

KIC 008182427

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})
008182427-01	OBS	No	4.528443	132.093318	35.8	27.797	10.0	9.7	1.13	6329	0.73	632.44

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008182427-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL — LPP_DV — 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.

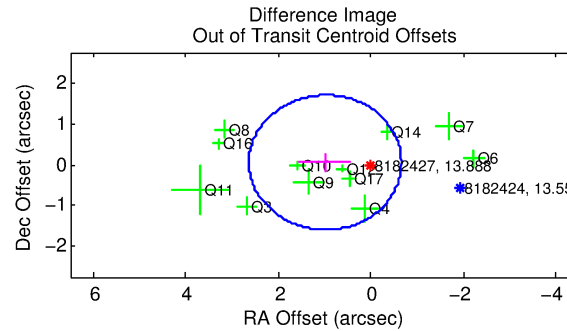
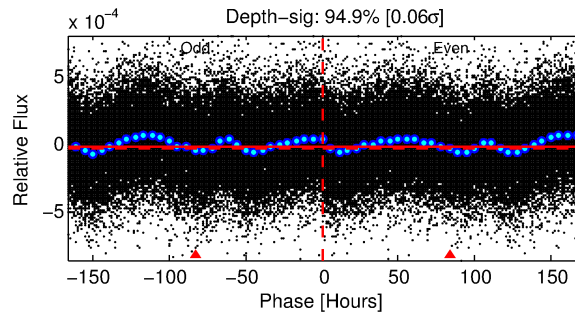
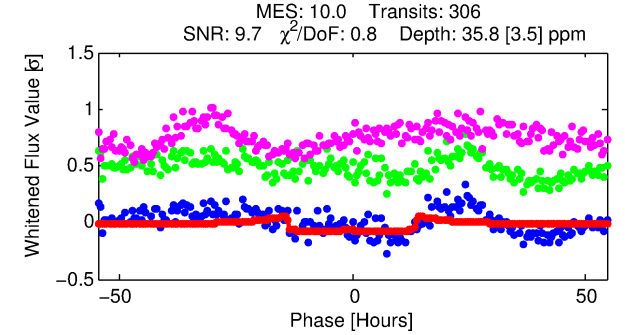
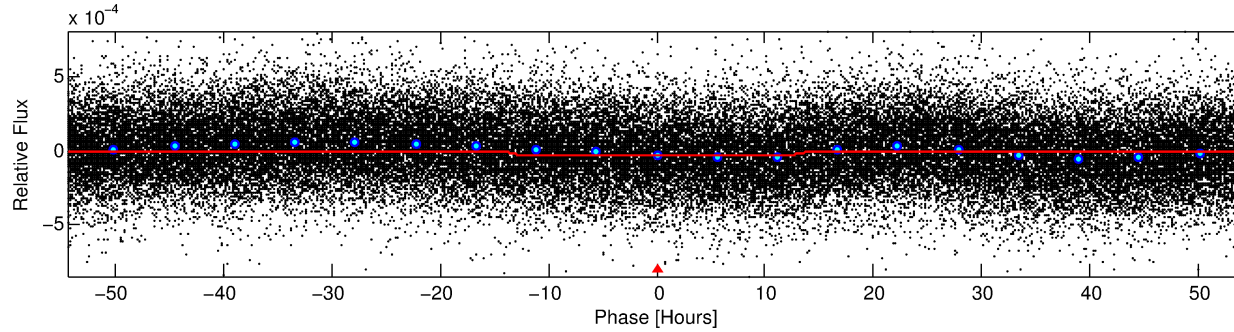
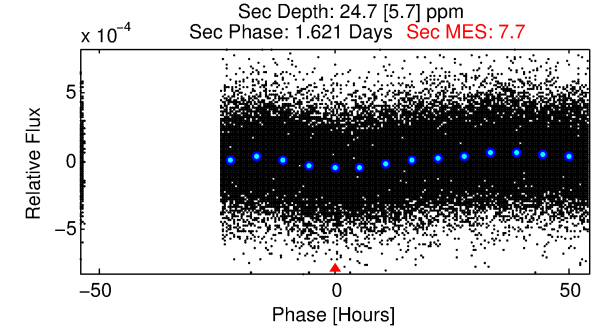
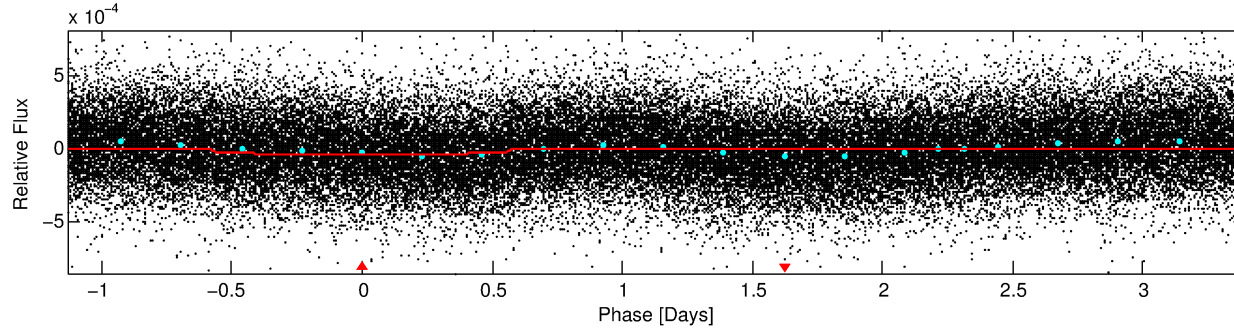
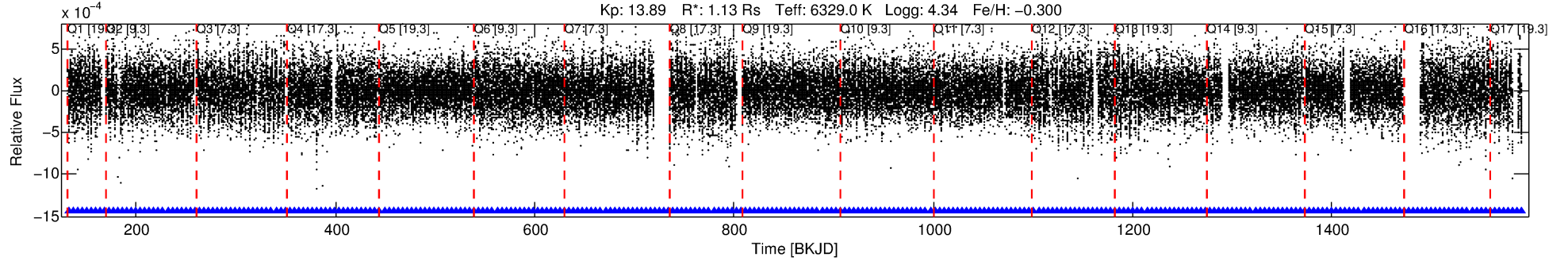
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008182427-01

No Significant Match Found

DV One-Page Summary

KIC: 8182427 Candidate: 1 of 1 Period: 4.528 d



DV Fit Results:

Period = 4.52844 [0.00008] d
Epoch = 132.0933 [0.0129] BKJD
Rp/R* = 0.0059 [0.0012]
a/R* = 1.20 [0.41]
b = 0.74 [0.69]
Seff = 632.44 [235.48]
Teq = 1279 [119] K
Rp = 0.73 [0.27] Re
a = 0.0539 [0.0132] AU
Ag = 73.85 [43.58] [1.67σ]
Teffp = 5796 [715] K [6.23σ]

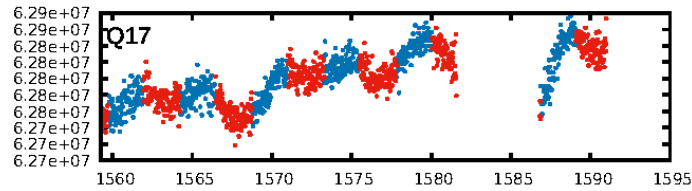
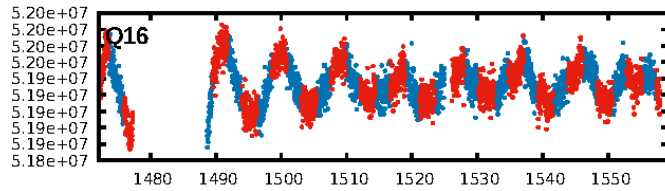
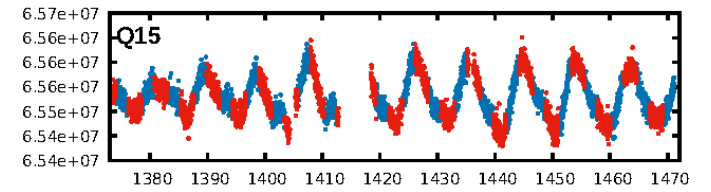
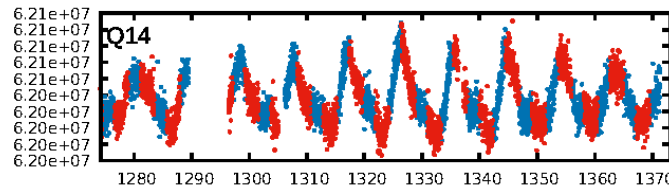
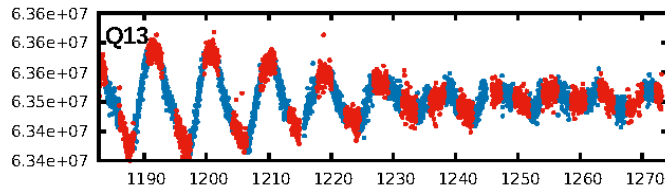
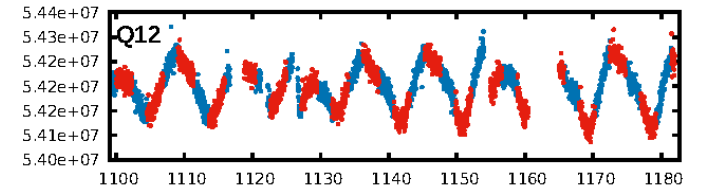
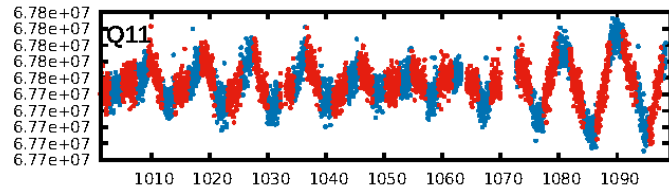
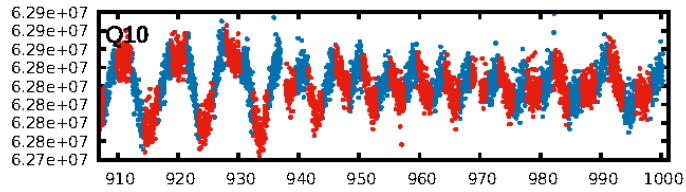
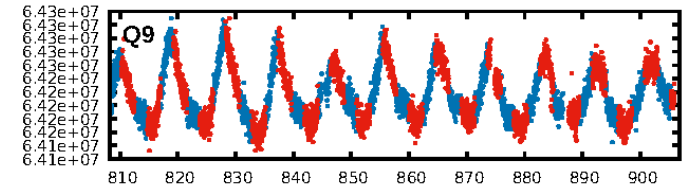
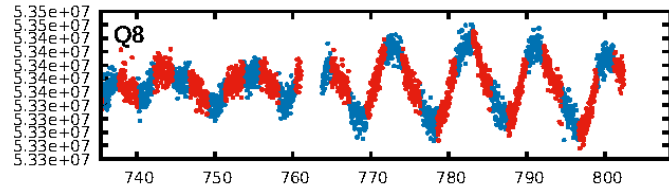
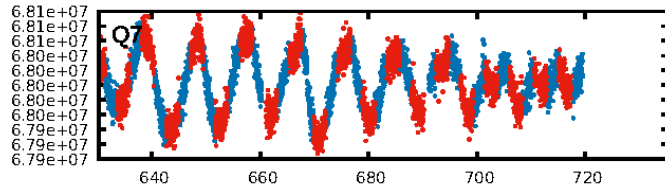
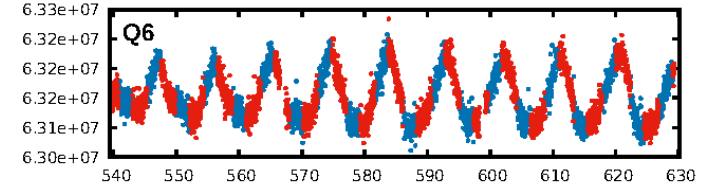
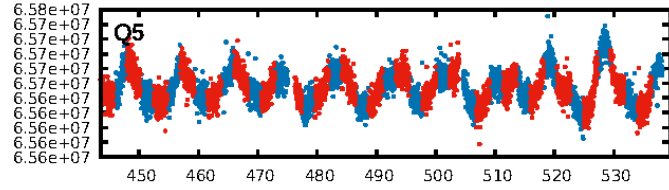
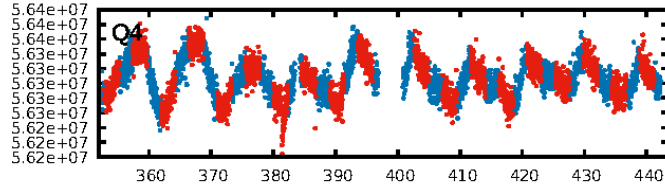
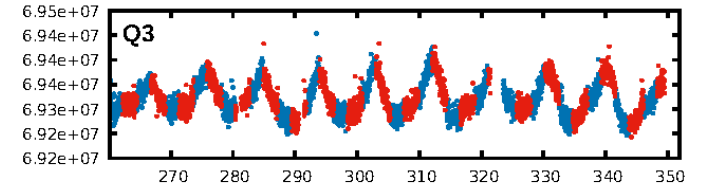
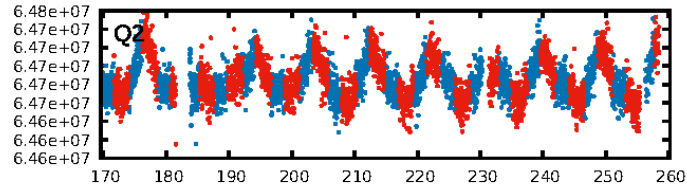
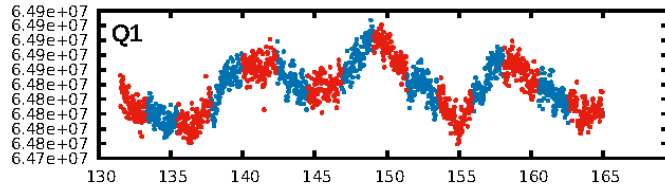
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 9.32e-27
RollingBand-fgt: 1.00 [292/292]
GhostDiagnostic-chr: 1.523
Centroid-sig: 0.6%
Centroid-so: 0.771 arcsec [1.17σ]
OotOffset-rm: 0.989 arcsec [1.80σ]
OotOffset-st: 3/3/4/2 [12]
KicOffset-rm: 0.562 arcsec [1.09σ]
KicOffset-st: 3/3/4/2 [12]
DiffImageQuality-fgm: 0.83 [10/12]
DiffImageOverlap-fno: 1.00 [17/17]

