

KIC 009631498

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})
009631498-01	OBS	No	1.867125	132.726581	5.3	19.906	8.9	11.5	3.26	9013	0.76	38490.40

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009631498-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_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.

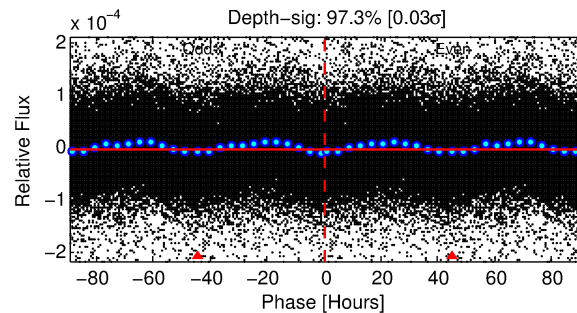
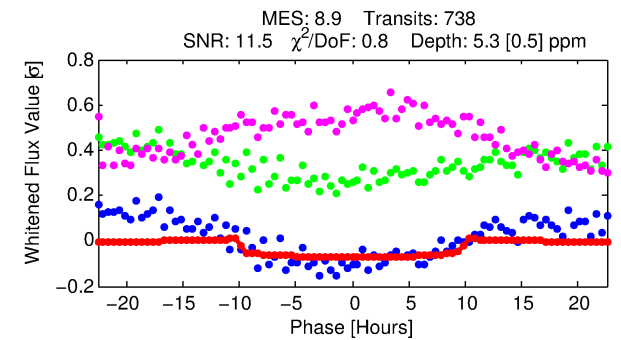
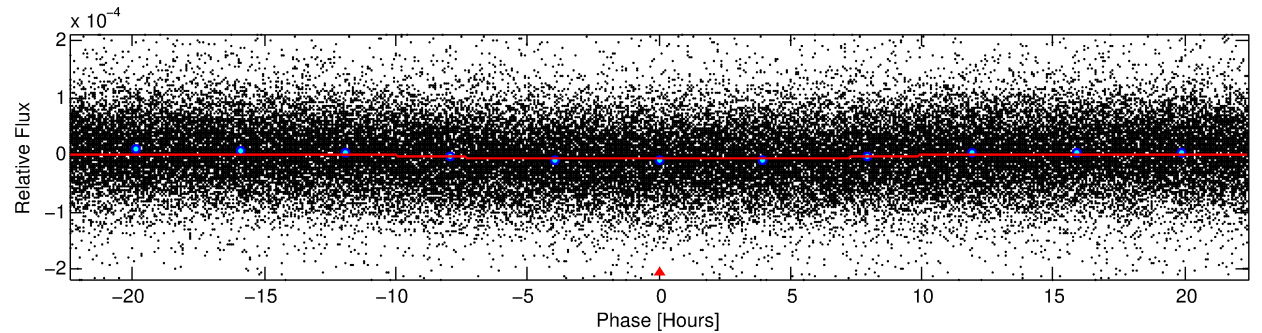
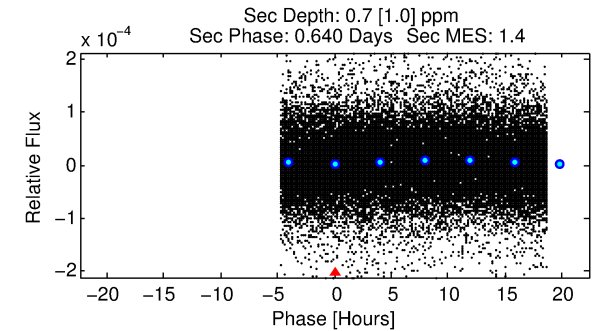
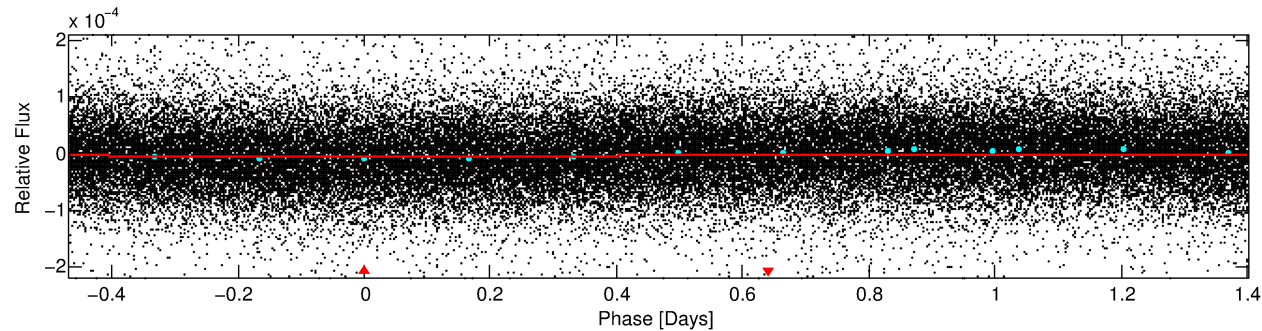
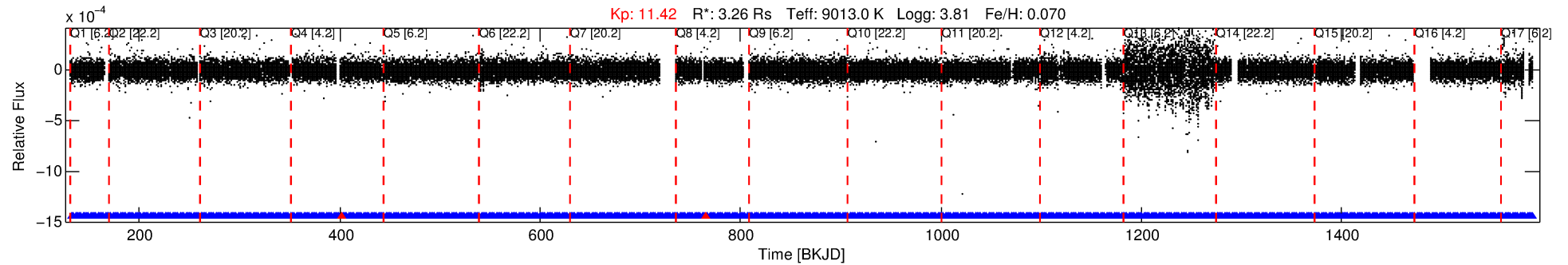
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009631498-01

No Significant Match Found

DV One-Page Summary

KIC: 9631498 Candidate: 1 of 1 Period: 1.867 d



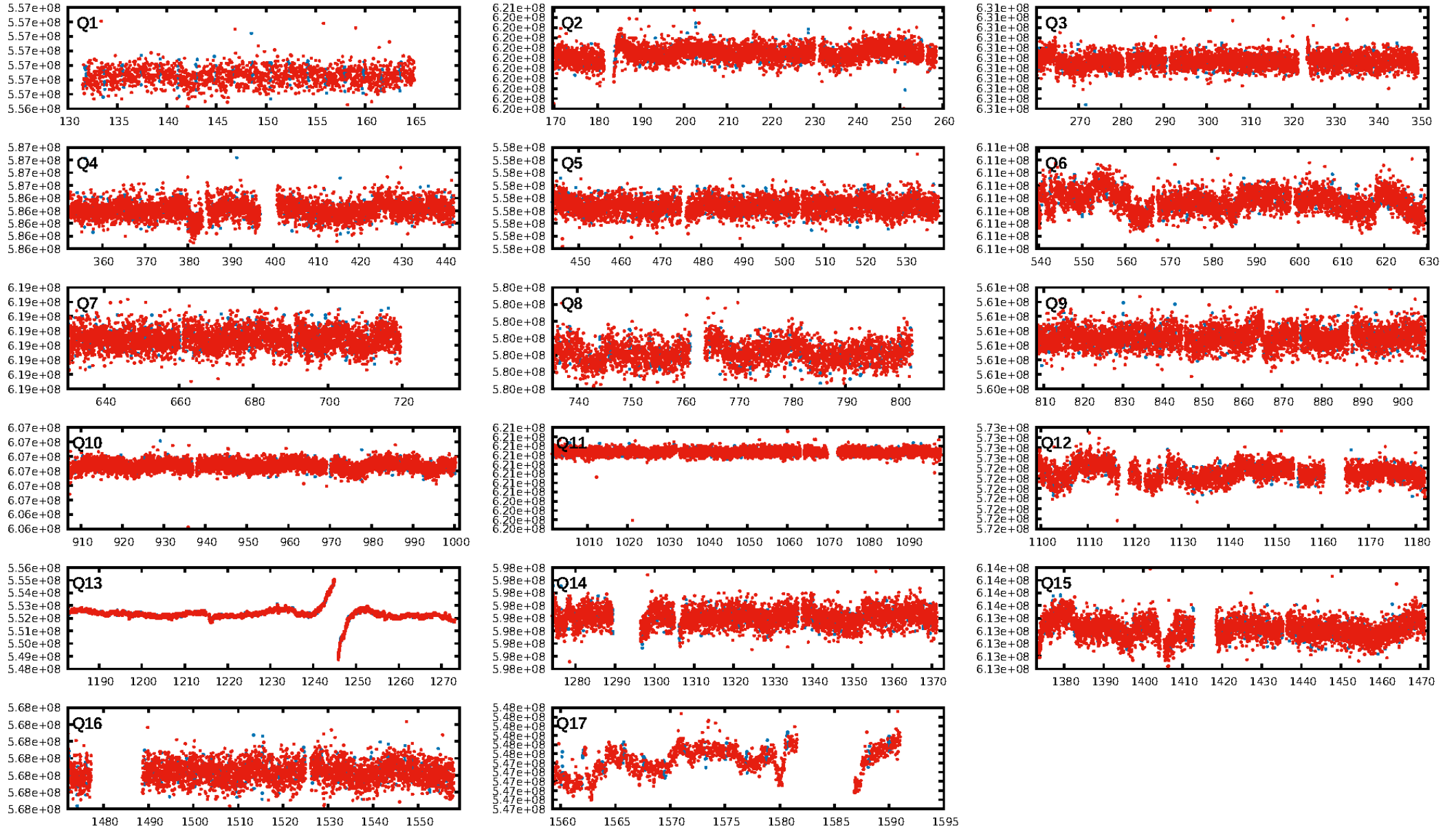
DV Fit Results:

Period = 1.86713 [0.00004] d
Epoch = 132.7266 [0.0113] BKJD
Rp/R* = 0.0021 [0.0012]
a/R* = 1.02 [0.12]
b = 0.00 [2504.77]
Seff = 38490.40 [26498.00]
Teff = 3572 [615] K
Rp = 0.76 [0.54] Re
a = 0.0404 [0.0171] AU
Ag = 1.01 [1.99] [0.00σ]
Teffp = 5530 [2588] K [0.74σ]

