

KIC 010525027

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})
010525027-01	OBS	2006.01	3.273469	134.444945	250.2	1.805	31.9	36.9	0.50	3758	0.92	36.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010525027-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

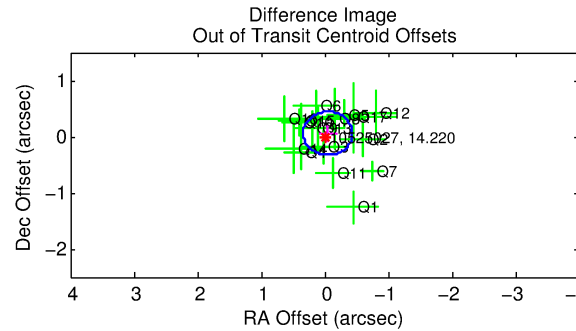
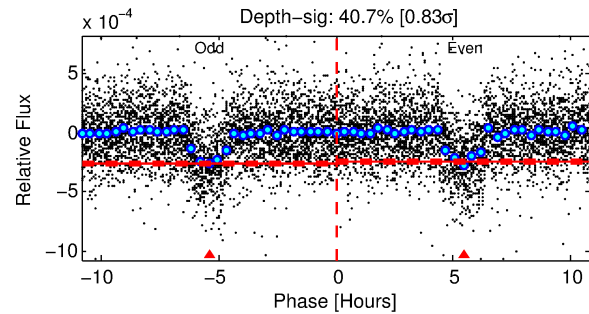
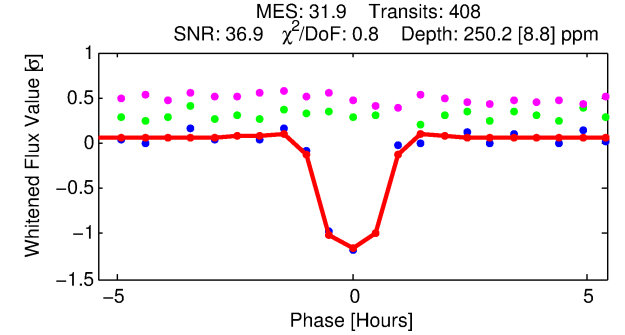
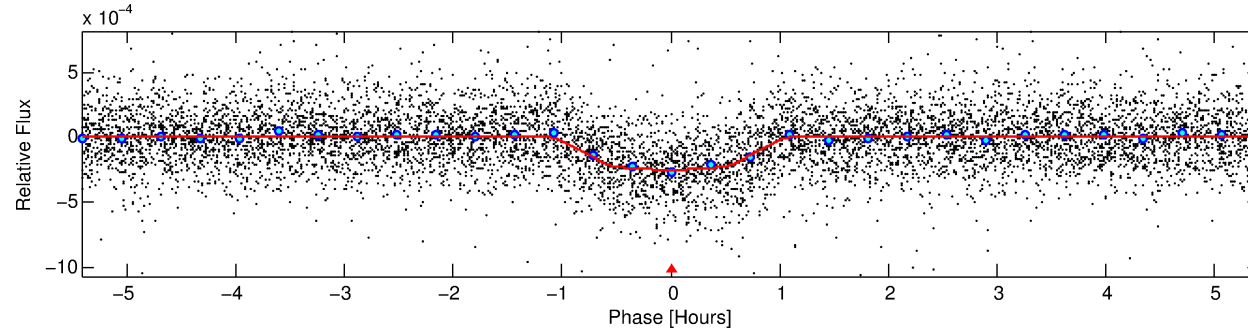
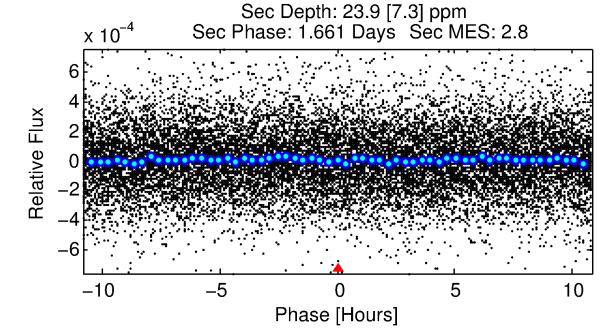
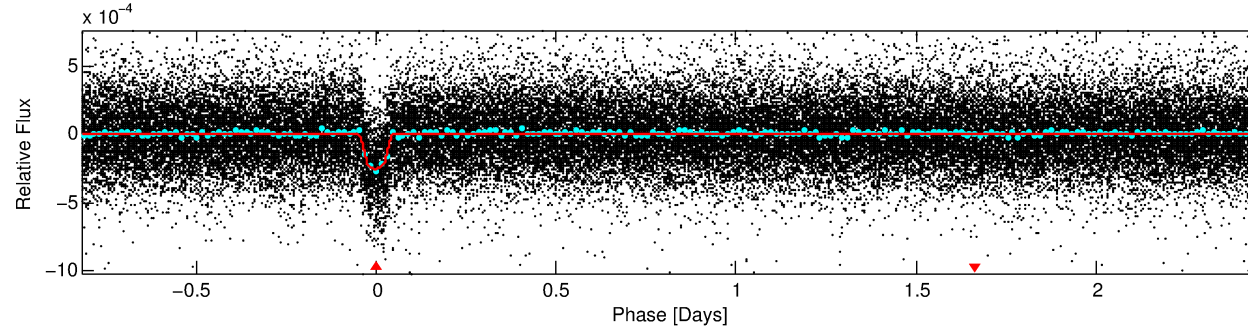
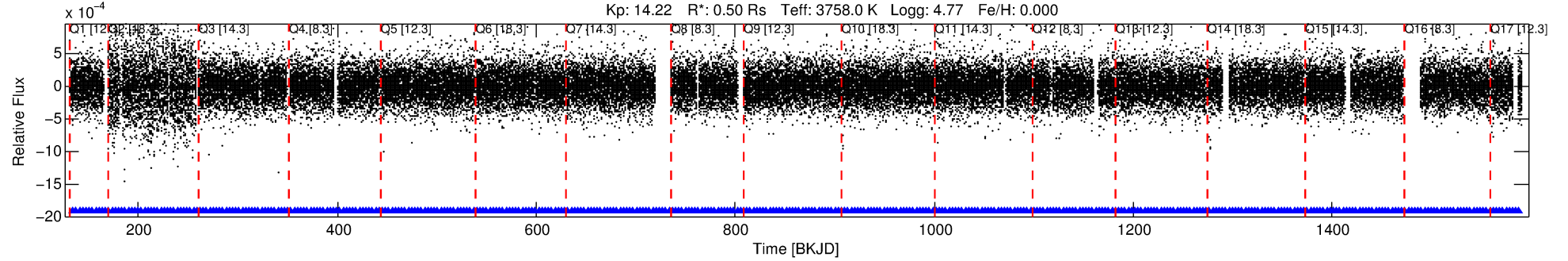
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010525027-01

No Significant Match Found

DV One-Page Summary

KIC: 10525027 Candidate: 1 of 1 Period: 3.273 d
KOI: K02006.01 Corr: 0.986



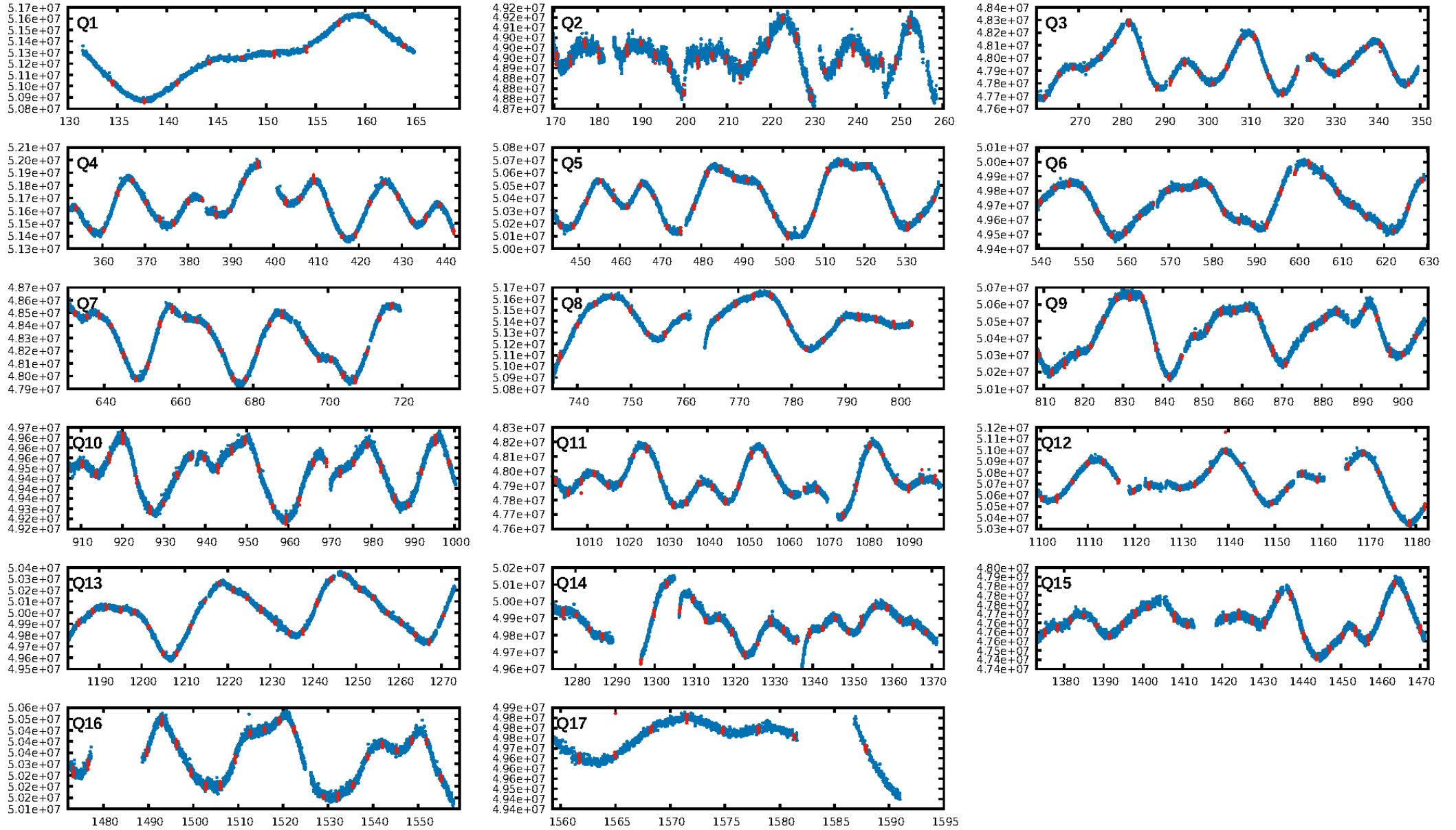
DV Fit Results:

Period = 3.27347 [0.00000] d
Epoch = 134.4449 [0.0009] BKJD
Rp/R* = 0.0170 [0.0038]
a/R* = 7.03 [6.87]
b = 0.88 [0.25]
Seff = 36.17 [4.45]
Teq = 625 [19] K
Rp = 0.92 [0.22] Re
a = 0.0349 [0.0022] AU
Ag = 18.78 [10.33] [1.72σ]
Teffp = 2013 [277] K [4.99σ]

