

KIC 006312317

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})
006312317-01	OBS	No	4.232741	133.578461	48.2	15.022	8.1	7.2	1.64	5534	1.28	980.02

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006312317-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

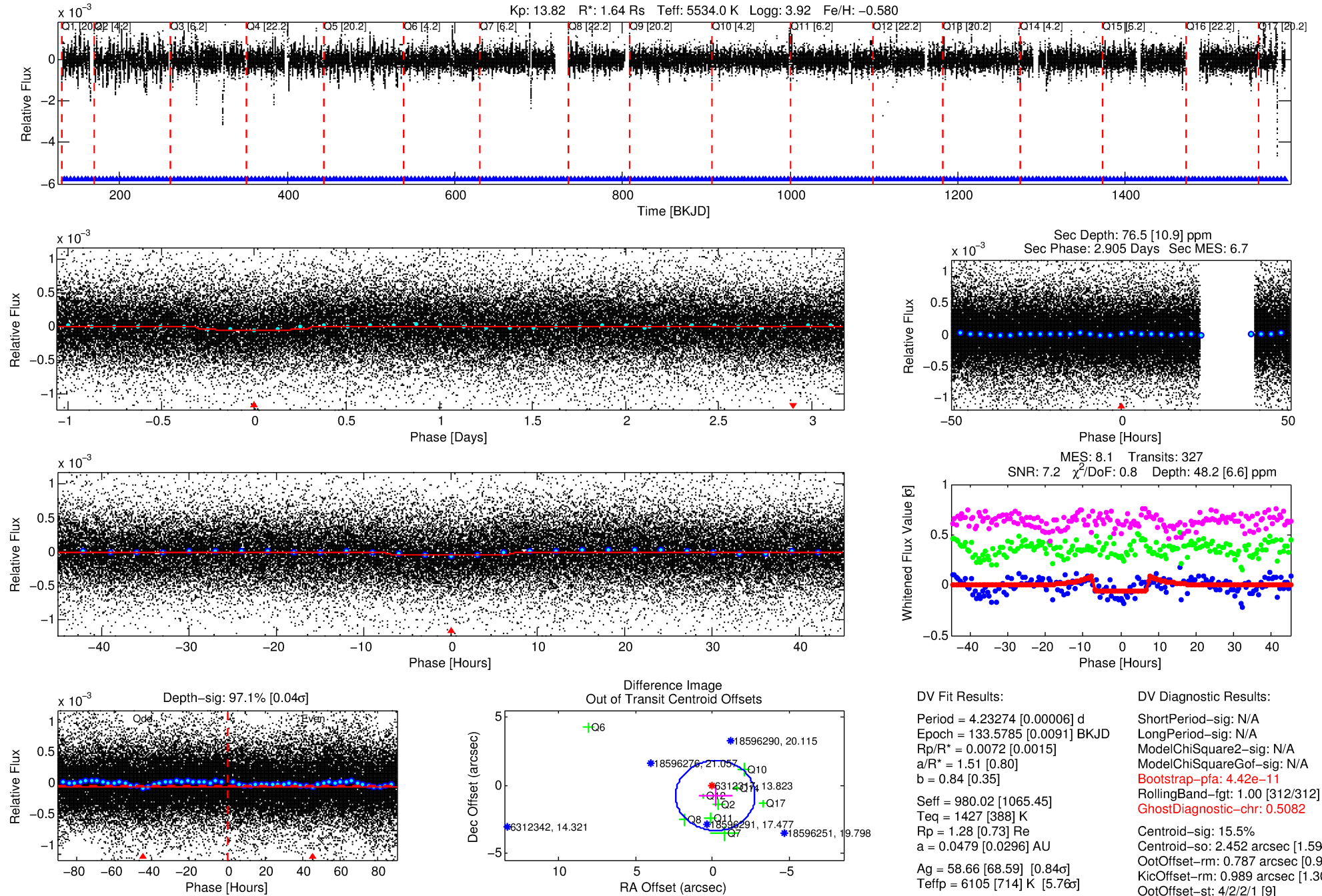
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006312317-01

No Significant Match Found

DV One-Page Summary

KIC: 6312317 Candidate: 1 of 1 Period: 4.233 d



DV Fit Results:

Period = 4.23274 [0.00006] d
Epoch = 133.5785 [0.0091] BKJD
Rp/R* = 0.0072 [0.0015]
a/R* = 1.51 [0.80]
b = 0.84 [0.35]
Seff = 980.02 [1065.45]
Teq = 1427 [388] K
Rp = 1.28 [0.73] Re
a = 0.0479 [0.0296] AU
Ag = 58.66 [68.59] [0.84 σ]
Teffp = 6105 [714] K [5.76 σ]

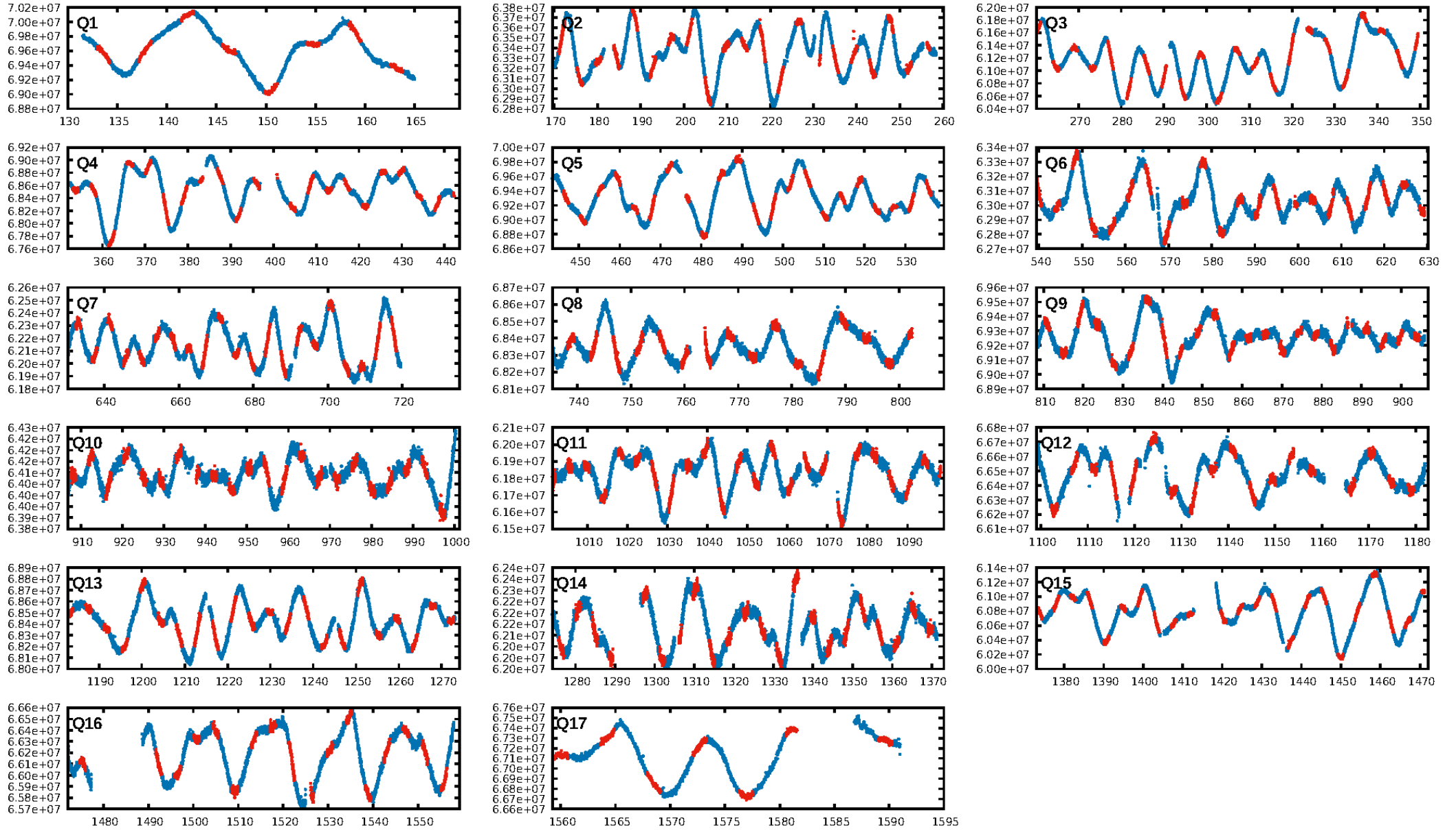
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.42e-11
RollingBand-fgt: 1.00 [312/312]
GhostDiagnostic-chr: 0.5082
Centroid-sig: 15.5%
Centroid-so: 2.452 arcsec [1.59 σ]
OotOffset-rm: 0.787 arcsec [0.92 σ]
KicOffset-rm: 0.989 arcsec [1.30 σ]
OotOffset-st: 4/2/2/1 [9]
KicOffset-st: 4/2/2/1 [9]
DiffImageQuality-fgm: 0.44 [4/9]
DiffImageOverlap-fno: 1.00 [17/17]

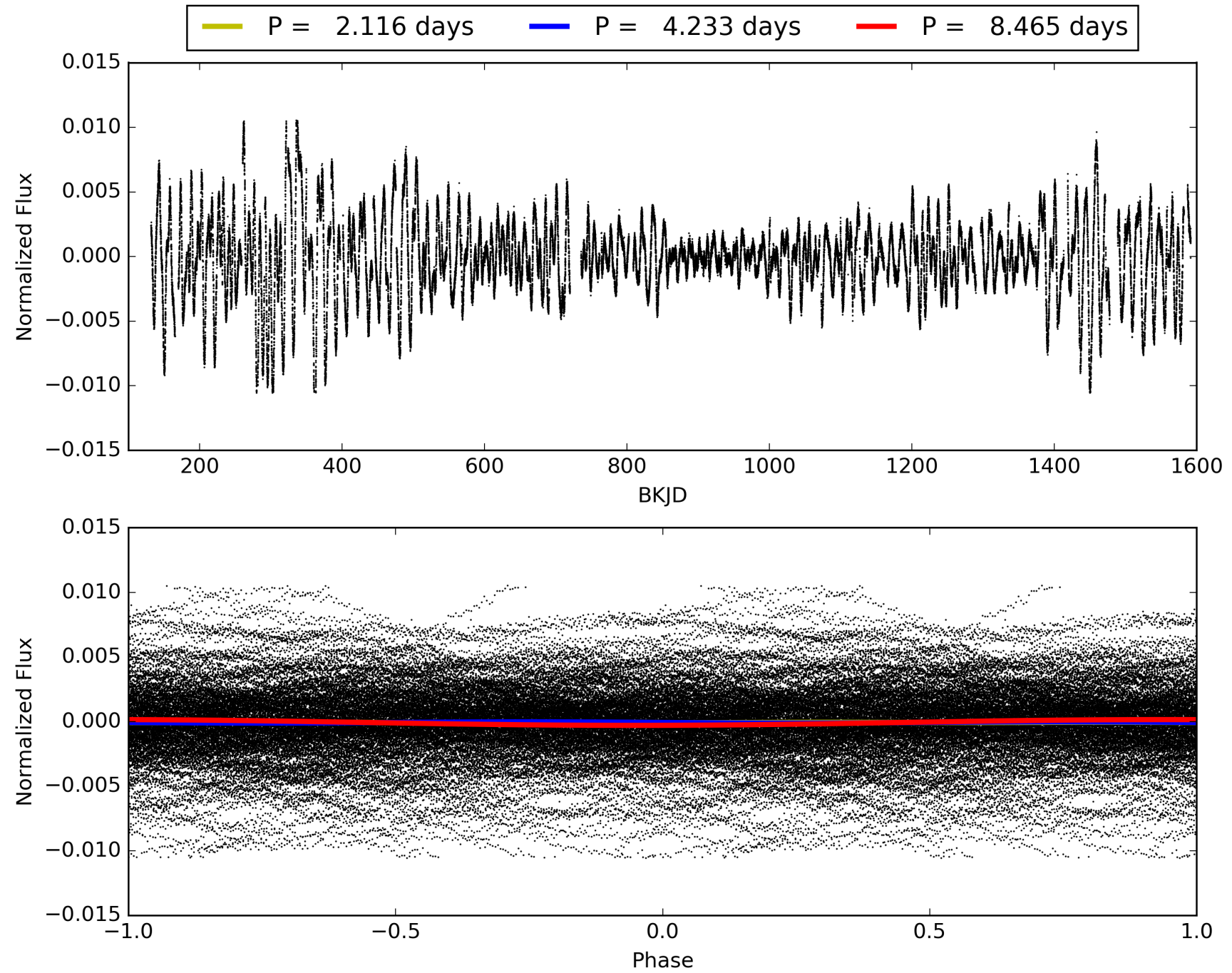
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:12:40 Z

