

KIC 003445812

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})
003445812-01	OBS	4802.01	0.605547	132.031271	60.5	1.366	7.9	9.9	0.85	6123	0.78	4787.78

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003445812-01	OBS	FP	0.00	1	0	1	0	MOD_NONUNIQ_ALT—CENT_RESOLVED_OFFSET

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

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

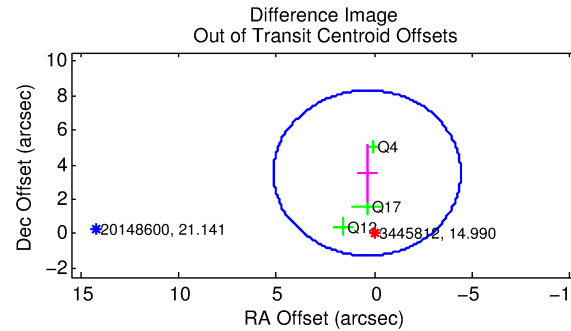
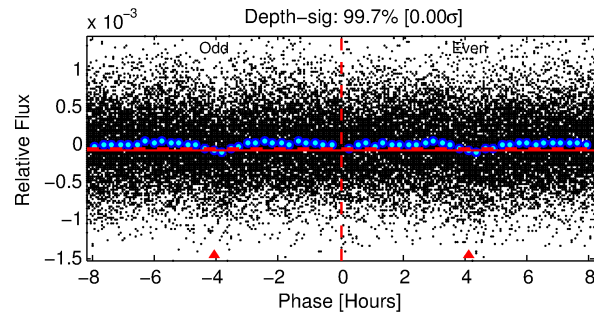
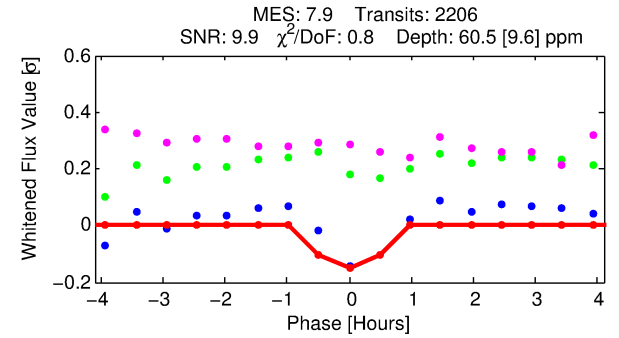
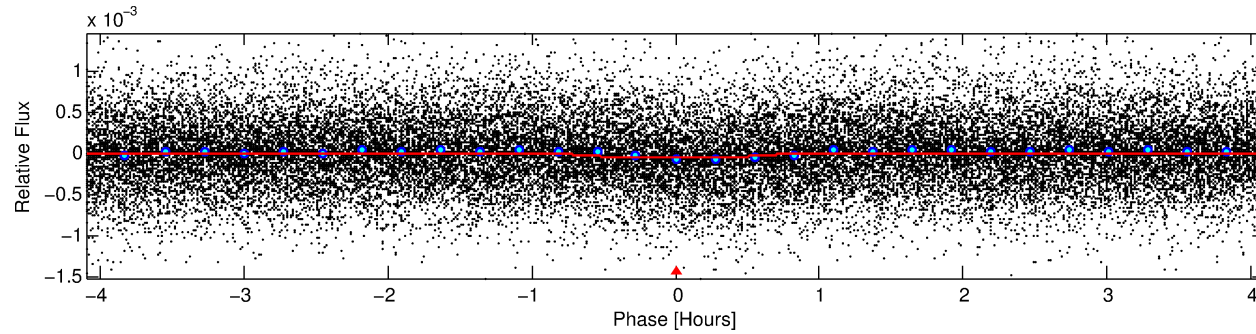
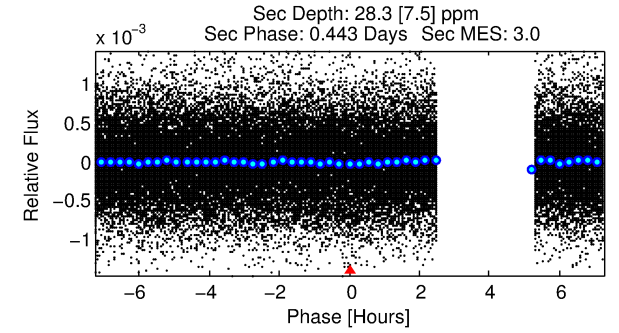
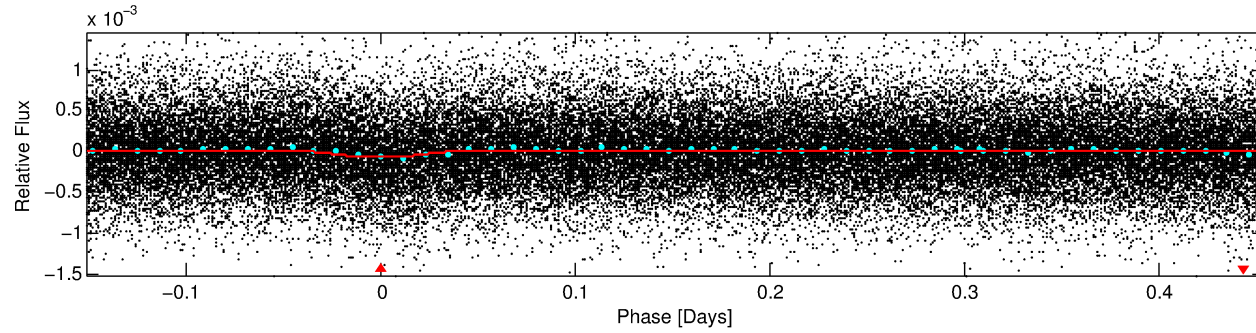
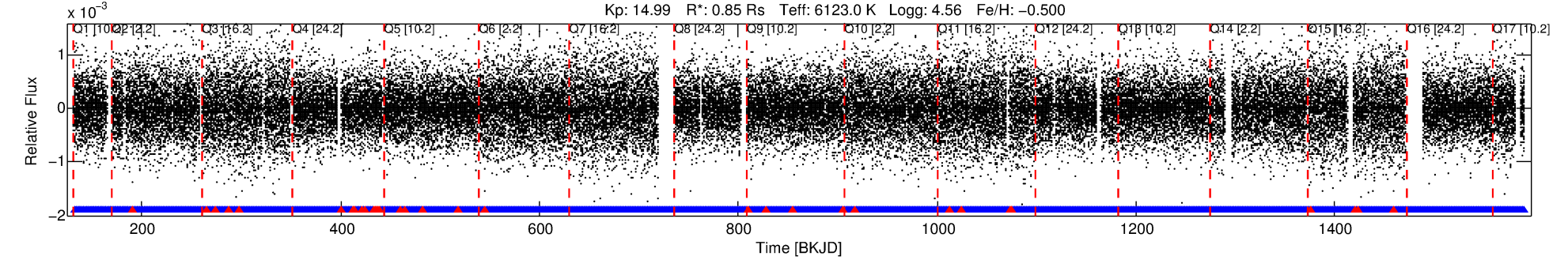
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003445812-01

No Significant Match Found

DV One-Page Summary

KIC: 3445812 Candidate: 1 of 1 Period: 0.606 d
KOI: K04802.01 Corr: 0.847



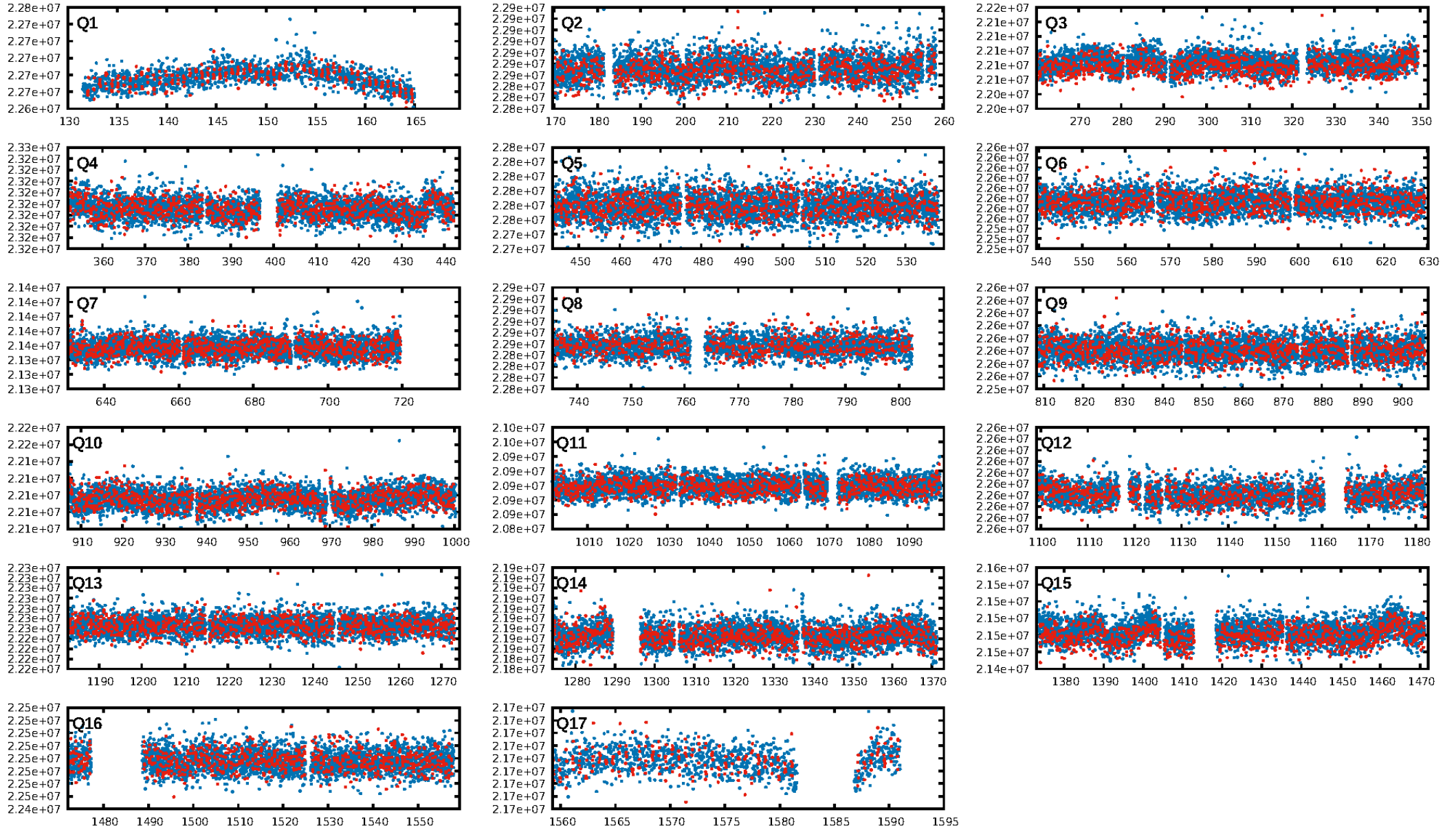
DV Fit Results:

Period = 0.60555 [0.00001] d
Epoch = 132.0313 [0.0022] BKJD
Rp/R* = 0.0084 [0.0053]
a/R* = 1.80 [4.32]
b = 0.90 [0.74]
Seff = 4787.78 [1821.74]
Teff = 2121 [202] K
Rp = 0.77 [0.54] Re
a = 0.0137 [0.0033] AU
Ag = 4.89 [6.53] [0.60 σ]
Teffp = 4876 [1577] K [1.73 σ]

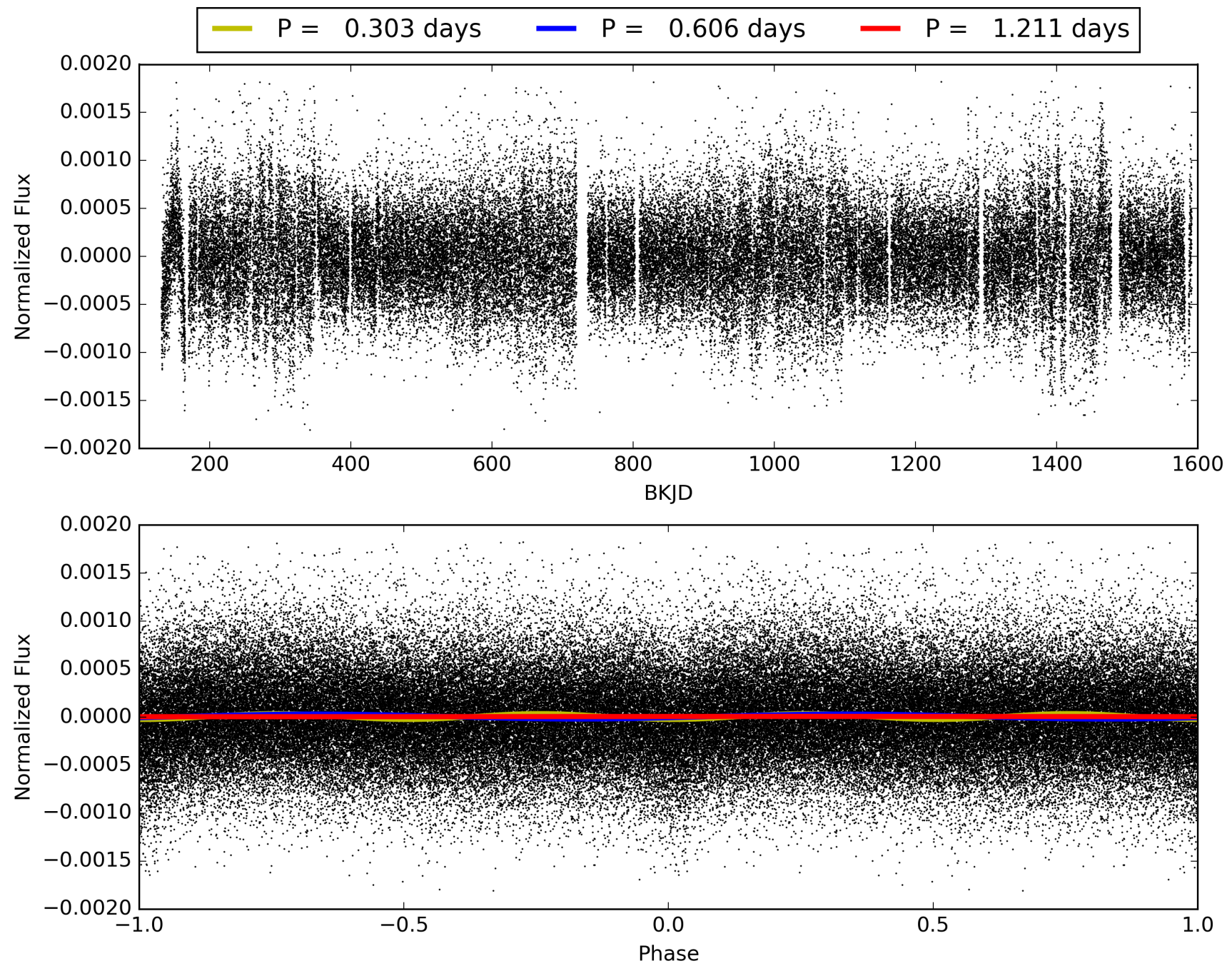
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.09e-15
RollingBand-fgt: 0.98 [2069/2107]
GhostDiagnostic-chr: -0.2703
Centroid-sig: 0.0%
Centroid-so: 8.119 arcsec [5.63 σ]
OotOffset-rm: 3.534 arcsec [2.22 σ]
KicOffset-rm: 3.679 arcsec [2.30 σ]
OotOffset-st: 0/0/2/1 [3]
KicOffset-st: 0/0/2/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 003445812-01, PDC Light Curves

