

KIC 009408917

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})
009408917-01	OBS	No	0.978032	131.782027	773.3	3.000	34.6	-1.0	1.50	6604	4.21	8652.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009408917-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL —LPP_DV —CENT_NOFITS

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

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

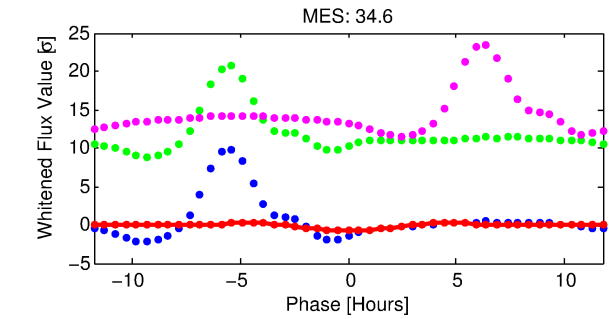
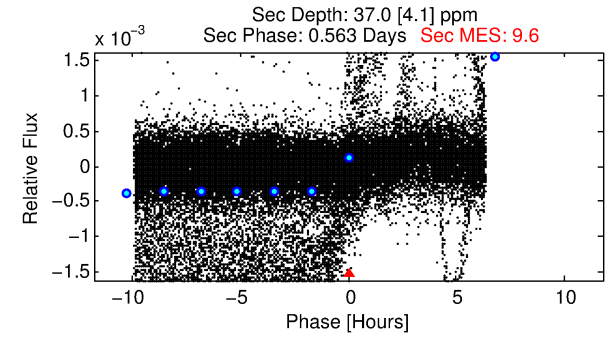
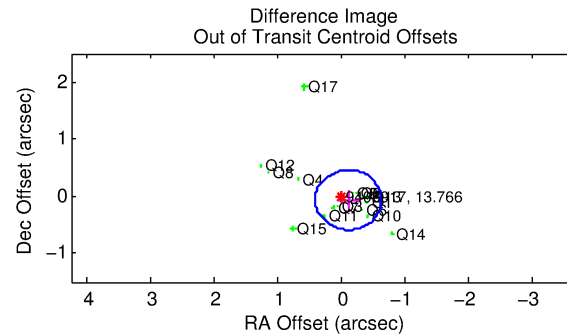
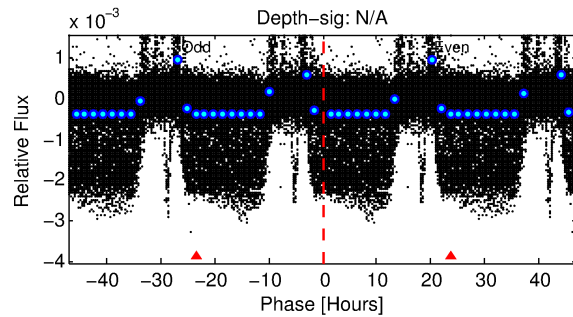
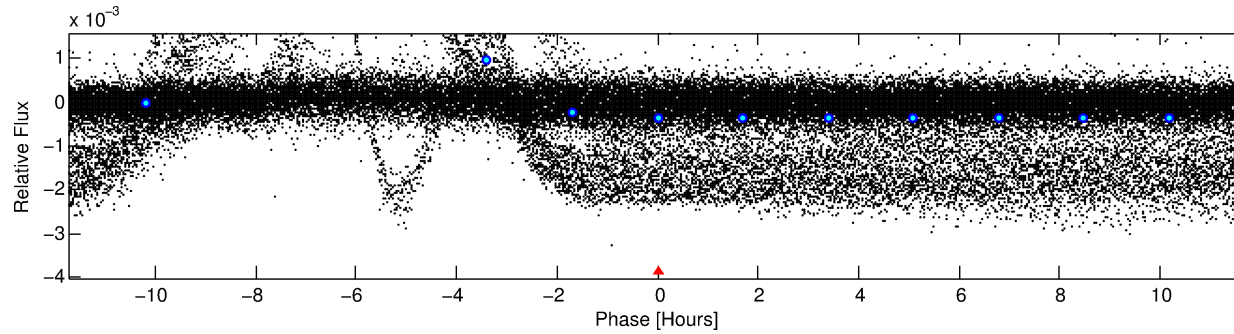
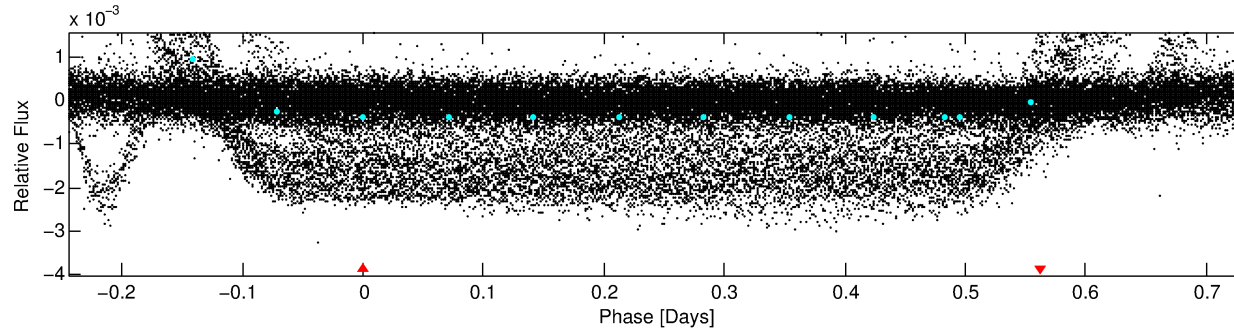
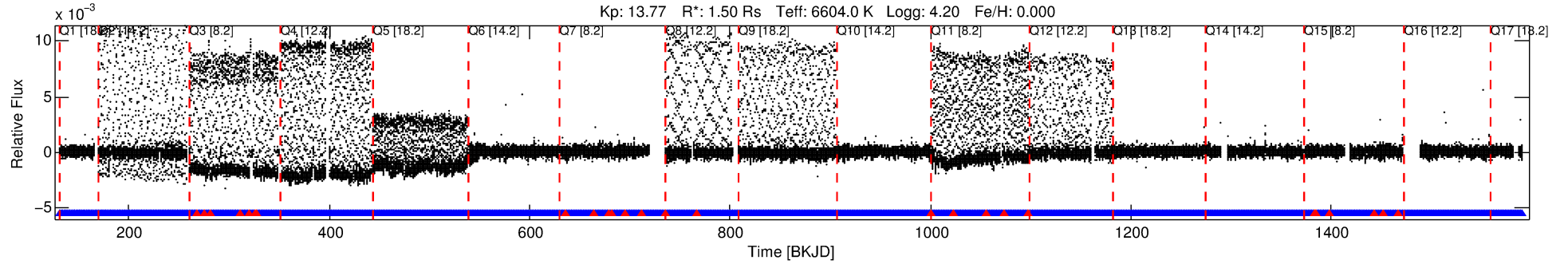
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009408917-01

No Significant Match Found

DV One-Page Summary

KIC: 9408917 Candidate: 1 of 1 Period: 0.978 d



TPS TCE Results:

Period = 0.97803 d
Epoch = 131.7820 BKJD

DV fit results are unavailable

DV Diagnostic Results:

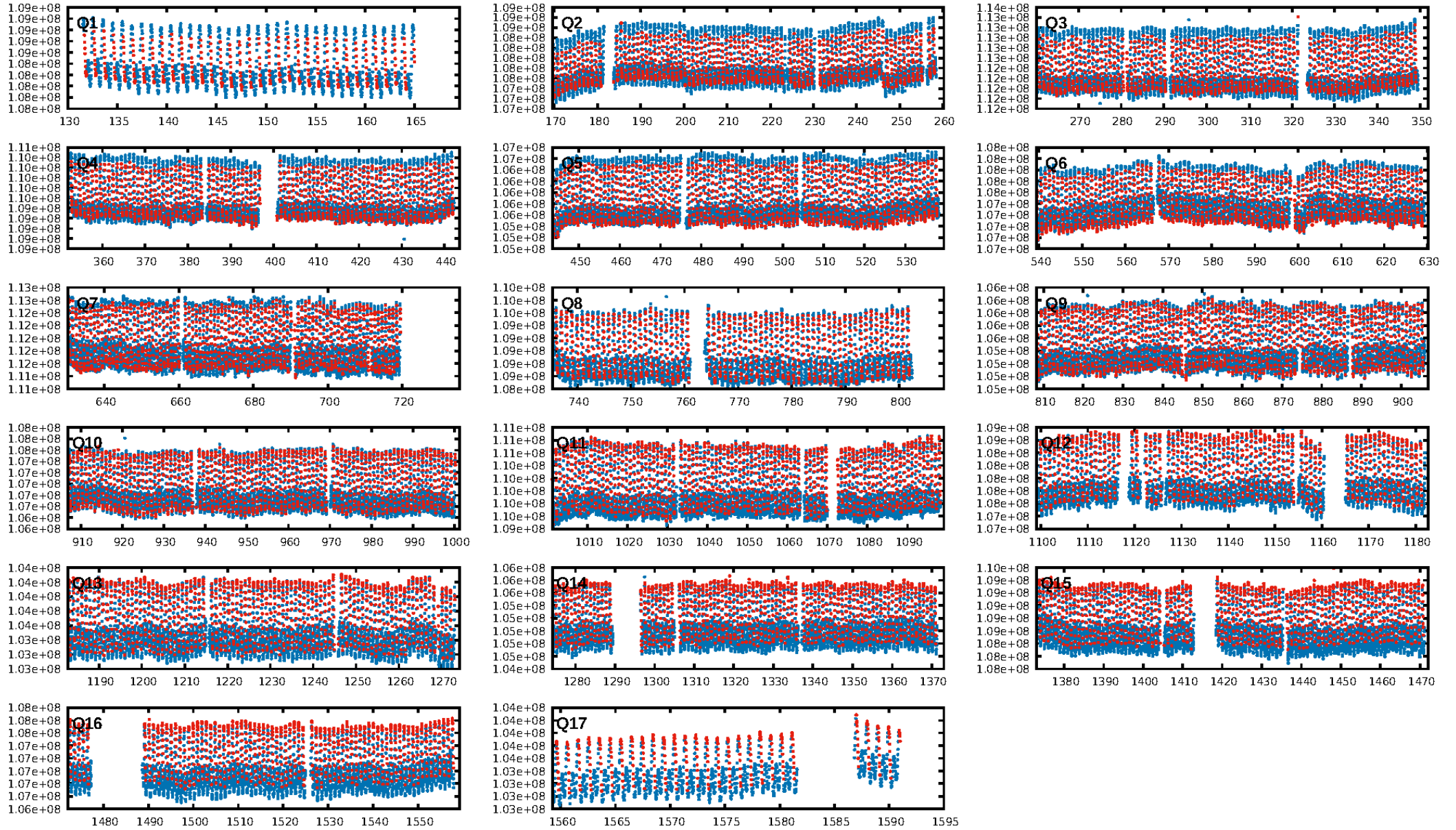
ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.98 [1302/1328]
GhostDiagnostic-chr: -5.489

