

KIC 005649833

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})
005649833-01	OBS	2799.01	0.597929	131.959571	62.8	1.608	20.5	21.7	1.16	6543	1.08	10229.58

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005649833-01	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 005649833-01

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
005649833-01	5649833	3831.01	5649836	1:1	12.0	3	-1	16.38	13.37	5310.60	Direct-PRF	0	0.74	0.25

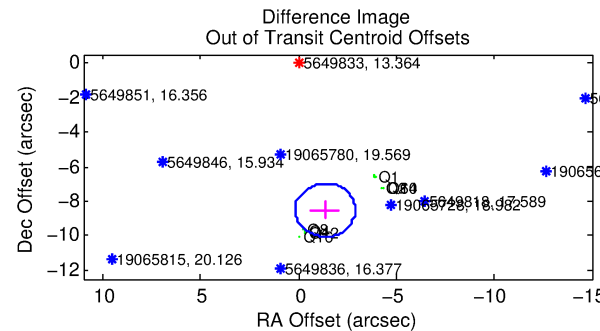
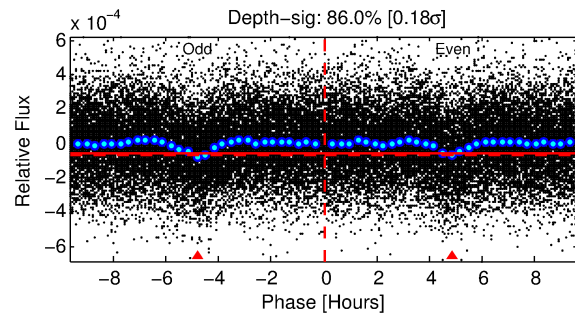
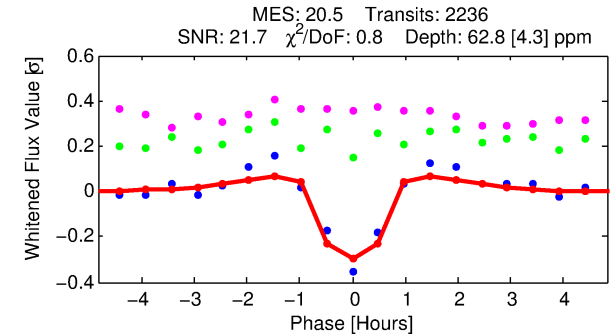
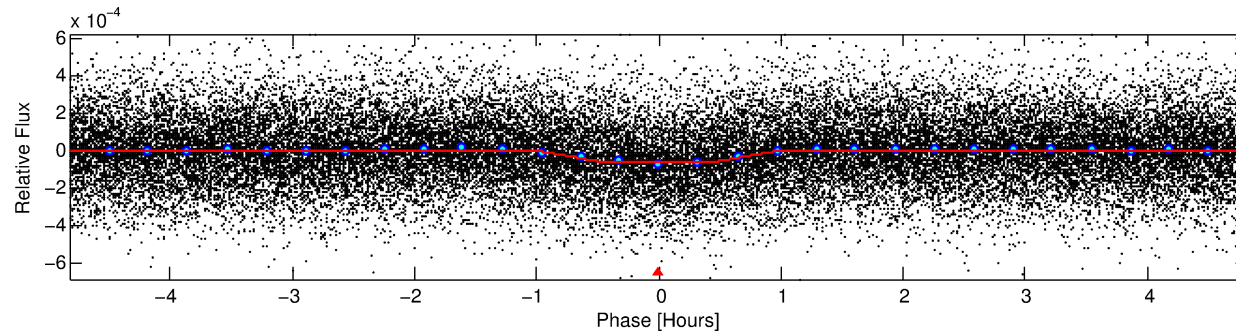
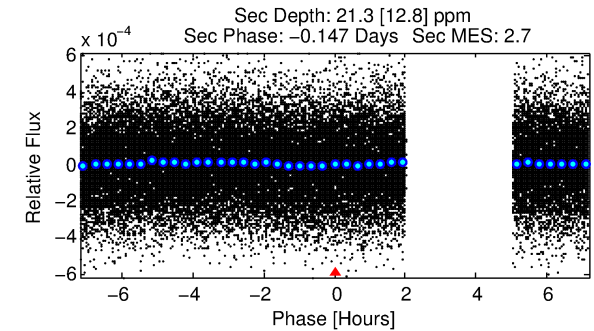
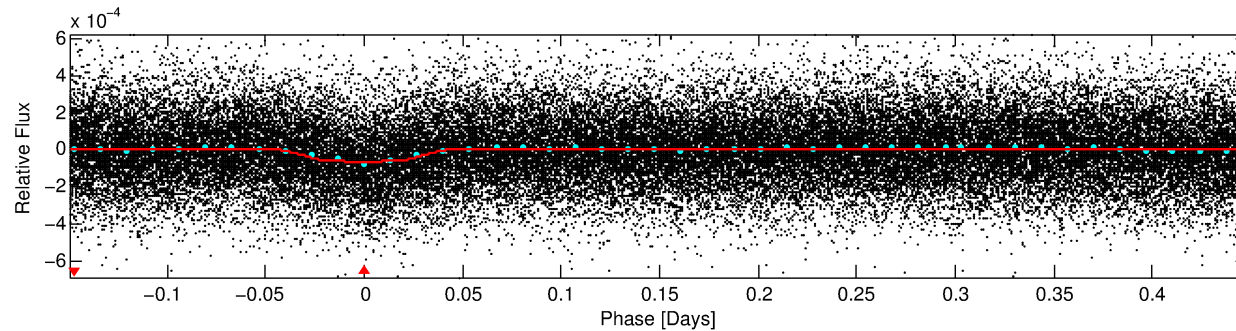
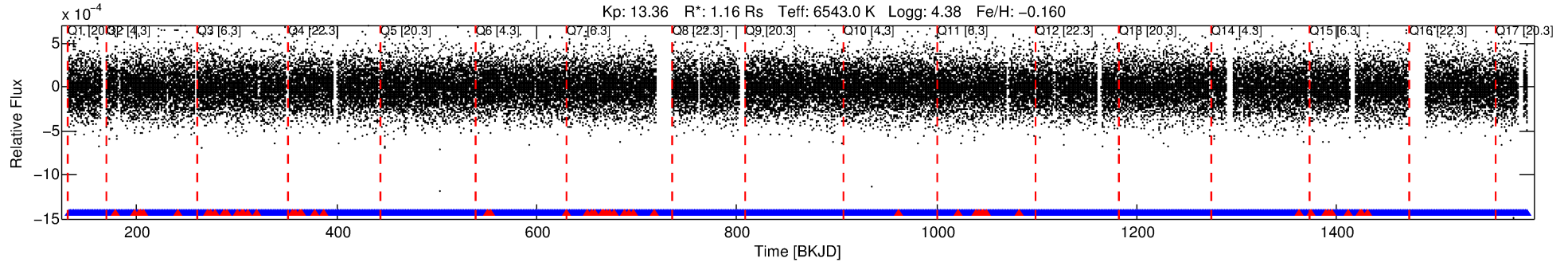
Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match 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: 5649833 Candidate: 1 of 1 Period: 0.598 d

KOI: K02799 Corr: No Ephemeris Match

Kp: 13.36 R*: 1.16 Rs Teff: 6543.0 K Logg: 4.38 Fe/H: -0.160



DV Fit Results:

Period = 0.59793 [0.00001] d
Epoch = 131.9596 [0.0009] BKJD
Rp/R* = 0.0085 [0.0020]
a/R* = 1.60 [1.30]
b = 0.90 [0.29]
Seff = 10229.58 [3655.39]
Teq = 2564 [229] K
Rp = 1.08 [0.40] Re
a = 0.0147 [0.0035] AU
Ag = 2.18 [1.82] [0.65σ]
Teff = 4820 [928] K [2.36σ]

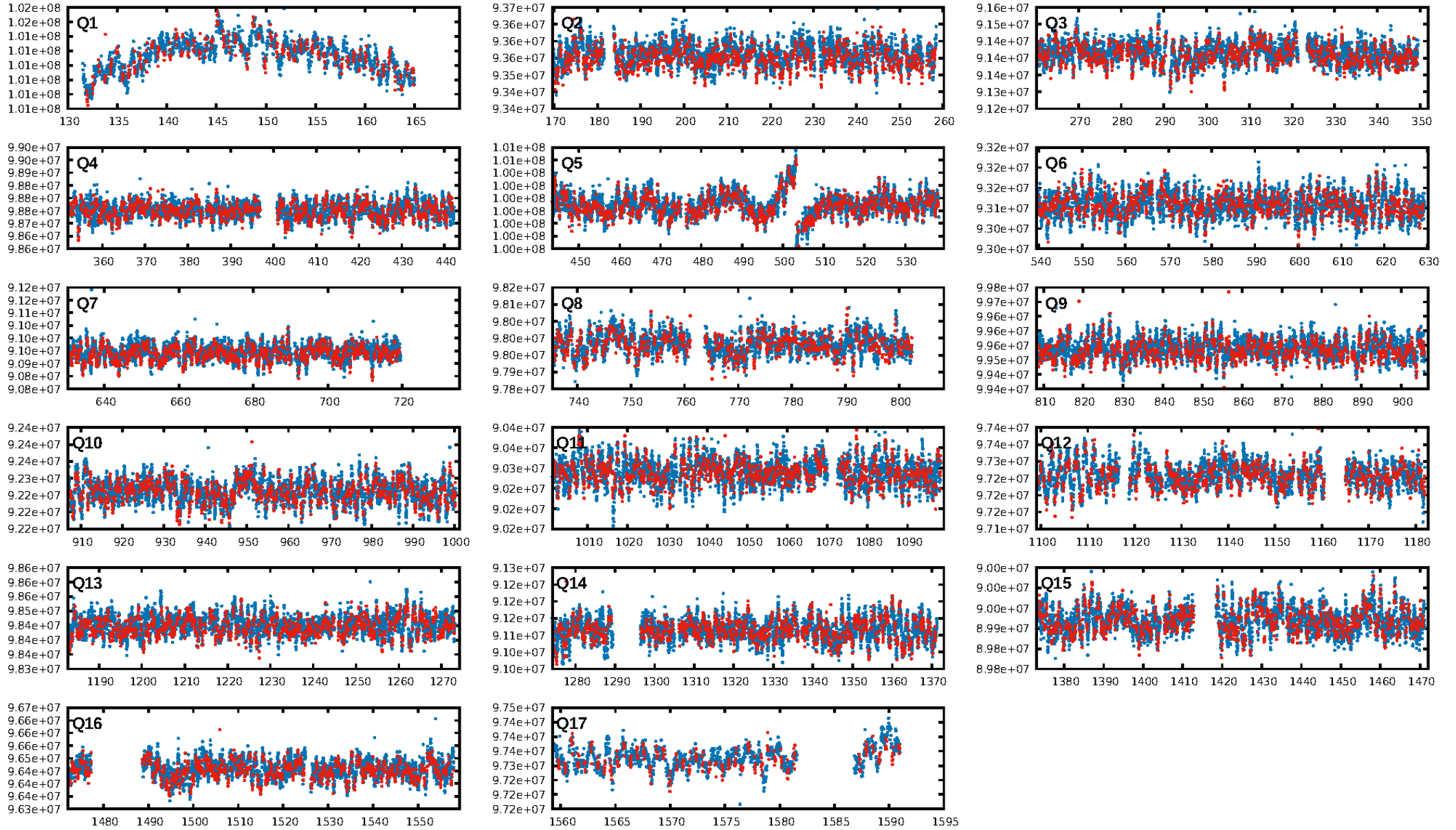
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.81e-91
RollingBand-fgt: 0.97 [2074/2135]
GhostDiagnostic-chr: -0.1395
Centroid-sig: 0.0%
Centroid-so: 245.478 arcsec [468.68σ]
OotOffset-rm: 8.624 arcsec [16.83σ]
KicOffset-rm: 8.564 arcsec [17.12σ]
OotOffset-st: 4/0/4/1 [9]
KicOffset-st: 4/0/4/1 [9]
DiffImageQuality-fgm: 1.00 [9/9]
DiffImageOverlap-fno: 1.00 [17/17]

