

KIC 004750669

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})
004750669-01	OBS	4649.01	3.384186	131.944017	190.1	1.797	9.8	10.5	0.80	5613	1.24	314.76

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004750669-01	OBS	PC	0.84	0	0	0	0	NO_COMMENT

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

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

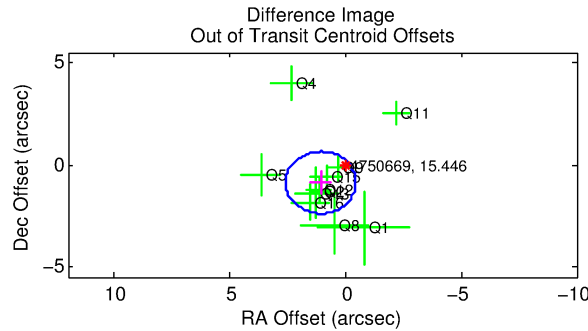
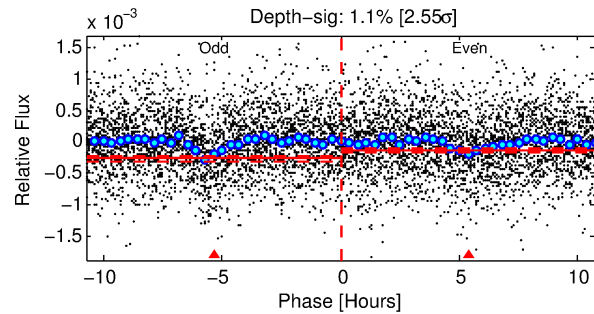
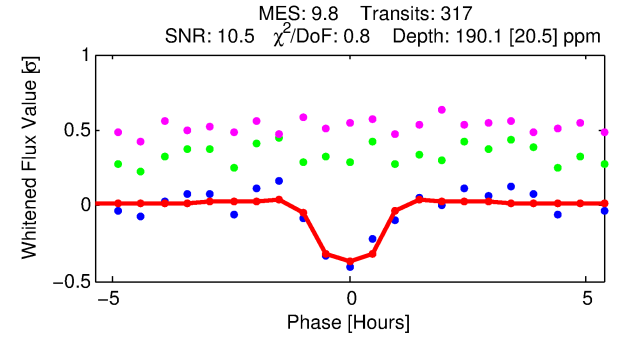
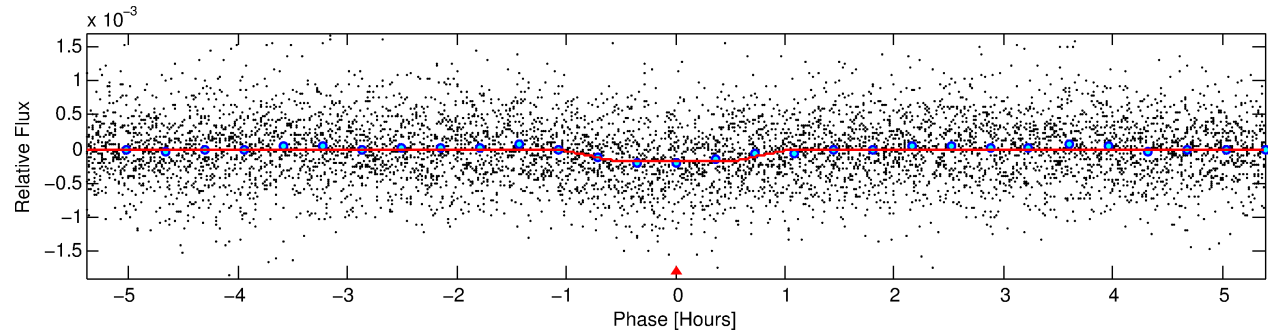
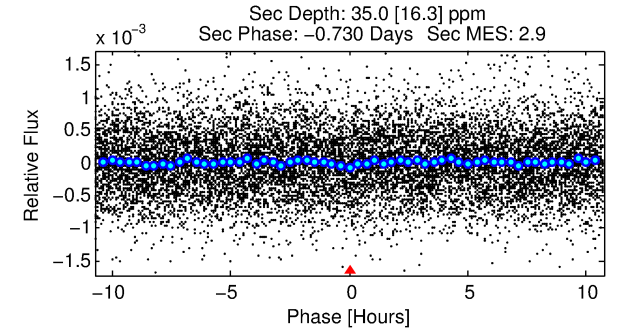
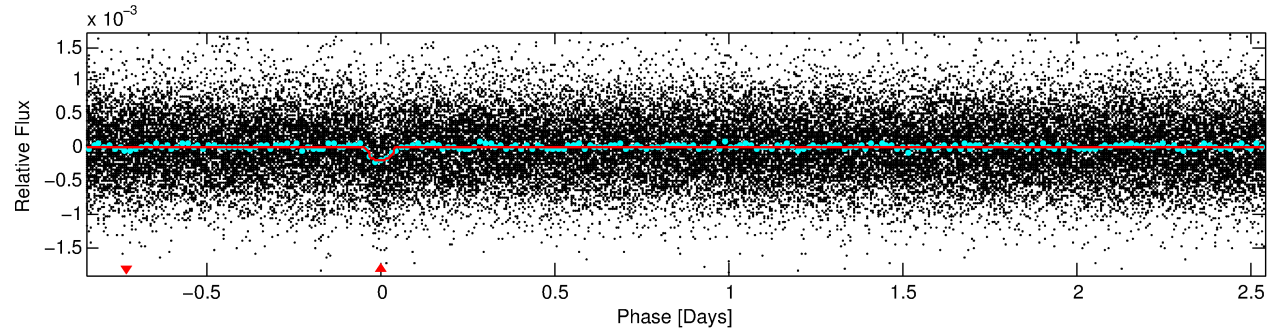
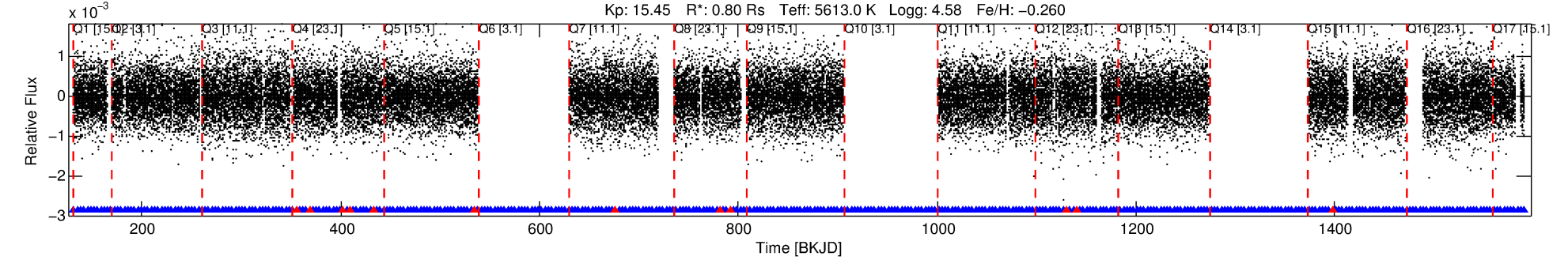
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004750669-01

No Significant Match Found

DV One-Page Summary

KIC: 4750669 Candidate: 1 of 1 Period: 3.384 d
KOI: K04649.01 Corr: 0.926



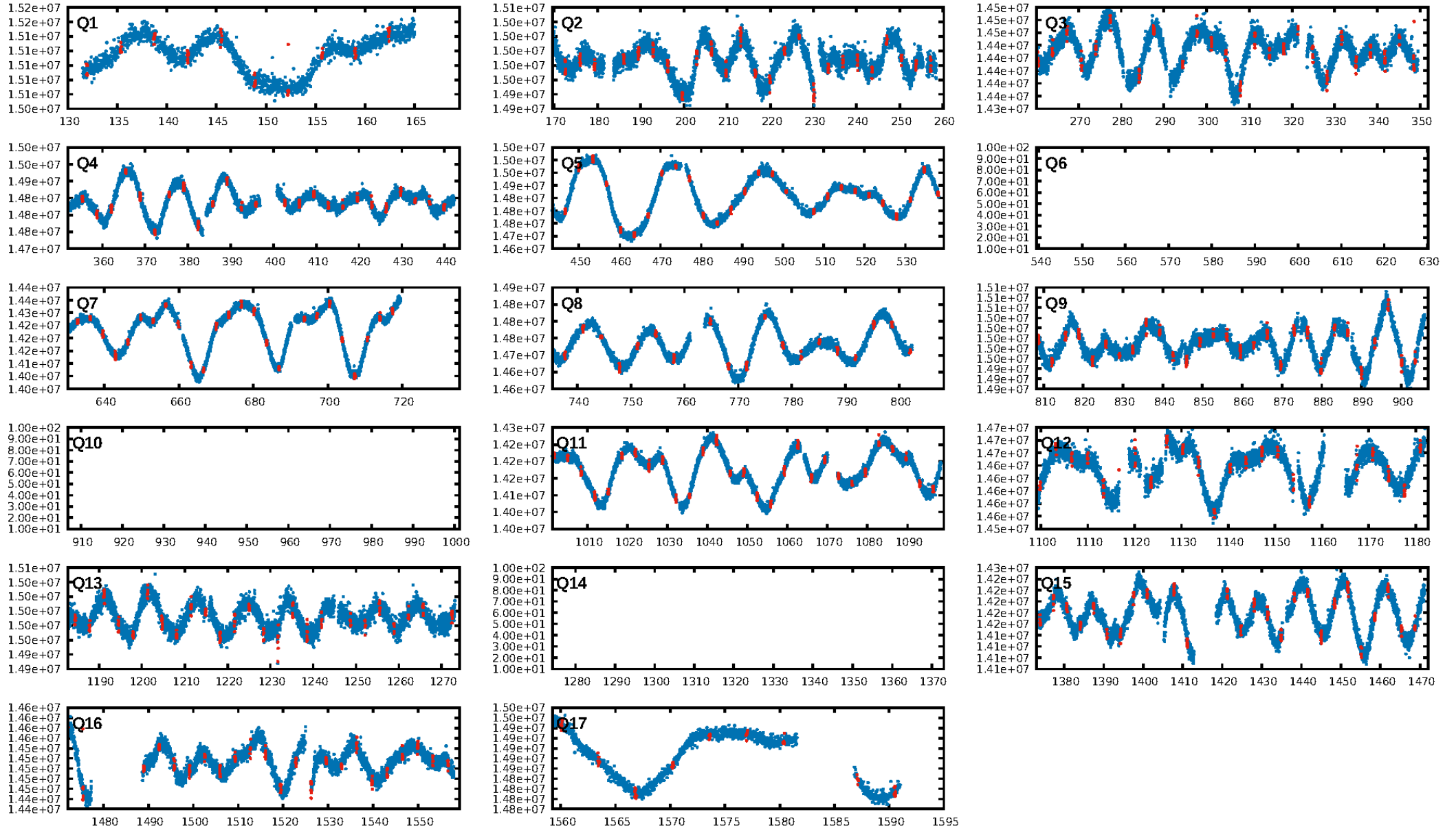
DV Fit Results:

Period = 3.38419 [0.00002] d
Epoch = 131.9440 [0.0029] BKJD
Rp/R* = 0.0142 [0.0119]
a/R* = 8.57 [31.56]
b = 0.82 [1.49]
Seff = 314.76 [95.60]
Teff = 1074 [82] K
Rp = 1.24 [1.07] Re
a = 0.0423 [0.0081] AU
Ag = 22.50 [39.49] [0.54σ]
Teffp = 3617 [1571] K [1.62σ]

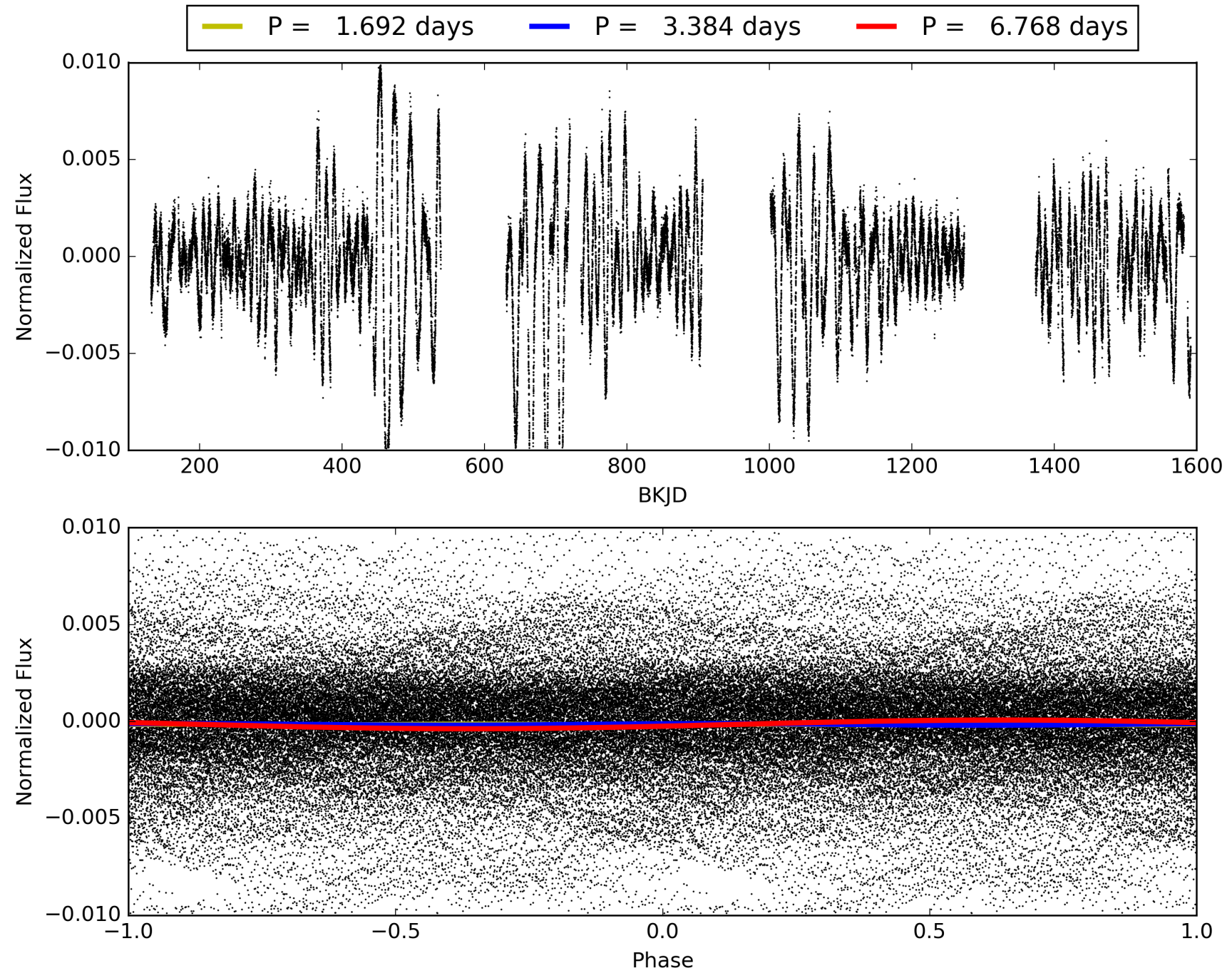
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.77e-22
RollingBand-fgt: 0.96 [286/298]
GhostDiagnostic-chr: 2.018
Centroid-sig: 35.2%
Centroid-so: 1.089 arcsec [0.83σ]
OotOffset-rm: 1.387 arcsec [2.74σ]
KicOffset-rm: 1.636 arcsec [3.29σ]
OotOffset-st: 1/2/4/4 [11]
KicOffset-st: 1/2/4/4 [11]
DiffImageQuality-fgm: 0.45 [5/11]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 004750669-01, PDC Light Curves

