

KIC 005473826

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})
005473826-01	OBS	No	1.051486	131.746561	10.9	8.313	22.8	8.3	2.86	11063	0.98	129396.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005473826-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL — 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.

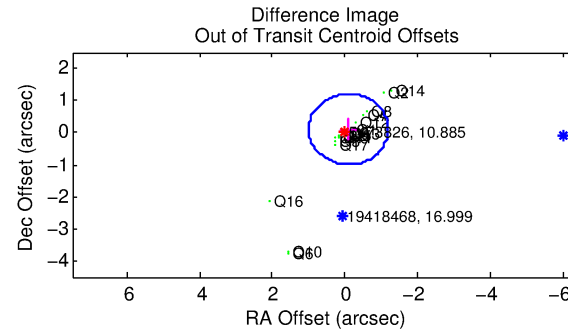
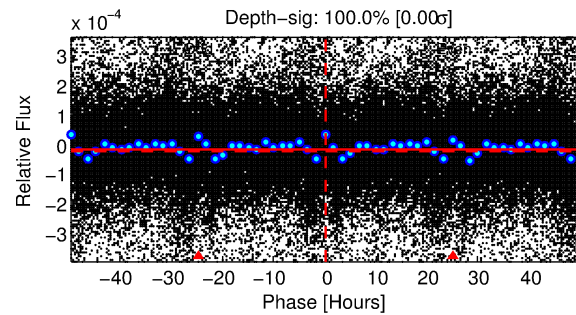
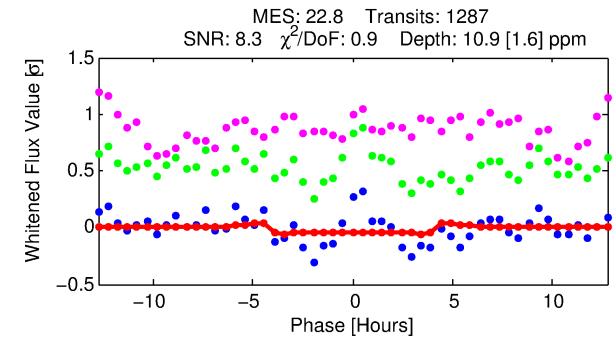
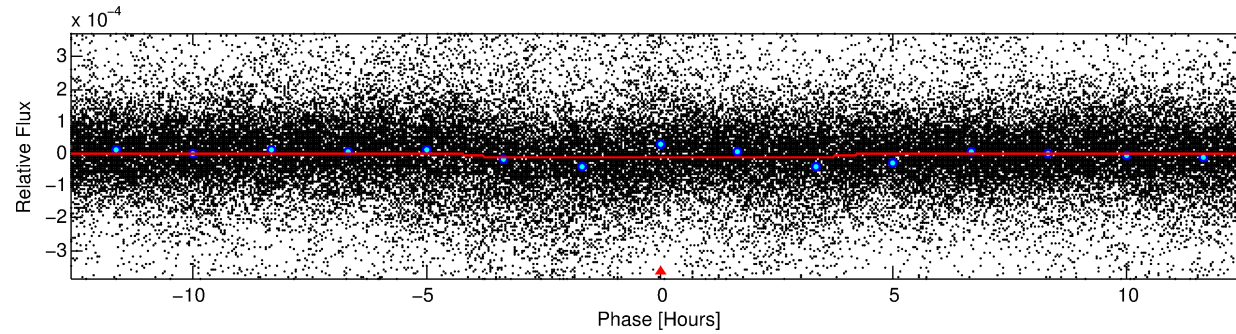
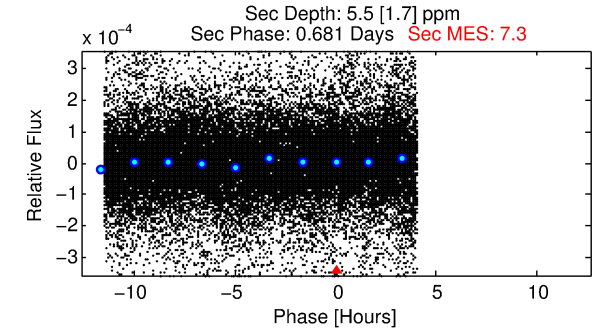
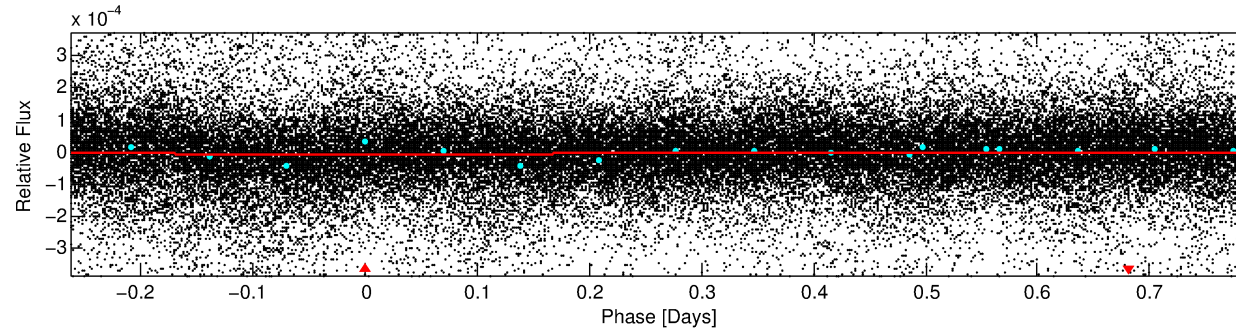
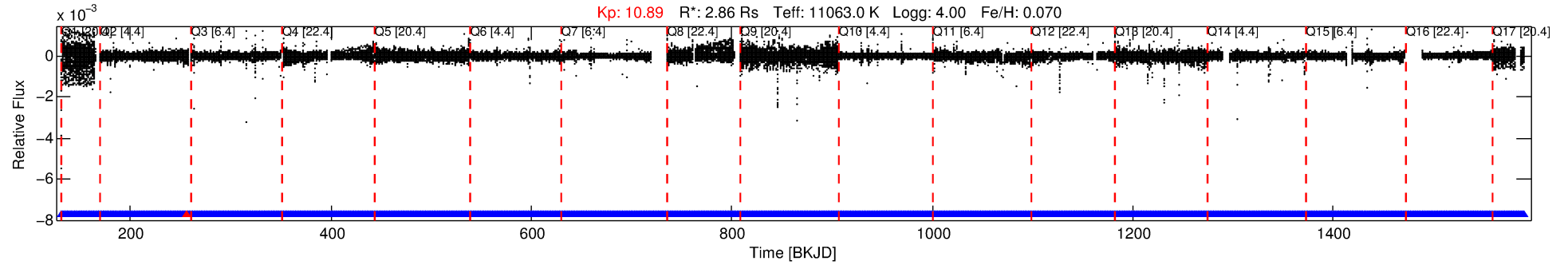
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005473826-01

No Significant Match Found

DV One-Page Summary

KIC: 5473826 Candidate: 1 of 1 Period: 1.051 d



DV Fit Results:

Period = 1.05149 [0.00001] d
Epoch = 131.7466 [0.0035] BKJD
 $R_p/R^* = 0.0031$ [0.0012]
 $a/R^* = 1.15$ [0.88]
 $b = 0.30$ [9.38]
 $\text{Seff} = 129396.25$ [64965.97]
 $T_{\text{eq}} = 4836$ [607] K
 $R_p = 0.98$ [0.51] R_e
 $a = 0.0291$ [0.0089] AU
 $A_g = 2.70$ [2.60] [0.65 σ]
 $T_{\text{eff}} = 9582$ [2065] K [2.20 σ]

