

KIC 005512513

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})
005512513-01	OBS	7730.01	0.774599	132.319208	141.1	2.706	12.9	12.8	0.58	4711	0.74	786.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005512513-01	OBS	FP	0.09	0	1	0	0	MOD_SEC_ALT

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

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

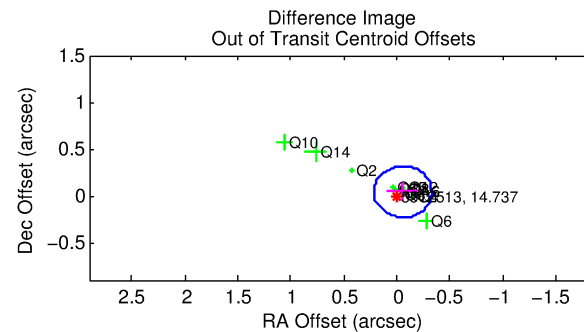
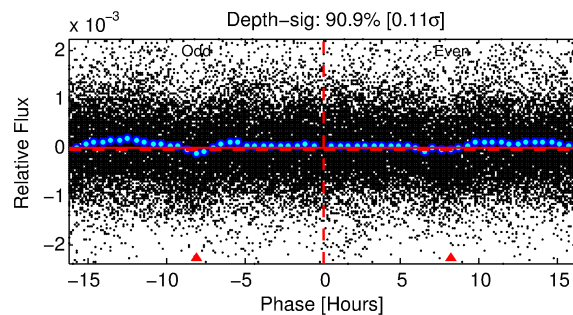
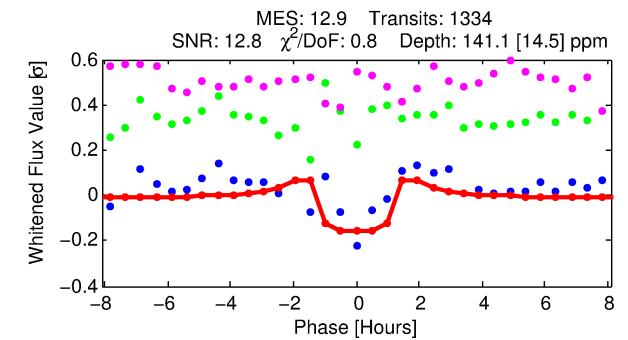
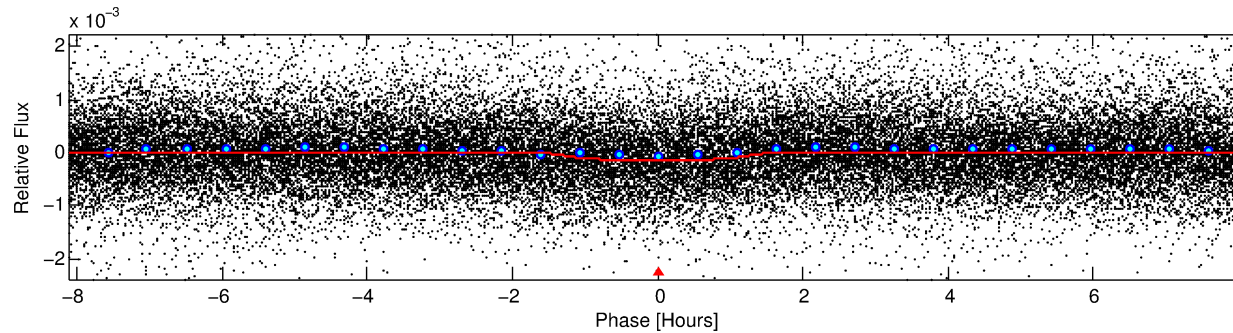
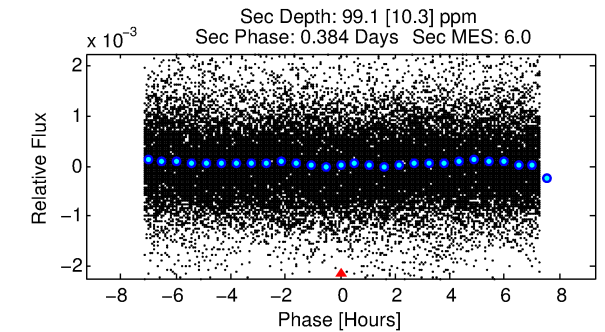
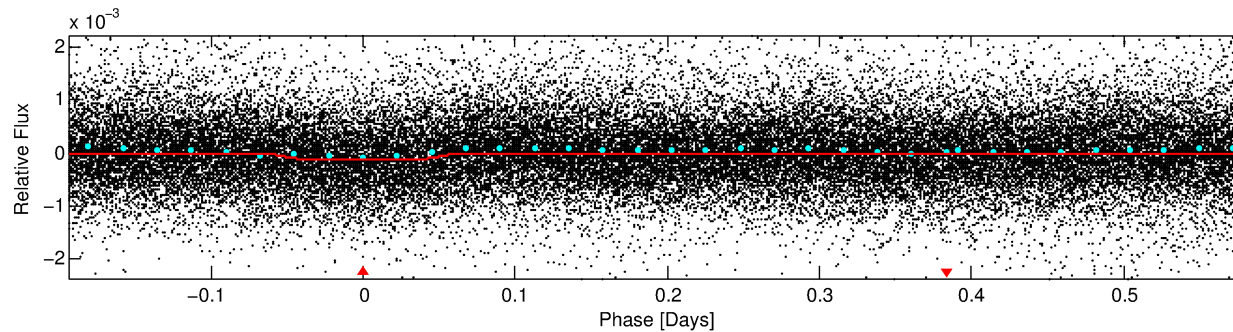
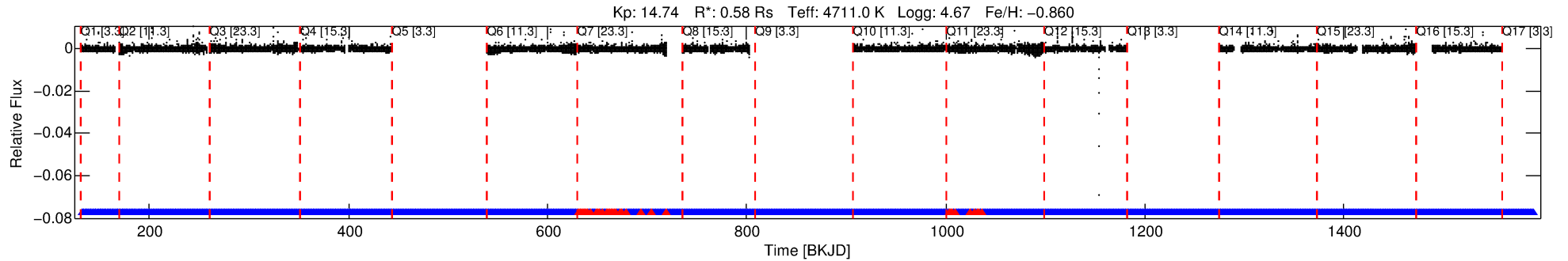
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005512513-01

