

KIC 003129539

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})
003129539-01	OBS	No	0.849419	132.033467	22.6	10.193	9.7	4.0	0.72	5616	0.34	1946.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003129539-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—HALO_GHOST

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

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

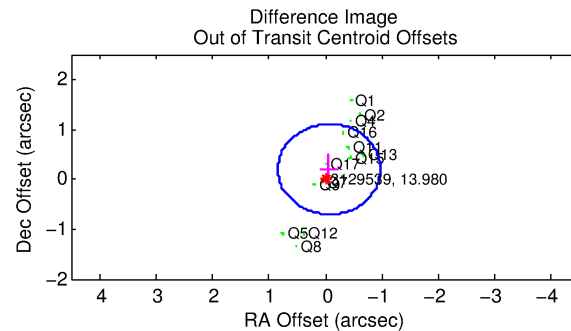
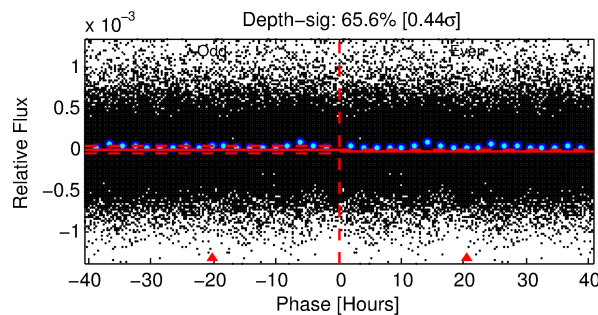
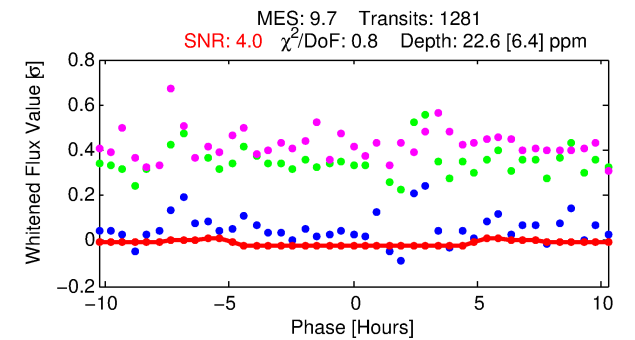
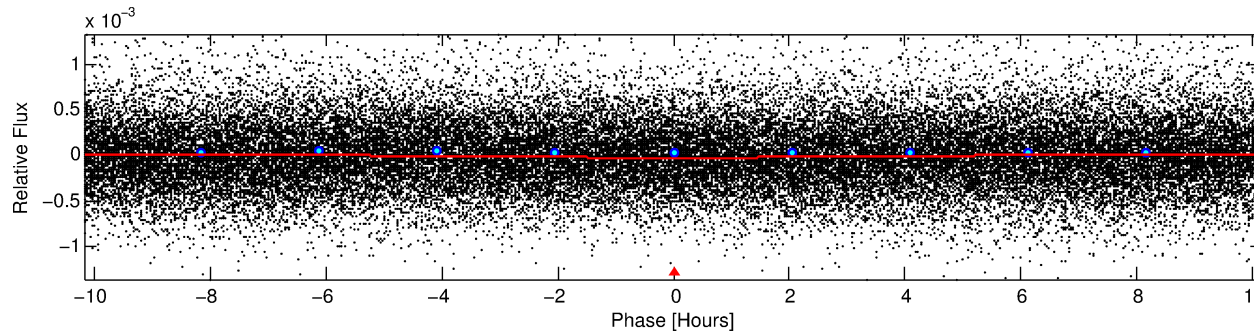
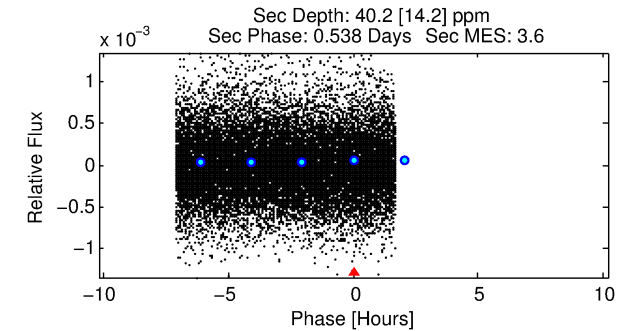
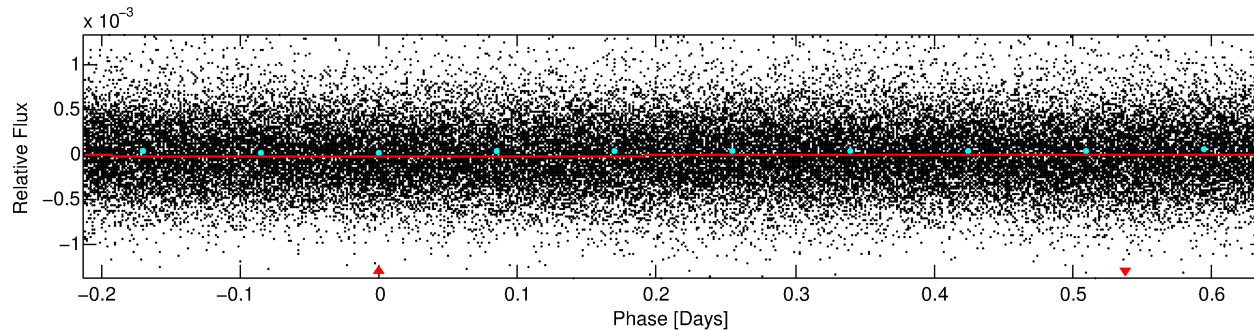
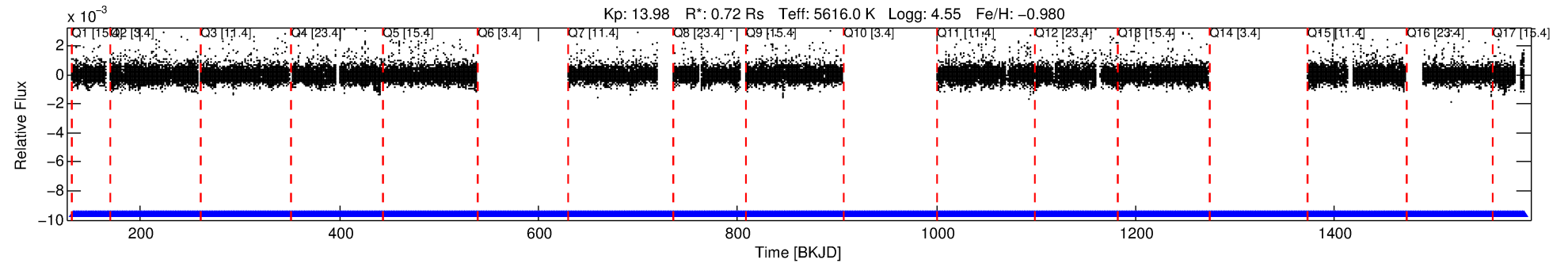
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 003129539-01

No Significant Match Found

DV One-Page Summary

KIC: 3129539 Candidate: 1 of 1 Period: 0.849 d



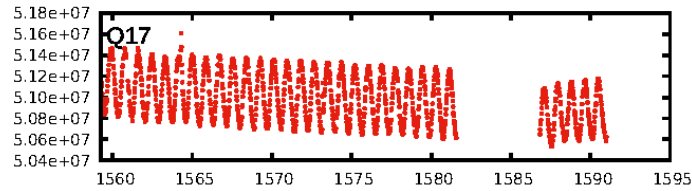
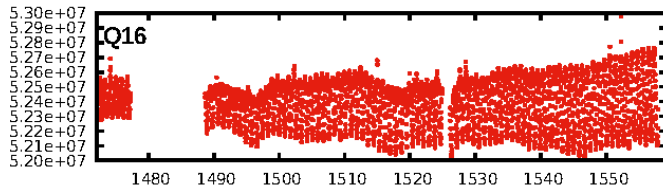
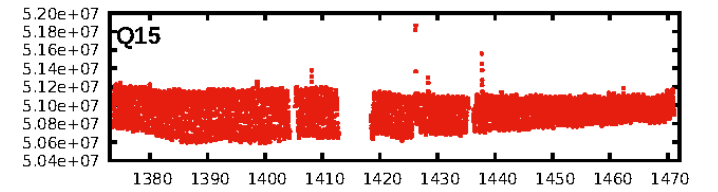
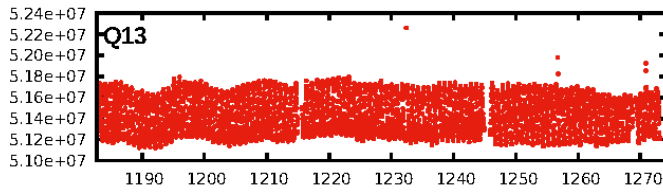
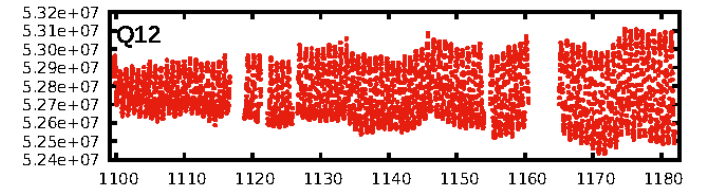
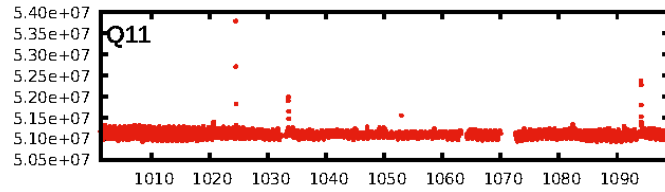
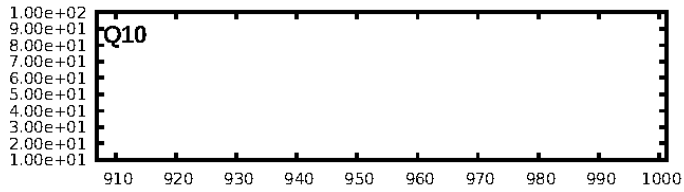
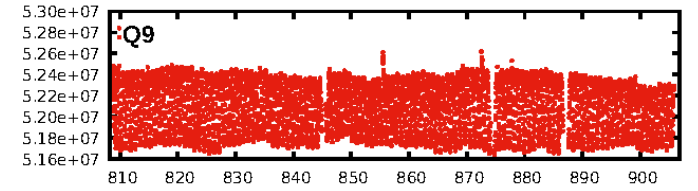
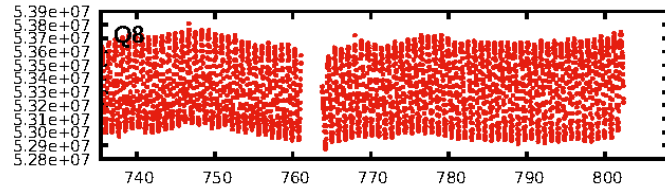
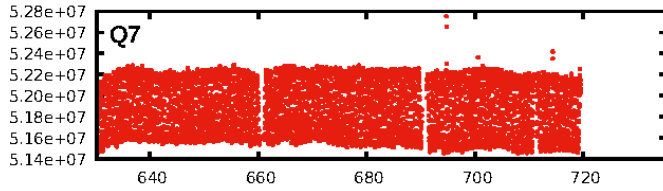
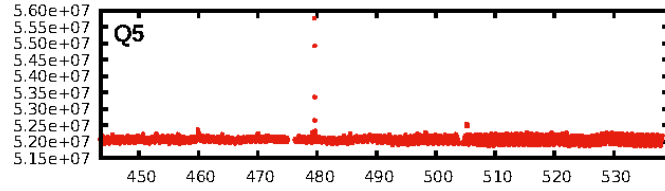
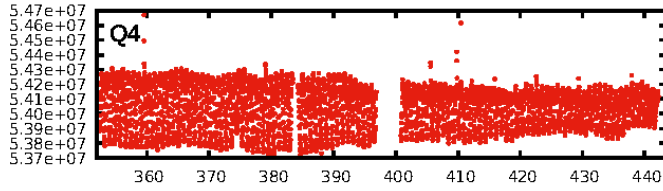
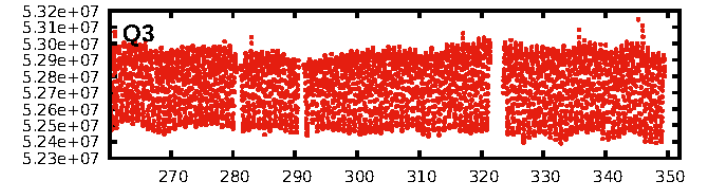
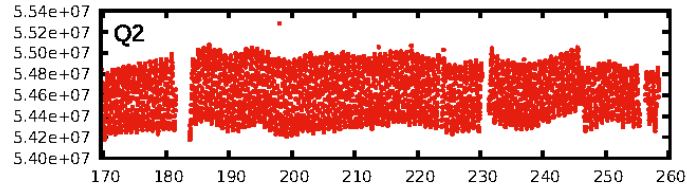
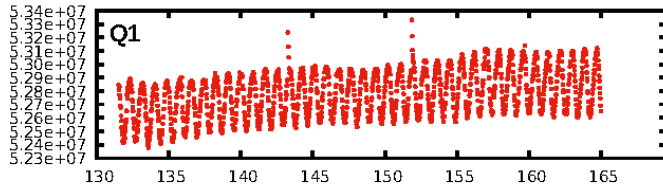
DV Fit Results:

Period = 0.84942 [0.00004] d
Epoch = 132.0335 [0.0137] BKJD
Rp/R* = 0.0044 [0.0046]
a/R* = 1.00 [0.01]
b = 0.06 [88.30]
Seff = 1946.83 [405.21]
Teff = 1694 [88] K
Rp = 0.34 [0.36] Re
a = 0.0154 [0.0018] AU
Ag = 44.82 [95.64] [0.46σ]
Teffp = 6776 [3609] K [1.41σ]

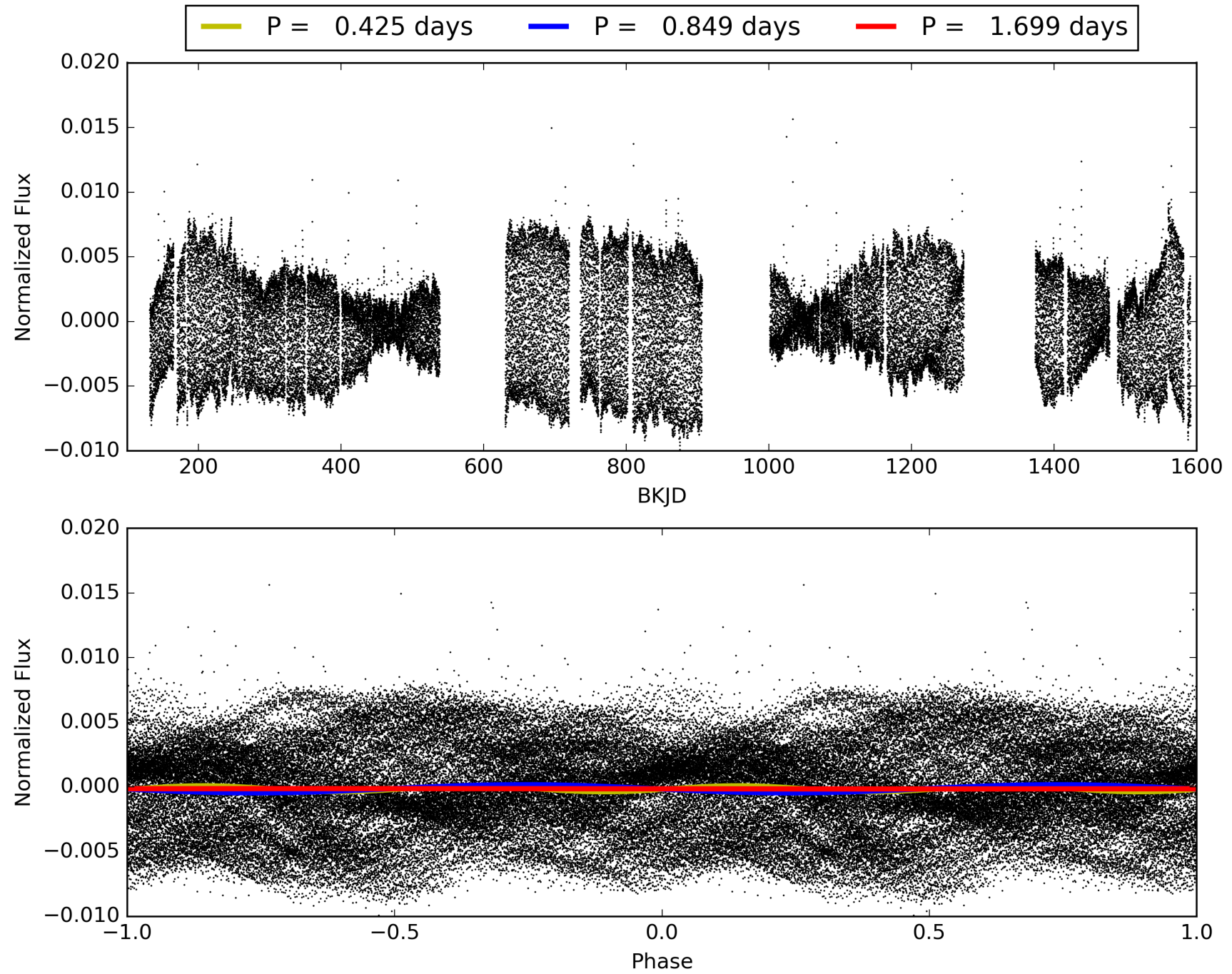
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1209/1209]
GhostDiagnostic-chr: 0.02713
Centroid-sig: 6.4%
Centroid-so: 2.163 arcsec [1.68σ]
OotOffset-rm: 0.208 arcsec [0.69σ]
KicOffset-rm: 0.126 arcsec [0.90σ]
OotOffset-st: 1/3/4/5 [13]
KicOffset-st: 1/3/4/5 [13]
DiffImageQuality-fgm: 0.46 [6/13]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 003129539-01, PDC Light Curves

