

KIC 007101067

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})
007101067-01	OBS	No	13.979398	137.656311	64.3	24.555	9.4	8.8	2.48	6419	2.33	592.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007101067-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_SATURATED

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

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

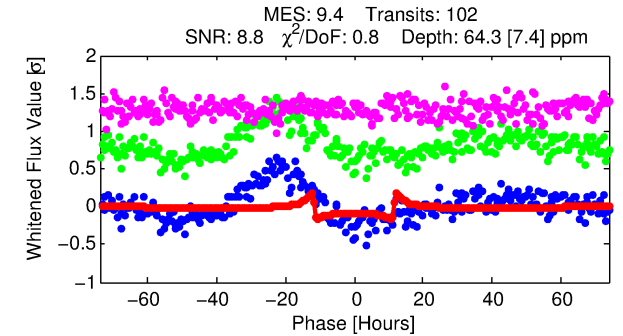
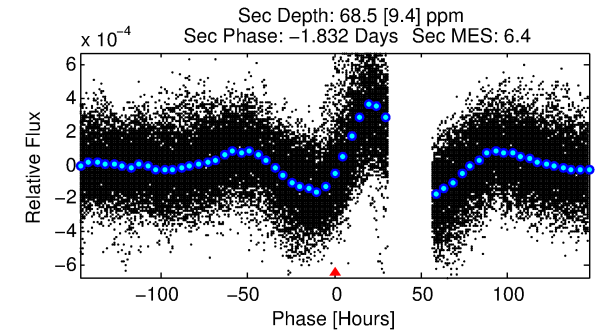
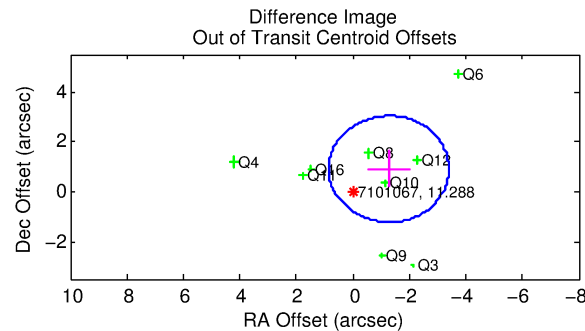
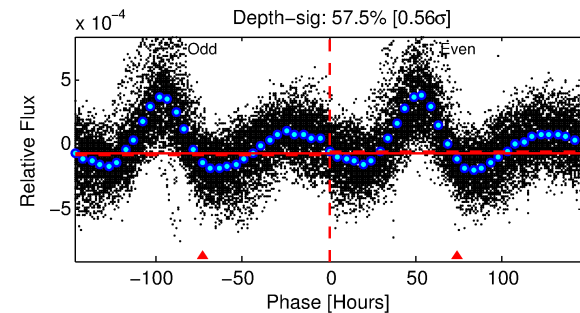
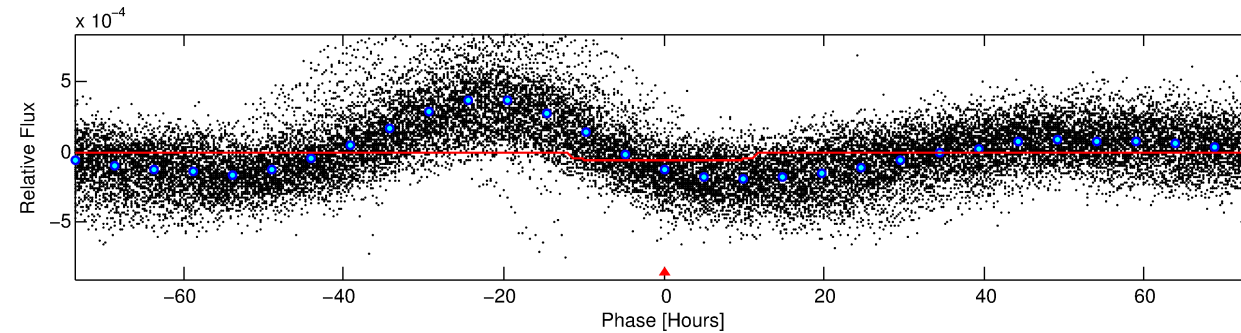
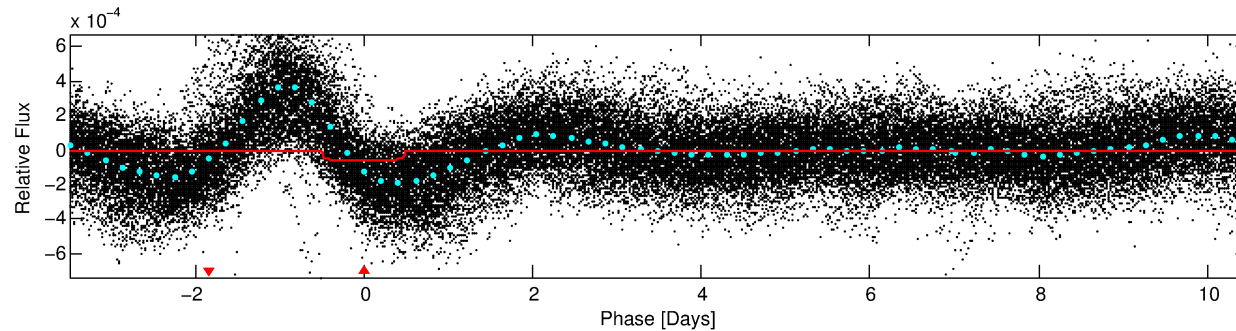
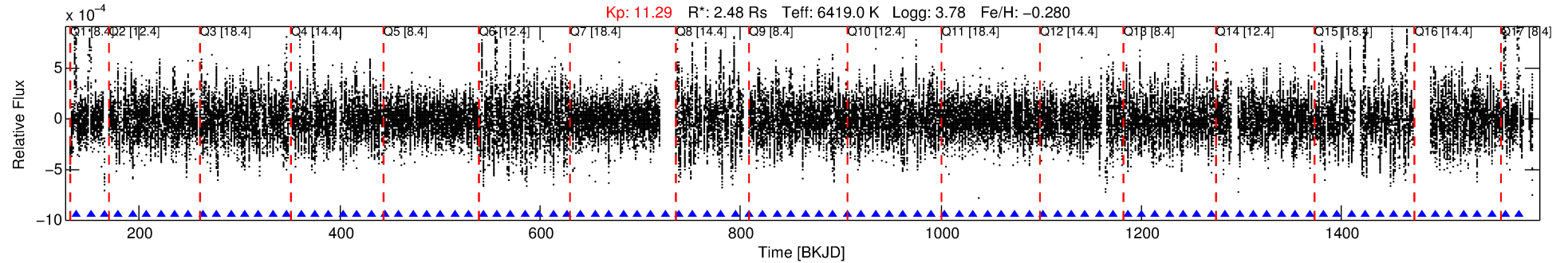
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007101067-01

