

KIC 003429637

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})
003429637-01	OBS	No	0.853020	131.863623	20.2	3.845	15.4	16.8	2.09	7211	1.09	25456.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003429637-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

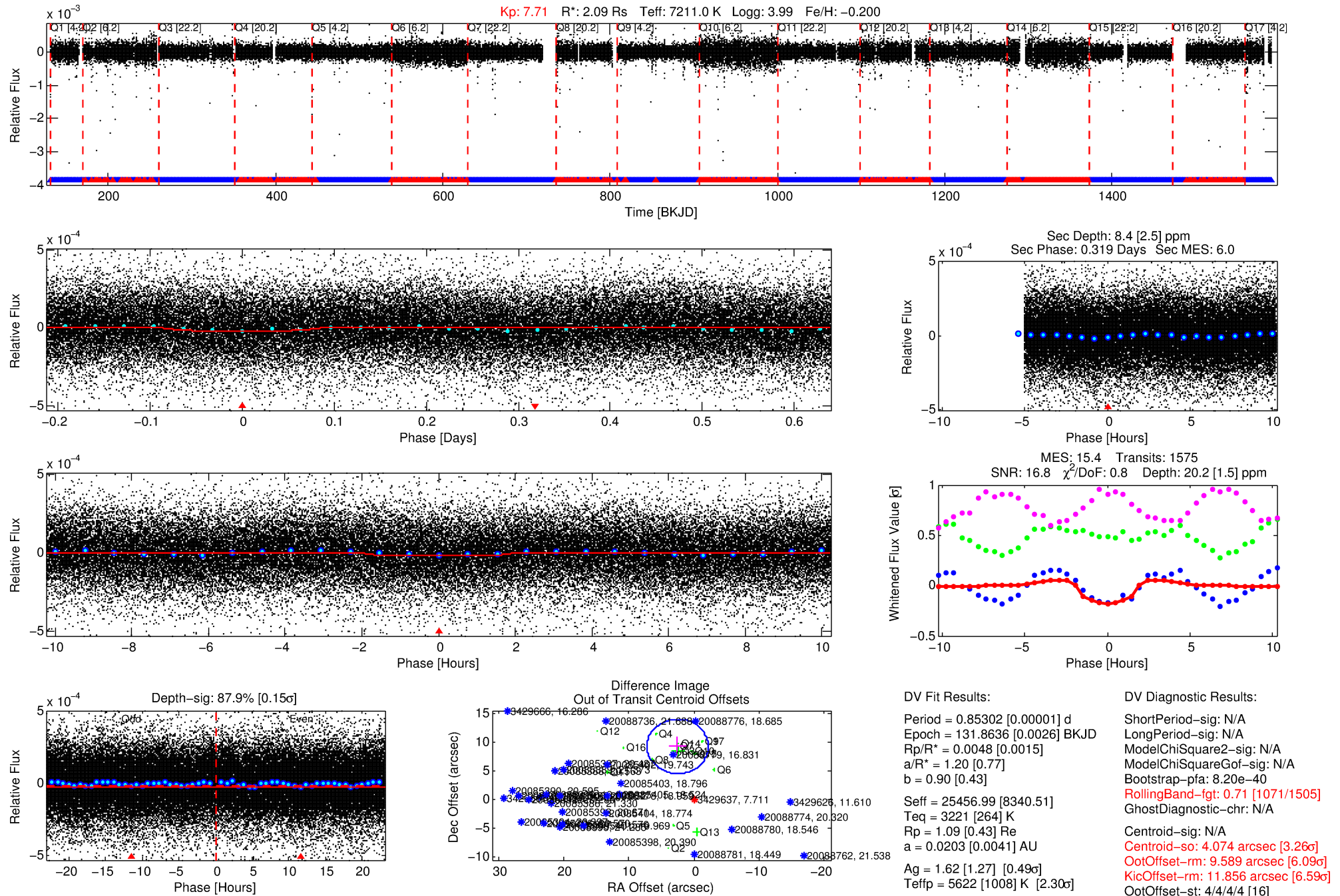
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003429637-01

No Significant Match Found

DV One-Page Summary

KIC: 3429637 Candidate: 1 of 1 Period: 0.853 d



DV Fit Results:

Period = 0.85302 [0.00001] d
Epoch = 131.8636 [0.0026] BKJD
Rp/R* = 0.0048 [0.0015]
a/R* = 1.20 [0.77]
b = 0.90 [0.43]
Seff = 25456.99 [8340.51]
Teq = 3221 [264] K
Rp = 1.09 [0.43] Re
a = 0.0203 [0.0041] AU
Ag = 1.62 [1.27] [0.49 σ]
Teffp = 5622 [1008] K [2.30 σ]

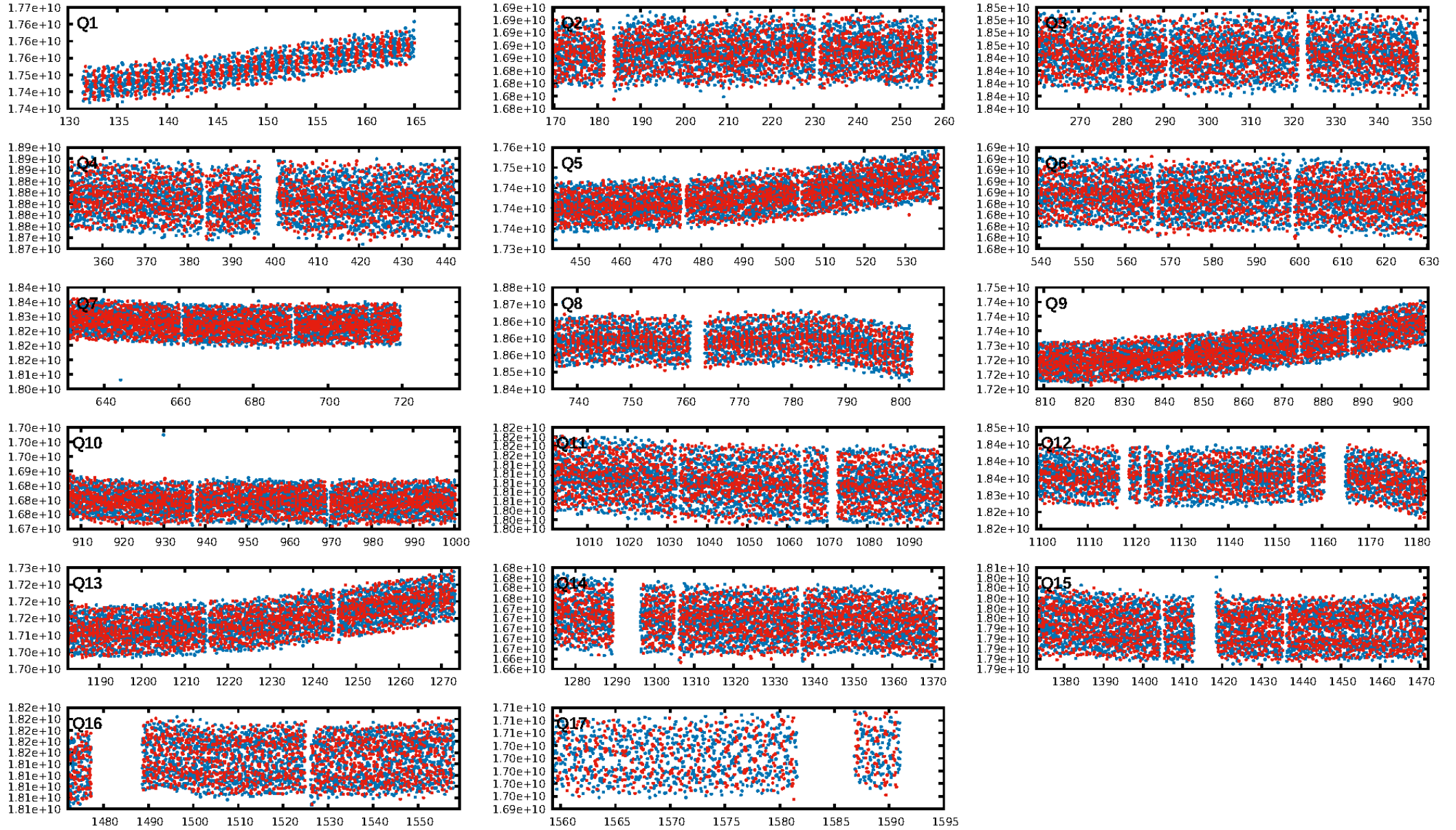
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: $8.20e-40$
RollingBand-fgt: 0.71 [1071/1505]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 4.074 arcsec [3.26 σ]
OotOffset-rm: 9.589 arcsec [6.09 σ]
KicOffset-rm: 11.856 arcsec [6.59 σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
DiffImageQuality-fgm: 0.00 [0/16]
DiffImageOverlap-fno: 1.00 [17/17]

