

KIC 004149720

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})
004149720-01	OBS	No	0.713720	131.521453	41.9	1.450	8.3	7.0	2.88	5008	2.27	21312.94

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004149720-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—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.

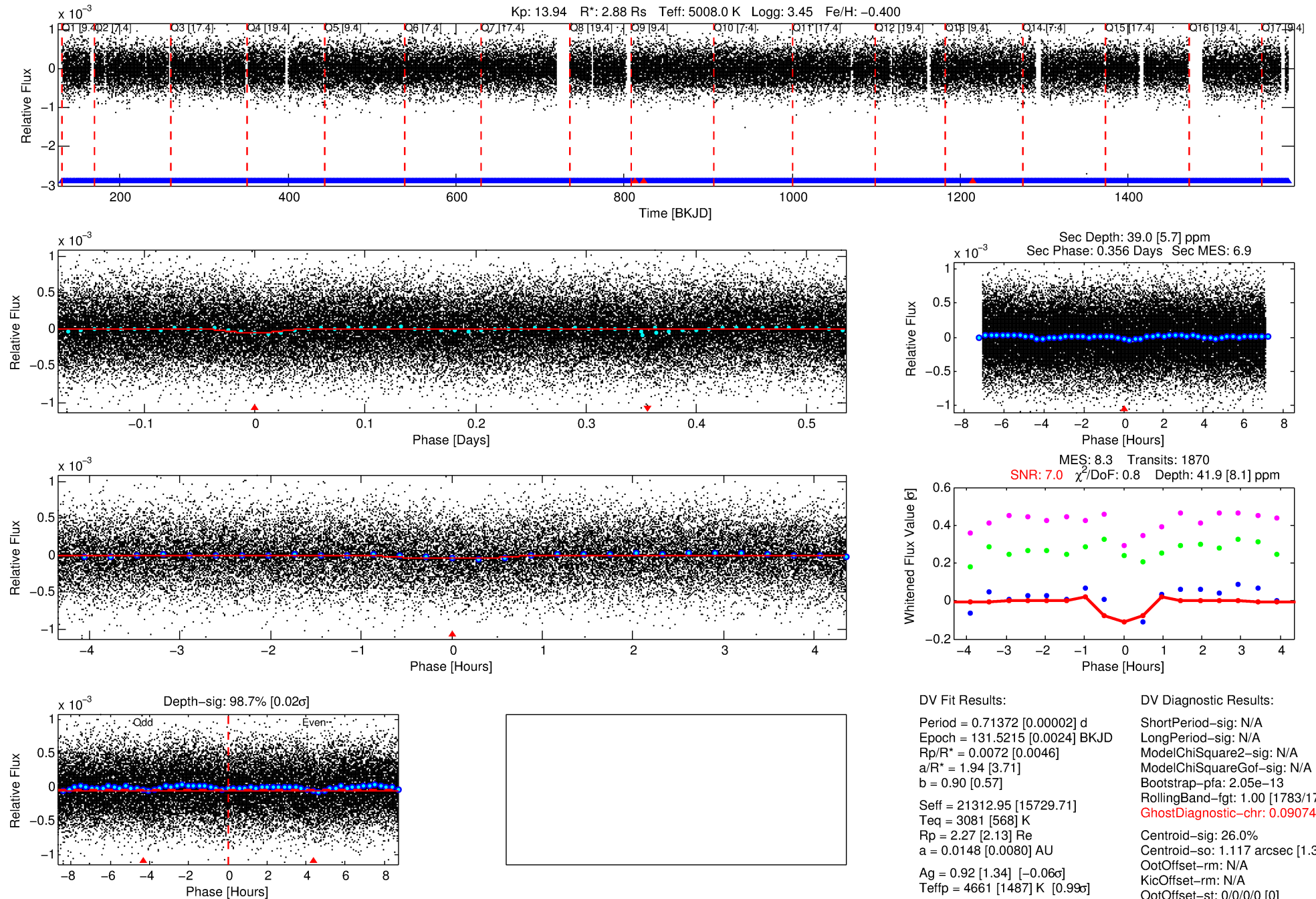
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004149720-01

No Significant Match Found

DV One-Page Summary

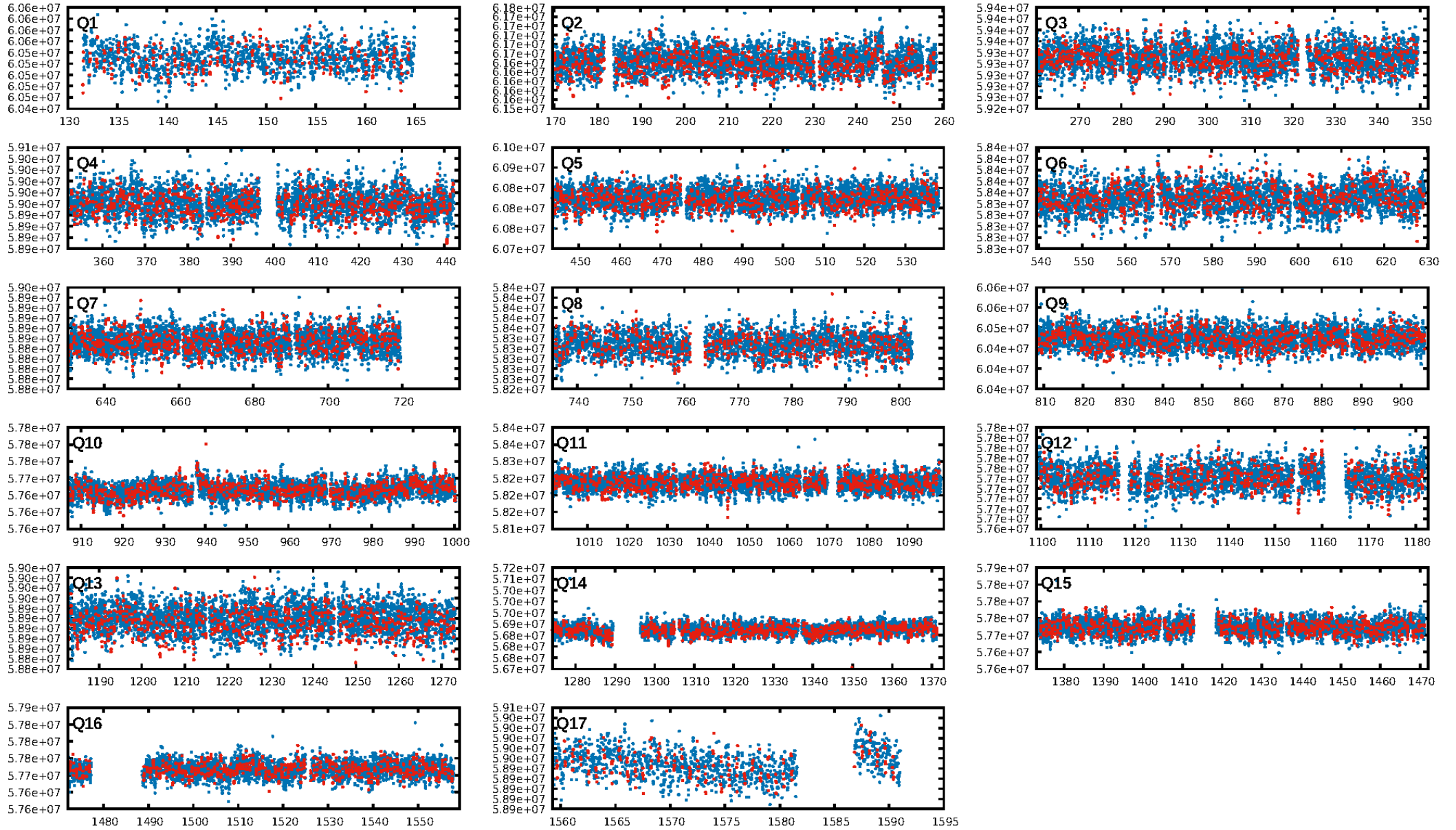
KIC: 4149720 Candidate: 1 of 1 Period: 0.714 d



