

KIC 003540153

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})
003540153-01	OBS	No	1.379550	131.785709	76.9	9.341	9.7	13.0	0.76	5772	0.66	1092.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003540153-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET—HALO_GHOST

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

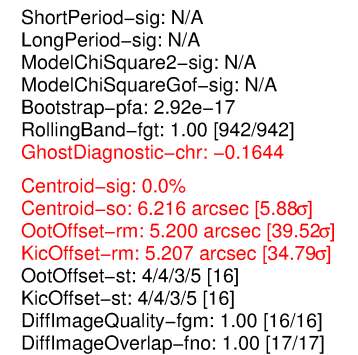
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

Ephemeris Match Information For 003540153-01

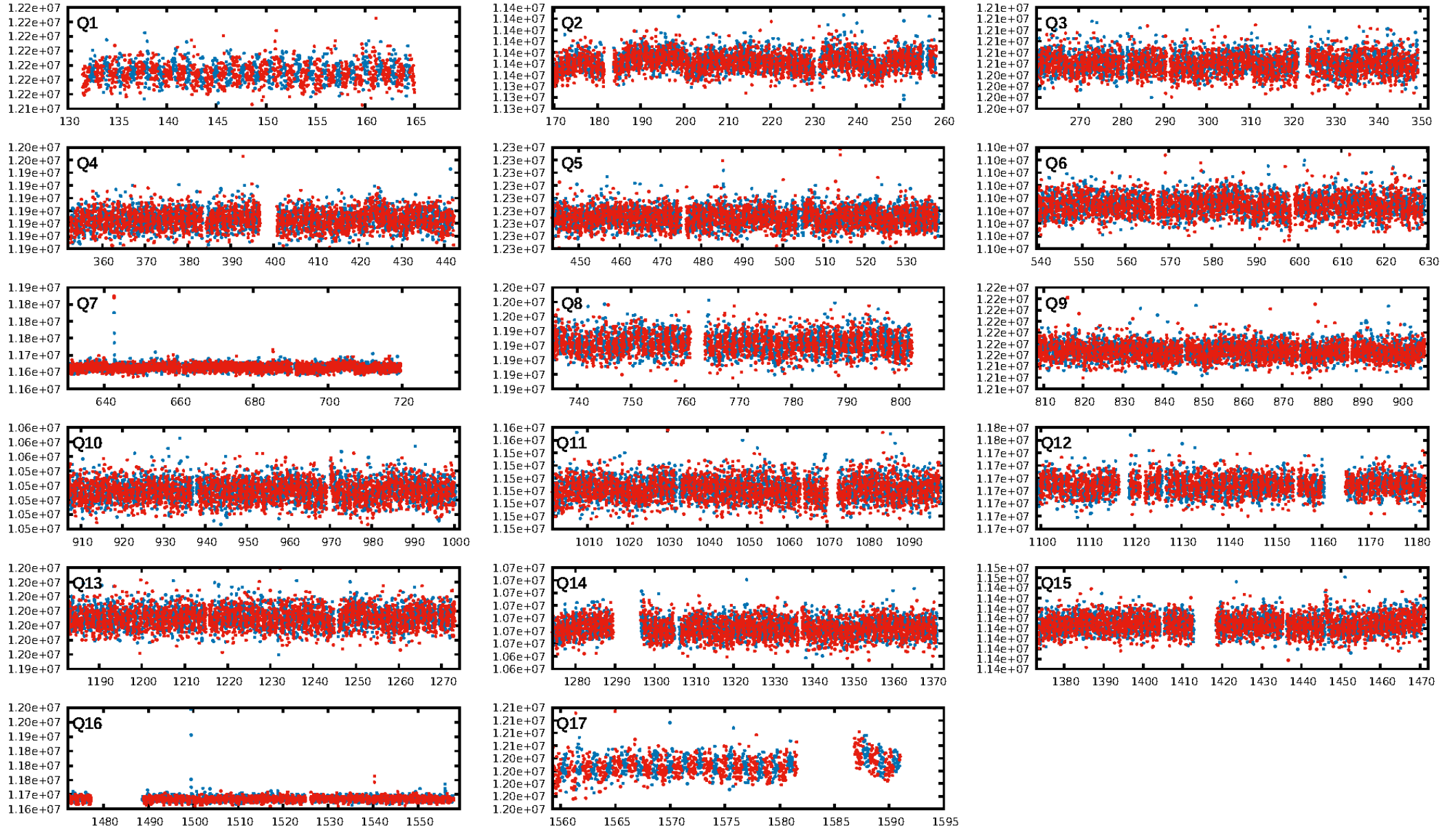
No Significant Match Found

KIC: 3540153 Candidate: 1 of 1 Period: 1.380 d

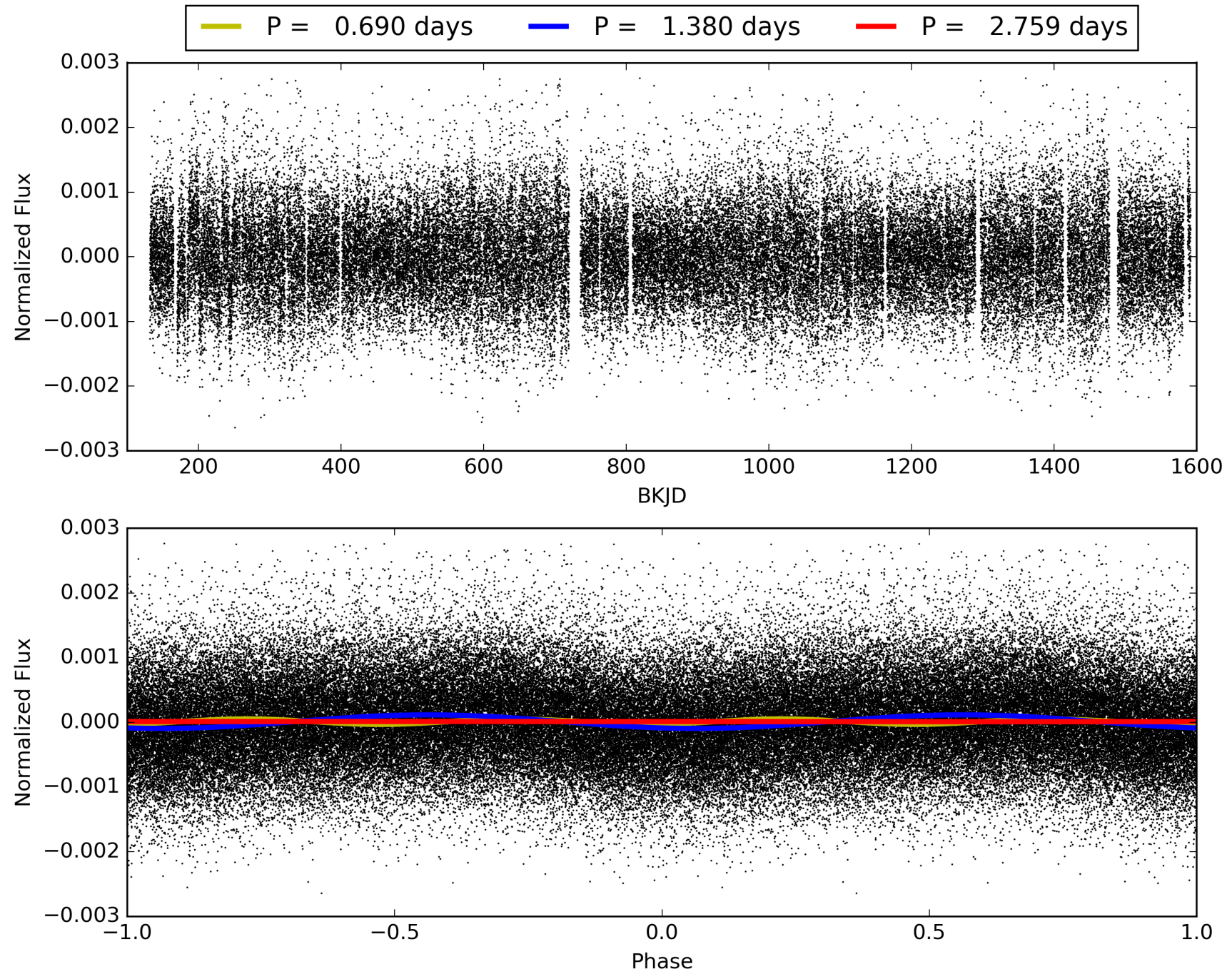


This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 003540153-01, PDC Light Curves

