

KIC 006879865

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})
006879865-01	OBS	0417.01	19.193107	138.580378	6754.1	2.536	254.6	250.9	0.89	5883	11.29	43.85

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006879865-01	OBS	FP	0.00	0	1	0	0	DEEP_V_SHAPED

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 006879865-01

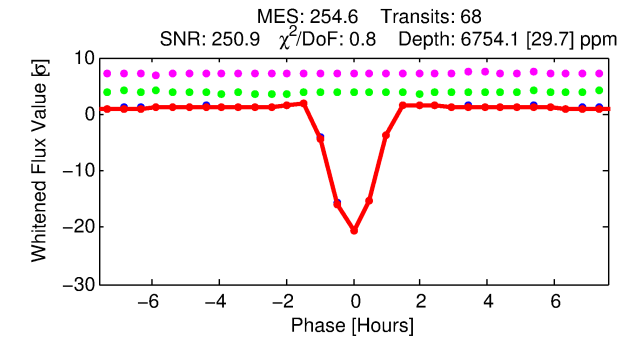
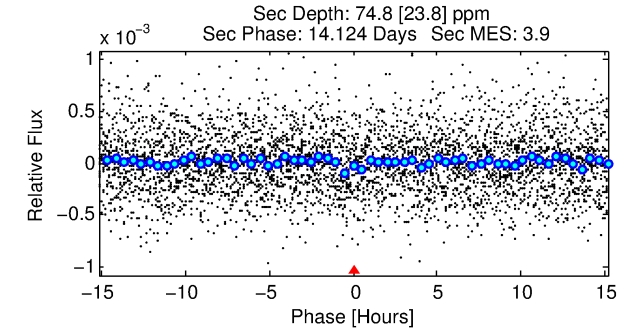
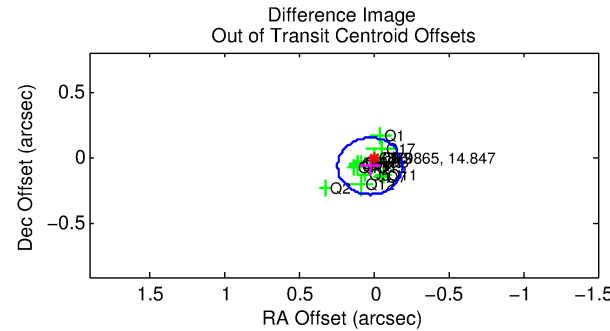
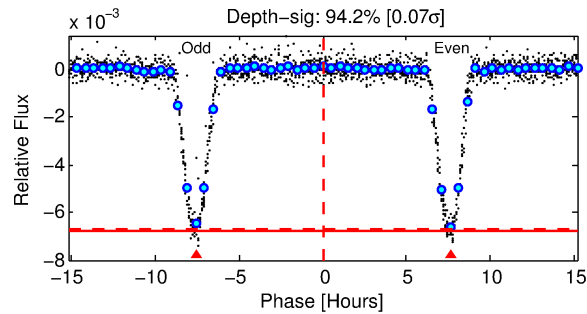
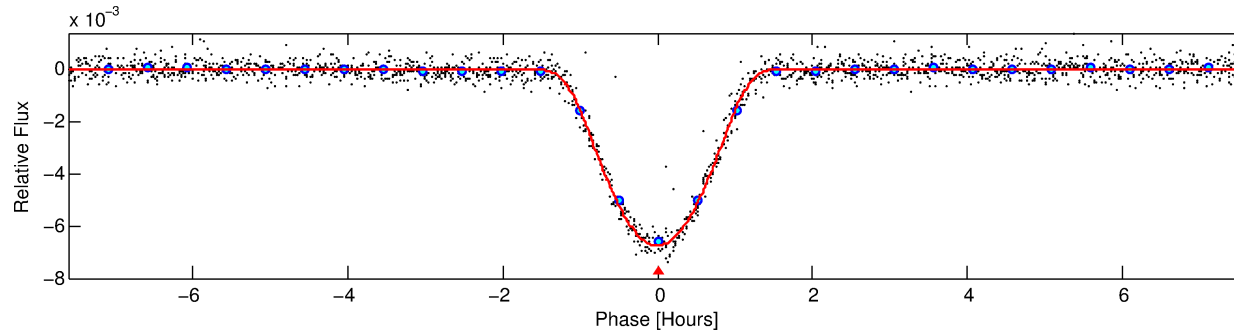
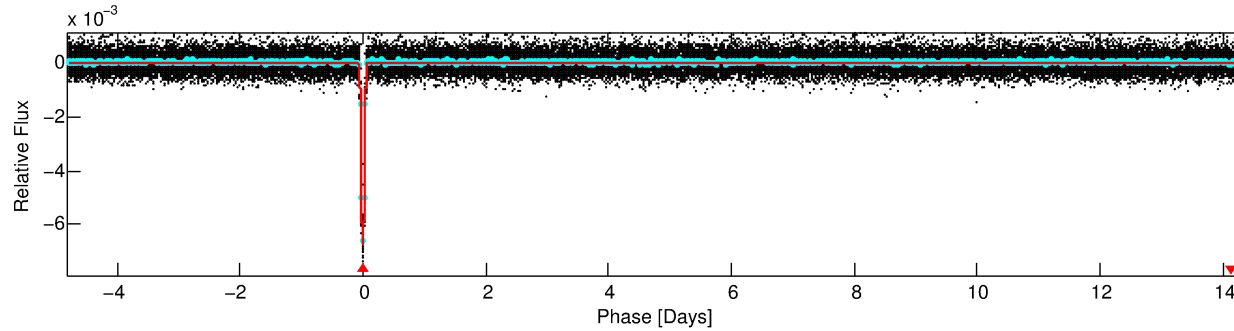
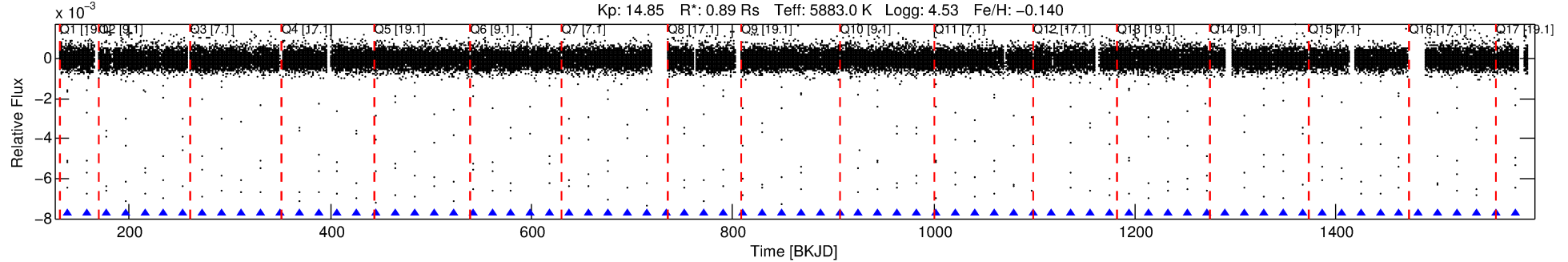
No Significant Match Found

DV One-Page Summary

KIC: 6879865 Candidate: 1 of 1 Period: 19.193 d

KOI: K00417.01 Corr: 0.994

Kp: 14.85 R*: 0.89 Rs Teff: 5883.0 K Logg: 4.53 Fe/H: -0.140



DV Fit Results:

Period = 19.19311 [0.00001] d
Epoch = 138.5804 [0.0002] BKJD
Rp/R* = 0.1160 [0.0127]
a/R* = 32.34 [0.91]
b = 0.97 [0.02]
Seff = 43.85 [16.78]
Teq = 656 [63] K
Rp = 11.29 [3.51] Re
a = 0.1395 [0.0346] AU
Ag = 6.29 [3.33] [1.59σ]
Teffp = 1606 [162] K [5.46σ]

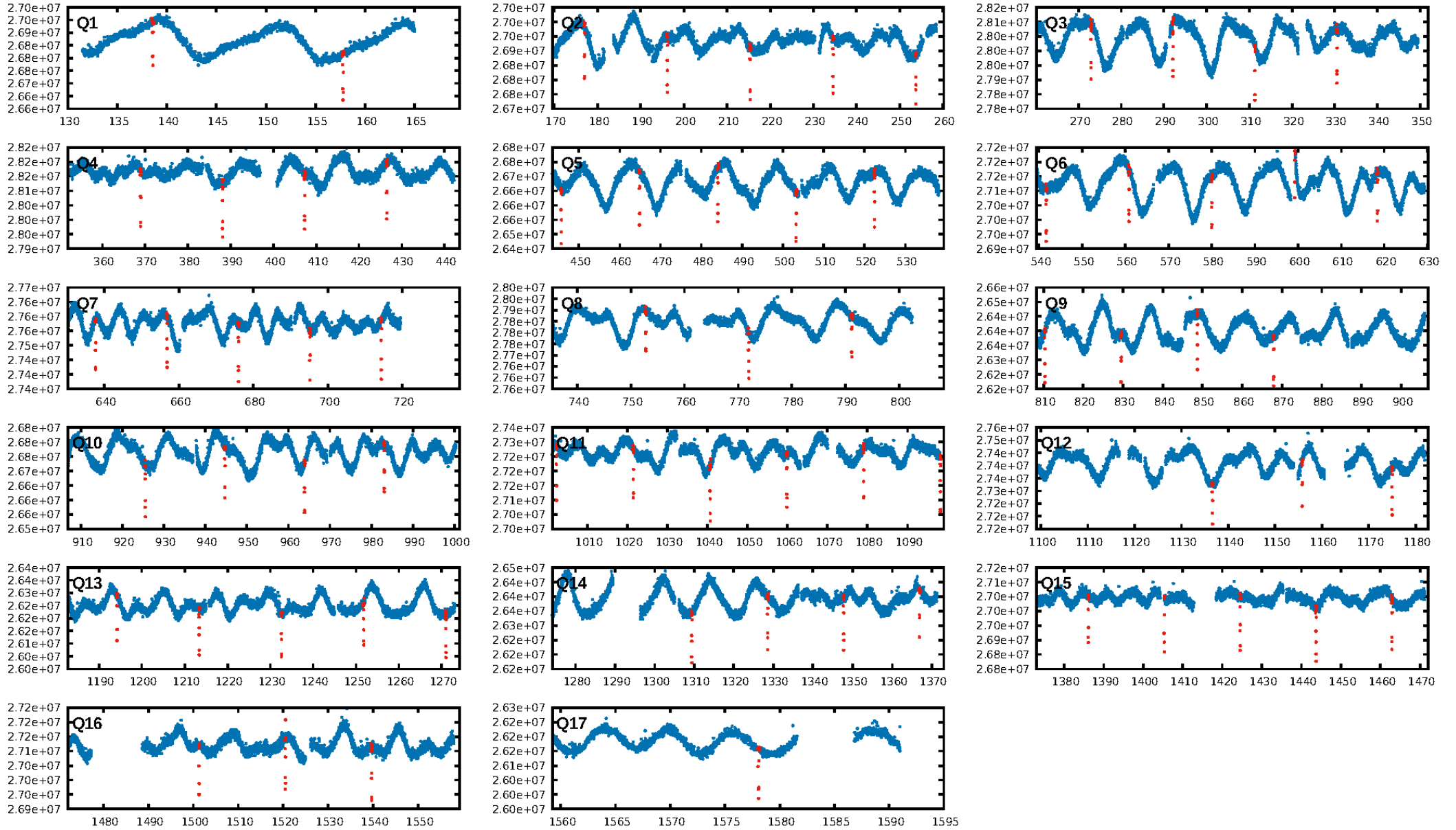
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 84.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [65/65]
GhostDiagnostic-chr: 5.309
Centroid-sig: 38.5%
Centroid-so: 0.114 arcsec [2.21σ]
OotOffset-rm: 0.066 arcsec [0.92σ]
KicOffset-rm: 0.030 arcsec [0.43σ]
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]

