

KIC 004859559

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})
004859559-01	OBS	No	1.144487	131.886146	9.1	12.559	11.5	0.9	1.86	6075	0.57	8447.29

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004859559-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_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.

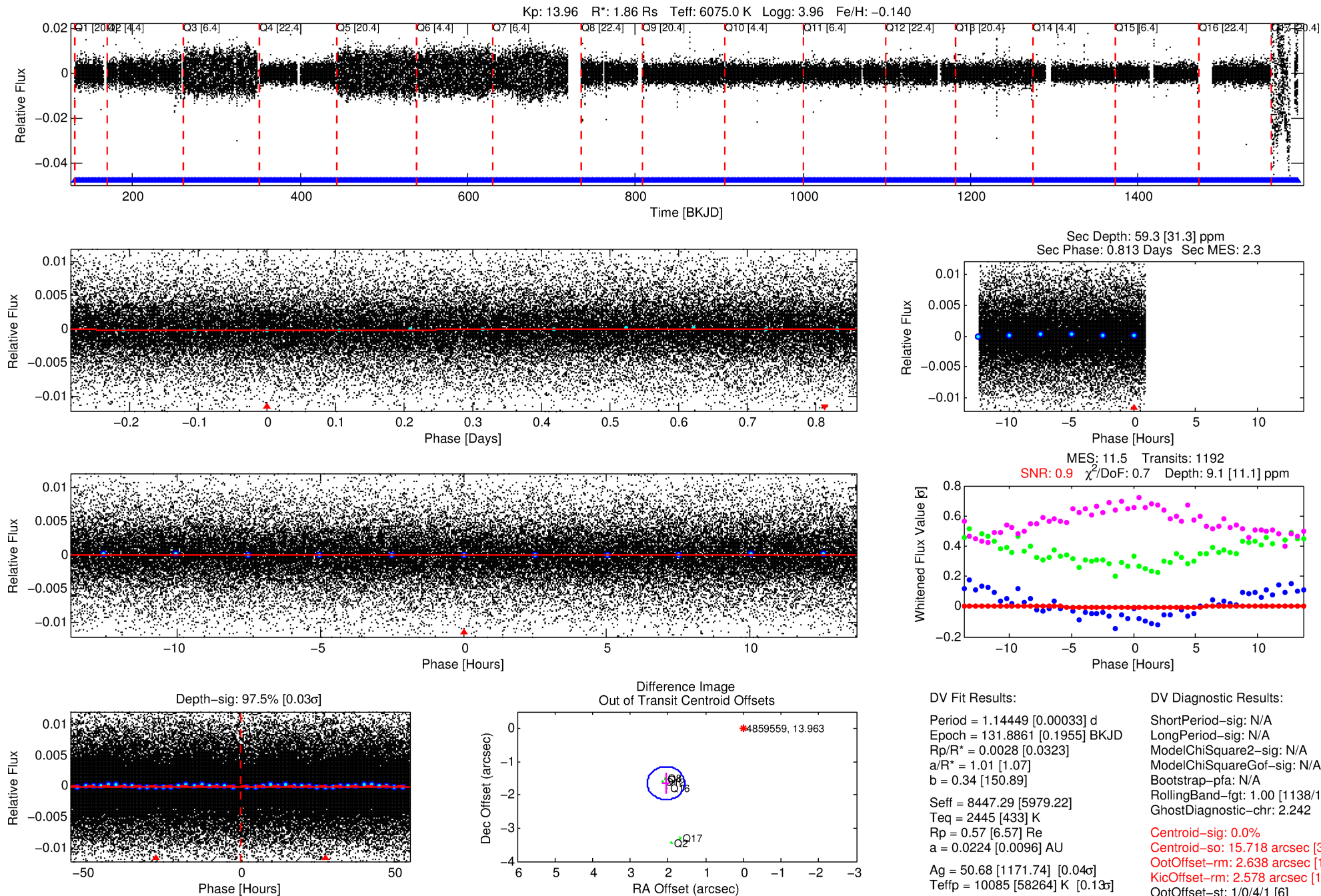
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004859559-01

No Significant Match Found

DV One-Page Summary

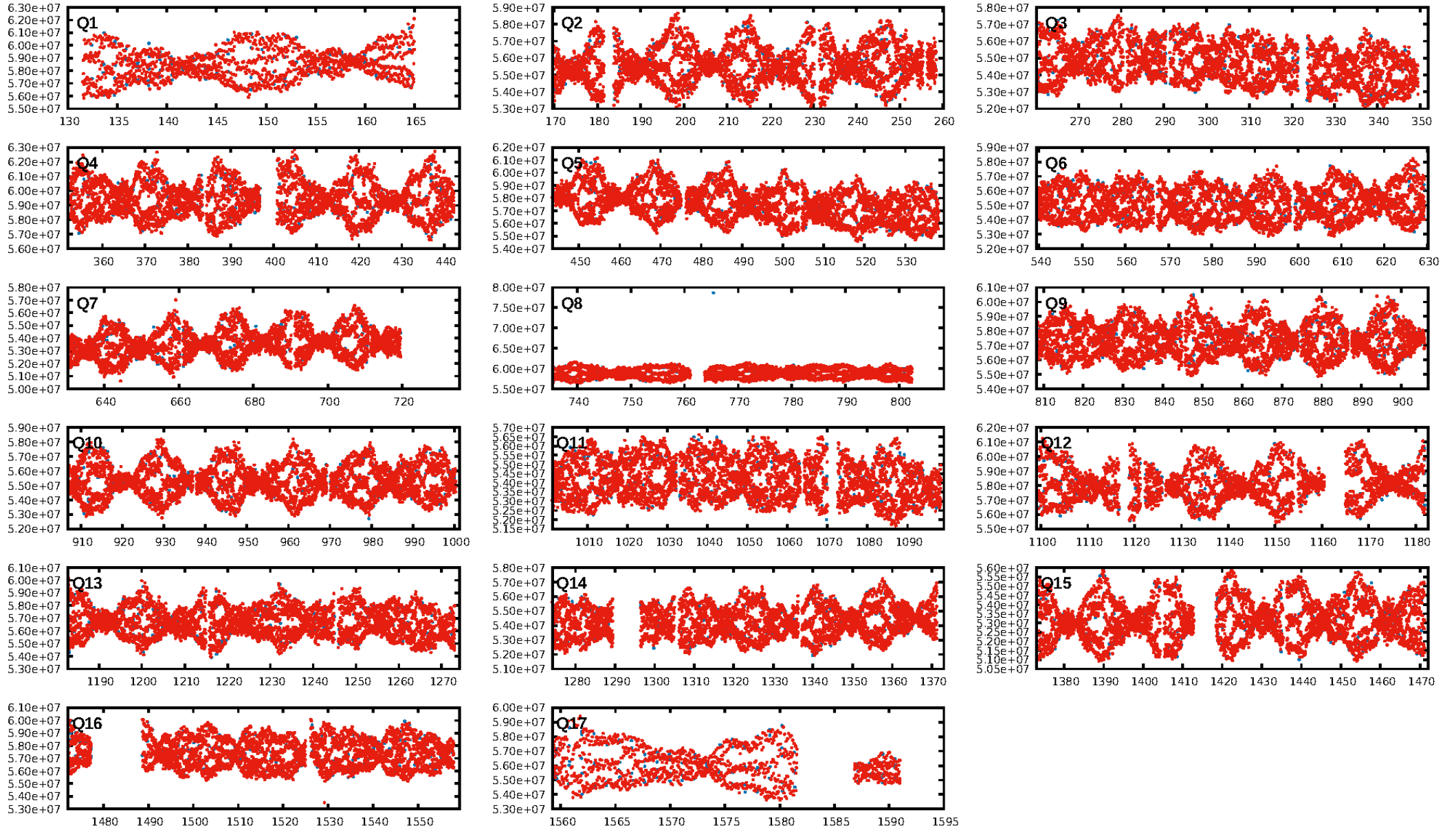
KIC: 4859559 Candidate: 1 of 1 Period: 1.144 d



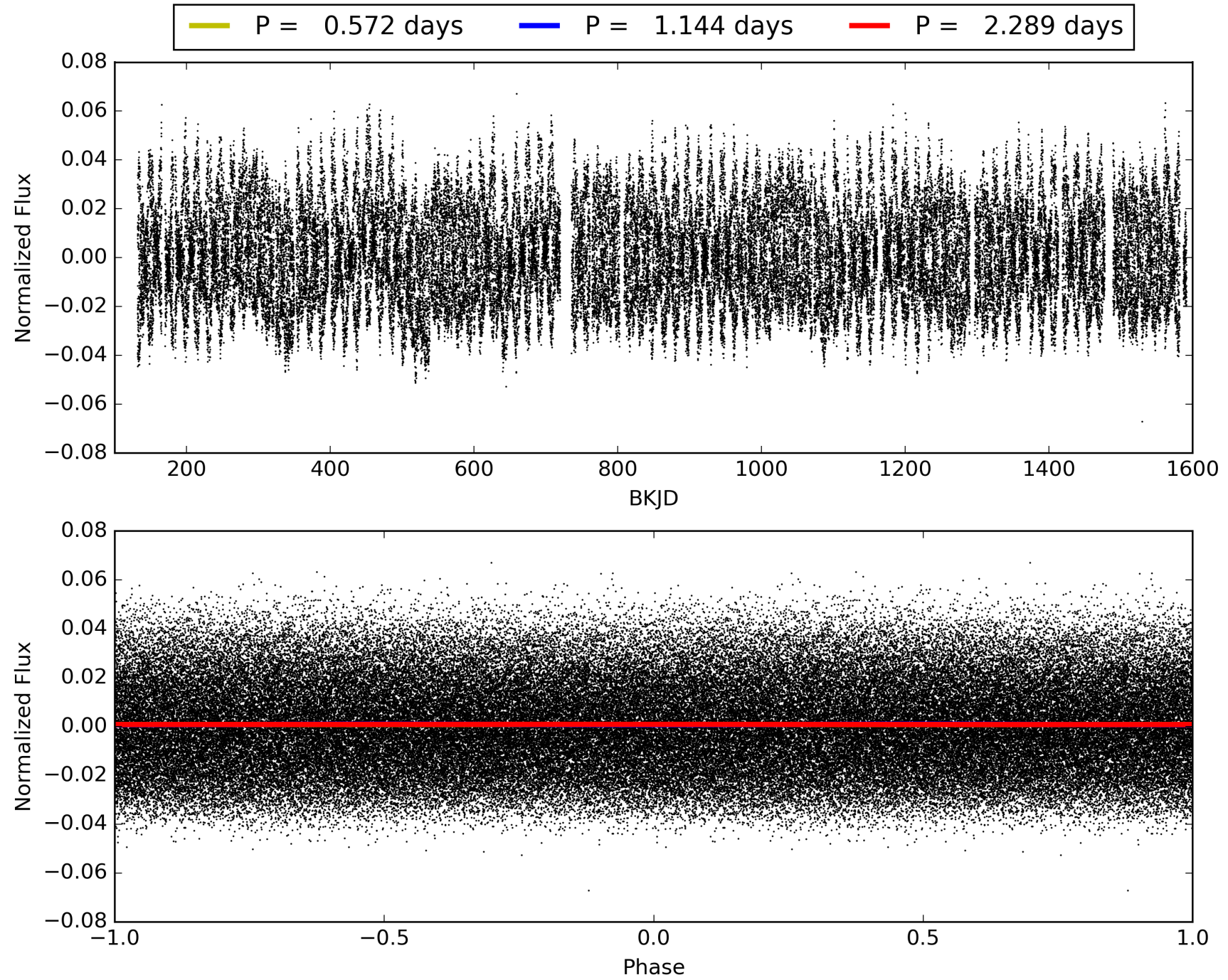
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 08:02:04 Z

