

KIC 004476123

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})
004476123-01	OBS	0814.01	22.366552	153.090179	961.3	5.281	25.6	27.7	0.73	5395	2.41	19.49

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004476123-01	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 004476123-01

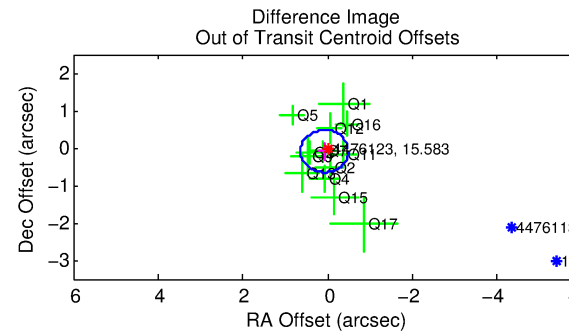
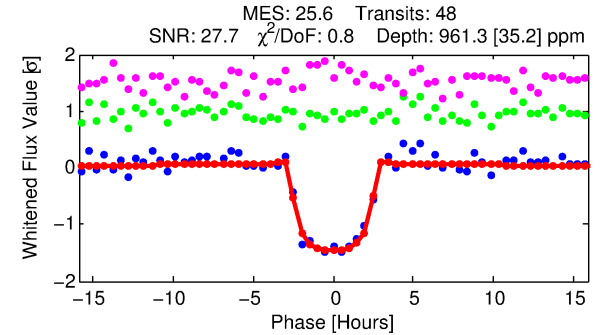
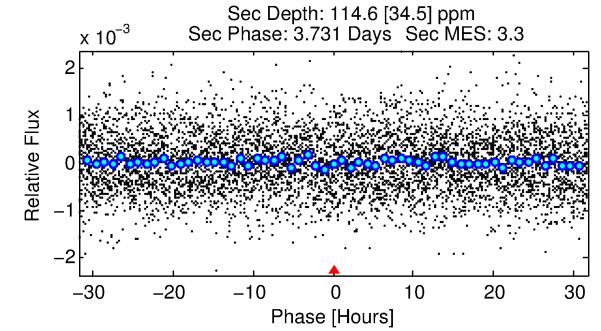
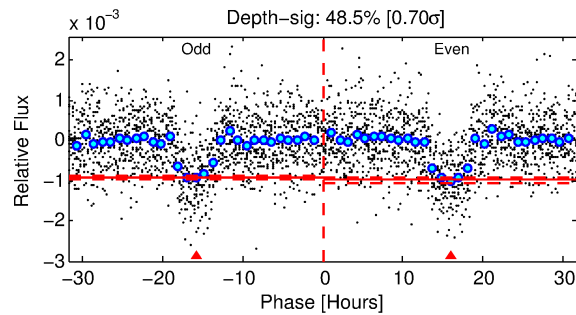
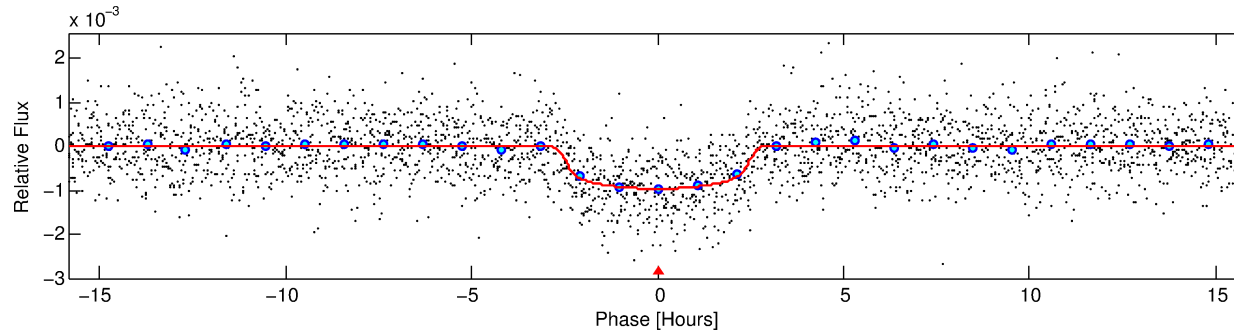
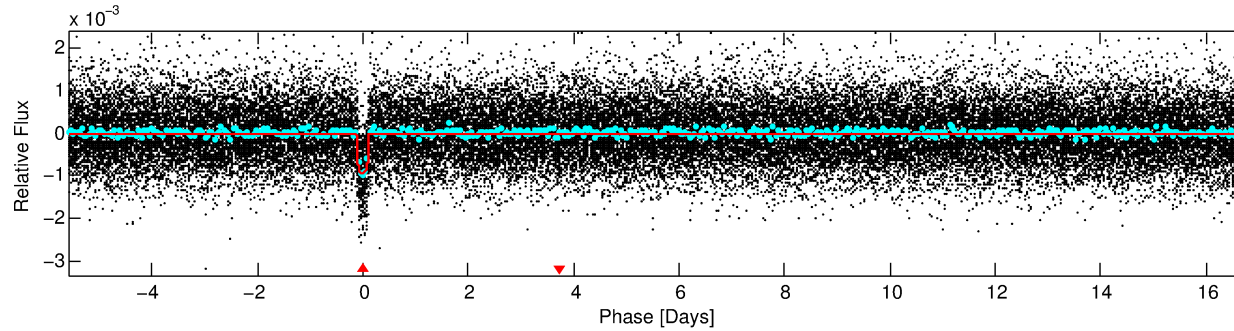
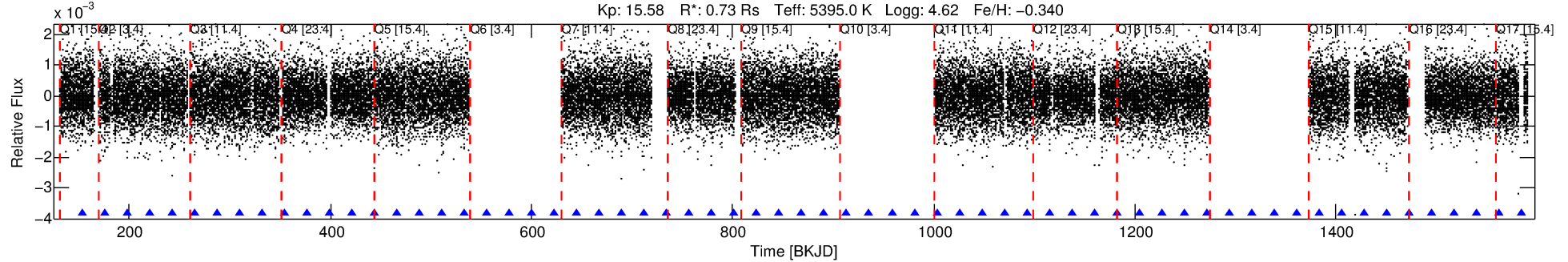
No Significant Match Found

DV One-Page Summary

KIC: 4476123 Candidate: 1 of 1 Period: 22.367 d

KOI: K00814.01 Corr: 0.987

Kp: 15.58 R*: 0.73 Rs Teff: 5395.0 K Logg: 4.62 Fe/H: -0.340



DV Fit Results:

Period = 22.36655 [0.00010] d
Epoch = 153.0902 [0.0036] BKJD
Rp/R* = 0.0301 [0.0092]
a/R* = 25.10 [31.26]
b = 0.68 [1.01]
Seff = 19.49 [4.44]
Teq = 536 [30] K
Rp = 2.41 [0.84] Re
a = 0.1448 [0.0198] AU
Ag = 227.55 [161.43] [1.40σ]
Teffp = 3217 [557] K [4.81σ]

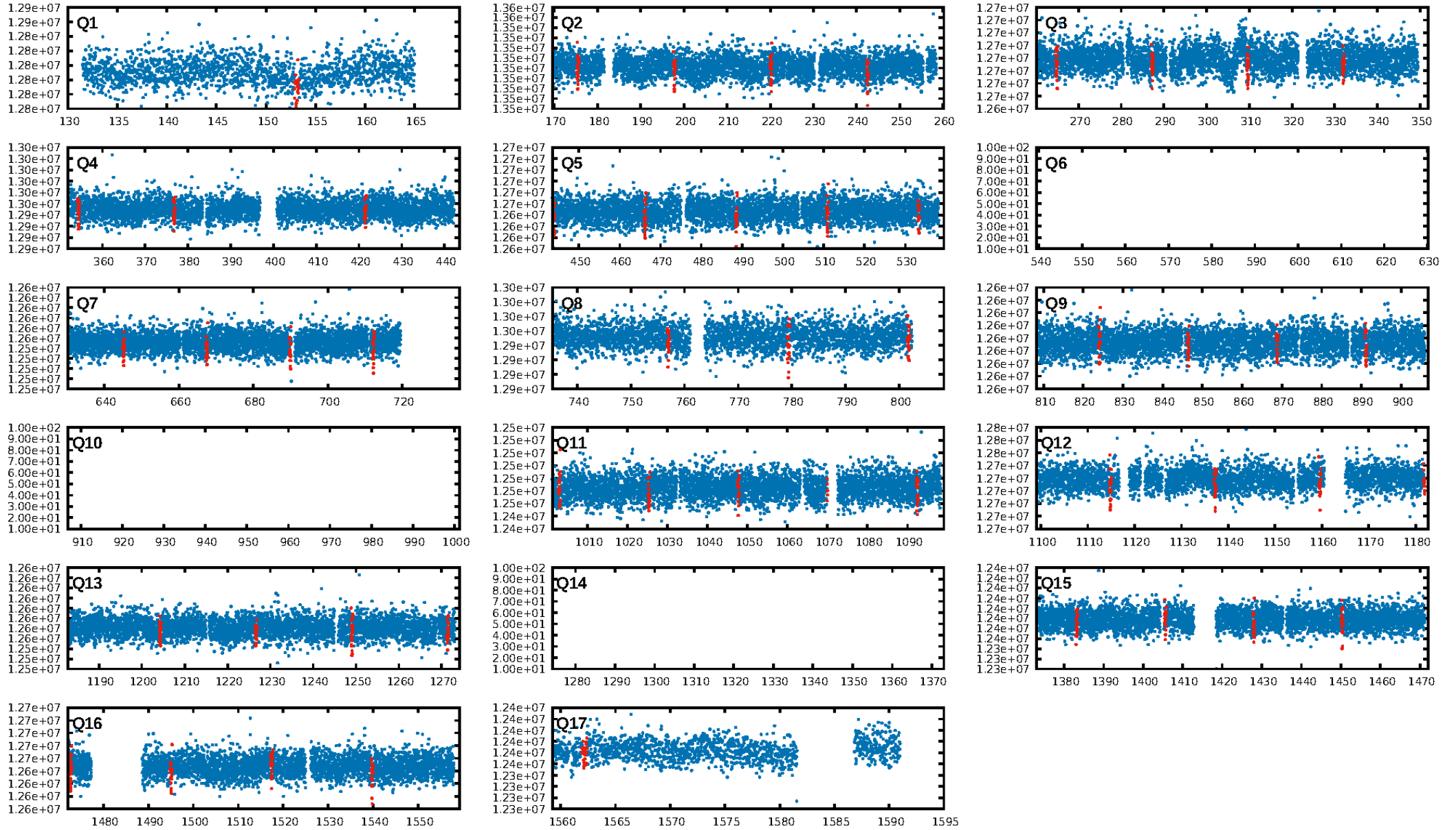
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 56.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.38e-146
RollingBand-fgt: 1.00 [46/46]
GhostDiagnostic-chr: 7.179
Centroid-sig: 79.9%
Centroid-so: 0.368 arcsec [0.64σ]
OotOffset-rm: 0.115 arcsec [0.61σ]
KicOffset-rm: 0.225 arcsec [1.10σ]
OotOffset-st: 1/4/3/5 [13]
KicOffset-st: 1/4/3/5 [13]
DiffImageQuality-fgm: 1.00 [13/13]
DiffImageOverlap-fno: 1.00 [14/14]

