

KIC 004481004

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})
004481004-01	OBS	No	1.271999	132.782271	154.8	9.908	10.7	10.1	2.73	7045	6.42	22635.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004481004-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV

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

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

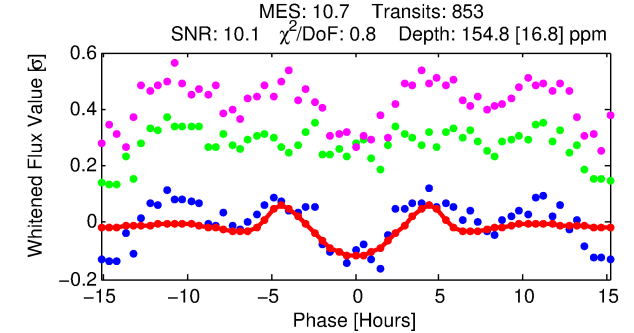
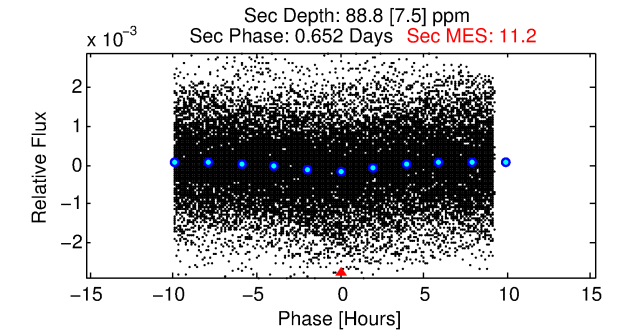
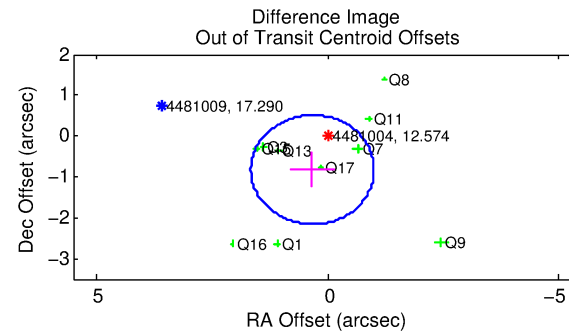
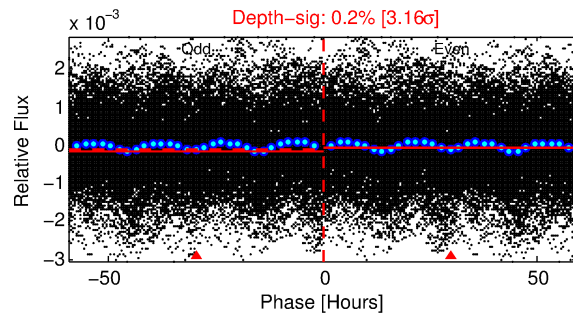
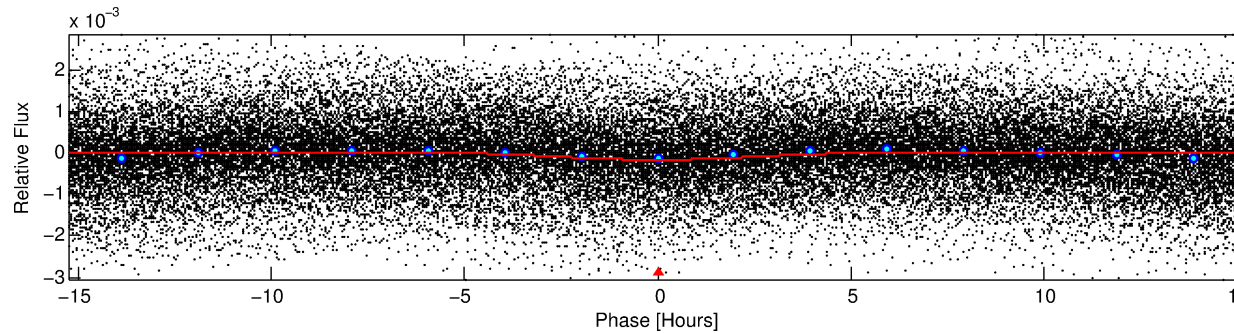
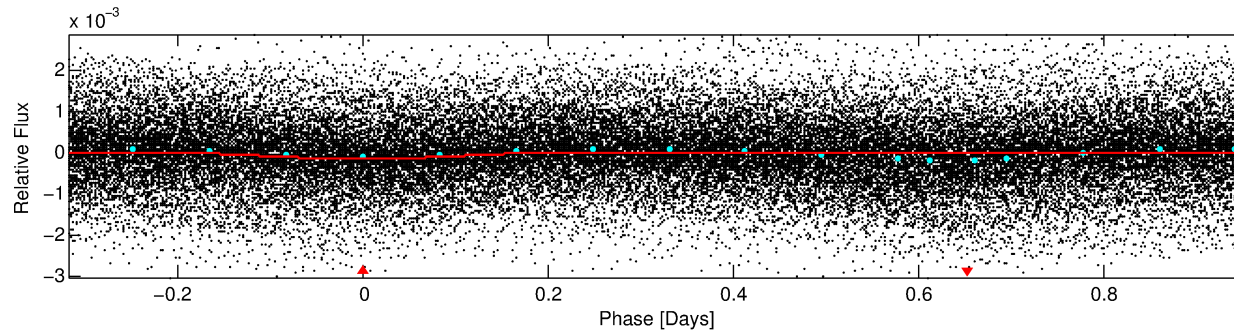
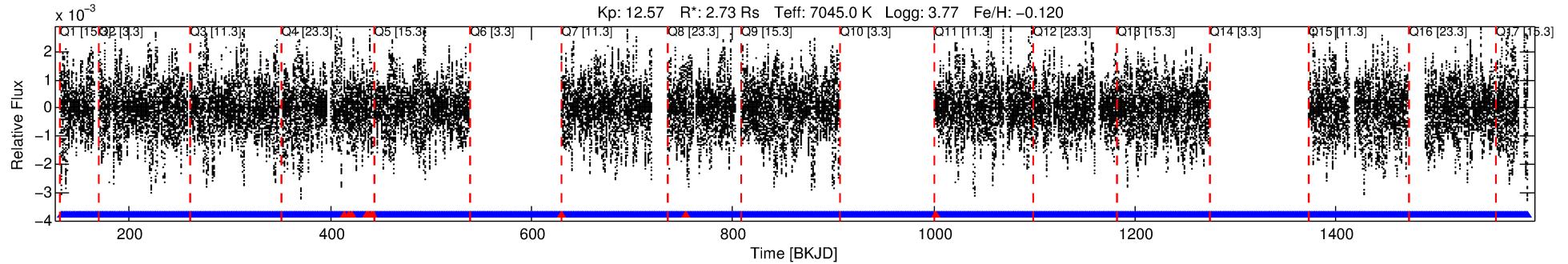
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004481004-01

No Significant Match Found

DV One-Page Summary

KIC: 4481004 Candidate: 1 of 1 Period: 1.272 d



DV Fit Results:

Period = 1.27200 [0.00002] d
Epoch = 132.7823 [0.0071] BKJD
Rp/R* = 0.0216 [0.0093]
a/R* = 1.03 [0.01]
b = 1.00 [0.01]
Seff = 22635.31 [11038.65]
Teq = 3128 [381] K
Rp = 6.42 [3.46] Re
a = 0.0269 [0.0080] AU
Ag = 0.86 [0.85] [-0.17σ]
Teffp = 4656 [1026] K [1.40σ]