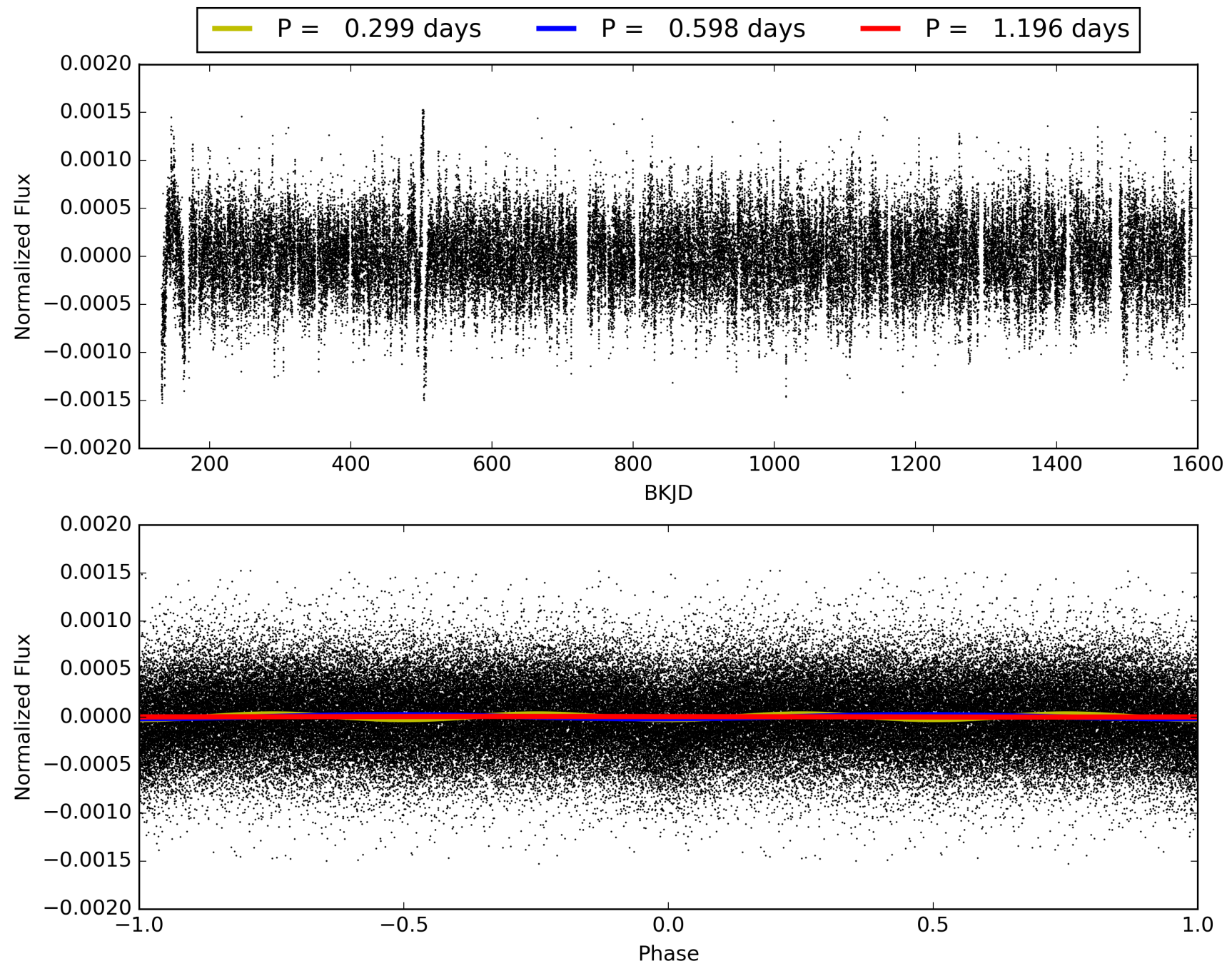
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:08:30 Z

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

TCE 005649833-01, PDC Light Curves

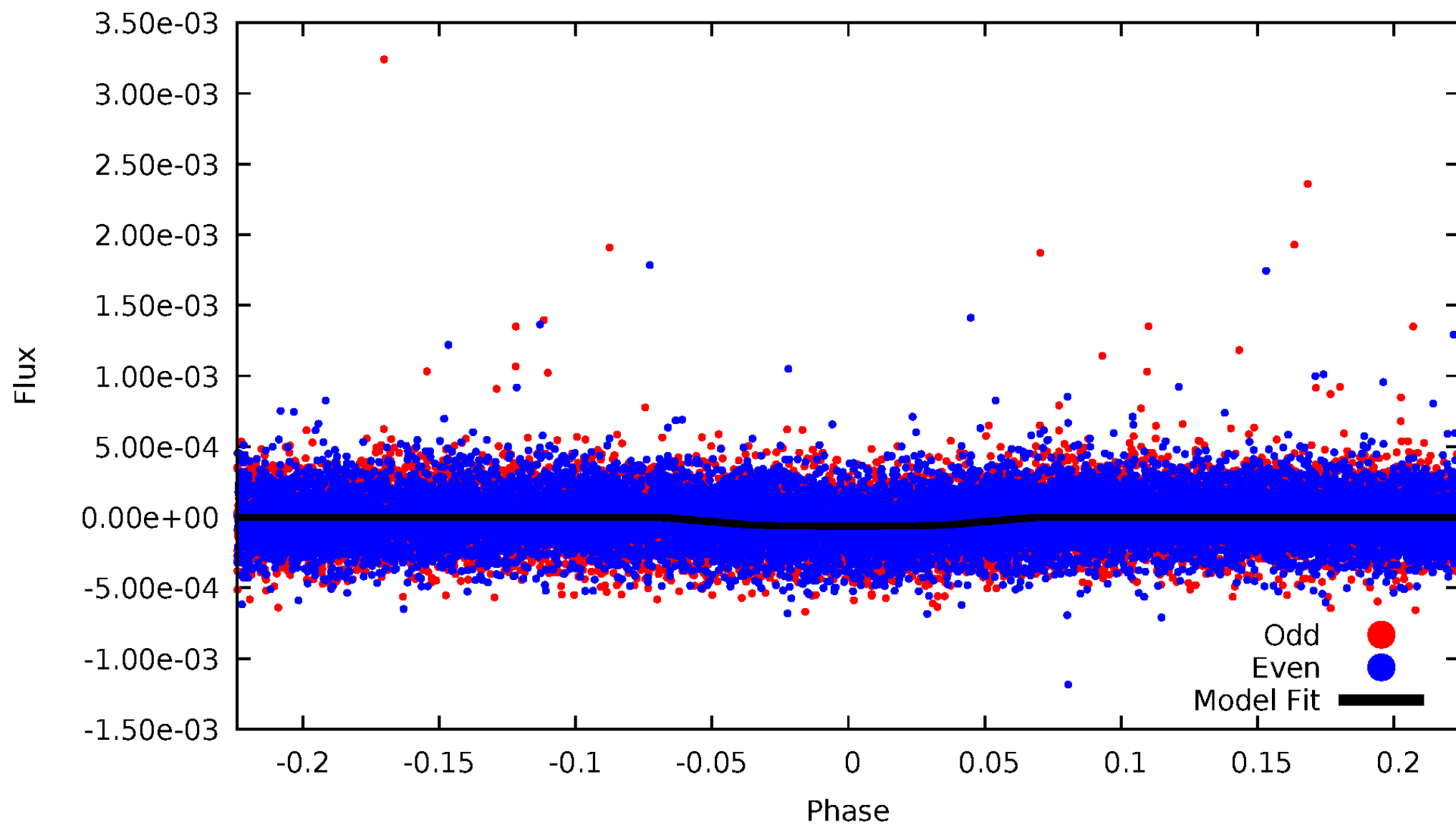


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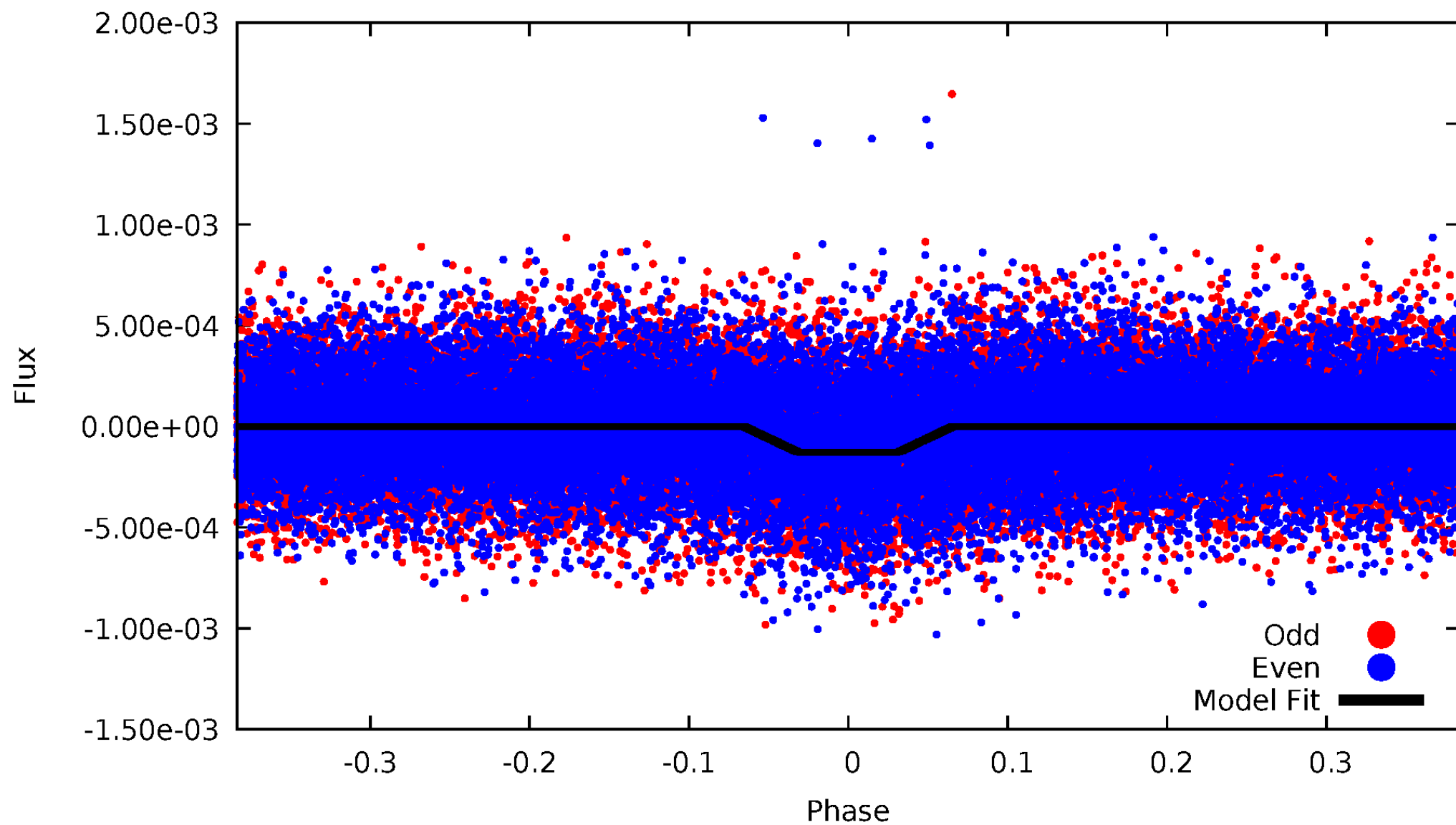
DV Odd/Even

