

KIC 007199724

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R _★ (R _☉)	T _★ (K)	R _p (R _⊕)	S _p (S _⊕)
007199724-01	OBS	7822.01	0.566761	131.846495	16.3	2.998	9.7	6.8	1.00	6108	0.48	6582.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007199724-01	OBS	FP	0.00	1	0	0	1	LPP_DV—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.

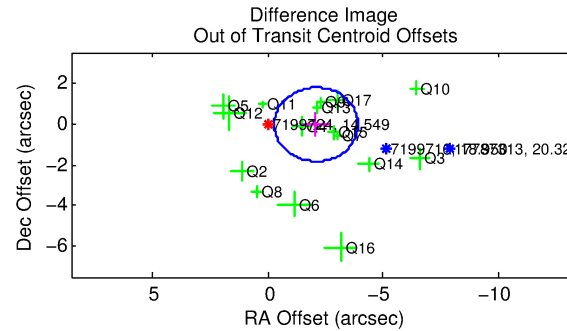
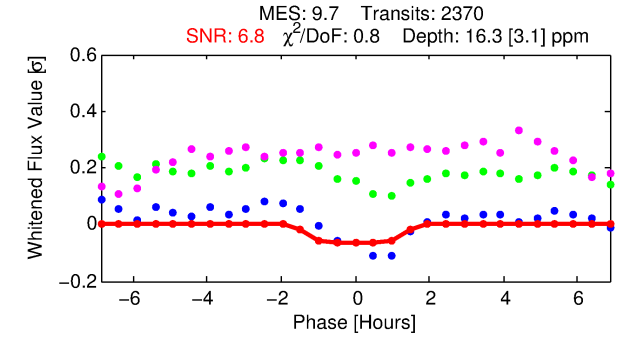
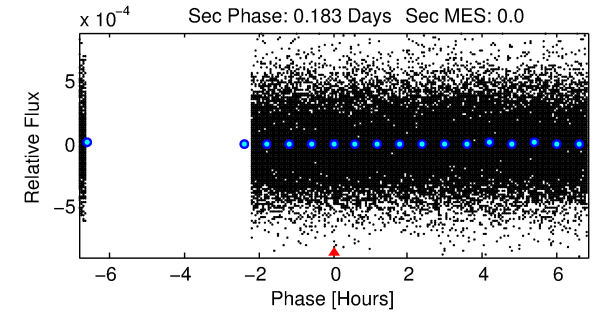
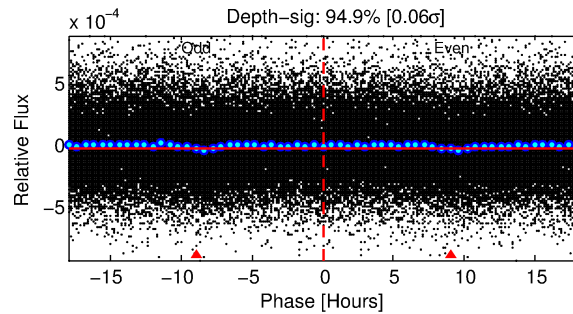
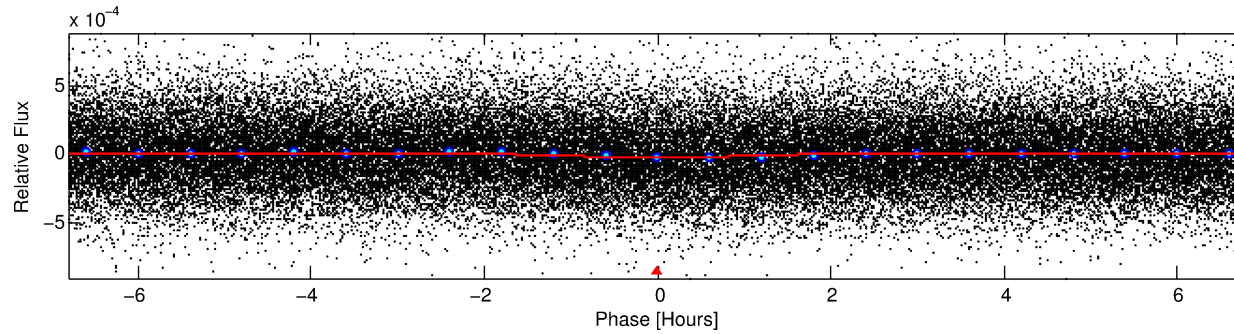
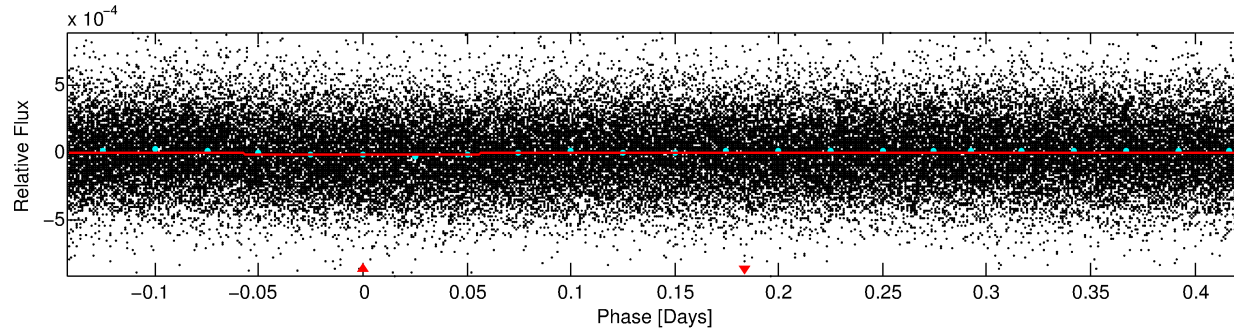
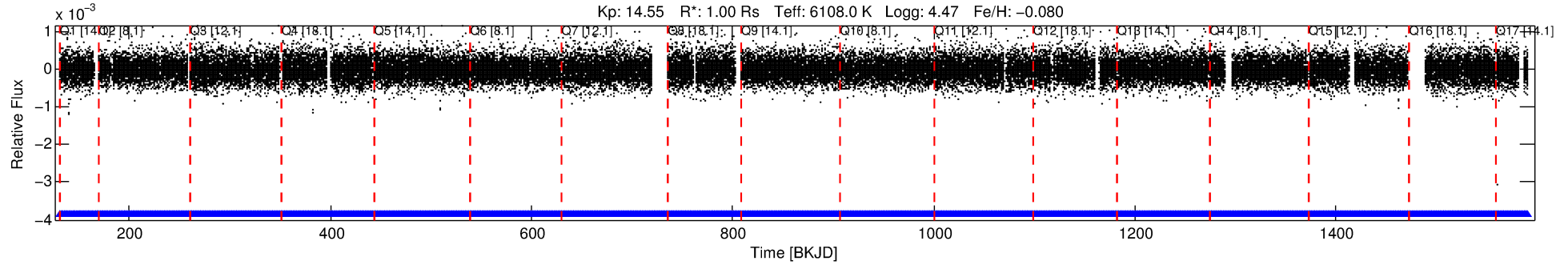
Ephemeris Match Information For 007199724-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist (″)	ΔRow	ΔCol	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ _P	σ _T
007199724-01	7199724	RR-Lyr-pri	7198959	1:1	644.9	131	95	7.86	14.55	38956.00	Direct-PRF	0	2.58	23.58

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. ΔRow and ΔCol 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 σ_P < 5.0 and σ_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: 7199724 Candidate: 1 of 1 Period: 0.567 d



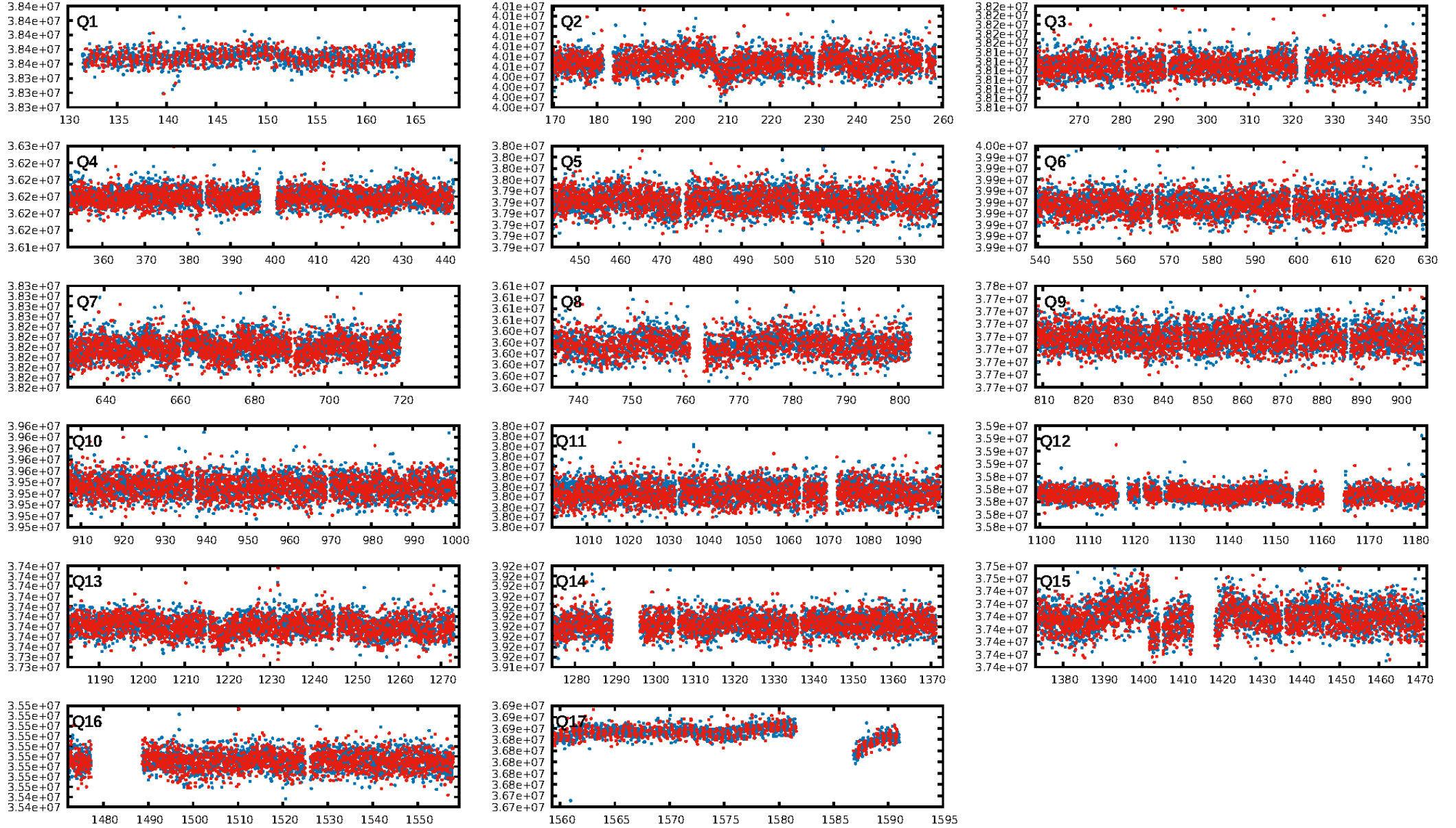
DV Fit Results:

Period = 0.56676 [0.00001] d
Epoch = 131.8465 [0.0054] BKJD
Rp/R* = 0.0044 [0.0033]
a/R* = 1.13 [0.97]
b = 0.91 [0.78]
Seff = 6582.96 [2547.16]
Teq = 2297 [222] K
Rp = 0.48 [0.38] Re
a = 0.0137 [0.0034] AU
Ag = N/A
Teffp = N/A

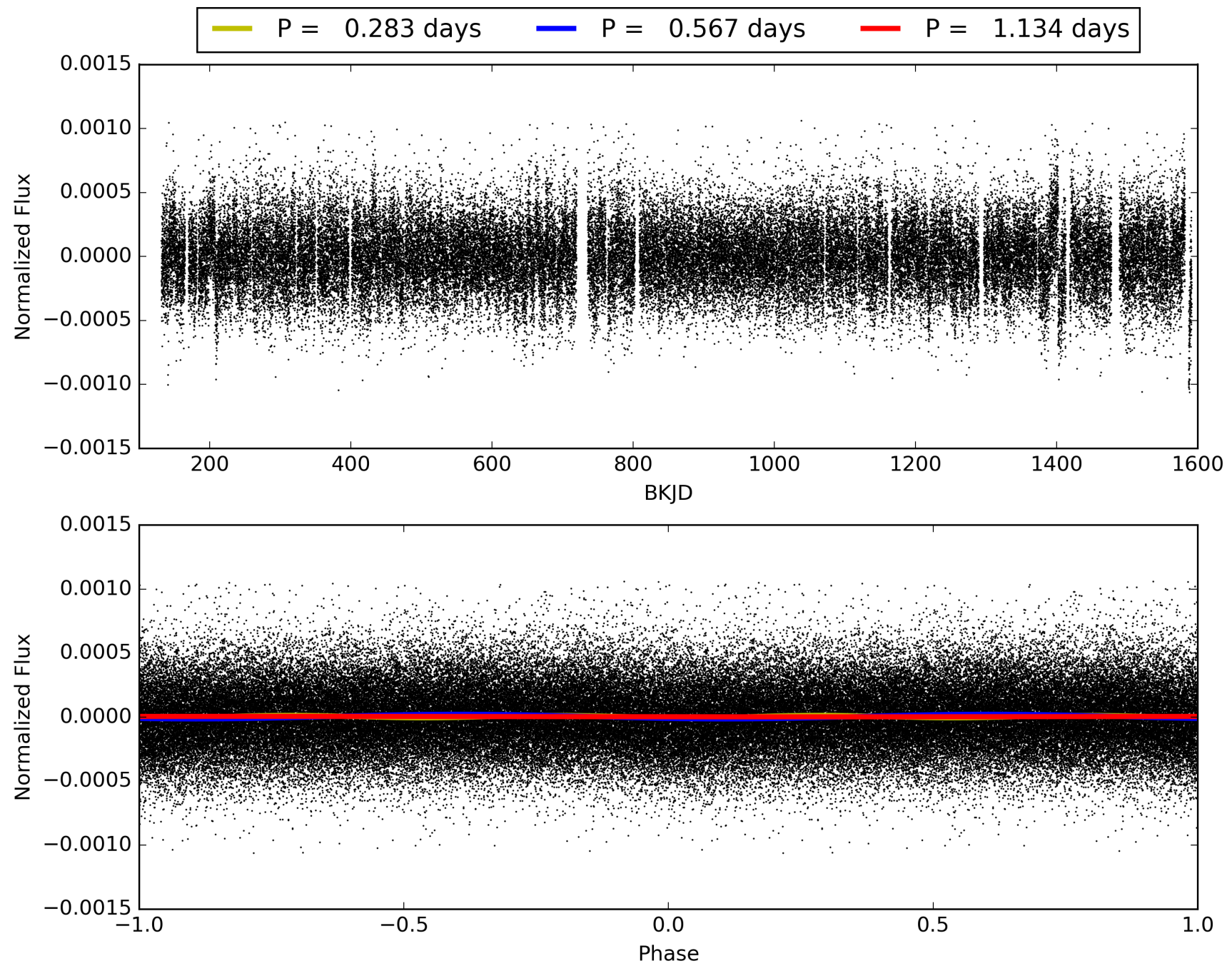
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.71e-19
RollingBand-fgt: 1.00 [2264/2264]
GhostDiagnostic-chr: 0.6062
Centroid-sig: 41.9%
Centroid-so: 1.539 arcsec [0.79 σ]
OotOffset-rm: 2.089 arcsec [3.47 σ]
KicOffset-rm: 2.204 arcsec [3.29 σ]
OotOffset-st: 4/4/4 [16]
KicOffset-st: 4/4/4 [16]
DiffImageQuality-fgm: 0.12 [2/16]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007199724-01, PDC Light Curves

