

KIC 004664046

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})
004664046-01	OBS	2930.01	1.129752	132.532485	129.4	3.143	13.0	13.6	0.71	5366	0.91	988.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004664046-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—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.

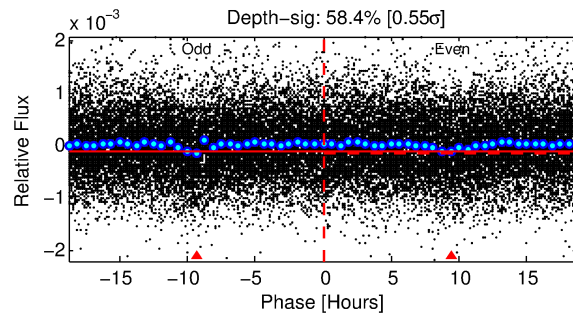
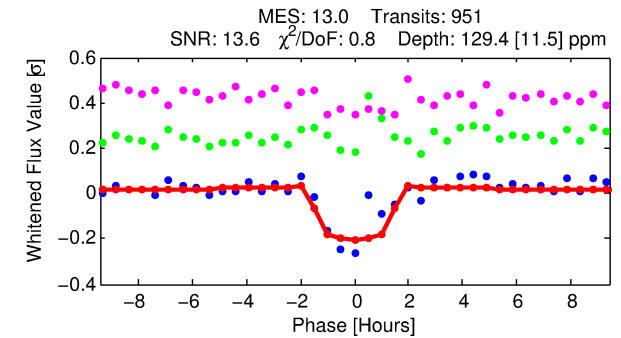
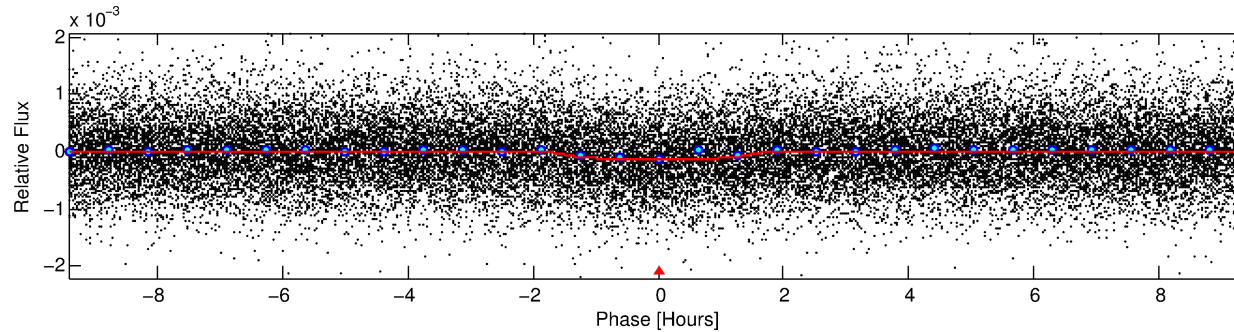
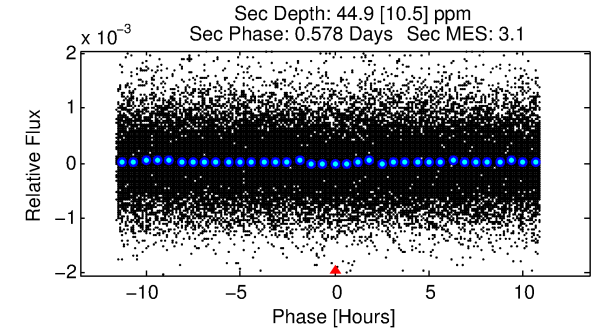
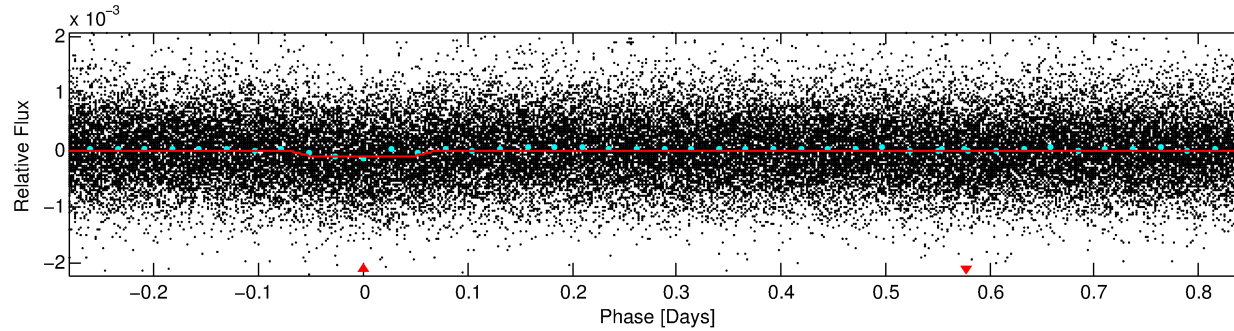
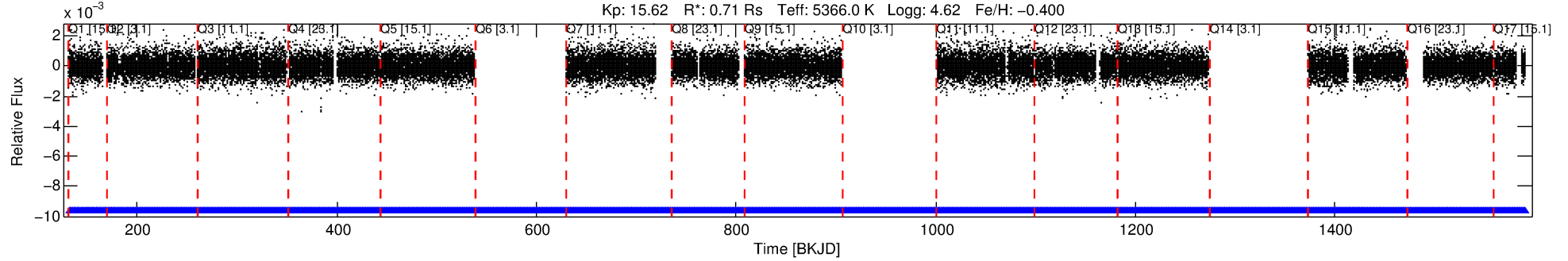
Ephemeris Match Information For 004664046-01

No Significant Match Found

DV One-Page Summary

KIC: 4664046 Candidate: 1 of 1 Period: 1.130 d
KOI: K02930.01 Corr: 0.957

Kp: 15.62 R*: 0.71 Rs Teff: 5366.0 K Logg: 4.62 Fe/H: -0.400



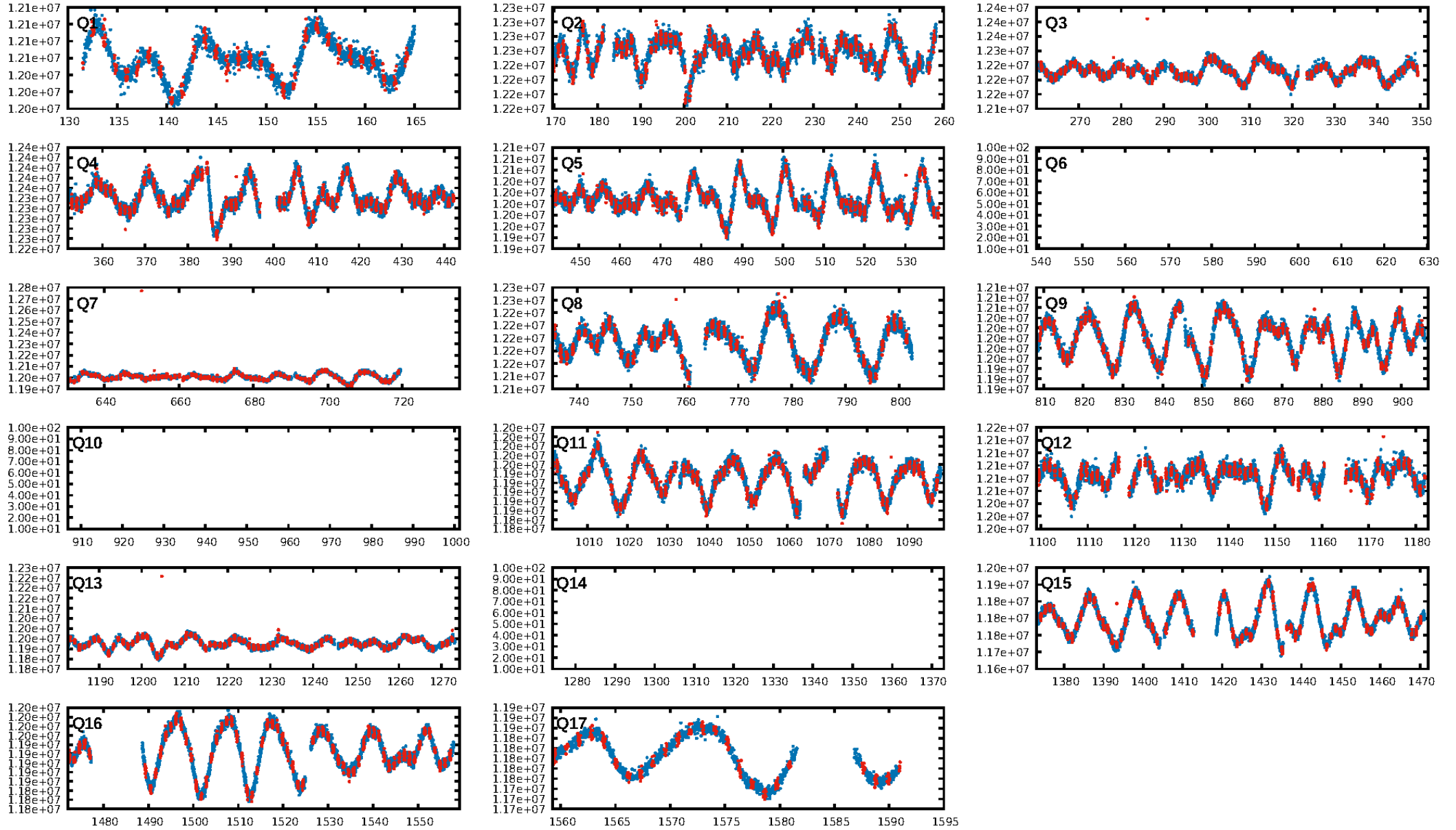
DV Fit Results:

Period = 1.12975 [0.00001] d
Epoch = 132.5325 [0.0028] BKJD
Rp/R* = 0.0117 [0.0083]
a/R* = 1.89 [4.12]
b = 0.81 [1.32]
Seff = 988.68 [215.92]
Teq = 1430 [78] K
Rp = 0.91 [0.67] Re
a = 0.0196 [0.0025] AU
Ag = 11.48 [16.77] [0.63σ]
Teffp = 4070 [1479] K [1.78σ]