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

TCE 004859559-01, PDC Light Curves

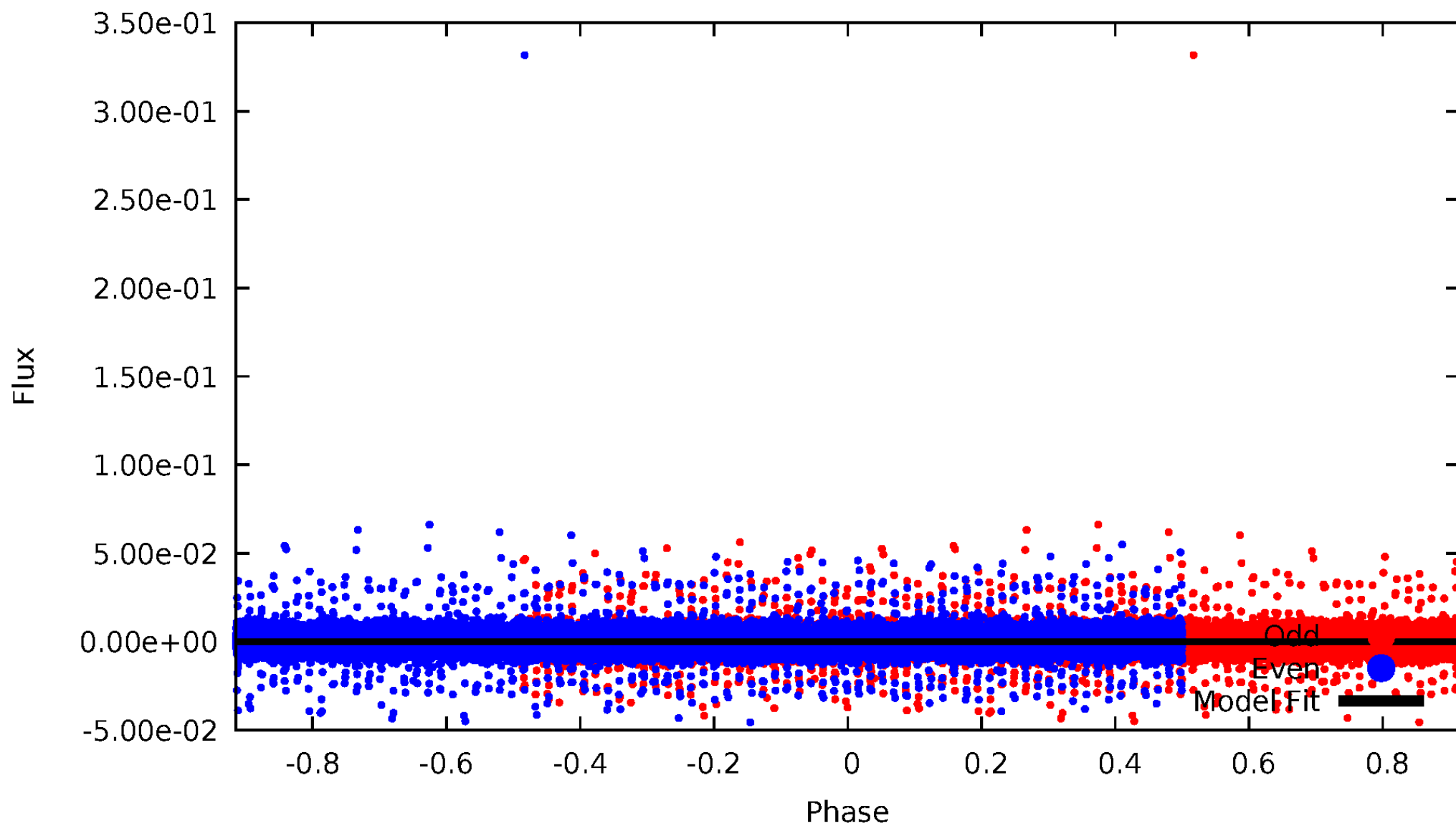


TCE 004859559-01



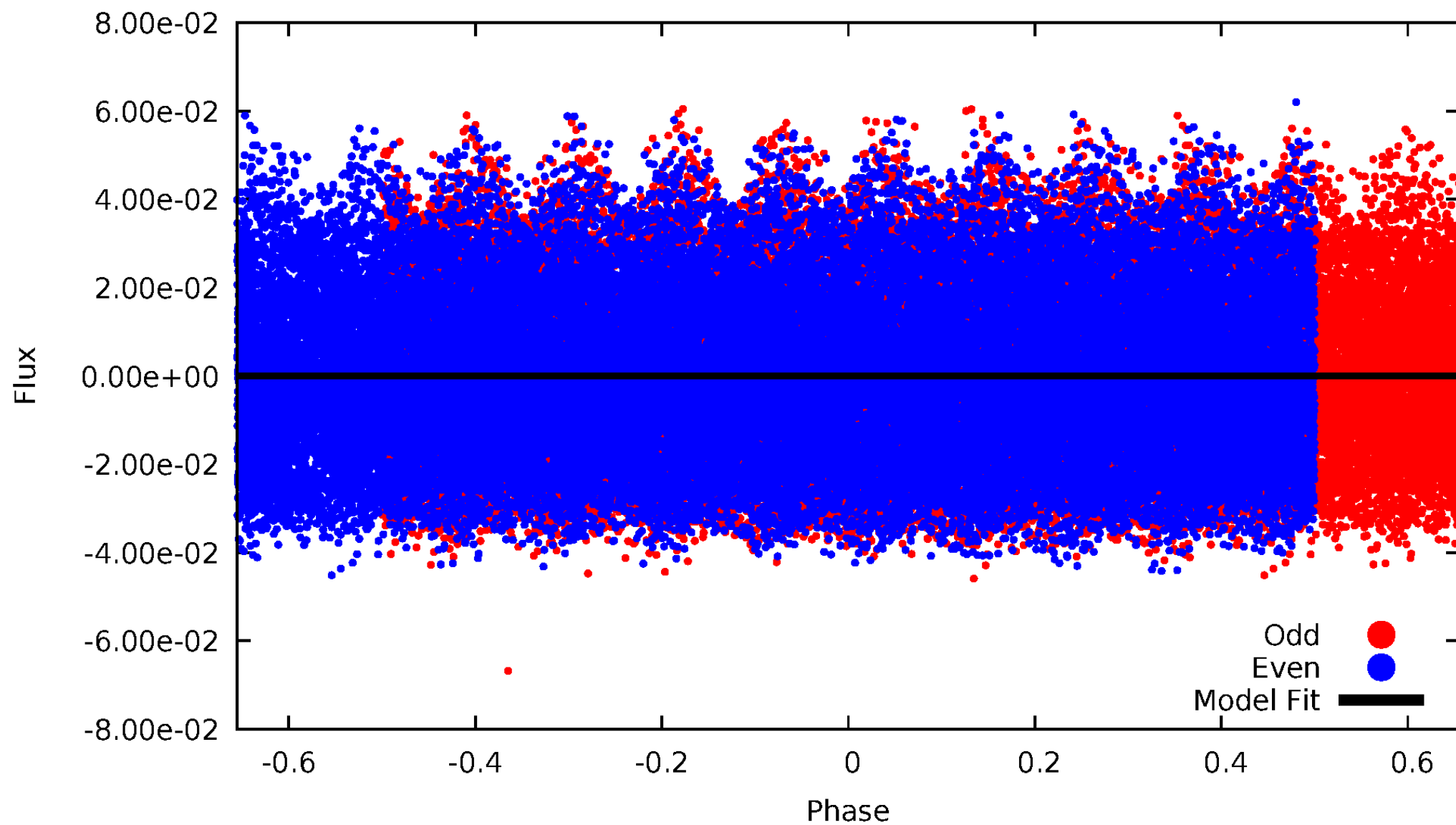
DV Odd/Even

TCE 004859559-01



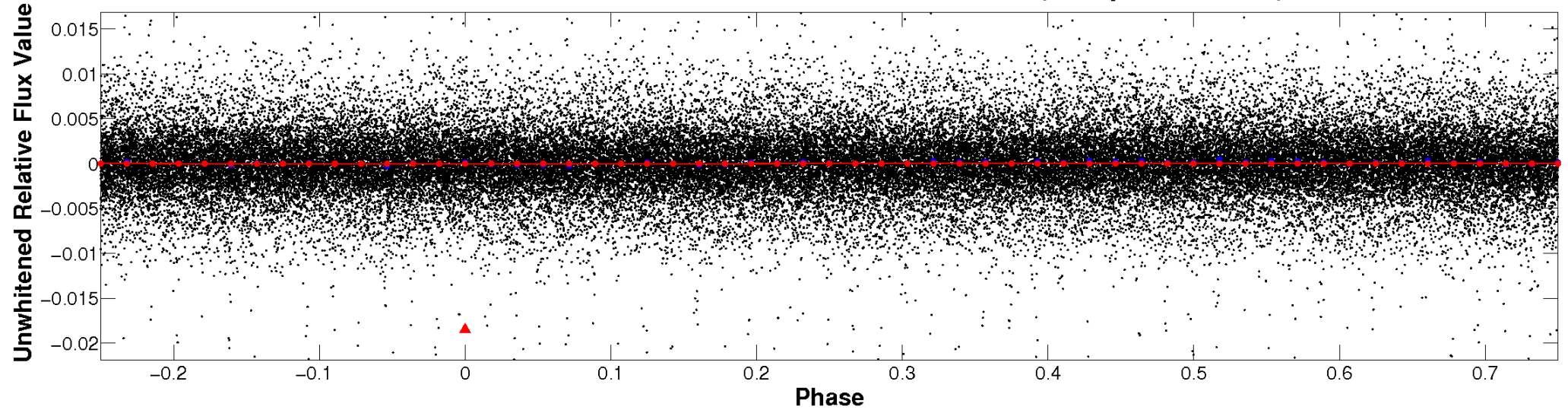
ALT Odd/Even

TCE 004859559-01

