

KIC 007031175

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})
007031175-01	OBS	No	0.566843	132.149161	0.0	4.422	8.9	0.0	0.99	5951	0.01	6228.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007031175-01	OBS	FP	0.00	1	0	0	1	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—CENT_FEW_DIFFS—EPHEM_MATCH

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.

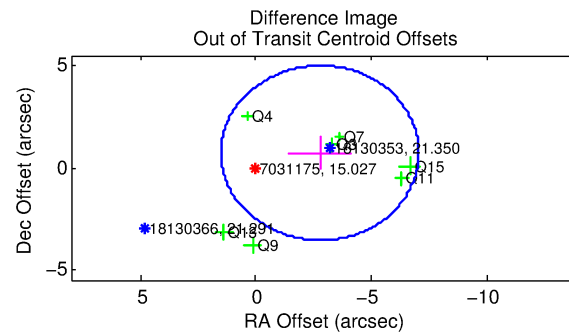
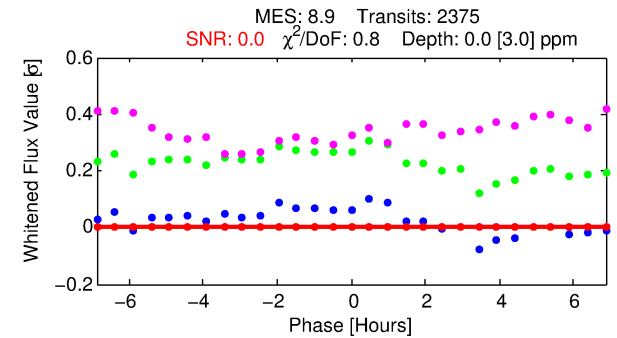
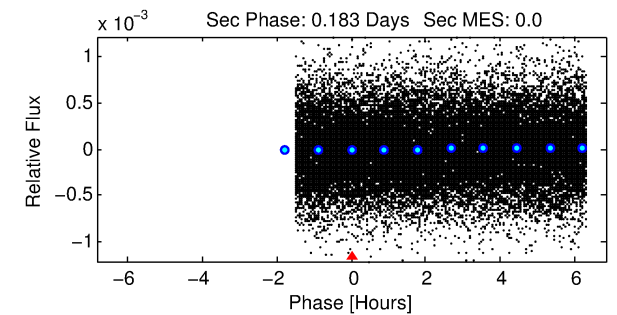
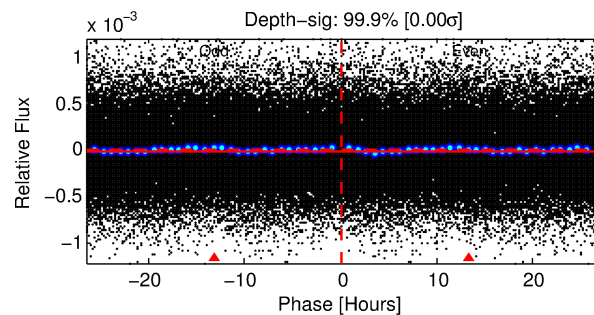
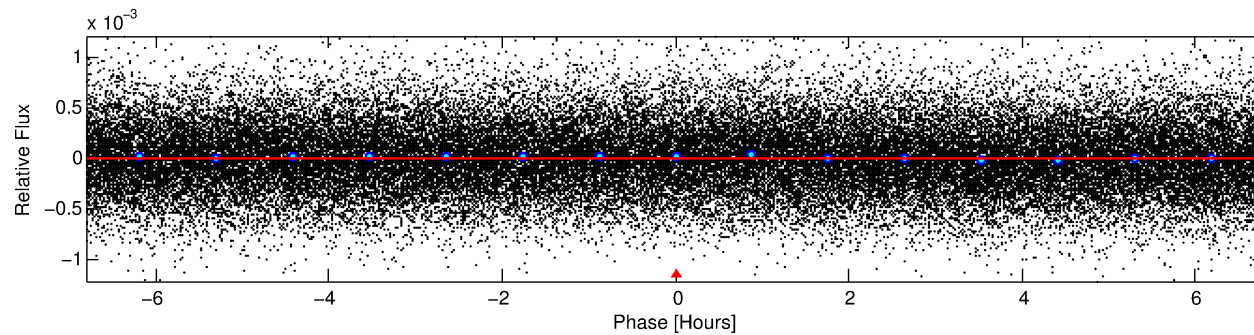
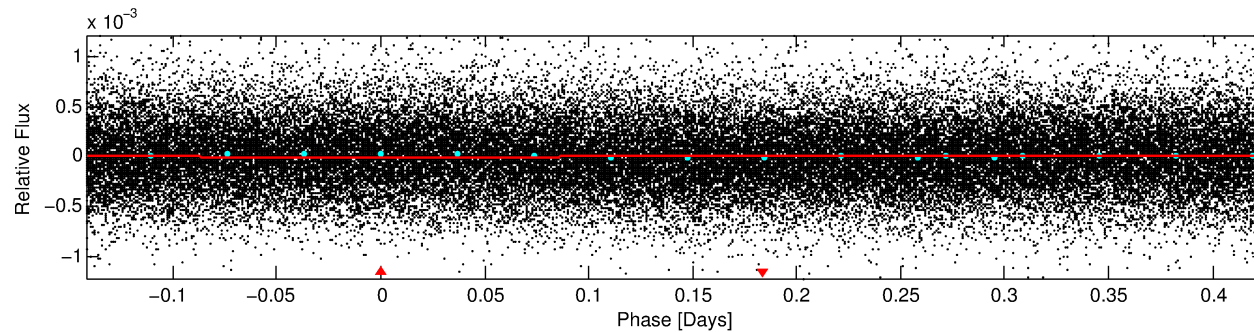
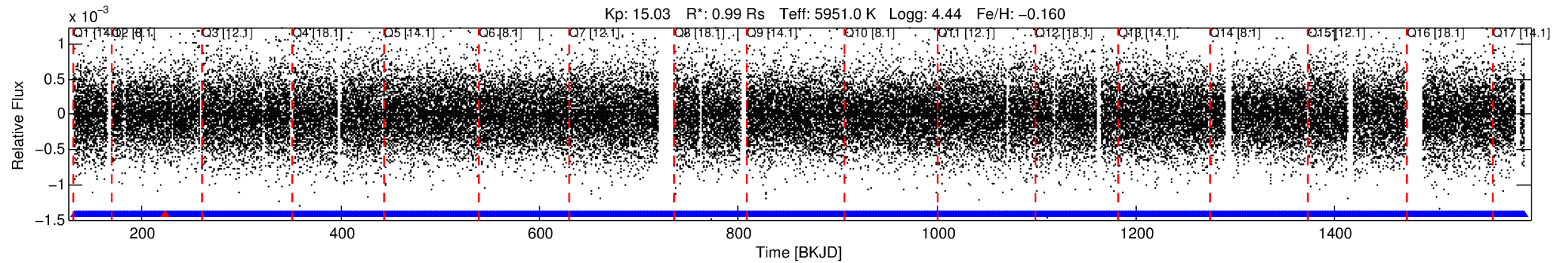
Ephemeris Match Information For 007031175-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist ($''$)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
007031175-01	7031175	RR-Lyr-pri	7198959	1:1	1353.8	70	-334	7.86	15.02	623300.00	Direct-PRF	0	3.00	2.57

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7031175 Candidate: 1 of 1 Period: 0.567 d



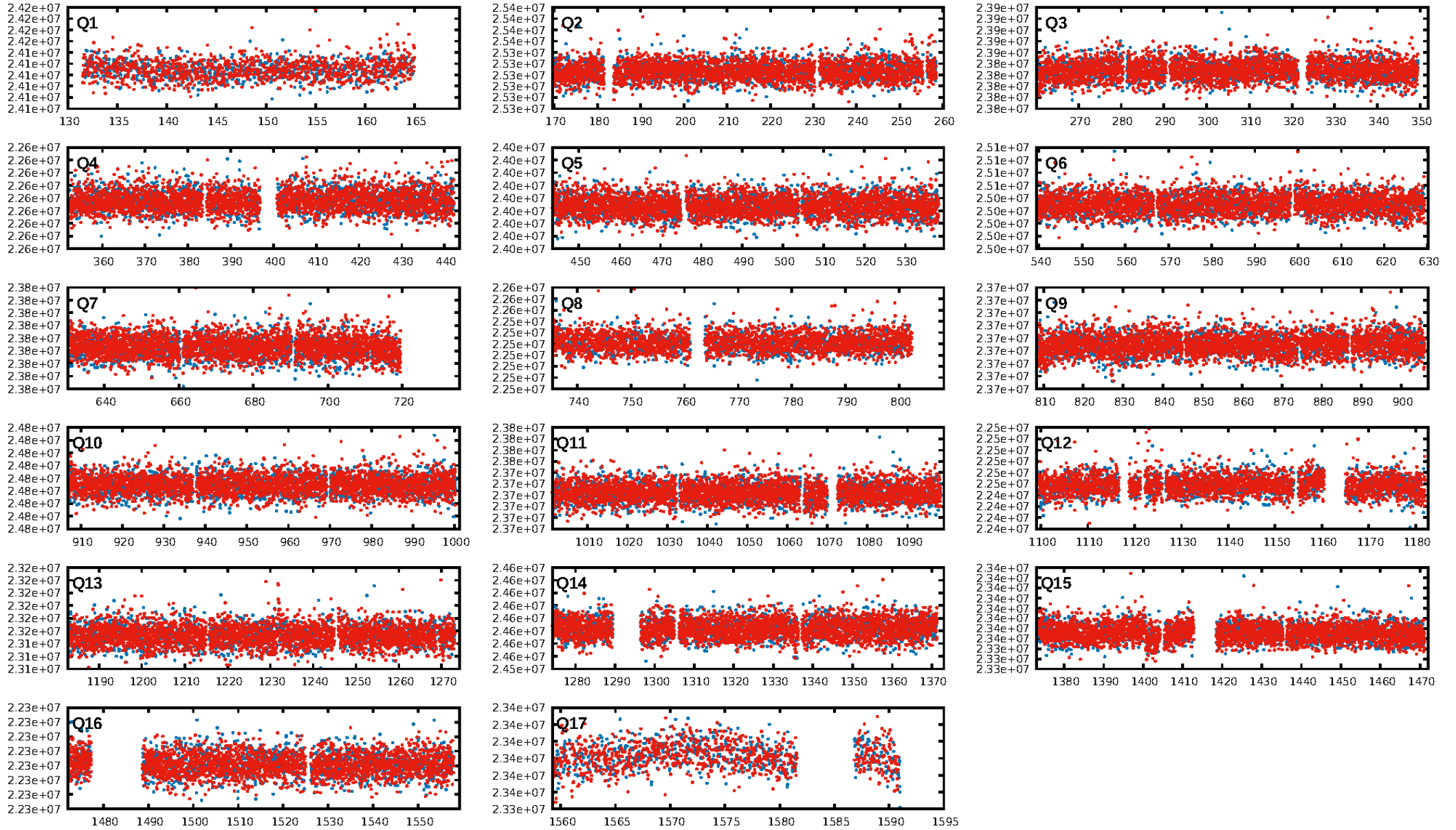
DV Fit Results:

Period = 0.56684 [0.05945] d
Epoch = 132.1492 [28.7040] BKJD
Rp/R* = 0.0001 [0.0235]
a/R* = 1.06 [34.37]
b = 0.81 [150.11]
Seff = 6228.65 [2556.20]
Teff = 2265 [232] K
Rp = 0.01 [2.53] Re
a = 0.0133 [0.0035] AU
Ag = N/A
Teffp = N/A

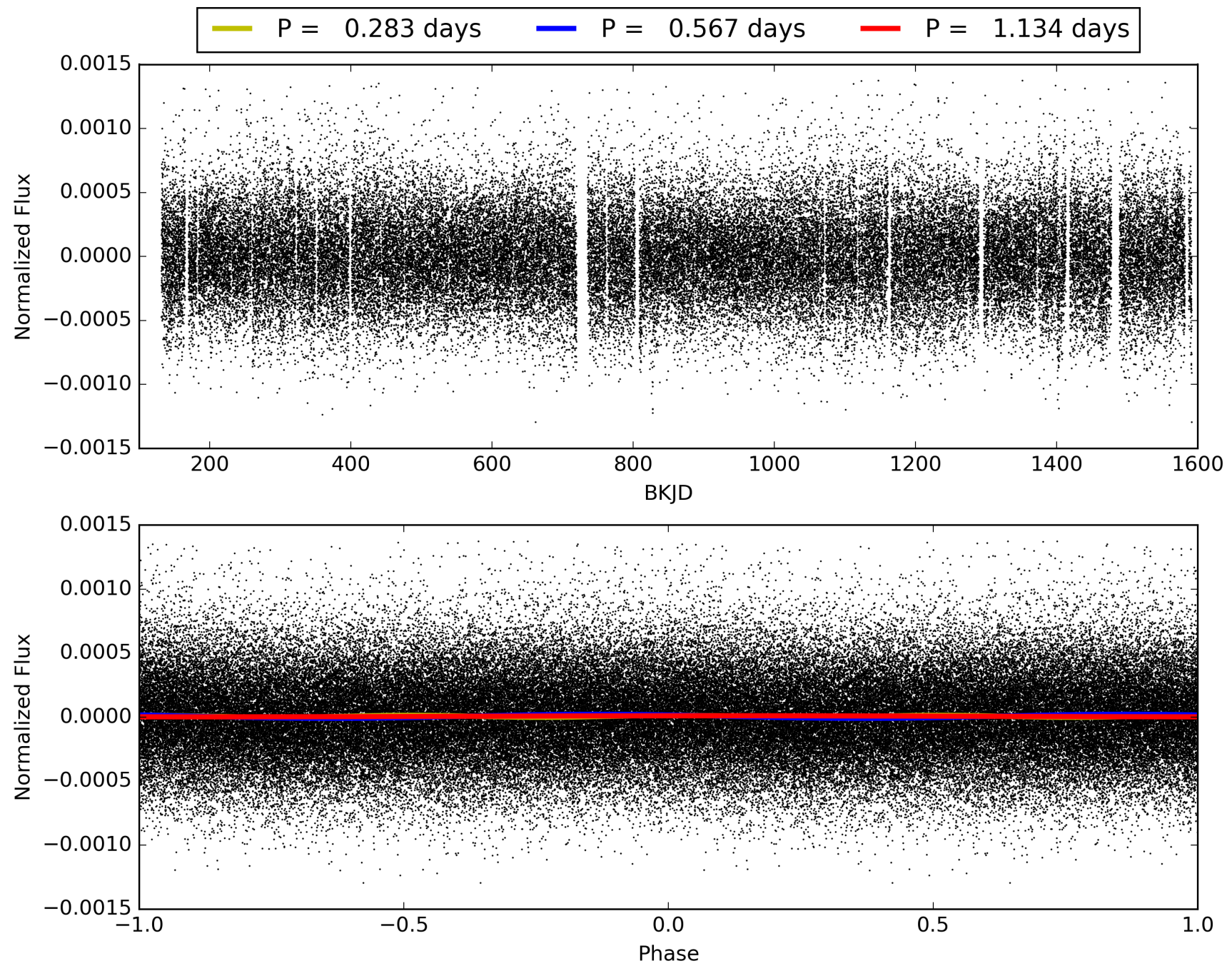
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2267/2268]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 2.851 arcsec [2.00 σ]
KicOffset-rm: 2.898 arcsec [2.11 σ]
OotOffset-st: 0/4/1/2 [7]
KicOffset-st: 0/4/1/2 [7]
DiffImageQuality-fgm: 0.00 [0/7]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007031175-01, PDC Light Curves