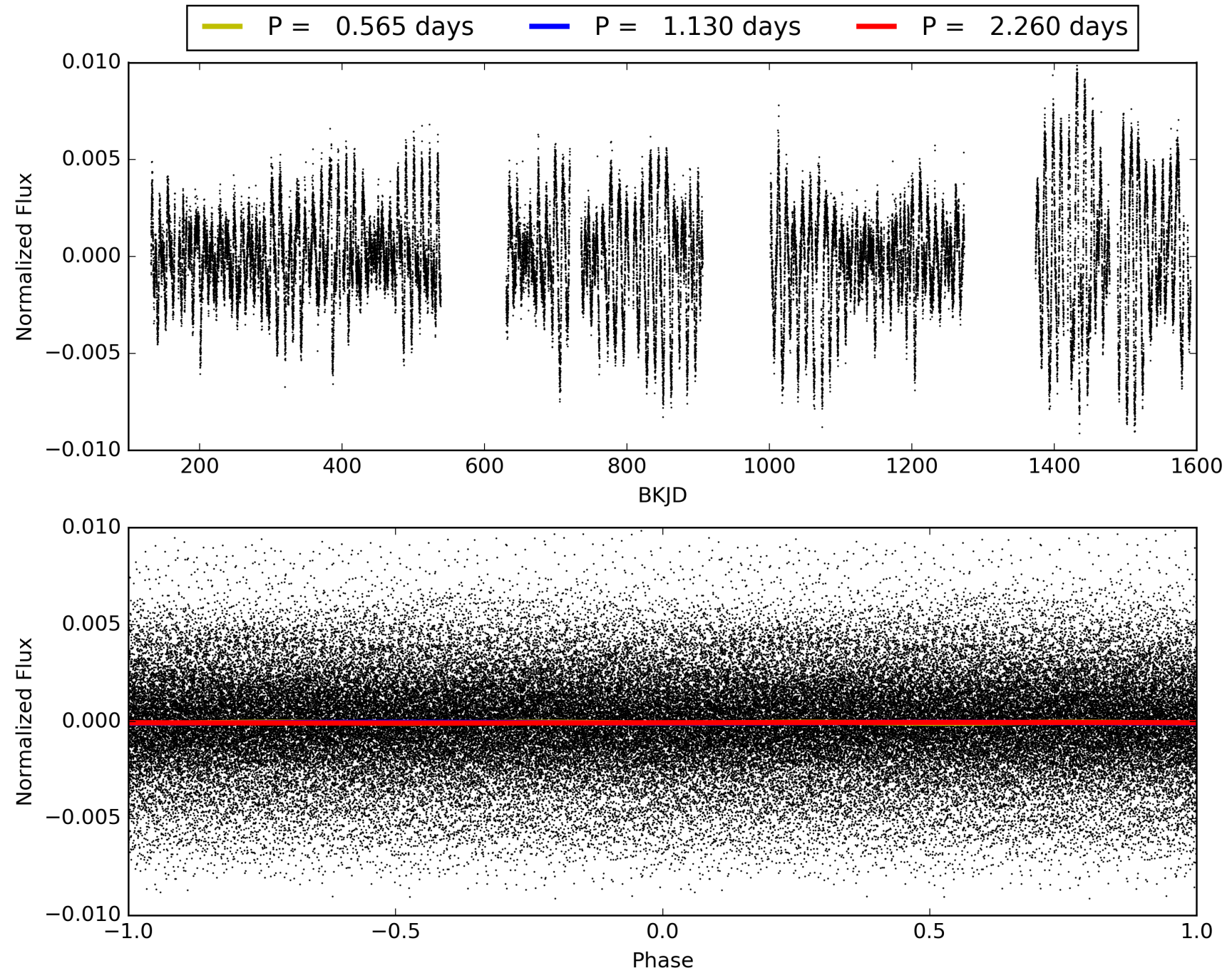
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.82e-37
RollingBand-fgt: 1.00 [898/898]
GhostDiagnostic-chr: -1.079
Centroid-sig: 0.0%
Centroid-so: 13.383 arcsec [14.15σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [14/14]