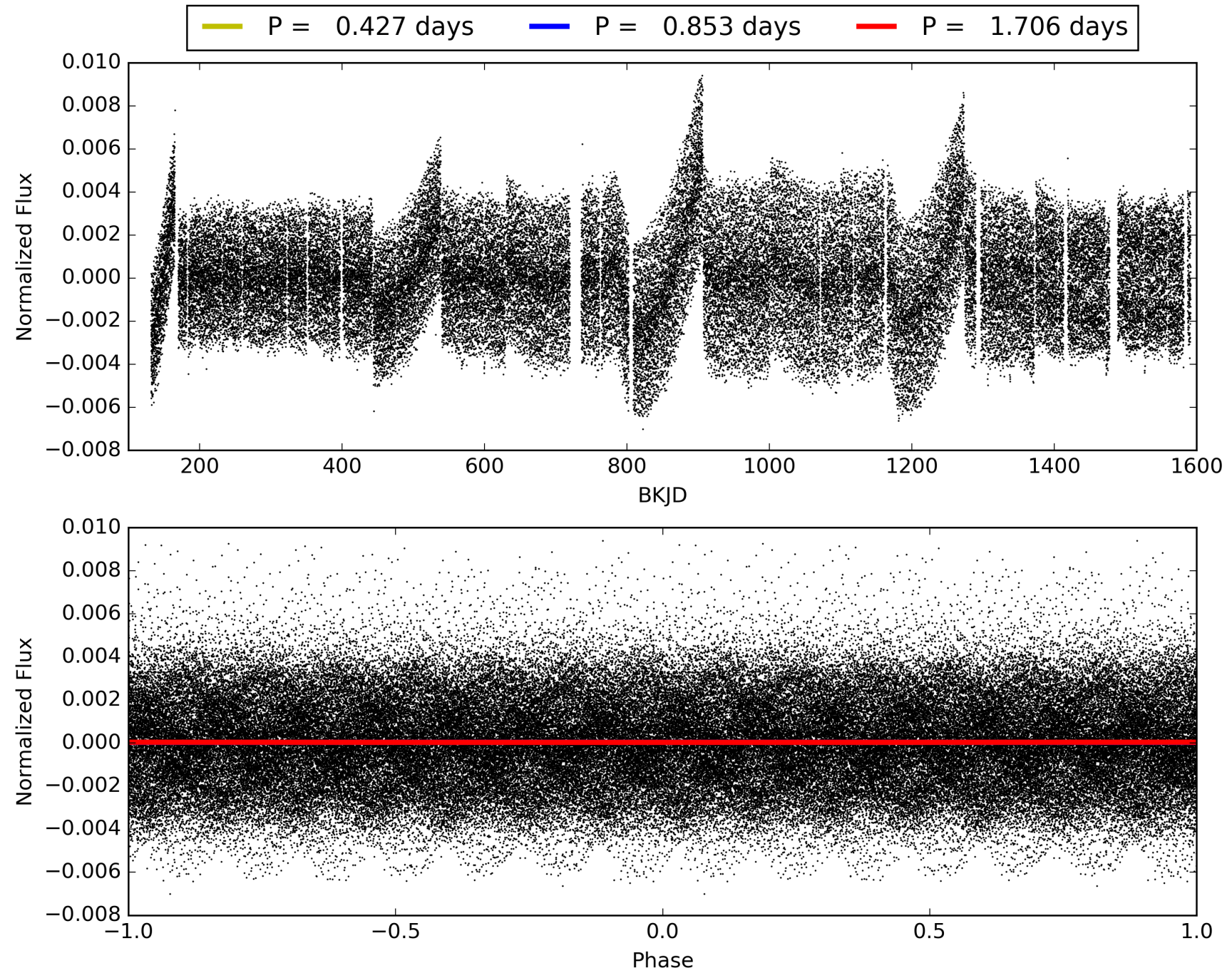
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 08:32:21 Z

