

KIC 007032481

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})
007032481-01	OBS	No	0.566751	131.903206	2.6	5.930	7.9	1.0	0.86	5747	0.14	4163.62

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007032481-01	OBS	FP	0.00	1	0	0	1	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.

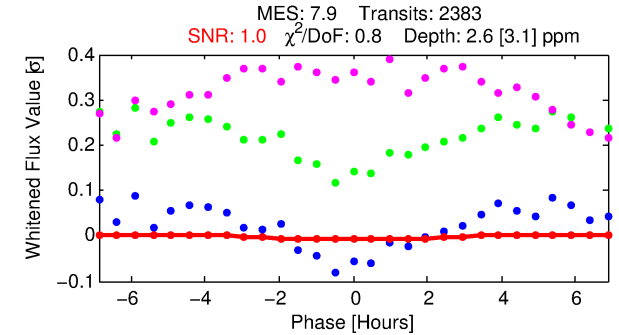
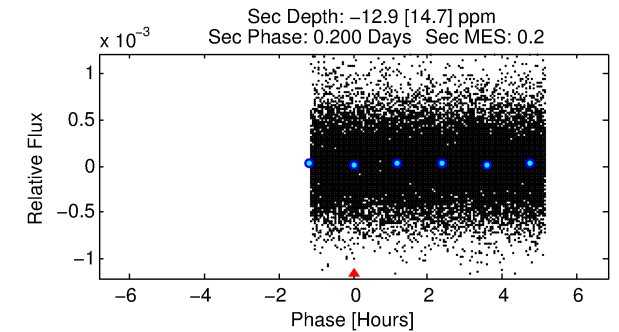
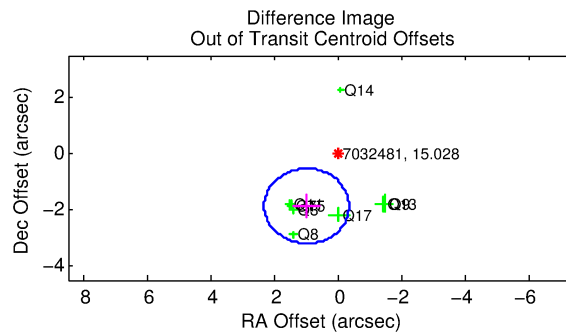
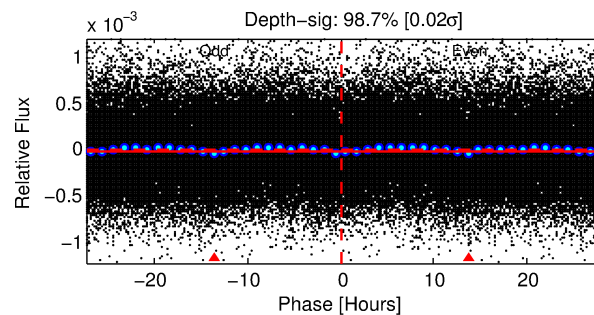
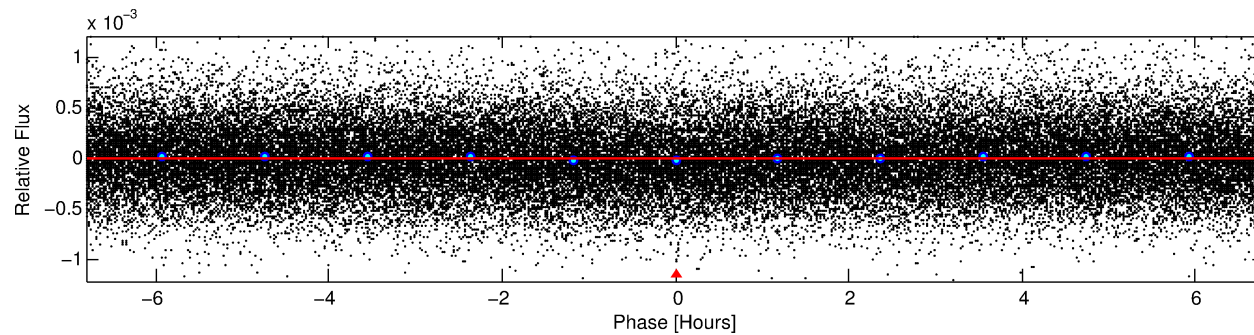
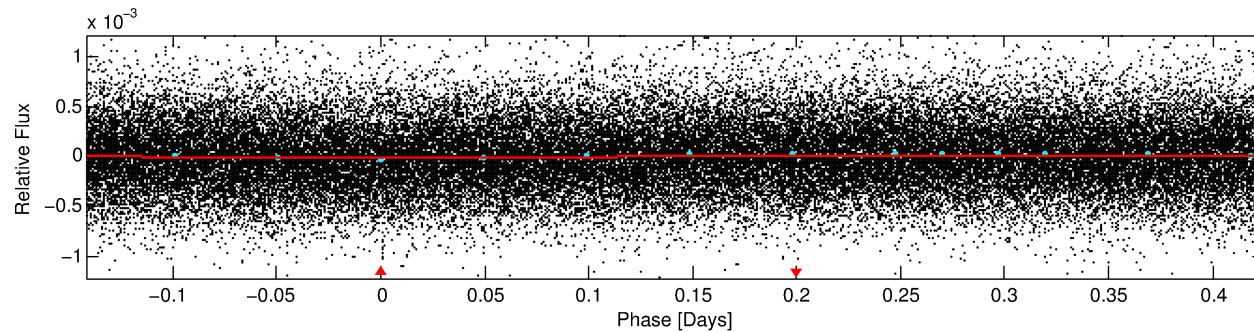
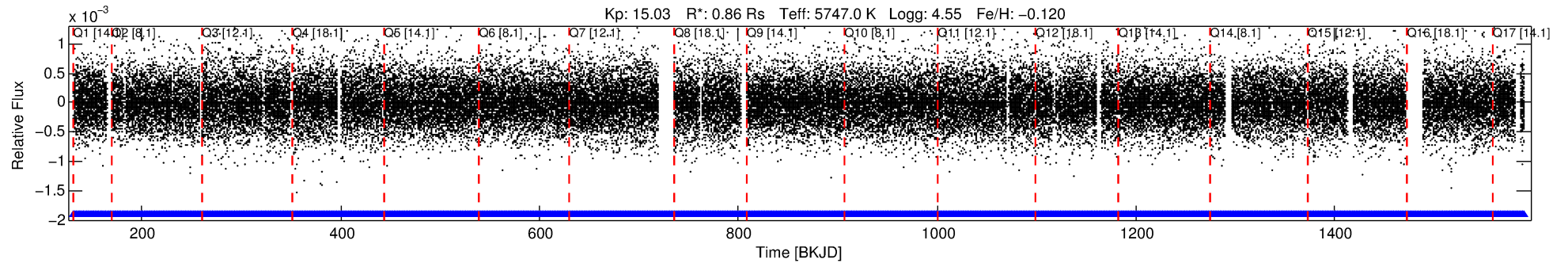
Ephemeris Match Information For 007032481-01

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
007032481-01	7032481	RR-Lyr-pri	7198959	1:1	746.4	178	-59	7.86	15.03	207770.00	Direct-PRF	0	0.67	18.50

Notes: $P_1:P_2$ 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. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 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: 7032481 Candidate: 1 of 1 Period: 0.567 d



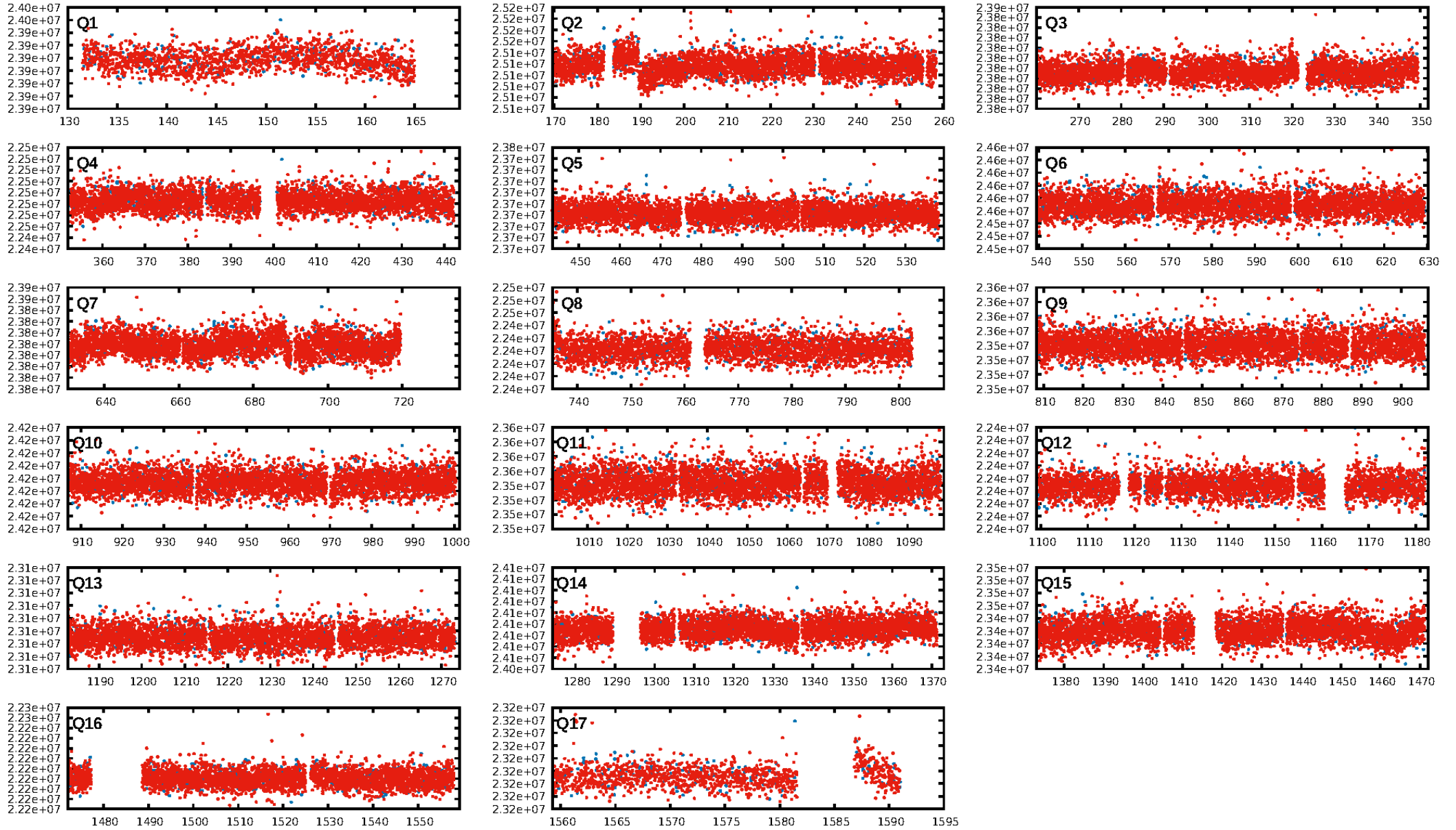
DV Fit Results:

Period = 0.56675 [0.00011] d
Epoch = 131.9032 [0.0637] BKJD
Rp/R* = 0.0015 [0.0132]
a/R* = 1.02 [1.59]
b = 0.20 [197.79]
Seff = 4163.62 [1605.24]
Teff = 2048 [197] K
Rp = 0.14 [1.24] Re
a = 0.0132 [0.0033] AU
Ag = N/A
Teffp = N/A

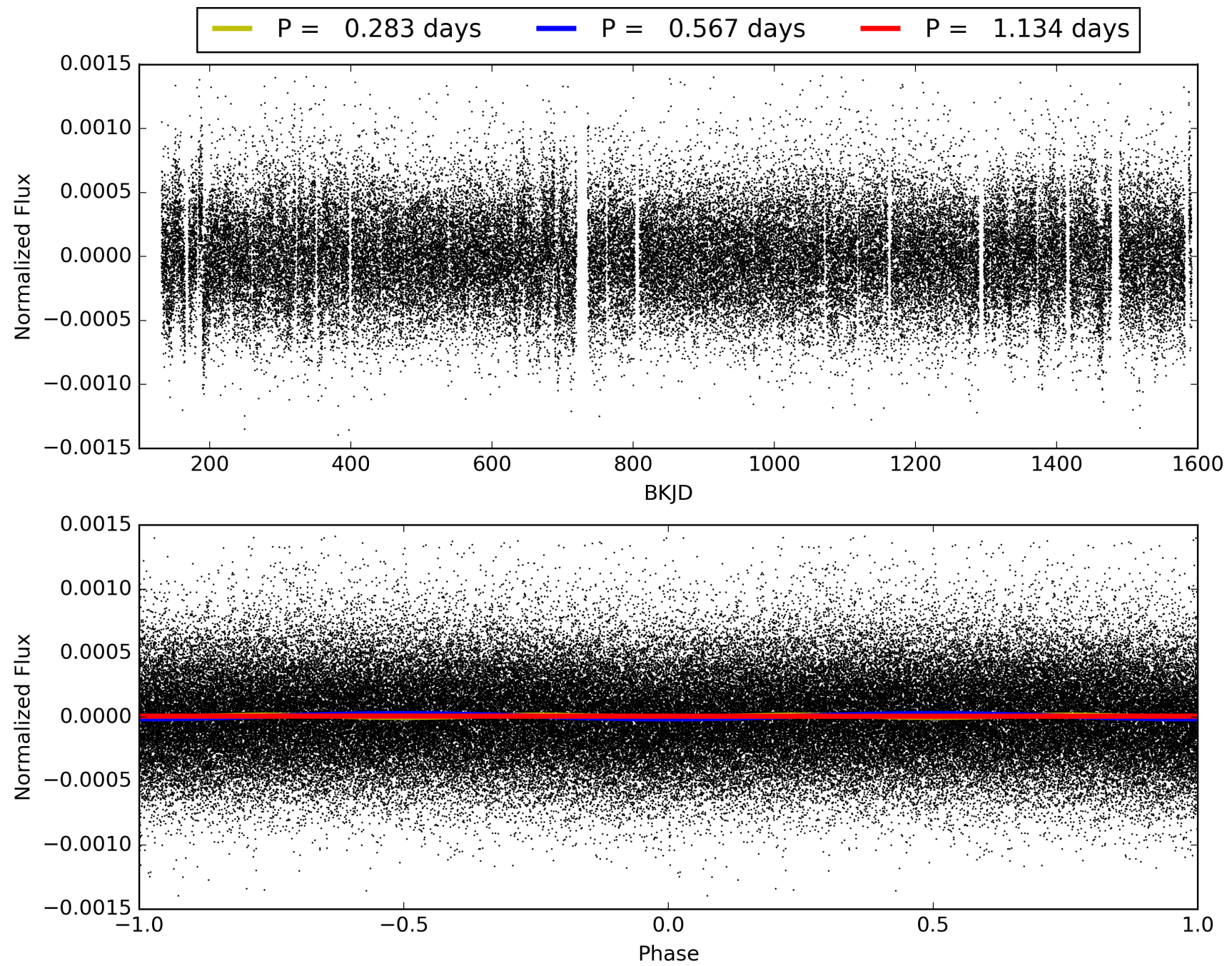
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2276/2276]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 2.121 arcsec [4.77σ]
KicOffset-rm: 2.263 arcsec [4.88σ]
OotOffset-st: 1/4/1/3 [9]
KicOffset-st: 1/4/1/3 [9]
DiffImageQuality-fgm: 0.67 [6/9]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007032481-01, PDC Light Curves