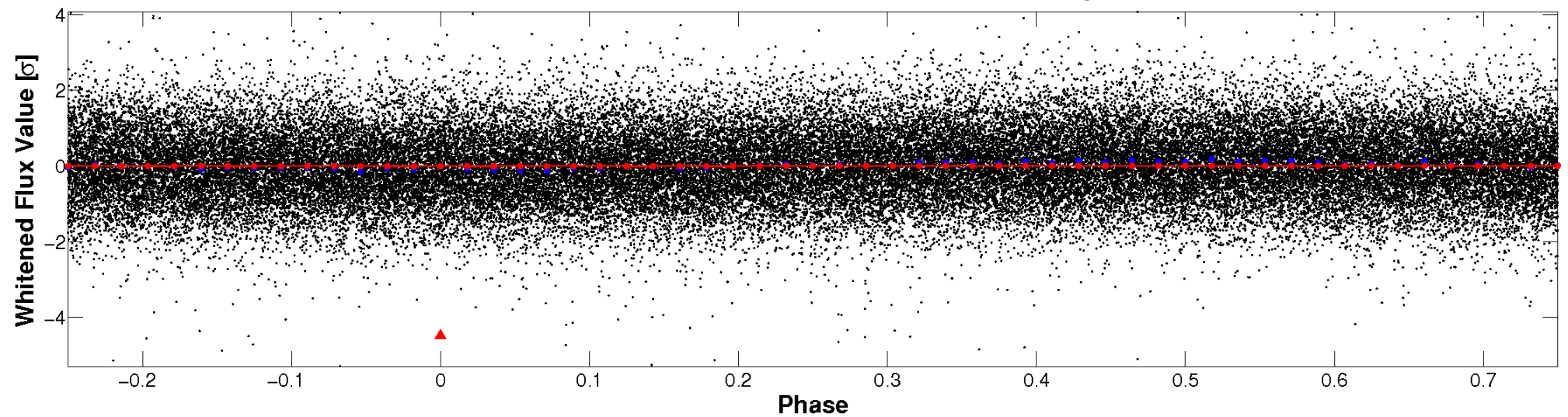


Non-Whitened Vs. Whitened Light Curve

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

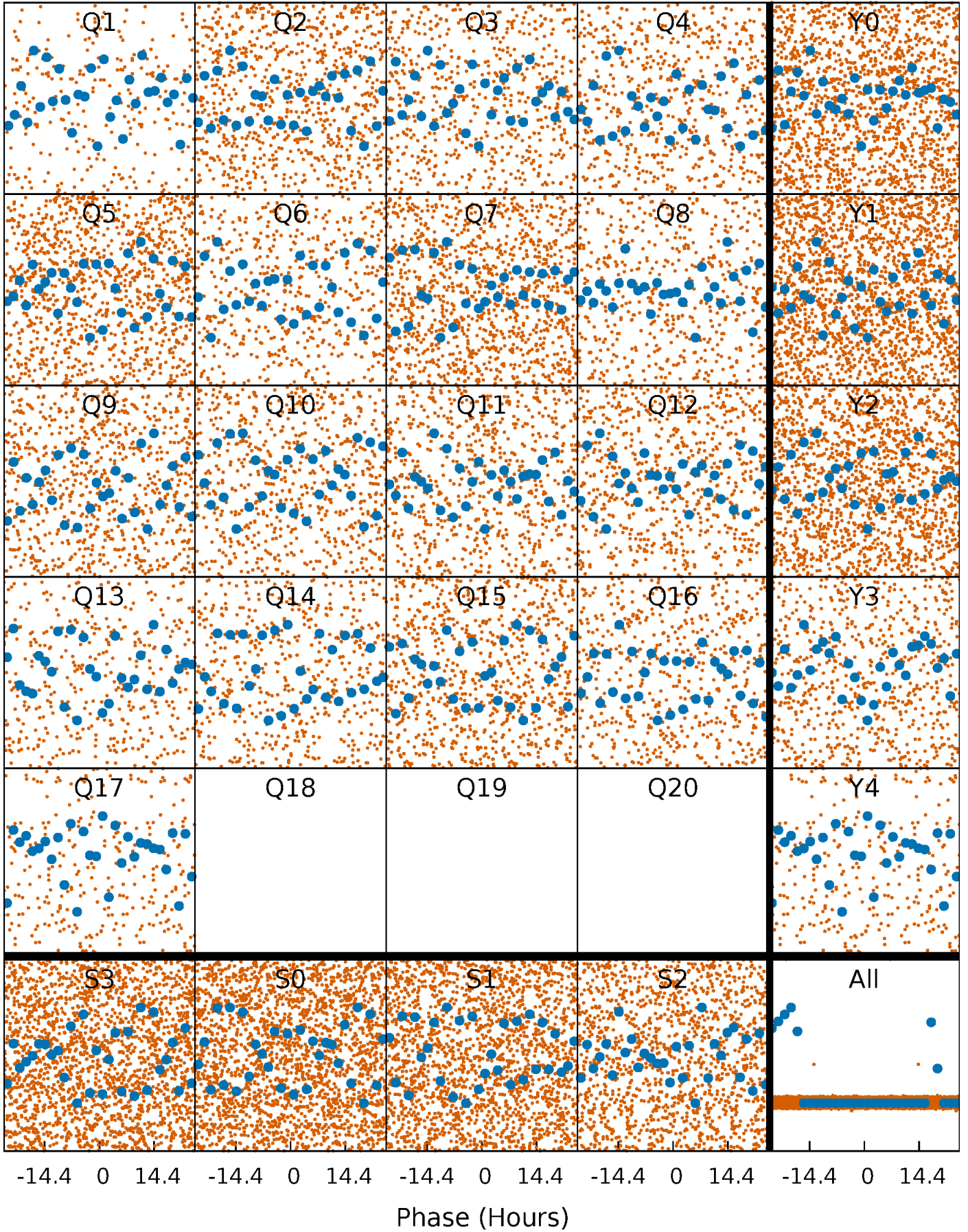


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



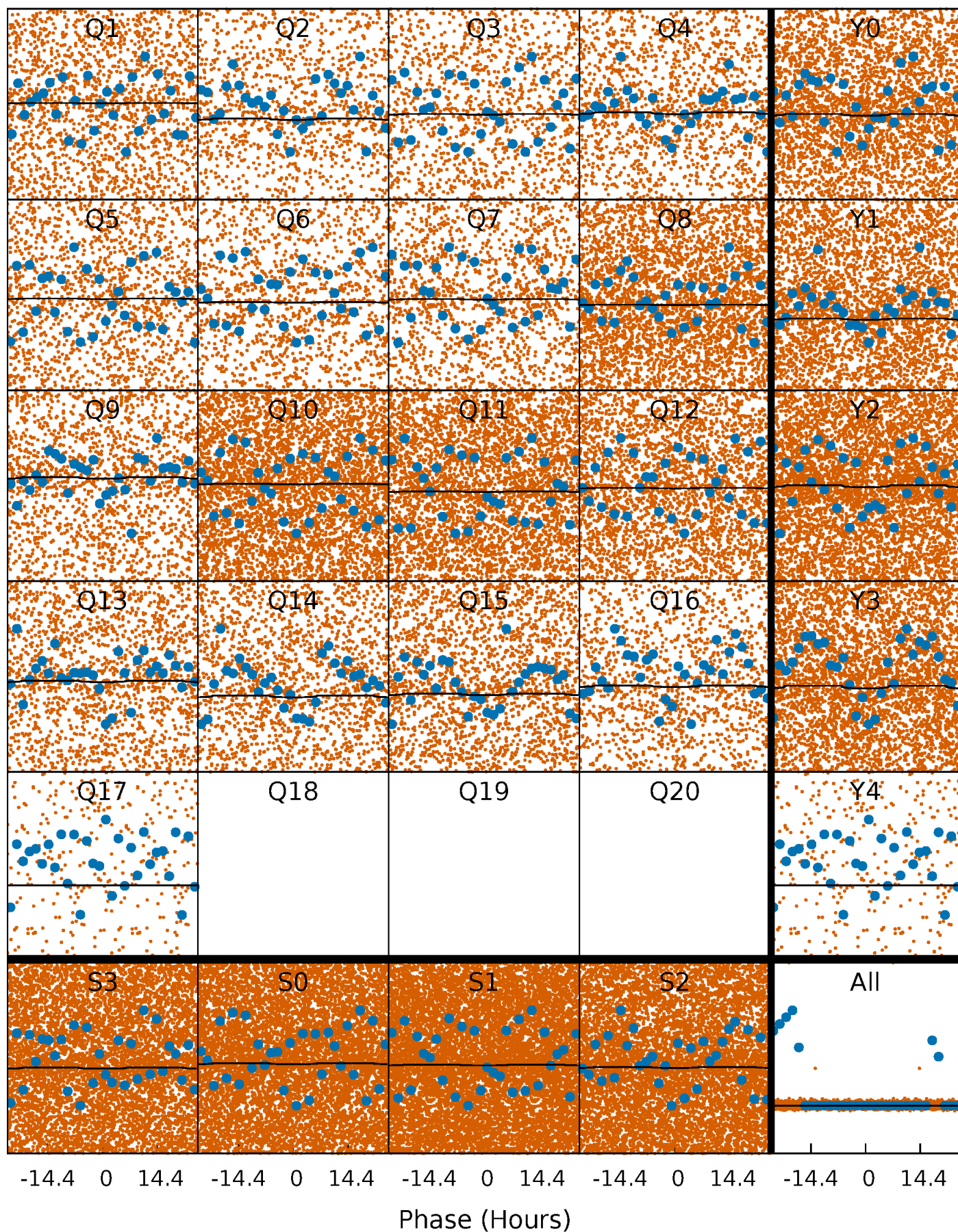
PDC Quarter-Phased Transit Curves

