

KIC 010676014

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})
010676014-01	OBS	1797.01	16.781783	139.792715	908.9	3.841	88.5	87.8	0.74	4925	2.47	20.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010676014-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

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.

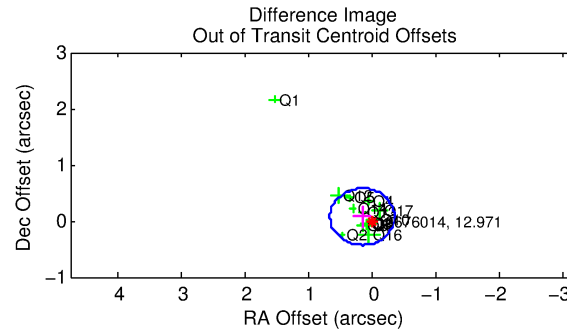
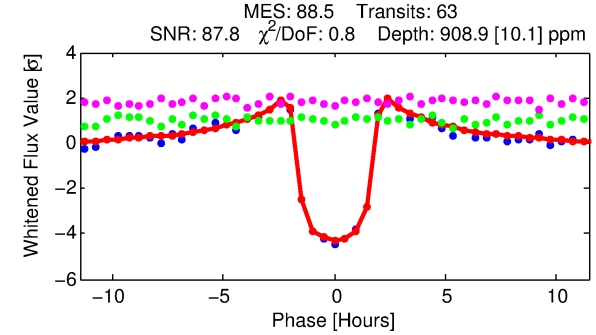
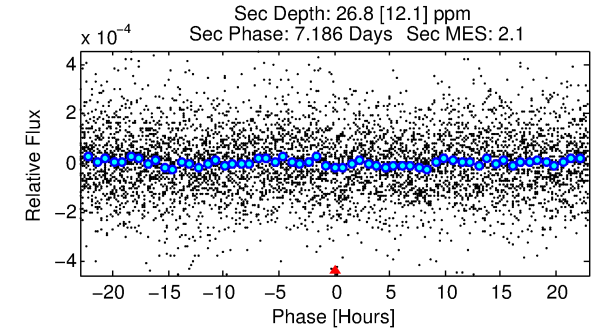
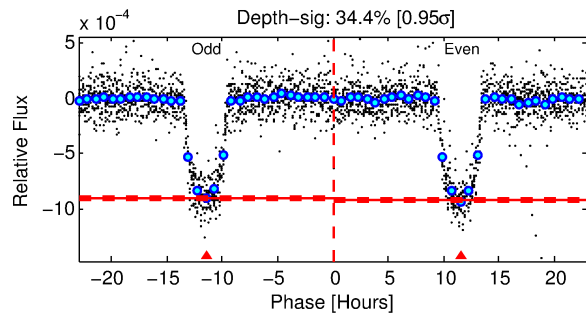
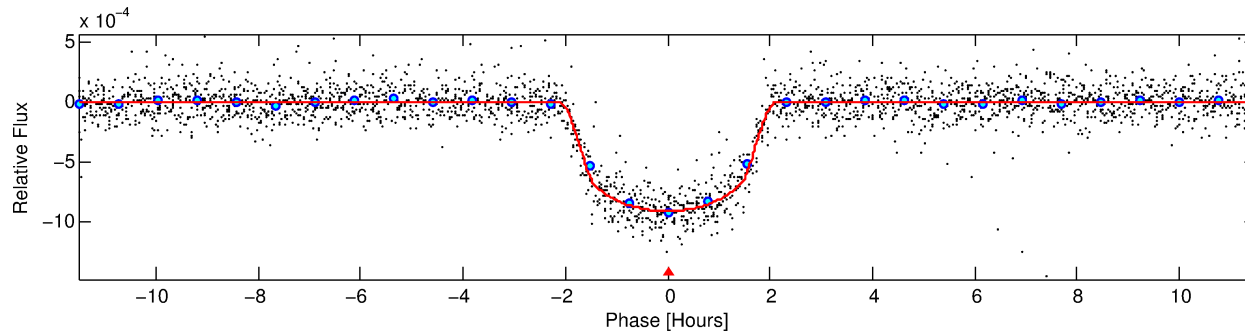
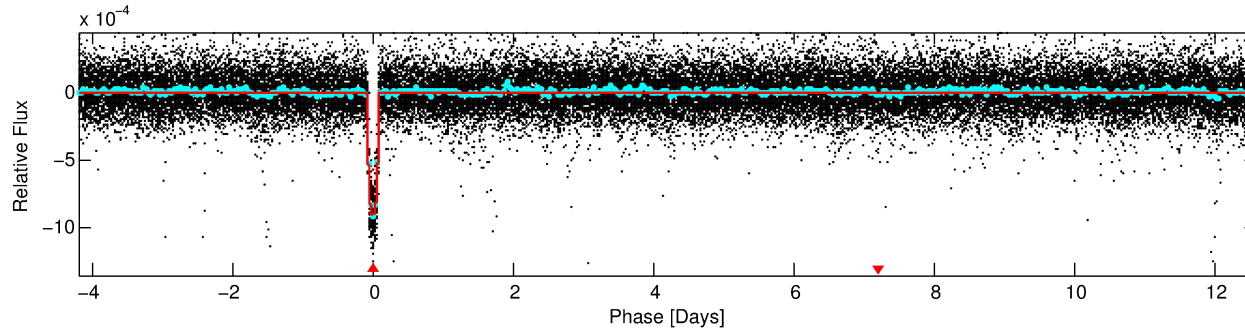
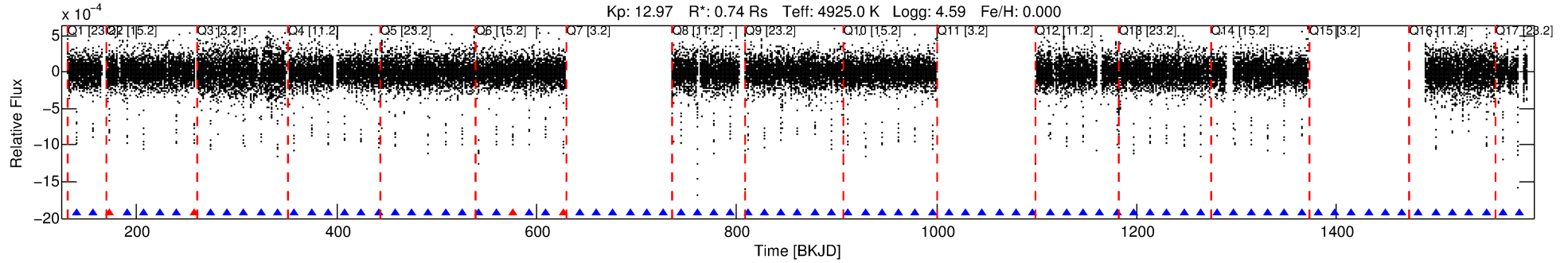
Ephemeris Match Information For 010676014-01

No Significant Match Found

DV One-Page Summary

KIC: 10676014 Candidate: 1 of 1 Period: 16.782 d

KOI: K01797.01 Corr: 0.988



DV Fit Results:

Period = 16.78178 [0.00001] d
Epoch = 139.7927 [0.0006] BKJD
Rp/R* = 0.0305 [0.0020]
a/R* = 22.74 [5.12]
b = 0.77 [0.12]
Seff = 20.85 [2.30]
Teq = 545 [15] K
Rp = 2.47 [0.22] Re
a = 0.1180 [0.0061] AU
Ag = 33.64 [16.00] [2.04 σ]
Teffp = 2029 [241] K [6.13 σ]

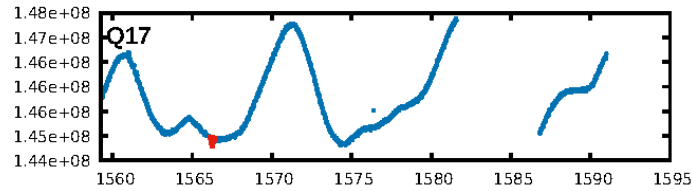
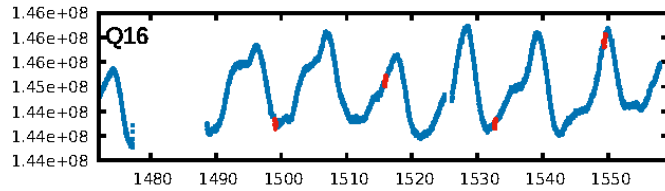
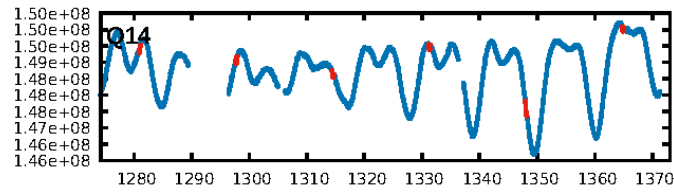
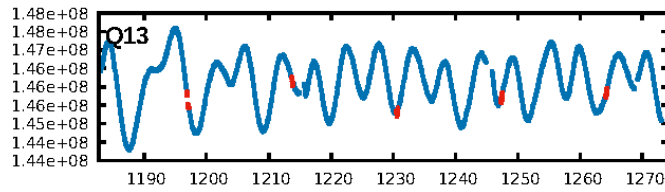
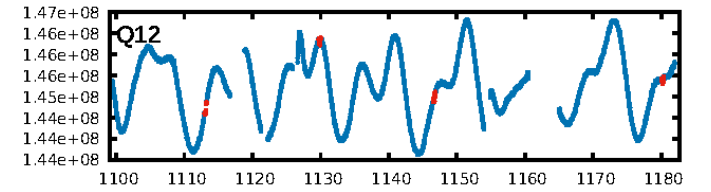
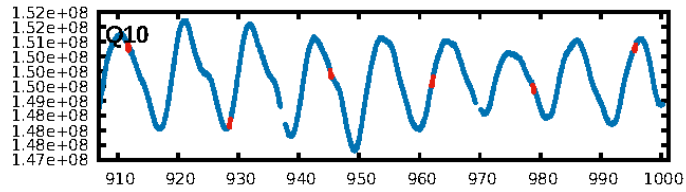
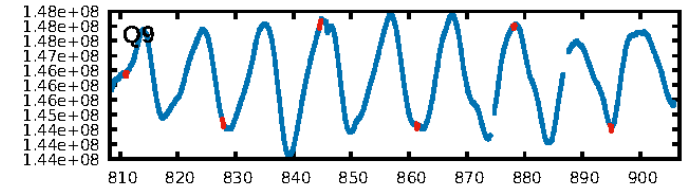
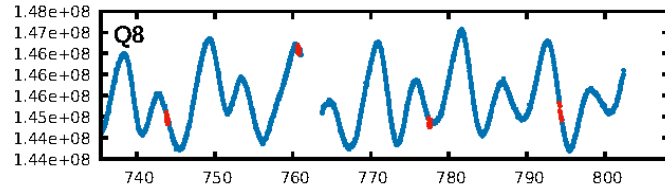
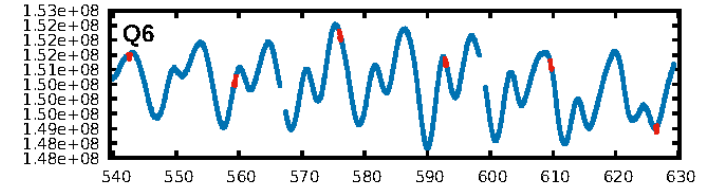
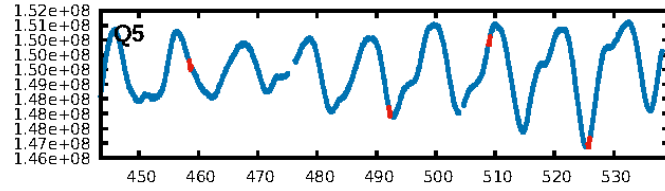
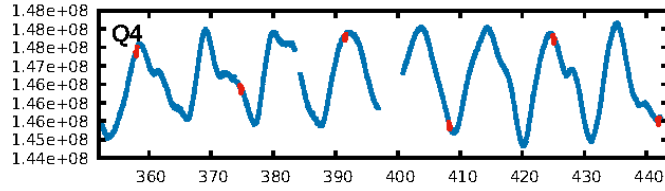
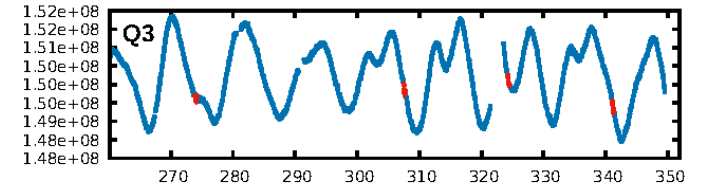
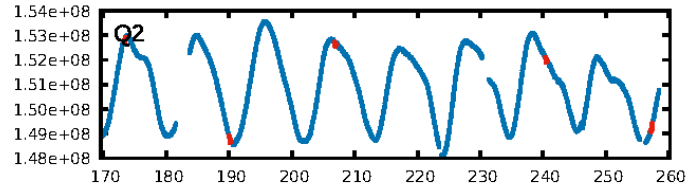
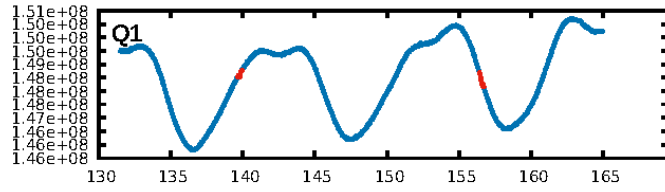
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 72.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.93 [56/60]
GhostDiagnostic-chr: 1.827
Centroid-sig: 8.4%
Centroid-so: 0.258 arcsec [2.47 σ]
OotOffset-rm: 0.175 arcsec [1.04 σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-rm: 0.505 arcsec [2.77 σ]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 1.00 [14/14]
DiffImageOverlap-fno: 1.00 [14/14]

