

KIC 003853654

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})
003853654-01	OBS	No	0.906312	131.537690	87.2	8.616	11.1	10.8	2.03	8037	2.00	30301.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003853654-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_MEAS

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

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

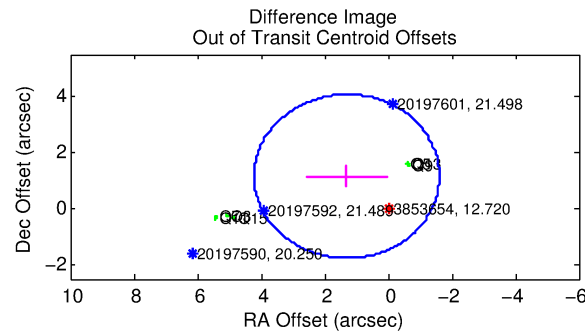
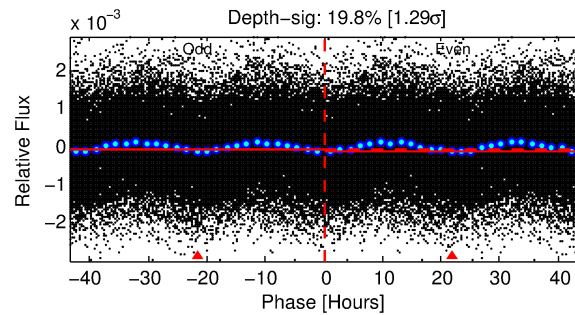
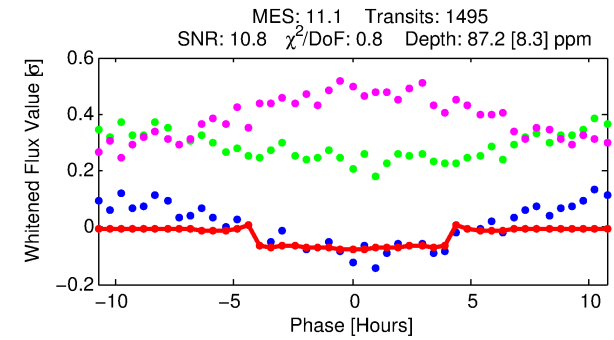
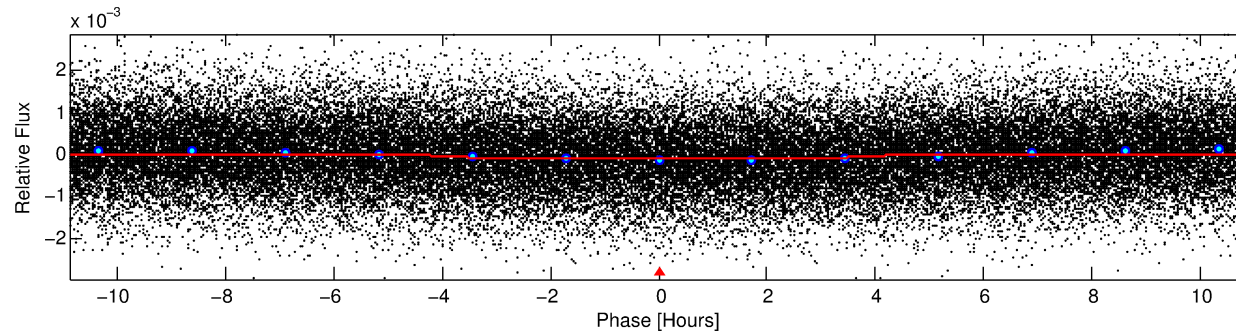
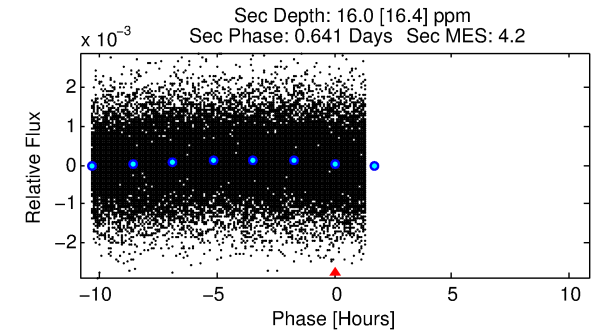
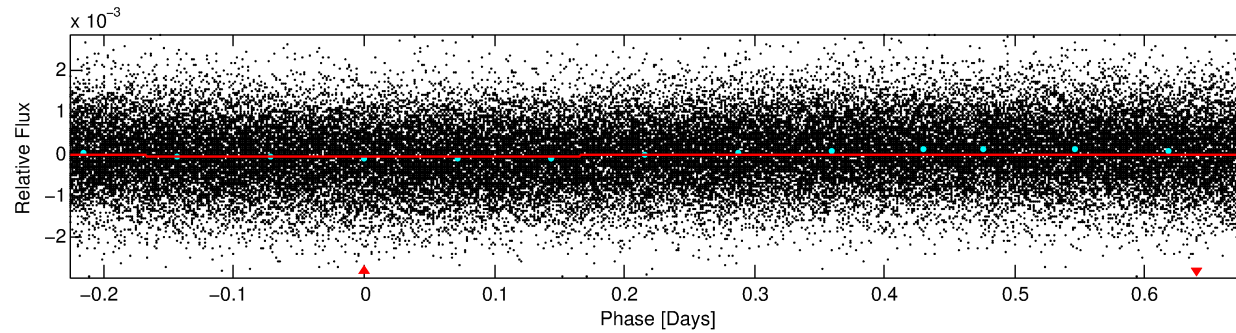
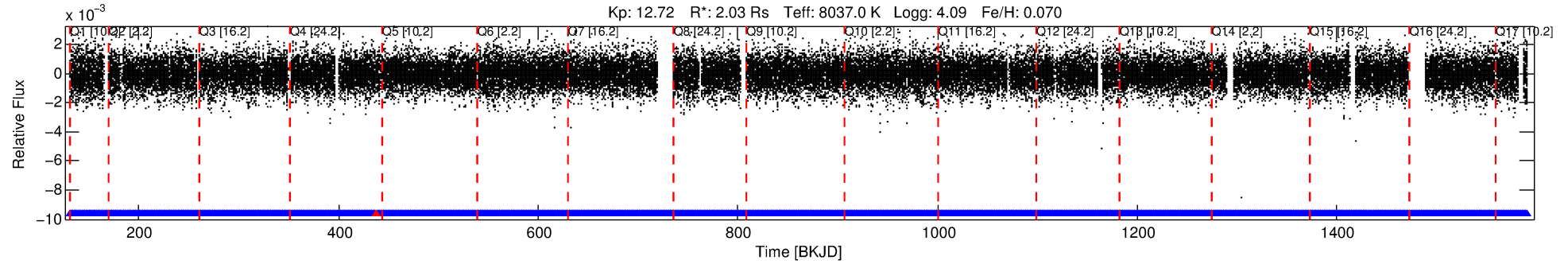
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003853654-01

No Significant Match Found

DV One-Page Summary

KIC: 3853654 Candidate: 1 of 1 Period: 0.906 d



DV Fit Results:

Period = 0.90631 [0.00002] d
Epoch = 131.5377 [0.0041] BKJD
Rp/R* = 0.0090 [0.0033]
a/R* = 1.04 [0.19]
b = 0.62 [2.17]
Seff = 30301.83 [10008.83]
Teq = 3364 [278] K
Rp = 2.00 [0.87] Re
a = 0.0225 [0.0045] AU
Ag = 1.12 [1.44] [0.08σ]
Teffp = 5351 [1690] K [1.16σ]