No Significant Match Found

DV One-Page Summary

KIC: 5512513 Candidate: 1 of 1 Period: 0.775 d



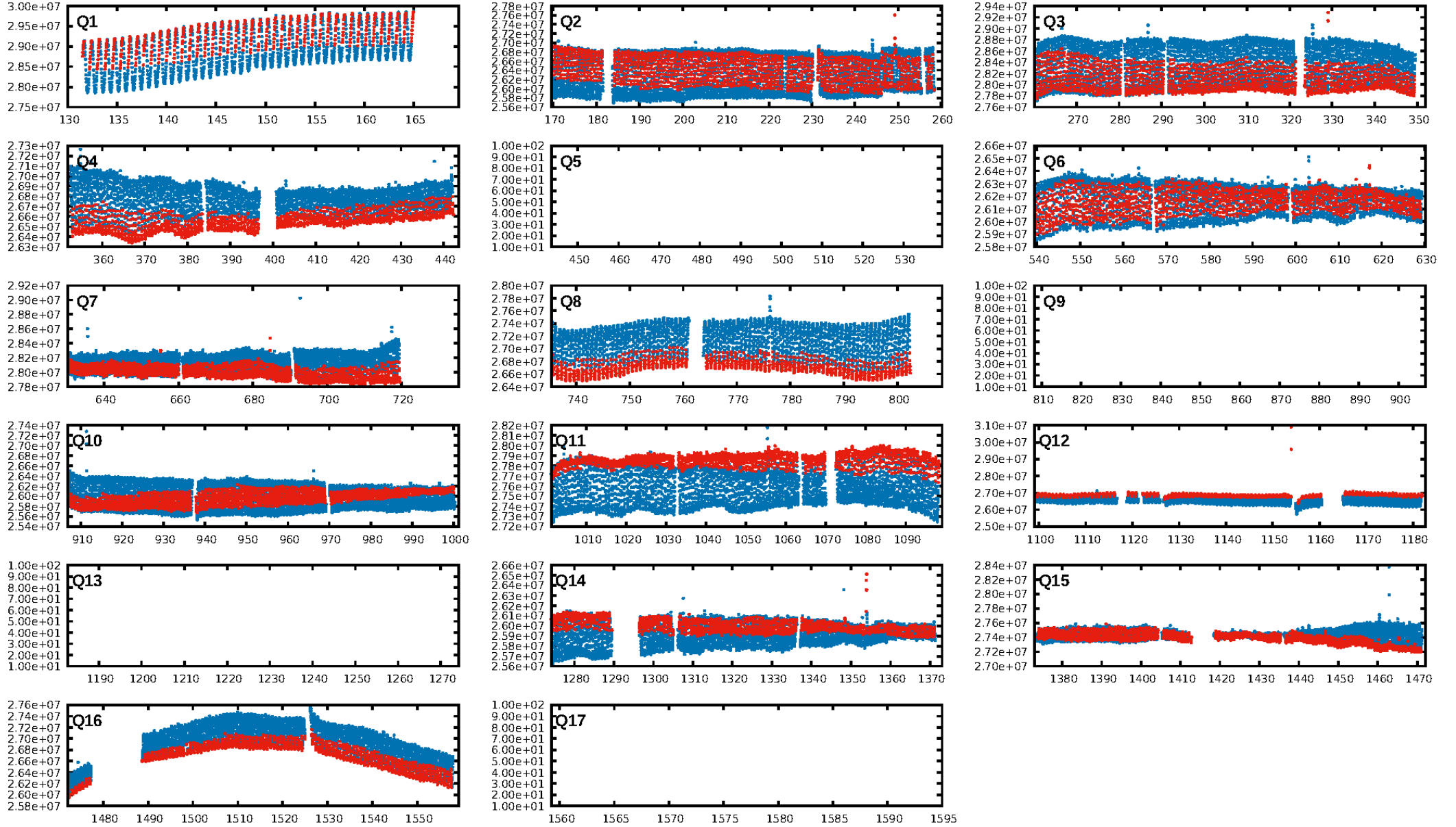
DV Fit Results:

Period = 0.77460 [0.00001] d
Epoch = 132.3192 [0.0016] BKJD
Rp/R* = 0.0118 [0.0060]
a/R* = 1.73 [2.13]
b = 0.74 [1.17]
Seff = 786.50 [121.11]
Teq = 1350 [52] K
Rp = 0.74 [0.38] Re
a = 0.0137 [0.0009] AU
Ag = 18.48 [18.98] [0.92 σ]
Teffp = 4329 [1114] K [2.67 σ]

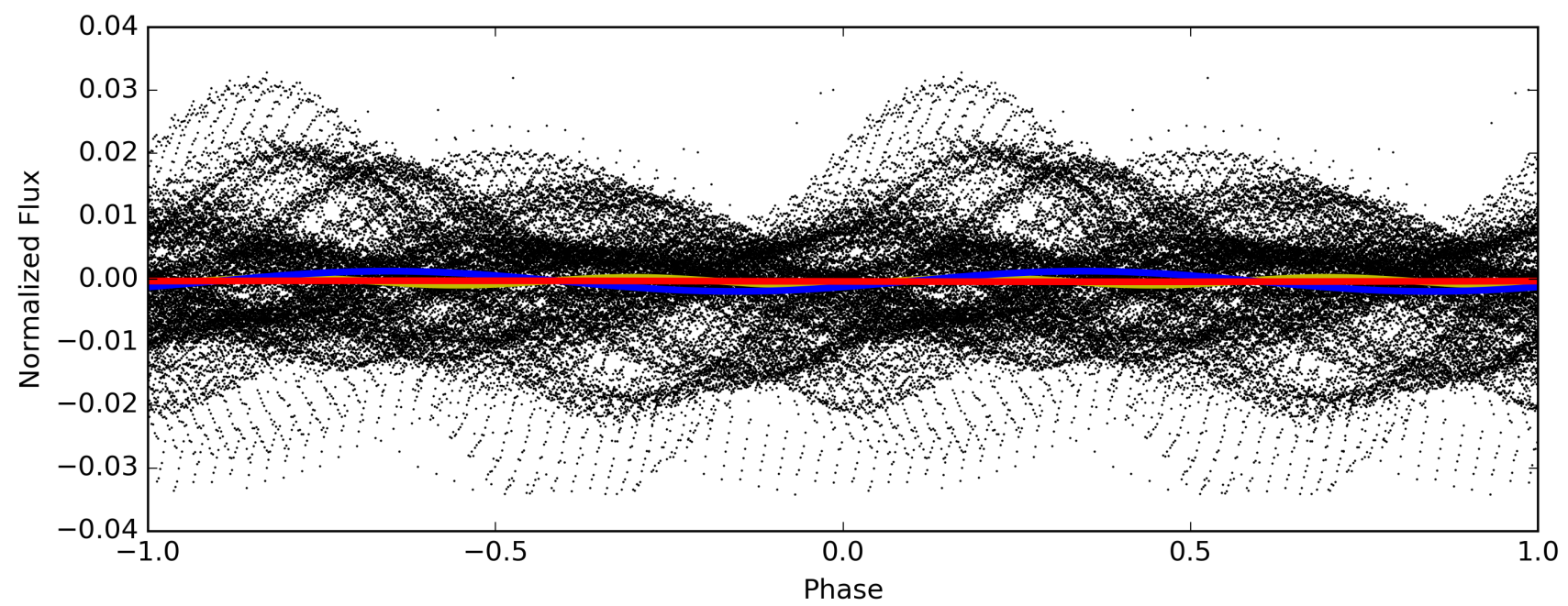
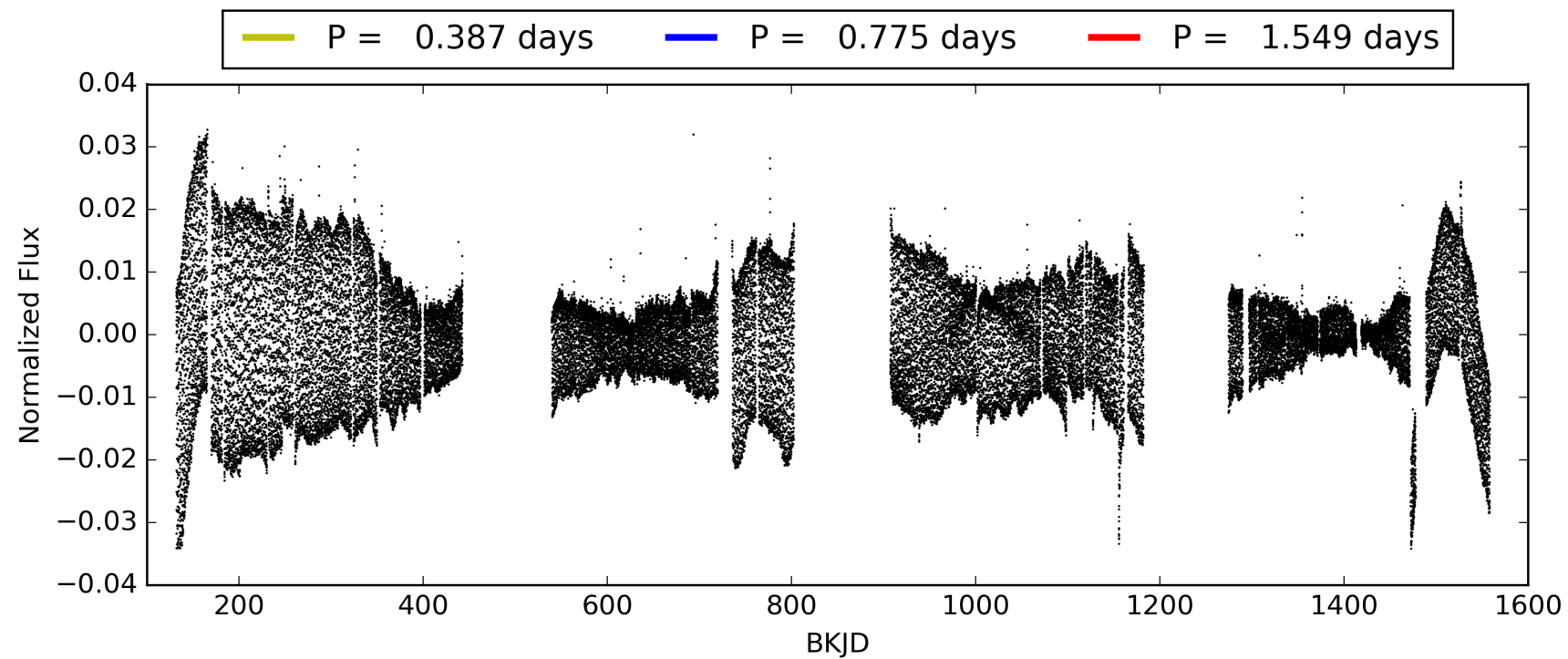
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.70e-32
RollingBand-fgt: 0.97 [1248/1290]
GhostDiagnostic-chr: 1.527
Centroid-sig: 28.7%
Centroid-so: 0.797 arcsec [1.53 σ]
OotOffset-rm: 0.072 arcsec [0.79 σ]
KicOffset-rm: 0.172 arcsec [1.51 σ]
OotOffset-st: 4/4/4/1 [13]
KicOffset-st: 4/4/4/1 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [13/13]