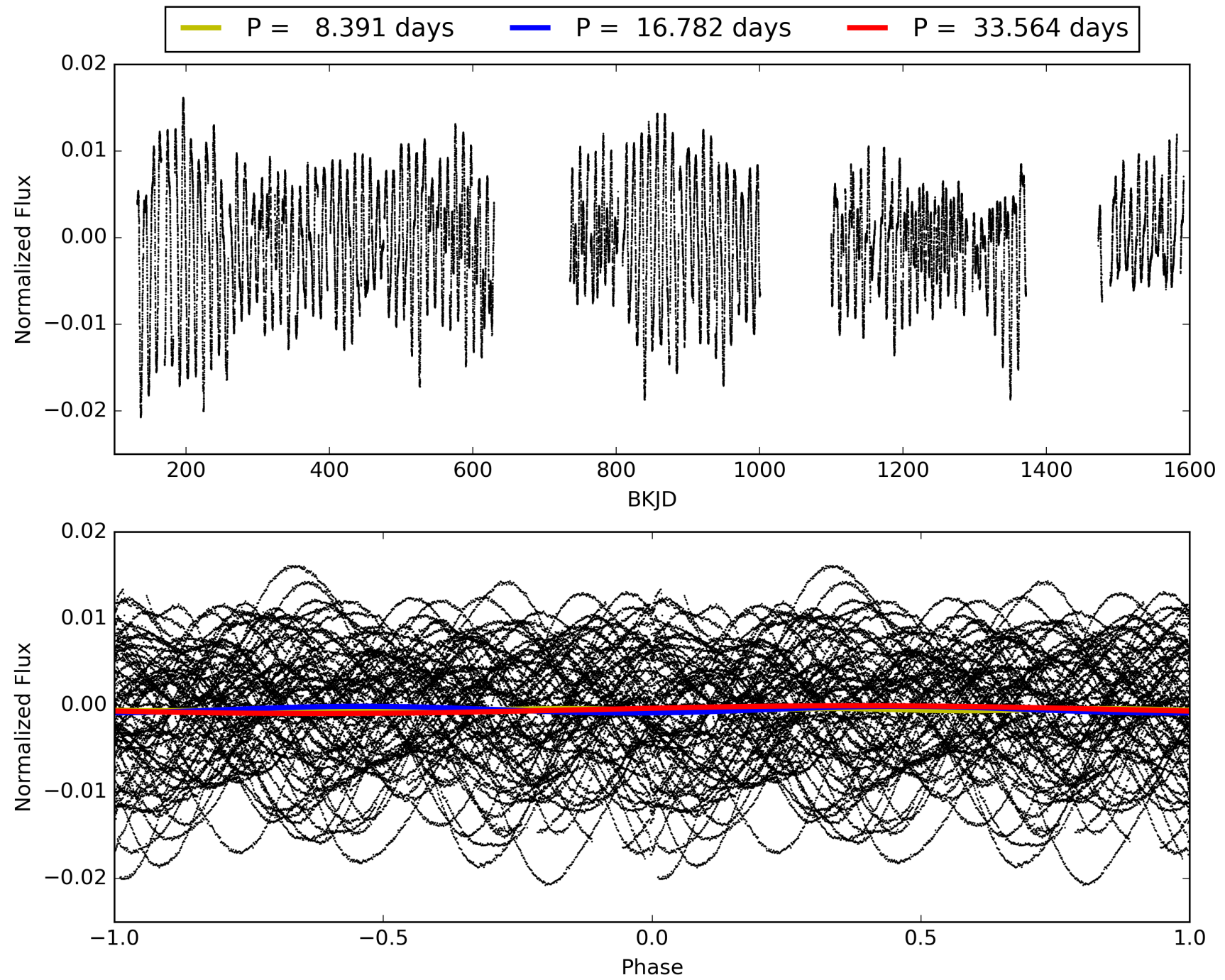
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:45:57 Z