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

TCE 006312317-01, PDC Light Curves

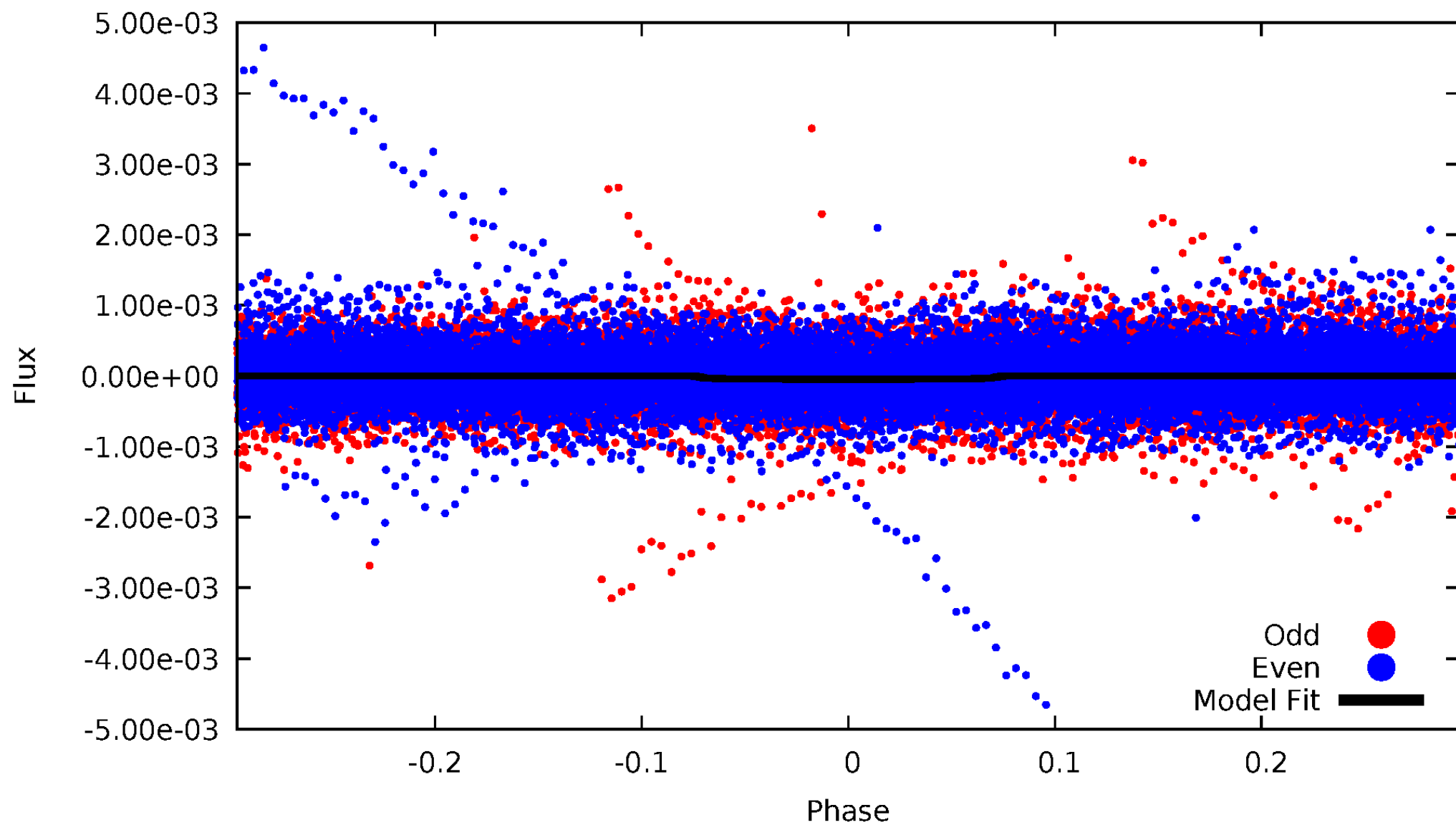


TCE 006312317-01



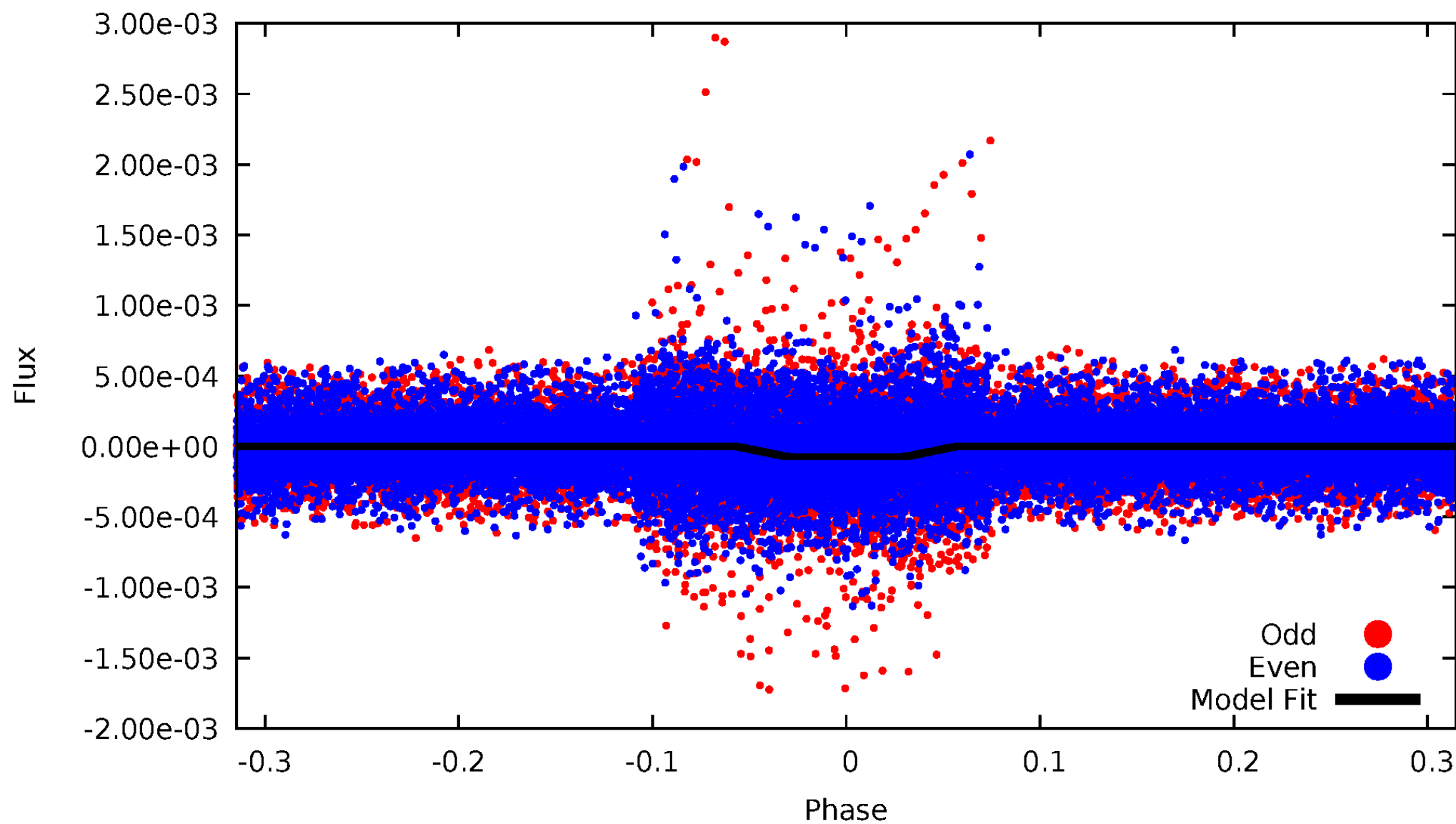
DV Odd/Even

TCE 006312317-01

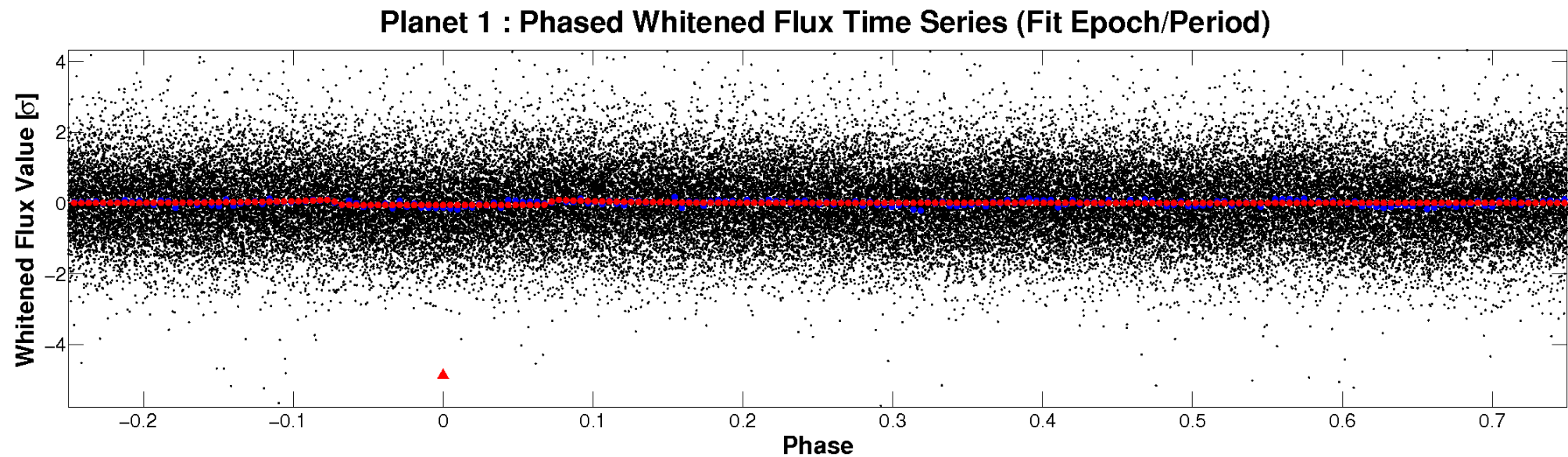
