

KIC 011622985

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})
011622985-01	OBS	2550.01	18.024324	144.277912	433.4	3.959	14.8	16.0	0.91	5955	2.36	51.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011622985-01	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 011622985-01

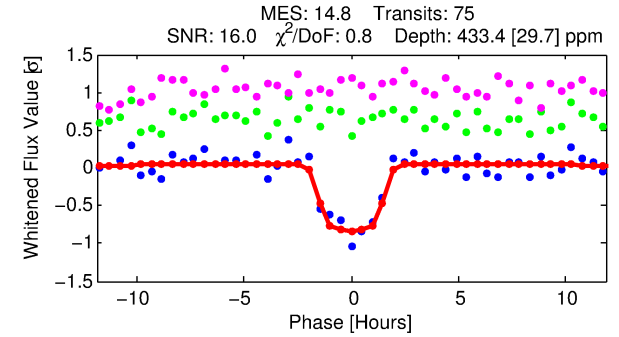
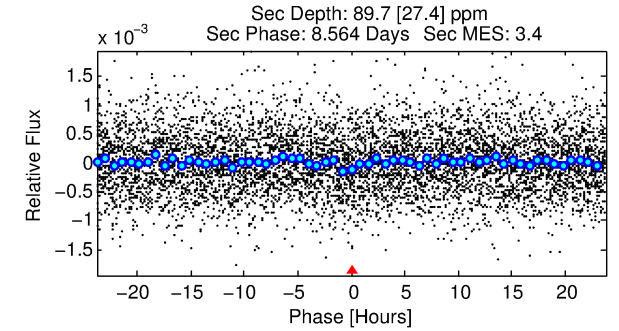
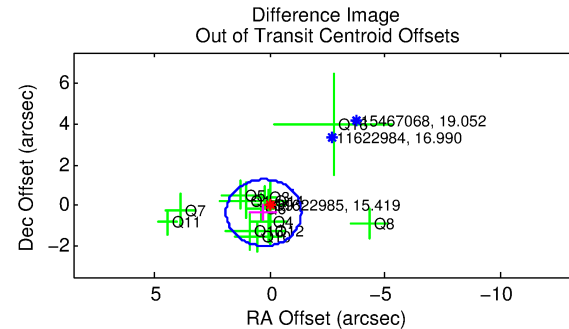
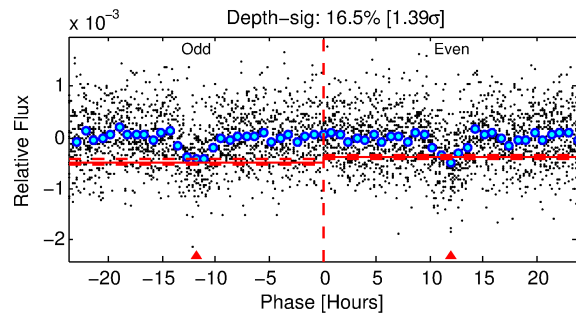
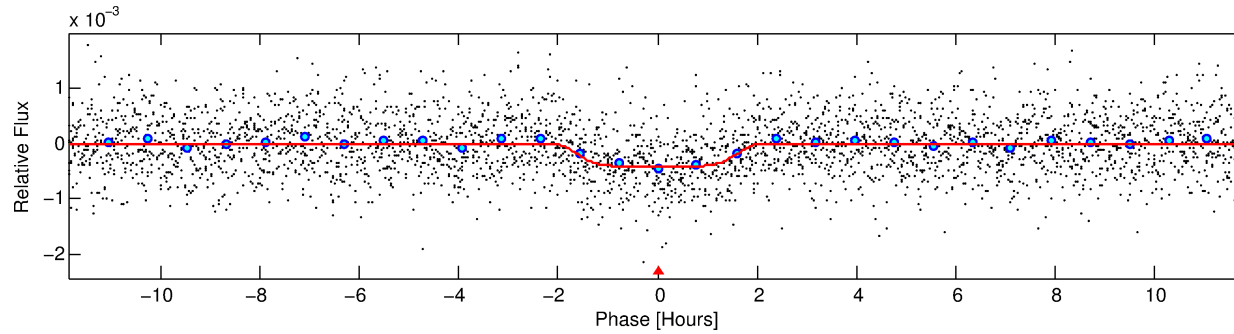
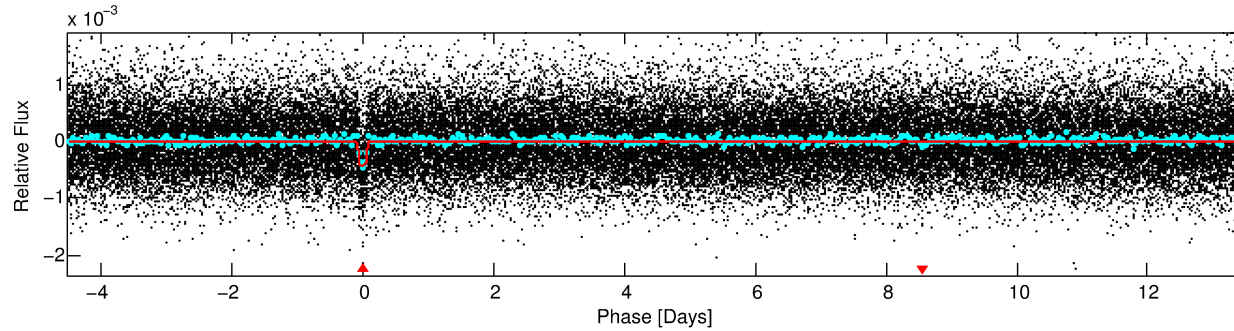
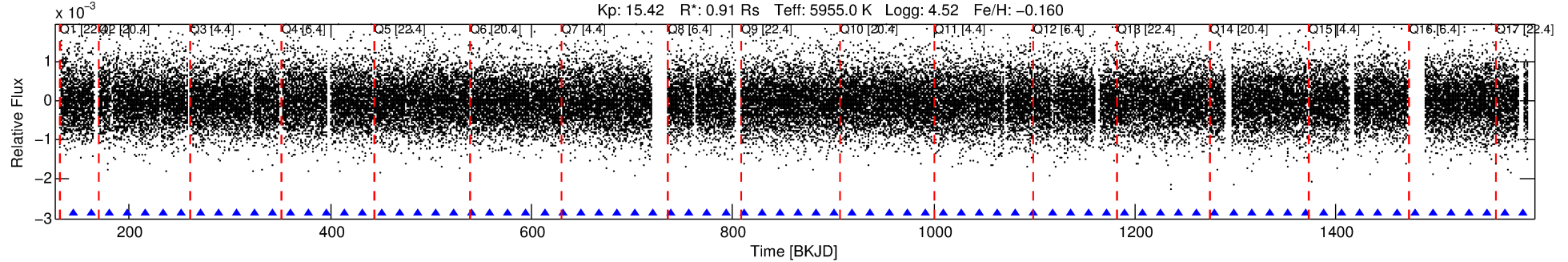
No Significant Match Found

DV One-Page Summary

KIC: 11622985 Candidate: 1 of 1 Period: 18.024 d

KOI: K02550.01 Corr: 0.945

Kp: 15.42 R*: 0.91 Rs Teff: 5955.0 K Logg: 4.52 Fe/H: -0.160



DV Fit Results:

Period = 18.02432 [0.00012] d
Epoch = 144.2779 [0.0055] BKJD
Rp/R* = 0.0237 [0.0018]
a/R* = 13.88 [4.44]
b = 0.94 [0.04]
Seff = 51.52 [20.83]
Teq = 683 [69] K
Rp = 2.36 [0.75] Re
a = 0.1346 [0.0353] AU
Ag = 160.92 [82.95] [1.93σ]
Teffp = 3762 [341] K [8.86σ]

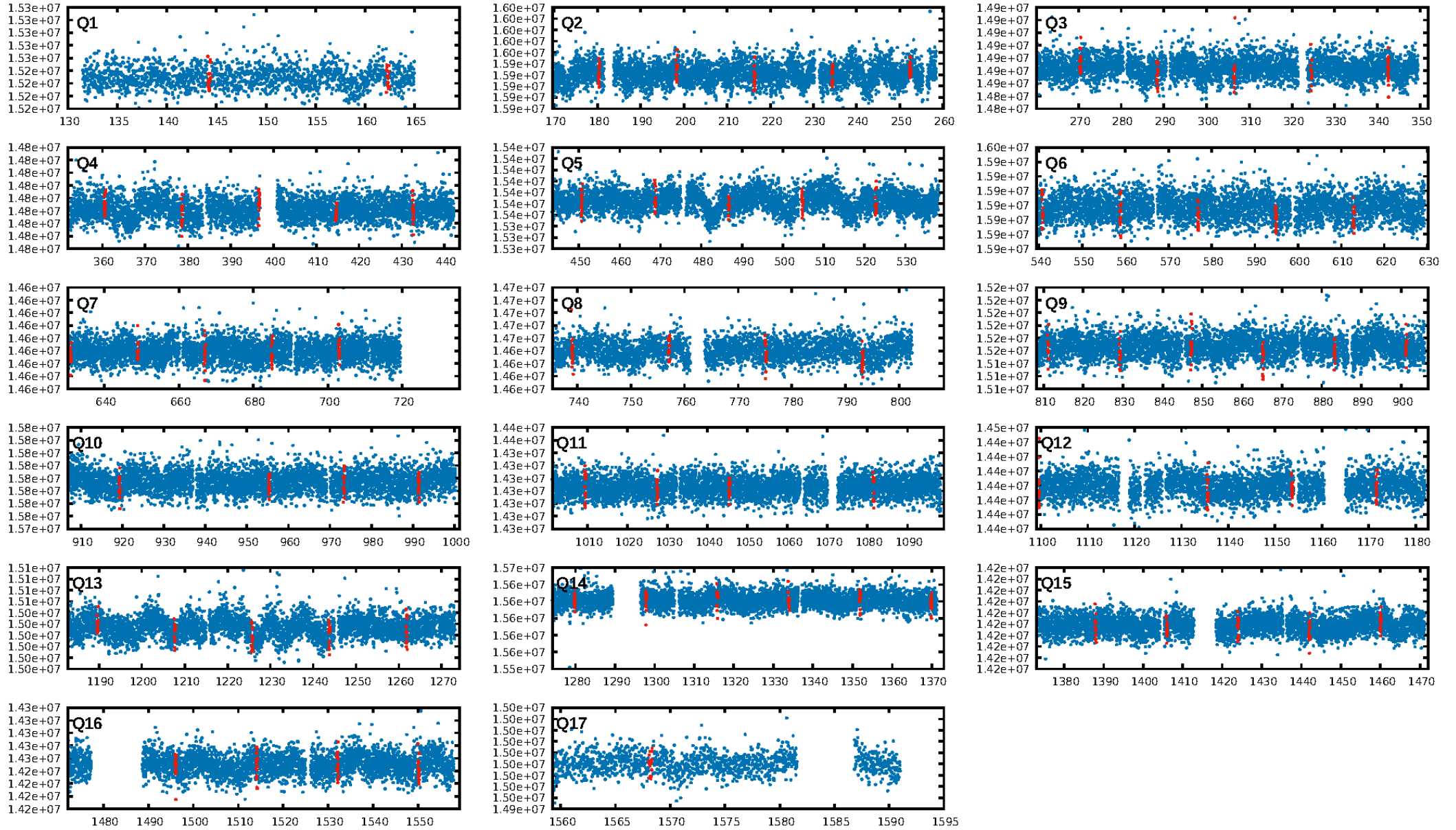
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 4.48e-48
RollingBand-fgt: 1.00 [72/72]
GhostDiagnostic-chr: 1.533
Centroid-sig: 0.7%
Centroid-so: 1.201 arcsec [1.40σ]
OotOffset-rm: 0.440 arcsec [0.81σ]
KicOffset-rm: 0.255 arcsec [0.54σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.64 [9/14]
DiffImageOverlap-fno: 1.00 [17/17]

