

KIC 006509713

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})
006509713-01	OBS	No	1.047901	131.985362	1.5	4.755	9.9	0.6	2.77	6759	0.39	24351.51

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006509713-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV

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

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

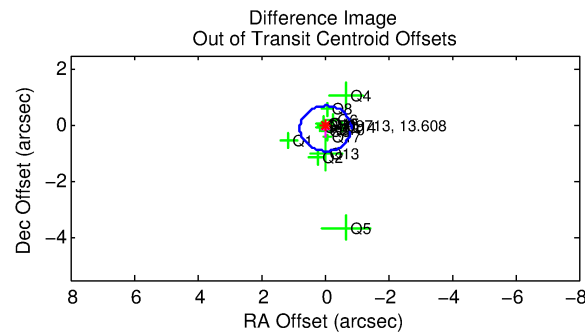
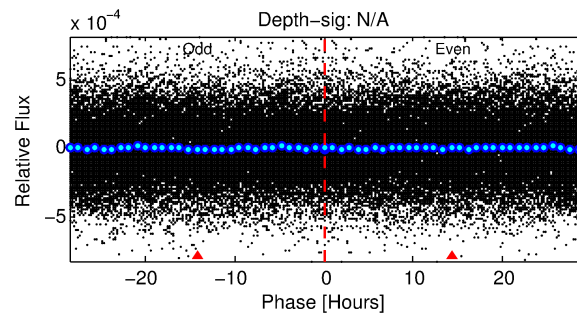
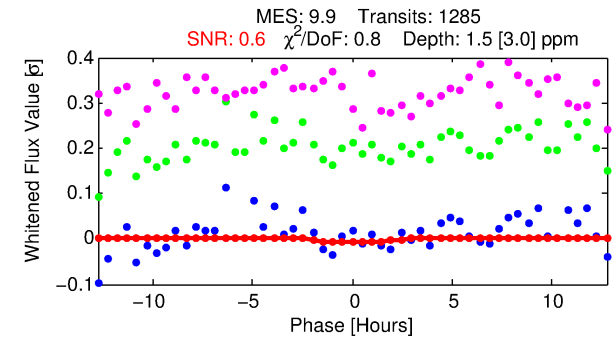
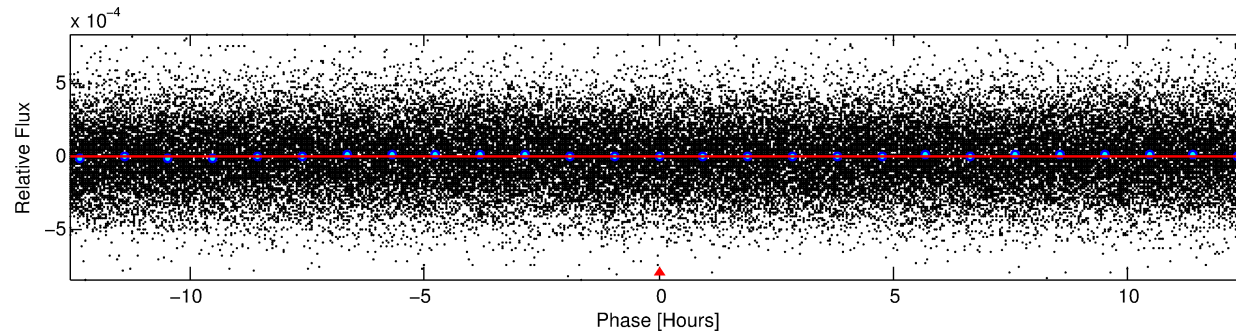
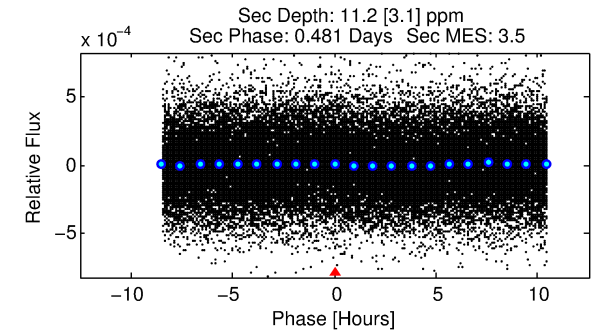
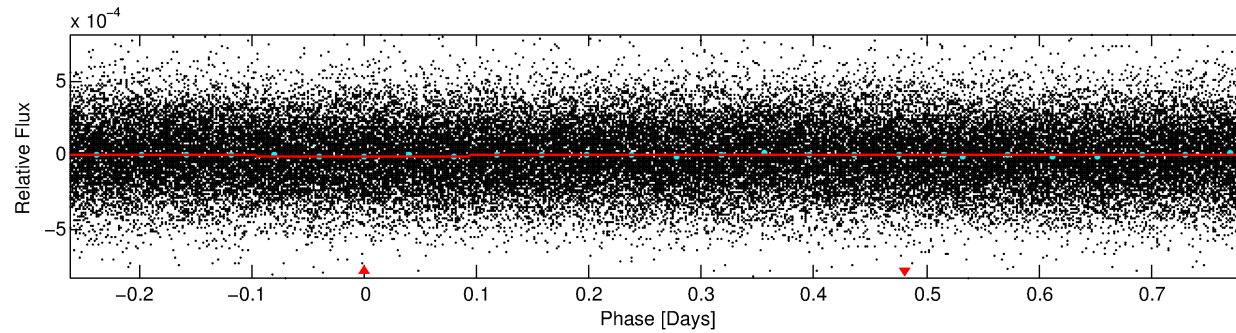
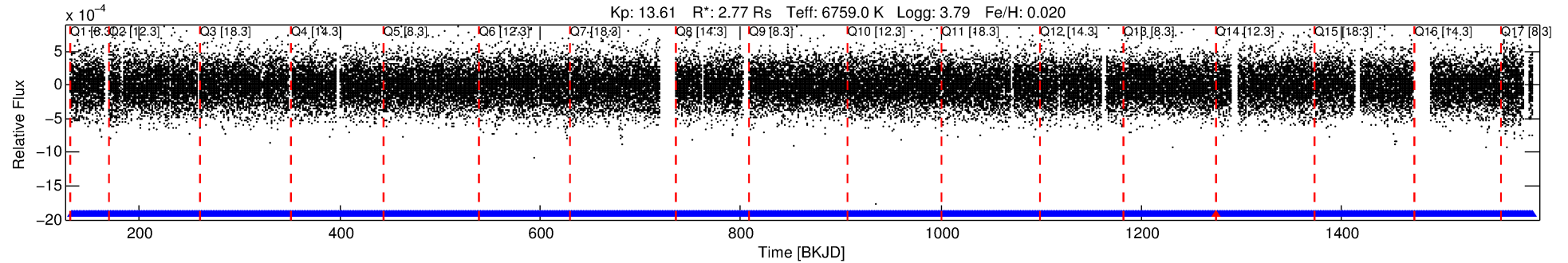
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006509713-01

No Significant Match Found

DV One-Page Summary

KIC: 6509713 Candidate: 1 of 1 Period: 1.048 d



DV Fit Results:

Period = 1.04790 [0.00024] d
Epoch = 131.9854 [0.0778] BKJD
Rp/R* = 0.0013 [0.0018]
a/R* = 1.24 [2.48]
b = 0.87 [1.59]
Seff = 24351.51 [18290.60]
Teff = 3185 [598] K
Rp = 0.39 [0.57] Re
a = 0.0243 [0.0110] AU
Ag = 23.39 [67.01] [0.33σ]
Teffp = 10830 [7515] K [1.01σ]

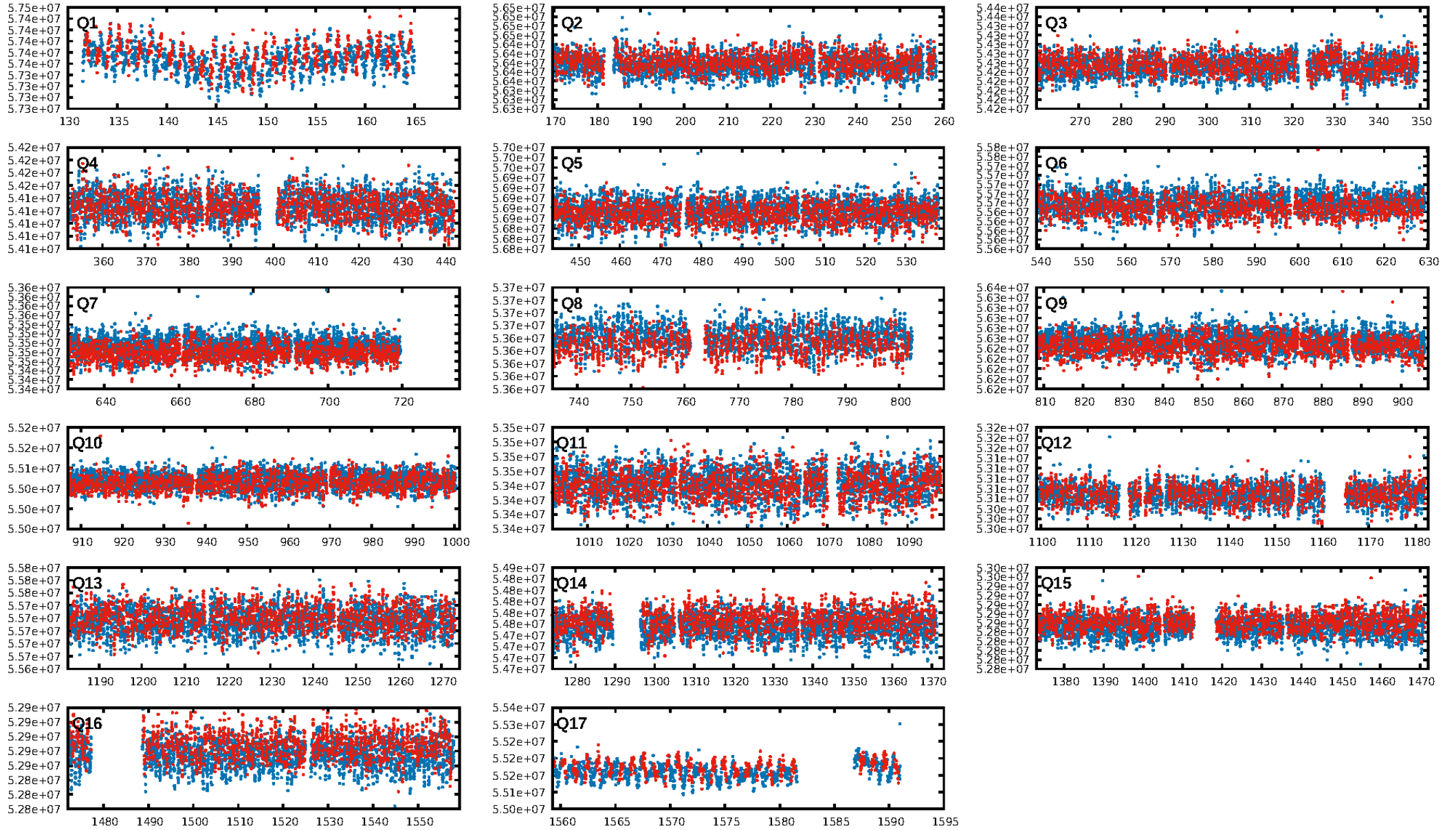
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.27e-18
RollingBand-fgt: 1.00 [1226/1227]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: N/A
OotOffset-rm: 0.107 arcsec [0.40σ]
KicOffset-rm: 0.114 arcsec [0.86σ]
OotOffset-st: 4/3/3/5 [15]
KicOffset-st: 4/3/3/5 [15]
DiffImageQuality-fgm: 0.53 [8/15]
DiffImageOverlap-fno: 1.00 [17/17]