TCE 004859559-01 $P = 1.144487$ Days $T_0 = 131.886145$ (BKJD)



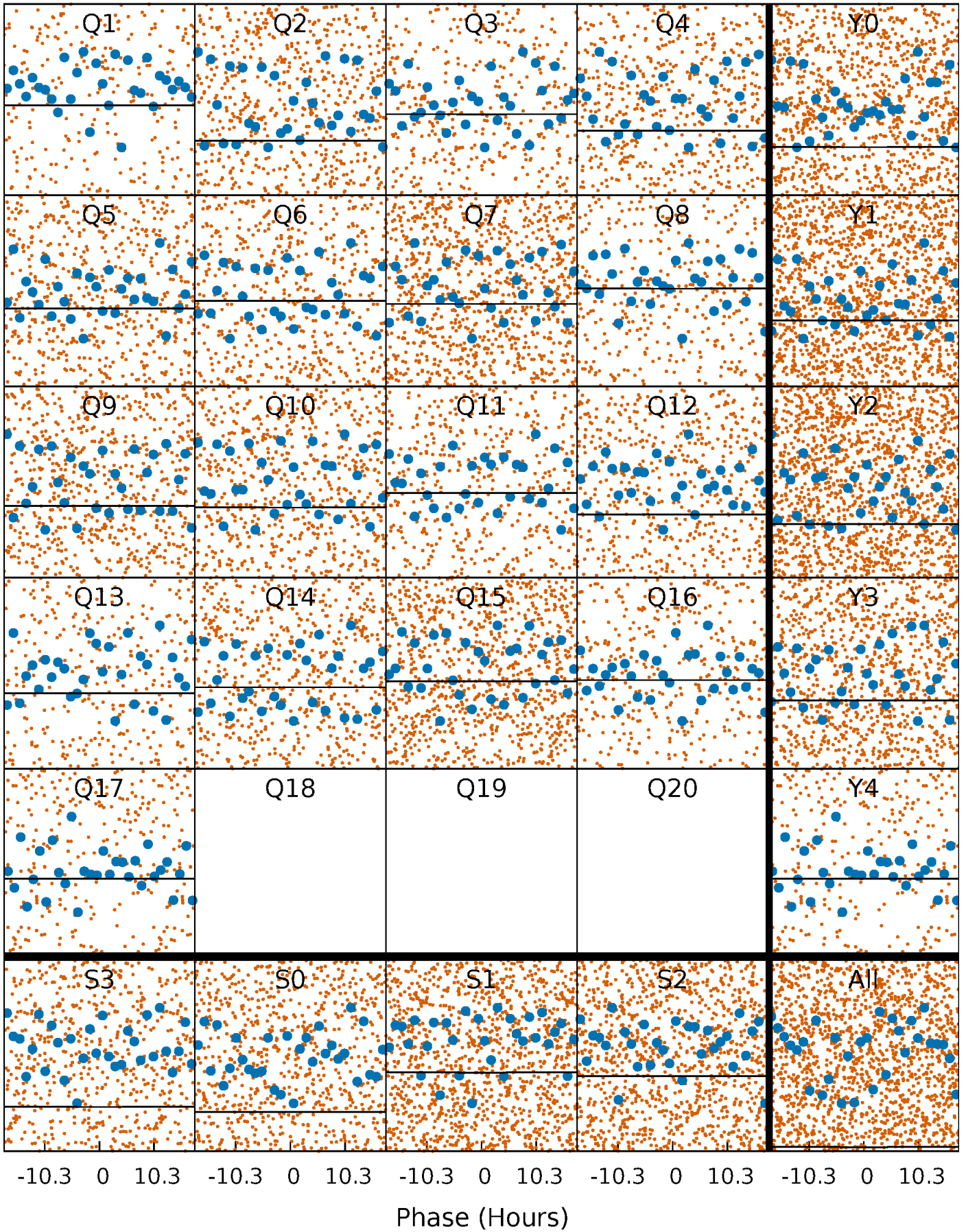
DV Quarter-Phased Transit Curves

TCE 004859559-01 P= 1.144487 Days $T_0=131.886145$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

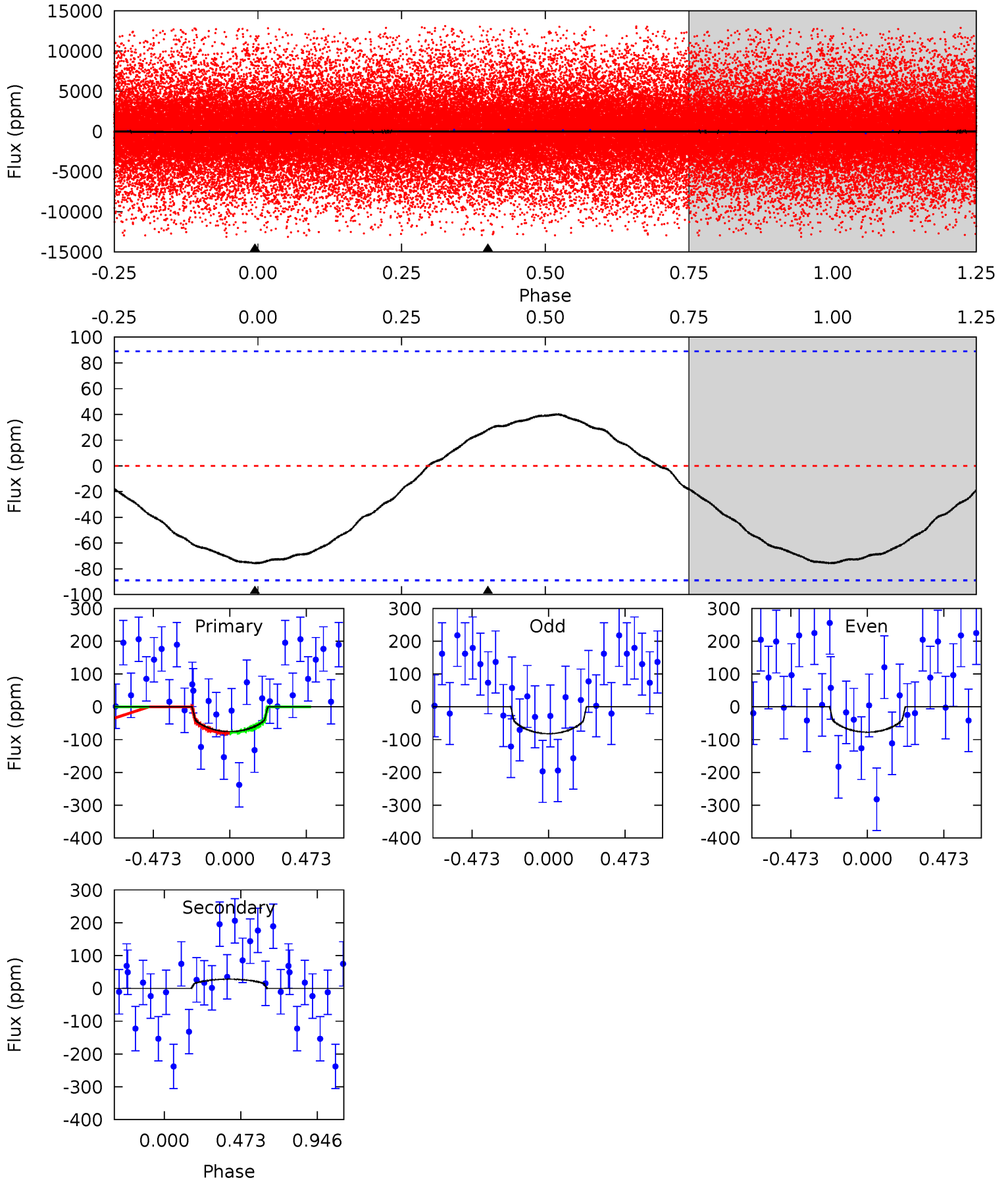
TCE 004859559-01 P= 1.144663 Days $T_0=131.951303$ (BKJD)