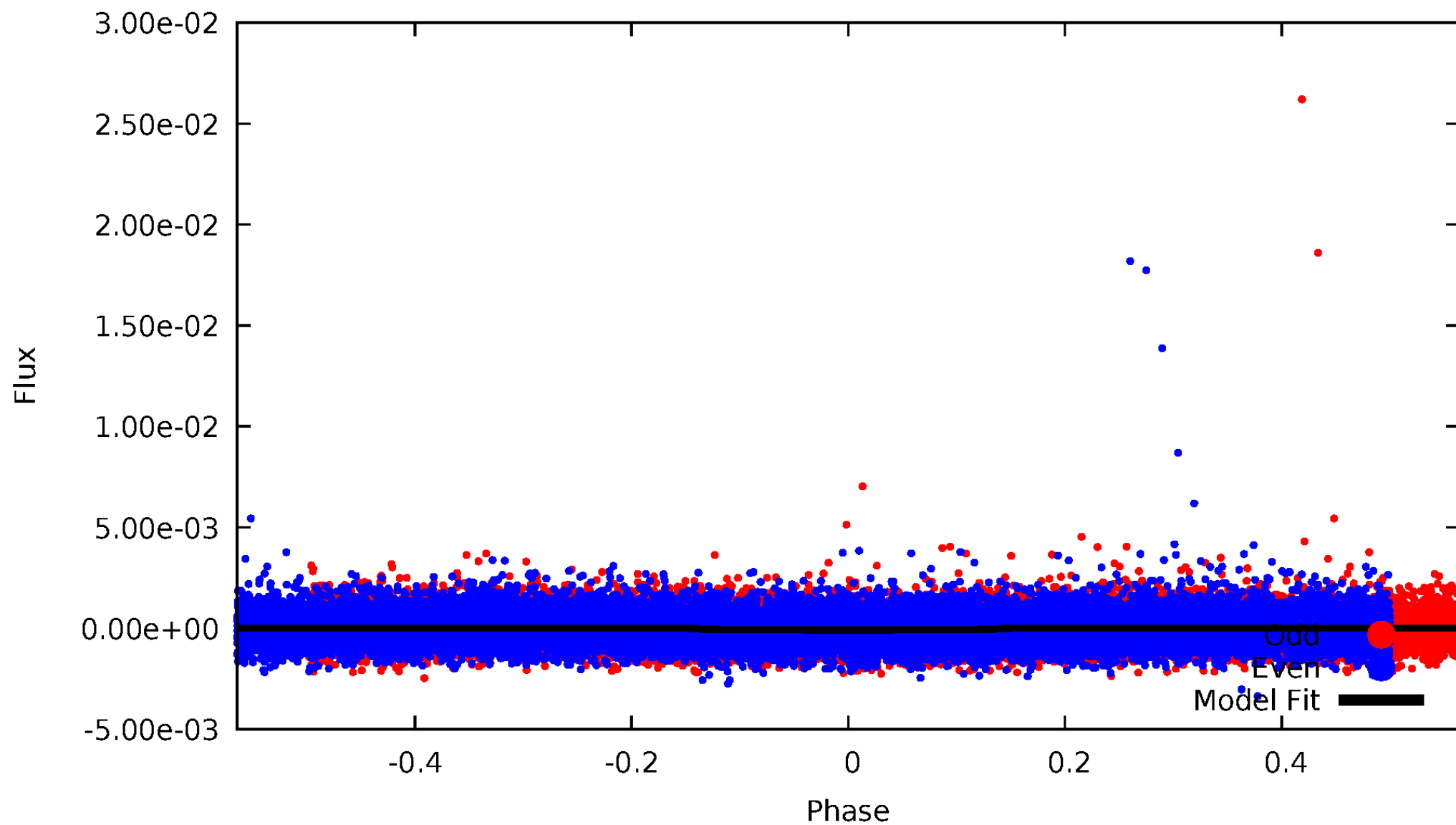


TCE 003540153-01



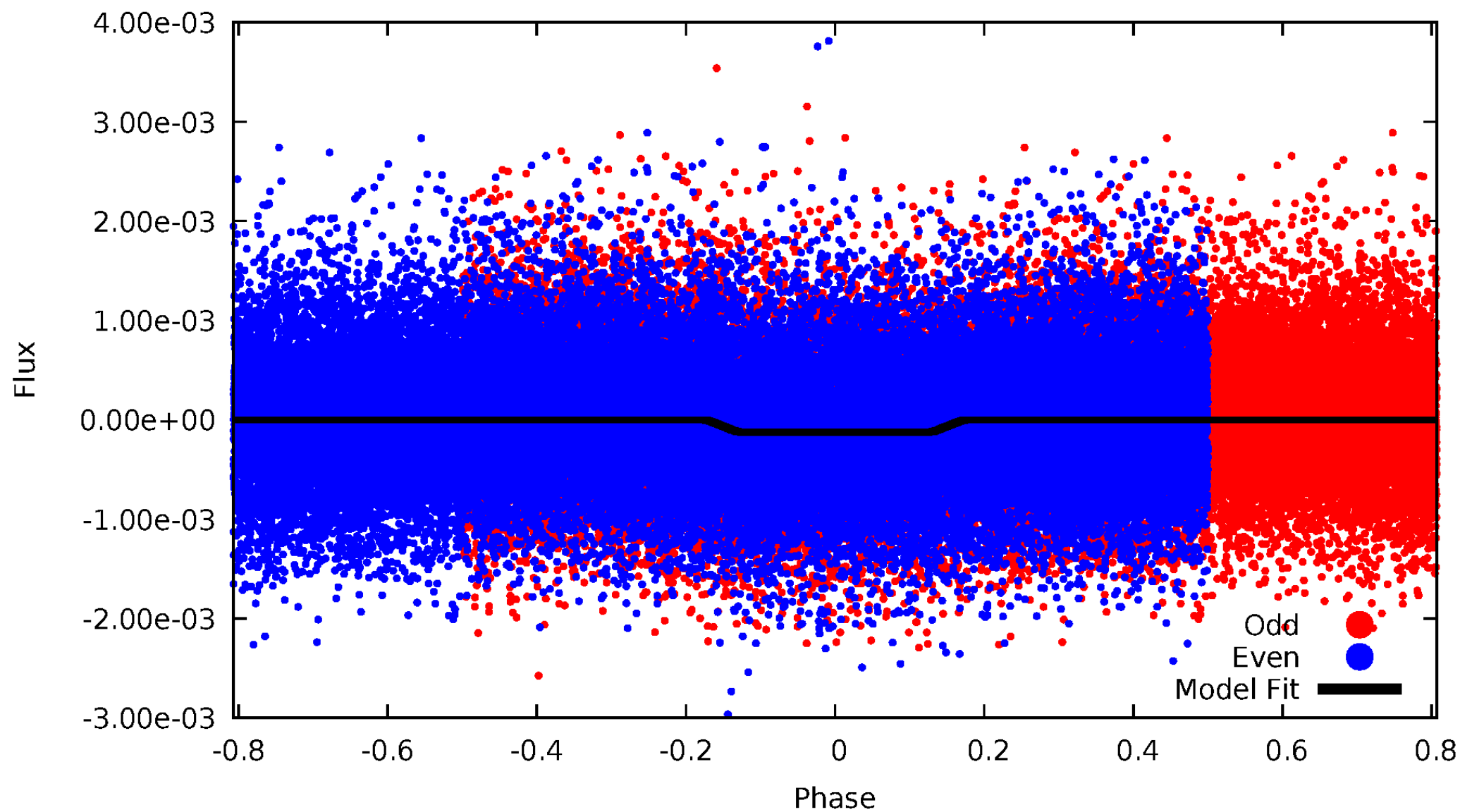
DV Odd/Even

TCE 003540153-01



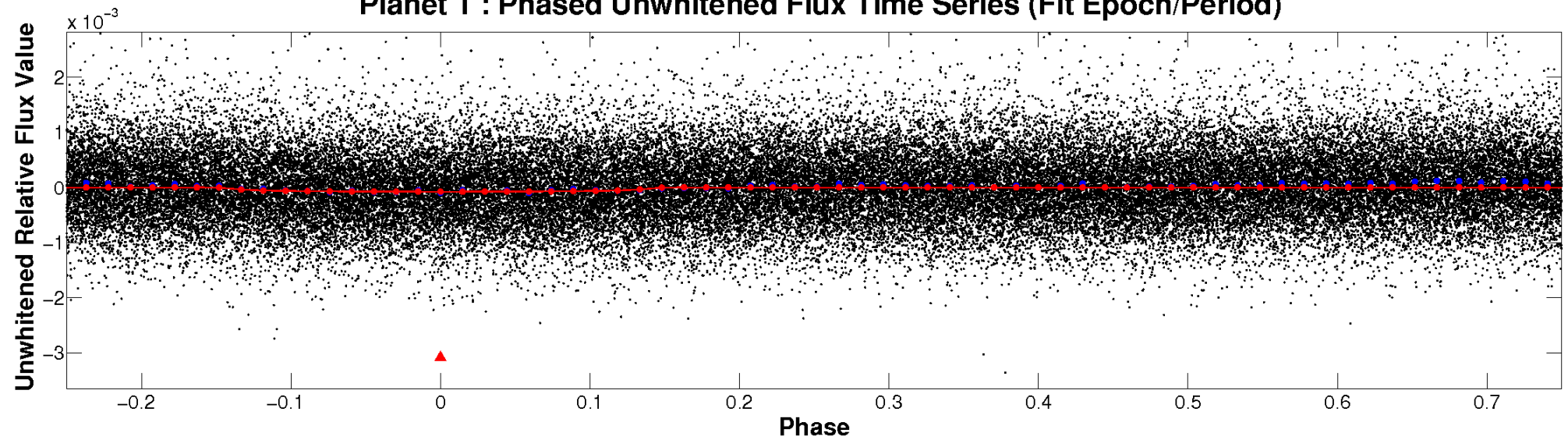
ALT Odd/Even

TCE 003540153-01

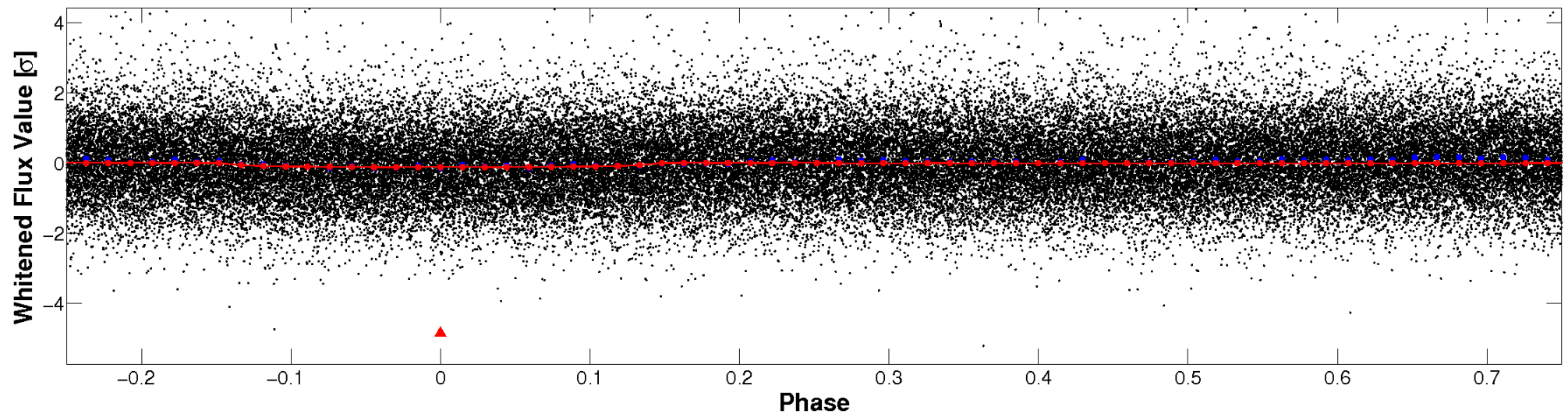


