

KIC 004826031

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})
004826031-01	OBS	No	0.545106	131.696129	4.3	4.792	12.5	1.2	11.95	6980	2.58	0.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004826031-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_FEW_DIFFS

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

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

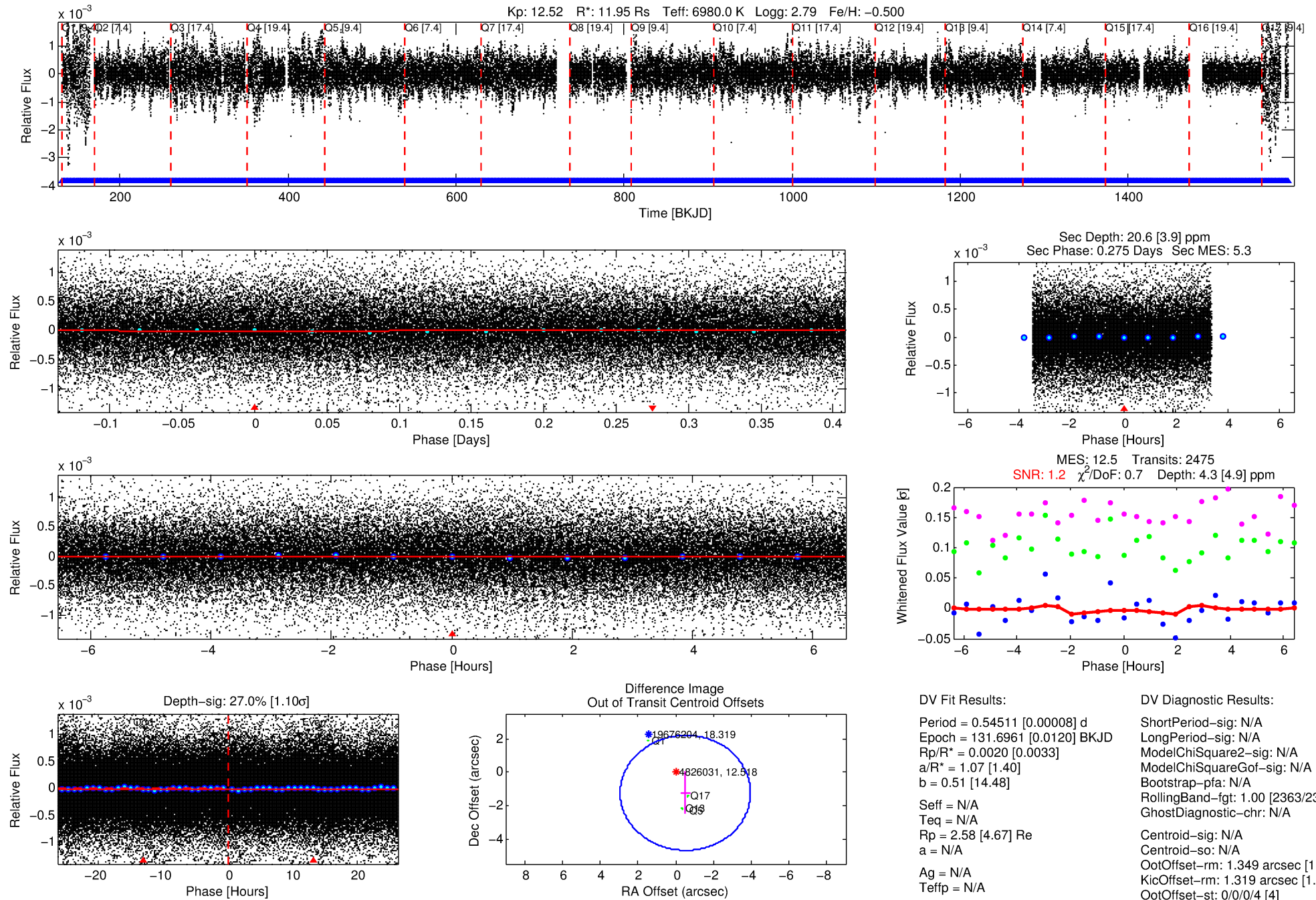
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004826031-01

No Significant Match Found

DV One-Page Summary

KIC: 4826031 Candidate: 1 of 1 Period: 0.545 d



DV Fit Results:

Period = 0.54511 [0.00008] d
Epoch = 131.6961 [0.0120] BKJD
Rp/R* = 0.0020 [0.0033]
a/R* = 1.07 [1.40]
b = 0.51 [14.48]
Seff = N/A
Teq = N/A
Rp = 2.58 [4.67] Re
a = N/A
Ag = N/A
Teffp = N/A

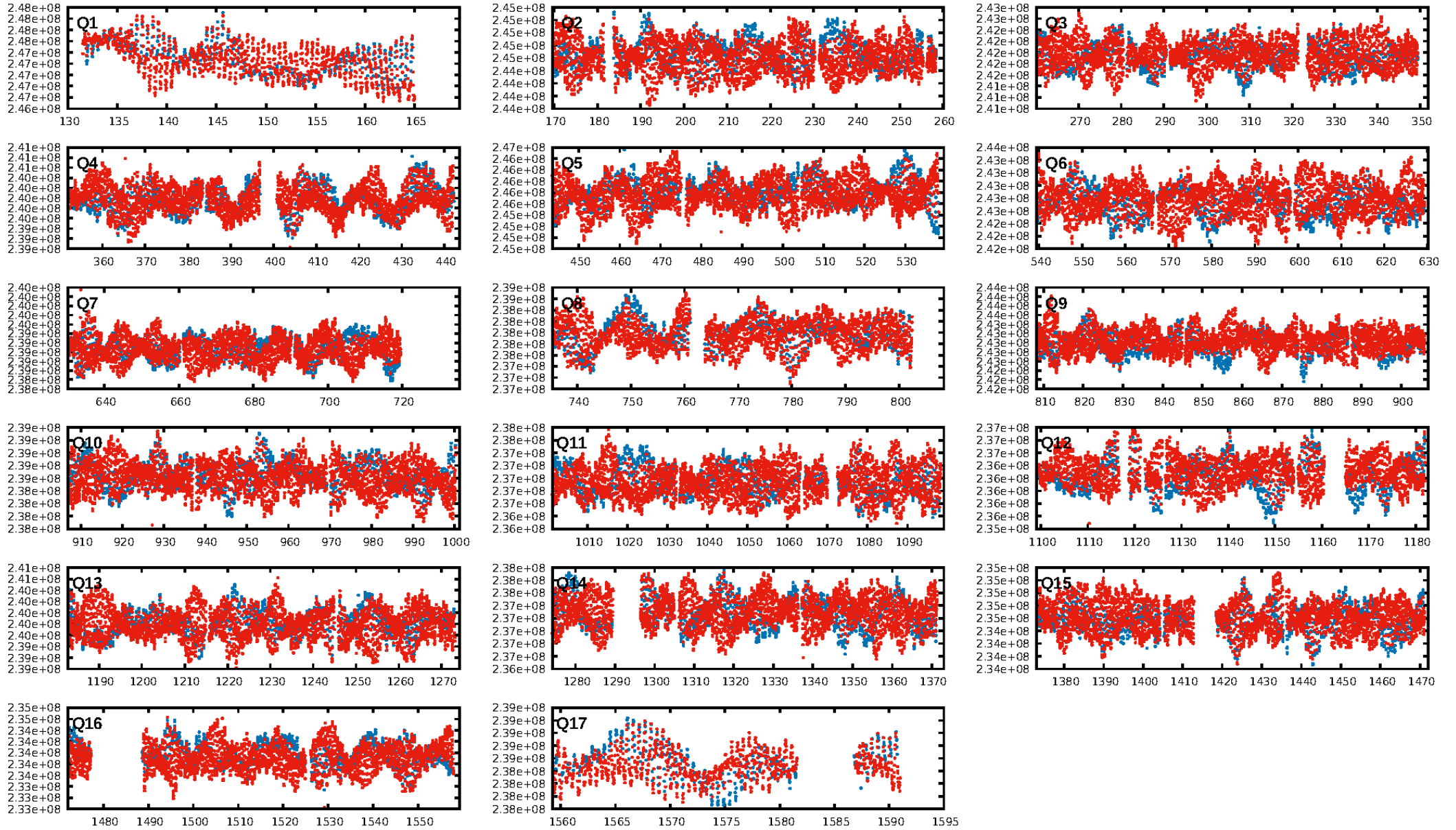
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2363/2363]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.349 arcsec [1.17 σ]
KicOffset-rm: 1.319 arcsec [1.16 σ]
OotOffset-st: 0/0/0/4 [4]
KicOffset-st: 0/0/0/4 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [17/17]

