

KIC 008453527

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})
008453527-01	OBS	No	0.815104	131.893051	0.4	9.781	7.8	1.1	3.25	8224	0.21	92068.06

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008453527-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—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.

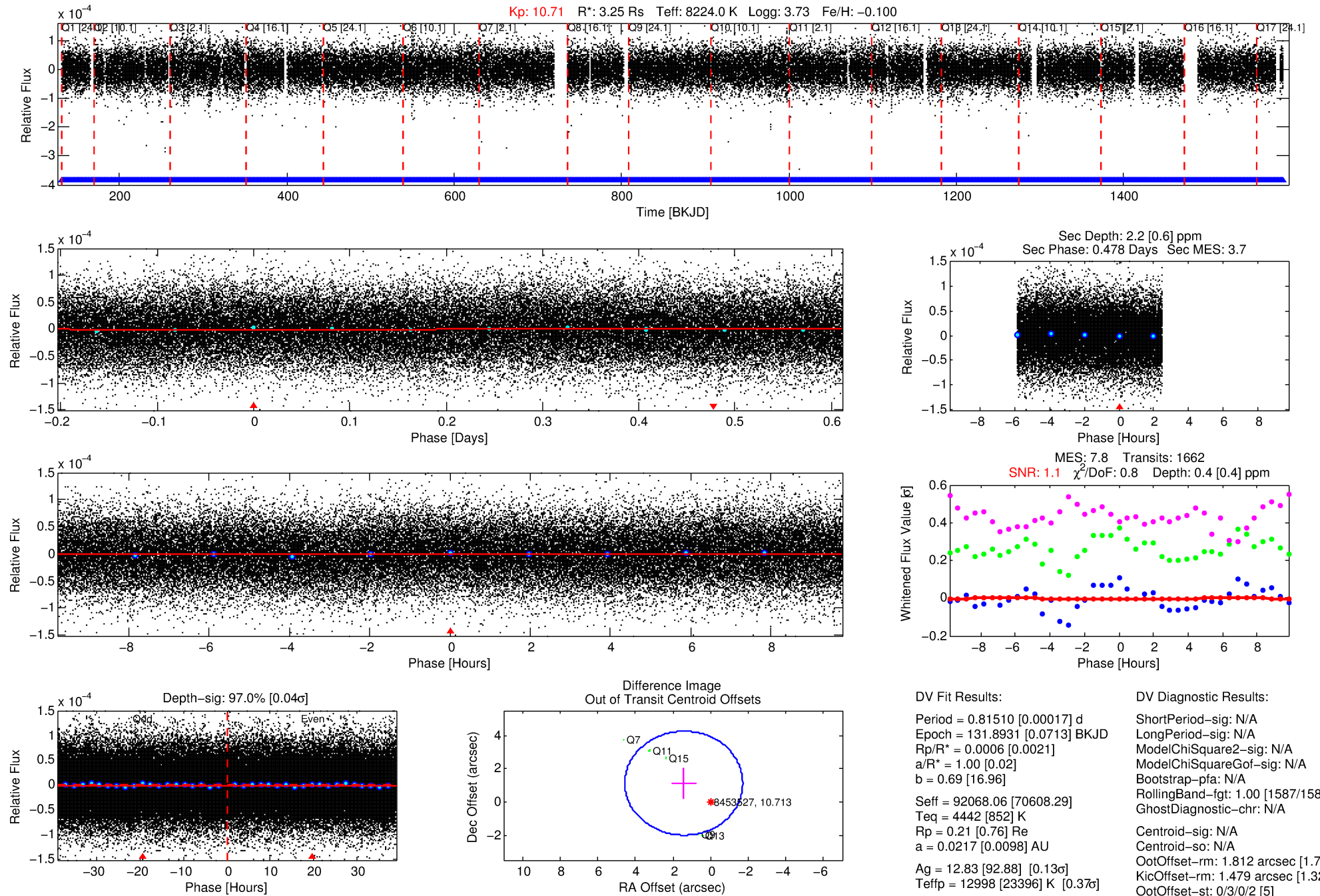
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008453527-01

No Significant Match Found

DV One-Page Summary

KIC: 8453527 Candidate: 1 of 1 Period: 0.815 d



DV Fit Results:

Period = 0.81510 [0.00017] d
Epoch = 131.8931 [0.0713] BKJD
 $R_p/R^* = 0.0006$ [0.0021]
 $a/R^* = 1.00$ [0.02]
 $b = 0.69$ [16.96]
 $\text{Seff} = 92068.06$ [70608.29]
 $T_{\text{eq}} = 4442$ [852] K
 $R_p = 0.21$ [0.76] R_e
 $a = 0.0217$ [0.0098] AU
 $A_g = 12.83$ [92.88] [0.13 σ]
 $T_{\text{eff}} = 12998$ [23396] K [0.37 σ]

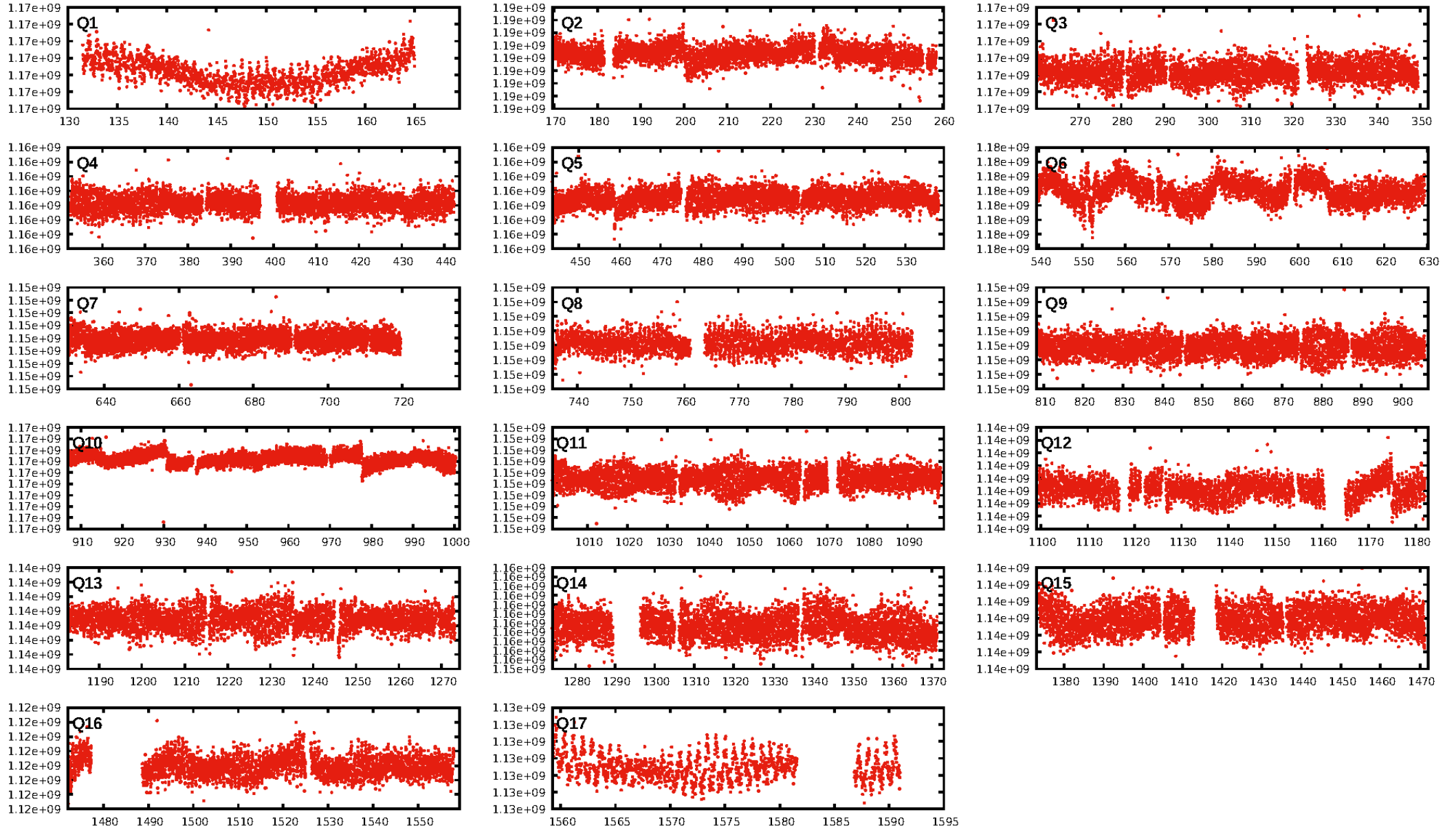
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1587/1587]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 1.812 arcsec [1.74 σ]
KicOffset-rm: 1.479 arcsec [1.32 σ]
OotOffset-st: 0/3/0/2 [5]
KicOffset-st: 0/3/0/2 [5]
DiffImageQuality-fgm: 0.40 [2/5]
DiffImageOverlap-fno: 1.00 [17/17]

