

KIC 011407569

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})
011407569-01	OBS	No	1.208200	131.854903	32.5	5.216	9.5	9.1	0.81	4978	0.46	865.37

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011407569-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_KIC_POS

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

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

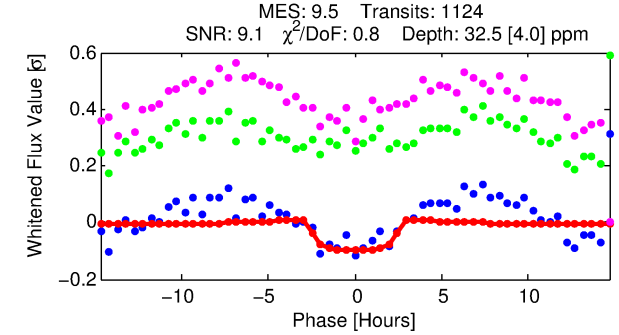
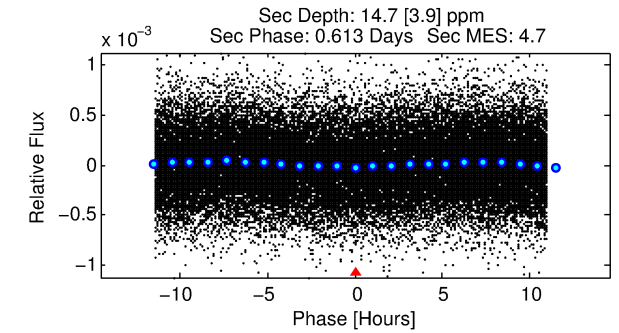
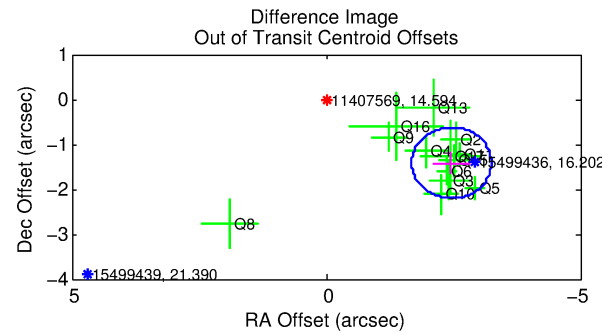
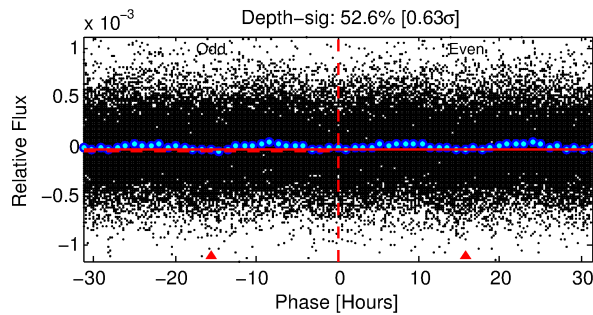
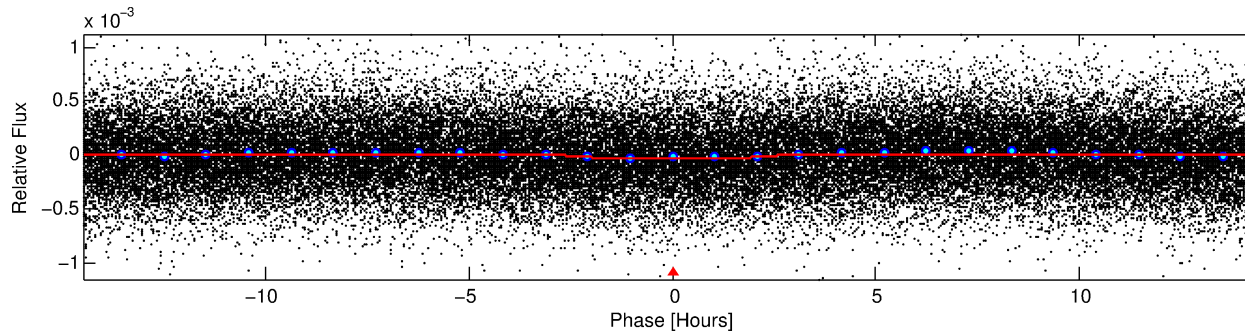
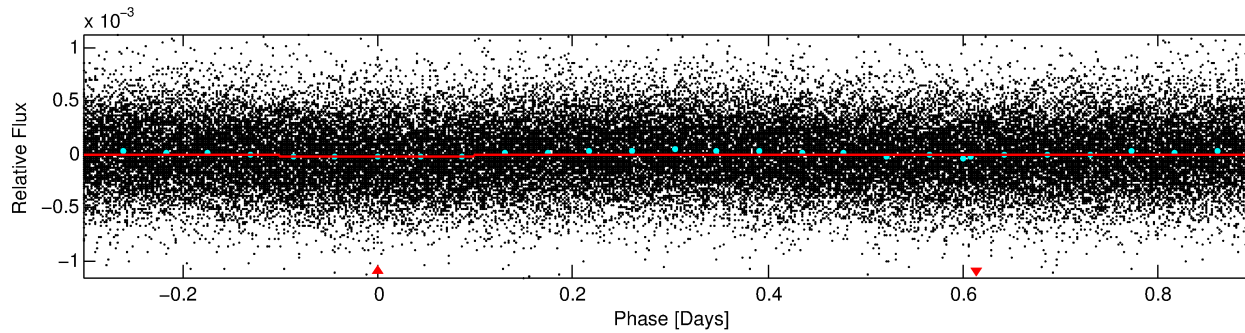
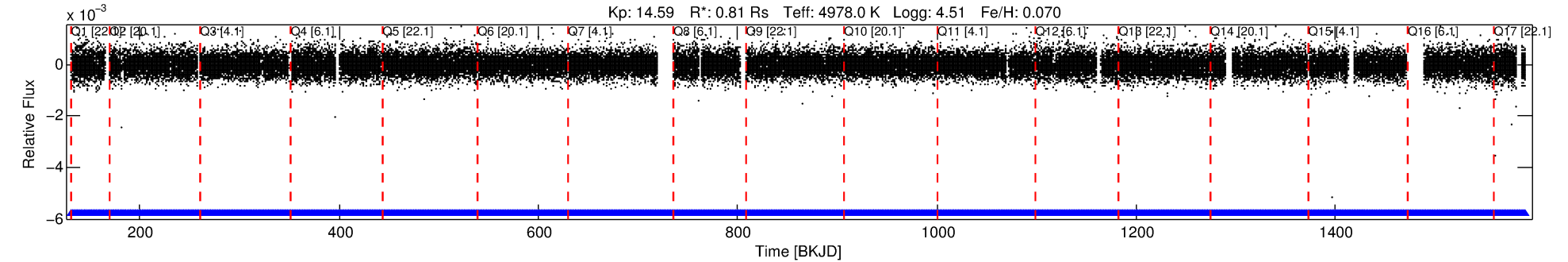
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011407569-01

No Significant Match Found

DV One-Page Summary

KIC: 11407569 Candidate: 1 of 1 Period: 1.208 d



DV Fit Results:

Period = 1.20820 [0.00002] d
Epoch = 131.8549 [0.0068] BKJD
Rp/R* = 0.0052 [0.0051]
a/R* = 1.78 [4.02]
b = 0.37 [7.79]
Seff = 865.37 [176.40]
Teff = 1383 [70] K
Rp = 0.45 [0.45] Re
a = 0.0204 [0.0020] AU
Ag = 16.22 [32.44] [0.47 σ]
Teffp = 4291 [2145] K [1.36 σ]

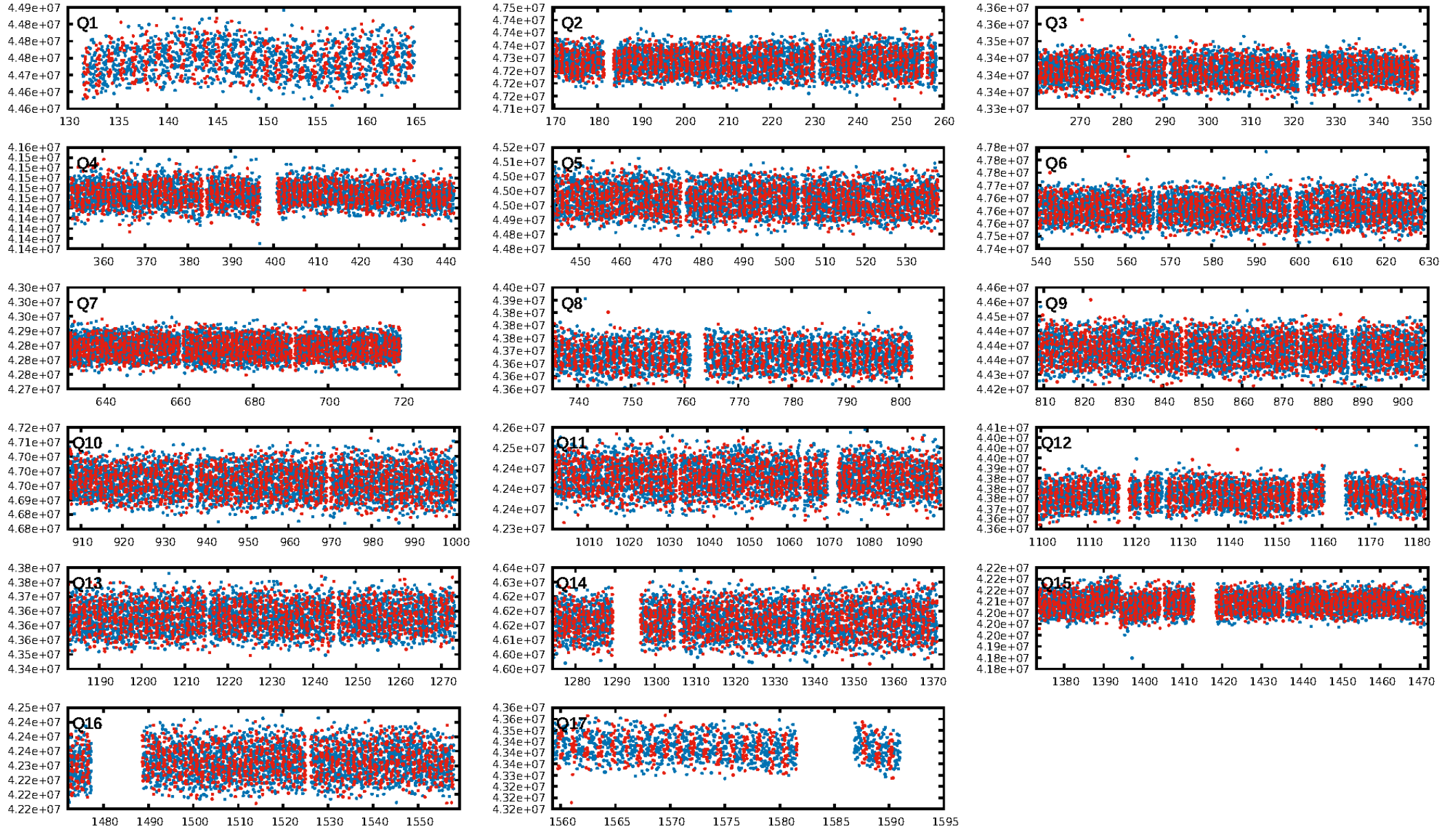
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.35e-17
RollingBand-fgt: 1.00 [1074/1074]
GhostDiagnostic-chr: 1.078
Centroid-sig: 0.0%
Centroid-so: 4.463 arcsec [3.82 σ]
OotOffset-rm: 2.839 arcsec [10.85 σ]
KicOffset-rm: 3.298 arcsec [12.77 σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 0.92 [12/13]
DiffImageOverlap-fno: 1.00 [17/17]

