

KIC 005021329

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})
005021329-01	OBS	No	0.555362	131.667245	28.8	2.369	9.4	10.7	1.83	7257	1.14	35751.74

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005021329-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

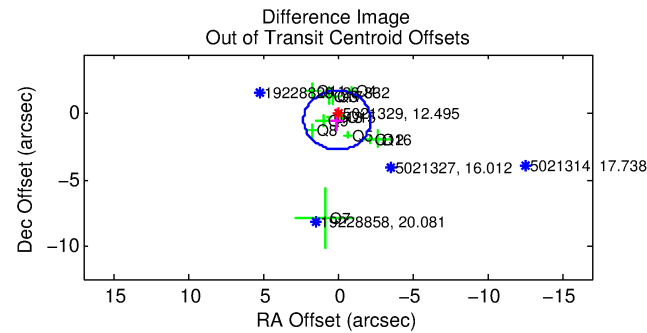
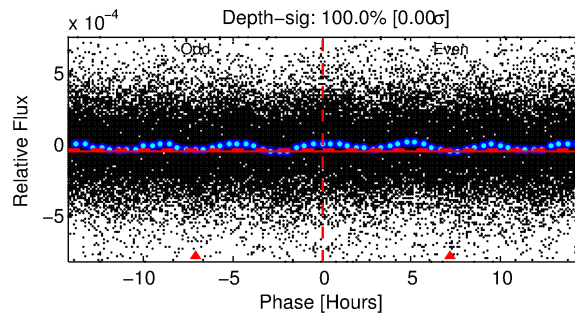
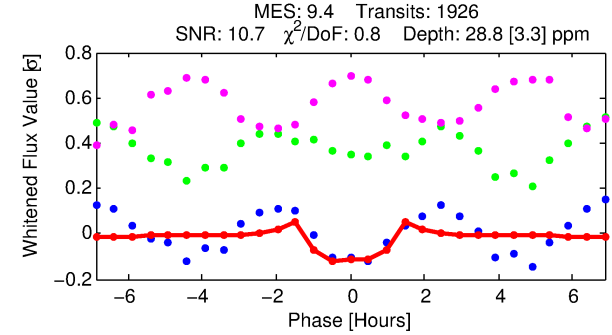
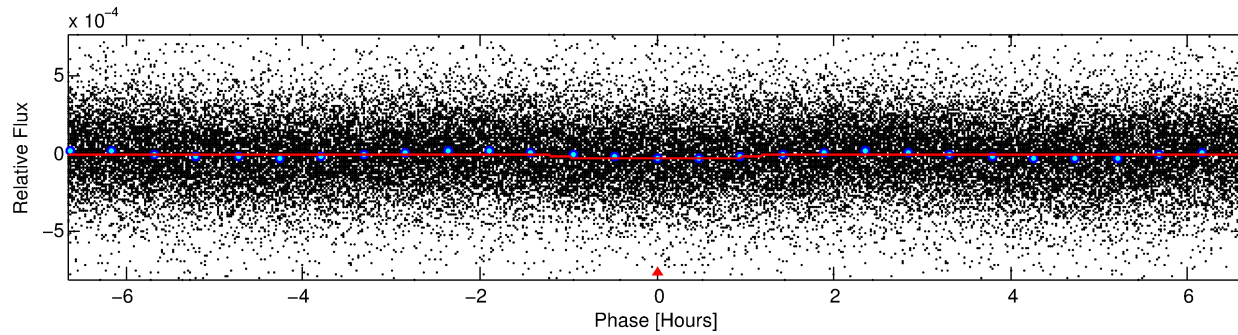
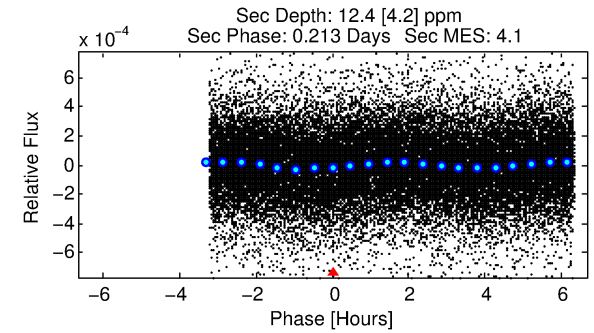
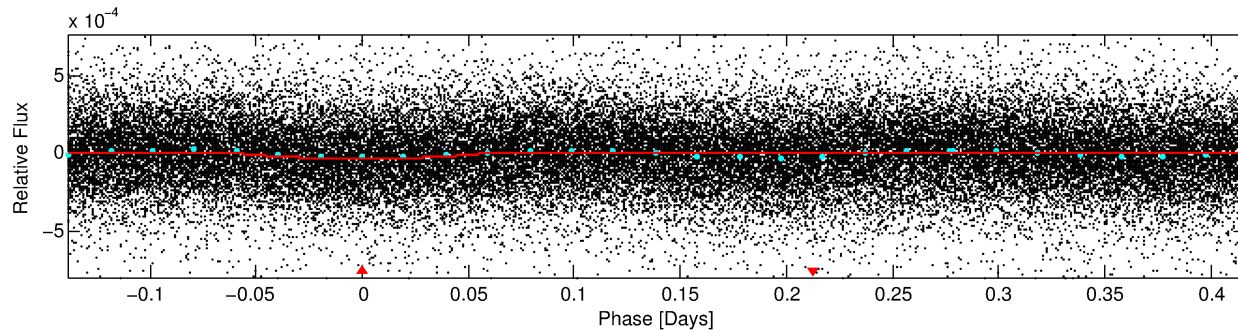
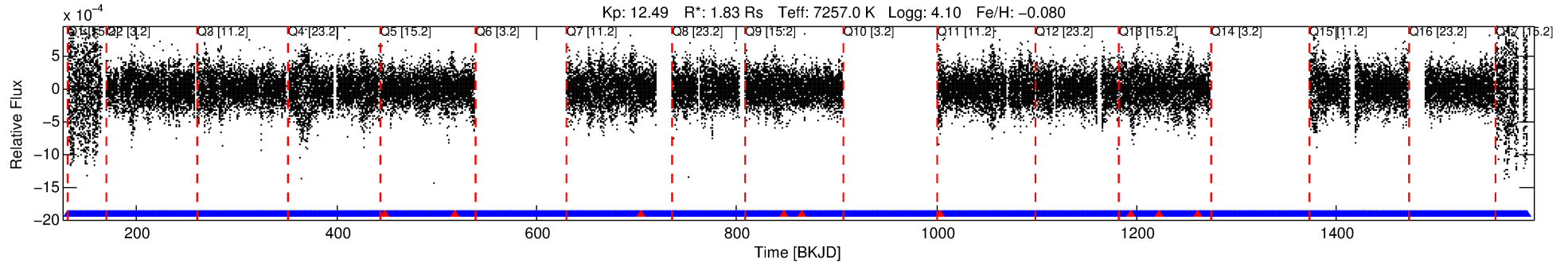
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005021329-01

No Significant Match Found

DV One-Page Summary

KIC: 5021329 Candidate: 1 of 1 Period: 0.555 d



DV Fit Results:

Period = 0.55536 [0.00001] d
Epoch = 131.6672 [0.0017] BKJD
Rp/R* = 0.0057 [0.0014]
a/R* = 1.24 [0.63]
b = 0.90 [0.32]
Seff = 35751.74 [13869.78]
Teq = 3506 [340] K
Rp = 1.14 [0.44] Re
a = 0.0152 [0.0038] AU
Ag = 1.23 [0.83] [0.27σ]
Teffp = 5706 [869] K [2.36σ]

