

KIC 005731646

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})
005731646-01	OBS	No	0.654980	131.826109	9.8	6.108	8.6	9.6	2.02	9044	0.65	68403.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005731646-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_DIFFS

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

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

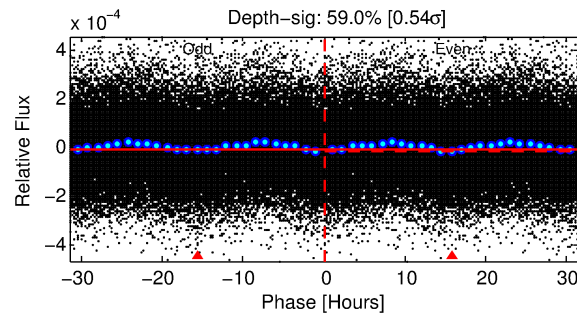
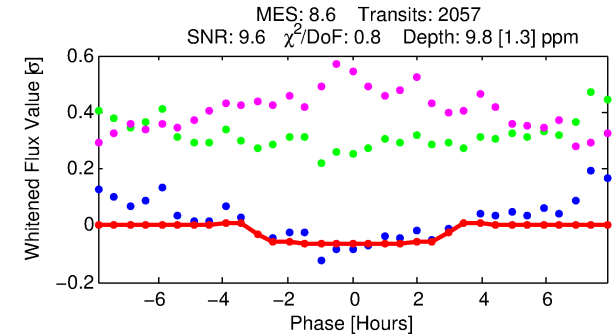
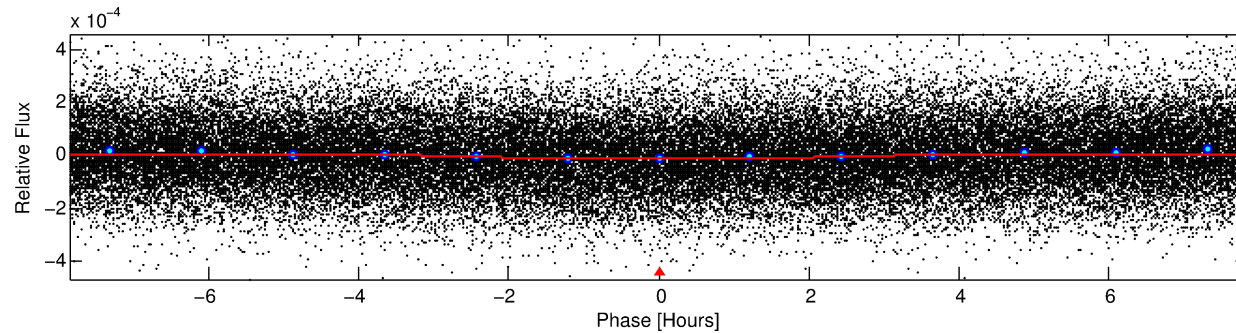
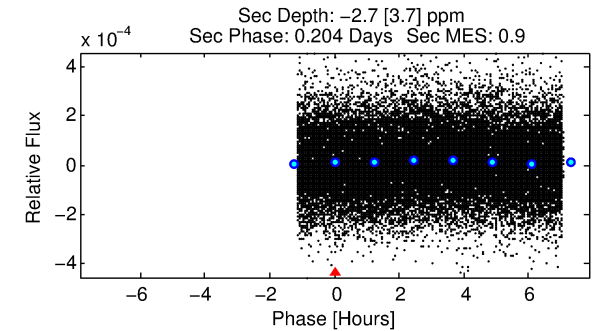
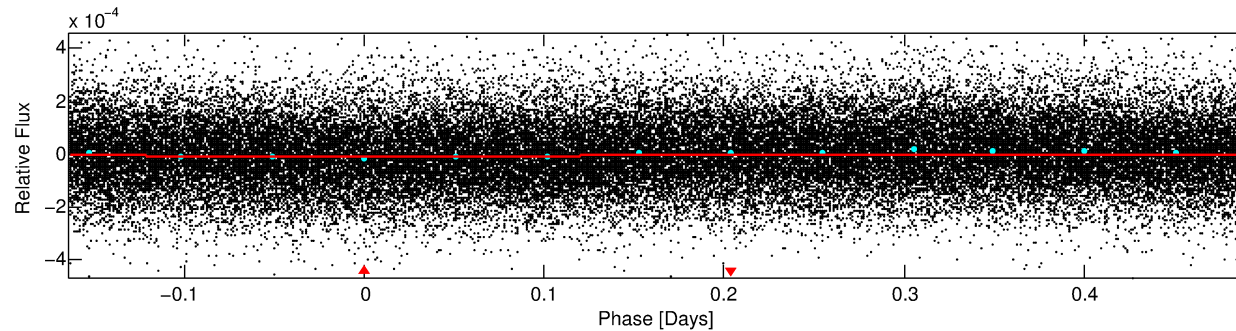
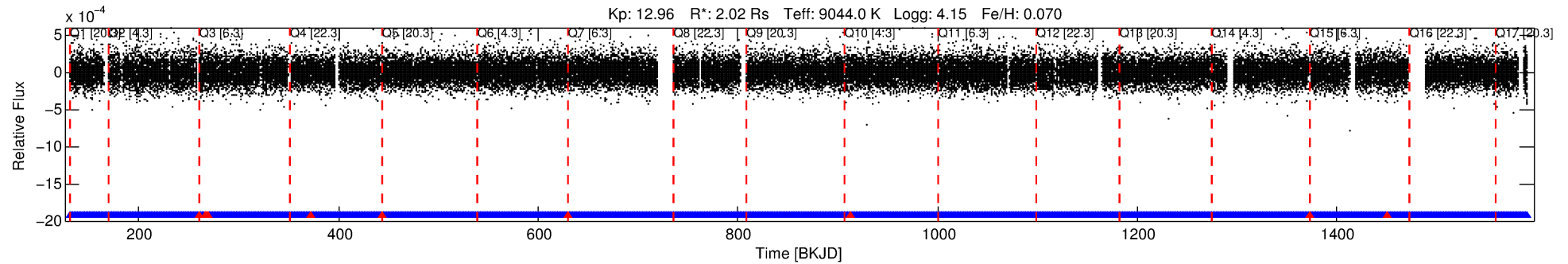
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005731646-01

No Significant Match Found

DV One-Page Summary

KIC: 5731646 Candidate: 1 of 1 Period: 0.655 d



DV Fit Results:

Period = 0.65498 [0.00001] d
Epoch = 131.8261 [0.0058] BKJD
Rp/R* = 0.0029 [0.0021]
a/R* = 1.06 [0.57]
b = 0.29 [15.25]
Seff = 68403.21 [27266.18]
Teff = 4124 [411] K
Rp = 0.65 [0.52] Re
a = 0.0189 [0.0049] AU
Ag = N/A
Teffp = N/A

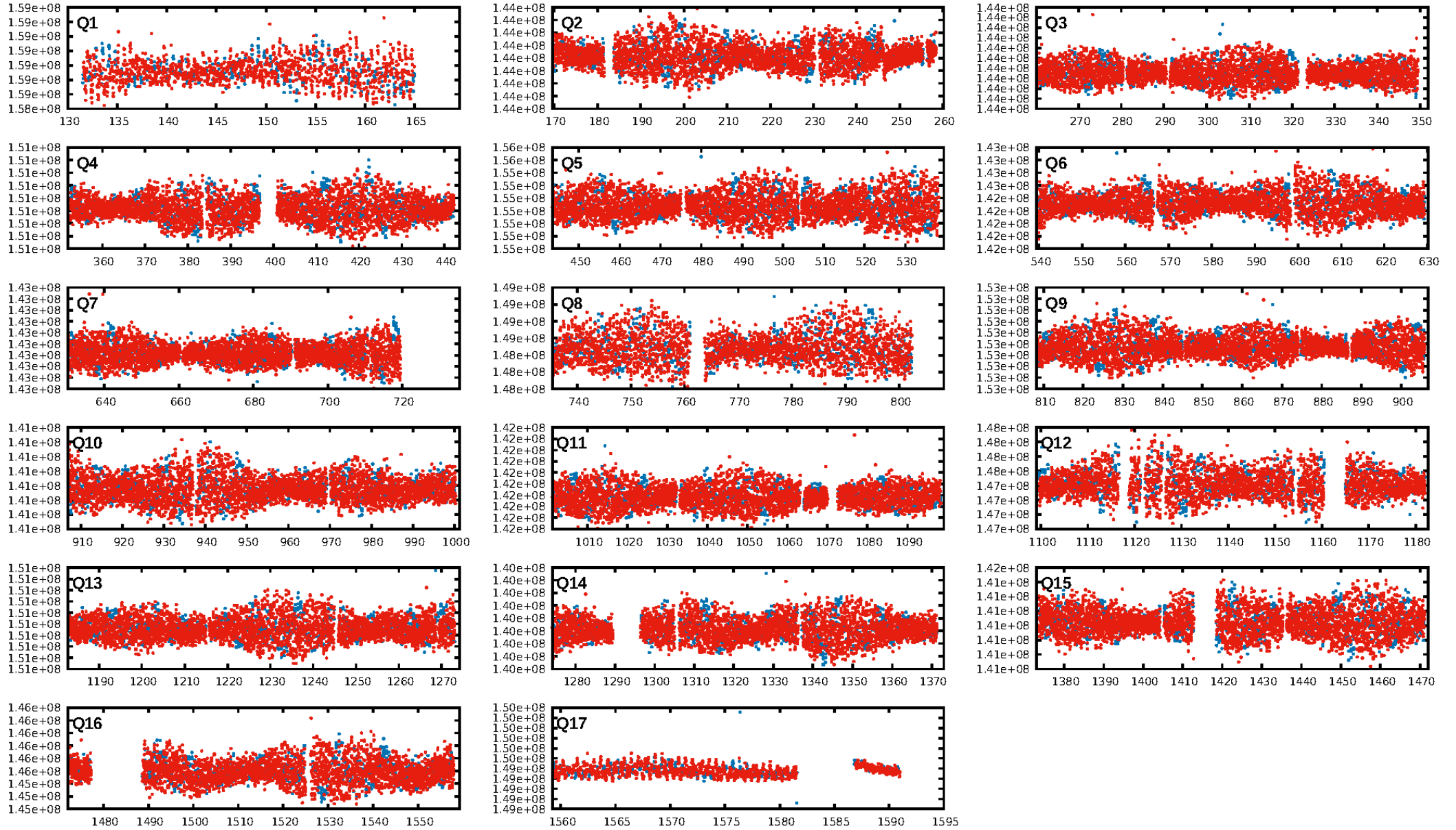
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [1955/1965]
GhostDiagnostic-chr: 3.017
Centroid-sig: 9.8%
Centroid-so: 2.124 arcsec [1.51σ]
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]

