

KIC 007819927

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})
007819927-01	OBS	No	107.879167	198.614580	45.8	2.177	10.6	12.8	18.55	4875	13.42	391.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007819927-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED

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

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

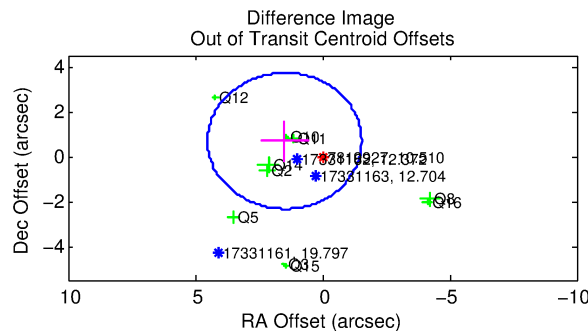
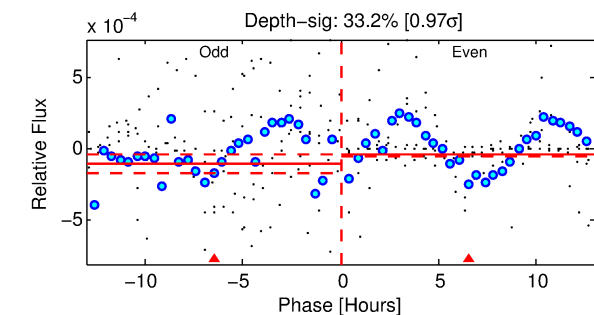
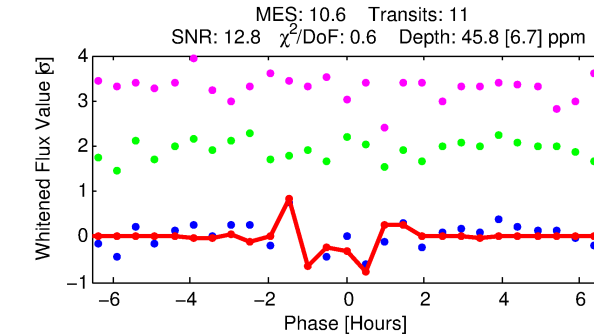
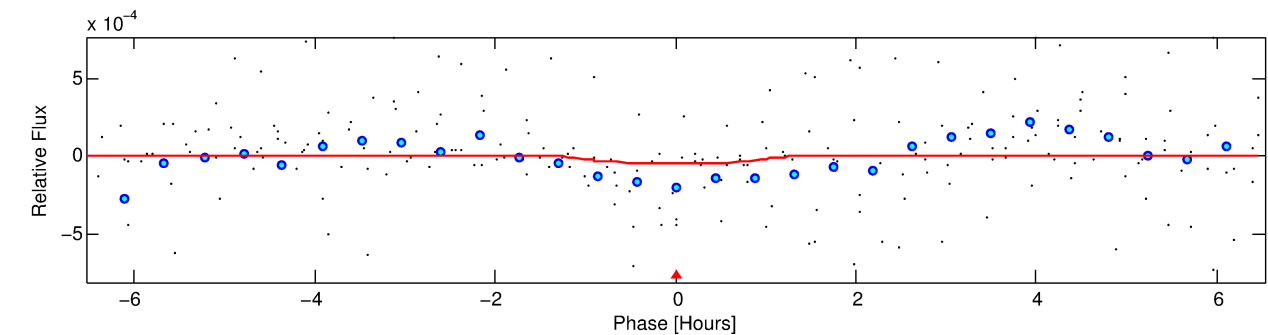
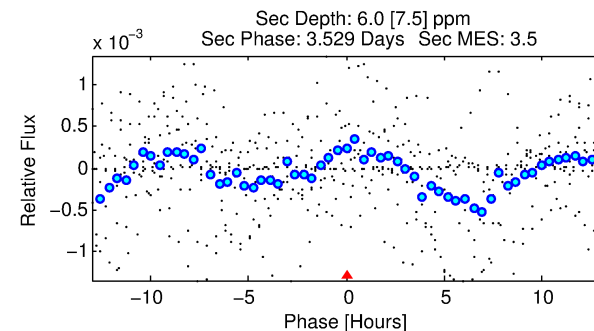
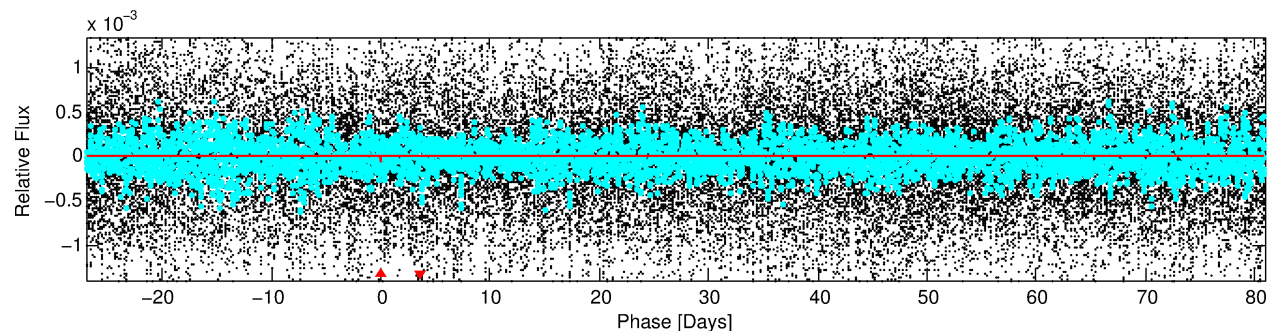
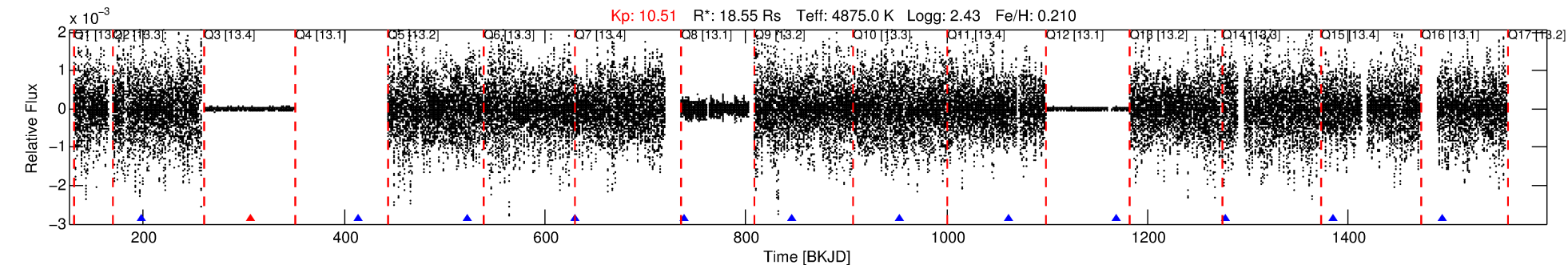
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007819927-01

No Significant Match Found

DV One-Page Summary

KIC: 7819927 Candidate: 1 of 1 Period: 107.879 d



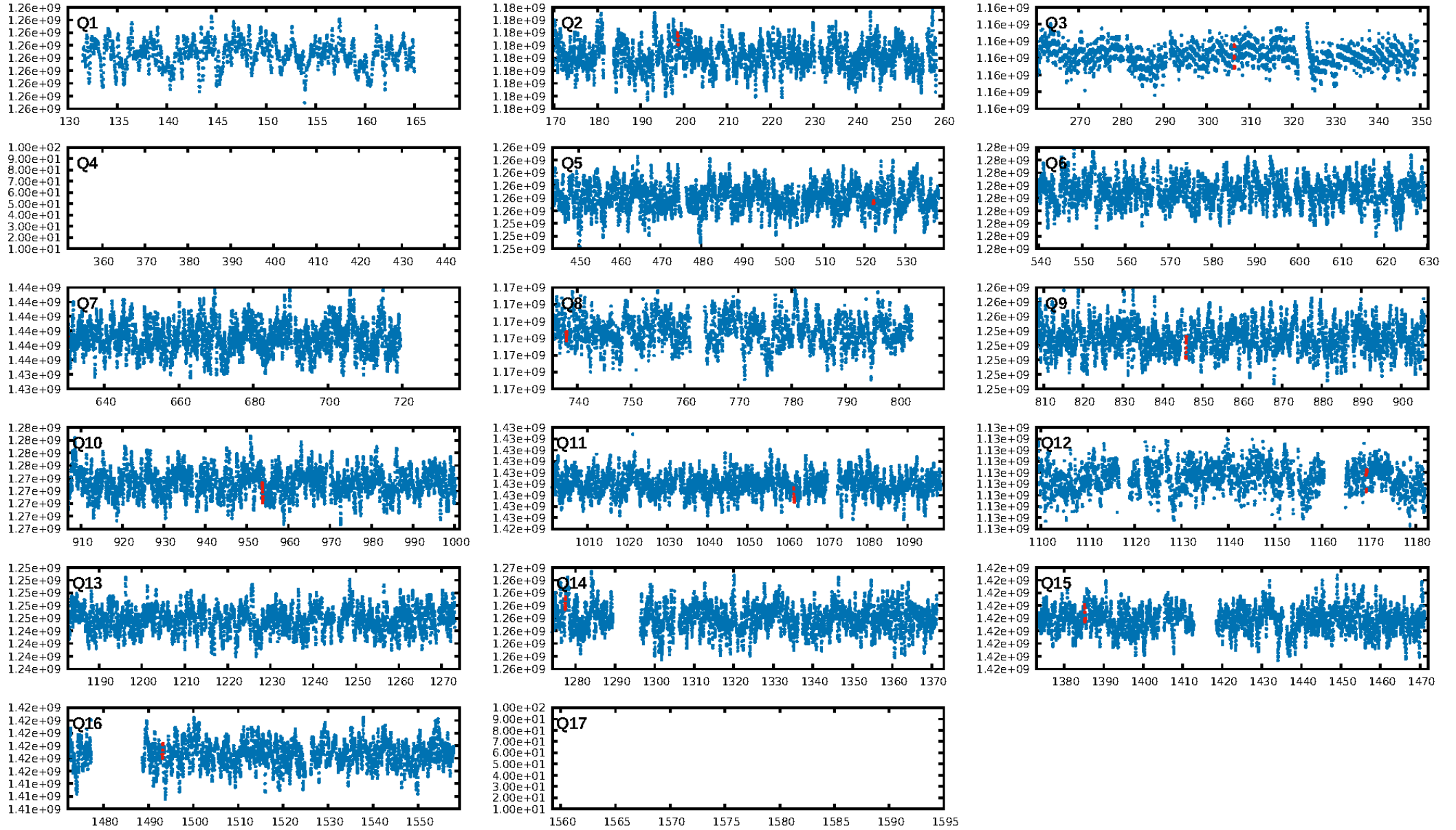
DV Fit Results:

Period = 107.87917 [0.00036] d
Epoch = 198.6146 [0.0037] BKJD
Rp/R* = 0.0066 [0.0020]
a/R* = 273.25 [307.68]
b = 0.70 [0.83]
Seff = 391.31 [117.23]
Teq = 1134 [85] K
Rp = 13.42 [6.14] Re
a = 0.6673 [0.1526] AU
Ag = 8.11 [11.45] [0.62σ]
Teffp = 2959 [1039] K [1.75σ]

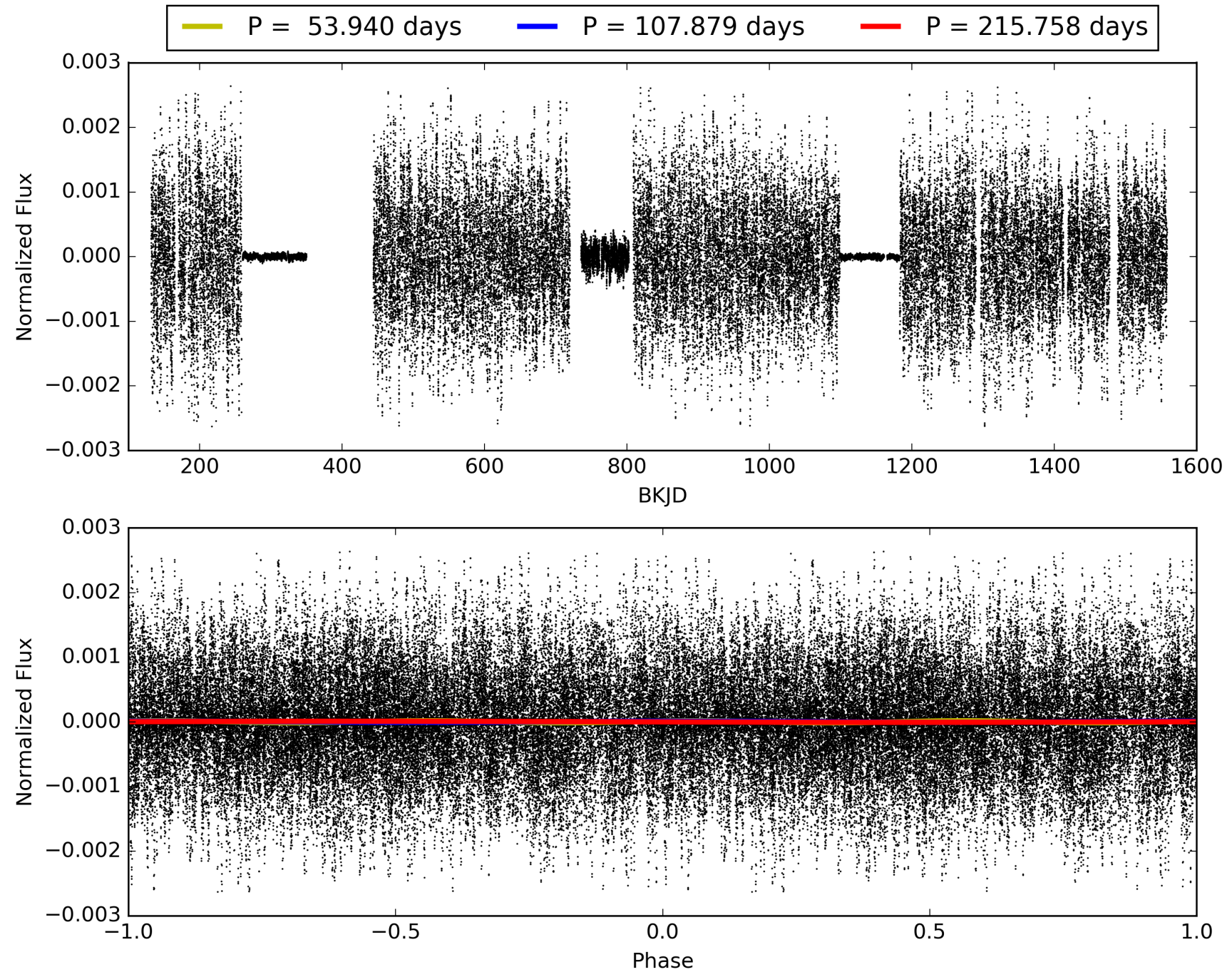
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.72e-20
RollingBand-fgt: 0.91 [10/11]
GhostDiagnostic-chr: -0.6389
Centroid-sig: 47.8%
Centroid-so: 2.045 arcsec [0.71σ]
OotOffset-rm: 1.636 arcsec [1.62σ]
KicOffset-rm: 2.011 arcsec [2.09σ]
OotOffset-st: 3/3/3/1 [10]
KicOffset-st: 3/3/3/1 [10]
DiffImageQuality-fgm: 0.60 [6/10]
DiffImageOverlap-fno: 1.00 [10/10]