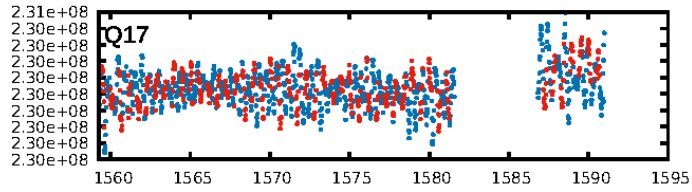
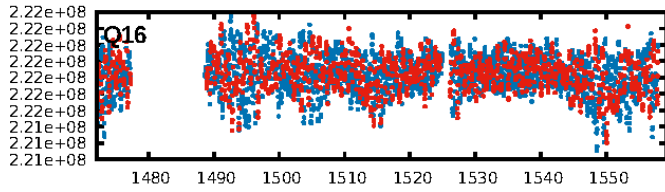
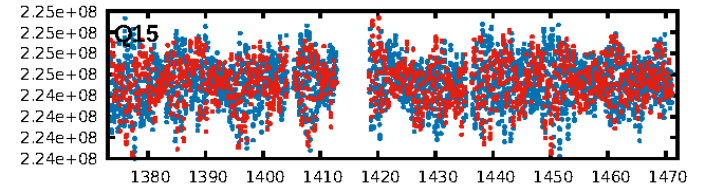
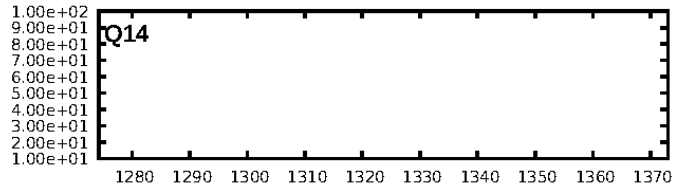
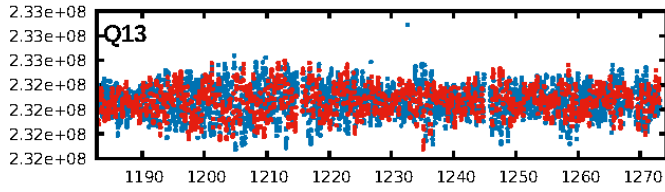
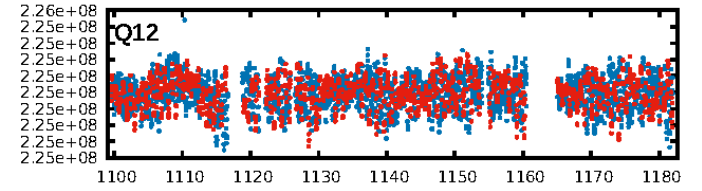
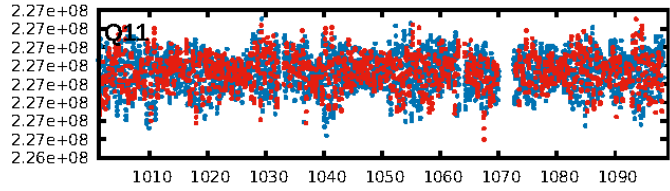
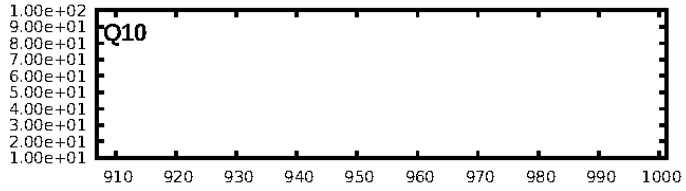
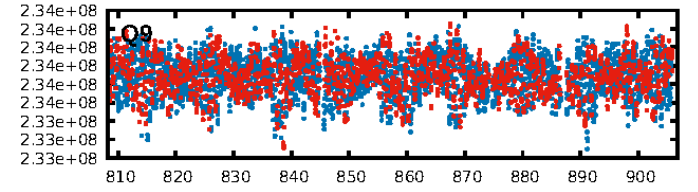
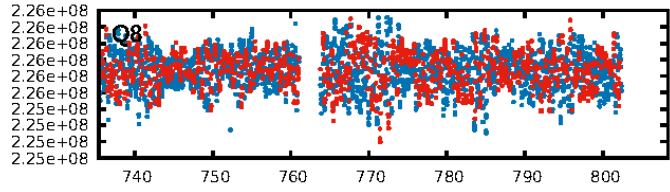
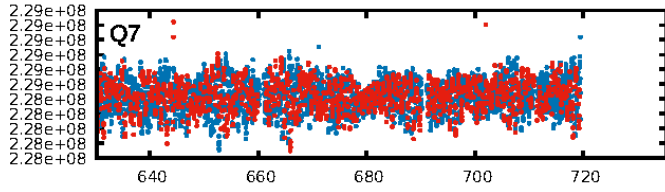
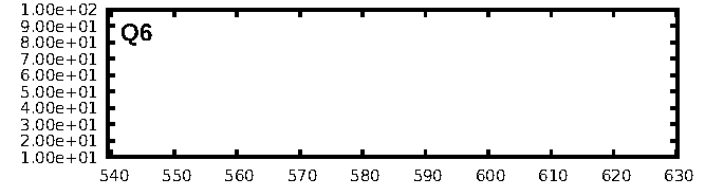
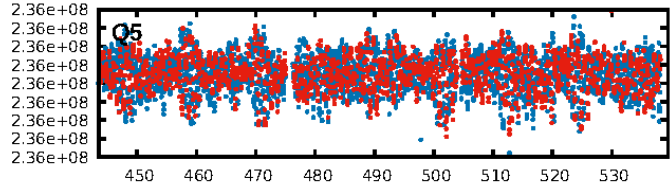
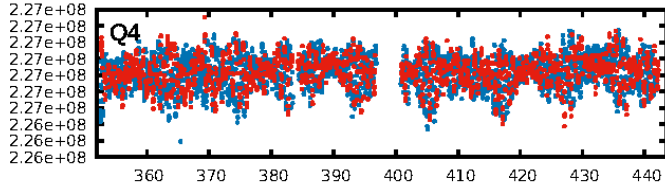
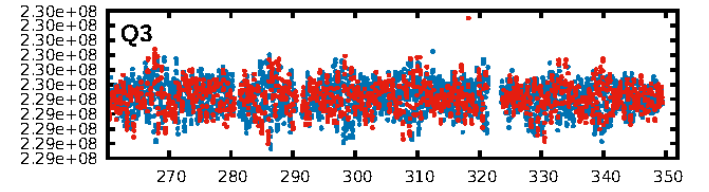
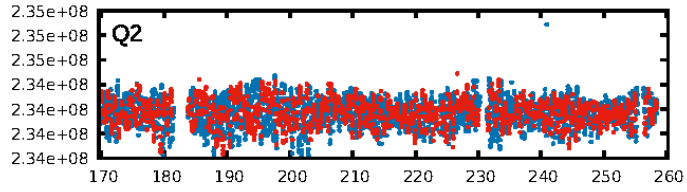
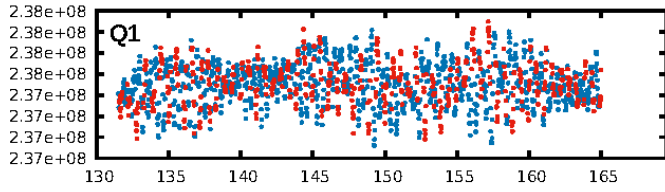
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.53e-17
RollingBand-fgt: 1.00 [1809/1818]
GhostDiagnostic-chr: 7.297
Centroid-sig: 22.2%
Centroid-so: 0.328 arcsec [0.68σ]
OotOffset-rm: 0.476 arcsec [0.64σ]
OotOffset-st: 0/4/4/4 [12]
KicOffset-rm: 0.549 arcsec [0.69σ]
KicOffset-st: 0/4/4/4 [12]
DiffImageQuality-fgm: 0.75 [9/12]
DiffImageOverlap-fno: 1.00 [14/14]

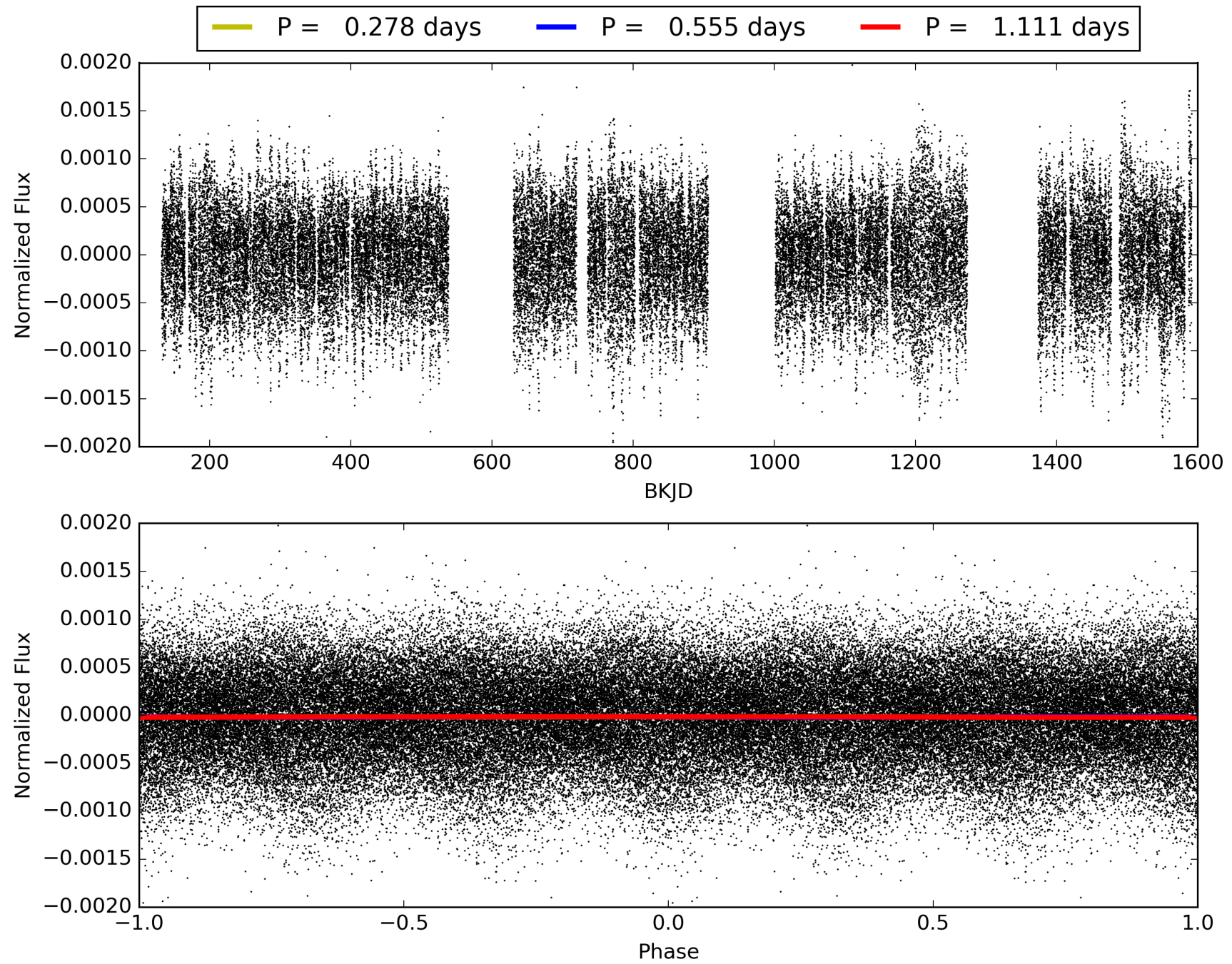
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:44:55 Z