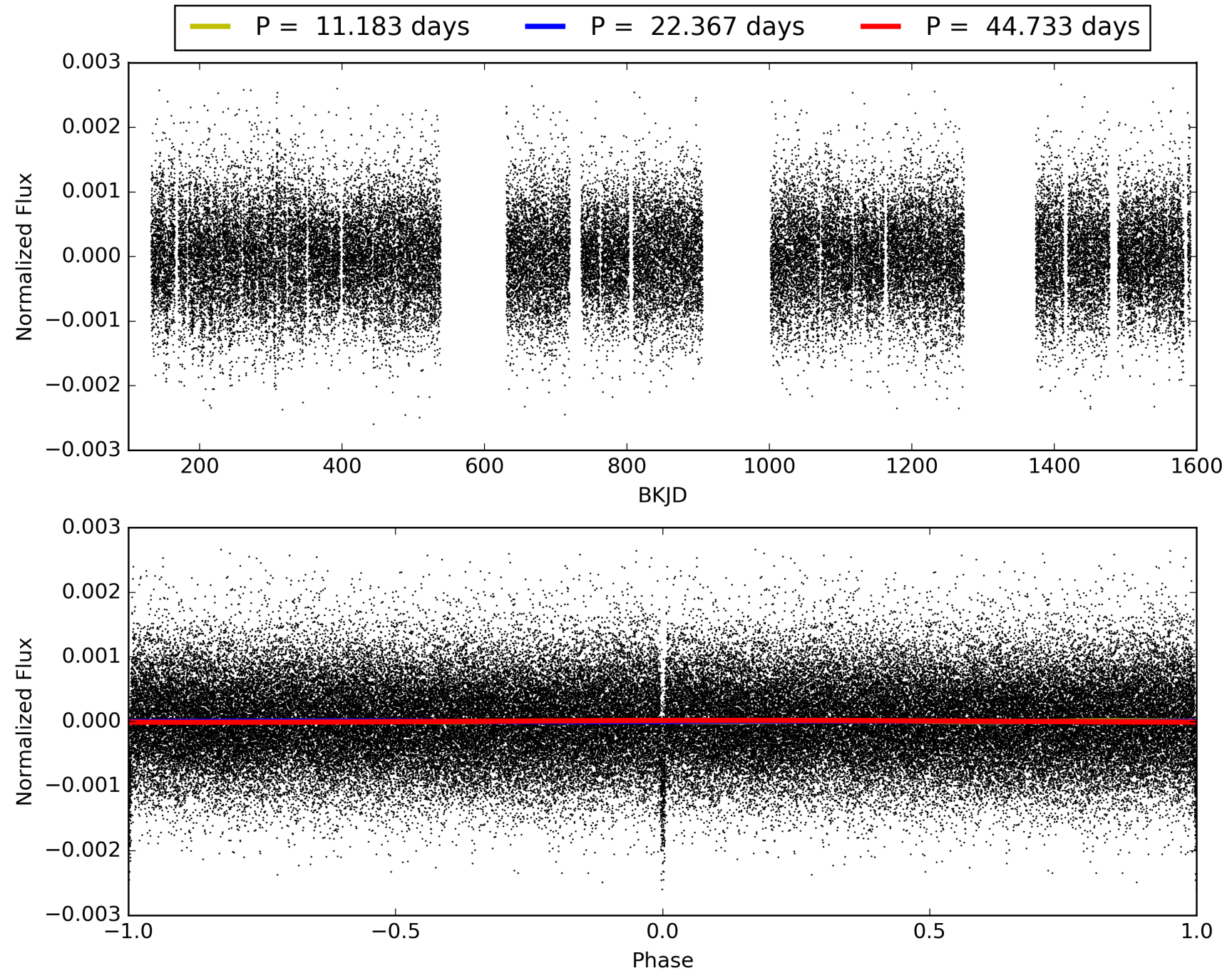
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 11:37:25 Z

