

KIC 003757814

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})
003757814-01	OBS	No	1.261367	132.334791	52.3	4.723	8.5	8.8	2.35	7568	1.81	20516.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003757814-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

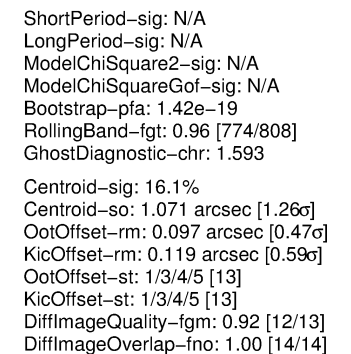
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

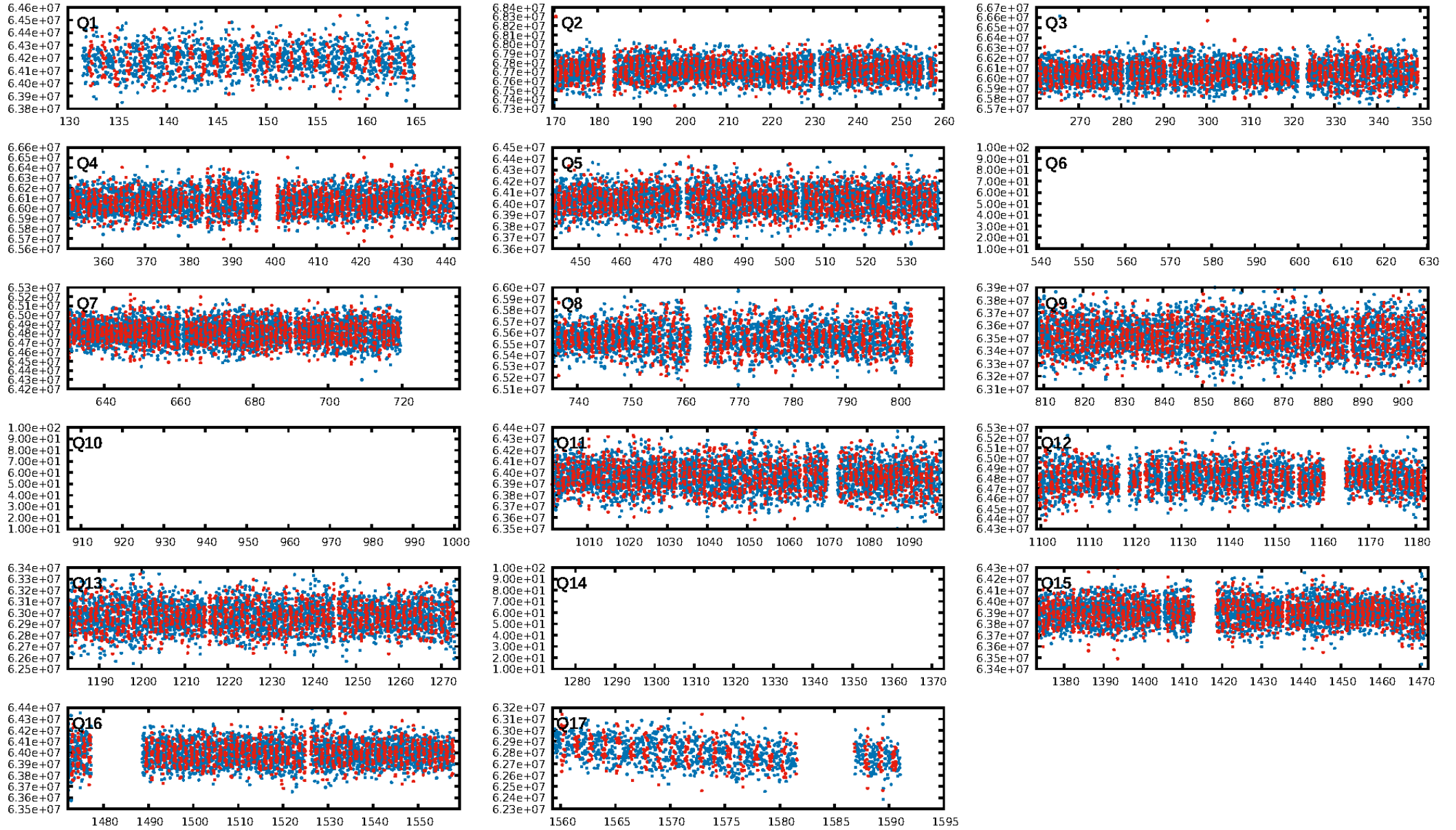
Ephemeris Match Information For 003757814-01

No Significant Match Found

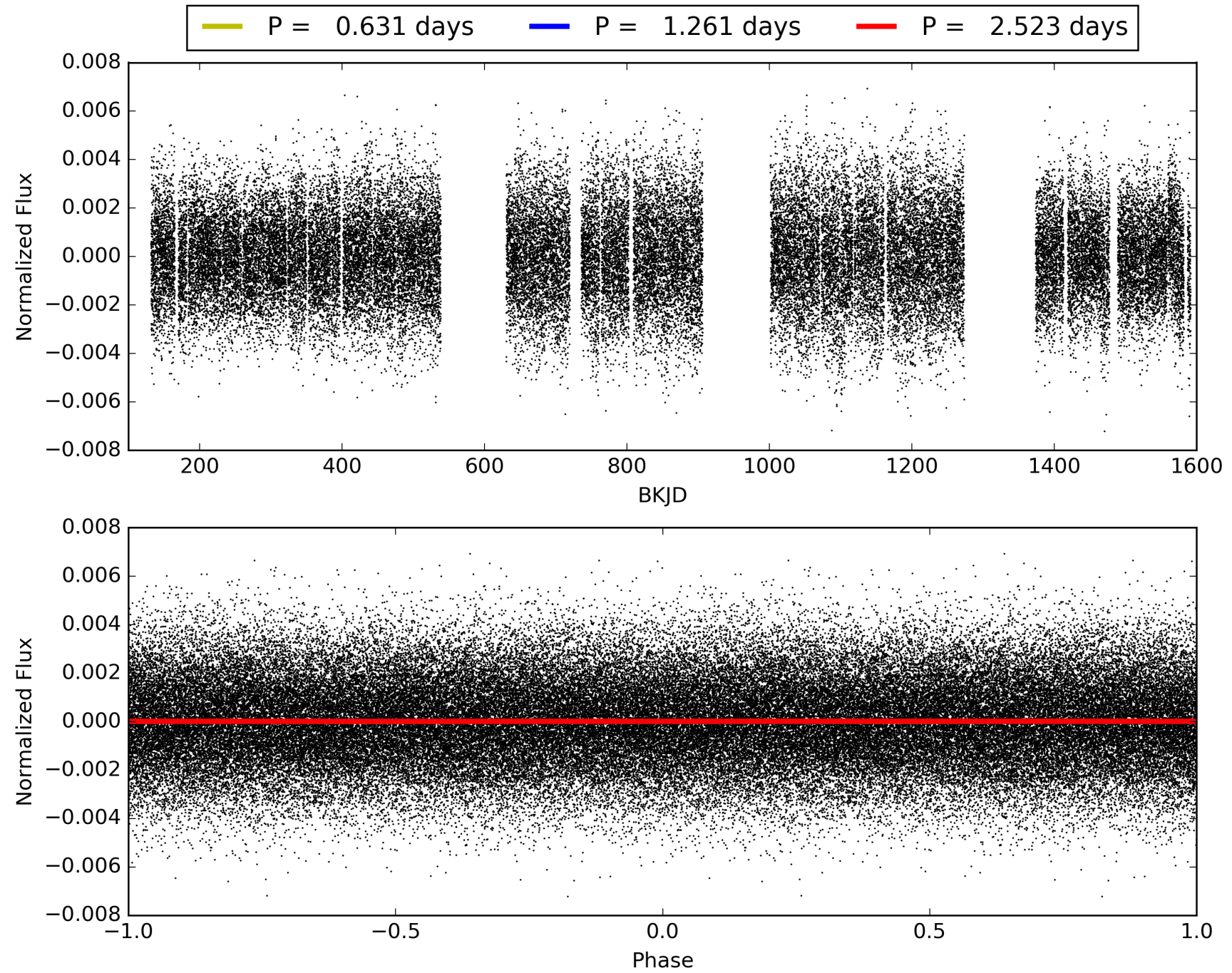
KIC: 3757814 Candidate: 1 of 1 Period: 1.261 d