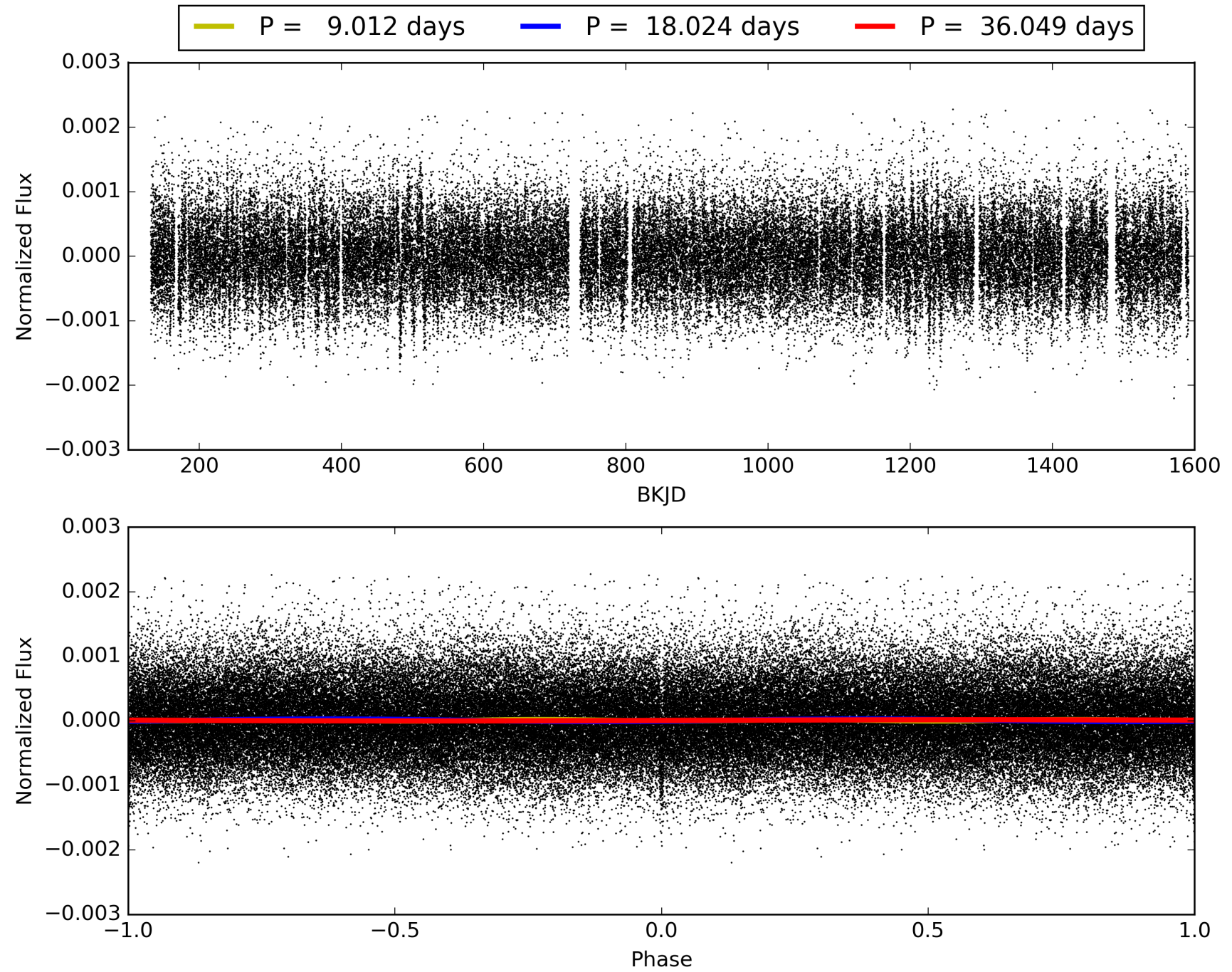
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:50:21 Z

