

KIC 008880157

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})
008880157-01	OBS	No	1.025994	131.704880	7.7	8.662	8.6	7.7	1.50	6912	0.45	9140.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008880157-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_SATURATED

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

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

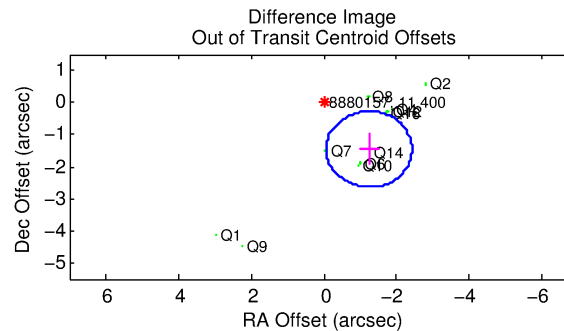
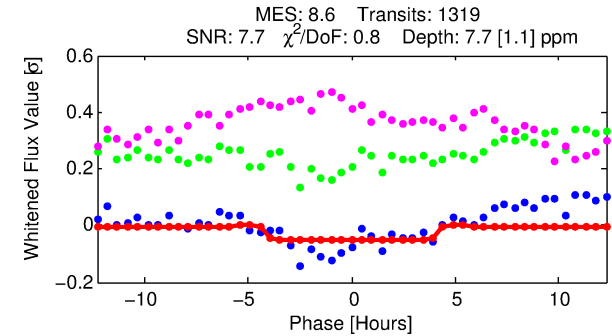
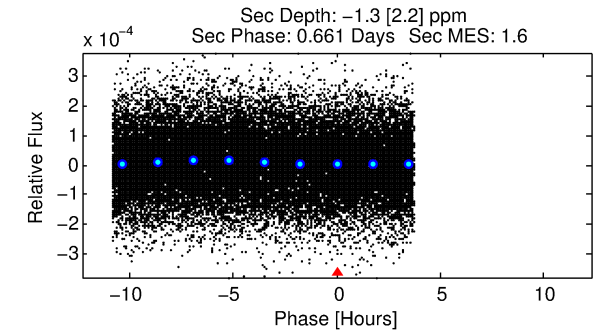
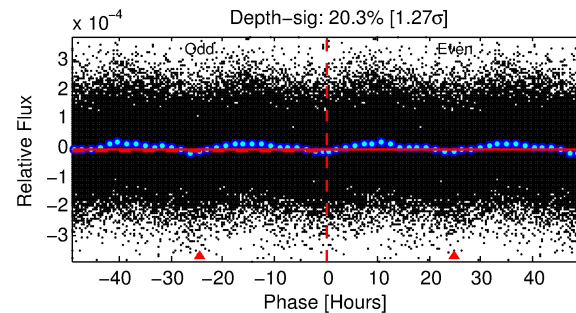
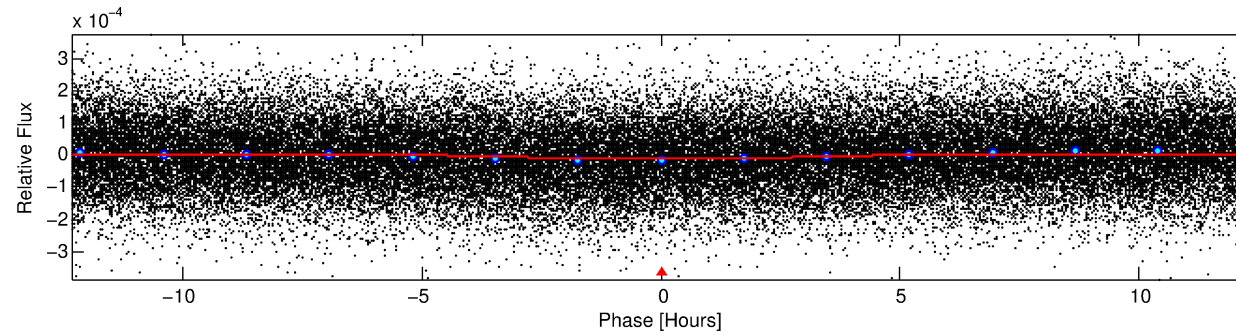
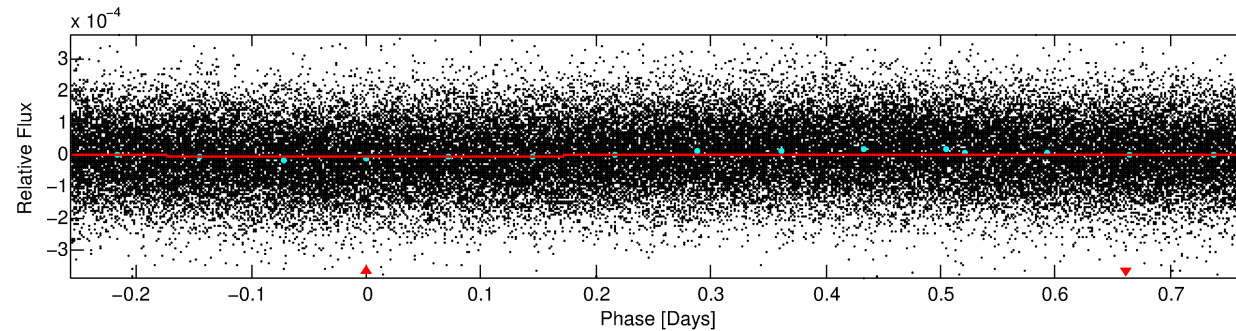
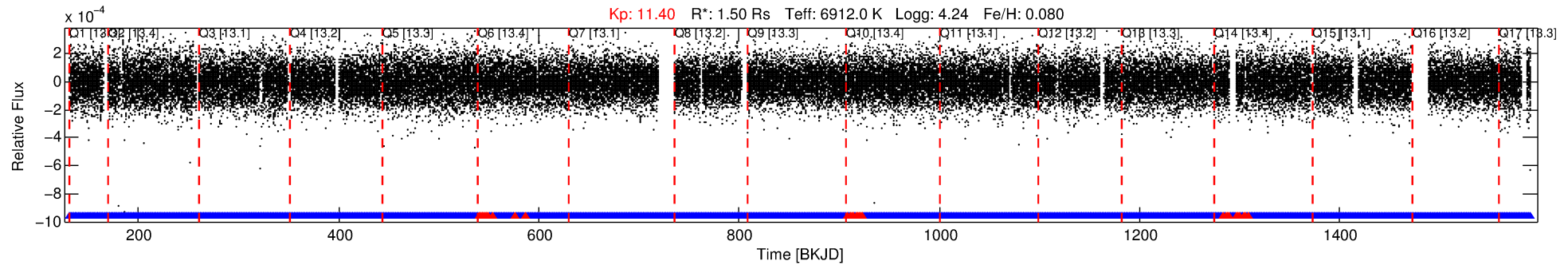
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008880157-01

No Significant Match Found

DV One-Page Summary

KIC: 8880157 Candidate: 1 of 1 Period: 1.026 d



DV Fit Results:

Period = 1.02599 [0.00002] d
Epoch = 131.7049 [0.0080] BKJD
Rp/R* = 0.0027 [0.0026]
a/R* = 1.06 [0.64]
b = 0.74 [3.46]
Seff = 9140.80 [3945.52]
Teq = 2493 [269] K
Rp = 0.45 [0.46] Re
a = 0.0224 [0.0062] AU
Ag = N/A
Teffp = N/A

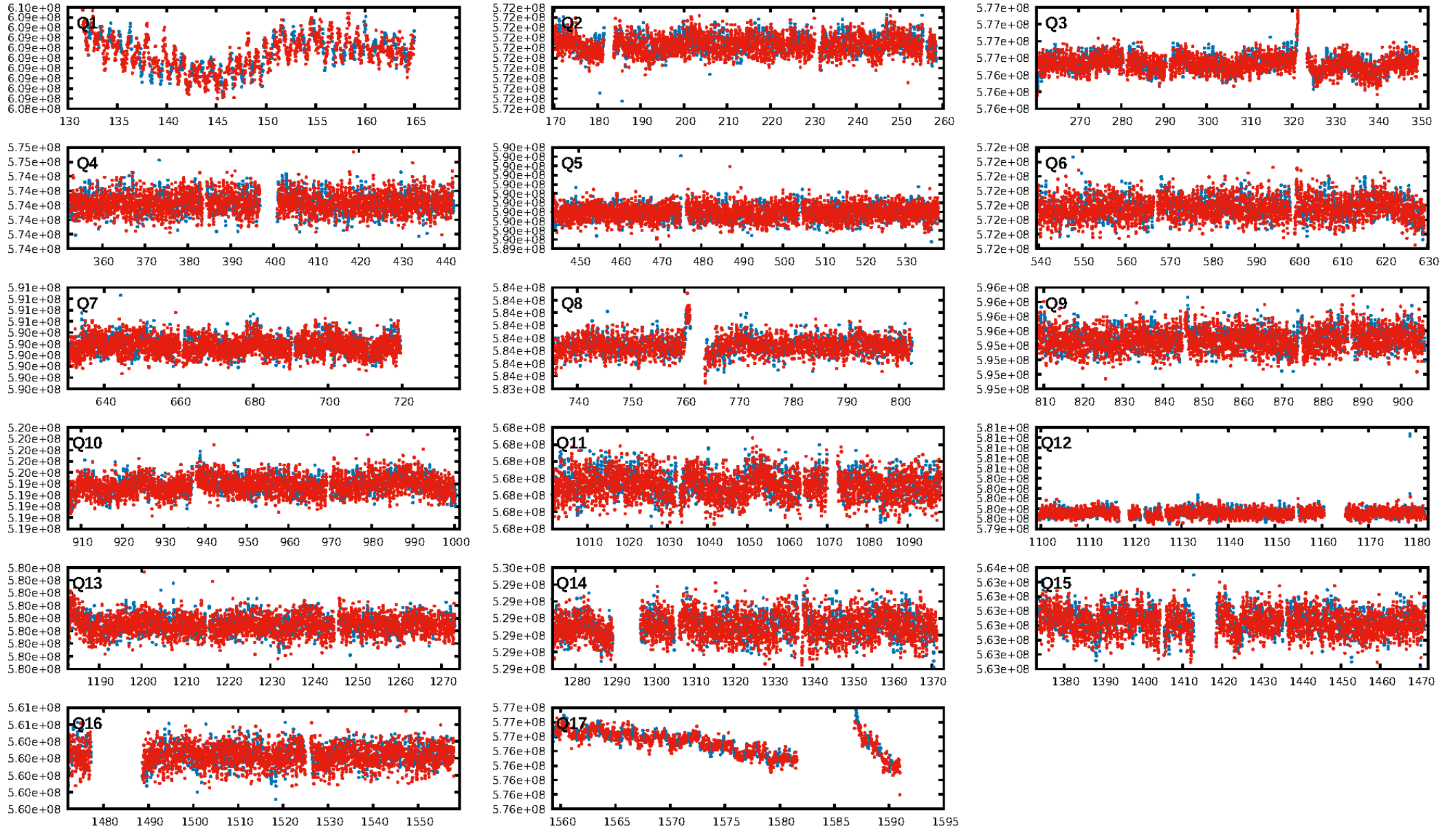
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.97 [1224/1260]
GhostDiagnostic-chr: -1.204
Centroid-sig: 0.0%
Centroid-so: 7.367 arcsec [5.49 σ]
OotOffset-rm: 1.917 arcsec [4.86 σ]
KicOffset-rm: 6.802 arcsec [15.07 σ]
OotOffset-st: 4/1/4/2 [11]
KicOffset-st: 4/1/4/2 [11]
DiffImageQuality-fgm: 0.82 [9/11]
DiffImageOverlap-fno: 1.00 [17/17]