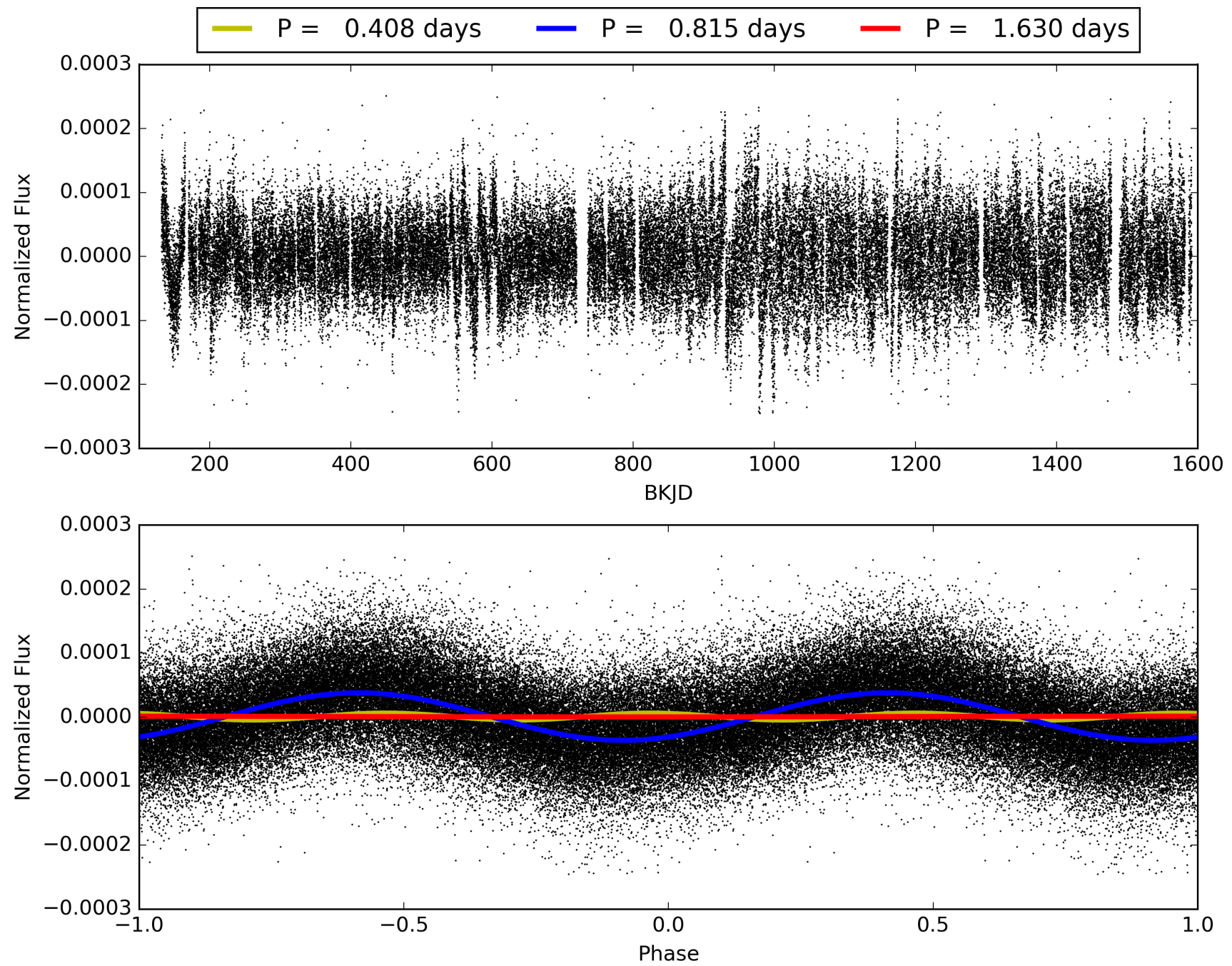
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:05:26 Z