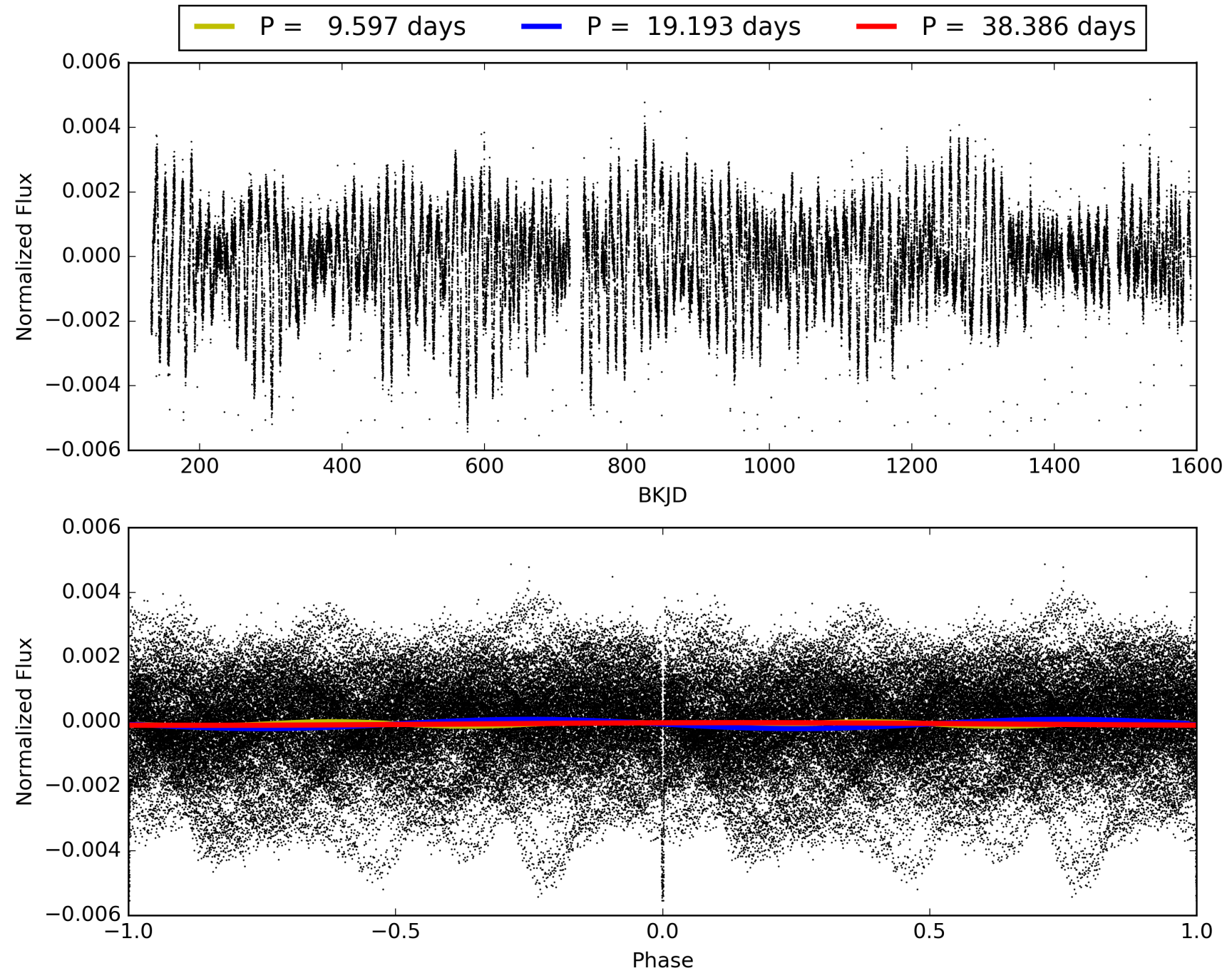
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:50:07 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 006879865-01, PDC Light Curves