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

TCE 004476123-01, PDC Light Curves

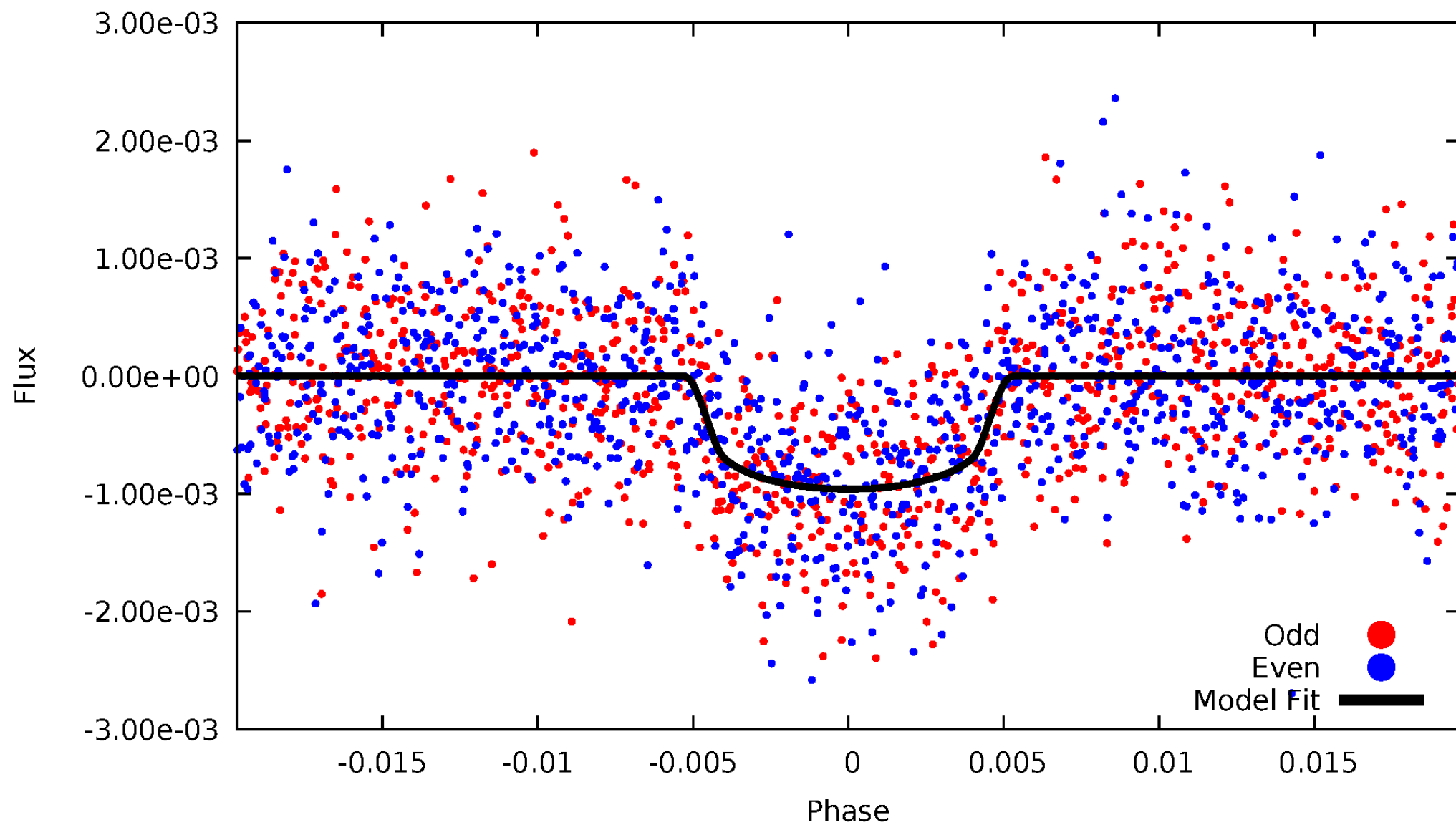


TCE 004476123-01



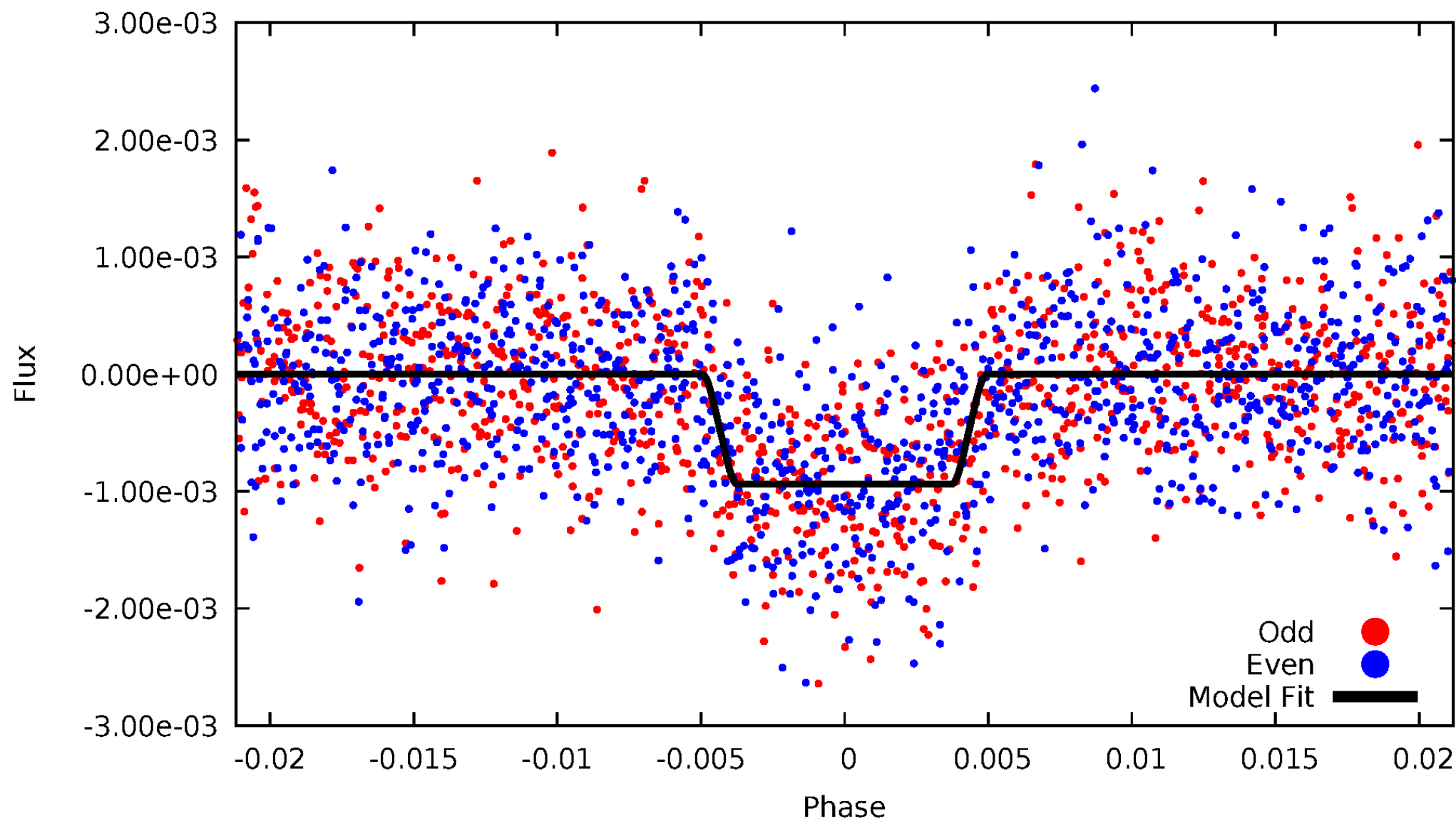
DV Odd/Even

TCE 004476123-01

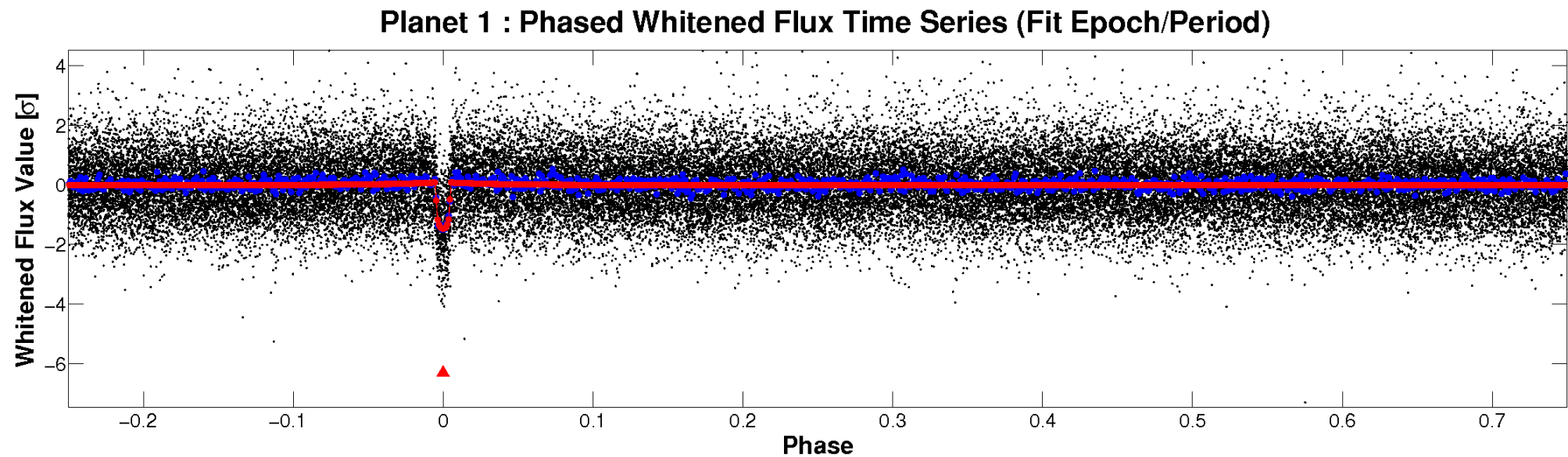
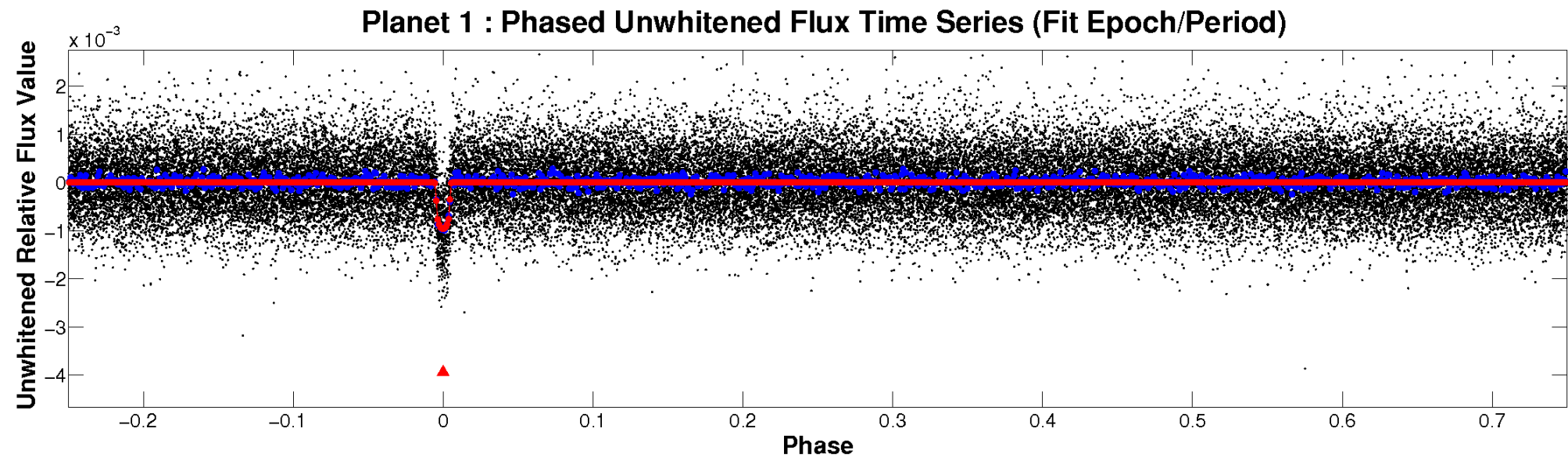


