

KIC 004829243

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})
004829243-01	OBS	No	0.880091	131.758067	38.9	2.361	9.7	7.0	2.33	5110	1.75	11540.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004829243-01	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.

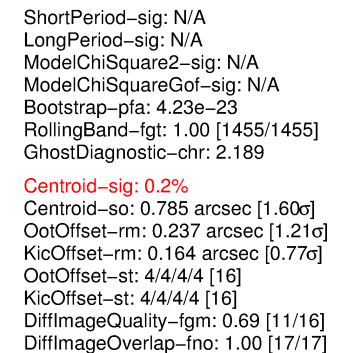
N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

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

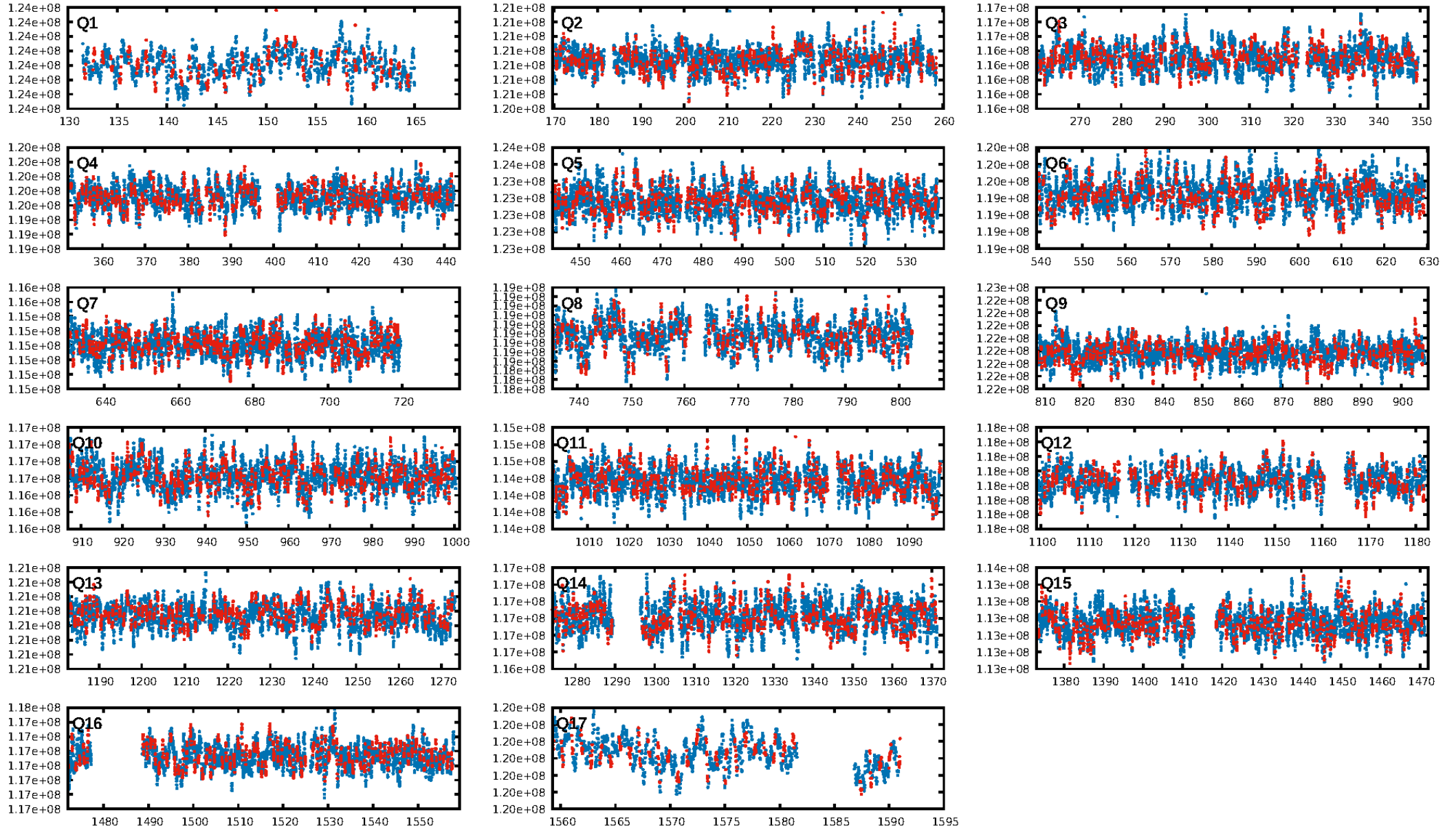
Ephemeris Match Information For 004829243-01

No Significant Match Found

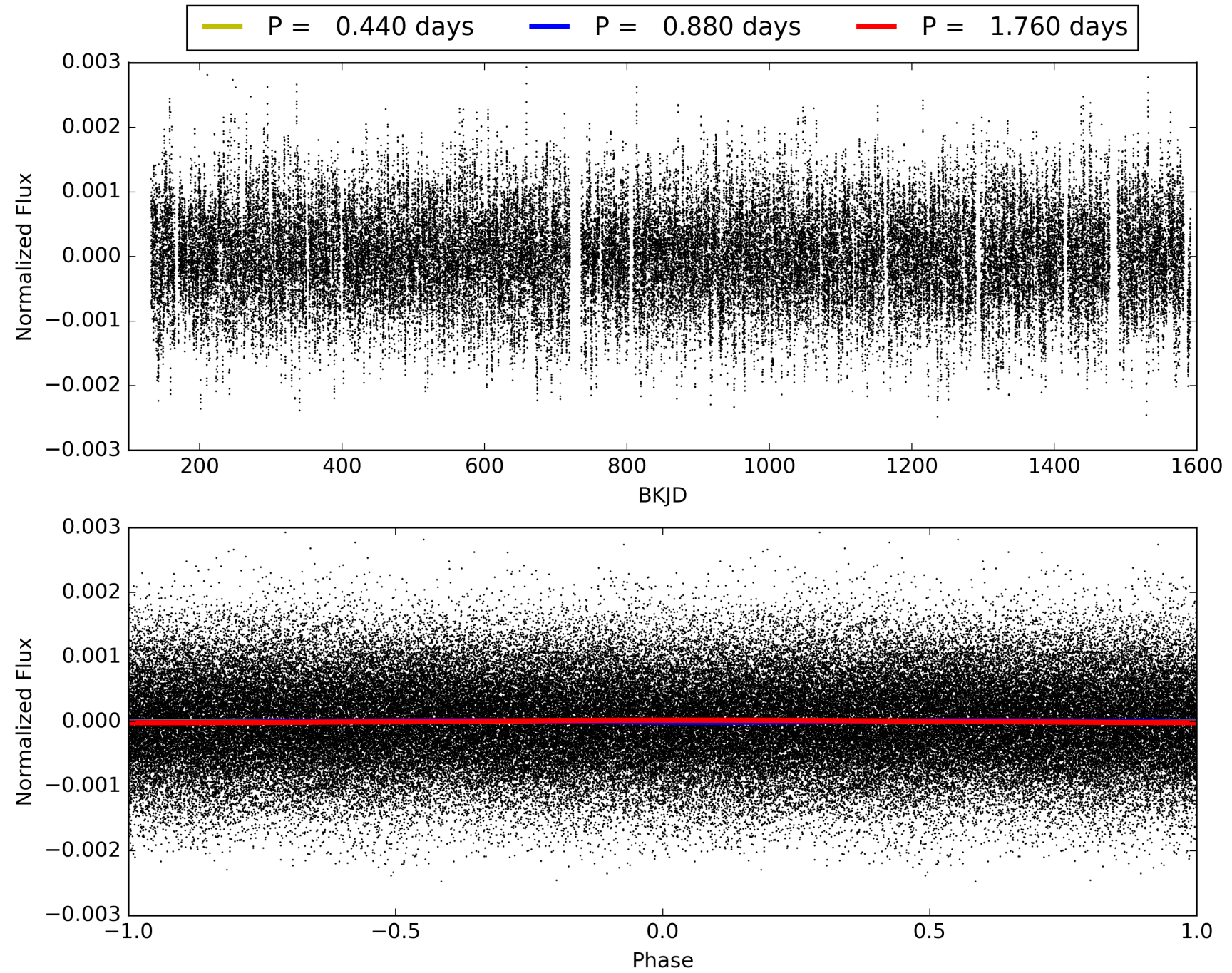
KIC: 4829243 Candidate: 1 of 1 Period: 0.880 d