Centroid-sig: 0.0%
Centroid-so: 0.165 arcsec [26.21σ]
OotOffset-rm: 0.124 arcsec [0.72σ]
KicOffset-rm: 0.194 arcsec [1.09σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 1.00 [16/16]
DiffImageOverlap-fno: 1.00 [17/17]

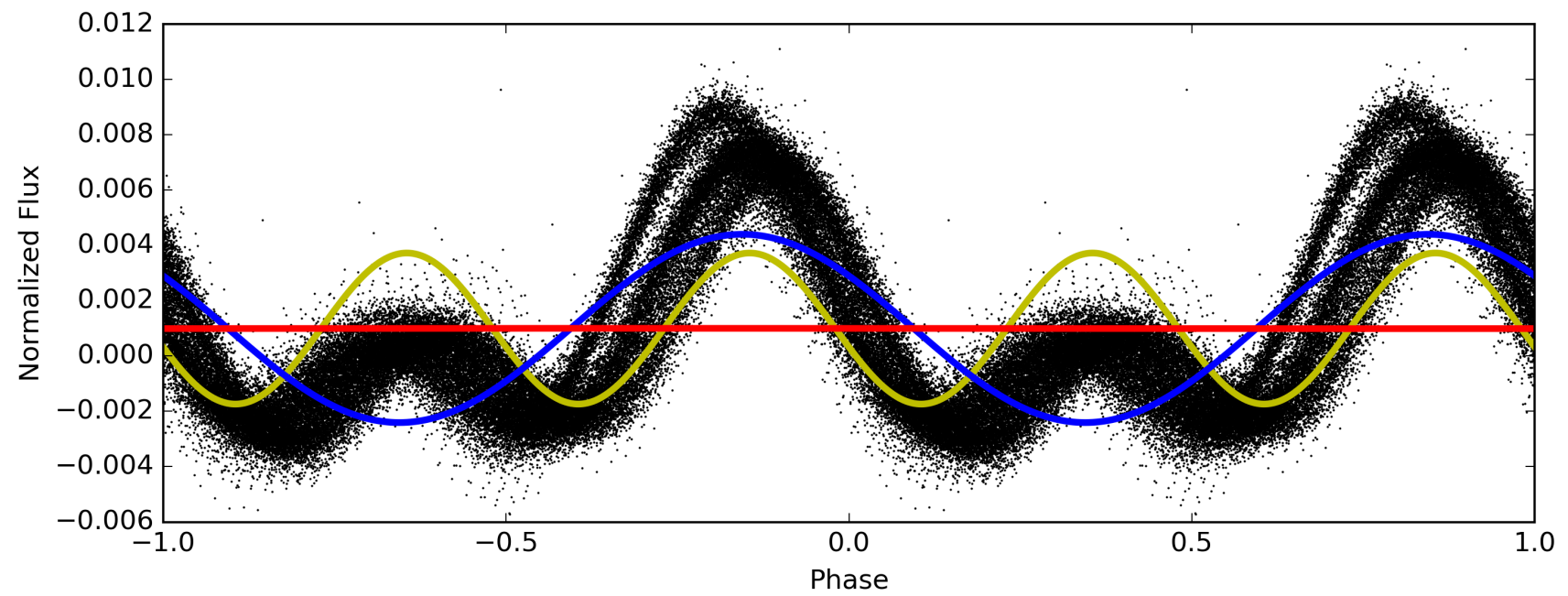
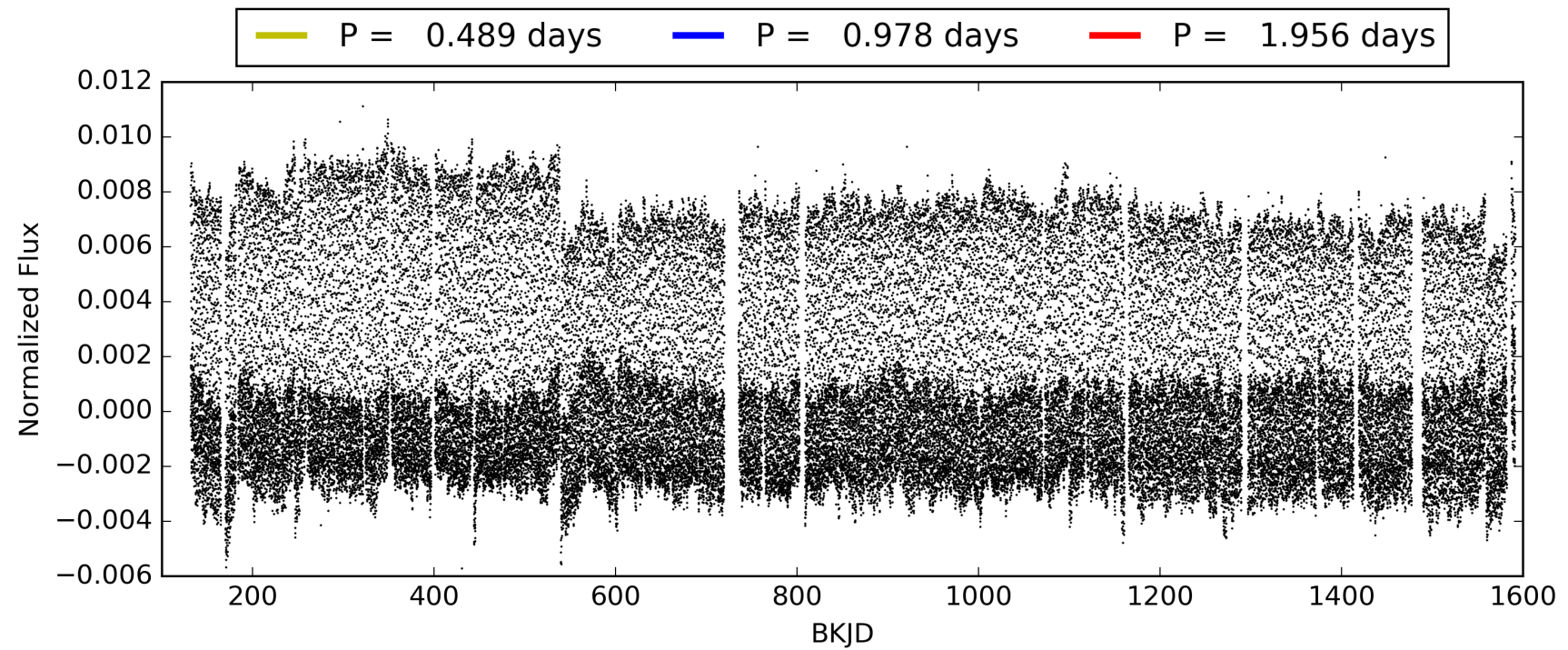
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:14:14 Z