TCE 004664046-01, PDC Light Curves

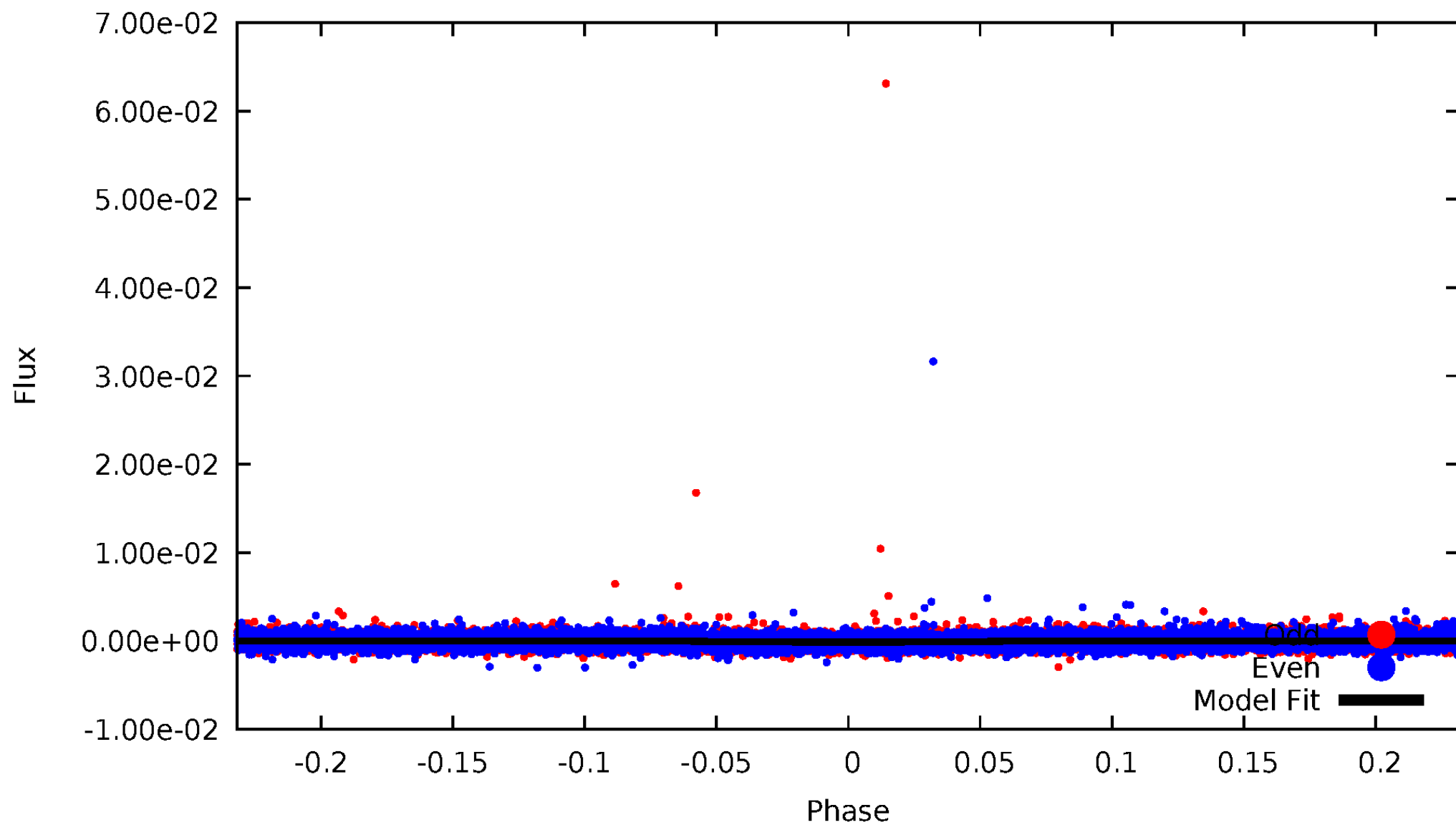


TCE 004664046-01



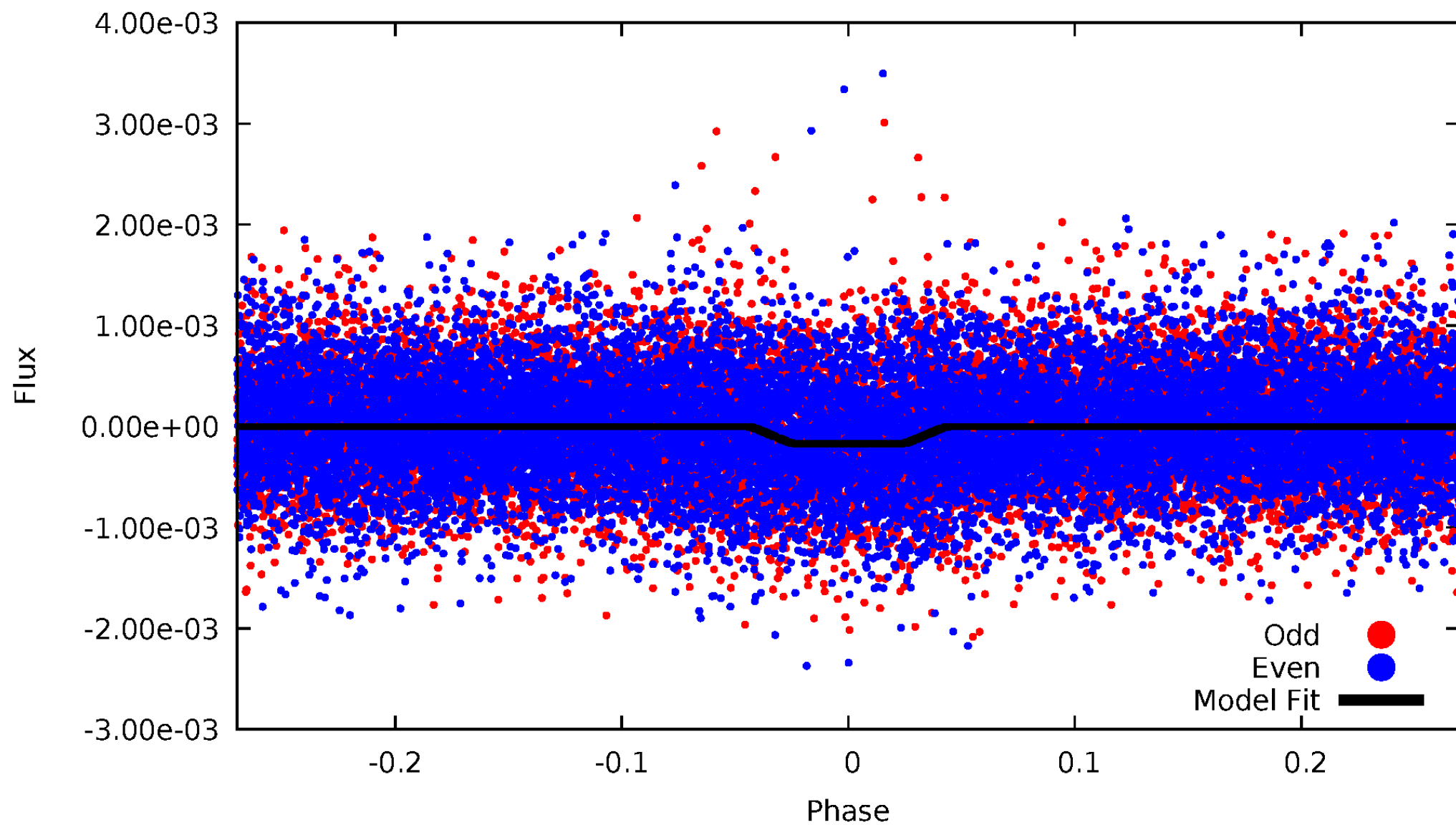
DV Odd/Even

TCE 004664046-01



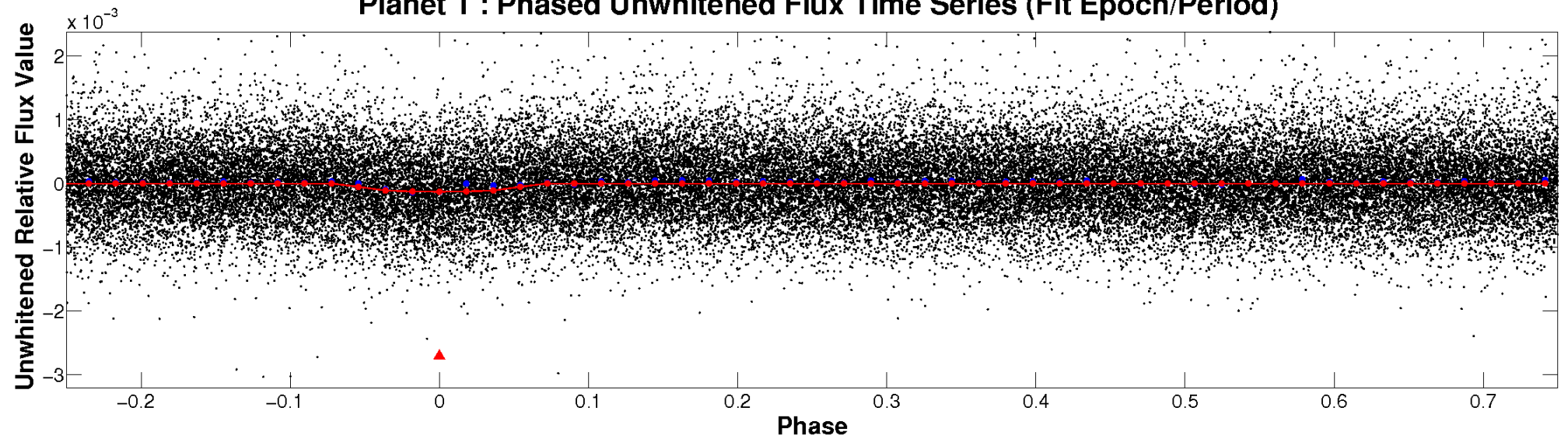
ALT Odd/Even

TCE 004664046-01

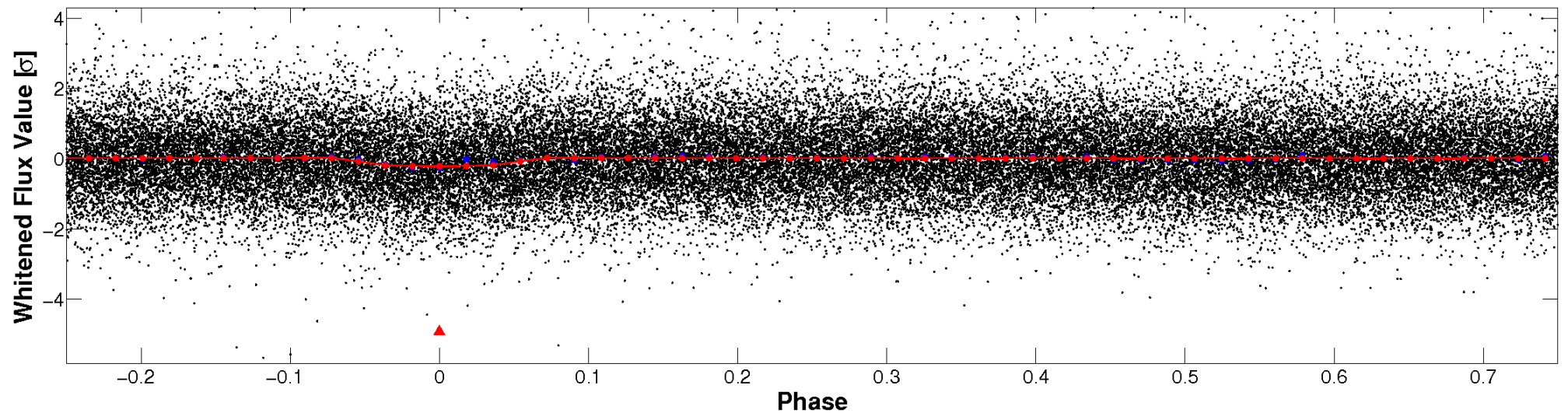


Non-Whitened Vs. Whitened Light Curve

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

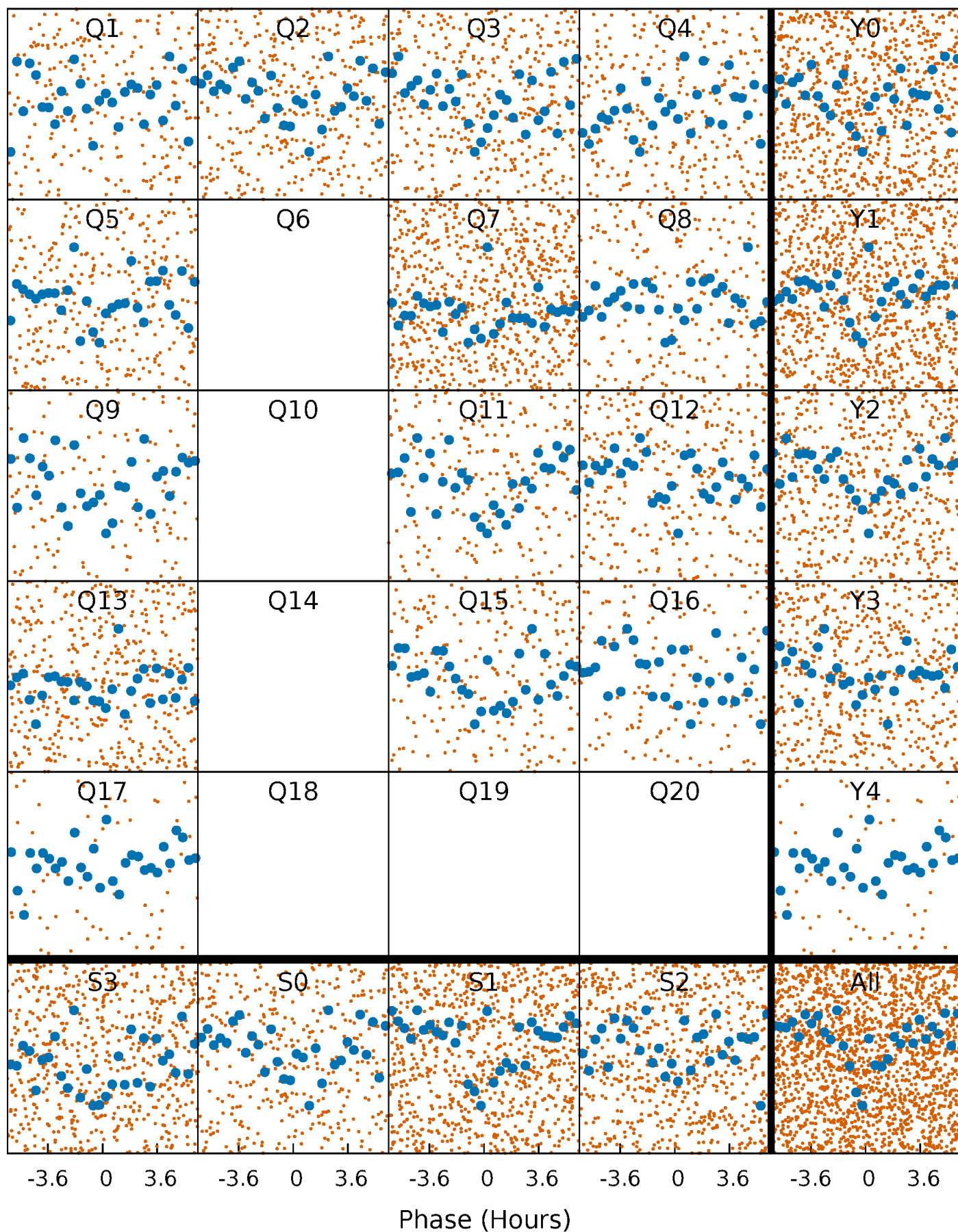


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



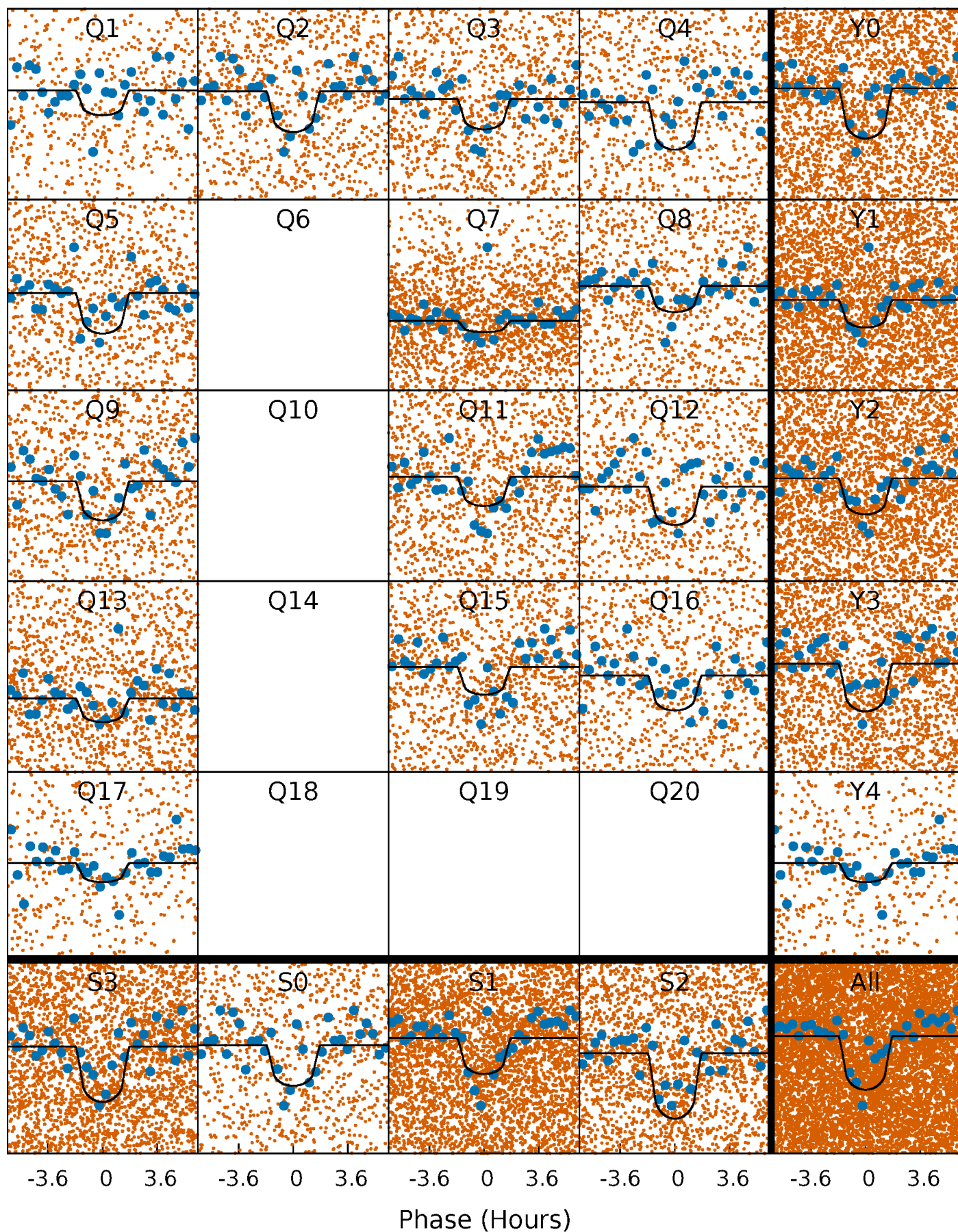
PDC Quarter-Phased Transit Curves

TCE 004664046-01 P= 1.129752 Days $T_0=132.532485$ (BKJD)