TCE 005512513-01, PDC Light Curves

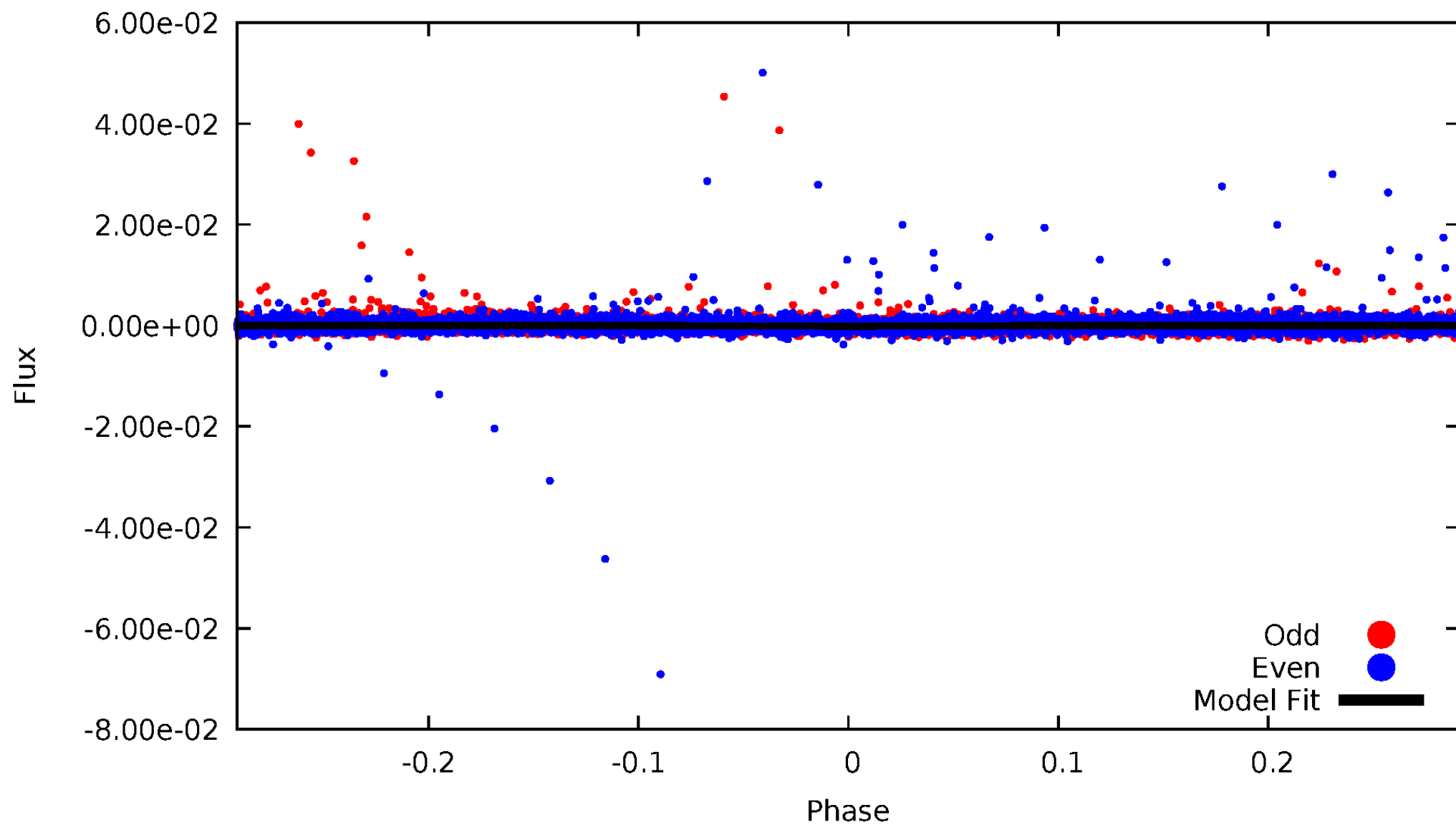


TCE 005512513-01



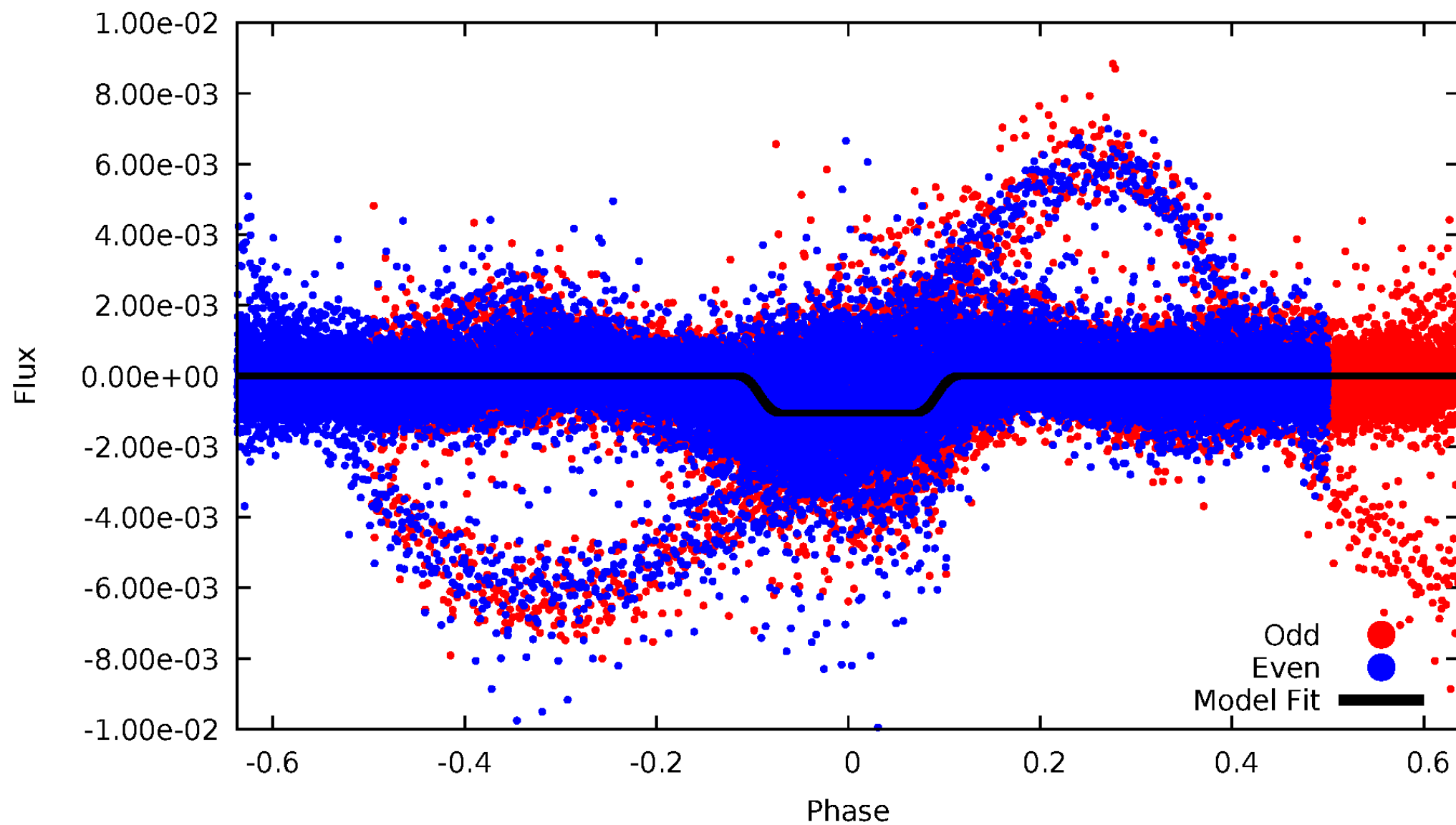