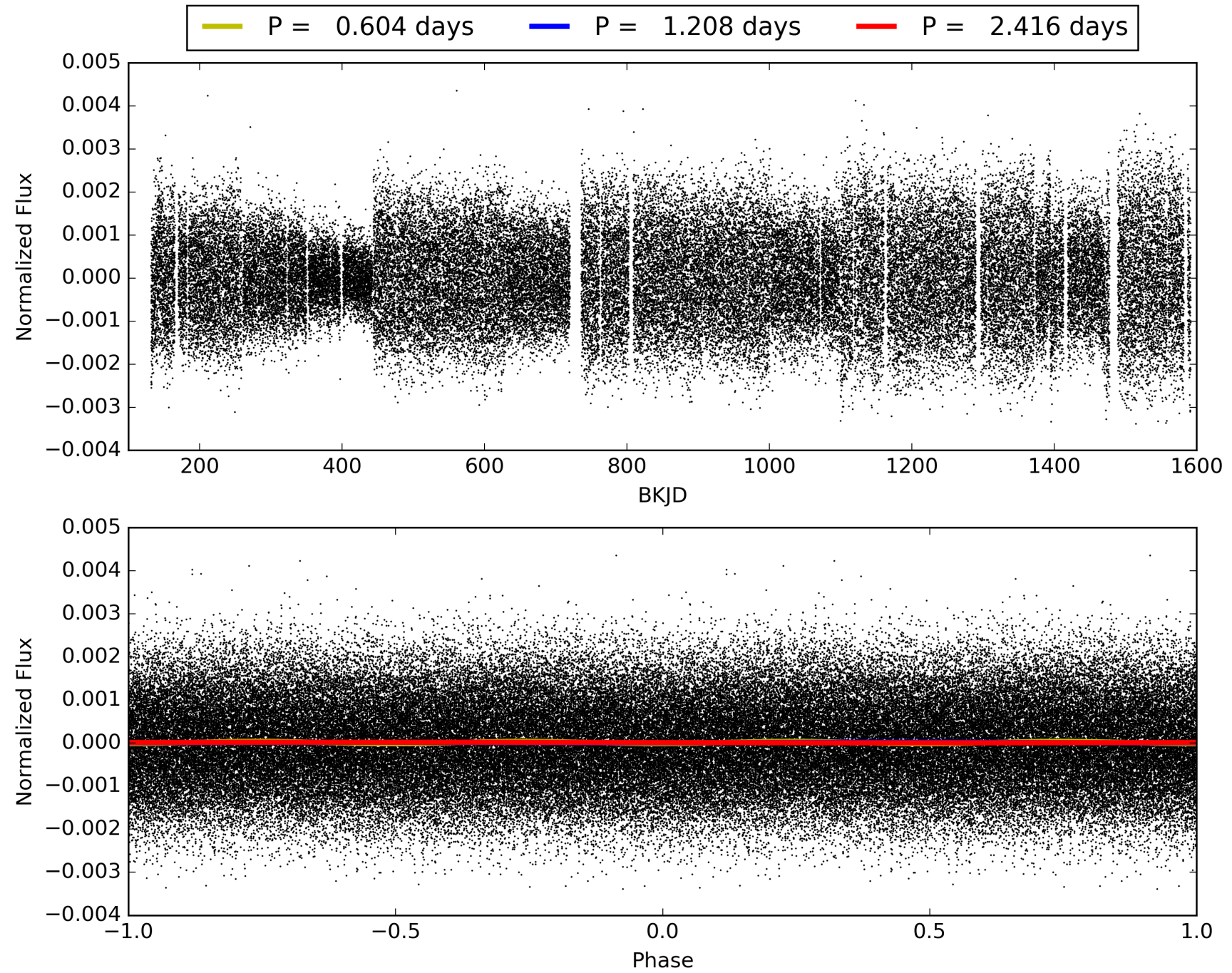
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 01:52:29 Z

