

KIC 008979487

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})
008979487-01	OBS	No	1.475867	132.789110	88.2	14.032	11.7	18.7	2.06	7191	1.97	11884.70

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008979487-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_DIFFS

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

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

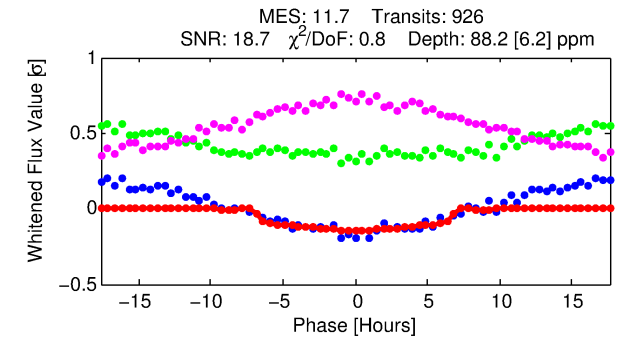
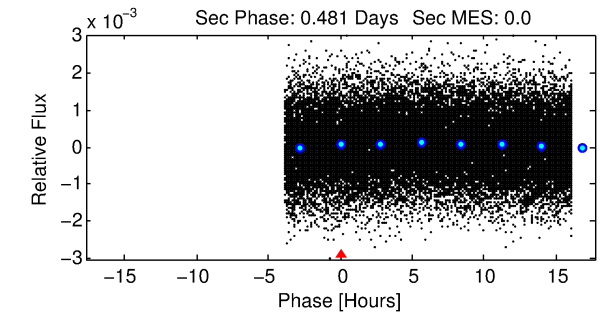
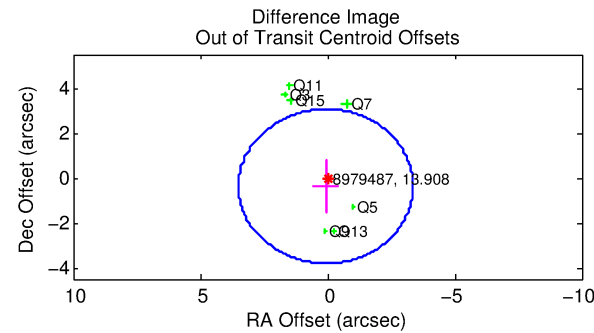
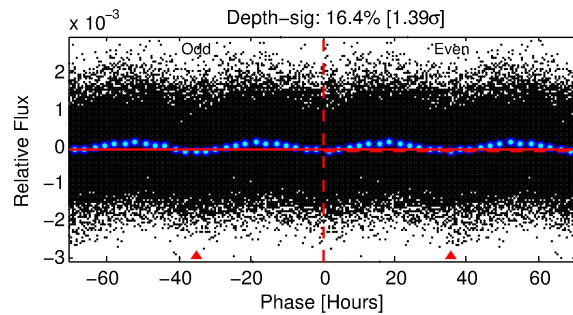
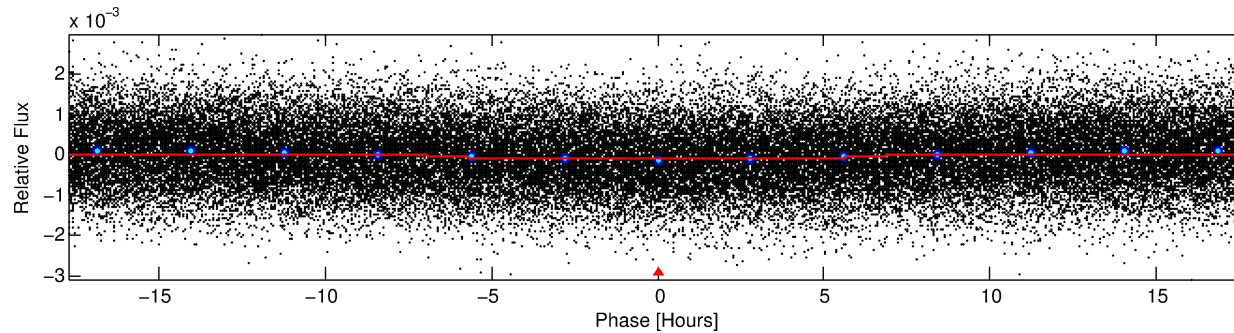
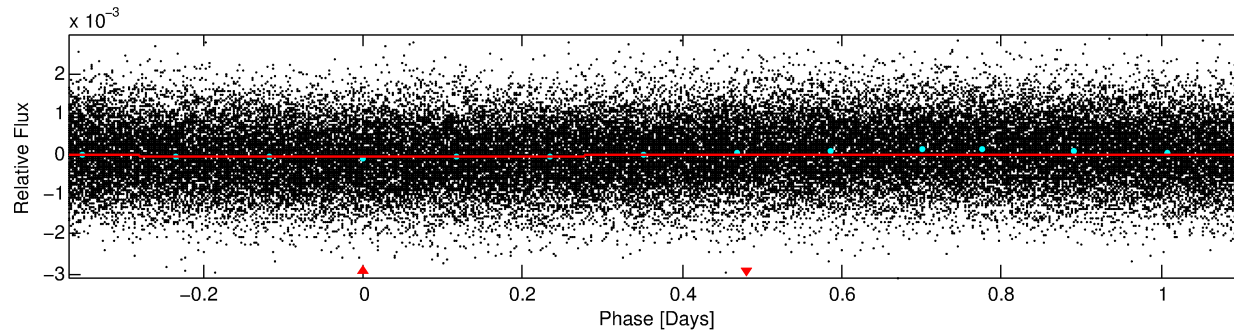
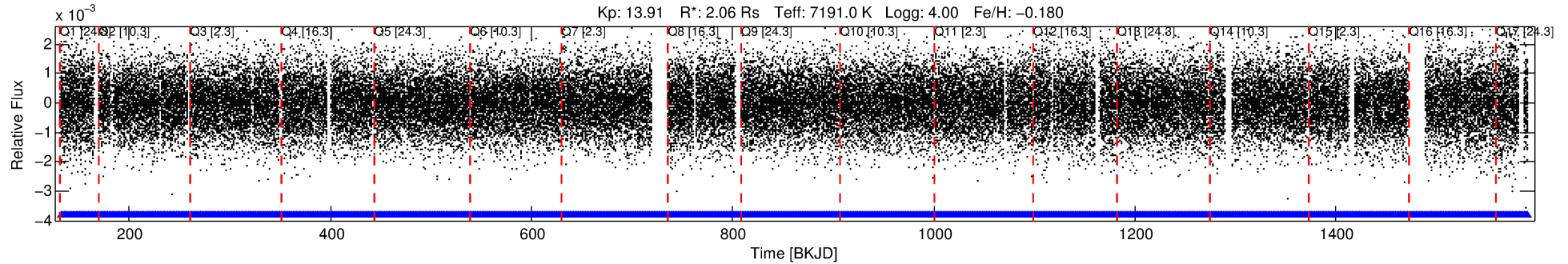
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008979487-01

No Significant Match Found

DV One-Page Summary

KIC: 8979487 Candidate: 1 of 1 Period: 1.476 d



DV Fit Results:

Period = 1.47587 [0.00002] d
Epoch = 132.7891 [0.0076] BKJD
Rp/R* = 0.0088 [0.0054]
a/R* = 1.06 [0.42]
b = 0.27 [12.59]
Seff = 11884.70 [5586.88]
Teq = 2662 [313] K
Rp = 1.97 [1.37] Re
a = 0.0293 [0.0084] AU
Ag = N/A
Teffp = N/A

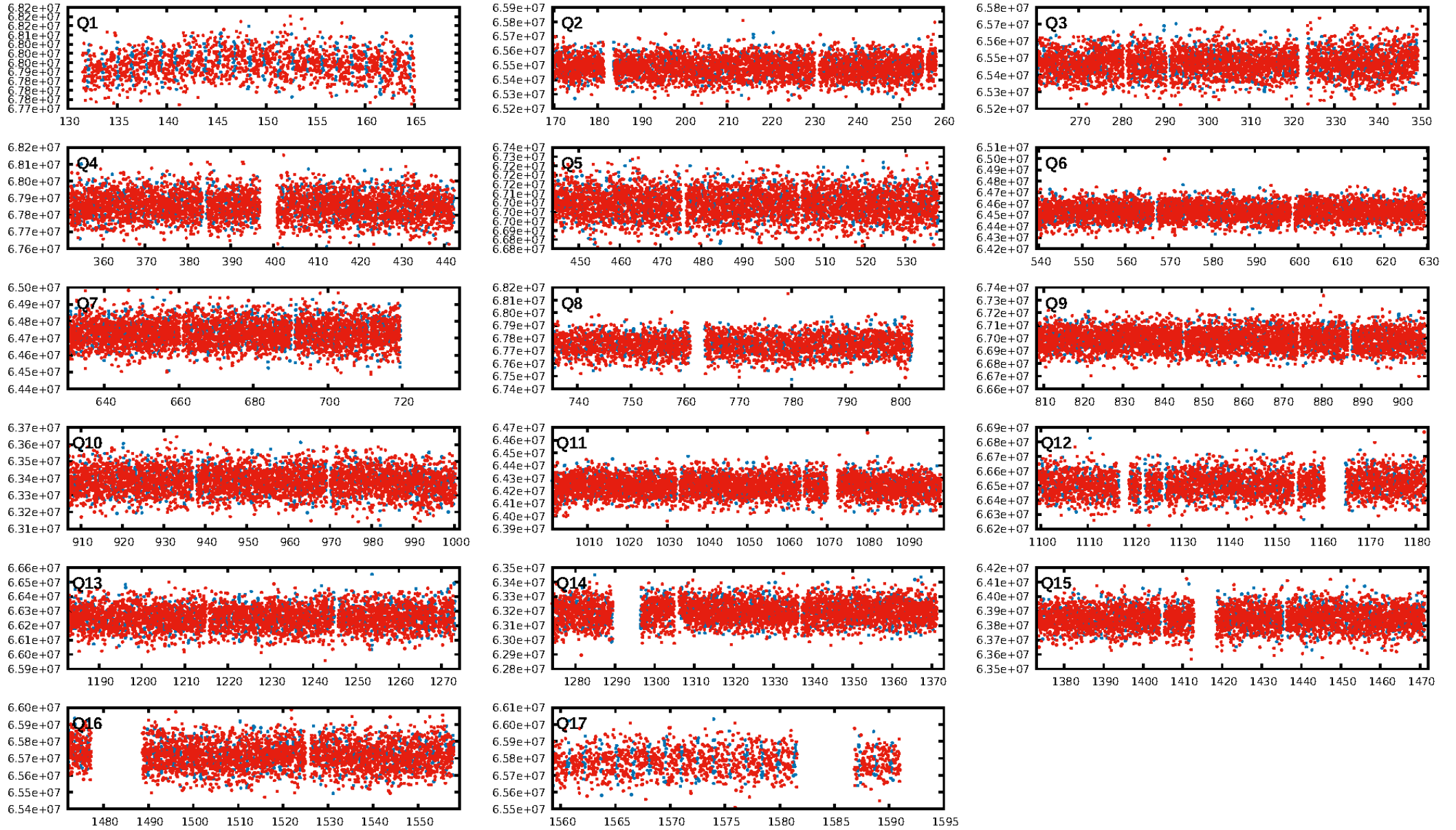
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [884/884]
GhostDiagnostic-chr: 2.133
Centroid-sig: 2.8%
Centroid-so: 0.552 arcsec [1.80 σ]
OotOffset-rm: 0.384 arcsec [0.34 σ]
KicOffset-rm: 0.497 arcsec [0.42 σ]
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]