DV Odd/Even

TCE 005512513-01

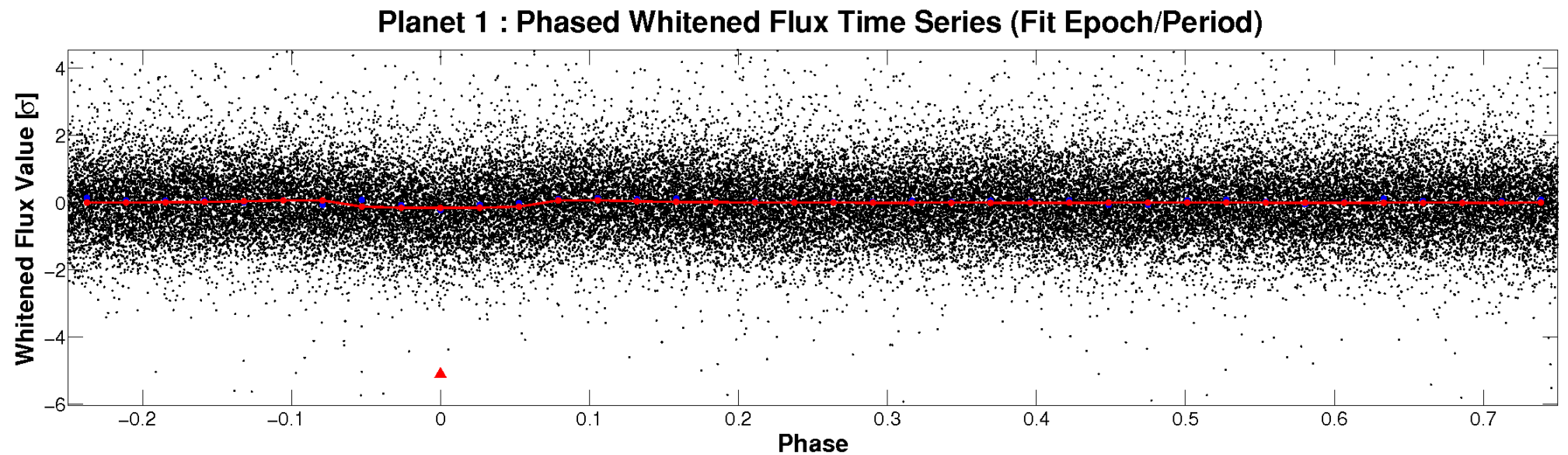
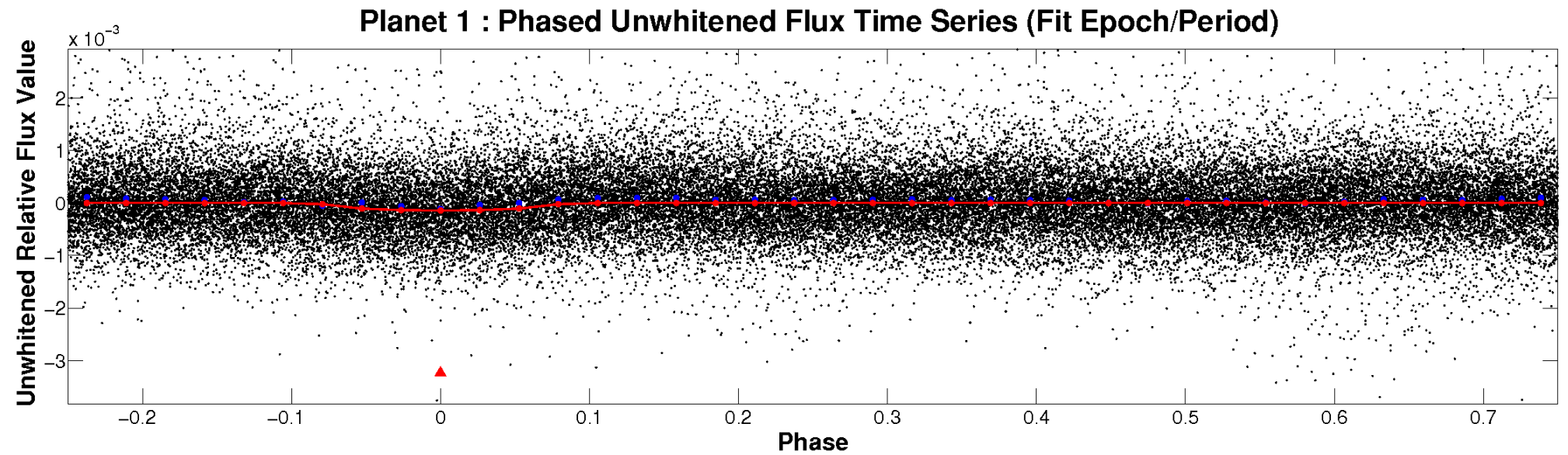