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

TCE 010676014-01, PDC Light Curves

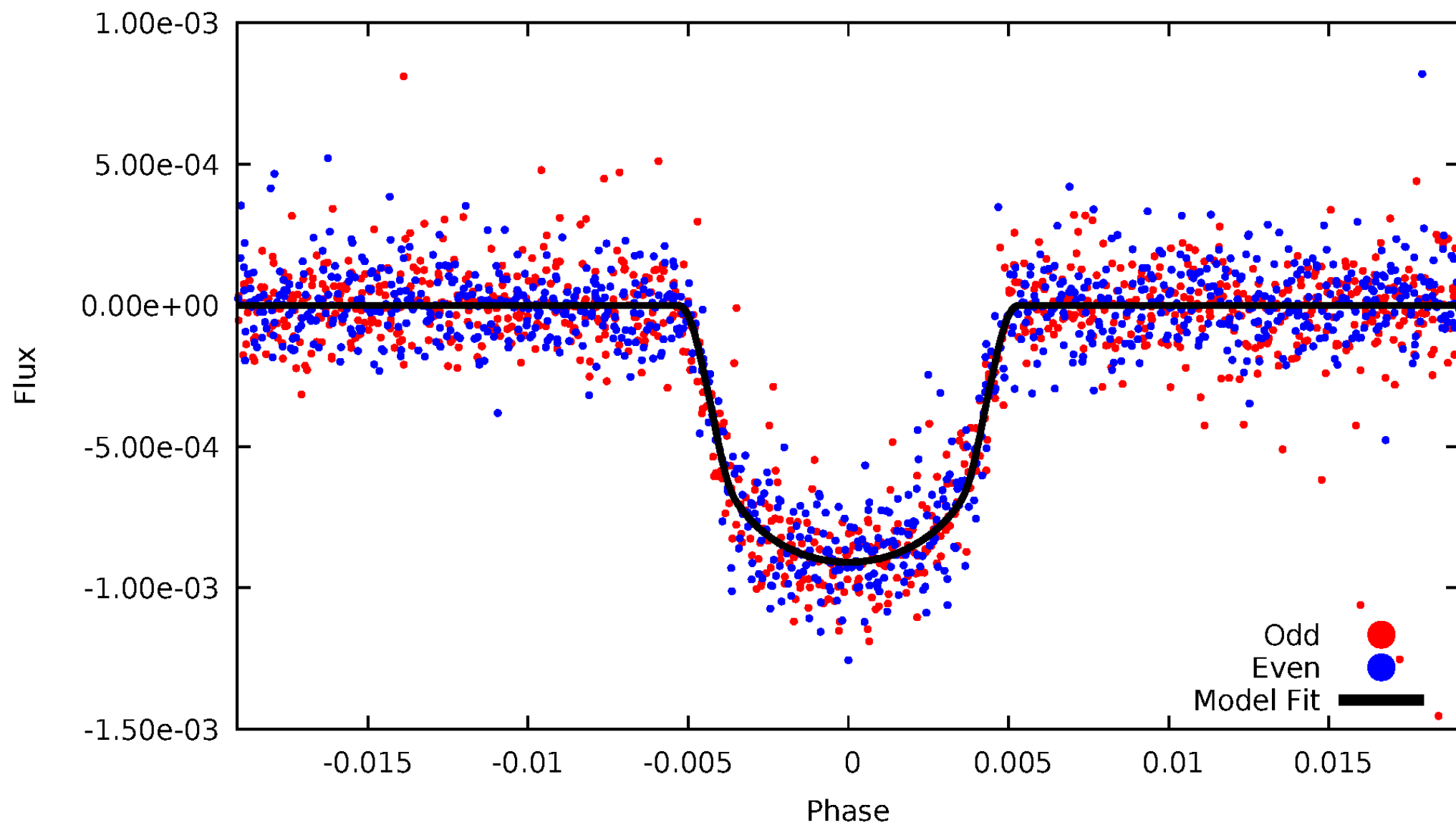


TCE 010676014-01



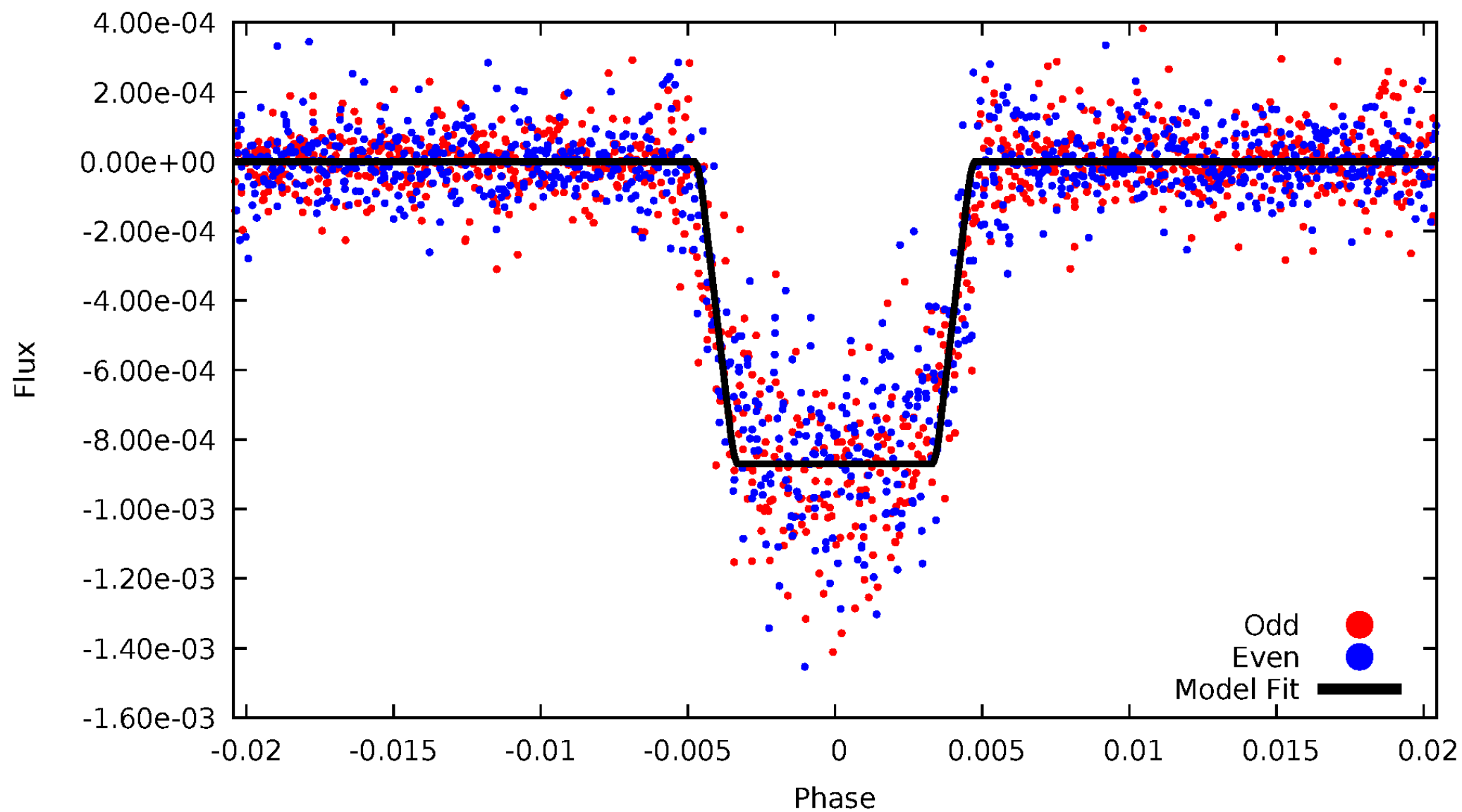
DV Odd/Even

TCE 010676014-01



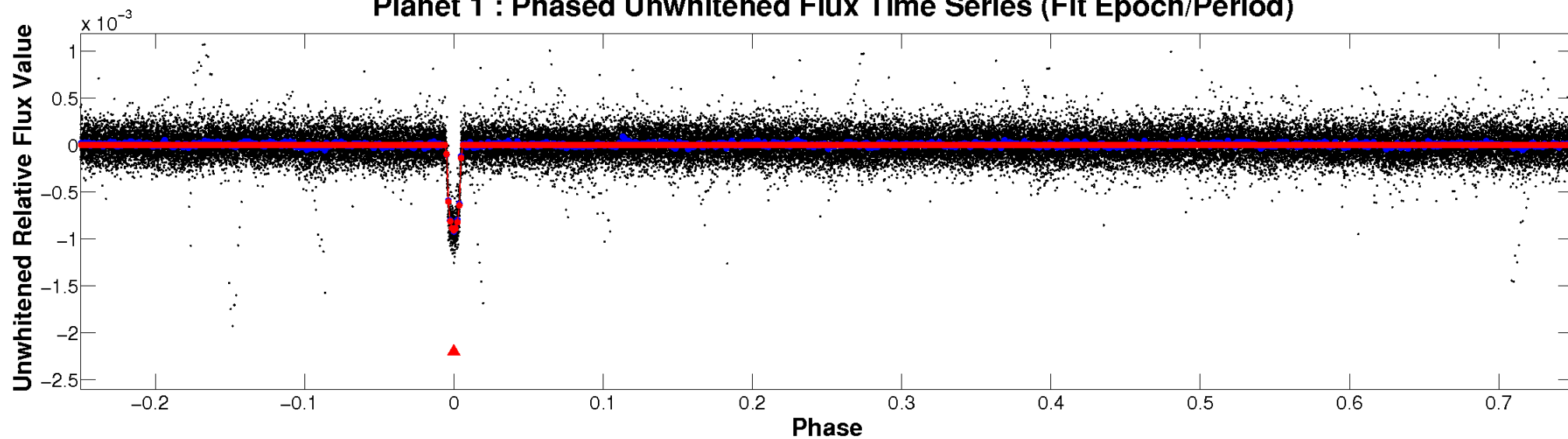
ALT Odd/Even

TCE 010676014-01

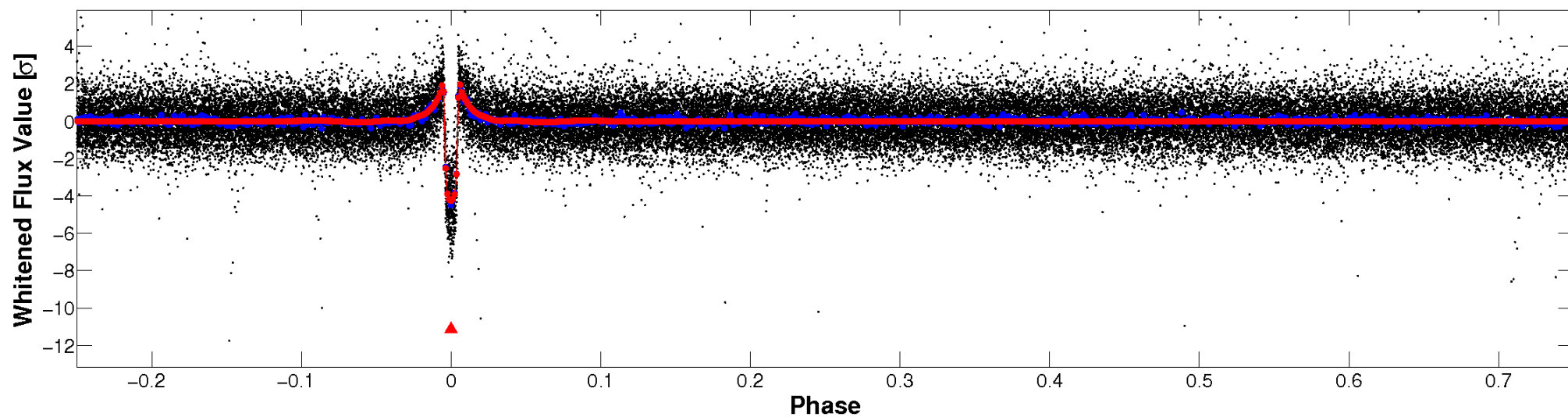


Non-Whitened Vs. Whitened Light Curve

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

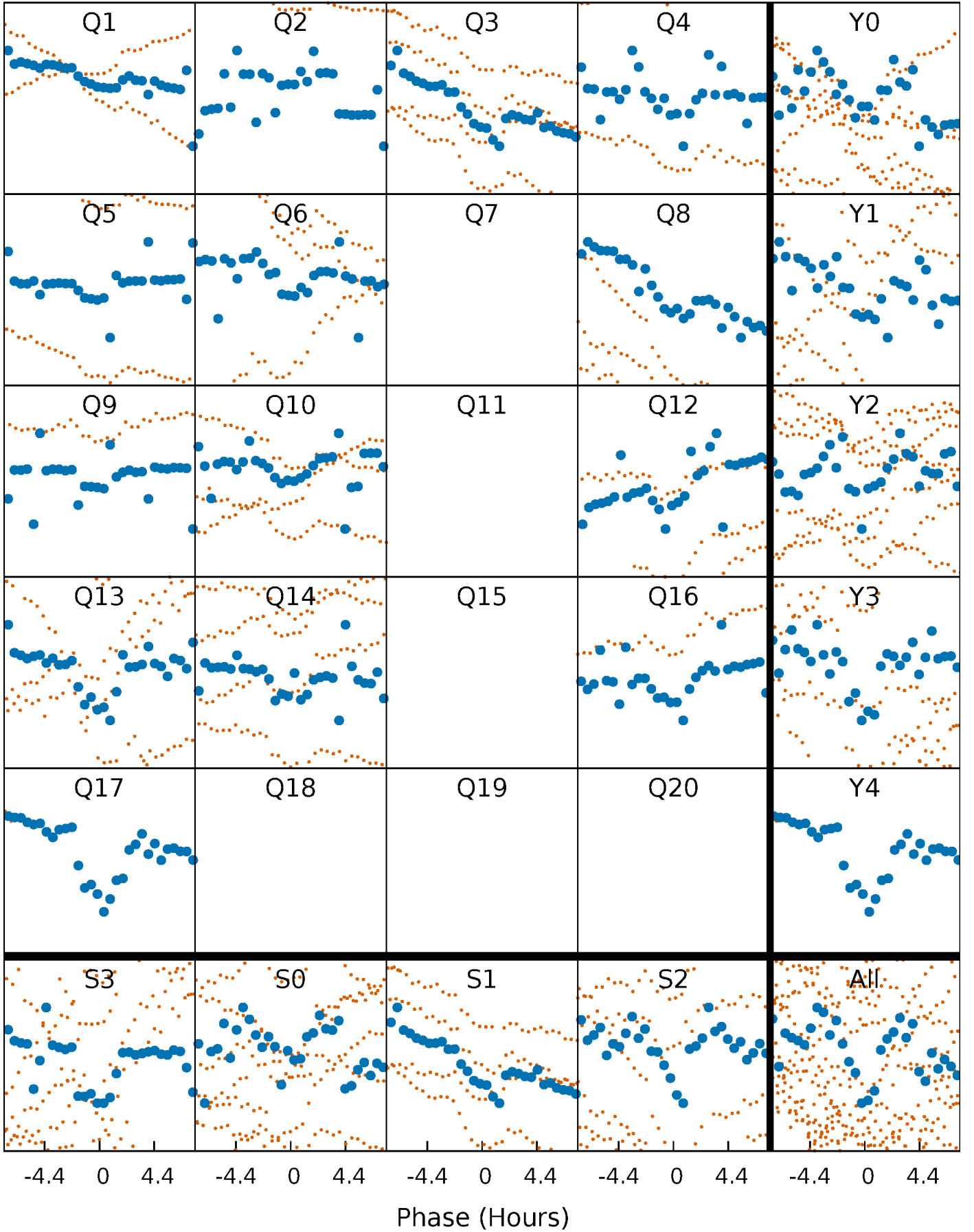


