

KIC 008524728

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})
008524728-01	OBS	No	0.535129	131.832379	7.1	2.162	7.6	8.4	3.22	9030	0.99	200797.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008524728-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_UNCERTAIN

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

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

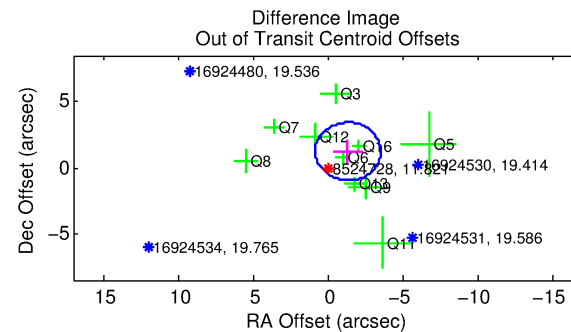
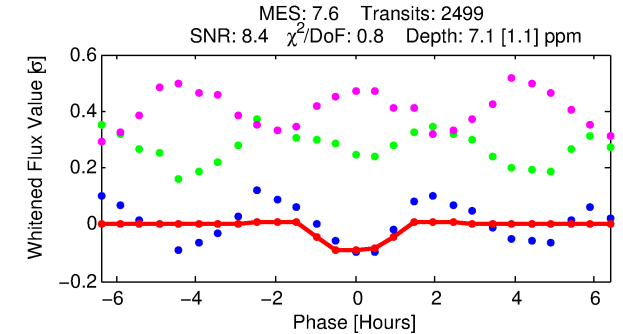
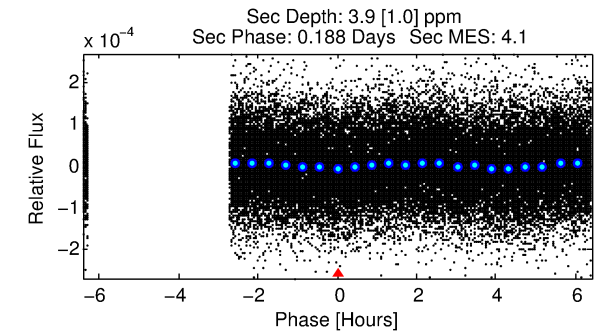
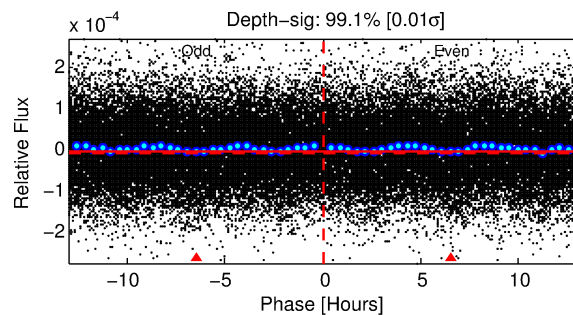
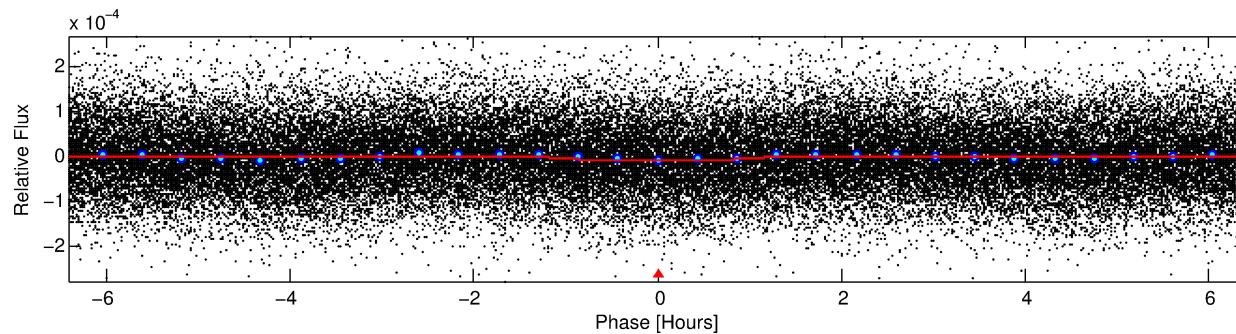
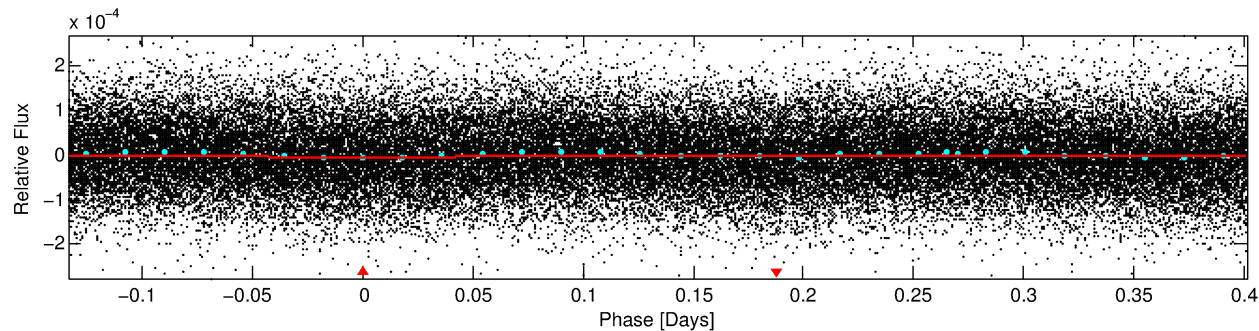
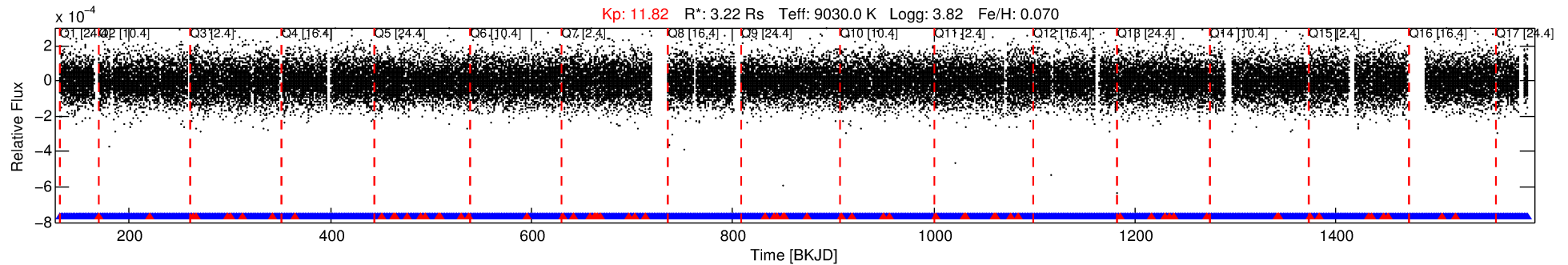
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008524728-01

No Significant Match Found

DV One-Page Summary

KIC: 8524728 Candidate: 1 of 1 Period: 0.535 d



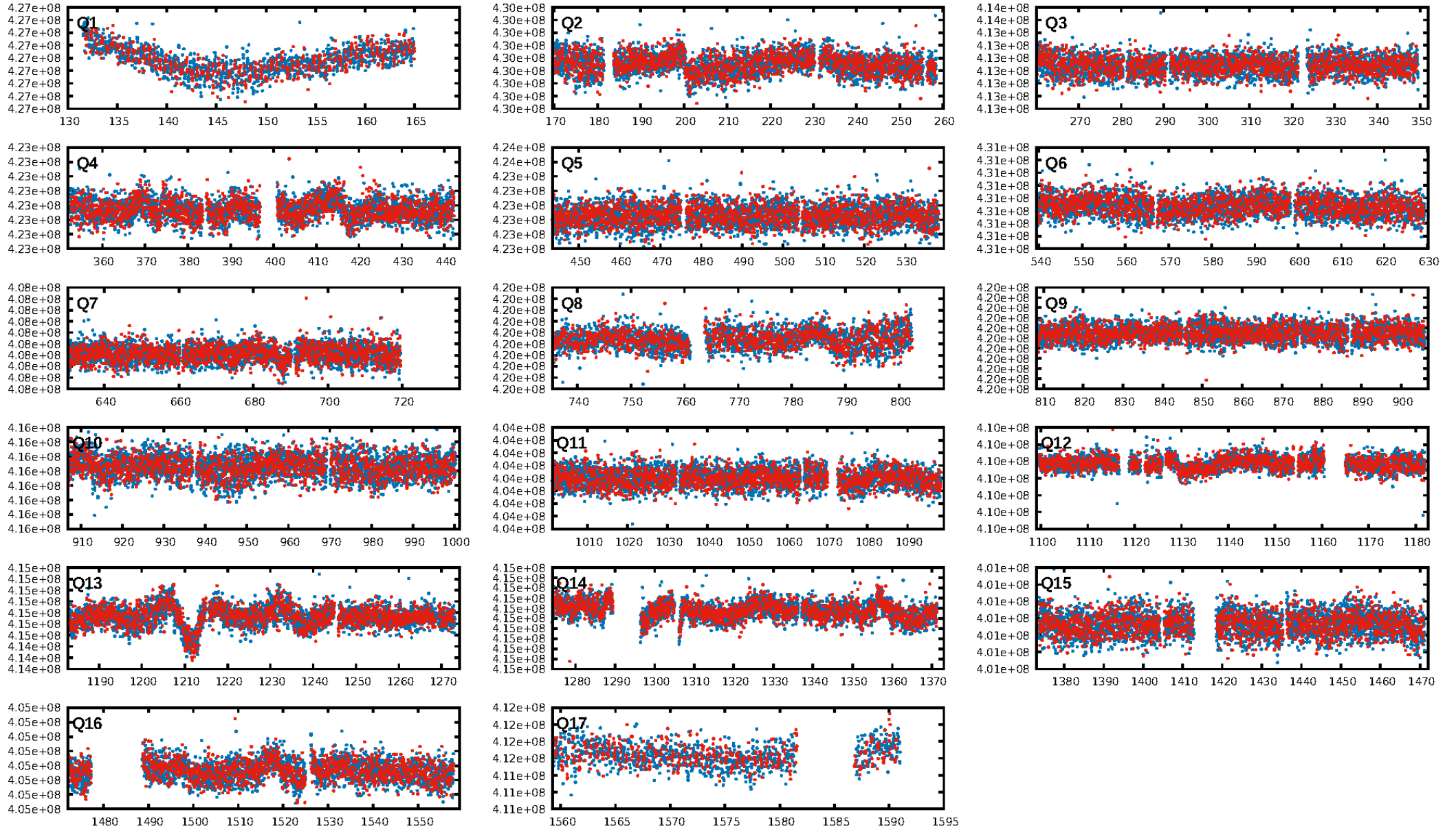
DV Fit Results:

Period = 0.53513 [0.00001] d
Epoch = 131.8324 [0.0031] BKJD
 R_p/R^* = 0.0028 [0.0004]
 a/R^* = 1.25 [0.42]
 b = 0.90 [0.19]
 Seff = 200797.28 [133630.75]
 Teq = 5398 [898] K
 R_p = 0.99 [0.44] R_e
 a = 0.0175 [0.0070] AU
 Ag = 0.66 [0.49] [-0.69 σ]
 Teffp = 7524 [837] K [1.73 σ]

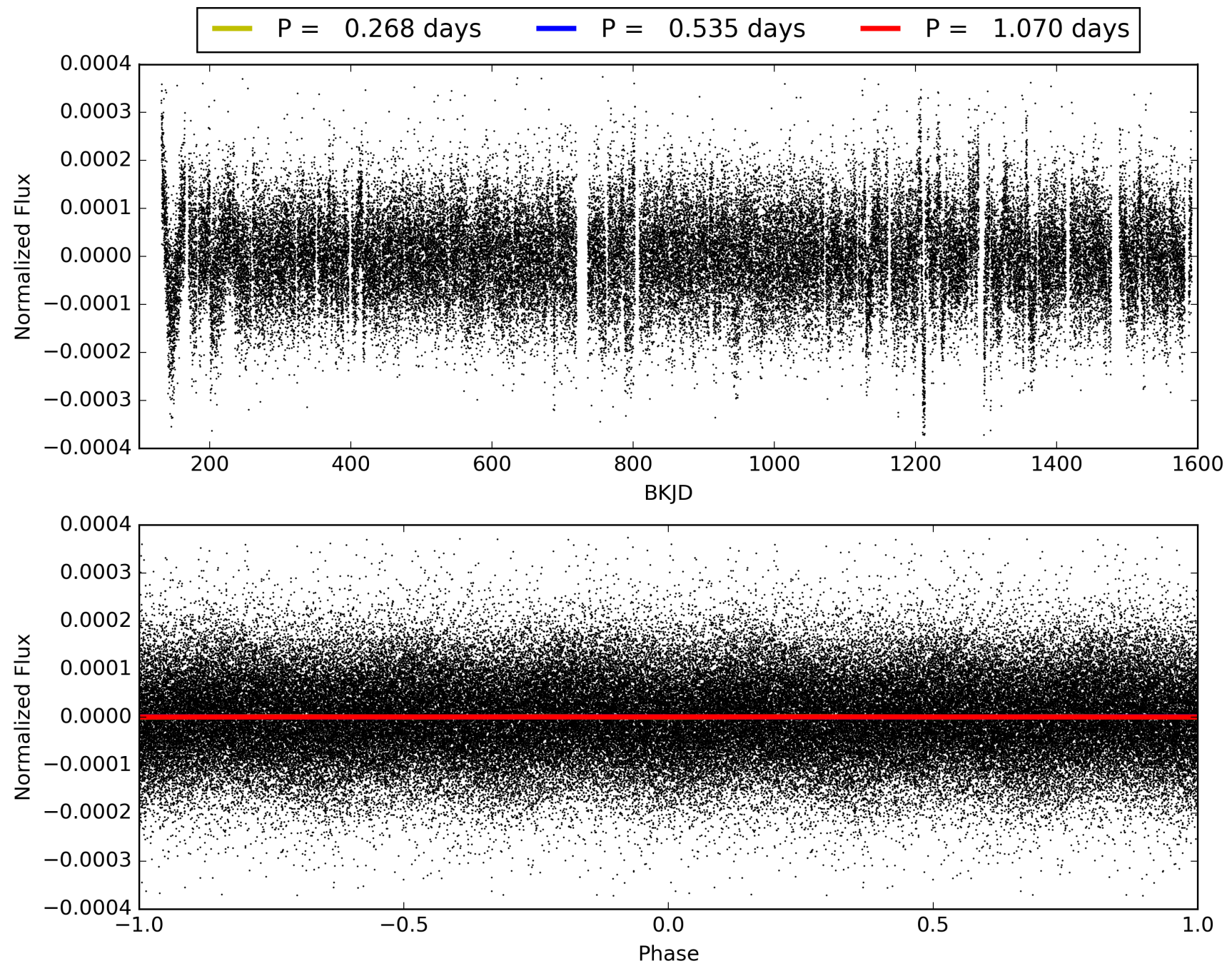
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.39e-13
RollingBand-fgt: 0.97 [2323/2386]
GhostDiagnostic-chr: -4.308
Centroid-sig: 15.9%
Centroid-so: 2.534 arcsec [1.10 σ]
OotOffset-rm: 1.830 arcsec [2.50 σ]
KicOffset-rm: 1.894 arcsec [2.08 σ]
OotOffset-st: 1/3/3/3 [10]
KicOffset-st: 1/3/3/3 [10]
DiffImageQuality-fgm: 0.20 [2/10]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008524728-01, PDC Light Curves