TCE 003757814-01, PDC Light Curves

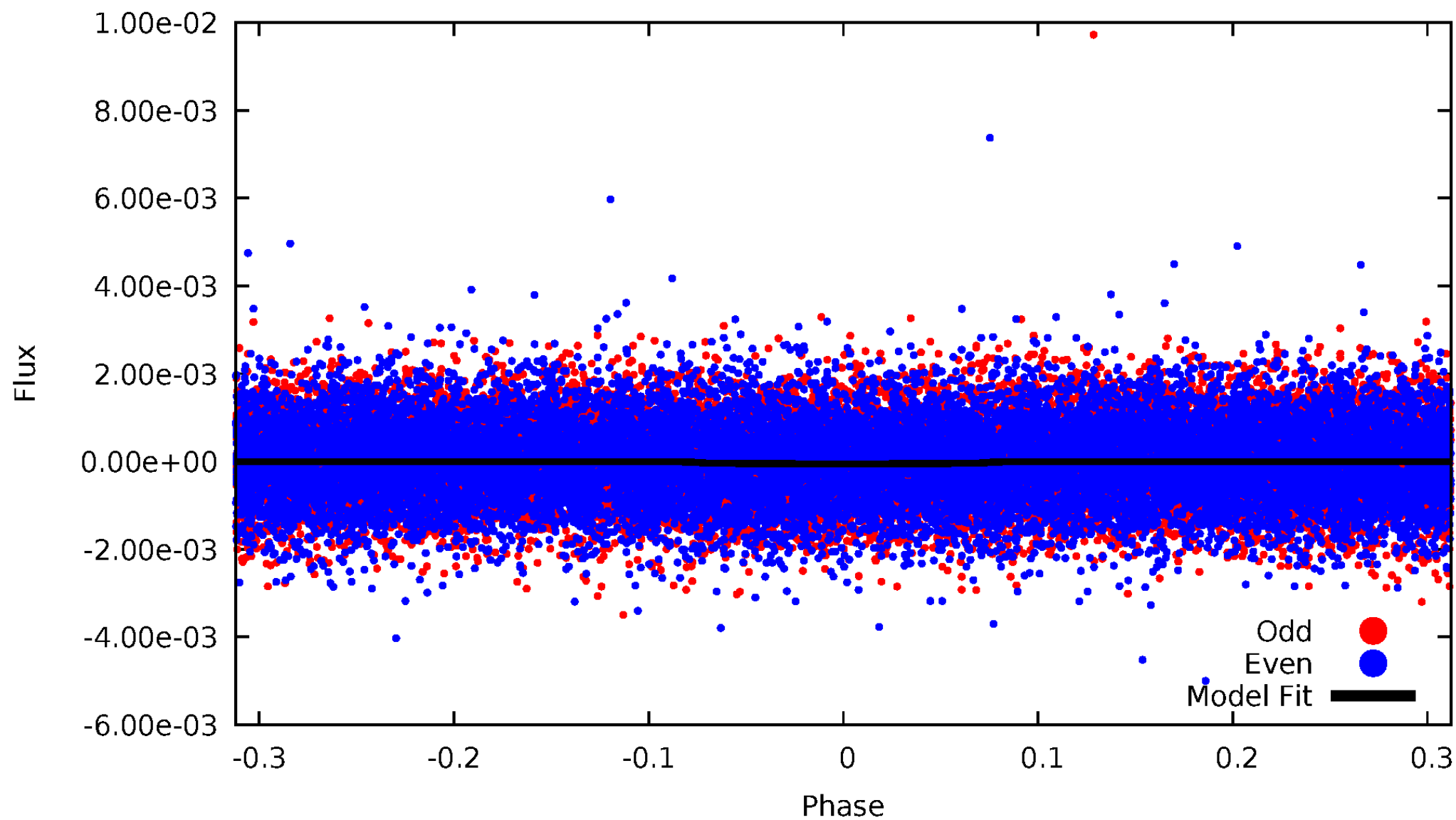


TCE 003757814-01



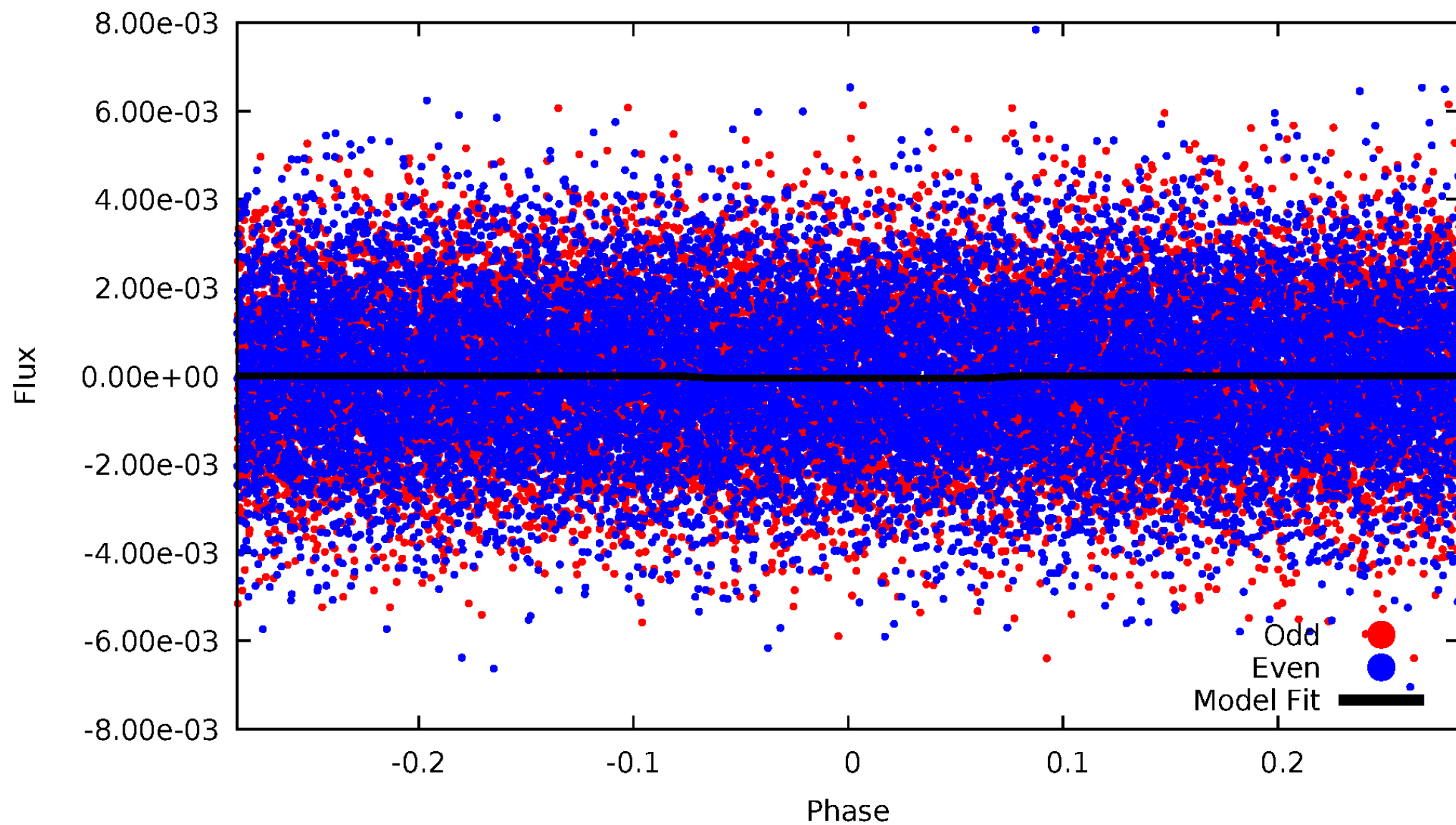
DV Odd/Even

TCE 003757814-01



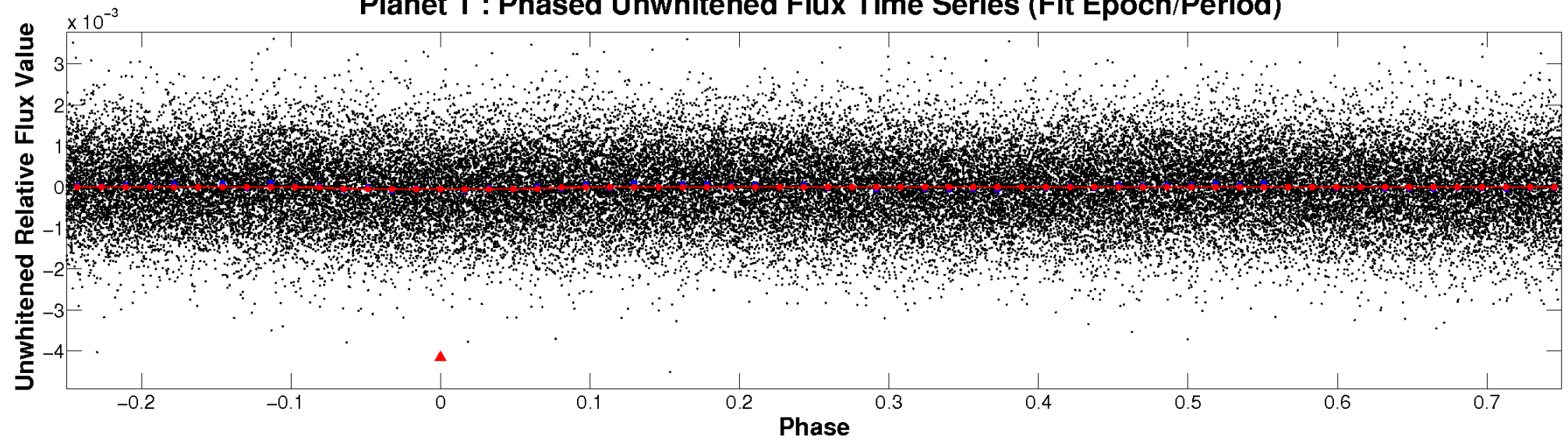
ALT Odd/Even

TCE 003757814-01

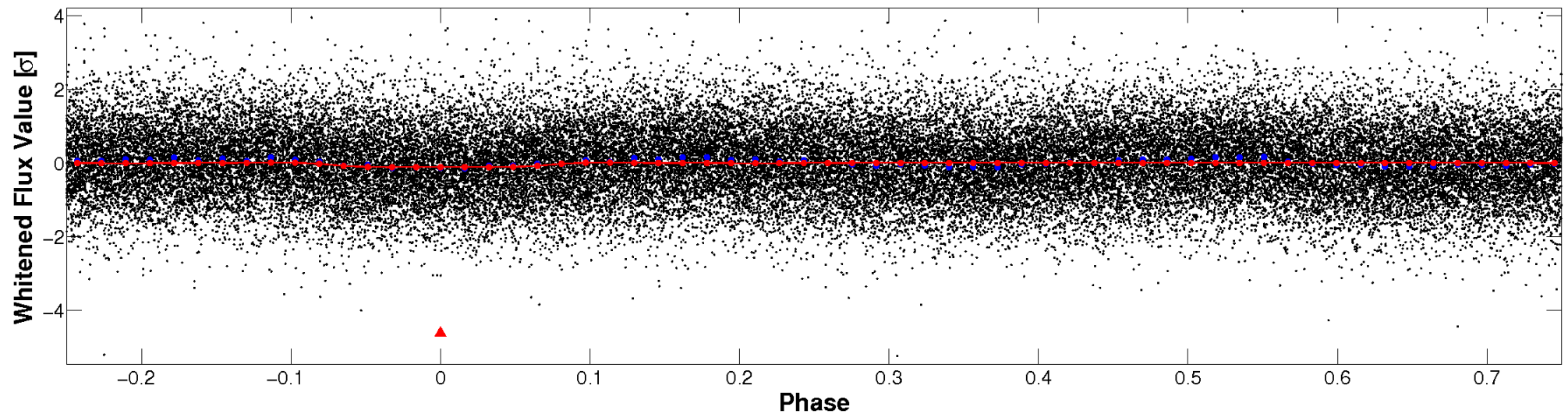


Non-Whitened Vs. Whitened Light Curve

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