ALT Odd/Even

TCE 004476123-01

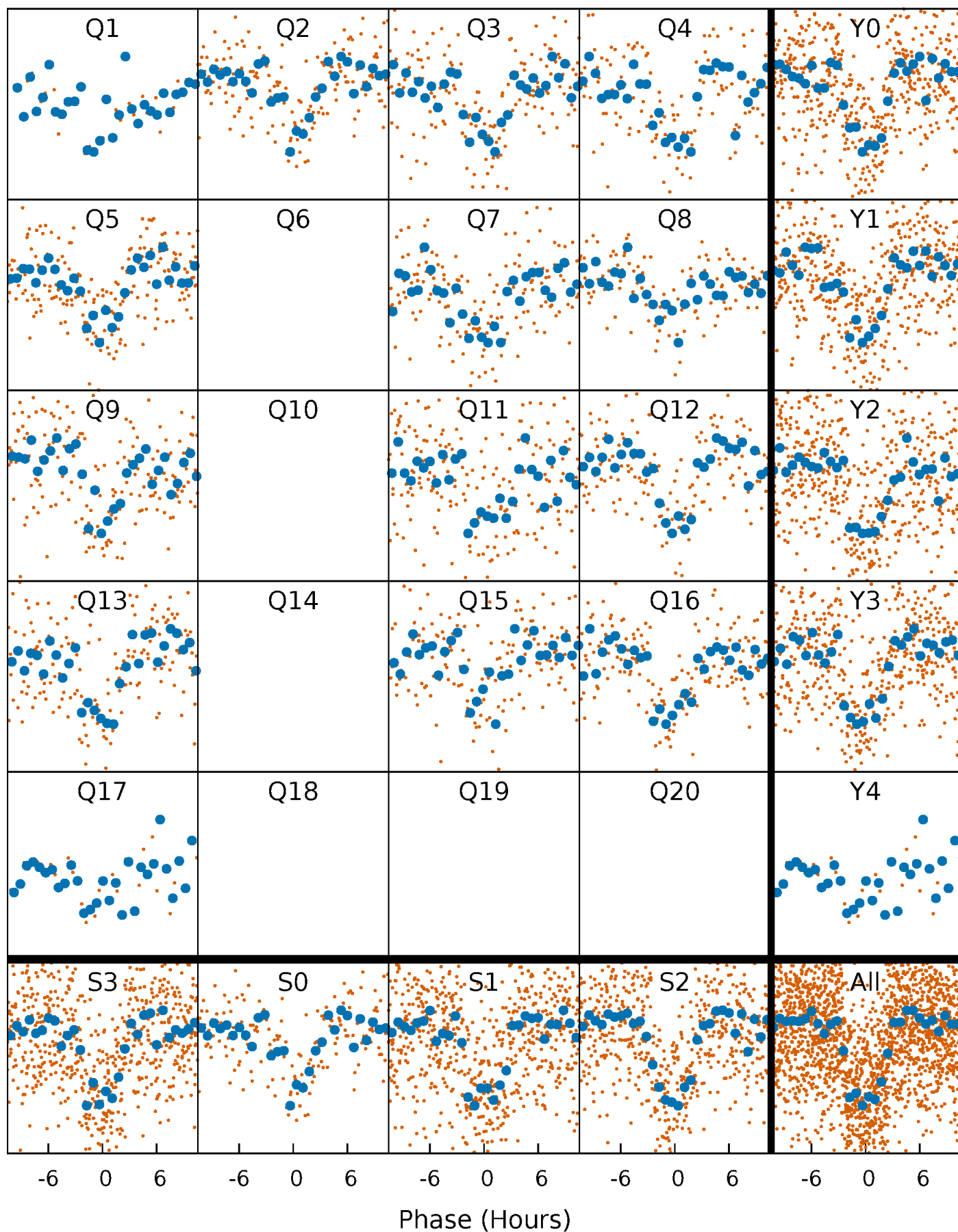


Non-Whitened Vs. Whitened Light Curve



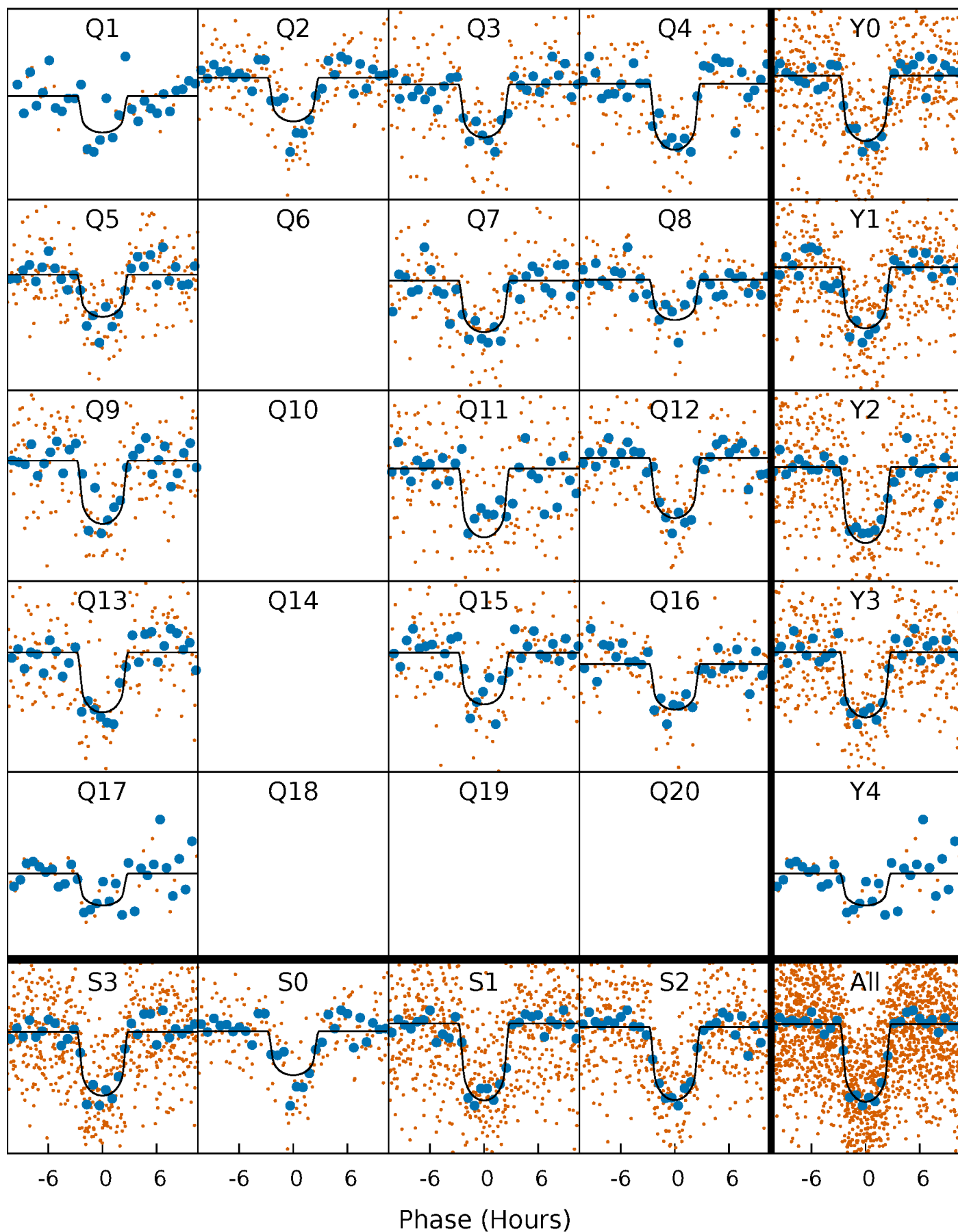
PDC Quarter-Phased Transit Curves

TCE 004476123-01 P= 22.366552 Days $T_0=153.090179$ (BKJD)



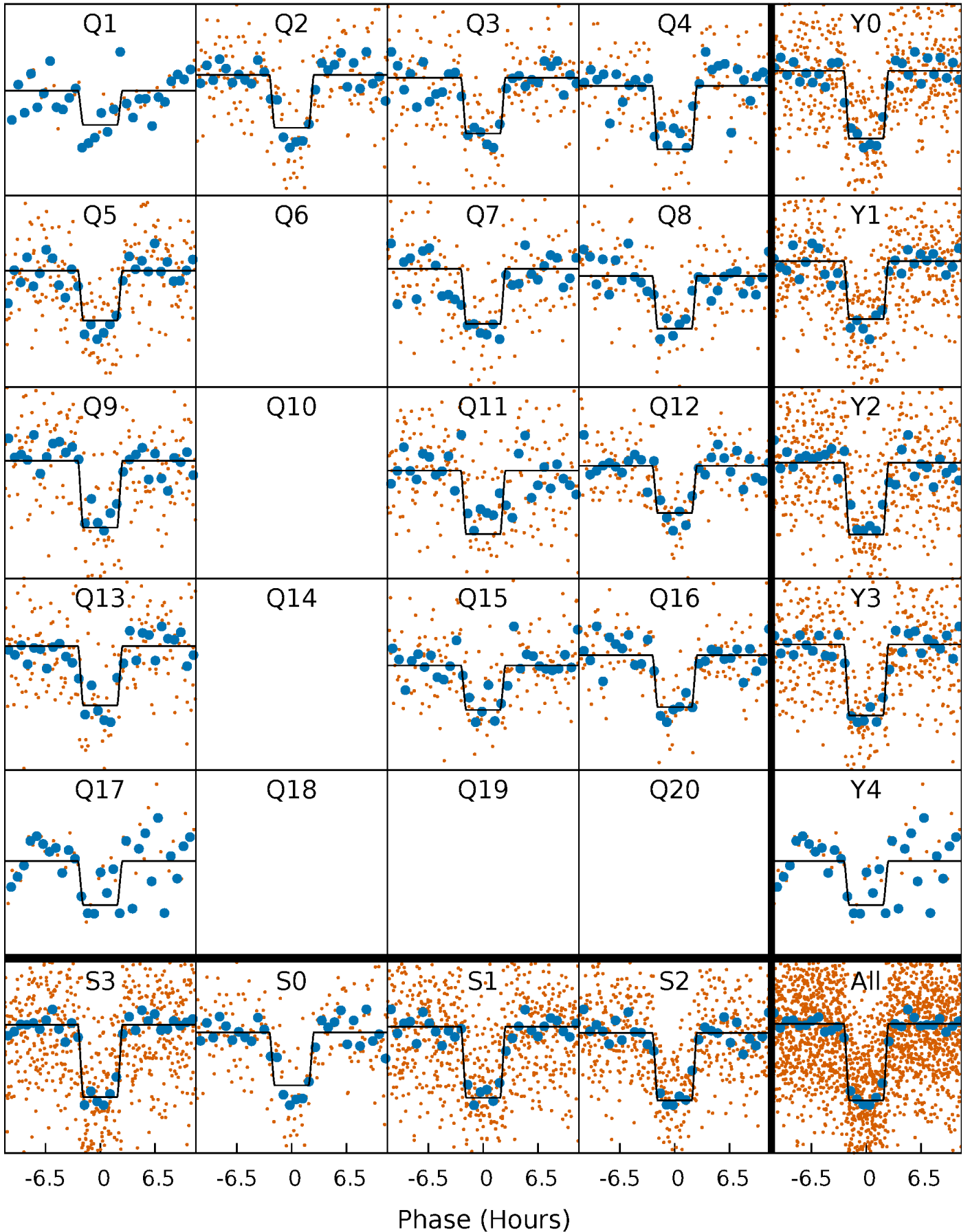
DV Quarter-Phased Transit Curves

TCE 004476123-01 P= 22.366552 Days $T_0=153.090179$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

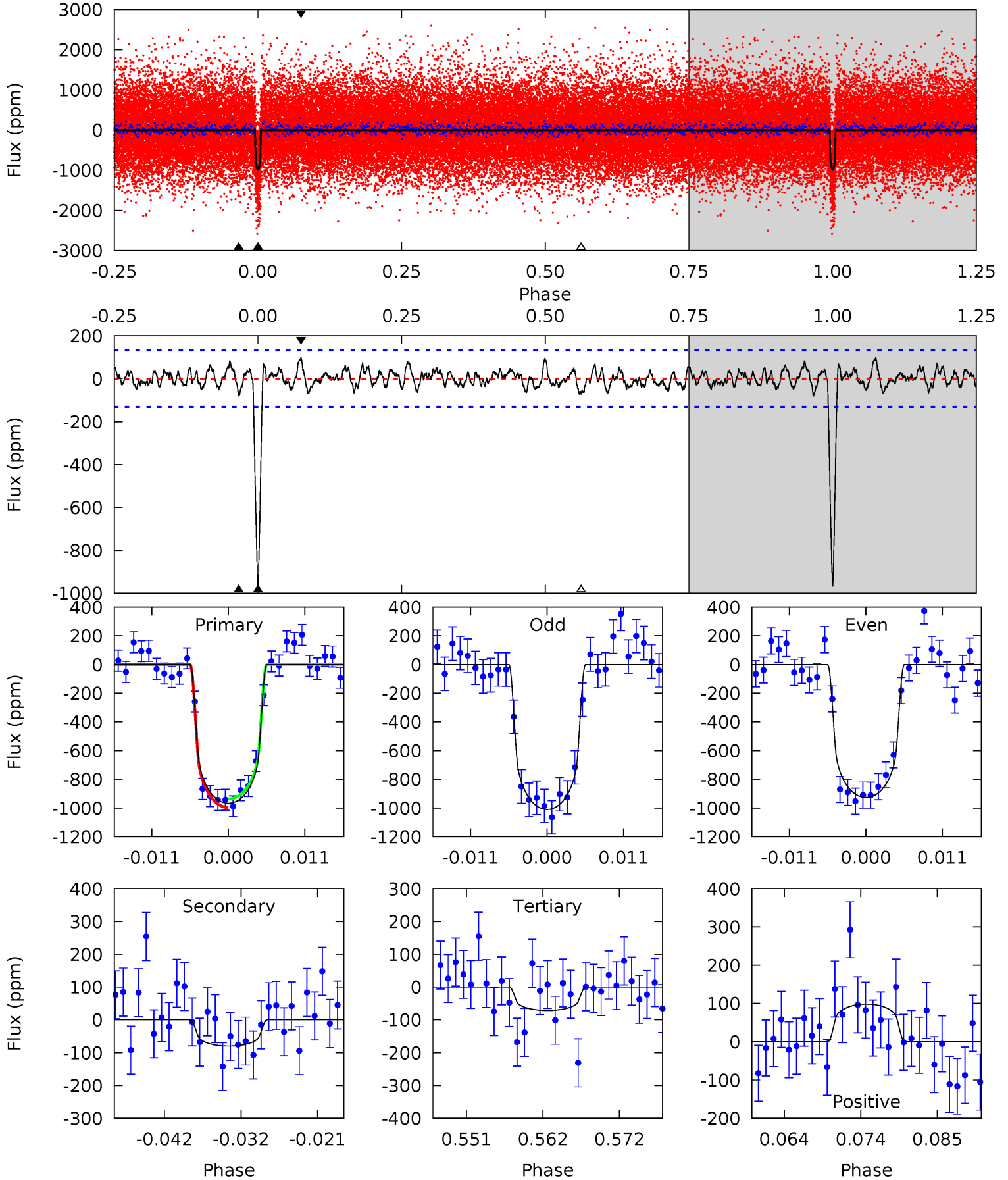
TCE 004476123-01 P= 22.366348 Days $T_0=153.095031$ (BKJD)