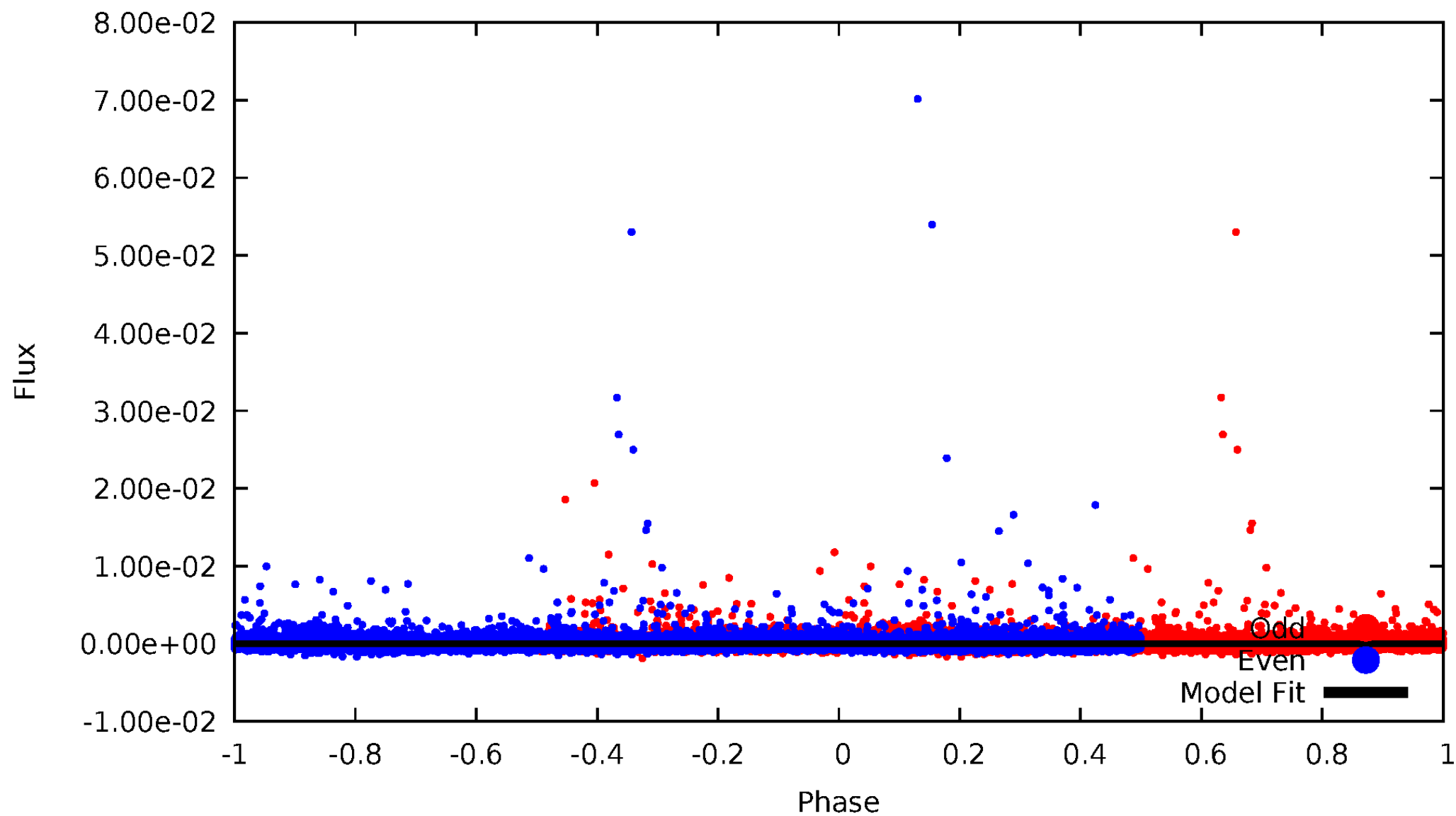


TCE 003129539-01



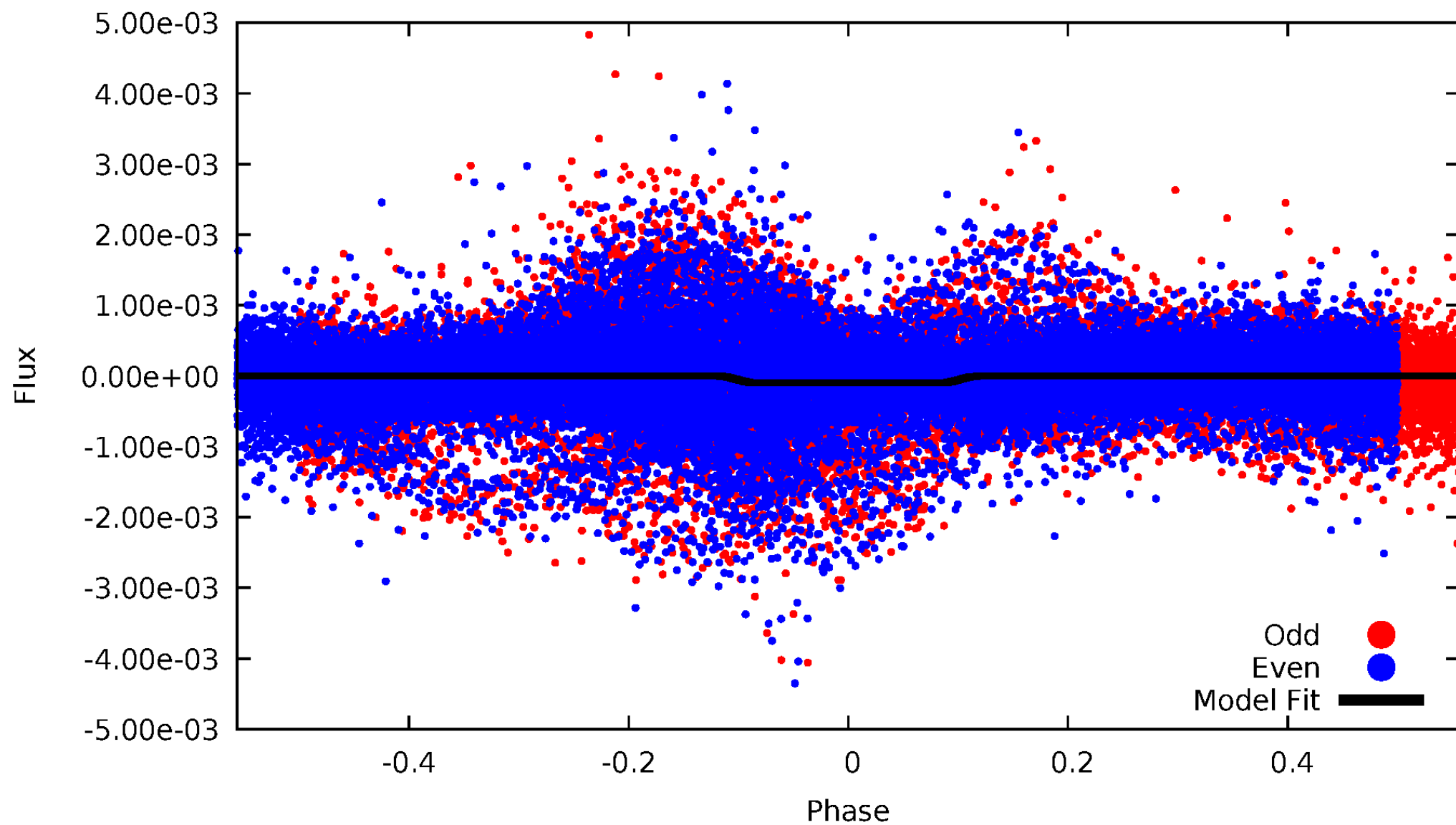
DV Odd/Even

TCE 003129539-01



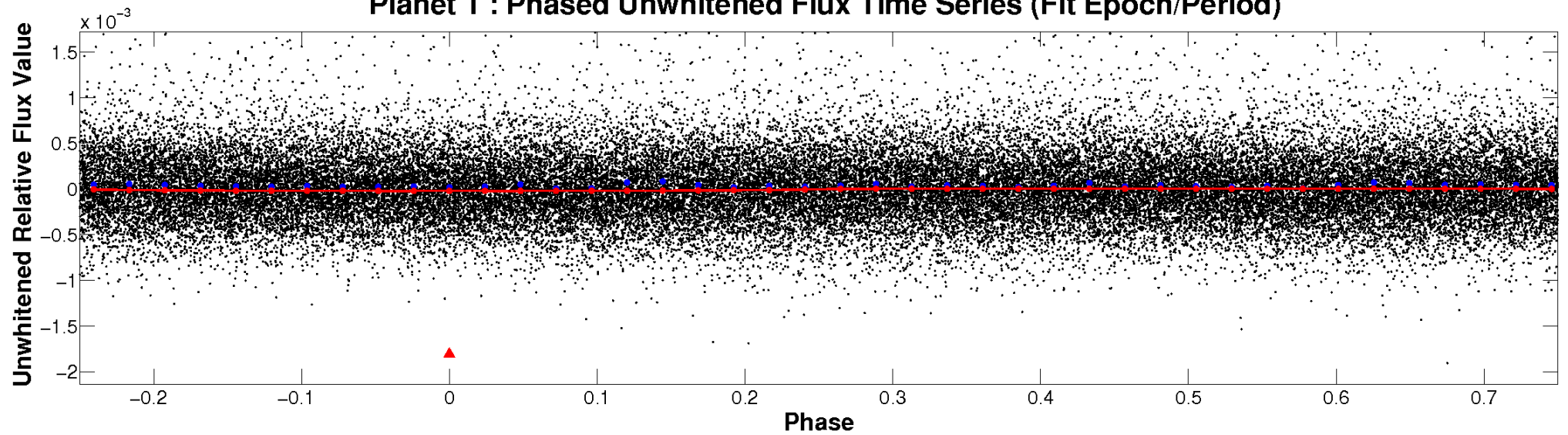
ALT Odd/Even

TCE 003129539-01

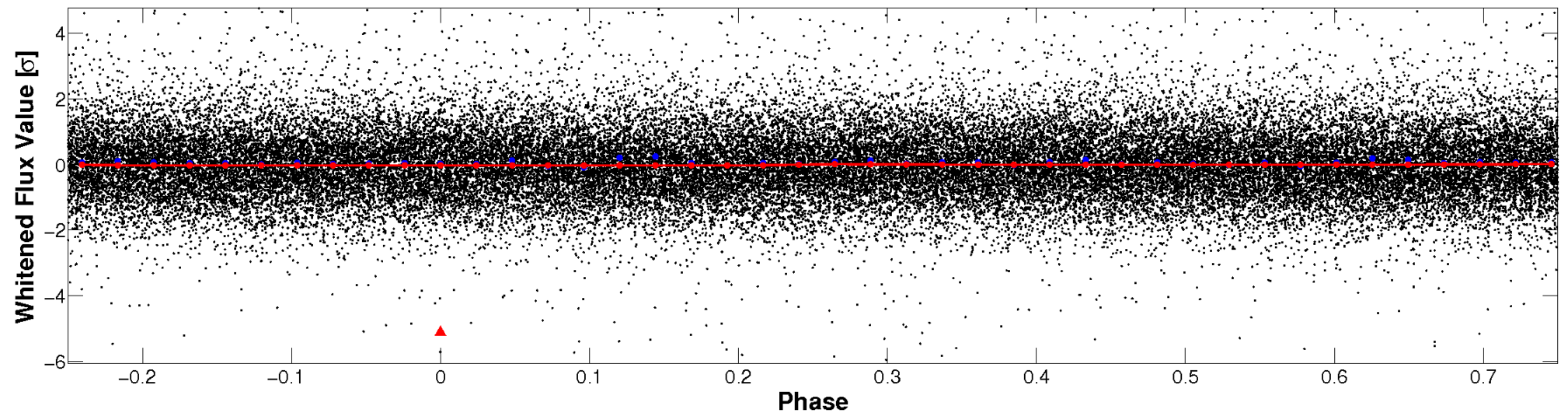


Non-Whitened Vs. Whitened Light Curve

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

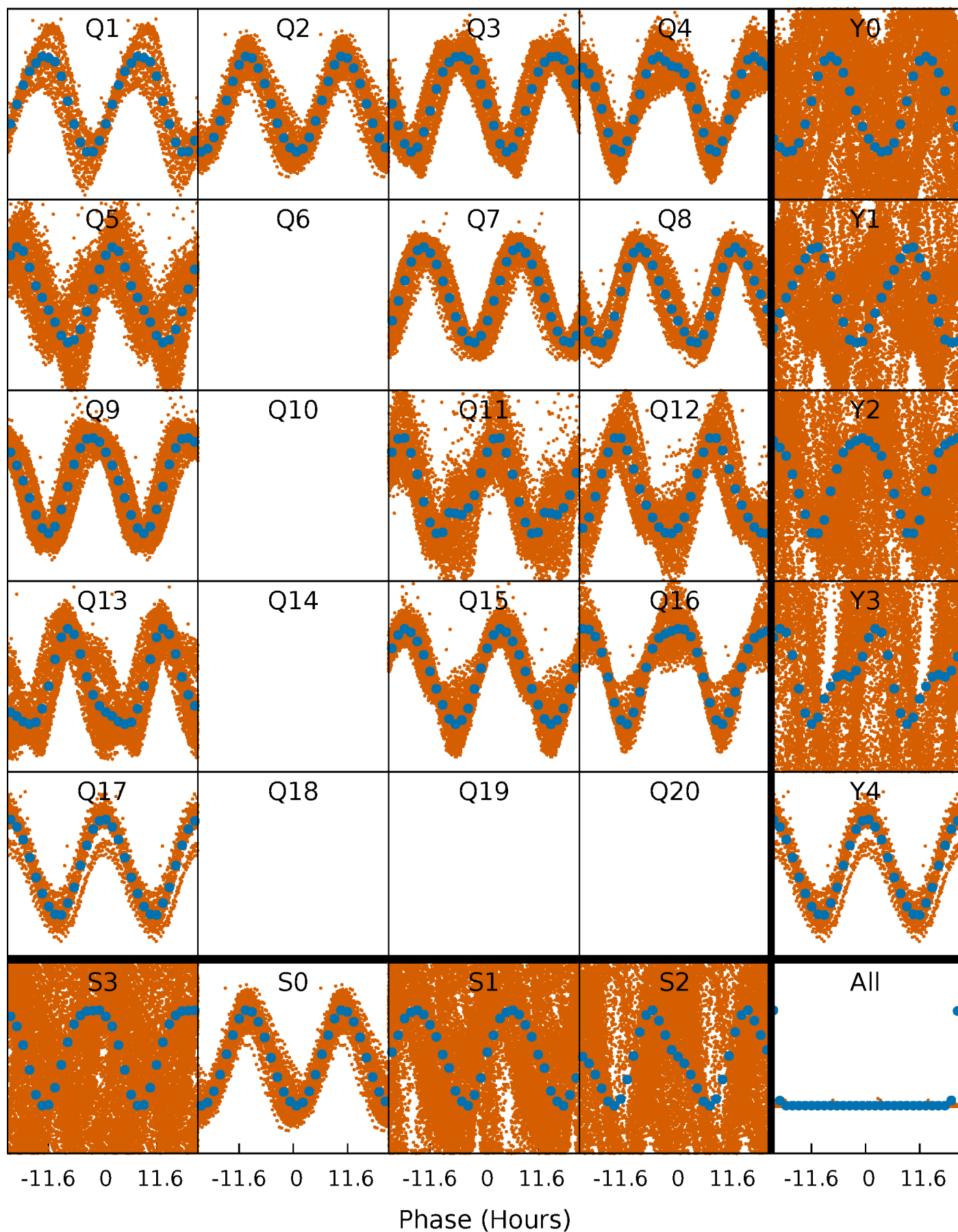