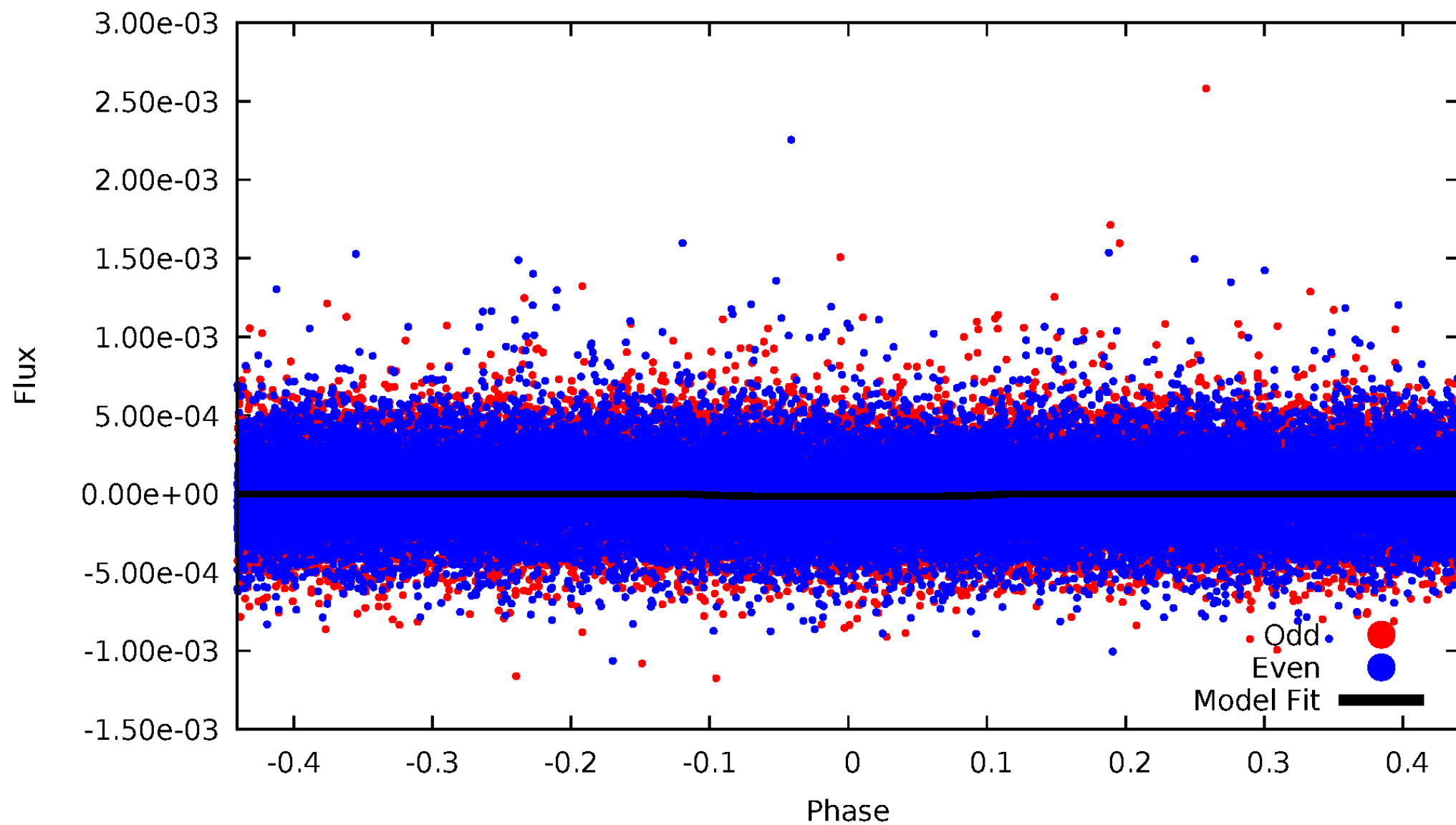


TCE 007199724-01



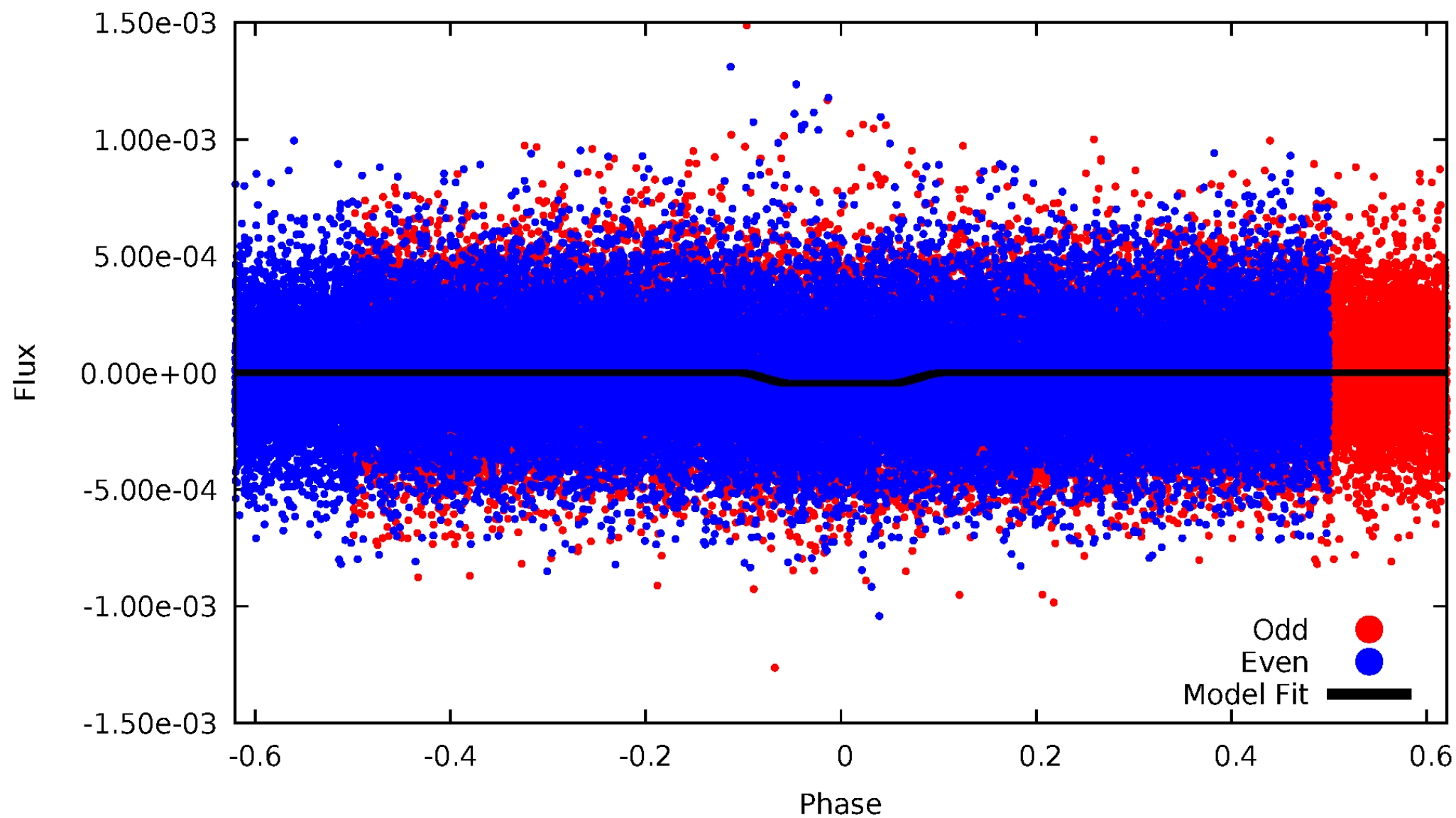
DV Odd/Even

TCE 007199724-01



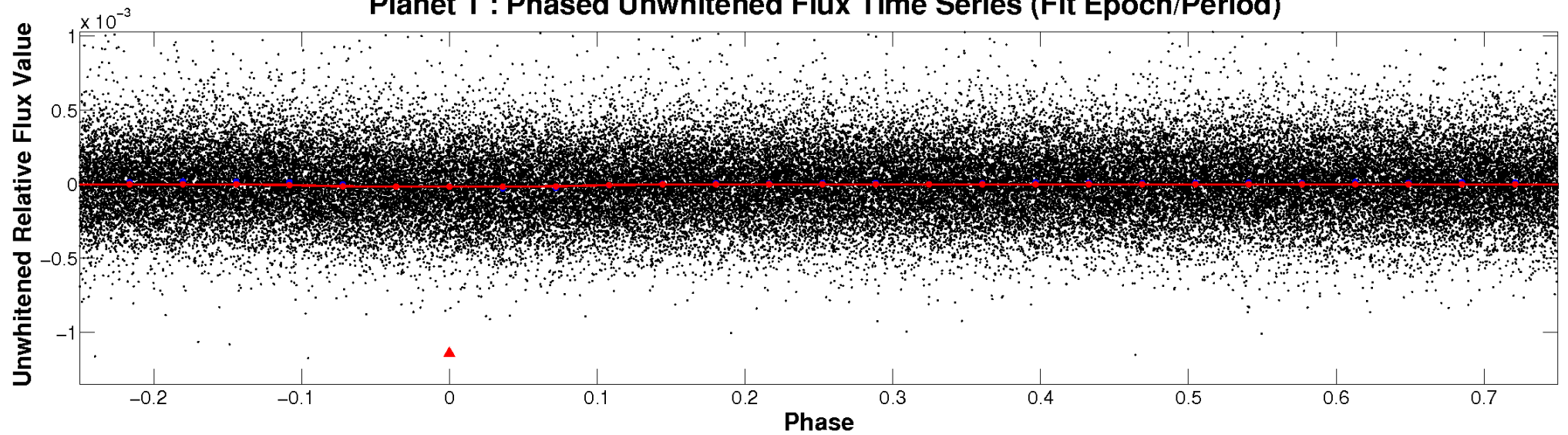
ALT Odd/Even

TCE 007199724-01

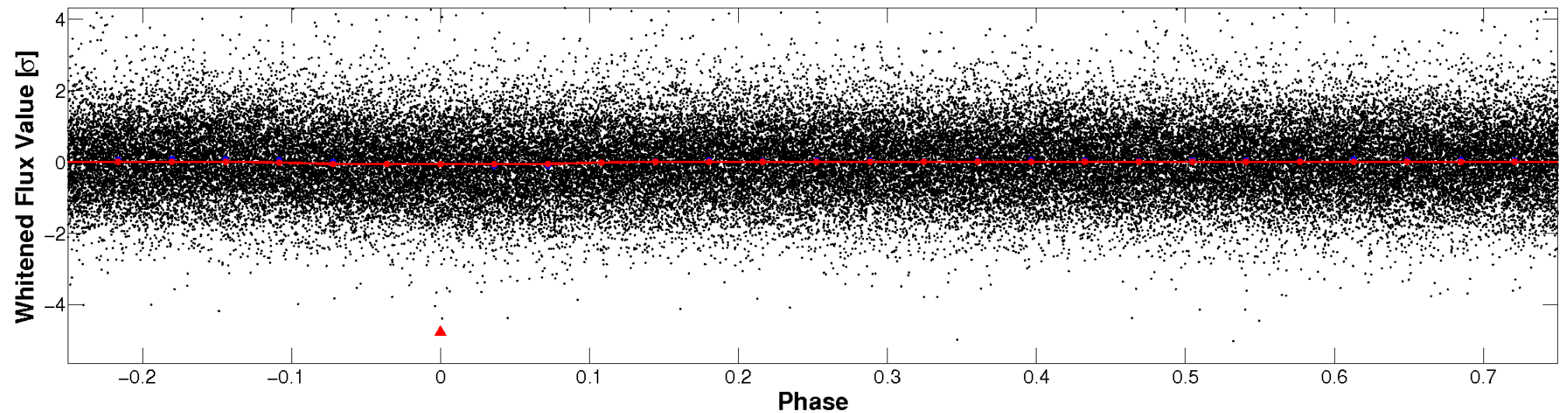


Non-Whitened Vs. Whitened Light Curve

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

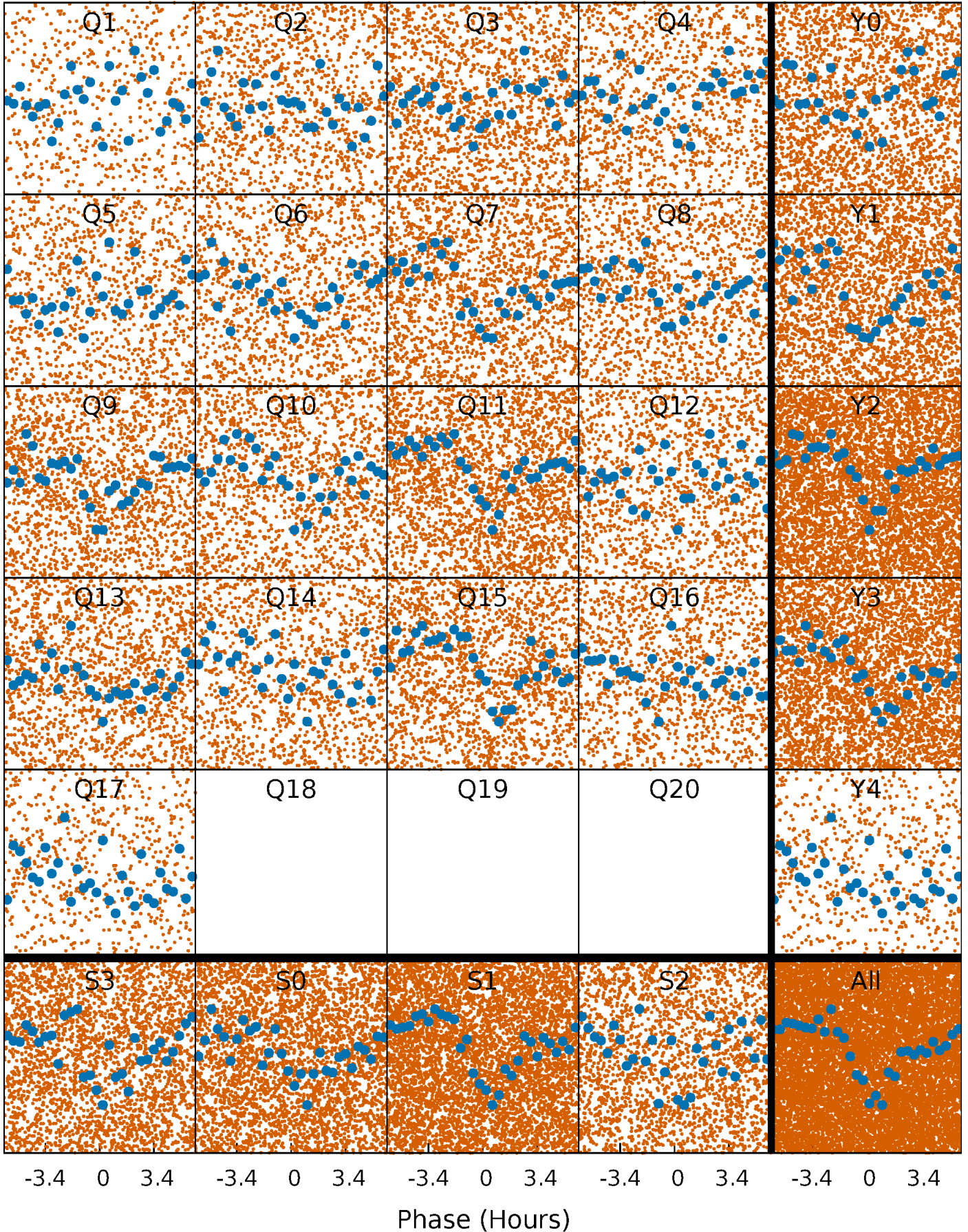


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