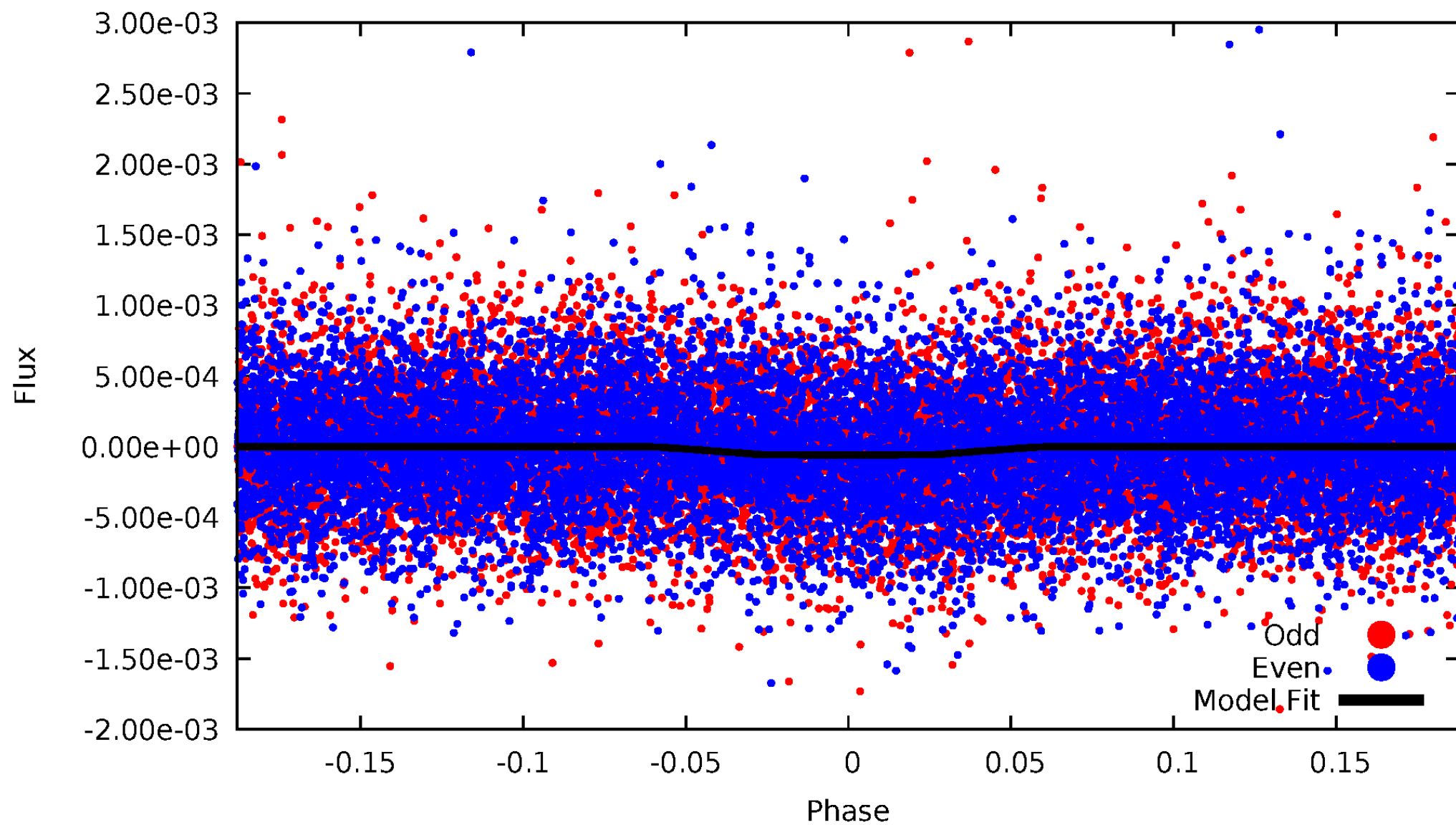


TCE 003445812-01



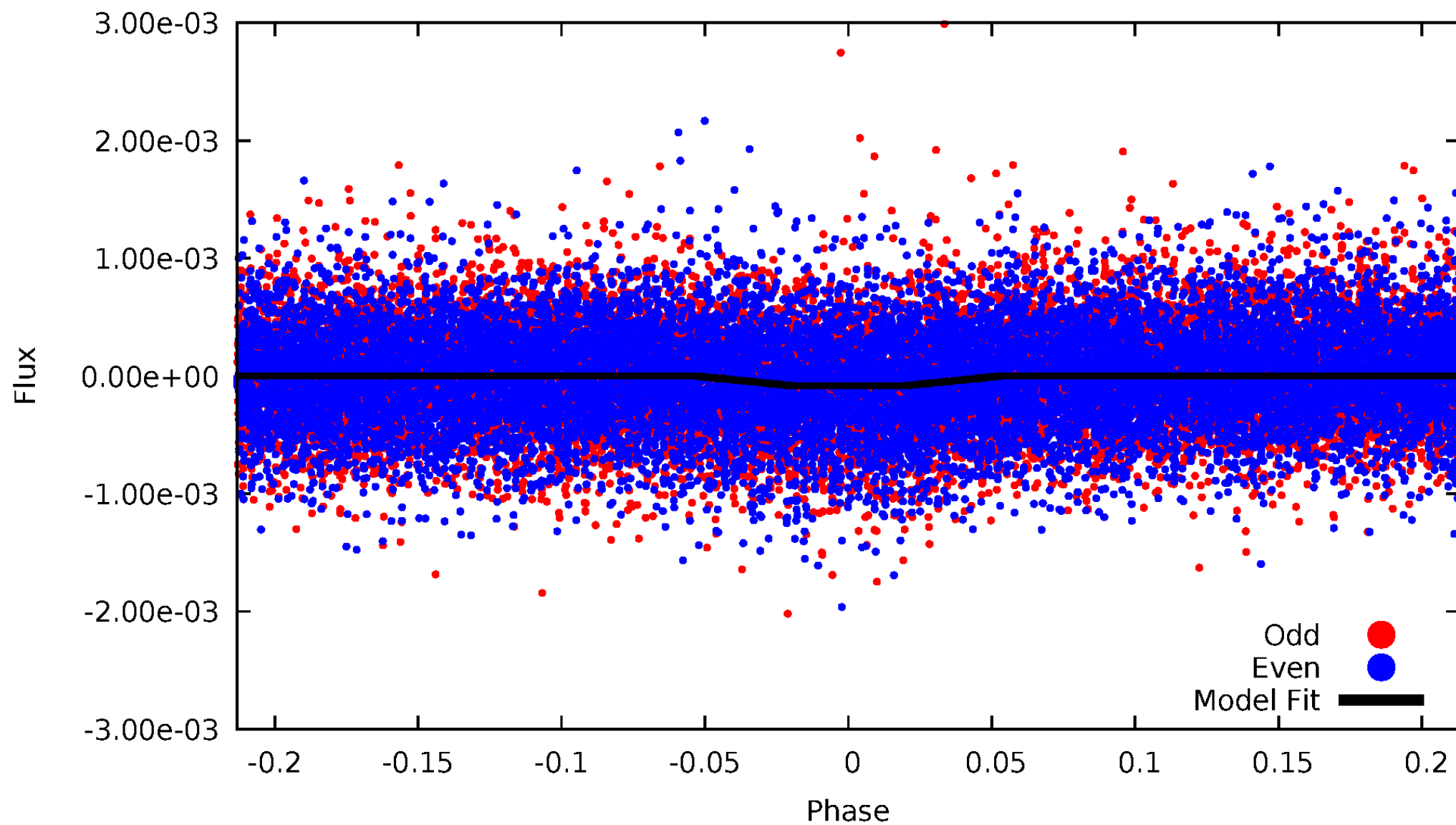
DV Odd/Even

TCE 003445812-01



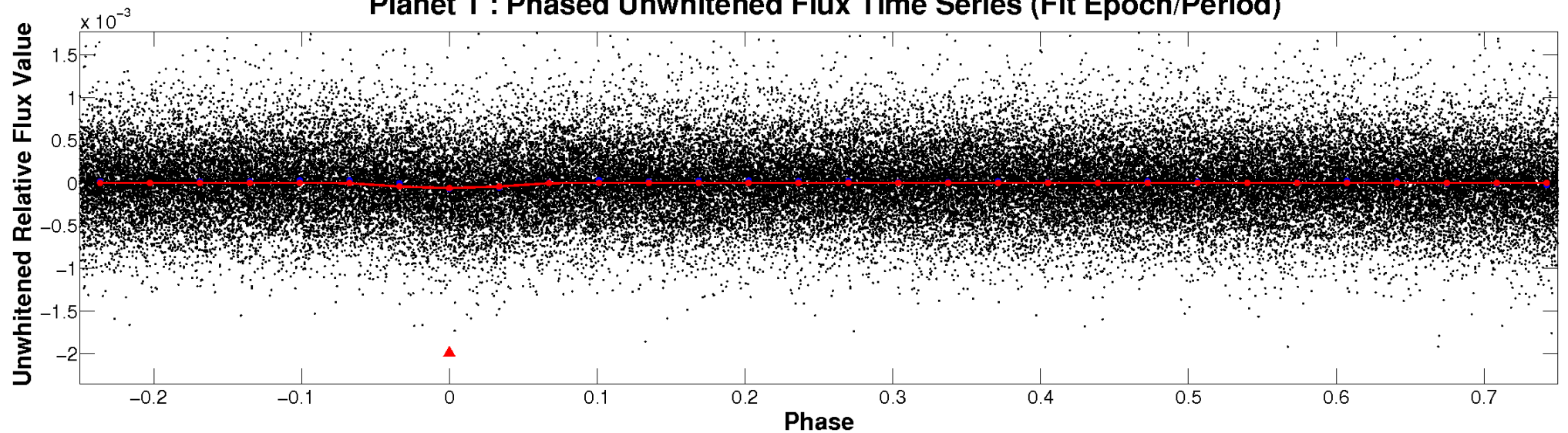
ALT Odd/Even

TCE 003445812-01

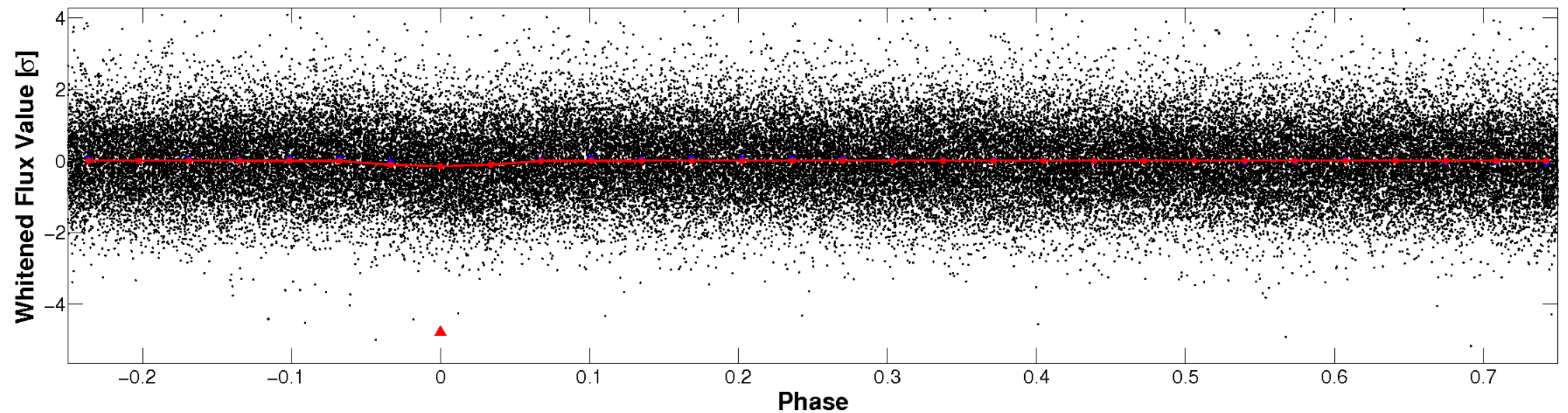


Non-Whitened Vs. Whitened Light Curve

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

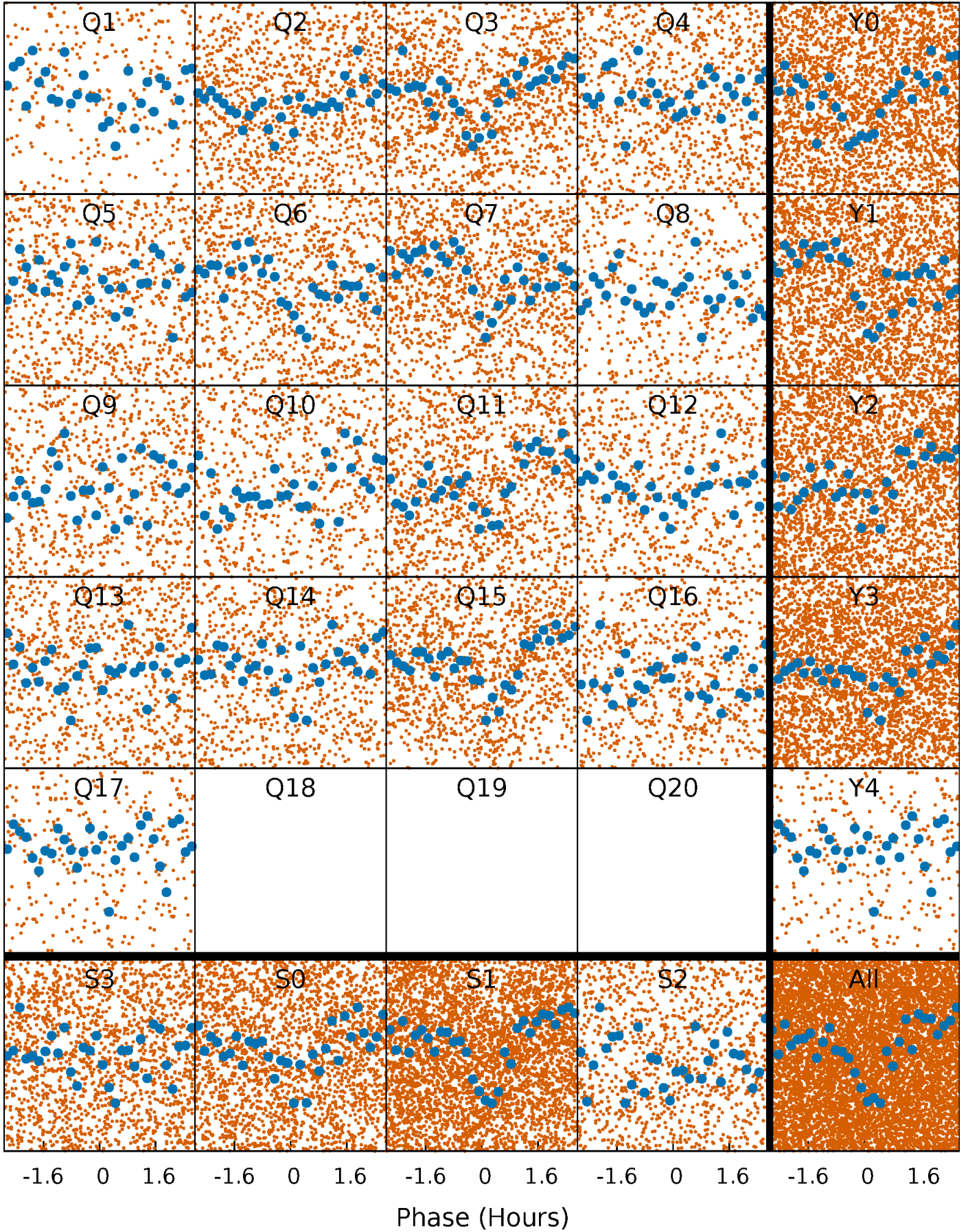


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