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

TCE 009408917-01, PDC Light Curves

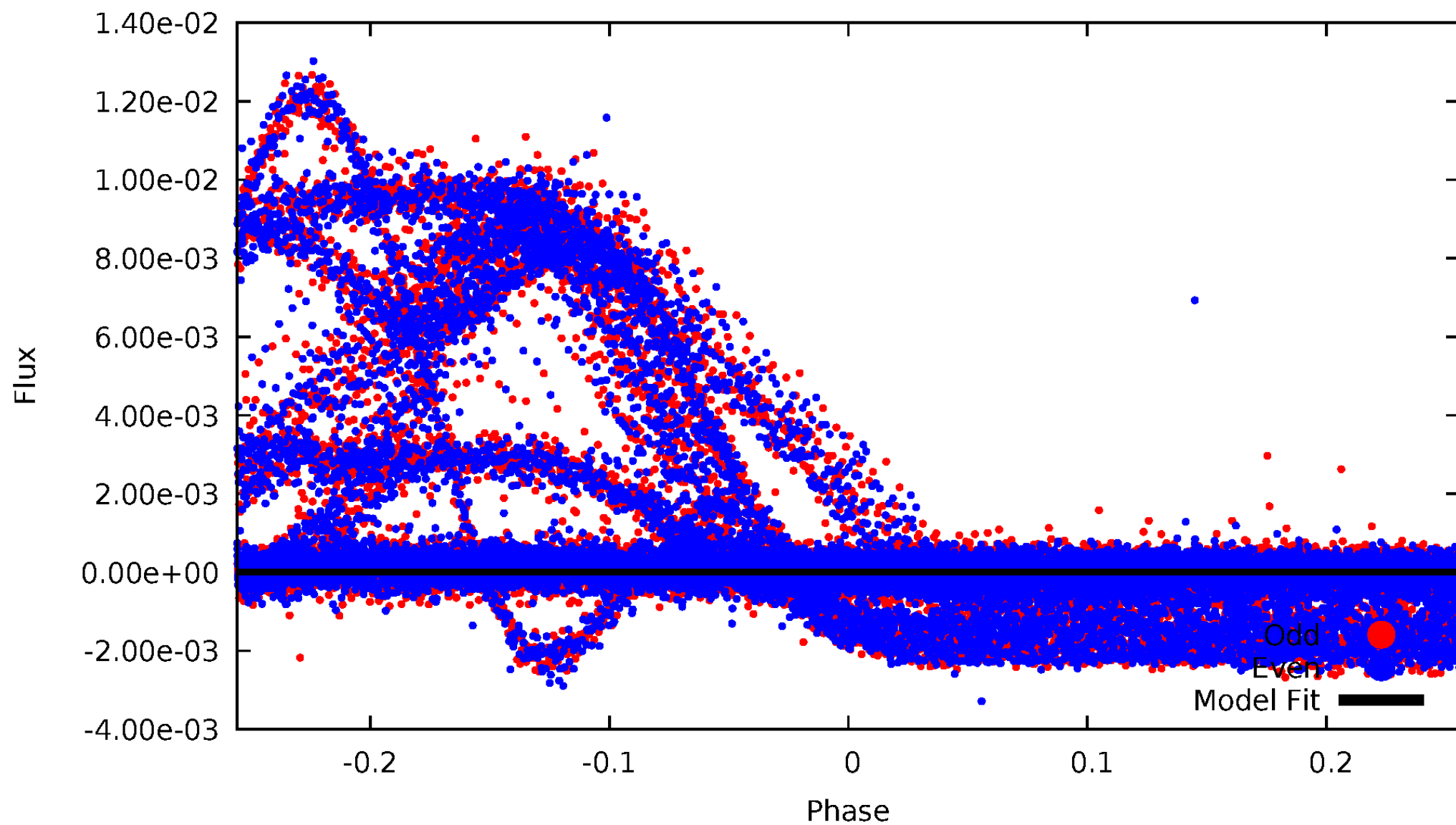


TCE 009408917-01



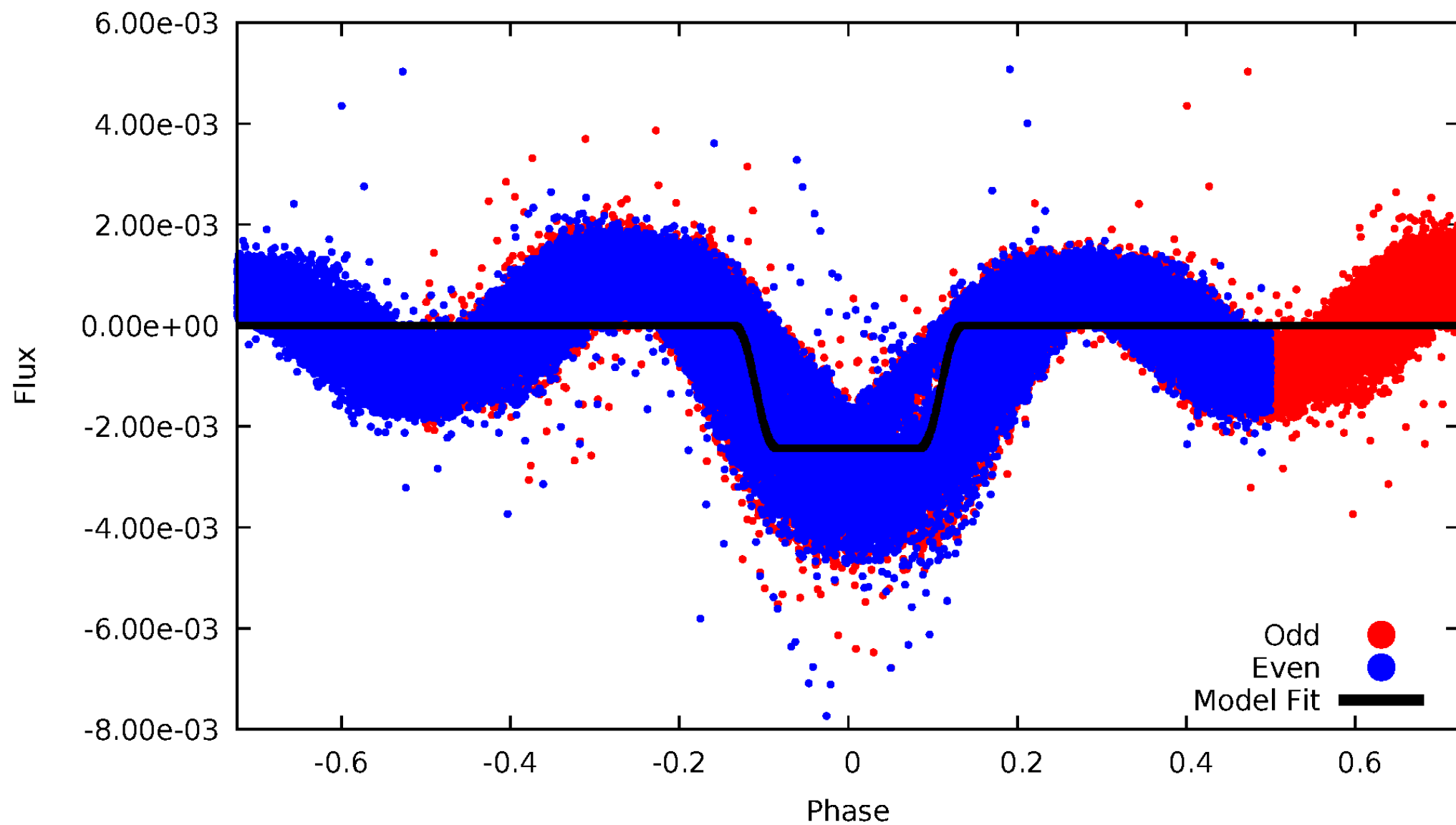
DV Odd/Even

TCE 009408917-01



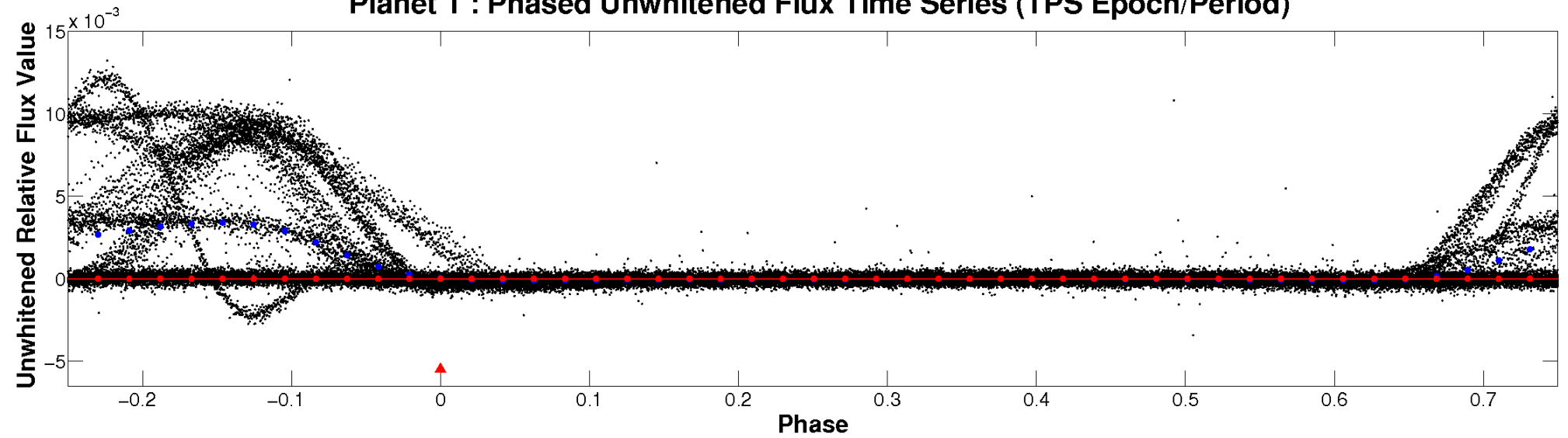
ALT Odd/Even

TCE 009408917-01

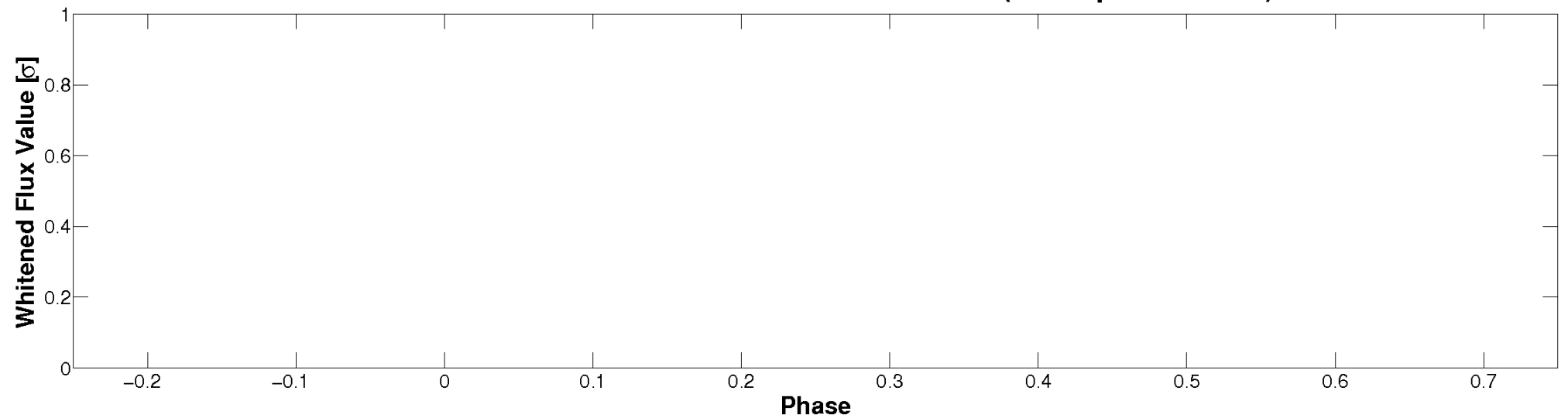