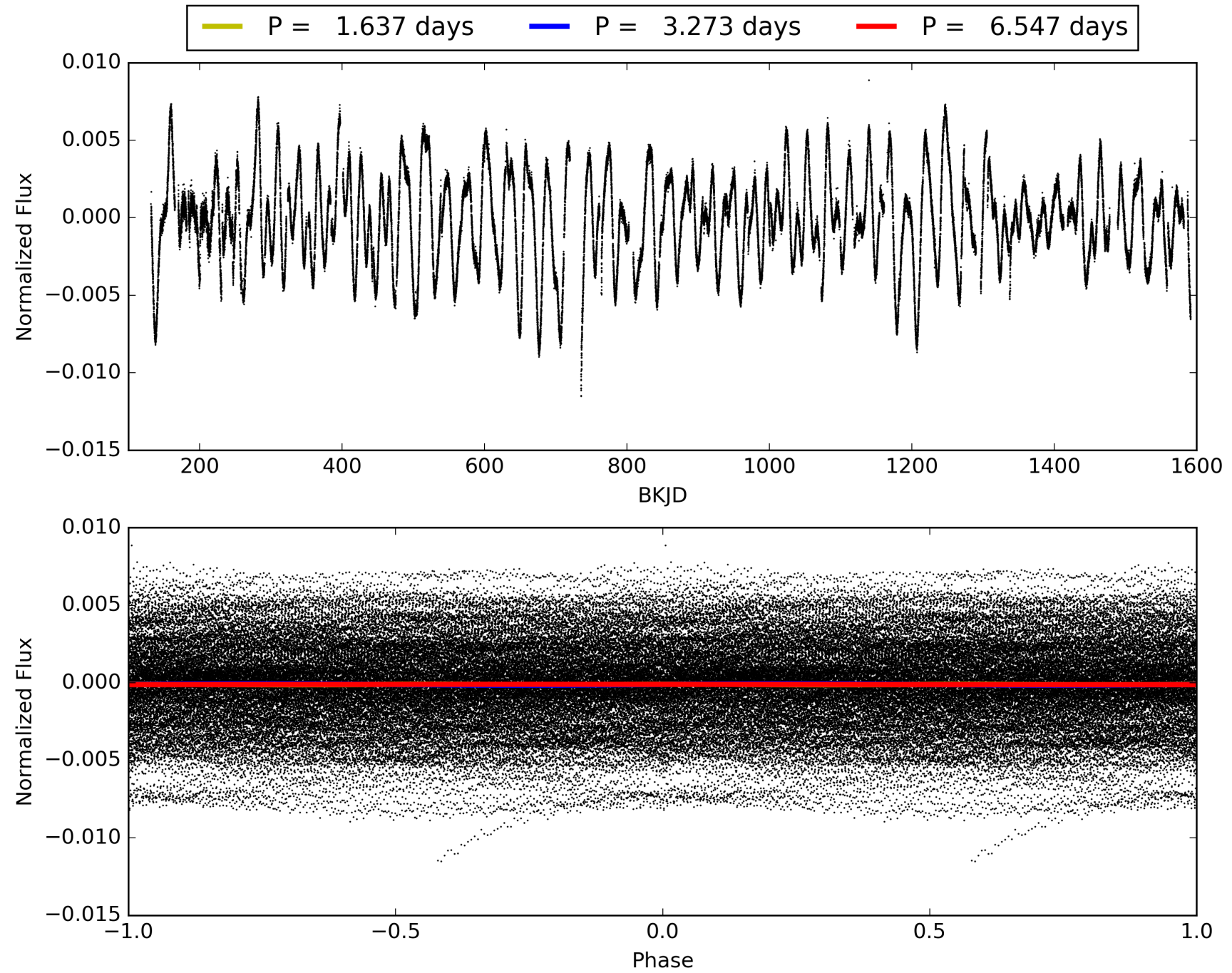
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 7.10e-213
RollingBand-fgt: 1.00 [390/390]
GhostDiagnostic-chr: 12.81
Centroid-sig: 5.5%
Centroid-so: 0.467 arcsec [1.37σ]
OotOffset-rm: 0.074 arcsec [0.58σ]
KicOffset-rm: 0.152 arcsec [0.94σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010525027-01, PDC Light Curves