TCE 007819927-01, PDC Light Curves

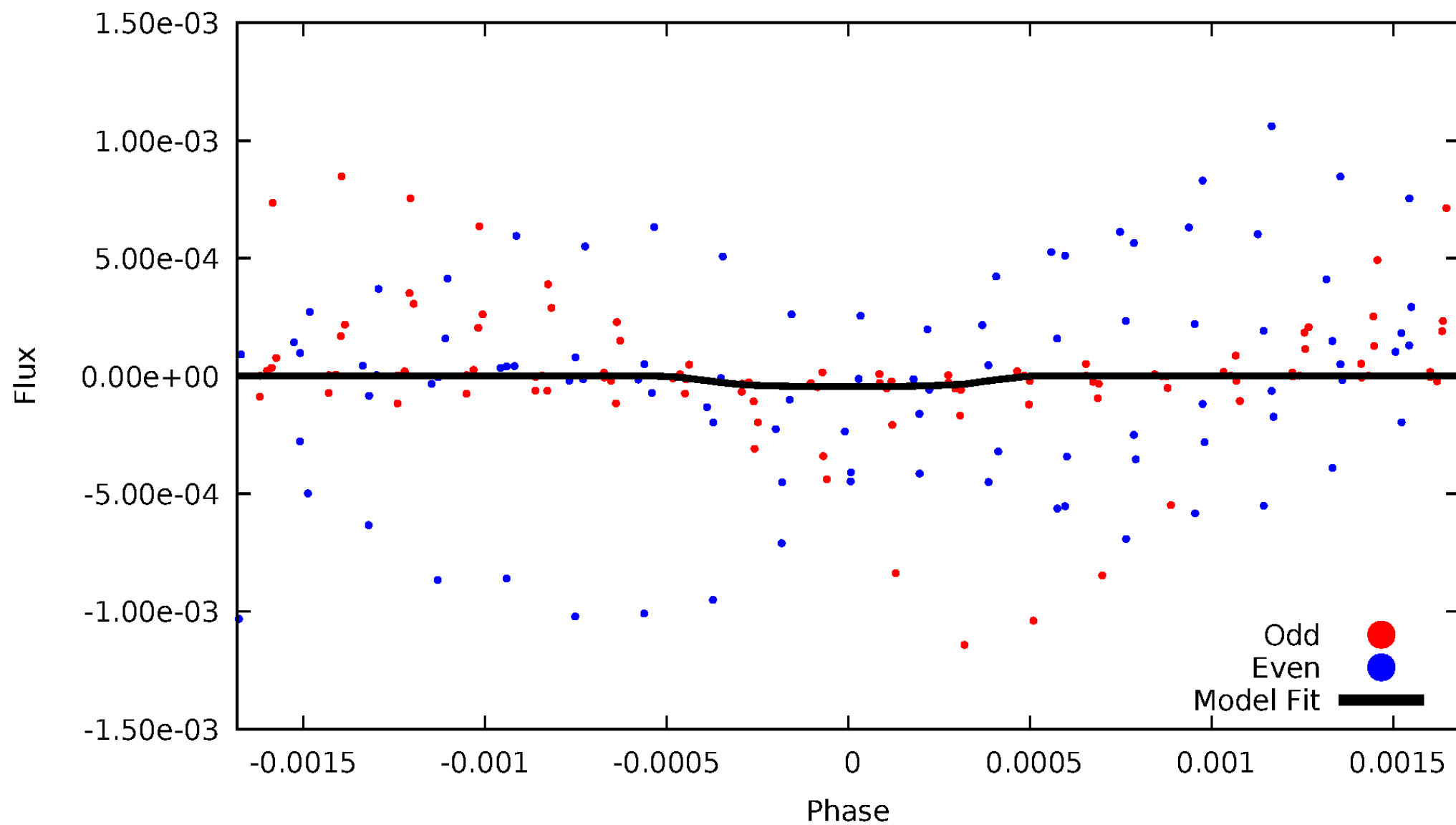


TCE 007819927-01



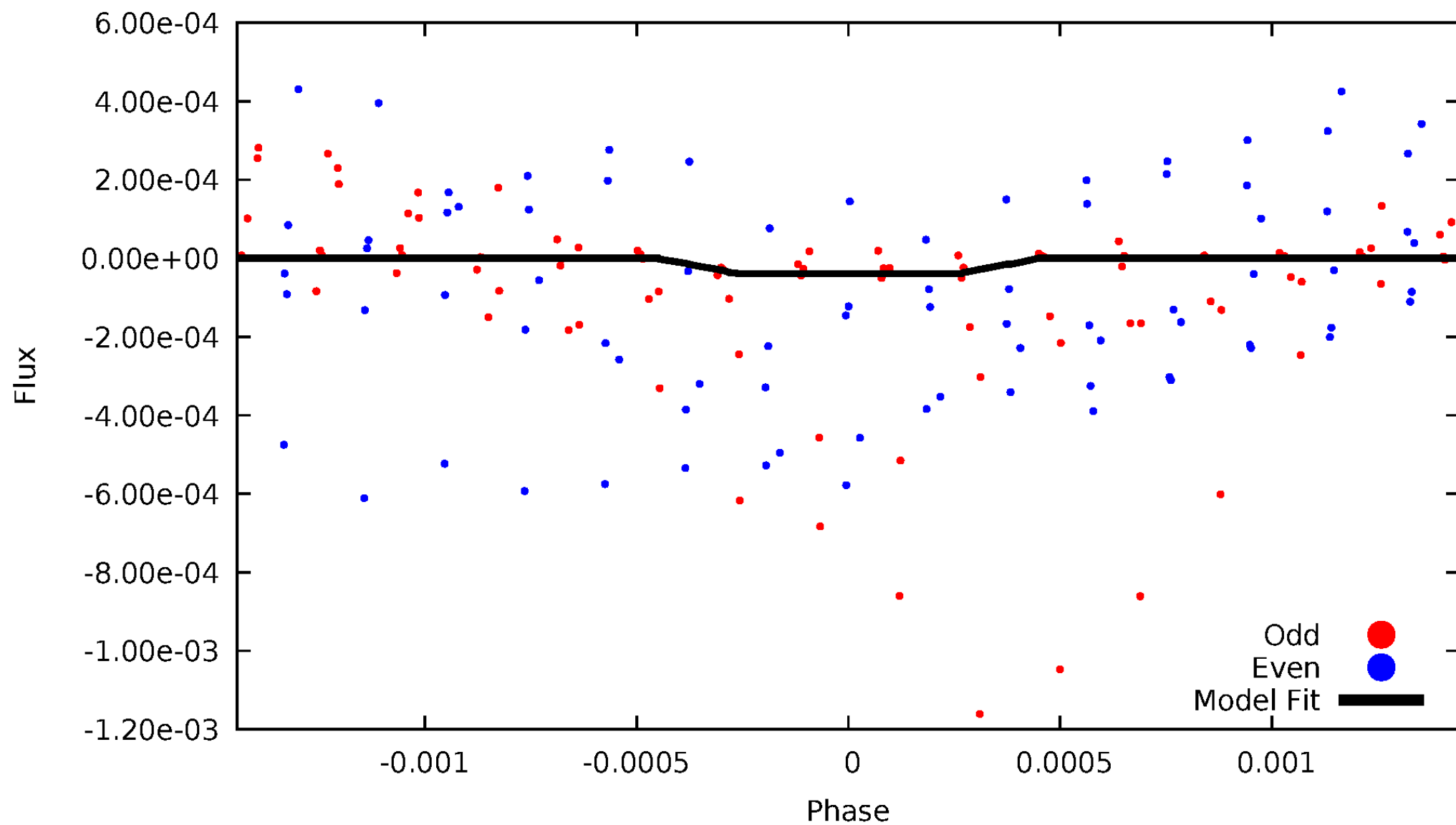
DV Odd/Even

TCE 007819927-01

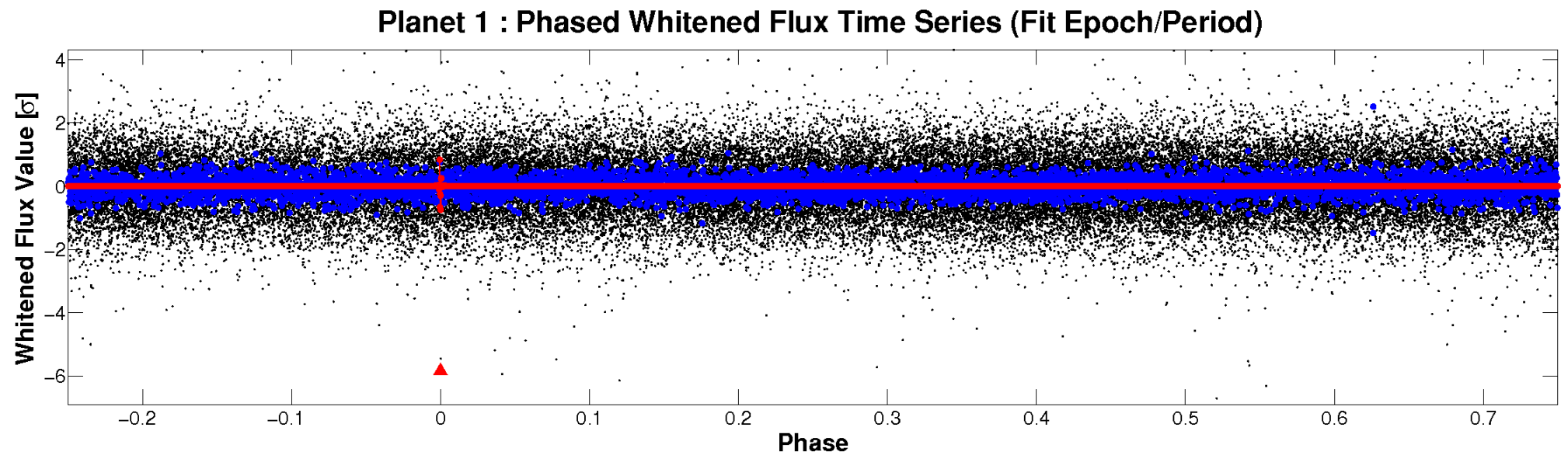
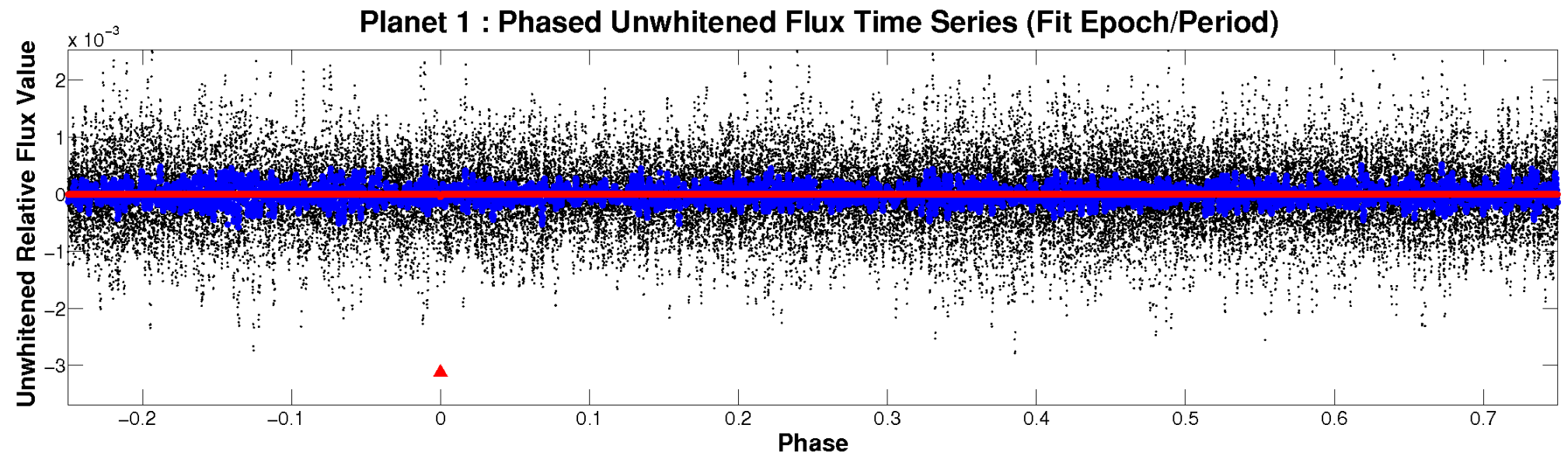