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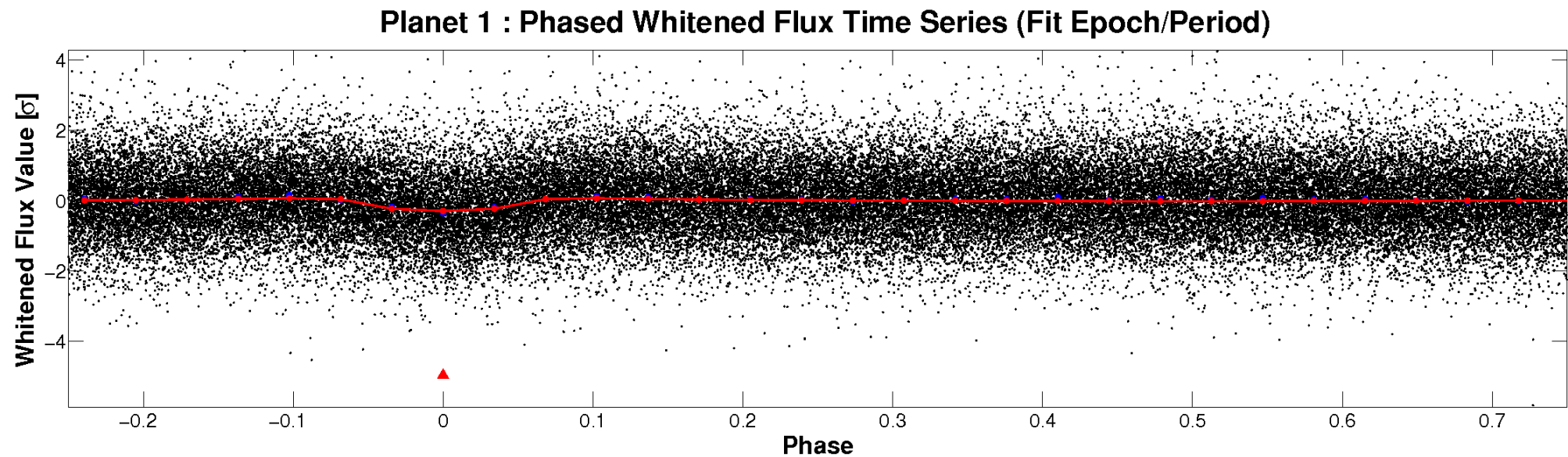
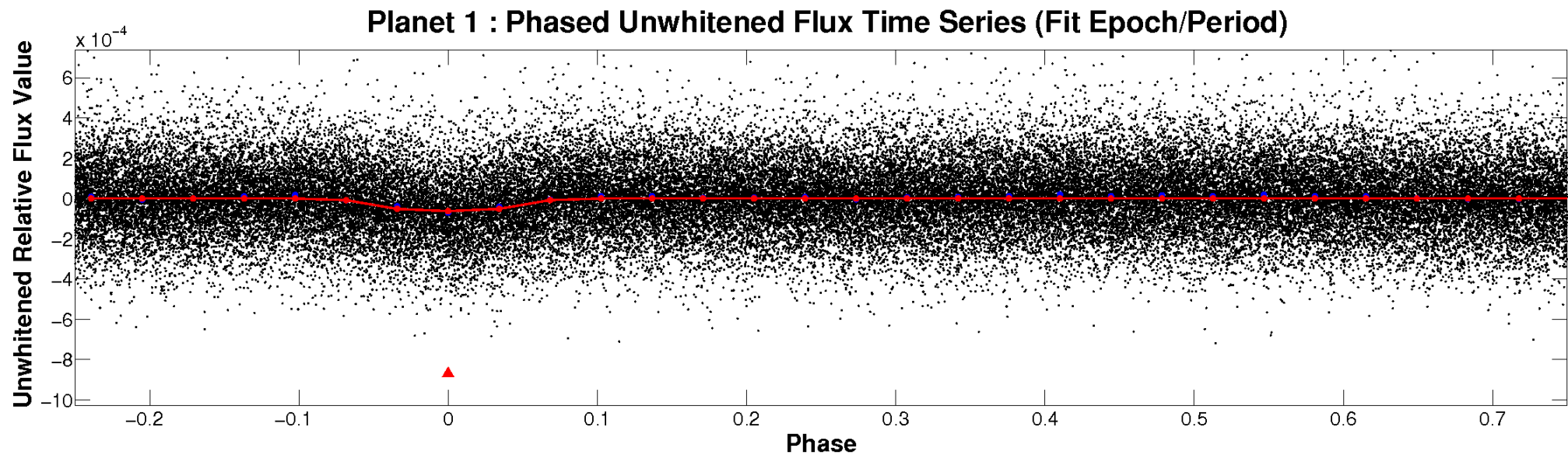


