

KIC 005621299

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})
005621299-01	OBS	6607.01	0.938937	131.833544	26.6	3.097	8.9	7.9	1.80	6534	1.09	11980.11

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005621299-01	OBS	FP	0.00	0	0	1	1	CENT_RESOLVED_OFFSET—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.

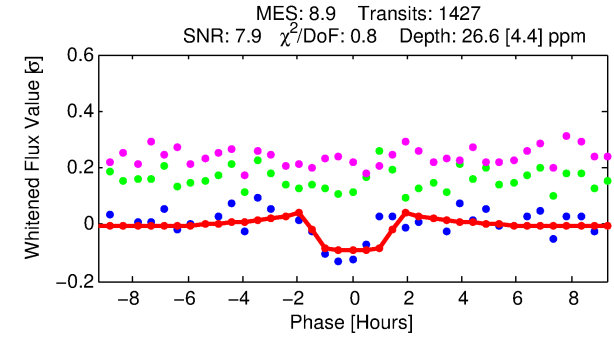
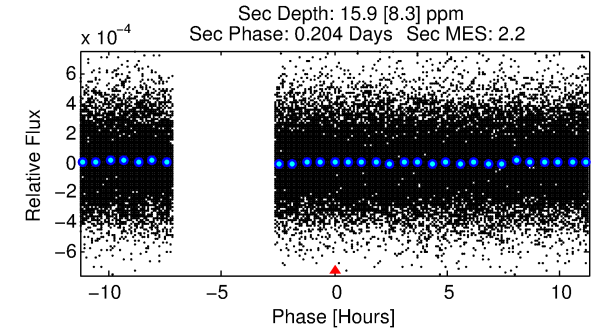
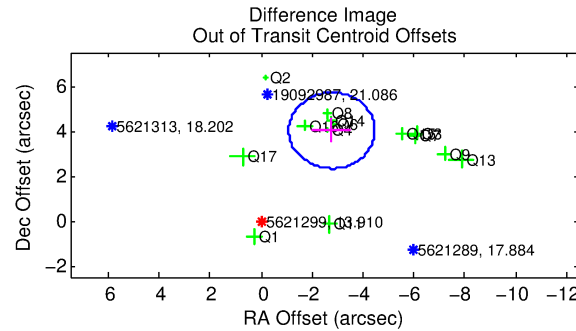
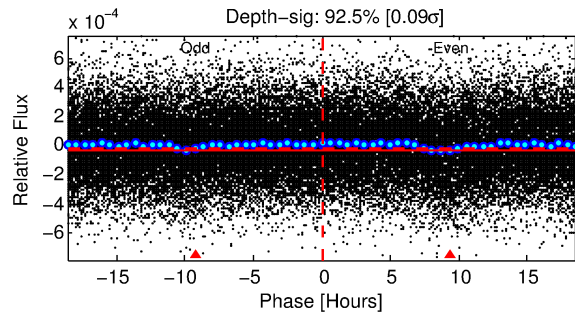
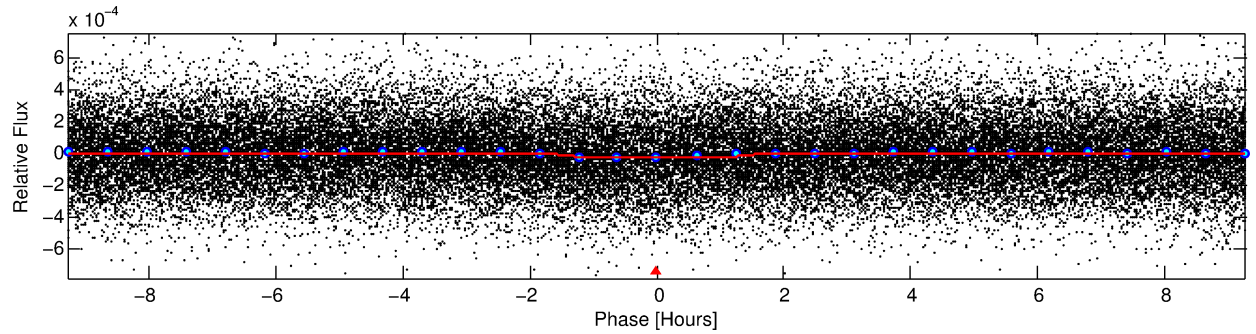
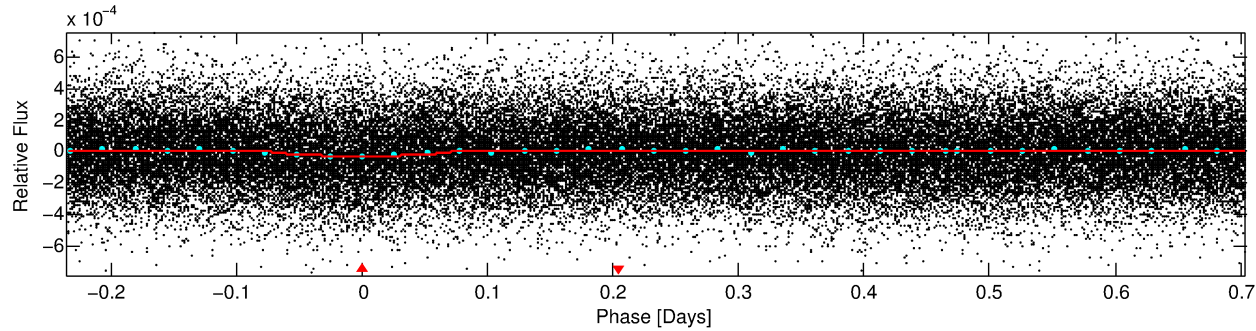
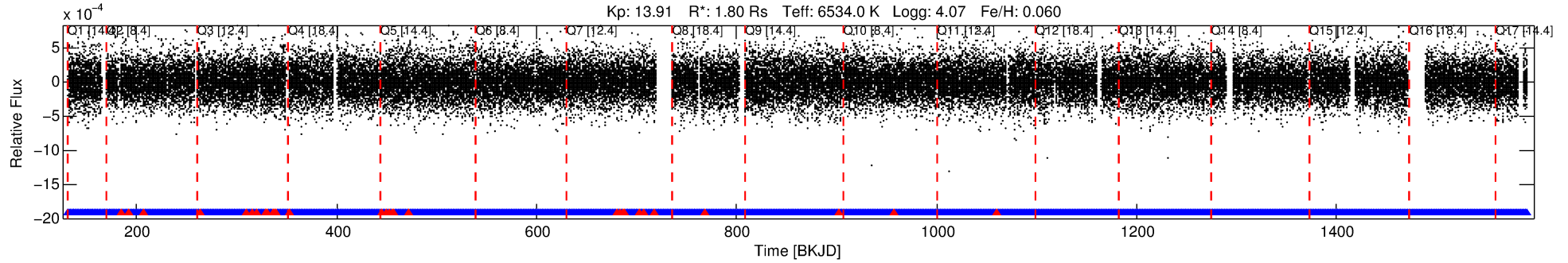
Ephemeris Match Information For 005621299-01

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
005621299-01	5621299	6606.01	5621294	1:1	27.8	-7	-3	13.61	13.91	13643.00	Direct-PRF	0	3.25	0.57

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: 5621299 Candidate: 1 of 1 Period: 0.939 d
KOI: K06607.01 Corr: 0.858



DV Fit Results:

Period = 0.93894 [0.00001] d
Epoch = 131.8335 [0.0033] BKJD
Rp/R* = 0.0056 [0.0024]
a/R* = 1.38 [1.66]
b = 0.90 [0.51]
Seff = 11980.11 [3575.79]
Teff = 2668 [199] K
Rp = 1.09 [0.53] Re
a = 0.0210 [0.0040] AU
Ag = 3.26 [3.46] [0.65 σ]
Teffp = 5541 [1414] K [2.01 σ]

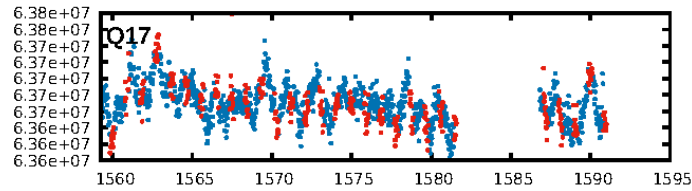
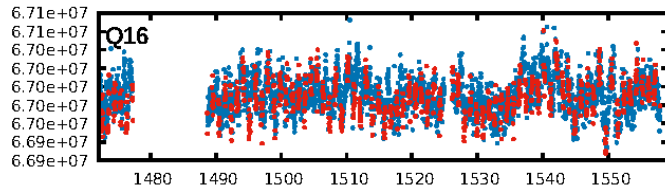
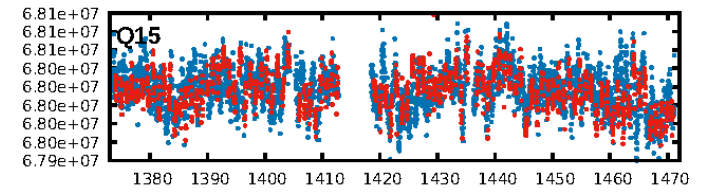
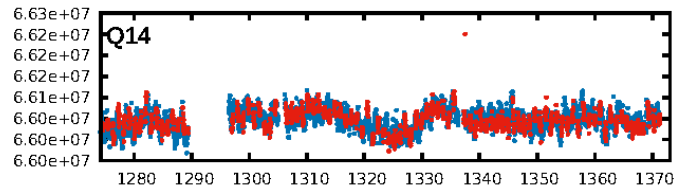
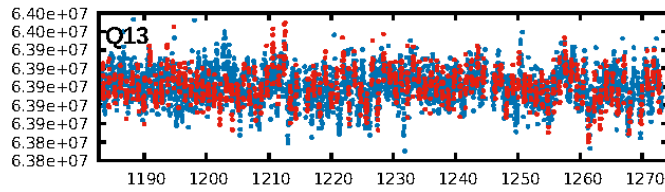
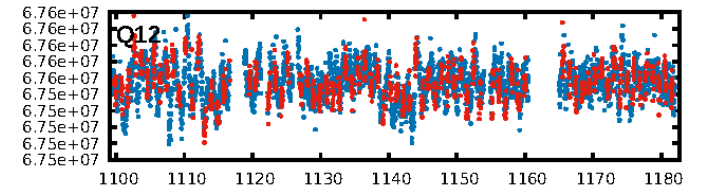
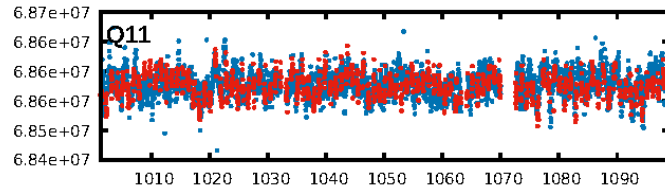
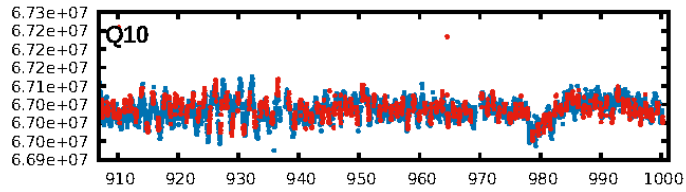
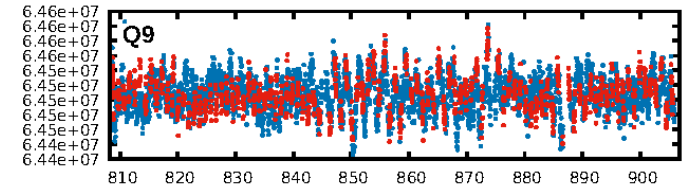
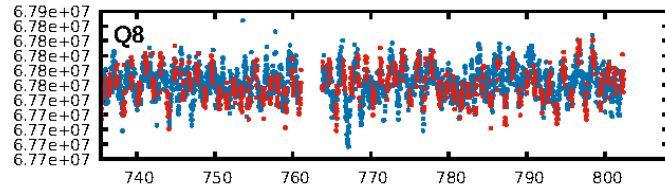
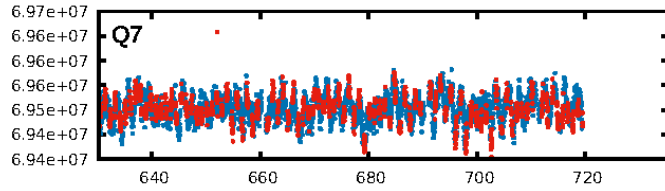
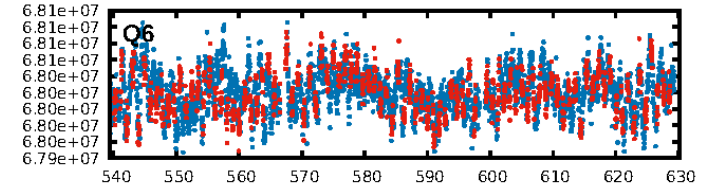
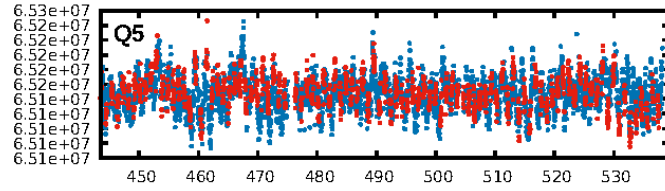
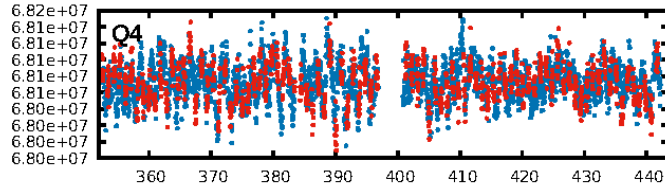
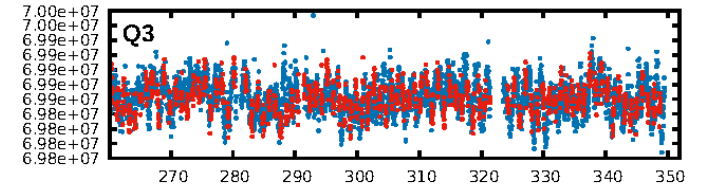
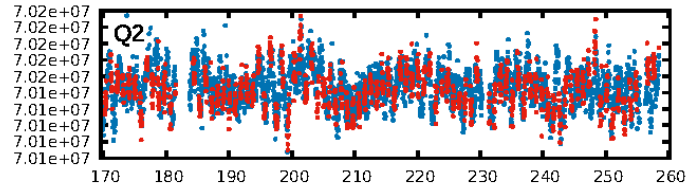
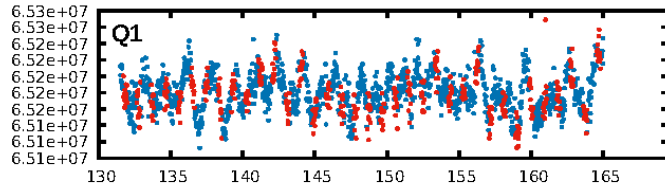
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.92e-18
RollingBand-fgt: 0.98 [1332/1362]
GhostDiagnostic-chr: -0.3486
Centroid-sig: 0.0%
Centroid-so: 9.904 arcsec [9.95 σ]
OotOffset-rm: 4.887 arcsec [8.67 σ]
KicOffset-rm: 4.952 arcsec [8.63 σ]
OotOffset-st: 3/4/3/4 [14]
KicOffset-st: 3/4/3/4 [14]
DiffImageQuality-fgm: 0.29 [4/14]
DiffImageOverlap-fno: 1.00 [17/17]