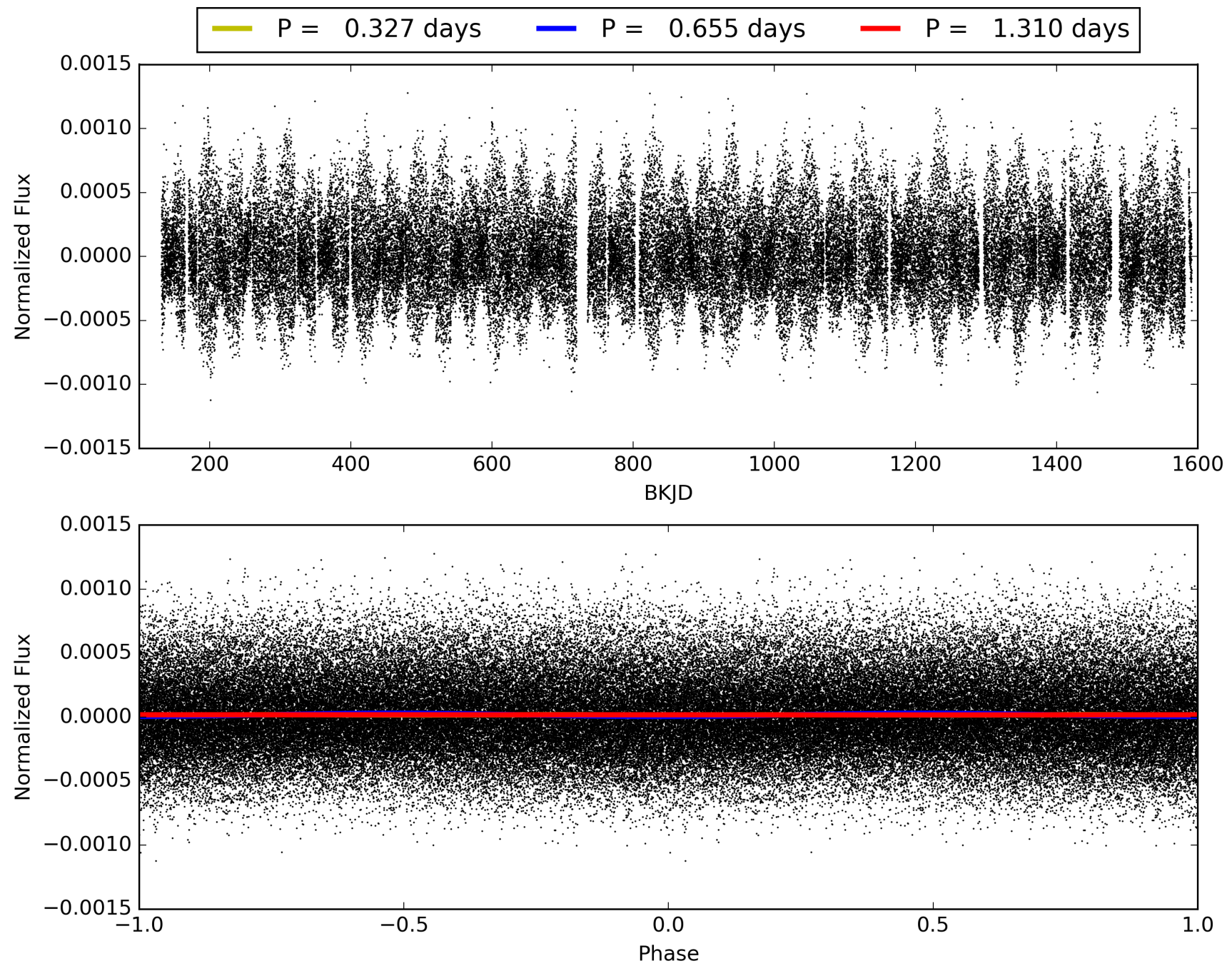
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:14:46 Z