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

TCE 011622985-01, PDC Light Curves

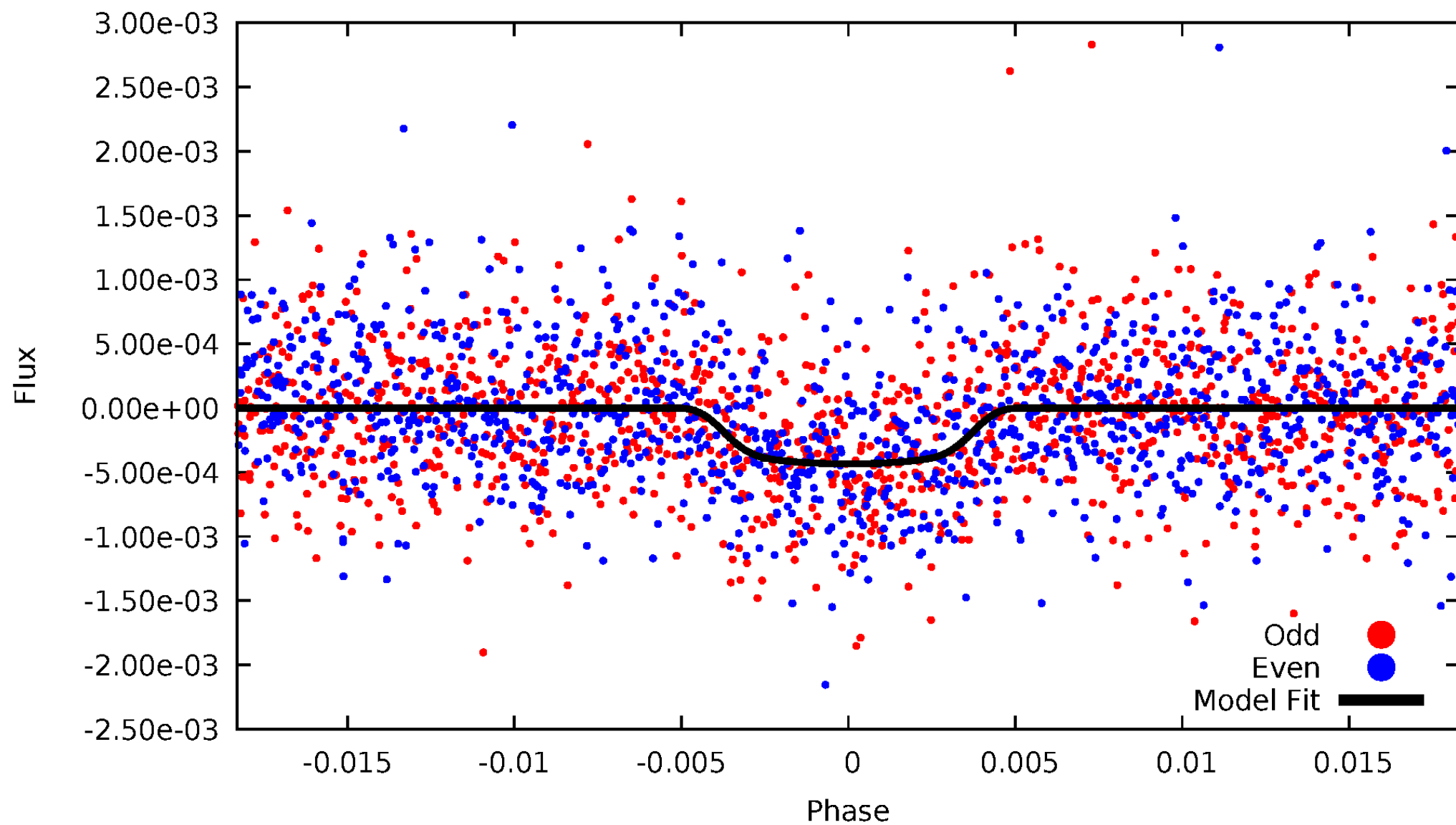


TCE 011622985-01



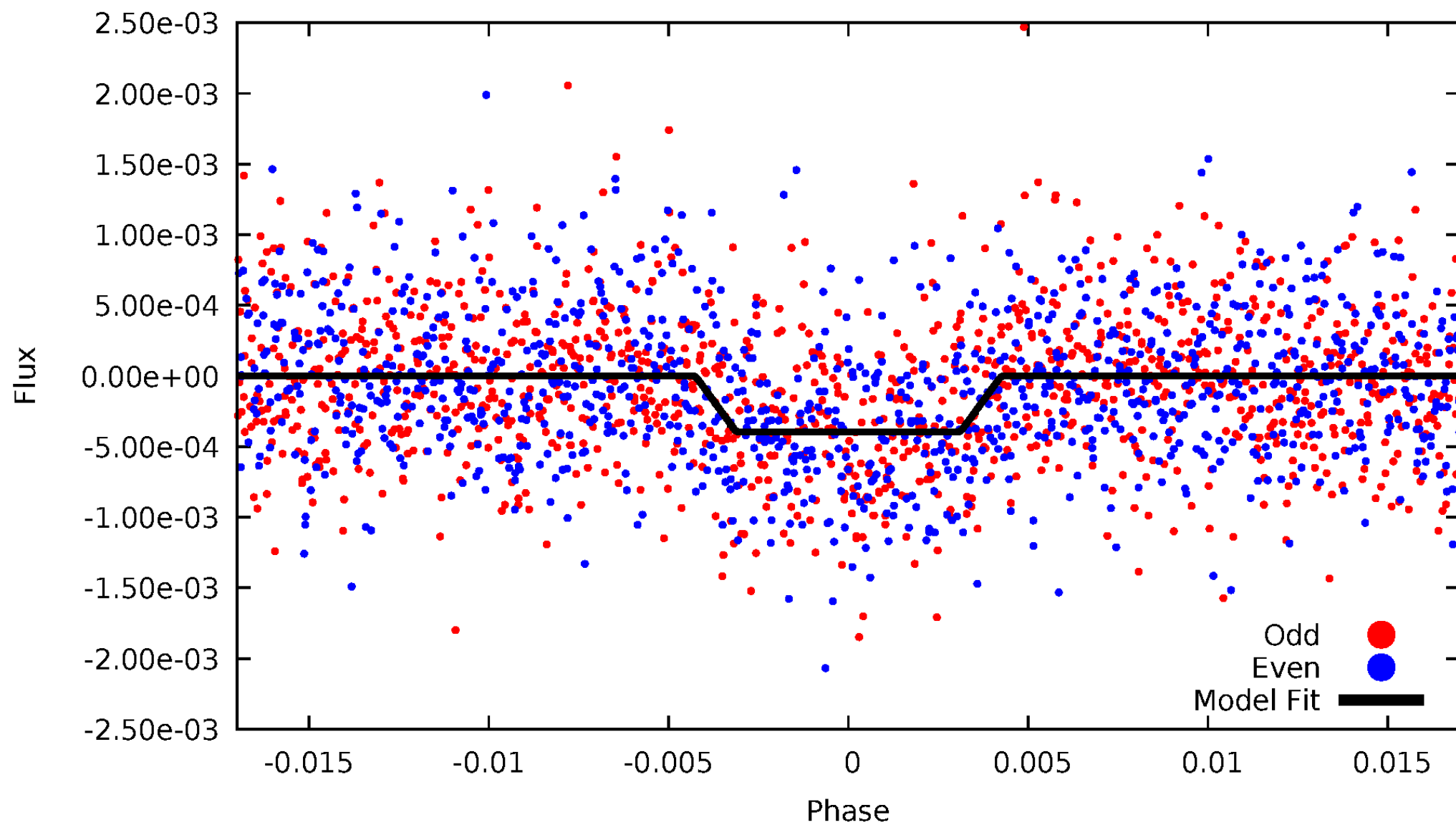
DV Odd/Even

TCE 011622985-01



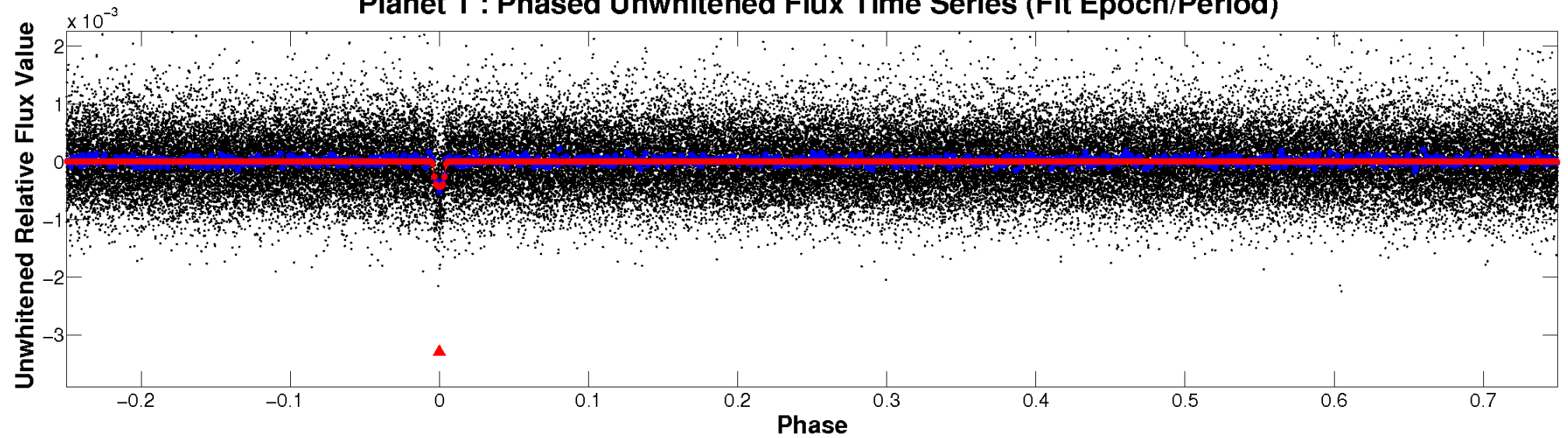
ALT Odd/Even

TCE 011622985-01

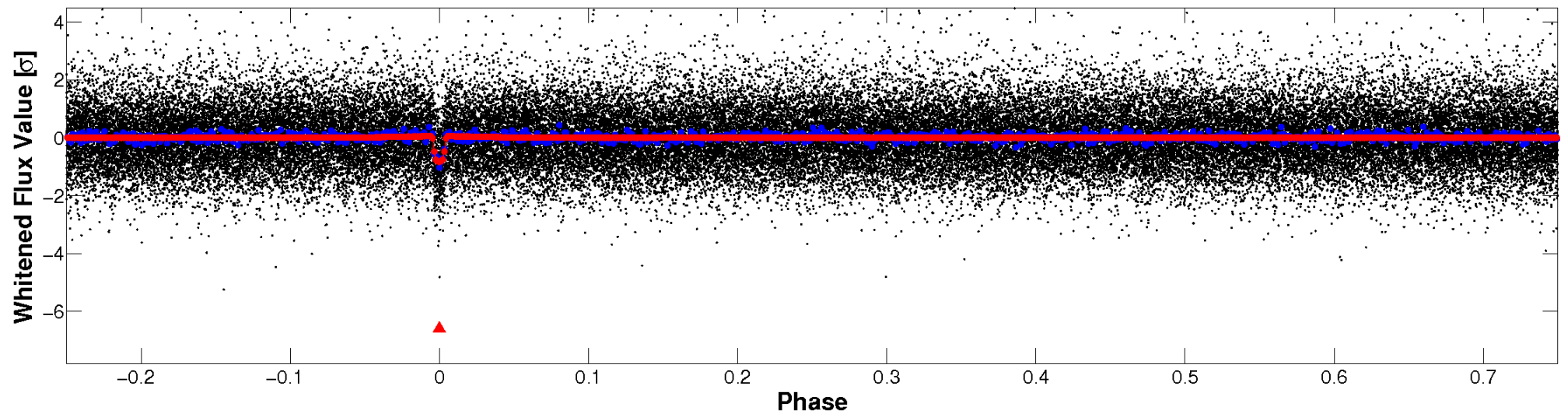


Non-Whitened Vs. Whitened Light Curve

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

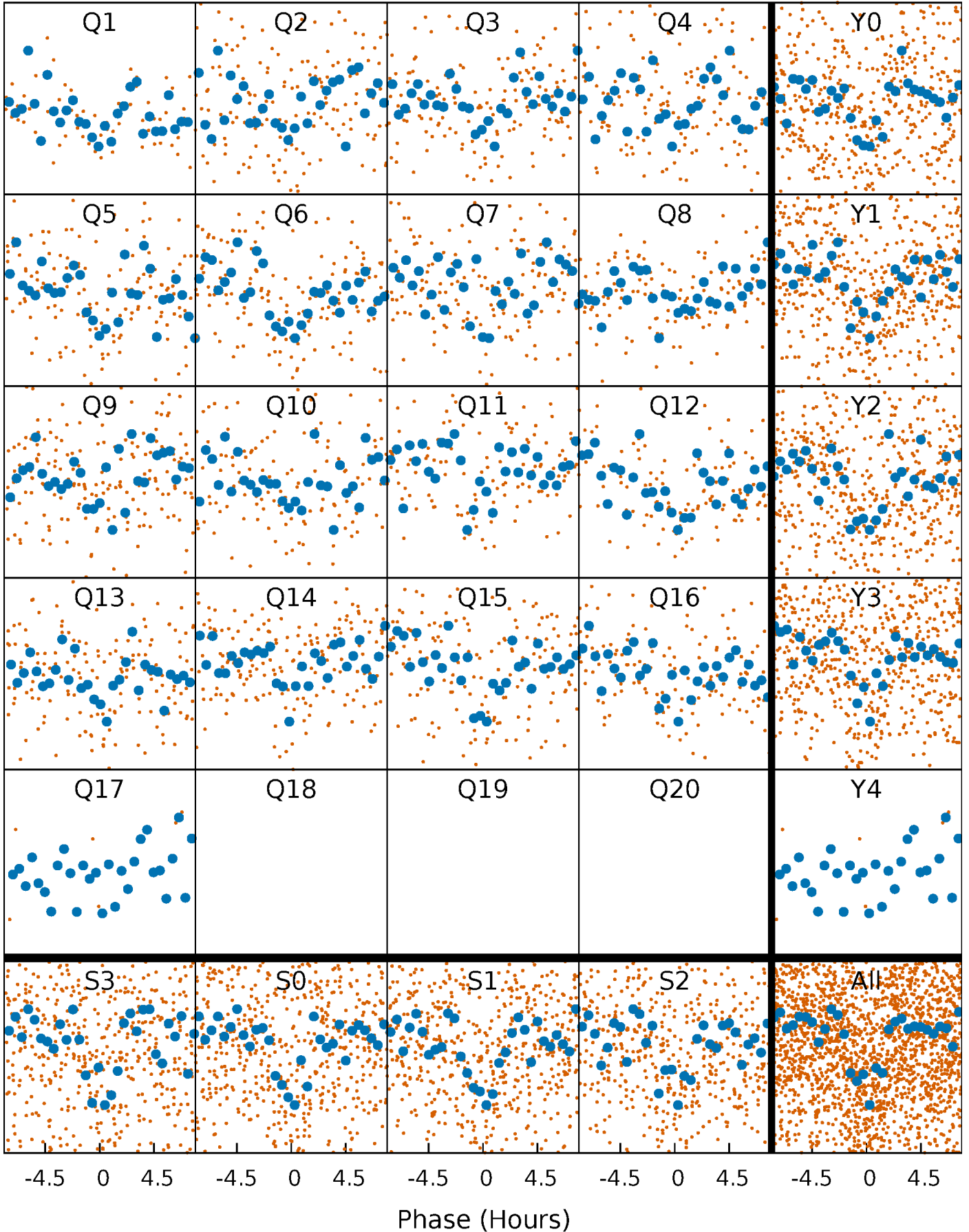