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



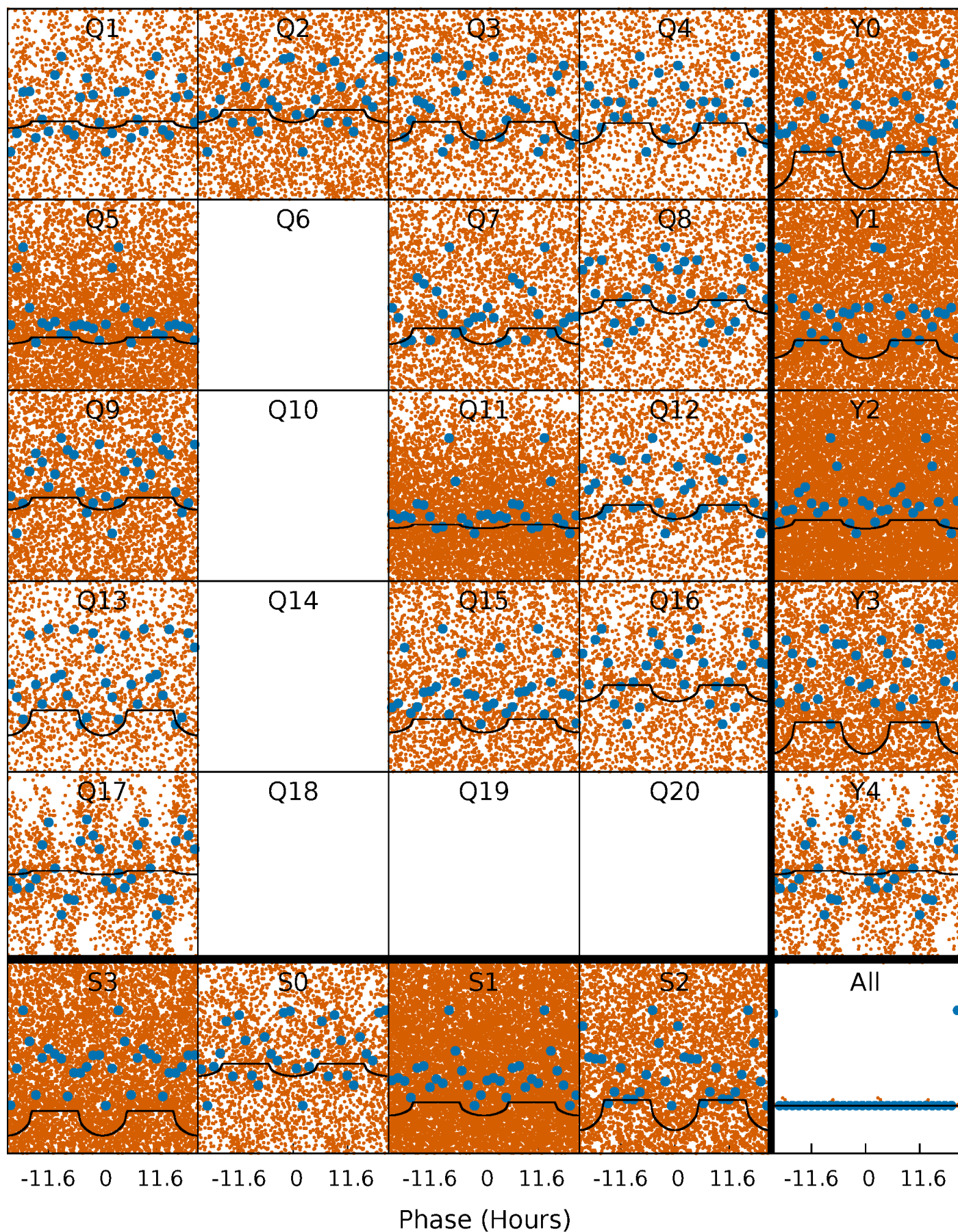
PDC Quarter-Phased Transit Curves

TCE 003129539-01 P= 0.849419 Days $T_0=132.033467$ (BKJD)



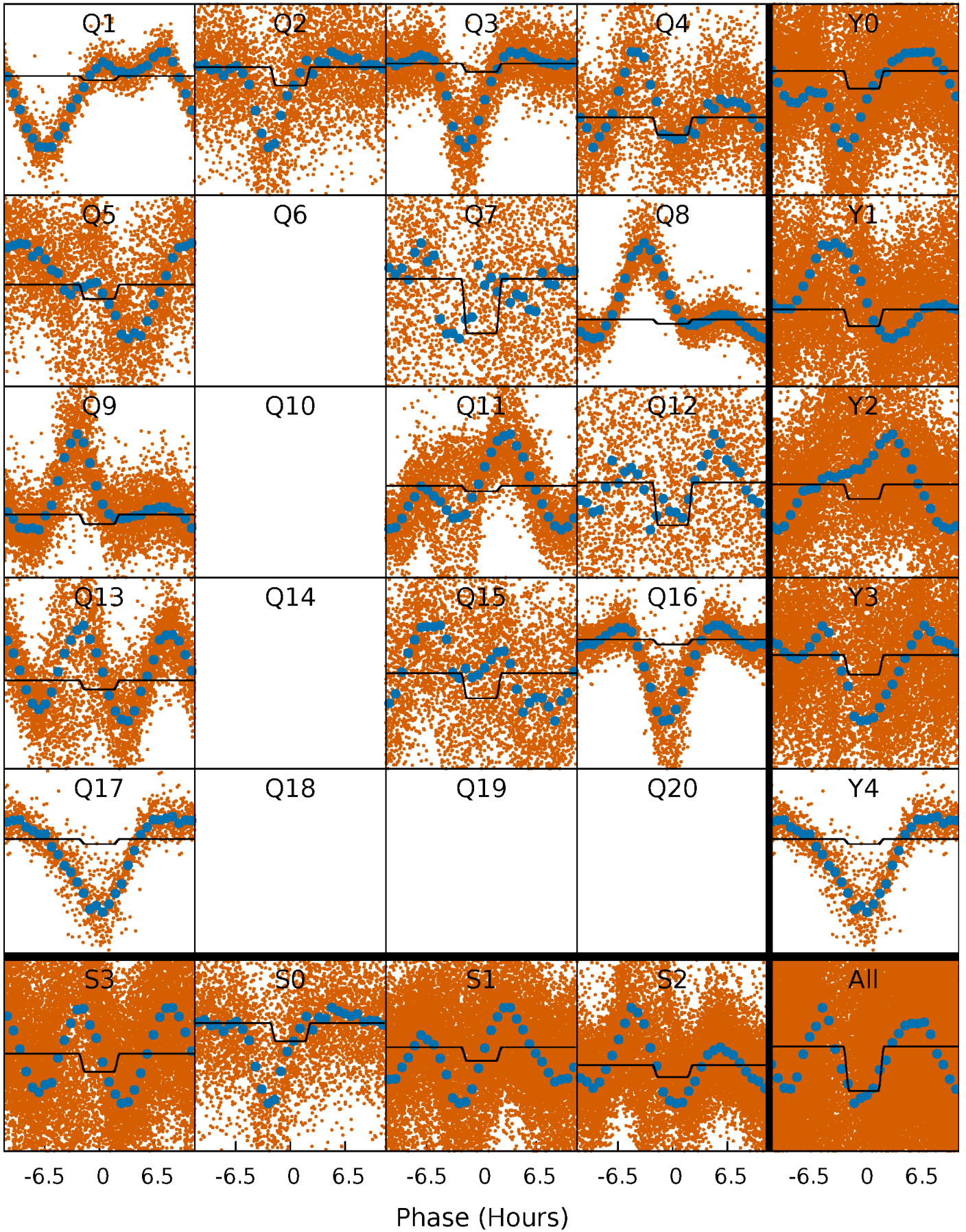
DV Quarter-Phased Transit Curves

TCE 003129539-01 P= 0.849419 Days $T_0=132.033467$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