TCE 004829243-01, PDC Light Curves

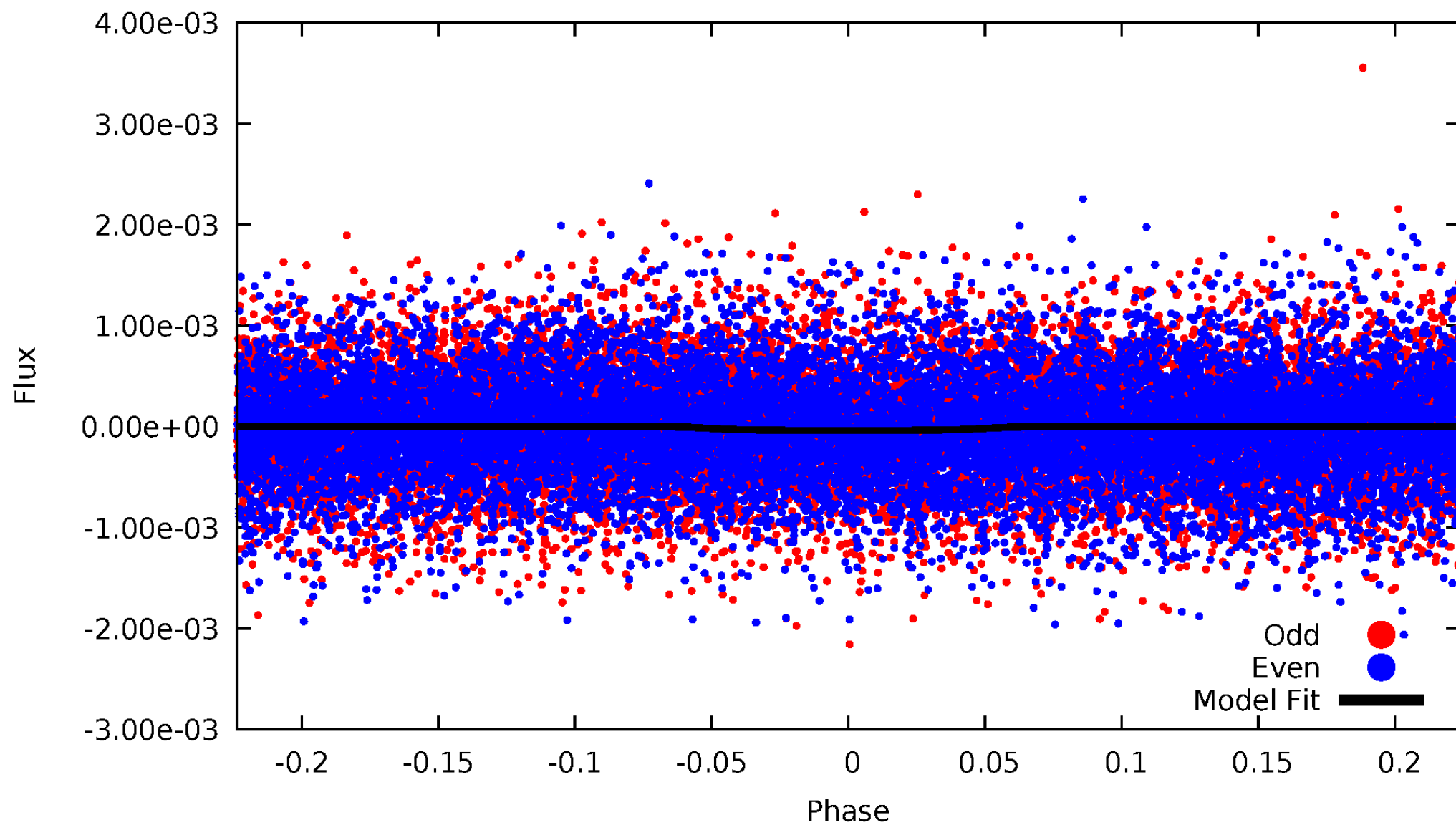


TCE 004829243-01



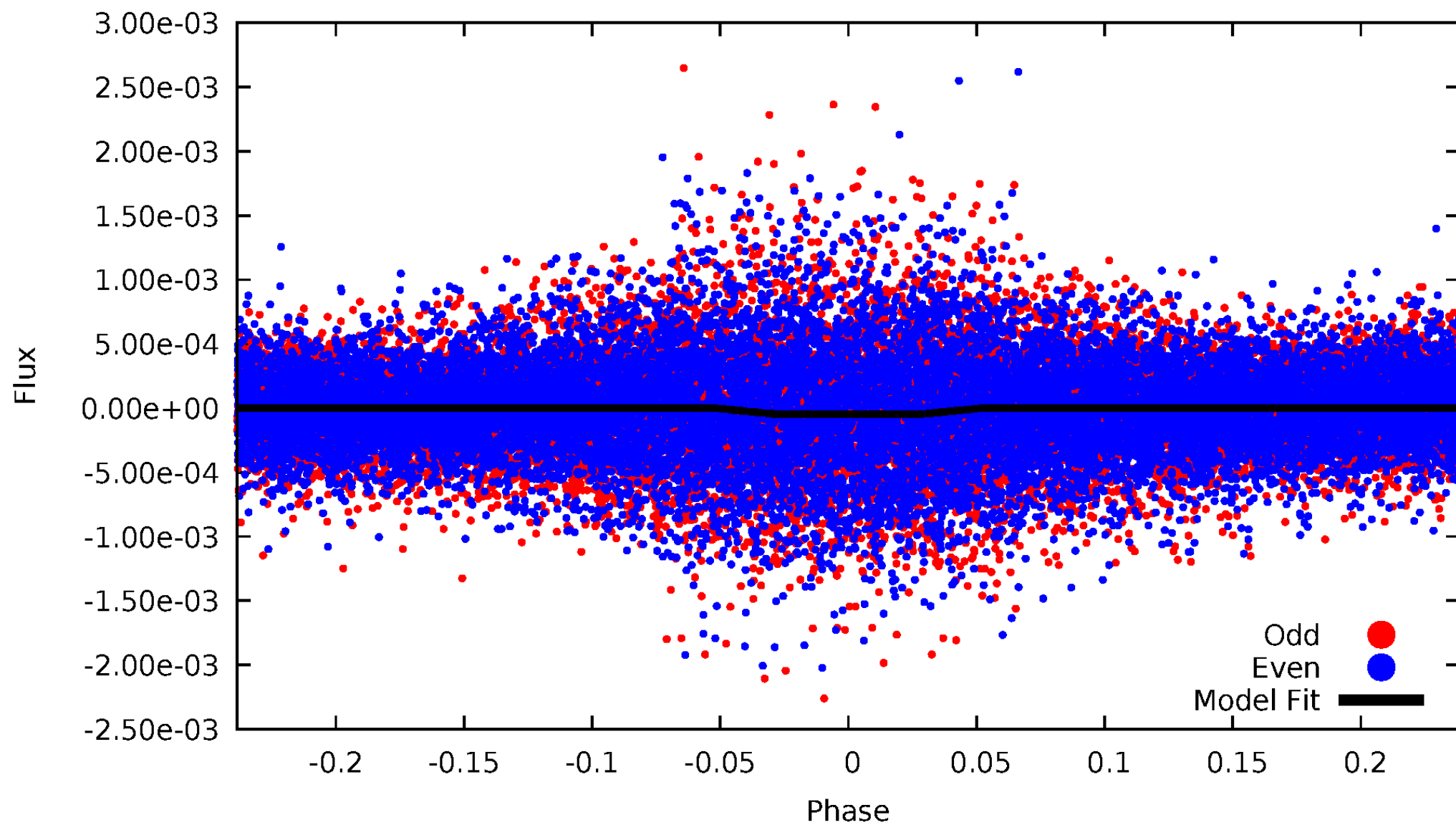
DV Odd/Even

TCE 004829243-01

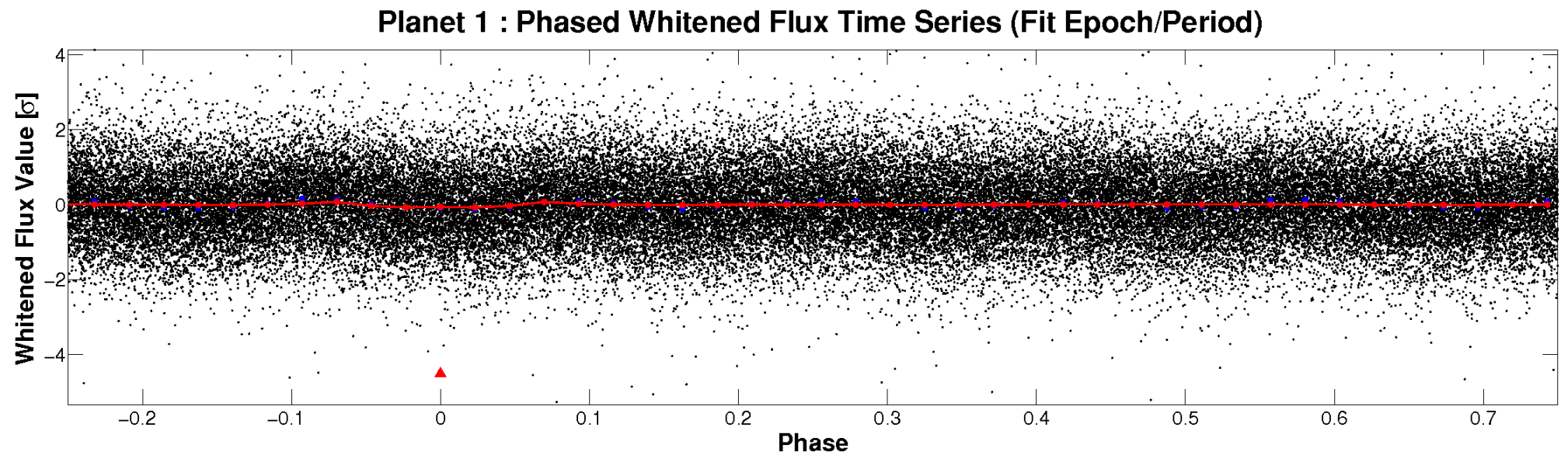
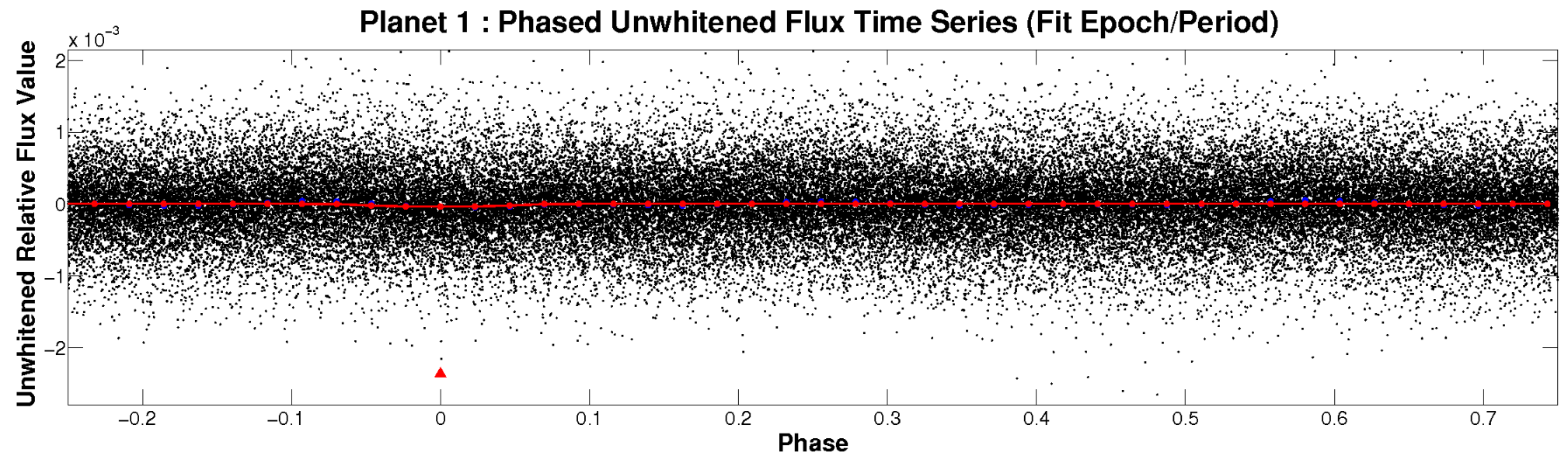