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

TCE 005731646-01, PDC Light Curves

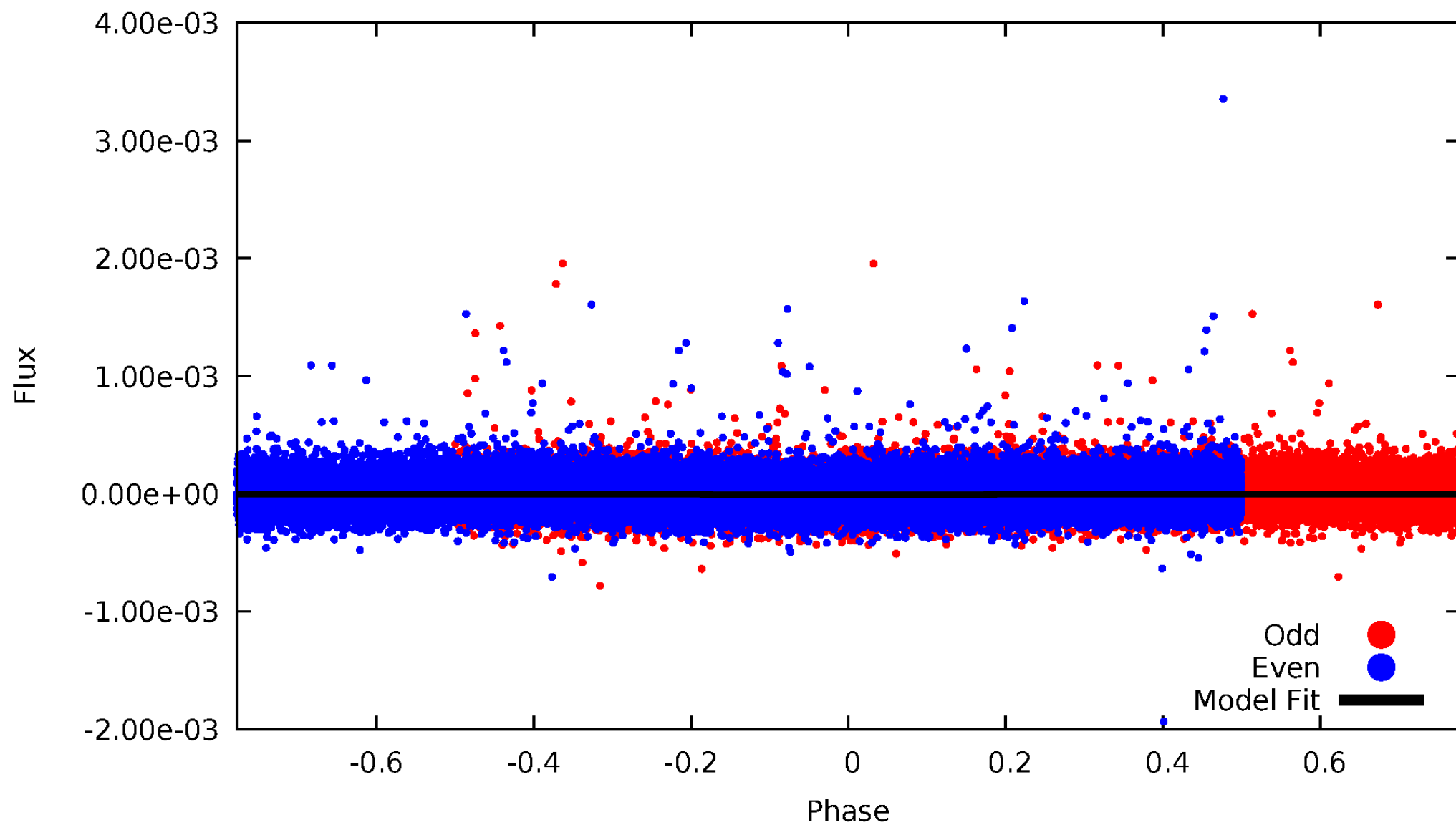


TCE 005731646-01



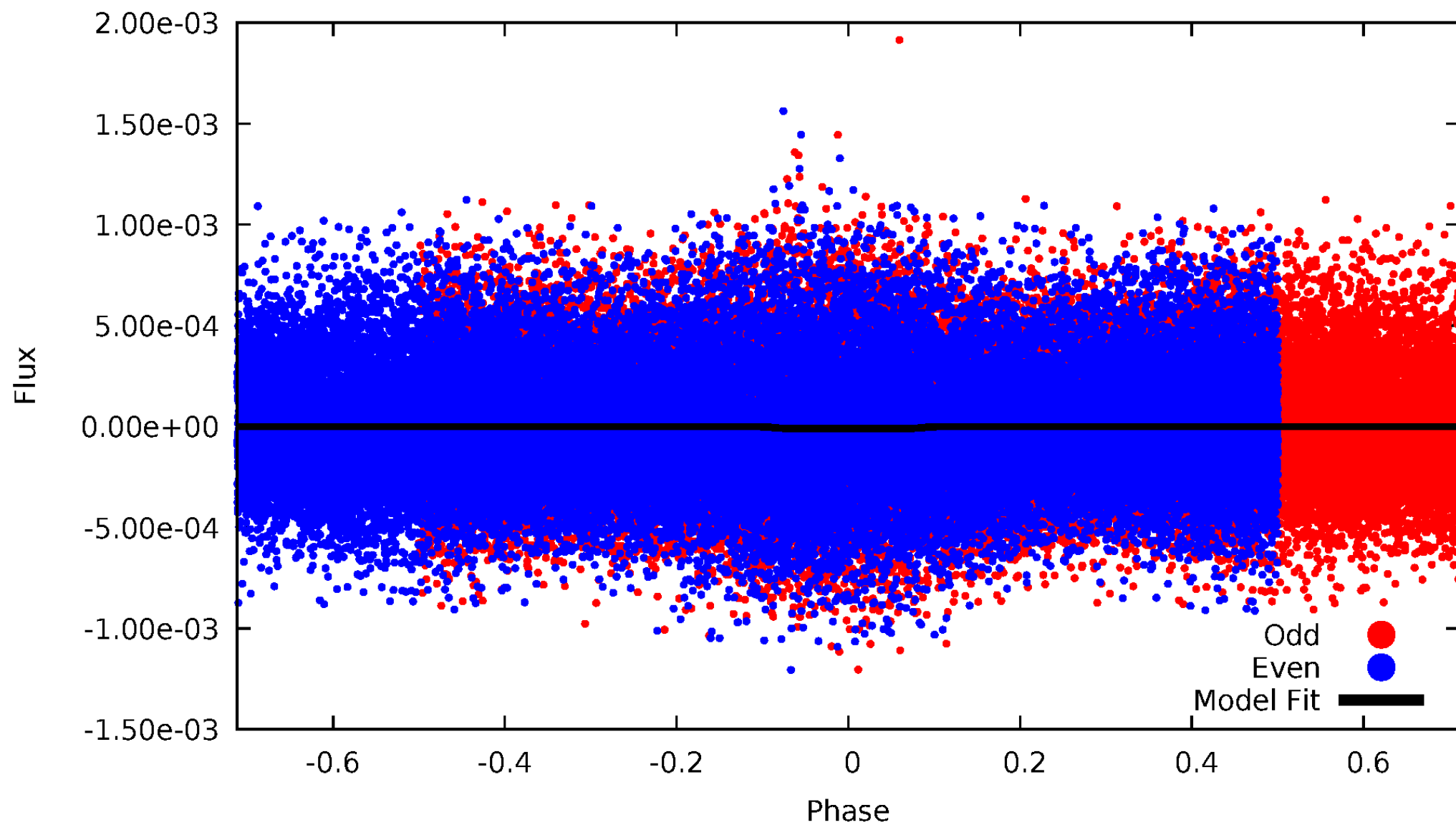
DV Odd/Even

TCE 005731646-01



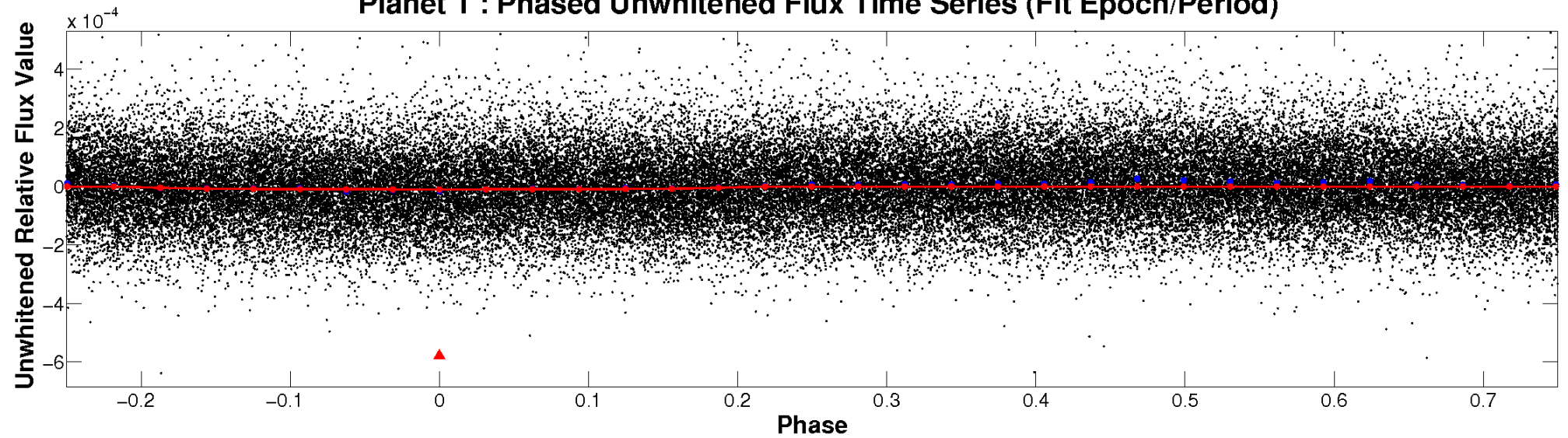
ALT Odd/Even

TCE 005731646-01

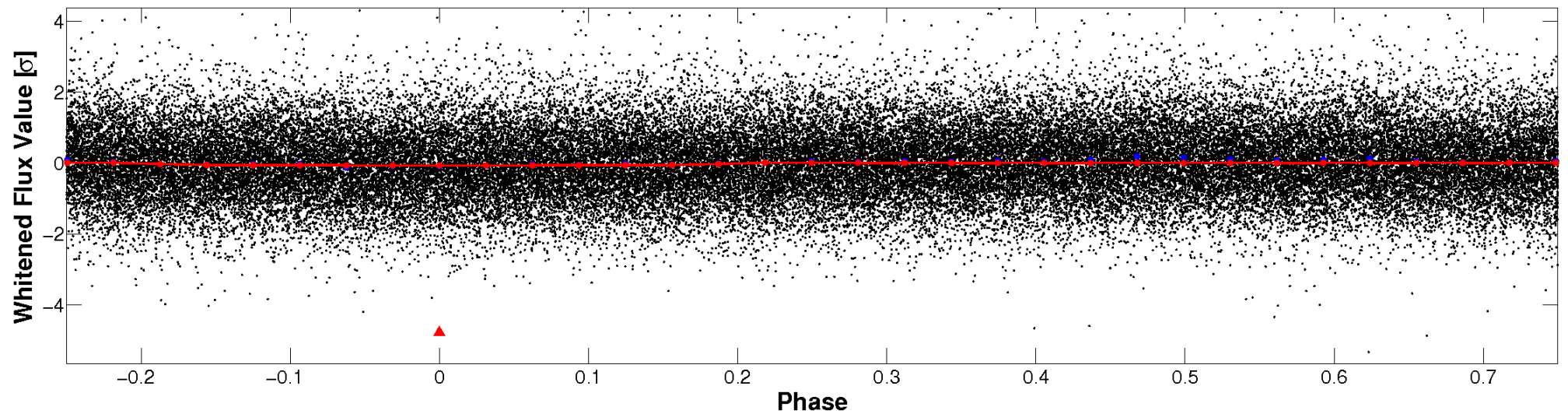


Non-Whitened Vs. Whitened Light Curve

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

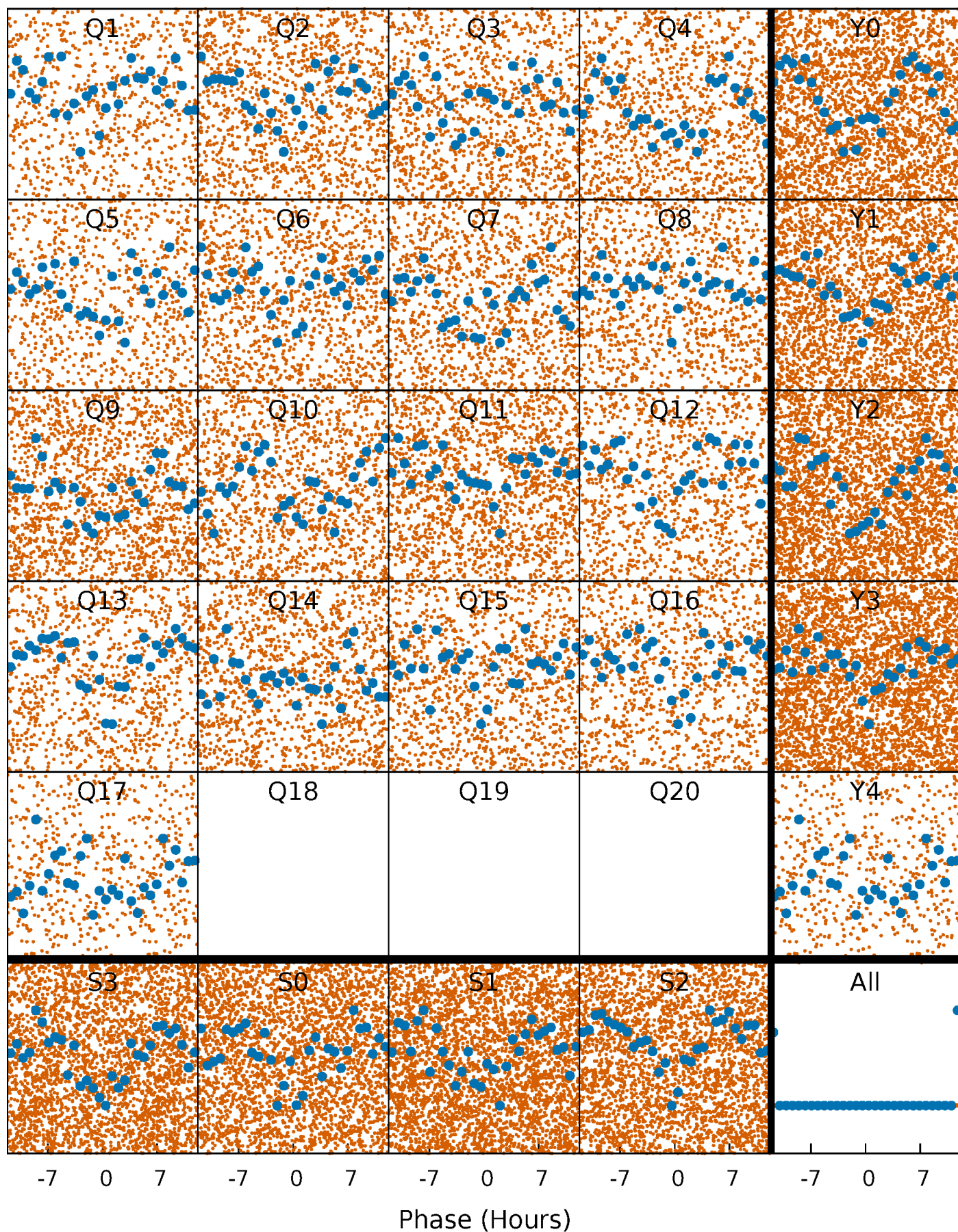