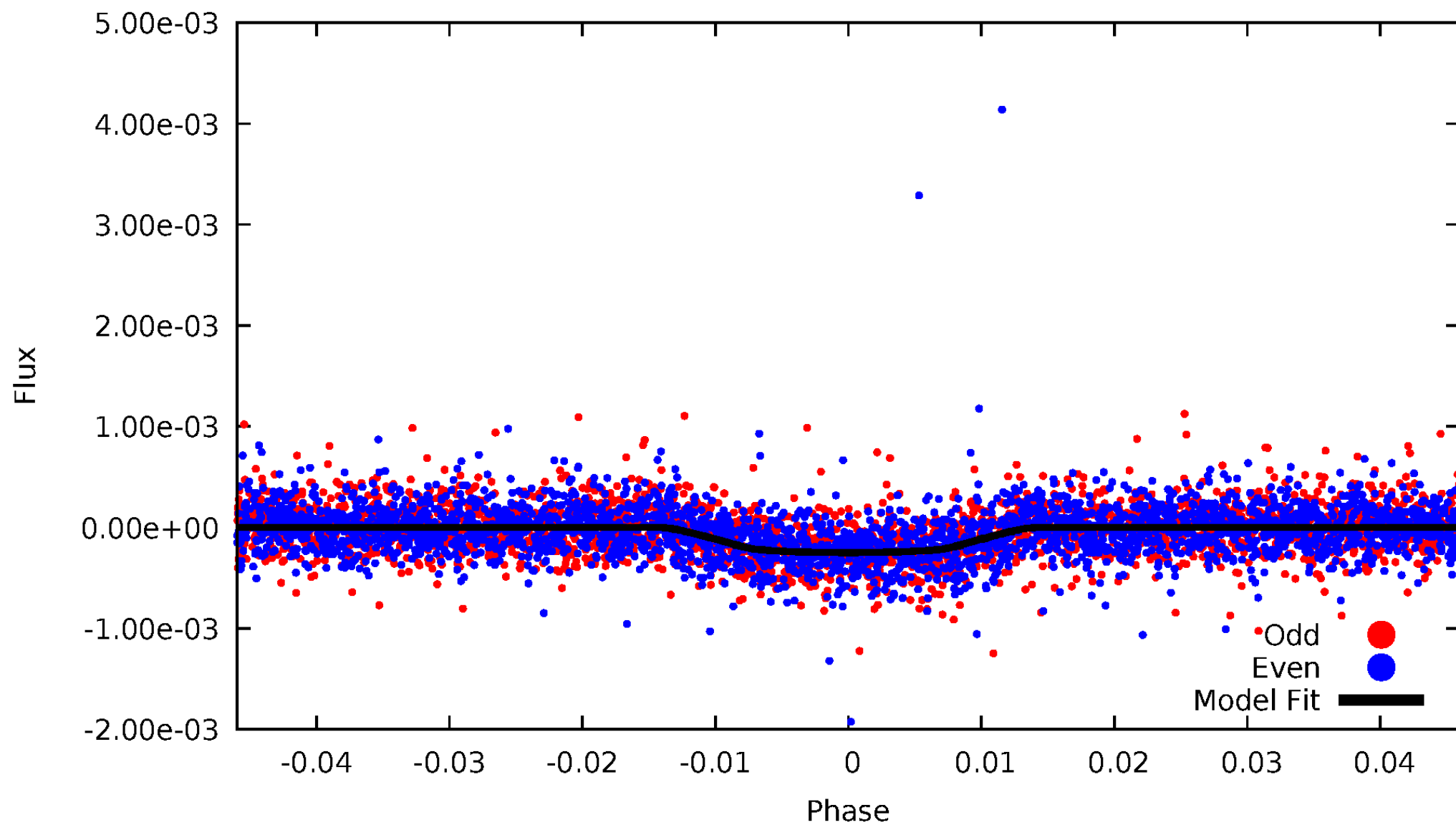


TCE 010525027-01



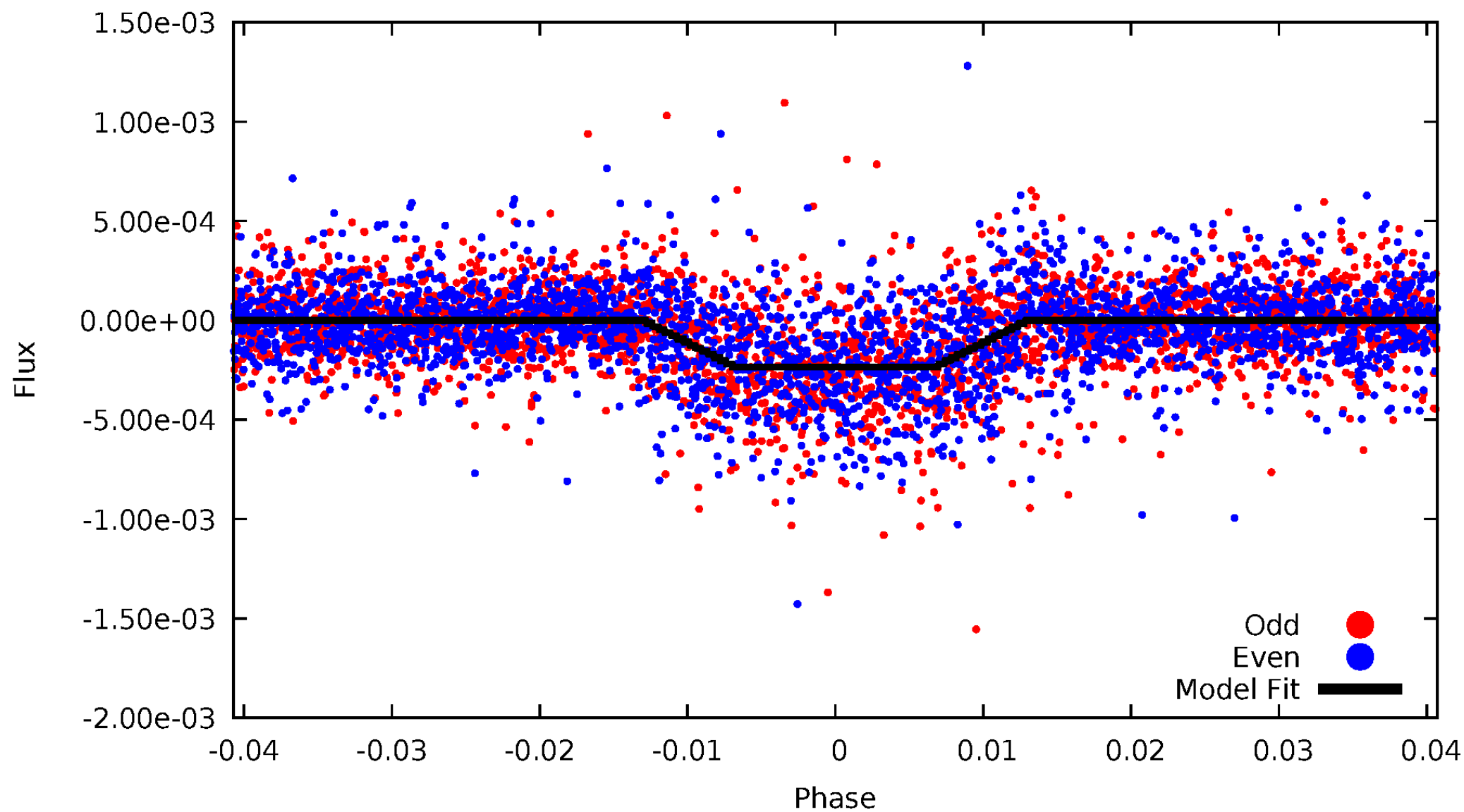
DV Odd/Even

TCE 010525027-01



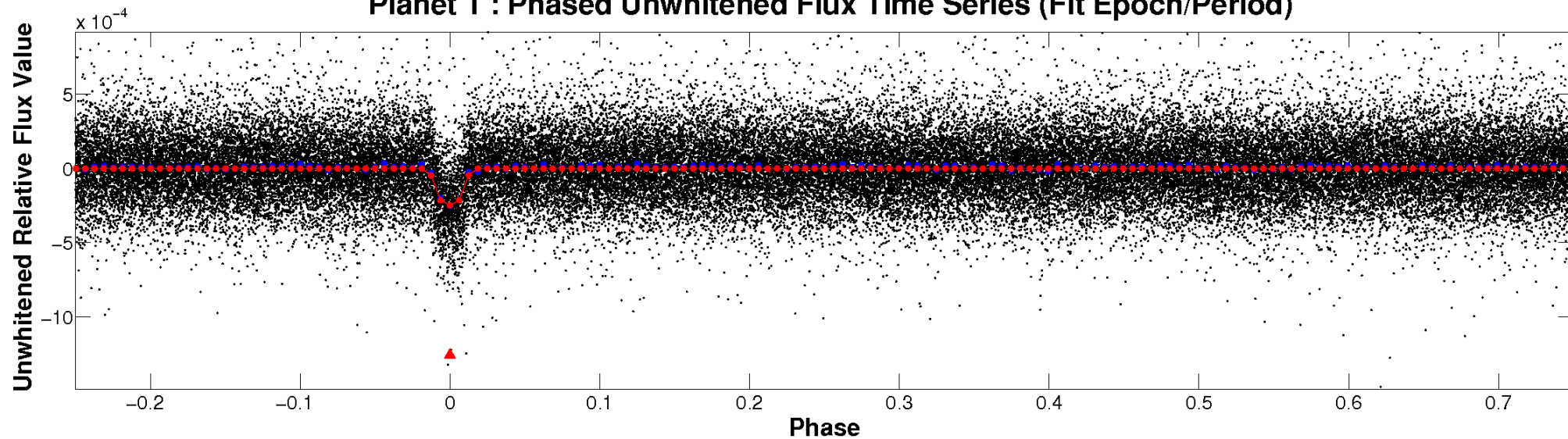
ALT Odd/Even

TCE 010525027-01

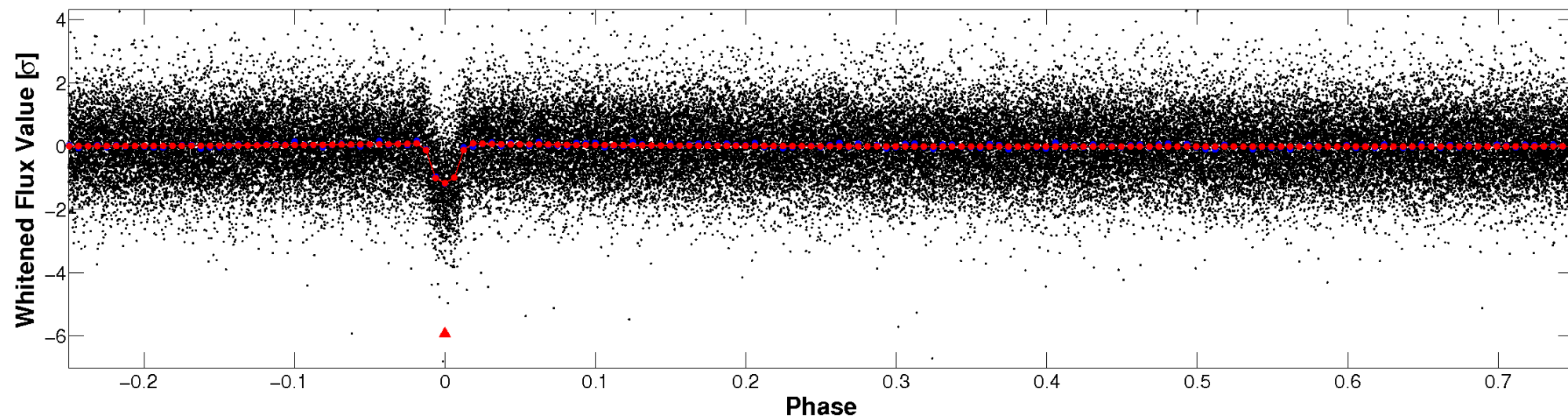


Non-Whitened Vs. Whitened Light Curve

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

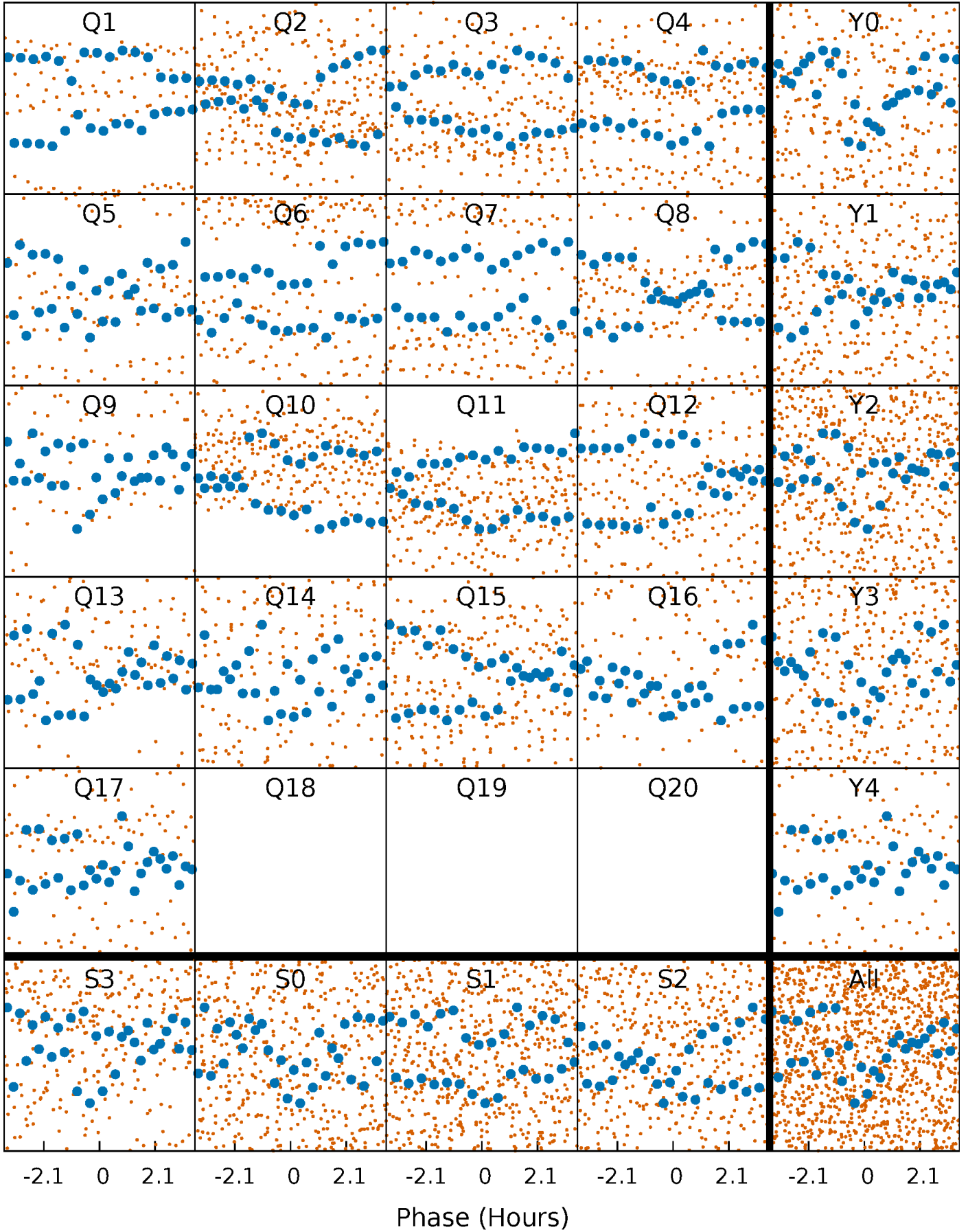


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



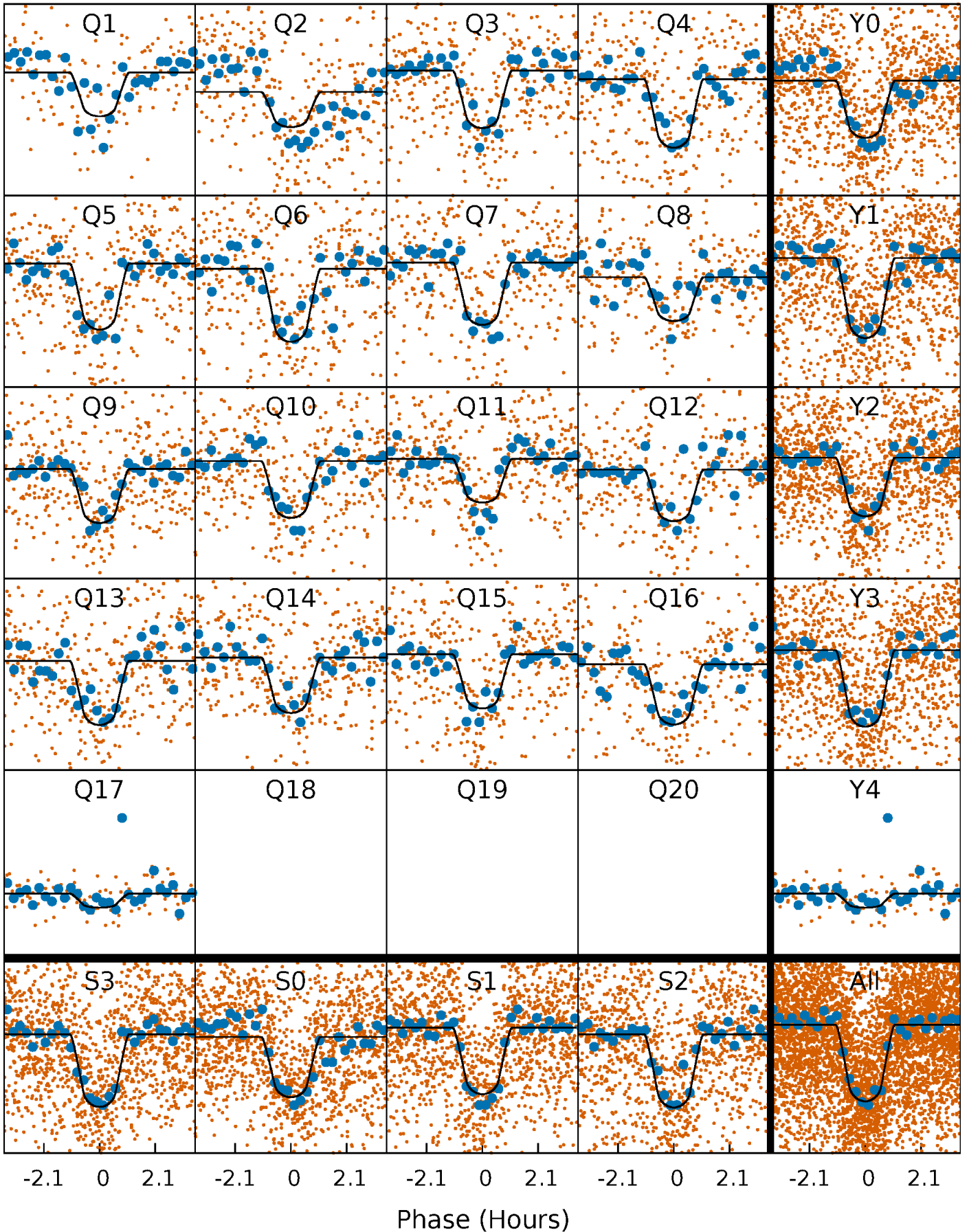
PDC Quarter-Phased Transit Curves

TCE 010525027-01 P= 3.273469 Days $T_0=134.444945$ (BKJD)