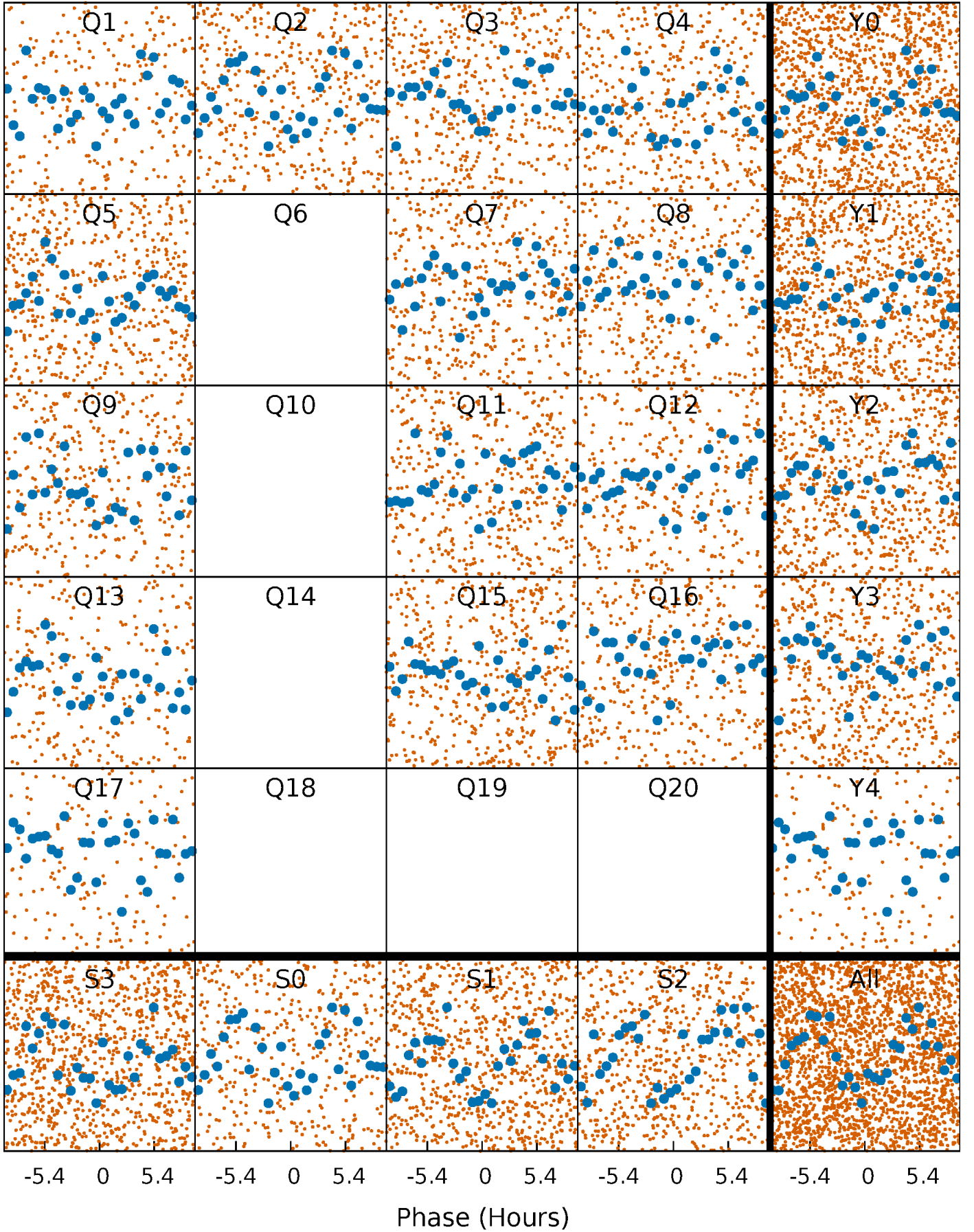


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



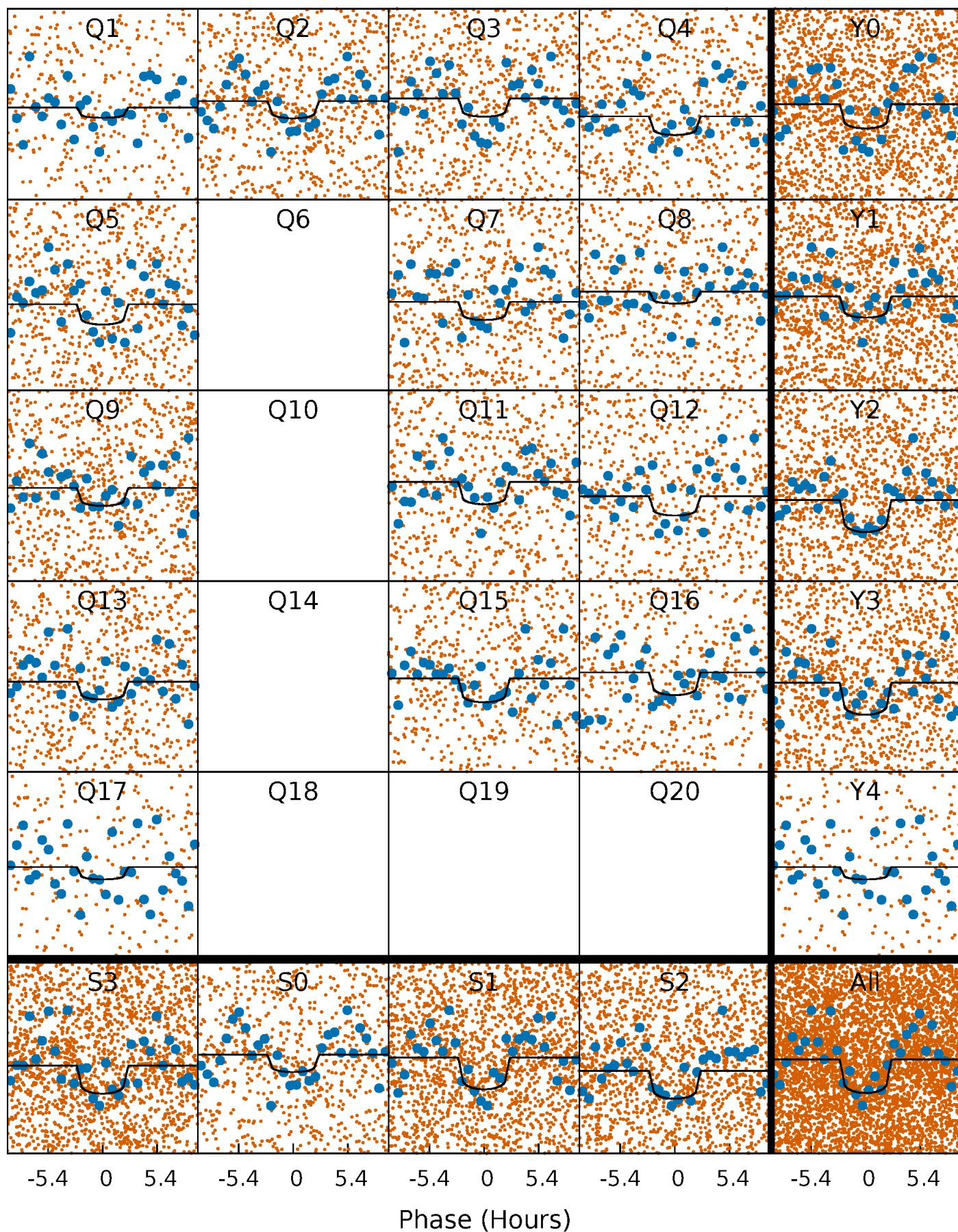
PDC Quarter-Phased Transit Curves

TCE 003757814-01 P= 1.261367 Days $T_0=132.334791$ (BKJD)



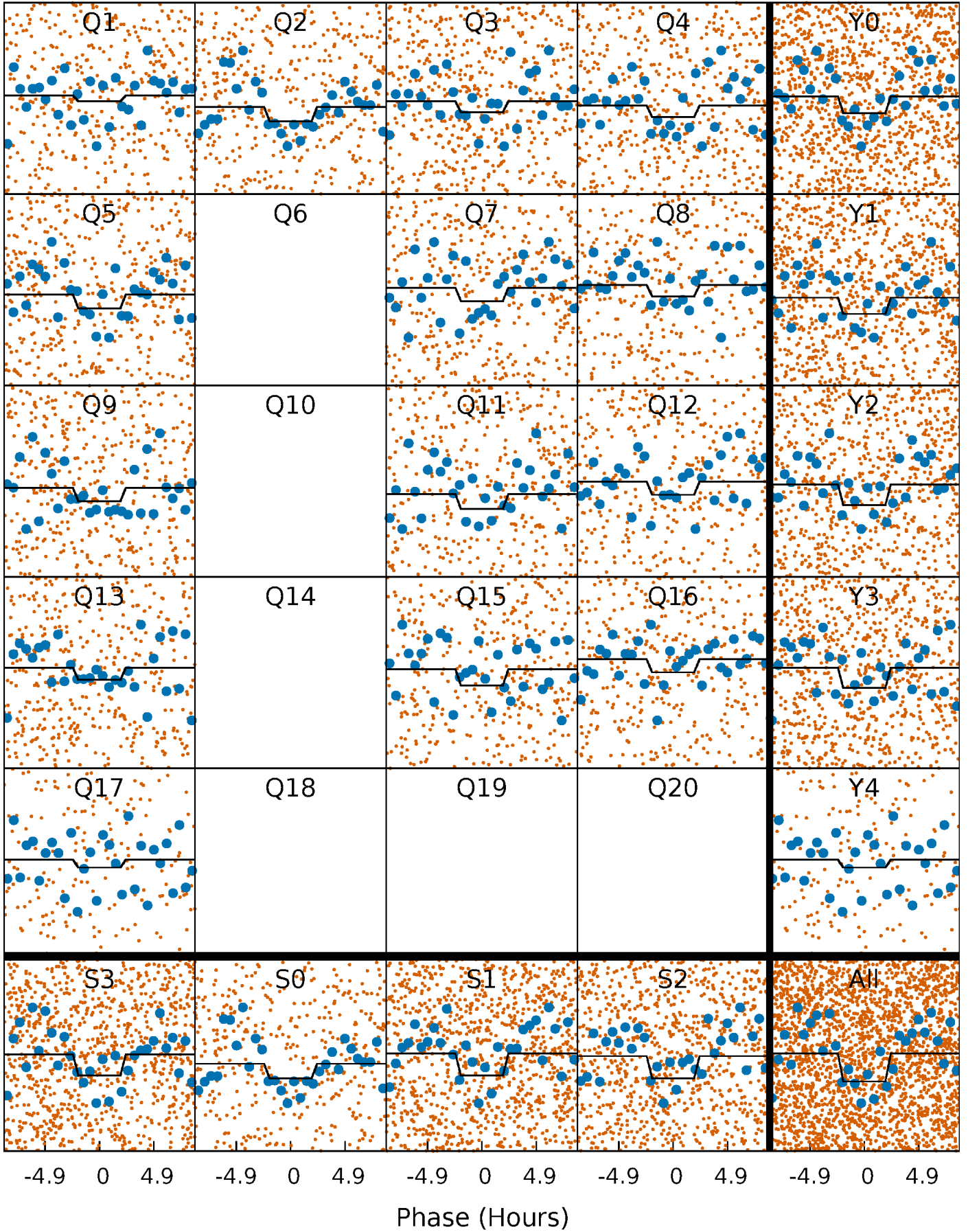
DV Quarter-Phased Transit Curves

TCE 003757814-01 P= 1.261367 Days $T_0=132.334791$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

