

KIC 003240976

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})
003240976-01	OBS	No	15.244689	138.745490	354.8	46.684	14.3	26.4	1.03	6385	2.91	107.44

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003240976-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

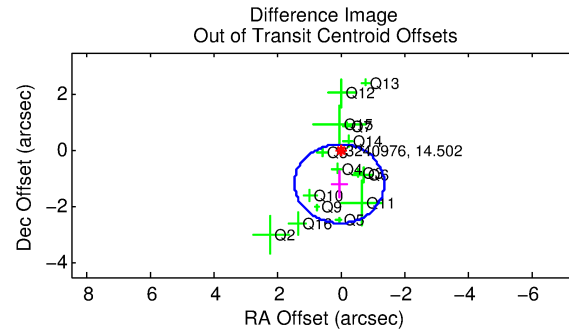
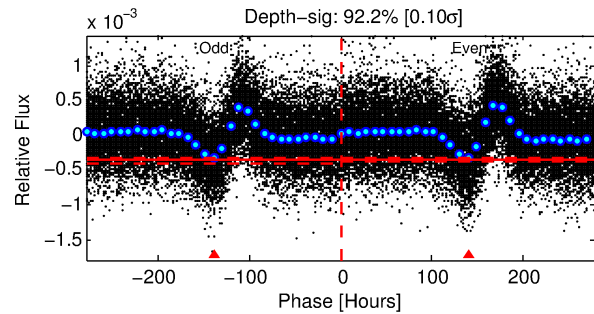
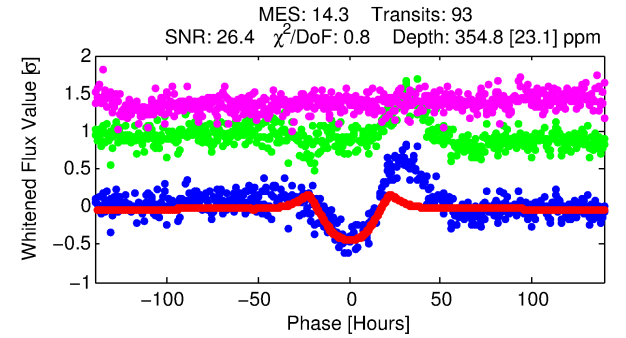
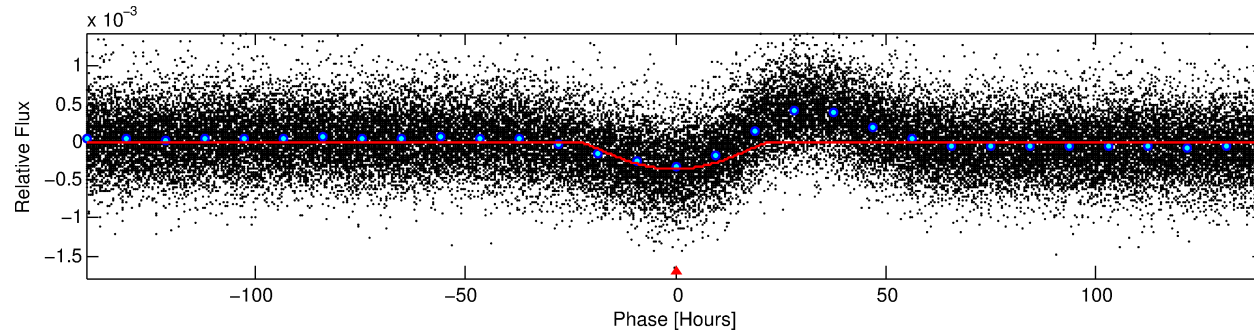
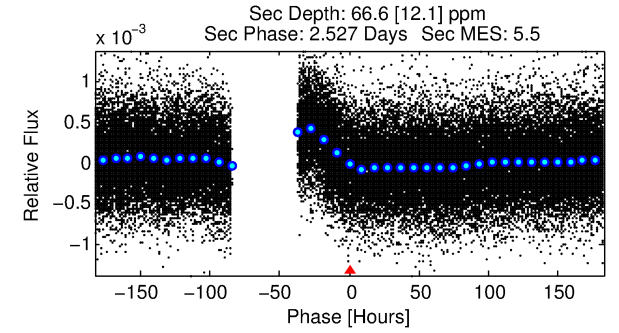
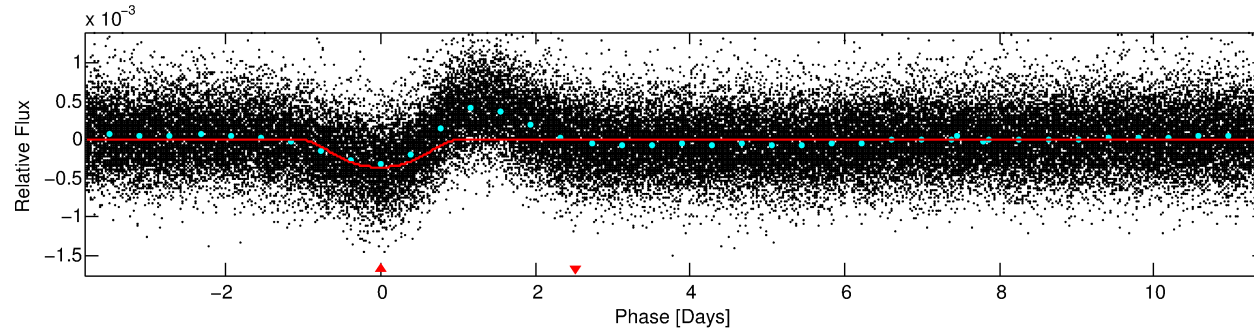
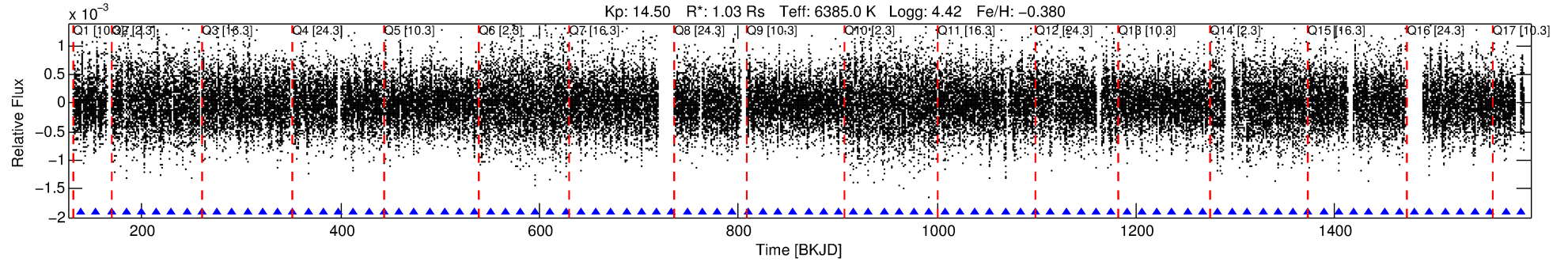
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003240976-01

No Significant Match Found

DV One-Page Summary

KIC: 3240976 Candidate: 1 of 1 Period: 15.245 d



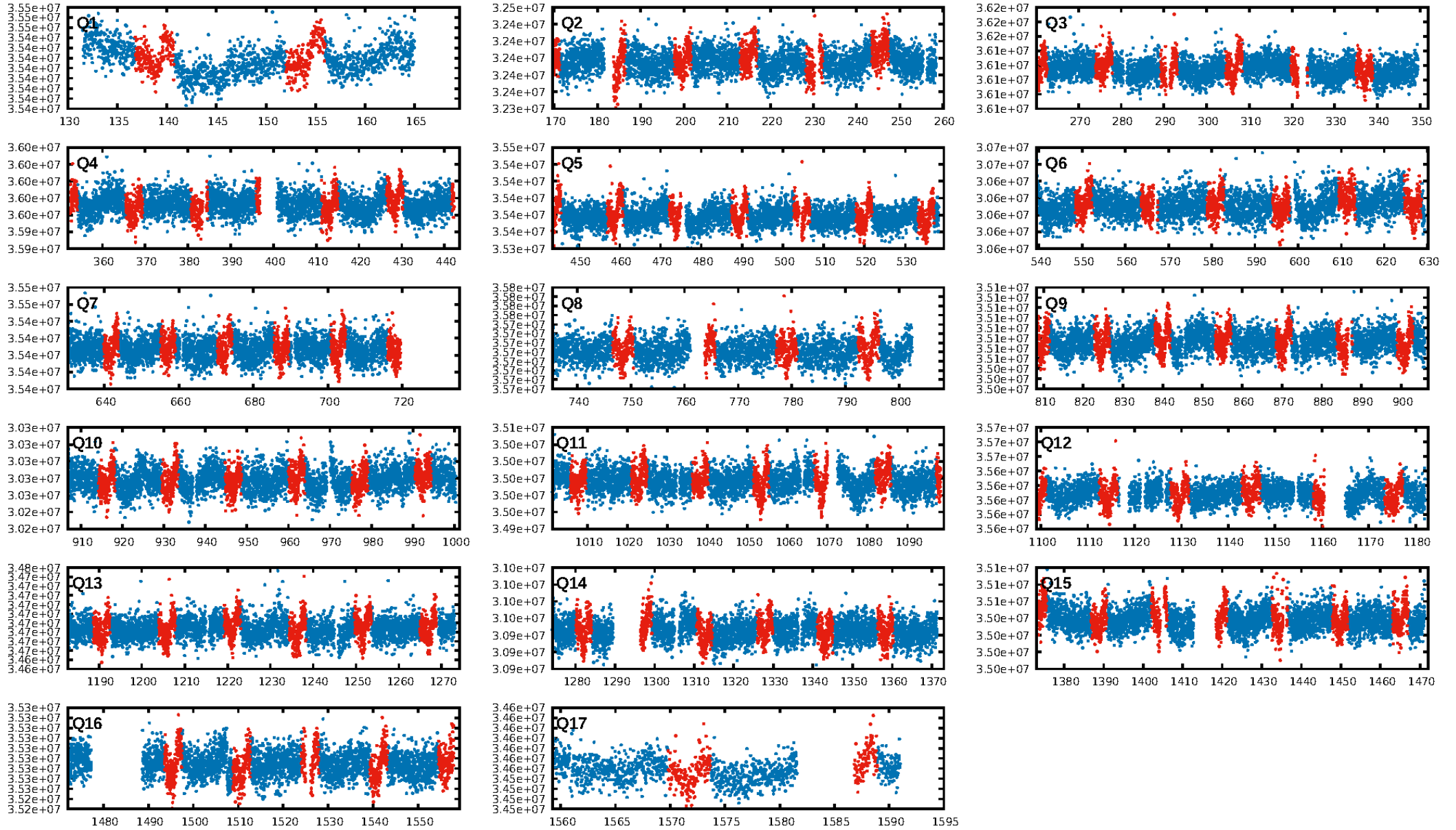
DV Fit Results:

Period = 15.24469 [0.00058] d
Epoch = 138.7455 [0.0316] BKJD
Rp/R* = 0.0259 [0.0048]
a/R* = 1.22 [0.03]
b = 0.99 [0.01]
Seff = 107.44 [42.85]
T_{eq} = 821 [82] K
Rp = 2.91 [1.06] R_e
a = 0.1215 [0.0316] AU
Ag = 63.68 [35.40] [1.77σ]
T_{eff} = 3586 [389] K [6.95σ]

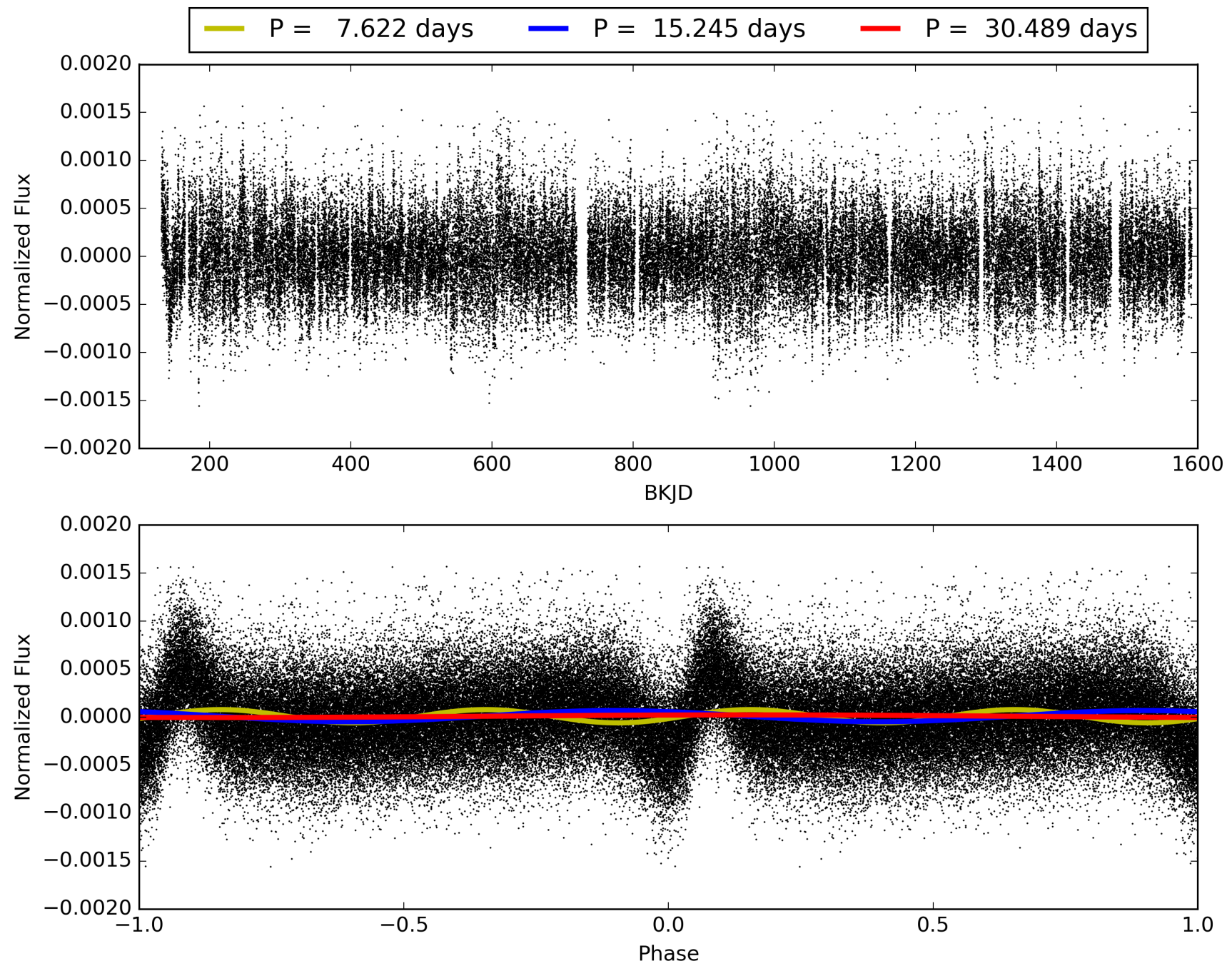
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 98.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.68e-47
RollingBand-fgt: 1.00 [89/89]
GhostDiagnostic-chr: 0.7846
Centroid-sig: 15.5%
Centroid-so: 0.157 arcsec [0.65σ]
OotOffset-rm: 1.180 arcsec [2.51σ]
KicOffset-rm: 1.183 arcsec [2.59σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.87 [13/15]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 003240976-01, PDC Light Curves