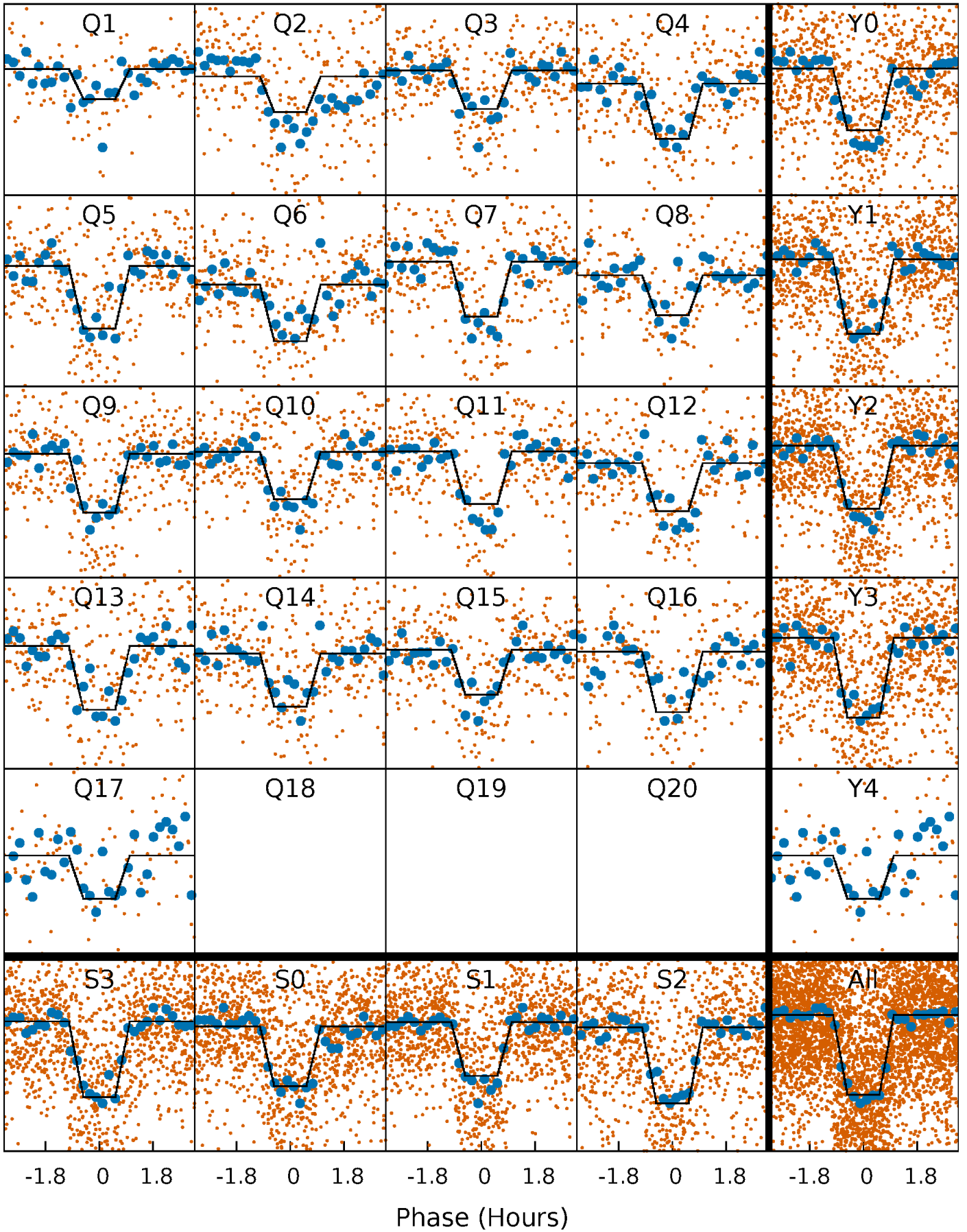
DV Quarter-Phased Transit Curves

TCE 010525027-01 P= 3.273469 Days $T_0=134.444945$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

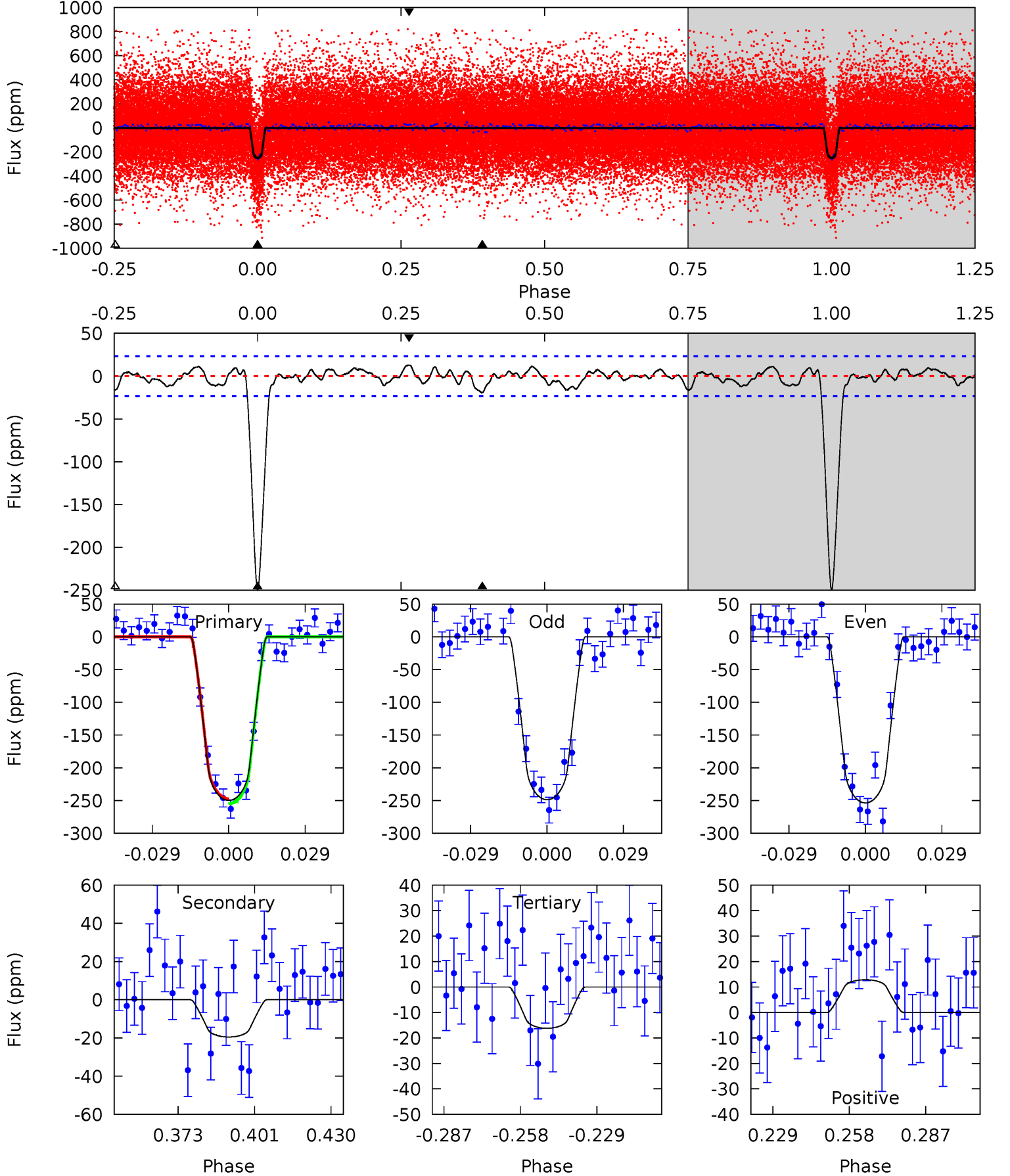
TCE 010525027-01 P= 3.273447 Days $T_0=134.450045$ (BKJD)



DV Model-Shift Uniqueness Test

010525027-01, P = 3.273469 Days, E = 131.171476 Days

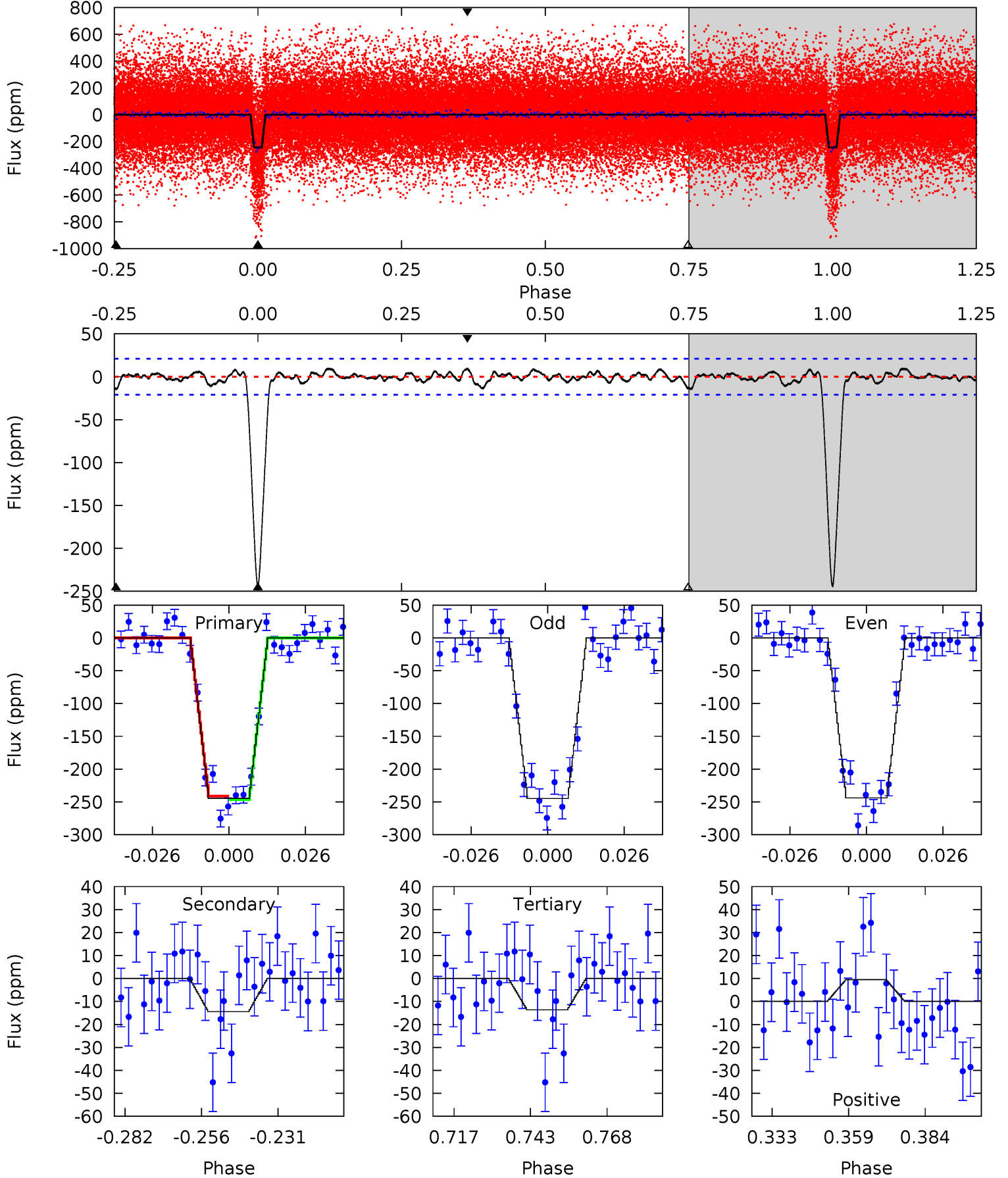
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
51.6	4.03	3.35	2.66	4.82	2.19	1.30	48.3	49.0	0.68	1.37	0.51	0.98	0.05	0.79