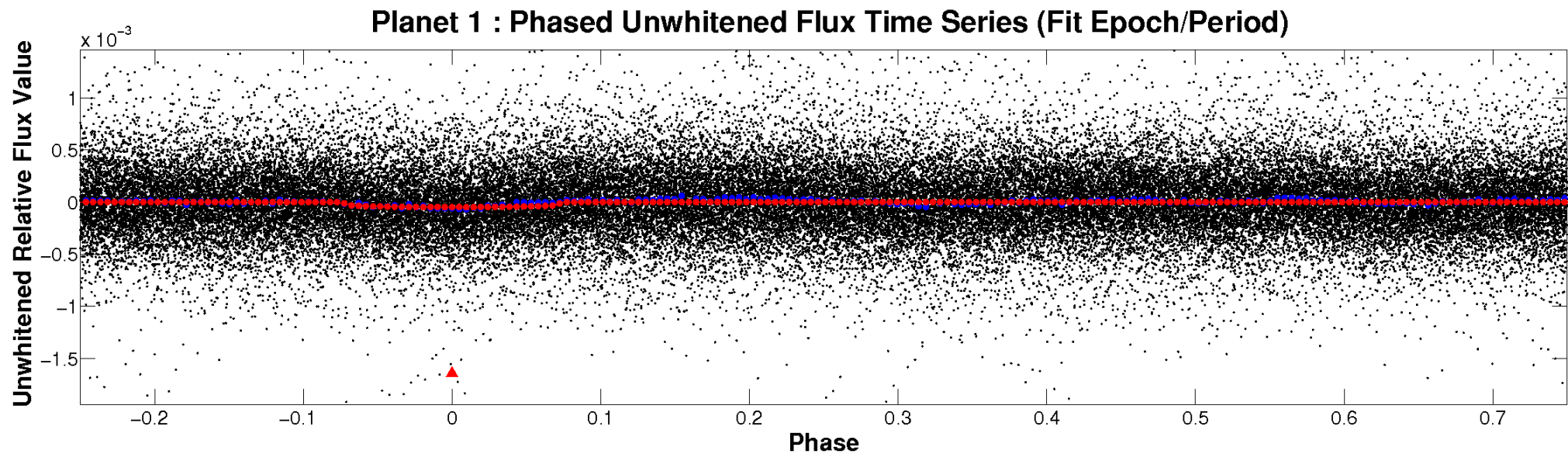


ALT Odd/Even

TCE 006312317-01

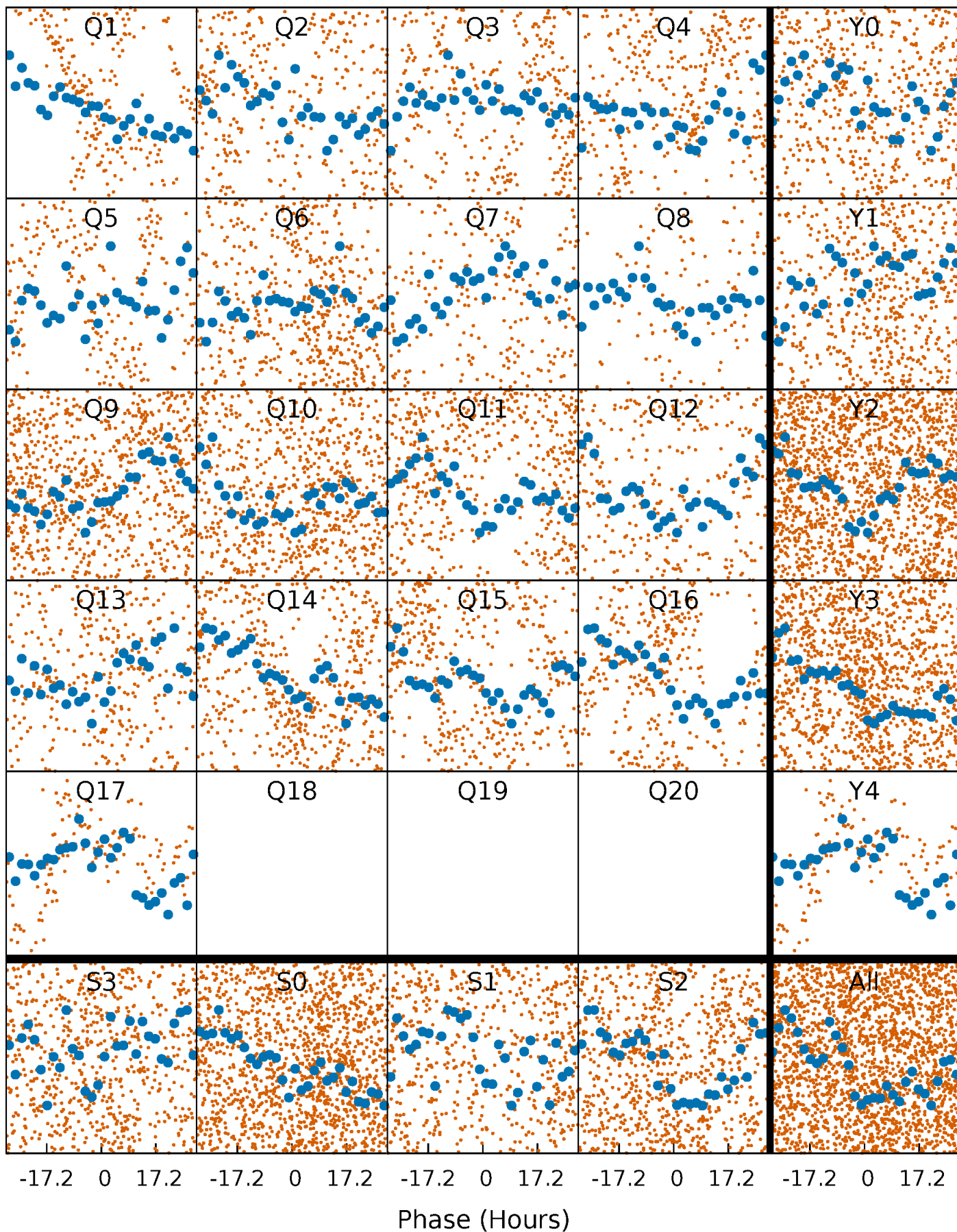


Non-Whitened Vs. Whitened Light Curve



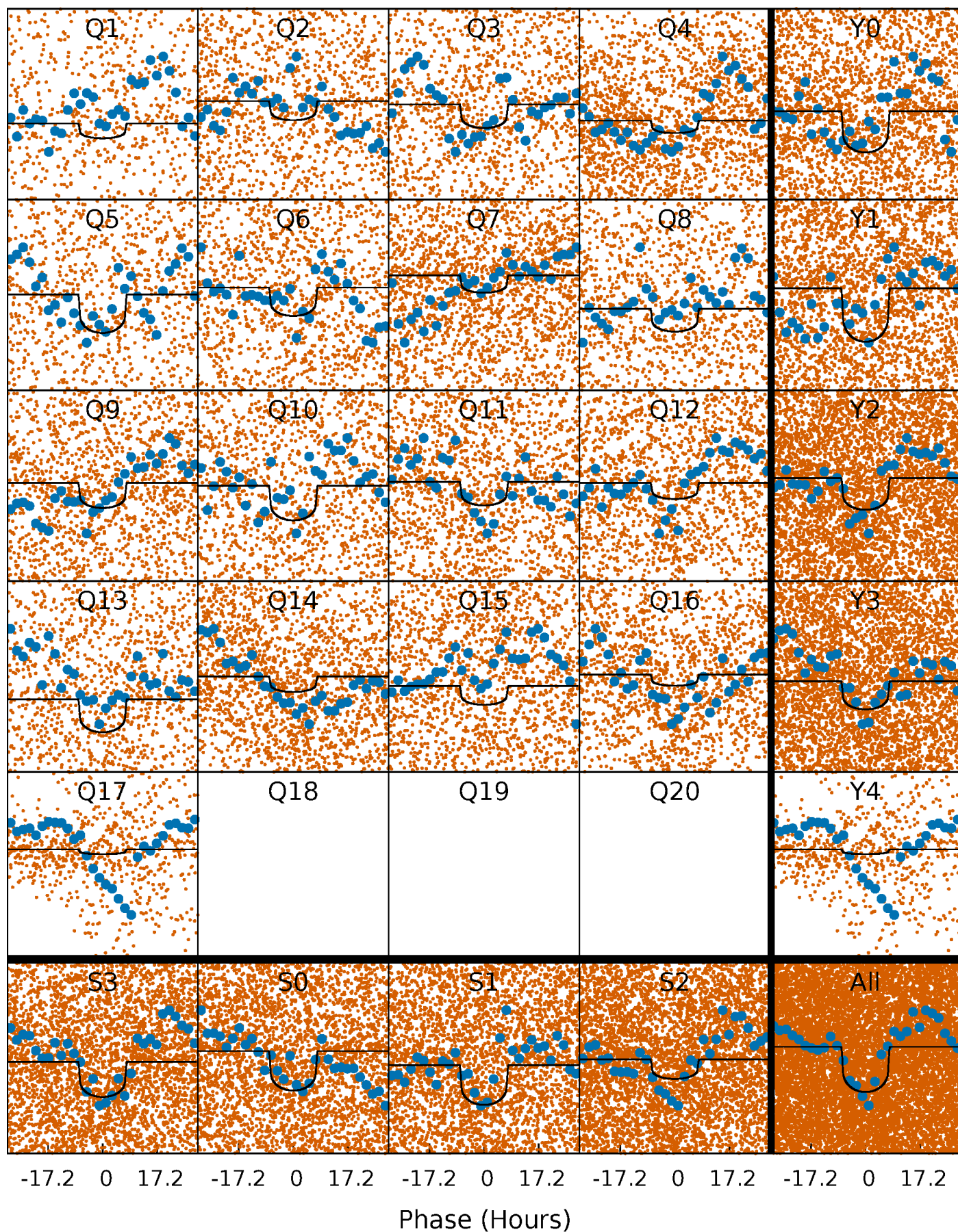
PDC Quarter-Phased Transit Curves

TCE 006312317-01 P= 4.232741 Days $T_0=133.578461$ (BKJD)