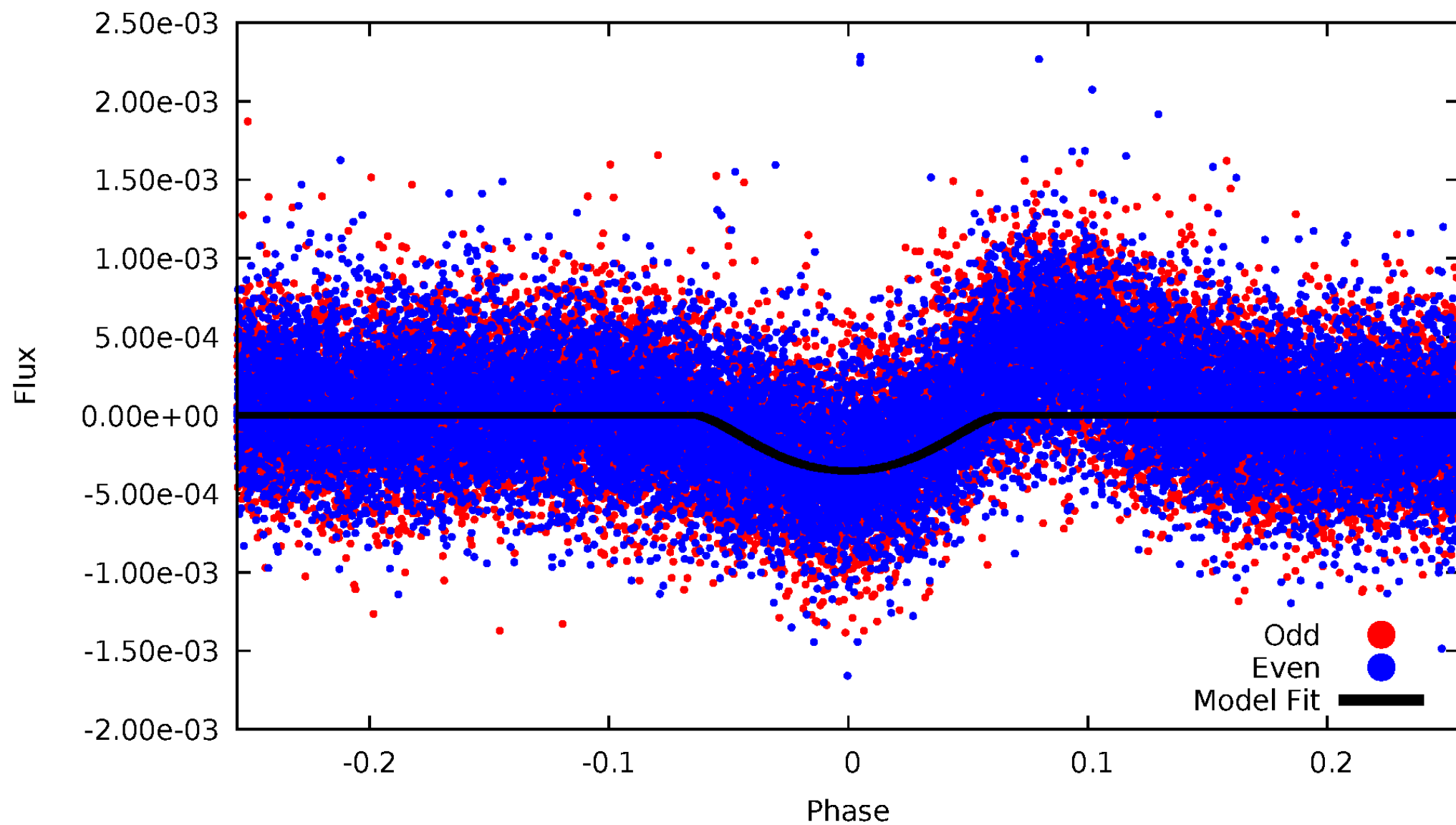


TCE 003240976-01



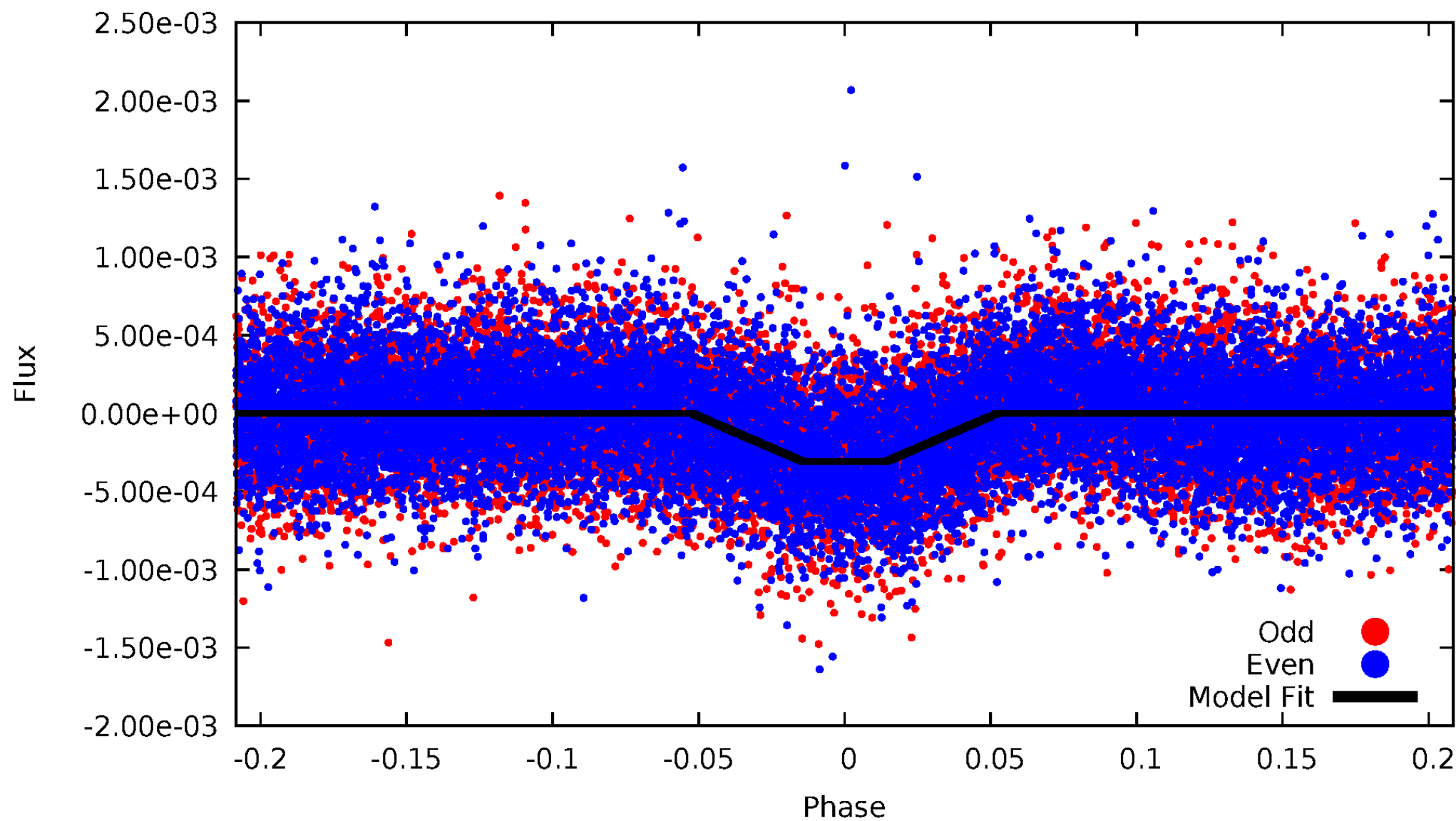
DV Odd/Even

TCE 003240976-01

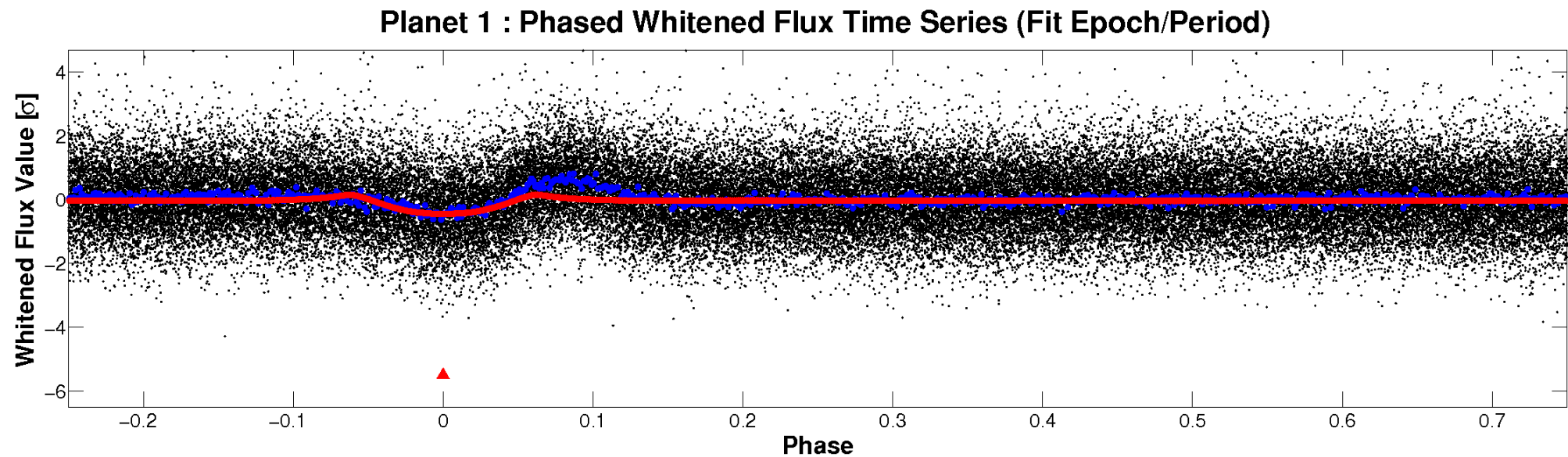
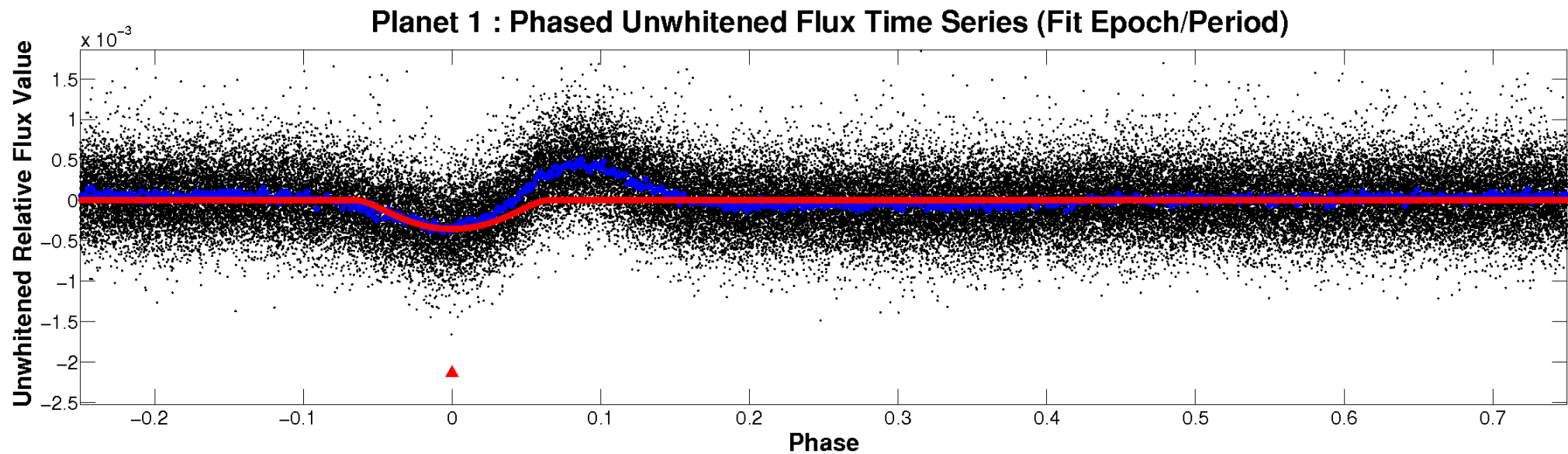