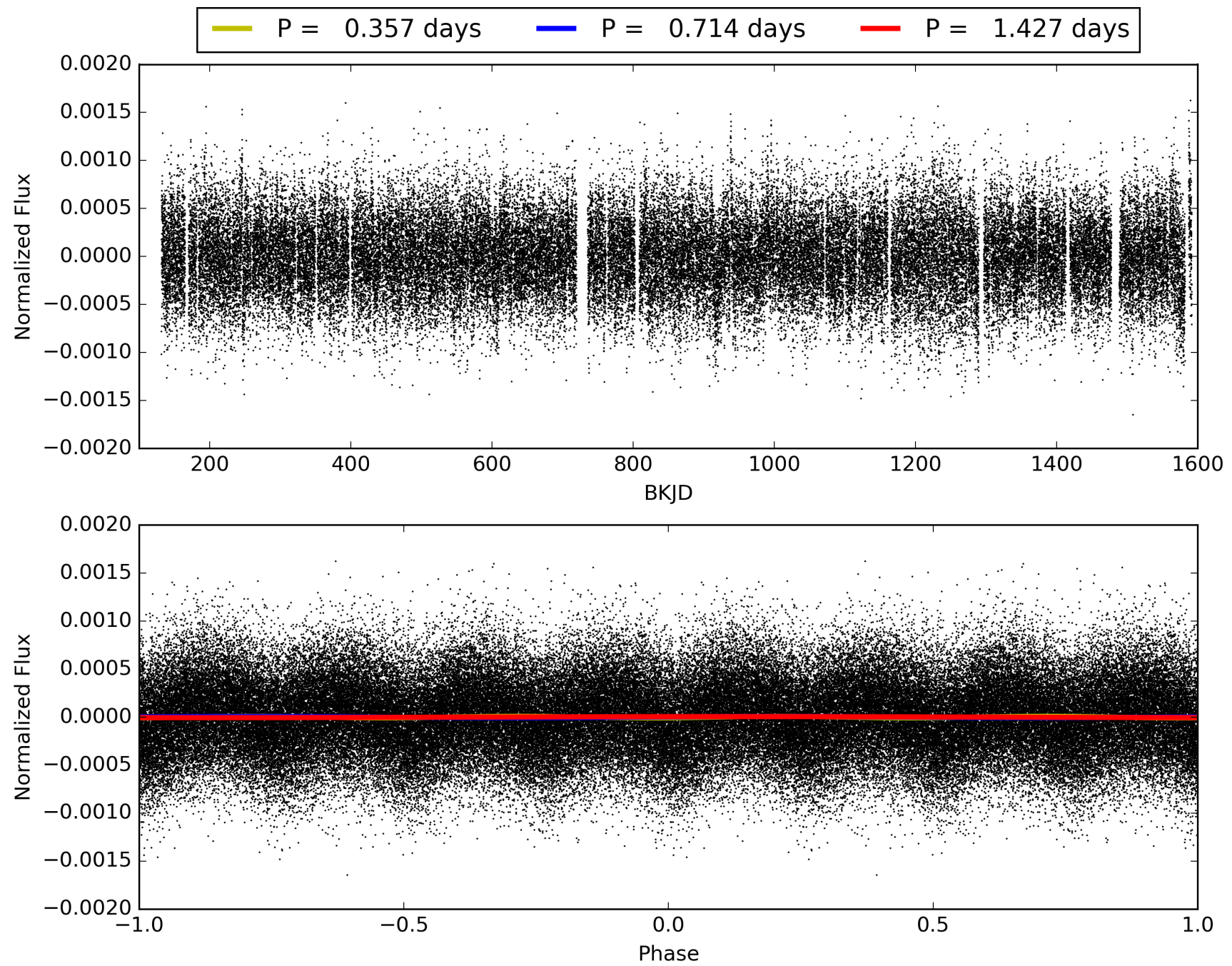
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:00:07 Z