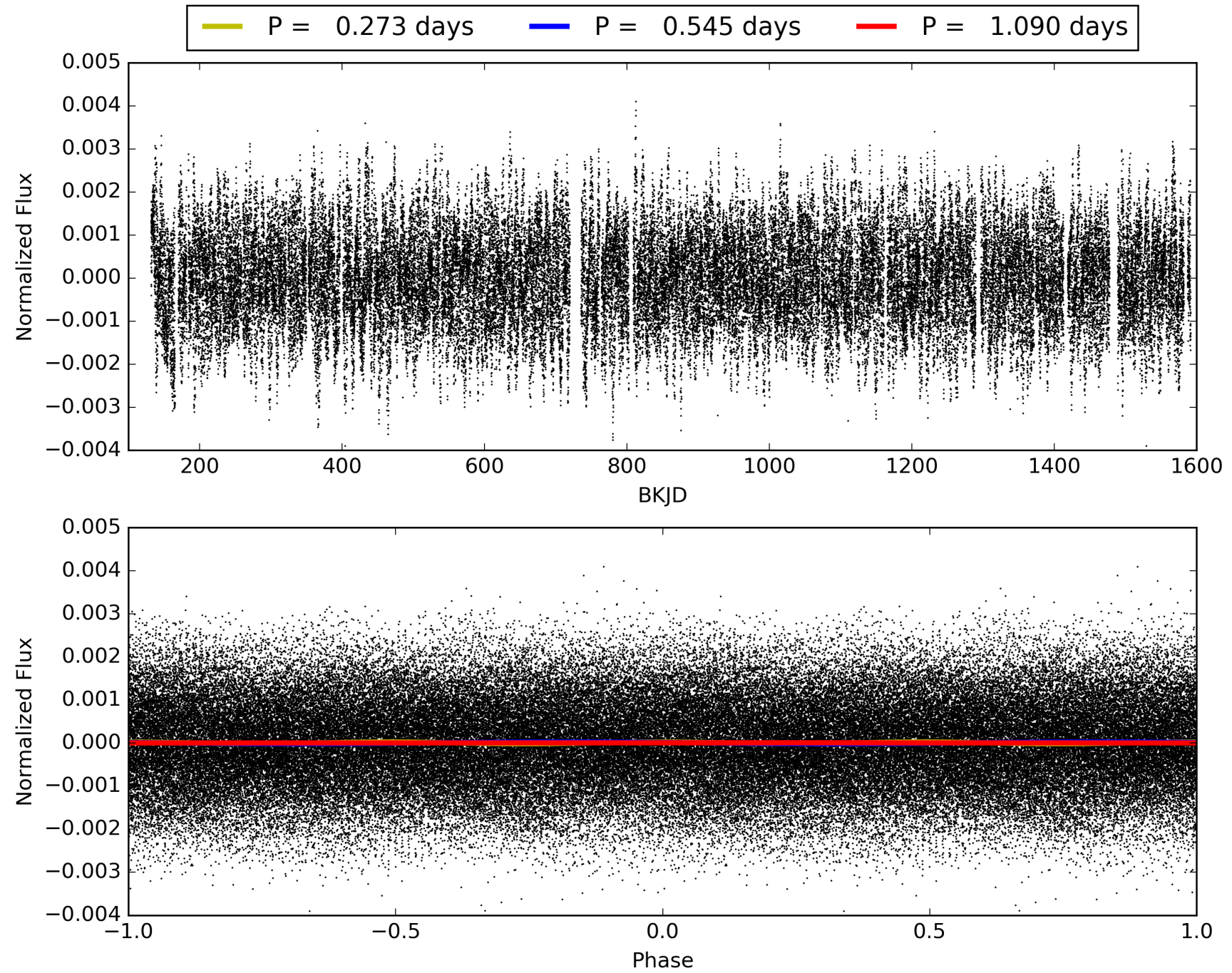
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:30:18 Z