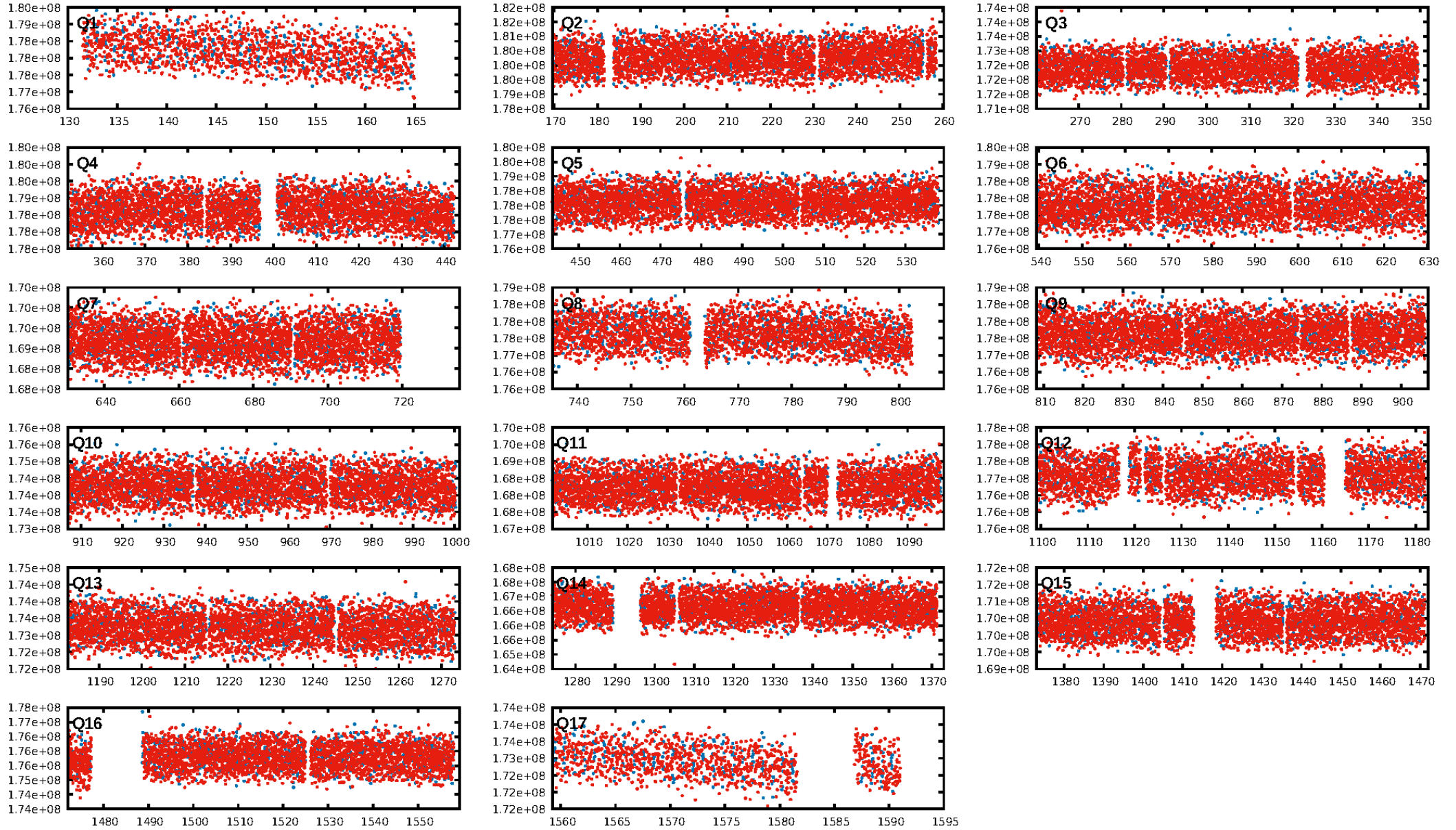
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1426/1427]
GhostDiagnostic-chr: 1.395
Centroid-sig: 0.0%
Centroid-so: 0.382 arcsec [2.43σ]
OotOffset-rm: 1.743 arcsec [1.79σ]
KicOffset-rm: 1.735 arcsec [1.85σ]
OotOffset-st: 0/4/0/3 [7]
KicOffset-st: 0/4/0/3 [7]
DiffImageQuality-fgm: 0.43 [3/7]
DiffImageOverlap-fno: 1.00 [17/17]

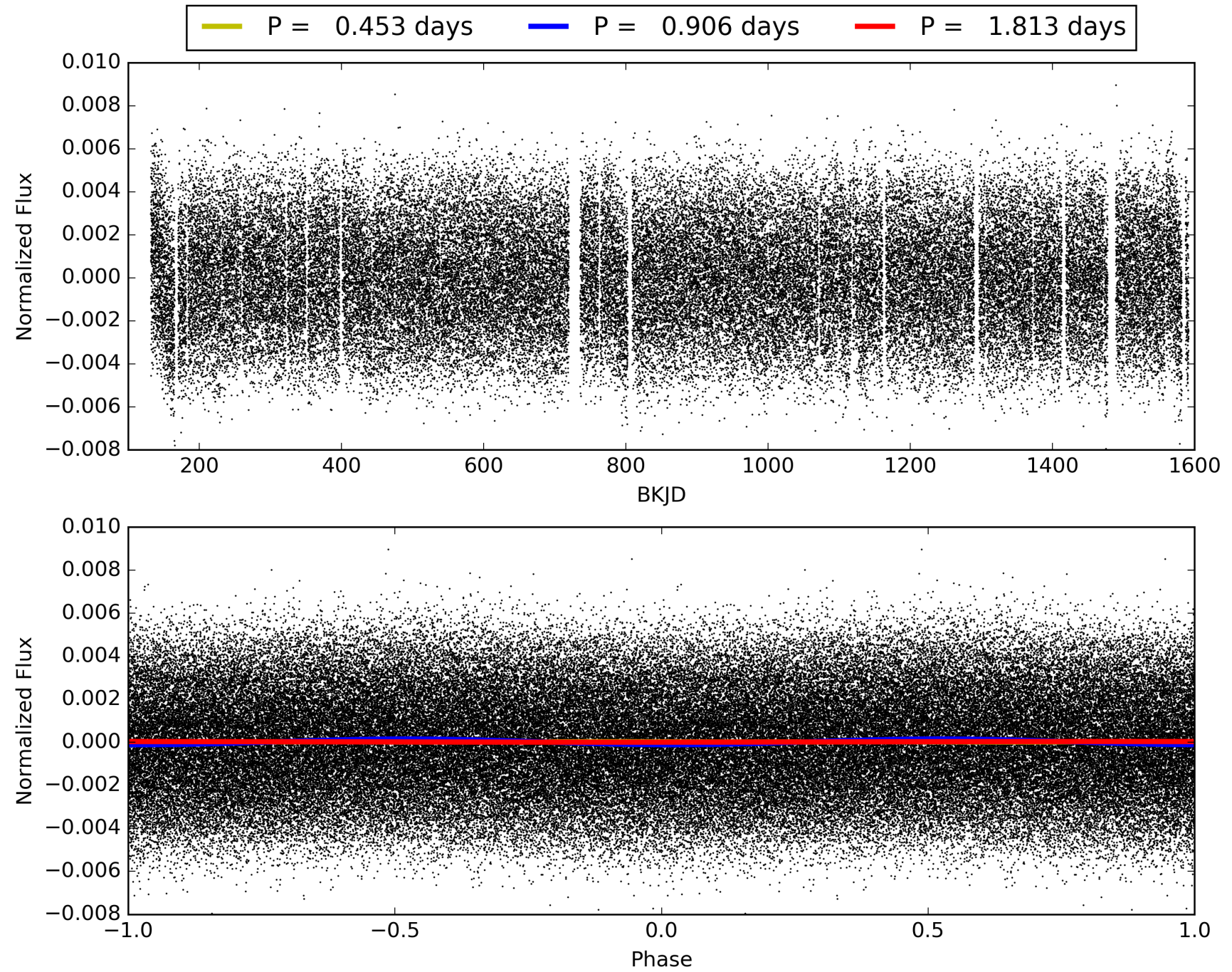
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 01:03:28 Z