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

TCE 004149720-01, PDC Light Curves

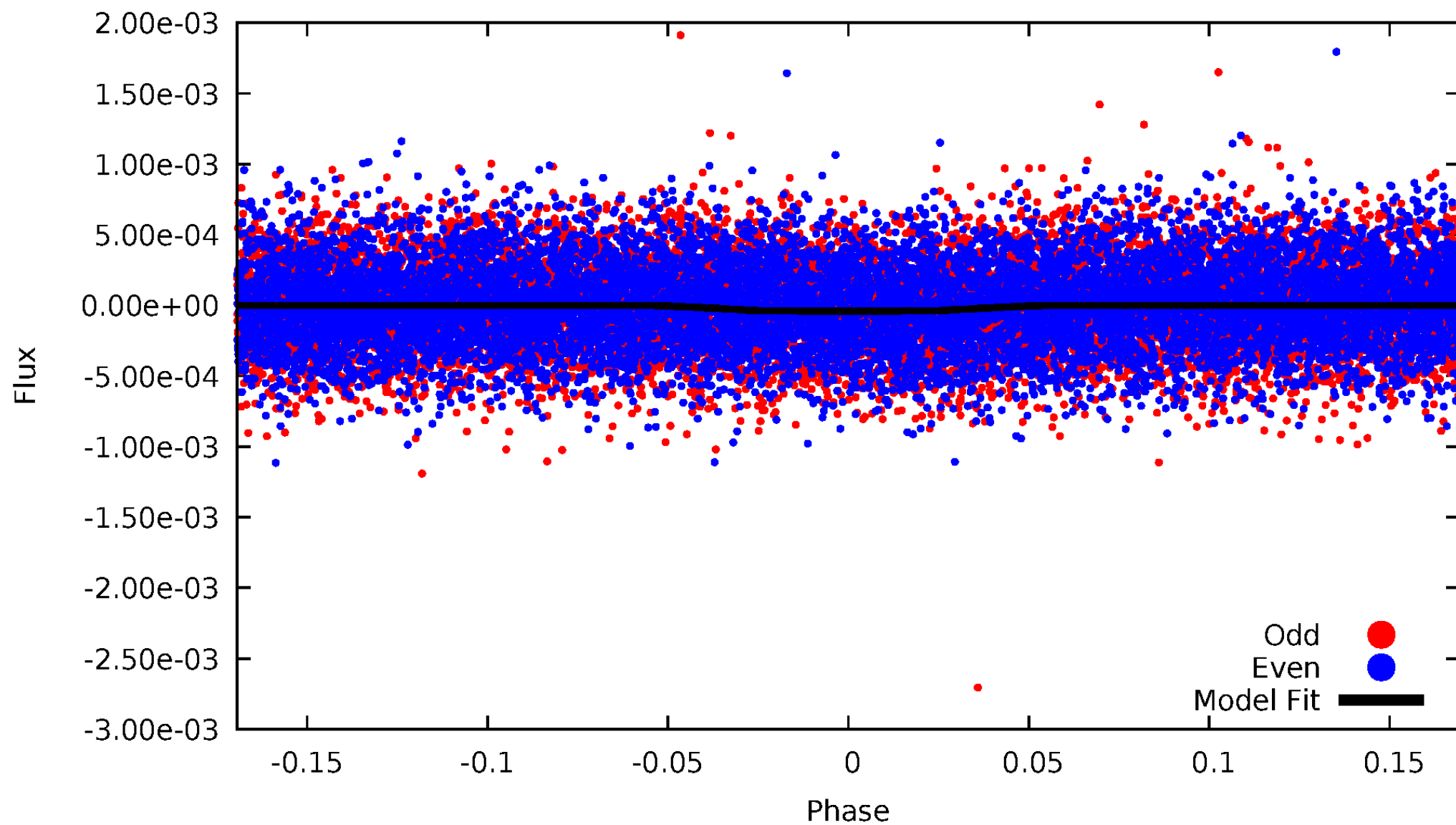


TCE 004149720-01



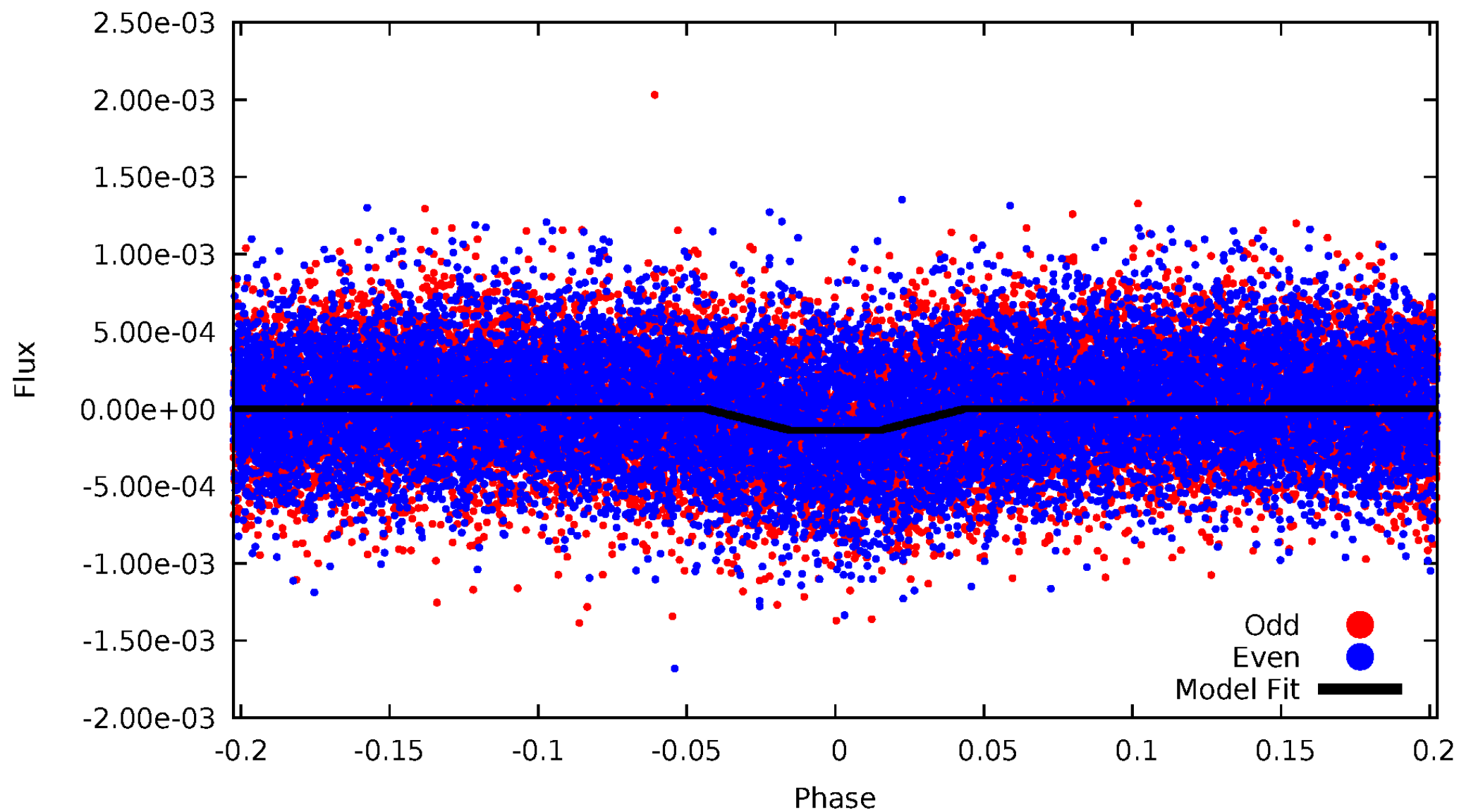
DV Odd/Even

TCE 004149720-01



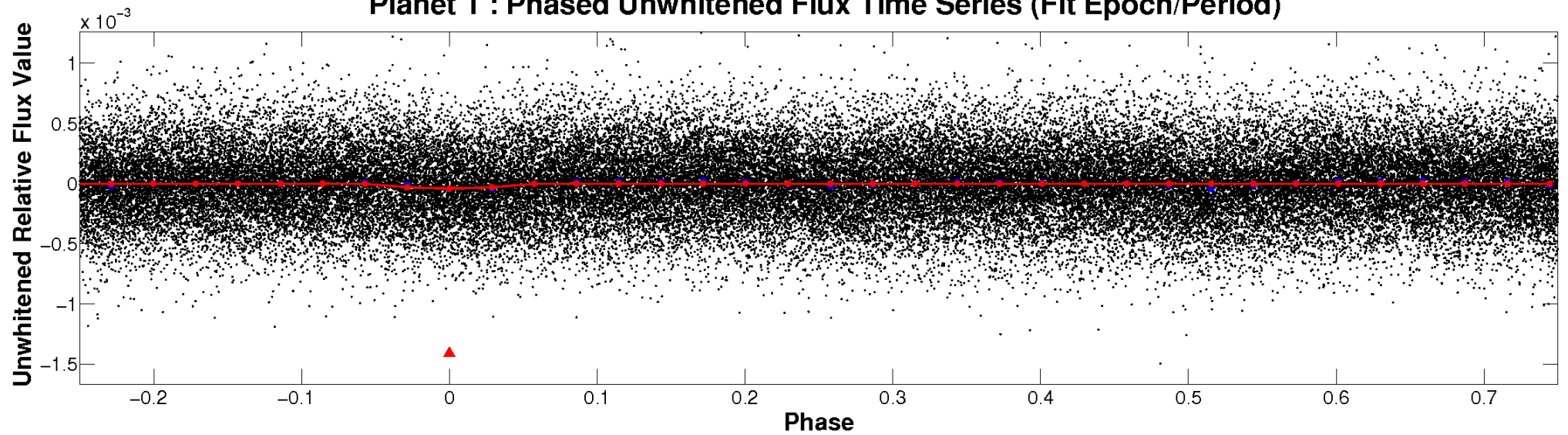
ALT Odd/Even

TCE 004149720-01

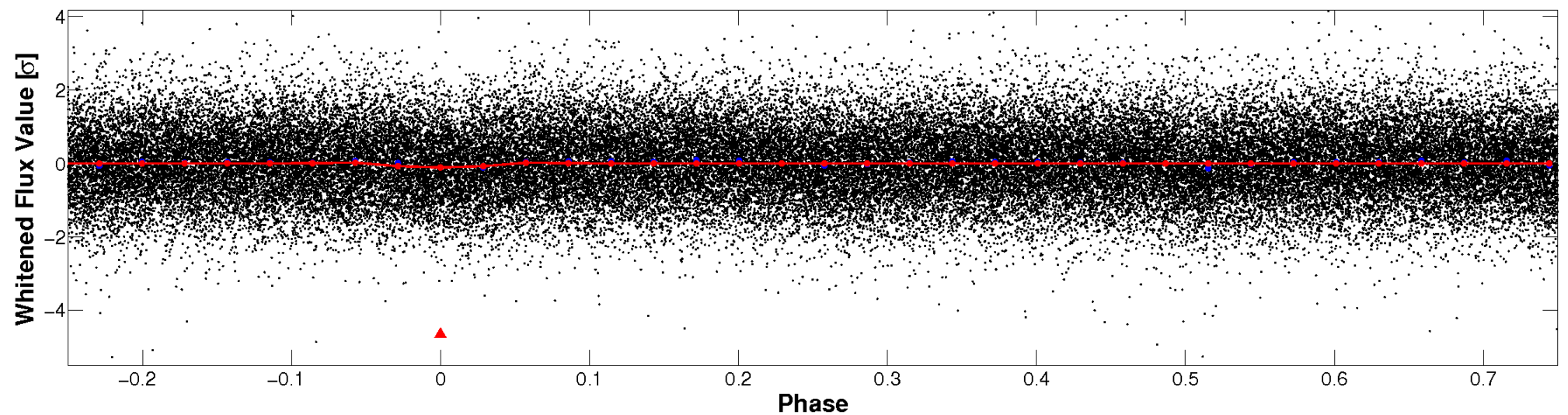


Non-Whitened Vs. Whitened Light Curve

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

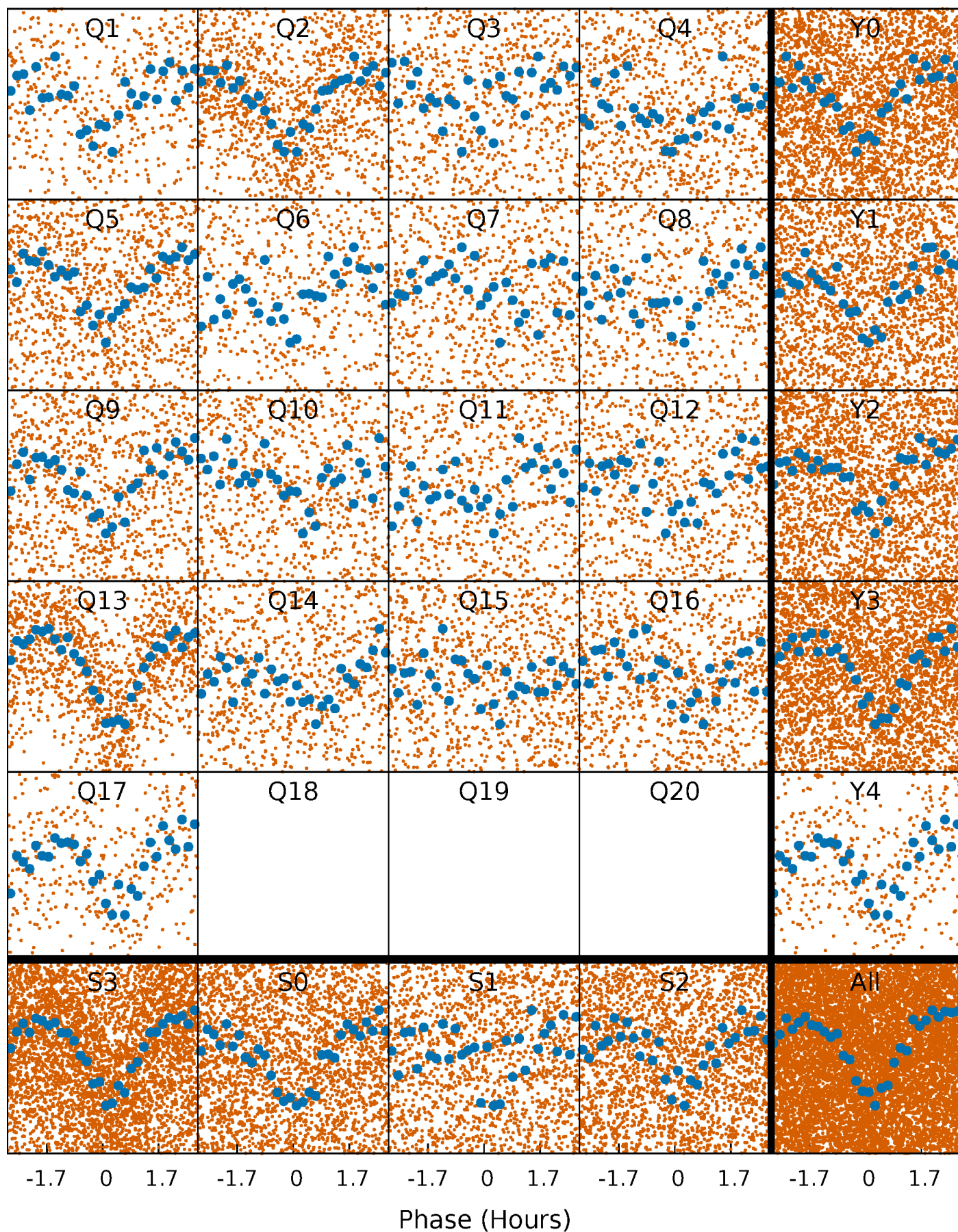