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

TCE 005021329-01, PDC Light Curves

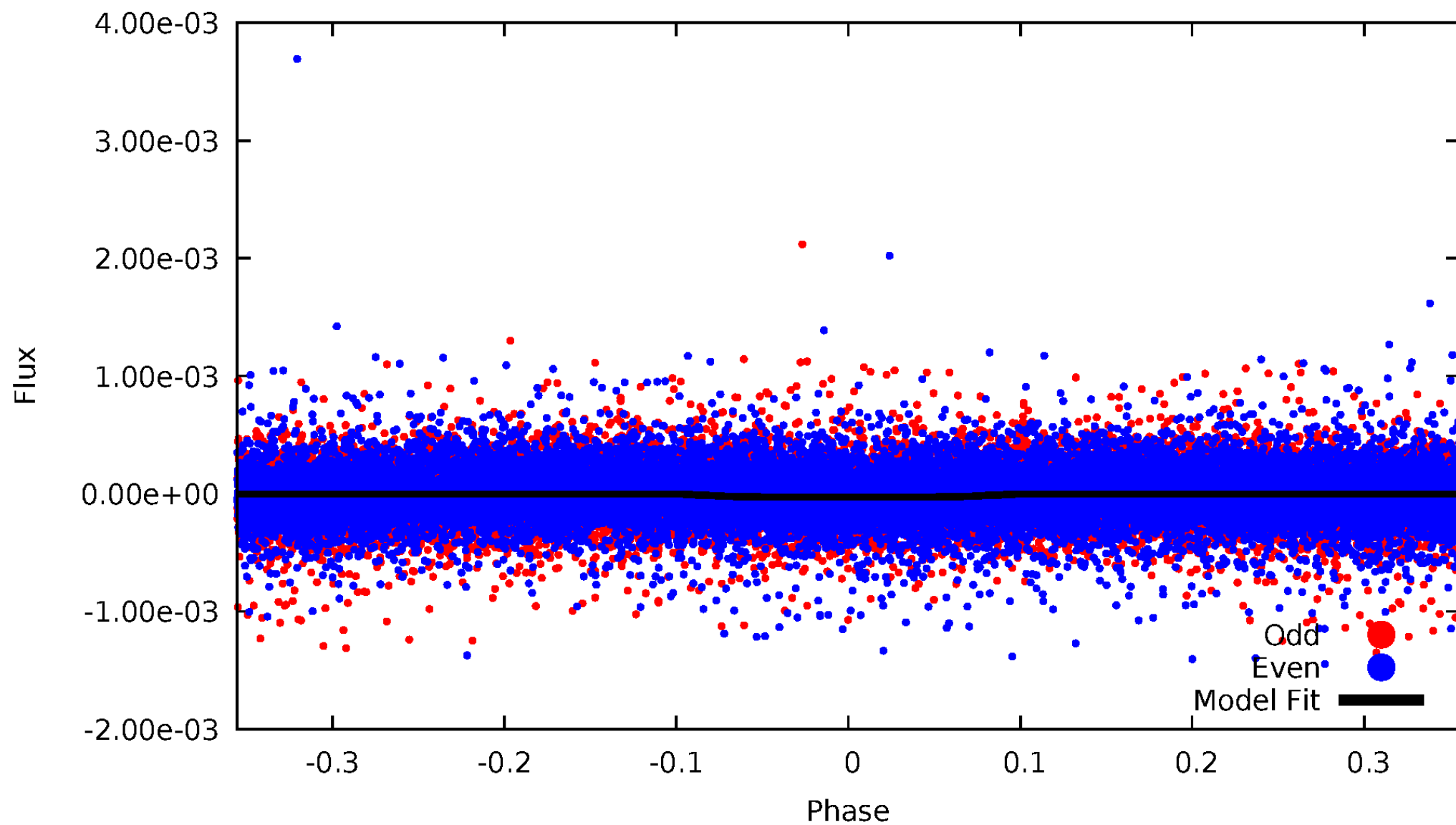


TCE 005021329-01



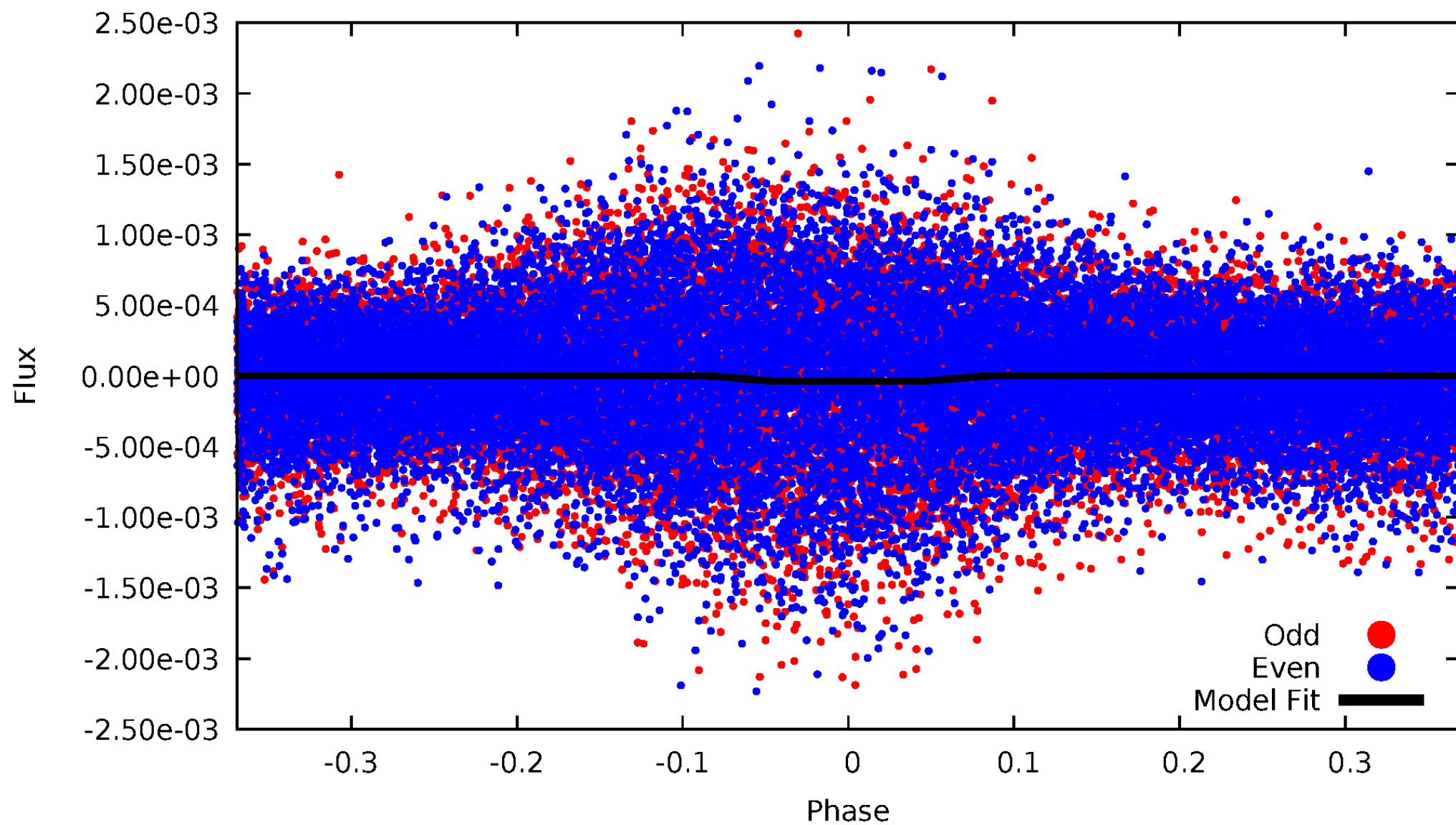
DV Odd/Even

TCE 005021329-01

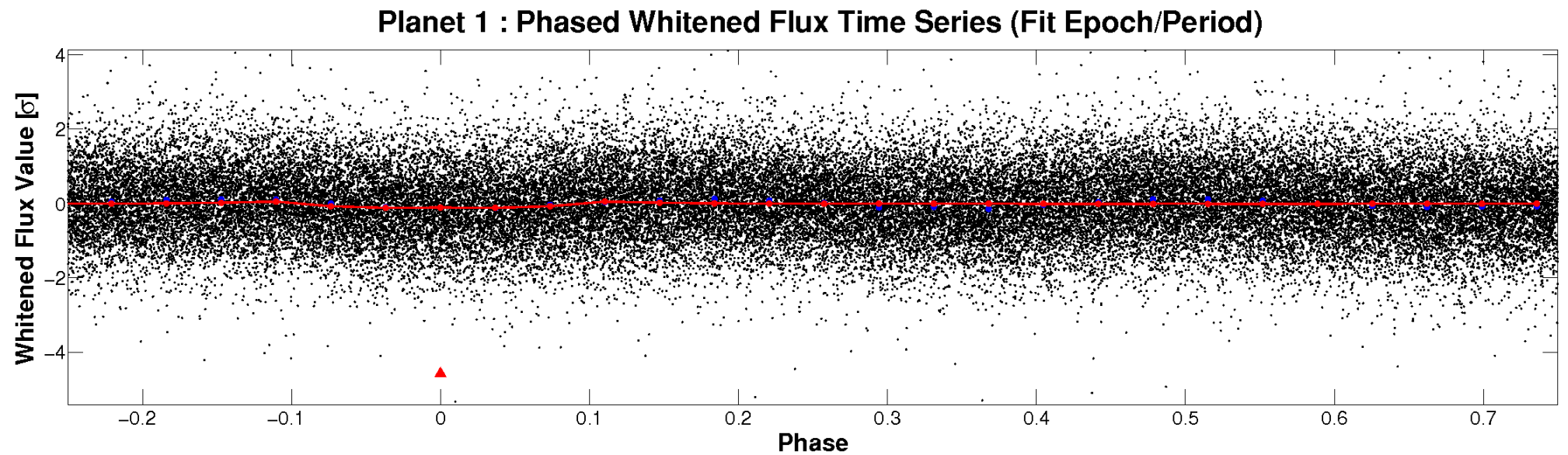
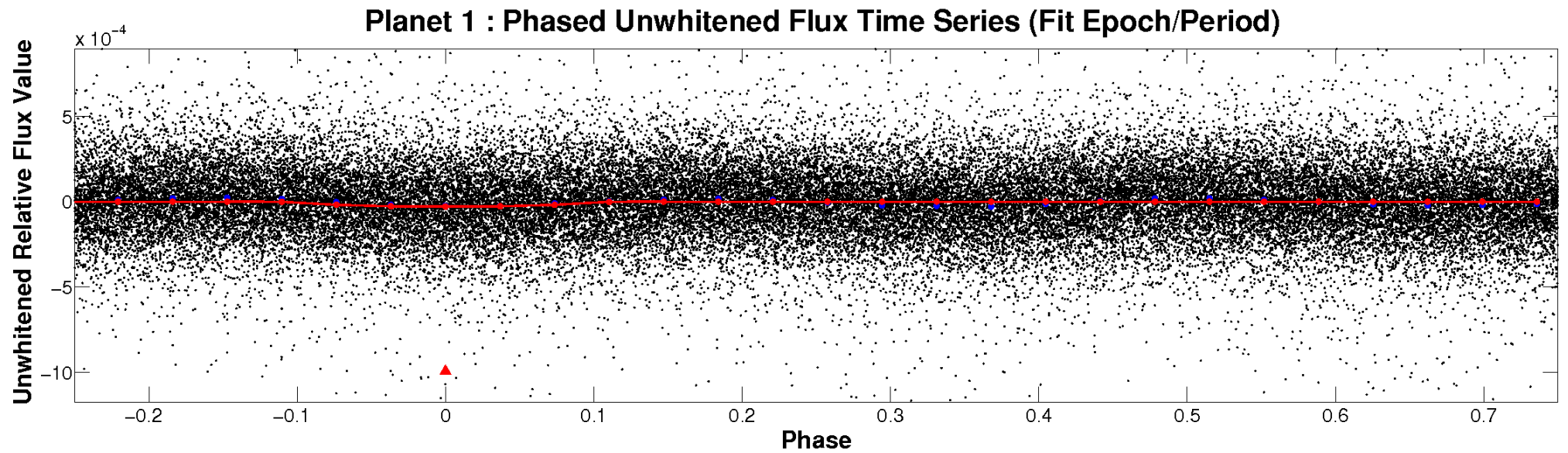