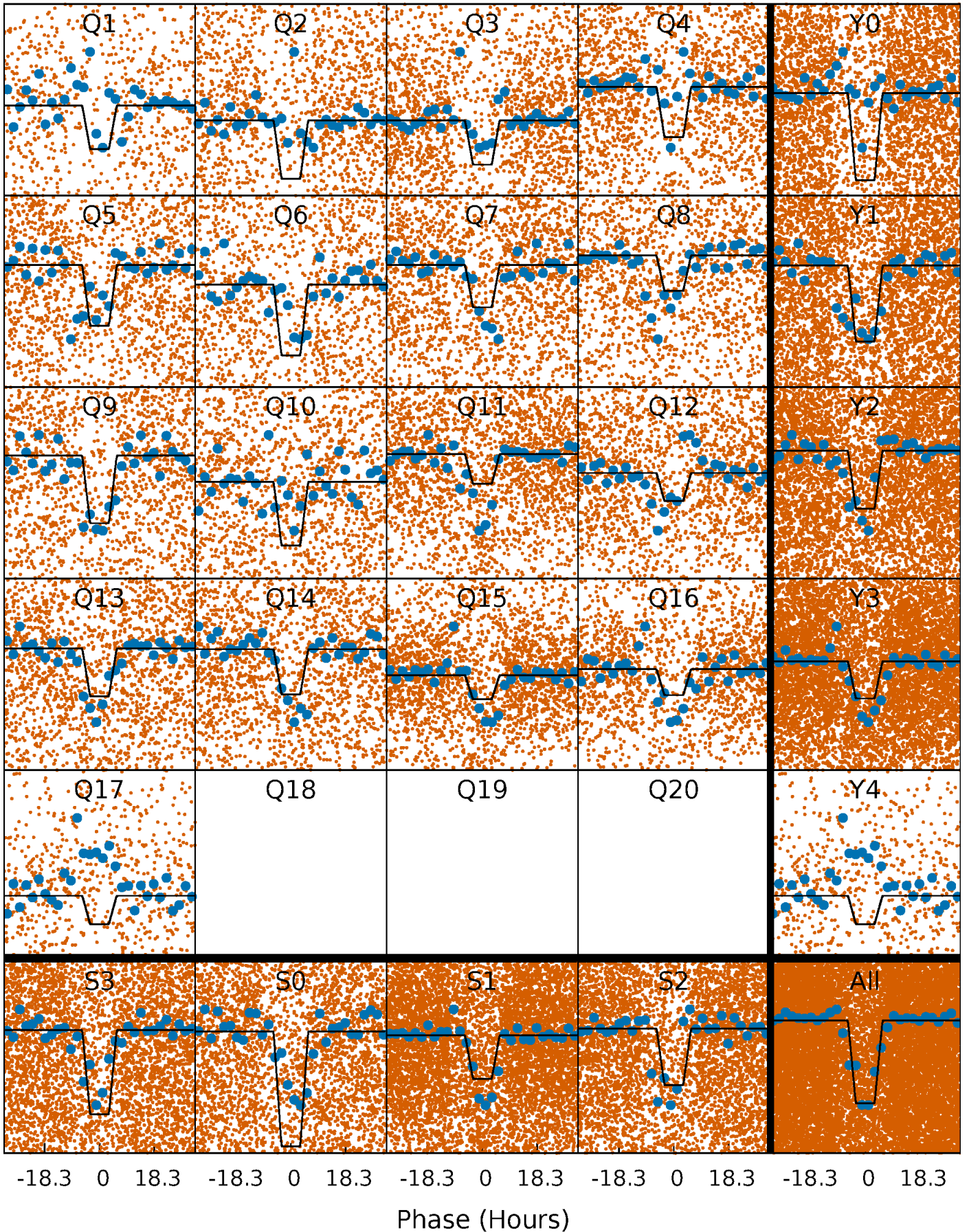
DV Quarter-Phased Transit Curves

TCE 006312317-01 P= 4.232741 Days $T_0=133.578461$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

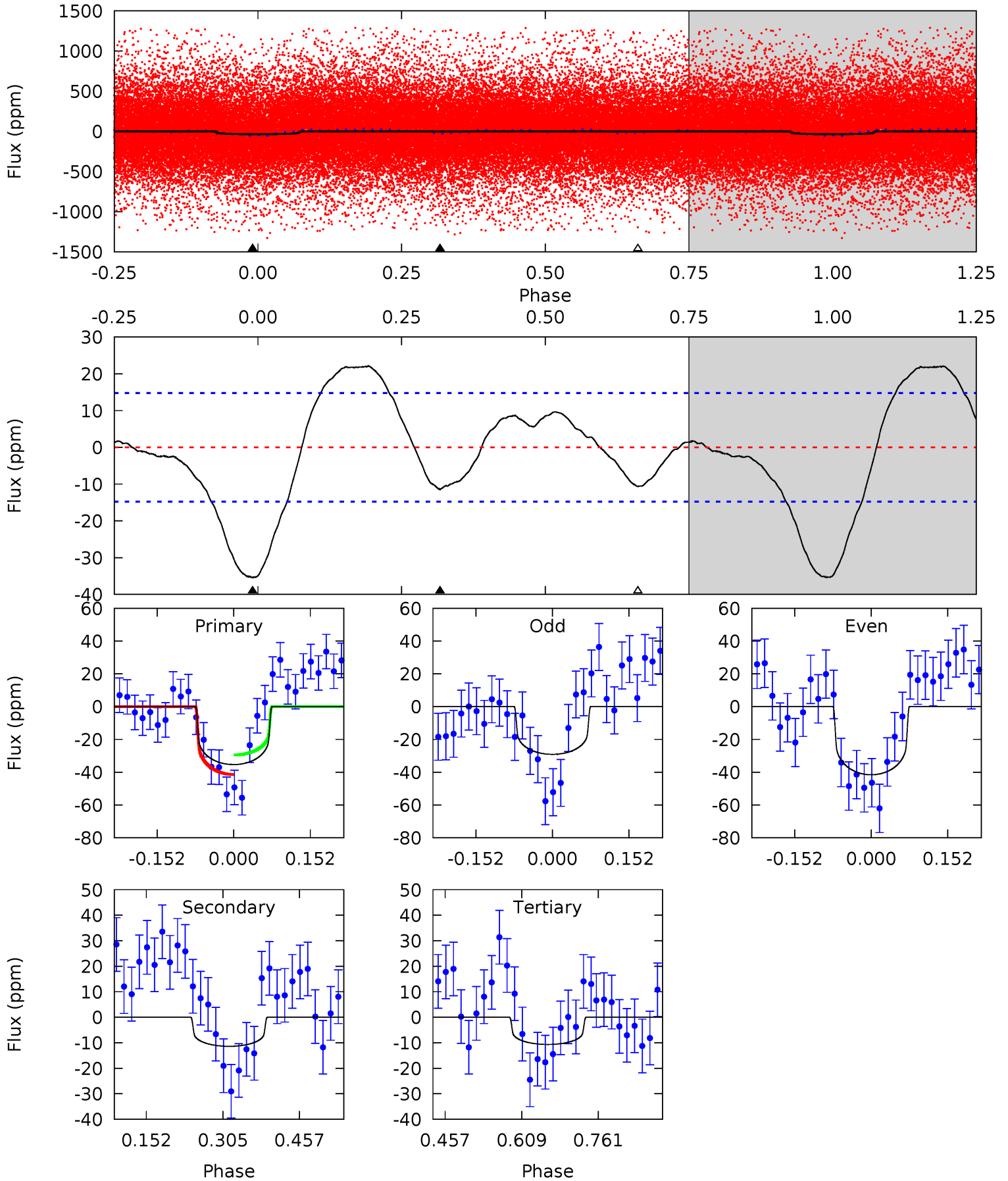
TCE 006312317-01 P= 4.232713 Days $T_0=133.586888$ (BKJD)



DV Model-Shift Uniqueness Test

006312317-01, P = 4.232741 Days, E = 129.345720 Days

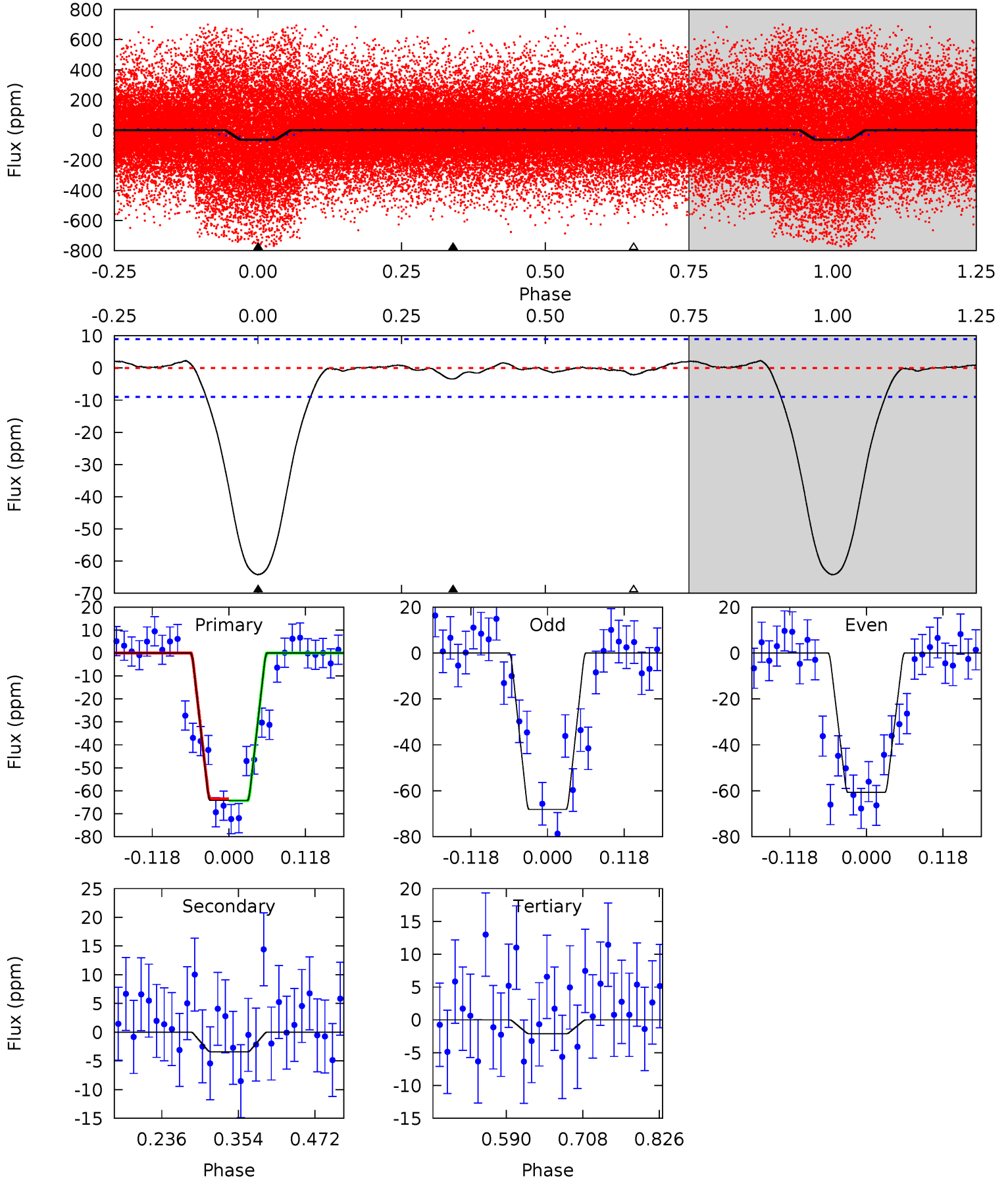
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	3.45	3.23	0	4.48	1.43	2.26	7.48	10.7	0.22	3.45	1.87	1.06	0.38	1.79