Non-Whitened Vs. Whitened Light Curve

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

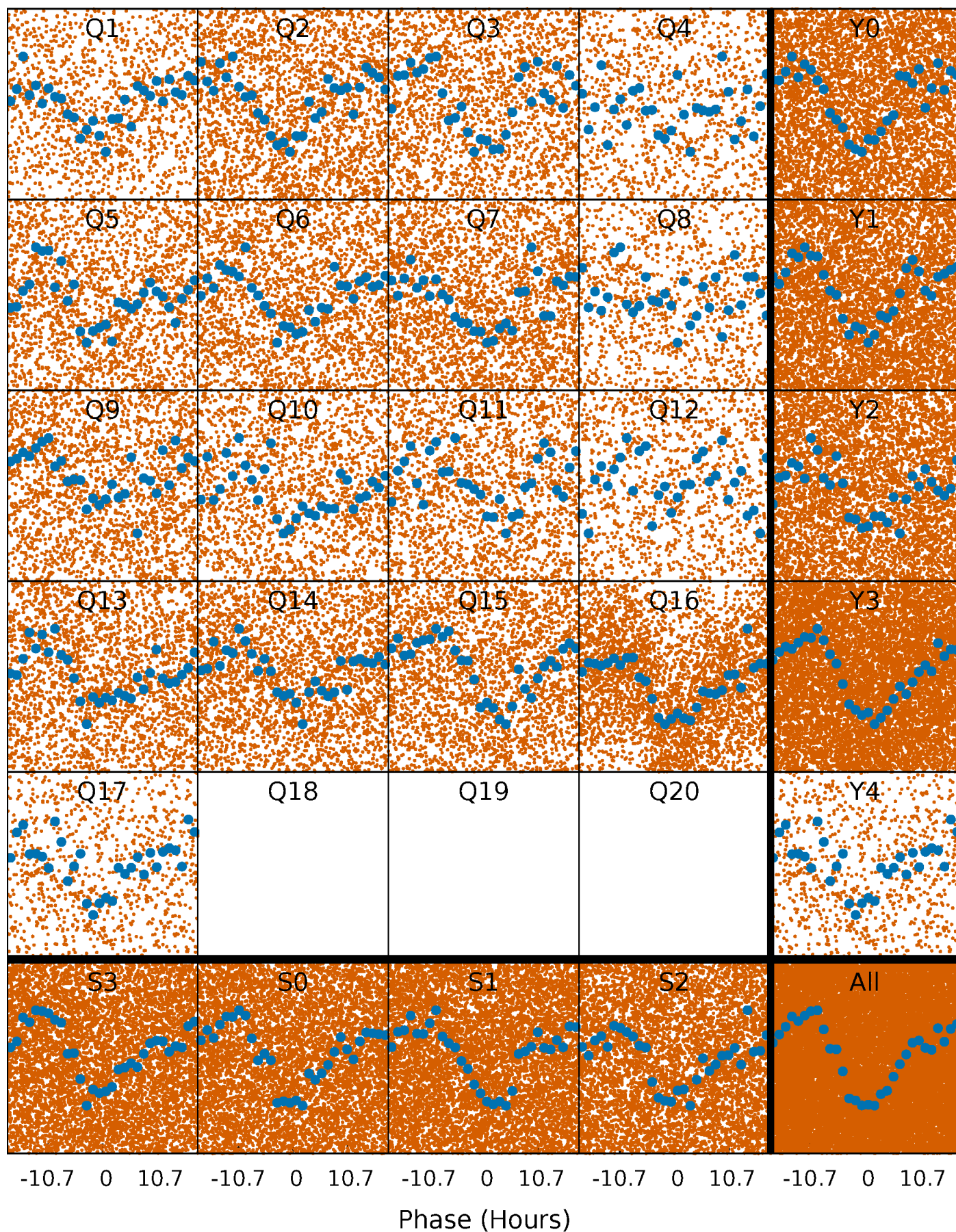


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



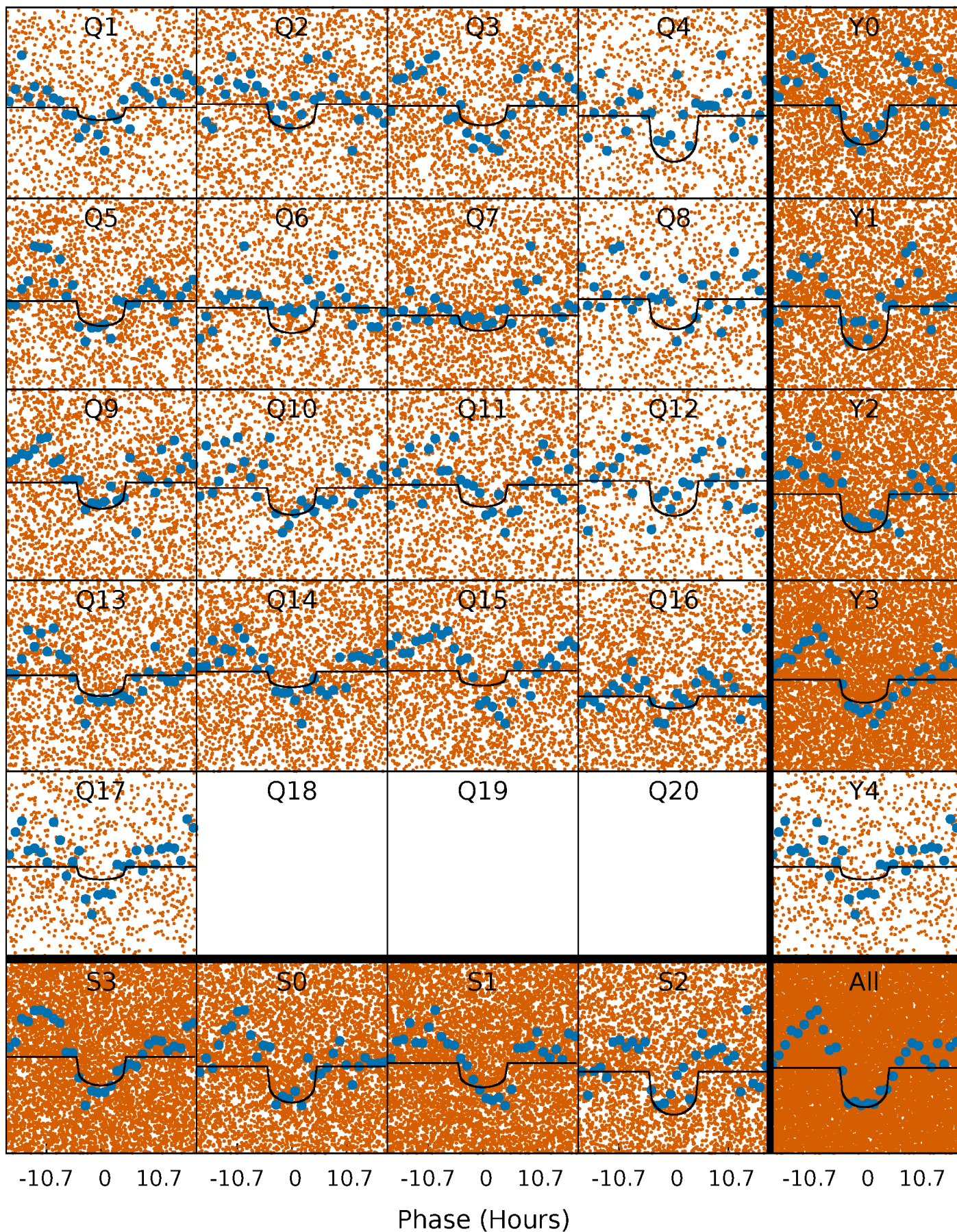
PDC Quarter-Phased Transit Curves