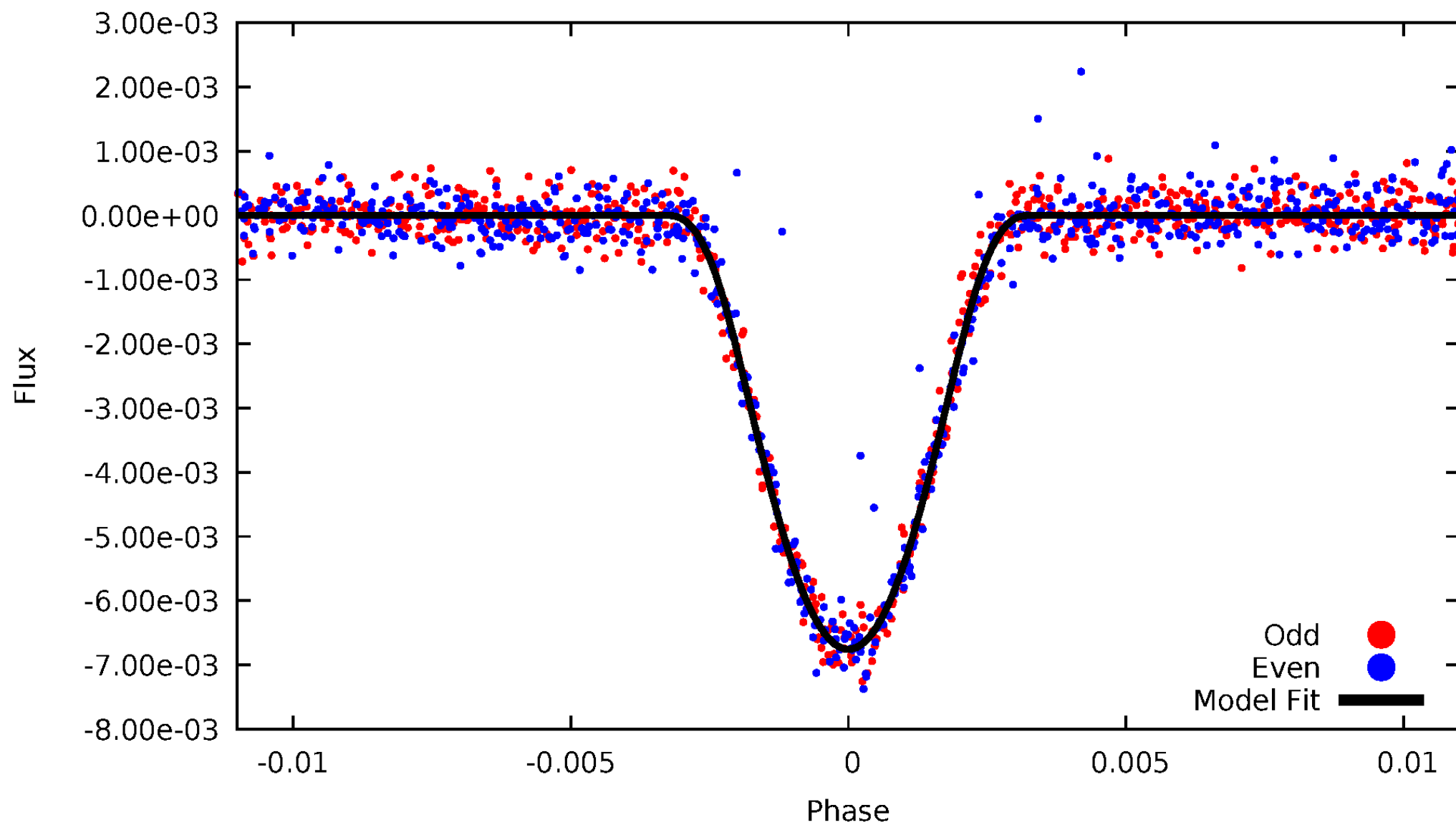


TCE 006879865-01



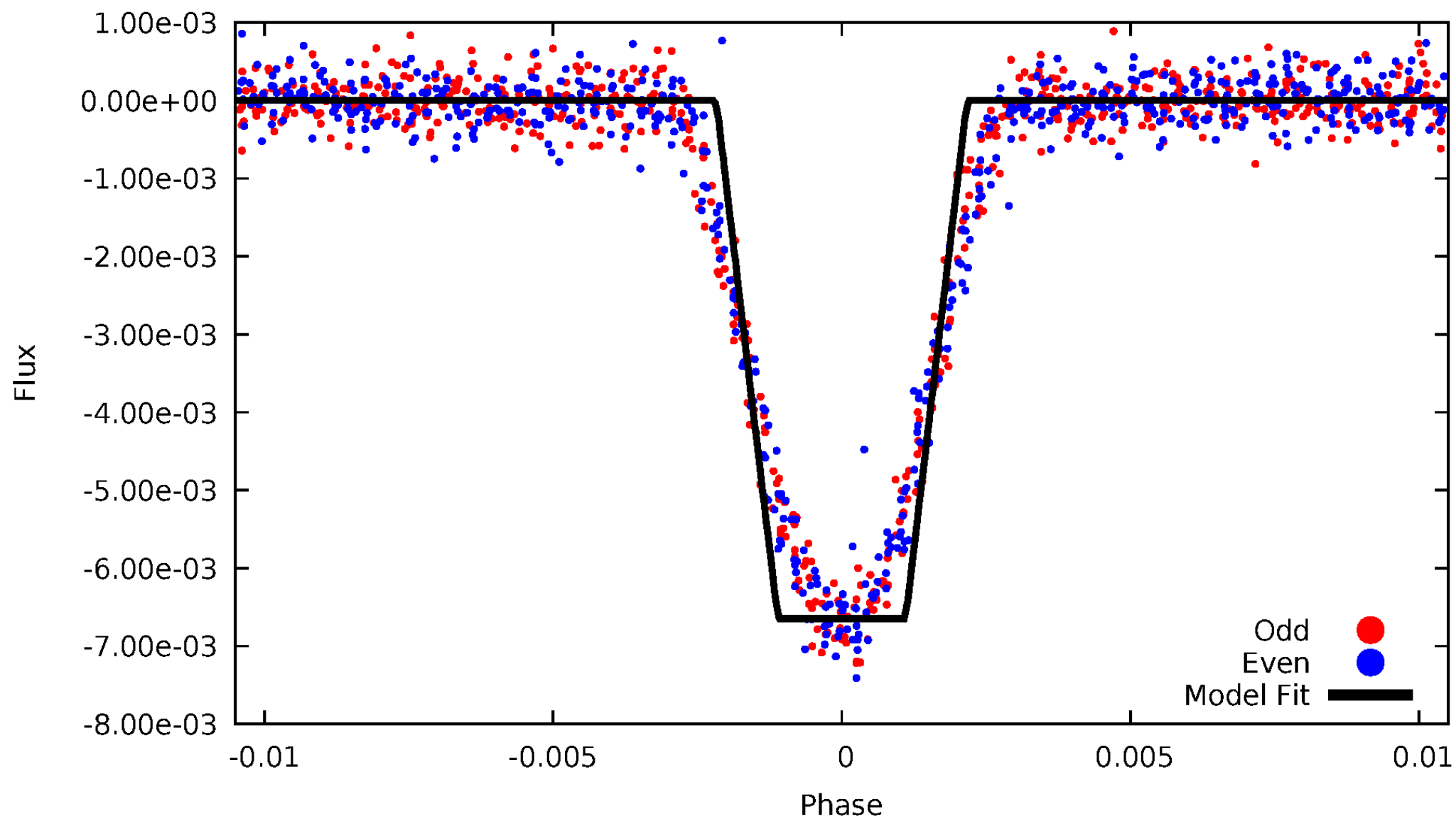
DV Odd/Even

TCE 006879865-01

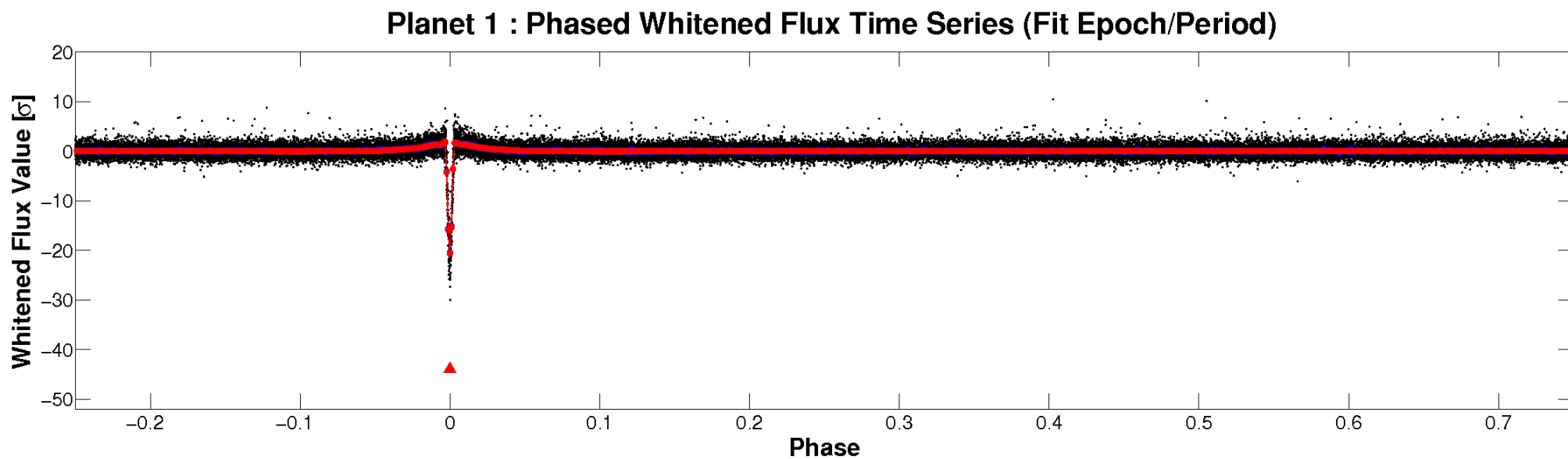
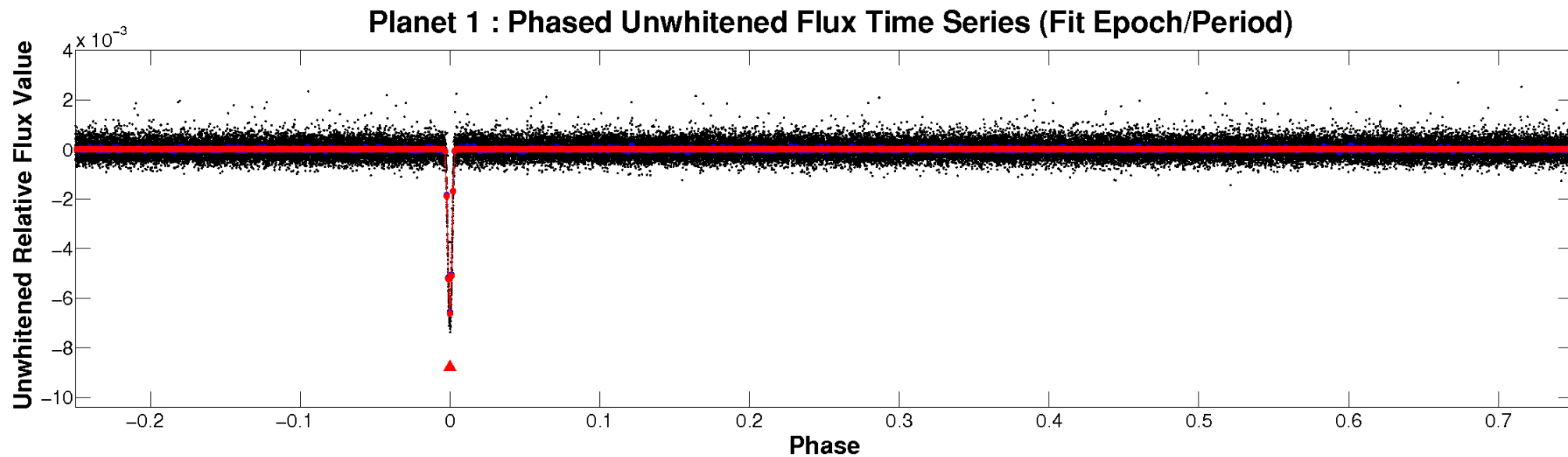


ALT Odd/Even

TCE 006879865-01

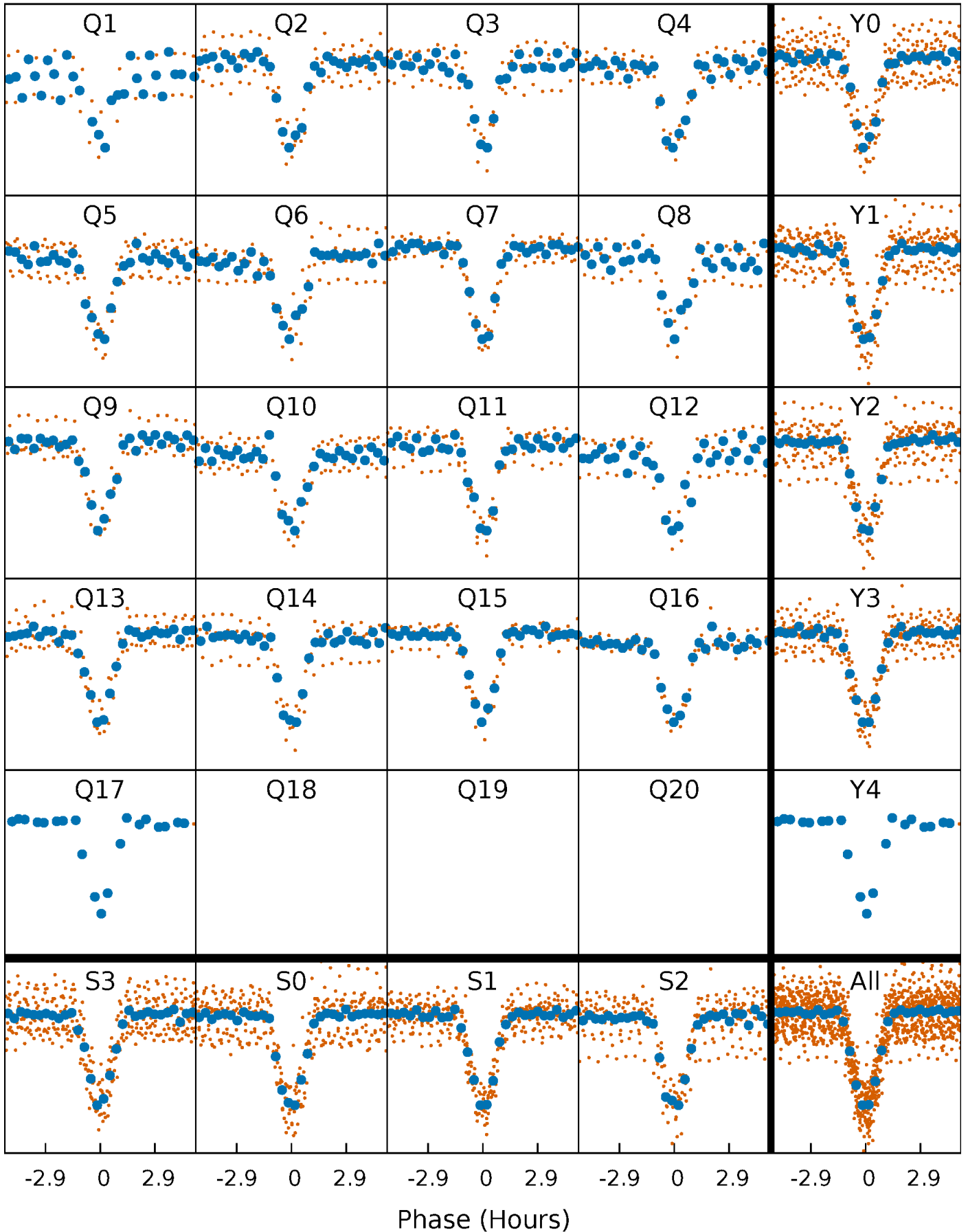


Non-Whitened Vs. Whitened Light Curve



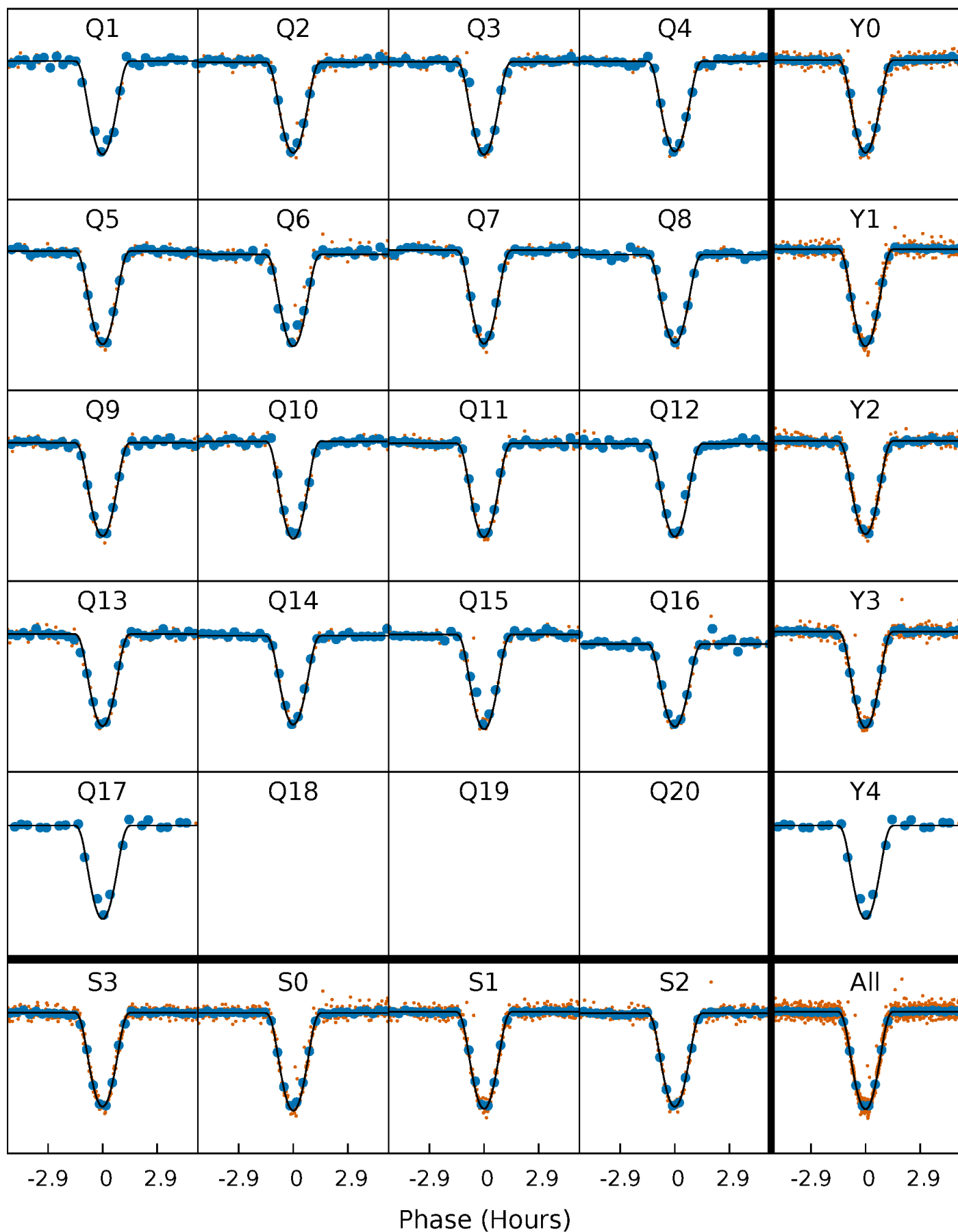
PDC Quarter-Phased Transit Curves

TCE 006879865-01 P= 19.193107 Days $T_0=138.580378$ (BKJD)