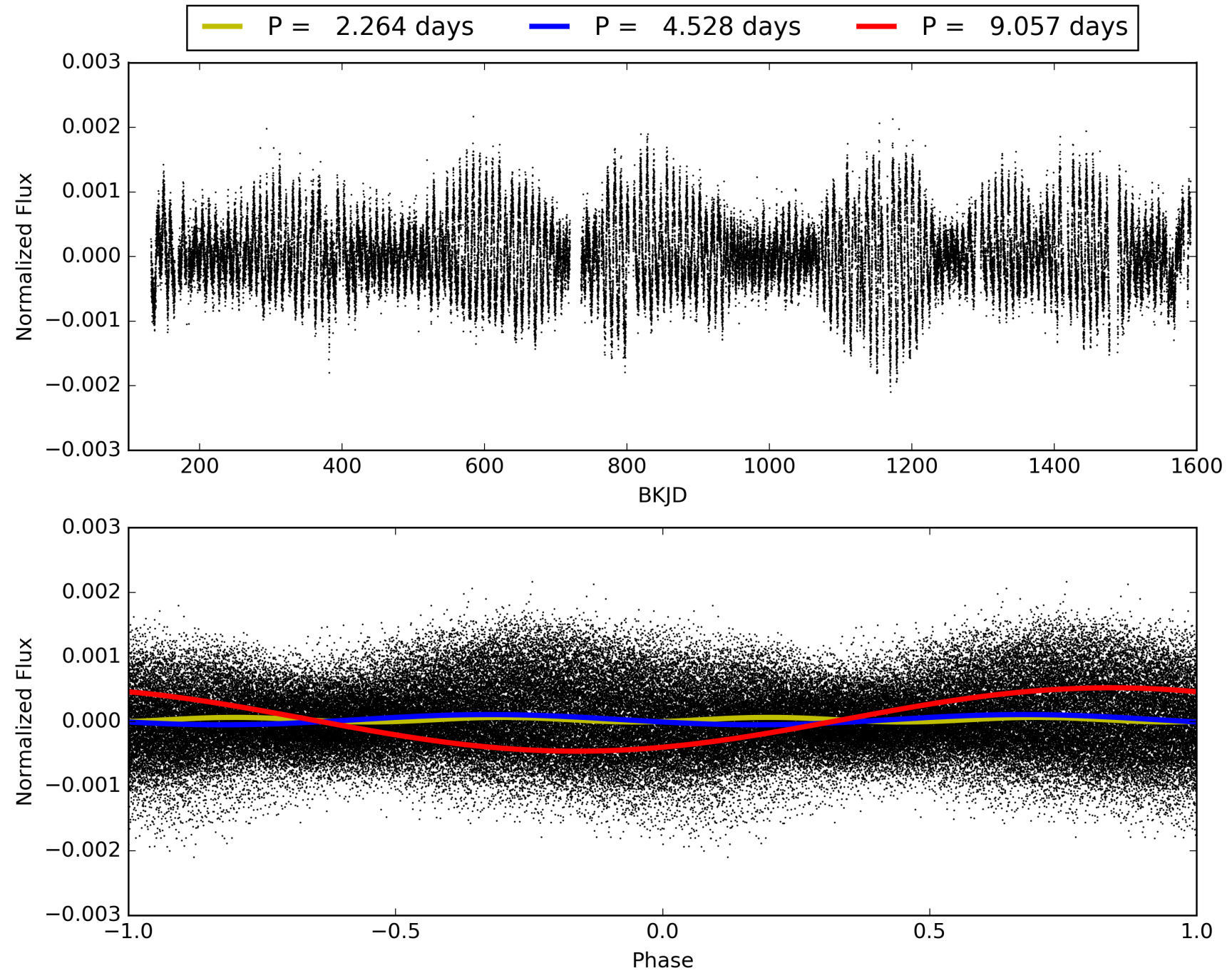
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:55:08 Z