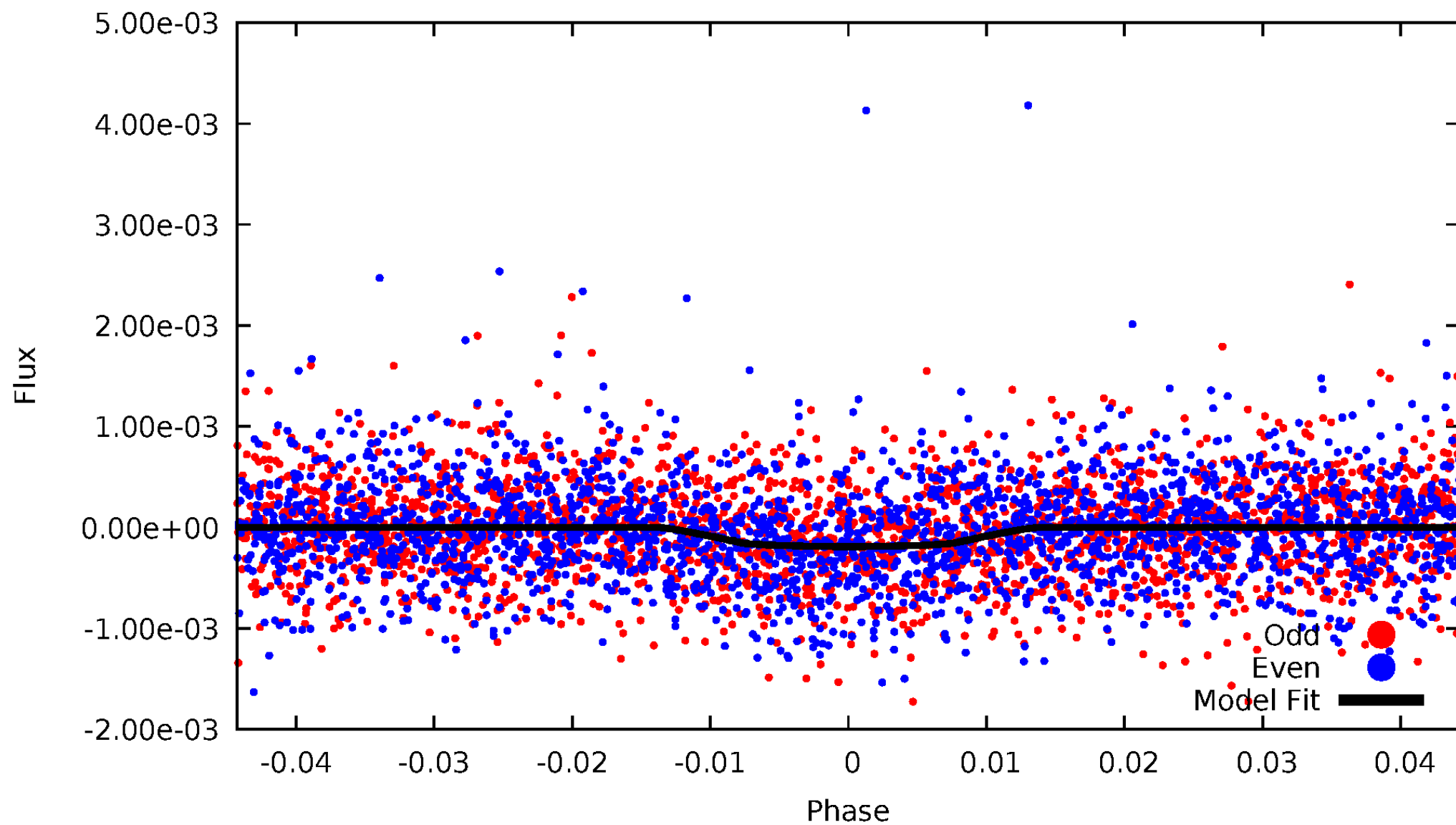


TCE 004750669-01



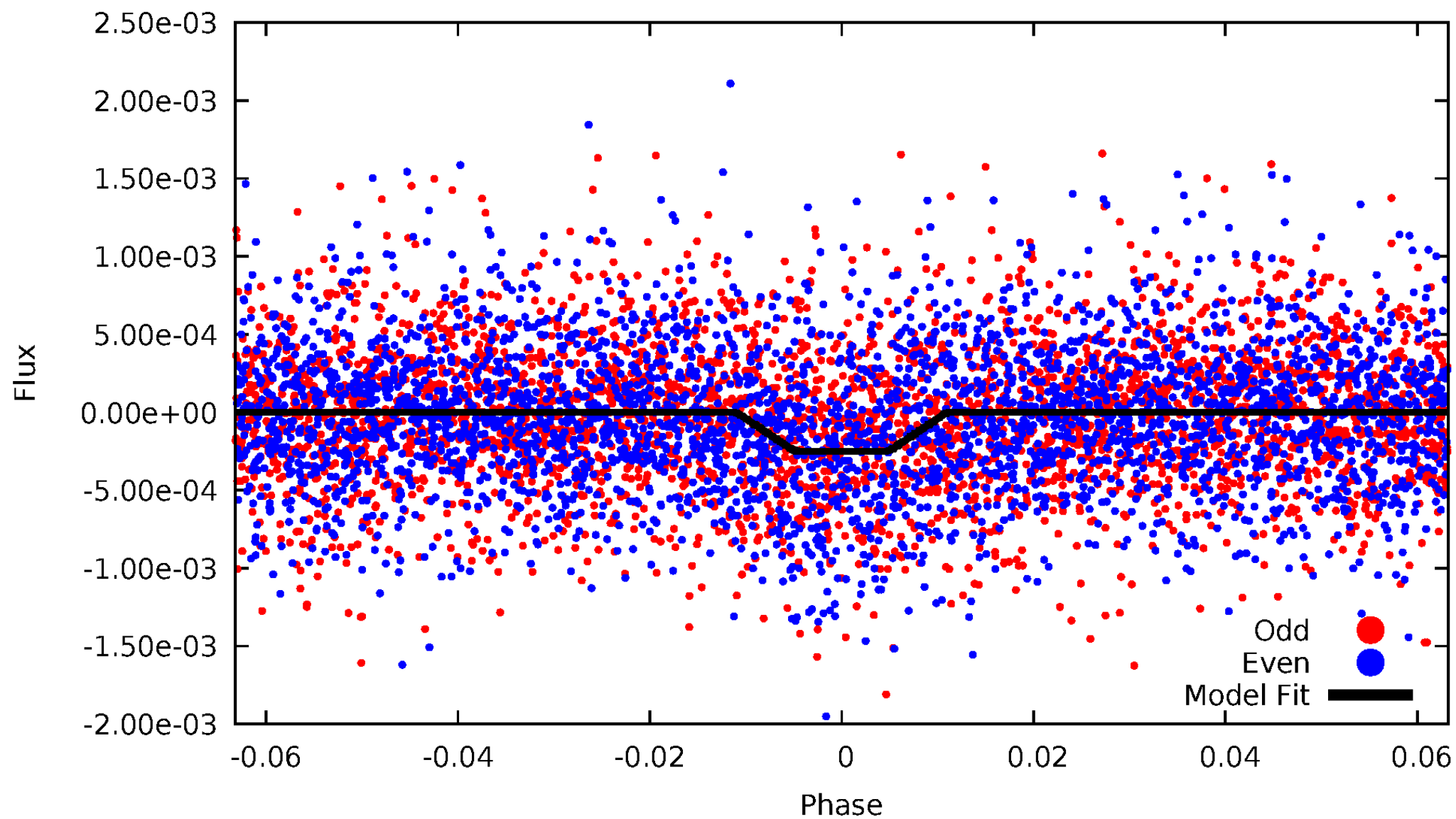
DV Odd/Even

TCE 004750669-01

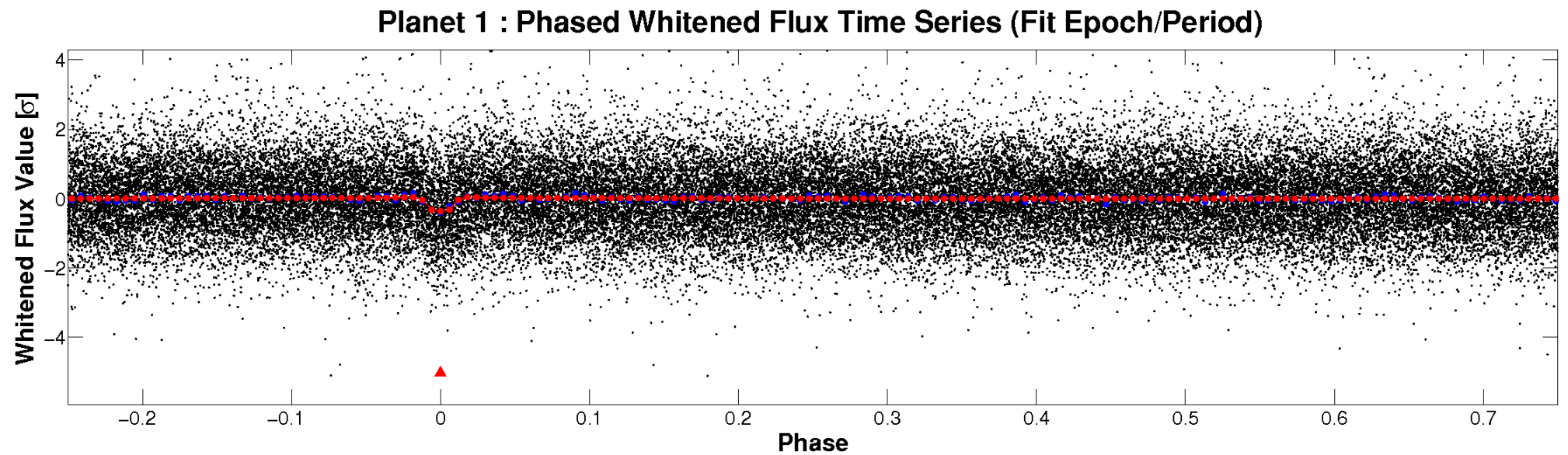
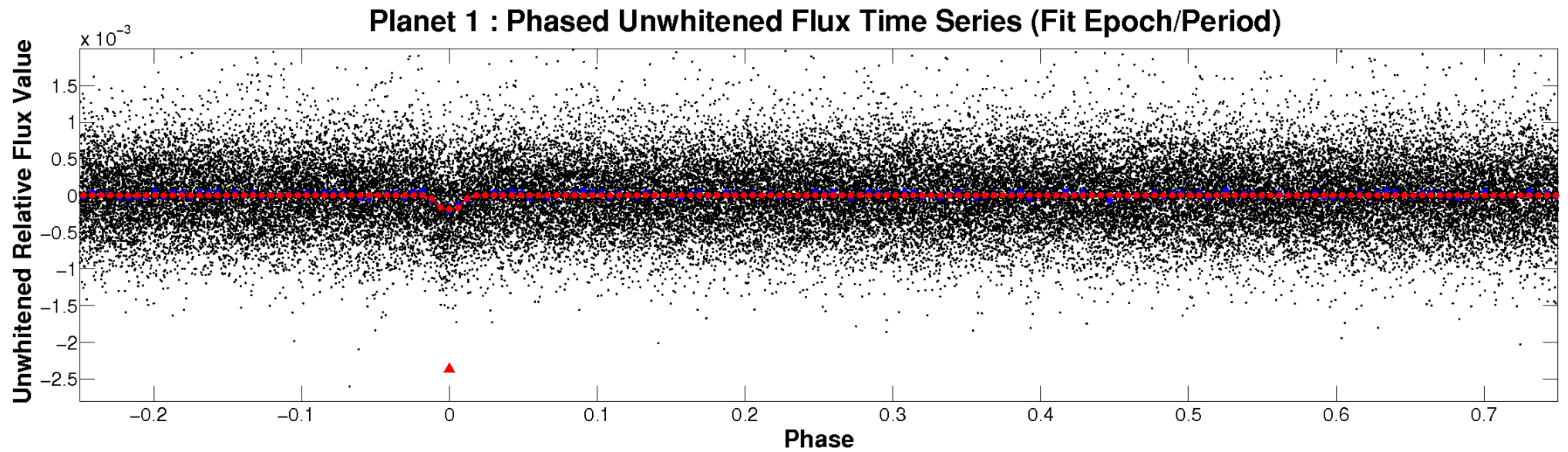