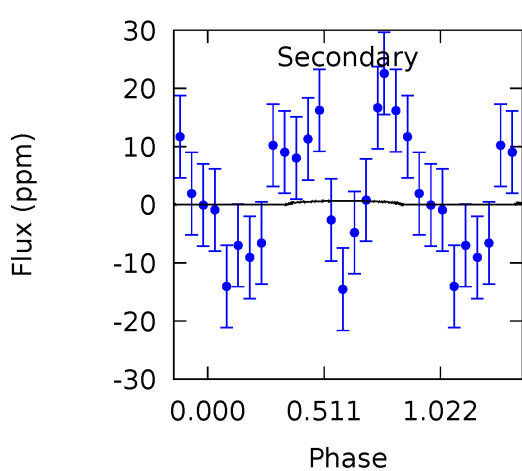
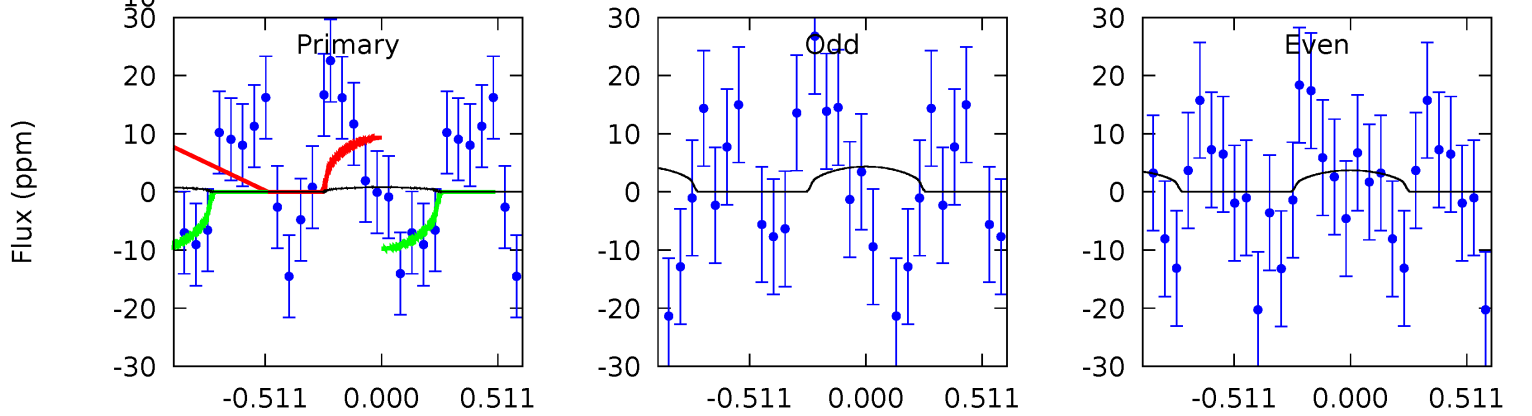
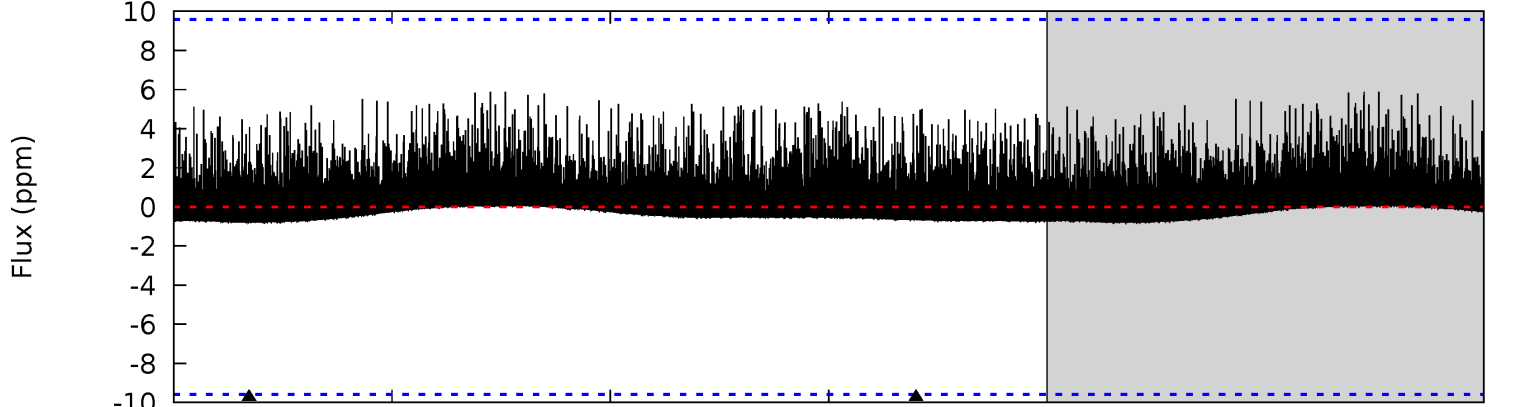
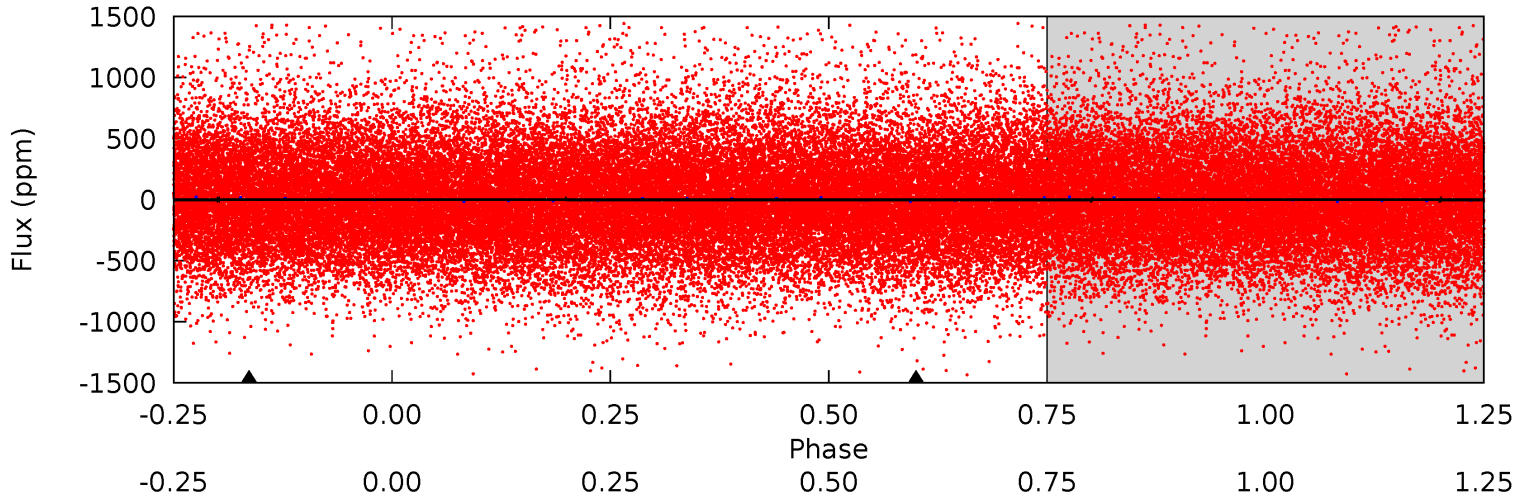
TCE 003129539-01 P= 0.850127 Days $T_0=132.146501$ (BKJD)



DV Model-Shift Uniqueness Test

003129539-01, P = 0.849419 Days, E = 131.184048 Days

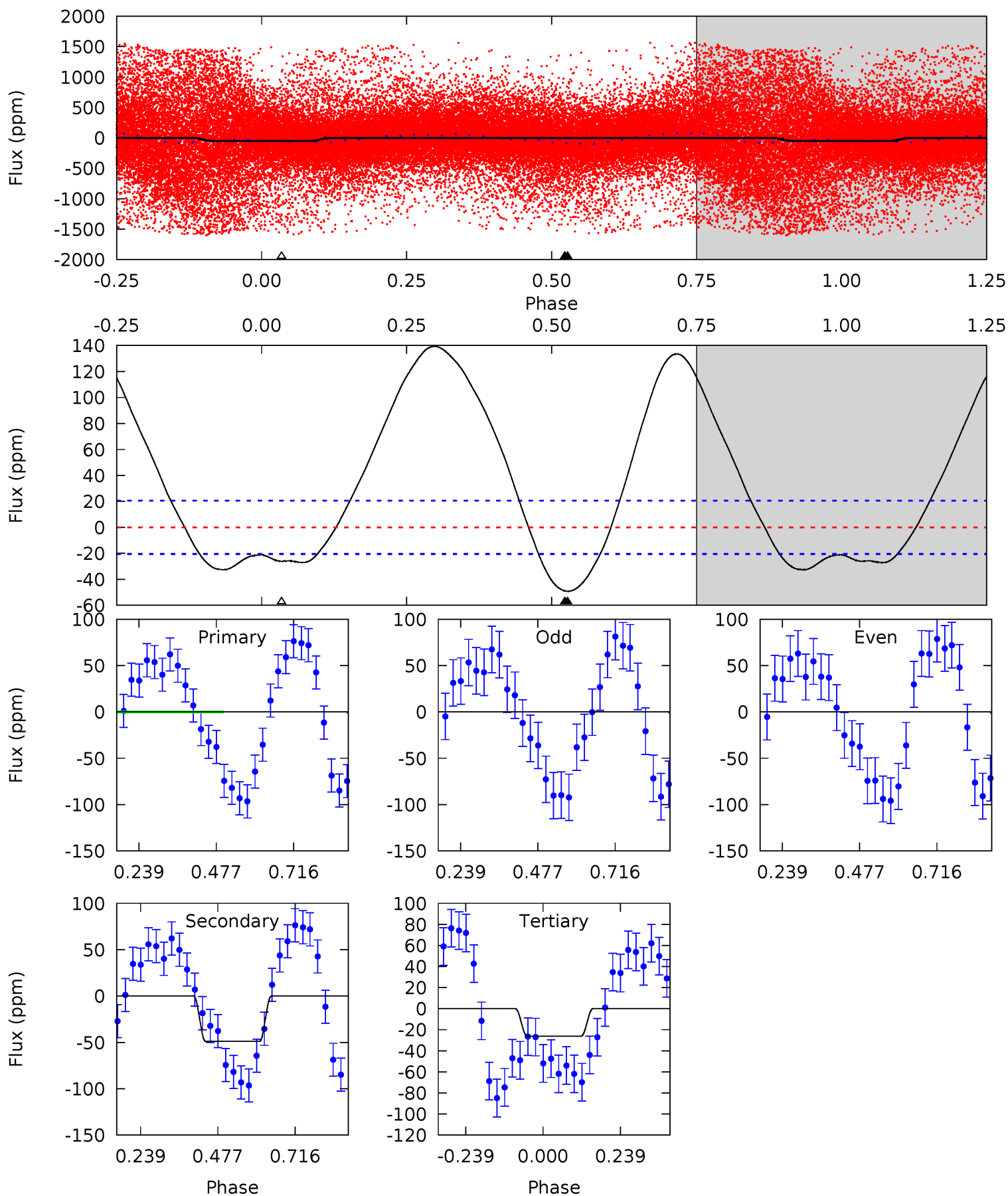
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.35	0.29	0	0	4.21	0.66	0.25	0.35	0.35	0.29	0.29	0.14	2.73	0.88	0.10



Alt Model-Shift Uniqueness Test

003129539-01, P = 0.850127 Days, E = 131.296374 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	10.4	5.57	0	4.38	1.18	11.0	4.94	10.5	4.88	10.4	1.14	10.2	0.74	1.71



Stellar Parameters For KIC 003129539

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5616^{+168}_{-168}	$4.553^{+0.095}_{-0.095}$	$-0.980^{+0.300}_{-0.300}$	$0.720^{+0.095}_{-0.078}$	$0.675^{+0.075}_{-0.025}$	$2.547^{+1.071}_{-0.694}$
	+3%/-3%	+2%/-2%	+31%/-31%	+13%/-11%	+11%/-4%	+42%/-27%
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 003129539-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1 ± 2	$0.43^{+0.34}_{-0.27}$	2363^{+111}_{-100}	2140^{+1871}_{-5579}	$0.340^{+3.782}_{-1.542}$
Alt.	-49 ± 5	$0.77^{+0.38}_{-0.33}$	2364^{+115}_{-94}	4821^{+1401}_{-704}	11^{+22}_{-6}

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

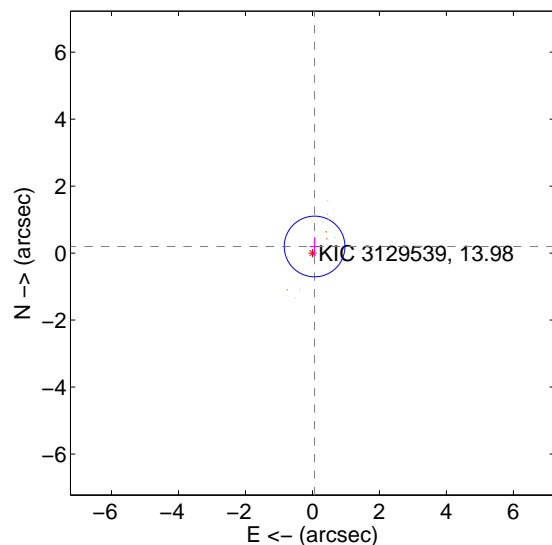
Supplemental centroid analysis for 003129539-01. Kepler magnitude: 13.98. Transit SNR 3.96

There are 6 quarters with good PRF difference image offsets

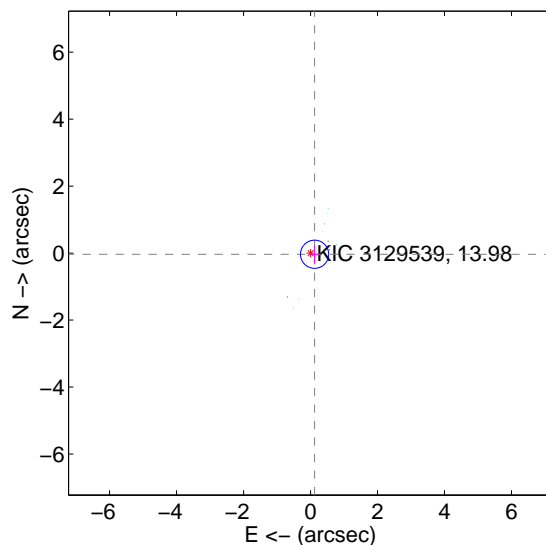
The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.208 ± 0.302	0.69	-0.064 ± 0.146	0.198 ± 0.278
PRF-fit source offset from KIC position	0.126 ± 0.140	0.90	-0.121 ± 0.124	-0.034 ± 0.271
photometric centroid source offset	2.16 ± 1.29	1.68	-1.66 ± 1.26	-1.39 ± 1.33