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



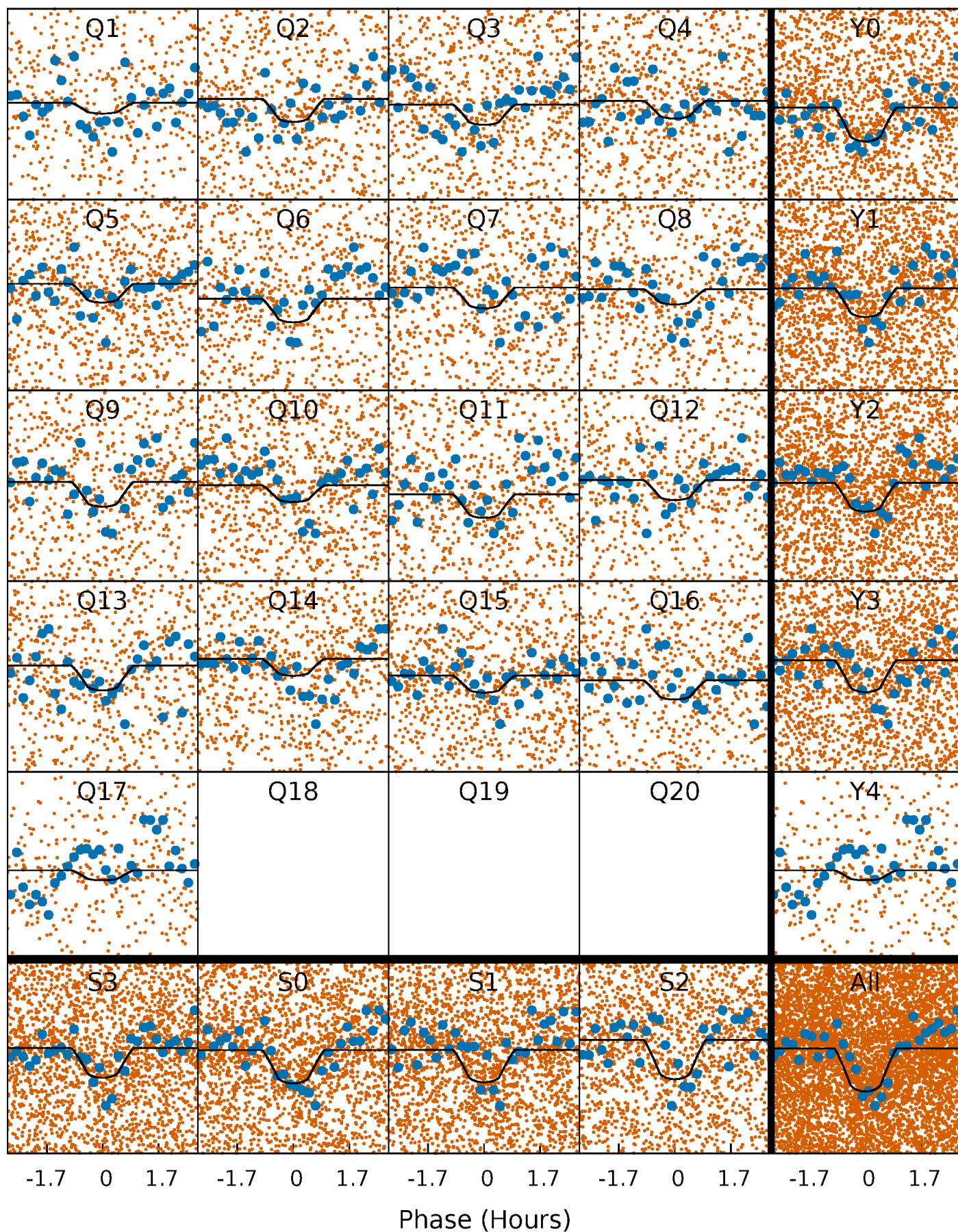
PDC Quarter-Phased Transit Curves

TCE 004149720-01 P= 0.713720 Days $T_0=131.521453$ (BKJD)



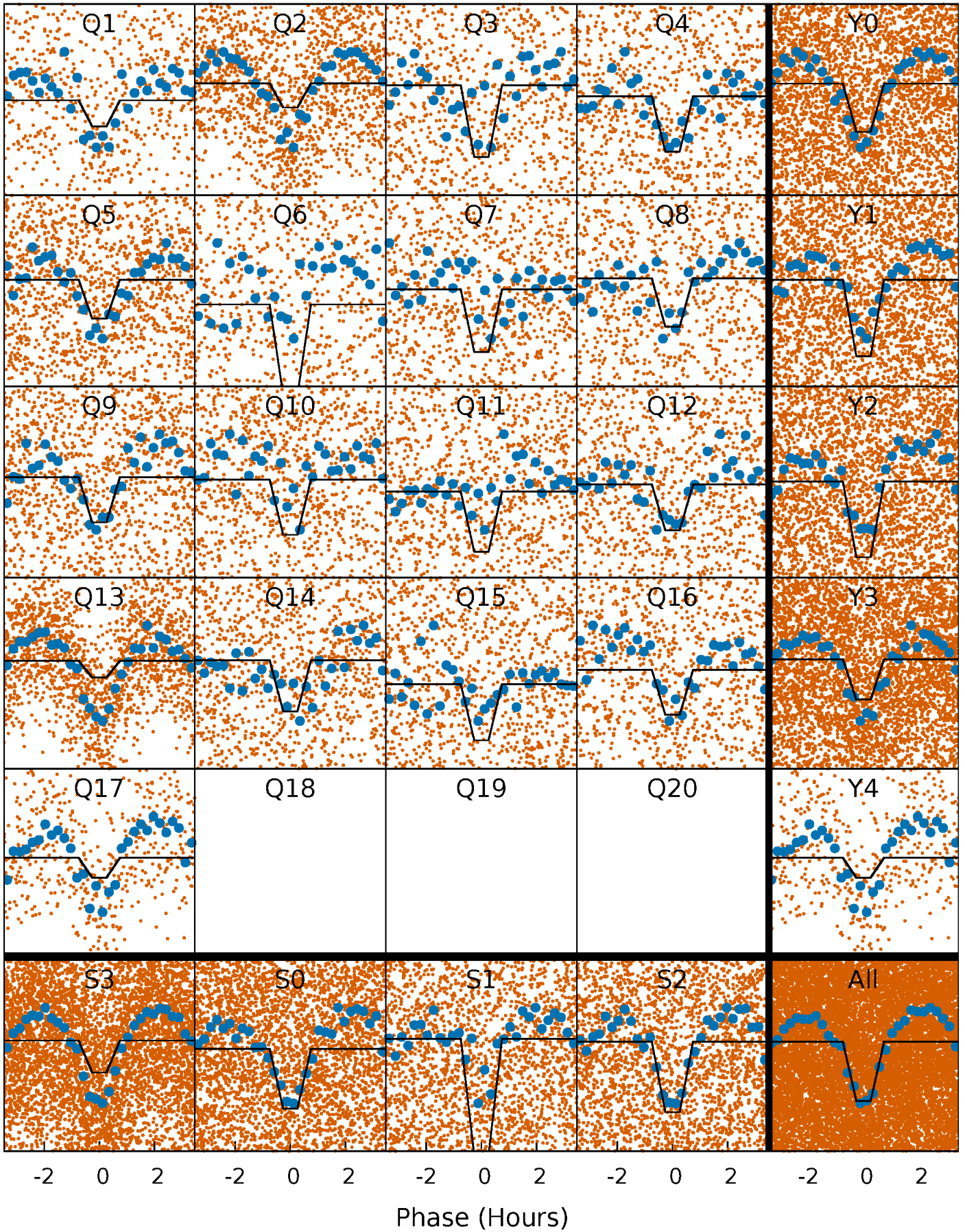
DV Quarter-Phased Transit Curves

TCE 004149720-01 P= 0.713720 Days $T_0=131.521453$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

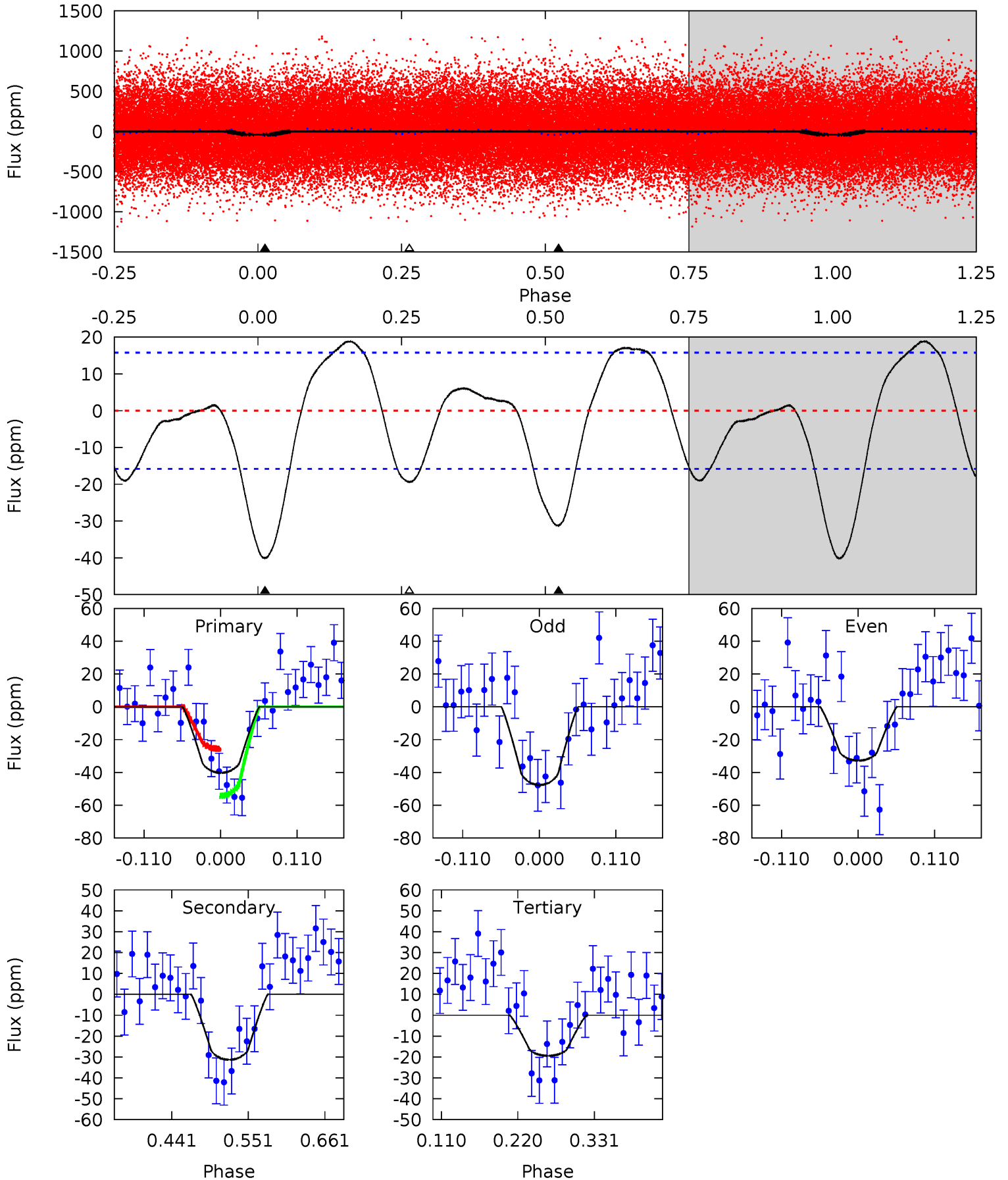
TCE 004149720-01 P= 0.713733 Days $T_0=131.516827$ (BKJD)