ALT Odd/Even

TCE 005649833-01

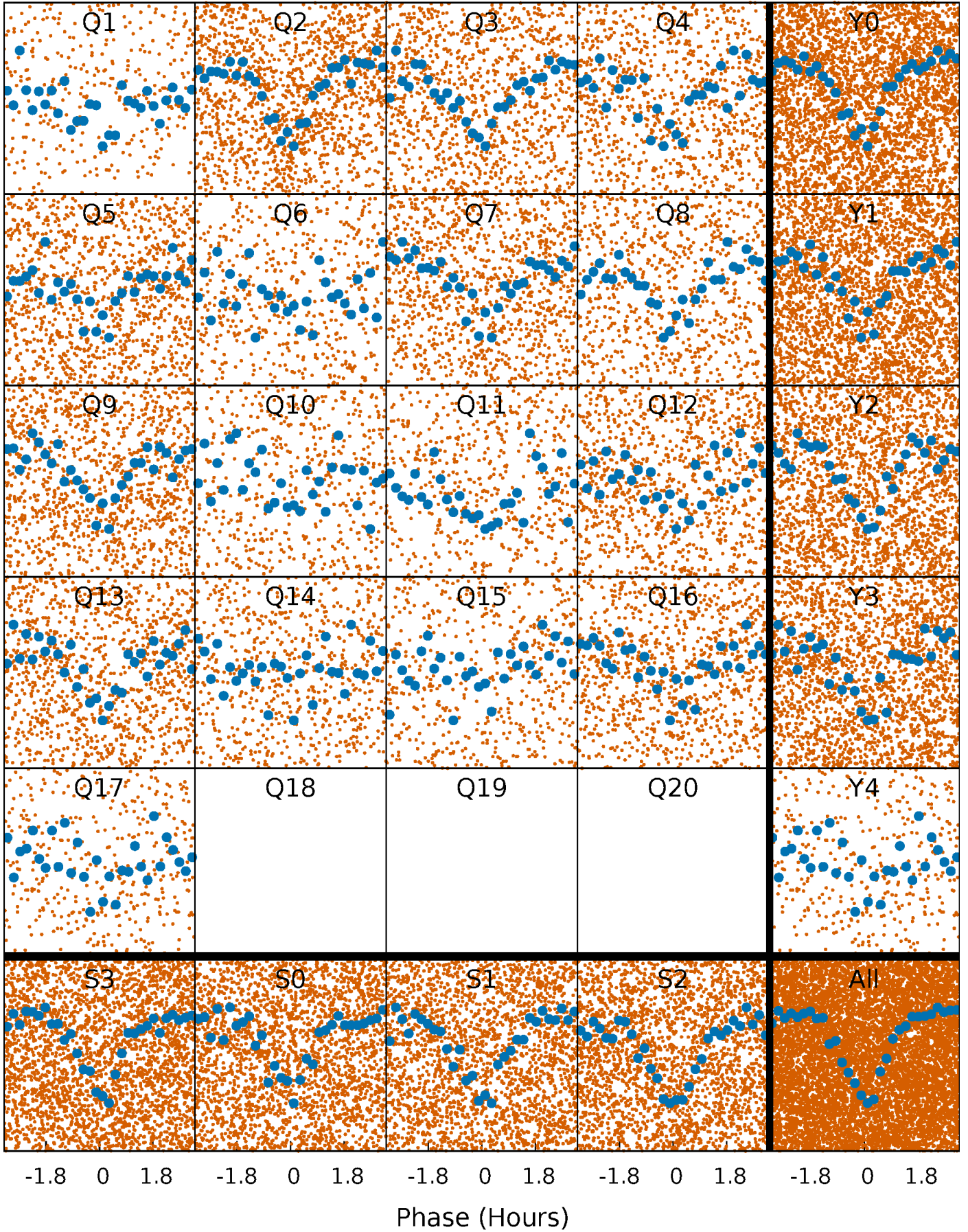


Non-Whitened Vs. Whitened Light Curve



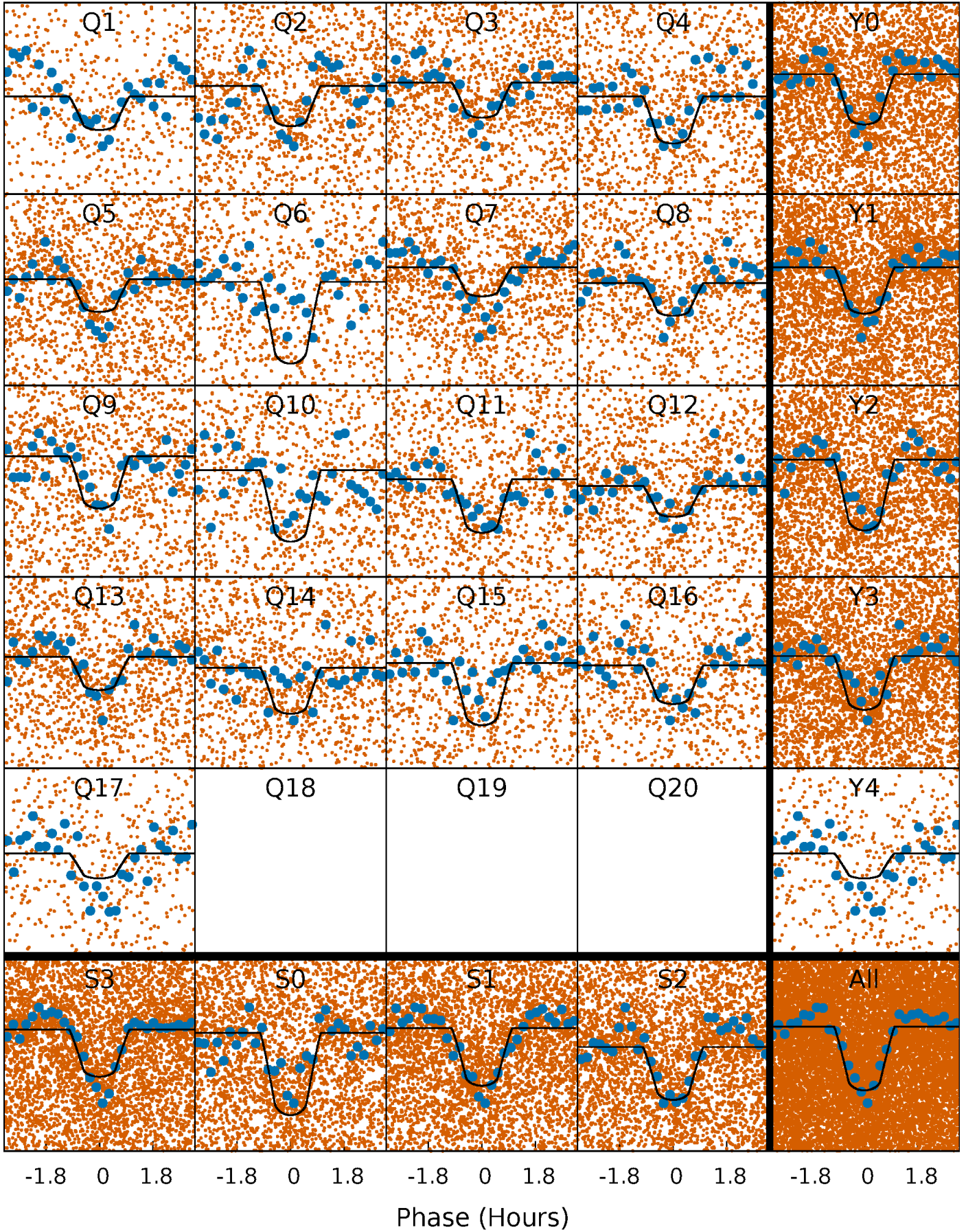
PDC Quarter-Phased Transit Curves

TCE 005649833-01 P= 0.597929 Days $T_0=131.959571$ (BKJD)



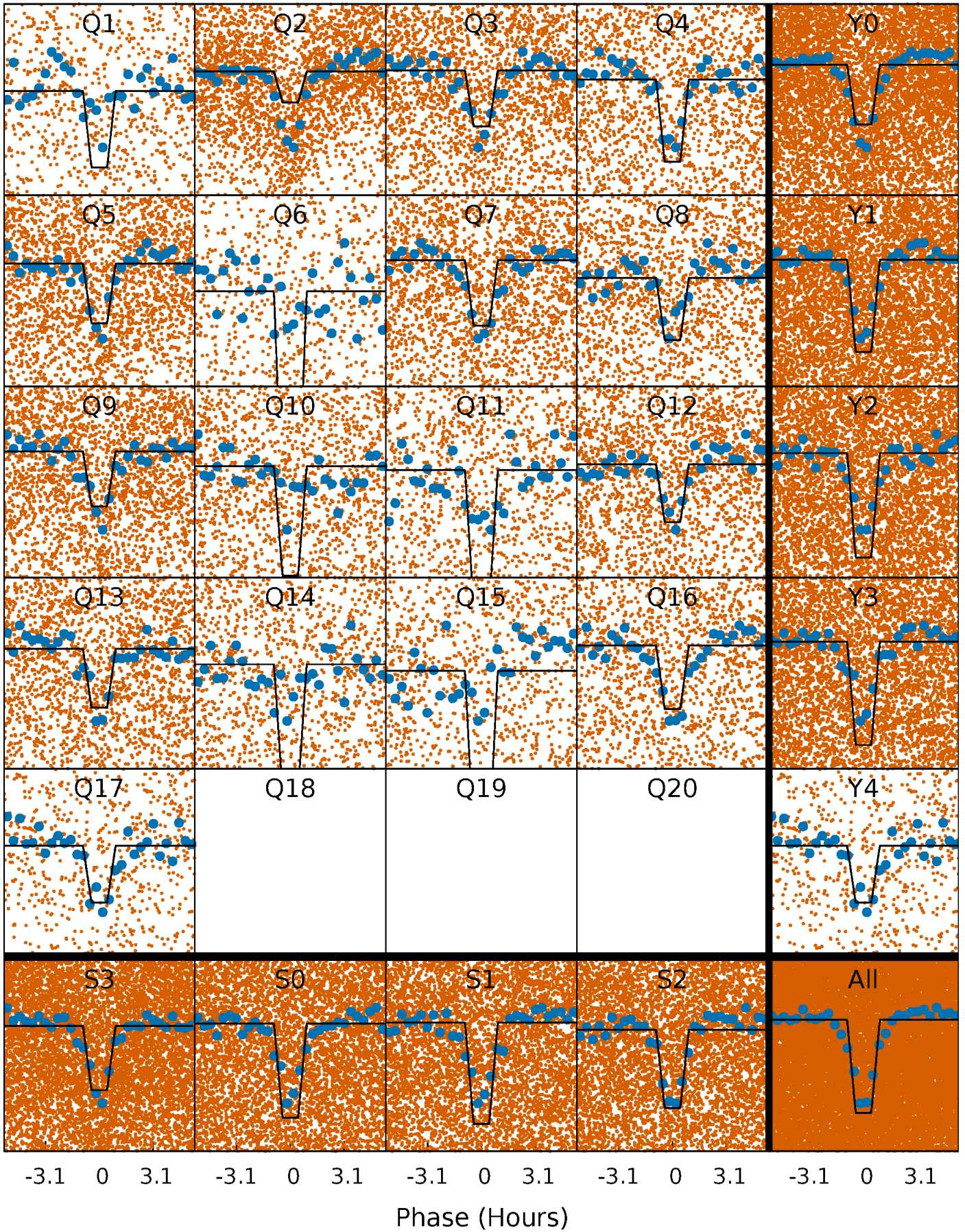
DV Quarter-Phased Transit Curves

TCE 005649833-01 P= 0.597929 Days $T_0=131.959571$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

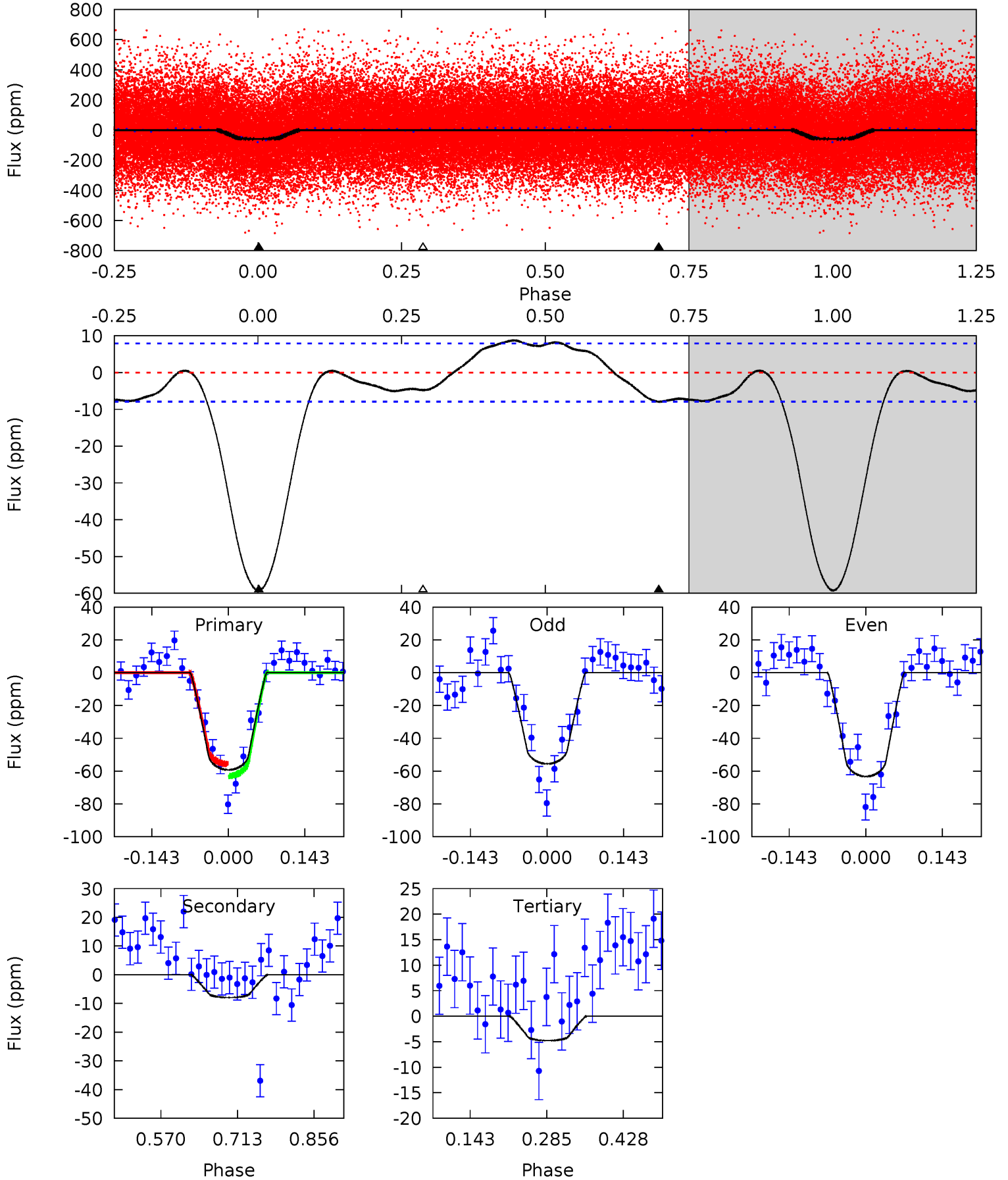
TCE 005649833-01 P= 0.597933 Days $T_0=131.955806$ (BKJD)