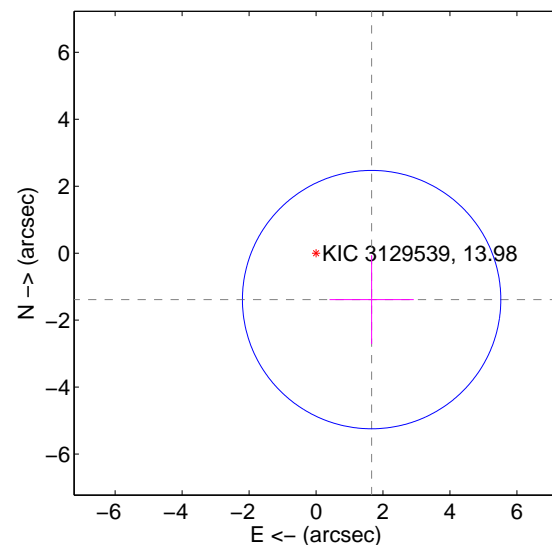
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

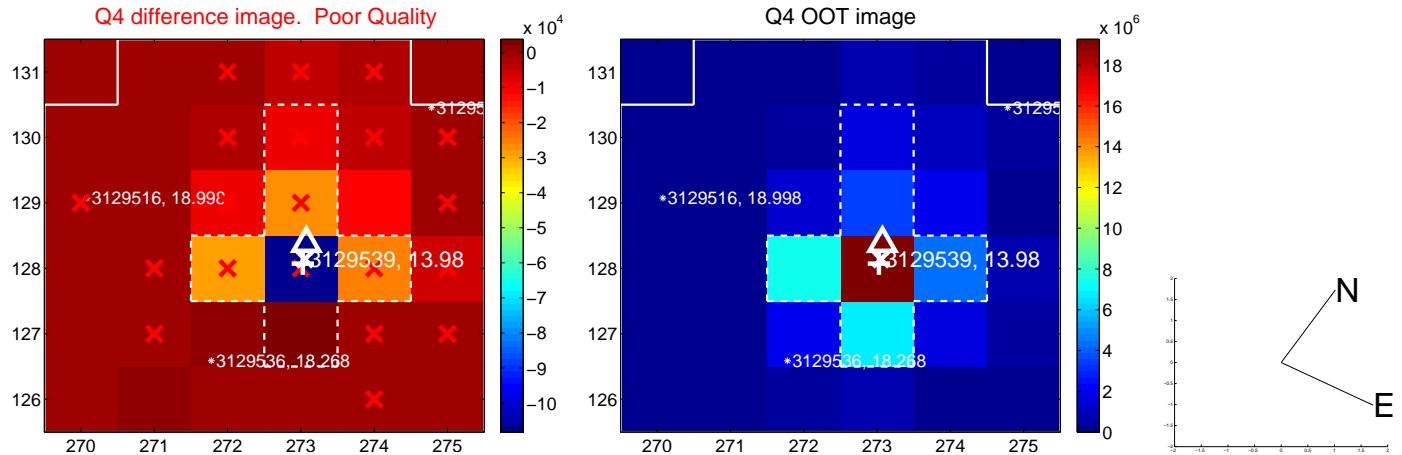
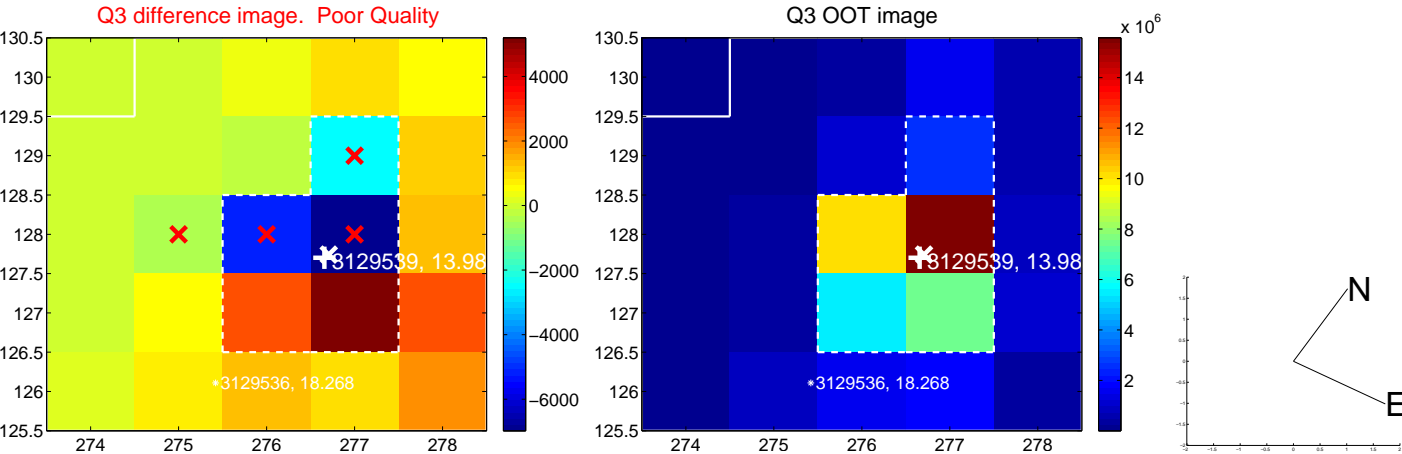
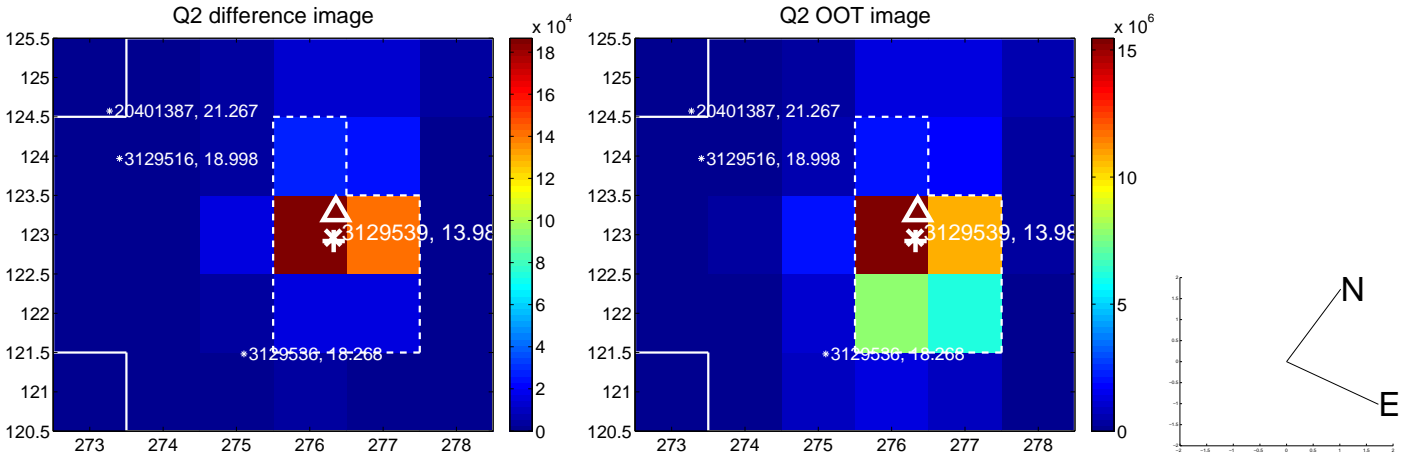
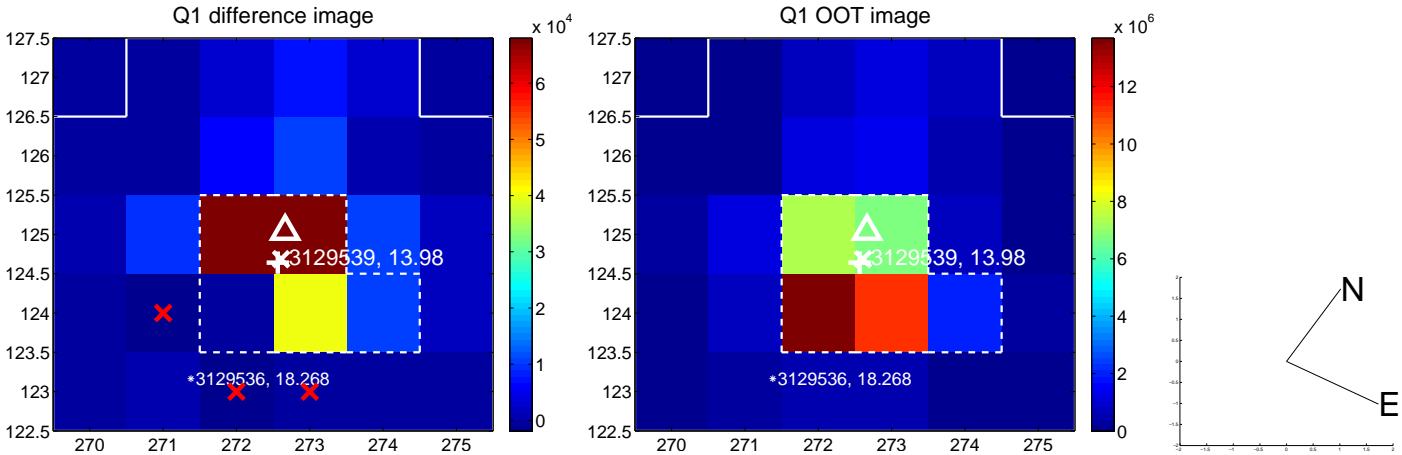