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



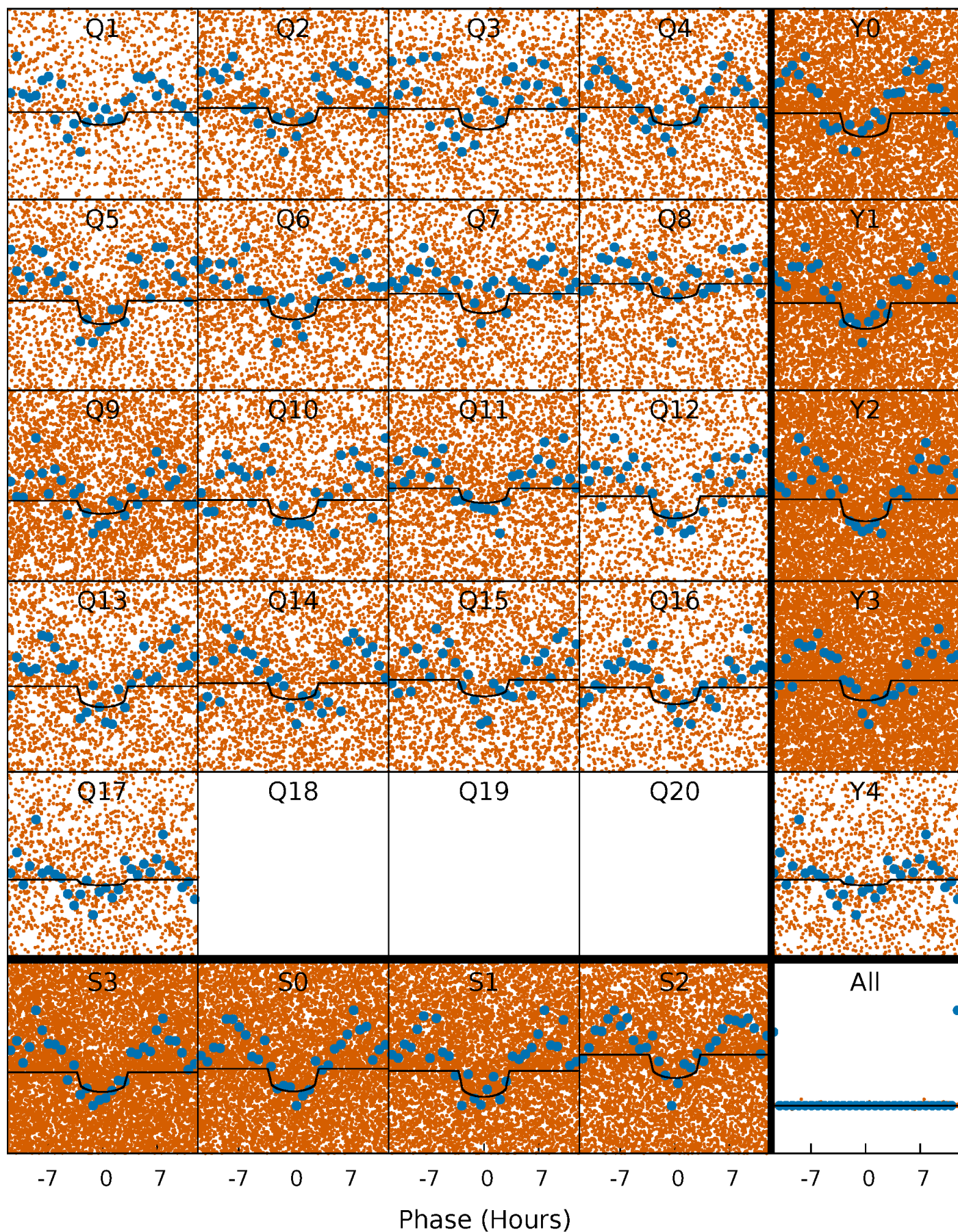
PDC Quarter-Phased Transit Curves

TCE 005731646-01 P= 0.654980 Days $T_0=131.826109$ (BKJD)



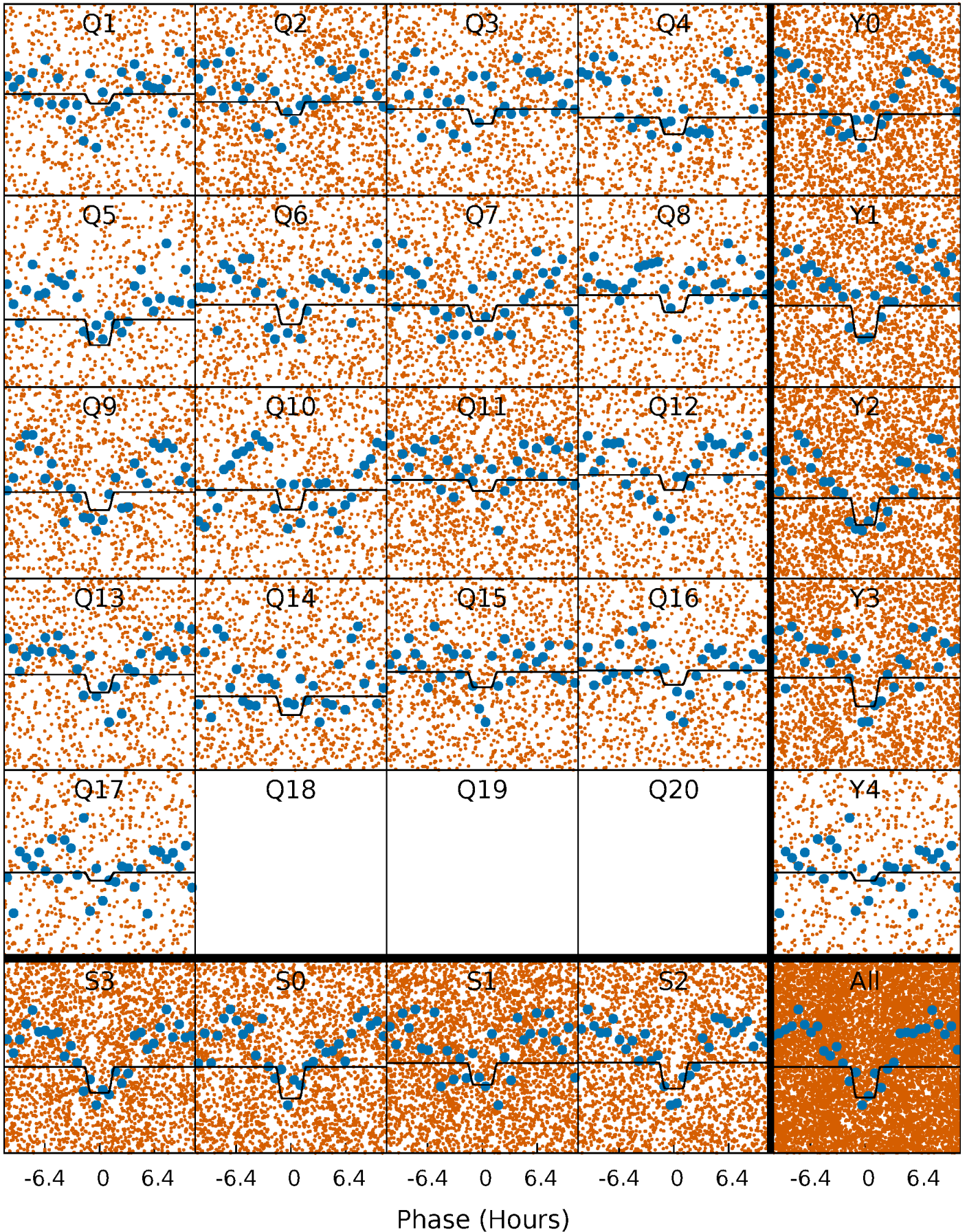
DV Quarter-Phased Transit Curves

TCE 005731646-01 P= 0.654980 Days $T_0=131.826109$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

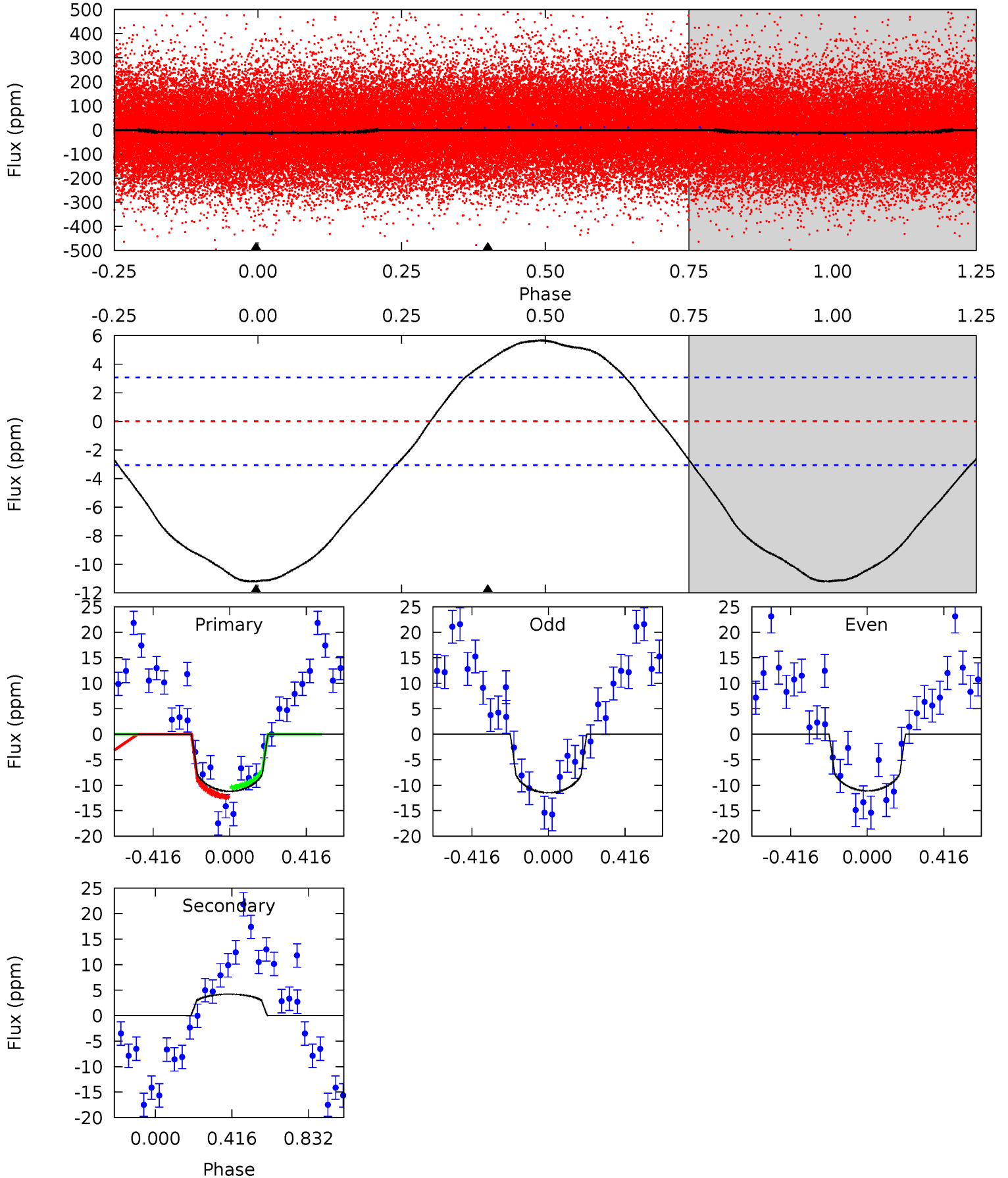
TCE 005731646-01 P= 0.654987 Days $T_0=131.806789$ (BKJD)