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

TCE 011407569-01, PDC Light Curves

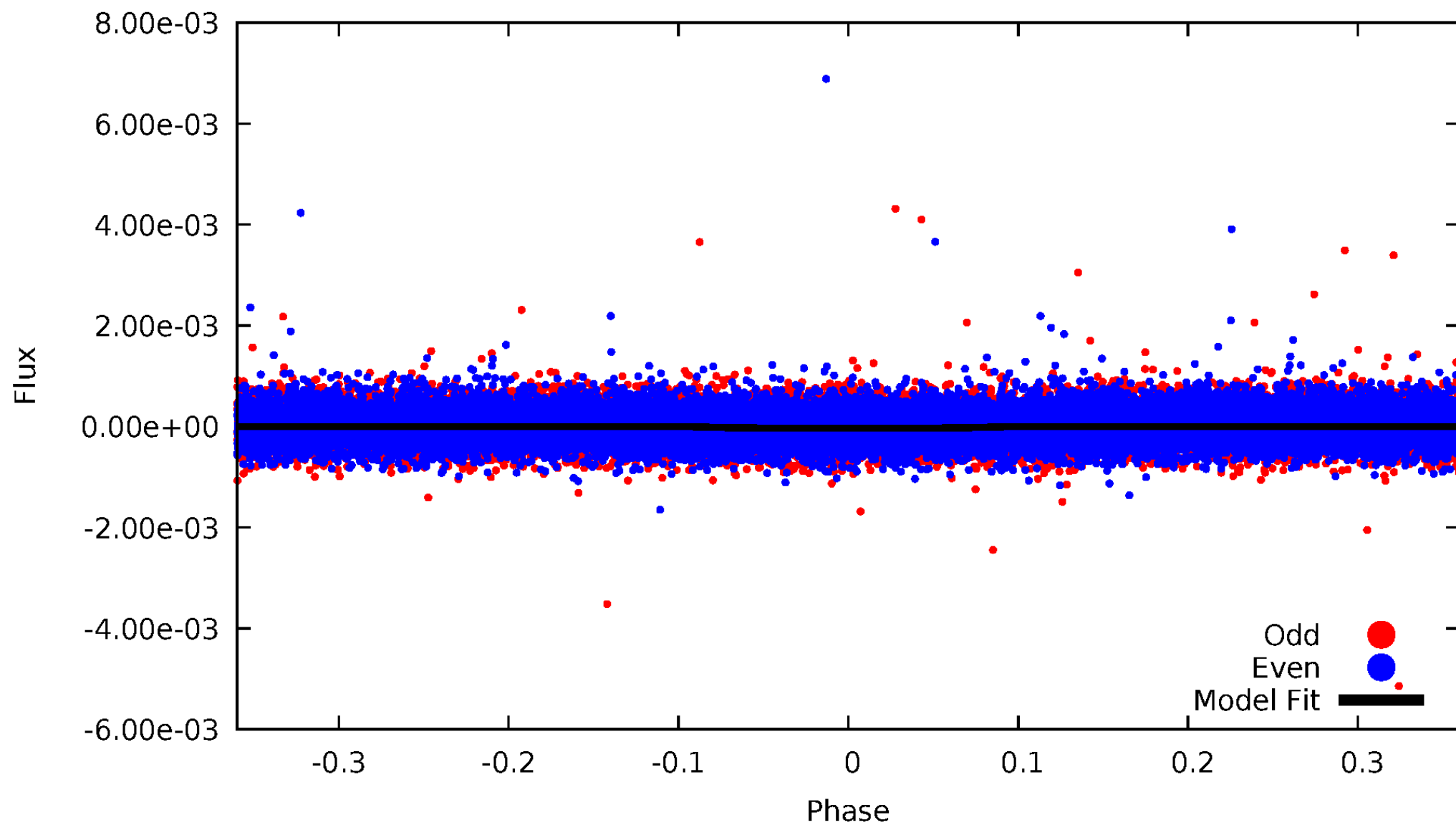


TCE 011407569-01



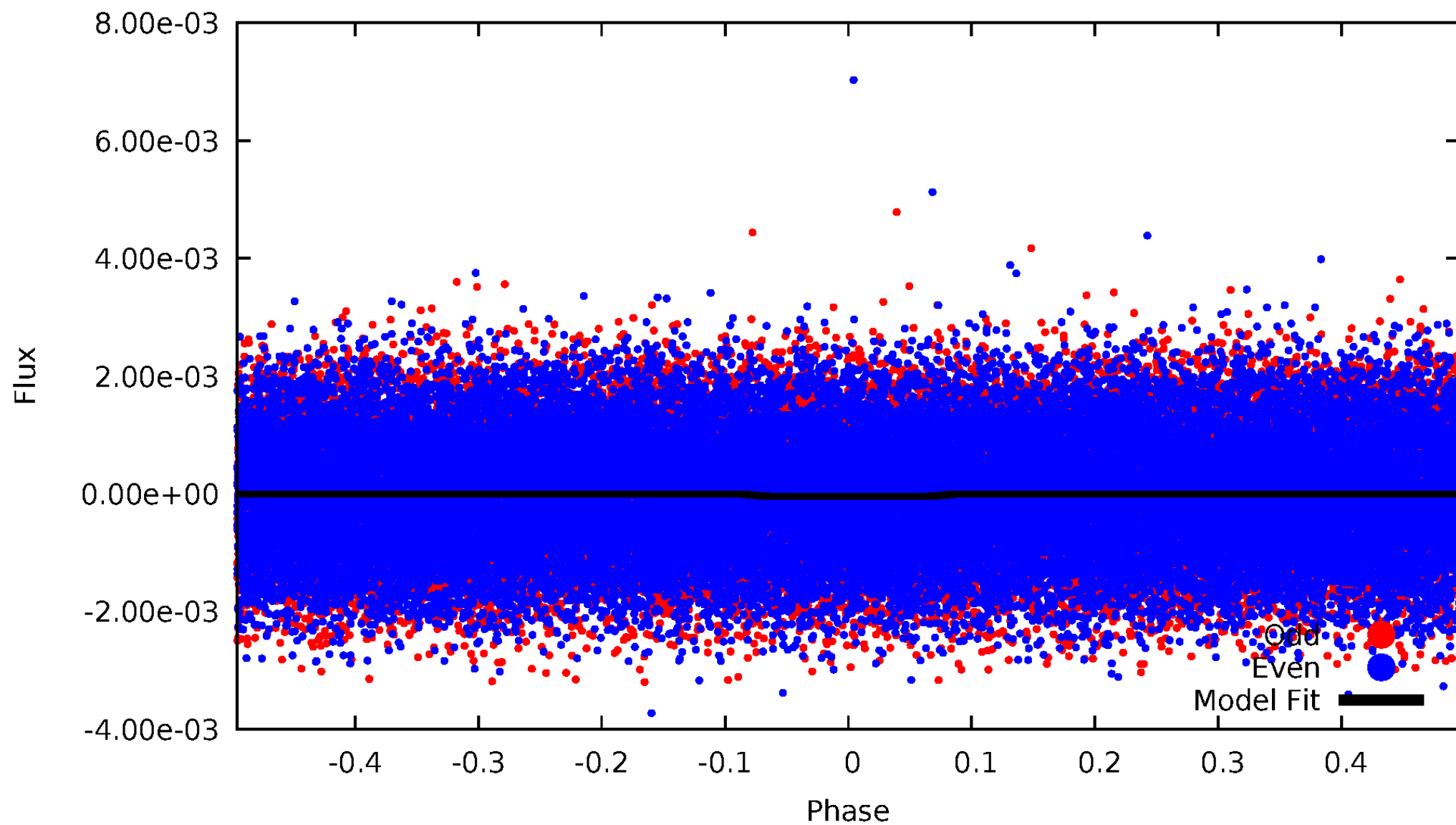
DV Odd/Even

TCE 011407569-01



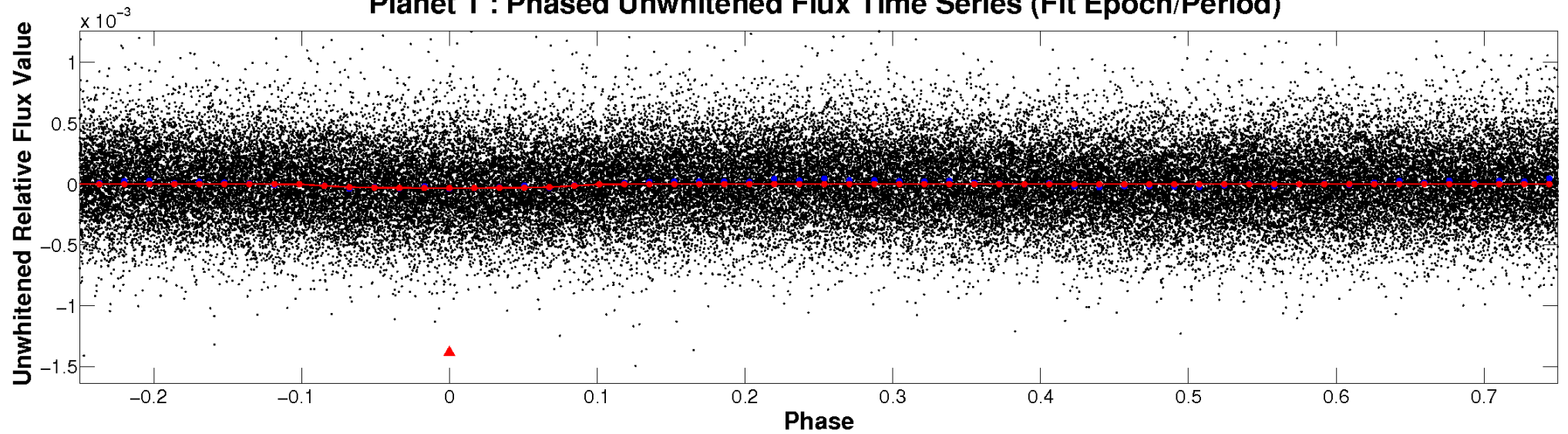
ALT Odd/Even

TCE 011407569-01

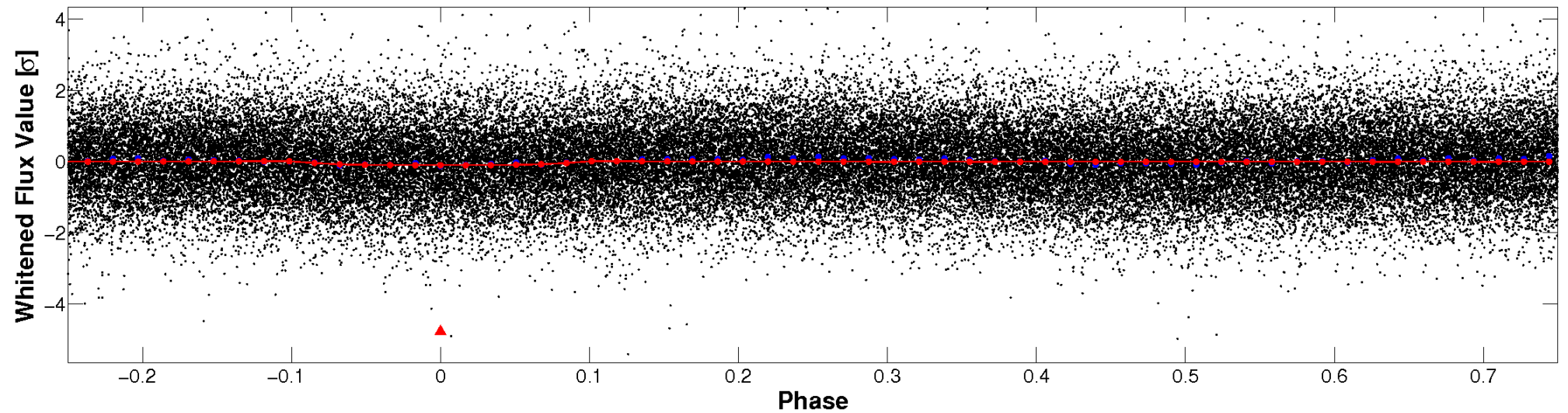


Non-Whitened Vs. Whitened Light Curve

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

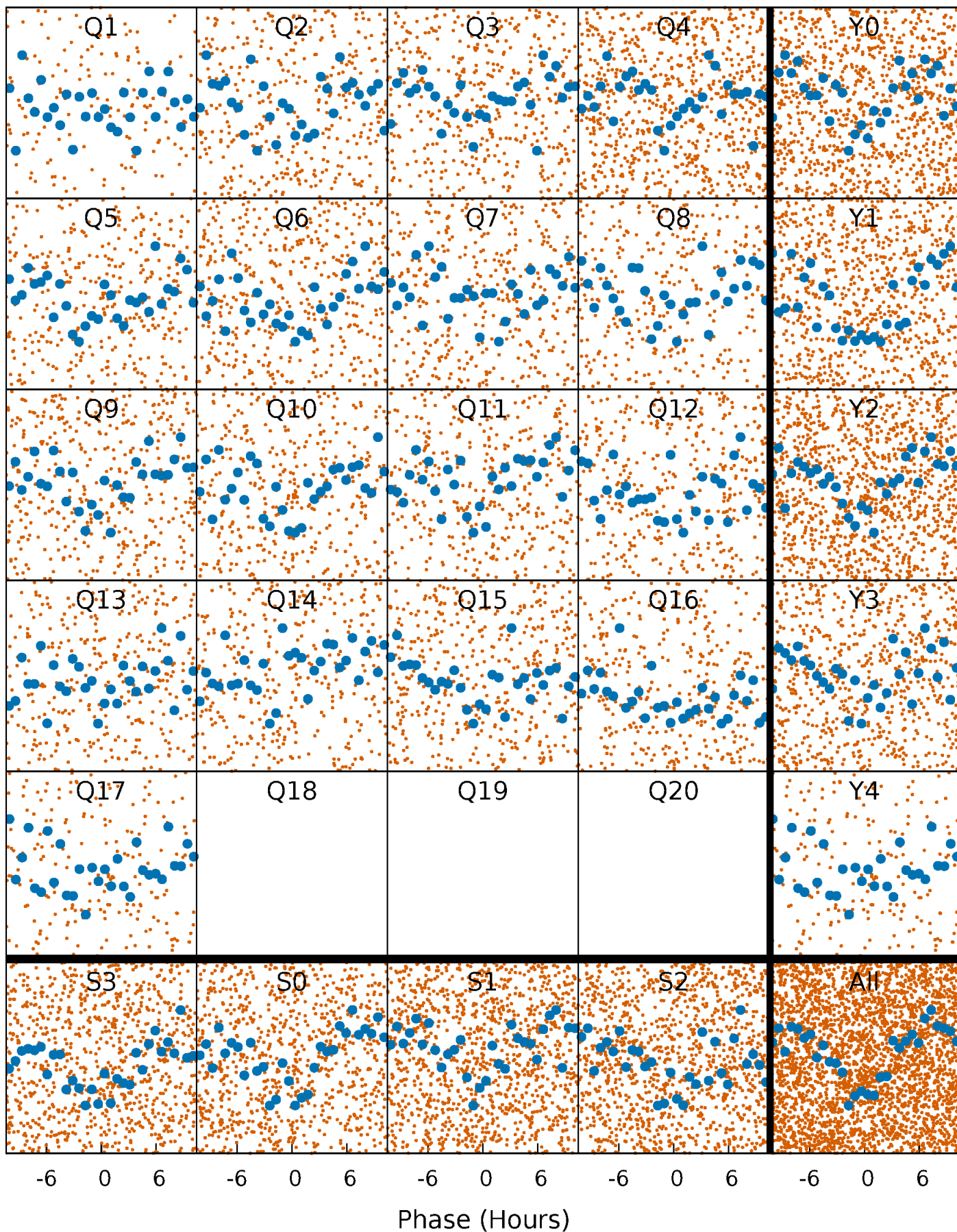