offset from photometric centroids

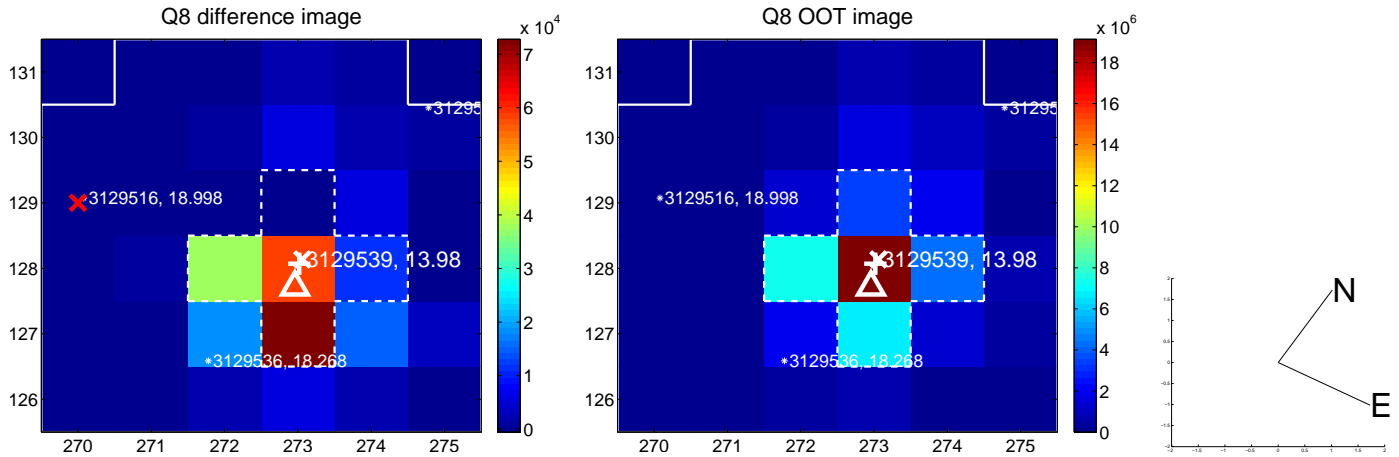
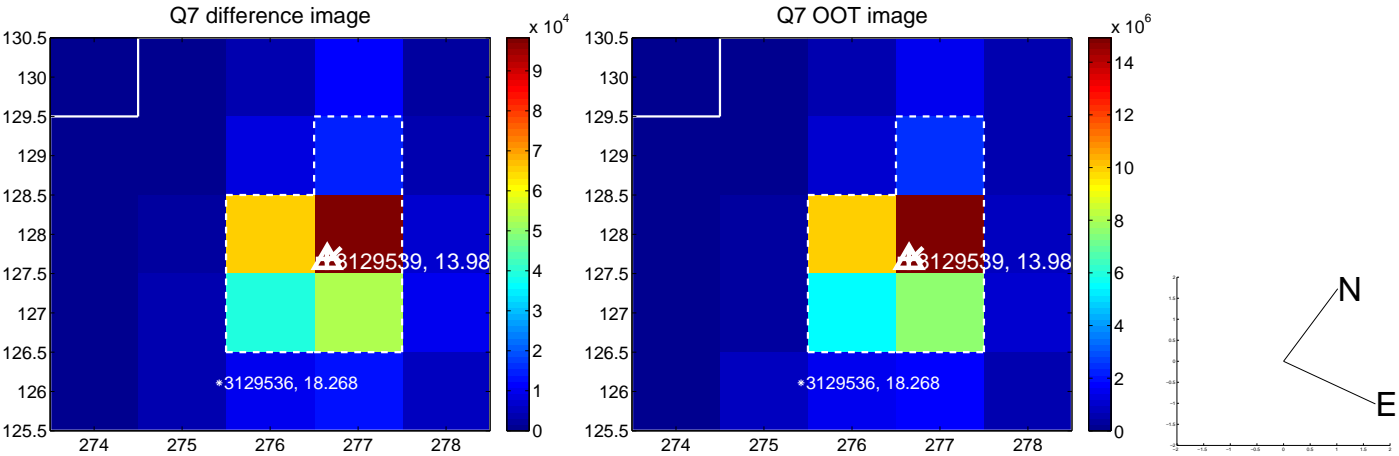
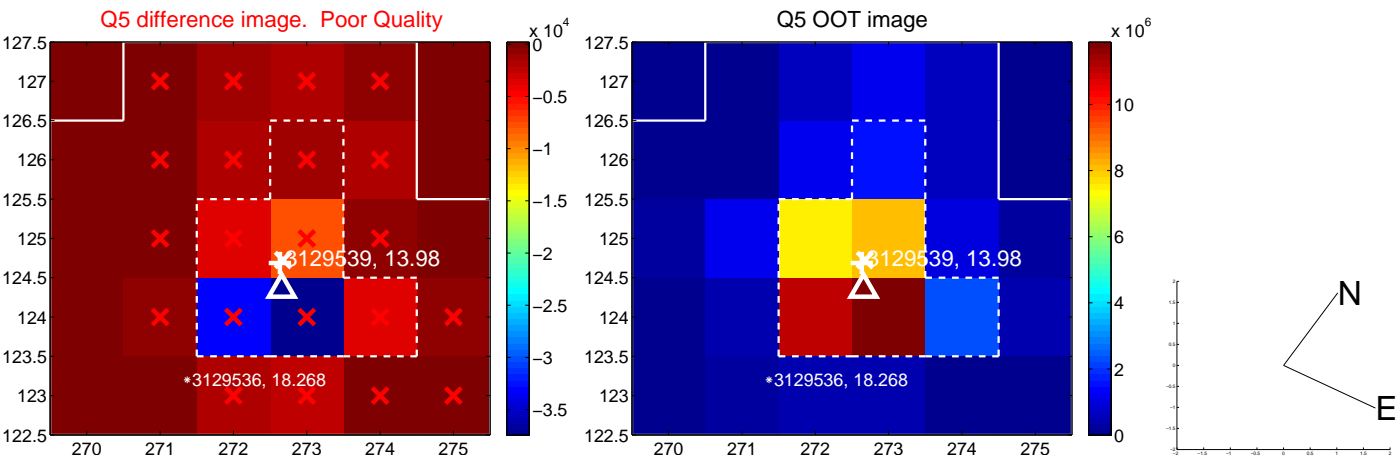


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

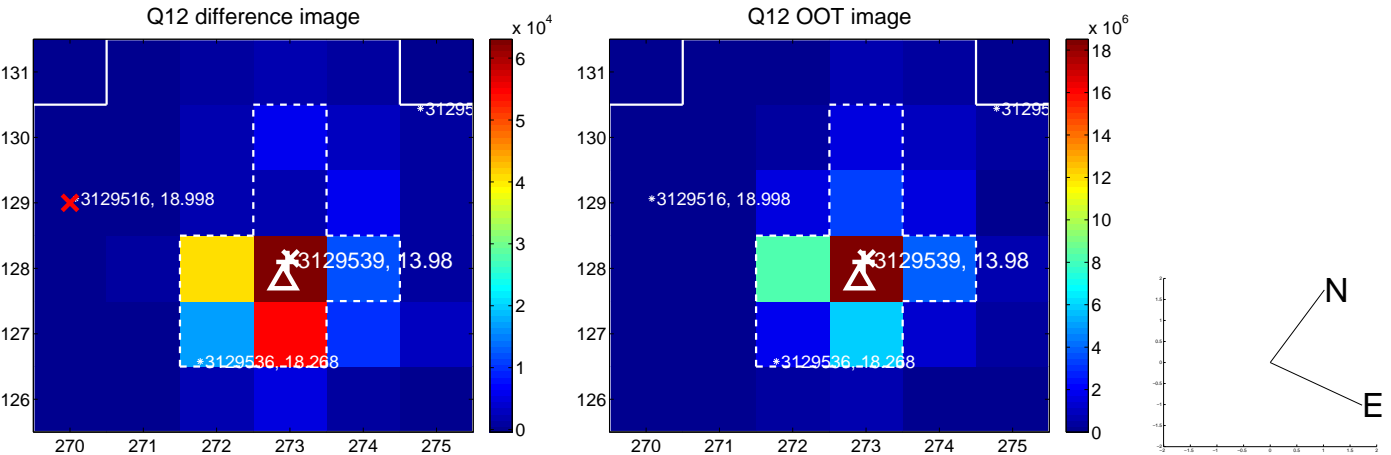
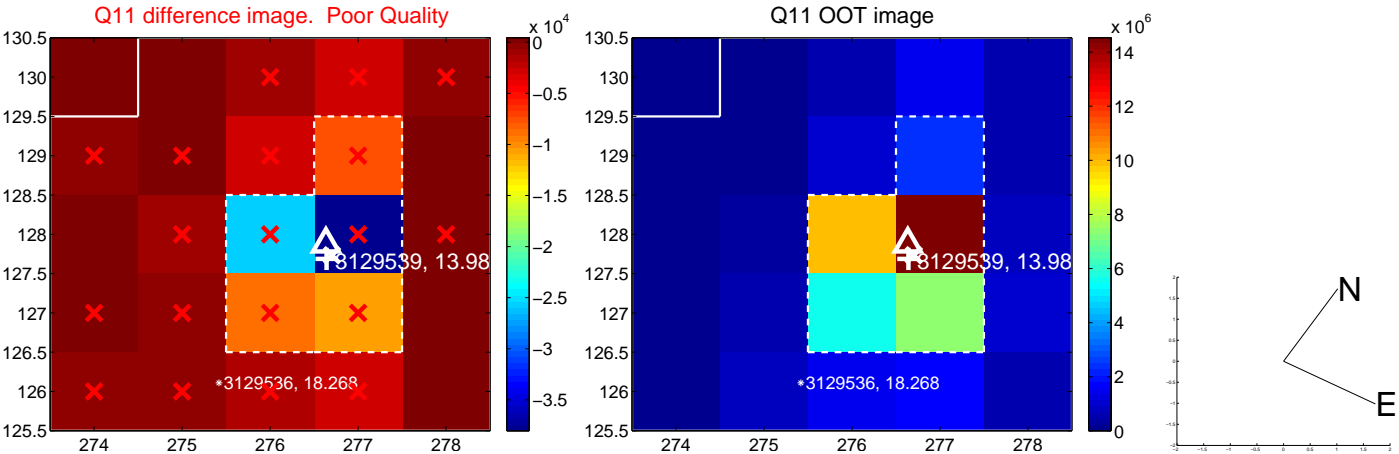
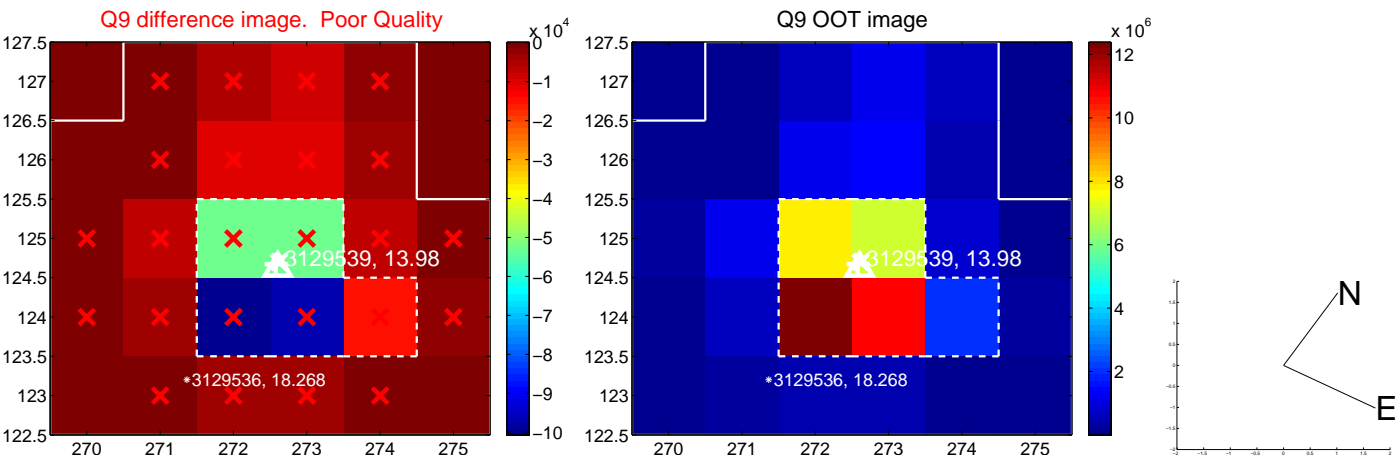
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



