

KIC 002833554

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})
002833554-01	OBS	No	1.040106	132.248102	14.3	8.829	8.5	9.2	3.48	5738	1.30	21846.71

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002833554-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

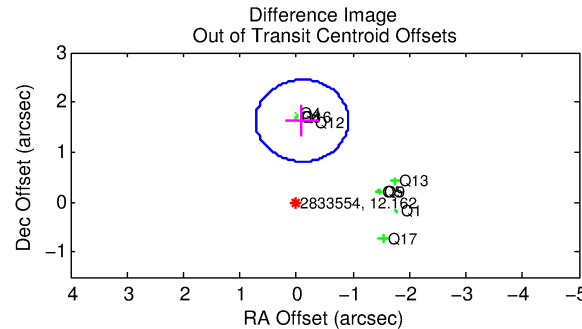
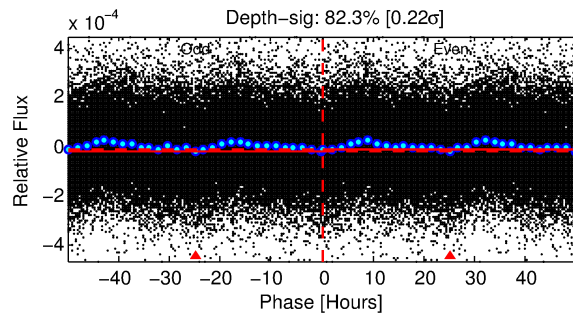
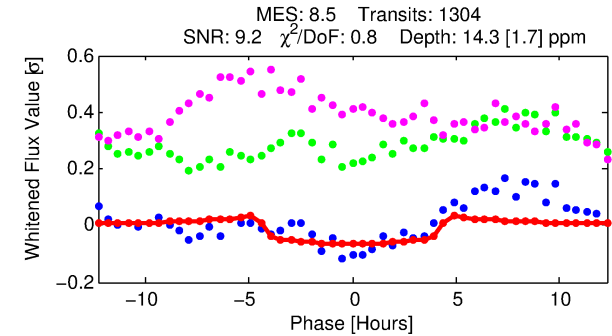
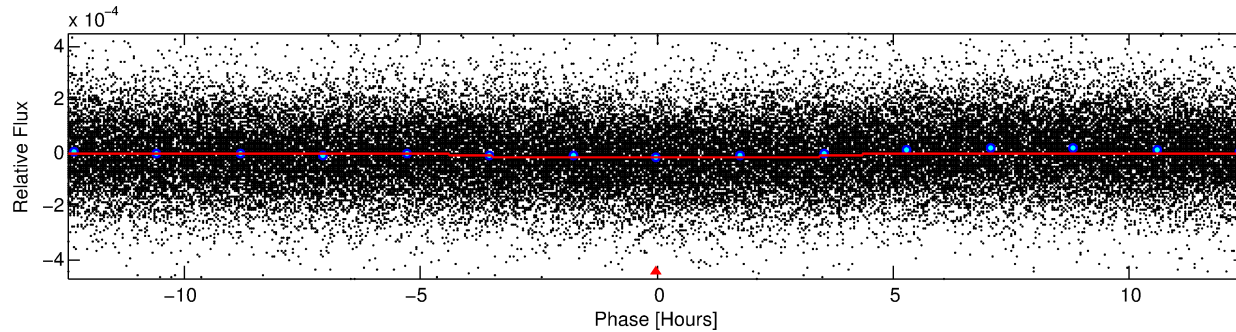
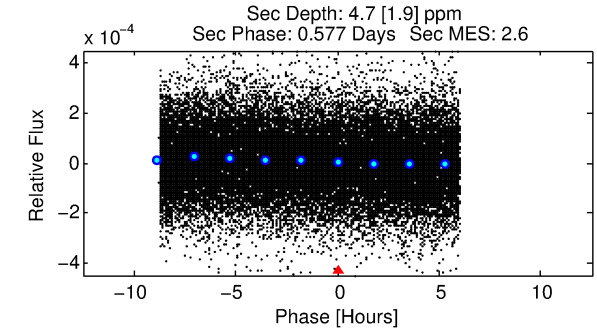
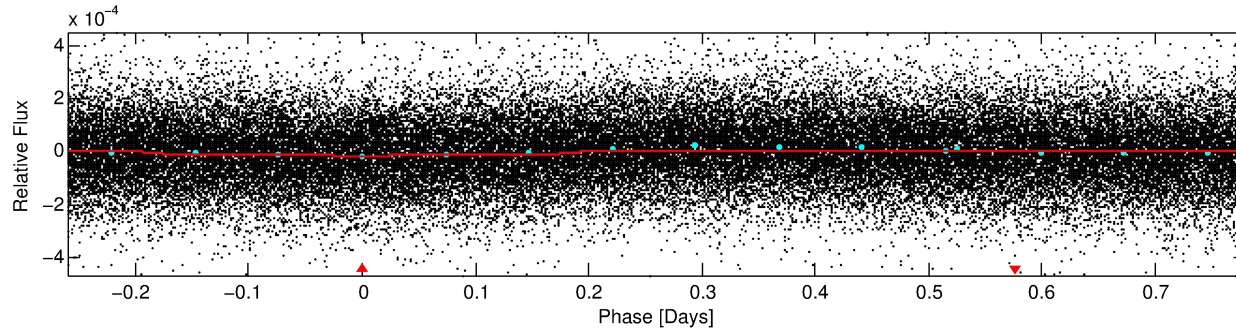
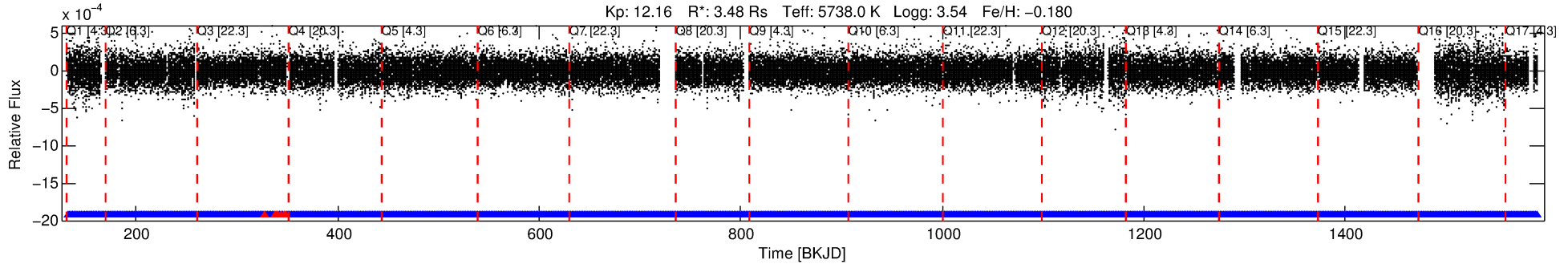
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002833554-01

No Significant Match Found

DV One-Page Summary

KIC: 2833554 Candidate: 1 of 1 Period: 1.040 d



DV Fit Results:

Period = 1.04011 [0.00002] d
Epoch = 132.2481 [0.0062] BKJD
Rp/R* = 0.0034 [0.0030]
a/R* = 1.12 [0.89]
b = 0.01 [488.23]
Seff = 21846.71 [14185.14]
Teq = 3100 [503] K
Rp = 1.30 [1.29] Re
a = 0.0232 [0.0095] AU
Ag = 0.82 [1.58] [-0.11σ]
Teff = 4568 [2068] K [0.69σ]

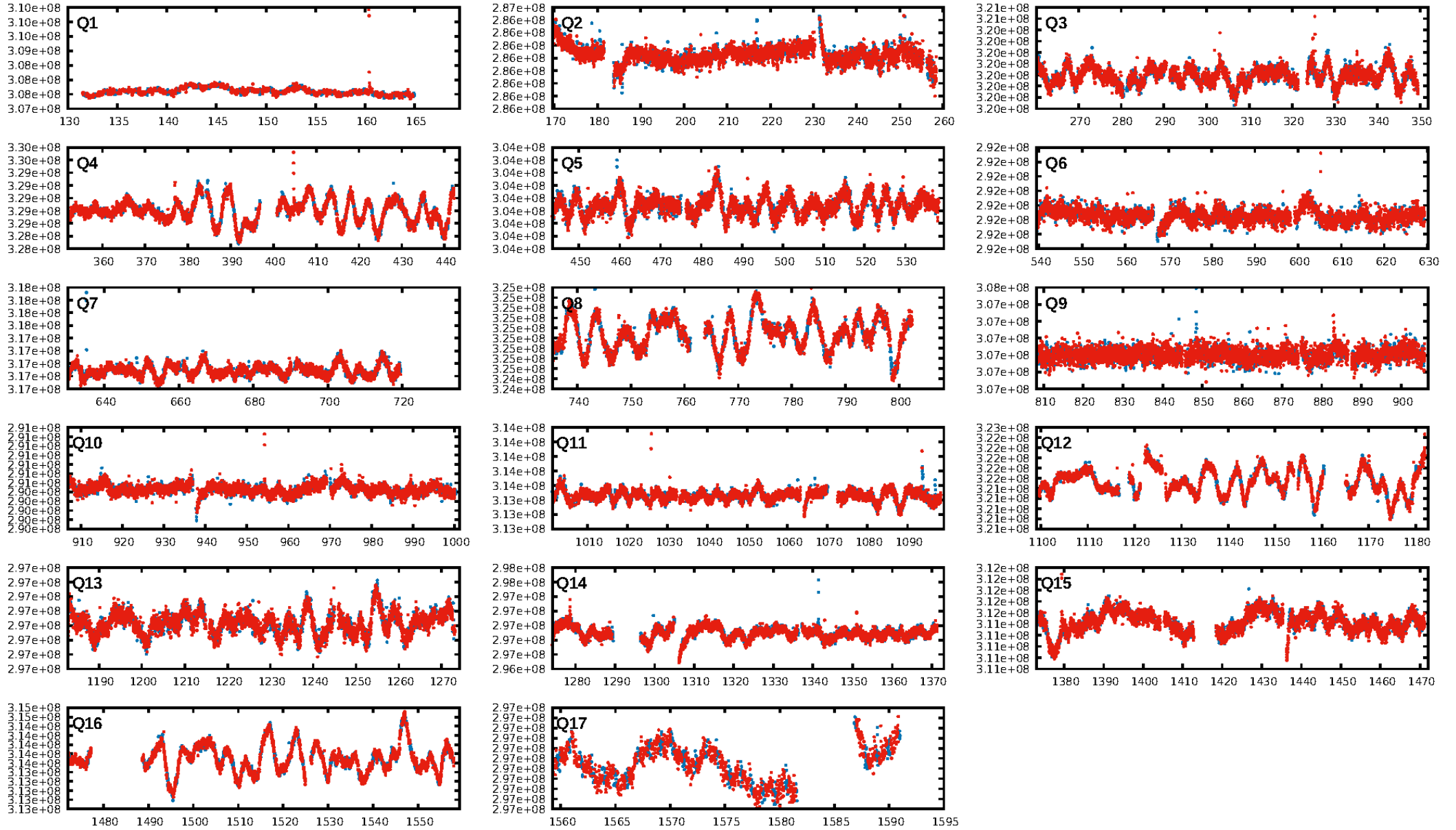
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.99 [1239/1246]
GhostDiagnostic-chr: 1.174
Centroid-sig: 26.5%
Centroid-so: 3.394 arcsec [1.21σ]
OotOffset-rm: 1.635 arcsec [5.99σ]
KicOffset-rm: 9.426 arcsec [119.97σ]
OotOffset-st: 0/0/4/5 [9]
KicOffset-st: 0/0/4/5 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 1.00 [17/17]