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

TCE 003853654-01, PDC Light Curves

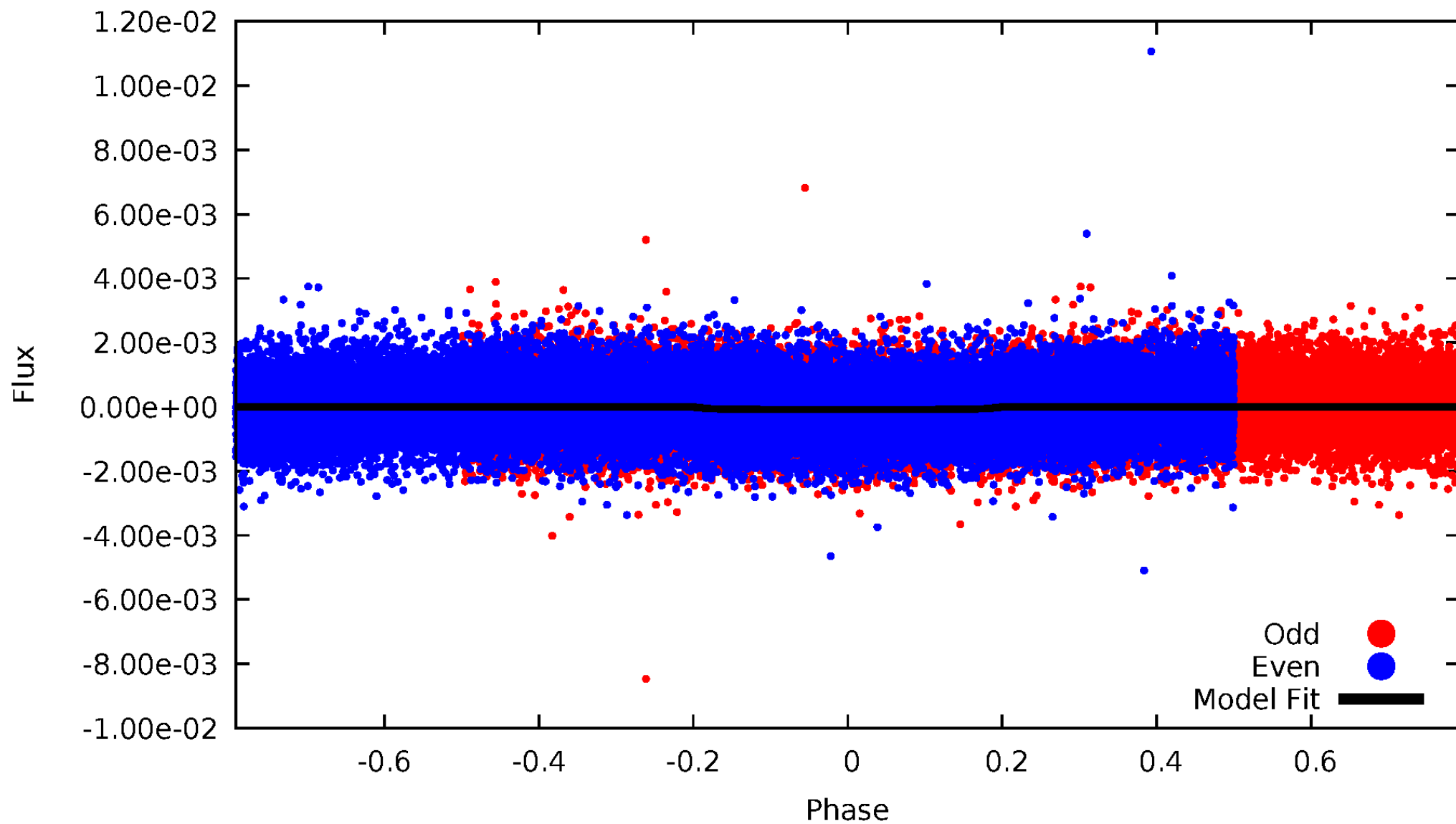


TCE 003853654-01



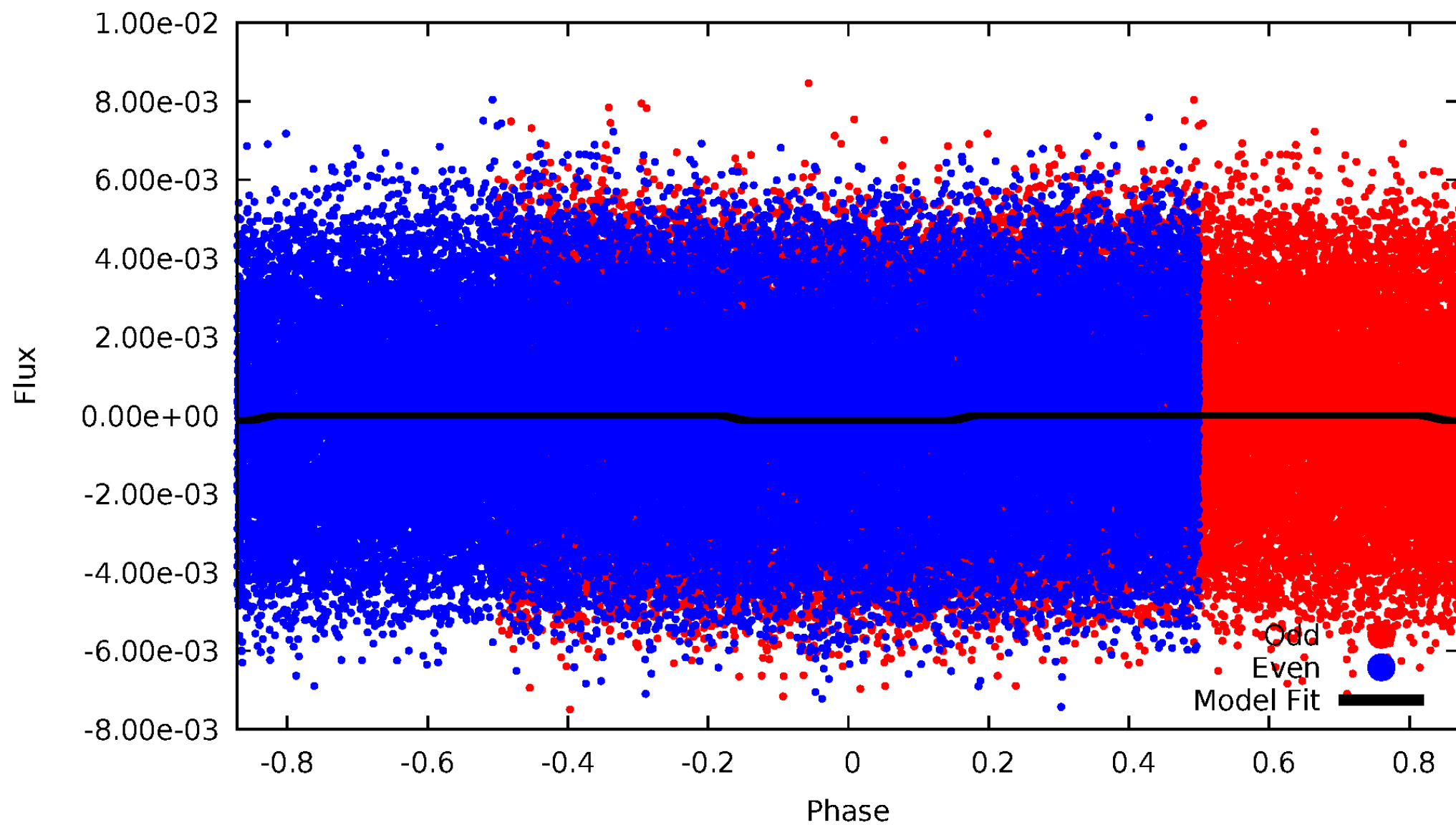
DV Odd/Even

TCE 003853654-01

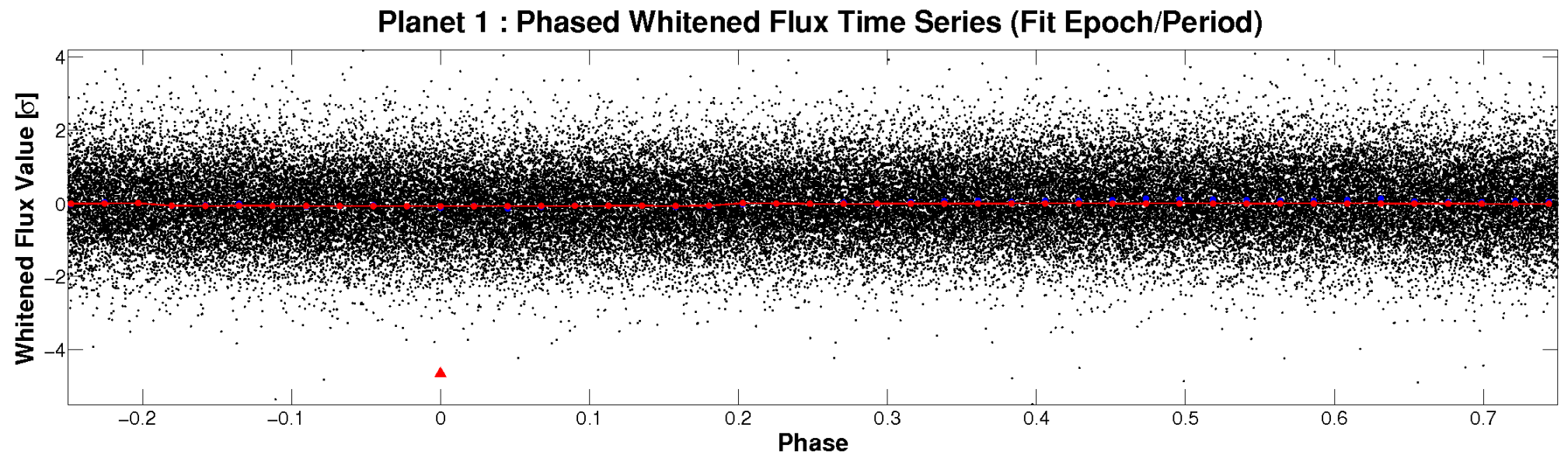
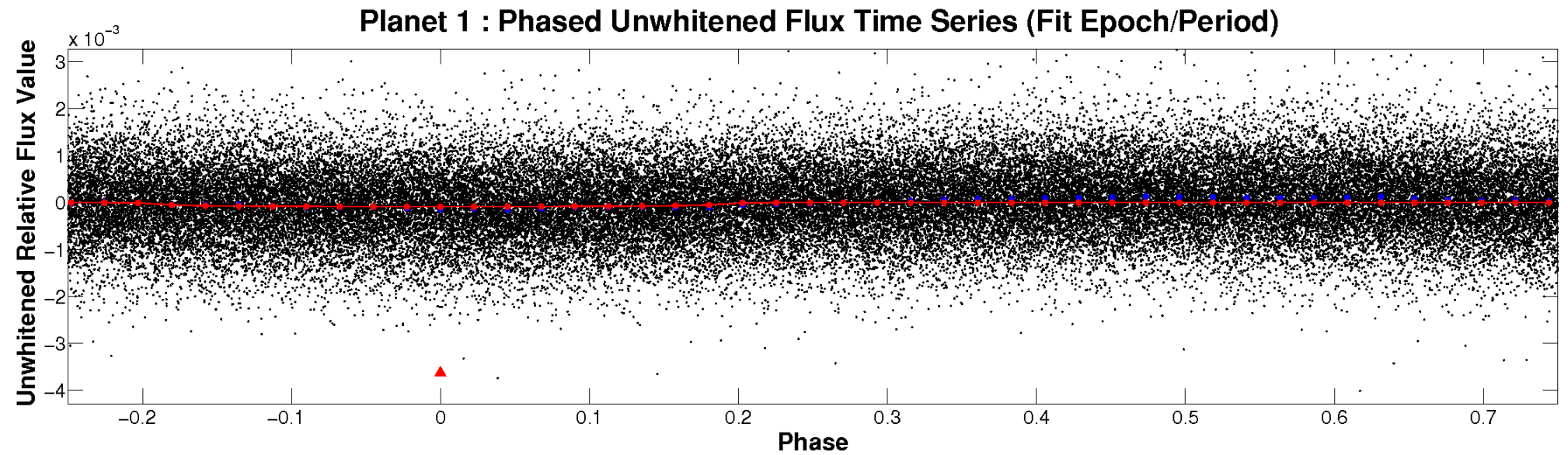