Alt Model-Shift Uniqueness Test

006312317-01, P = 4.232713 Days, E = 129.354175 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.4	1.72	1.07	0	4.53	1.56	0.50	31.4	32.4	0.66	1.72	1.87	1.24	0.03	0.21



Stellar Parameters For KIC 006312317

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5534^{+180}_{-163}	$3.923^{+0.665}_{-0.285}$	$-0.580^{+0.300}_{-0.300}$	$1.635^{+0.774}_{-0.860}$	$0.816^{+0.086}_{-0.105}$	$0.263^{+2.420}_{-0.157}$
	+3%/-3%	+17%/-7%	+52%/-52%	+47%/-53%	+11%/-13%	+919%/-60%
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 006312317-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-11 ± 3	$1.19^{+0.45}_{-0.41}$	1975^{+259}_{-315}	4071^{+450}_{-372}	$9.819^{+12.805}_{-5.075}$
Alt.	-3 ± 2	$1.41^{+0.49}_{-0.47}$	1952^{+279}_{-320}	3080^{+358}_{-489}	$1.994^{+3.506}_{-1.337}$

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 $A_{obs} \gg 1.0$

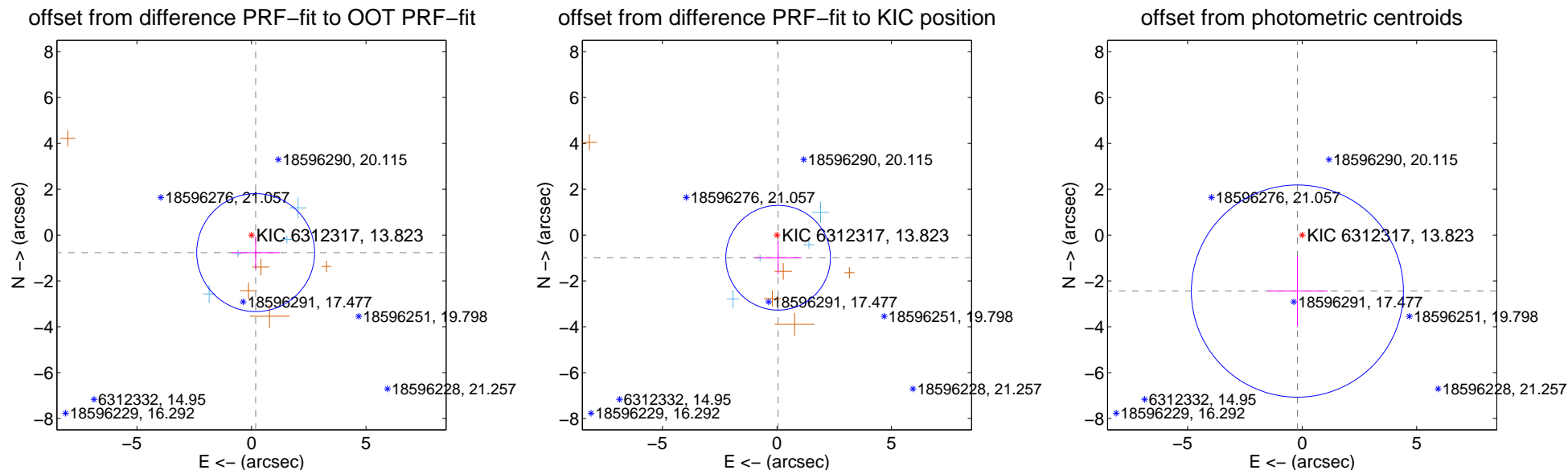
DV Centroid Data

Supplemental centroid analysis for 006312317-01. Kepler magnitude: 13.82. Transit SNR 7.24

There are 4 quarters with good PRF difference image offsets

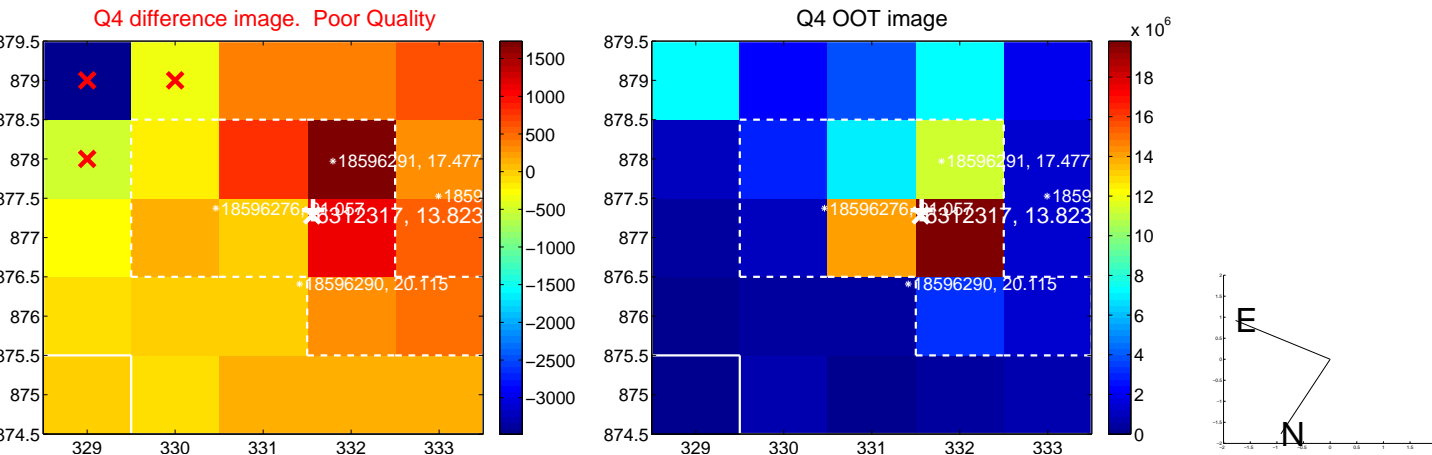
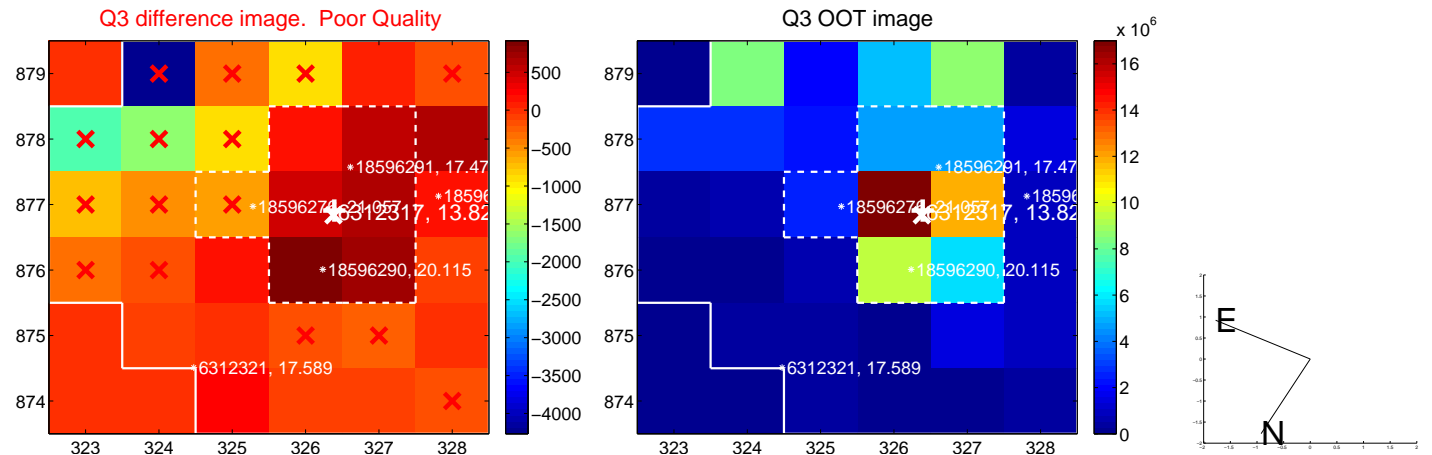
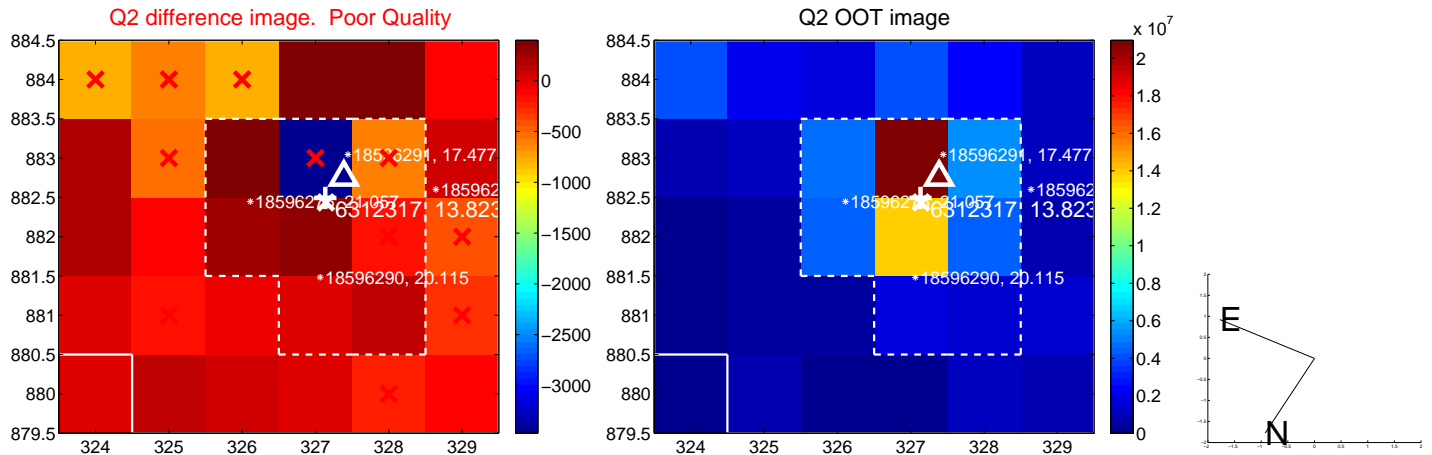
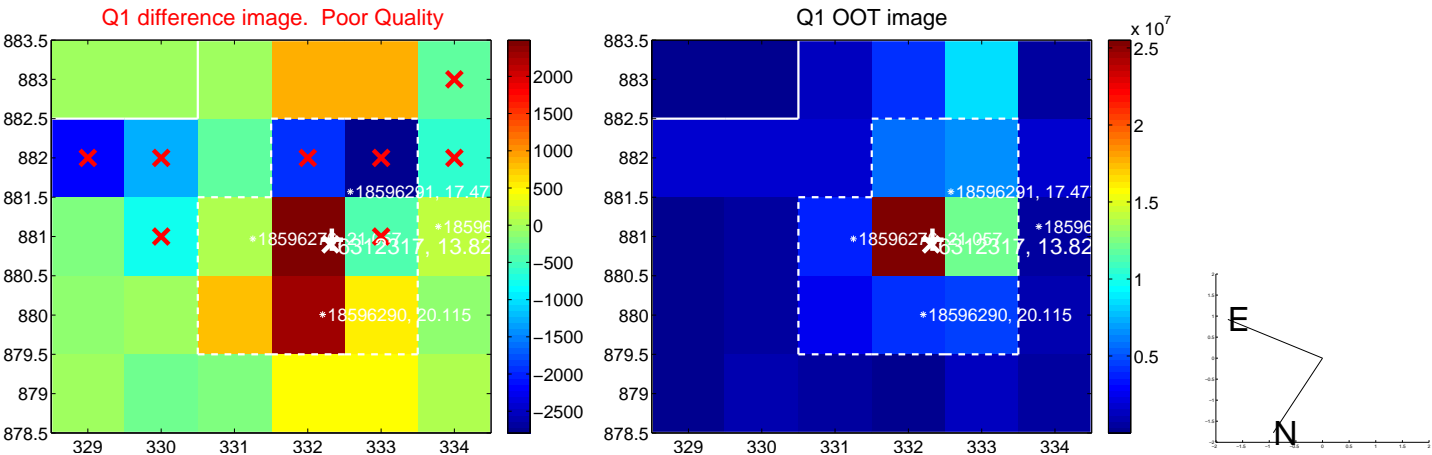
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.787 ± 0.858	0.92	-0.183 ± 1.049	-0.765 ± 0.703
PRF-fit source offset from KIC position	0.989 ± 0.761	1.30	-0.051 ± 1.015	-0.988 ± 0.734
photometric centroid source offset	2.45 ± 1.54	1.59	0.21 ± 1.32	-2.44 ± 1.54