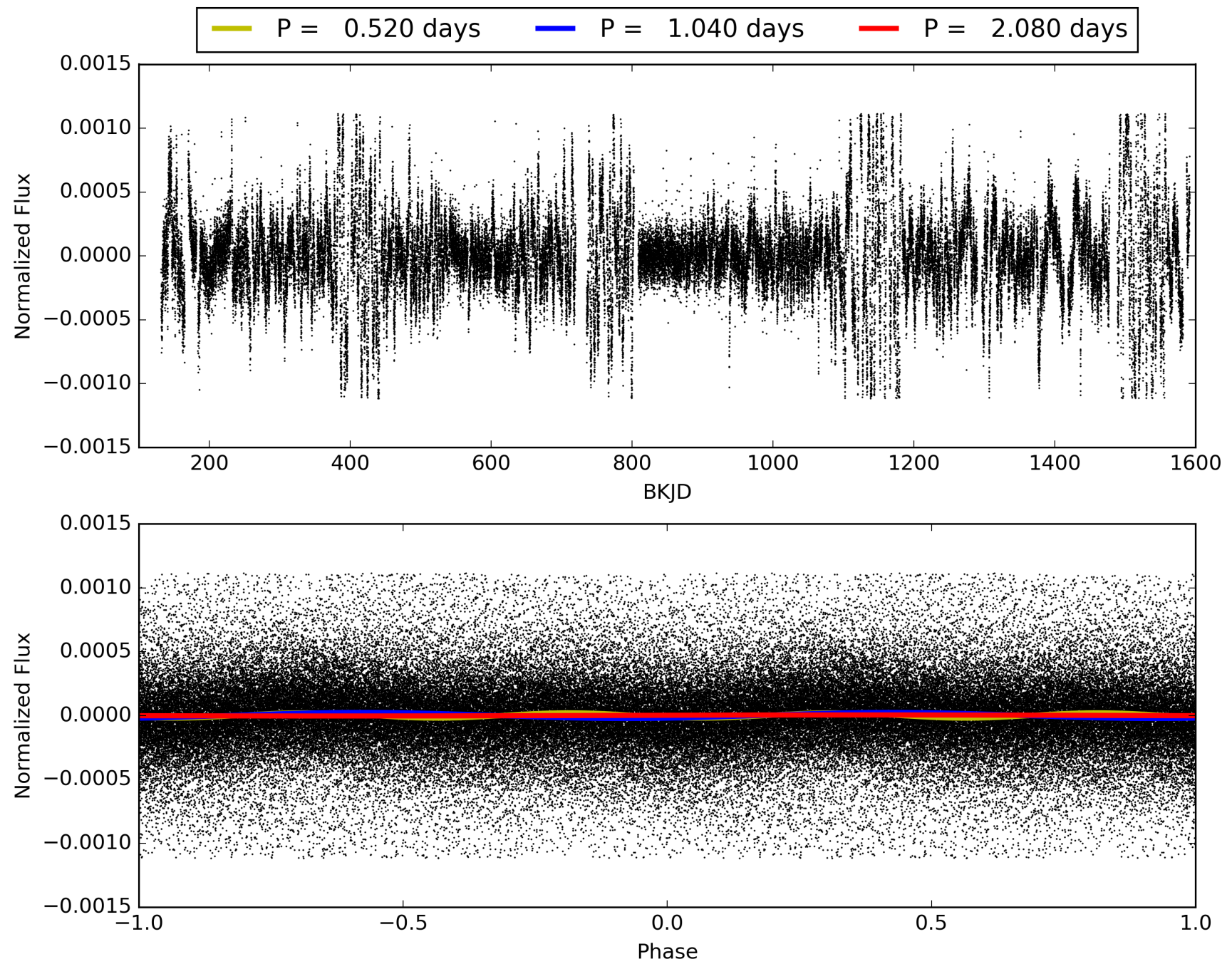
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 21:42:55 Z