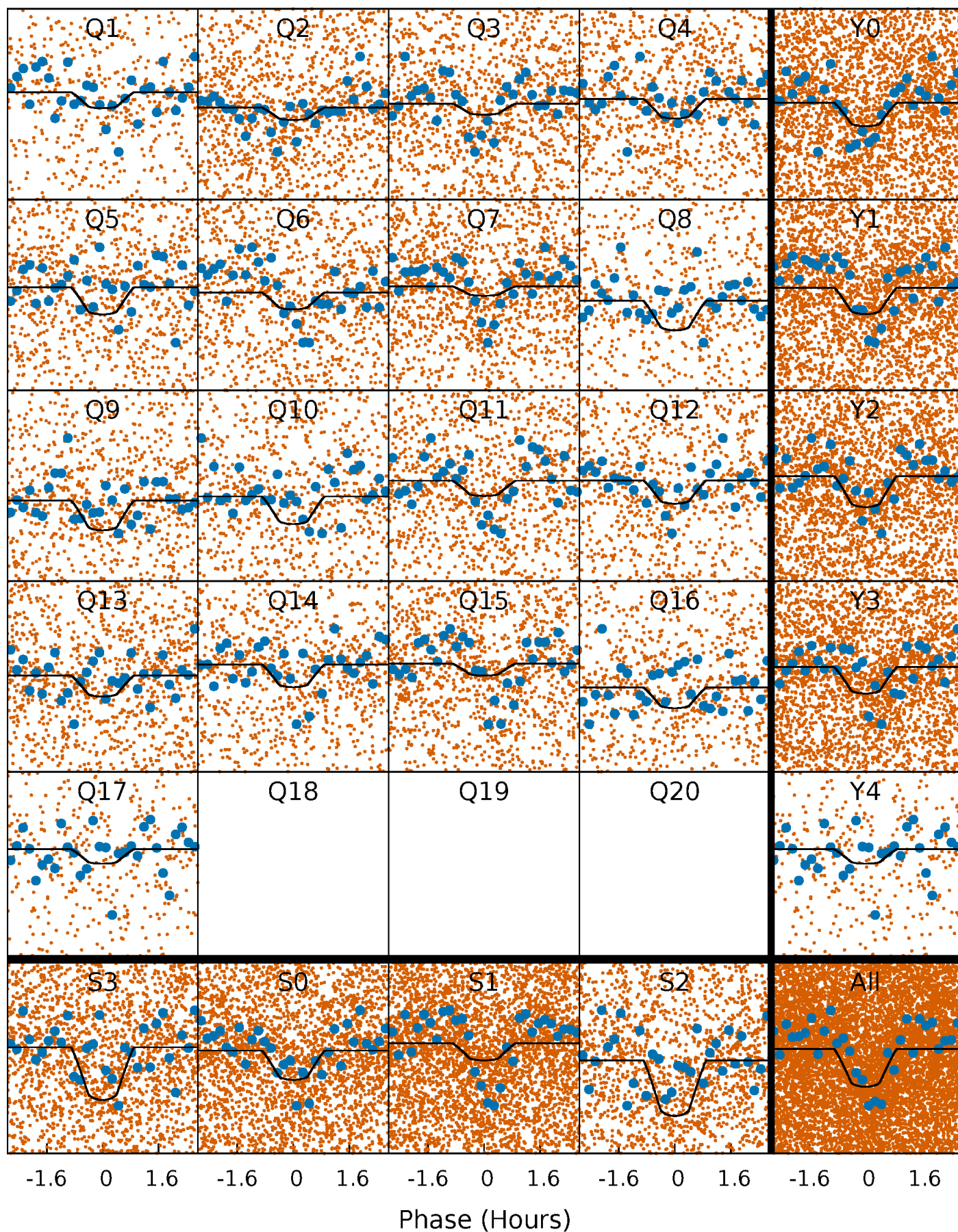
PDC Quarter-Phased Transit Curves

TCE 003445812-01 P= 0.605547 Days $T_0=132.031271$ (BKJD)



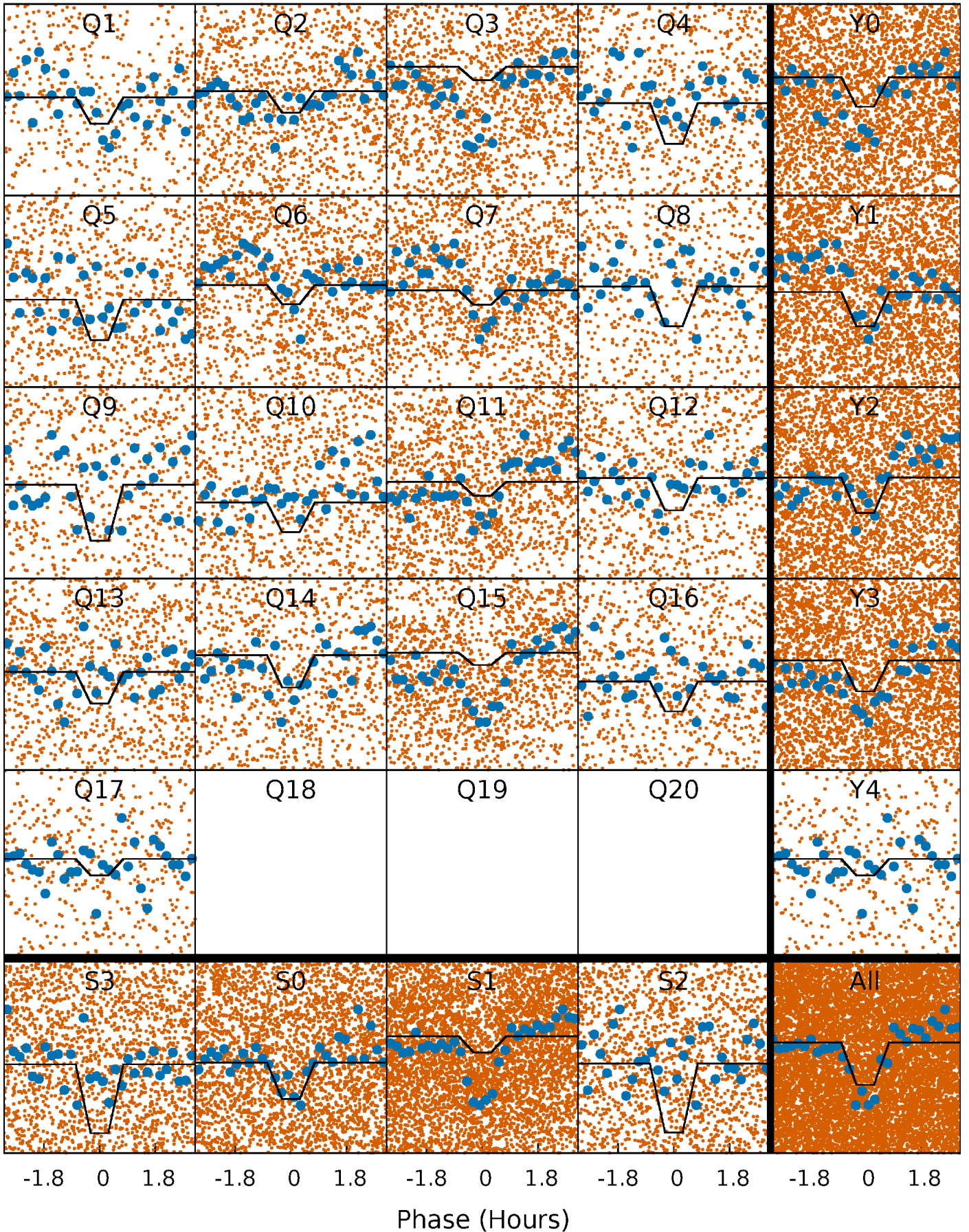
DV Quarter-Phased Transit Curves

TCE 003445812-01 P= 0.605547 Days $T_0=132.031271$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

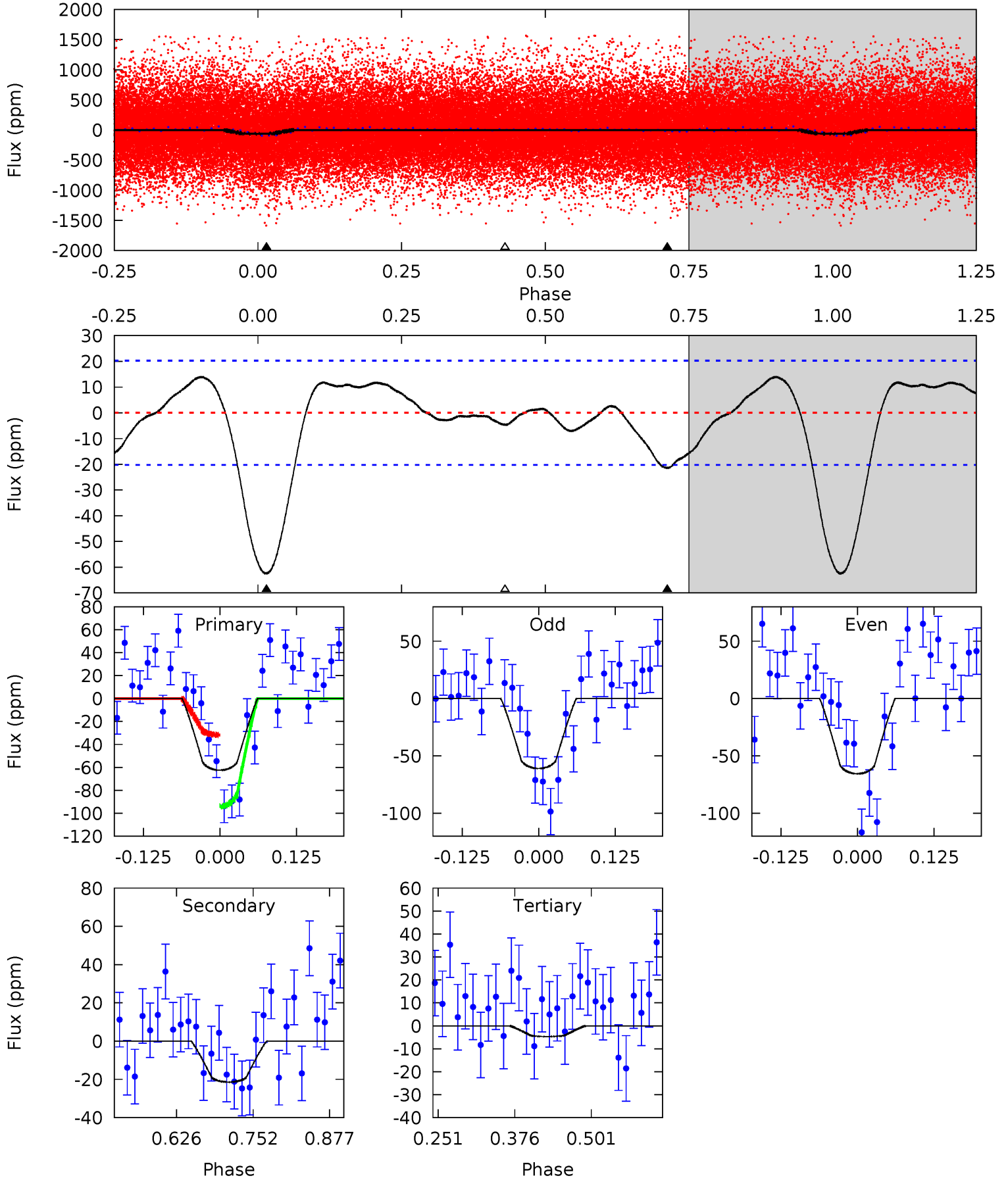
TCE 003445812-01 P= 0.605553 Days $T_0=132.031288$ (BKJD)