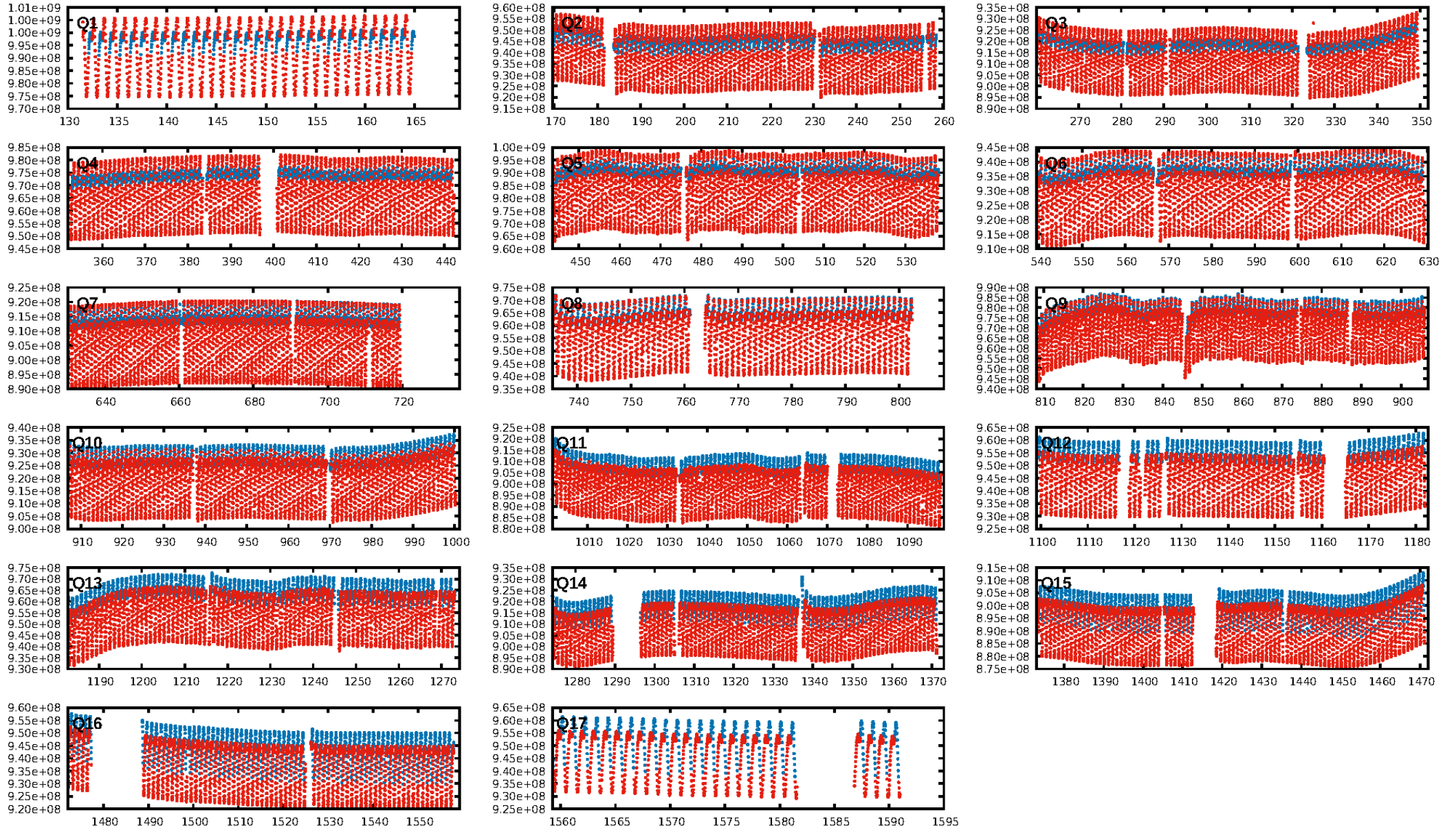
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1228/1229]
GhostDiagnostic-chr: 2.726
Centroid-sig: 0.0%
Centroid-so: 21.410 arcsec [10.96 σ]
OotOffset-rm: 0.139 arcsec [0.38 σ]
KicOffset-rm: 0.290 arcsec [1.07 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.88 [15/17]
DiffImageOverlap-fno: 1.00 [17/17]

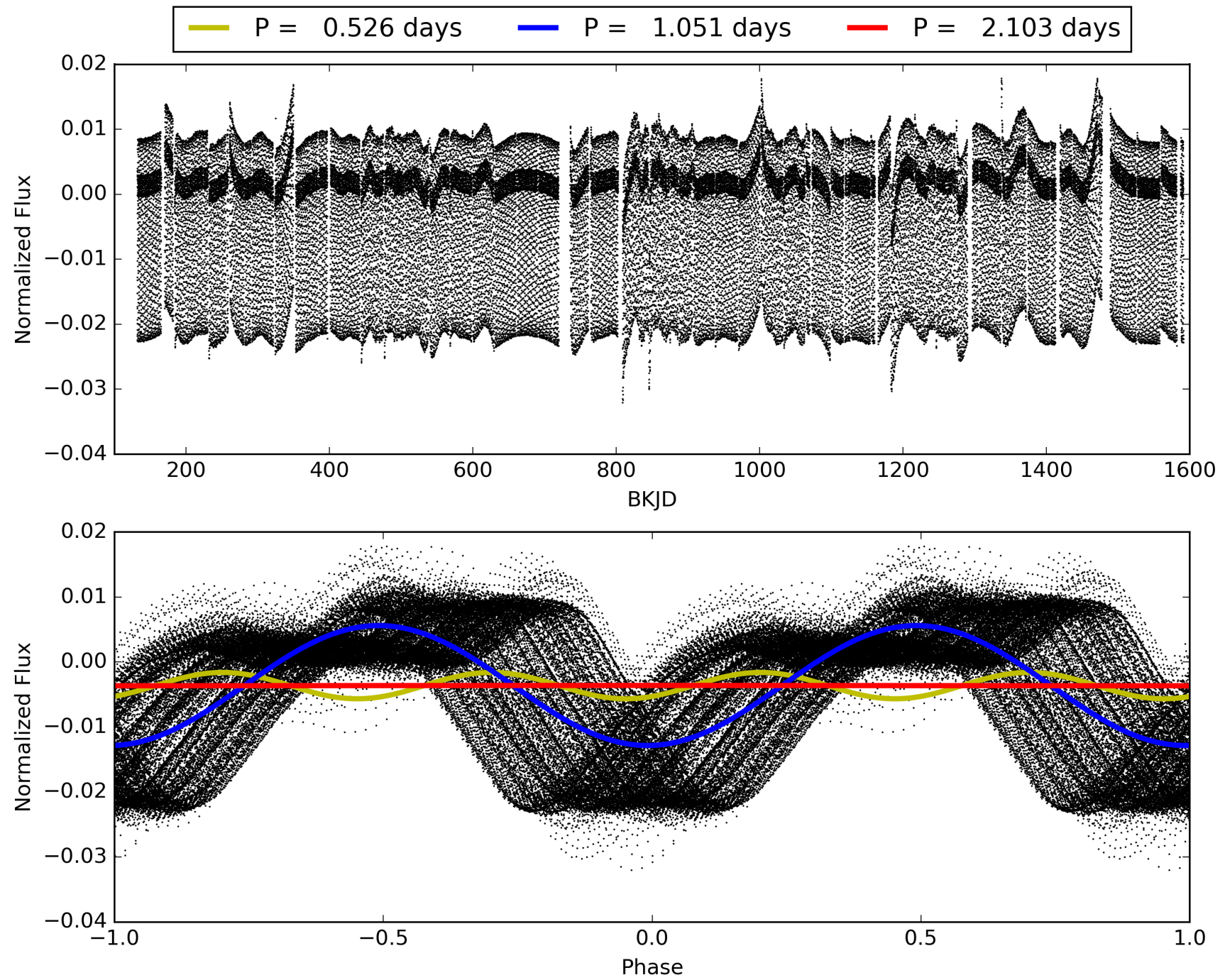
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:45:19 Z