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



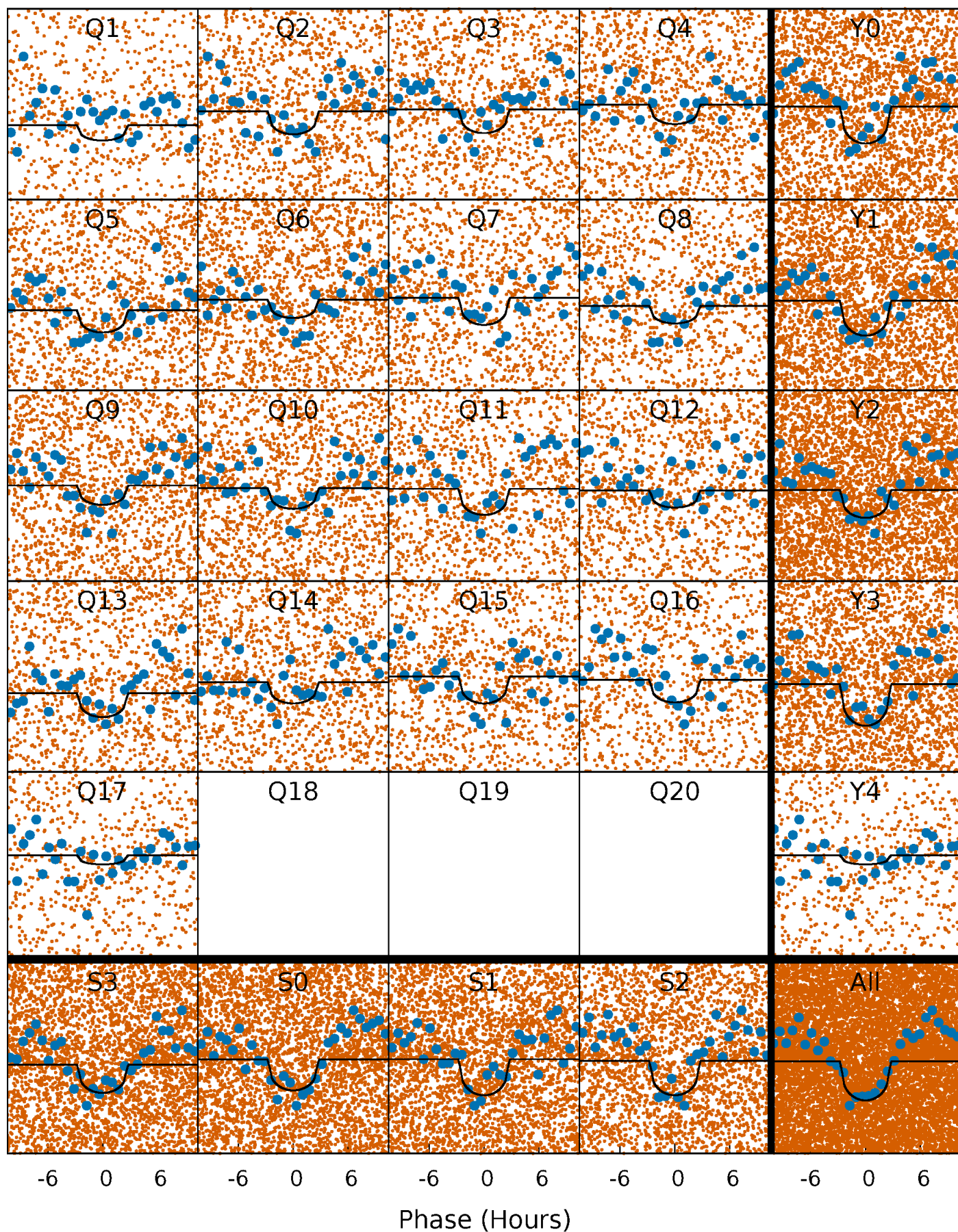
PDC Quarter-Phased Transit Curves

TCE 011407569-01 P= 1.208200 Days $T_0=131.854903$ (BKJD)



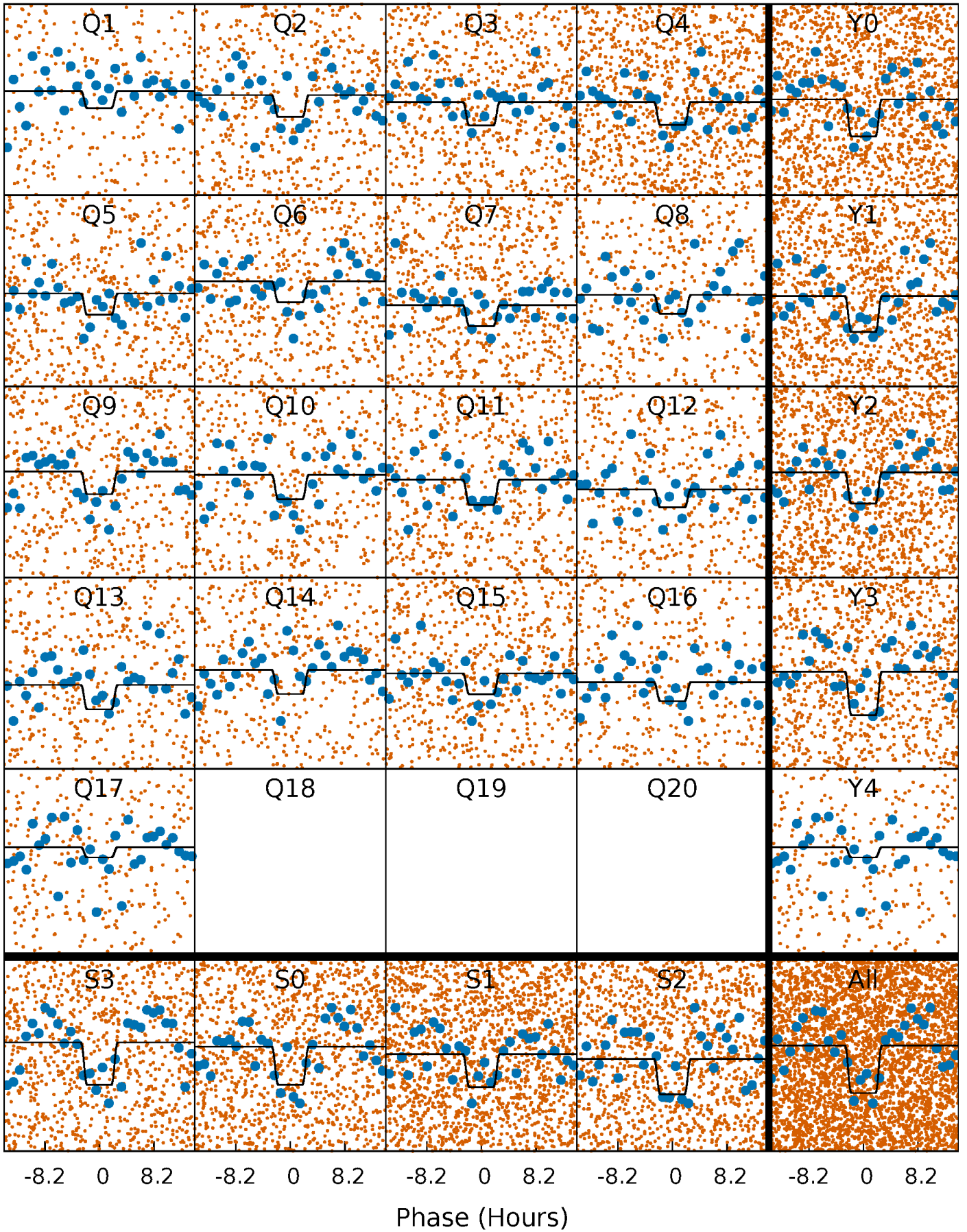
DV Quarter-Phased Transit Curves

TCE 011407569-01 P= 1.208200 Days $T_0=131.854903$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

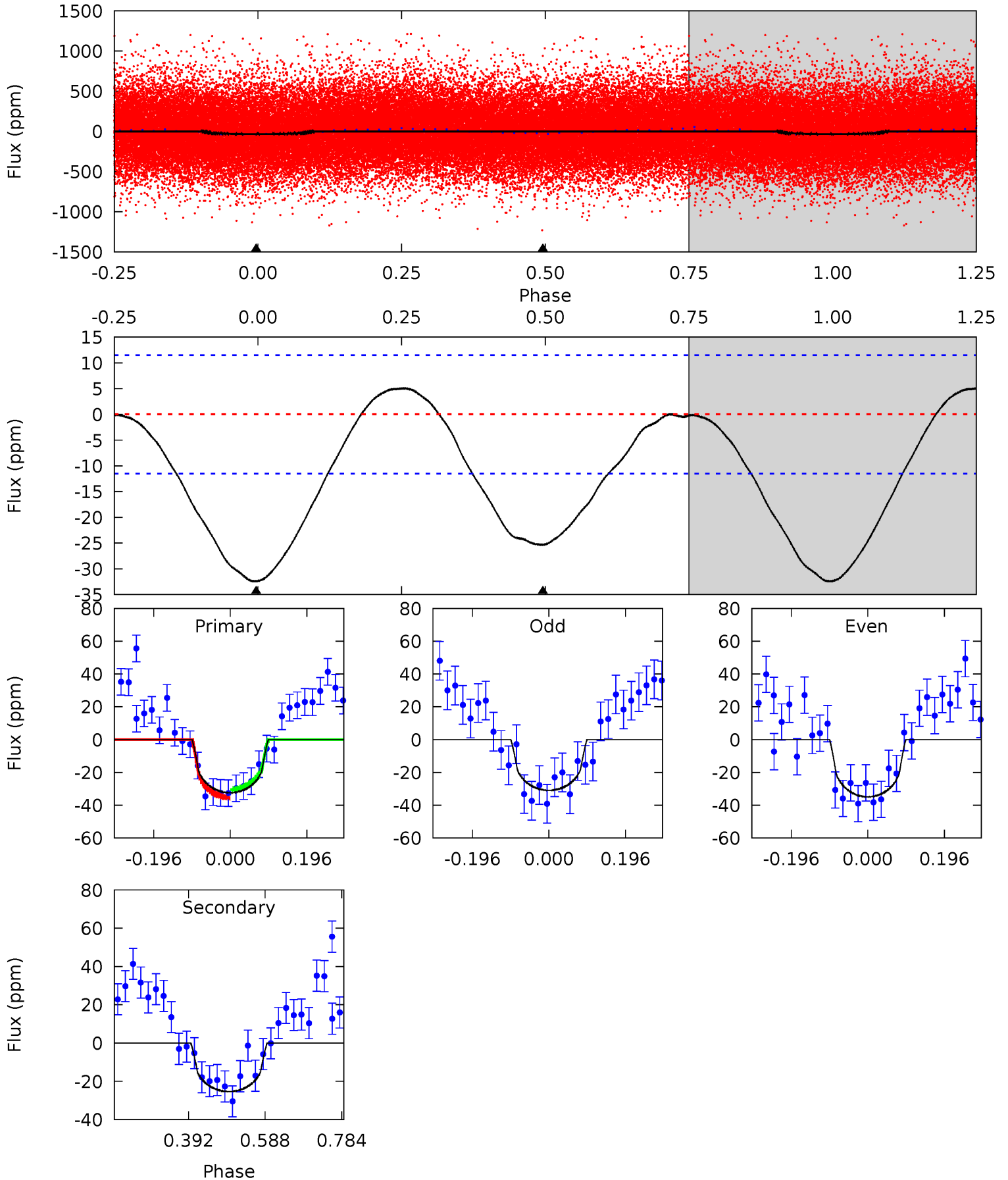
TCE 011407569-01 P= 1.208181 Days $T_0=131.849539$ (BKJD)