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



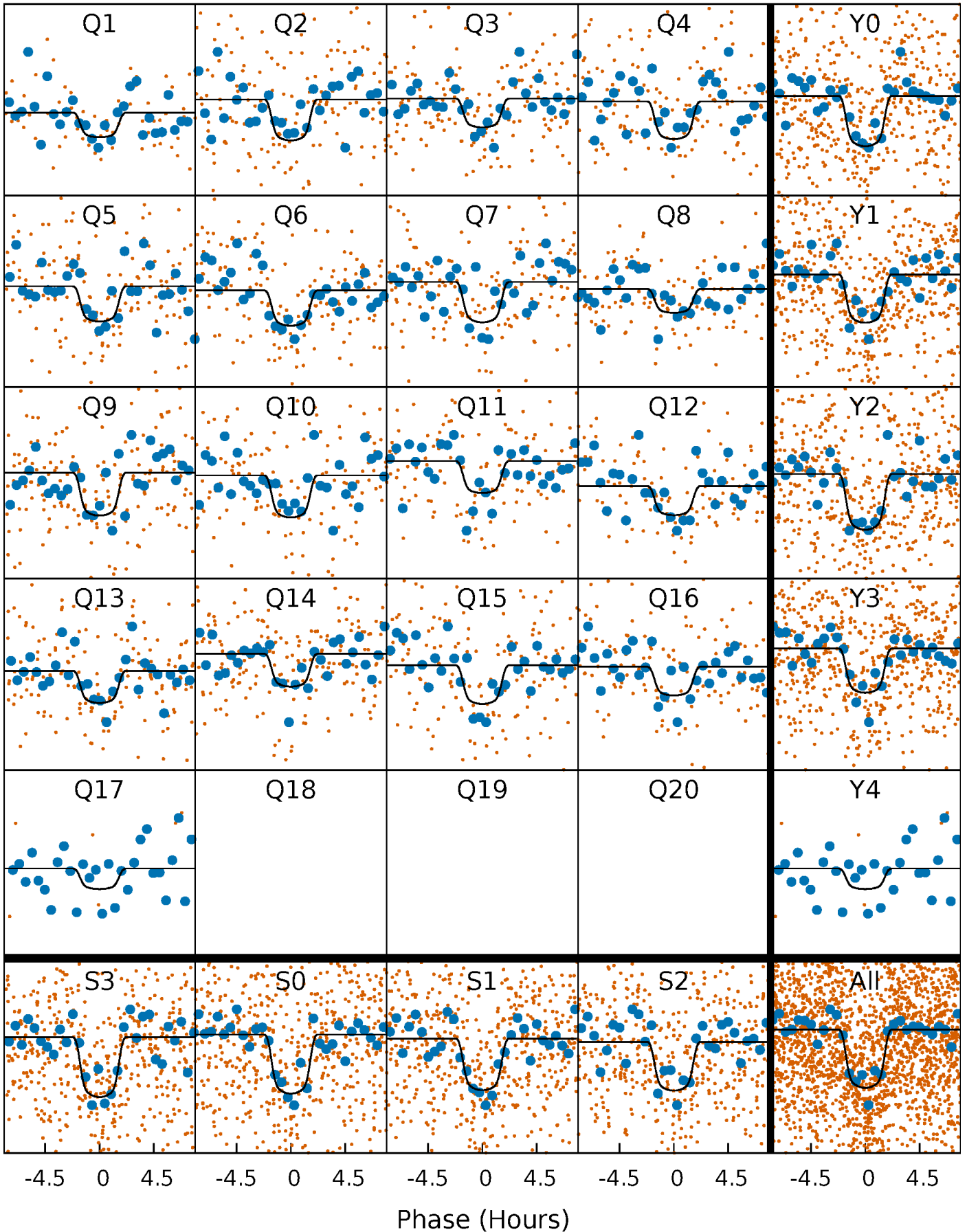
PDC Quarter-Phased Transit Curves

TCE 011622985-01 P= 18.024324 Days $T_0=144.277912$ (BKJD)



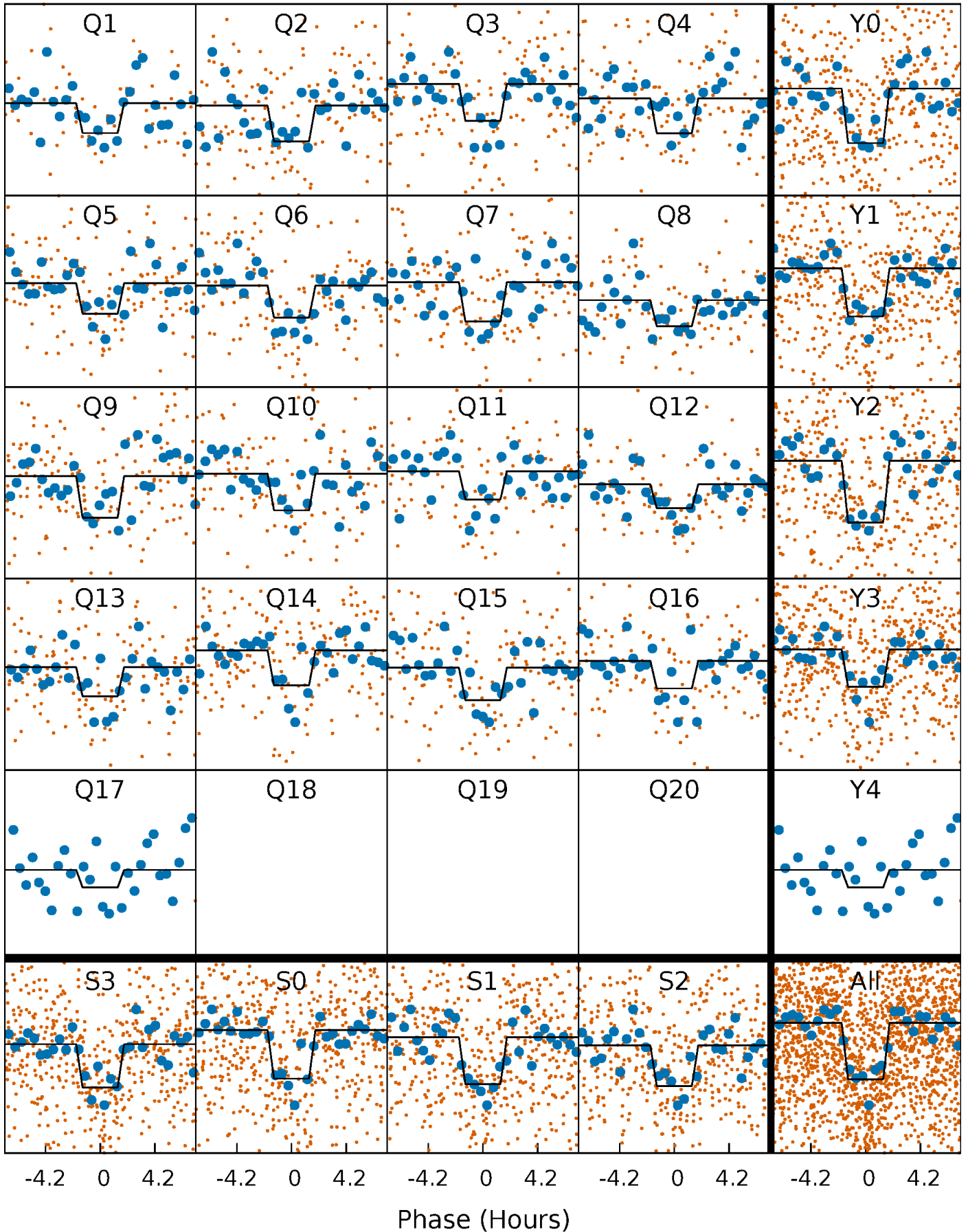
DV Quarter-Phased Transit Curves

TCE 011622985-01 P= 18.024324 Days $T_0=144.277912$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

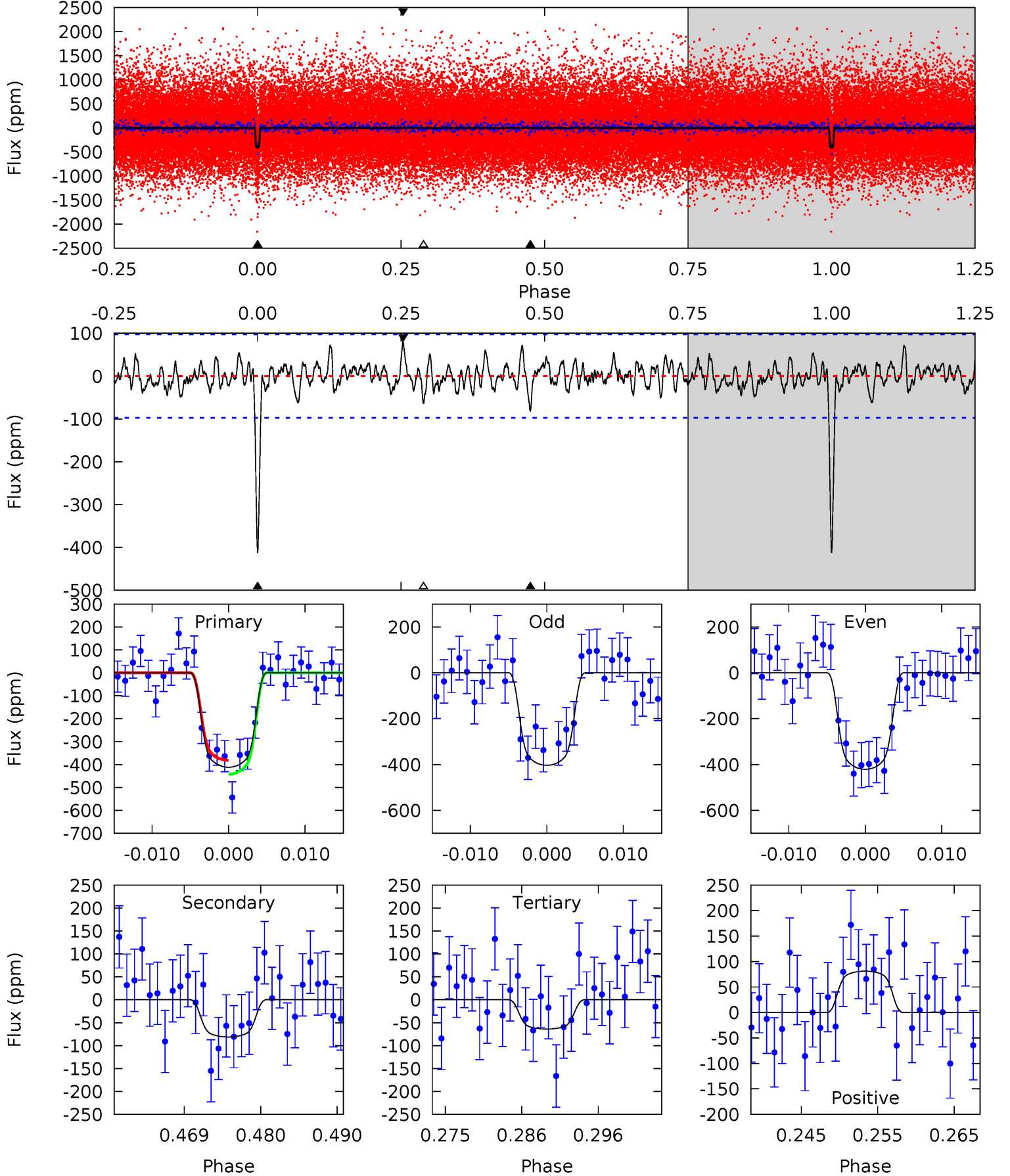
TCE 011622985-01 P= 18.024302 Days $T_0=144.278375$ (BKJD)