No Significant Match Found

DV One-Page Summary

KIC: 7101067 Candidate: 1 of 1 Period: 13.979 d



DV Fit Results:

Period = 13.97940 [0.00019] d
Epoch = 137.6563 [0.0114] BKJD
Rp/R* = 0.0086 [0.0006]
a/R* = 2.15 [0.26]
b = 0.91 [0.03]
Seff = 592.72 [320.21]
Teq = 1258 [170] K
Rp = 2.33 [0.81] Re
a = 0.1255 [0.0416] AU
Ag = 109.33 [61.69] [1.76 σ]
Teffp = 6290 [341] K [13.22 σ]

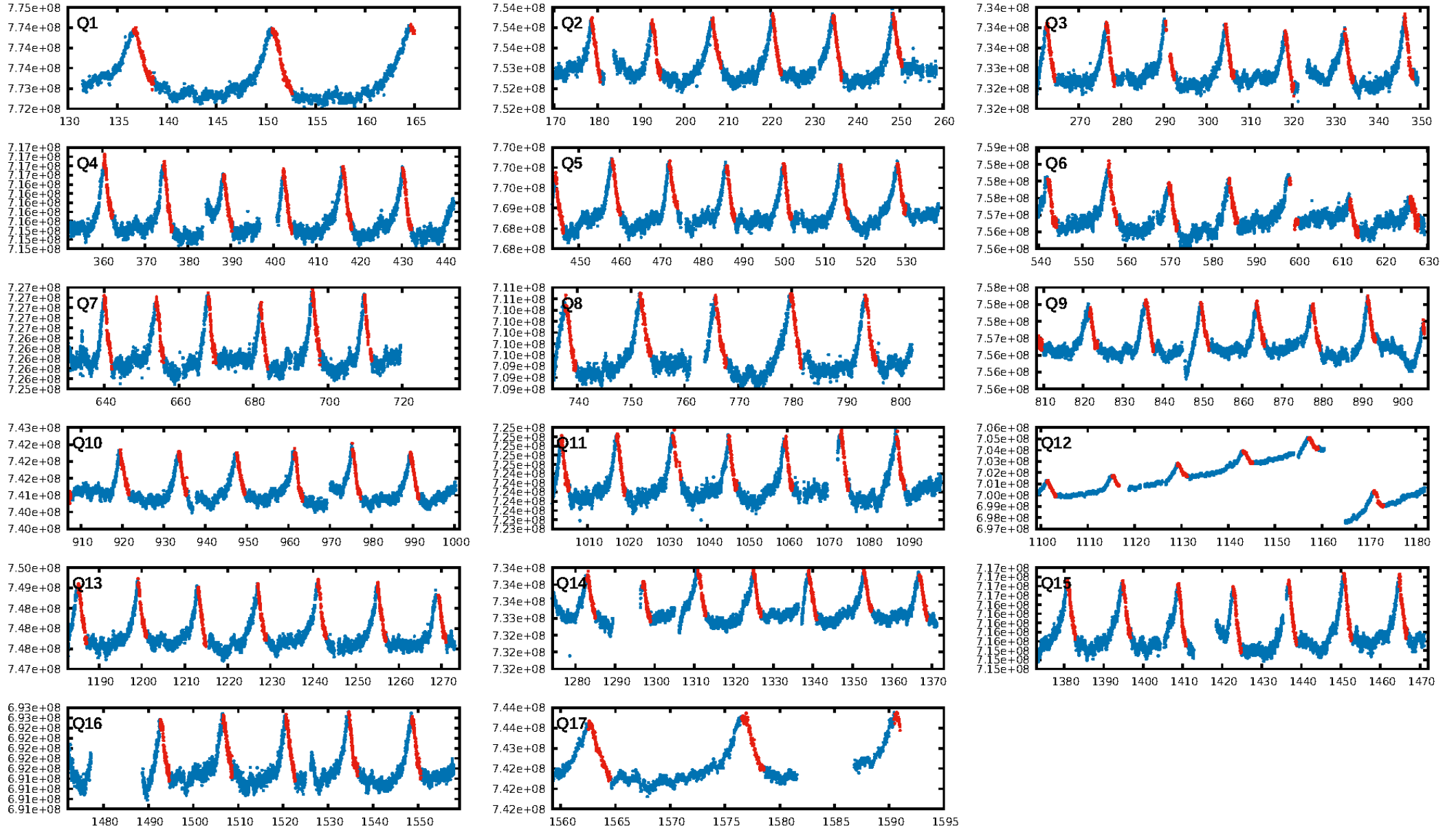
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.49e-20
RollingBand-fgt: 1.00 [97/97]
GhostDiagnostic-chr: -0.7979
Centroid-sig: 25.9%
Centroid-so: 0.848 arcsec [1.22 σ]
OotOffset-rm: 1.556 arcsec [2.19 σ]
KicOffset-rm: 1.650 arcsec [2.19 σ]
OotOffset-st: 2/2/4/1 [9]
KicOffset-st: 2/2/4/1 [9]
DiffImageQuality-fgm: 0.67 [6/9]
DiffImageOverlap-fno: 1.00 [17/17]