DV Model-Shift Uniqueness Test

011407569-01, P = 1.208200 Days, E = 130.646703 Days

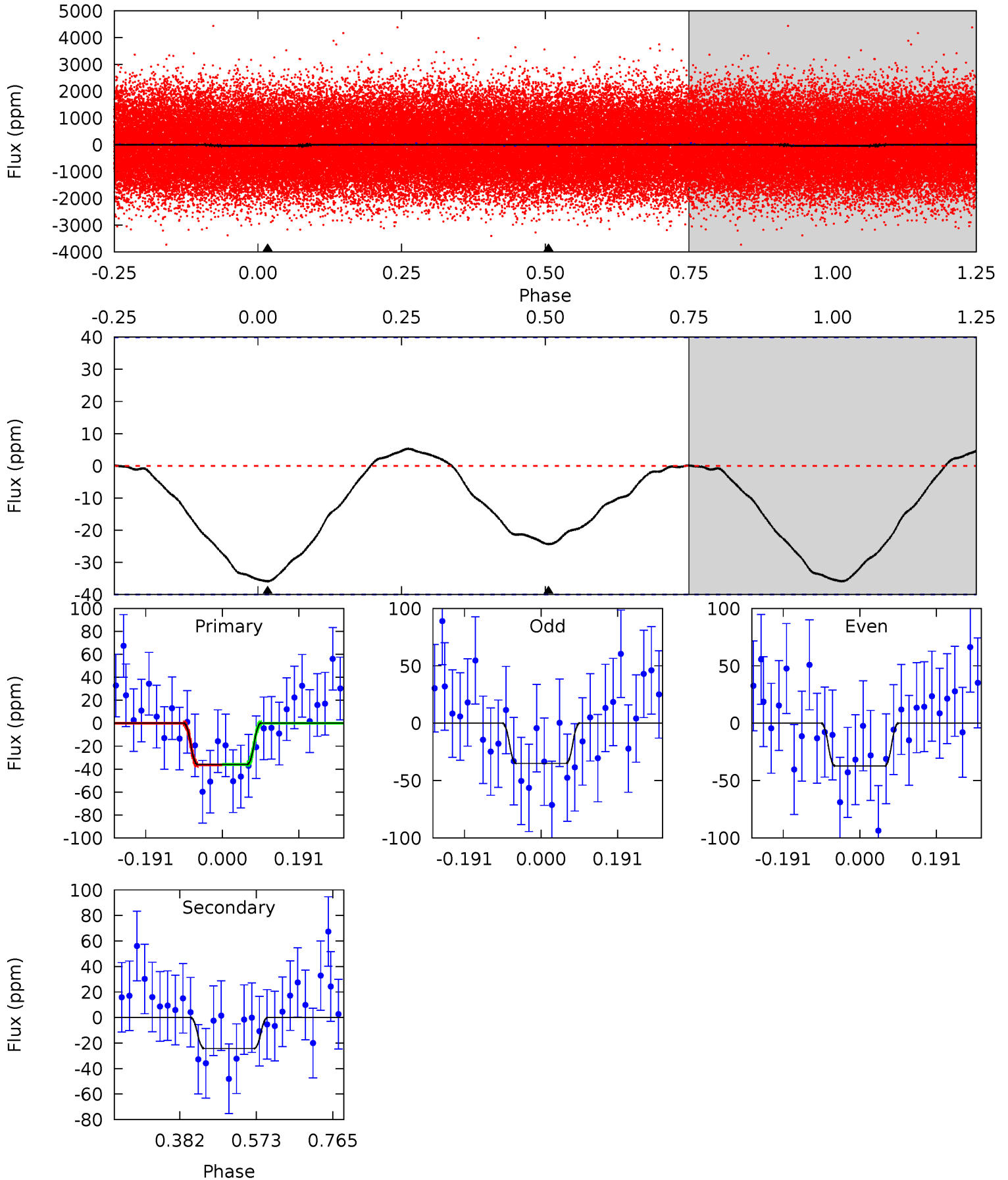
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.5	9.74	0	0	4.42	1.29	0.95	12.5	12.5	9.74	9.74	0.77	0.81	0.13	0.94



Alt Model-Shift Uniqueness Test

011407569-01, P = 1.208181 Days, E = 130.641358 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.98	2.70	0	0	4.43	1.31	0.28	3.98	3.98	2.70	2.70	0.12	0.83	0.13	0.03



Stellar Parameters For KIC 011407569

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4978^{+175}_{-175}	$4.511^{+0.084}_{-0.063}$	$0.070^{+0.250}_{-0.300}$	$0.808^{+0.069}_{-0.087}$	$0.772^{+0.085}_{-0.056}$	$2.062^{+0.771}_{-0.437}$
	+4%/-4%	+2%/-1%	+357%/-429%	+9%/-11%	+11%/-7%	+37%/-21%
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 011407569-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-25 ± 3	$0.52^{+0.40}_{-0.32}$	1927^{+83}_{-82}	4642^{+2708}_{-896}	22^{+124}_{-15}
Alt.	-24 ± 9	$0.62^{+0.43}_{-0.37}$	1928^{+78}_{-95}	4220^{+2077}_{-763}	13^{+70}_{-9}

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

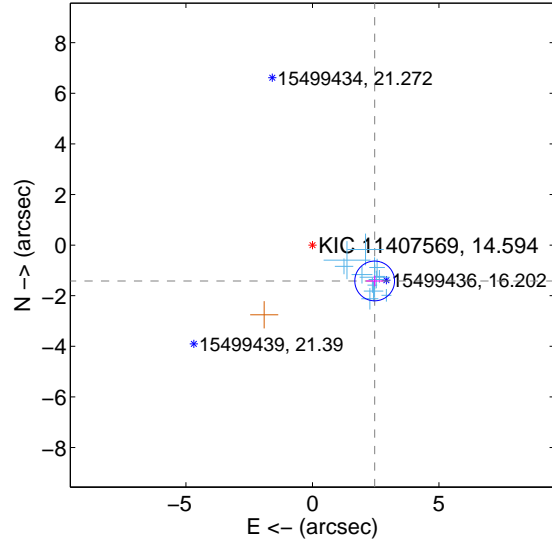
Supplemental centroid analysis for 011407569-01. Kepler magnitude: 14.59. Transit SNR 9.06

There are 12 quarters with good PRF difference image offsets

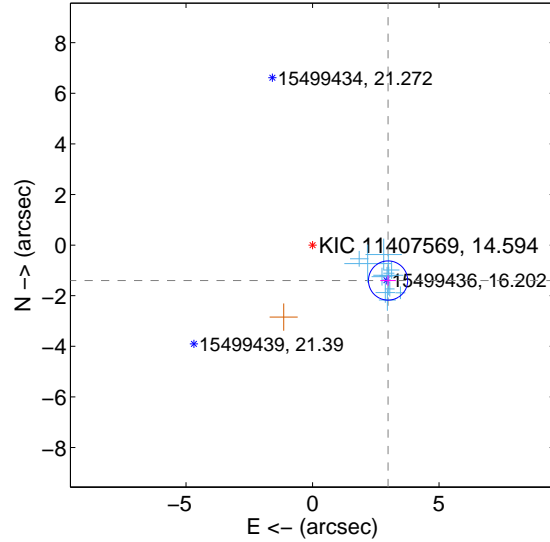
The direct PRF centroid is offset from the target star catalog position by about 0.55 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.839 ± 0.262	10.85	-2.460 ± 0.339	-1.417 ± 0.210
PRF-fit source offset from KIC position	3.298 ± 0.258	12.77	-2.986 ± 0.308	-1.400 ± 0.205
photometric centroid source offset	4.46 ± 1.17	3.82	-4.29 ± 1.18	-1.24 ± 1.03

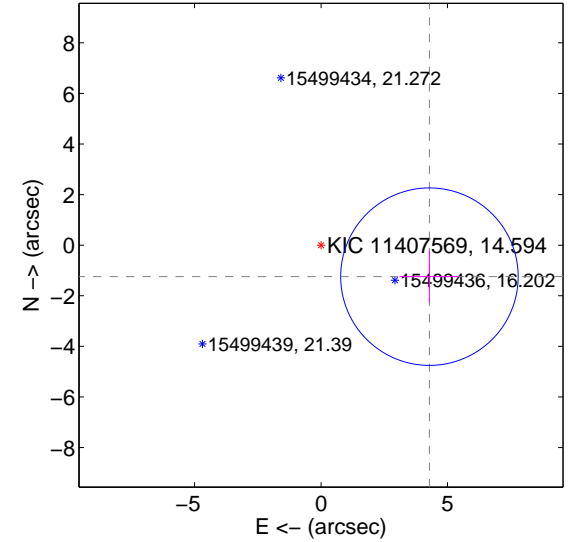
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