DV Model-Shift Uniqueness Test

011622985-01, $P = 18.024324$ Days, $E = 126.253588$ Days

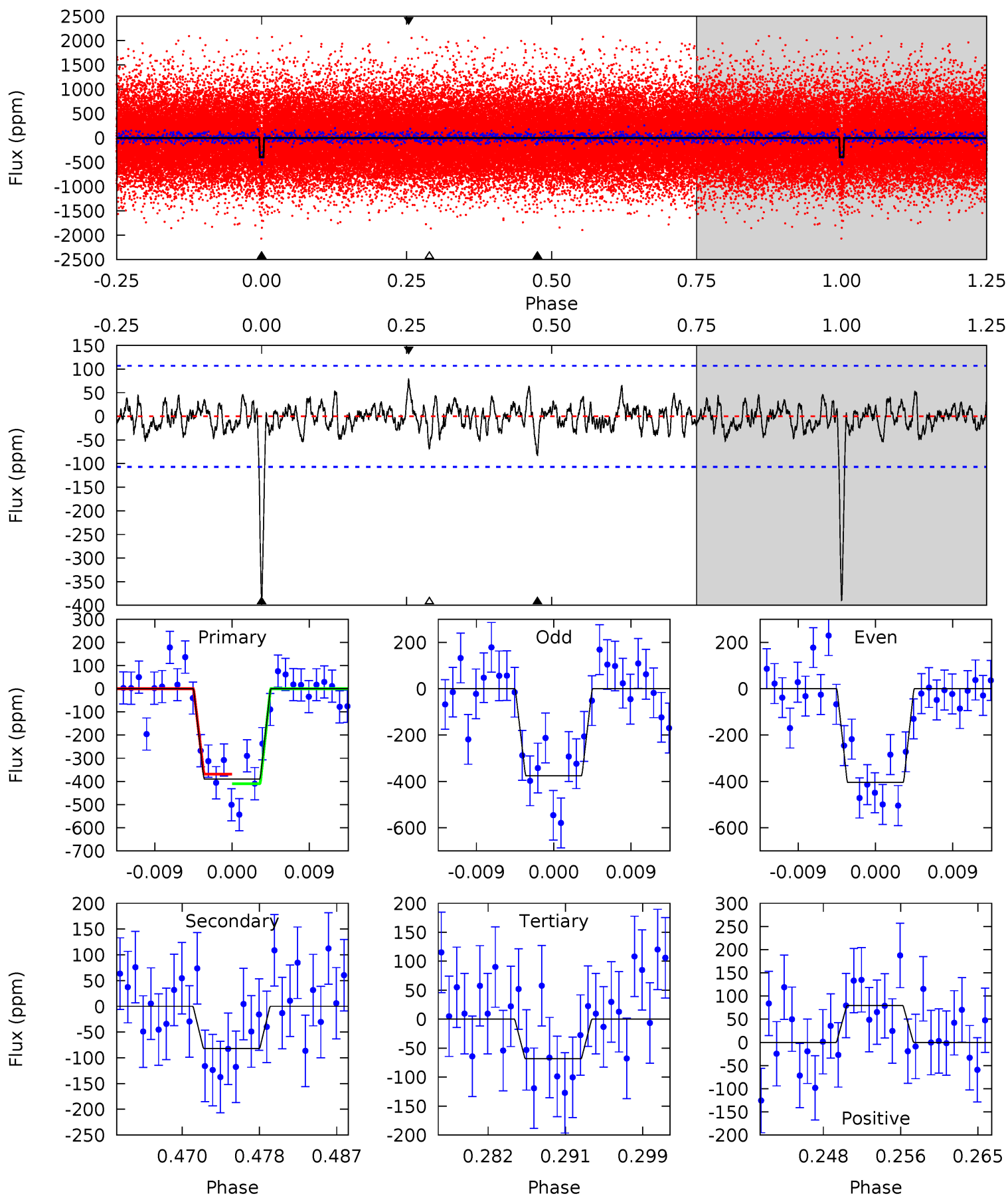
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.2	4.18	3.29	4.18	5.02	2.57	1.21	17.9	17.0	0.89	-0.00	0.46	1.01	0.16	1.57



Alt Model-Shift Uniqueness Test

011622985-01, P = 18.024302 Days, E = 126.254073 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.4	3.87	3.23	3.75	5.06	2.63	1.06	15.2	14.6	0.64	0.12	0.69	1.00	0.17	0.96



Stellar Parameters For KIC 011622985

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5955^{+161}_{-179}	$4.520^{+0.037}_{-0.213}$	$-0.160^{+0.300}_{-0.300}$	$0.910^{+0.280}_{-0.093}$	$0.999^{+0.119}_{-0.132}$	$1.869^{+0.397}_{-1.013}$
	+3%/-3%	+1%/-5%	+188%/-188%	+31%/-10%	+12%/-13%	+21%/-54%
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 011622985-01 / KOI 2550.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-81 ± 19	$2.49^{+0.43}_{-0.30}$	986^{+76}_{-50}	3993^{+224}_{-218}	125^{+56}_{-41}
Alt.	-82 ± 21	$2.09^{+0.37}_{-0.29}$	979^{+69}_{-45}	4233^{+286}_{-277}	178^{+72}_{-60}

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

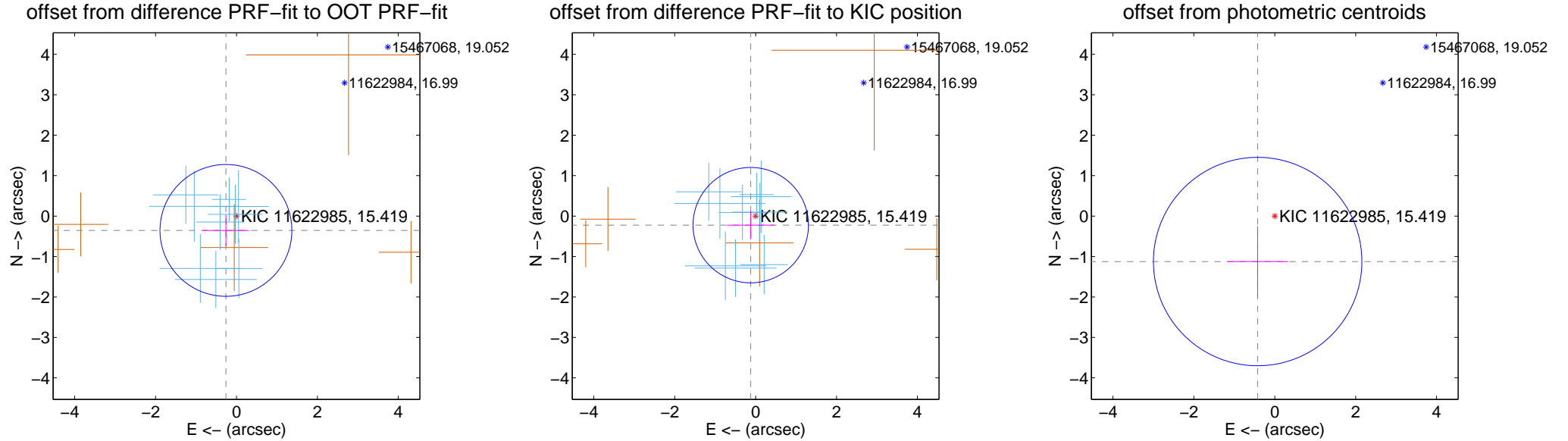
DV Centroid Data

Supplemental centroid analysis for 011622985-01. Kepler magnitude: 15.42. Transit SNR 16.00

There are 9 quarters with good PRF difference image offsets

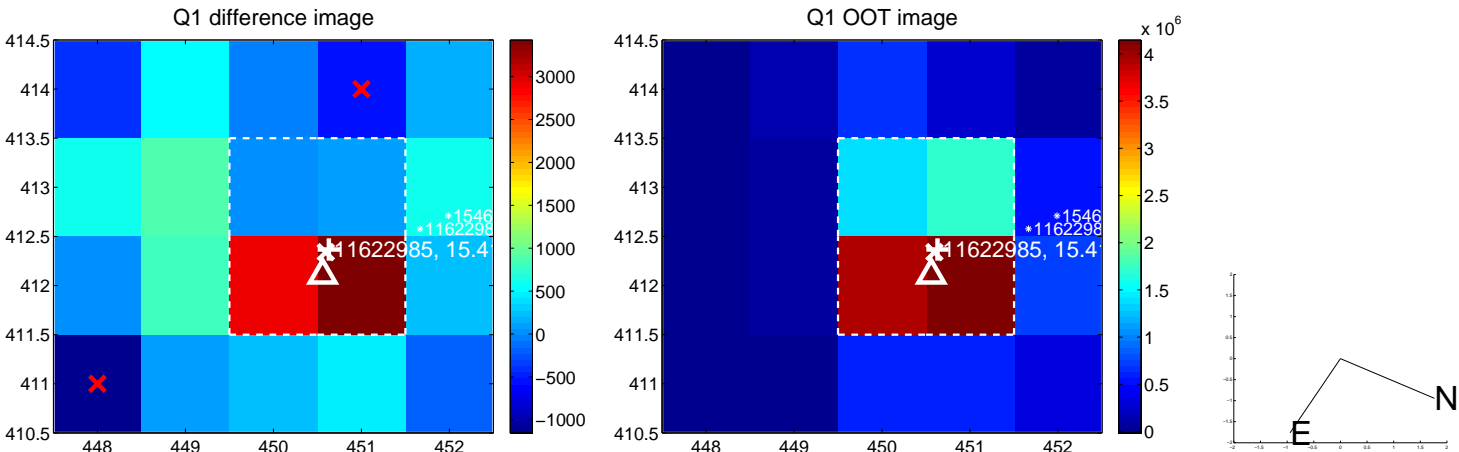
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.440 ± 0.543	0.81	0.261 ± 0.573	-0.354 ± 0.386
PRF-fit source offset from KIC position	0.255 ± 0.476	0.54	0.120 ± 0.586	-0.224 ± 0.348
photometric centroid source offset	1.20 ± 0.86	1.40	0.42 ± 0.76	-1.12 ± 0.87

