

KIC 003120276

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})
003120276-01	OBS	1111.01	10.265487	136.495110	394.1	4.532	17.8	18.0	0.85	5699	2.27	83.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003120276-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH

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 003120276-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
003120276-01	3120276	6307.01	3120320	1:1	36.5	5	8	10.88	15.21	382.82	Direct-PRF	0	0.47	0.20

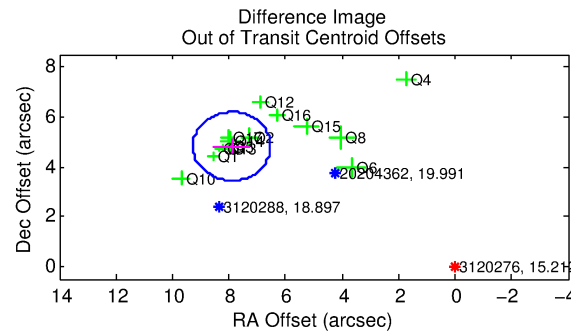
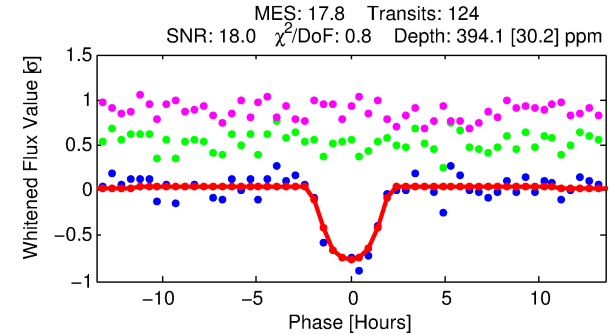
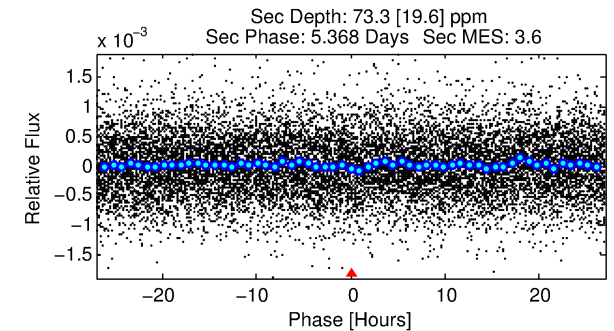
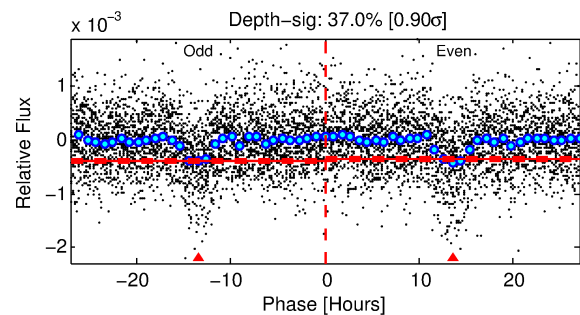
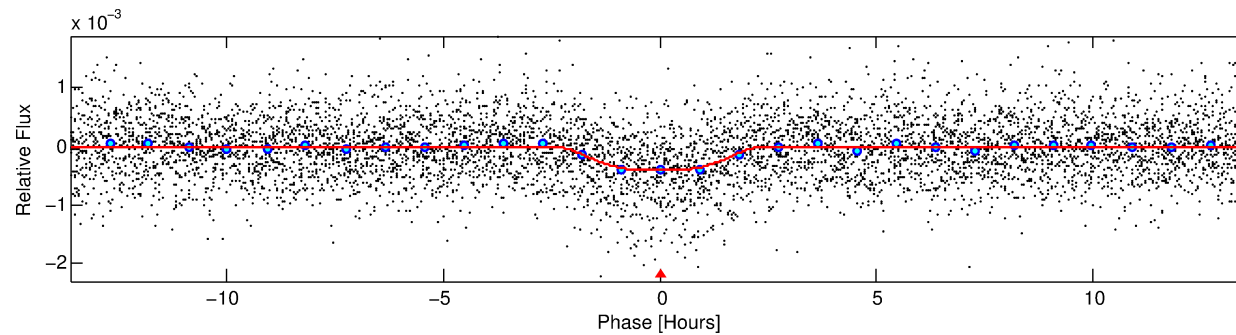
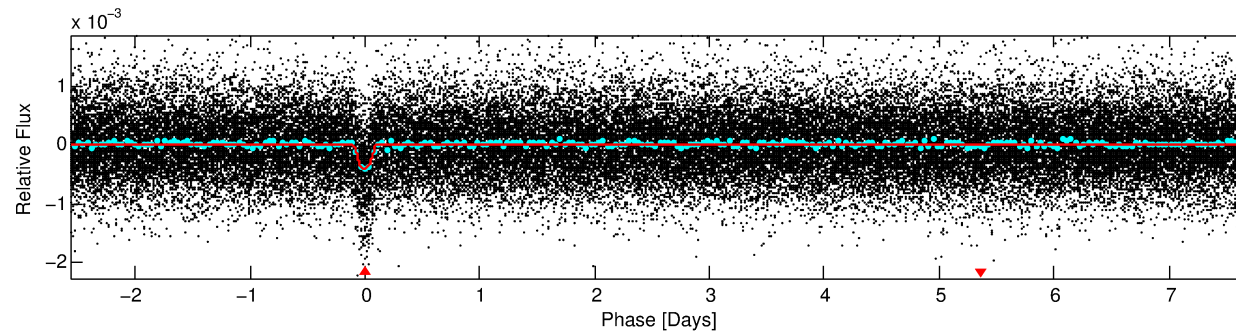
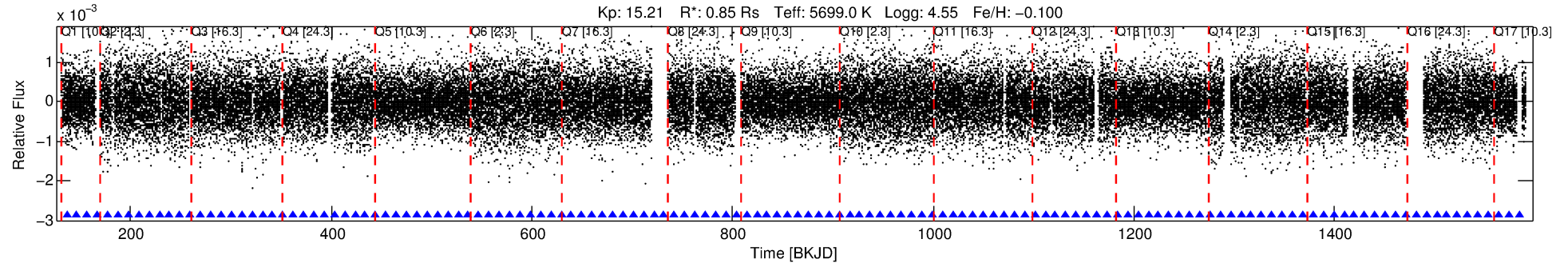
Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 3120276 Candidate: 1 of 1 Period: 10.265 d

KOI: K01111.01 Corr: 0.901

Kp: 15.21 R*: 0.85 Rs Teff: 5699.0 K Logg: 4.55 Fe/H: -0.100



DV Fit Results:

Period = 10.26549 [0.00007] d
Epoch = 136.4951 [0.0058] BKJD
Rp/R* = 0.0244 [0.0015]
a/R* = 5.75 [0.76]
b = 0.97 [0.01]
Seff = 83.35 [30.07]
Teq = 770 [70] K
Rp = 2.27 [0.64] Re
a = 0.0908 [0.0212] AU
Ag = 64.76 [29.11] [2.19σ]
Teffp = 3379 [267] K [9.45σ]

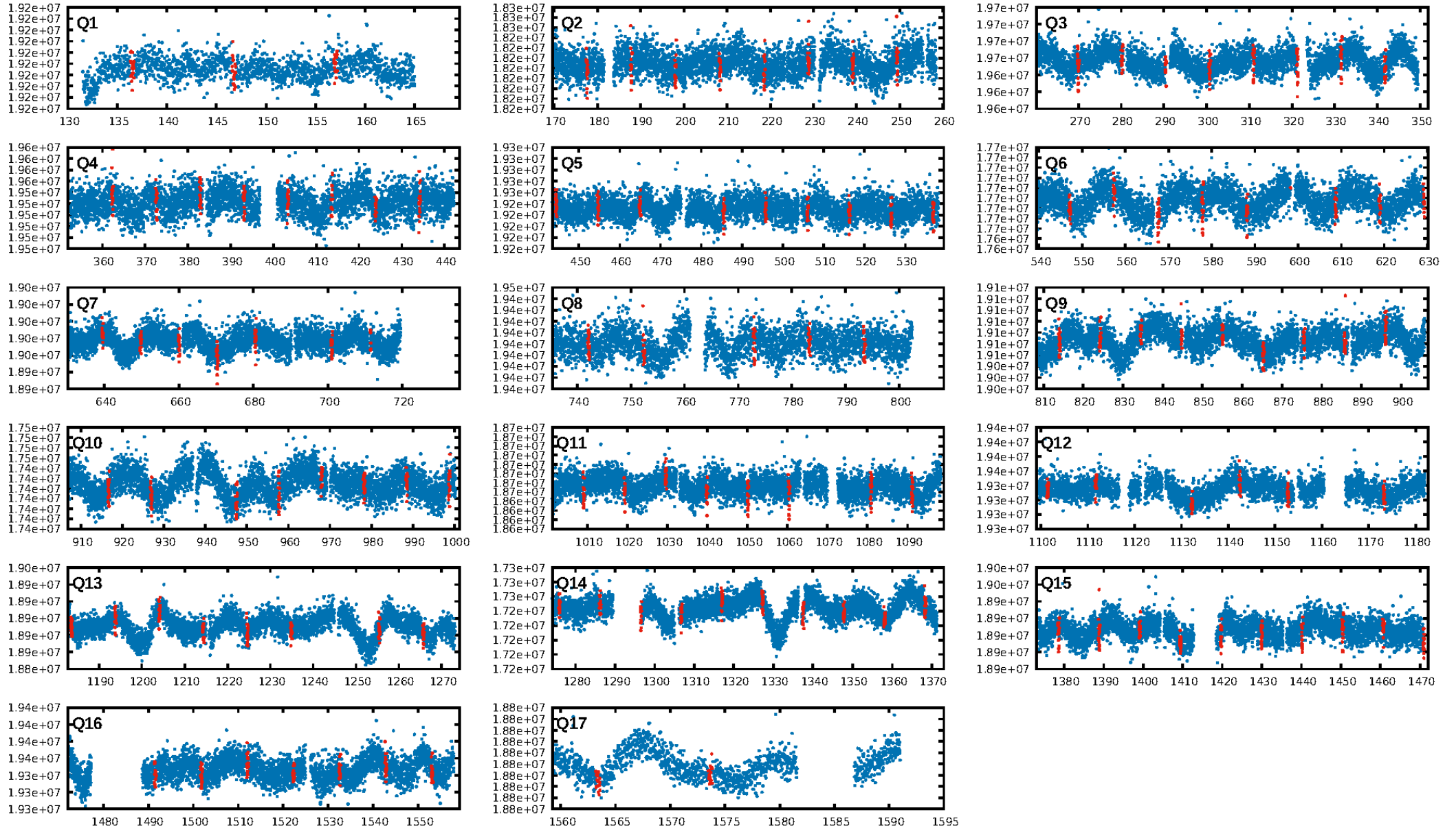
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.35e-72
RollingBand-fgt: 1.00 [119/119]
GhostDiagnostic-chr: -0.146
Centroid-sig: 0.0%
Centroid-so: 7.264 arcsec [9.09σ]
OotOffset-rm: 9.251 arcsec [20.19σ]
KicOffset-rm: 9.210 arcsec [22.78σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.36 [5/14]
DiffImageOverlap-fno: 1.00 [17/17]