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

TCE 004826031-01, PDC Light Curves

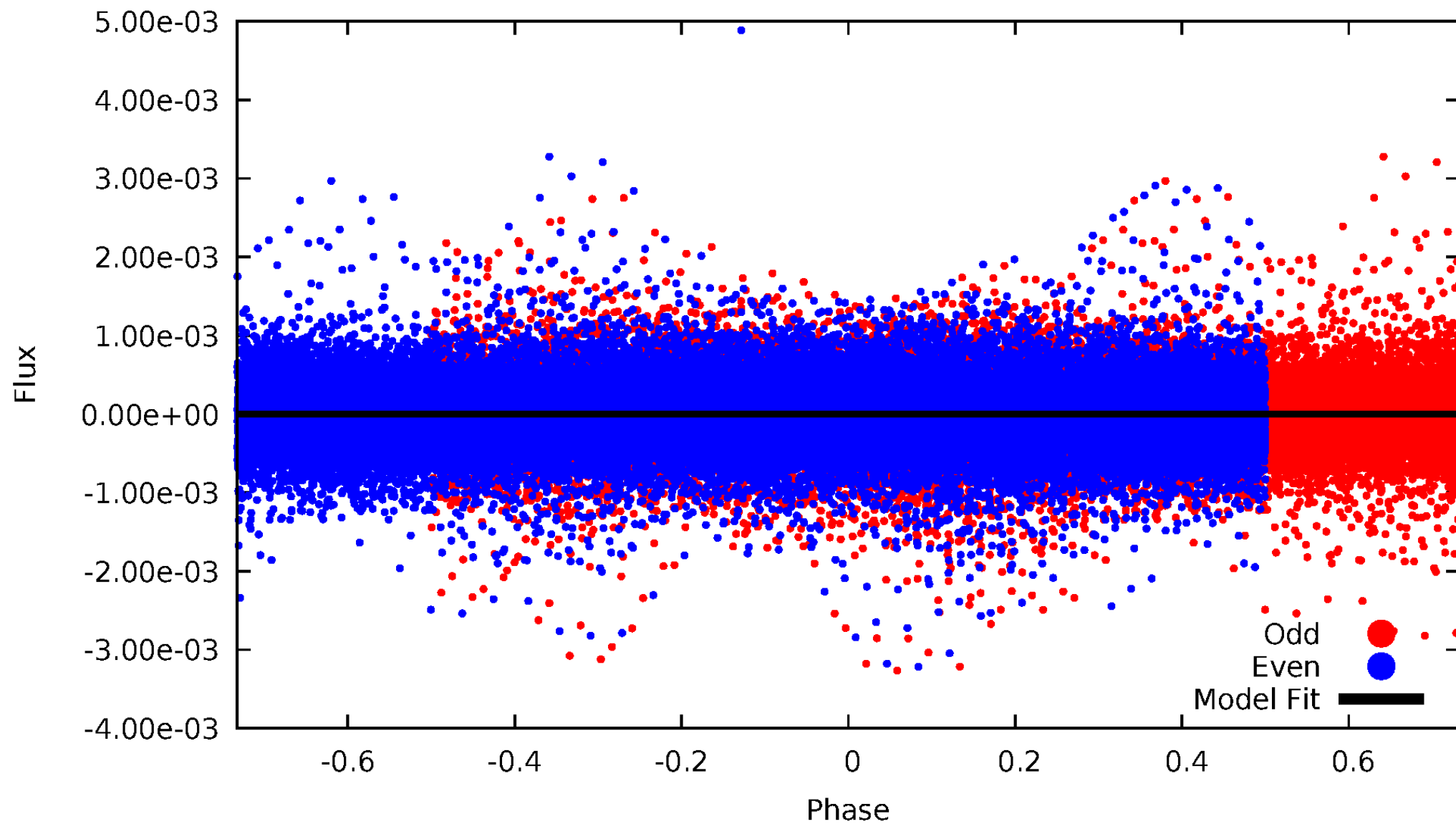


TCE 004826031-01



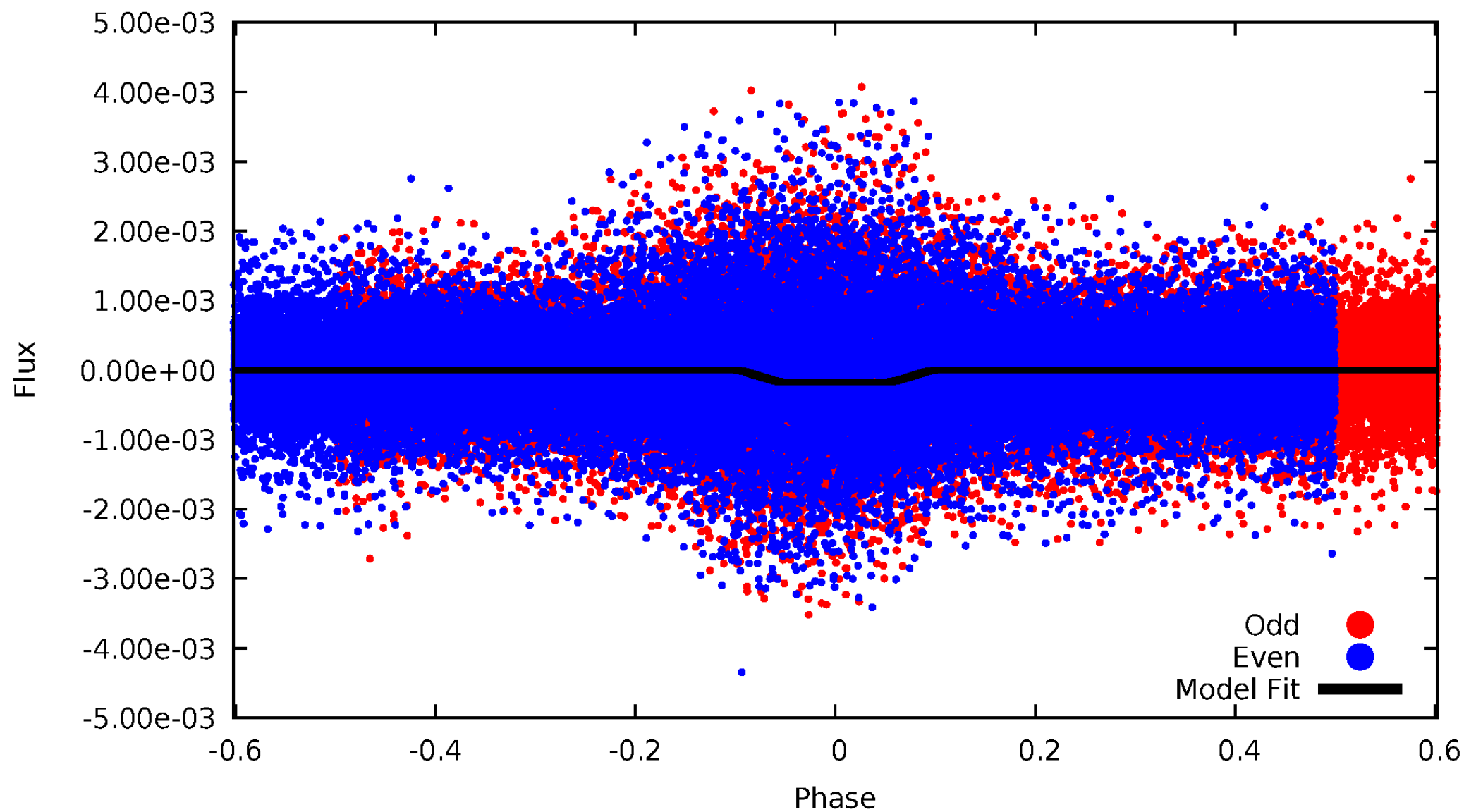
DV Odd/Even

TCE 004826031-01



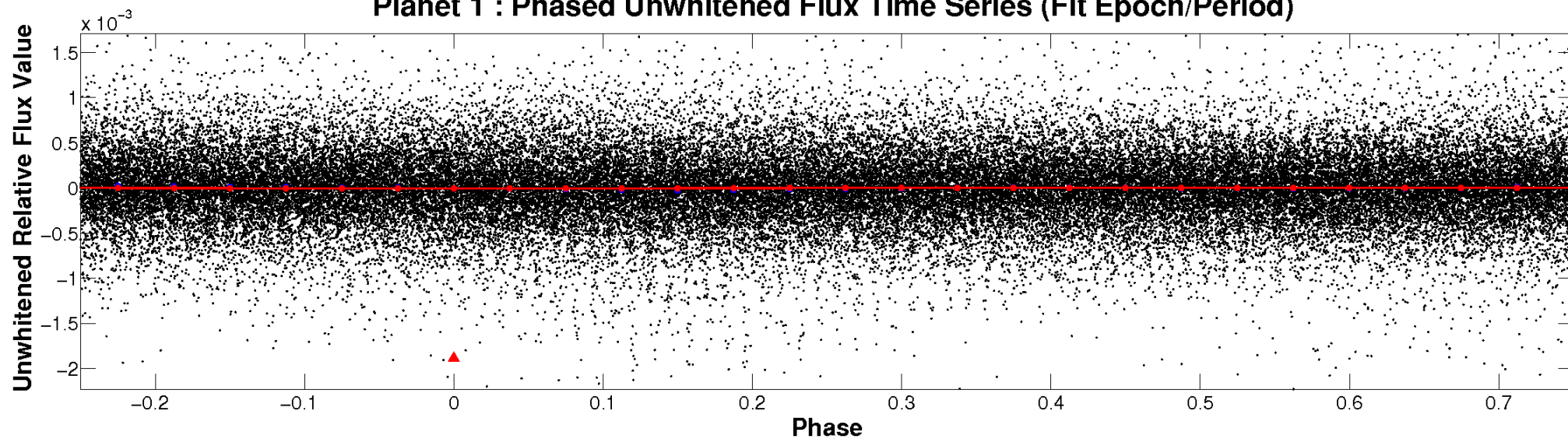
ALT Odd/Even

TCE 004826031-01

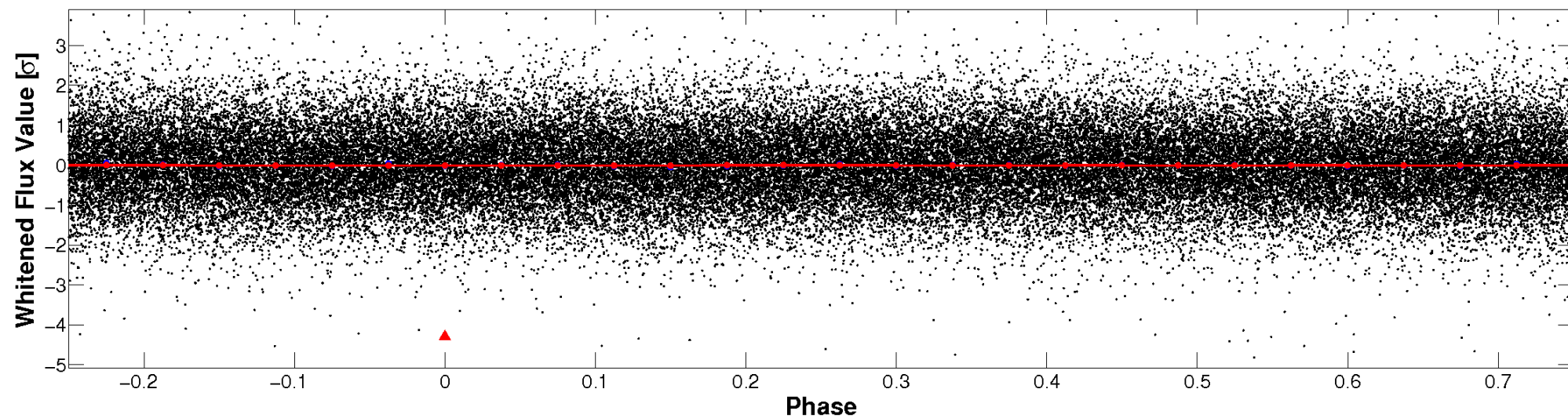


Non-Whitened Vs. Whitened Light Curve

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

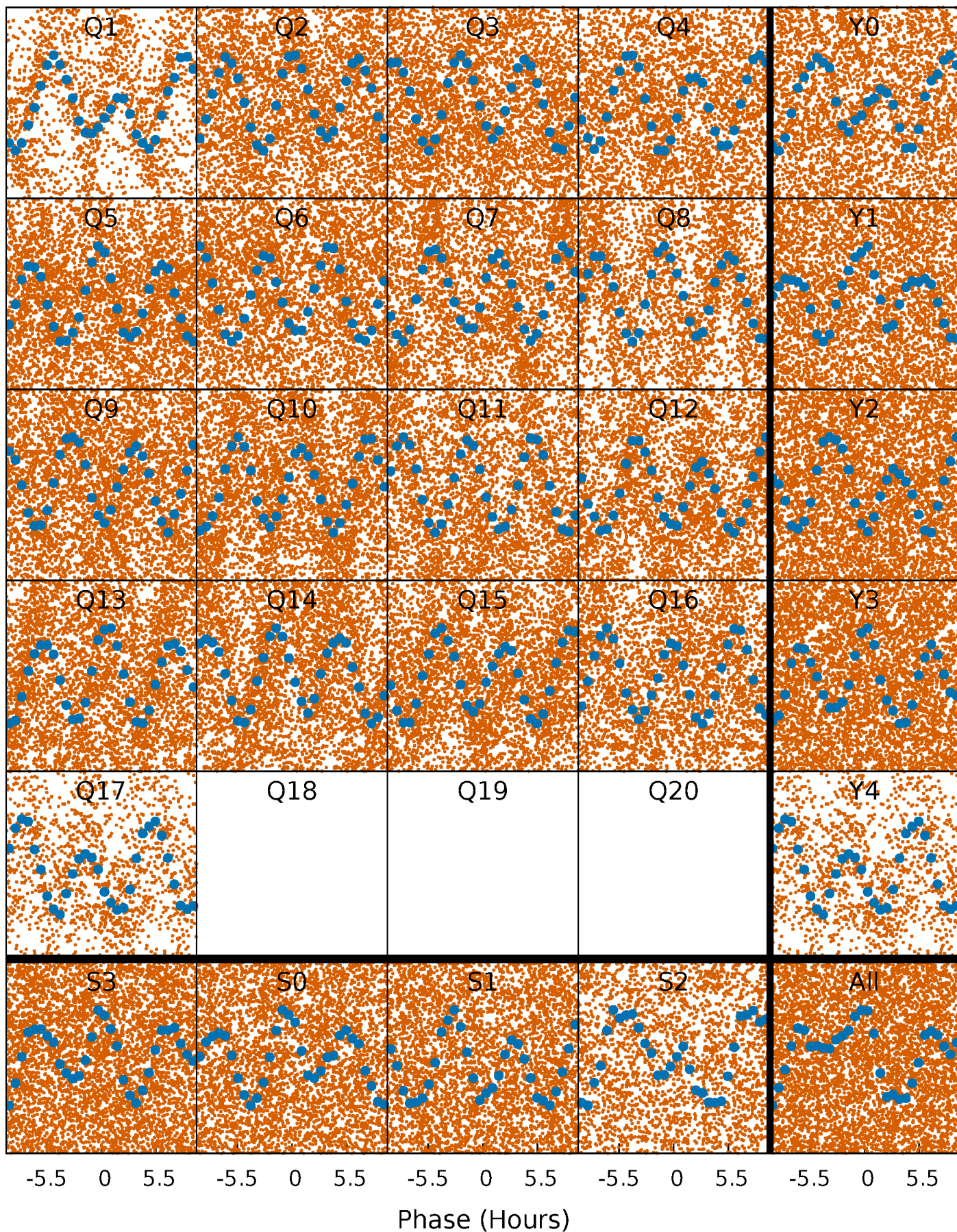


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



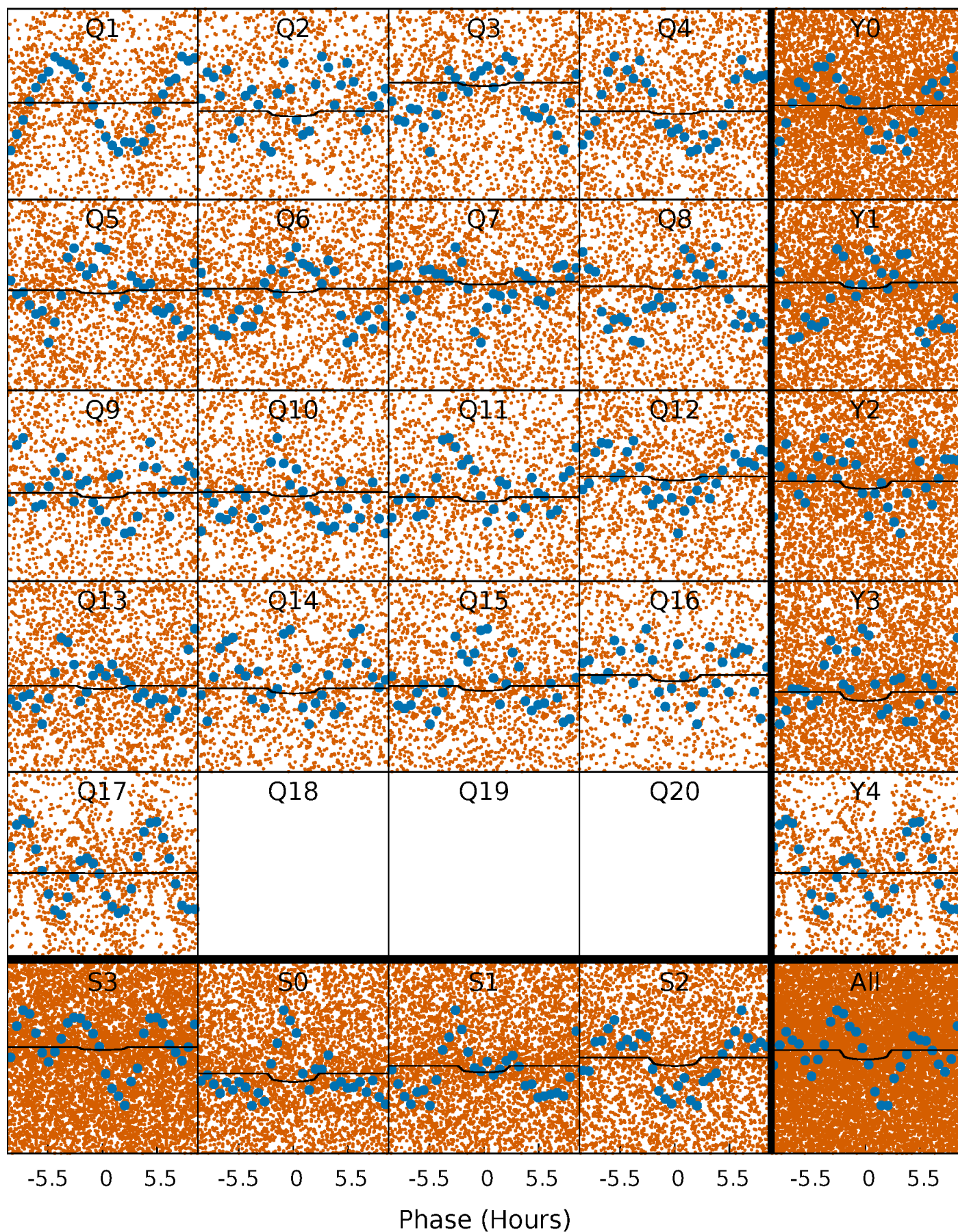
PDC Quarter-Phased Transit Curves

TCE 004826031-01 P= 0.545106 Days $T_0=131.696129$ (BKJD)