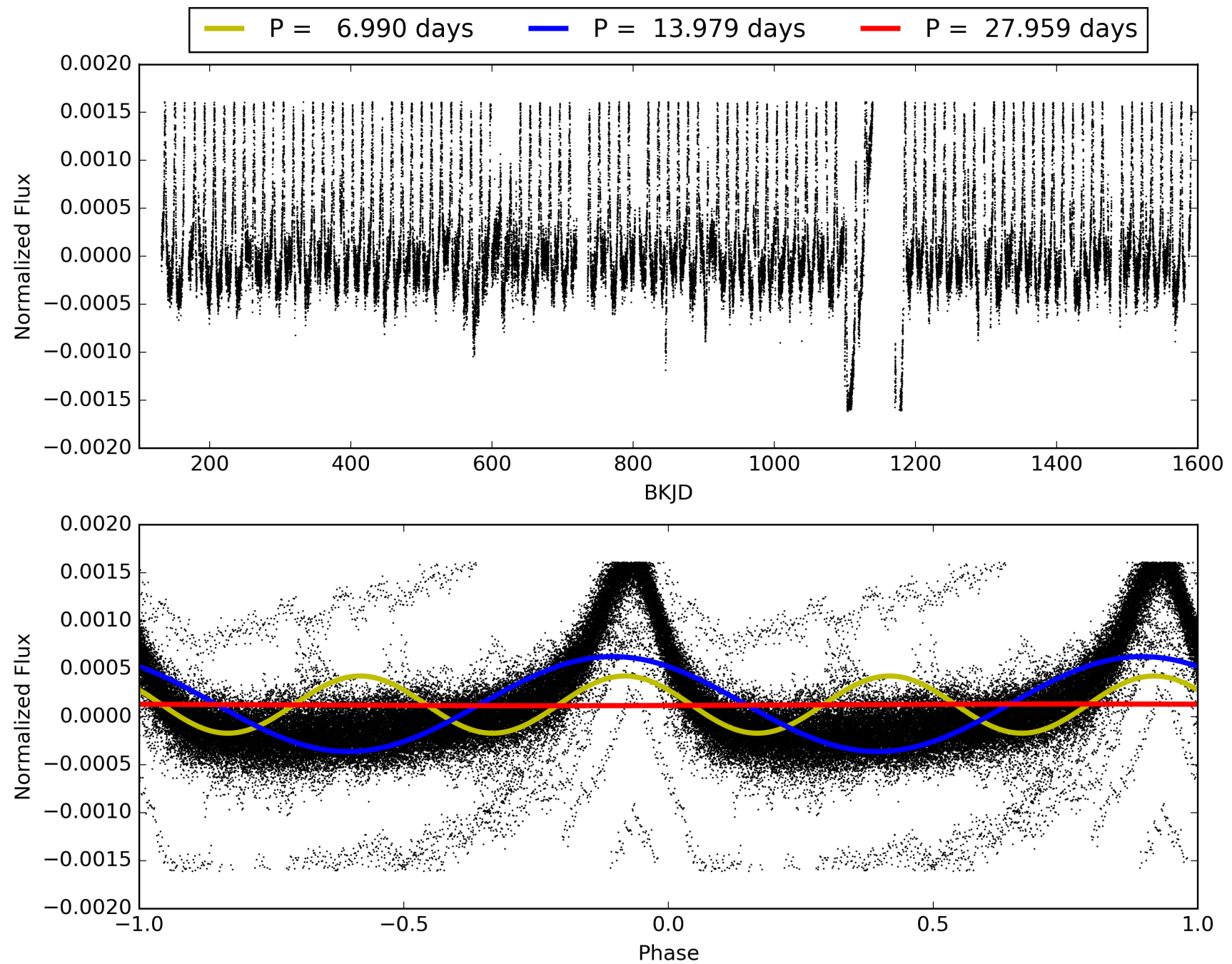
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 23:33:03 Z