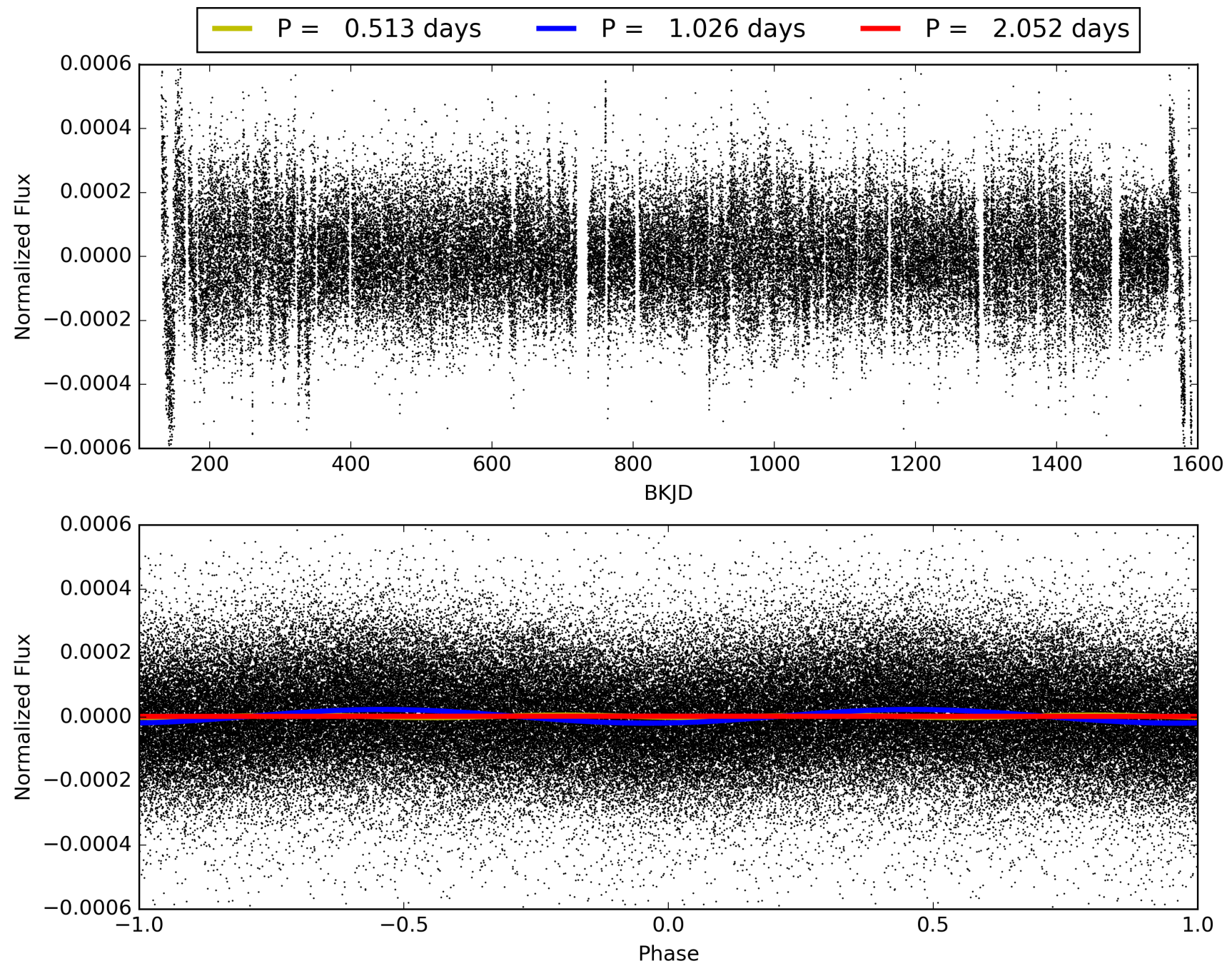
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:01:09 Z