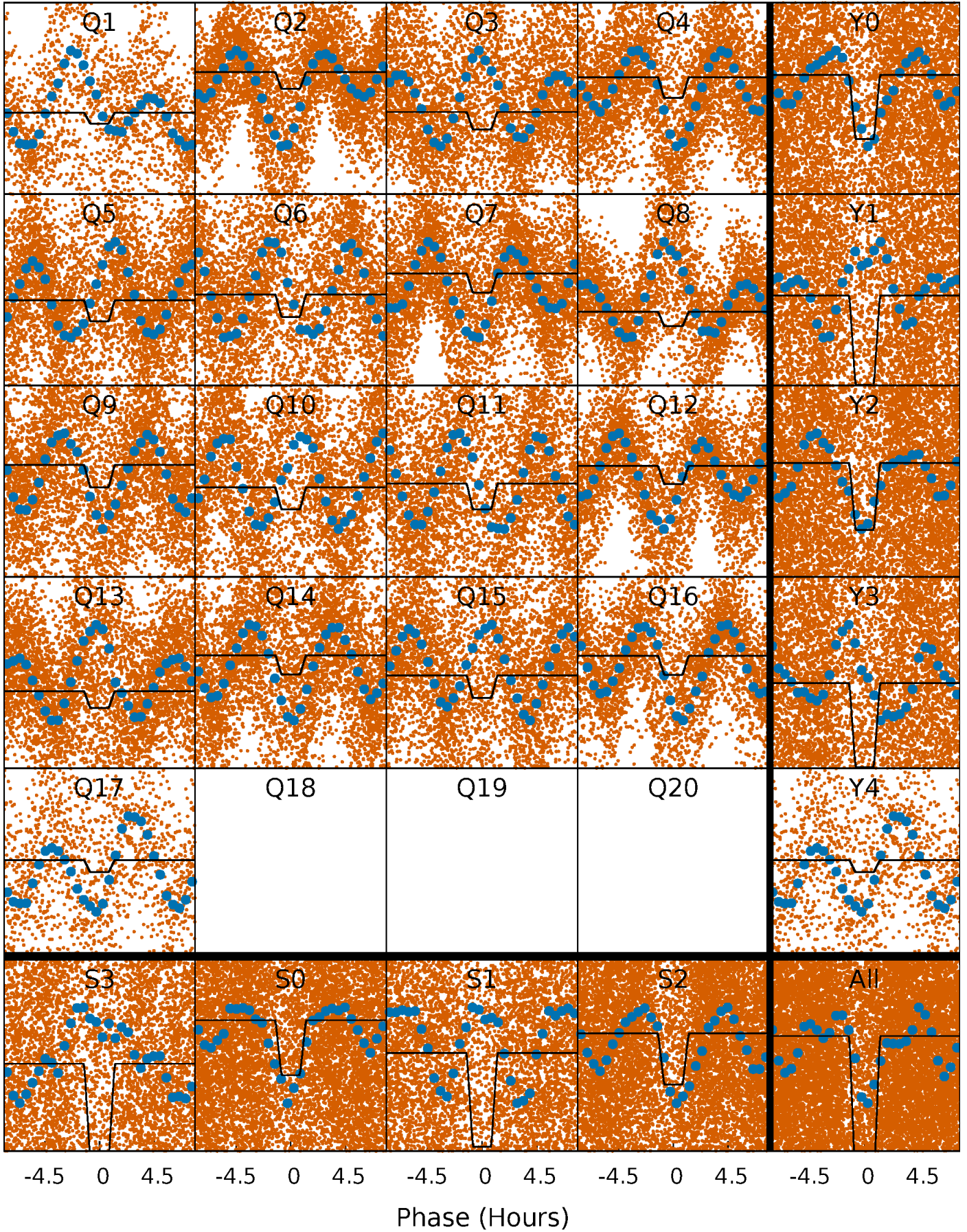
DV Quarter-Phased Transit Curves

TCE 004826031-01 P= 0.545106 Days $T_0=131.696129$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

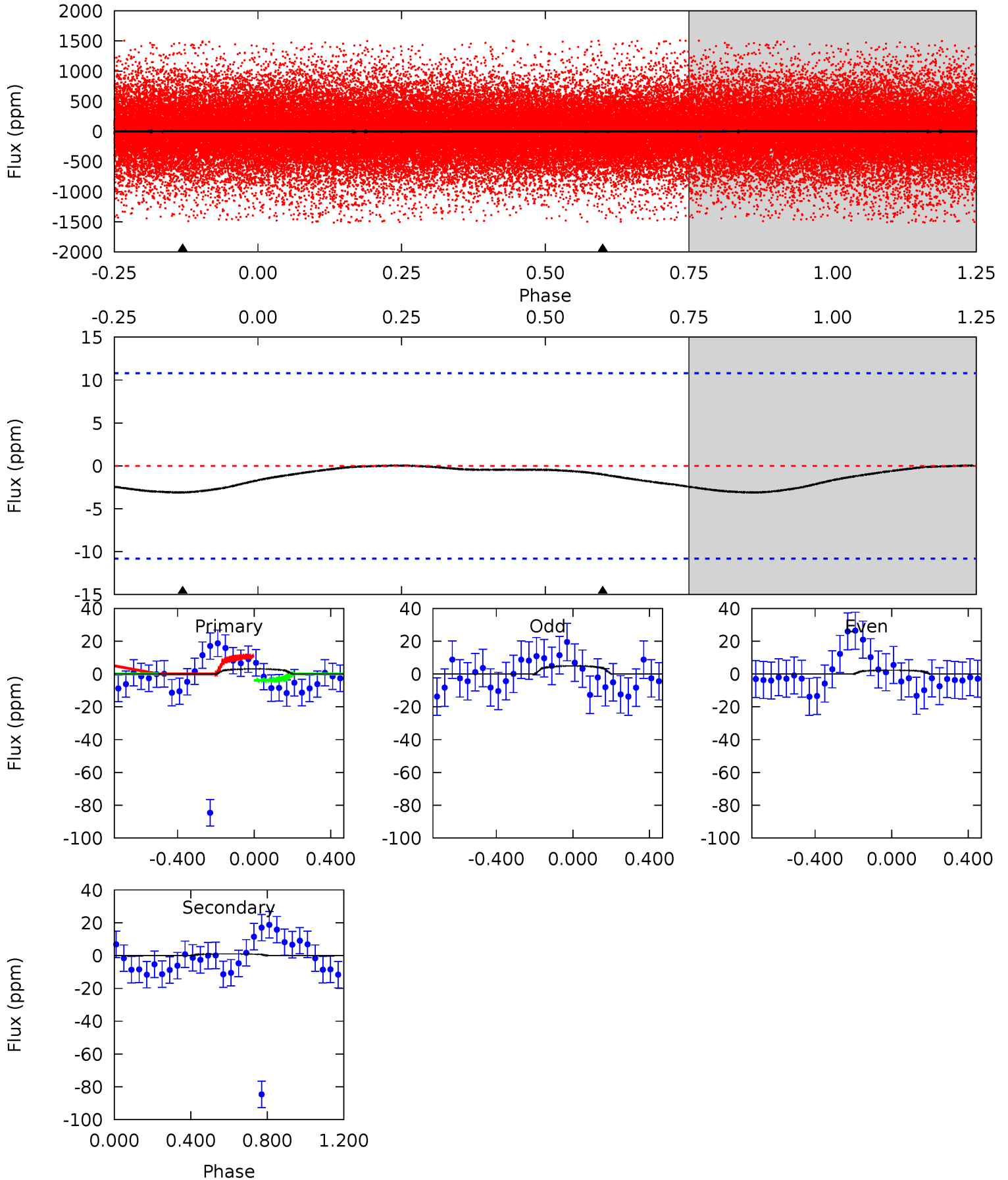
TCE 004826031-01 P= 0.545183 Days $T_0=131.585604$ (BKJD)



