

KIC 007212025

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})
007212025-01	OBS	No	0.622049	131.934791	79.9	1.947	7.2	8.9	0.68	4370	0.73	957.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007212025-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—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.

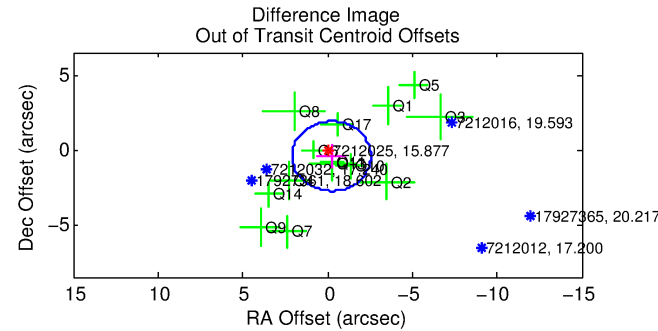
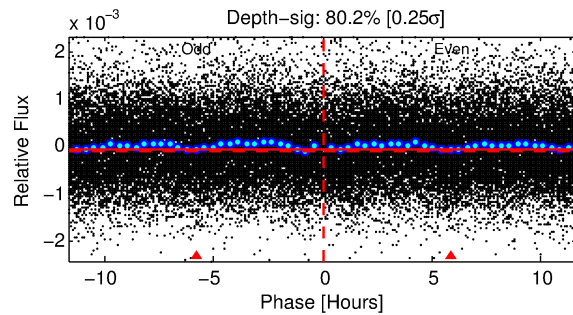
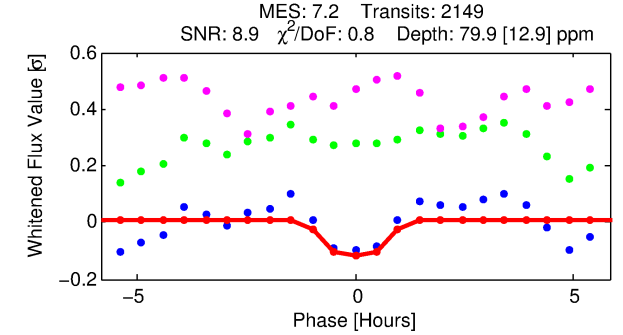
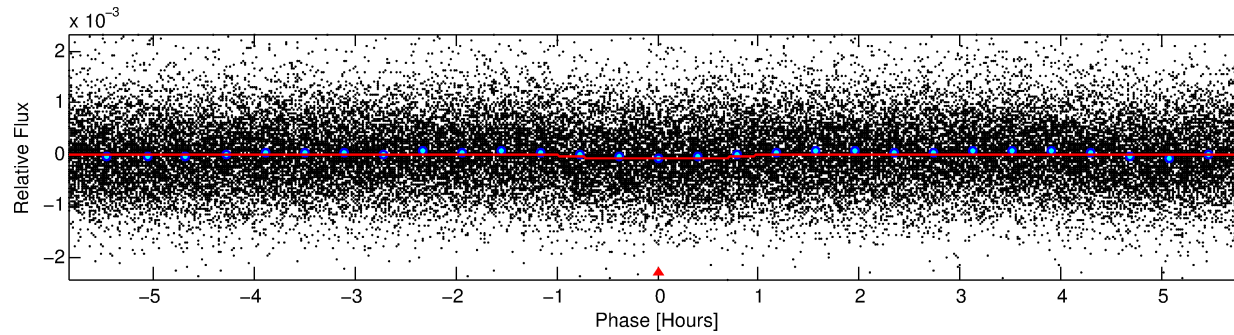
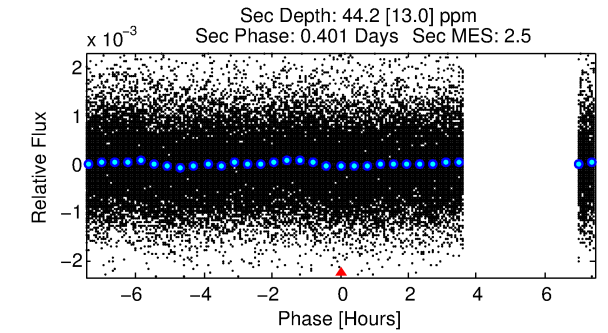
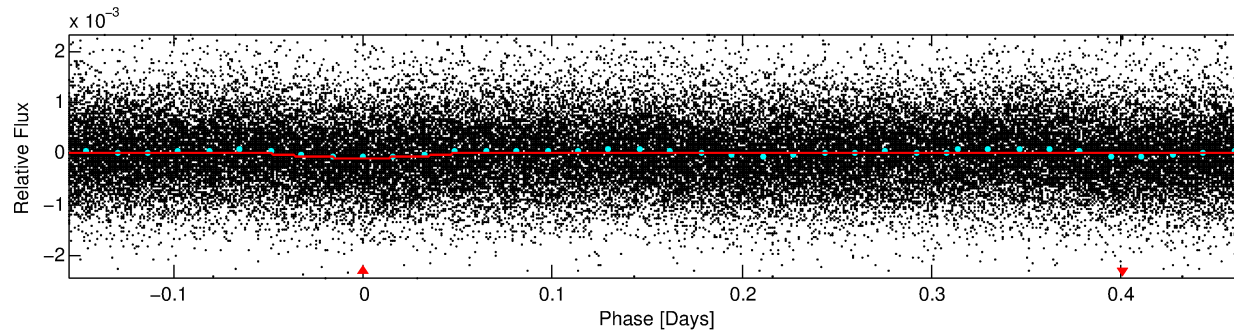
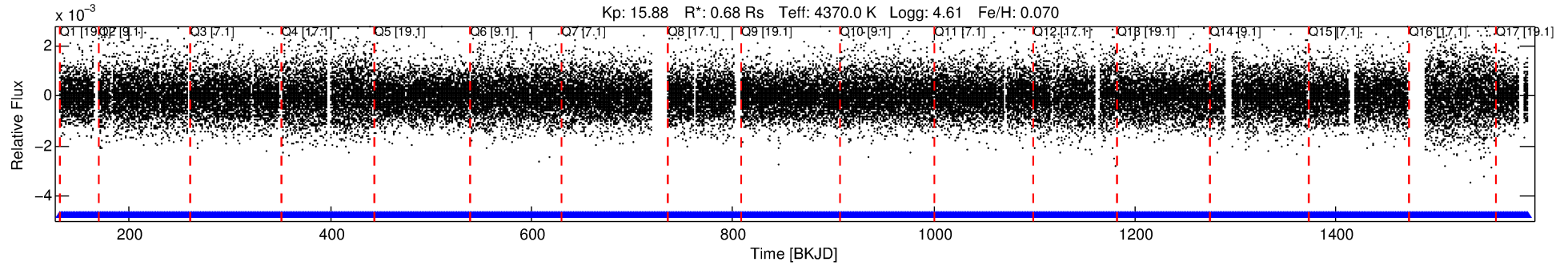
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007212025-01

No Significant Match Found

DV One-Page Summary

KIC: 7212025 Candidate: 1 of 1 Period: 0.622 d



DV Fit Results:

Period = 0.62205 [0.00001] d
Epoch = 131.9348 [0.0030] BKJD
Rp/R* = 0.0099 [0.0096]
a/R* = 1.52 [3.01]
b = 0.88 [0.92]
Seff = 957.65 [143.32]
Teff = 1418 [53] K
Rp = 0.73 [0.71] Re
a = 0.0125 [0.0008] AU
Ag = 7.11 [13.89] [0.44σ]
Teffp = 3581 [1751] K [1.23σ]

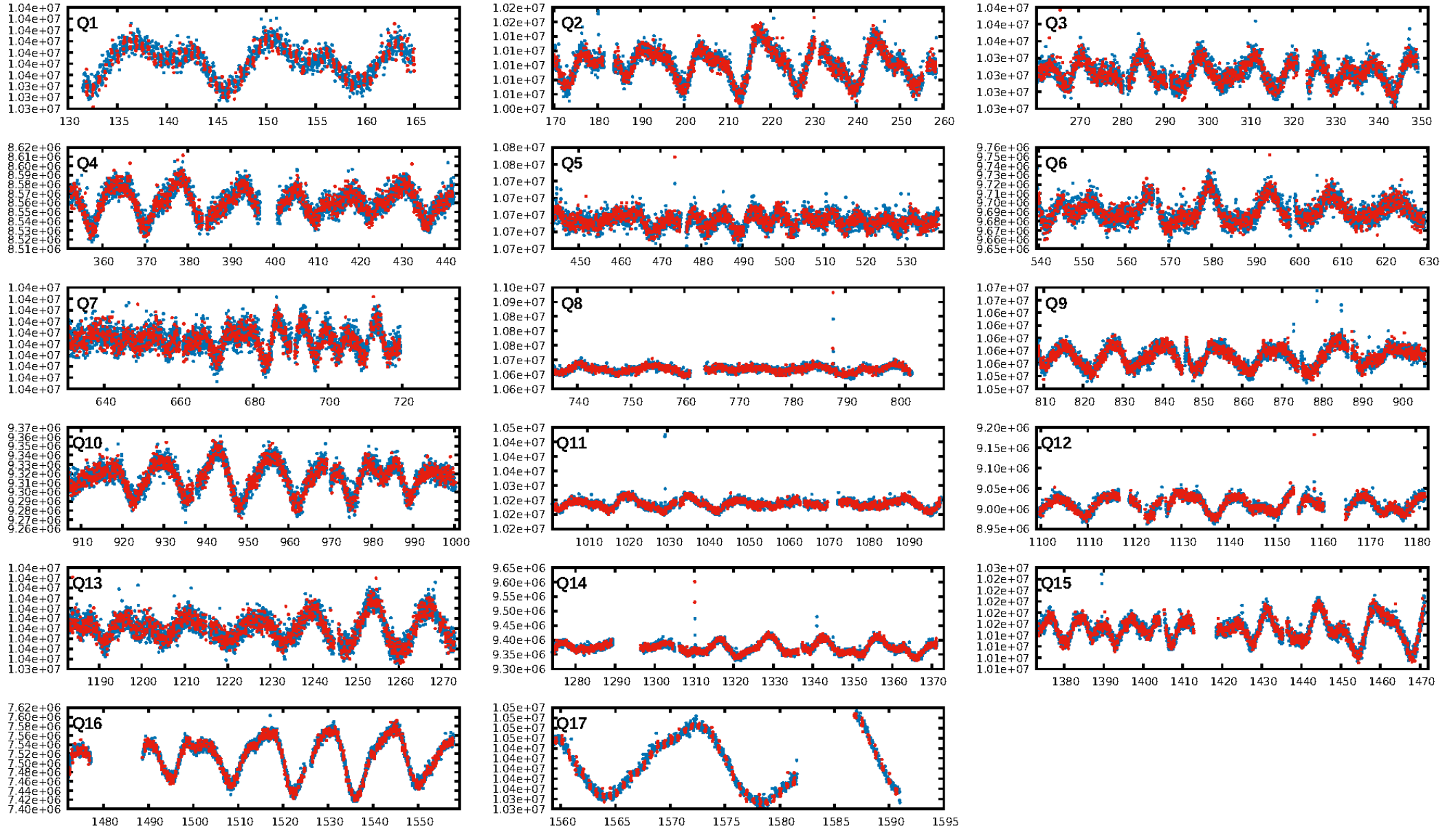
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.21e-11
RollingBand-fgt: 1.00 [2052/2052]
GhostDiagnostic-chr: 18.88
Centroid-sig: 24.0%
Centroid-so: 1.668 arcsec [1.36σ]
OotOffset-rm: 0.494 arcsec [0.64σ]
KicOffset-rm: 0.560 arcsec [0.69σ]
OotOffset-st: 4/3/2/5 [14]
KicOffset-st: 4/3/2/5 [14]
DiffImageQuality-fgm: 0.36 [5/14]
DiffImageOverlap-fno: 1.00 [17/17]