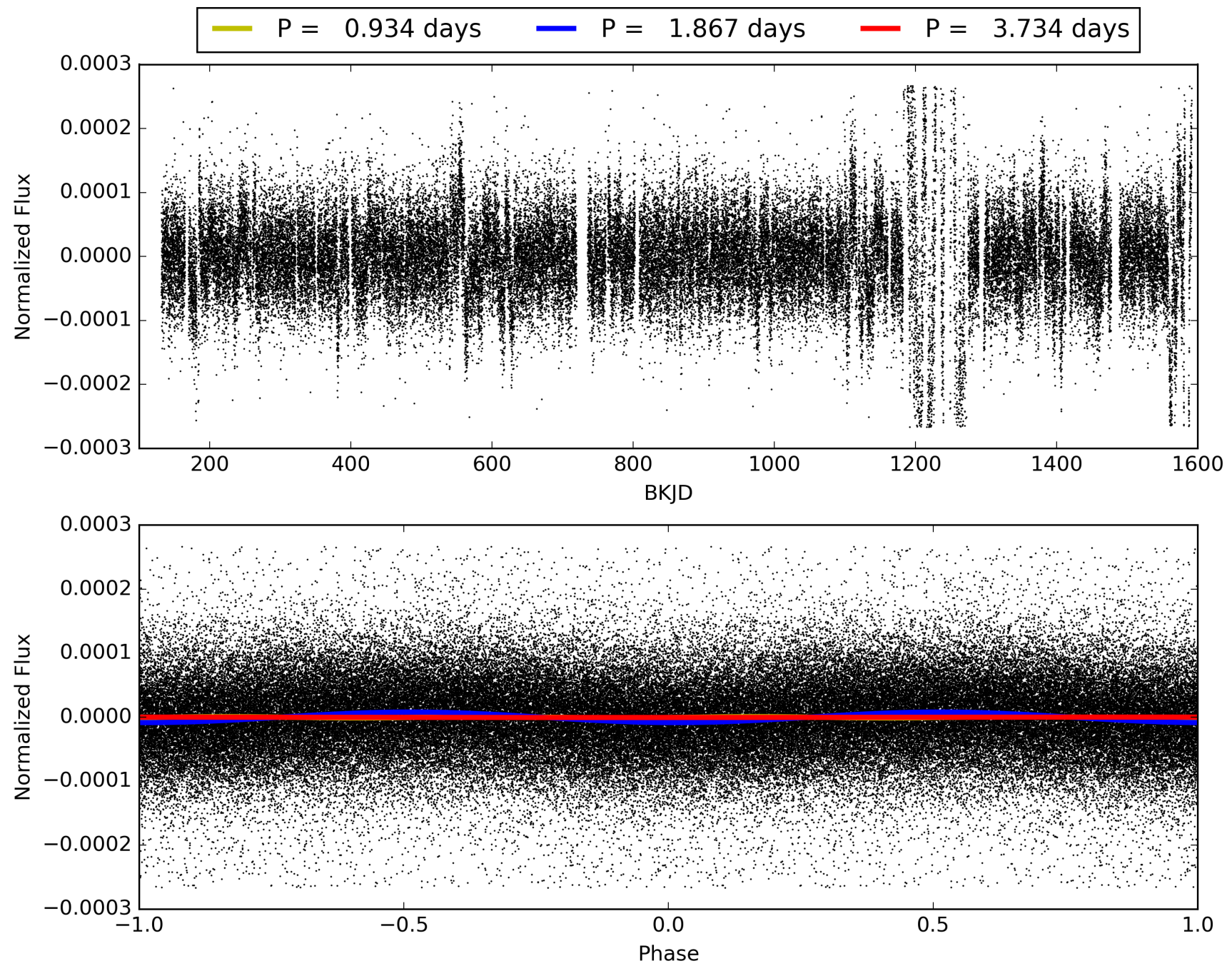
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [702/704]
GhostDiagnostic-chr: 5.366
Centroid-sig: 41.8%
Centroid-so: 1.402 arcsec [0.84σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [17/17]