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

TCE 002833554-01, PDC Light Curves

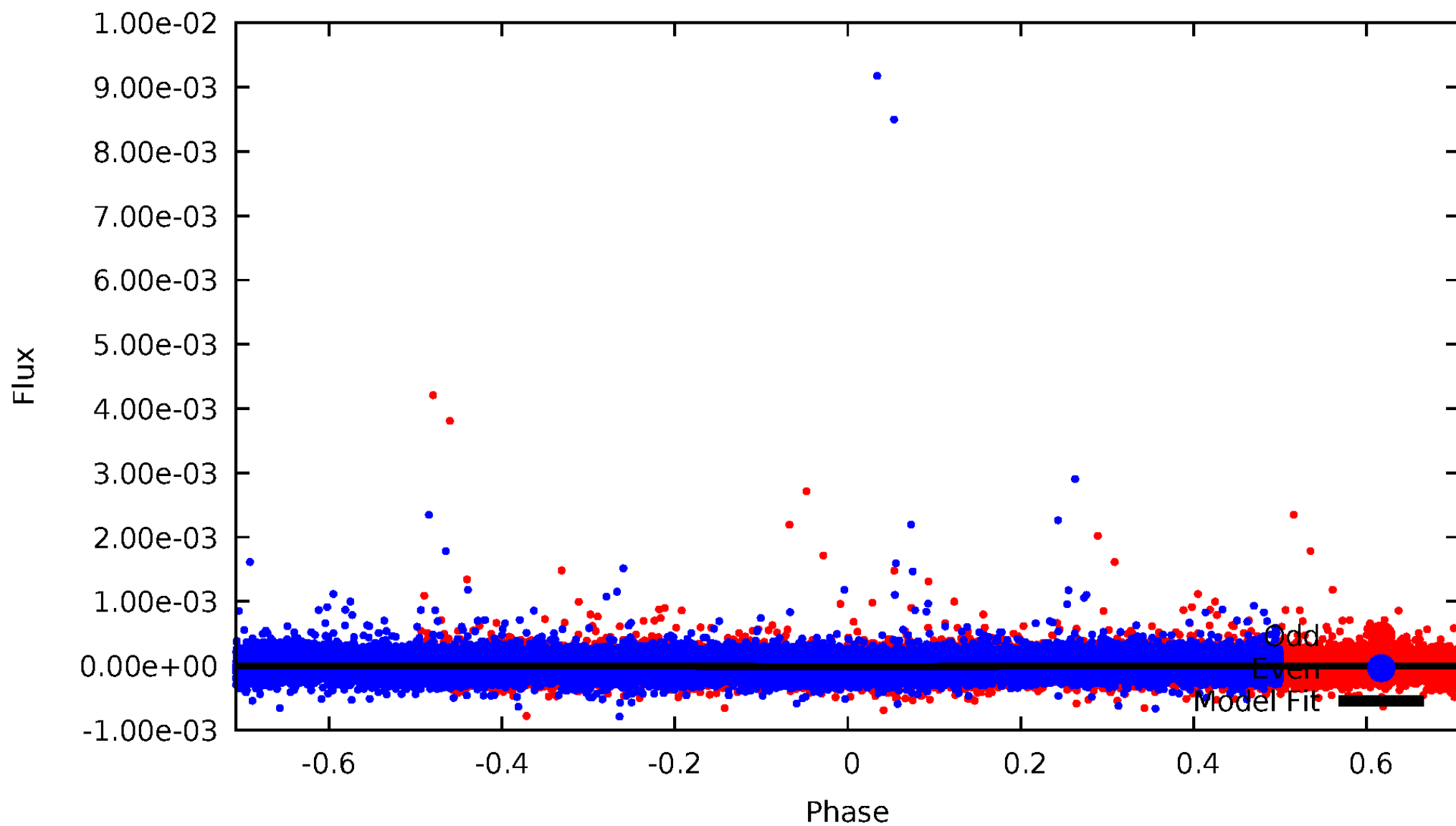


TCE 002833554-01



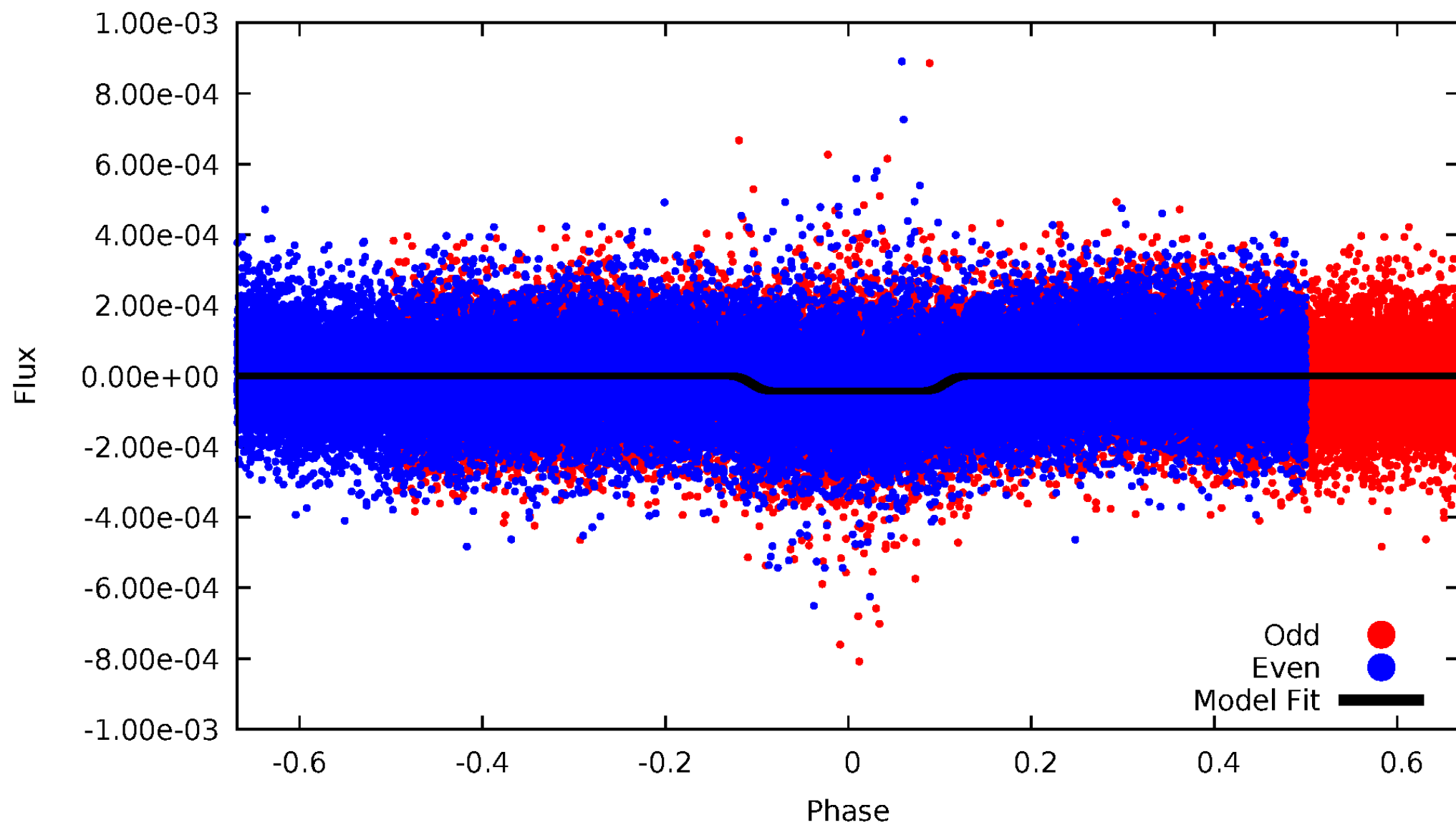
DV Odd/Even

TCE 002833554-01



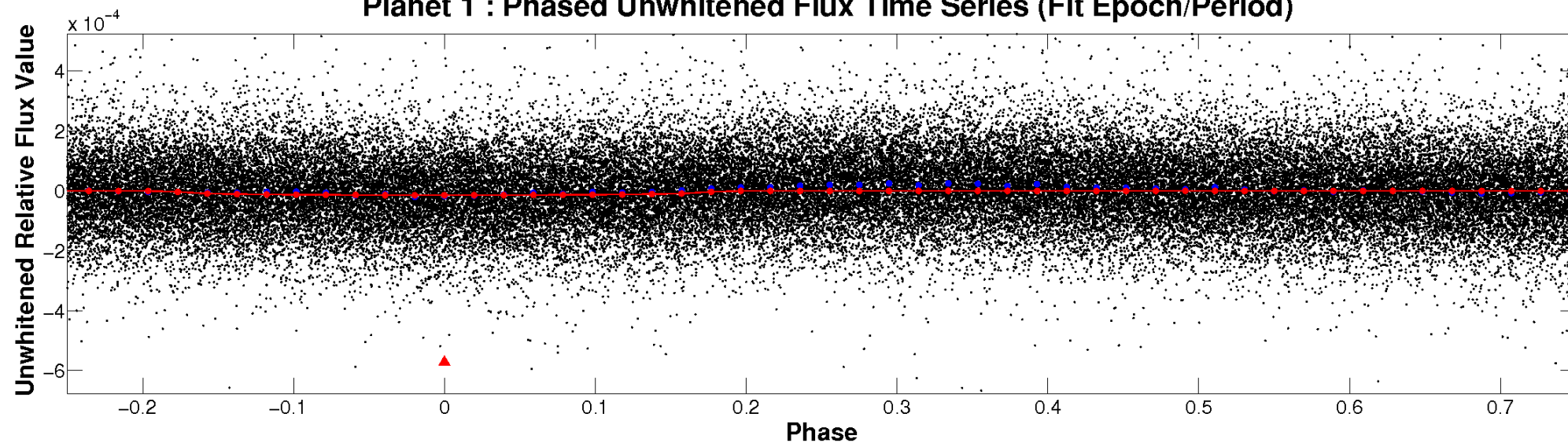
ALT Odd/Even

TCE 002833554-01

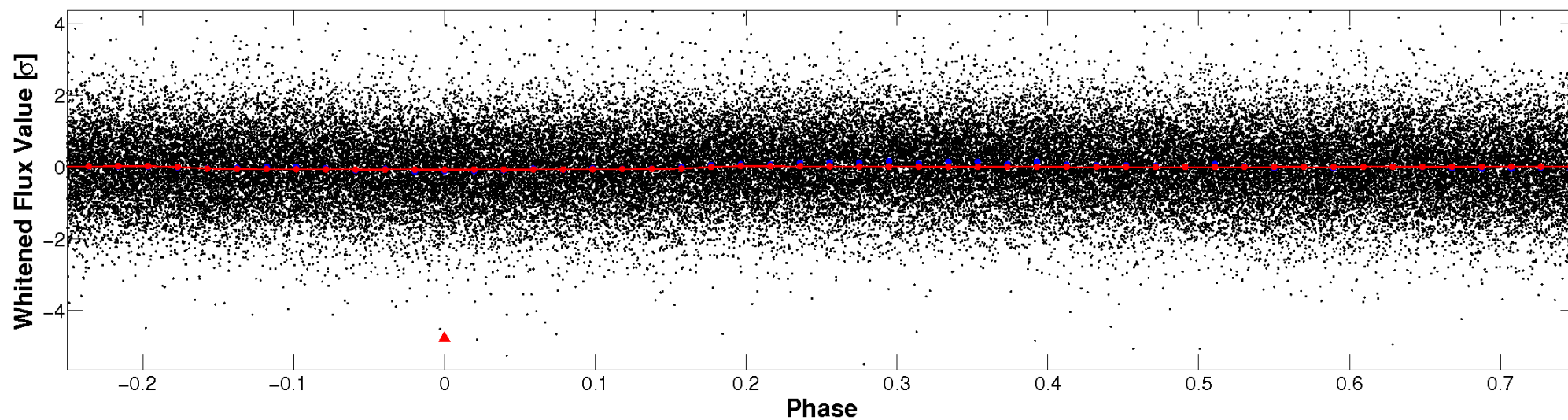


Non-Whitened Vs. Whitened Light Curve

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

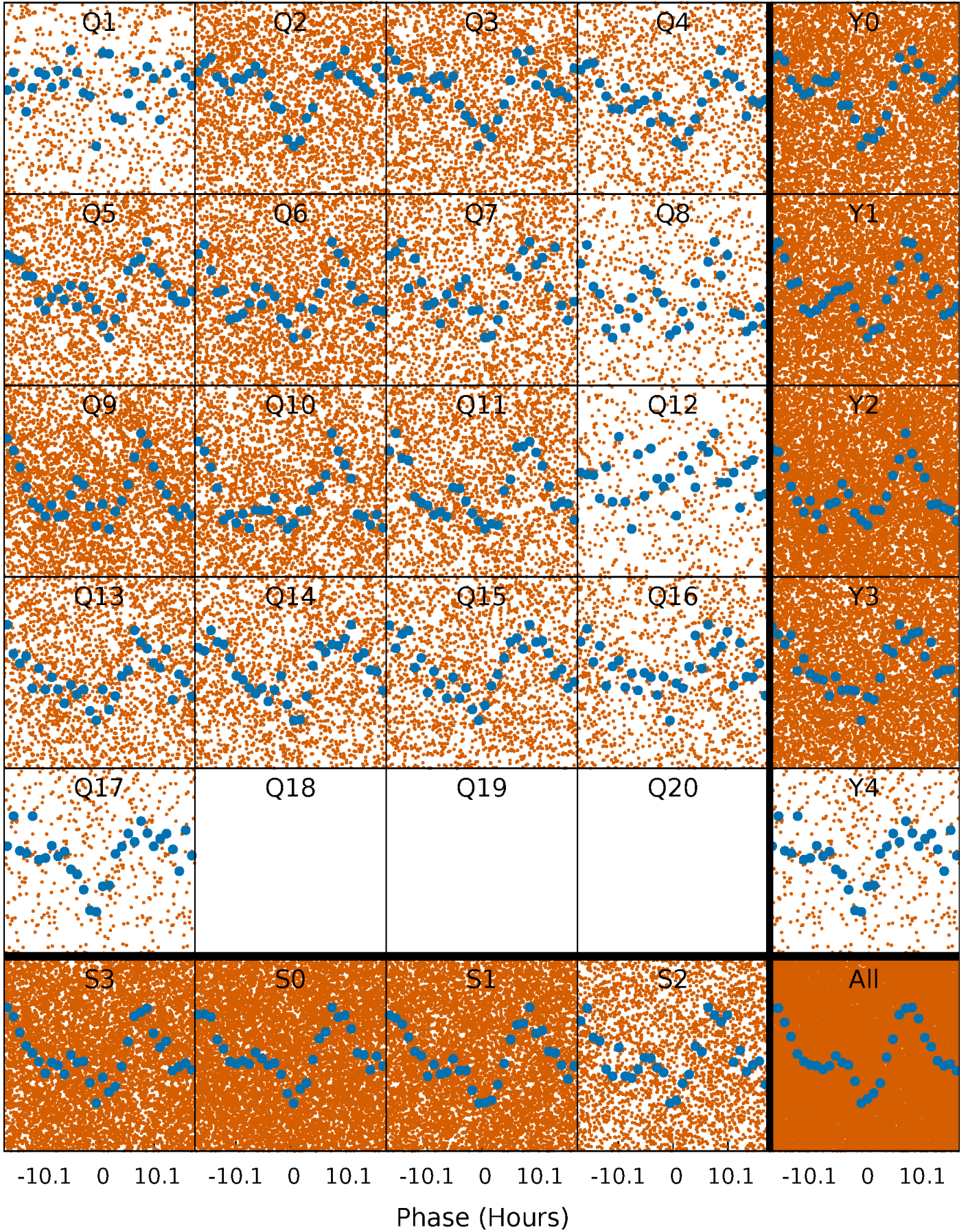


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



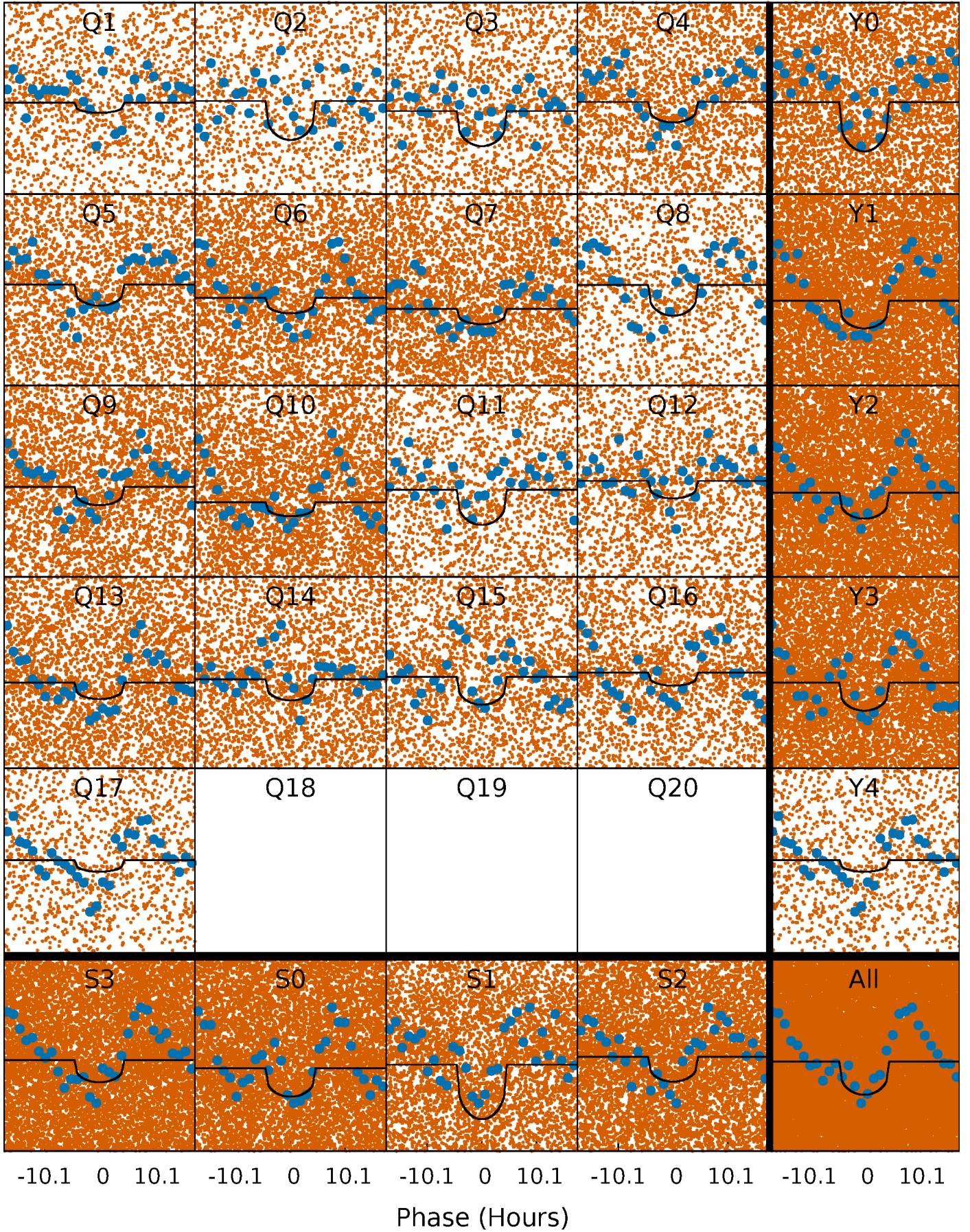
PDC Quarter-Phased Transit Curves

TCE 002833554-01 P= 1.040106 Days $T_0=132.248102$ (BKJD)