TCE 003540153-01 P= 1.379550 Days $T_0=131.785709$ (BKJD)



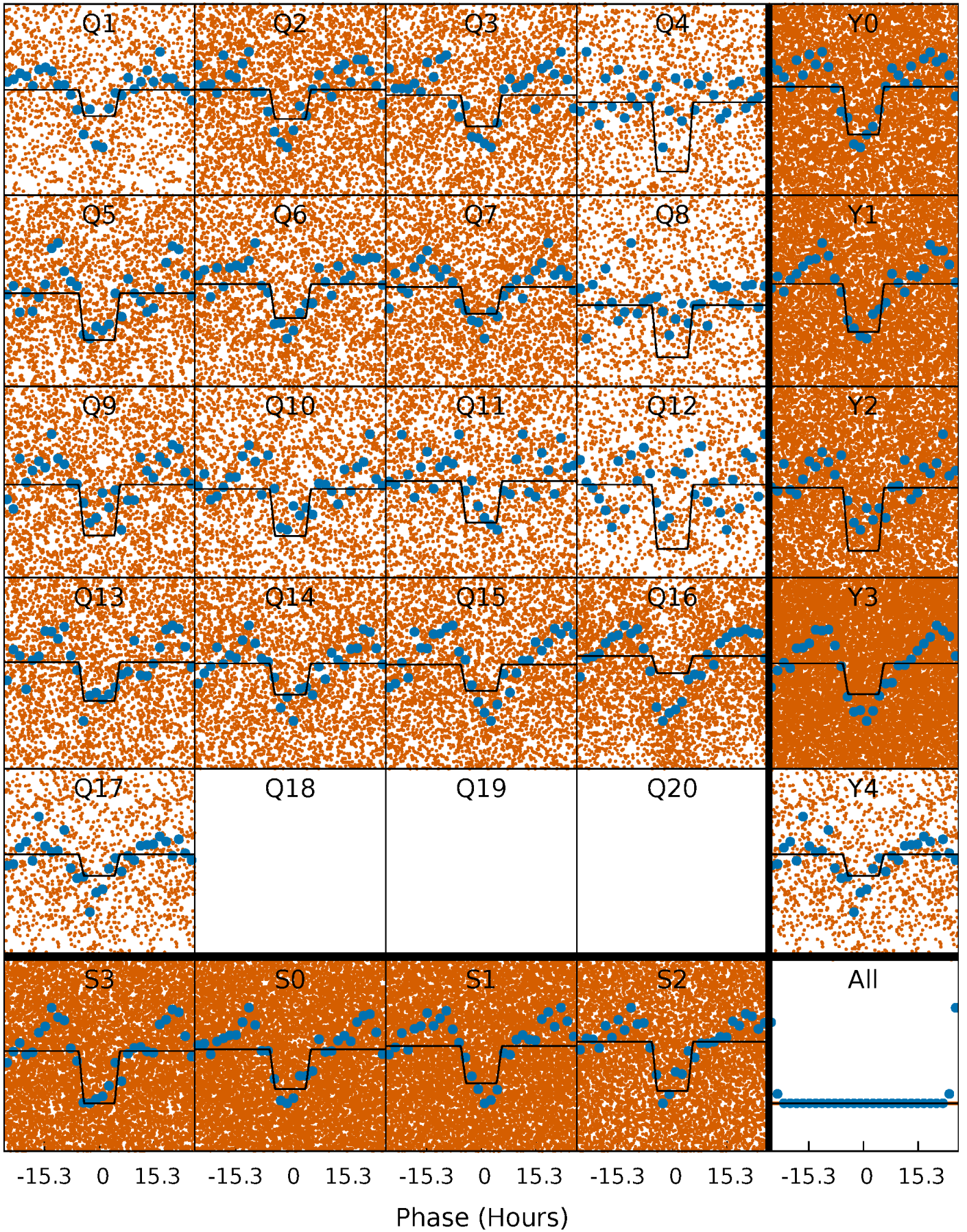
DV Quarter-Phased Transit Curves

TCE 003540153-01 P= 1.379550 Days $T_0=131.785709$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