ALT Odd/Even

TCE 003853654-01

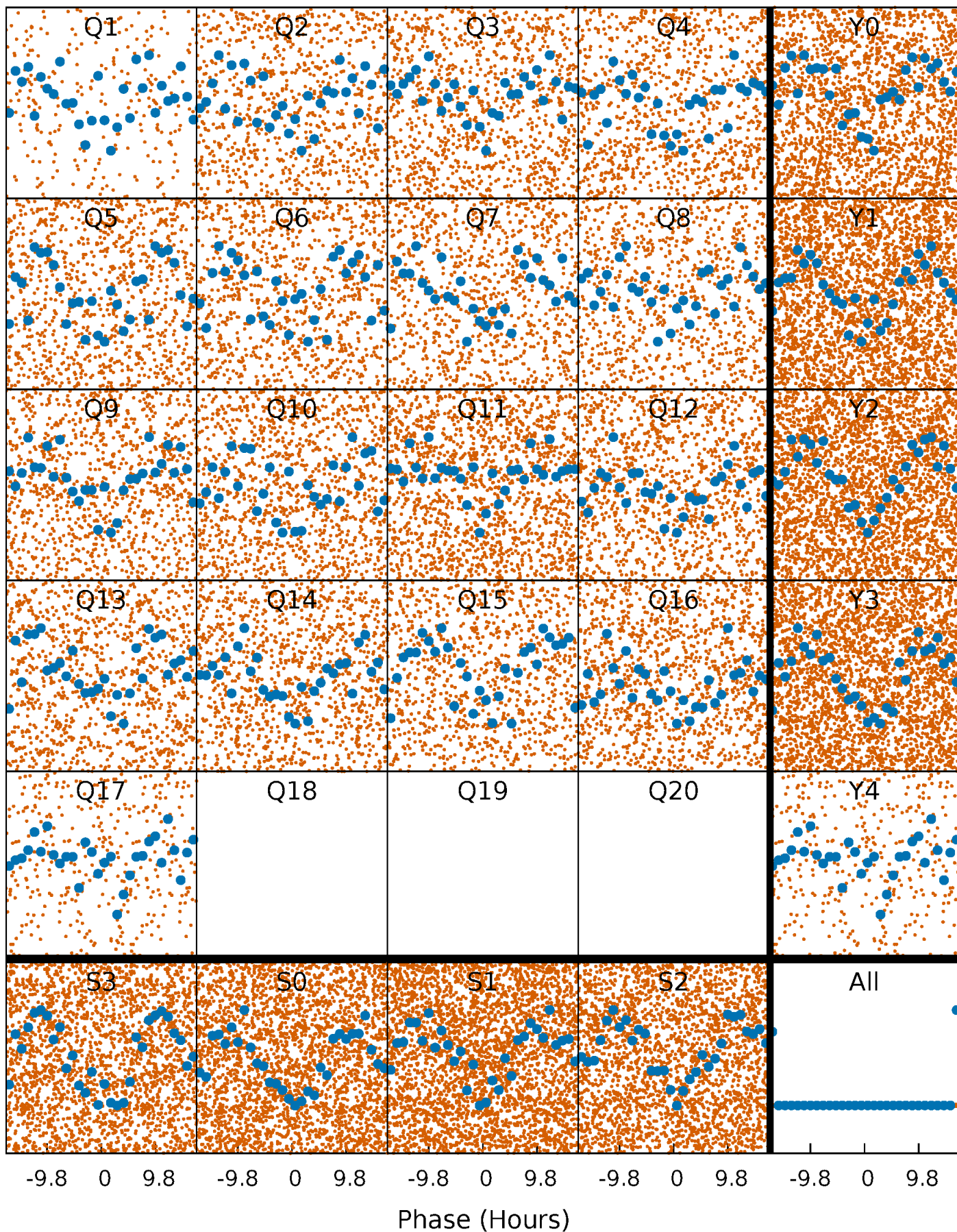


Non-Whitened Vs. Whitened Light Curve



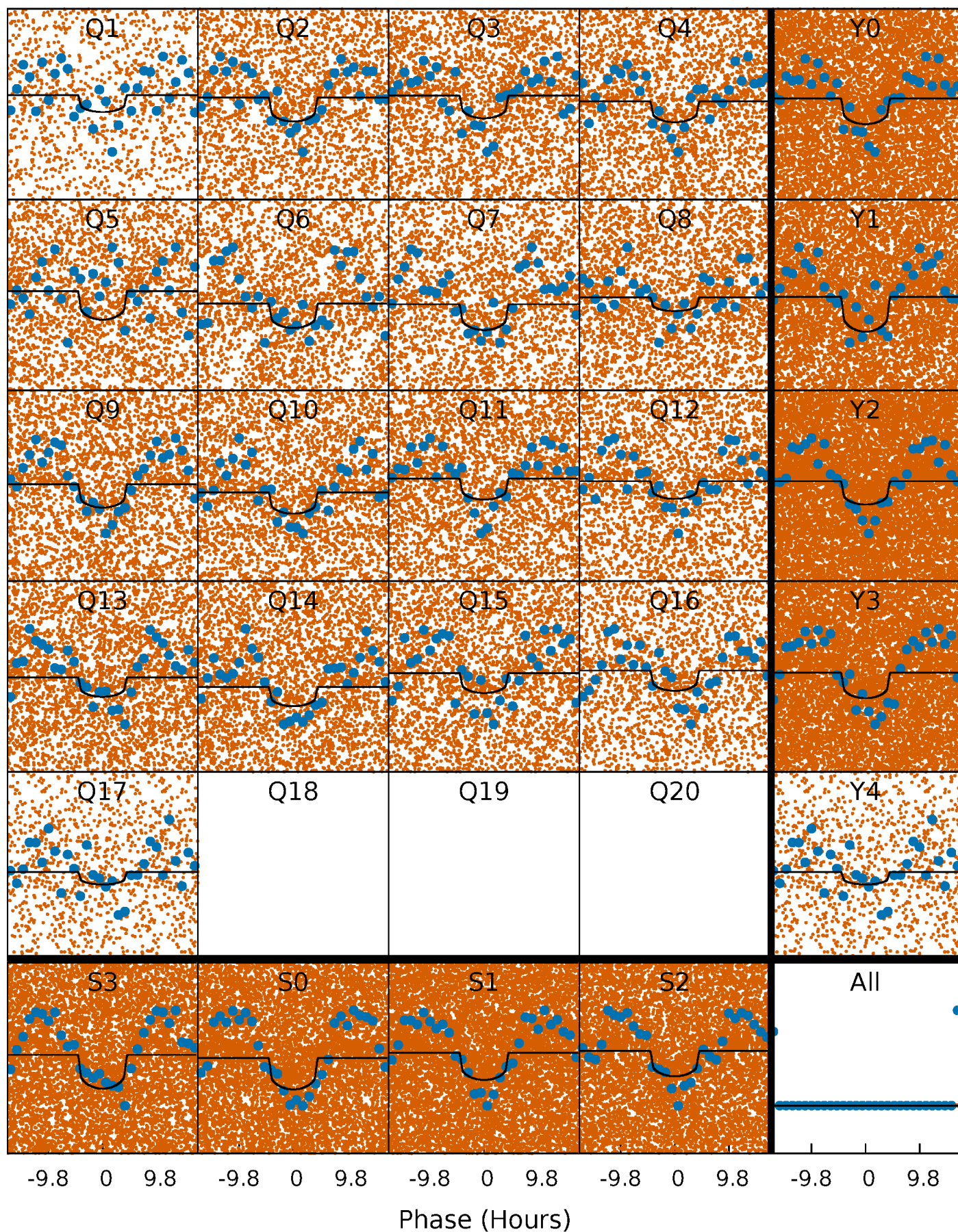
PDC Quarter-Phased Transit Curves

TCE 003853654-01 P= 0.906312 Days $T_0=131.537690$ (BKJD)