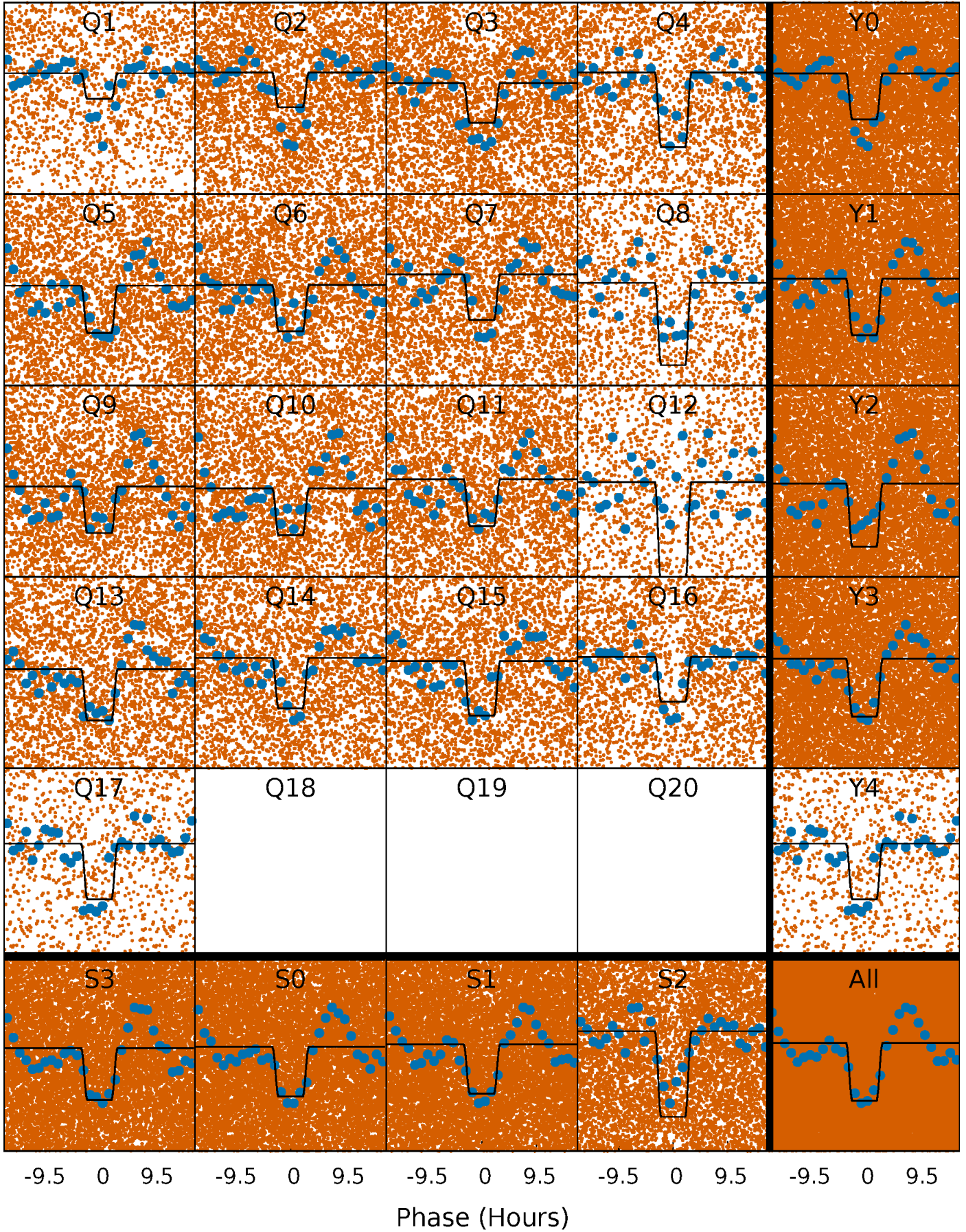
DV Quarter-Phased Transit Curves

TCE 002833554-01 P= 1.040106 Days $T_0=132.248102$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

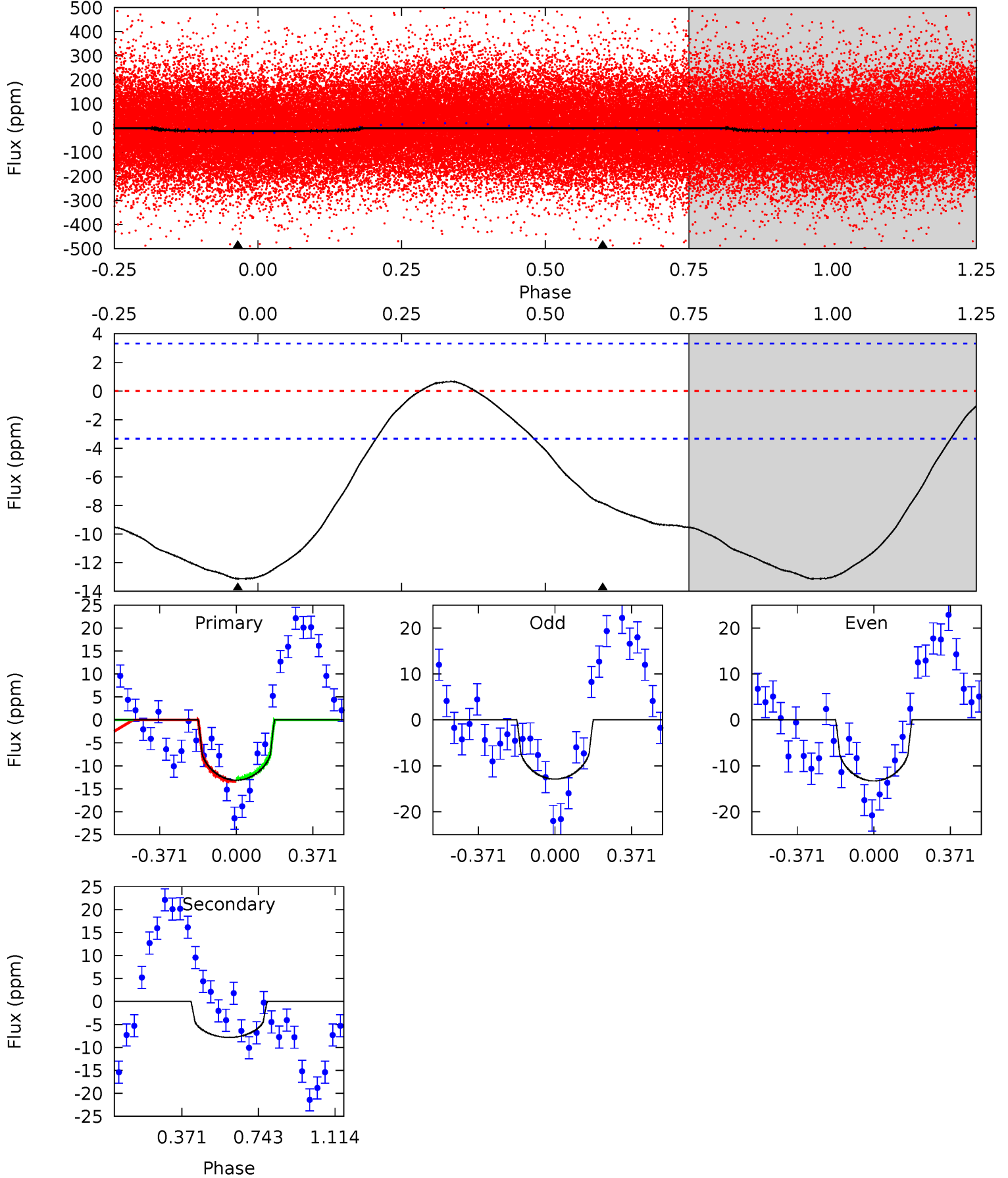
TCE 002833554-01 P= 1.040102 Days $T_0=132.283951$ (BKJD)



DV Model-Shift Uniqueness Test

002833554-01, P = 1.040106 Days, E = 131.207996 Days

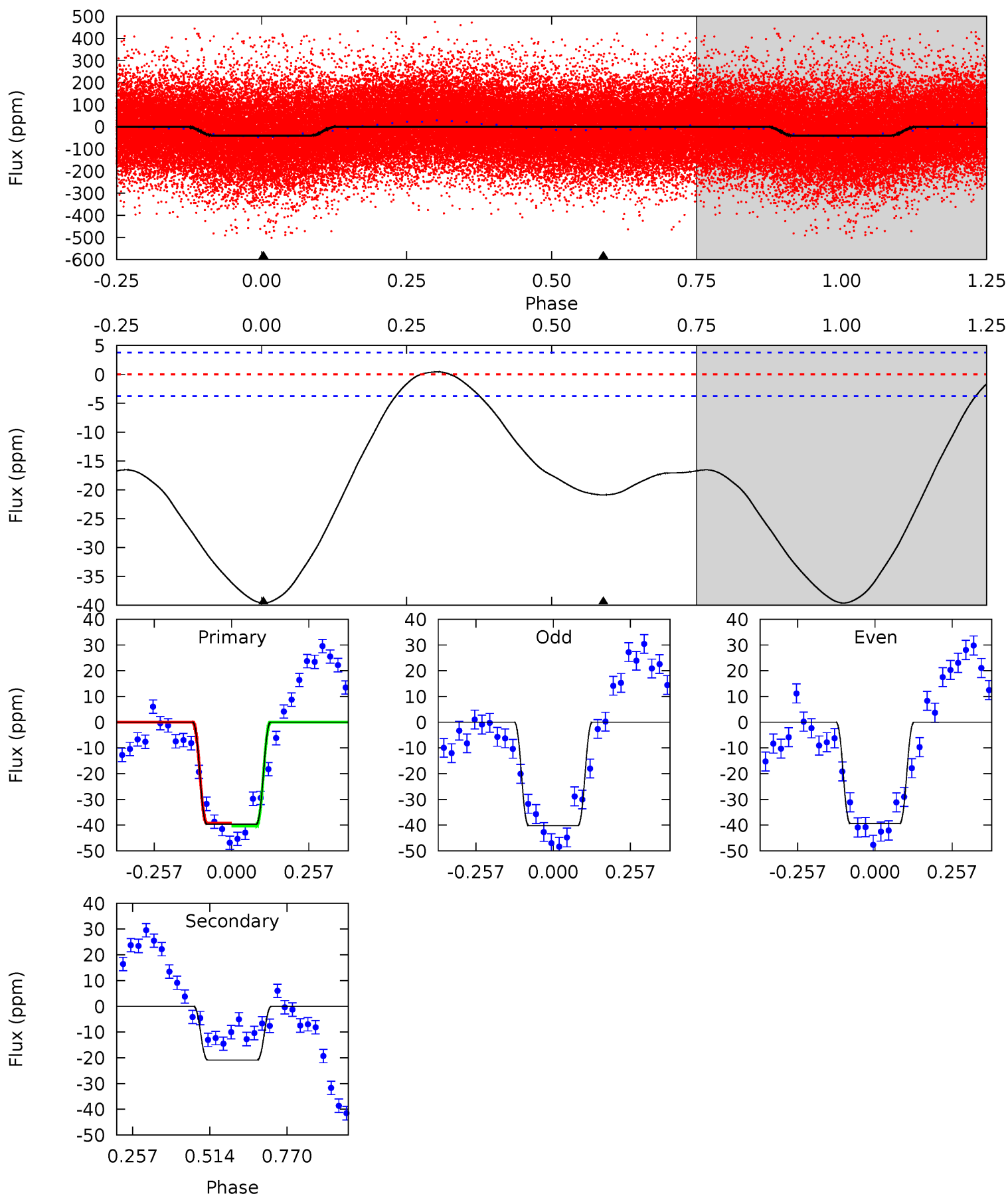
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.9	10.1	0	0	4.28	0.89	0.94	16.9	16.9	10.1	10.1	0.26	0.83	0.05	0.41