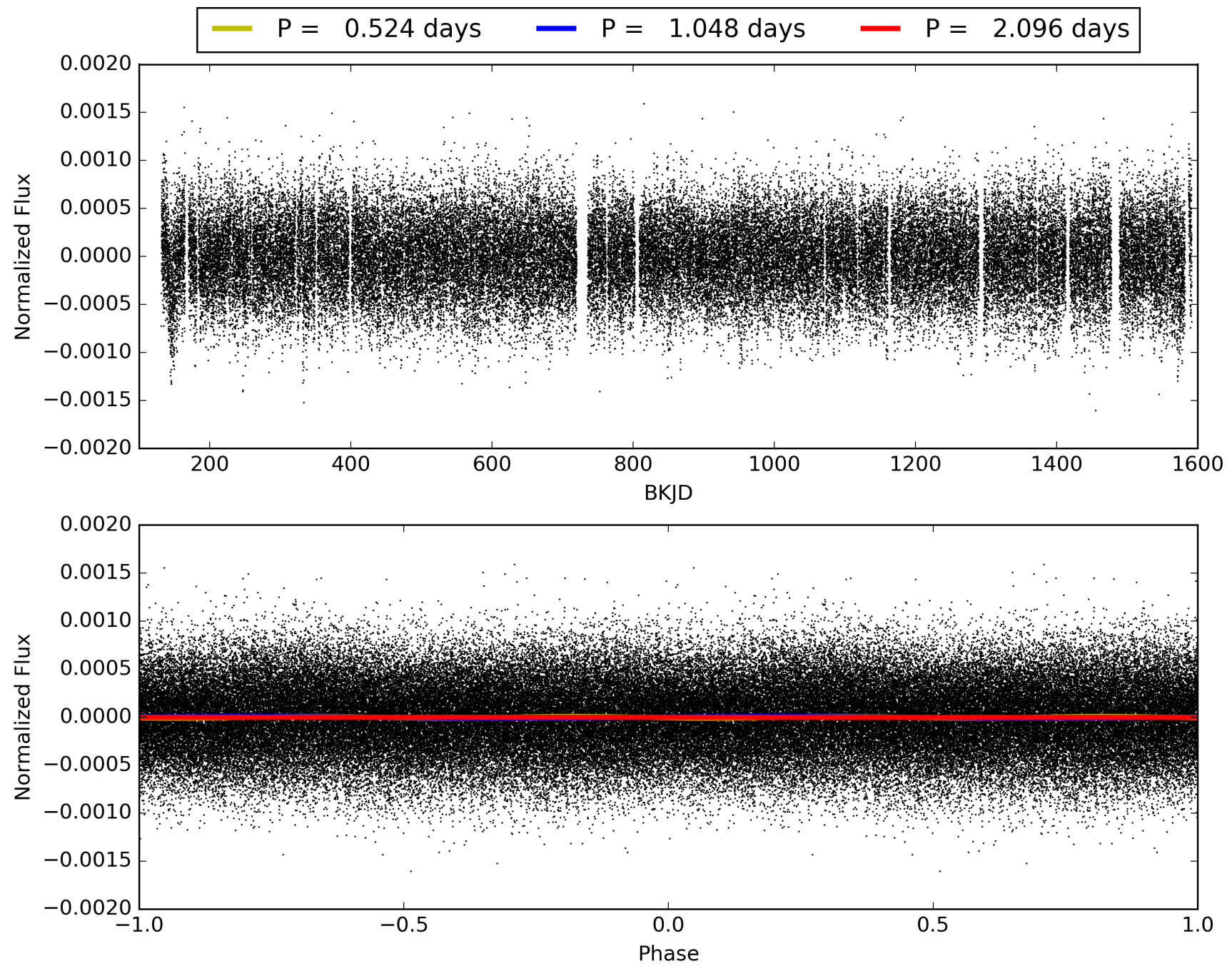
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 20:12:36 Z