DV Model-Shift Uniqueness Test

003445812-01, P = 0.605547 Days, E = 131.425724 Days

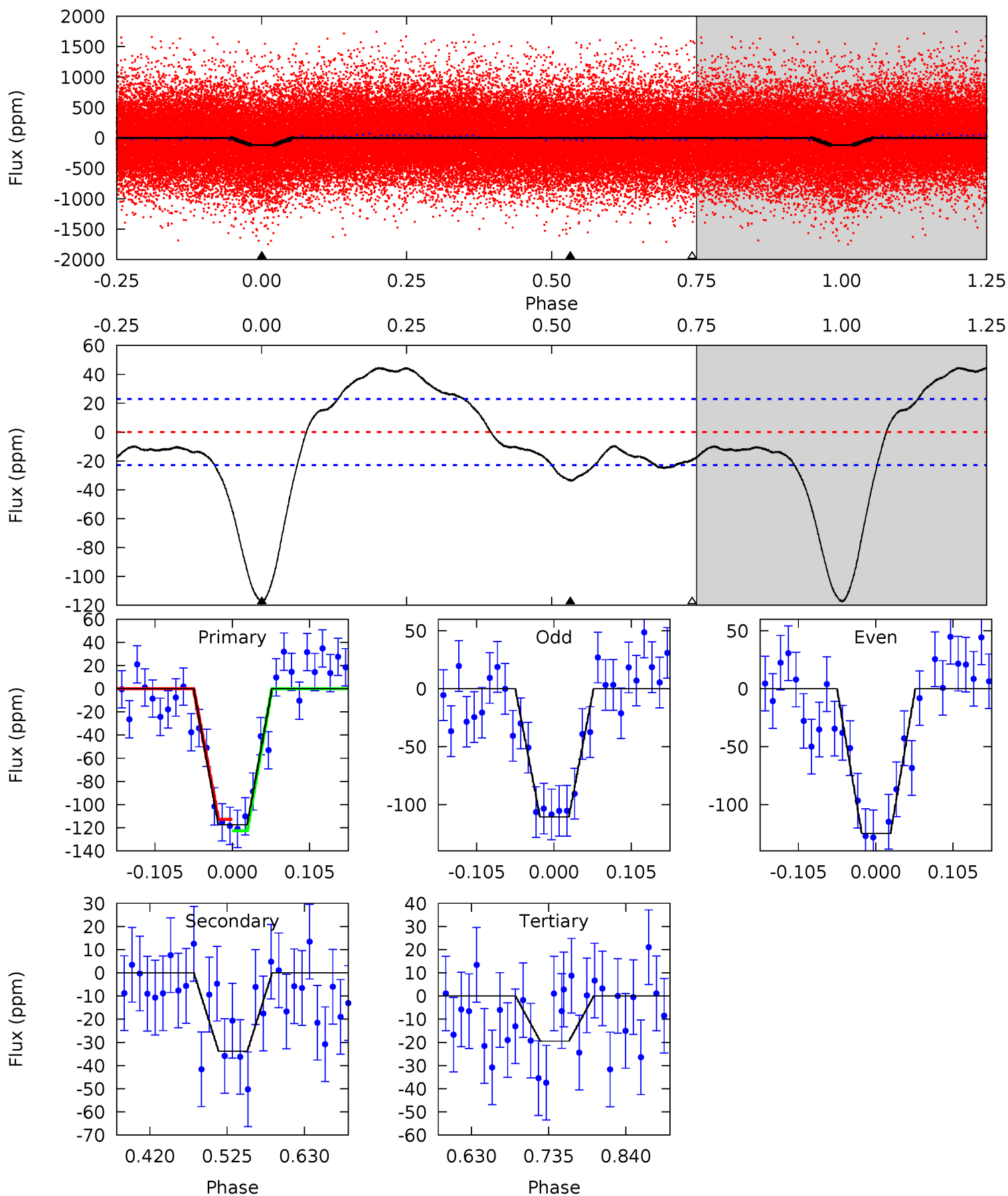
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	4.77	1.04	0	4.52	1.53	1.31	12.9	13.9	3.73	4.77	0.51	1.00	0.18	6.98



Alt Model-Shift Uniqueness Test

003445812-01, P = 0.605553 Days, E = 131.425735 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.4	6.73	3.88	0	4.55	1.62	4.86	19.5	23.4	2.85	6.73	1.41	1.08	0.27	0.98



Stellar Parameters For KIC 003445812

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6123^{+166}_{-203}	$4.556^{+0.035}_{-0.196}$	$-0.500^{+0.300}_{-0.300}$	$0.846^{+0.243}_{-0.065}$	$0.941^{+0.107}_{-0.107}$	$2.185^{+0.425}_{-1.166}$
	+3%/-3%	+1%/-4%	+60%/-60%	+29%/-8%	+11%/-11%	+19%/-53%
Source	PHO1	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 003445812-01 / KOI 4802.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-21 ± 4	$0.85^{+0.55}_{-0.44}$	3028^{+183}_{-133}	4488^{+1900}_{-832}	$2.992^{+10.266}_{-1.869}$
Alt.	-34 ± 5	$0.94^{+0.55}_{-0.46}$	3026^{+185}_{-134}	4747^{+1702}_{-814}	$3.828^{+11.115}_{-2.277}$

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

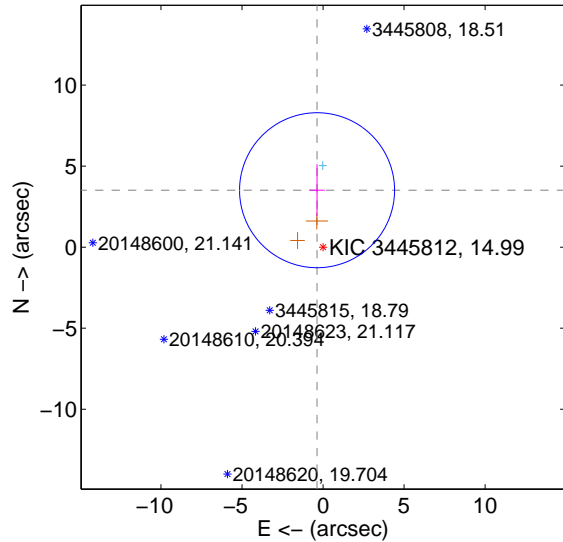
Supplemental centroid analysis for 003445812-01. Kepler magnitude: 14.99. Transit SNR 9.90

There are 1 quarters with good PRF difference image offsets

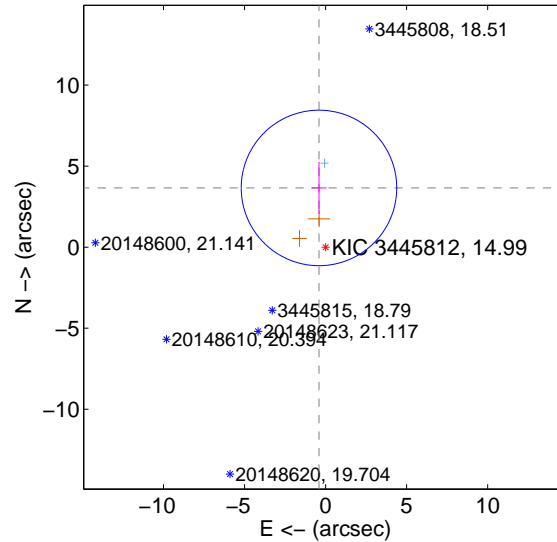
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.534 ± 1.594	2.22	0.369 ± 0.481	3.515 ± 1.602
PRF-fit source offset from KIC position	3.679 ± 1.599	2.30	0.408 ± 0.477	3.656 ± 1.609
photometric centroid source offset	8.12 ± 1.44	5.63	-4.25 ± 1.51	6.92 ± 1.41

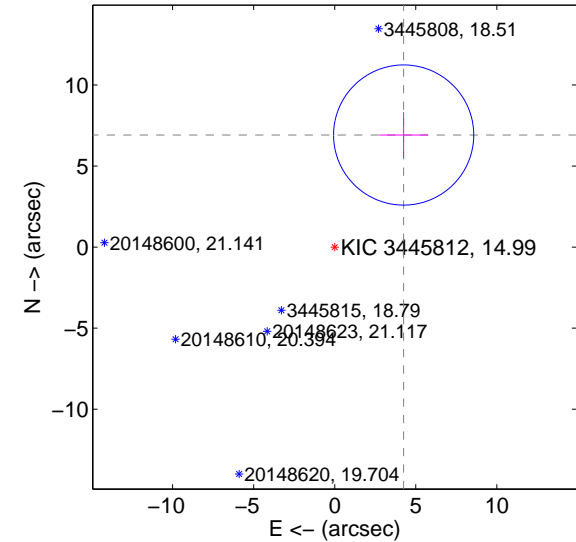
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