Alt Model-Shift Uniqueness Test

010525027-01, P = 3.273447 Days, E = 131.176598 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.3	3.32	3.14	2.18	4.84	2.23	0.99	53.1	54.1	0.18	1.14	0.11	0.97	0.04	0.61



Stellar Parameters For KIC 010525027

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3758^{+75}_{-85}	$4.769^{+0.040}_{-0.040}$	$0.000^{+0.150}_{-0.150}$	$0.496^{+0.042}_{-0.042}$	$0.528^{+0.034}_{-0.046}$	$6.086^{+1.221}_{-0.922}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+8%/-8%	+6%/-9%	+20%/-15%
Source	SPE70	SPE60	SPE70	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010525027-01 / KOI 2006.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-20 ± 5	$0.92^{+0.22}_{-0.21}$	875^{+22}_{-25}	2536^{+198}_{-142}	15^{+12}_{-5}
Alt.	-14 ± 4	$0.84^{+0.21}_{-0.22}$	875^{+24}_{-25}	2501^{+220}_{-176}	13^{+12}_{-6}

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

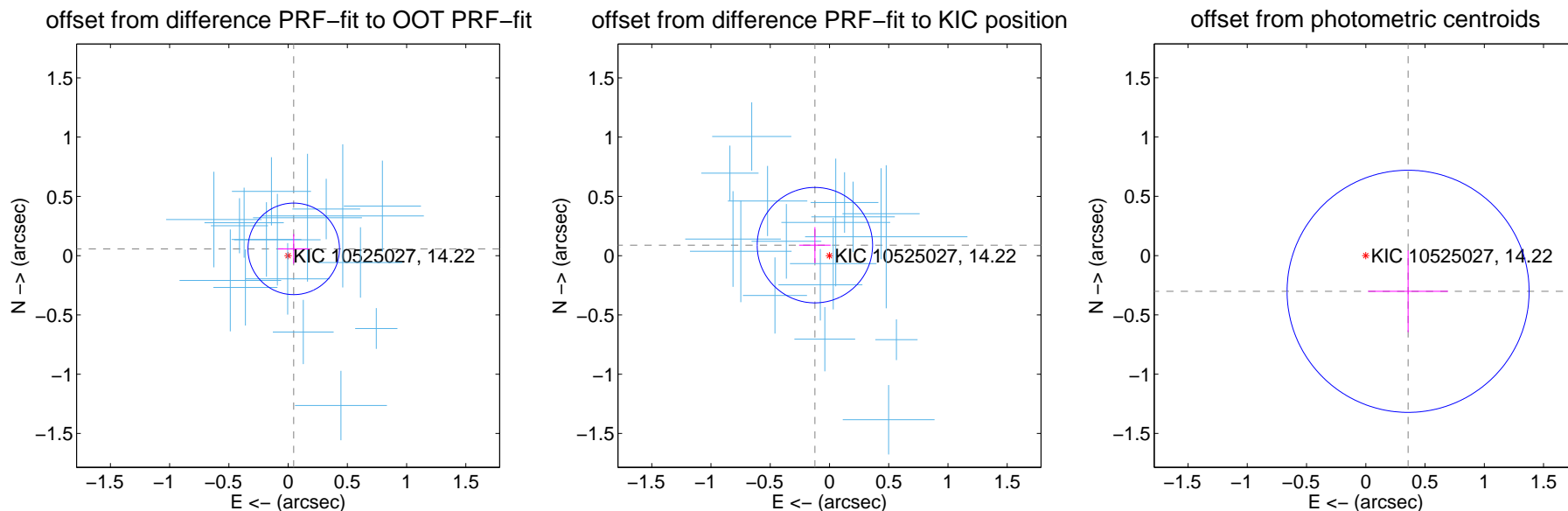
DV Centroid Data

Supplemental centroid analysis for 010525027-01. Kepler magnitude: 14.22. Transit SNR 36.94

There are 17 quarters with good PRF difference image offsets

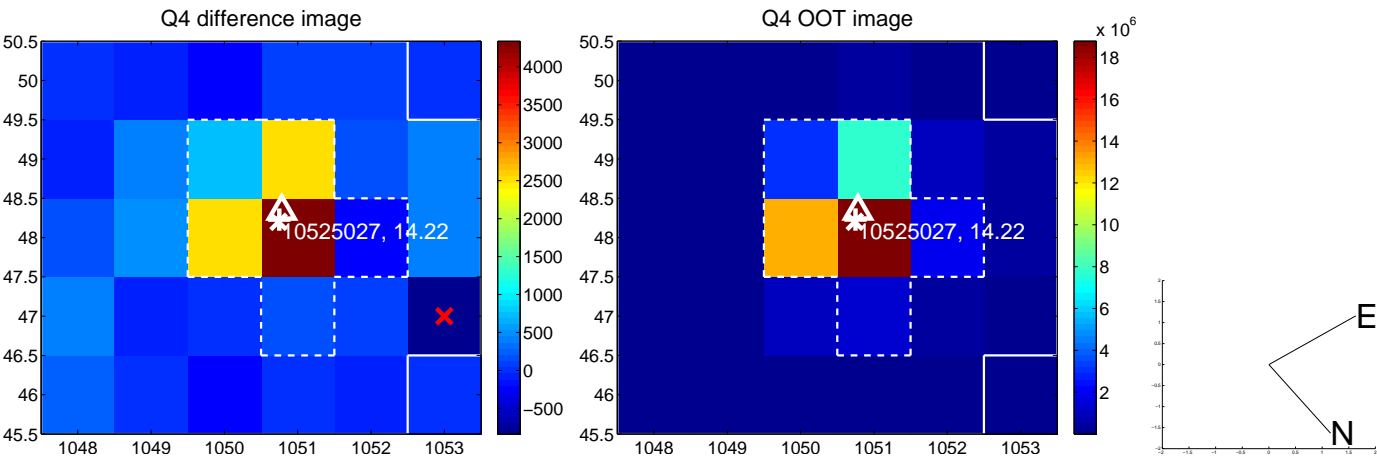
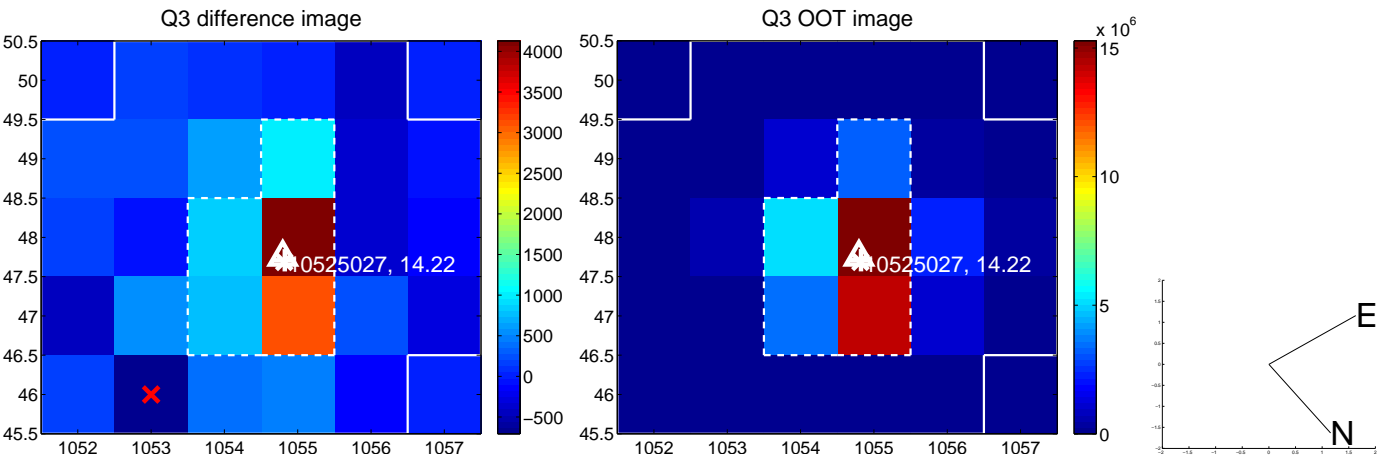
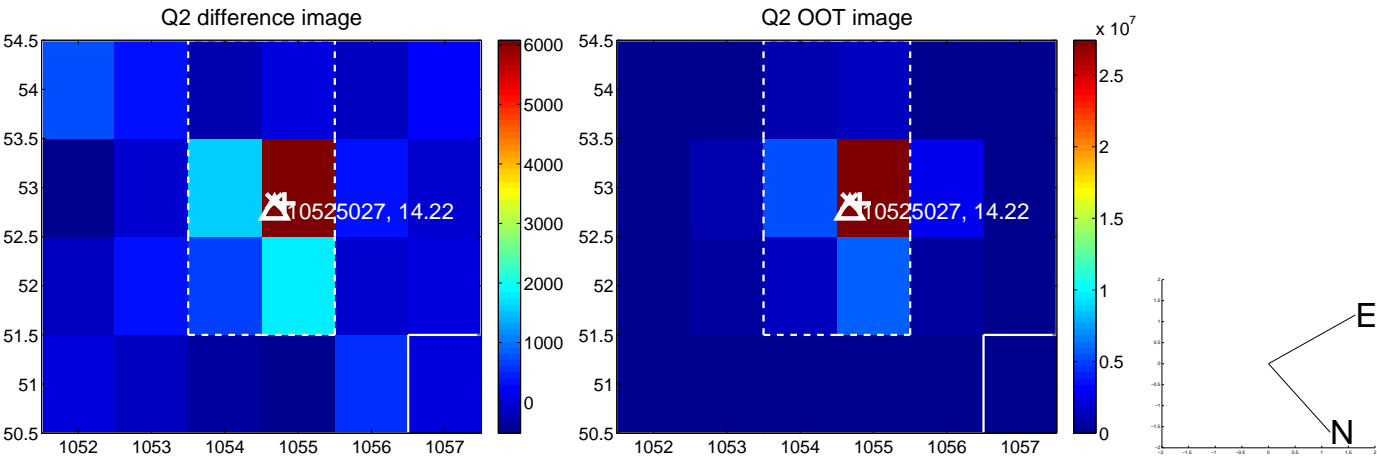
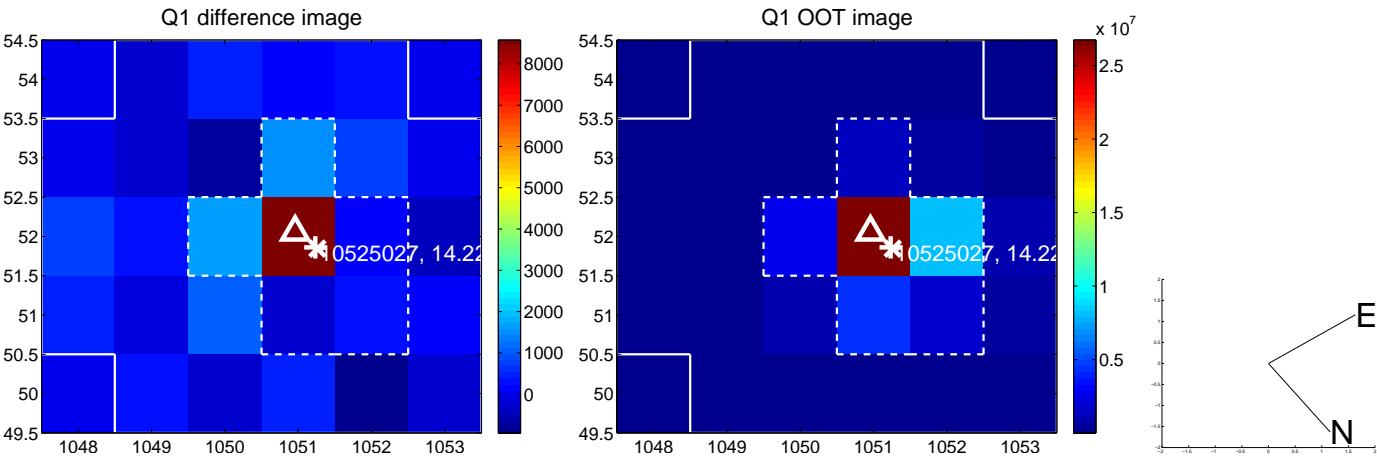
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.074 ± 0.129	0.58	-0.047 ± 0.134	0.057 ± 0.125
PRF-fit source offset from KIC position	0.152 ± 0.162	0.94	0.123 ± 0.133	0.089 ± 0.152
photometric centroid source offset	0.47 ± 0.34	1.37	-0.36 ± 0.34	-0.30 ± 0.34