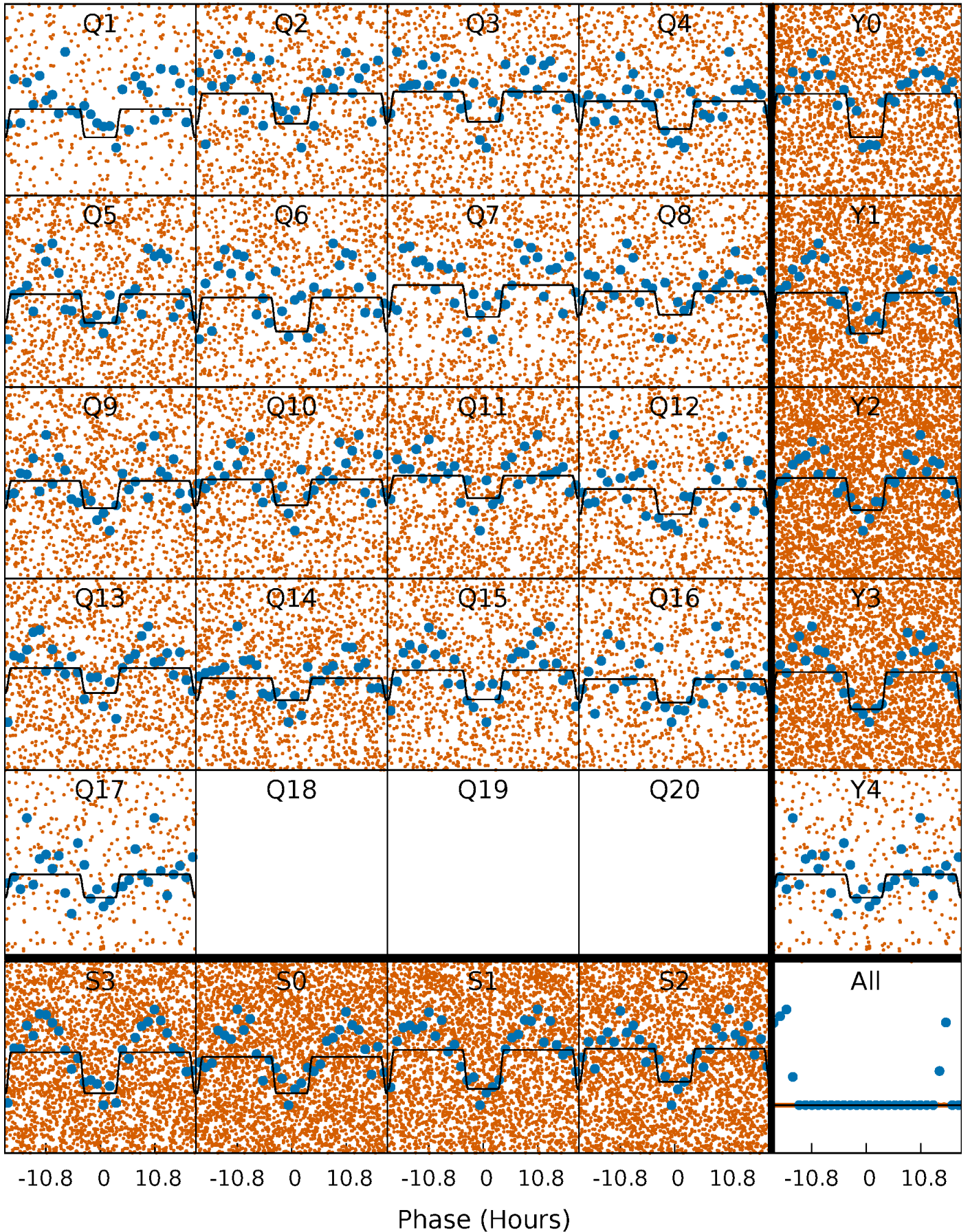
DV Quarter-Phased Transit Curves

TCE 003853654-01 P= 0.906312 Days $T_0=131.537690$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

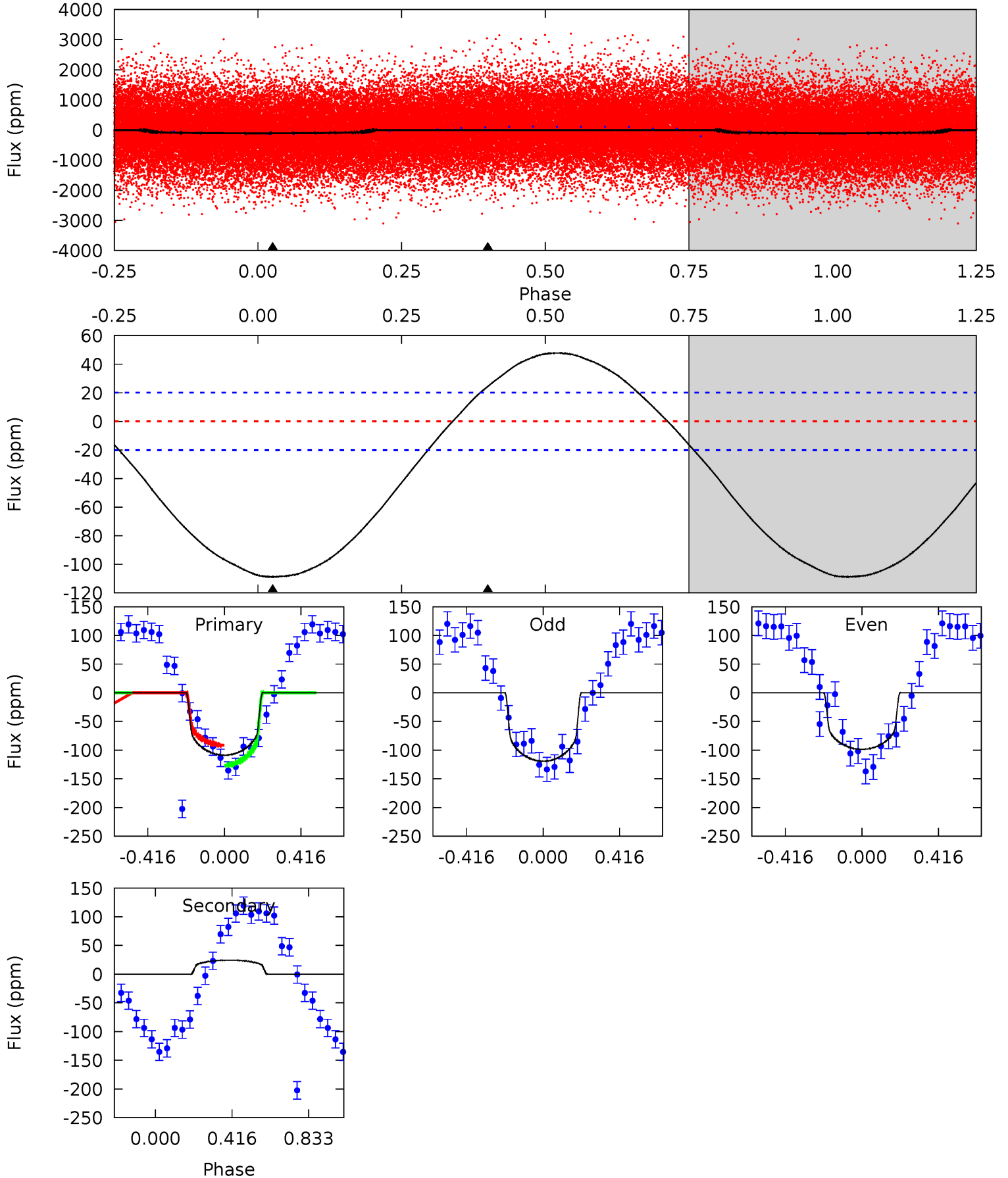
TCE 003853654-01 P= 0.906369 Days $T_0=131.516927$ (BKJD)