ALT Odd/Even

TCE 004829243-01

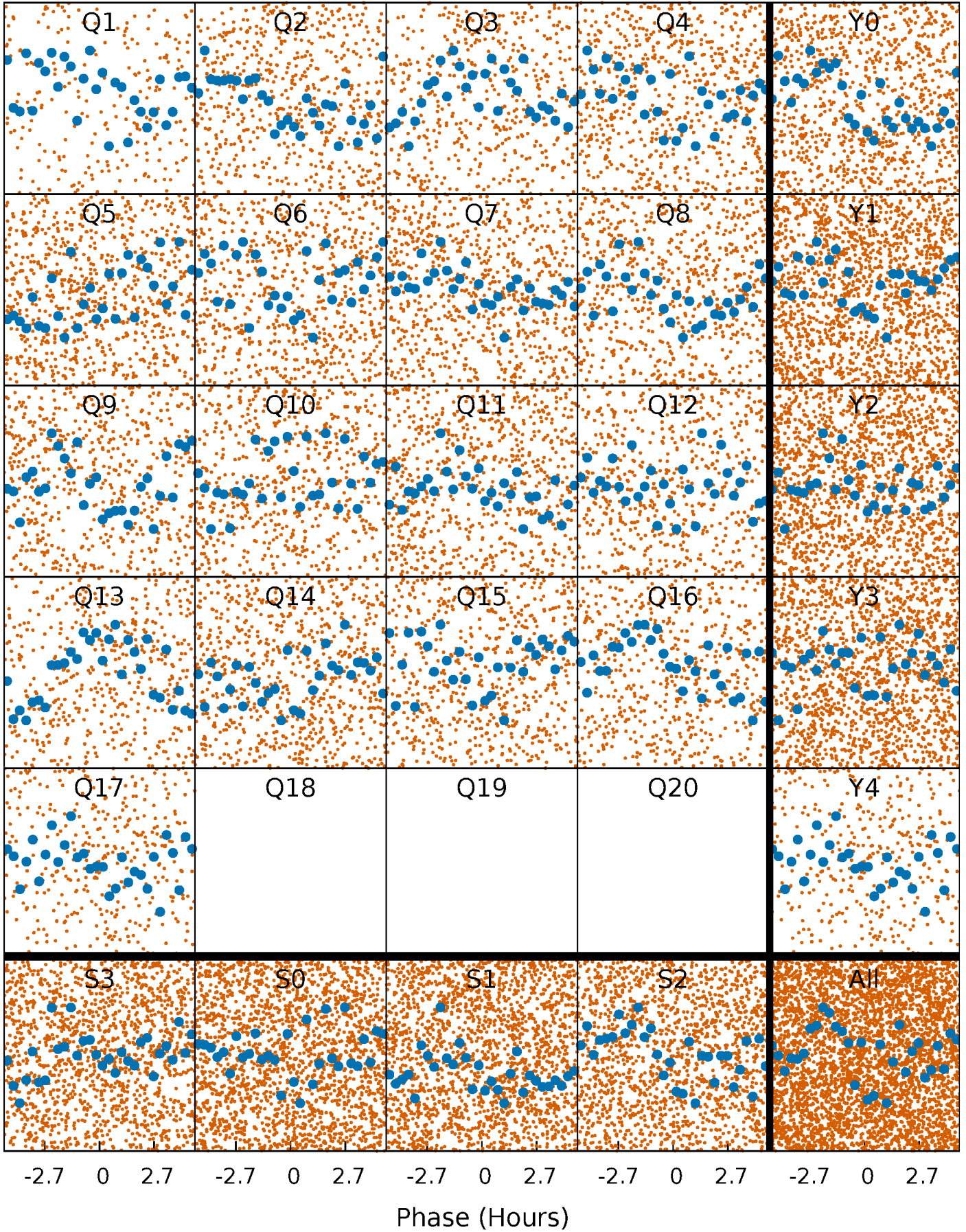


Non-Whitened Vs. Whitened Light Curve



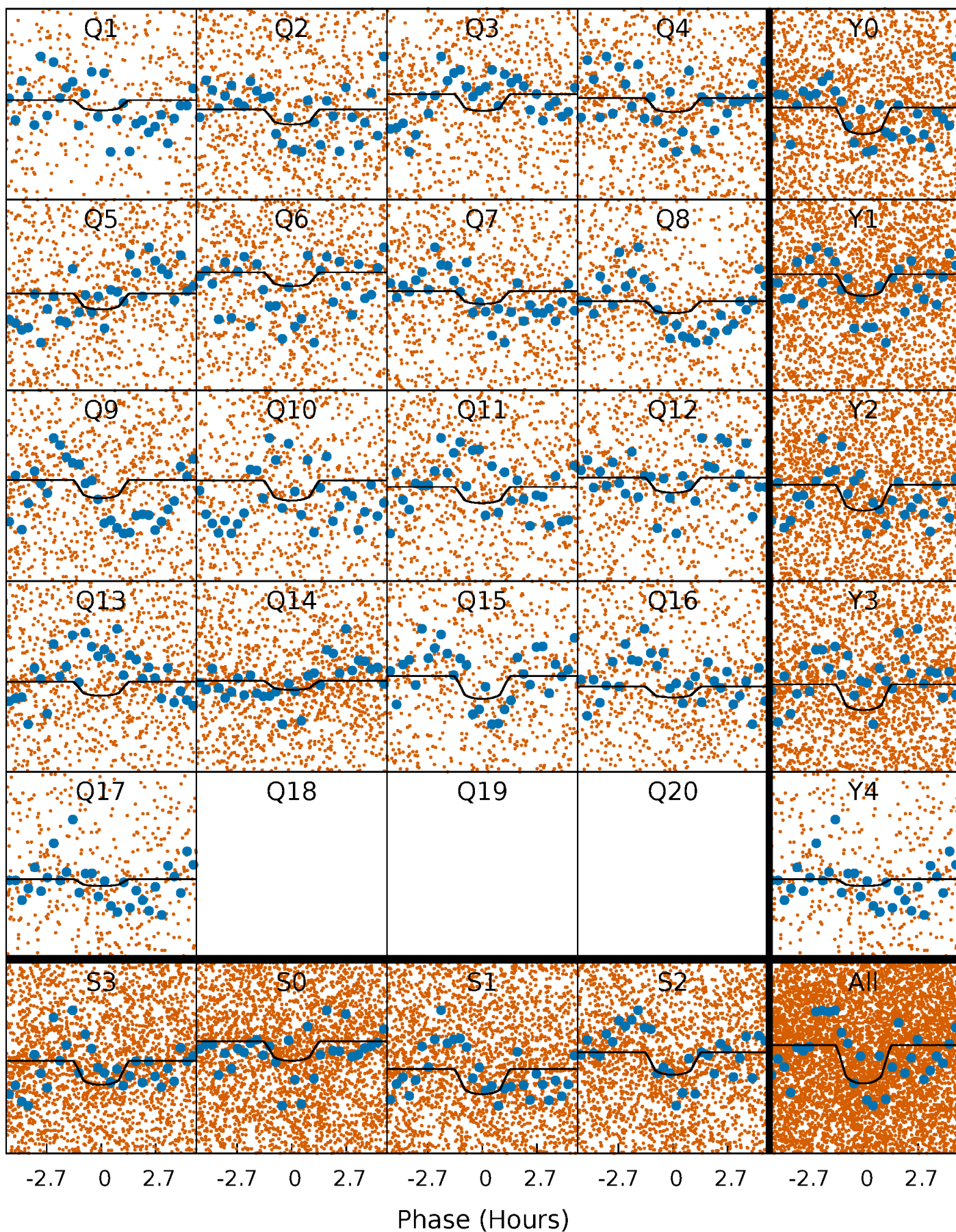
PDC Quarter-Phased Transit Curves

TCE 004829243-01 P= 0.880091 Days $T_0=131.758067$ (BKJD)