DV Model-Shift Uniqueness Test

004859559-01, P = 1.144487 Days, E = 130.741658 Days

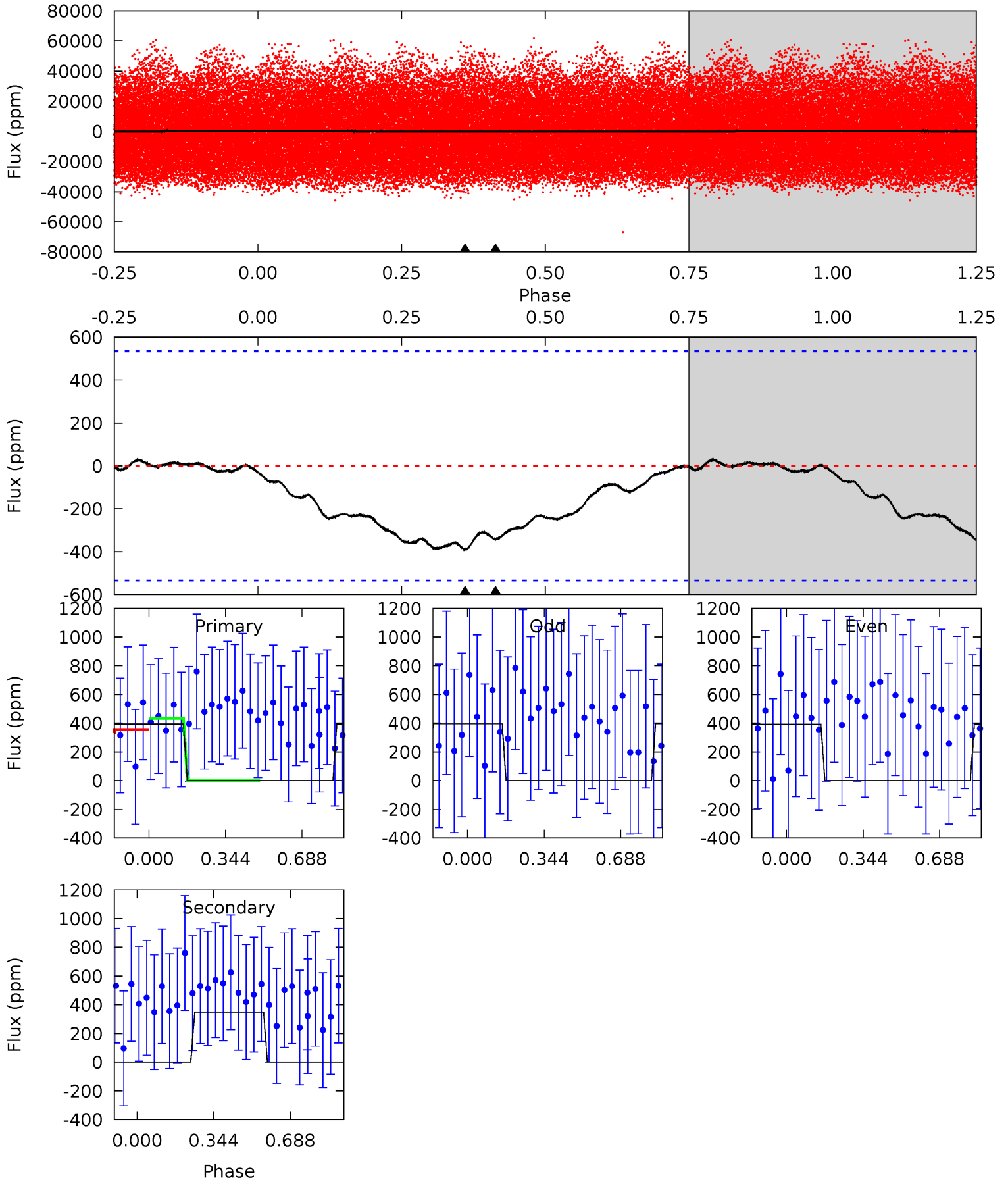
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.59	-1.33	0	0	4.23	0.72	0.43	3.59	3.59	-1.33	-1.33	0.11	0.61	0.35	0.07



Alt Model-Shift Uniqueness Test

004859559-01, P = 1.144663 Days, E = 130.806640 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.17	2.80	0	0	4.30	0.95	0.15	3.17	3.17	2.80	2.80	0.01	3.64	0.08	0.31



Stellar Parameters For KIC 004859559

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6075^{+201}_{-201}	$3.956^{+0.413}_{-0.138}$	$-0.140^{+0.300}_{-0.300}$	$1.865^{+0.430}_{-0.799}$	$1.146^{+0.178}_{-0.198}$	$0.249^{+0.908}_{-0.102}$
	+3%/-3%	+10%/-3%	+214%/-214%	+23%/-43%	+16%/-17%	+365%/-41%
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 004859559-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	28 ± 21	$4.28^{+4.80}_{-2.99}$	3365^{+278}_{-386}	-3726^{+438}_{-1523}	$-0.311^{+0.278}_{-3.713}$
Alt.	-348 ± 124	$4.09^{+4.34}_{-2.89}$	3327^{+263}_{-360}	5426^{+6080}_{-1608}	$5.529^{+56.214}_{-4.407}$

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 $A_{obs} \gg 1.0$

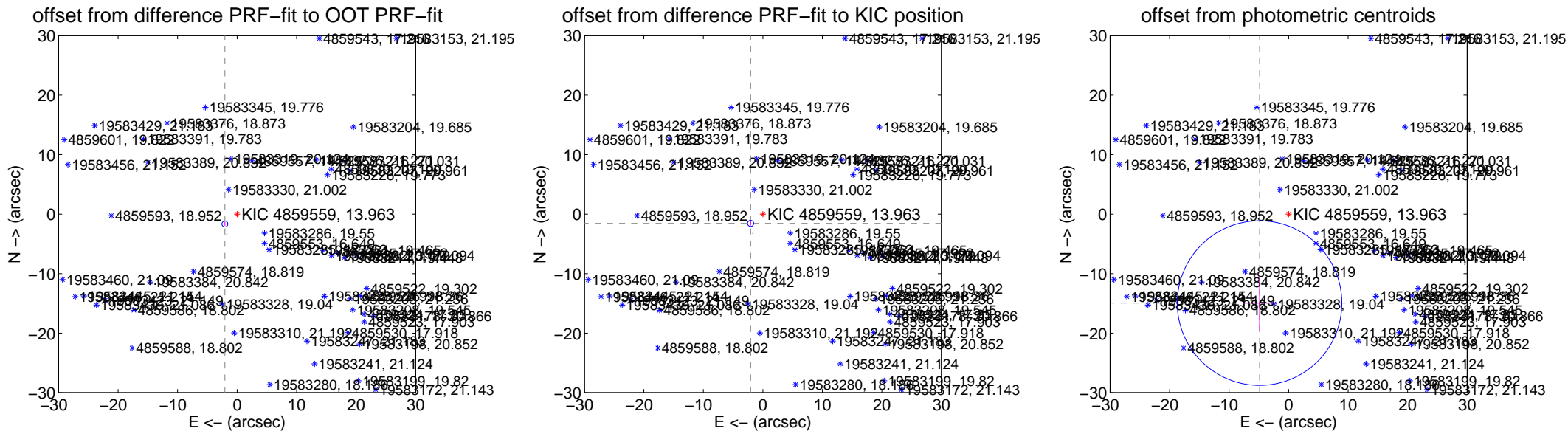
DV Centroid Data

Supplemental centroid analysis for 004859559-01. Kepler magnitude: 13.96. Transit SNR 0.87