DV Model-Shift Uniqueness Test

005731646-01, P = 0.654980 Days, E = 131.171129 Days

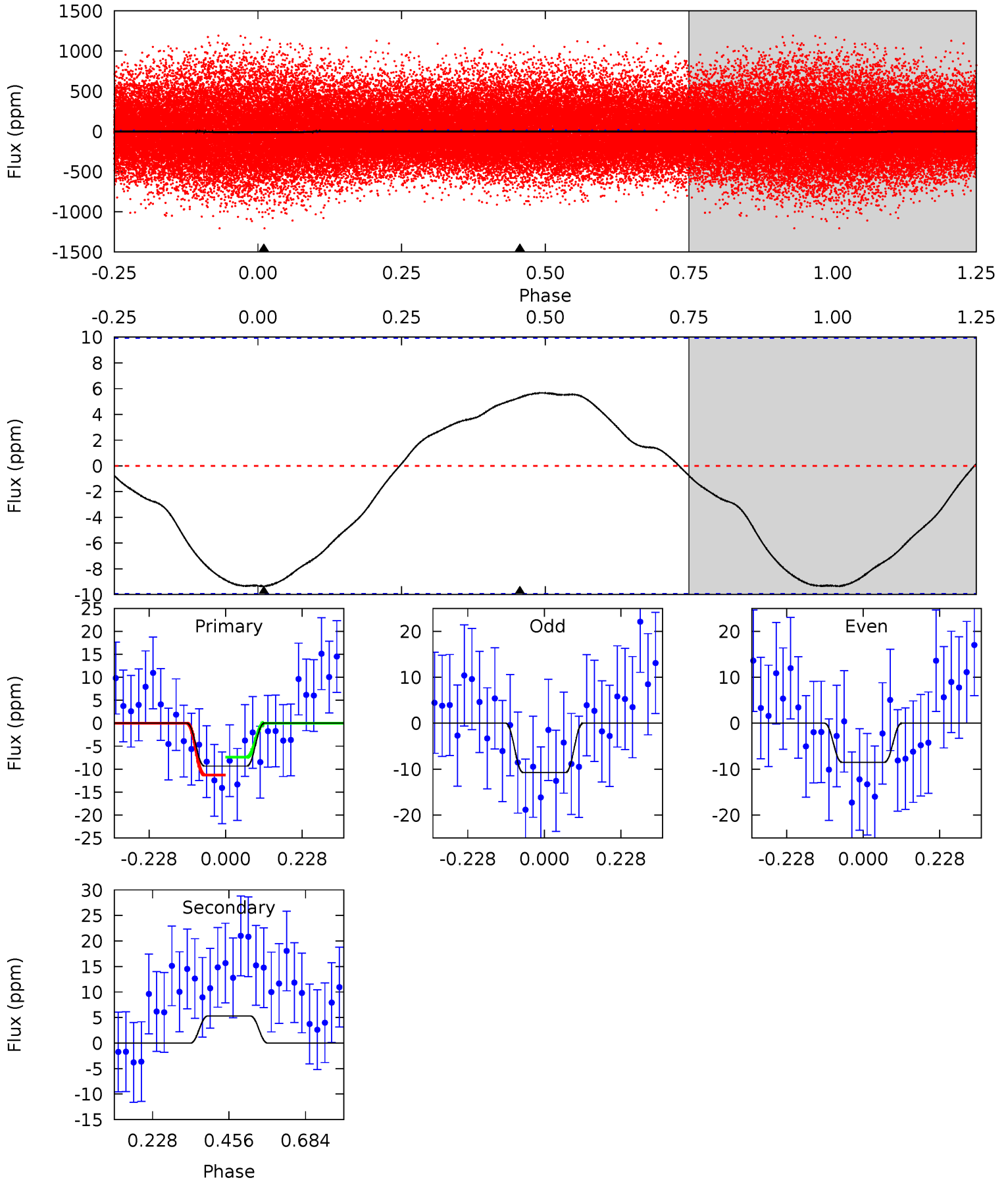
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.5	-5.85	0	0	4.26	0.81	2.11	15.5	15.5	-5.85	-5.85	0.26	0.95	0.34	1.30



Alt Model-Shift Uniqueness Test

005731646-01, P = 0.654987 Days, E = 131.151802 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.12	-2.34	0	0	4.39	1.21	0.49	4.12	4.12	-2.34	-2.34	0.49	0.42	0.38	0.88



Stellar Parameters For KIC 005731646

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9044^{+255}_{-438}	$4.150^{+0.116}_{-0.174}$	$0.070^{+0.200}_{-0.650}$	$2.021^{+0.678}_{-0.452}$	$2.103^{+0.361}_{-0.542}$	$0.359^{+0.245}_{-0.168}$
	+3%/-5%	+3%/-4%	+286%/-929%	+34%/-22%	+17%/-26%	+68%/-47%
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 005731646-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	4 ± 1	$0.73^{+0.46}_{-0.41}$	5776^{+438}_{-400}	-7050^{+1203}_{-4344}	$-1.405^{+0.859}_{-5.815}$
Alt.	5 ± 2	$0.76^{+0.49}_{-0.42}$	5771^{+454}_{-415}	-7272^{+1457}_{-5026}	$-1.699^{+1.186}_{-7.321}$

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

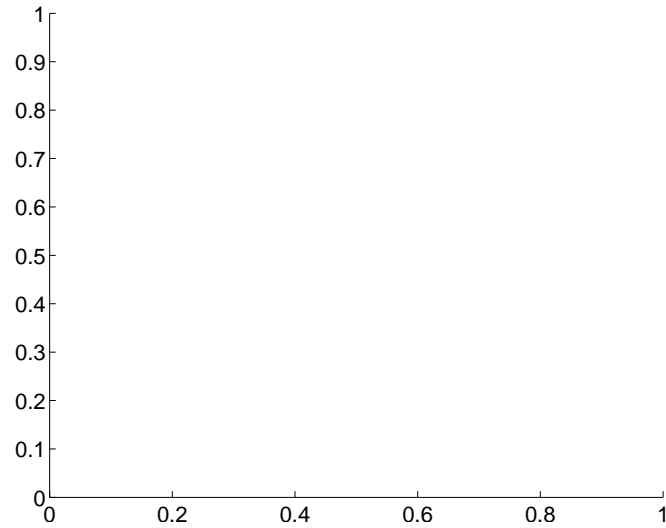
Supplemental centroid analysis for 005731646-01. Kepler magnitude: 12.96. Transit SNR 9.61

There are 0 quarters with good PRF difference image offsets

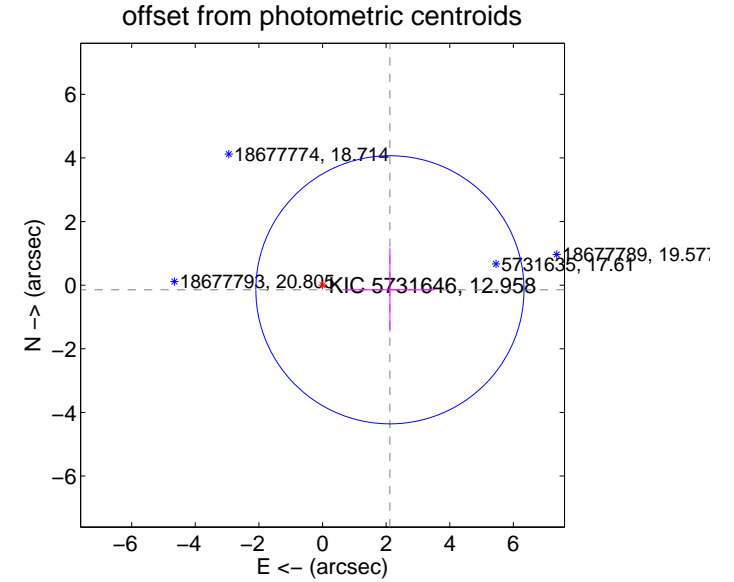
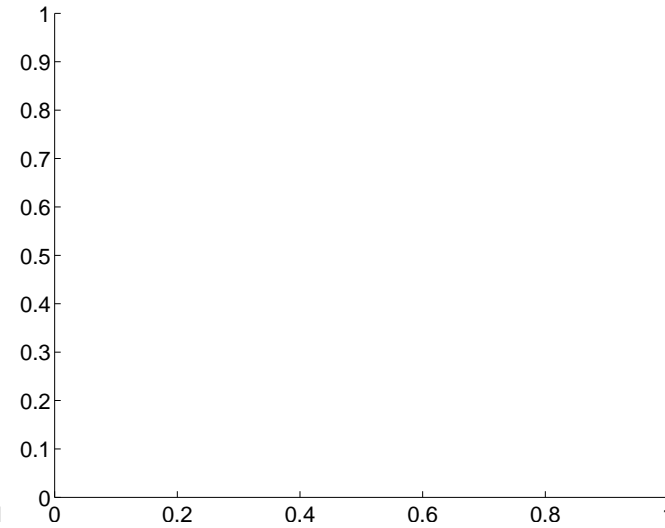
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	2.12 ± 1.40	1.51	-2.12 ± 1.41	-0.15 ± 1.32