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

TCE 008453527-01, PDC Light Curves

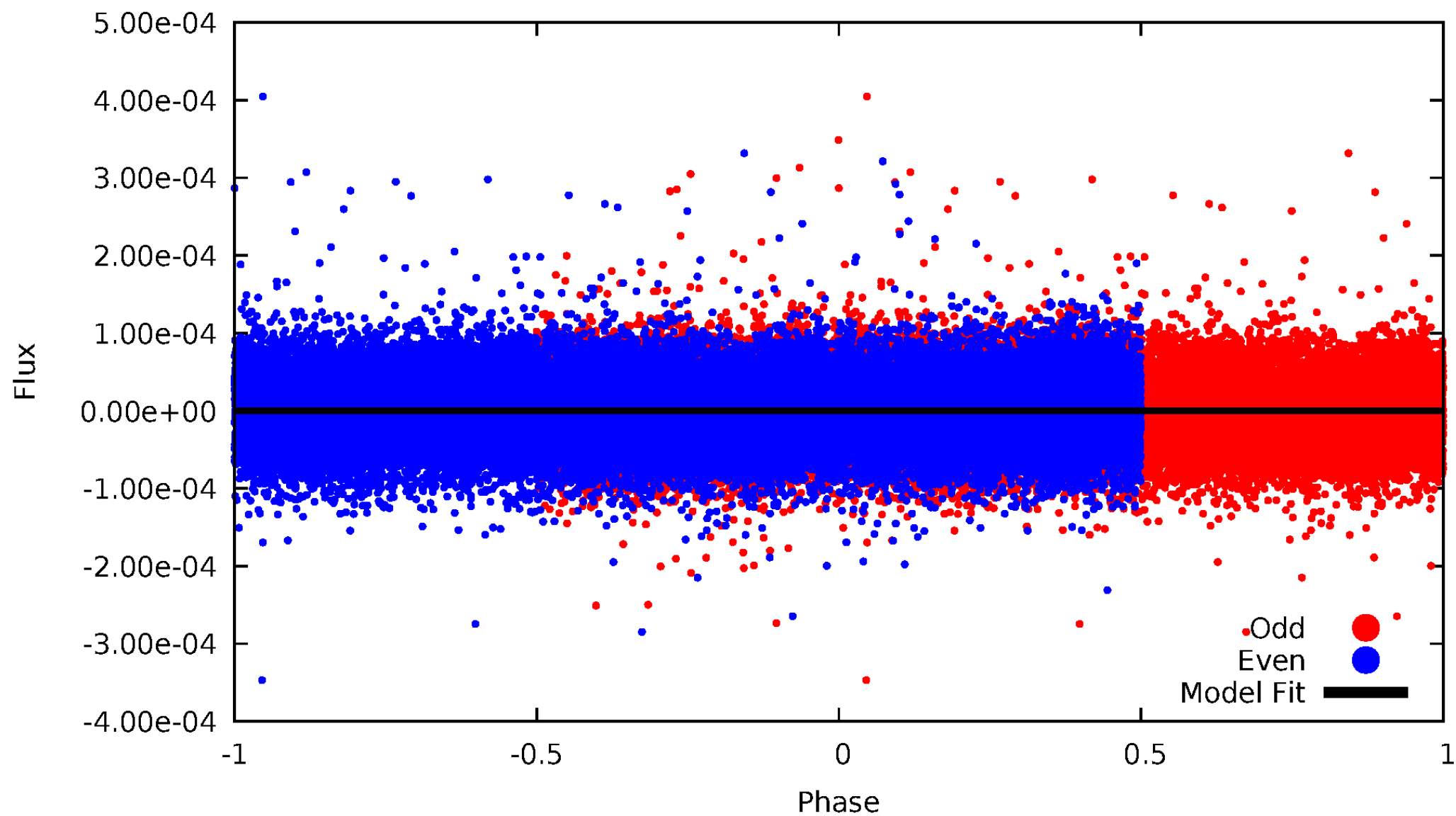


TCE 008453527-01



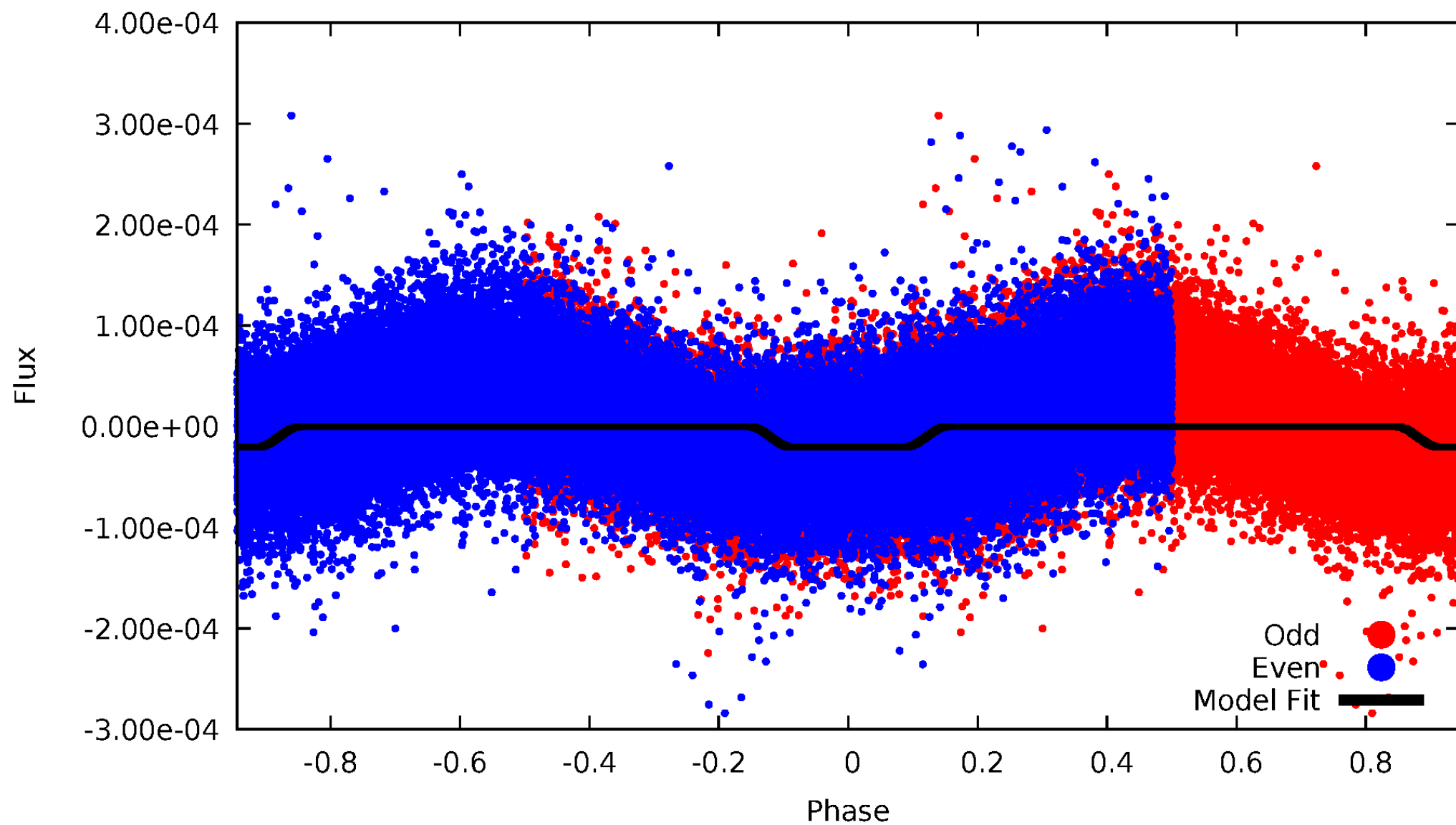
DV Odd/Even

TCE 008453527-01



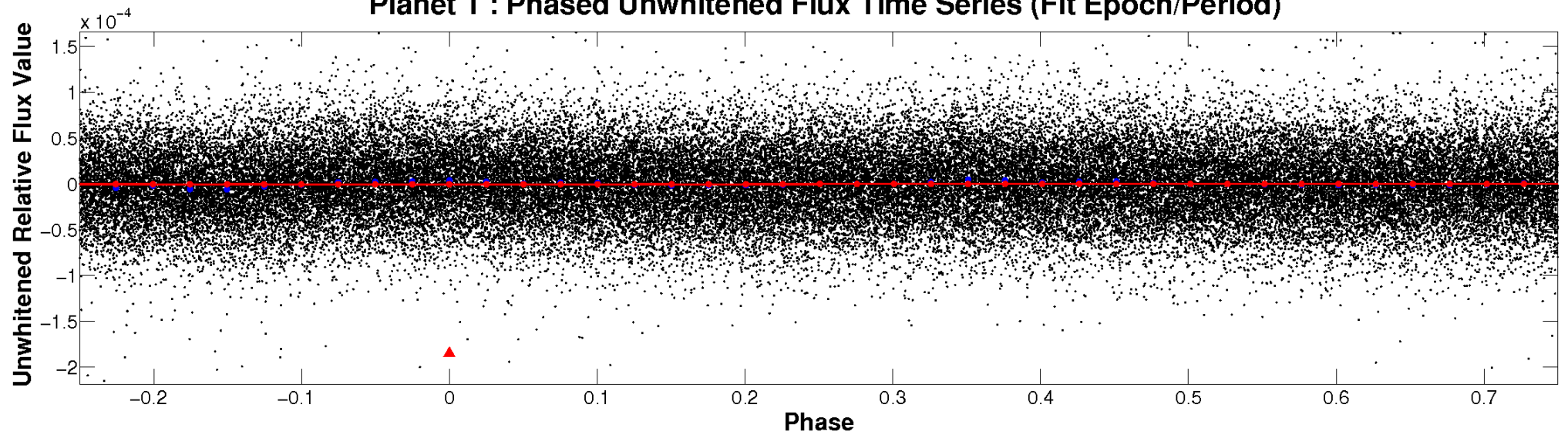
ALT Odd/Even

TCE 008453527-01

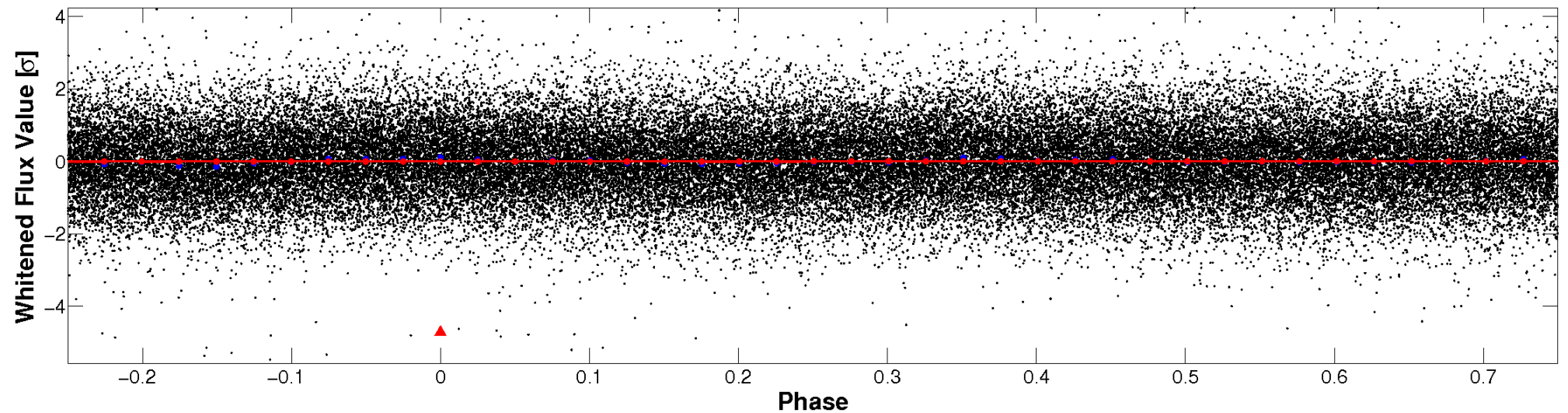


Non-Whitened Vs. Whitened Light Curve

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

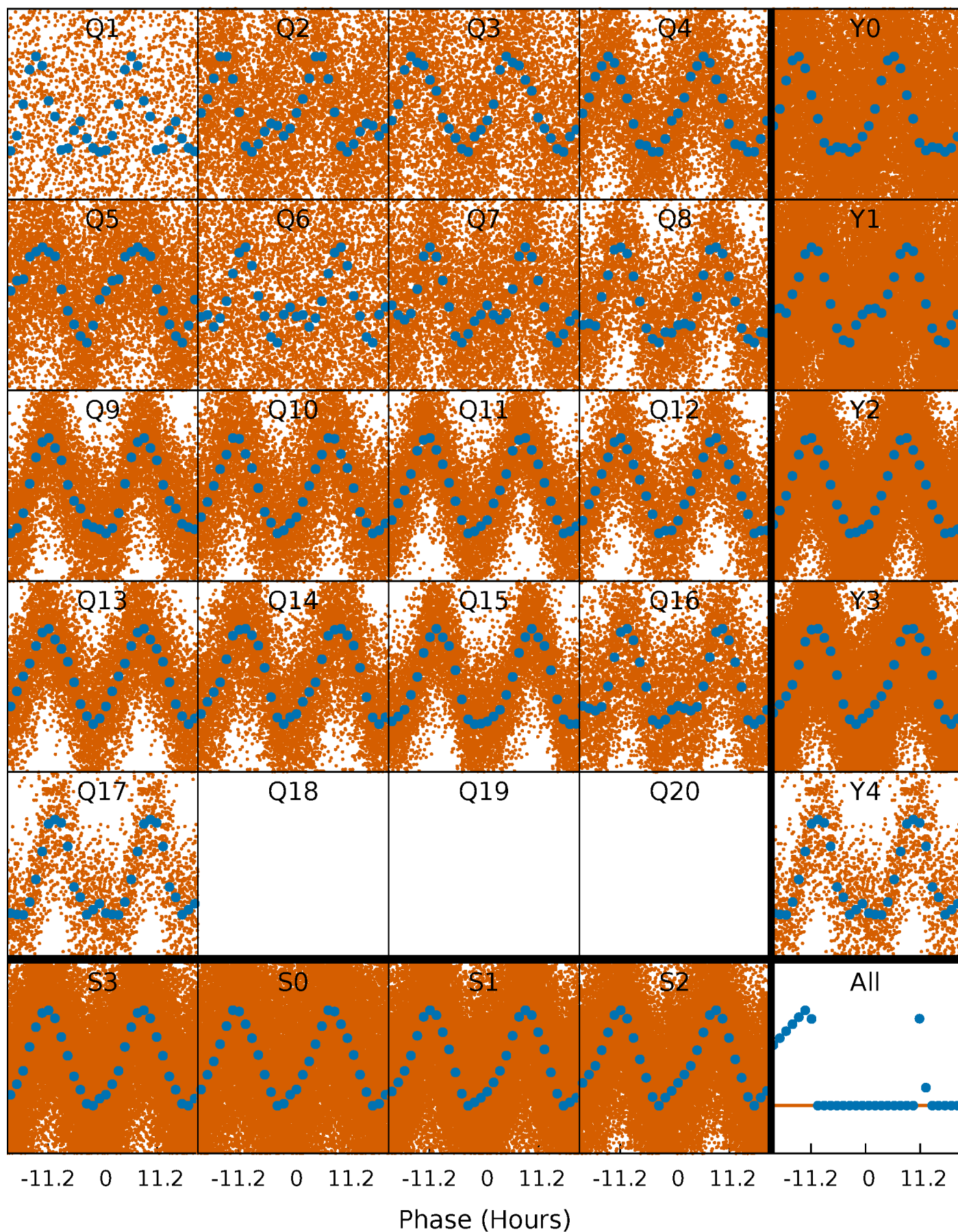


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



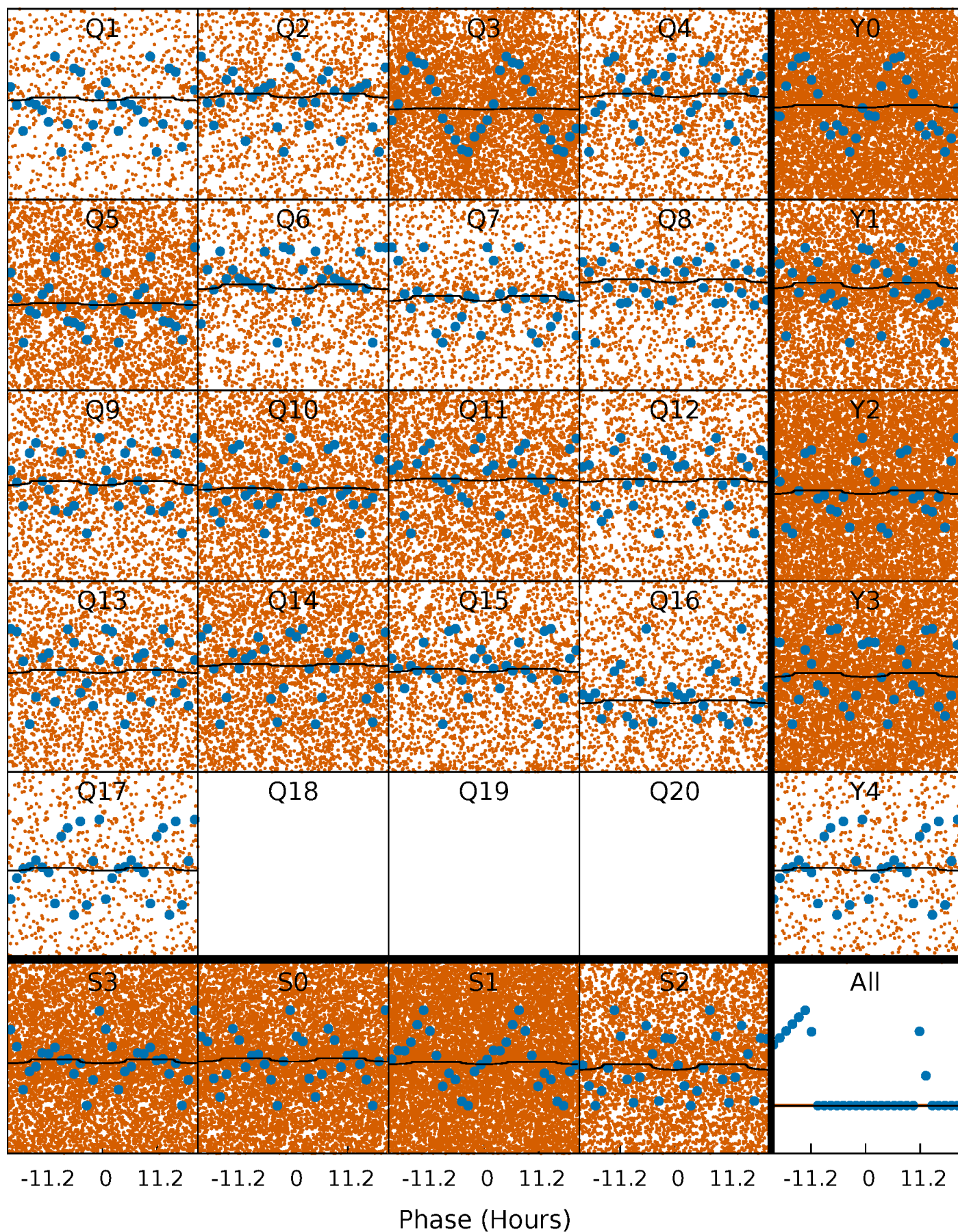
PDC Quarter-Phased Transit Curves

TCE 008453527-01 P= 0.815104 Days $T_0=131.893051$ (BKJD)