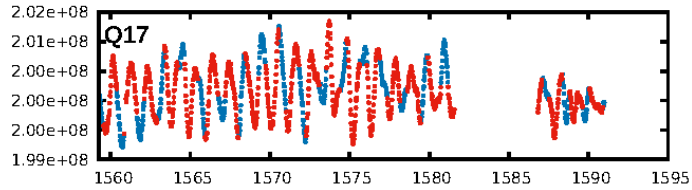
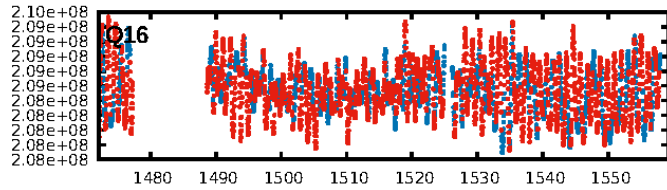
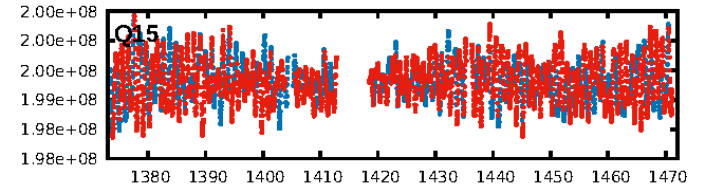
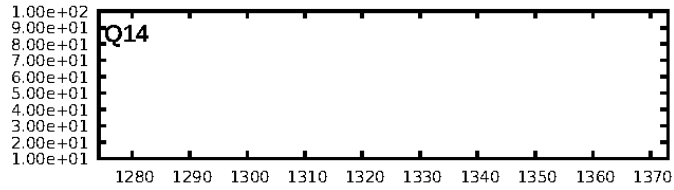
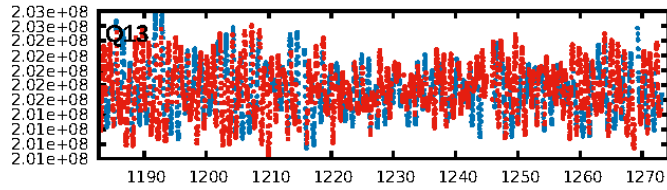
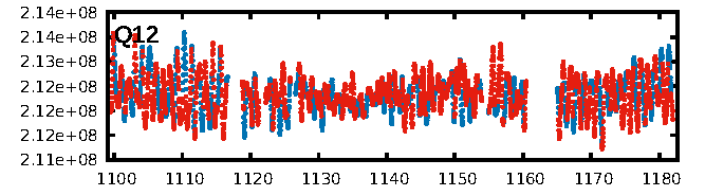
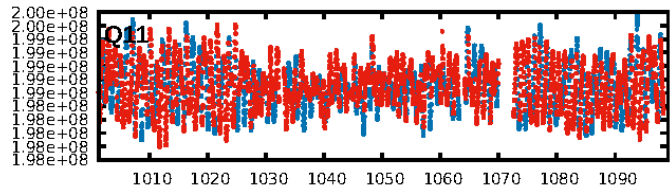
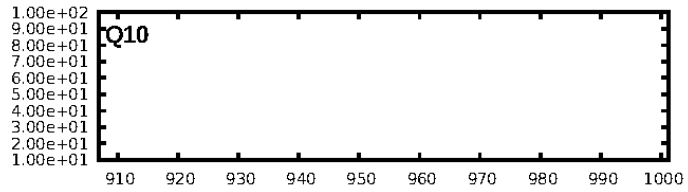
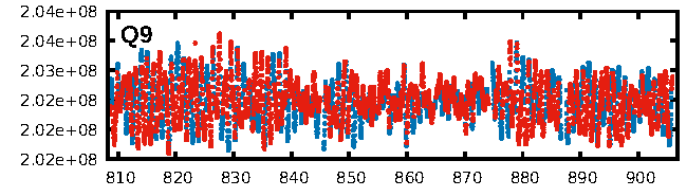
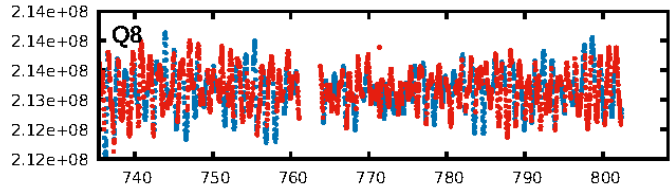
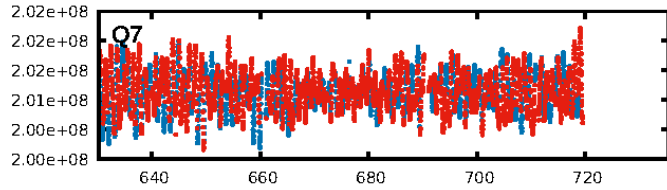
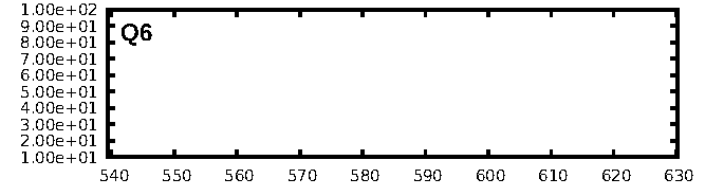
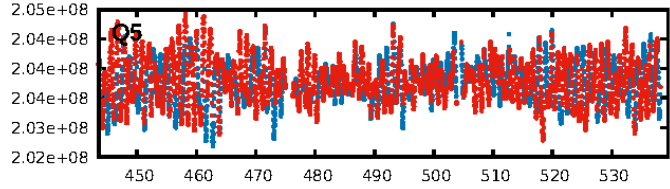
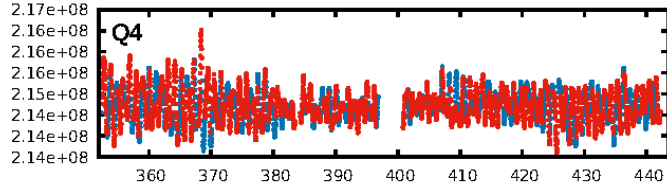
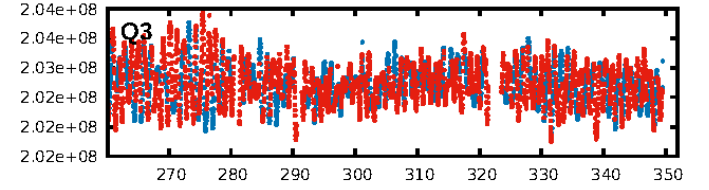
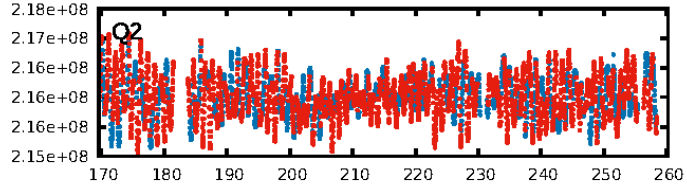
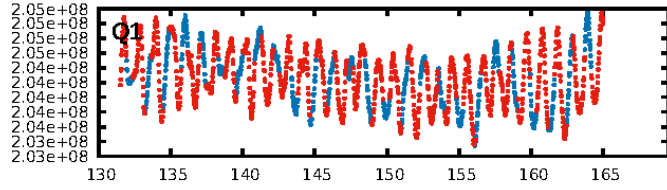
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.41e-02
RollingBand-fgt: 0.99 [794/804]
GhostDiagnostic-chr: 1.003
Centroid-sig: 97.6%
Centroid-so: 0.148 arcsec [1.09σ]
OotOffset-rm: 0.887 arcsec [1.99σ]
OotOffset-st: 0/4/2/4 [10]
KicOffset-rm: 0.834 arcsec [2.03σ]
KicOffset-st: 0/4/2/4 [10]
DiffImageQuality-fgm: 0.40 [4/10]
DiffImageOverlap-fno: 1.00 [14/14]

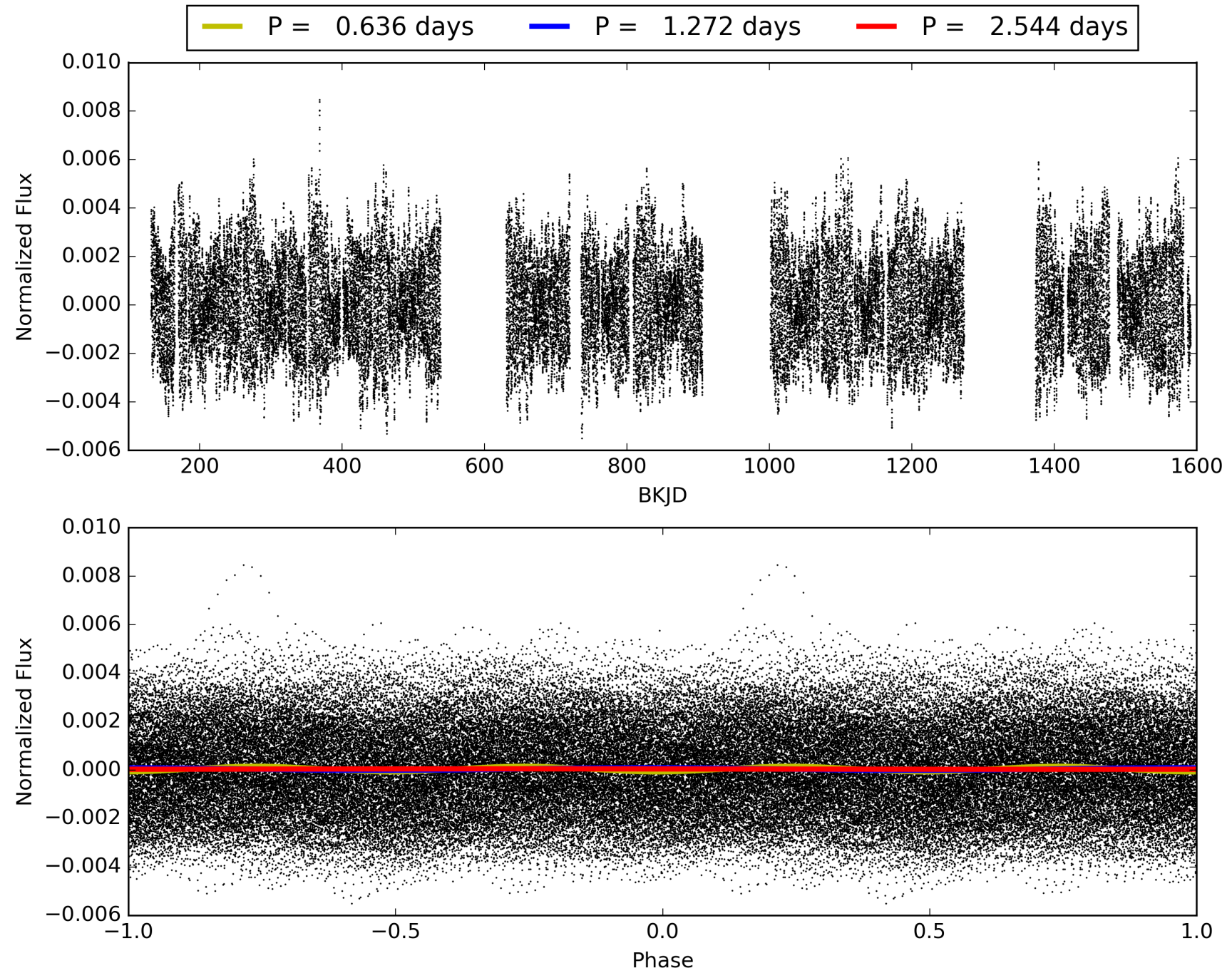
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:15:27 Z