There is no PRF-fit offset from OOT-fit

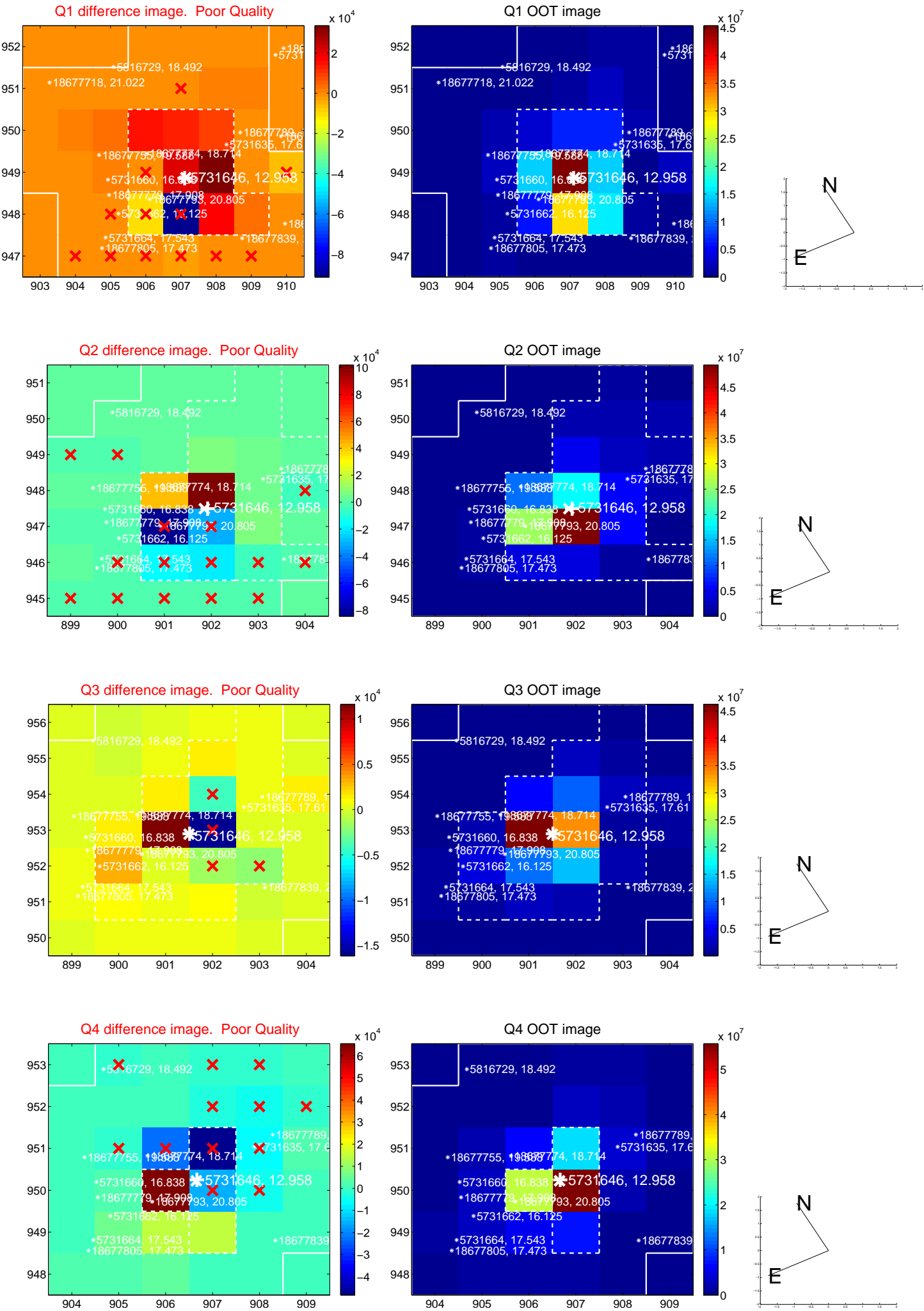


There is no PRF-fit offset from KIC

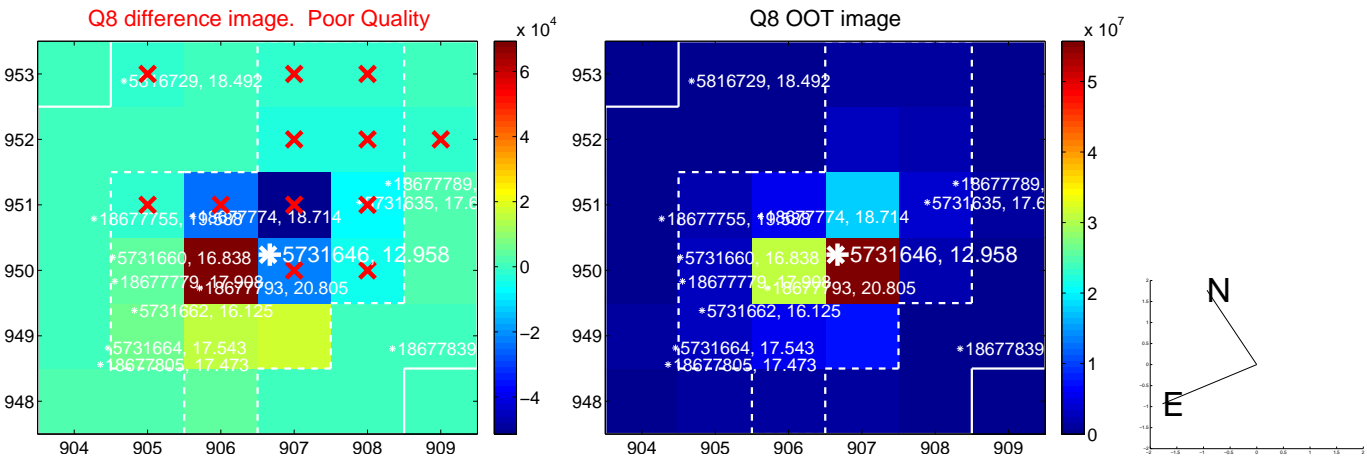
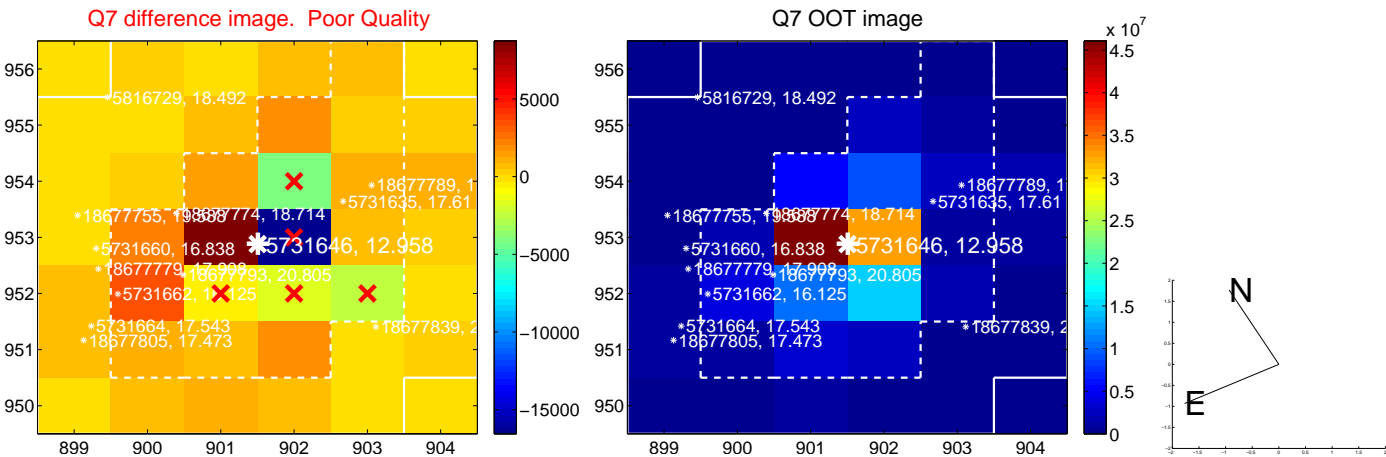
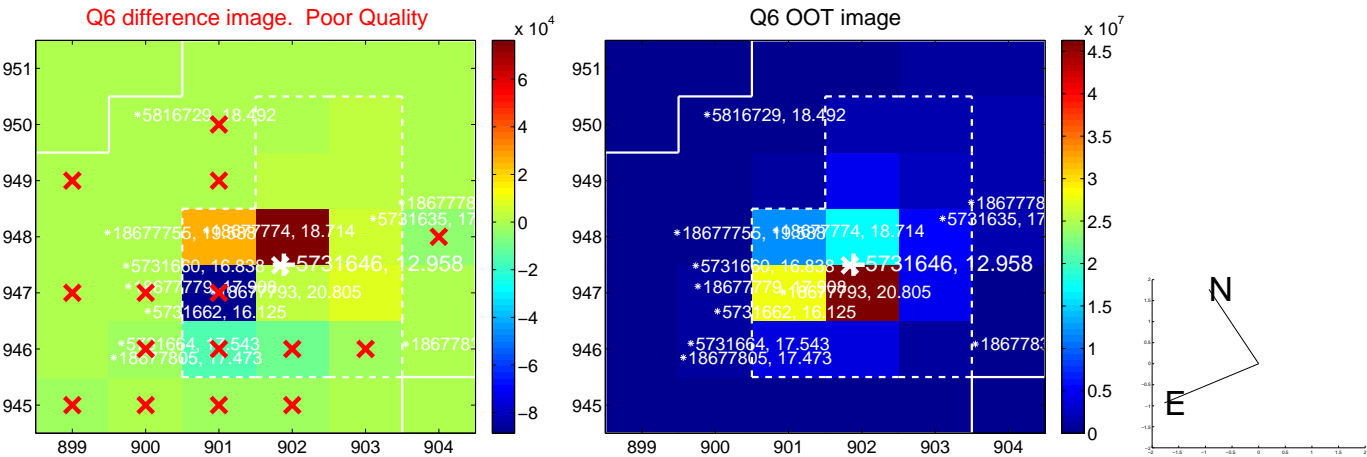
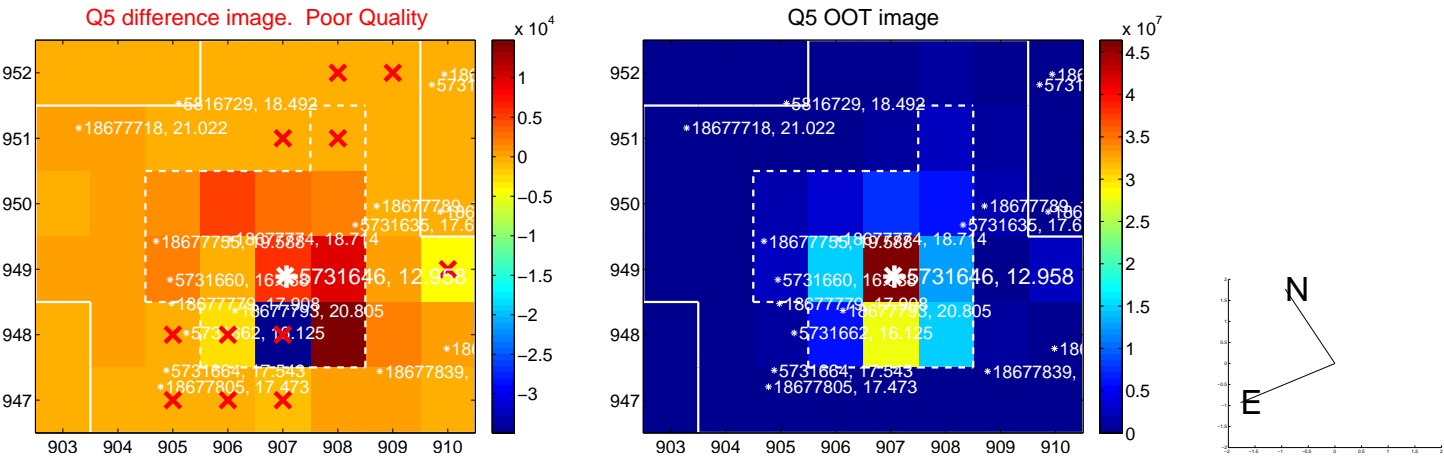