DV Model-Shift Uniqueness Test

004826031-01, P = 0.545106 Days, E = 131.151023 Days

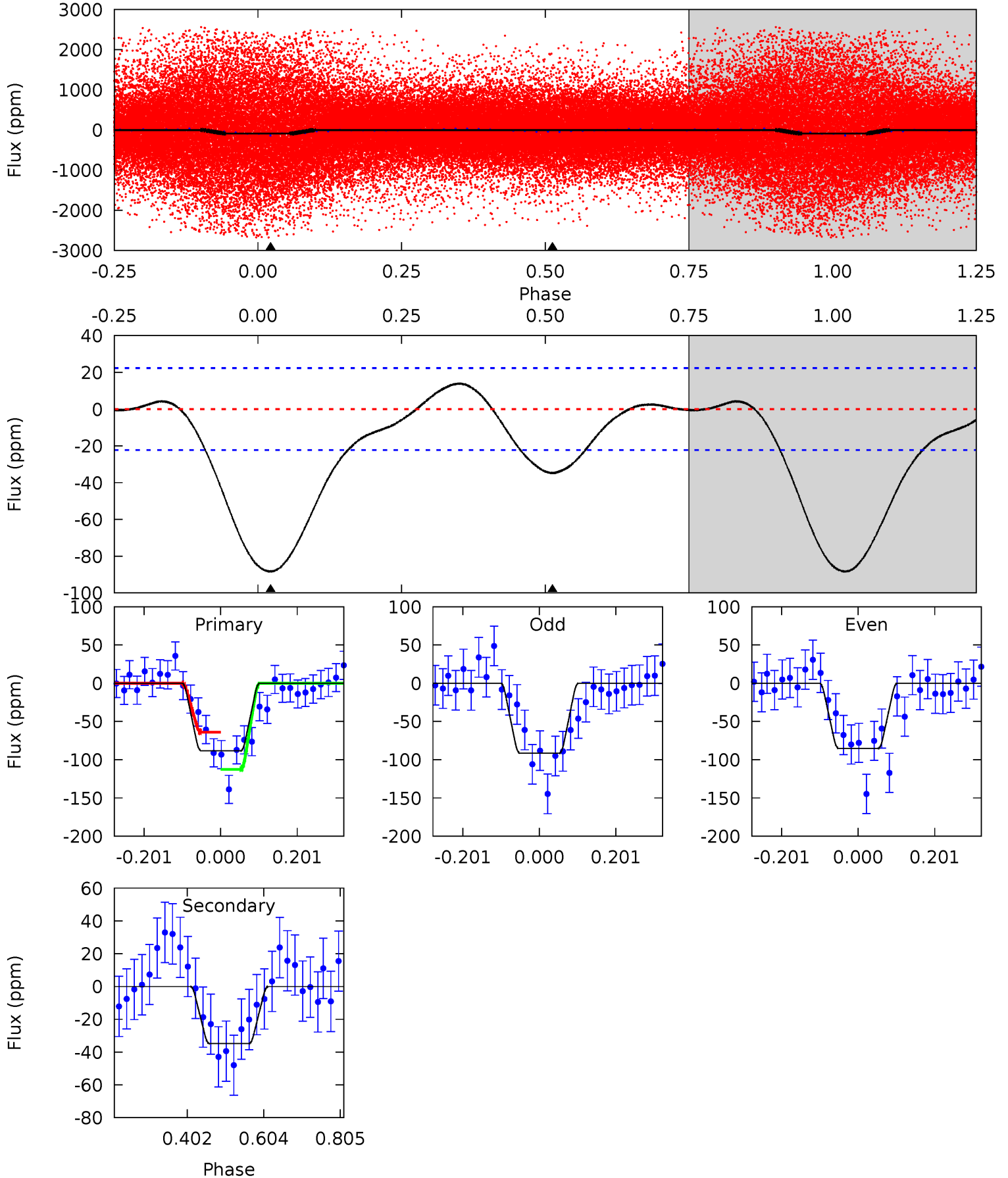
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.22	0.40	0	0	4.26	0.84	0.01	1.22	1.22	0.40	0.40	0.53	-5.40	0.01	1.41



Alt Model-Shift Uniqueness Test

004826031-01, P = 0.545183 Days, E = 131.040421 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	6.90	0	0	4.42	1.28	0.82	17.5	17.5	6.90	6.90	0.61	0.49	0.14	4.92



Stellar Parameters For KIC 004826031

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6980^{+169}_{-254}	$2.794^{+0.630}_{-0.035}$	$-0.500^{+0.350}_{-0.300}$	$11.948^{+0.411}_{-7.806}$	$3.239^{+0.072}_{-1.445}$	$0.003^{+0.030}_{-0.000}$
	+2%/-4%	+23%/-1%	+70%/-60%	+3%/-65%	+2%/-45%	+1111%/-13%
Source	PHO1	FLK73	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 004826031-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1 ± 3	$3.38^{+3.51}_{-2.29}$	10296^{+591}_{-1666}	-8384^{+2466}_{-1074}	$0.010^{+0.129}_{-0.033}$
Alt.	-35 ± 5	$14.93^{+5.11}_{-5.96}$	10381^{+544}_{-1596}	-8507^{+1938}_{-707}	$0.032^{+0.051}_{-0.015}$

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 $A_{obs} \gg 1.0$

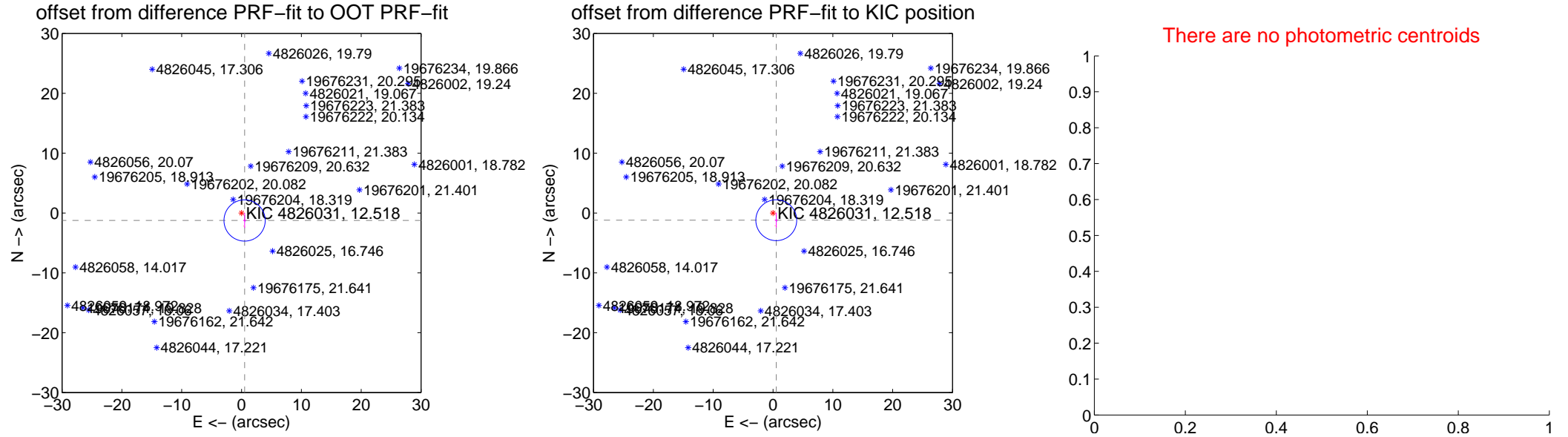
DV Centroid Data

Supplemental centroid analysis for 004826031-01. Kepler magnitude: 12.52. Transit SNR 1.19

There are 2 quarters with good PRF difference image offsets

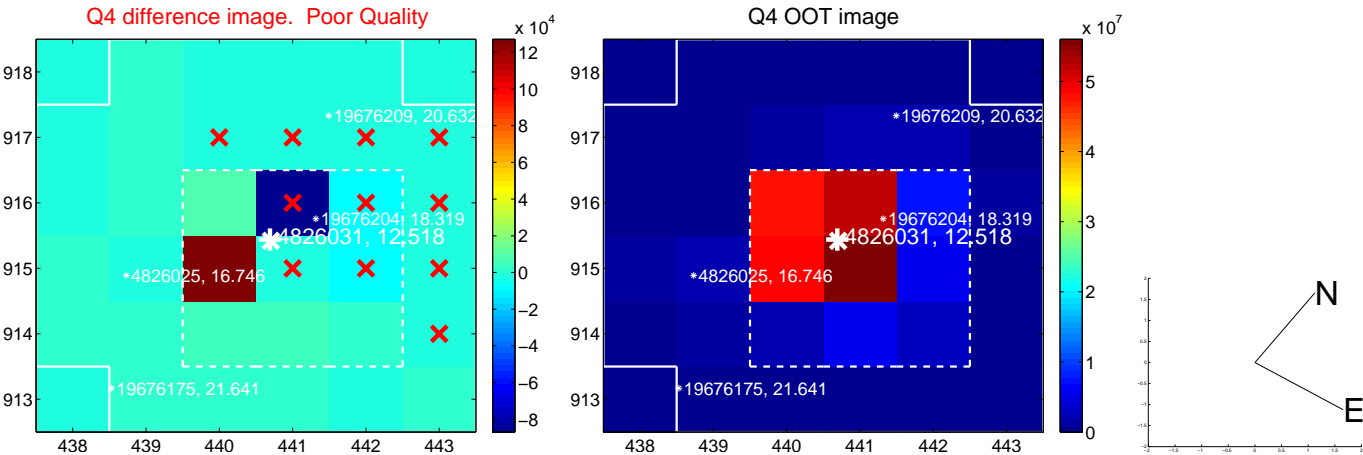
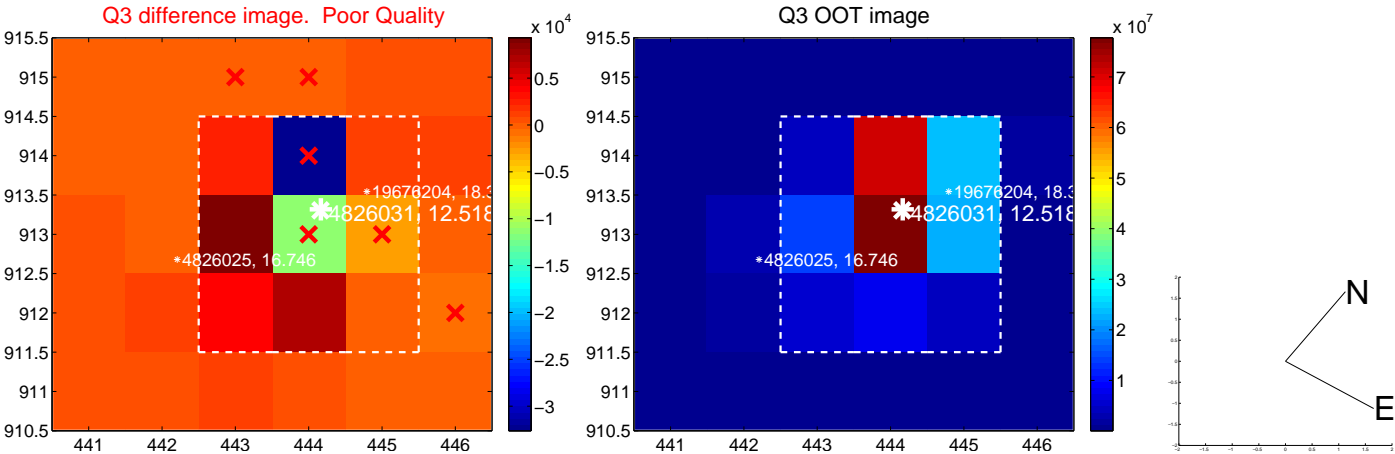
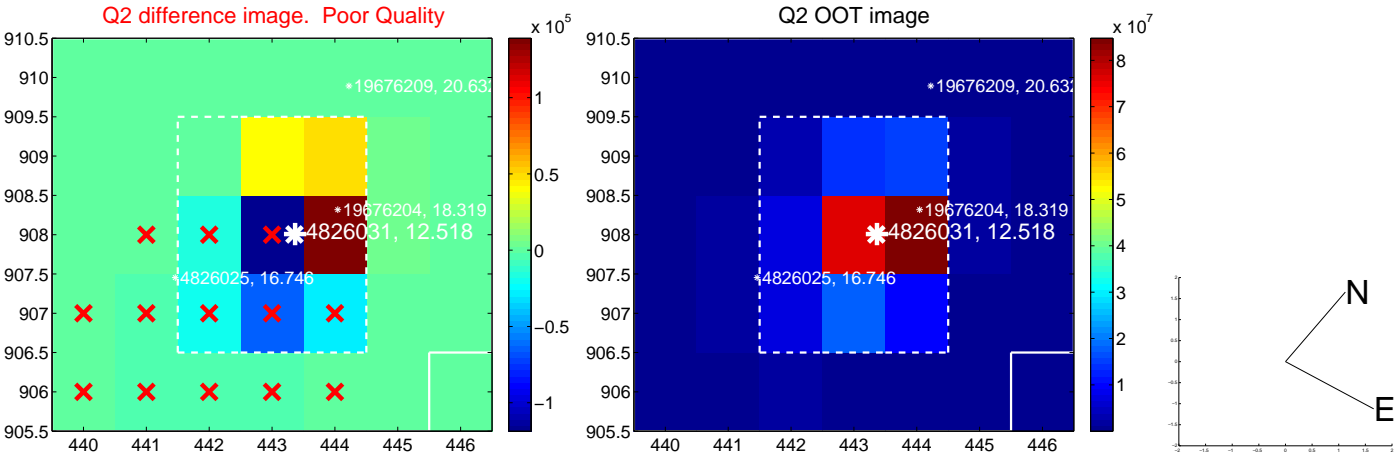
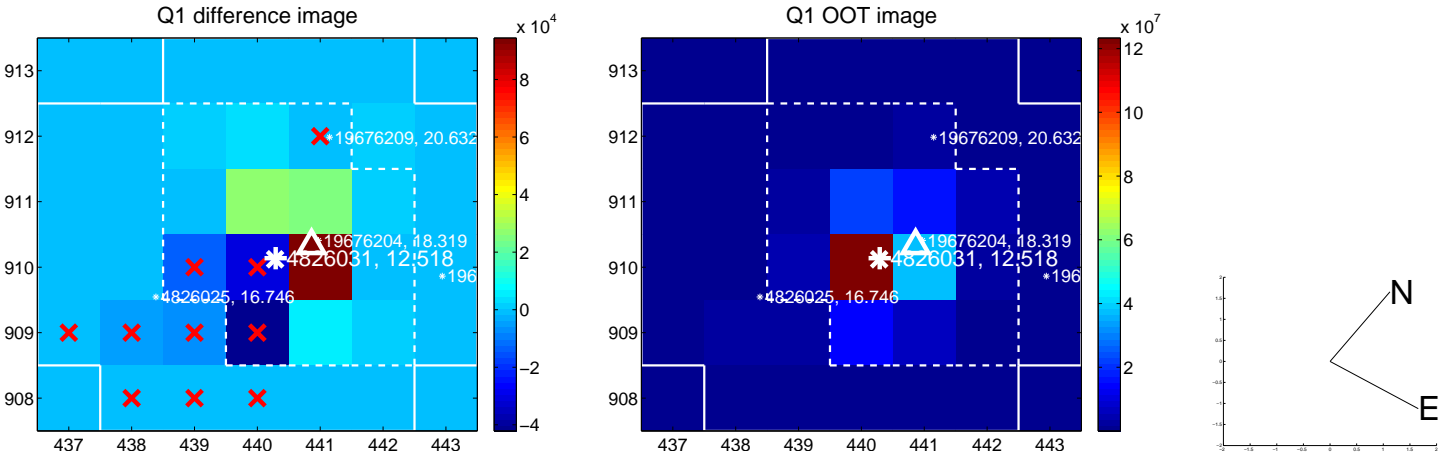
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.349 ± 1.149	1.17	-0.512 ± 0.247	-1.248 ± 1.237
PRF-fit source offset from KIC position	1.319 ± 1.138	1.16	-0.545 ± 0.251	-1.201 ± 1.245
photometric centroid source offset	—	—	—	—