ALT Odd/Even

TCE 005512513-01

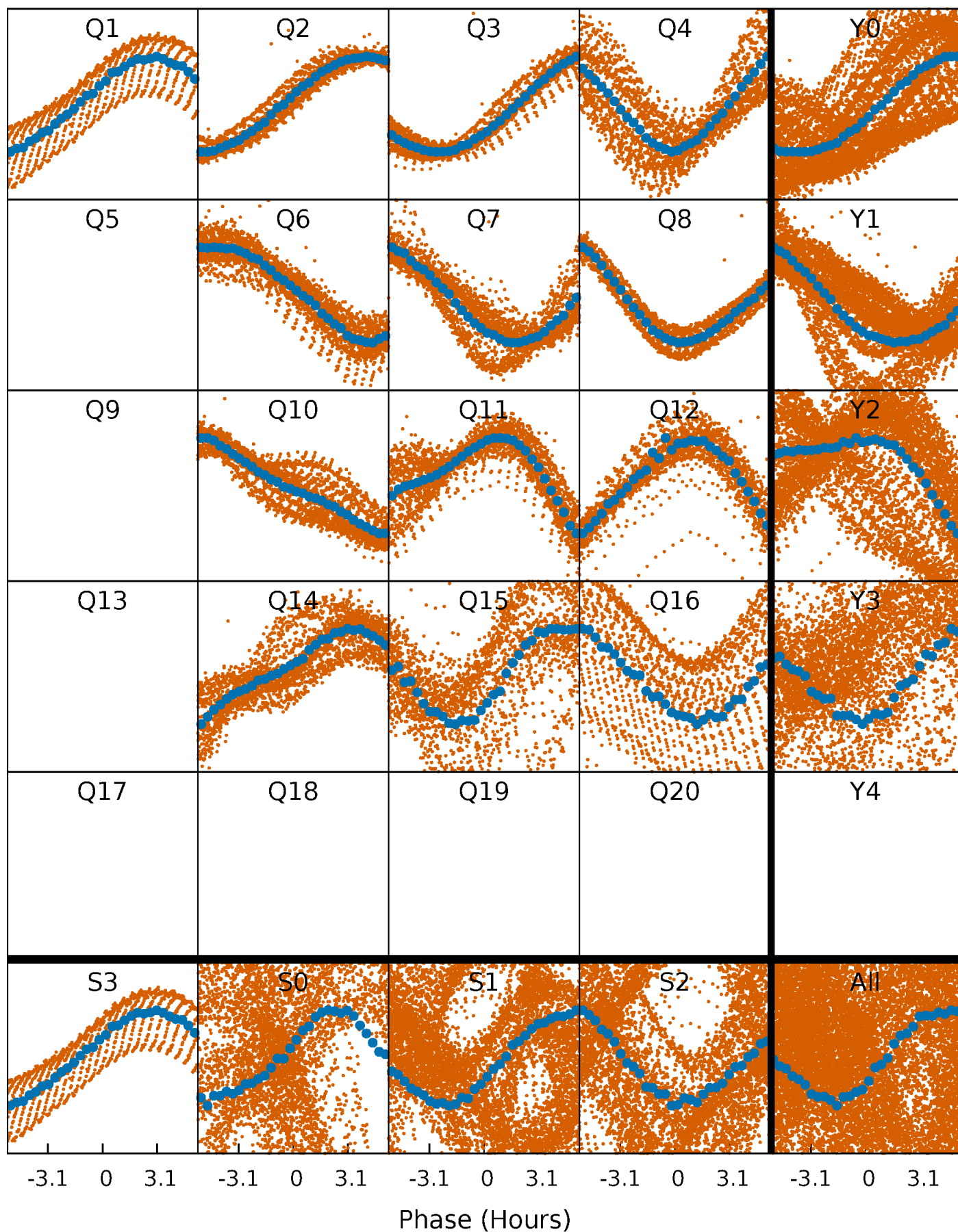


Non-Whitened Vs. Whitened Light Curve



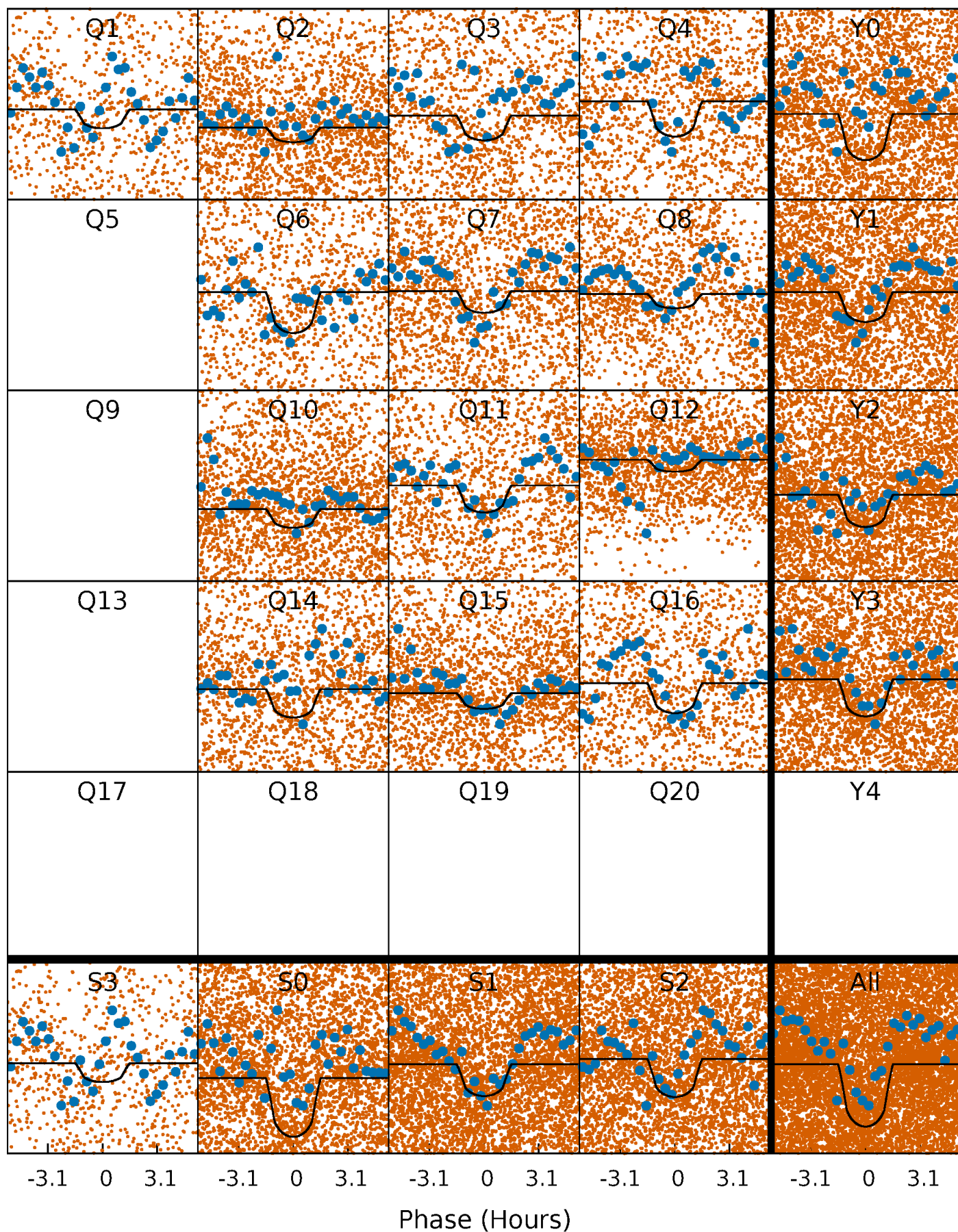
PDC Quarter-Phased Transit Curves

TCE 005512513-01 P= 0.774599 Days $T_0=132.319208$ (BKJD)



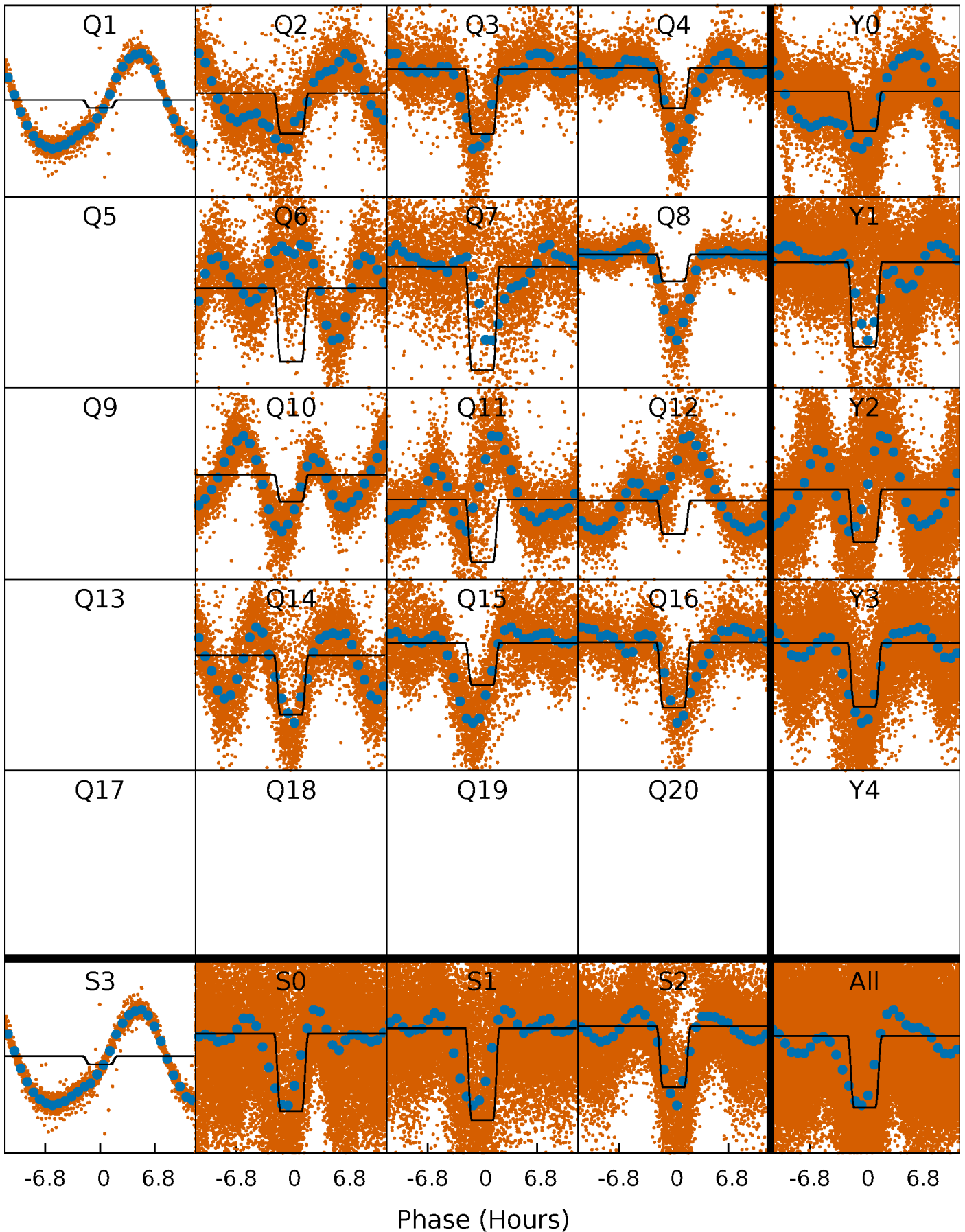
DV Quarter-Phased Transit Curves

TCE 005512513-01 P= 0.774599 Days $T_0=132.319208$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