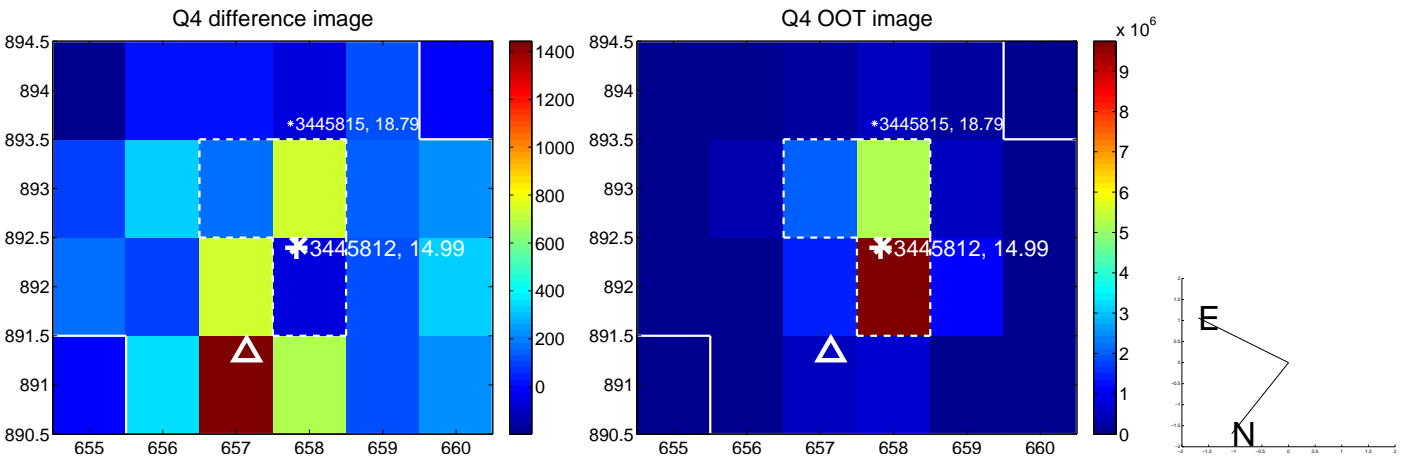
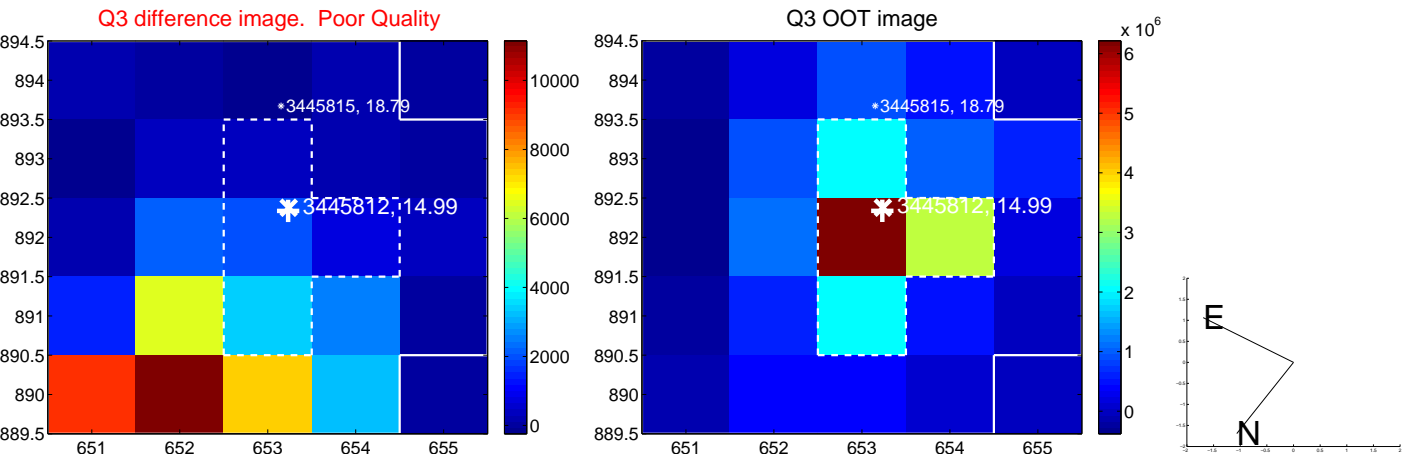
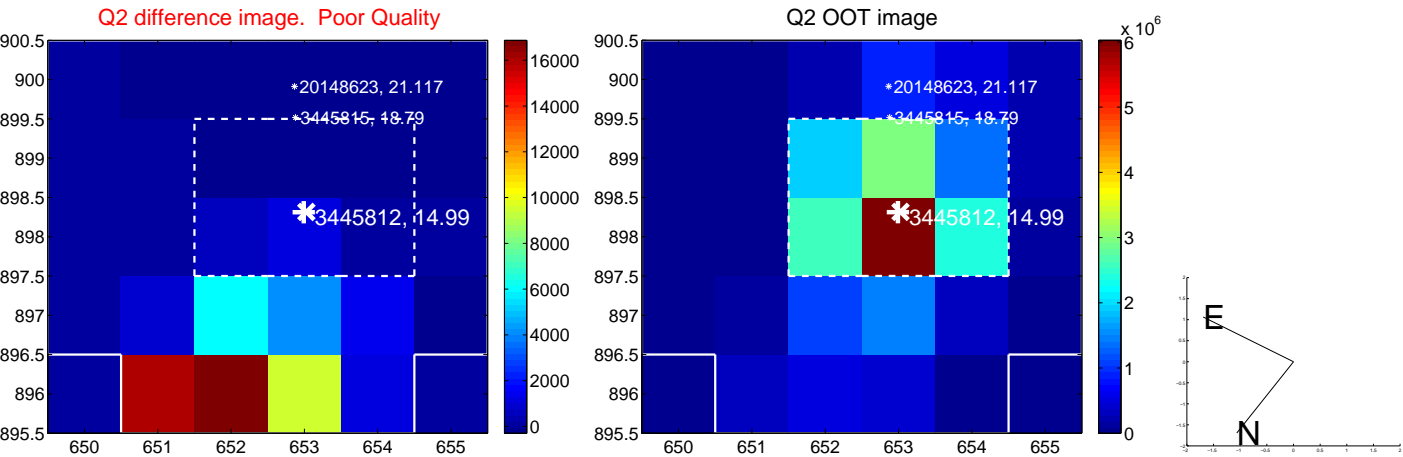
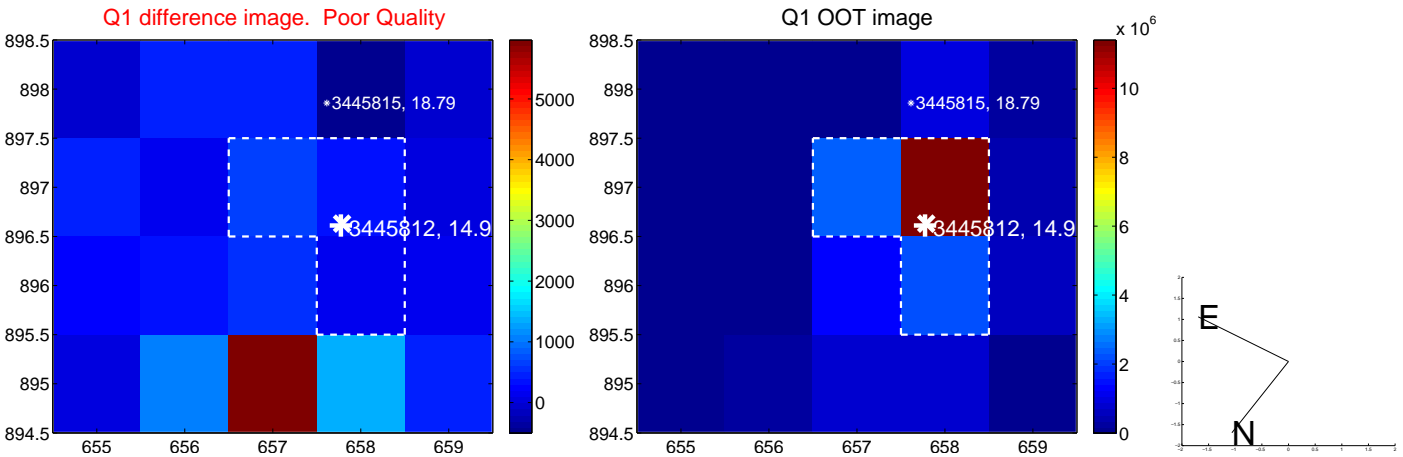