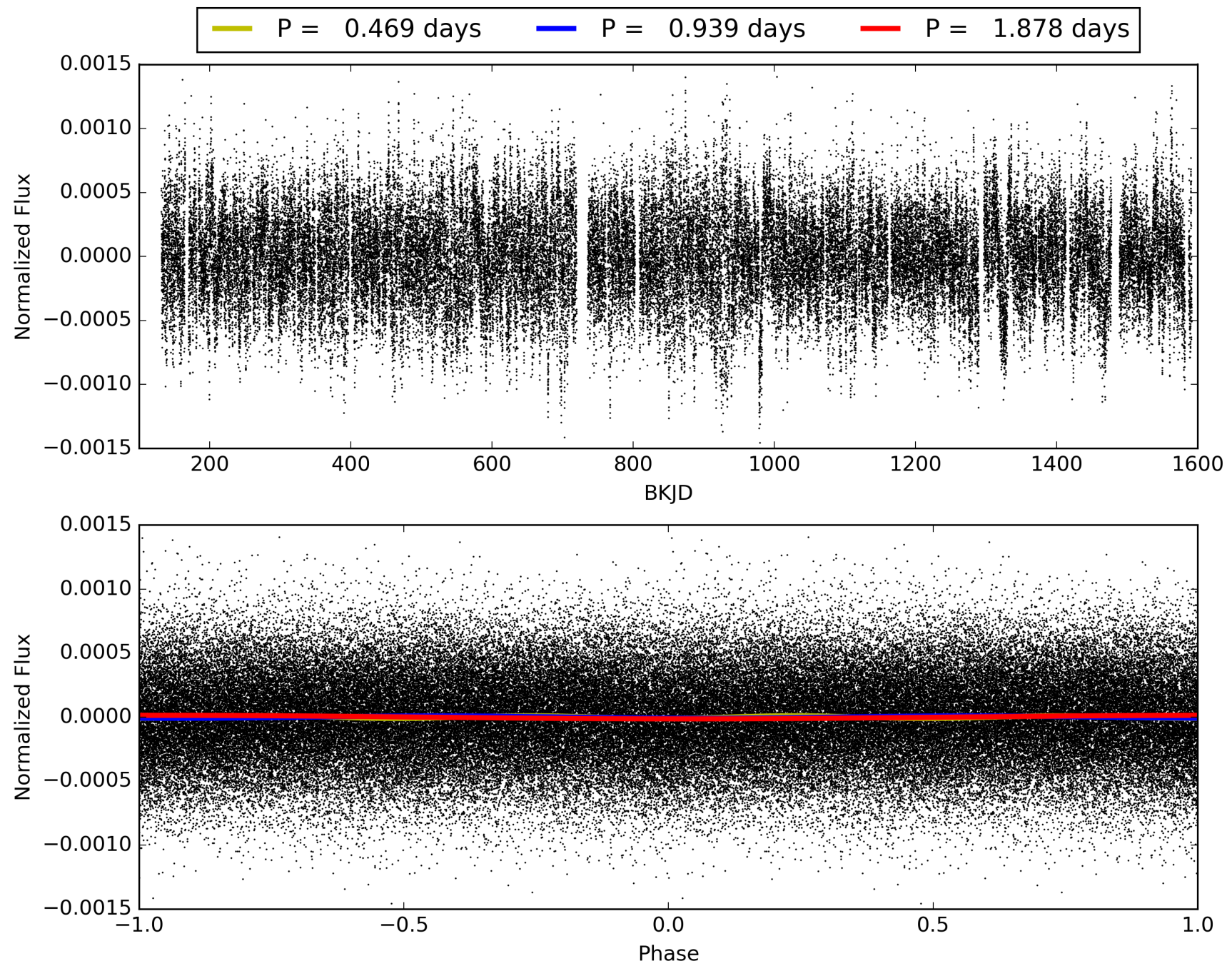
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005621299-01, PDC Light Curves