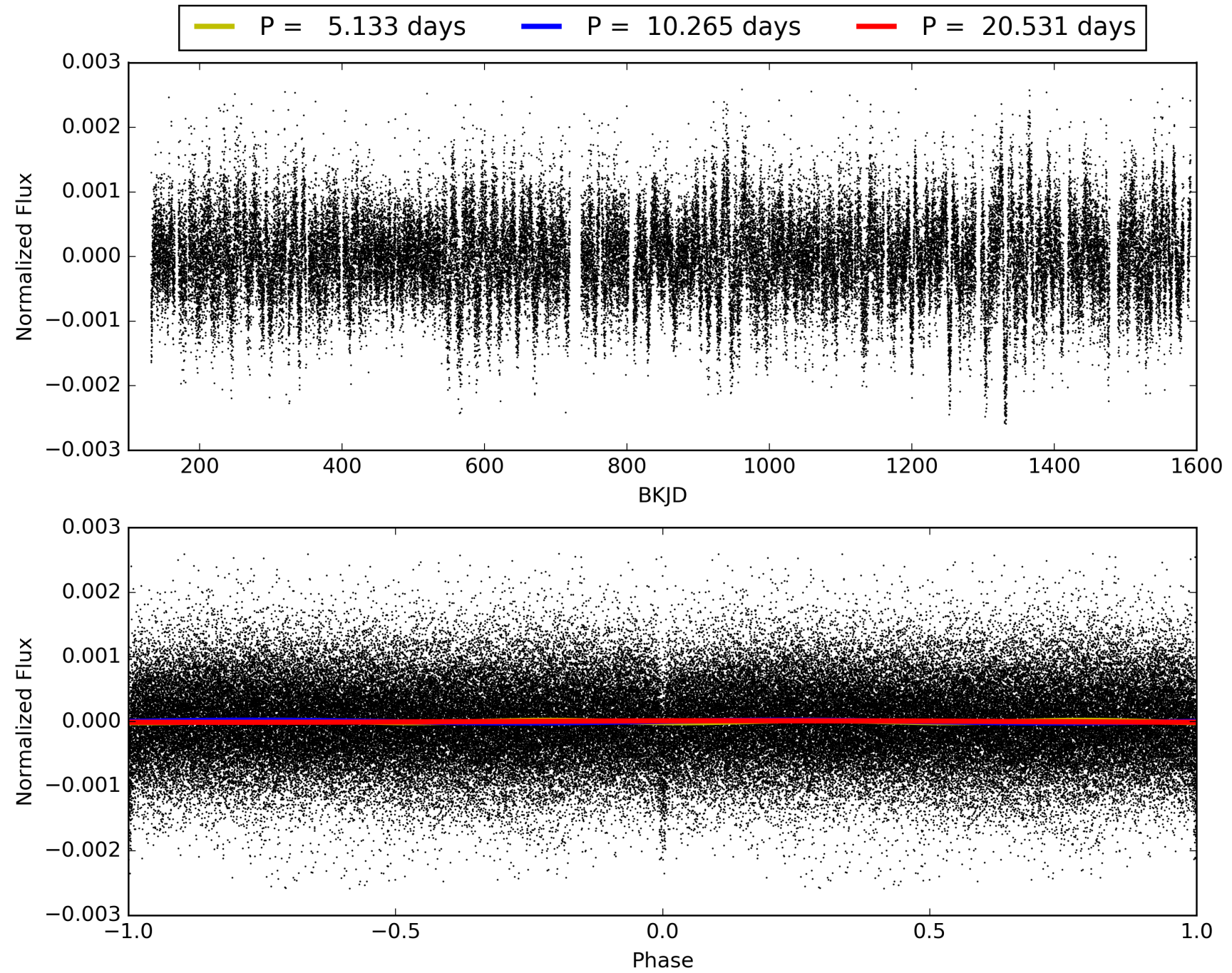
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:34:30 Z

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

TCE 003120276-01, PDC Light Curves

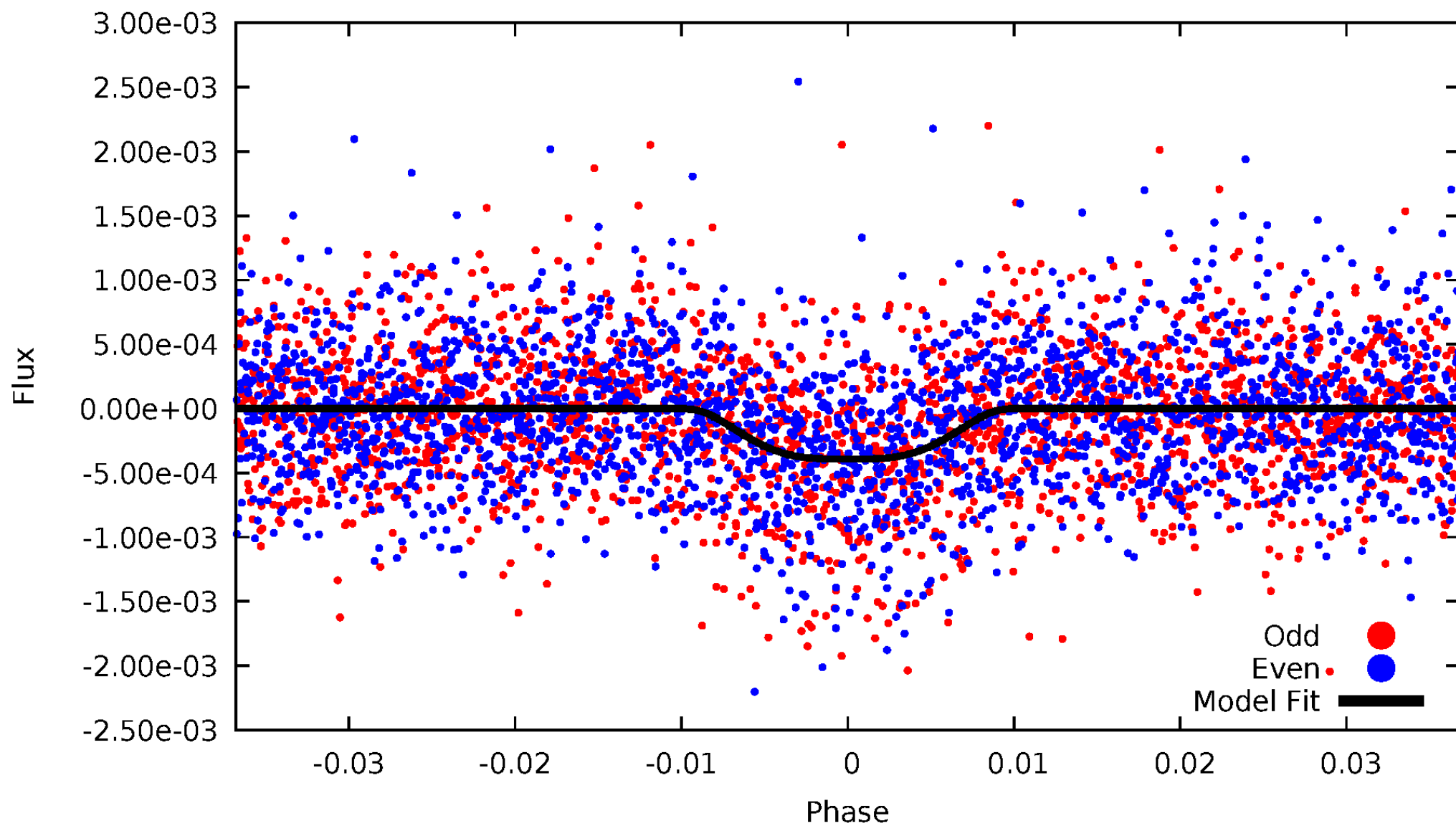


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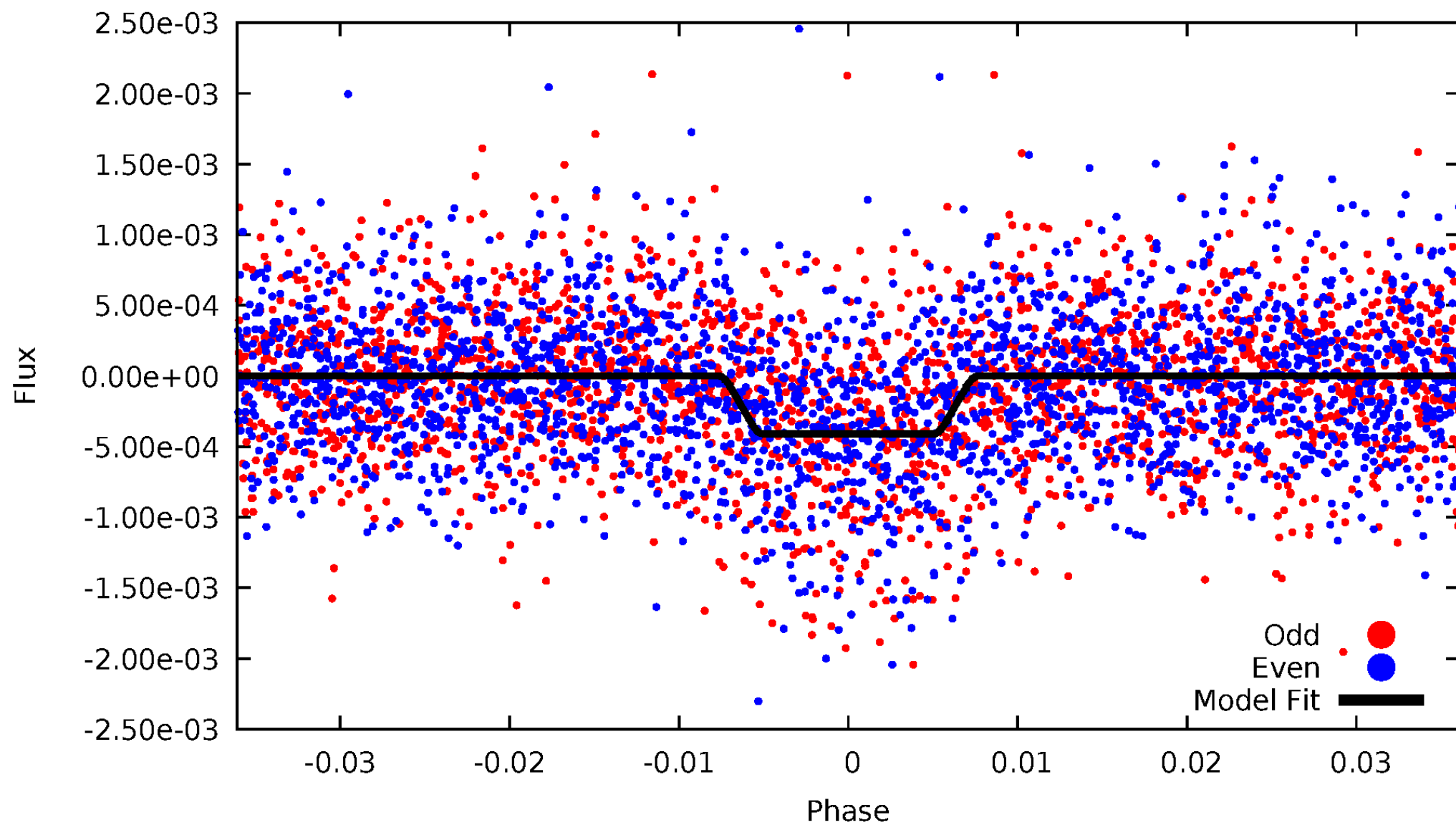
DV Odd/Even