ALT Odd/Even

TCE 007819927-01

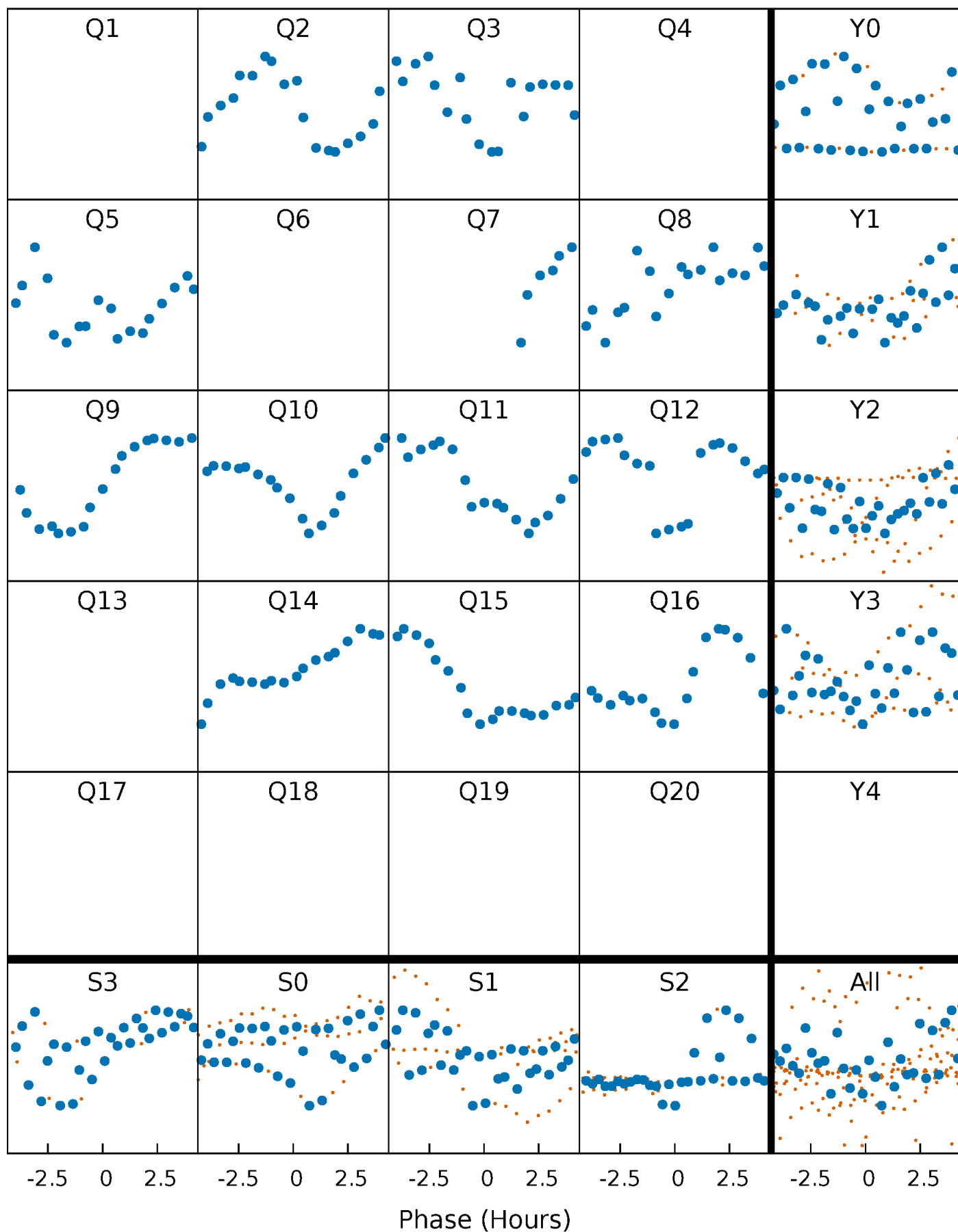


Non-Whitened Vs. Whitened Light Curve



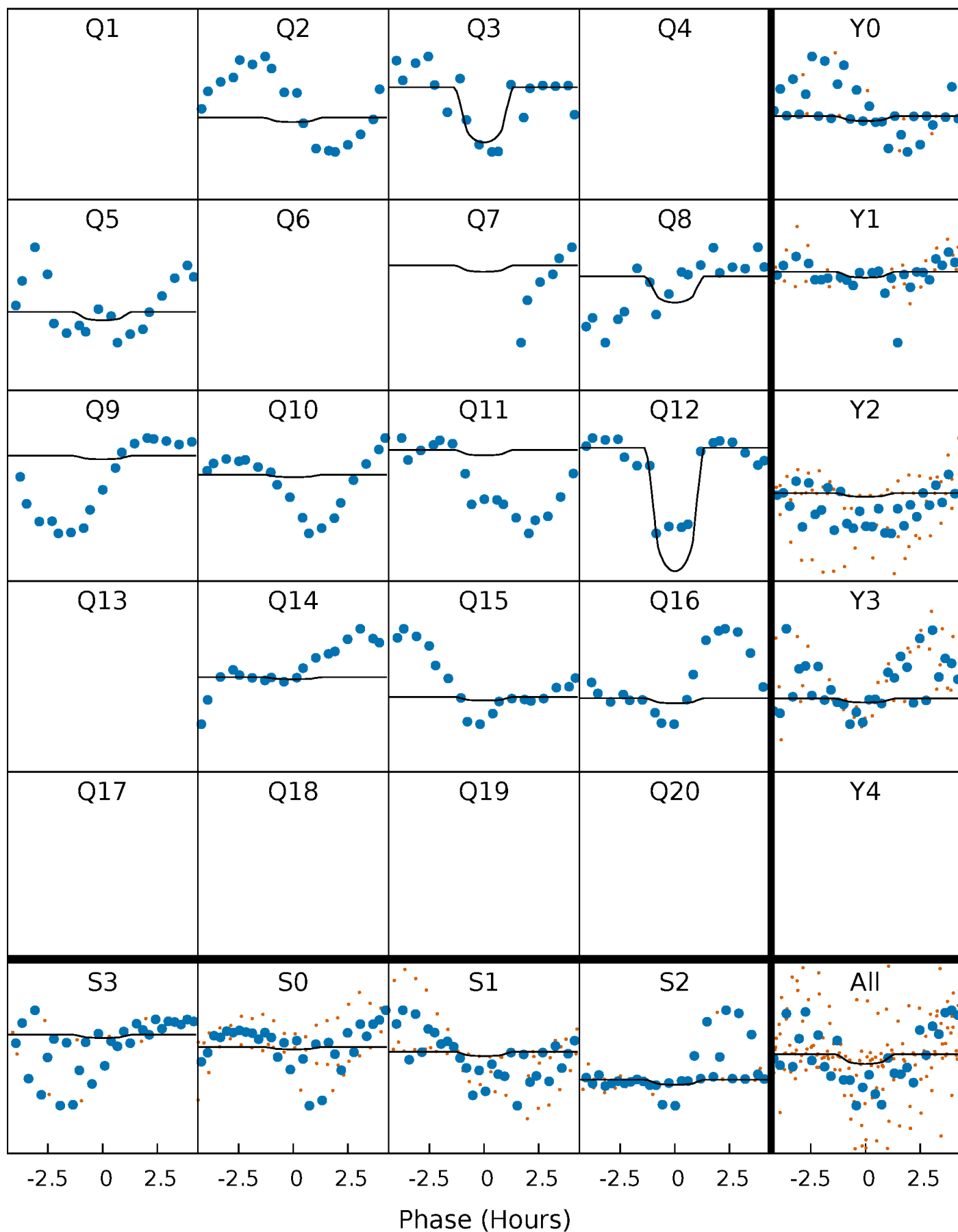
PDC Quarter-Phased Transit Curves

TCE 007819927-01 P=107.879167 Days $T_0=198.614580$ (BKJD)