DV Model-Shift Uniqueness Test

004476123-01, P = 22.366552 Days, E = 130.723627 Days

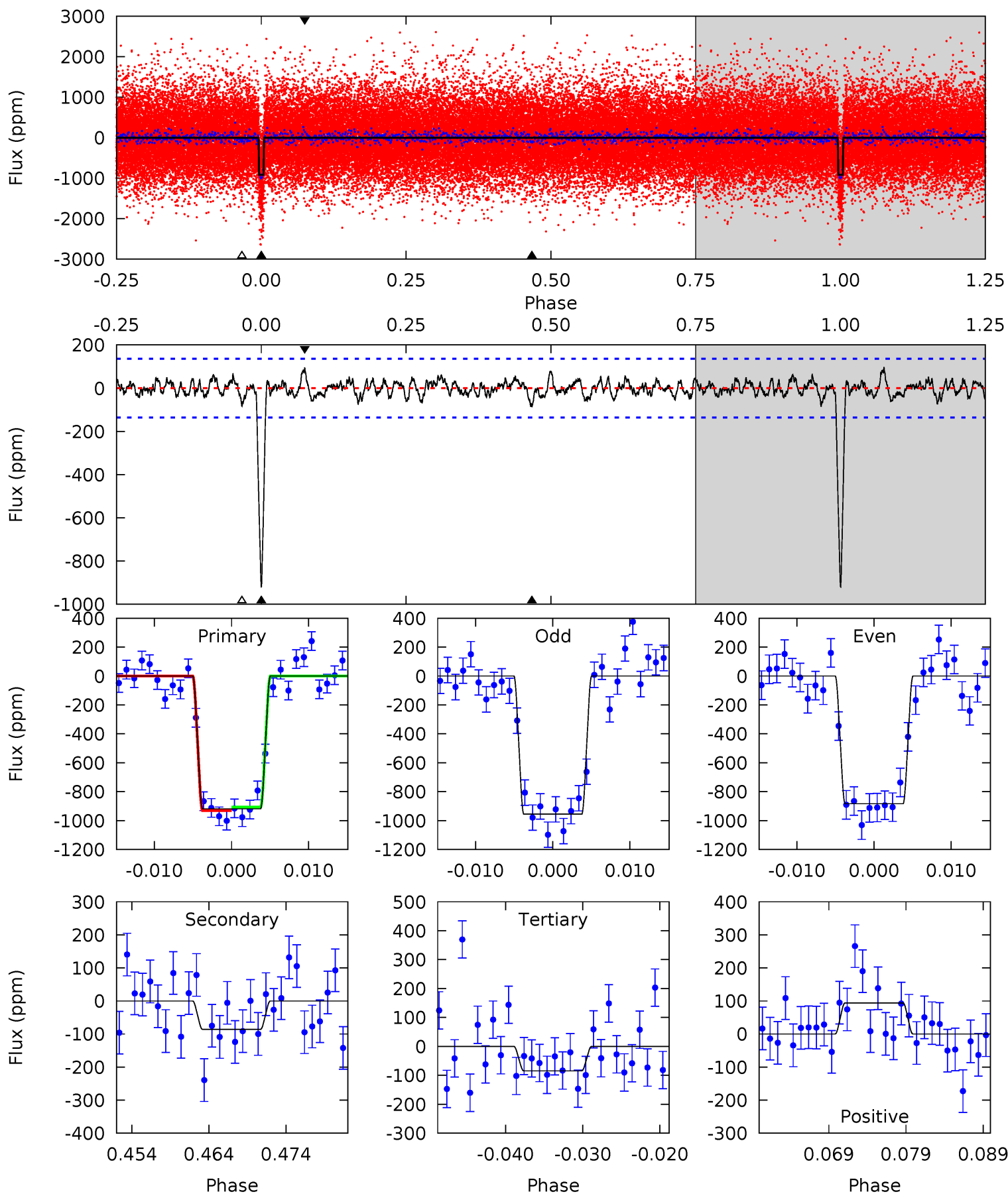
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.8	3.04	2.72	3.74	5.02	2.56	1.19	34.1	33.1	0.32	-0.70	1.59	1.00	0.09	1.14



Alt Model-Shift Uniqueness Test

004476123-01, P = 22.366348 Days, E = 130.728683 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.9	3.17	3.12	3.47	5.03	2.58	1.03	30.8	30.5	0.05	-0.30	1.33	0.98	0.09	0.44



Stellar Parameters For KIC 004476123

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5395^{+160}_{-160}	$4.615^{+0.032}_{-0.104}$	$-0.340^{+0.300}_{-0.300}$	$0.734^{+0.122}_{-0.052}$	$0.821^{+0.076}_{-0.093}$	$2.929^{+0.439}_{-0.951}$
	+3%/-3%	+1%/-2%	+88%/-88%	+17%/-7%	+9%/-11%	+15%/-32%
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 004476123-01 / KOI 0814.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-80 ± 26	$2.46^{+0.81}_{-0.75}$	760^{+35}_{-31}	3424^{+491}_{-321}	147^{+178}_{-71}
Alt.	-86 ± 27	$2.55^{+0.78}_{-0.73}$	759^{+35}_{-28}	3448^{+414}_{-333}	152^{+155}_{-75}

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 $A_{obs} \gg 1.0$

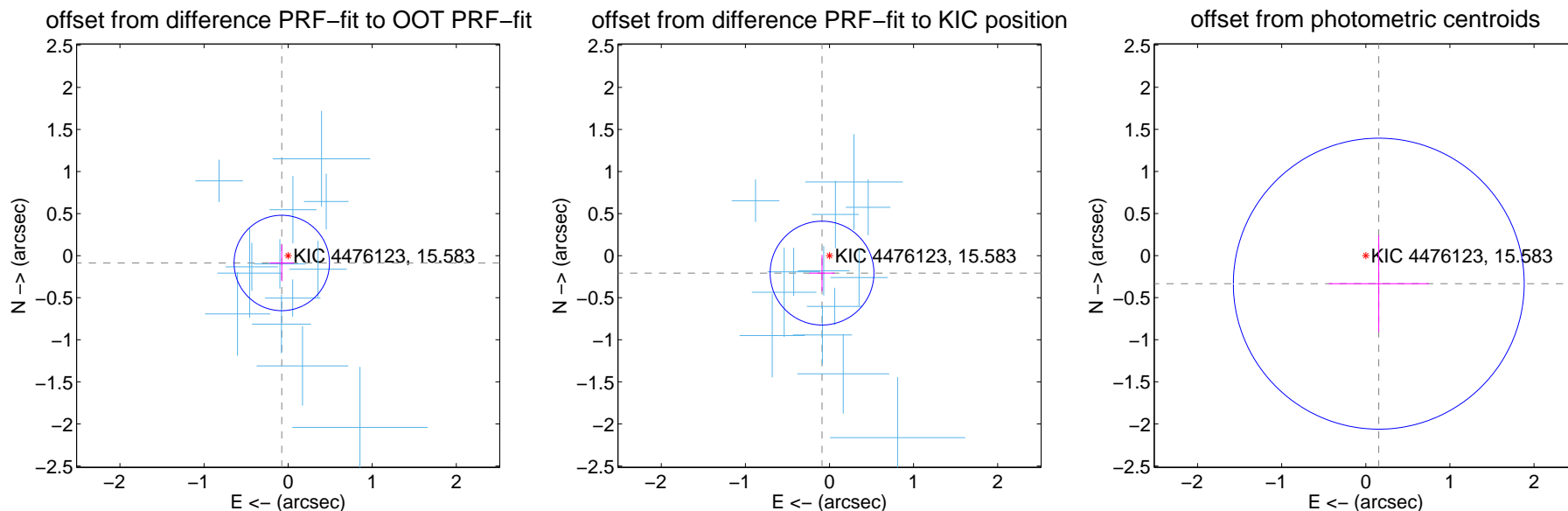
DV Centroid Data

Supplemental centroid analysis for 004476123-01. Kepler magnitude: 15.58. Transit SNR 27.70