TCE 003120276-01



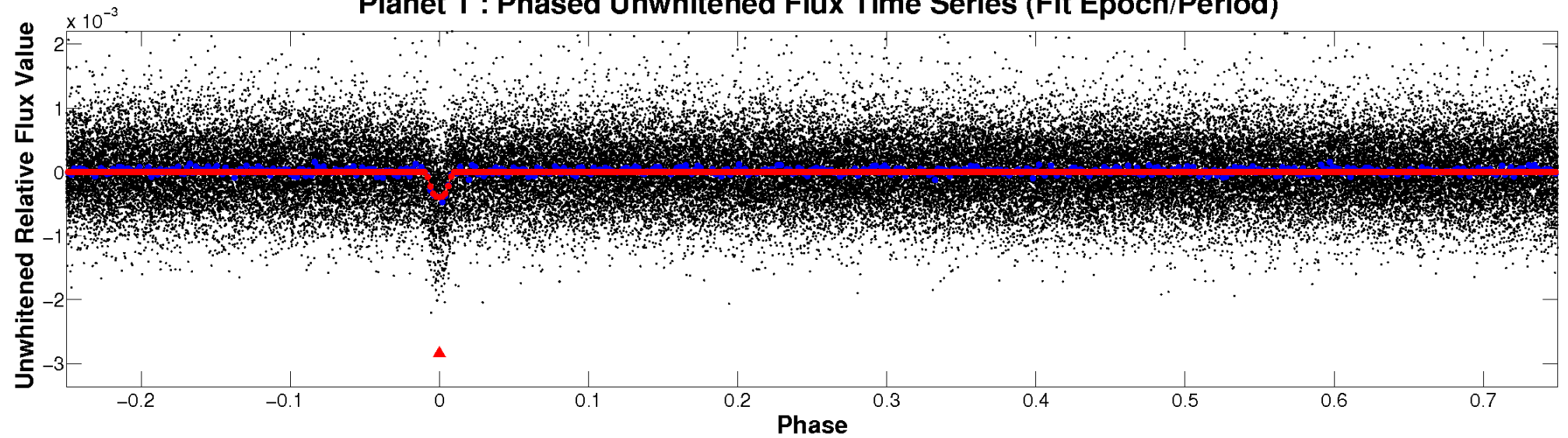
ALT Odd/Even

TCE 003120276-01

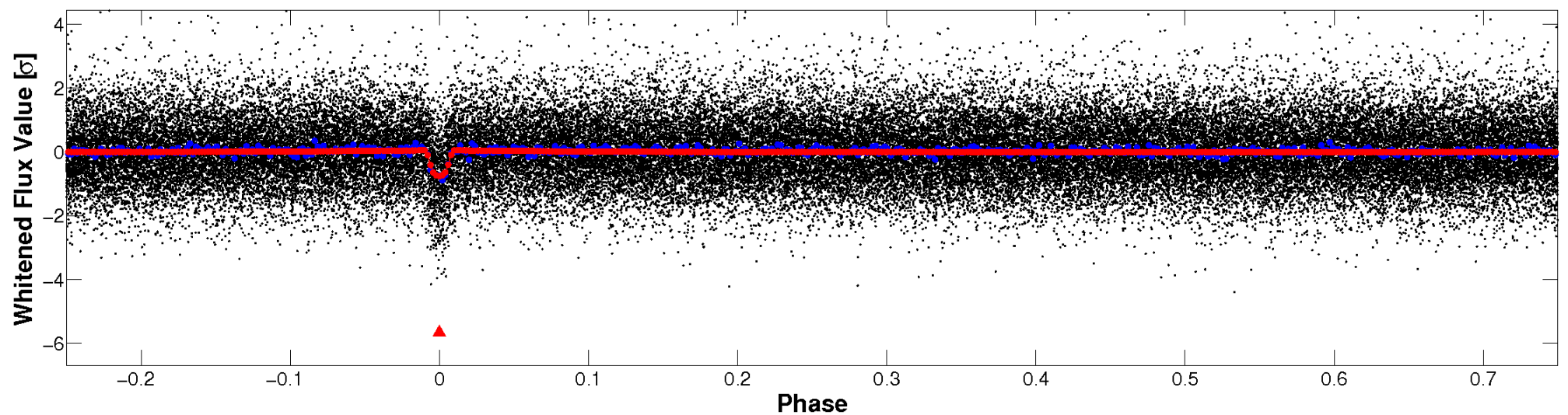


Non-Whitened Vs. Whitened Light Curve

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

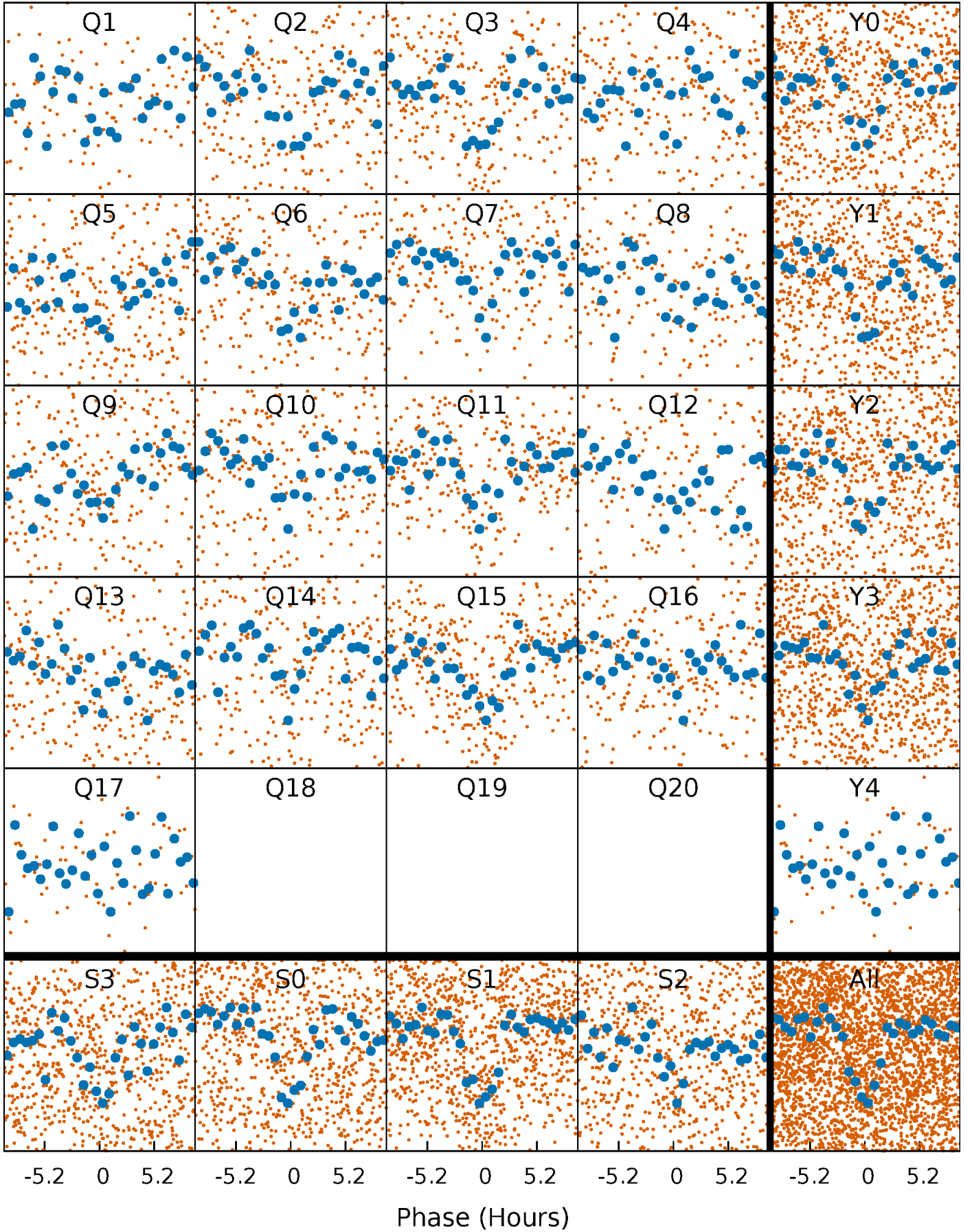


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



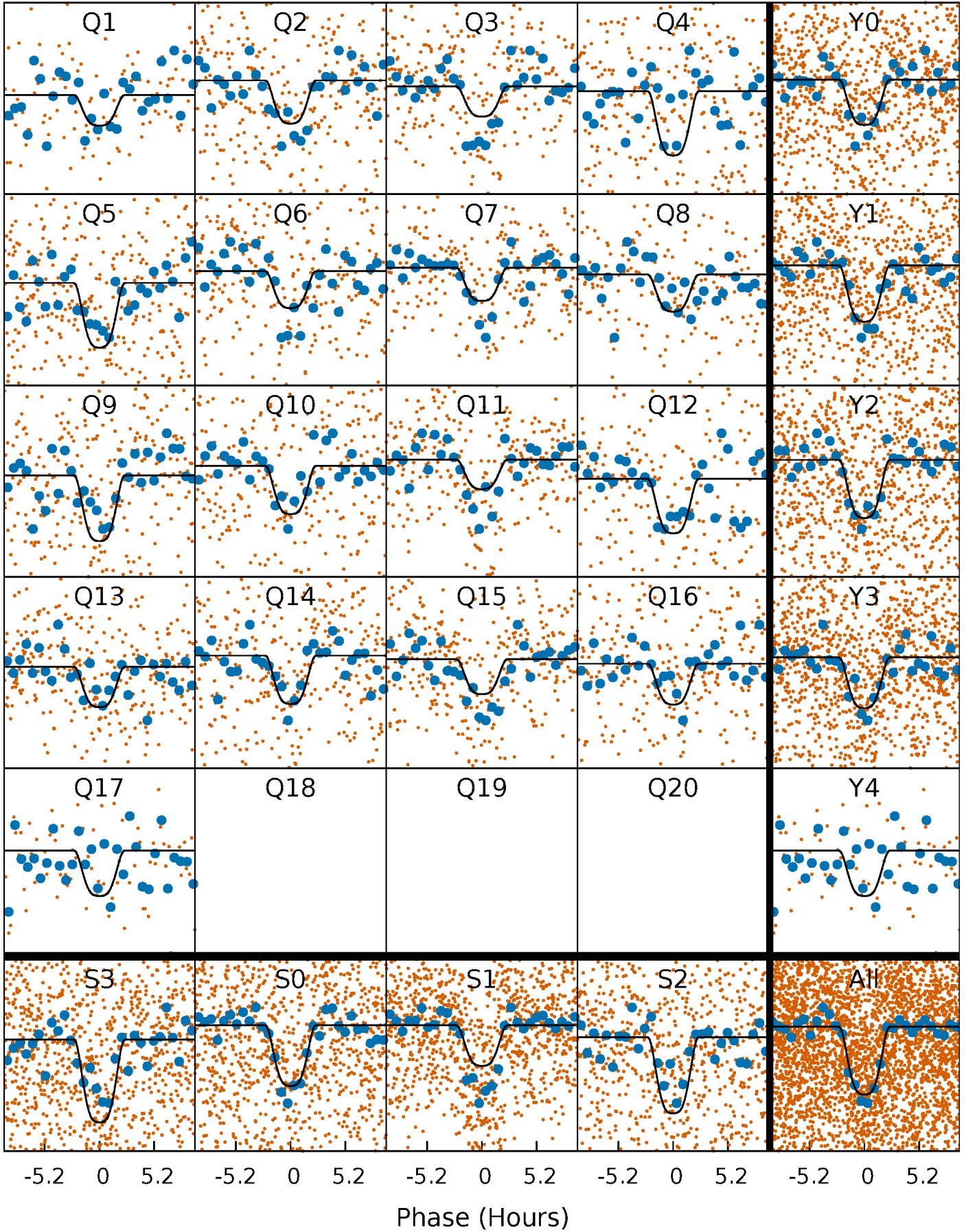
PDC Quarter-Phased Transit Curves

TCE 003120276-01 P= 10.265487 Days $T_0=136.495110$ (BKJD)