TCE 009631498-01, PDC Light Curves

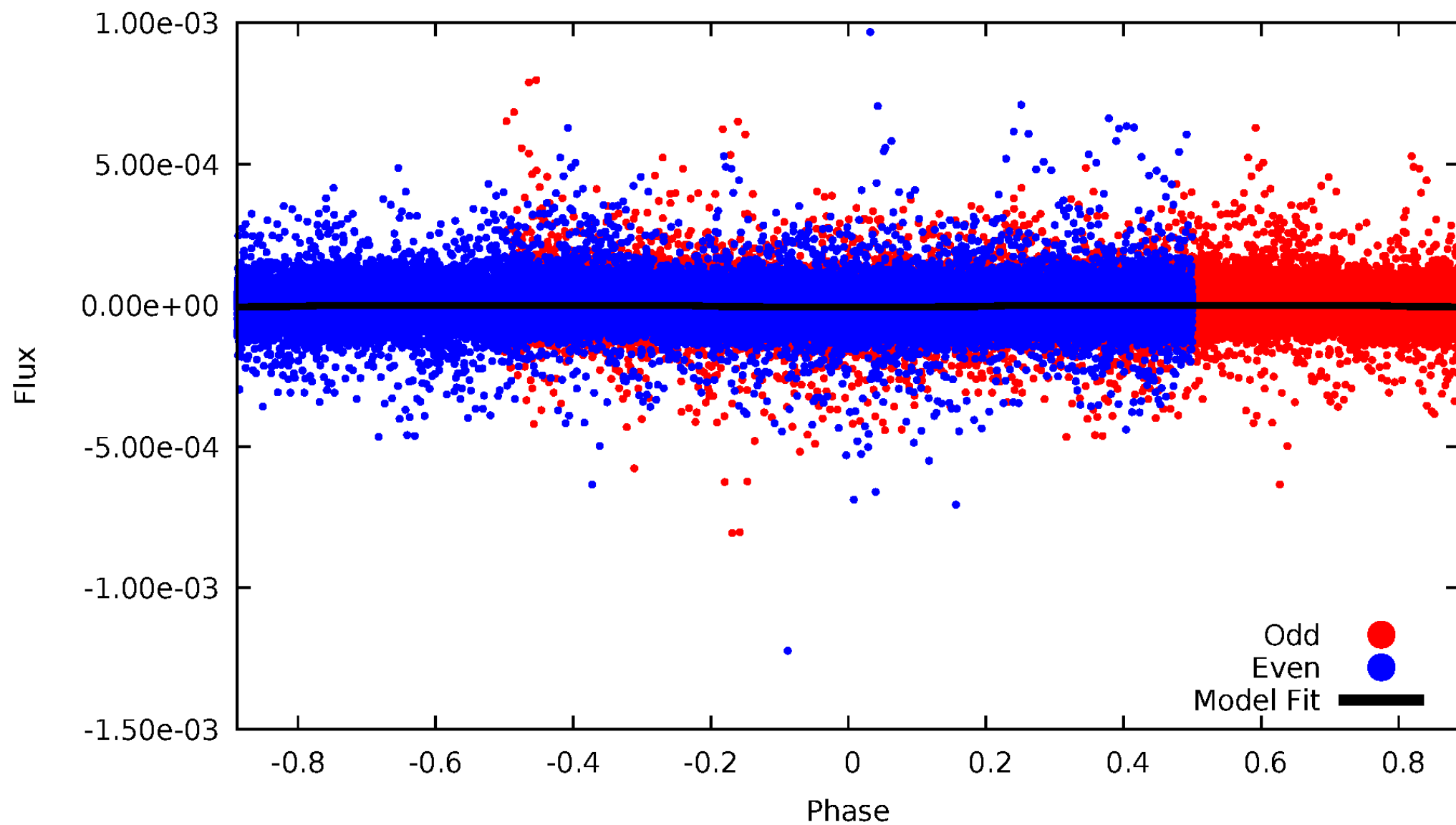


TCE 009631498-01



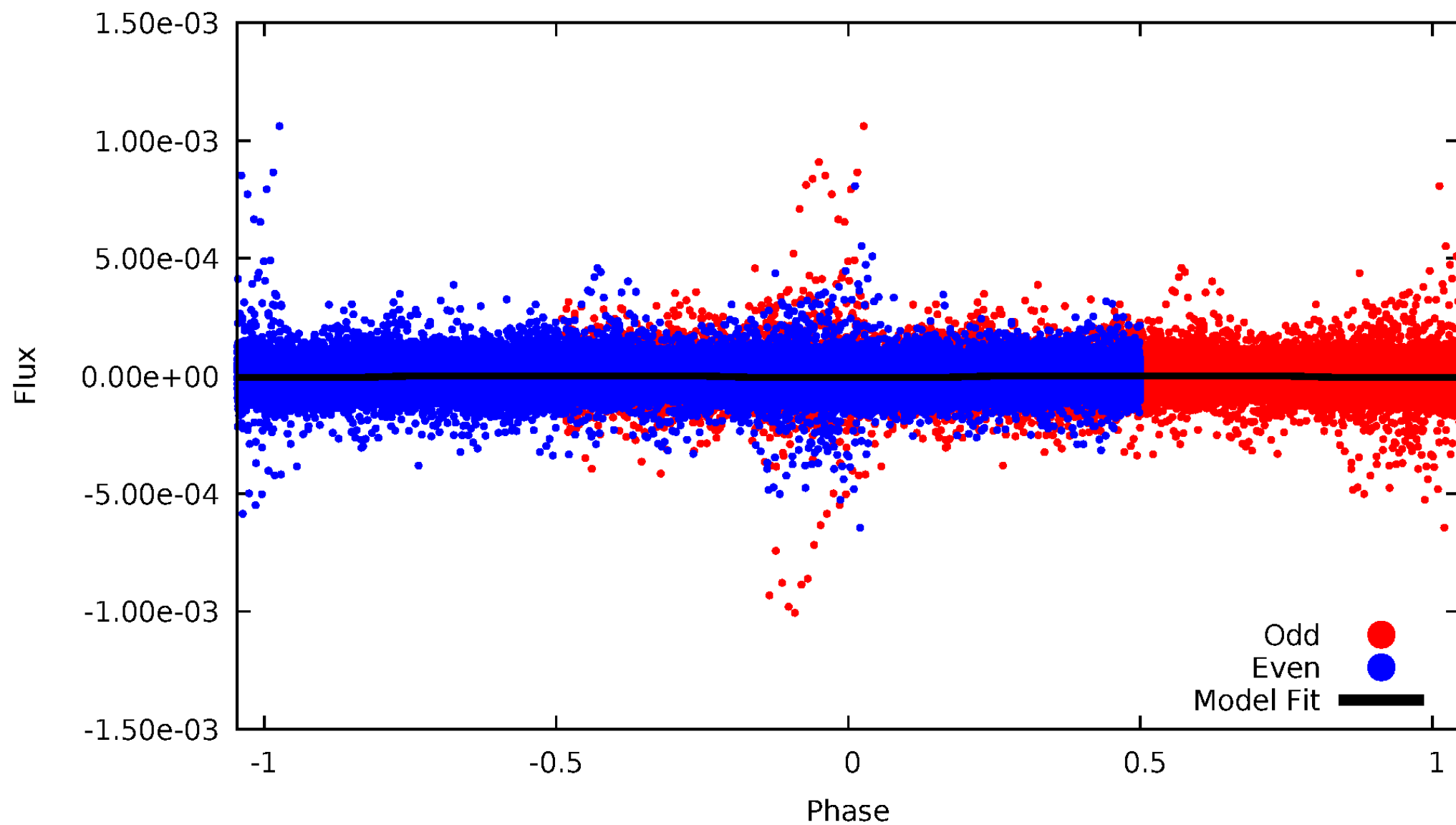
DV Odd/Even

TCE 009631498-01



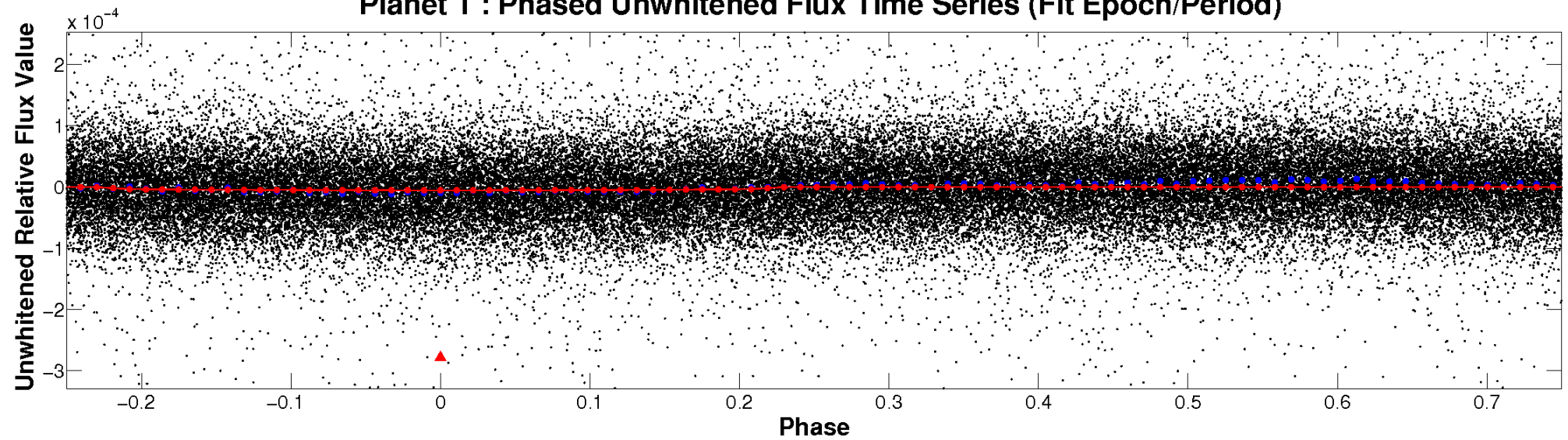
ALT Odd/Even

TCE 009631498-01

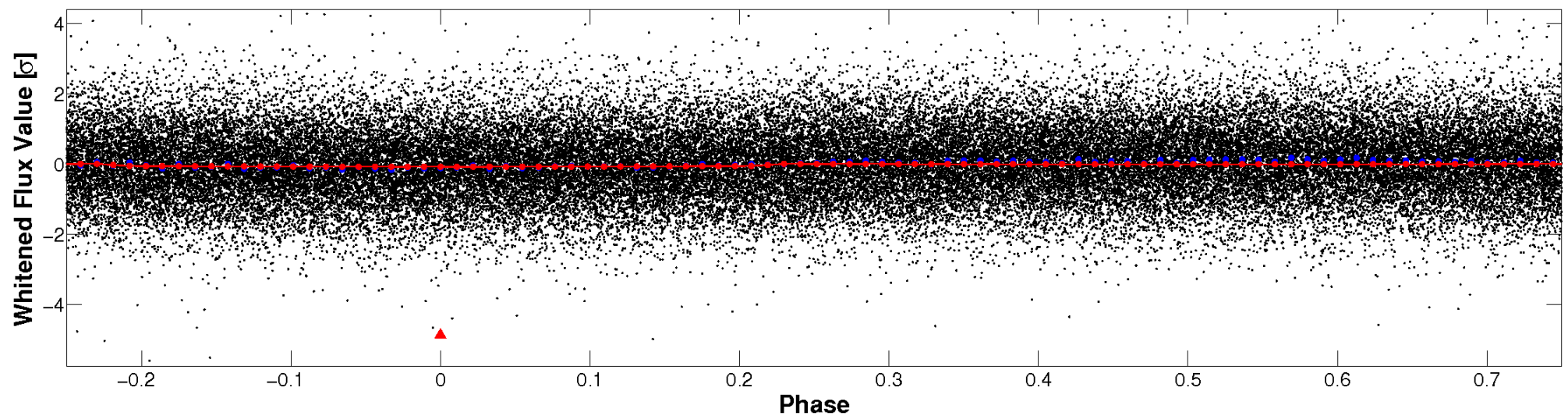


Non-Whitened Vs. Whitened Light Curve

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

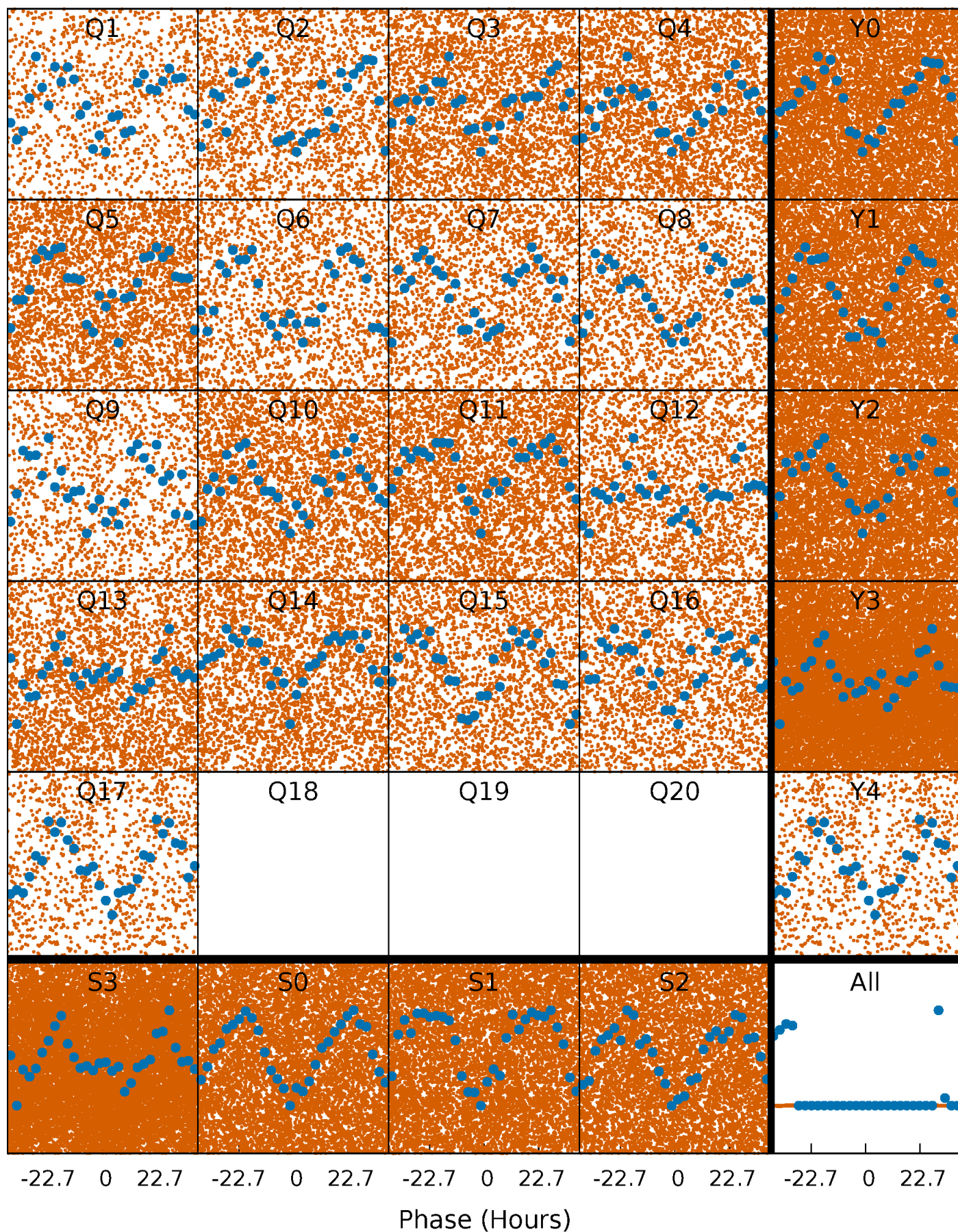