ALT Odd/Even

TCE 005021329-01

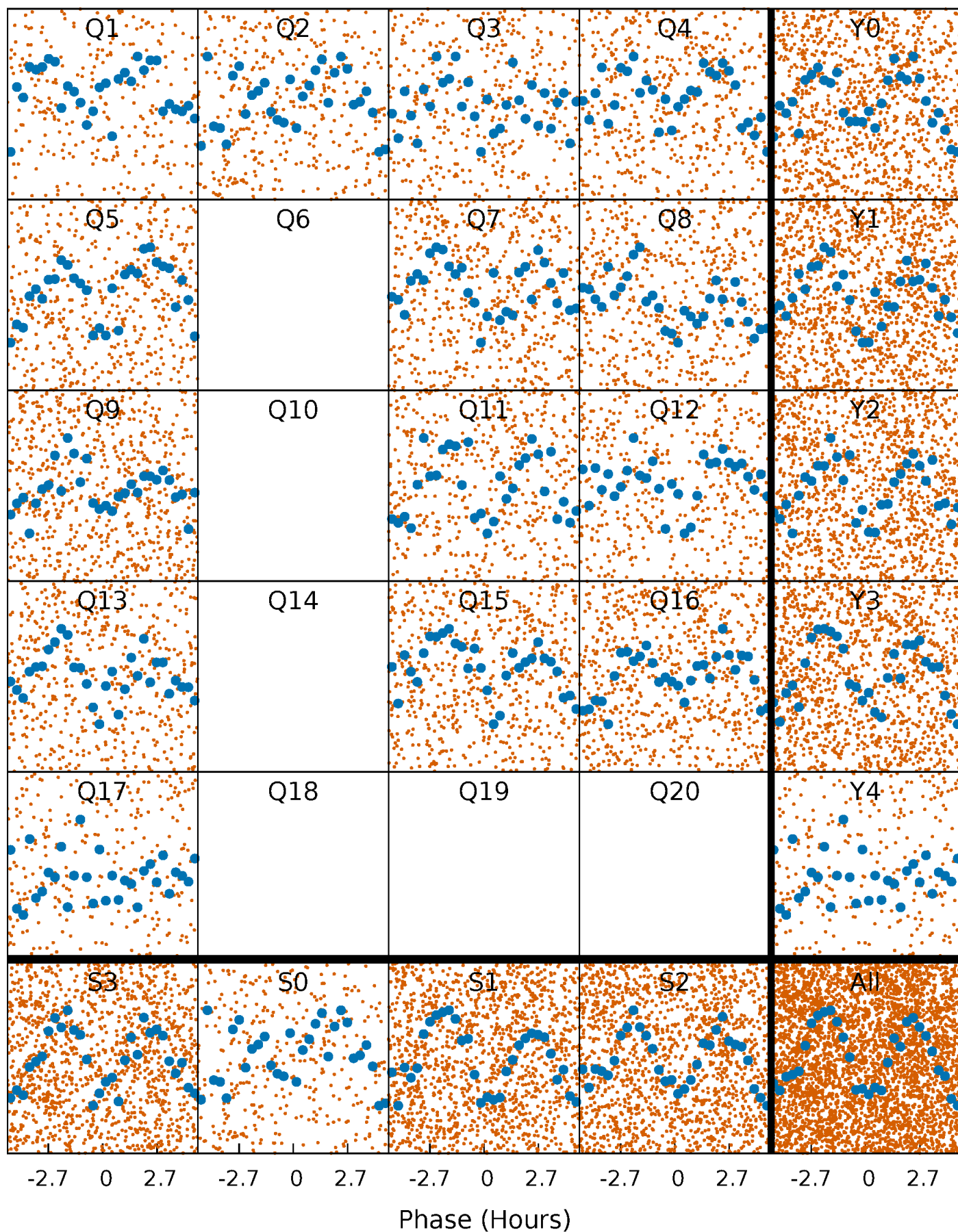


Non-Whitened Vs. Whitened Light Curve



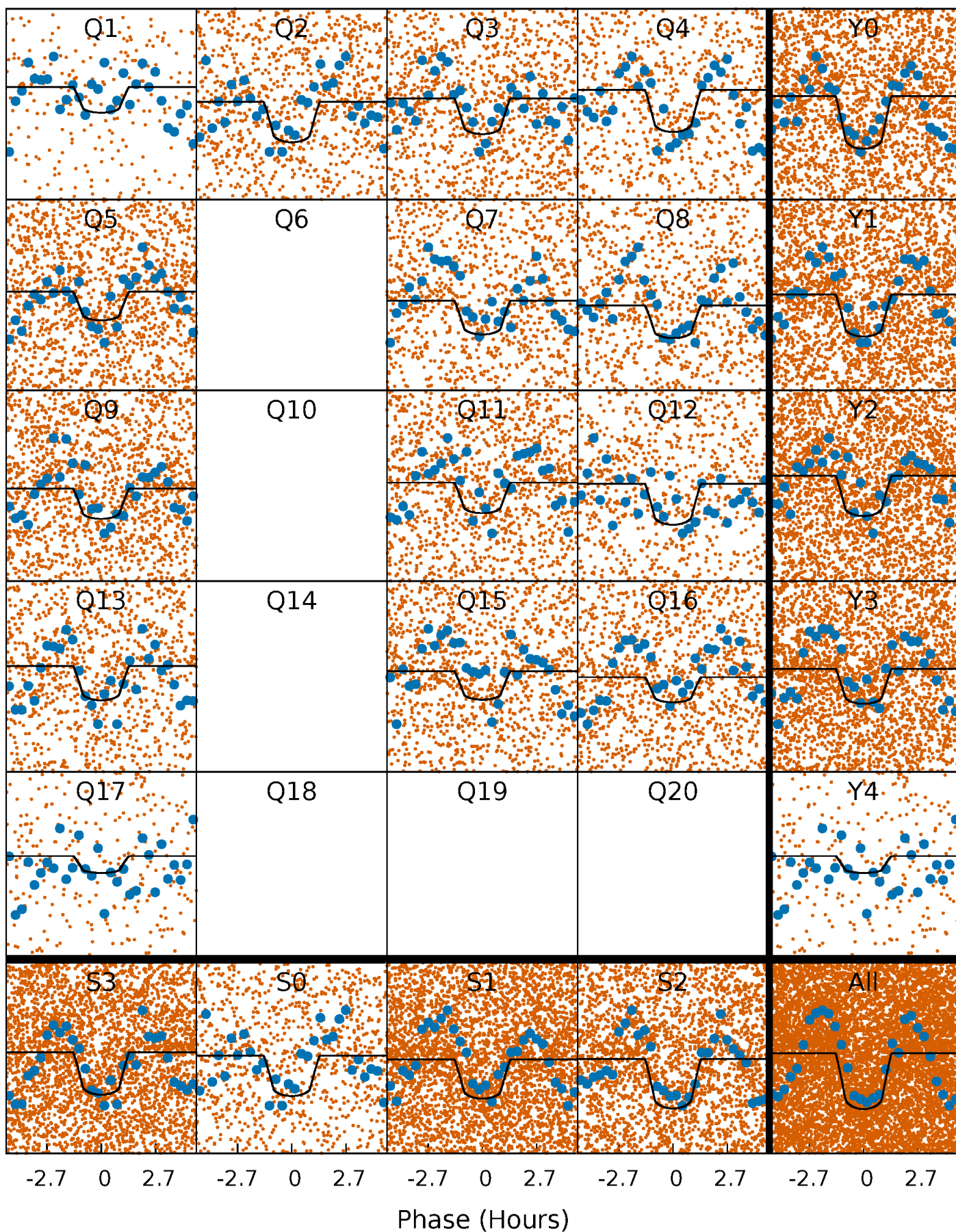
PDC Quarter-Phased Transit Curves

TCE 005021329-01 P= 0.555362 Days $T_0=131.667245$ (BKJD)



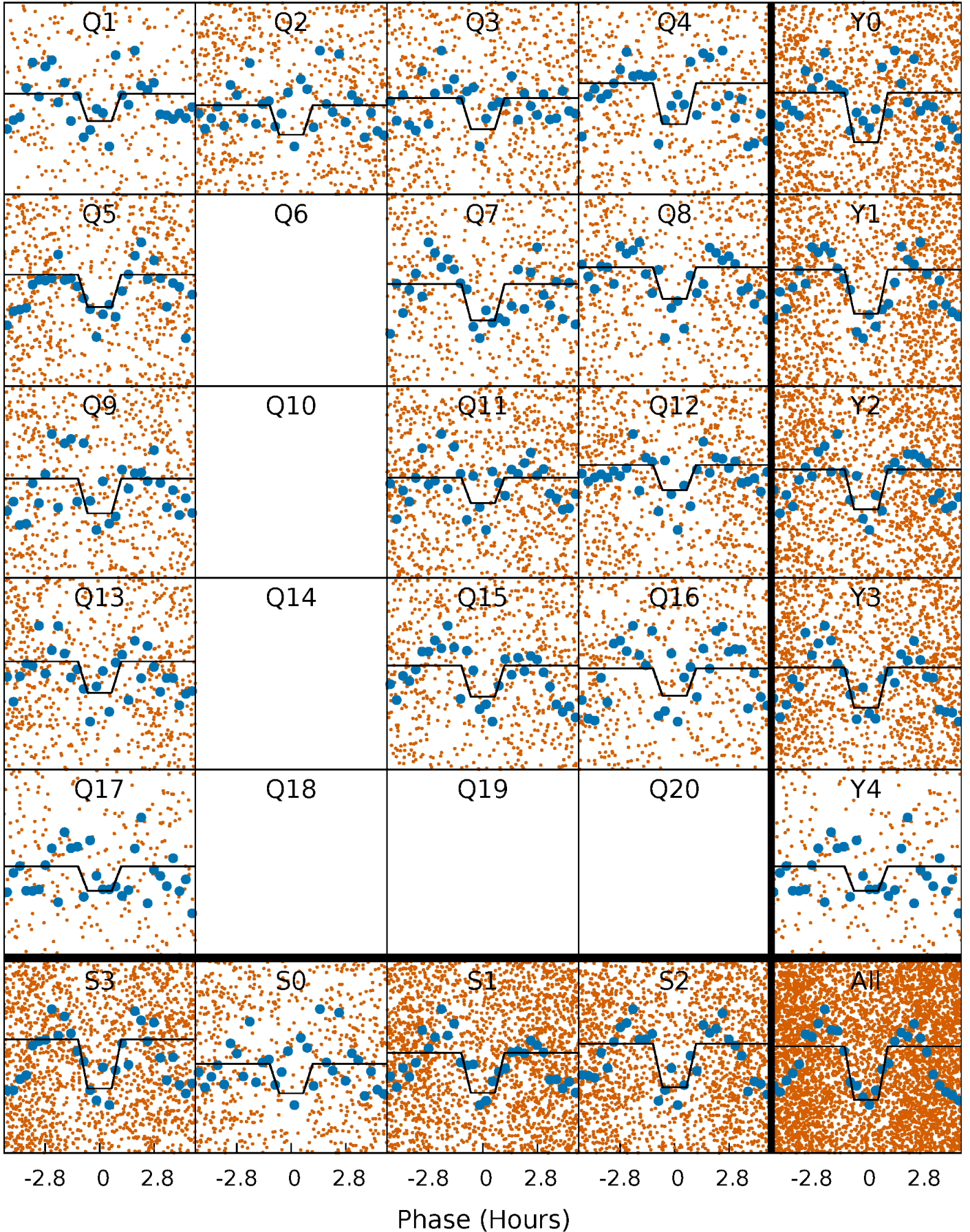
DV Quarter-Phased Transit Curves

TCE 005021329-01 P= 0.555362 Days $T_0=131.667245$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