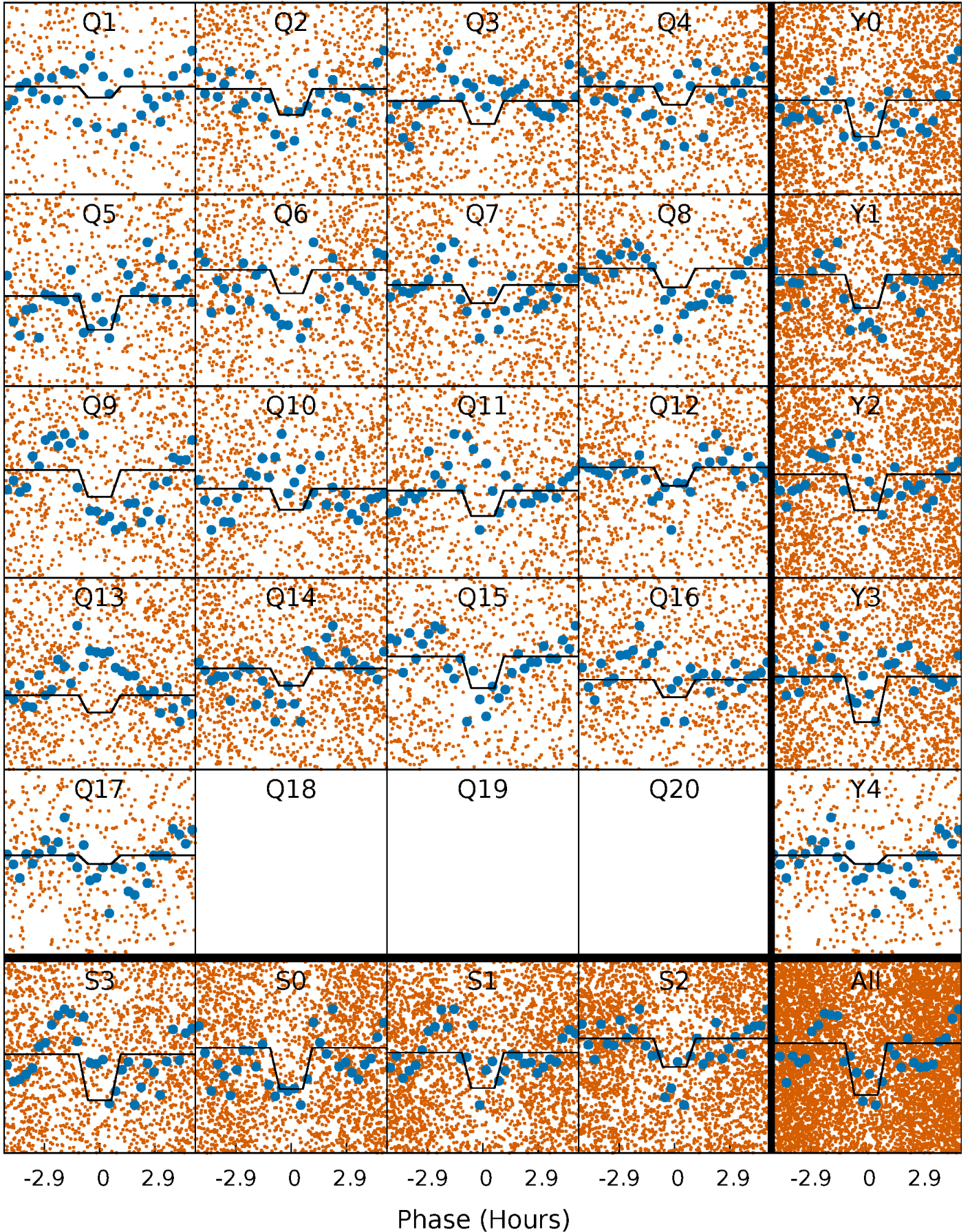
DV Quarter-Phased Transit Curves

TCE 004829243-01 P= 0.880091 Days $T_0=131.758067$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

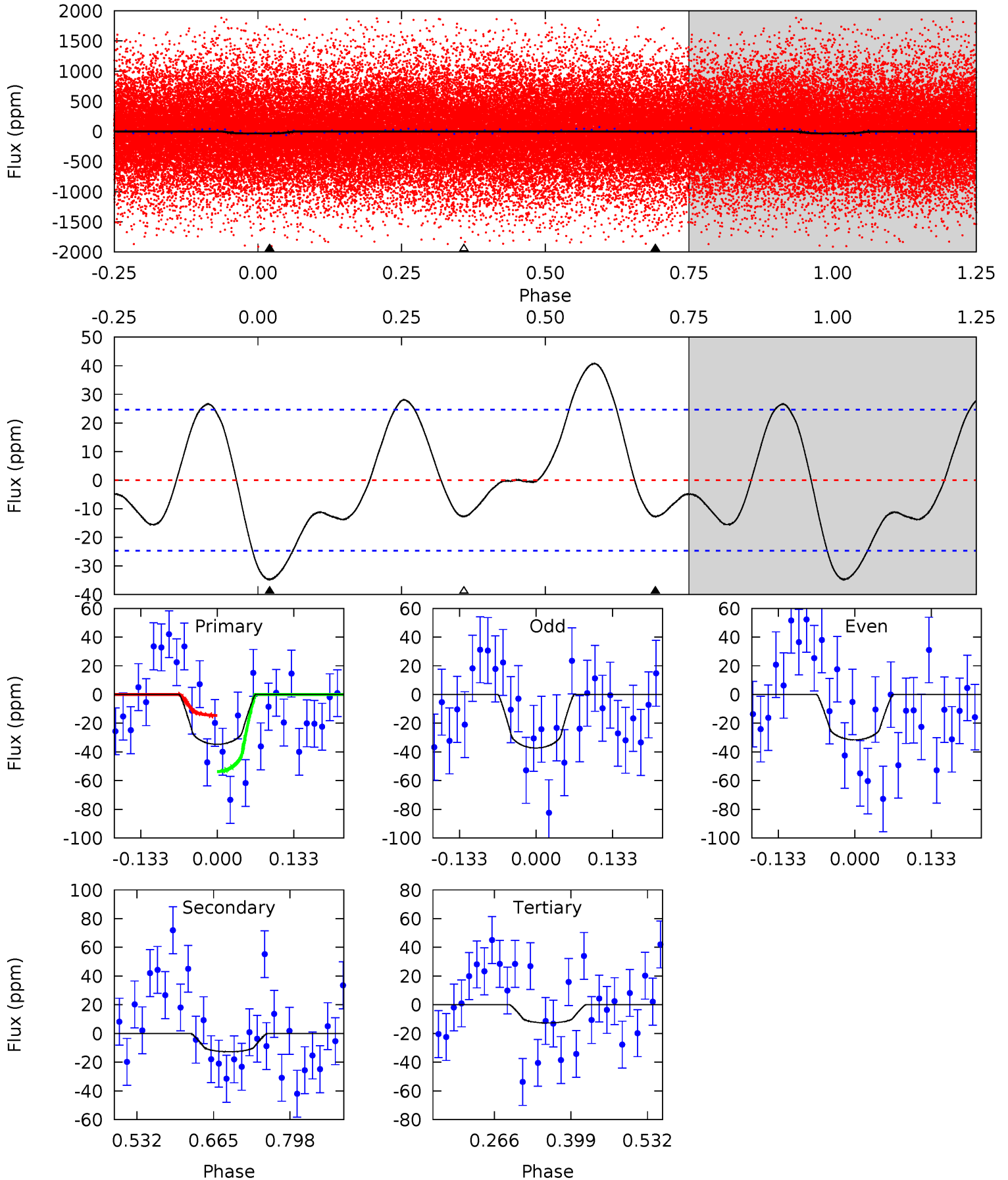
TCE 004829243-01 P= 0.880100 Days $T_0=131.761314$ (BKJD)



DV Model-Shift Uniqueness Test

004829243-01, P = 0.880091 Days, E = 130.877976 Days

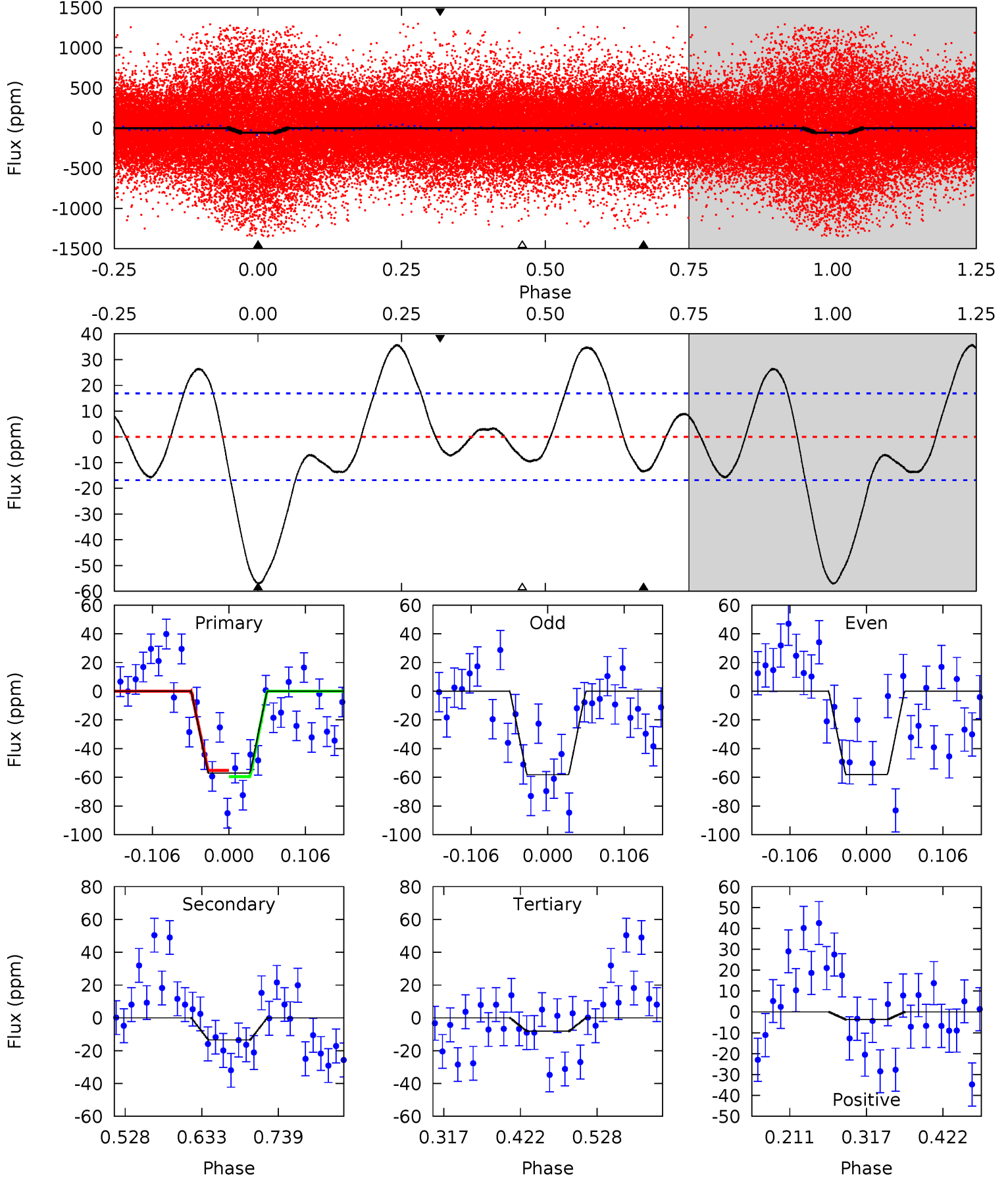
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.34	2.33	2.32	0	4.50	1.50	2.37	4.02	6.34	0.01	2.33	0.53	0.74	0.54	3.61