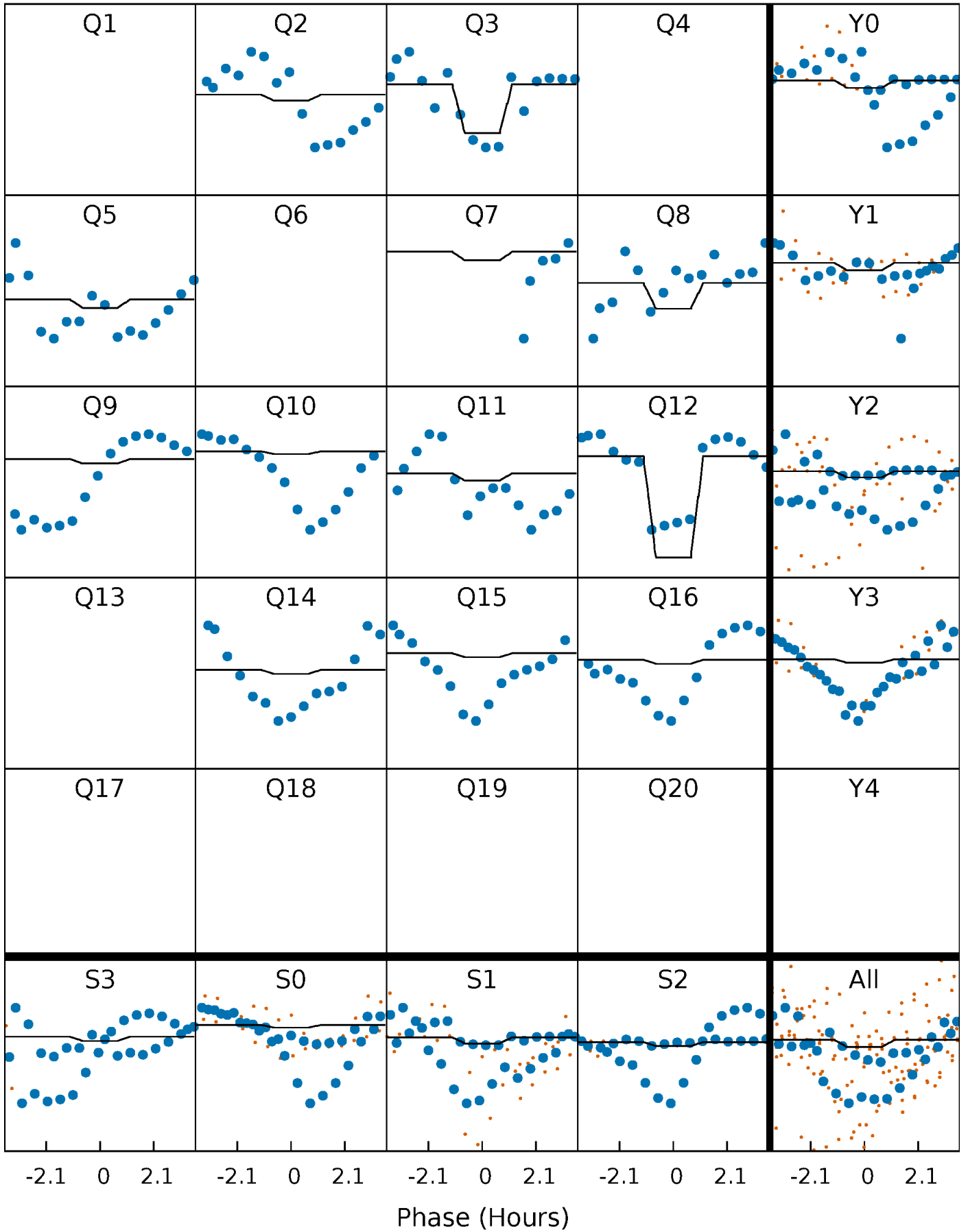
DV Quarter-Phased Transit Curves

TCE 007819927-01 P=107.879167 Days $T_0=198.614580$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

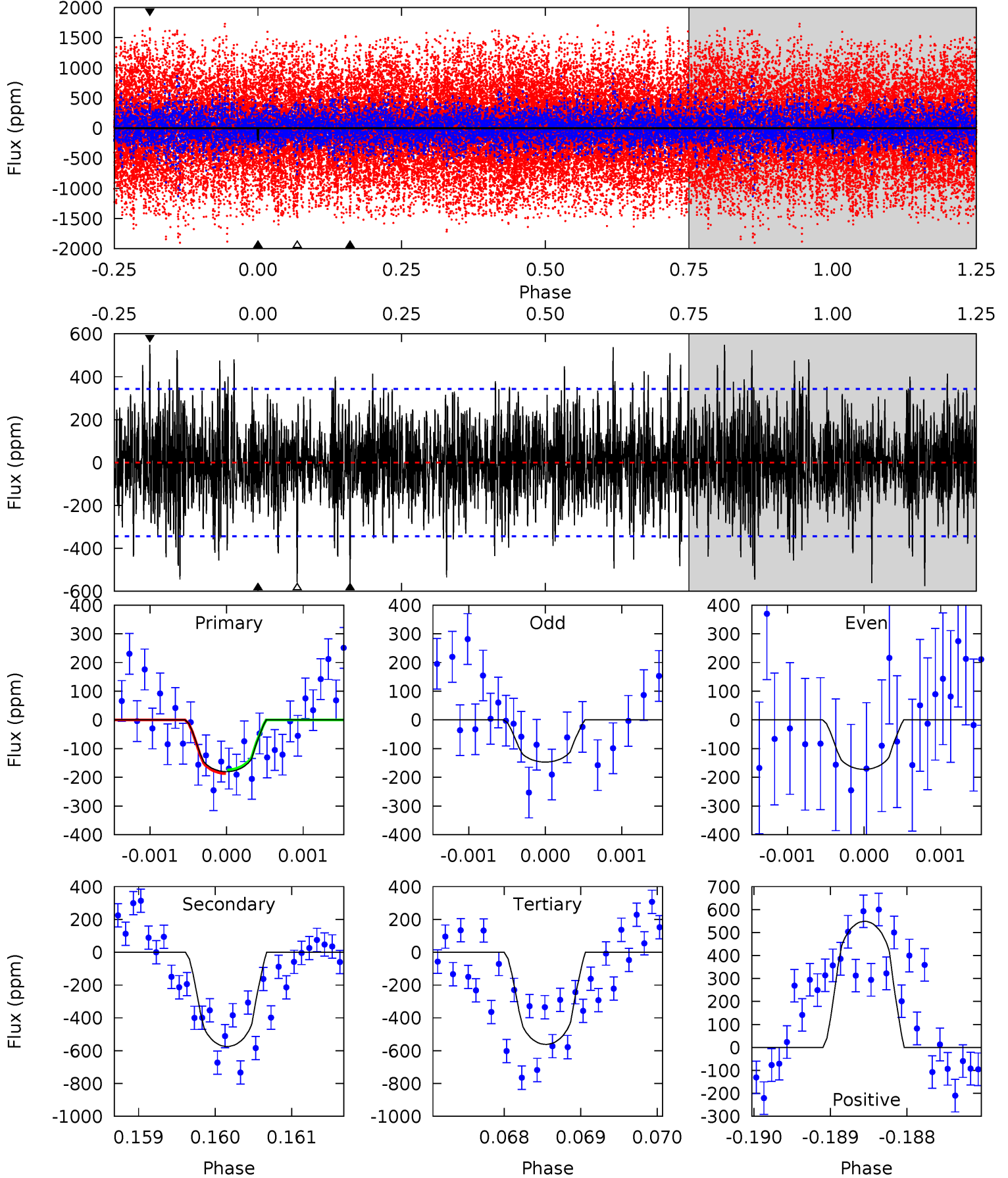
TCE 007819927-01 P=107.878853 Days $T_0=198.617790$ (BKJD)



DV Model-Shift Uniqueness Test

007819927-01, P = 107.879167 Days, E = 90.735413 Days

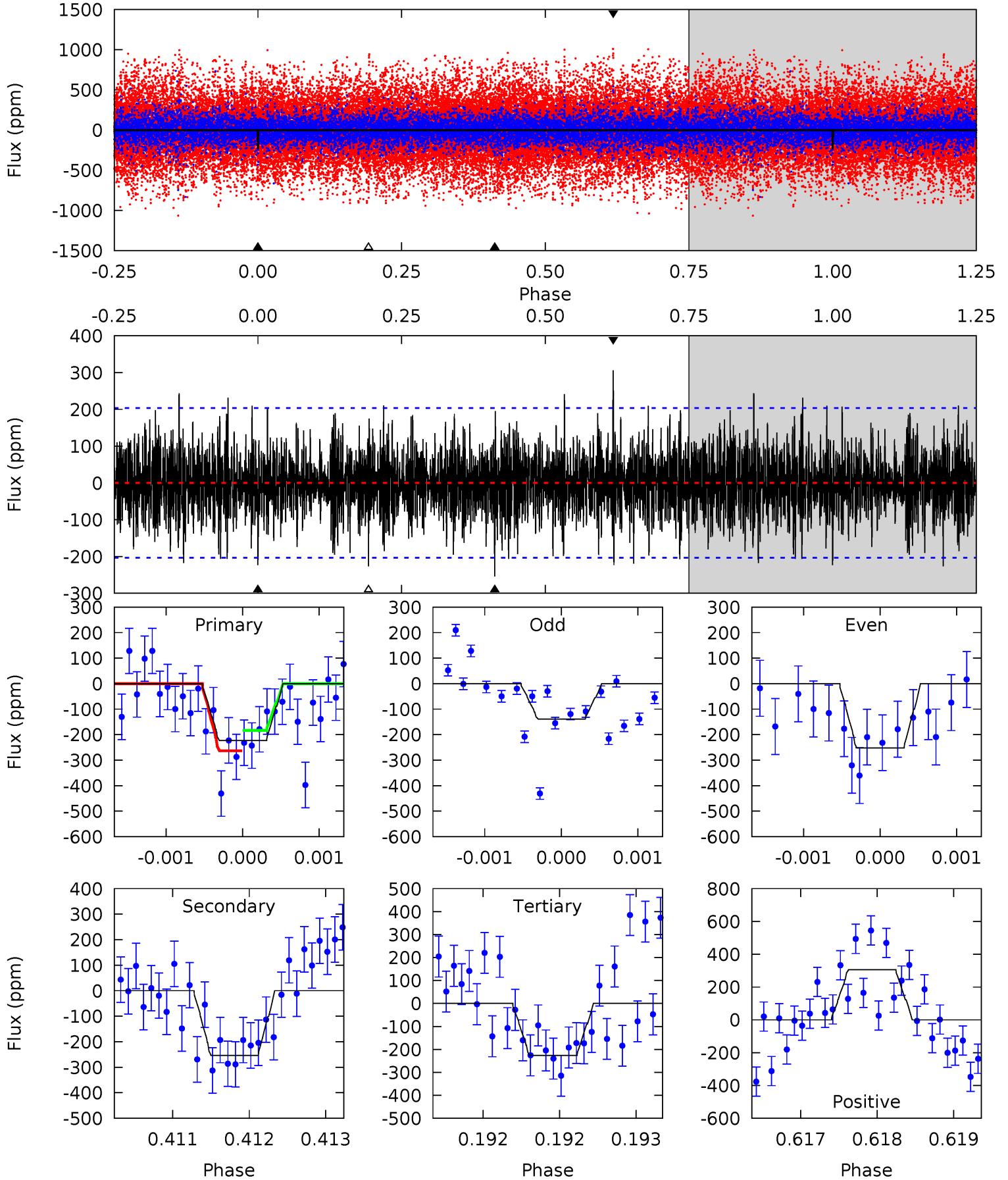
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.87	9.13	8.92	8.72	5.45	3.30	2.48	-6.06	-5.85	0.21	0.41	0.20	2.40	0.49	0.10