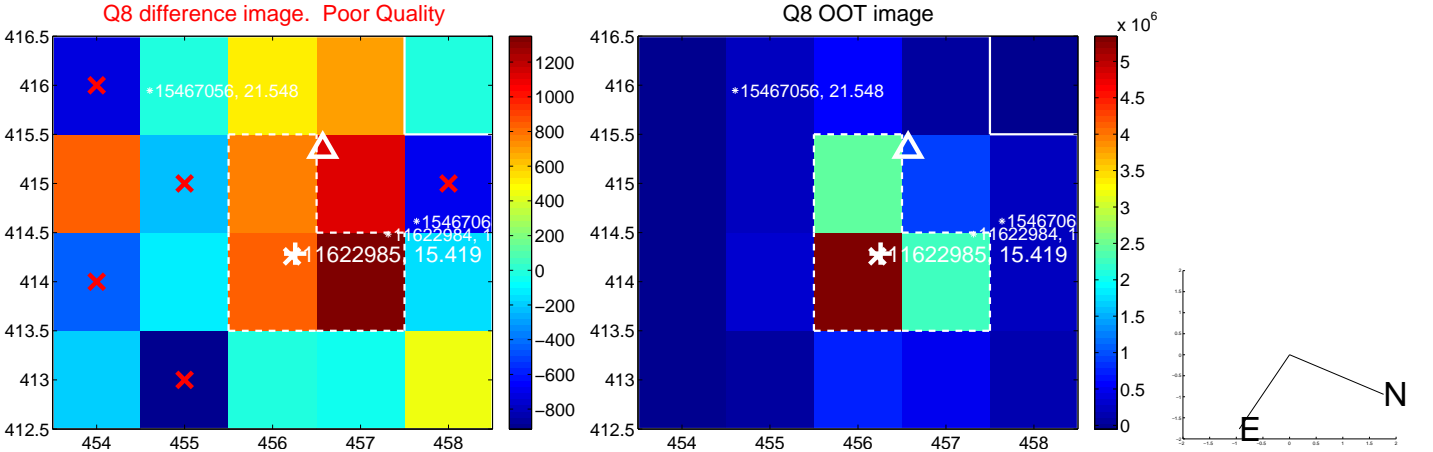
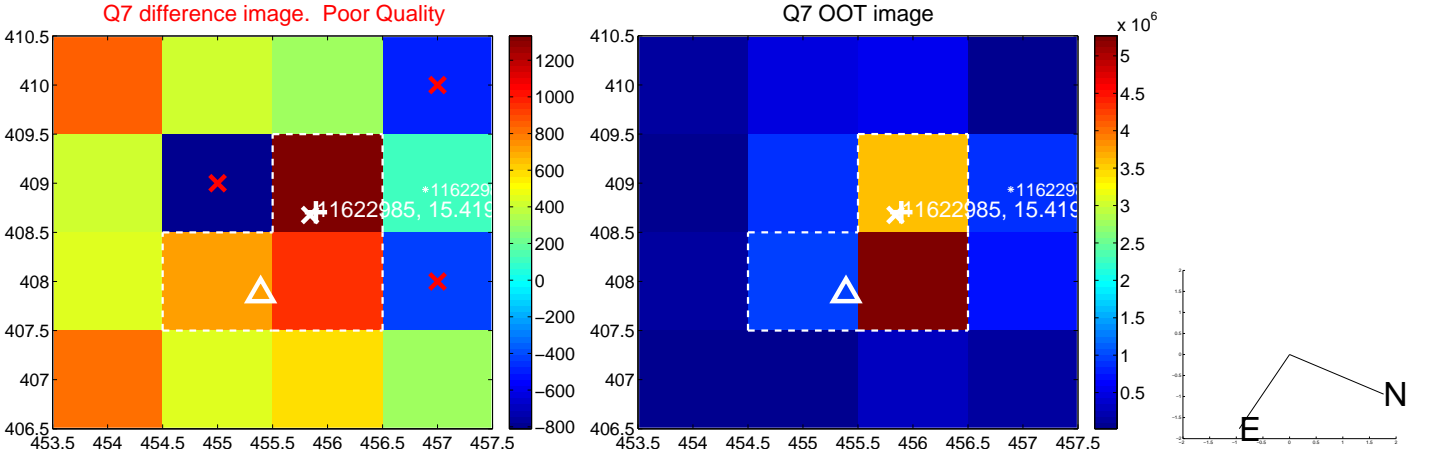
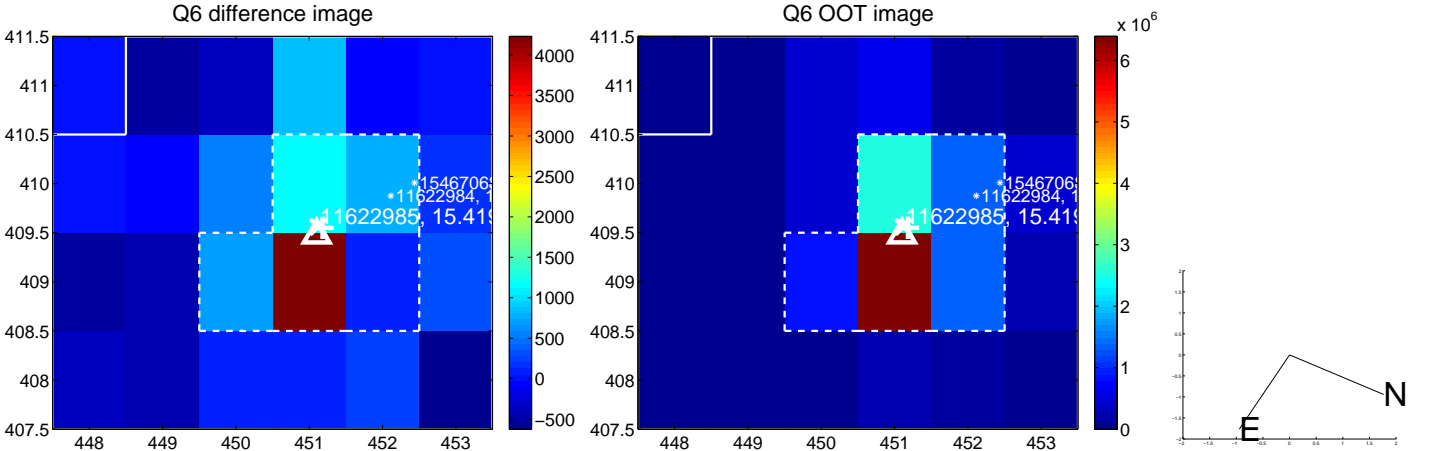
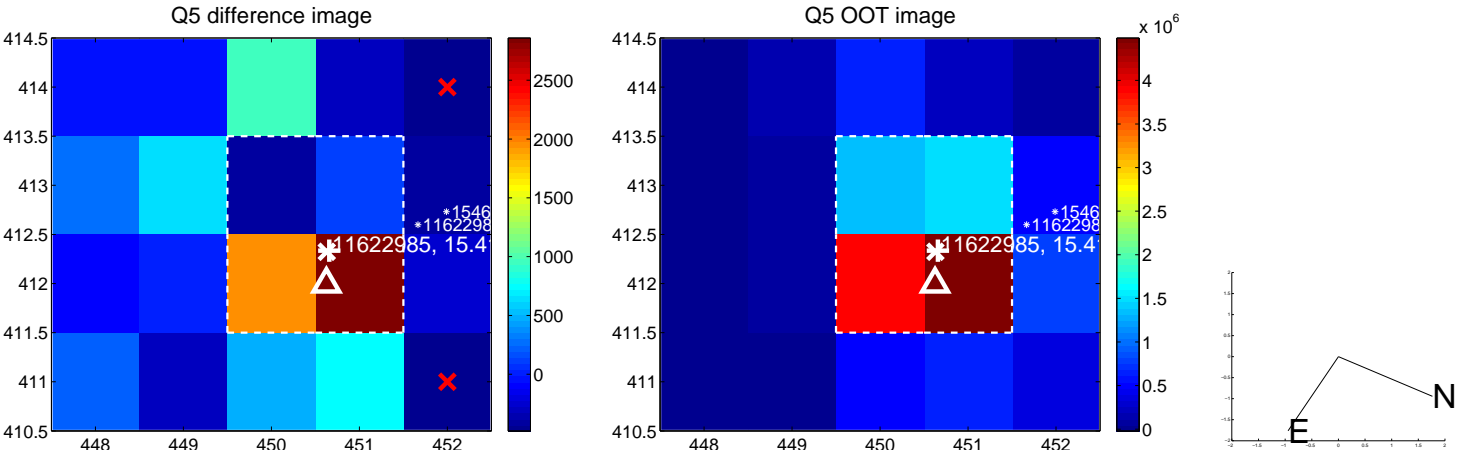