Alt Model-Shift Uniqueness Test

002833554-01, P = 1.040102 Days, E = 131.243849 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
45.8	24.2	0	0	4.36	1.13	0.75	45.8	45.8	24.2	24.2	0.43	0.97	0.01	0.60



Stellar Parameters For KIC 002833554

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5738^{+171}_{-171}	$3.542^{+0.368}_{-0.123}$	$-0.180^{+0.300}_{-0.300}$	$3.478^{+0.664}_{-1.550}$	$1.536^{+0.198}_{-0.495}$	$0.051^{+0.159}_{-0.019}$
	+3%/-3%	+10%/-3%	+167%/-167%	+19%/-45%	+13%/-32%	+309%/-37%
Source	PHO1	FLK73	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 002833554-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-8 ± 1	$1.27^{+1.03}_{-0.81}$	4256^{+308}_{-430}	4794^{+3482}_{-1472}	$1.408^{+8.704}_{-0.990}$
Alt.	-21 ± 1	$2.30^{+1.29}_{-1.07}$	4285^{+284}_{-447}	4611^{+1641}_{-1062}	$1.160^{+2.731}_{-0.679}$

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 $A_{obs} \gg 1.0$

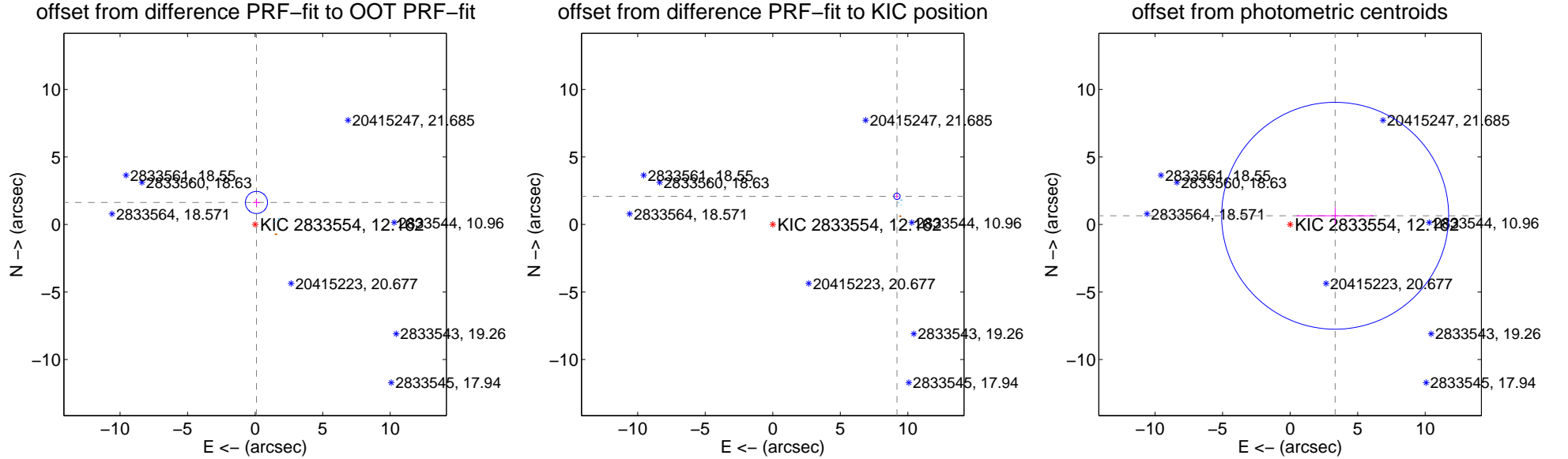
DV Centroid Data

Supplemental centroid analysis for 002833554-01. Kepler magnitude: 12.16. Transit SNR 9.19

There are 4 quarters with good PRF difference image offsets

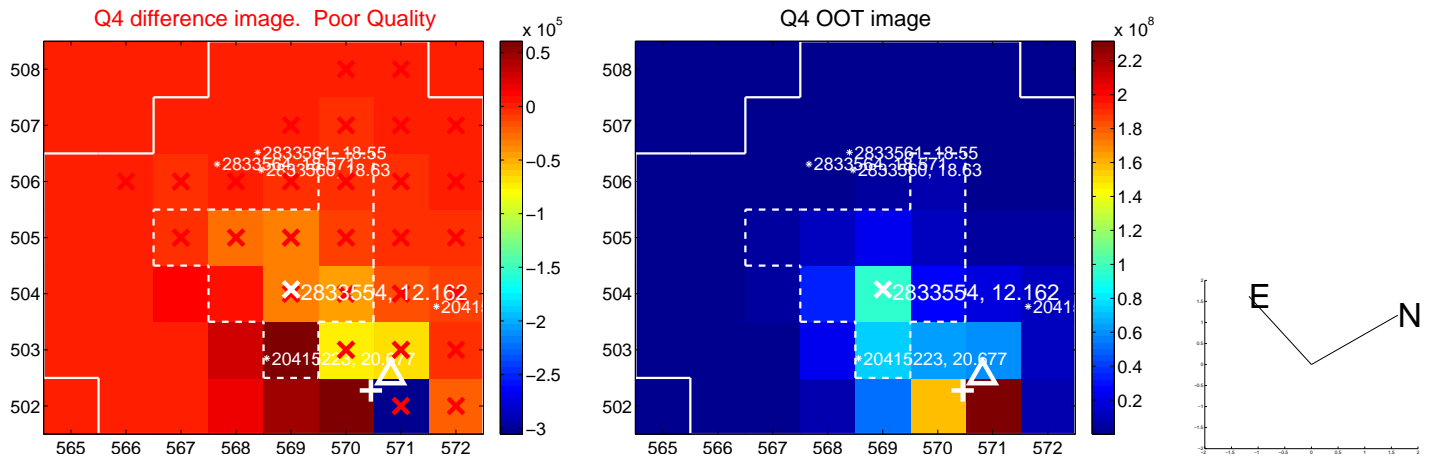
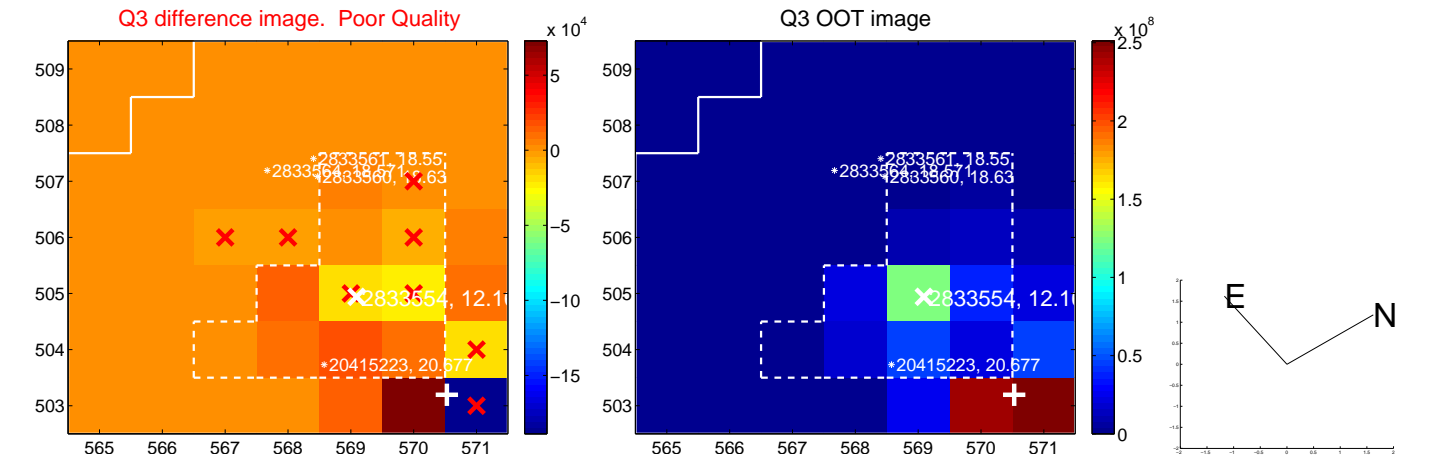
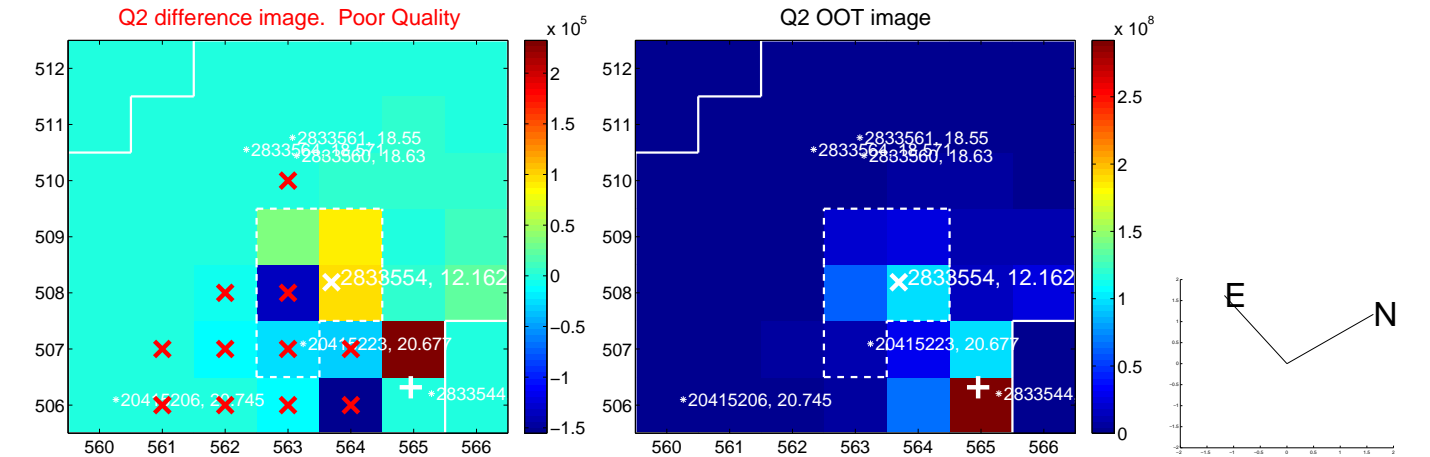
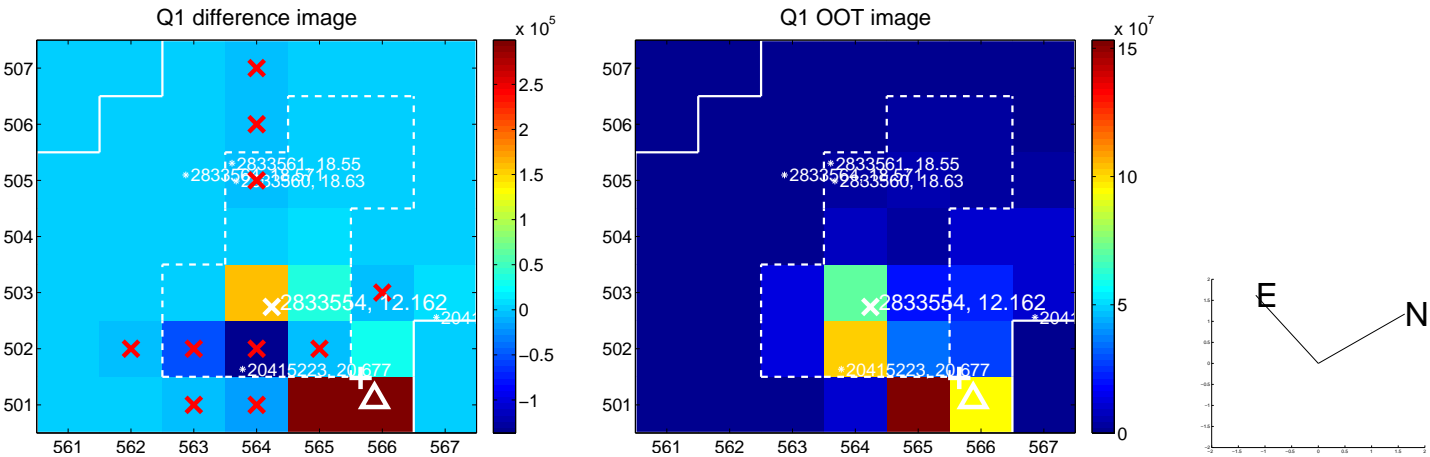
The OOT PRF centroid is offset from the target star catalog position by about 8.01 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.635 \pm 0.273	5.99	-0.098 \pm 0.271	1.632 \pm 0.288
PRF-fit source offset from KIC position	9.426 \pm 0.079	119.97	-9.192 \pm 0.080	2.089 \pm 0.169
photometric centroid source offset	3.39 \pm 2.80	1.21	-3.33 \pm 2.85	0.65 \pm 0.62