Alt Model-Shift Uniqueness Test

007819927-01, $P = 107.878853$ Days, $E = 90.738937$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.00	6.83	6.10	8.24	5.48	3.34	1.94	-0.10	-2.24	0.73	-1.41	1.55	1.72	0.55	1.09



Stellar Parameters For KIC 007819927

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4875^{+86}_{-229}	$2.433^{+0.035}_{-0.028}$	$0.210^{+0.150}_{-0.400}$	$18.555^{+0.702}_{-6.320}$	$3.405^{+0.095}_{-1.908}$	$0.001^{+0.000}_{-0.000}$
	+2%/-5%	+1%/-1%	+71%/-190%	+4%/-34%	+3%/-56%	+58%/-11%
Source	PHO1	AST9	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 007819927-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-575 ± 63	$13.47^{+4.11}_{-4.03}$	1581^{+42}_{-74}	9627^{+2887}_{-1735}	780^{+746}_{-332}
Alt.	-254 ± 37	$12.49^{+4.02}_{-4.43}$	1582^{+38}_{-80}	7767^{+2284}_{-1337}	405^{+499}_{-184}

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

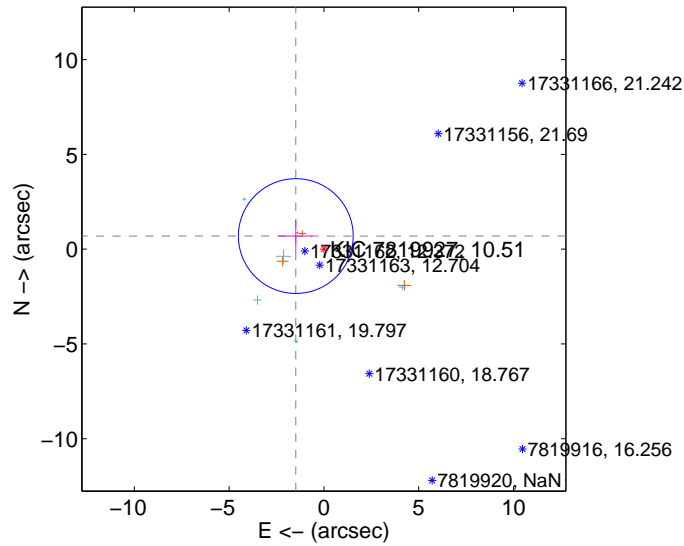
Supplemental centroid analysis for 007819927-01. **Kepler magnitude: 10.51.** Transit SNR 12.82

There are 6 quarters with good PRF difference image offsets

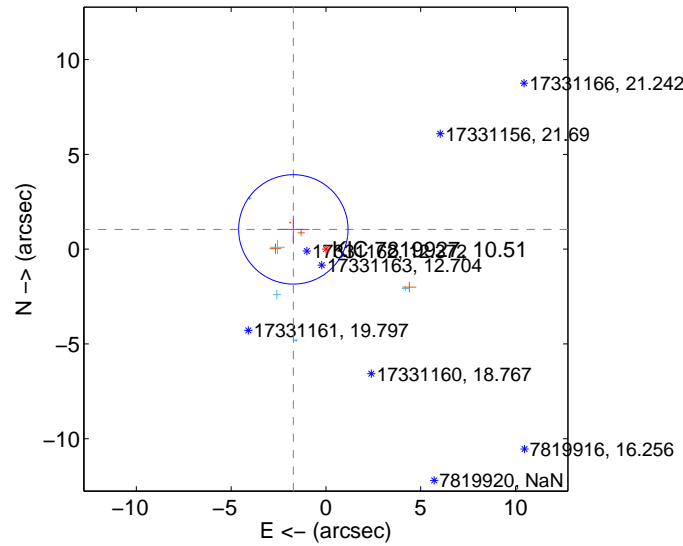
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.636 ± 1.009	1.62	1.483 ± 0.901	0.691 ± 0.866
PRF-fit source offset from KIC position	2.011 ± 0.962	2.09	1.719 ± 0.858	1.044 ± 0.724
photometric centroid source offset	2.04 ± 2.86	0.71	-1.15 ± 3.19	-1.69 ± 2.70

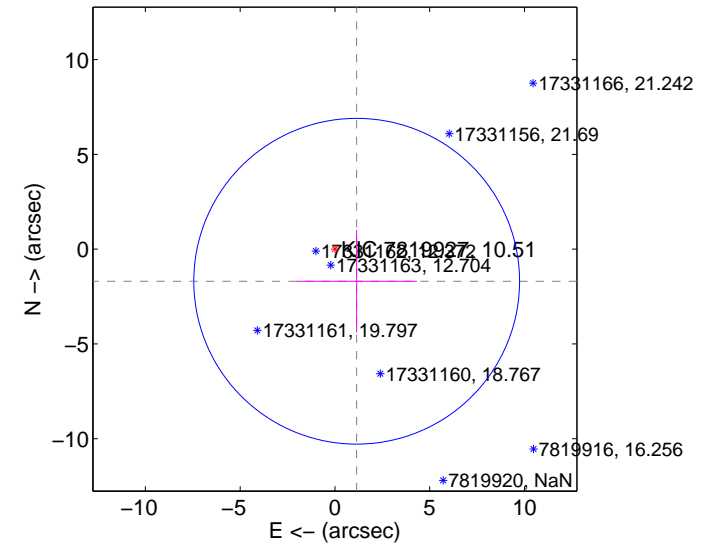
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



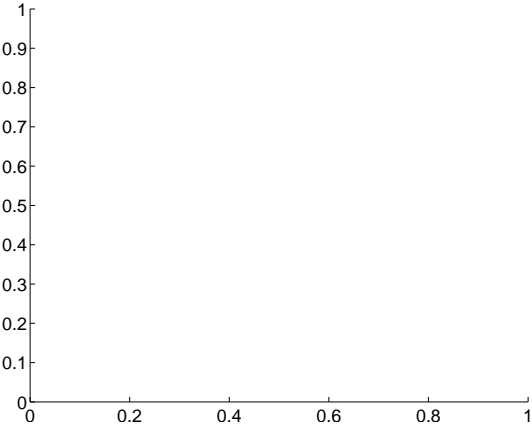
offset from photometric centroids



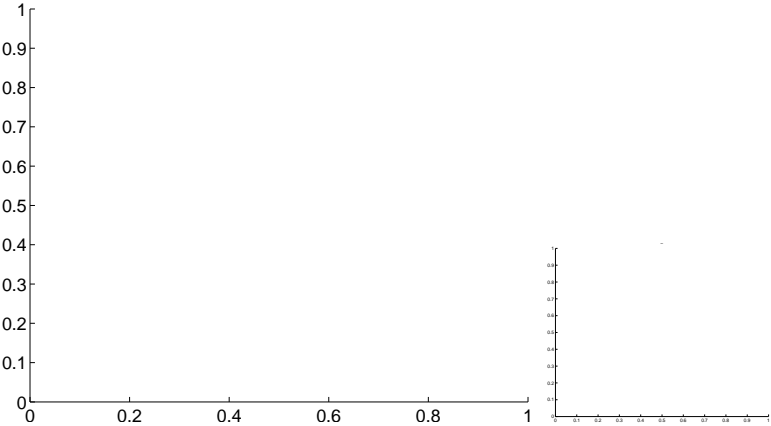
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