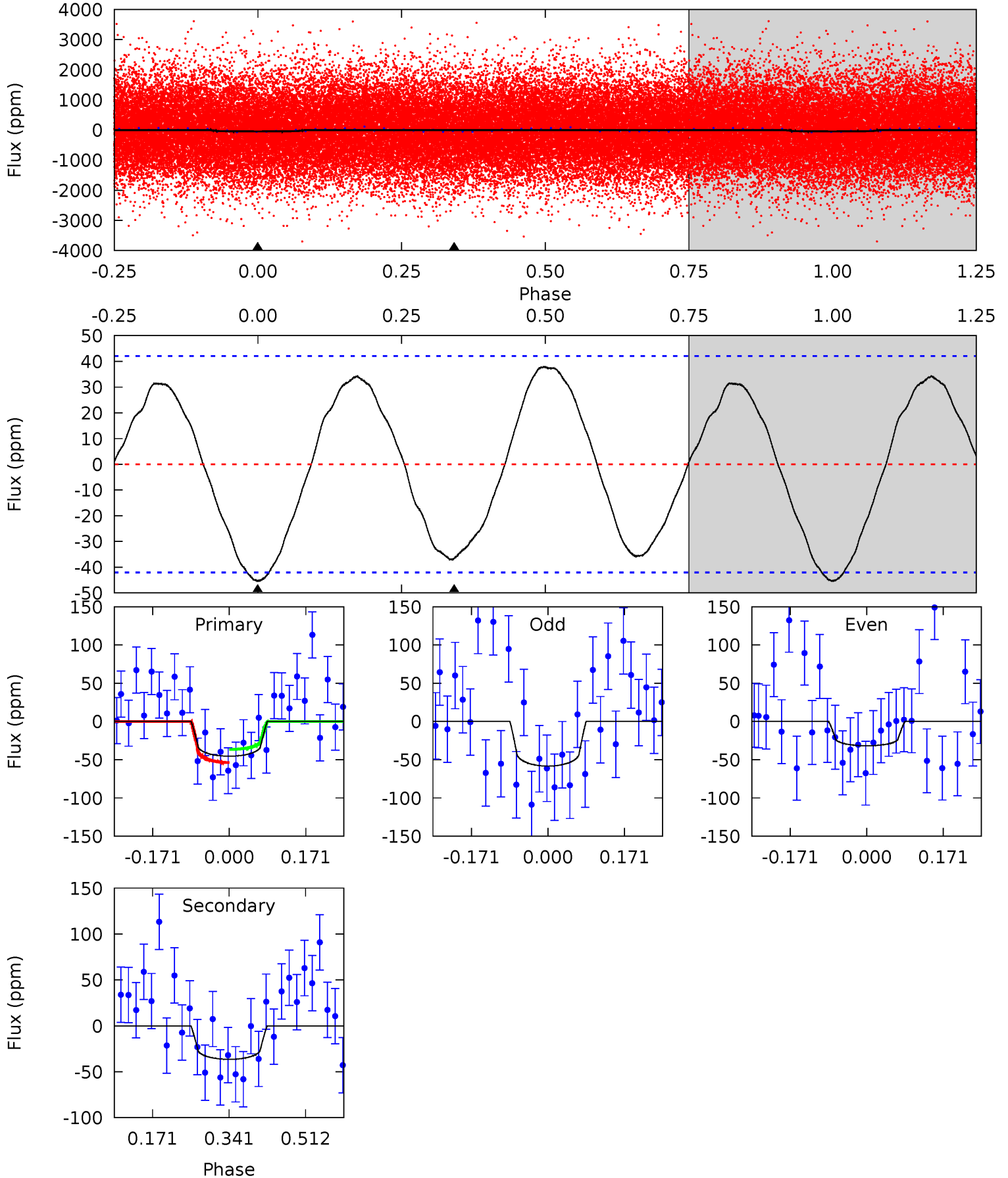
TCE 003757814-01 P= 1.261386 Days $T_0=132.317168$ (BKJD)



DV Model-Shift Uniqueness Test

003757814-01, P = 1.261367 Days, E = 131.073424 Days

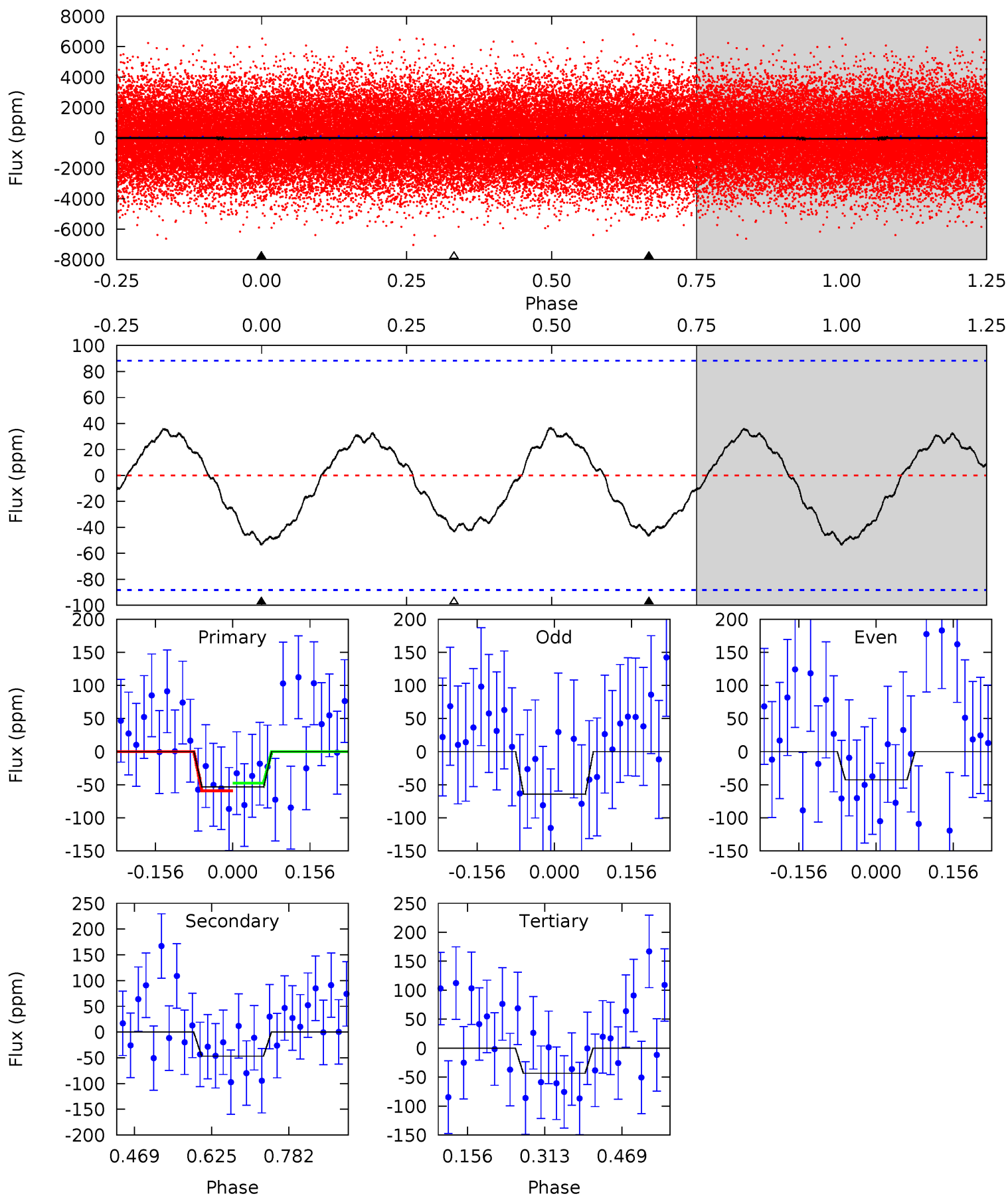
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.80	3.86	0	0	4.45	1.37	2.53	4.80	4.80	3.86	3.86	1.41	0.94	0.45	0.91



Alt Model-Shift Uniqueness Test

003757814-01, P = 1.261386 Days, E = 131.055782 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.71	2.37	2.19	0	4.47	1.42	1.37	0.51	2.71	0.17	2.37	0.54	0.95	0.41	0.29



Stellar Parameters For KIC 003757814

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7568^{+210}_{-341}	$3.967^{+0.216}_{-0.144}$	$0.140^{+0.200}_{-0.400}$	$2.353^{+0.528}_{-0.703}$	$1.870^{+0.130}_{-0.391}$	$0.202^{+0.263}_{-0.087}$
	+3%/-5%	+5%/-4%	+143%/-286%	+22%/-30%	+7%/-21%	+130%/-43%
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 003757814-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-37 ± 9	$1.94^{+1.48}_{-1.18}$	4224^{+303}_{-341}	6356^{+5627}_{-1669}	$3.990^{+21.089}_{-2.753}$
Alt.	-47 ± 20	$1.96^{+1.44}_{-1.26}$	4218^{+305}_{-324}	6662^{+6876}_{-1783}	$4.934^{+29.346}_{-3.434}$