DV Model-Shift Uniqueness Test

004149720-01, P = 0.713720 Days, E = 130.807733 Days

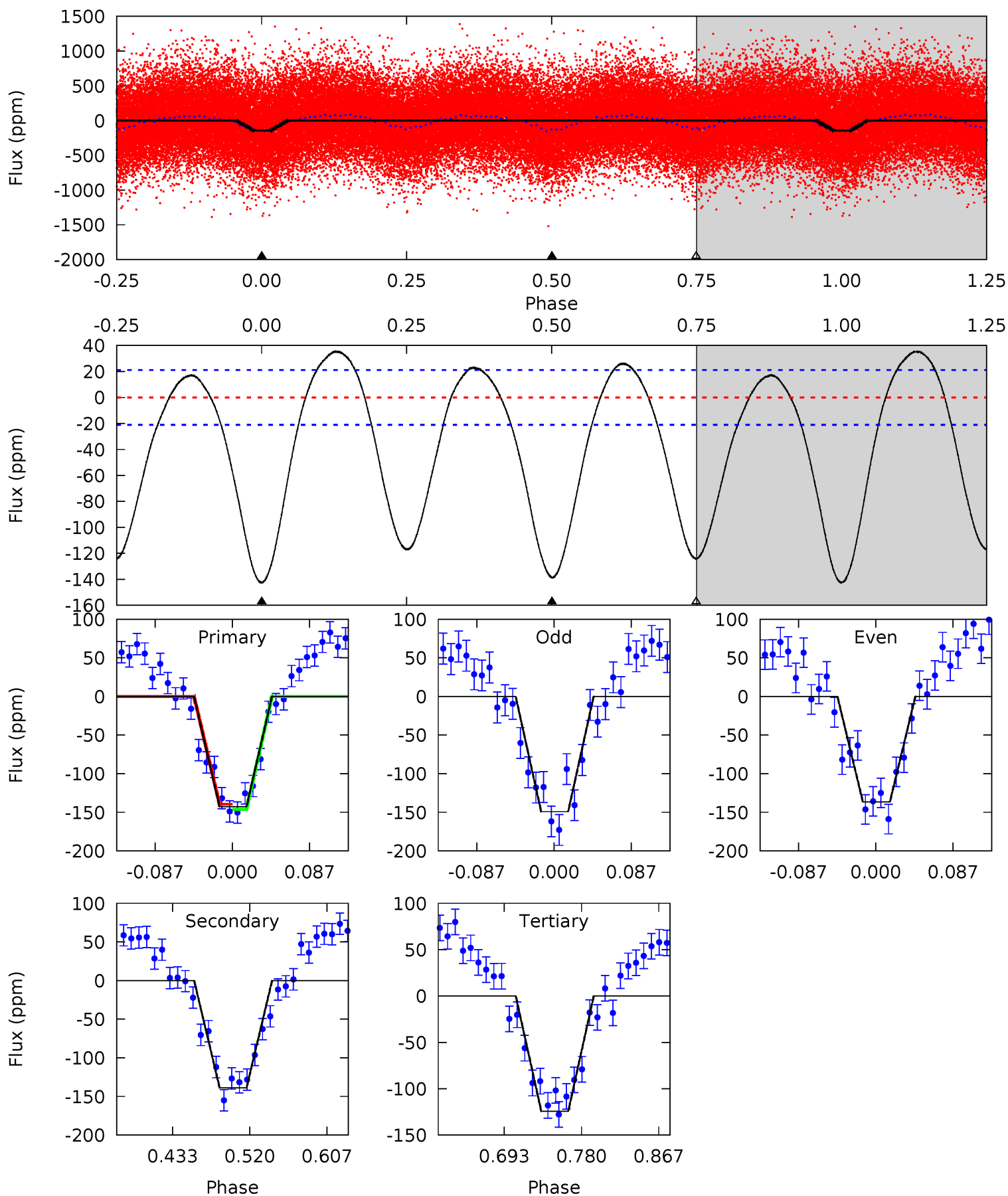
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	9.01	5.58	0	4.54	1.60	3.40	5.98	11.6	3.43	9.01	2.14	1.01	0.32	4.09



Alt Model-Shift Uniqueness Test

004149720-01, P = 0.713733 Days, E = 130.803094 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.0	30.2	27.1	0	4.59	1.71	11.0	3.98	31.0	3.14	30.2	1.36	0.96	0.20	0.74



Stellar Parameters For KIC 004149720

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5008^{+137}_{-100}	$3.449^{+0.368}_{-0.301}$	$-0.400^{+0.300}_{-0.200}$	$2.882^{+1.635}_{-1.998}$	$0.851^{+0.294}_{-0.158}$	$0.050^{+0.150}_{-0.034}$
	+3%/-2%	+11%/-9%	+75%/-50%	+57%/-69%	+35%/-19%	+300%/-68%
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 004149720-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-31 ± 3	$2.48^{+1.80}_{-1.32}$	4410^{+552}_{-556}	3903^{+1935}_{-7178}	$0.648^{+2.173}_{-0.429}$
Alt.	-139 ± 5	$3.97^{+1.90}_{-1.77}$	4415^{+540}_{-566}	4626^{+1404}_{-876}	$1.143^{+2.411}_{-0.649}$

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

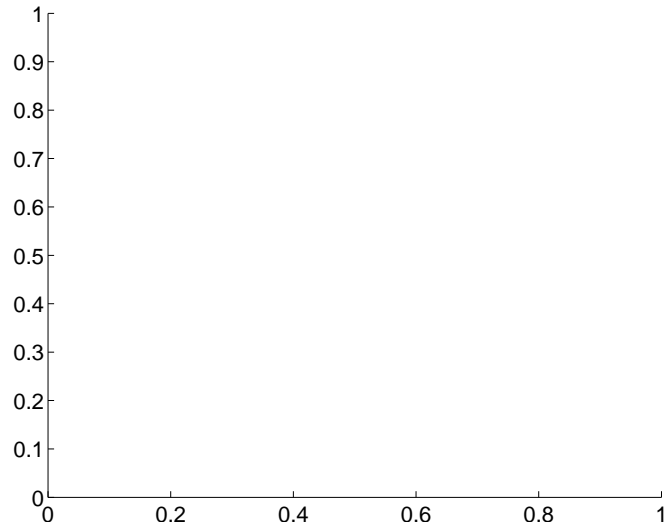
Supplemental centroid analysis for 004149720-01. Kepler magnitude: 13.94. Transit SNR 6.99

There are 0 quarters with good PRF difference image offsets

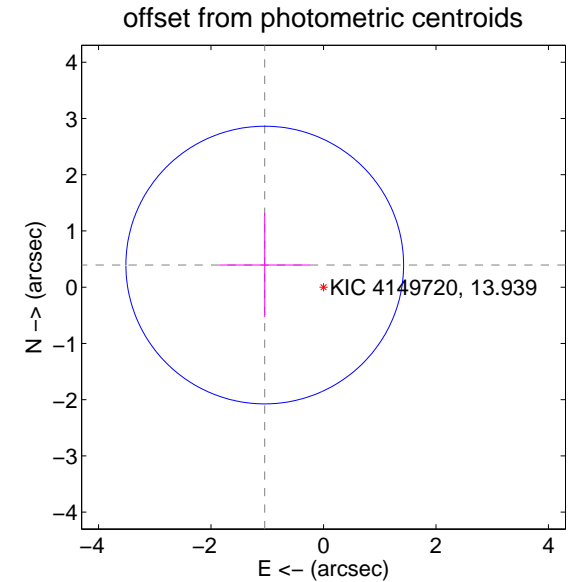
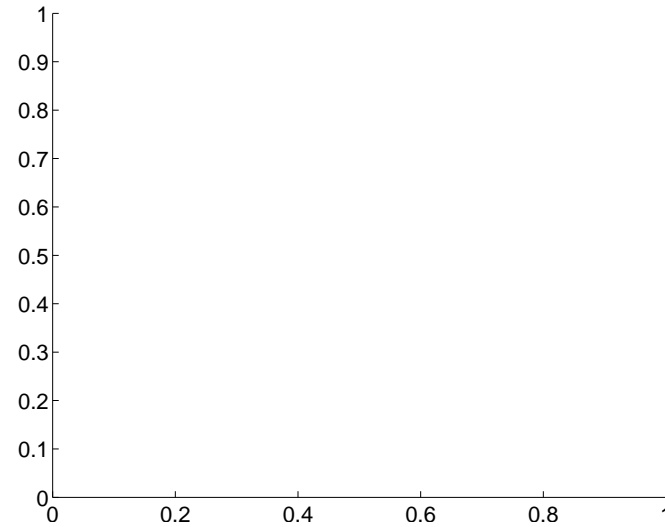
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	1.12 ± 0.82	1.36	1.04 ± 0.81	0.39 ± 0.93