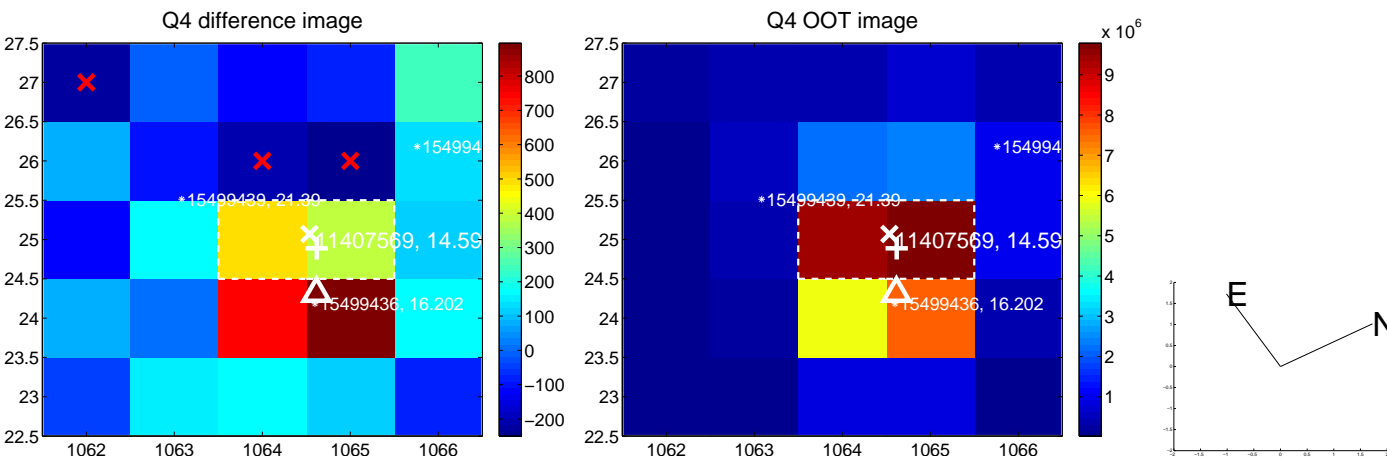
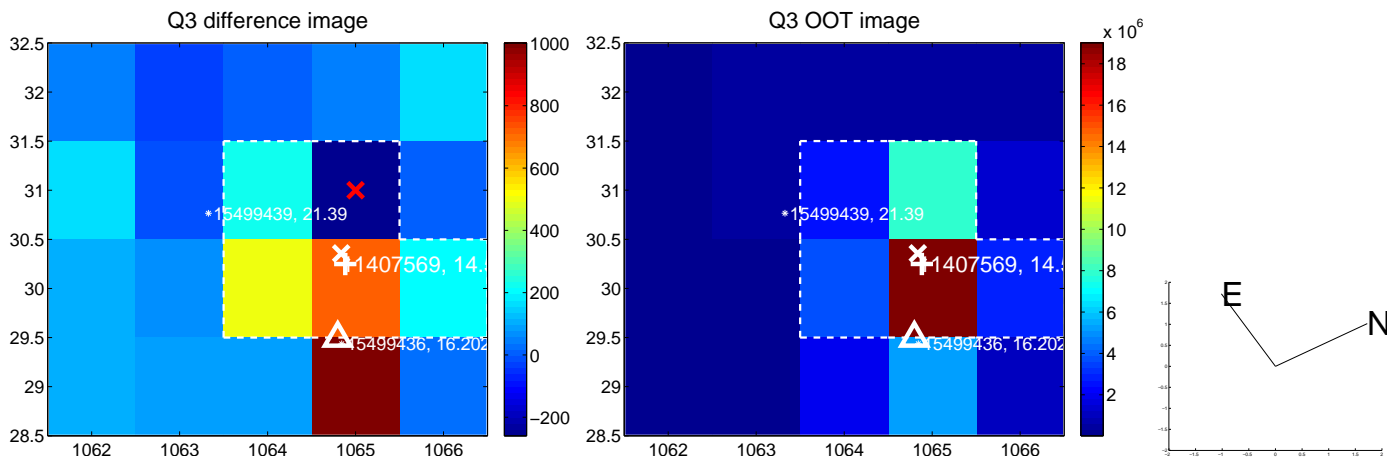
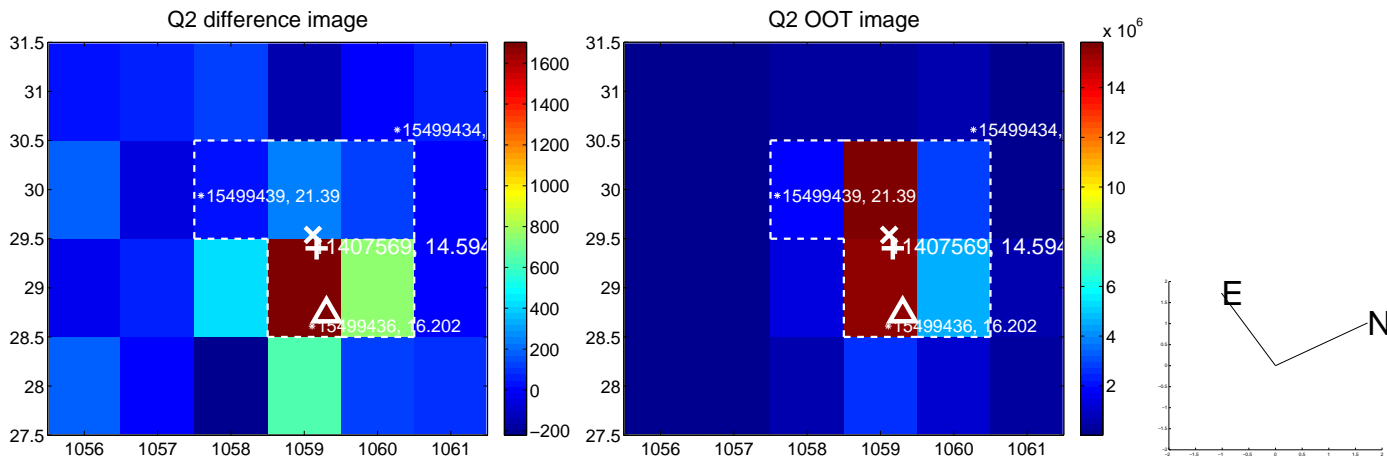
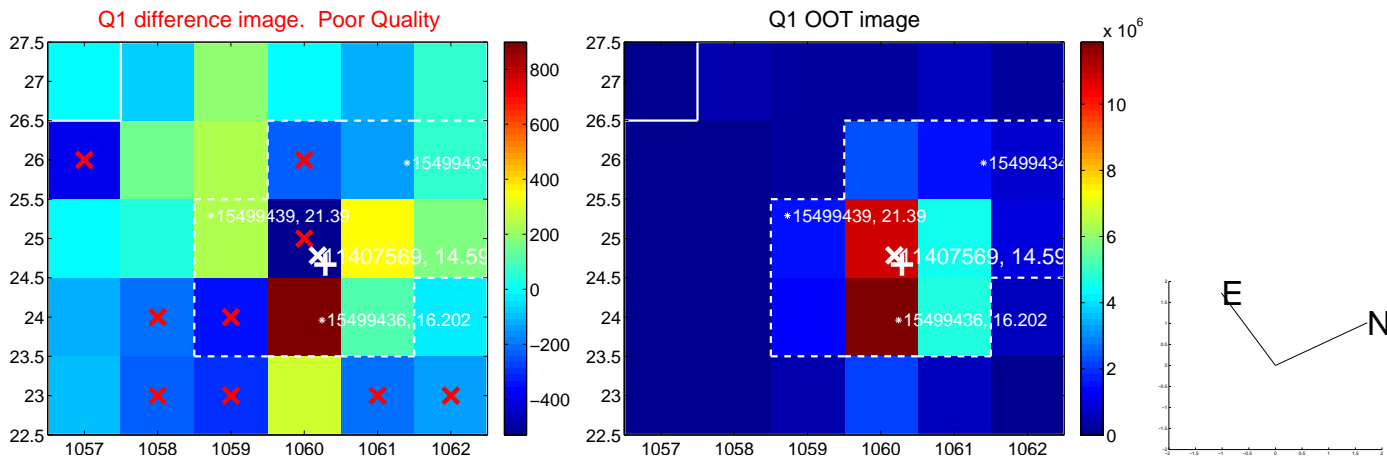