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

TCE 008880157-01, PDC Light Curves

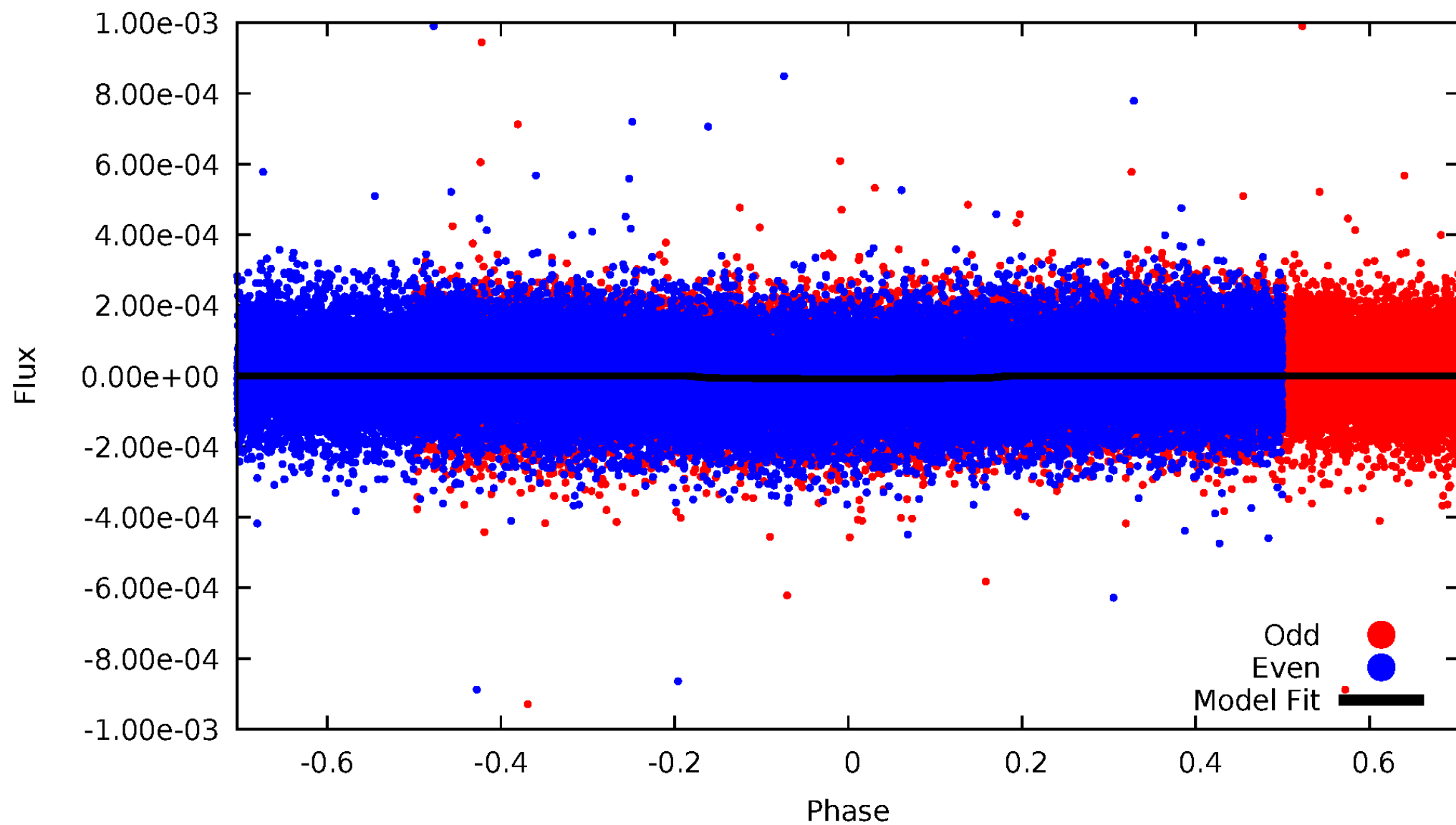


TCE 008880157-01



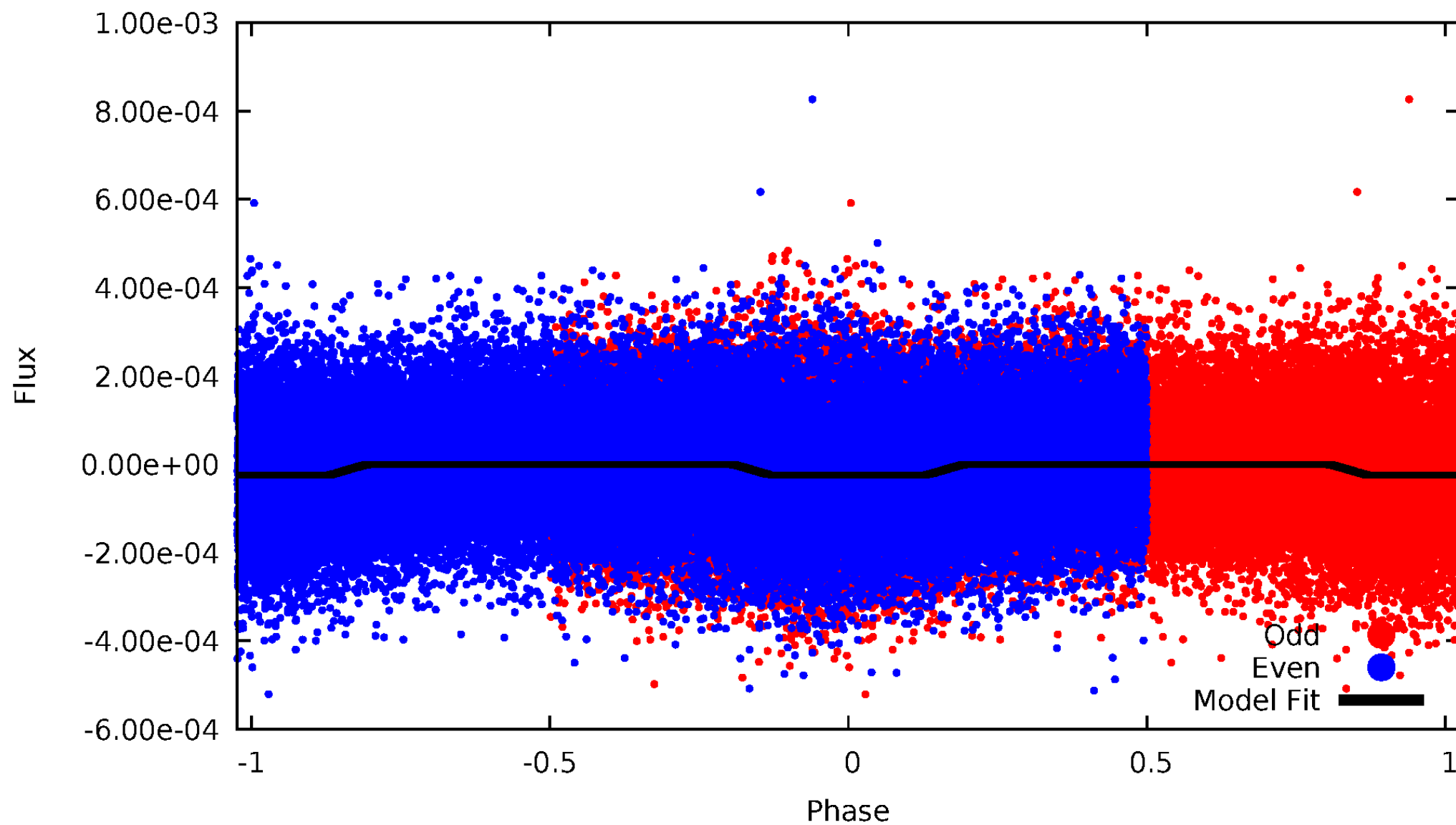
DV Odd/Even

TCE 008880157-01



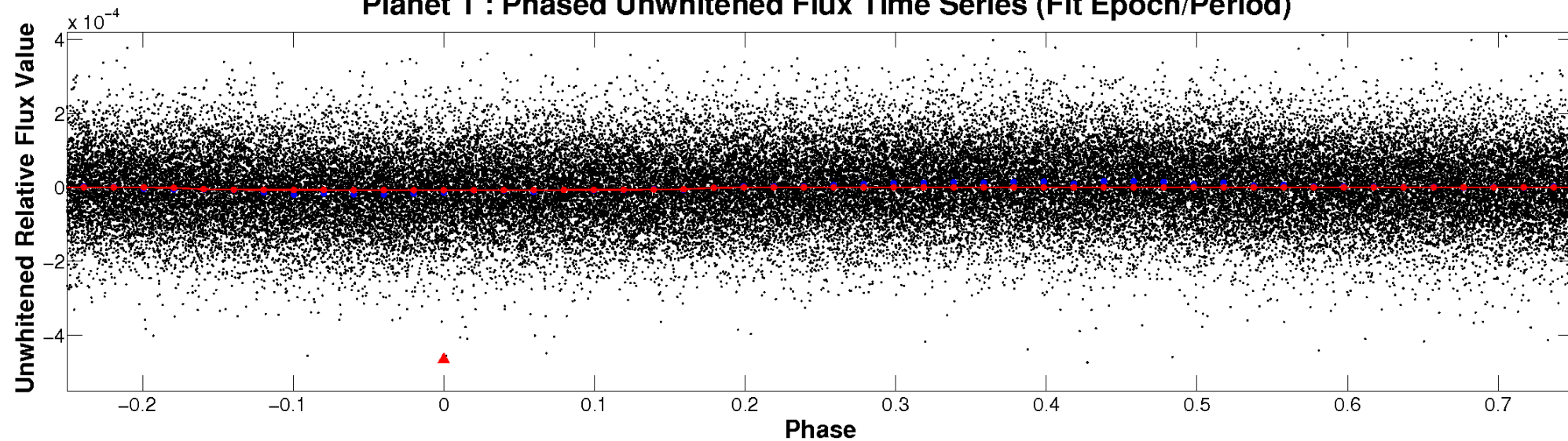
ALT Odd/Even

TCE 008880157-01

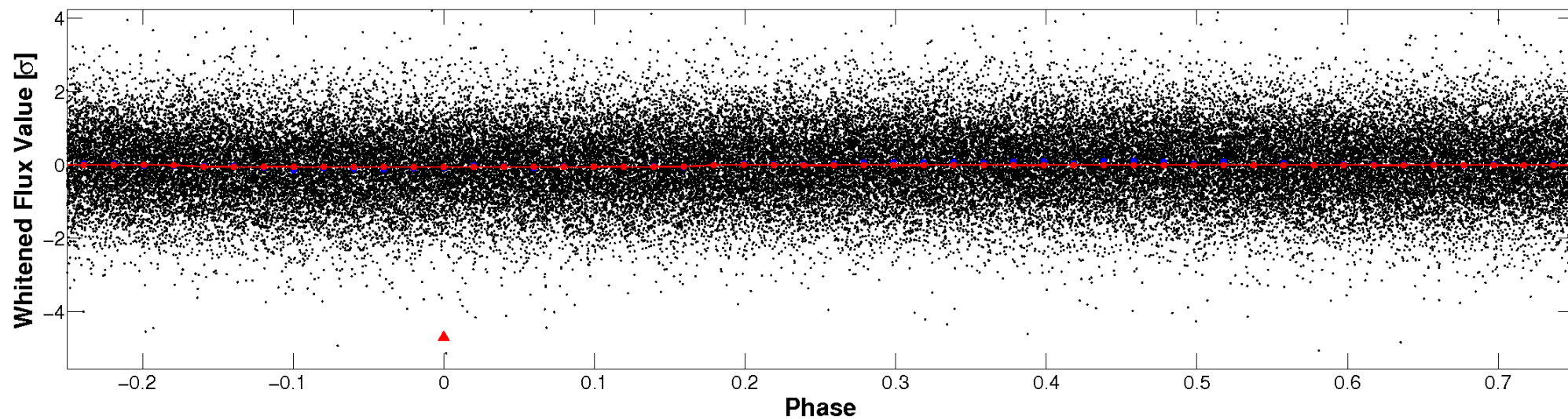


Non-Whitened Vs. Whitened Light Curve

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