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

TCE 007101067-01, PDC Light Curves

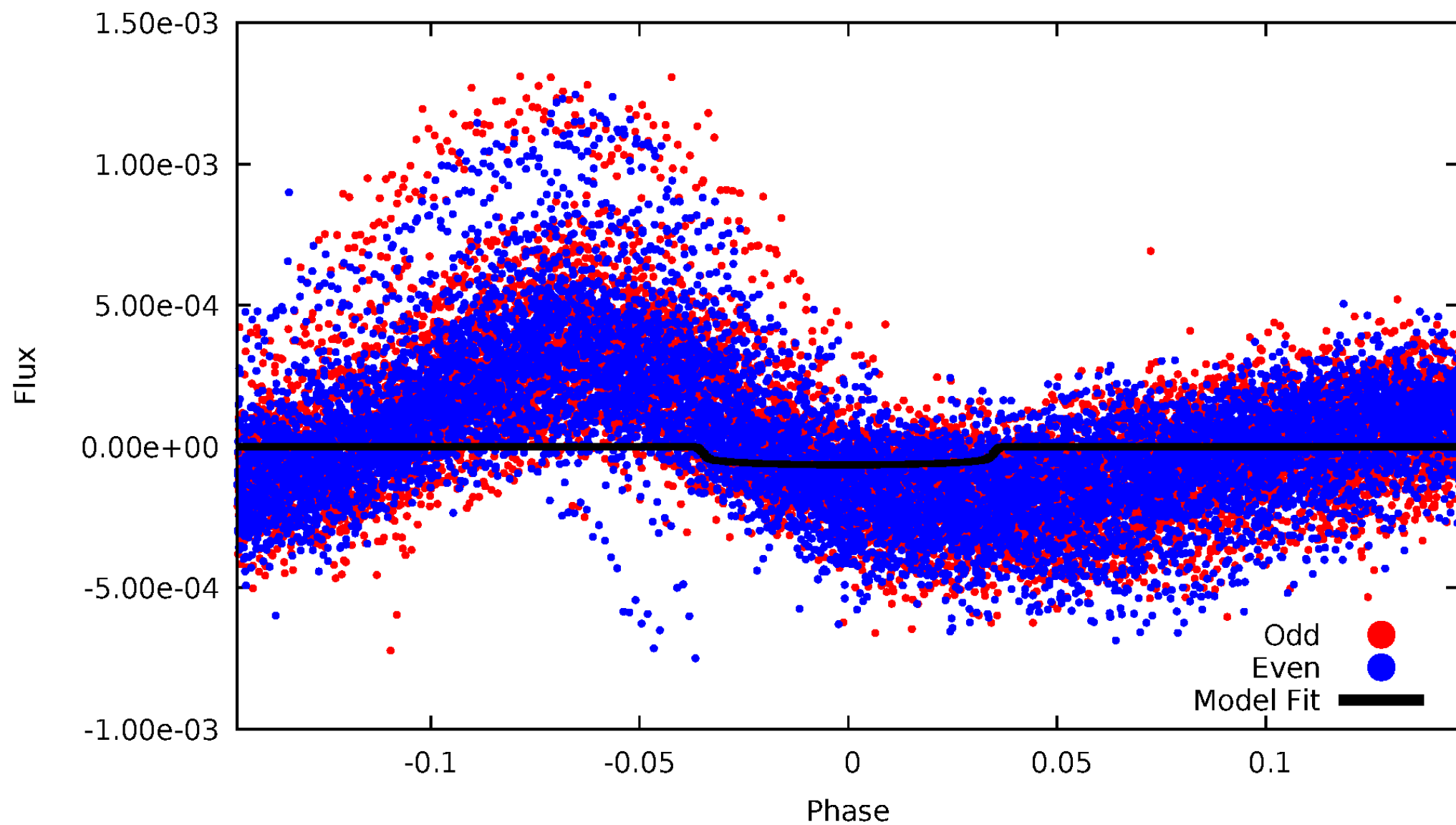


TCE 007101067-01