There are 0 quarters with good PRF difference image offsets

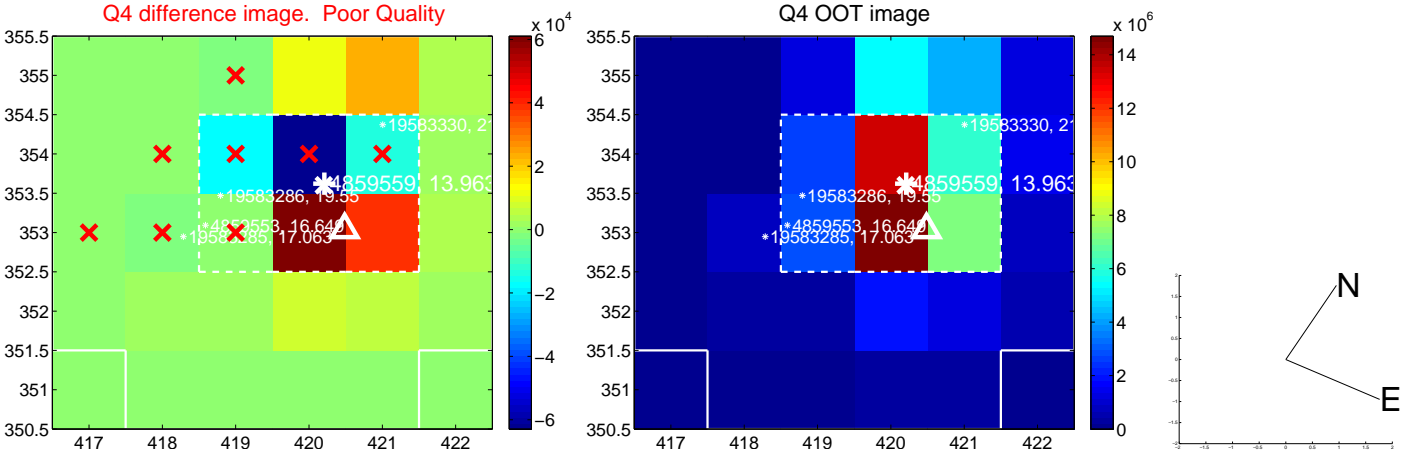
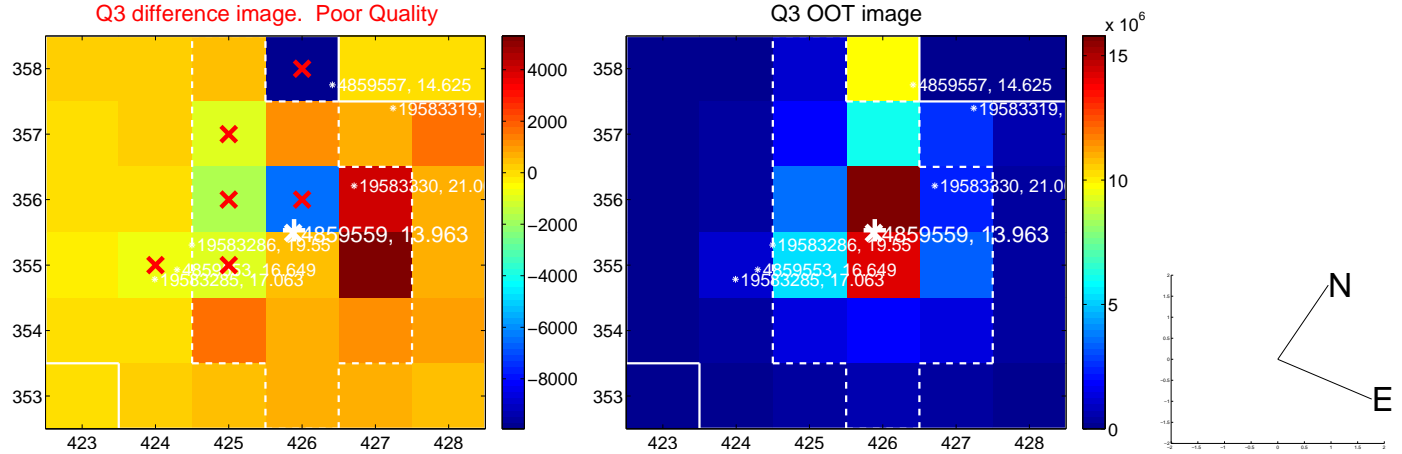
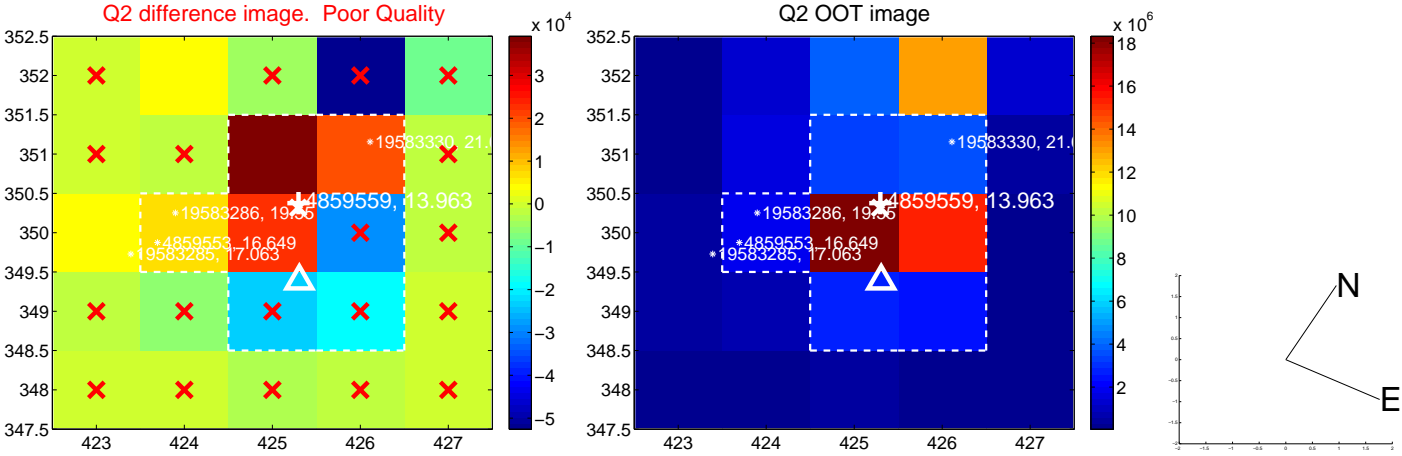
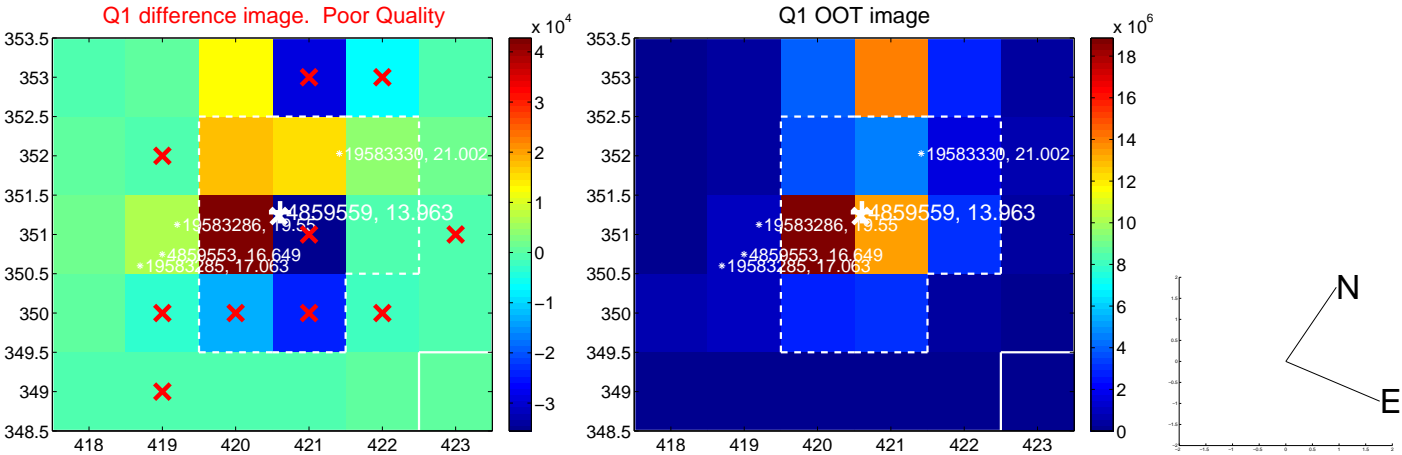
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.638 ± 0.165	15.97	2.057 ± 0.087	-1.652 ± 0.309
PRF-fit source offset from KIC position	2.578 ± 0.171	15.08	2.057 ± 0.100	-1.554 ± 0.362
photometric centroid source offset	15.72 ± 4.61	3.41	4.88 ± 2.73	-14.94 ± 4.77