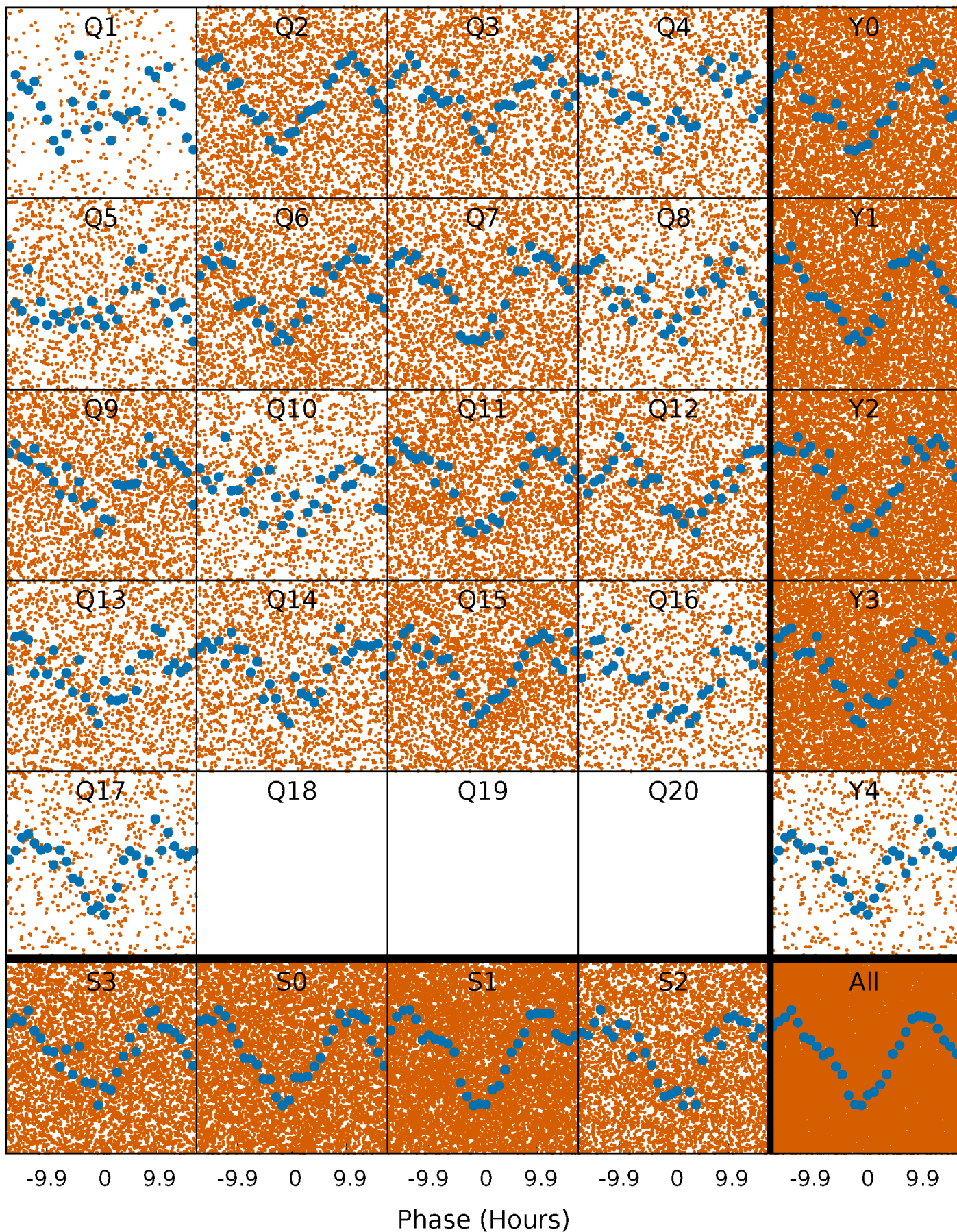


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



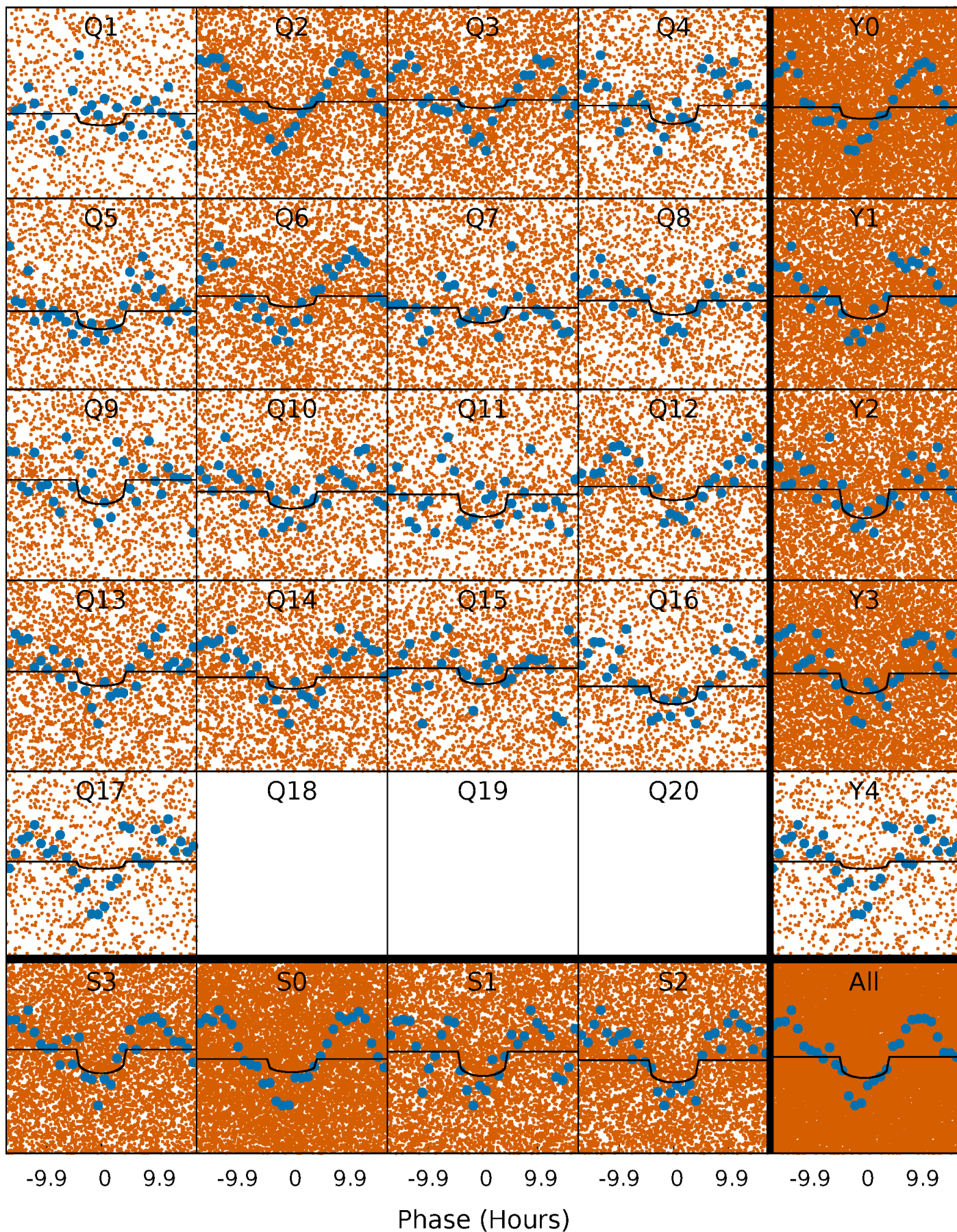
PDC Quarter-Phased Transit Curves

TCE 008880157-01 P= 1.025994 Days $T_0=131.704880$ (BKJD)



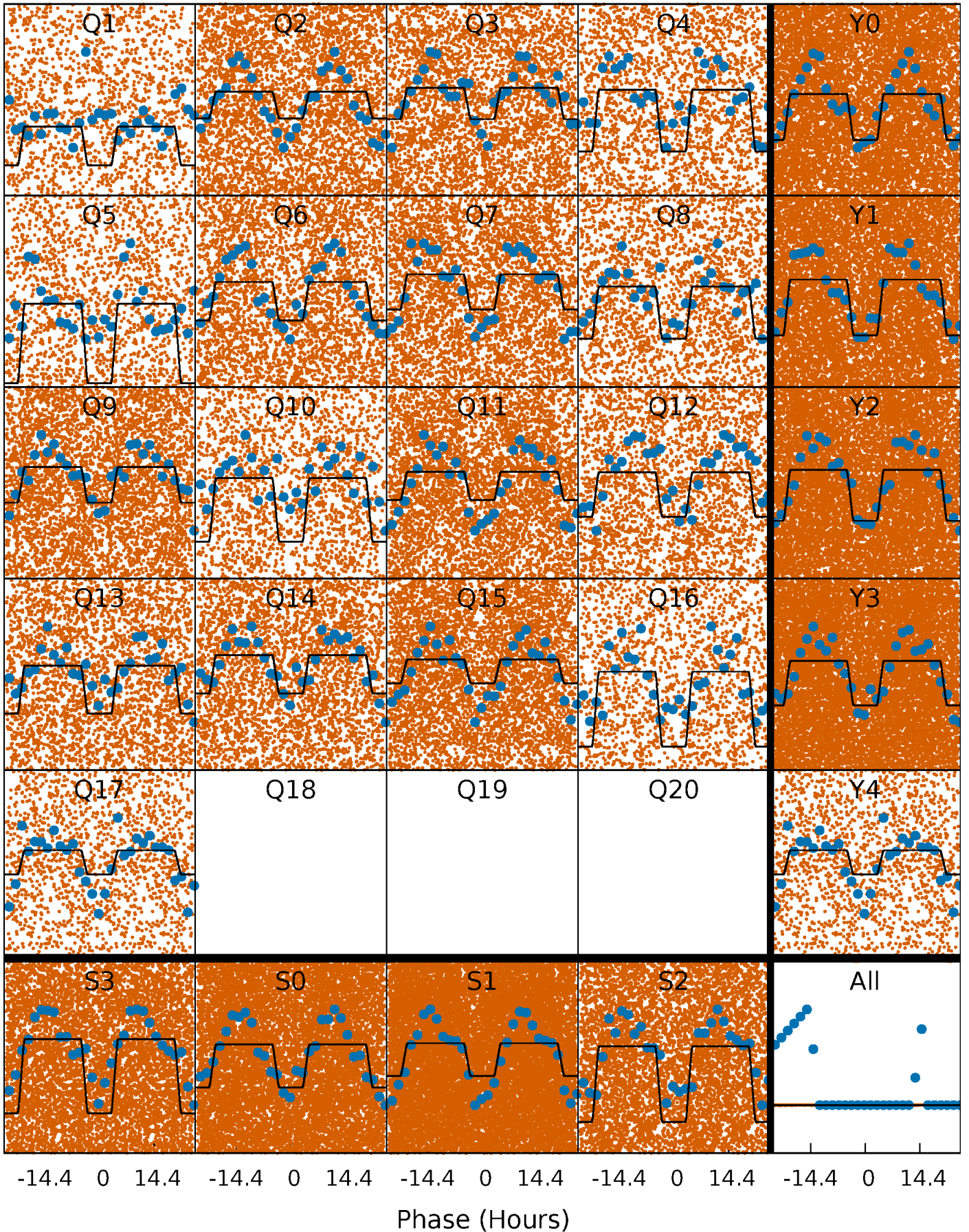
DV Quarter-Phased Transit Curves

TCE 008880157-01 P= 1.025994 Days $T_0=131.704880$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