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

TCE 006509713-01, PDC Light Curves

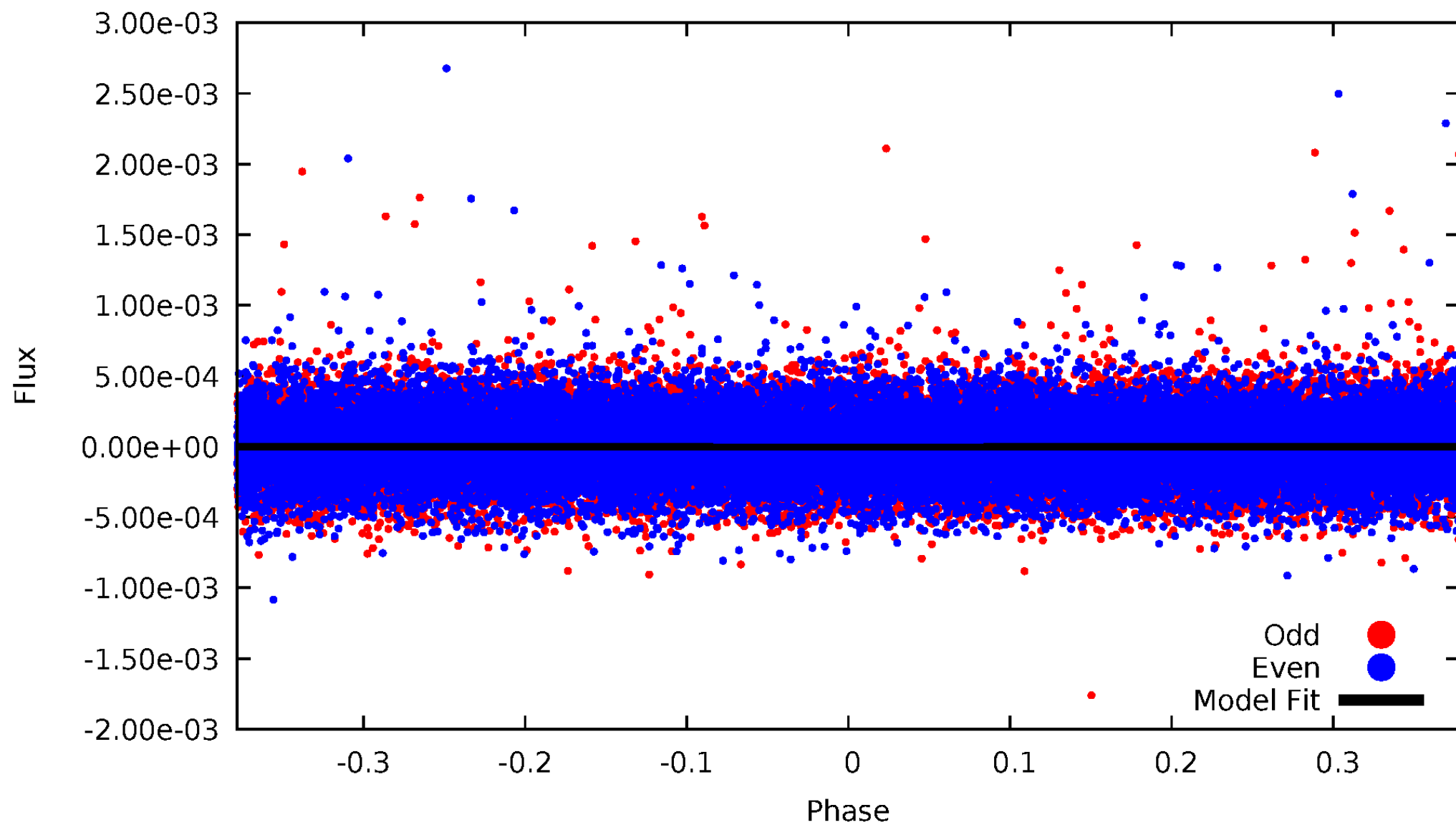


TCE 006509713-01



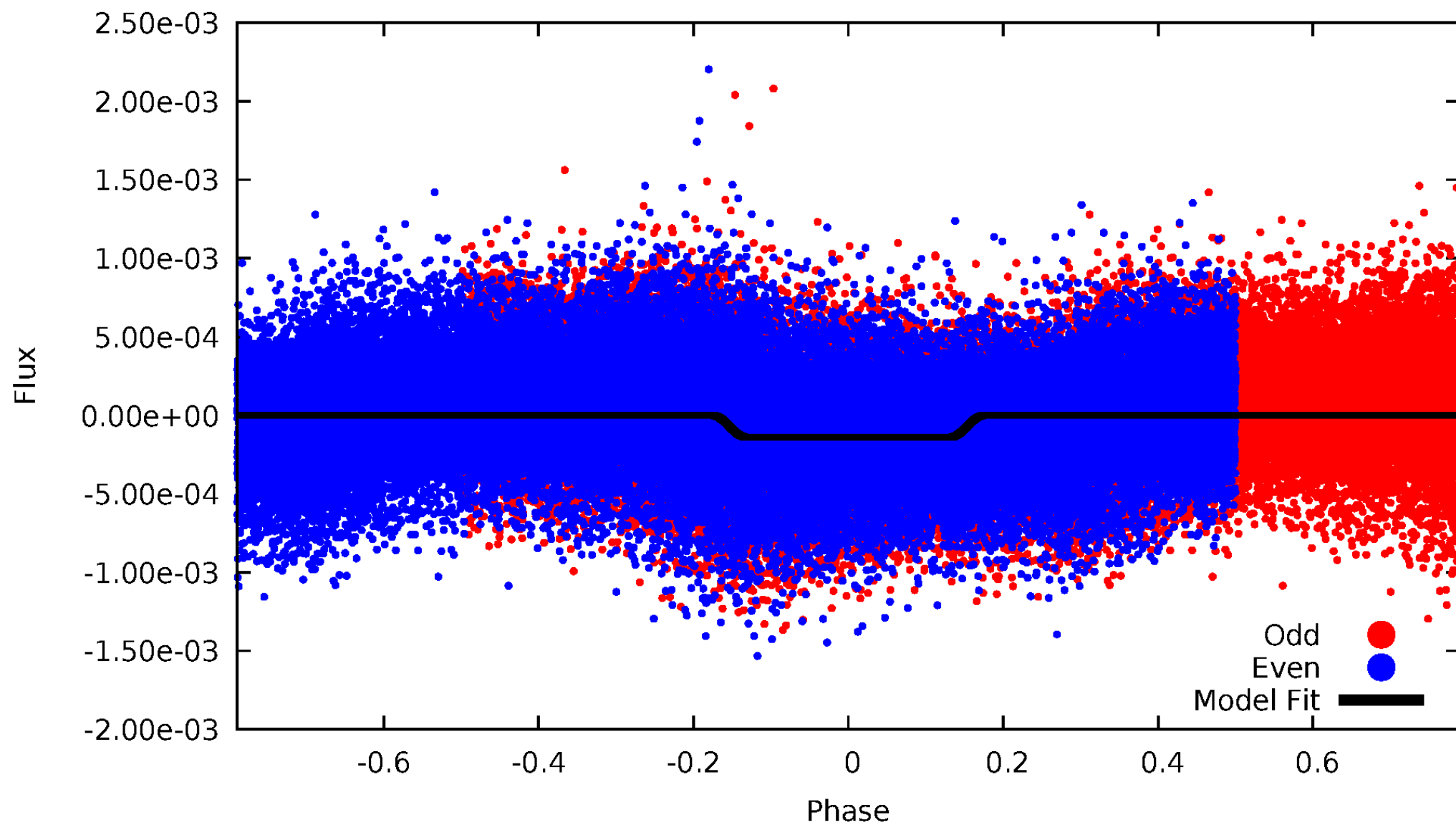
DV Odd/Even

TCE 006509713-01



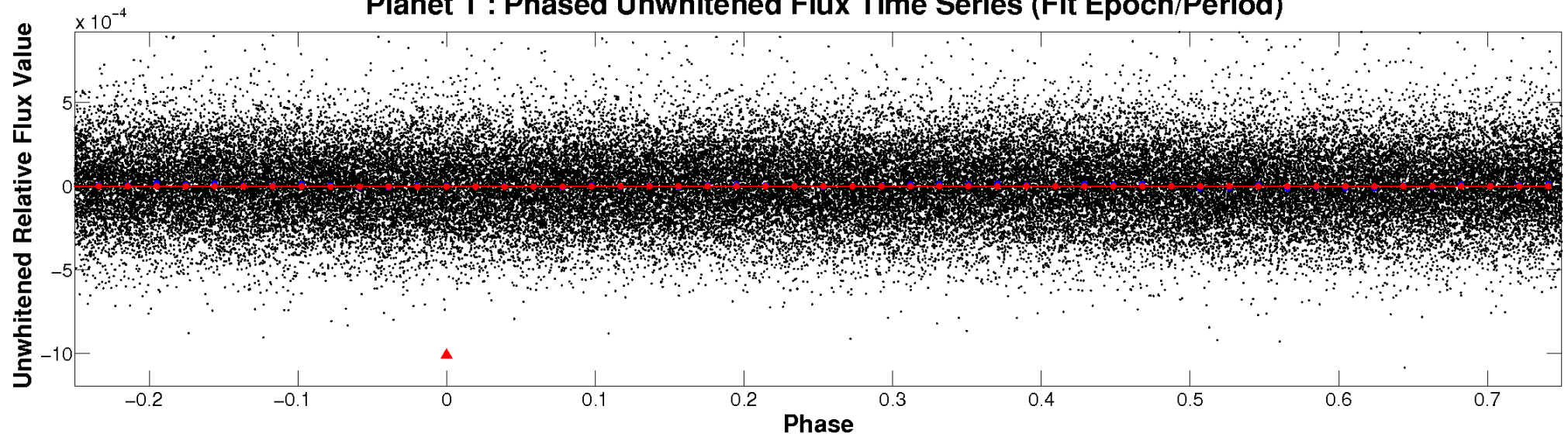
ALT Odd/Even

TCE 006509713-01

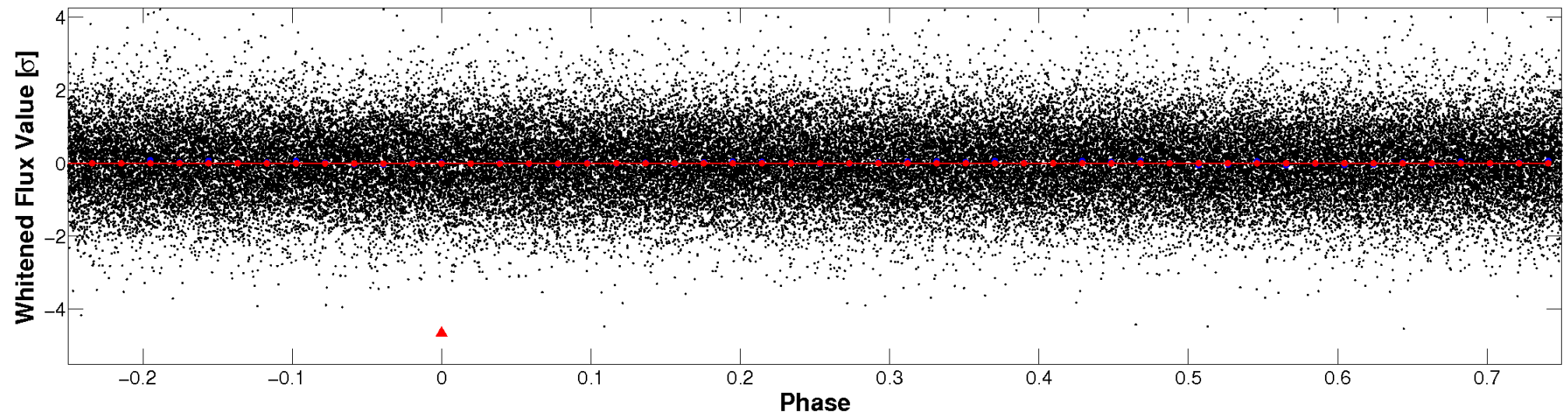


Non-Whitened Vs. Whitened Light Curve

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

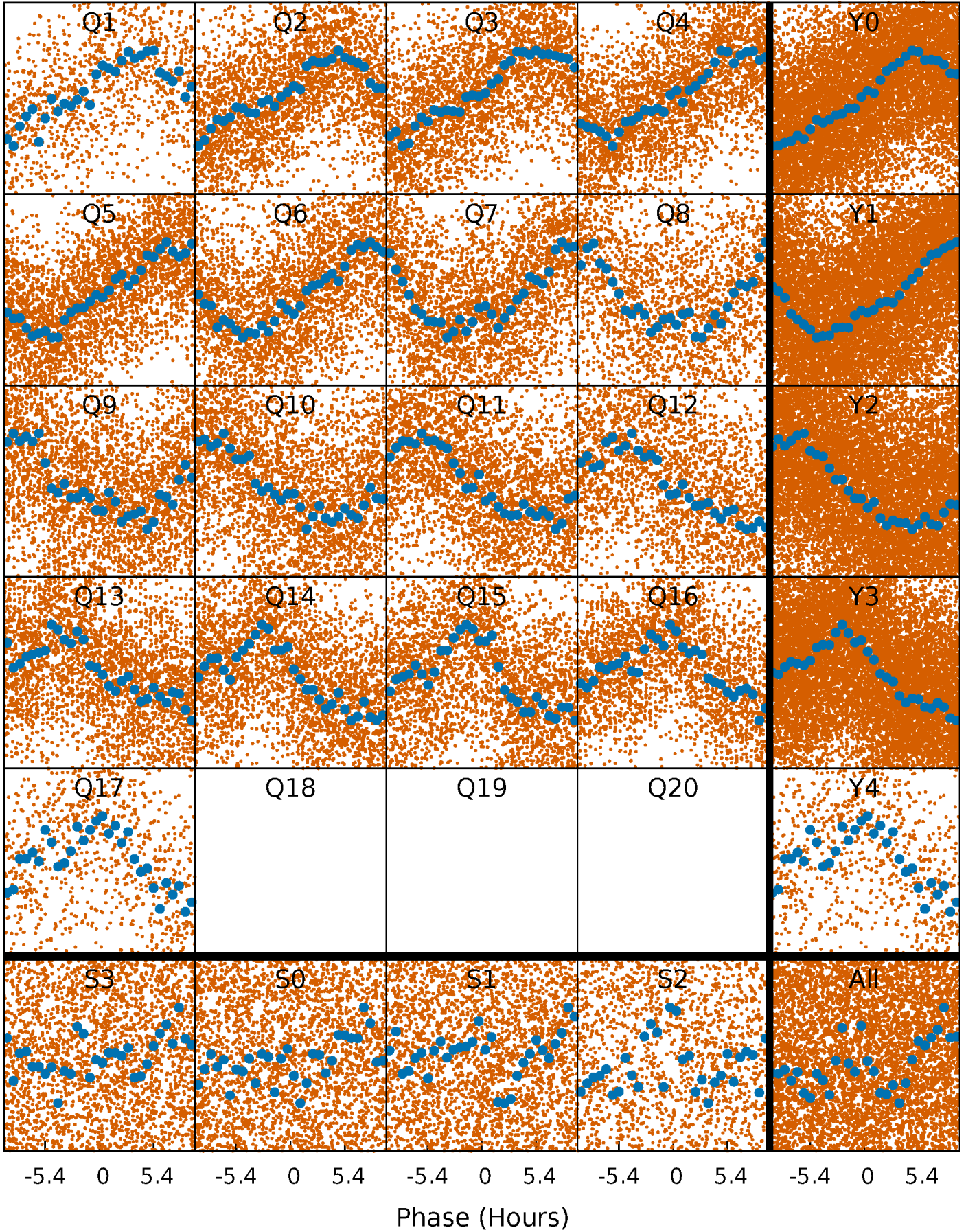