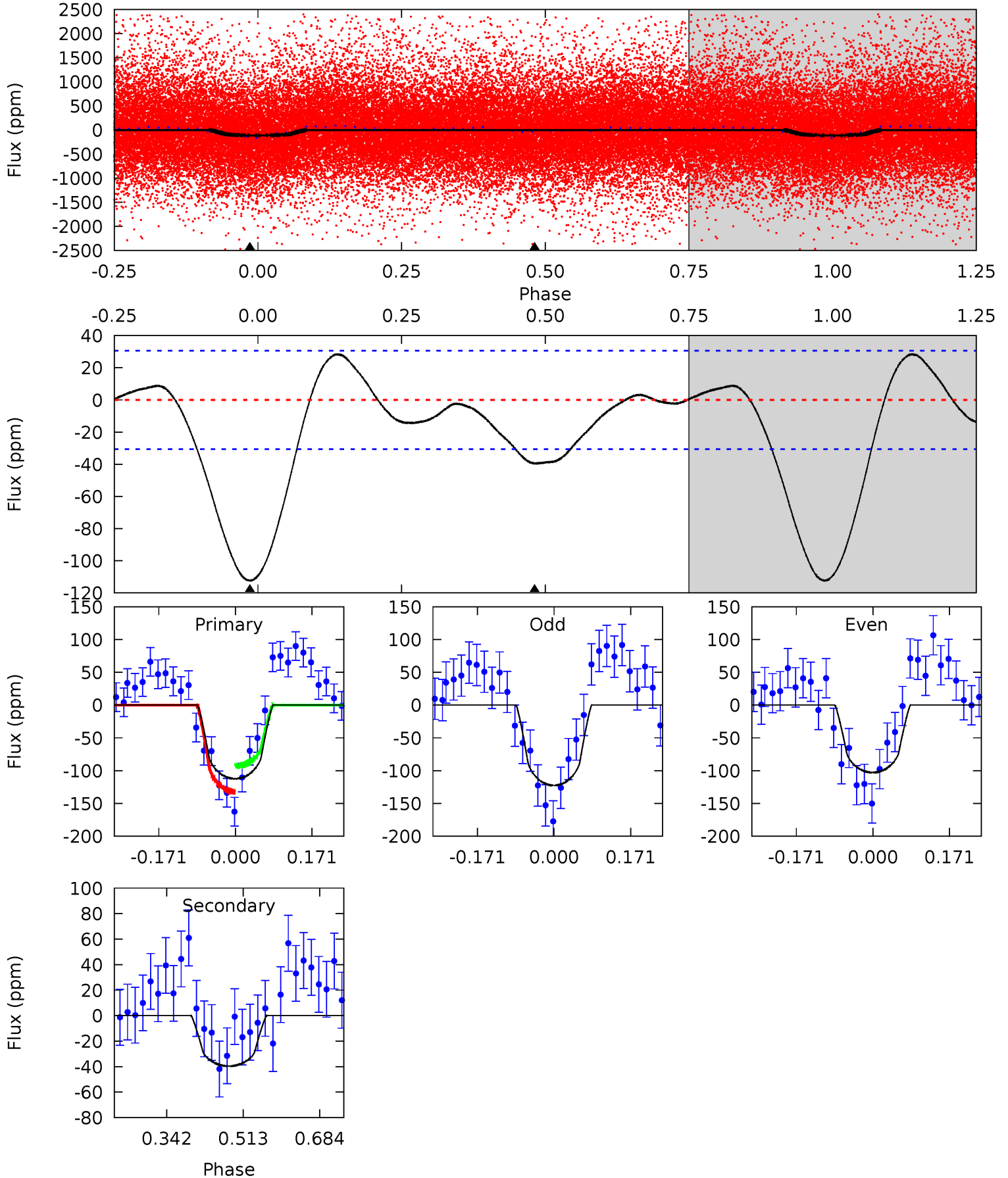
TCE 005512513-01 P= 0.774634 Days $T_0=132.263678$ (BKJD)



DV Model-Shift Uniqueness Test

005512513-01, P = 0.774599 Days, E = 130.770010 Days

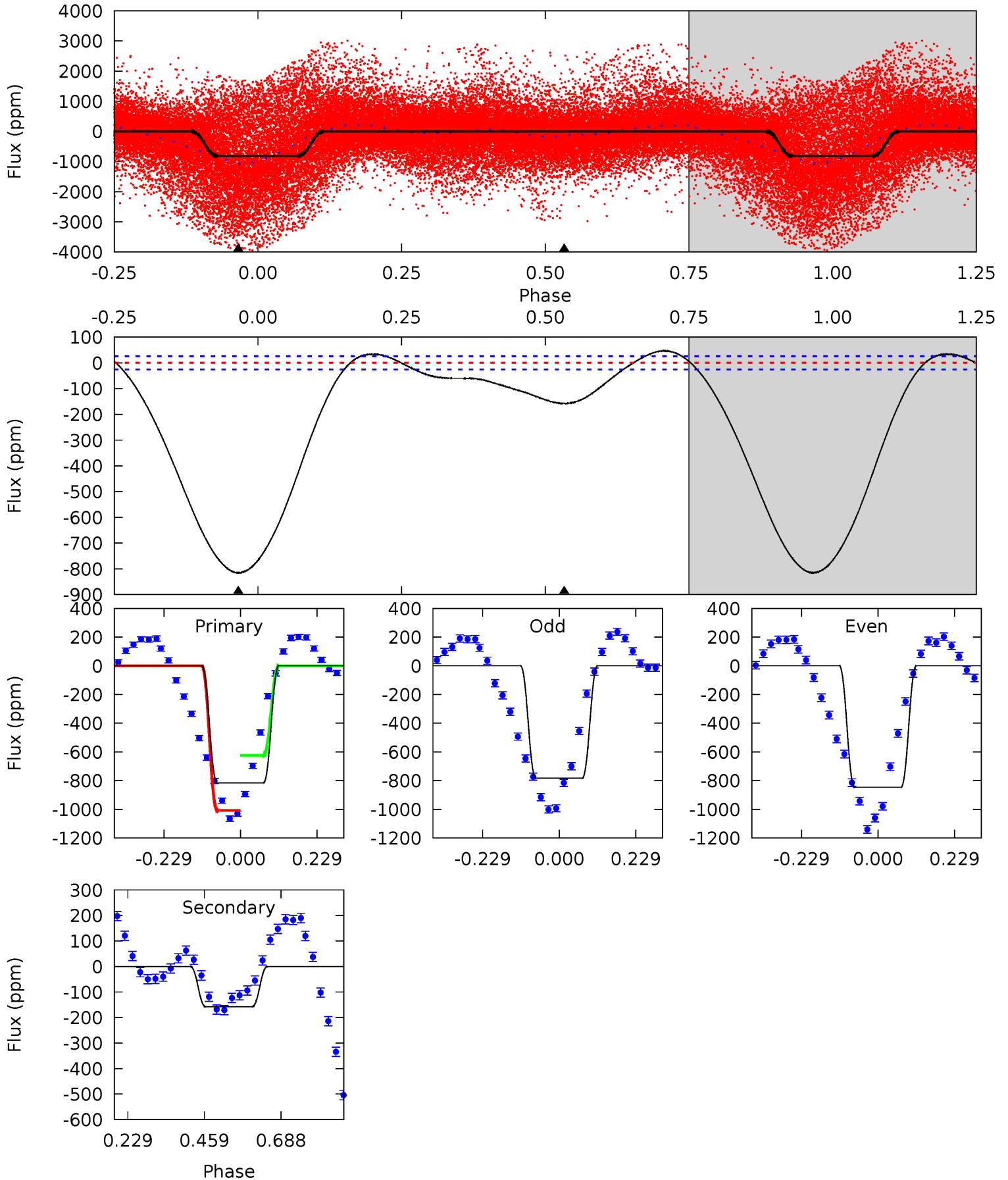
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.4	5.77	0	0	4.45	1.37	1.37	16.4	16.4	5.77	5.77	1.45	0.48	0.20	2.91



Alt Model-Shift Uniqueness Test

005512513-01, P = 0.774634 Days, E = 131.489044 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
139.3	27.0	0	0	4.39	1.20	4.94	139.3	139.3	27.0	27.0	5.44	0.83	0.05	34.1



Stellar Parameters For KIC 005512513

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4711^{+142}_{-142}	$4.671^{+0.052}_{-0.032}$	$-0.860^{+0.350}_{-0.300}$	$0.579^{+0.046}_{-0.042}$	$0.573^{+0.053}_{-0.025}$	$4.154^{+0.874}_{-0.601}$
	+3%/-3%	+1%/-1%	+41%/-35%	+8%/-7%	+9%/-4%	+21%/-14%
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 005512513-01 / KOI 7730.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-40 ± 7	$0.76^{+0.39}_{-0.35}$	1879^{+69}_{-66}	3686^{+1010}_{-484}	$6.968^{+19.080}_{-3.879}$
Alt.	-158 ± 6	$2.03^{+0.42}_{-0.40}$	1878^{+67}_{-63}	3337^{+248}_{-194}	$4.006^{+2.084}_{-1.241}$