DV Model-Shift Uniqueness Test

005649833-01, P = 0.597929 Days, E = 131.361642 Days

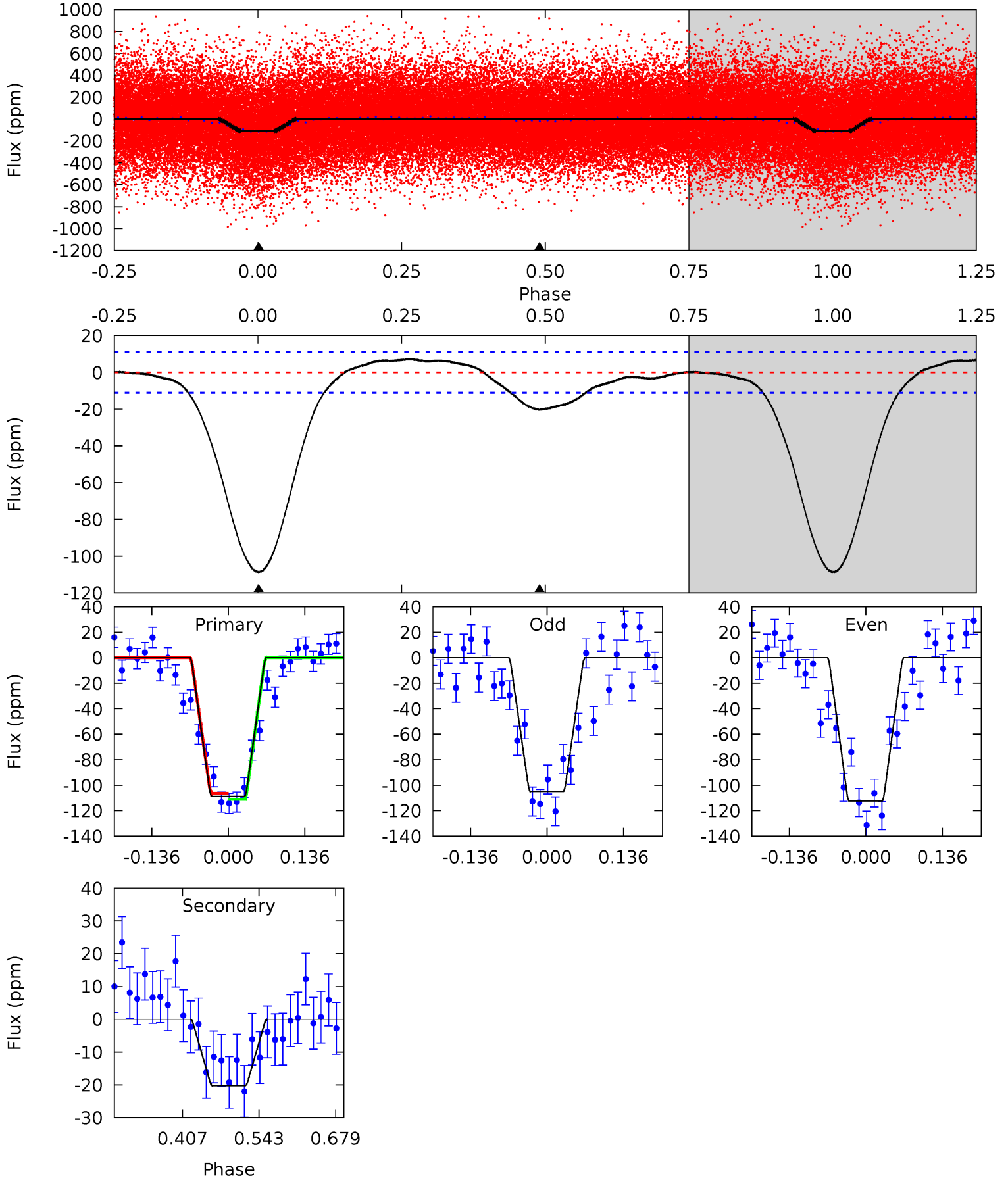
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.7	4.51	2.71	0	4.49	1.47	2.99	30.9	33.7	1.80	4.51	2.20	1.01	0.13	2.05



Alt Model-Shift Uniqueness Test

005649833-01, P = 0.597933 Days, E = 131.357873 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
44.2	8.25	0	0	4.50	1.49	1.63	44.2	44.2	8.25	8.25	1.50	1.07	0.06	0.97



Stellar Parameters For KIC 005649833

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6543^{+148}_{-198}	$4.382^{+0.060}_{-0.180}$	$-0.160^{+0.250}_{-0.300}$	$1.159^{+0.333}_{-0.143}$	$1.181^{+0.162}_{-0.146}$	$1.068^{+0.339}_{-0.507}$
	+2%/-3%	+1%/-4%	+156%/-188%	+29%/-12%	+14%/-12%	+32%/-47%
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 005649833-01 / KOI 2799.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-8 ± 2	$1.12^{+0.31}_{-0.28}$	3636^{+246}_{-161}	3683^{+584}_{-626}	$0.730^{+0.600}_{-0.315}$
Alt.	-20 ± 2	$1.48^{+0.32}_{-0.27}$	3642^{+248}_{-177}	4076^{+431}_{-356}	$1.097^{+0.544}_{-0.393}$

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

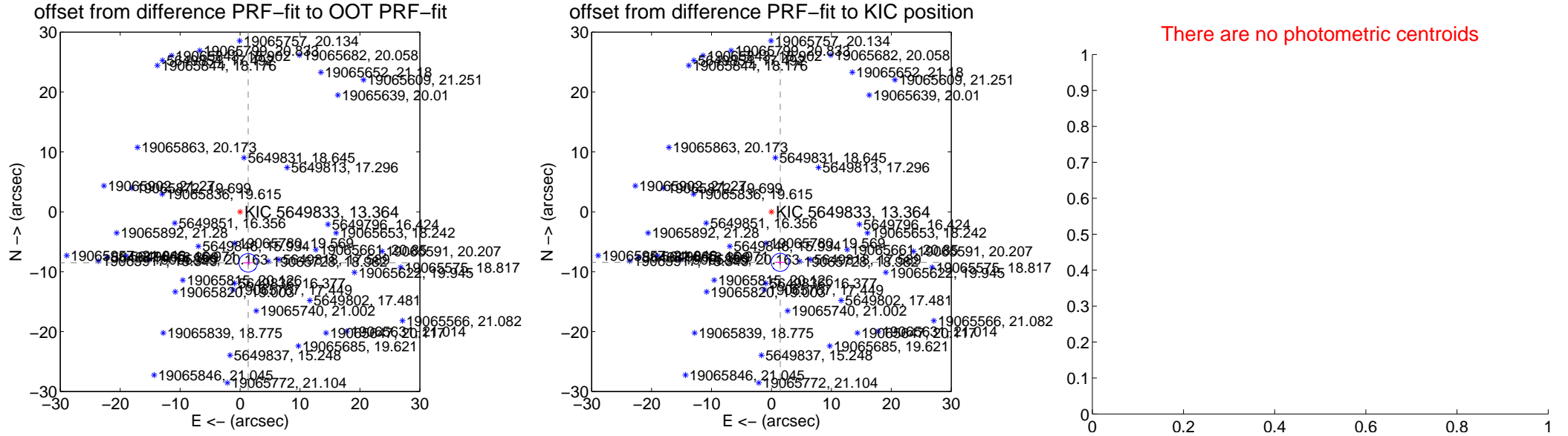
DV Centroid Data

Supplemental centroid analysis for 005649833-01. Kepler magnitude: 13.36. Transit SNR 21.74