Alt Model-Shift Uniqueness Test

004829243-01, P = 0.880100 Days, E = 130.881214 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.4	3.63	2.21	-0.99	4.55	1.62	4.02	13.2	16.4	1.42	4.61	0.01	0.78	0.38	0.61



Stellar Parameters For KIC 004829243

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5110^{+141}_{-115}	$3.627^{+0.975}_{-0.325}$	$-0.500^{+0.300}_{-0.200}$	$2.331^{+1.399}_{-1.554}$	$0.840^{+0.279}_{-0.150}$	$0.093^{+2.595}_{-0.076}$
	+3%/-2%	+27%/-9%	+60%/-40%	+60%/-67%	+33%/-18%	+2778%/-81%
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 004829243-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-13 ± 5	$1.61^{+0.96}_{-0.70}$	3613^{+577}_{-713}	3532^{+859}_{-6131}	$0.737^{+1.844}_{-0.471}$
Alt.	-13 ± 4	$1.60^{+0.86}_{-0.73}$	3600^{+547}_{-728}	3690^{+854}_{-1132}	$0.868^{+1.991}_{-0.543}$

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

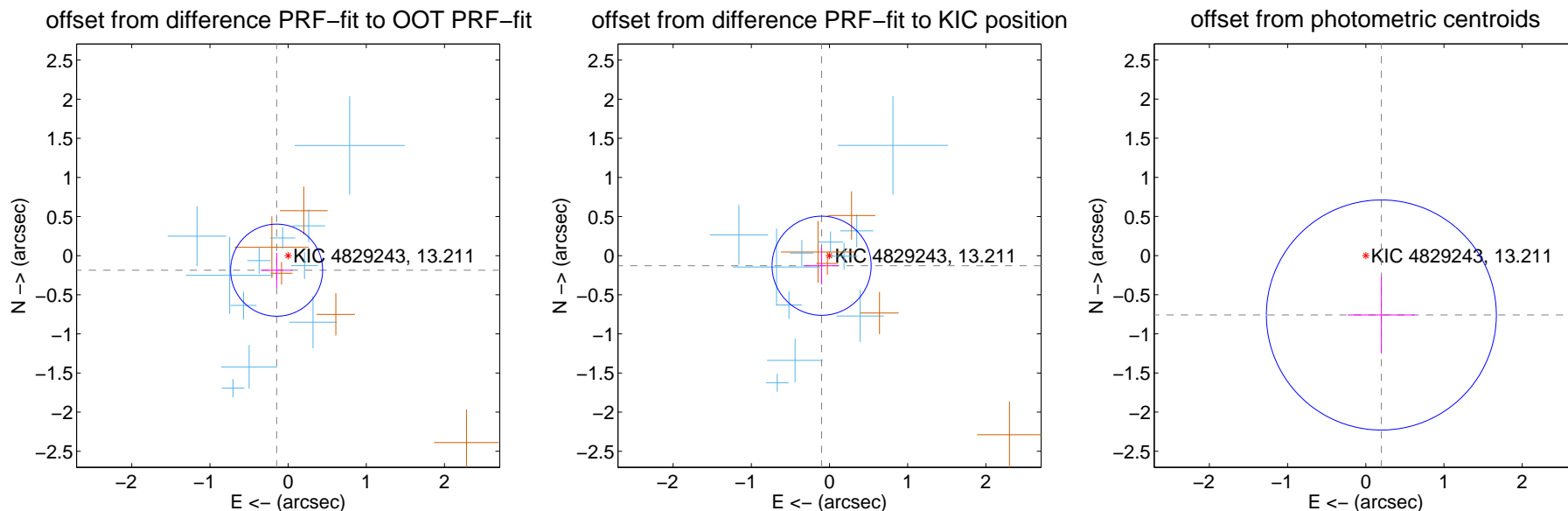
DV Centroid Data

Supplemental centroid analysis for 004829243-01. Kepler magnitude: 13.21. Transit SNR 6.97

There are 11 quarters with good PRF difference image offsets

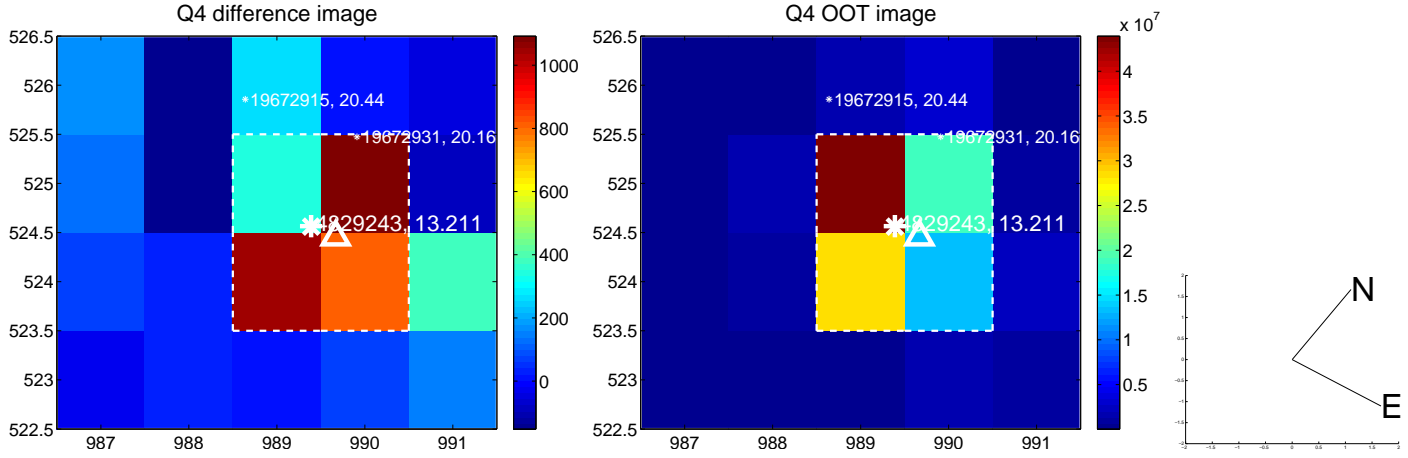
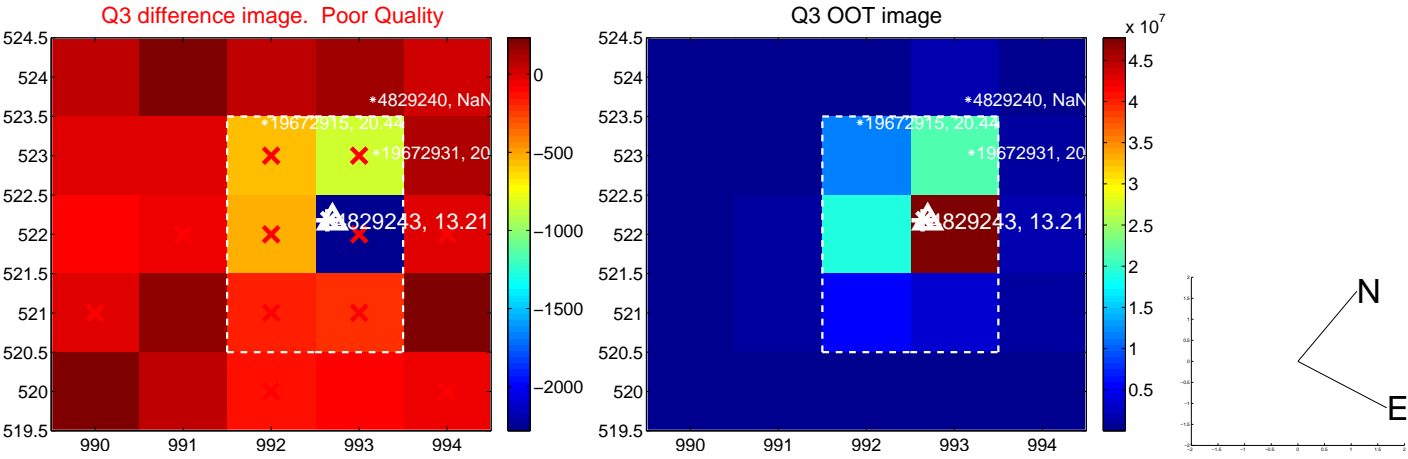
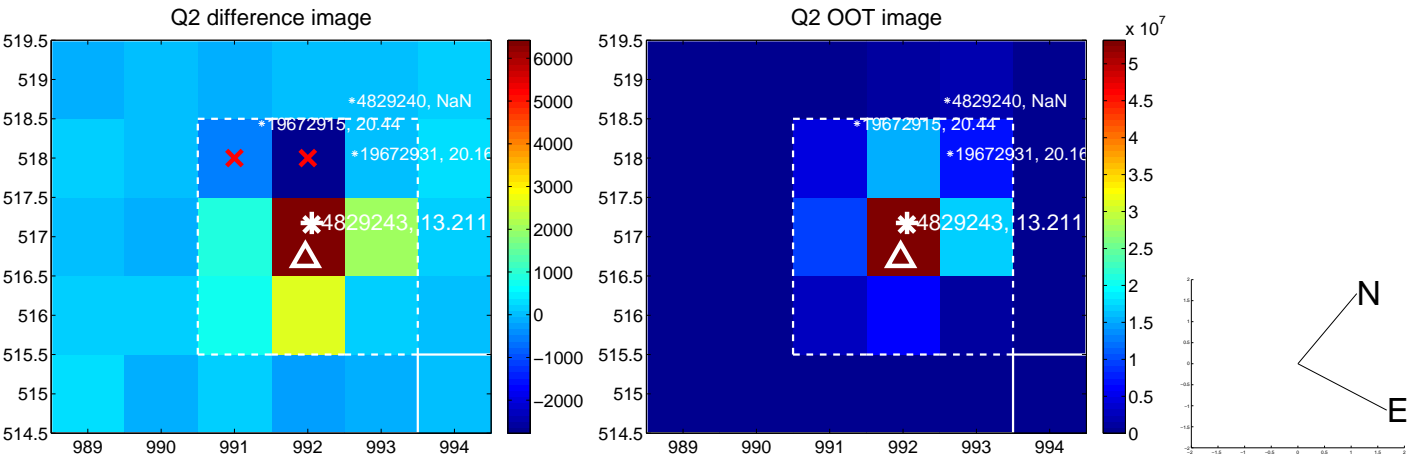
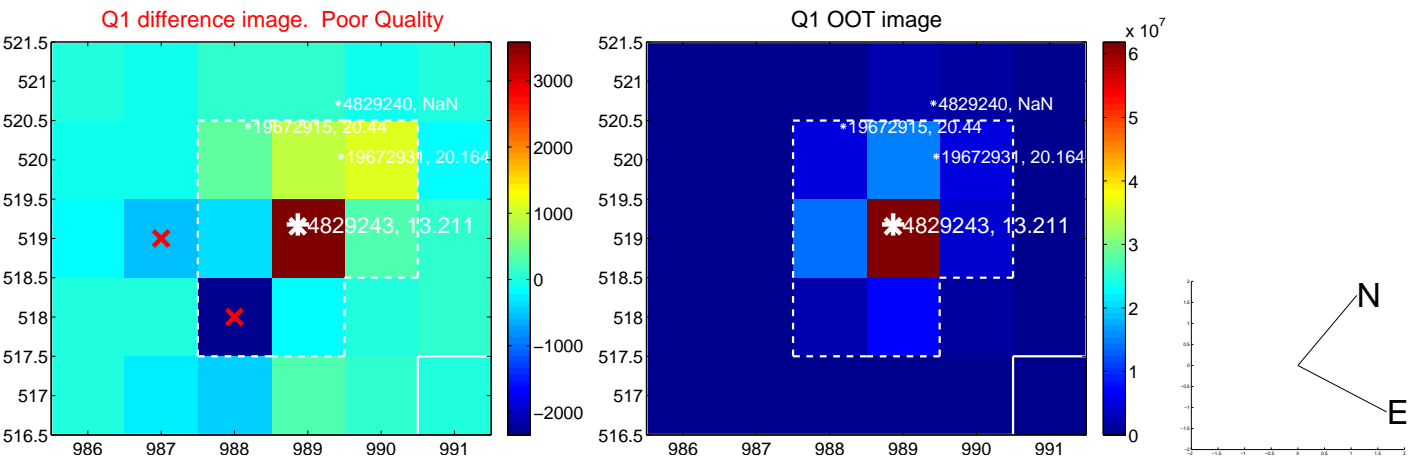
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.237 ± 0.196	1.21	0.147 ± 0.201	-0.186 ± 0.224
PRF-fit source offset from KIC position	0.164 ± 0.211	0.77	0.101 ± 0.216	-0.129 ± 0.238
photometric centroid source offset	0.78 ± 0.49	1.60	-0.20 ± 0.43	-0.76 ± 0.49