ALT Odd/Even

TCE 004750669-01

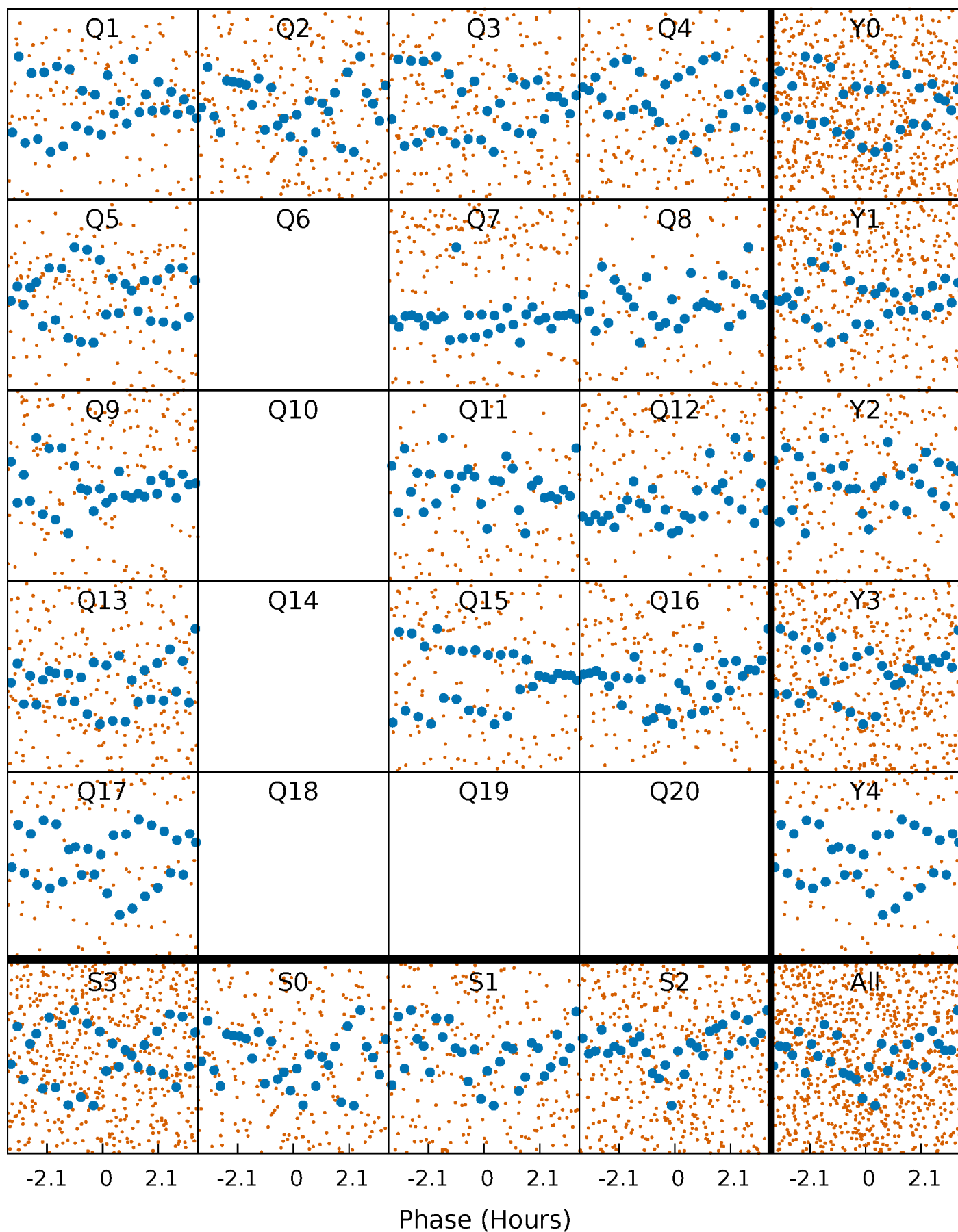


Non-Whitened Vs. Whitened Light Curve



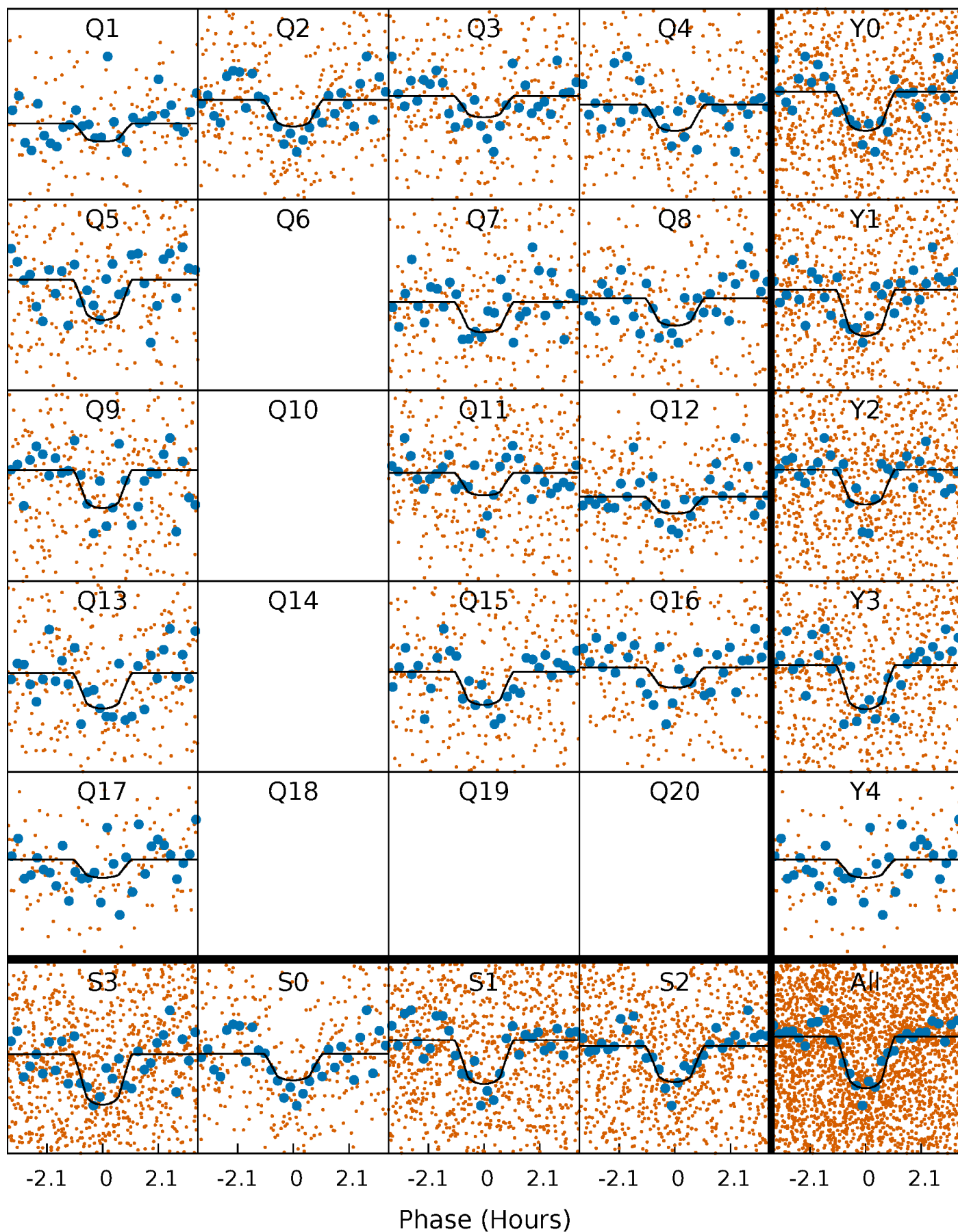
PDC Quarter-Phased Transit Curves

TCE 004750669-01 P= 3.384186 Days $T_0=131.944017$ (BKJD)



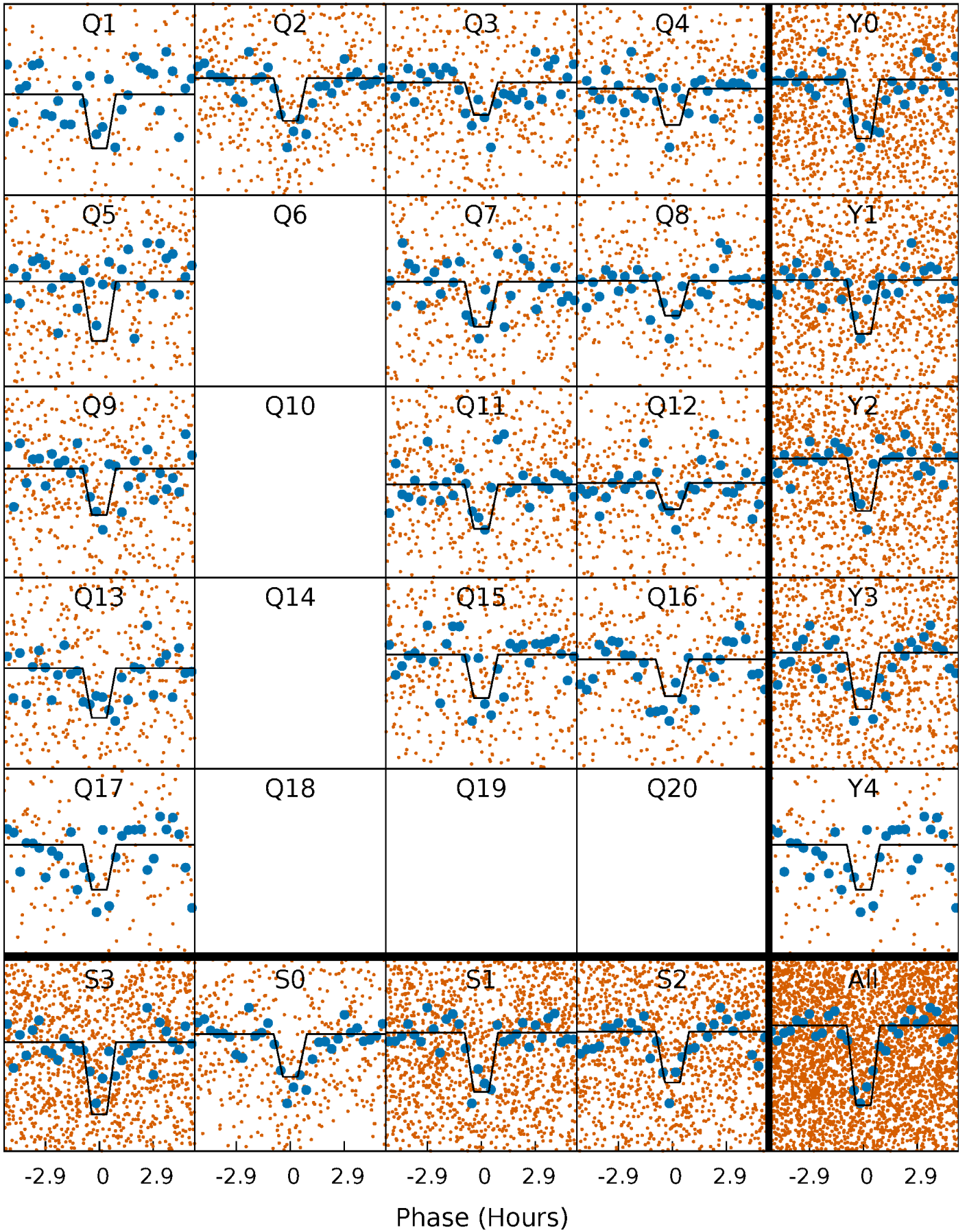
DV Quarter-Phased Transit Curves

TCE 004750669-01 P= 3.384186 Days $T_0=131.944017$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

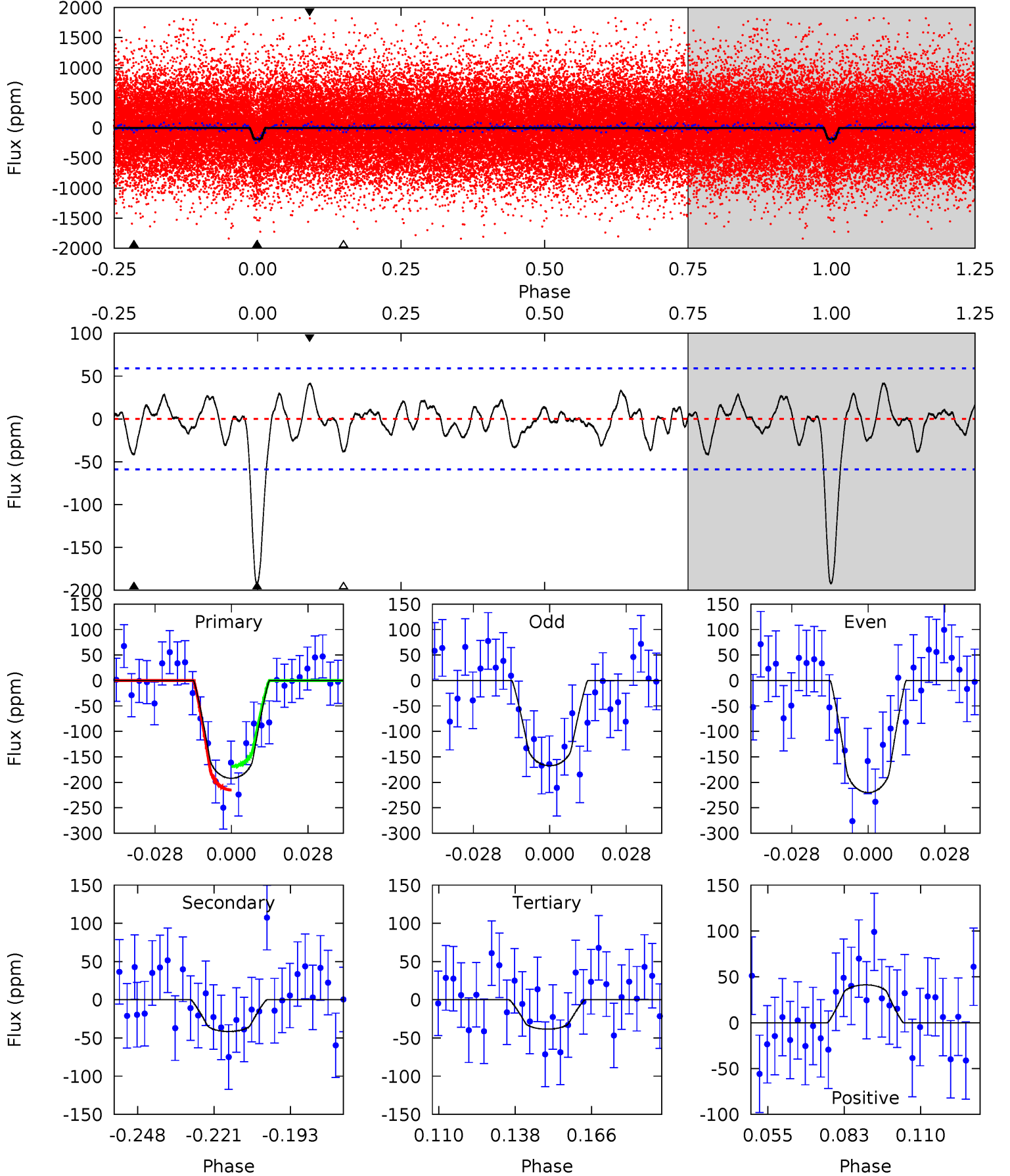
TCE 004750669-01 P= 3.384204 Days $T_0=131.938300$ (BKJD)