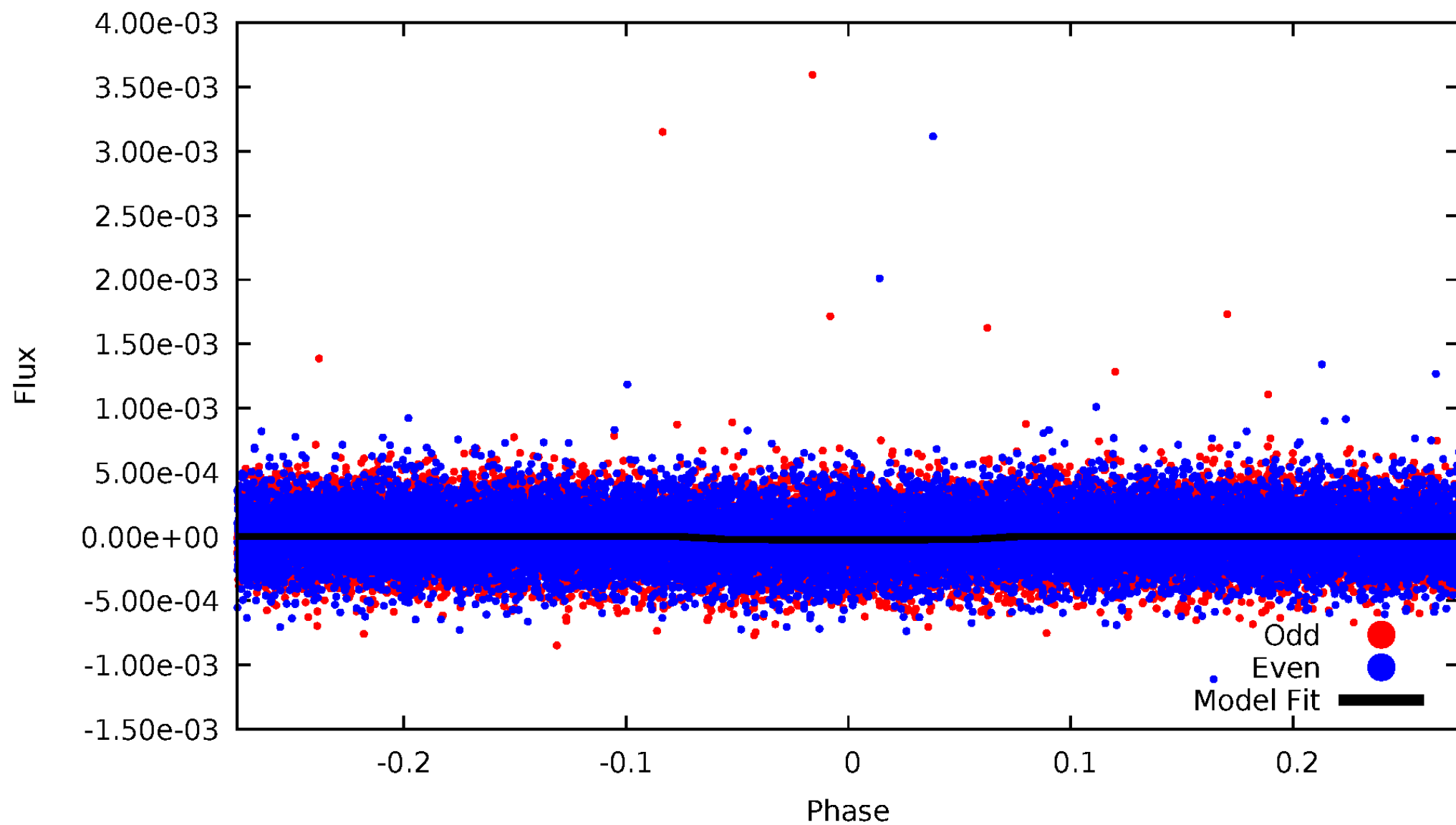


TCE 005621299-01



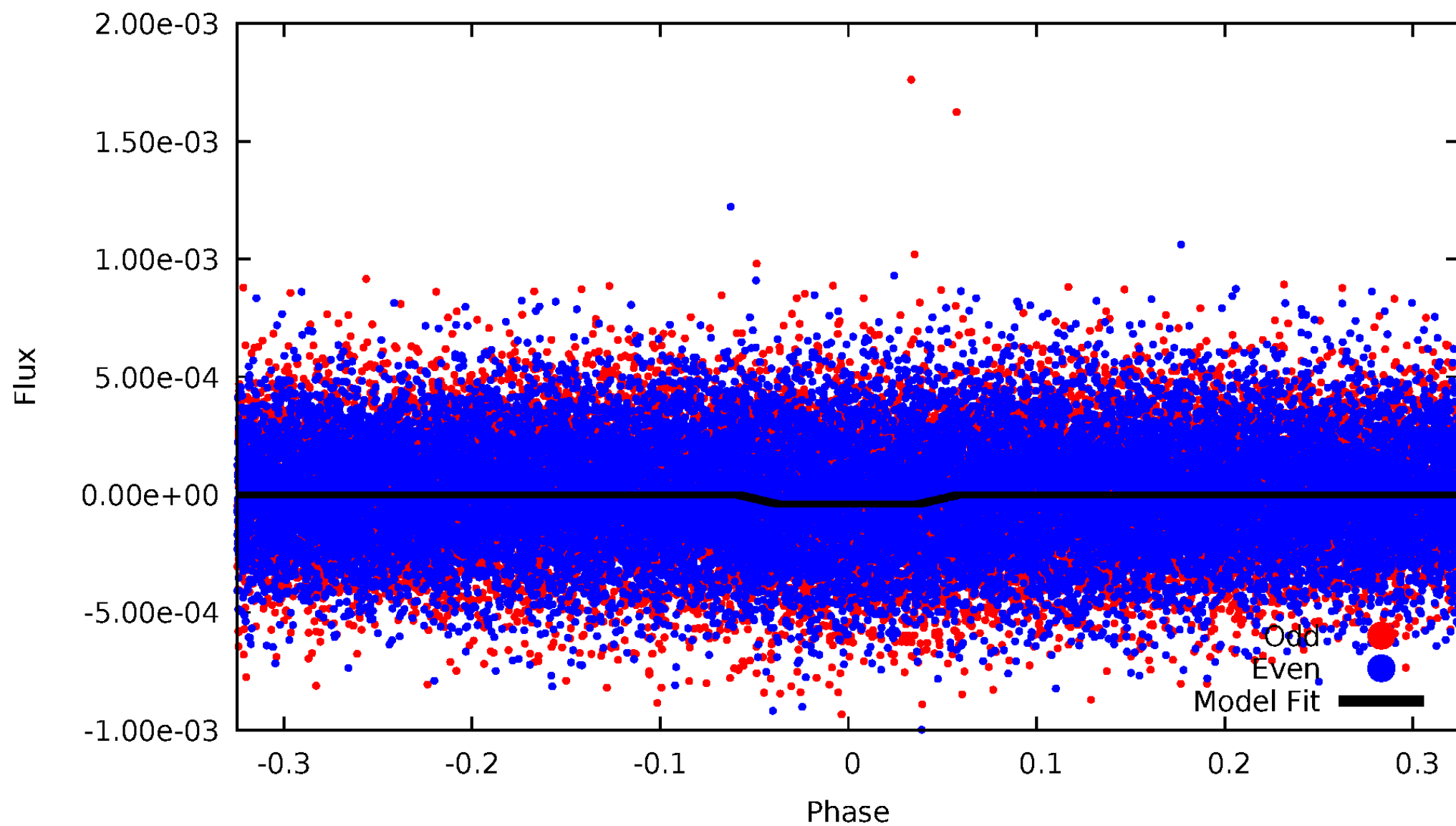
DV Odd/Even

TCE 005621299-01

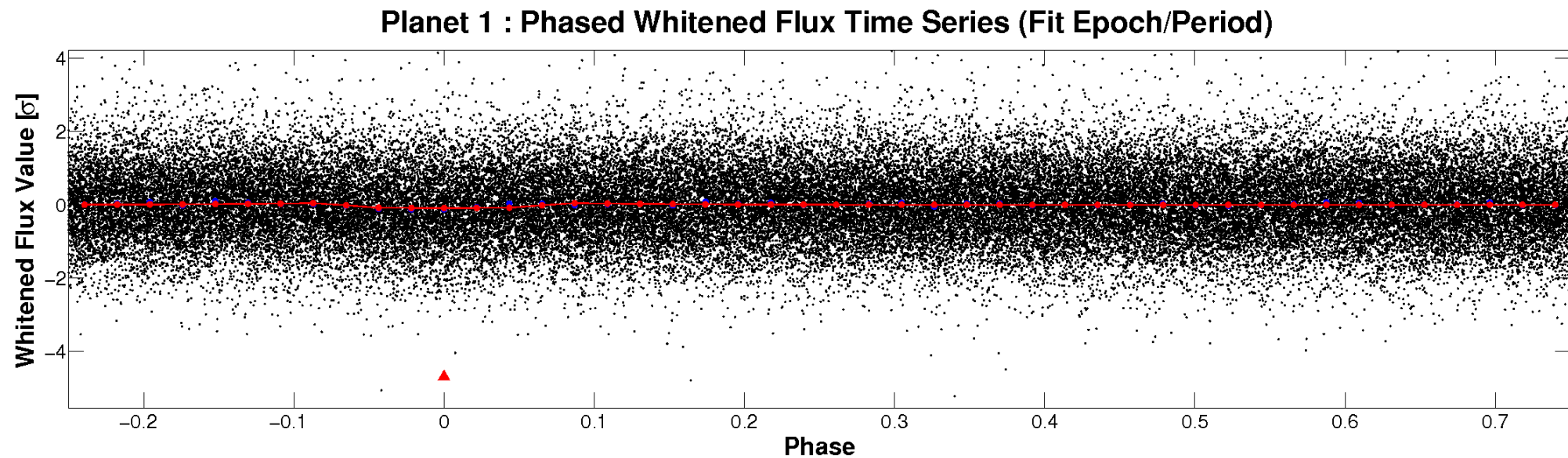
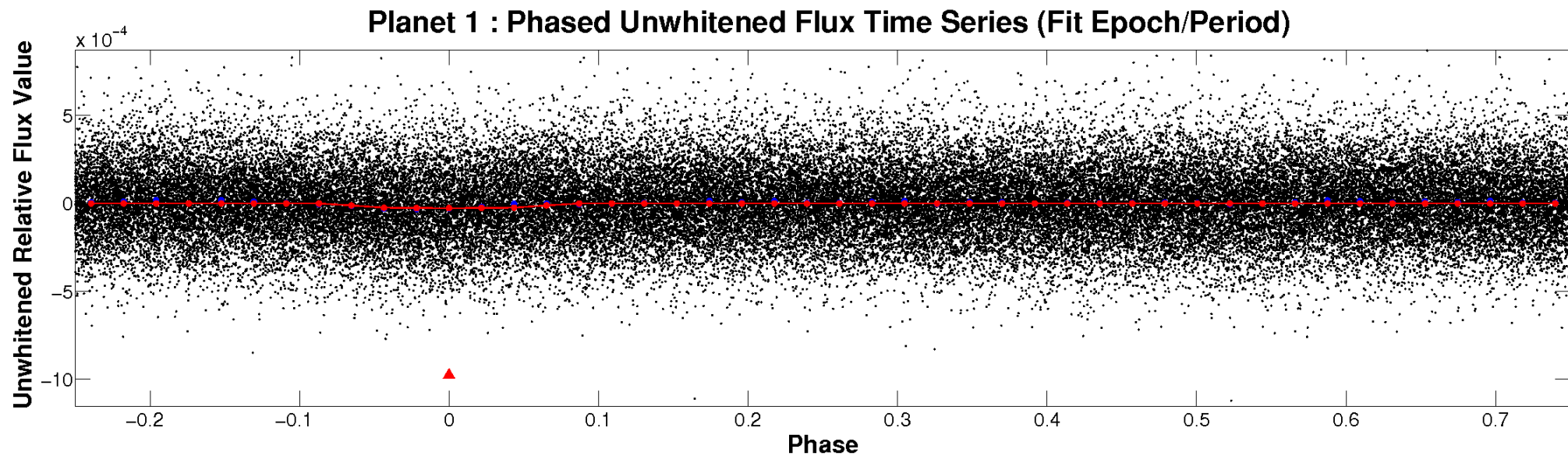