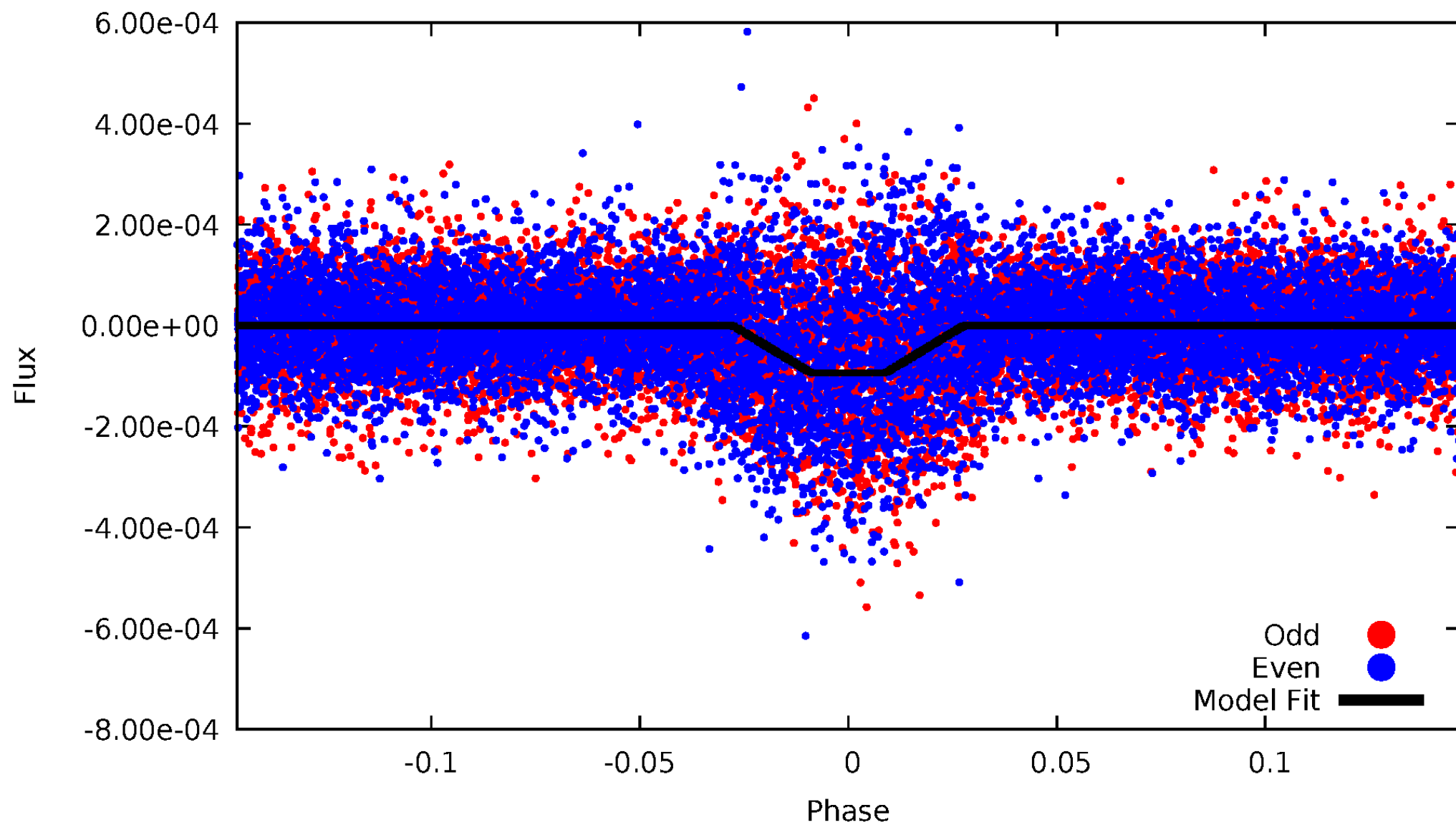
DV Odd/Even

TCE 007101067-01



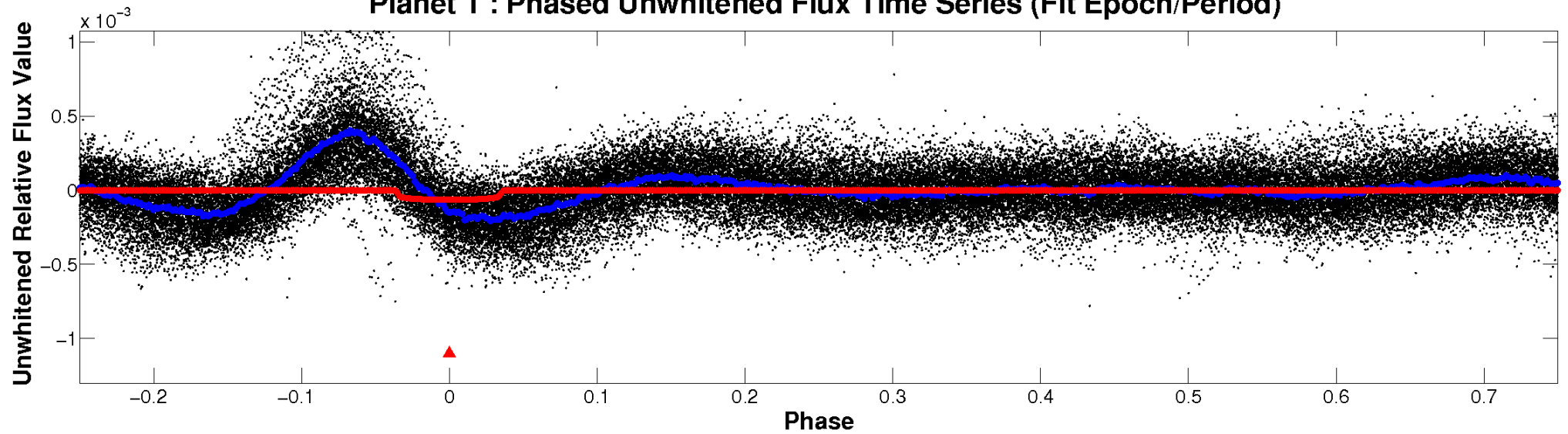
ALT Odd/Even

TCE 007101067-01

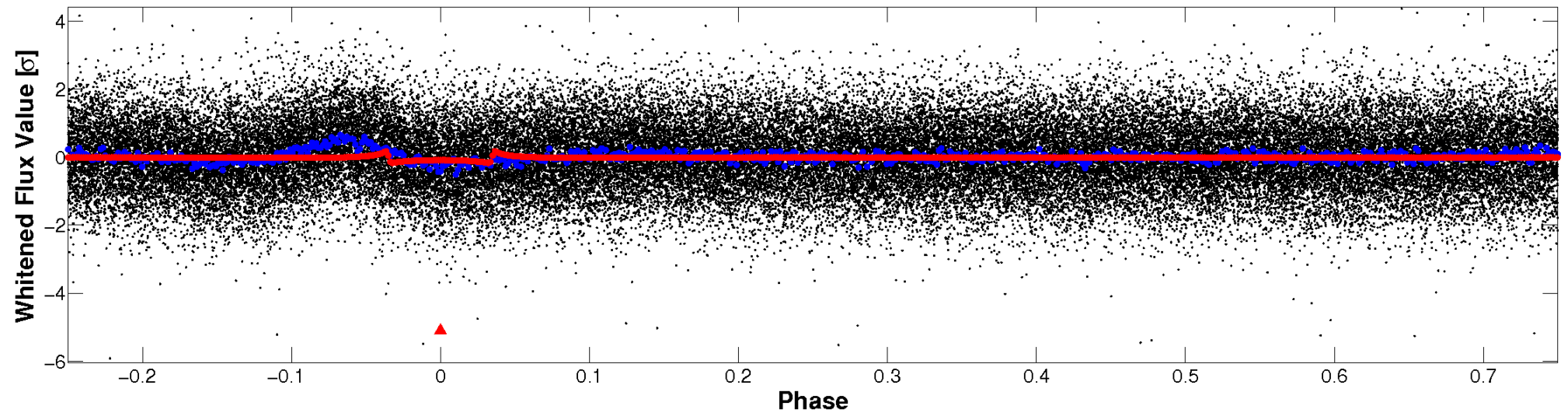