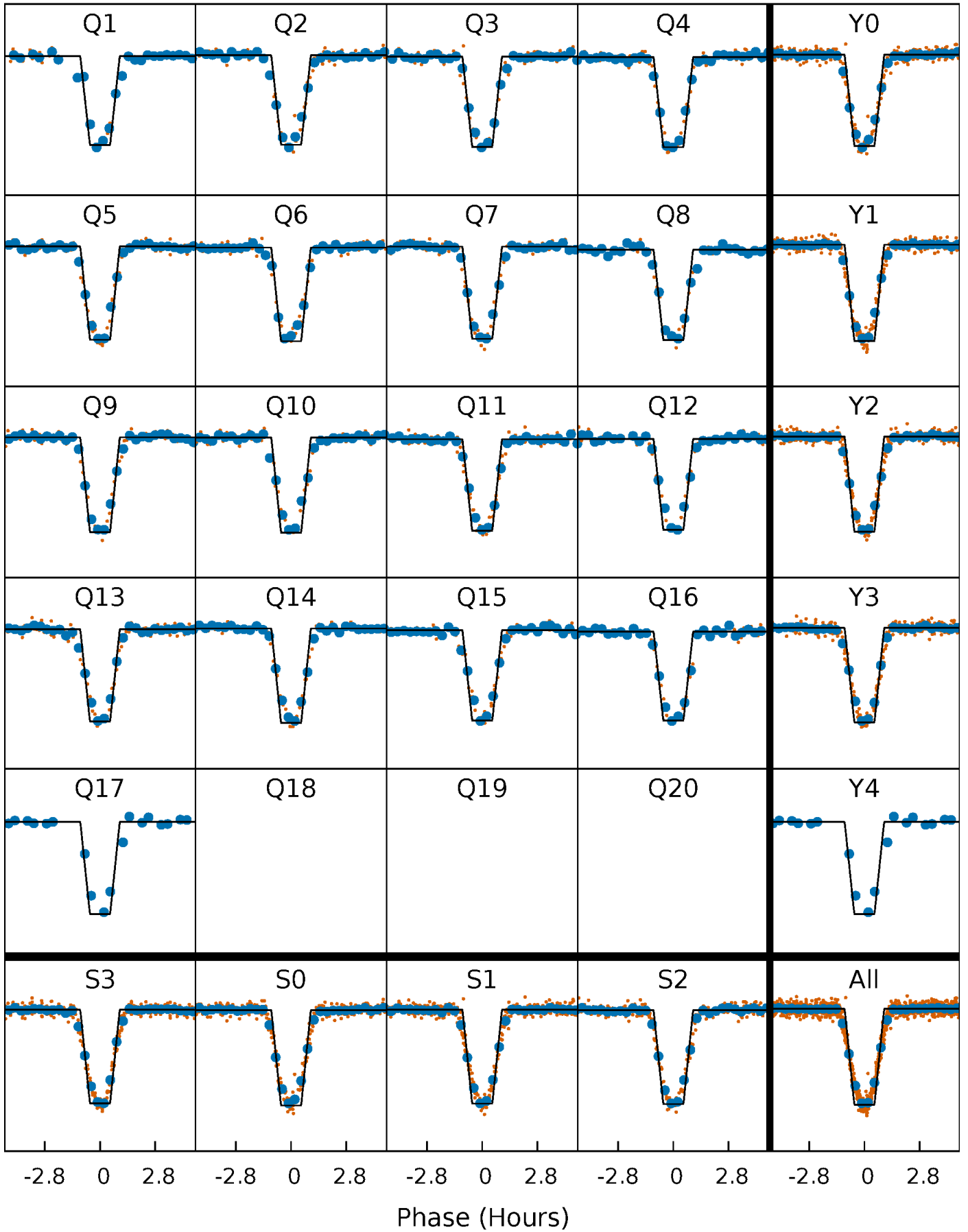
DV Quarter-Phased Transit Curves

TCE 006879865-01 P= 19.193107 Days $T_0=138.580378$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

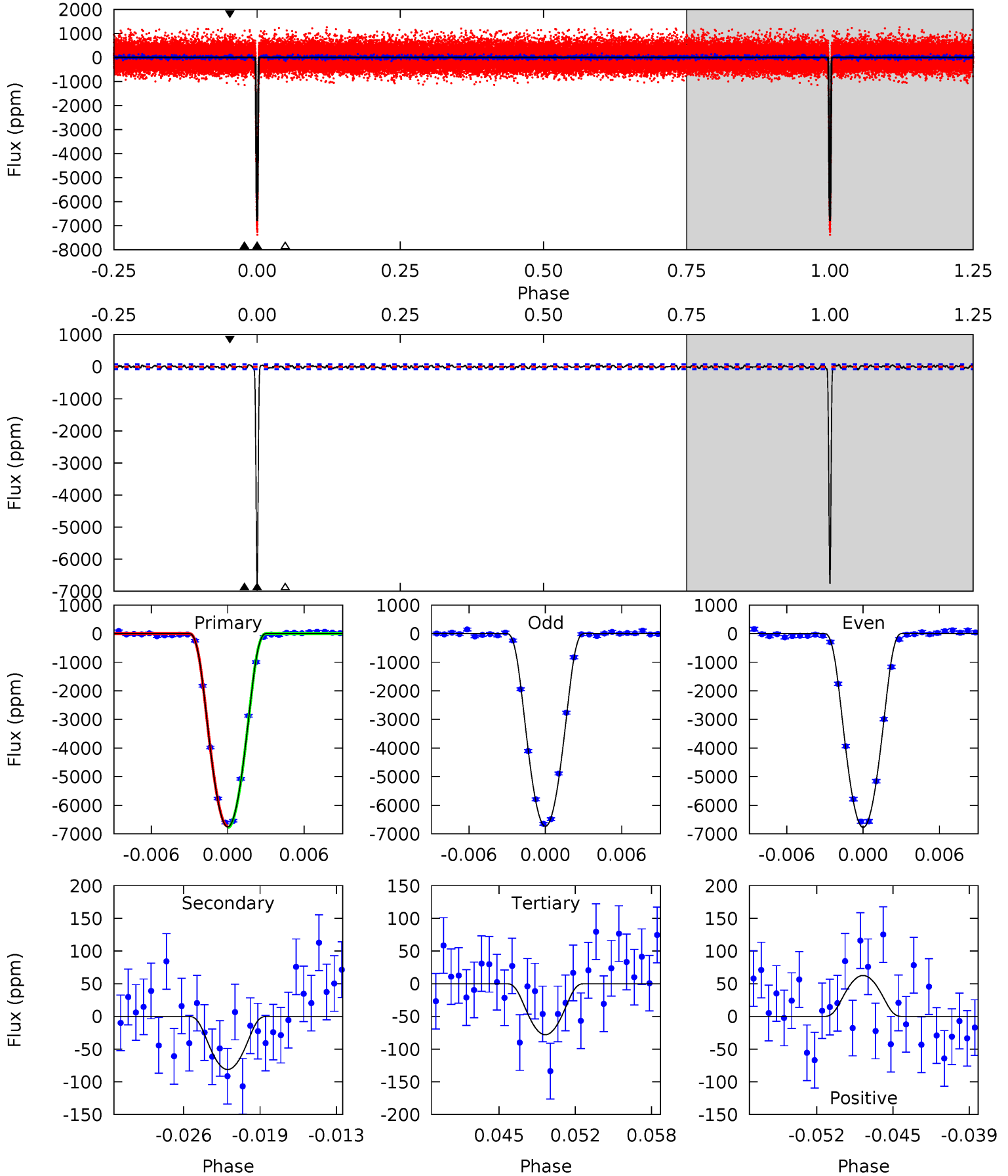
TCE 006879865-01 P= 19.193063 Days $T_0=138.582041$ (BKJD)



DV Model-Shift Uniqueness Test

006879865-01, P = 19.193107 Days, E = 119.387271 Days

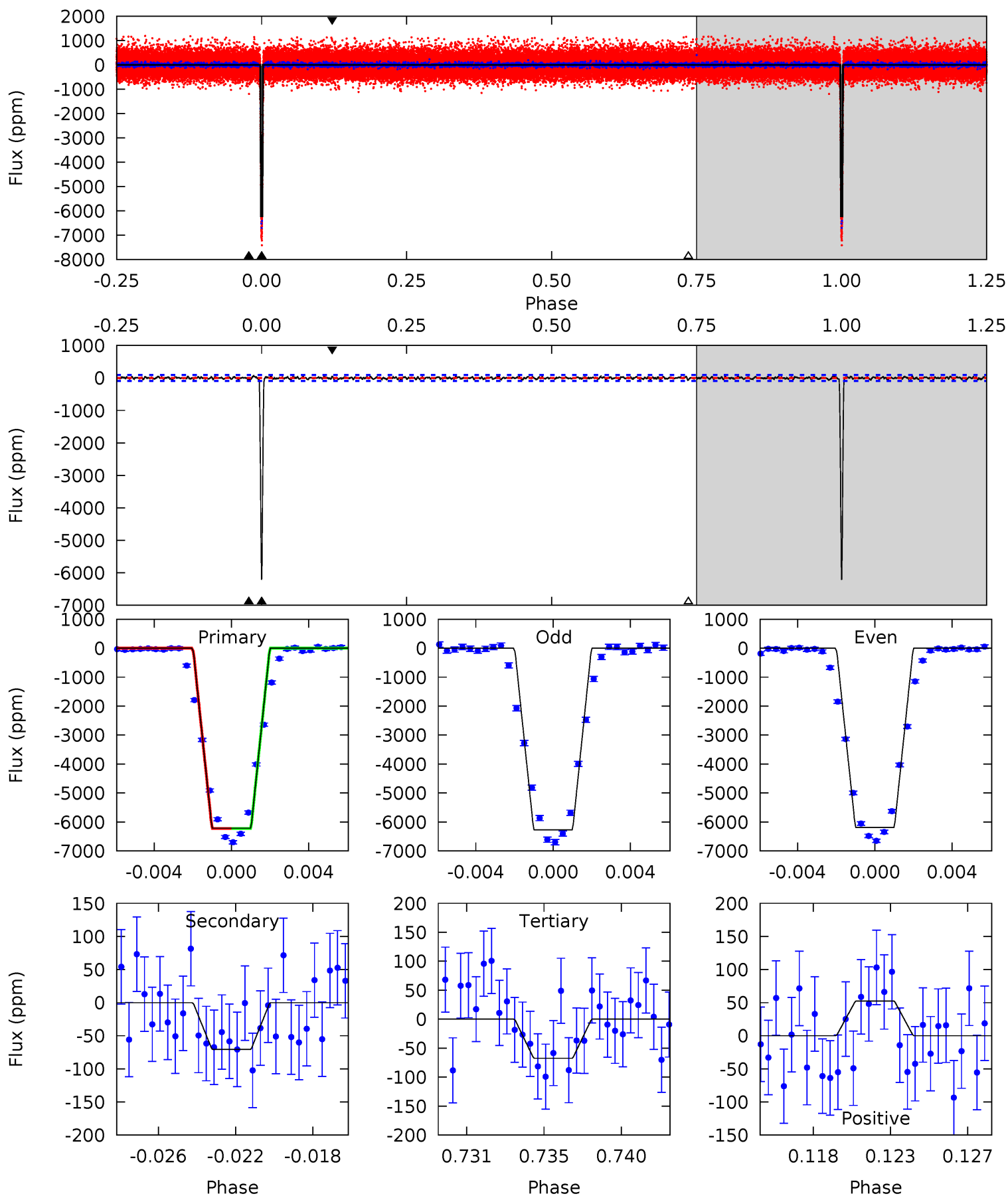
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
455.4	5.47	5.26	4.22	5.11	2.72	1.63	450.1	451.1	0.22	1.26	1.30	0.99	0.01	1.66