There are 9 quarters with good PRF difference image offsets

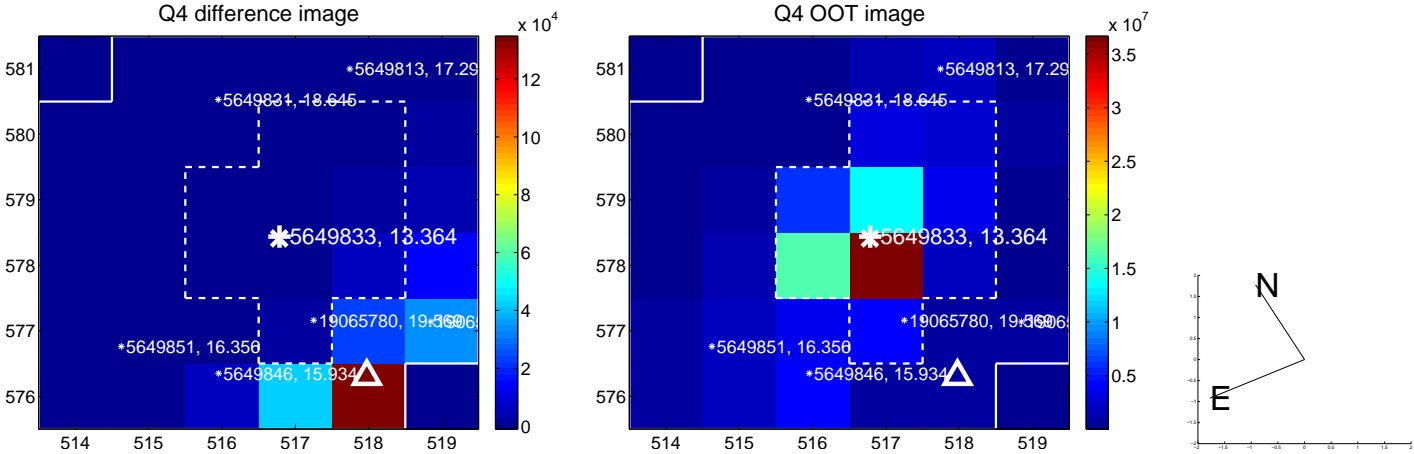
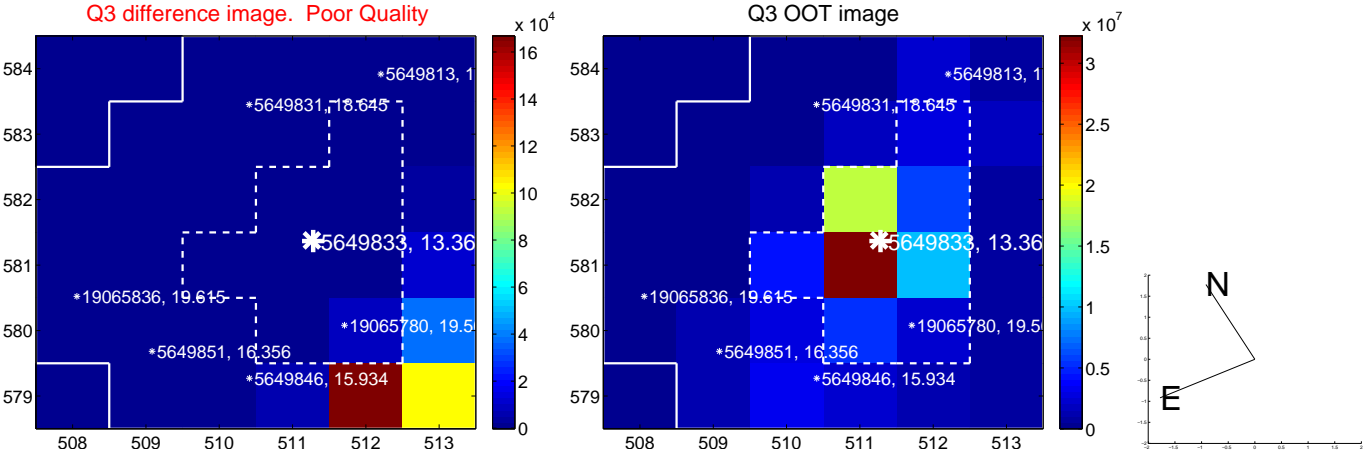
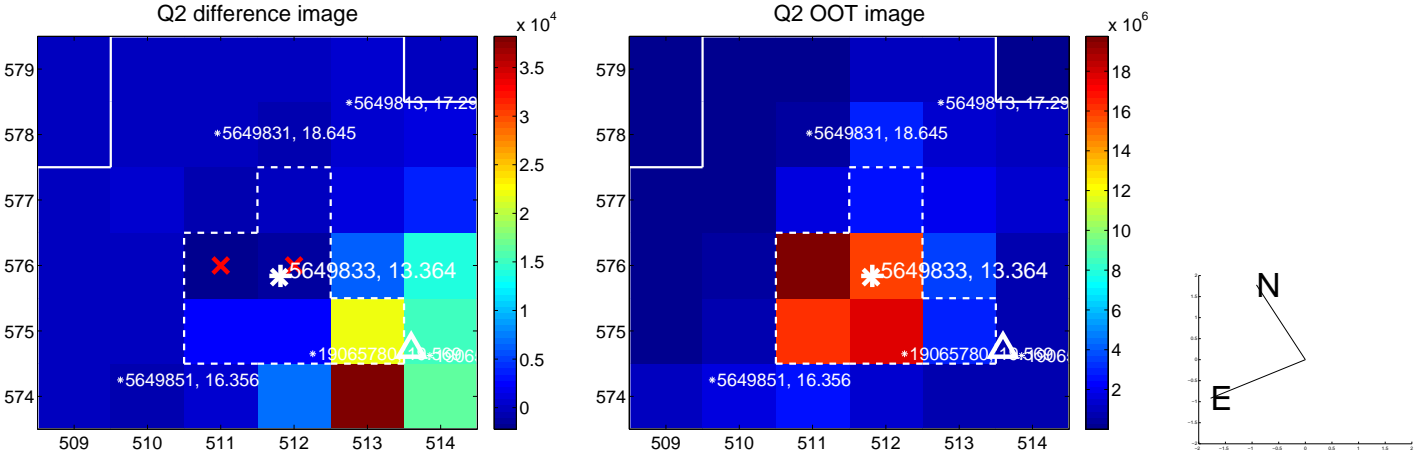
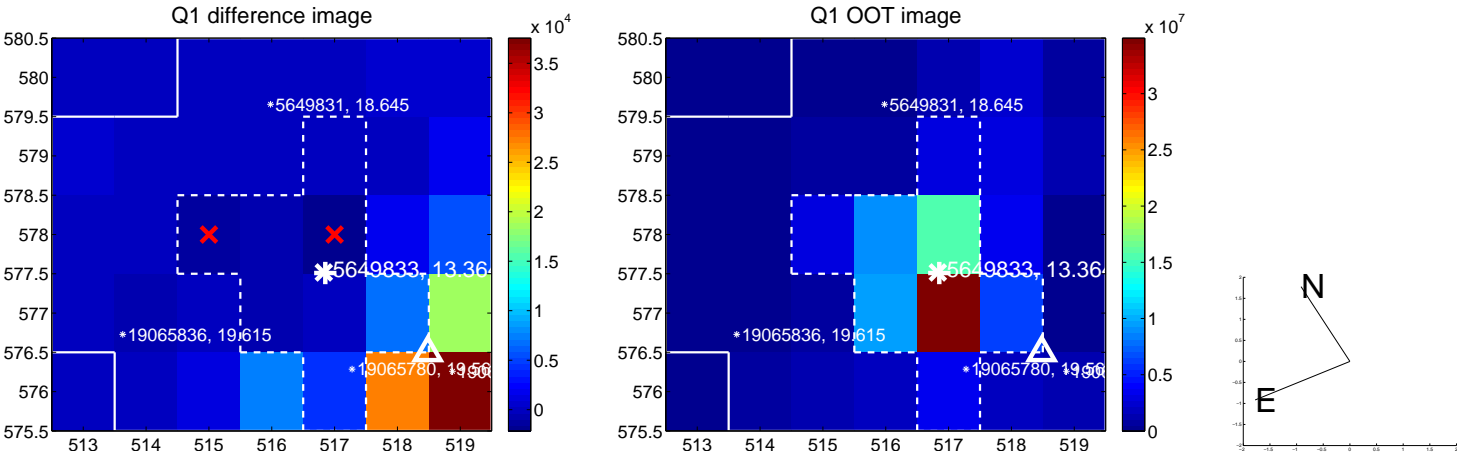
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.624 ± 0.512	16.83	-1.357 ± 0.731	-8.517 ± 0.506
PRF-fit source offset from KIC position	8.564 ± 0.500	17.12	-1.463 ± 0.733	-8.438 ± 0.492
photometric centroid source offset	—	—	—	—

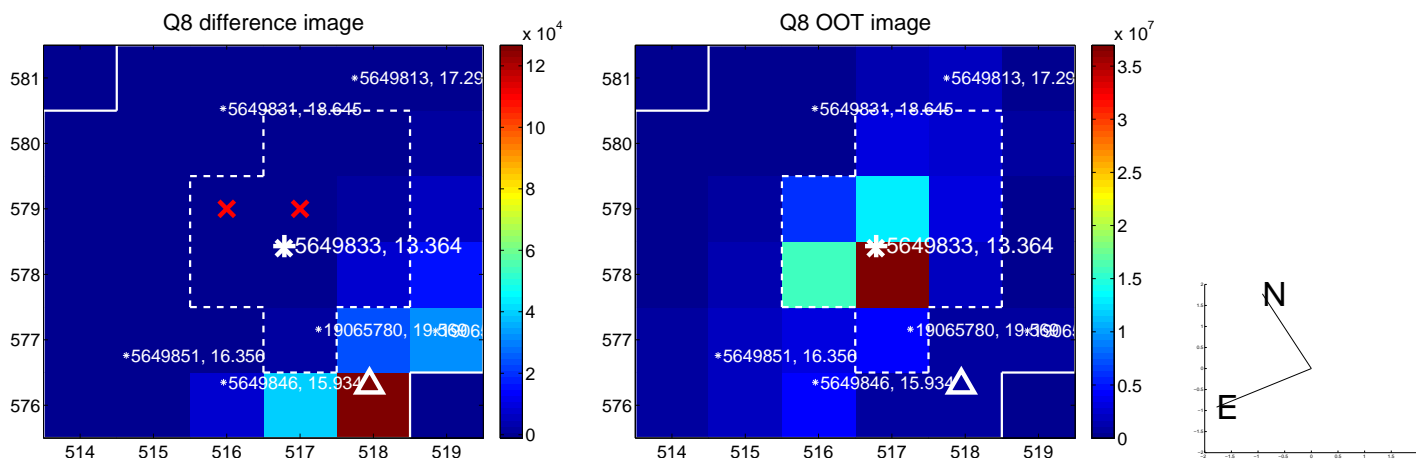
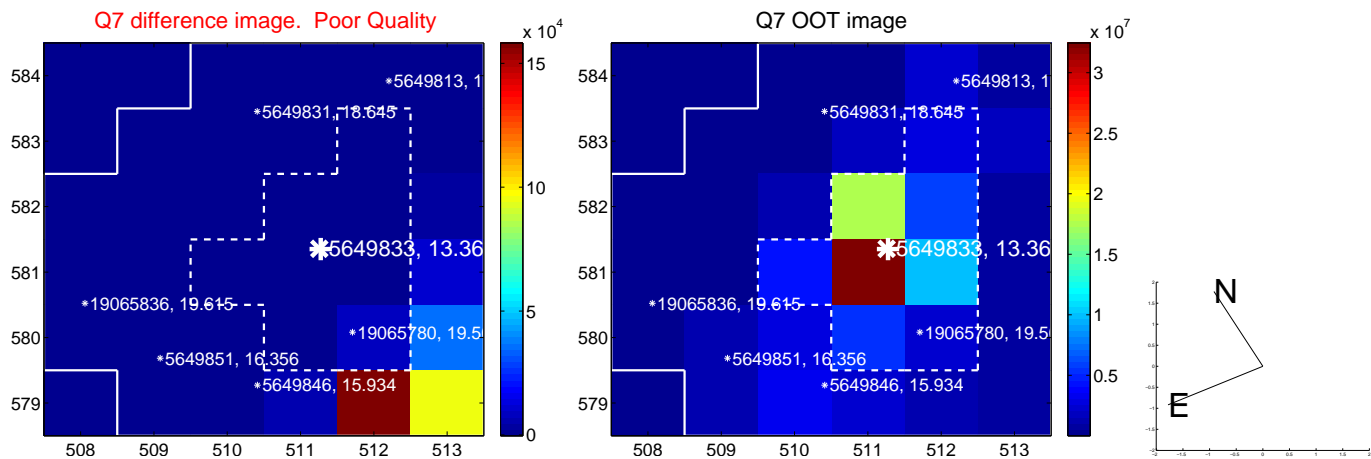
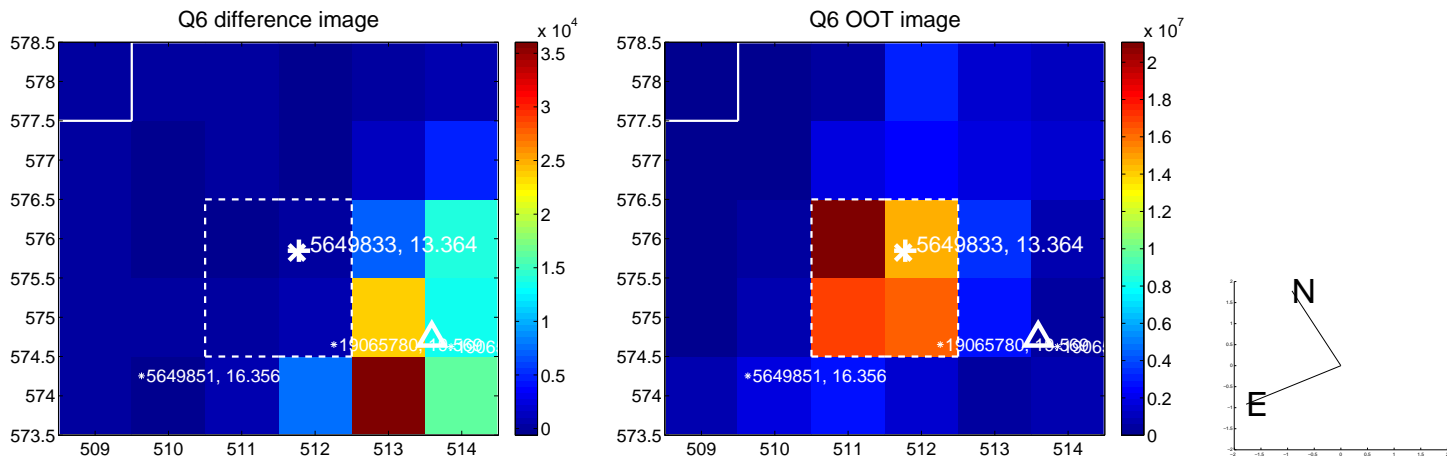
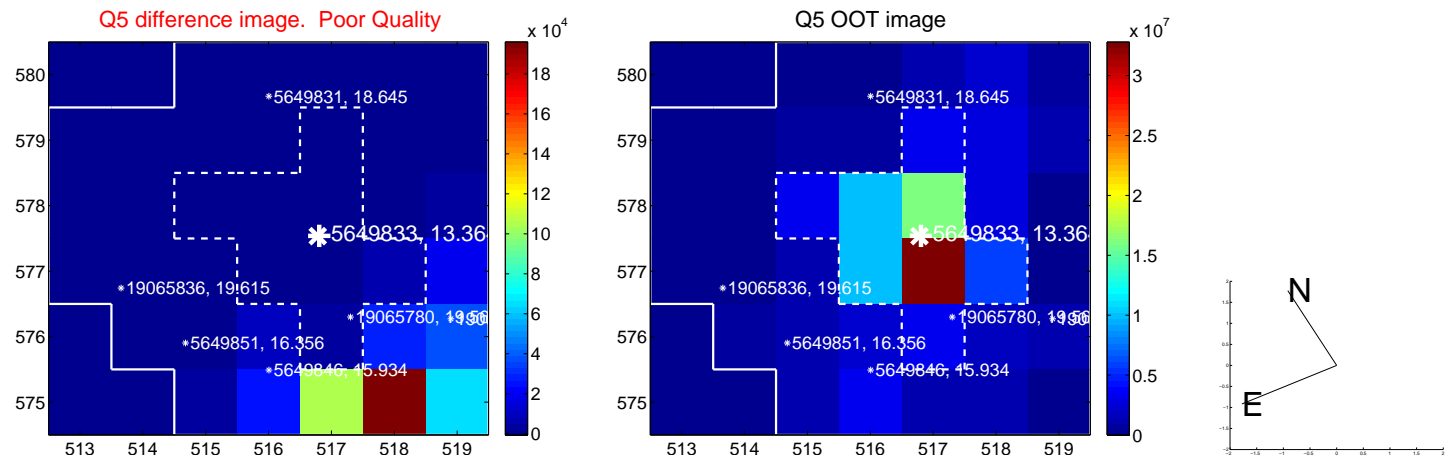