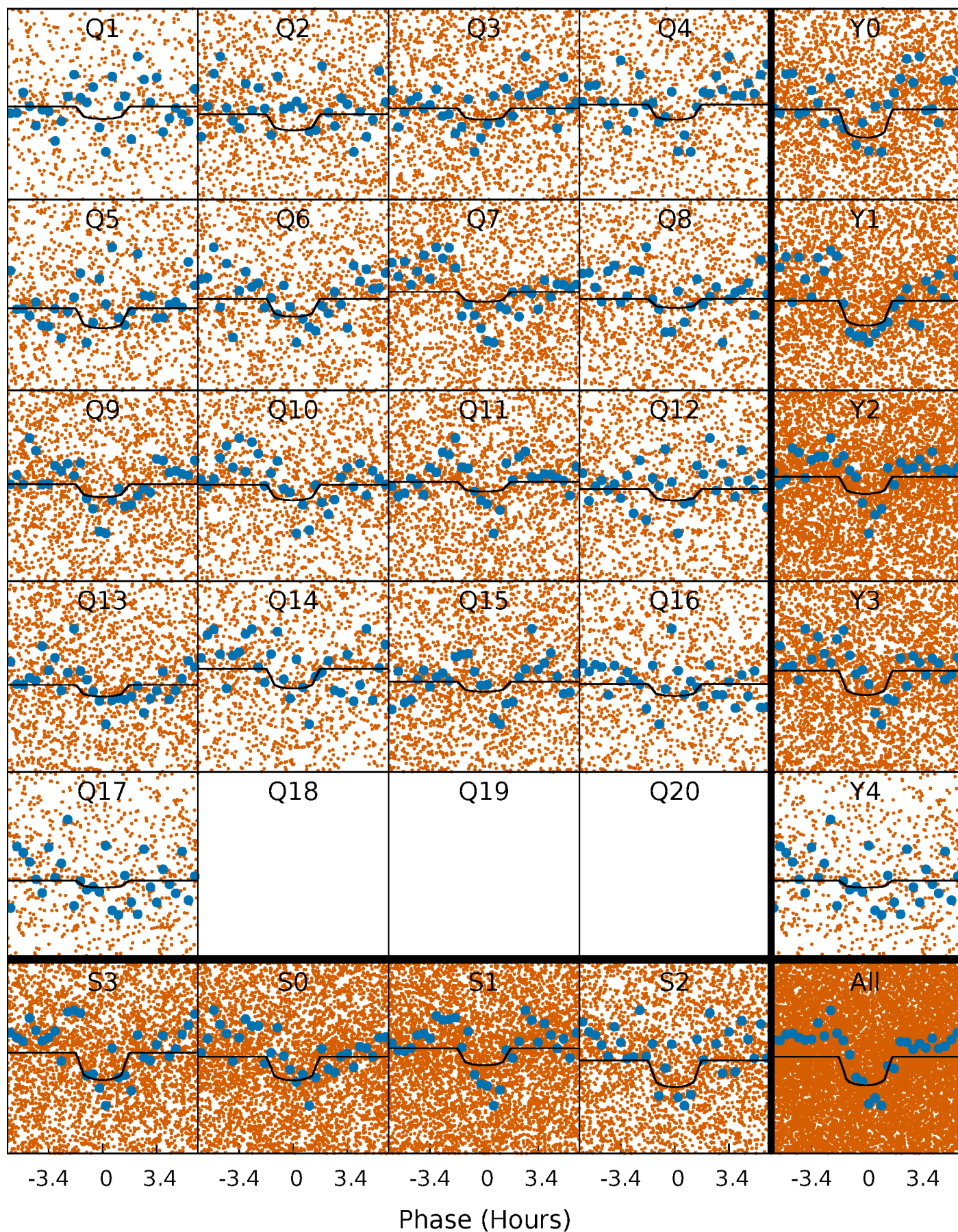
PDC Quarter-Phased Transit Curves

TCE 007199724-01 P= 0.566761 Days $T_0=131.846495$ (BKJD)



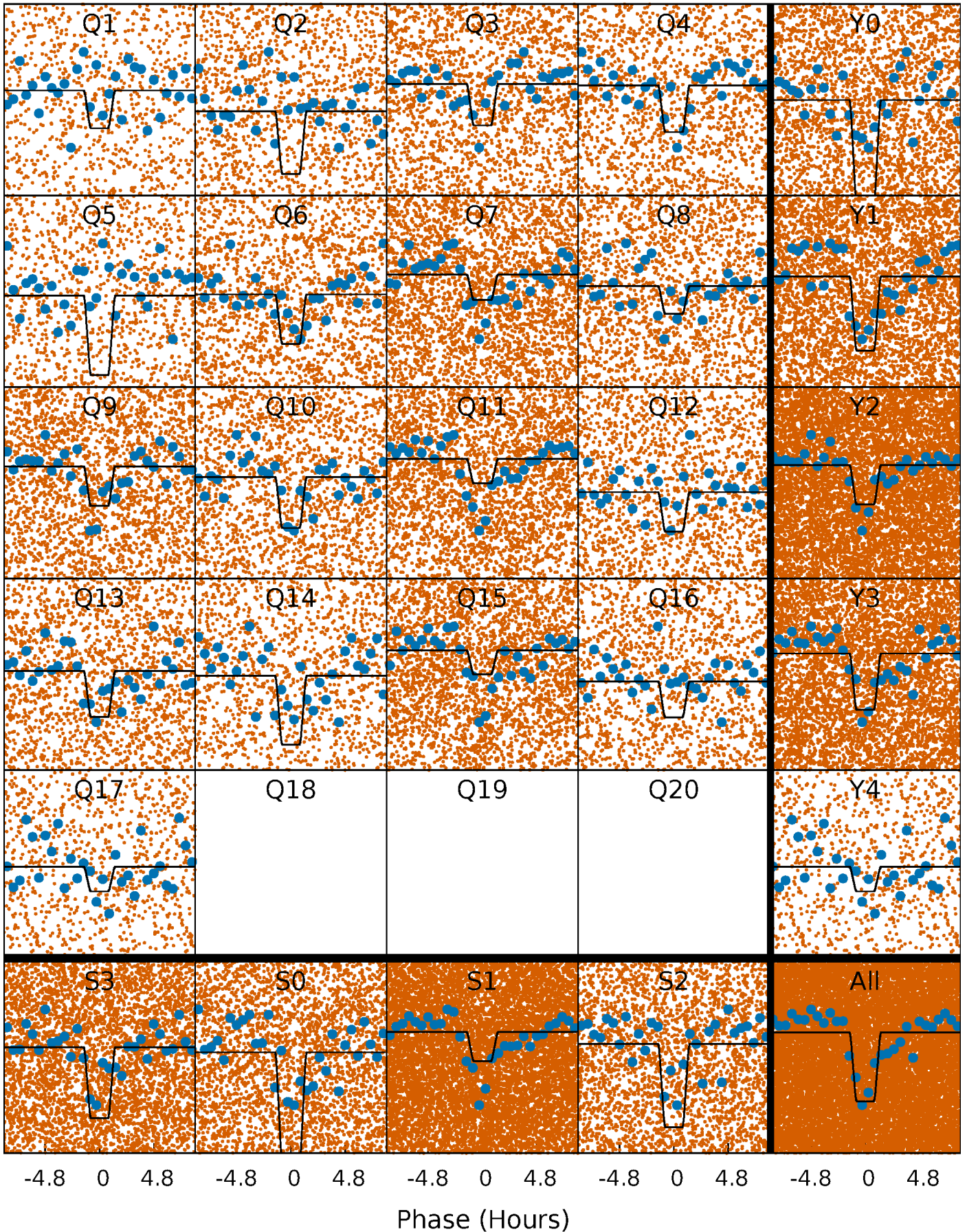
DV Quarter-Phased Transit Curves

TCE 007199724-01 P= 0.566761 Days $T_0=131.846495$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

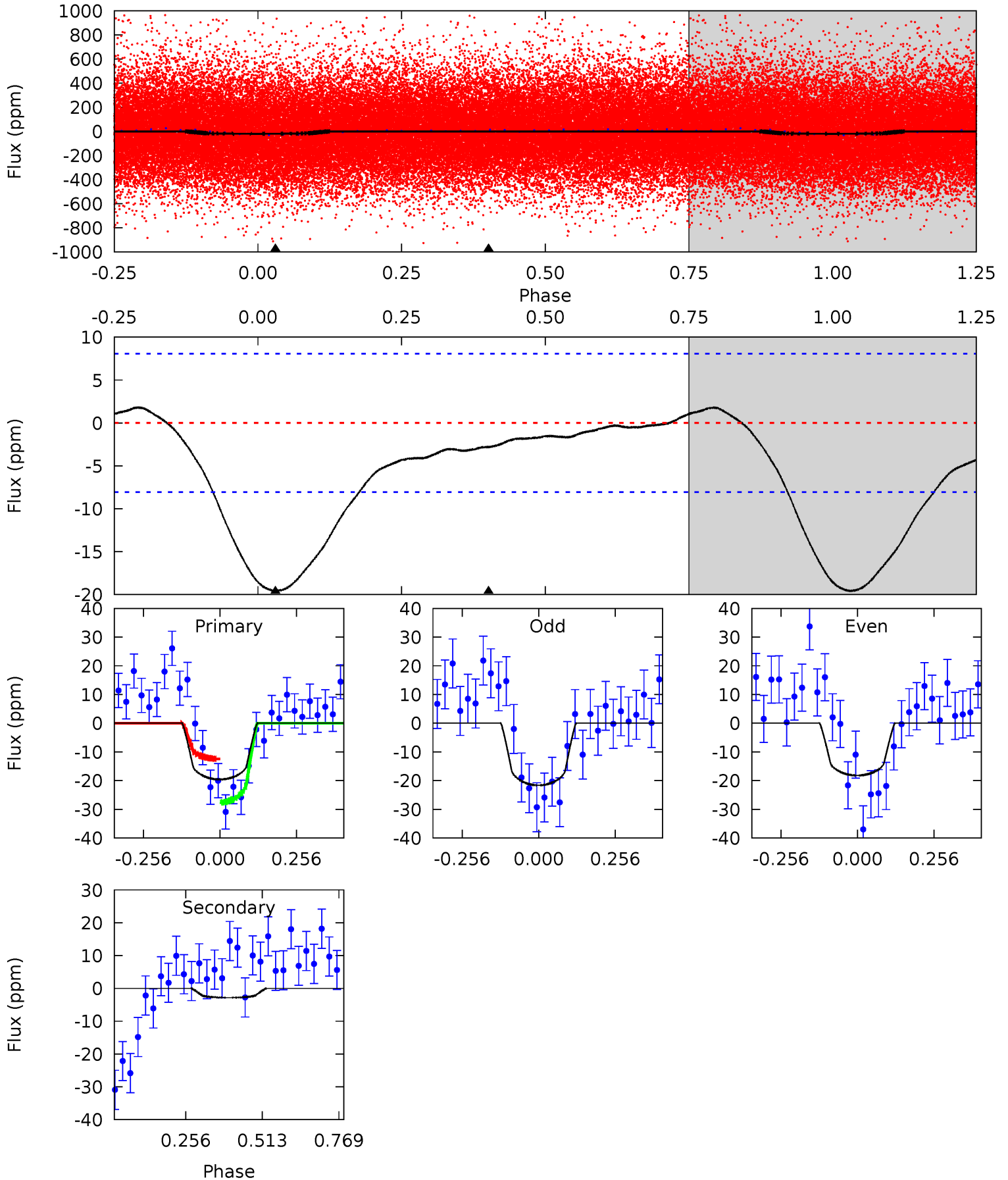
TCE 007199724-01 P= 0.566788 Days $T_0=131.830423$ (BKJD)