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

TCE 005473826-01, PDC Light Curves

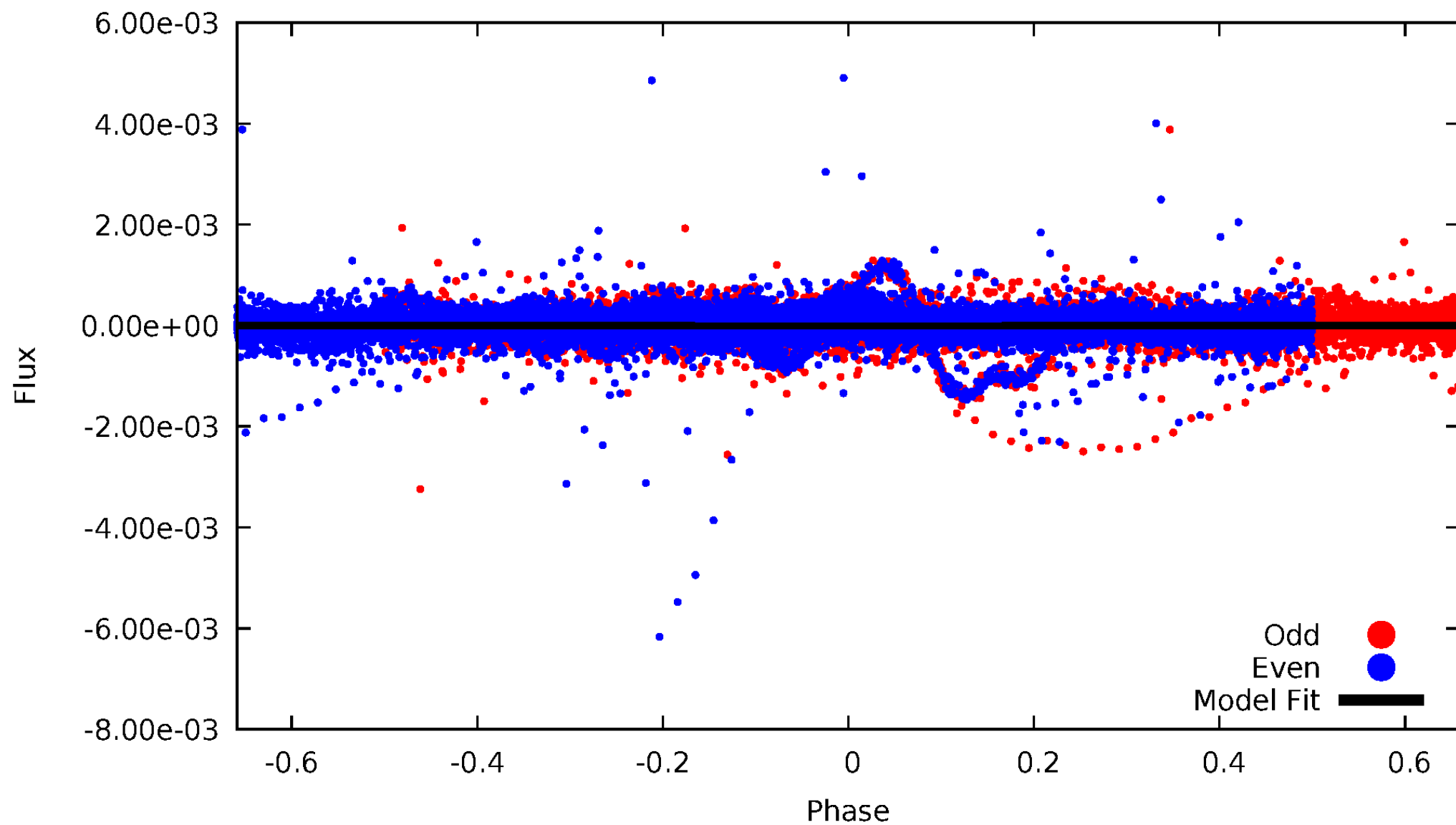


TCE 005473826-01



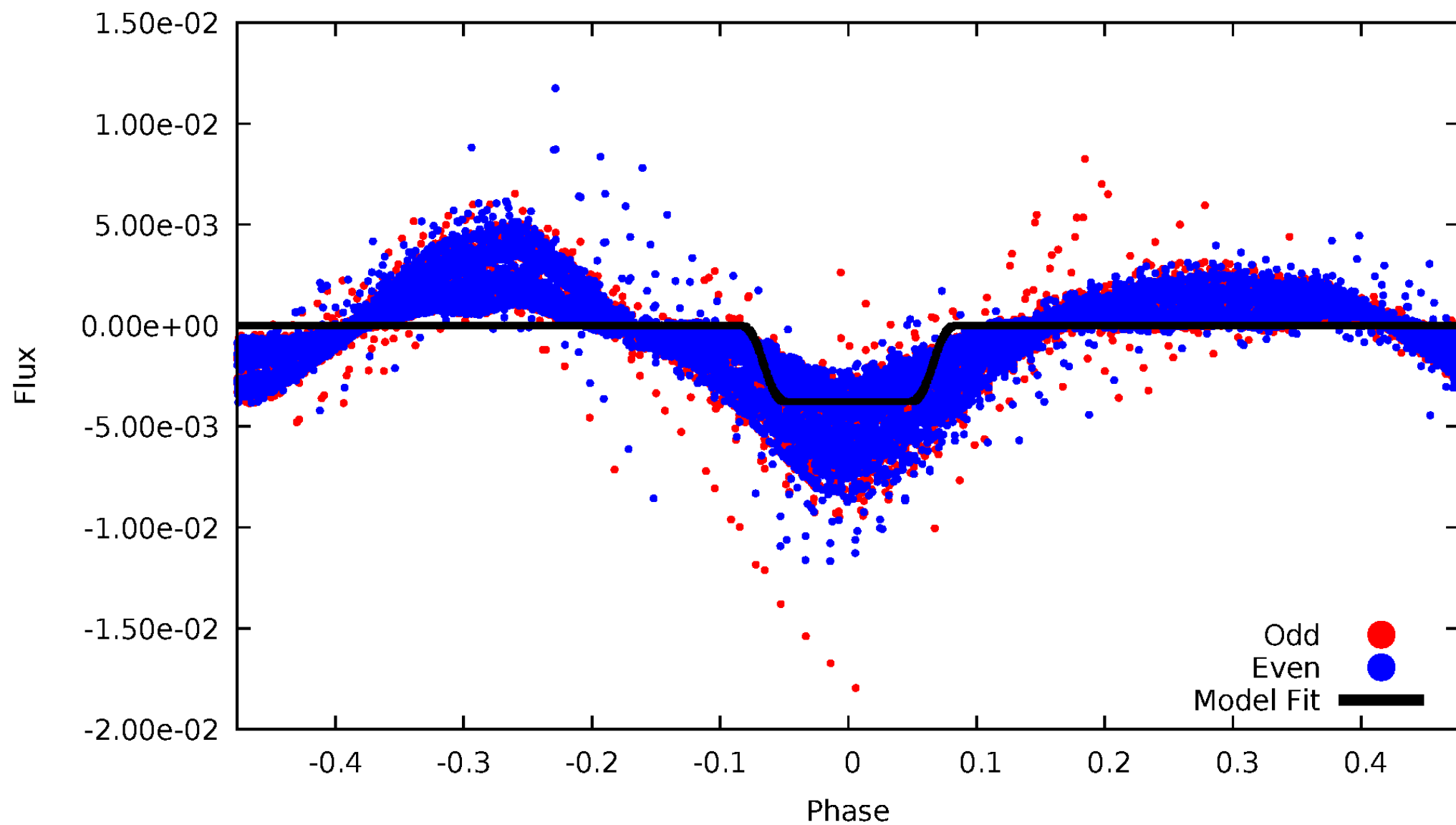
DV Odd/Even

TCE 005473826-01



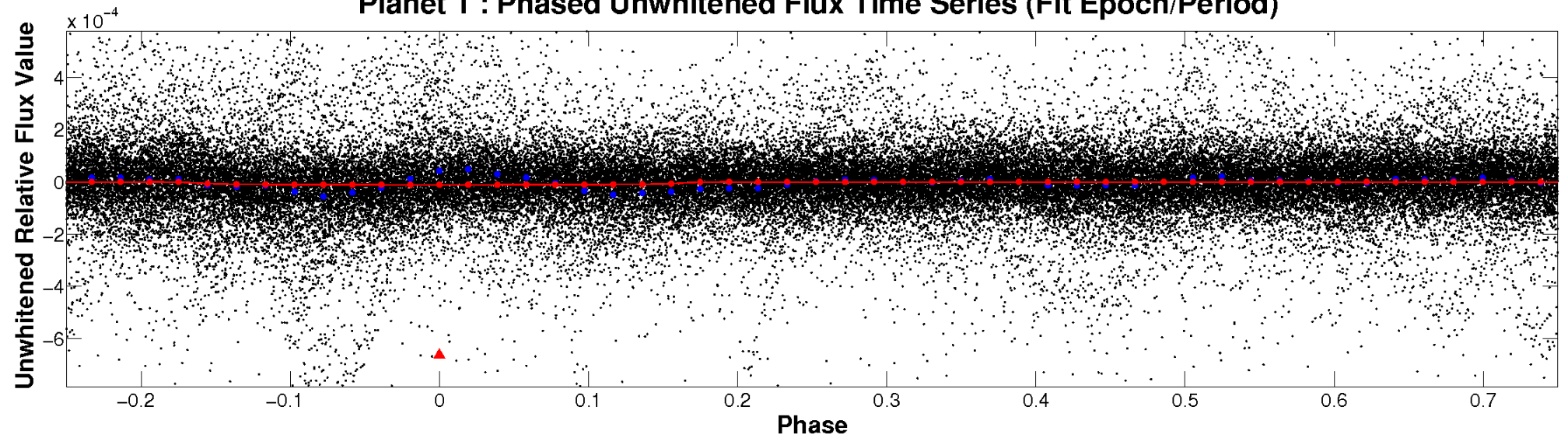
ALT Odd/Even

TCE 005473826-01

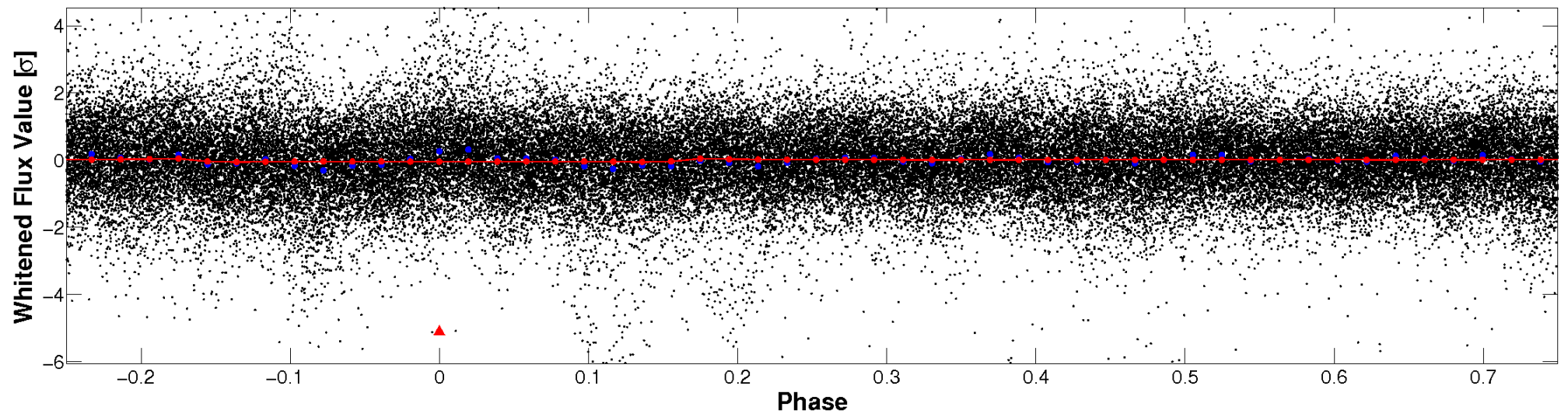