offset from photometric centroids

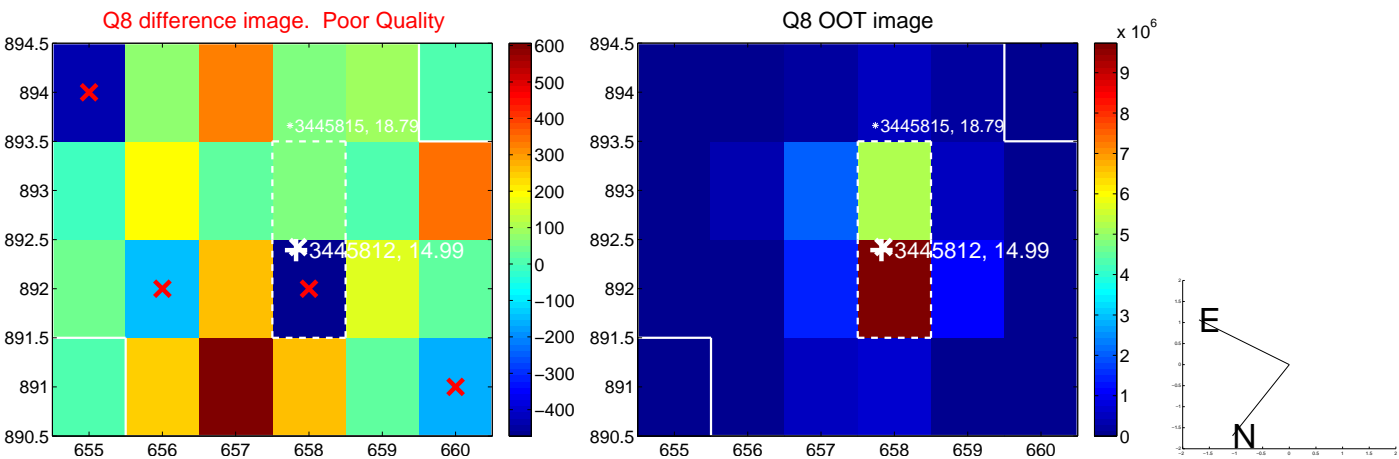
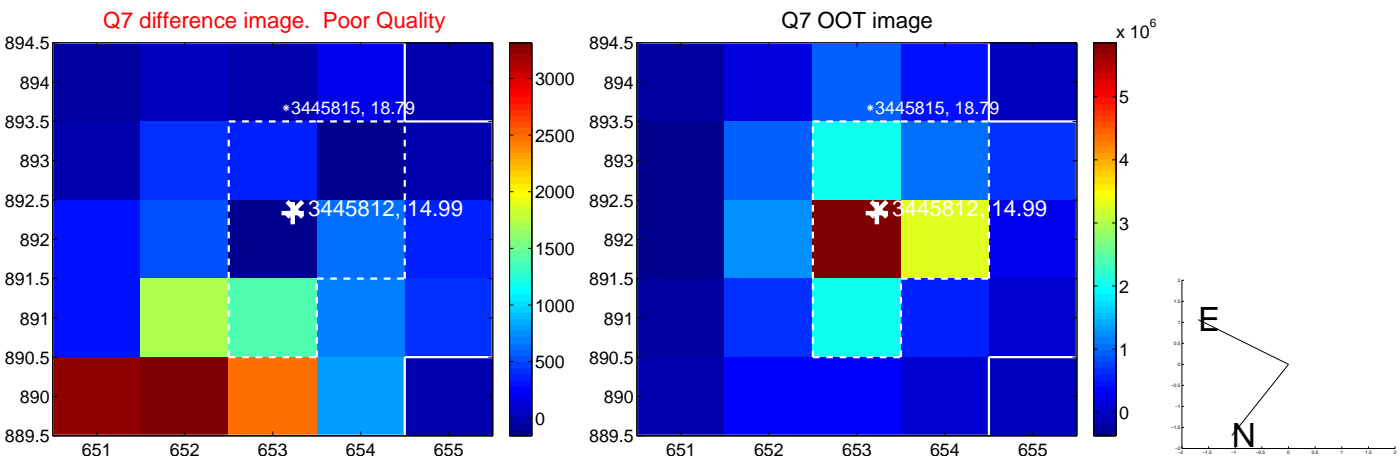
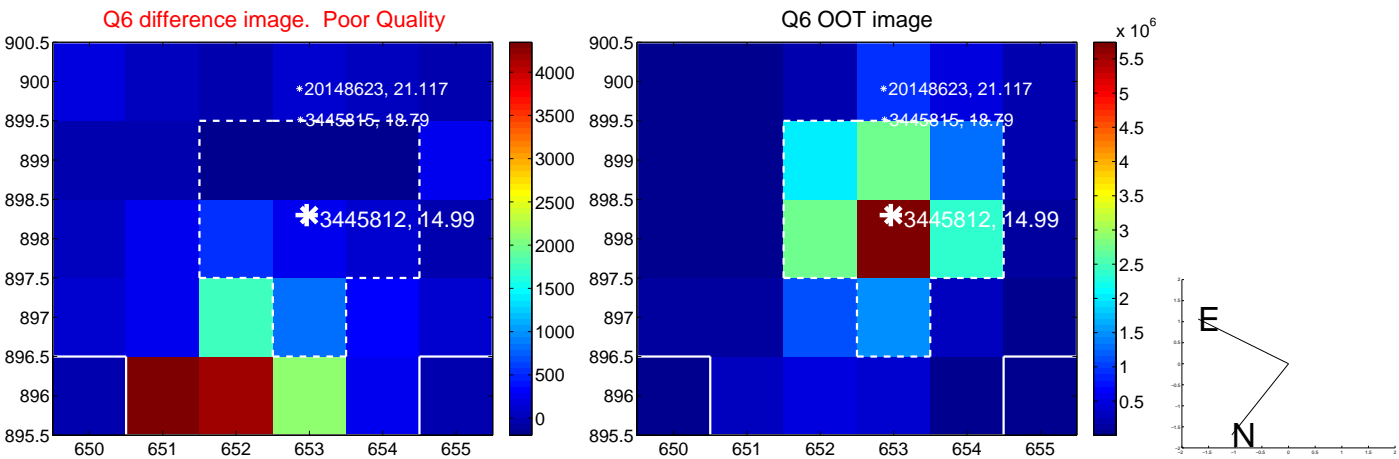
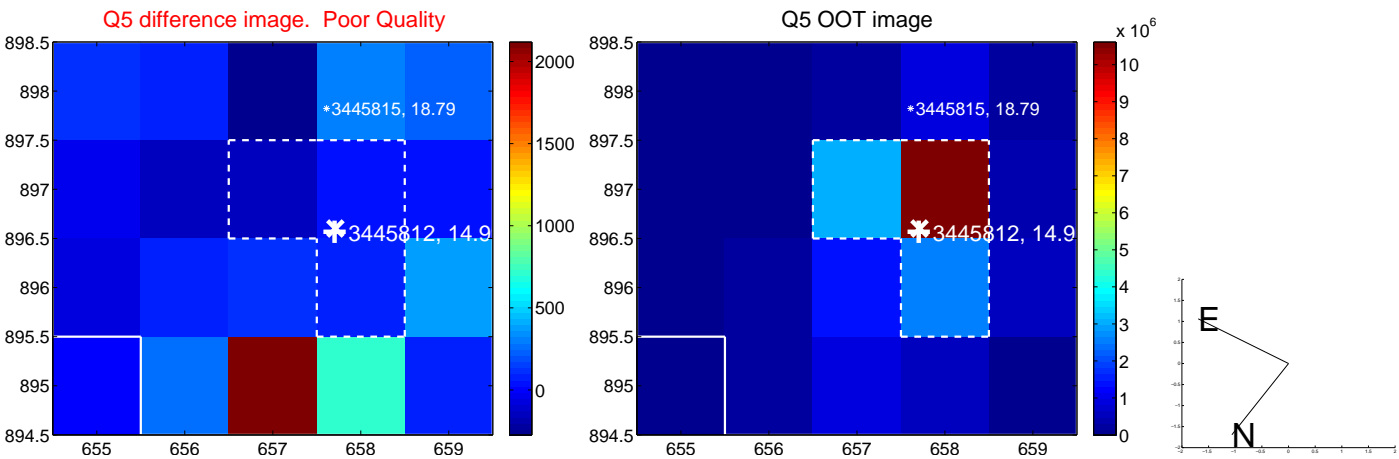


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

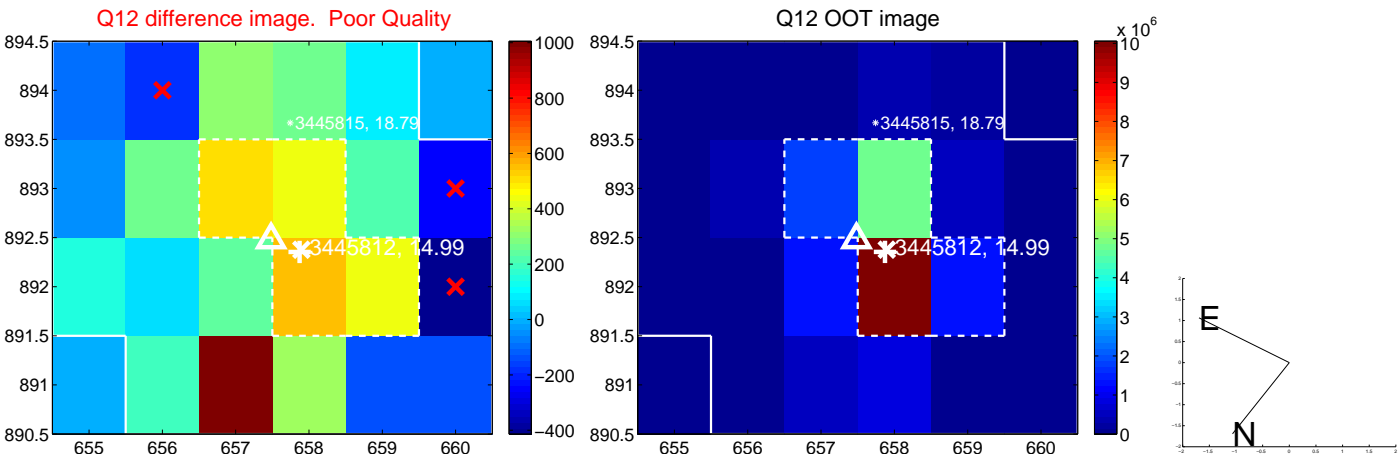
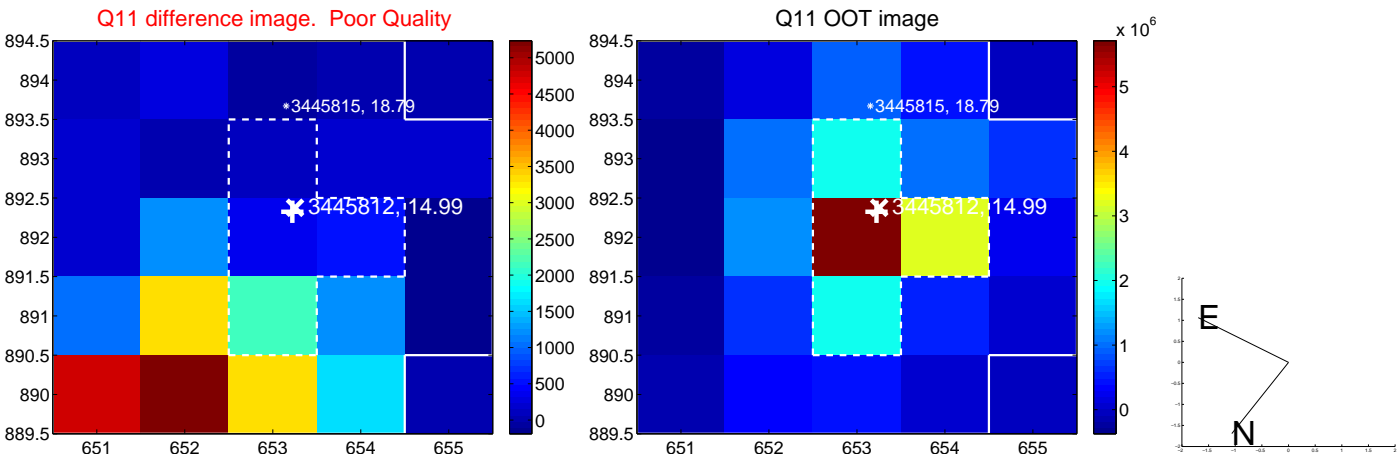
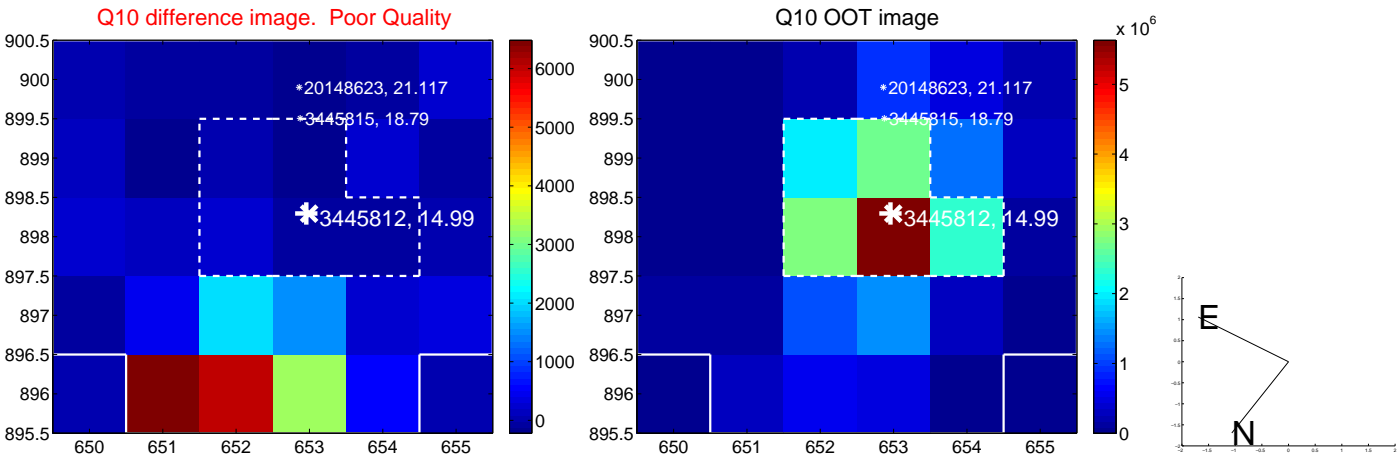
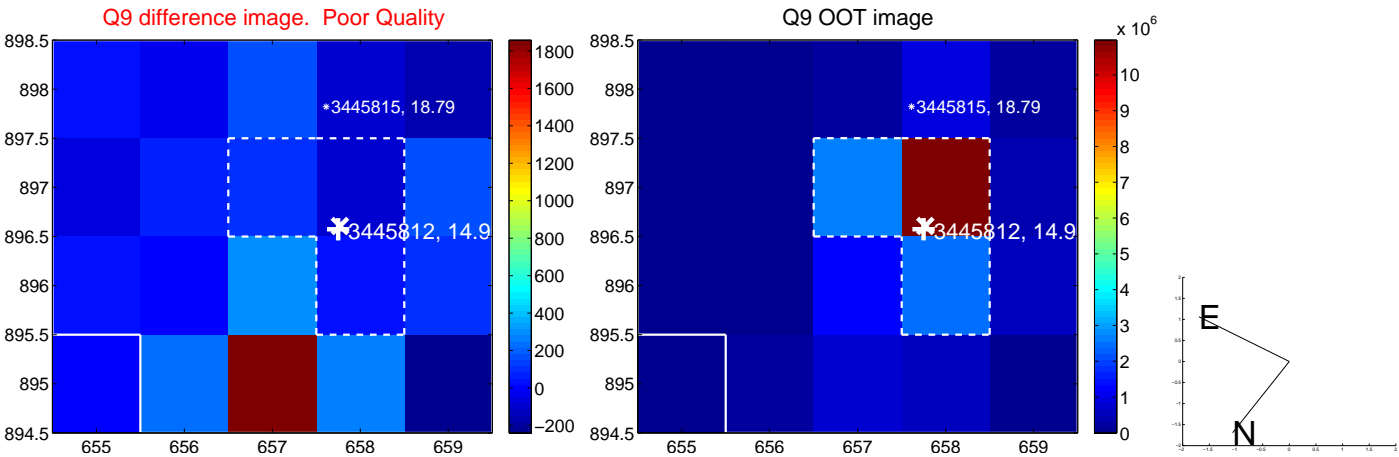
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