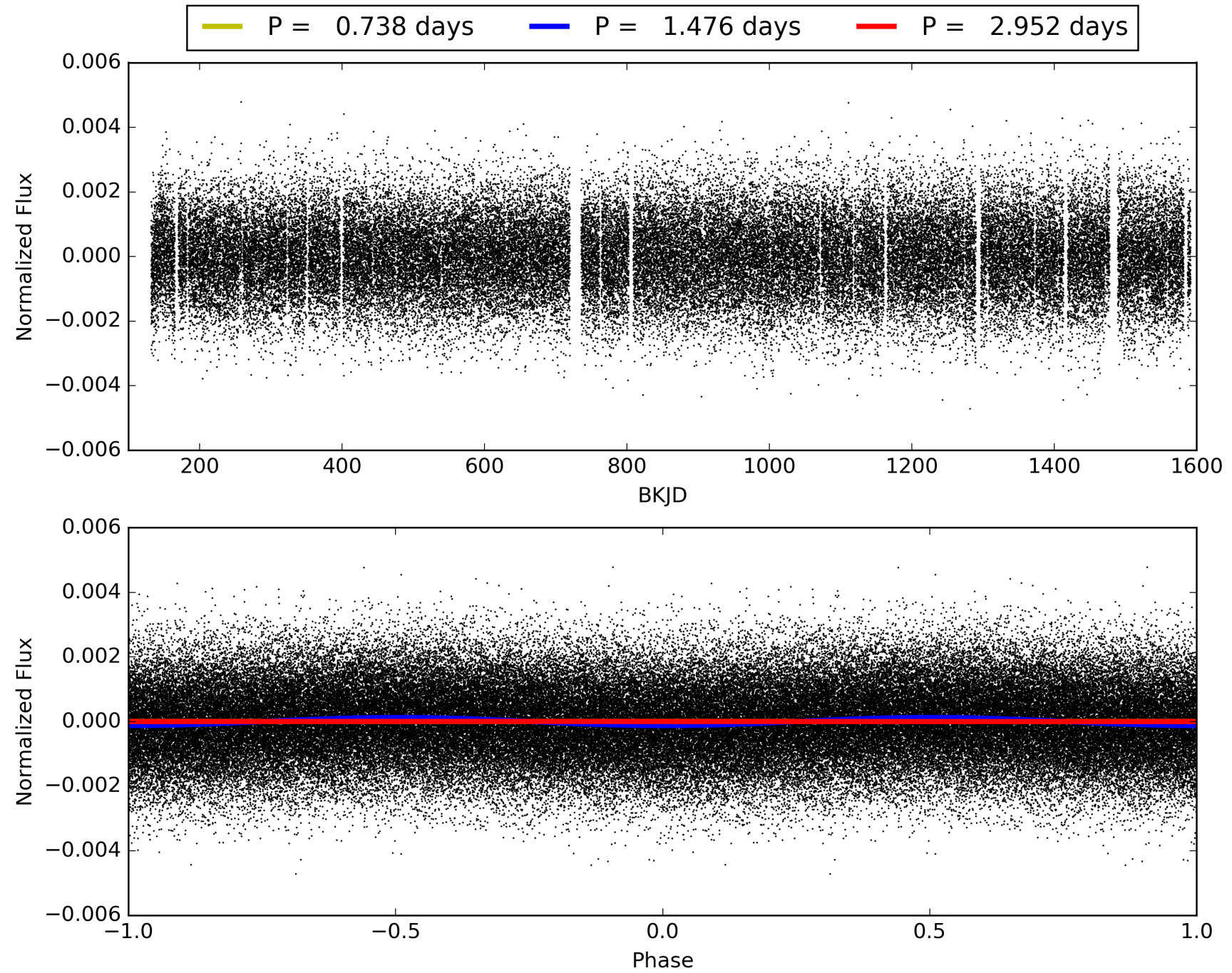
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:23:02 Z