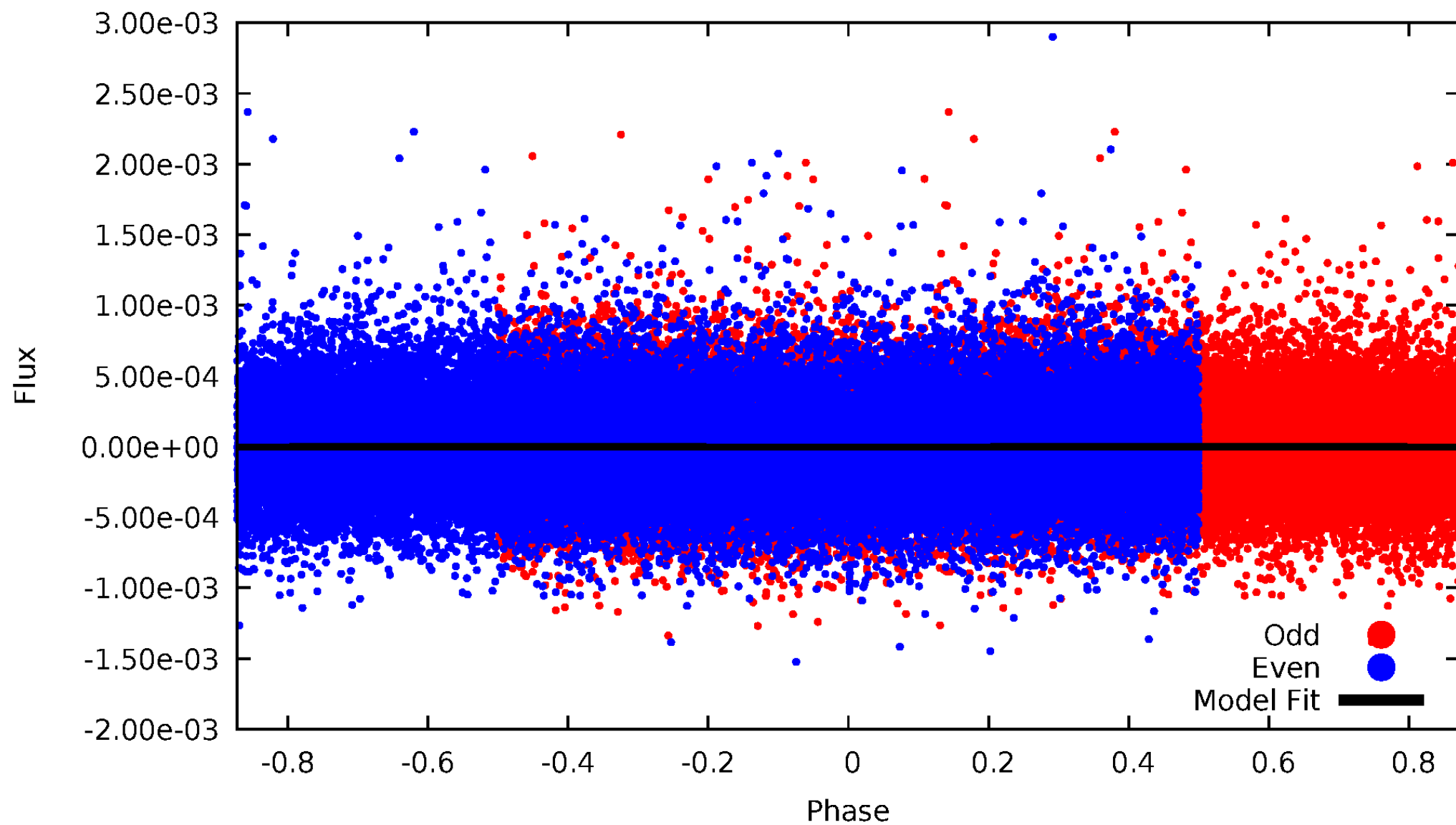


TCE 007032481-01



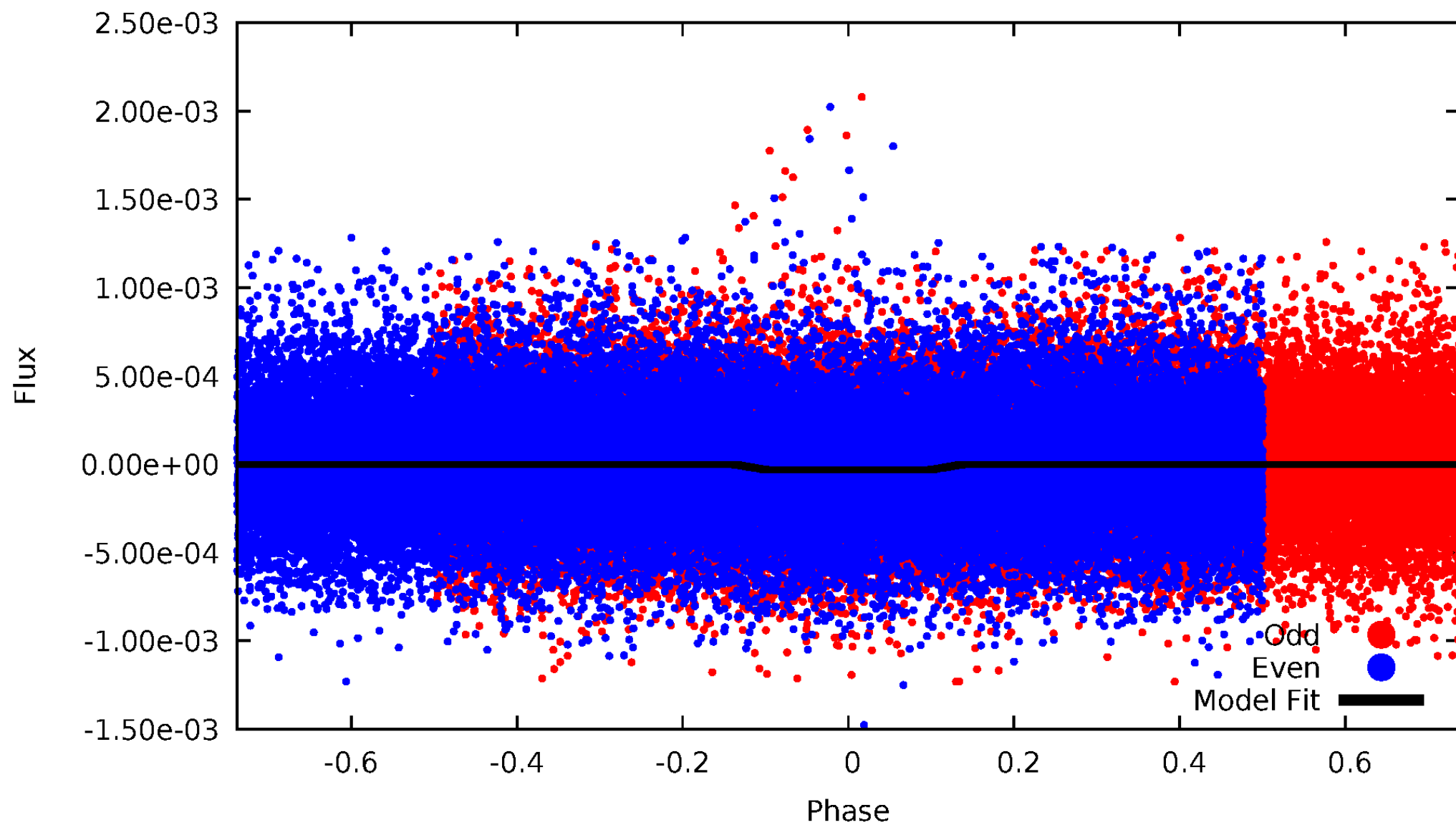
DV Odd/Even

TCE 007032481-01



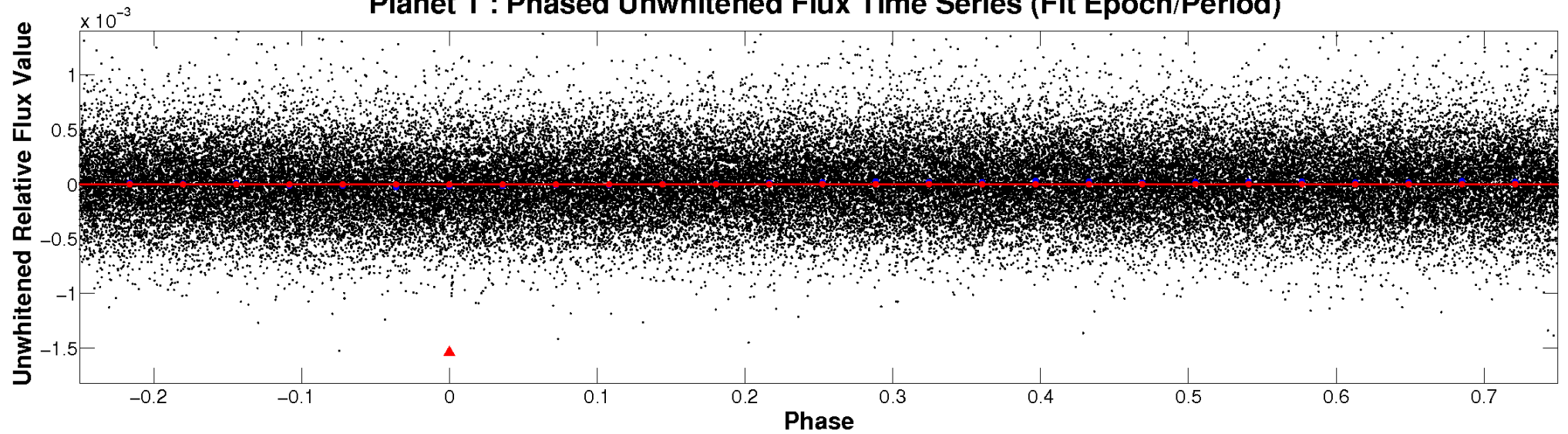
ALT Odd/Even

TCE 007032481-01

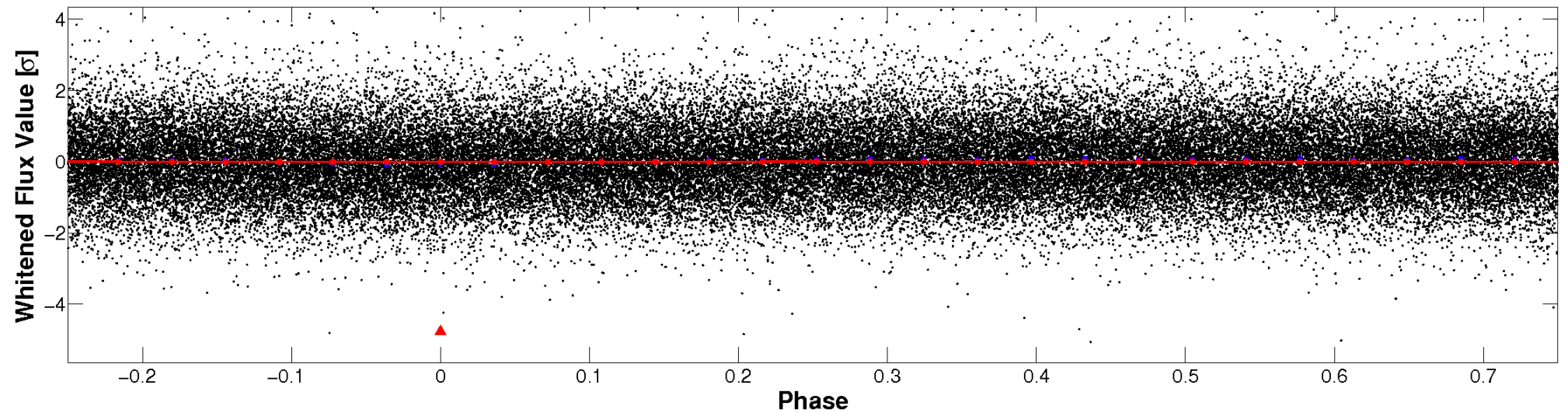


Non-Whitened Vs. Whitened Light Curve

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

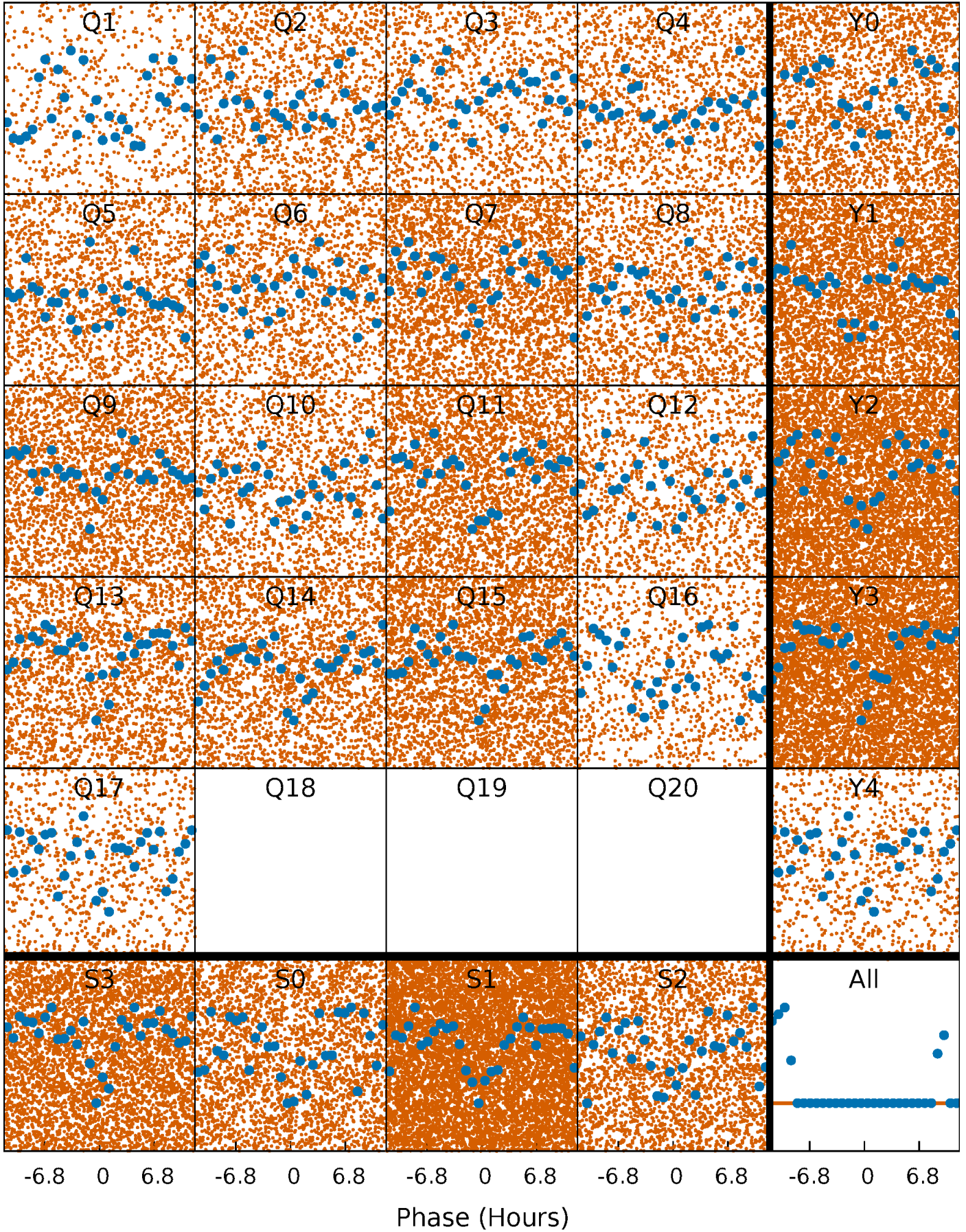


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