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

TCE 004481004-01, PDC Light Curves

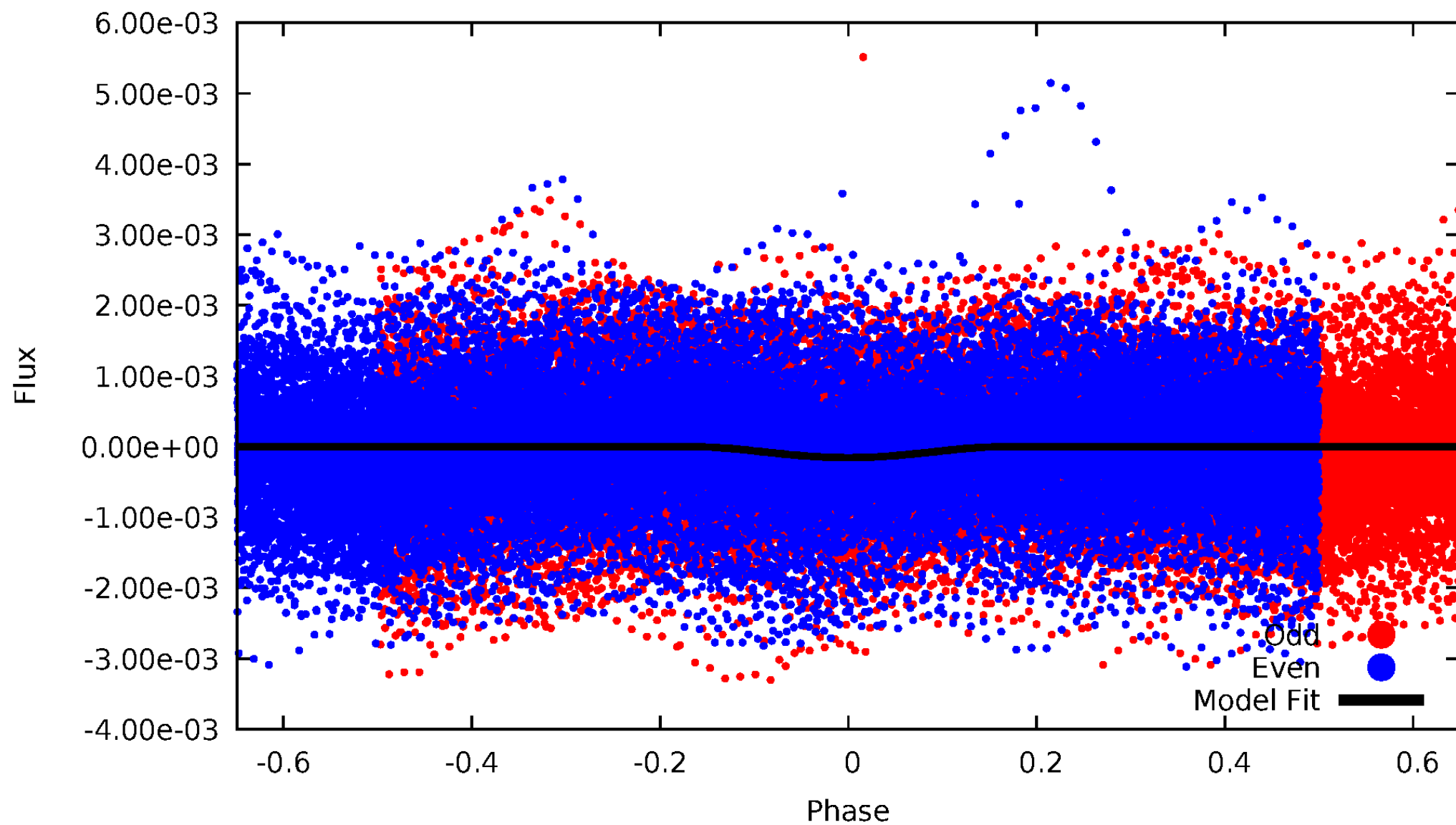


TCE 004481004-01



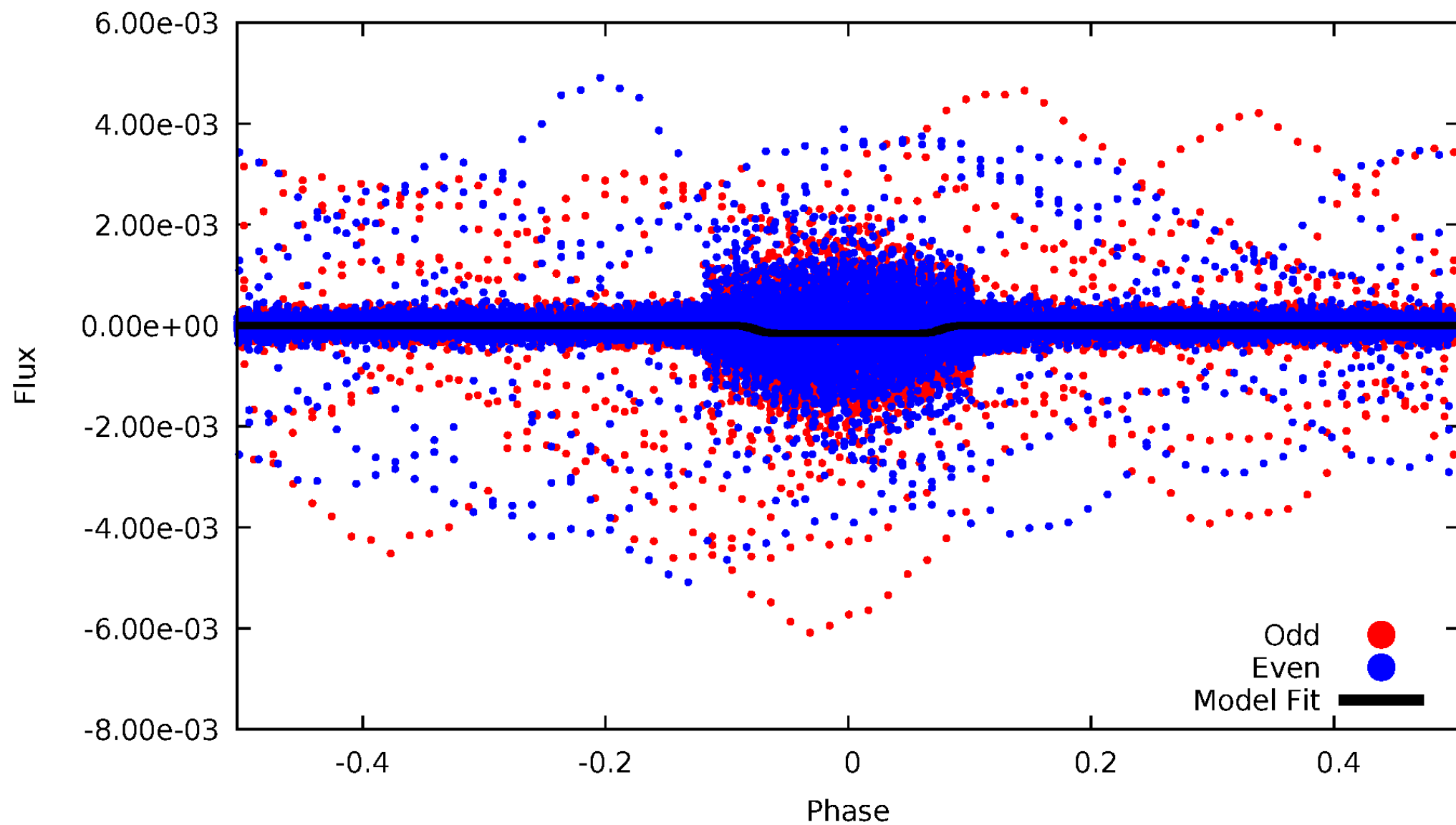
DV Odd/Even

TCE 004481004-01

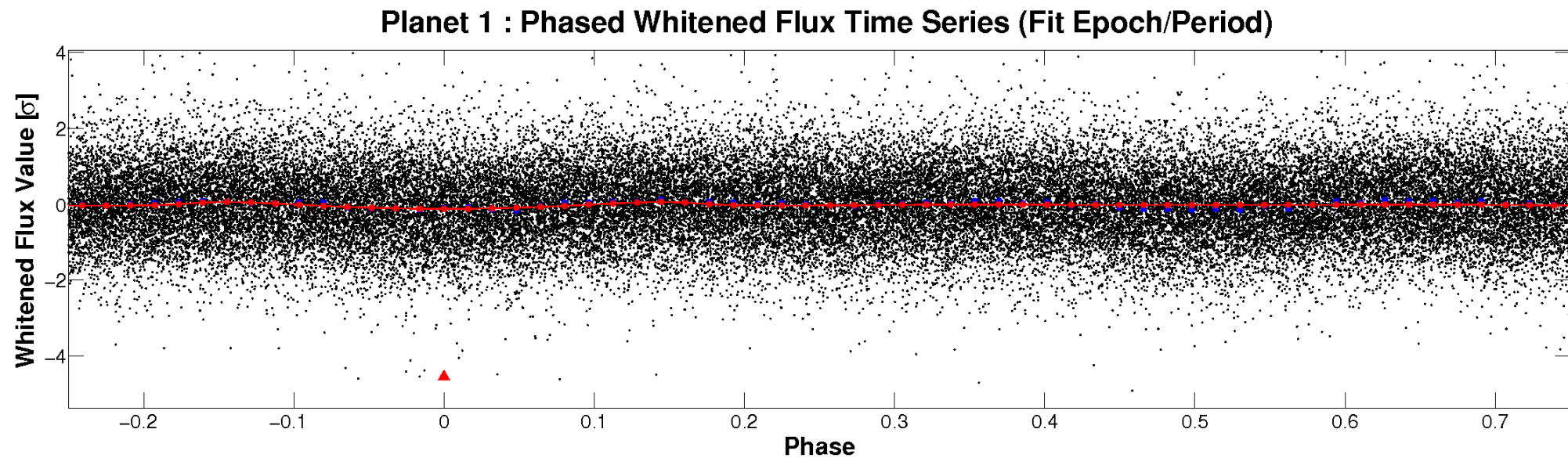
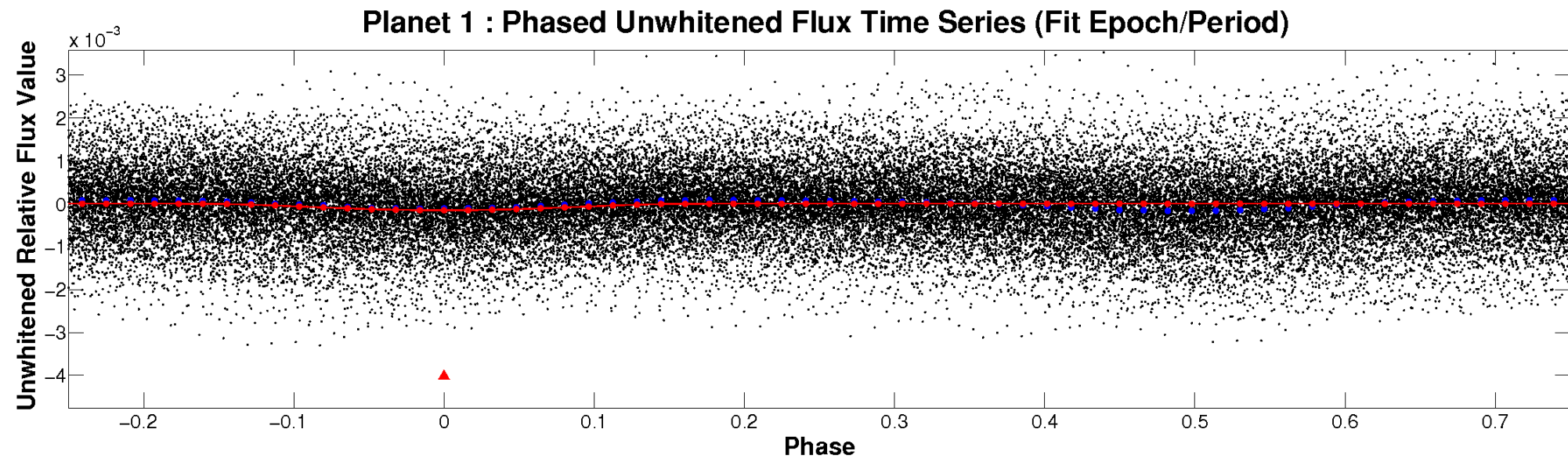