DV Model-Shift Uniqueness Test

007199724-01, P = 0.566761 Days, E = 131.279734 Days

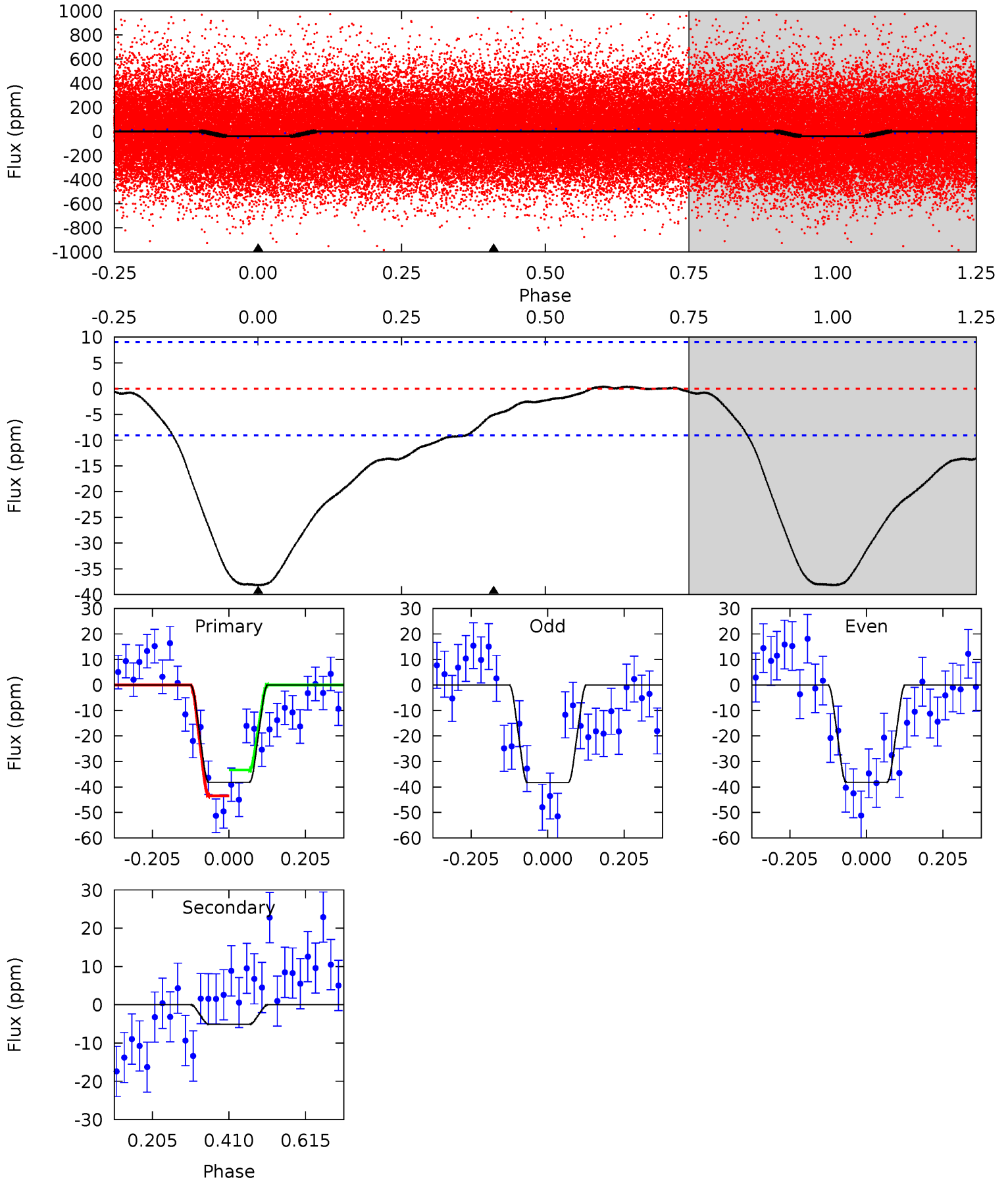
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	1.53	0	0	4.36	1.13	0.35	10.6	10.6	1.53	1.53	0.93	0.86	0.08	4.08



Alt Model-Shift Uniqueness Test

007199724-01, P = 0.566788 Days, E = 131.263635 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.6	2.48	0	0	4.41	1.27	0.23	18.6	18.6	2.48	2.48	0.02	0.91	0.01	2.47



Stellar Parameters For KIC 007199724

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6108^{+162}_{-198}	$4.471^{+0.062}_{-0.200}$	$-0.080^{+0.250}_{-0.350}$	$0.997^{+0.294}_{-0.105}$	$1.072^{+0.139}_{-0.153}$	$1.525^{+0.414}_{-0.788}$
	+3%/-3%	+1%/-4%	+312%/-438%	+29%/-11%	+13%/-14%	+27%/-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 007199724-01 / KOI 7822.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-3 ± 2	$0.54^{+0.36}_{-0.31}$	3257^{+217}_{-147}	3616^{+1635}_{-6457}	$0.895^{+3.686}_{-0.706}$
Alt.	-5 ± 2	$0.77^{+0.37}_{-0.38}$	3265^{+234}_{-161}	3570^{+1243}_{-1229}	$0.847^{+2.274}_{-0.524}$

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 $A_{obs} \gg 1.0$

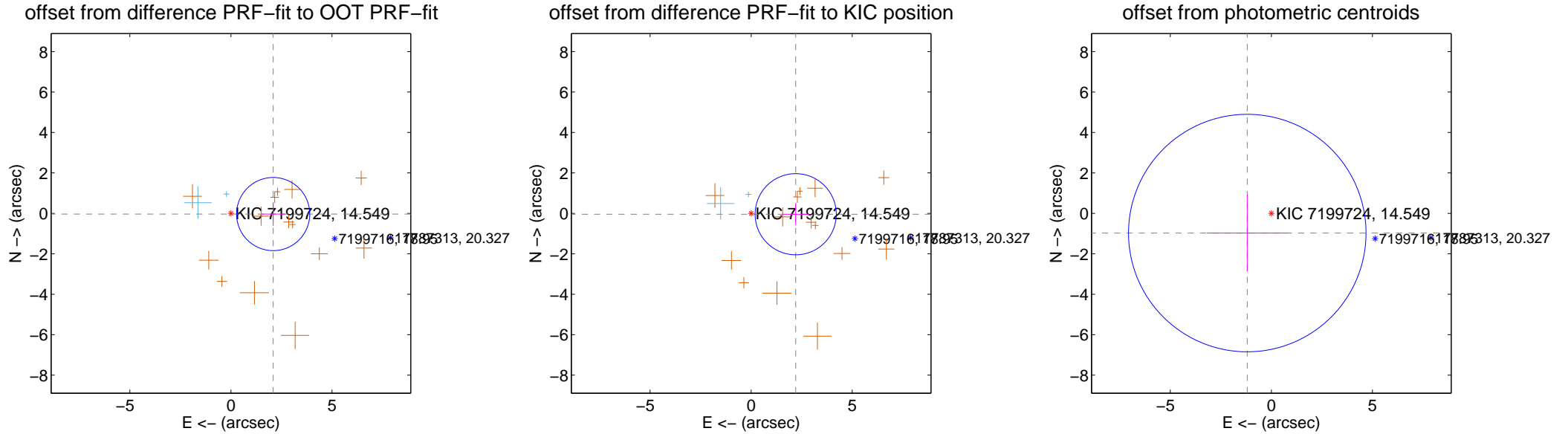
DV Centroid Data

Supplemental centroid analysis for 007199724-01. Kepler magnitude: 14.55. Transit SNR 6.79

There are 2 quarters with good PRF difference image offsets

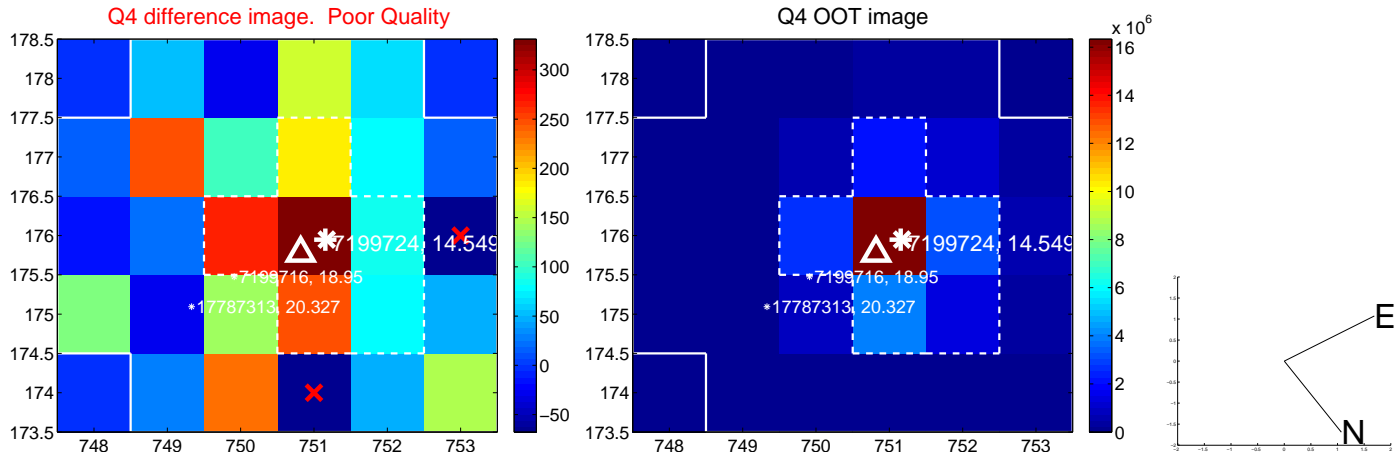
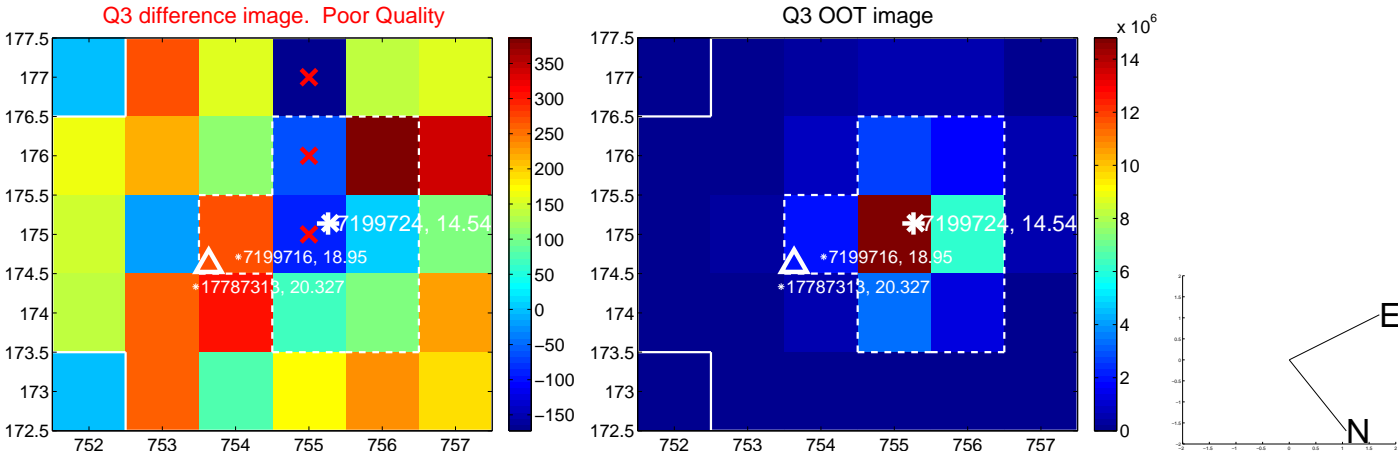
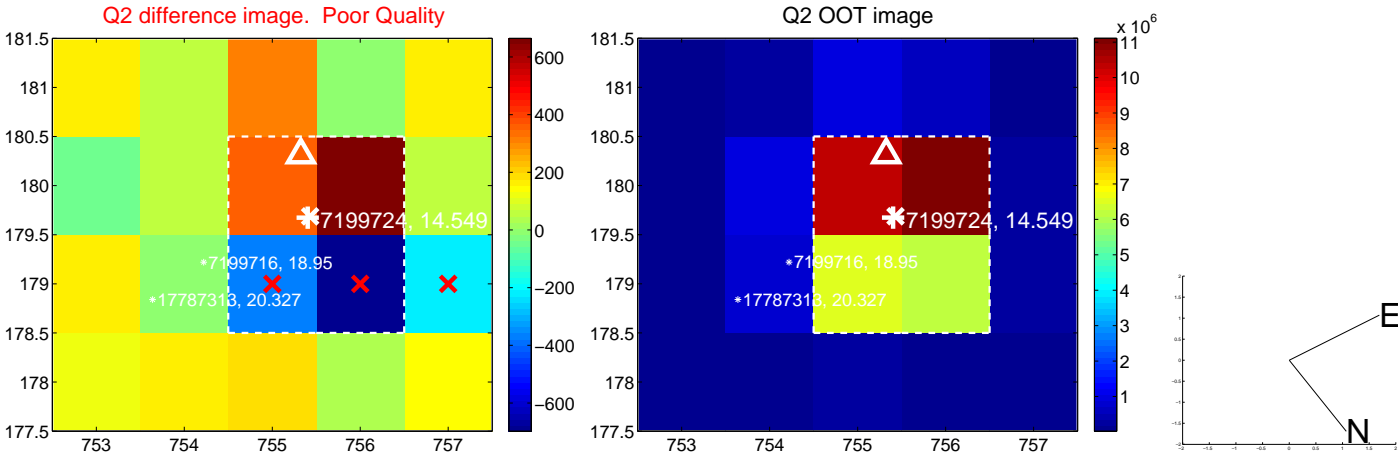
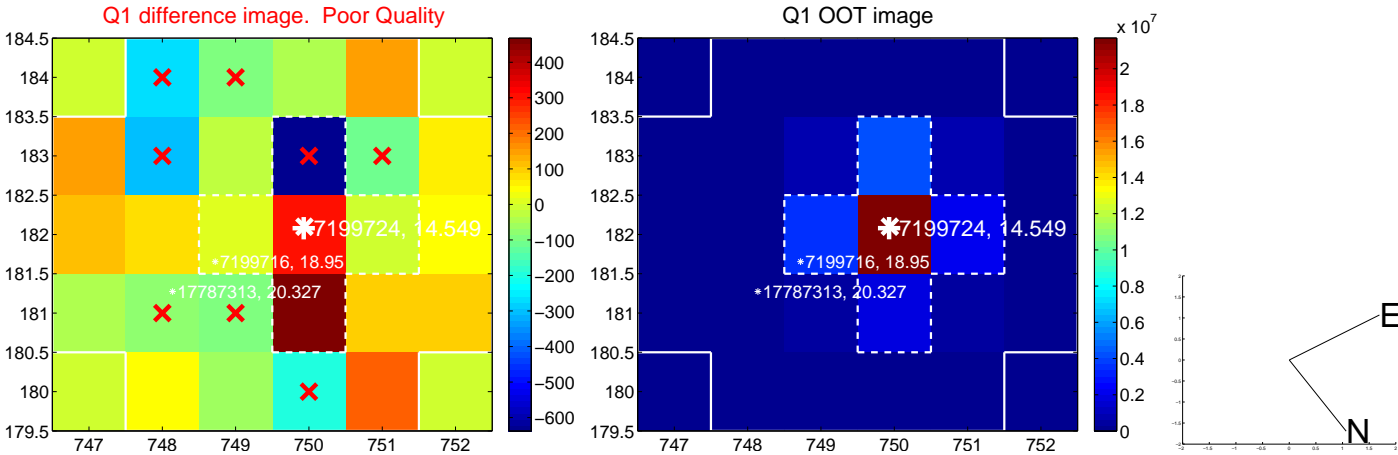
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.089 ± 0.603	3.47	-2.089 ± 0.603	-0.035 ± 0.577
PRF-fit source offset from KIC position	2.204 ± 0.669	3.29	-2.203 ± 0.670	-0.043 ± 0.544
photometric centroid source offset	1.54 ± 1.96	0.79	1.19 ± 1.99	-0.97 ± 1.90