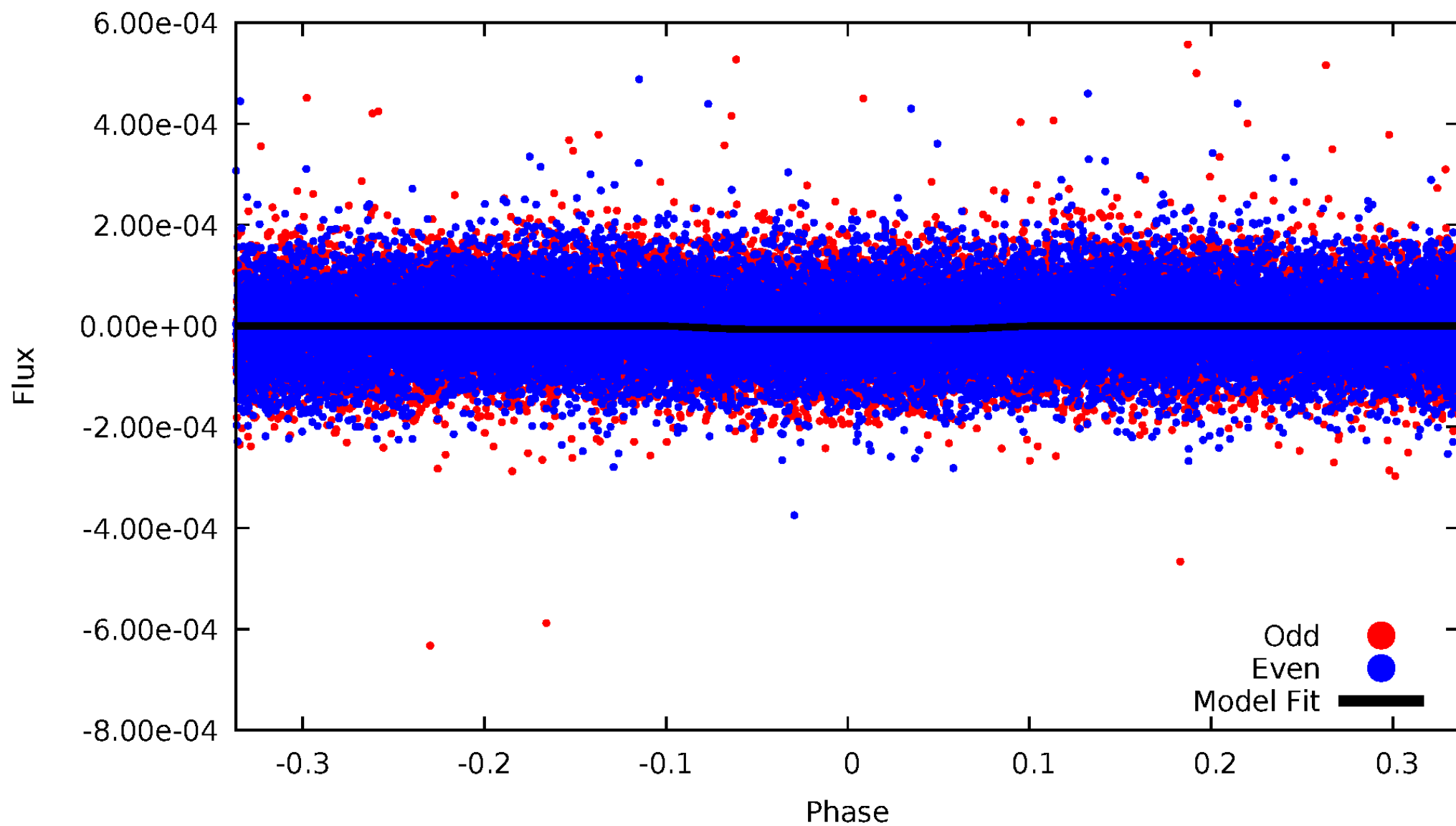


TCE 008524728-01



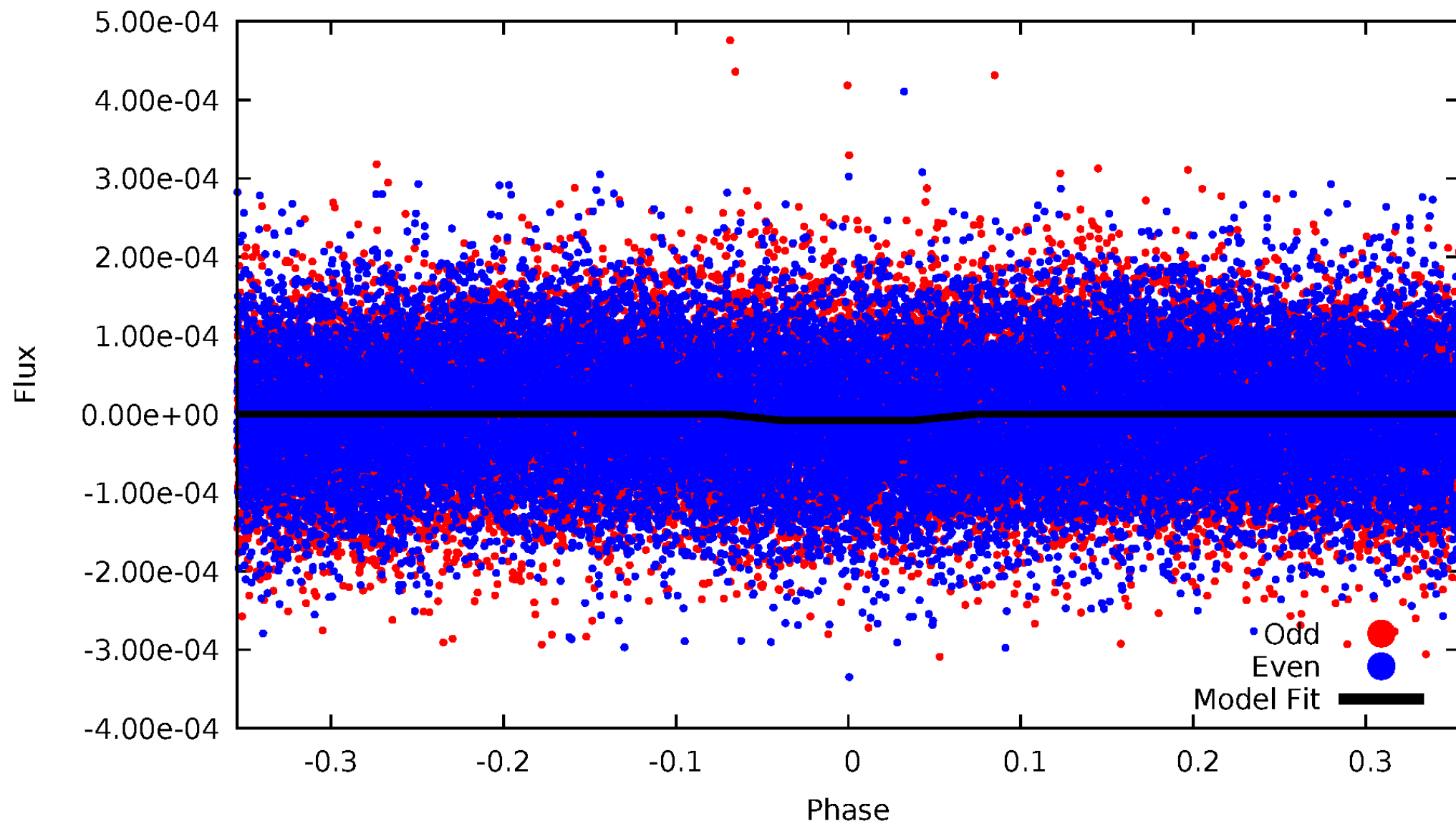
DV Odd/Even

TCE 008524728-01



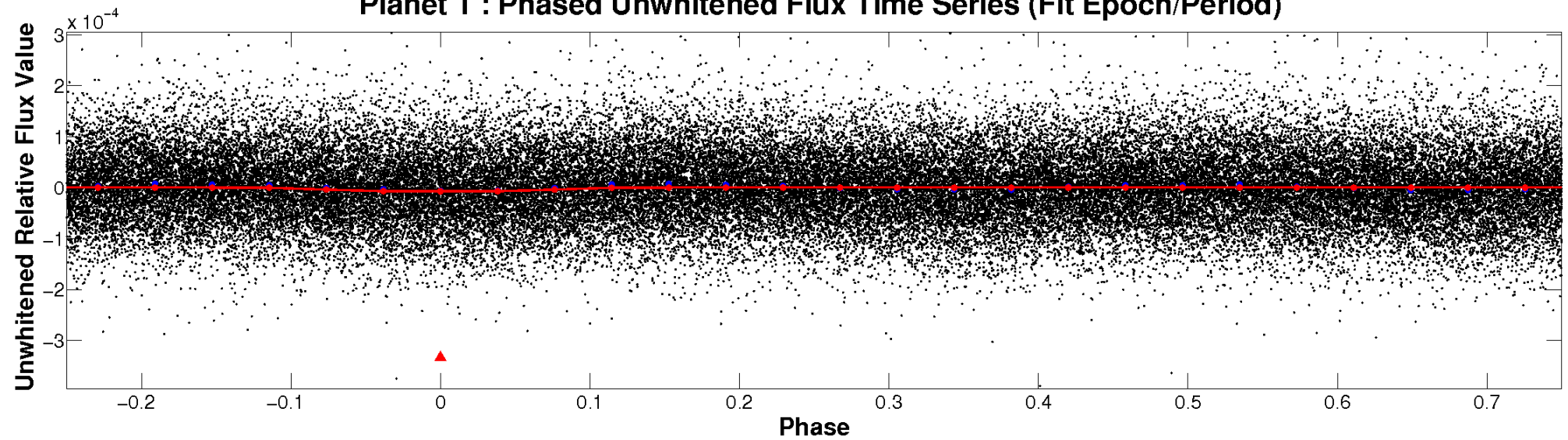
ALT Odd/Even

TCE 008524728-01

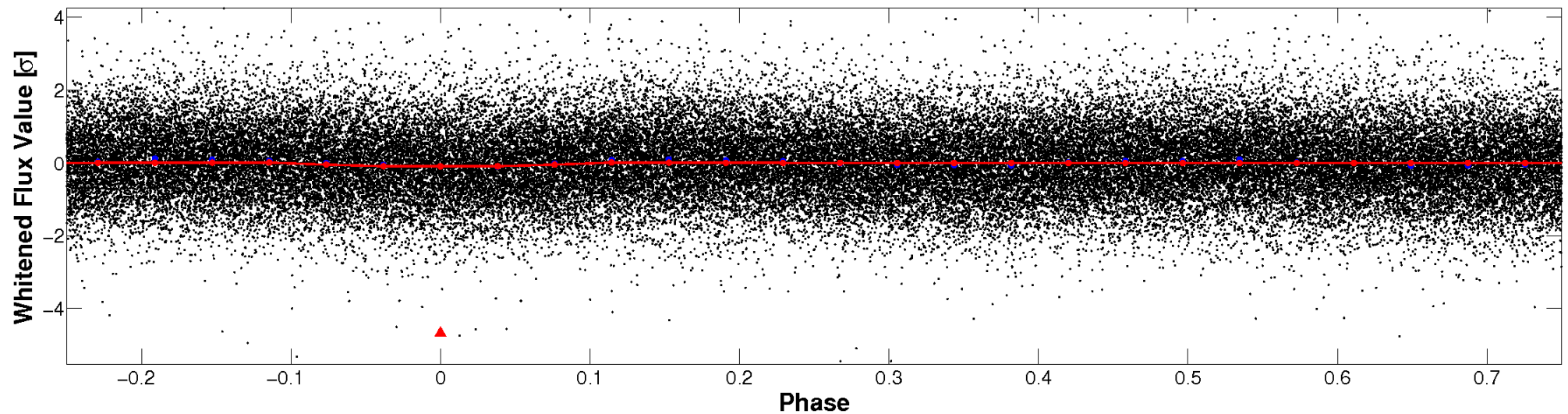


Non-Whitened Vs. Whitened Light Curve

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

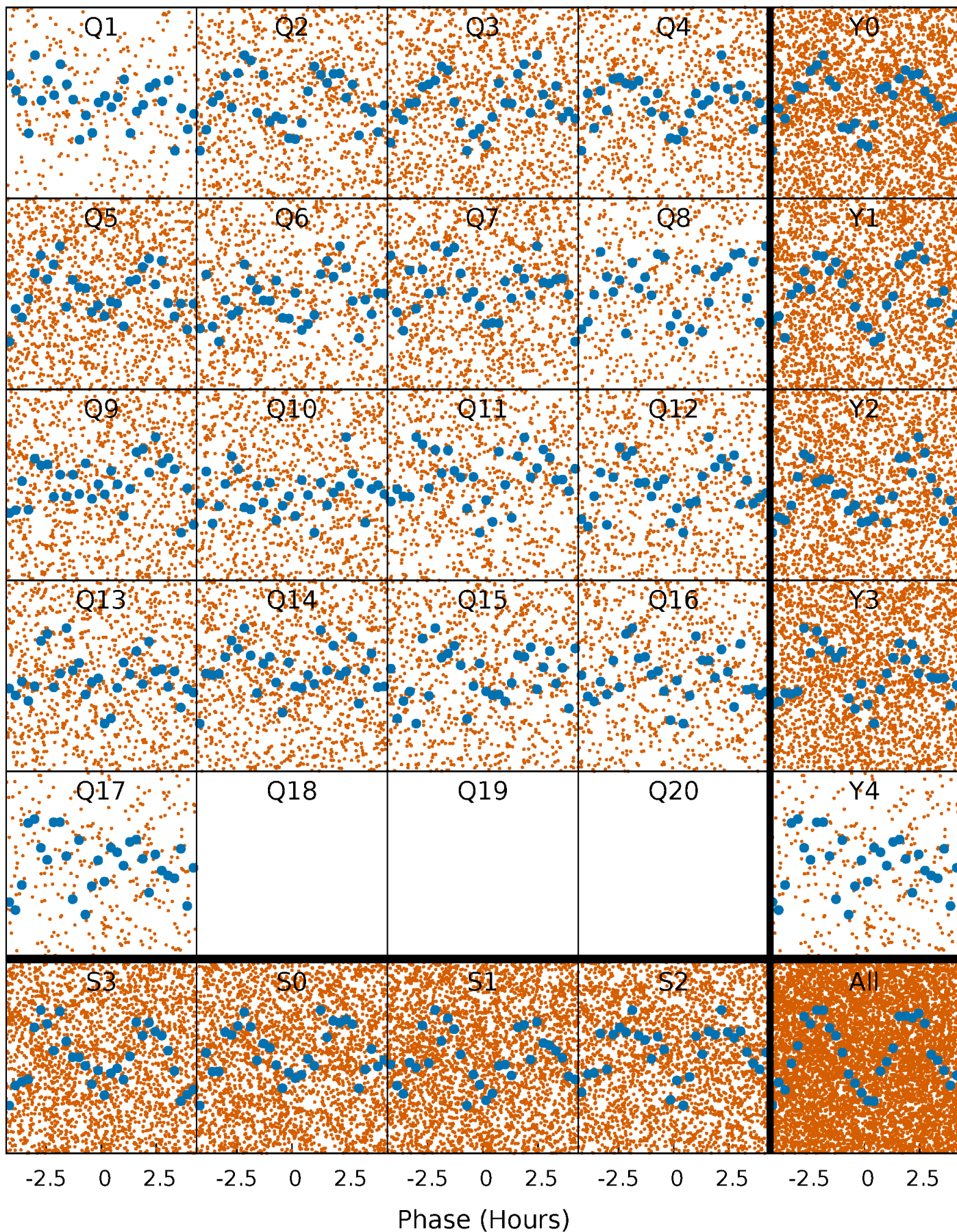