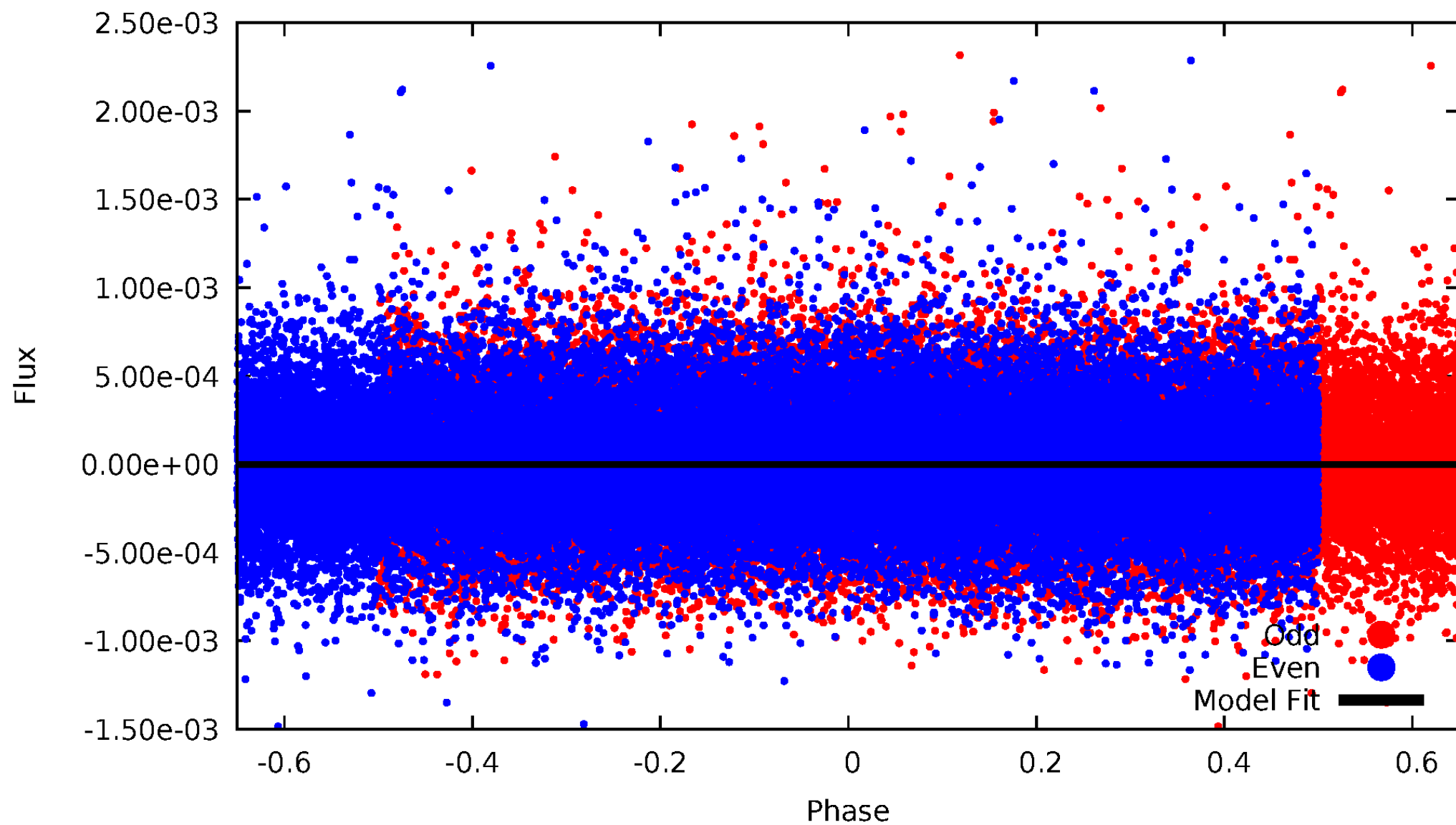


TCE 007031175-01



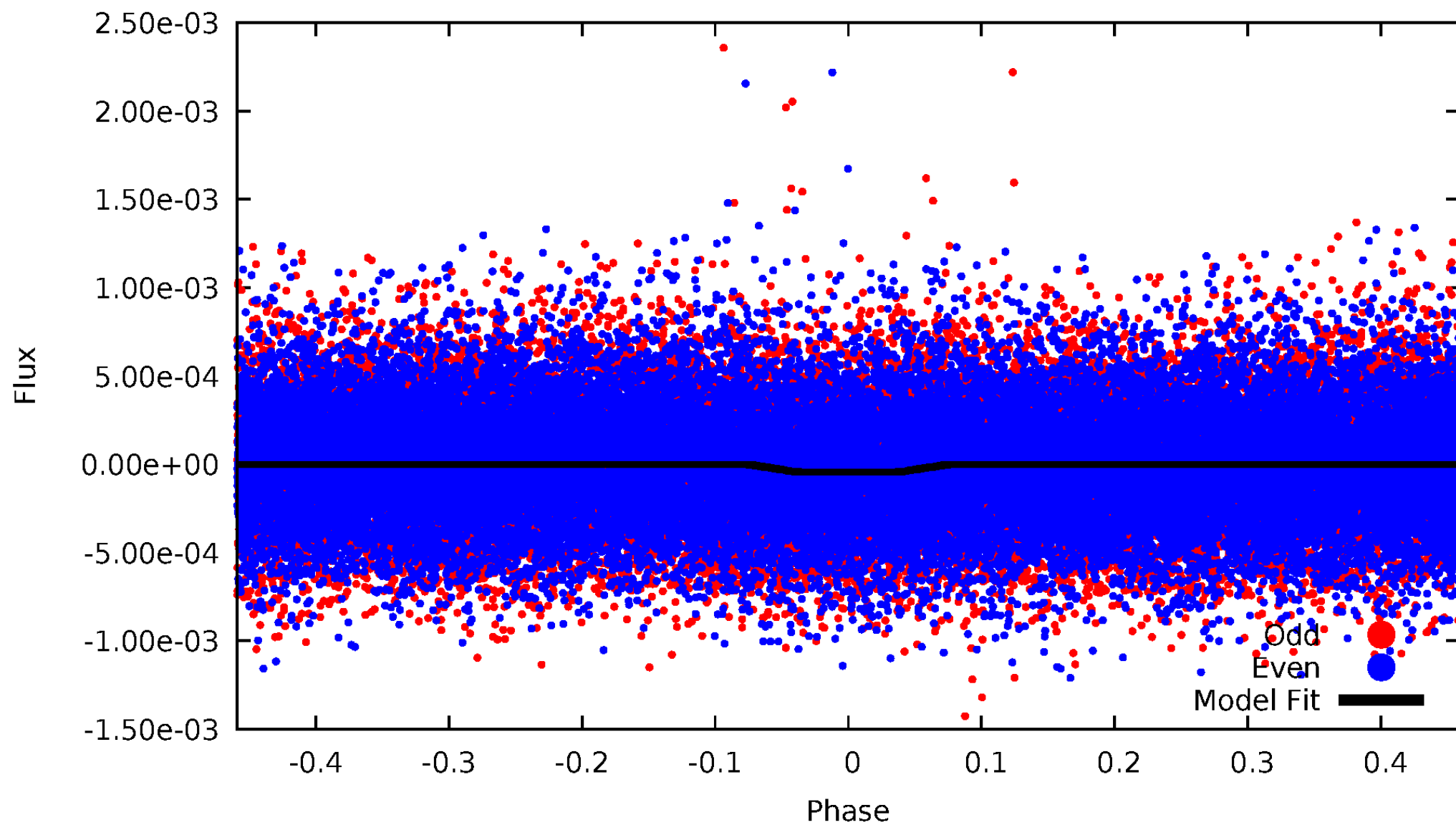
DV Odd/Even

TCE 007031175-01



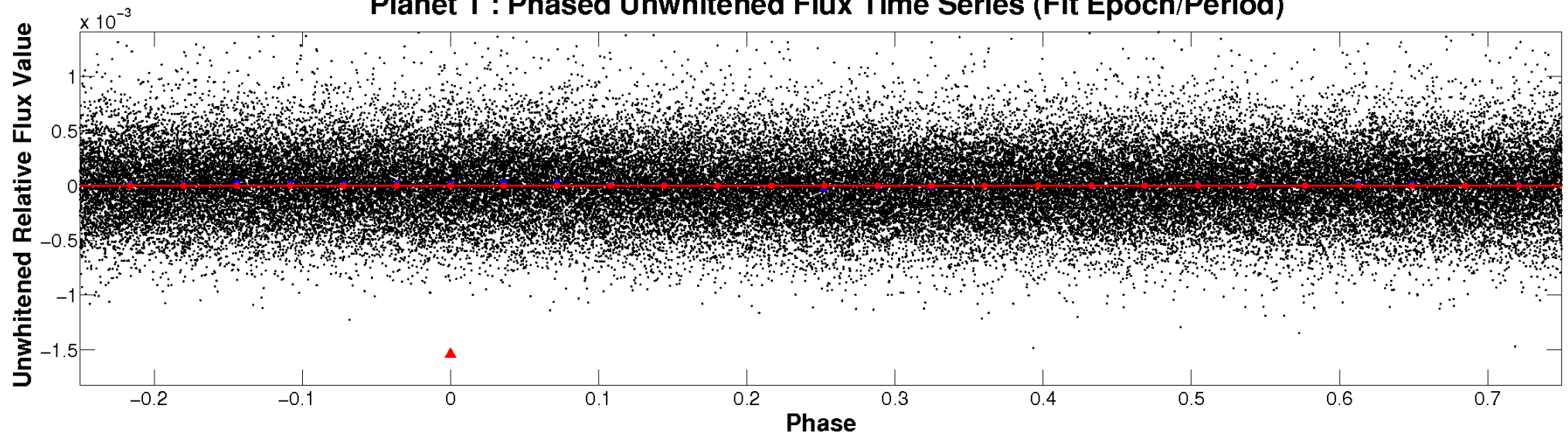
ALT Odd/Even

TCE 007031175-01

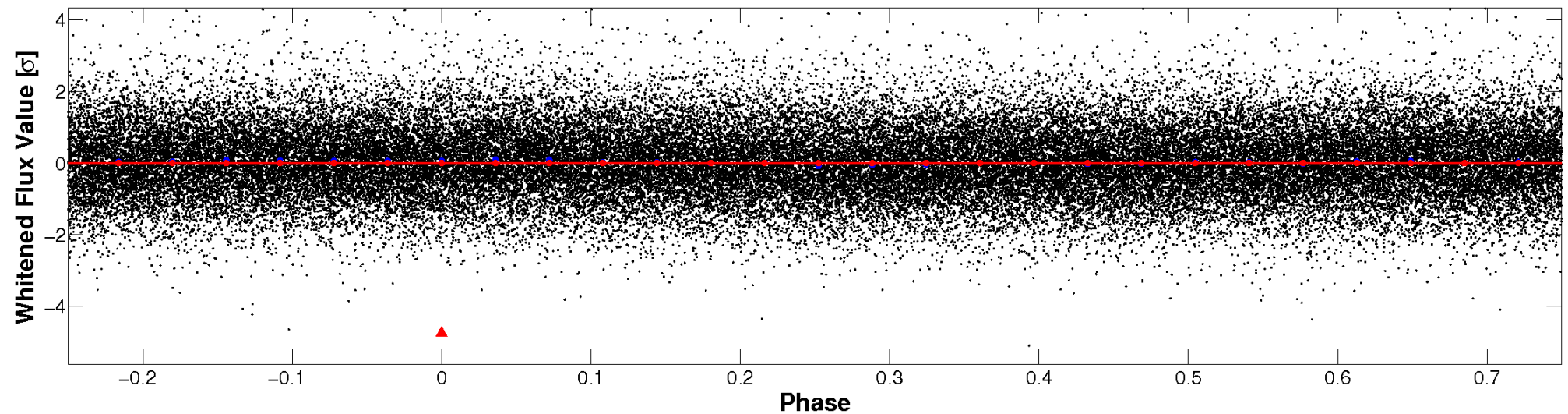


Non-Whitened Vs. Whitened Light Curve

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

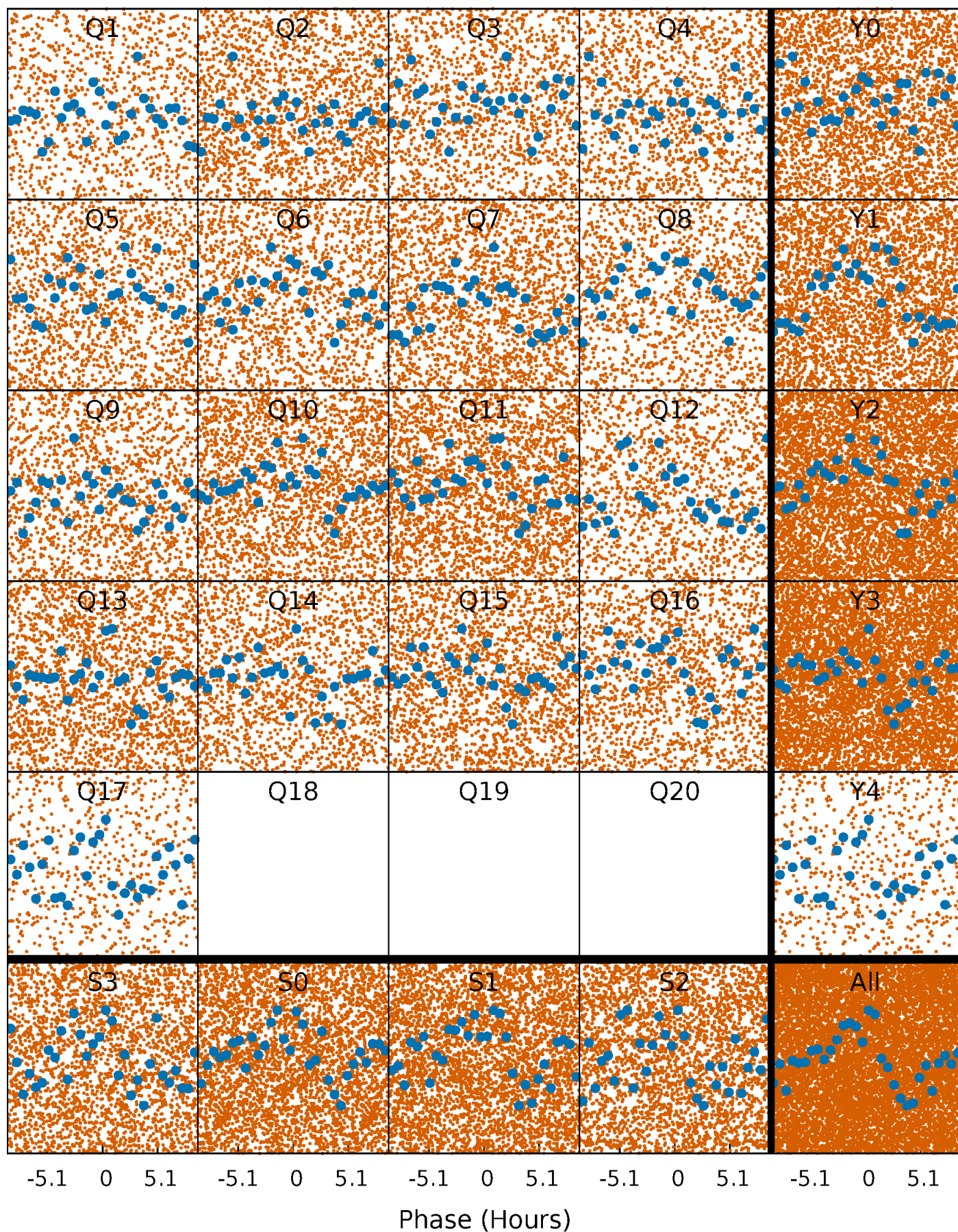


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