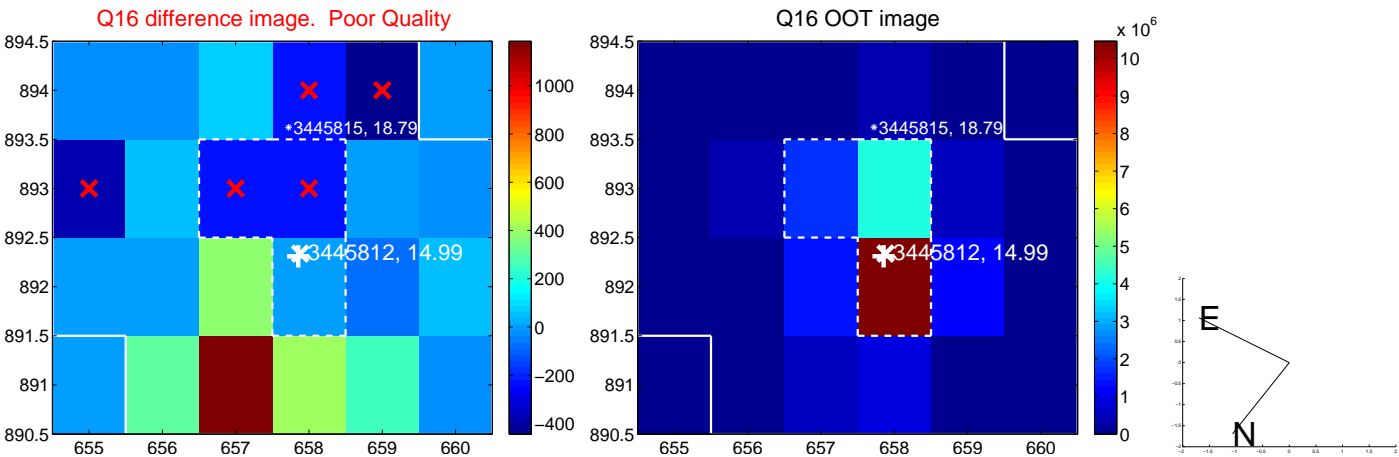
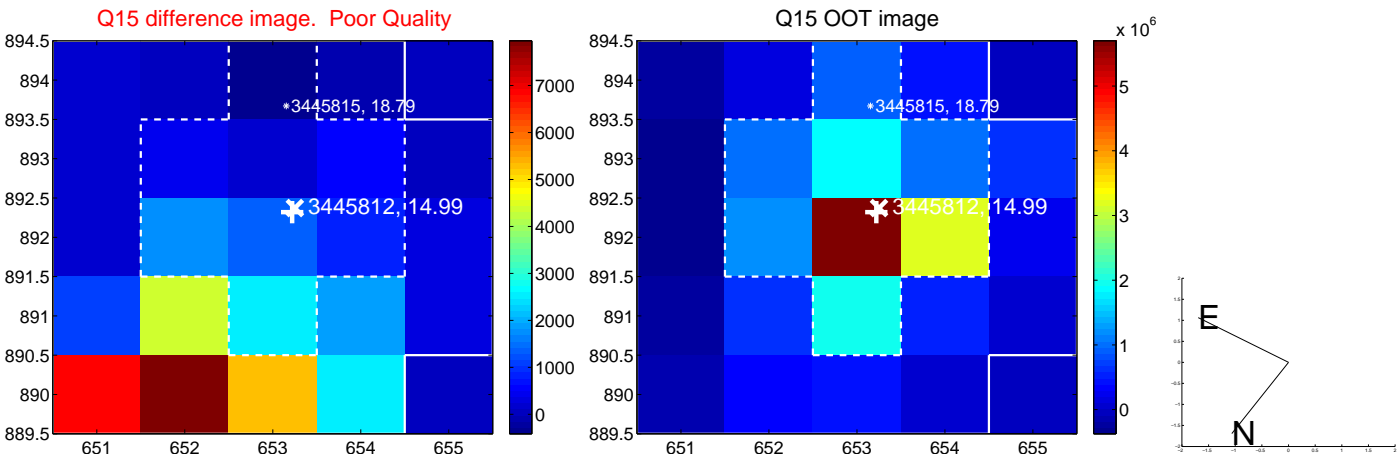
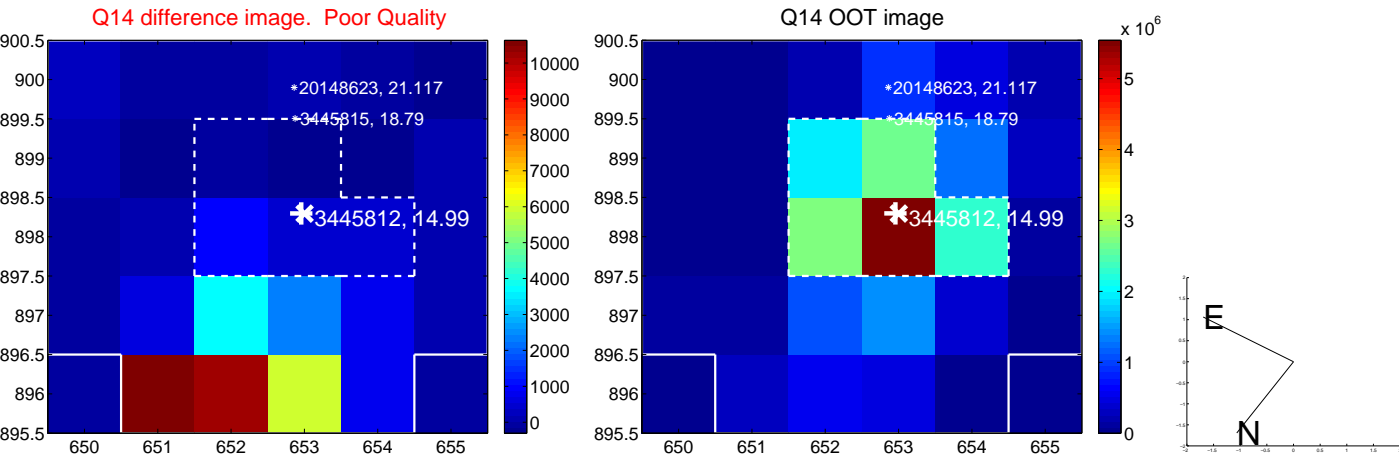
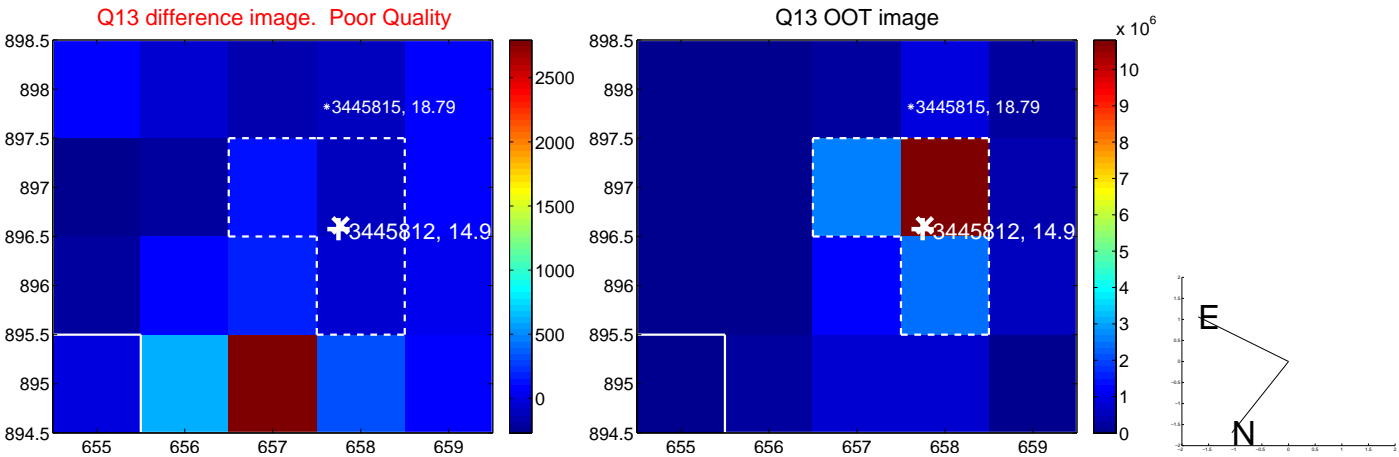
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