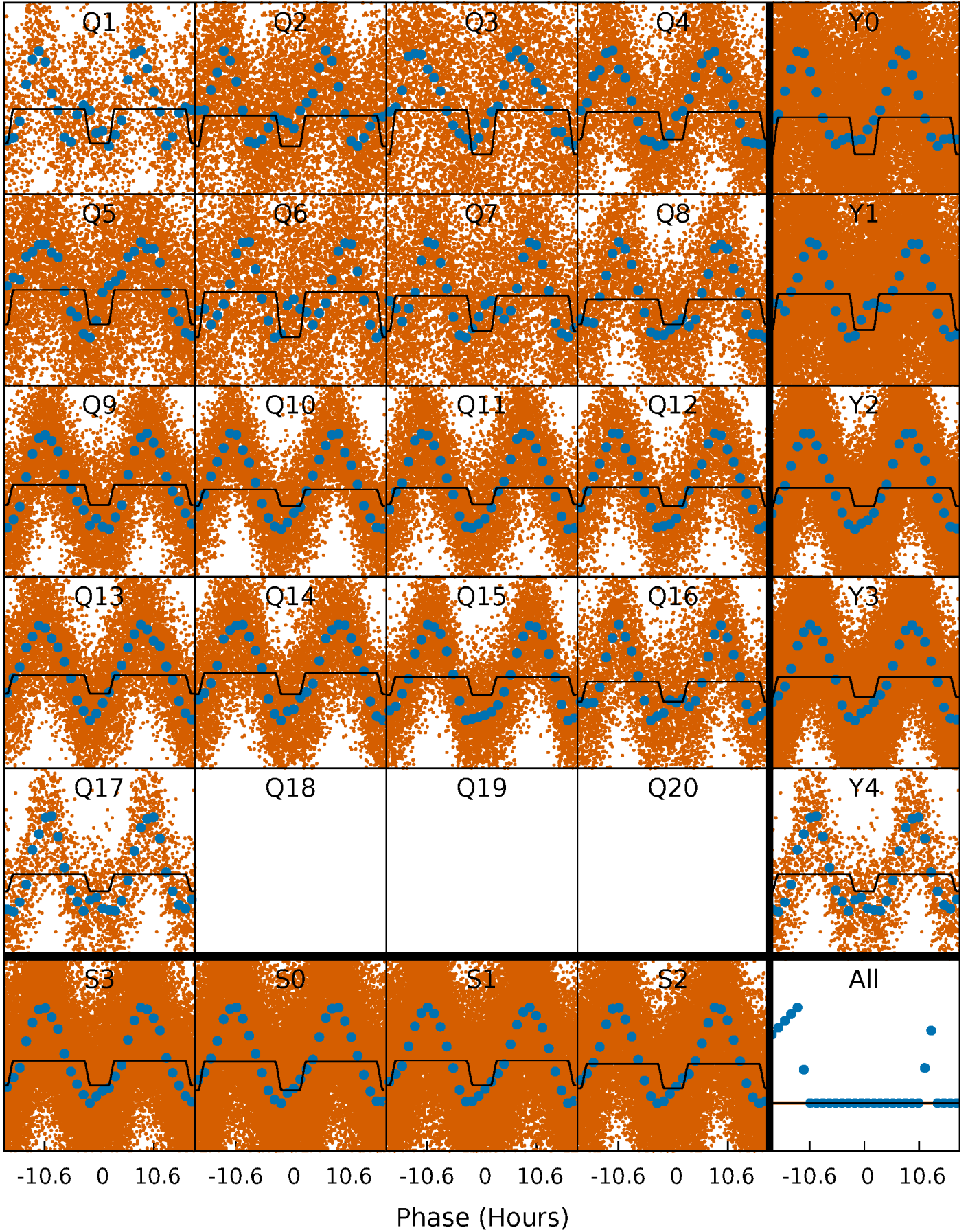
DV Quarter-Phased Transit Curves

TCE 008453527-01 P= 0.815104 Days $T_0=131.893051$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

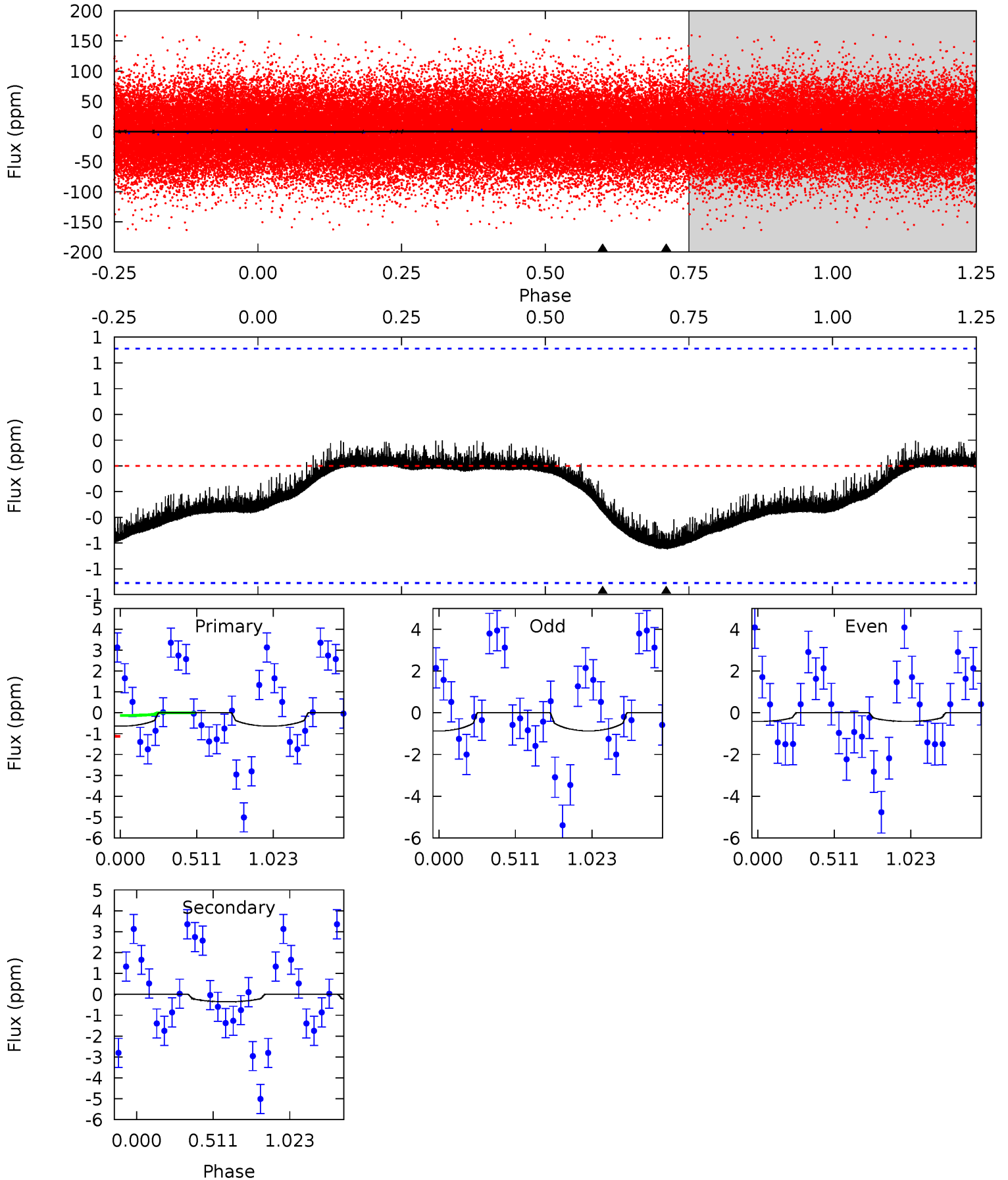
TCE 008453527-01 P= 0.815157 Days $T_0=131.814977$ (BKJD)