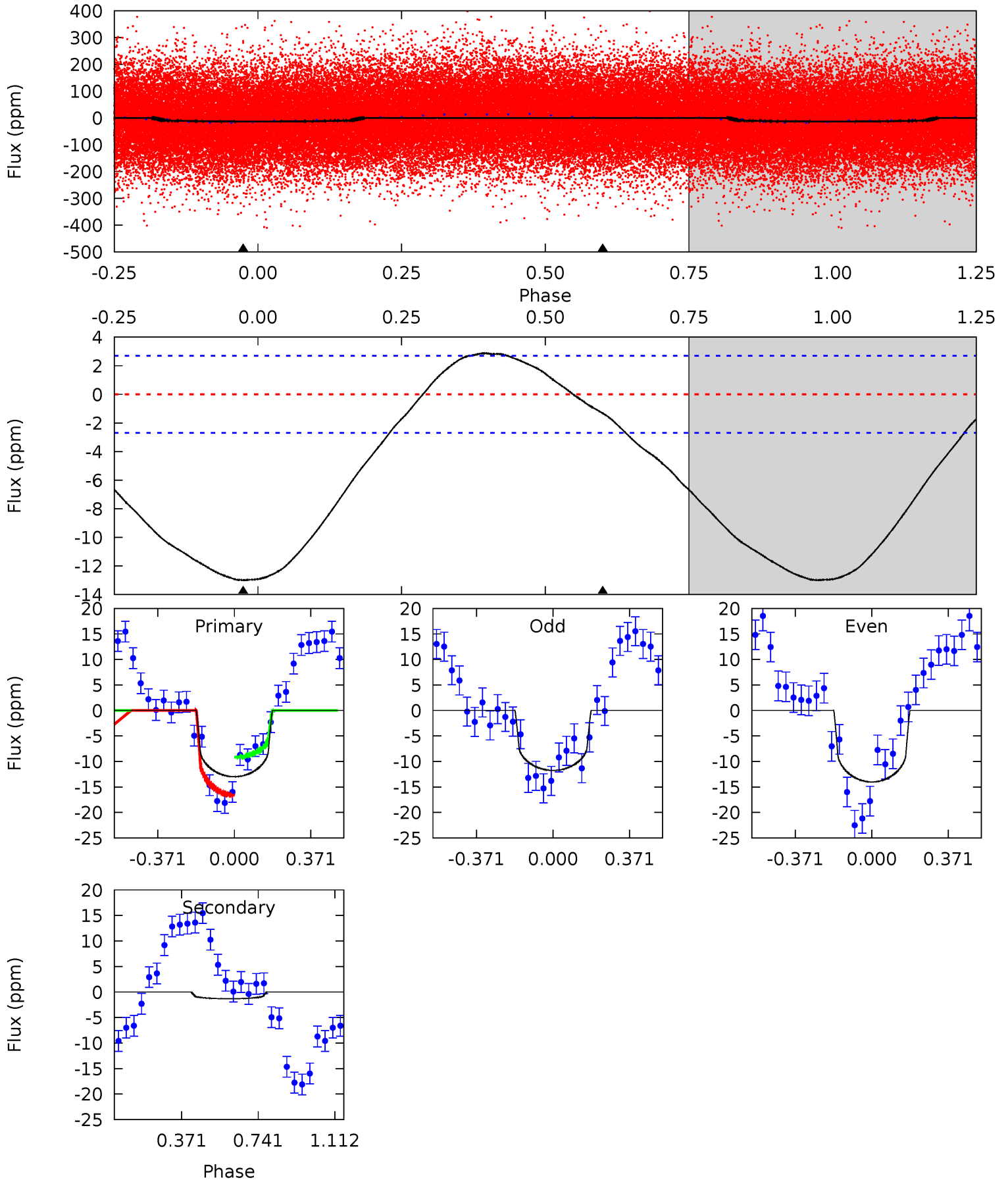
TCE 008880157-01 P= 1.026007 Days $T_0=131.679490$ (BKJD)



DV Model-Shift Uniqueness Test

008880157-01, P = 1.025994 Days, E = 130.678886 Days

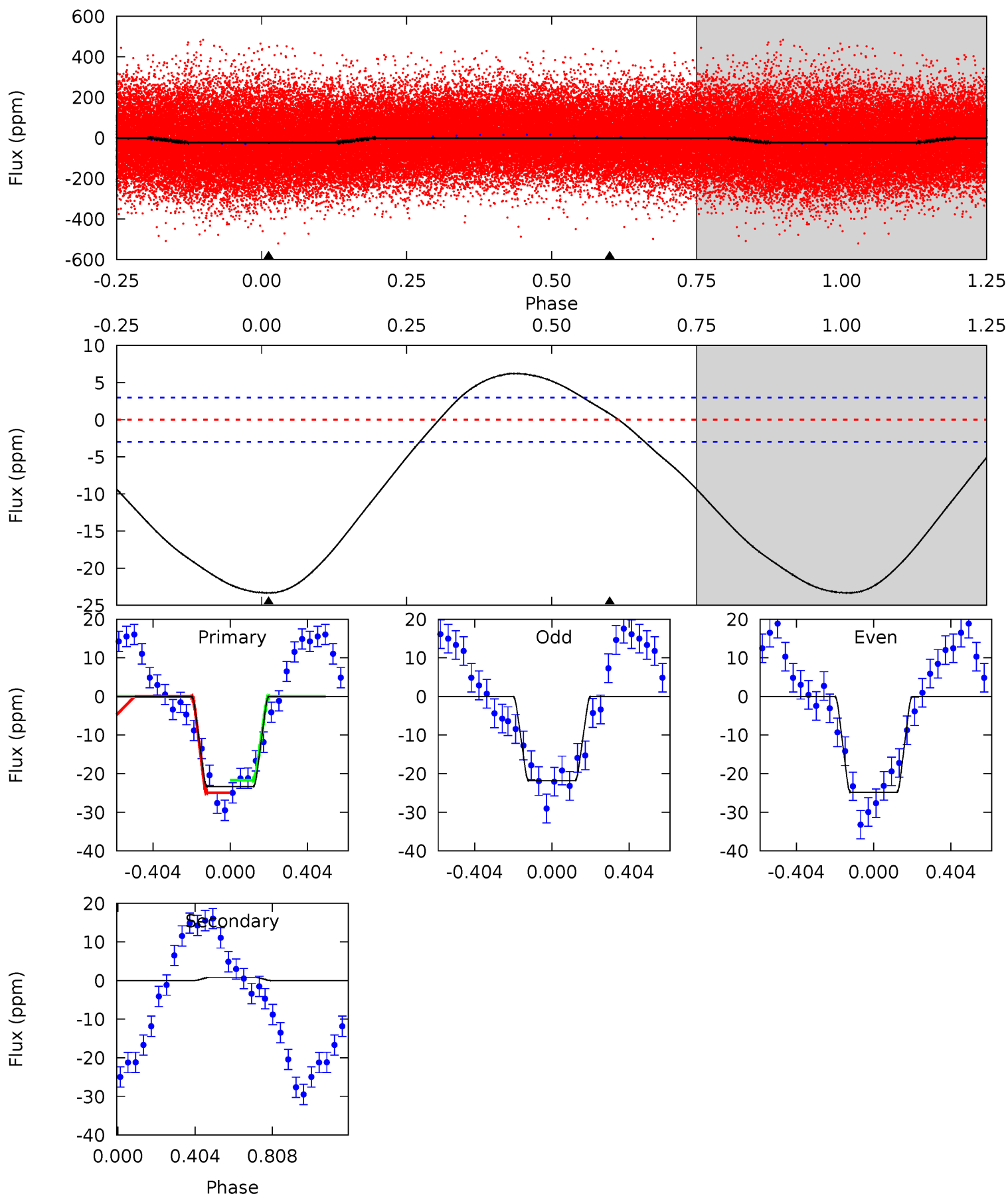
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.7	2.11	0	0	4.28	0.90	2.13	20.7	20.7	2.11	2.11	1.78	1.18	0.18	5.99



Alt Model-Shift Uniqueness Test

008880157-01, P = 1.026007 Days, E = 130.653483 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.5	-1.15	0	0	4.26	0.83	3.66	33.5	33.5	-1.15	-1.15	2.12	0.79	0.21	2.26



Stellar Parameters For KIC 008880157

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6912^{+193}_{-303}	$4.241^{+0.090}_{-0.210}$	$0.080^{+0.200}_{-0.350}$	$1.499^{+0.511}_{-0.256}$	$1.429^{+0.213}_{-0.213}$	$0.597^{+0.289}_{-0.326}$
	+3%/-4%	+2%/-5%	+250%/-438%	+34%/-17%	+15%/-15%	+48%/-55%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 008880157-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1 ± 1	$0.57^{+0.41}_{-0.36}$	3539^{+270}_{-216}	4012^{+2399}_{-5998}	$1.024^{+6.467}_{-0.728}$
Alt.	1 ± 1	$0.85^{+0.48}_{-0.41}$	3552^{+273}_{-232}	-3817^{+377}_{-740}	$-0.261^{+0.228}_{-0.899}$