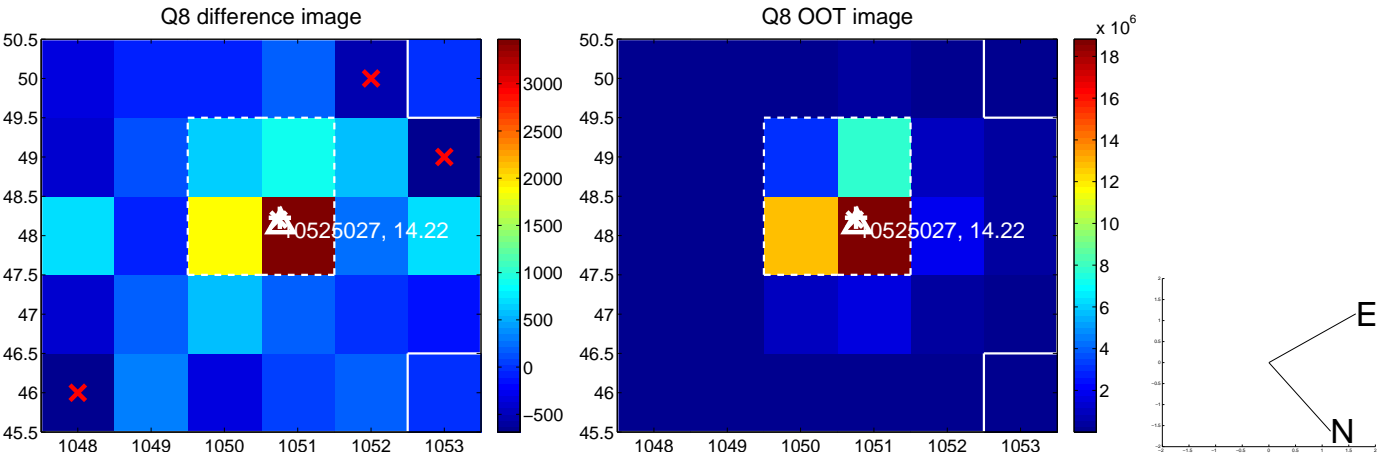
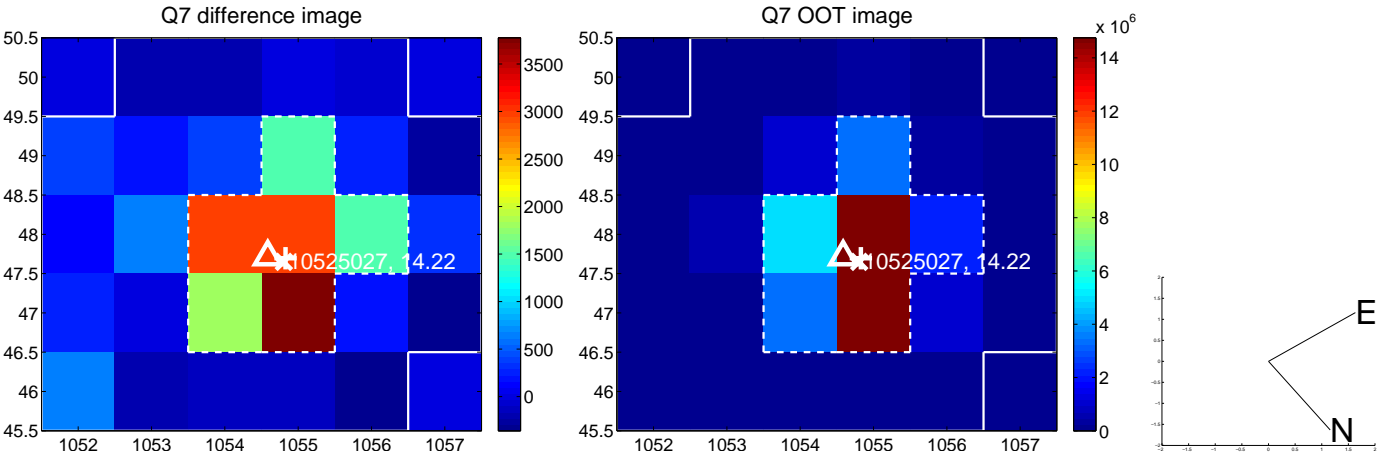
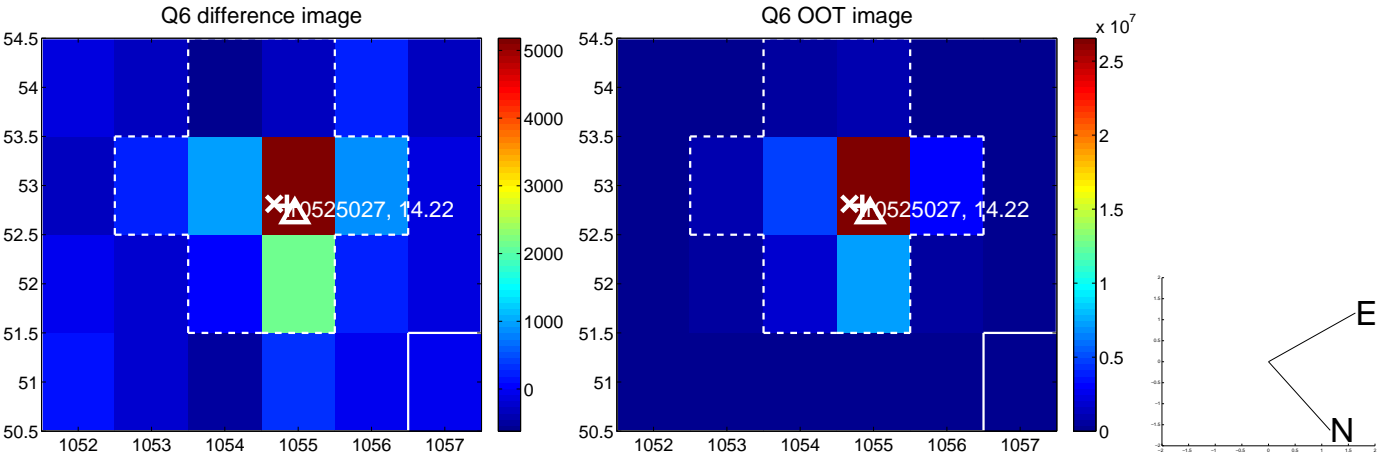
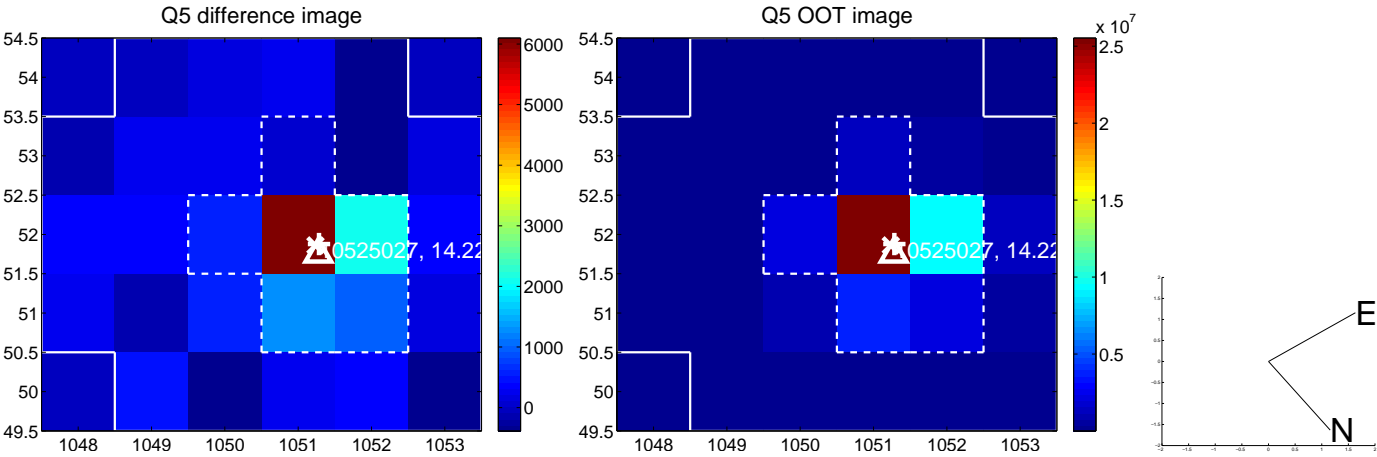