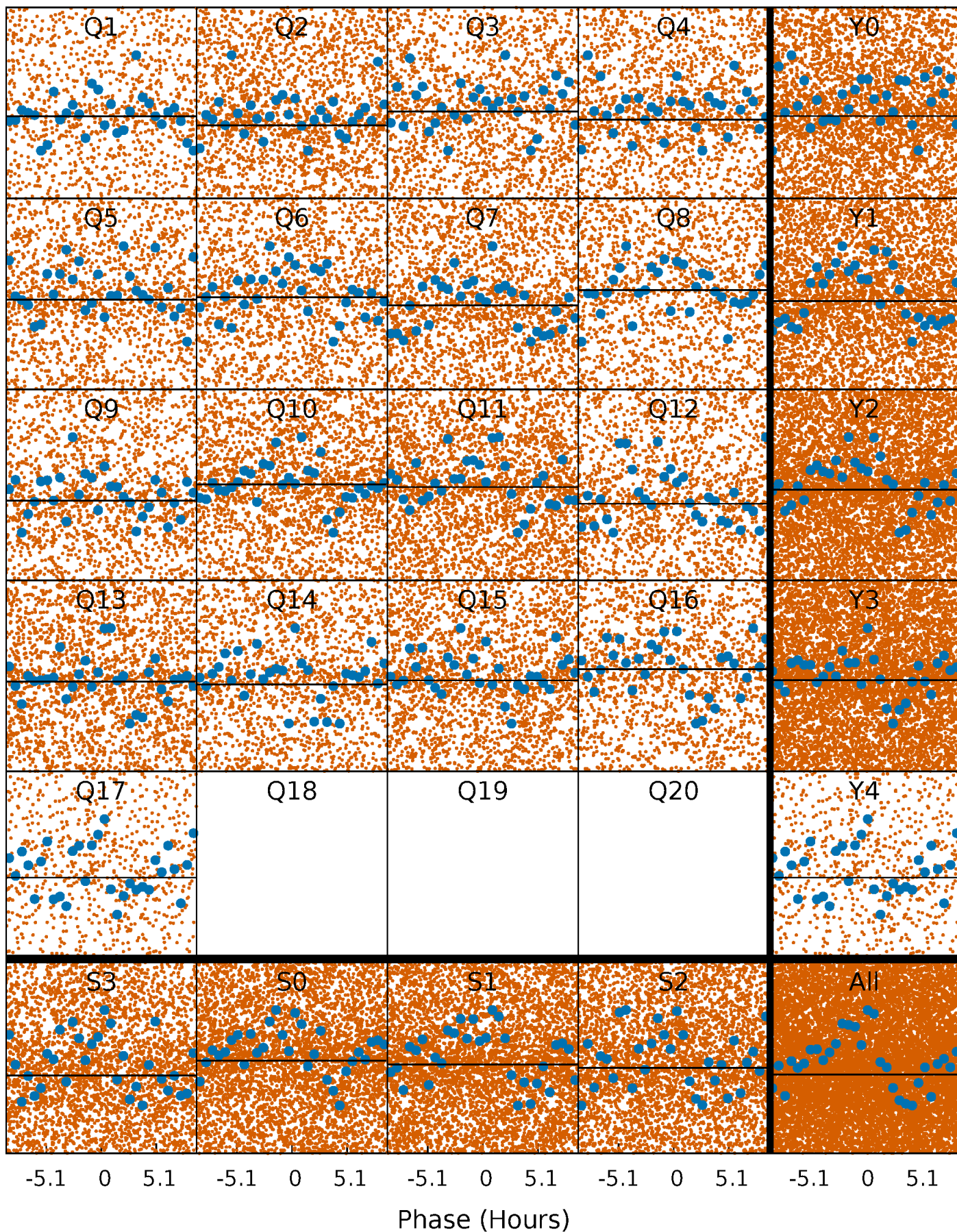
PDC Quarter-Phased Transit Curves

TCE 007031175-01 P= 0.566843 Days $T_0=132.149161$ (BKJD)



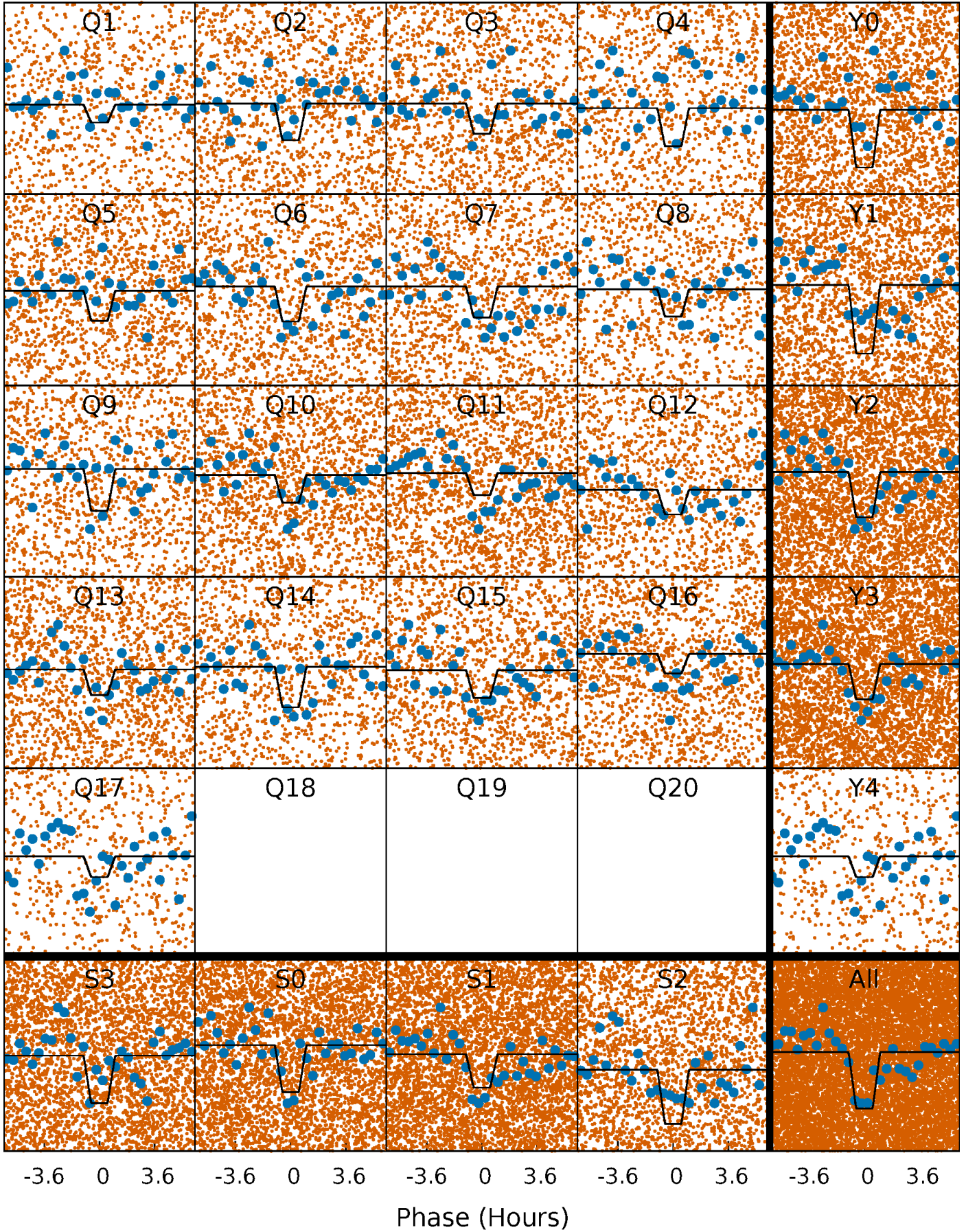
DV Quarter-Phased Transit Curves

TCE 007031175-01 P= 0.566843 Days $T_0=132.149161$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

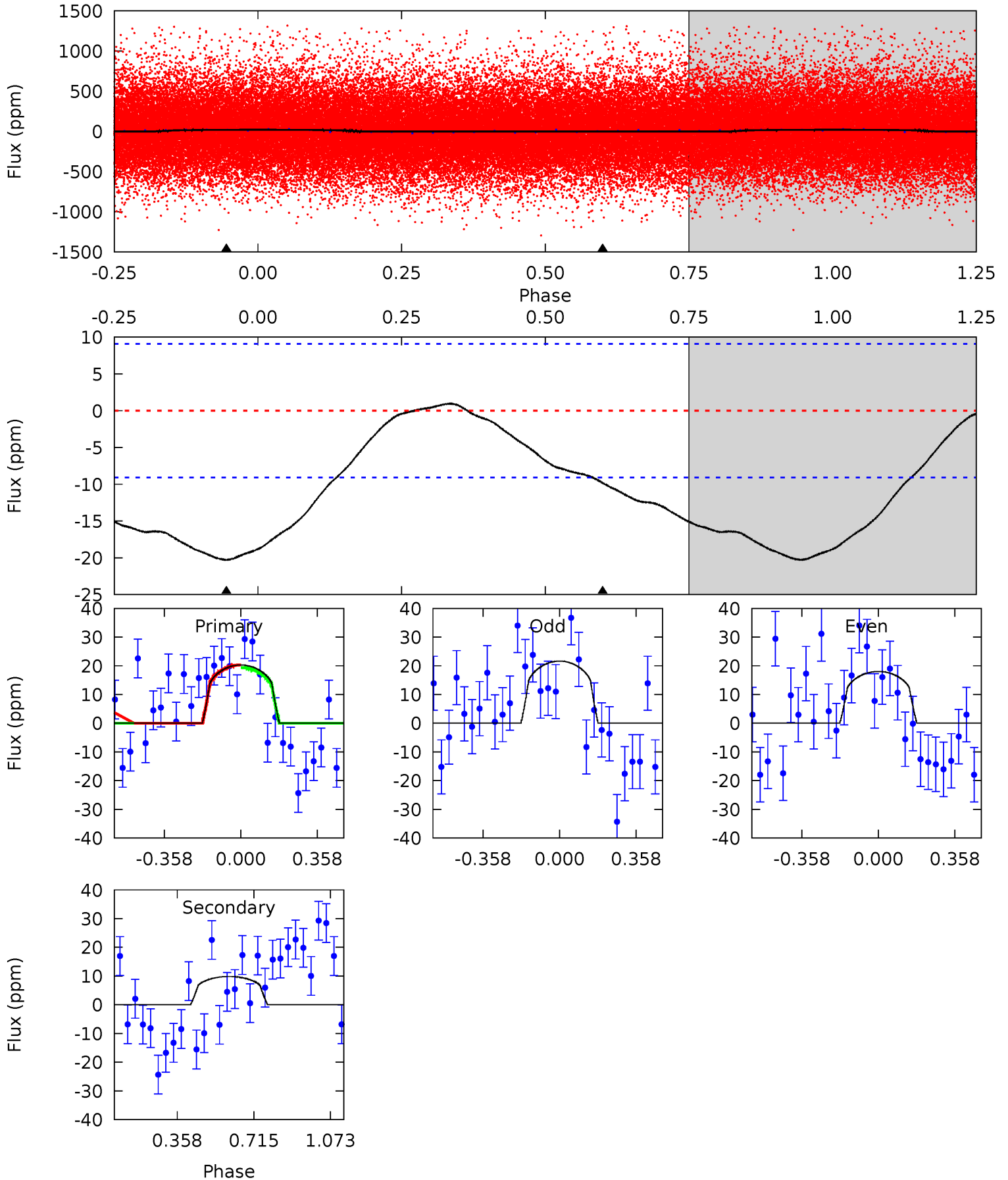
TCE 007031175-01 P= 0.566795 Days $T_0=131.810266$ (BKJD)