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

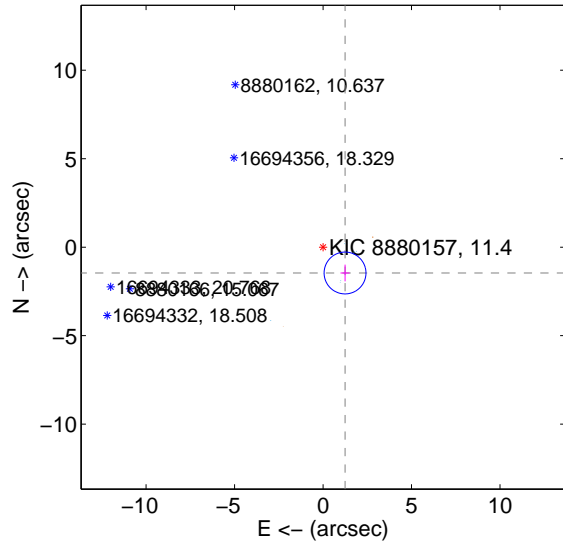
Supplemental centroid analysis for 008880157-01. **Kepler magnitude: 11.40.** Transit SNR 7.66

There are 9 quarters with good PRF difference image offsets

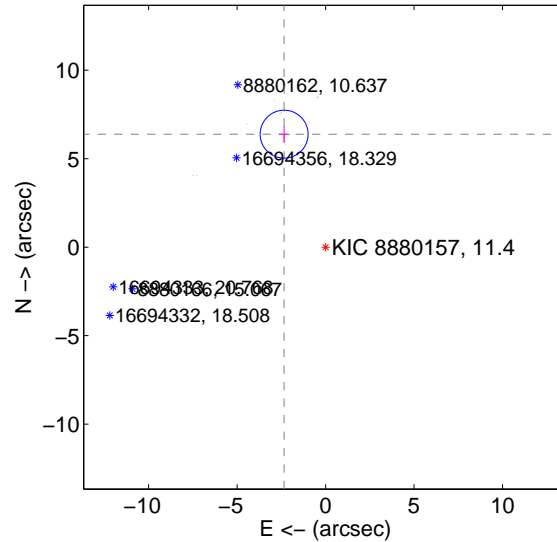
The OOT PRF centroid is offset from the target star catalog position by about 8.94 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.917 ± 0.394	4.86	-1.243 ± 0.256	-1.459 ± 0.470
PRF-fit source offset from KIC position	6.802 ± 0.451	15.07	2.343 ± 0.312	6.386 ± 0.467
photometric centroid source offset	7.37 ± 1.34	5.49	2.72 ± 0.93	6.85 ± 1.40

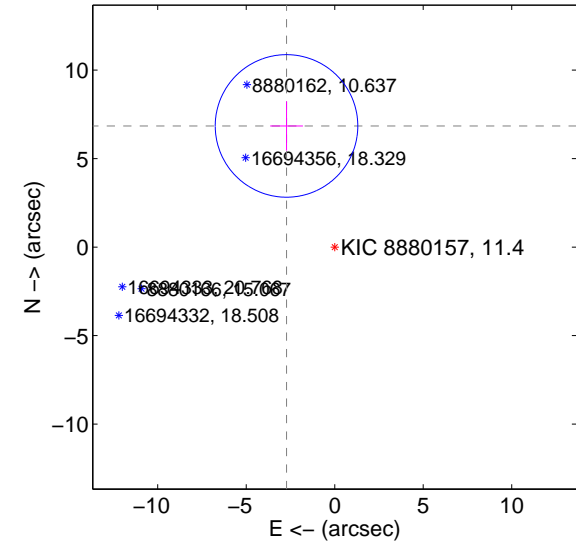
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