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

TCE 008182427-01, PDC Light Curves

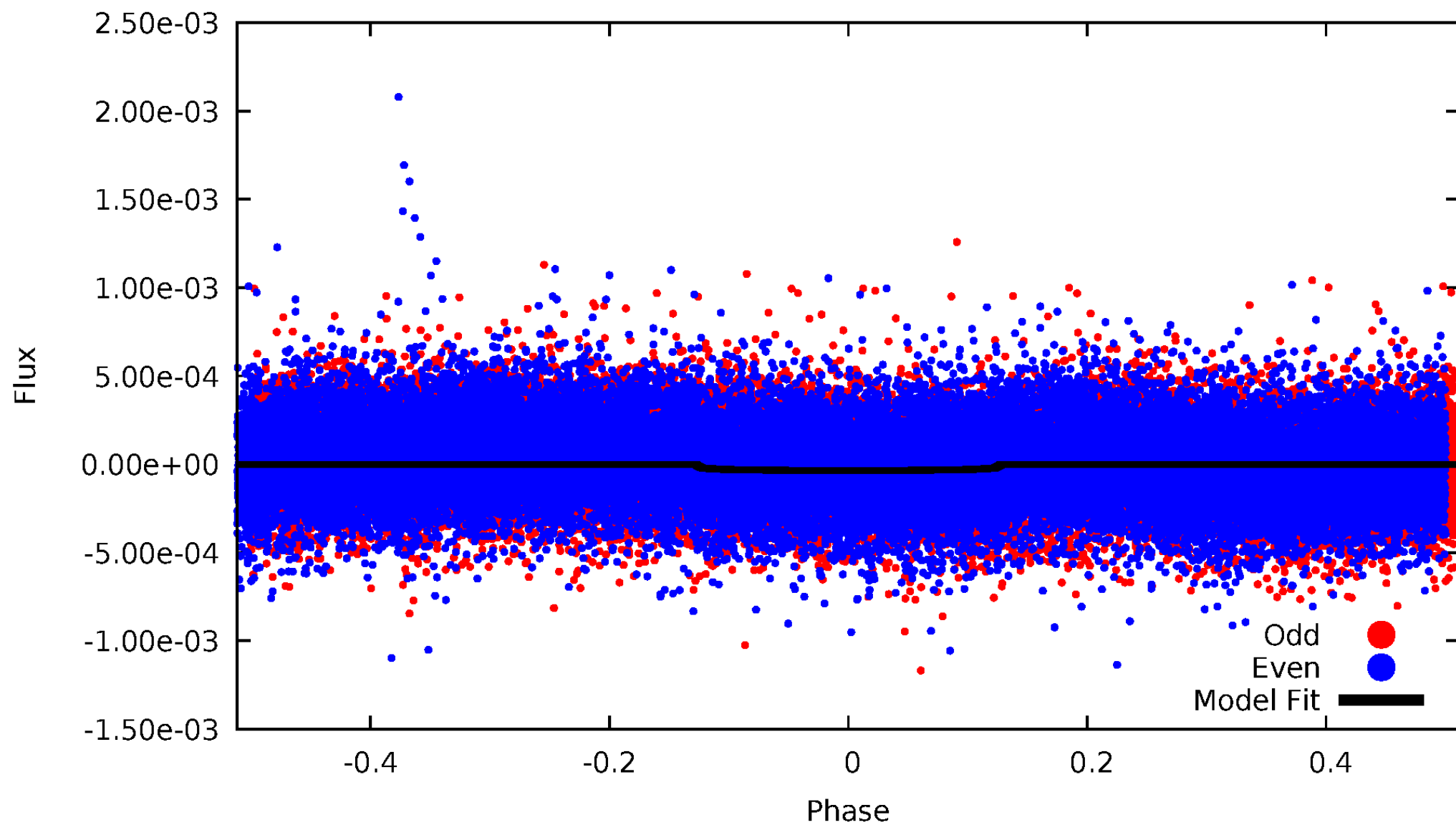


TCE 008182427-01



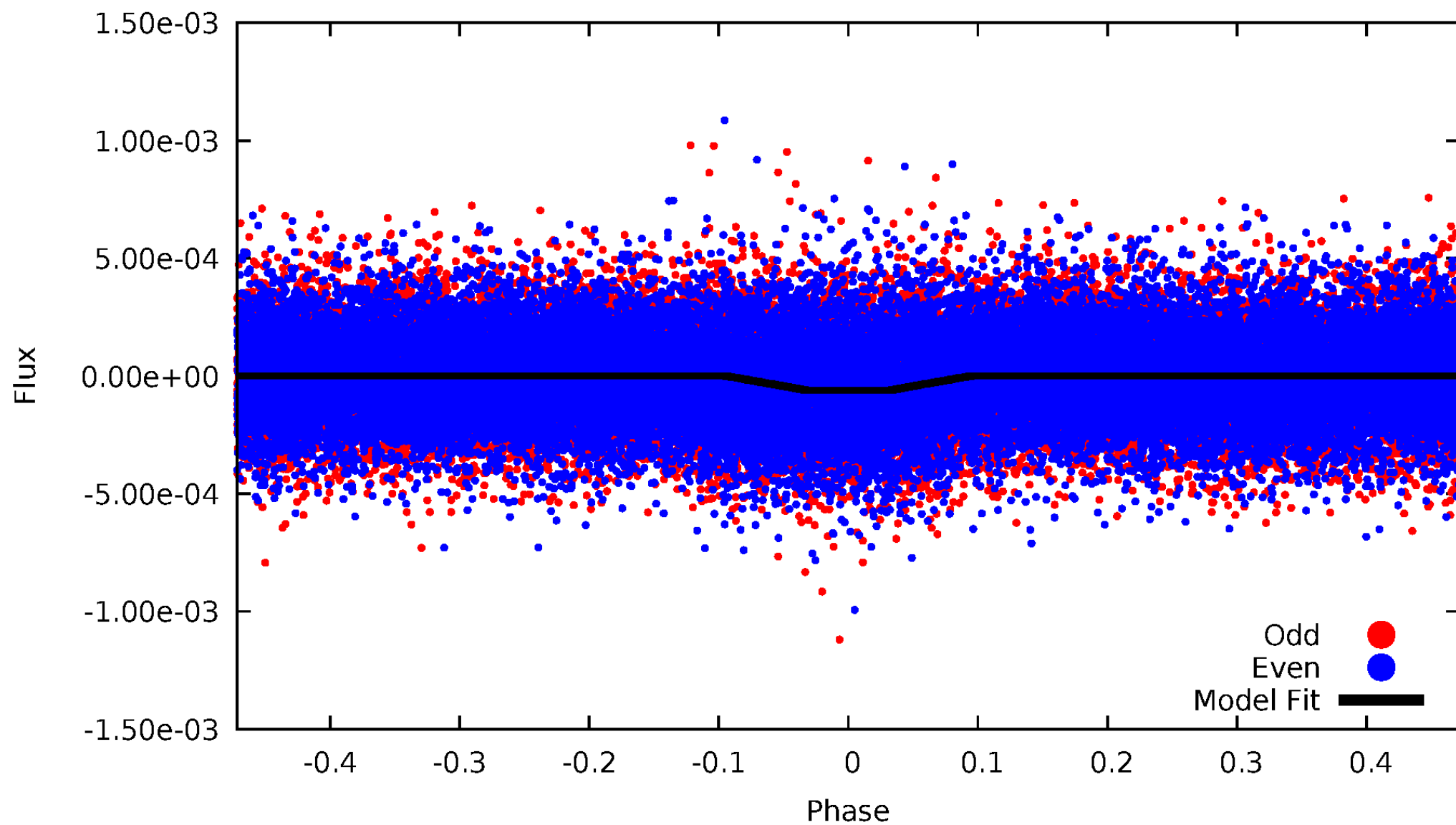
DV Odd/Even

TCE 008182427-01



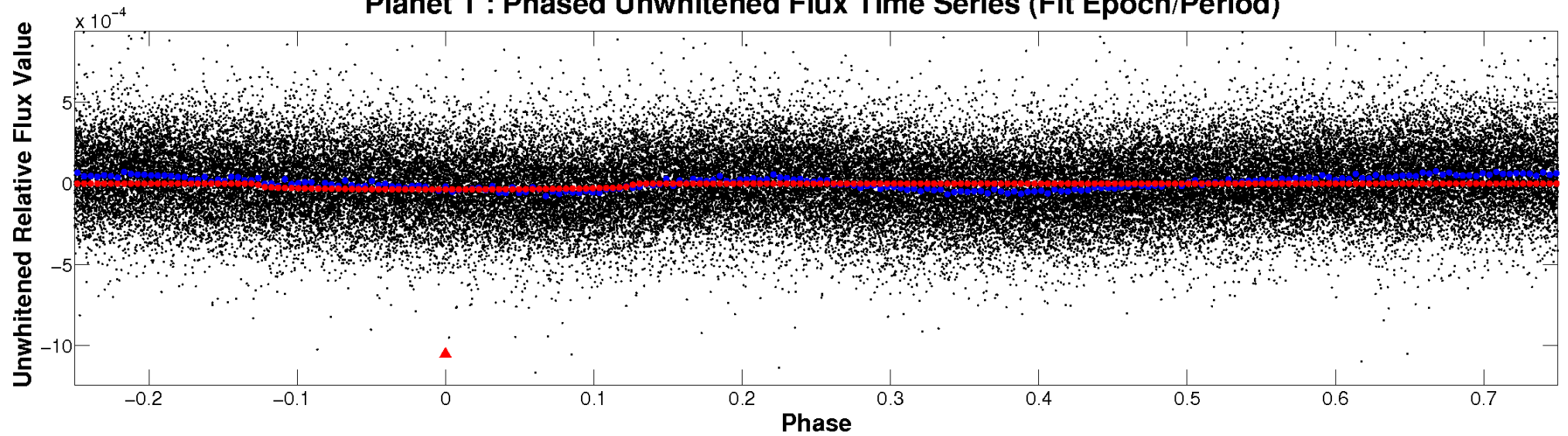
ALT Odd/Even

TCE 008182427-01

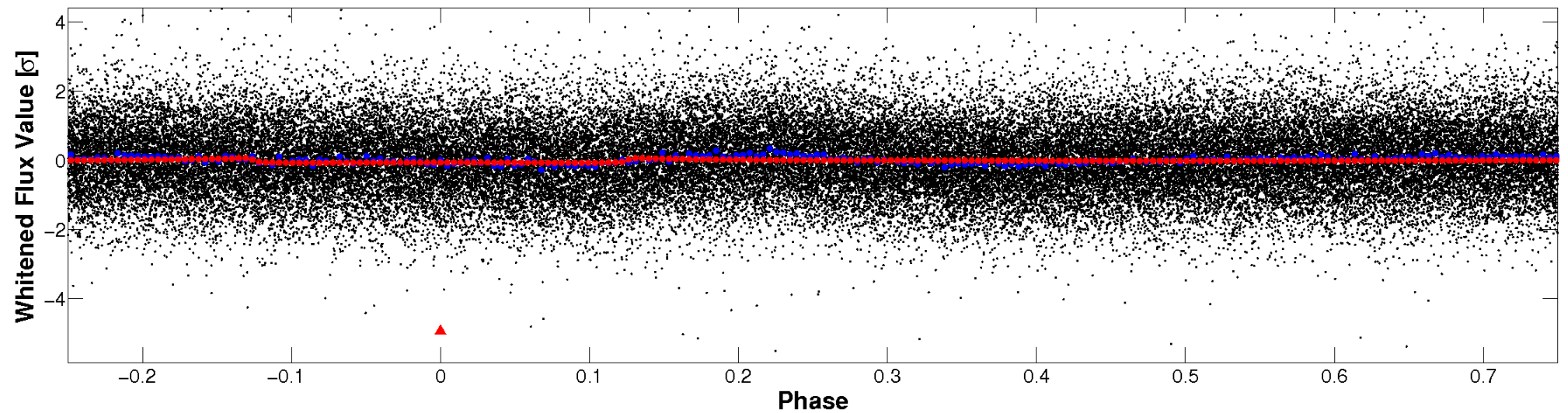


Non-Whitened Vs. Whitened Light Curve

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

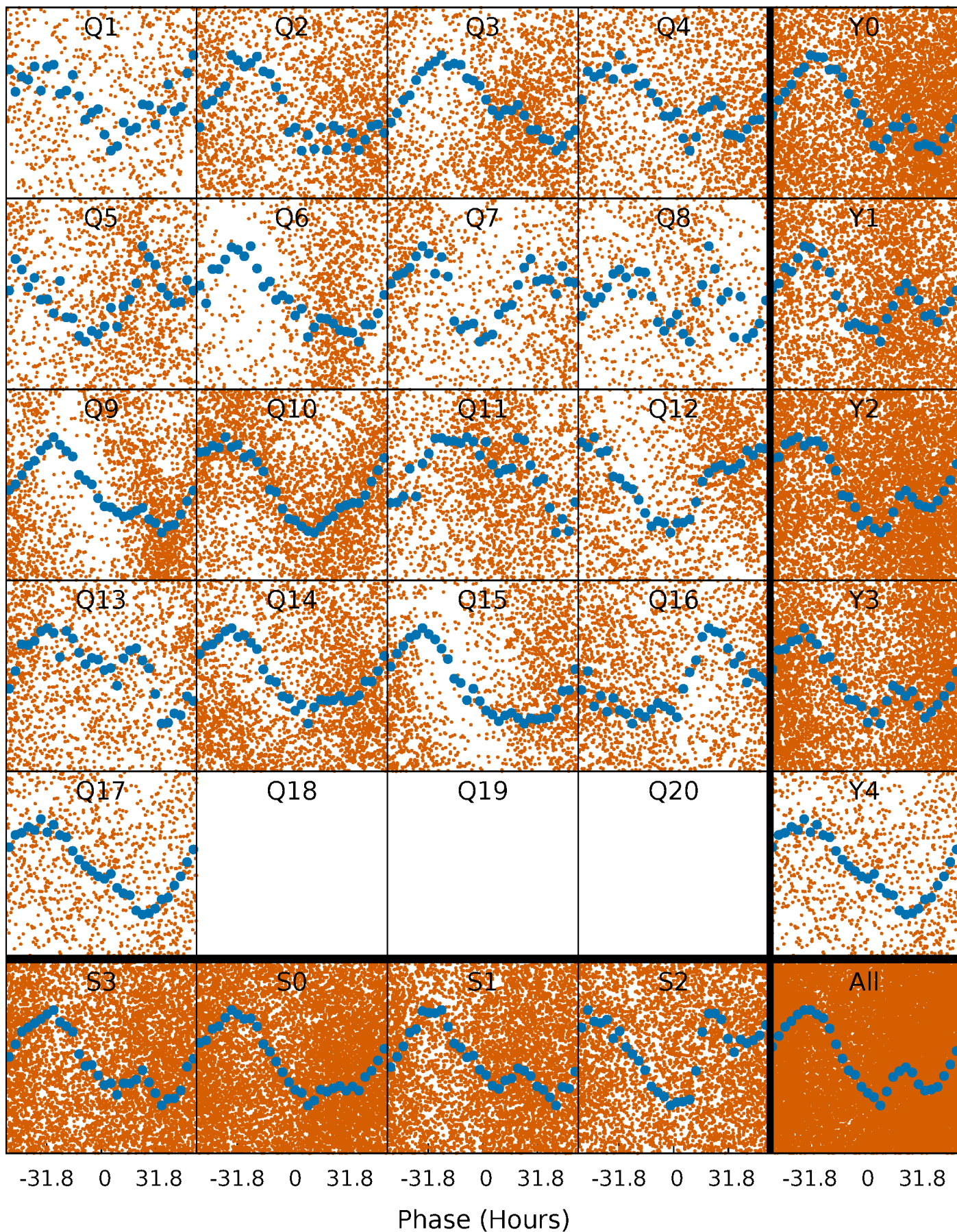