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

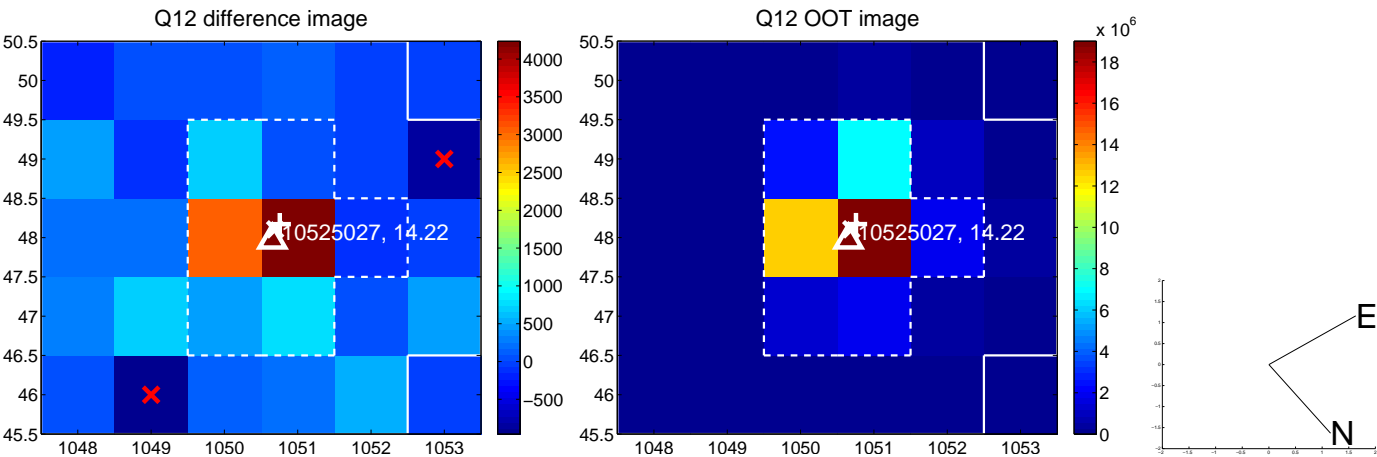
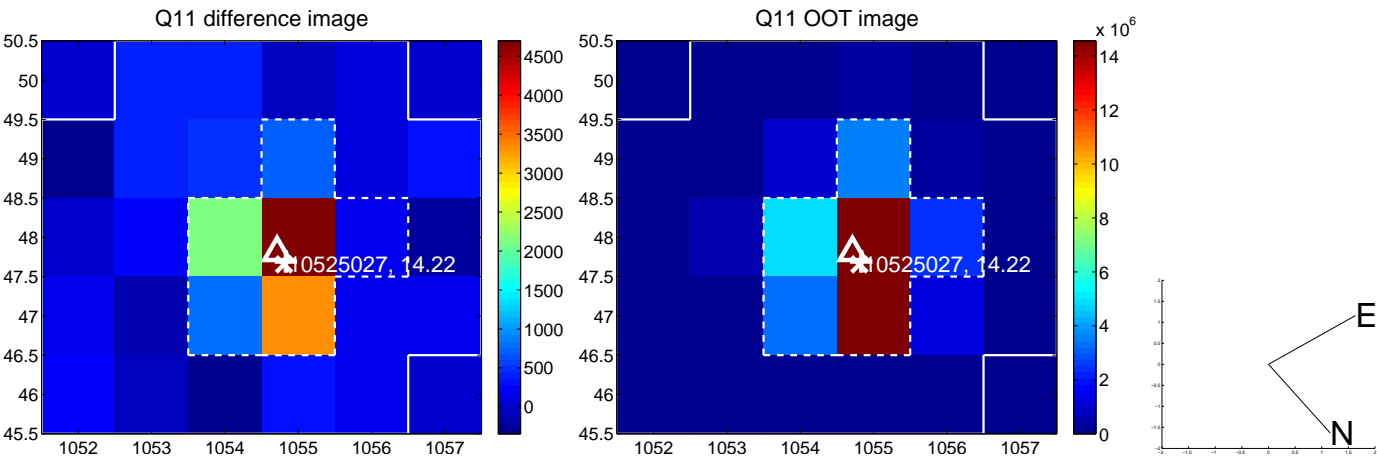
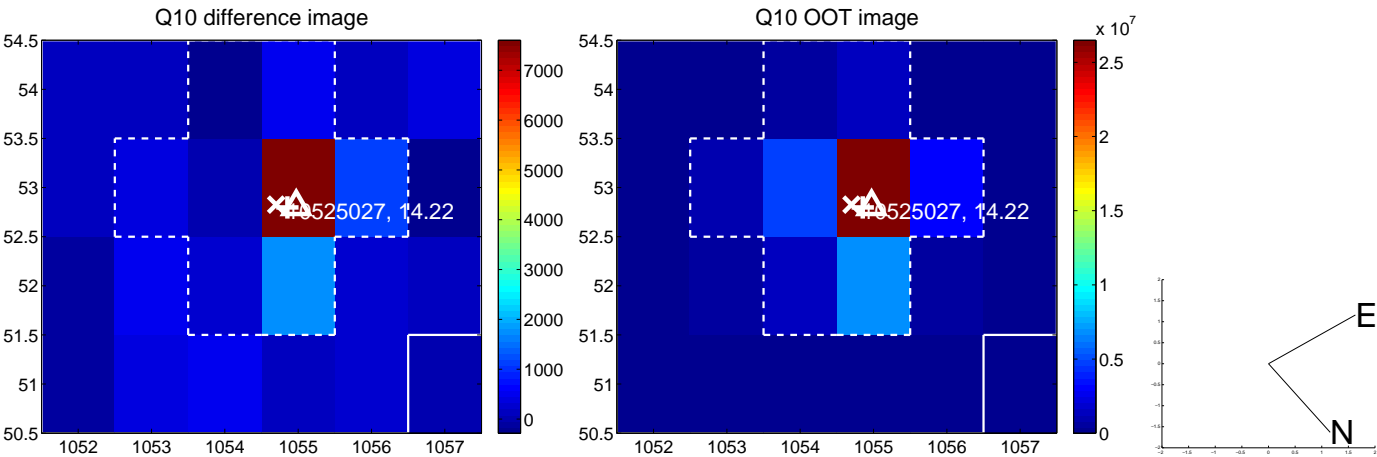
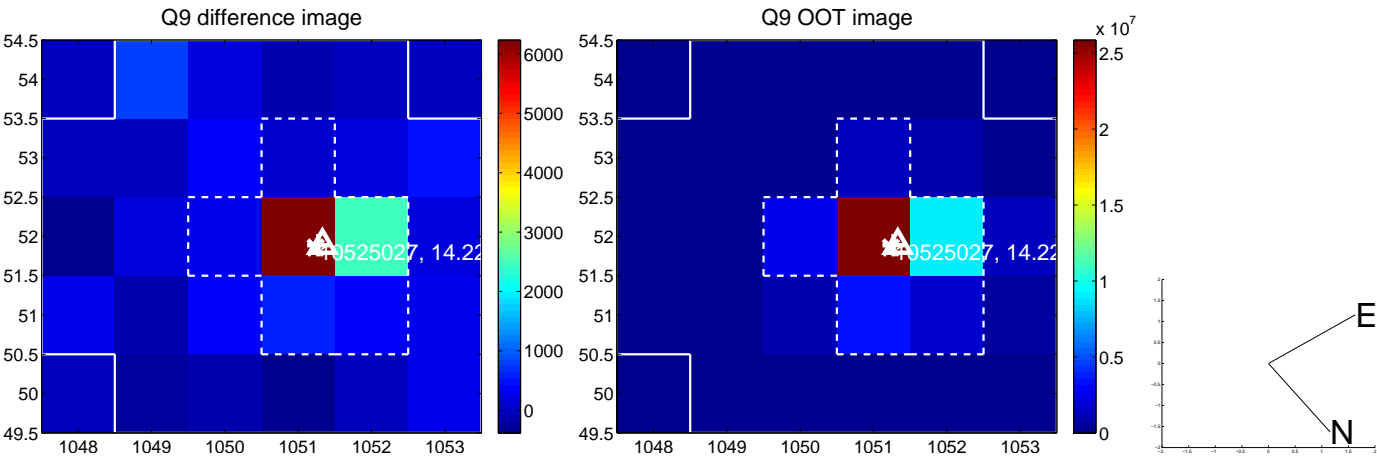
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