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



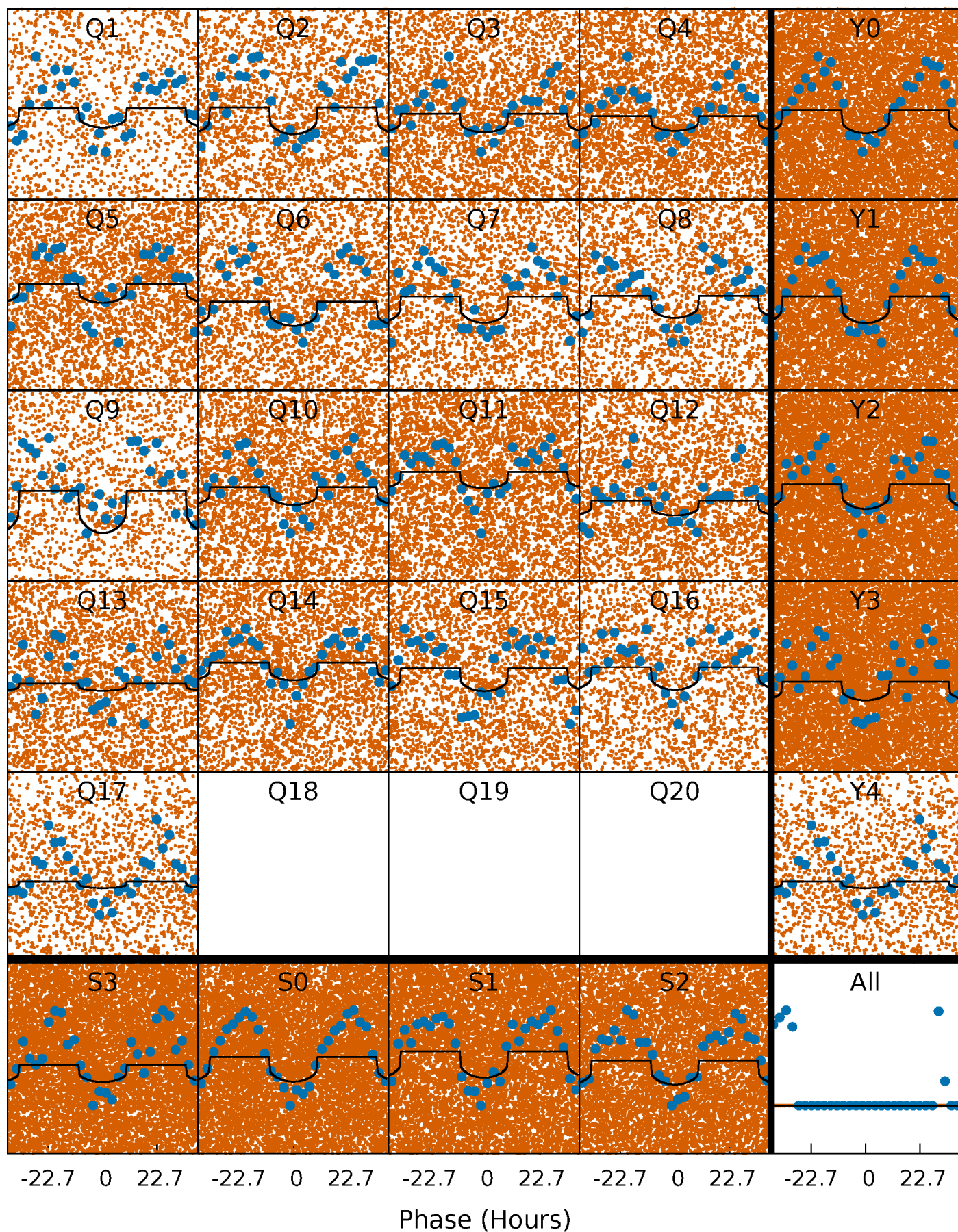
PDC Quarter-Phased Transit Curves

TCE 009631498-01 P= 1.867125 Days $T_0=132.726581$ (BKJD)



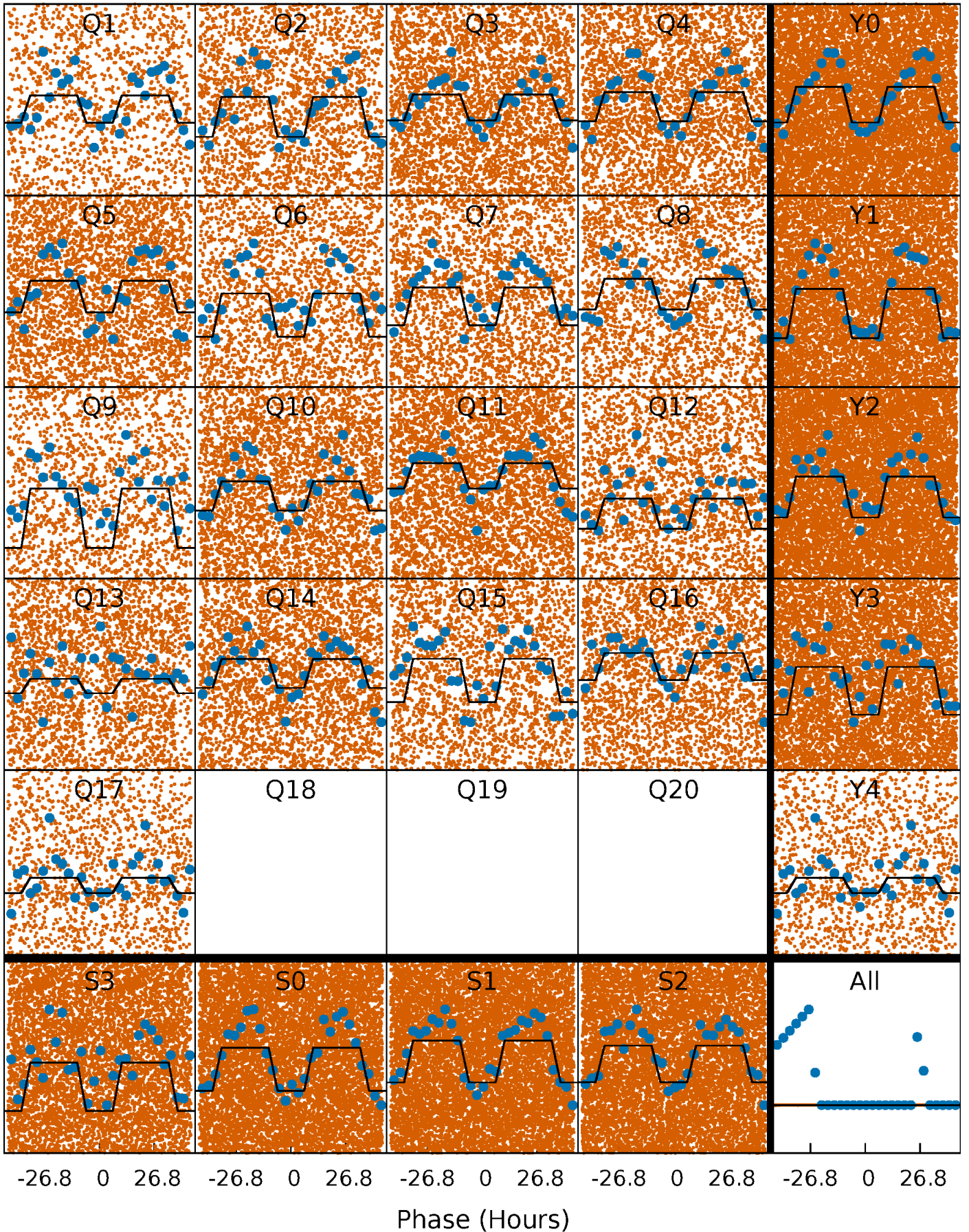
DV Quarter-Phased Transit Curves

TCE 009631498-01 P= 1.867125 Days $T_0=132.726581$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

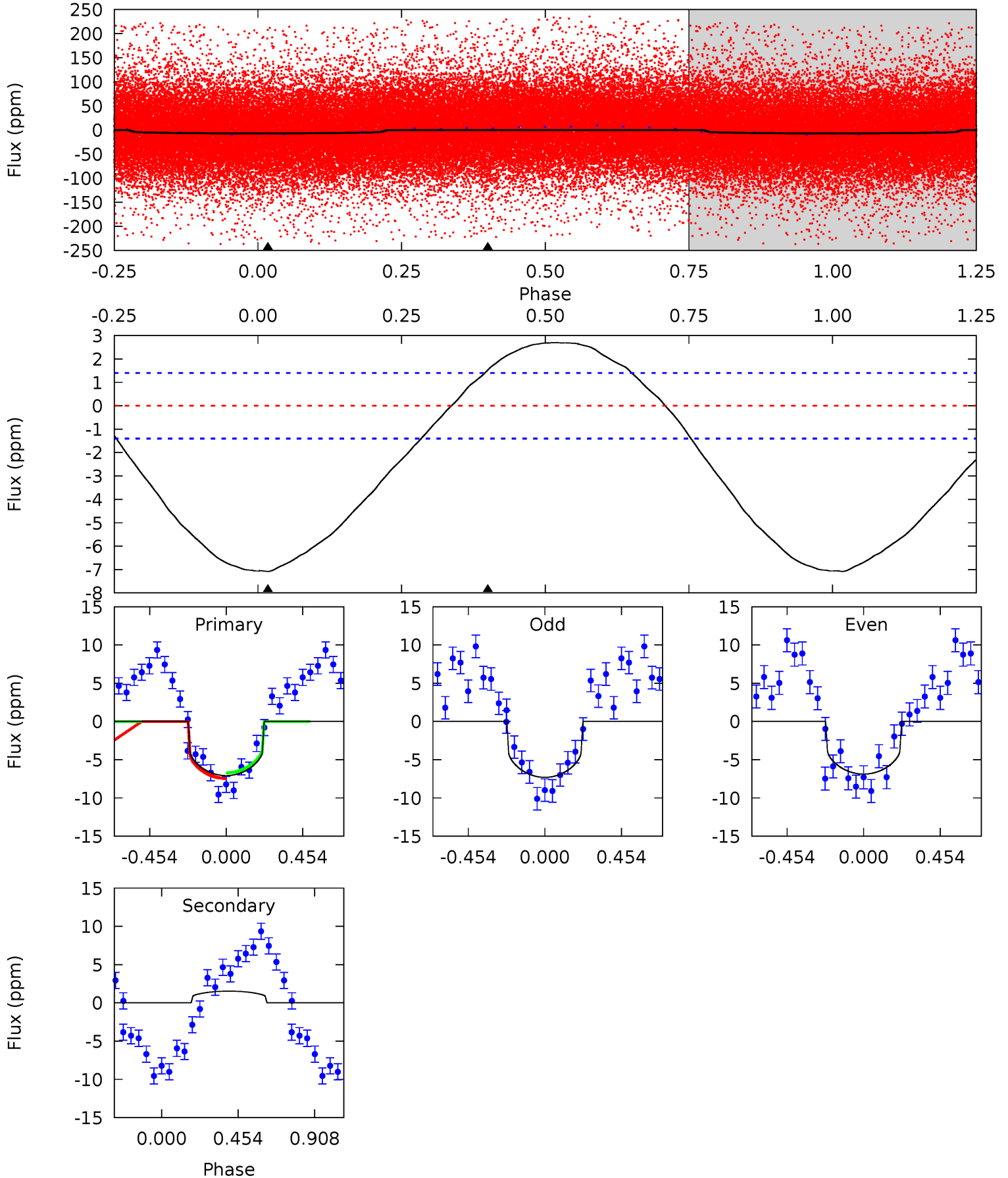
TCE 009631498-01 P= 1.867236 Days $T_0=132.699998$ (BKJD)