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



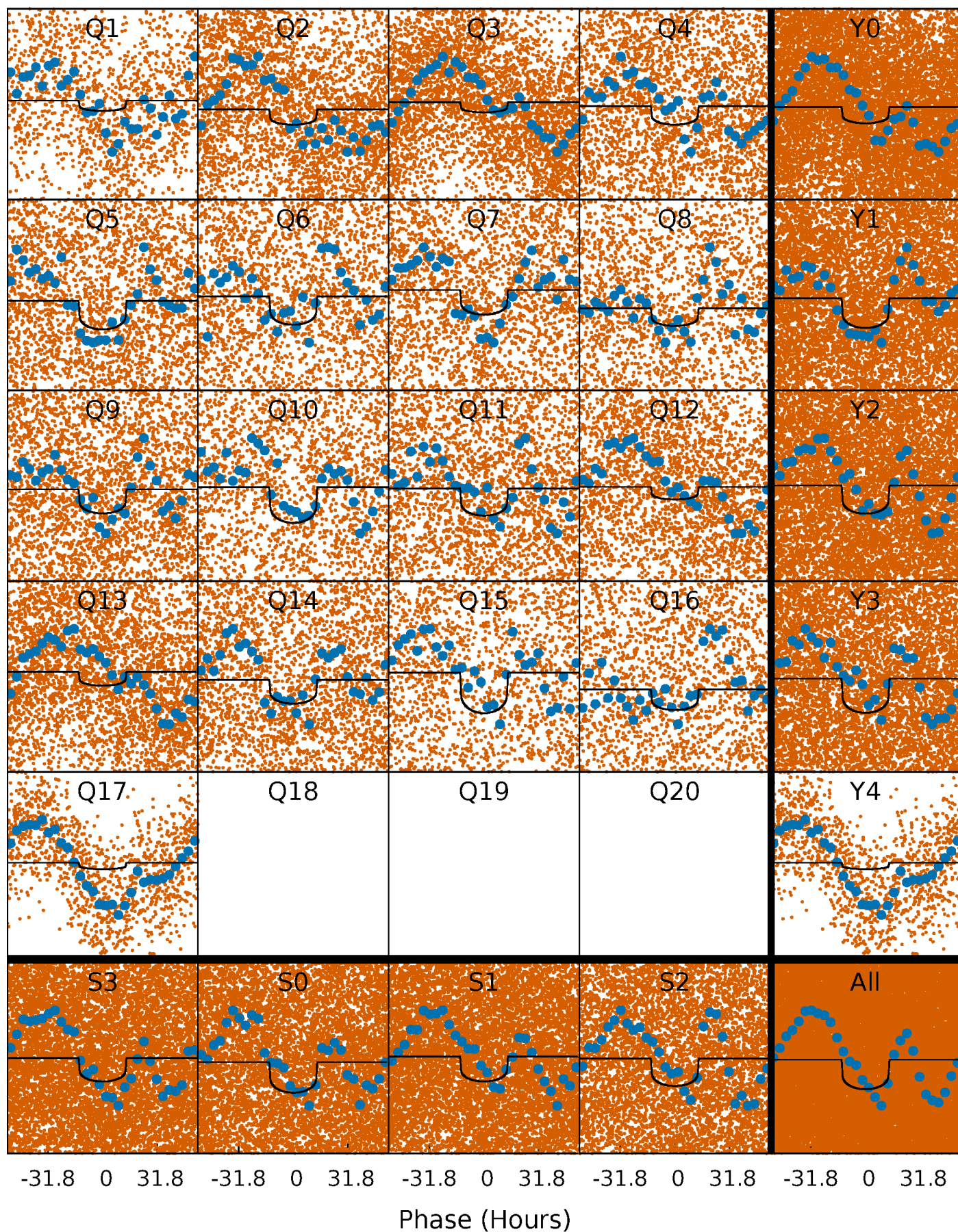
PDC Quarter-Phased Transit Curves

TCE 008182427-01 P= 4.528443 Days $T_0=132.093318$ (BKJD)



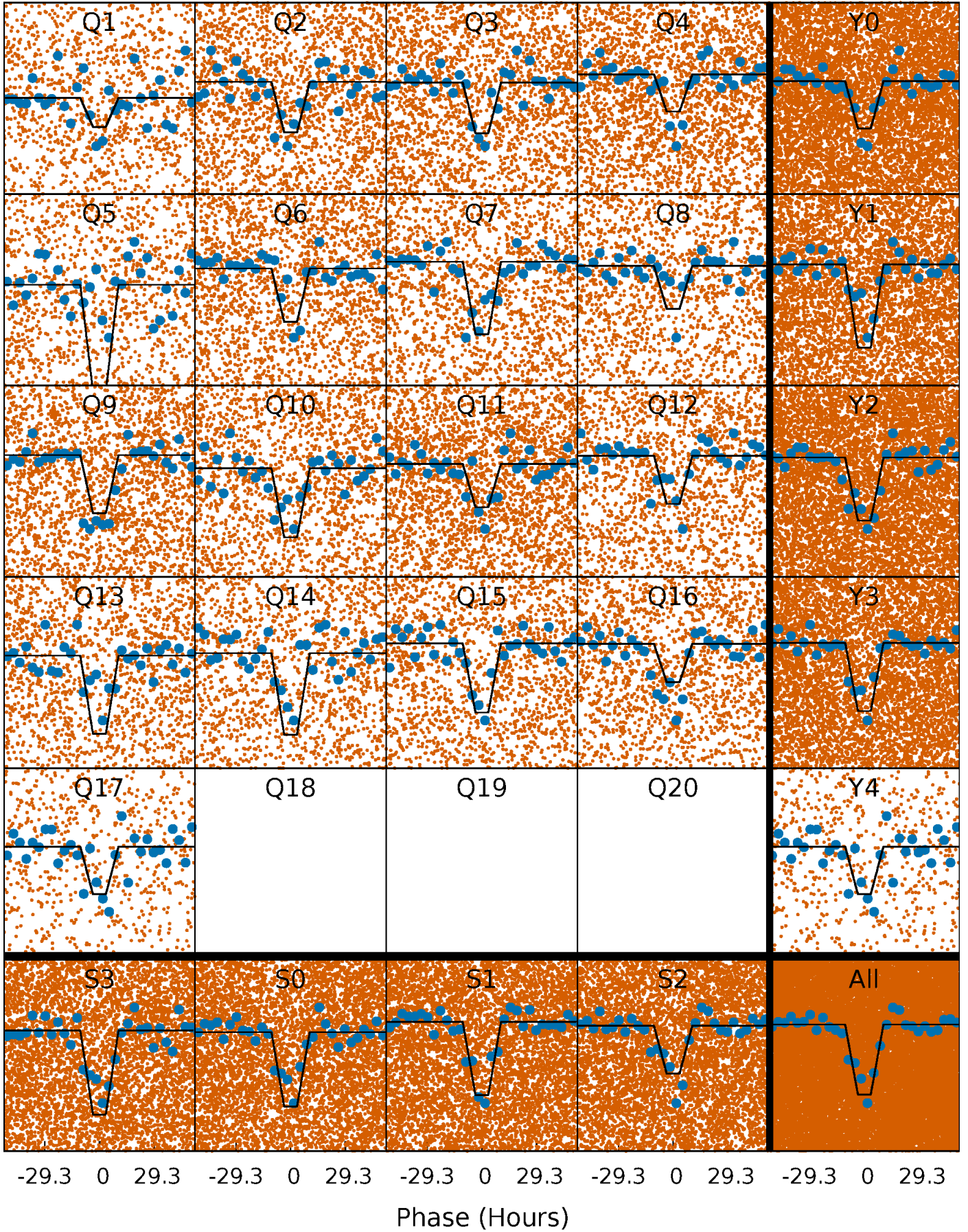
DV Quarter-Phased Transit Curves

TCE 008182427-01 P= 4.528443 Days $T_0=132.093318$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

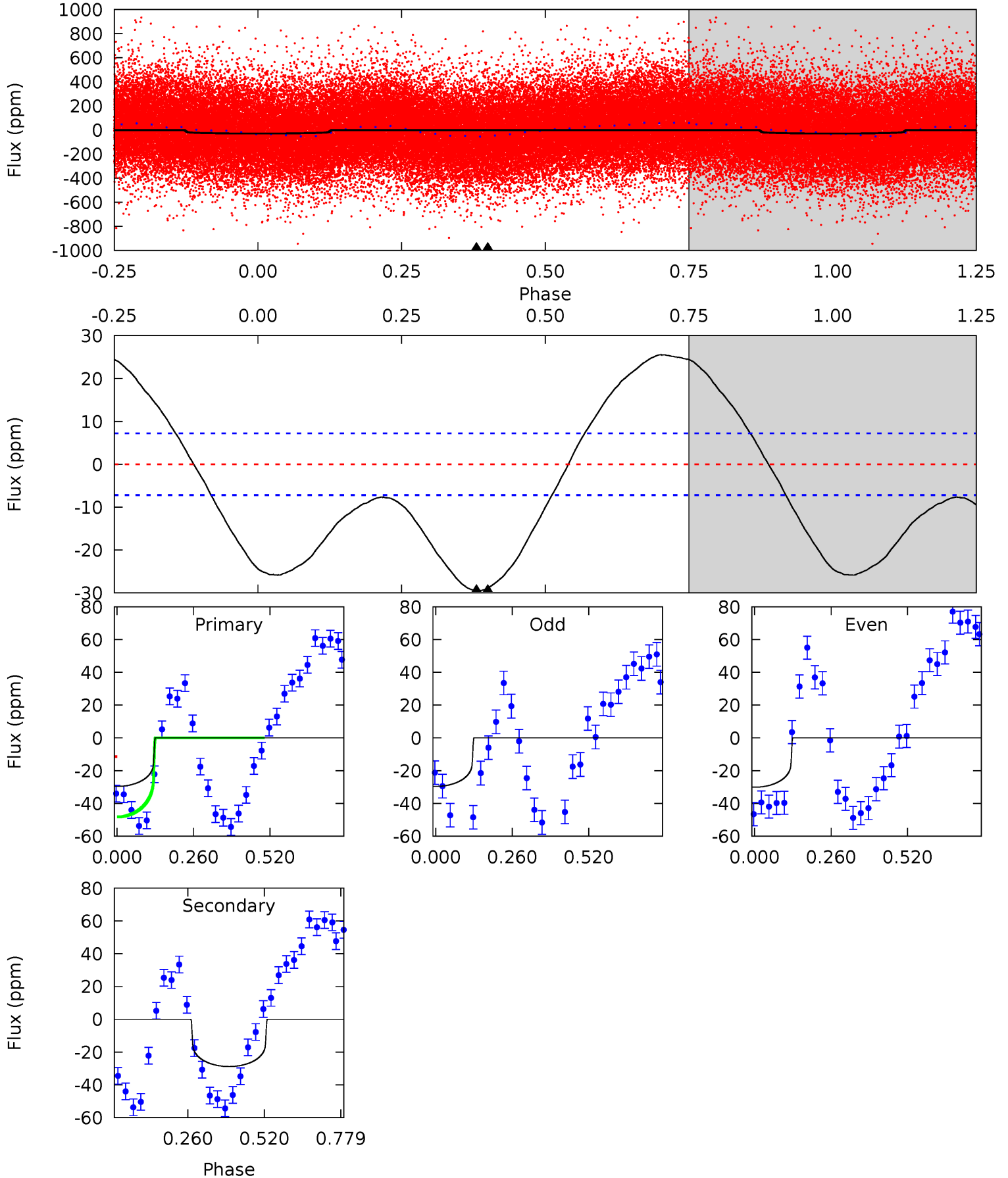
TCE 008182427-01 P= 4.528716 Days $T_0=132.384200$ (BKJD)