Non-Whitened Vs. Whitened Light Curve

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

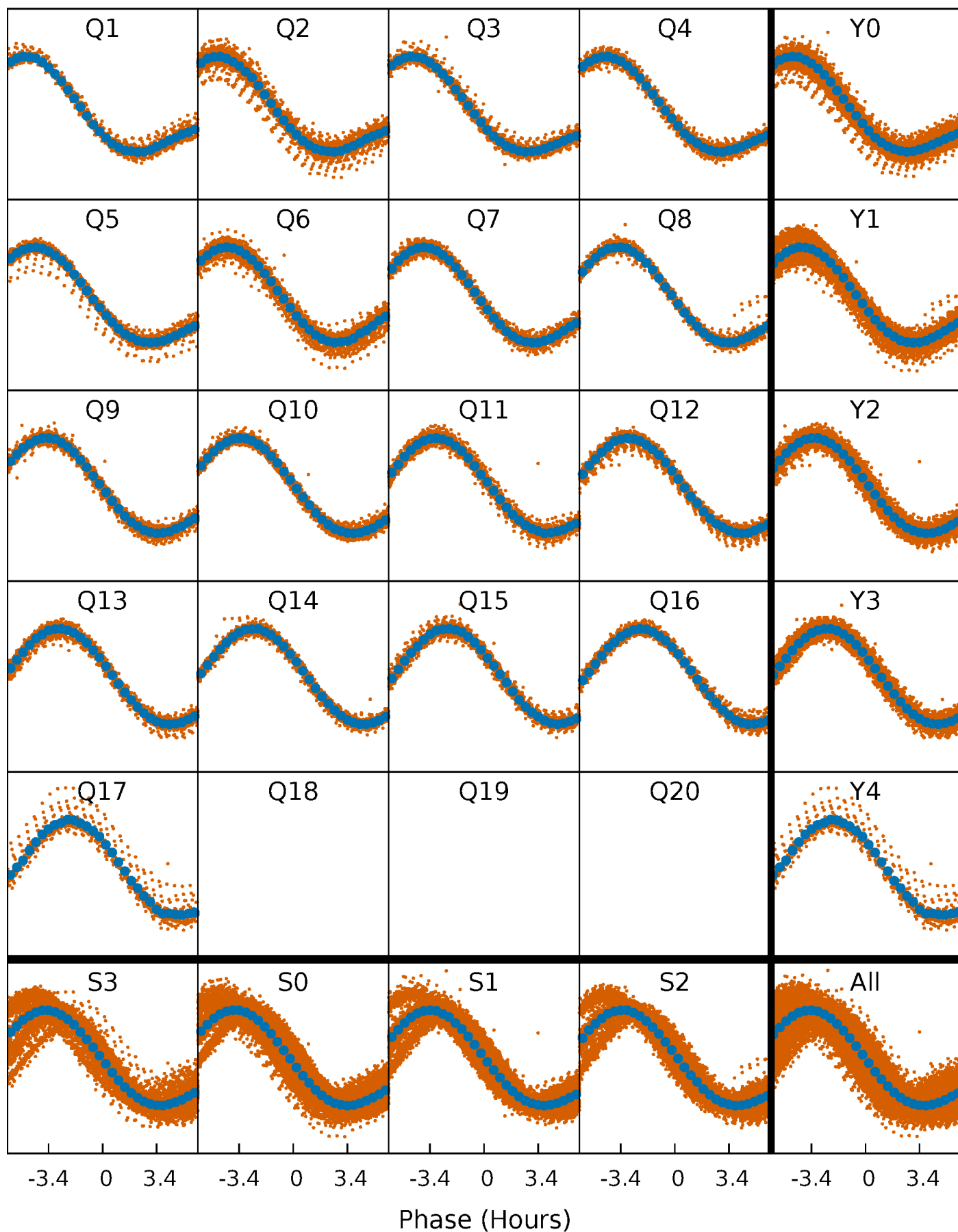


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



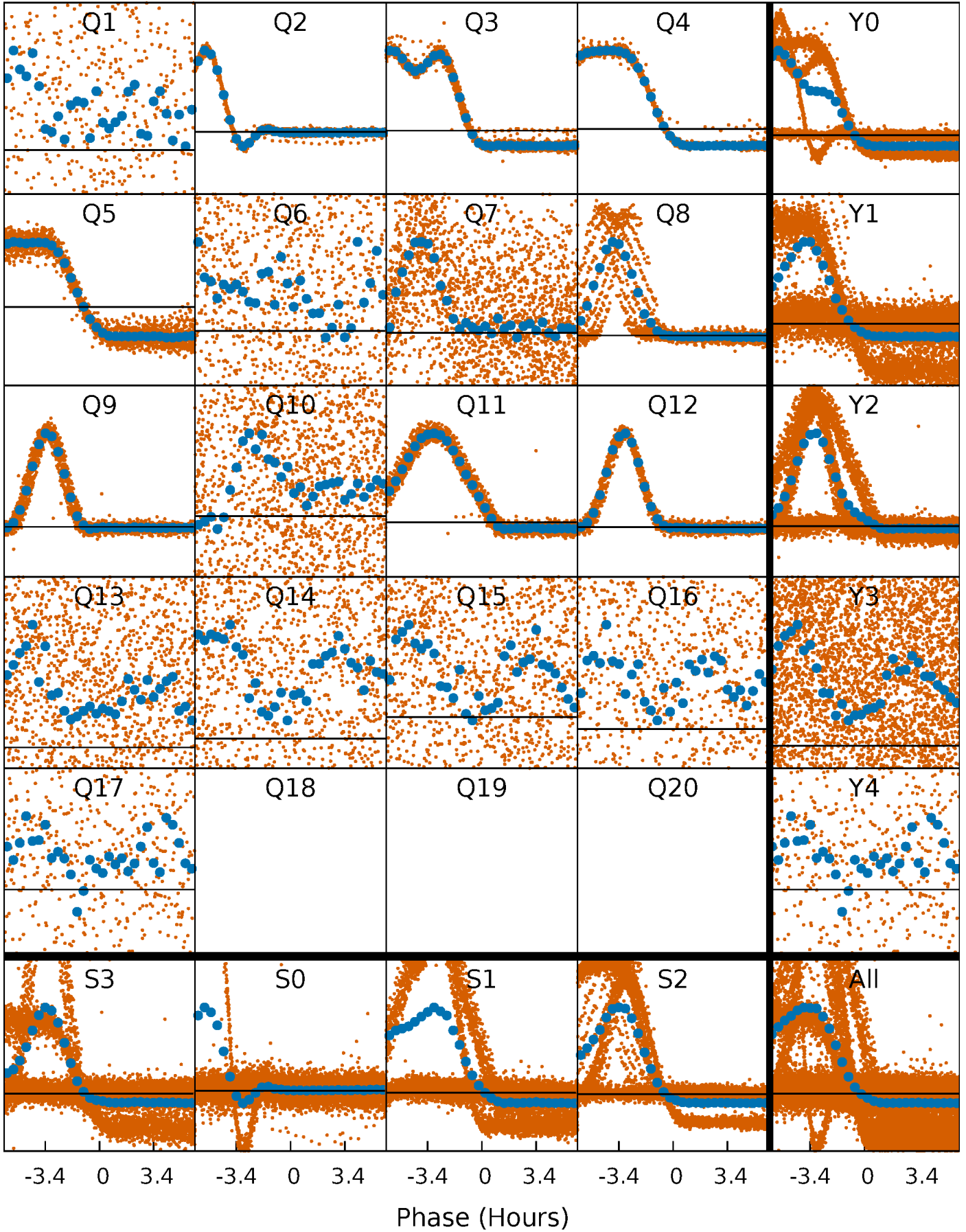
PDC Quarter-Phased Transit Curves

TCE 009408917-01 P= 0.978032 Days $T_0=131.782027$ (BKJD)