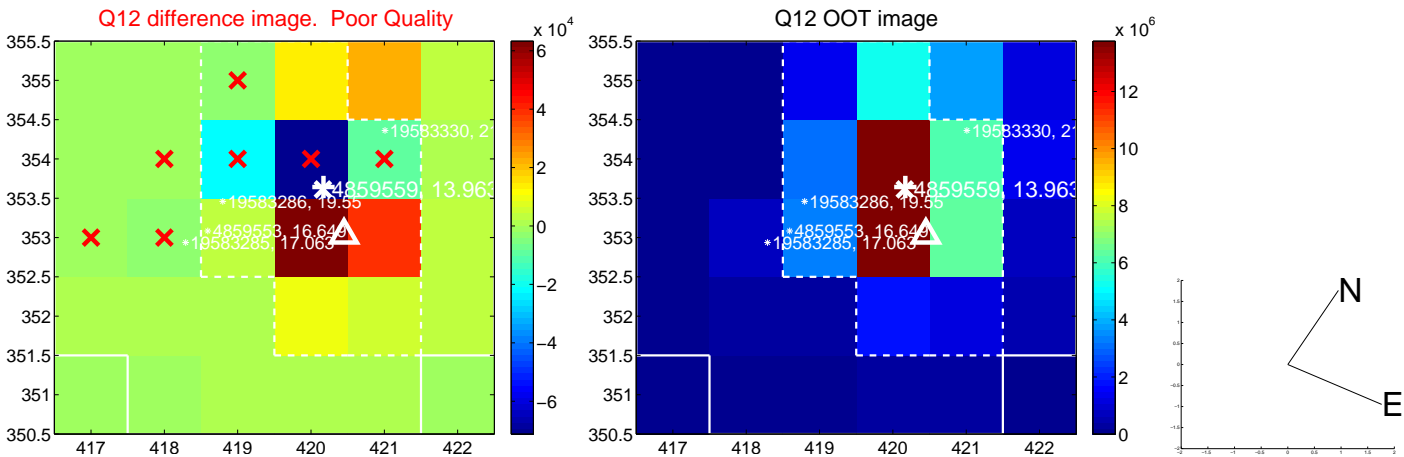
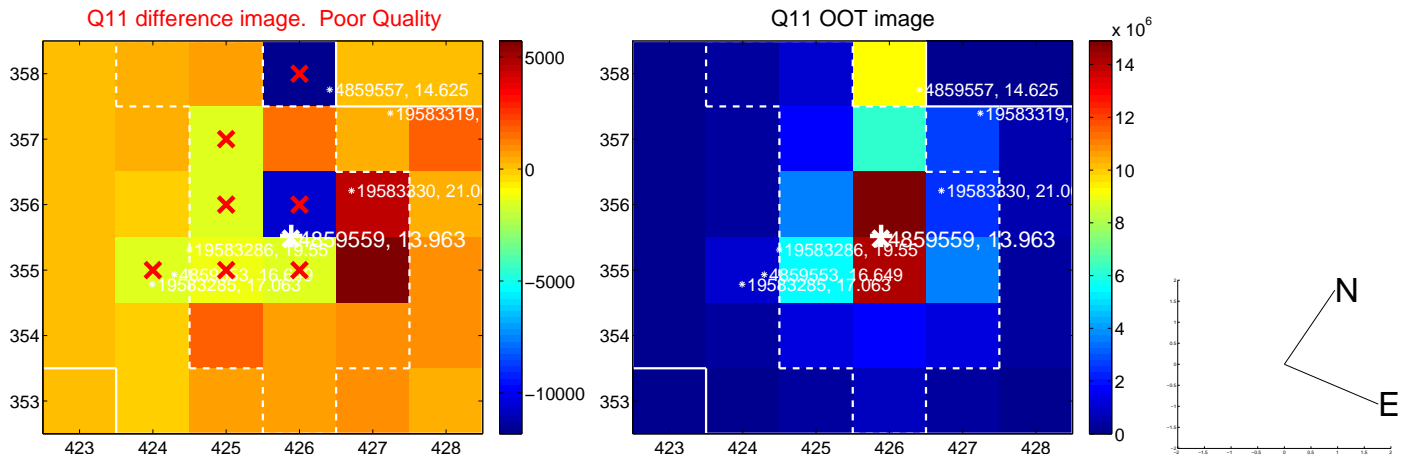
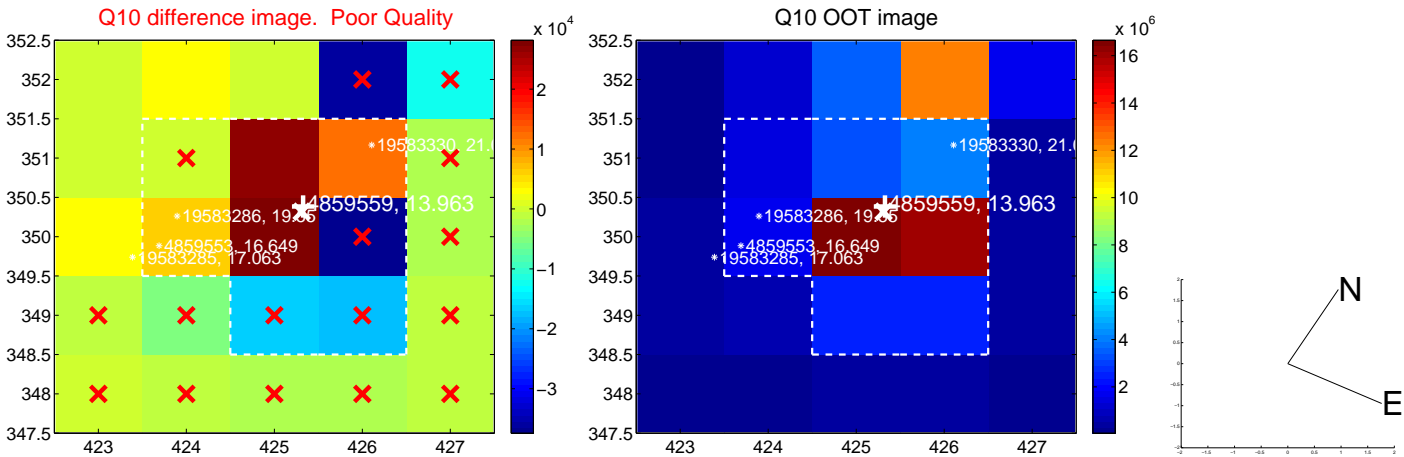
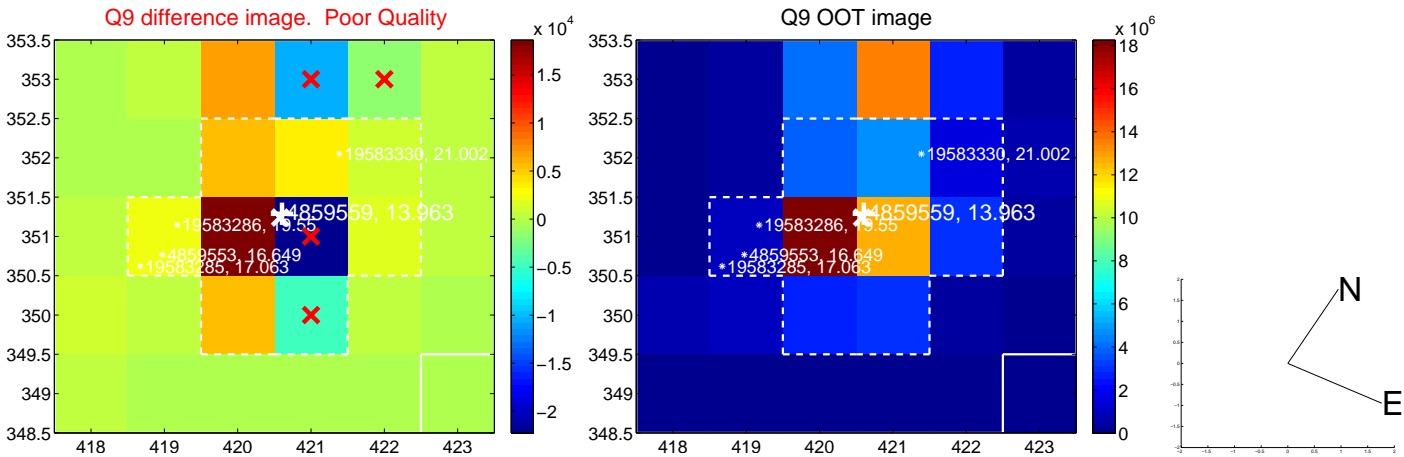


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

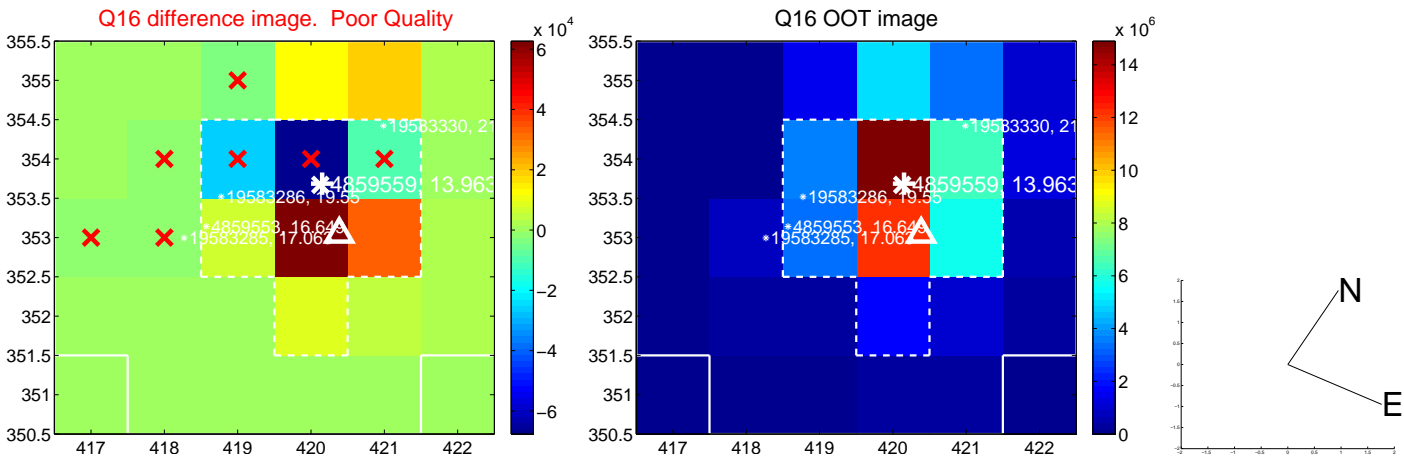
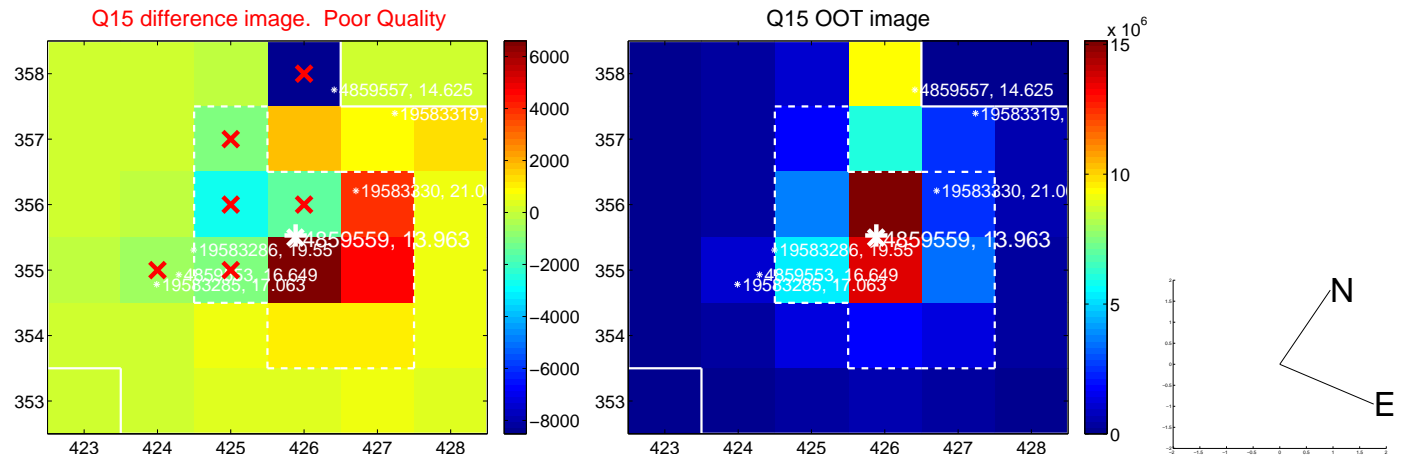
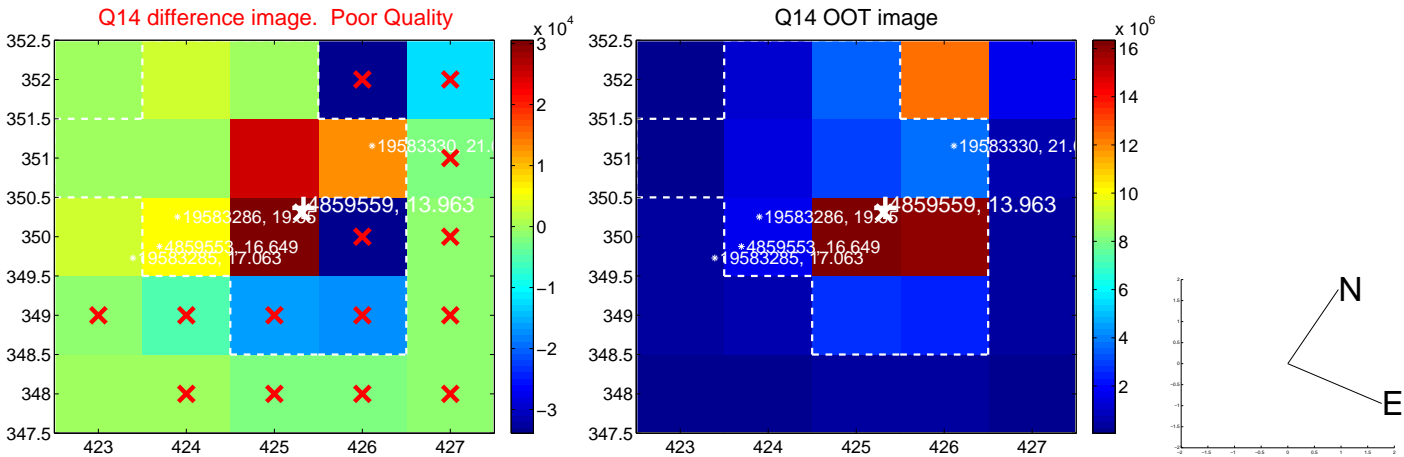
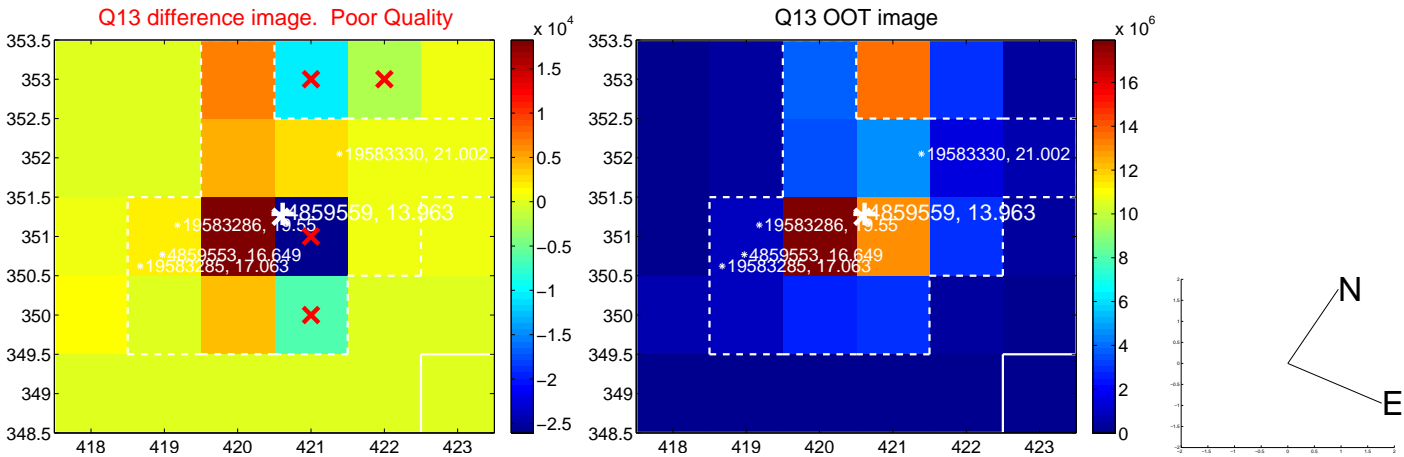
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