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

TCE 003429637-01, PDC Light Curves

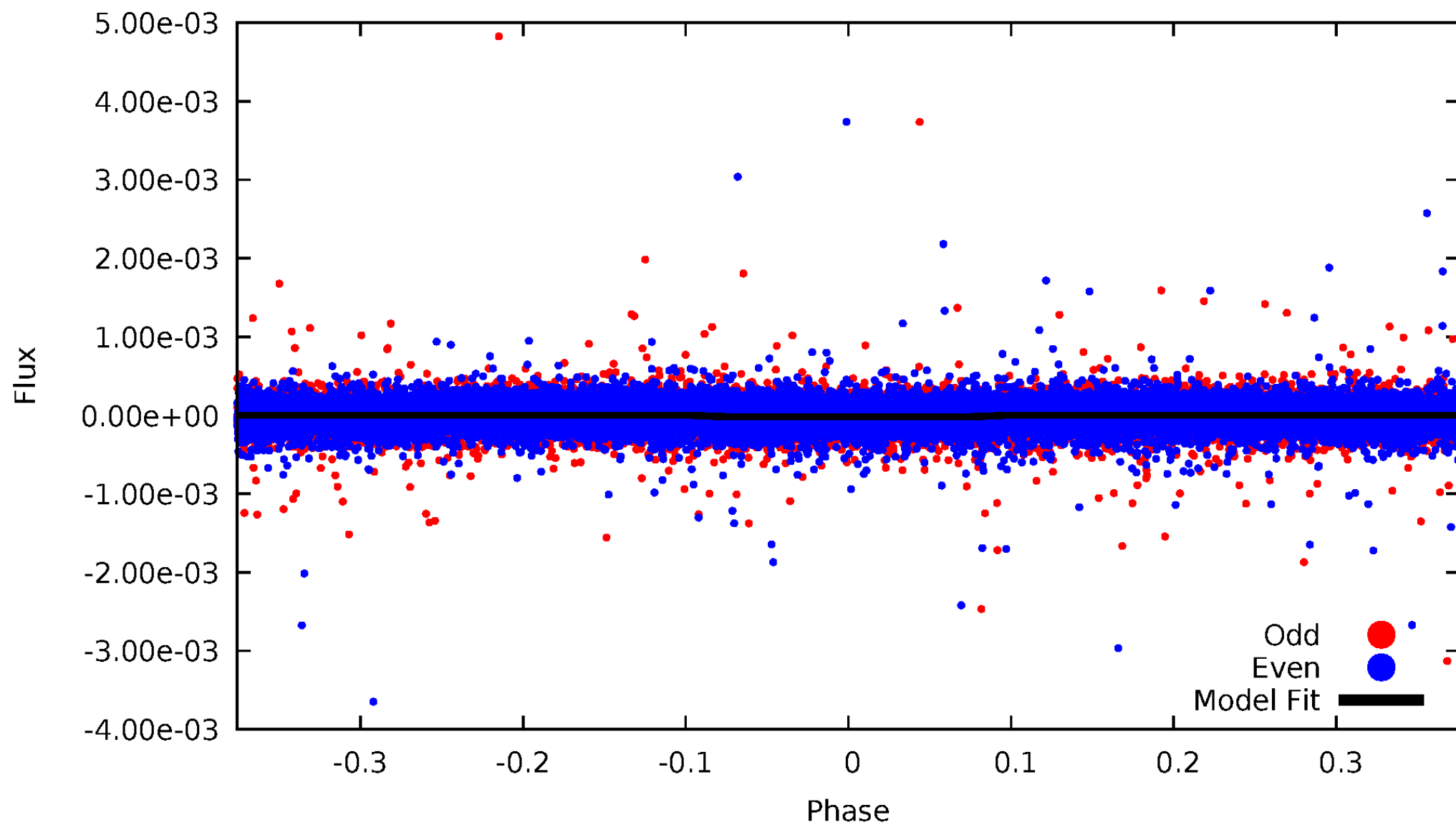


TCE 003429637-01



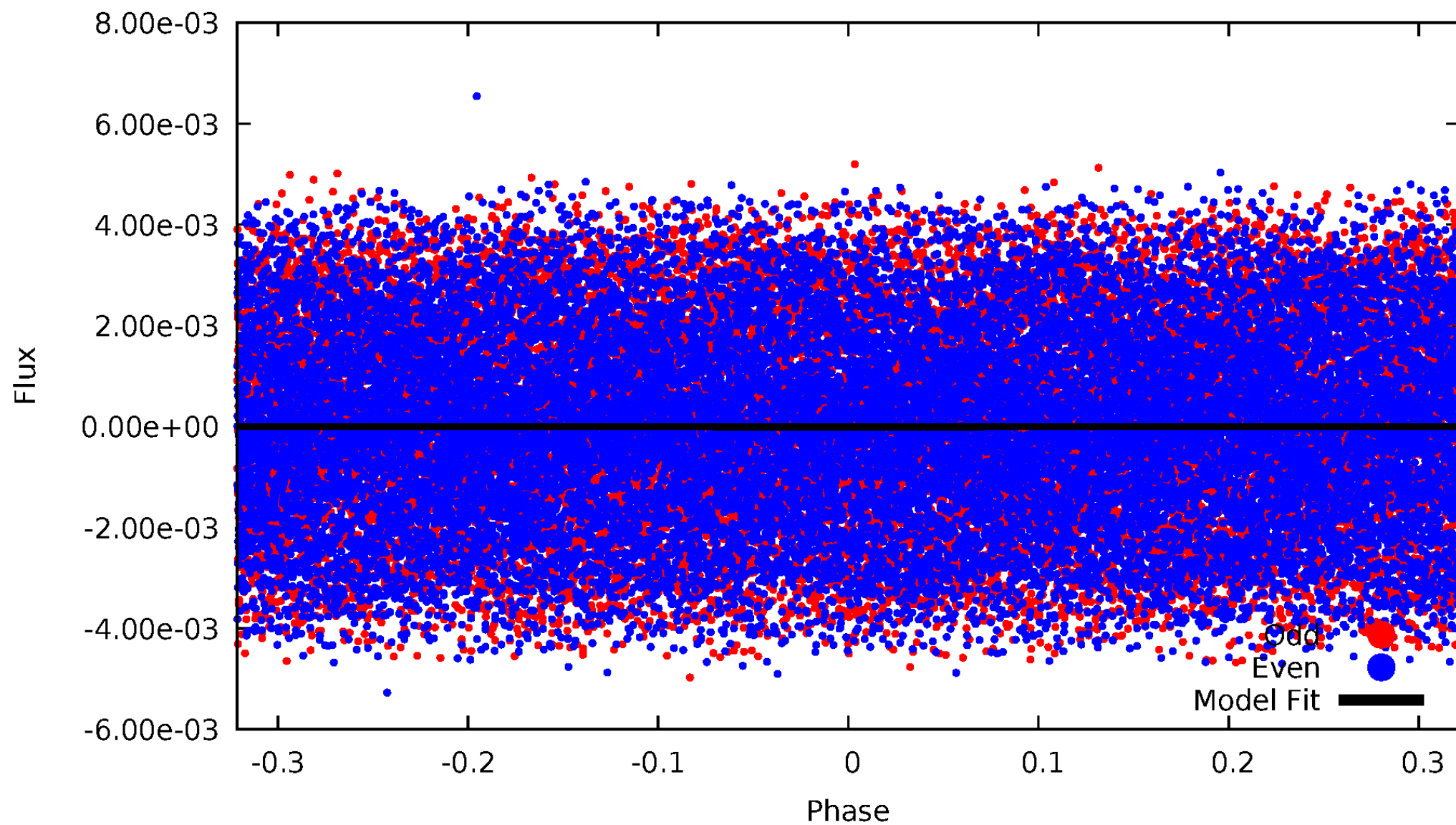
DV Odd/Even

TCE 003429637-01



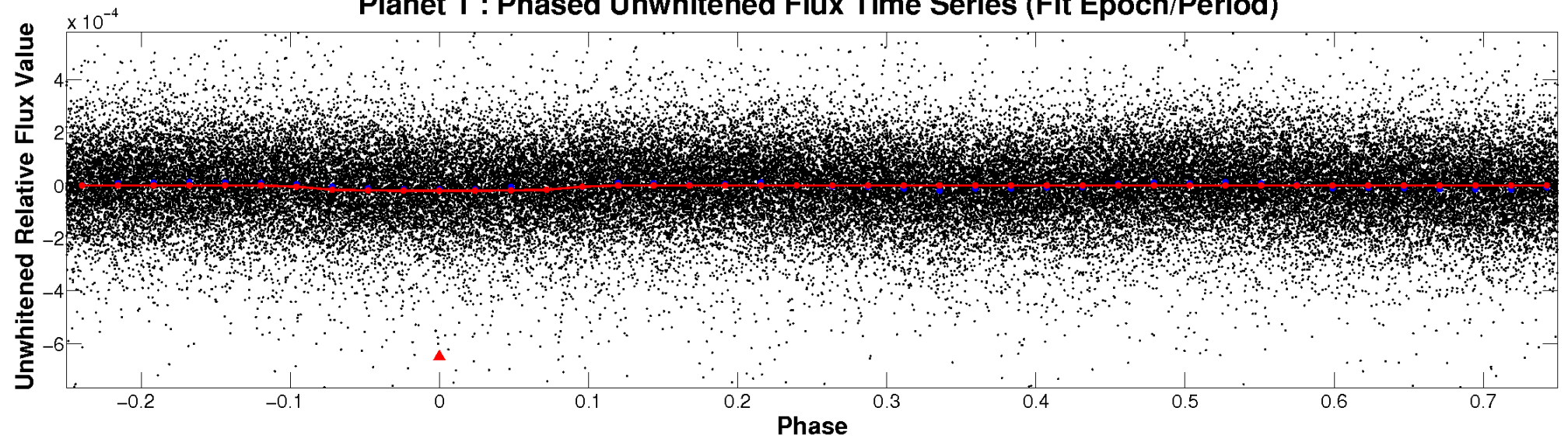
ALT Odd/Even

TCE 003429637-01

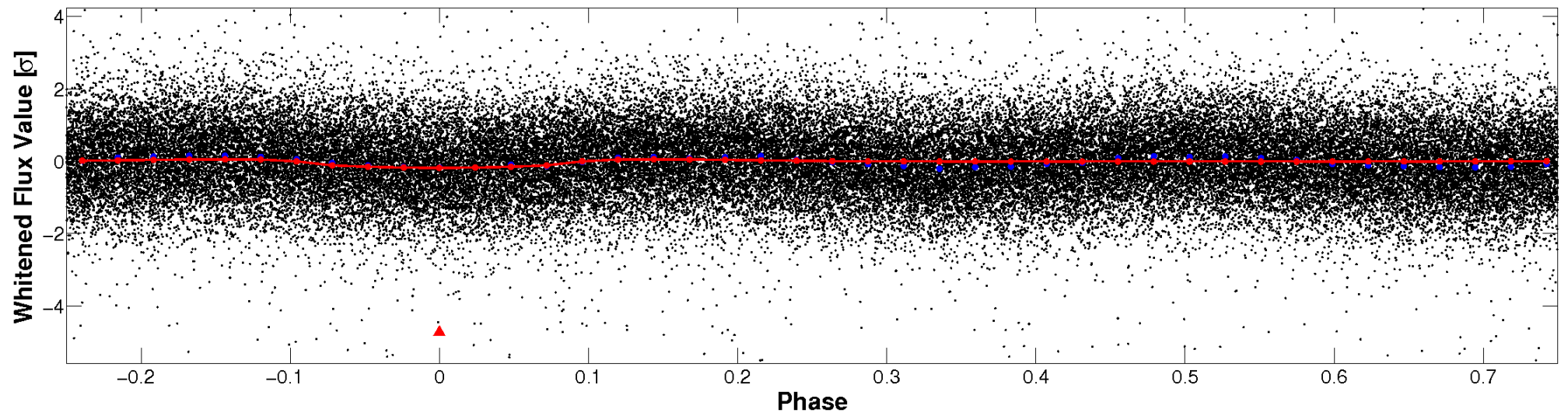