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

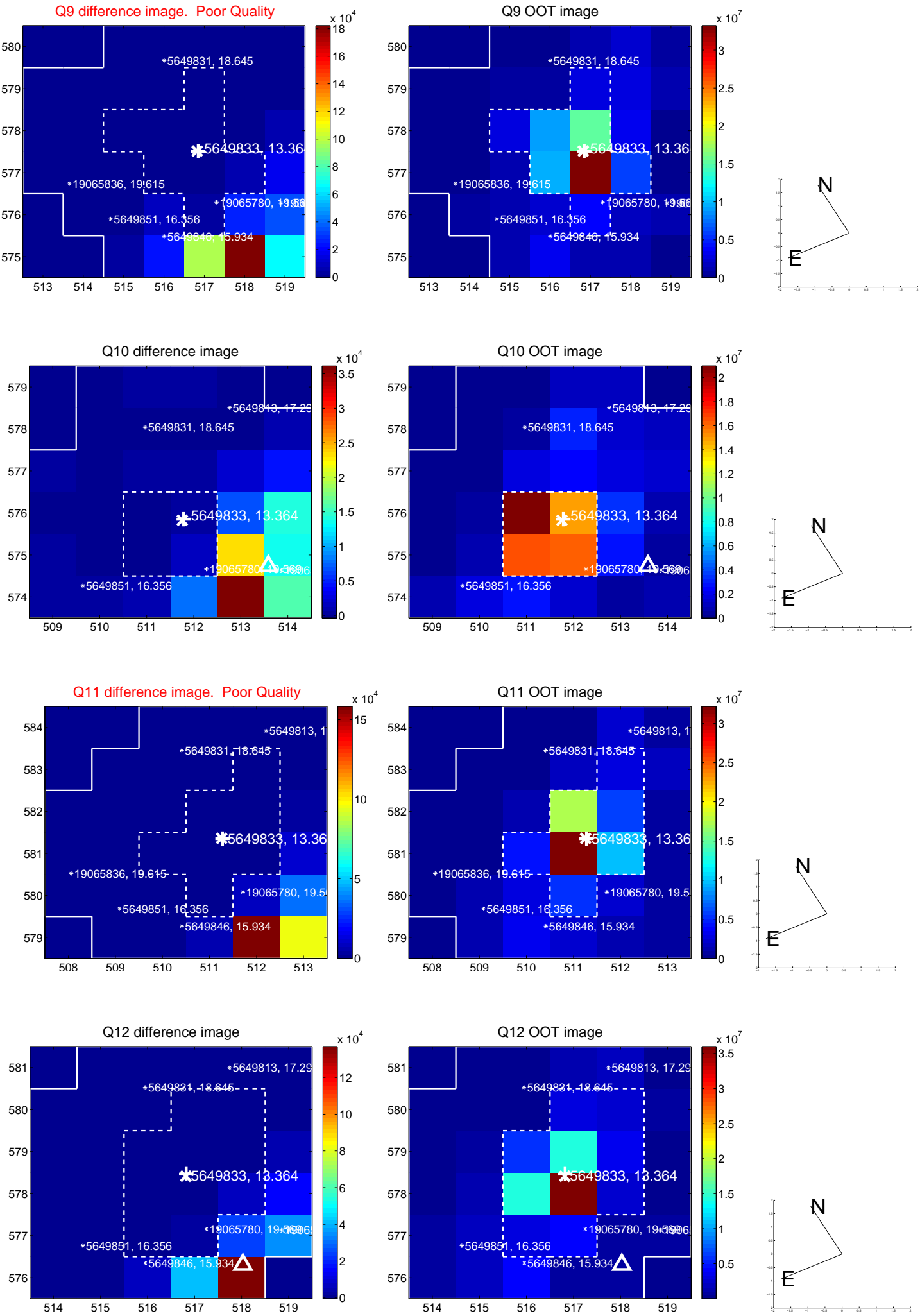
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