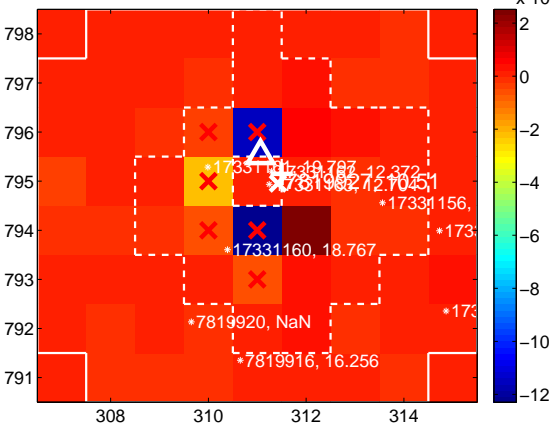
Q1 no difference image



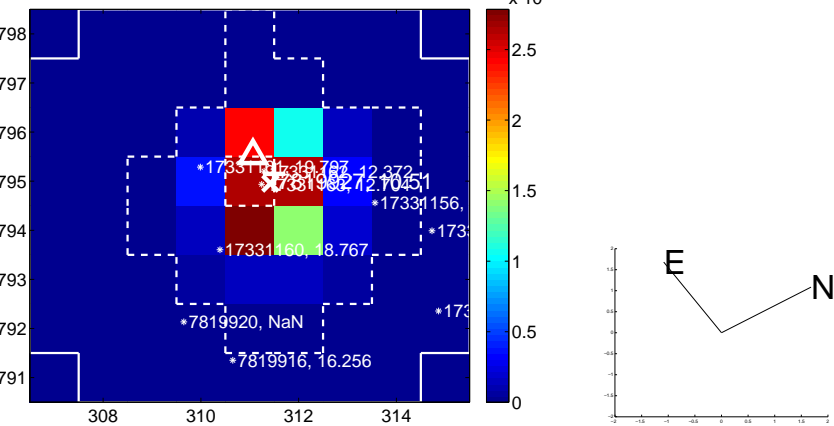
Q1 no OOT image



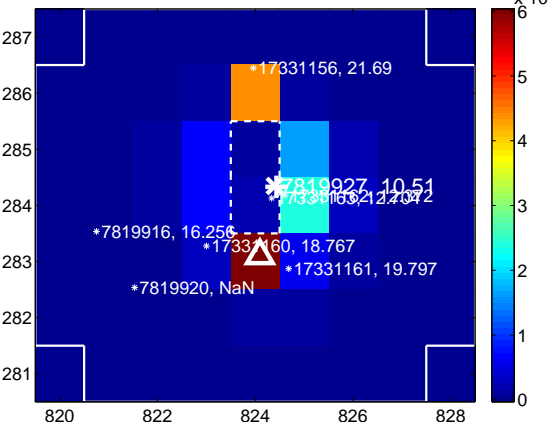
Q2 difference image. Poor Quality



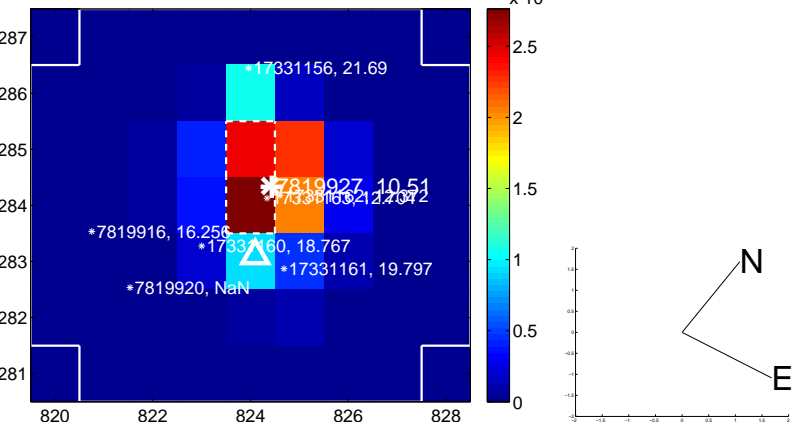
Q2 OOT image



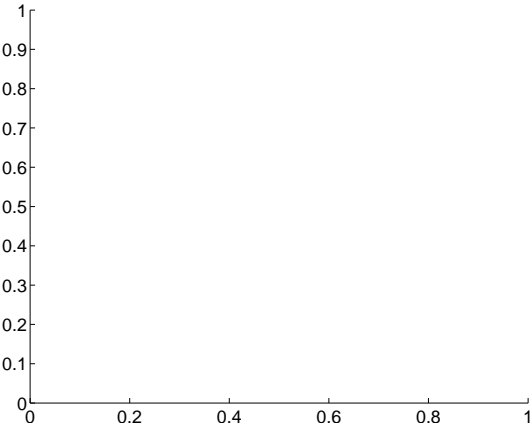
Q3 difference image



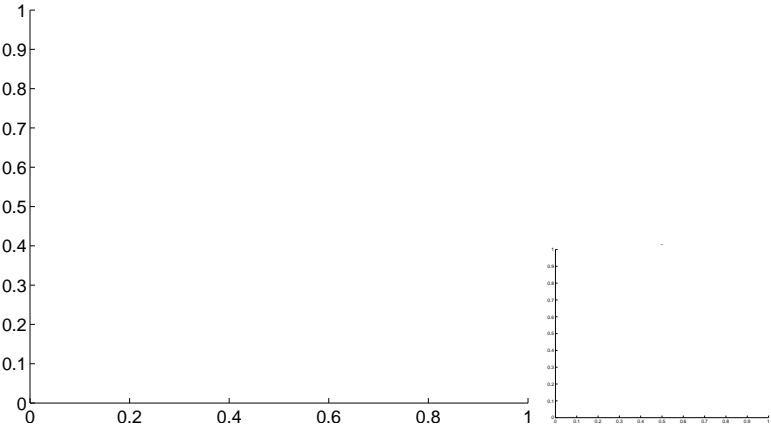
Q3 OOT image



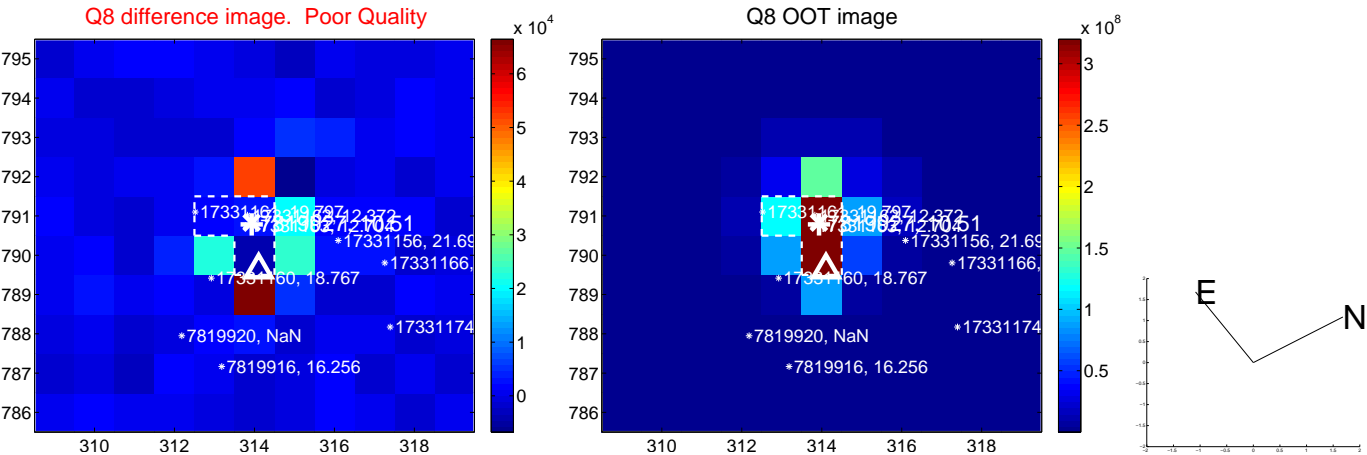
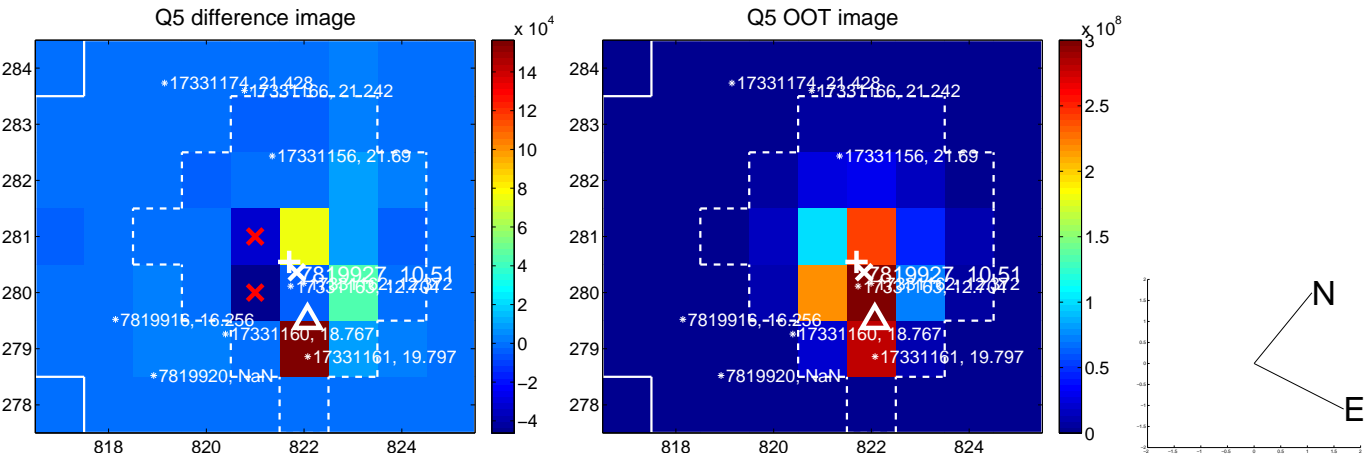
Q4 no difference image