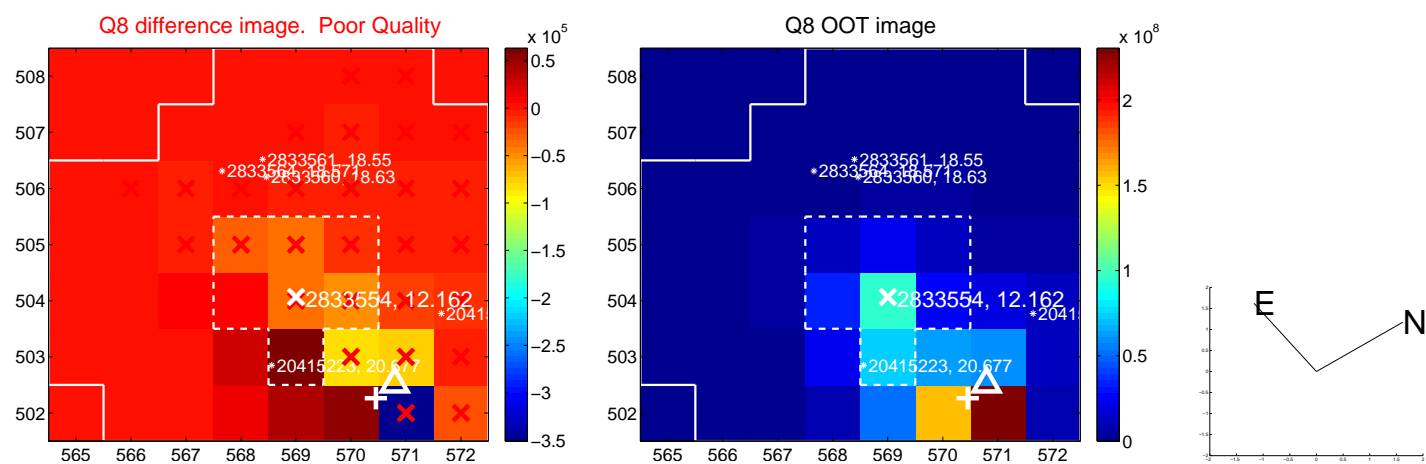
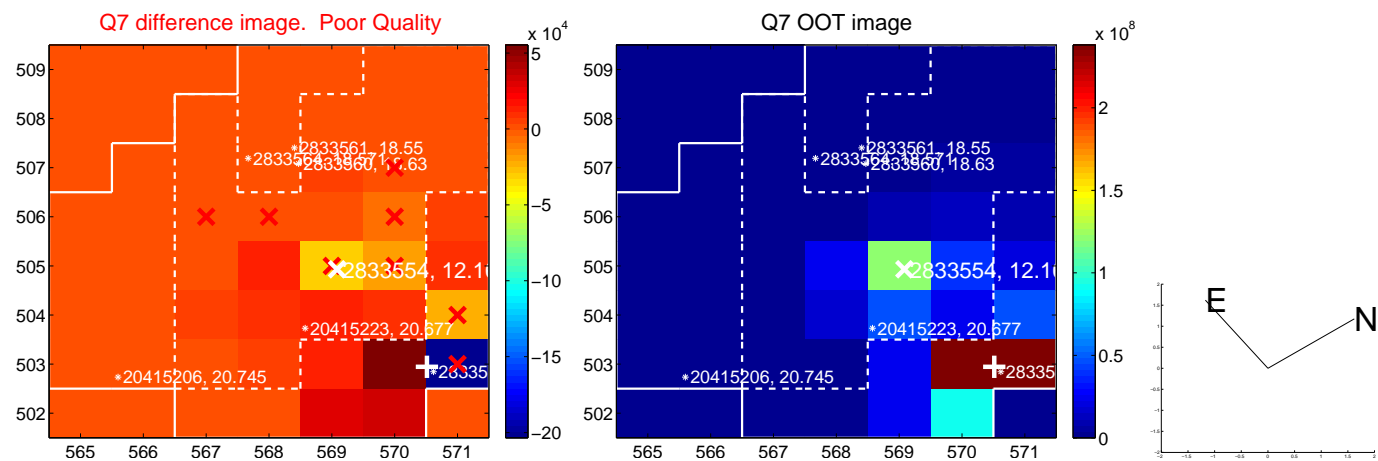
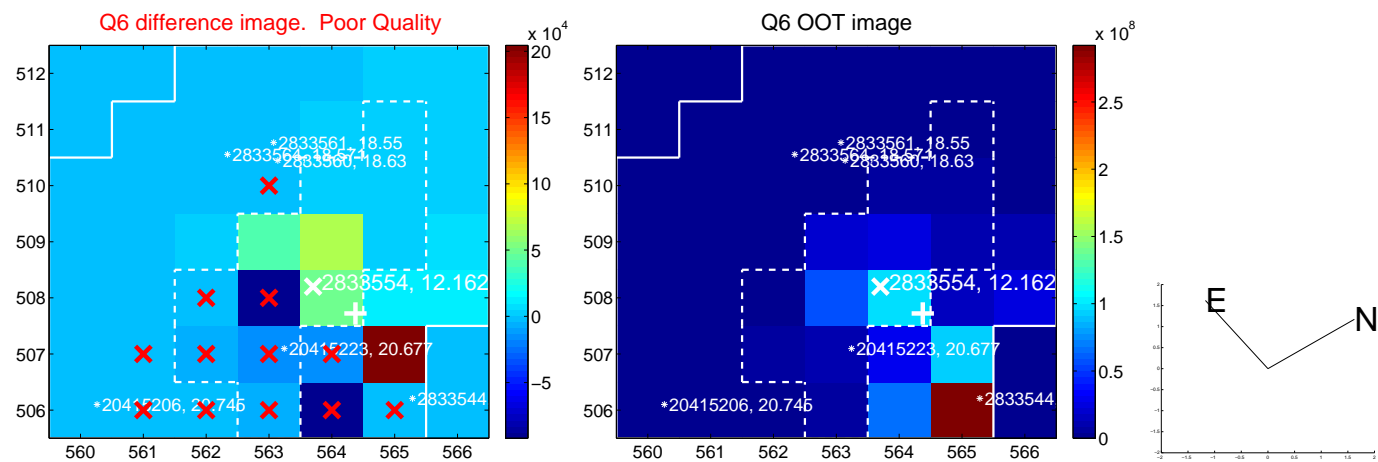
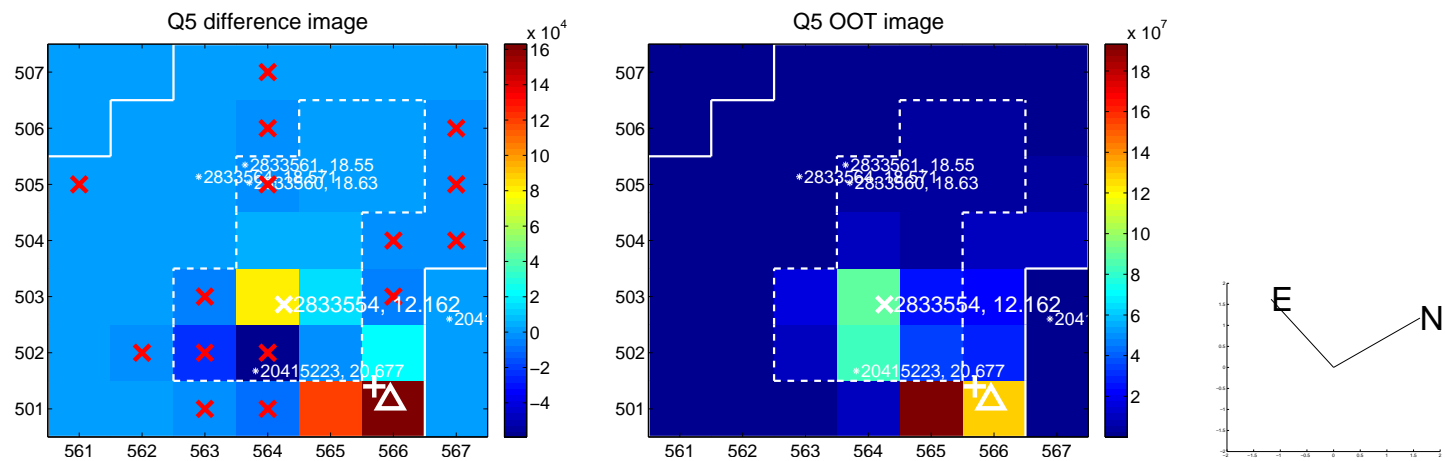