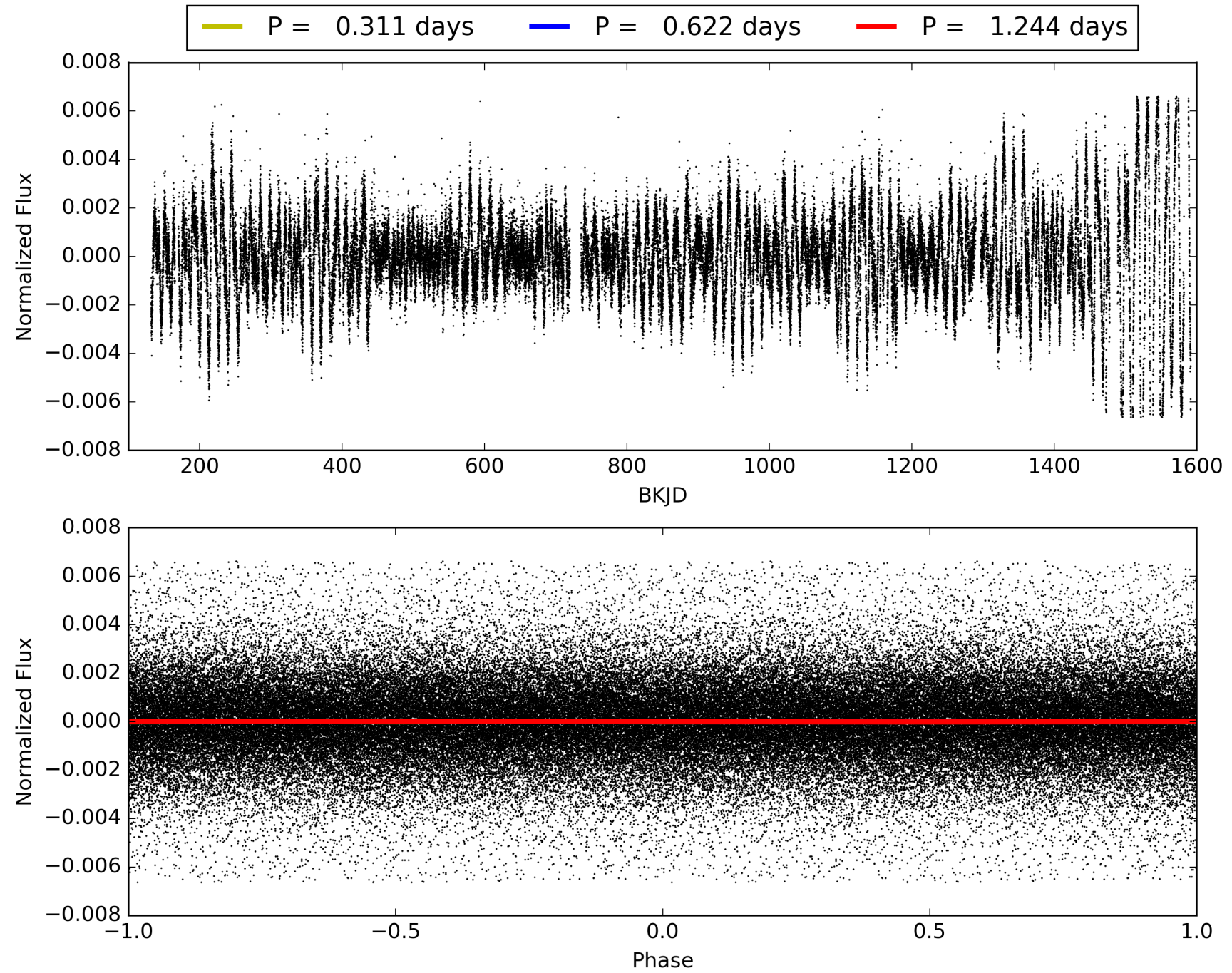
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 21:58:46 Z