There are 13 quarters with good PRF difference image offsets

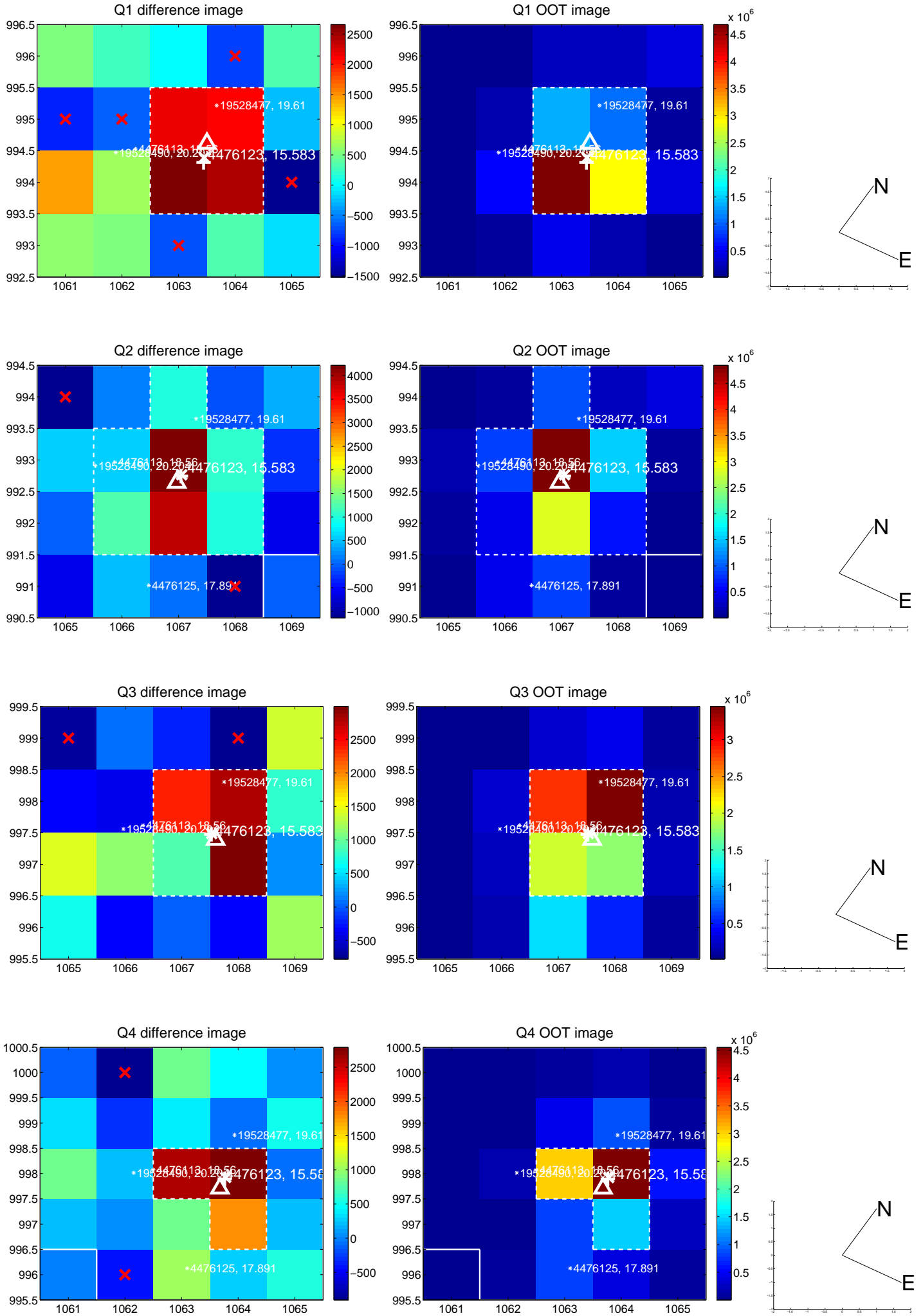
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.115 ± 0.189	0.61	0.076 ± 0.144	-0.087 ± 0.217
PRF-fit source offset from KIC position	0.225 ± 0.206	1.10	0.088 ± 0.148	-0.207 ± 0.215
photometric centroid source offset	0.37 ± 0.58	0.64	-0.15 ± 0.59	-0.33 ± 0.57

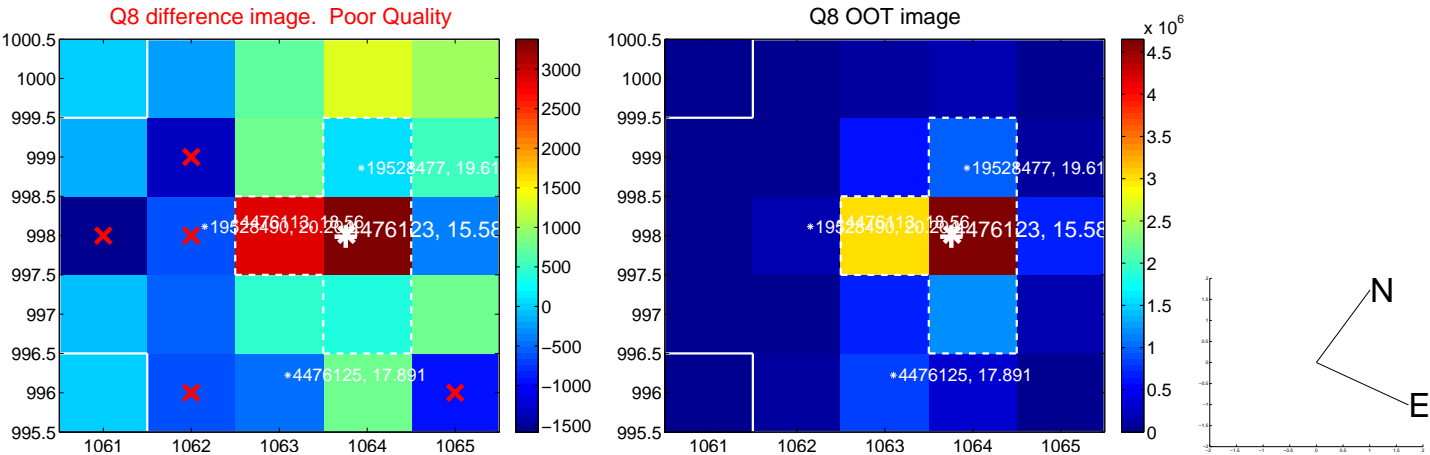
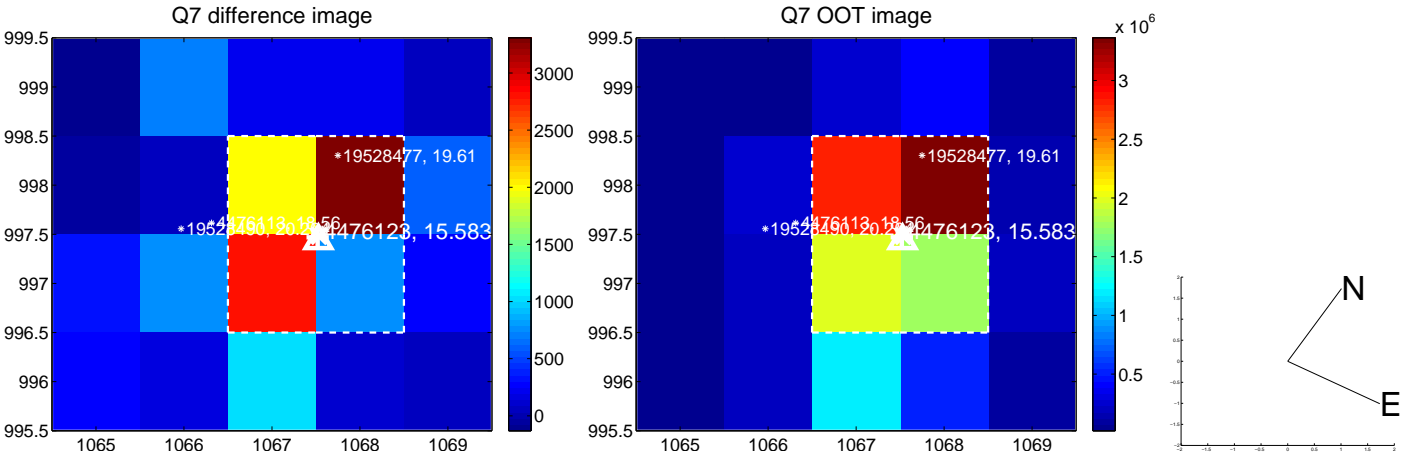
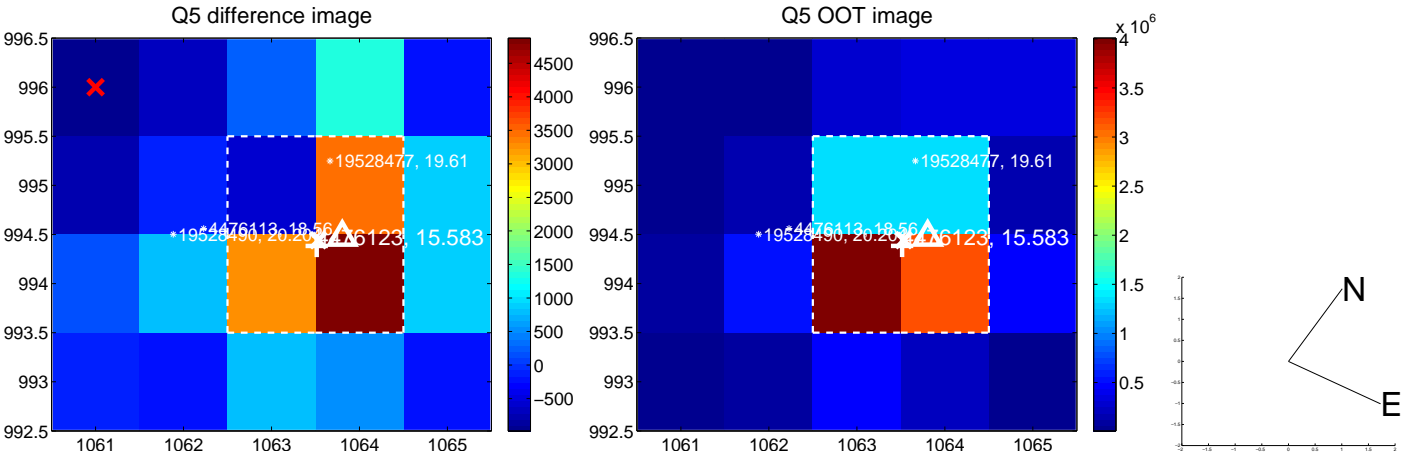