Non-Whitened Vs. Whitened Light Curve

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

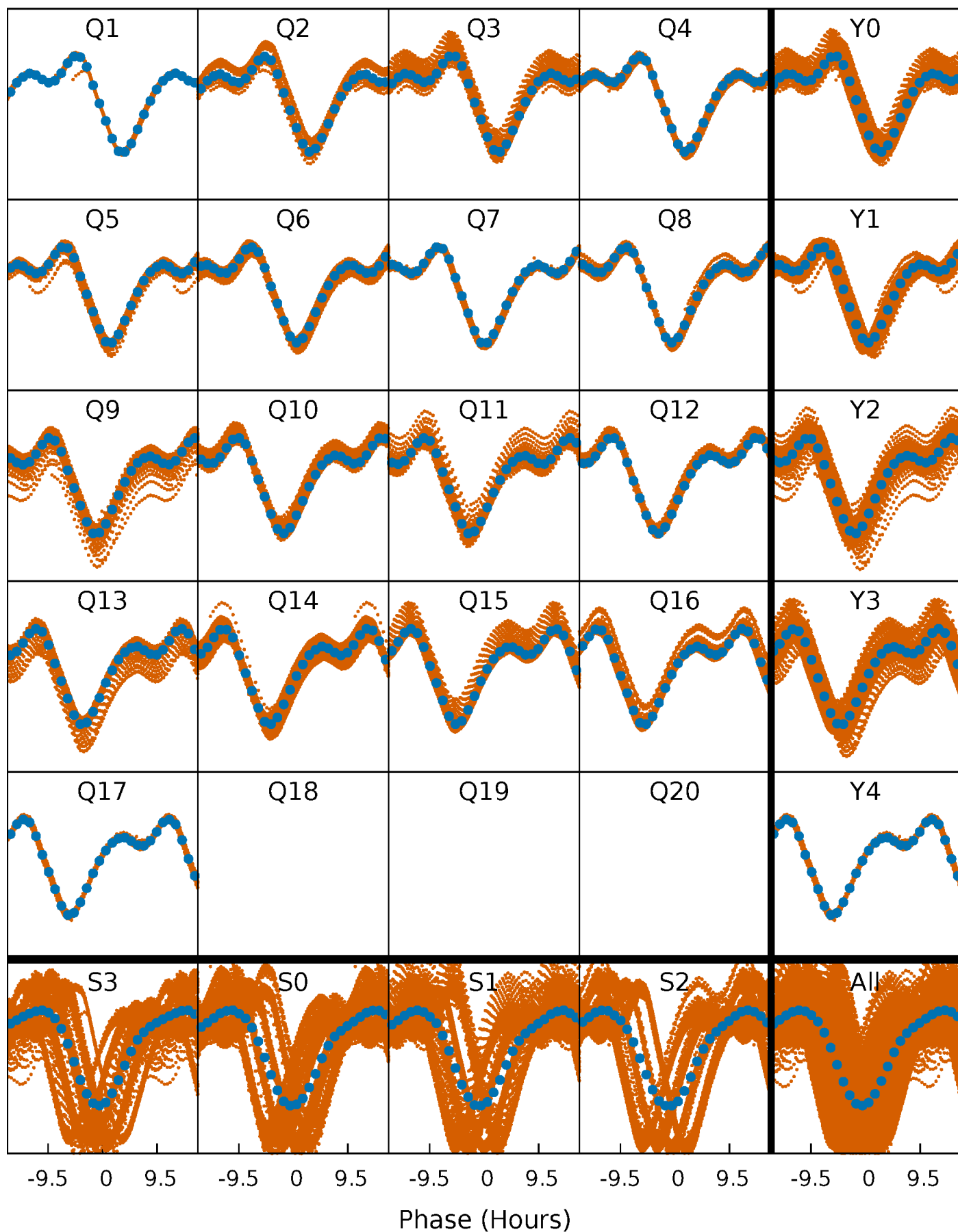


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



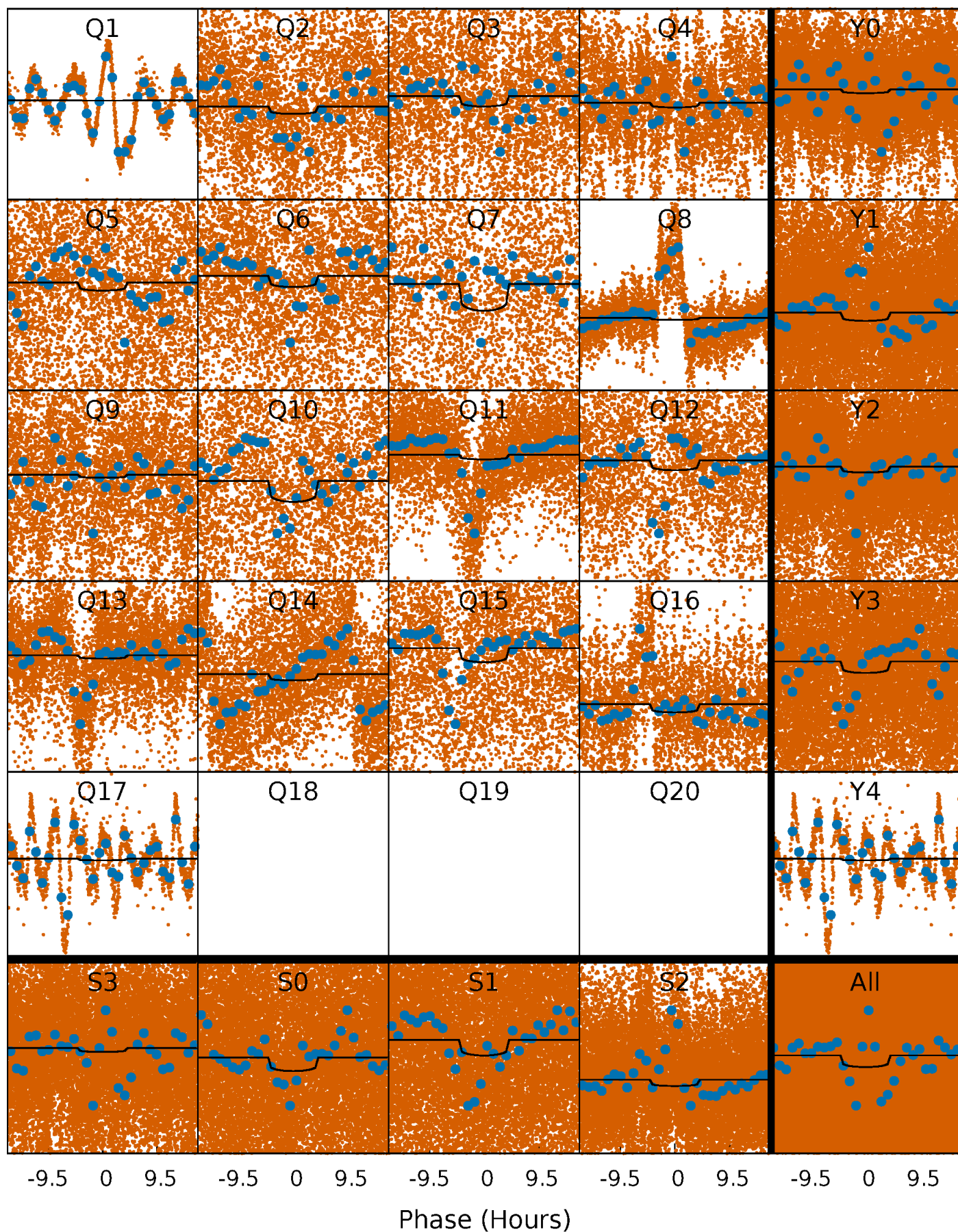
PDC Quarter-Phased Transit Curves

TCE 005473826-01 P= 1.051486 Days $T_0=131.746562$ (BKJD)