Non-Whitened Vs. Whitened Light Curve

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

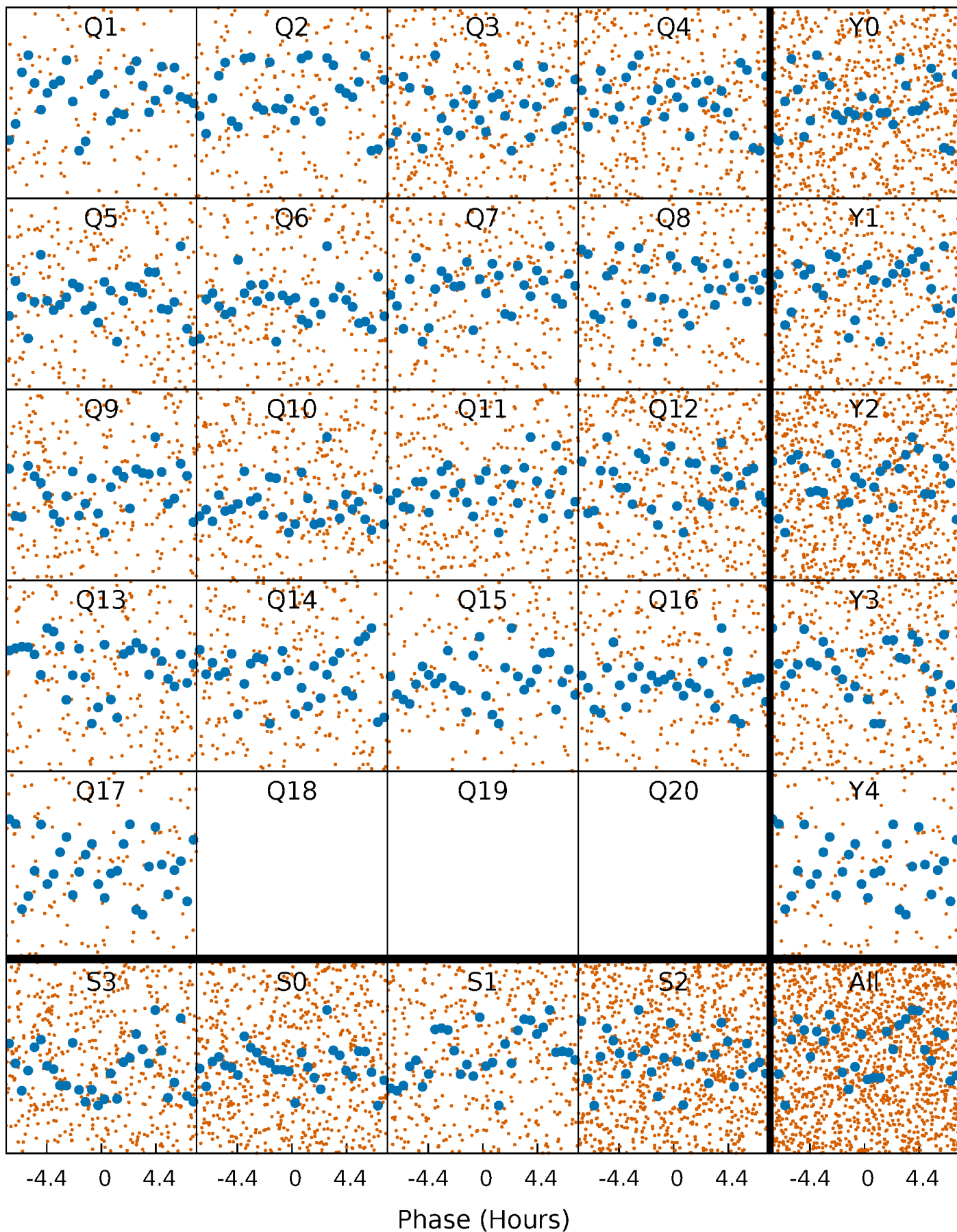


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



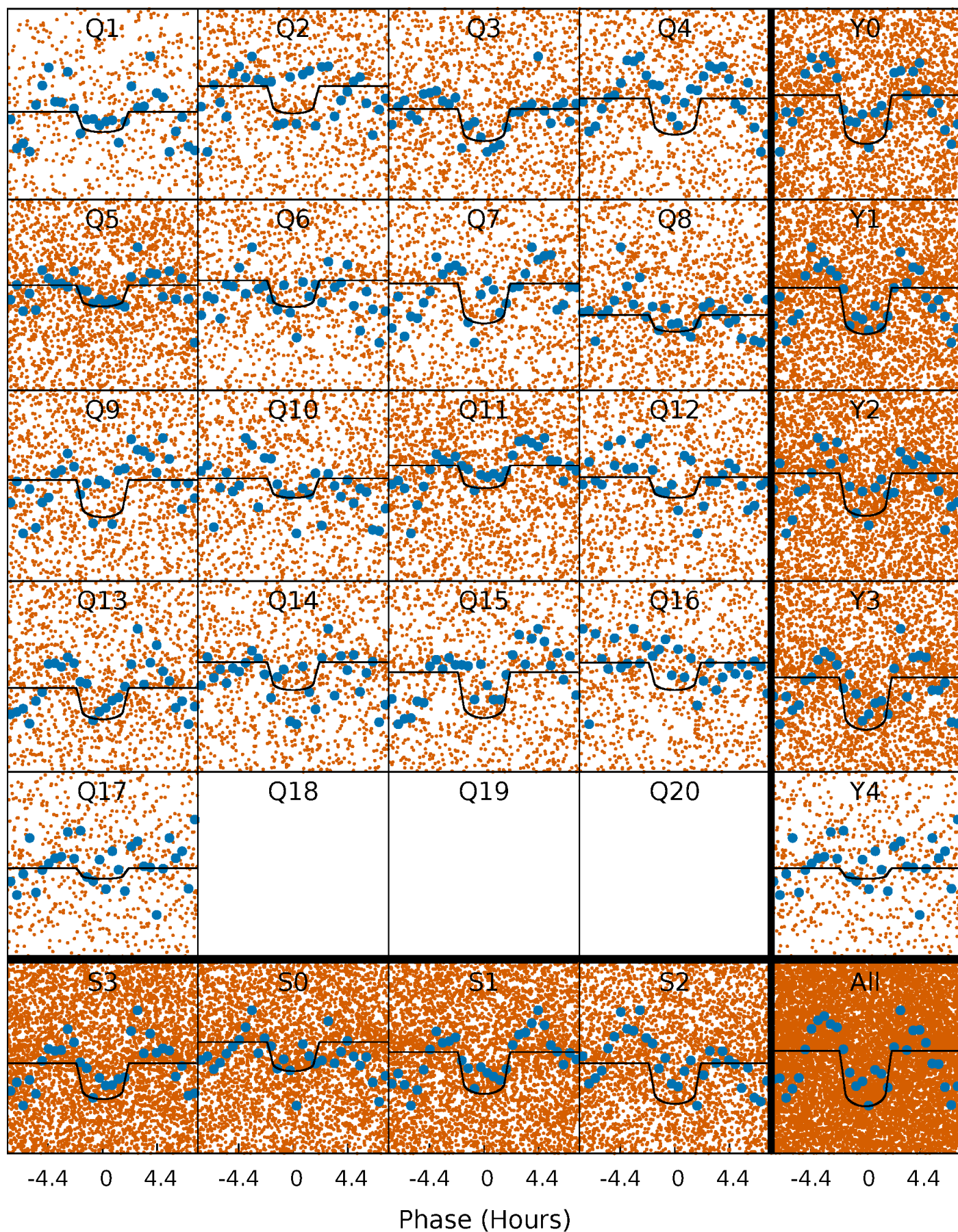
PDC Quarter-Phased Transit Curves

TCE 003429637-01 P= 0.853020 Days $T_0=131.863623$ (BKJD)