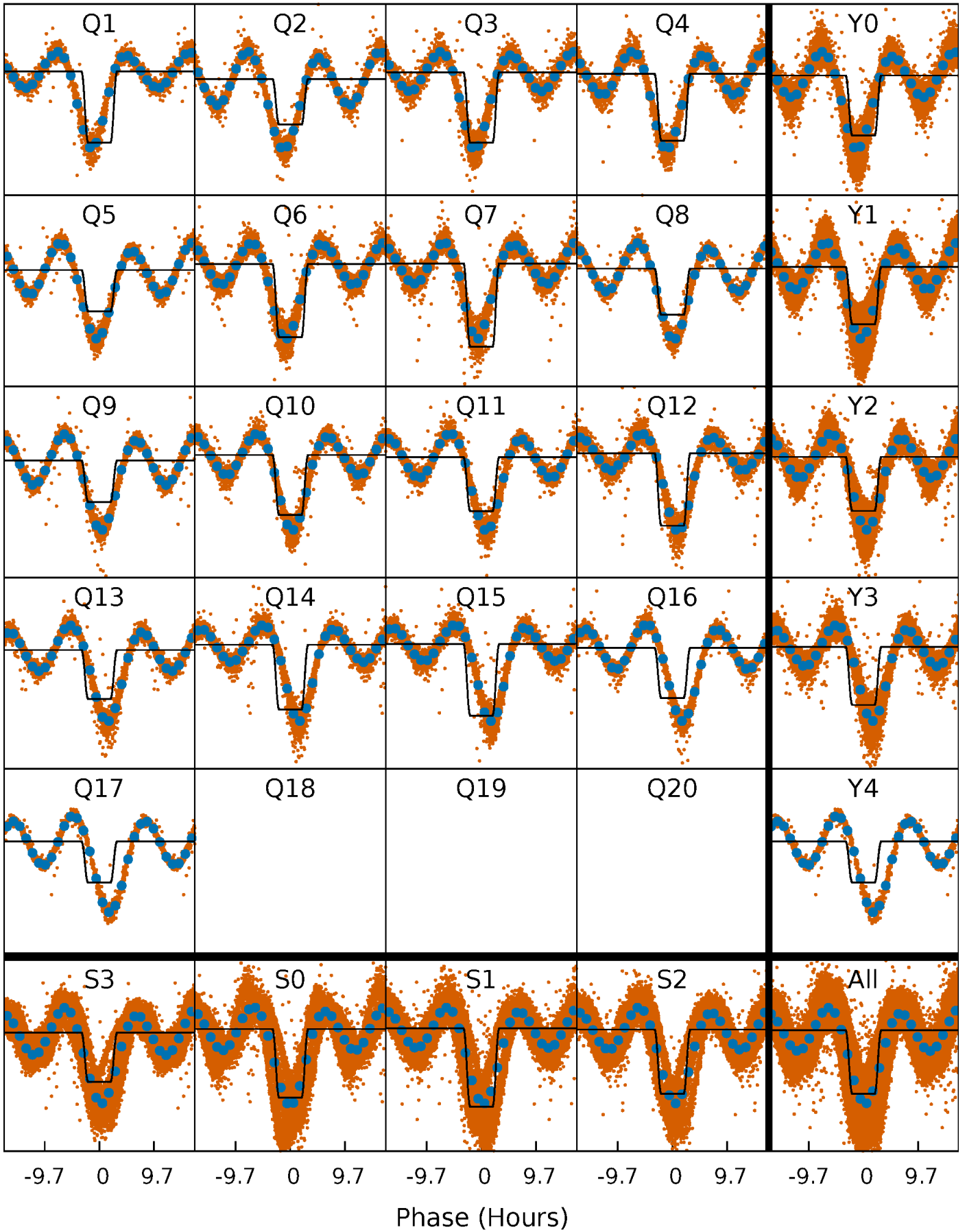
DV Quarter-Phased Transit Curves

TCE 009408917-01 P= 0.978032 Days $T_0=131.782027$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

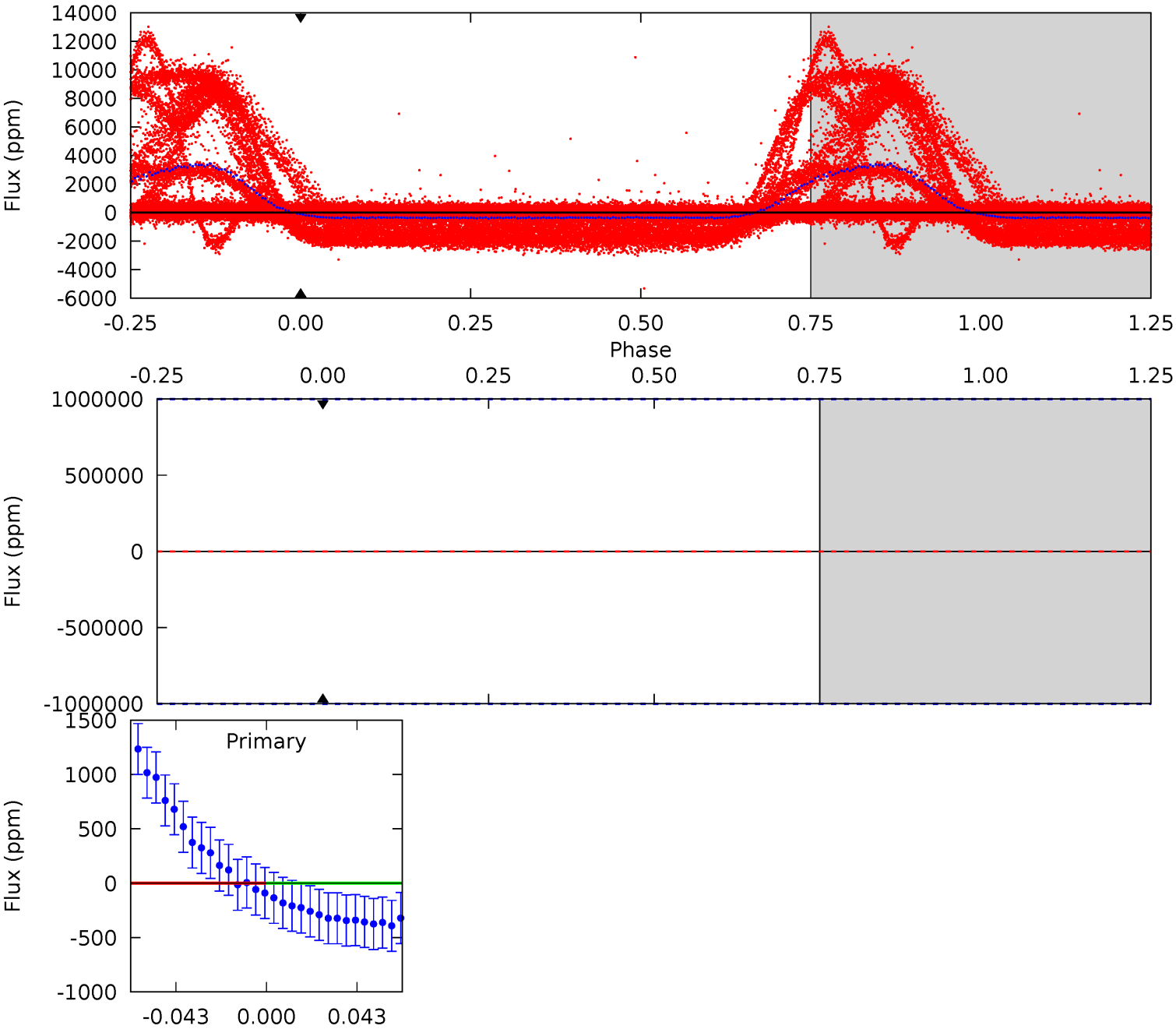
TCE 009408917-01 P= 0.978032 Days $T_0=131.874540$ (BKJD)



DV Model-Shift Uniqueness Test

009408917-01, P = 0.978032 Days, E = 130.803995 Days

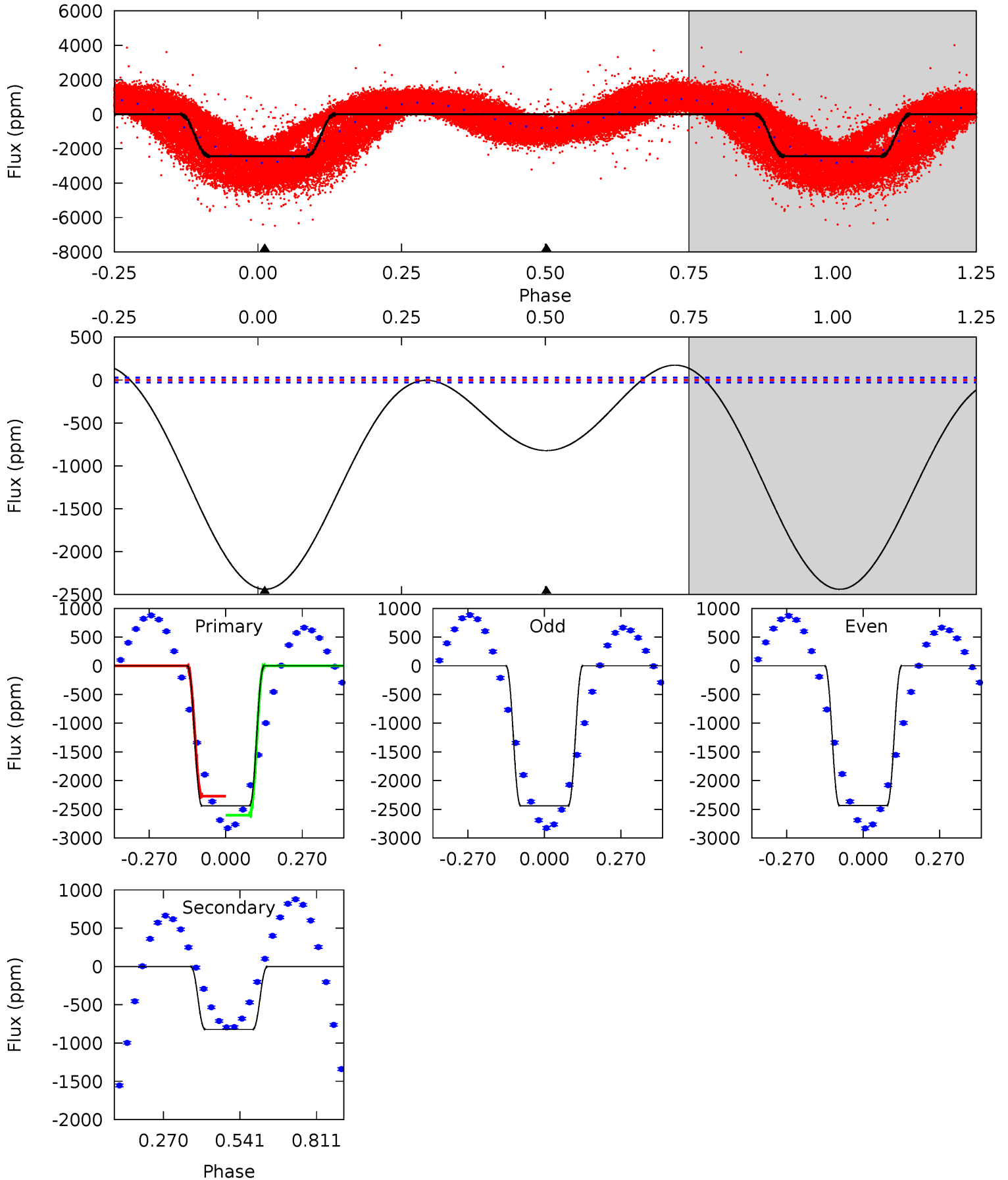
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

009408917-01, P = 0.978032 Days, E = 130.896508 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
383.3	129.3	0	0	4.35	1.10	17.4	383.3	383.3	129.3	129.3	0.25	1.04	0.07	21.4



