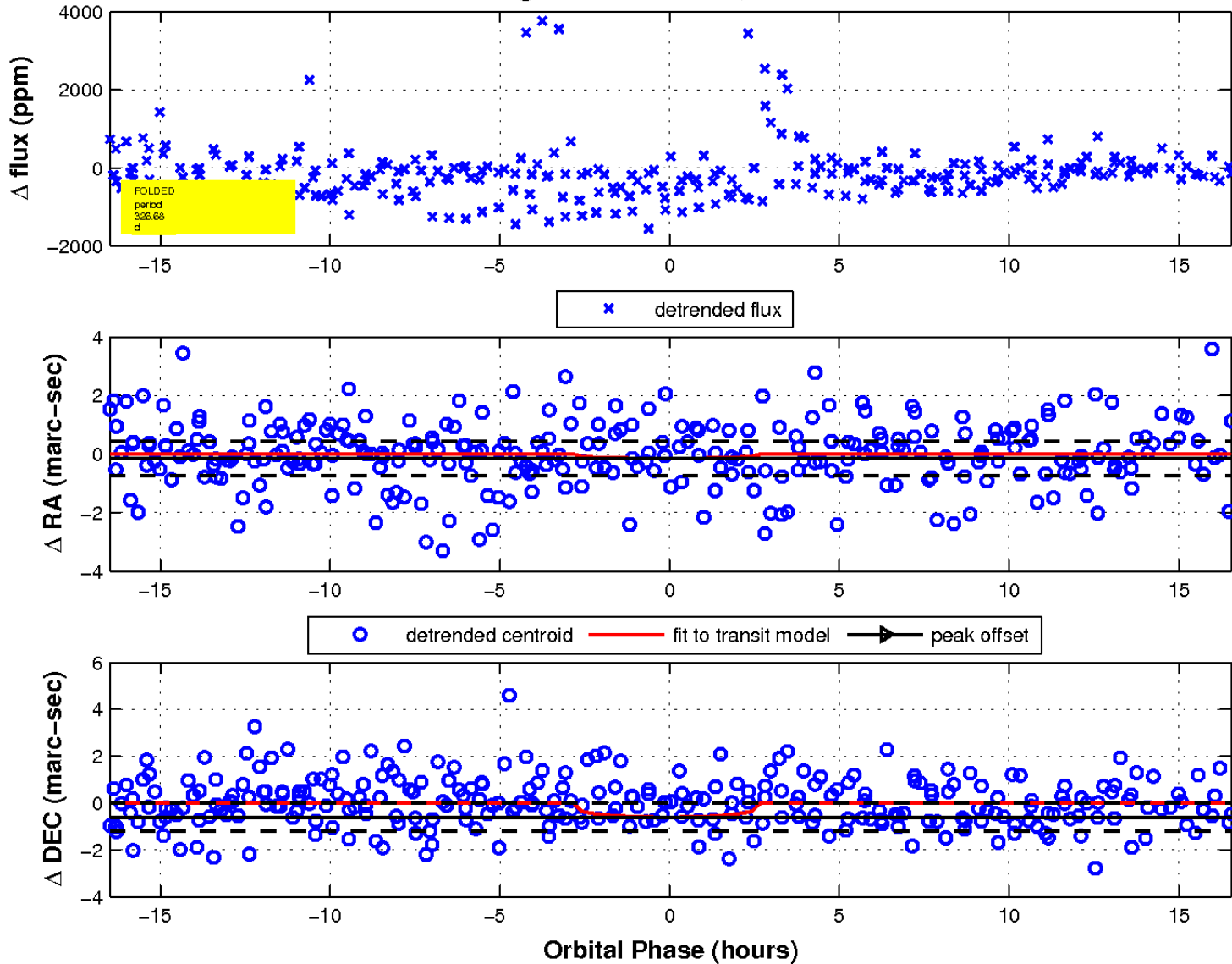
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