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



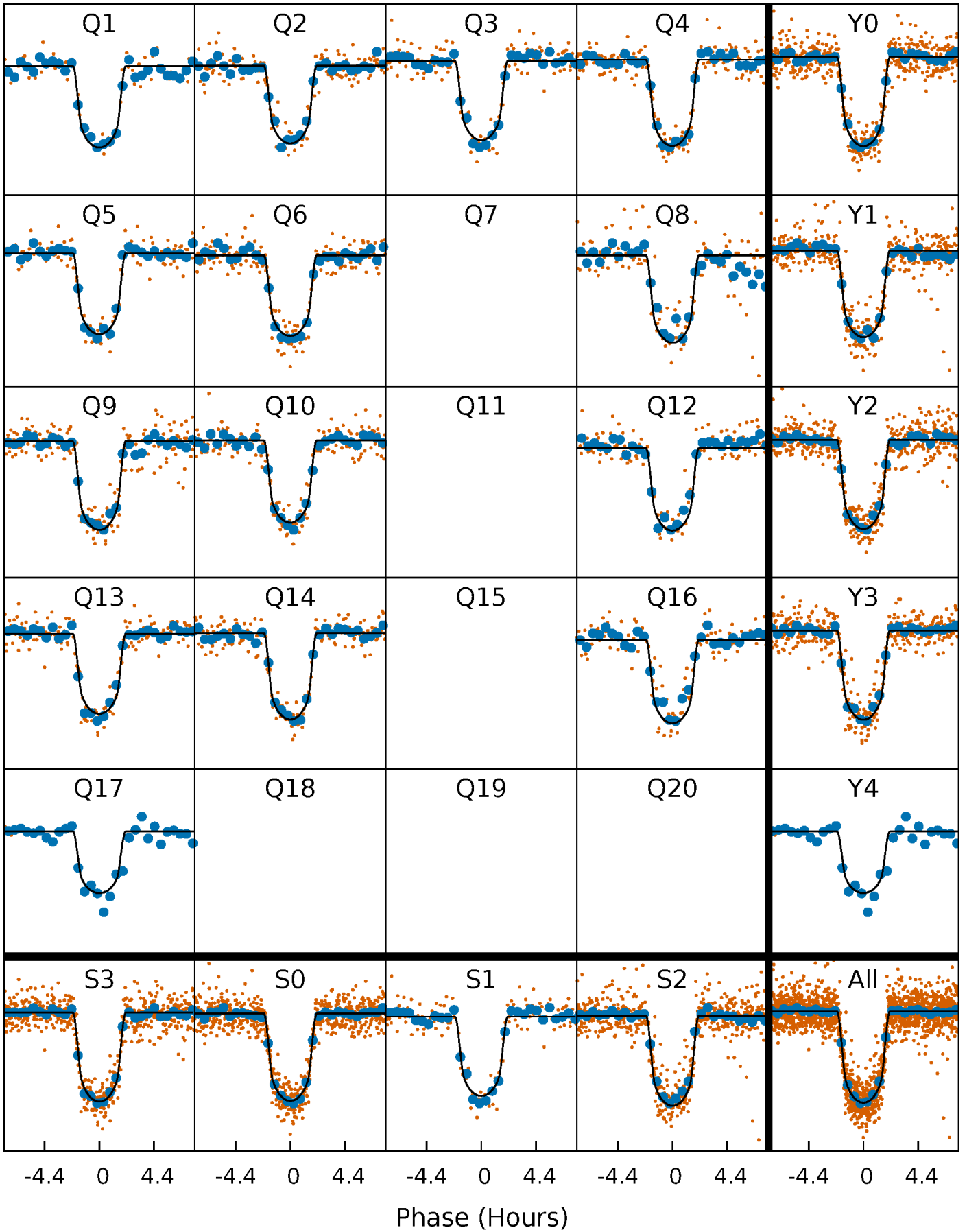
PDC Quarter-Phased Transit Curves

TCE 010676014-01 P= 16.781783 Days $T_0=139.792715$ (BKJD)



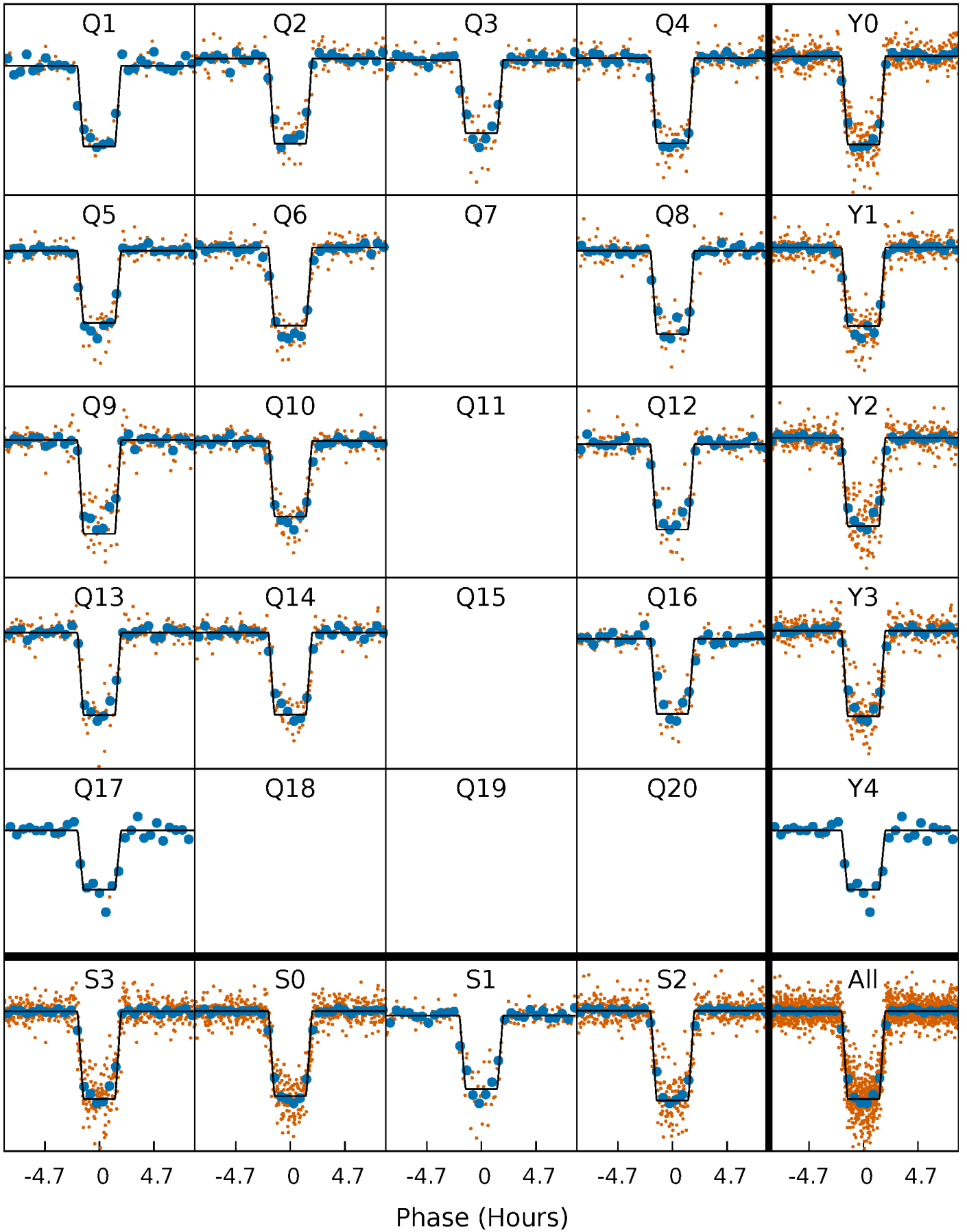
DV Quarter-Phased Transit Curves

TCE 010676014-01 P= 16.781783 Days $T_0=139.792715$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

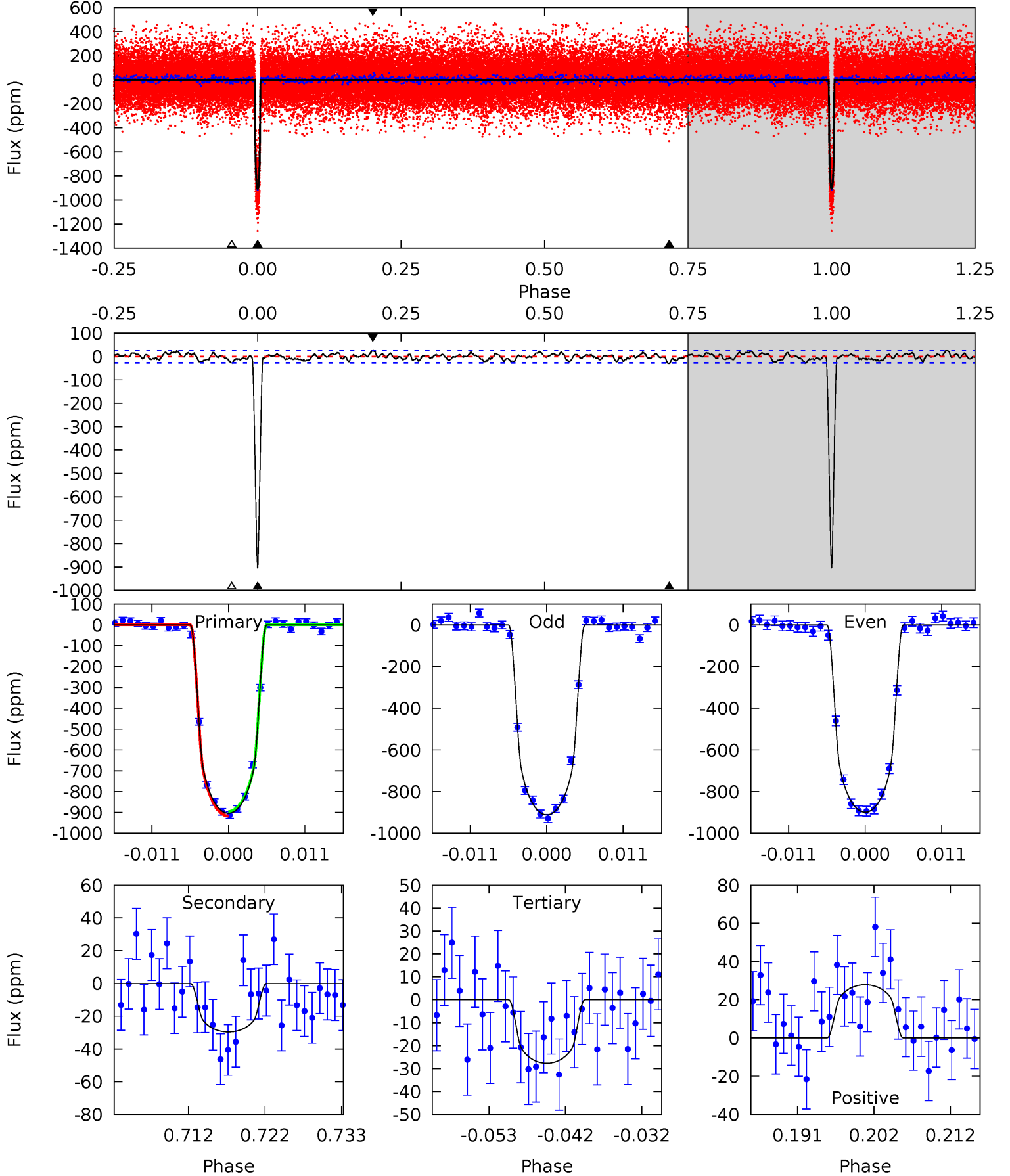
TCE 010676014-01 P= 16.781668 Days $T_0=139.796711$ (BKJD)