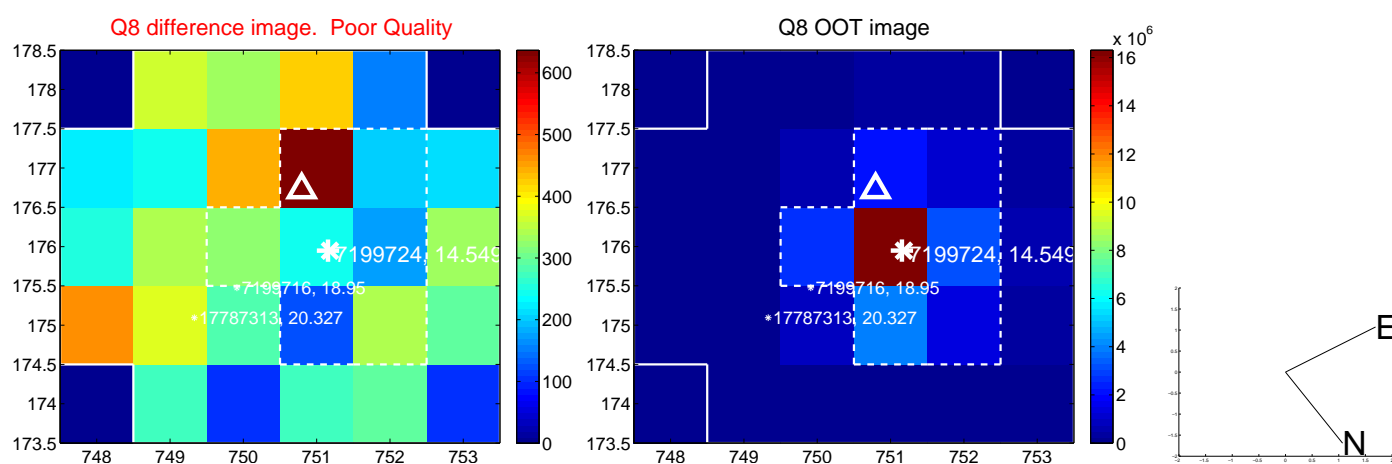
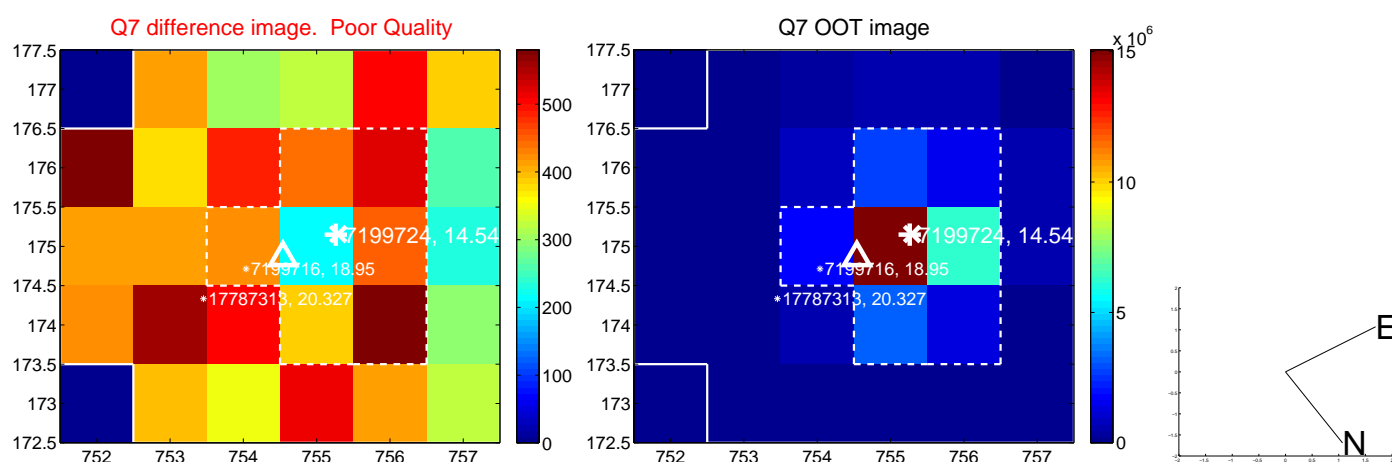
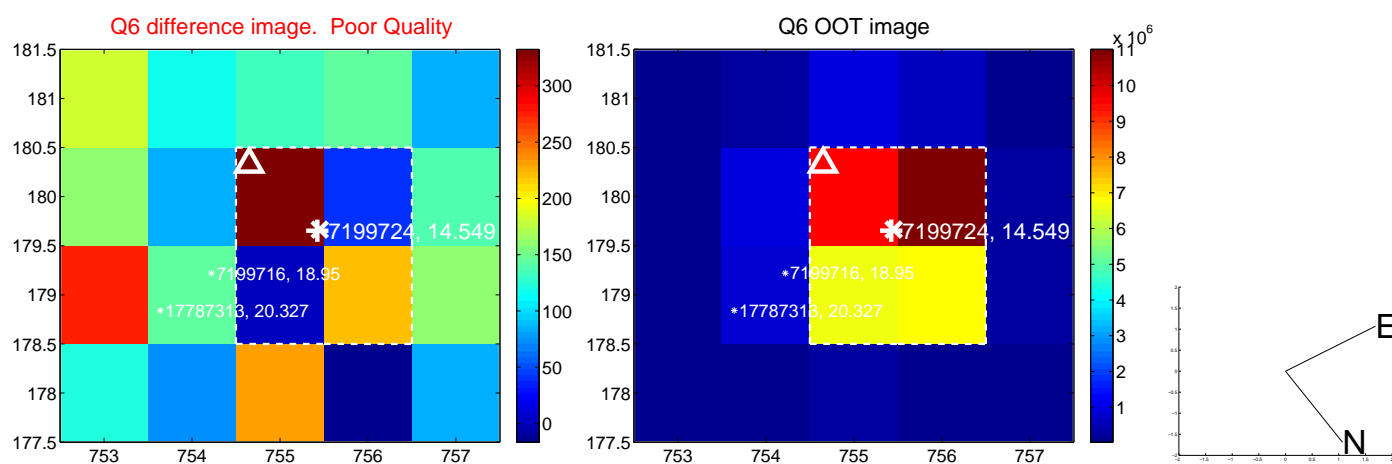
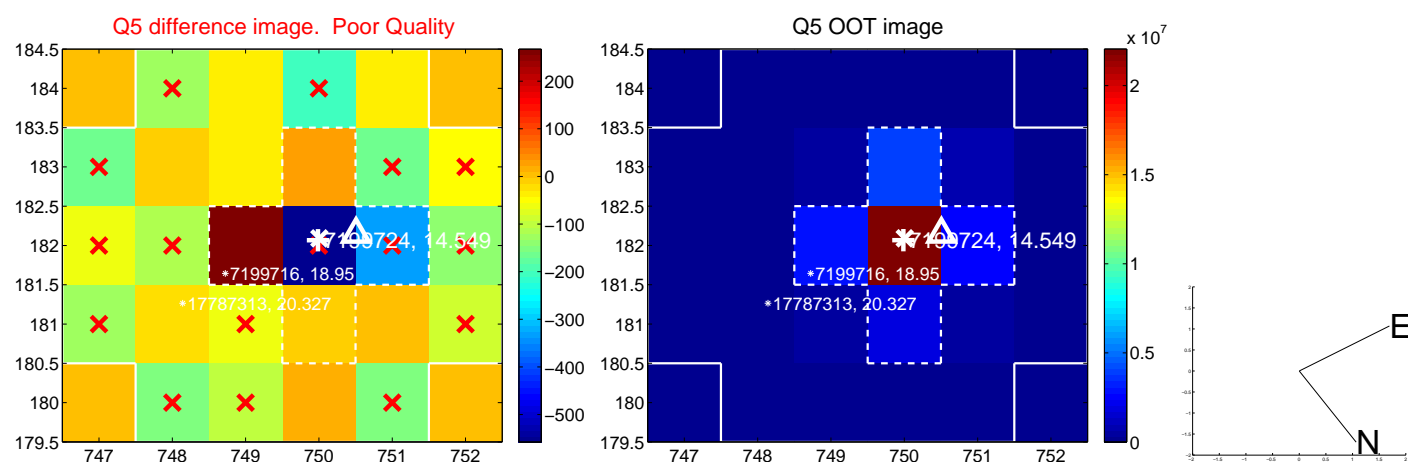