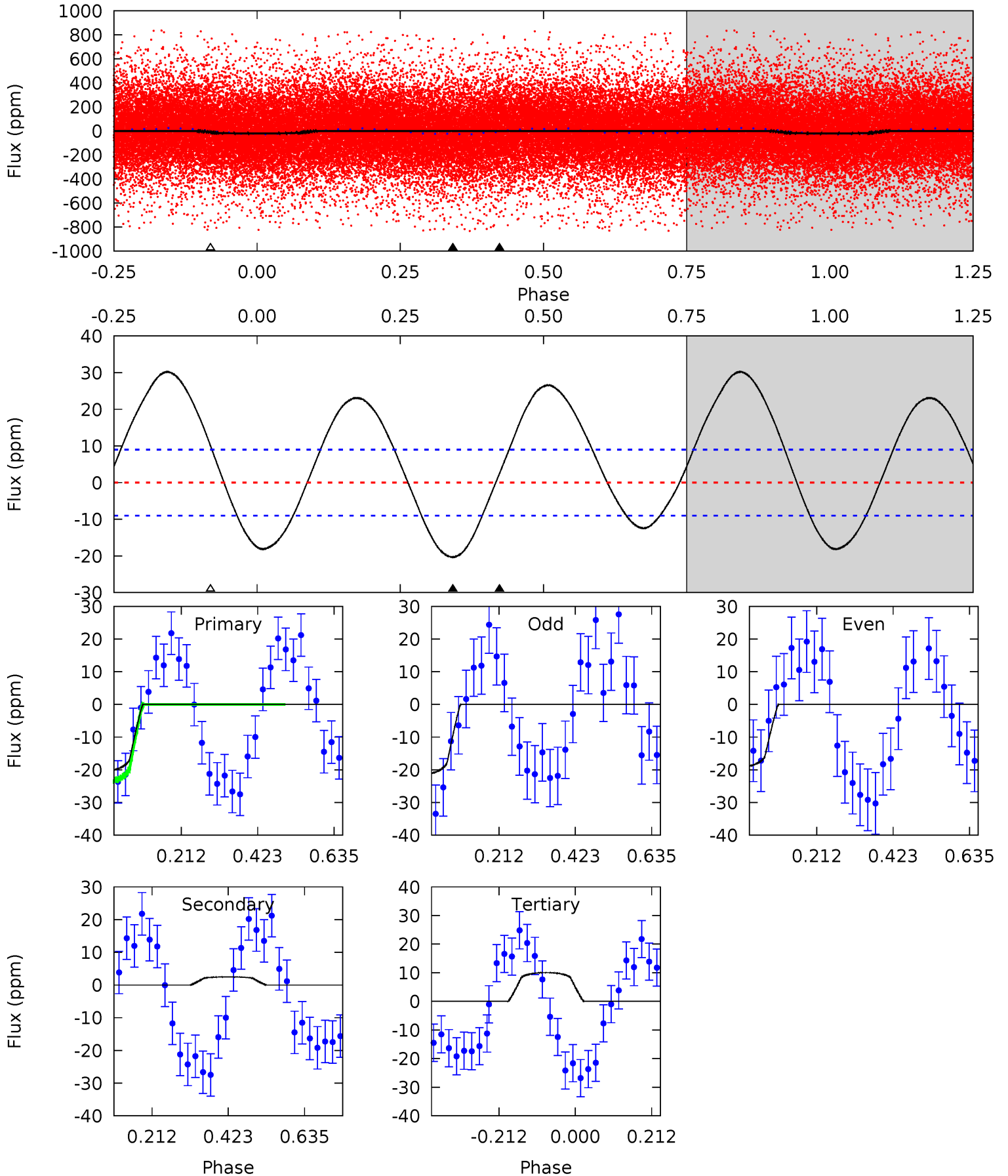
TCE 005021329-01 P= 0.555367 Days $T_0=131.667551$ (BKJD)



DV Model-Shift Uniqueness Test

005021329-01, P = 0.555362 Days, E = 131.111883 Days

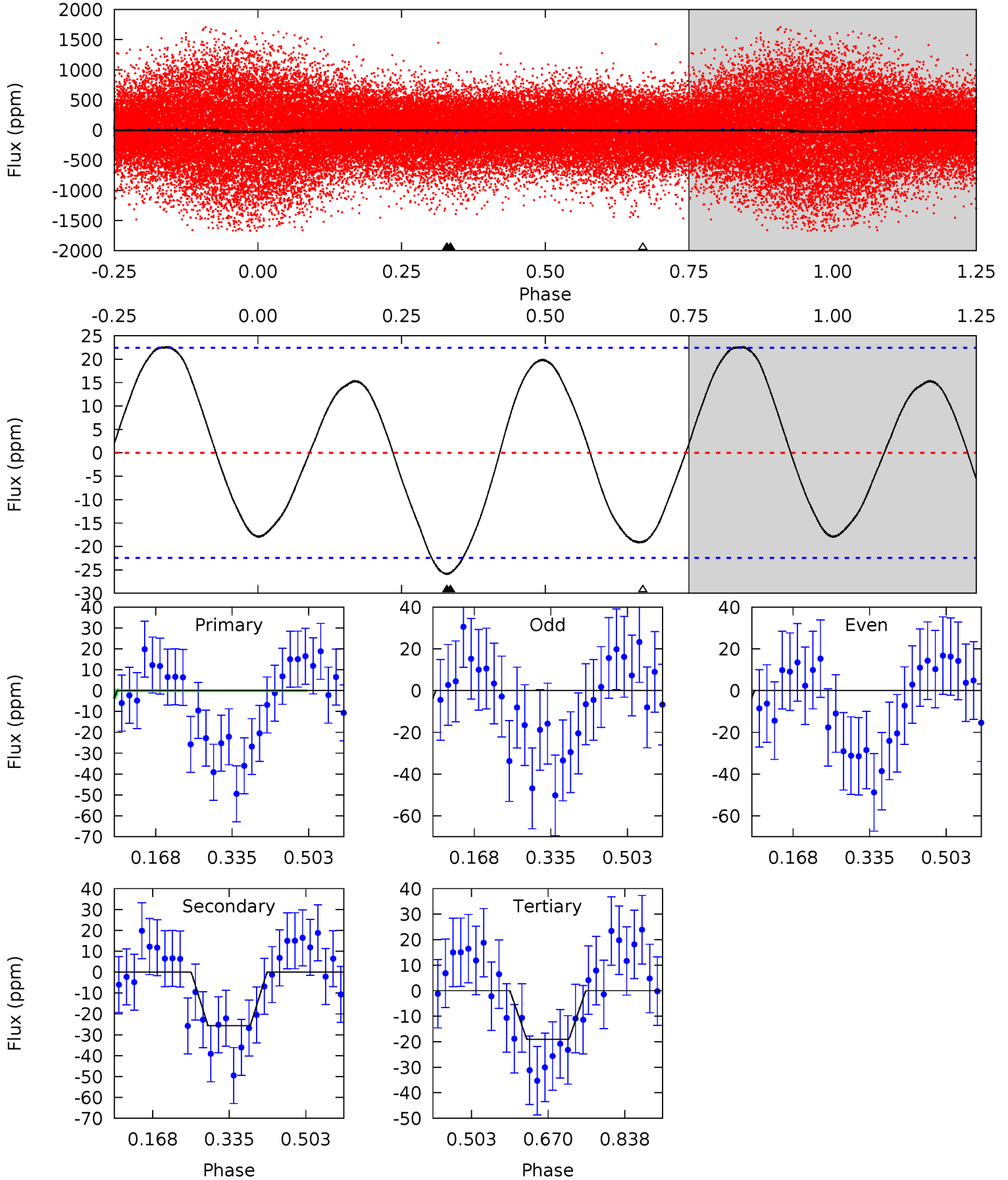
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.96	-1.22	-4.93	0	4.40	1.25	7.56	14.9	9.96	3.71	-1.22	0.56	1.04	0.60	1.69



Alt Model-Shift Uniqueness Test

005021329-01, P = 0.555367 Days, E = 131.112184 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.14	5.09	3.77	0	4.46	1.38	2.72	1.36	5.14	1.31	5.09	0.05	-1.99	0.47	0.27



Stellar Parameters For KIC 005021329

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7257^{+230}_{-316}	$4.099^{+0.149}_{-0.182}$	$-0.080^{+0.250}_{-0.350}$	$1.829^{+0.563}_{-0.422}$	$1.529^{+0.212}_{-0.236}$	$0.352^{+0.279}_{-0.182}$
	+3%/-4%	+4%/-4%	+312%/-438%	+31%/-23%	+14%/-15%	+79%/-52%
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 005021329-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	2 ± 2	$1.15^{+0.32}_{-0.28}$	4914^{+403}_{-350}	-4757^{+458}_{-482}	$-0.221^{+0.189}_{-0.297}$
Alt.	-26 ± 5	$1.21^{+0.36}_{-0.31}$	4912^{+344}_{-337}	6220^{+1237}_{-769}	$2.163^{+1.926}_{-0.882}$

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 $A_{obs} \gg 1.0$

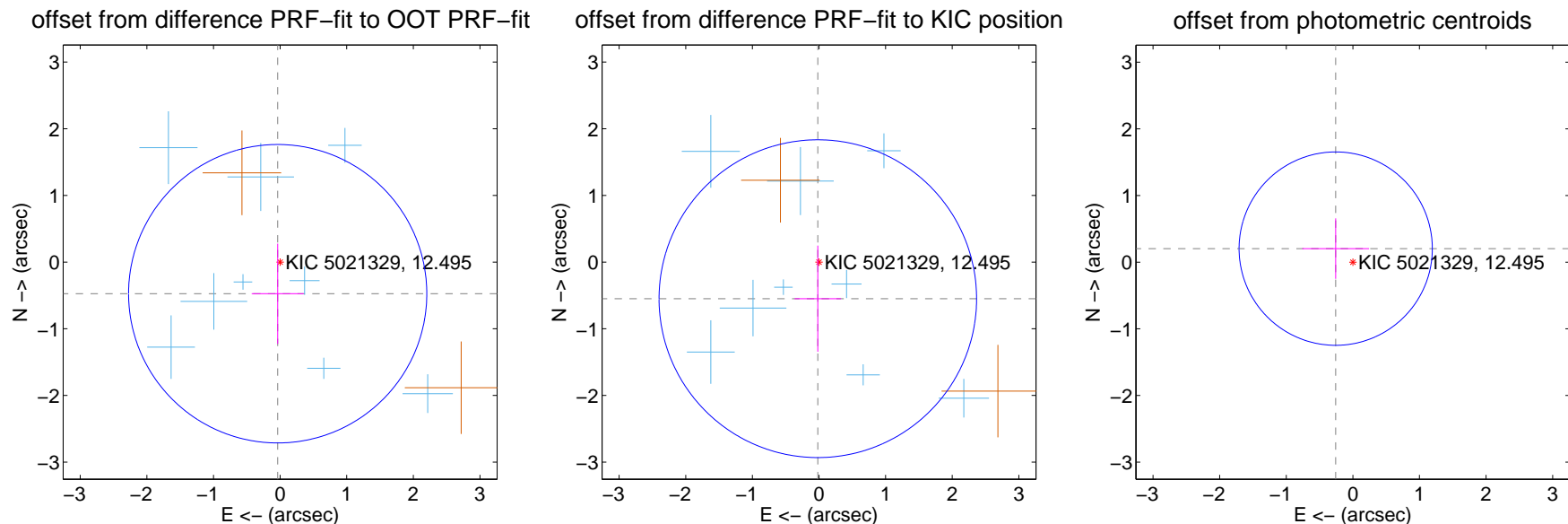
DV Centroid Data

Supplemental centroid analysis for 005021329-01. Kepler magnitude: 12.49. Transit SNR 10.67