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

TCE 007212025-01, PDC Light Curves

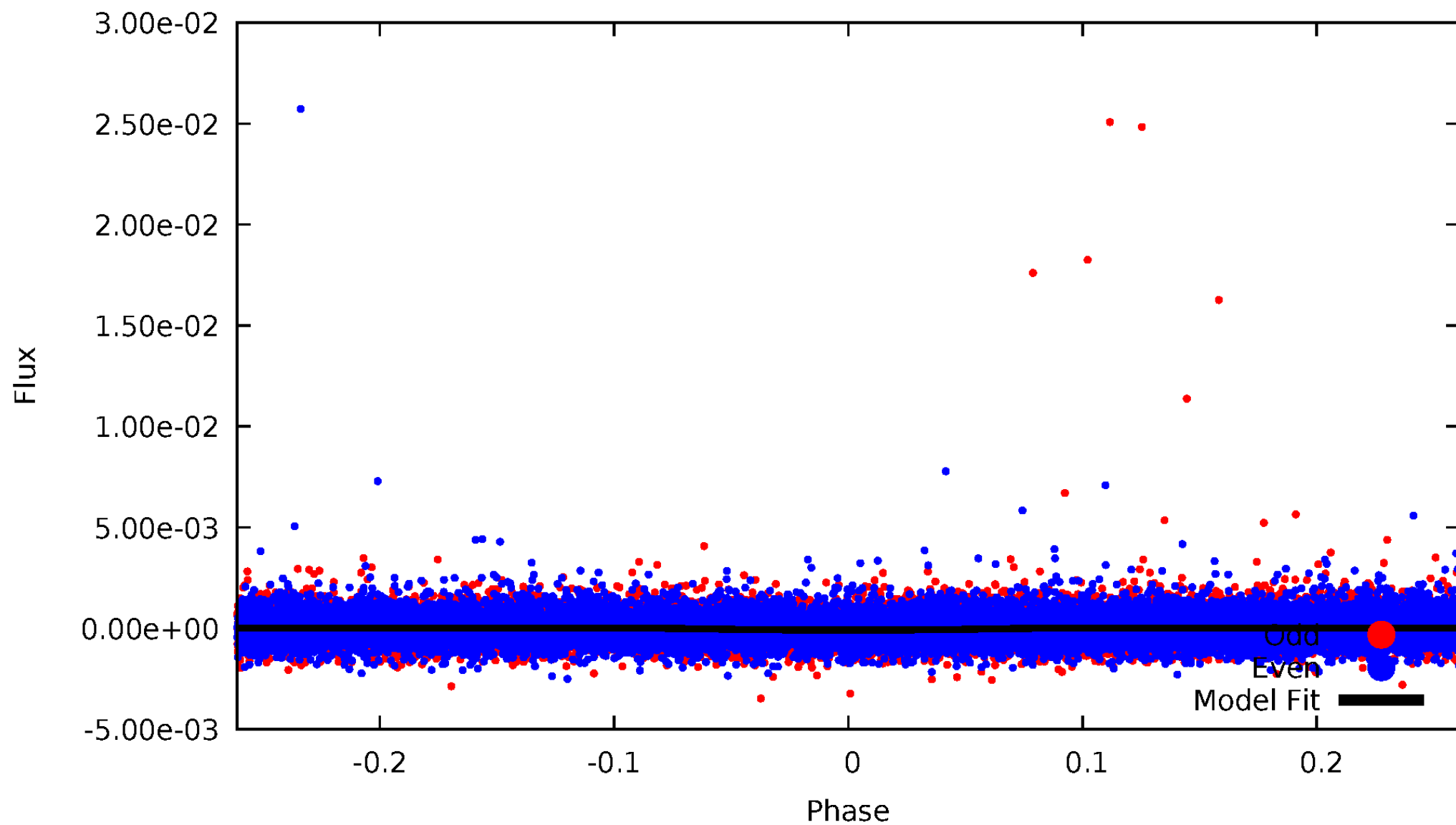


TCE 007212025-01



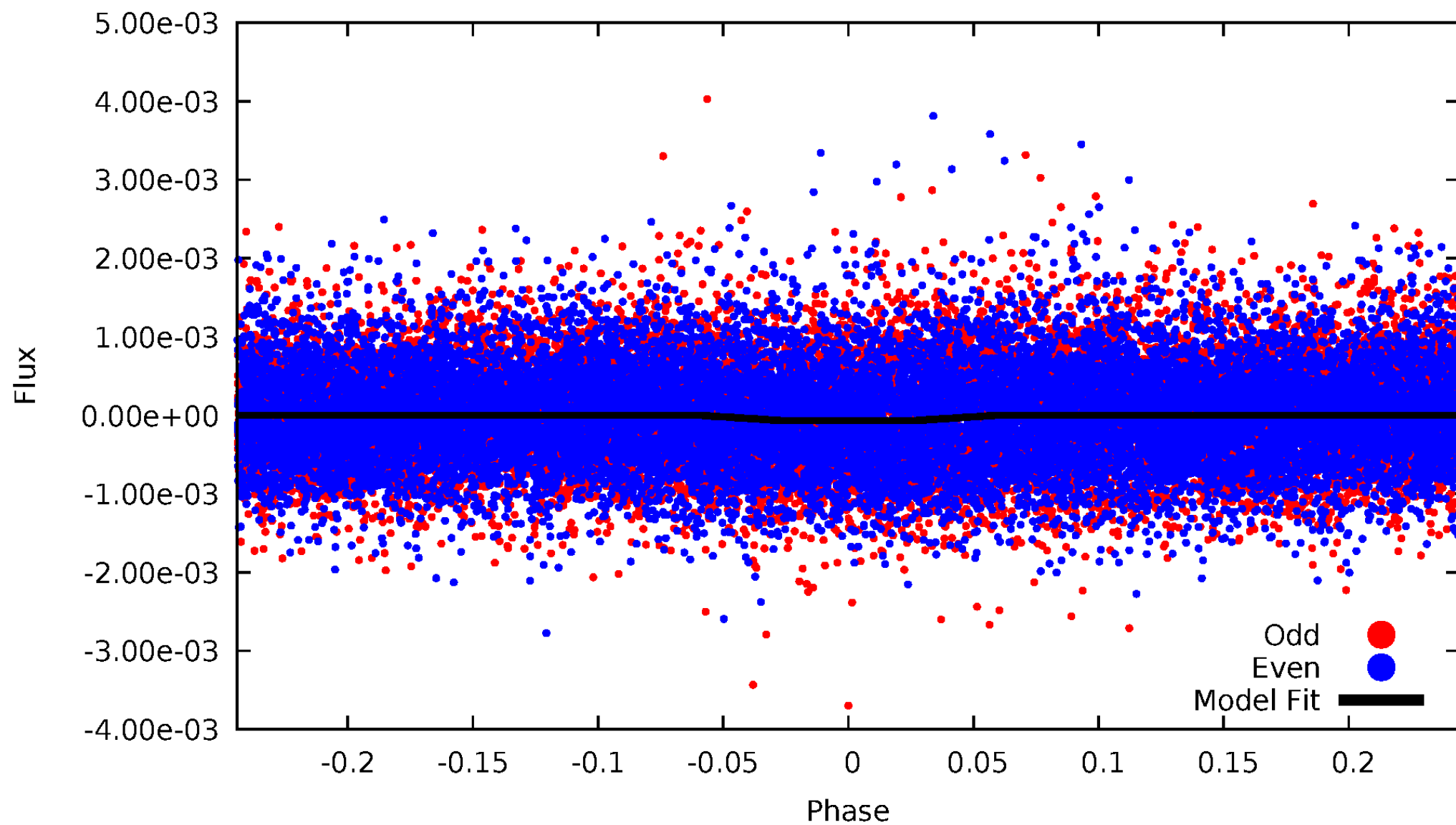
DV Odd/Even

TCE 007212025-01



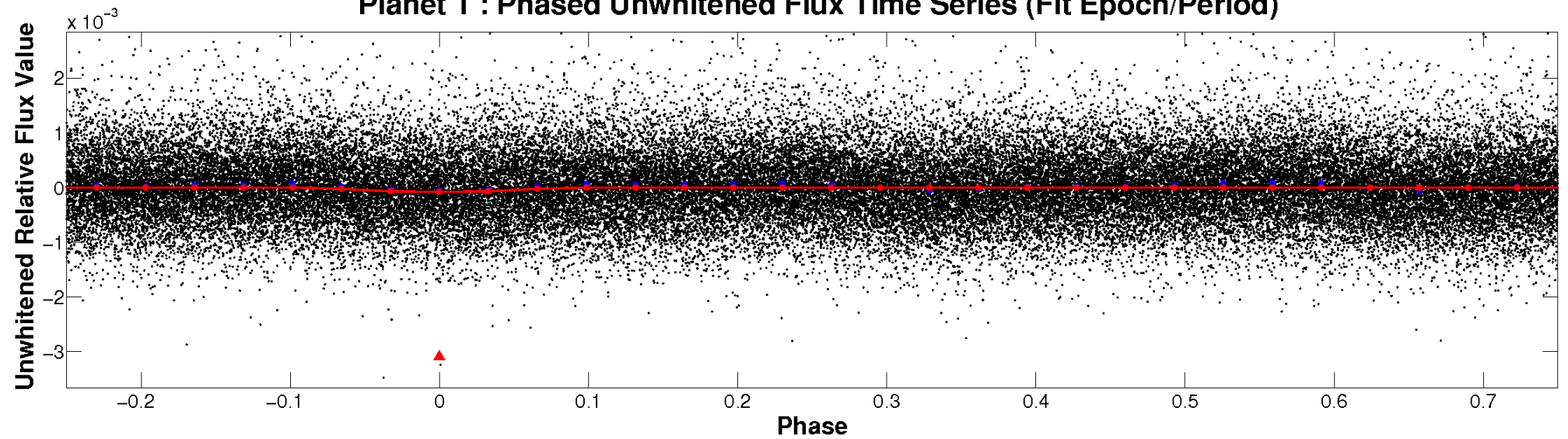
ALT Odd/Even

TCE 007212025-01

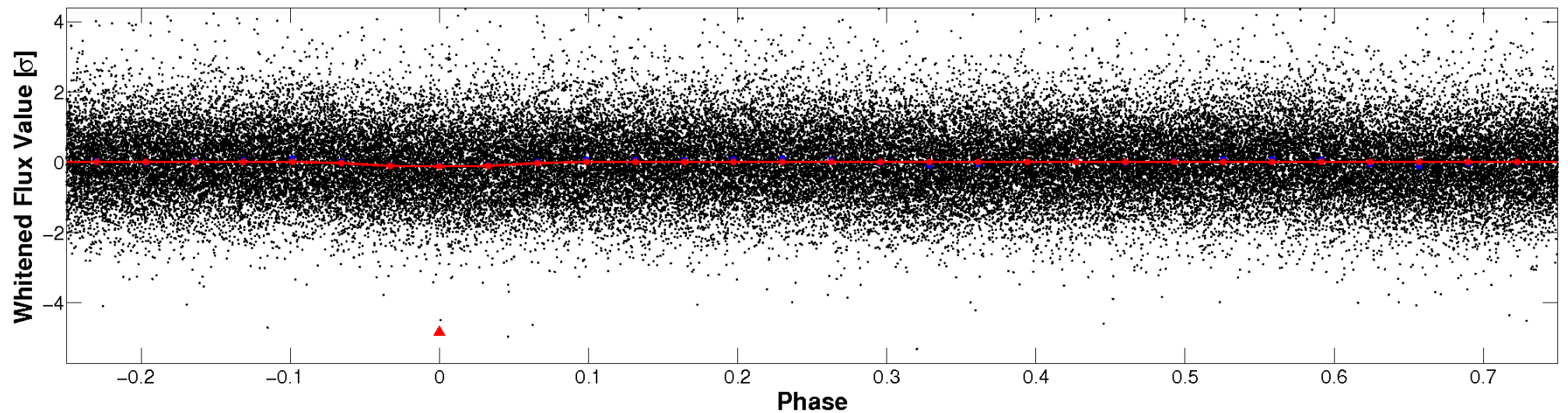


Non-Whitened Vs. Whitened Light Curve

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

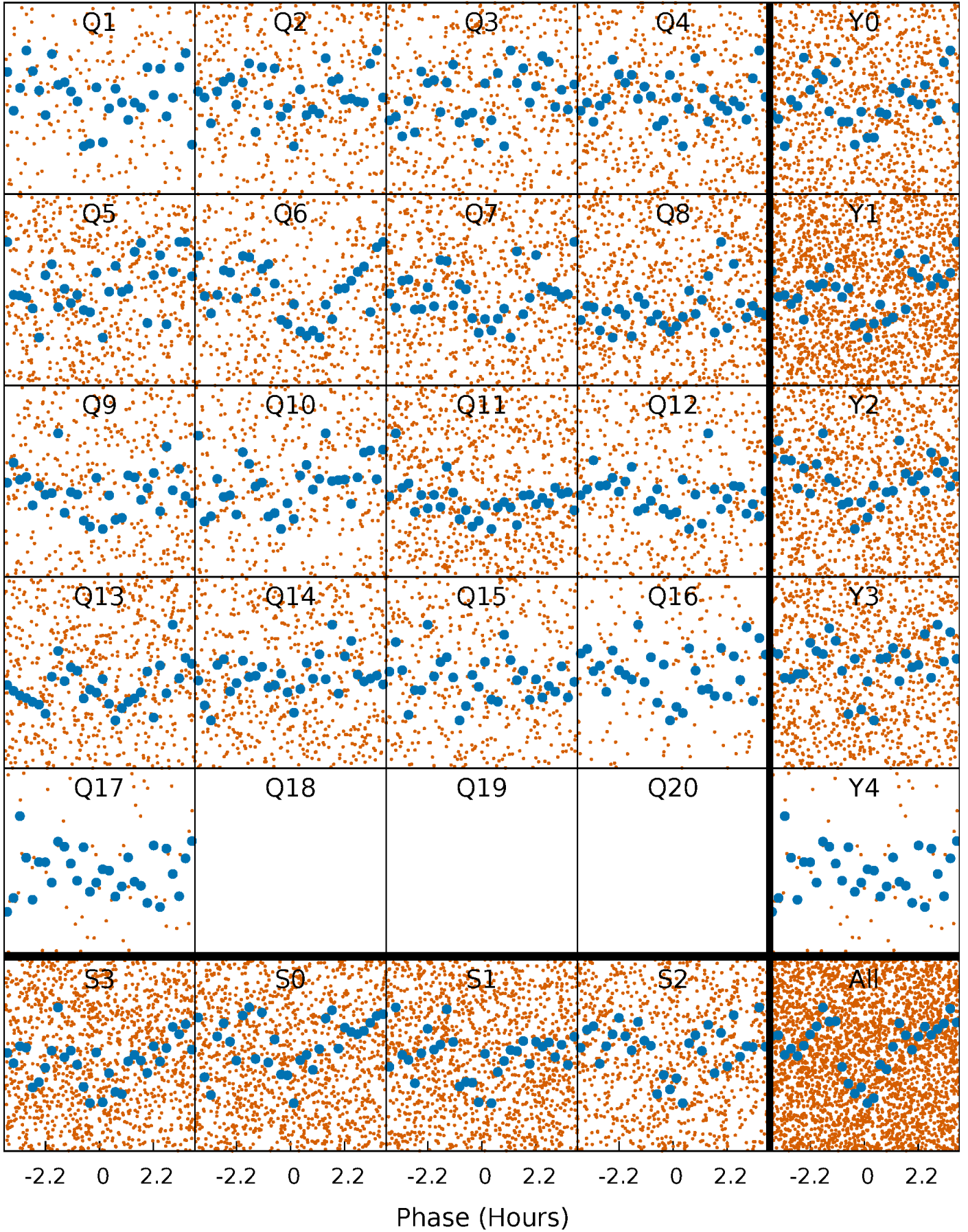


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



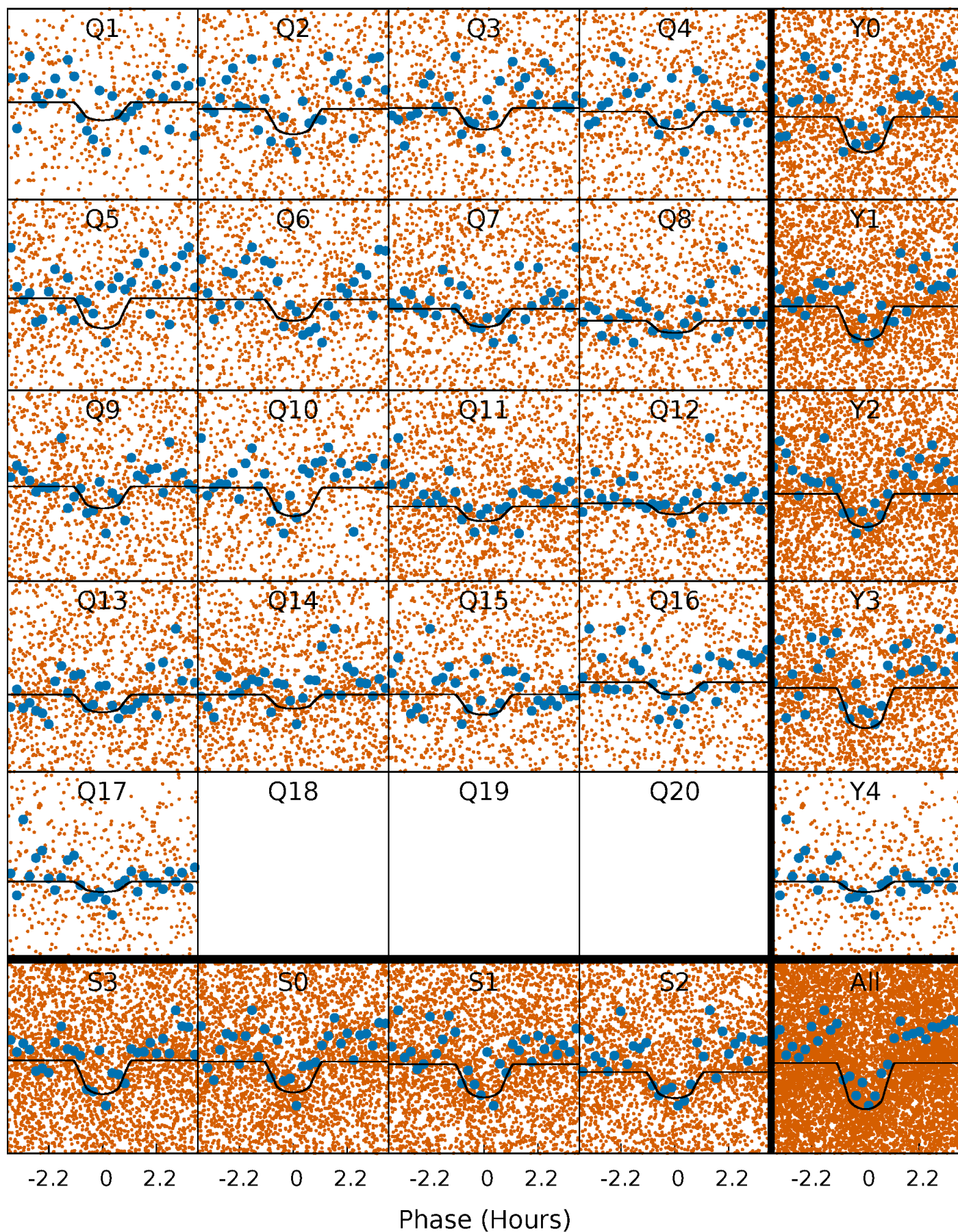
PDC Quarter-Phased Transit Curves

TCE 007212025-01 P= 0.622049 Days $T_0=131.934791$ (BKJD)