Alt Model-Shift Uniqueness Test

006879865-01, P = 19.193063 Days, E = 119.388978 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
348.1	3.95	3.77	2.93	5.18	2.85	1.16	344.3	345.1	0.18	1.03	2.24	1.00	0.01	0.08



Stellar Parameters For KIC 006879865

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5883^{+159}_{-176}	$4.530^{+0.037}_{-0.200}$	$-0.140^{+0.300}_{-0.300}$	$0.892^{+0.260}_{-0.087}$	$0.985^{+0.117}_{-0.130}$	$1.952^{+0.397}_{-1.022}$
	+3%/-3%	+1%/-4%	+214%/-214%	+29%/-10%	+12%/-13%	+20%/-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 006879865-01 / KOI 0417.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-81 ± 15	$12.00^{+2.14}_{-1.72}$	946^{+64}_{-47}	2479^{+106}_{-112}	$5.710^{+2.581}_{-1.678}$
Alt.	-71 ± 18	$8.31^{+1.88}_{-1.49}$	941^{+64}_{-46}	2664^{+158}_{-139}	10^{+6}_{-4}

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 $A_{obs} \gg 1.0$

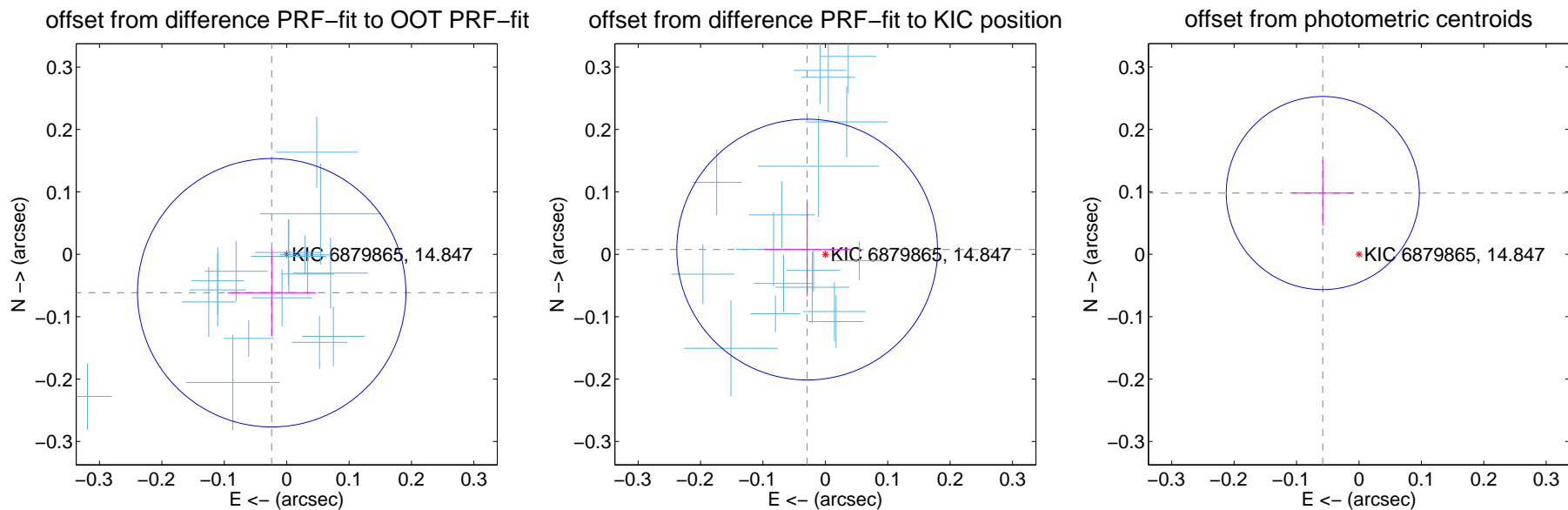
DV Centroid Data

Supplemental centroid analysis for 006879865-01. Kepler magnitude: 14.85. Transit SNR 250.91

There are 17 quarters with good PRF difference image offsets

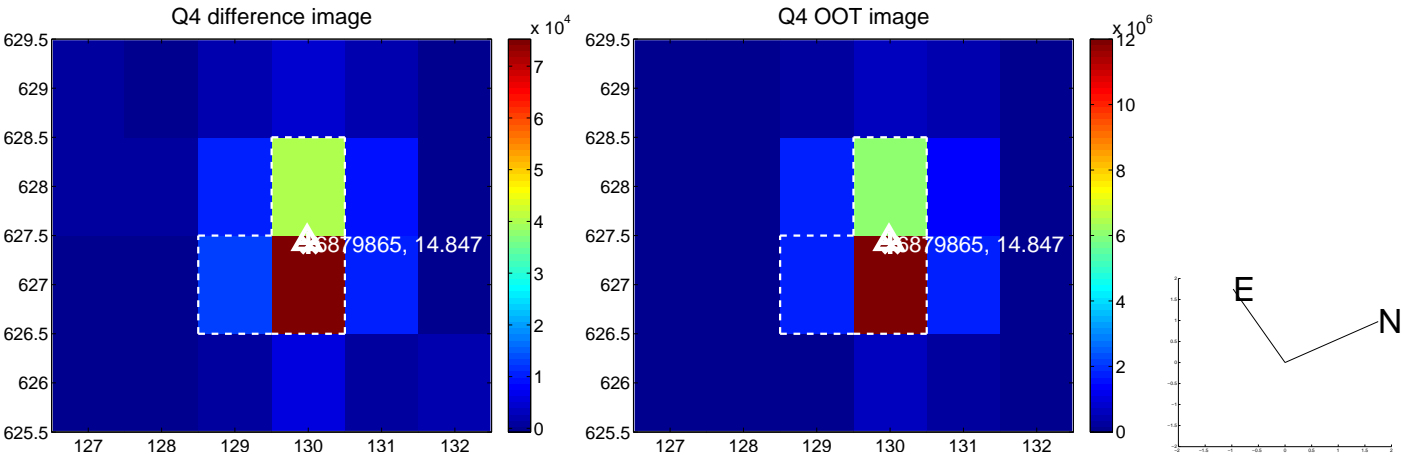
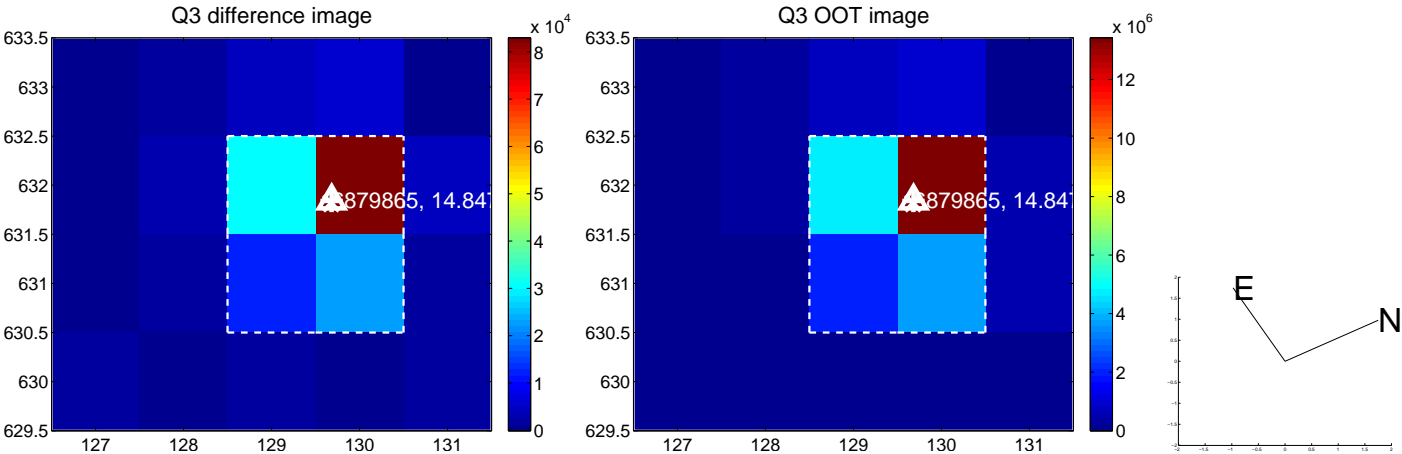
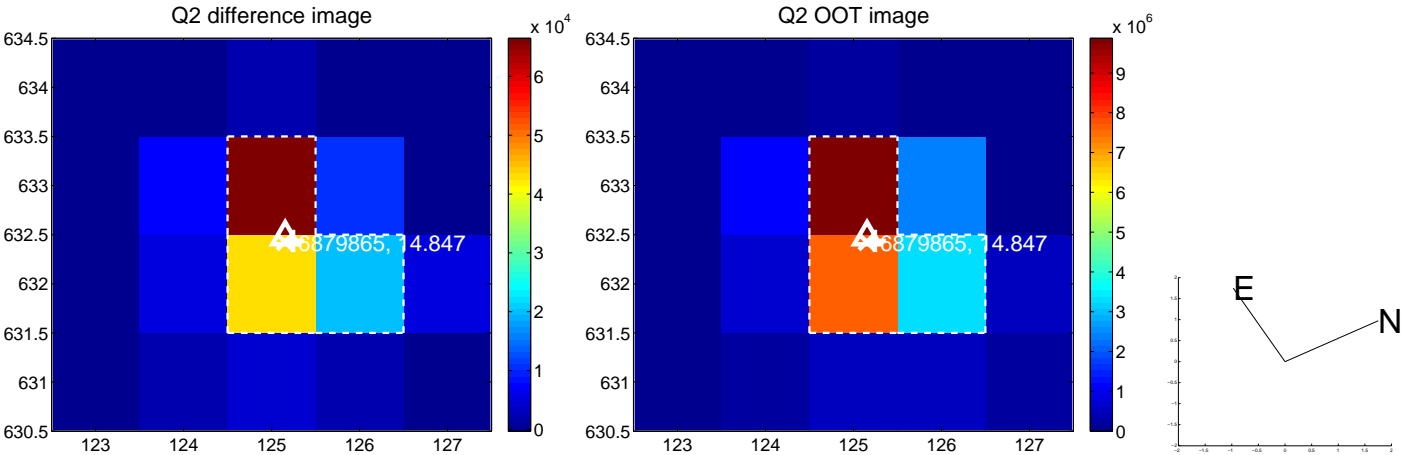
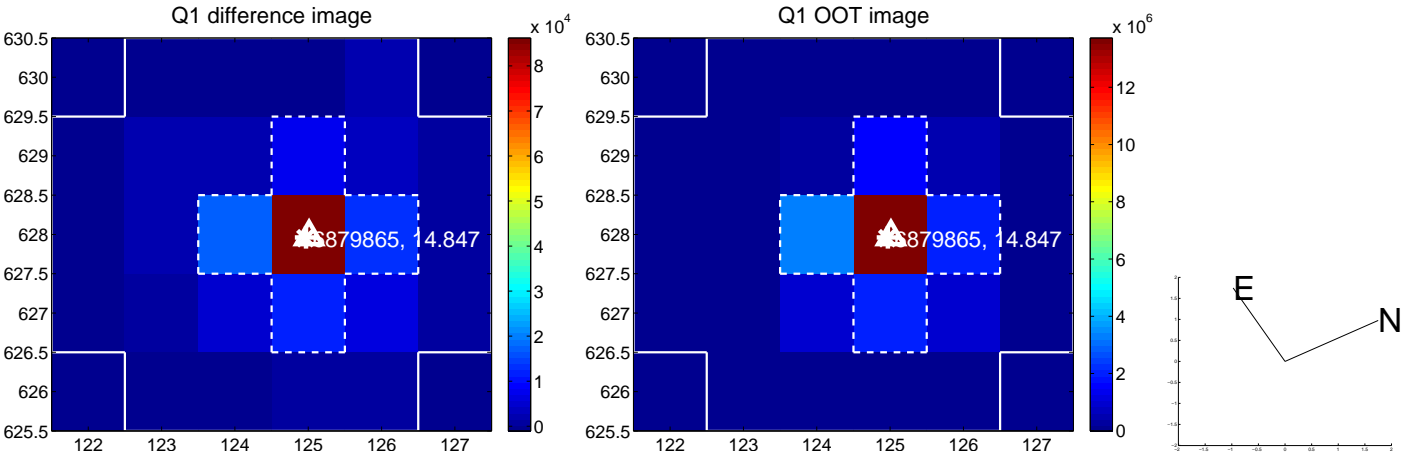
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.066 ± 0.072	0.92	0.024 ± 0.071	-0.062 ± 0.070
PRF-fit source offset from KIC position	0.030 ± 0.070	0.43	0.029 ± 0.069	0.008 ± 0.075
photometric centroid source offset	0.11 ± 0.05	2.21	0.06 ± 0.05	0.10 ± 0.05