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

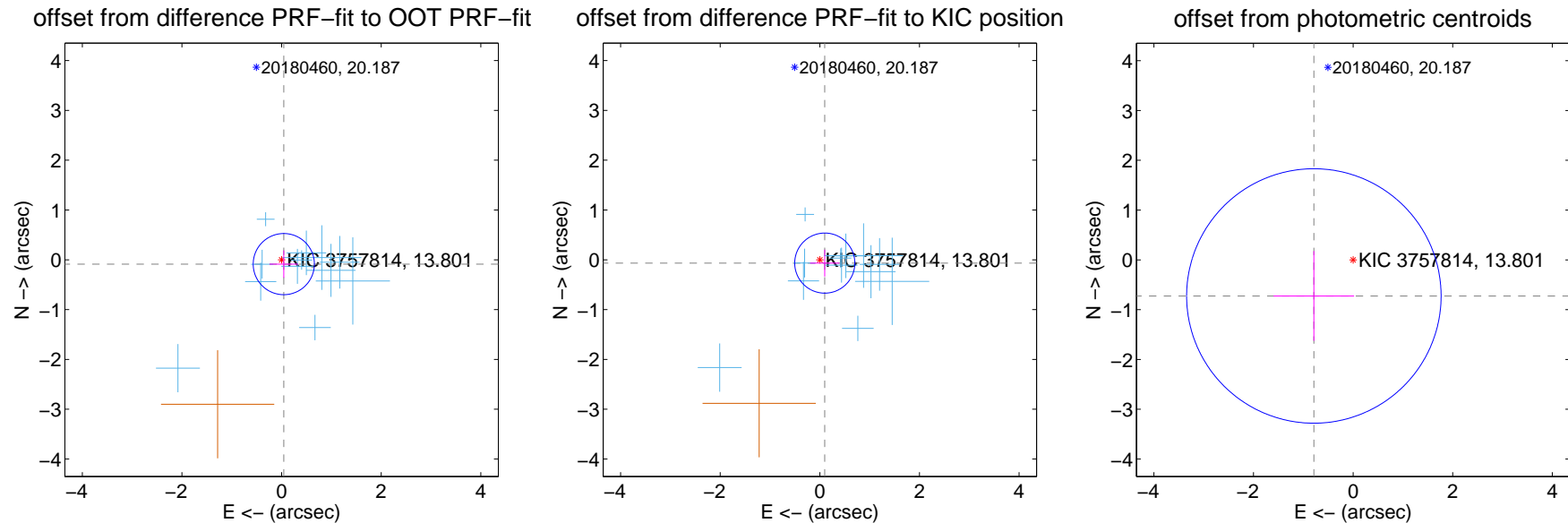
DV Centroid Data

Supplemental centroid analysis for 003757814-01. Kepler magnitude: 13.80. Transit SNR 8.83

There are 12 quarters with good PRF difference image offsets

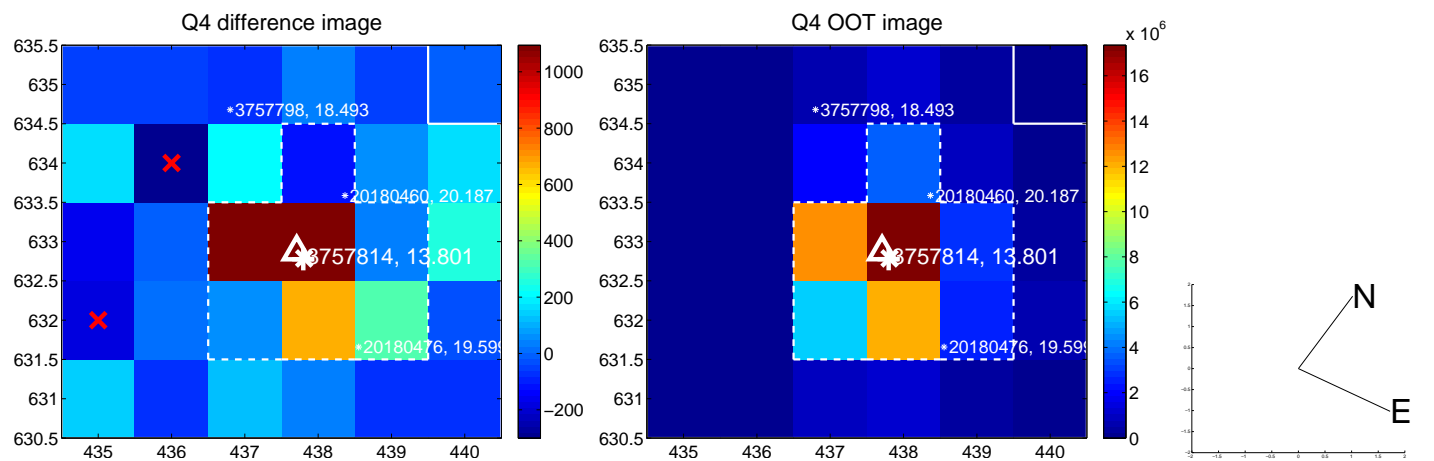
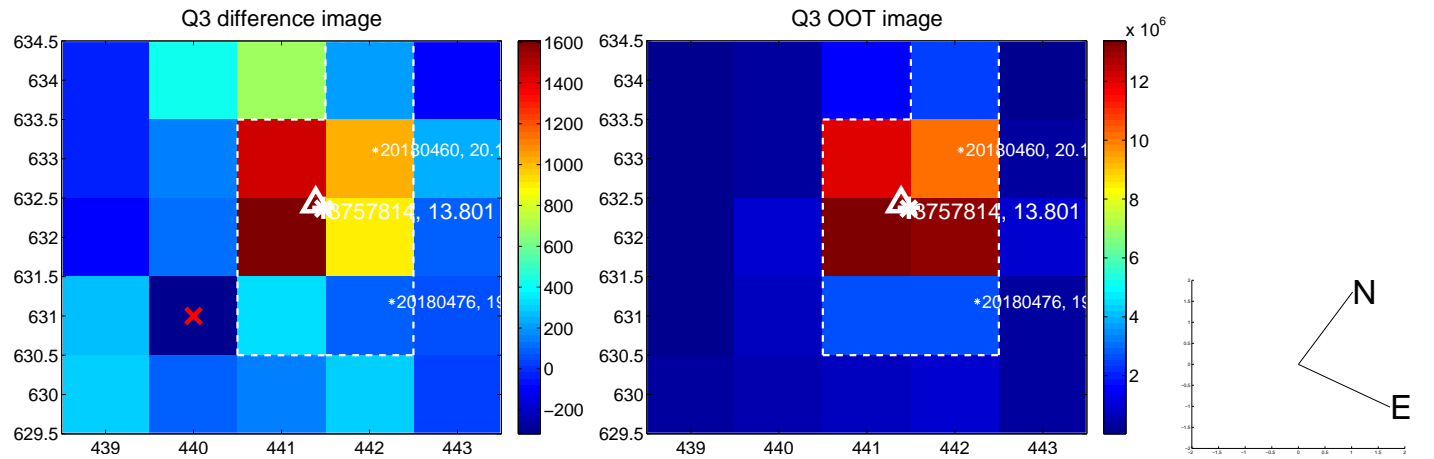
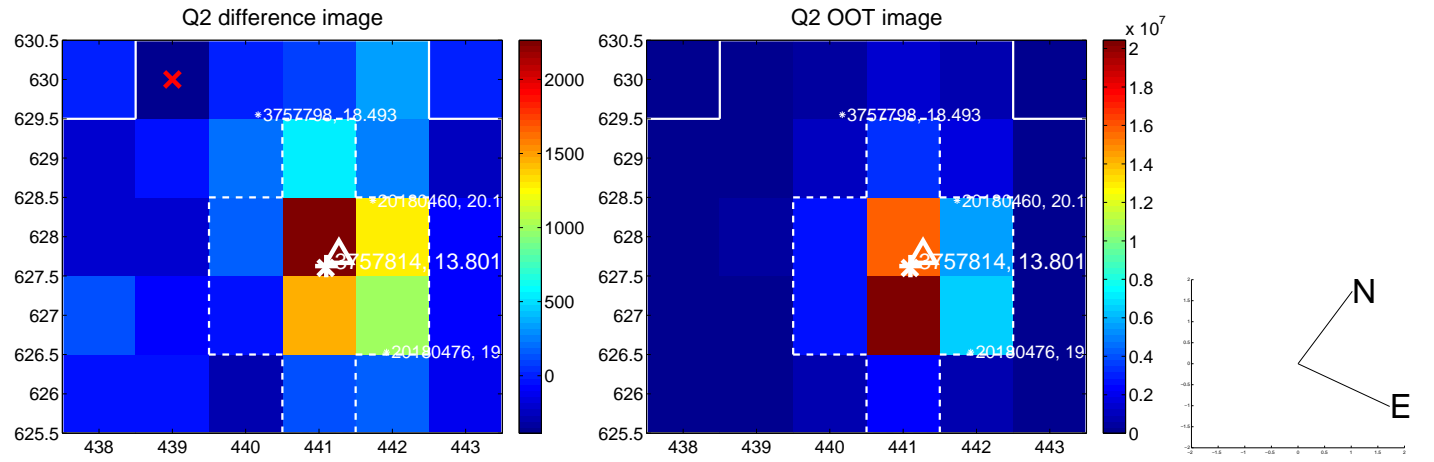
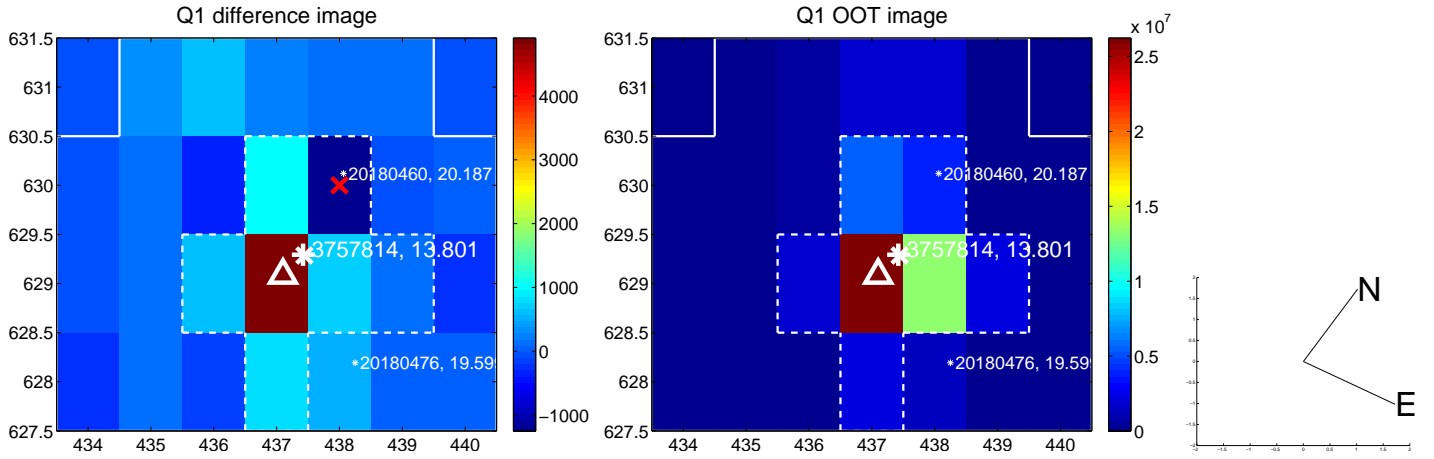
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.097 ± 0.205	0.47	-0.044 ± 0.286	-0.087 ± 0.275
PRF-fit source offset from KIC position	0.119 ± 0.201	0.59	-0.099 ± 0.296	-0.066 ± 0.269
photometric centroid source offset	1.07 ± 0.85	1.26	0.79 ± 0.81	-0.72 ± 0.90