Non-Whitened Vs. Whitened Light Curve

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

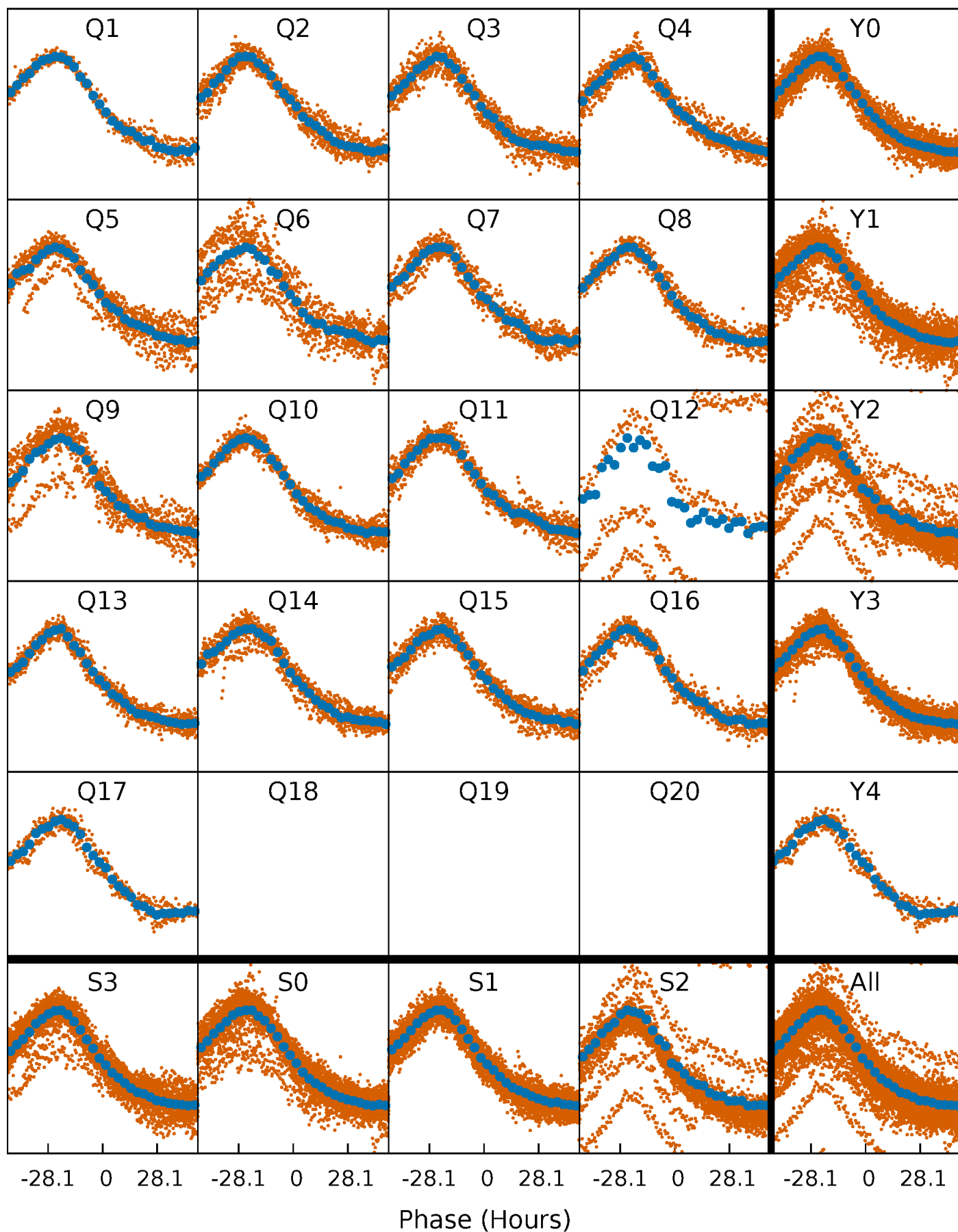


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