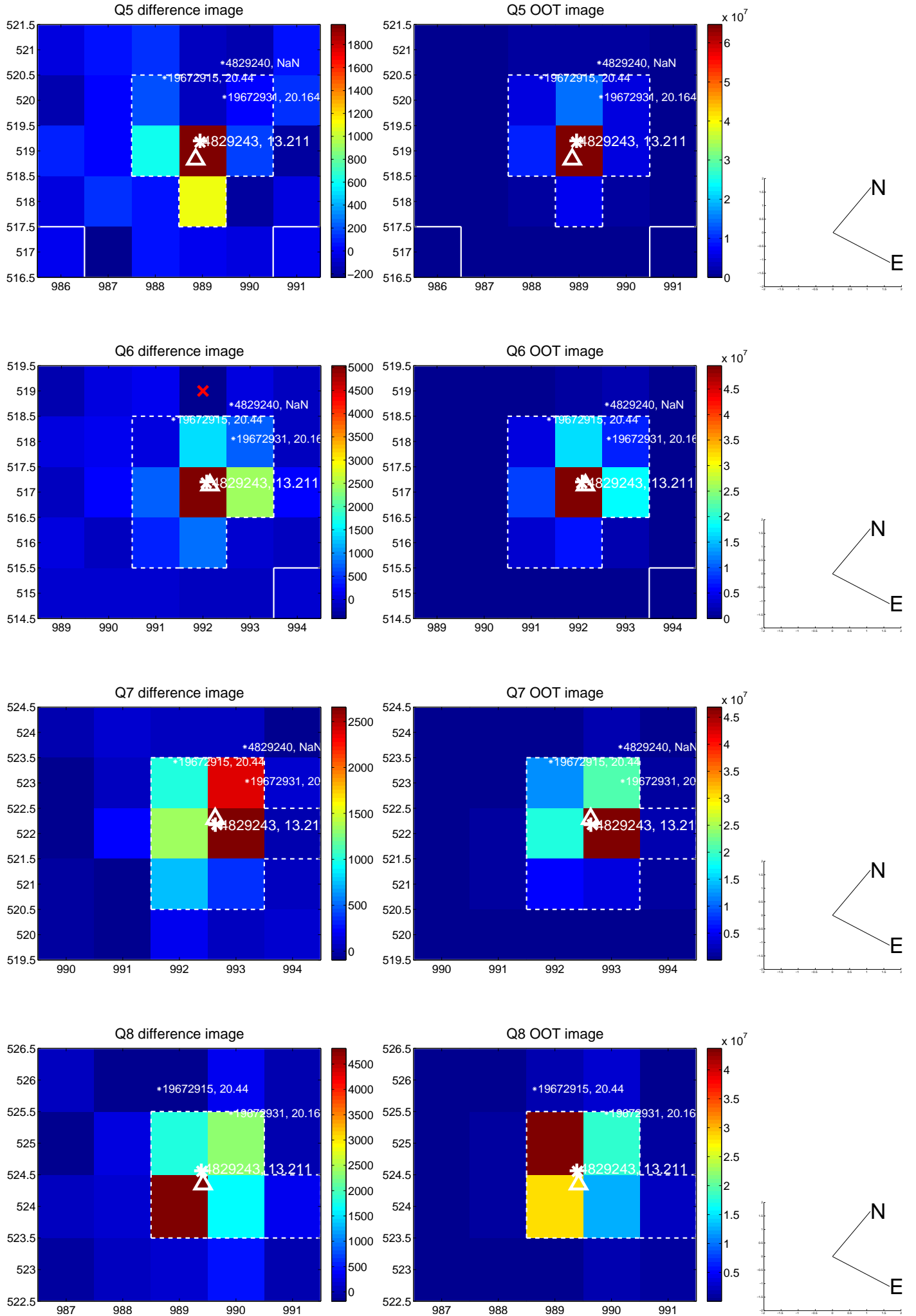


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

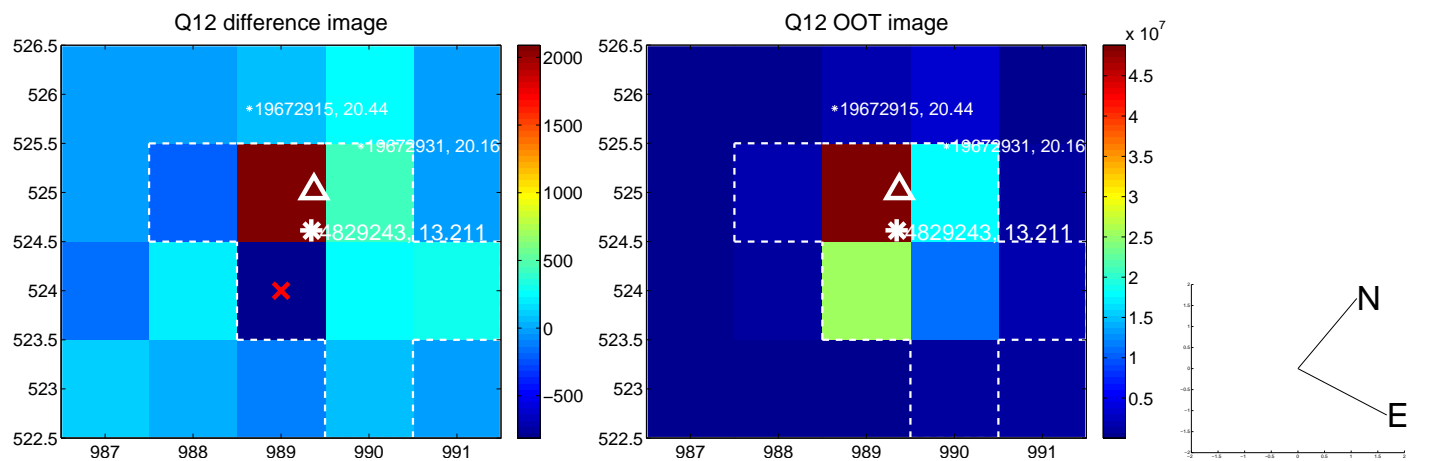
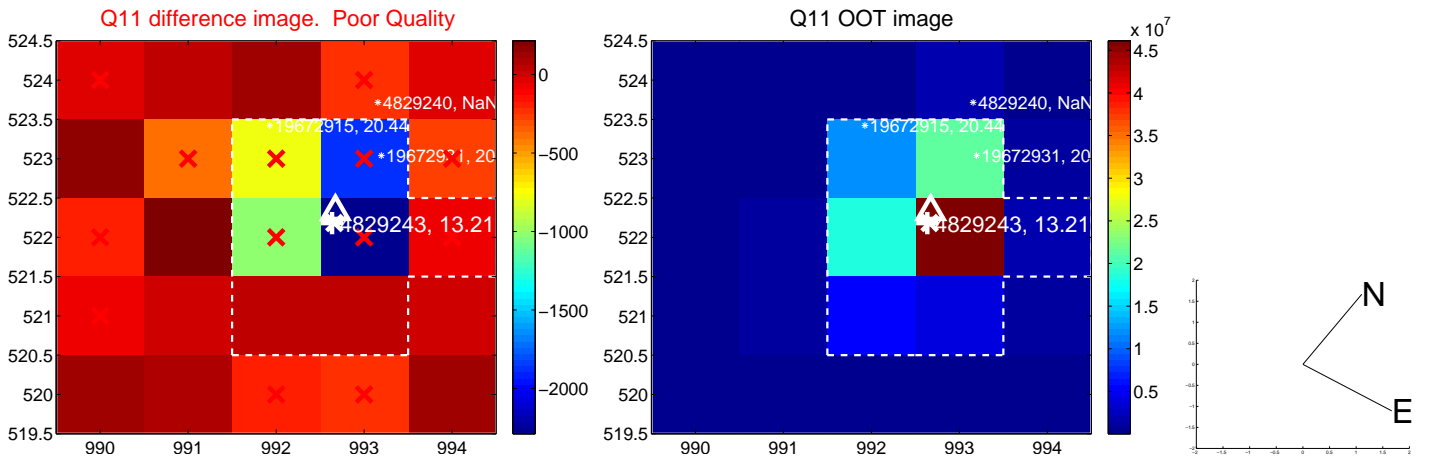
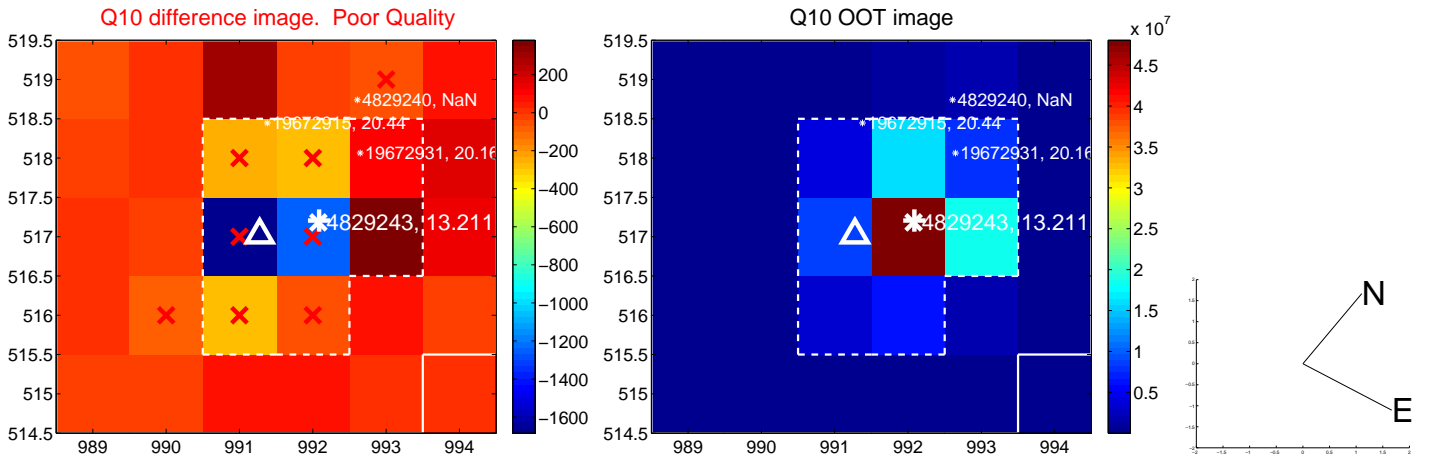
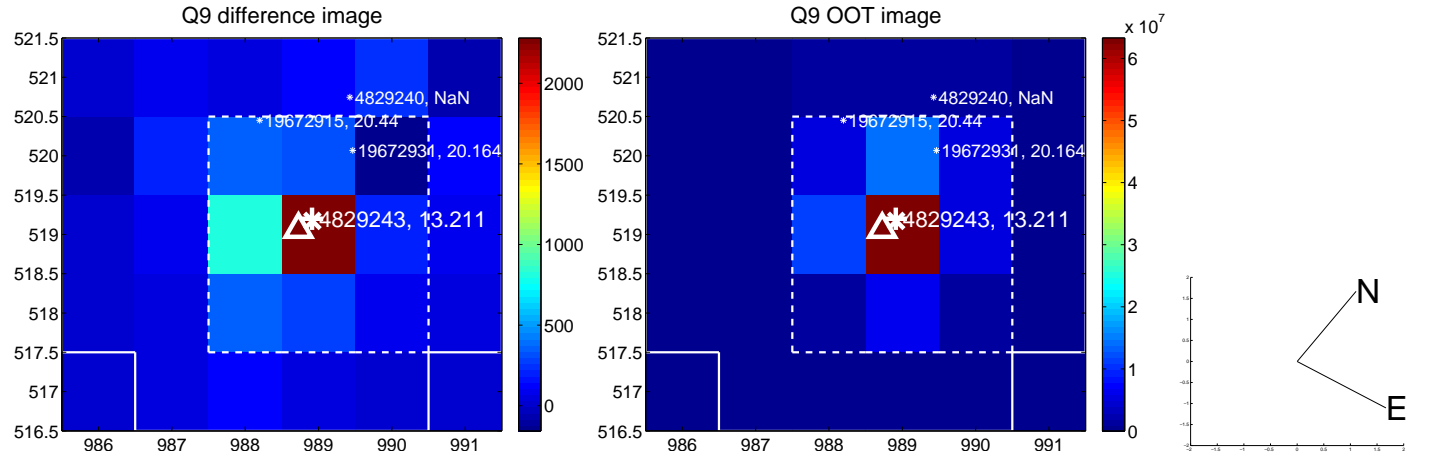
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