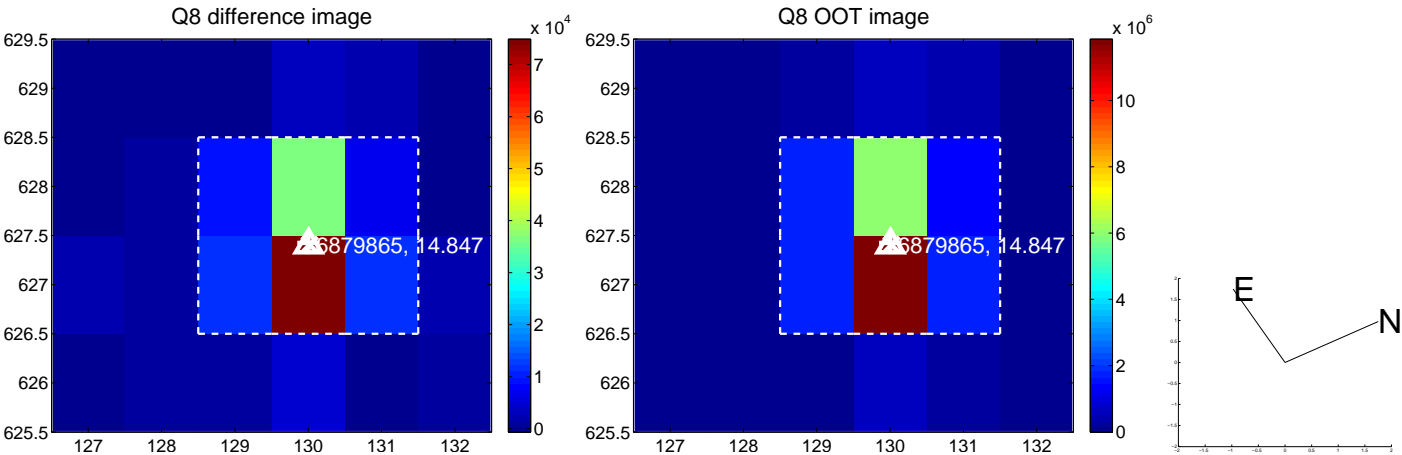
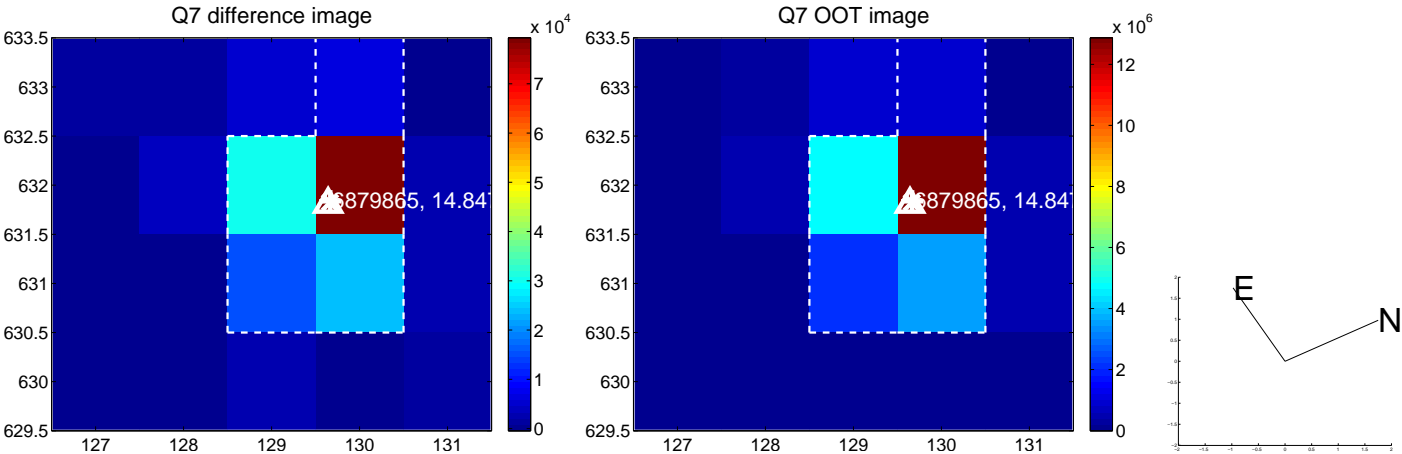
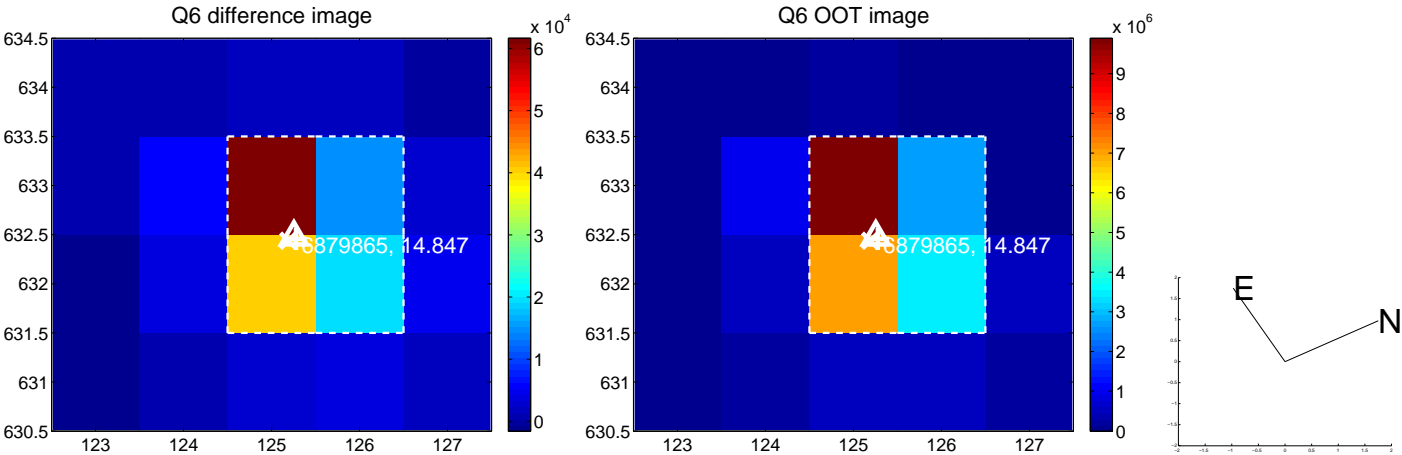
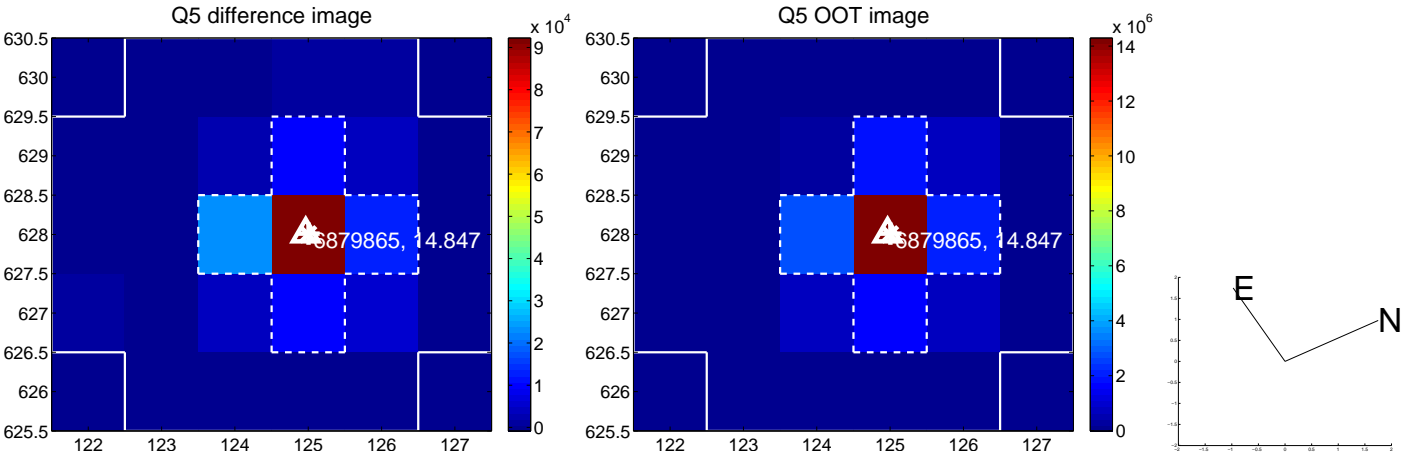