ALT Odd/Even

TCE 005621299-01

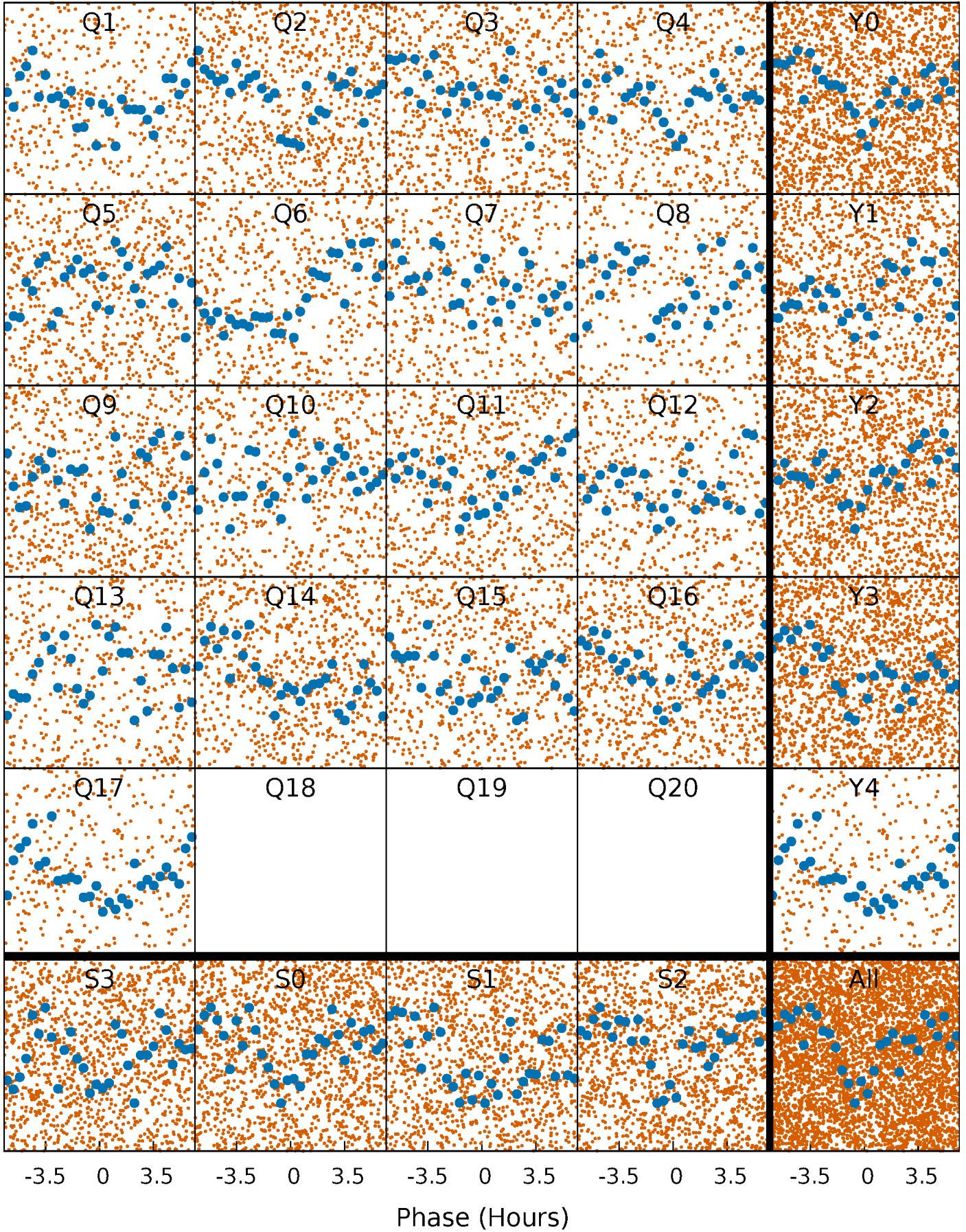


Non-Whitened Vs. Whitened Light Curve



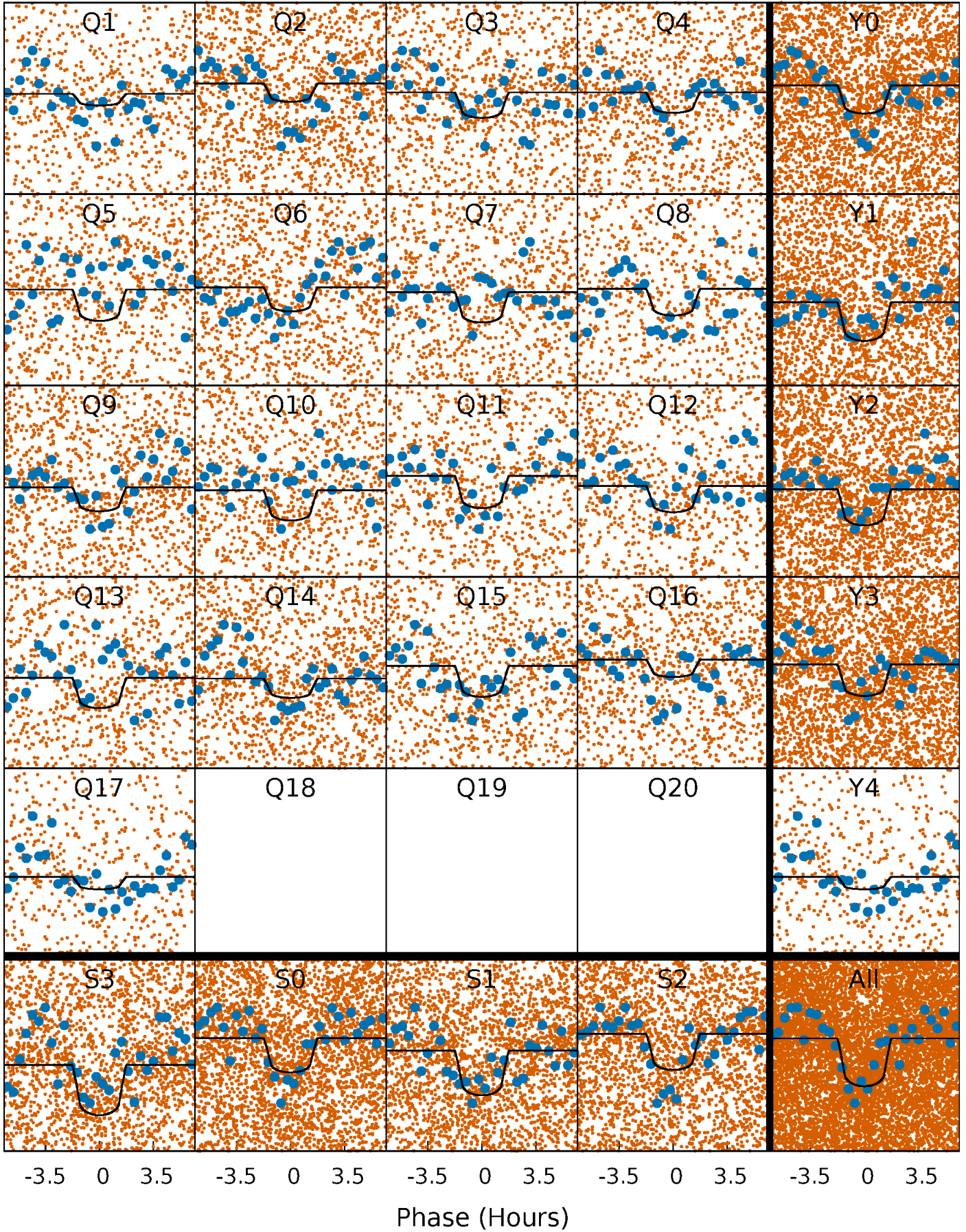
PDC Quarter-Phased Transit Curves

TCE 005621299-01 P= 0.938937 Days $T_0=131.833544$ (BKJD)



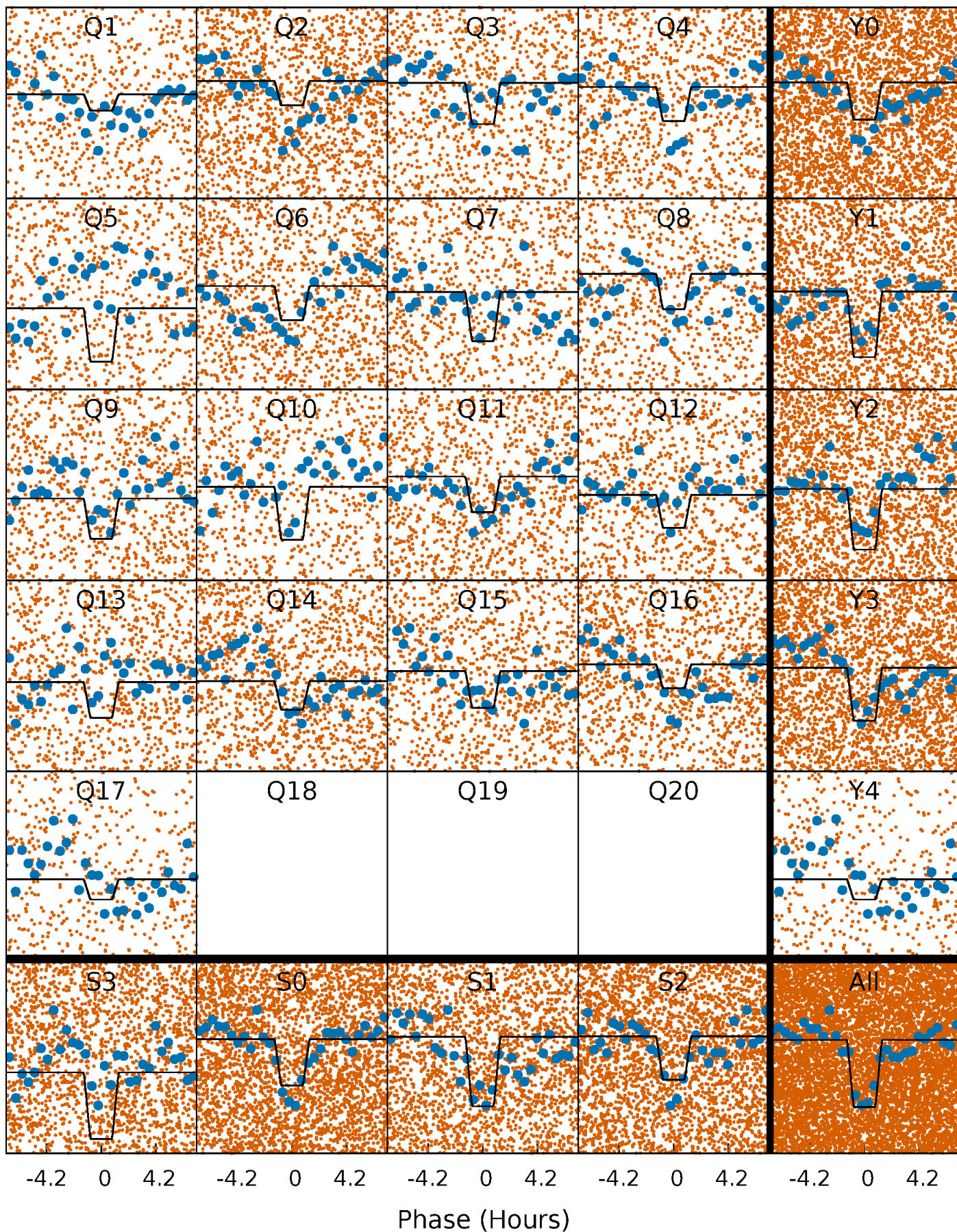
DV Quarter-Phased Transit Curves

TCE 005621299-01 P= 0.938937 Days $T_0=131.833544$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

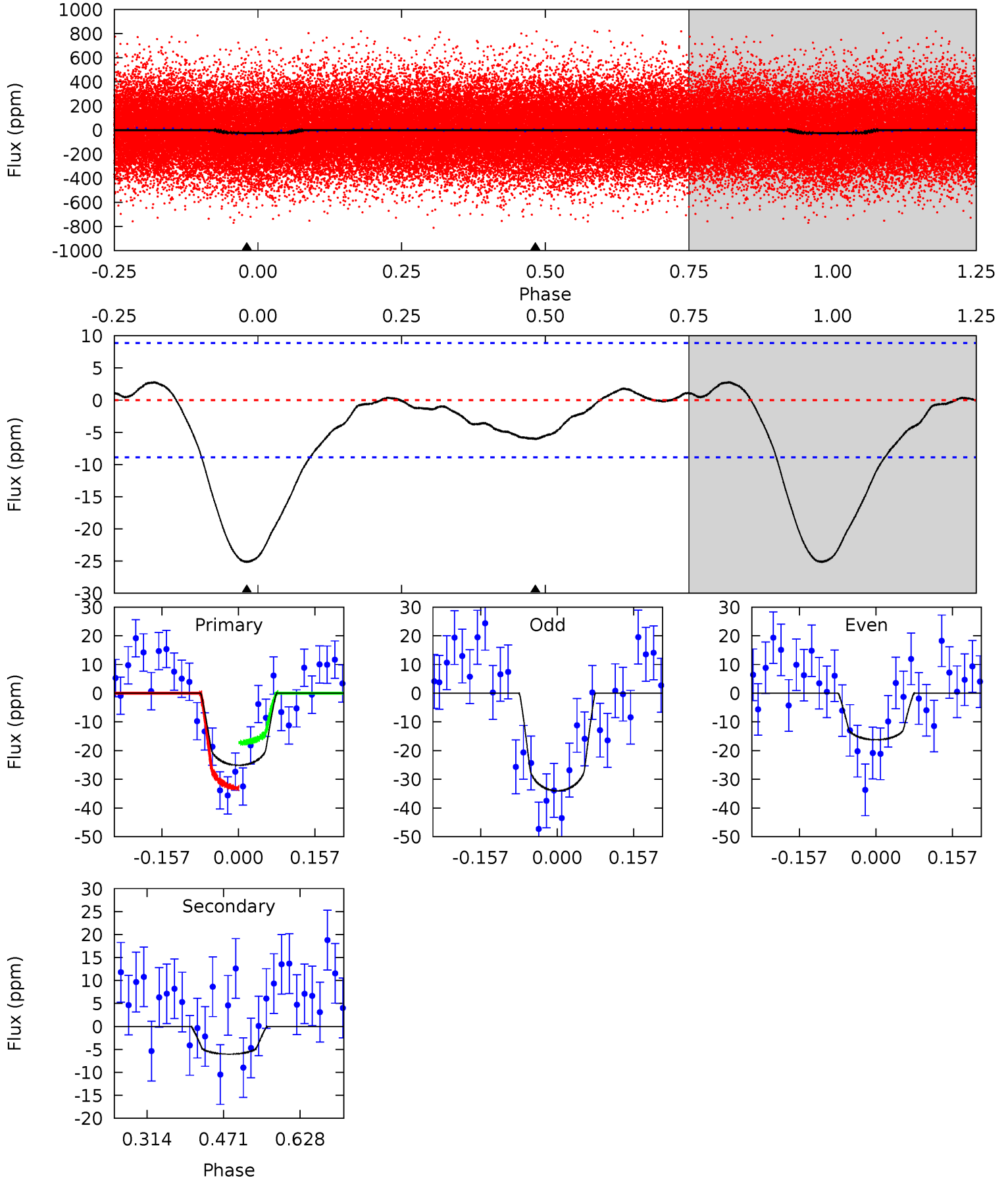
TCE 005621299-01 P= 0.938908 Days $T_0=131.839124$ (BKJD)