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

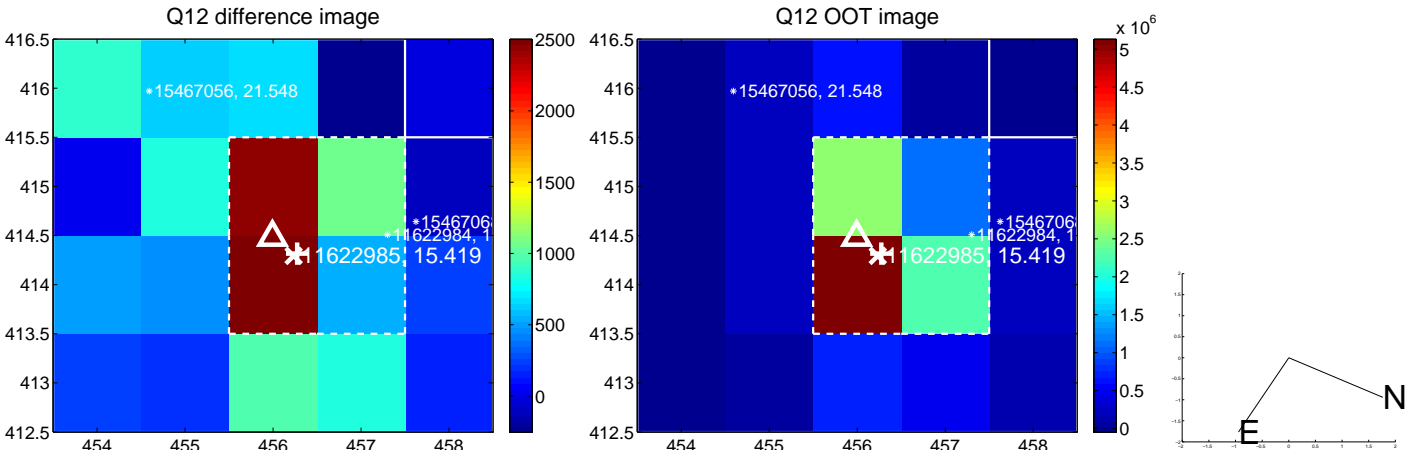
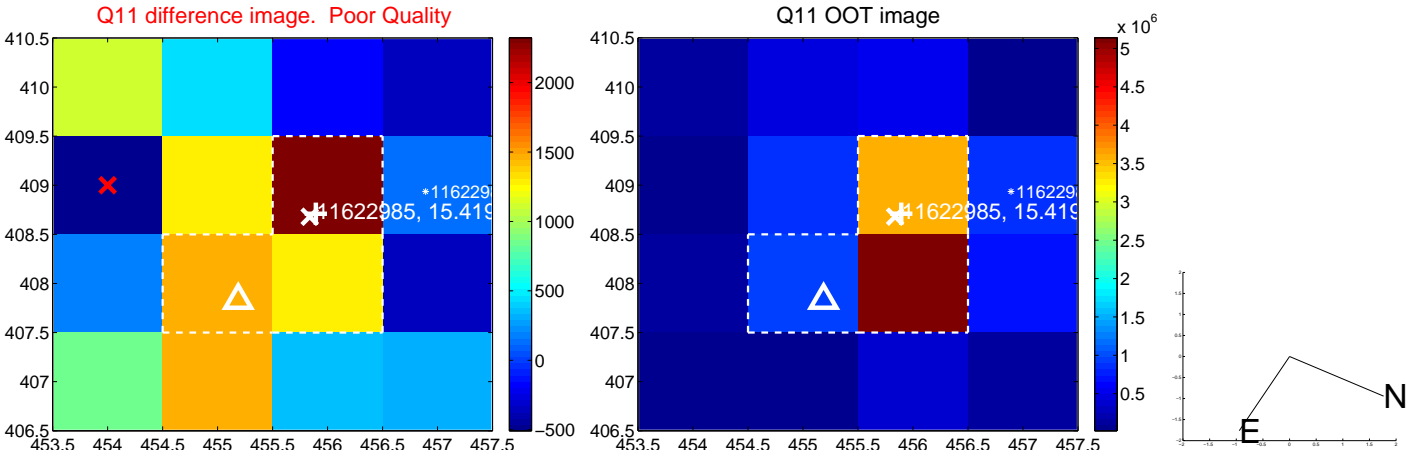
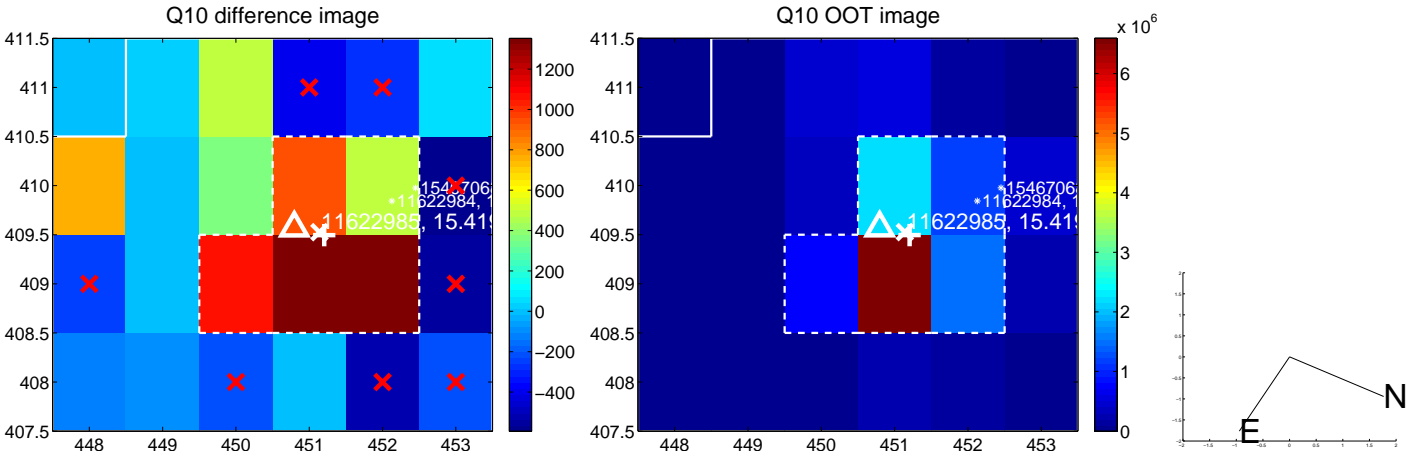
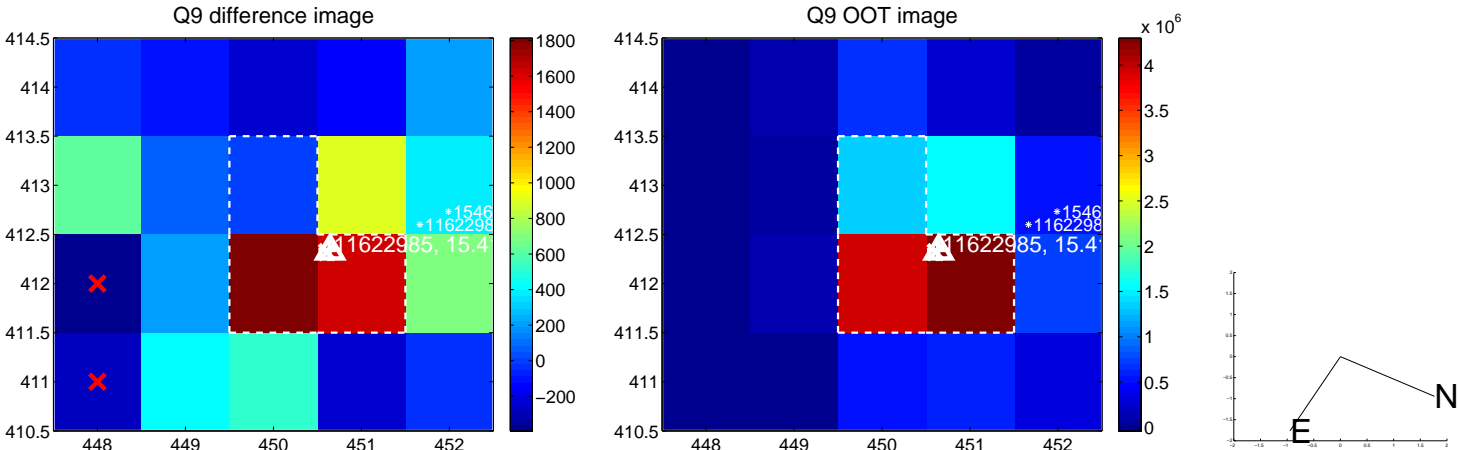
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