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

TCE 008979487-01, PDC Light Curves

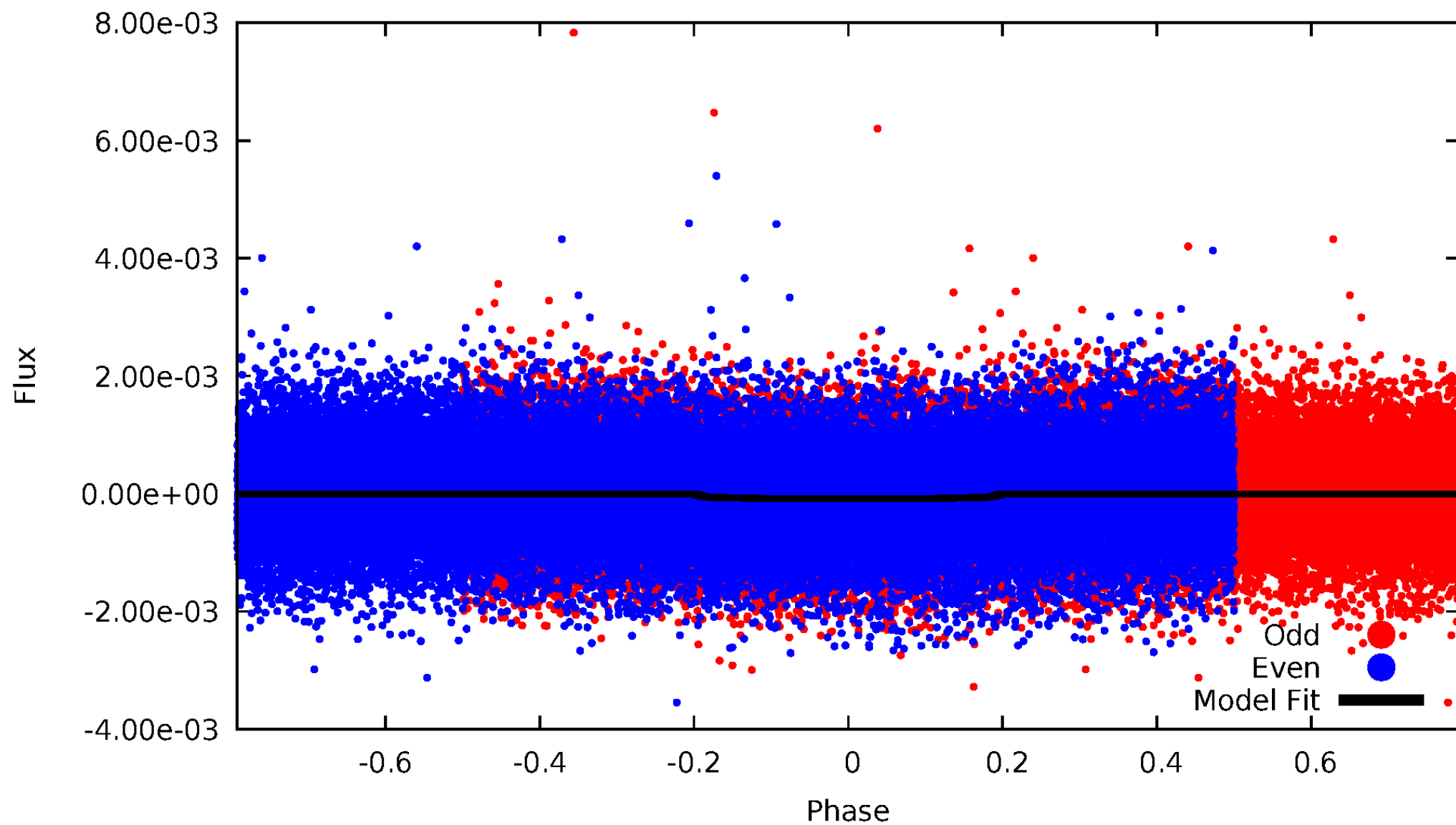


TCE 008979487-01



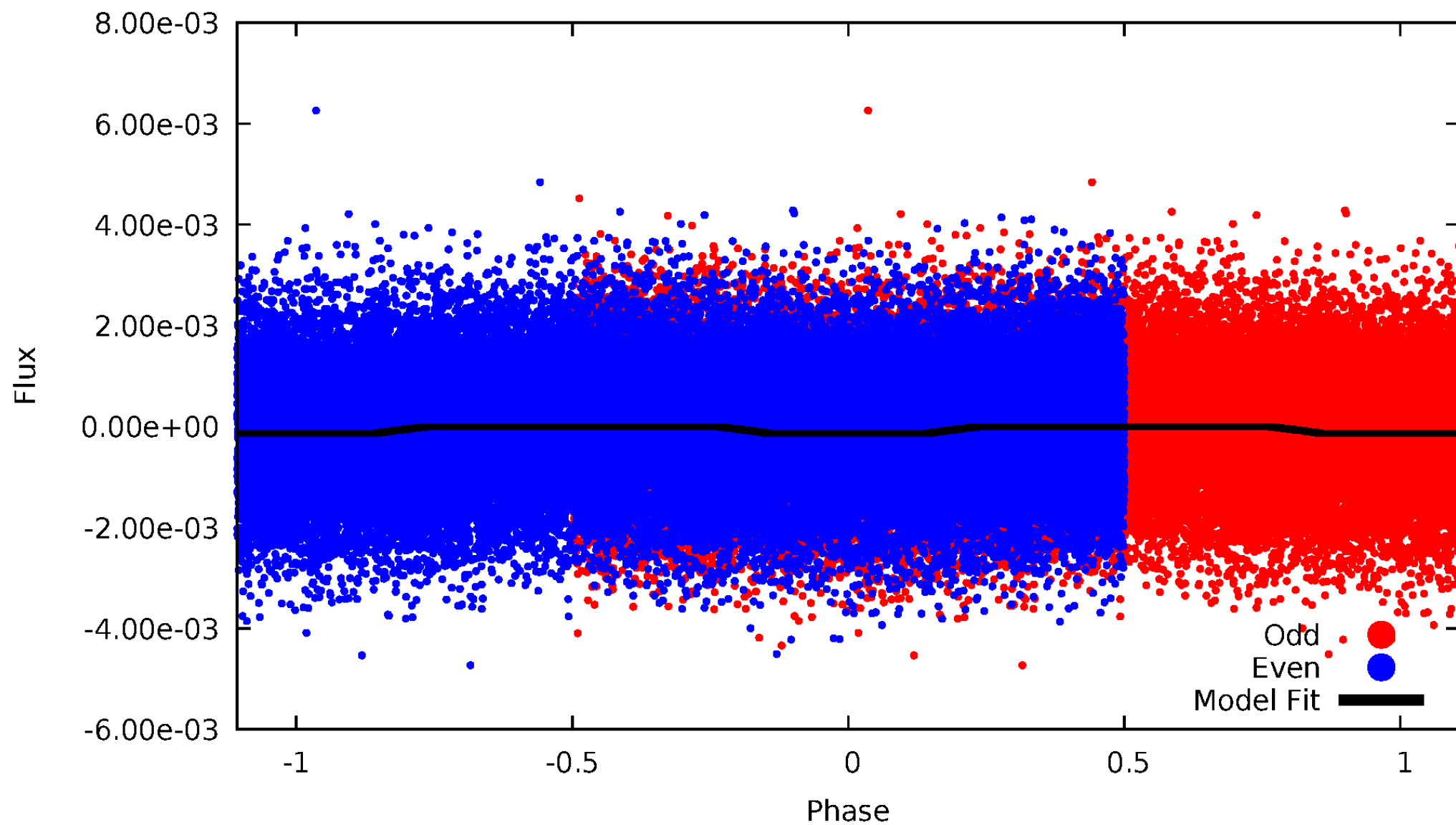
DV Odd/Even

TCE 008979487-01



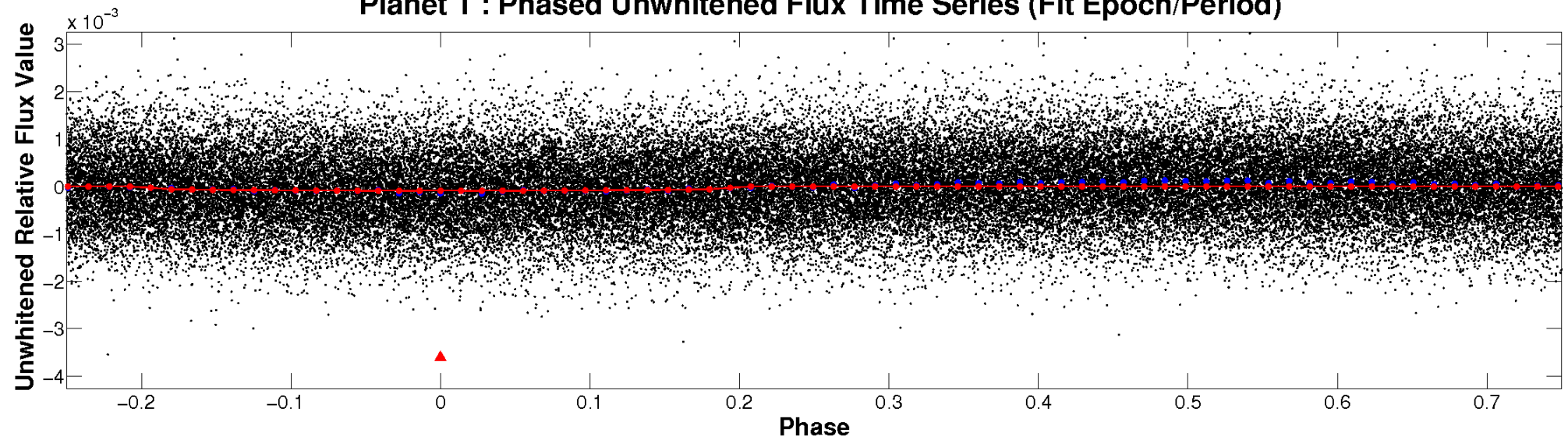
ALT Odd/Even

TCE 008979487-01

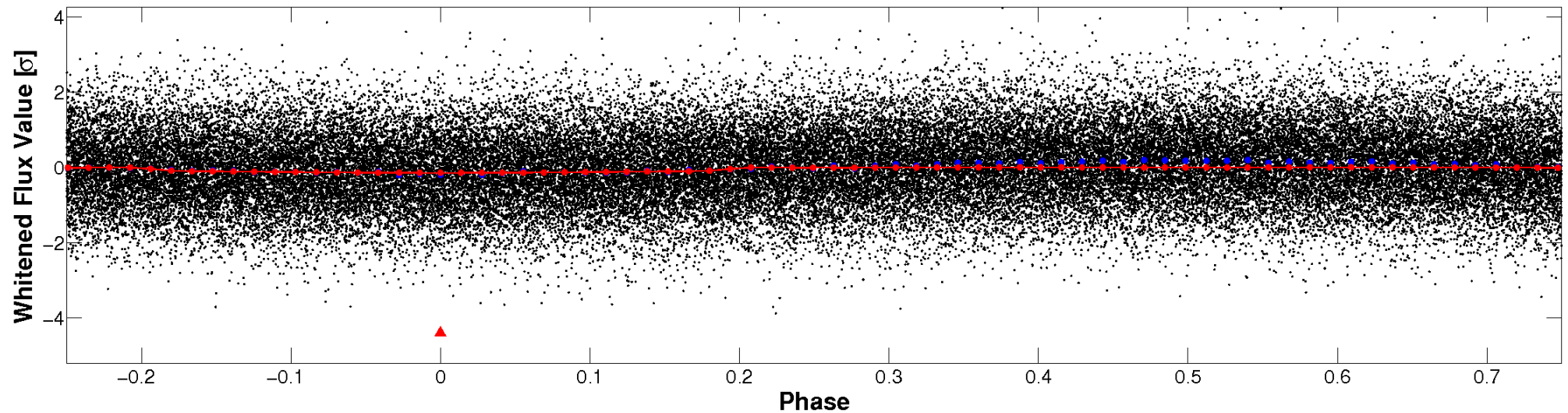


Non-Whitened Vs. Whitened Light Curve

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

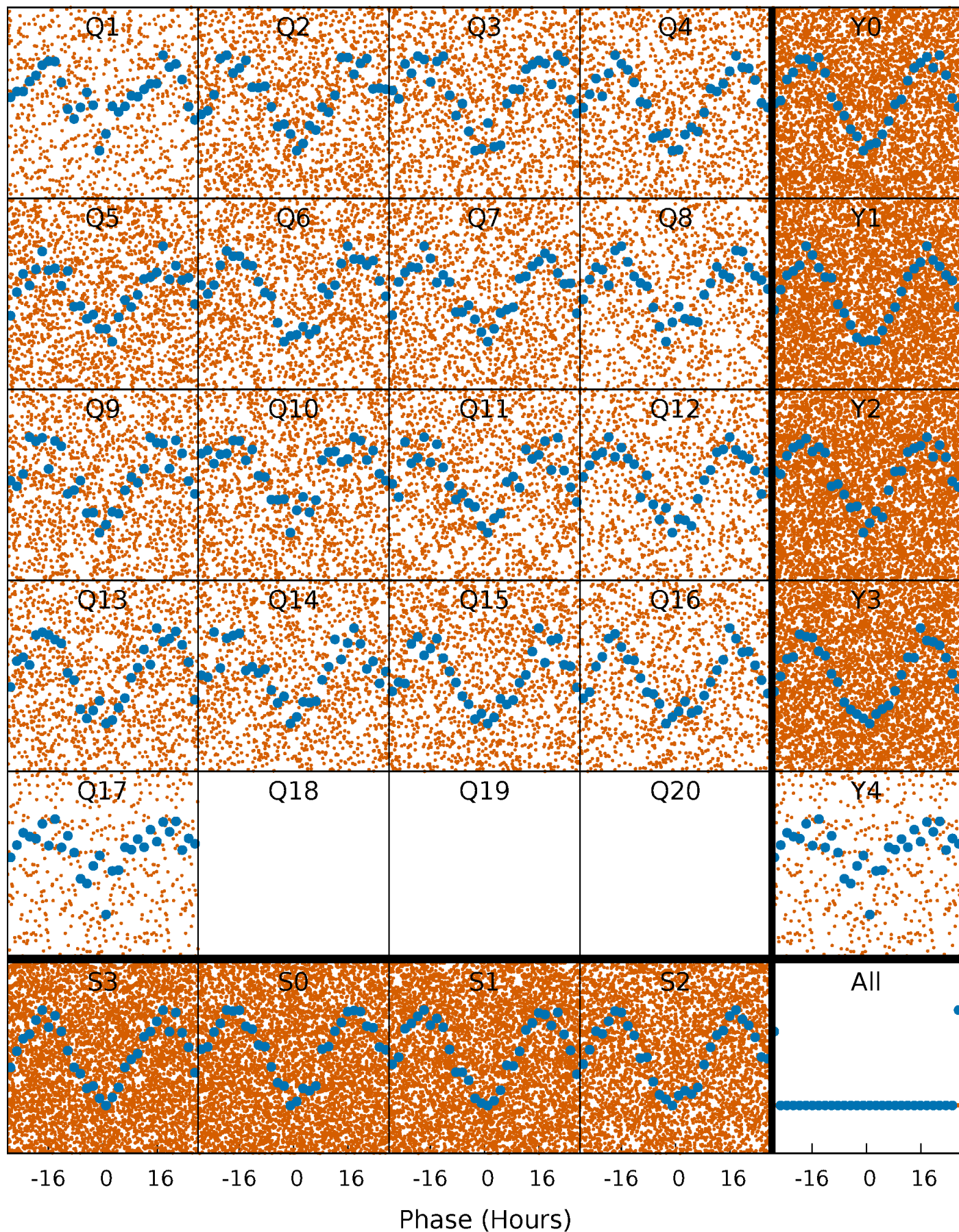


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



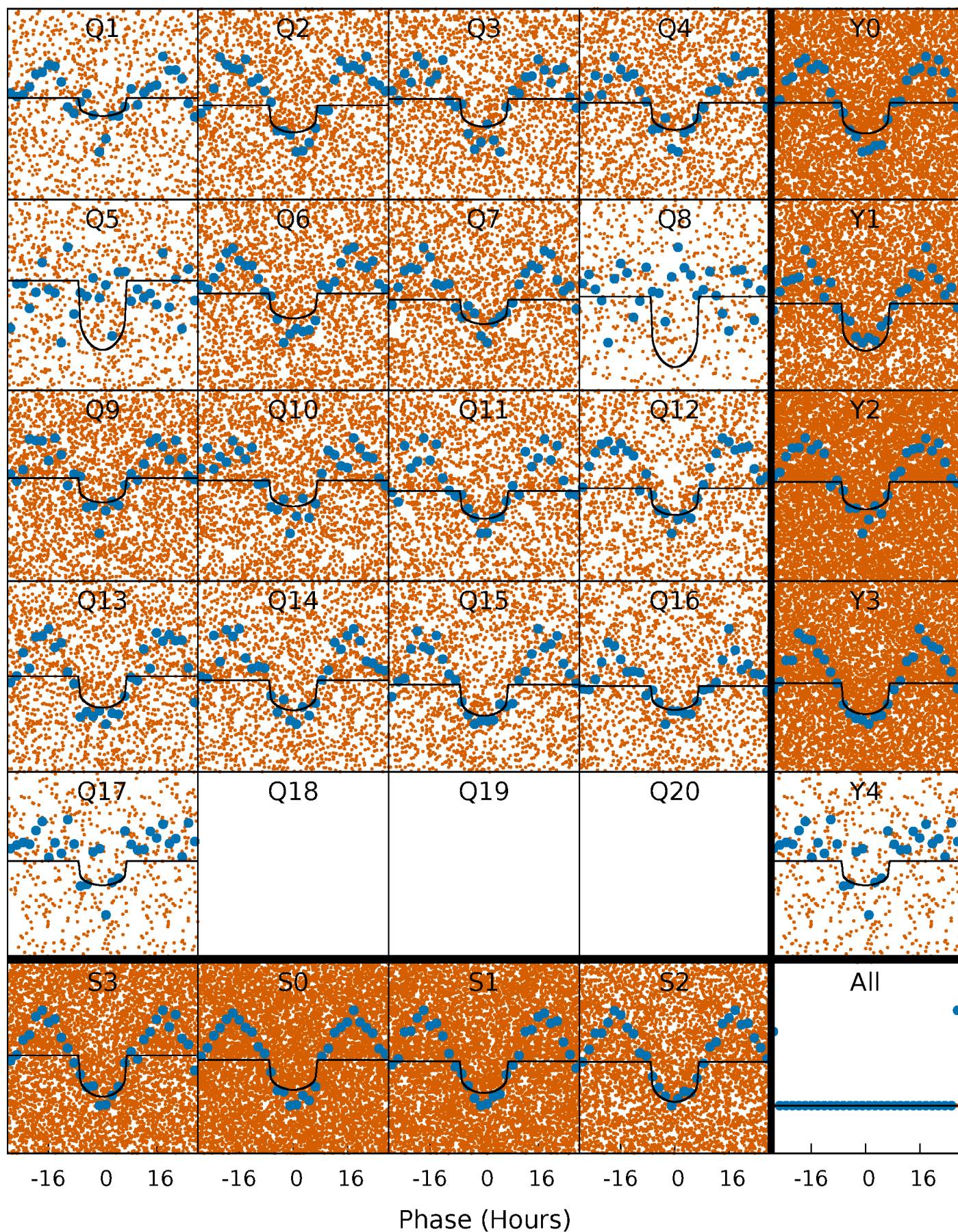
PDC Quarter-Phased Transit Curves

TCE 008979487-01 P= 1.475867 Days $T_0=132.789110$ (BKJD)