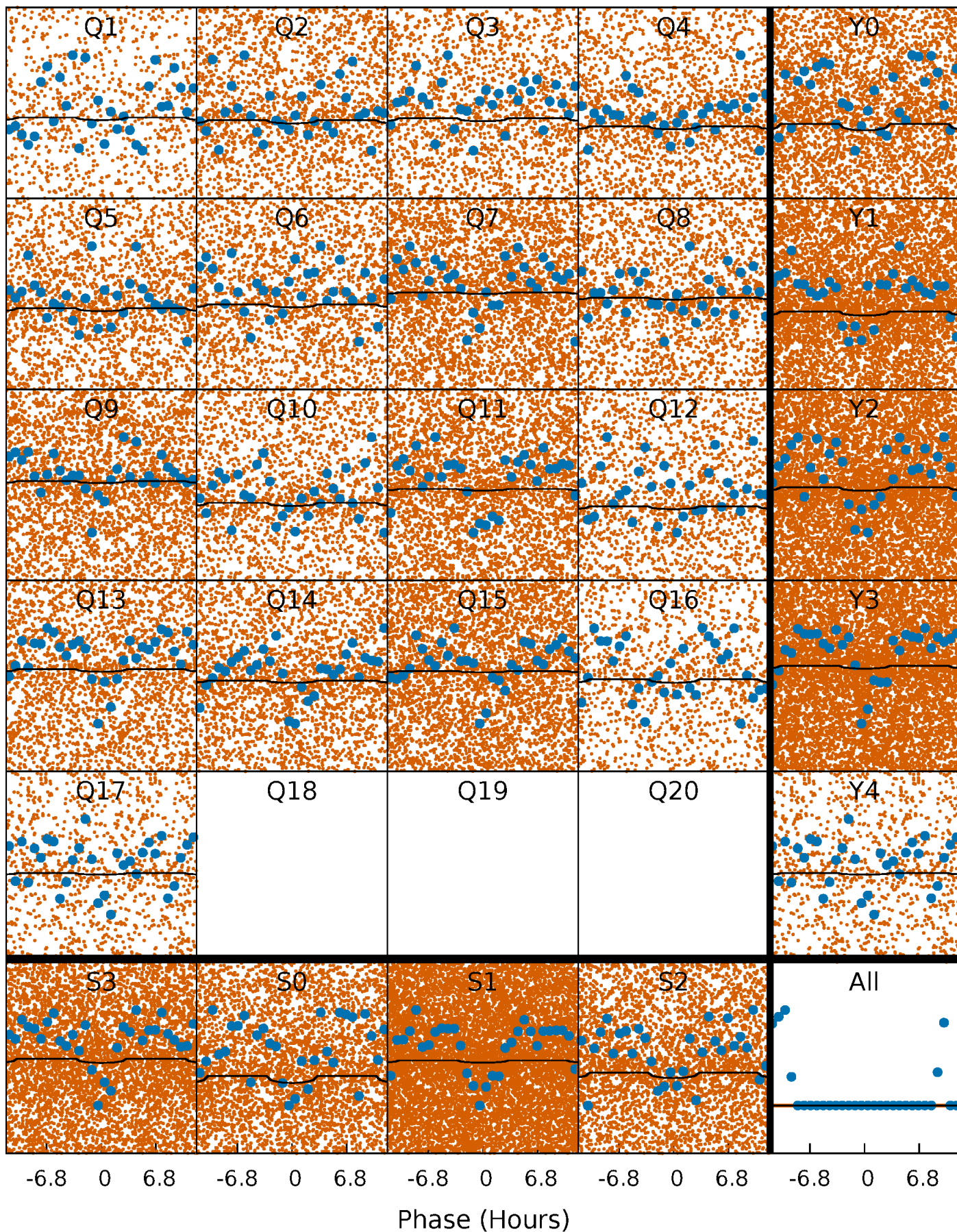
PDC Quarter-Phased Transit Curves

TCE 007032481-01 P= 0.566751 Days $T_0=131.903206$ (BKJD)



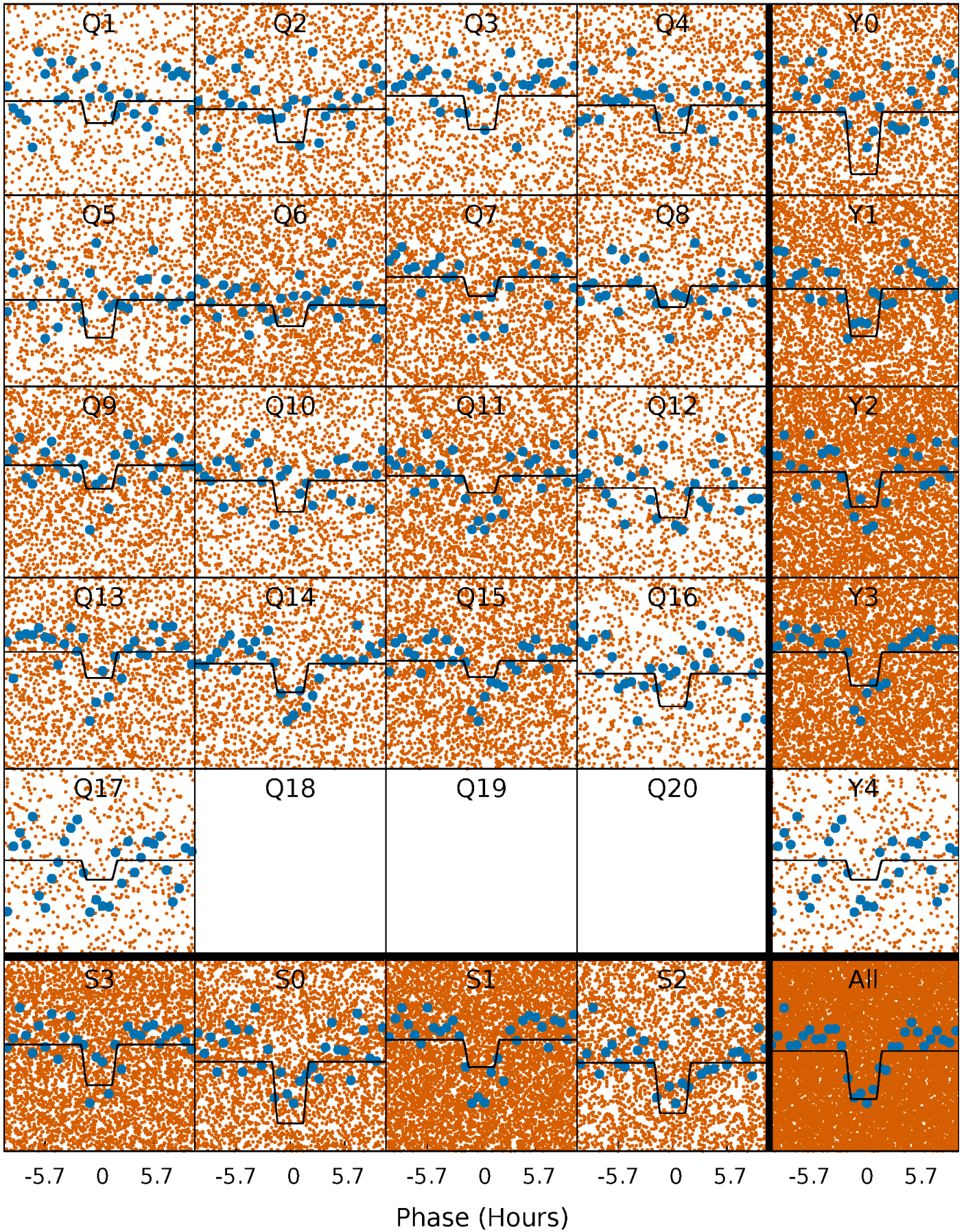
DV Quarter-Phased Transit Curves

TCE 007032481-01 P= 0.566751 Days $T_0=131.903206$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

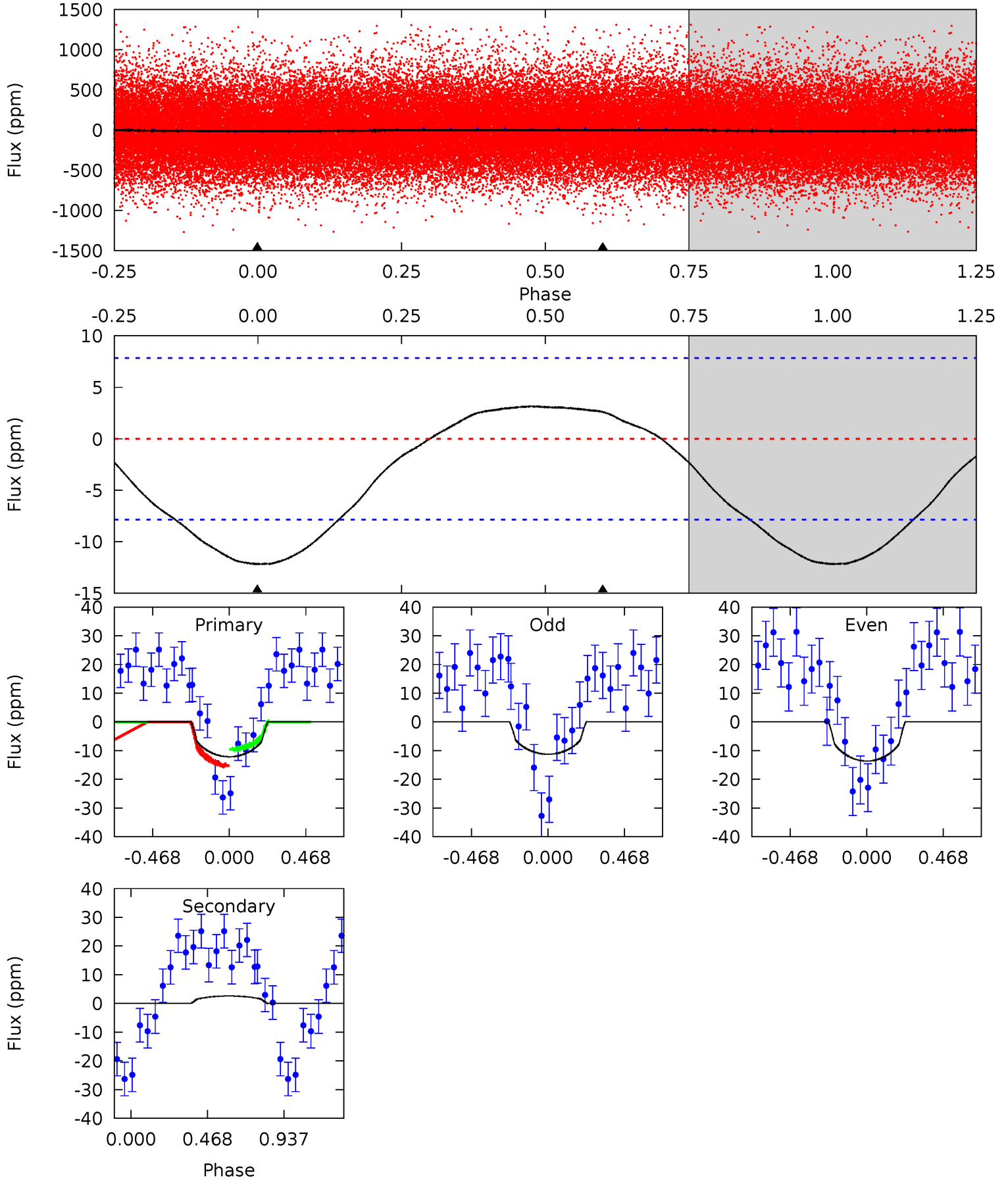
TCE 007032481-01 P= 0.566788 Days $T_0=131.835528$ (BKJD)