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

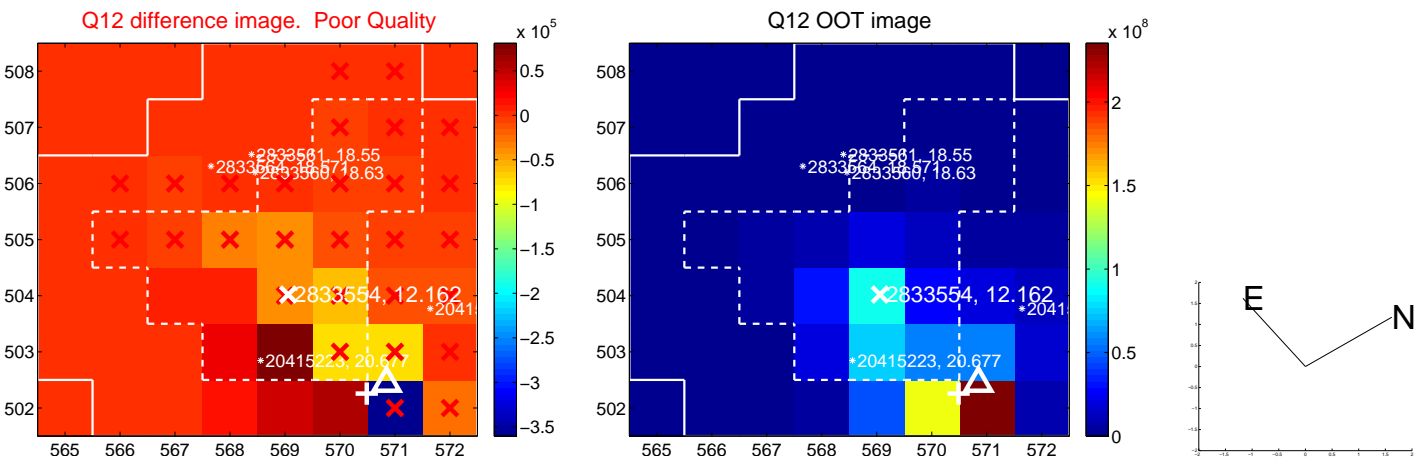
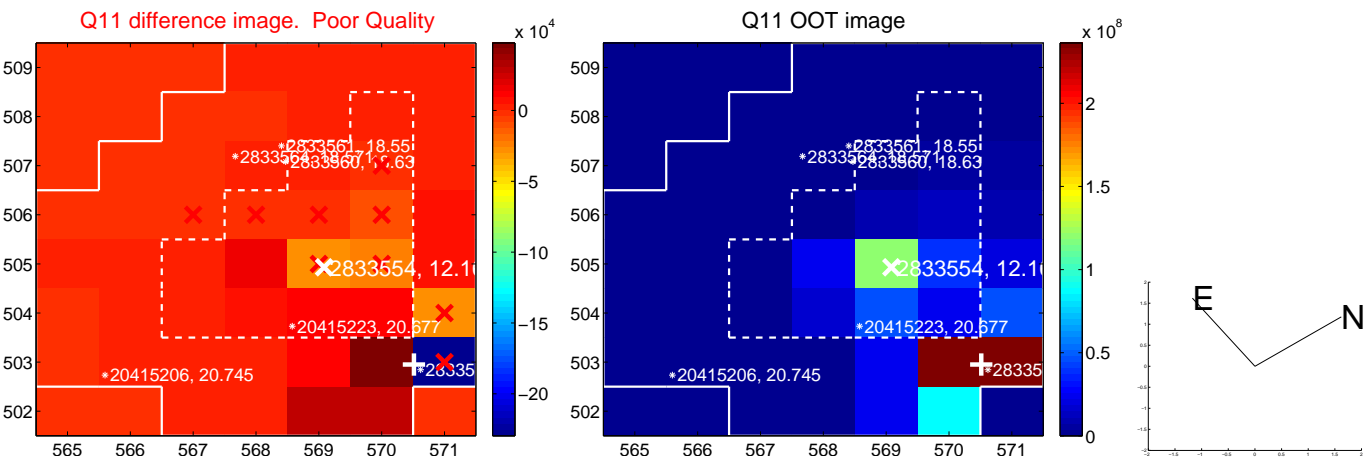
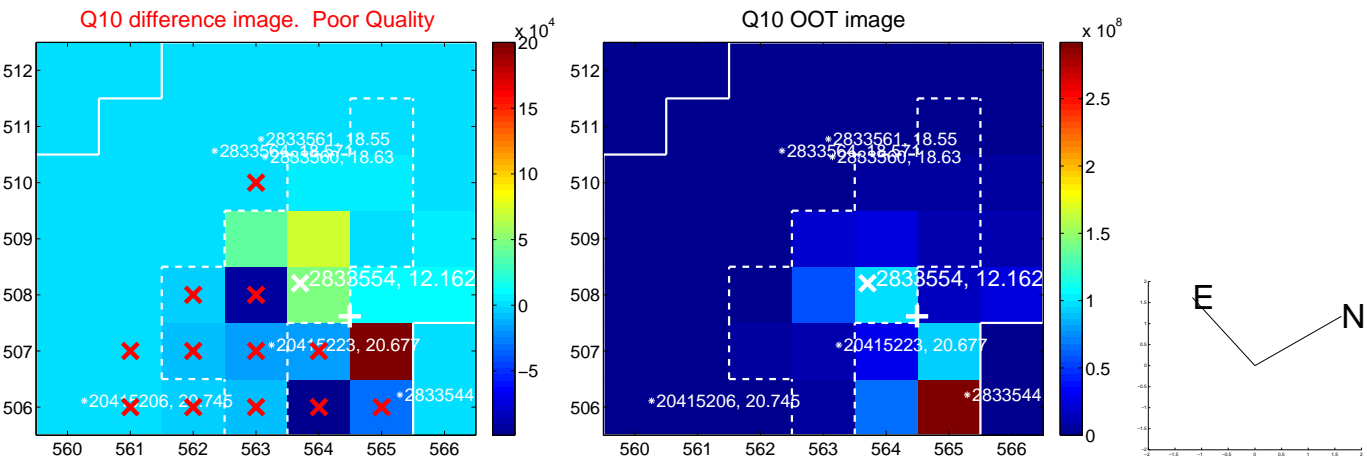
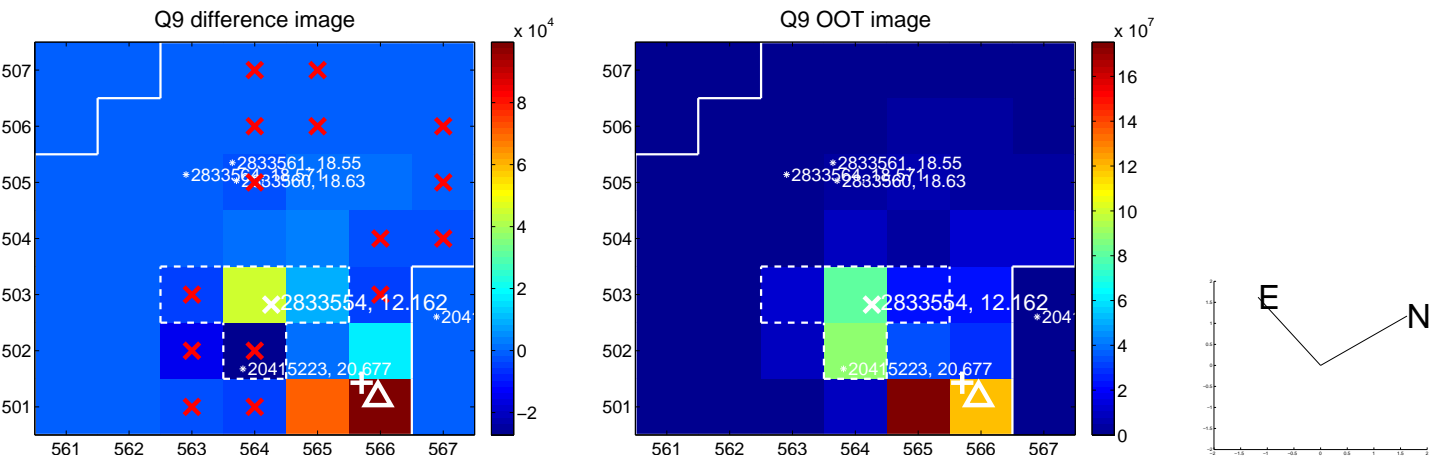
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