ALT Odd/Even

TCE 004481004-01

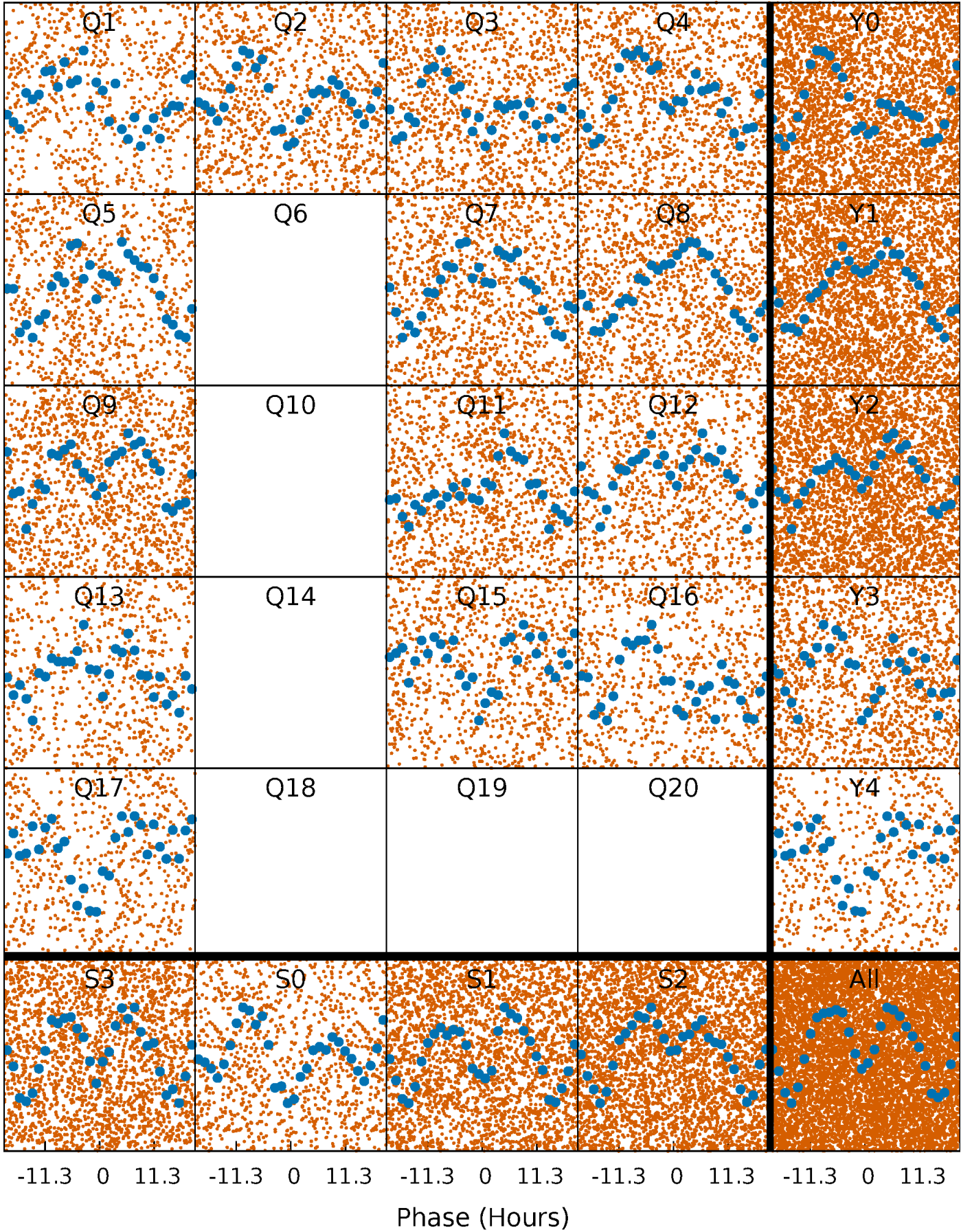


Non-Whitened Vs. Whitened Light Curve



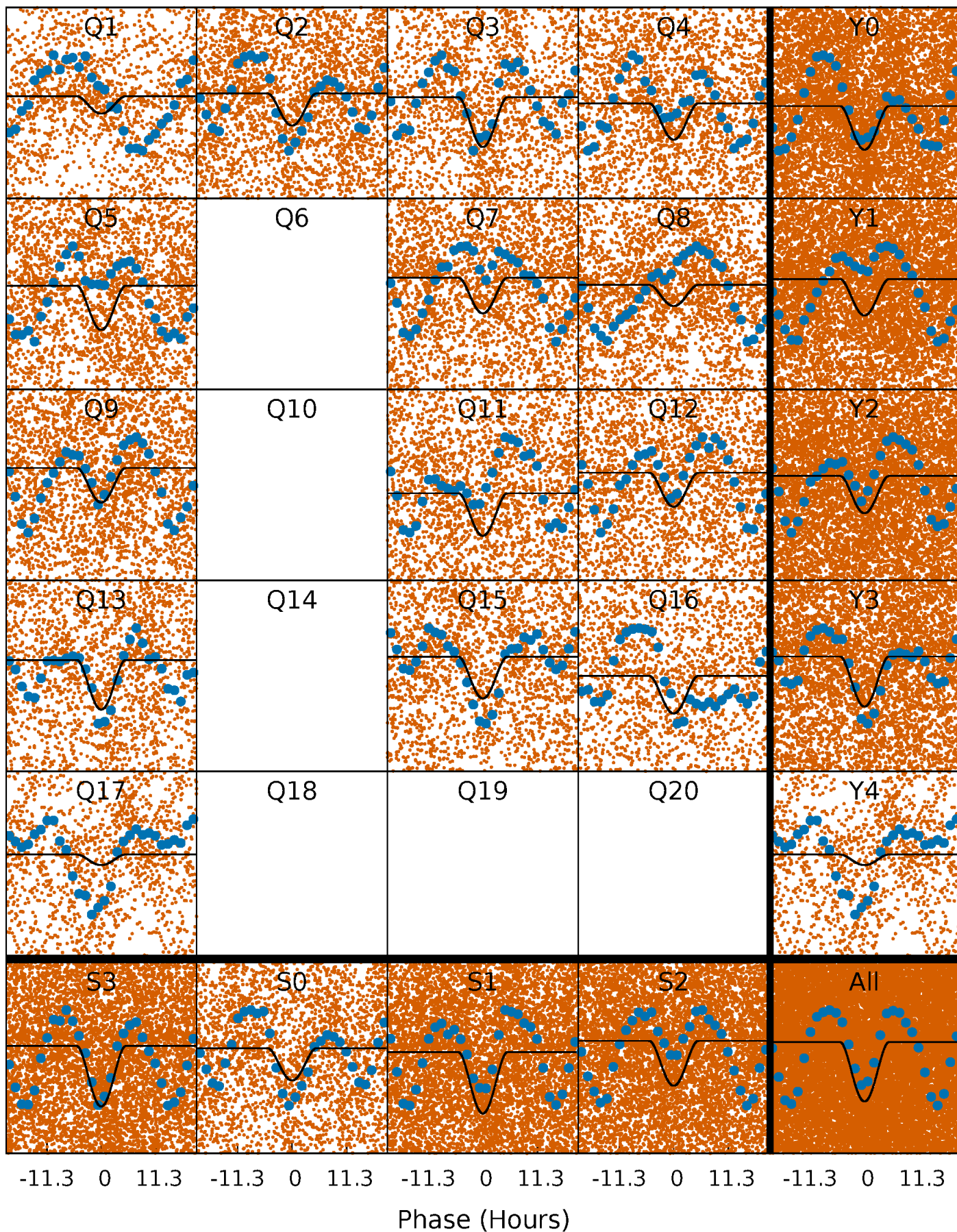
PDC Quarter-Phased Transit Curves

TCE 004481004-01 P= 1.271999 Days $T_0=132.782271$ (BKJD)



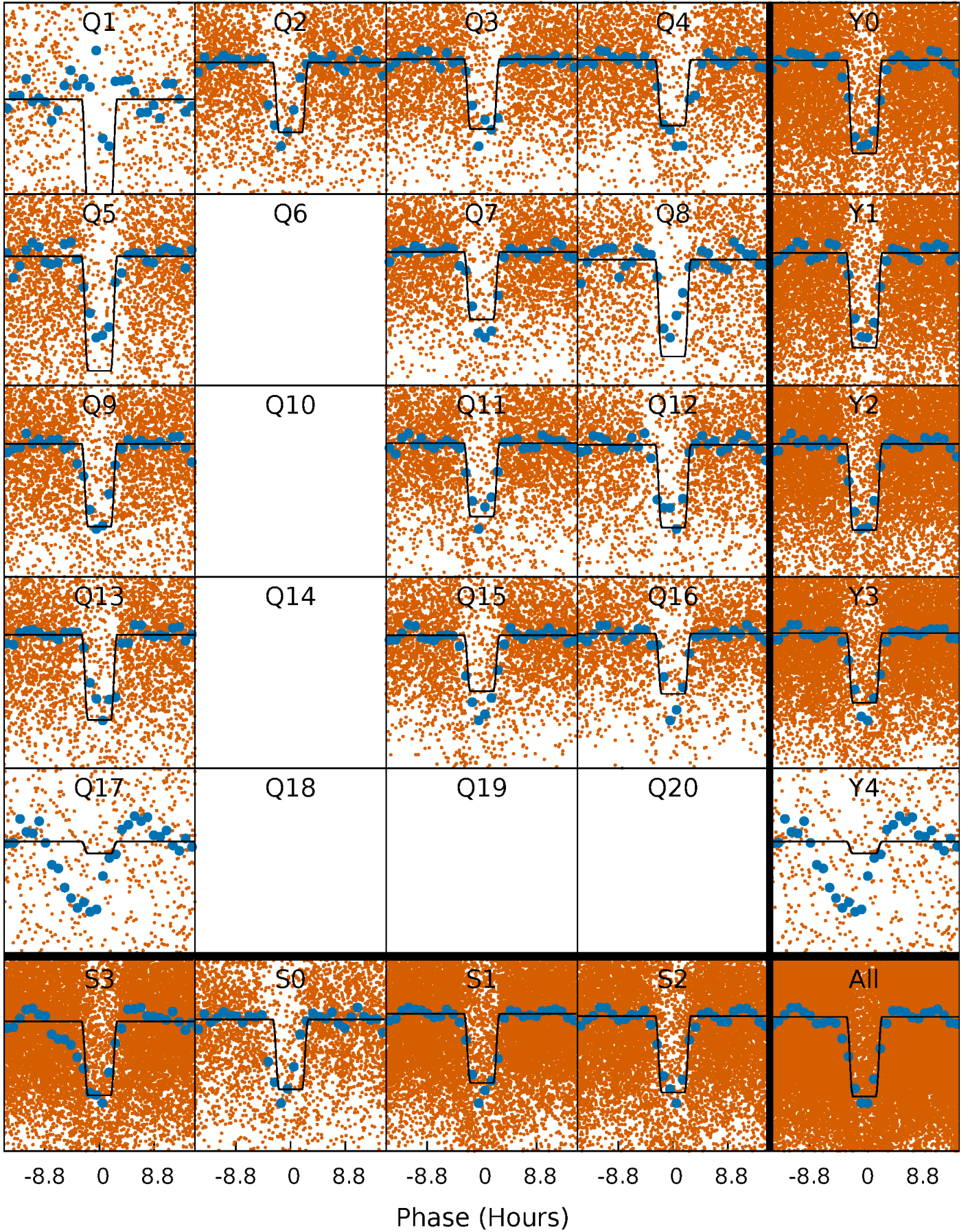
DV Quarter-Phased Transit Curves

TCE 004481004-01 P= 1.271999 Days $T_0=132.782271$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