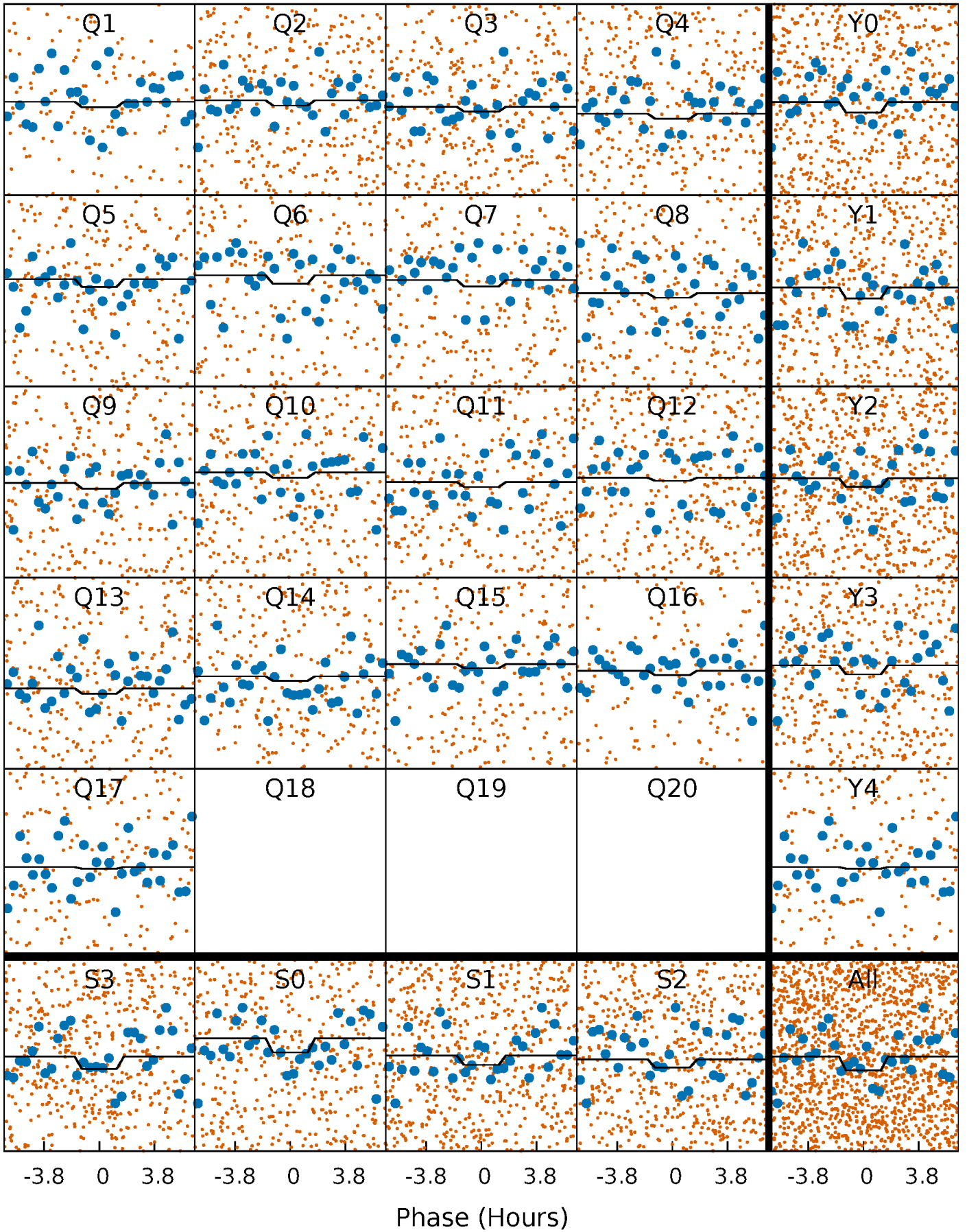
DV Quarter-Phased Transit Curves

TCE 003429637-01 P= 0.853020 Days $T_0=131.863623$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

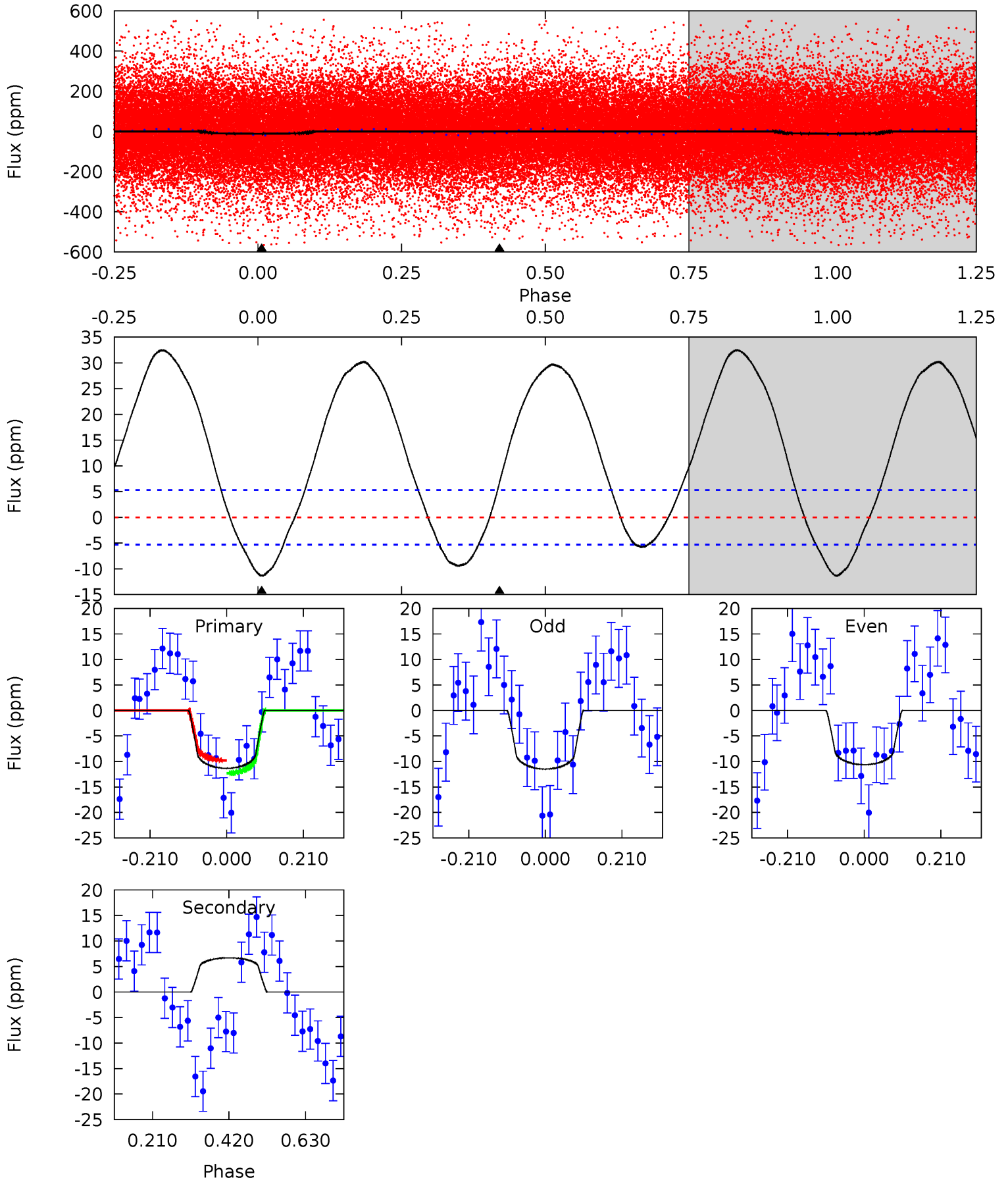
TCE 003429637-01 P= 0.853029 Days $T_0=131.840631$ (BKJD)



DV Model-Shift Uniqueness Test

003429637-01, P = 0.853020 Days, E = 131.010603 Days

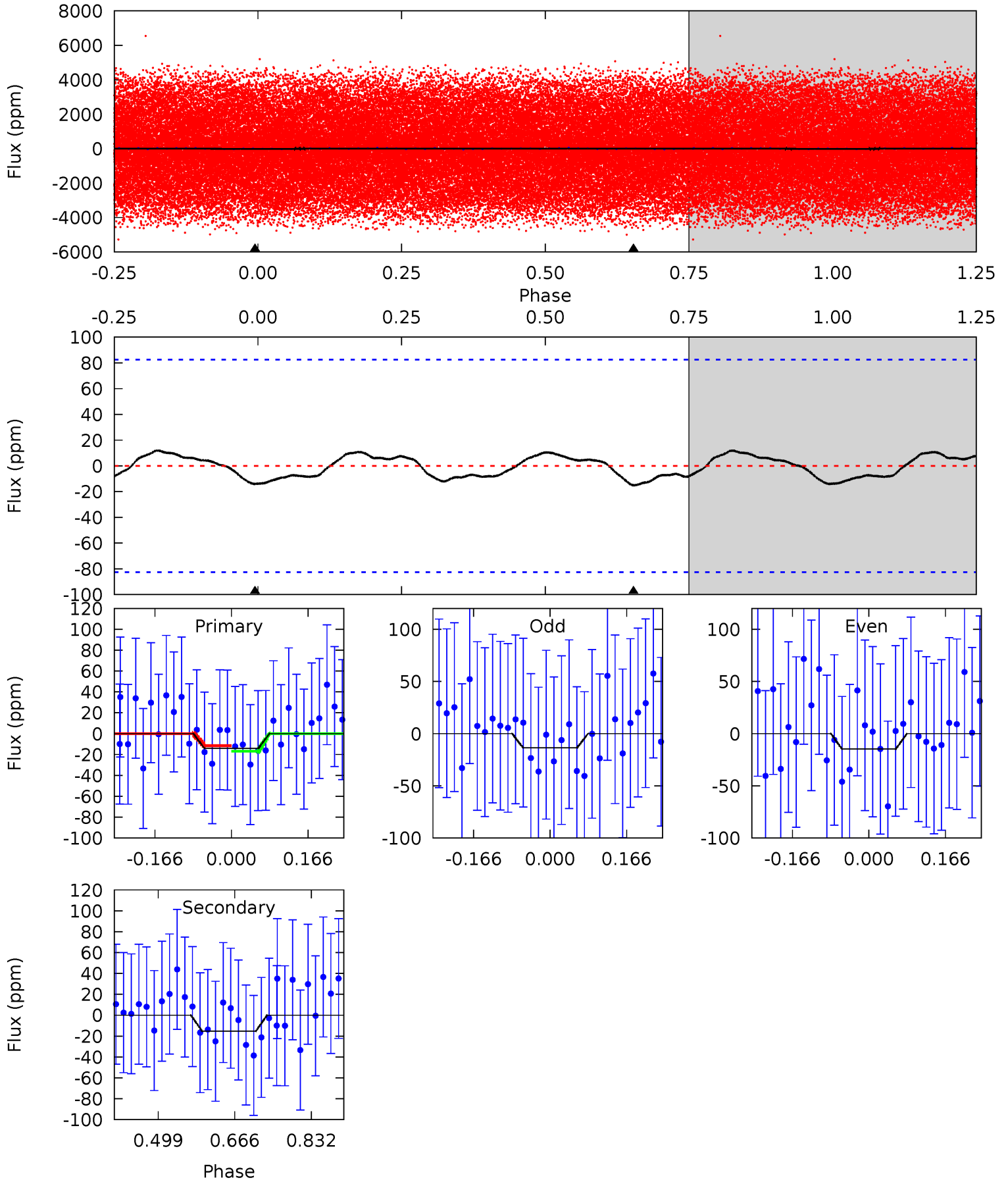
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.44	-5.58	0	0	4.41	1.25	7.91	9.44	9.44	-5.58	-5.58	0.36	1.03	0.74	1.03