There is no PRF-fit offset from OOT-fit

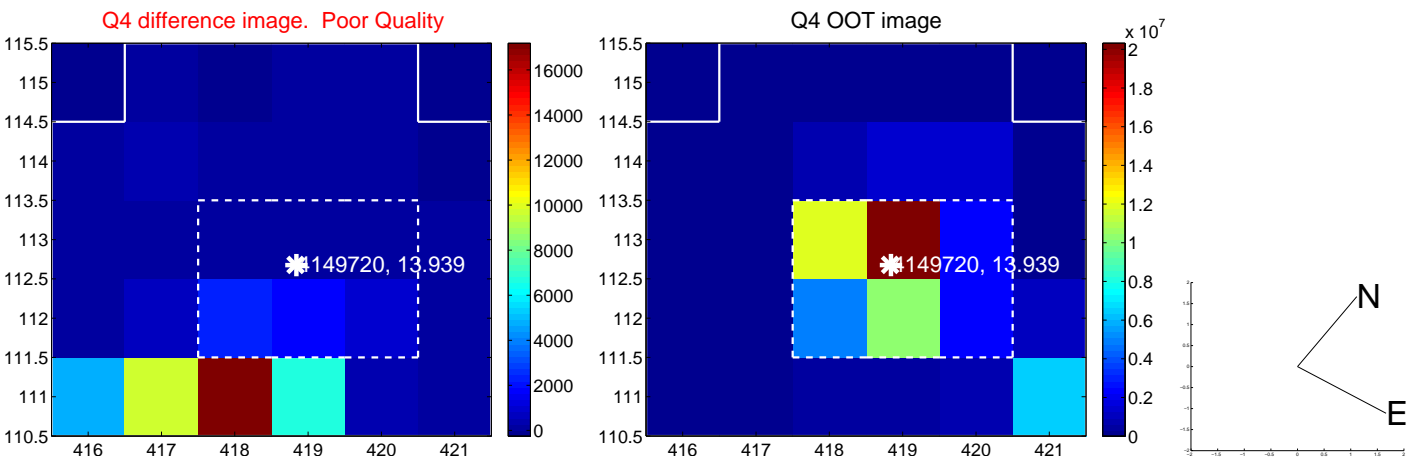
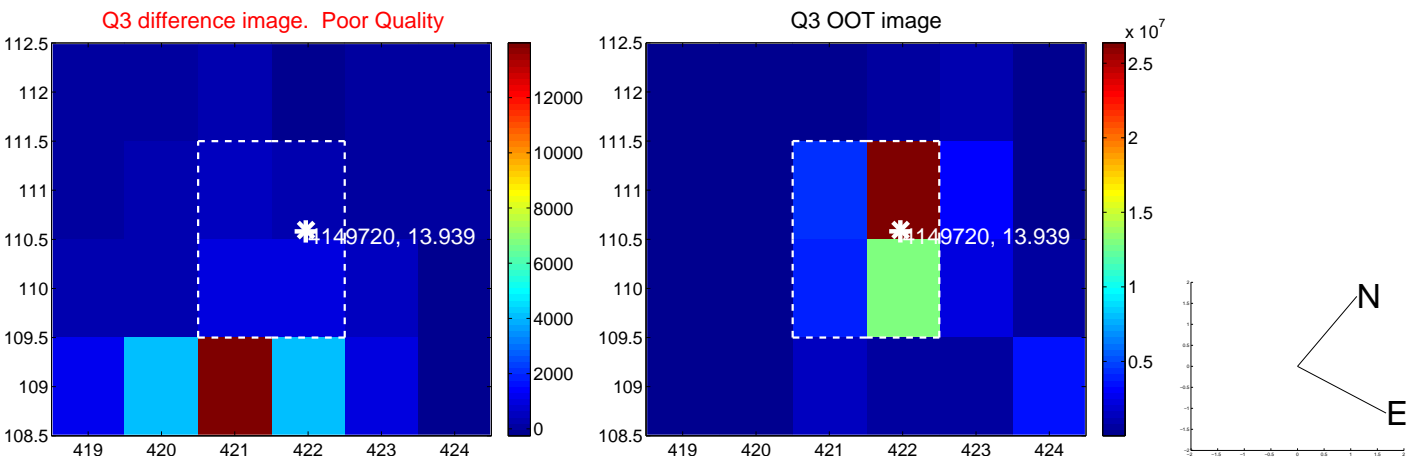
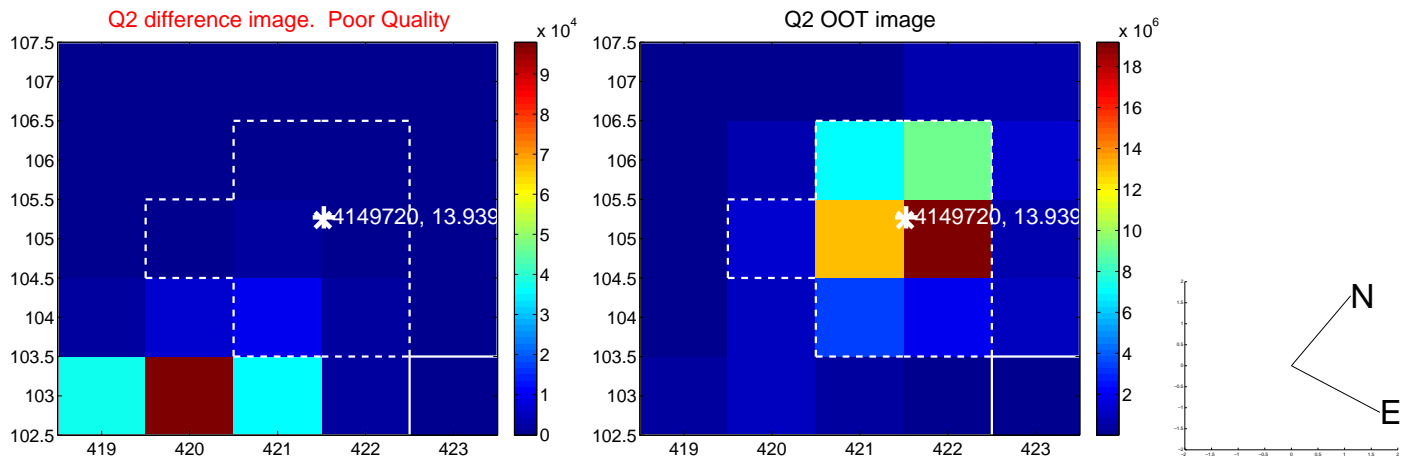
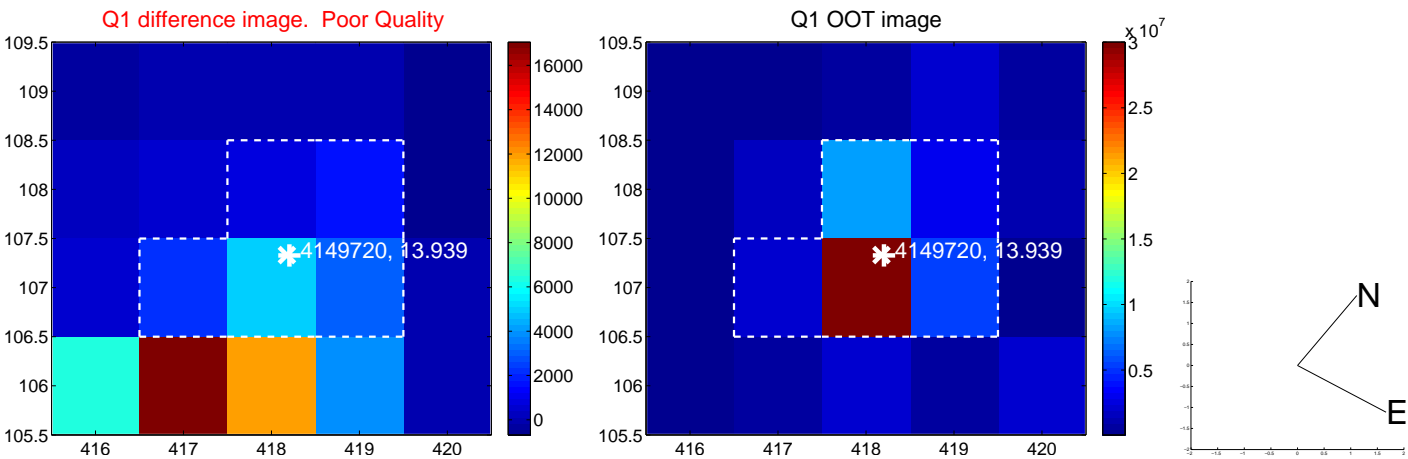