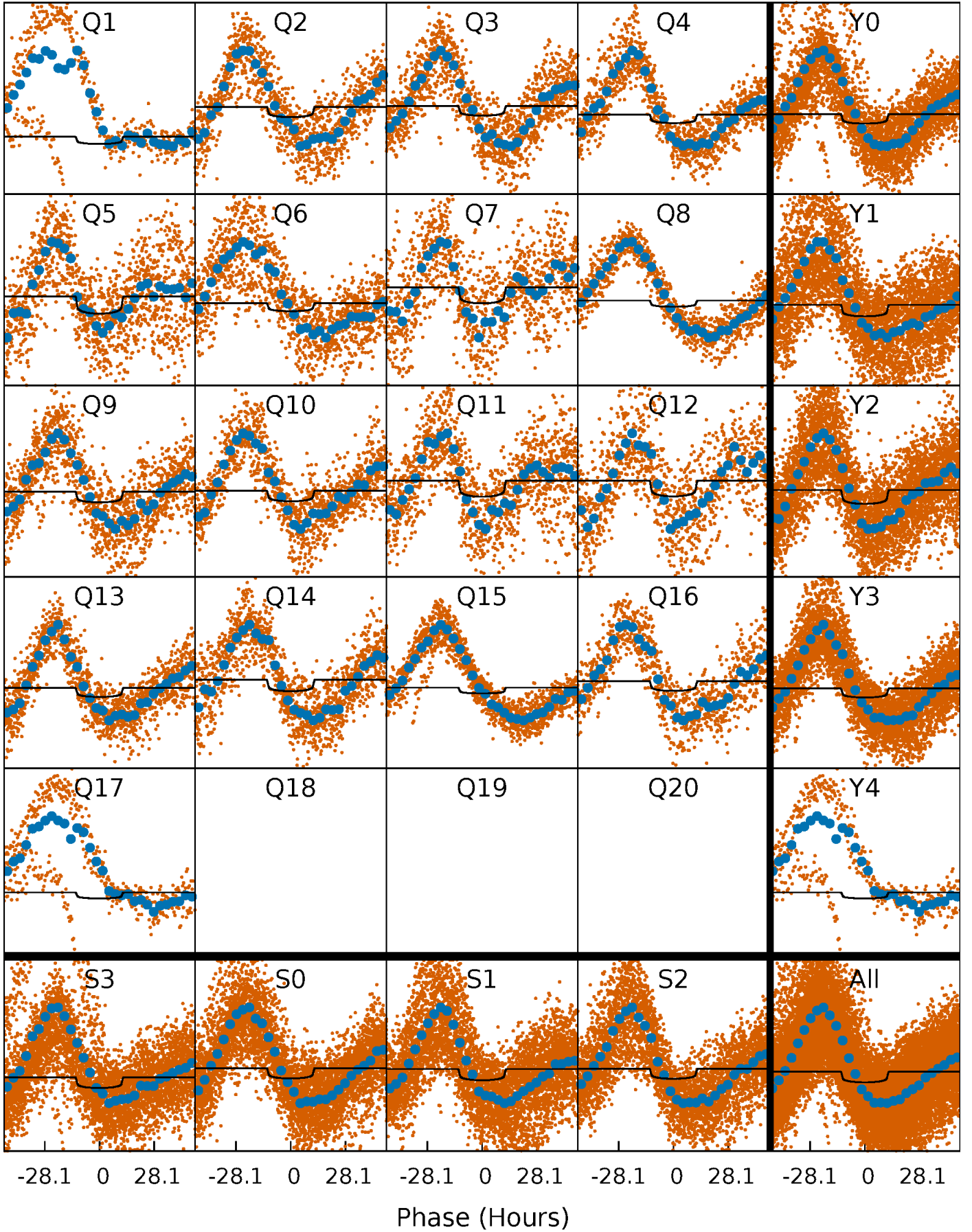
PDC Quarter-Phased Transit Curves

TCE 007101067-01 P= 13.979398 Days $T_0=137.656311$ (BKJD)