DV Model-Shift Uniqueness Test

009631498-01, P = 1.867125 Days, E = 130.859456 Days

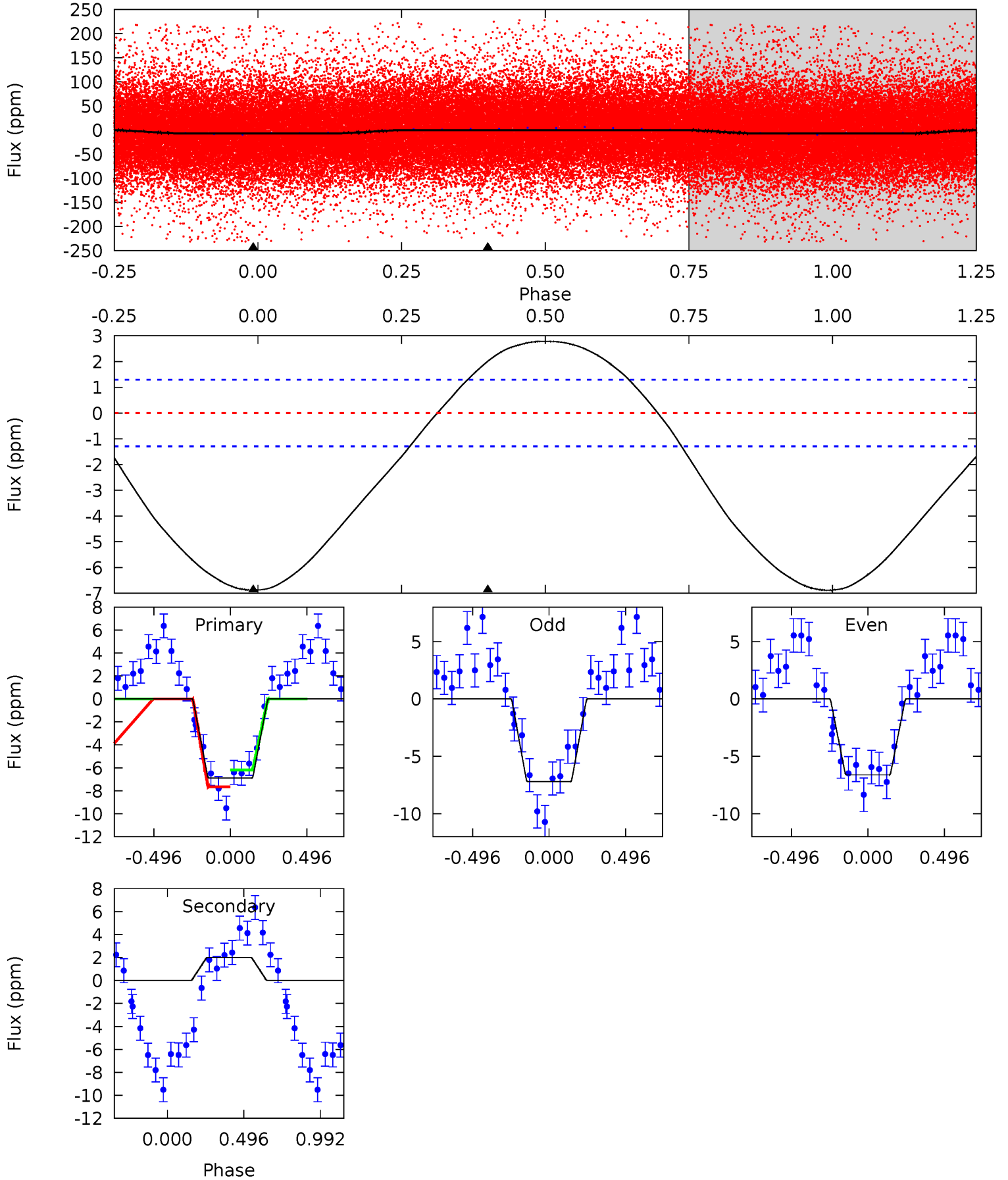
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.4	-4.63	0	0	4.24	0.75	2.51	21.4	21.4	-4.63	-4.63	0.65	0.99	0.28	1.11



Alt Model-Shift Uniqueness Test

009631498-01, P = 1.867236 Days, E = 130.832762 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
22.5	-6.57	0	0	4.22	0.68	2.73	22.5	22.5	-6.57	-6.57	0.94	0.94	0.29	2.41



Stellar Parameters For KIC 009631498

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	9013^{+249}_{-463}	$3.813^{+0.378}_{-0.162}$	$0.070^{+0.150}_{-0.650}$	$3.257^{+1.004}_{-1.506}$	$2.513^{+0.302}_{-0.845}$	$0.102^{+0.304}_{-0.054}$
	+3%/-5%	+10%/-4%	+214%/-929%	+31%/-46%	+12%/-34%	+296%/-53%
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 009631498-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	2 ± 0	$0.70^{+0.43}_{-0.35}$	4871^{+414}_{-558}	-6617^{+1161}_{-3133}	$-2.637^{+1.617}_{-7.469}$
Alt.	2 ± 0	$0.87^{+0.46}_{-0.39}$	4829^{+481}_{-529}	-6429^{+955}_{-2124}	$-2.290^{+1.320}_{-4.927}$

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

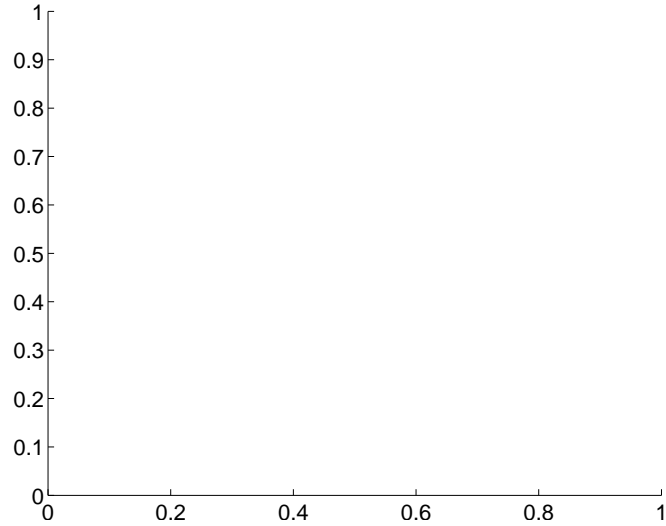
Supplemental centroid analysis for 009631498-01. **Kepler magnitude: 11.42.** Transit SNR 11.54

There are 0 quarters with good PRF difference image offsets

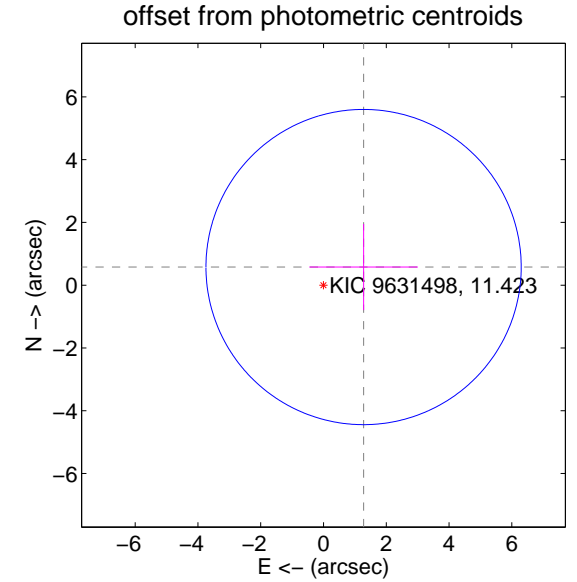
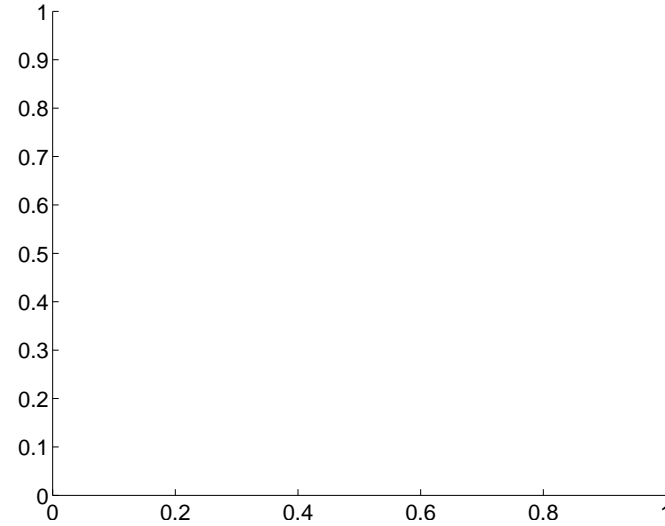
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	1.40 ± 1.67	0.84	-1.28 ± 1.73	0.58 ± 1.37