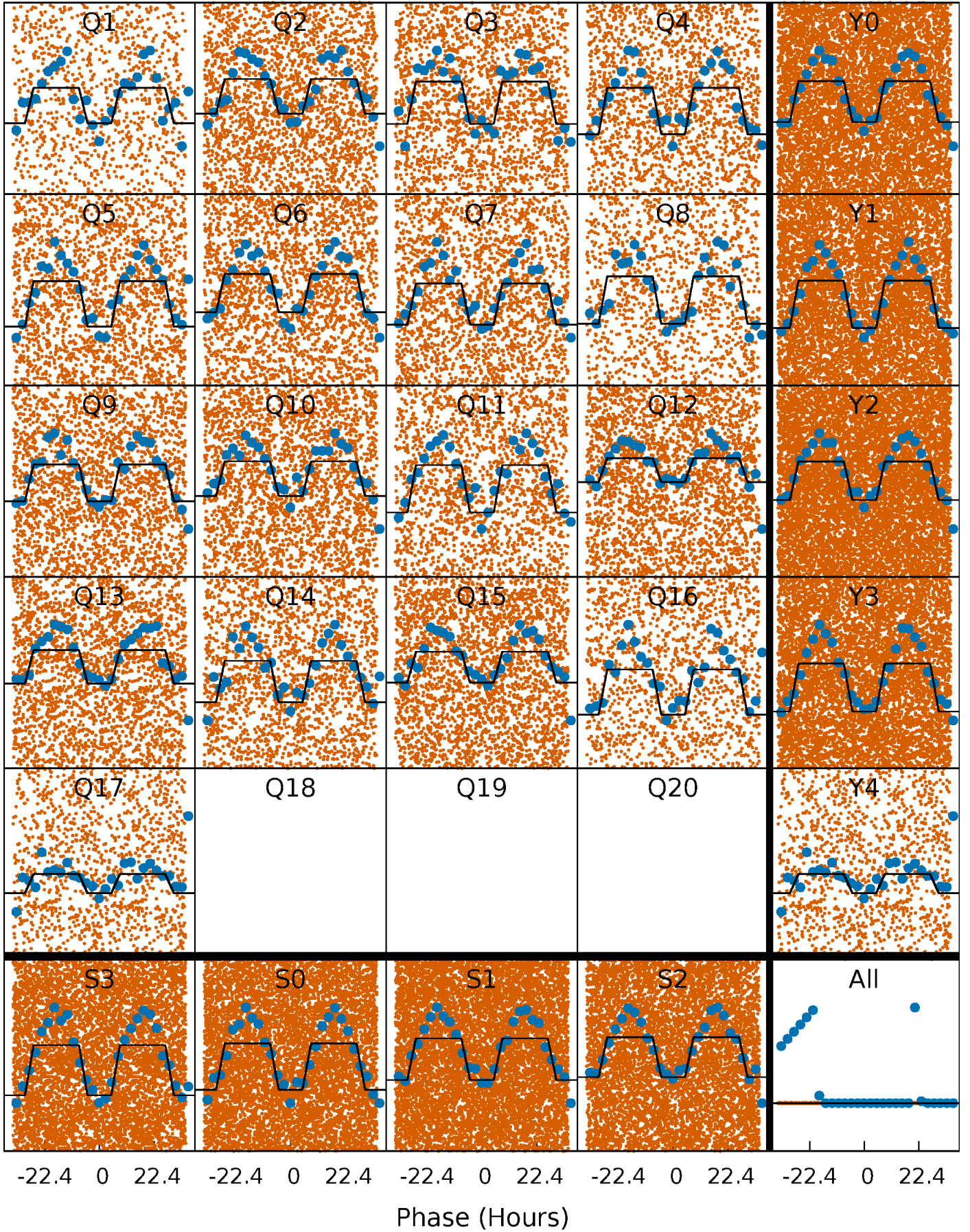
DV Quarter-Phased Transit Curves

TCE 008979487-01 P= 1.475867 Days $T_0=132.789110$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

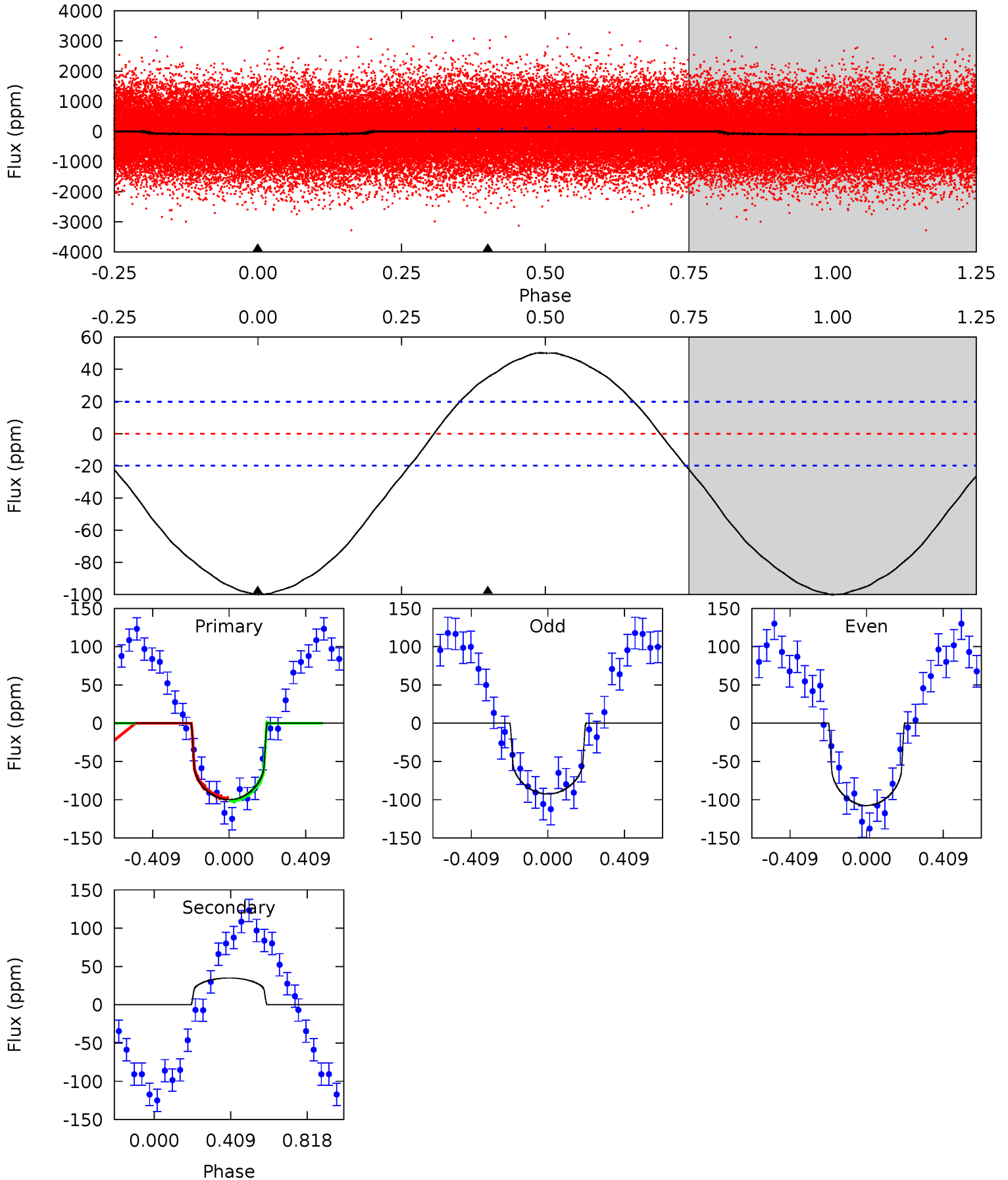
TCE 008979487-01 $P = 1.475847$ Days $T_0 = 132.800898$ (BKJD)



DV Model-Shift Uniqueness Test

008979487-01, P = 1.475867 Days, E = 131.313243 Days

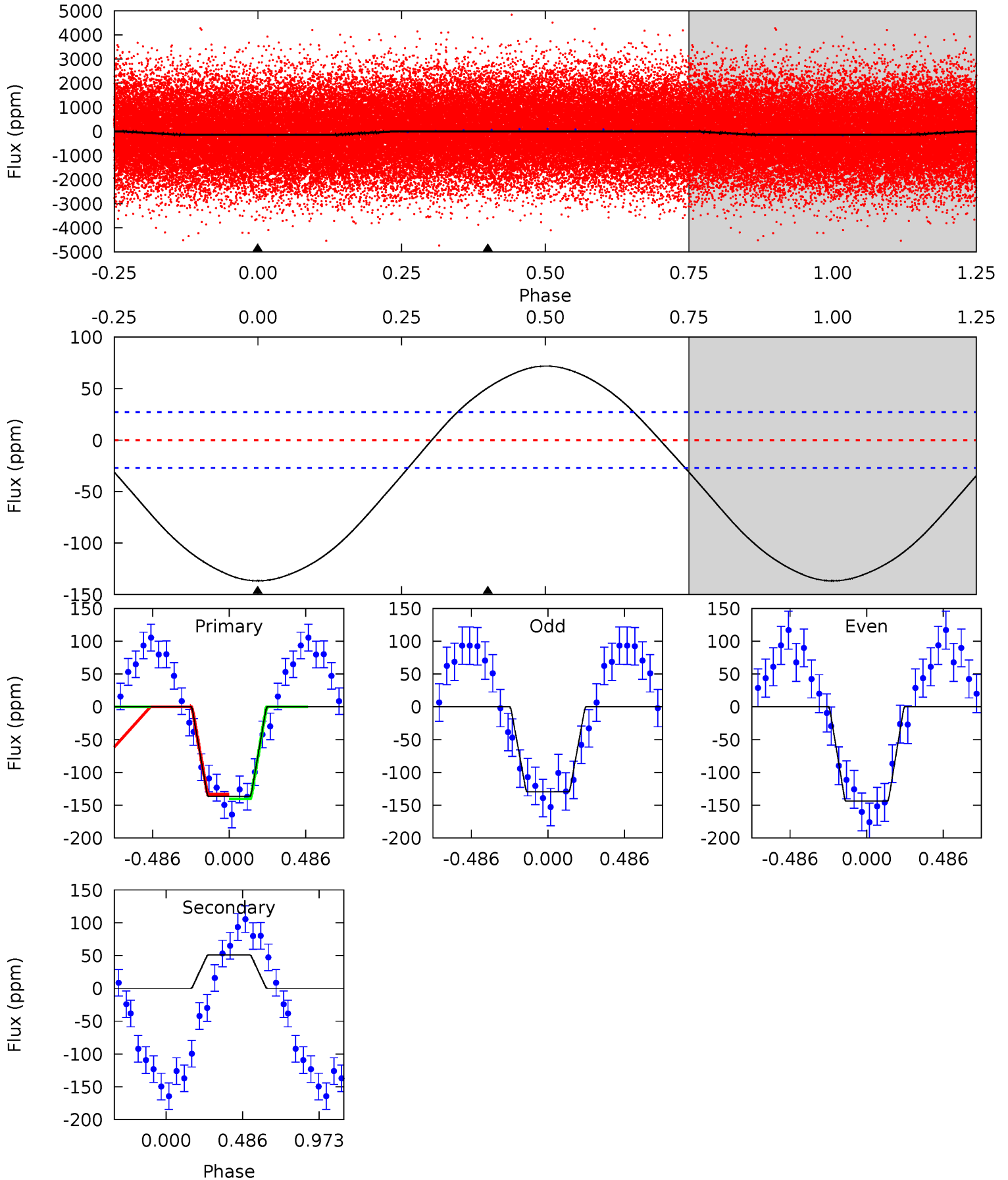
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.5	-7.51	0	0	4.26	0.83	2.79	21.5	21.5	-7.51	-7.51	1.61	0.99	0.33	0.36