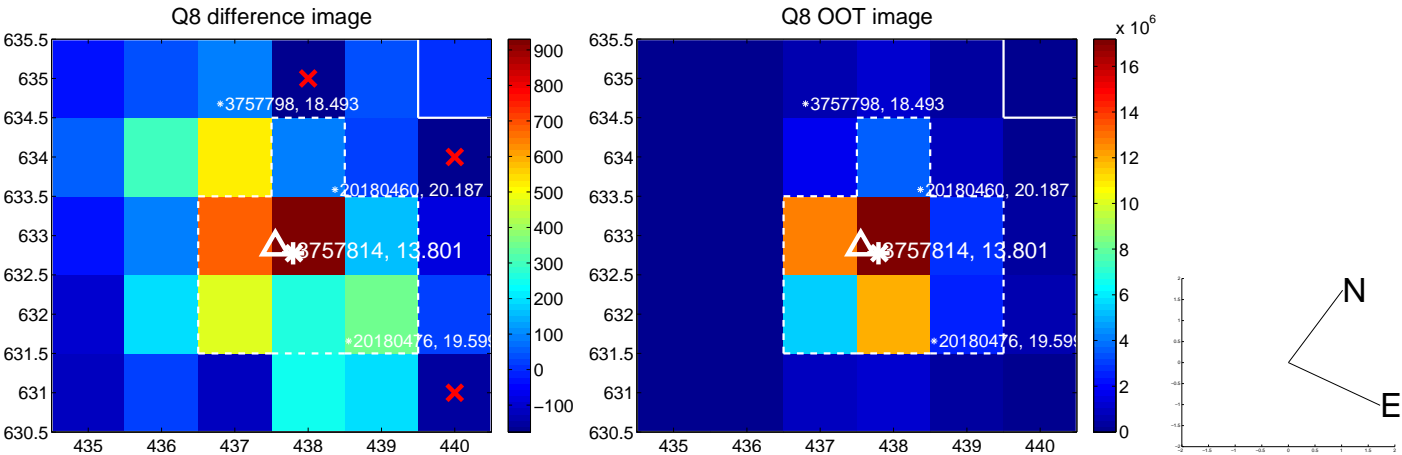
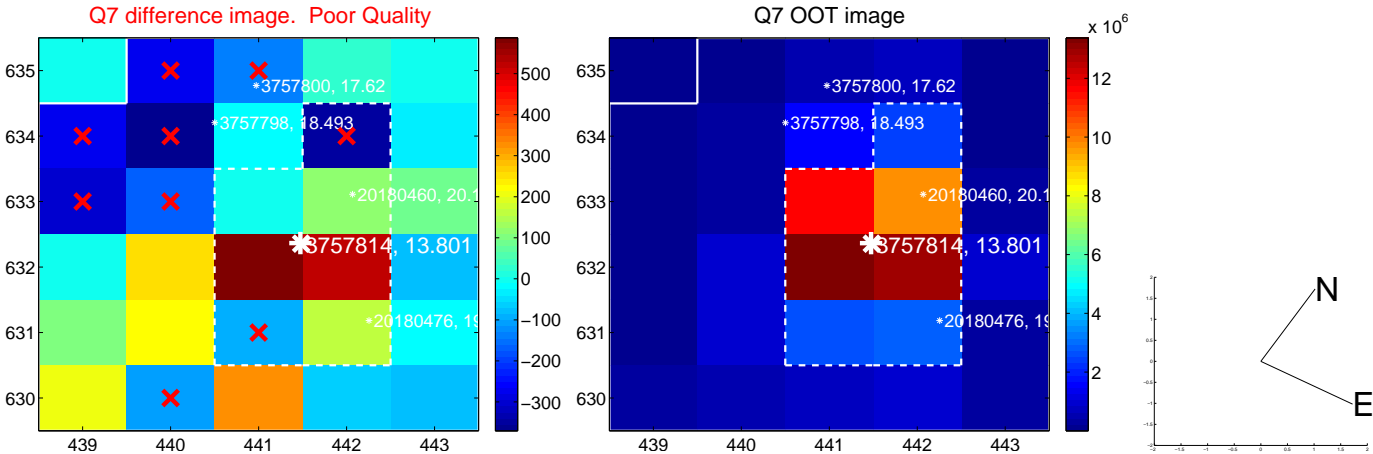
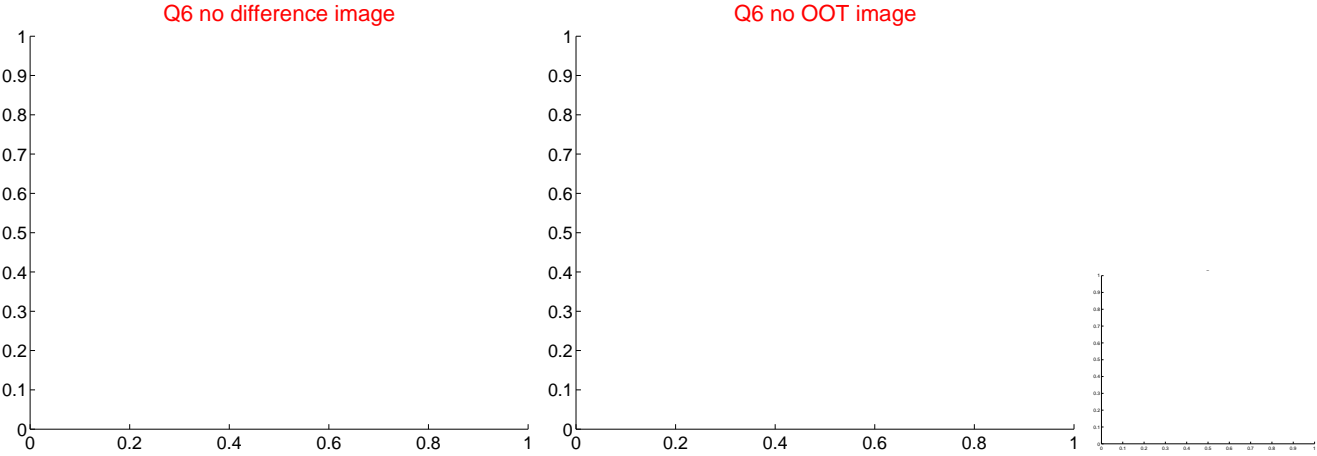
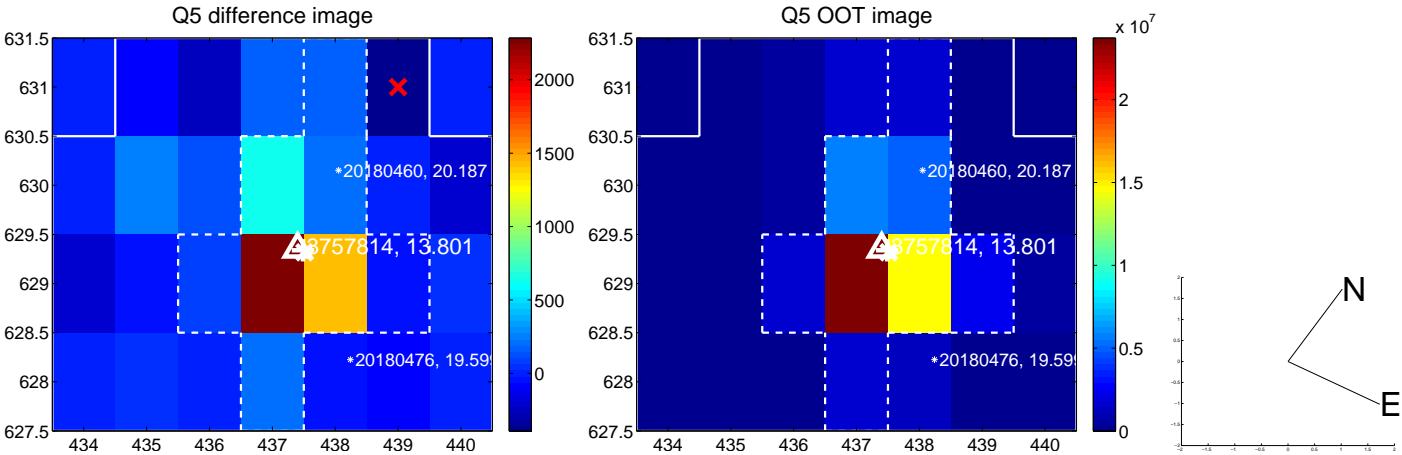