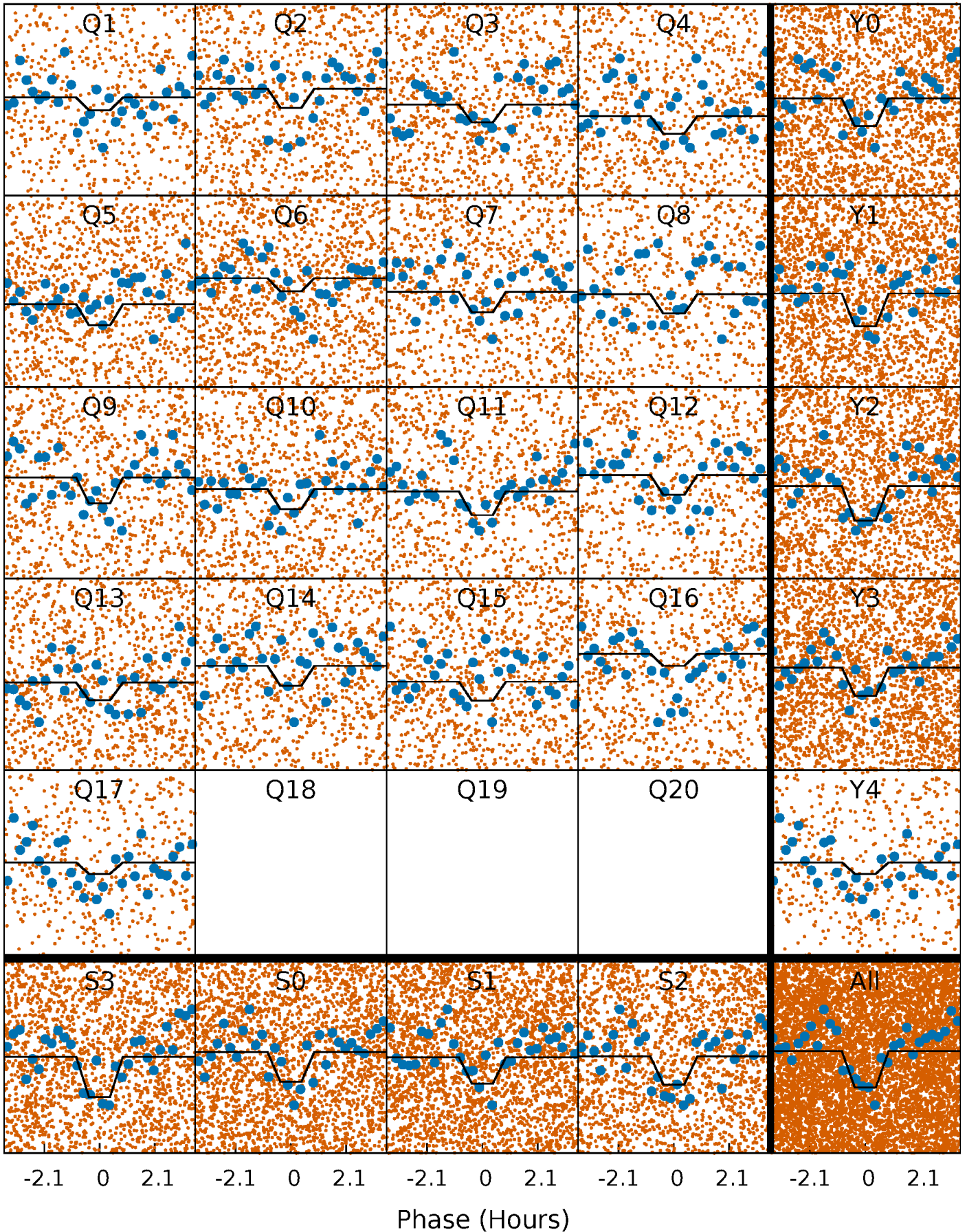
DV Quarter-Phased Transit Curves

TCE 007212025-01 P= 0.622049 Days $T_0=131.934791$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

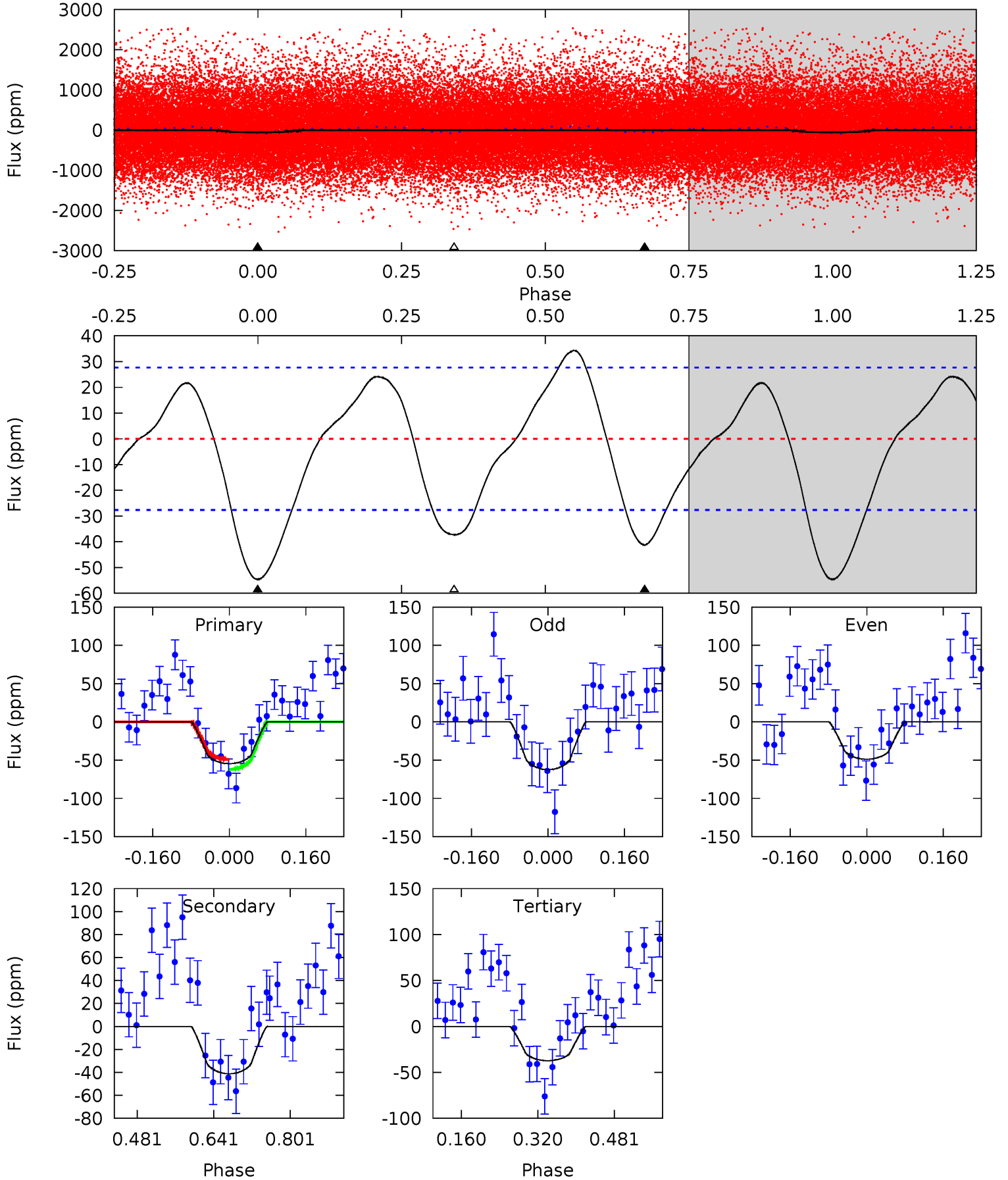
TCE 007212025-01 P= 0.622051 Days $T_0=131.929760$ (BKJD)



DV Model-Shift Uniqueness Test

007212025-01, P = 0.622049 Days, E = 131.312742 Days

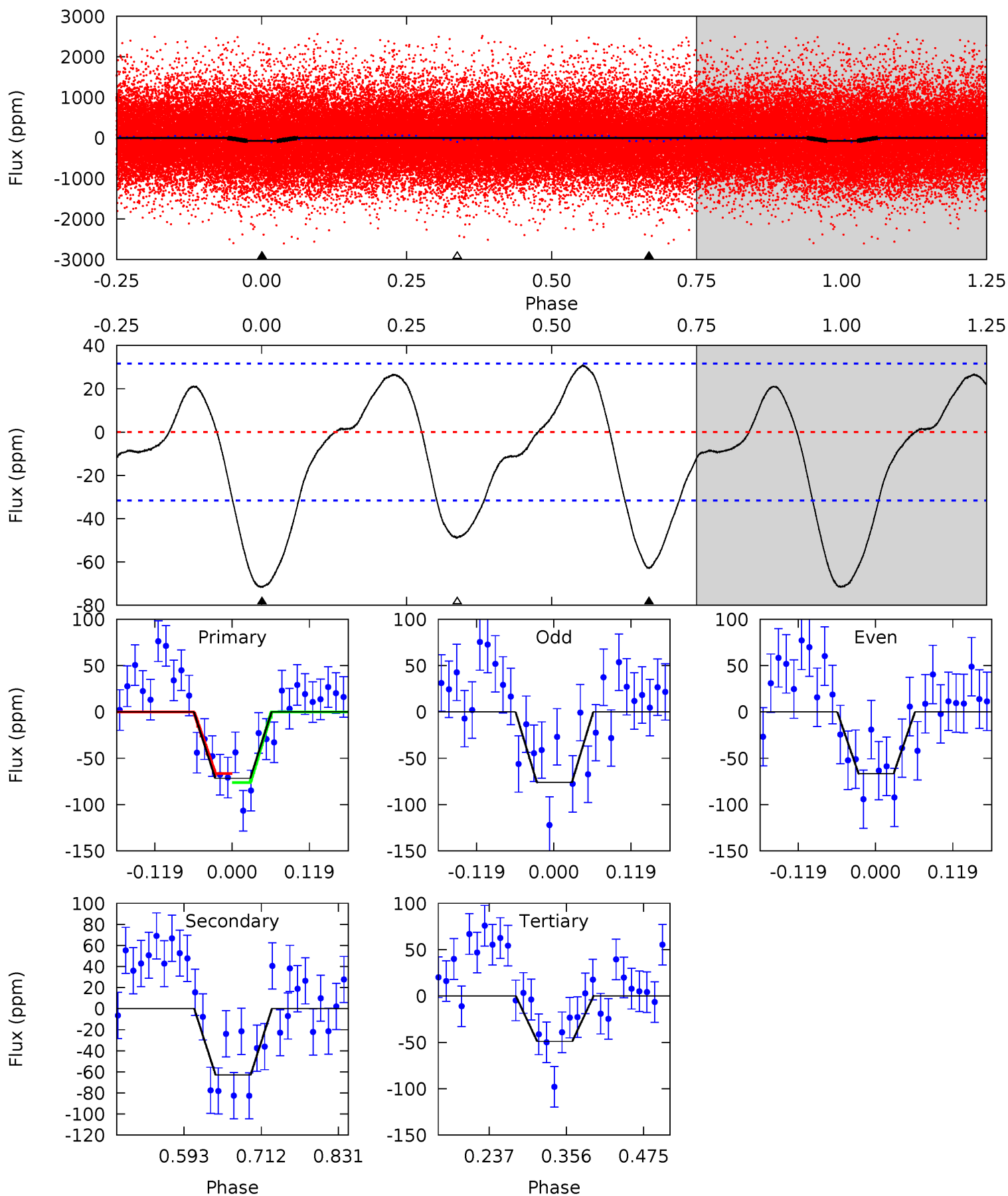
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.81	6.65	6.02	0	4.46	1.40	3.40	2.79	8.81	0.63	6.65	1.10	0.89	0.39	1.04