DV Model-Shift Uniqueness Test

008453527-01, P = 0.815104 Days, E = 131.077947 Days

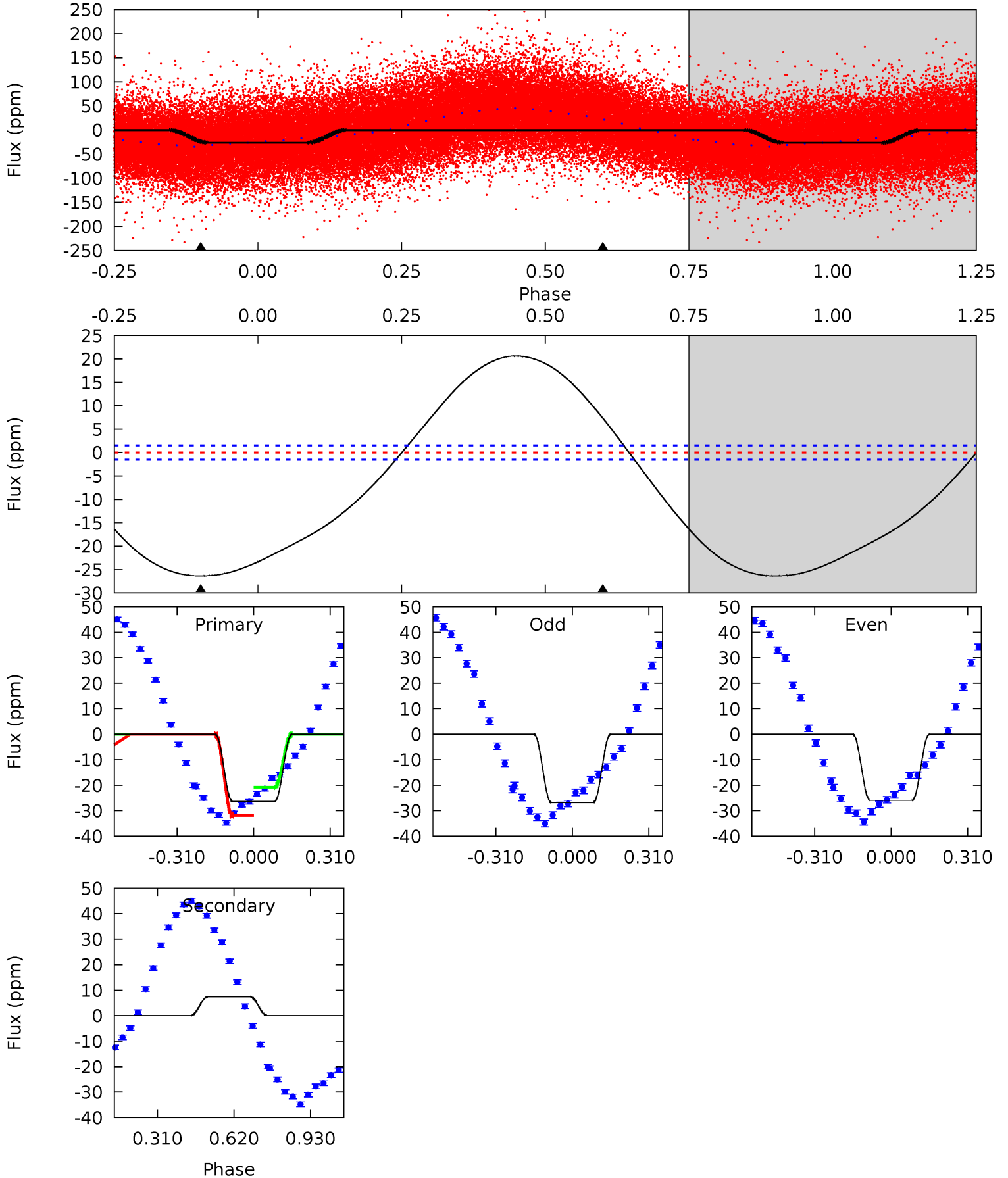
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.98	1.65	0	0	4.21	0.66	0.14	2.98	2.98	1.65	1.65	1.05	2.99	0.23	2.33



Alt Model-Shift Uniqueness Test

008453527-01, P = 0.815157 Days, E = 130.999820 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
75.5	-21.1	0	0	4.32	1.02	12.1	75.5	75.5	-21.1	-21.1	1.19	1.04	0.44	17.8



Stellar Parameters For KIC 008453527

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8224^{+228}_{-342}	$3.725^{+0.448}_{-0.140}$	$-0.100^{+0.250}_{-0.400}$	$3.249^{+0.841}_{-1.442}$	$2.046^{+0.389}_{-0.476}$	$0.084^{+0.354}_{-0.033}$
	+3%/-4%	+12%/-4%	+250%/-400%	+26%/-44%	+19%/-23%	+421%/-39%
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 008453527-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-0 \pm 0	$0.54^{+0.56}_{-0.38}$	6016^{+536}_{-618}	-2643^{+11118}_{-2200}	$0.288^{+3.024}_{-0.243}$
Alt.	7 \pm 0	$1.42^{+0.85}_{-0.68}$	6024^{+501}_{-712}	-6733^{+827}_{-2342}	$-0.951^{+0.572}_{-2.656}$

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

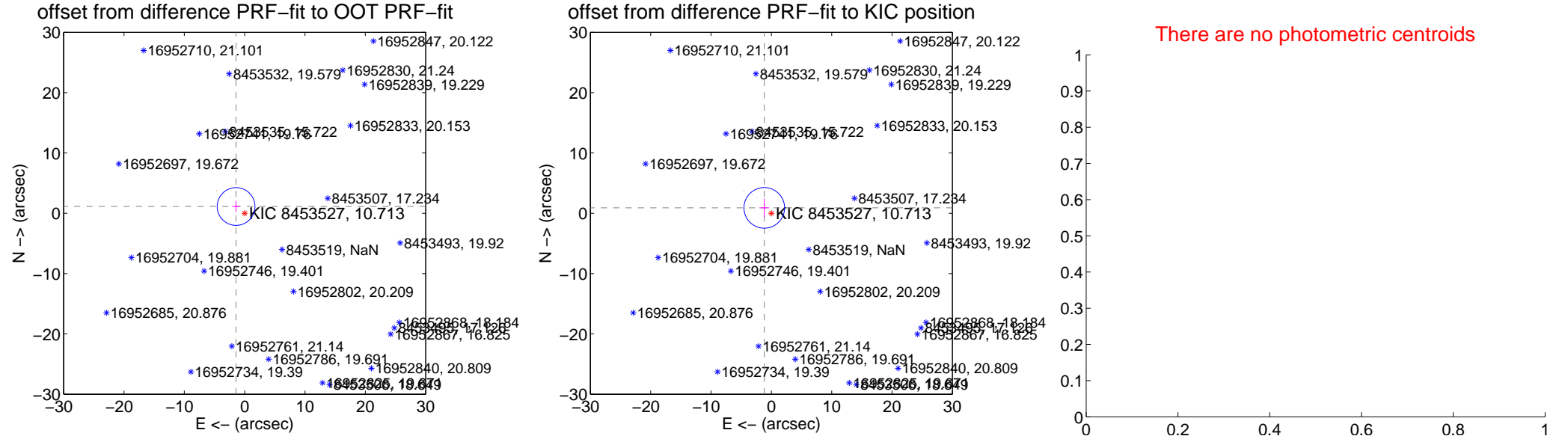
DV Centroid Data

Supplemental centroid analysis for 008453527-01. **Kepler magnitude: 10.71.** Transit SNR 1.08

There are 2 quarters with good PRF difference image offsets

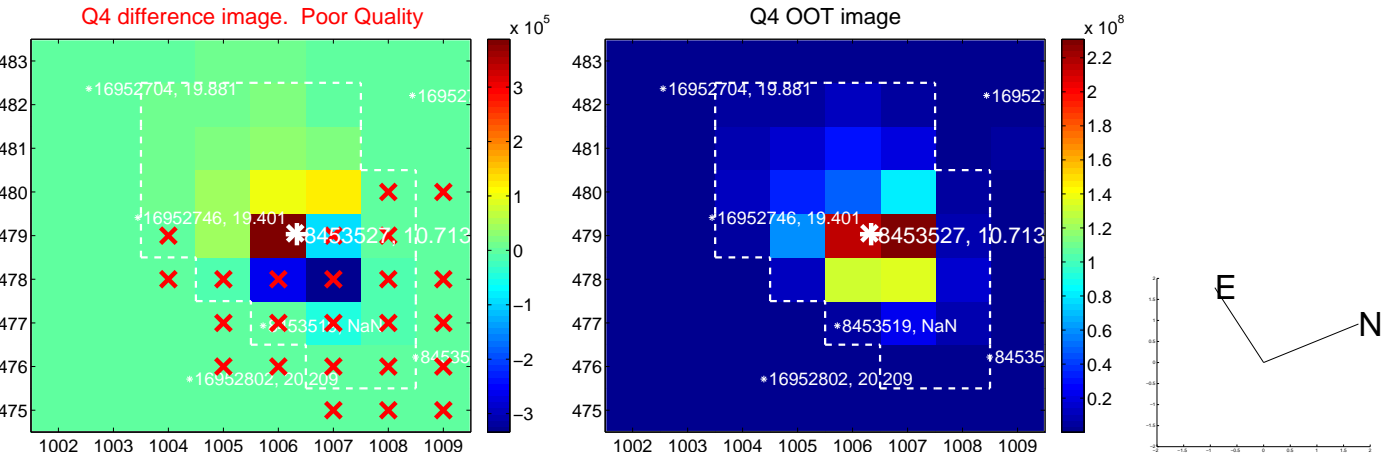
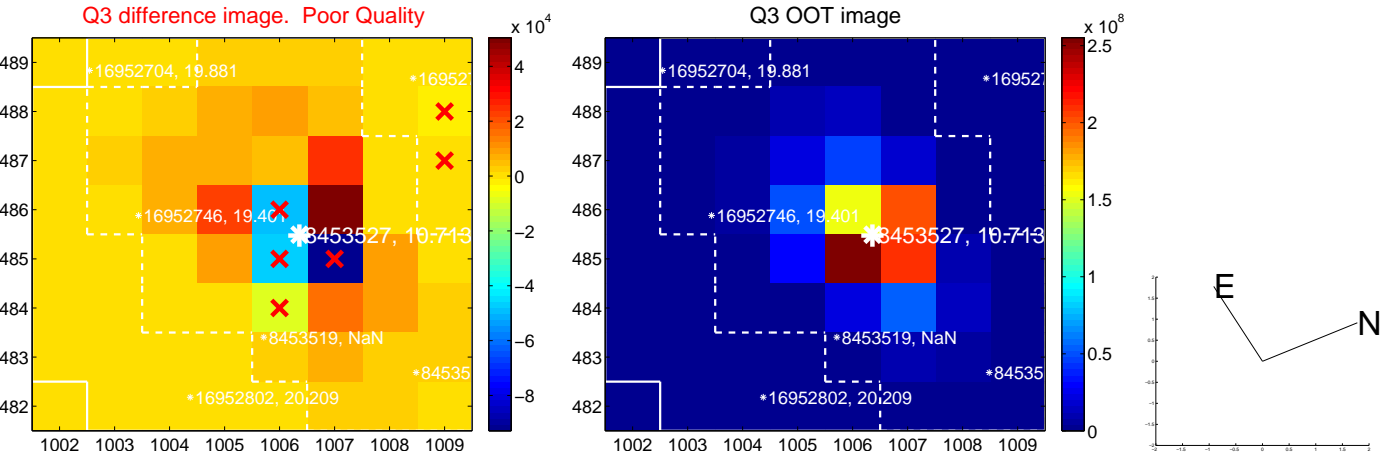
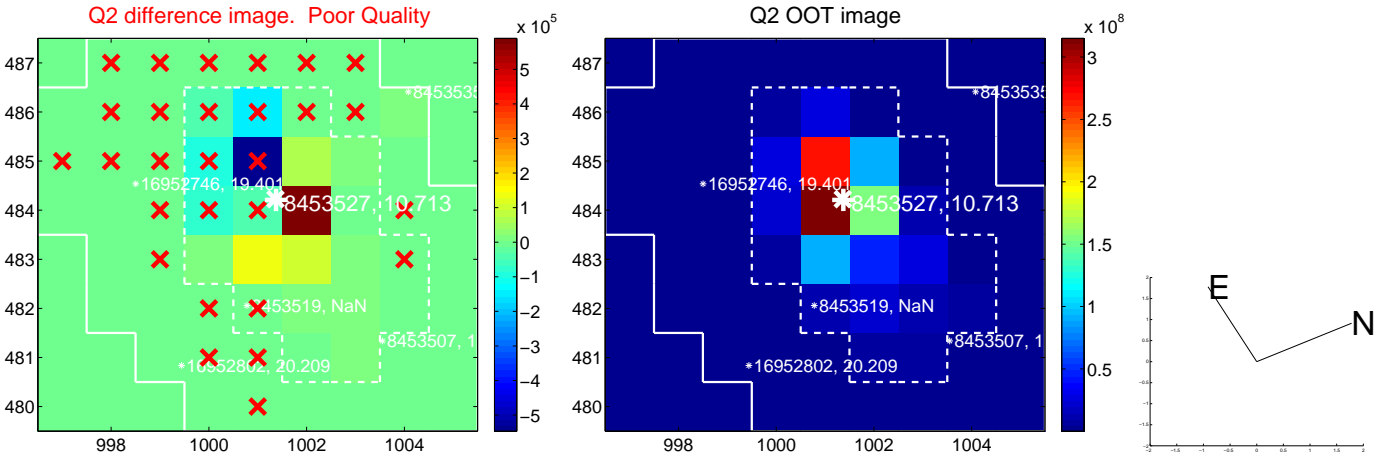
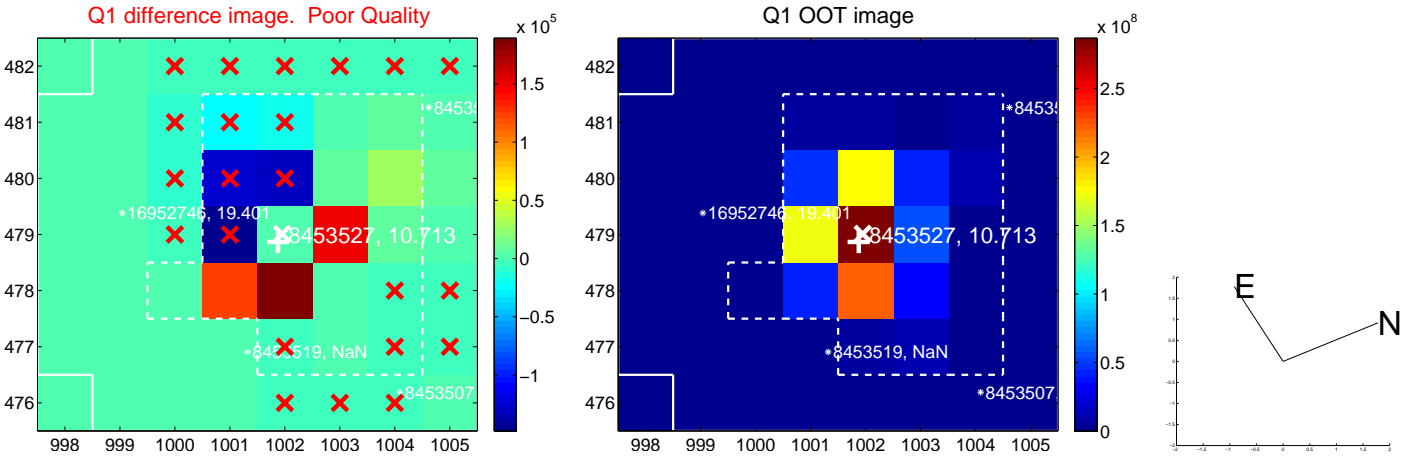
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.812 ± 1.043	1.74	1.422 ± 0.624	1.123 ± 0.926
PRF-fit source offset from KIC position	1.479 ± 1.123	1.32	1.177 ± 0.807	0.895 ± 1.522
photometric centroid source offset	—	—	—	—