offset from photometric centroids

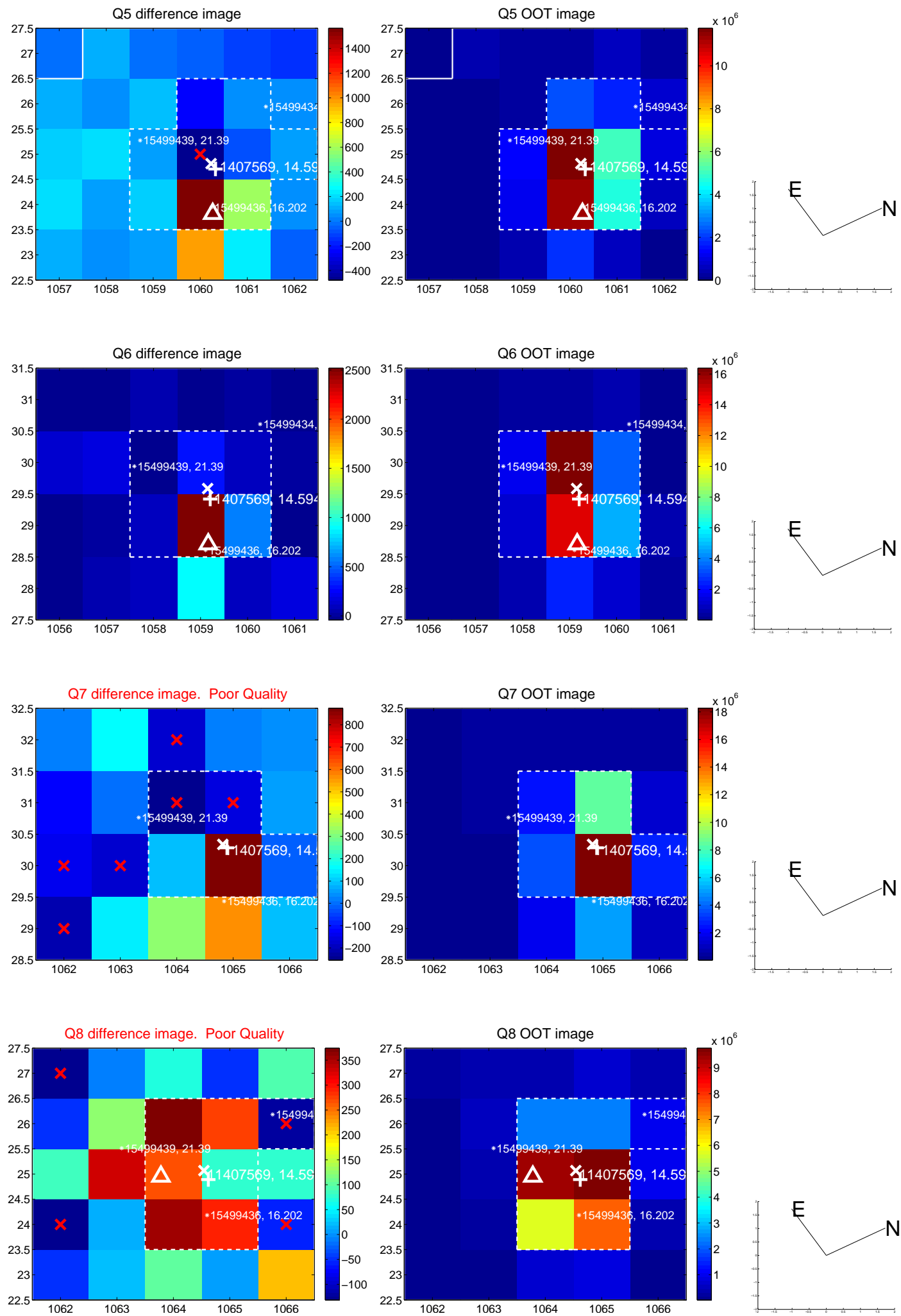


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

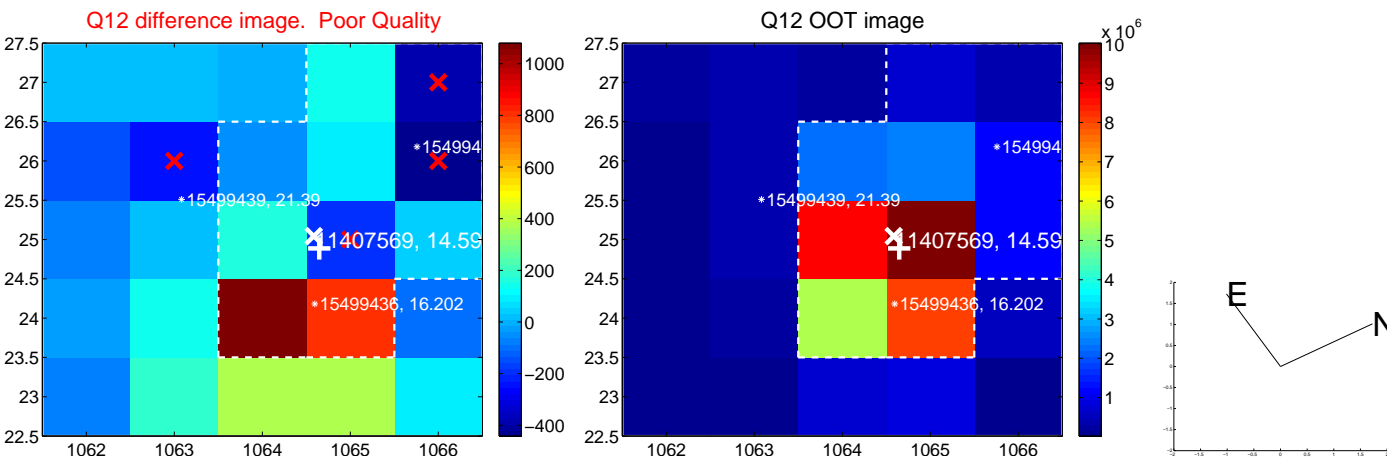
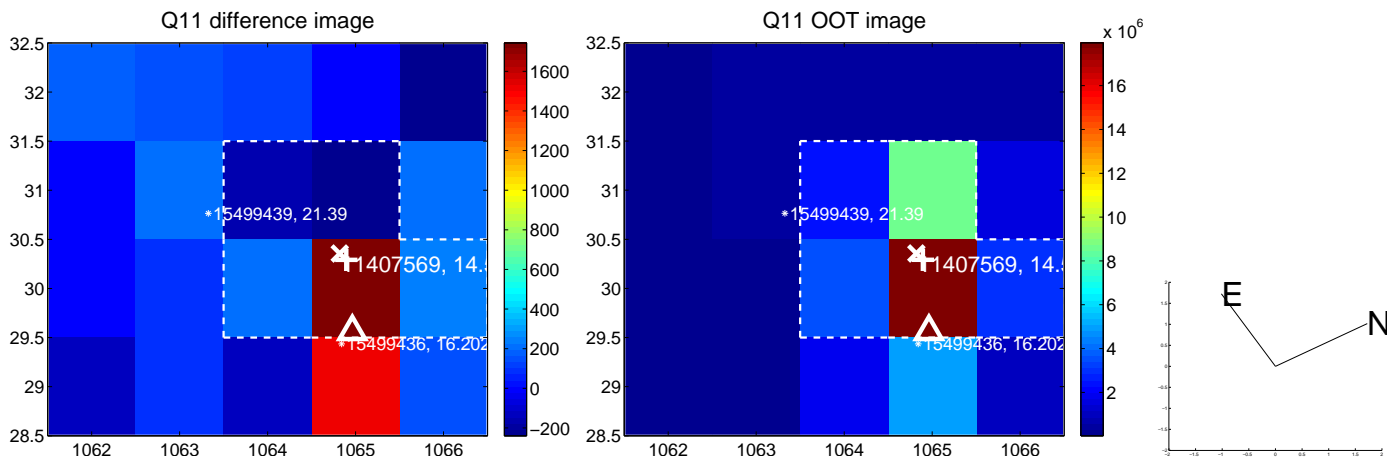
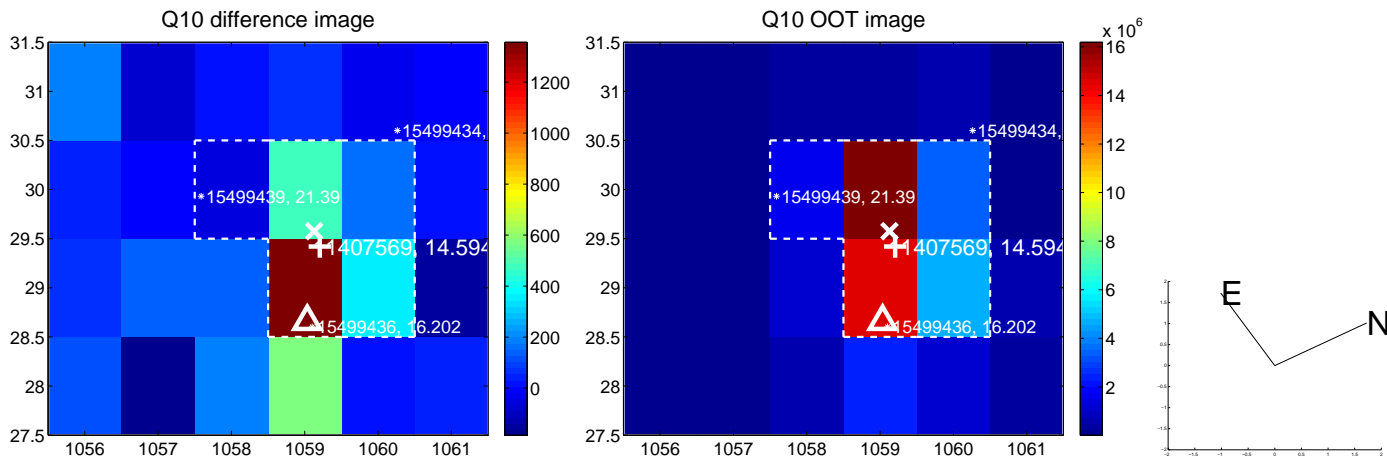
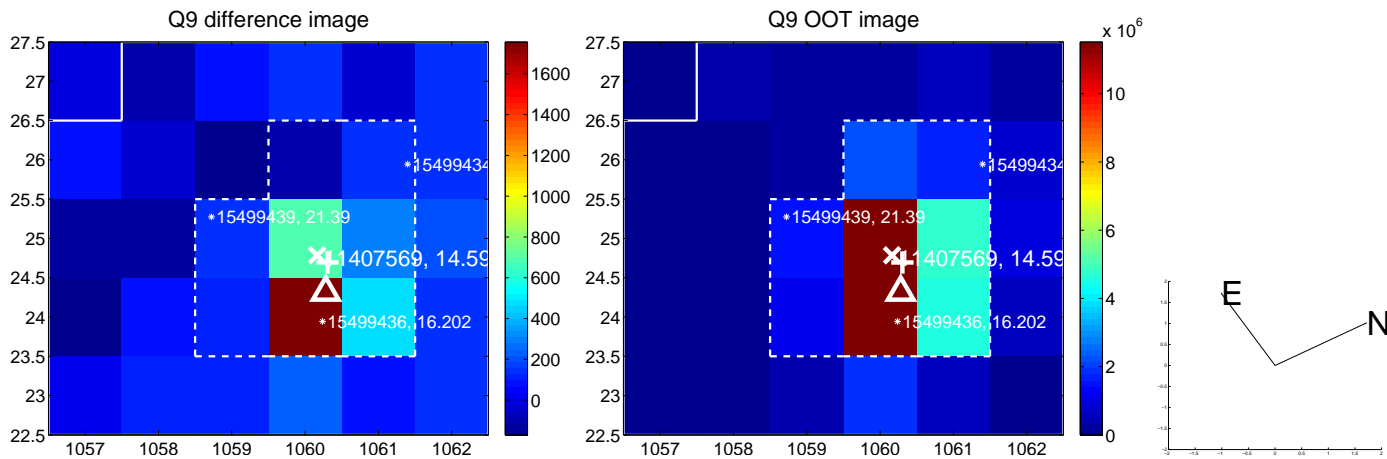
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