Stellar Parameters For KIC 009408917

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6604^{+184}_{-253}	$4.201^{+0.140}_{-0.193}$	$0.000^{+0.250}_{-0.300}$	$1.504^{+0.481}_{-0.320}$	$1.312^{+0.188}_{-0.209}$	$0.543^{+0.435}_{-0.281}$
	+3%/-4%	+3%/-5%	+inf%/-inf%	+32%/-21%	+14%/-16%	+80%/-52%
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 009408917-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$12.88^{+13.45}_{-8.82}$	3463^{+260}_{-237}	-4980^{+31973}_{-20061}	$-2.013^{+252.049}_{-233.795}$
Alt.	-822 ± 6	$15.17^{+13.24}_{-10.39}$	3442^{+274}_{-214}	3733^{+2769}_{-6351}	$0.898^{+7.530}_{-0.652}$

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 $A_{obs} \gg 1.0$

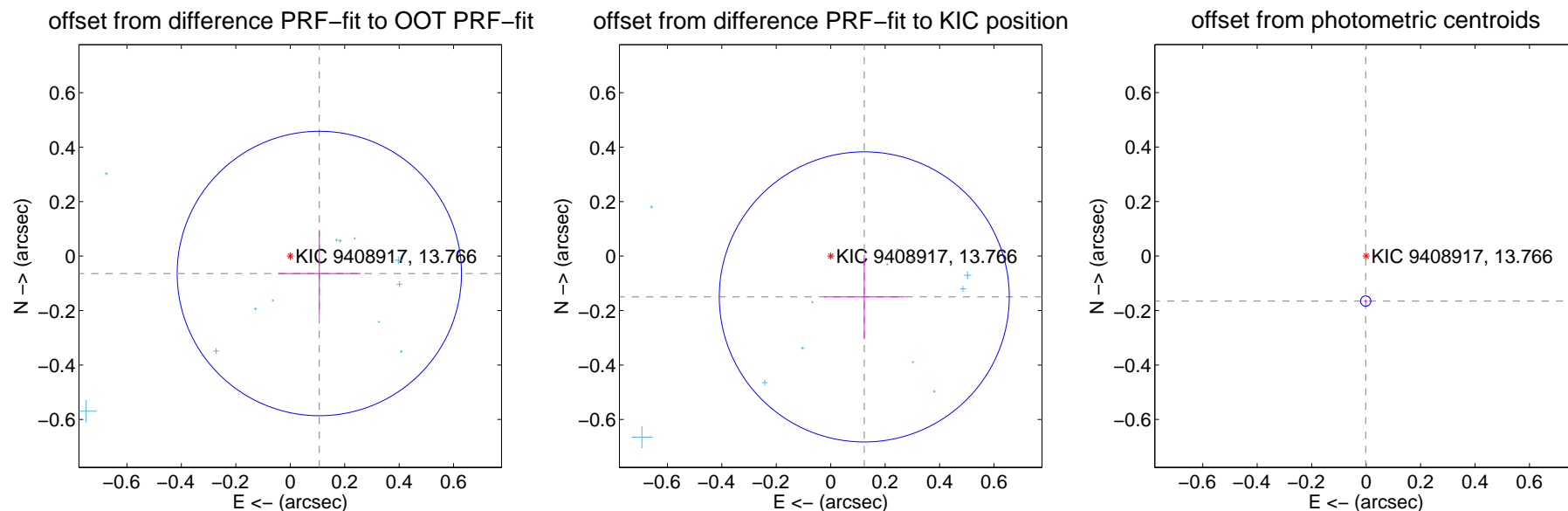
DV Centroid Data

Supplemental centroid analysis for 009408917-01. Kepler magnitude: 13.77. Transit SNR -1.00

There are 16 quarters with good PRF difference image offsets

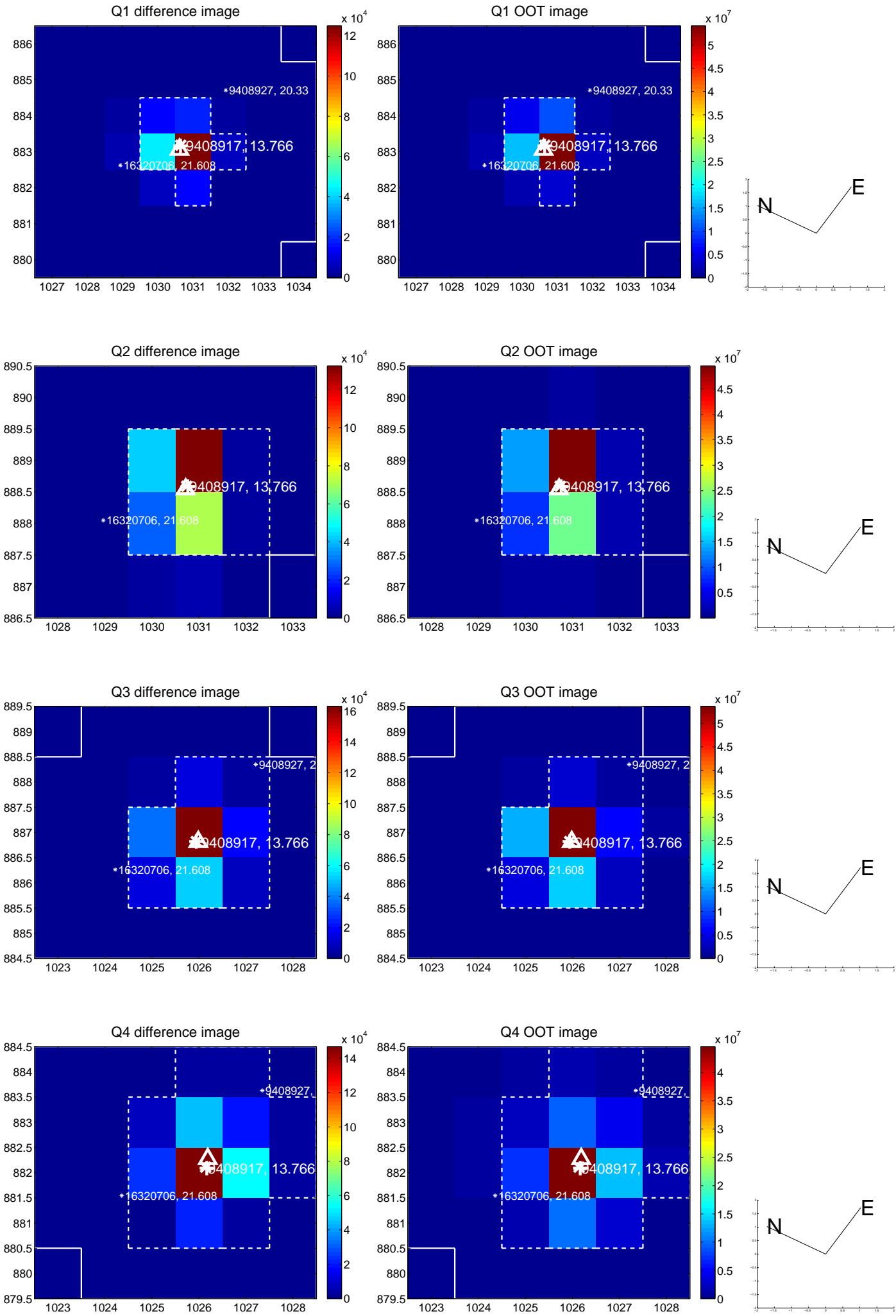
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.124 ± 0.174	0.72	-0.107 ± 0.152	-0.064 ± 0.155
PRF-fit source offset from KIC position	0.194 ± 0.178	1.09	-0.123 ± 0.149	-0.150 ± 0.155
photometric centroid source offset	0.17 ± 0.01	26.21	0.00 ± 0.01	-0.17 ± 0.01