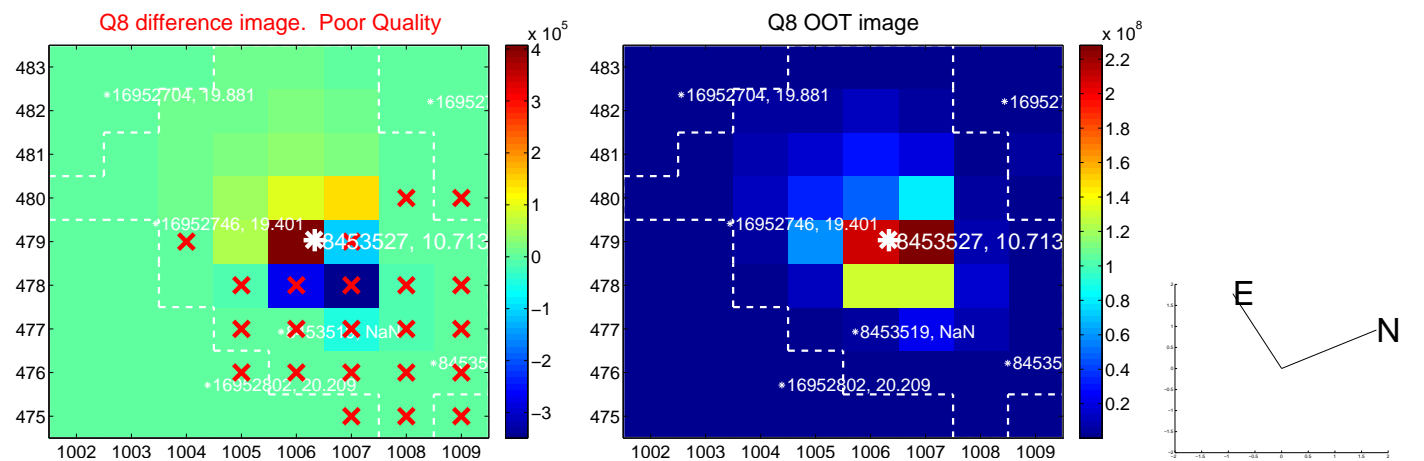
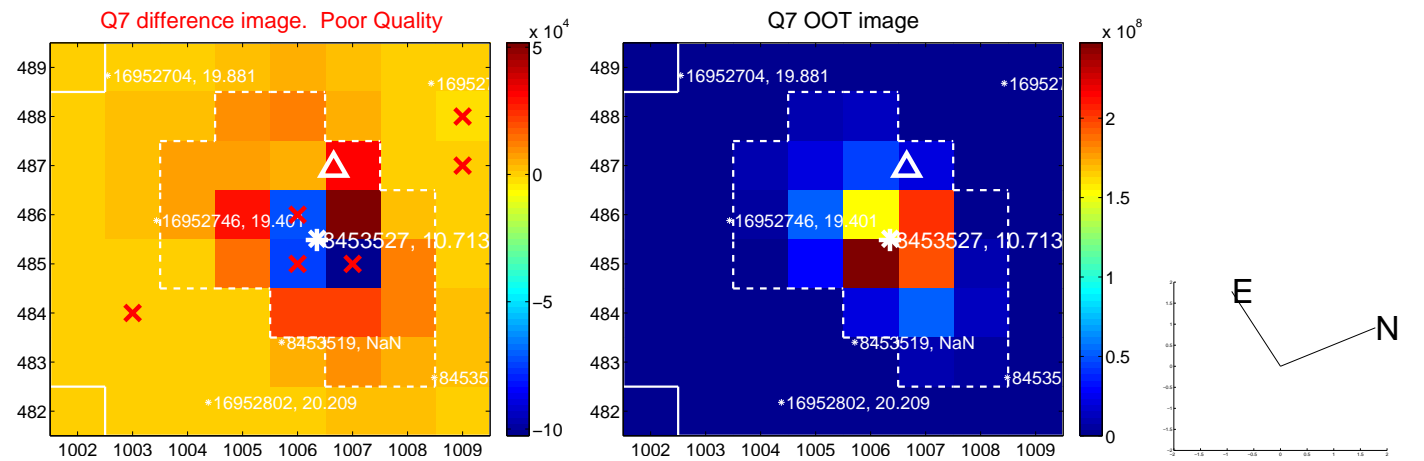
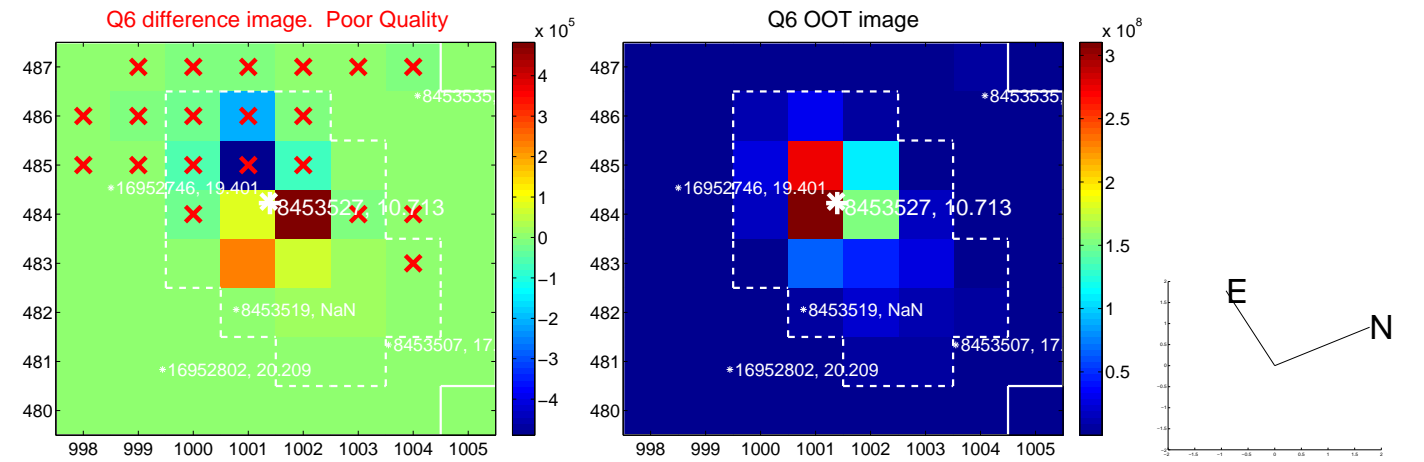
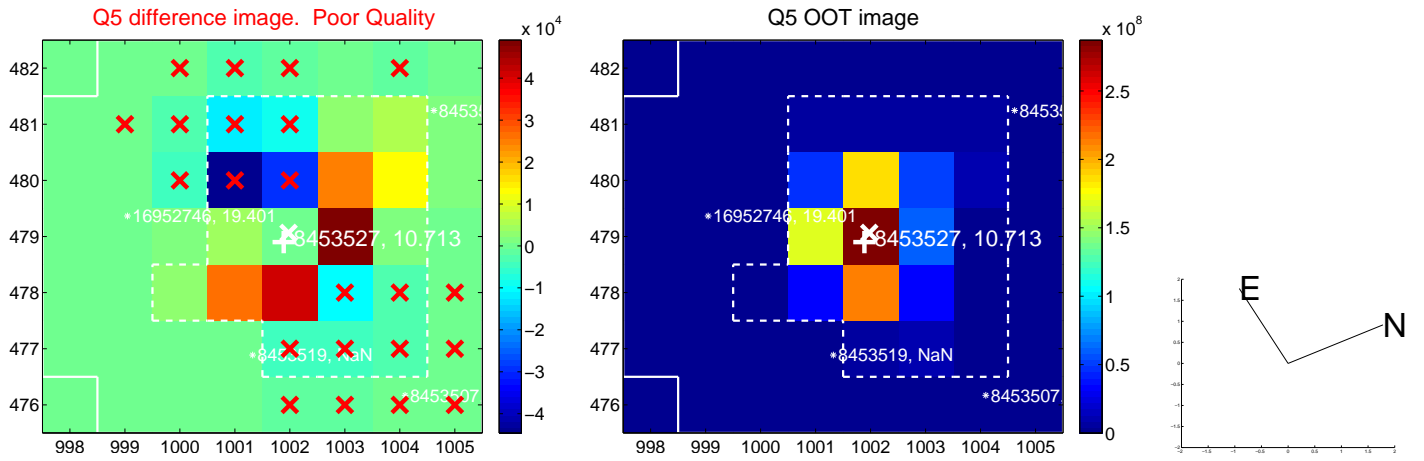