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

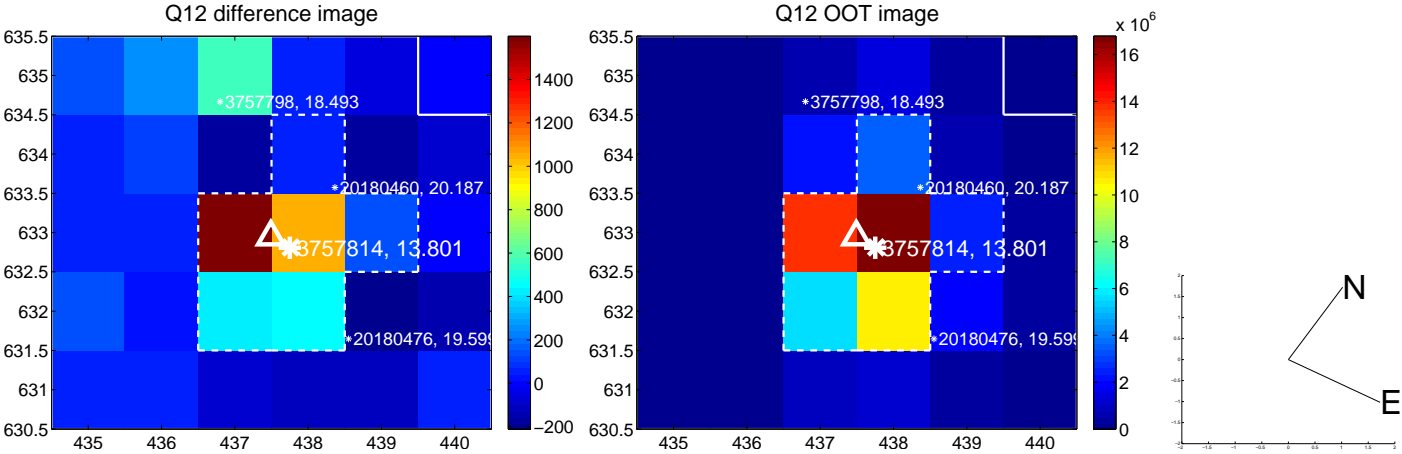
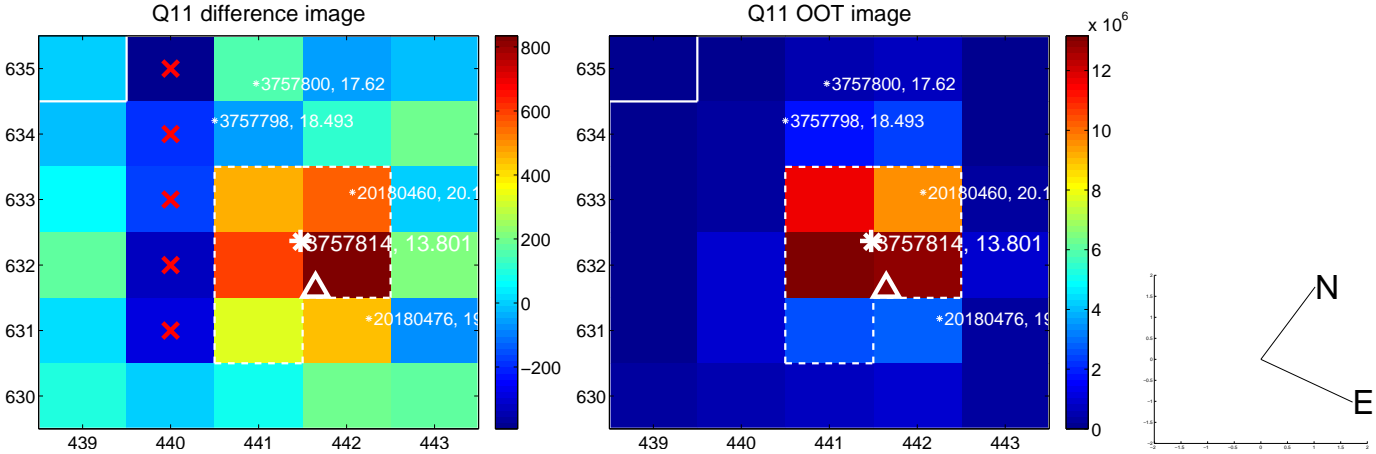
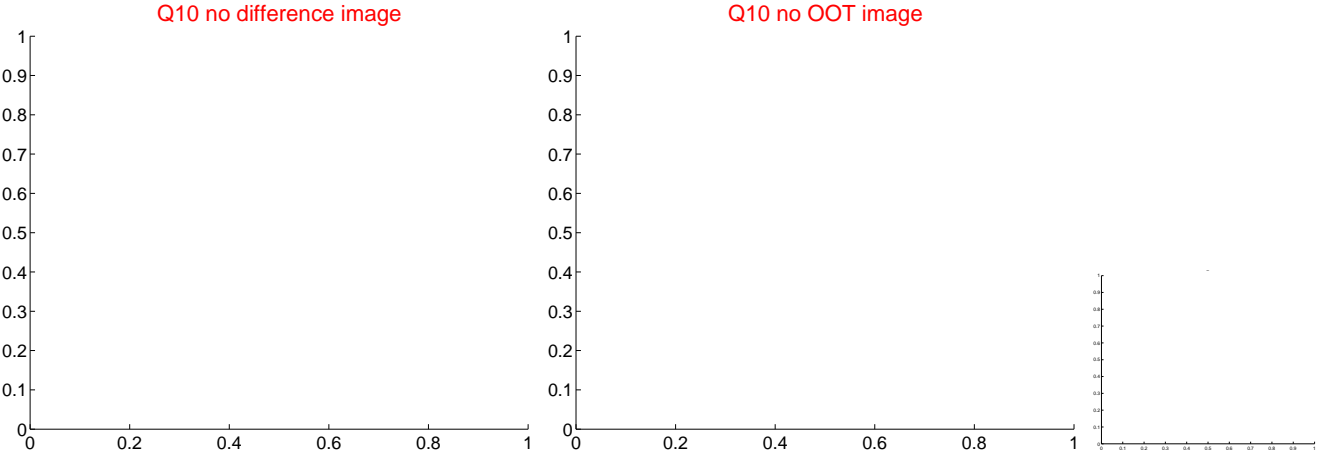
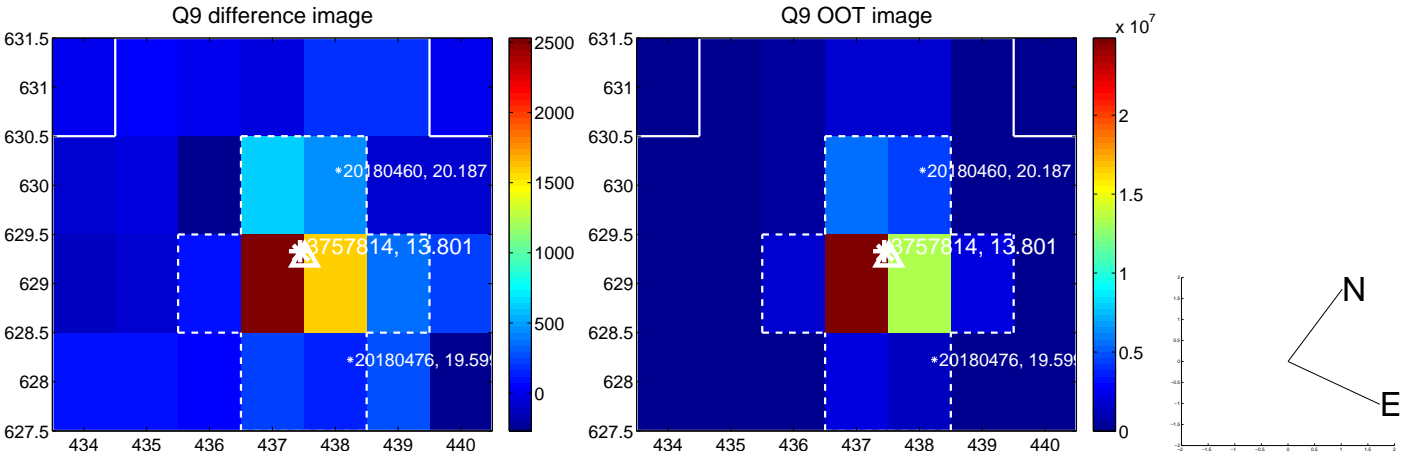
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