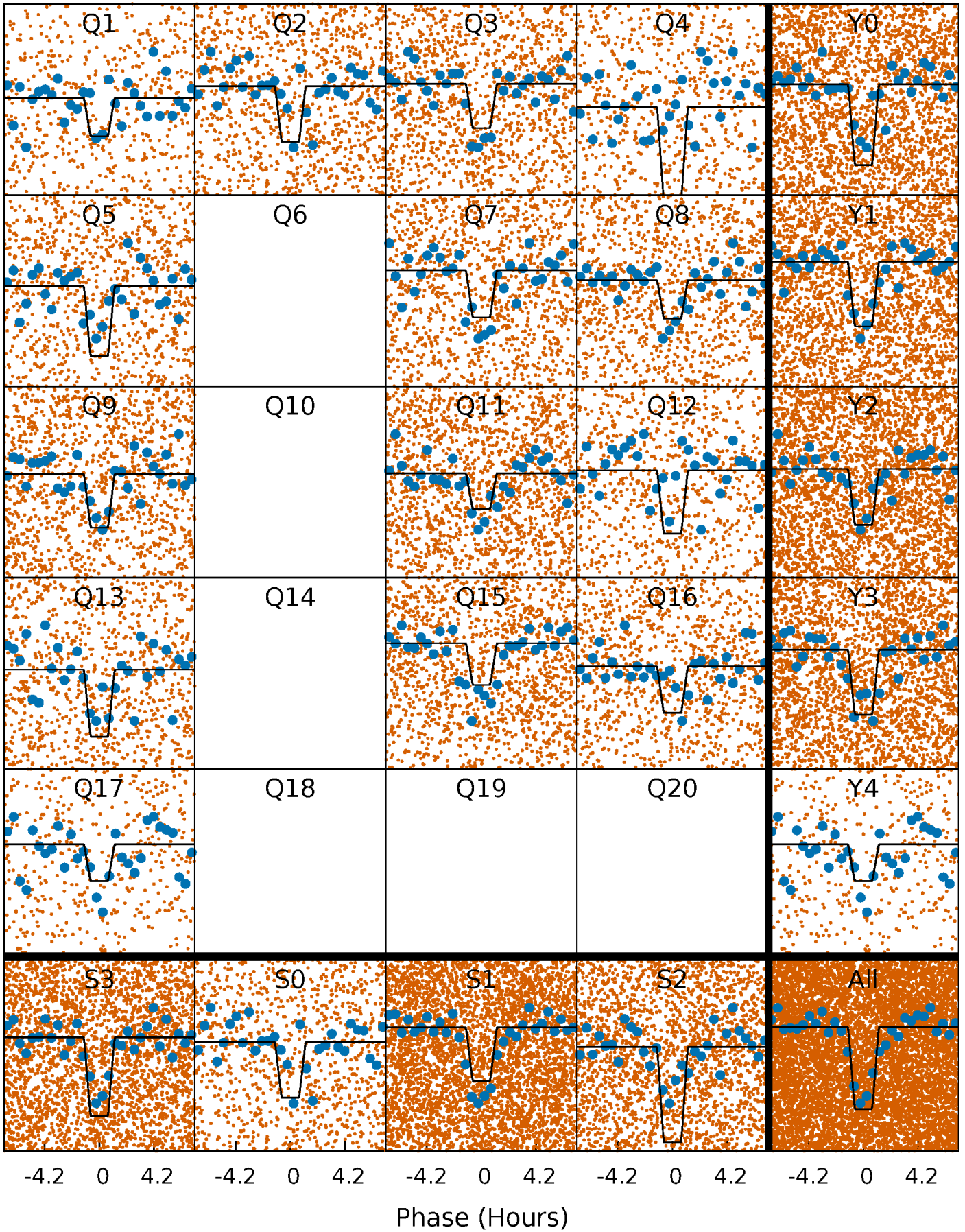
DV Quarter-Phased Transit Curves

TCE 004664046-01 P= 1.129752 Days $T_0=132.532485$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

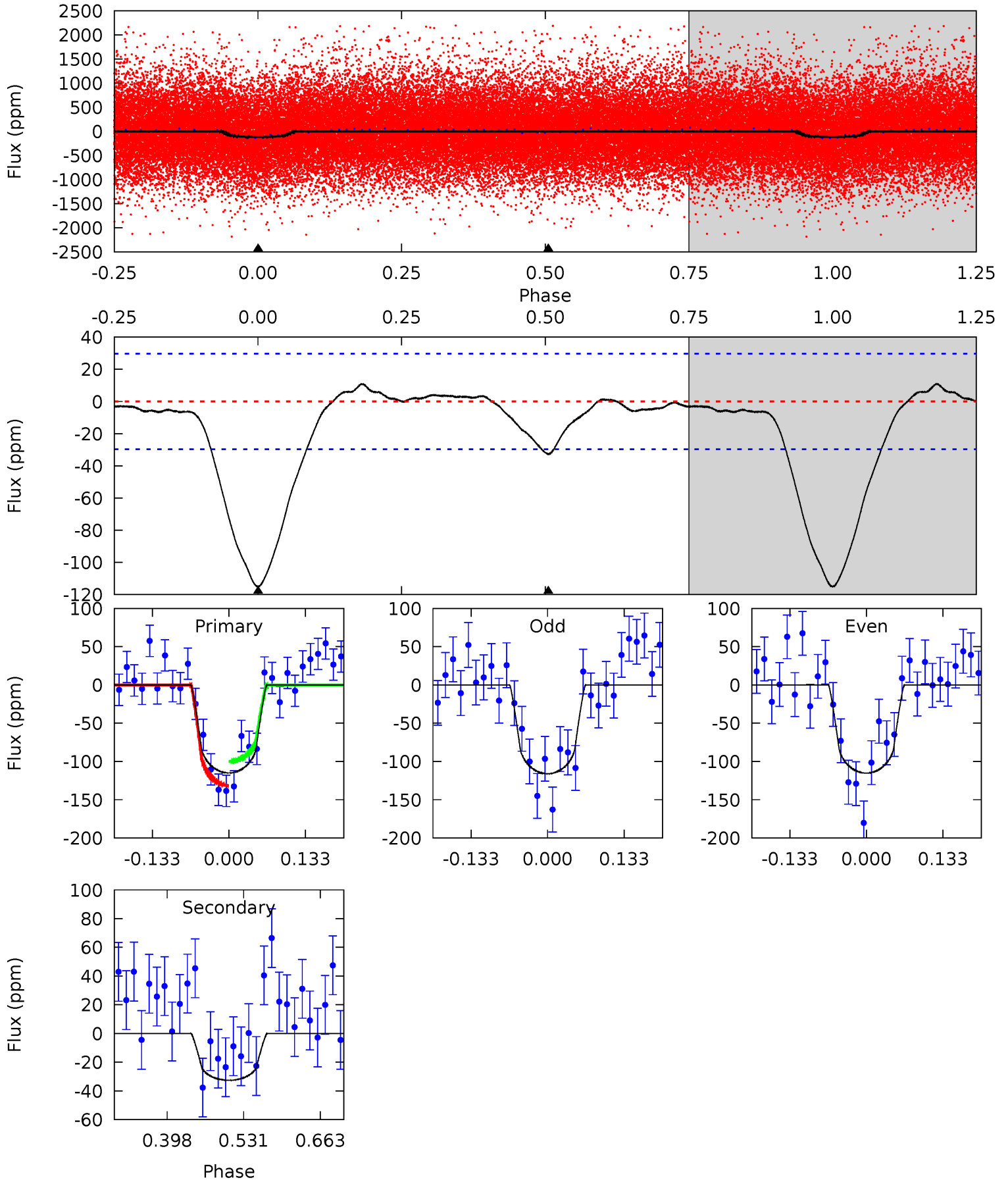
TCE 004664046-01 P= 1.129794 Days $T_0=132.505645$ (BKJD)