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

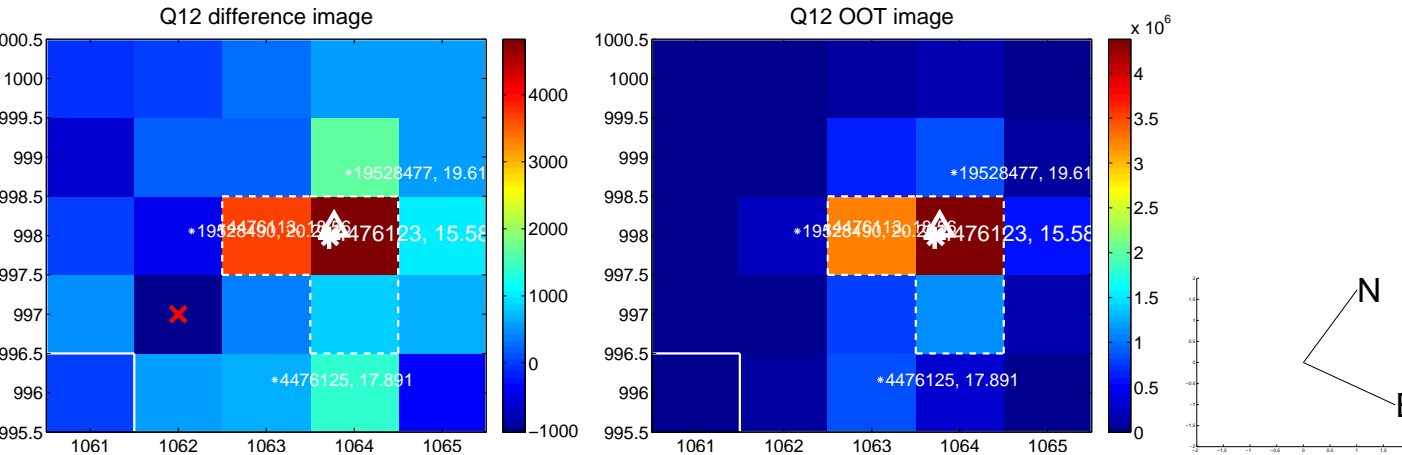
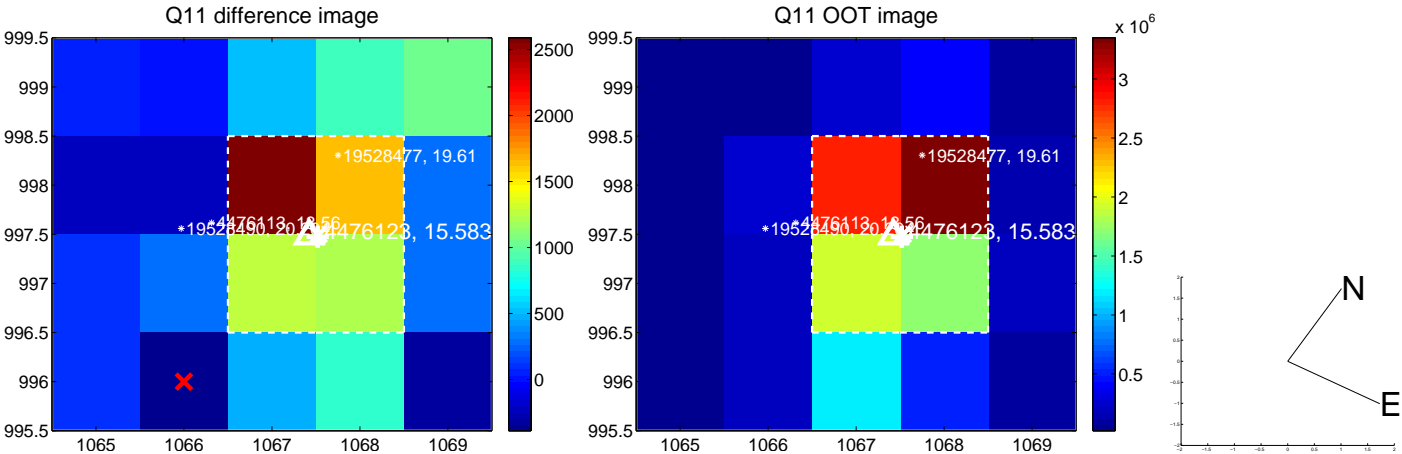
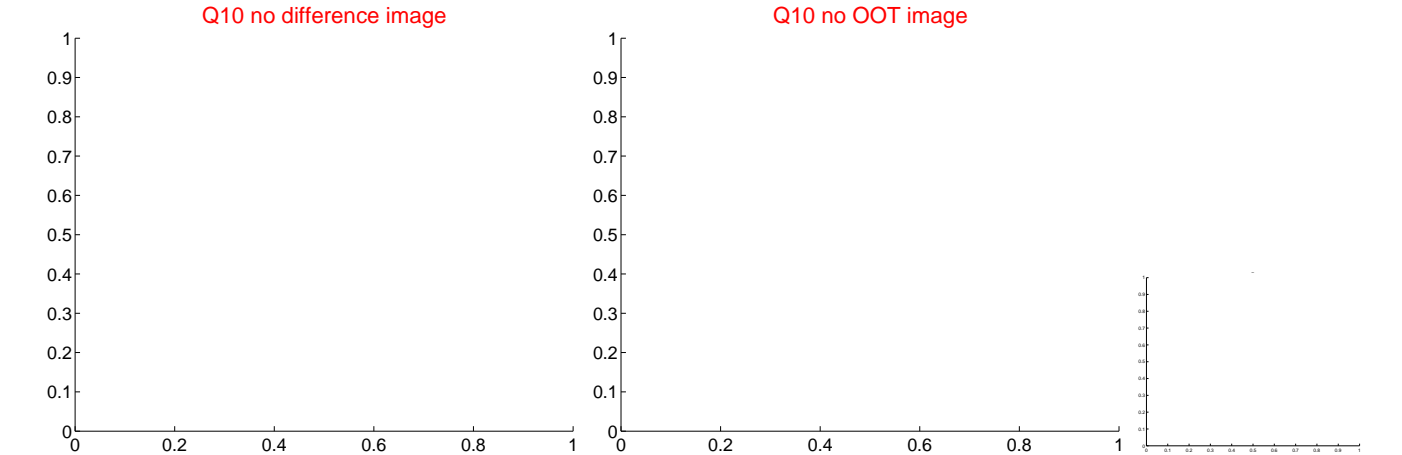
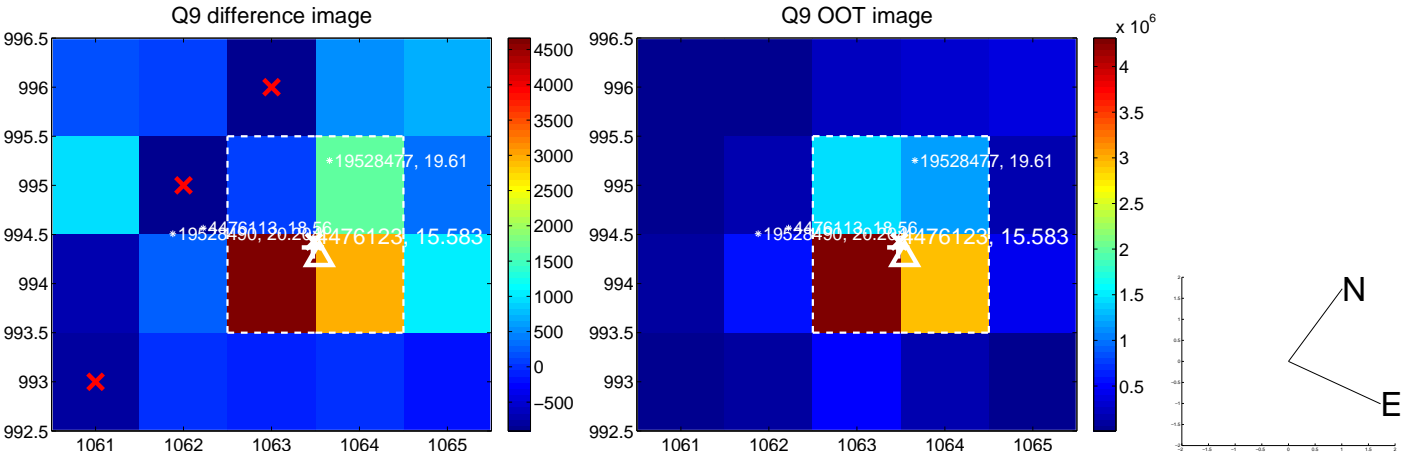
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