DV Model-Shift Uniqueness Test

005621299-01, P = 0.938937 Days, E = 130.894607 Days

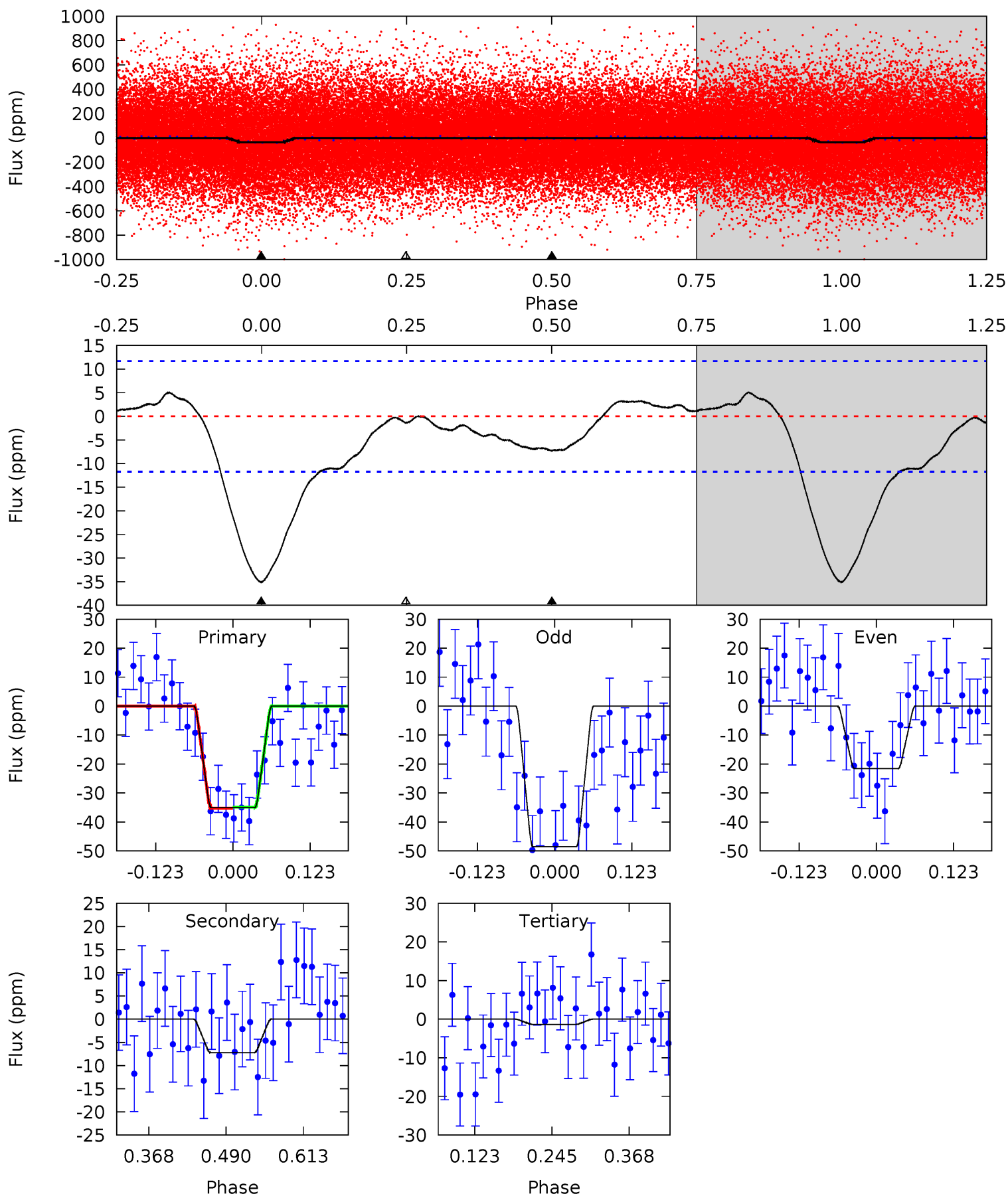
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.6	3.03	0	0	4.47	1.41	0.71	12.6	12.6	3.03	3.03	4.47	0.88	0.10	3.96



Alt Model-Shift Uniqueness Test

005621299-01, P = 0.938908 Days, E = 130.900216 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.5	2.79	0.52	0	4.52	1.54	1.52	13.0	13.5	2.28	2.79	5.21	1.33	0.13	0.06



Stellar Parameters For KIC 005621299

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6534^{+78}_{-85}	$4.074^{+0.168}_{-0.112}$	$0.060^{+0.150}_{-0.150}$	$1.797^{+0.311}_{-0.380}$	$1.395^{+0.123}_{-0.135}$	$0.338^{+0.291}_{-0.115}$
	+1%/-1%	+4%/-3%	+250%/-250%	+17%/-21%	+9%/-10%	+86%/-34%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 005621299-01 / KOI 6607.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-6 ± 2	$1.09^{+0.48}_{-0.48}$	3723^{+161}_{-199}	4245^{+1382}_{-949}	$1.189^{+2.740}_{-0.686}$
Alt.	-7 ± 3	$1.22^{+0.50}_{-0.49}$	3724^{+174}_{-207}	4183^{+1151}_{-855}	$1.123^{+1.953}_{-0.605}$

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 $A_{obs} \gg 1.0$

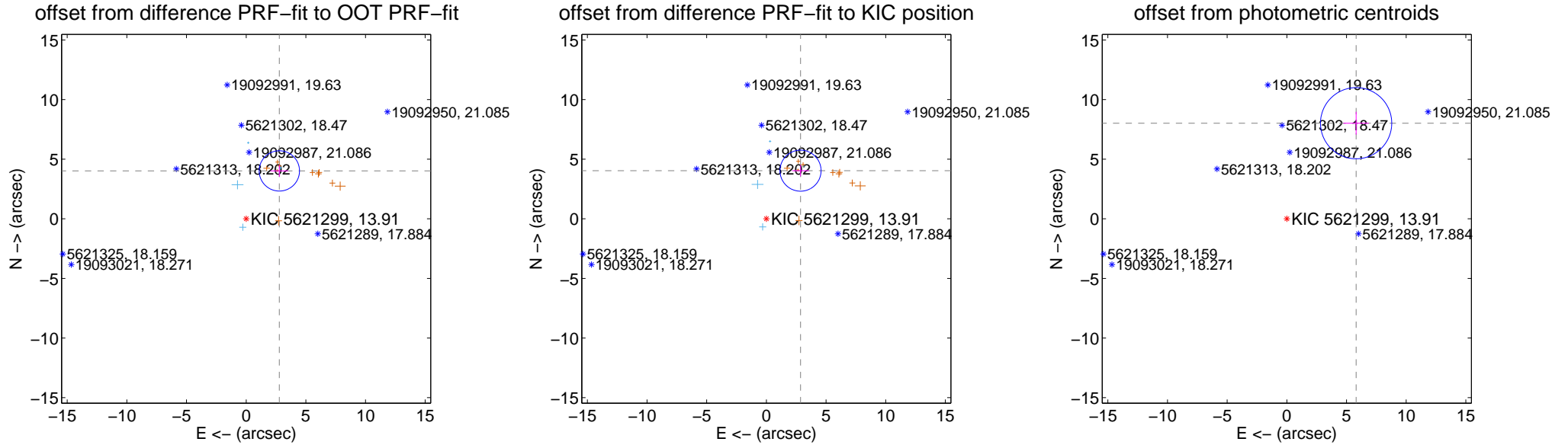
DV Centroid Data

Supplemental centroid analysis for 005621299-01. Kepler magnitude: 13.91. Transit SNR 7.94