DV Model-Shift Uniqueness Test

007031175-01, P = 0.566843 Days, E = 131.015475 Days

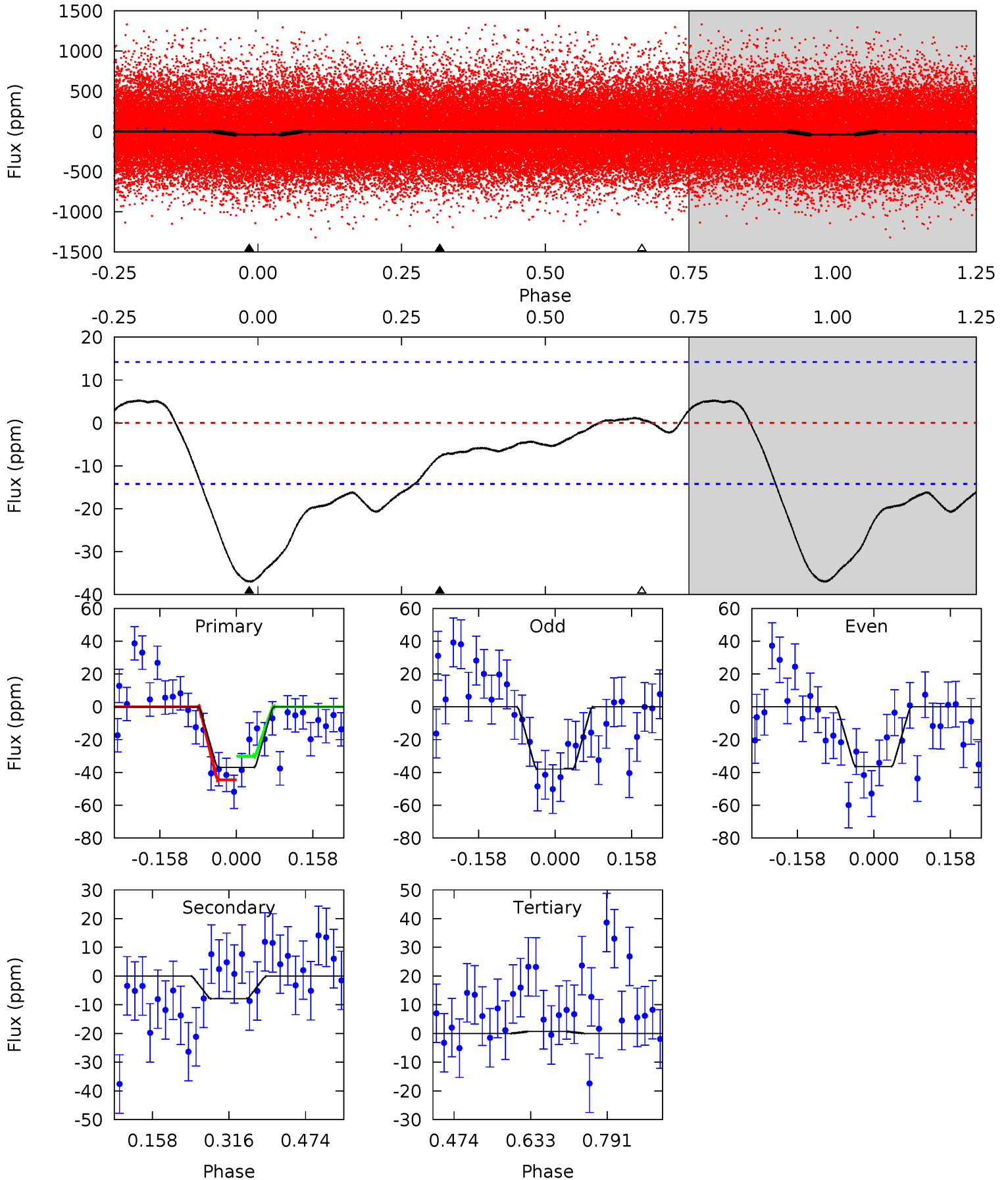
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.58	4.66	0	0	4.29	0.92	0.31	9.58	9.58	4.66	4.66	0.86	1.25	0.05	0.22



Alt Model-Shift Uniqueness Test

007031175-01, P = 0.566795 Days, E = 131.243471 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	2.48	-0.21	0	4.47	1.41	1.45	11.9	11.6	2.69	2.48	0.24	0.97	0.12	2.26



Stellar Parameters For KIC 007031175

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5951^{+161}_{-197}	$4.436^{+0.084}_{-0.196}$	$-0.160^{+0.300}_{-0.300}$	$0.990^{+0.300}_{-0.129}$	$0.976^{+0.132}_{-0.119}$	$1.414^{+0.523}_{-0.695}$
	+3%/-3%	+2%/-4%	+188%/-188%	+30%/-13%	+14%/-12%	+37%/-49%
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 007031175-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-10 ± 2	$1.81^{+1.82}_{-1.31}$	3212^{+240}_{-198}	-2265^{+7296}_{-853}	$0.280^{+3.434}_{-0.216}$
Alt.	-8 ± 3	$2.13^{+1.96}_{-1.42}$	3222^{+275}_{-206}	-2887^{+6879}_{-317}	$0.156^{+1.459}_{-0.116}$

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 $A_{\text{obs}} \gg 1.0$

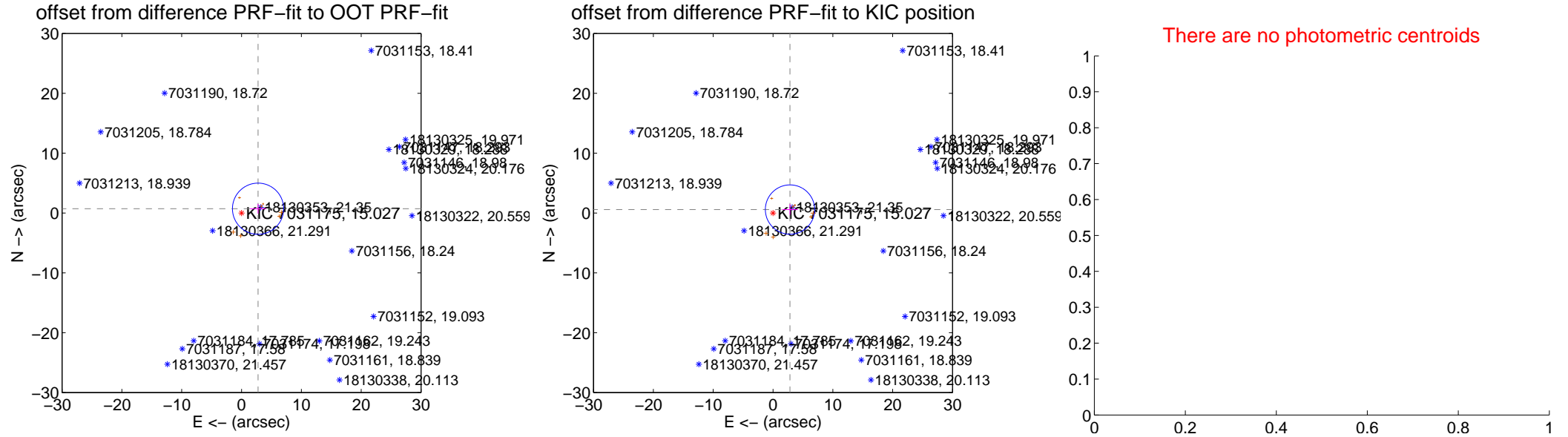
DV Centroid Data

Supplemental centroid analysis for 007031175-01. Kepler magnitude: 15.03. Transit SNR 0.00