ALT Odd/Even

TCE 003240976-01

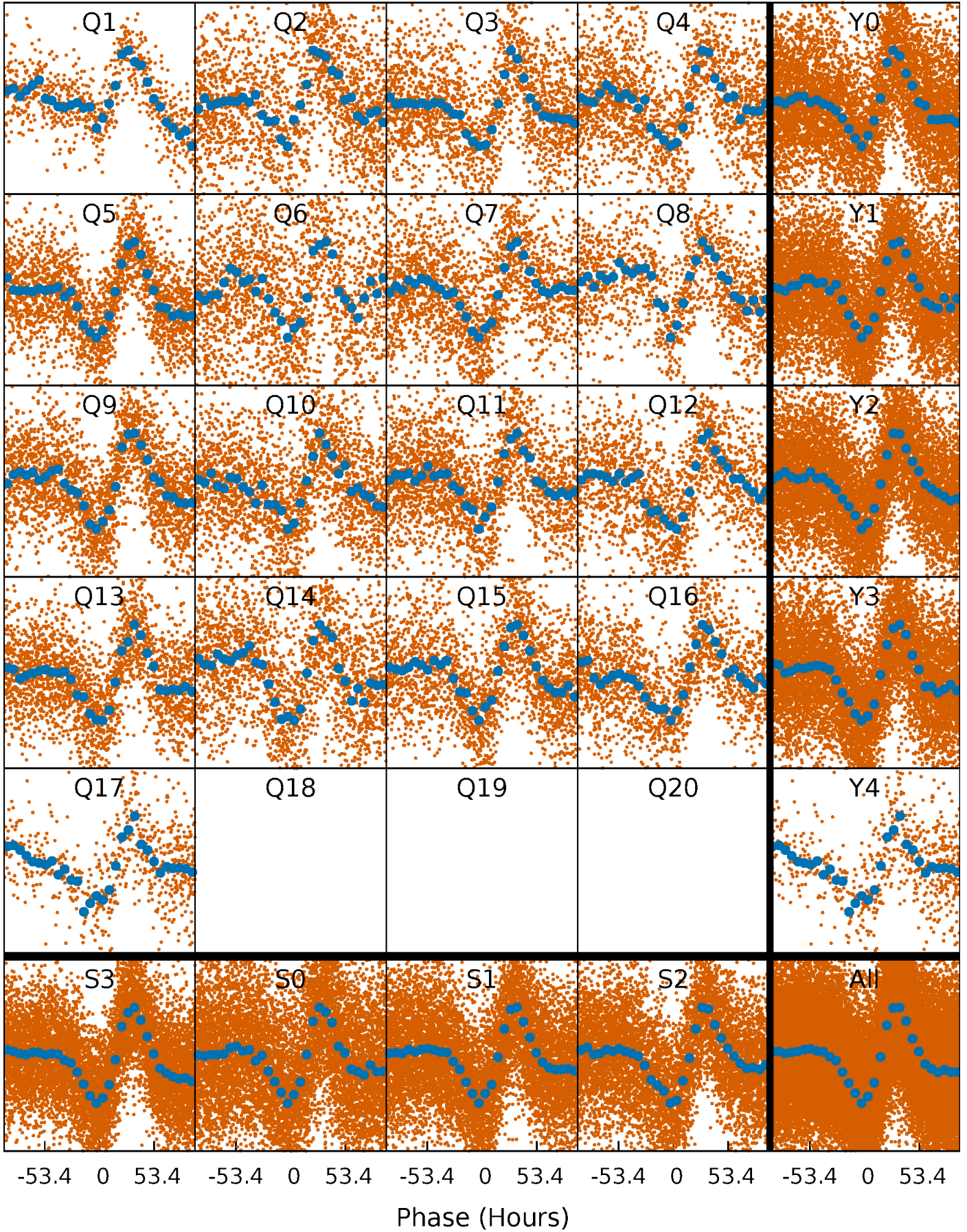


Non-Whitened Vs. Whitened Light Curve



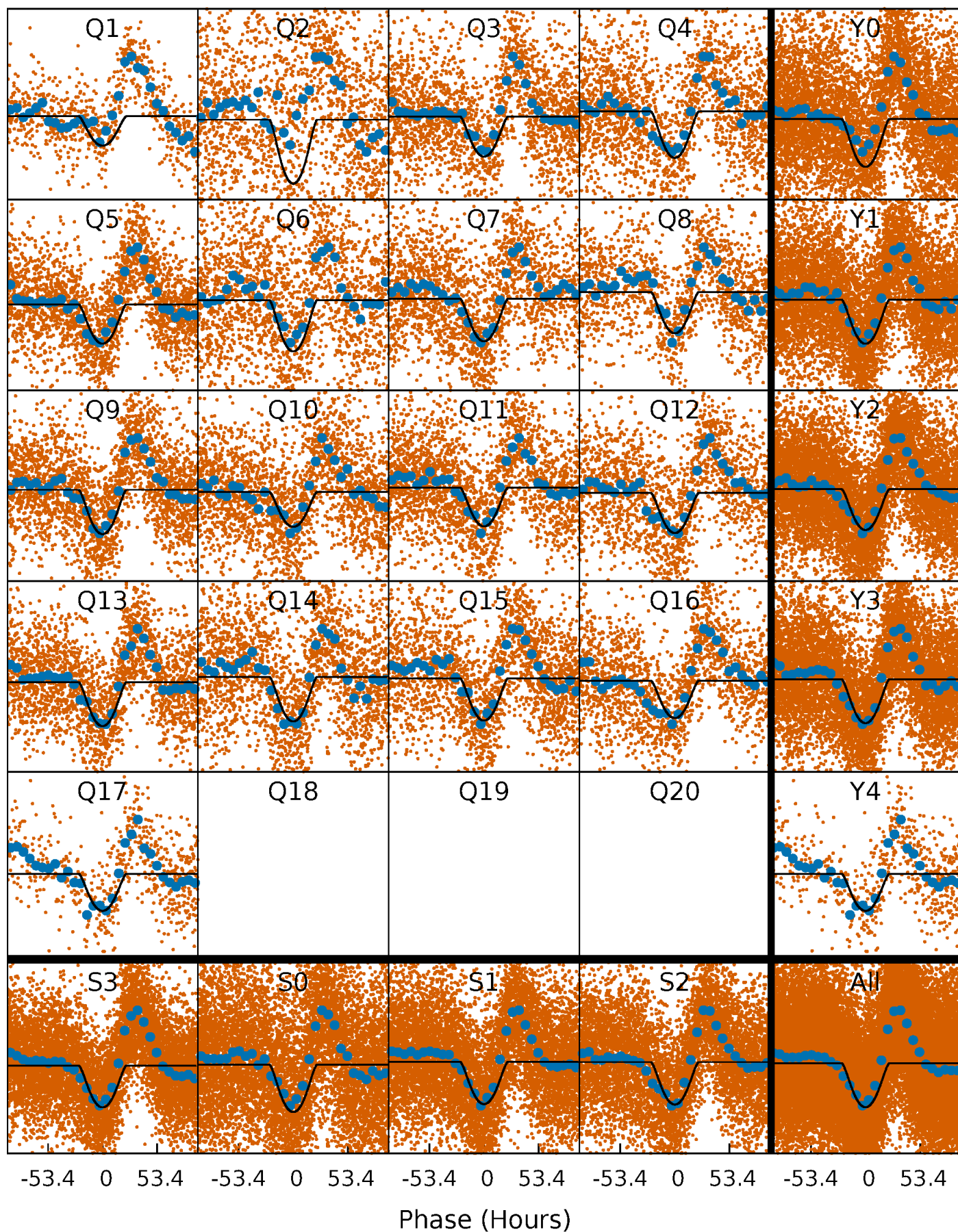
PDC Quarter-Phased Transit Curves

TCE 003240976-01 P= 15.244689 Days $T_0=138.745490$ (BKJD)



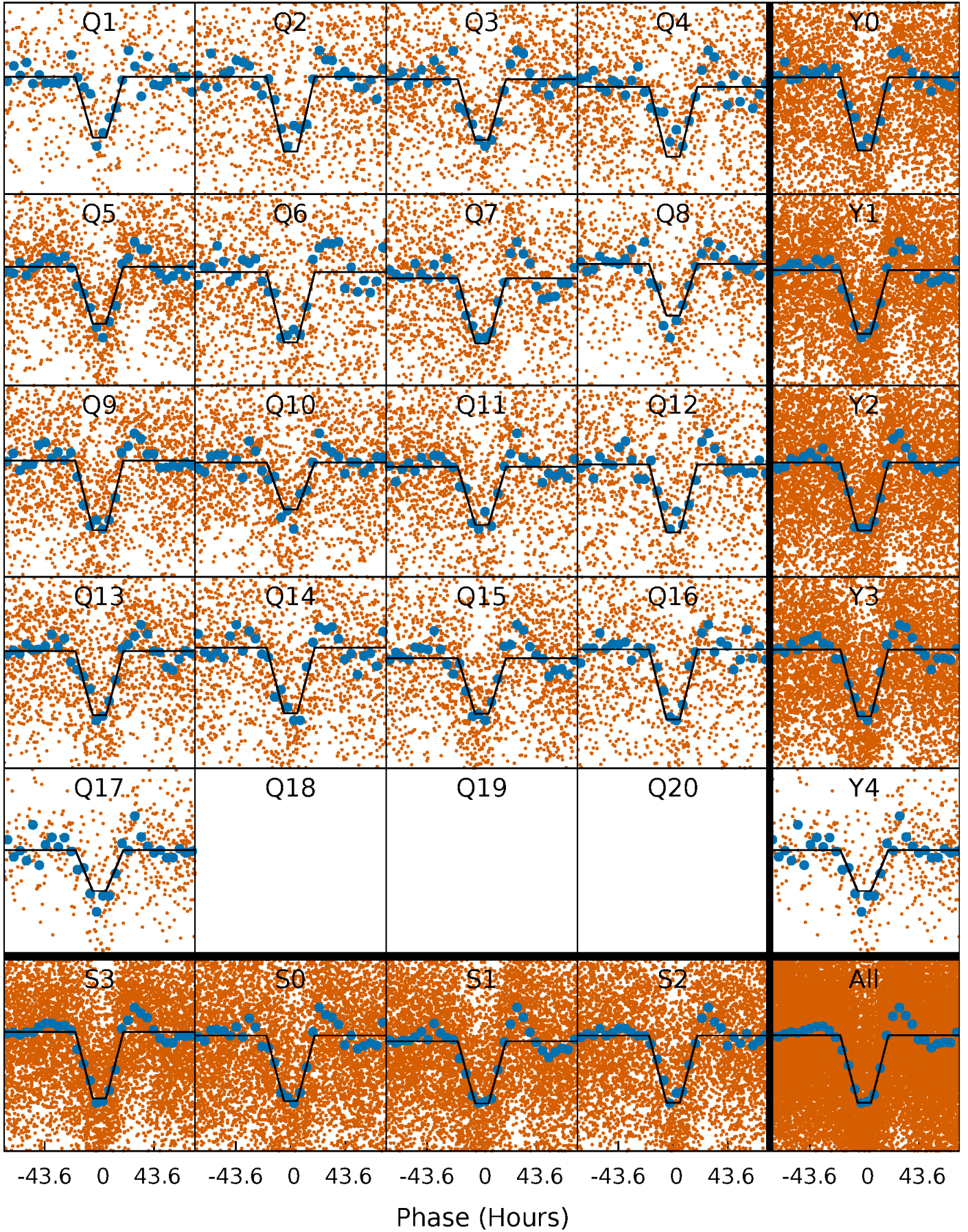
DV Quarter-Phased Transit Curves

TCE 003240976-01 P= 15.244689 Days $T_0=138.745490$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

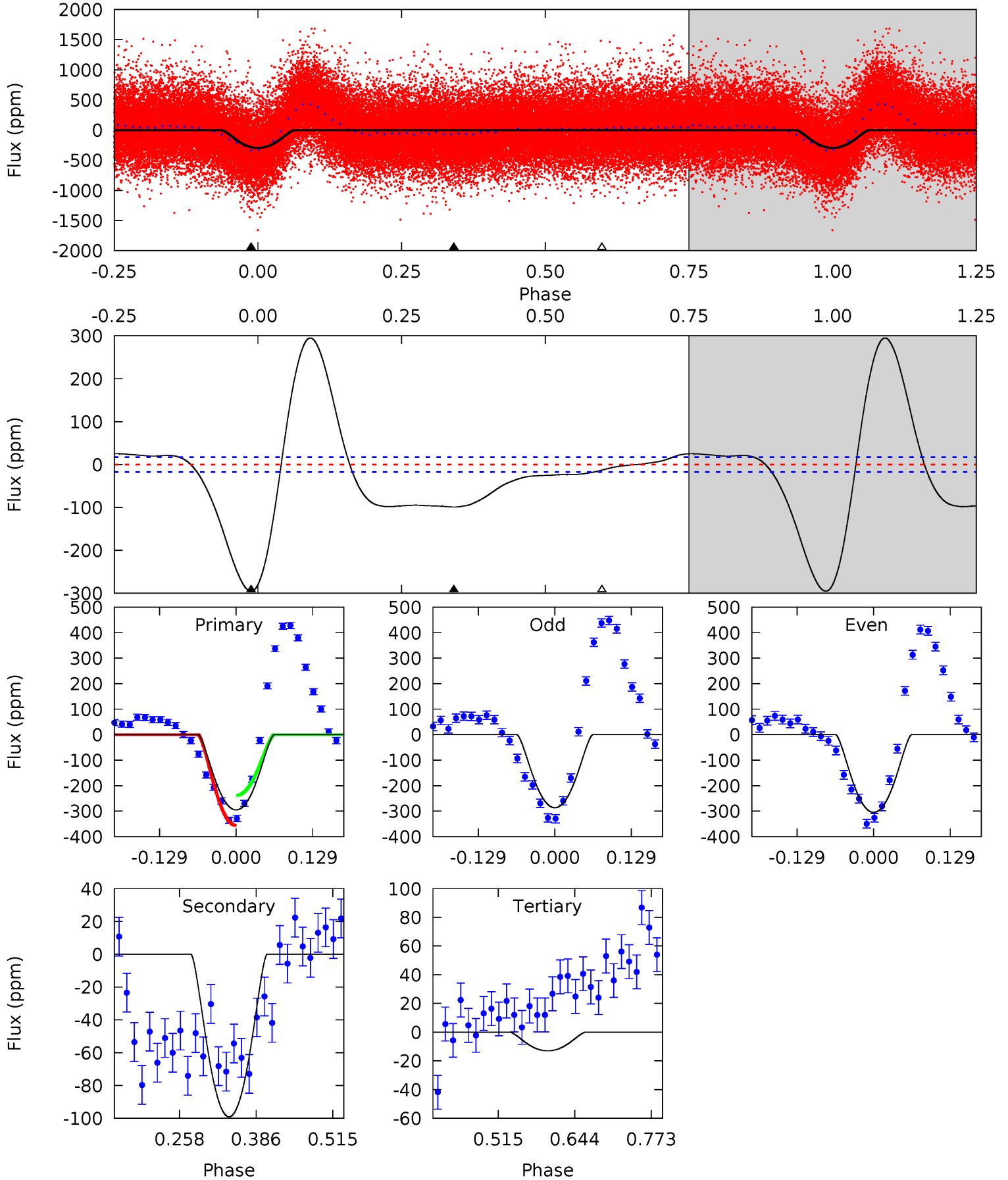
TCE 003240976-01 P= 15.246319 Days $T_0=138.779046$ (BKJD)