DV Model-Shift Uniqueness Test

008182427-01, P = 4.528443 Days, E = 127.564875 Days

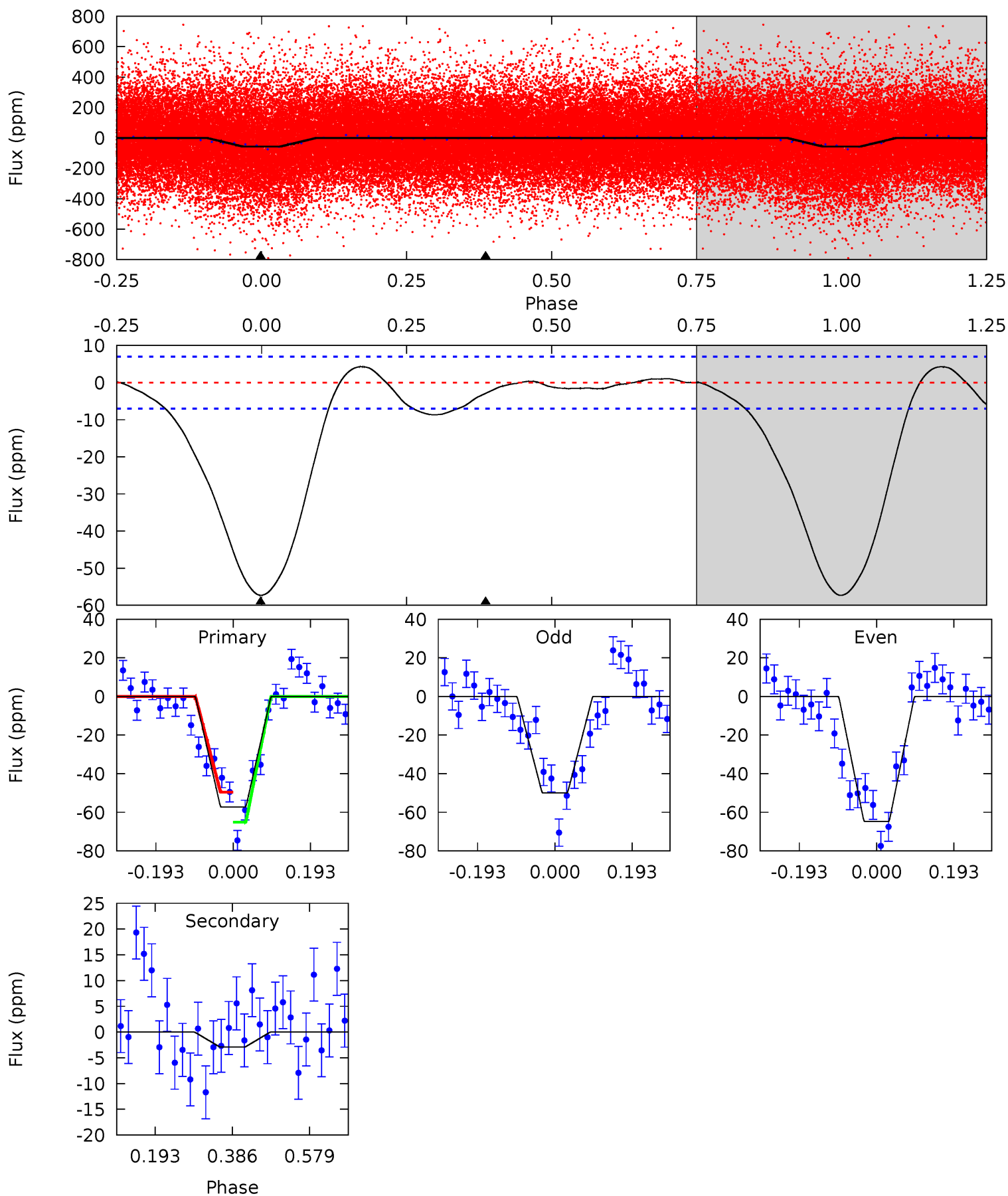
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.9	17.5	0	0	4.36	1.13	12.0	17.9	17.9	17.5	17.5	0.15	1.00	0.46	11.3



Alt Model-Shift Uniqueness Test

008182427-01, P = 4.528716 Days, E = 127.855484 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
36.2	1.83	0	0	4.42	1.30	0.75	36.2	36.2	1.83	1.83	4.64	0.96	0.07	4.91



Stellar Parameters For KIC 008182427

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6329^{+170}_{-207}	$4.339^{+0.108}_{-0.186}$	$-0.300^{+0.300}_{-0.300}$	$1.130^{+0.339}_{-0.183}$	$1.012^{+0.173}_{-0.106}$	$0.989^{+0.492}_{-0.528}$
	+3%/-3%	+2%/-4%	+100%/-100%	+30%/-16%	+17%/-10%	+50%/-53%
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 008182427-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-29 ± 2	$0.75^{+0.19}_{-0.18}$	1799^{+133}_{-96}	5998^{+825}_{-537}	82^{+55}_{-29}
Alt.	-3 ± 2	$0.99^{+0.23}_{-0.17}$	1797^{+144}_{-97}	3370^{+370}_{-363}	$4.472^{+3.963}_{-2.499}$

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

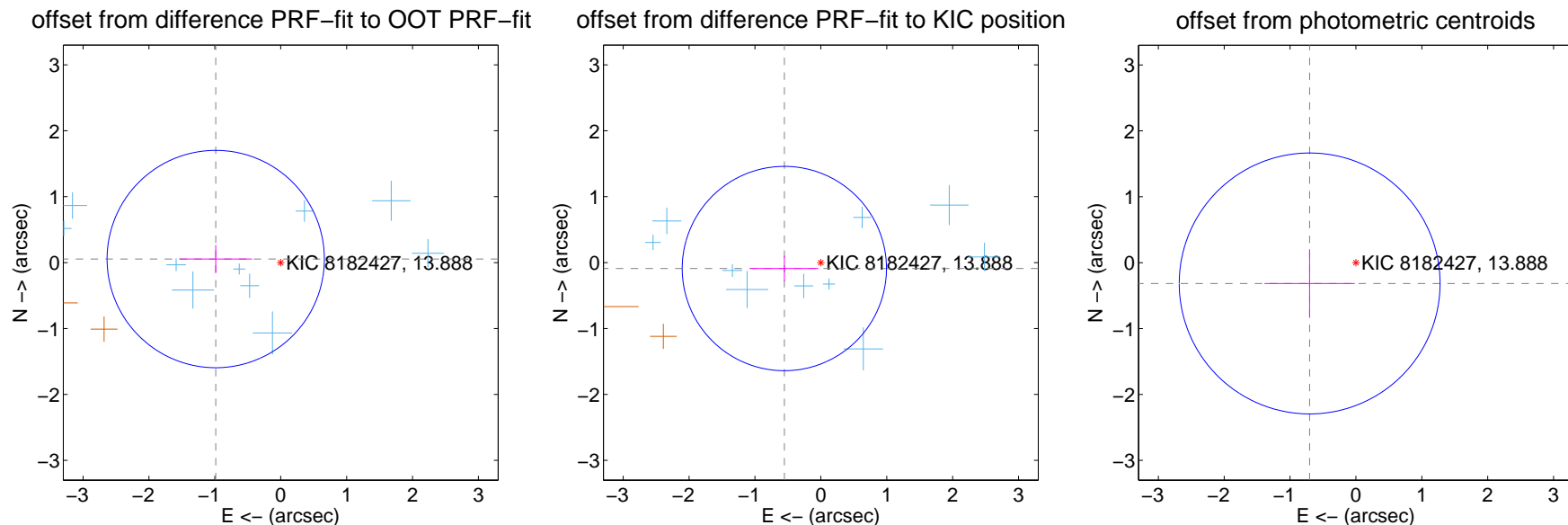
DV Centroid Data

Supplemental centroid analysis for 008182427-01. Kepler magnitude: 13.89. Transit SNR 9.70

There are 10 quarters with good PRF difference image offsets

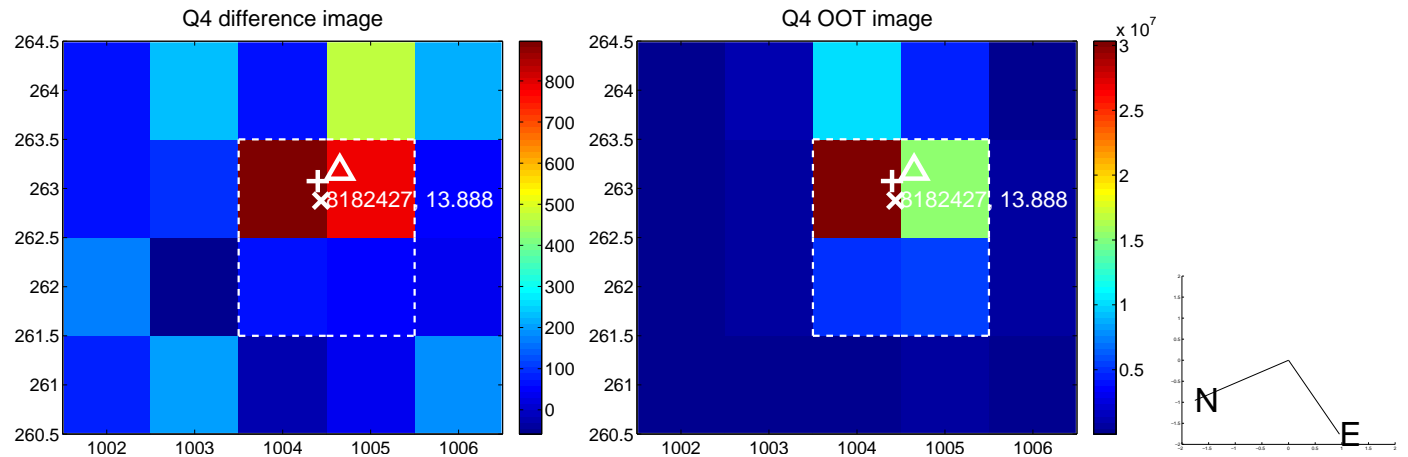
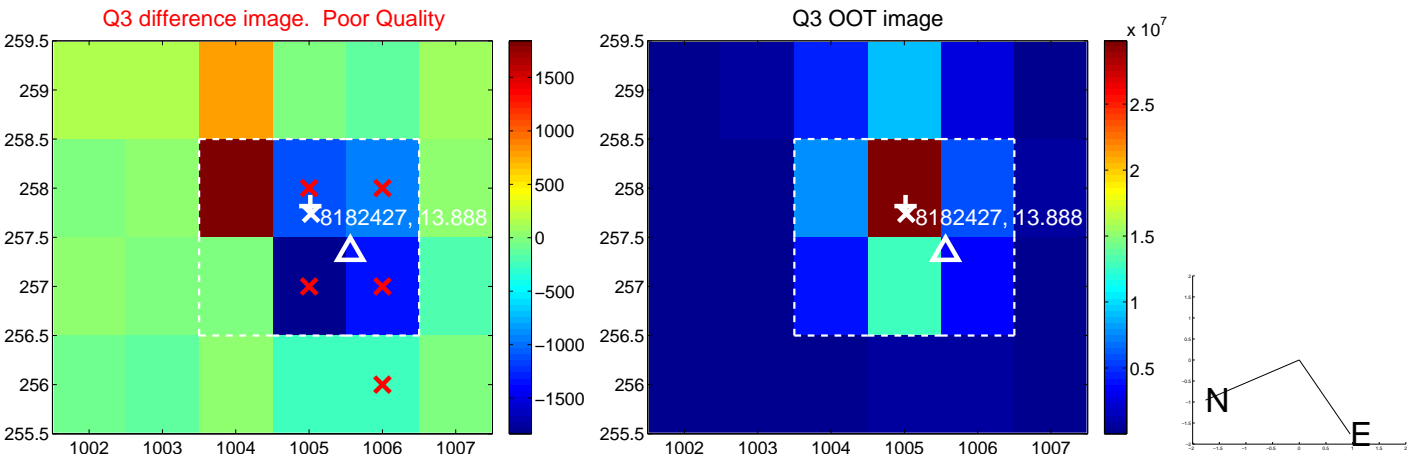
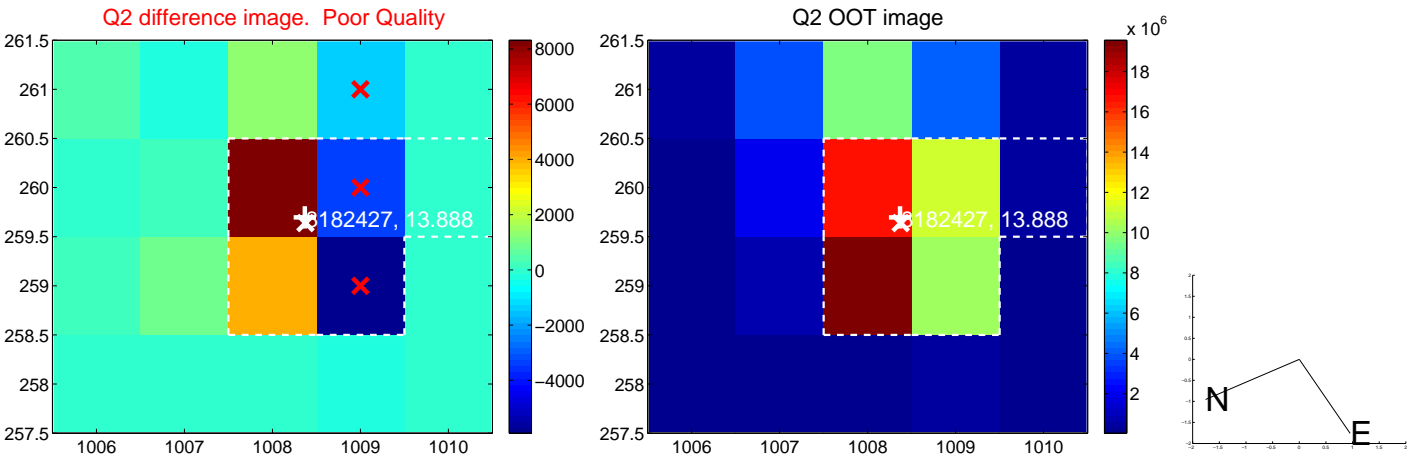
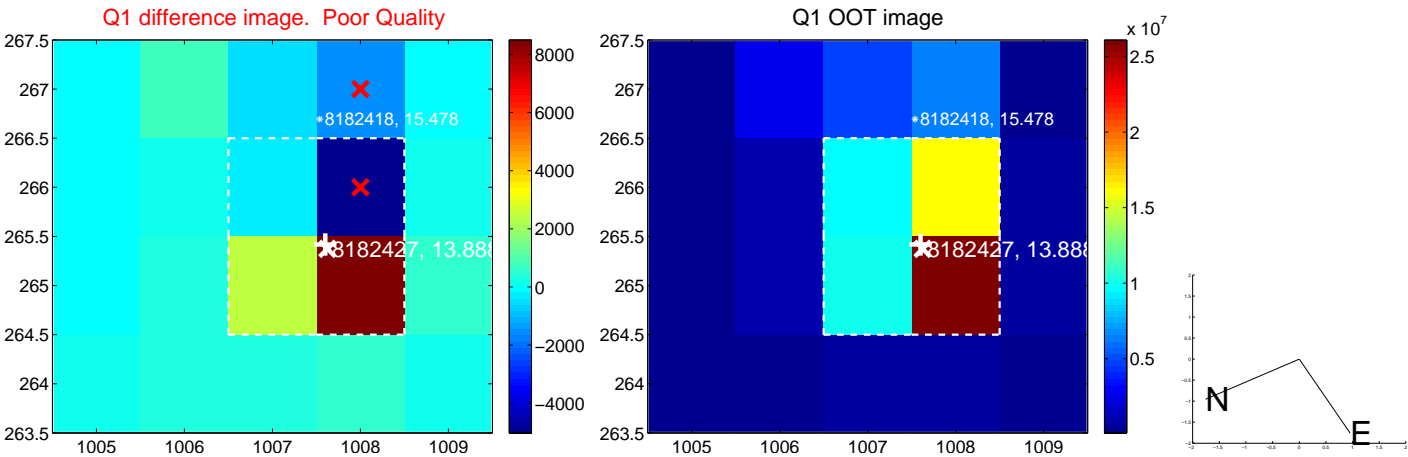
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.989 ± 0.550	1.80	0.987 ± 0.552	0.054 ± 0.212
PRF-fit source offset from KIC position	0.562 ± 0.517	1.09	0.554 ± 0.515	-0.090 ± 0.194
photometric centroid source offset	0.77 ± 0.66	1.17	0.70 ± 0.68	-0.32 ± 0.52