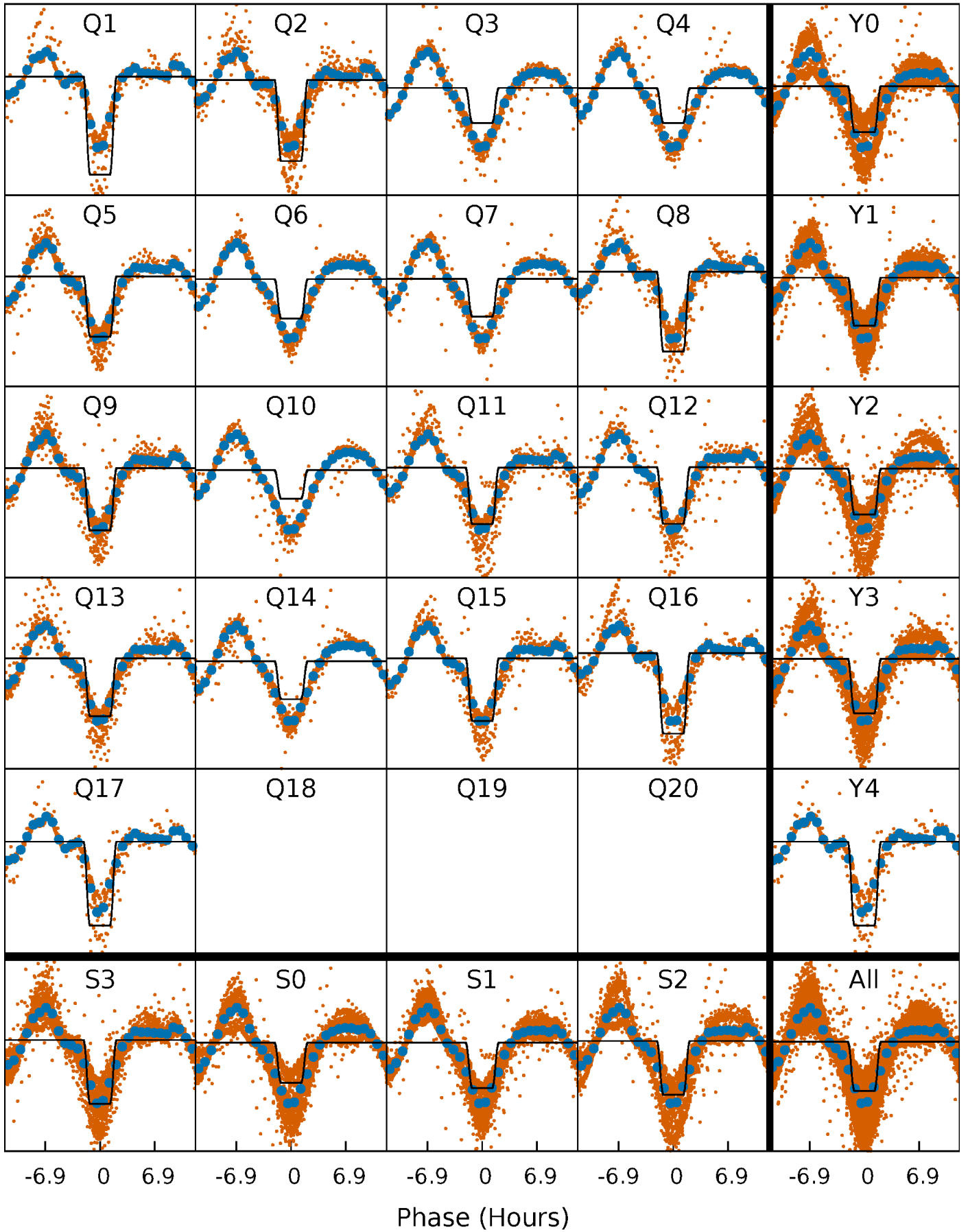
DV Quarter-Phased Transit Curves

TCE 005473826-01 P= 1.051486 Days $T_0=131.746562$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

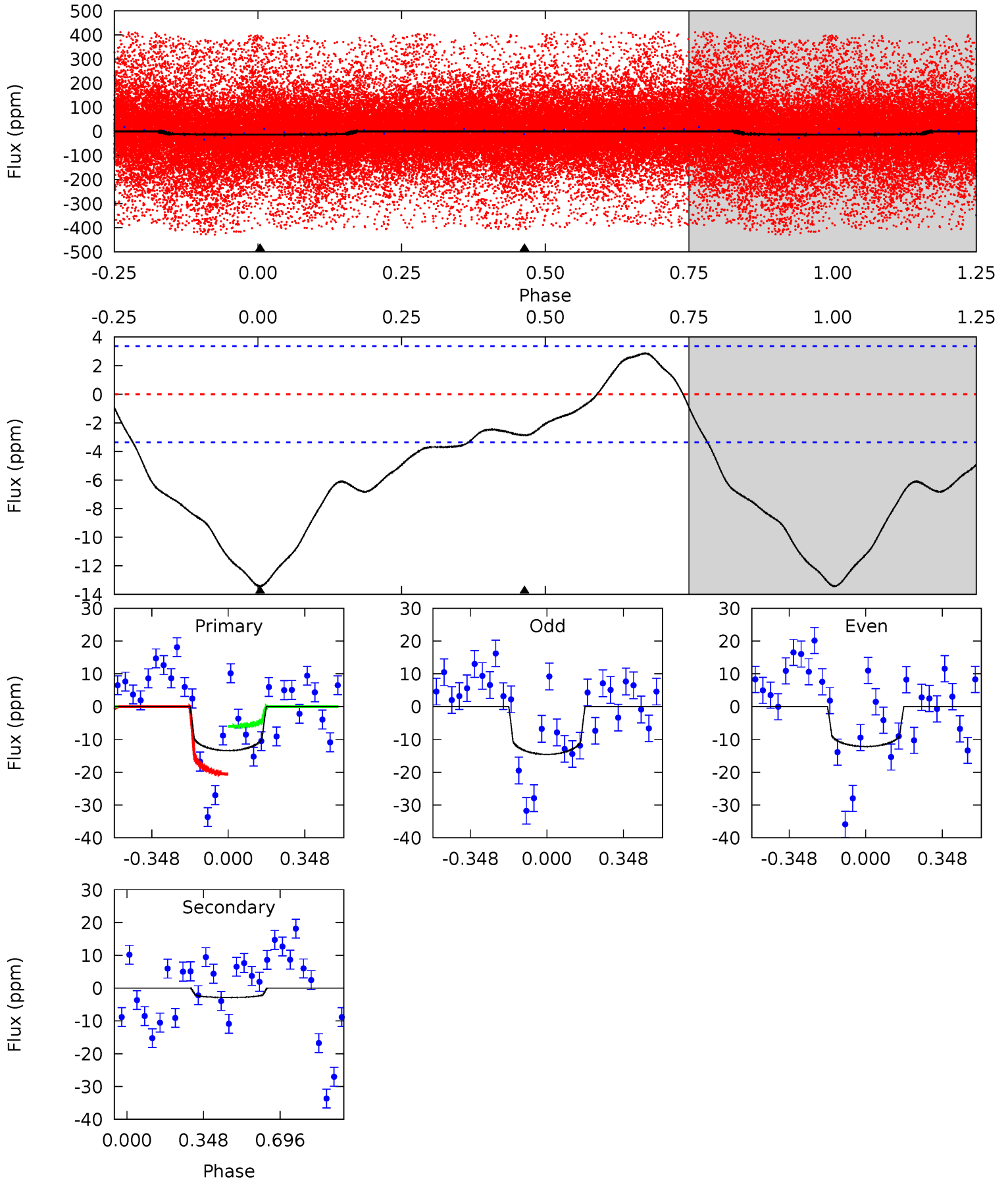
TCE 005473826-01 P= 1.051201 Days $T_0=131.884929$ (BKJD)