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

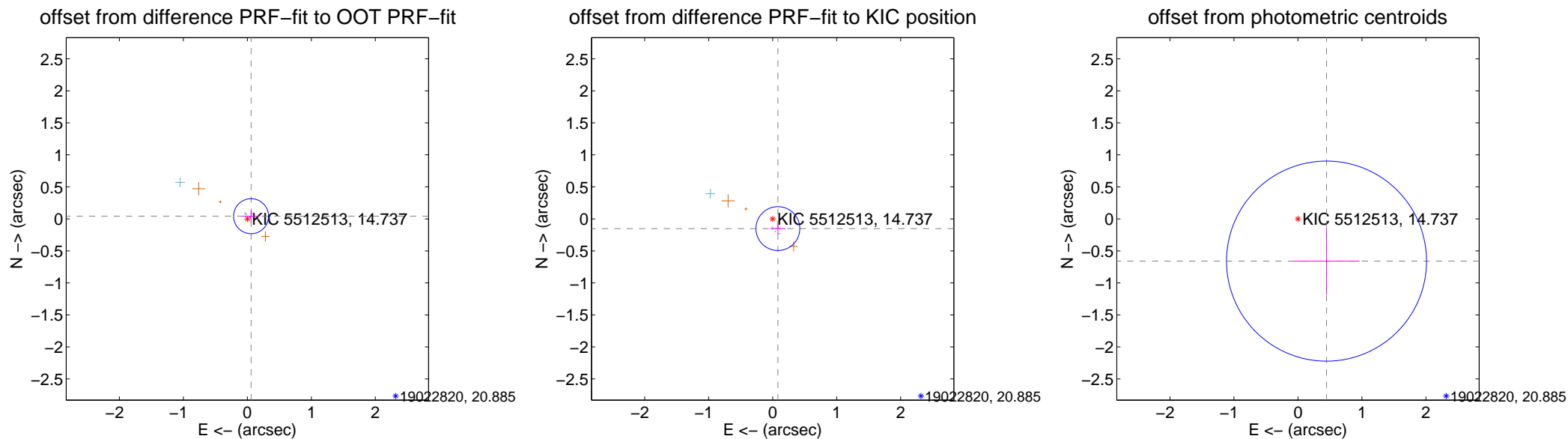
DV Centroid Data

Supplemental centroid analysis for 005512513-01. Kepler magnitude: 14.74. Transit SNR 12.80

There are 7 quarters with good PRF difference image offsets

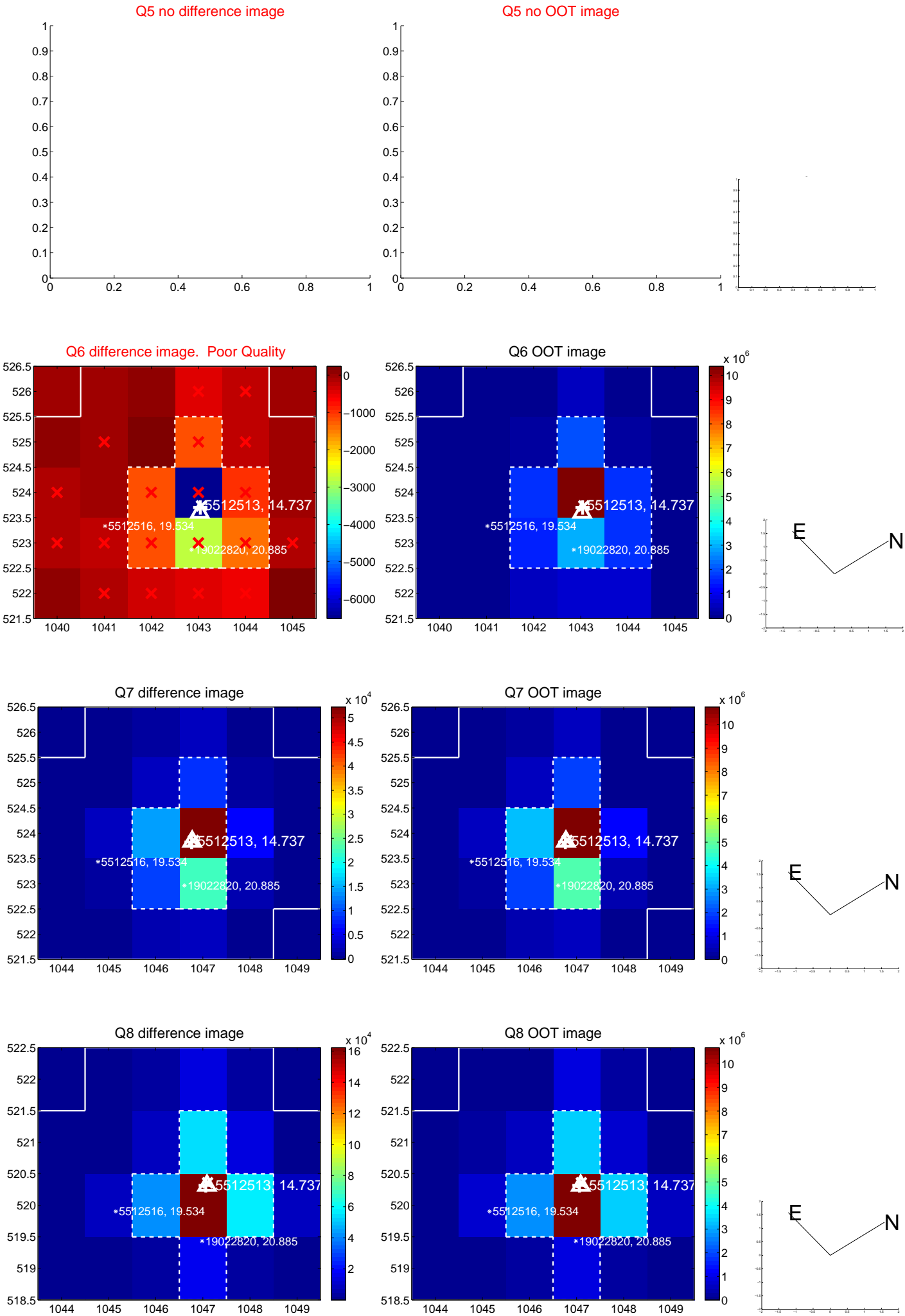
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.072 ± 0.091	0.79	-0.058 ± 0.137	0.042 ± 0.092
PRF-fit source offset from KIC position	0.172 ± 0.114	1.51	-0.082 ± 0.116	-0.152 ± 0.087
photometric centroid source offset	0.80 ± 0.52	1.53	-0.45 ± 0.52	-0.66 ± 0.52