DV Model-Shift Uniqueness Test

004750669-01, P = 3.384186 Days, E = 128.559831 Days

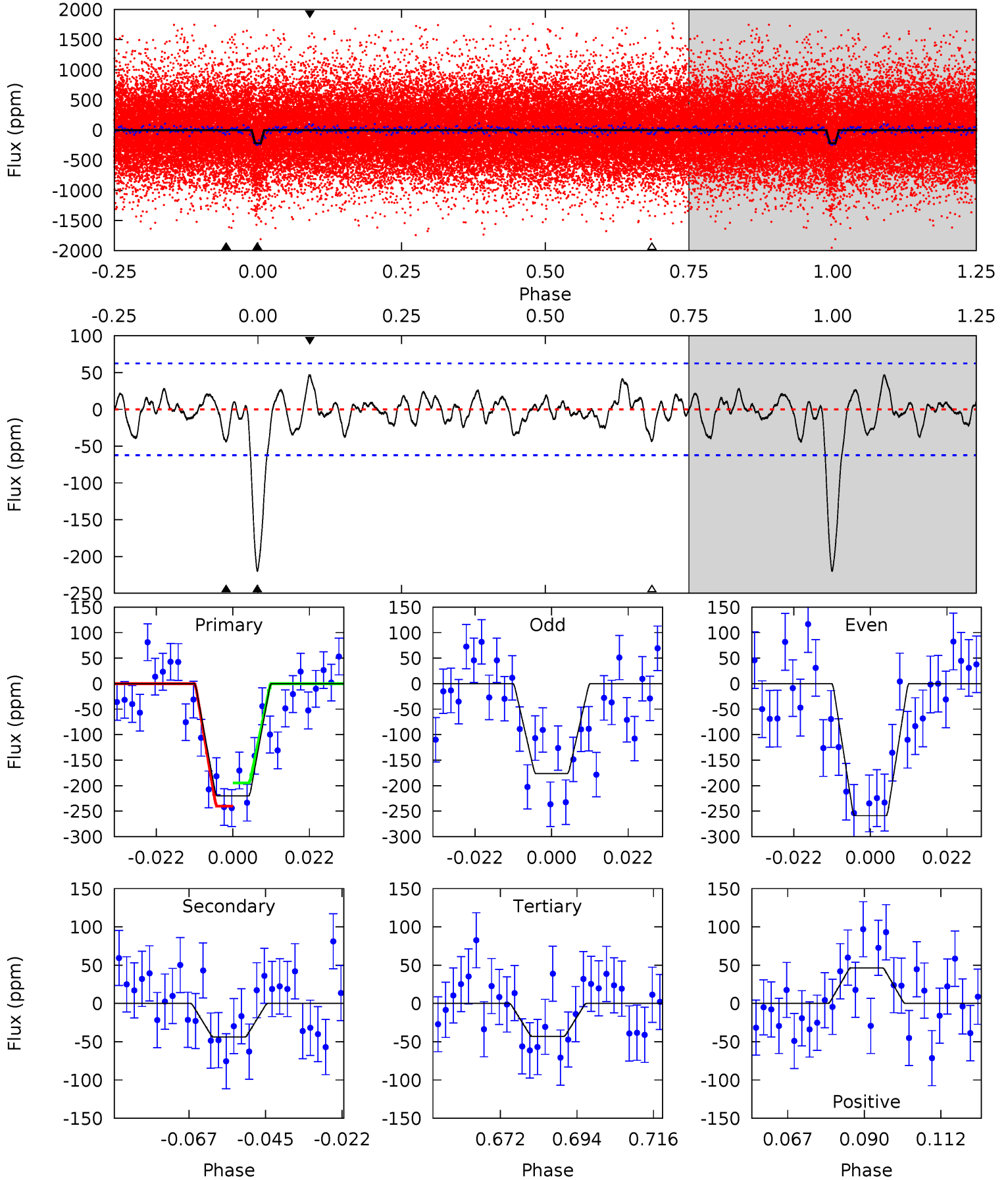
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.7	3.40	3.15	3.38	4.83	2.20	1.23	12.6	12.4	0.26	0.03	2.17	1.04	0.18	1.91



Alt Model-Shift Uniqueness Test

004750669-01, P = 3.384204 Days, E = 128.554096 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.1	3.42	3.36	3.63	4.87	2.28	1.24	13.8	13.5	0.06	-0.20	3.23	1.00	0.17	1.78



Stellar Parameters For KIC 004750669

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5613^{+152}_{-169}	$4.581^{+0.038}_{-0.152}$	$-0.260^{+0.300}_{-0.300}$	$0.795^{+0.182}_{-0.073}$	$0.888^{+0.088}_{-0.107}$	$2.492^{+0.494}_{-1.100}$
	+3%/-3%	+1%/-3%	+115%/-115%	+23%/-9%	+10%/-12%	+20%/-44%
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 004750669-01 / KOI 4649.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-42 ± 12	$1.45^{+1.03}_{-0.81}$	1529^{+83}_{-67}	3845^{+1425}_{-647}	19^{+73}_{-13}
Alt.	-44 ± 13	$1.61^{+1.00}_{-0.90}$	1532^{+85}_{-68}	3752^{+1469}_{-594}	16^{+73}_{-10}

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 $A_{obs} \gg 1.0$

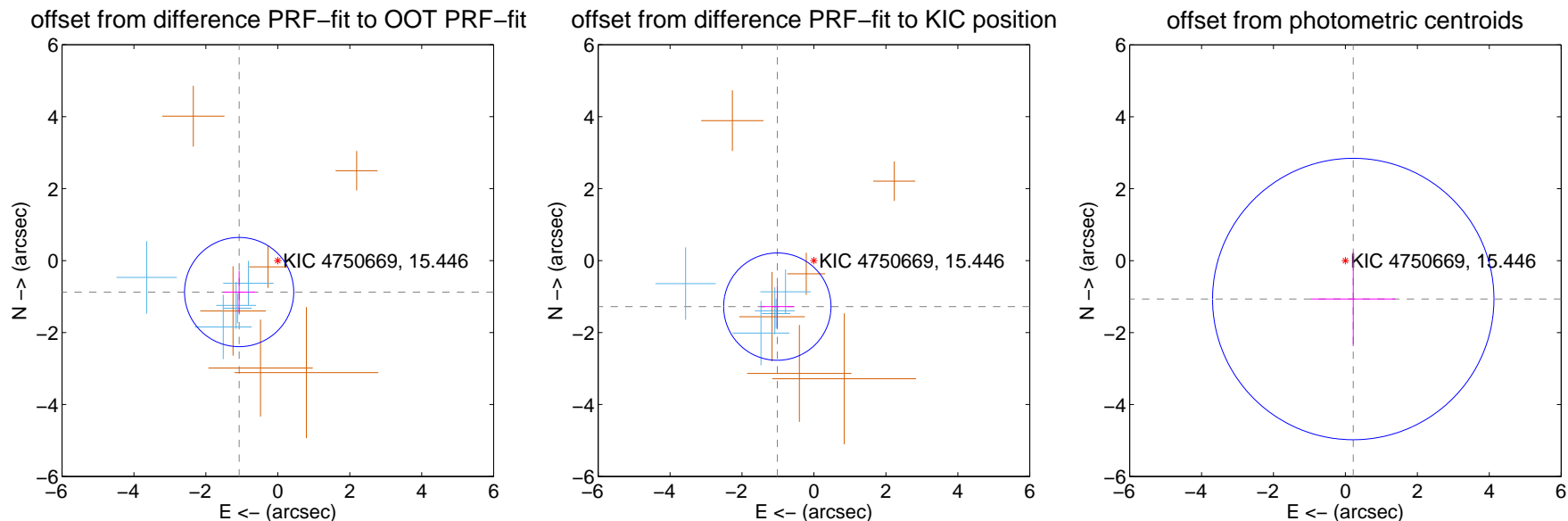
DV Centroid Data

Supplemental centroid analysis for 004750669-01. Kepler magnitude: 15.45. Transit SNR 10.48