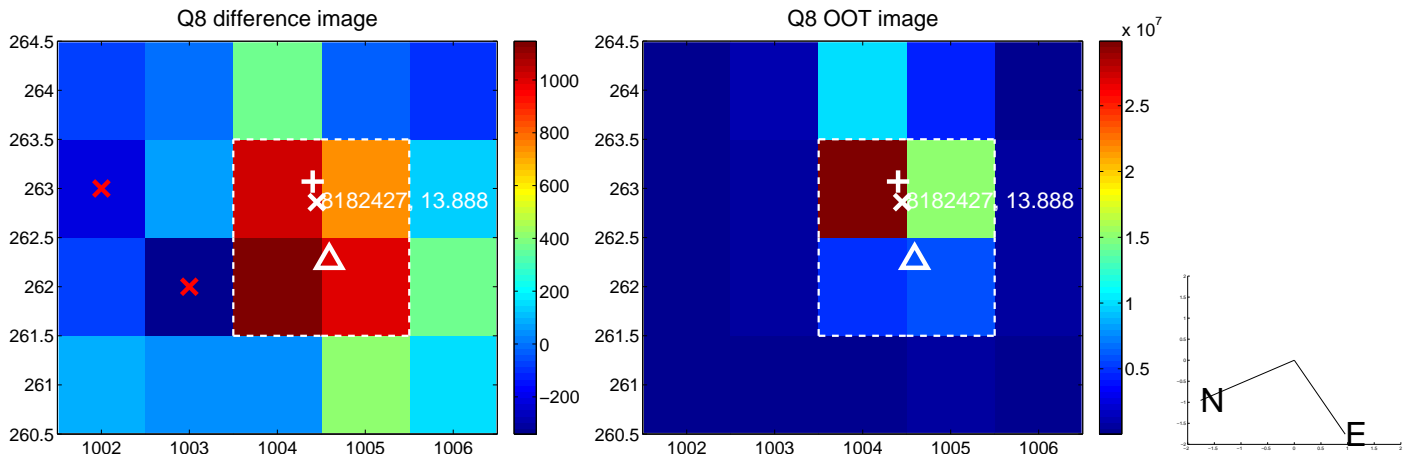
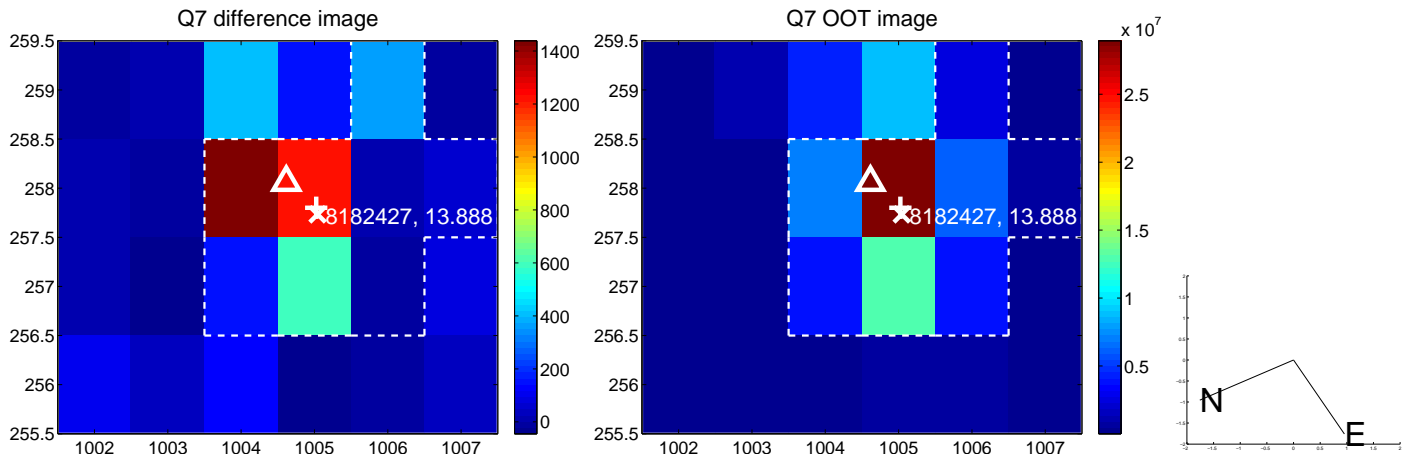
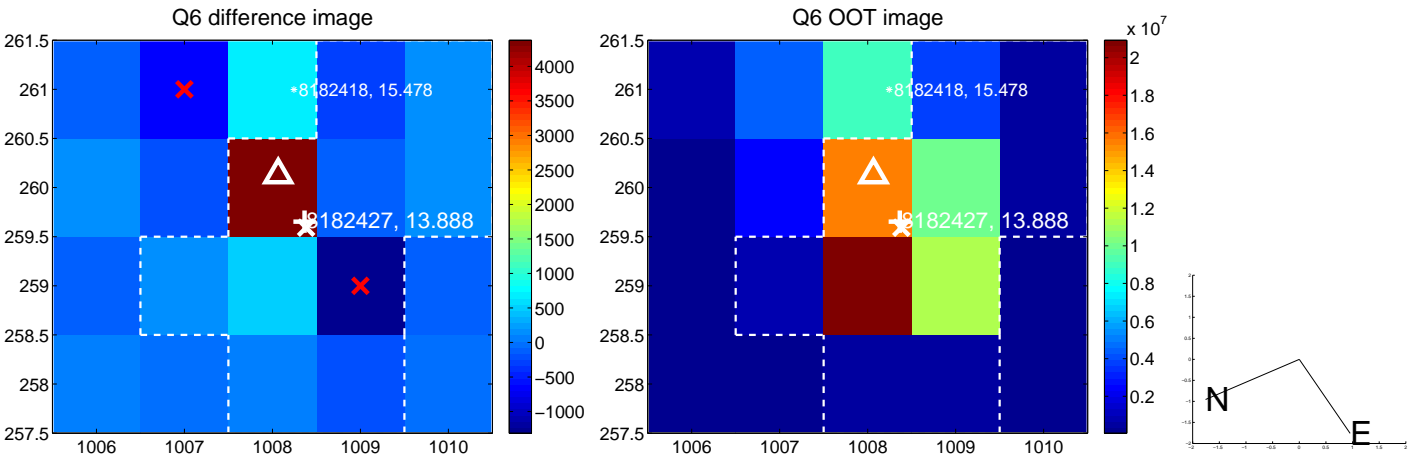
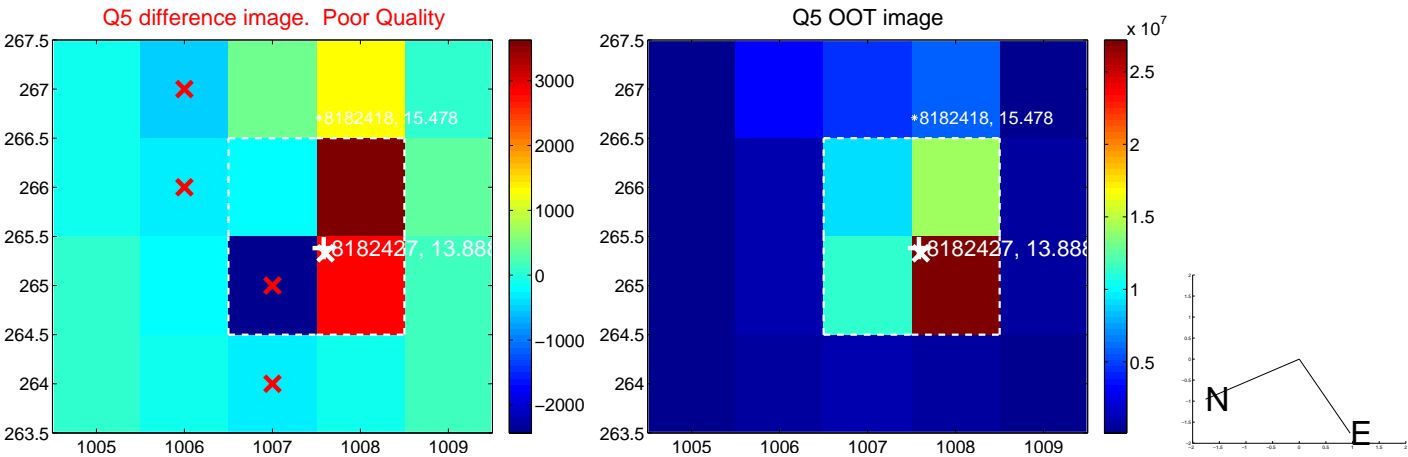