There are 0 quarters with good PRF difference image offsets

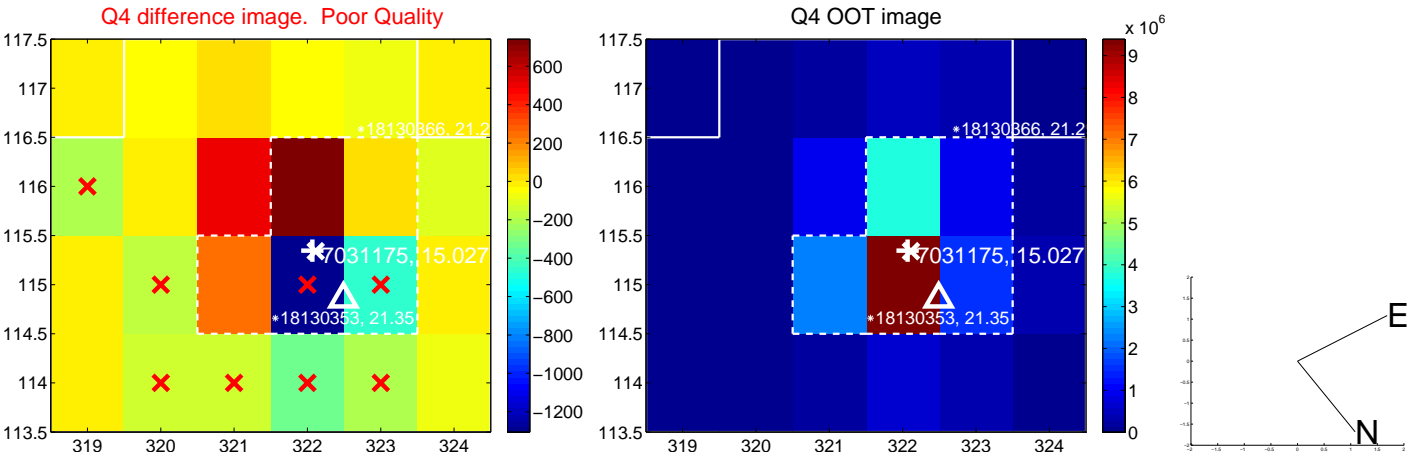
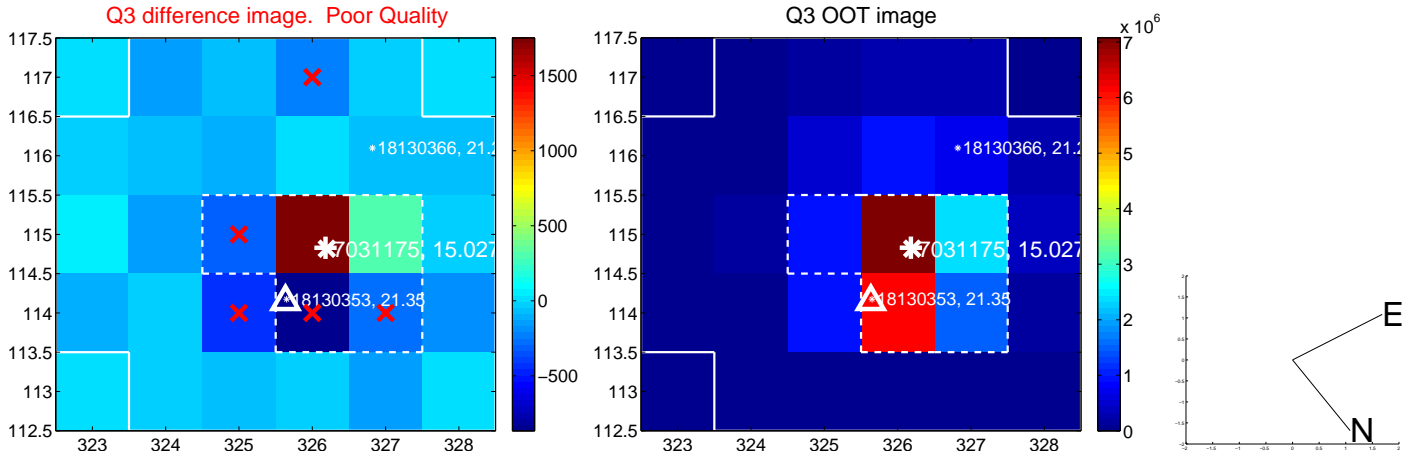
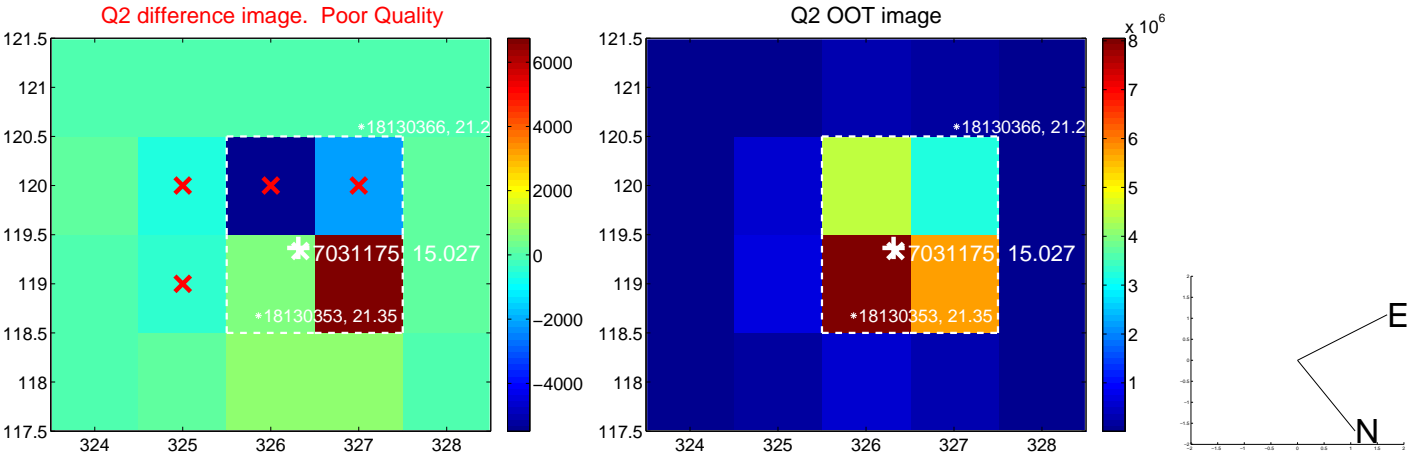
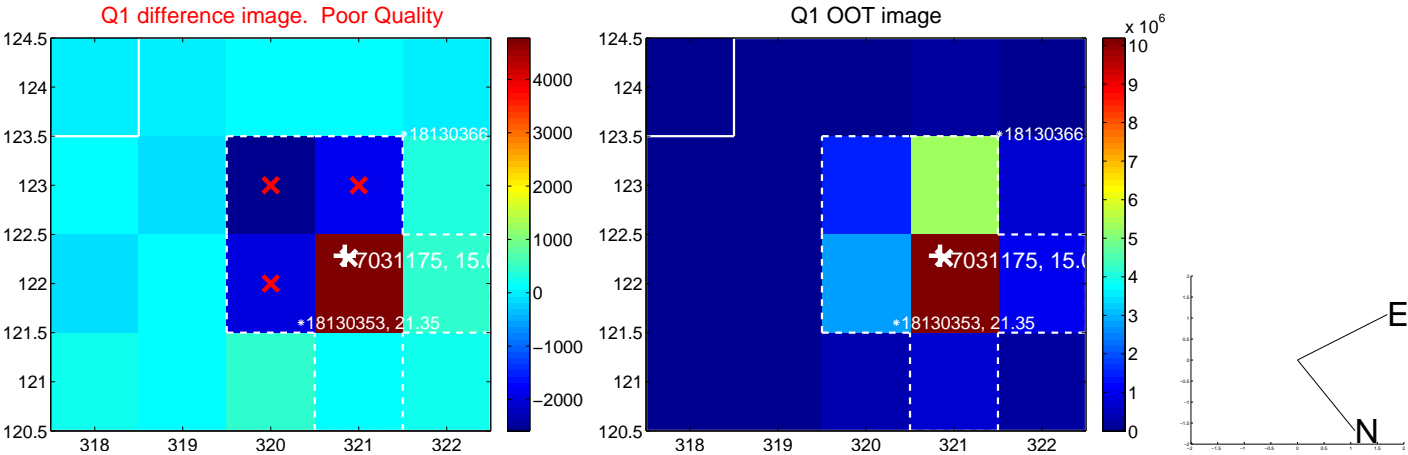
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.851 ± 1.426	2.00	-2.760 ± 1.359	0.718 ± 0.804
PRF-fit source offset from KIC position	2.898 ± 1.373	2.11	-2.839 ± 1.311	0.579 ± 0.899
photometric centroid source offset	—	—	—	—

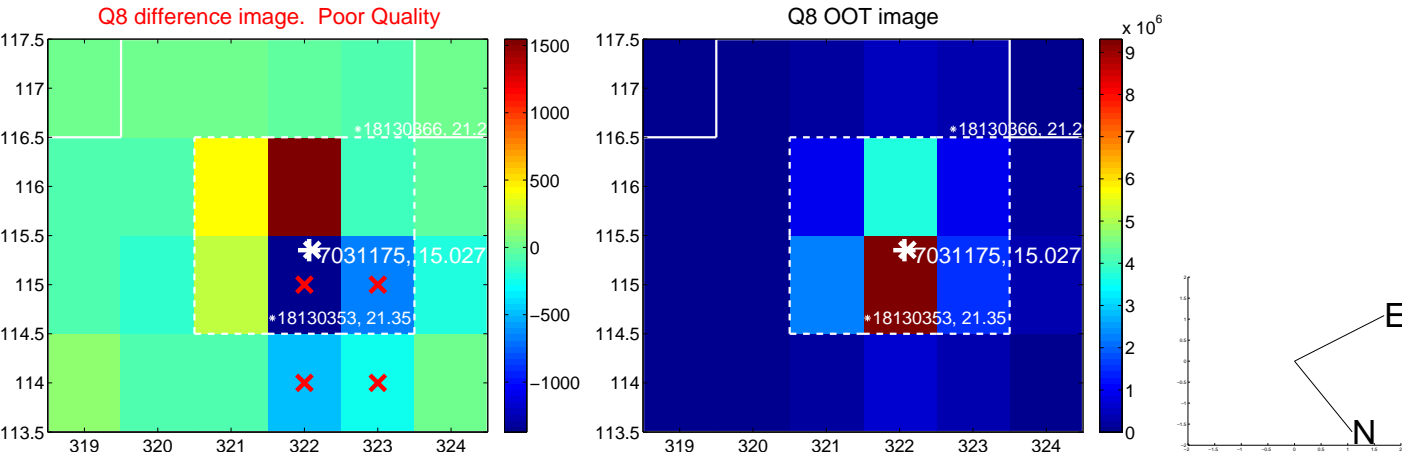
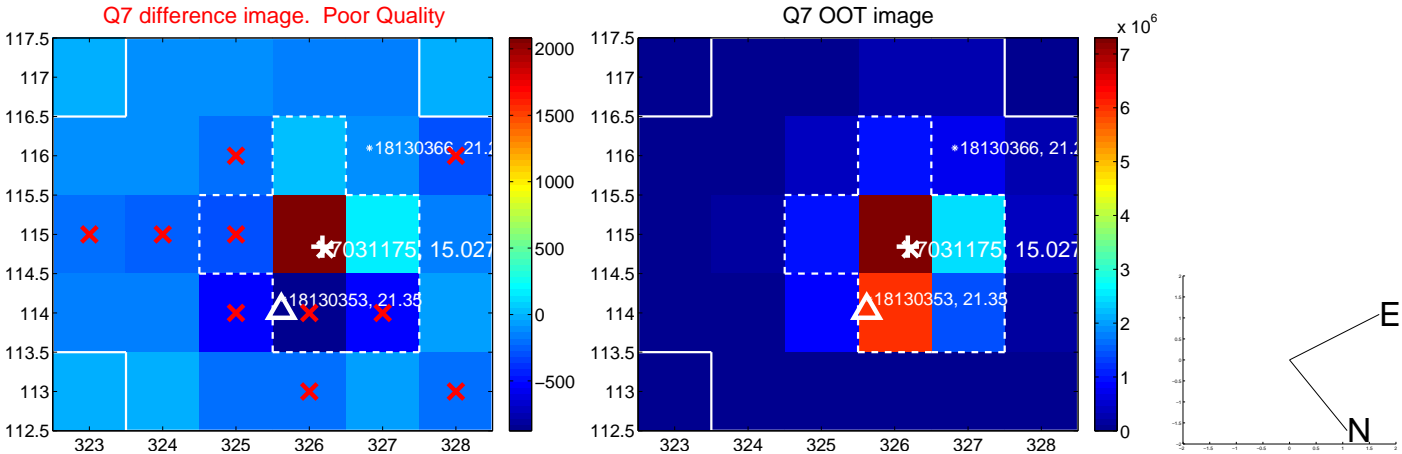
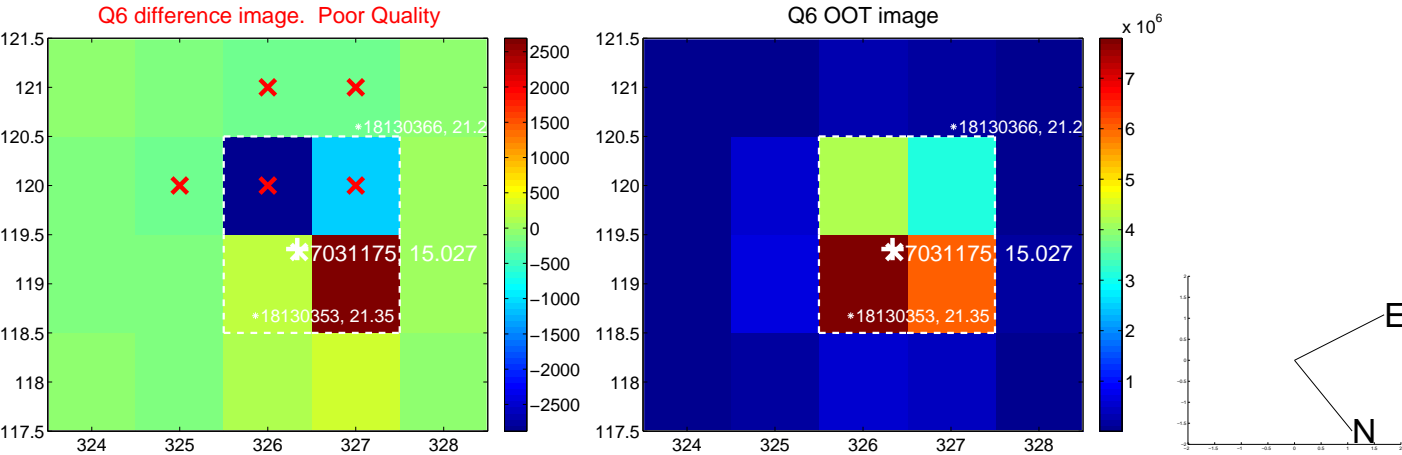
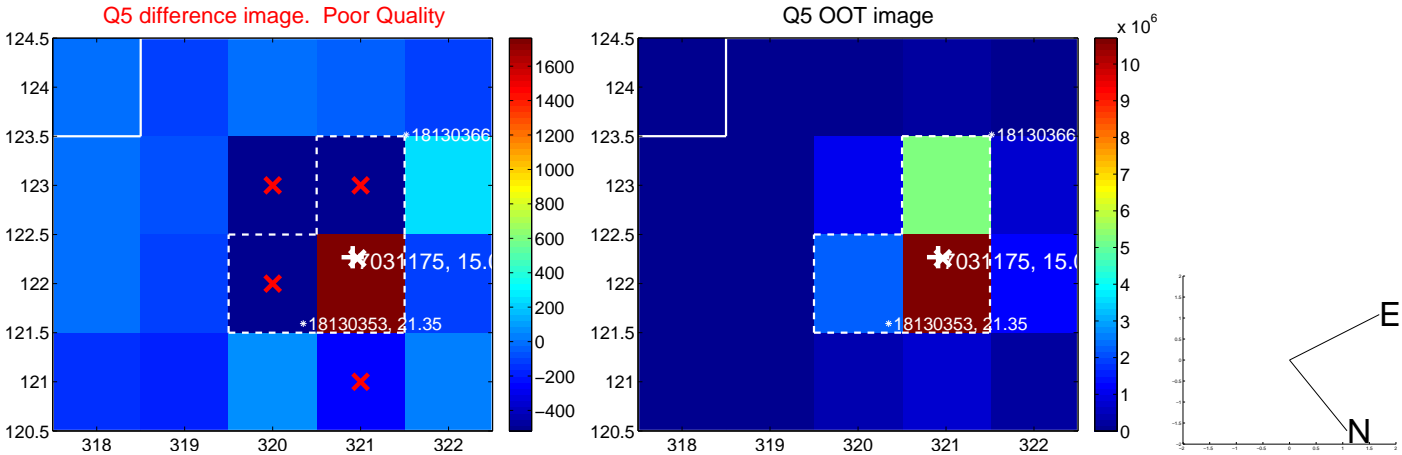