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



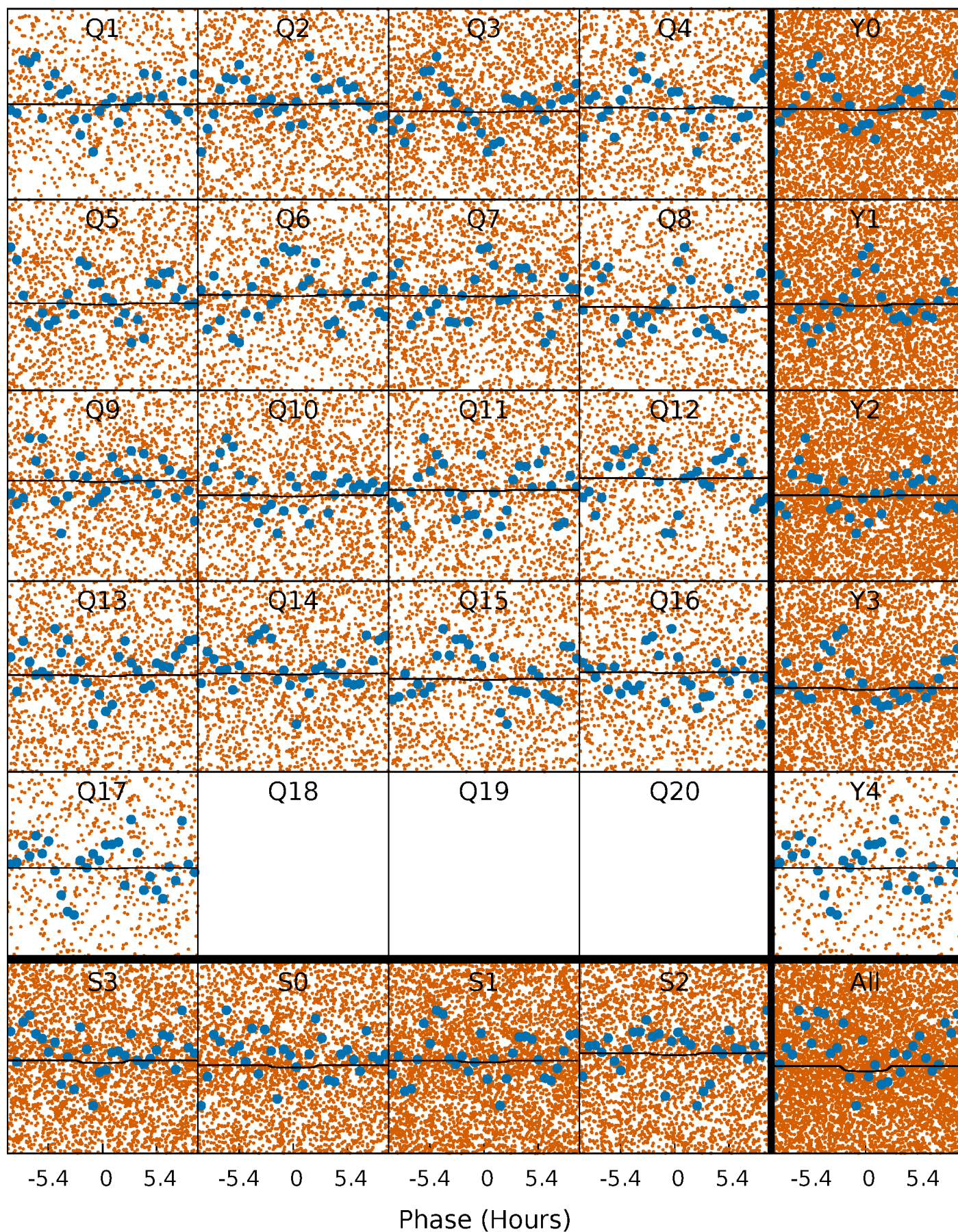
PDC Quarter-Phased Transit Curves

TCE 006509713-01 P= 1.047901 Days $T_0=131.985362$ (BKJD)



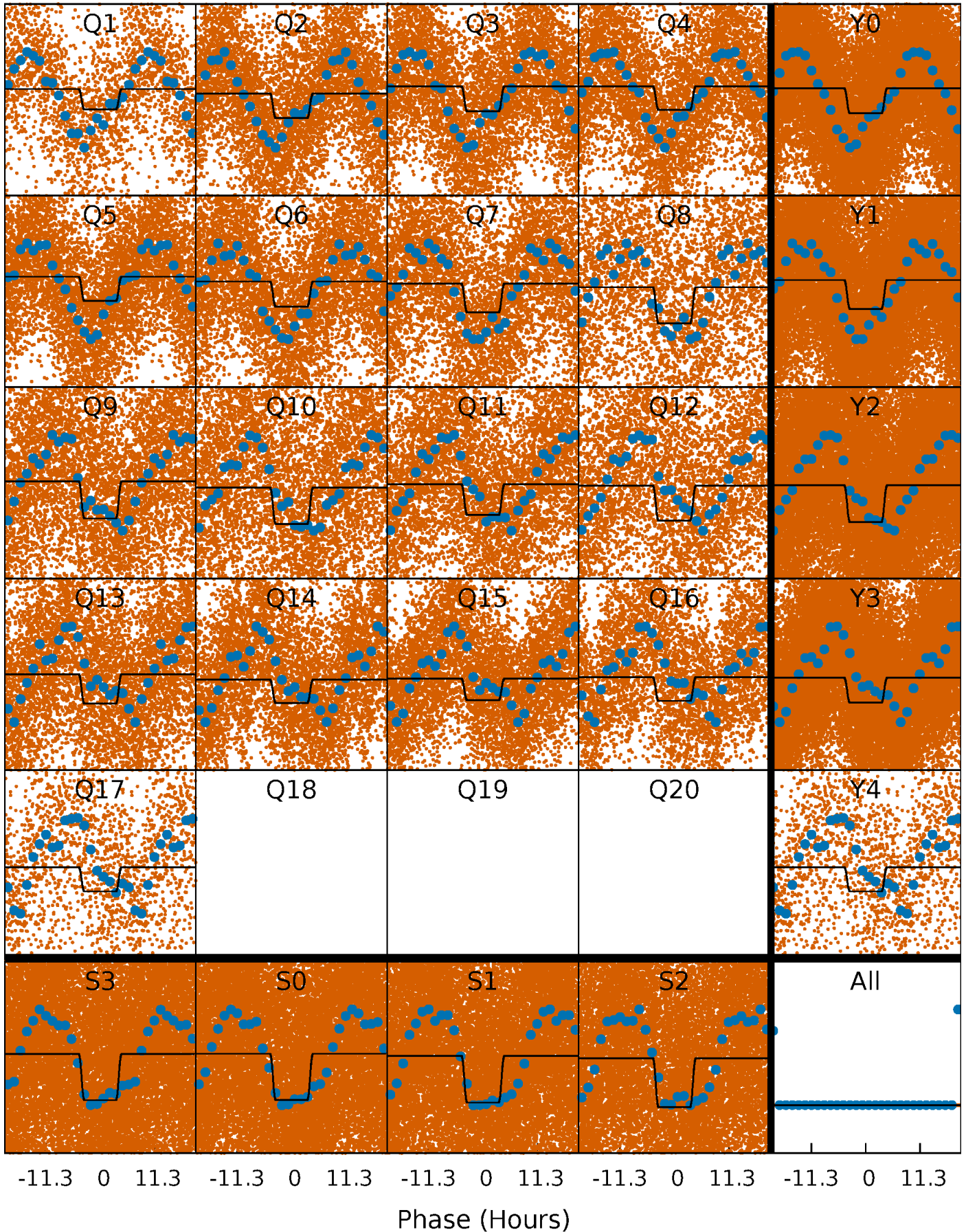
DV Quarter-Phased Transit Curves

TCE 006509713-01 P= 1.047901 Days $T_0=131.985362$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

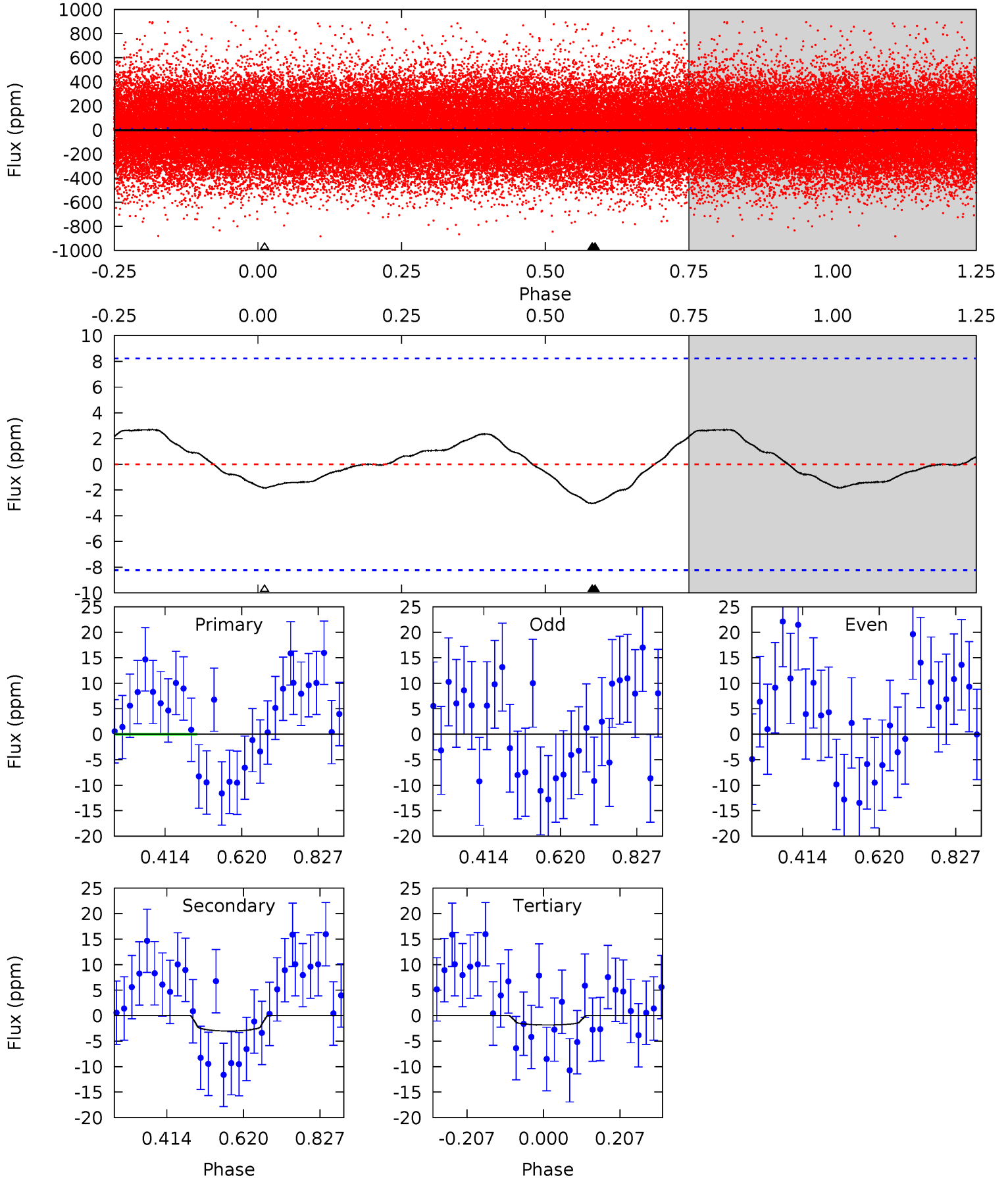
TCE 006509713-01 P= 1.048281 Days $T_0=131.707861$ (BKJD)