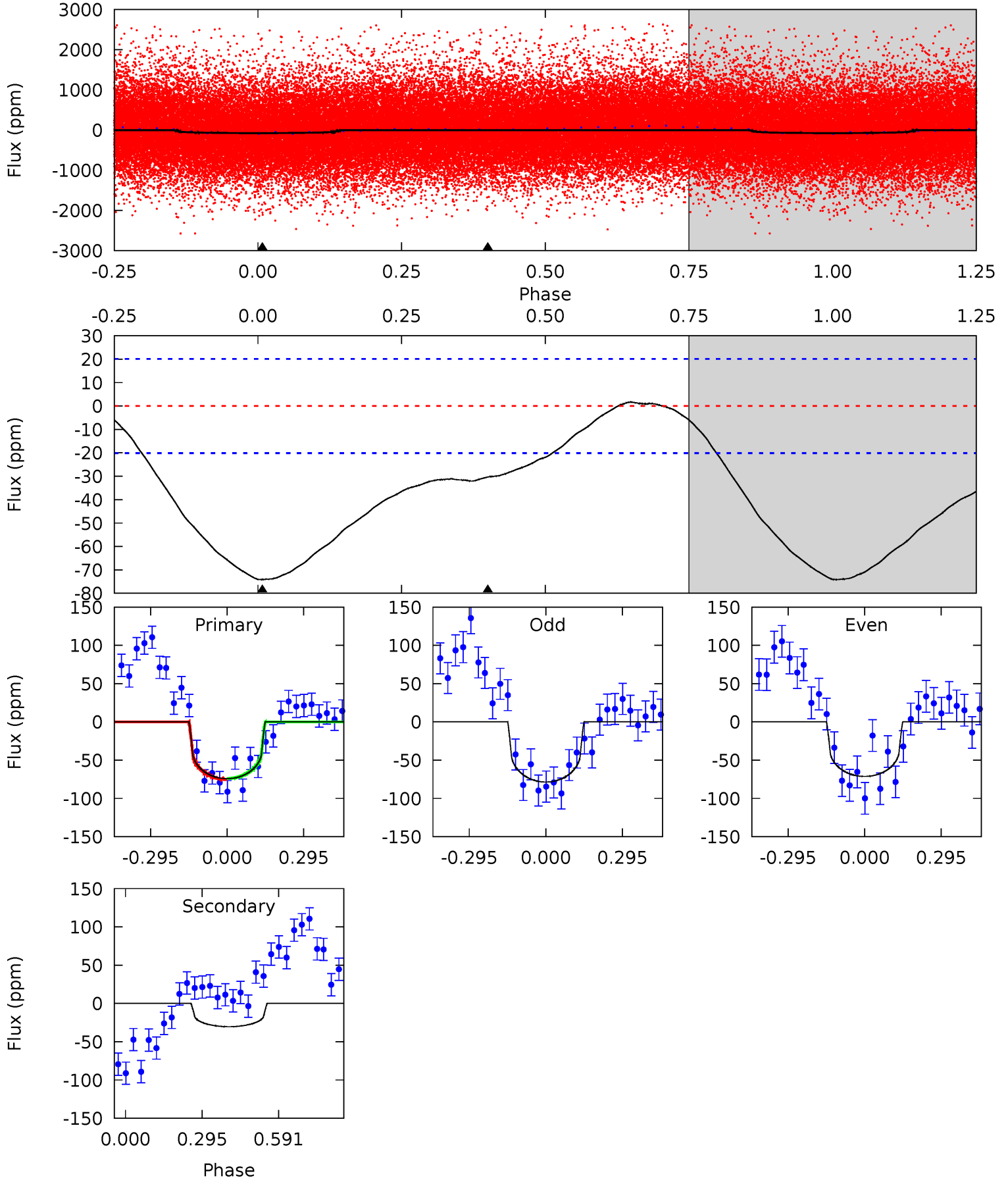
TCE 003540153-01 P= 1.379594 Days $T_0=131.789296$ (BKJD)



DV Model-Shift Uniqueness Test

003540153-01, P = 1.379550 Days, E = 130.406159 Days

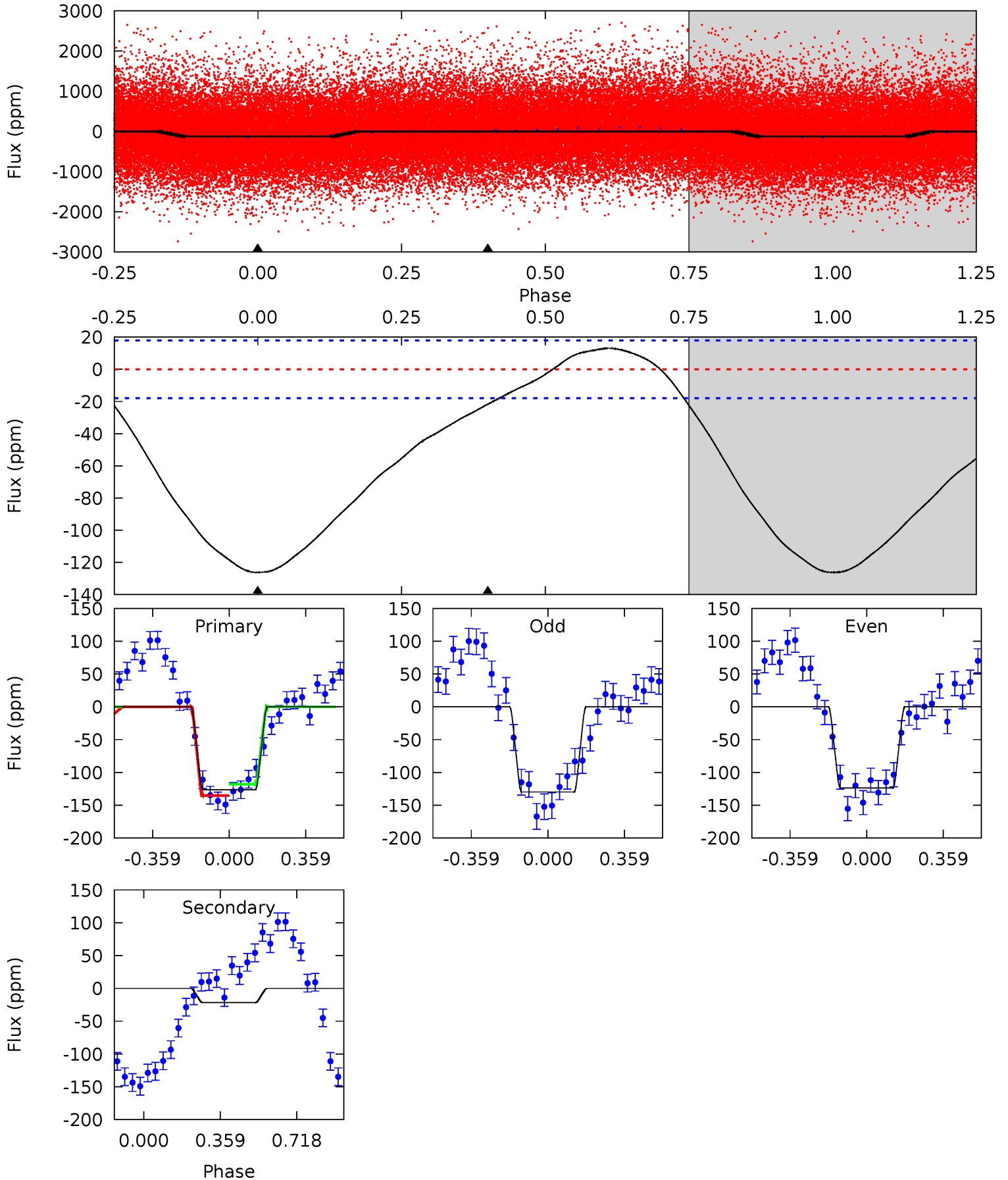
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.0	6.52	0	0	4.33	1.05	0.50	16.0	16.0	6.52	6.52	0.79	1.17	0.02	0.15