DV Model-Shift Uniqueness Test

004664046-01, P = 1.129752 Days, E = 131.402733 Days

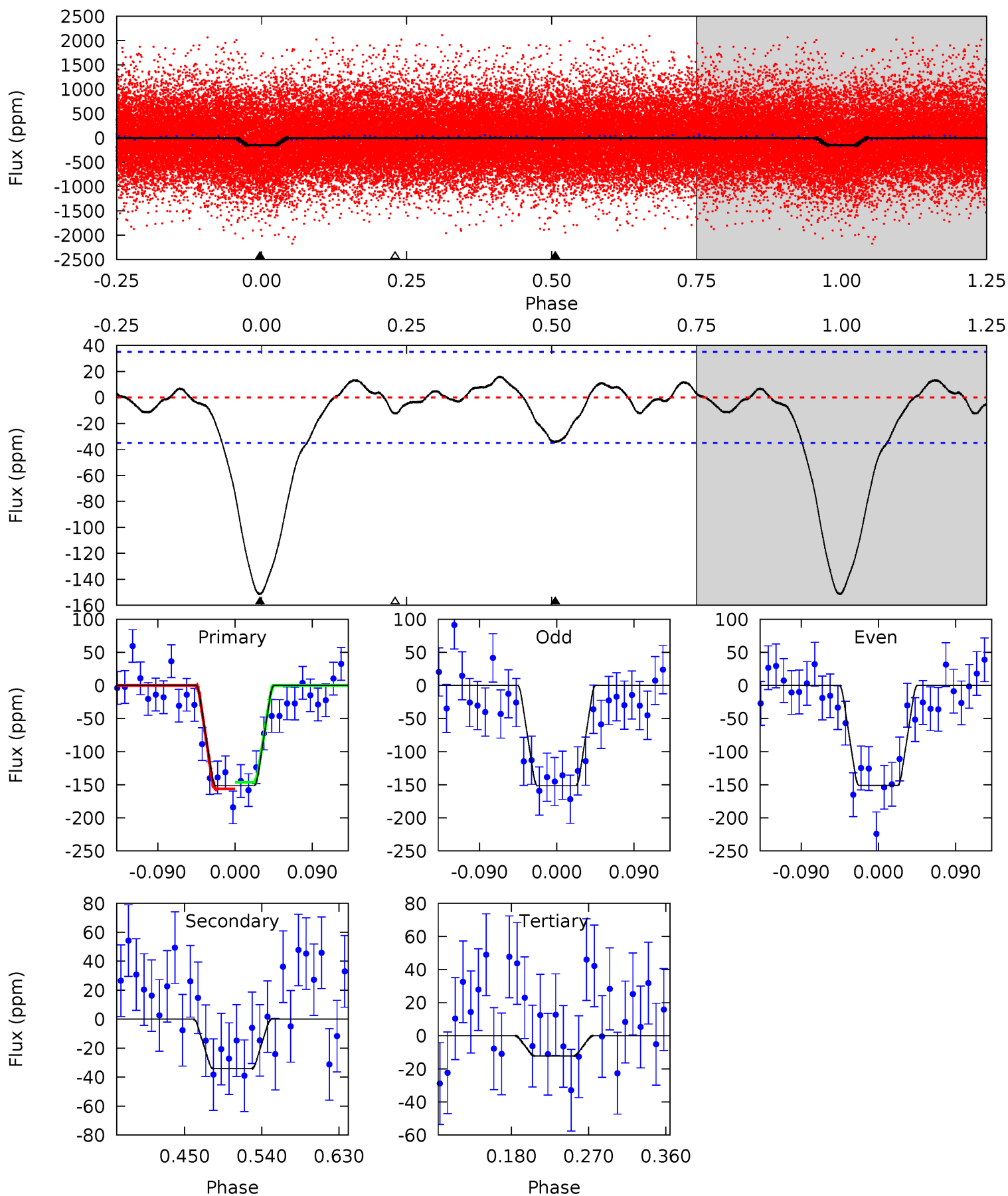
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.4	4.95	0	0	4.51	1.50	0.70	17.4	17.4	4.95	4.95	0.06	0.77	0.09	2.39



Alt Model-Shift Uniqueness Test

004664046-01, P = 1.129794 Days, E = 131.375851 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.8	4.46	1.61	0	4.59	1.70	0.99	18.2	19.8	2.86	4.46	0.00	1.00	0.10	0.65



Stellar Parameters For KIC 004664046

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5366^{+160}_{-160}	$4.625^{+0.032}_{-0.097}$	$-0.400^{+0.300}_{-0.300}$	$0.715^{+0.114}_{-0.052}$	$0.793^{+0.076}_{-0.084}$	$3.059^{+0.529}_{-1.007}$
	+3%/-3%	+1%/-2%	+75%/-75%	+16%/-7%	+10%/-11%	+17%/-33%
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 004664046-01 / KOI 2930.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-33 ± 7	$1.01^{+0.62}_{-0.58}$	2017^{+91}_{-74}	3843^{+1634}_{-549}	$6.670^{+28.702}_{-4.218}$
Alt.	-34 ± 8	$1.09^{+0.65}_{-0.60}$	2029^{+87}_{-83}	3819^{+1424}_{-618}	$5.947^{+23.289}_{-3.770}$

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

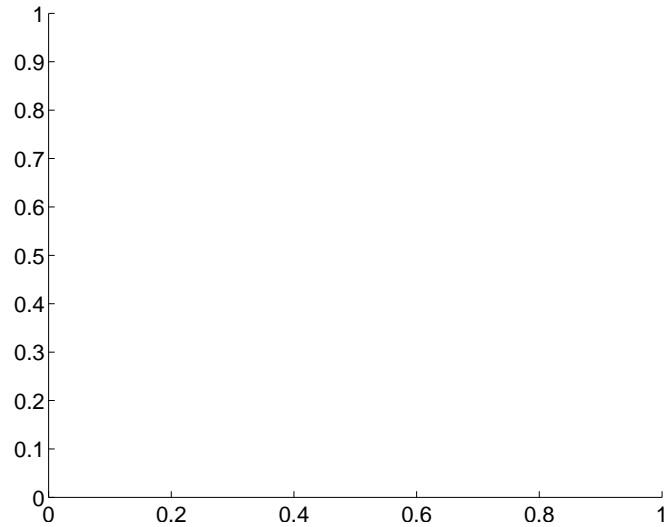
Supplemental centroid analysis for 004664046-01. Kepler magnitude: 15.62. Transit SNR 13.58

There are 0 quarters with good PRF difference image offsets

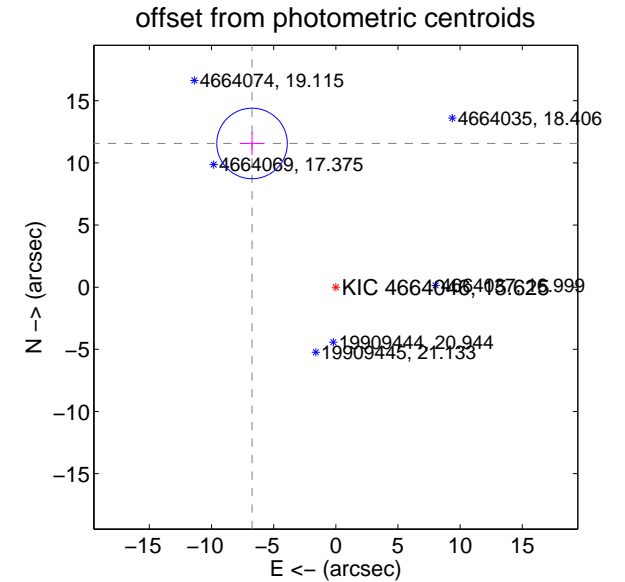
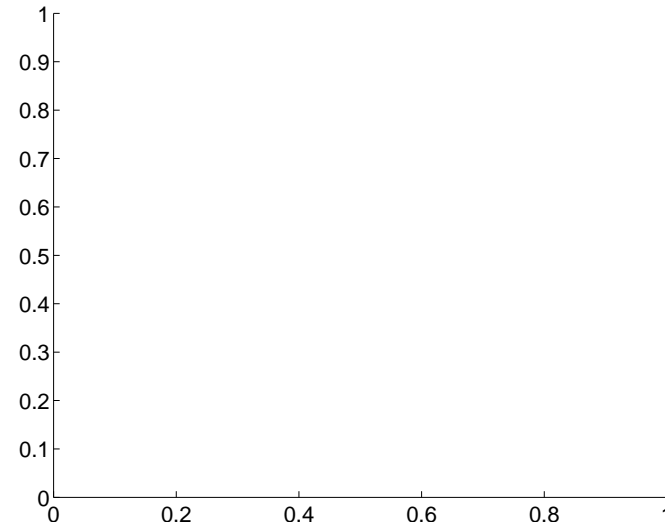
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	13.38 ± 0.95	14.15	6.74 ± 0.97	11.56 ± 0.94