DV Model-Shift Uniqueness Test

006509713-01, P = 1.047901 Days, E = 130.937461 Days

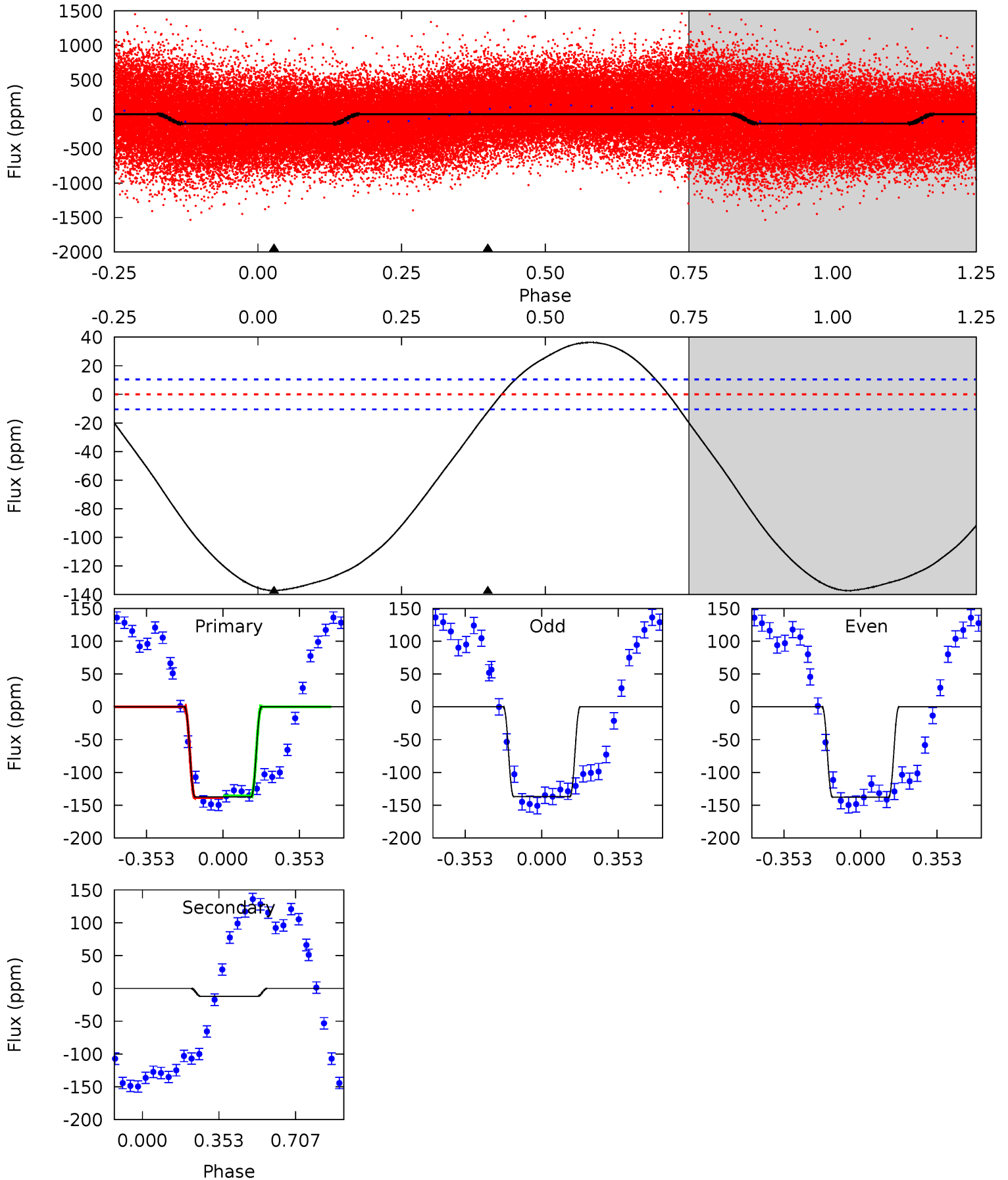
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.61	1.62	0.98	0	4.41	1.26	0.69	0.63	1.61	0.64	1.62	1.11	-1.73	0.47	0.77



Alt Model-Shift Uniqueness Test

006509713-01, P = 1.048281 Days, E = 130.659580 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
56.2	4.97	0	0	4.29	0.93	6.02	56.2	56.2	4.97	4.97	0.17	0.98	0.21	0.57



Stellar Parameters For KIC 006509713

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6759^{+190}_{-285}	$3.793^{+0.432}_{-0.108}$	$0.020^{+0.250}_{-0.300}$	$2.772^{+0.552}_{-1.288}$	$1.738^{+0.165}_{-0.496}$	$0.115^{+0.480}_{-0.038}$
	+3%/-4%	+11%/-3%	+1250%/-1500%	+20%/-46%	+9%/-29%	+418%/-33%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006509713-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3 ± 2	$0.53^{+0.46}_{-0.36}$	4298^{+321}_{-543}	5762^{+7094}_{-1972}	$2.869^{+27.786}_{-2.292}$
Alt.	-12 ± 2	$3.27^{+0.82}_{-0.84}$	4315^{+327}_{-533}	2980^{+728}_{-6171}	$0.360^{+0.290}_{-0.138}$

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

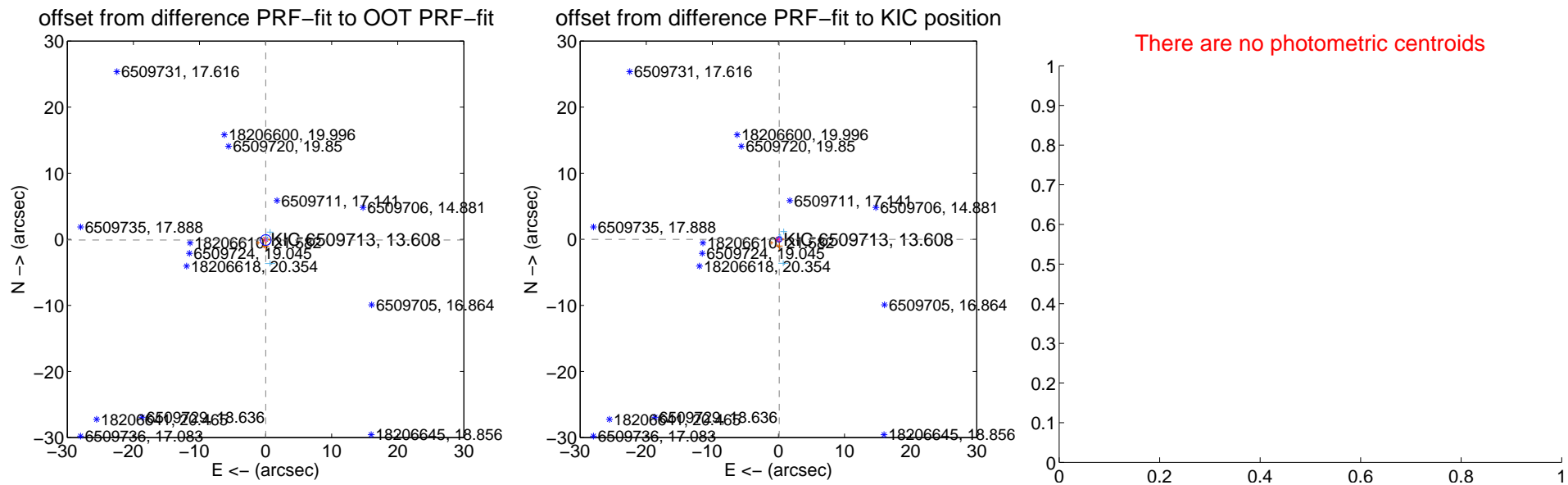
DV Centroid Data

Supplemental centroid analysis for 006509713-01. Kepler magnitude: 13.61. Transit SNR 0.57