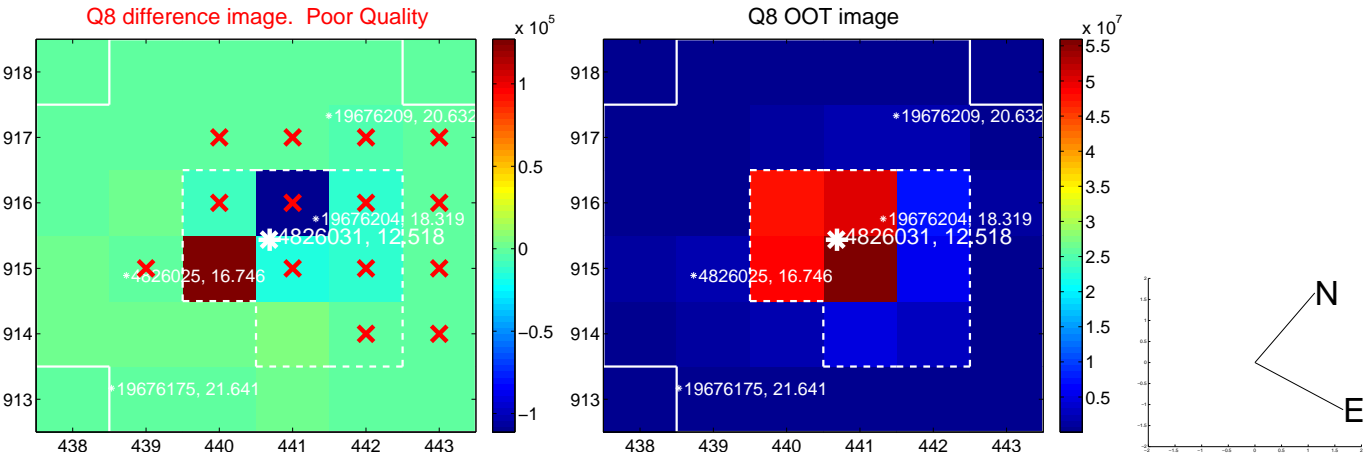
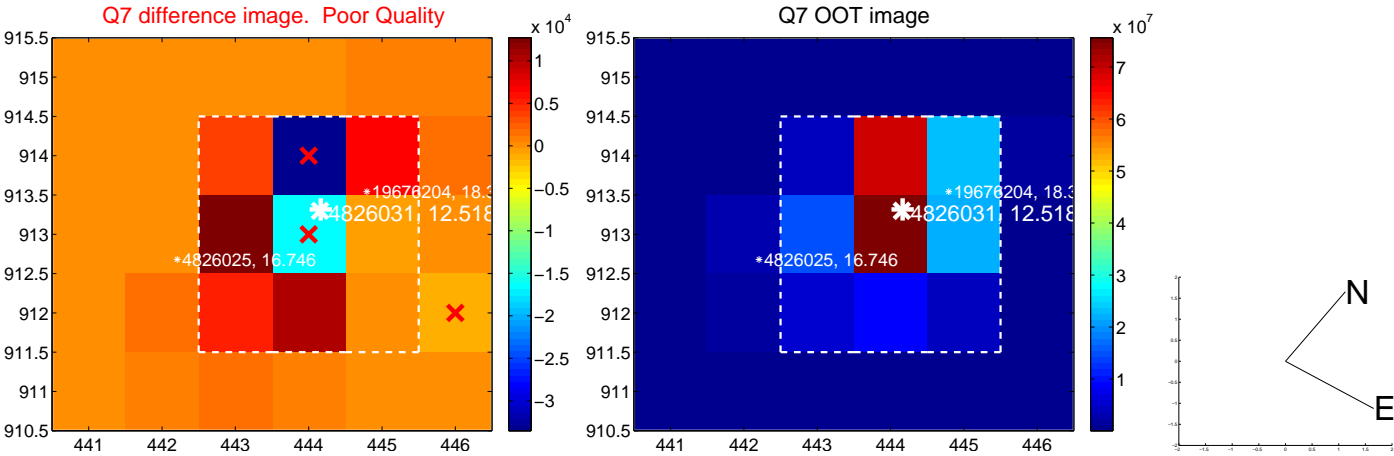
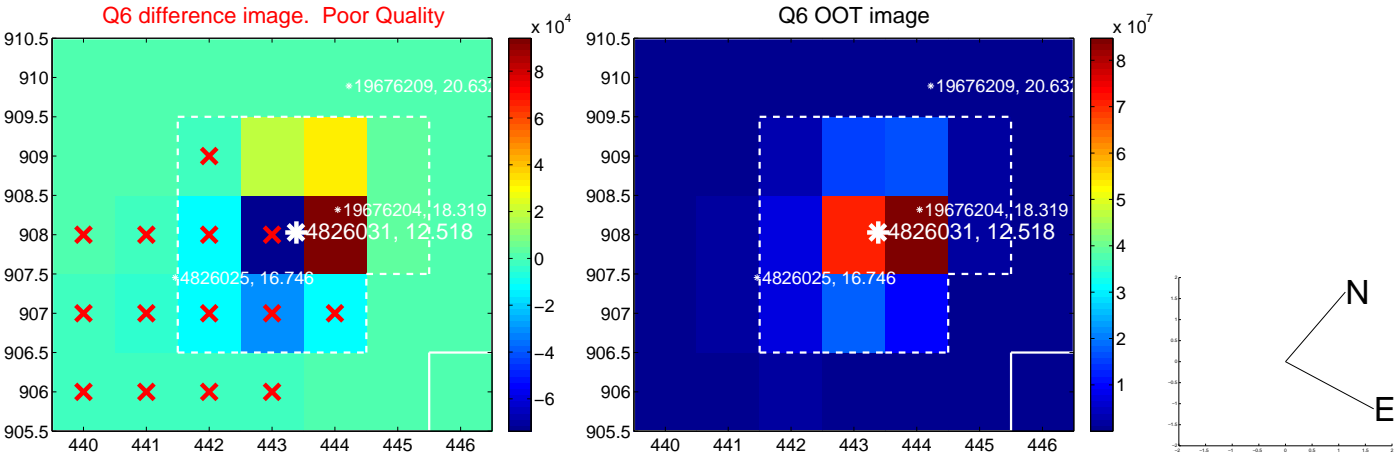
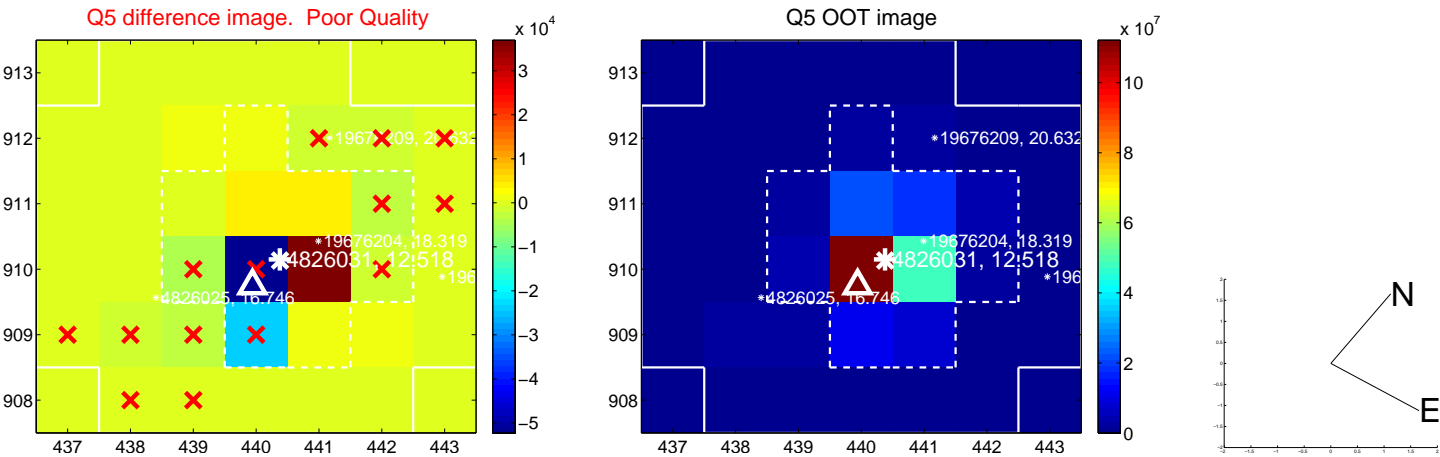