There are 4 quarters with good PRF difference image offsets

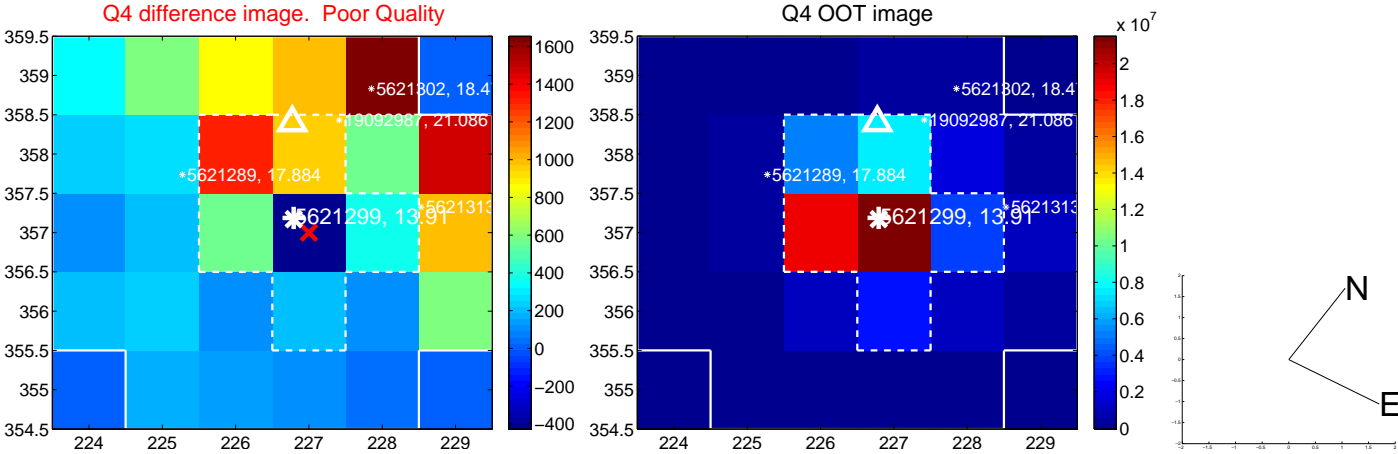
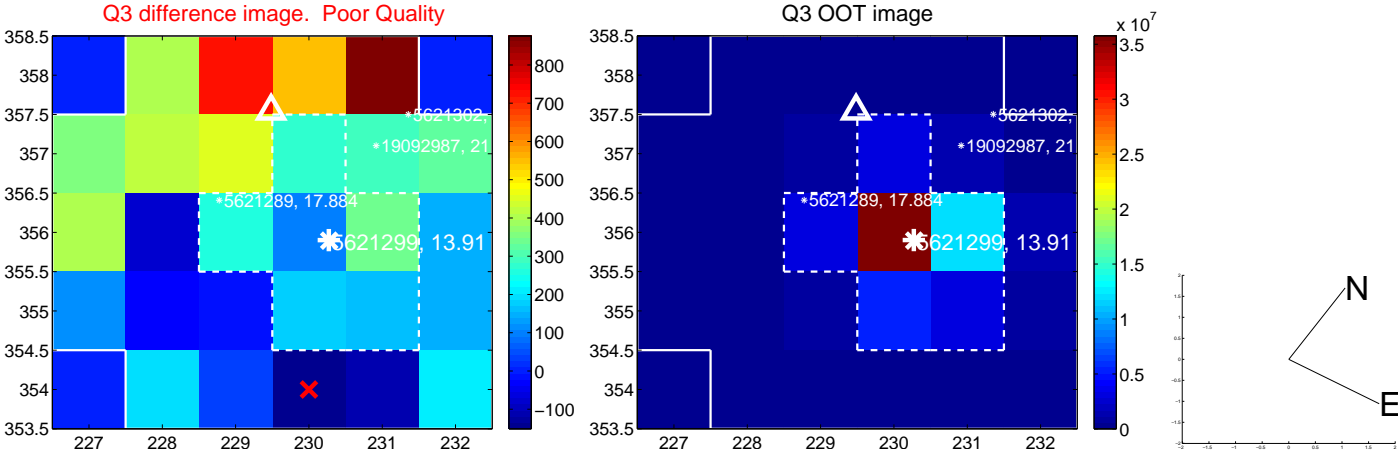
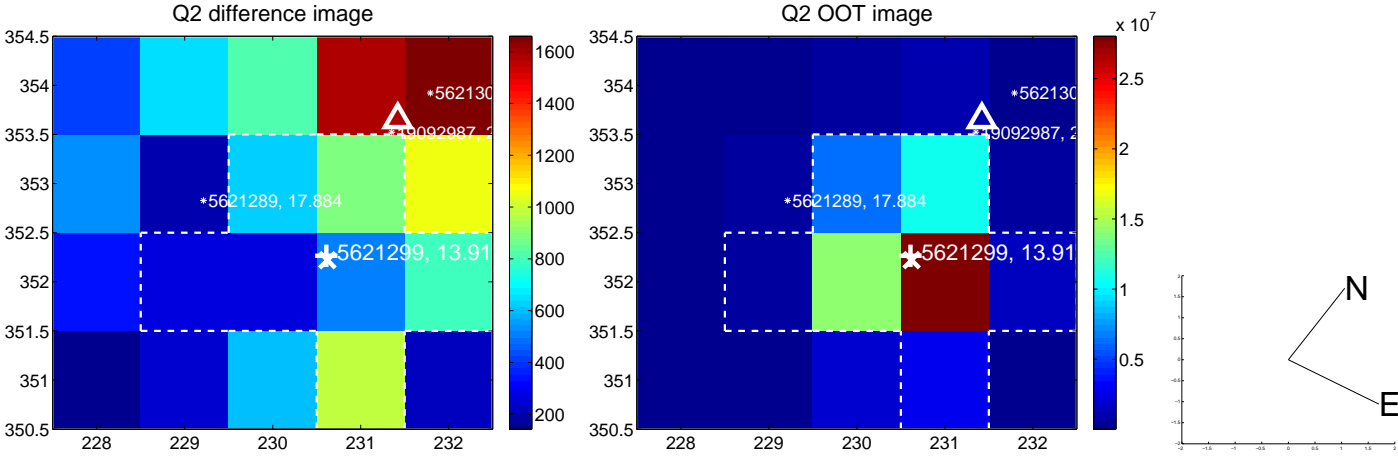
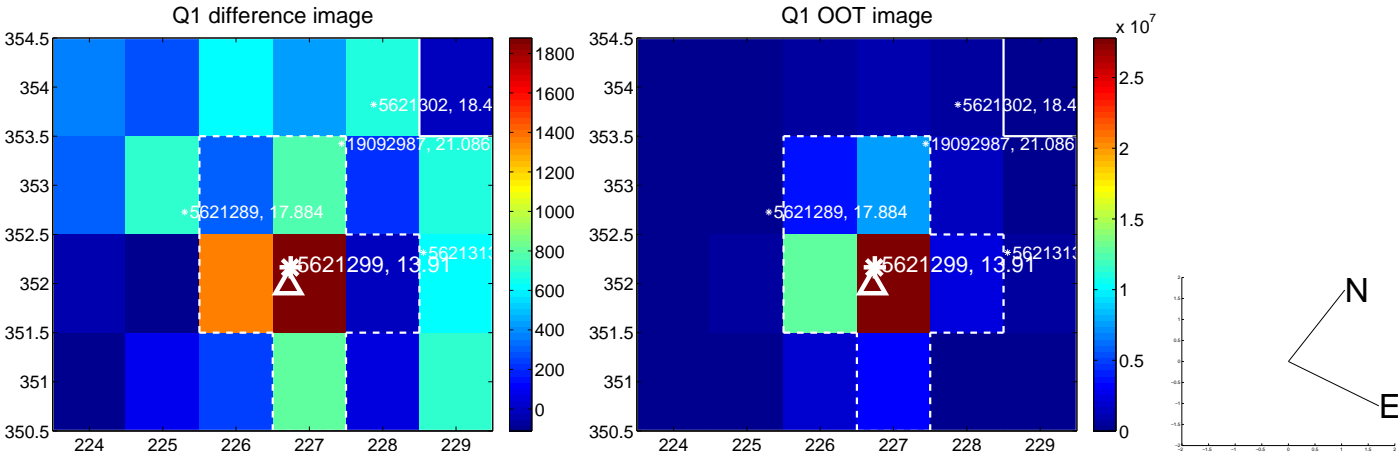
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.887 ± 0.564	8.67	-2.779 ± 0.741	4.020 ± 0.492
PRF-fit source offset from KIC position	4.952 ± 0.574	8.63	-2.863 ± 0.705	4.040 ± 0.474
photometric centroid source offset	9.90 ± 1.00	9.95	-5.81 ± 1.07	8.02 ± 0.96

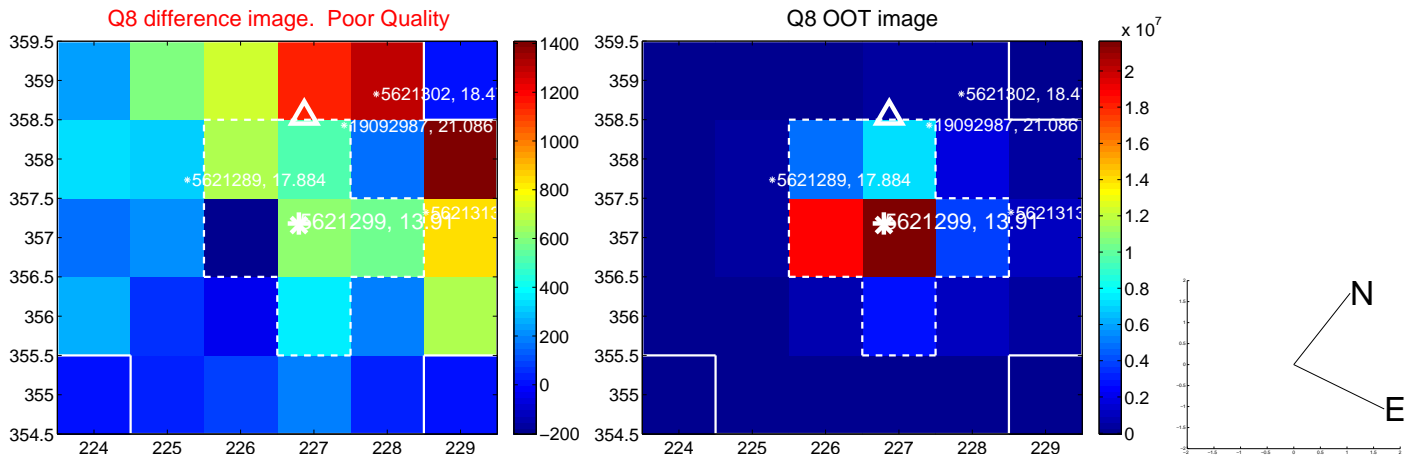
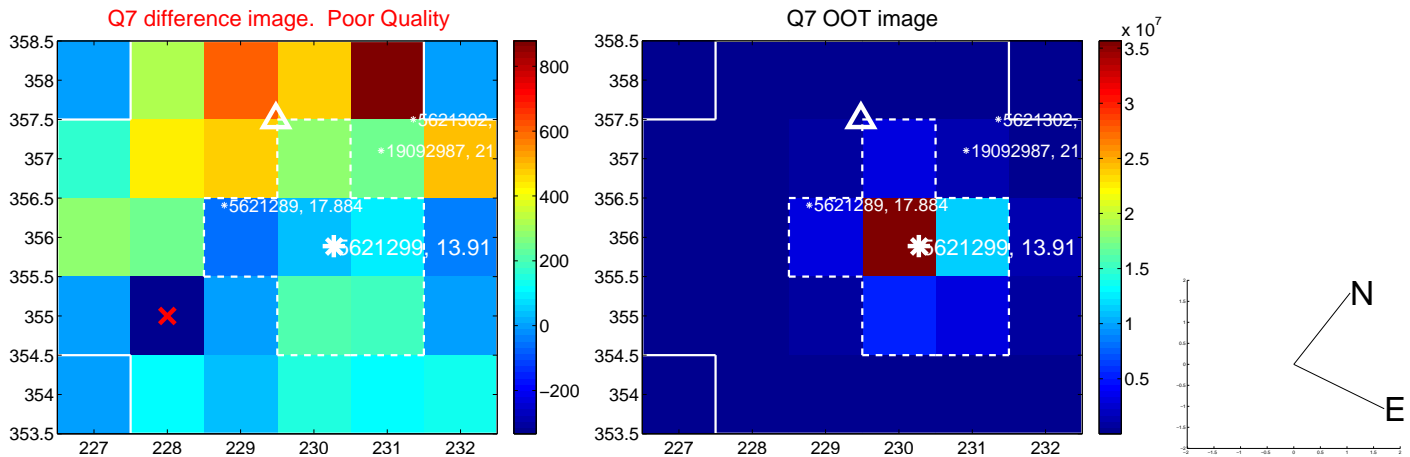
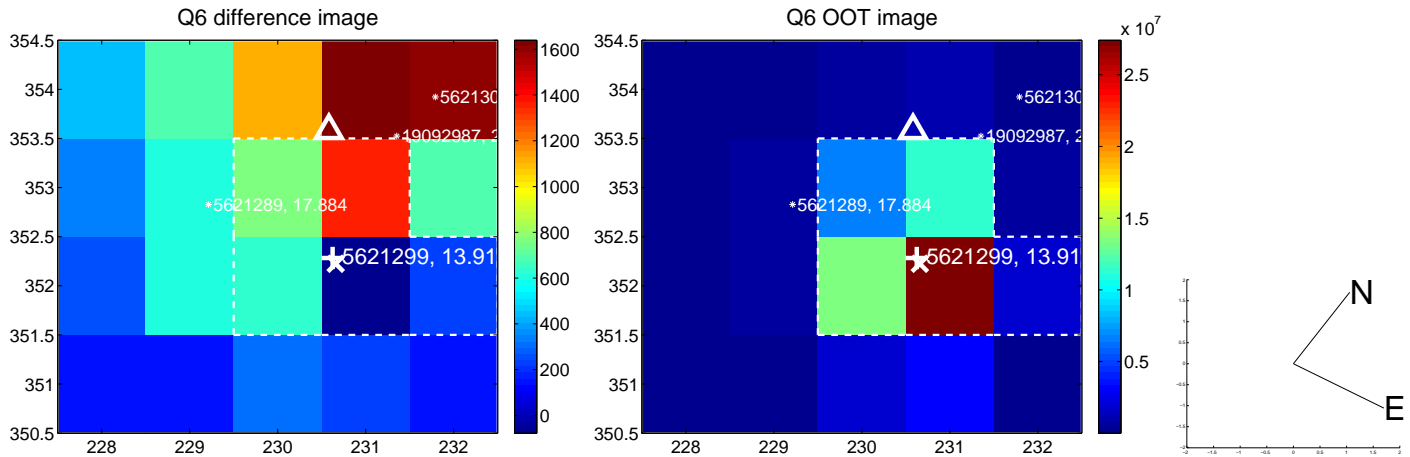
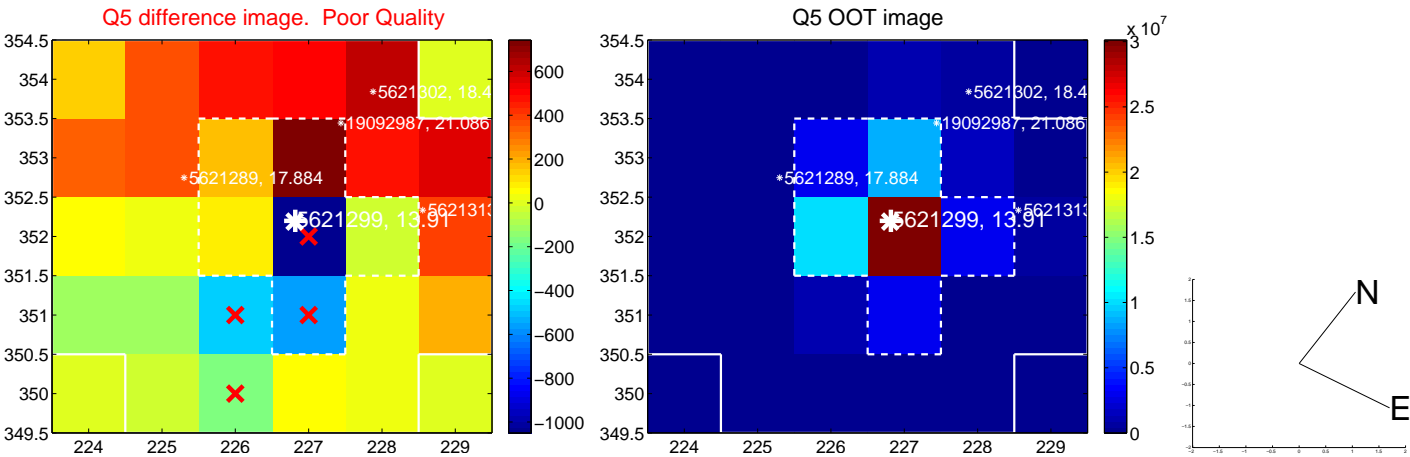