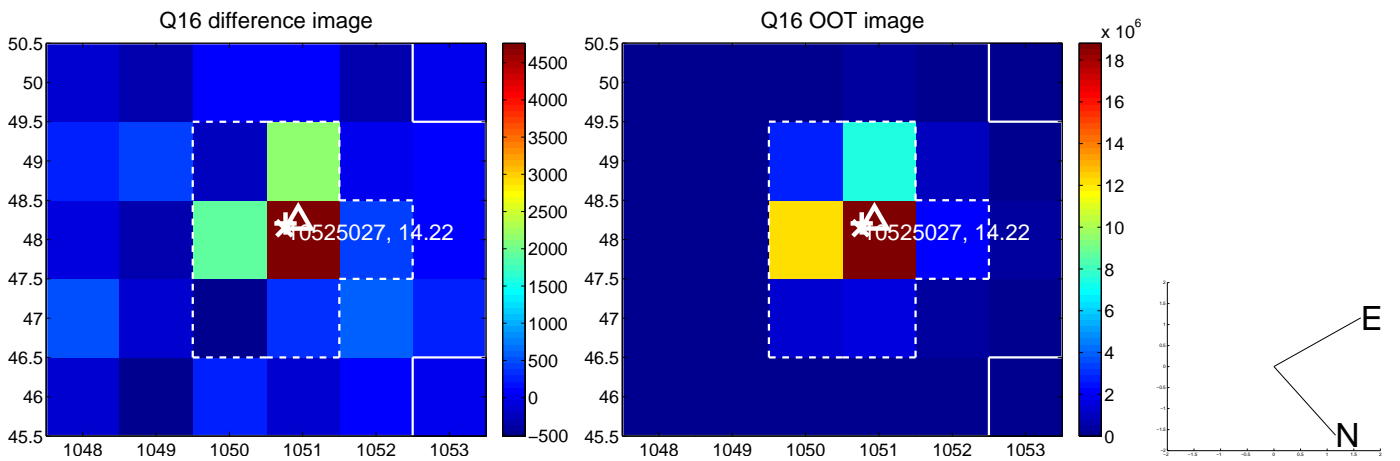
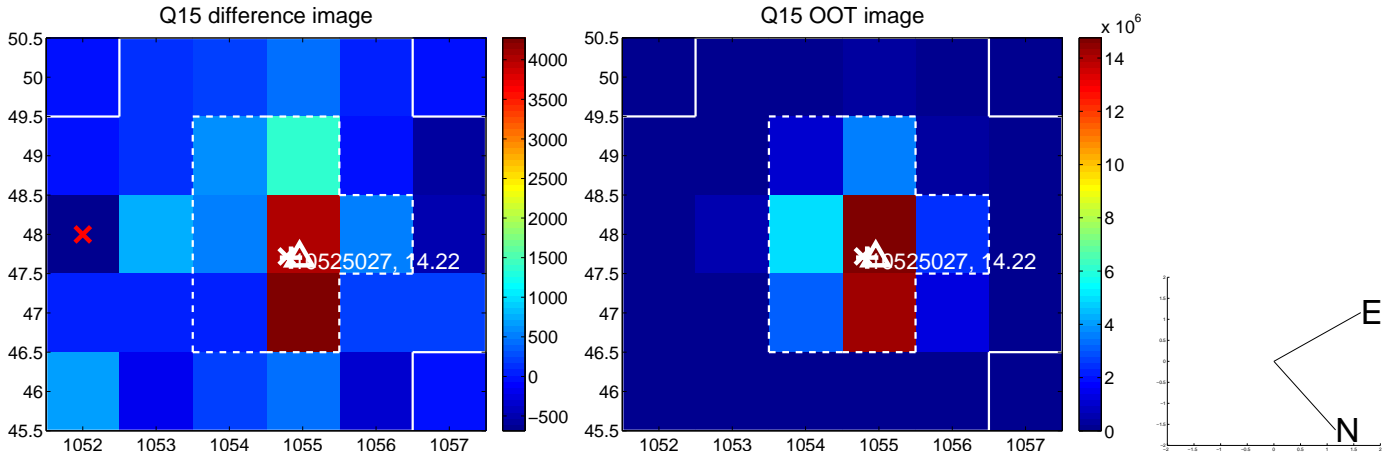
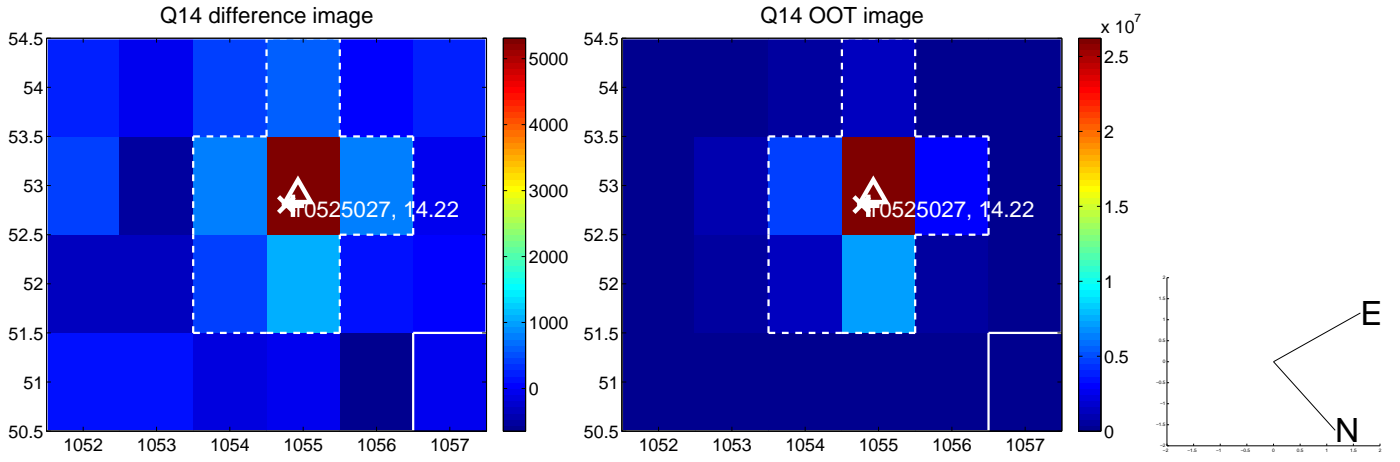
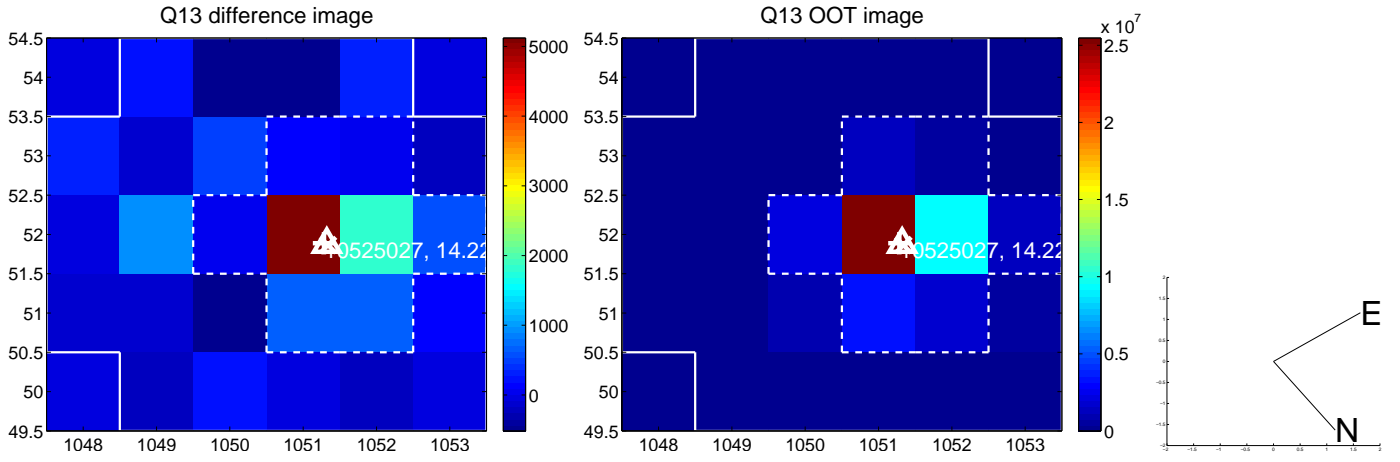
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



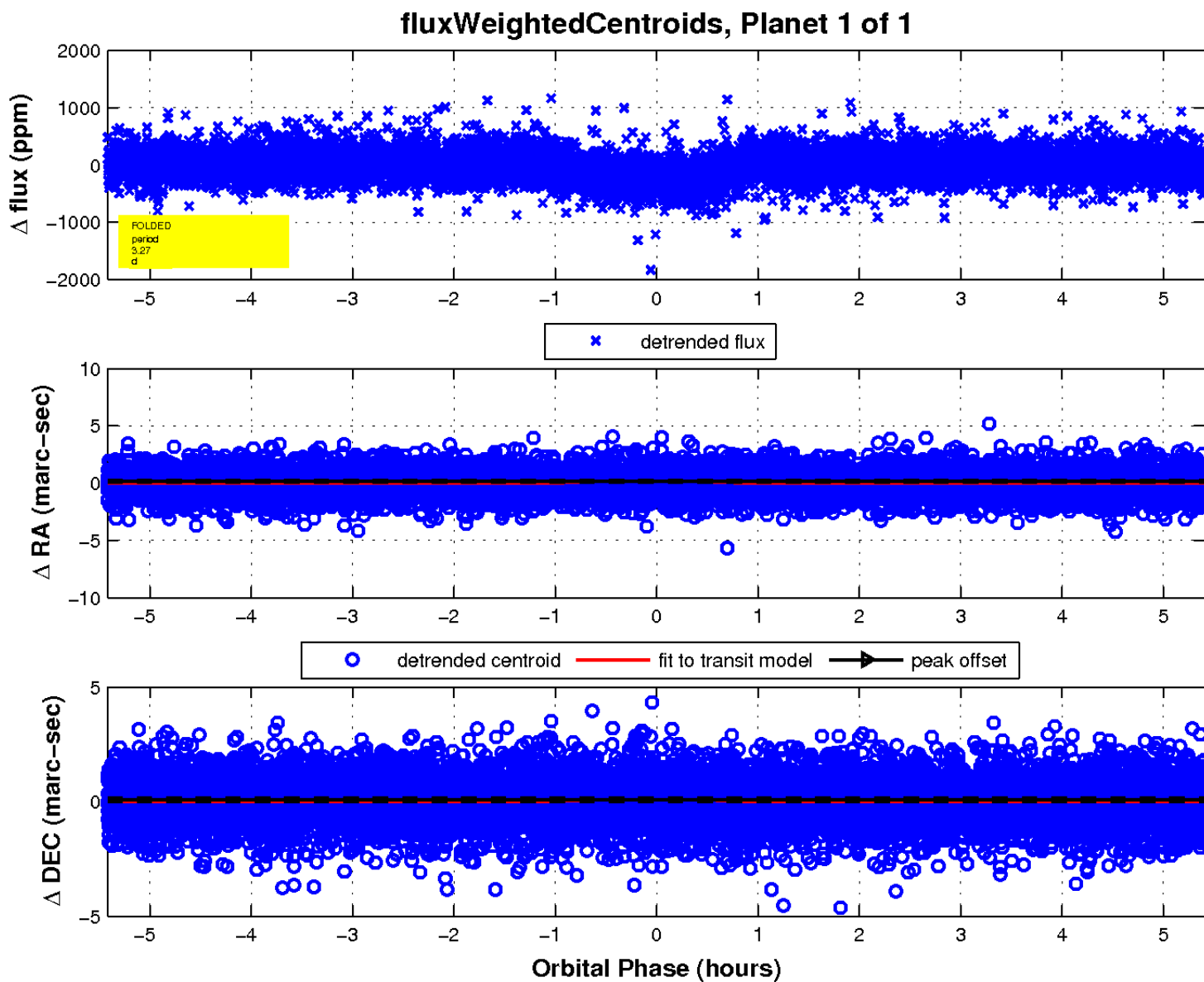
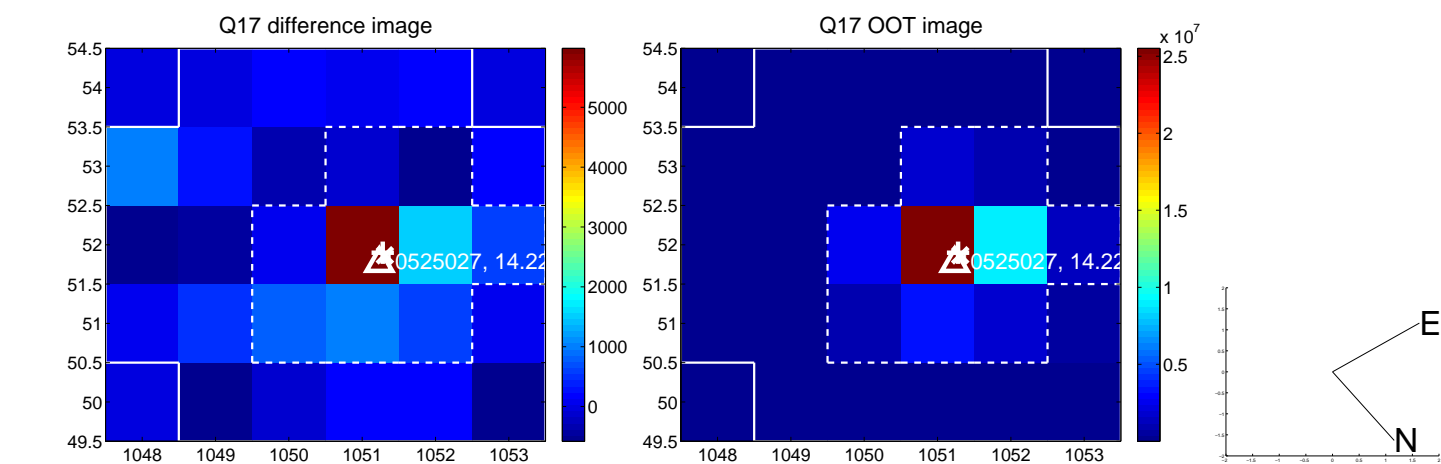
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UKIRT Image

Declination