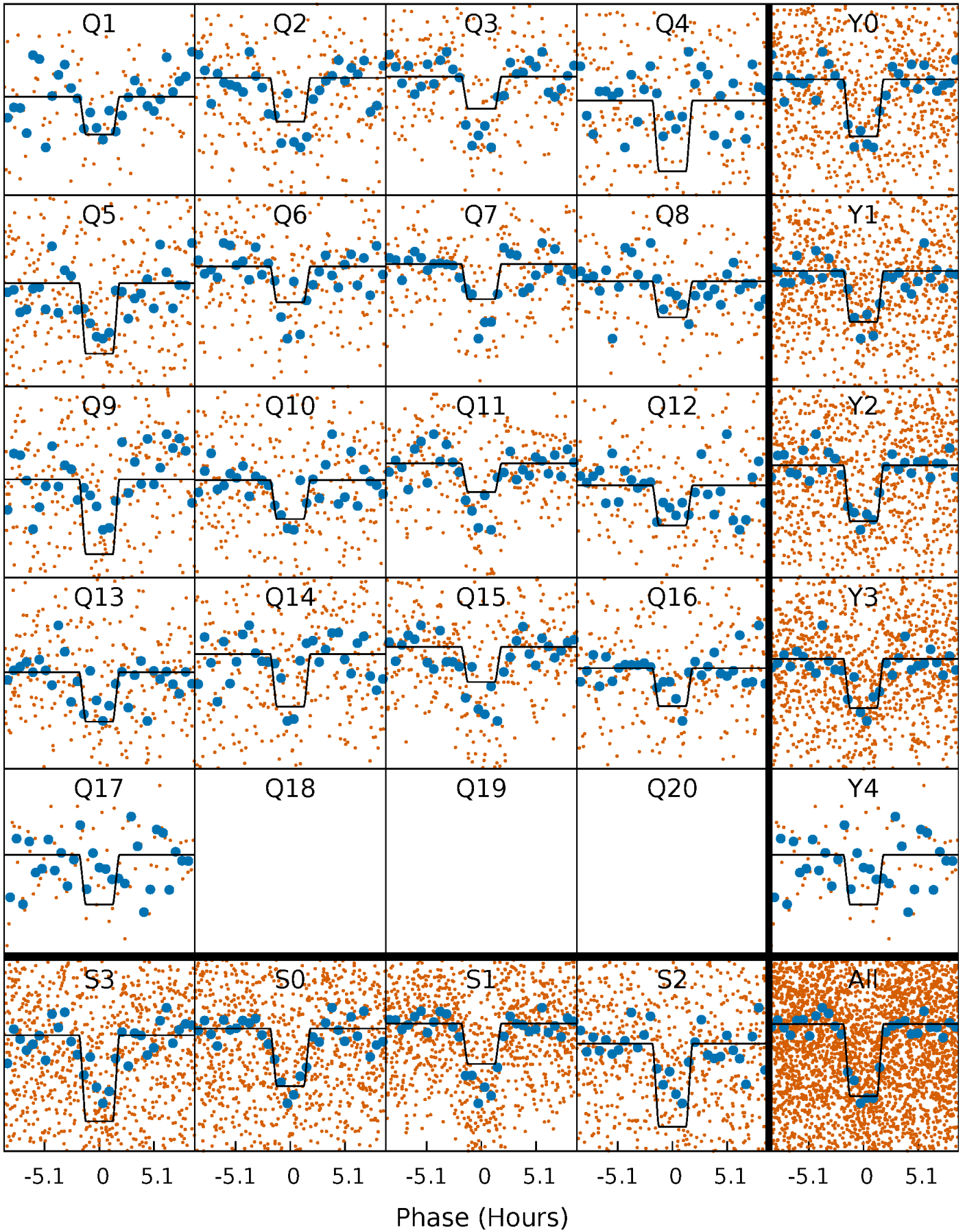
DV Quarter-Phased Transit Curves

TCE 003120276-01 P= 10.265487 Days $T_0=136.495110$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

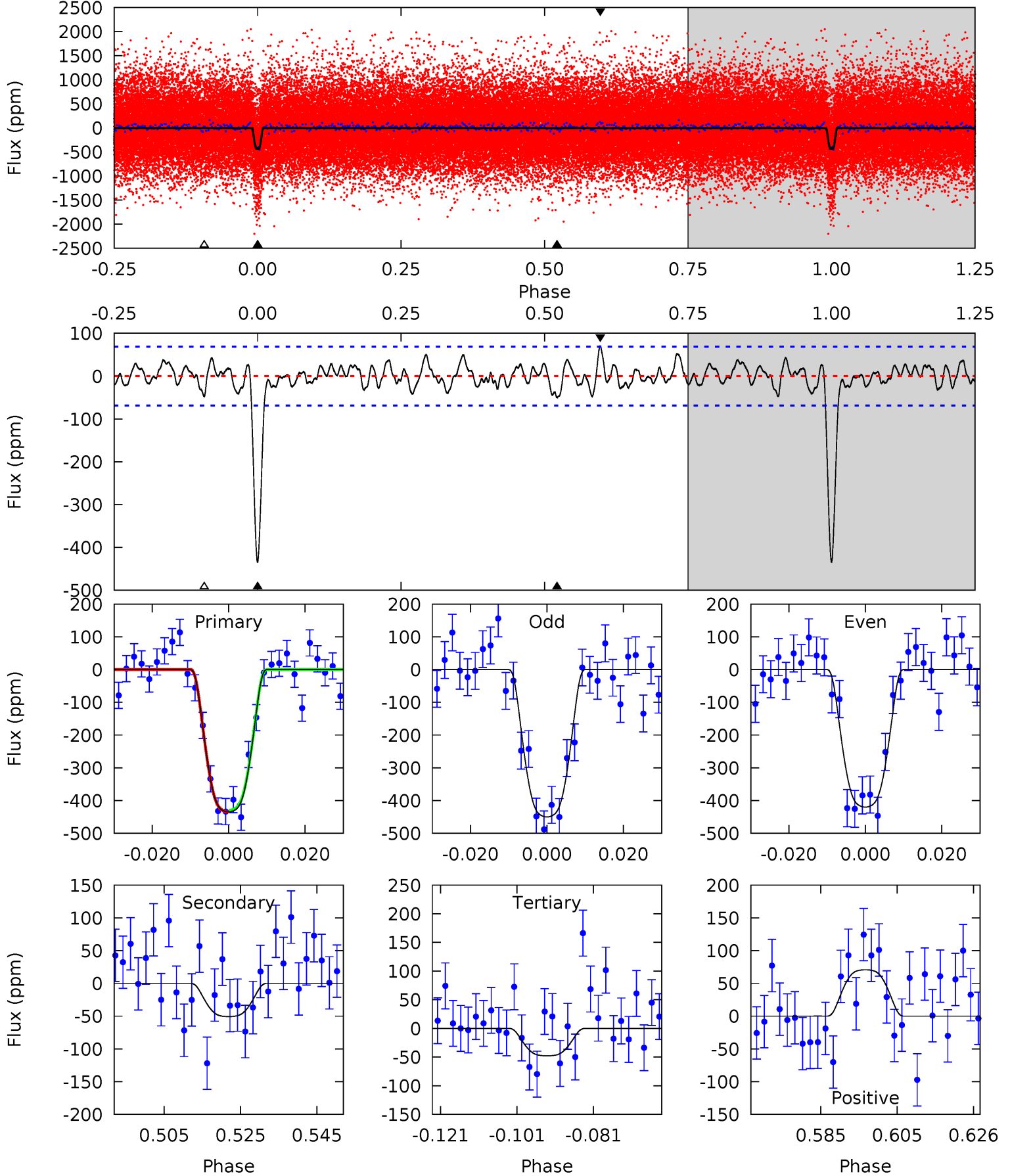
TCE 003120276-01 P= 10.265508 Days $T_0=136.491875$ (BKJD)



DV Model-Shift Uniqueness Test

003120276-01, $P = 10.265487$ Days, $E = 126.229623$ Days

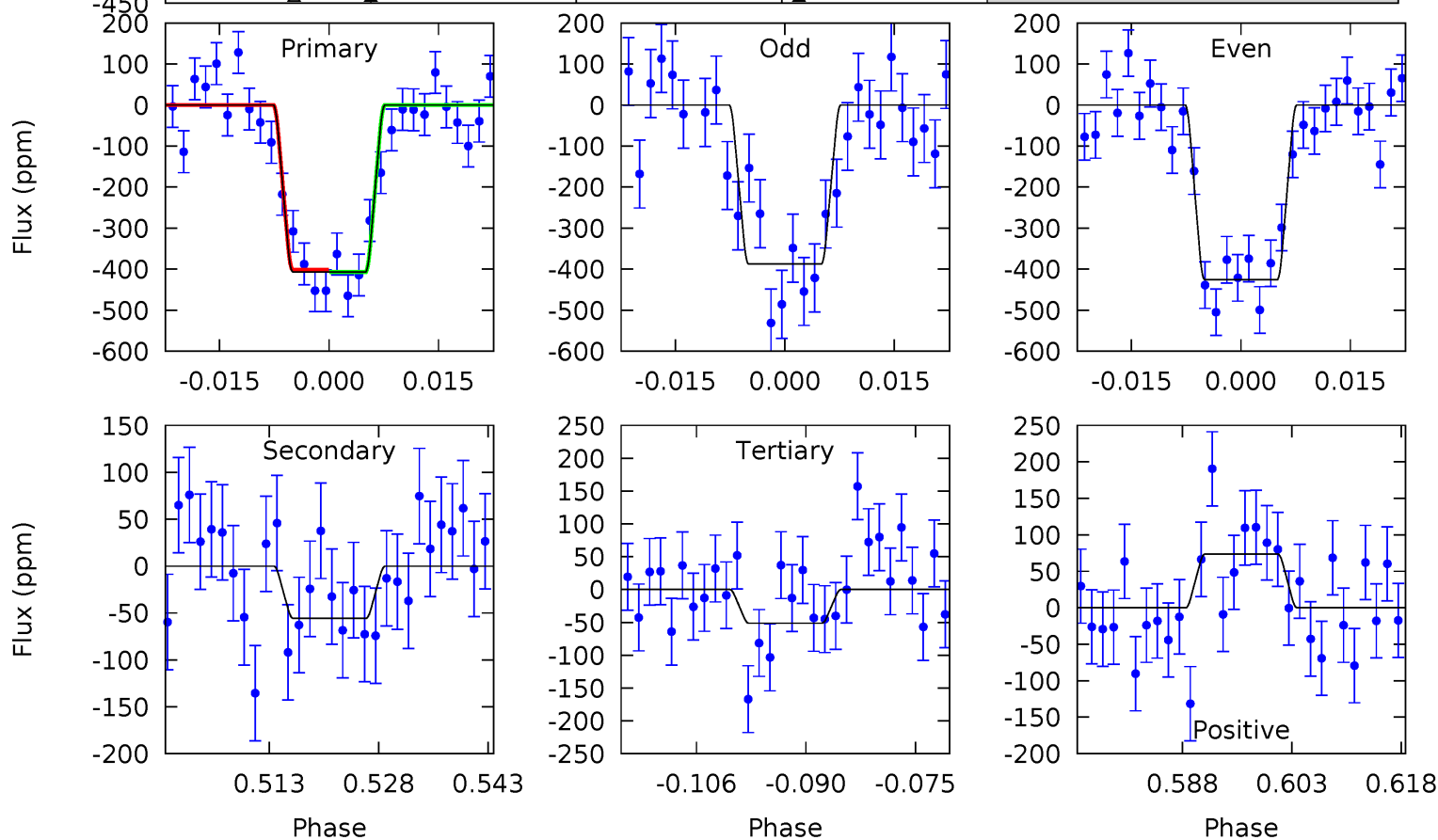
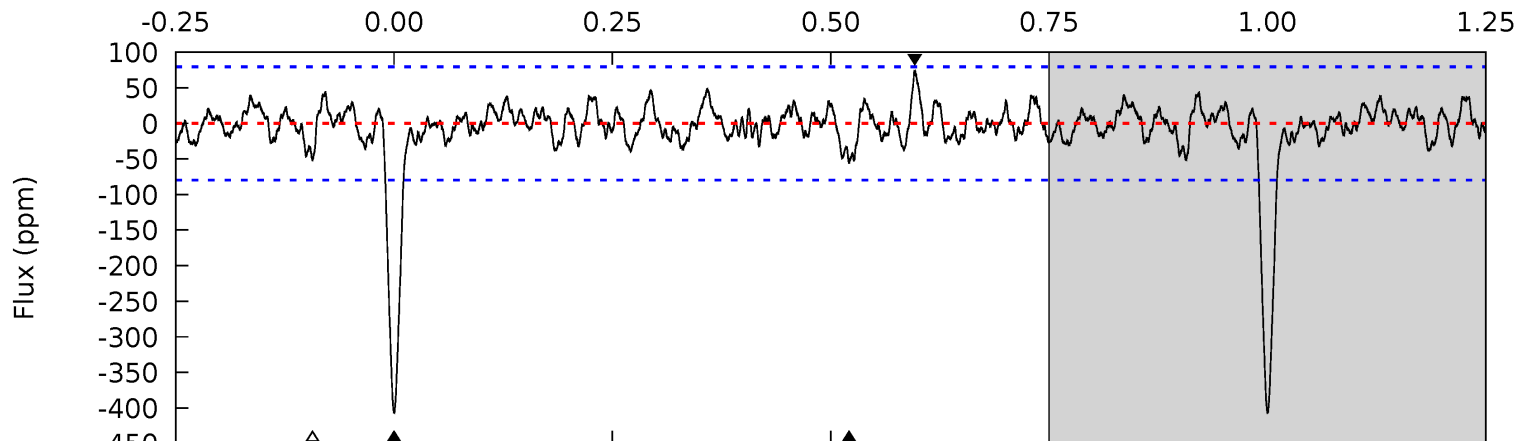
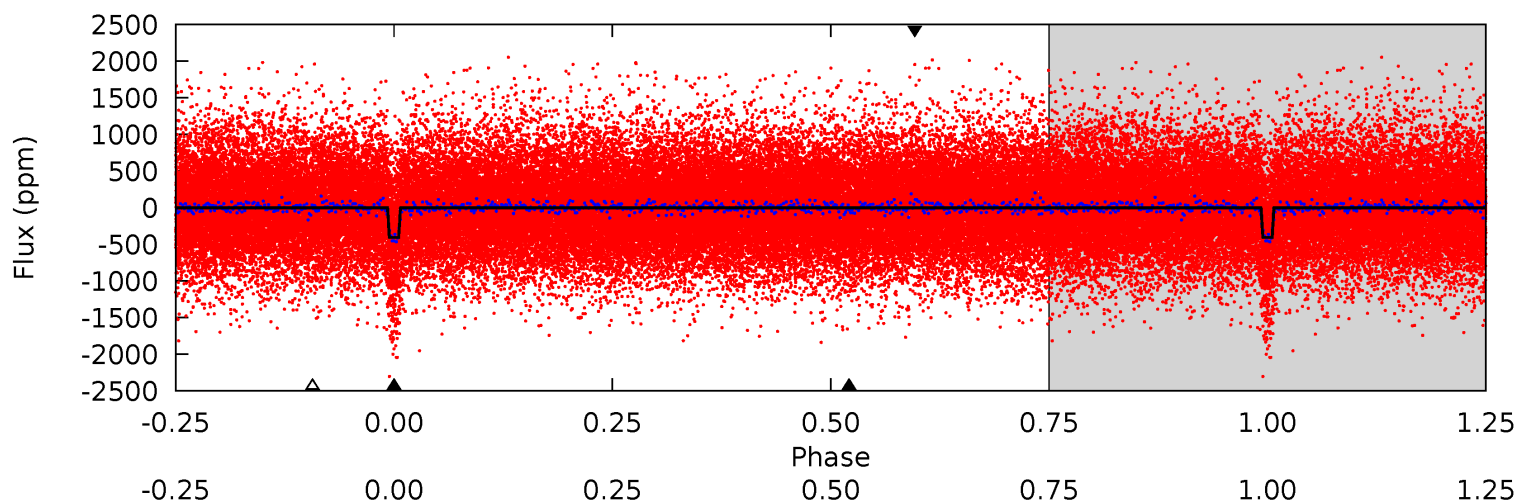
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.9	3.60	3.40	5.04	4.89	2.32	1.45	27.5	25.9	0.20	-1.43	1.07	1.21	0.14	0.16