DV Model-Shift Uniqueness Test

003853654-01, P = 0.906312 Days, E = 130.631378 Days

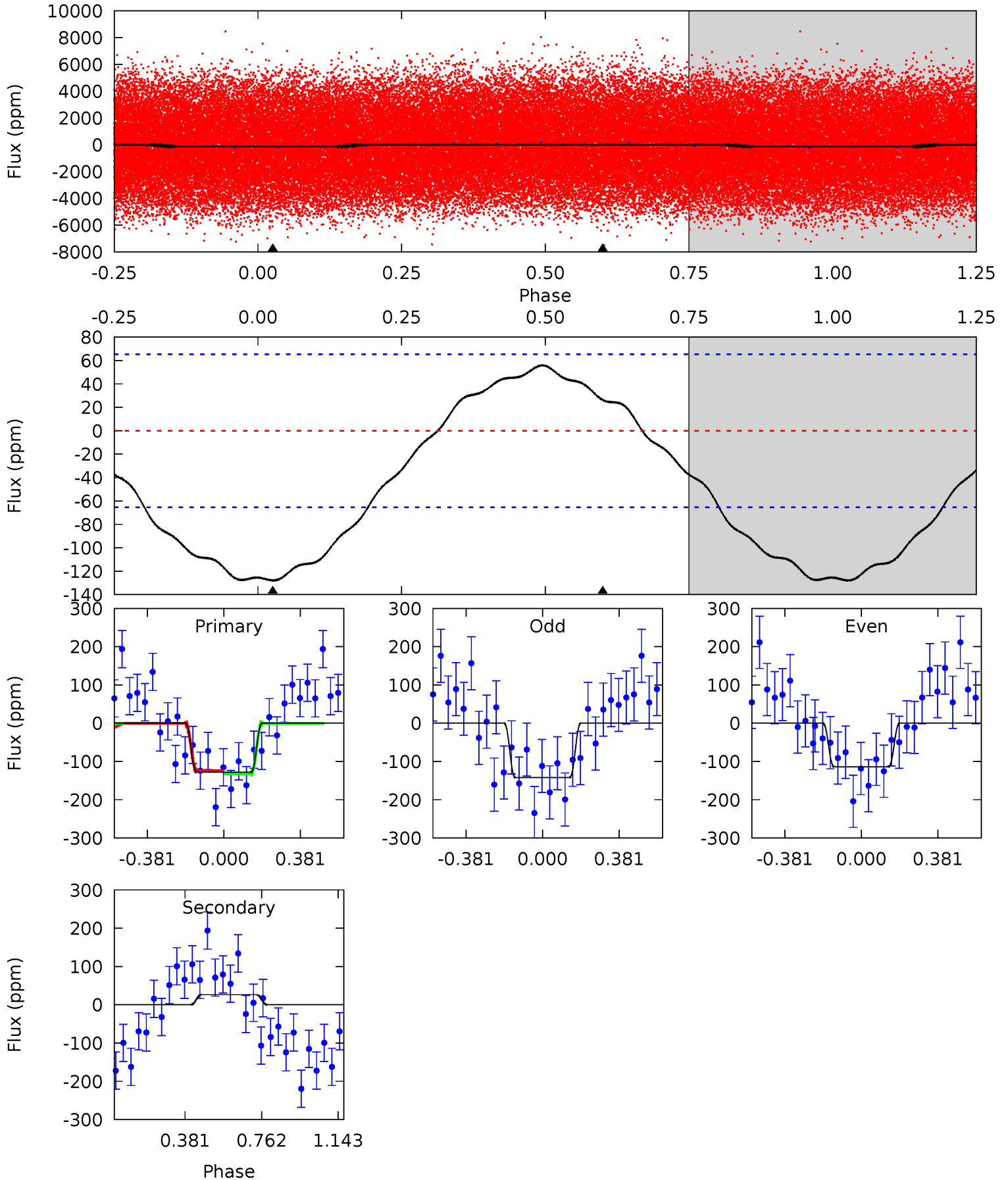
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.0	-5.18	0	0	4.26	0.81	2.56	23.0	23.0	-5.18	-5.18	2.20	0.99	0.31	3.79



Alt Model-Shift Uniqueness Test

003853654-01, P = 0.906369 Days, E = 130.610558 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.37	-1.72	0	0	4.28	0.88	1.06	8.37	8.37	-1.72	-1.72	0.91	0.96	0.30	0.29



Stellar Parameters For KIC 003853654

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8037^{+221}_{-331}	$4.092^{+0.140}_{-0.154}$	$0.070^{+0.150}_{-0.450}$	$2.027^{+0.491}_{-0.401}$	$1.850^{+0.170}_{-0.316}$	$0.313^{+0.234}_{-0.135}$
	+3%/-4%	+3%/-4%	+214%/-643%	+24%/-20%	+9%/-17%	+75%/-43%
Source	KIC0	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 003853654-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	24 ± 5	$1.93^{+0.82}_{-0.71}$	4704^{+309}_{-313}	-6046^{+720}_{-1561}	$-1.756^{+0.912}_{-2.671}$
Alt.	26 ± 15	$2.63^{+0.78}_{-0.74}$	4680^{+327}_{-307}	-5447^{+692}_{-1003}	$-1.033^{+0.626}_{-1.277}$

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 $A_{obs} \gg 1.0$

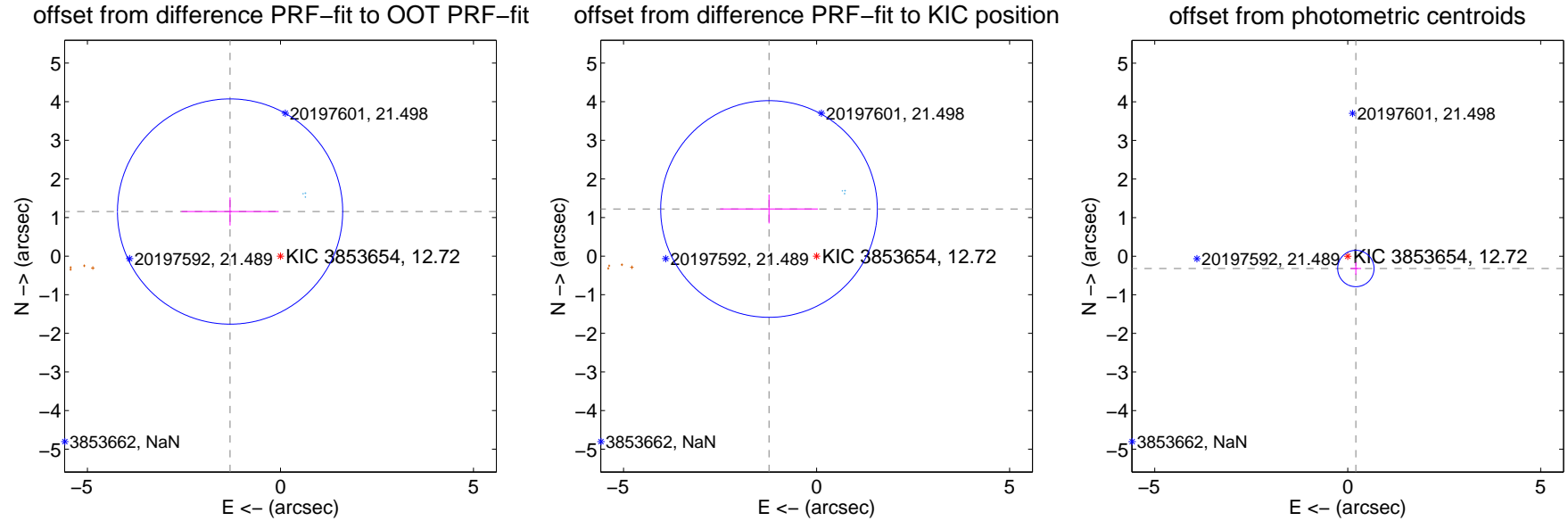
DV Centroid Data

Supplemental centroid analysis for 003853654-01. Kepler magnitude: 12.72. Transit SNR 10.84

There are 3 quarters with good PRF difference image offsets

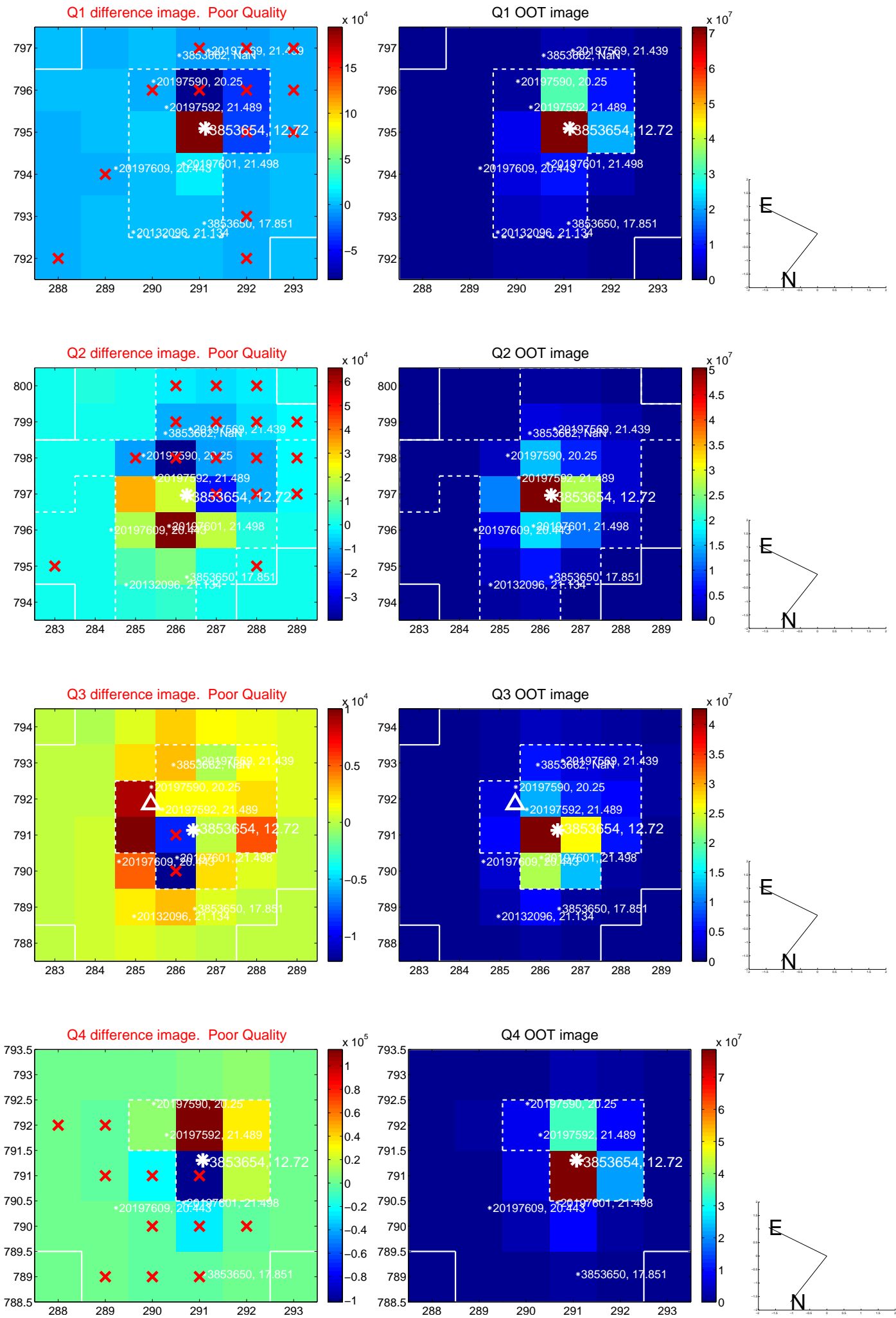
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.743 ± 0.972	1.79	1.305 ± 1.258	1.155 ± 0.364
PRF-fit source offset from KIC position	1.735 ± 0.935	1.85	1.232 ± 1.264	1.221 ± 0.373
photometric centroid source offset	0.38 ± 0.16	2.43	-0.21 ± 0.14	-0.32 ± 0.16