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

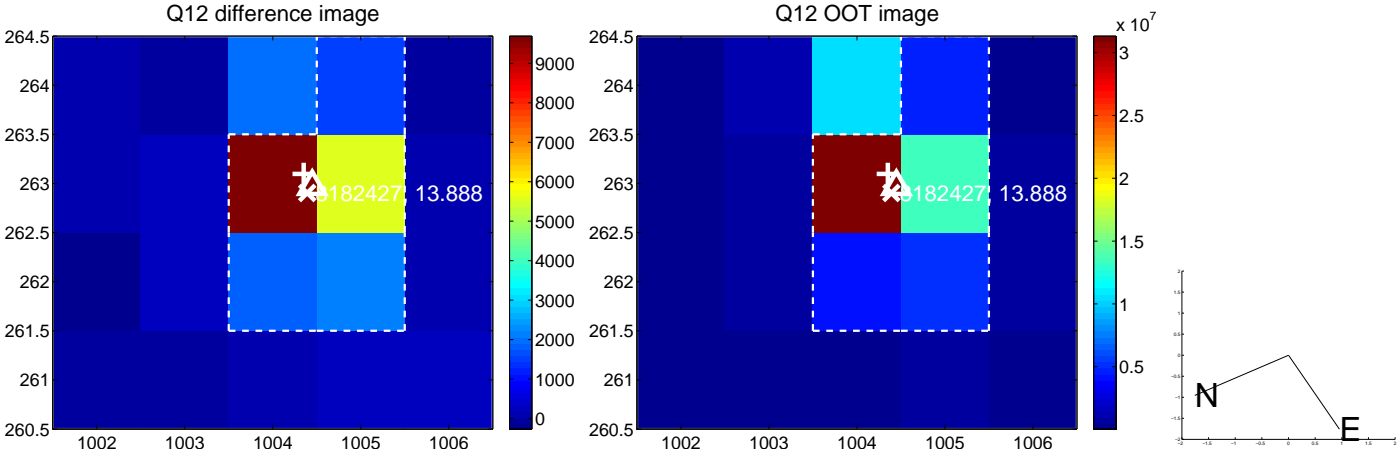
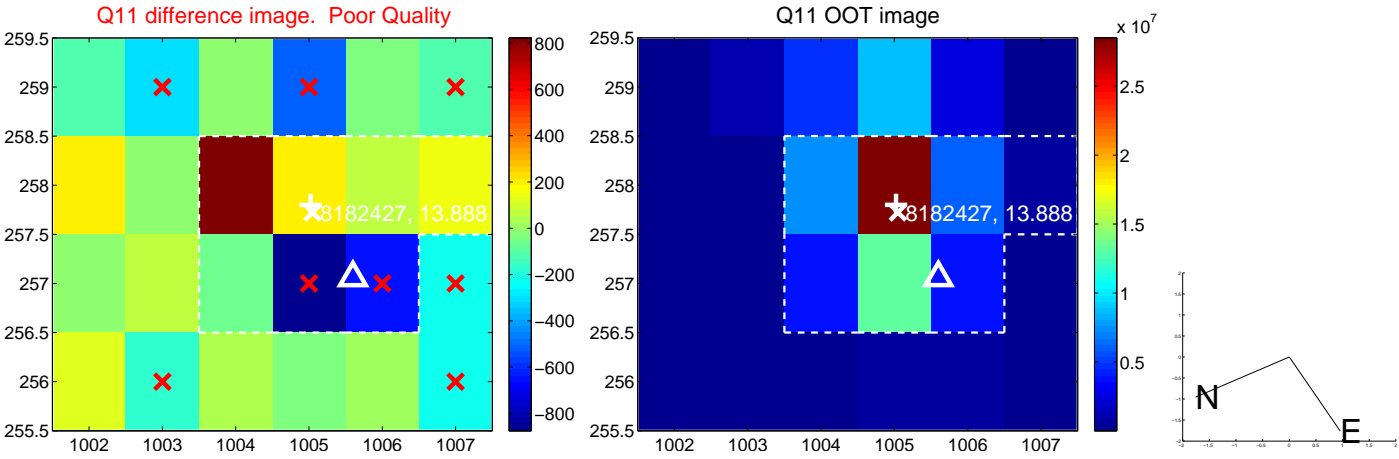
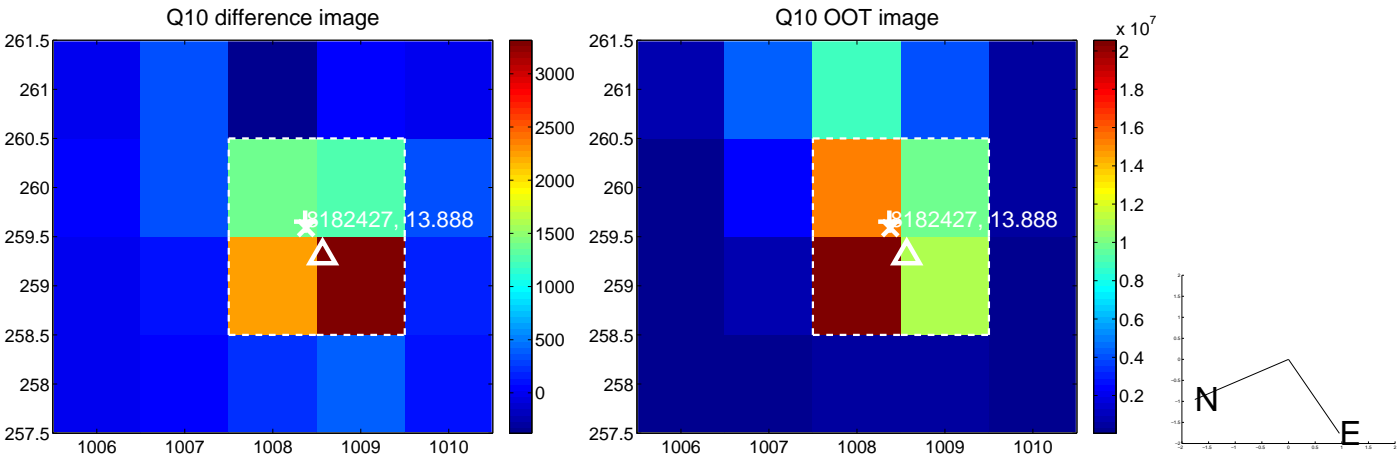
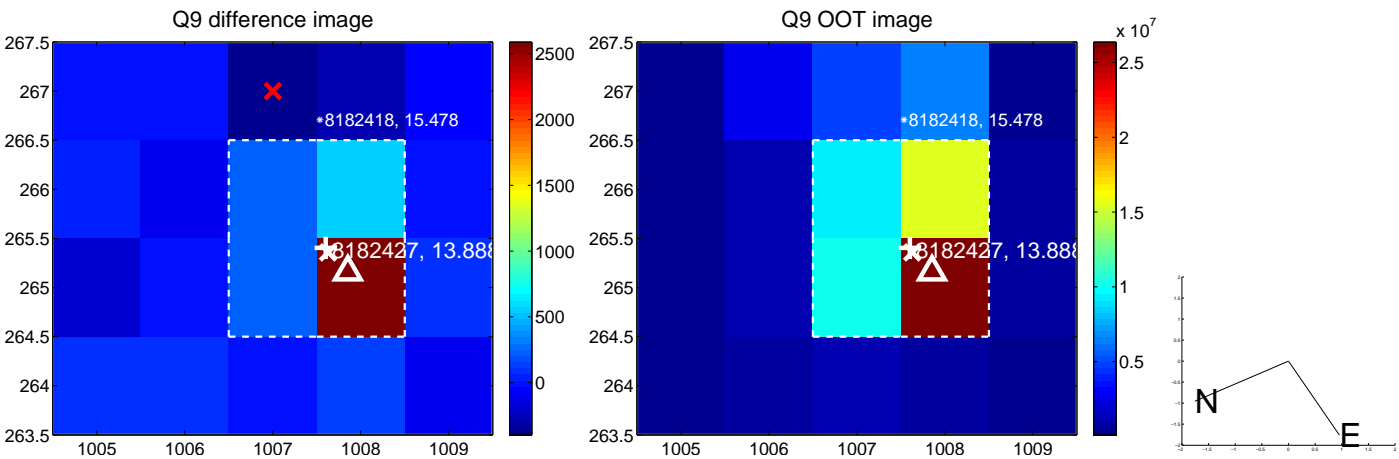
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