Alt Model-Shift Uniqueness Test

003120276-01, P = 10.265508 Days, E = 126.226367 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.3	3.46	3.19	4.58	4.95	2.43	1.19	22.1	20.7	0.26	-1.12	1.18	1.30	0.15	0.17



Stellar Parameters For KIC 003120276

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5699^{+152}_{-169}	$4.553^{+0.033}_{-0.187}$	$-0.100^{+0.300}_{-0.300}$	$0.853^{+0.235}_{-0.073}$	$0.950^{+0.094}_{-0.115}$	$2.159^{+0.382}_{-1.027}$
	+3%/-3%	+1%/-4%	+300%/-300%	+28%/-9%	+10%/-12%	+18%/-48%
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 003120276-01 / KOI 1111.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-51 ± 14	$2.35^{+0.35}_{-0.23}$	1101^{+75}_{-50}	3531^{+167}_{-200}	39^{+14}_{-13}
Alt.	-56 ± 16	$1.96^{+0.30}_{-0.20}$	1104^{+68}_{-47}	3816^{+230}_{-219}	62^{+26}_{-21}

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 $A_{obs} \gg 1.0$

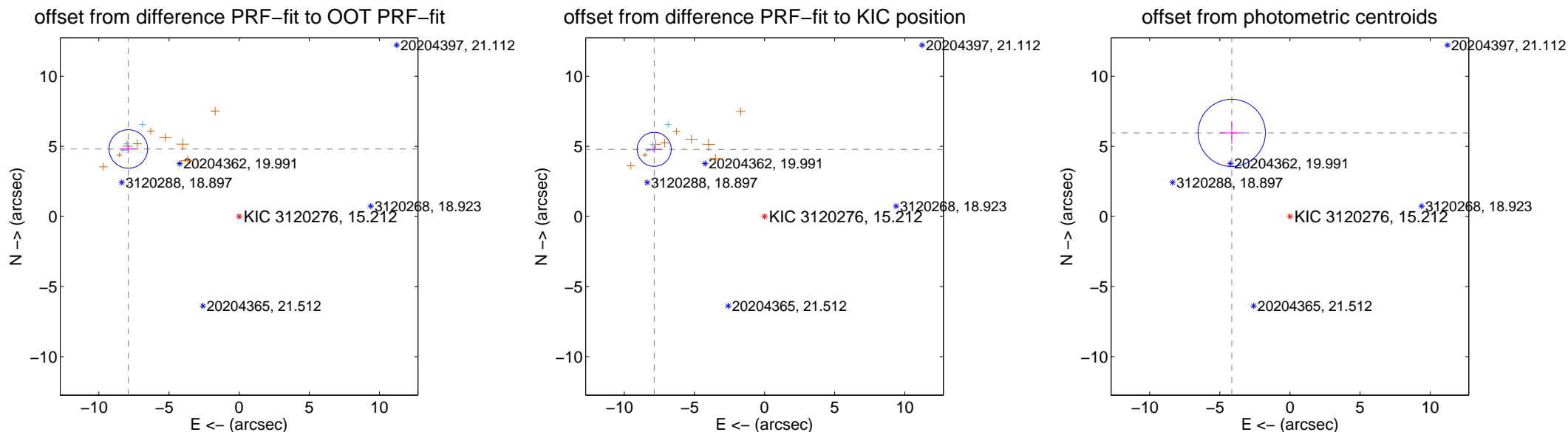
DV Centroid Data

Supplemental centroid analysis for 003120276-01. Kepler magnitude: 15.21. Transit SNR 18.04