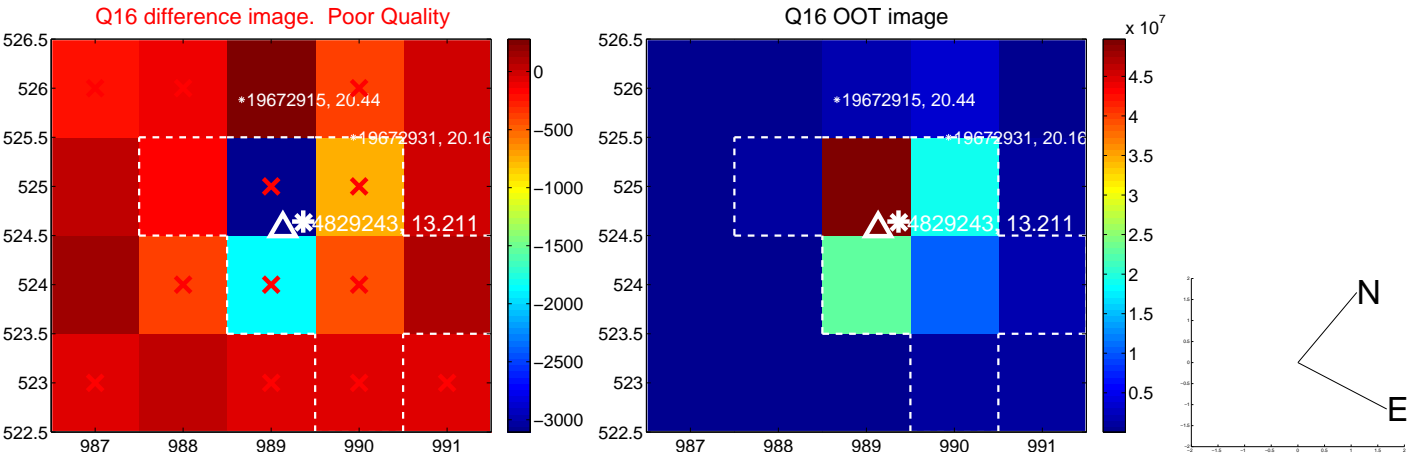
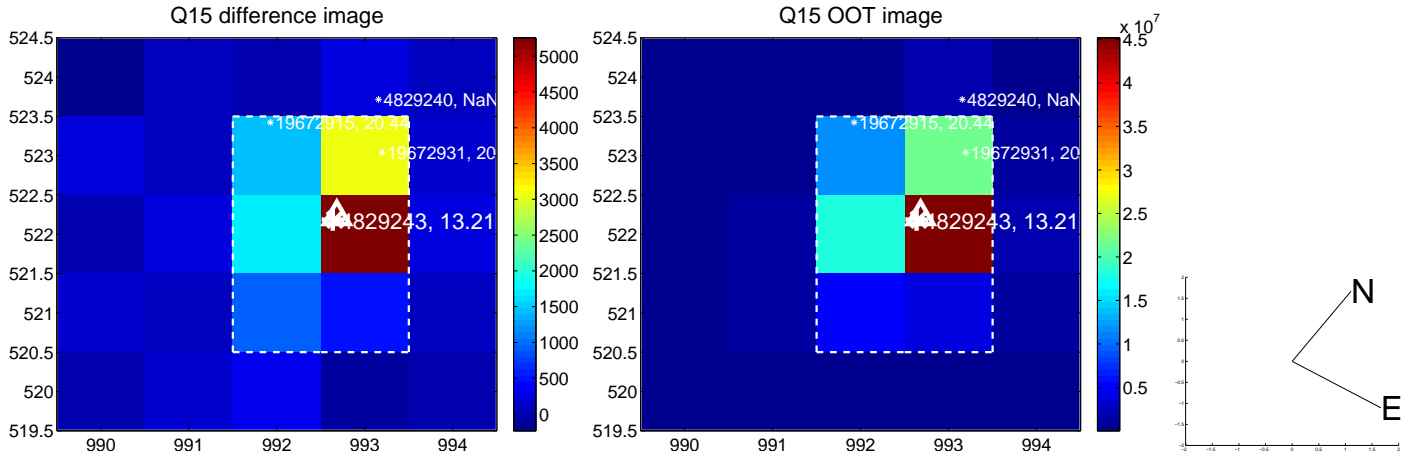
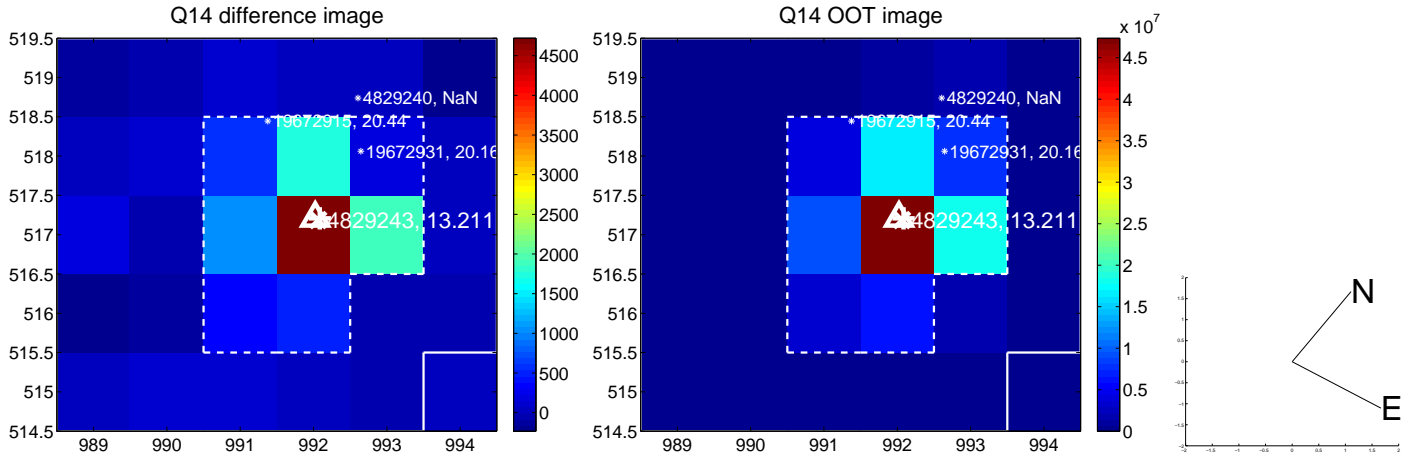
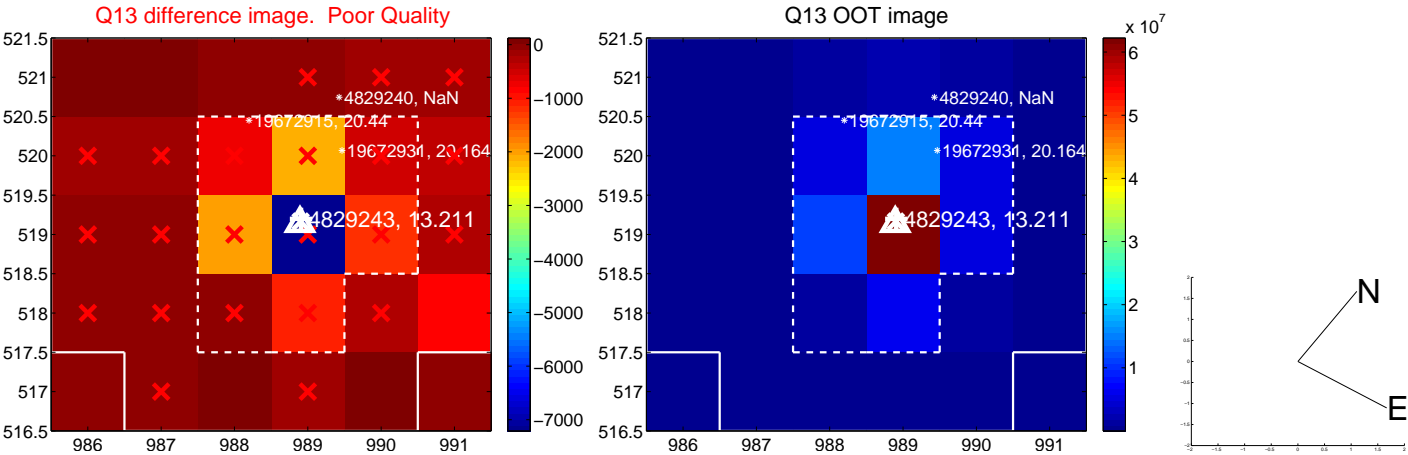