DV Model-Shift Uniqueness Test

003240976-01, P = 15.244689 Days, E = 123.500801 Days

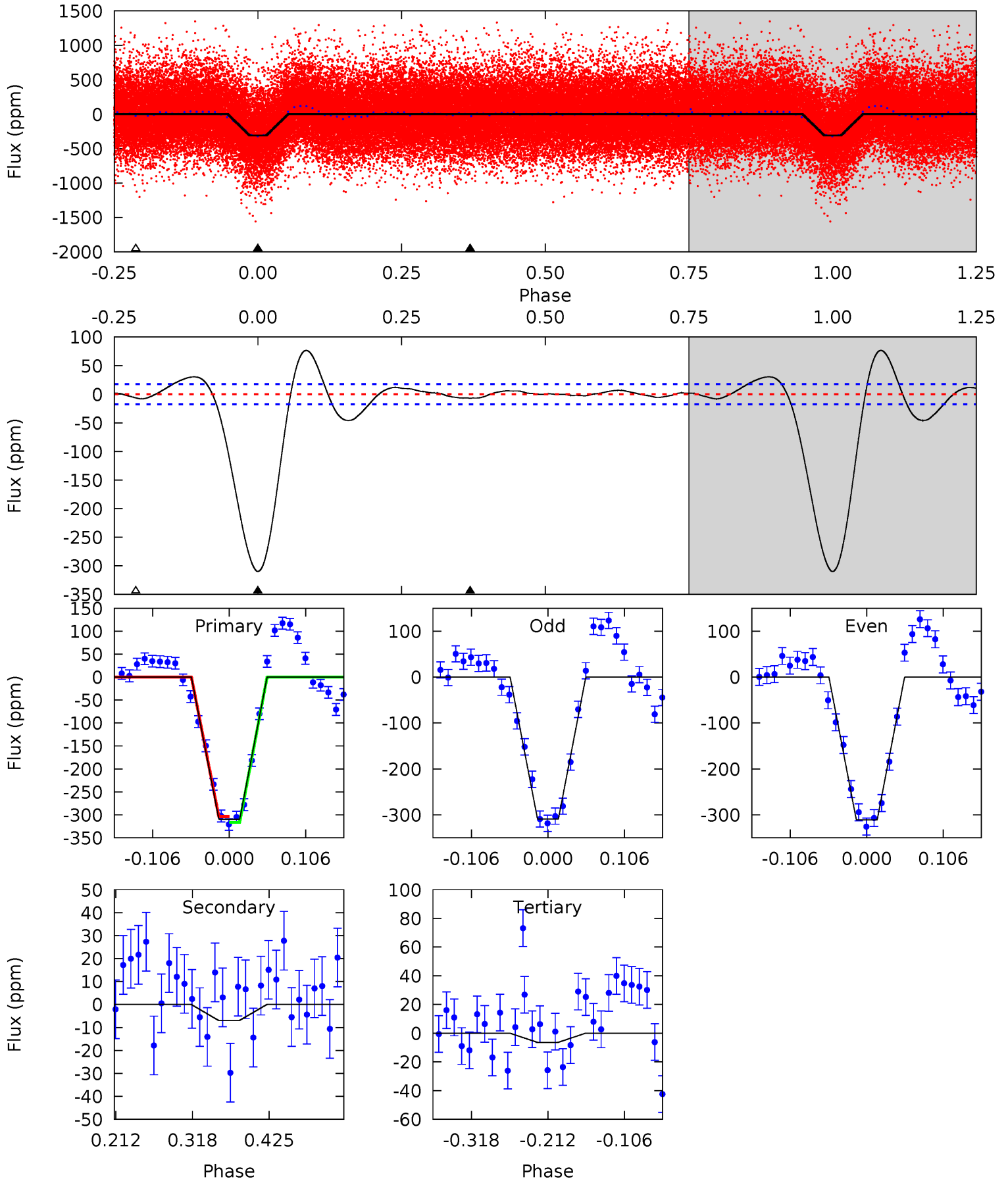
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
76.7	25.8	3.38	0	4.51	1.52	12.3	73.4	76.7	22.4	25.8	2.37	0.95	0.50	15.4



Alt Model-Shift Uniqueness Test

003240976-01, P = 15.246319 Days, E = 123.532727 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
79.4	1.78	1.63	0	4.55	1.62	3.99	77.8	79.4	0.15	1.78	0.23	1.02	0.20	1.61



Stellar Parameters For KIC 003240976

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6385^{+177}_{-222}	$4.423^{+0.067}_{-0.202}$	$-0.380^{+0.250}_{-0.350}$	$1.032^{+0.323}_{-0.115}$	$1.026^{+0.145}_{-0.119}$	$1.314^{+0.474}_{-0.678}$
	+3%/-3%	+2%/-5%	+66%/-92%	+31%/-11%	+14%/-12%	+36%/-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 003240976-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-99 ± 4	$3.01^{+0.75}_{-0.63}$	1164^{+85}_{-58}	4219^{+371}_{-290}	89^{+49}_{-32}
Alt.	-7 ± 4	$2.07^{+0.64}_{-0.58}$	1164^{+76}_{-60}	3080^{+353}_{-389}	13^{+15}_{-8}

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

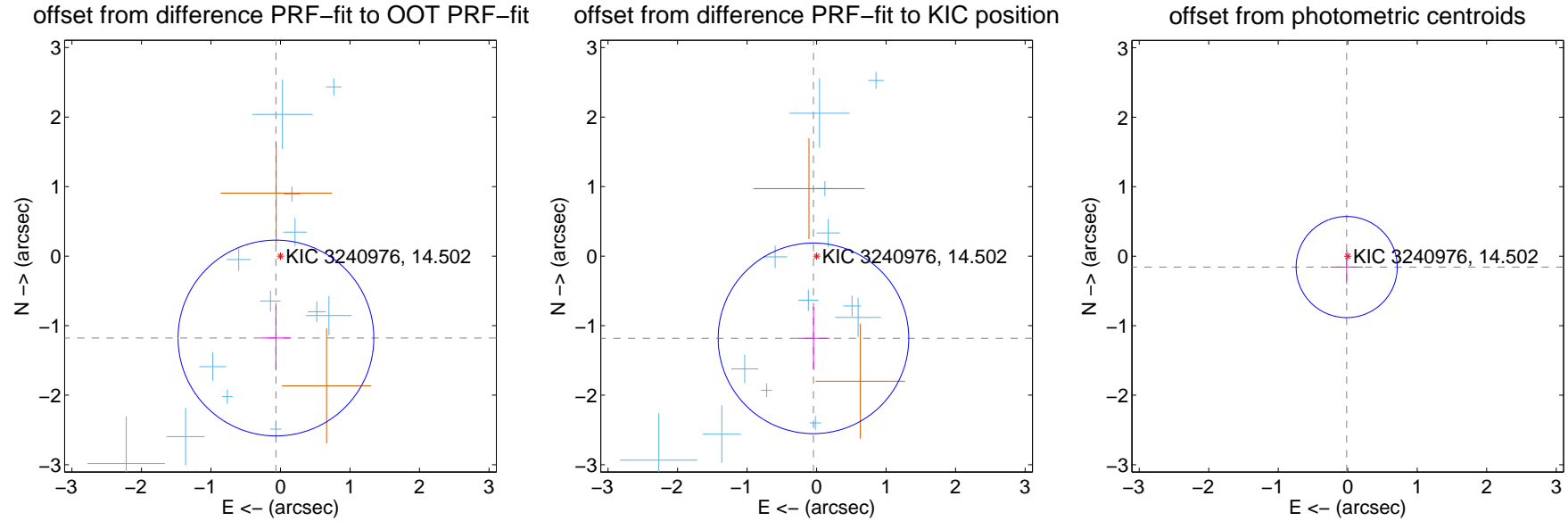
DV Centroid Data

Supplemental centroid analysis for 003240976-01. Kepler magnitude: 14.50. Transit SNR 26.39