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

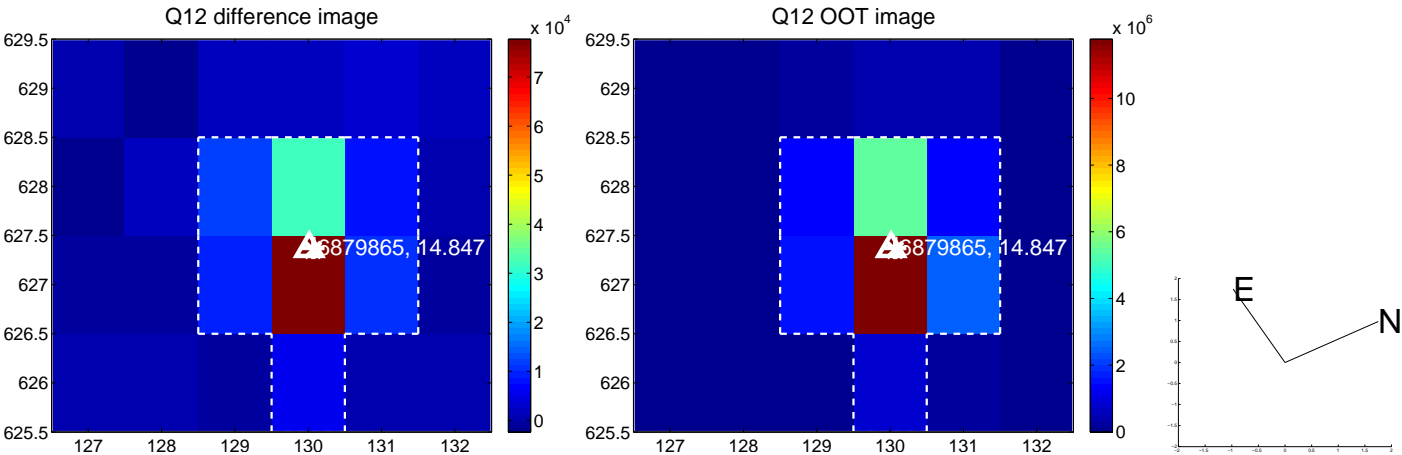
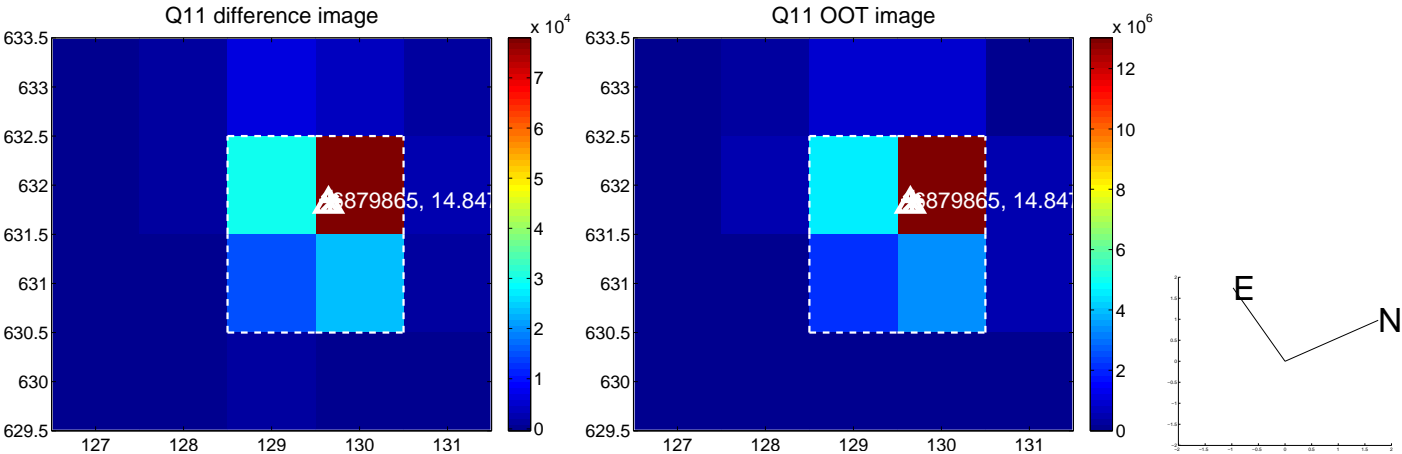
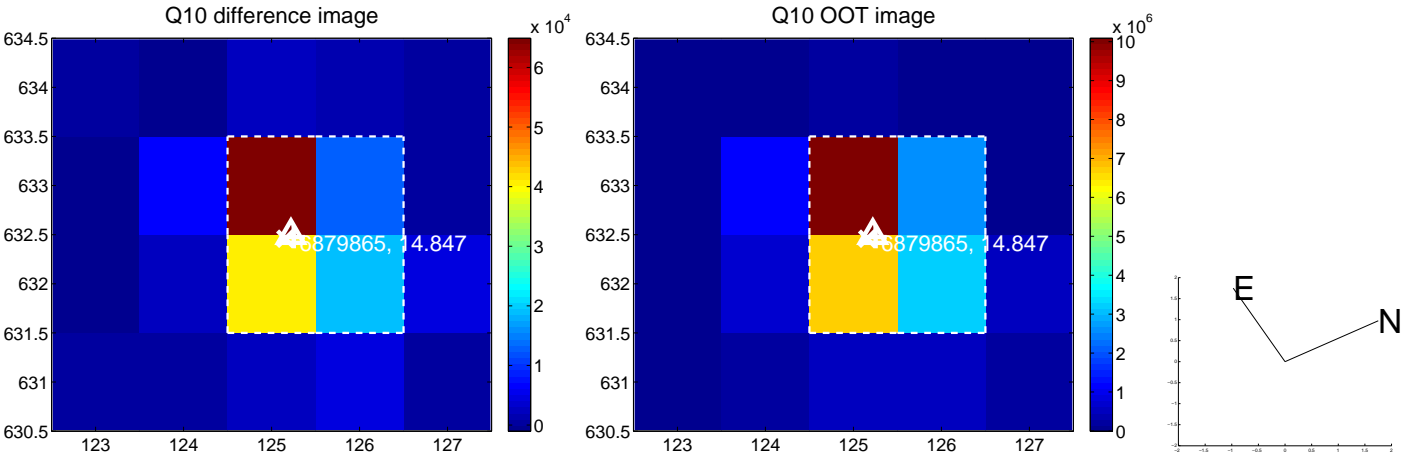
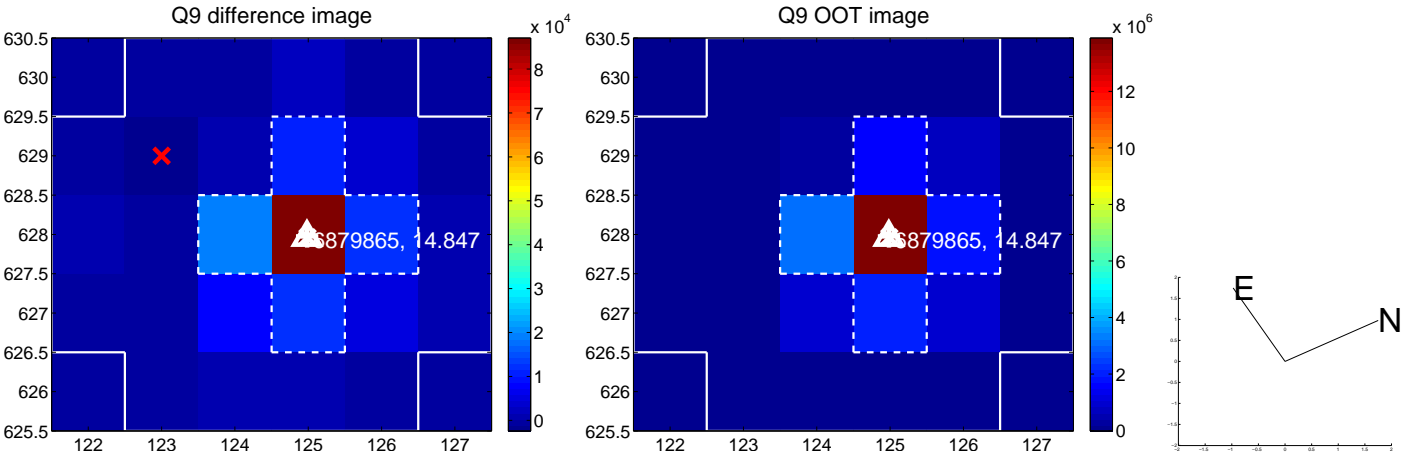
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