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

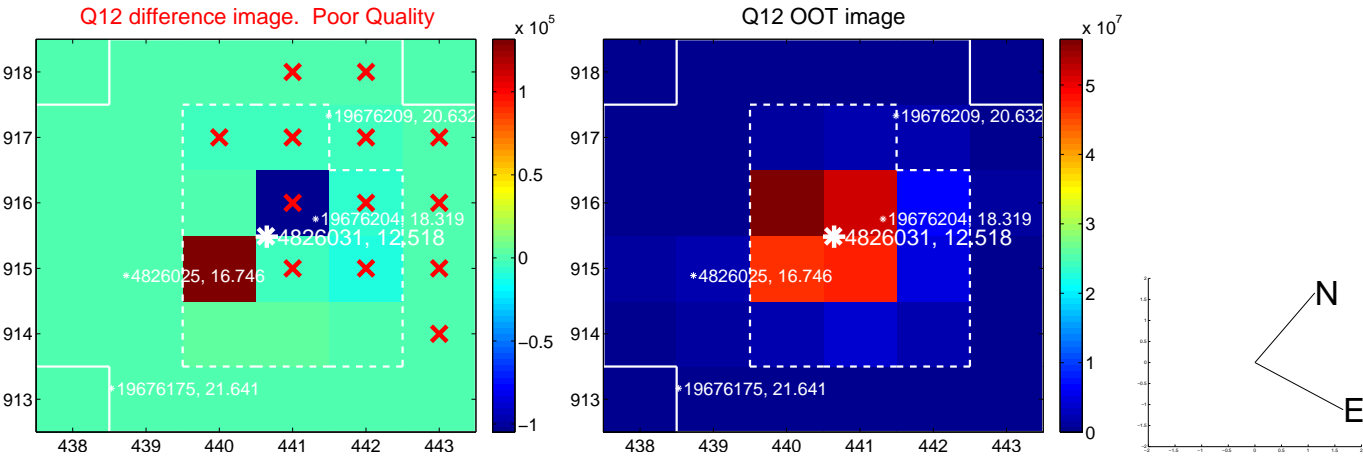
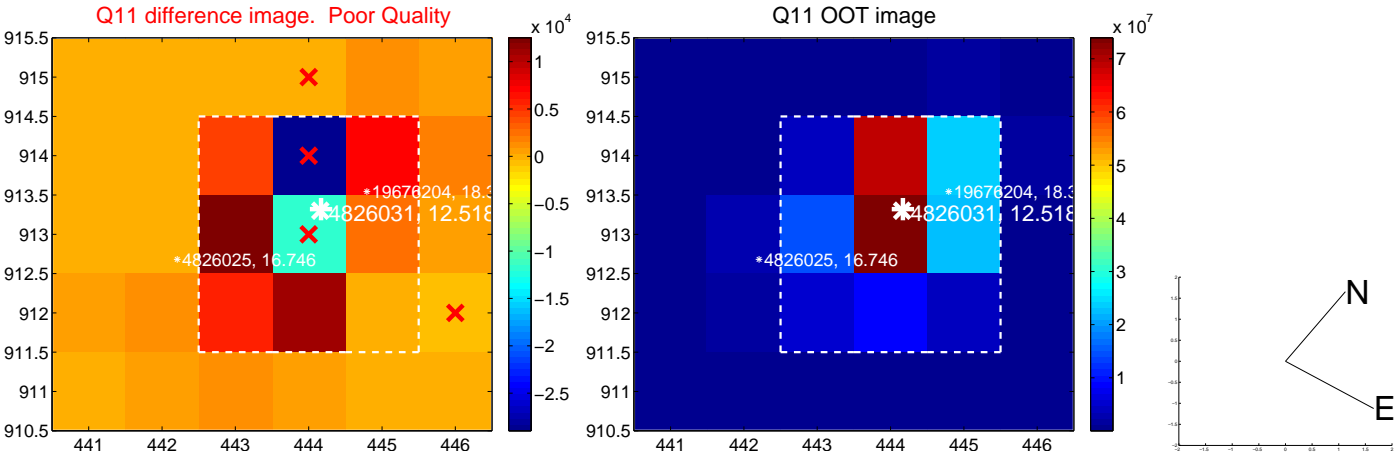
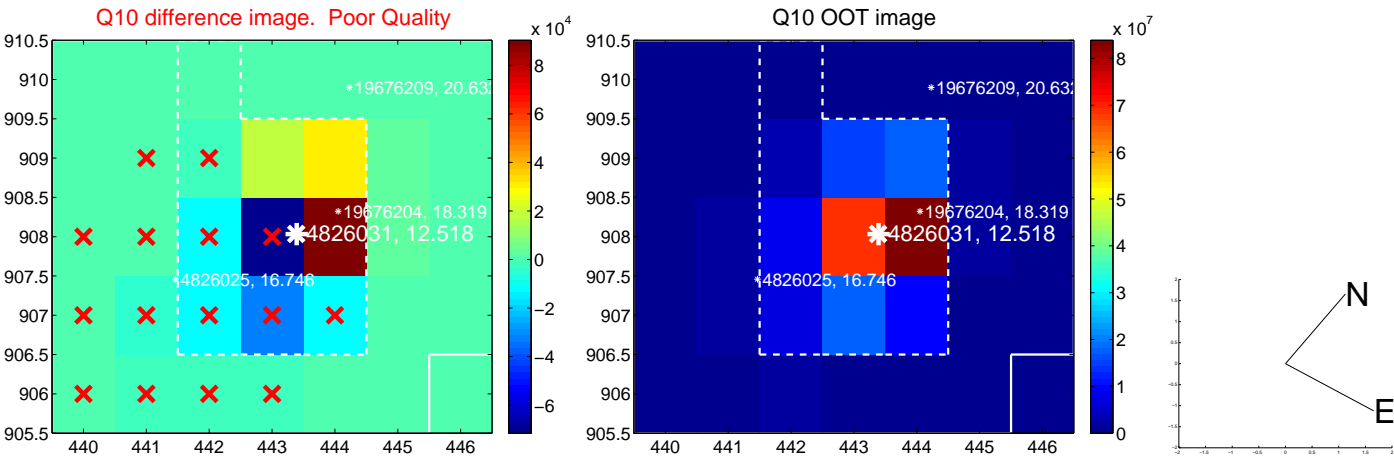
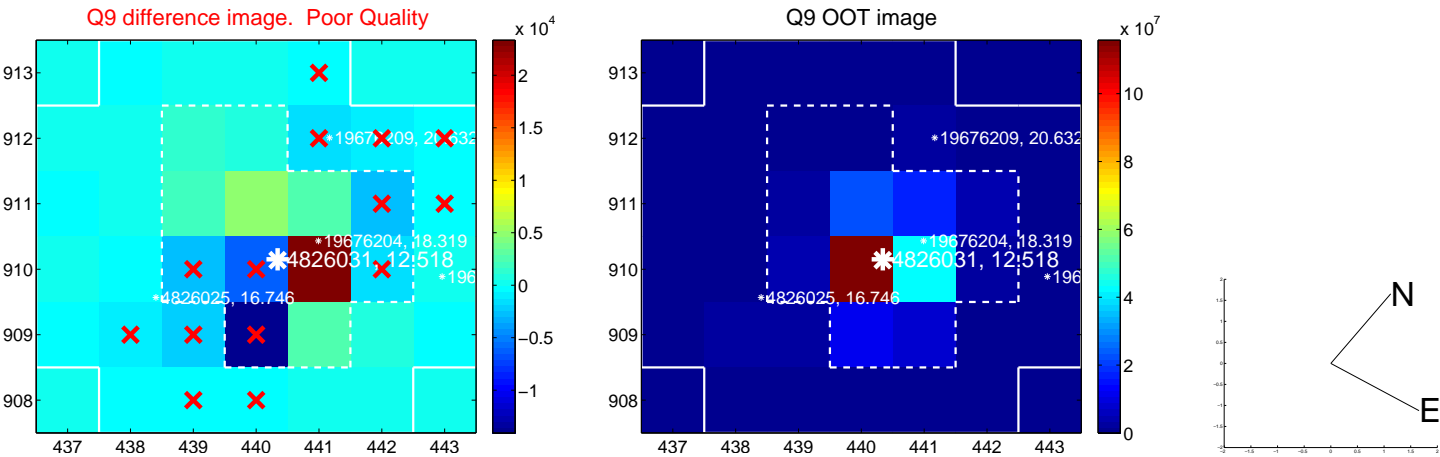
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