There is no PRF-fit offset from OOT-fit

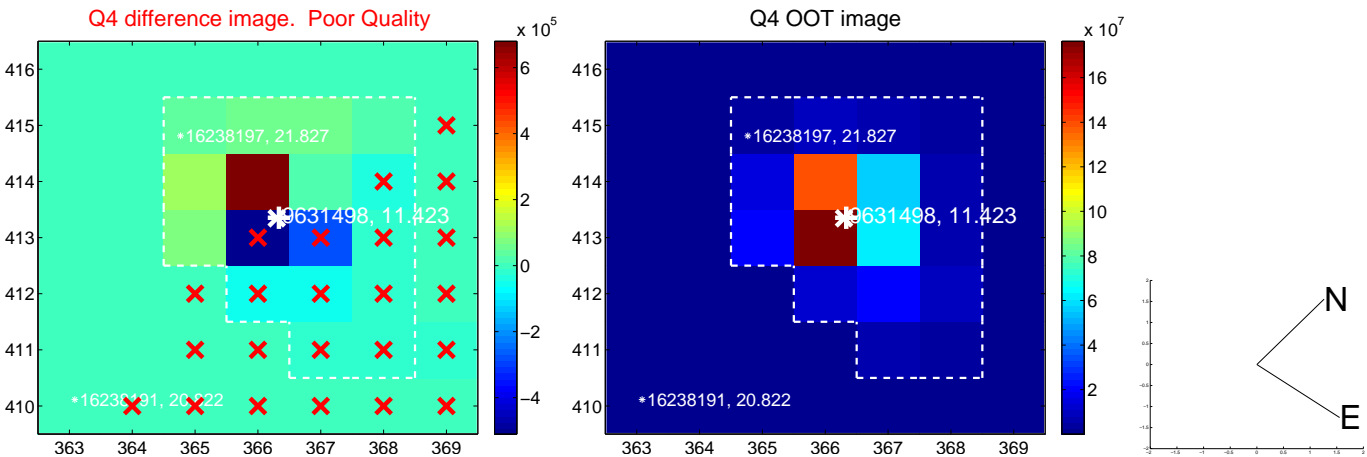
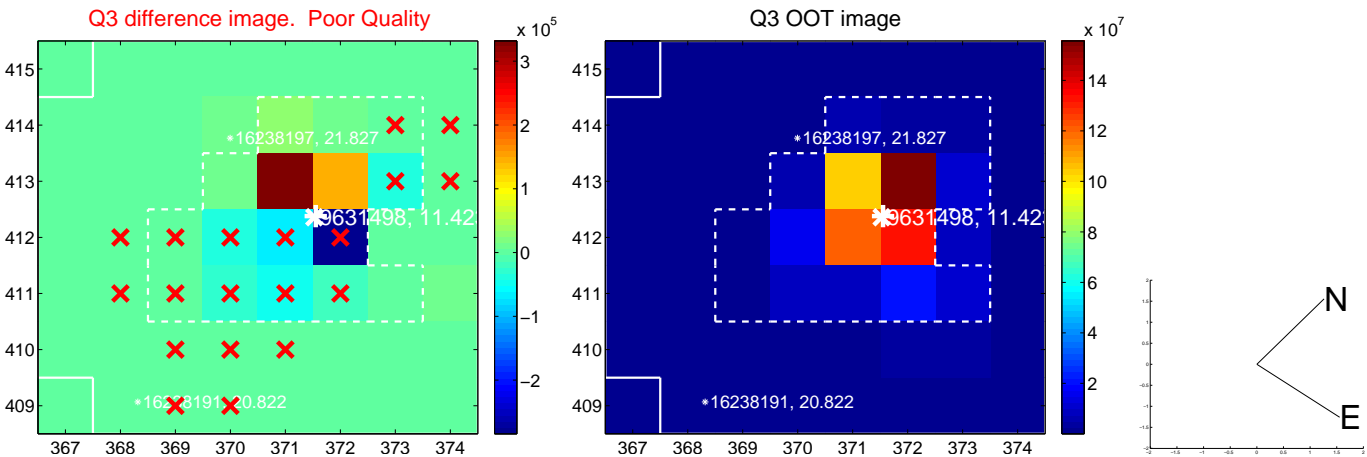
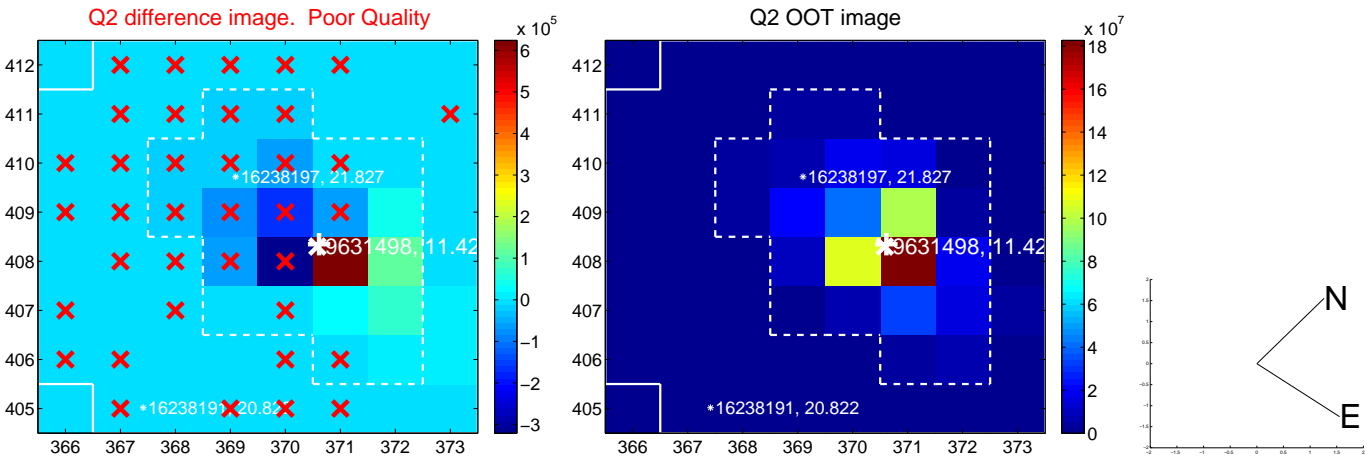
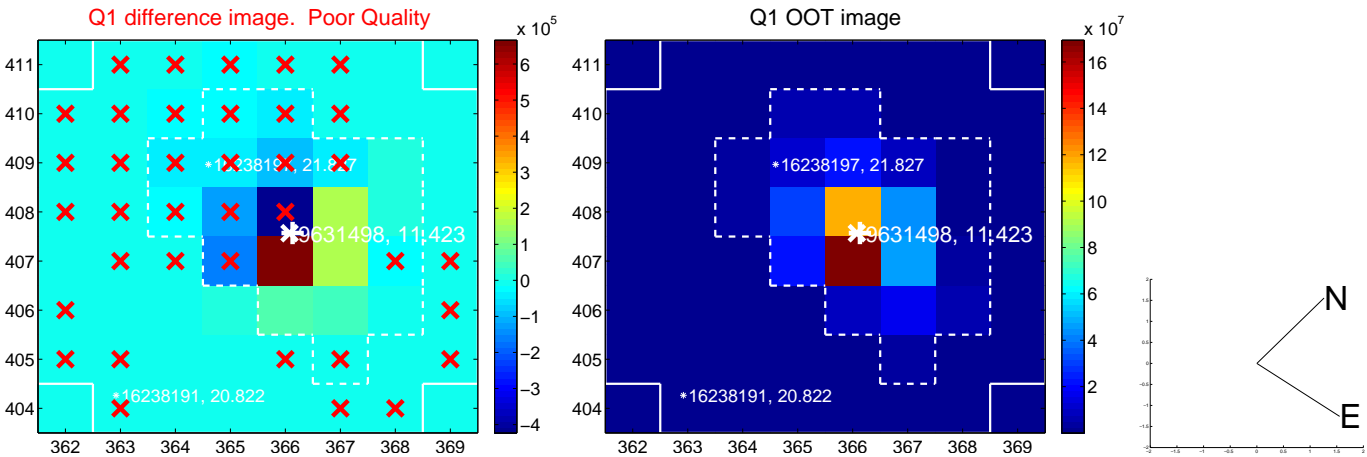


There is no PRF-fit offset from KIC

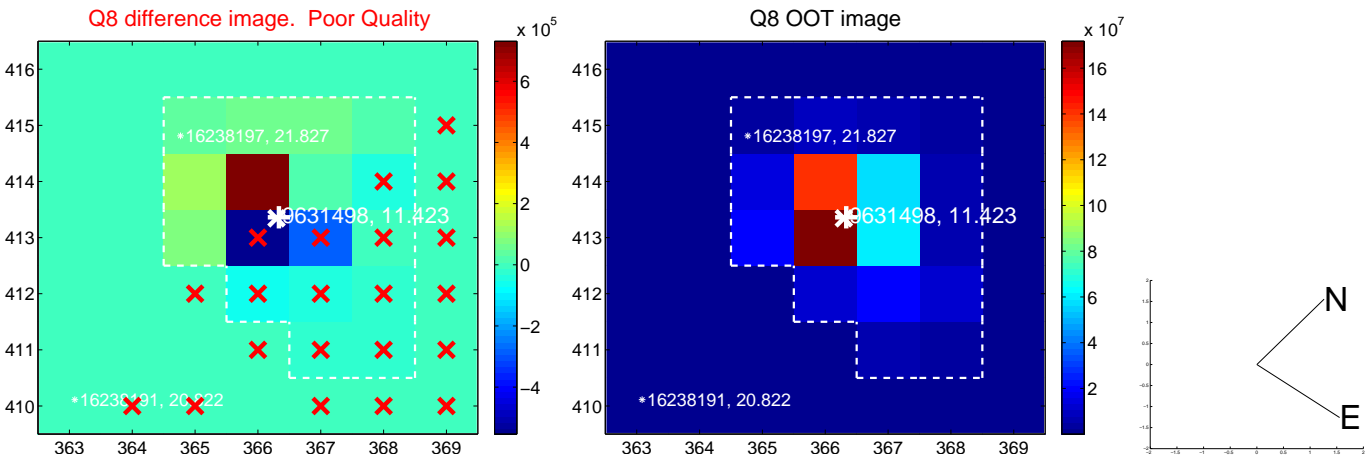
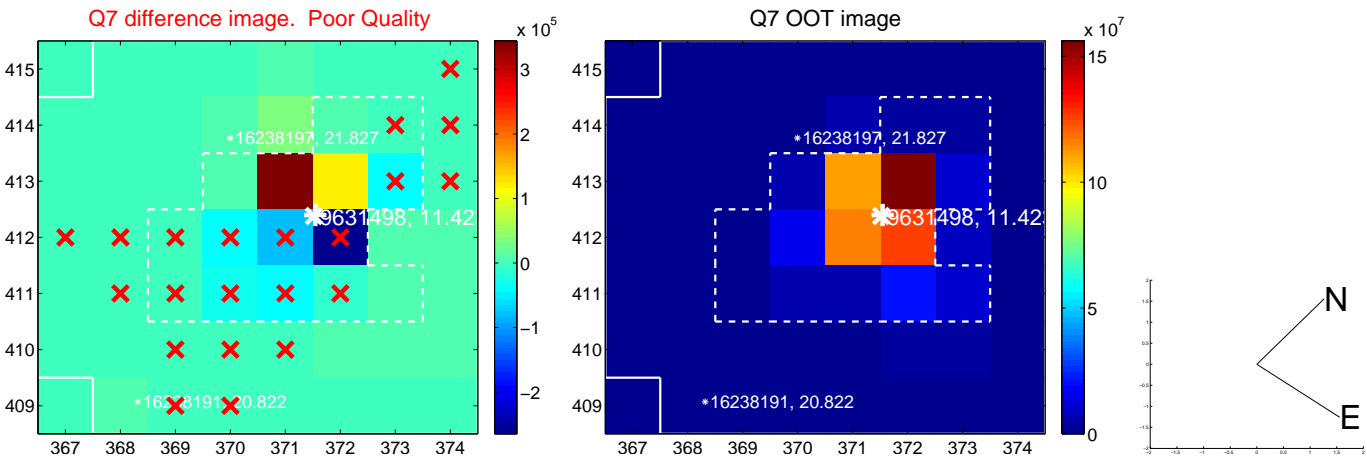
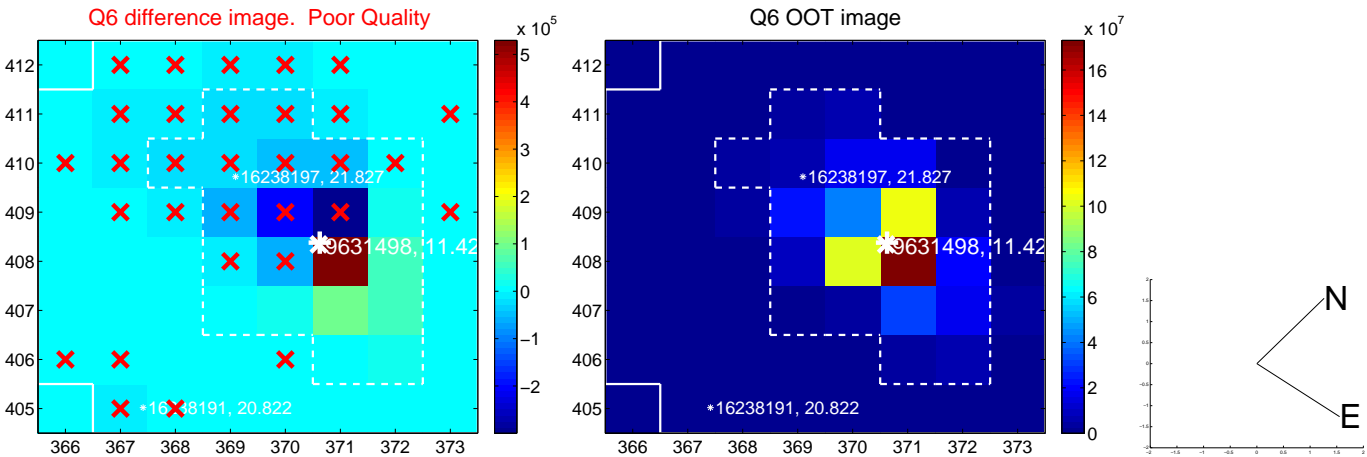
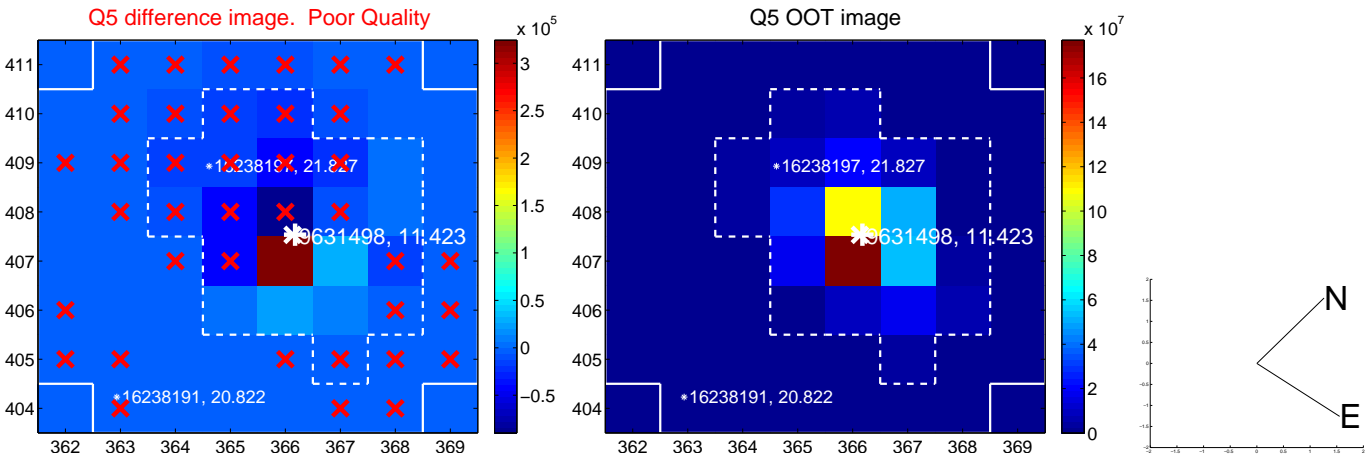