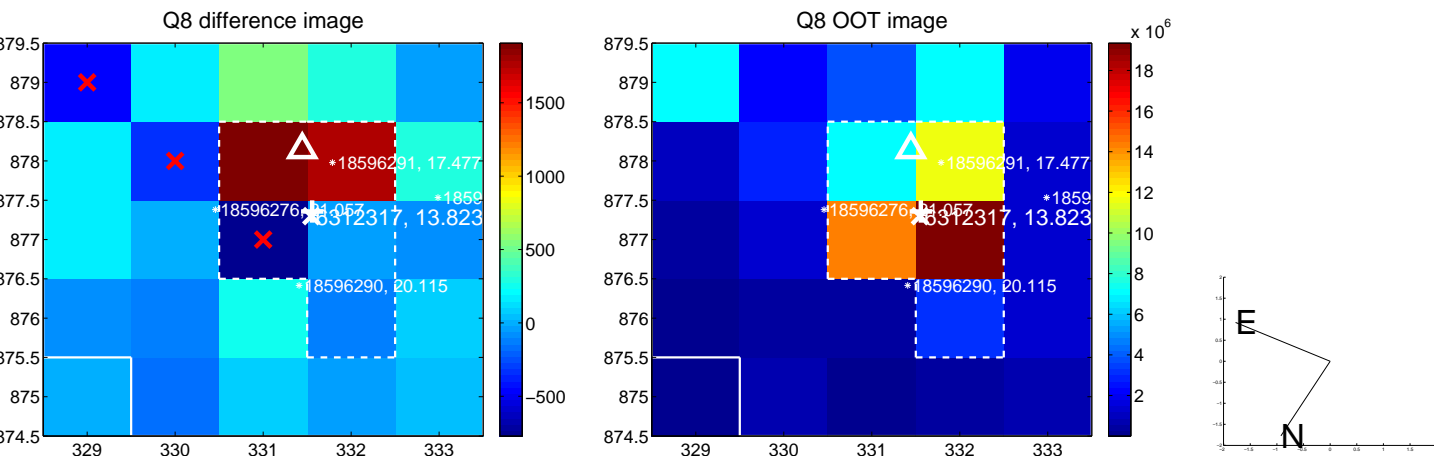
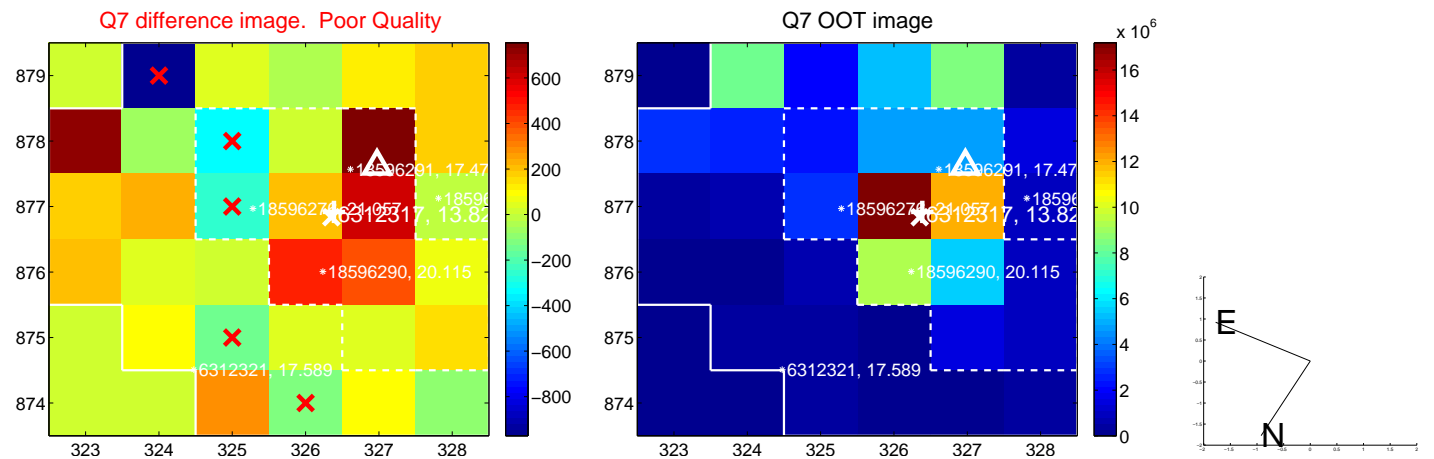
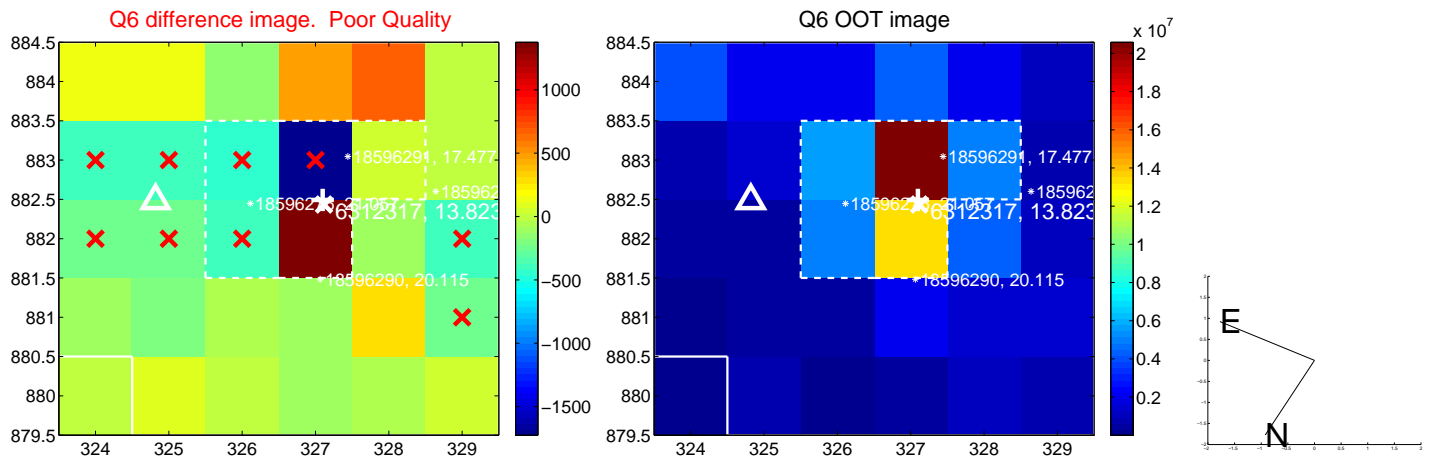
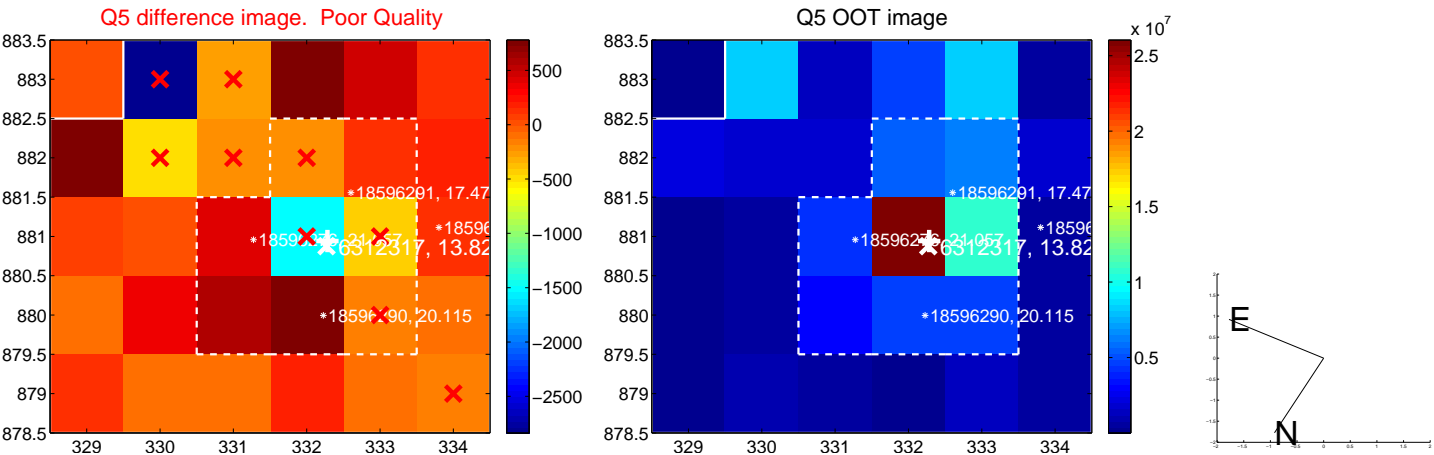