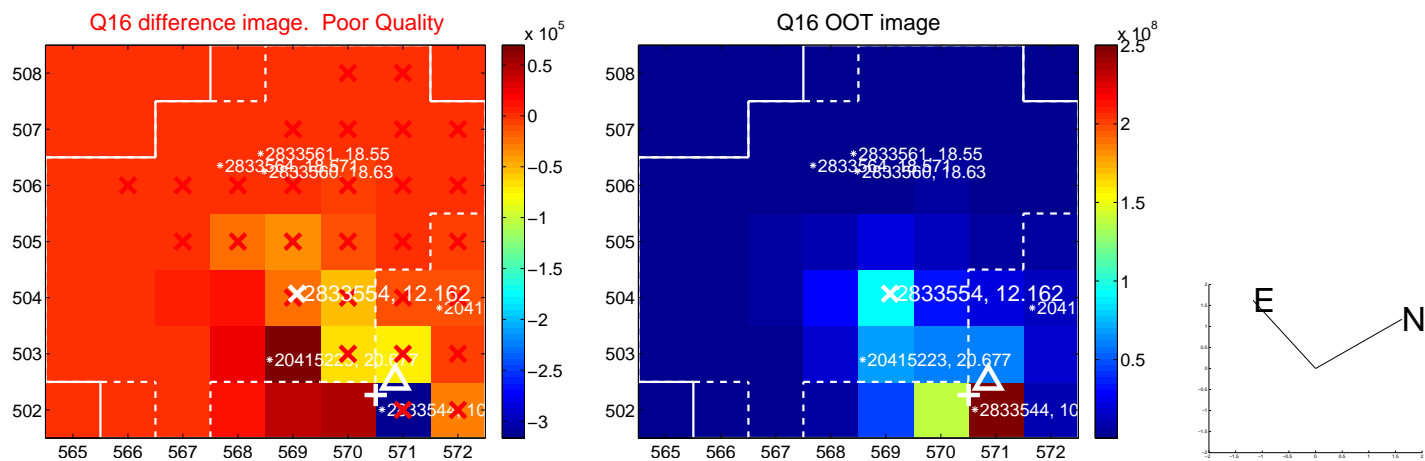
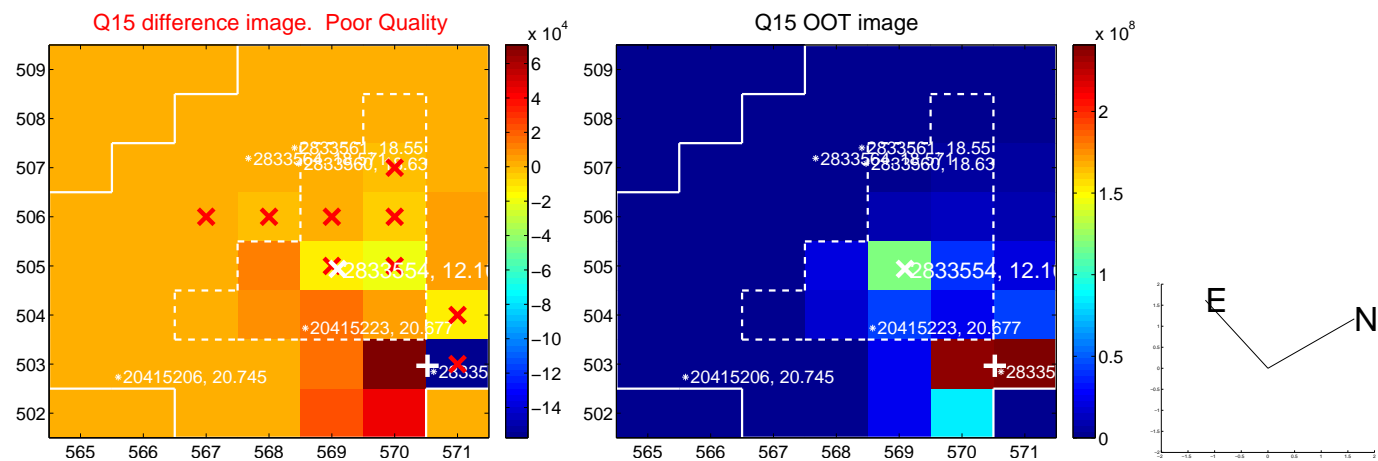
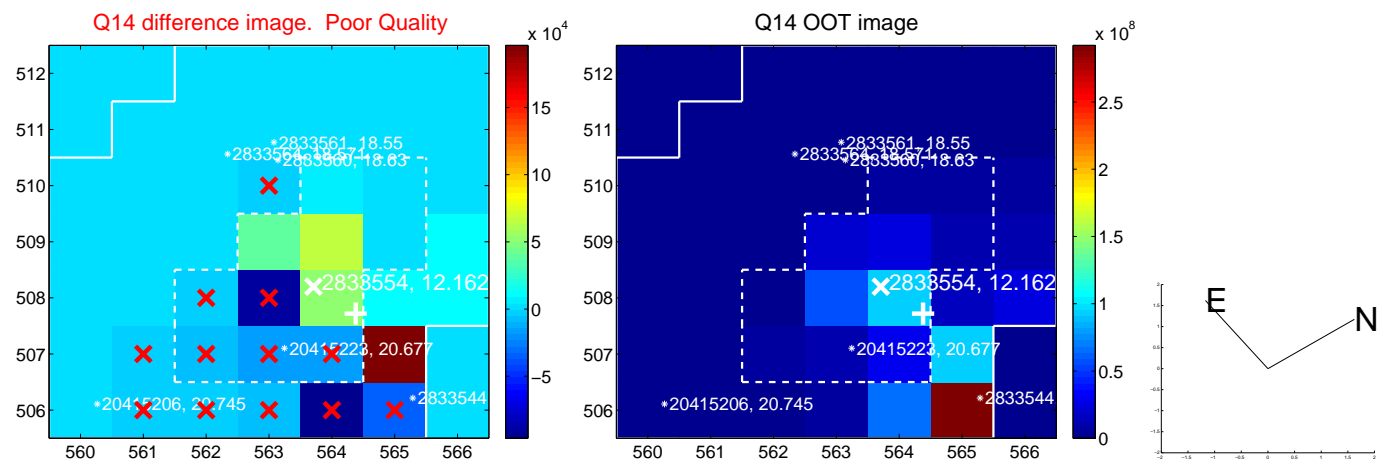
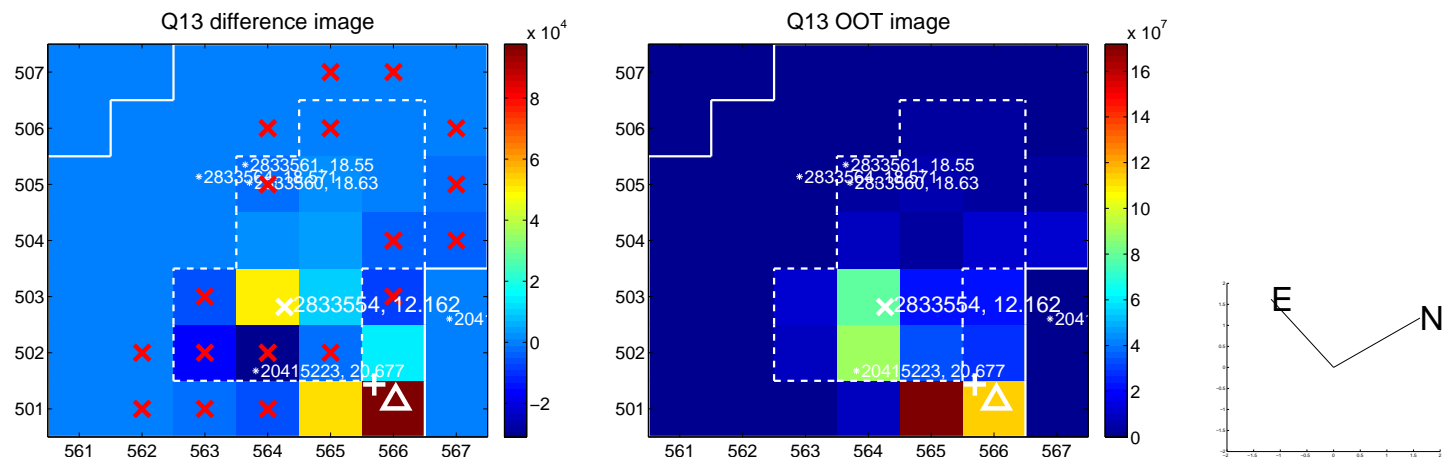
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



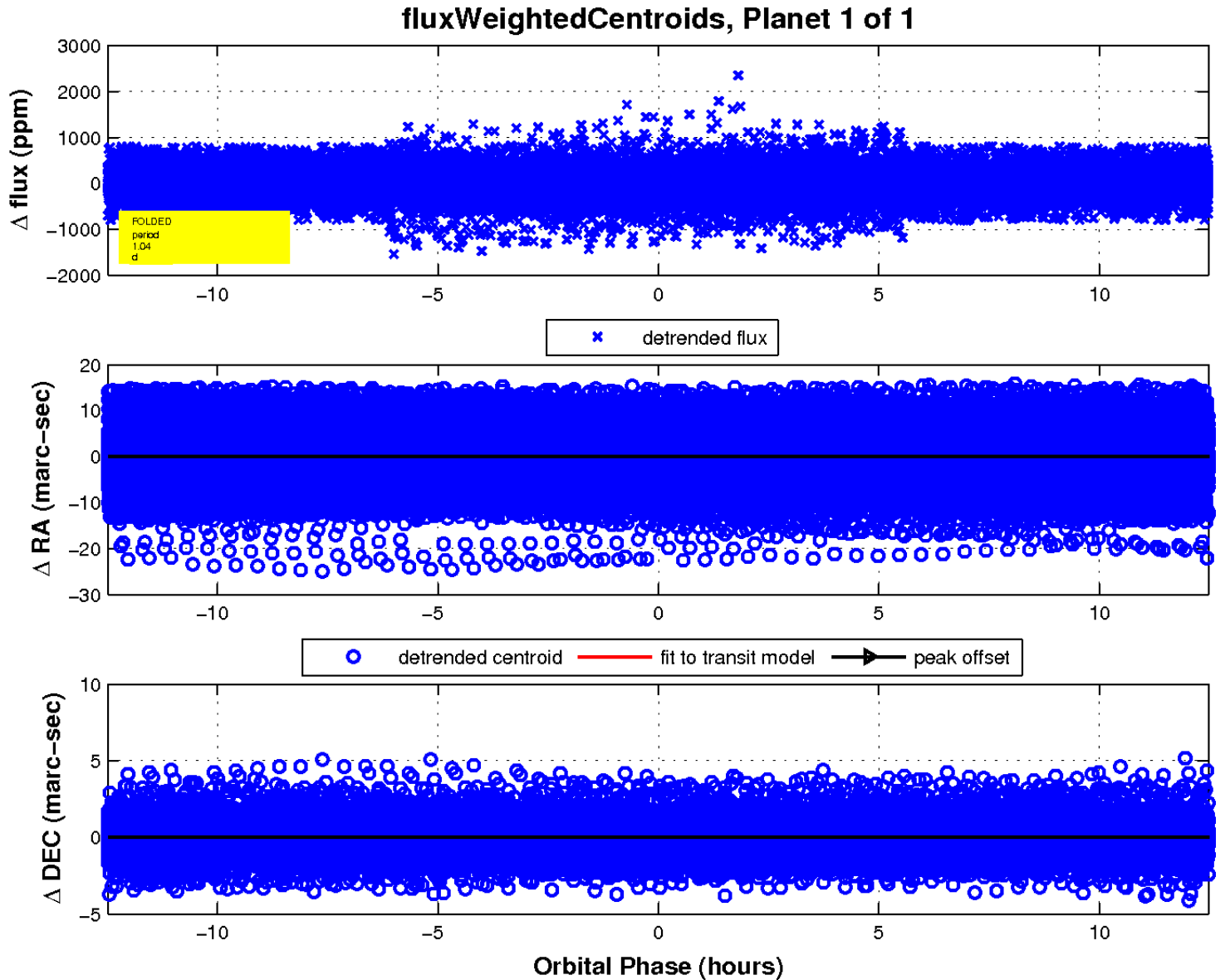
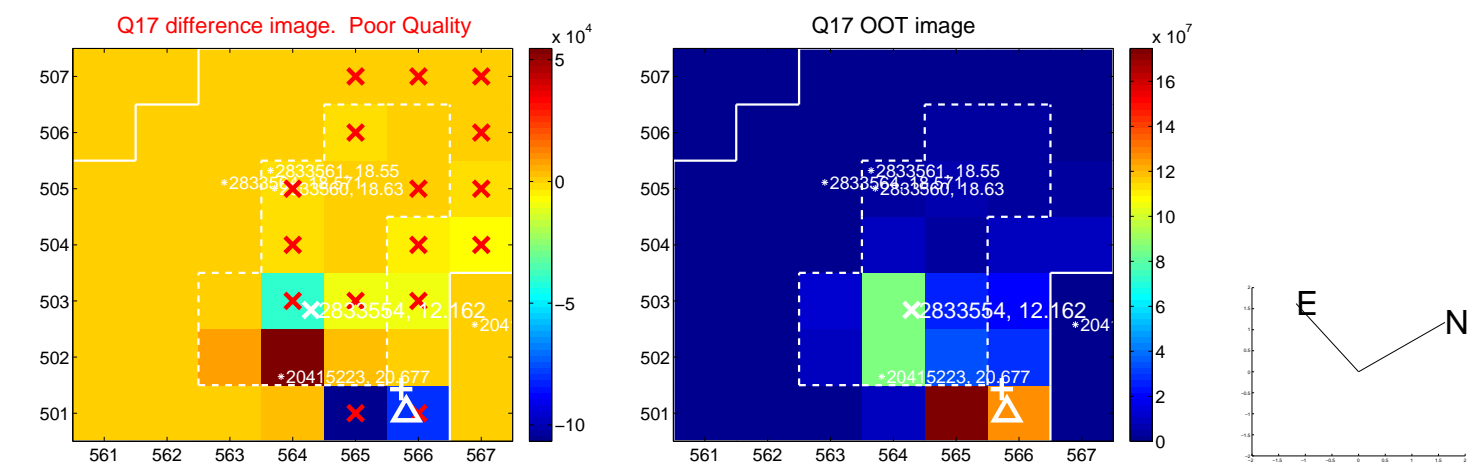
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UKIRT Image

Declination