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

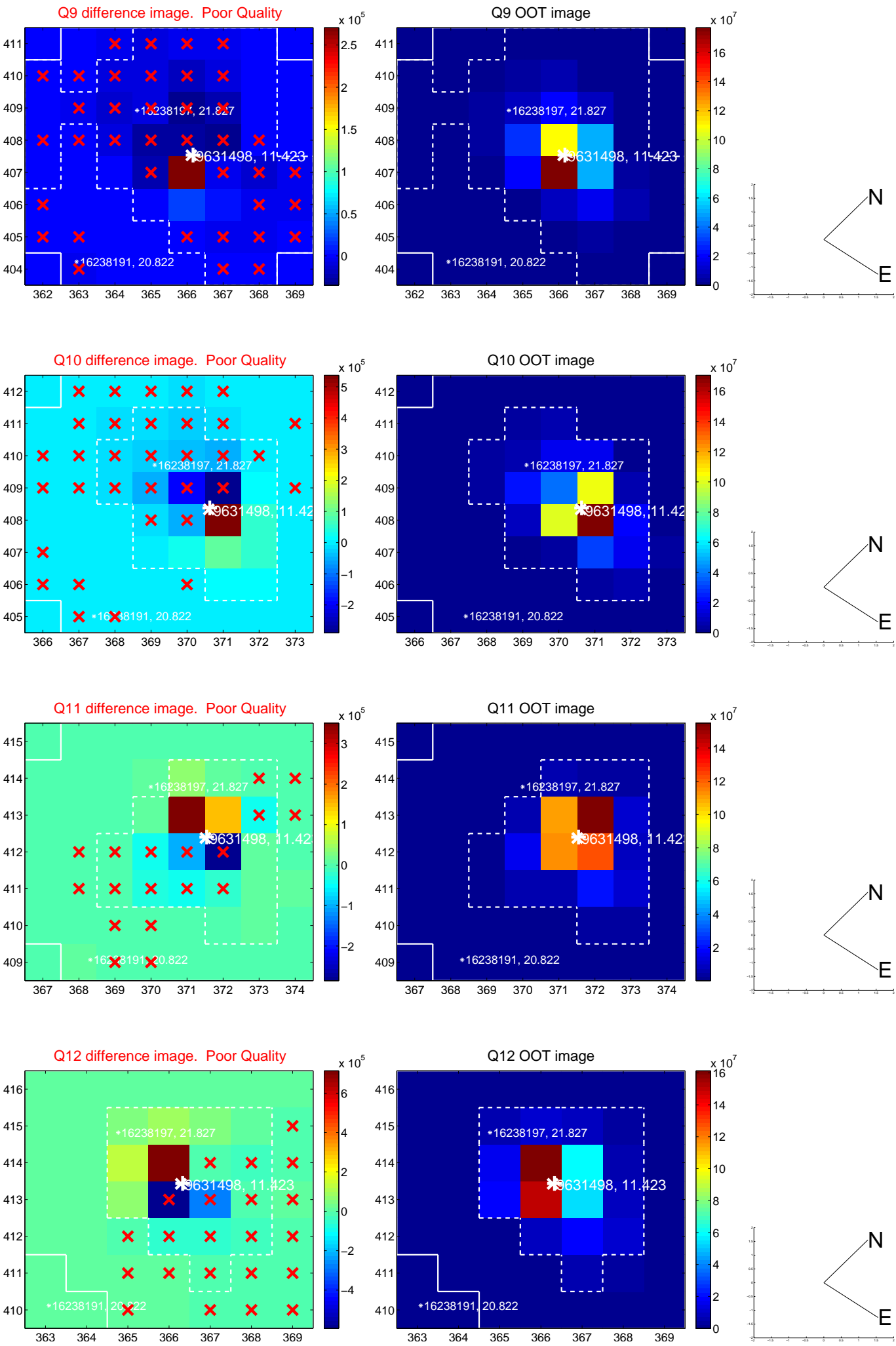
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