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

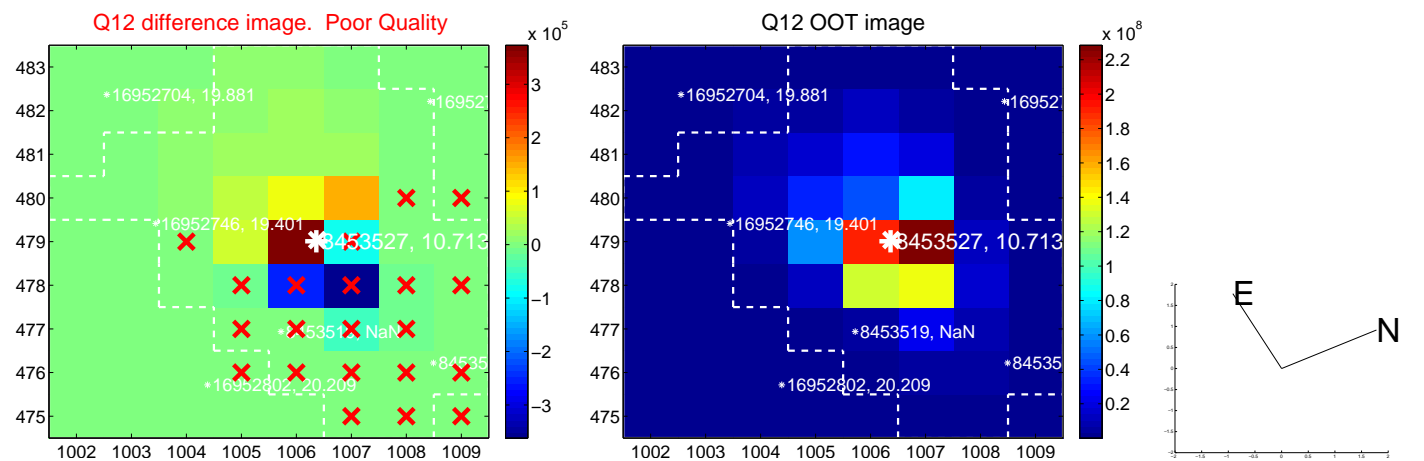
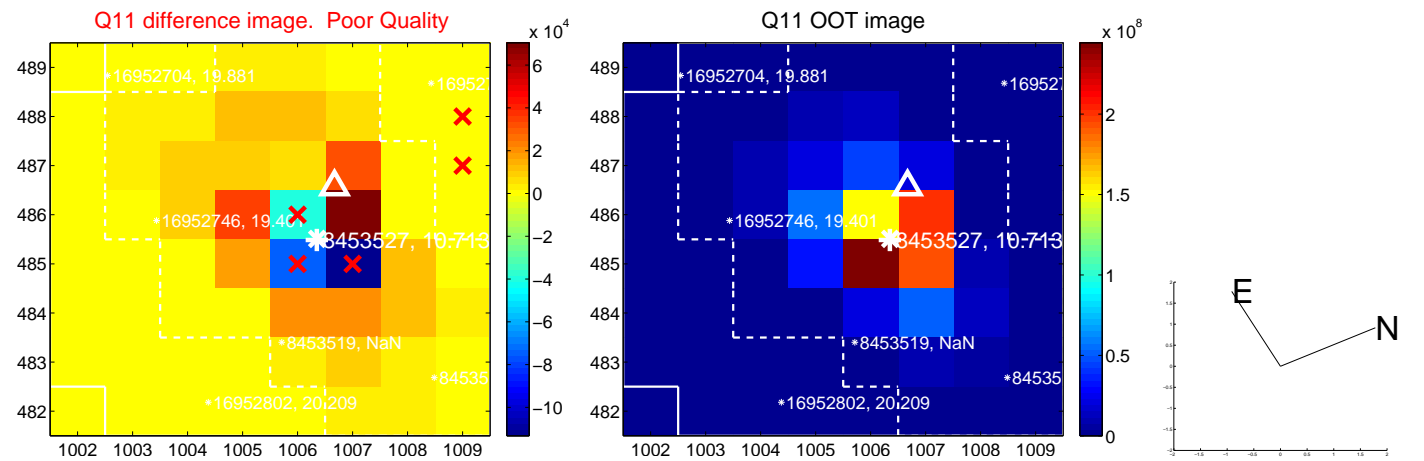
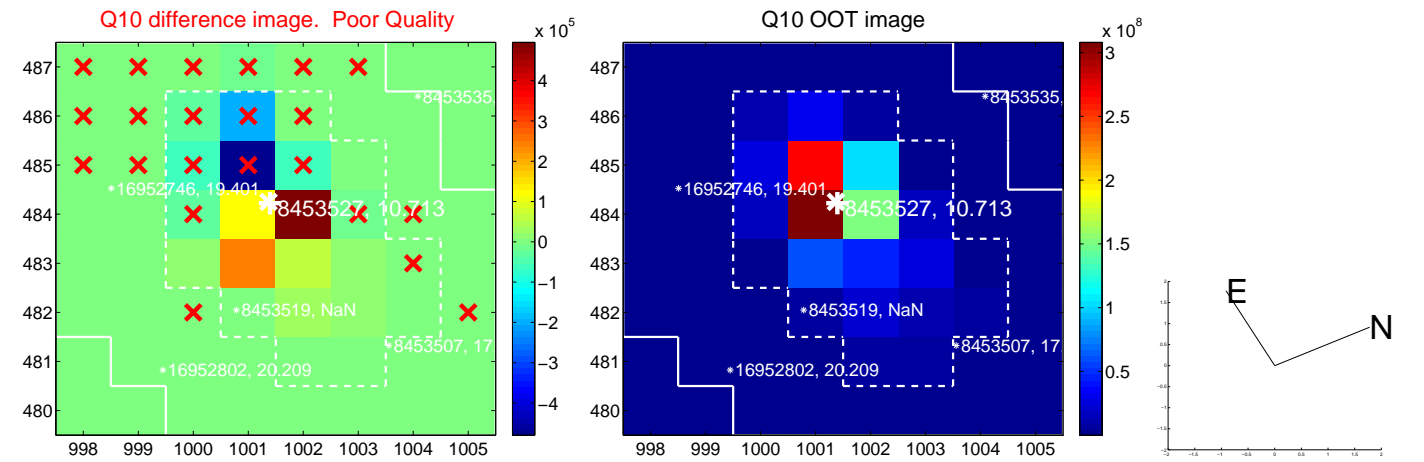
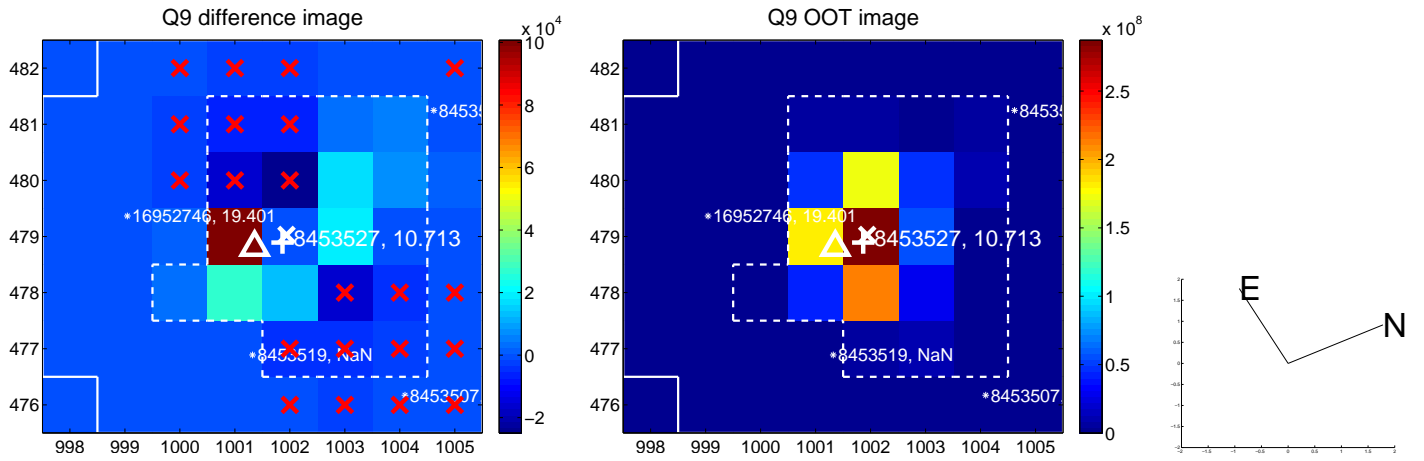
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