Alt Model-Shift Uniqueness Test

003540153-01, P = 1.379594 Days, E = 130.409702 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.2	5.19	0	0	4.29	0.92	2.33	30.2	30.2	5.19	5.19	0.73	1.06	0.09	2.06



Stellar Parameters For KIC 003540153

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5772^{+157}_{-174}	$4.601^{+0.034}_{-0.136}$	$-0.560^{+0.300}_{-0.300}$	$0.757^{+0.154}_{-0.061}$	$0.845^{+0.077}_{-0.095}$	$2.745^{+0.500}_{-1.085}$
	+3%/-3%	+1%/-3%	+54%/-54%	+20%/-8%	+9%/-11%	+18%/-40%
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 003540153-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-30 ± 5	$0.97^{+0.89}_{-0.64}$	2086^{+107}_{-85}	4273^{+2584}_{-945}	$9.376^{+66.755}_{-6.964}$
Alt.	-22 ± 4	$1.19^{+0.96}_{-0.74}$	2077^{+117}_{-82}	3689^{+1728}_{-698}	$4.193^{+25.895}_{-2.879}$

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

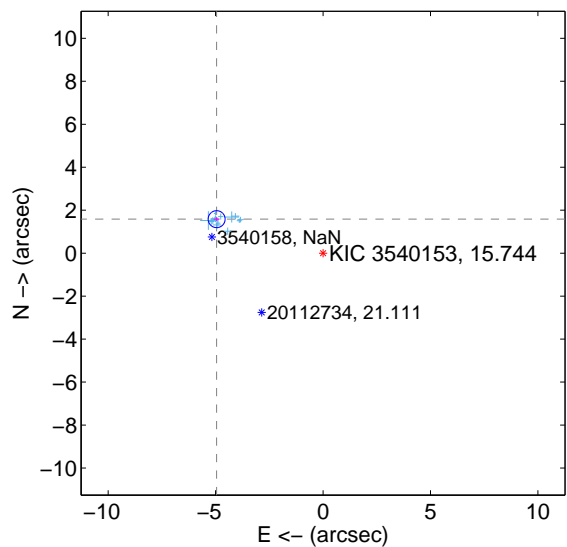
Supplemental centroid analysis for 003540153-01. Kepler magnitude: 15.74. Transit SNR 13.05

There are 16 quarters with good PRF difference image offsets

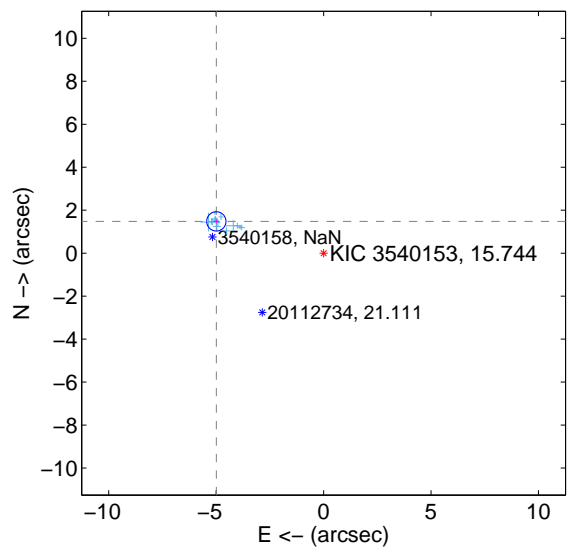
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.200 ± 0.132	39.52	4.953 ± 0.135	1.583 ± 0.081
PRF-fit source offset from KIC position	5.207 ± 0.150	34.79	4.992 ± 0.145	1.480 ± 0.085
photometric centroid source offset	6.22 ± 1.06	5.88	4.95 ± 1.09	3.76 ± 0.99

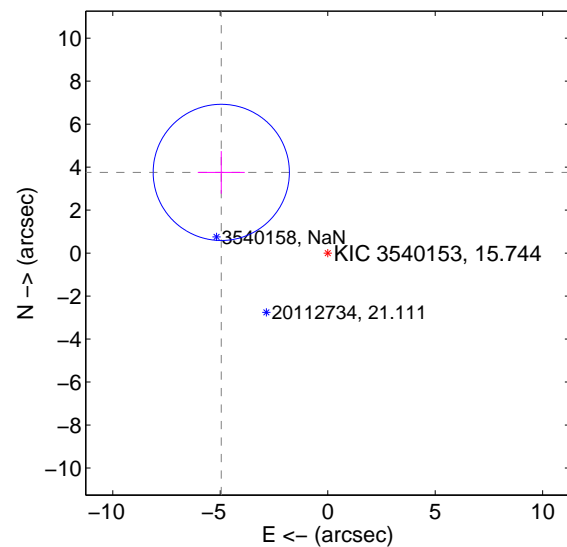
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