There are 8 quarters with good PRF difference image offsets

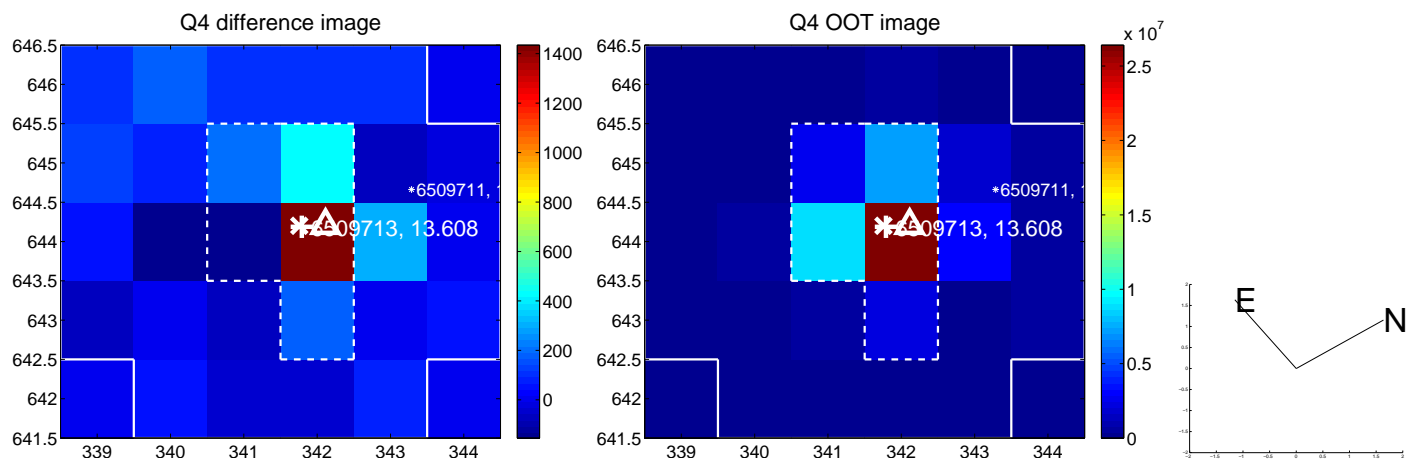
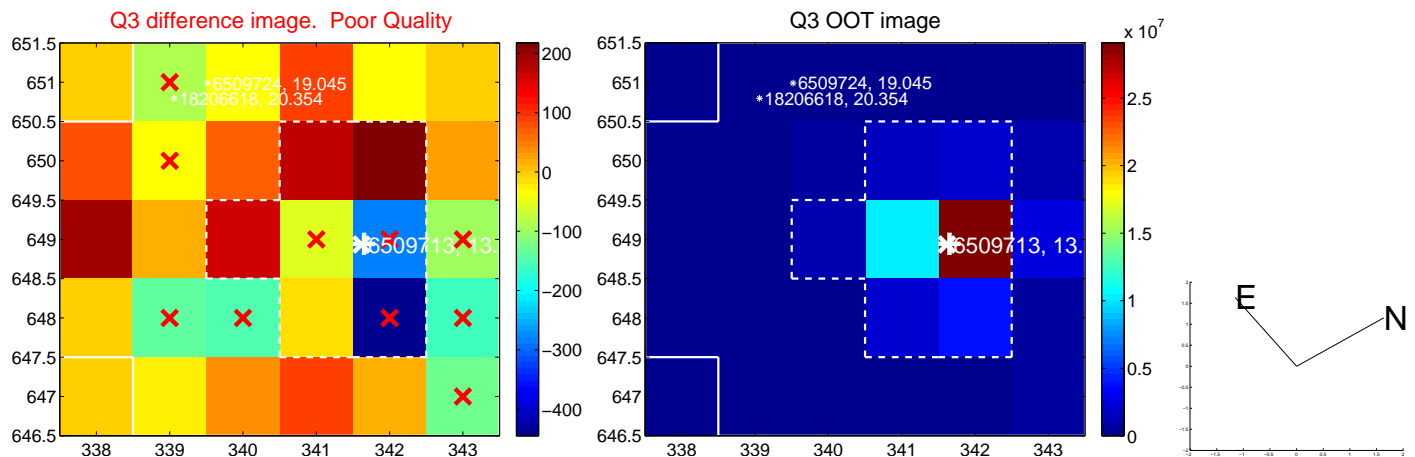
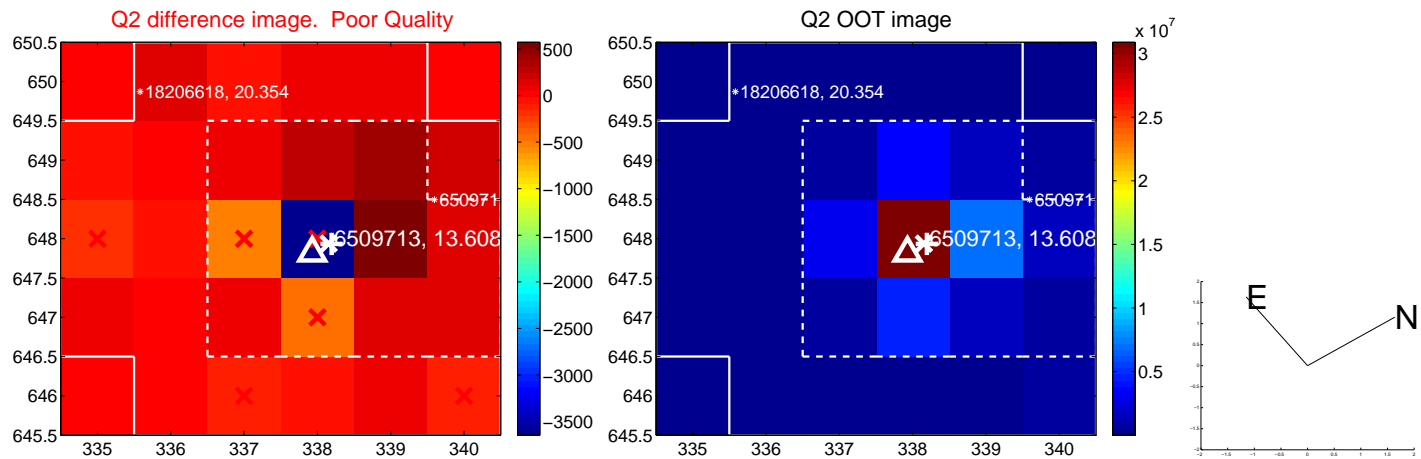
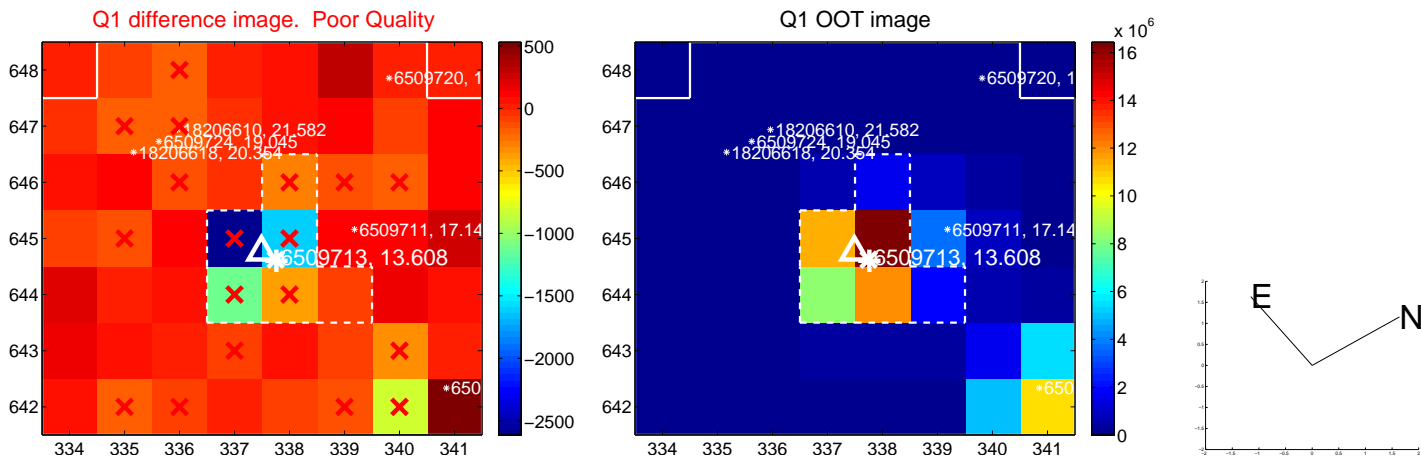
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.107 ± 0.269	0.40	-0.025 ± 0.128	-0.104 ± 0.273
PRF-fit source offset from KIC position	0.114 ± 0.134	0.86	-0.114 ± 0.129	-0.010 ± 0.283
photometric centroid source offset	—	—	—	—

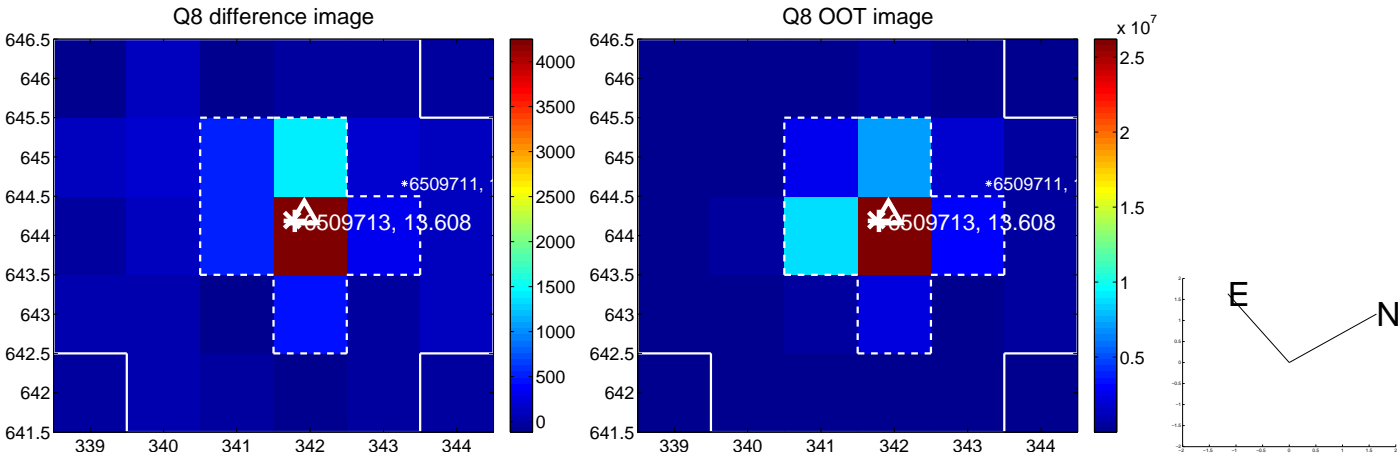
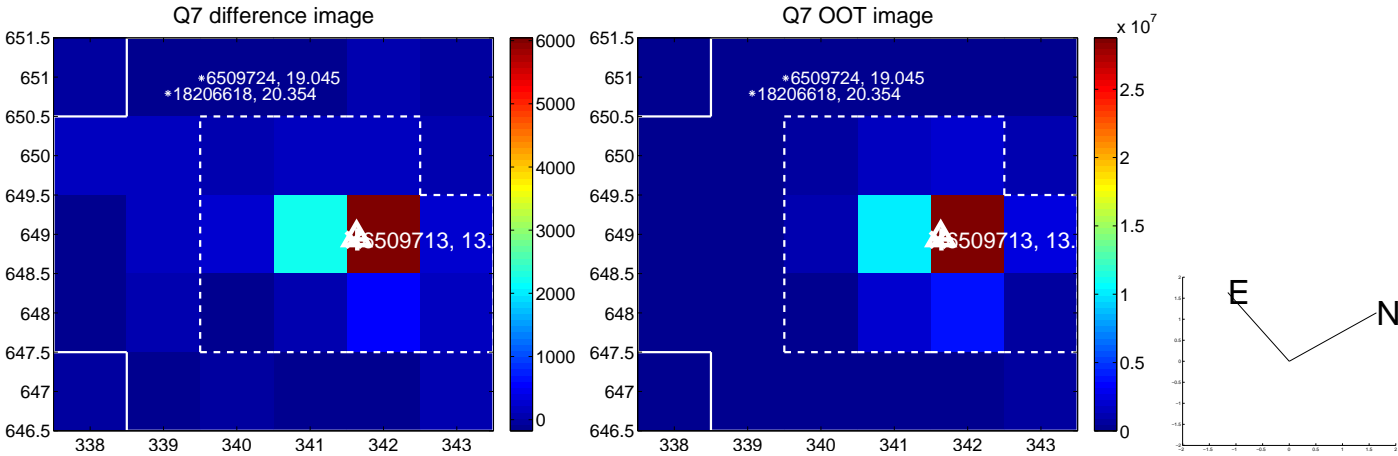
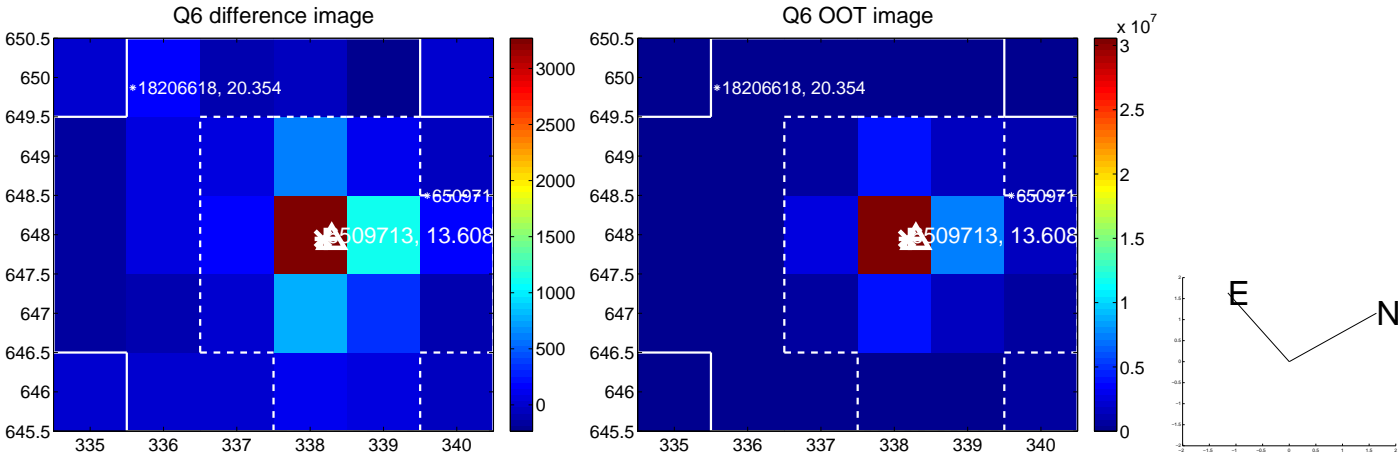
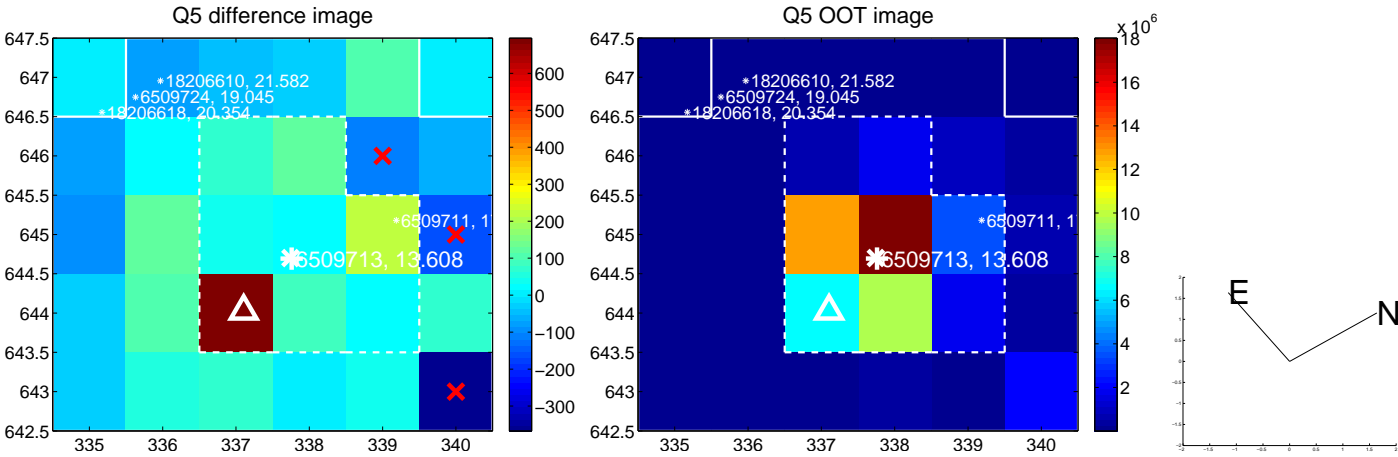