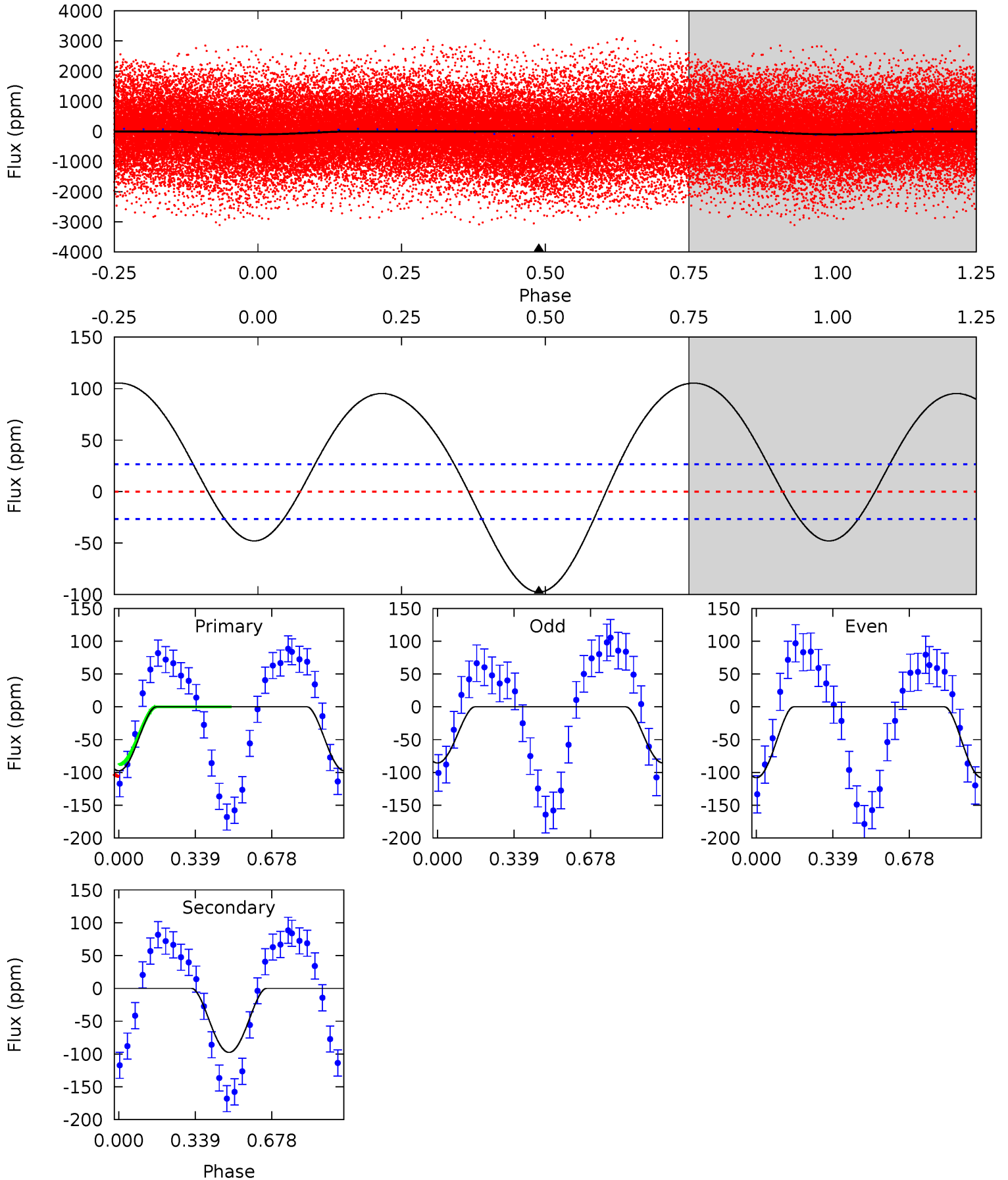
TCE 004481004-01 P= 1.272024 Days $T_0=132.769938$ (BKJD)



DV Model-Shift Uniqueness Test

004481004-01, P = 1.271999 Days, E = 131.510272 Days

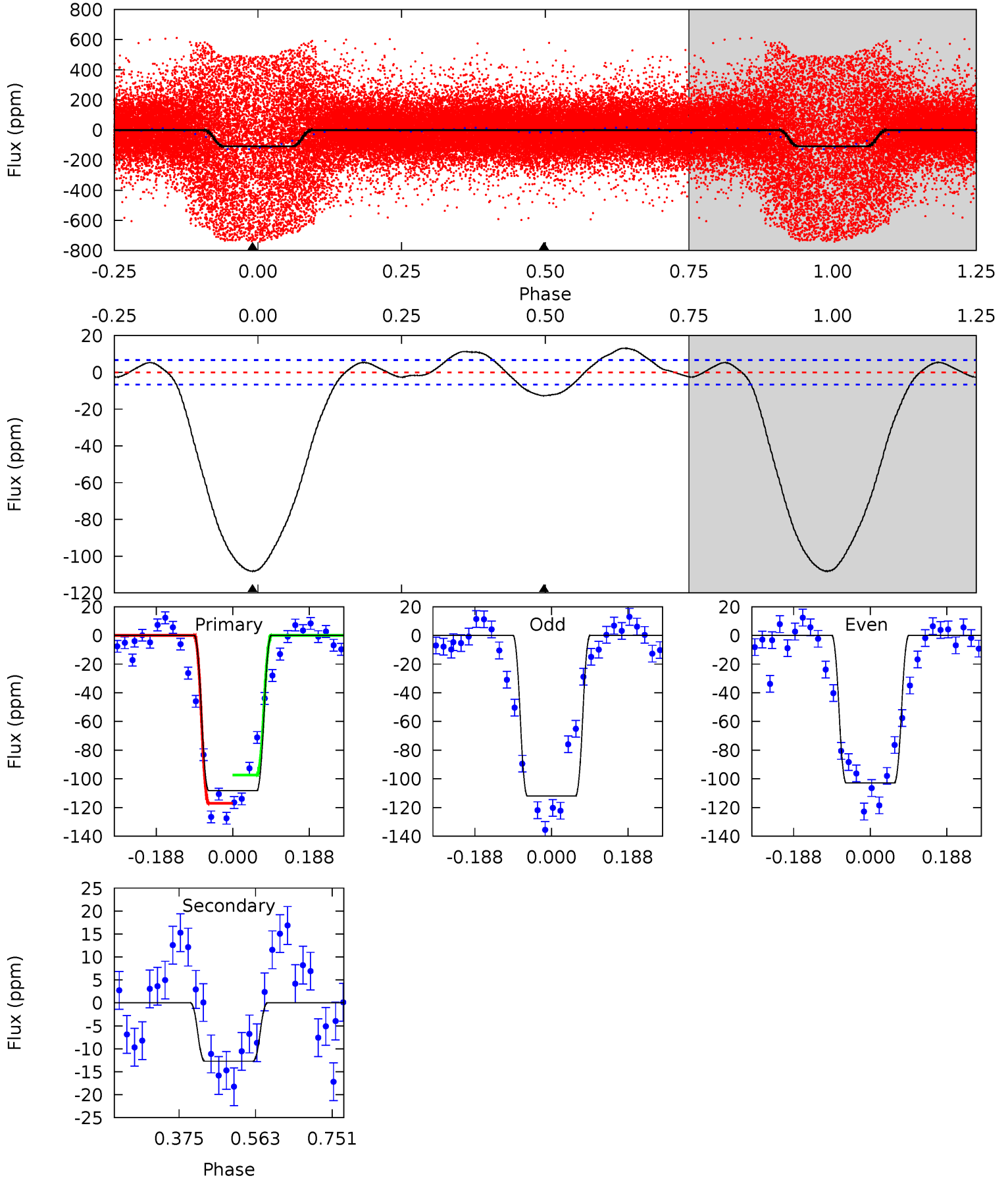
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.8	15.8	0	0	4.30	0.96	6.56	15.8	15.8	15.8	15.8	1.82	0.49	0.52	1.43



Alt Model-Shift Uniqueness Test

004481004-01, P = 1.272024 Days, E = 131.497914 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
71.9	8.44	0	0	4.43	1.32	1.65	71.9	71.9	8.44	8.44	3.01	1.40	0.11	6.50



Stellar Parameters For KIC 004481004

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7045^{+187}_{-250}	$3.773^{+0.270}_{-0.090}$	$-0.120^{+0.250}_{-0.300}$	$2.726^{+0.472}_{-0.876}$	$1.607^{+0.224}_{-0.249}$	$0.112^{+0.203}_{-0.033}$
	+3%/-4%	+7%/-2%	+208%/-250%	+17%/-32%	+14%/-15%	+182%/-29%
Source	PHO1	FLK73	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 004481004-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-98 ± 6	$6.32^{+2.85}_{-2.74}$	4296^{+252}_{-356}	4477^{+1459}_{-987}	$1.014^{+2.001}_{-0.547}$
Alt.	-13 ± 2	$3.85^{+2.68}_{-2.33}$	4280^{+243}_{-350}	2773^{+2665}_{-6317}	$0.340^{+1.852}_{-0.221}$

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

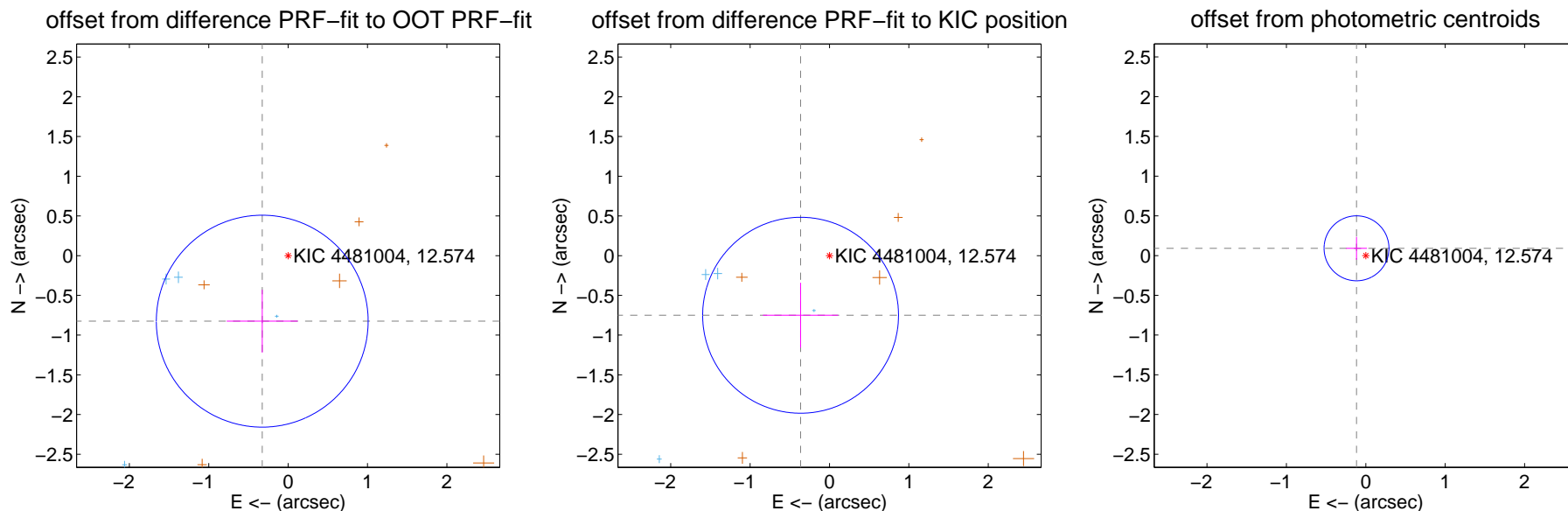
DV Centroid Data

Supplemental centroid analysis for 004481004-01. Kepler magnitude: 12.57. Transit SNR 10.08