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

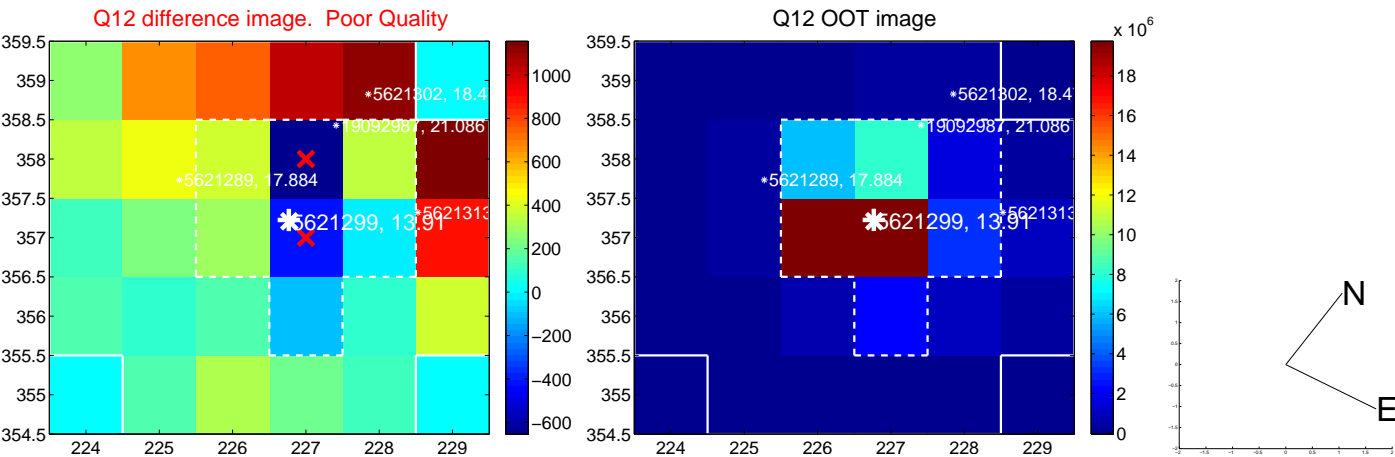
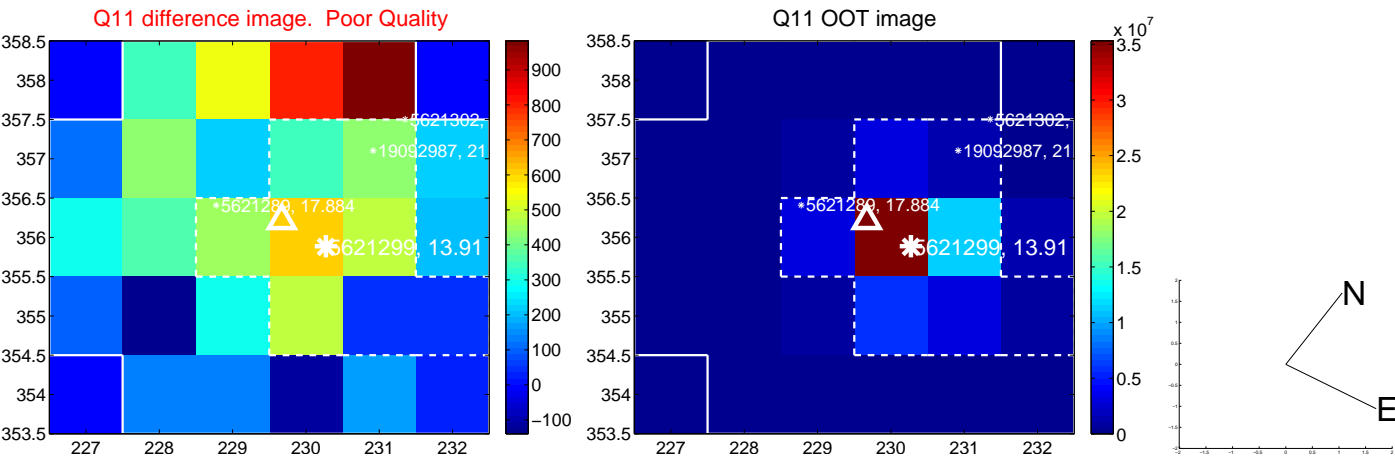
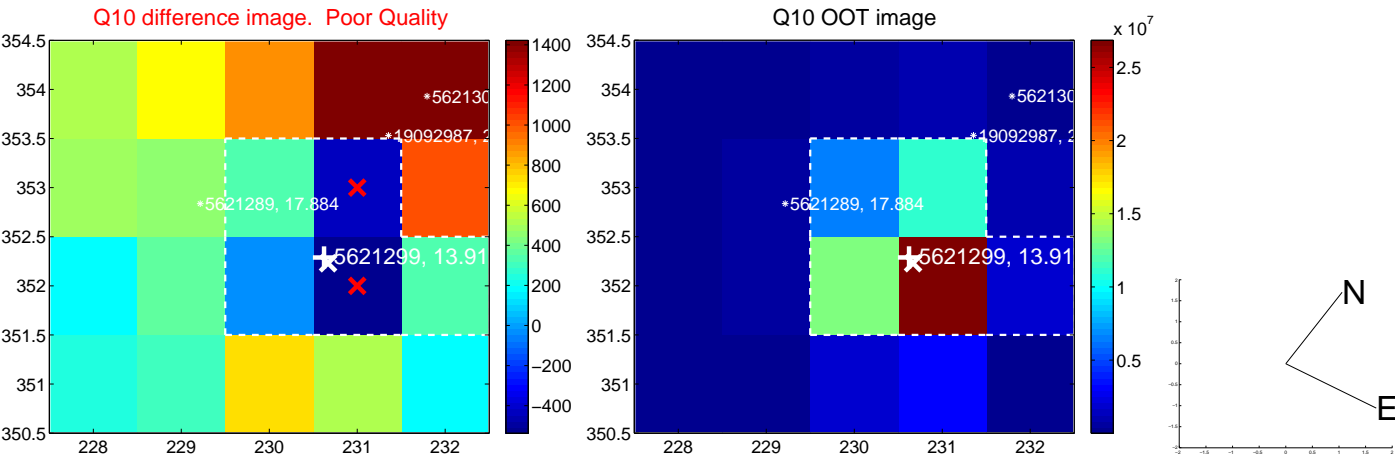
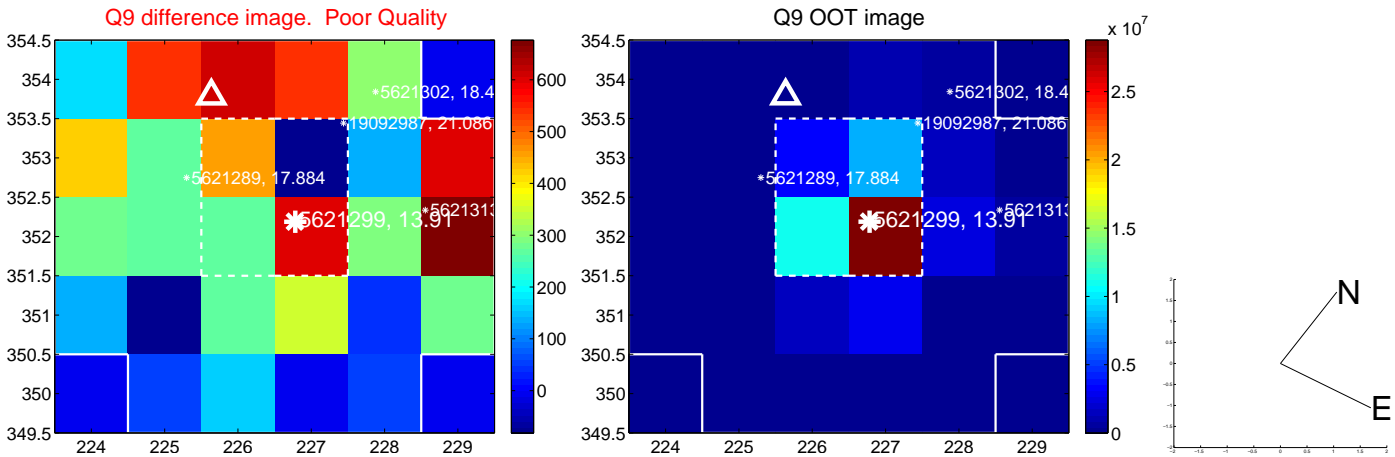
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