Alt Model-Shift Uniqueness Test

007212025-01, P = 0.622051 Days, E = 131.307709 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.3	9.01	7.02	0	4.53	1.56	3.11	3.24	10.3	1.99	9.01	0.68	1.00	0.30	0.70



Stellar Parameters For KIC 007212025

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4370^{+131}_{-131}	$4.606^{+0.046}_{-0.021}$	$0.070^{+0.250}_{-0.300}$	$0.678^{+0.032}_{-0.056}$	$0.677^{+0.052}_{-0.052}$	$3.055^{+0.654}_{-0.282}$
	+3%/-3%	+1%/-0%	+357%/-429%	+5%/-8%	+8%/-8%	+21%/-9%
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 007212025-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-41 ± 6	$0.86^{+0.61}_{-0.58}$	1973^{+63}_{-64}	3516^{+1775}_{-602}	$4.757^{+38.233}_{-3.162}$
Alt.	-63 ± 7	$0.80^{+0.63}_{-0.50}$	1973^{+64}_{-67}	3864^{+1958}_{-700}	$8.548^{+50.636}_{-5.934}$

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

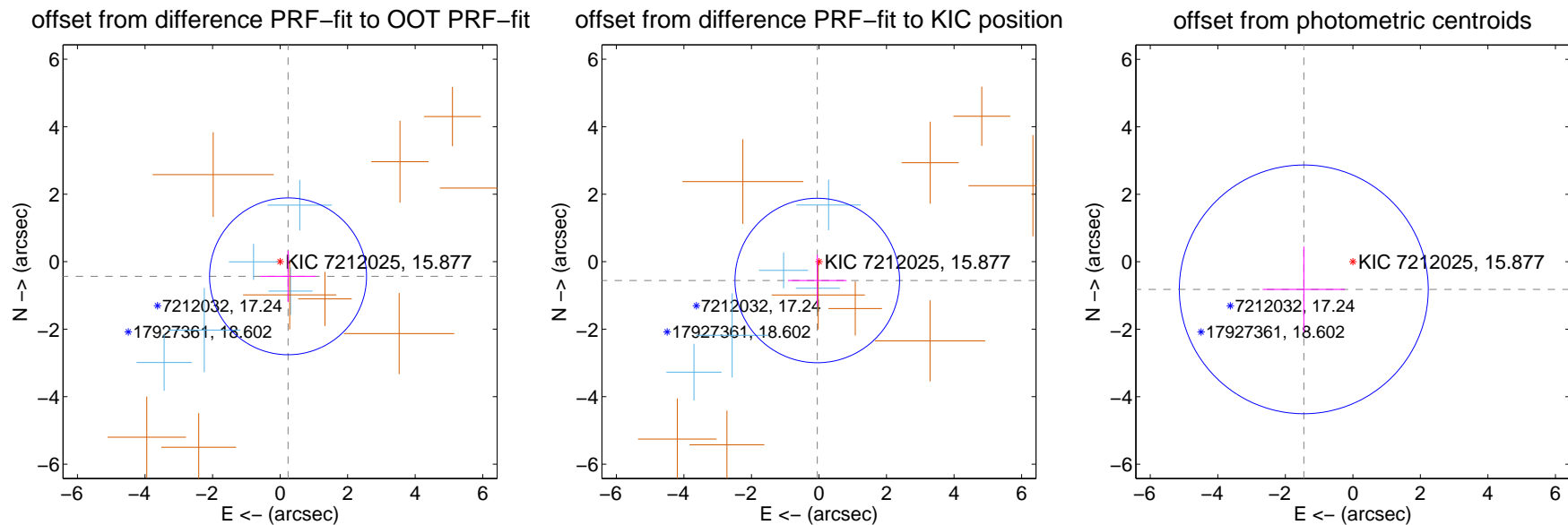
DV Centroid Data

Supplemental centroid analysis for 007212025-01. Kepler magnitude: 15.88. Transit SNR 8.86

There are 5 quarters with good PRF difference image offsets

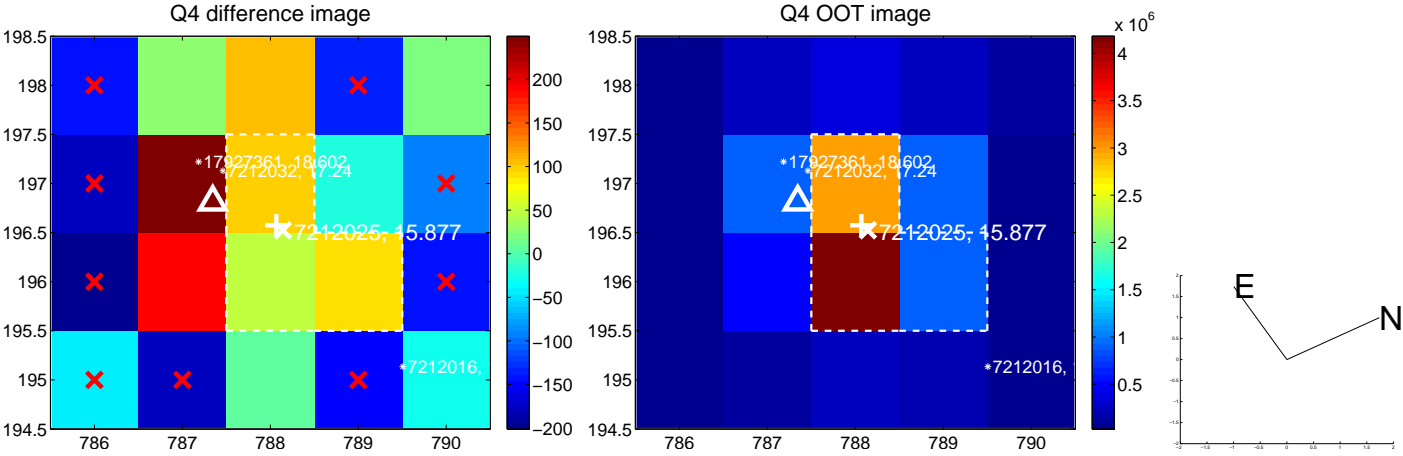
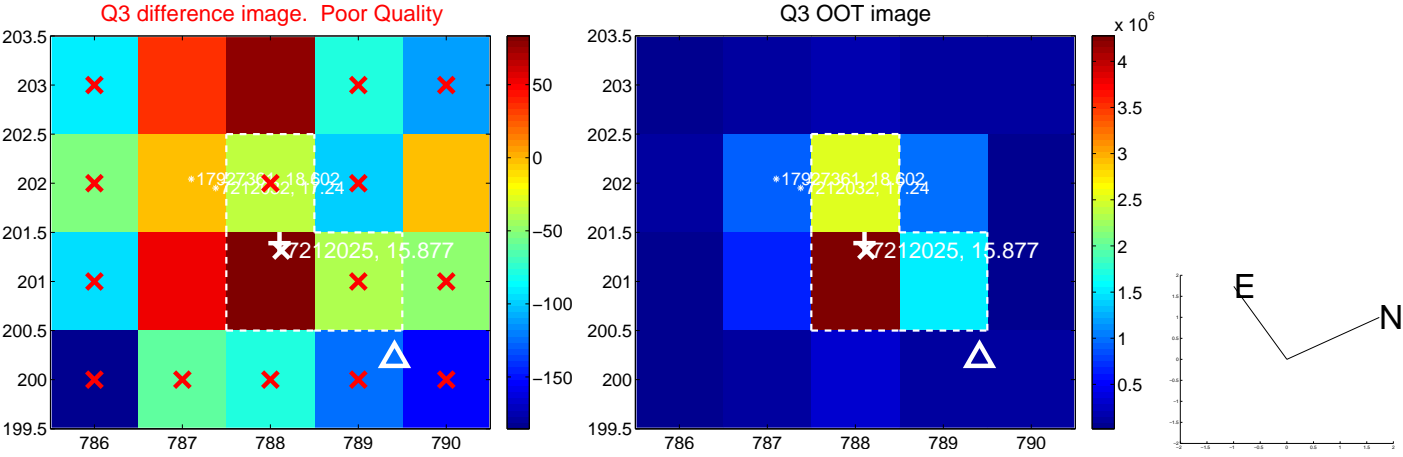
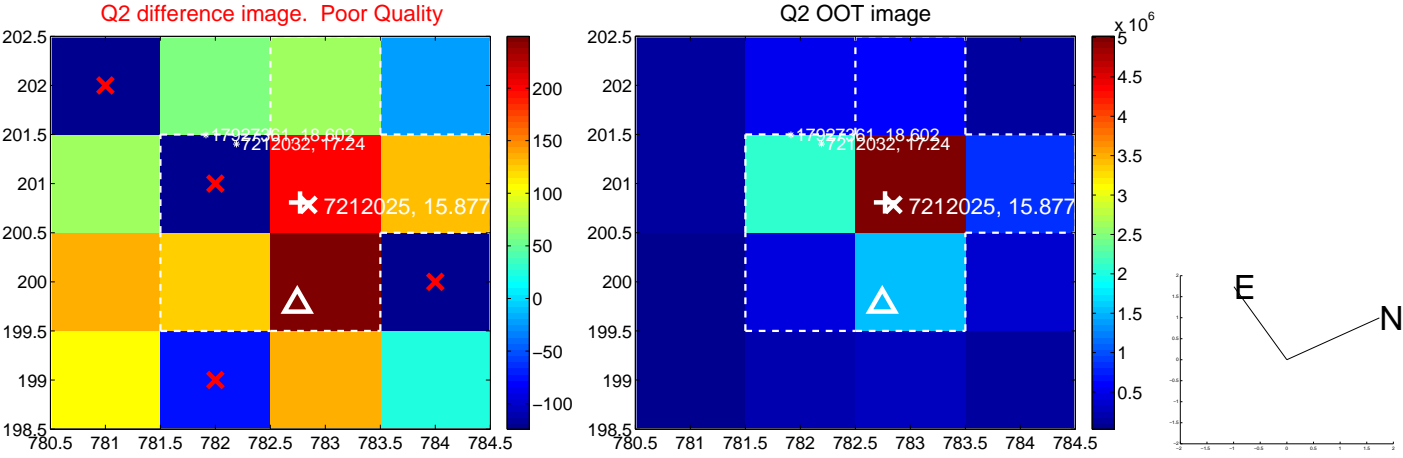
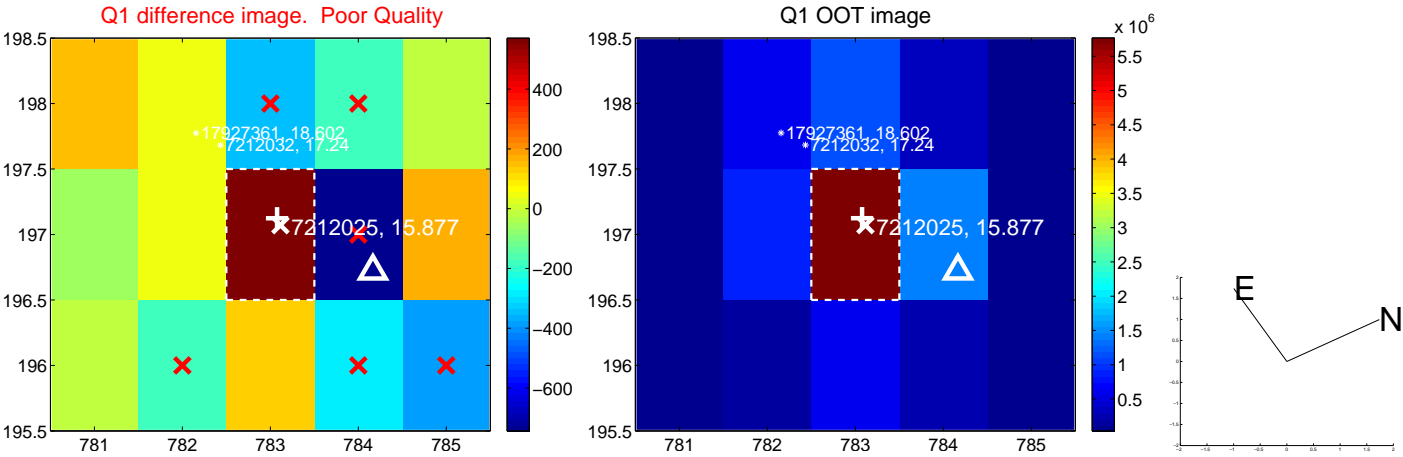
The direct PRF centroid is offset from the target star catalog position by about 0.30 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.494 ± 0.775	0.64	-0.236 ± 0.824	-0.434 ± 0.759
PRF-fit source offset from KIC position	0.560 ± 0.812	0.69	0.051 ± 0.867	-0.558 ± 0.757
photometric centroid source offset	1.67 ± 1.23	1.36	1.45 ± 1.22	-0.82 ± 1.27