There are 5 quarters with good PRF difference image offsets

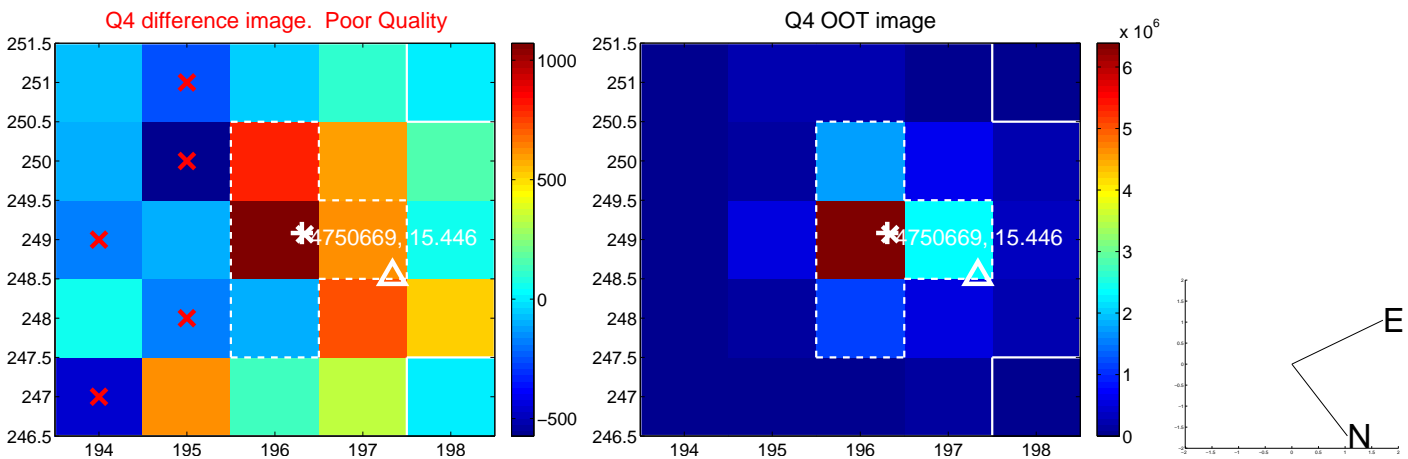
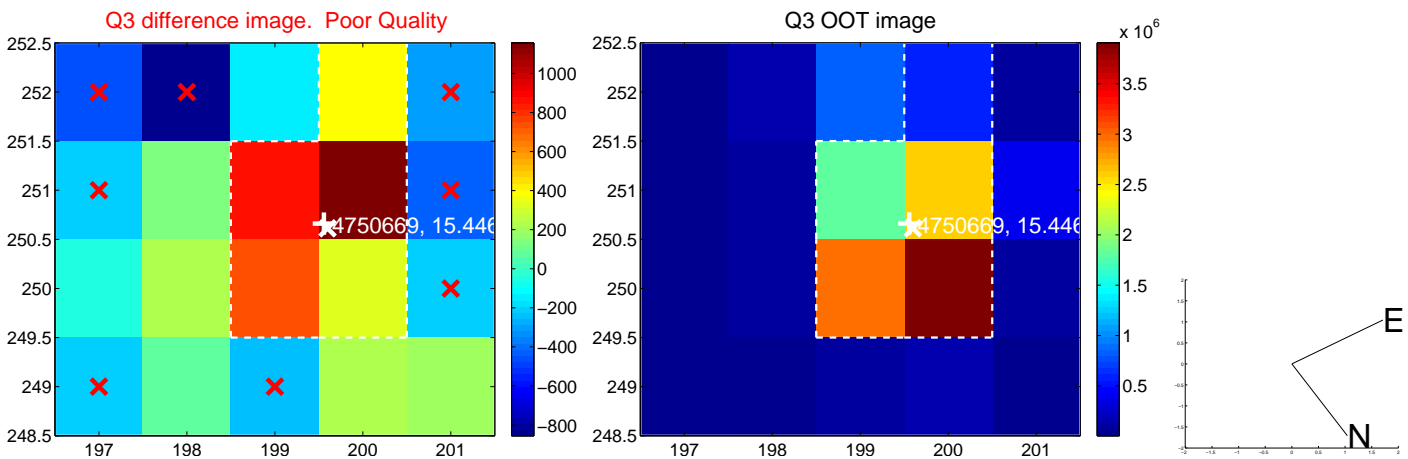
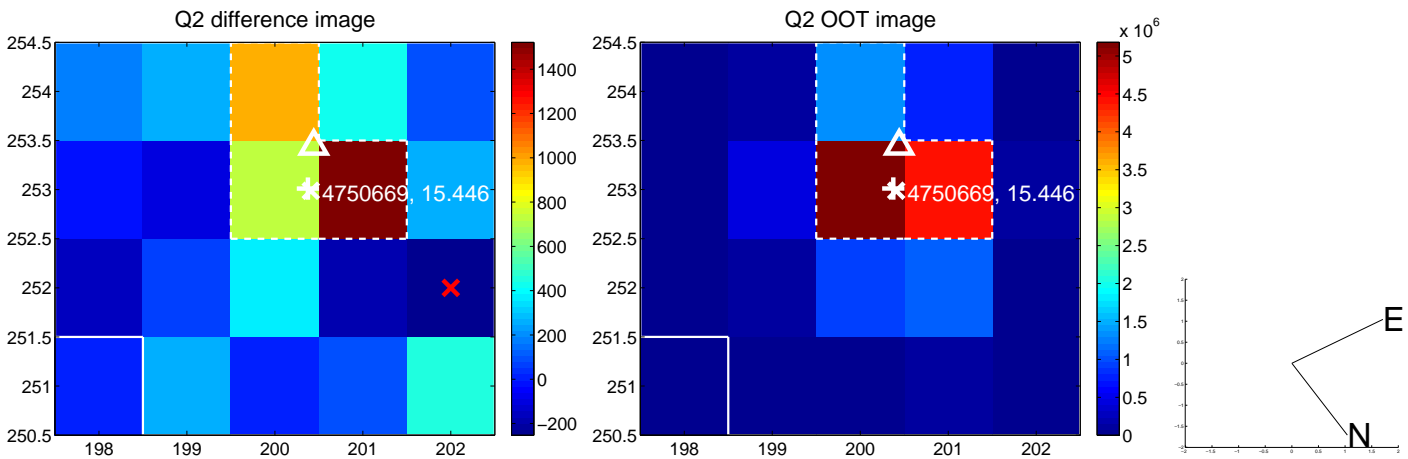
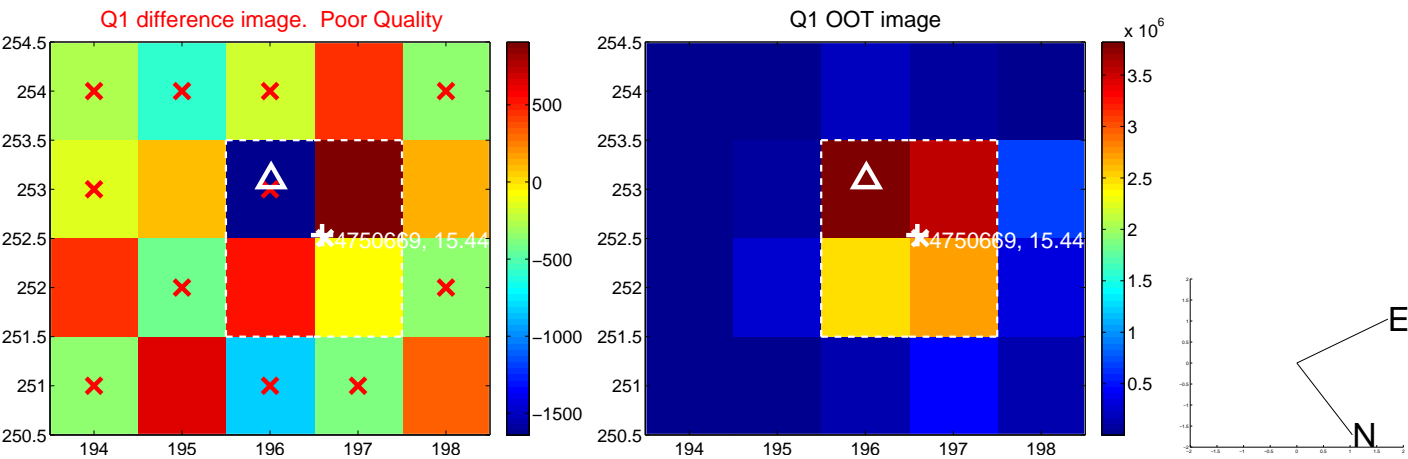
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.387 ± 0.506	2.74	1.076 ± 0.448	-0.875 ± 0.584
PRF-fit source offset from KIC position	1.636 ± 0.497	3.29	1.019 ± 0.464	-1.280 ± 0.586
photometric centroid source offset	1.09 ± 1.30	0.83	-0.22 ± 1.17	-1.07 ± 1.31

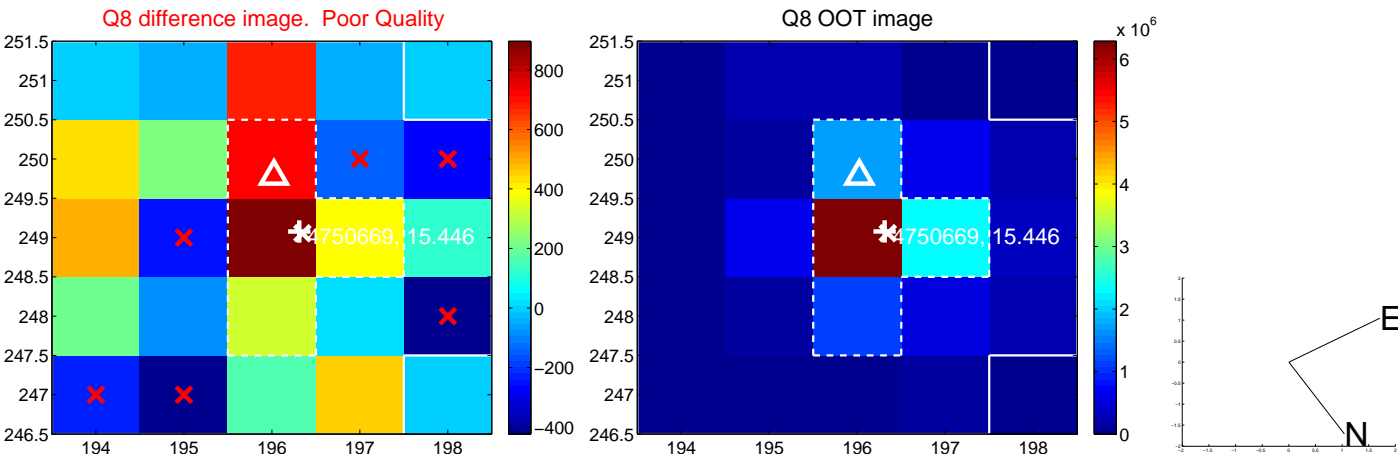
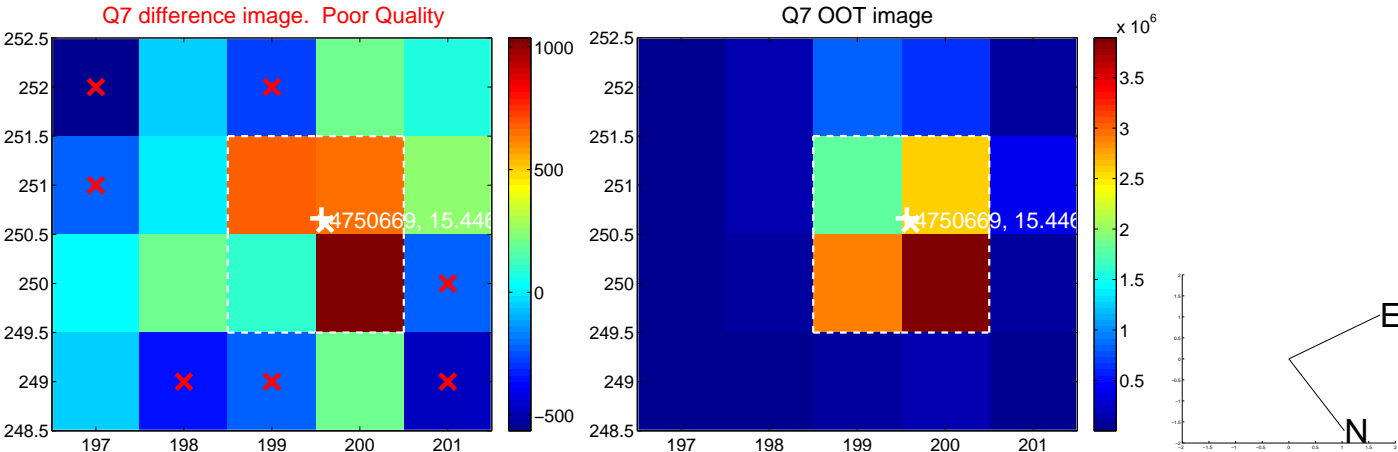
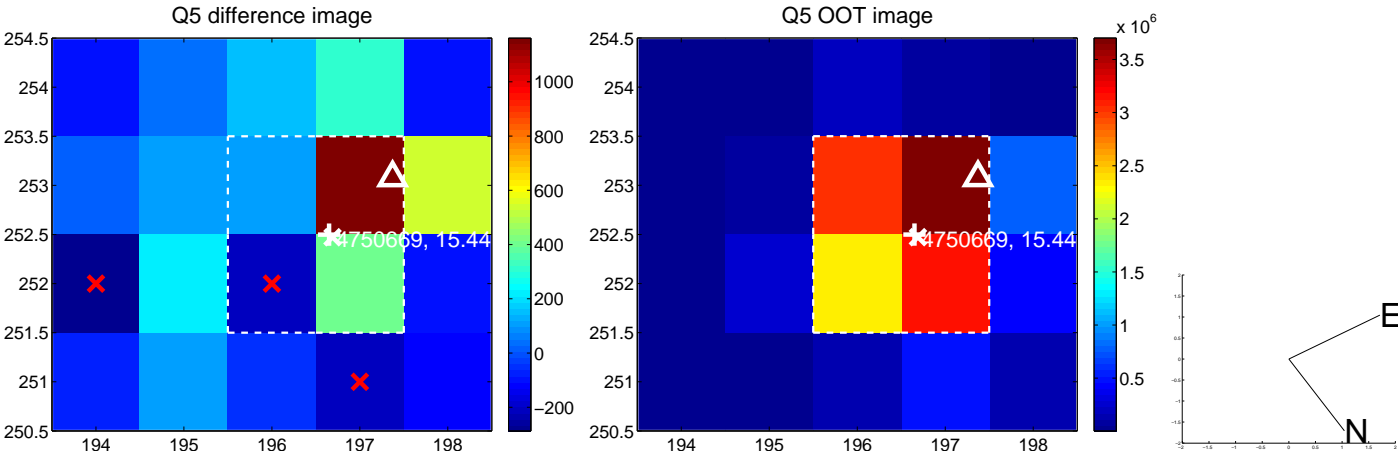