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

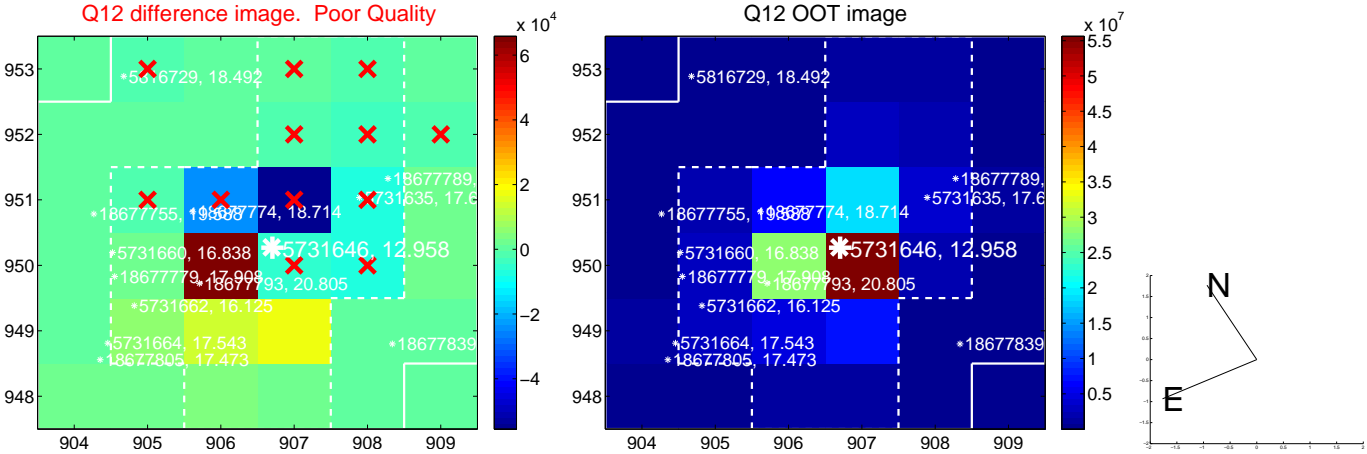
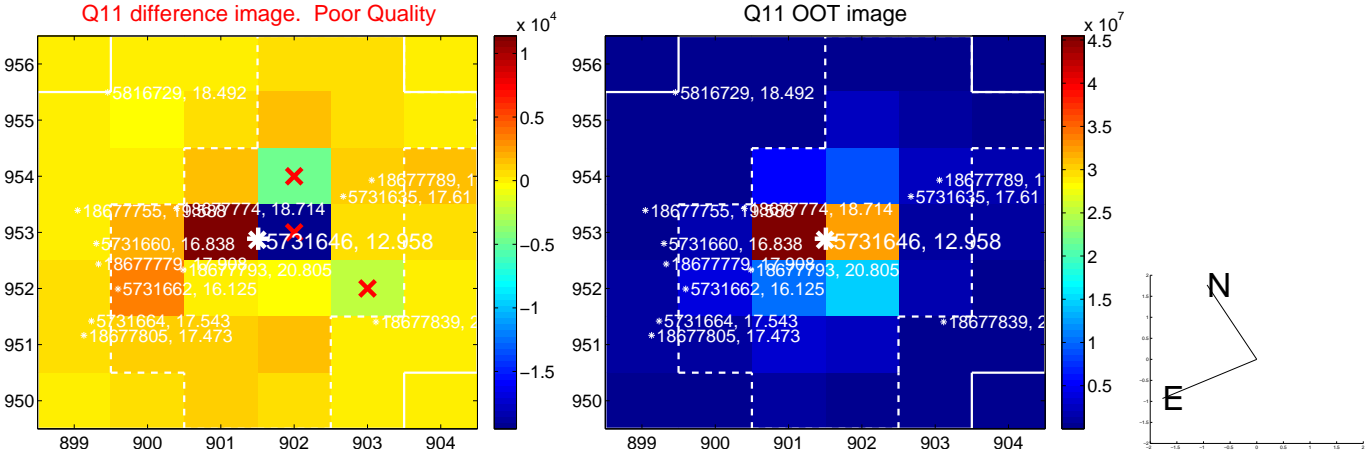
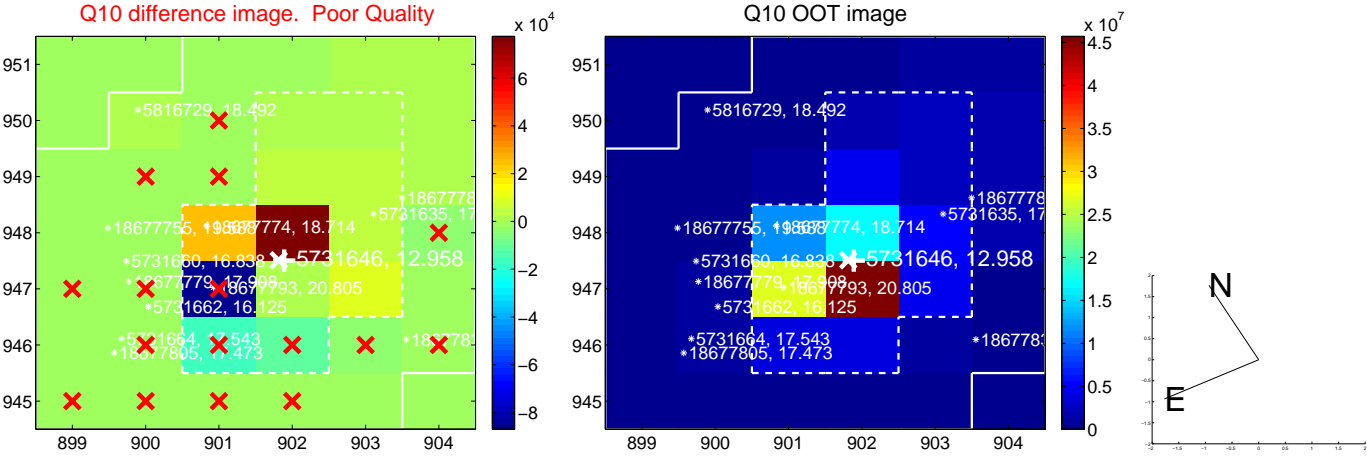
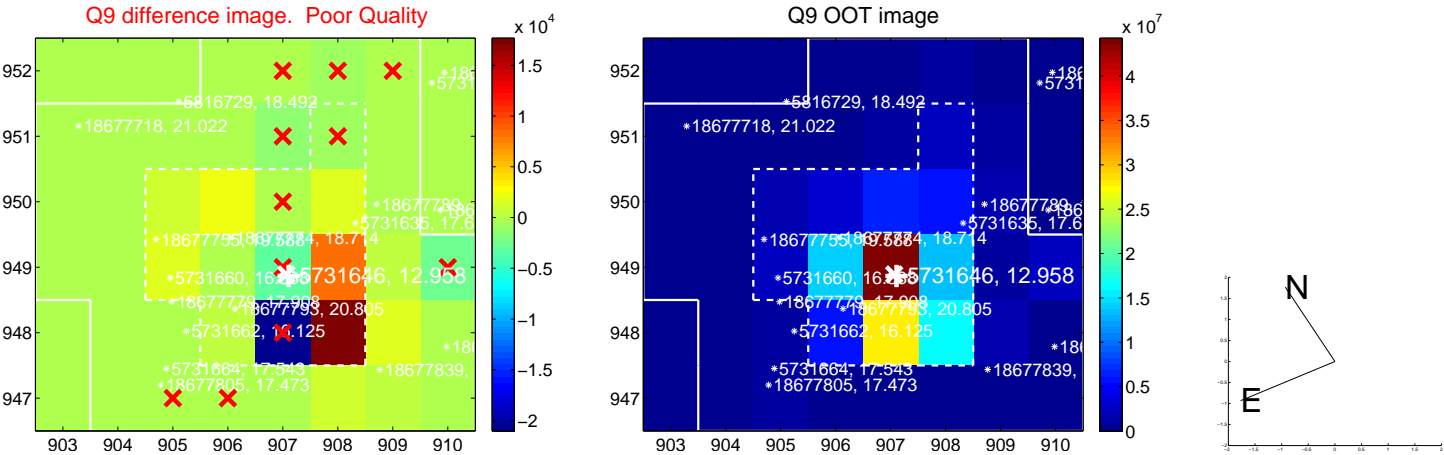
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