There is no PRF-fit offset from OOT-fit

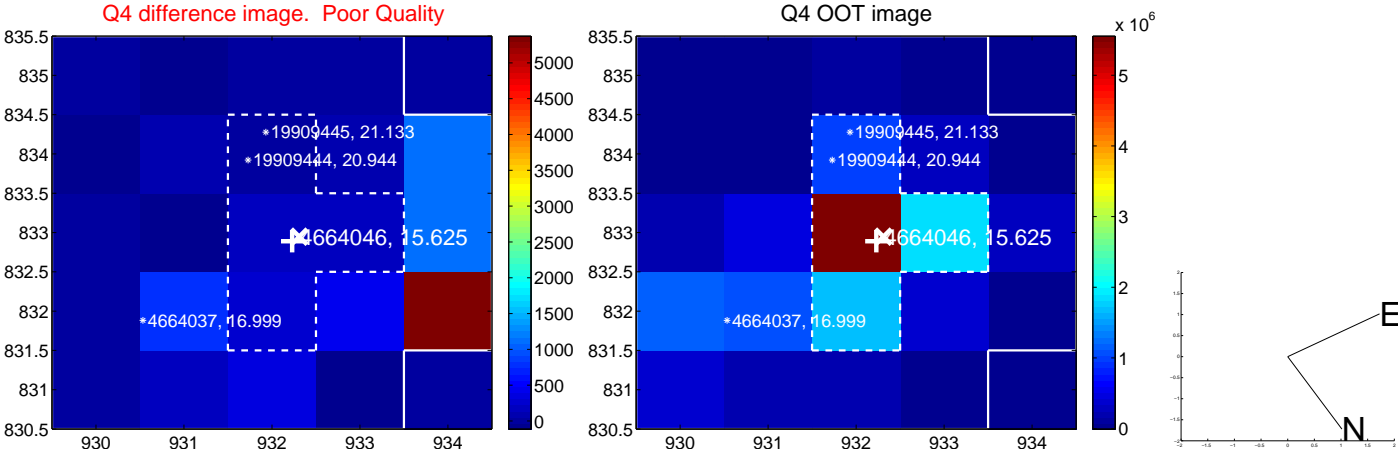
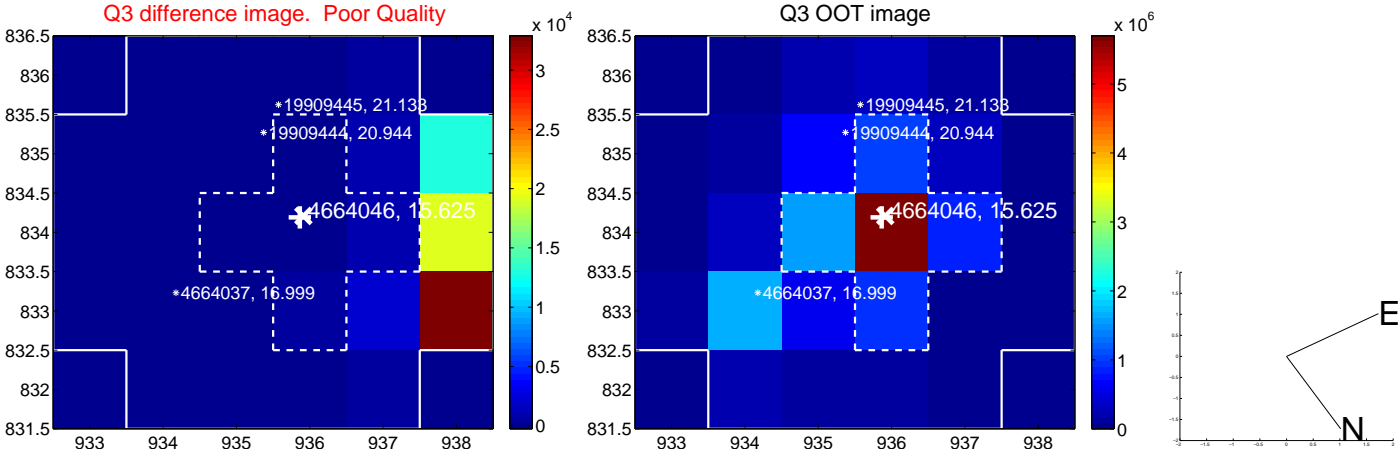
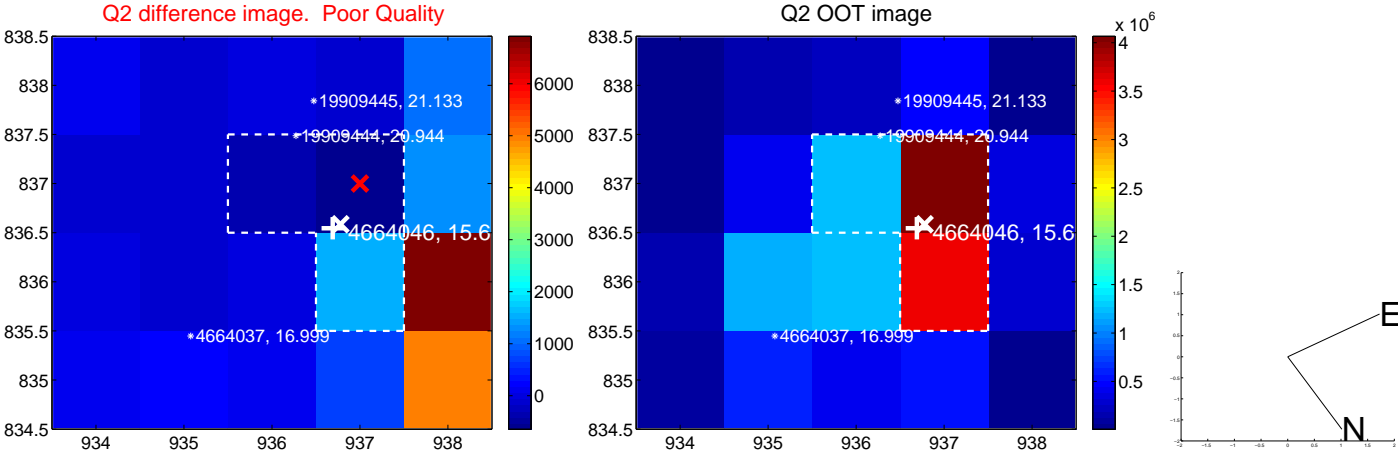
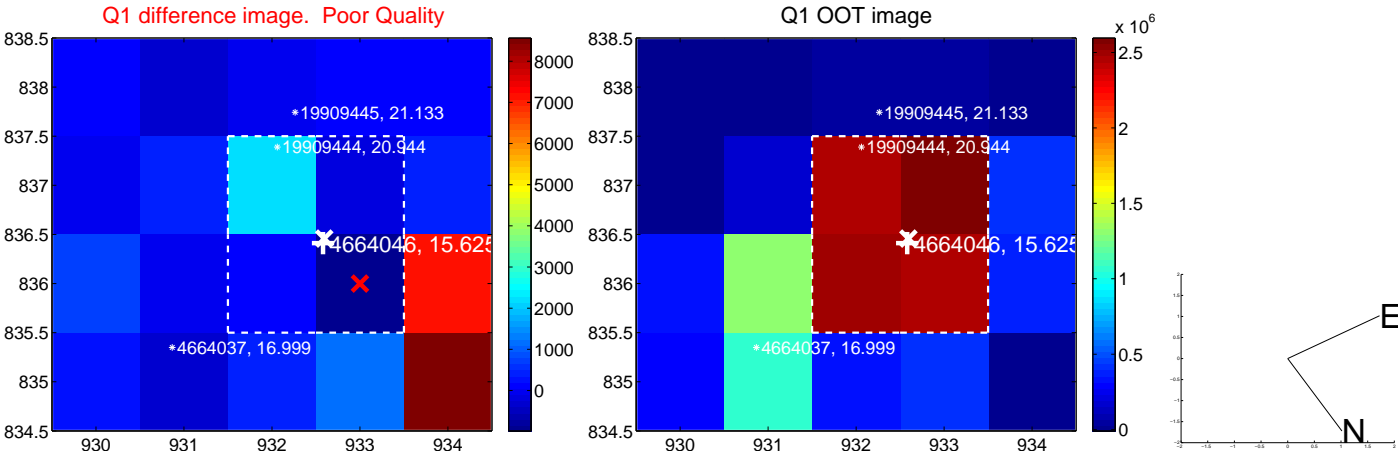


There is no PRF-fit offset from KIC

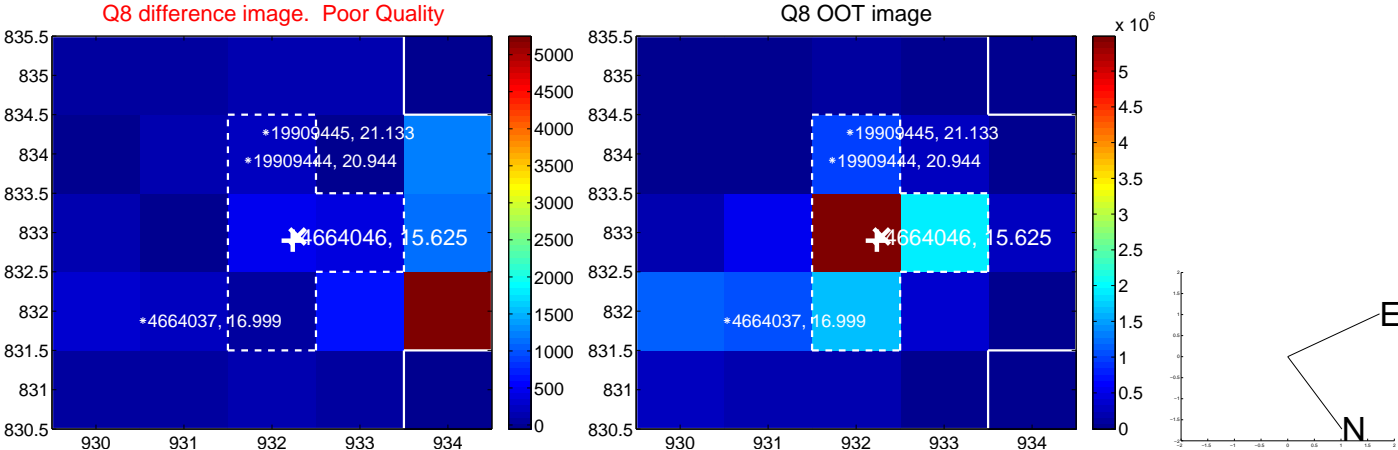
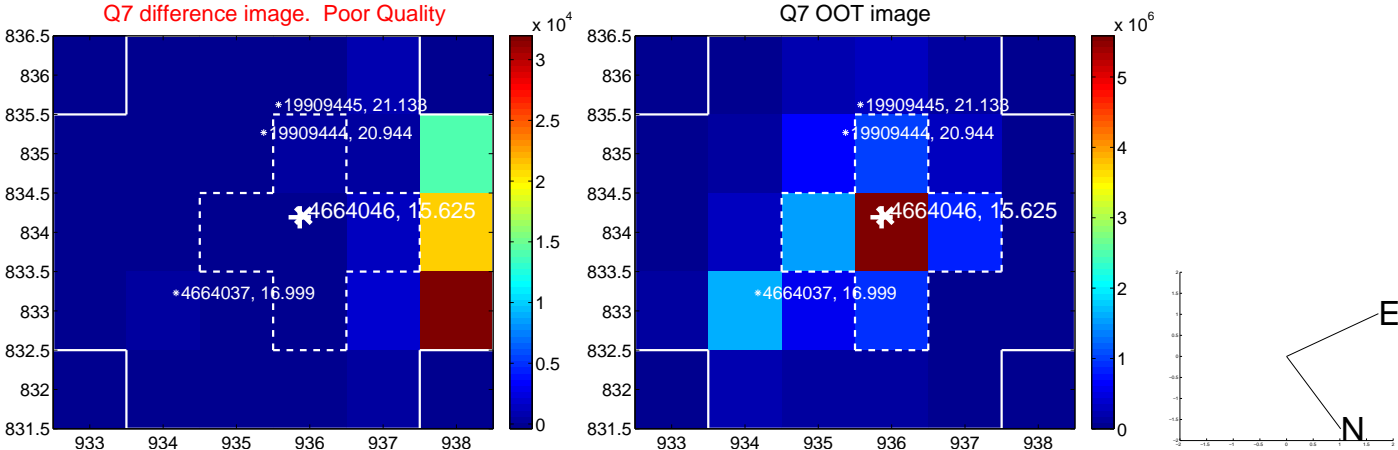
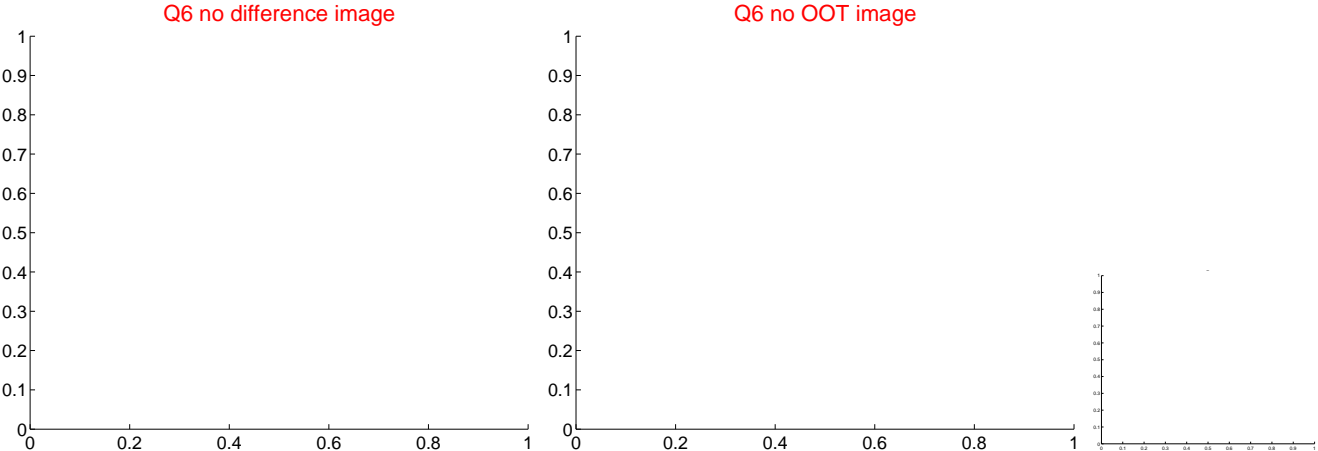
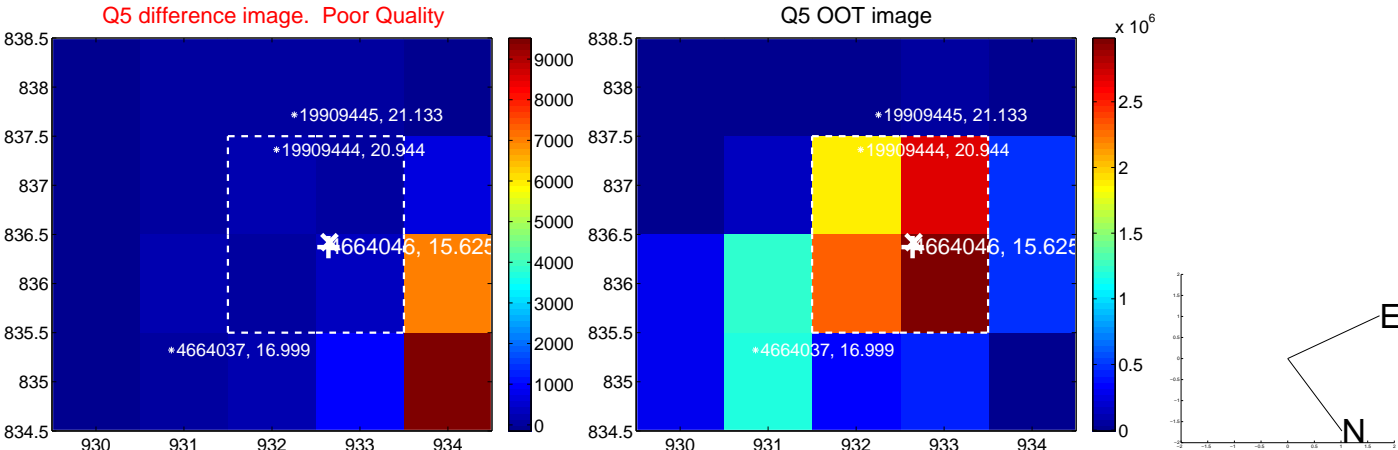