DV Model-Shift Uniqueness Test

005473826-01, P = 1.051486 Days, E = 130.695076 Days

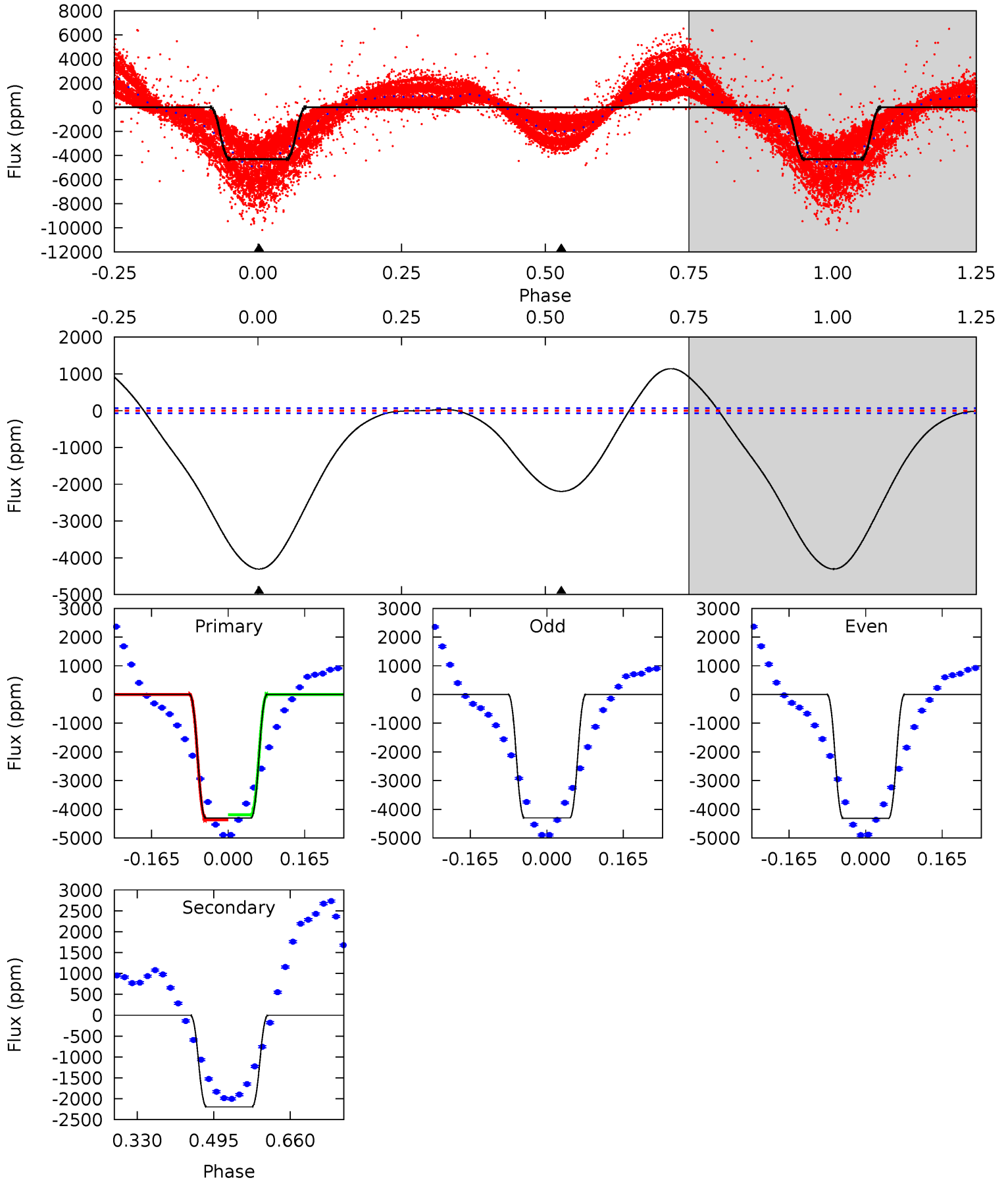
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	3.68	0	0	4.30	0.94	3.07	17.2	17.2	3.68	3.68	1.55	0.96	0.18	9.74



Alt Model-Shift Uniqueness Test

005473826-01, P = 1.051201 Days, E = 130.833728 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
278.8	142.1	0	0	4.46	1.39	32.4	278.8	278.8	142.1	142.1	0.32	1.16	0.21	5.48



Stellar Parameters For KIC 005473826

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	11063^{+348}_{-502}	$3.999^{+0.266}_{-0.143}$	$0.070^{+0.050}_{-0.650}$	$2.857^{+0.572}_{-0.981}$	$2.966^{+0.189}_{-0.754}$	$0.179^{+0.346}_{-0.065}$
	+3%/-5%	+7%/-4%	+71%/-929%	+20%/-34%	+6%/-25%	+193%/-36%
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 005473826-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3 ± 1	$0.92^{+0.40}_{-0.36}$	6648^{+539}_{-608}	6770^{+3018}_{-1442}	$1.461^{+2.821}_{-0.746}$
Alt.	-2195 ± 15	$19.04^{+2.28}_{-3.56}$	6724^{+456}_{-597}	8750^{+273}_{-329}	$2.810^{+1.103}_{-0.566}$

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

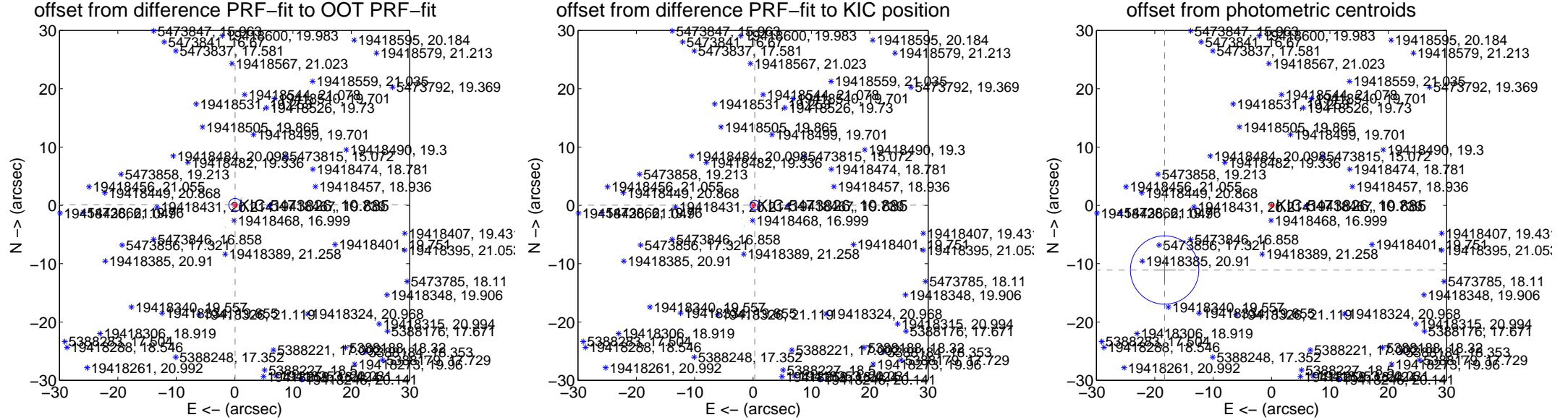
DV Centroid Data

Supplemental centroid analysis for 005473826-01. **Kepler magnitude: 10.88.** Transit SNR 8.26

There are 15 quarters with good PRF difference image offsets

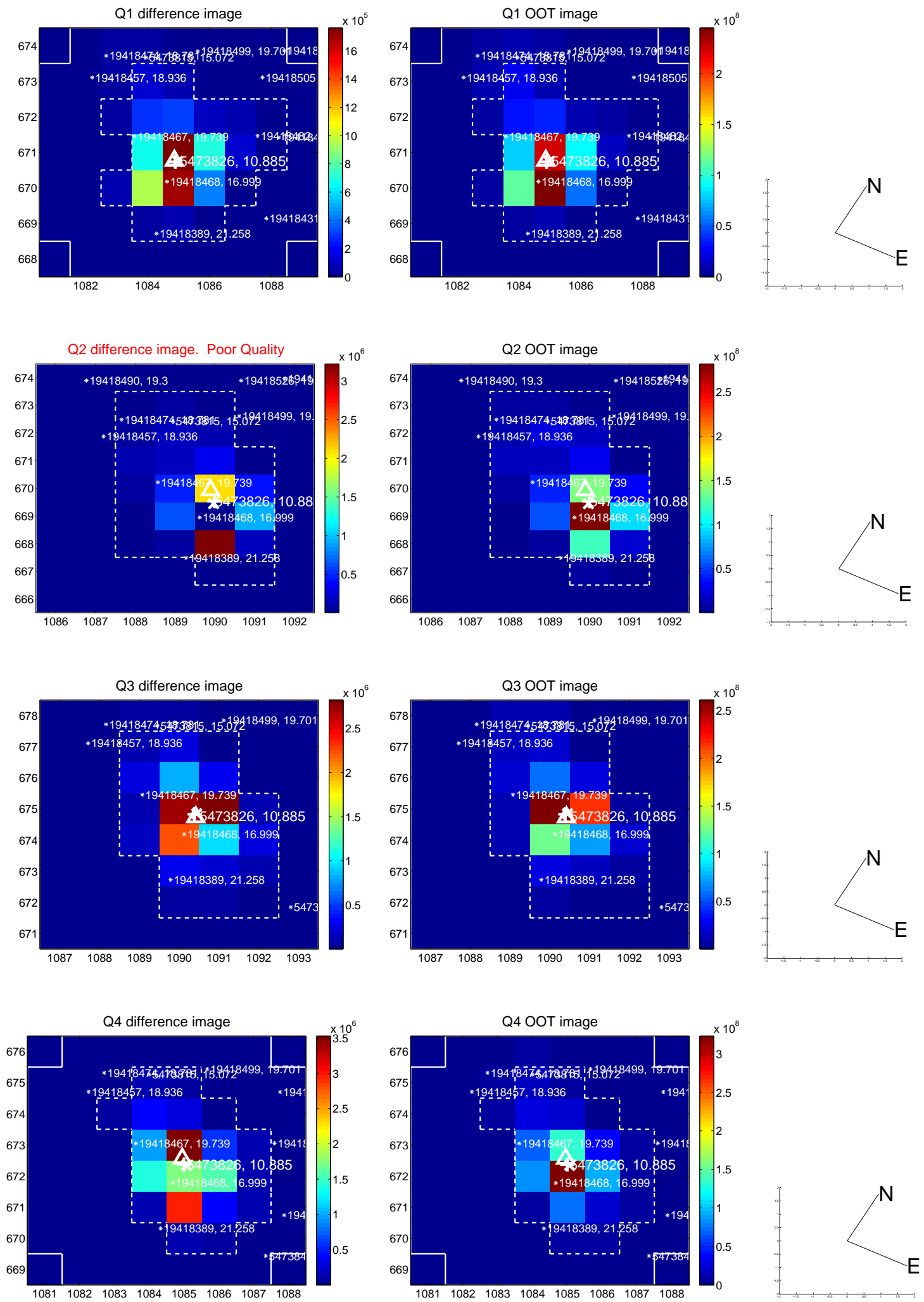
The direct PRF centroid is offset from the target star catalog position by about 0.31 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.139 ± 0.366	0.38	-0.096 ± 0.209	0.101 ± 0.325
PRF-fit source offset from KIC position	0.290 ± 0.271	1.07	-0.287 ± 0.230	0.042 ± 0.331
photometric centroid source offset	21.41 ± 1.95	10.96	18.32 ± 1.90	-11.08 ± 2.10