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



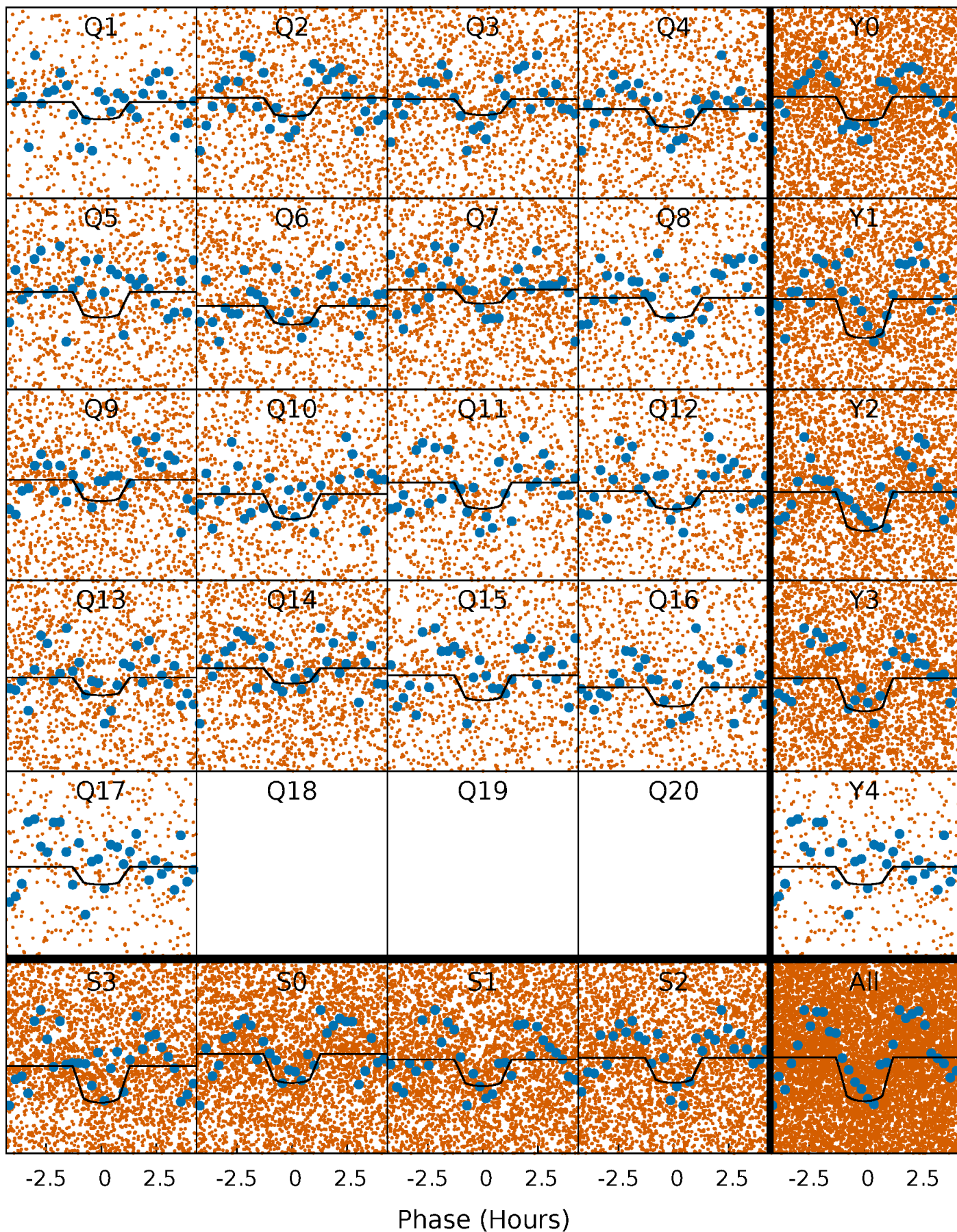
PDC Quarter-Phased Transit Curves

TCE 008524728-01 P= 0.535129 Days $T_0=131.832379$ (BKJD)



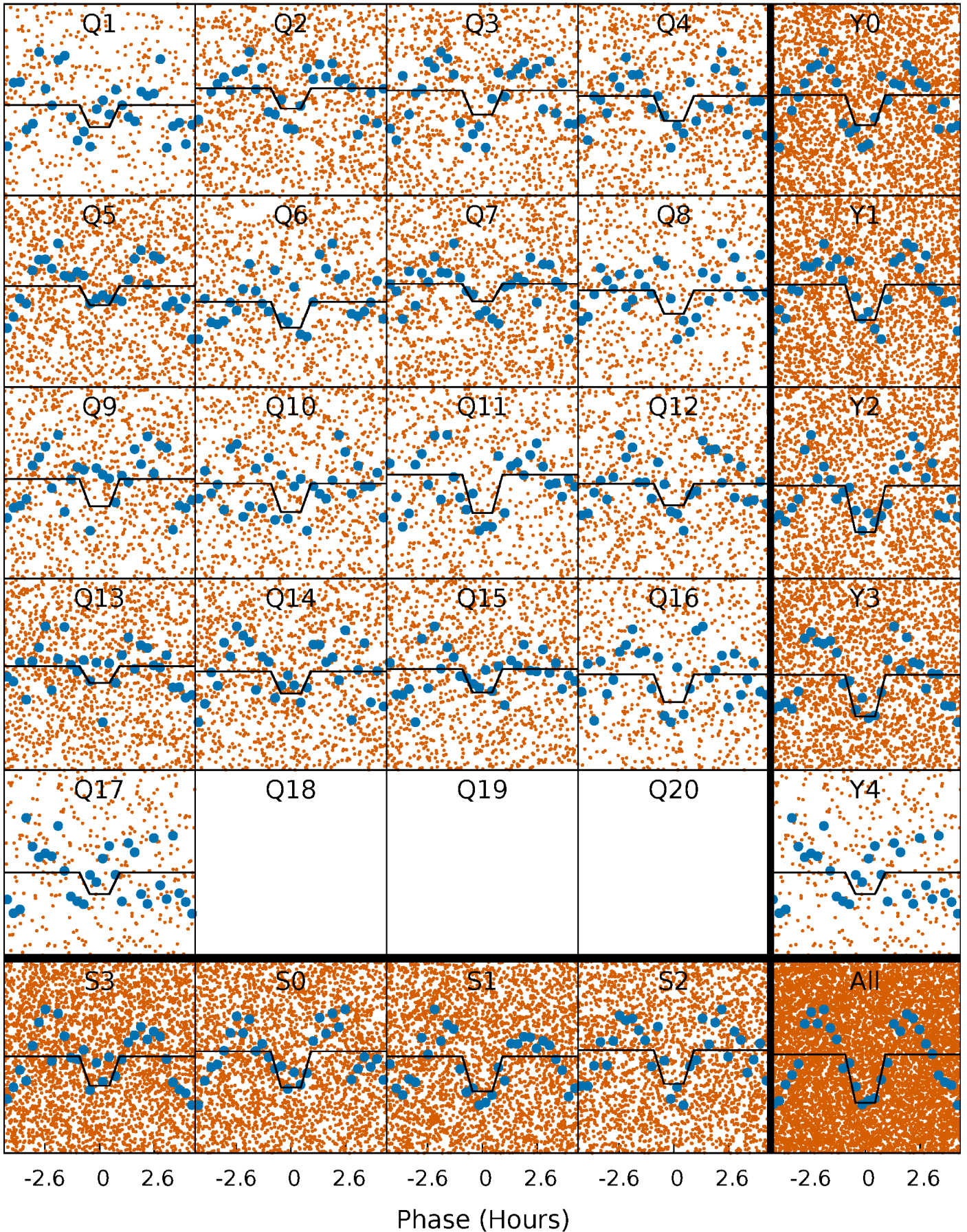
DV Quarter-Phased Transit Curves

TCE 008524728-01 P= 0.535129 Days $T_0=131.832379$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