There are 9 quarters with good PRF difference image offsets

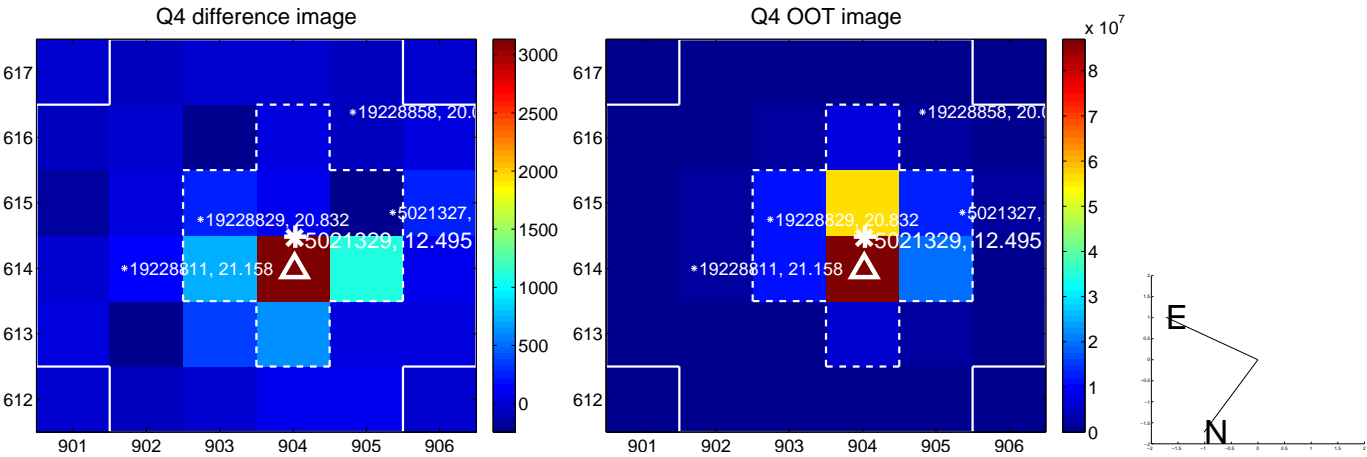
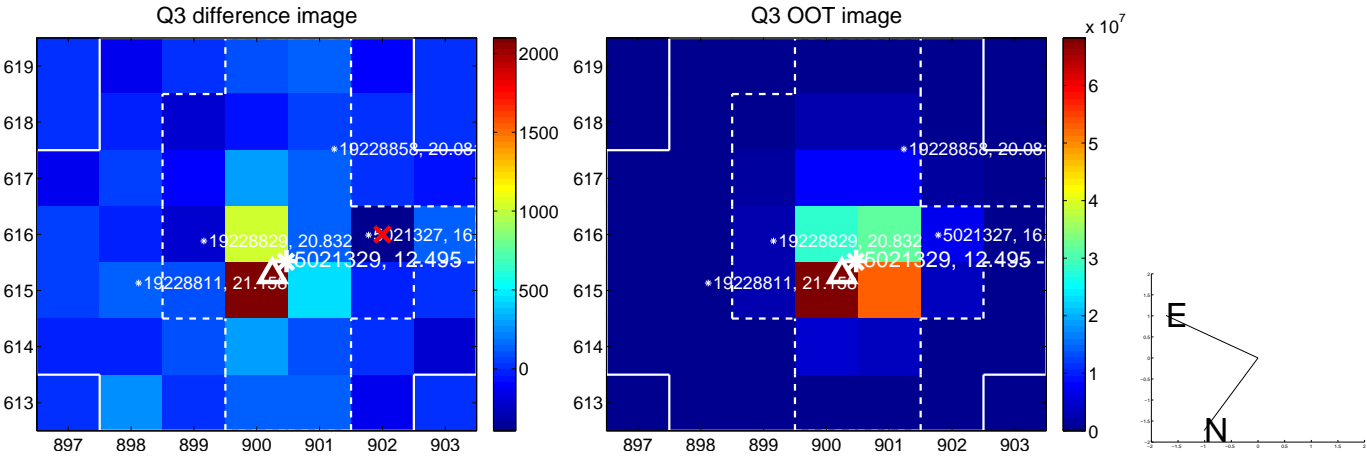
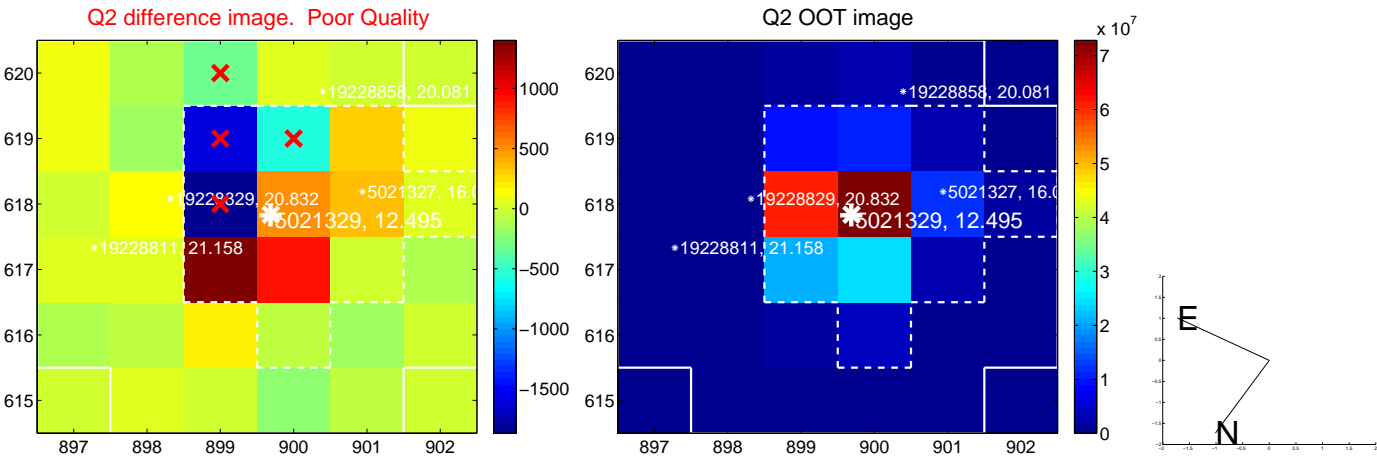
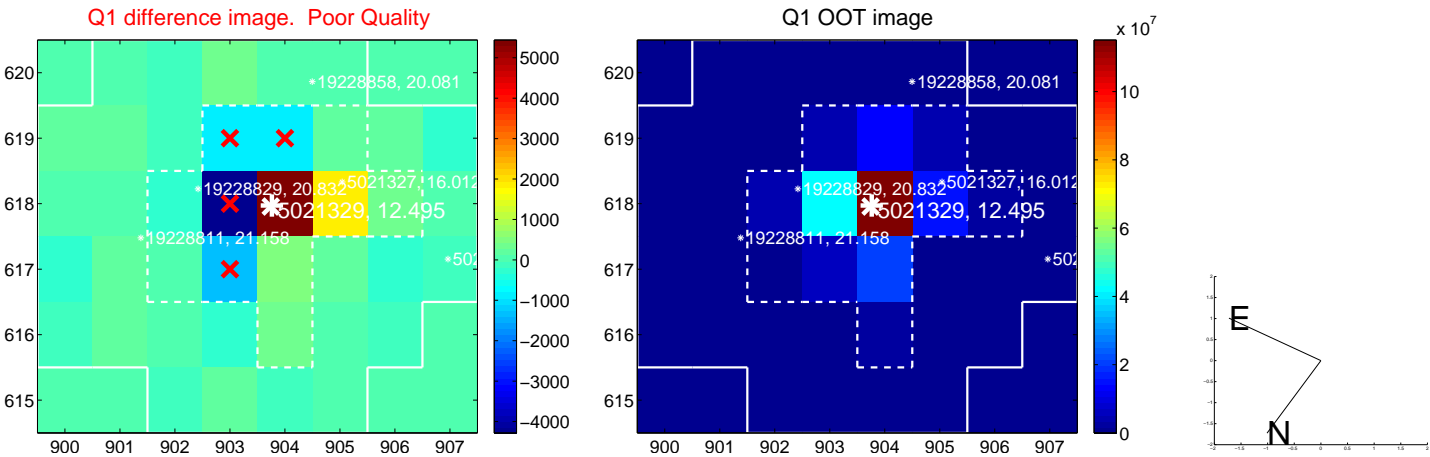
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.476 ± 0.746	0.64	0.036 ± 0.390	-0.475 ± 0.751
PRF-fit source offset from KIC position	0.549 ± 0.795	0.69	0.018 ± 0.348	-0.549 ± 0.796
photometric centroid source offset	0.33 ± 0.48	0.68	0.26 ± 0.50	0.20 ± 0.45

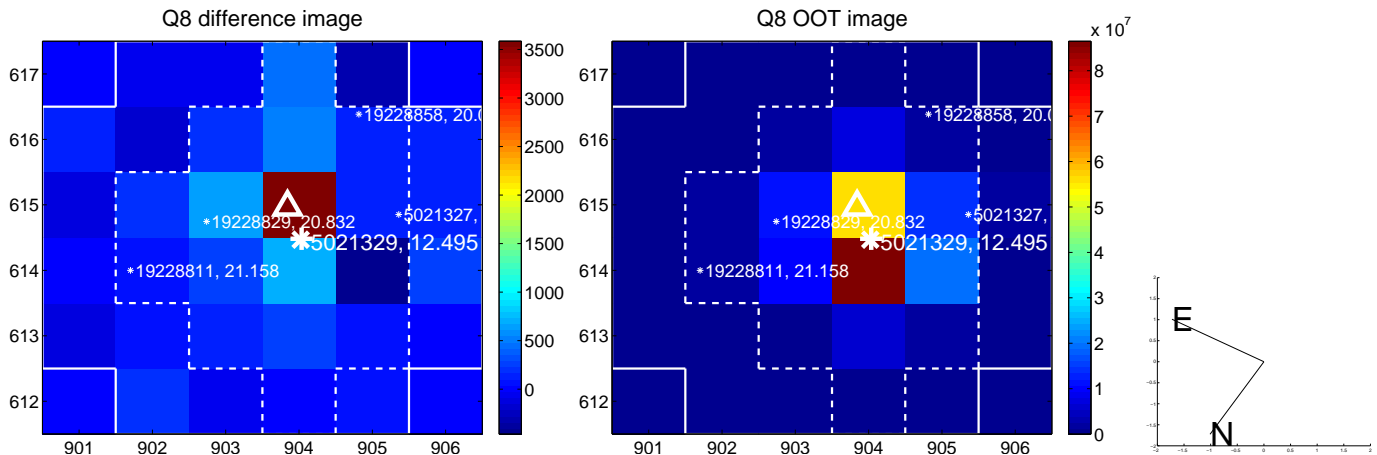
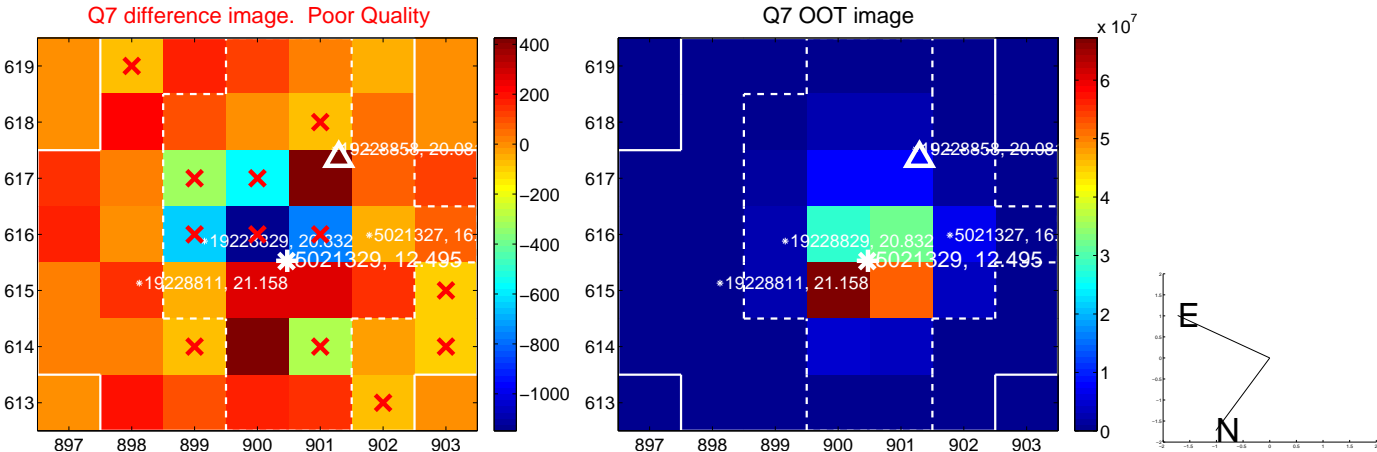
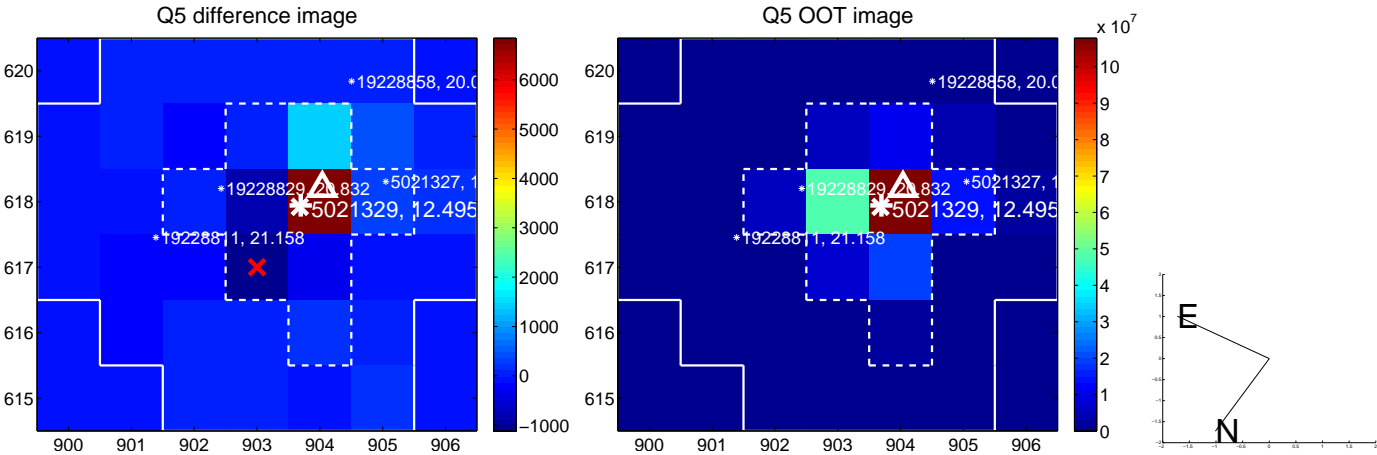