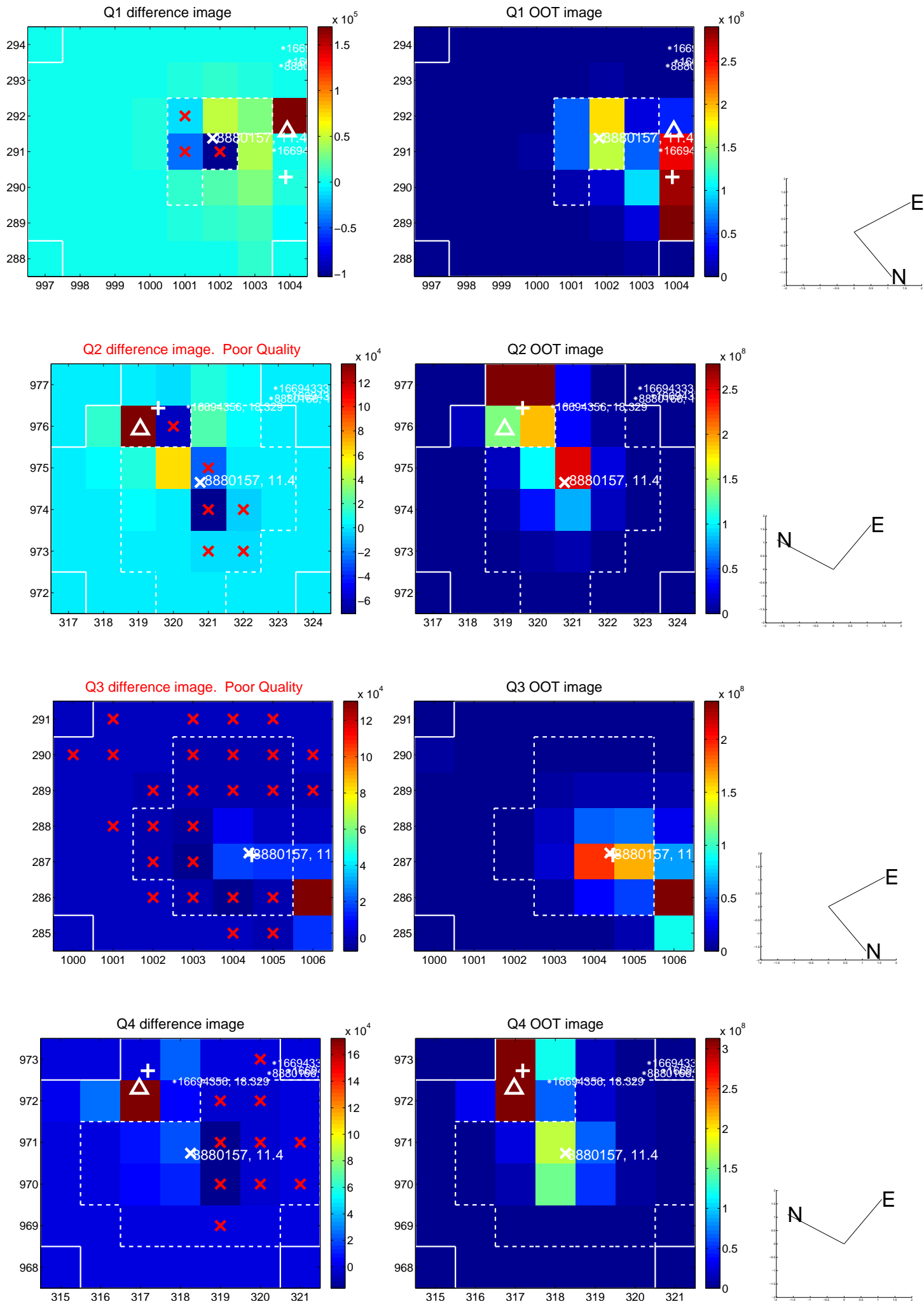


offset from photometric centroids

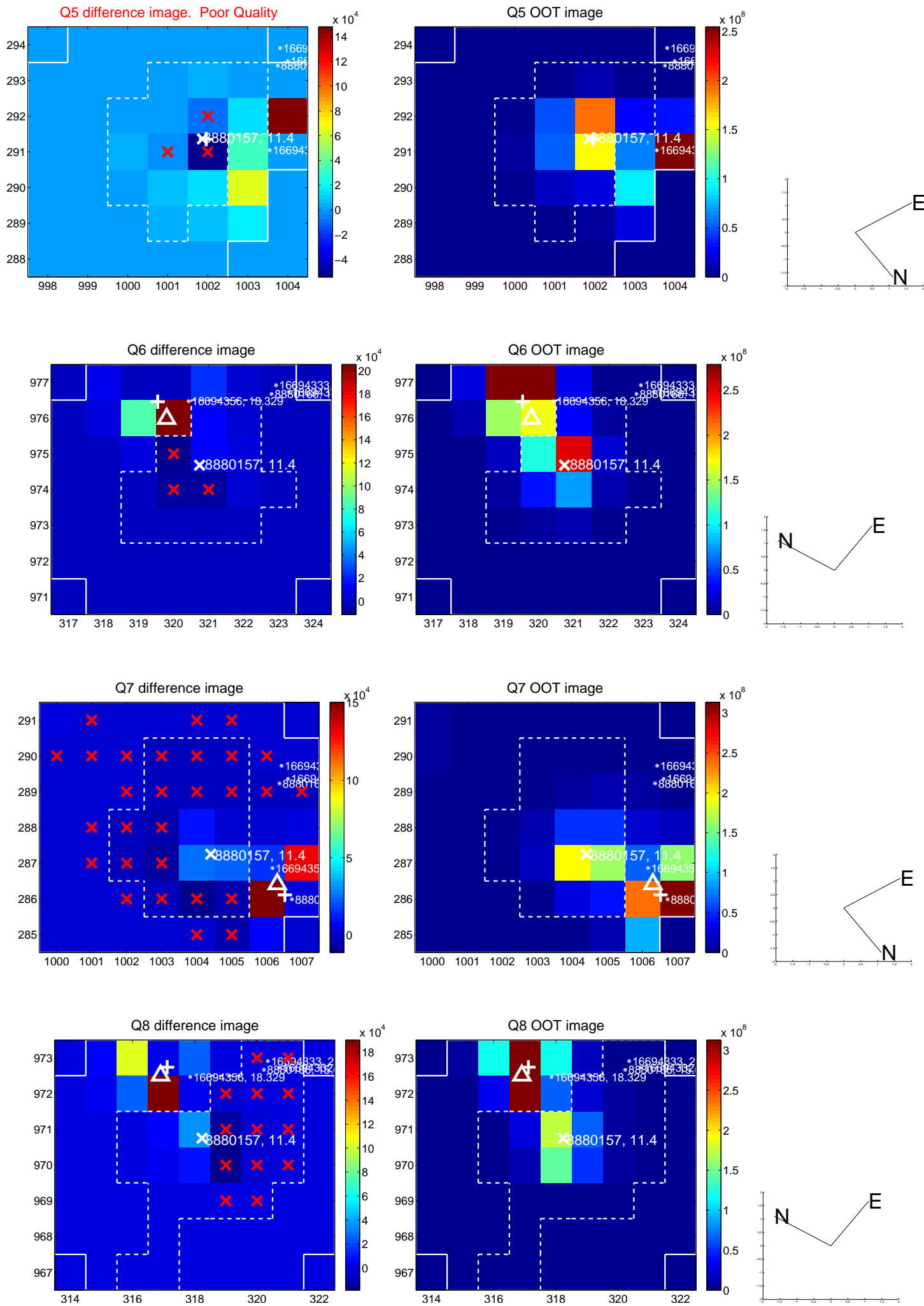


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

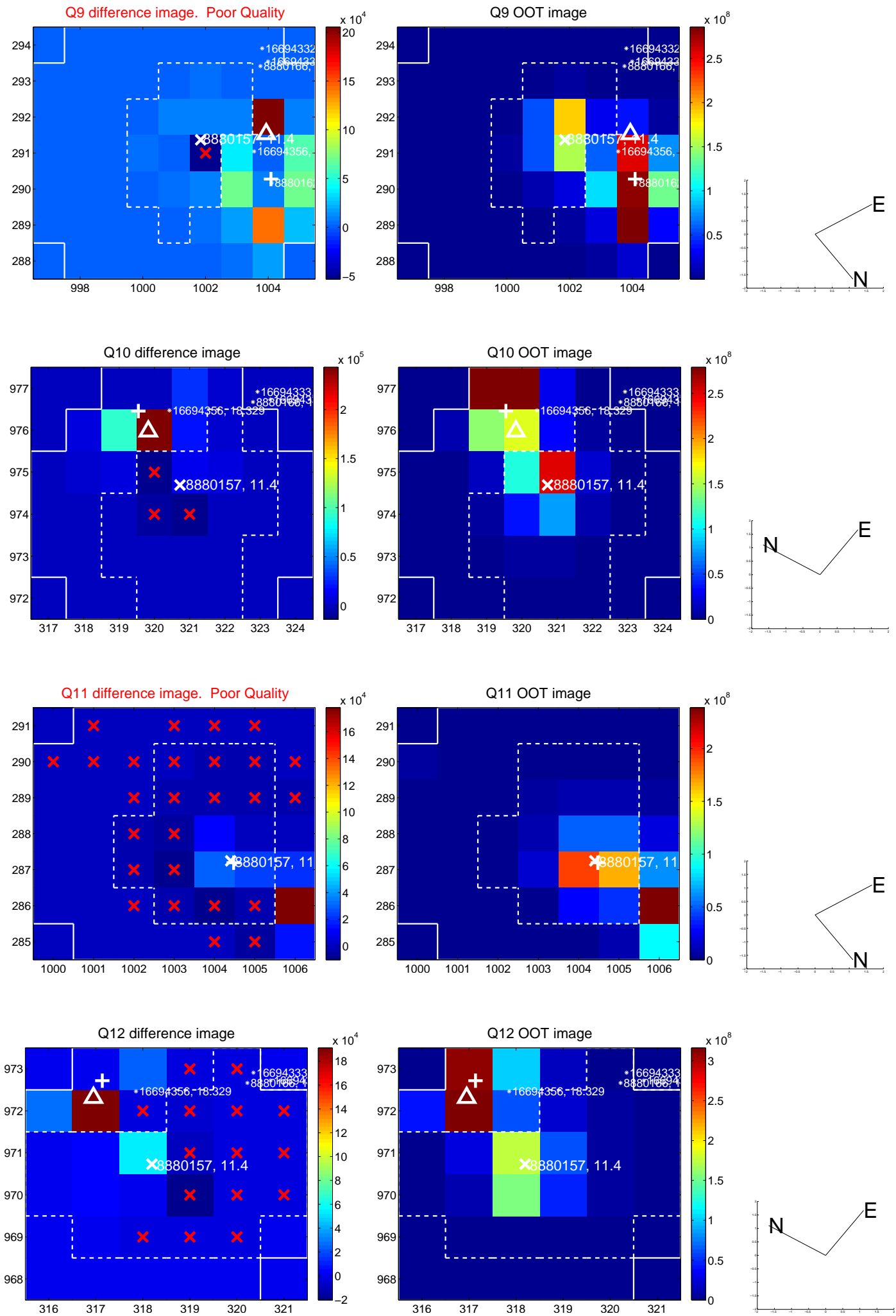
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



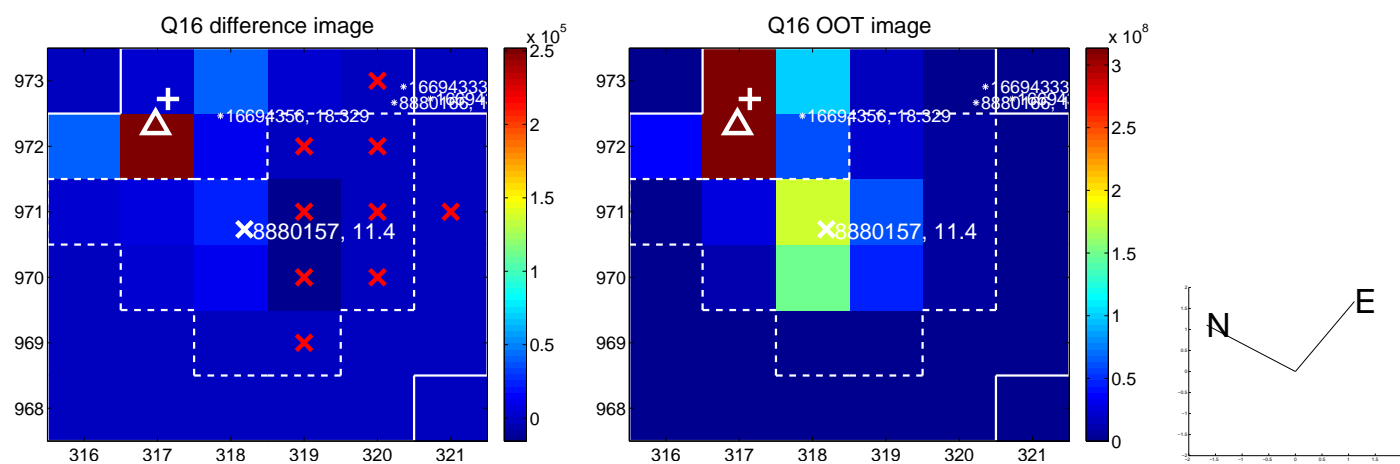
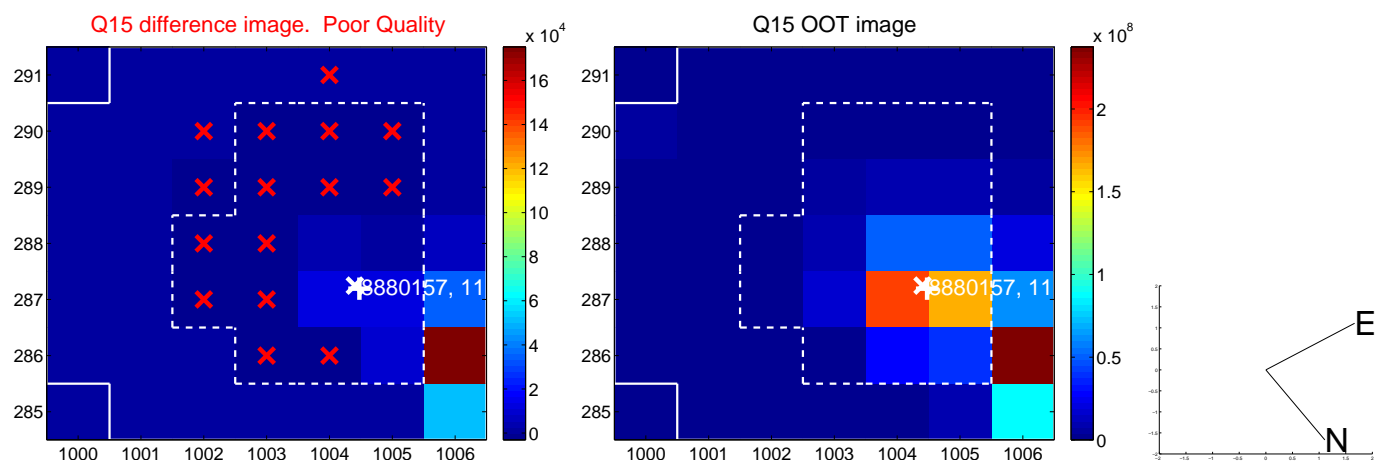
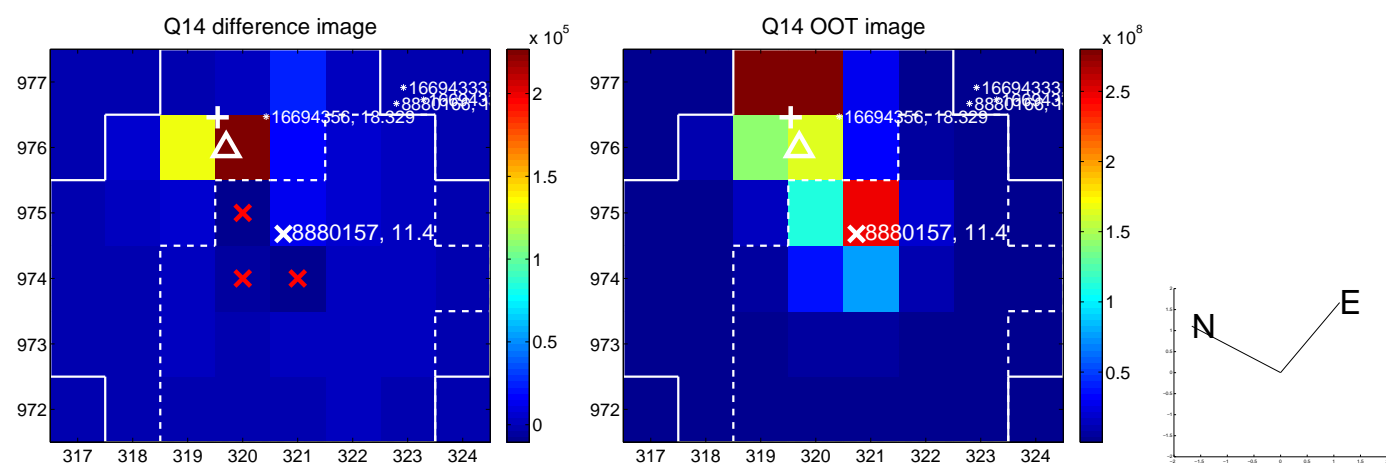
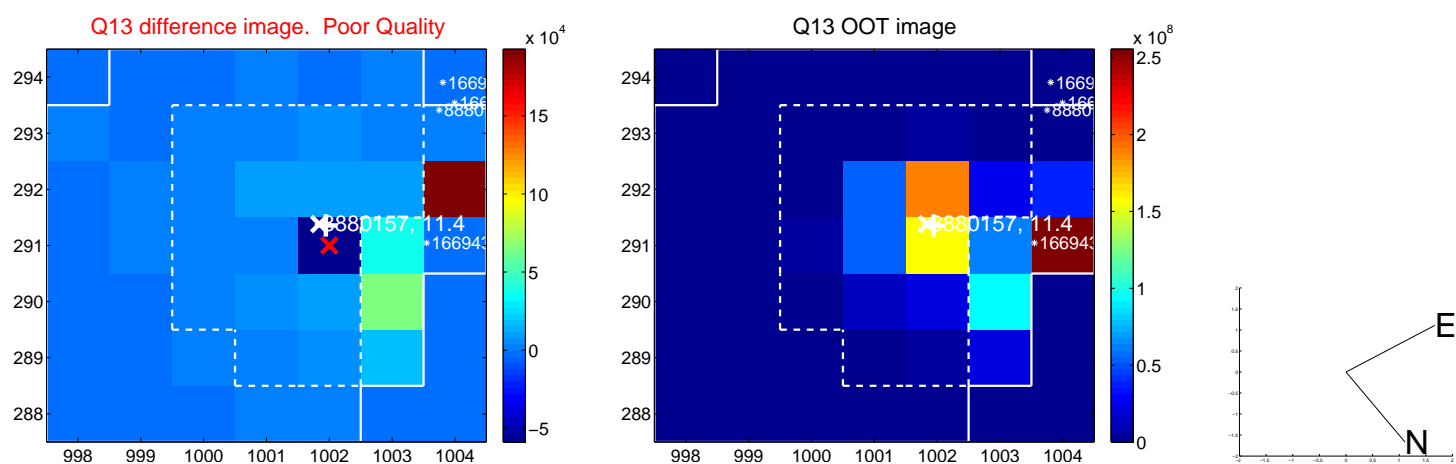
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