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

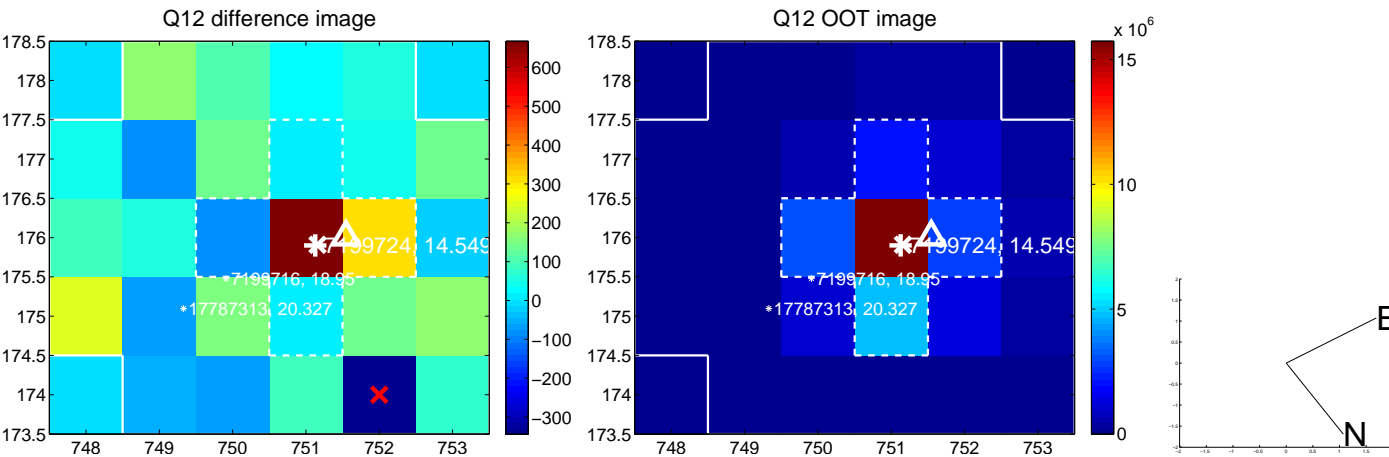
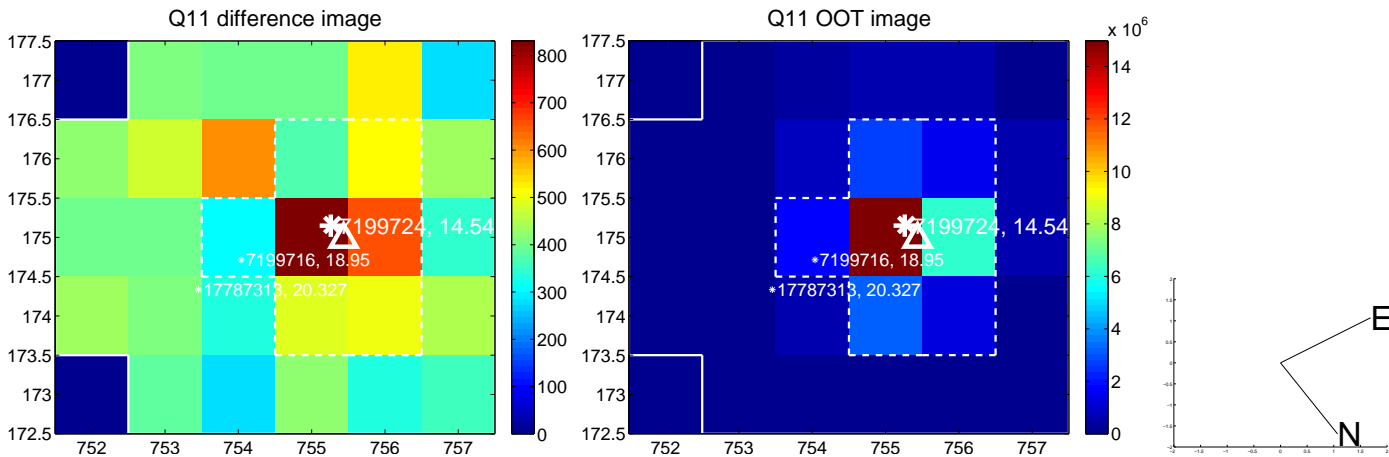
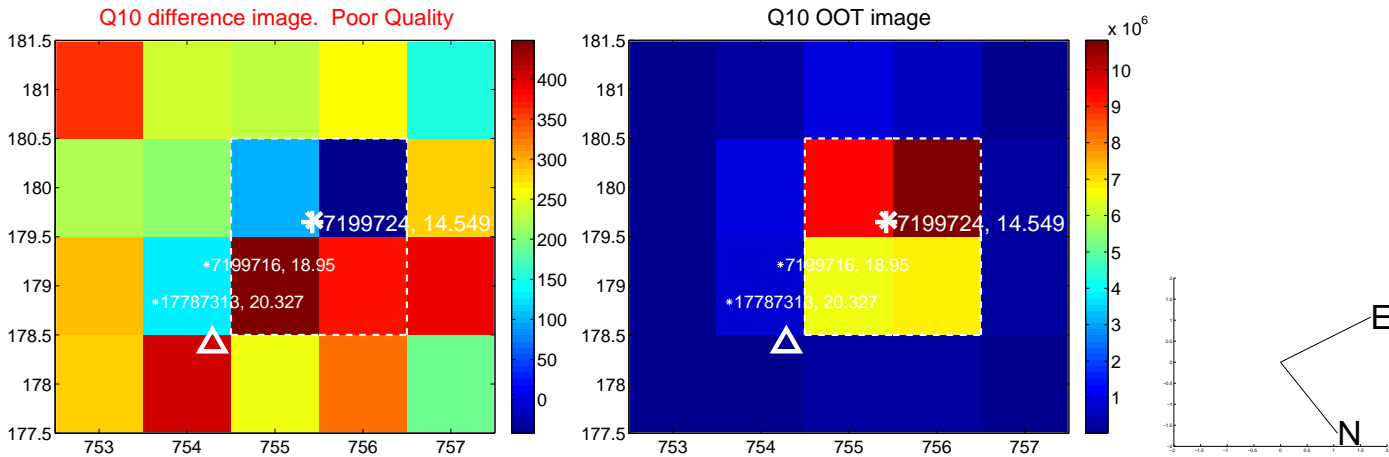
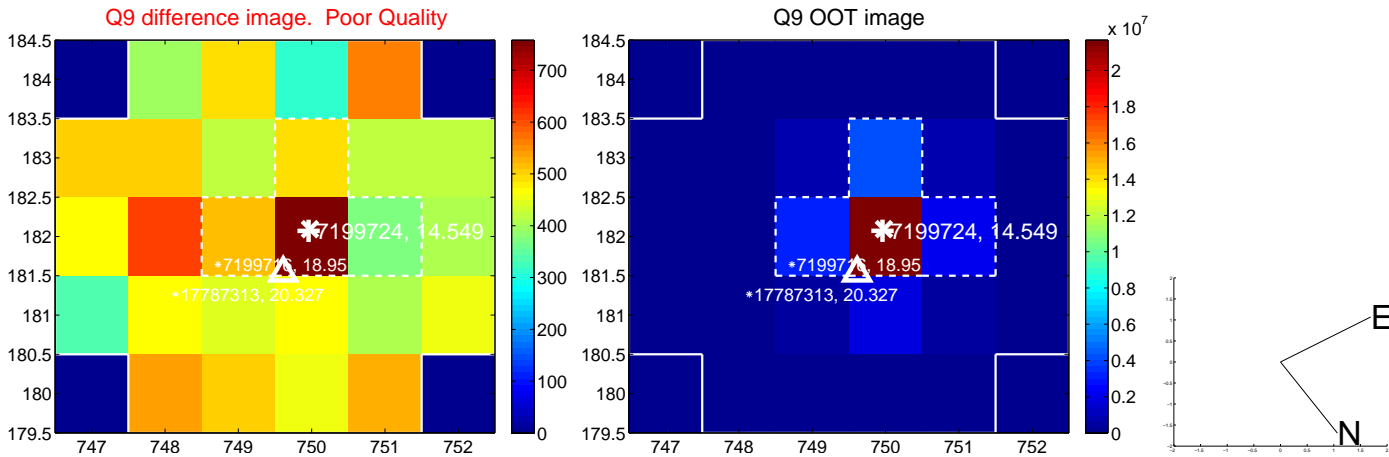
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