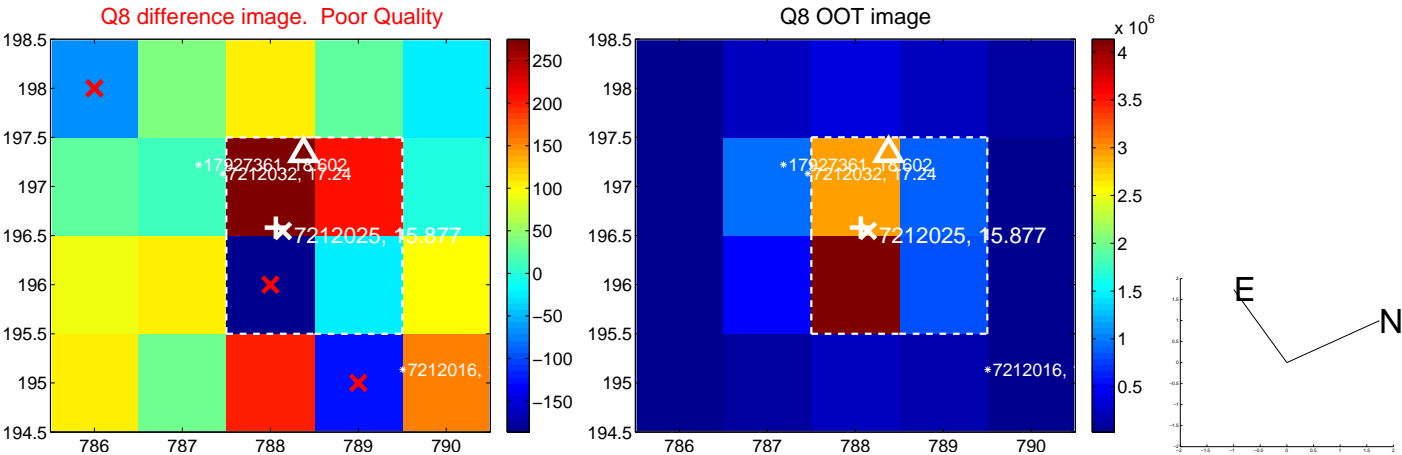
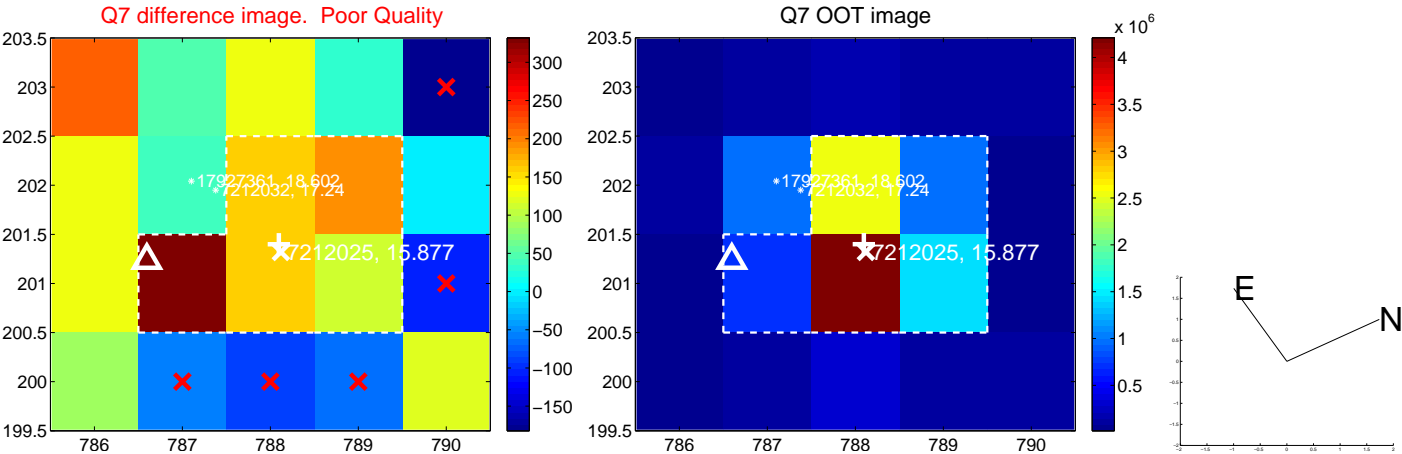
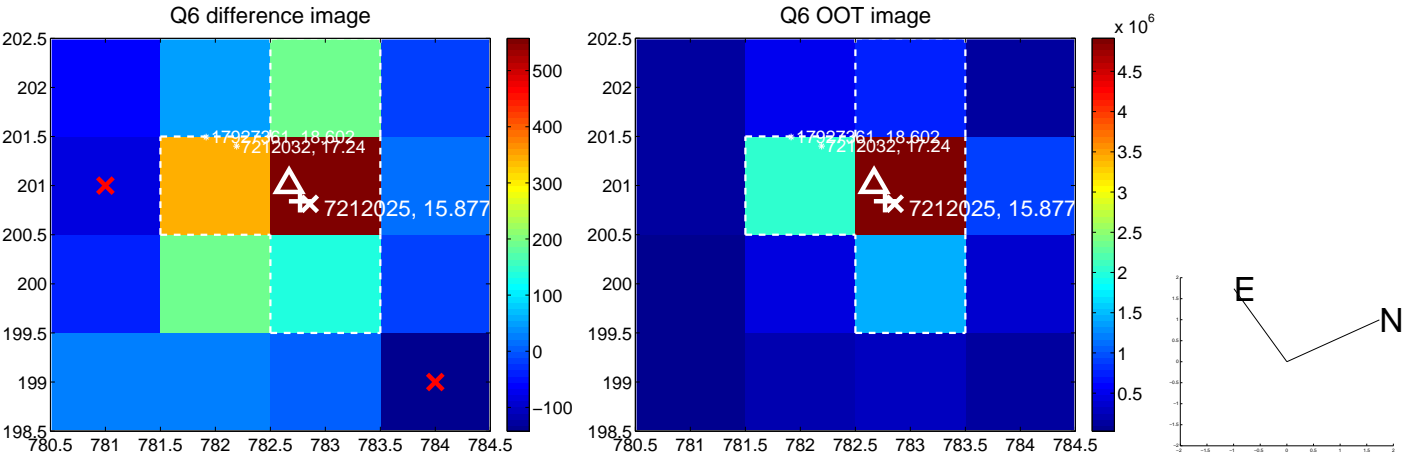
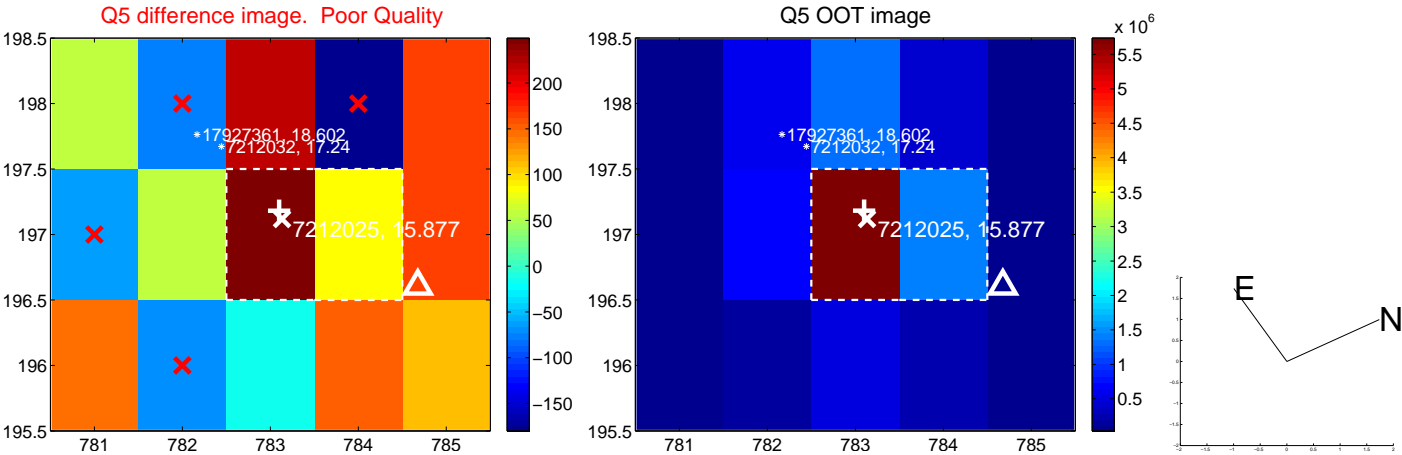