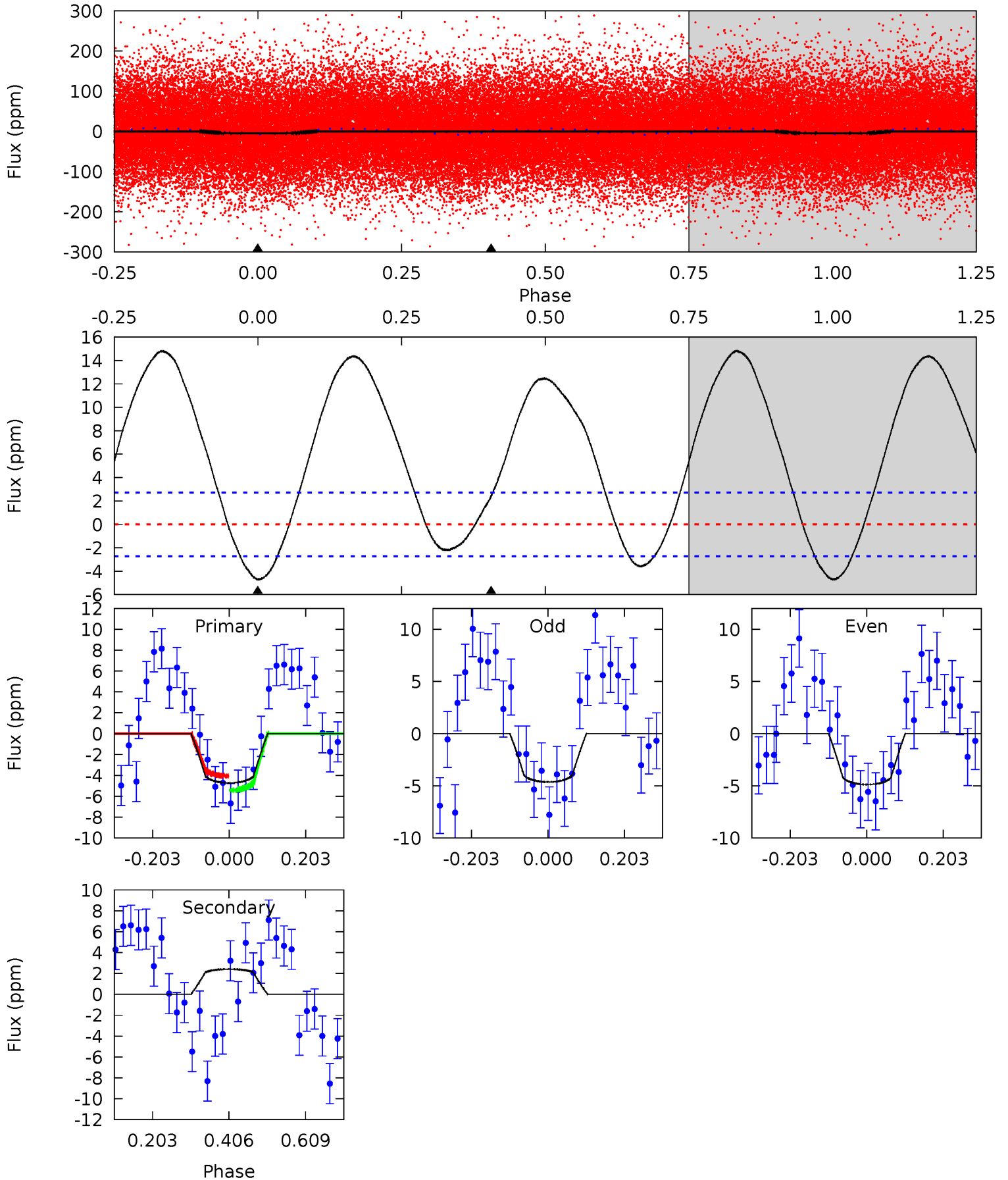
TCE 008524728-01 P= 0.535132 Days $T_0=131.831983$ (BKJD)



DV Model-Shift Uniqueness Test

008524728-01, P = 0.535129 Days, E = 131.297250 Days

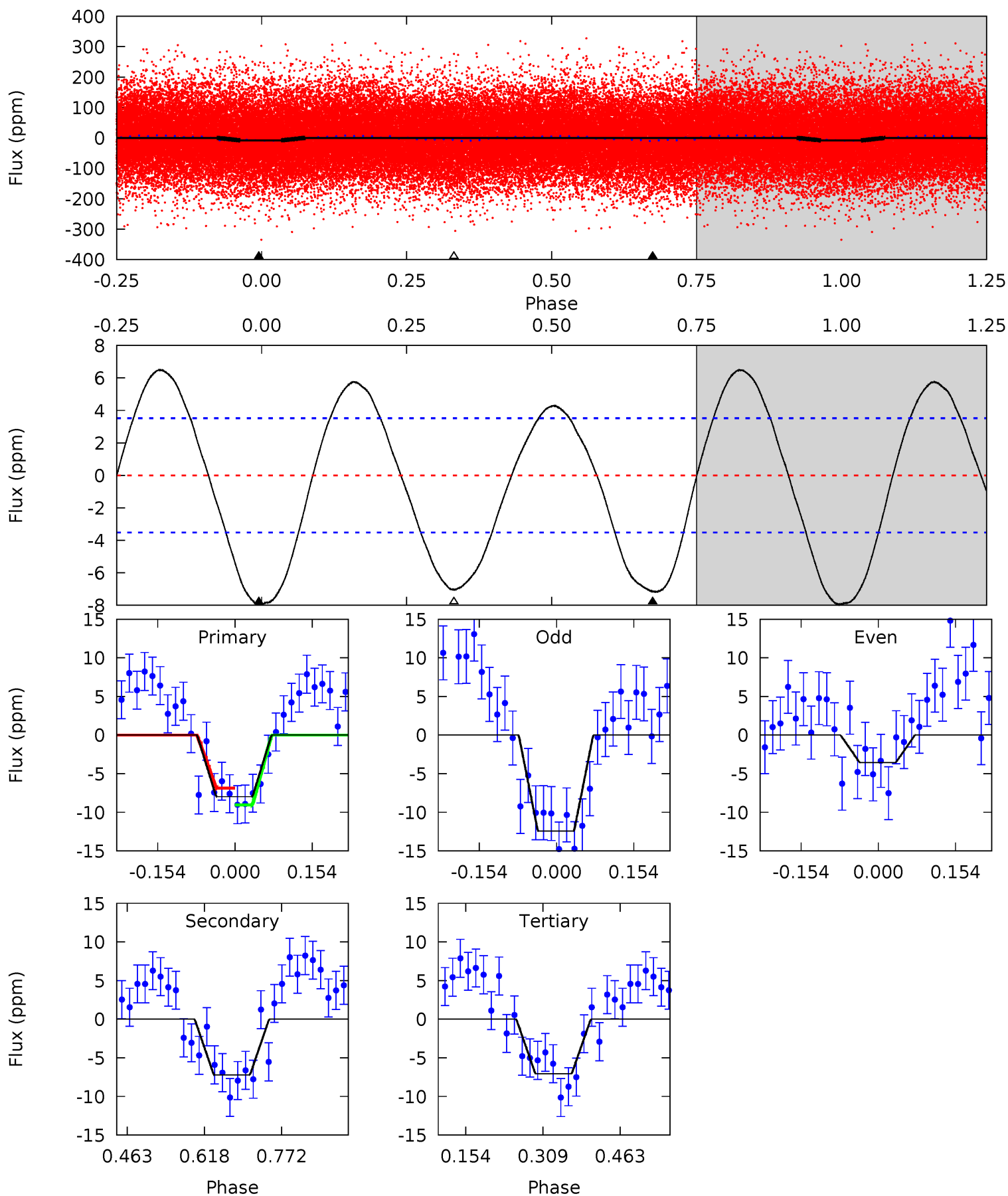
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.67	-3.92	0	0	4.41	1.27	8.06	7.67	7.67	-3.92	-3.92	0.20	1.03	0.76	1.12



Alt Model-Shift Uniqueness Test

008524728-01, P = 0.535132 Days, E = 131.296851 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	9.15	8.99	0	4.47	1.42	5.62	1.15	10.1	0.16	9.15	5.57	0.97	0.45	1.37



Stellar Parameters For KIC 008524728

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	9030^{+249}_{-463}	$3.822^{+0.371}_{-0.159}$	$0.070^{+0.200}_{-0.600}$	$3.218^{+0.971}_{-1.335}$	$2.505^{+0.291}_{-0.874}$	$0.106^{+0.345}_{-0.055}$
	+3%/-5%	+10%/-4%	+286%/-857%	+30%/-41%	+12%/-35%	+326%/-52%
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 008524728-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	2 ± 1	$0.94^{+0.25}_{-0.26}$	7334^{+625}_{-779}	-7254^{+575}_{-660}	$-0.448^{+0.189}_{-0.364}$
Alt.	-7 ± 1	$0.95^{+0.25}_{-0.24}$	7286^{+639}_{-803}	7760^{+1185}_{-1012}	$1.326^{+0.934}_{-0.510}$