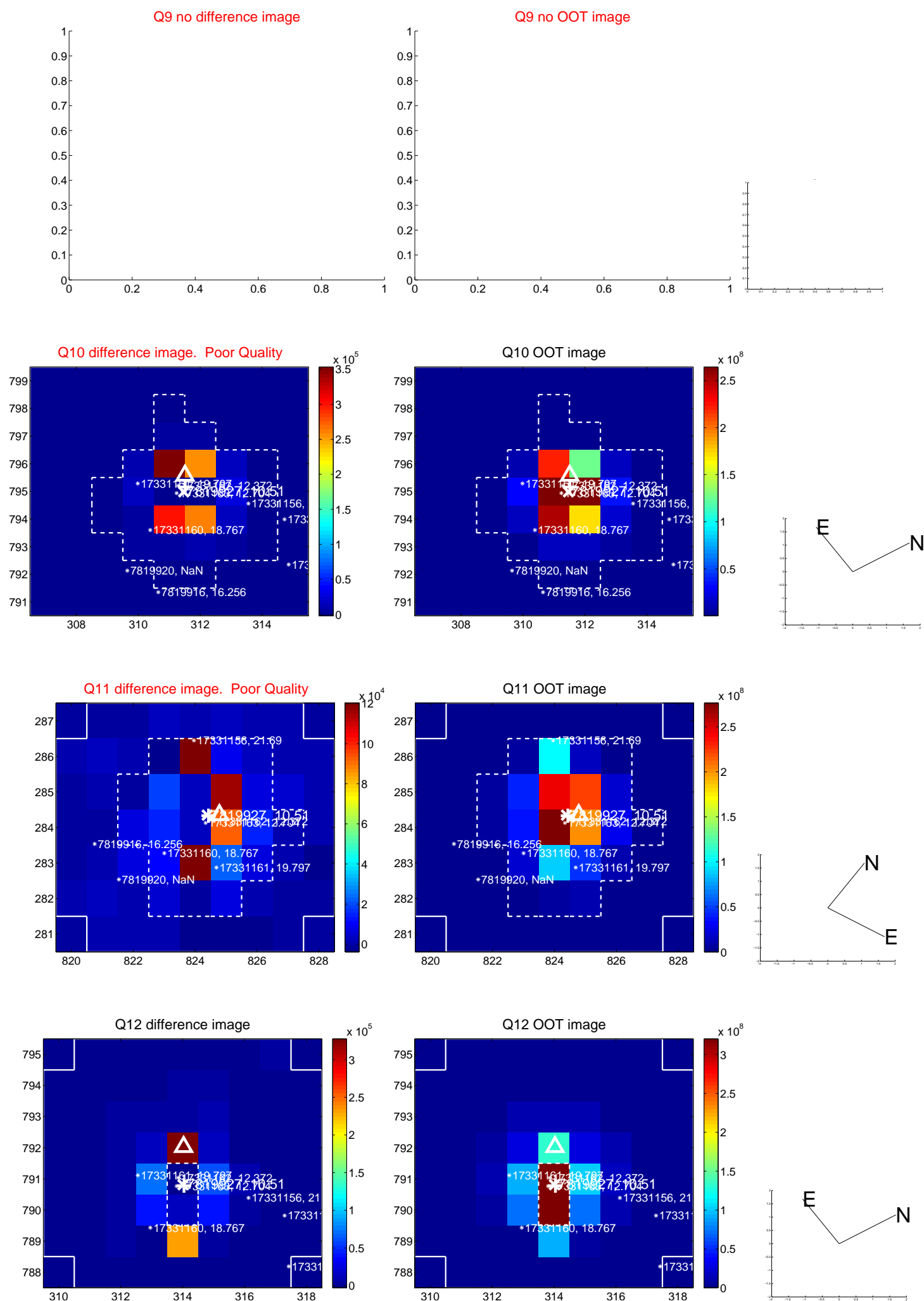
Q4 no OOT image



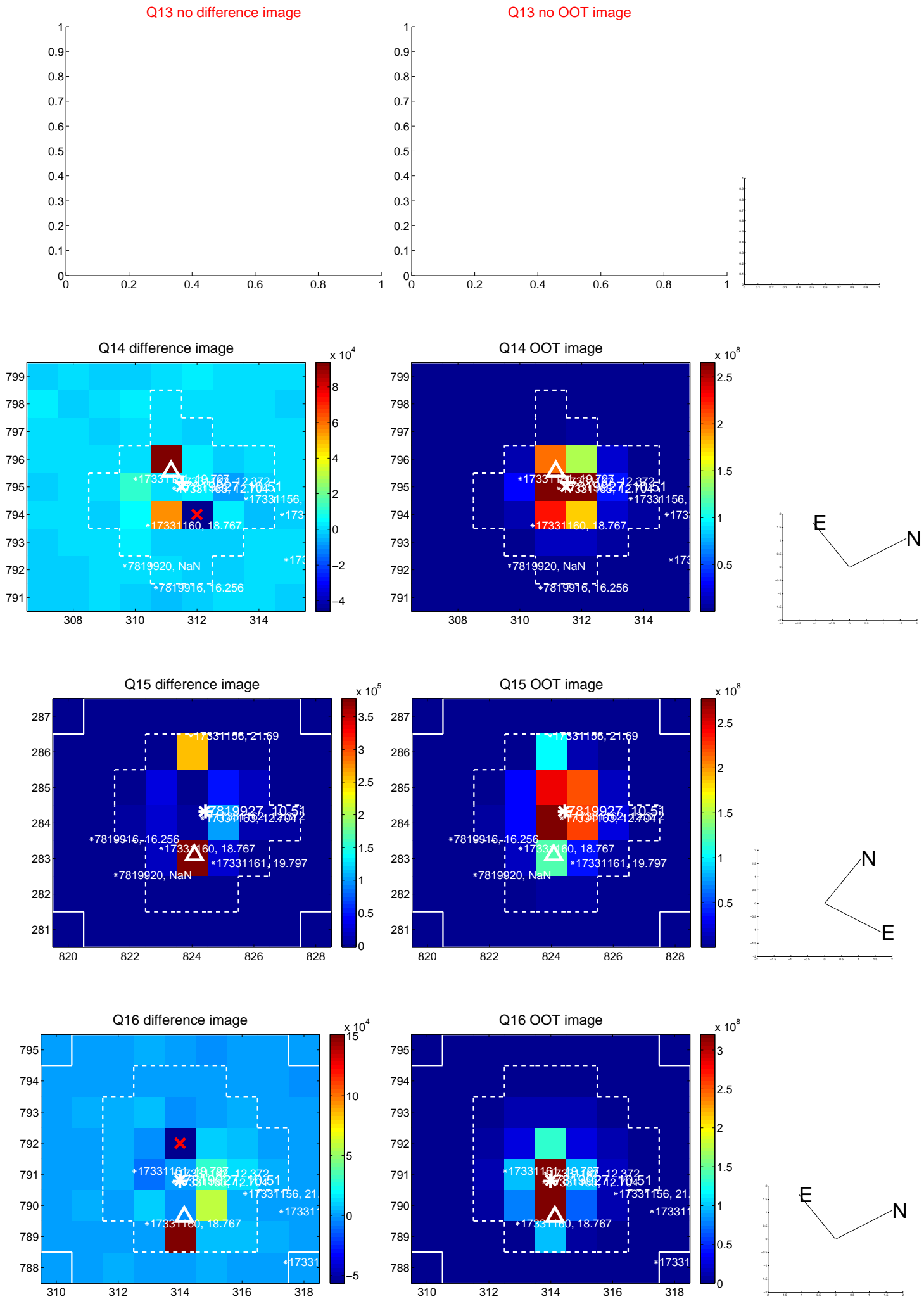
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



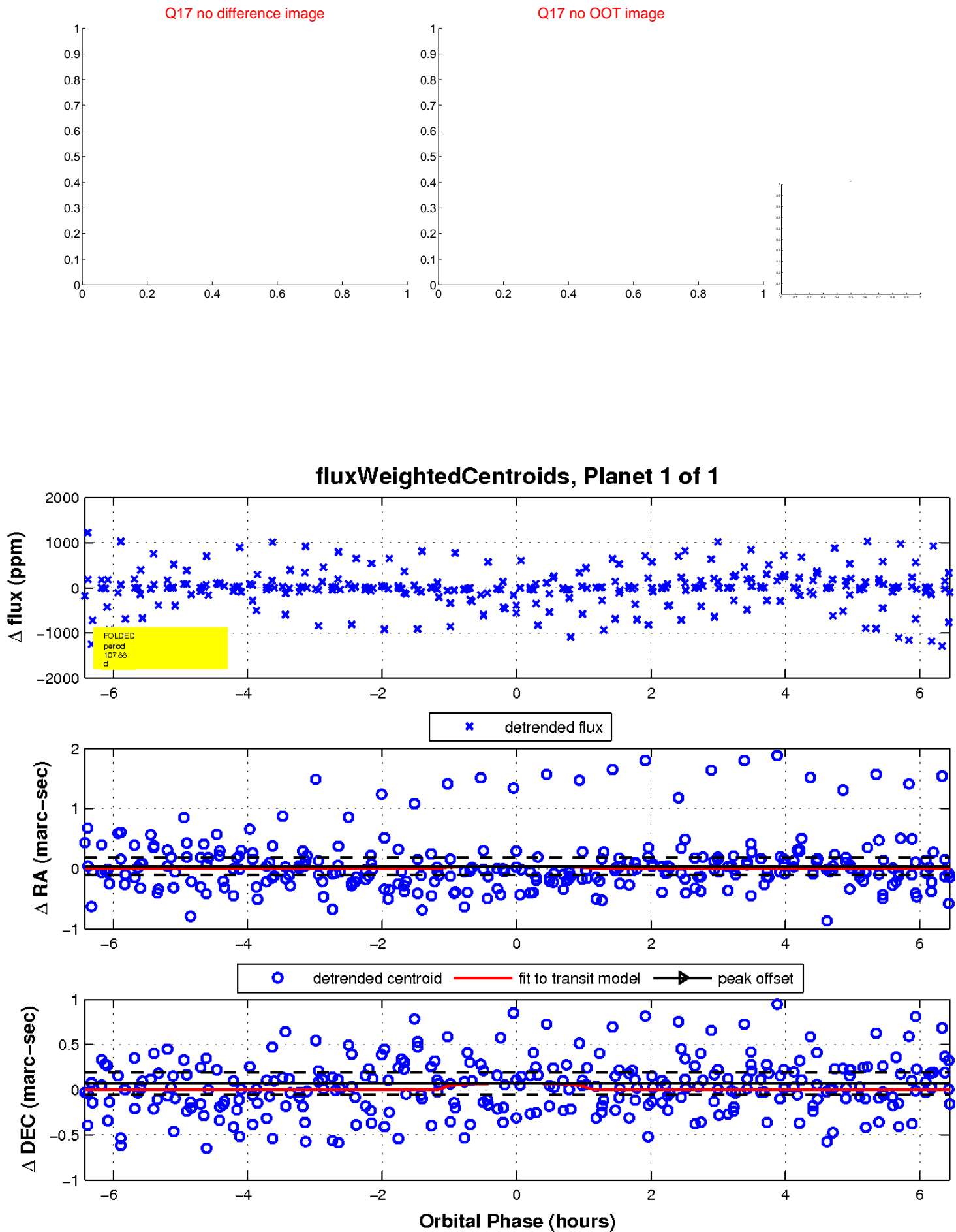
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