Alt Model-Shift Uniqueness Test

003429637-01, P = 0.853029 Days, E = 130.987602 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.76	0.82	0	0	4.46	1.38	0.41	0.76	0.76	0.82	0.82	0.03	0.46	0.44	0.14



Stellar Parameters For KIC 003429637

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7211^{+128}_{-156}	$3.988^{+0.182}_{-0.112}$	$-0.200^{+0.150}_{-0.150}$	$2.086^{+0.378}_{-0.462}$	$1.541^{+0.128}_{-0.171}$	$0.239^{+0.213}_{-0.083}$
	+2%/-2%	+5%/-3%	+75%/-75%	+18%/-22%	+8%/-11%	+89%/-35%
Source	SPE4	SPE4	SPE4	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003429637-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	7 ± 1	$1.04^{+0.39}_{-0.38}$	4472^{+228}_{-278}	-5588^{+576}_{-1031}	$-1.392^{+0.678}_{-2.018}$
Alt.	-15 ± 19	$0.80^{+0.38}_{-0.34}$	4464^{+238}_{-240}	7063^{+4933}_{-12456}	$4.301^{+17.334}_{-5.531}$

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 $A_{obs} \gg 1.0$

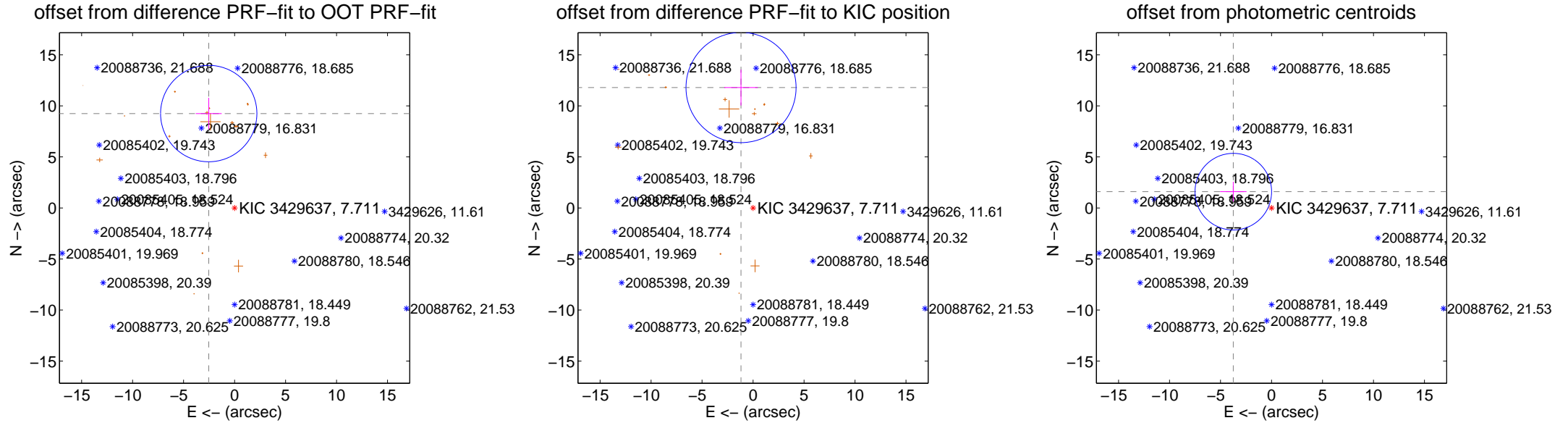
DV Centroid Data

Supplemental centroid analysis for 003429637-01. **Kepler magnitude: 7.71.** Transit SNR 16.79

There are 0 quarters with good PRF difference image offsets

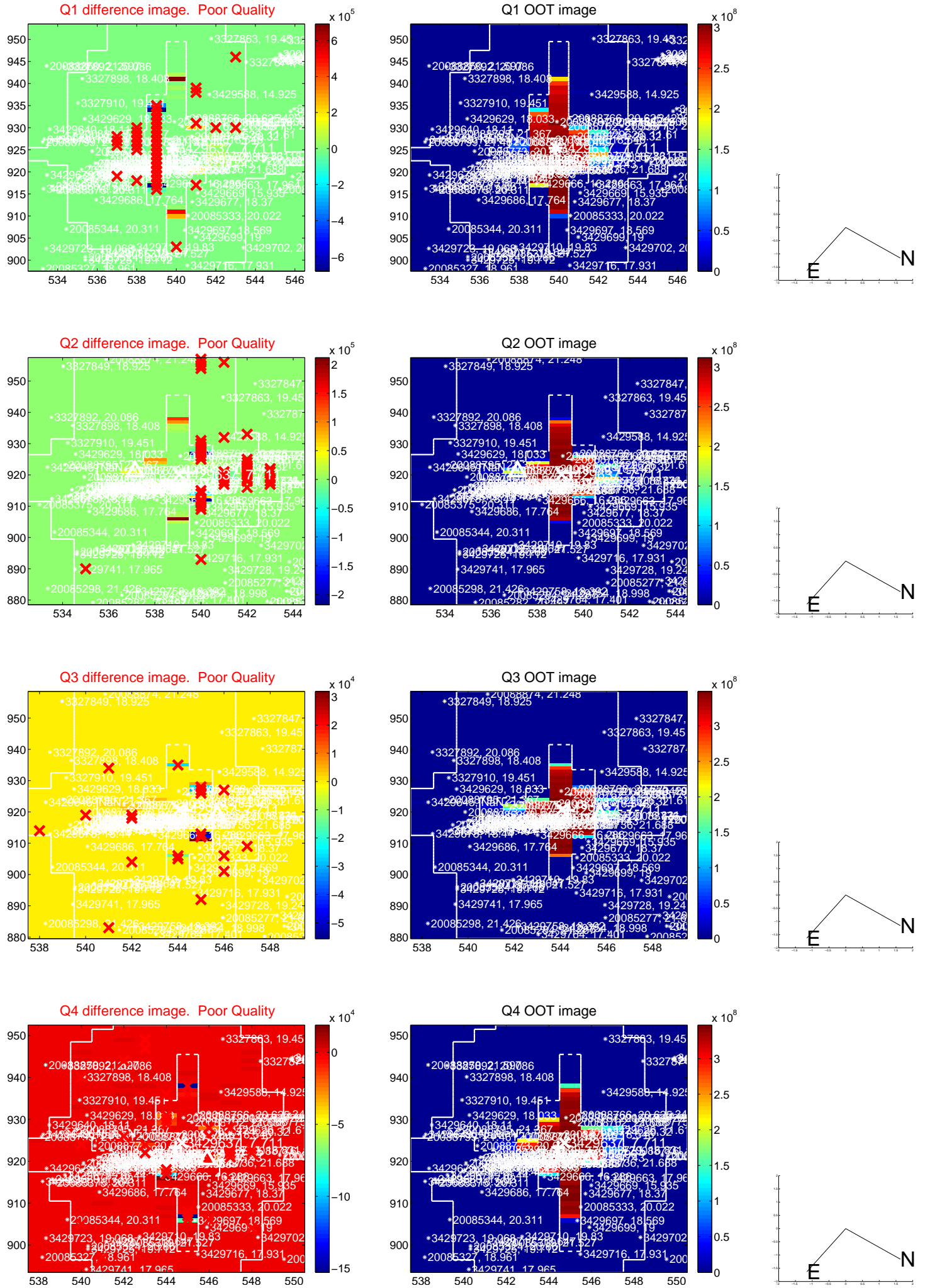
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.589 ± 1.574	6.09	2.535 ± 1.270	9.248 ± 1.542
PRF-fit source offset from KIC position	11.856 ± 1.799	6.59	1.179 ± 1.647	11.797 ± 1.754
photometric centroid source offset	4.07 ± 1.25	3.26	3.75 ± 1.30	1.60 ± 0.97