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

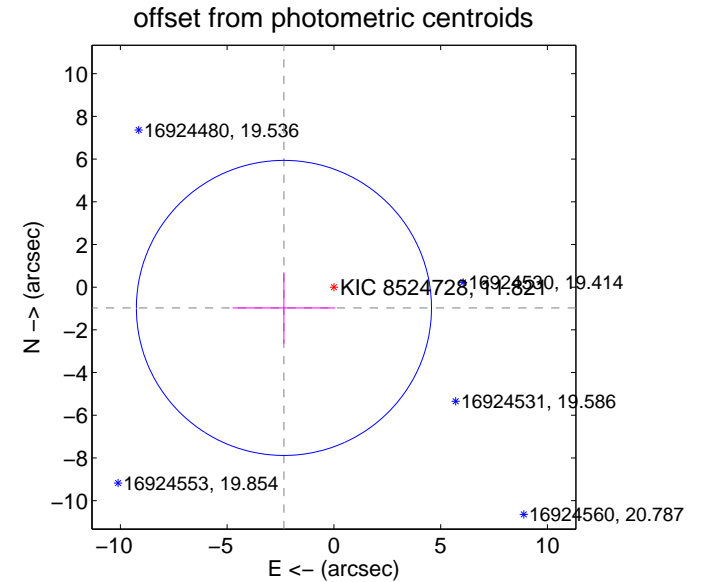
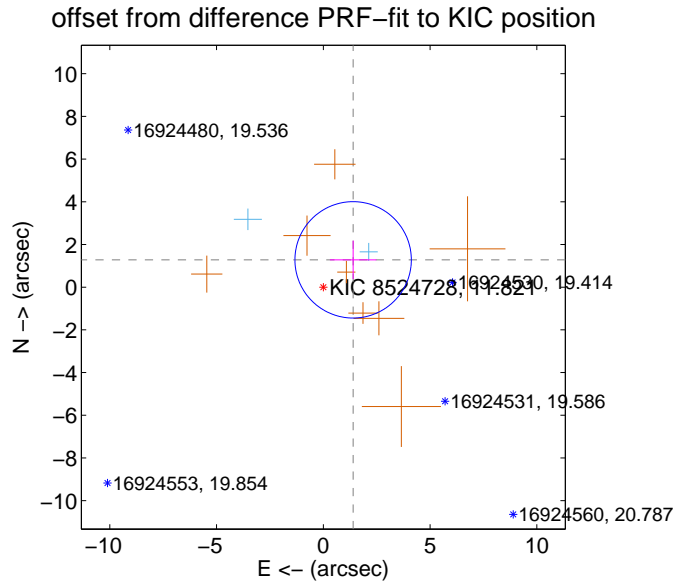
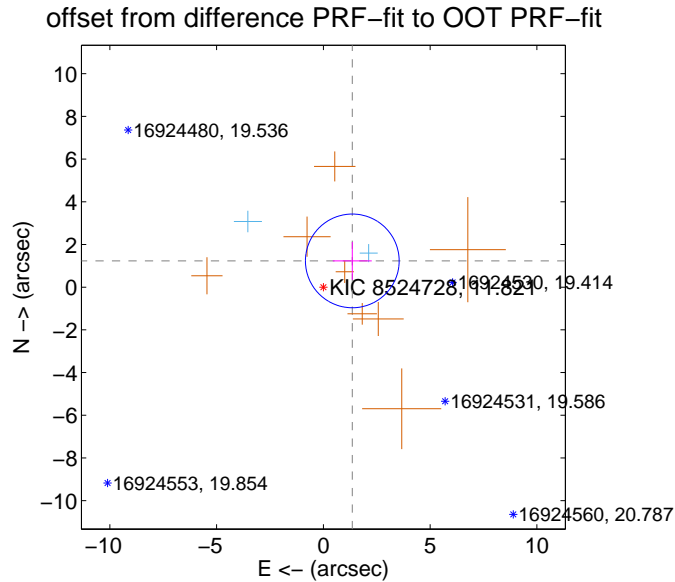
DV Centroid Data

Supplemental centroid analysis for 008524728-01. **Kepler magnitude: 11.82.** Transit SNR 8.38

There are 2 quarters with good PRF difference image offsets

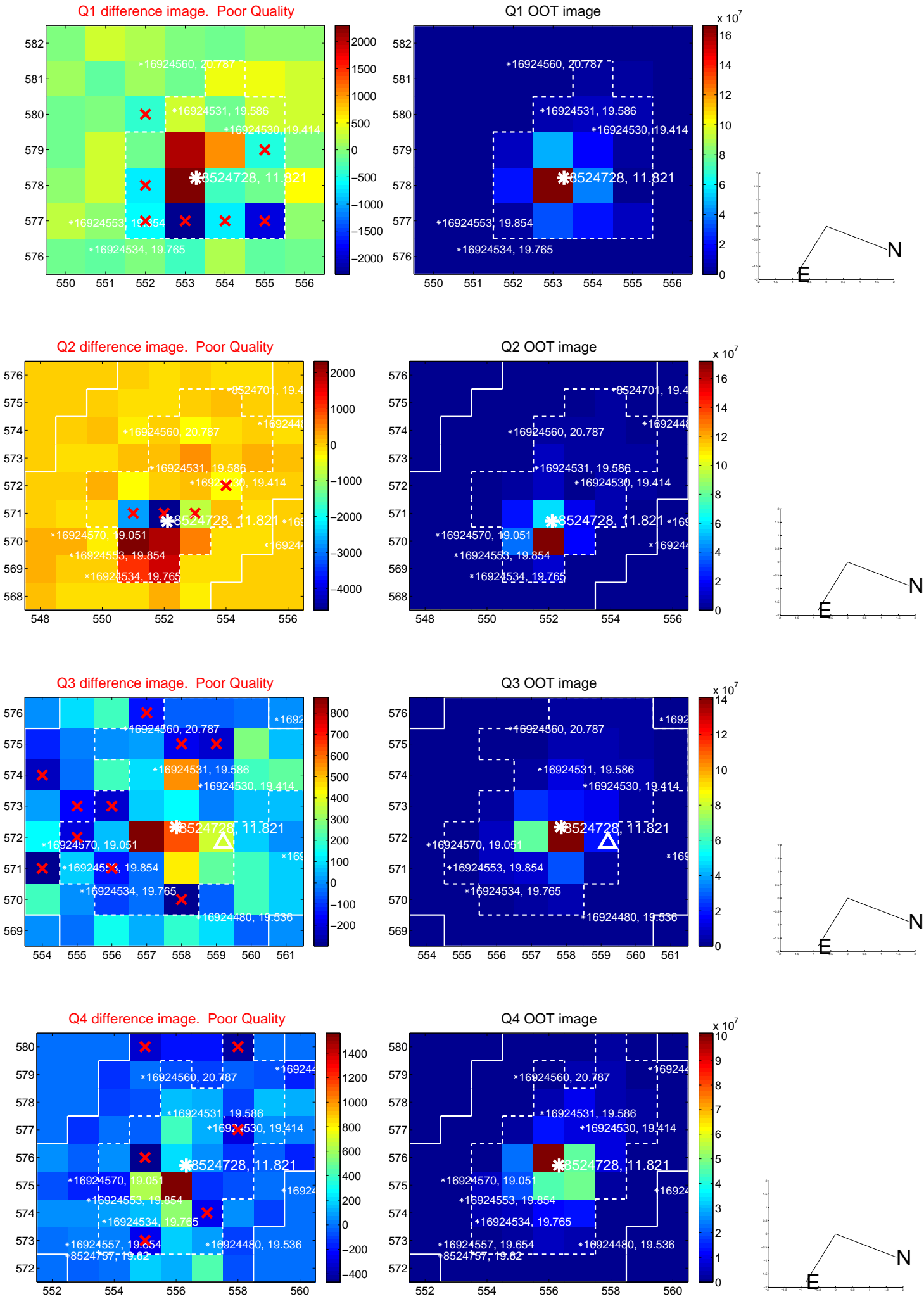
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.830 ± 0.732	2.50	-1.355 ± 0.912	1.230 ± 0.883
PRF-fit source offset from KIC position	1.894 ± 0.909	2.08	-1.397 ± 1.090	1.280 ± 0.900
photometric centroid source offset	2.53 ± 2.30	1.10	2.34 ± 2.40	-0.97 ± 1.67