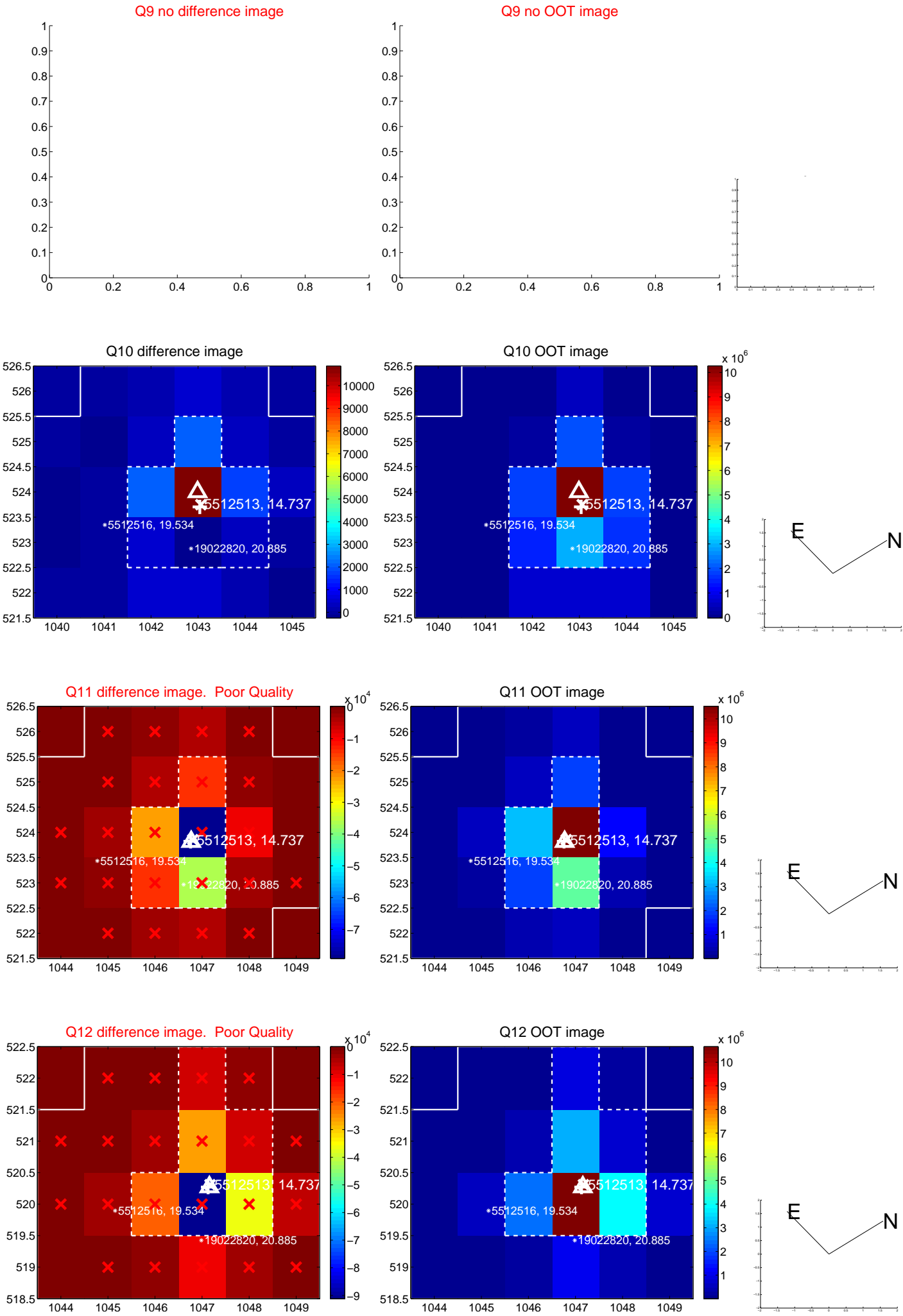


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

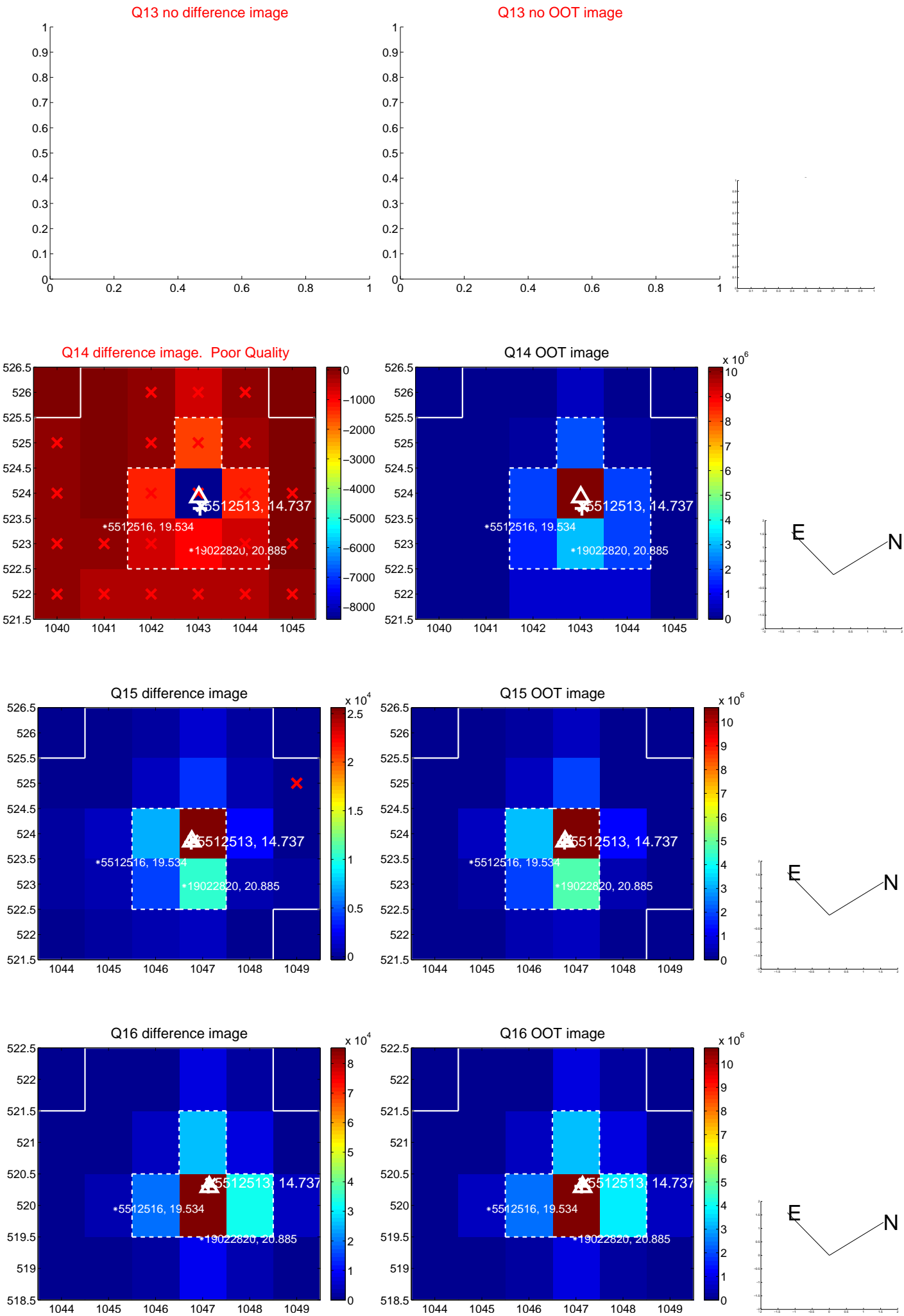
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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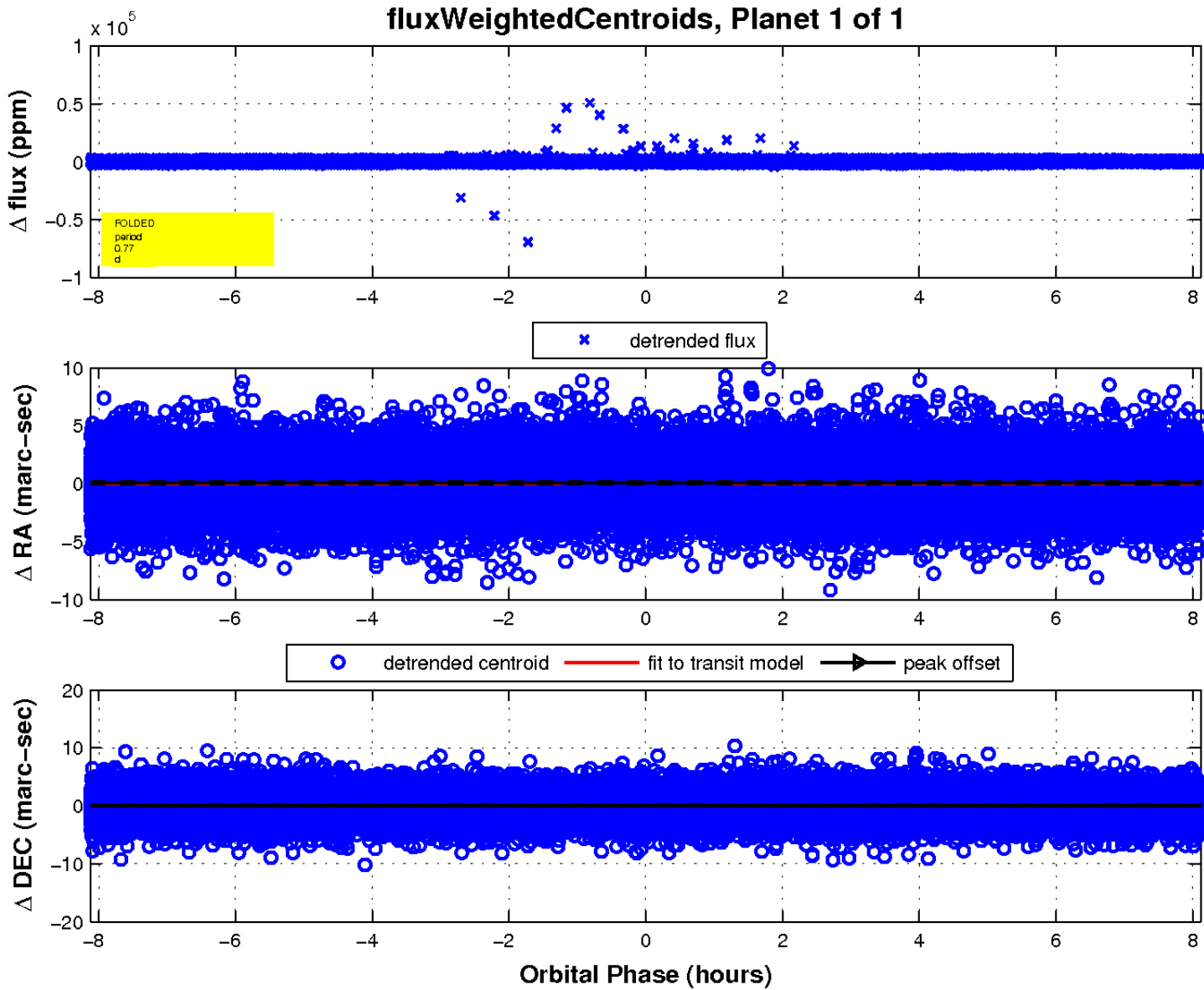
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

Q17 no difference image

Q17 no OOT image



UKIRT Image

Declination