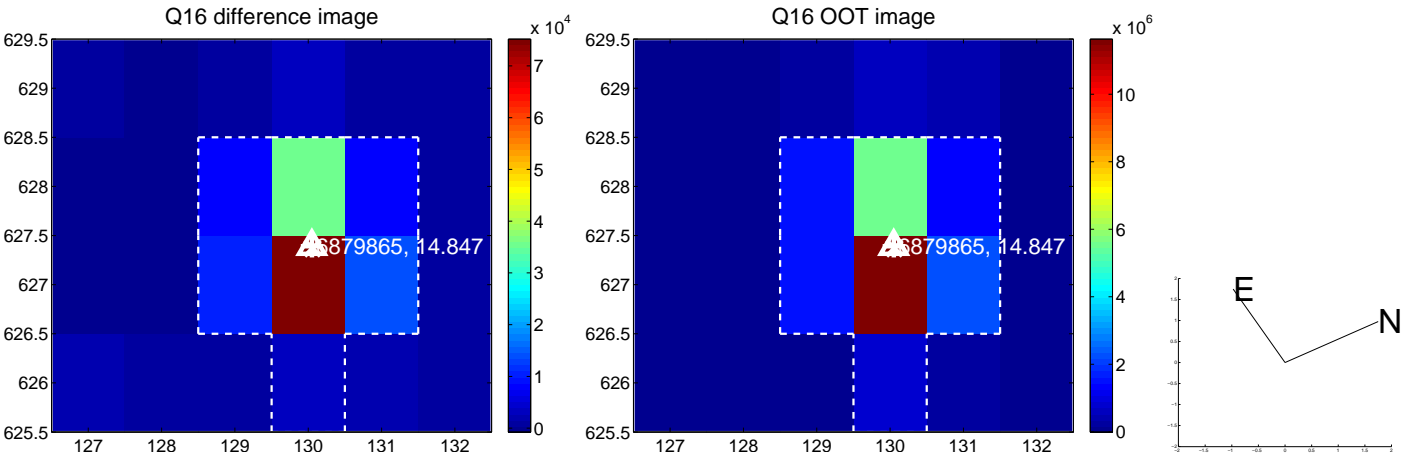
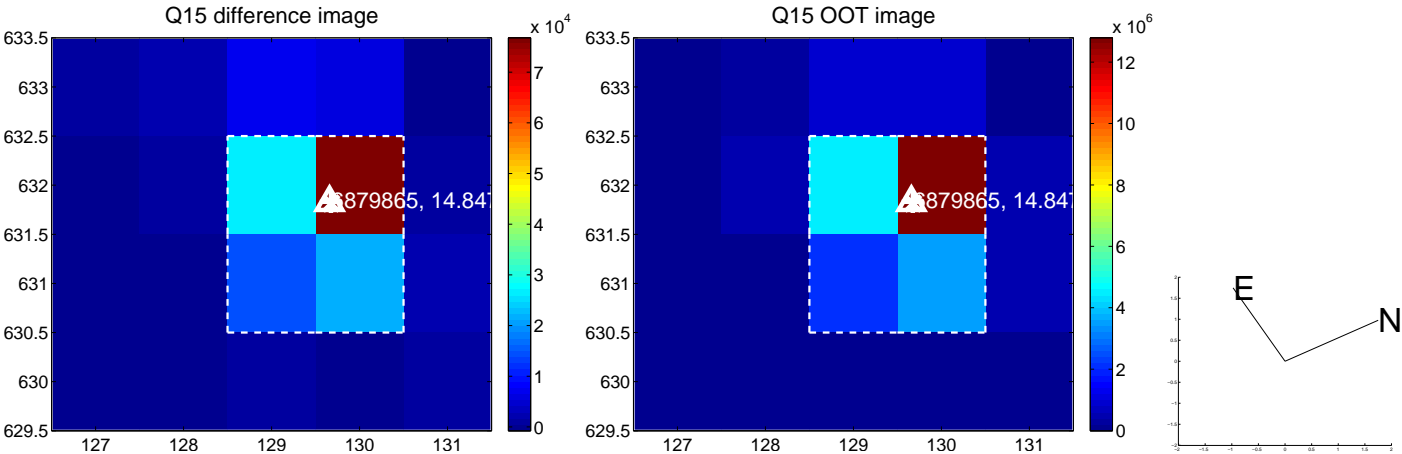
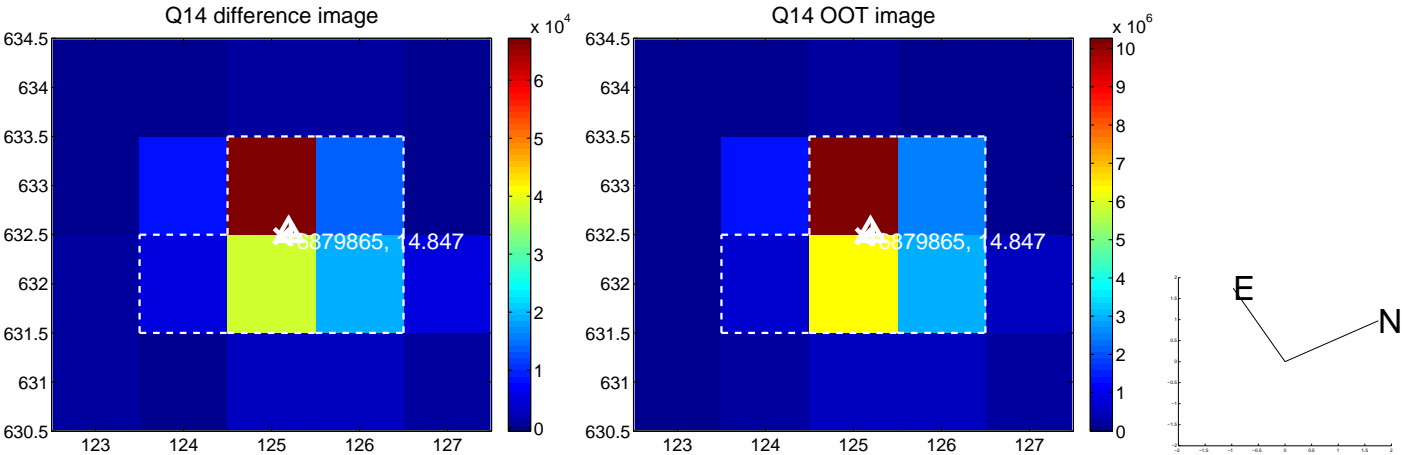
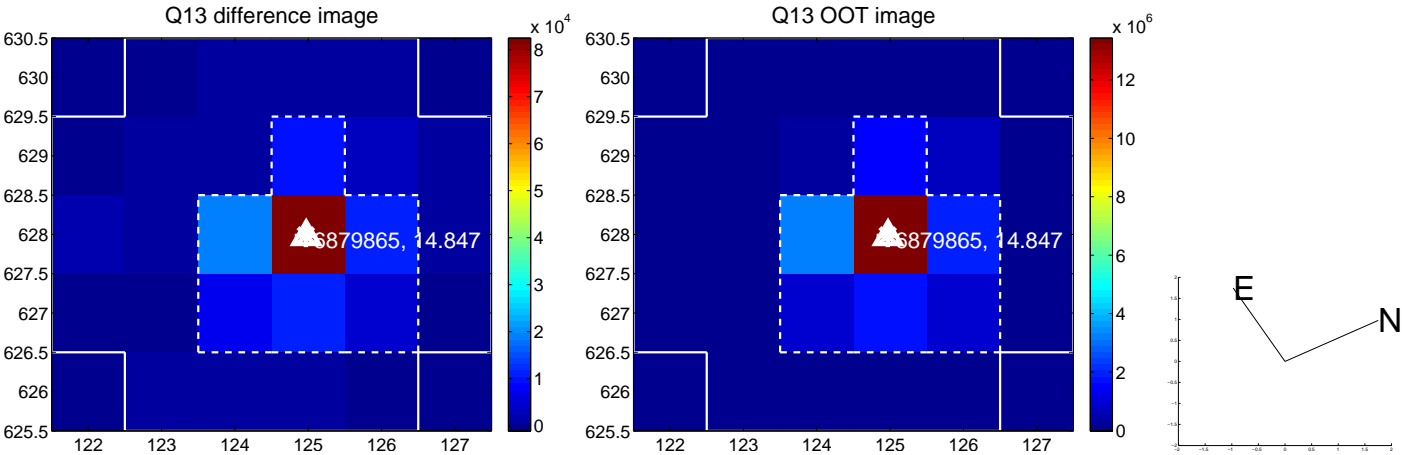
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



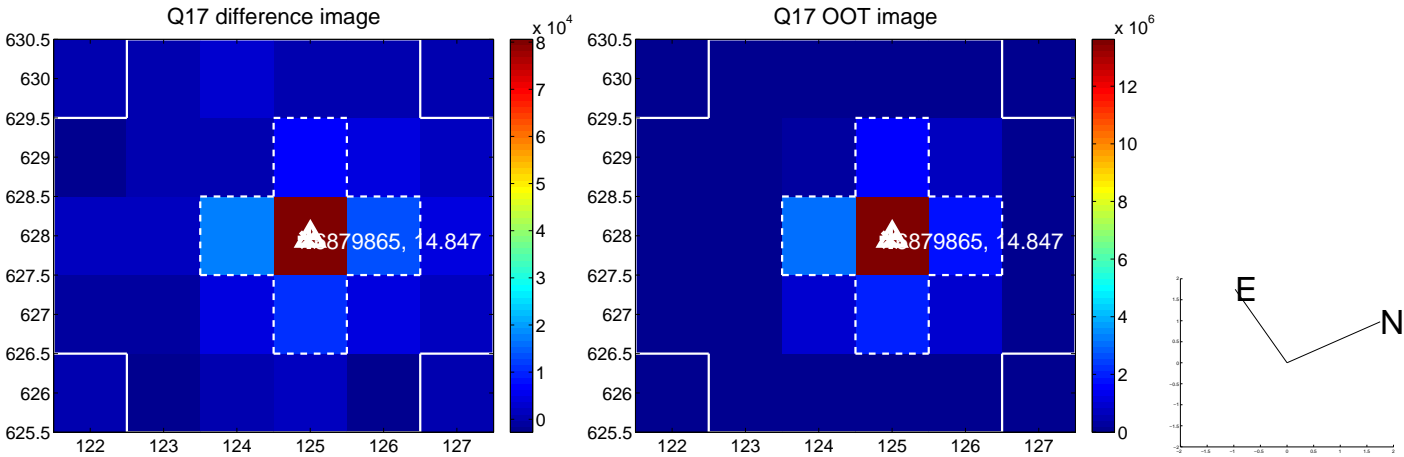
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



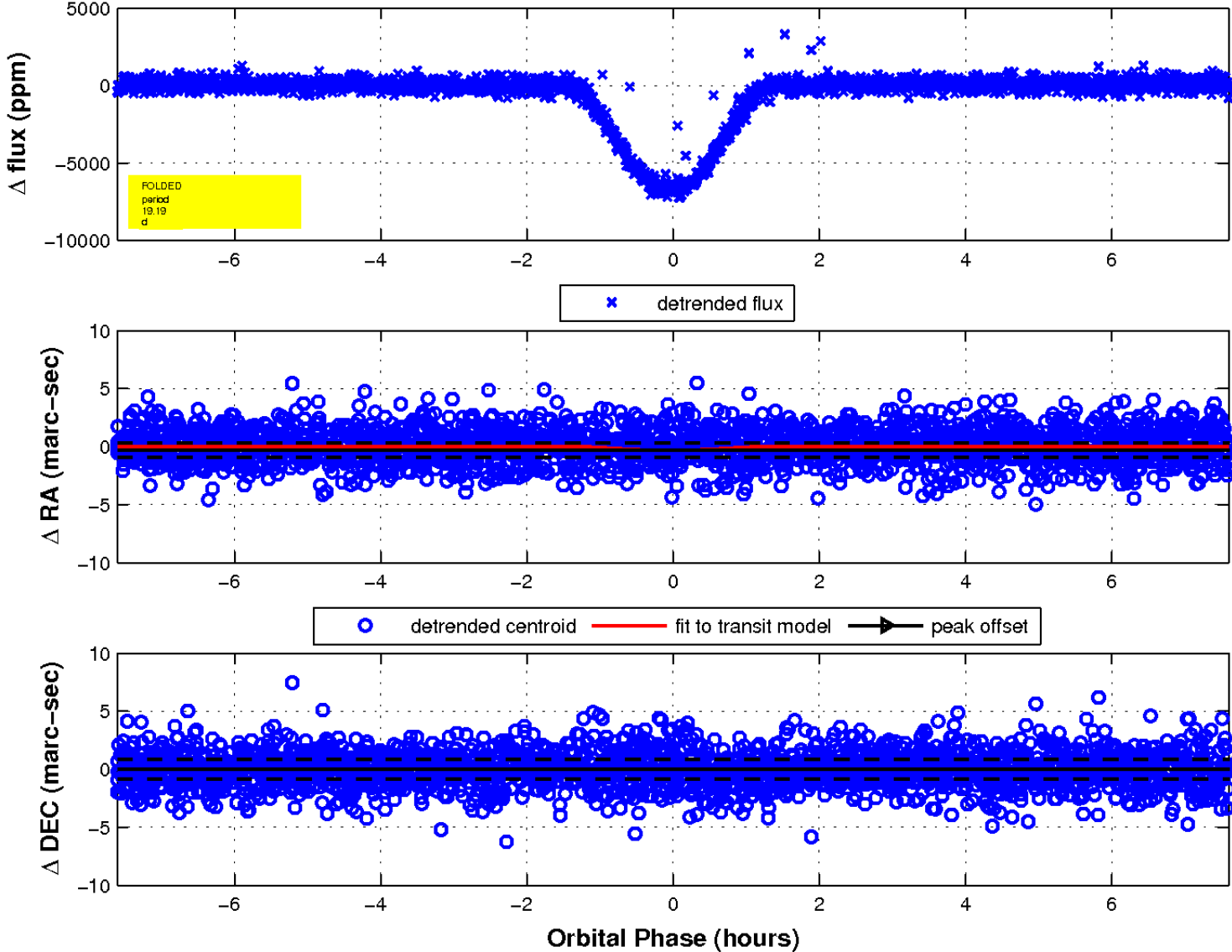
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