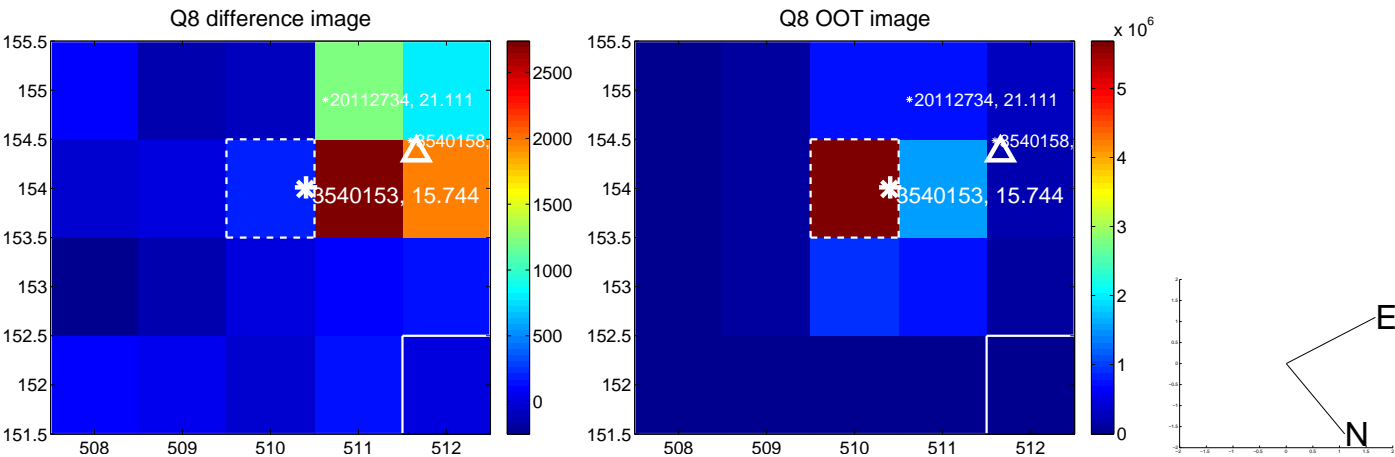
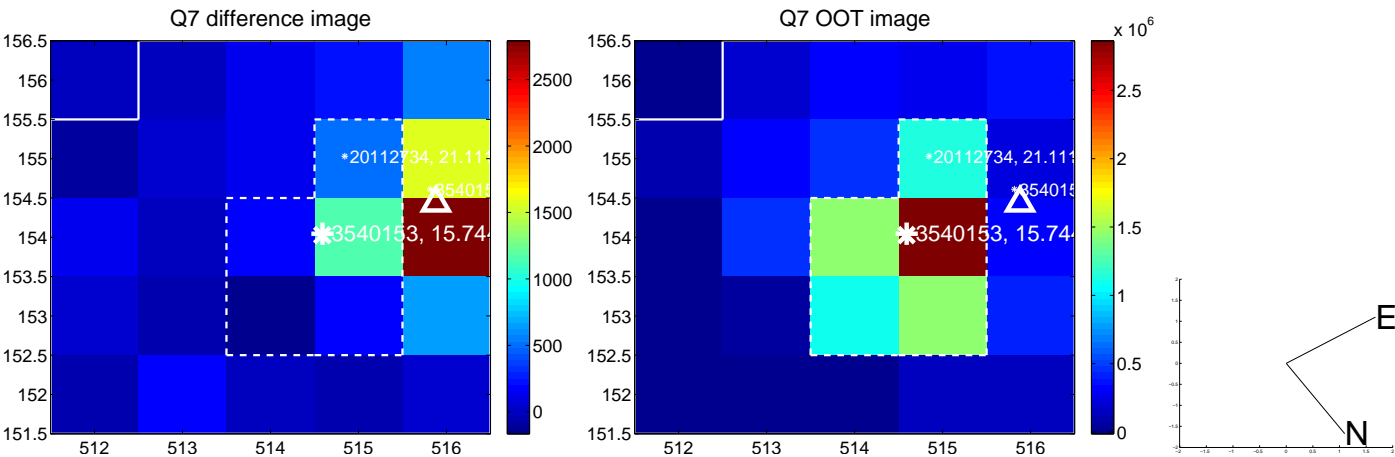
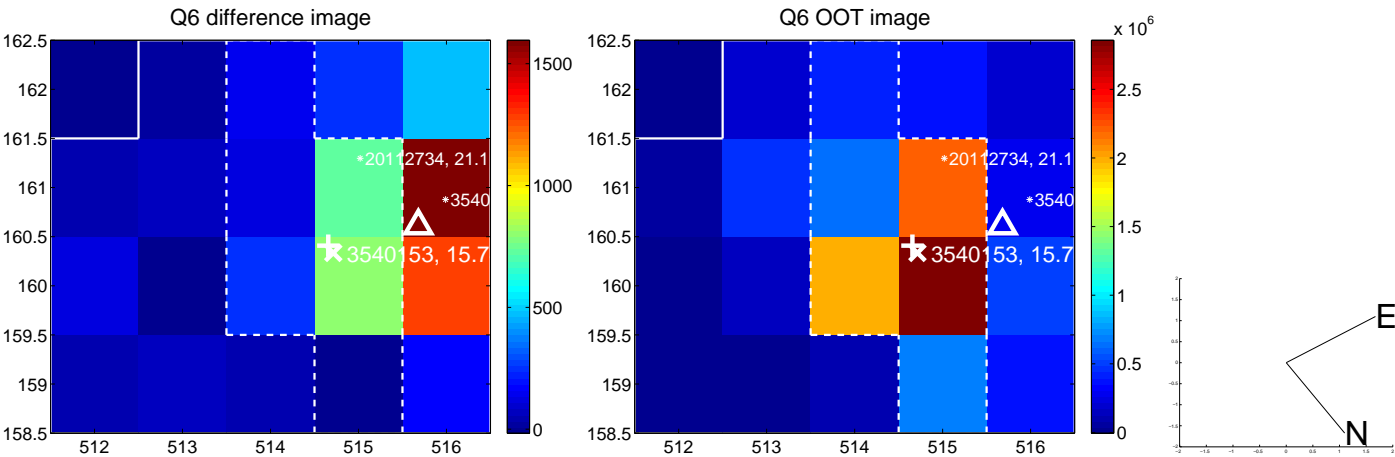
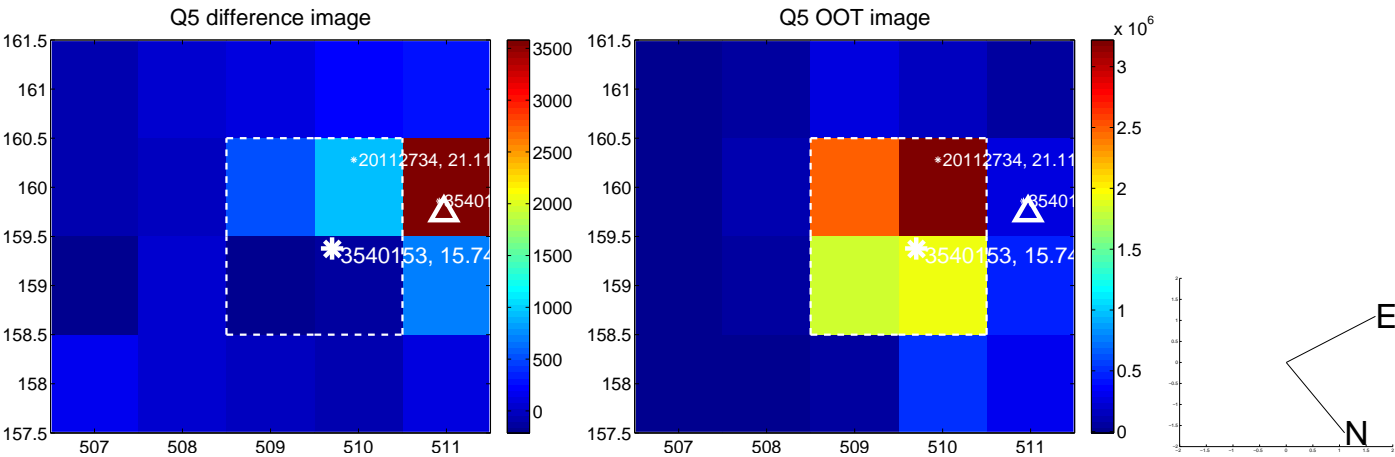