DV Model-Shift Uniqueness Test

010676014-01, P = 16.781783 Days, E = 123.010932 Days

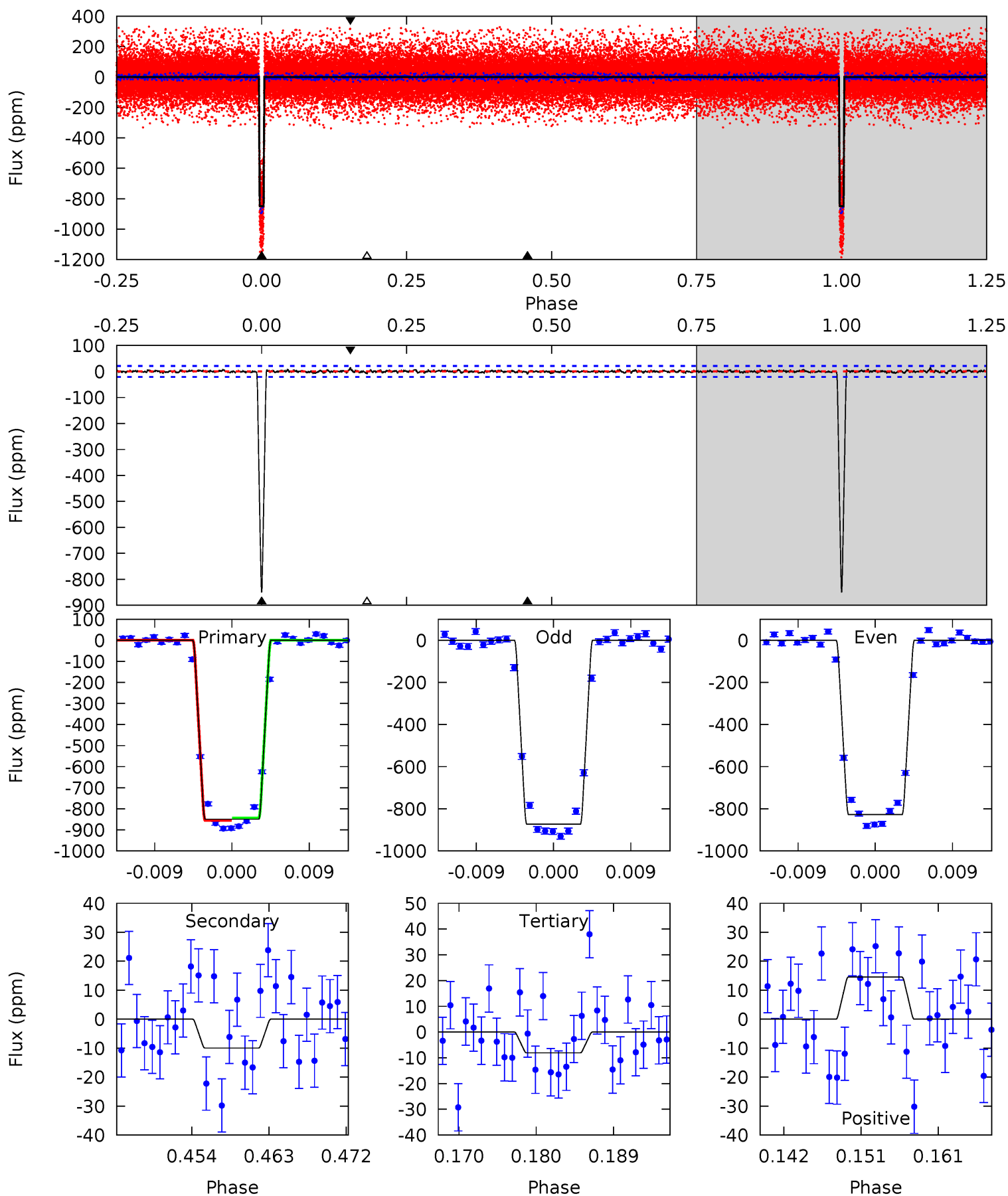
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
168.9	5.55	5.18	5.20	5.01	2.55	1.89	163.7	163.7	0.37	0.34	1.18	0.99	0.03	2.01



Alt Model-Shift Uniqueness Test

010676014-01, P = 16.781668 Days, E = 123.015043 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
204.6	2.40	1.95	3.50	5.04	2.60	0.61	202.6	201.1	0.45	-1.10	5.58	0.98	0.02	1.29



Stellar Parameters For KIC 010676014

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4925^{+98}_{-98}	$4.588^{+0.024}_{-0.042}$	$0.000^{+0.150}_{-0.150}$	$0.742^{+0.045}_{-0.033}$	$0.778^{+0.042}_{-0.042}$	$2.683^{+0.324}_{-0.349}$
	+2%/-2%	+1%/-1%	+inf%/-inf%	+6%/-4%	+5%/-5%	+12%/-13%
Source	SPE57	SPE57	SPE57	DSEP		

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

Secondary Eclipse Parameters for KIC 010676014-01 / KOI 1797.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-30 ± 5	$2.48^{+0.18}_{-0.17}$	763^{+19}_{-17}	2786^{+91}_{-96}	37^{+10}_{-8}
Alt.	-10 ± 4	$2.39^{+0.20}_{-0.18}$	764^{+18}_{-18}	2444^{+112}_{-154}	13^{+6}_{-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 $A_{\text{obs}} \gg 1.0$

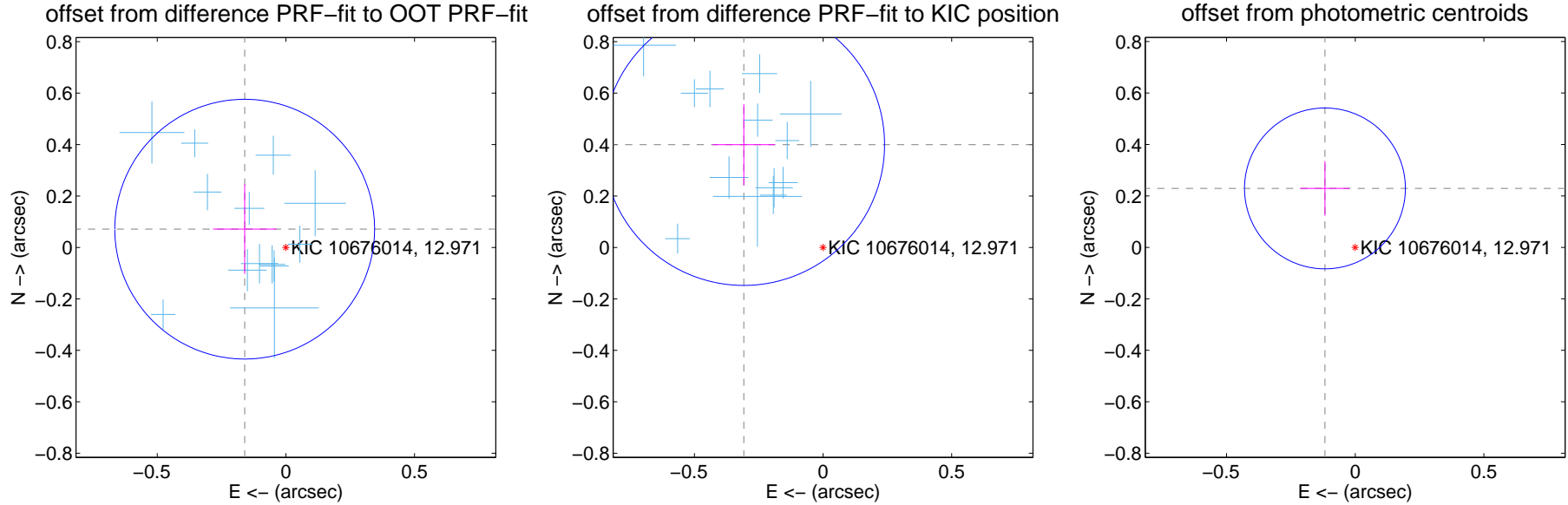
DV Centroid Data

Supplemental centroid analysis for 010676014-01. Kepler magnitude: 12.97. Transit SNR 87.83