Alt Model-Shift Uniqueness Test

008979487-01, P = 1.475847 Days, E = 131.325051 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.3	-7.92	0	0	4.22	0.70	2.83	21.3	21.3	-7.92	-7.92	1.10	0.86	0.34	0.54



Stellar Parameters For KIC 008979487

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7191^{+224}_{-324}	$3.996^{+0.246}_{-0.164}$	$-0.180^{+0.250}_{-0.350}$	$2.063^{+0.542}_{-0.663}$	$1.539^{+0.205}_{-0.308}$	$0.247^{+0.388}_{-0.116}$
	+3%/-5%	+6%/-4%	+139%/-194%	+26%/-32%	+13%/-20%	+157%/-47%
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 008979487-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	35 ± 5	$2.03^{+1.27}_{-1.02}$	3702^{+312}_{-326}	-5758^{+942}_{-2635}	$-3.941^{+2.455}_{-11.422}$
Alt.	51 ± 6	$2.53^{+1.32}_{-1.16}$	3686^{+315}_{-317}	-5724^{+862}_{-1874}	$-3.737^{+2.122}_{-8.683}$

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

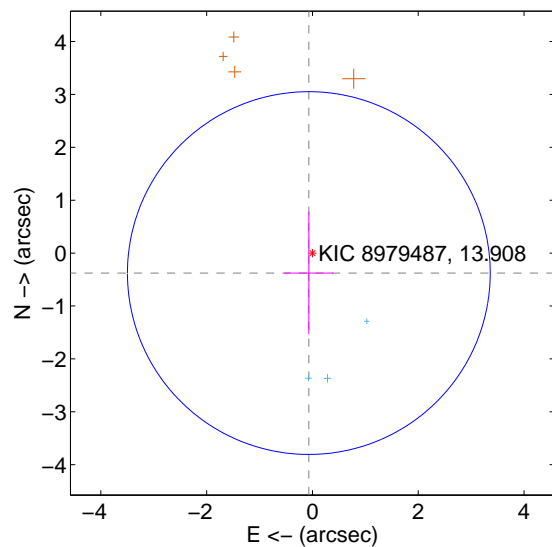
Supplemental centroid analysis for 008979487-01. Kepler magnitude: 13.91. Transit SNR 18.75

There are 3 quarters with good PRF difference image offsets

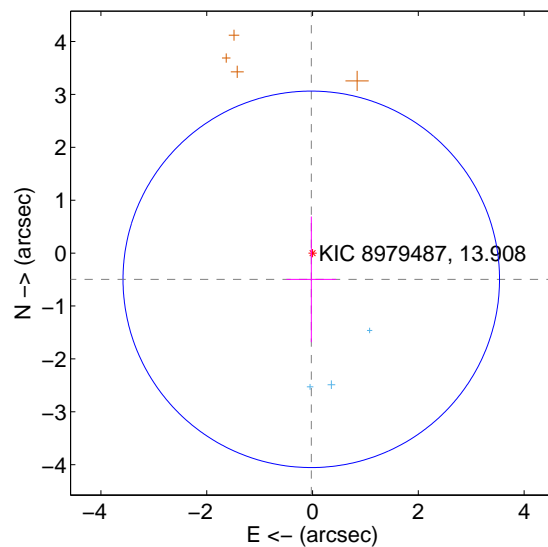
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.384 ± 1.143	0.34	0.068 ± 0.467	-0.378 ± 1.159
PRF-fit source offset from KIC position	0.497 ± 1.186	0.42	0.024 ± 0.472	-0.496 ± 1.187
photometric centroid source offset	0.55 ± 0.31	1.80	0.37 ± 0.30	-0.41 ± 0.31

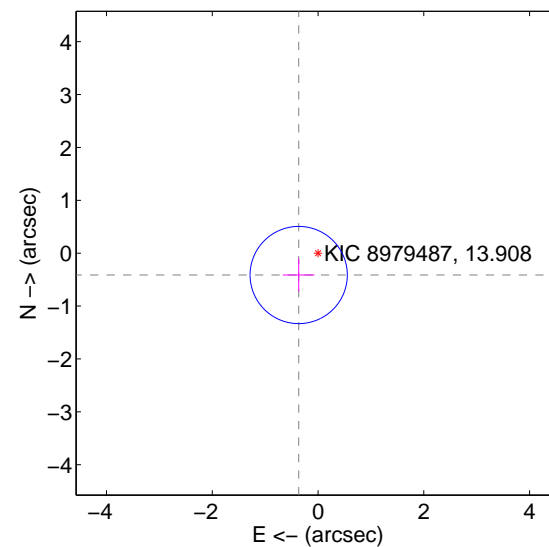
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

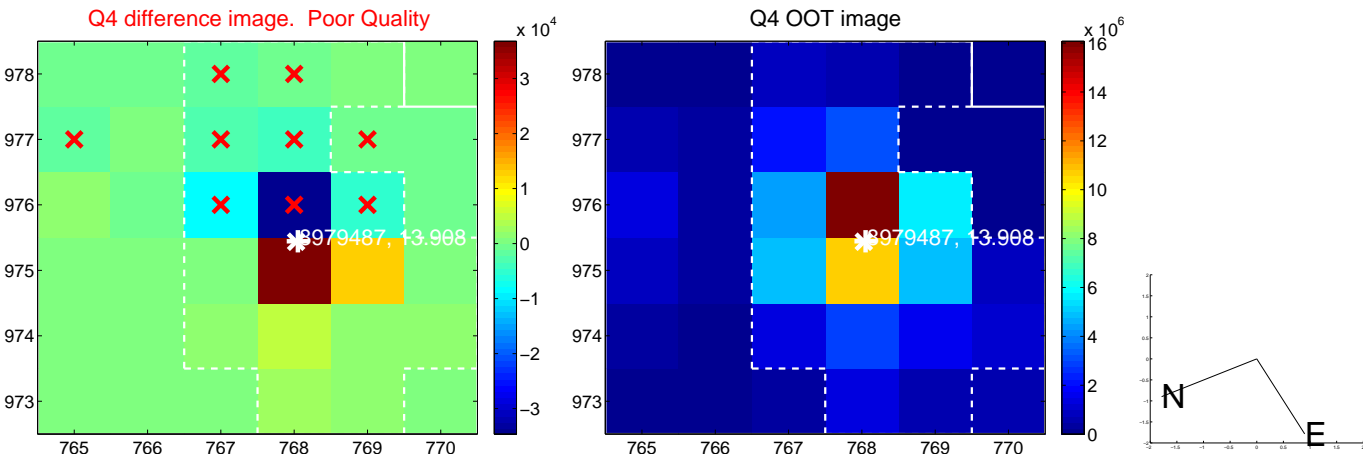
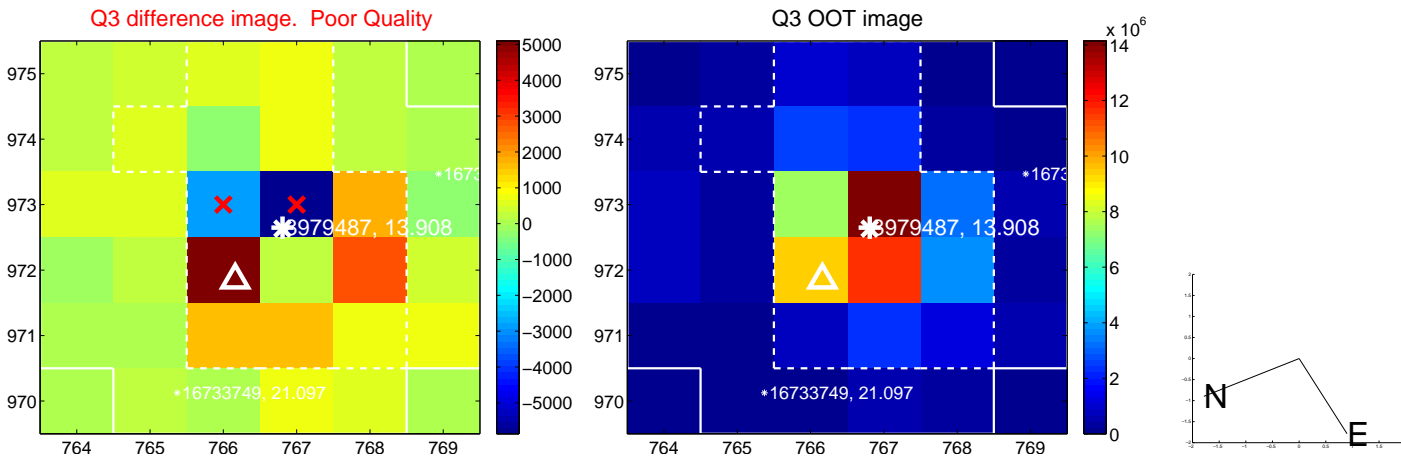
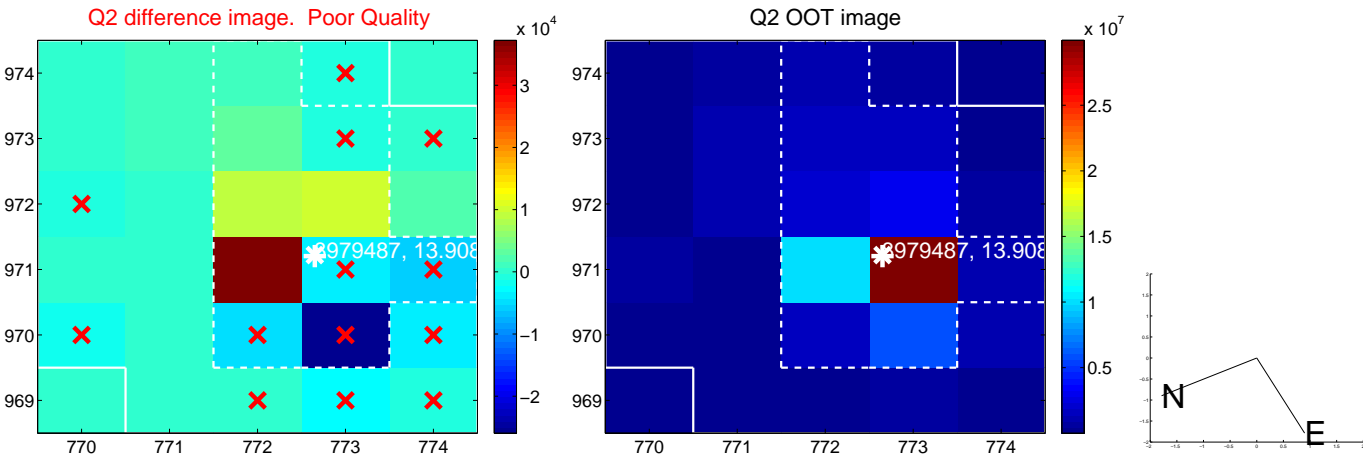
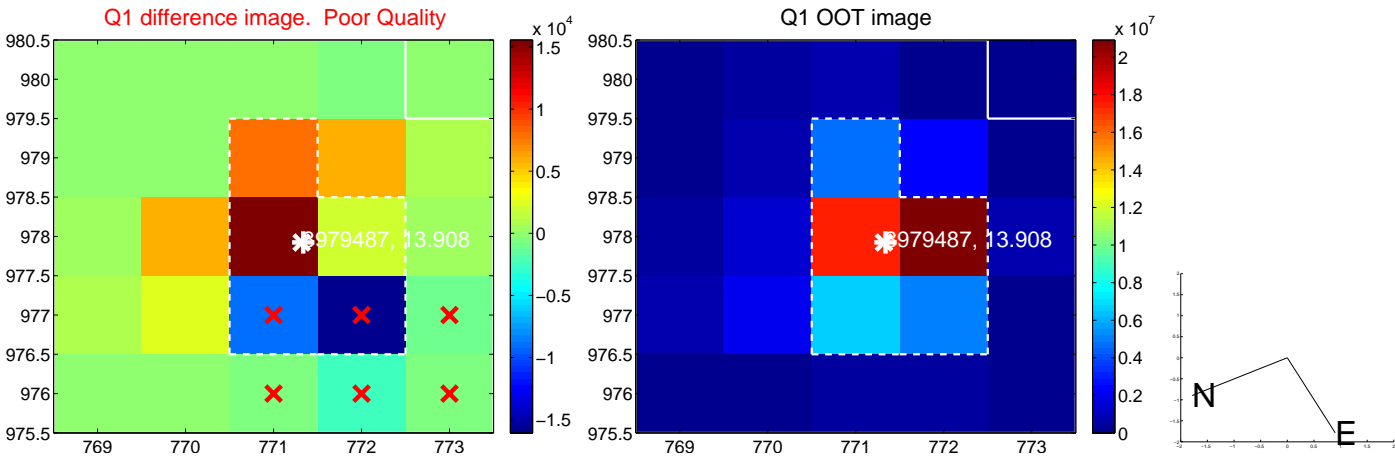