There are 5 quarters with good PRF difference image offsets

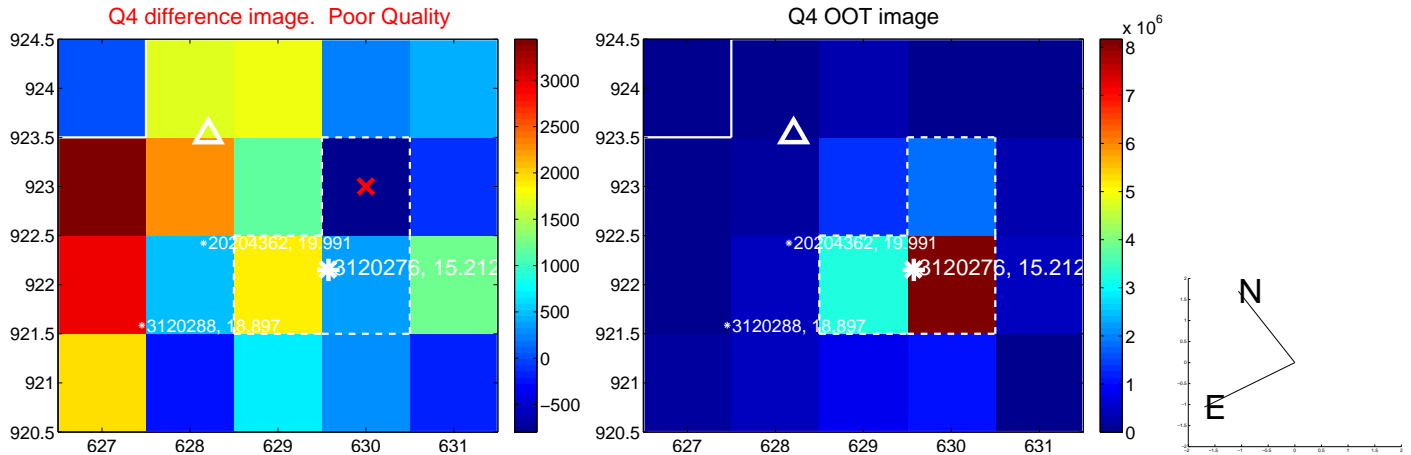
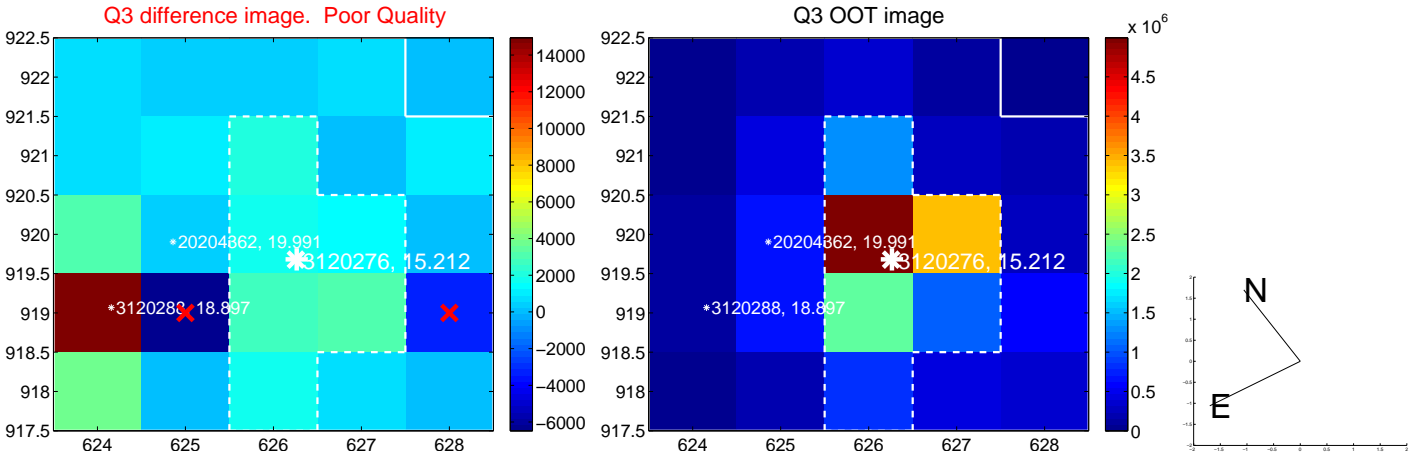
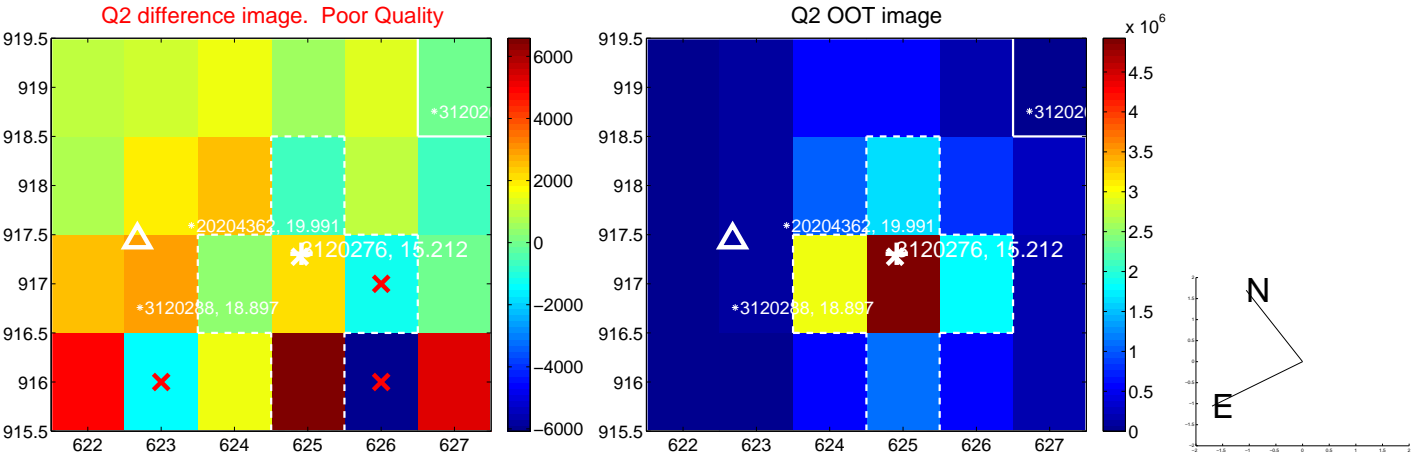
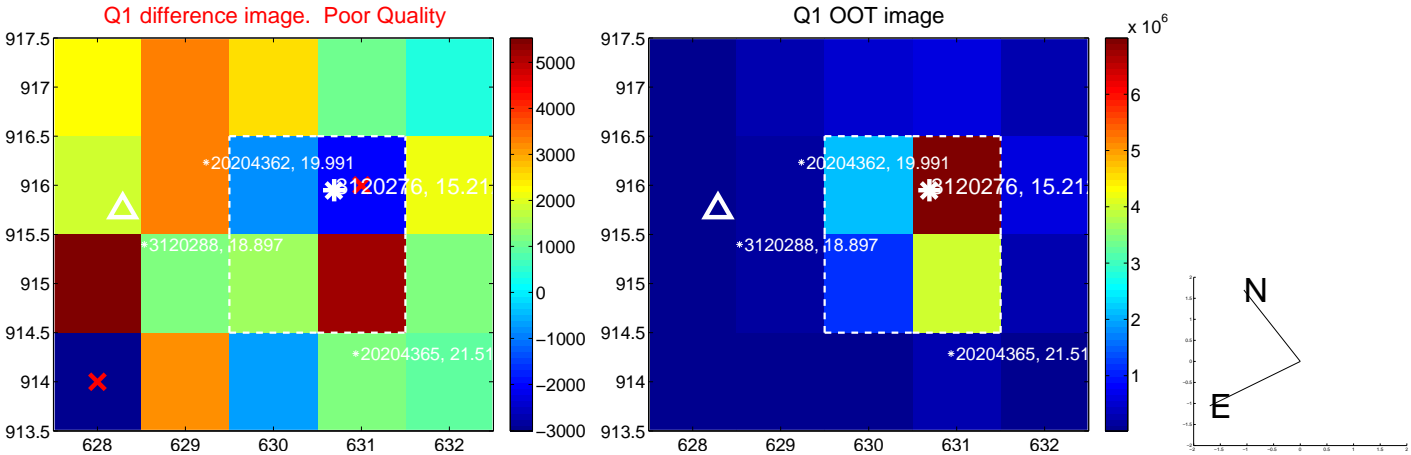
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.251 ± 0.458	20.19	7.899 ± 0.611	4.815 ± 0.276
PRF-fit source offset from KIC position	9.210 ± 0.404	22.78	7.867 ± 0.534	4.789 ± 0.251
photometric centroid source offset	7.26 ± 0.80	9.09	4.15 ± 0.84	5.96 ± 0.78

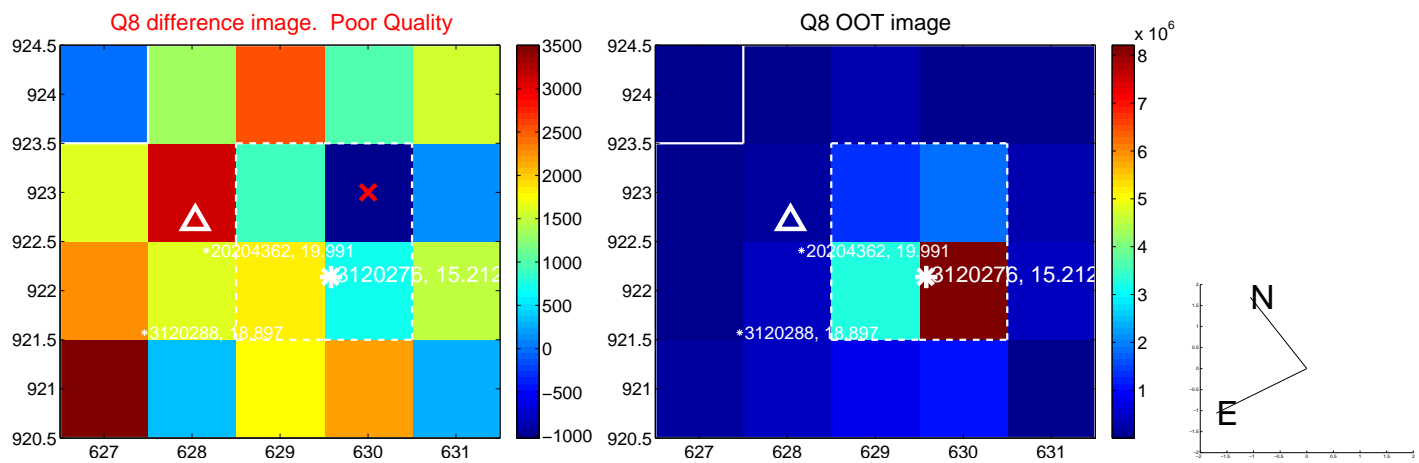
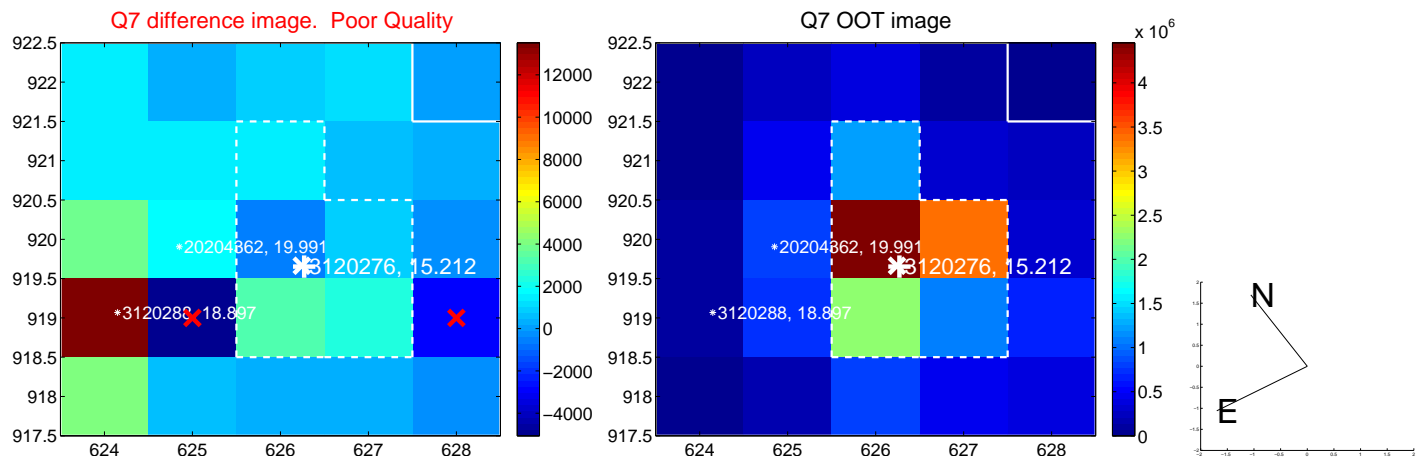
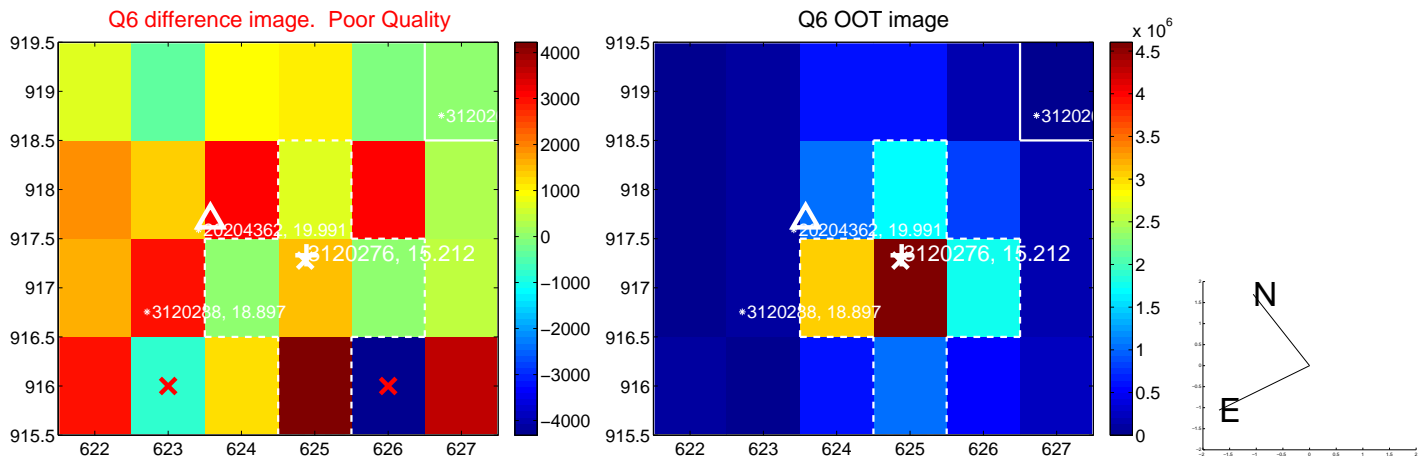
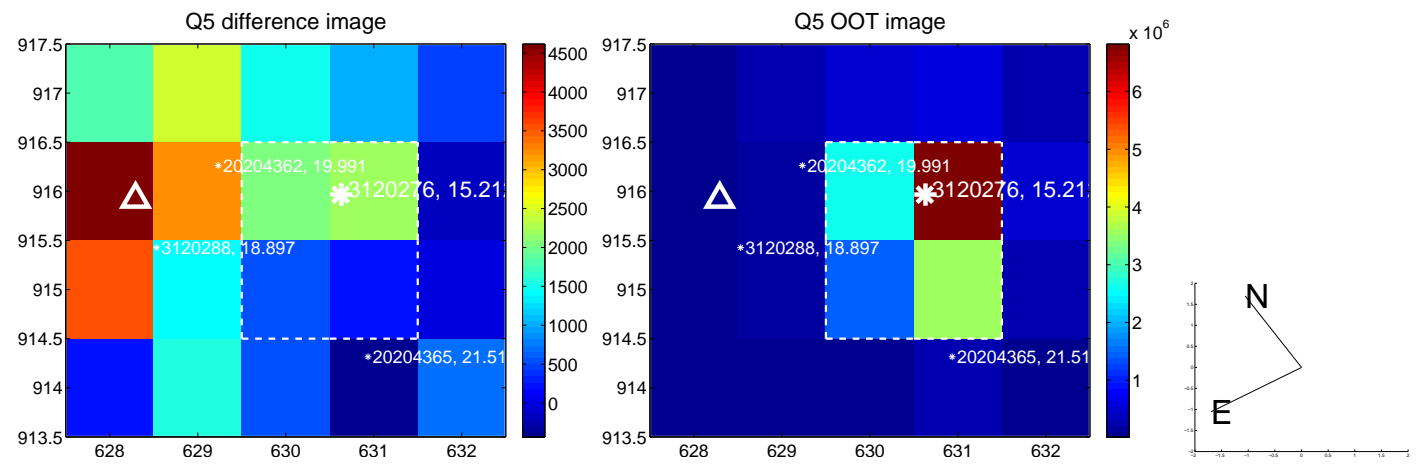