There are 14 quarters with good PRF difference image offsets

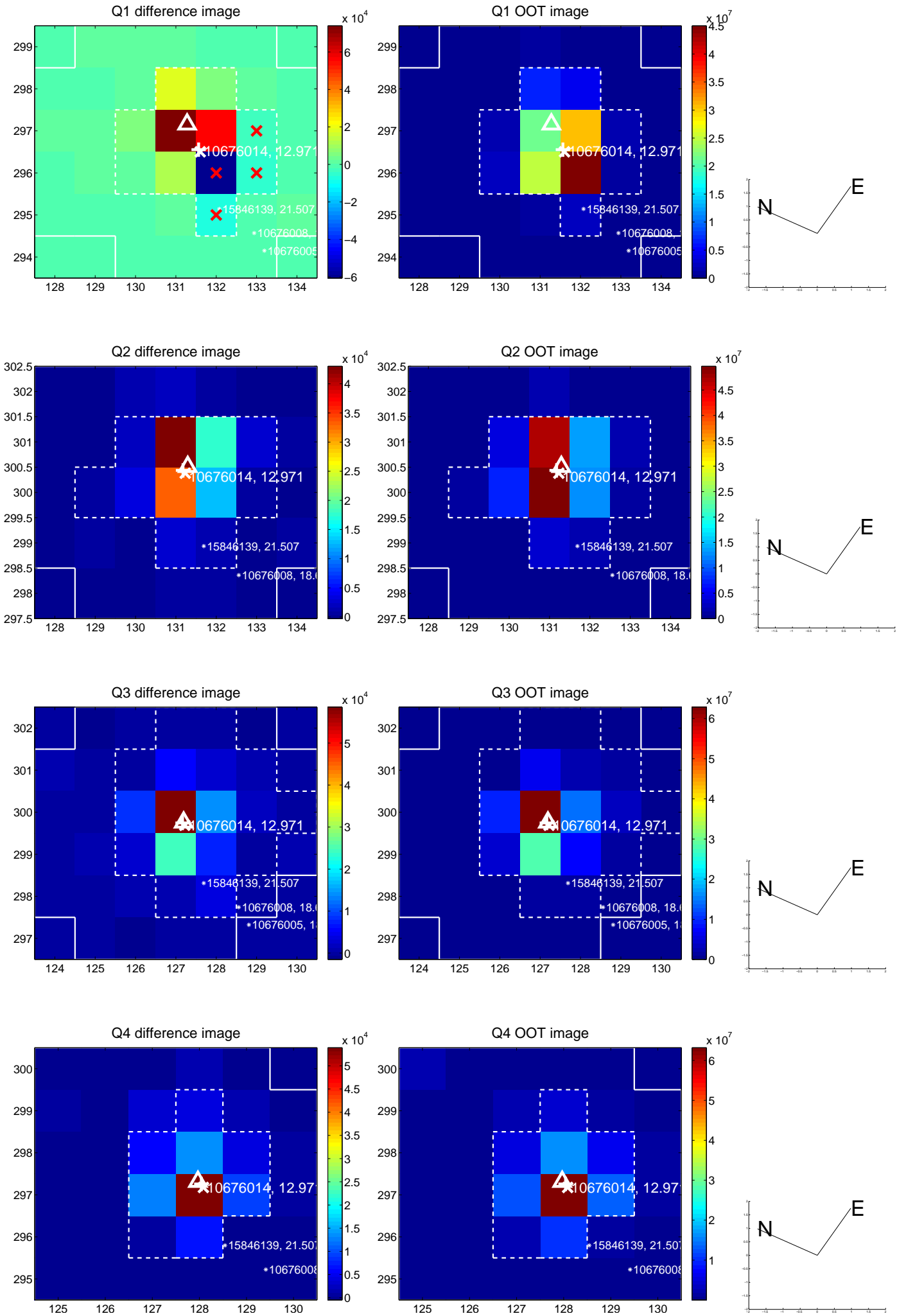
The direct PRF centroid is offset from the target star catalog position by about 0.38 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.175 ± 0.168	1.04	0.160 ± 0.123	0.071 ± 0.174
PRF-fit source offset from KIC position	0.505 ± 0.182	2.77	0.308 ± 0.122	0.400 ± 0.158
photometric centroid source offset	0.26 ± 0.10	2.47	0.12 ± 0.10	0.23 ± 0.11

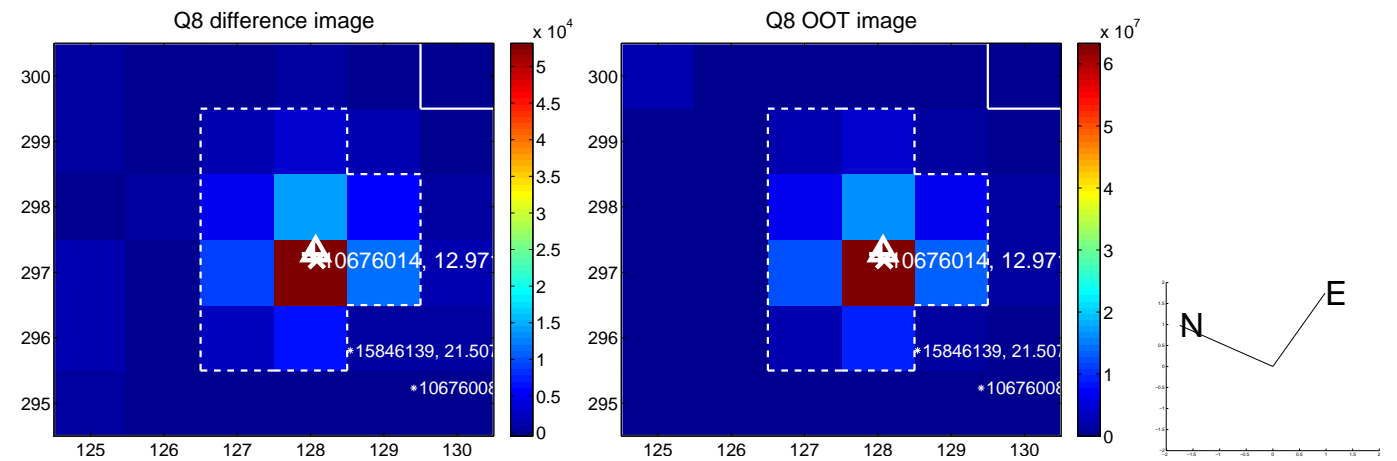
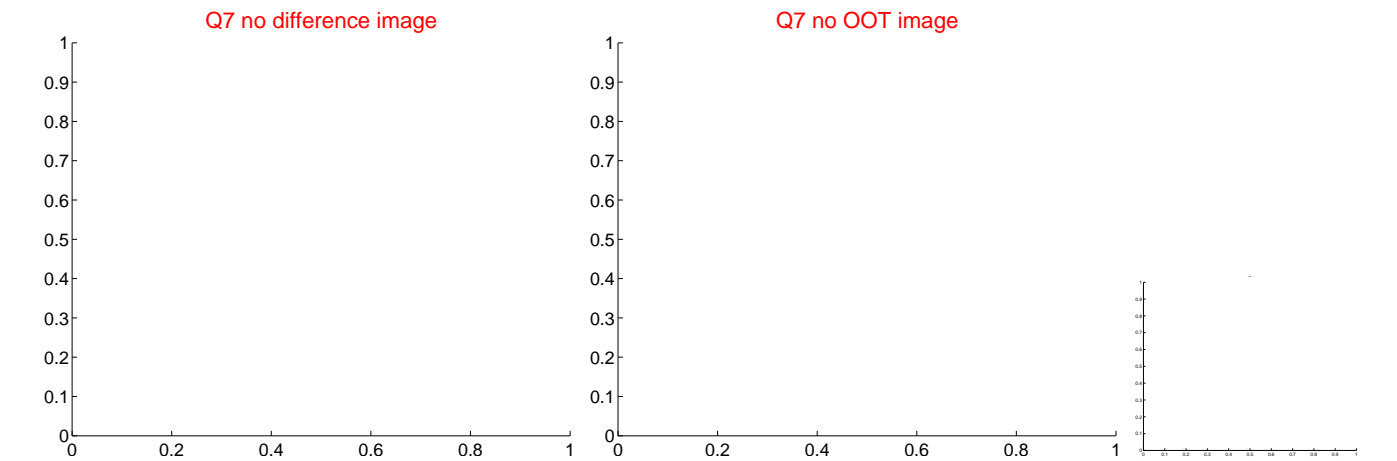
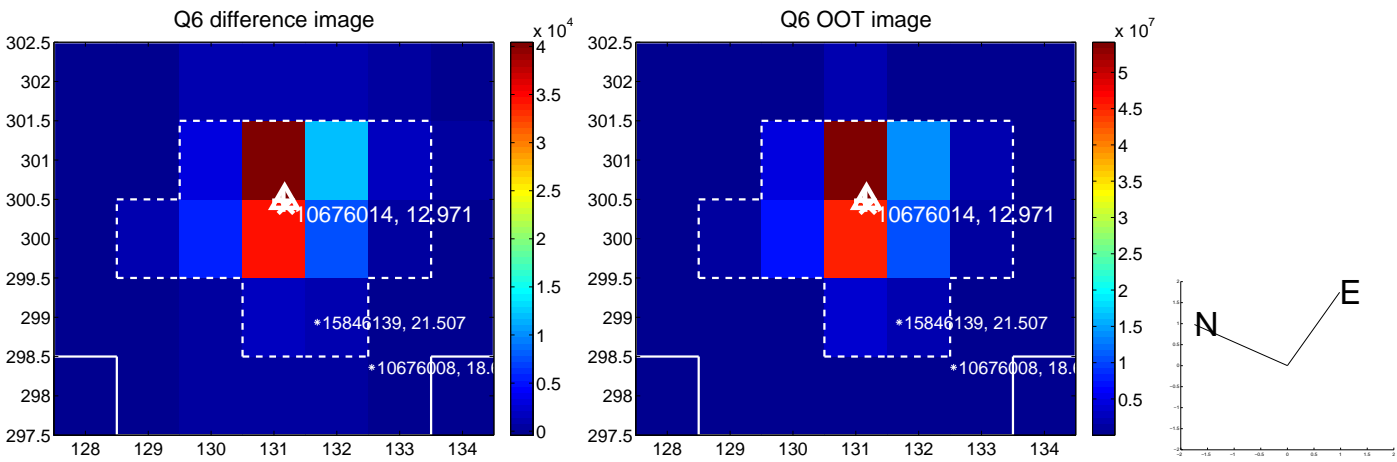
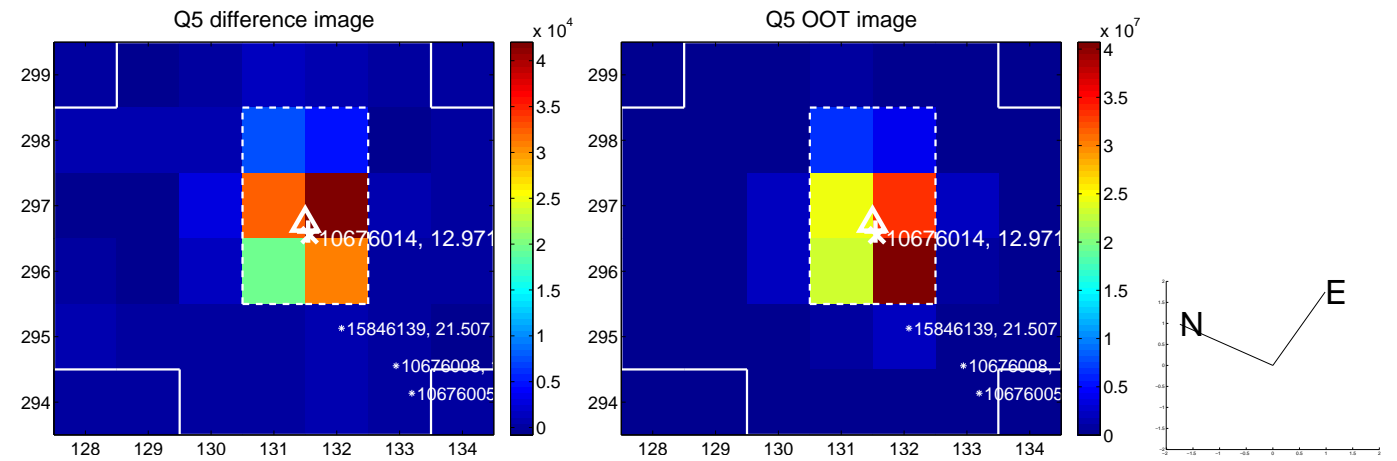