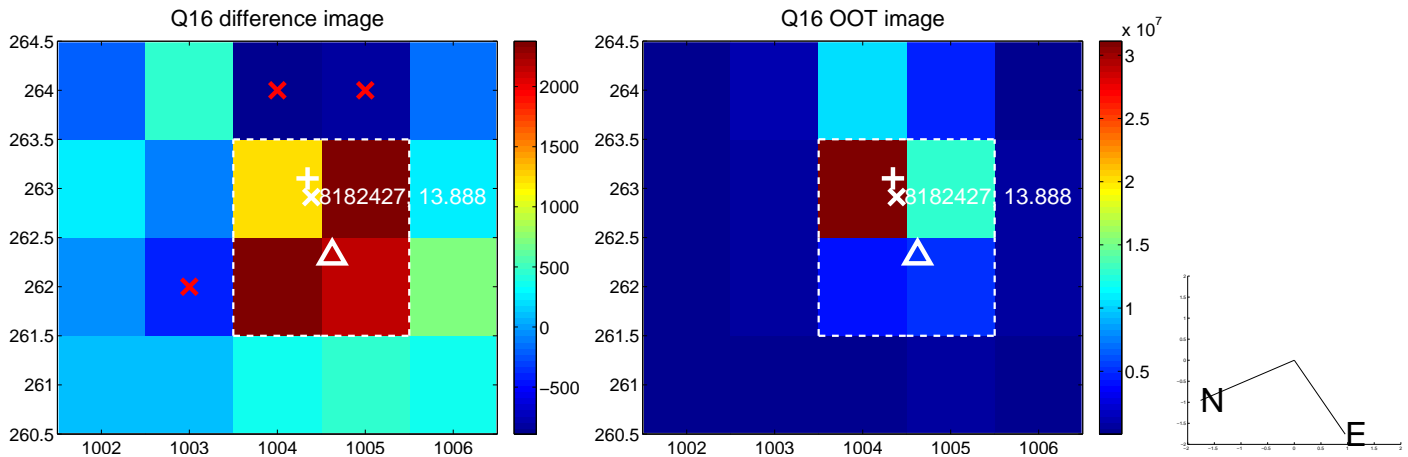
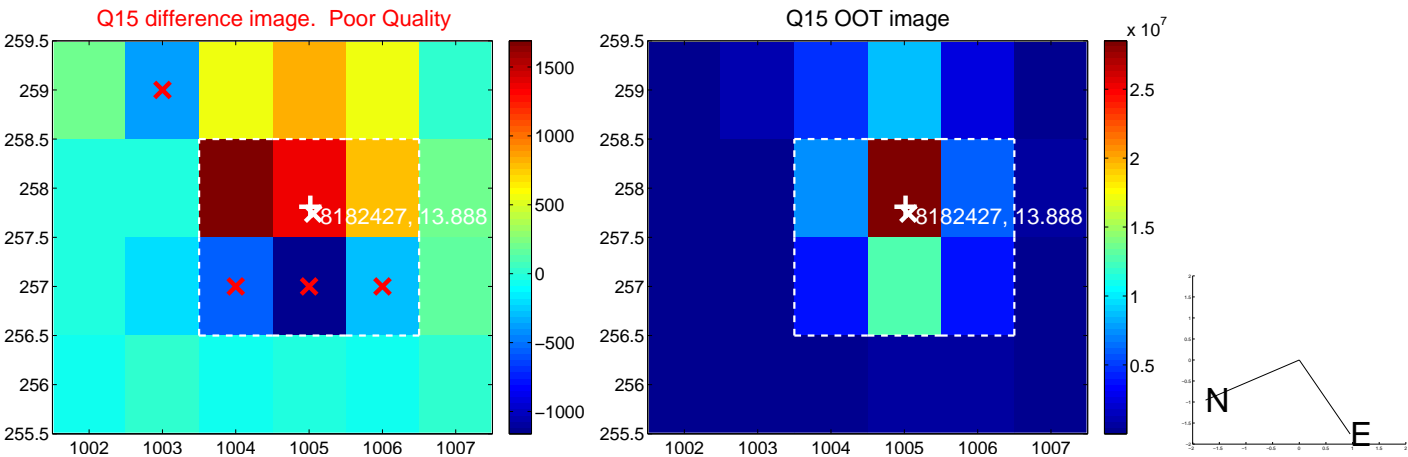
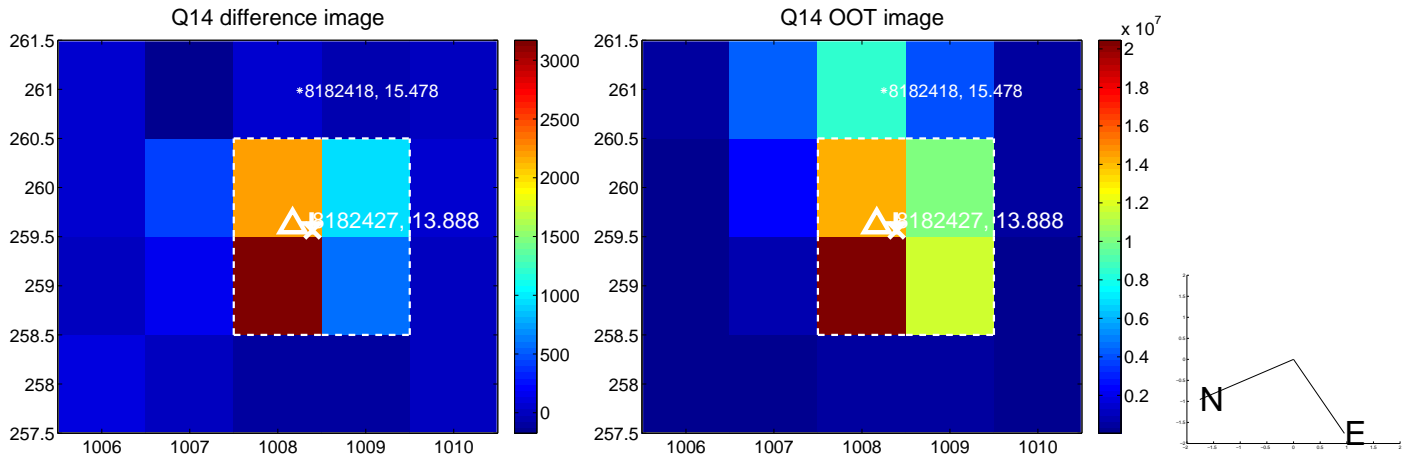
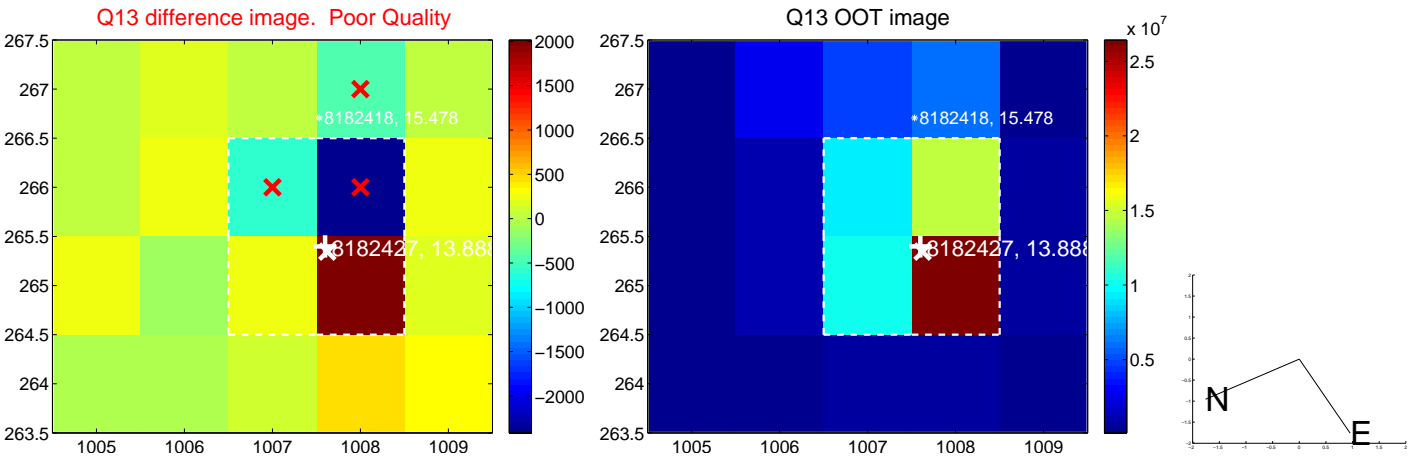
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



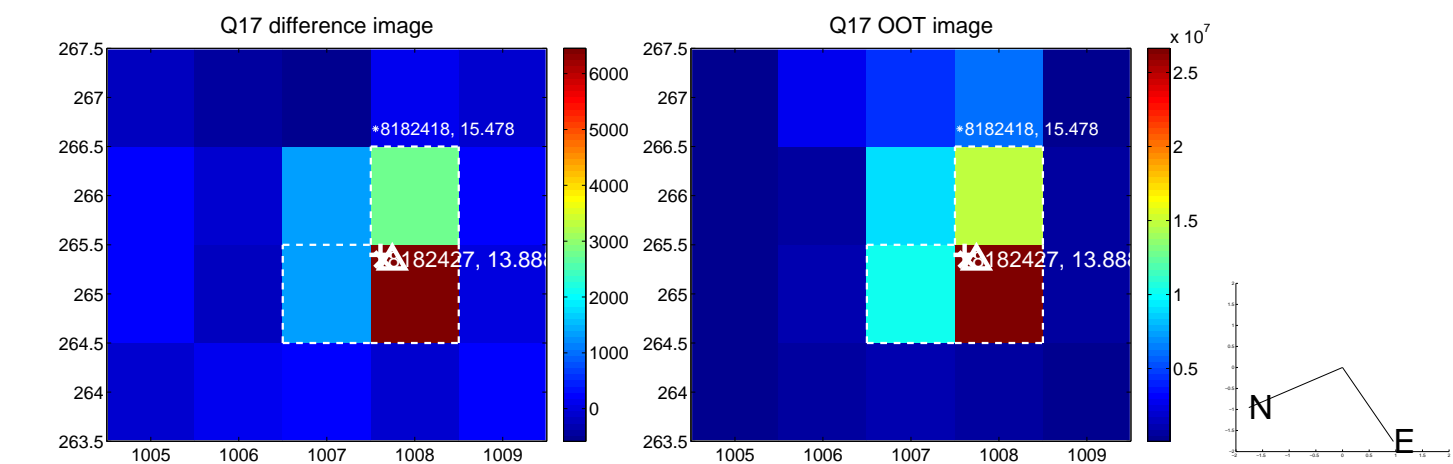
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



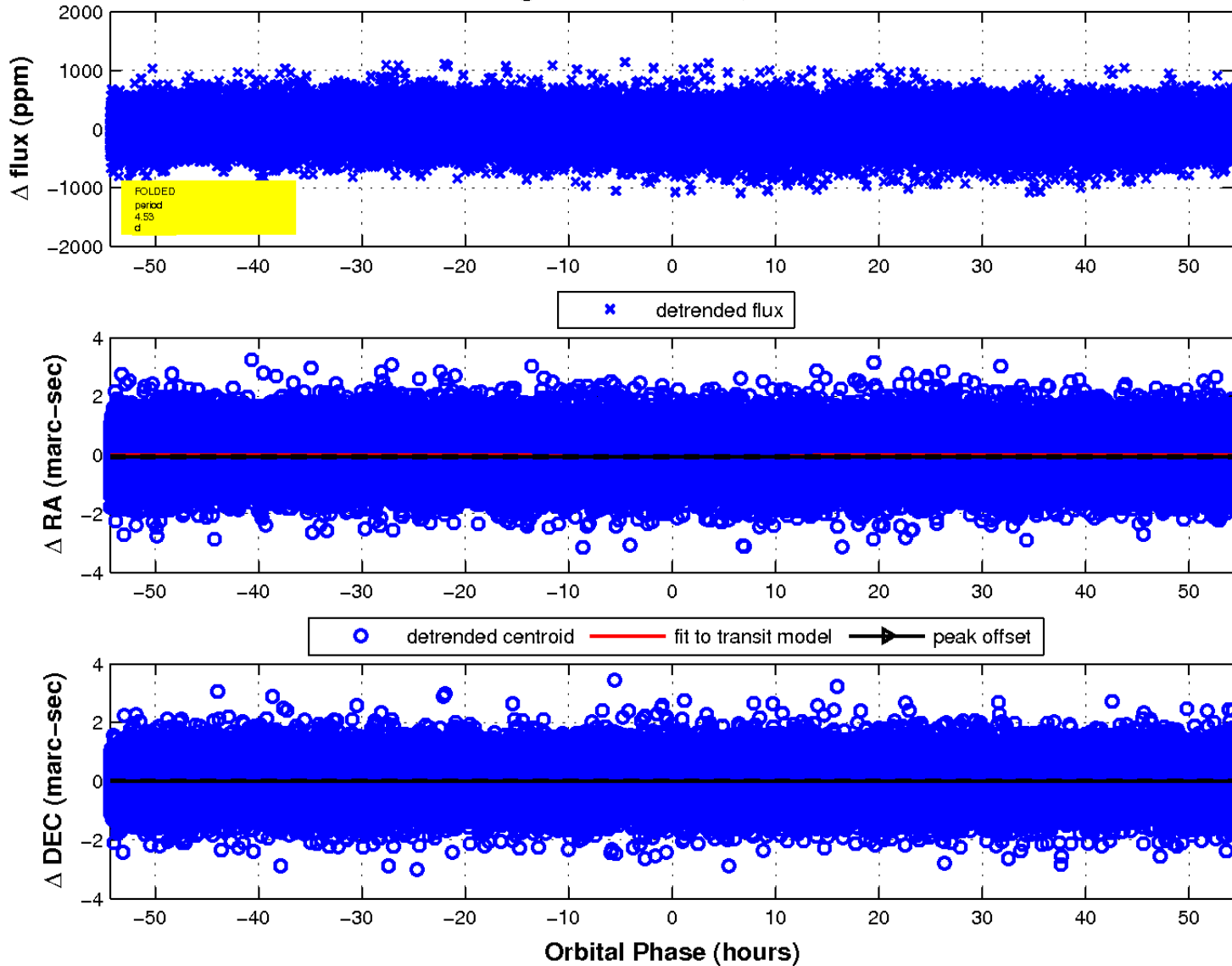
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