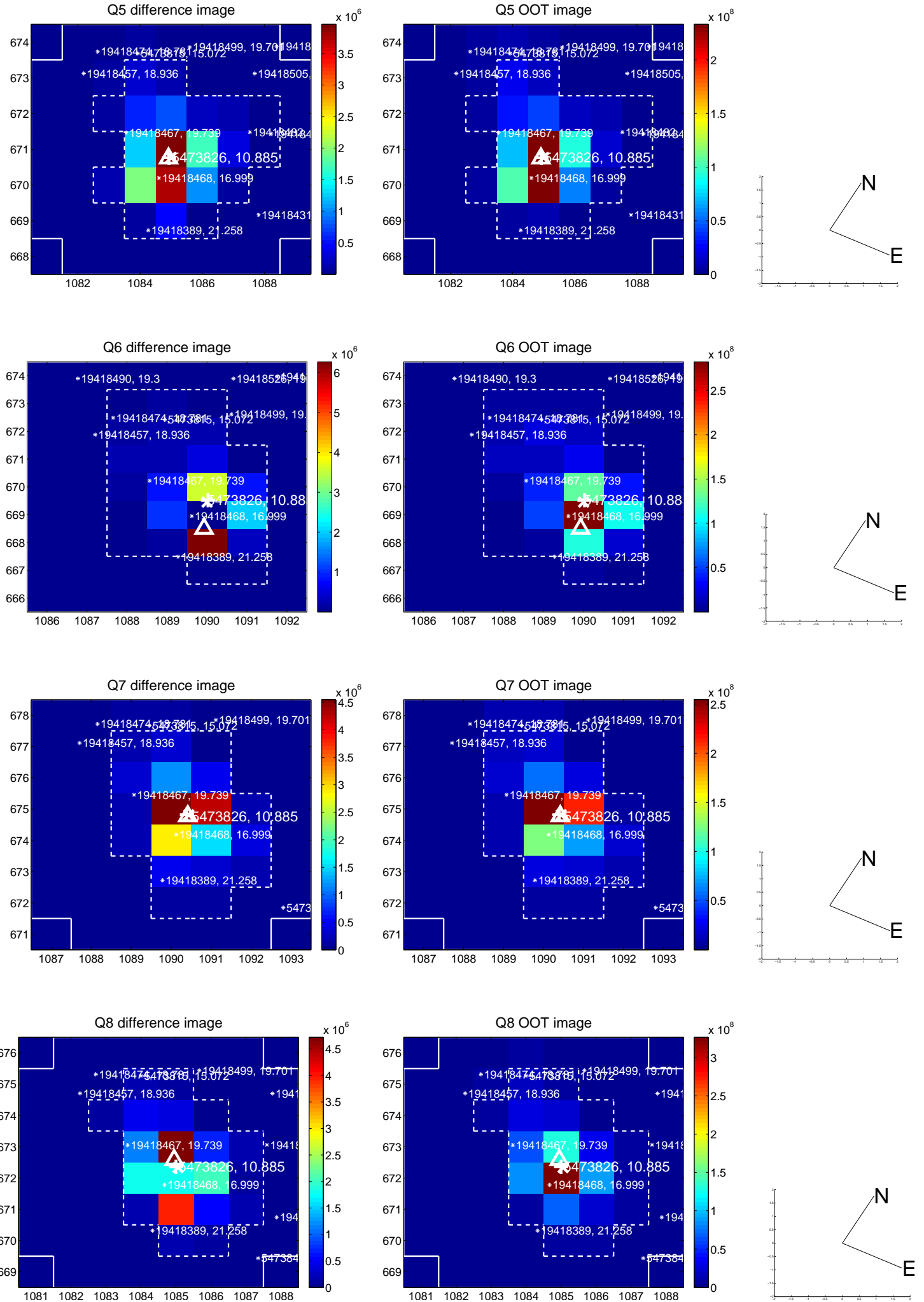


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

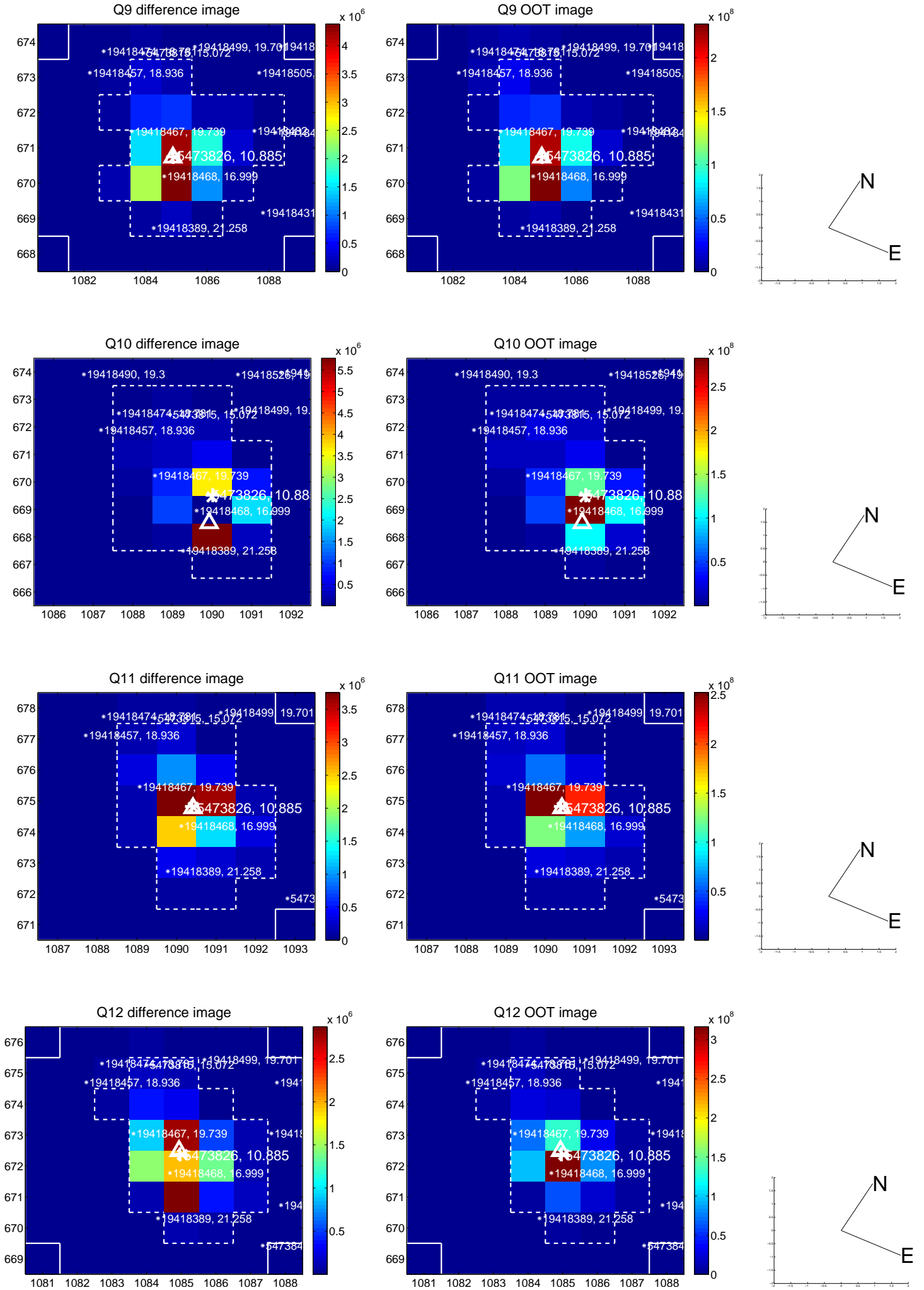
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