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

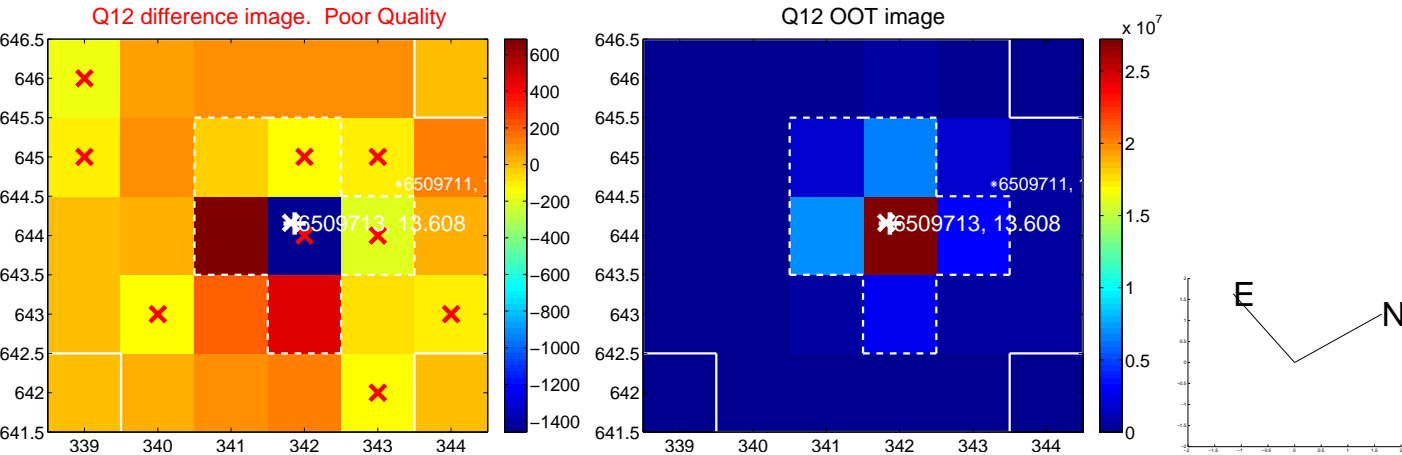
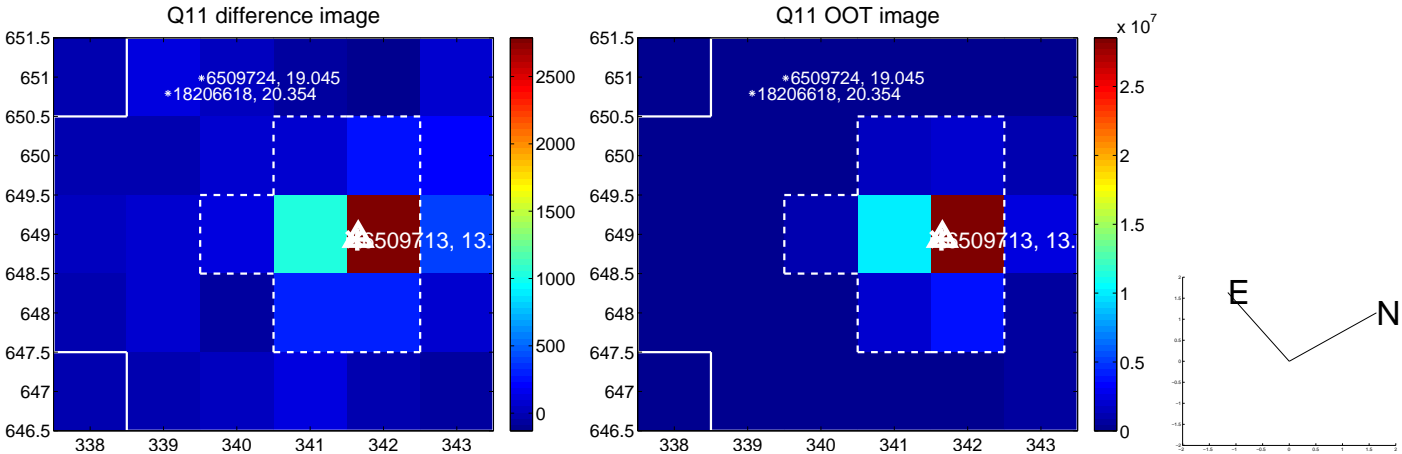
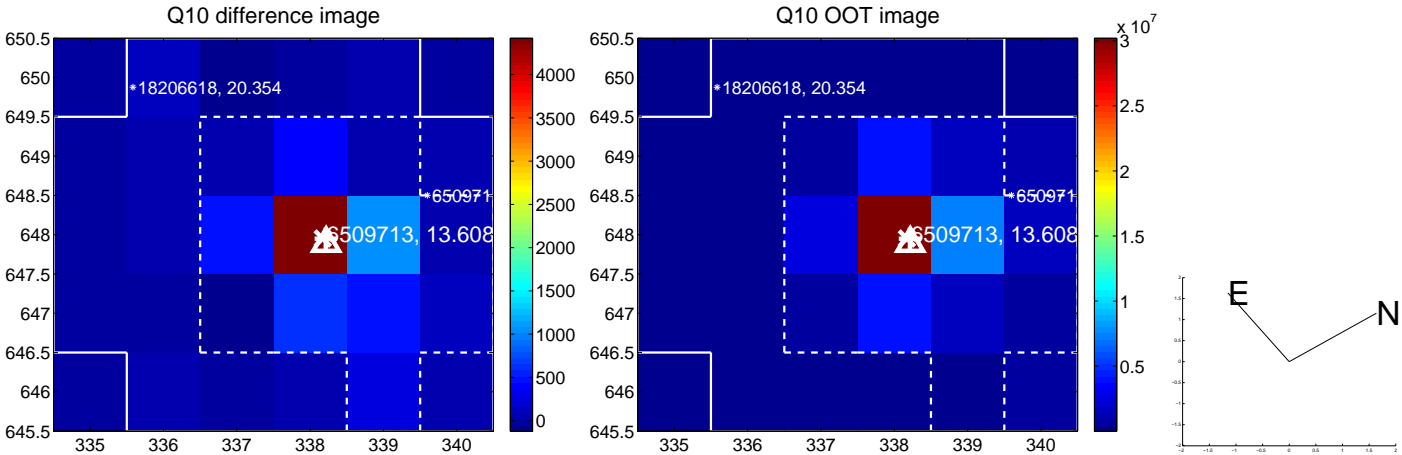
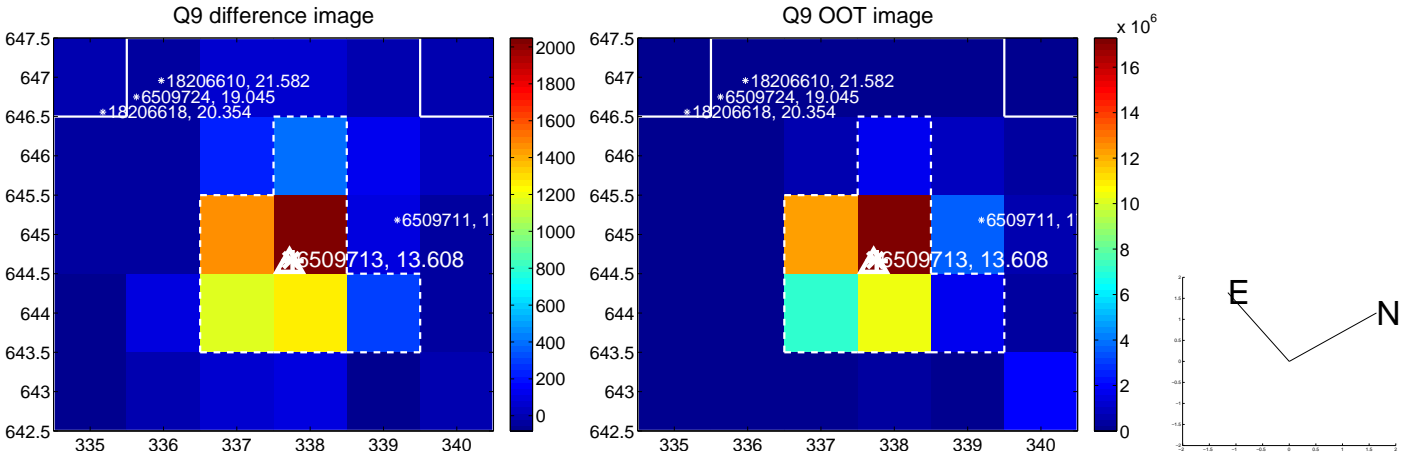
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