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

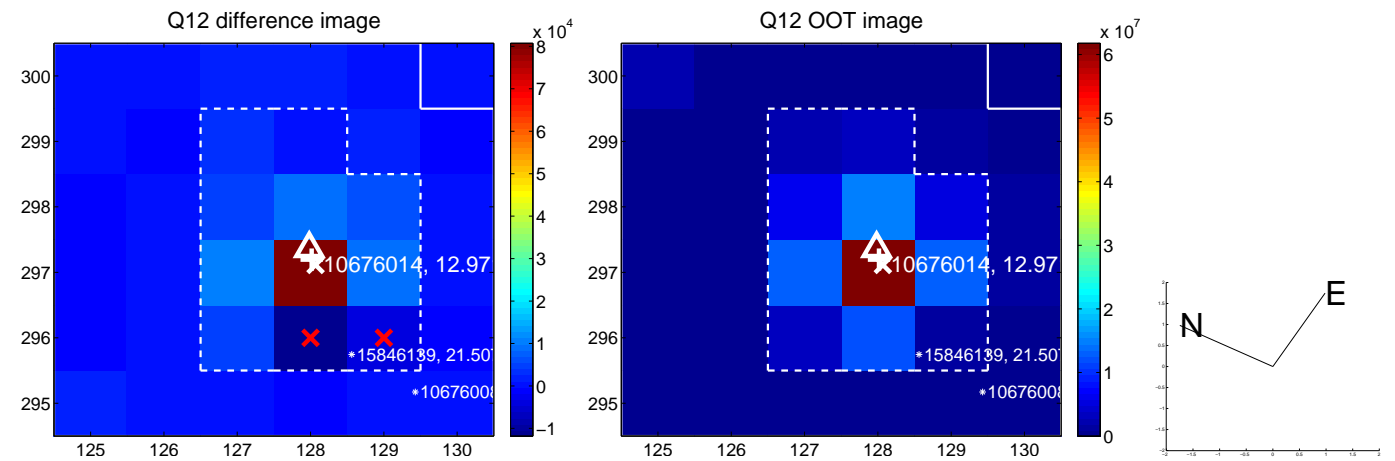
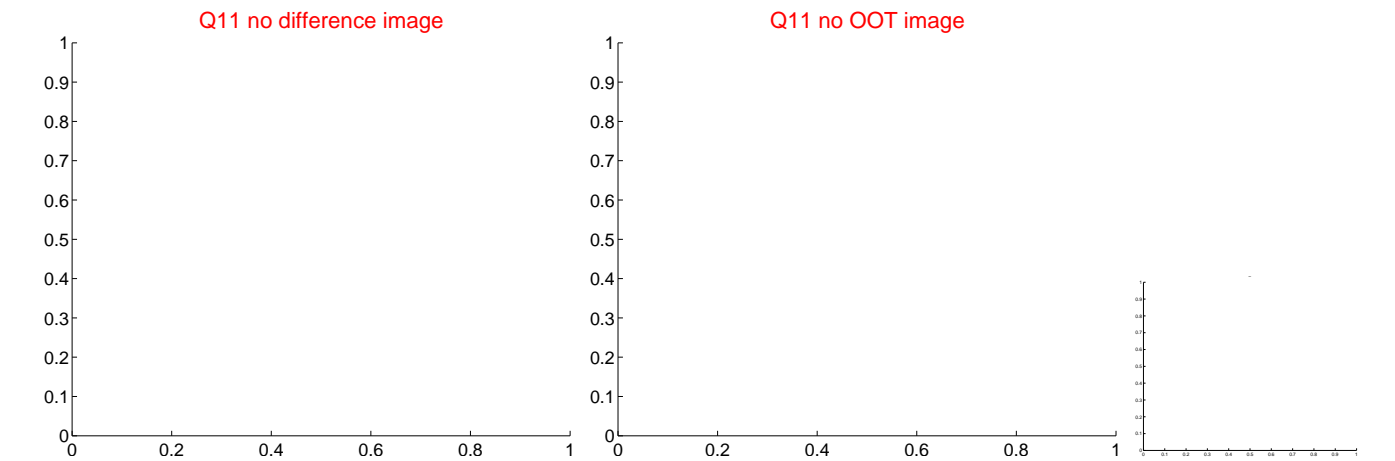
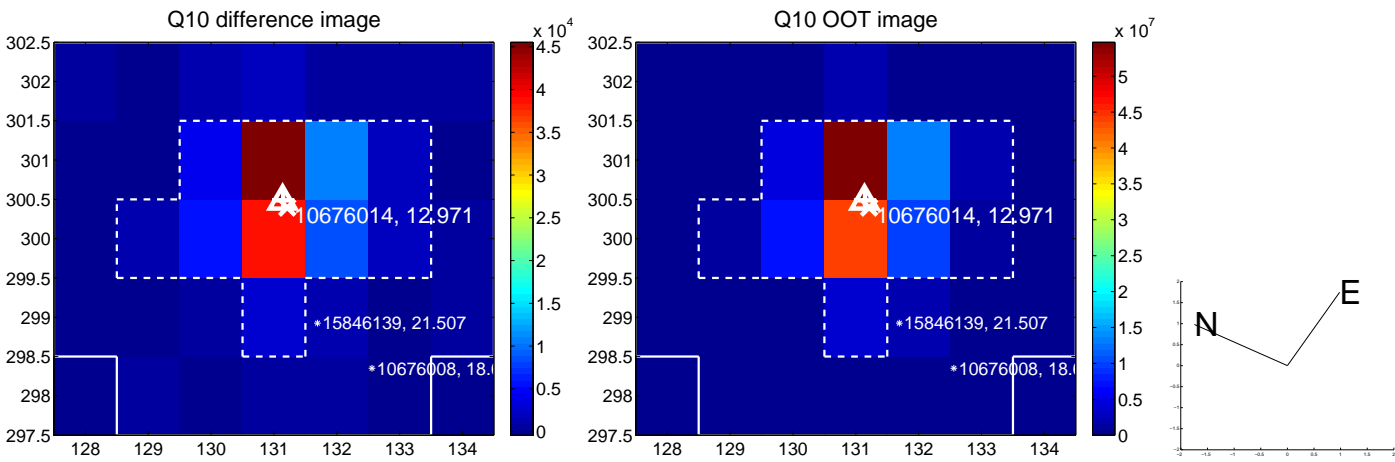
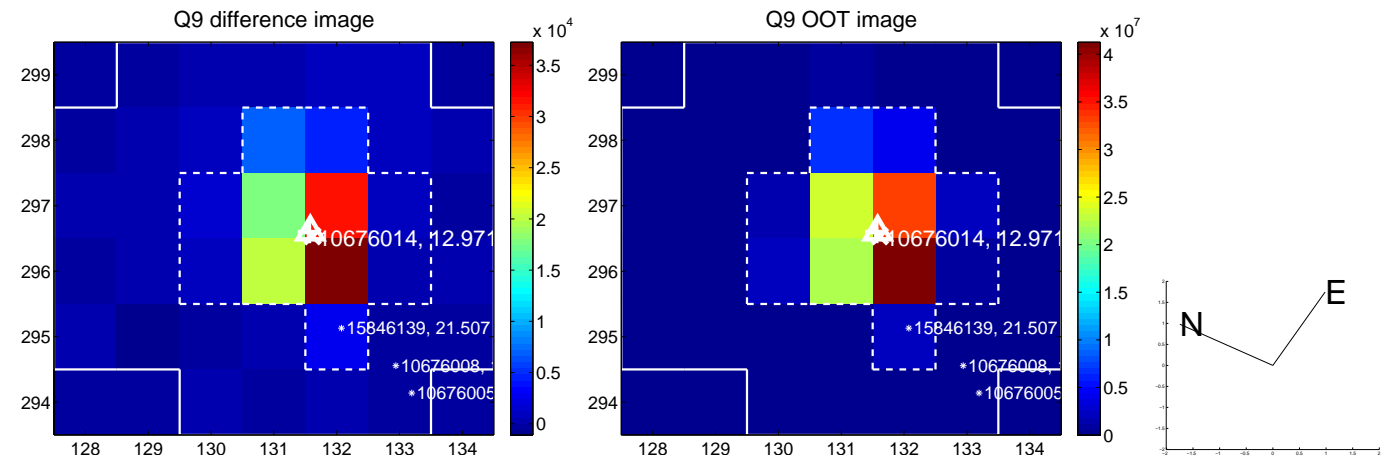
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