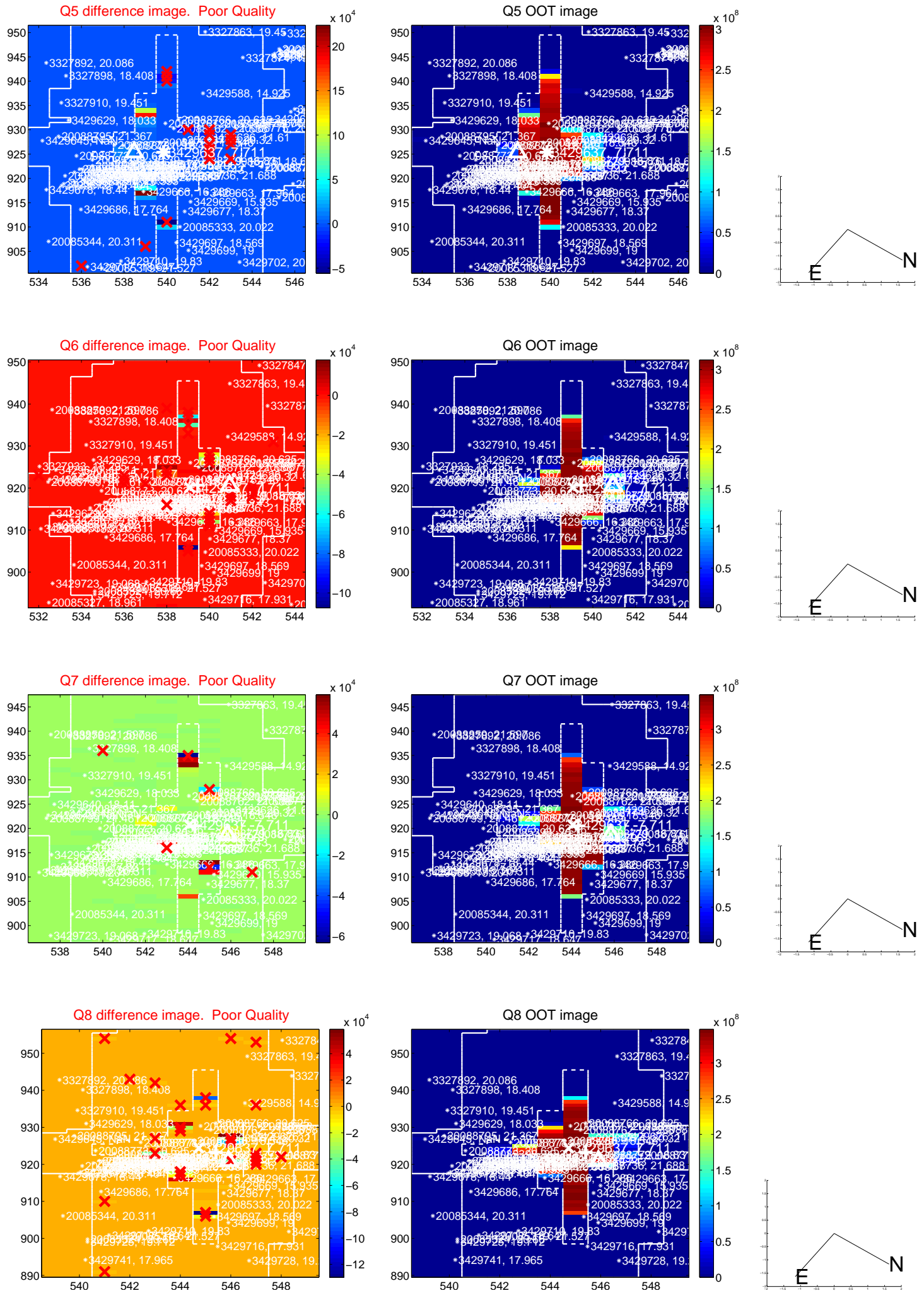


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

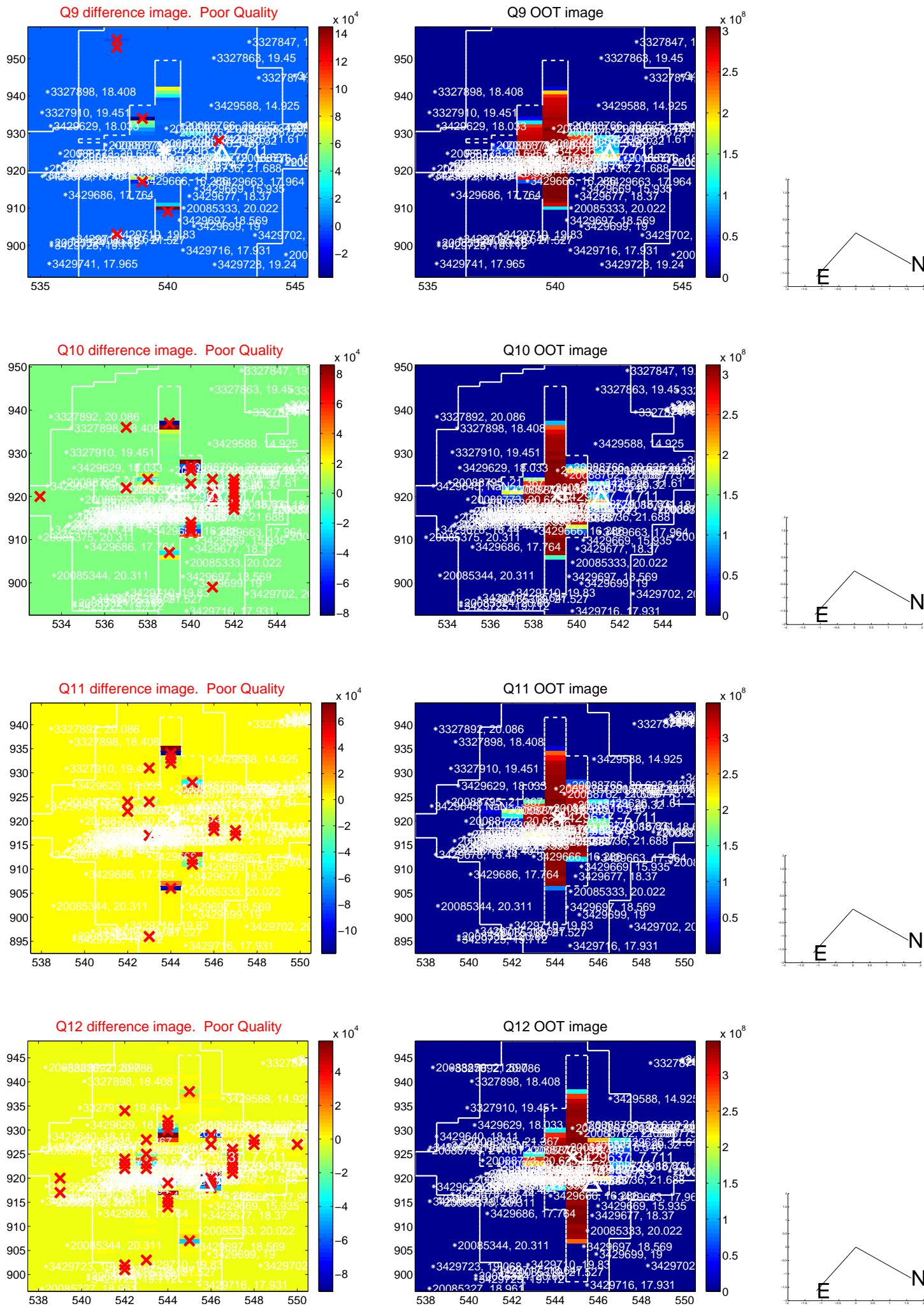
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