offset from photometric centroids

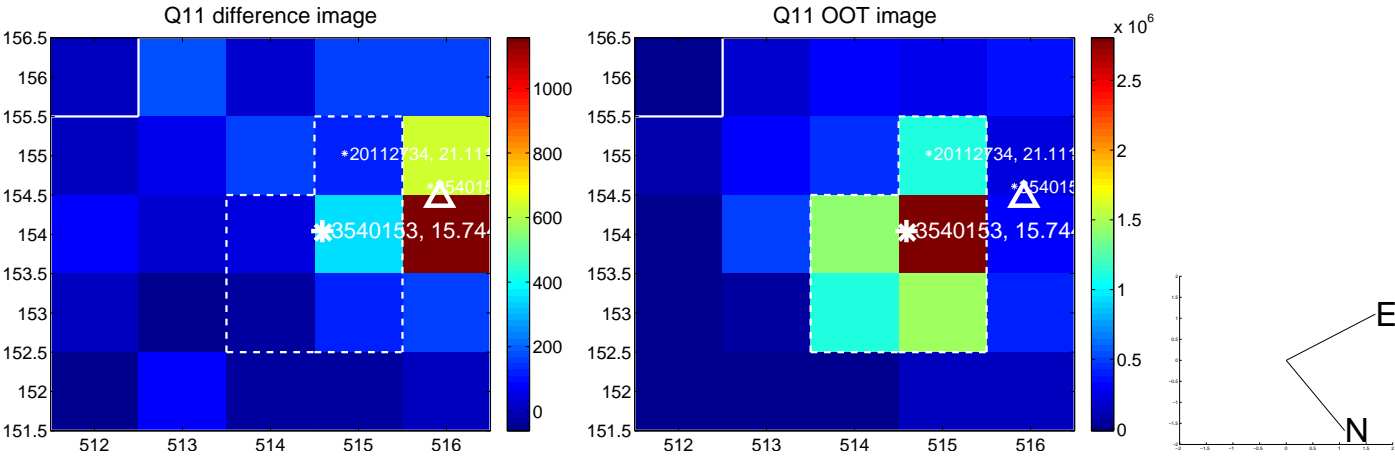
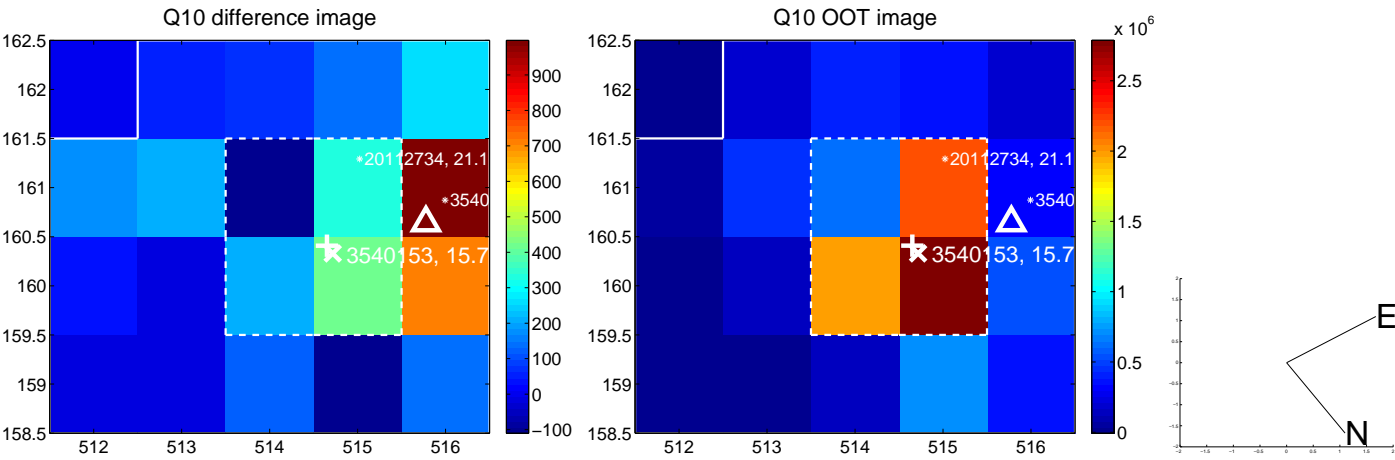
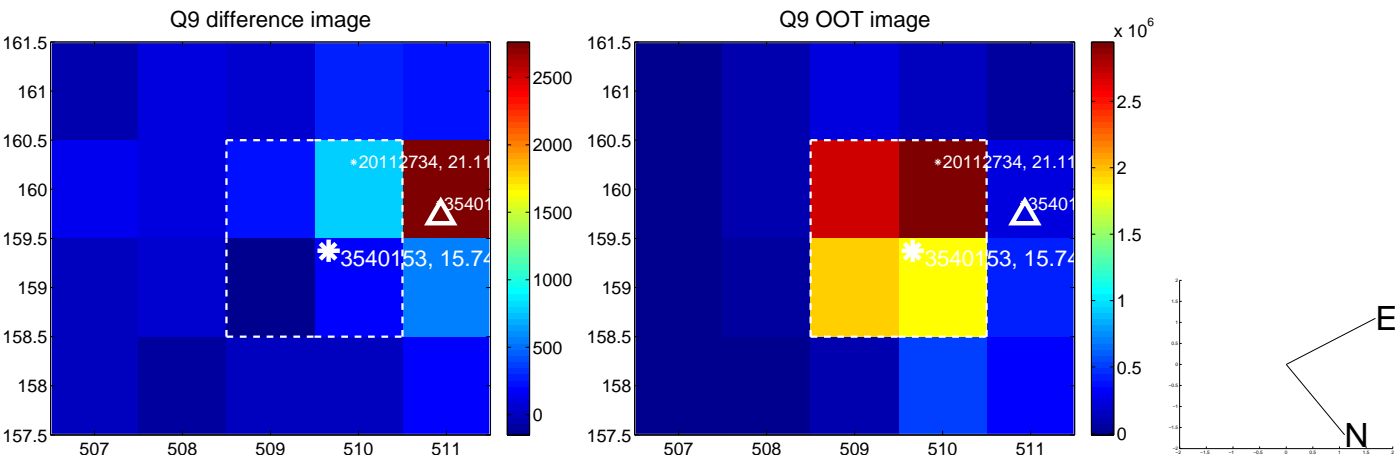


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

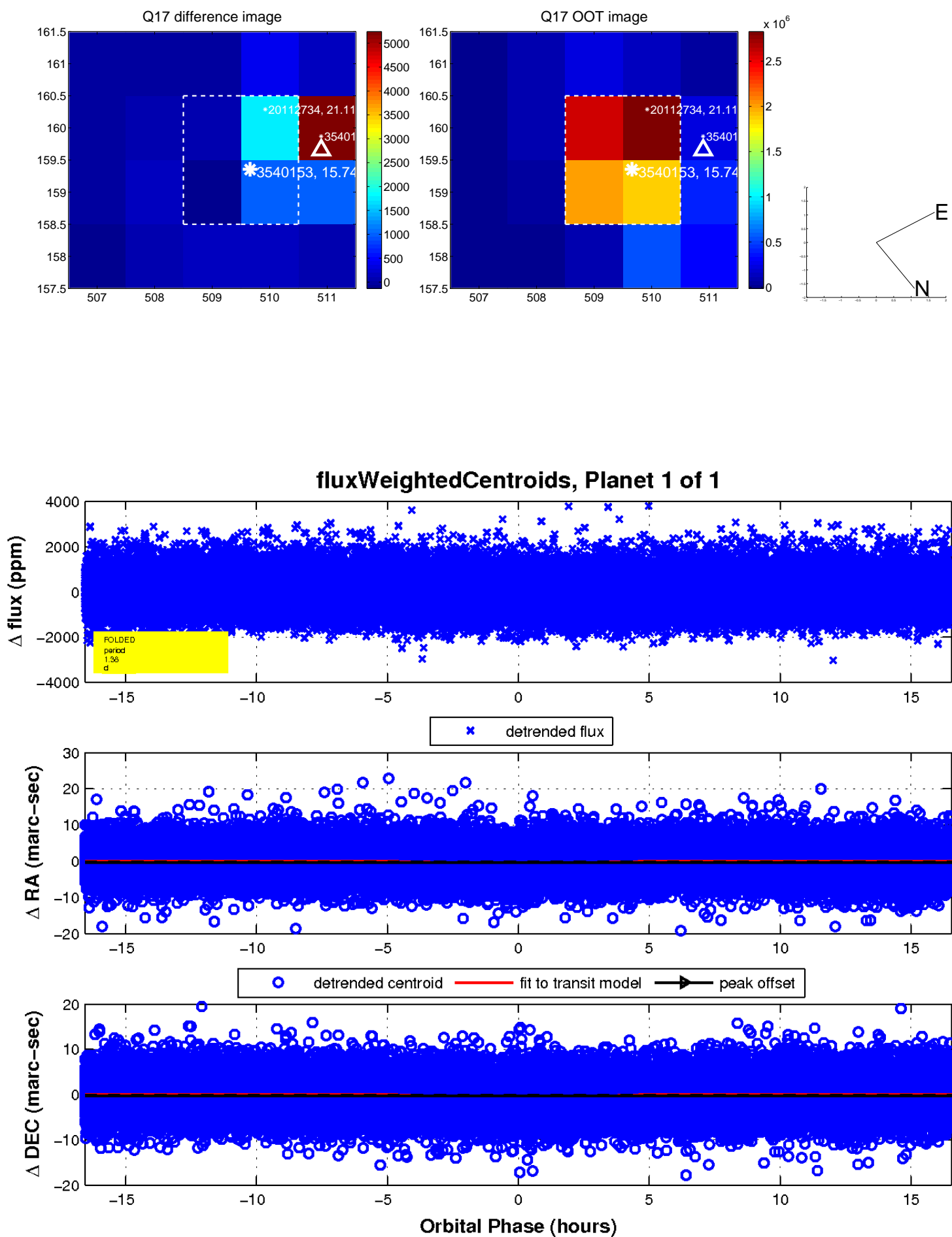
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