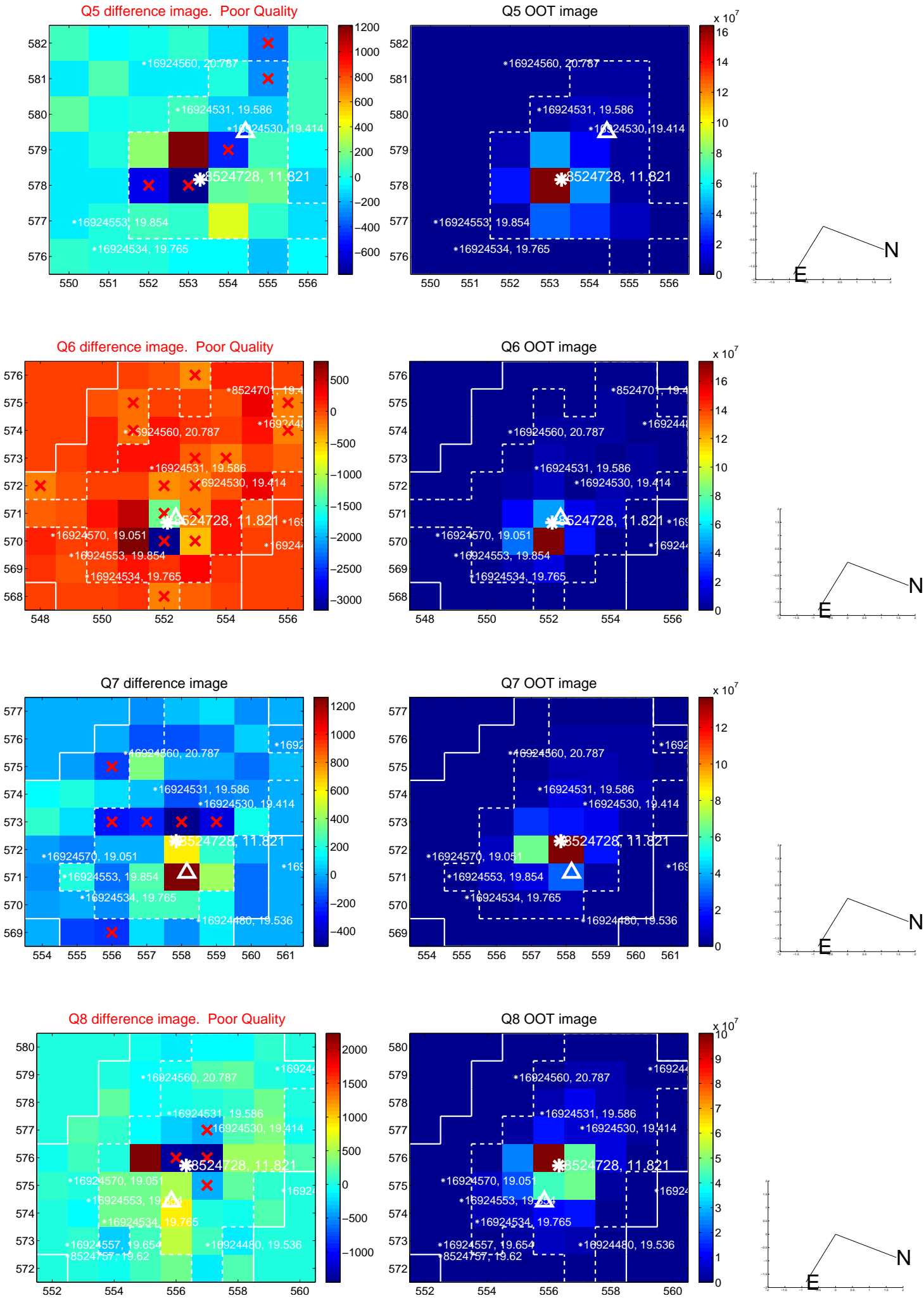


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

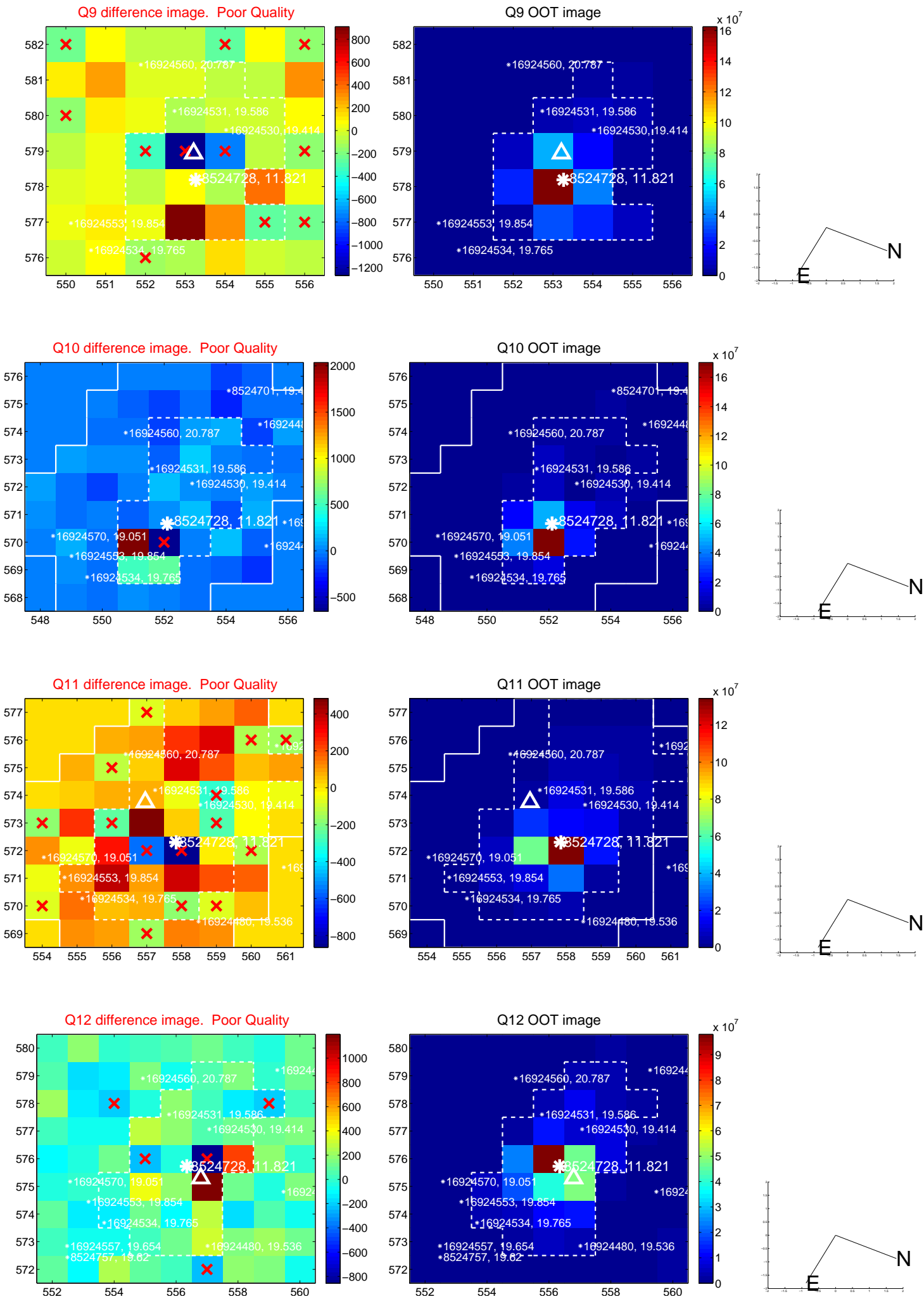
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



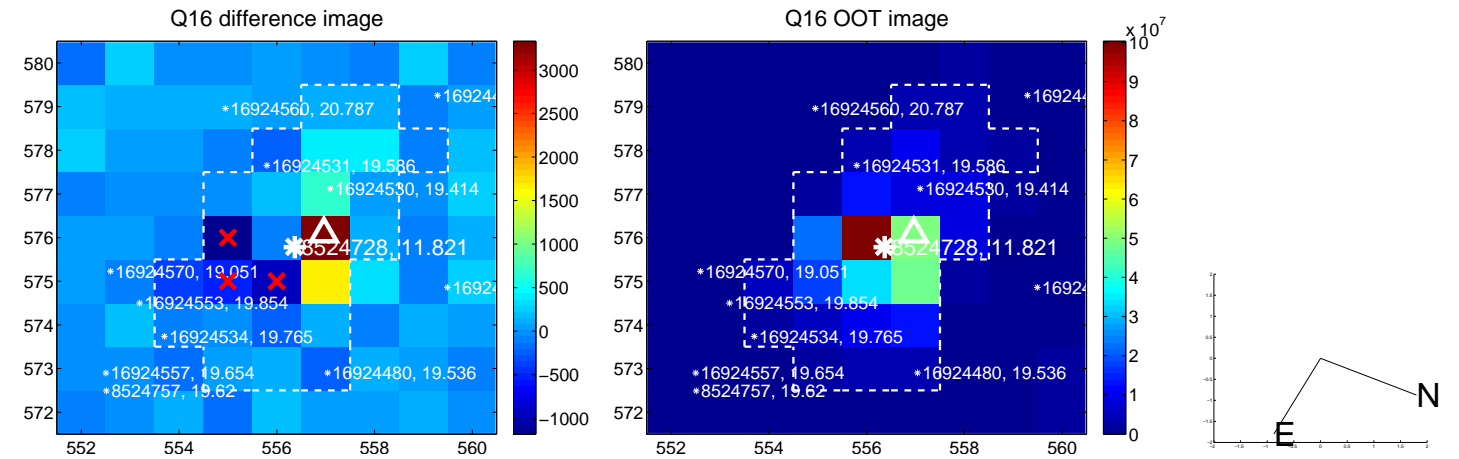
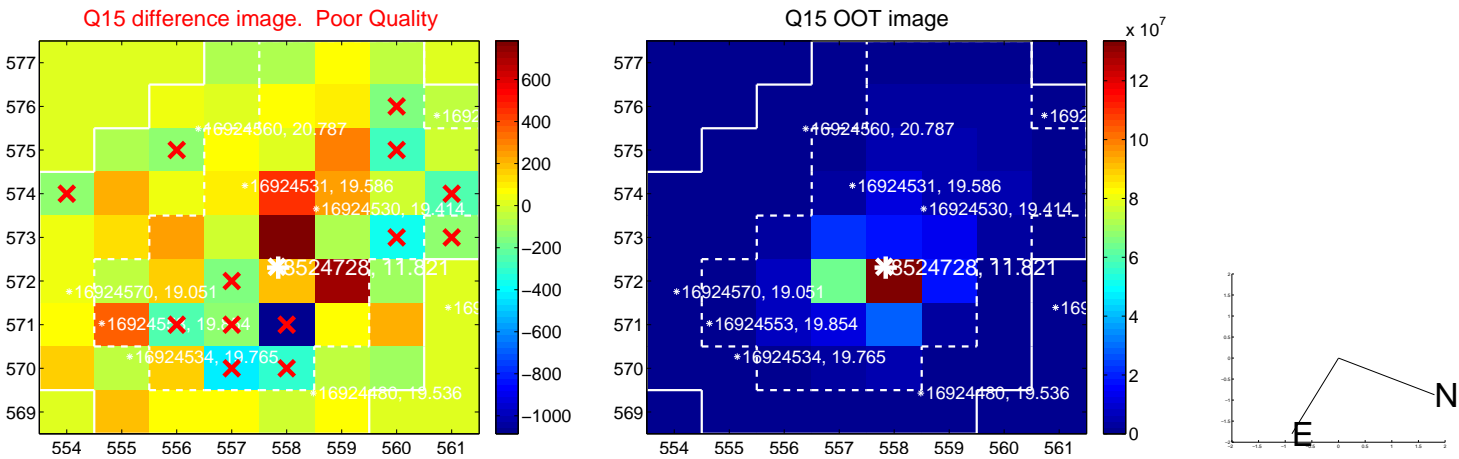
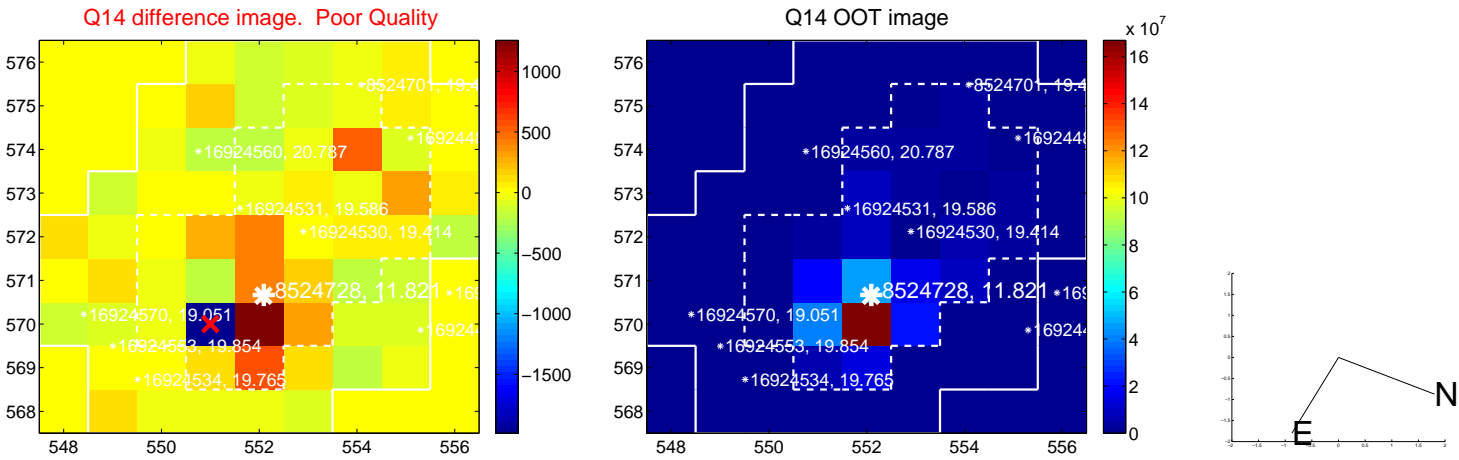
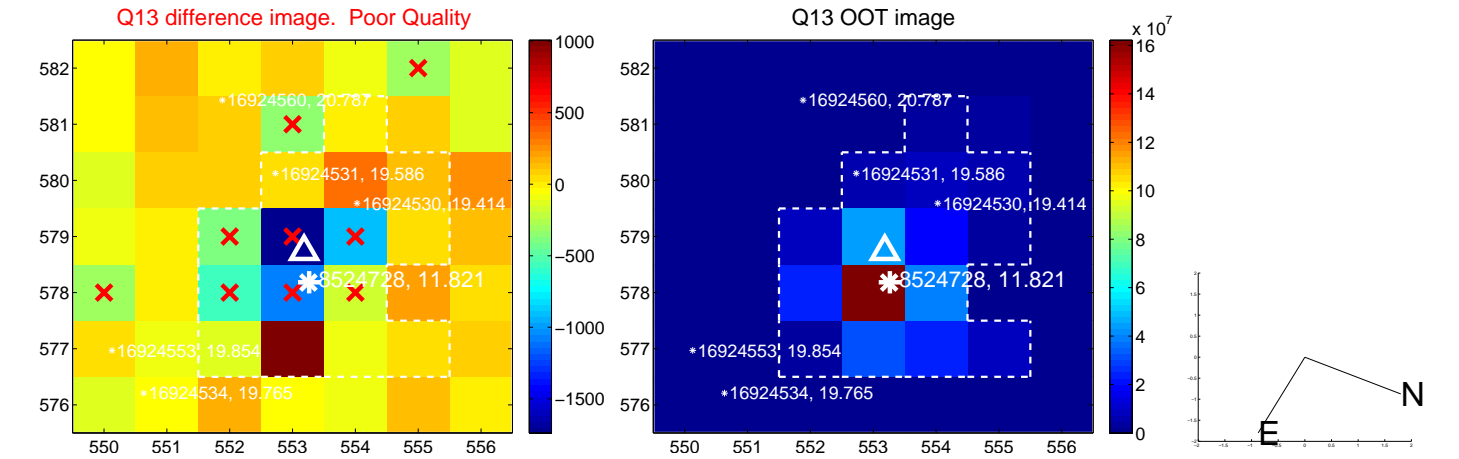
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