offset from photometric centroids

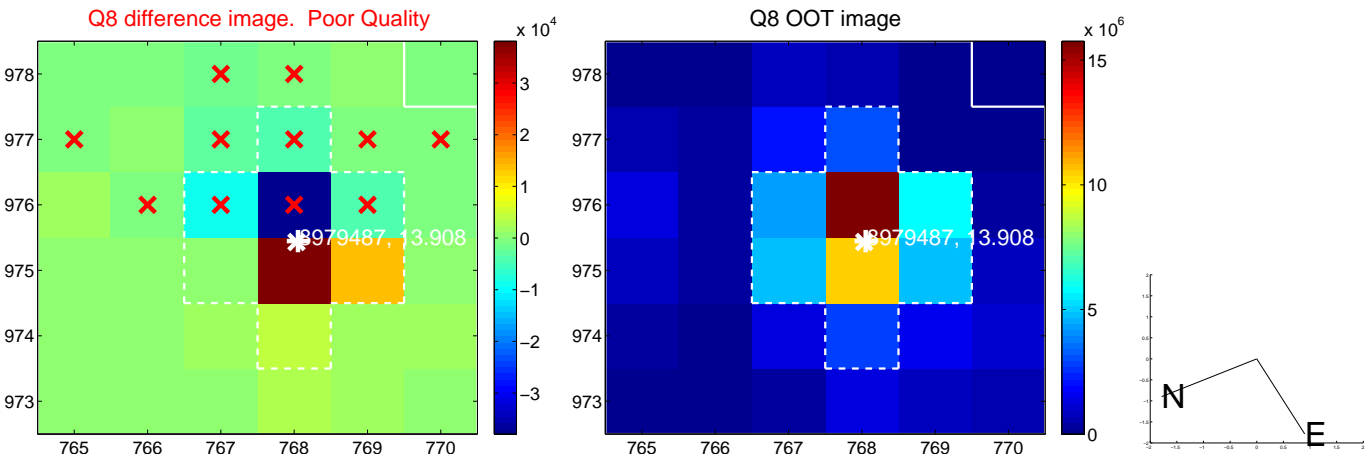
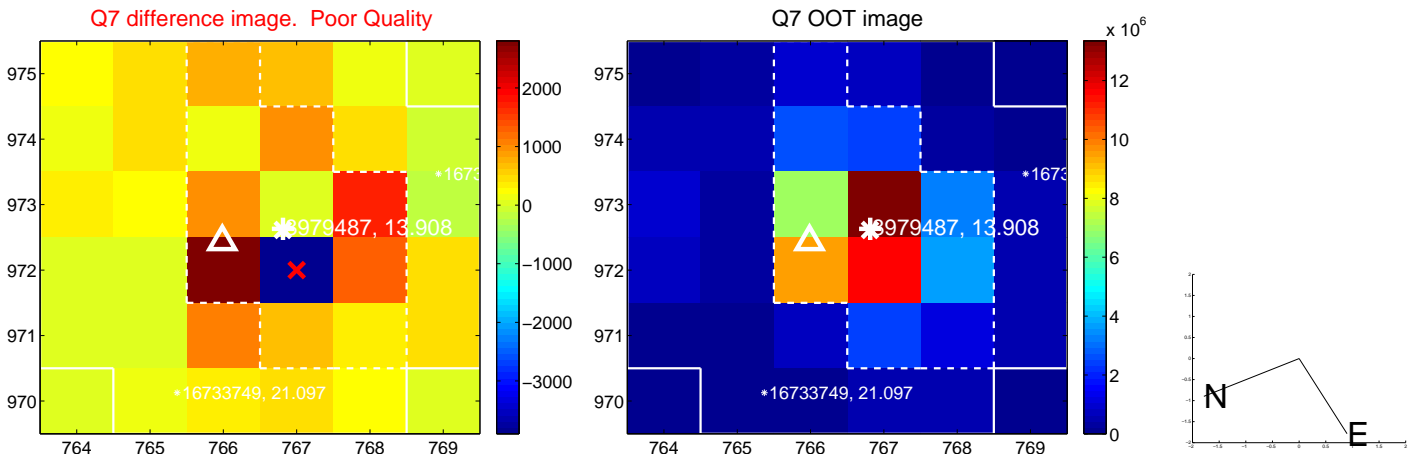
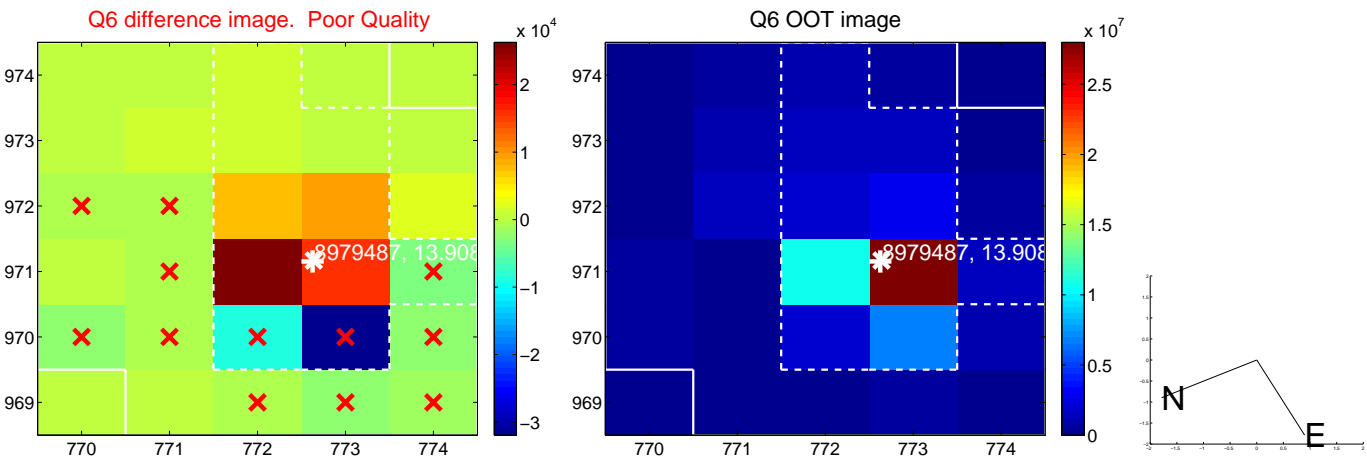
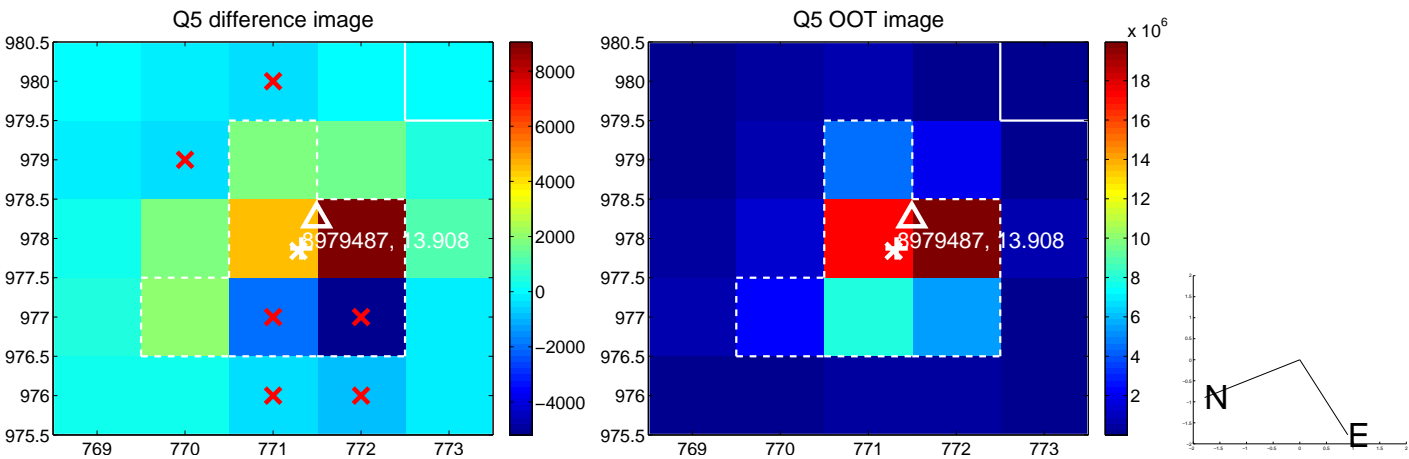