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

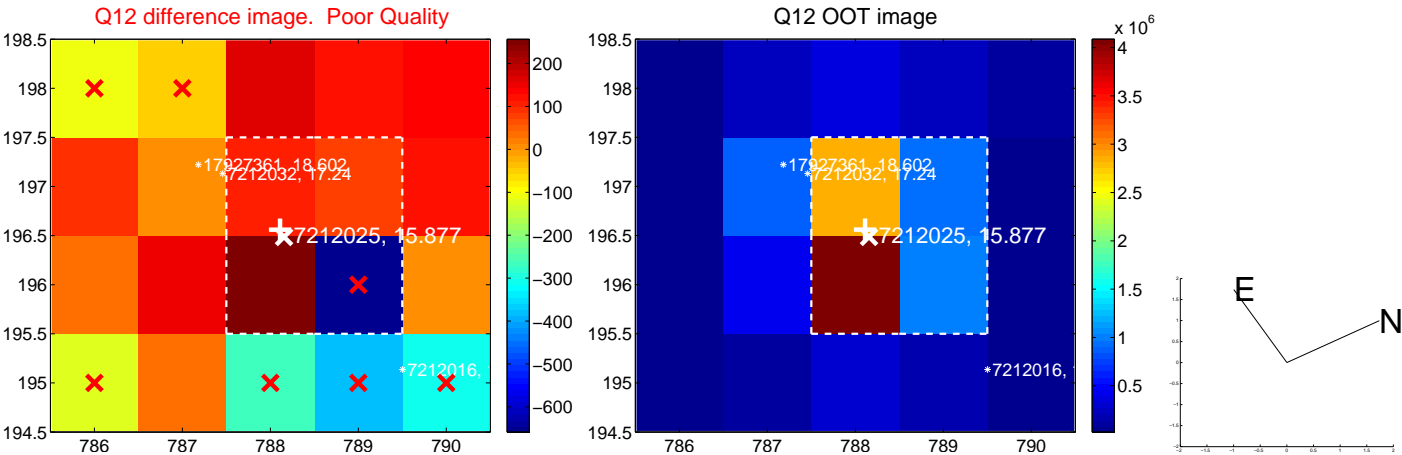
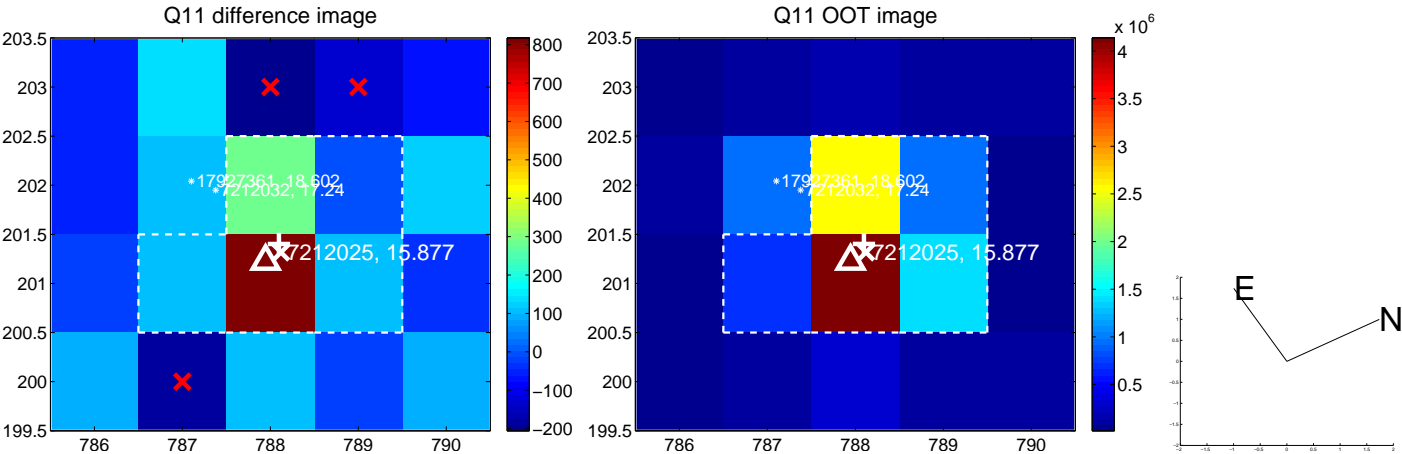
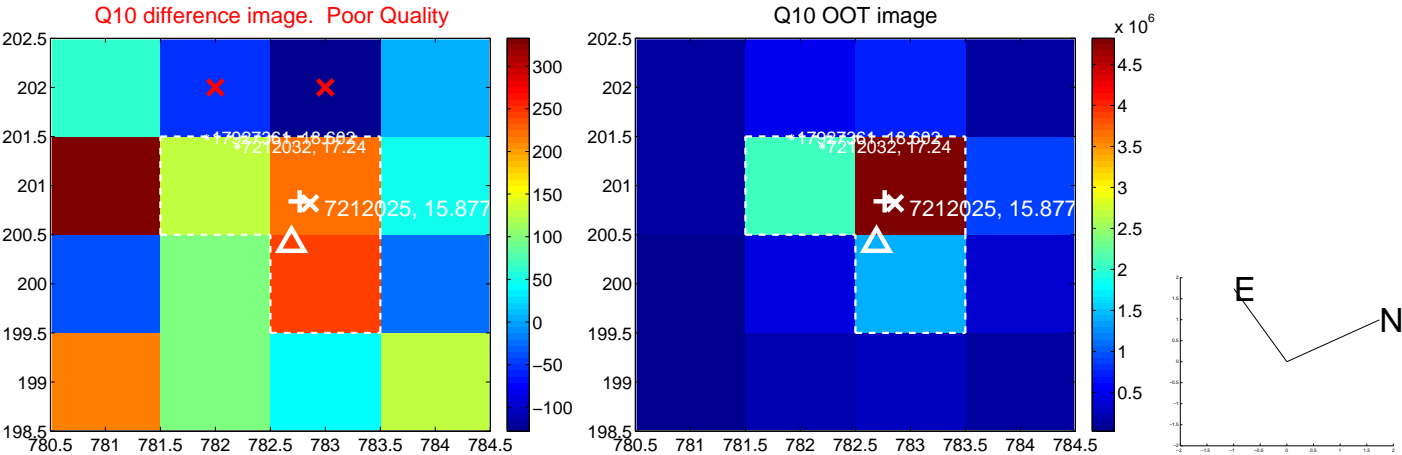
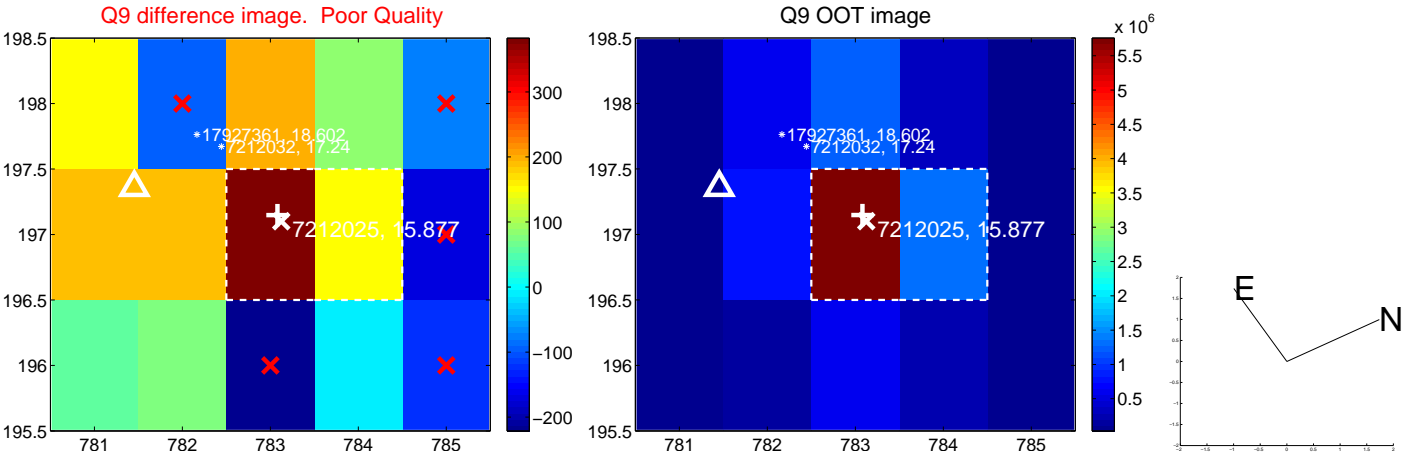
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