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

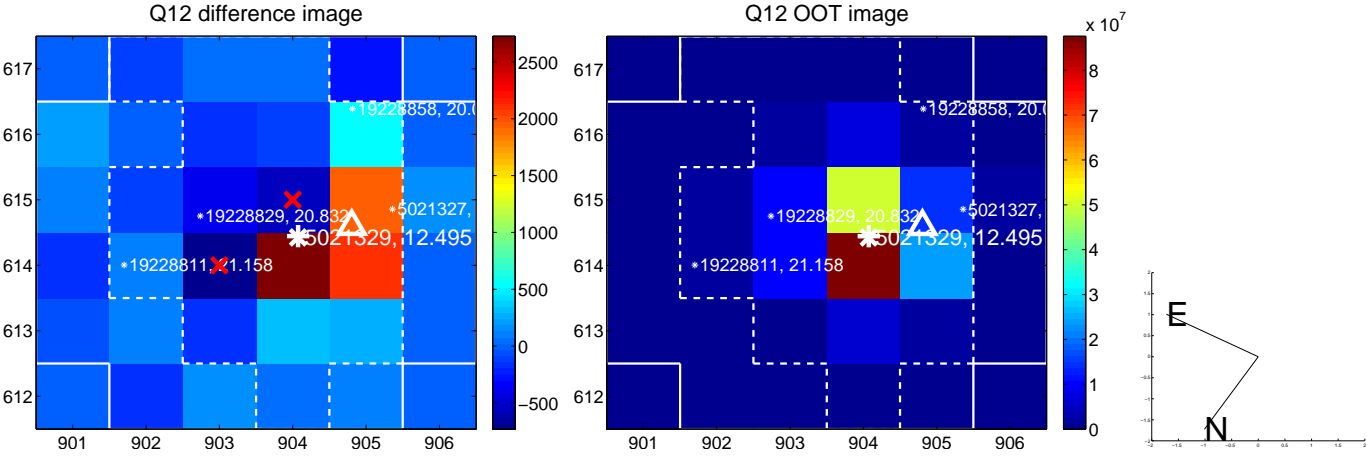
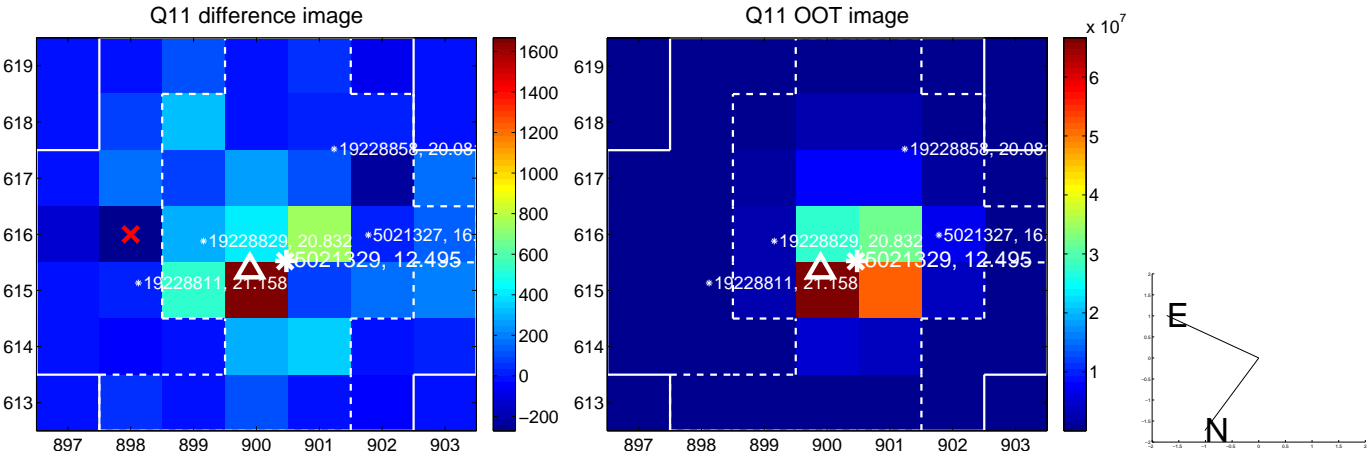
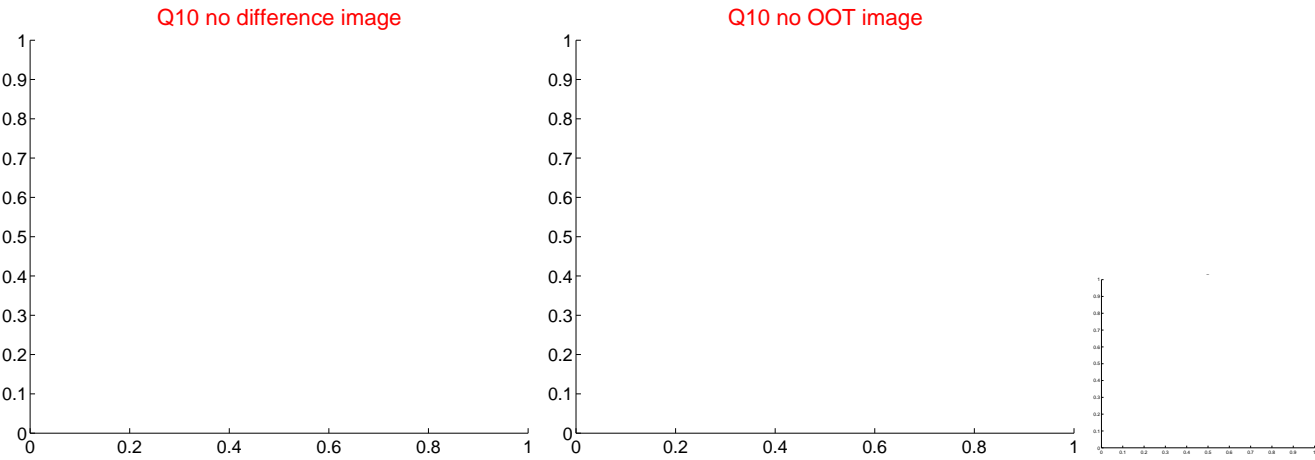
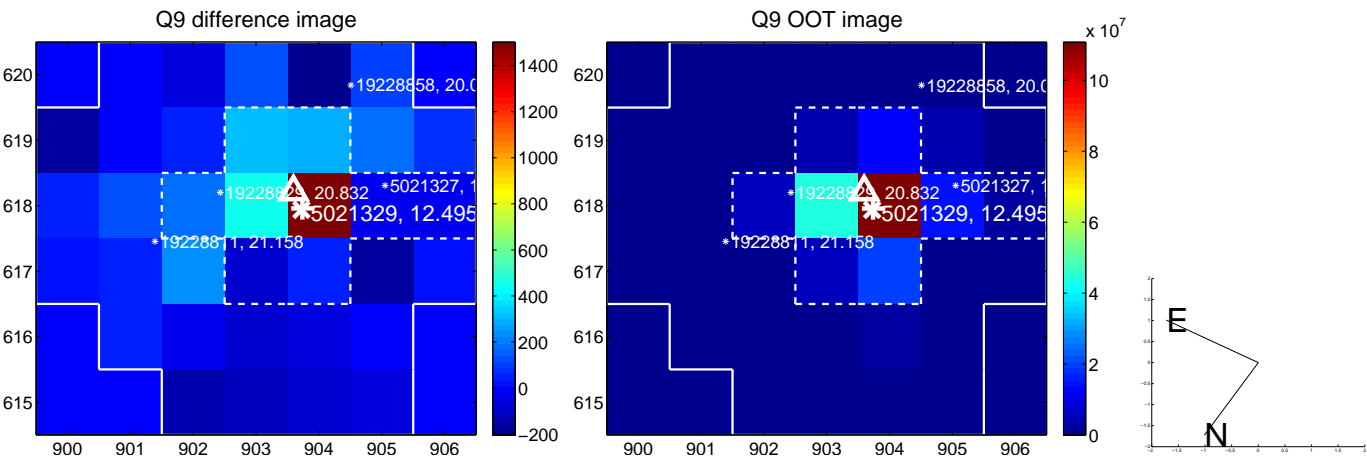
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