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

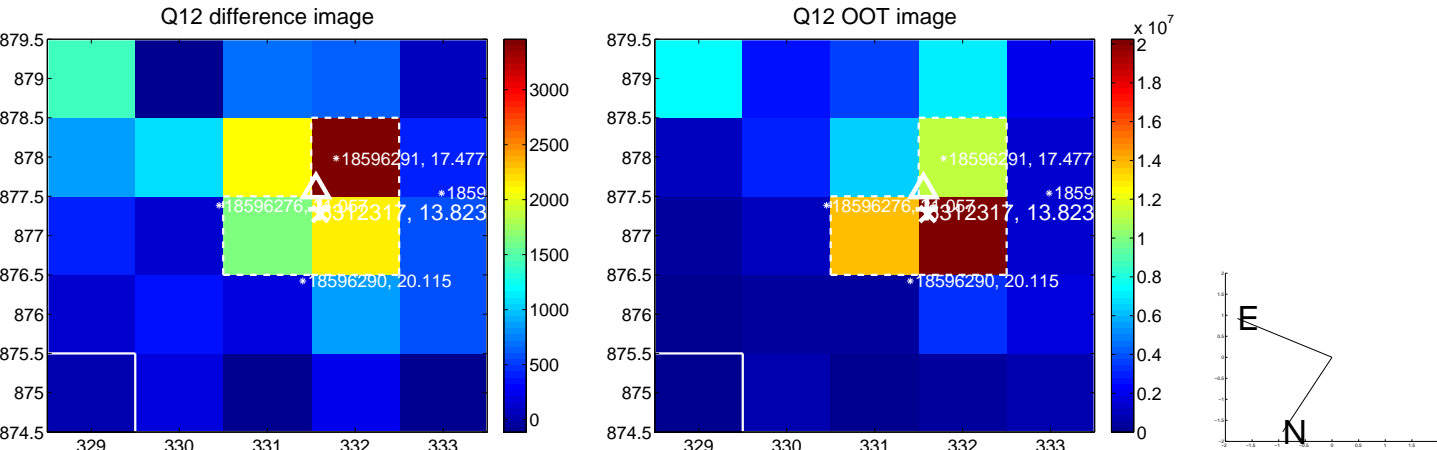
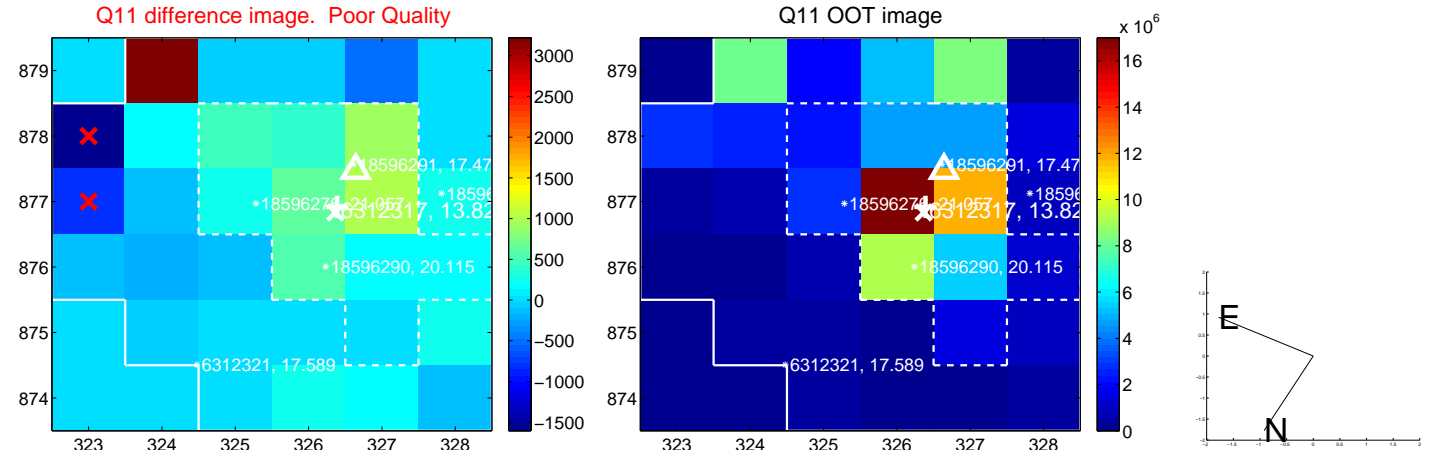
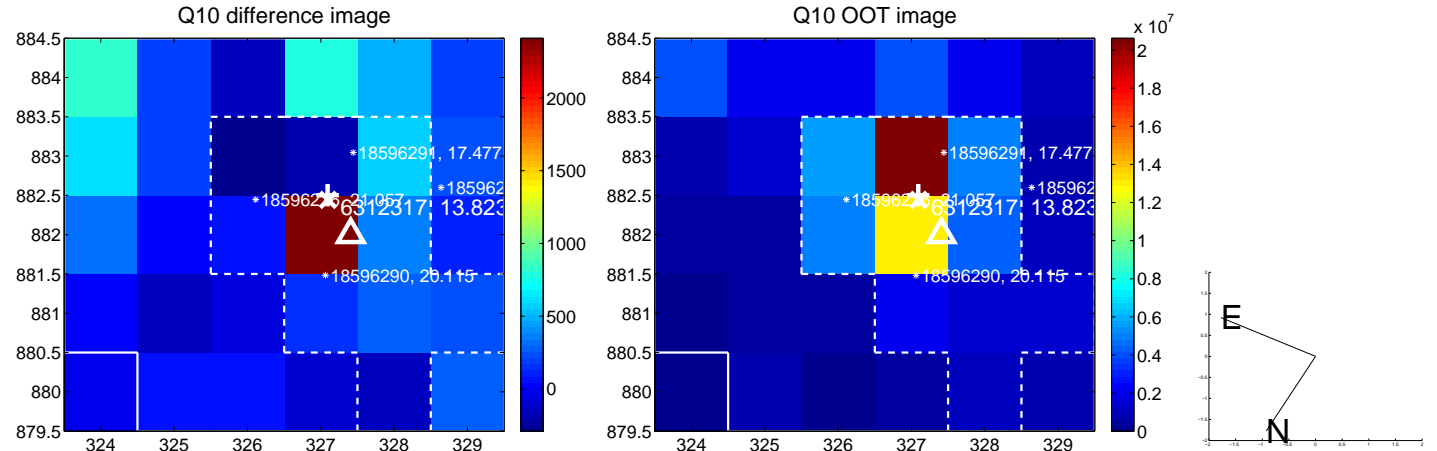
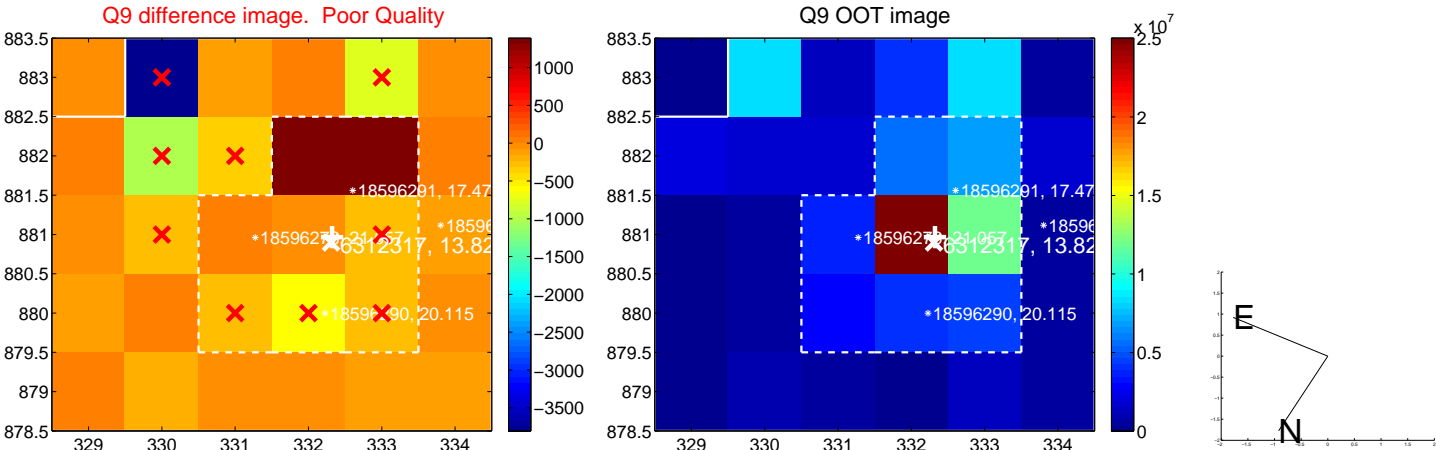
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