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

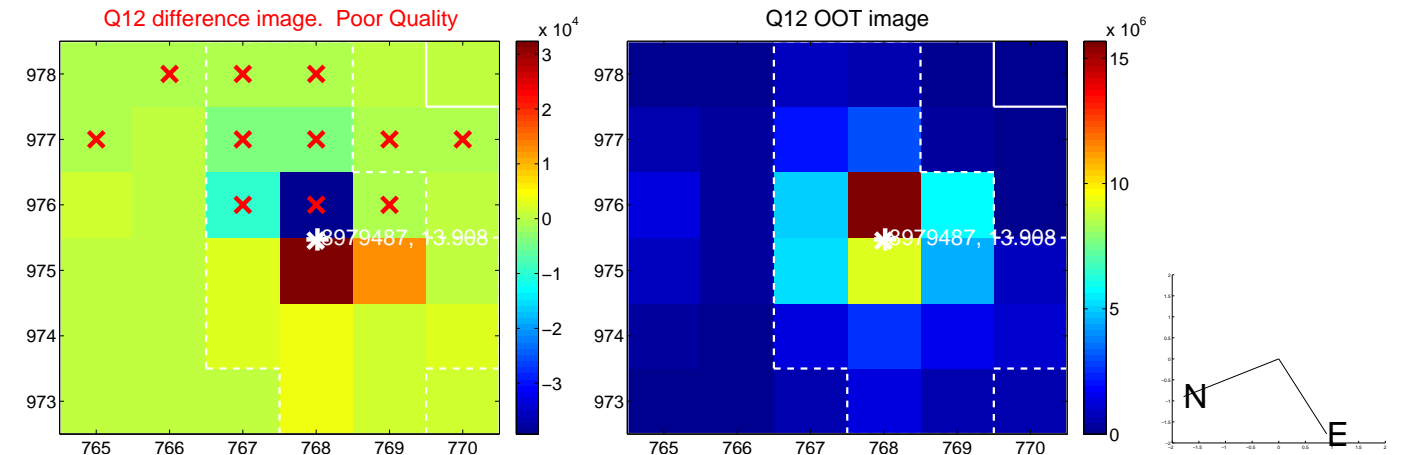
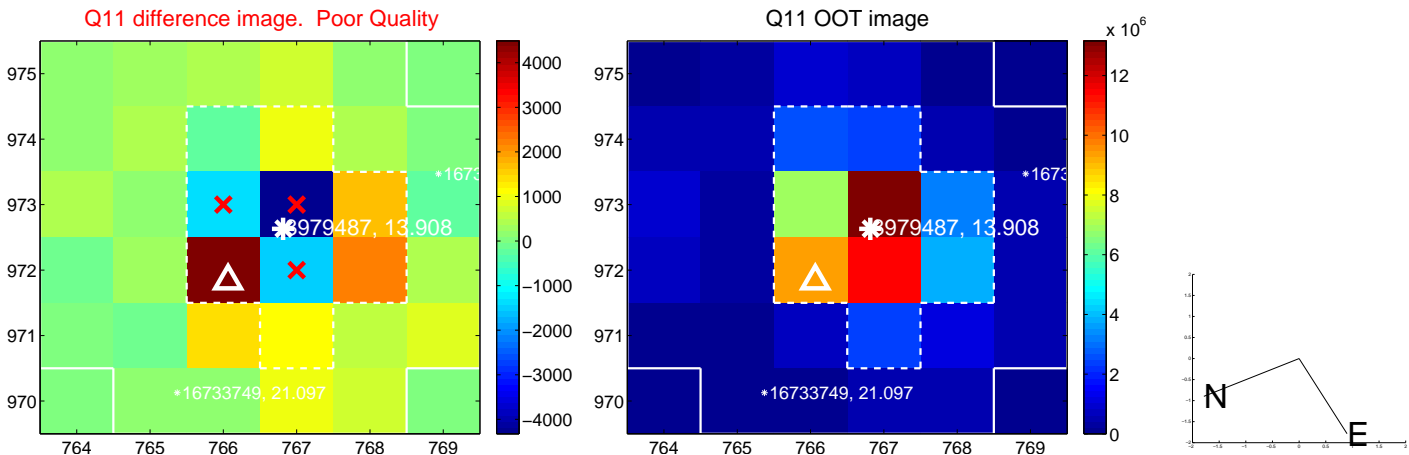
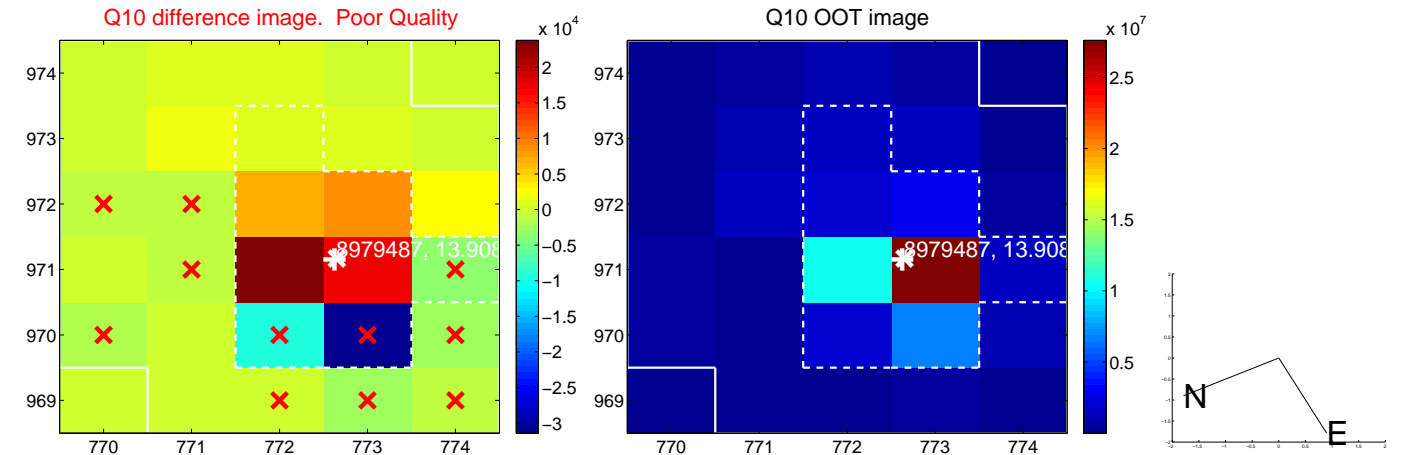
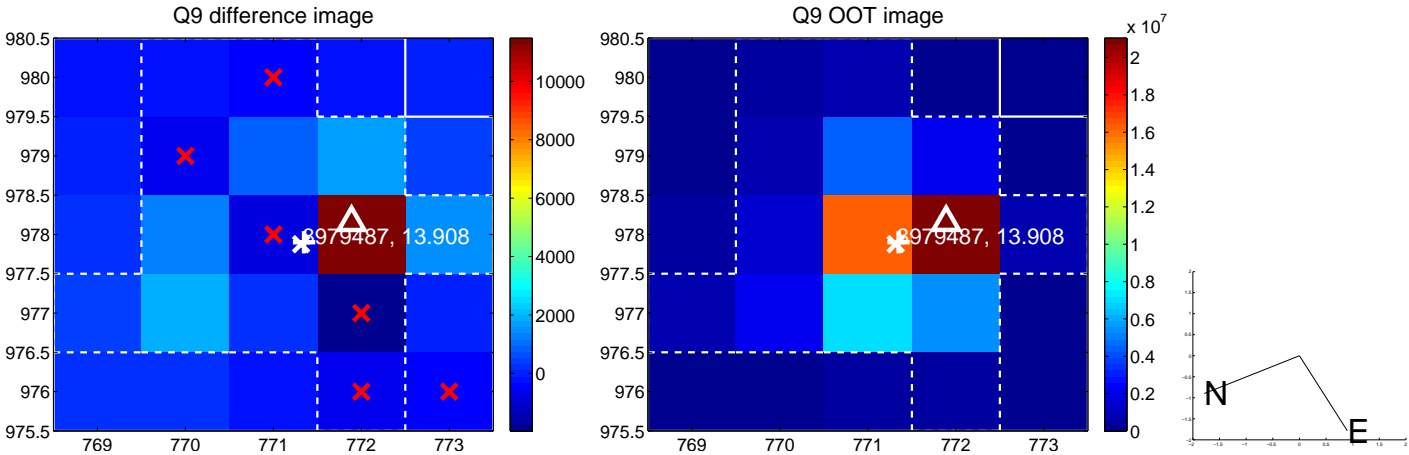
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