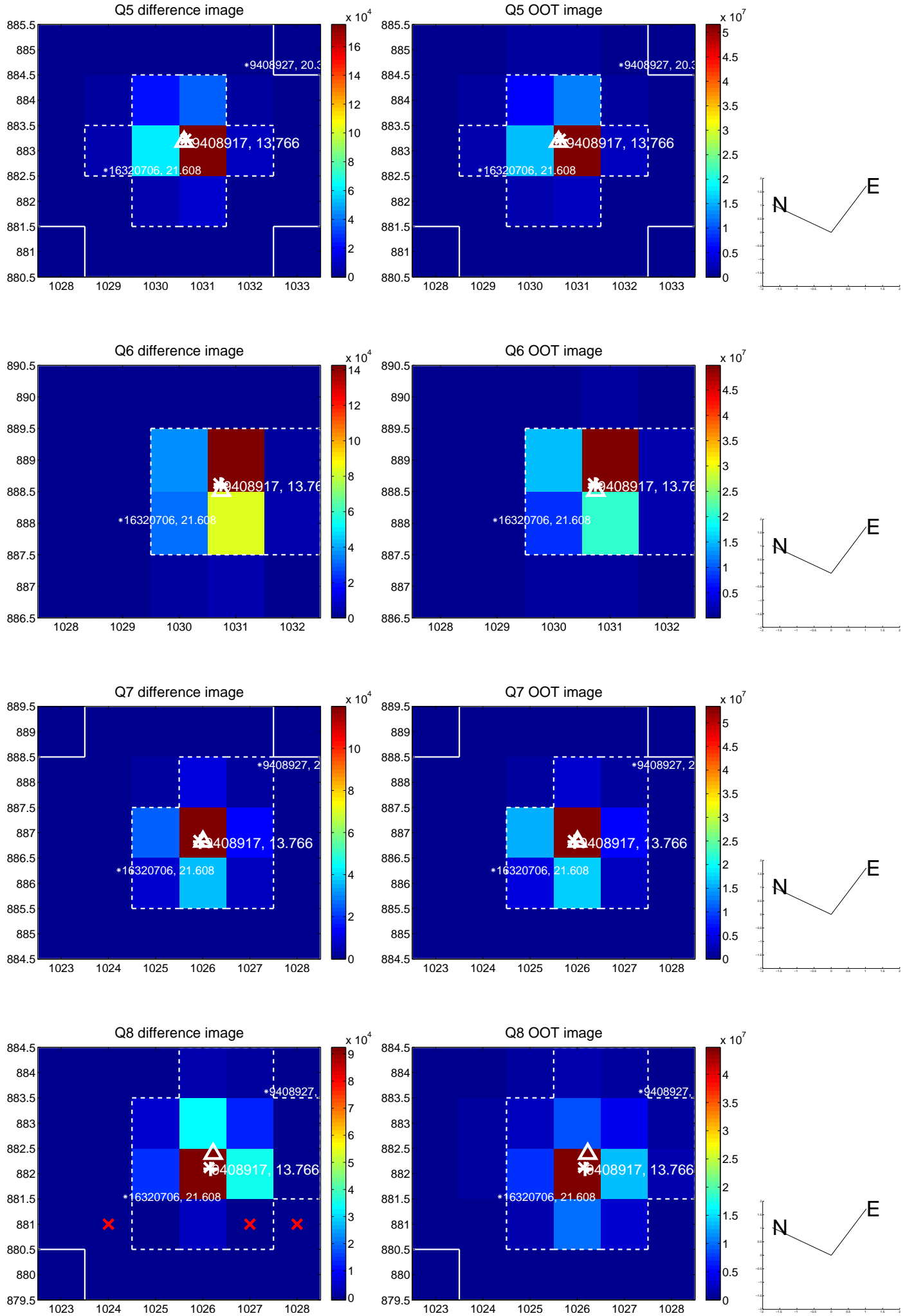


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

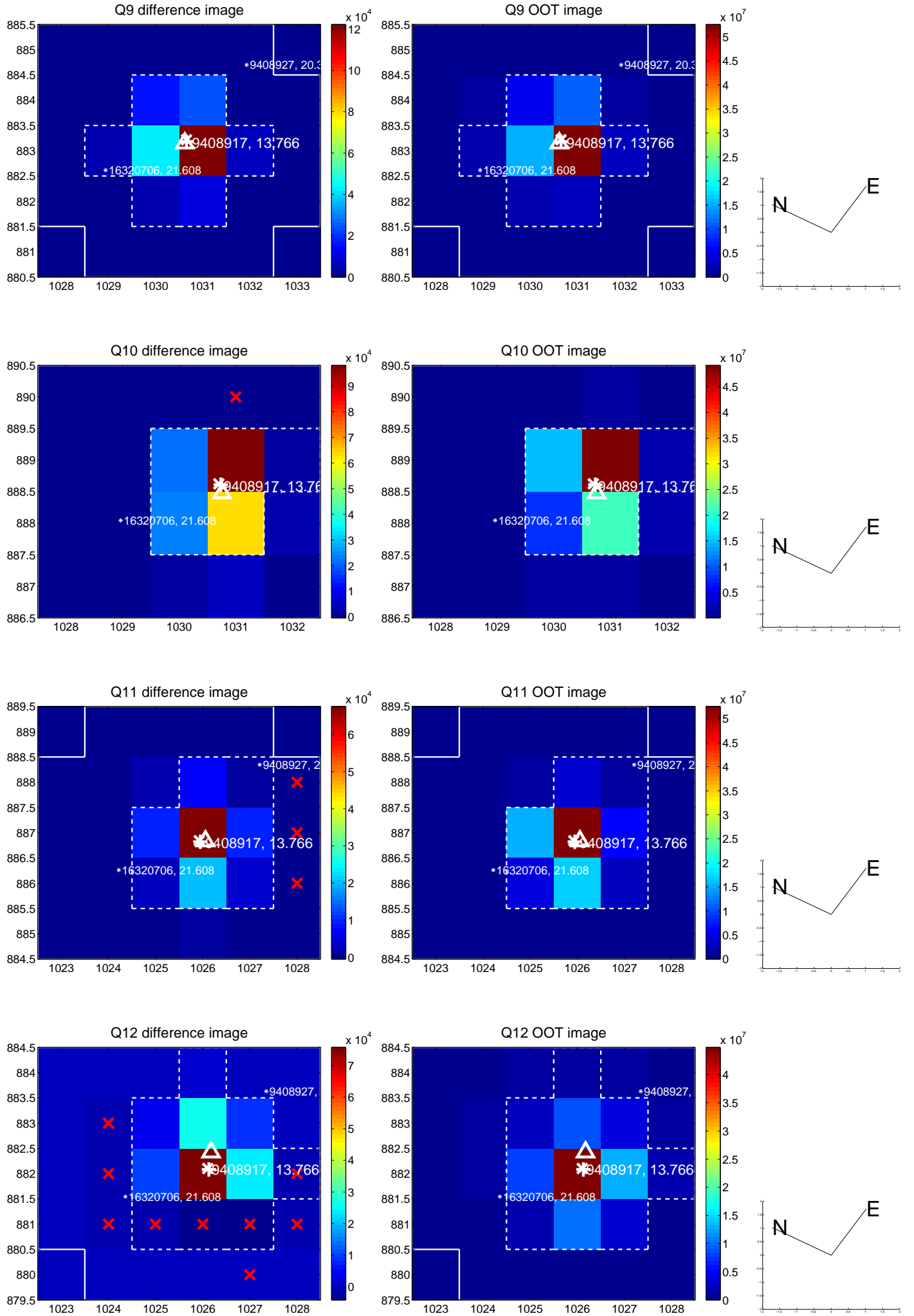
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



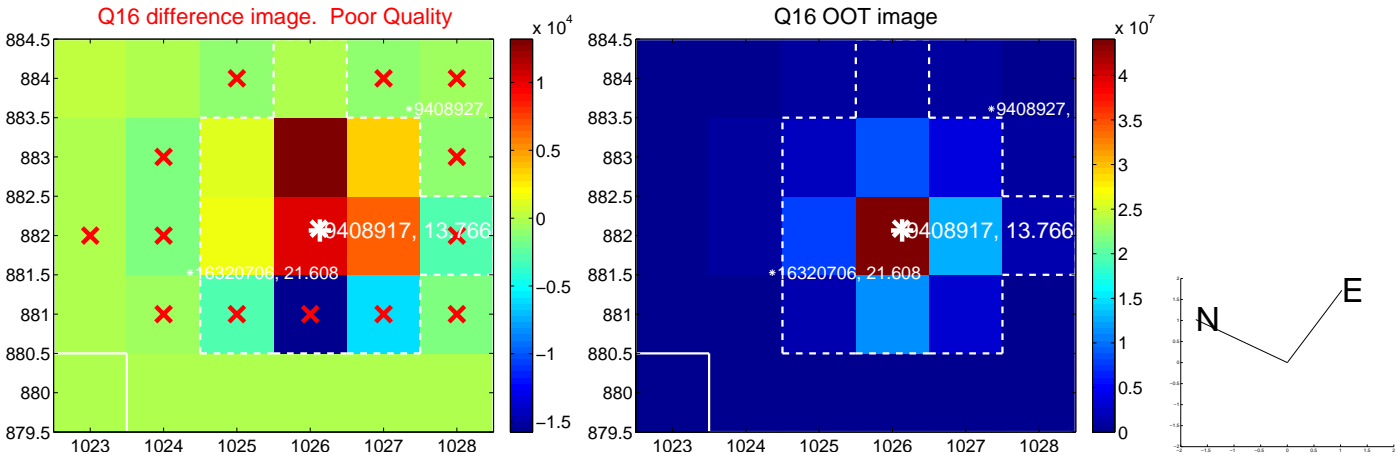
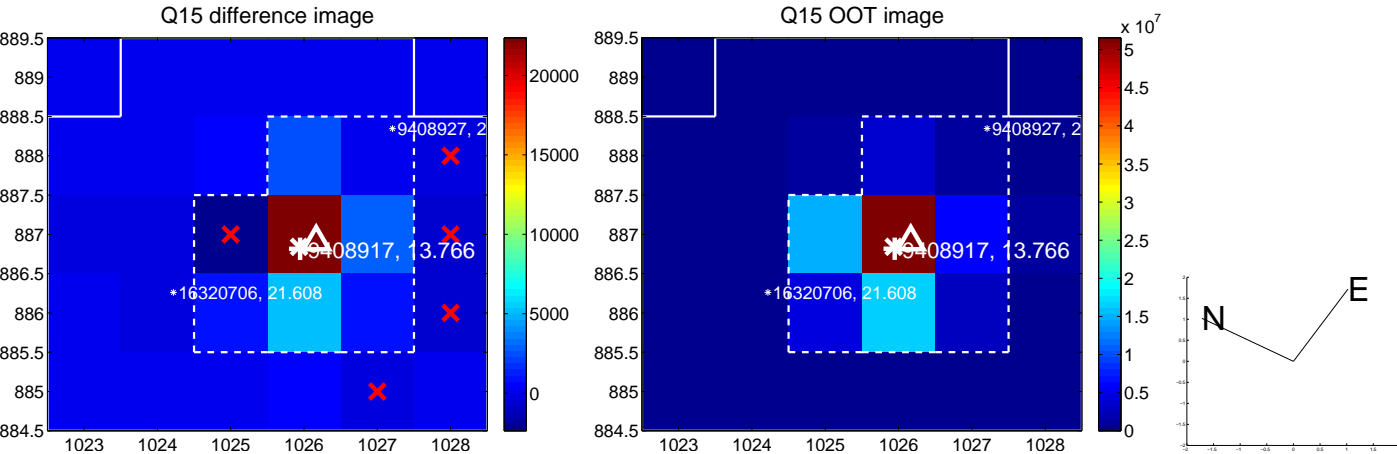
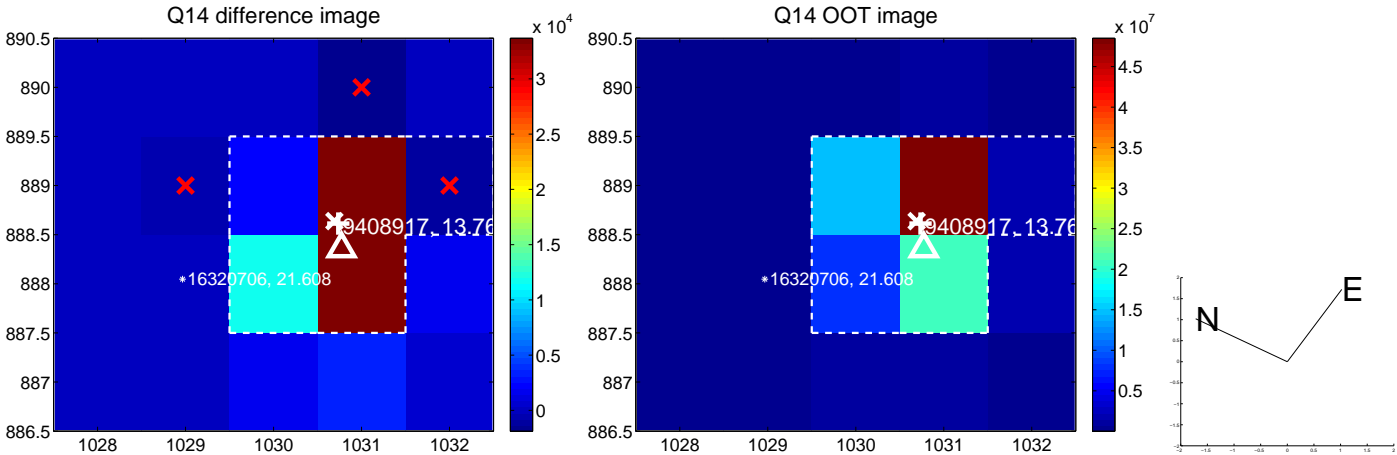
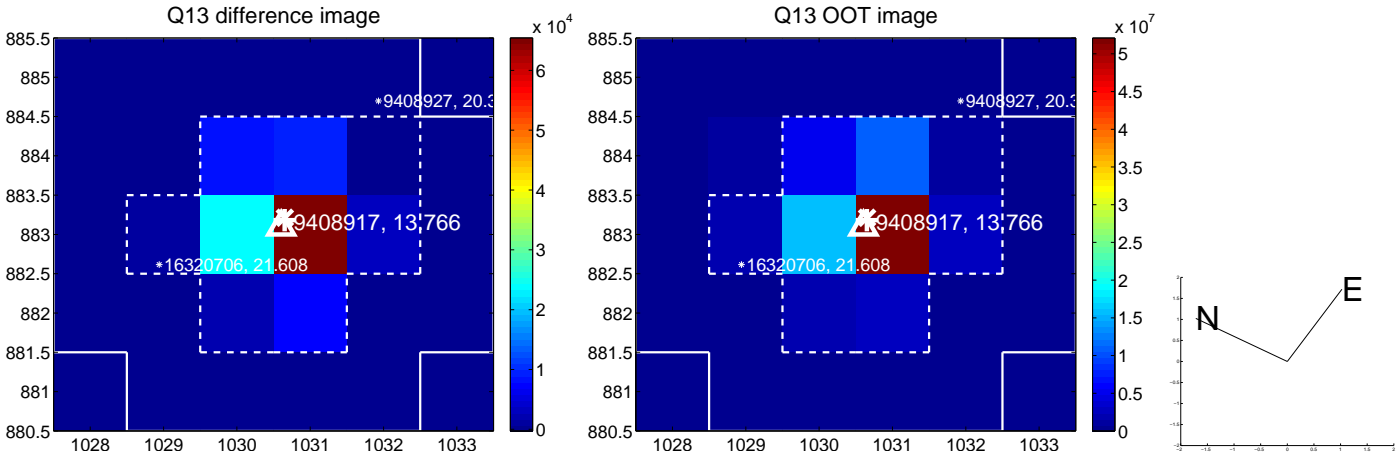
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