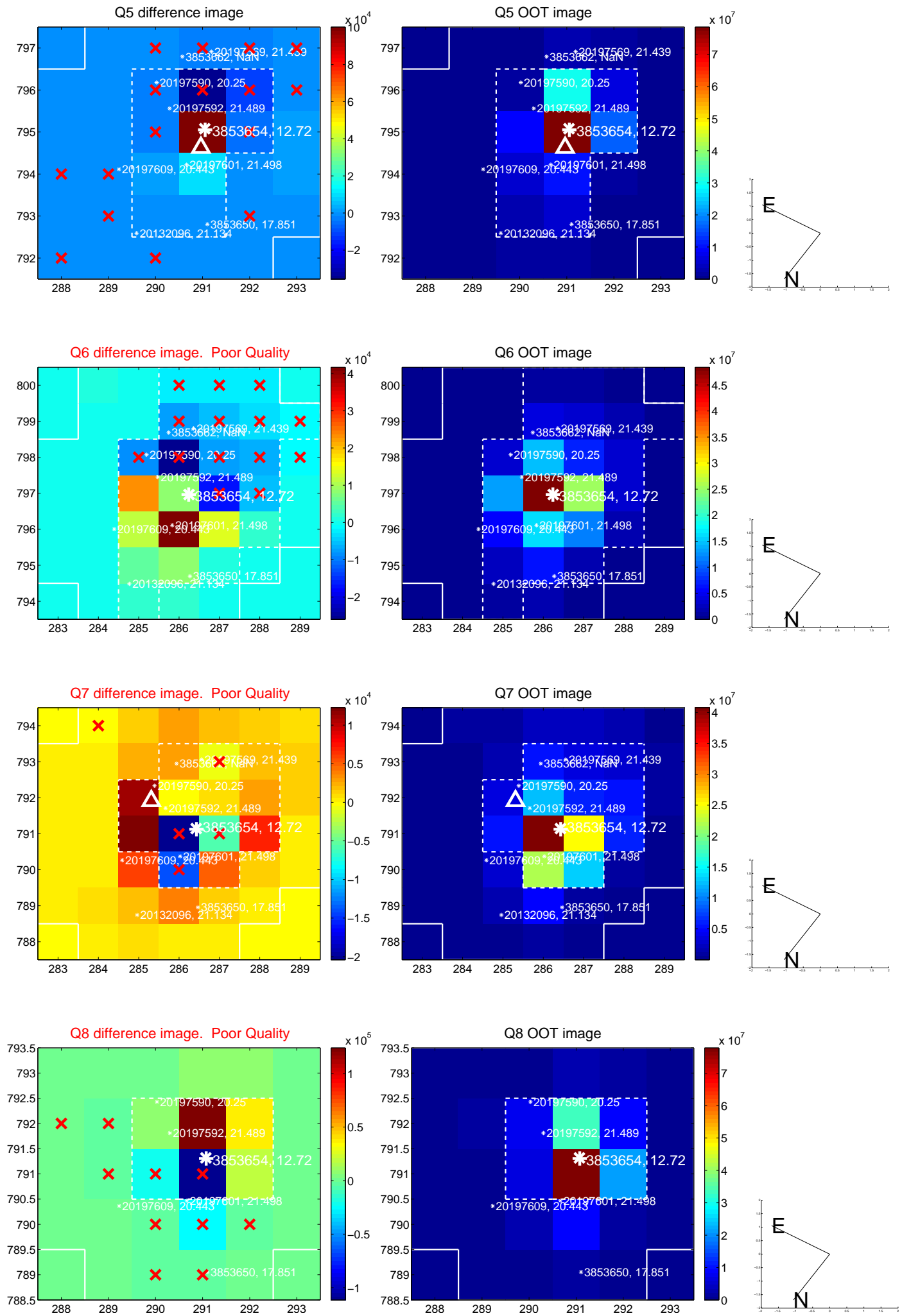


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

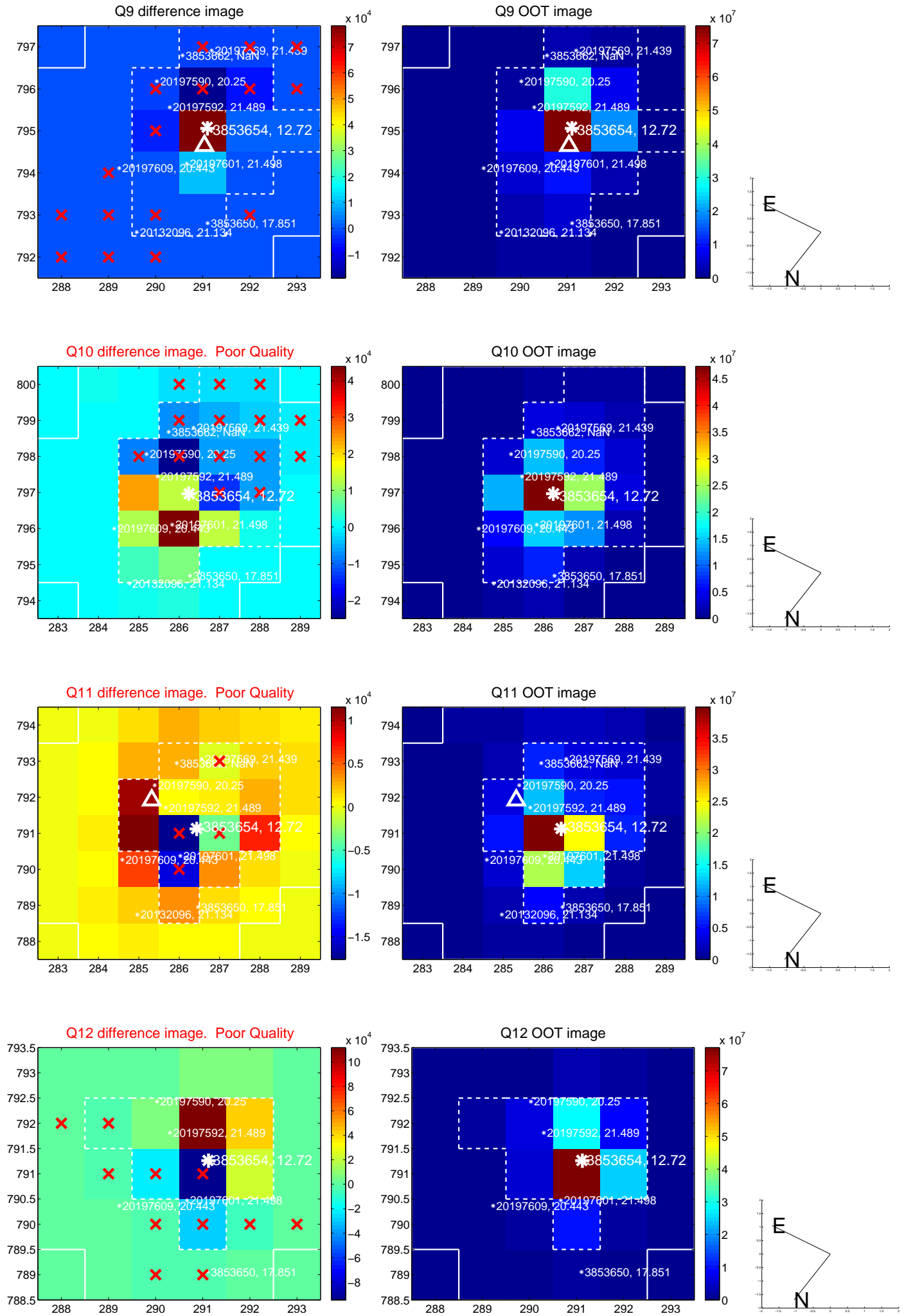
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