DV Model-Shift Uniqueness Test

007032481-01, P = 0.566751 Days, E = 131.336455 Days

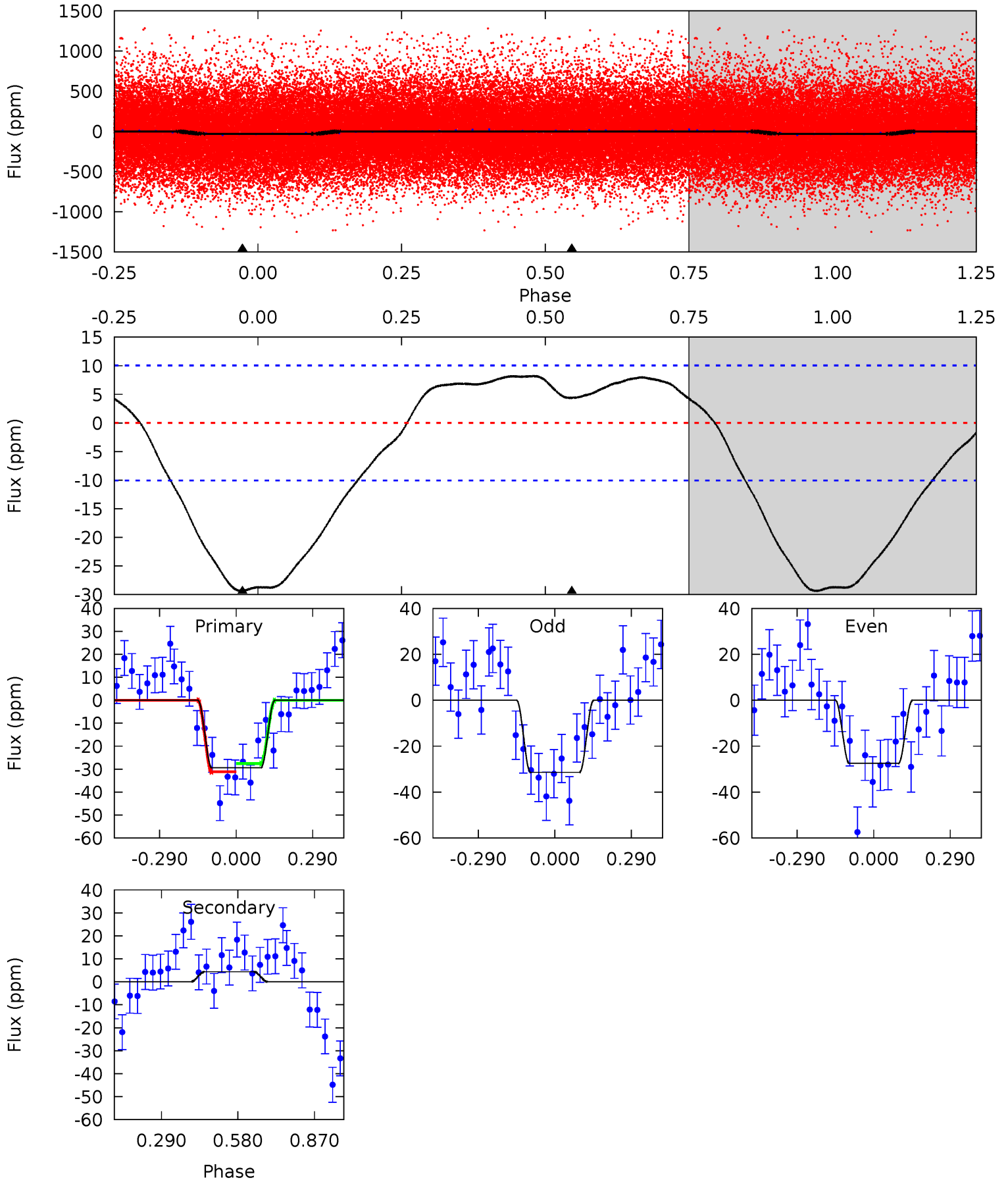
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.55	-1.40	0	0	4.23	0.73	0.55	6.55	6.55	-1.40	-1.40	0.64	0.68	0.21	1.54



Alt Model-Shift Uniqueness Test

007032481-01, P = 0.566788 Days, E = 131.268740 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.7	-1.88	0	0	4.34	1.06	1.69	12.7	12.7	-1.88	-1.88	0.83	0.95	0.22	0.77



Stellar Parameters For KIC 007032481

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5747^{+153}_{-170}	$4.547^{+0.036}_{-0.204}$	$-0.120^{+0.300}_{-0.300}$	$0.861^{+0.247}_{-0.082}$	$0.953^{+0.106}_{-0.116}$	$2.104^{+0.421}_{-1.096}$
	+3%/-3%	+1%/-4%	+250%/-250%	+29%/-10%	+11%/-12%	+20%/-52%
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 007032481-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	3 ± 2	$0.88^{+1.05}_{-0.62}$	2932^{+197}_{-131}	-3367^{+277}_{-1252}	$-0.218^{+0.187}_{-3.216}$
Alt.	4 ± 2	$1.08^{+1.10}_{-0.76}$	2936^{+197}_{-136}	-3410^{+275}_{-1354}	$-0.298^{+0.241}_{-3.546}$

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 $A_{obs} \gg 1.0$

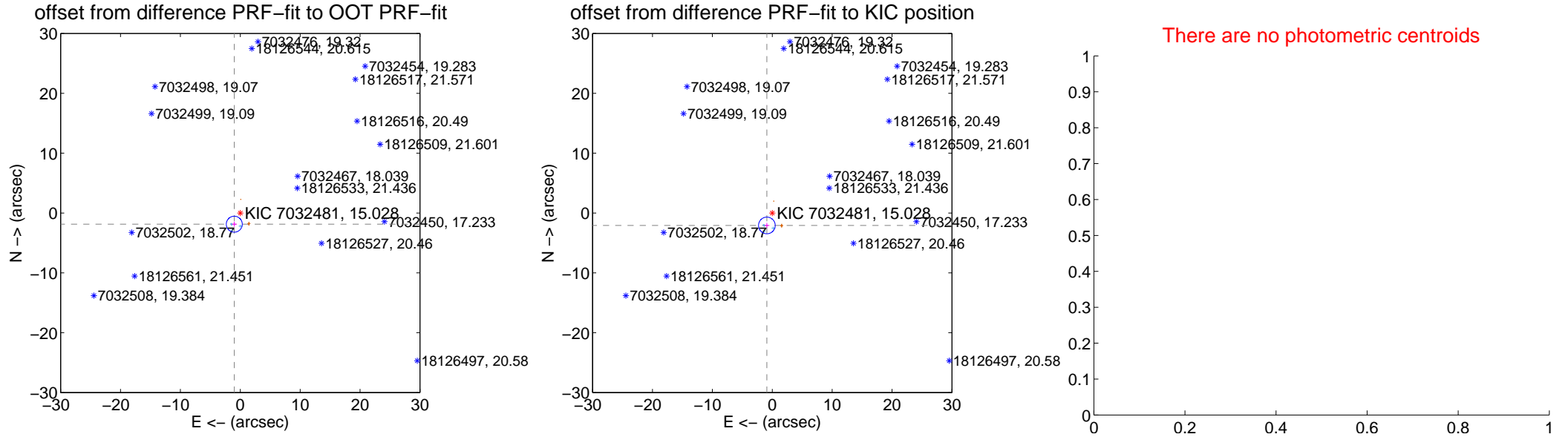
DV Centroid Data

Supplemental centroid analysis for 007032481-01. Kepler magnitude: 15.03. Transit SNR 1.04