There are 4 quarters with good PRF difference image offsets

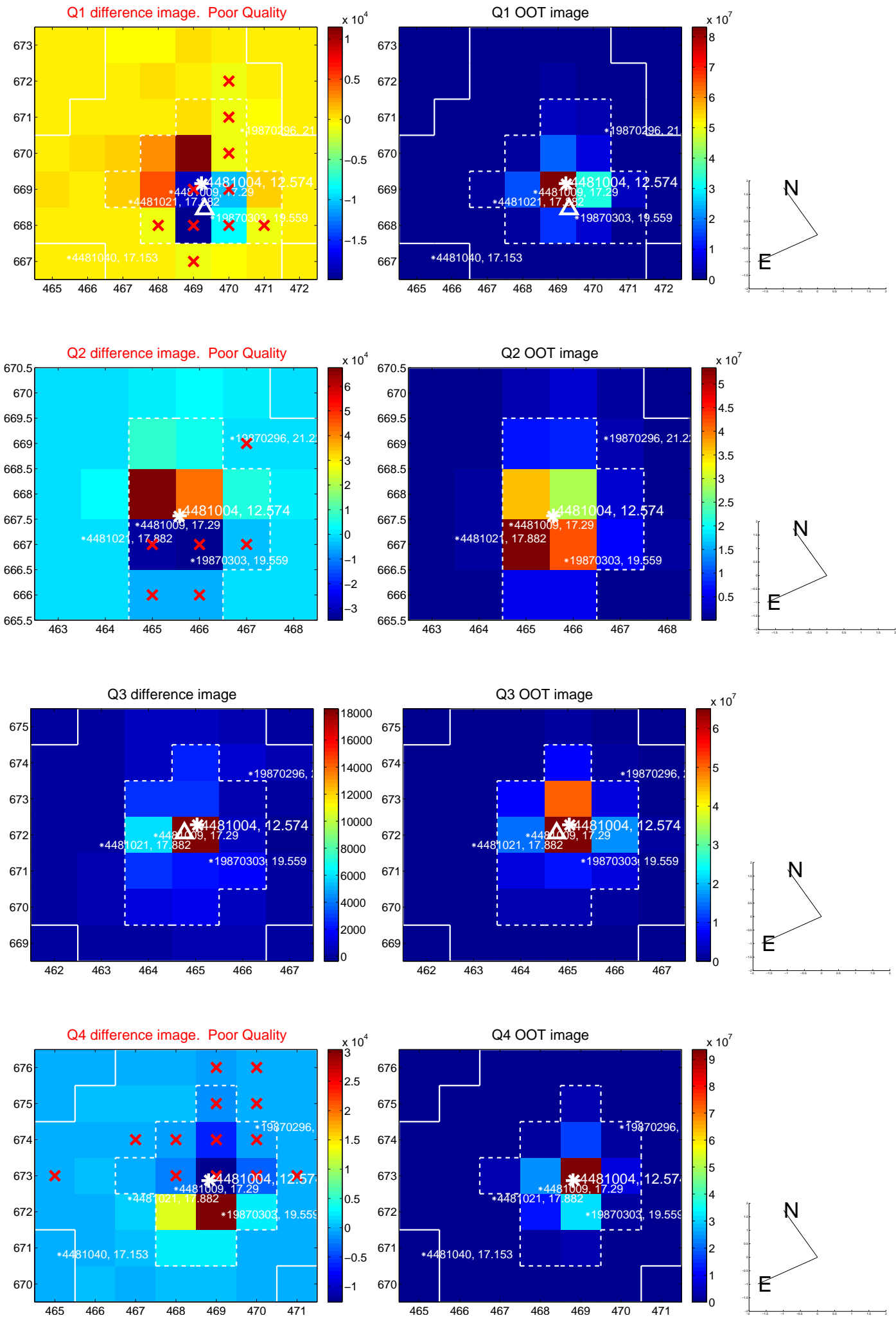
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.887 ± 0.445	1.99	0.326 ± 0.448	-0.825 ± 0.396
PRF-fit source offset from KIC position	0.834 ± 0.411	2.03	0.364 ± 0.473	-0.750 ± 0.409
photometric centroid source offset	0.15 ± 0.14	1.09	0.12 ± 0.13	0.09 ± 0.14

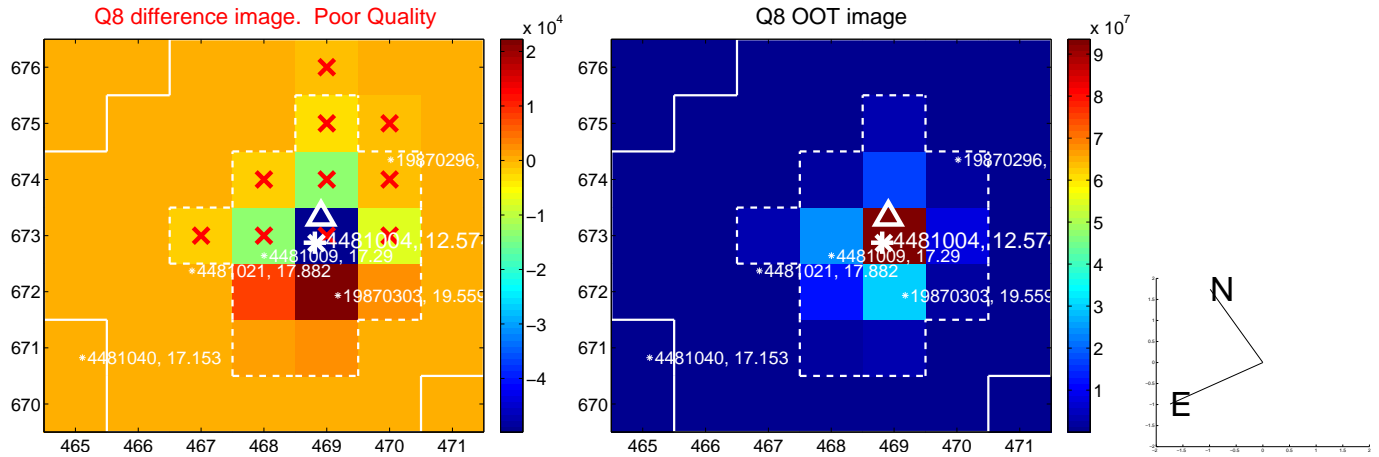
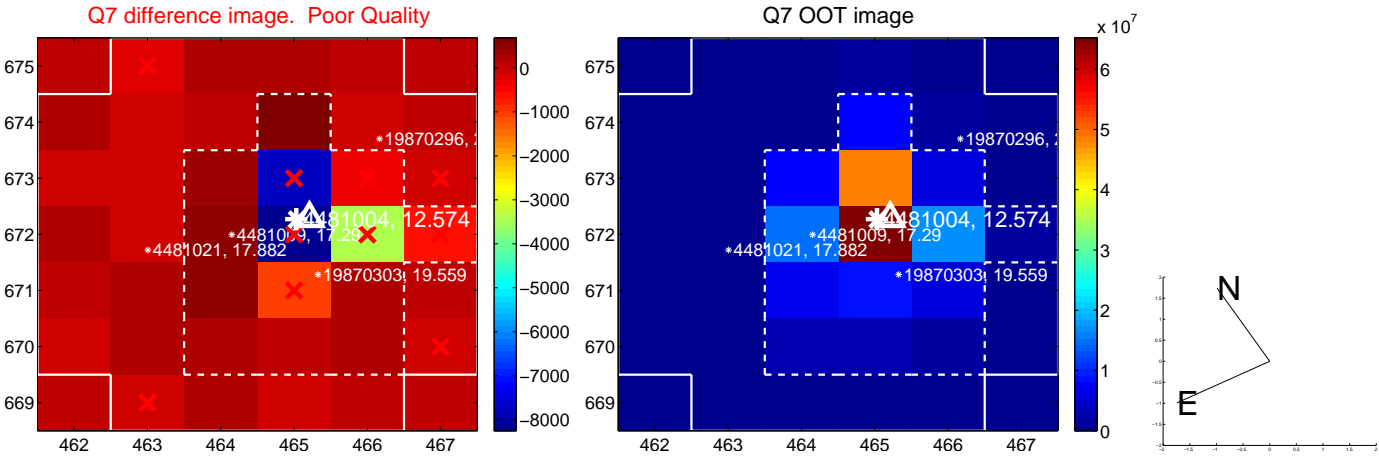
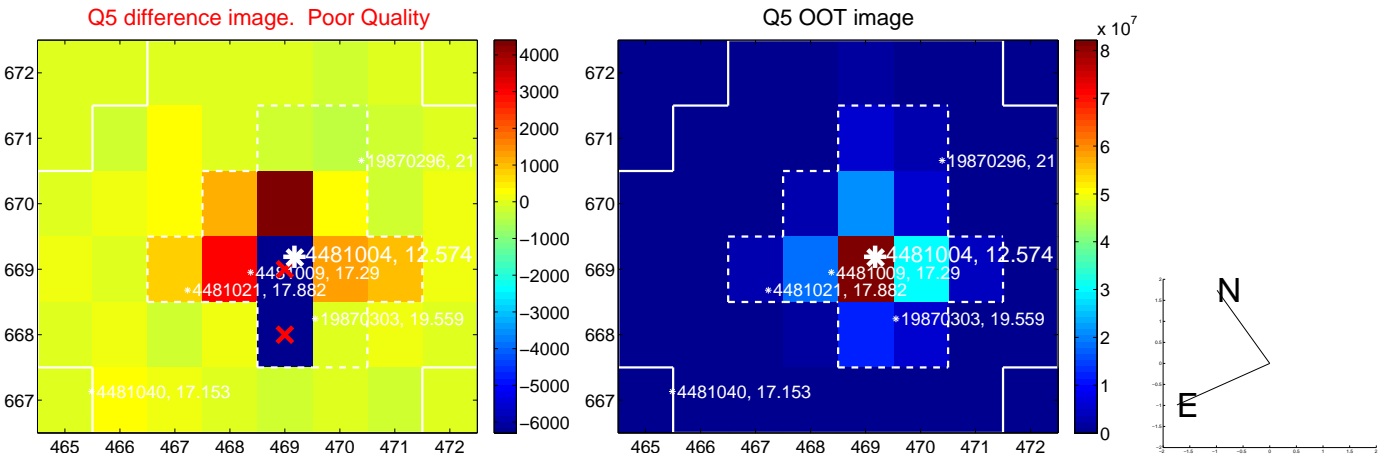