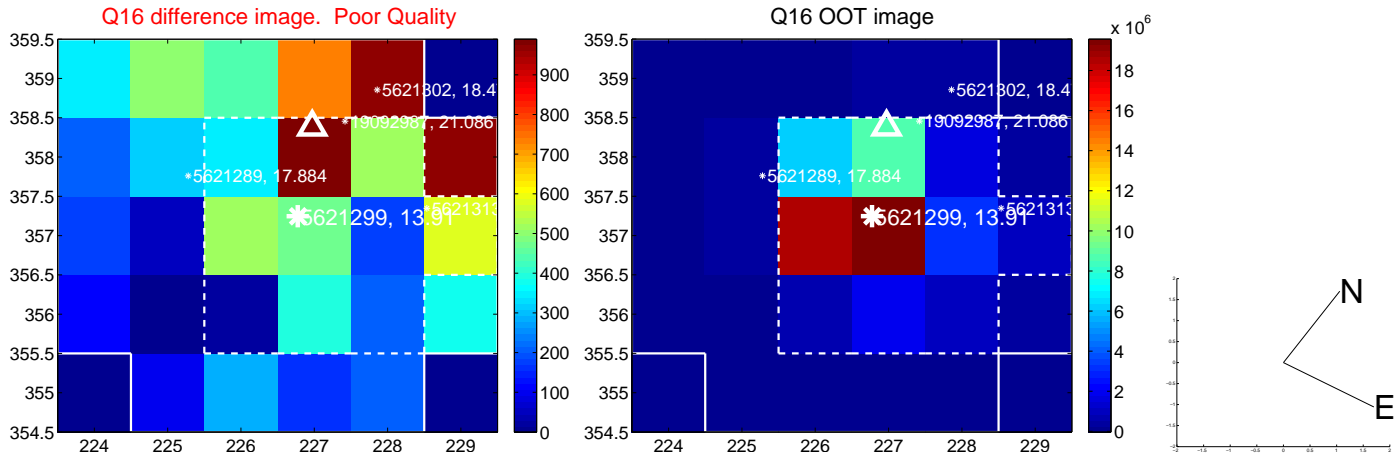
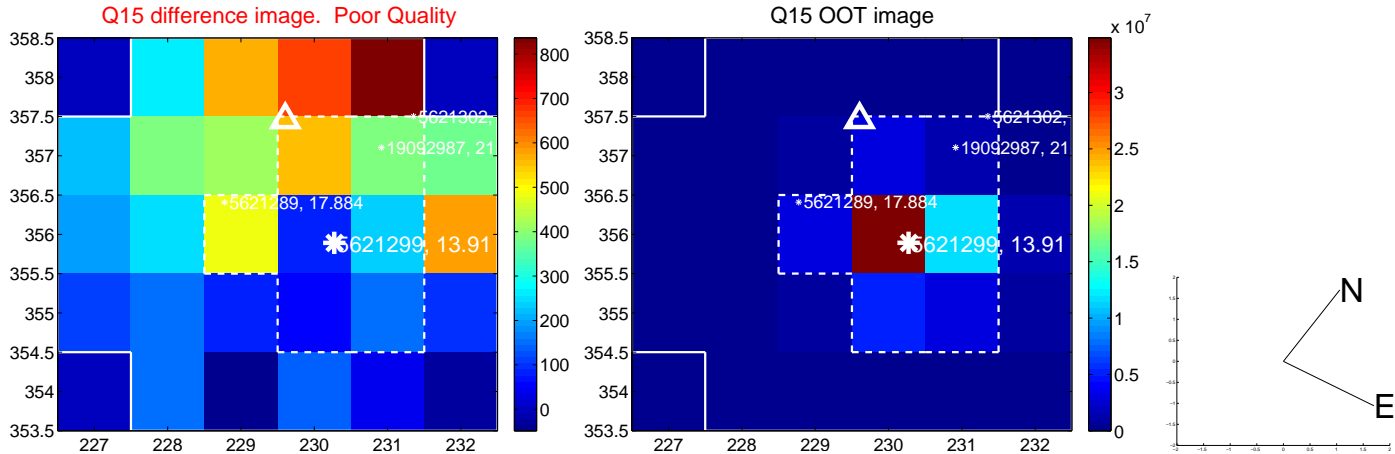
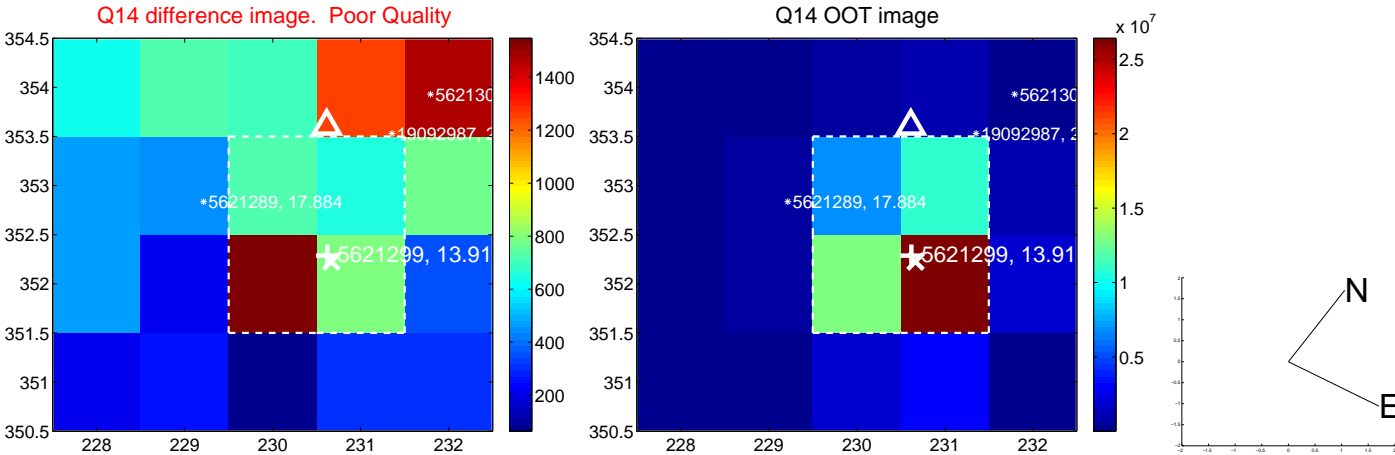
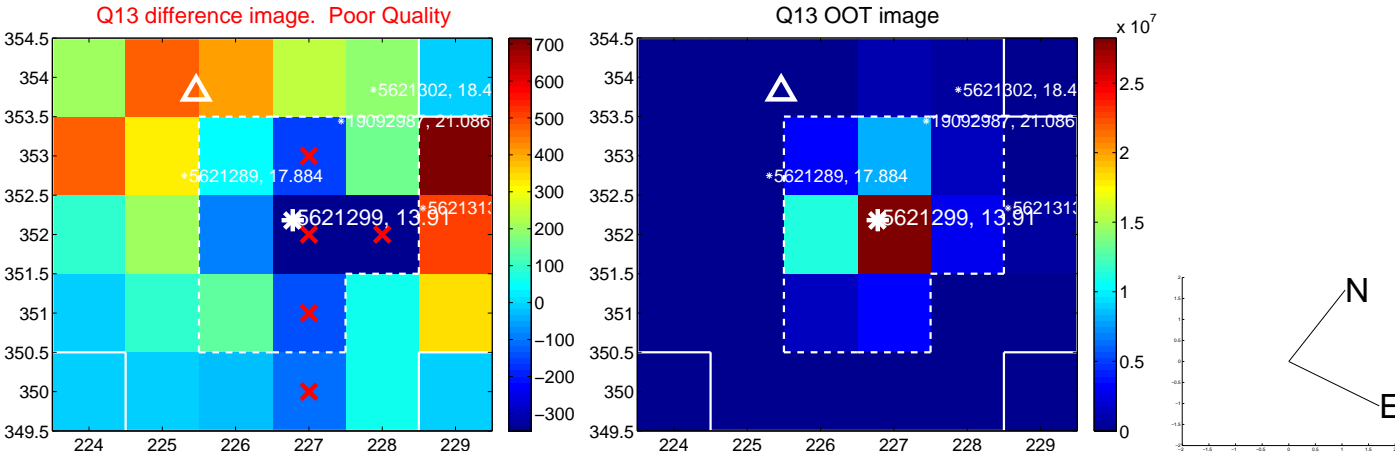
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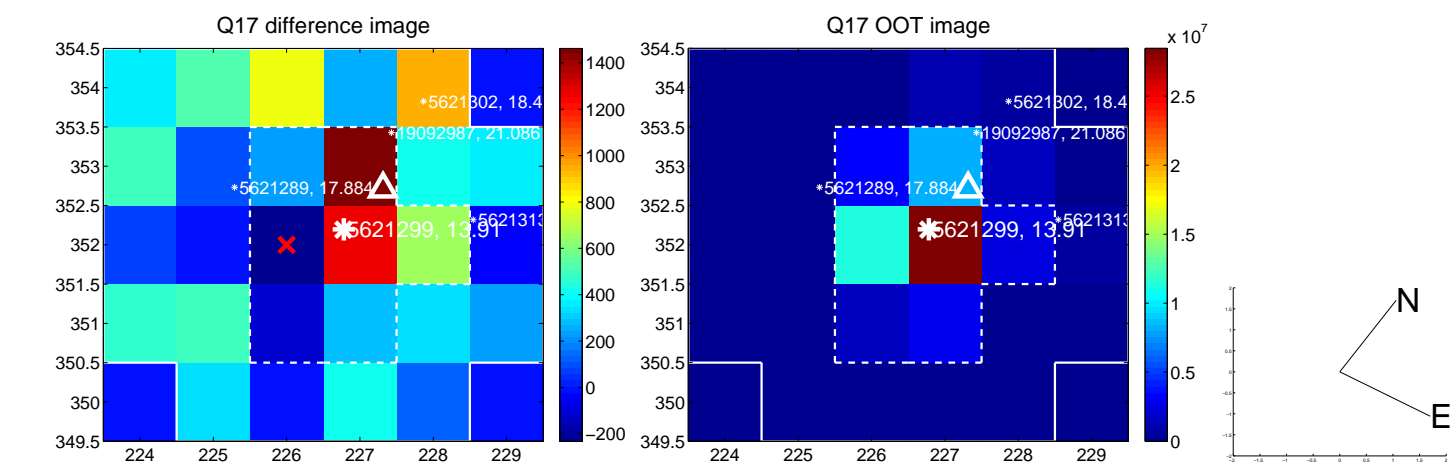
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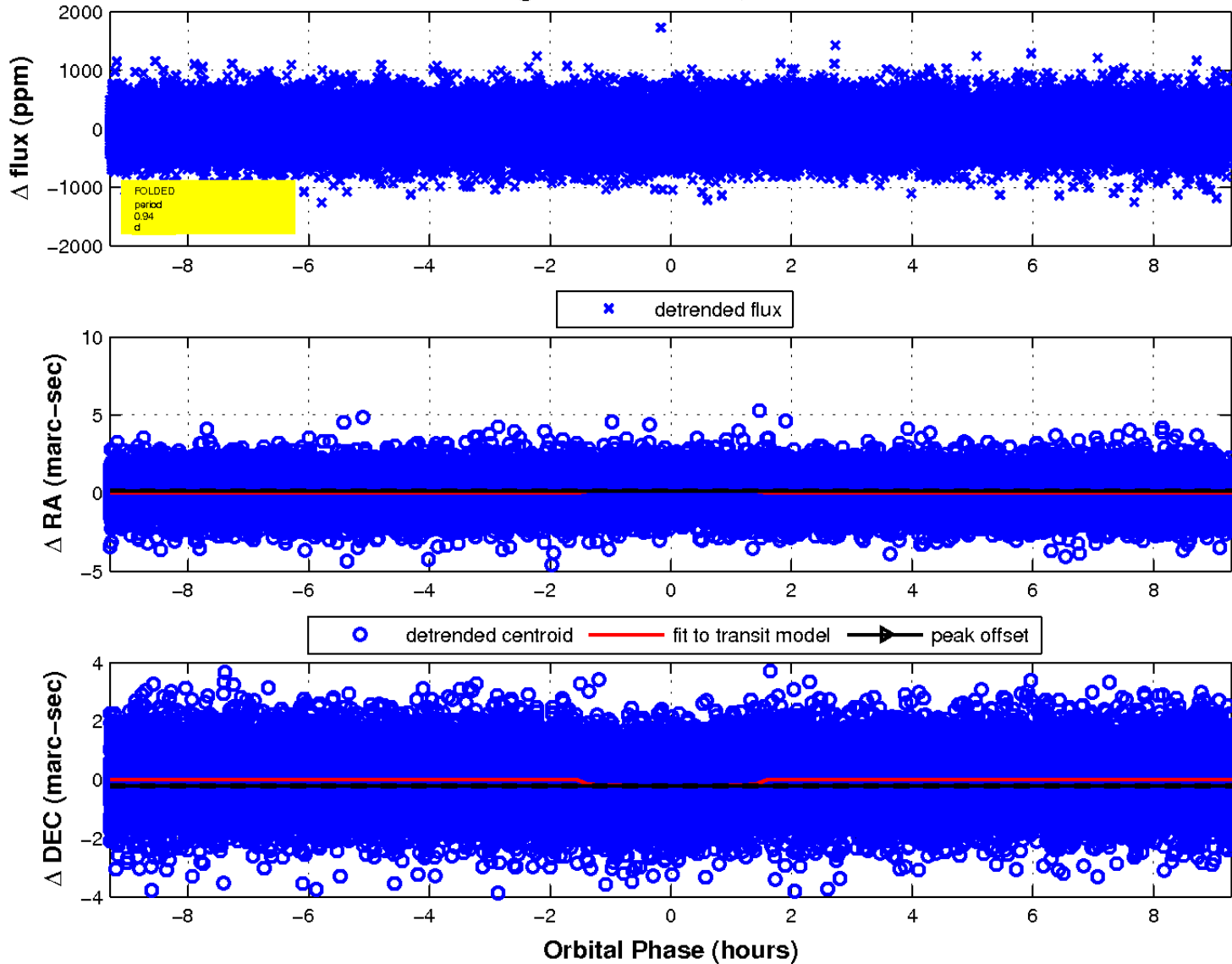
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