There are 6 quarters with good PRF difference image offsets

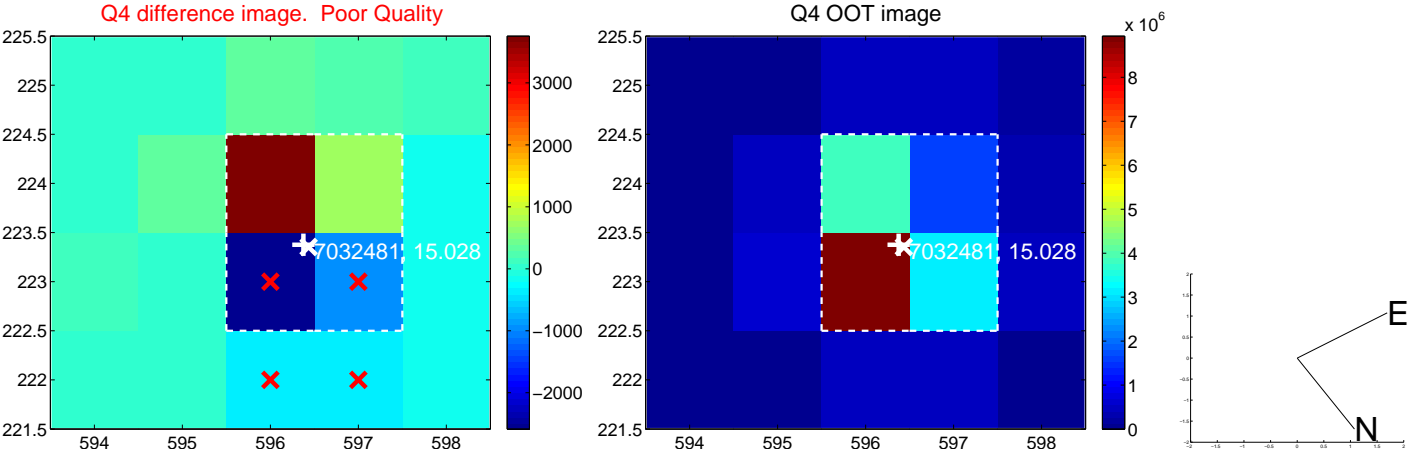
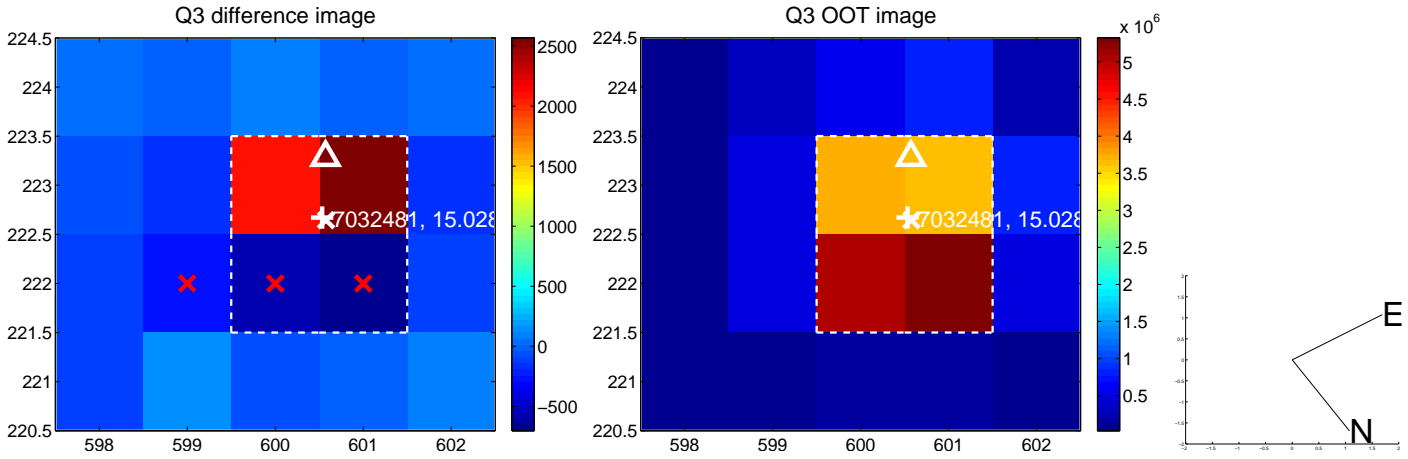
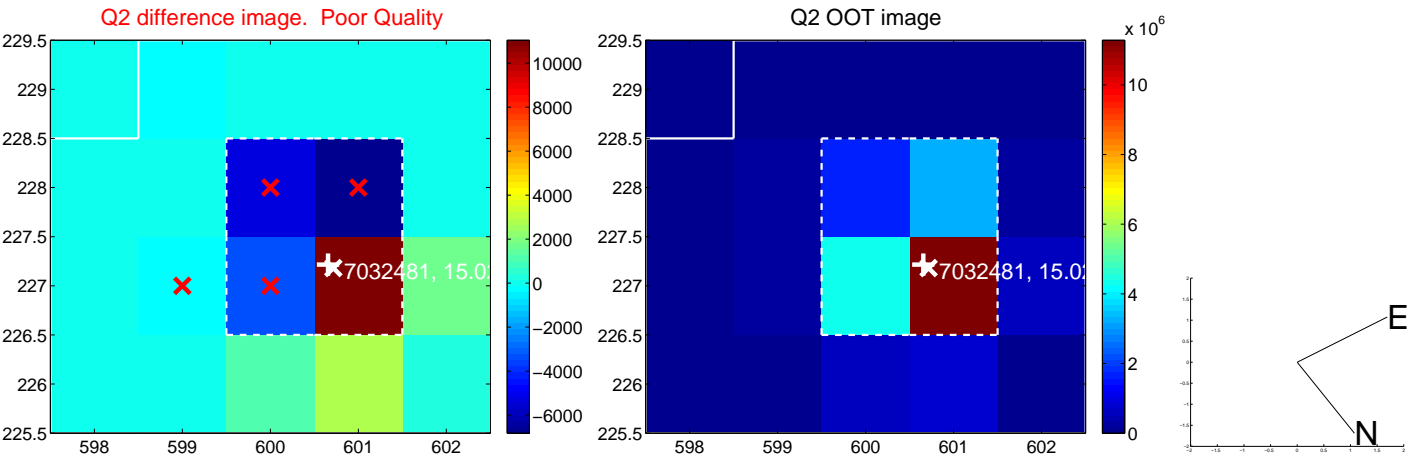
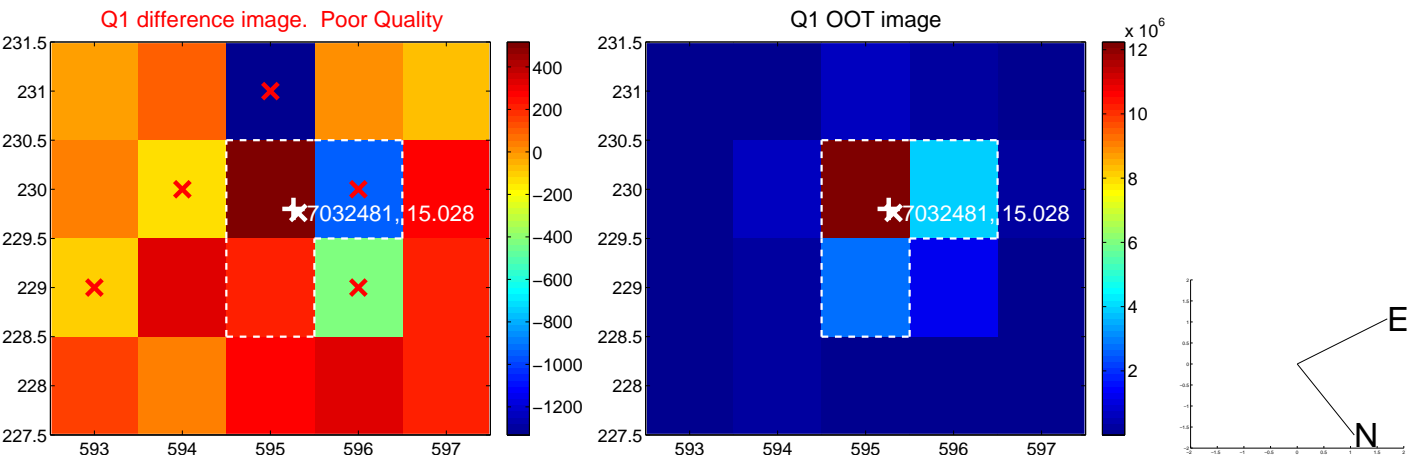
The direct PRF centroid is offset from the target star catalog position by about 0.37 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.121 \pm 0.444	4.77	1.001 \pm 0.408	-1.870 \pm 0.411
PRF-fit source offset from KIC position	2.263 \pm 0.464	4.88	0.898 \pm 0.420	-2.077 \pm 0.428
photometric centroid source offset	—	—	—	—

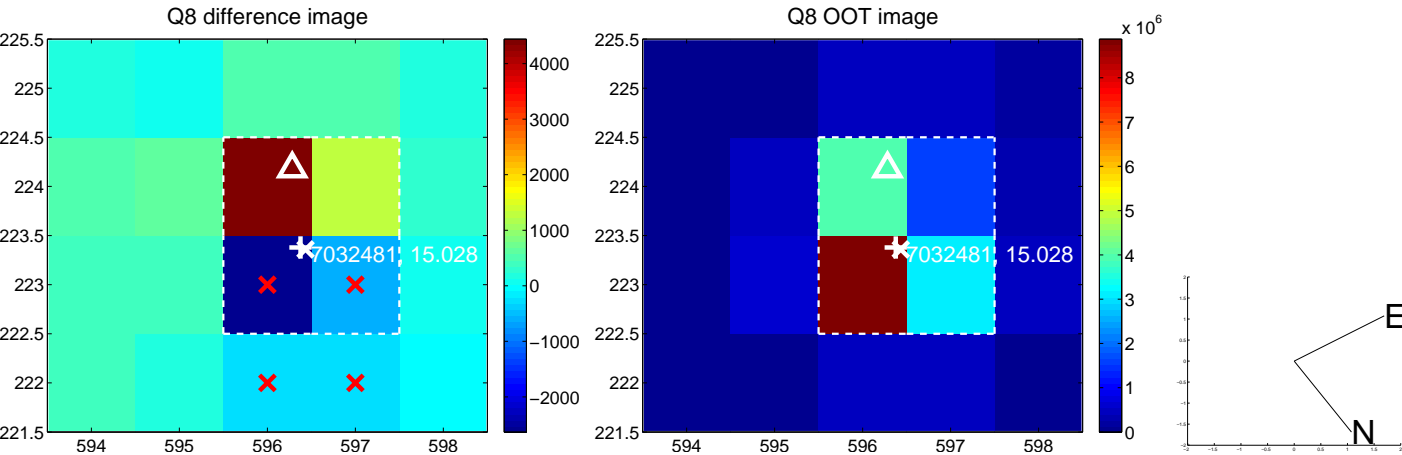
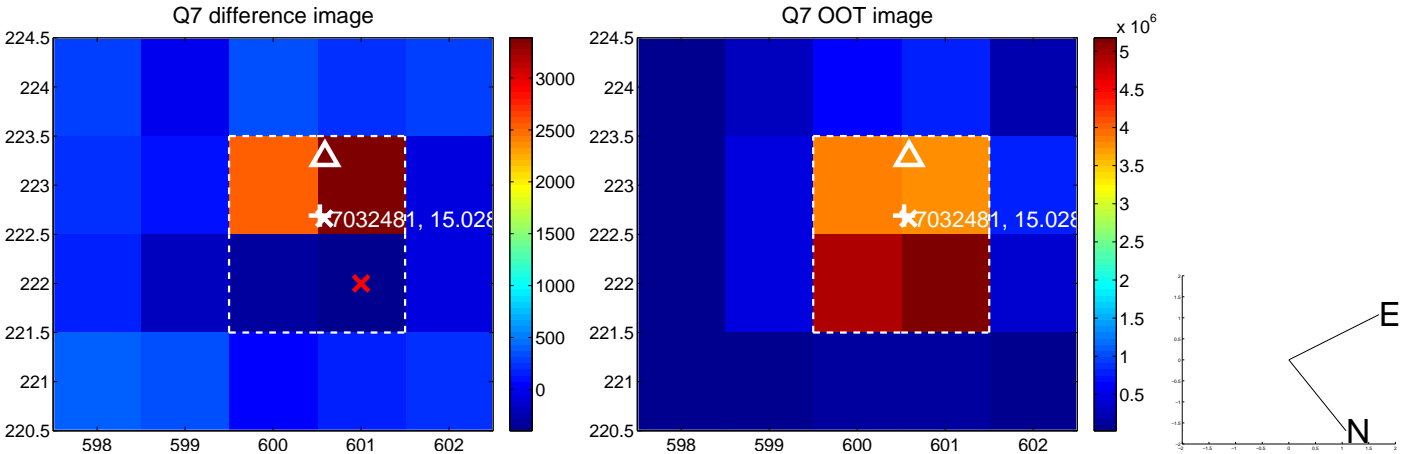
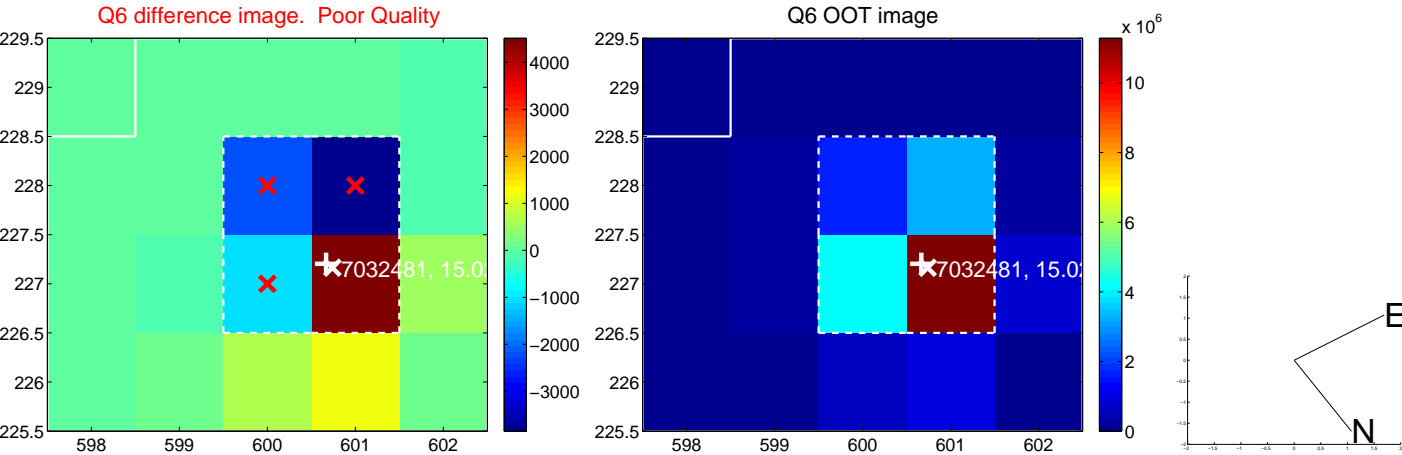
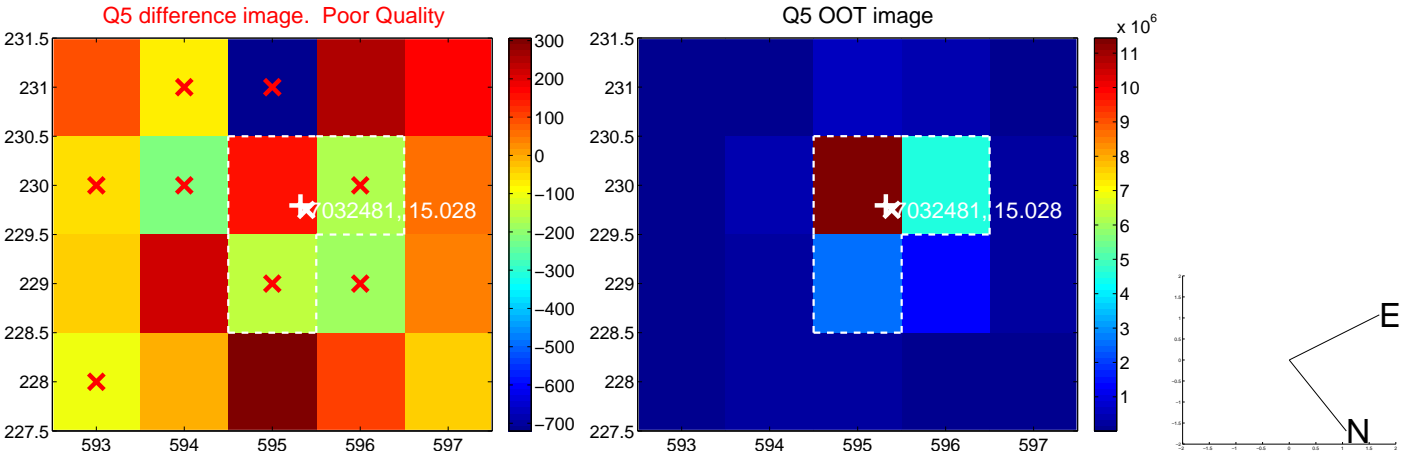