There is no PRF-fit offset from KIC

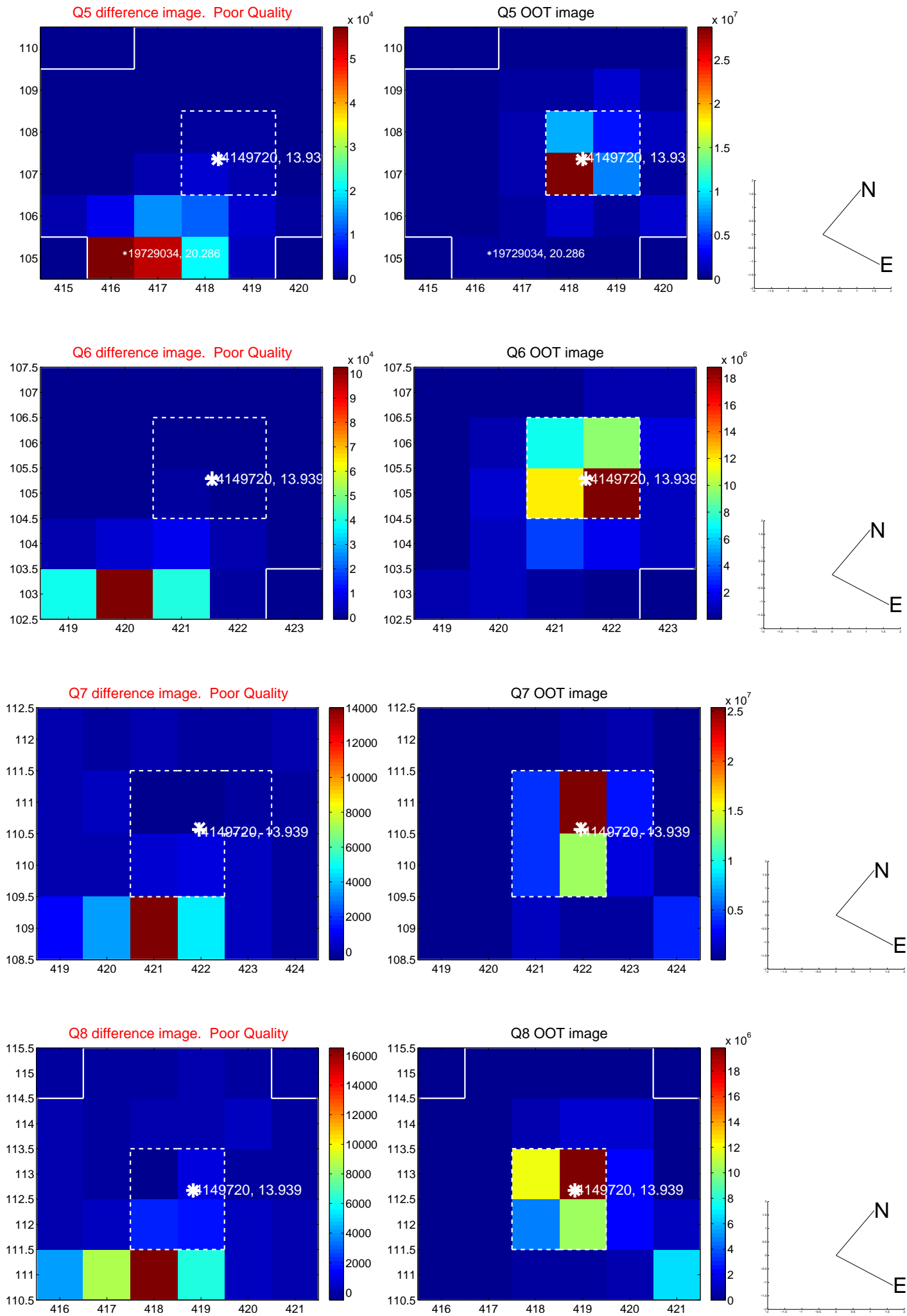


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

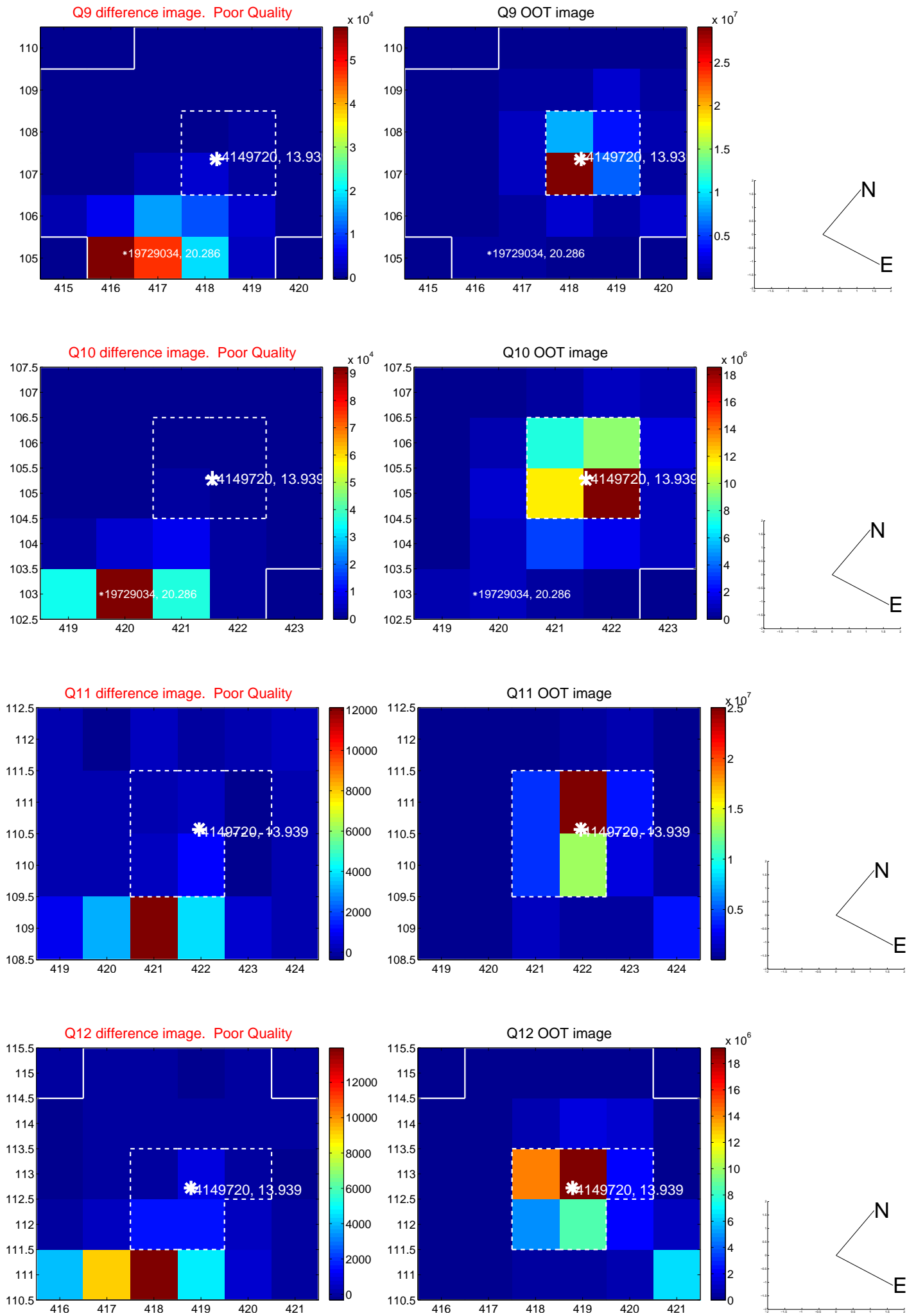
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



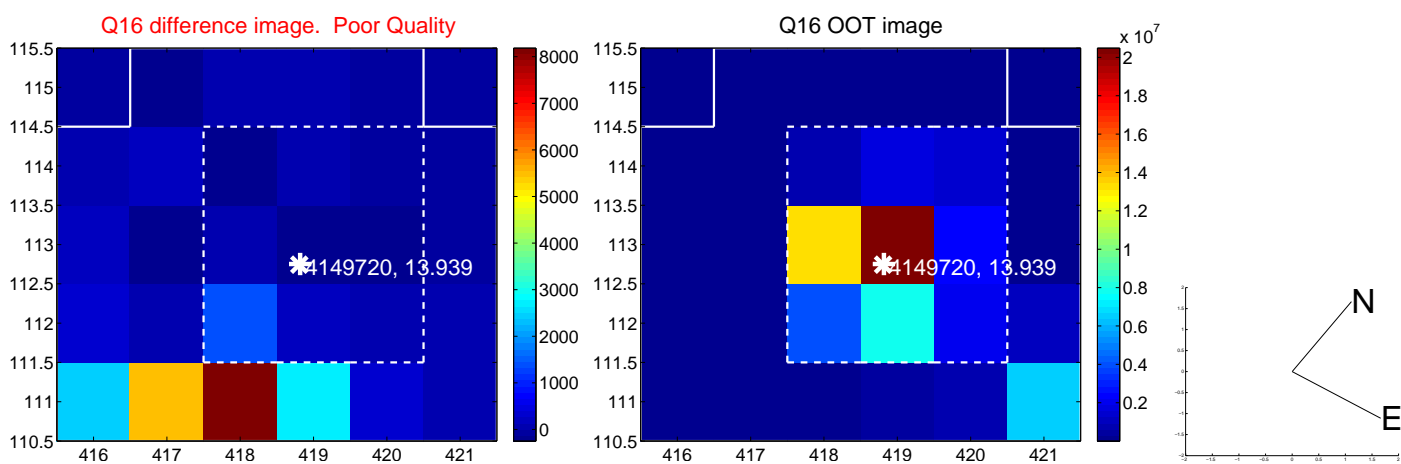
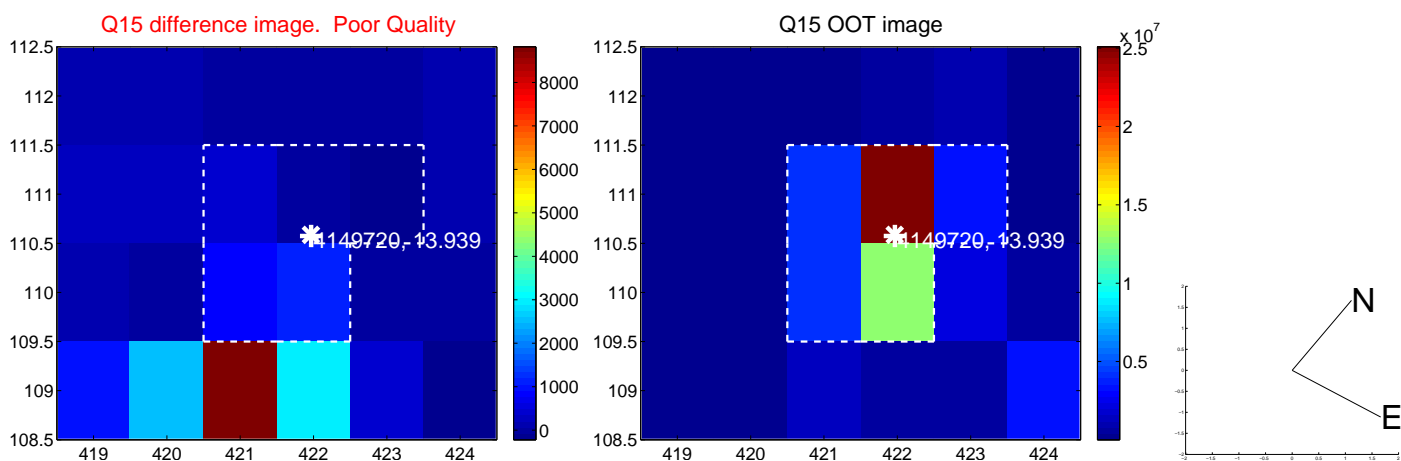
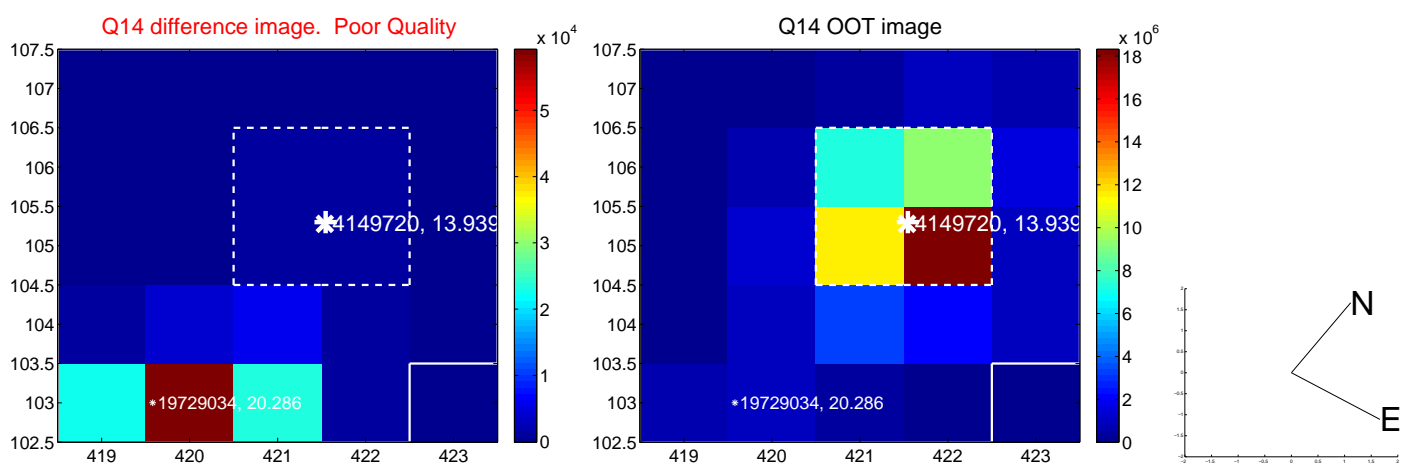
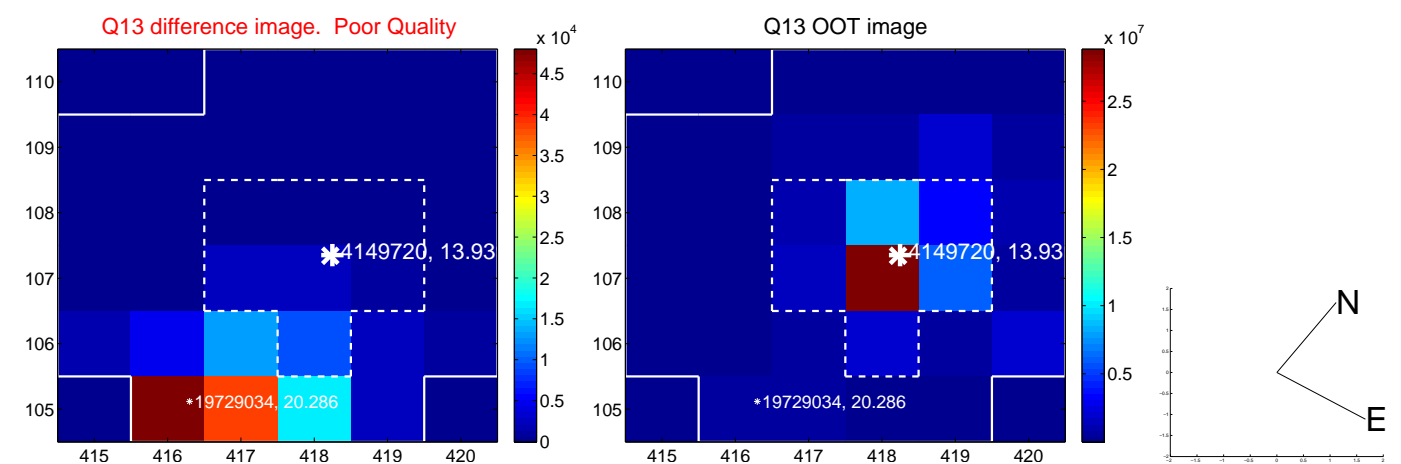
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