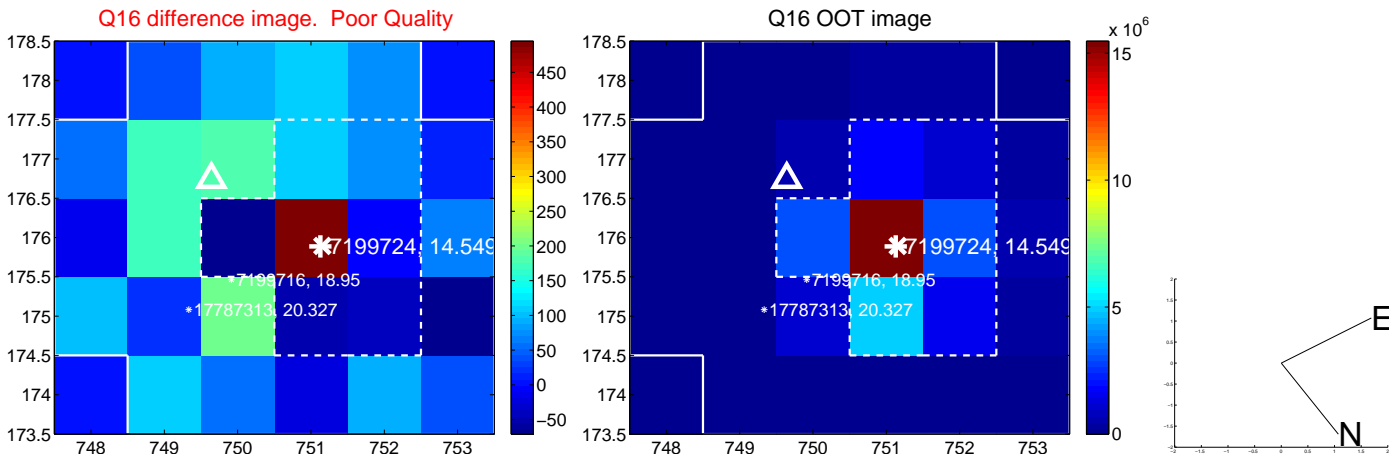
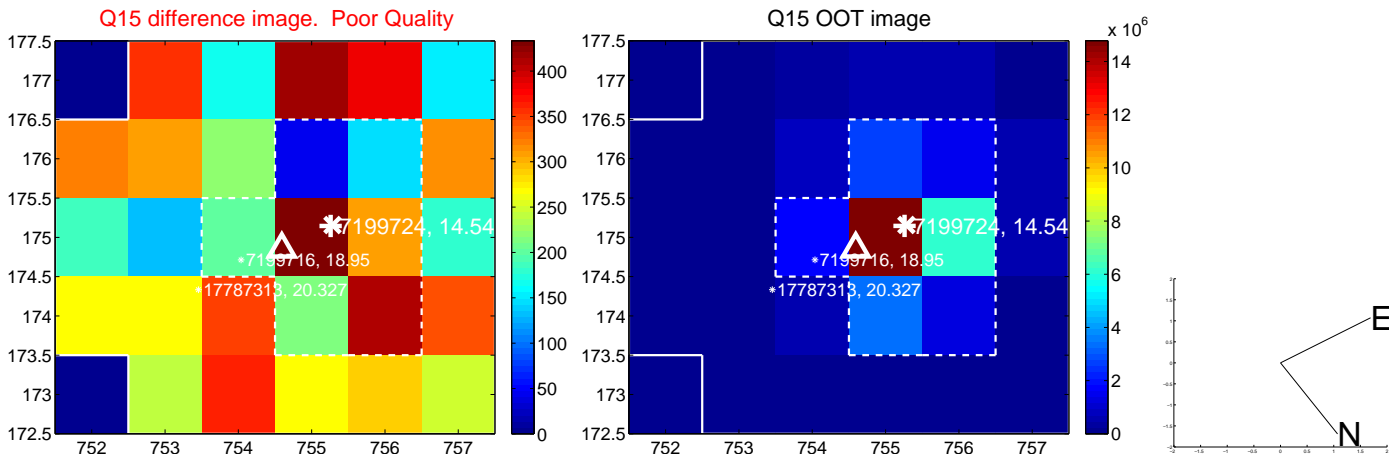
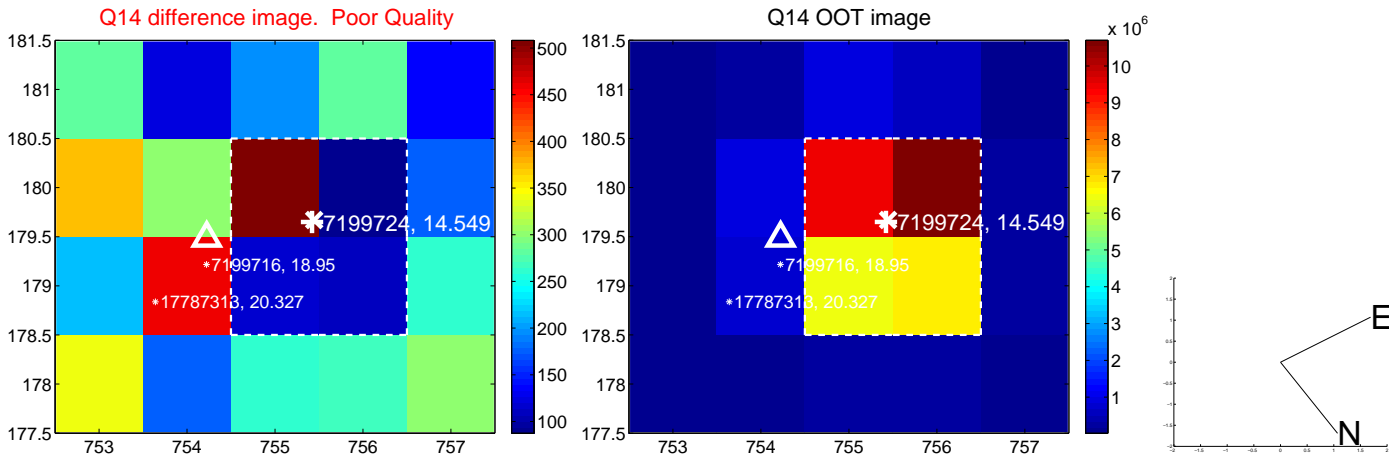
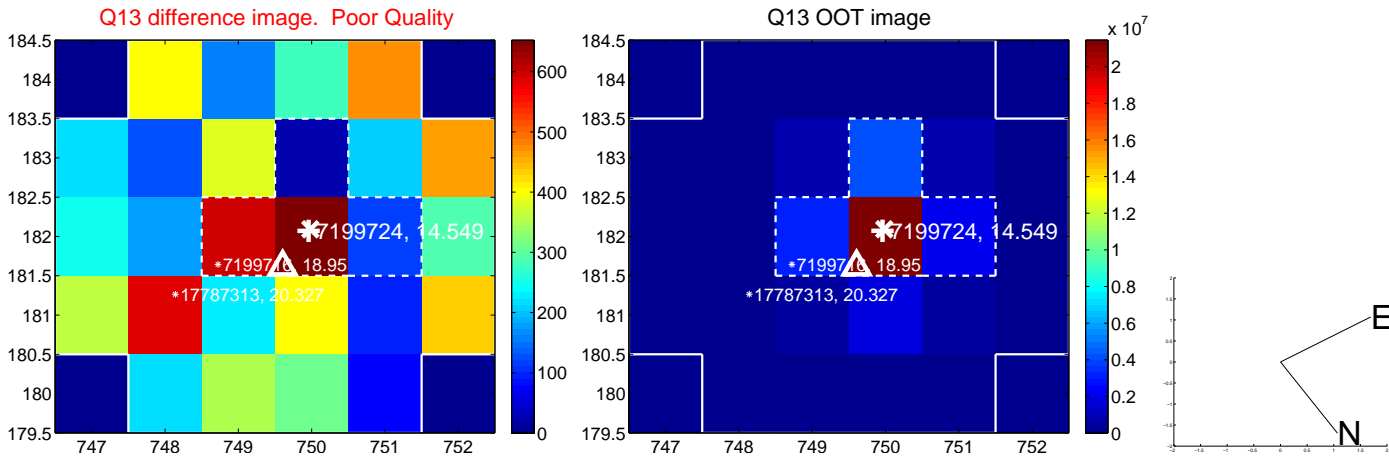
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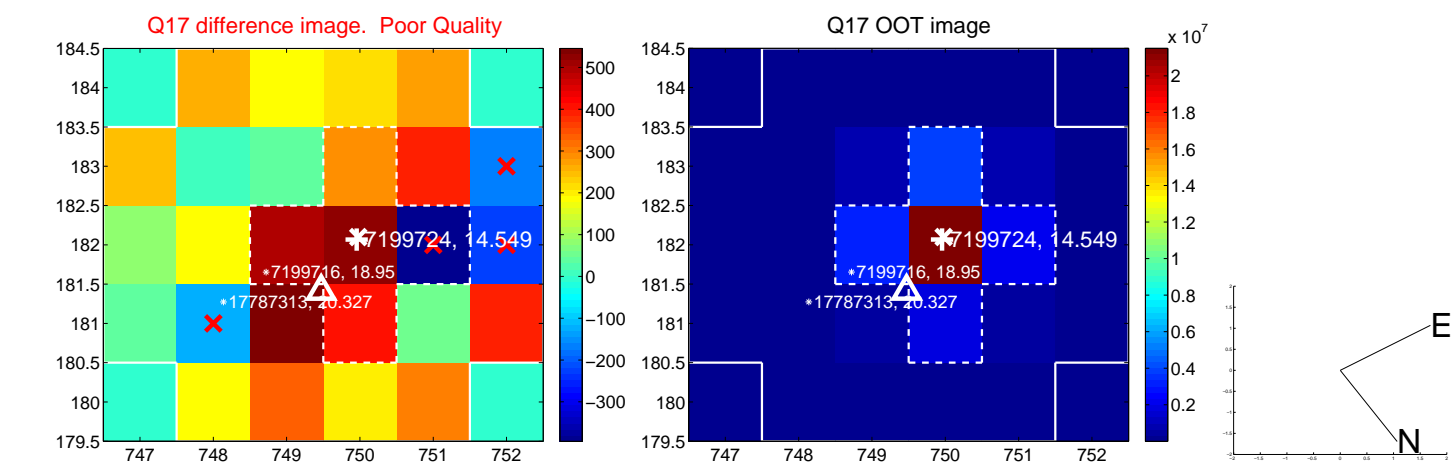
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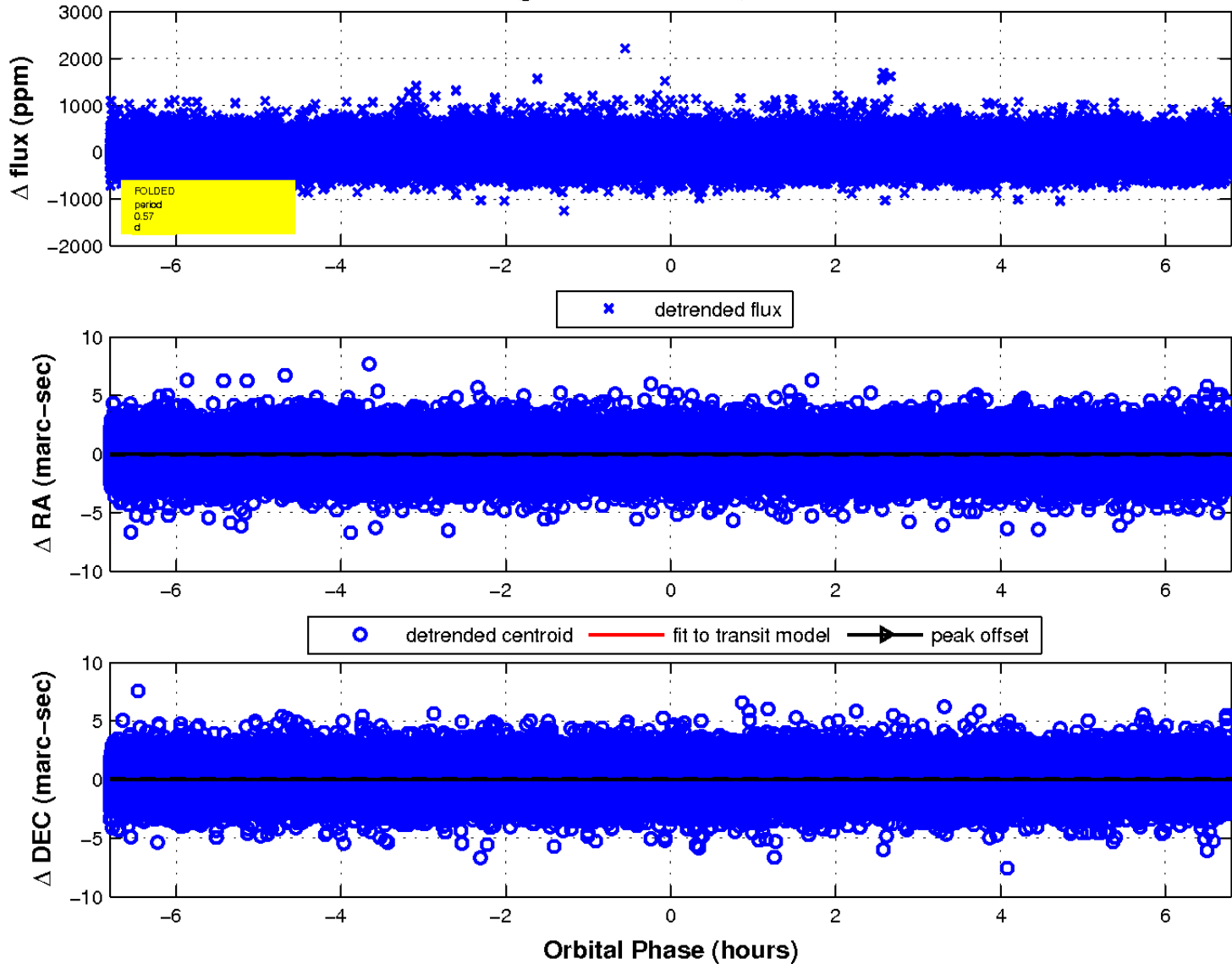
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