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

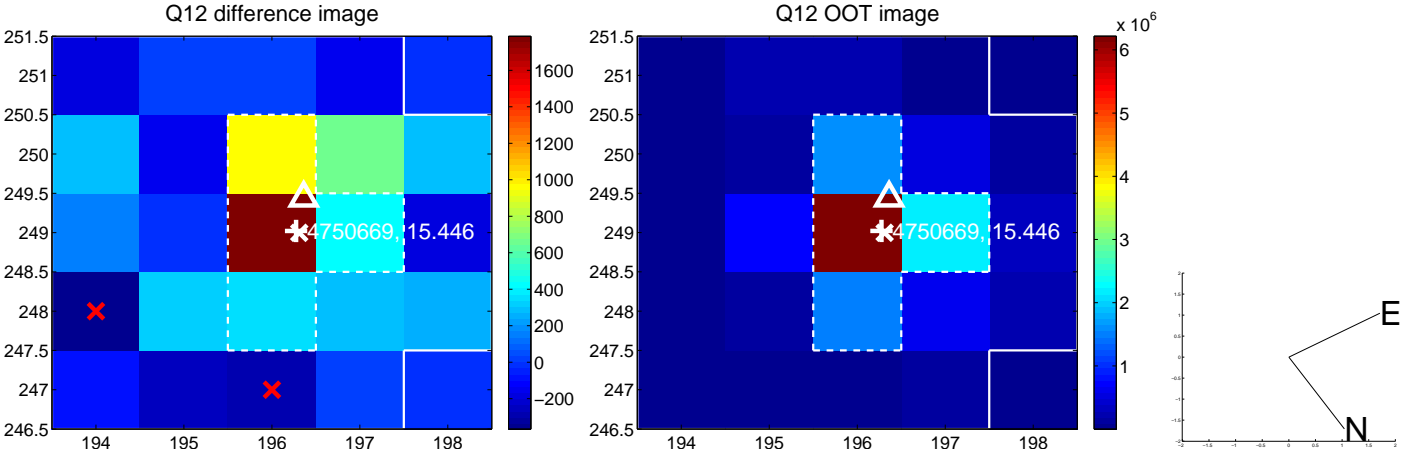
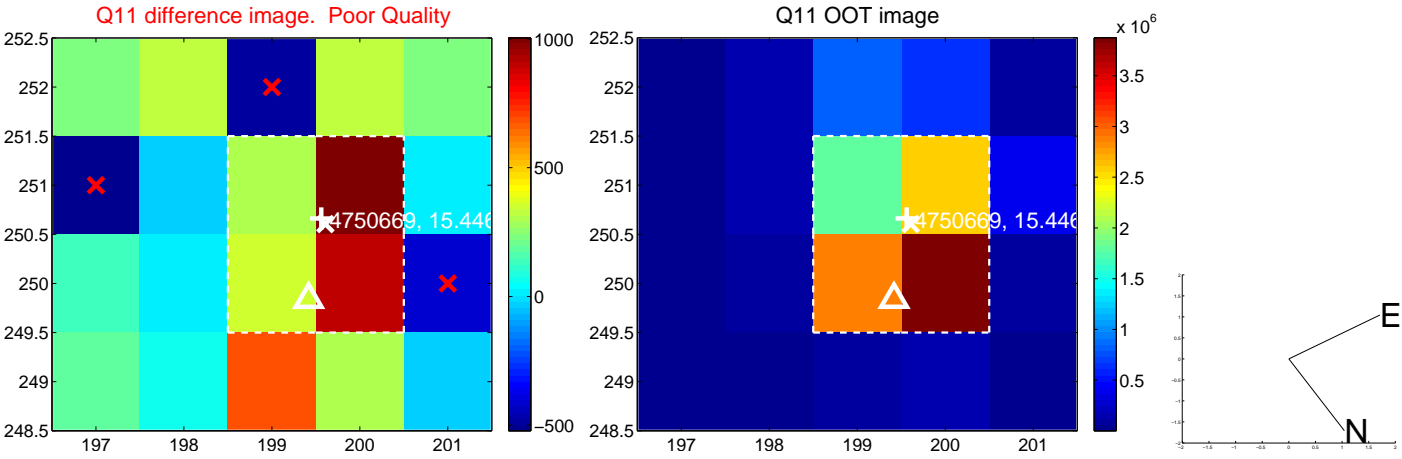
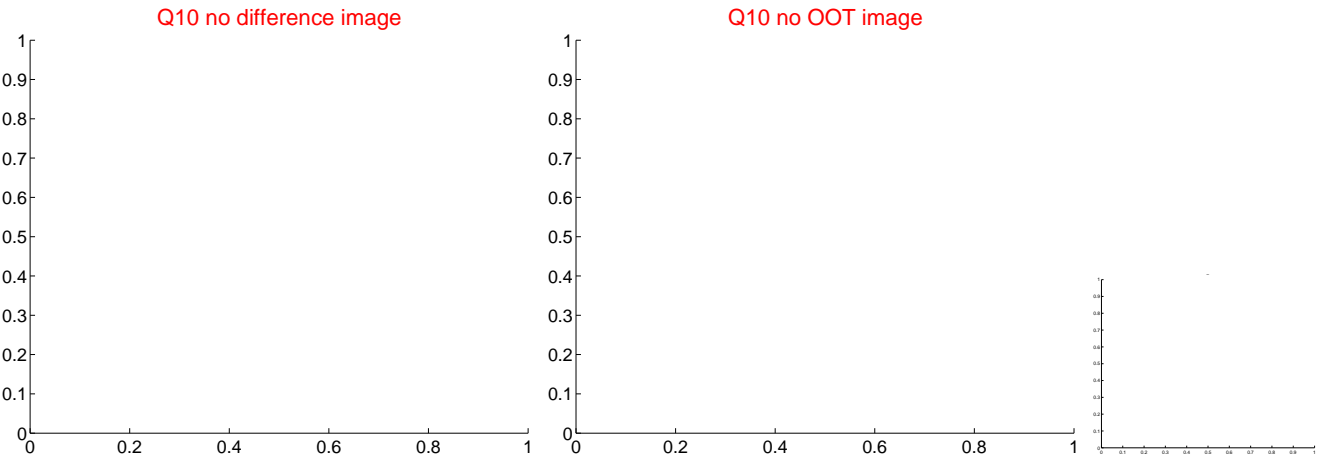
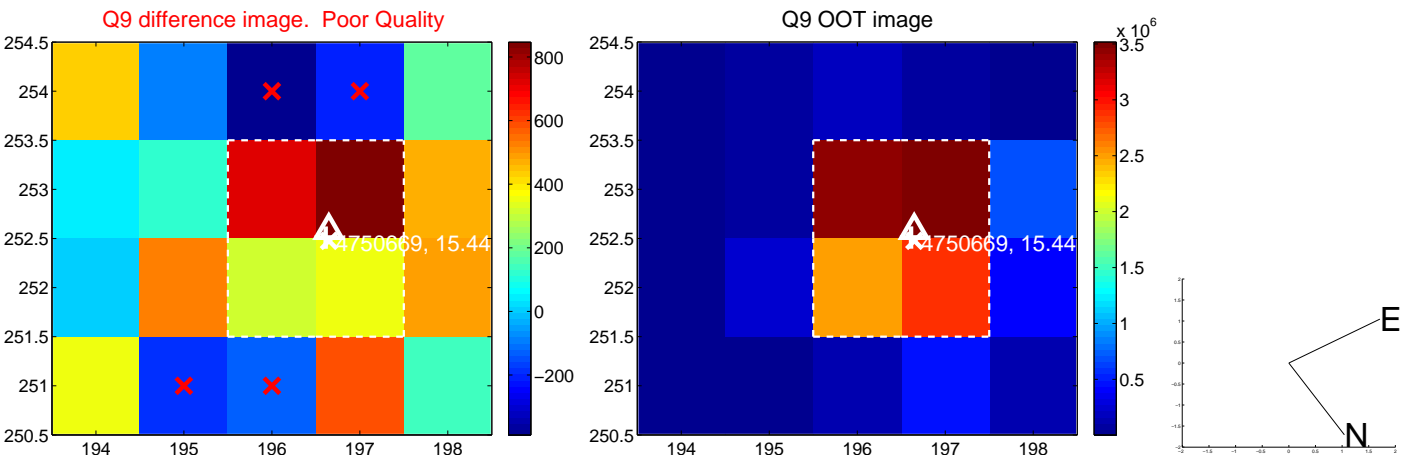
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