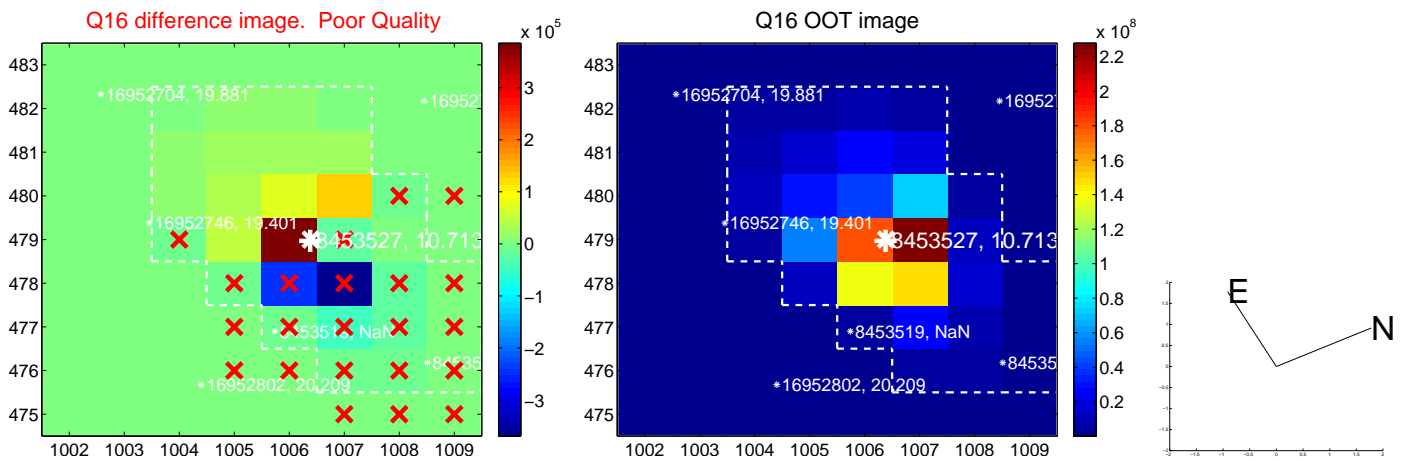
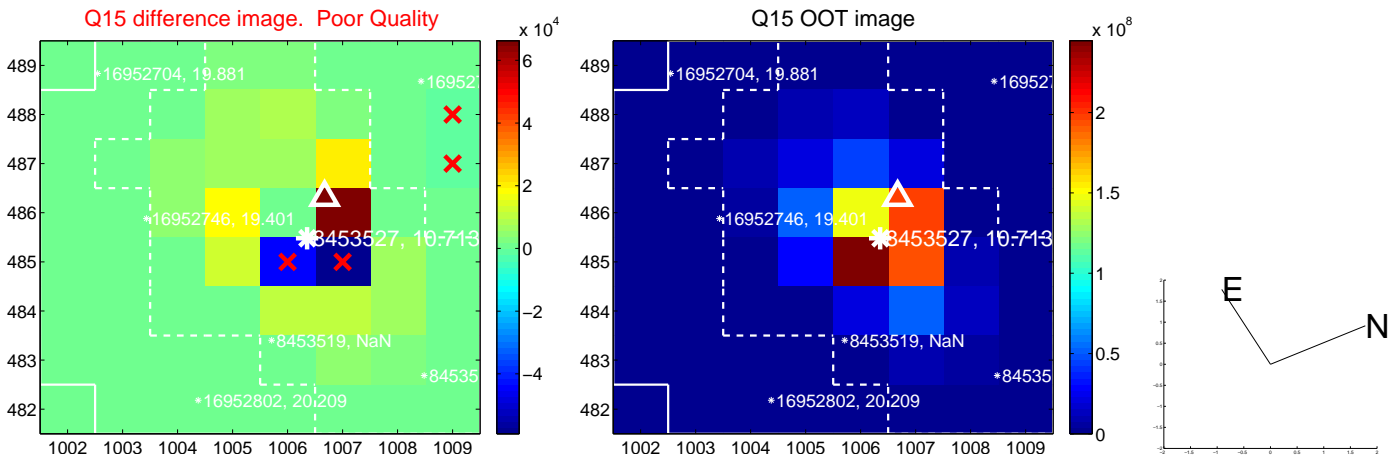
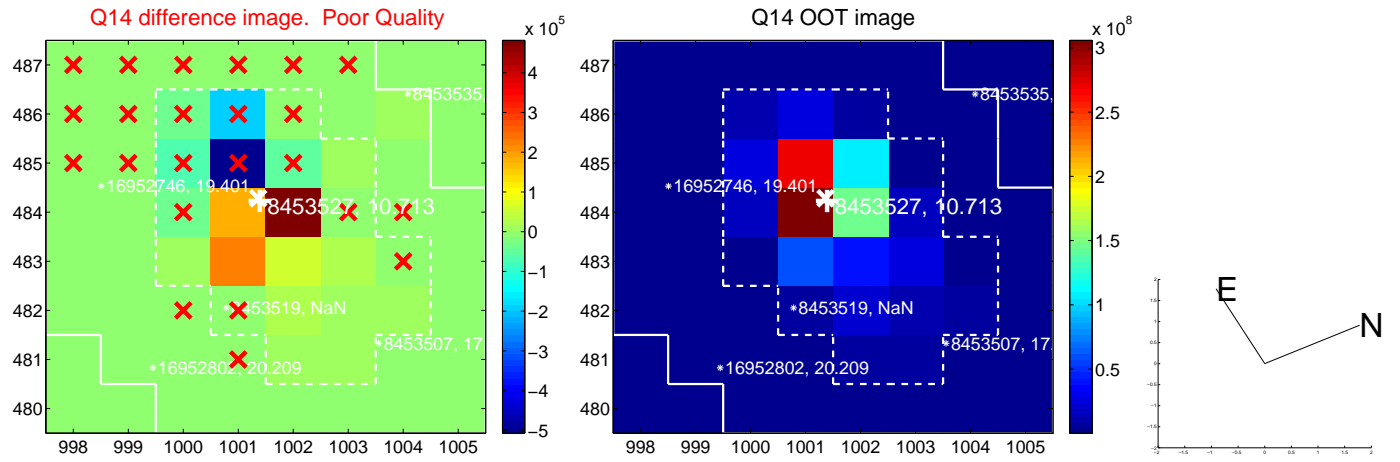
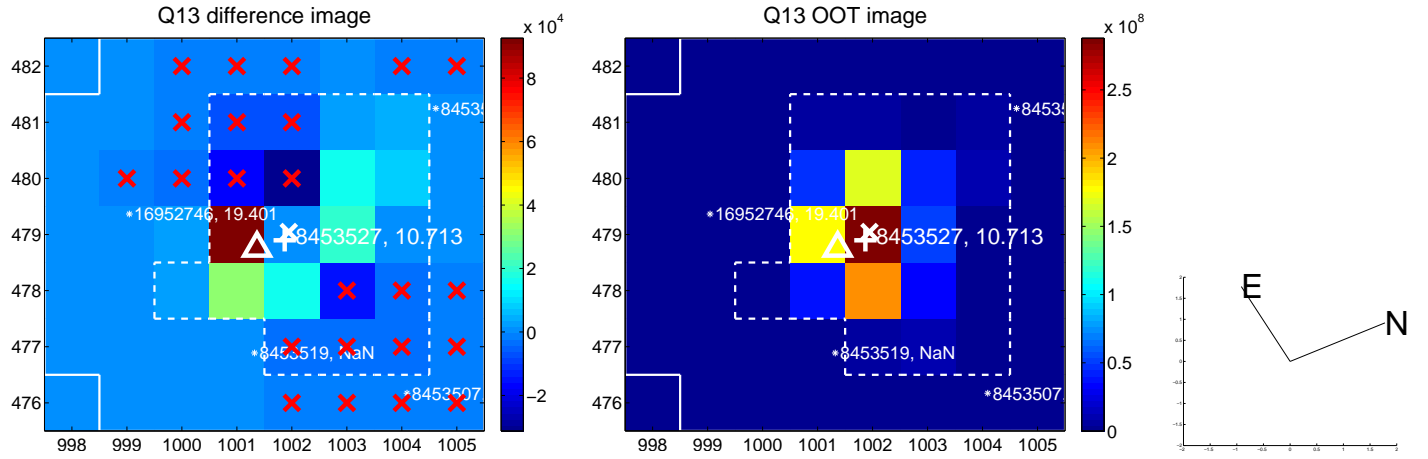
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



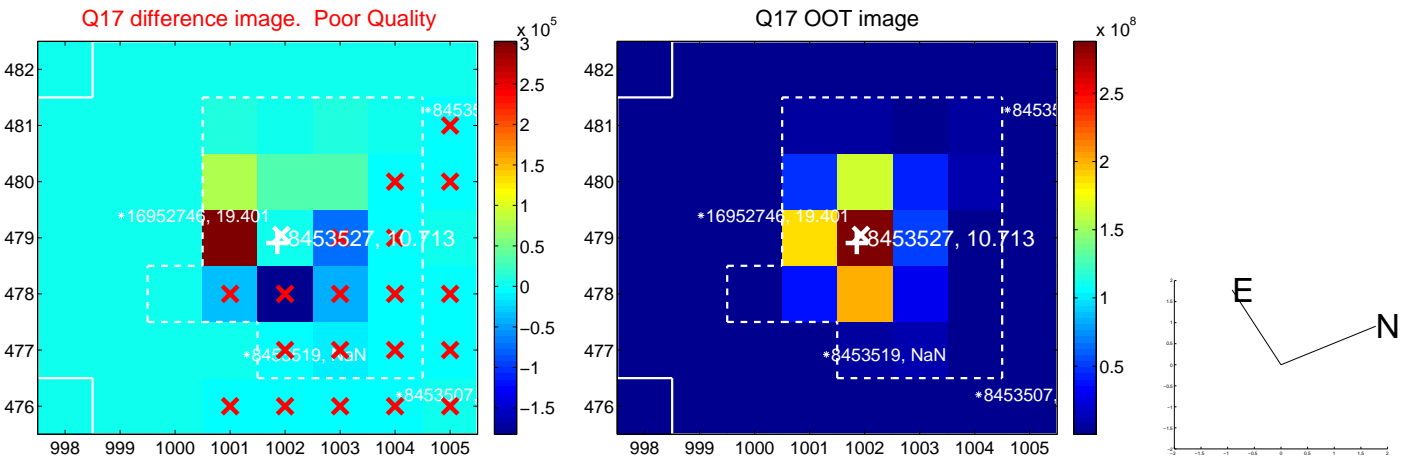
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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folded centroid time series figure for this object.

UKIRT Image

Declination