There are 13 quarters with good PRF difference image offsets

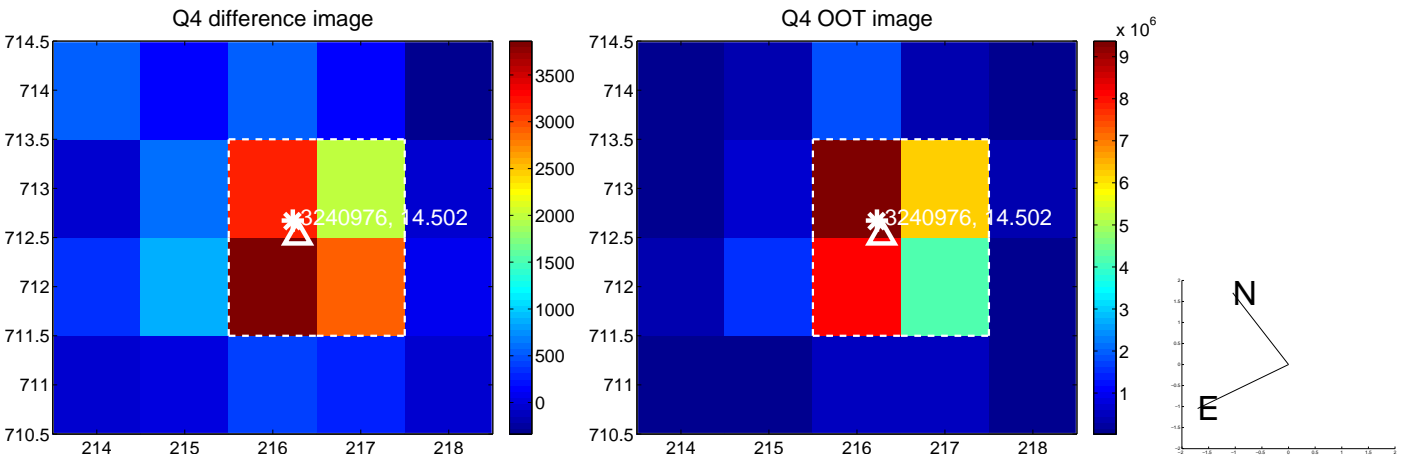
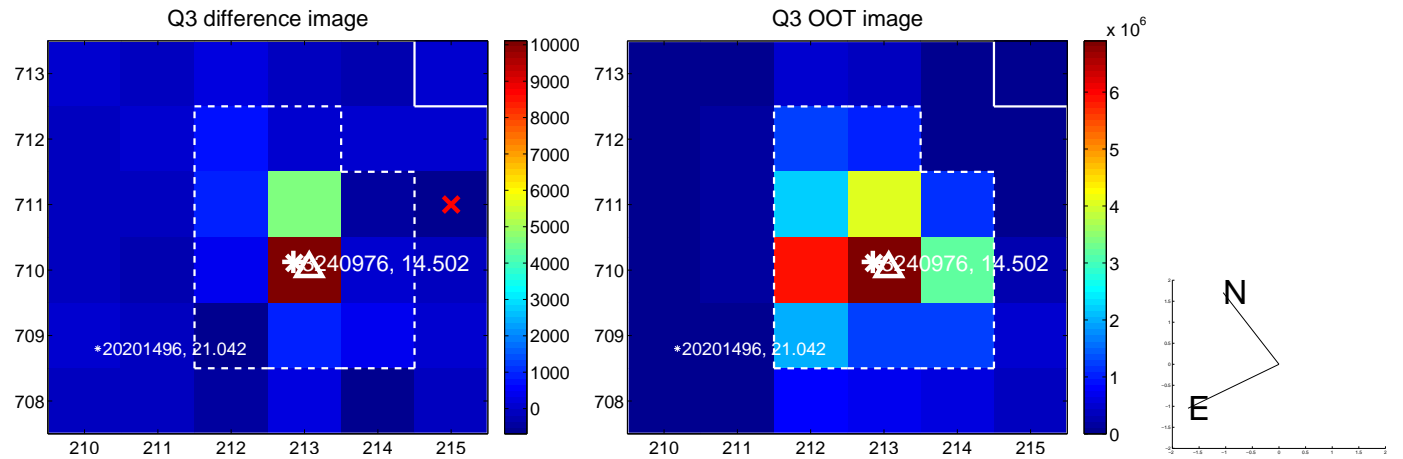
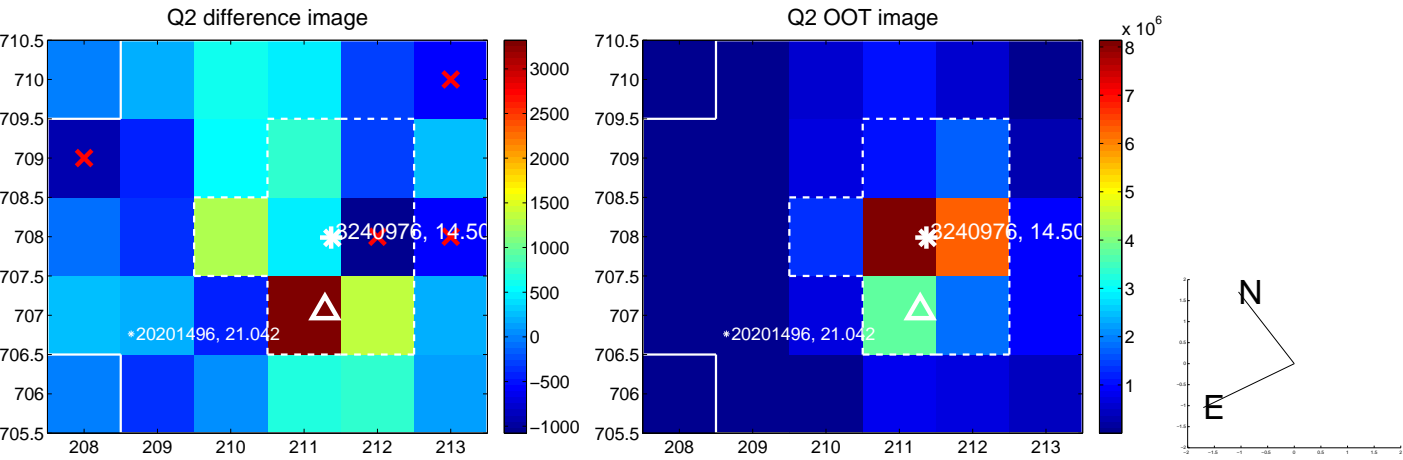
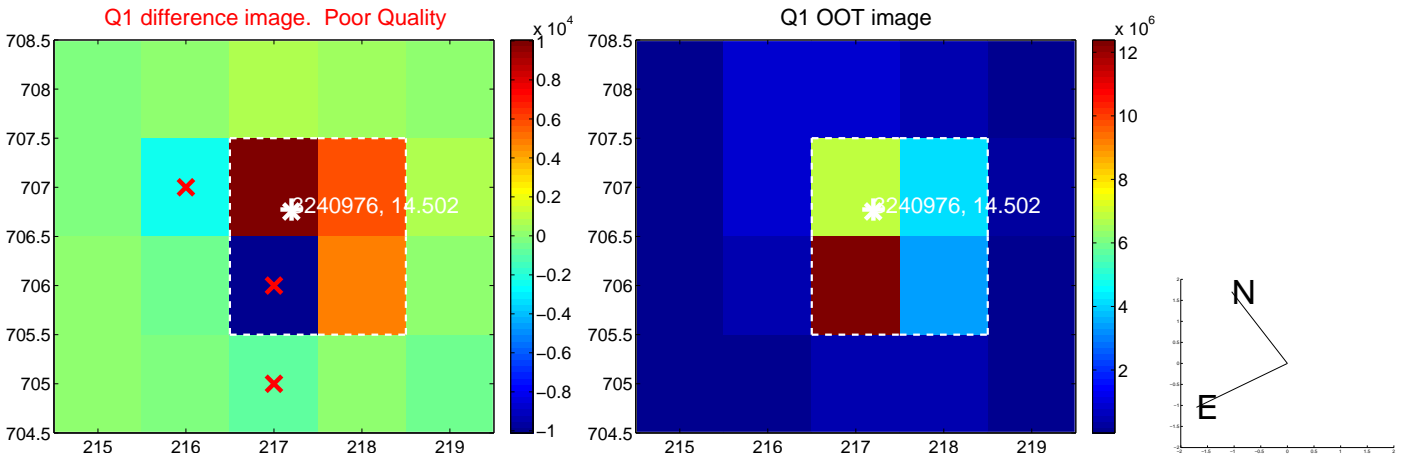
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.180 ± 0.469	2.51	0.065 ± 0.216	-1.178 ± 0.464
PRF-fit source offset from KIC position	1.183 ± 0.457	2.59	0.045 ± 0.232	-1.182 ± 0.452
photometric centroid source offset	0.16 ± 0.24	0.65	0.01 ± 0.24	-0.16 ± 0.24

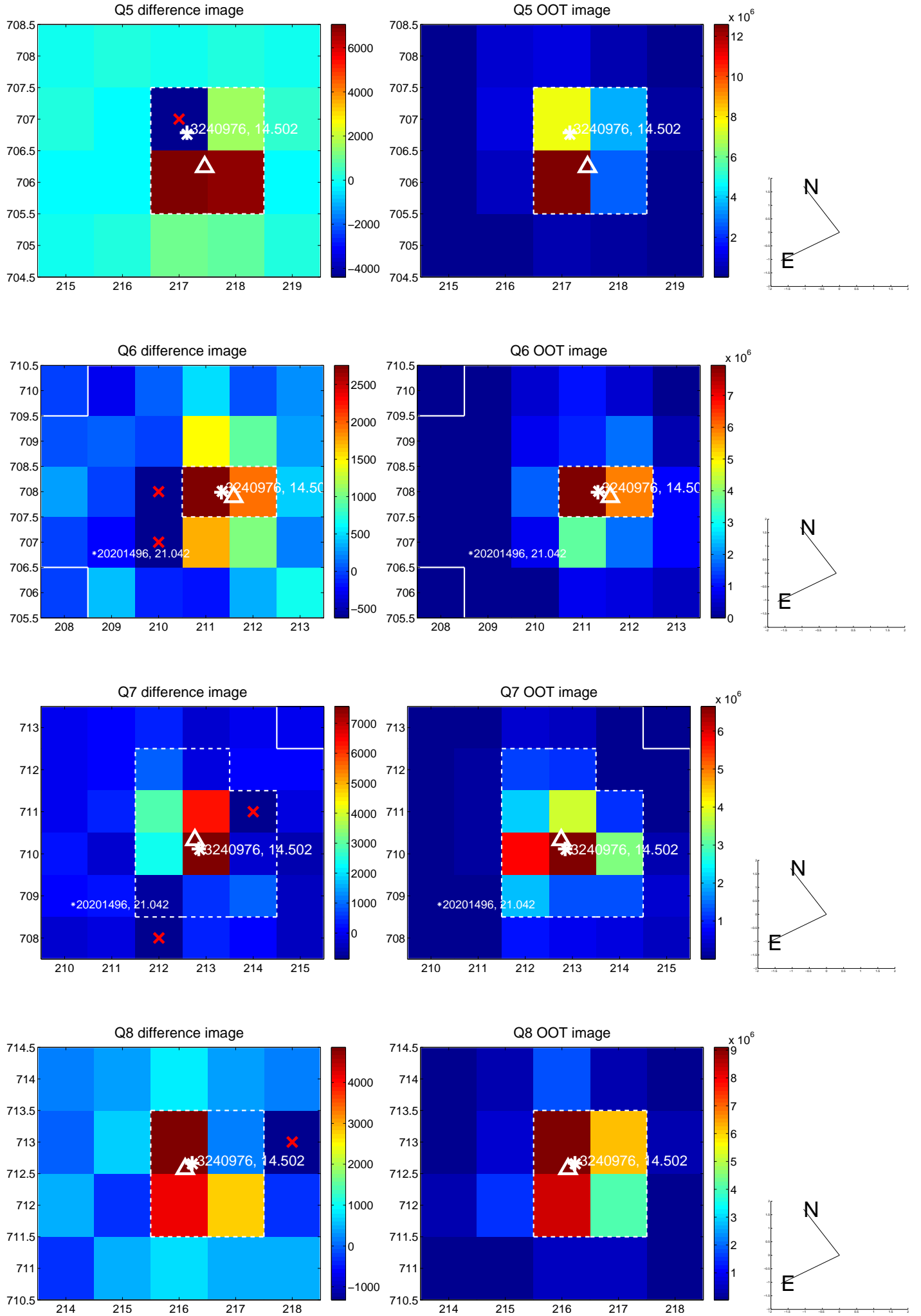


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000 are from the UKIRT catalog.