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

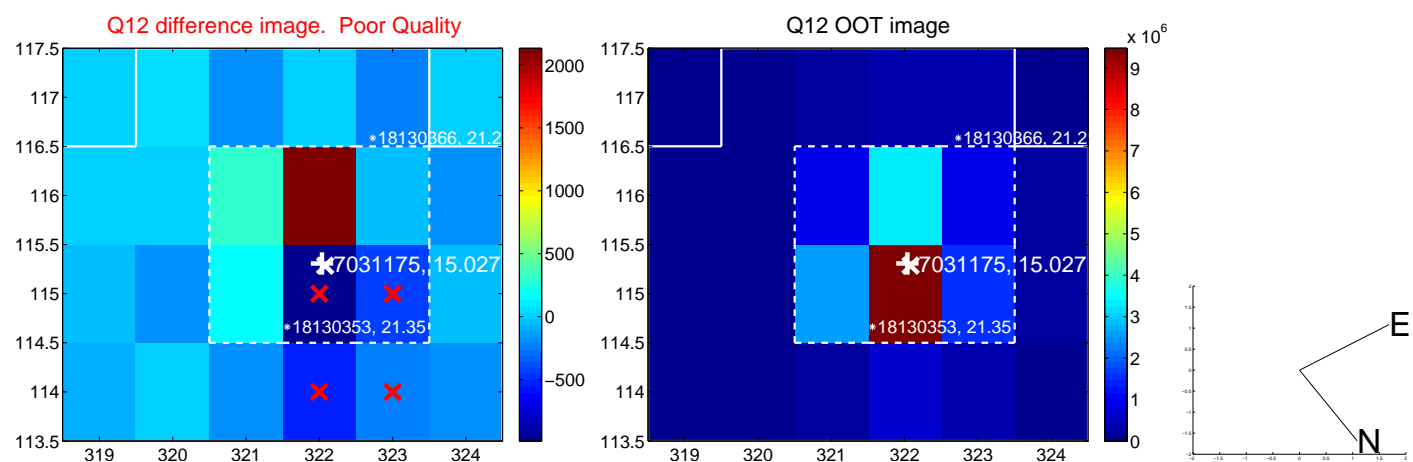
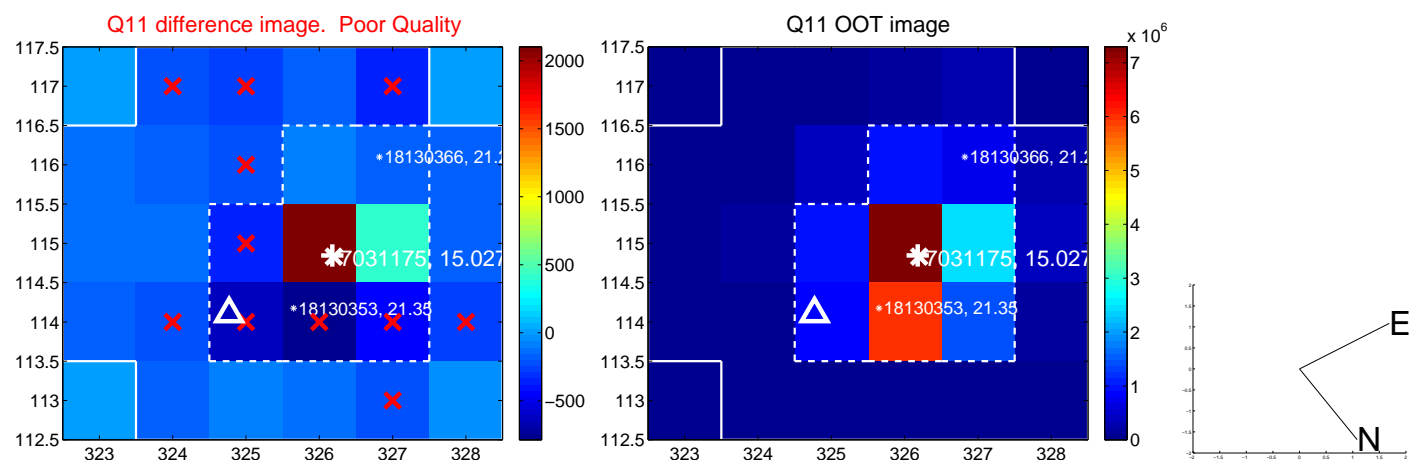
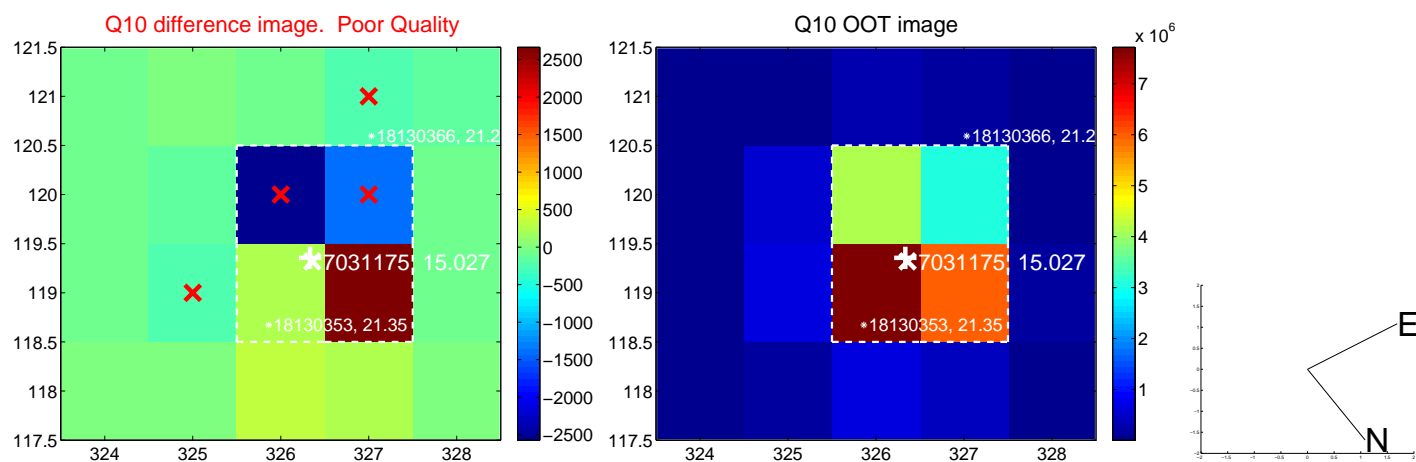
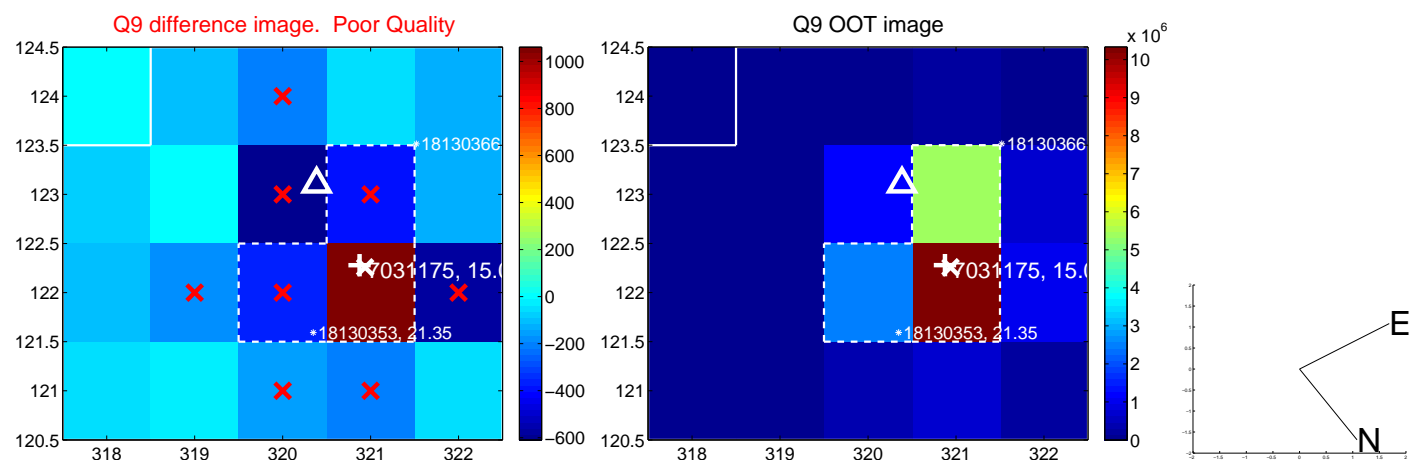
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