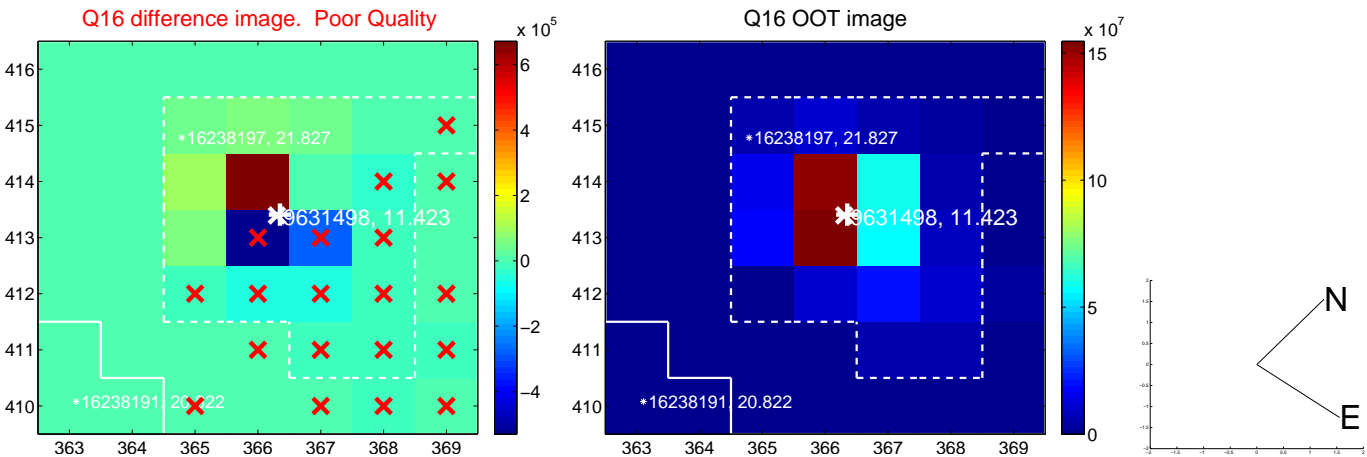
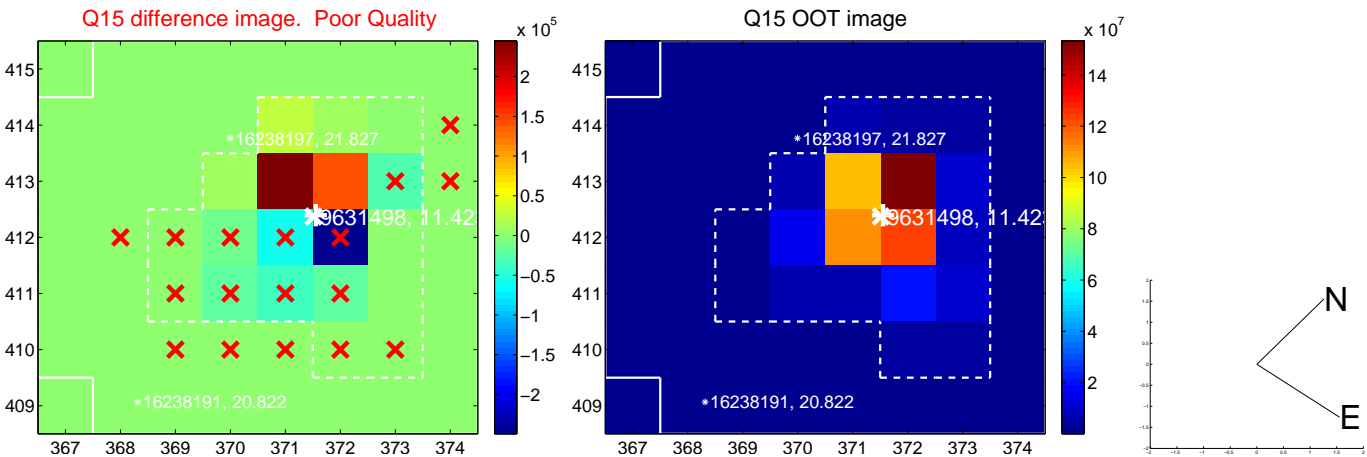
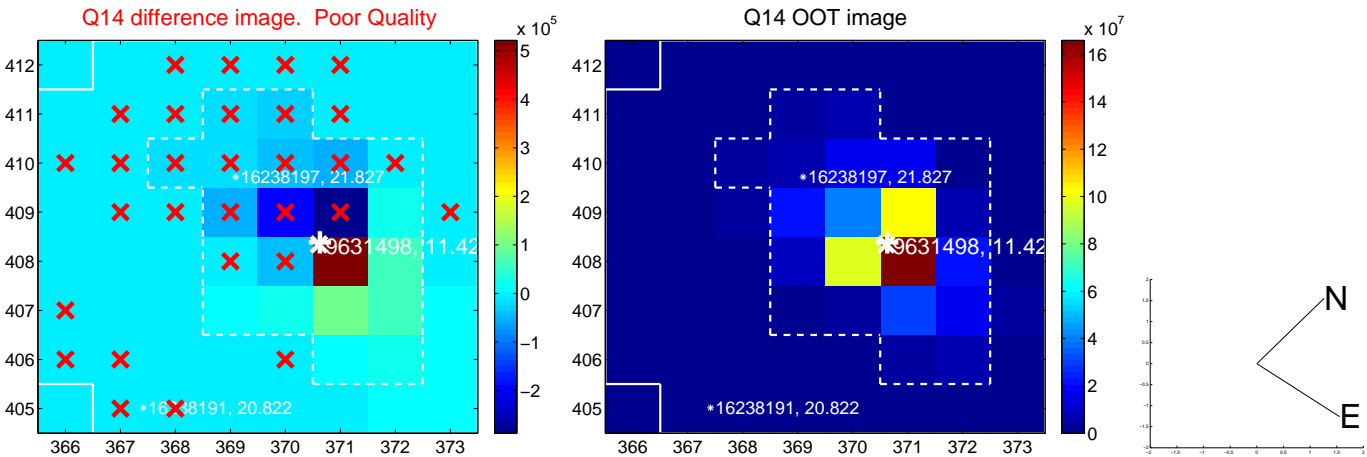
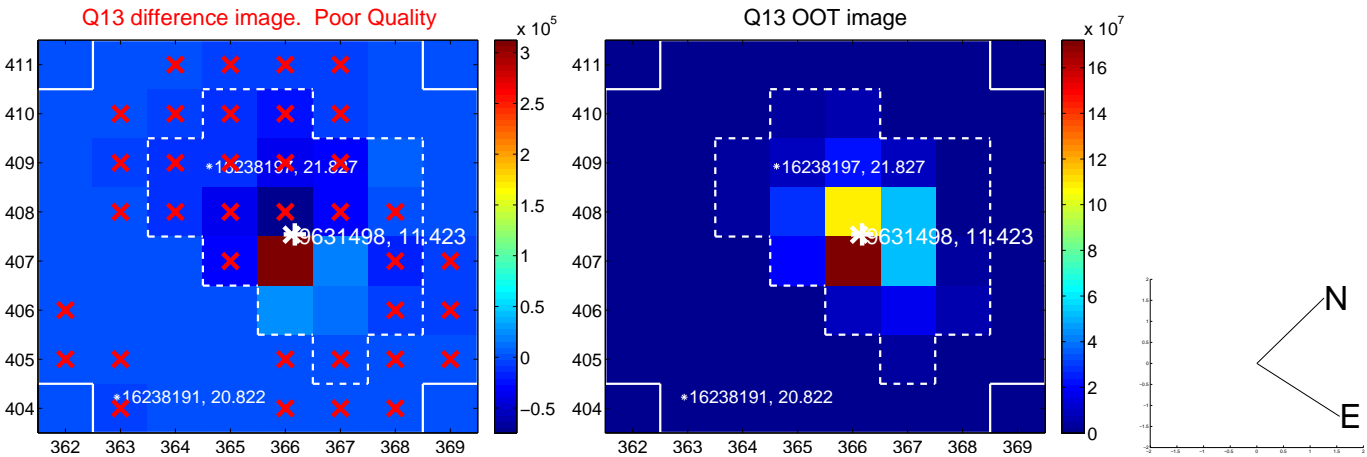
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



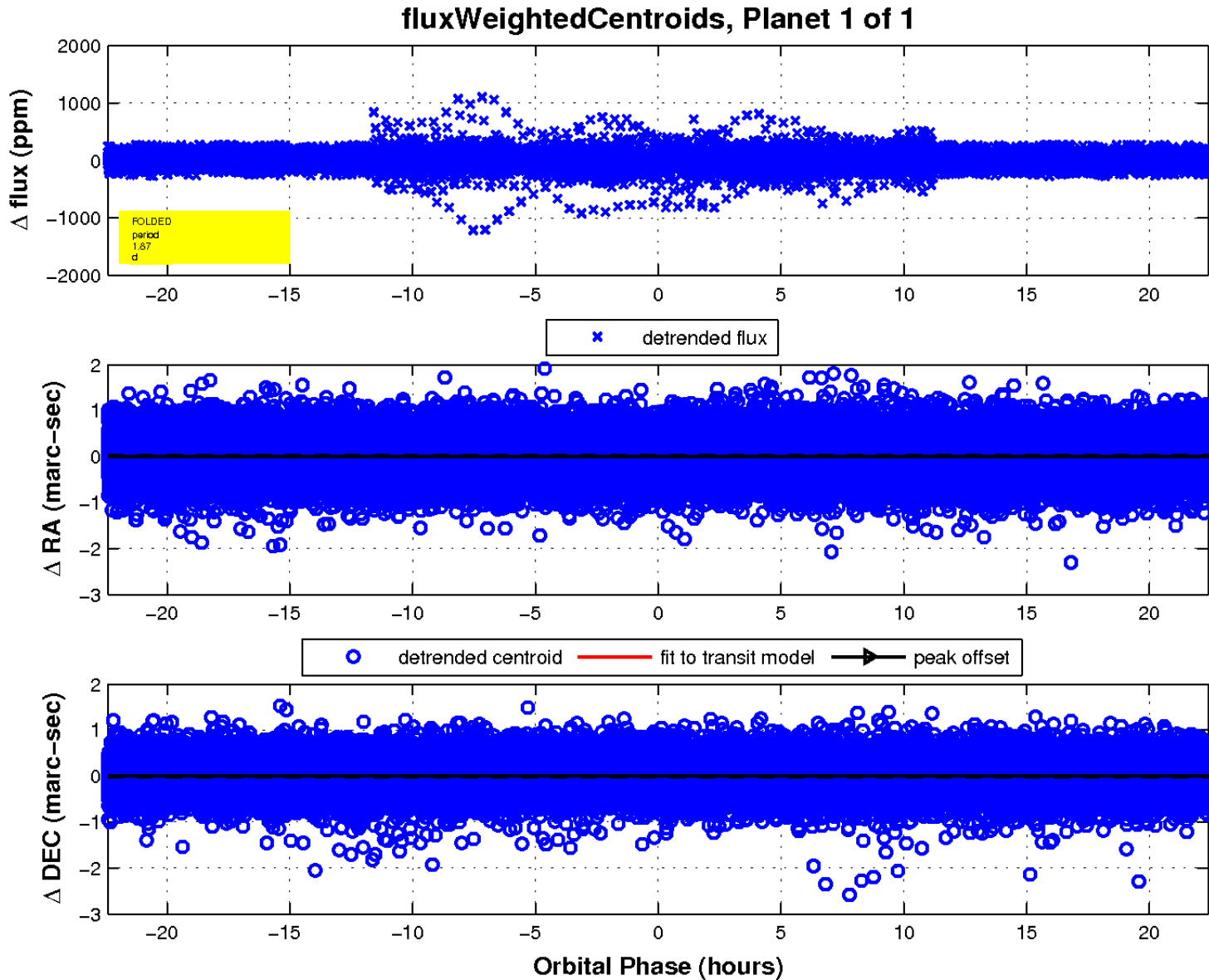
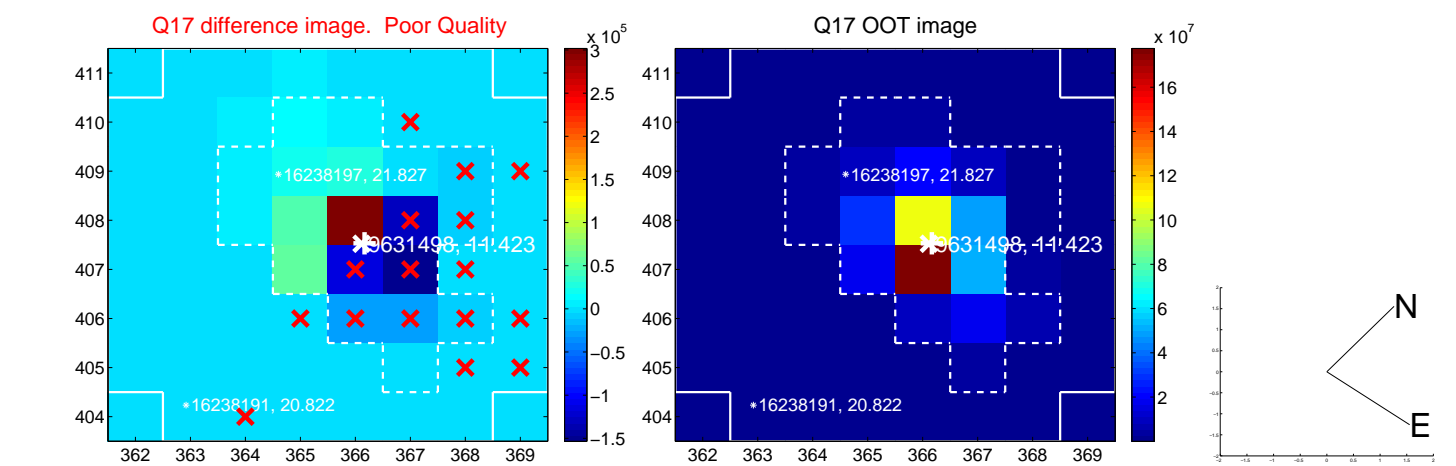
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