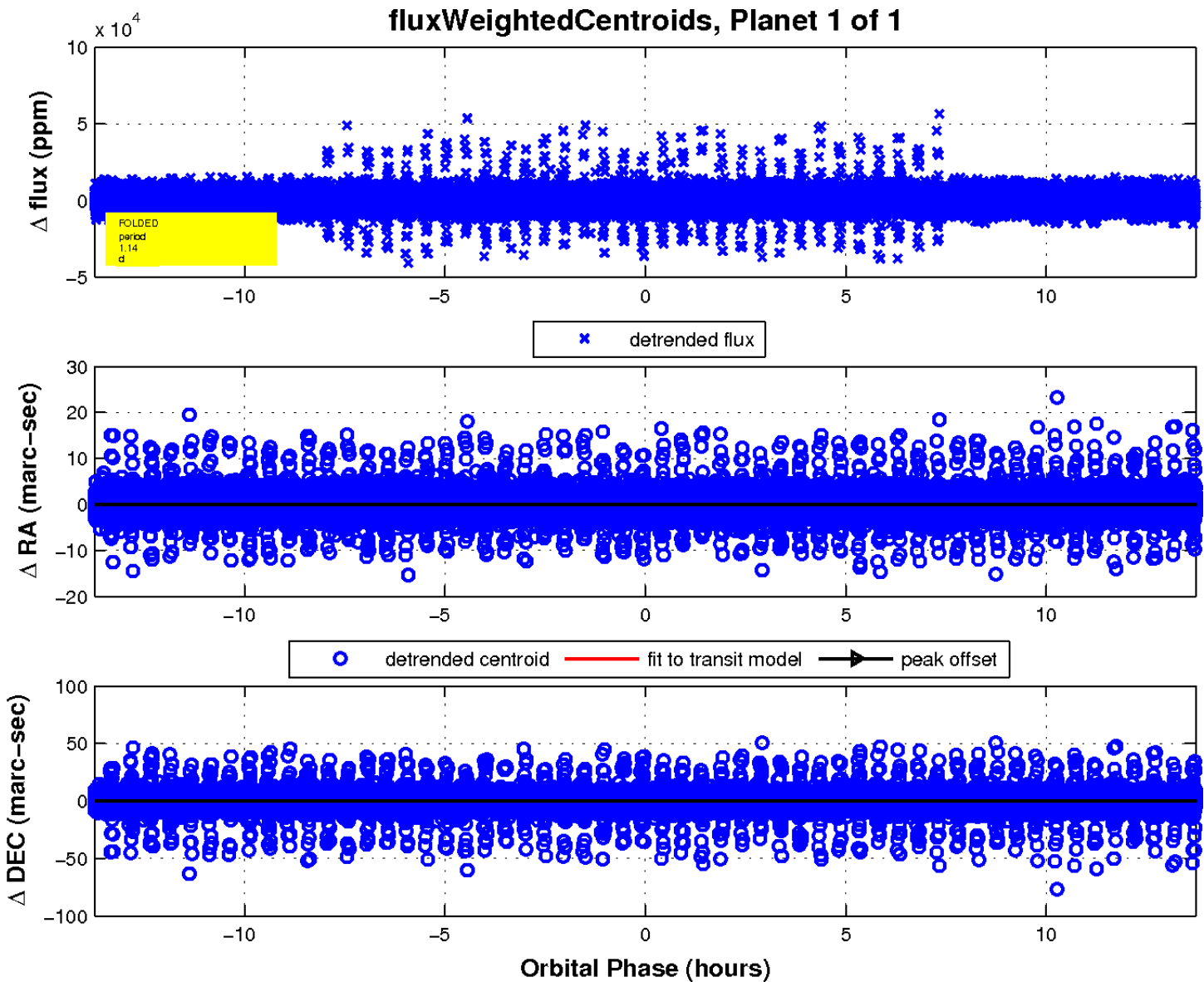
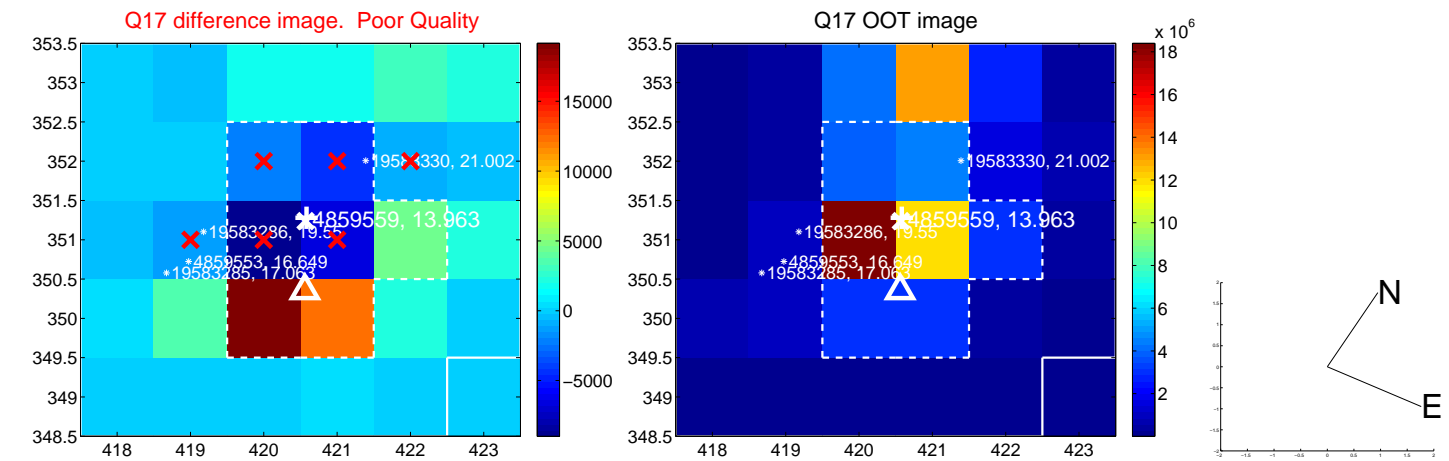
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UKIRT Image

Declination