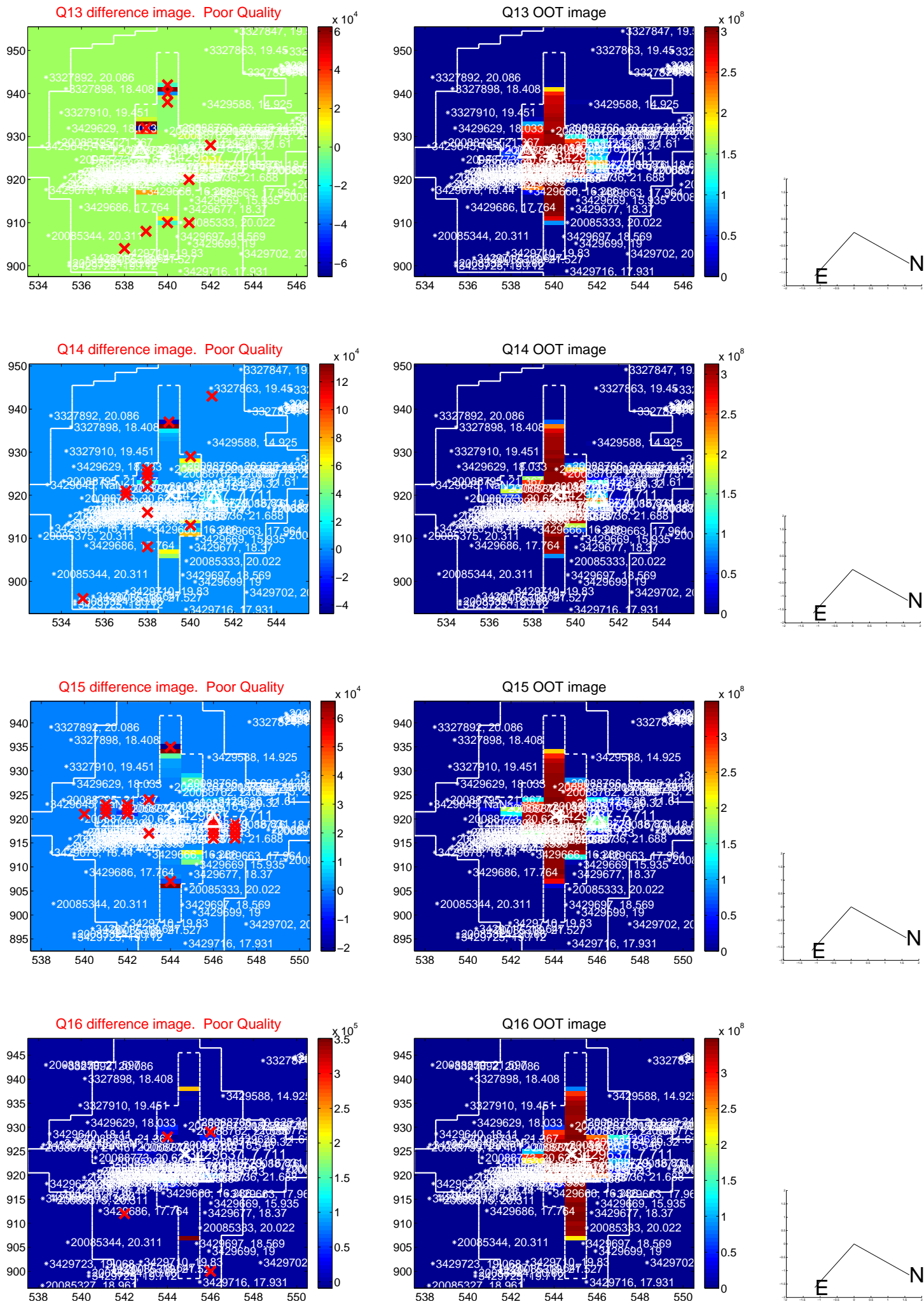
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



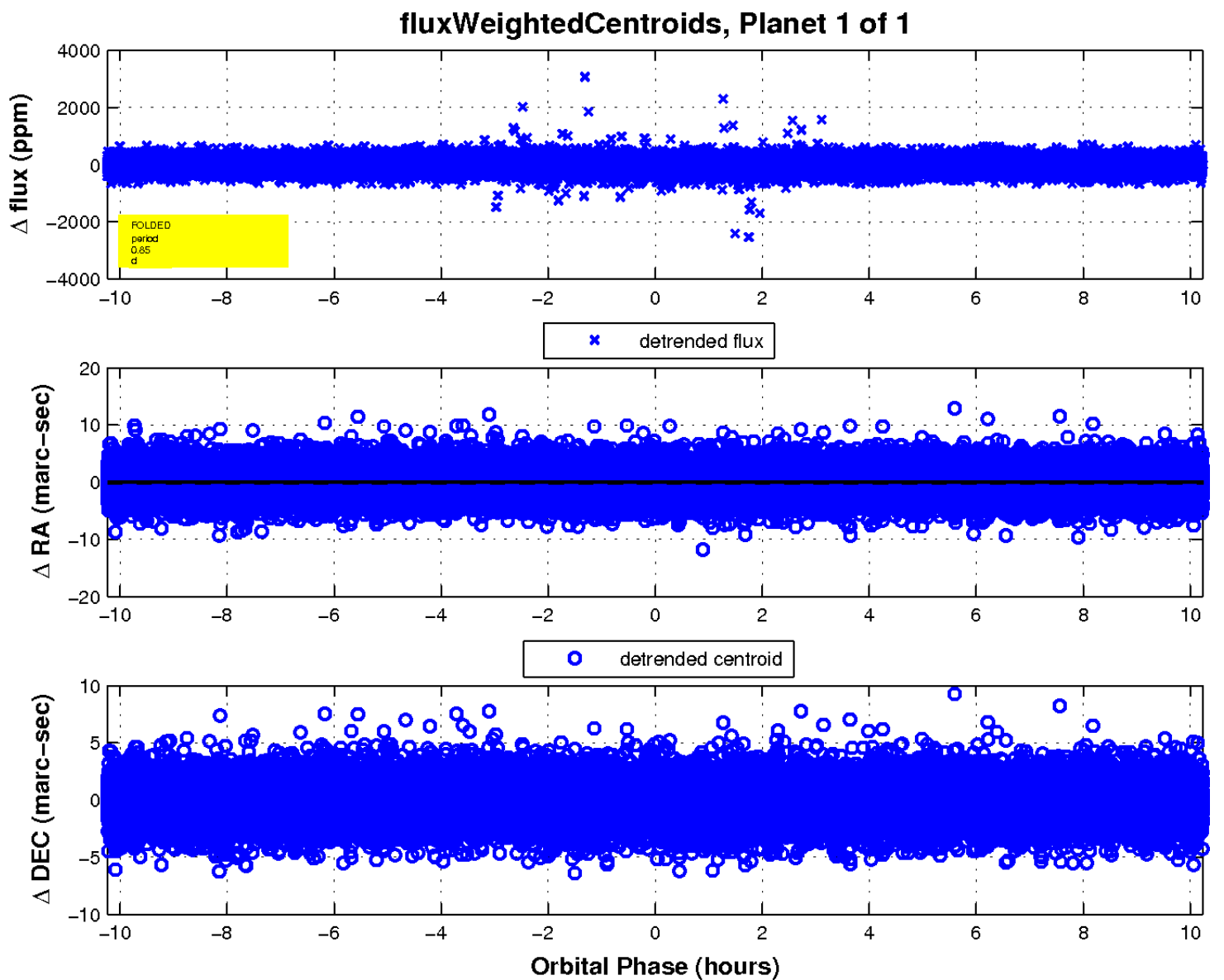
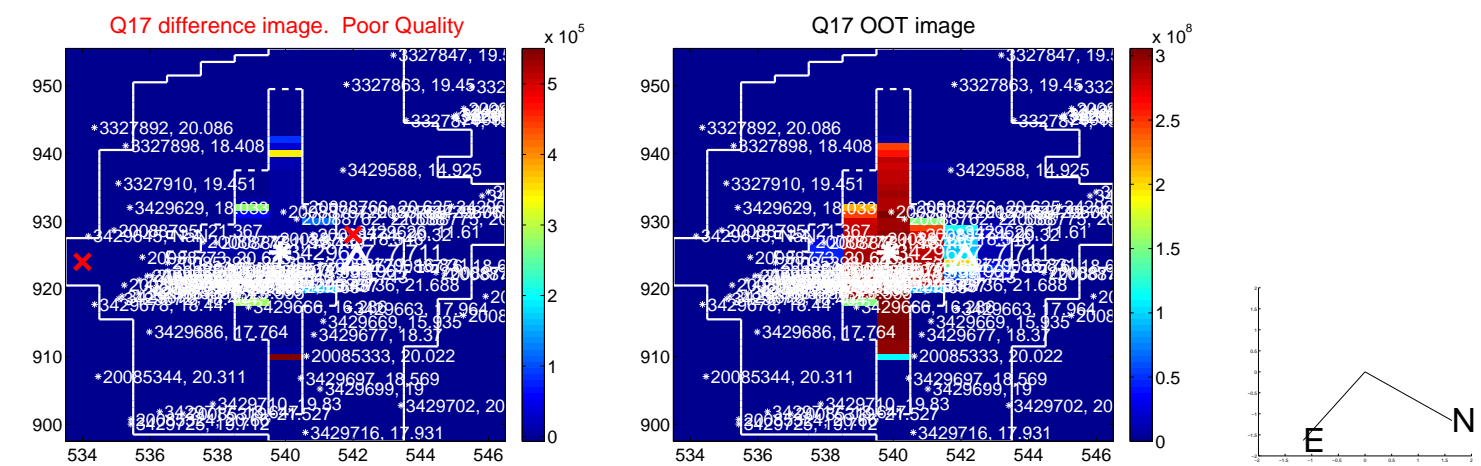
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UKIRT Image