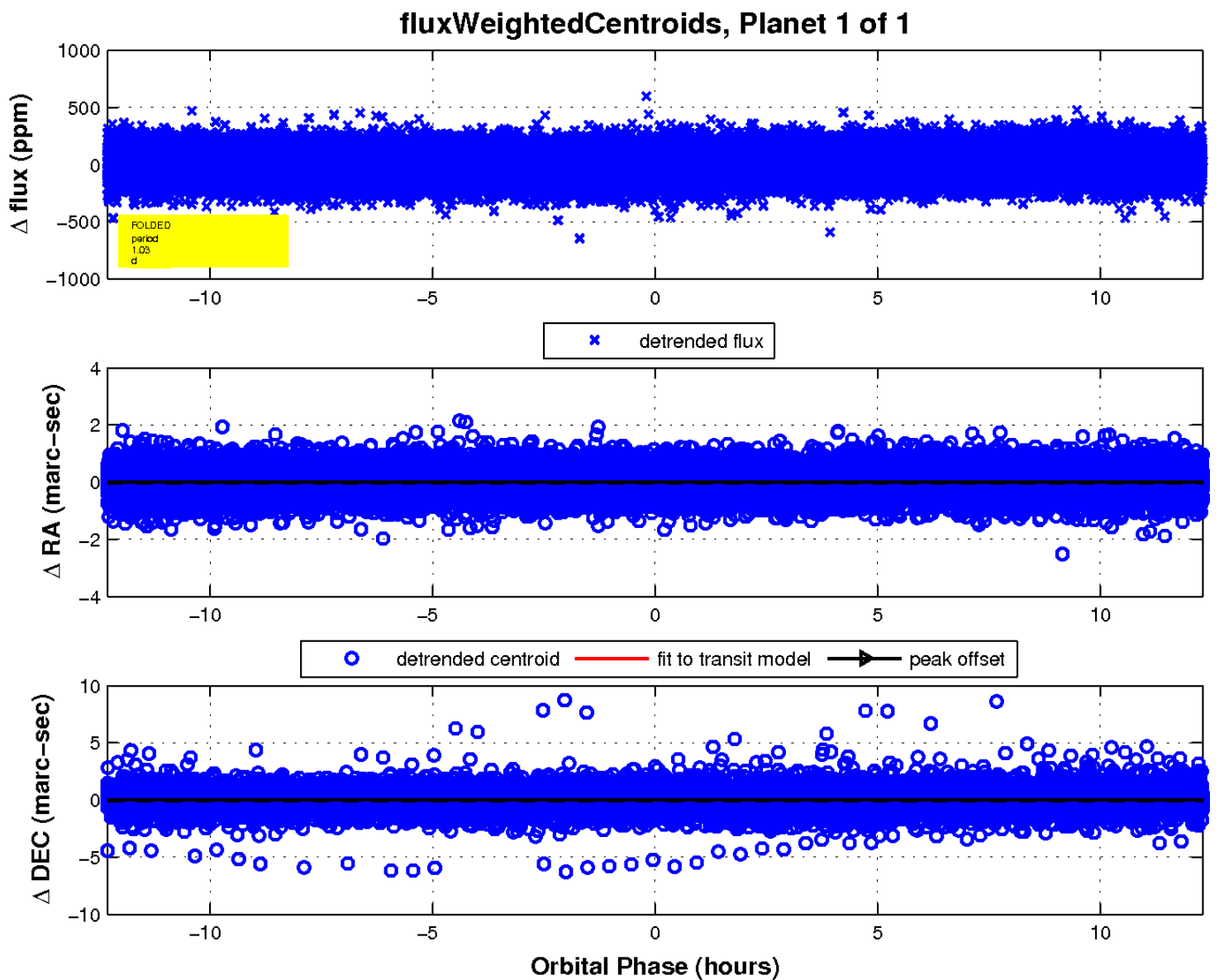
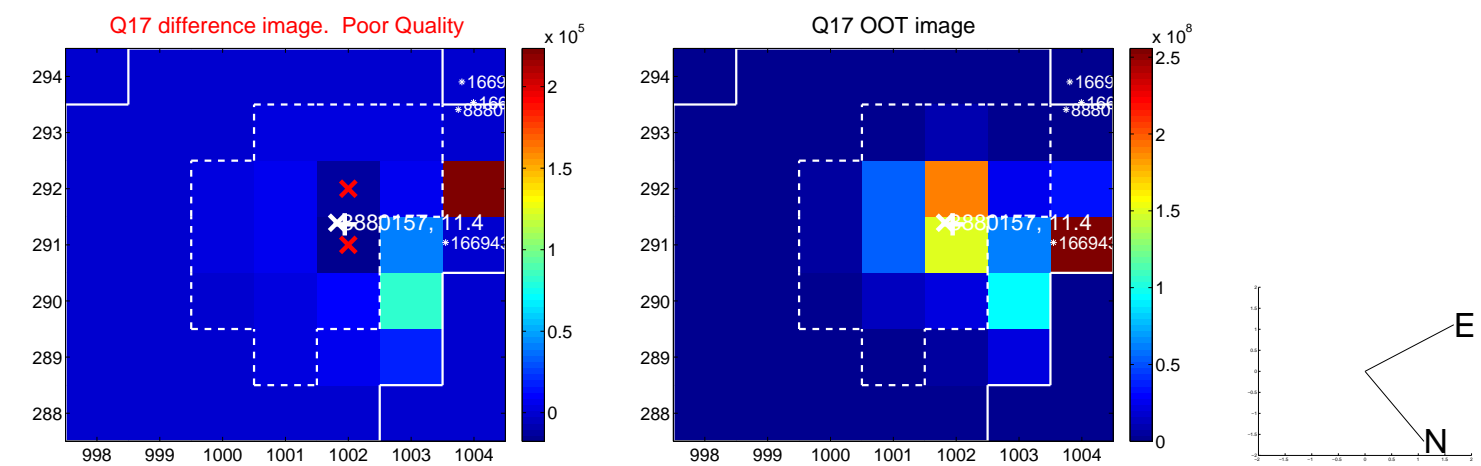
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UKIRT Image

Declination