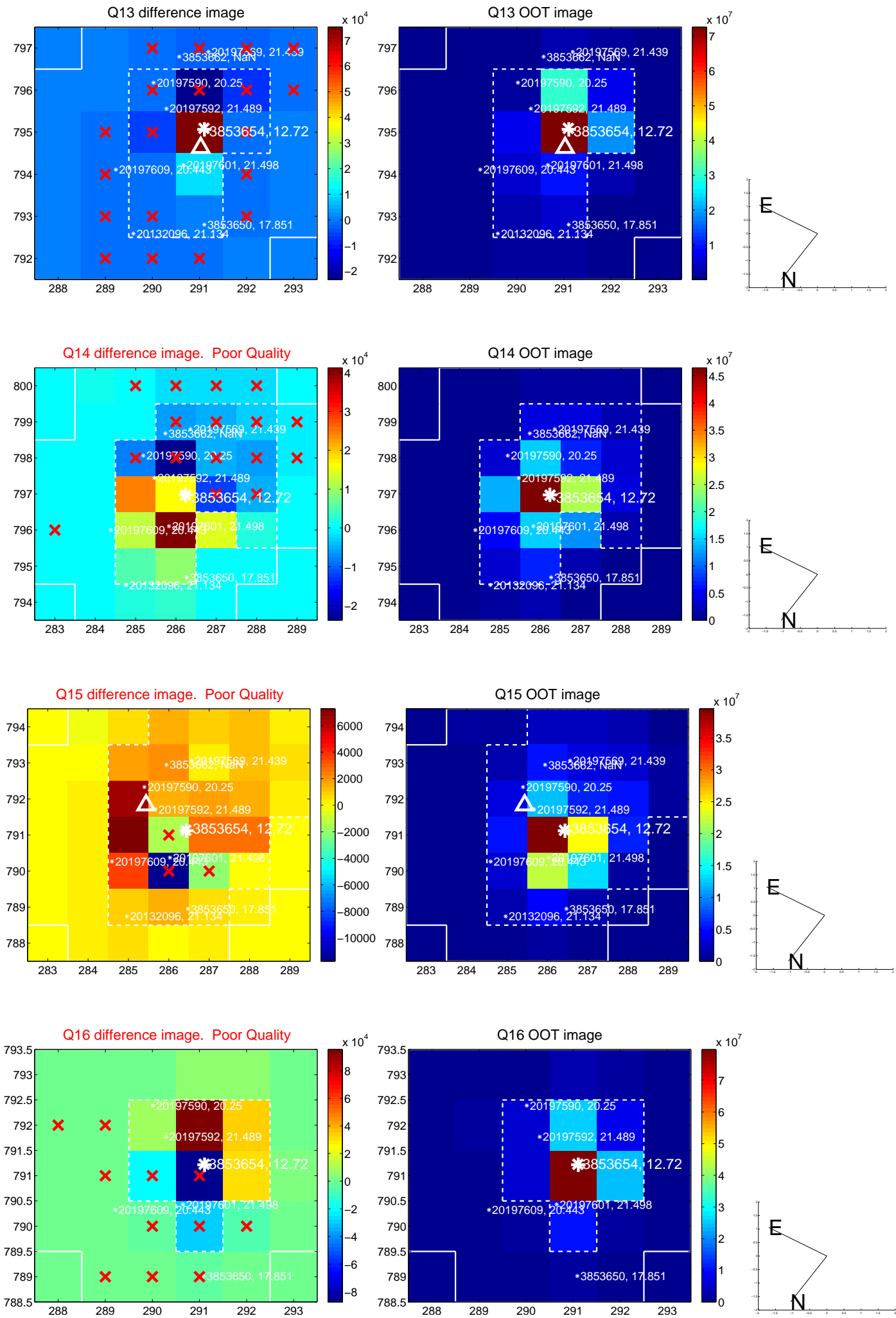
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



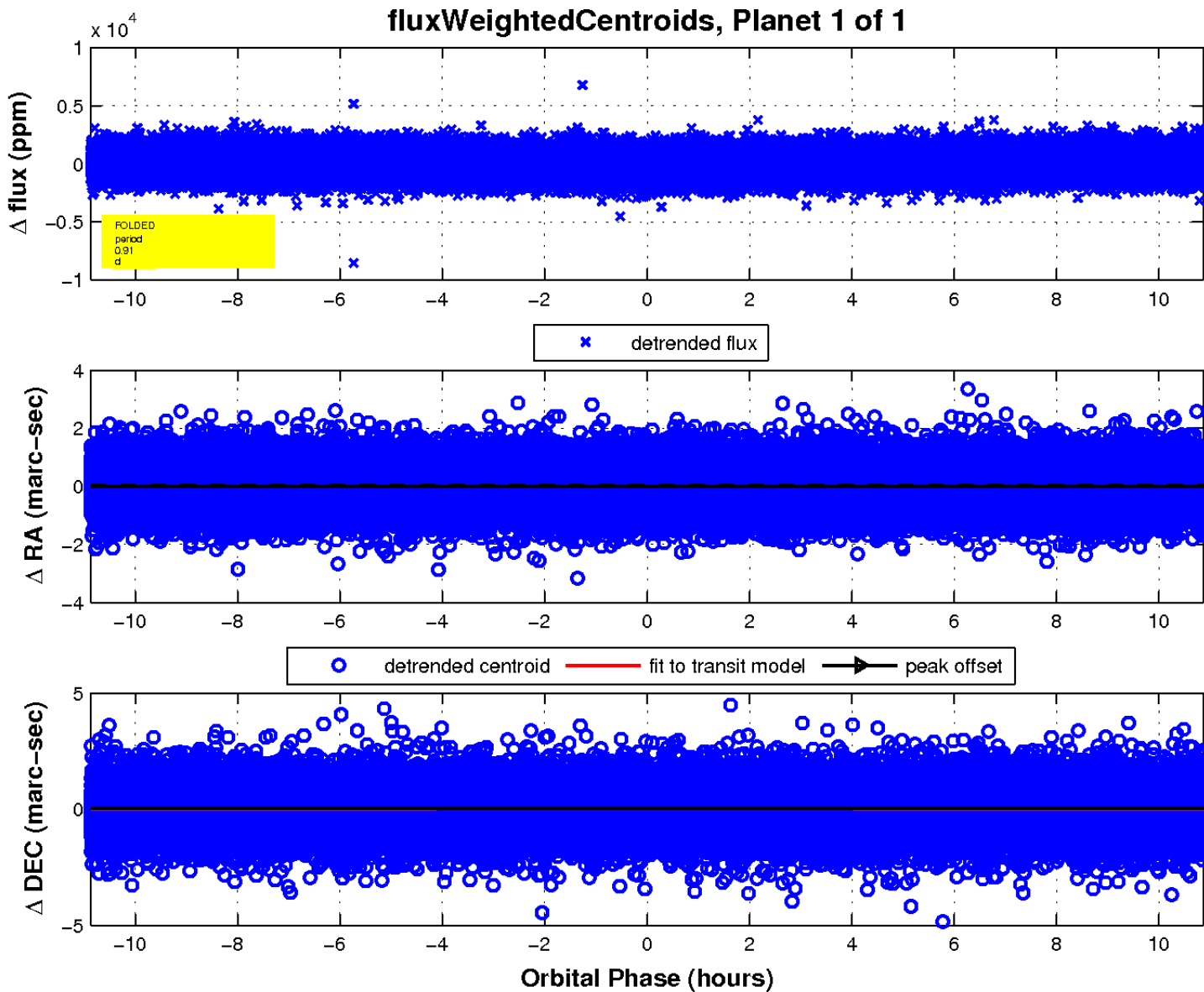
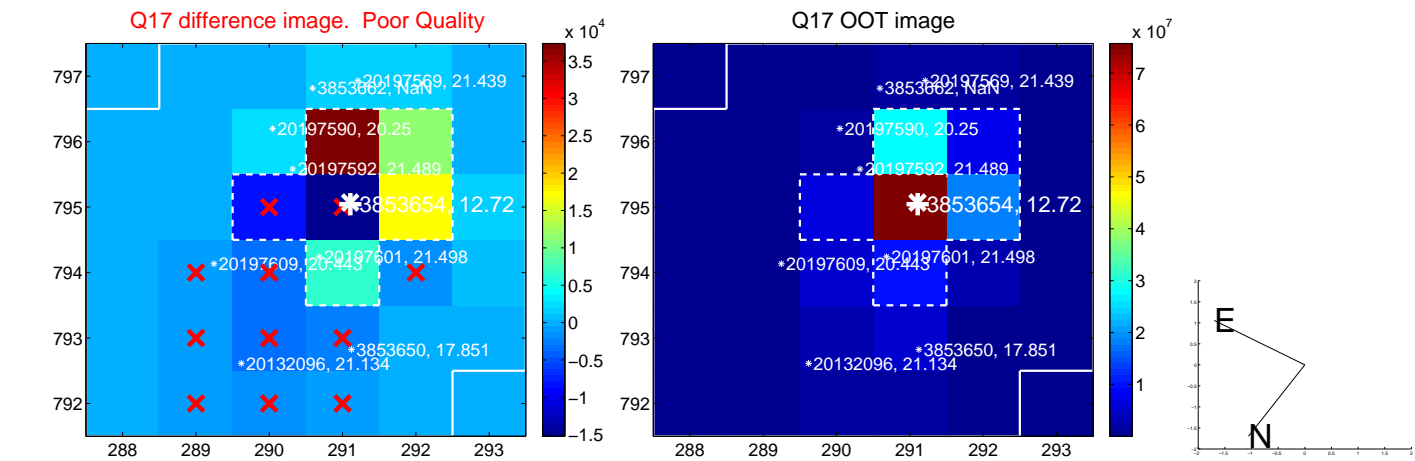
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UKIRT Image

Declination