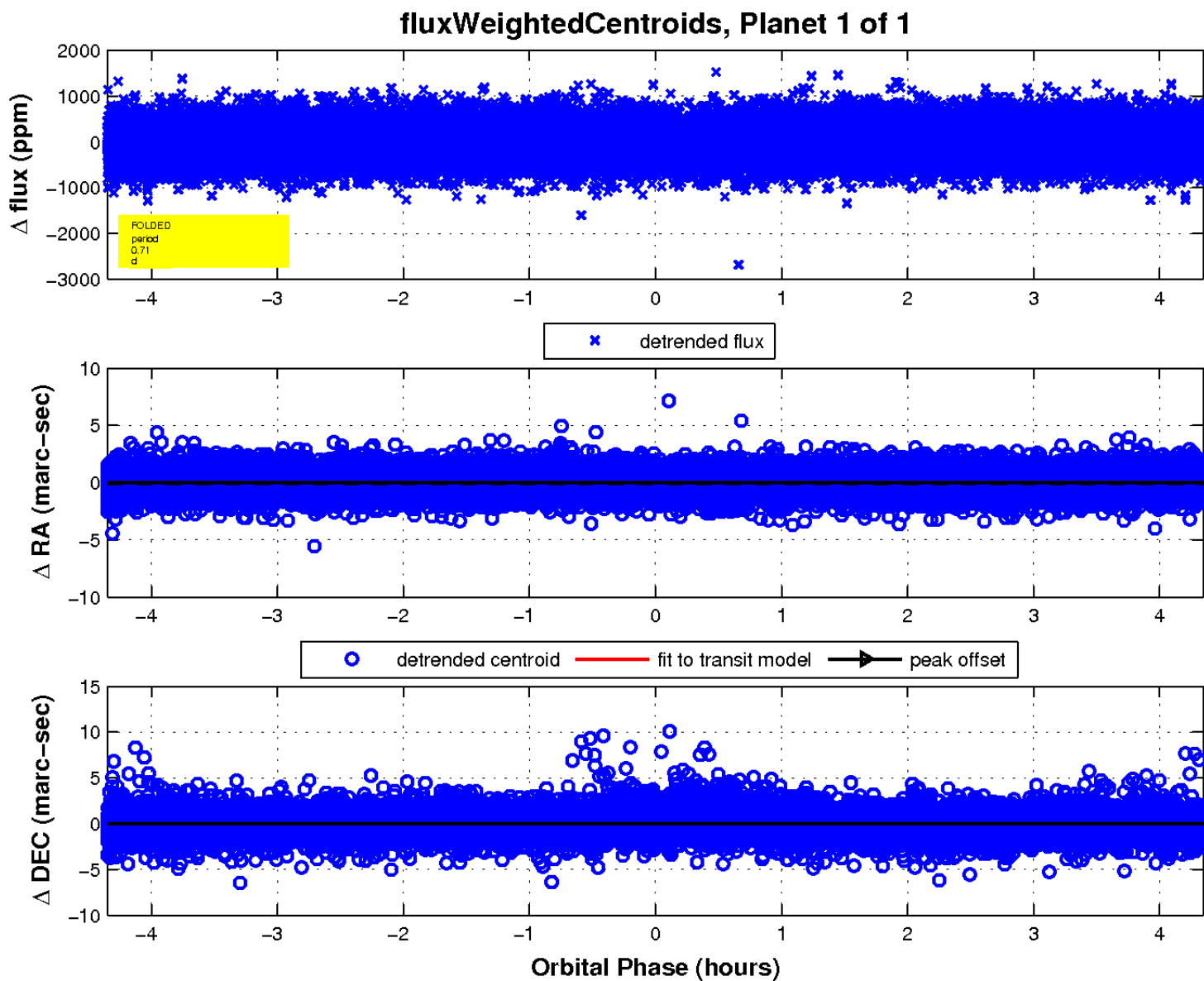
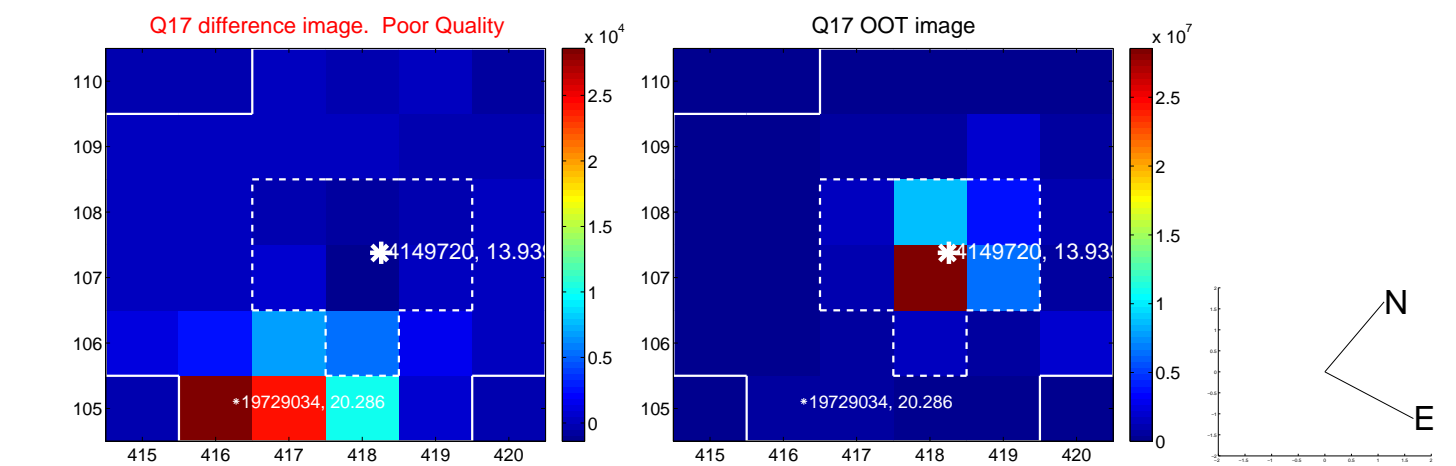
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UKIRT Image