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

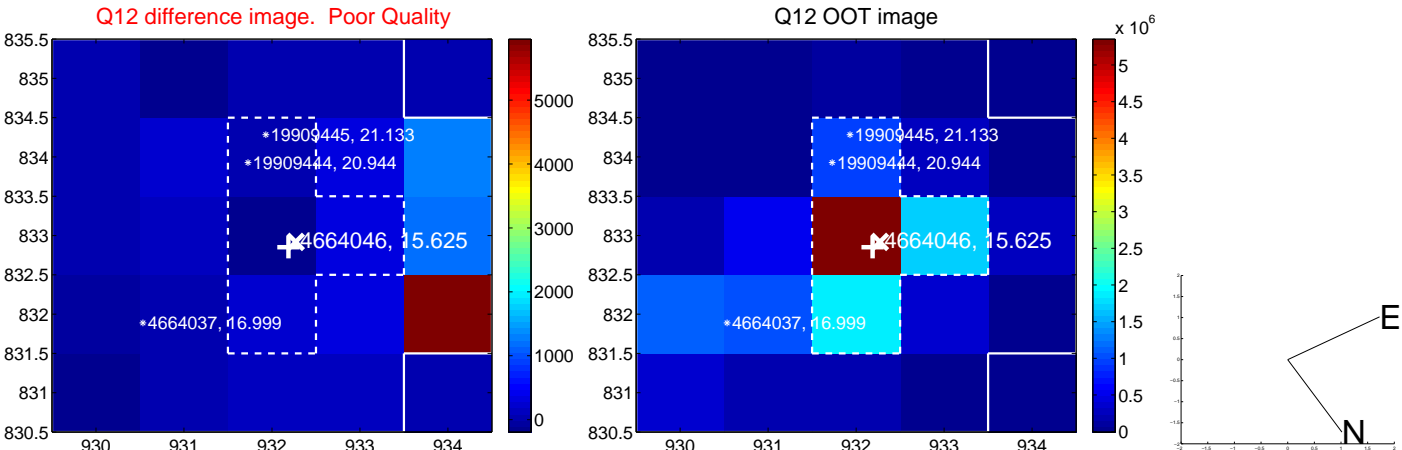
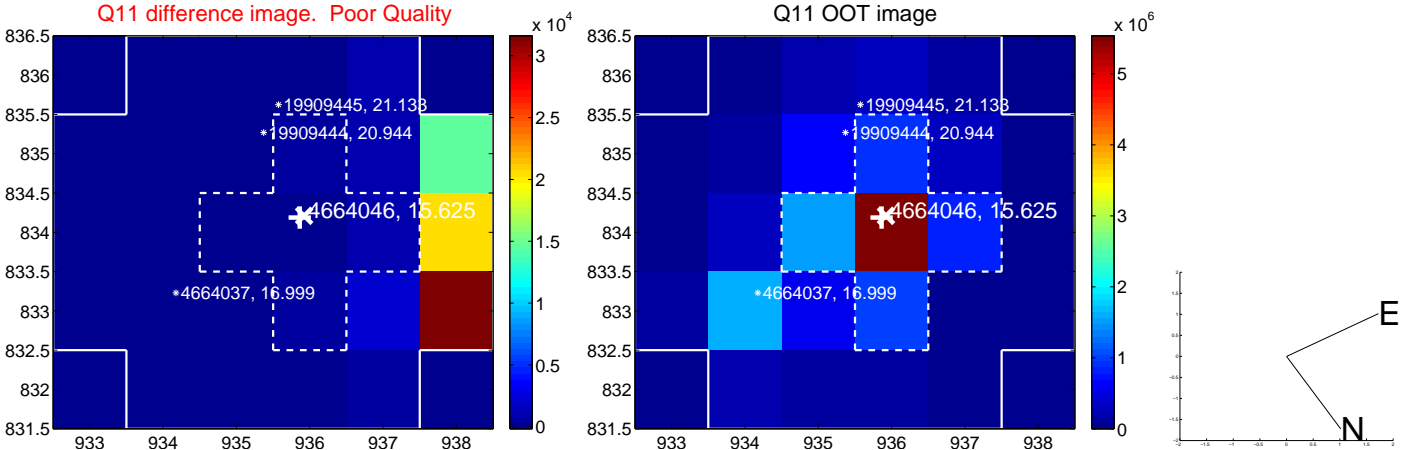
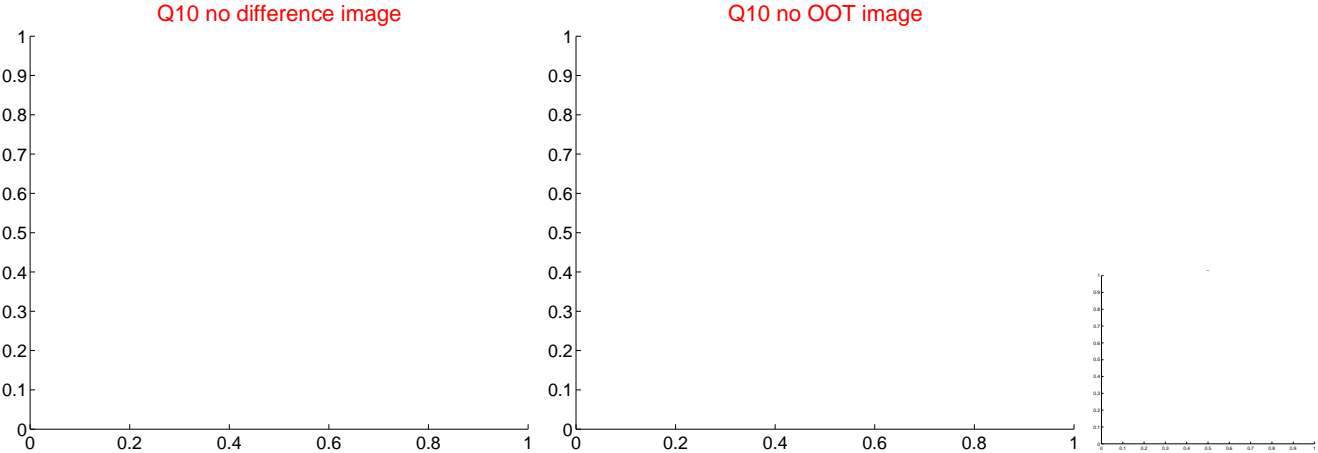
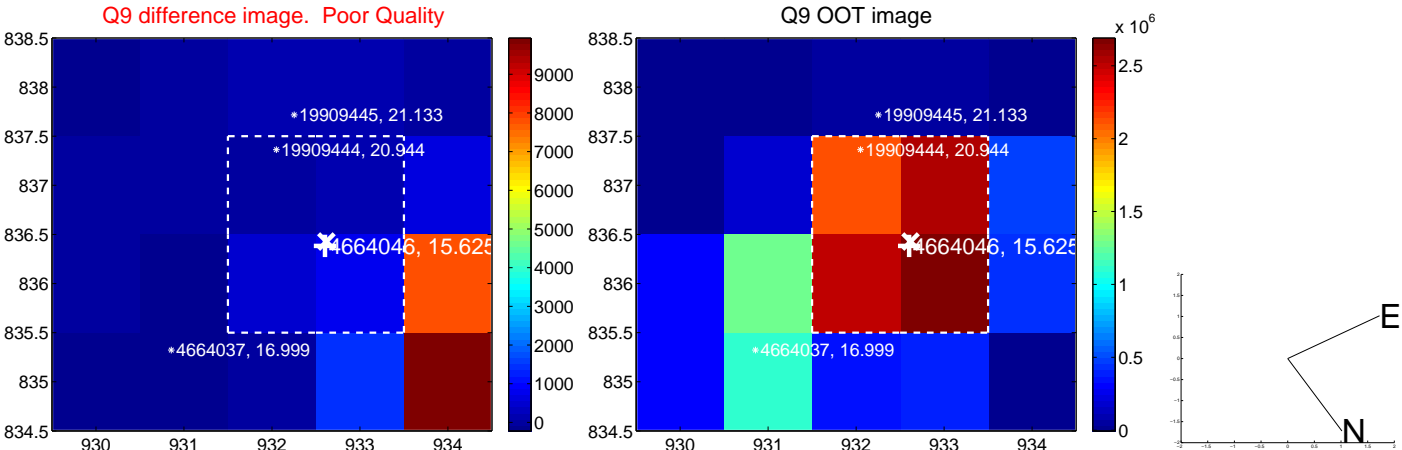
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