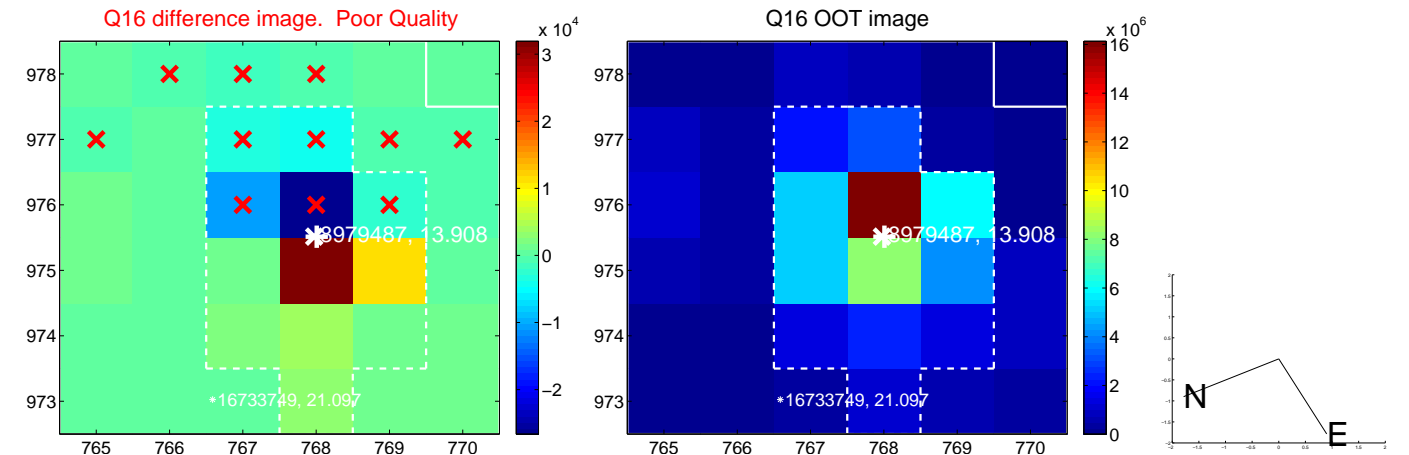
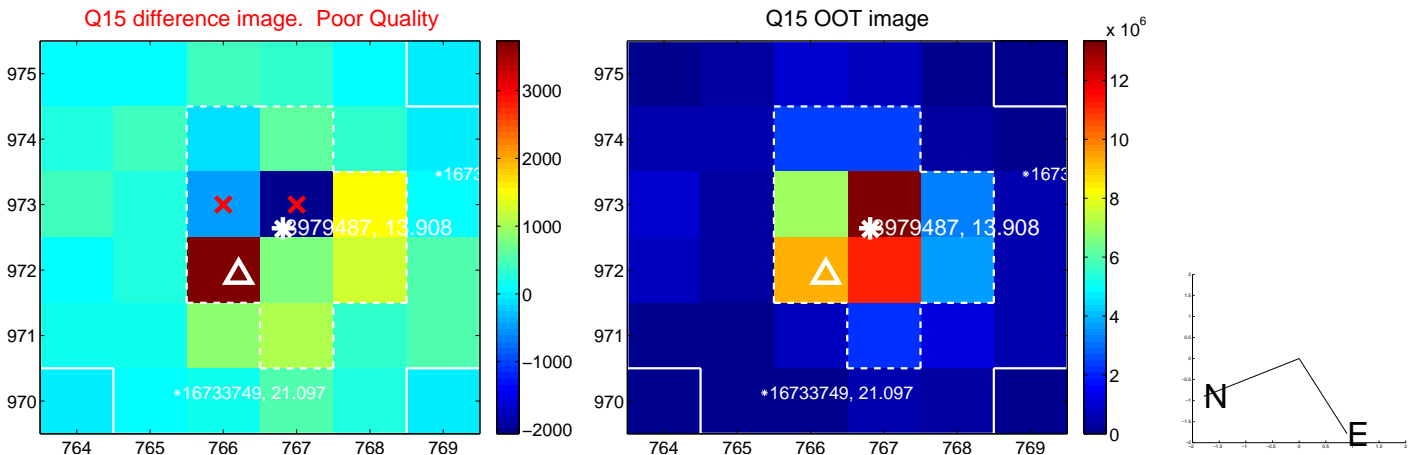
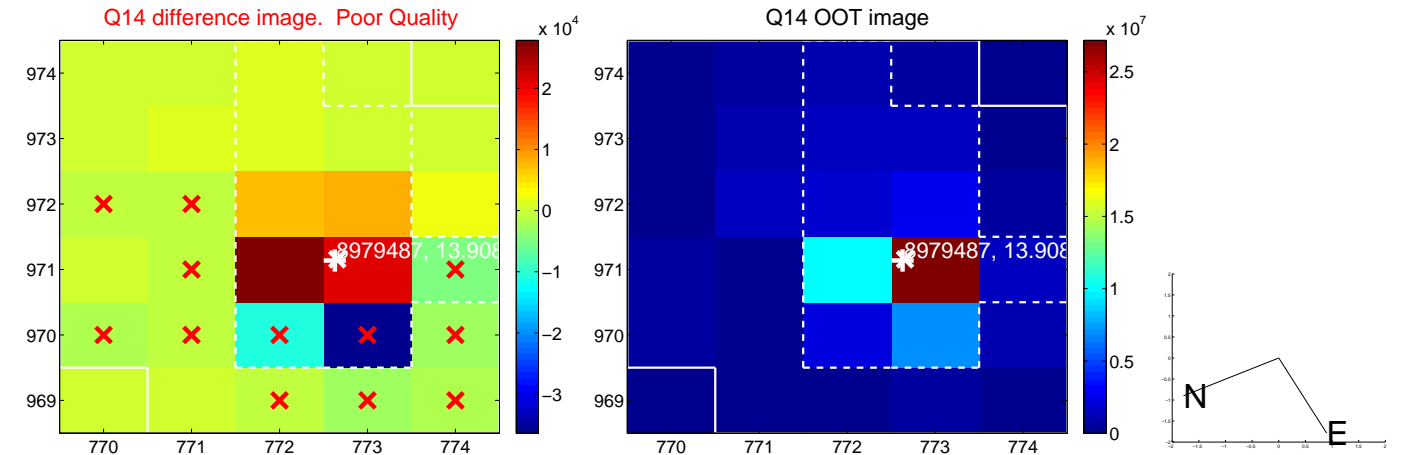
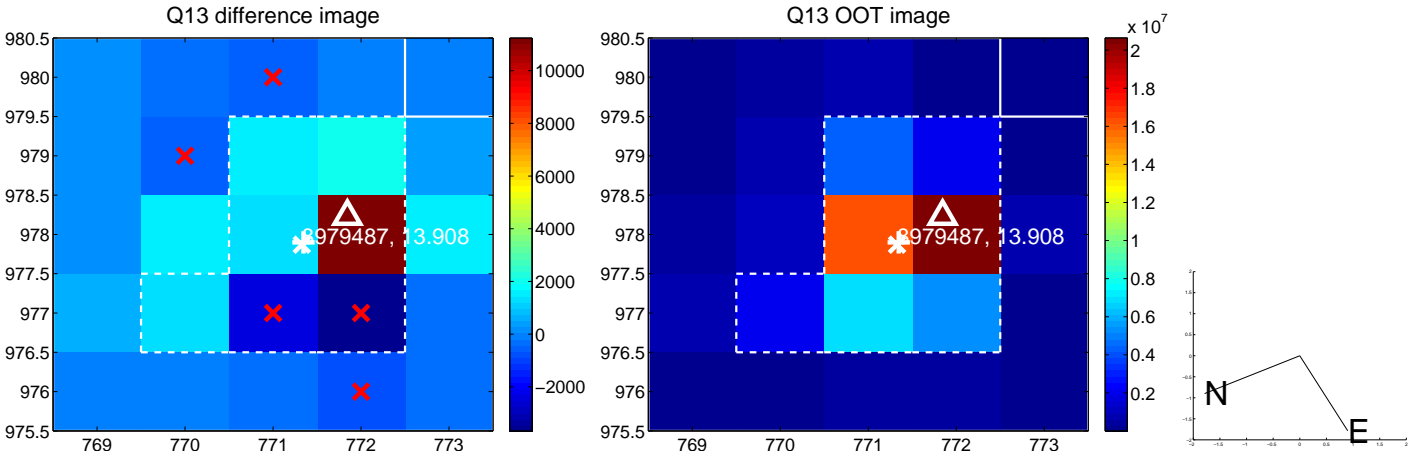
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



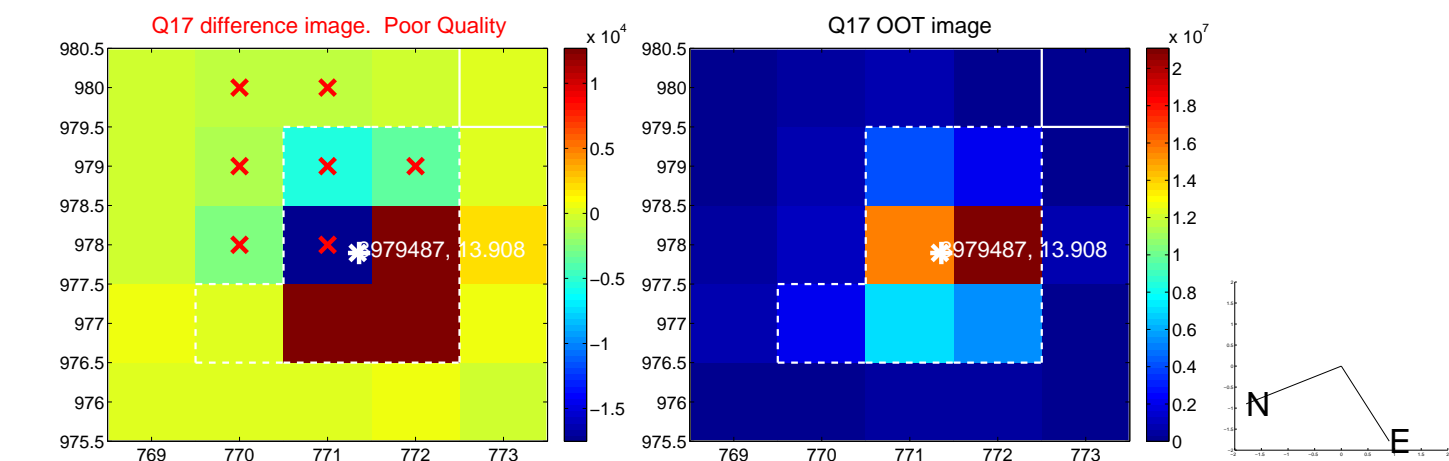
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



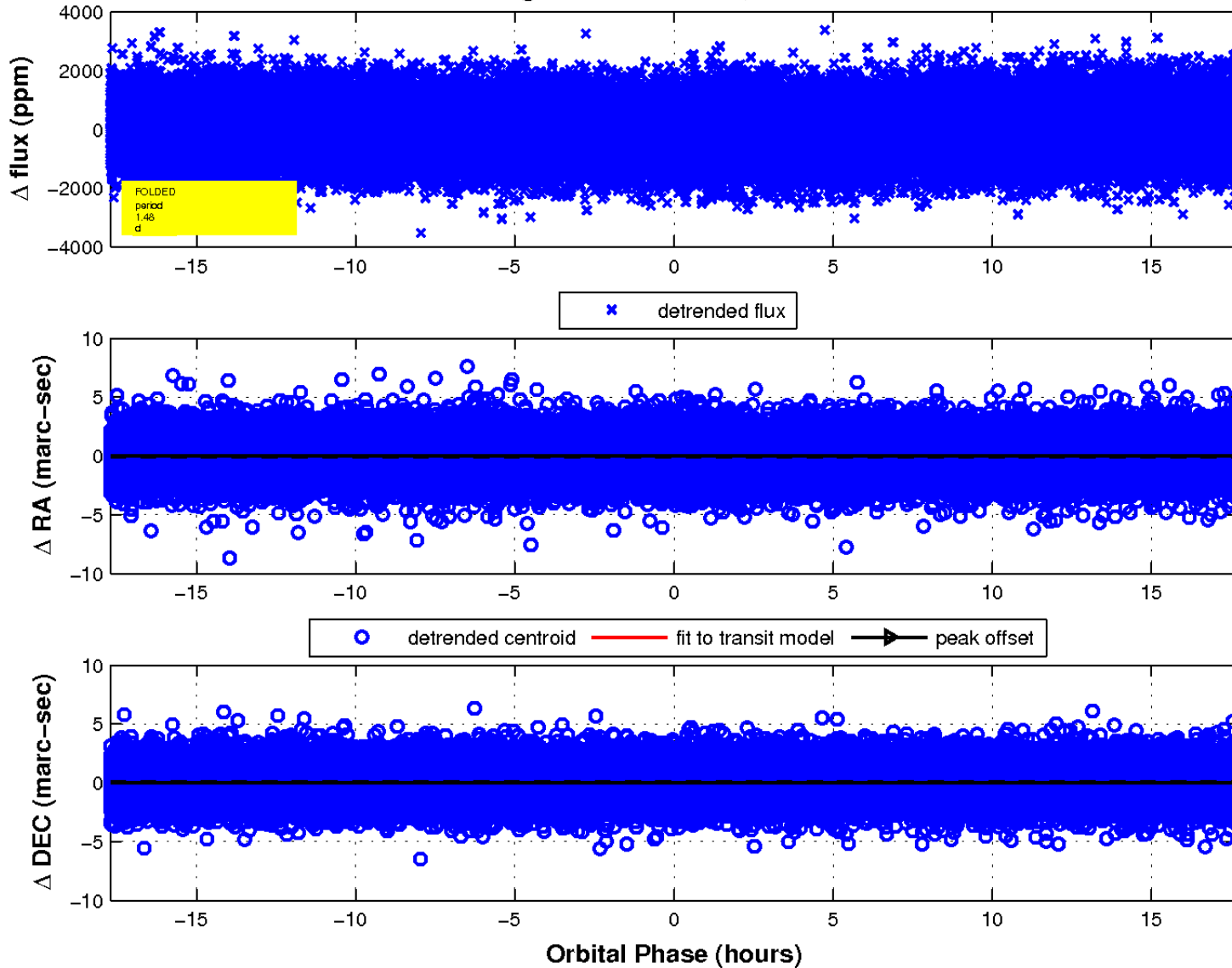
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