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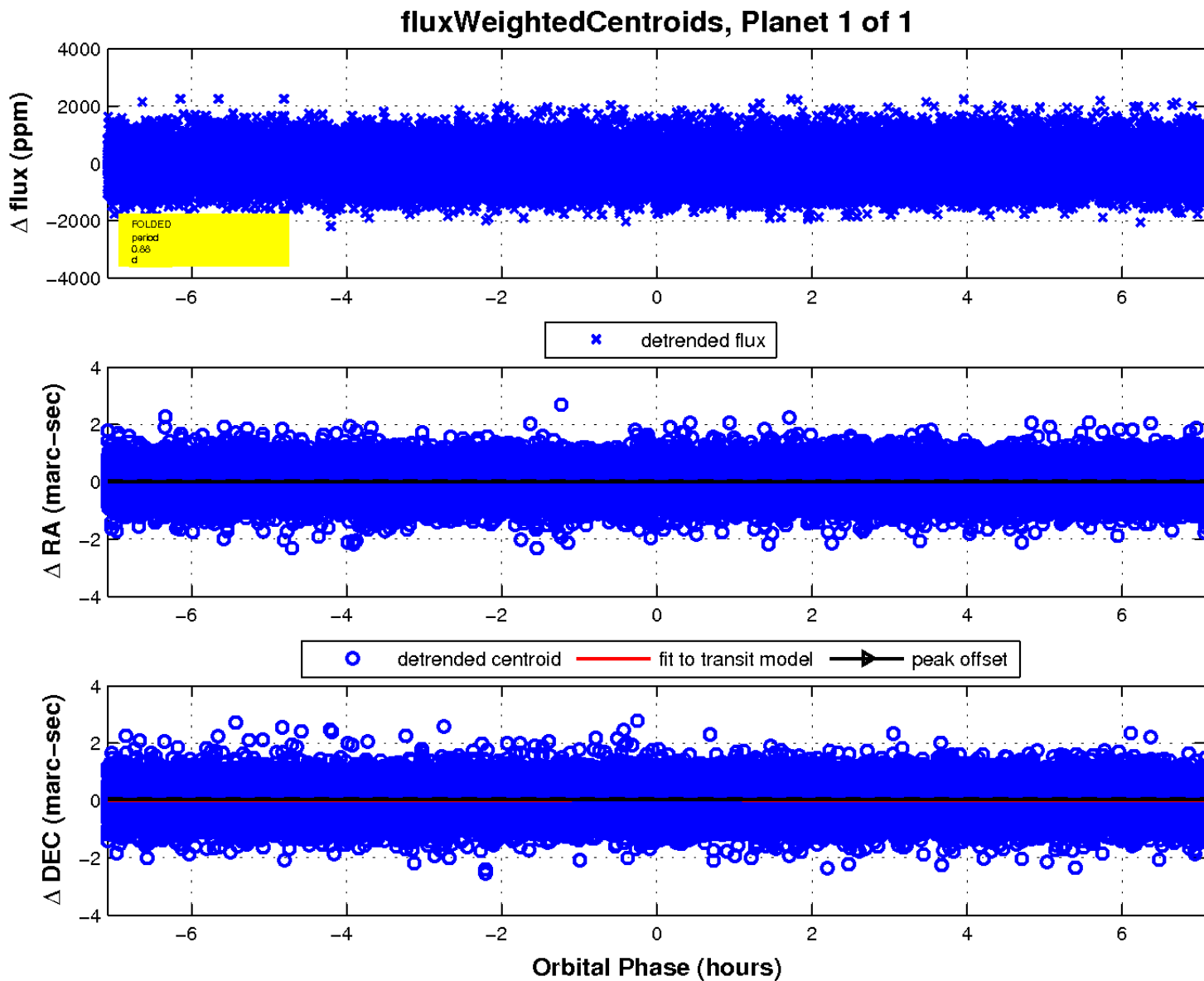
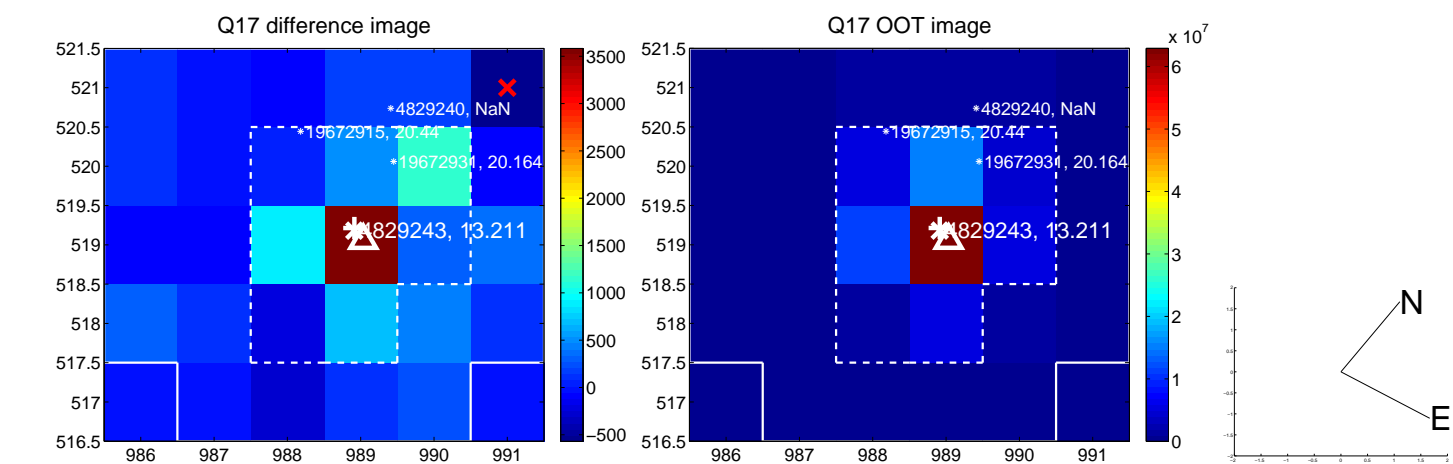
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UKIRT Image

Declination