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

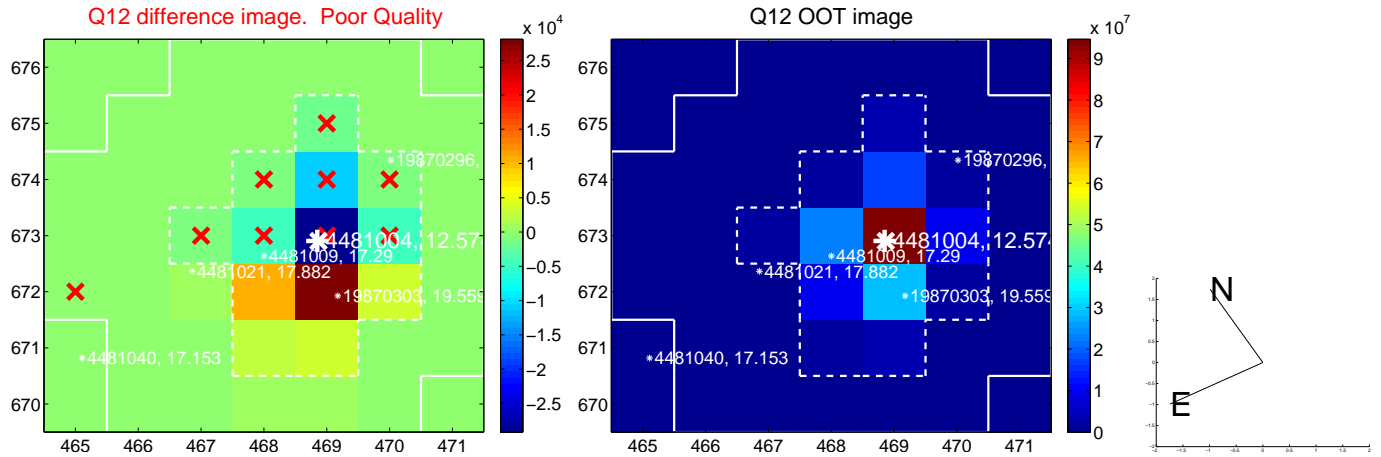
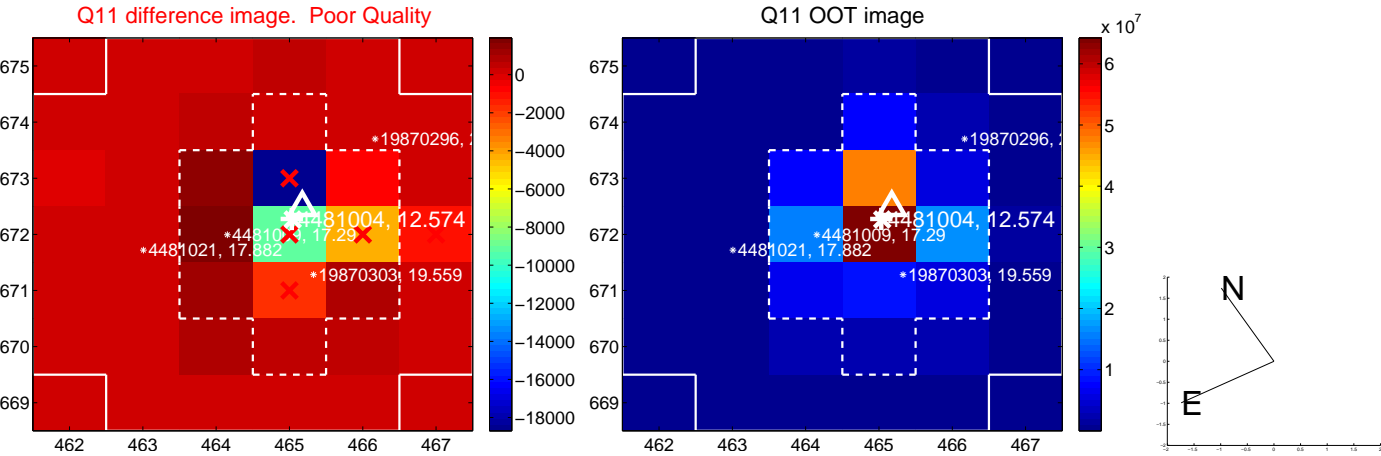
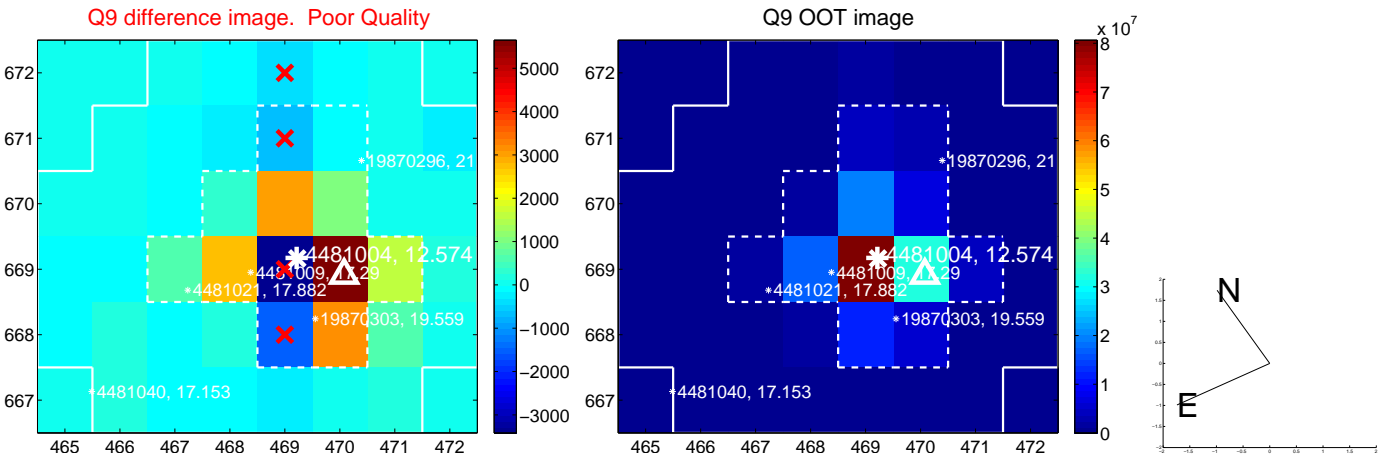
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