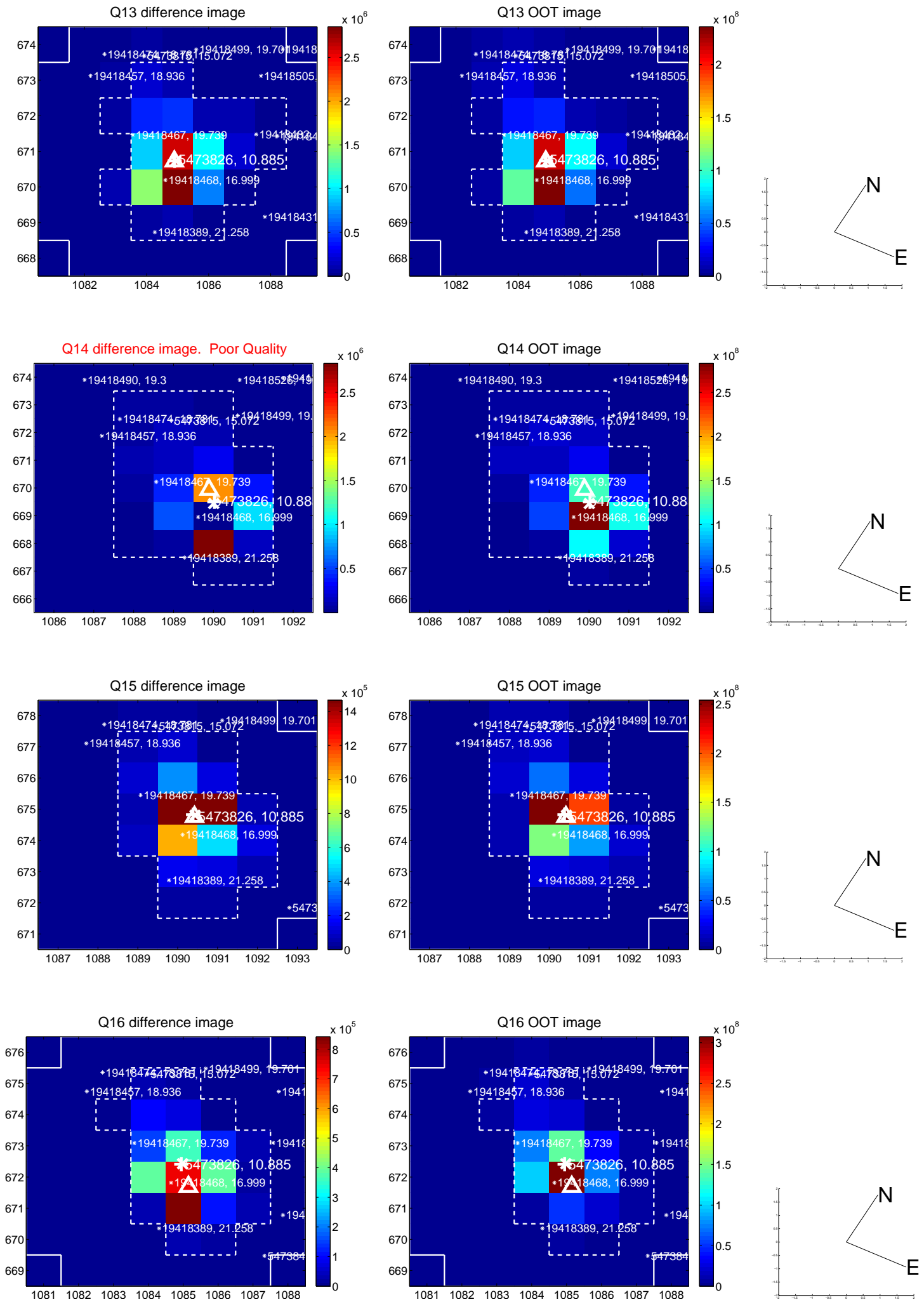
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



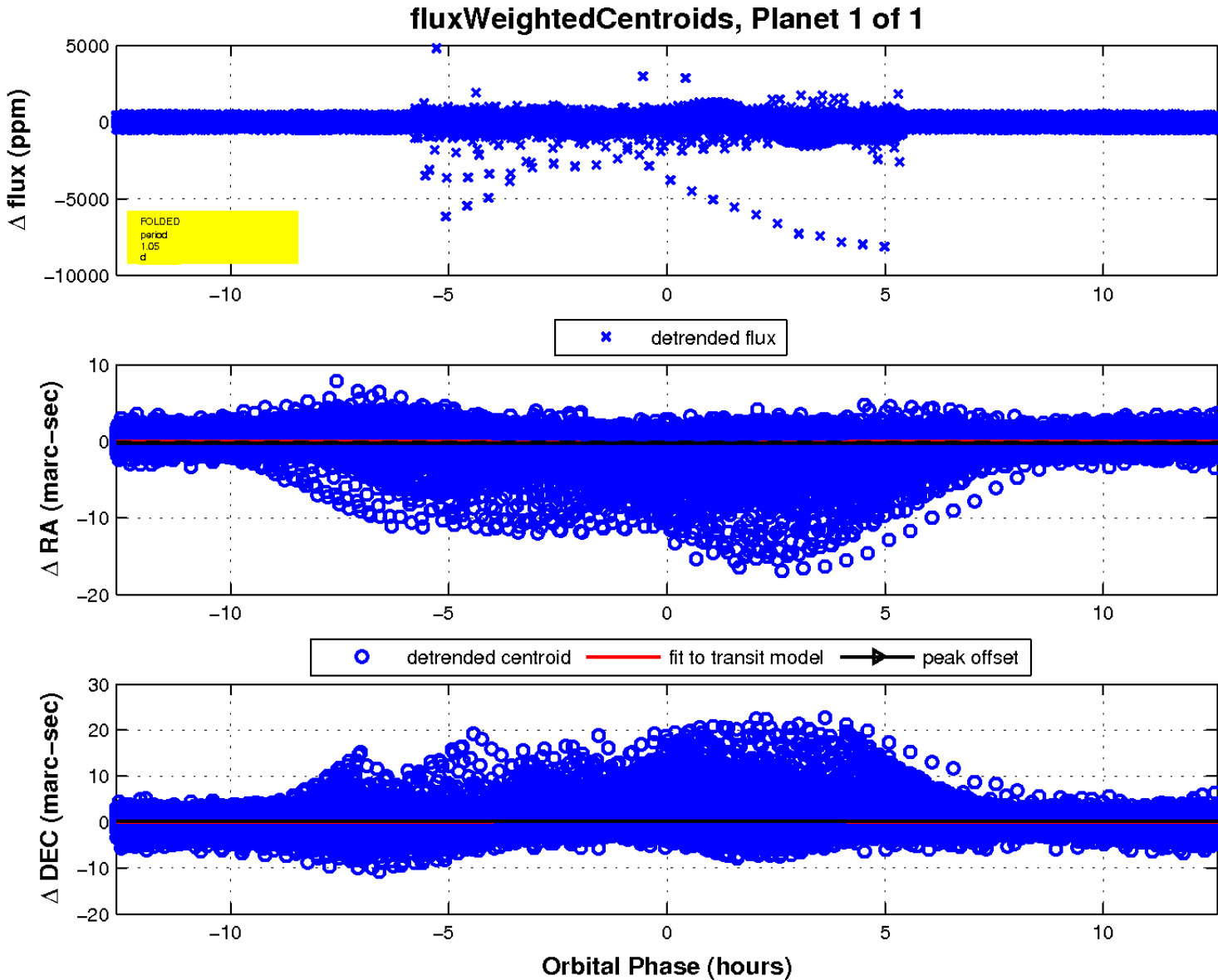
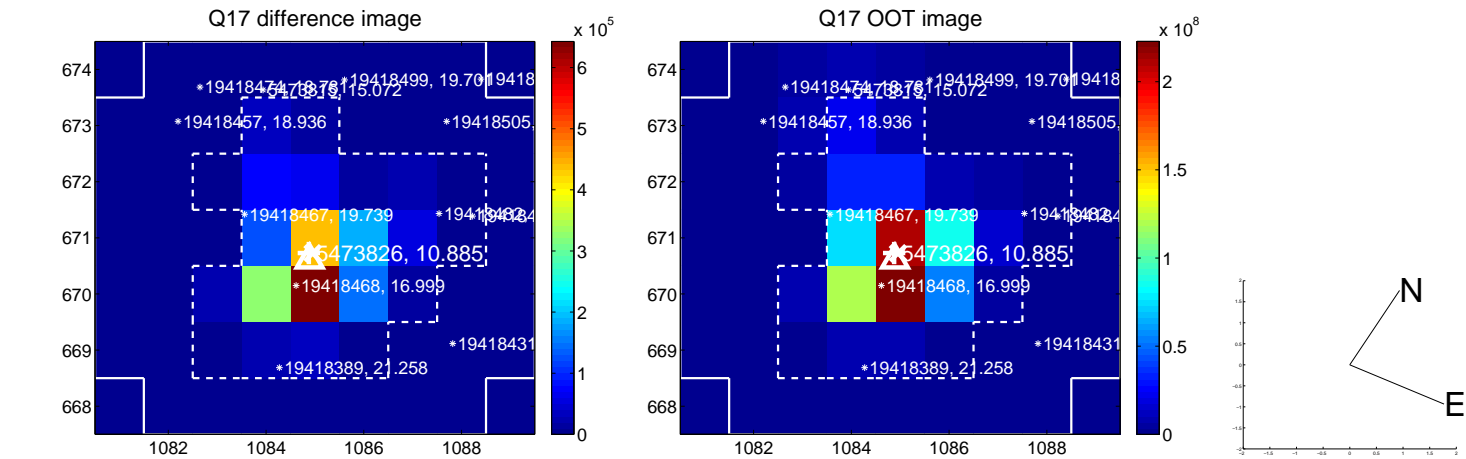
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



UKIRT Image

Declination