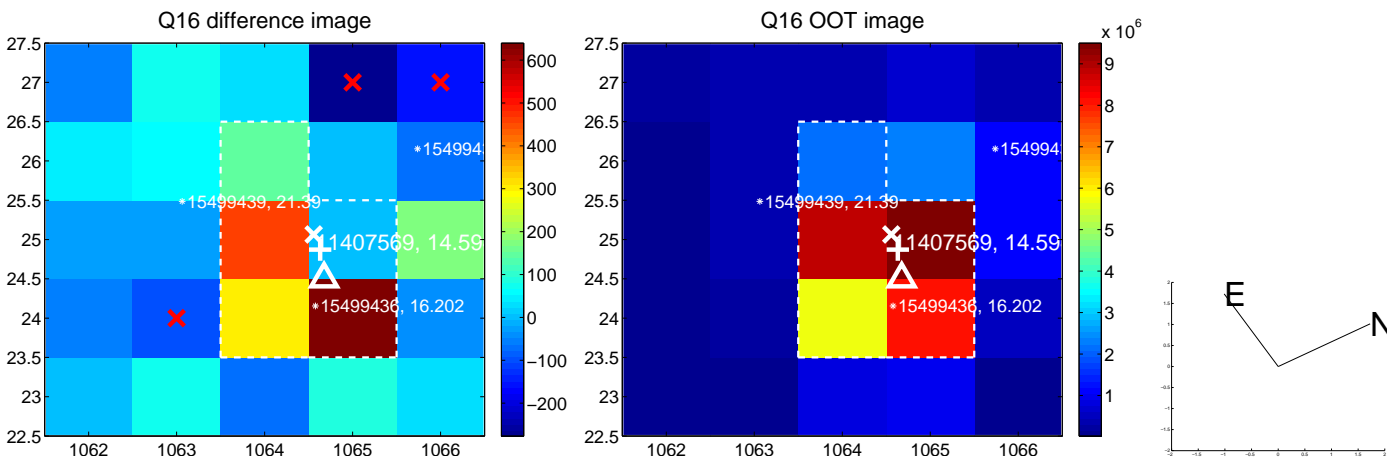
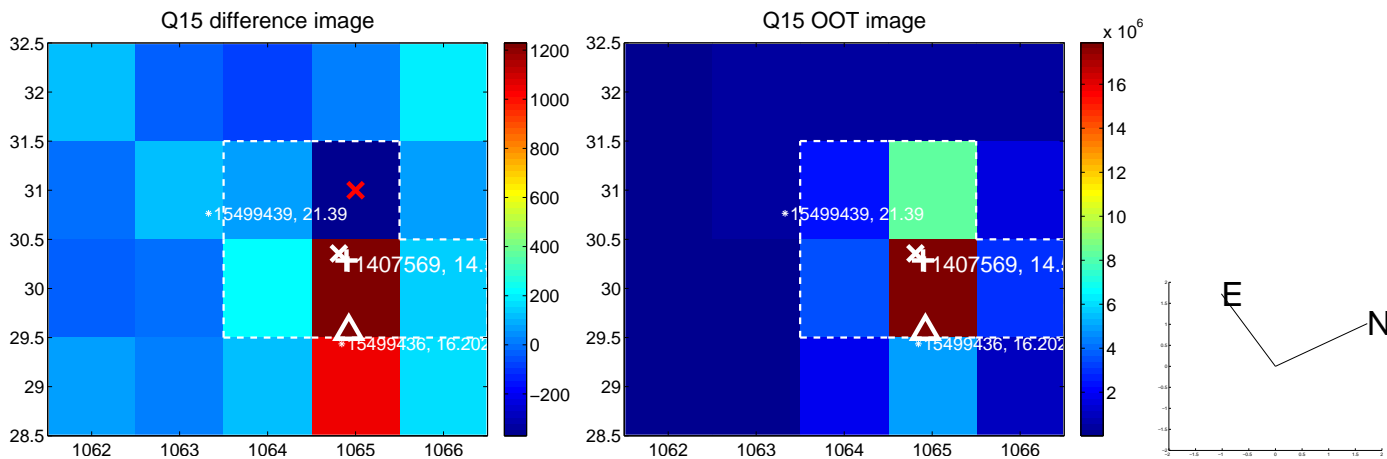
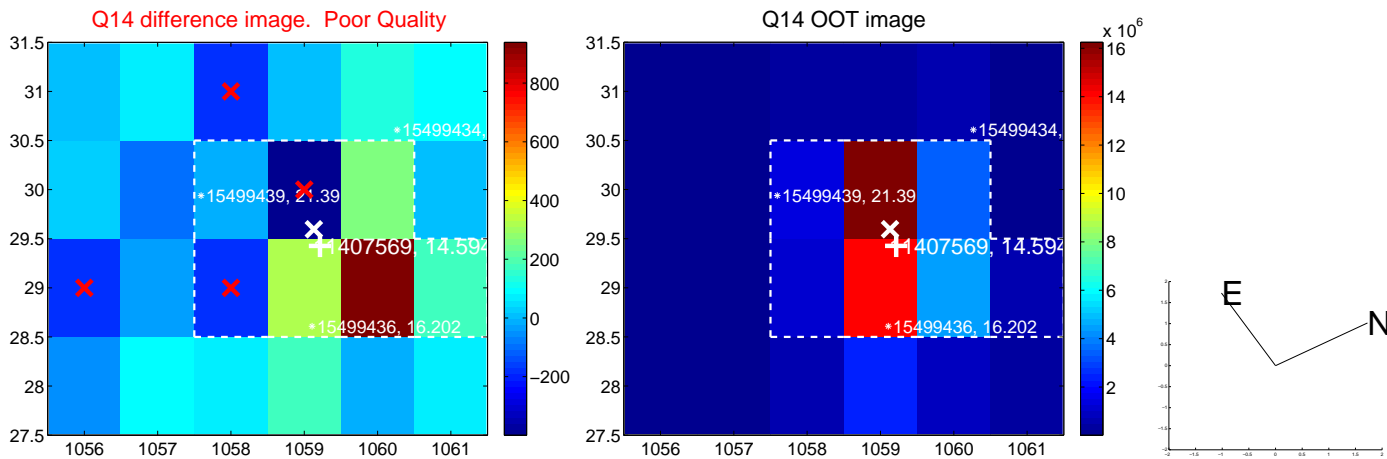
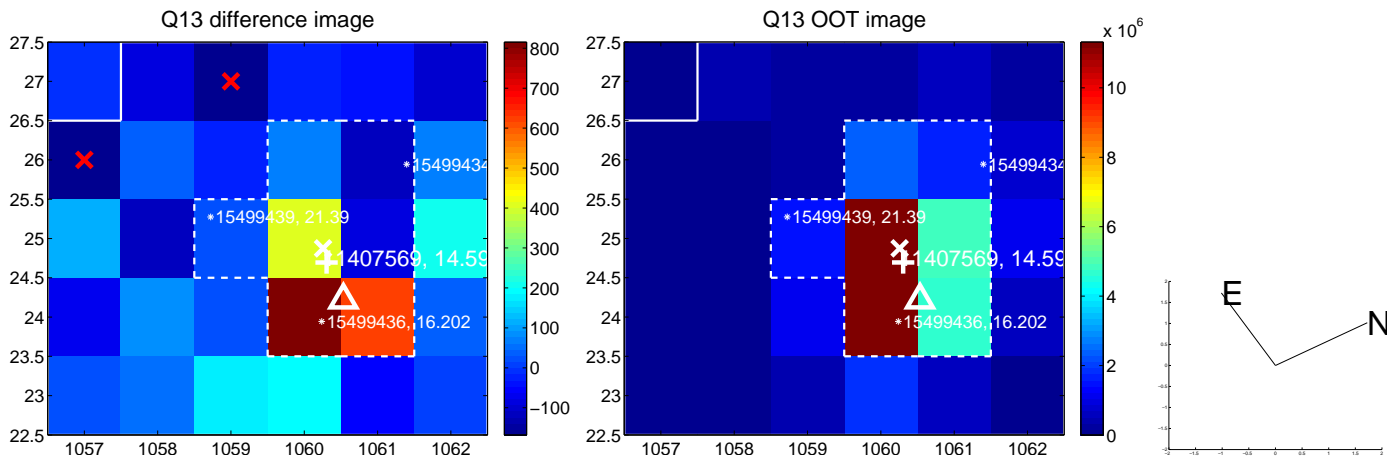
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



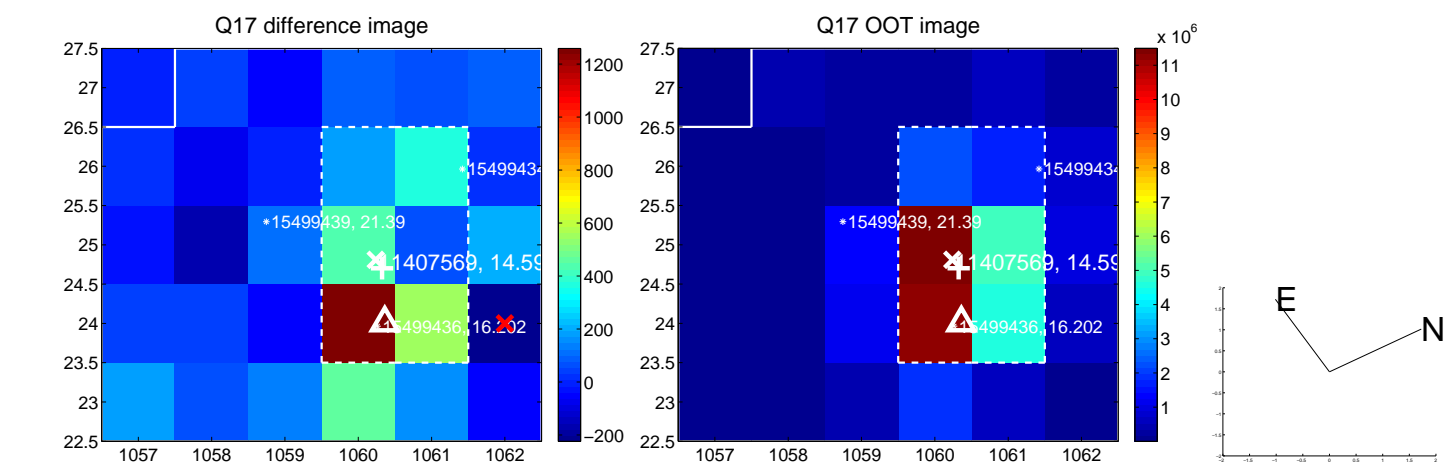
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



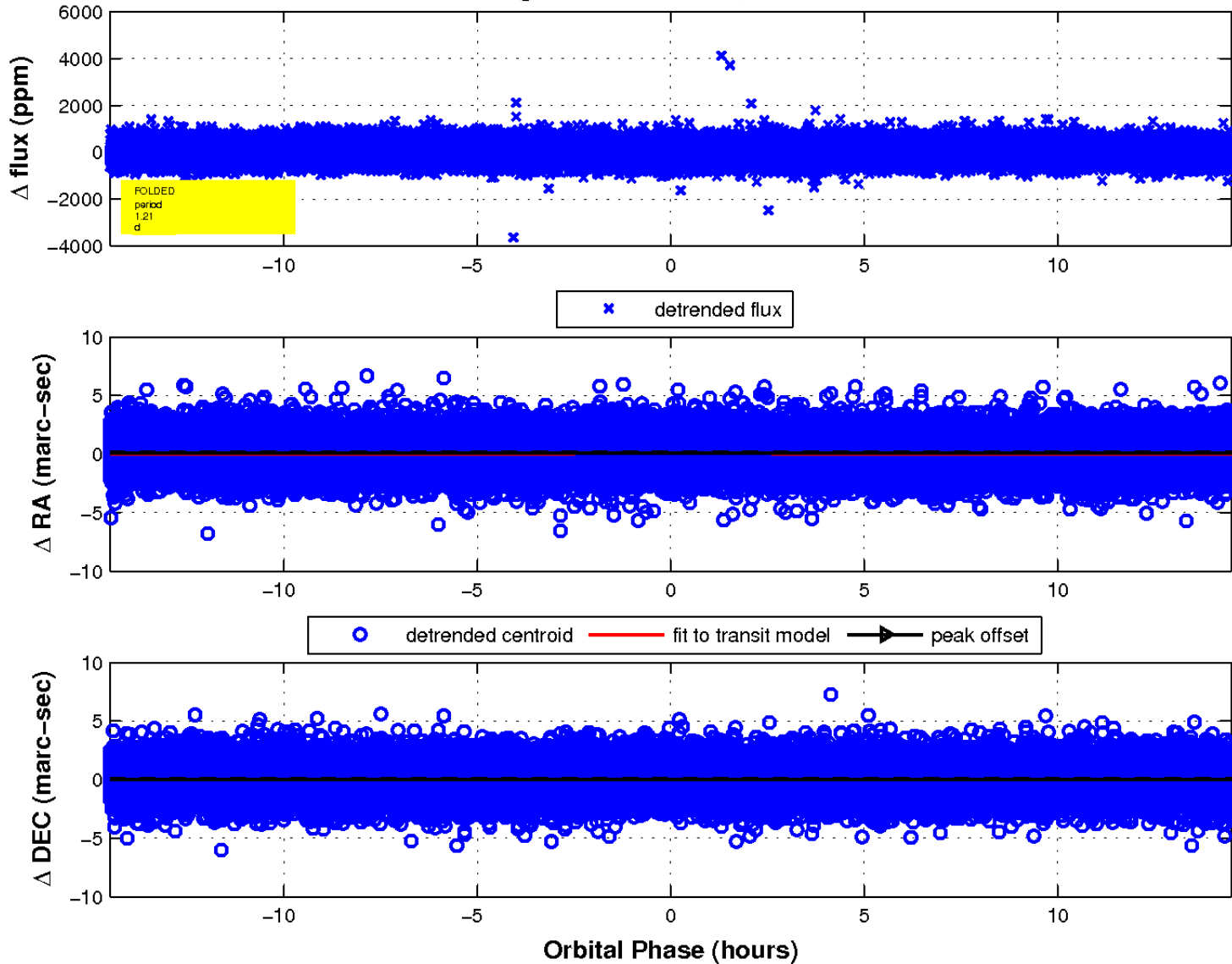
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