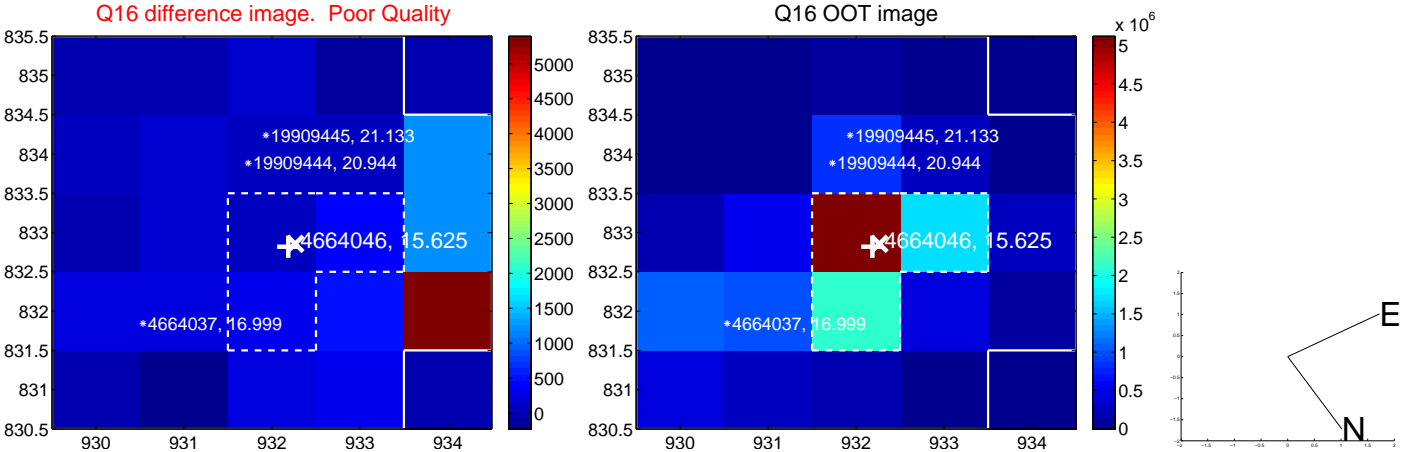
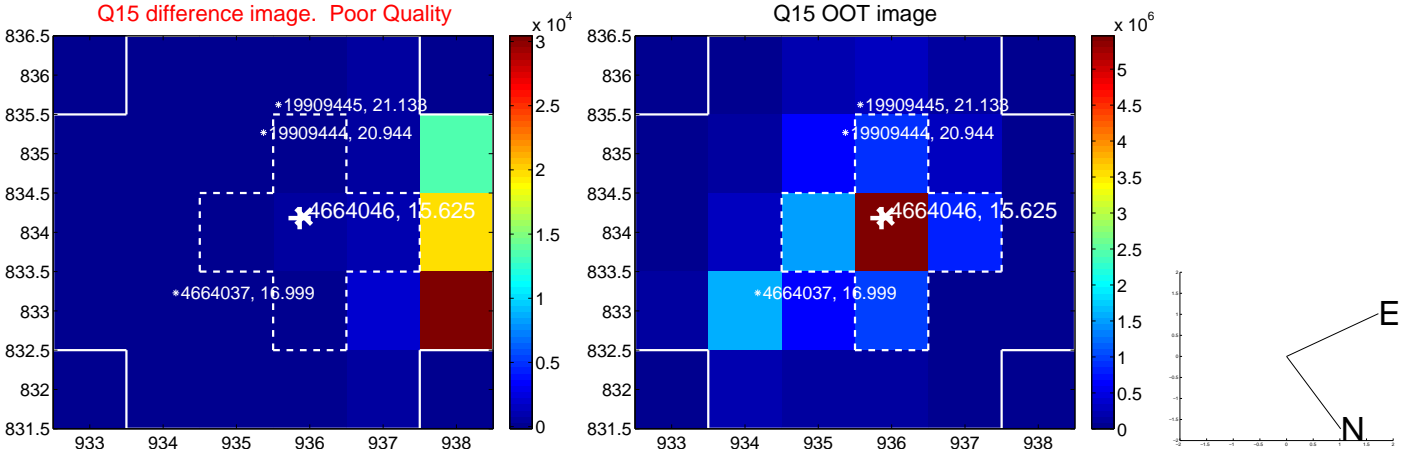
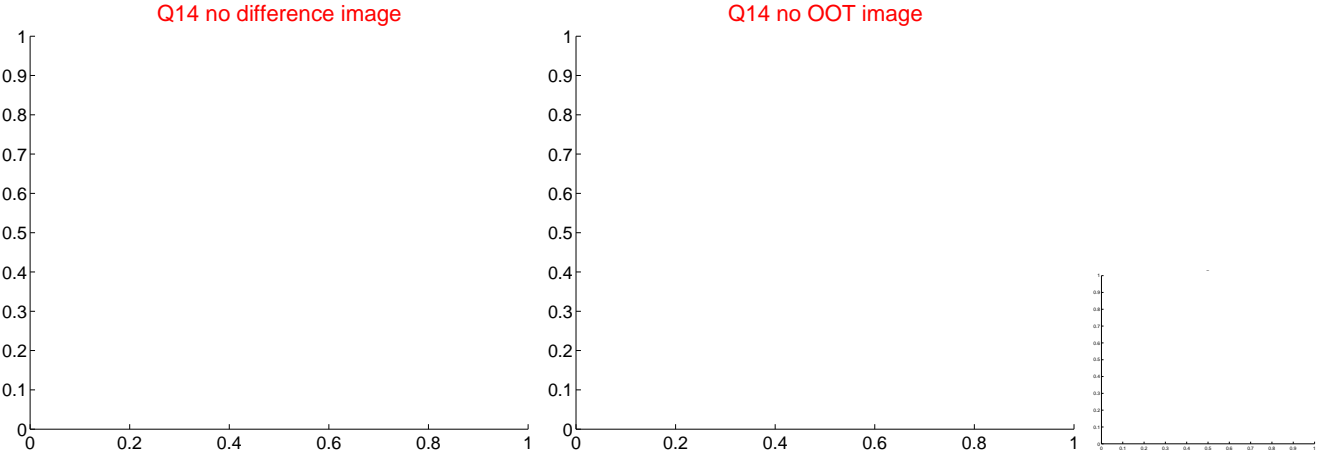
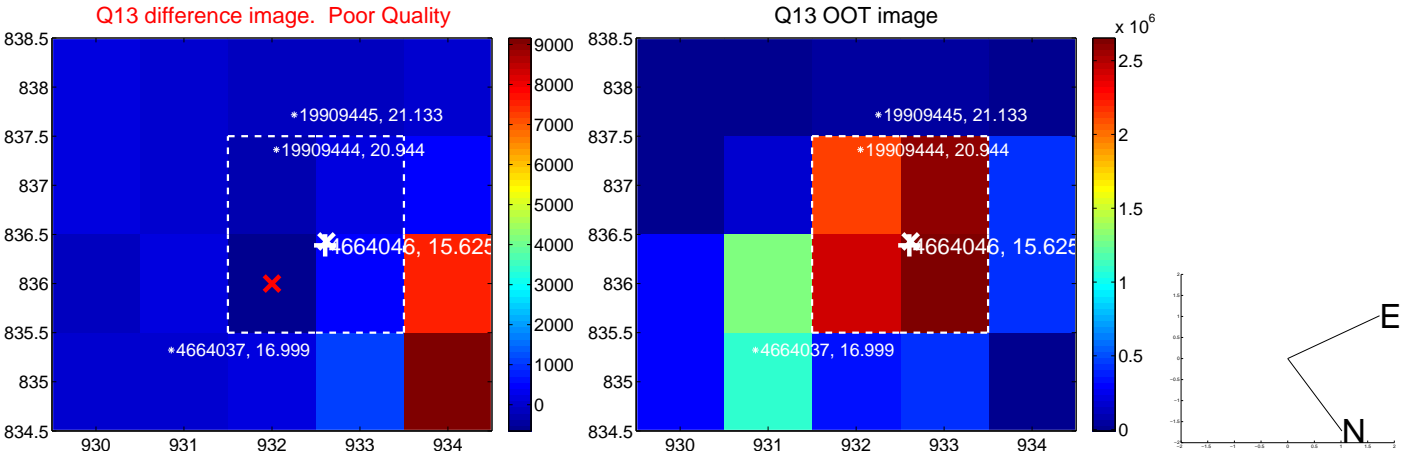
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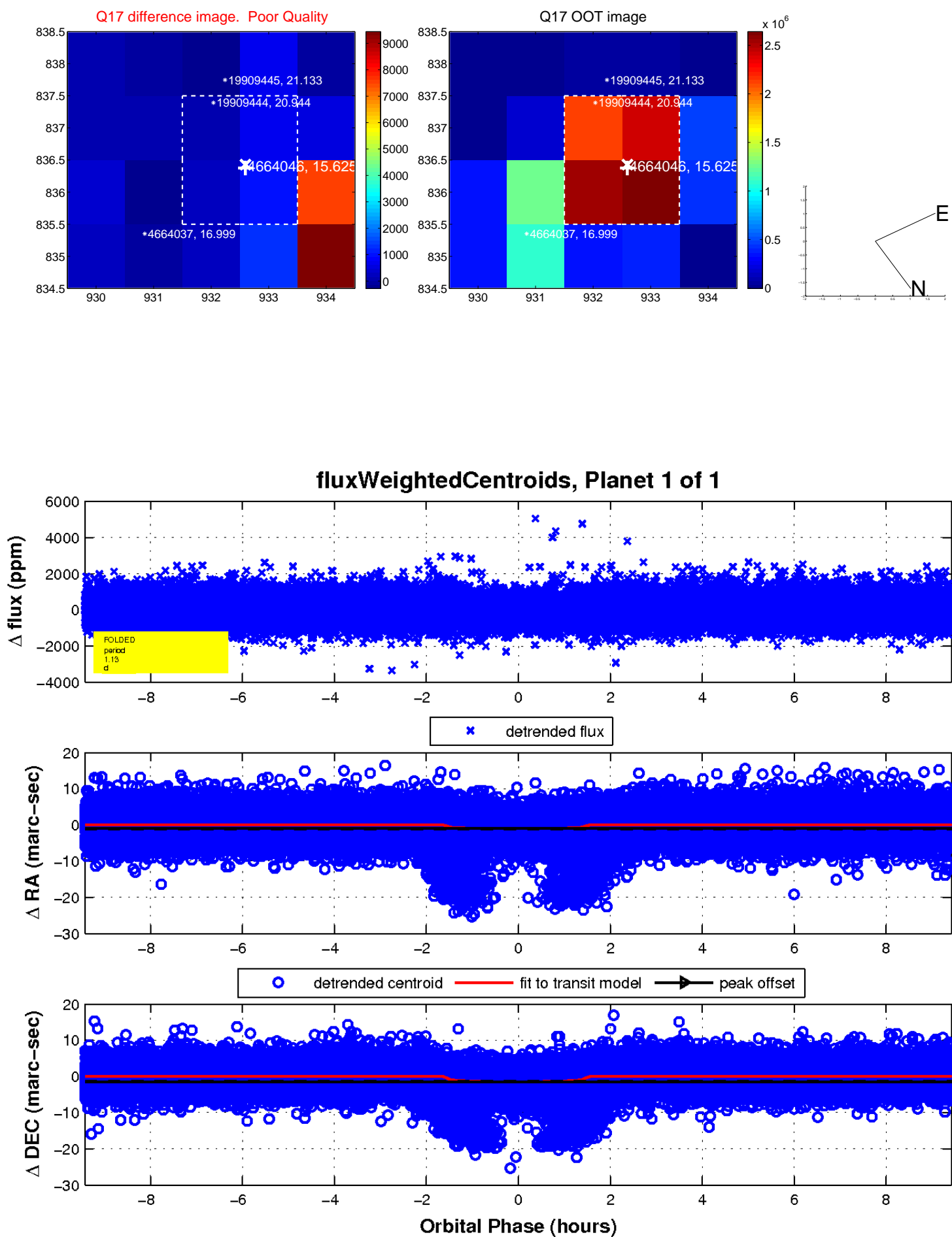
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UKIRT Image

Declination