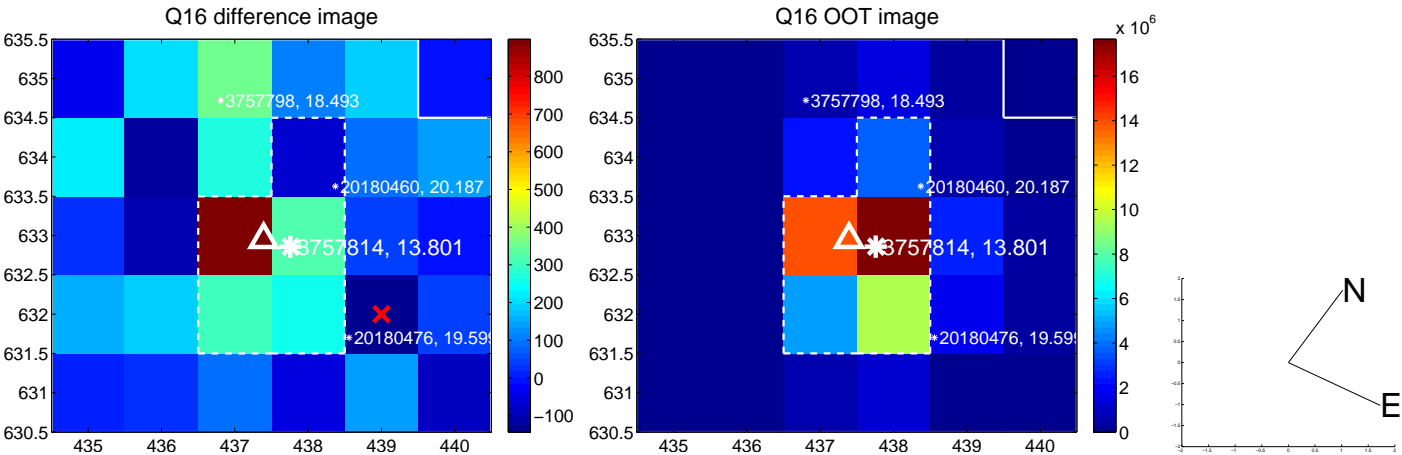
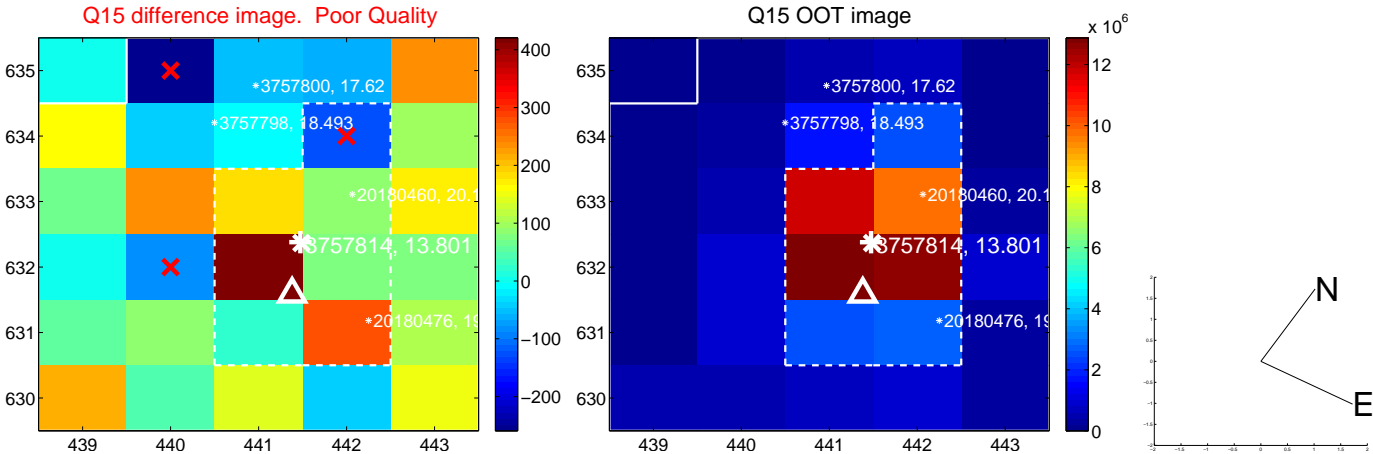
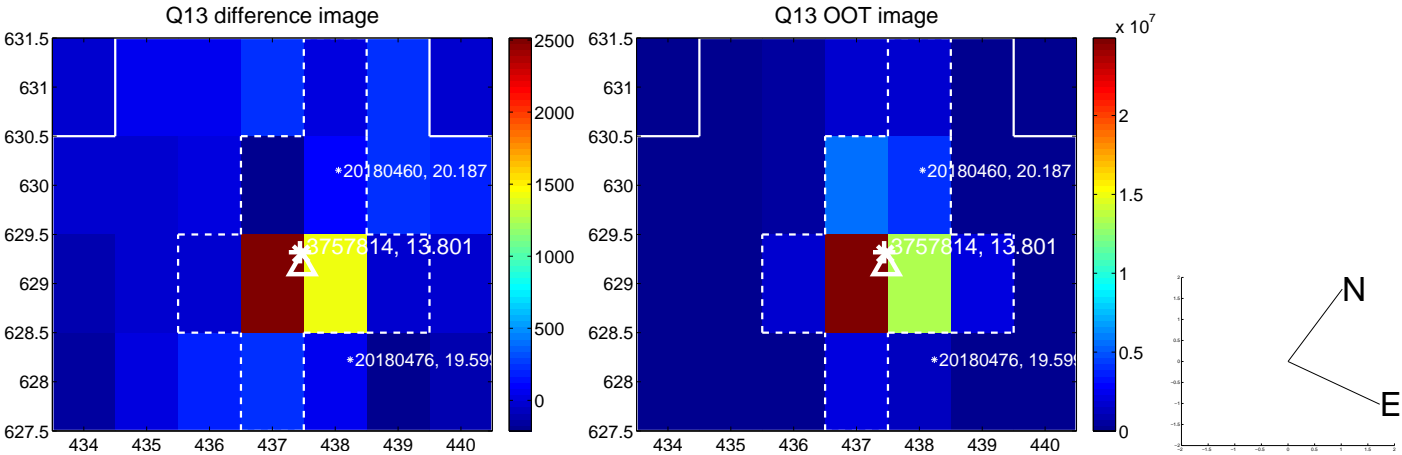
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



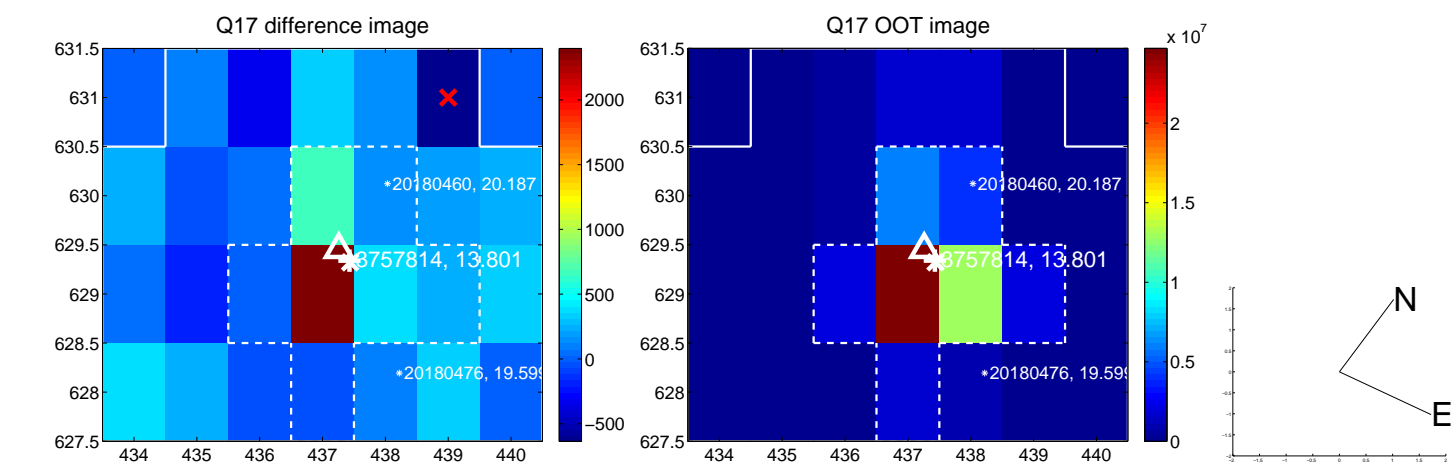
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



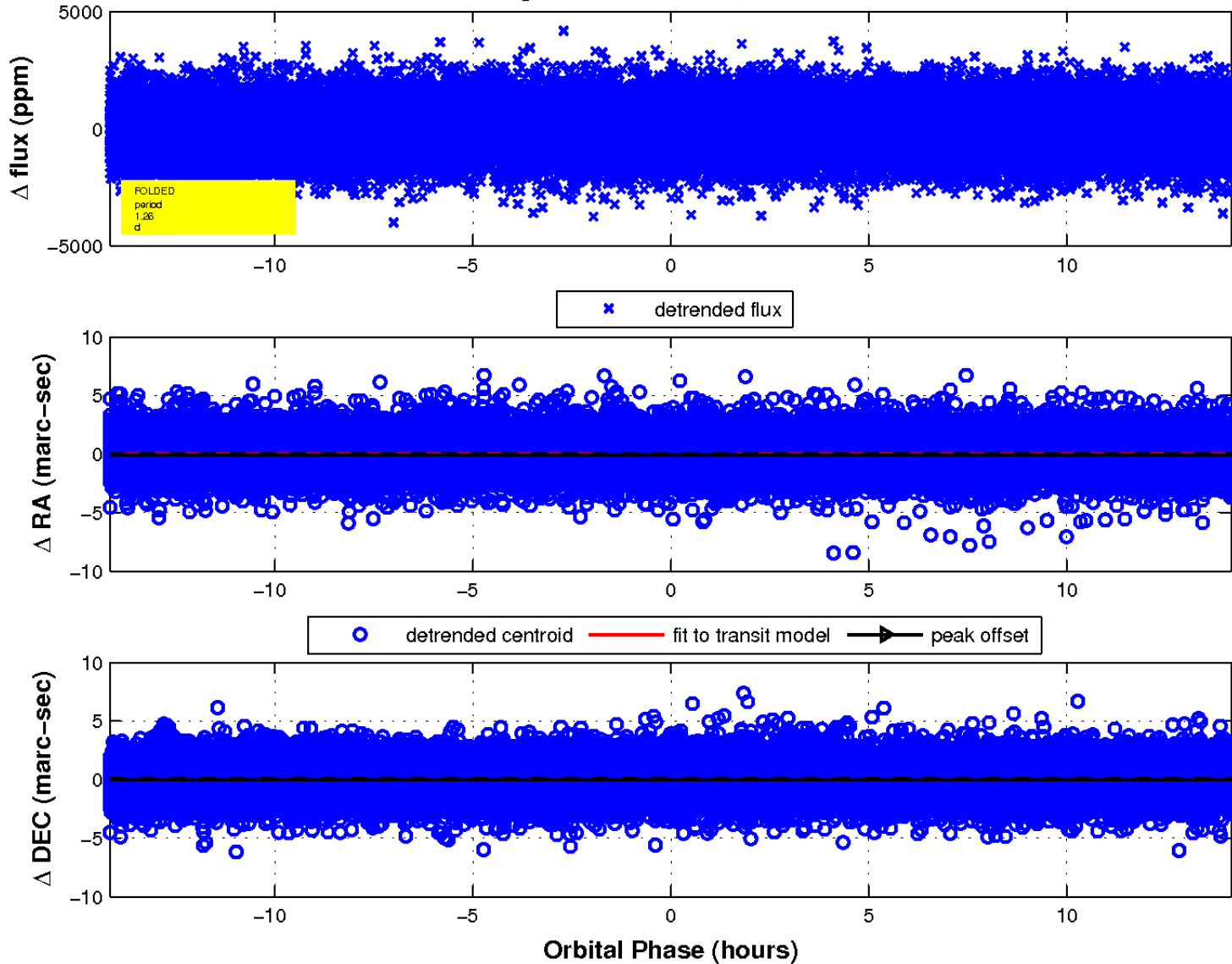
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