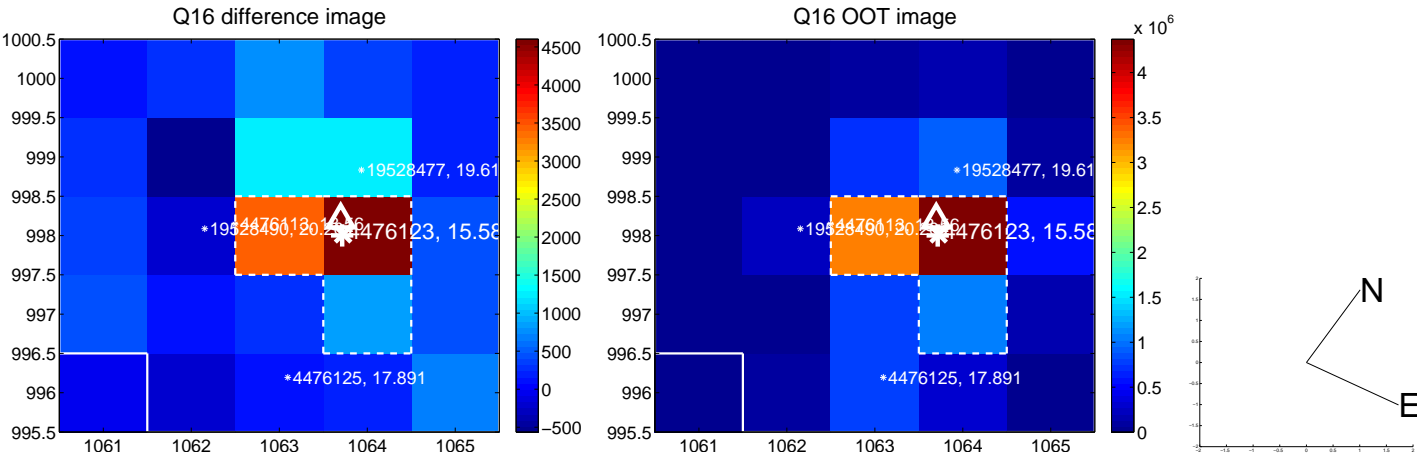
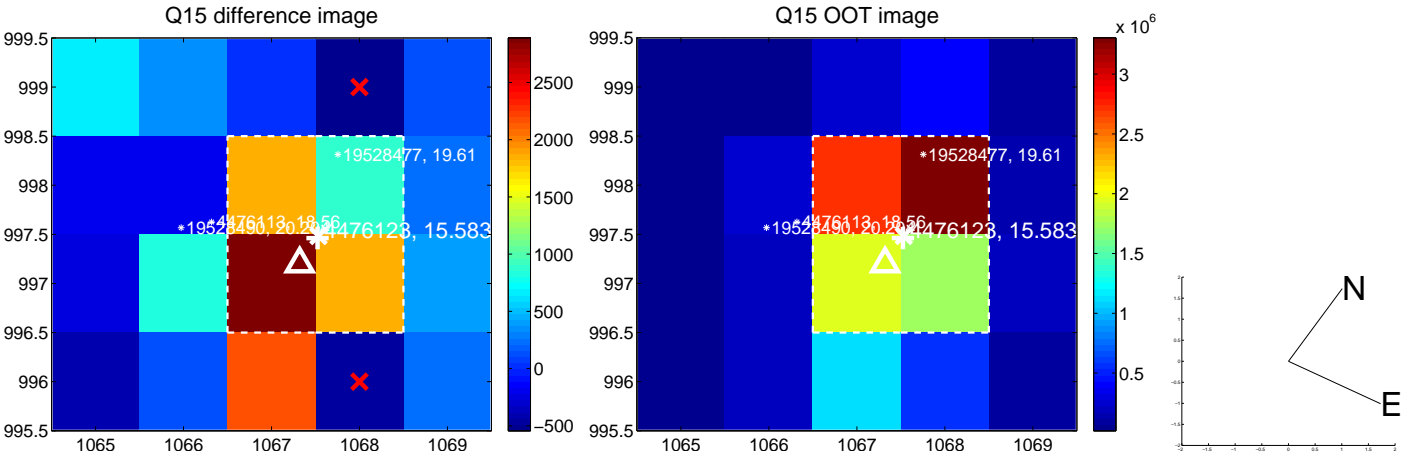
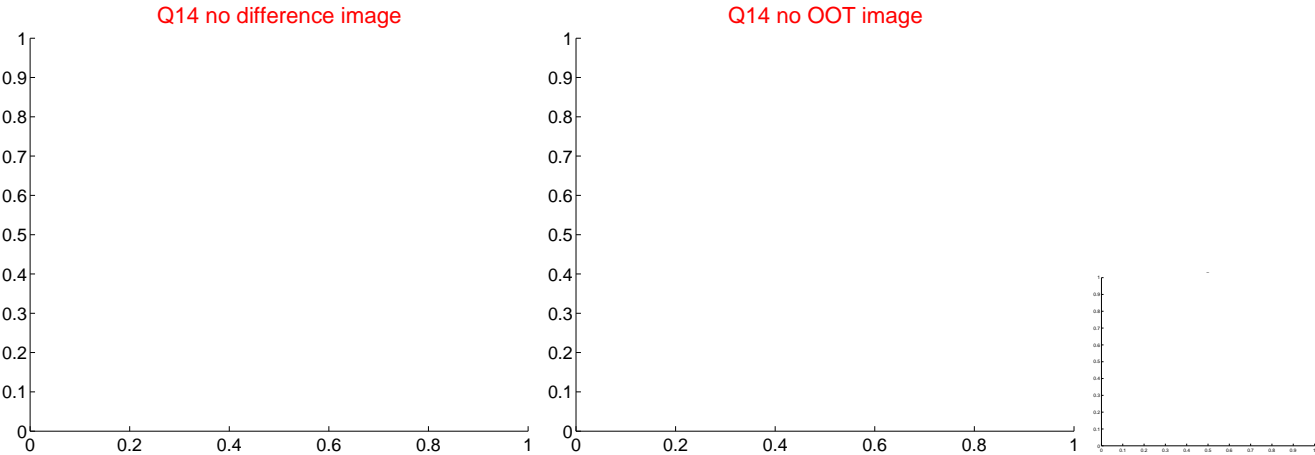
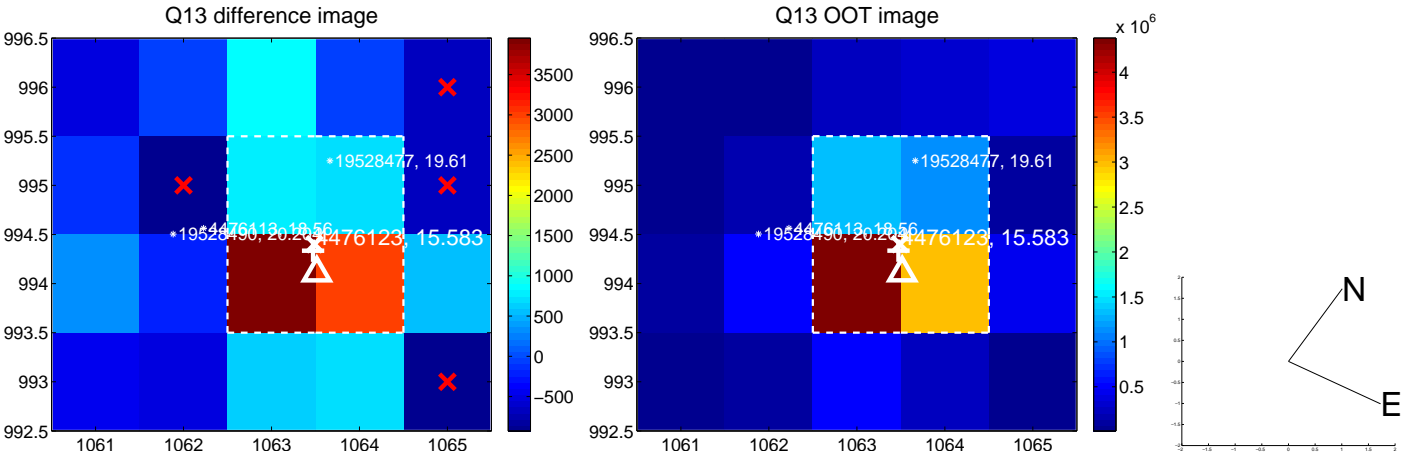
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



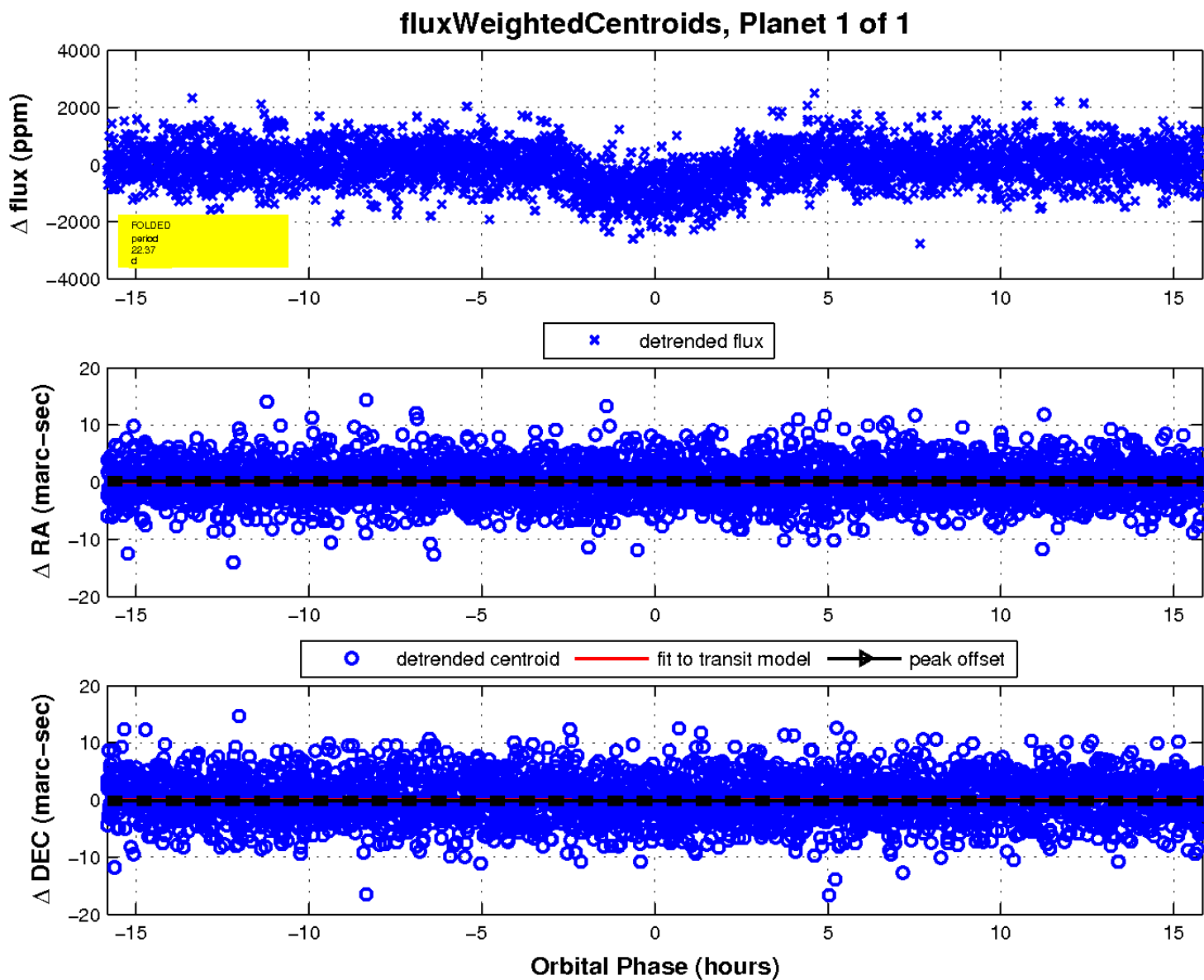
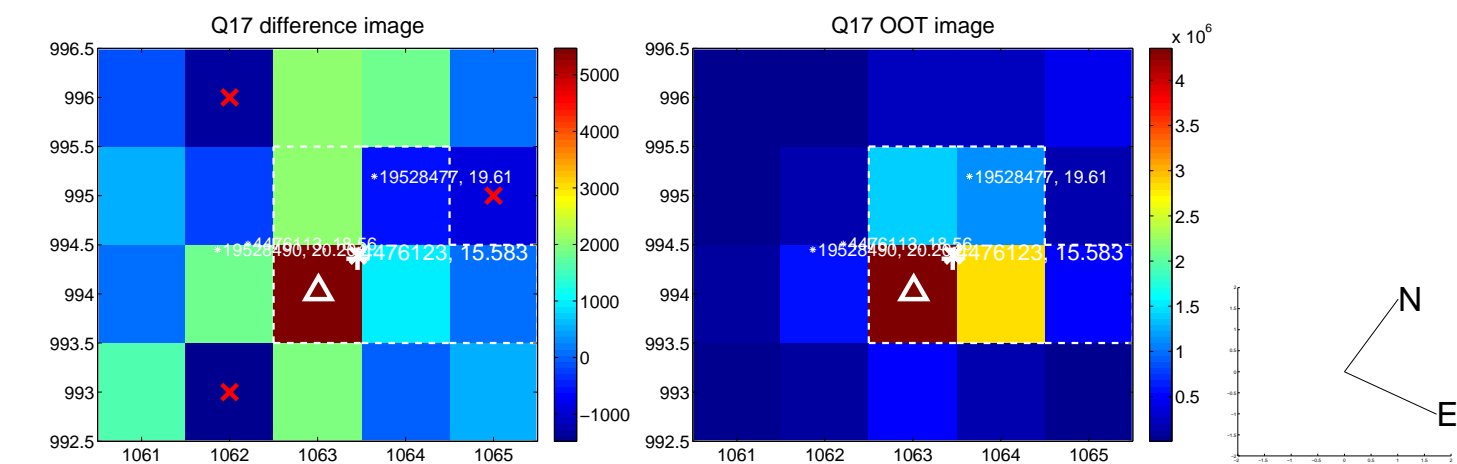
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UKIRT Image

Declination