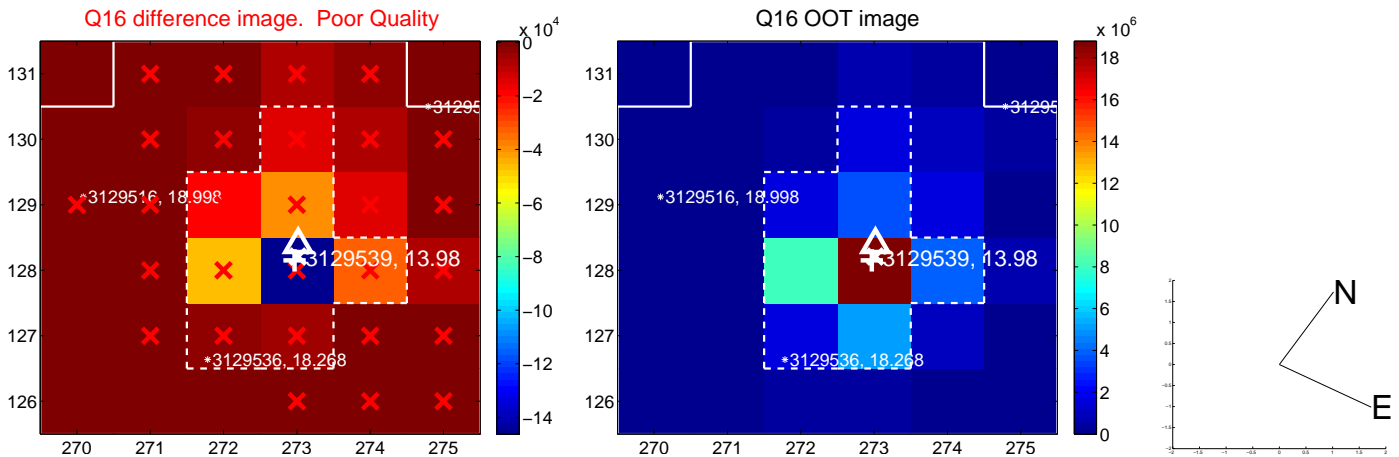
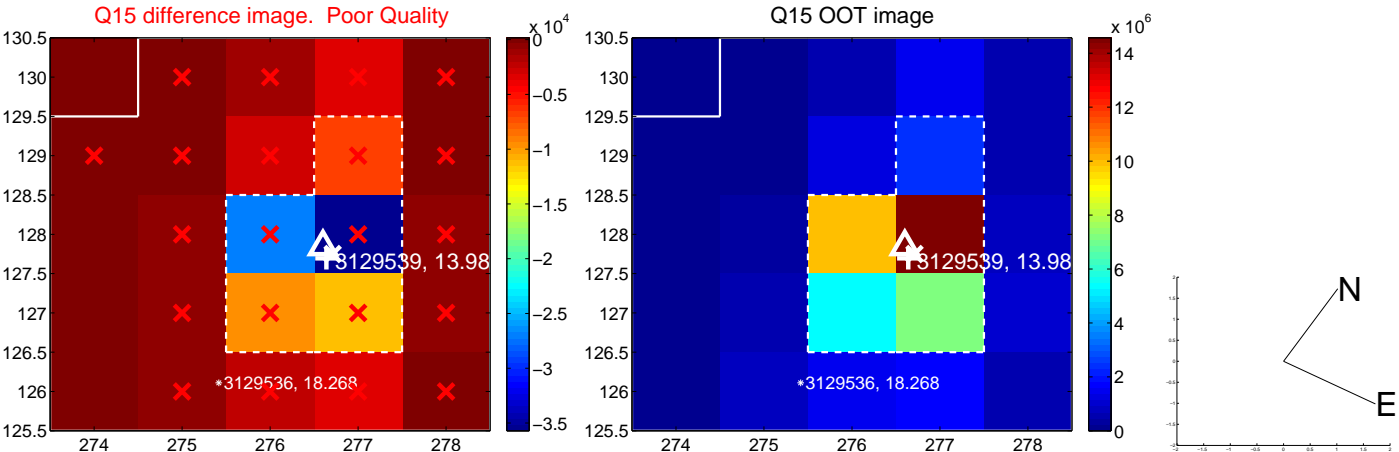
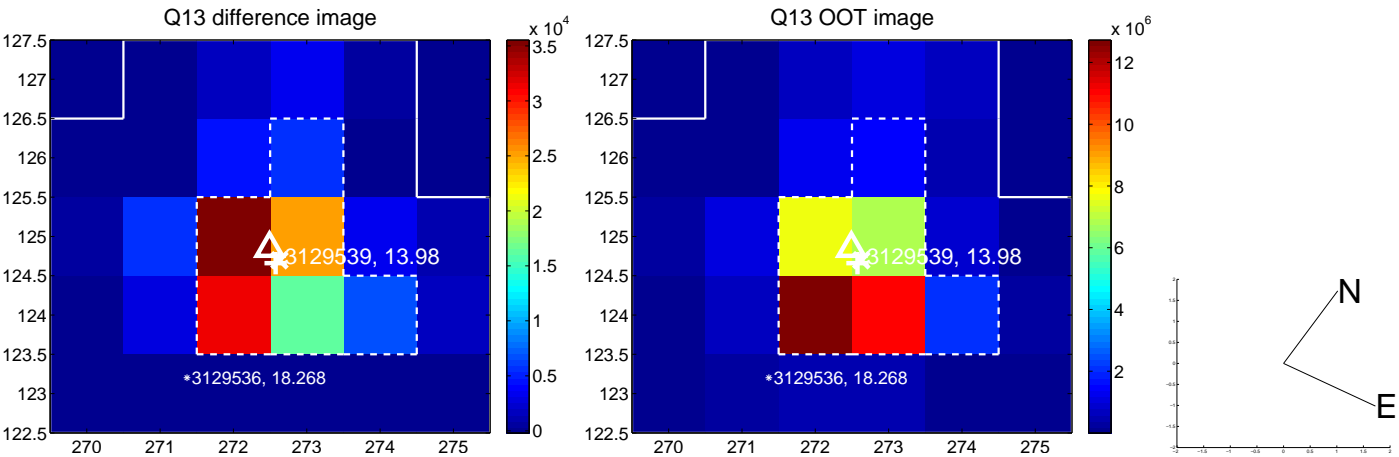
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



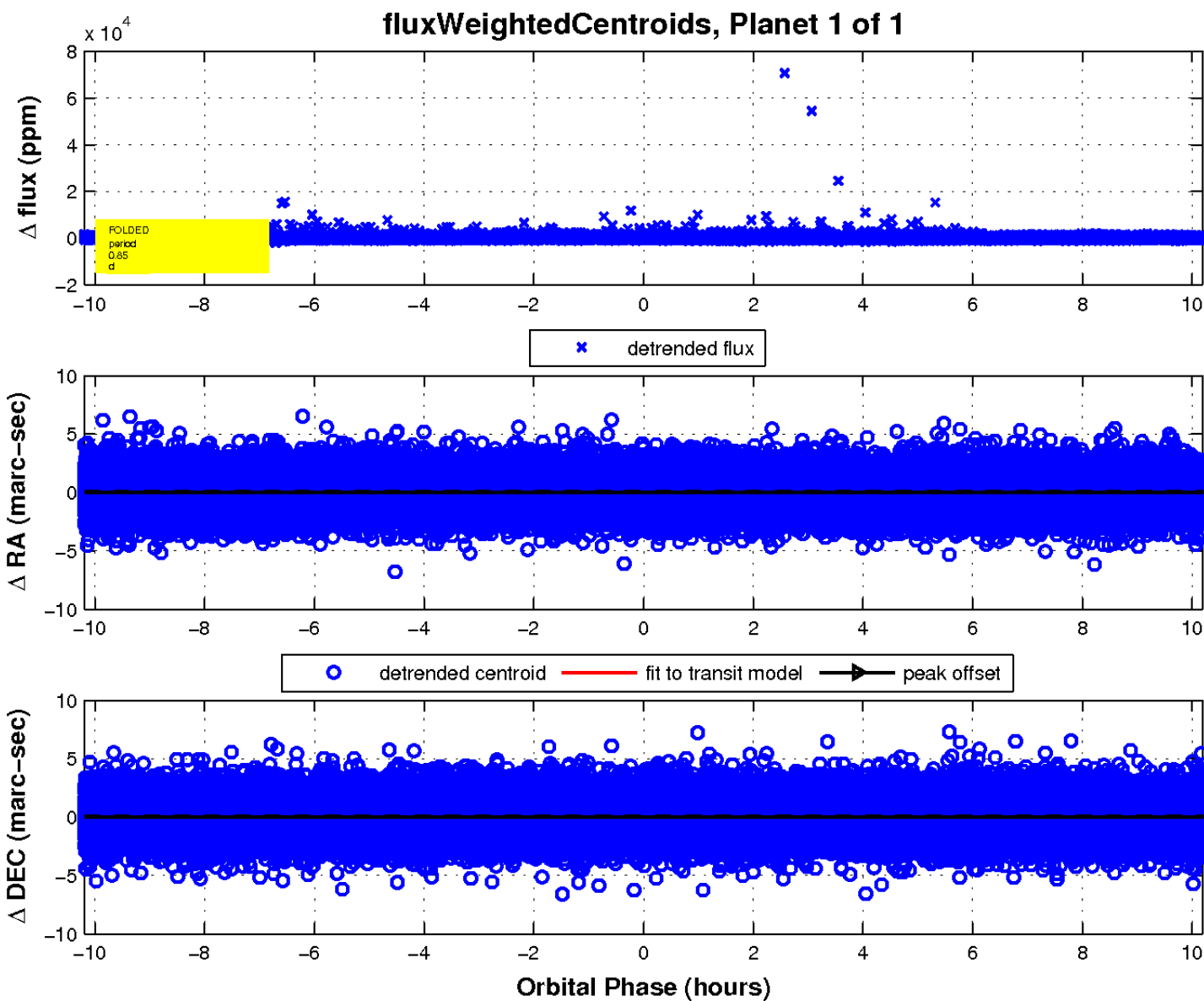
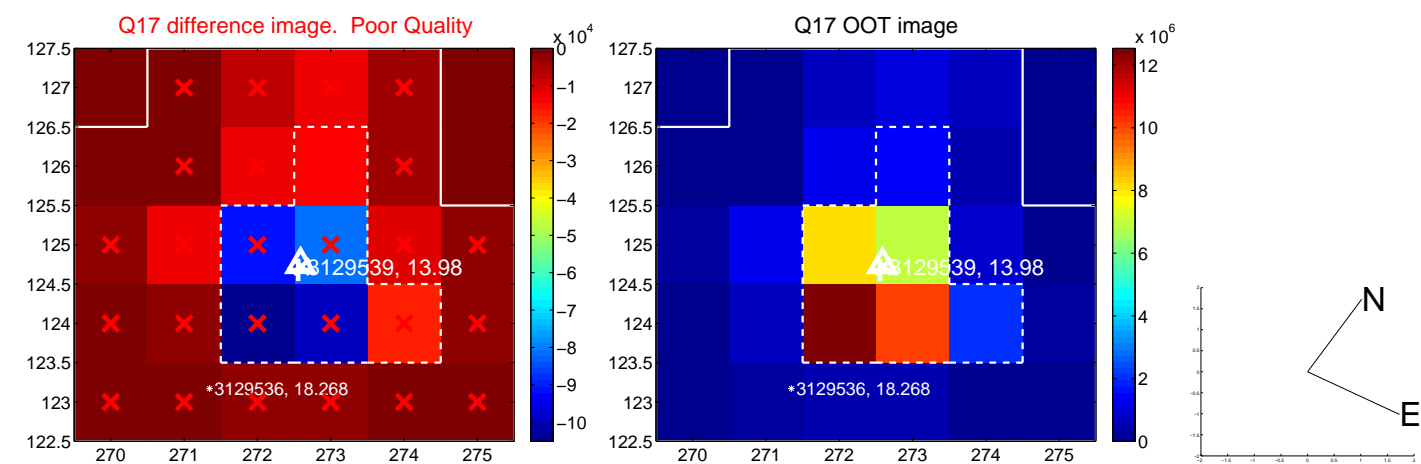
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