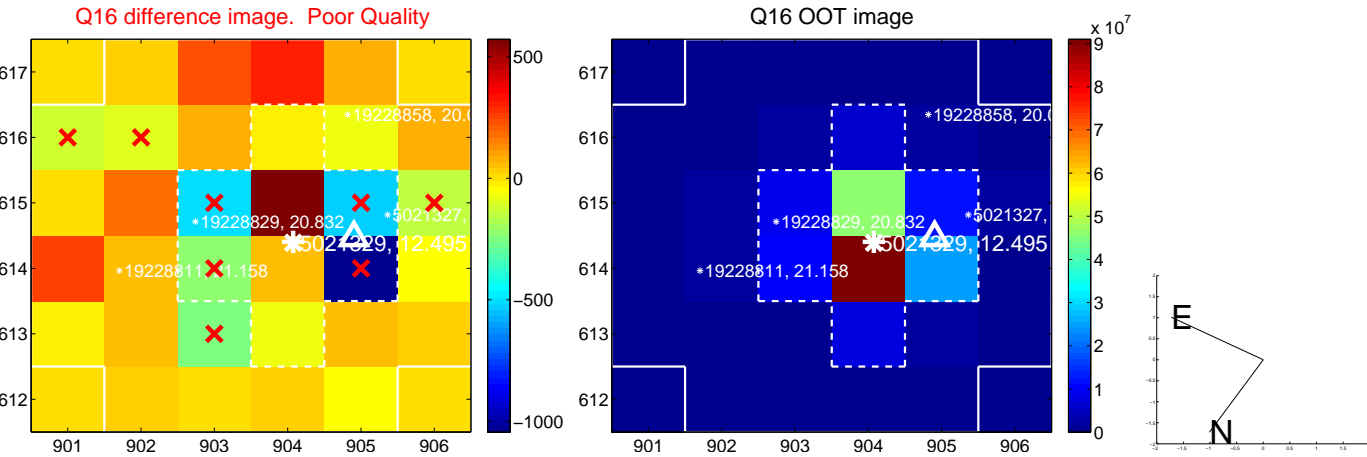
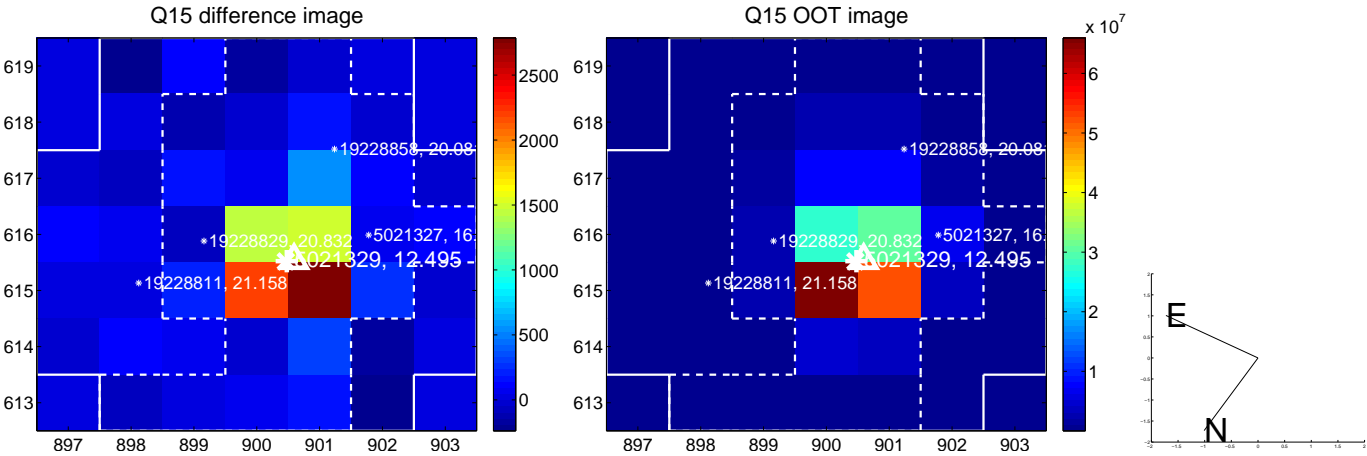
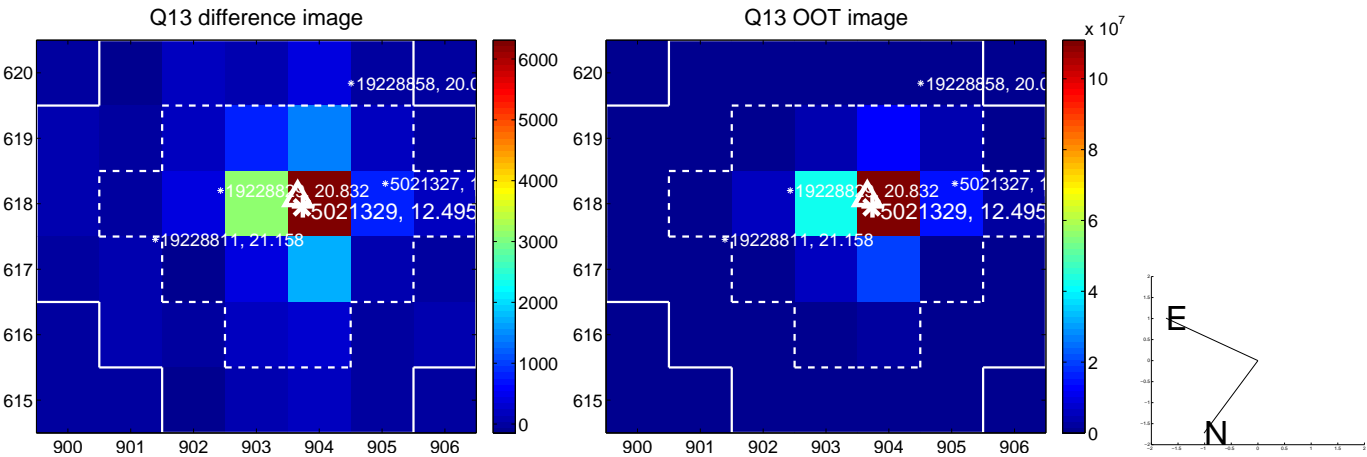
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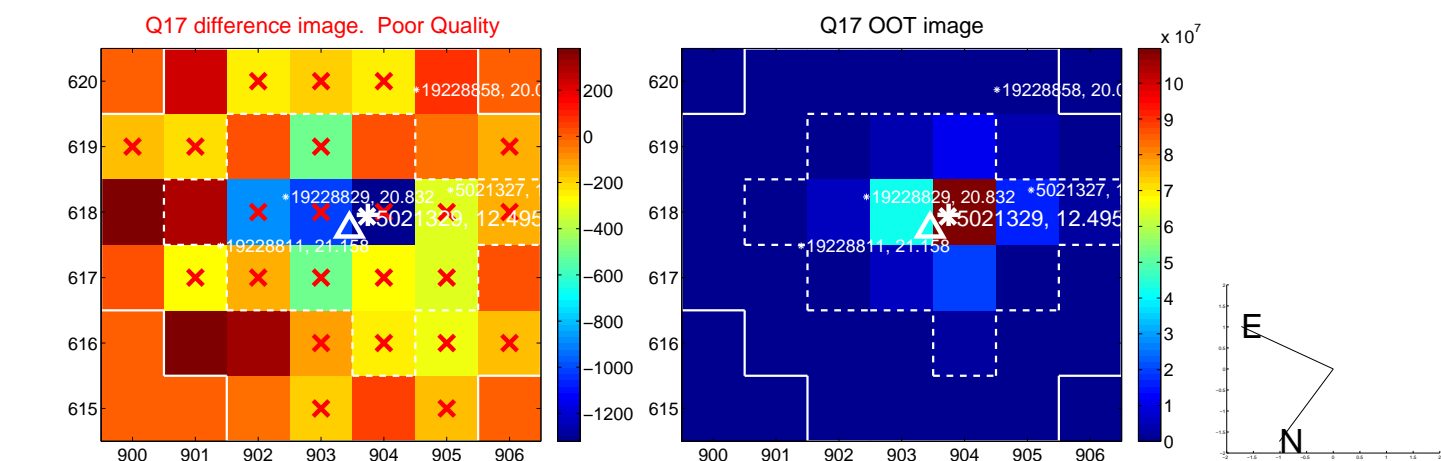
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



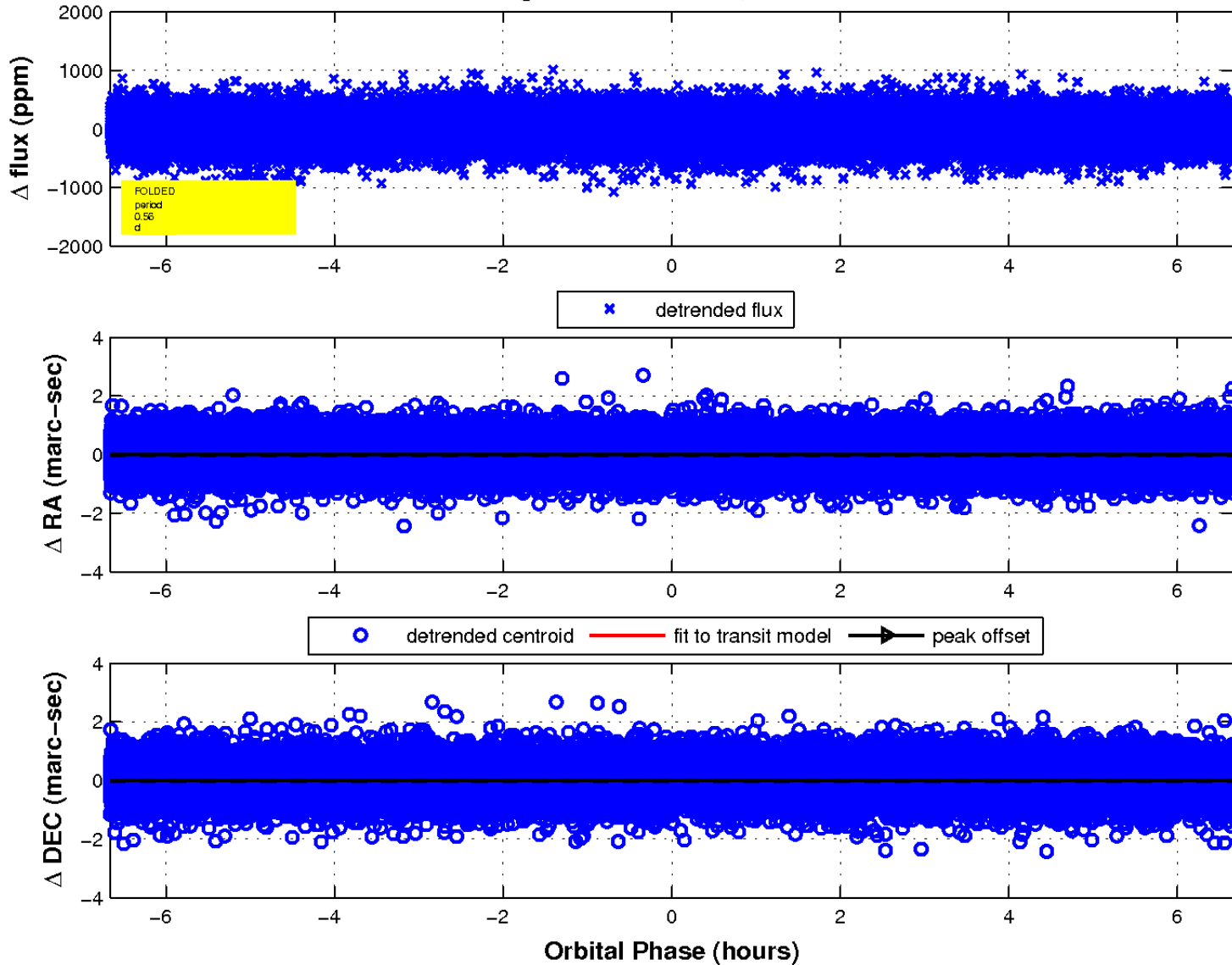
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