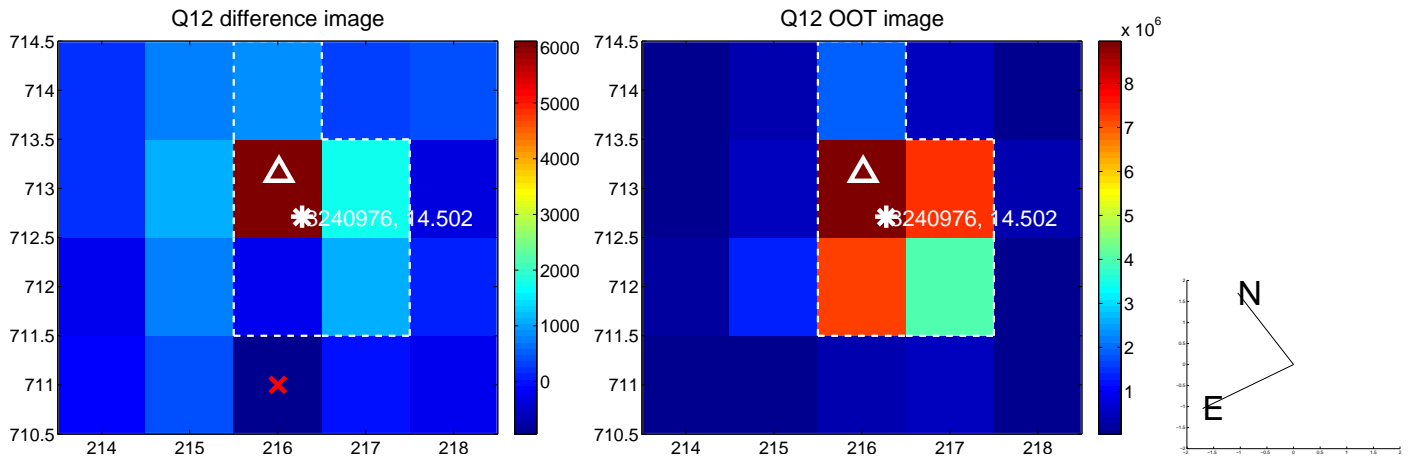
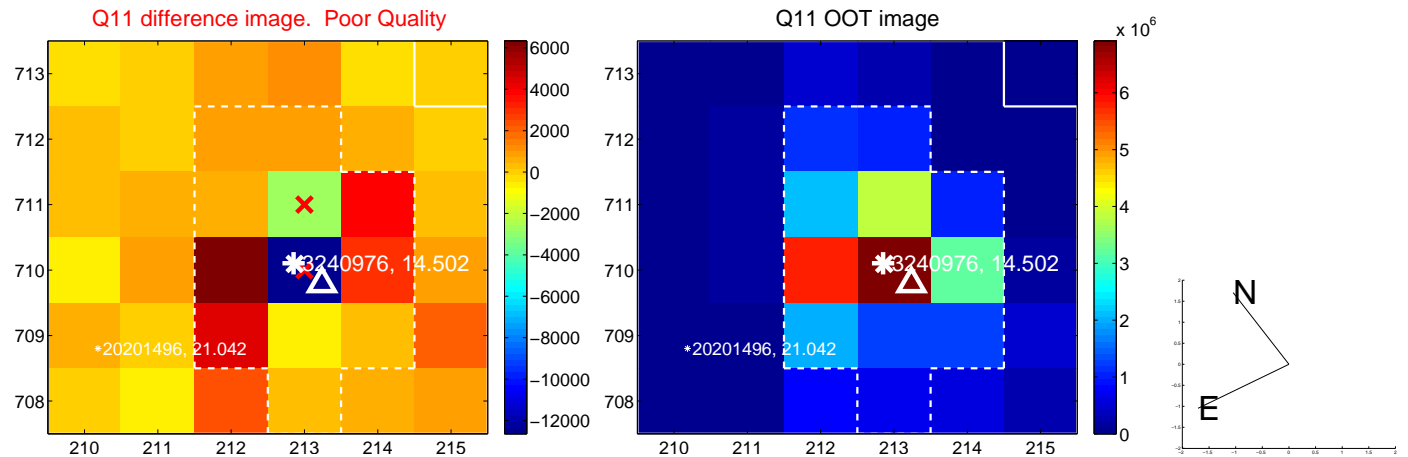
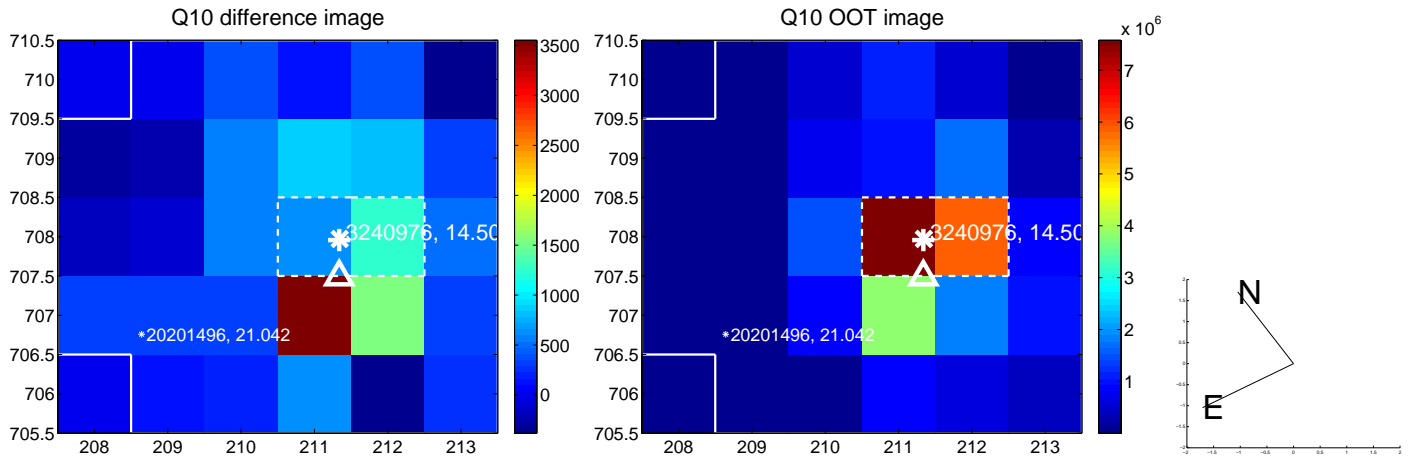
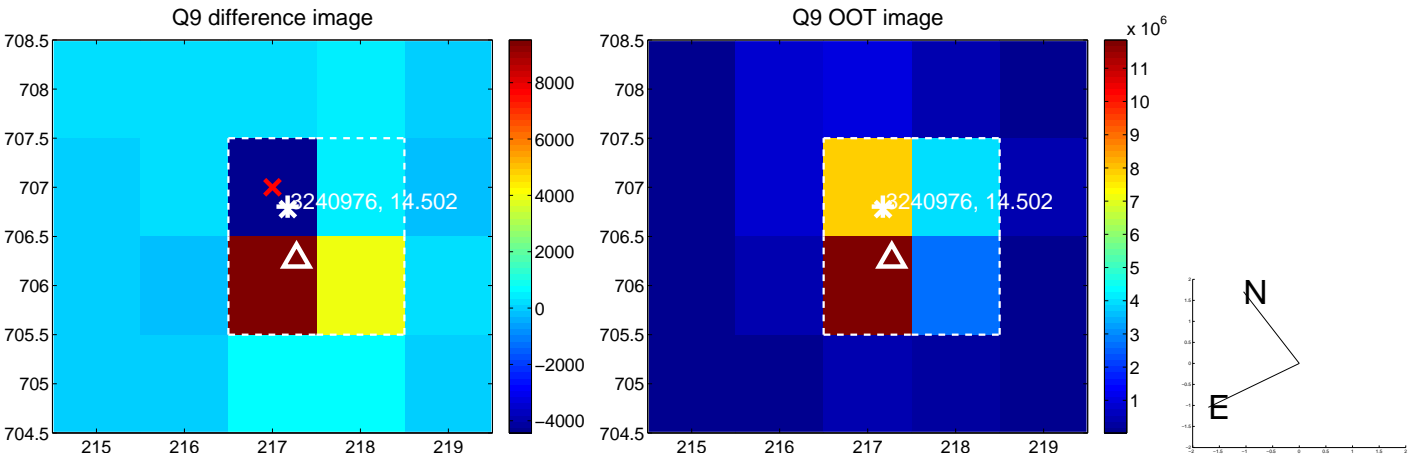
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