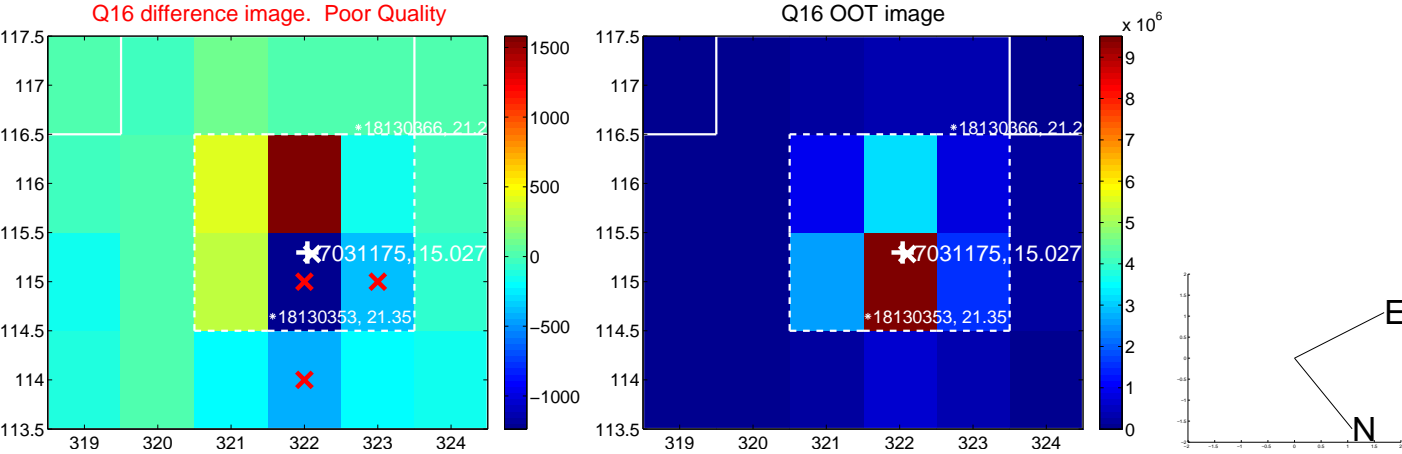
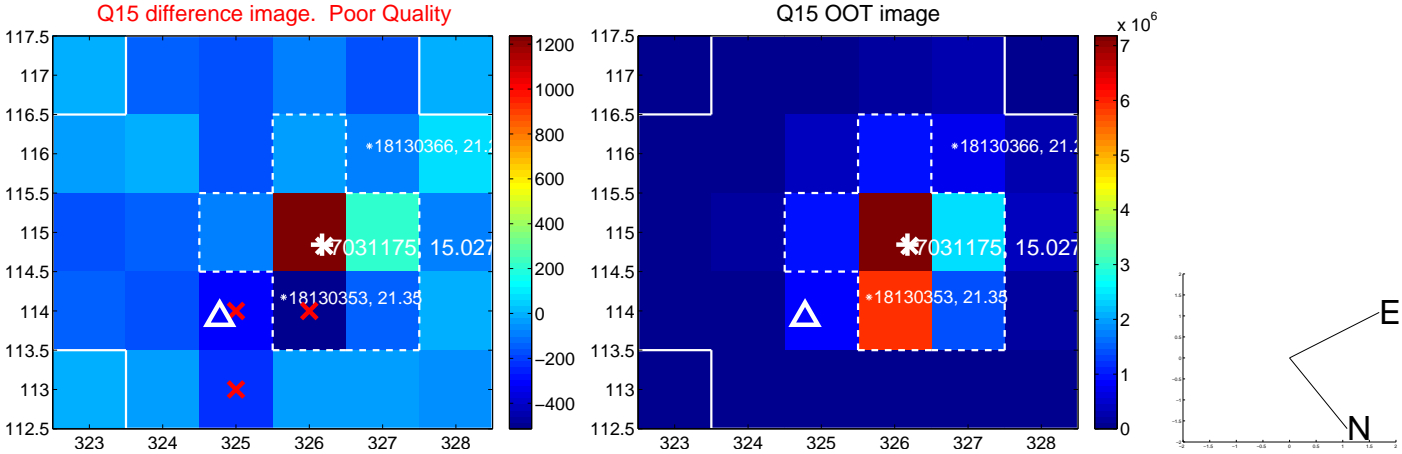
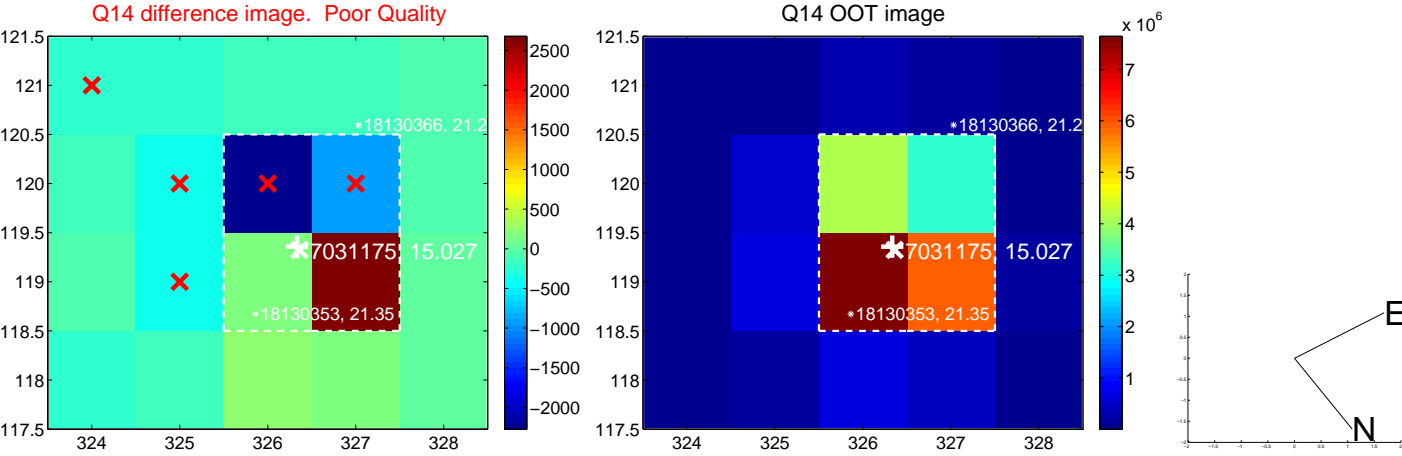
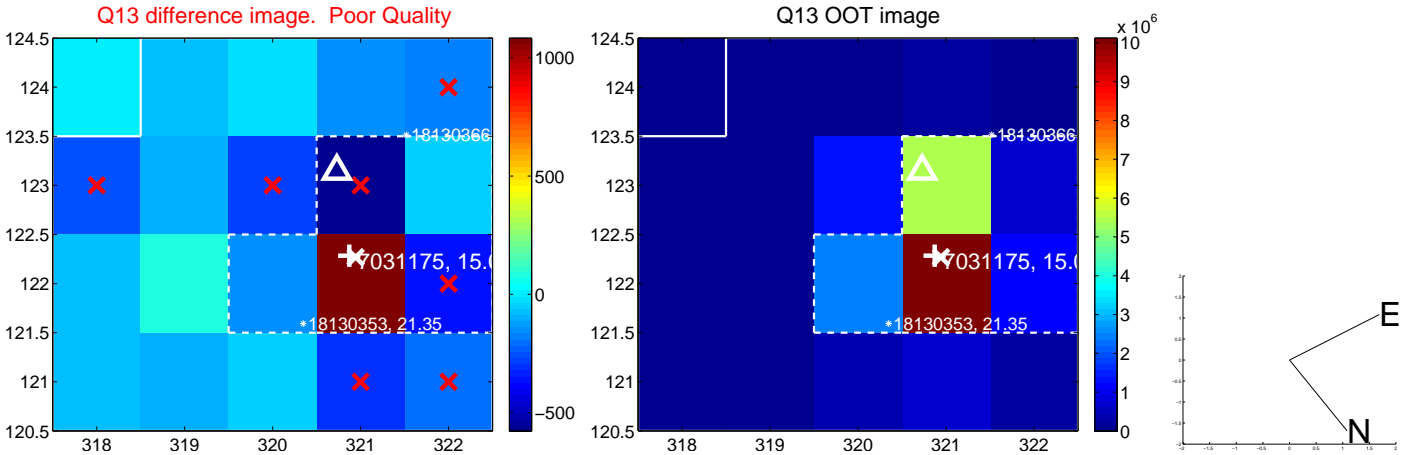
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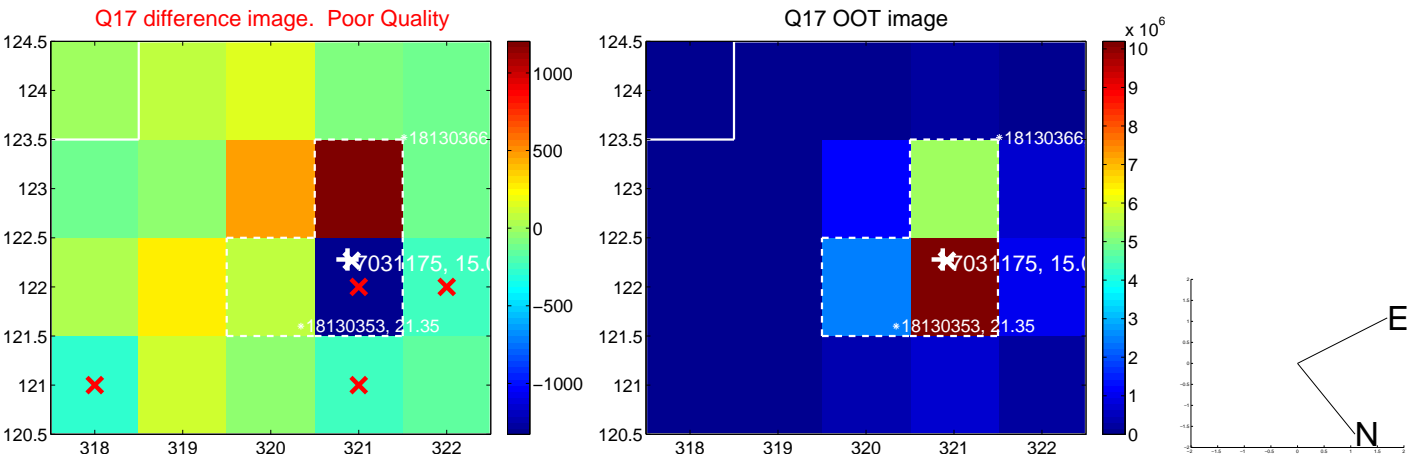
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folded centroid time series figure for this object.

UKIRT Image

Declination