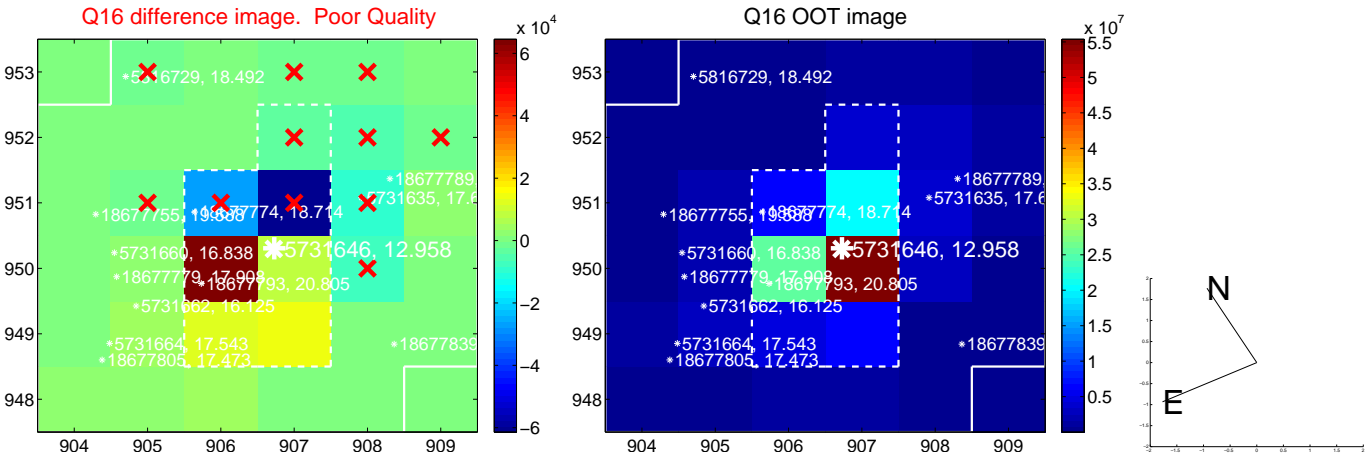
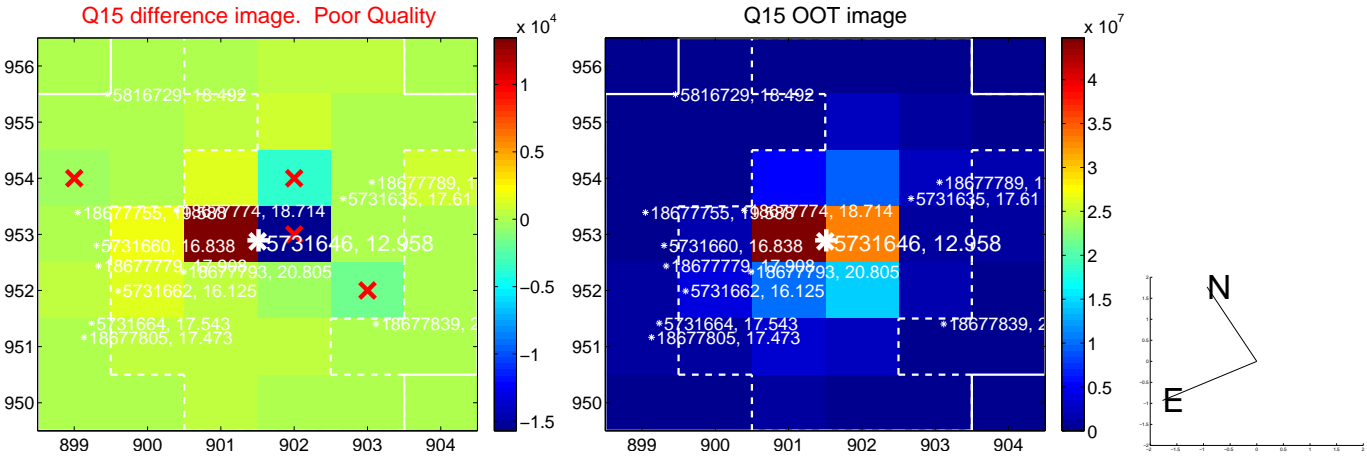
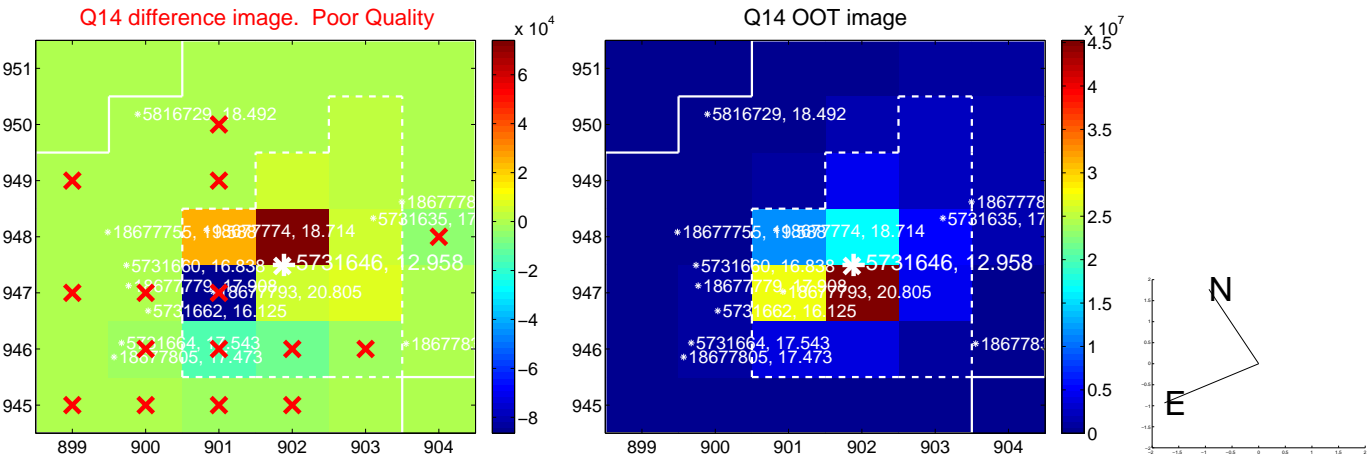
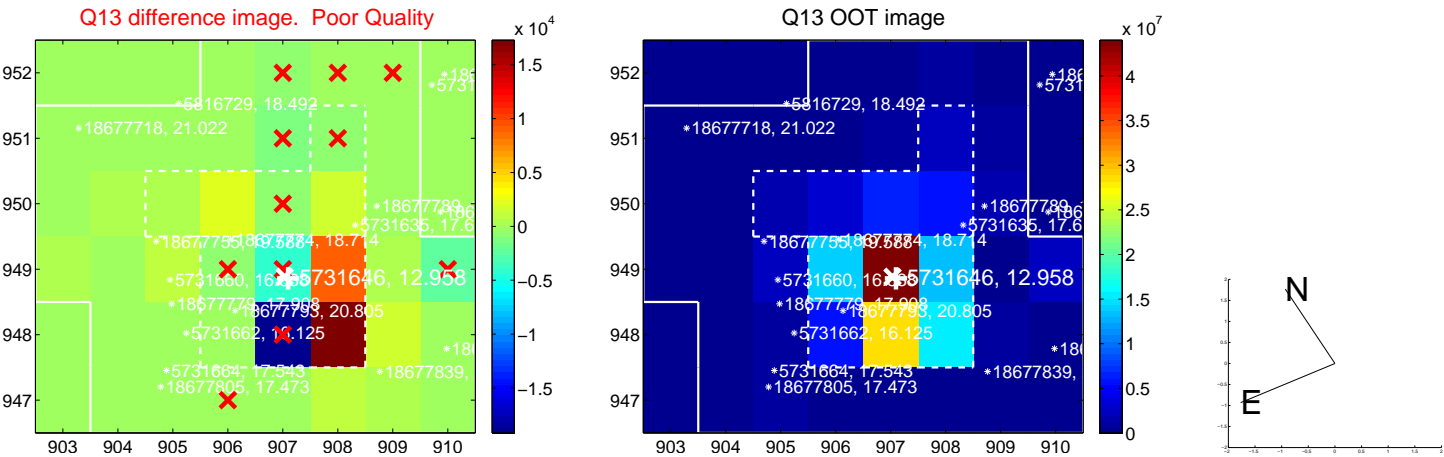
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



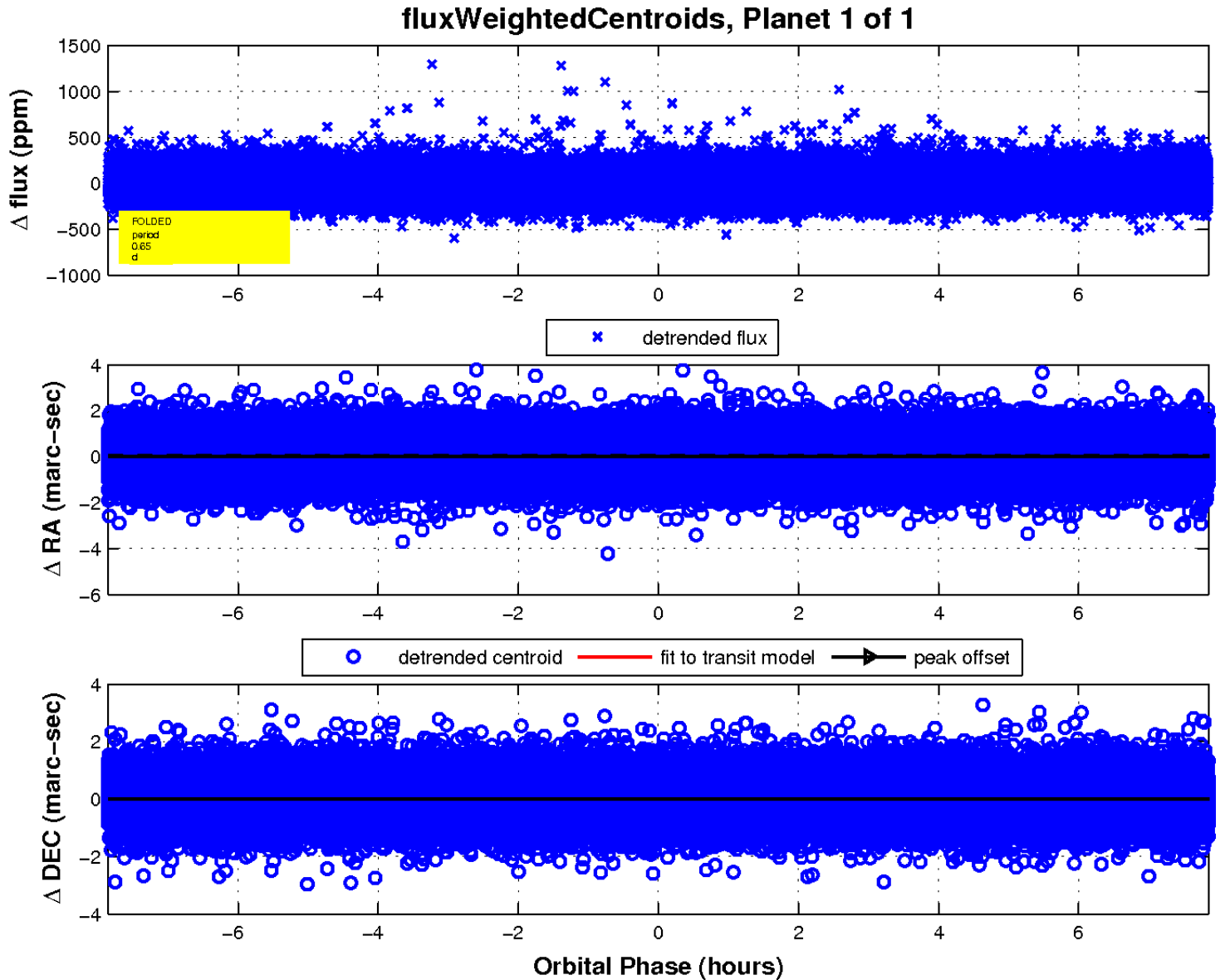
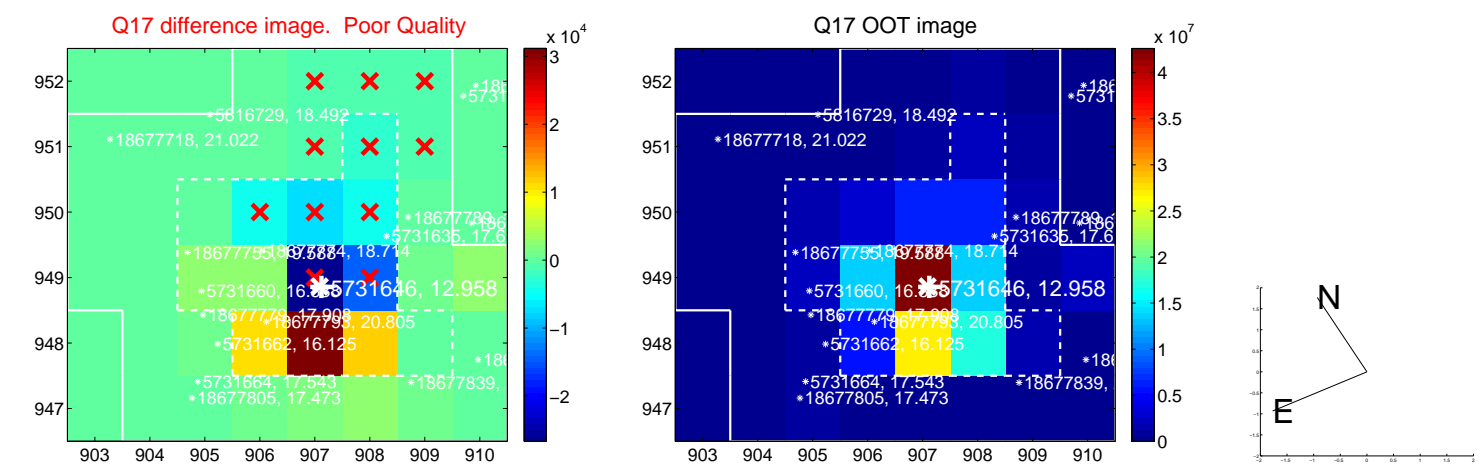
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