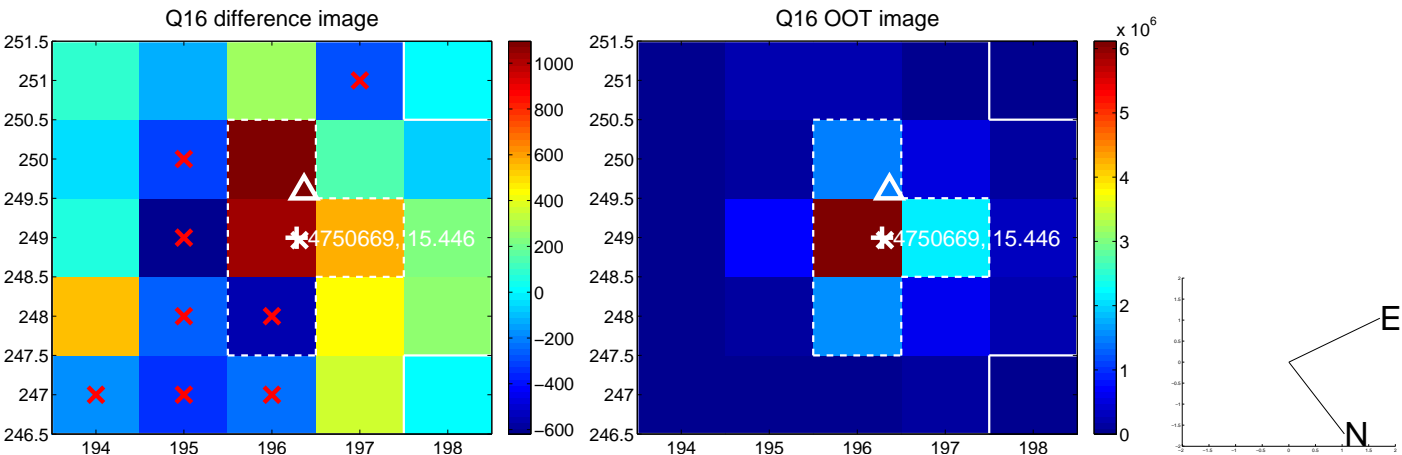
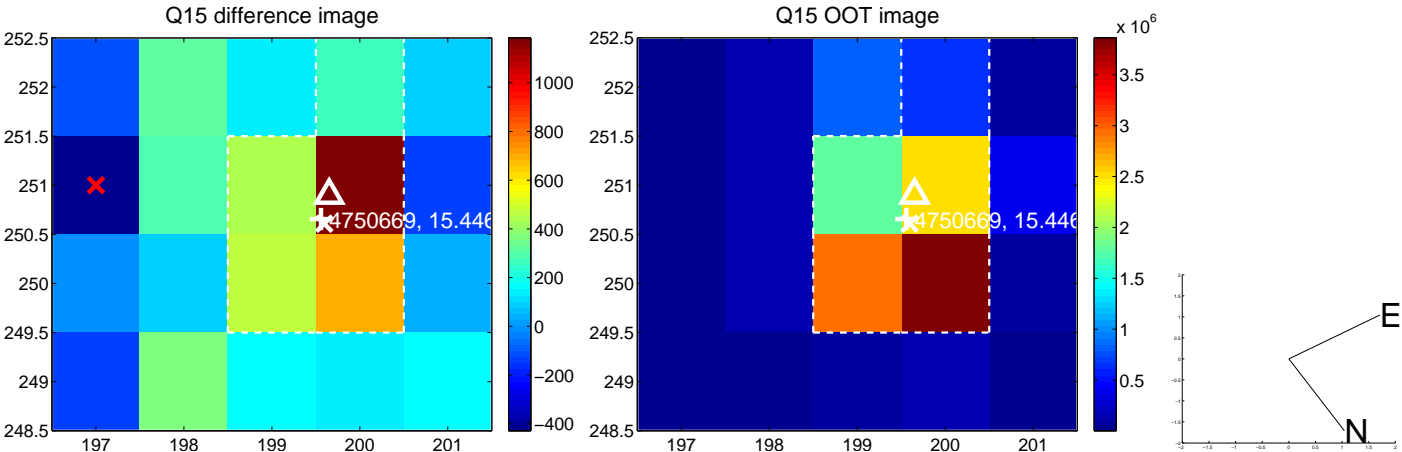
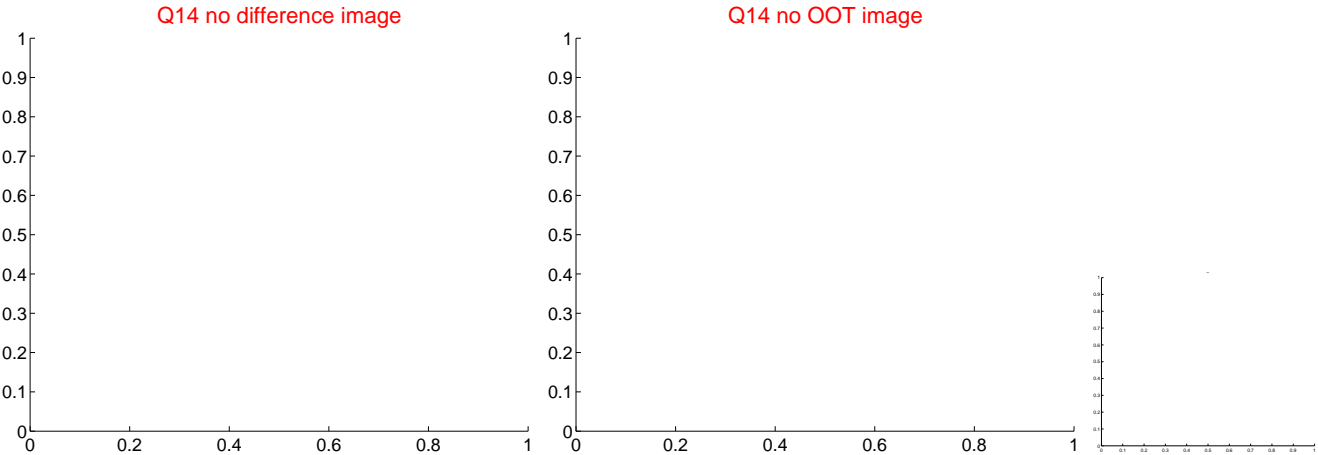
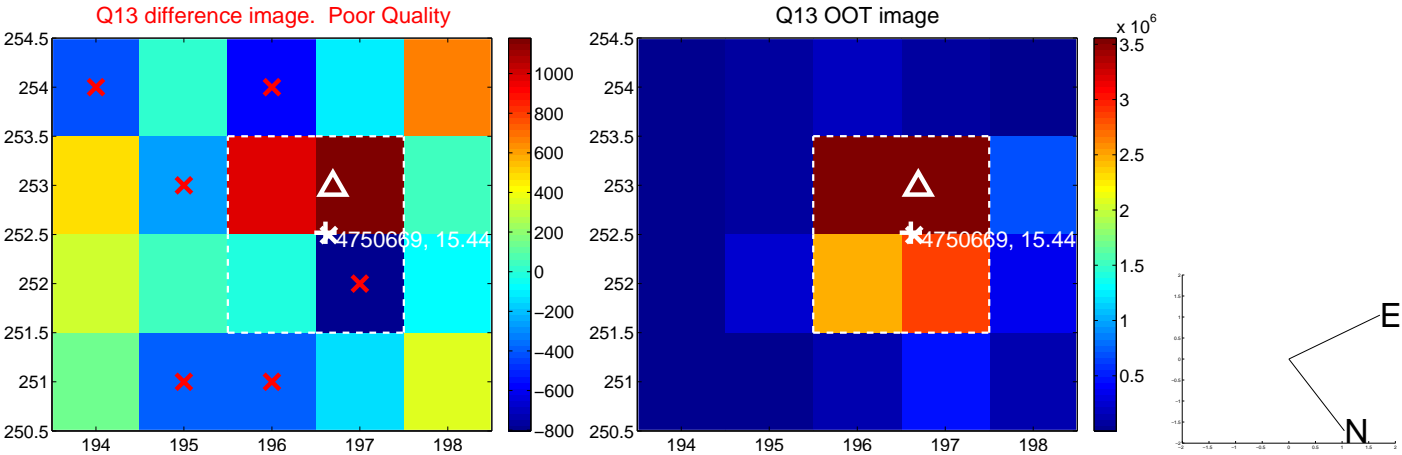
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



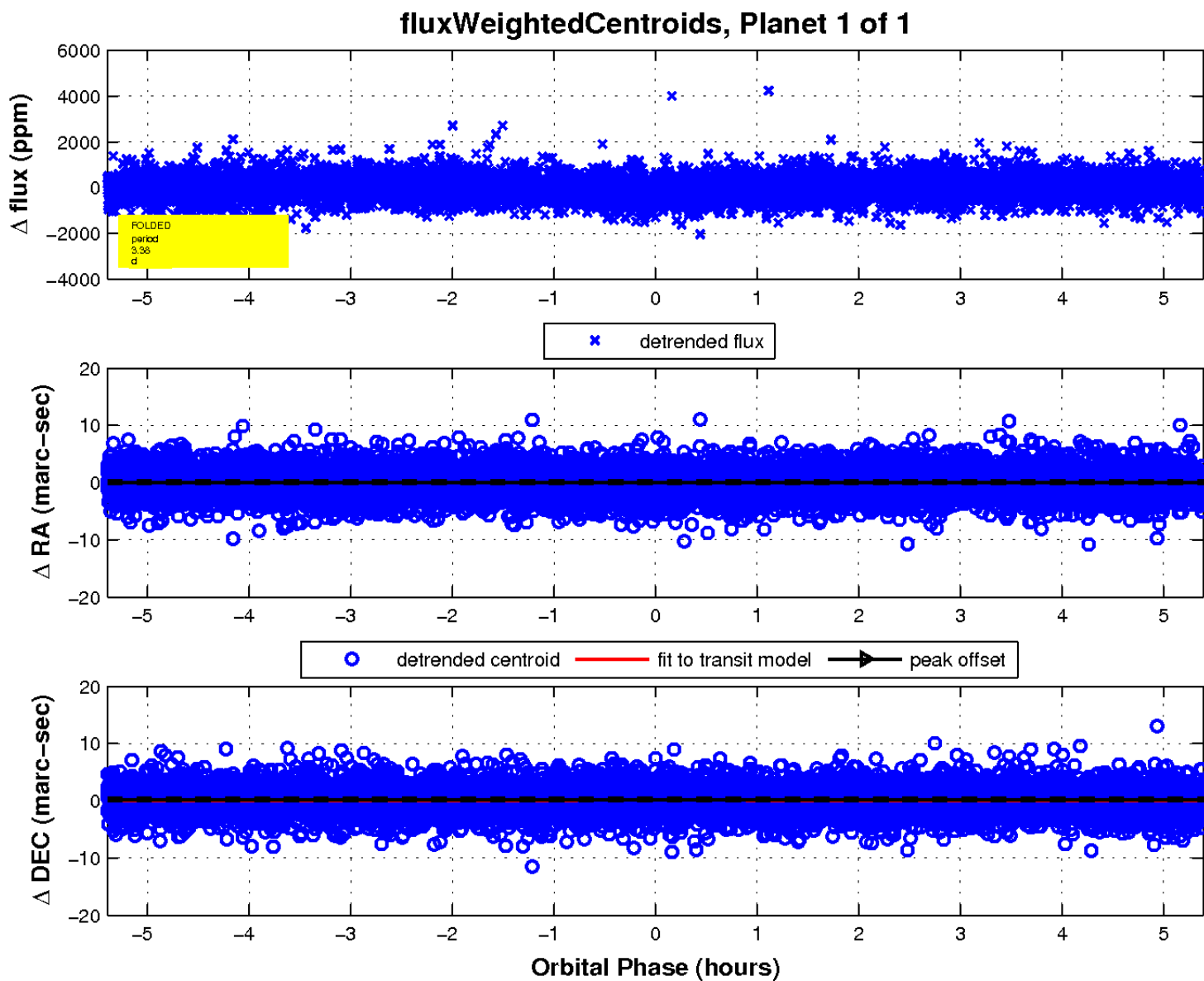
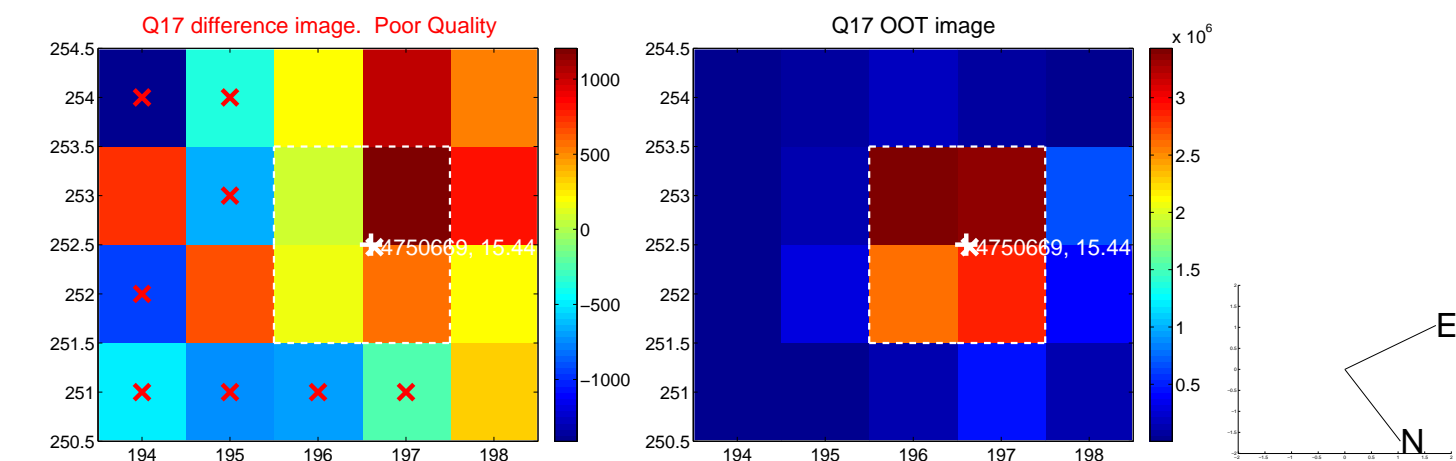
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