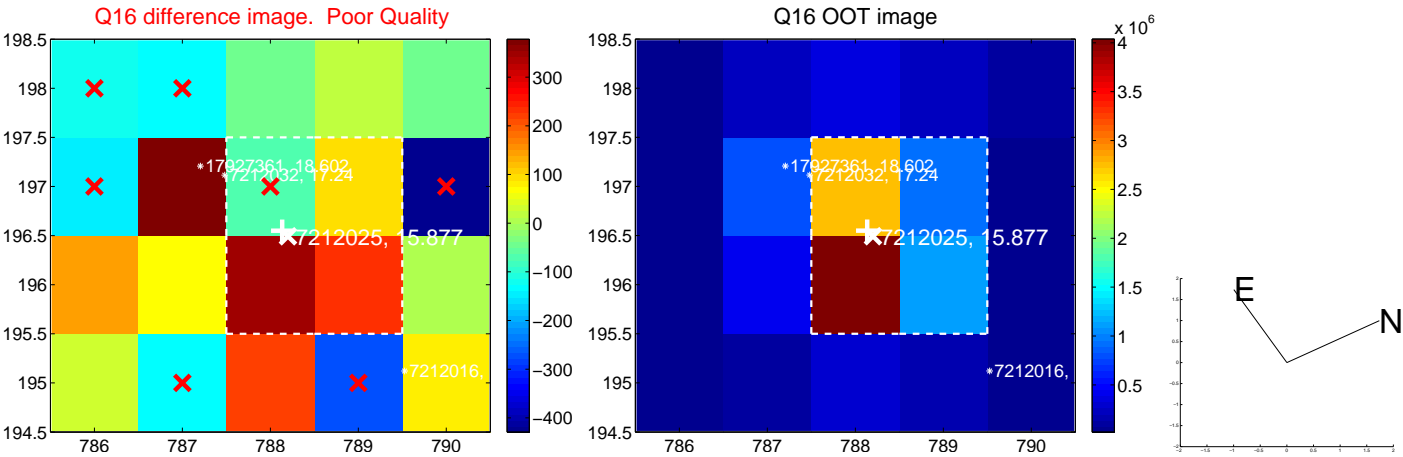
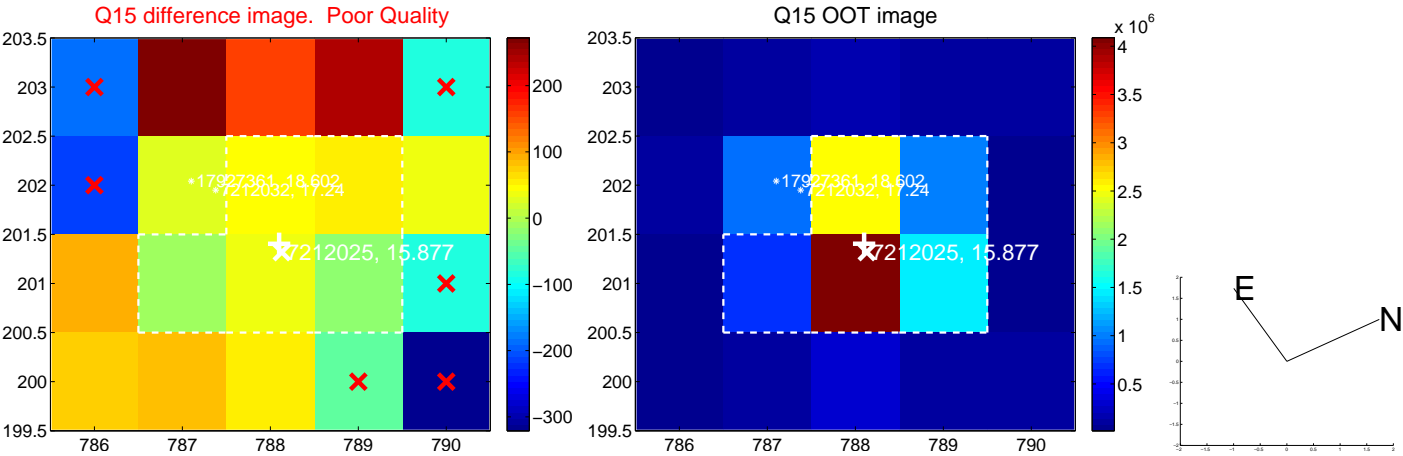
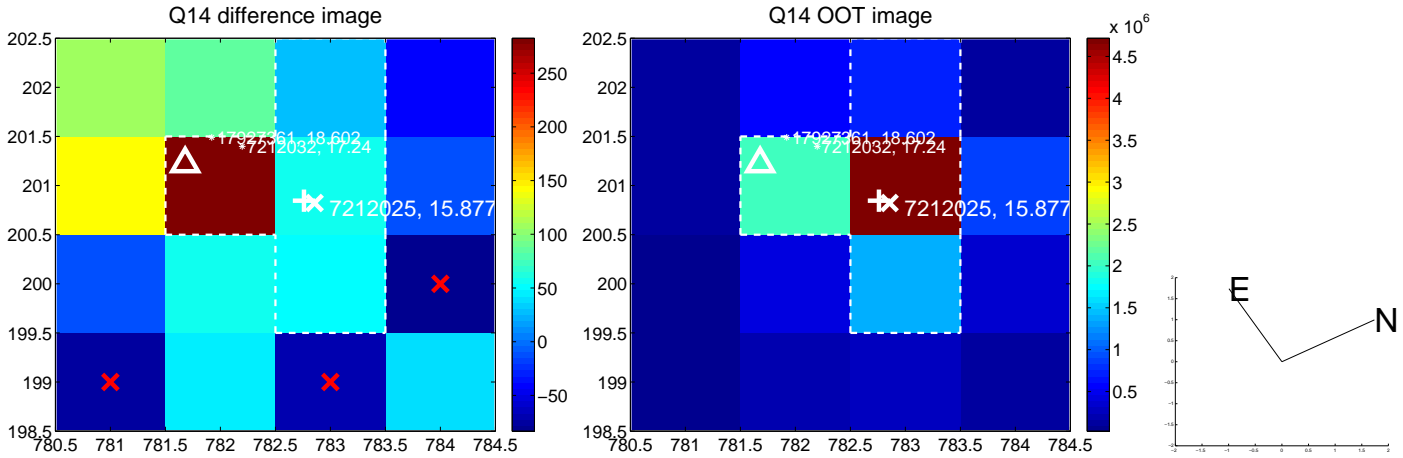
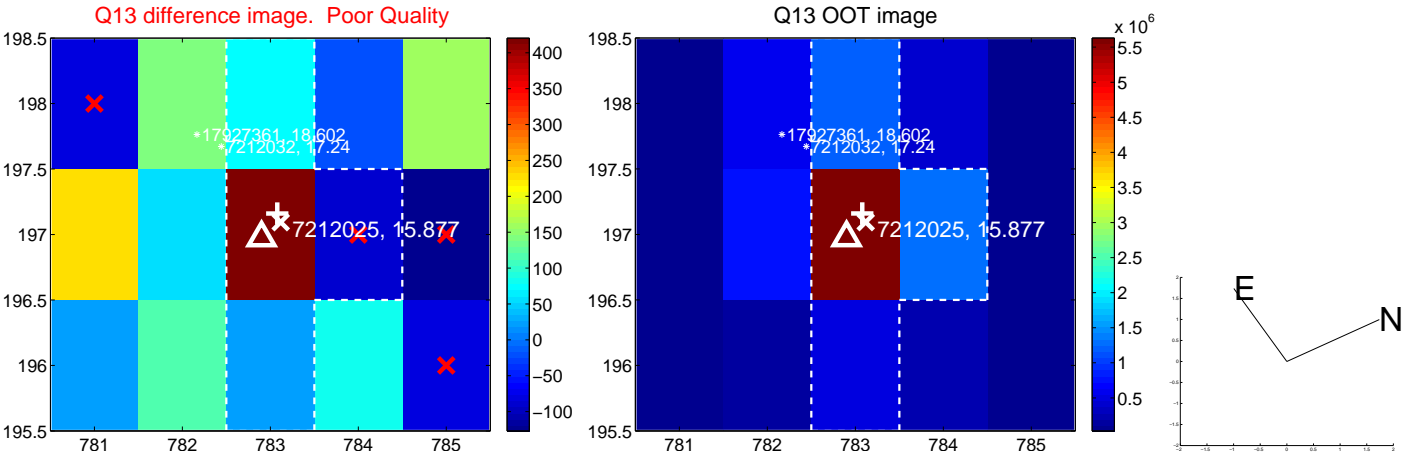
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



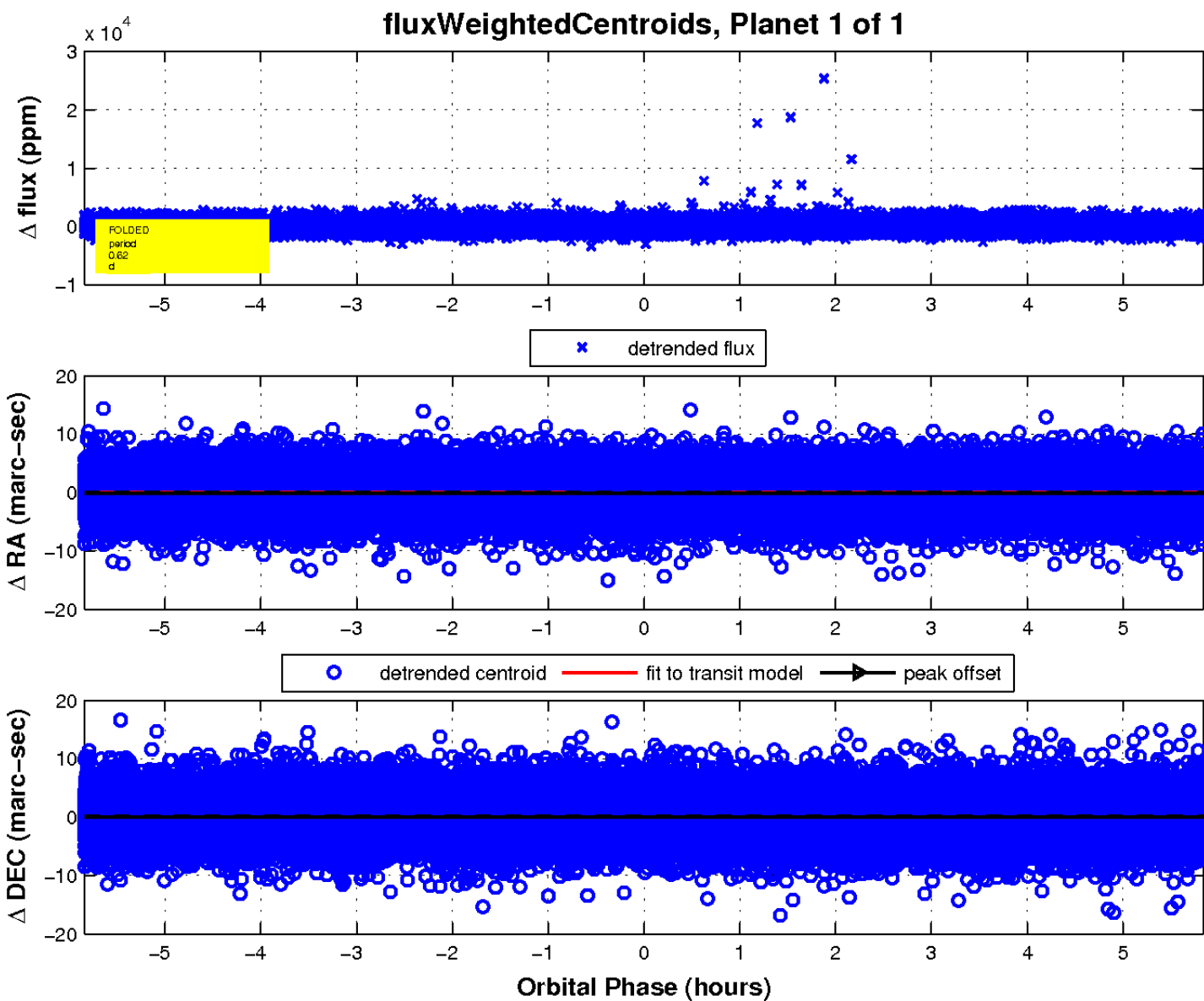
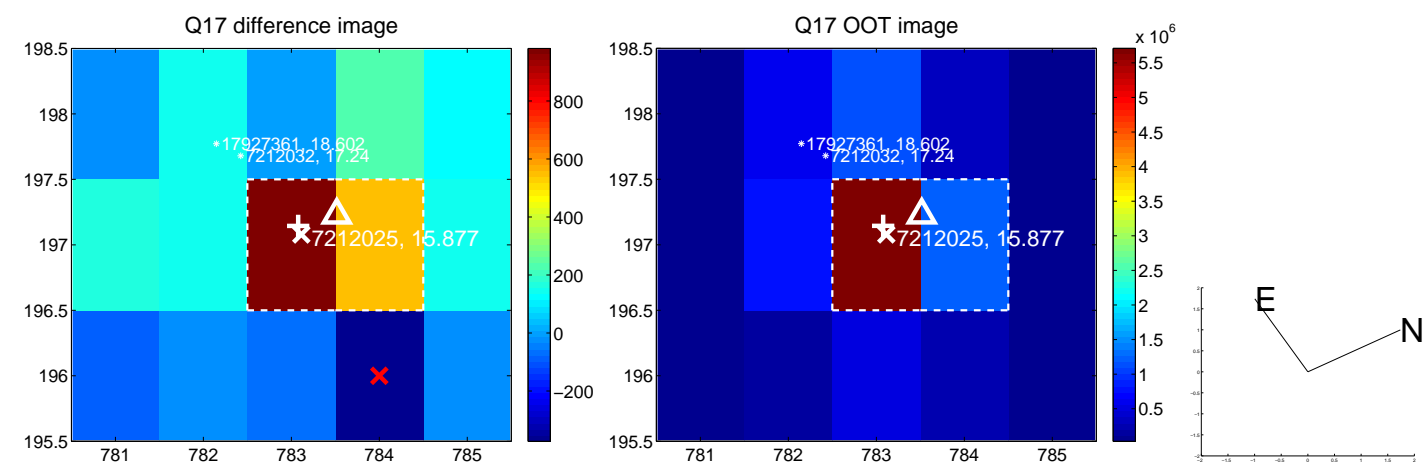
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