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

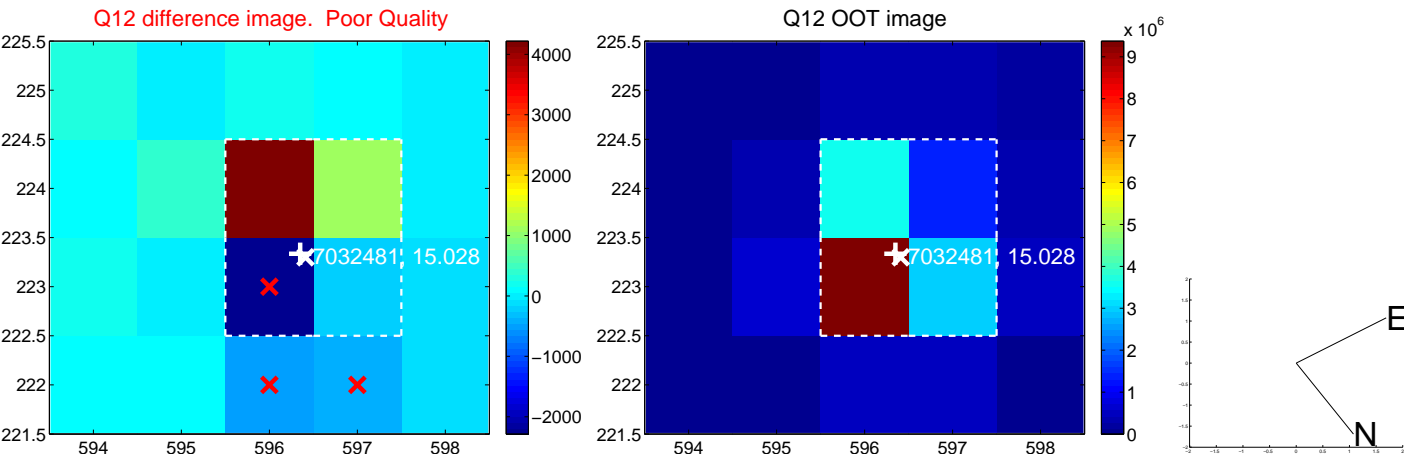
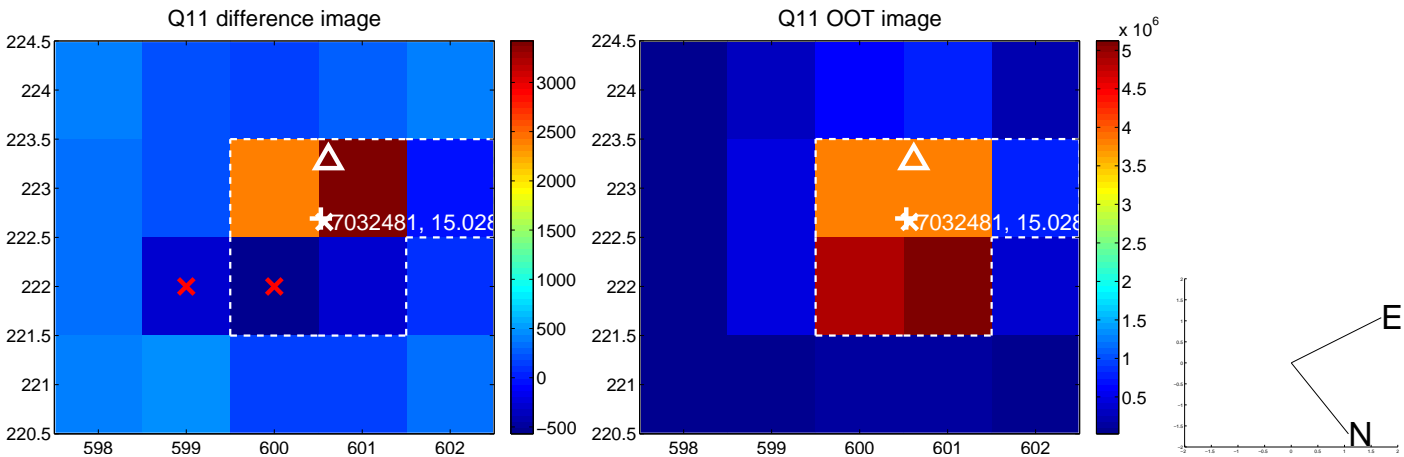
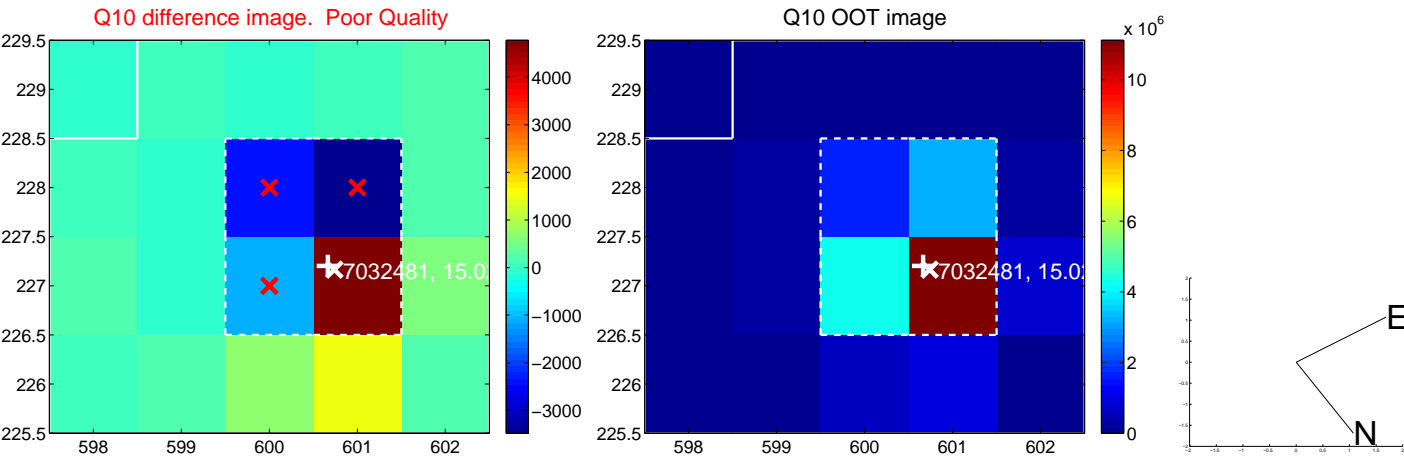
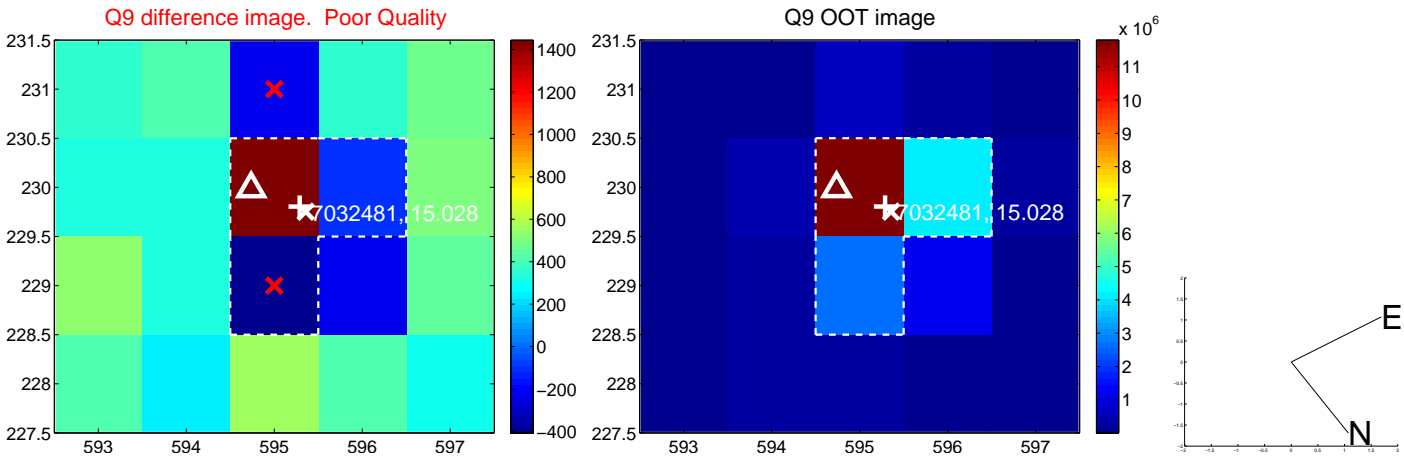
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