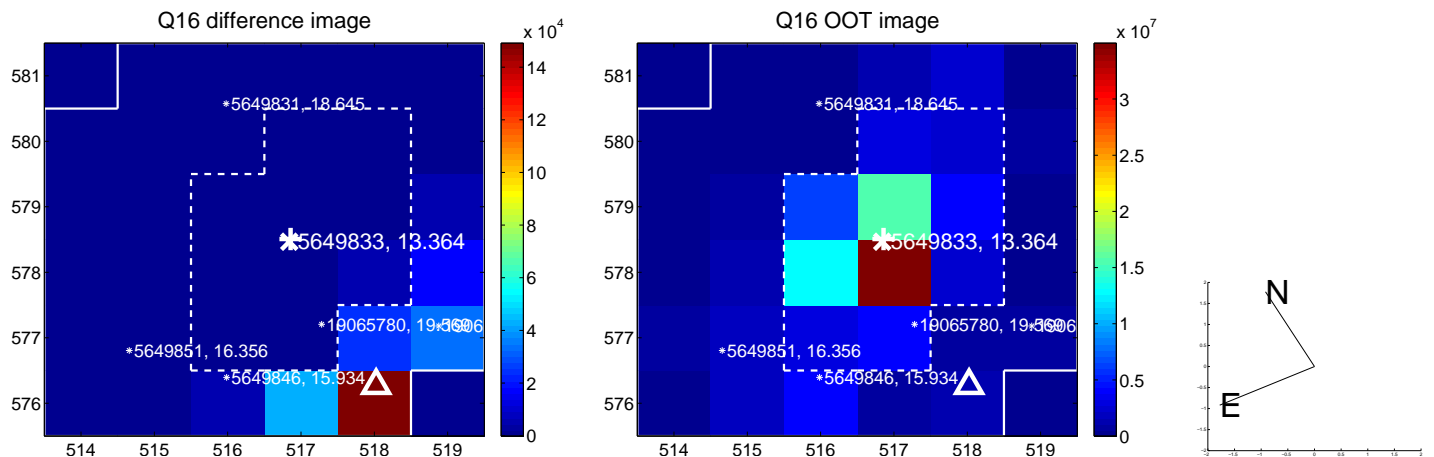
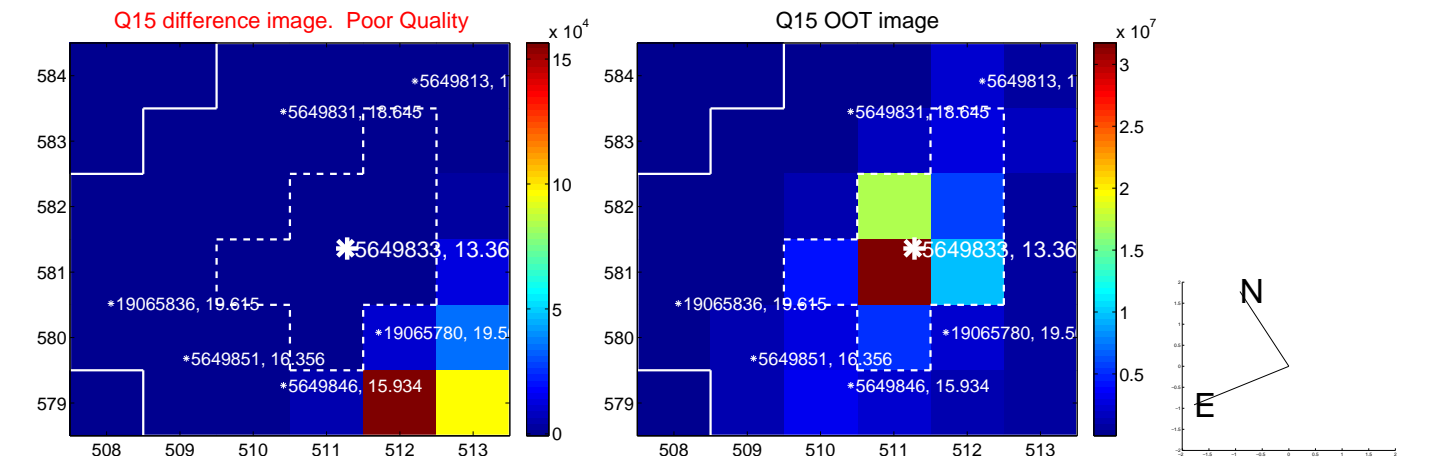
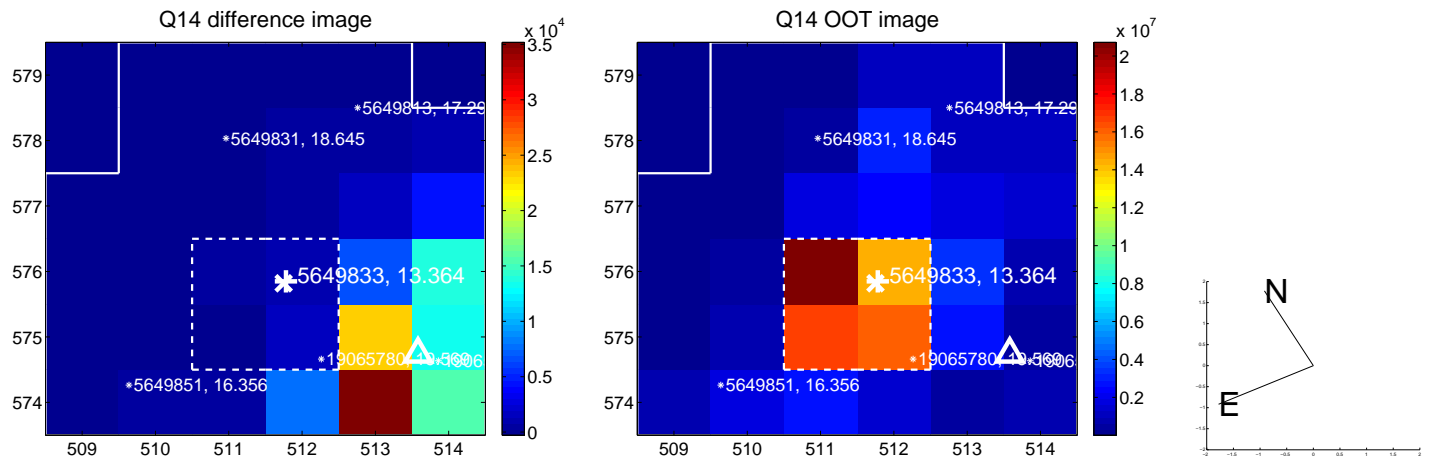
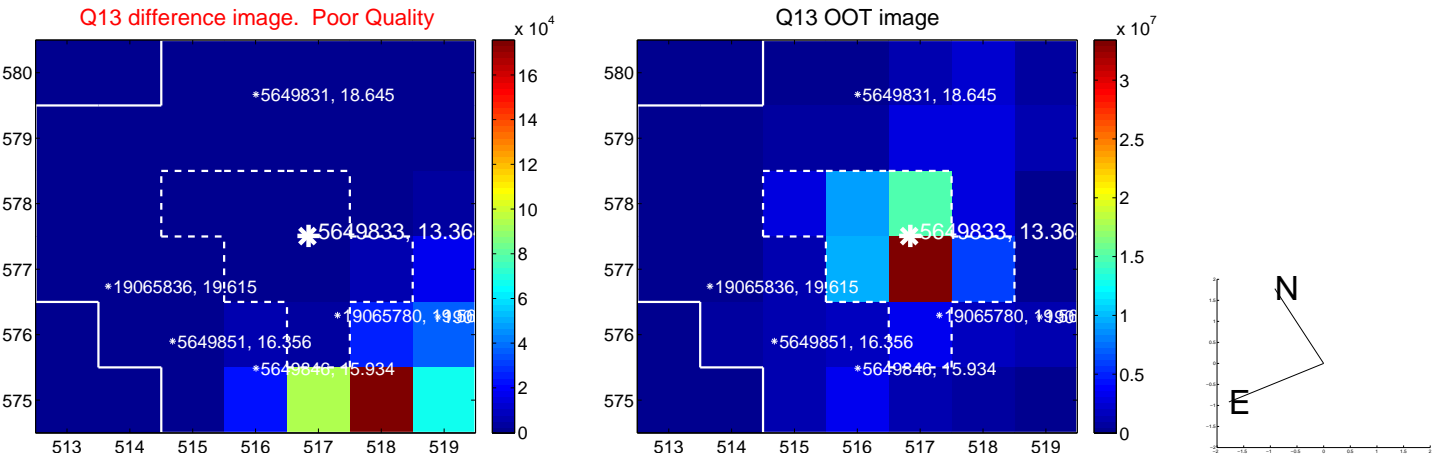
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



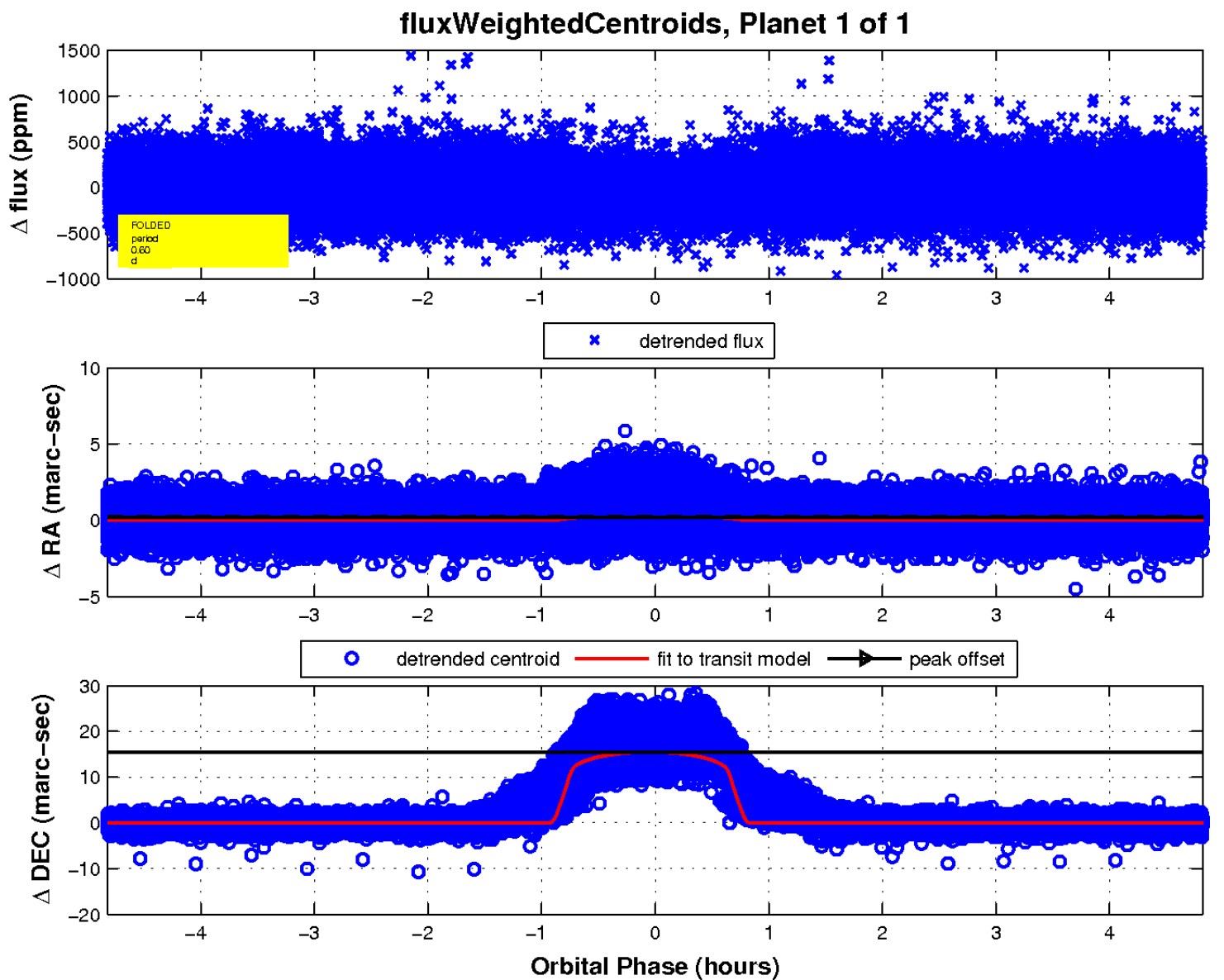
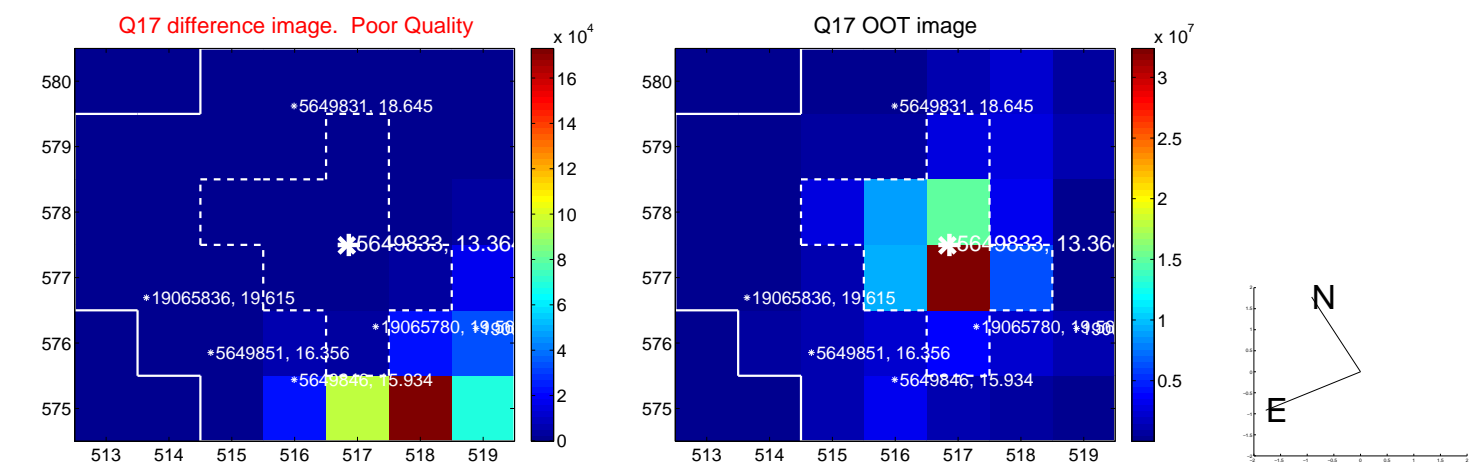
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UKIRT Image

Declination