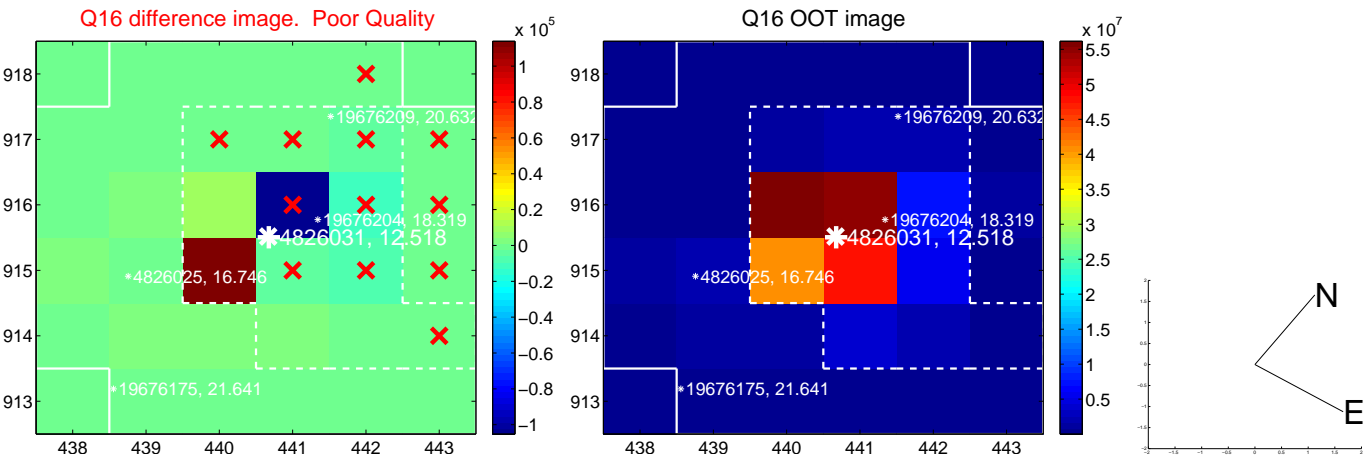
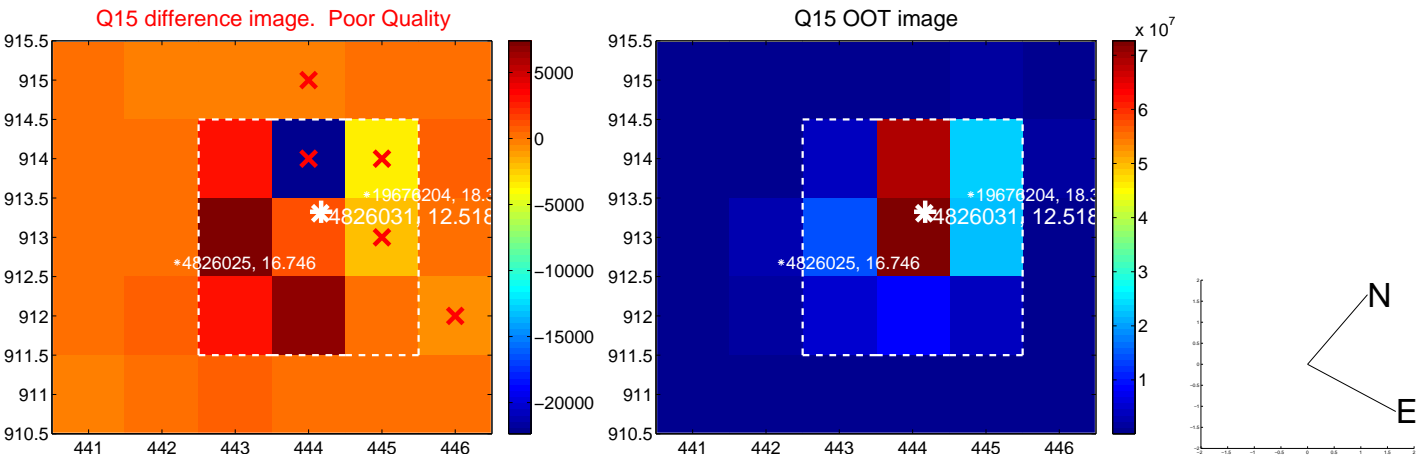
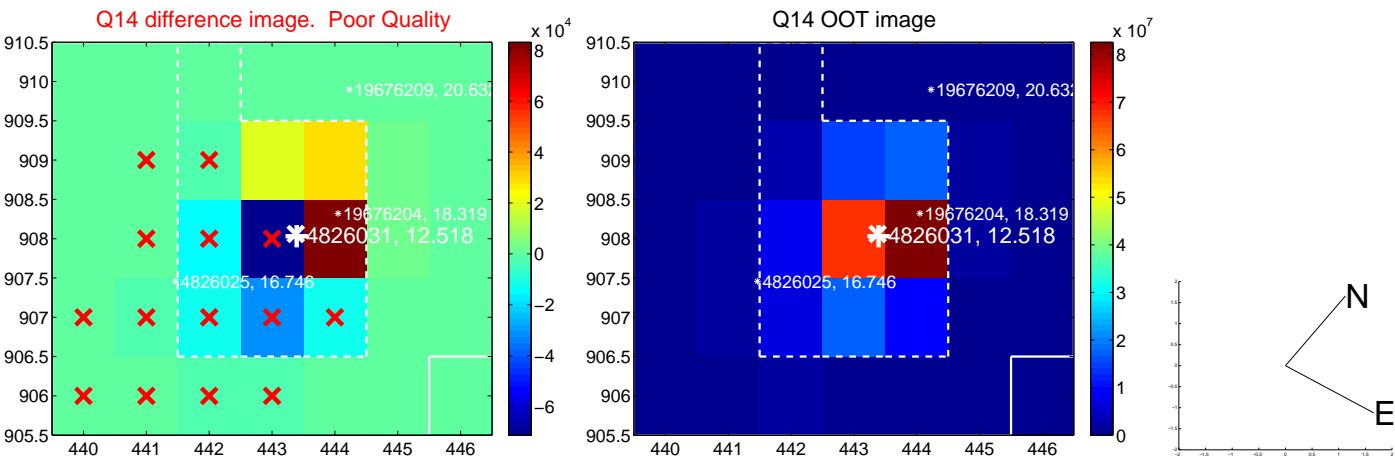
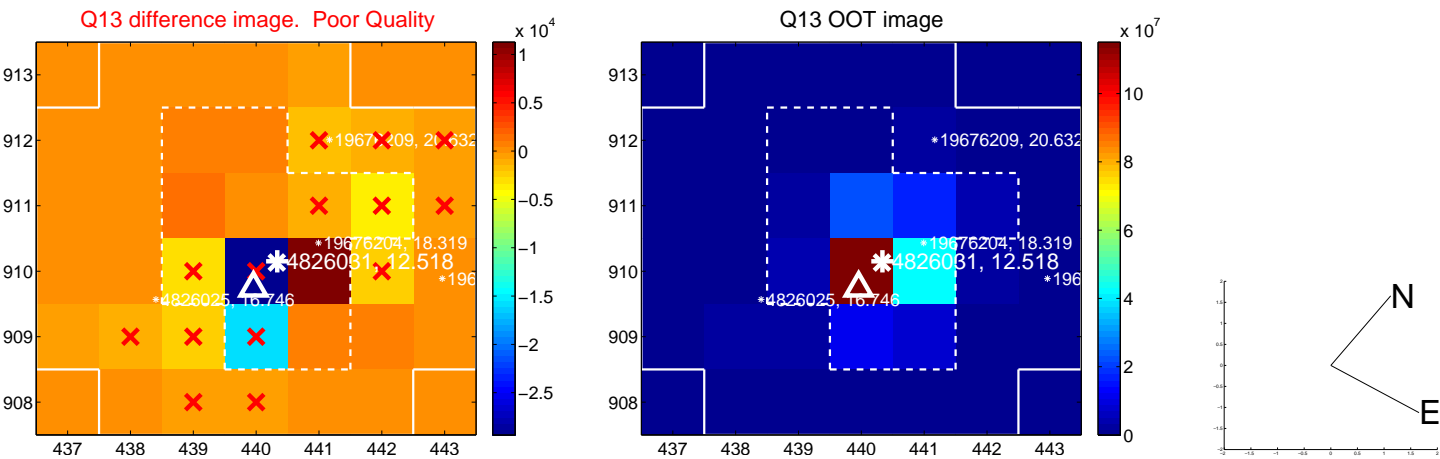
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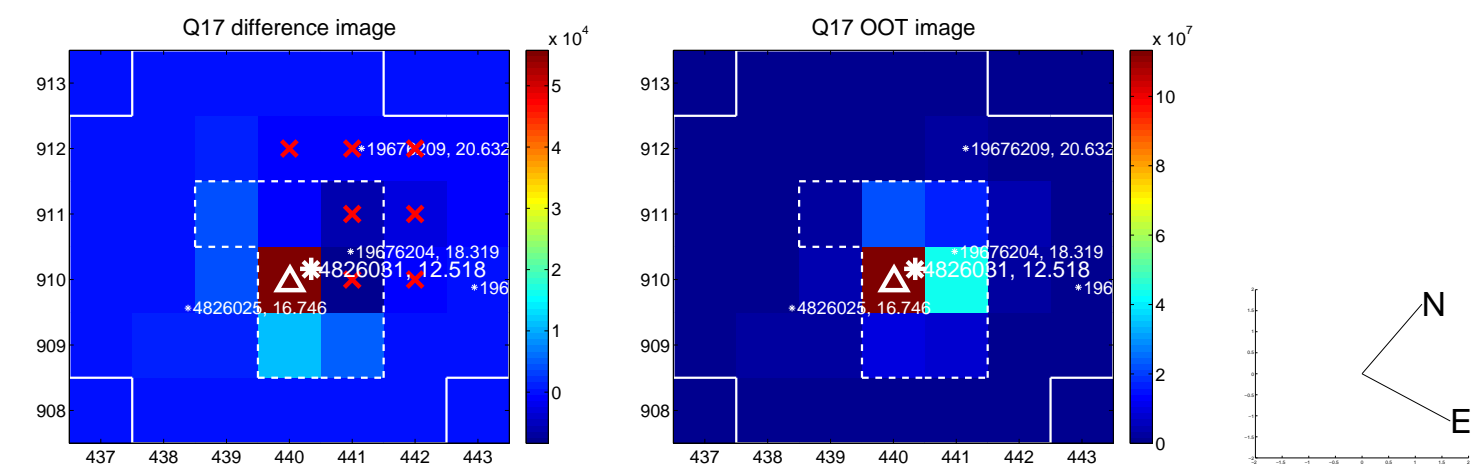
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folded centroid time series figure for this object.

UKIRT Image

Declination