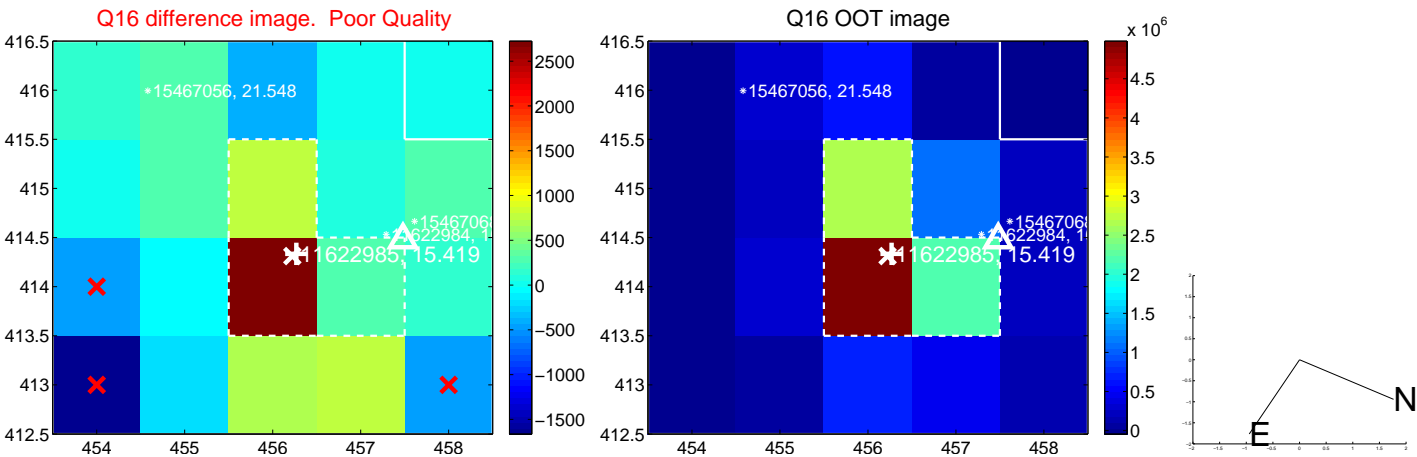
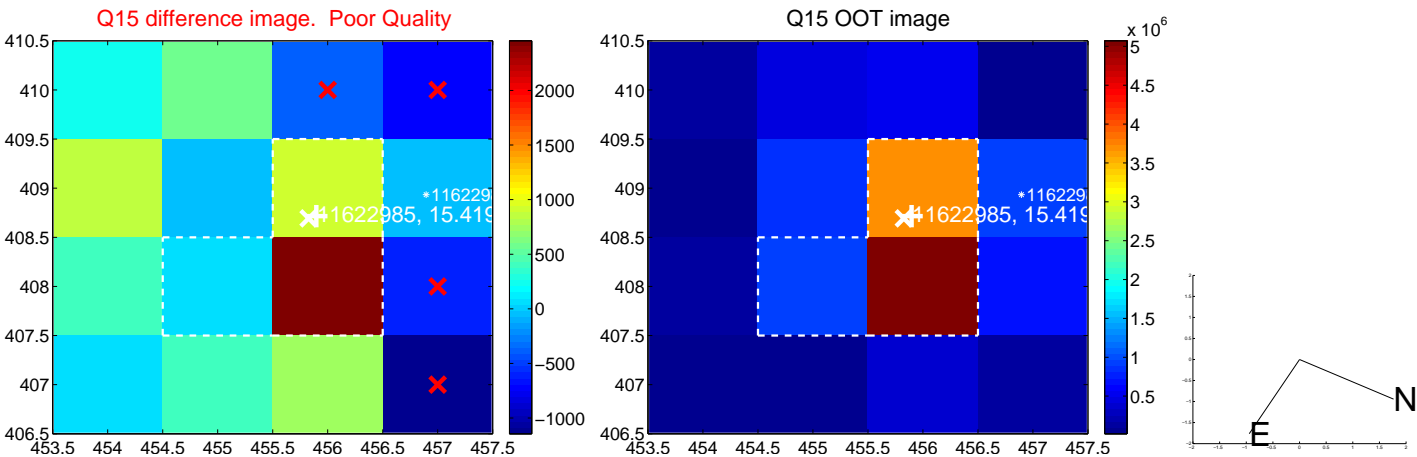
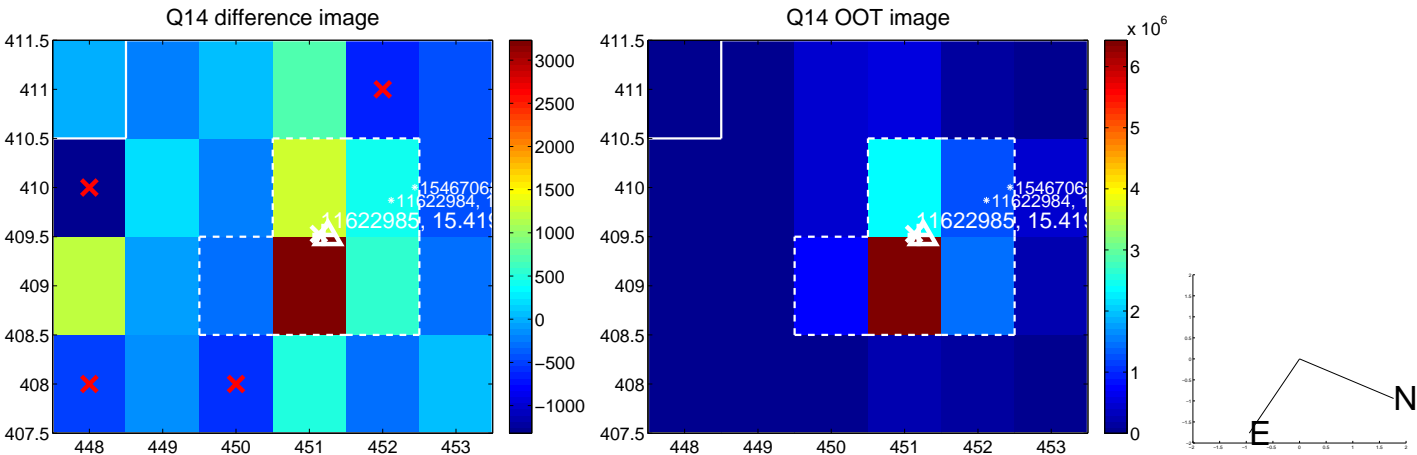
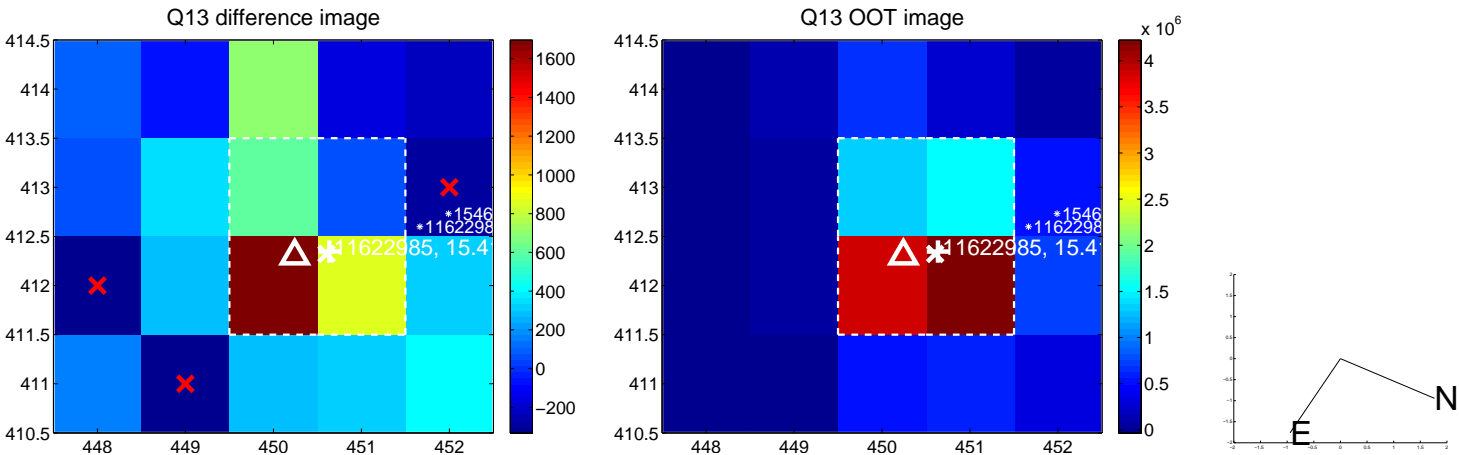
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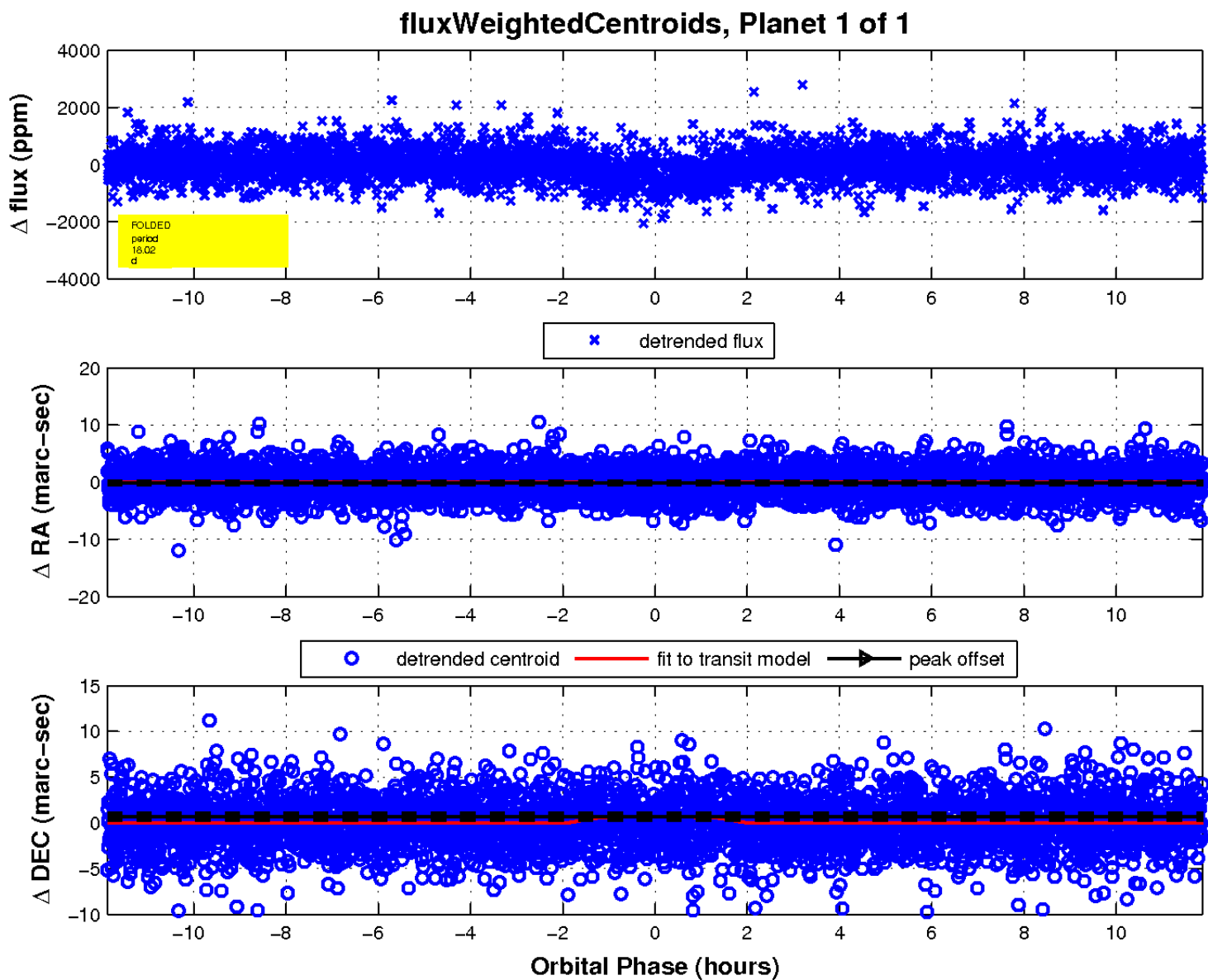
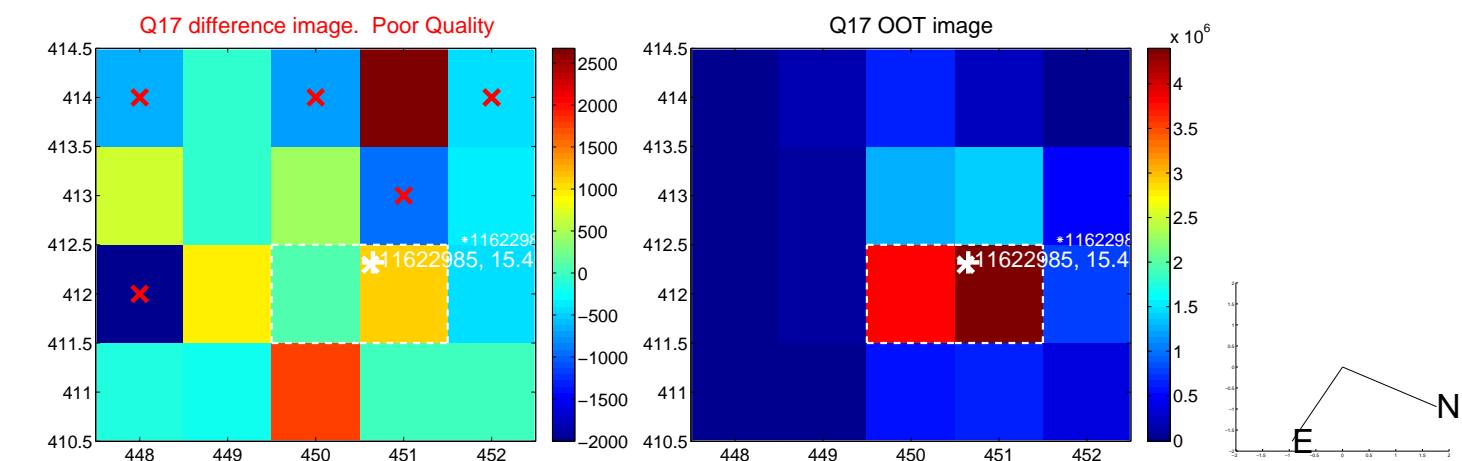
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