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

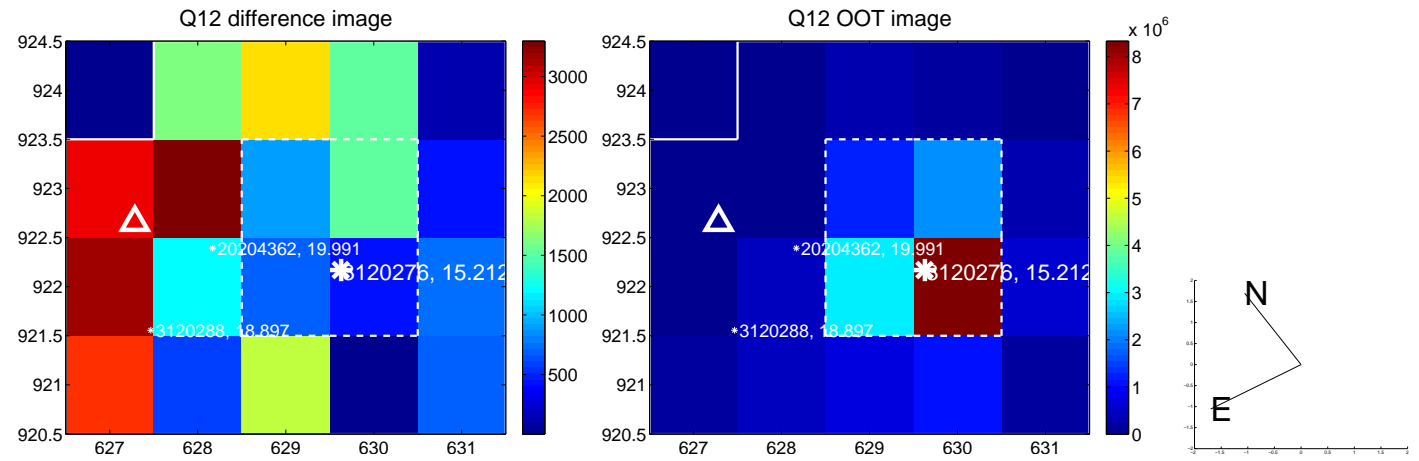
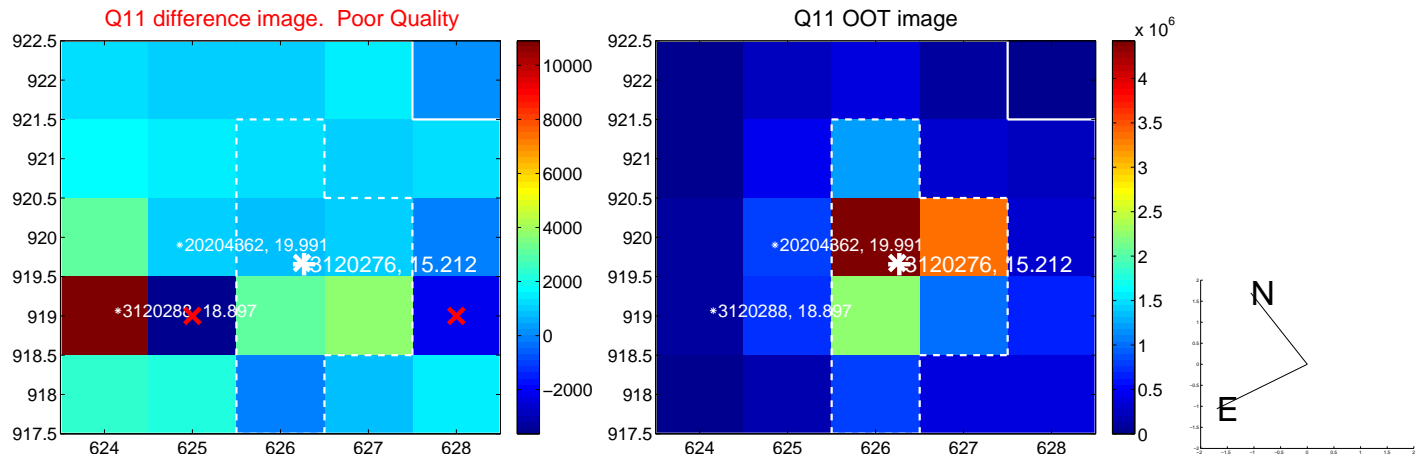
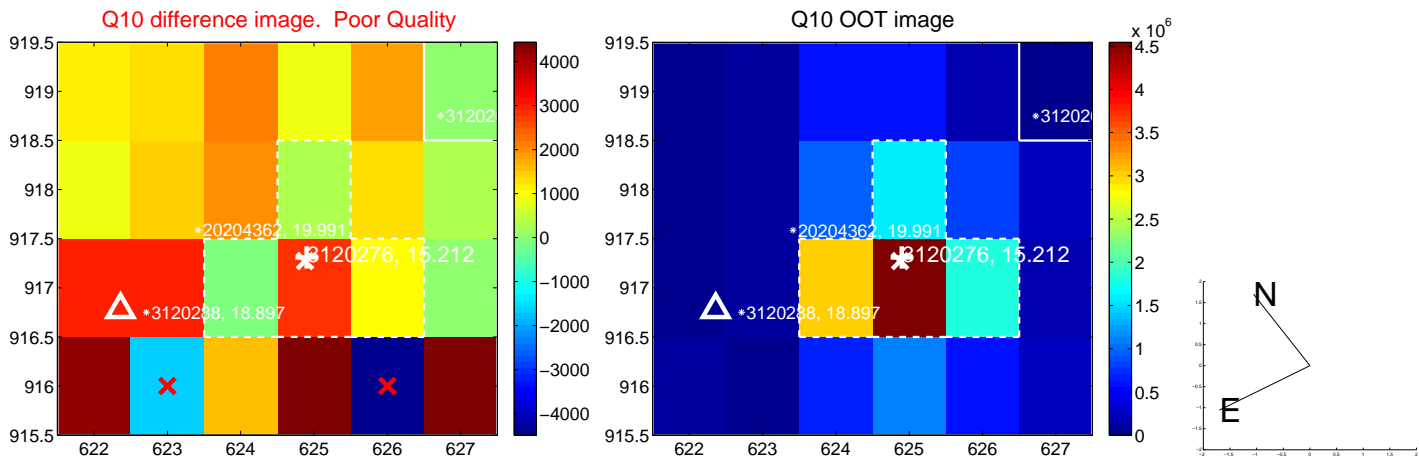
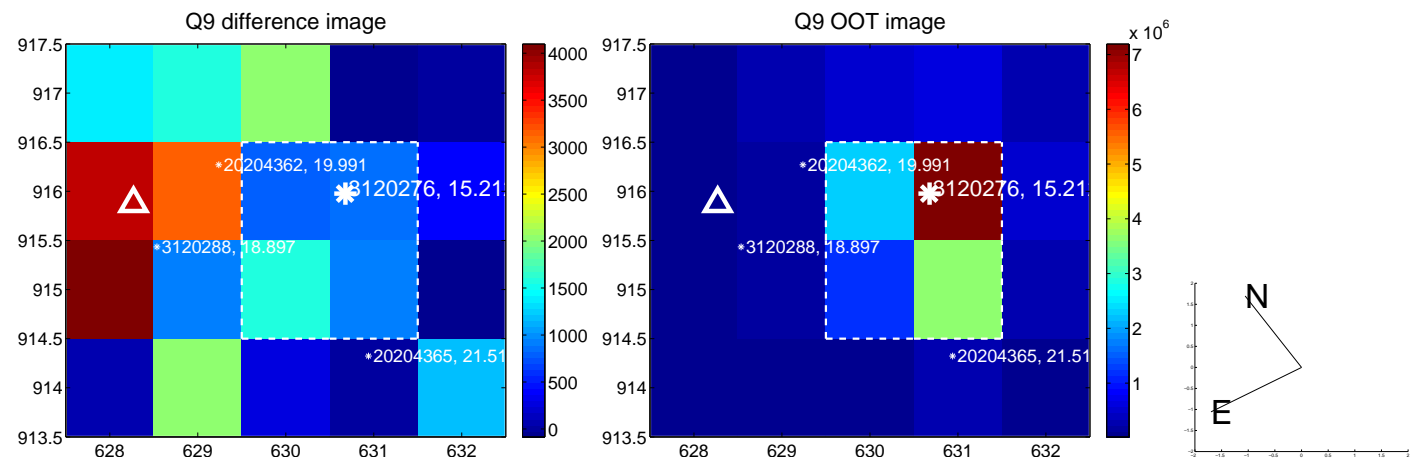
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