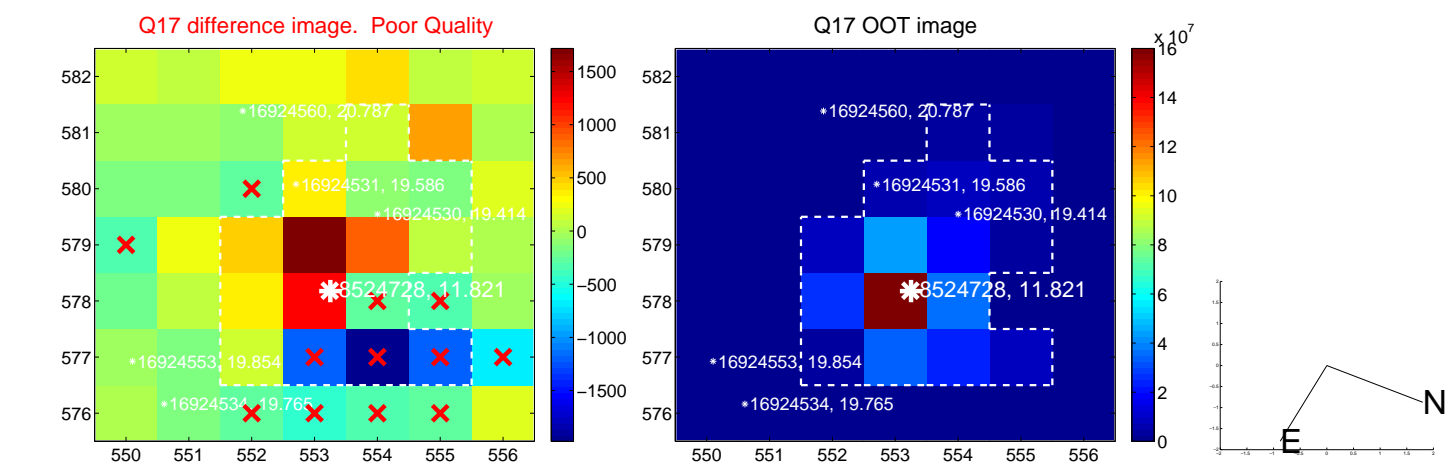
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



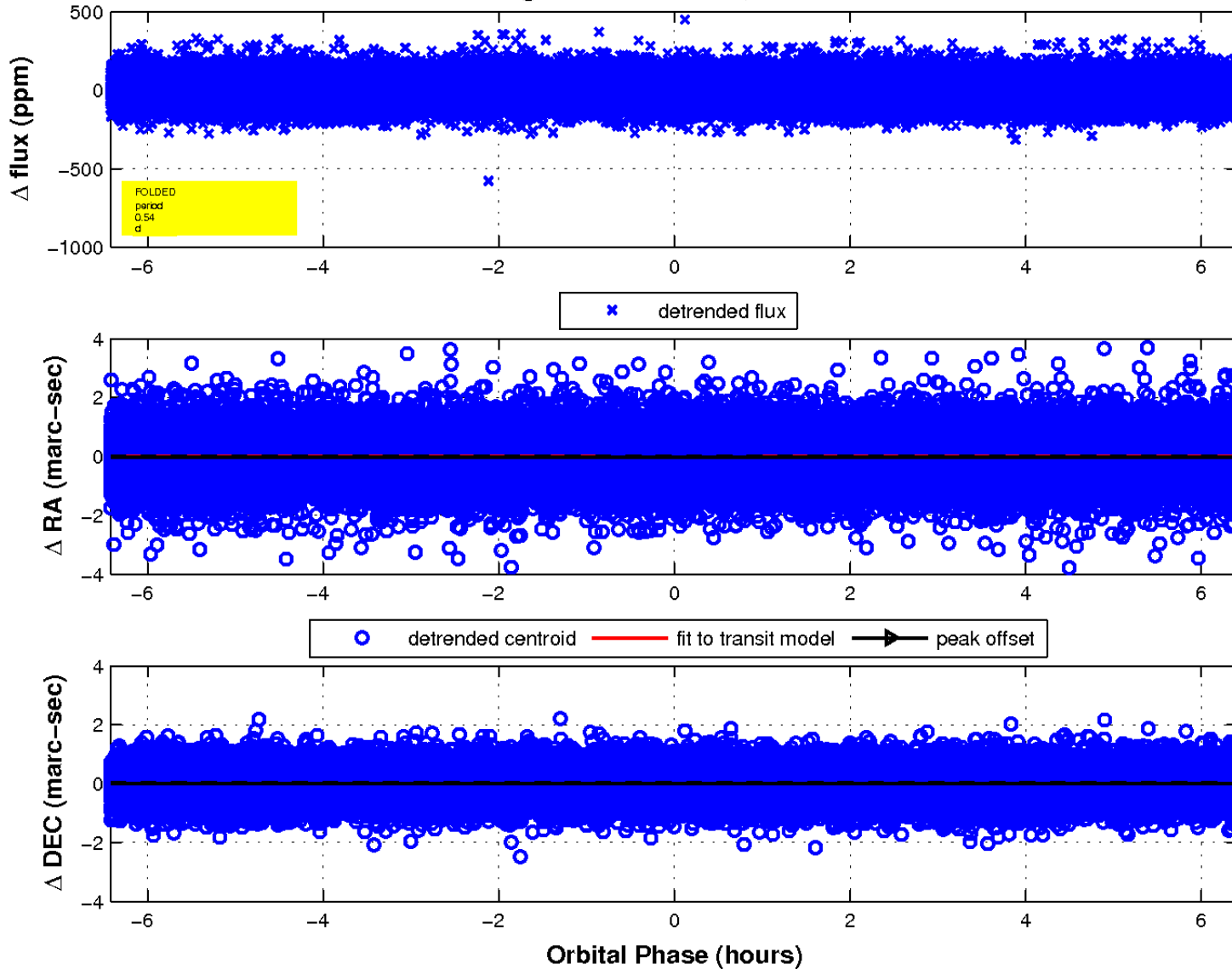
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