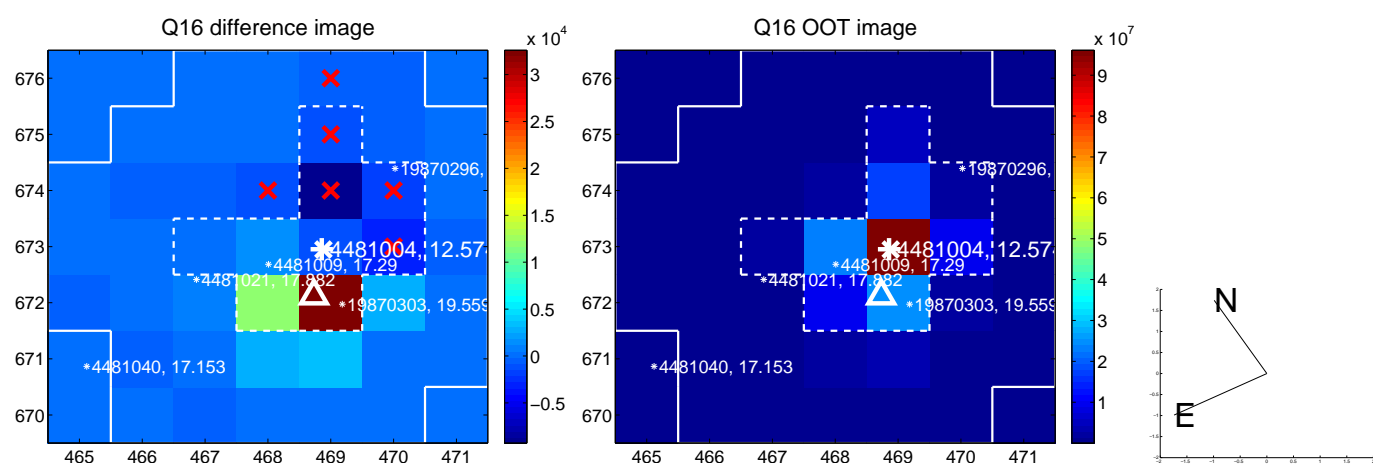
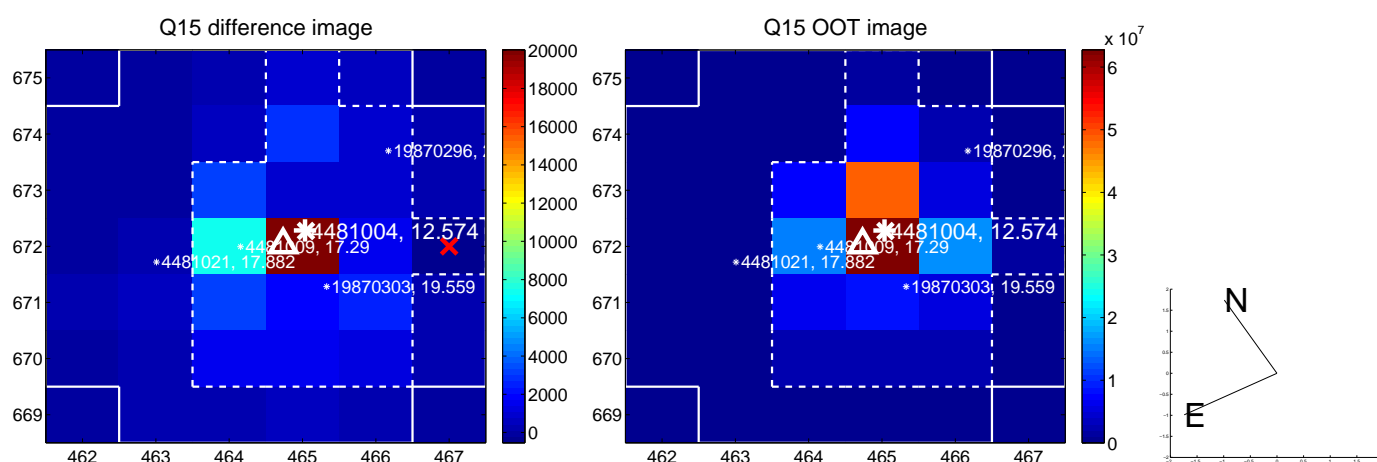
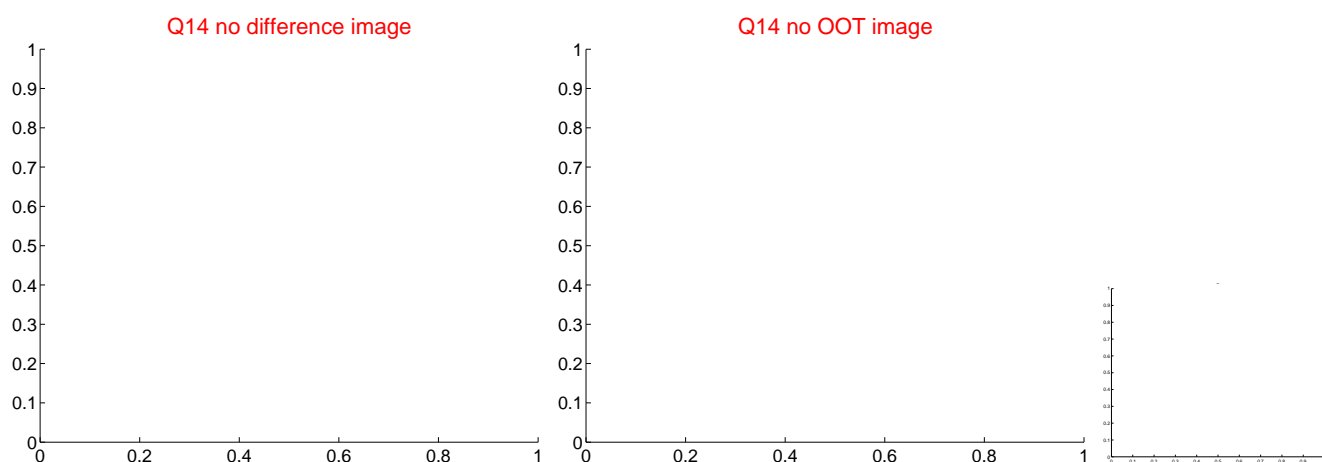
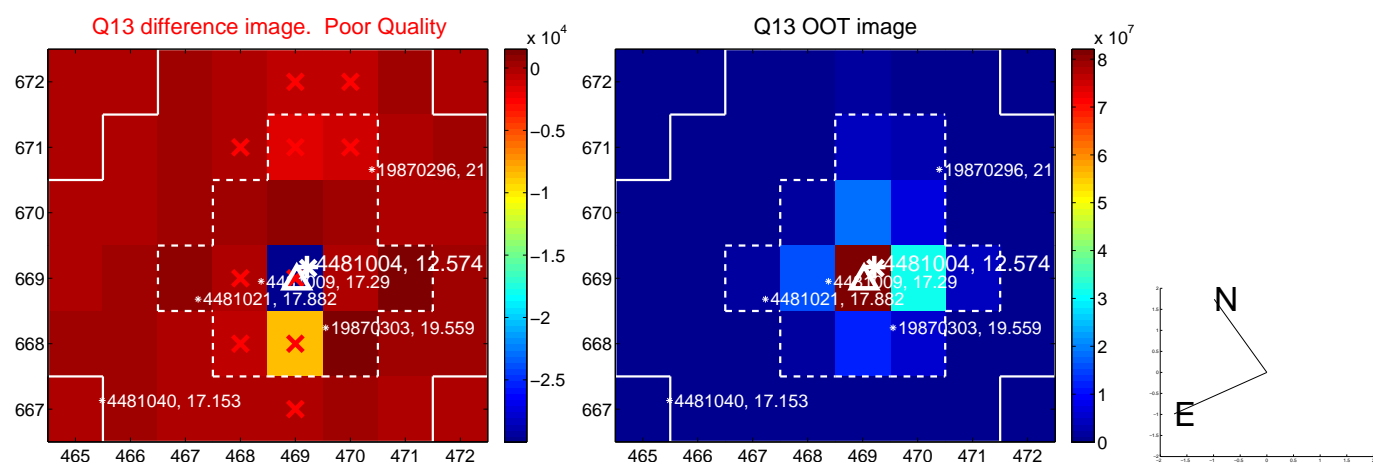
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



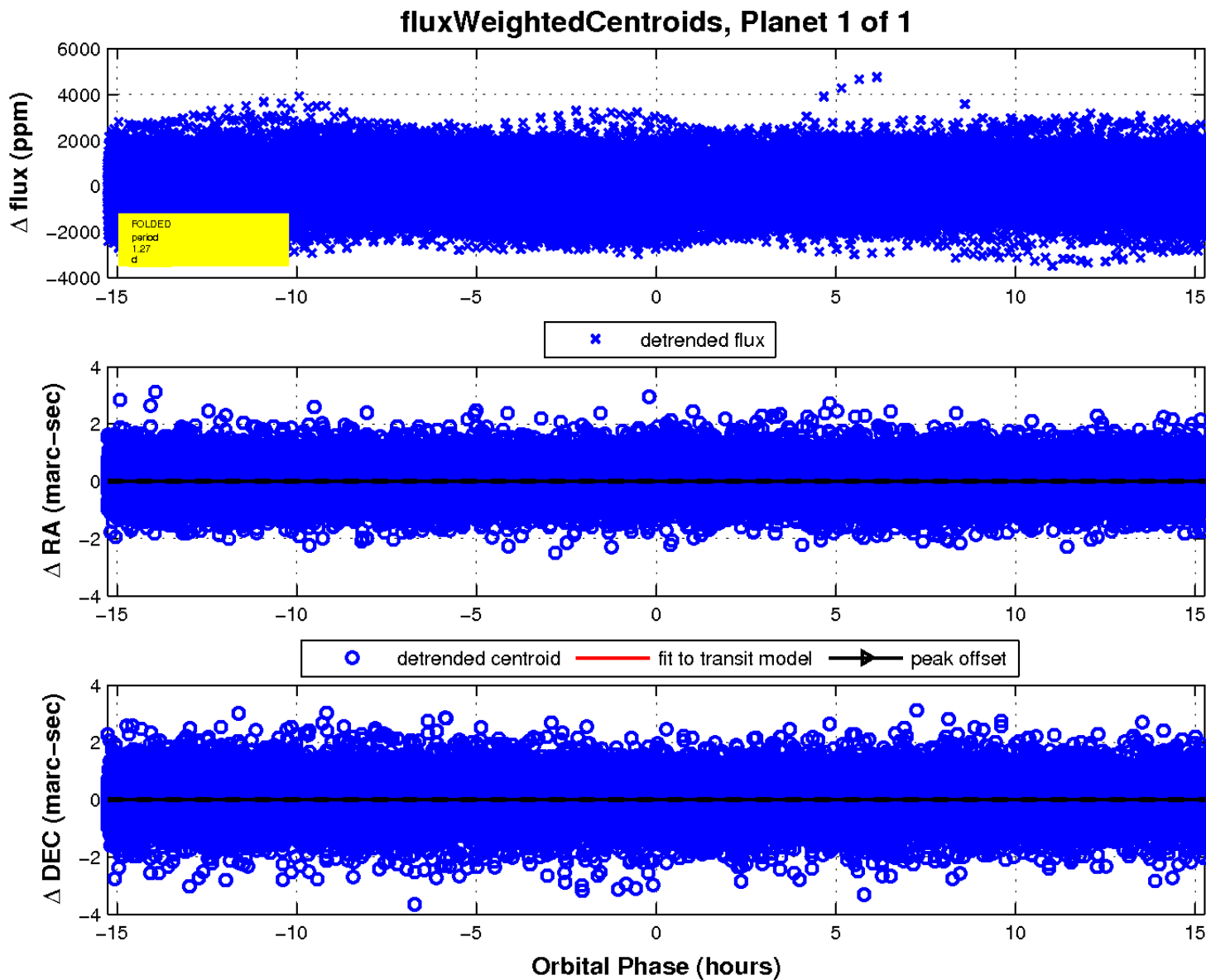
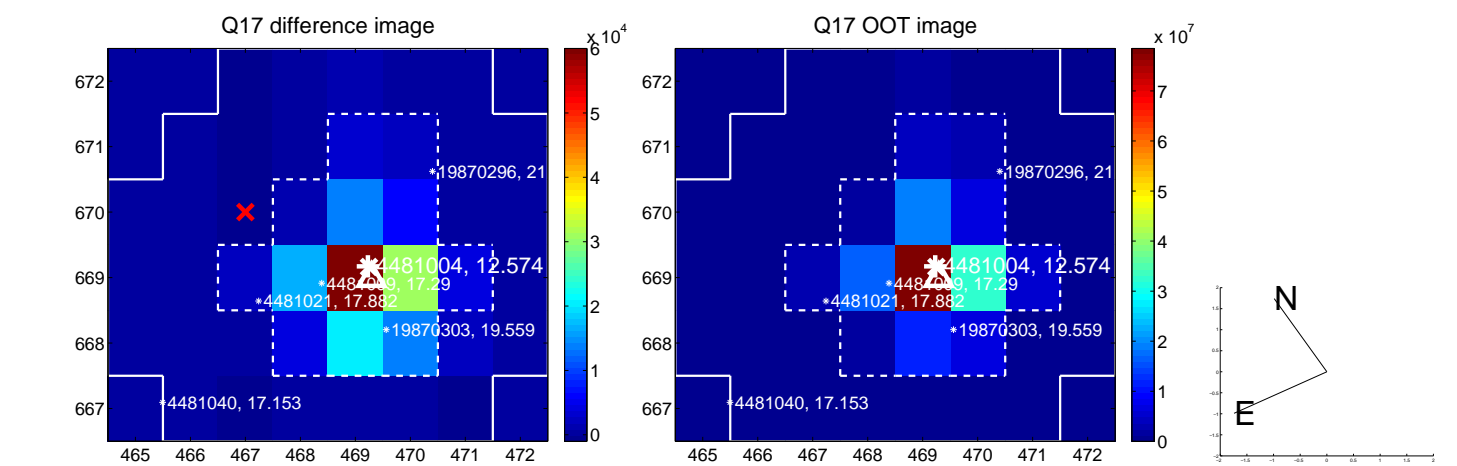
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