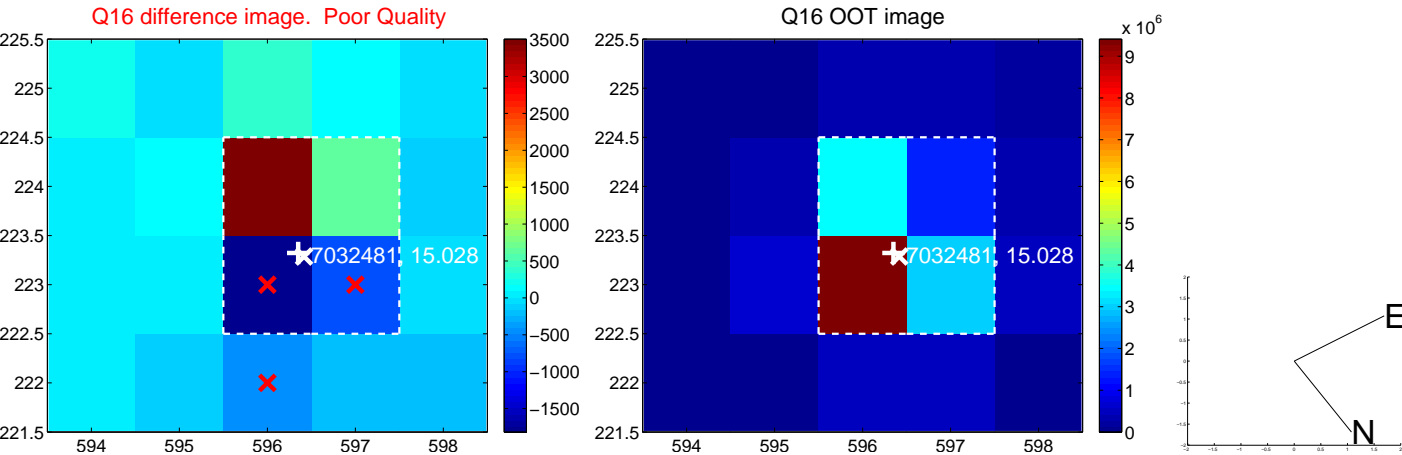
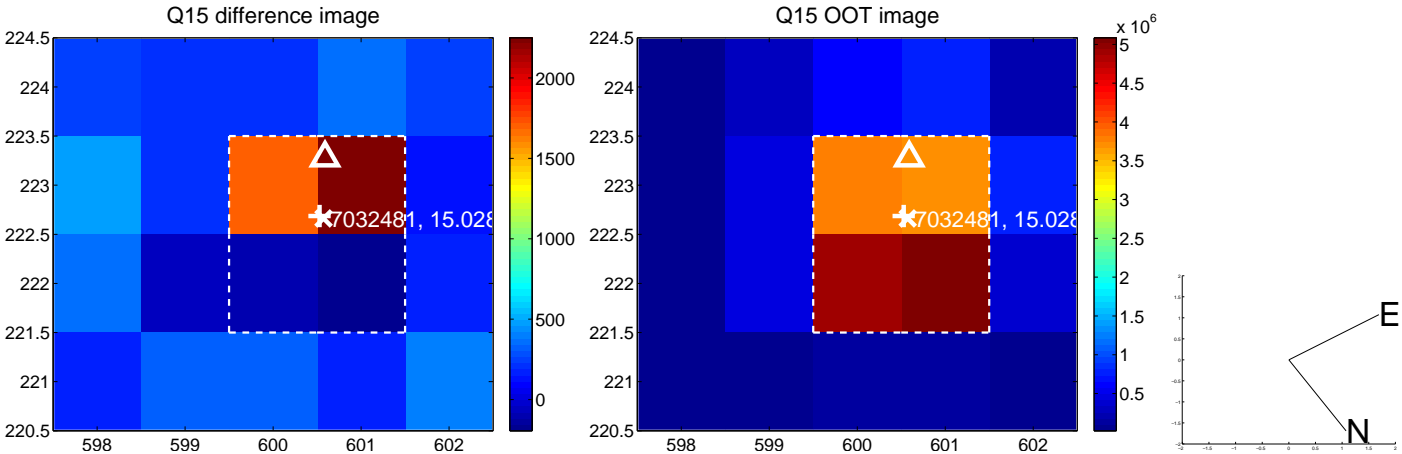
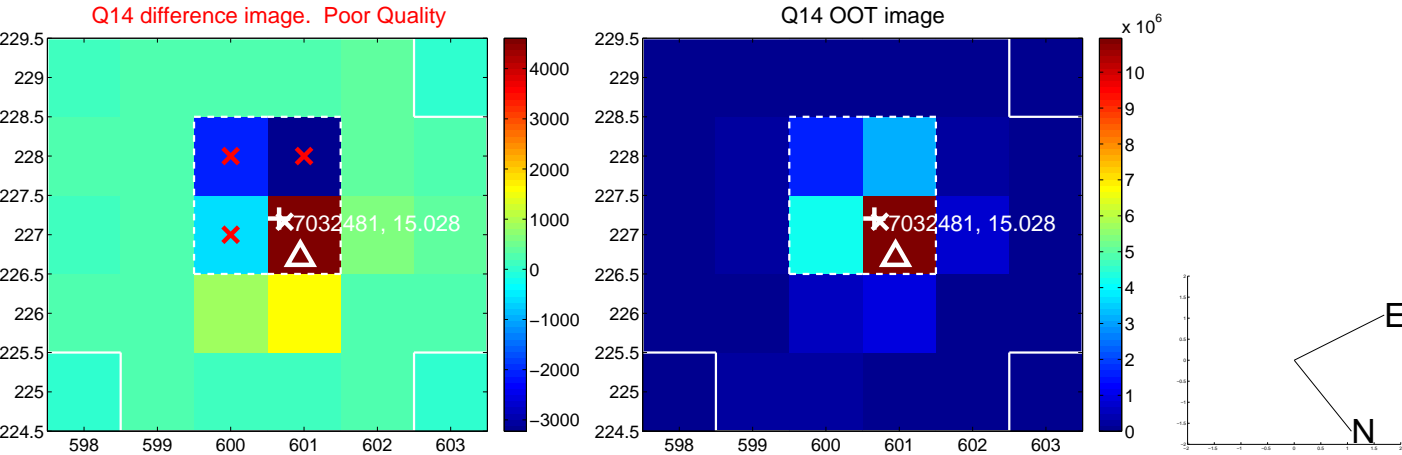
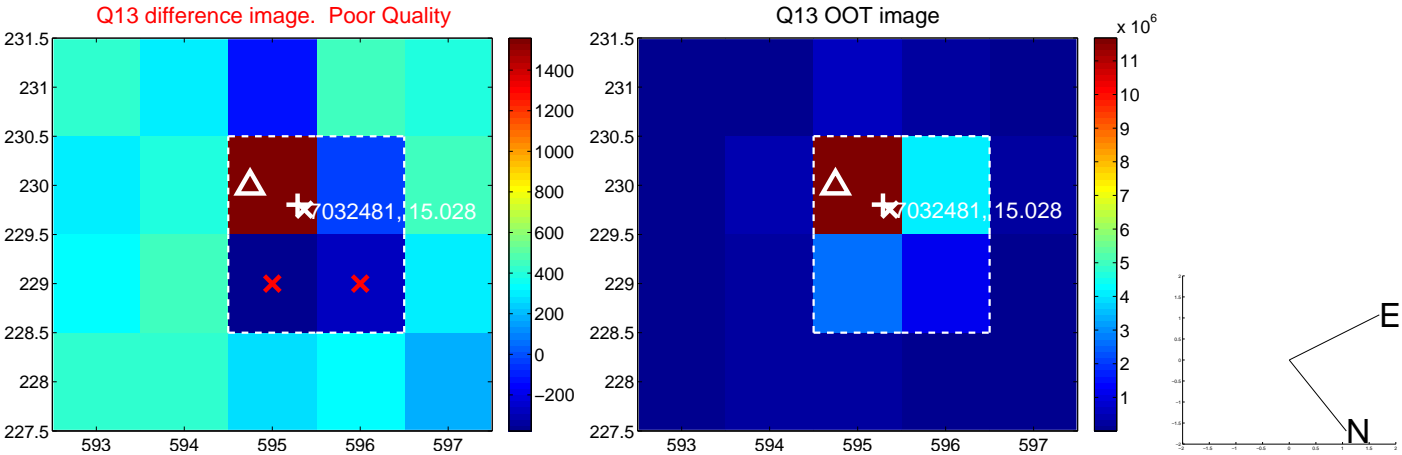
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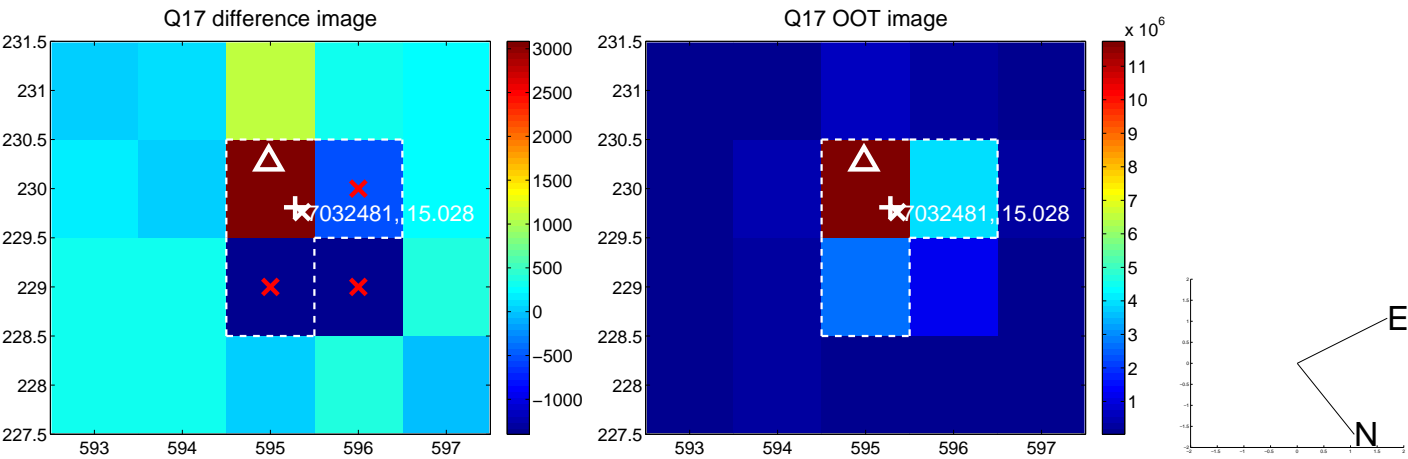
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folded centroid time series figure for this object.

UKIRT Image

Declination