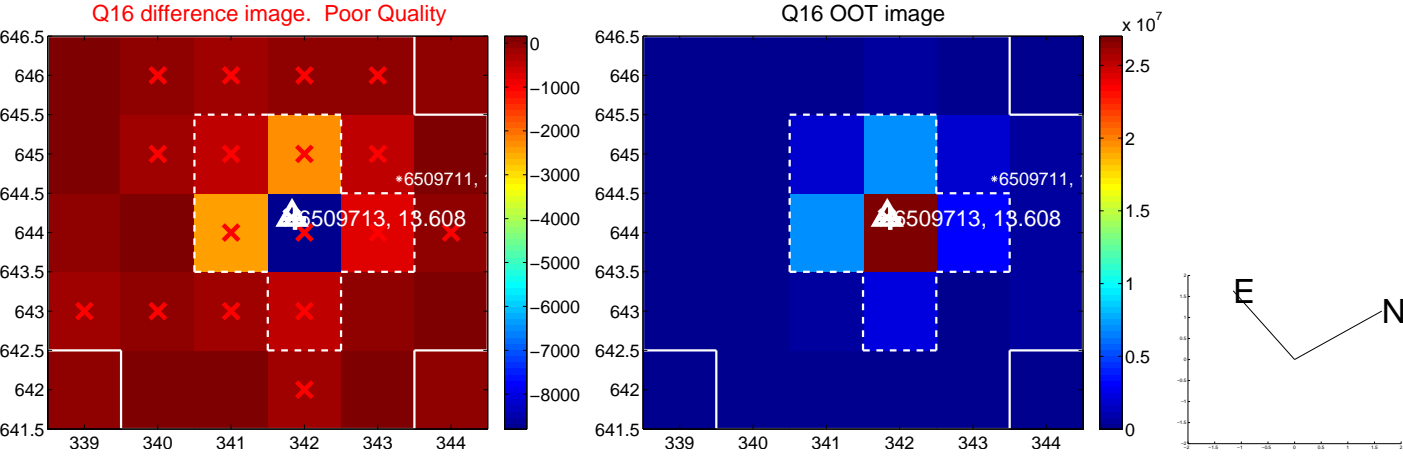
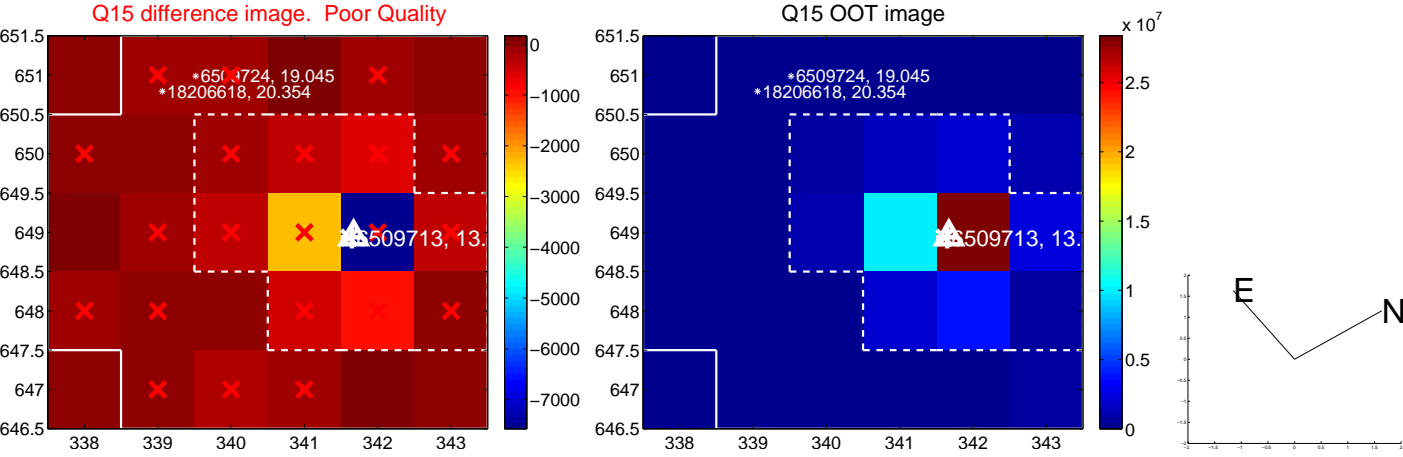
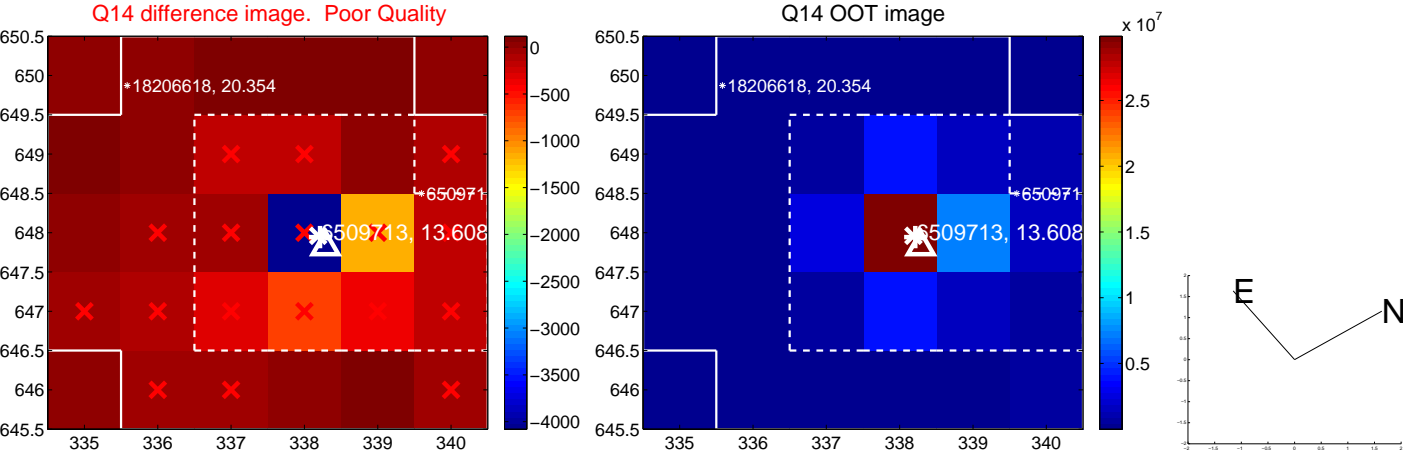
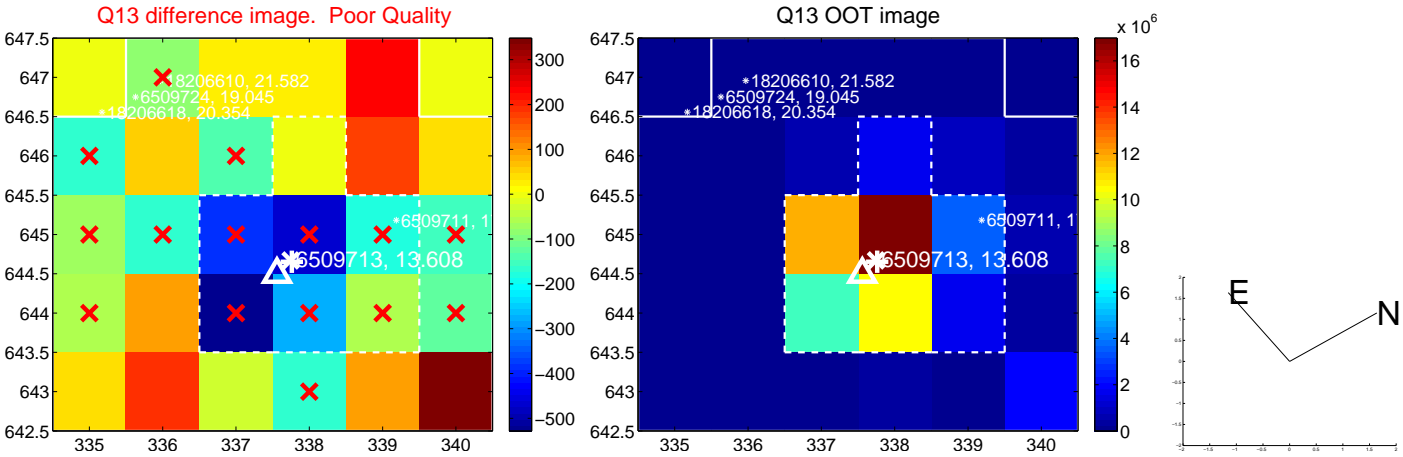
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



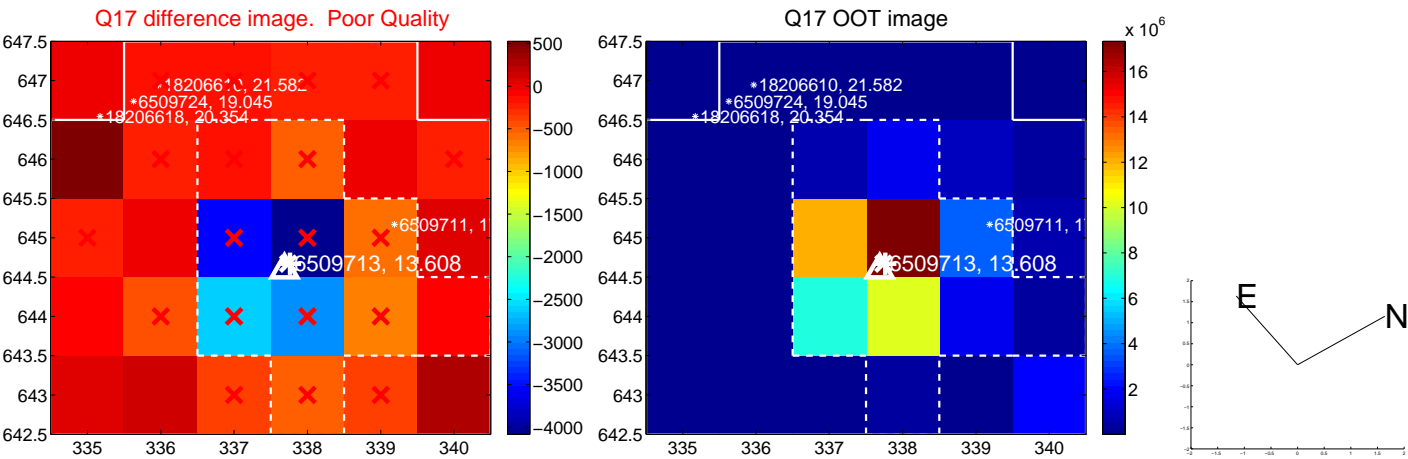
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



folded centroid time series figure for this object.

UKIRT Image

Declination