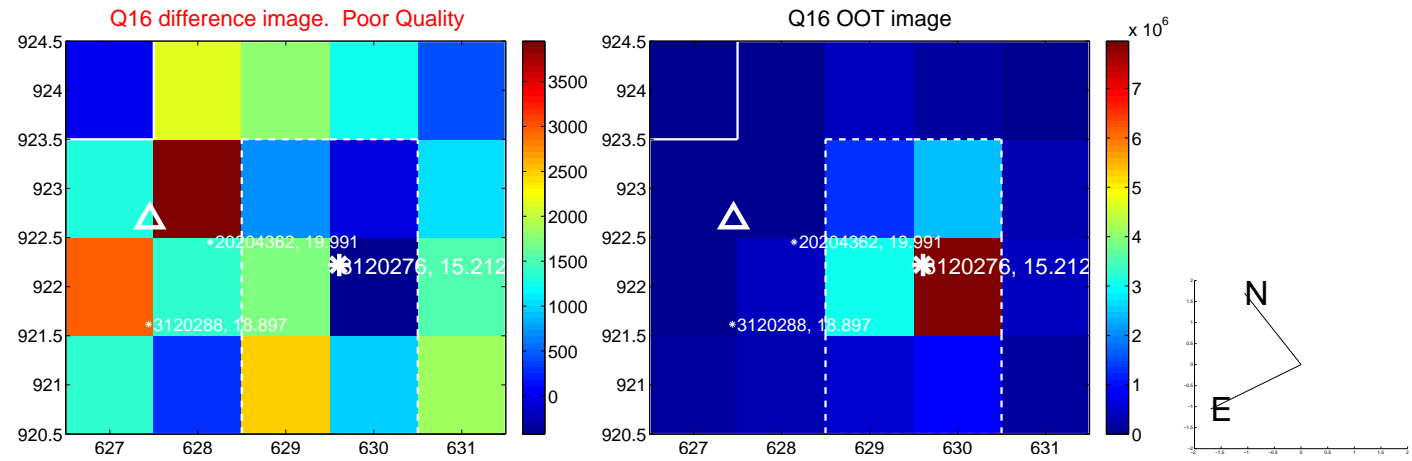
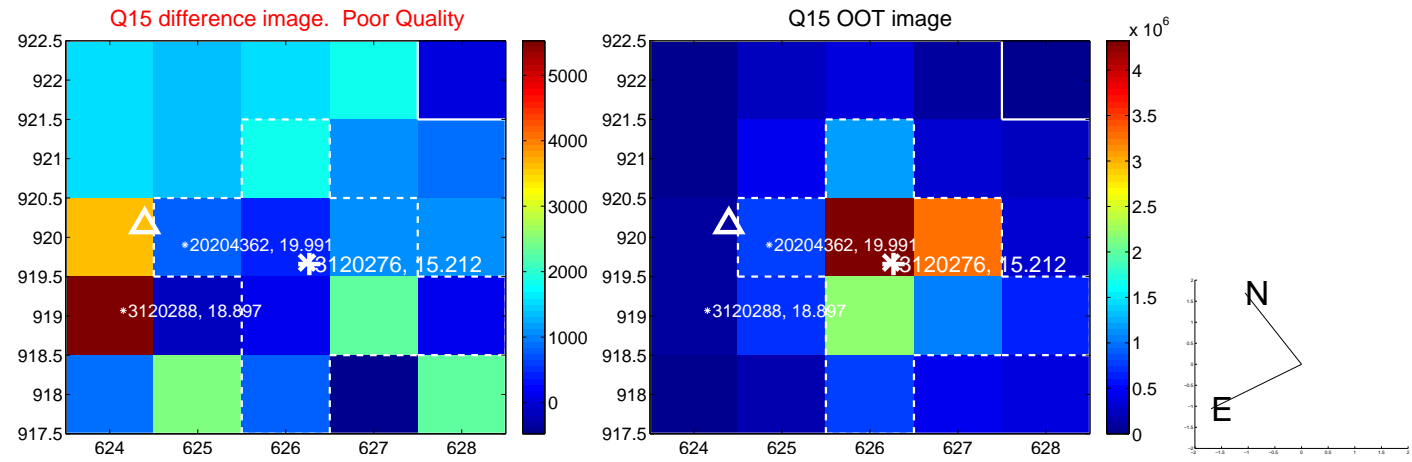
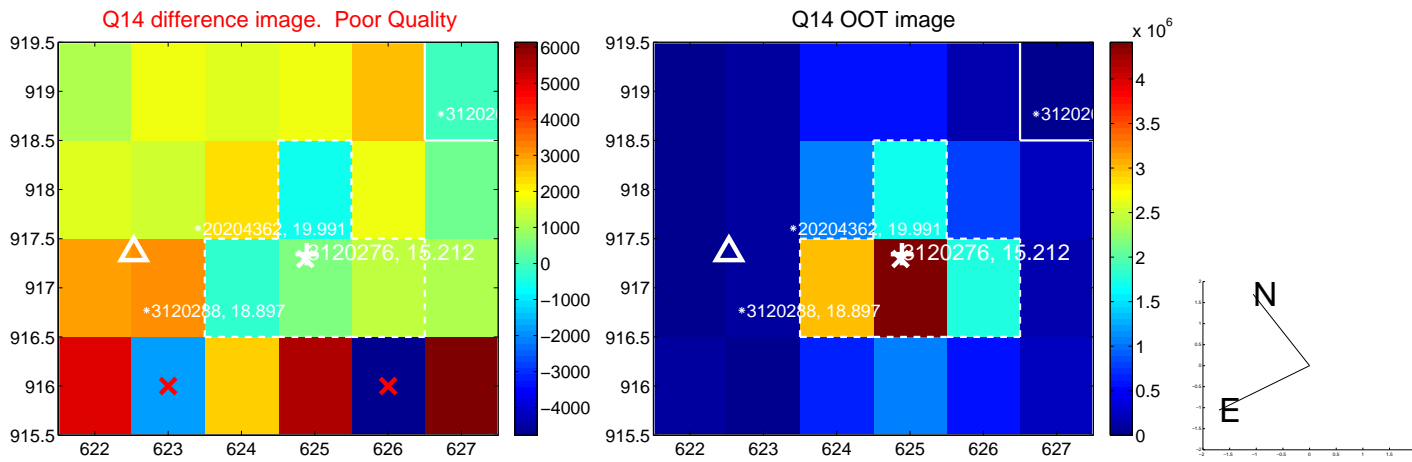
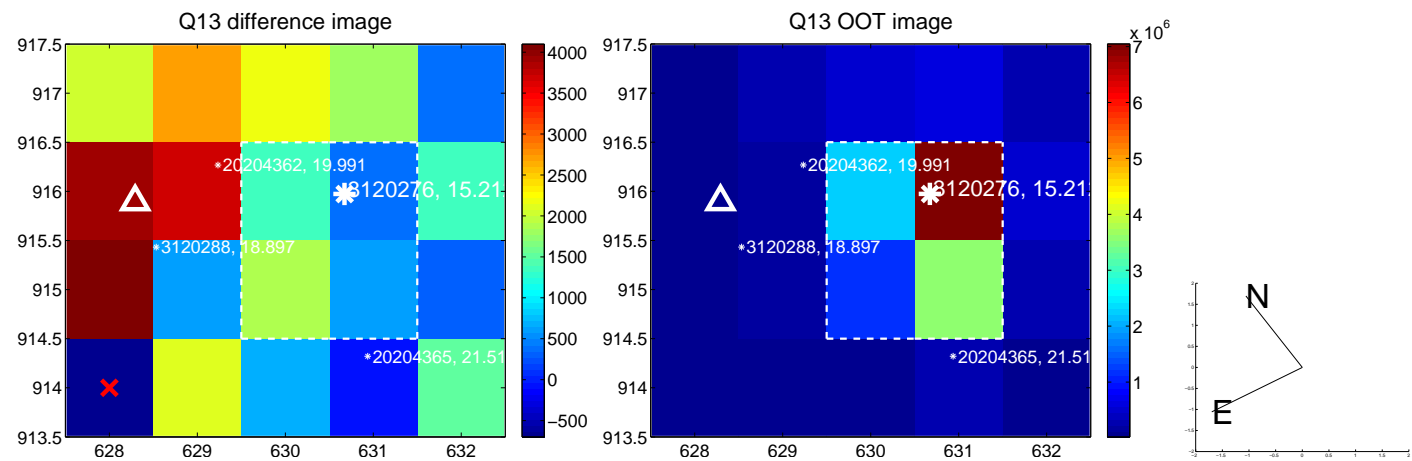
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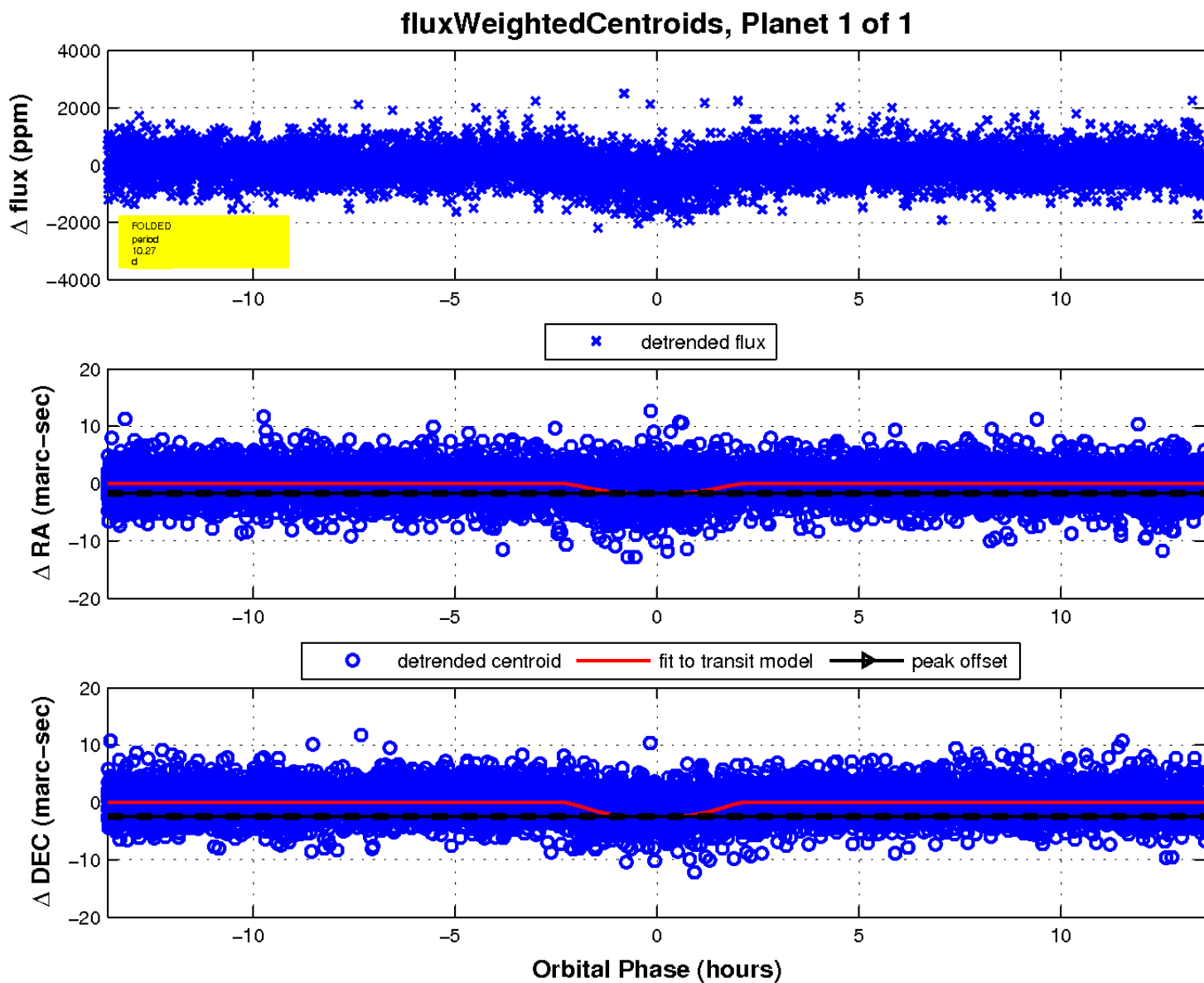
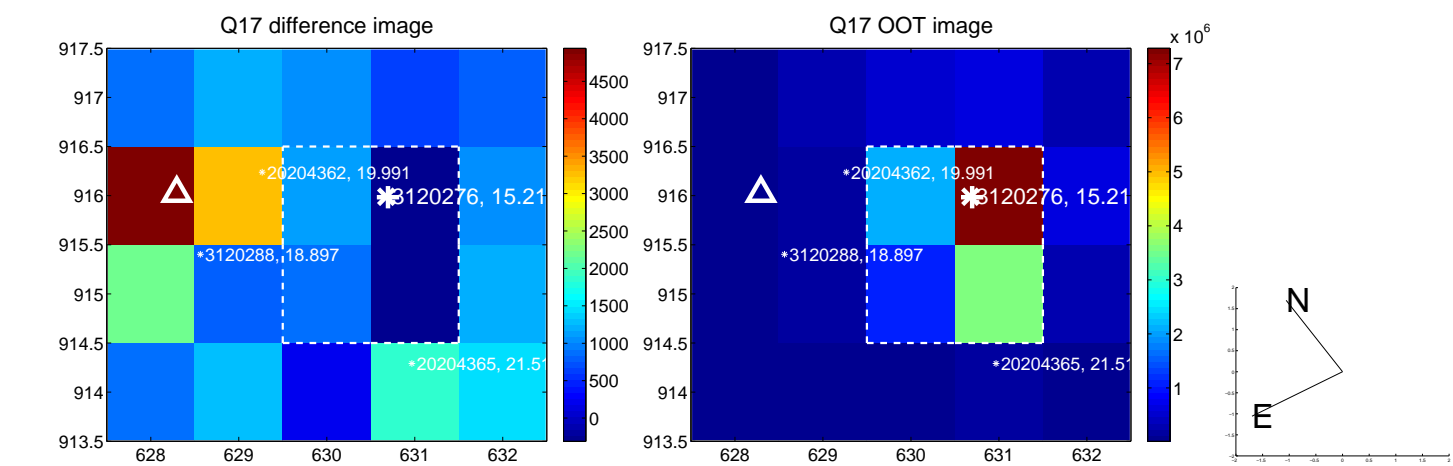
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