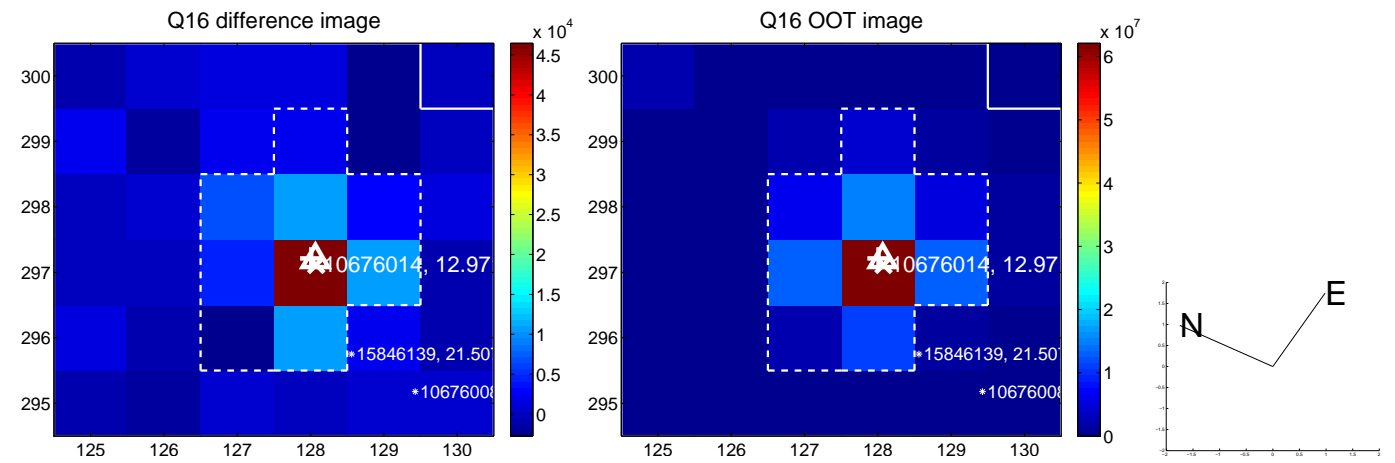
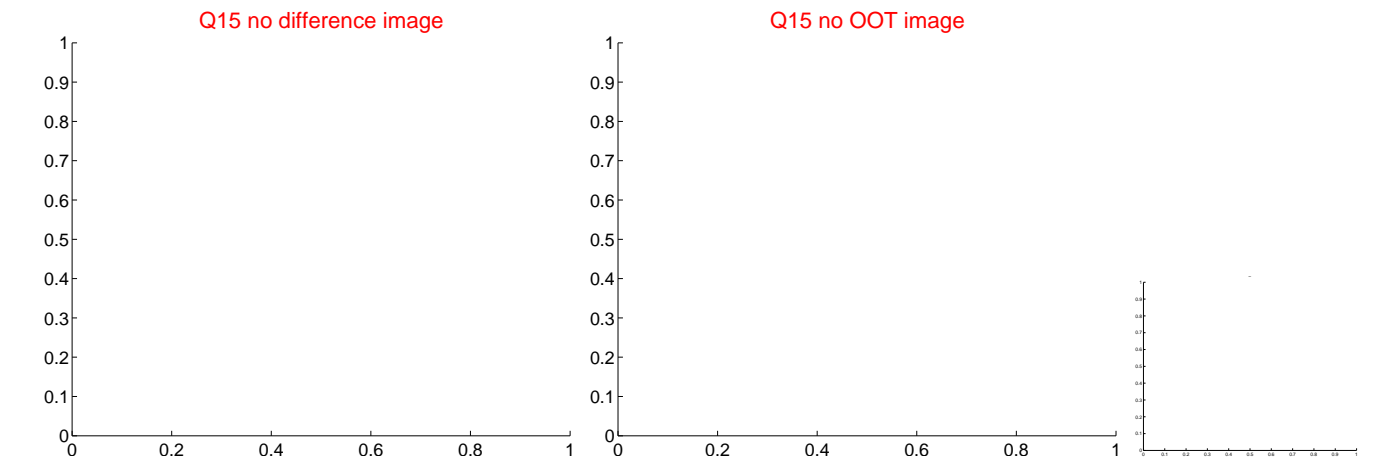
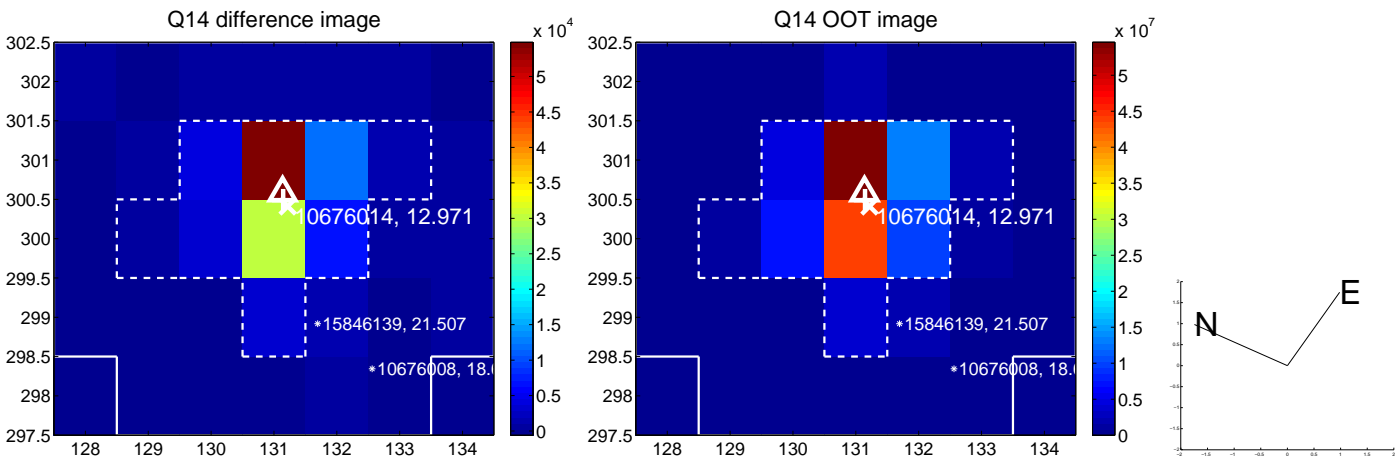
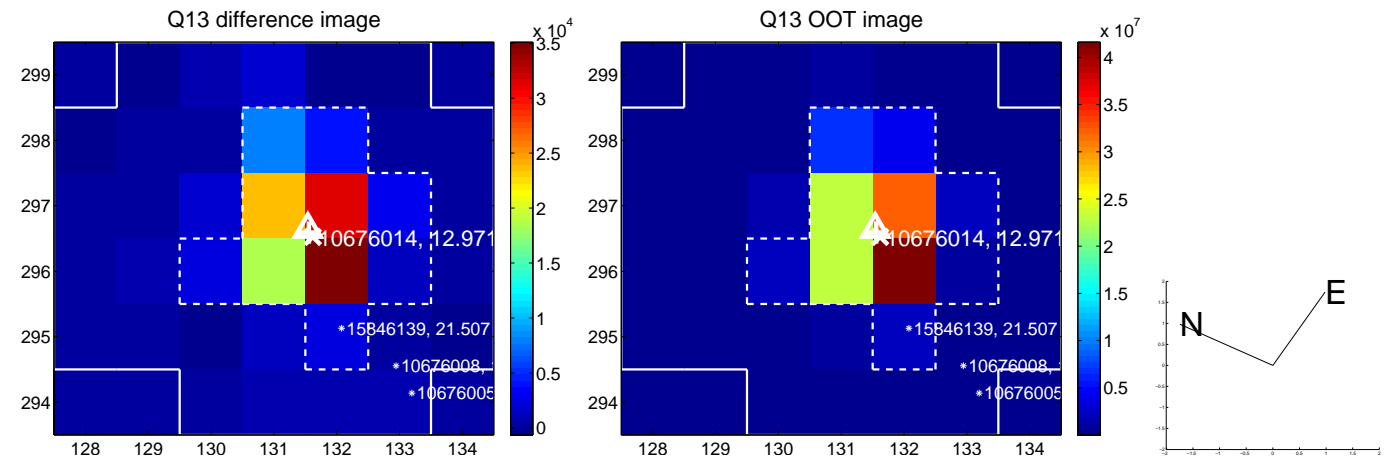
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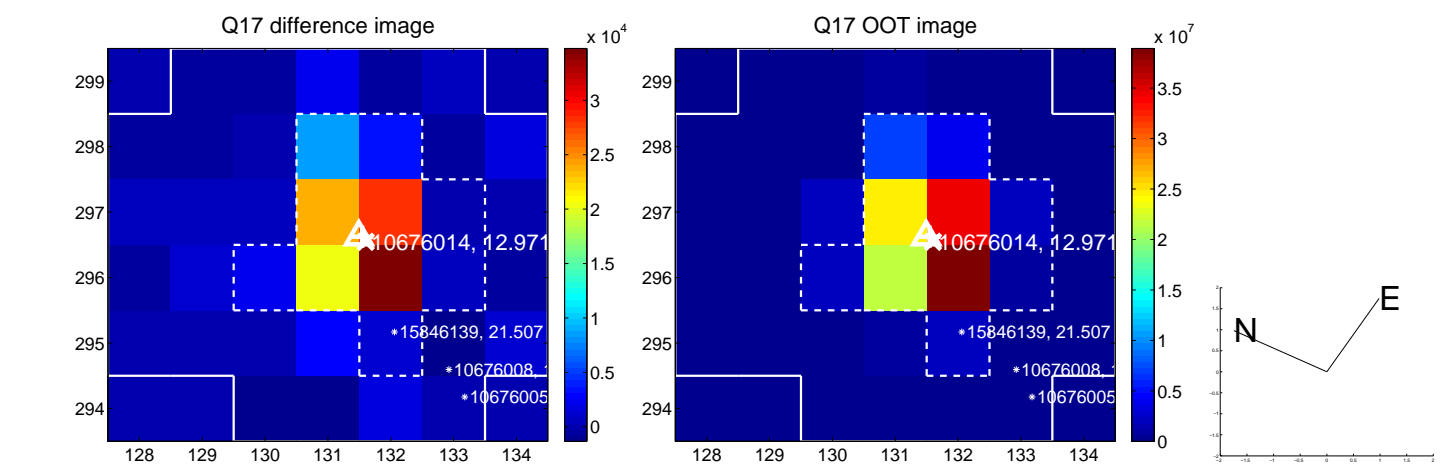
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



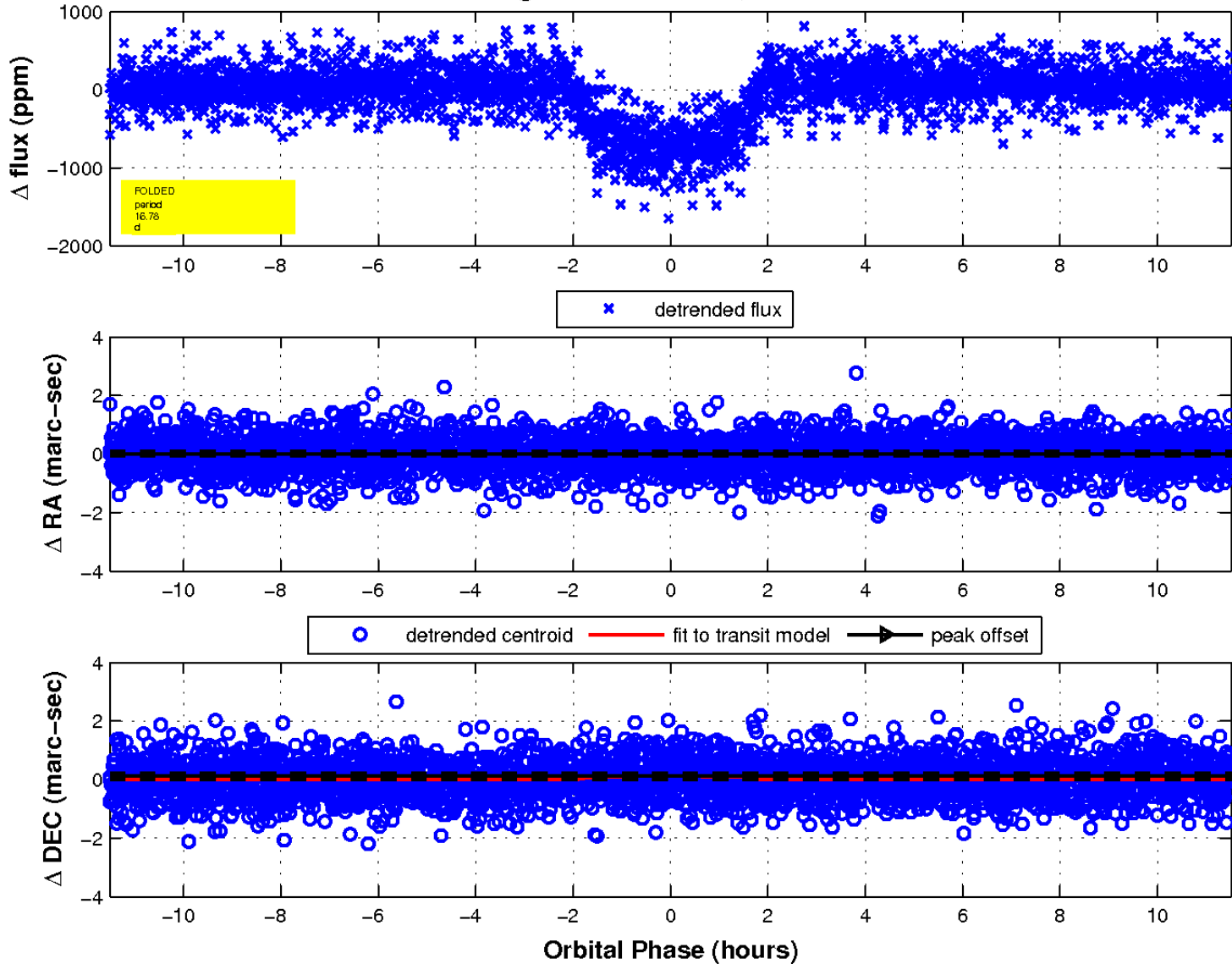
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