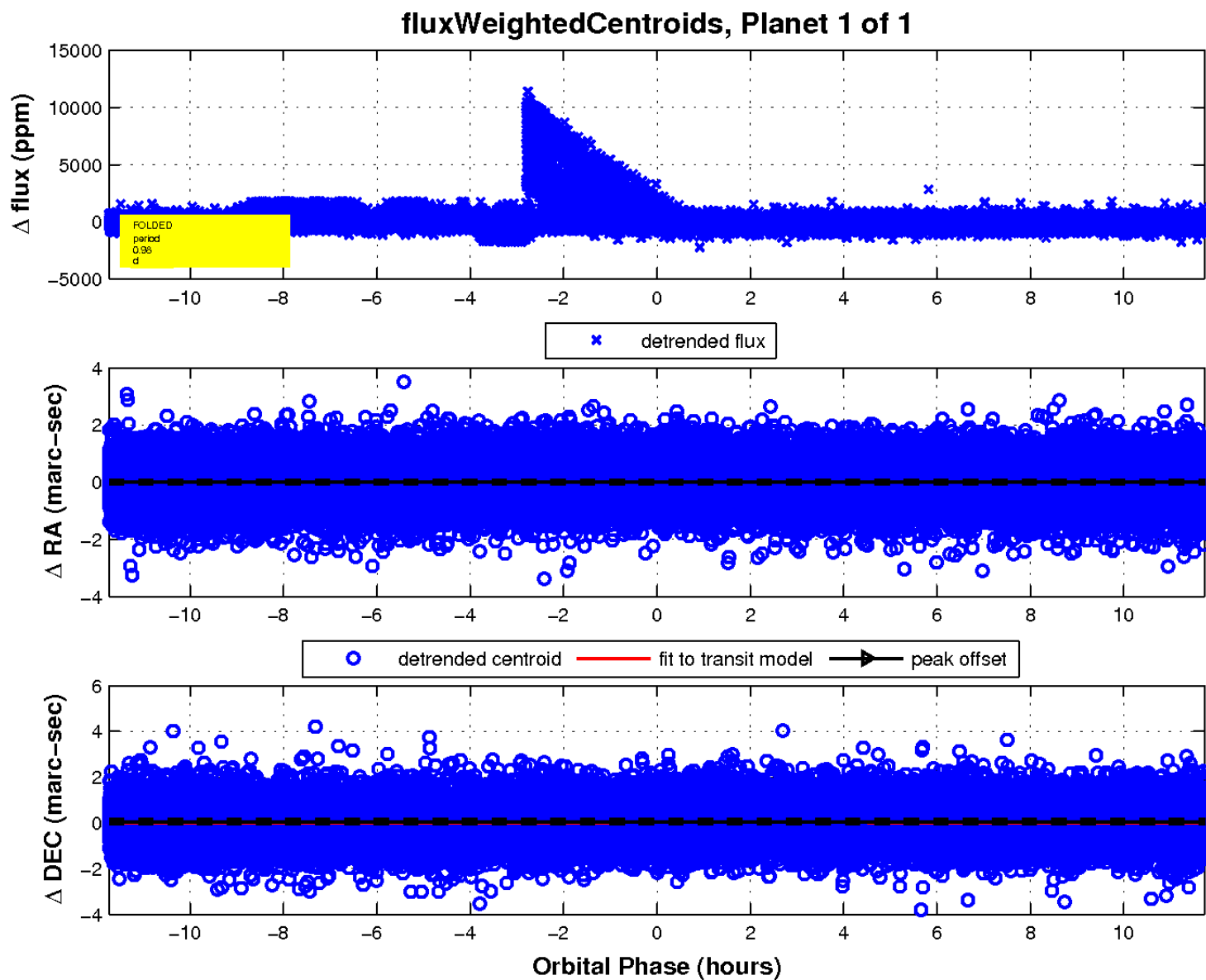
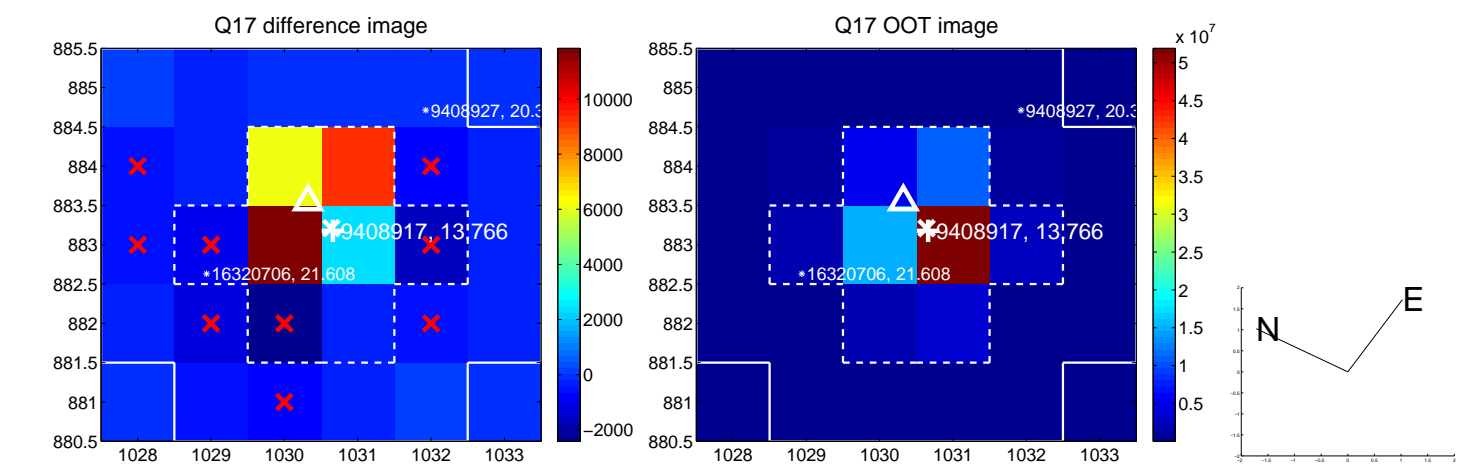
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UKIRT Image

Declination