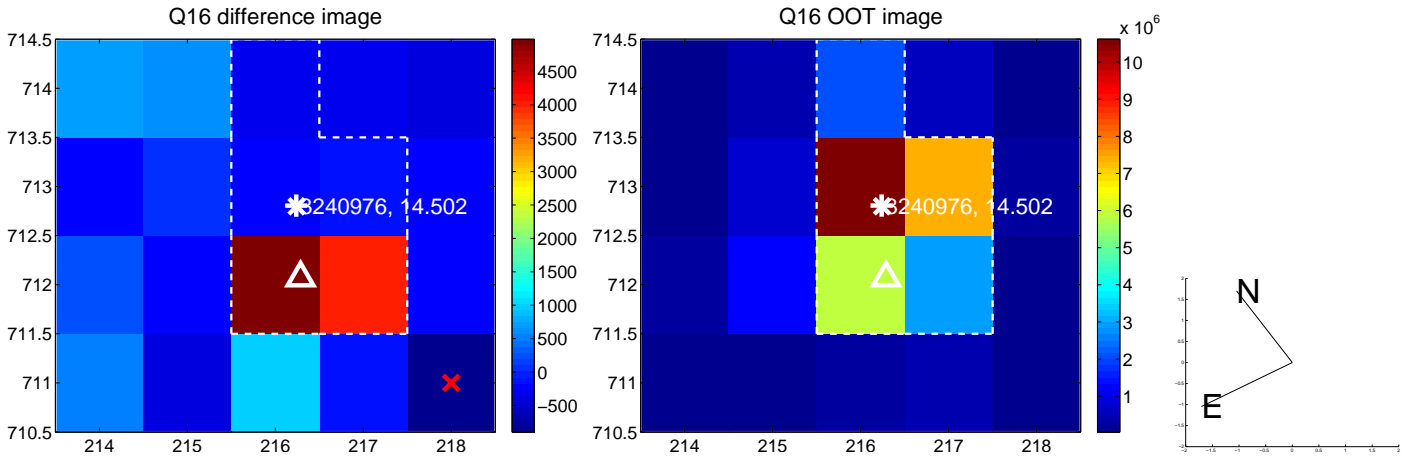
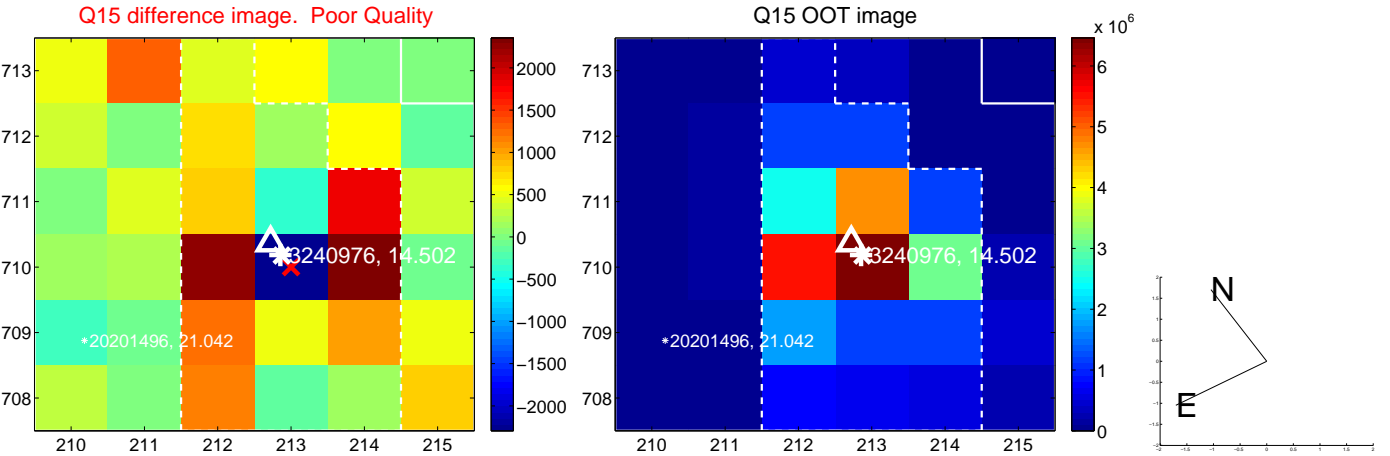
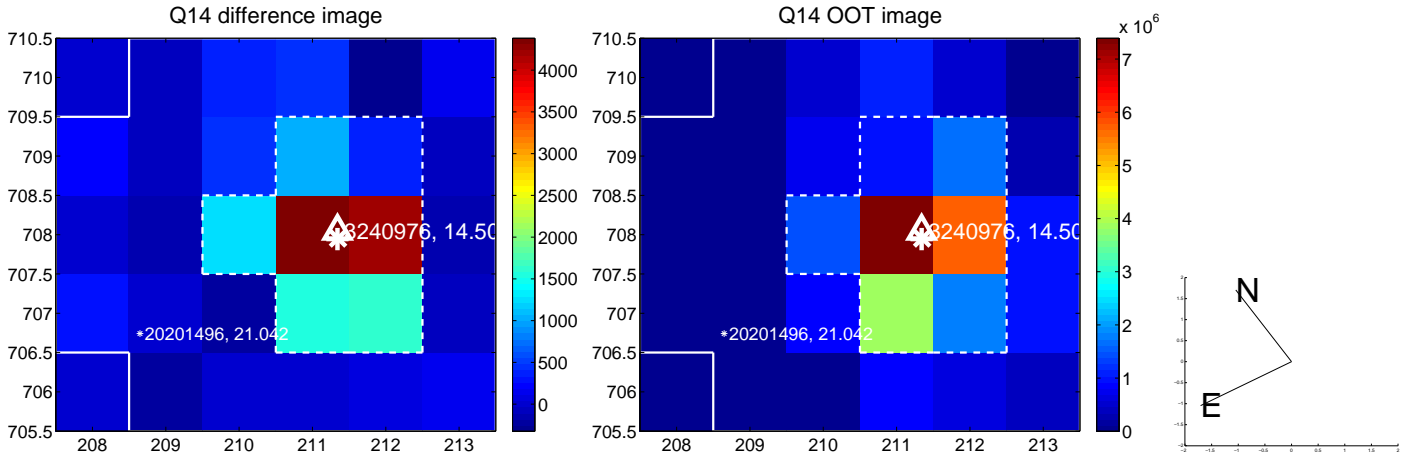
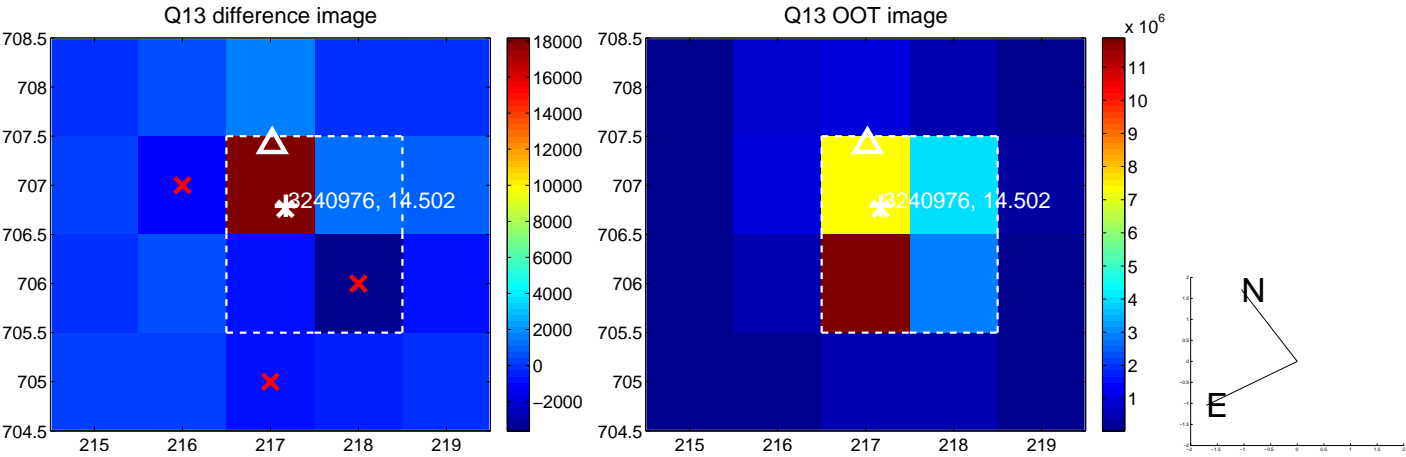
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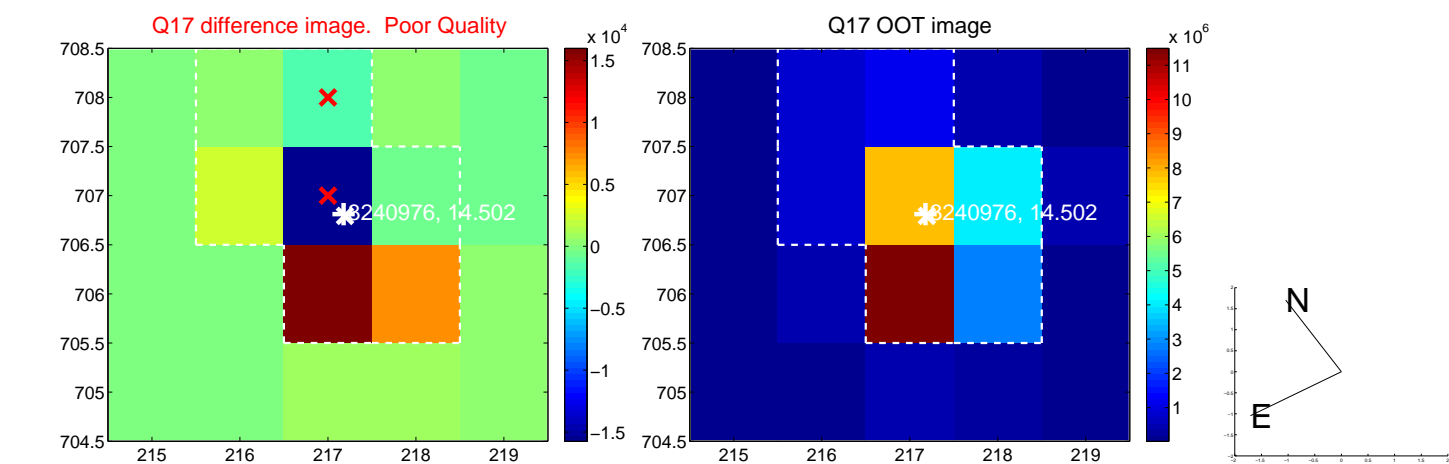
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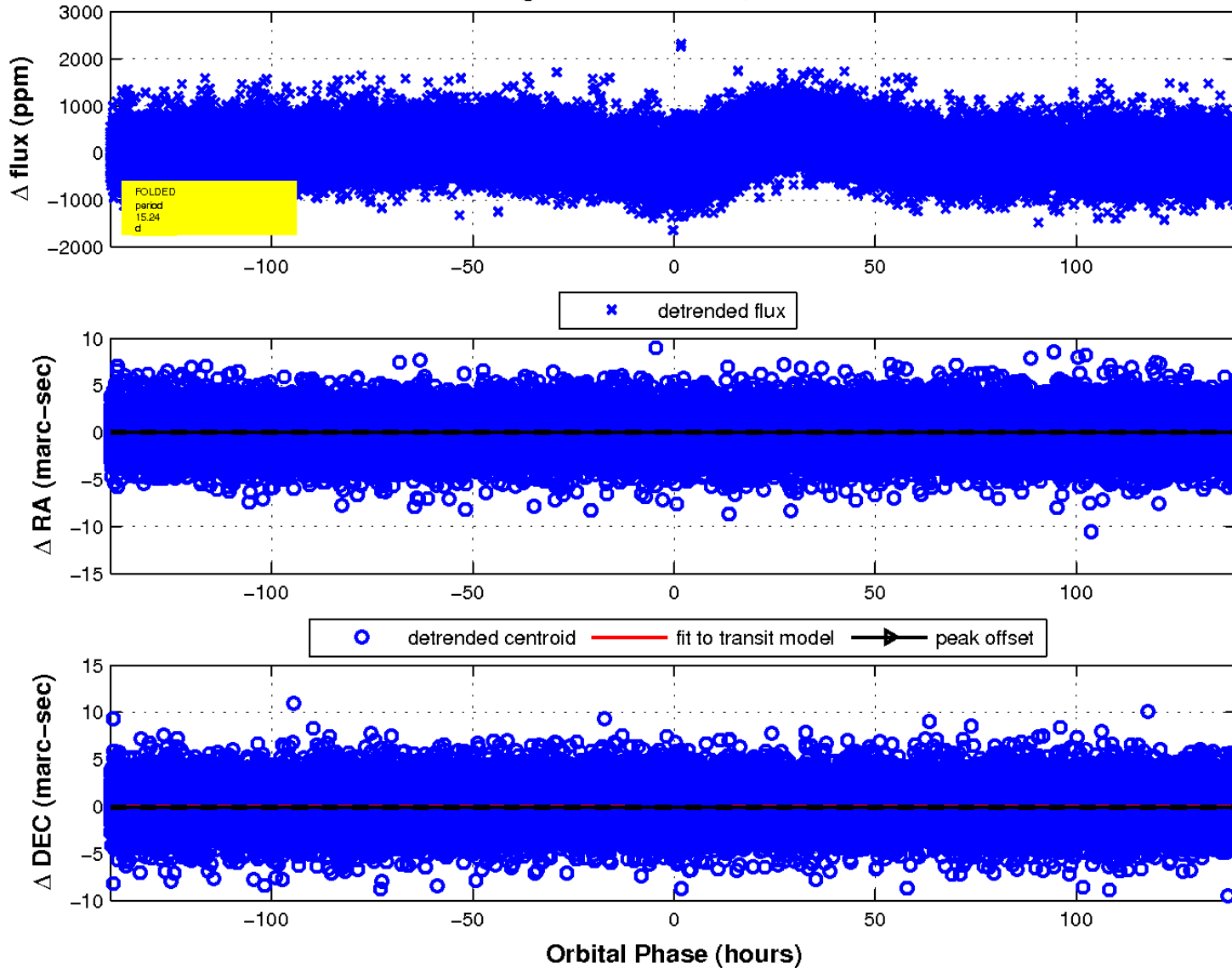
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