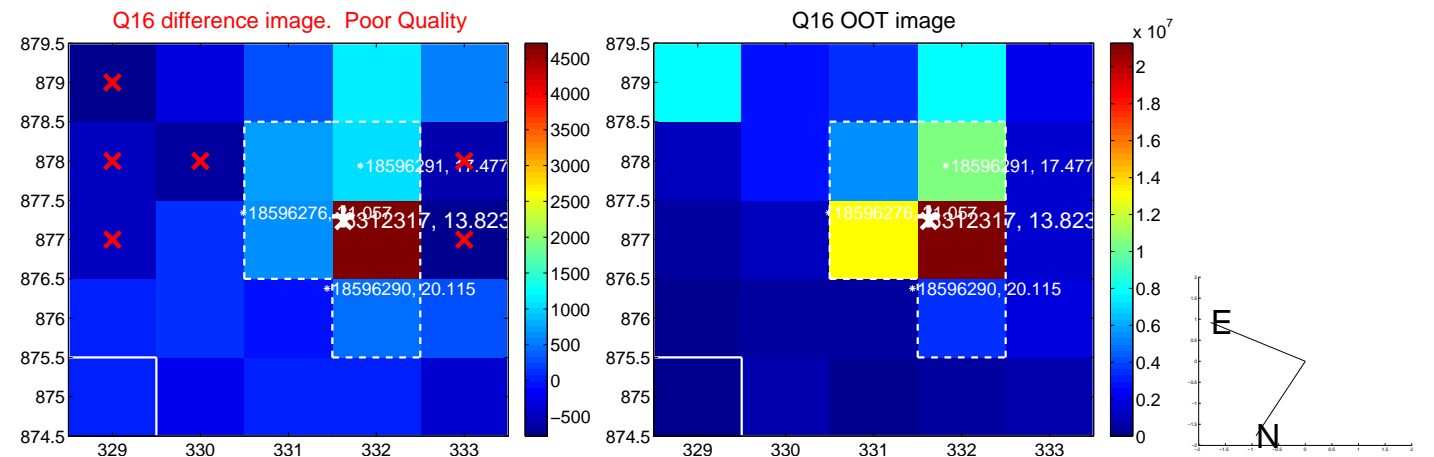
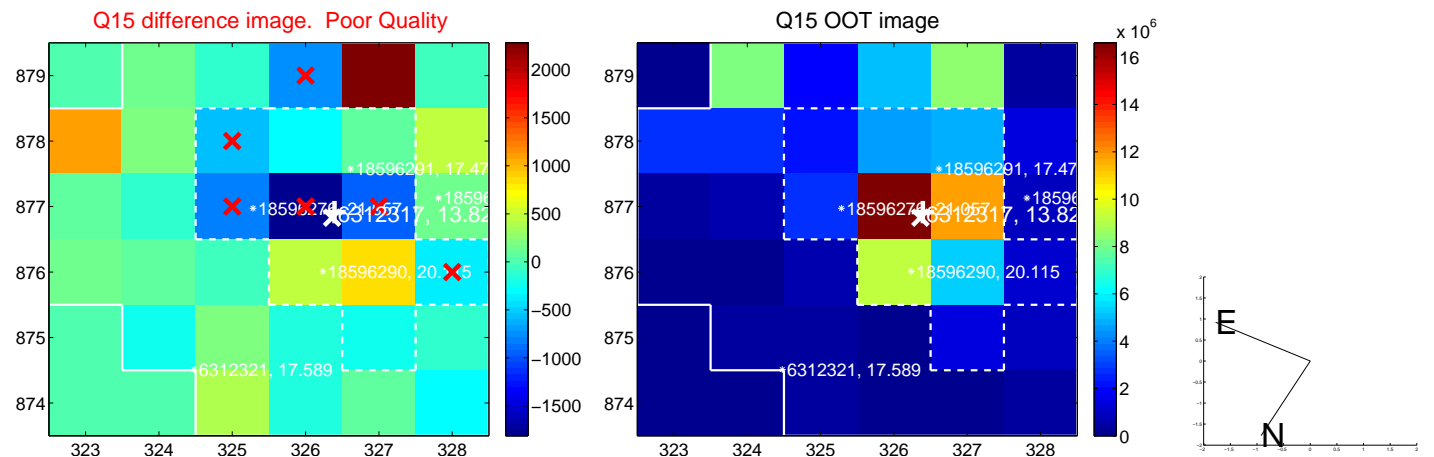
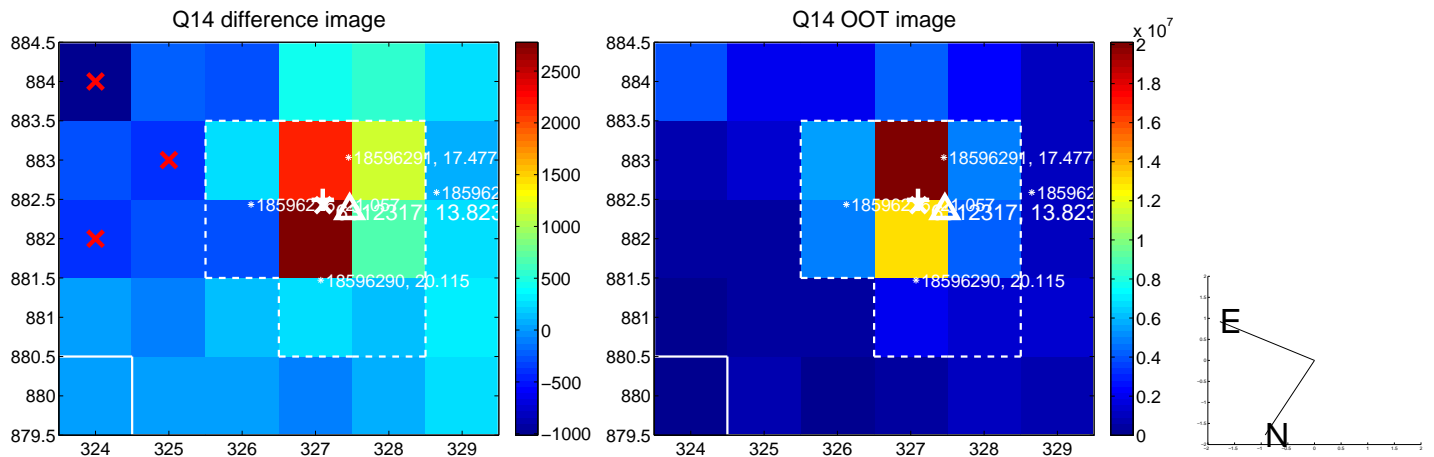
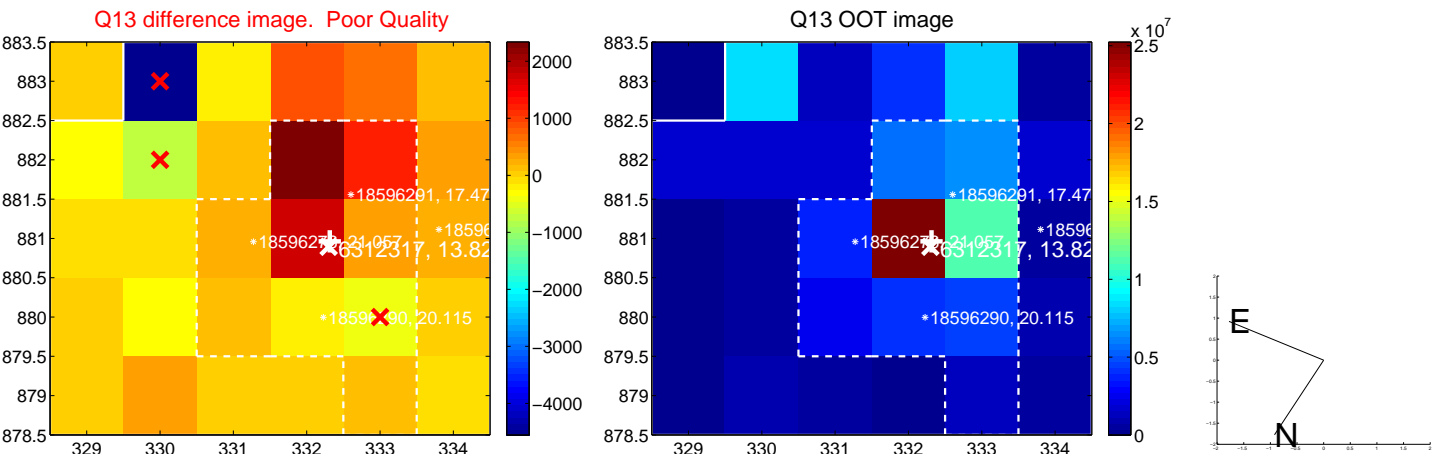
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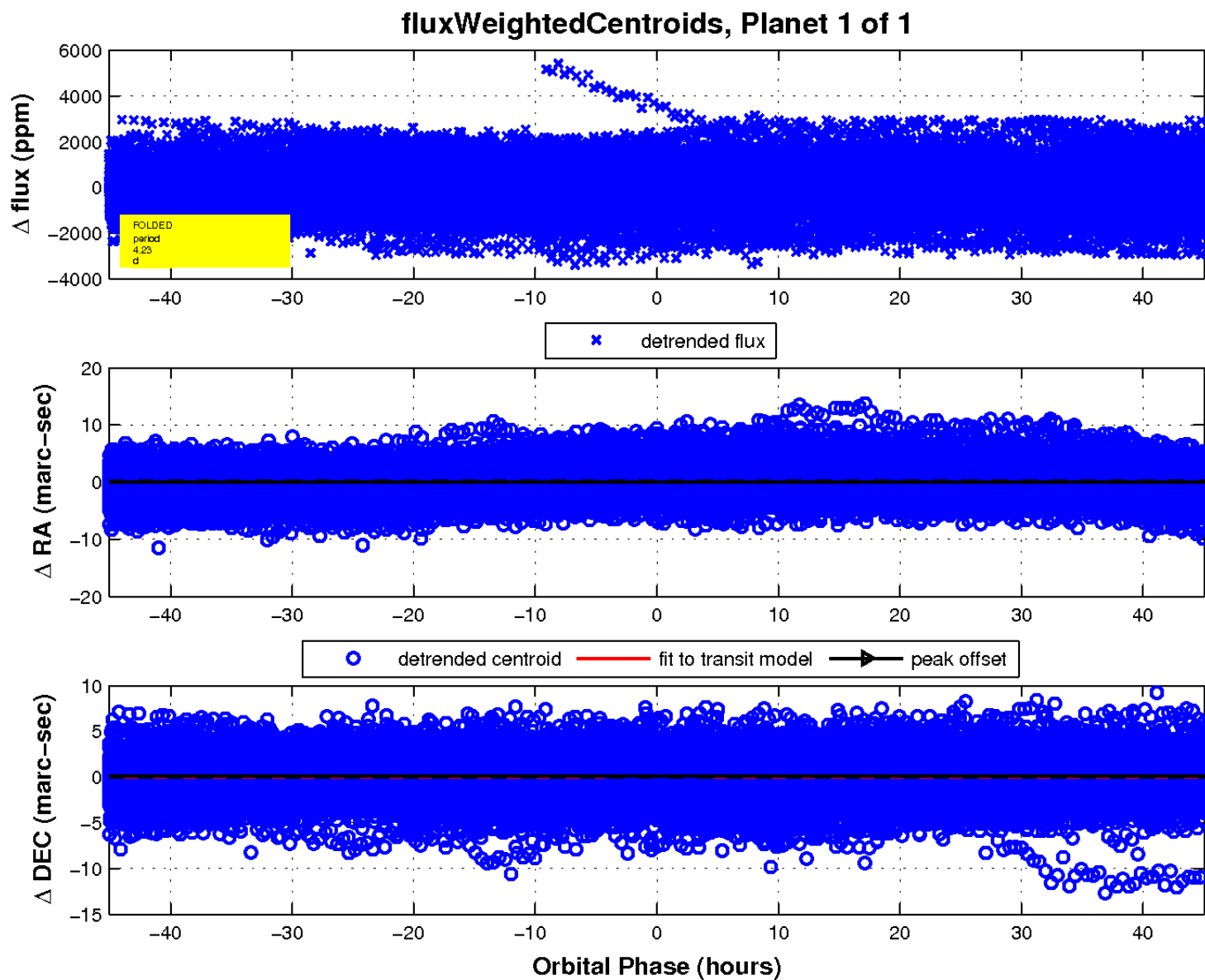
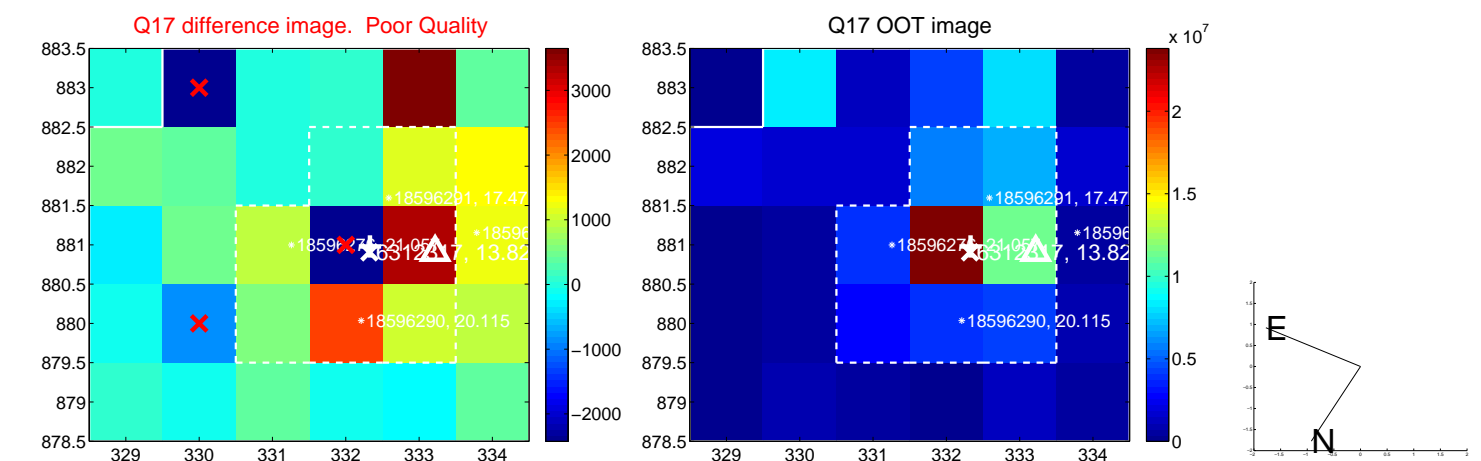
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UKIRT Image