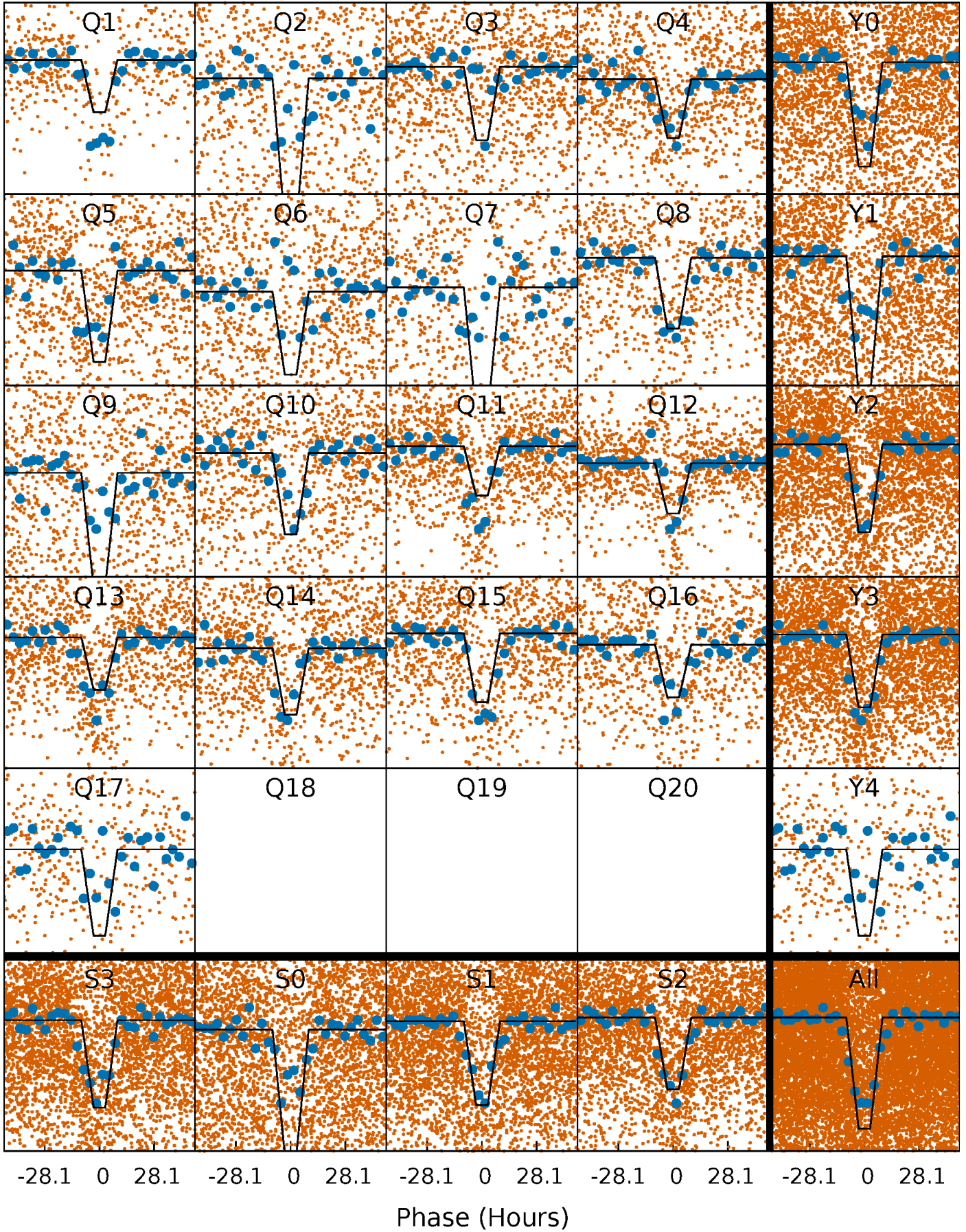
DV Quarter-Phased Transit Curves

TCE 007101067-01 P= 13.979398 Days $T_0=137.656311$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

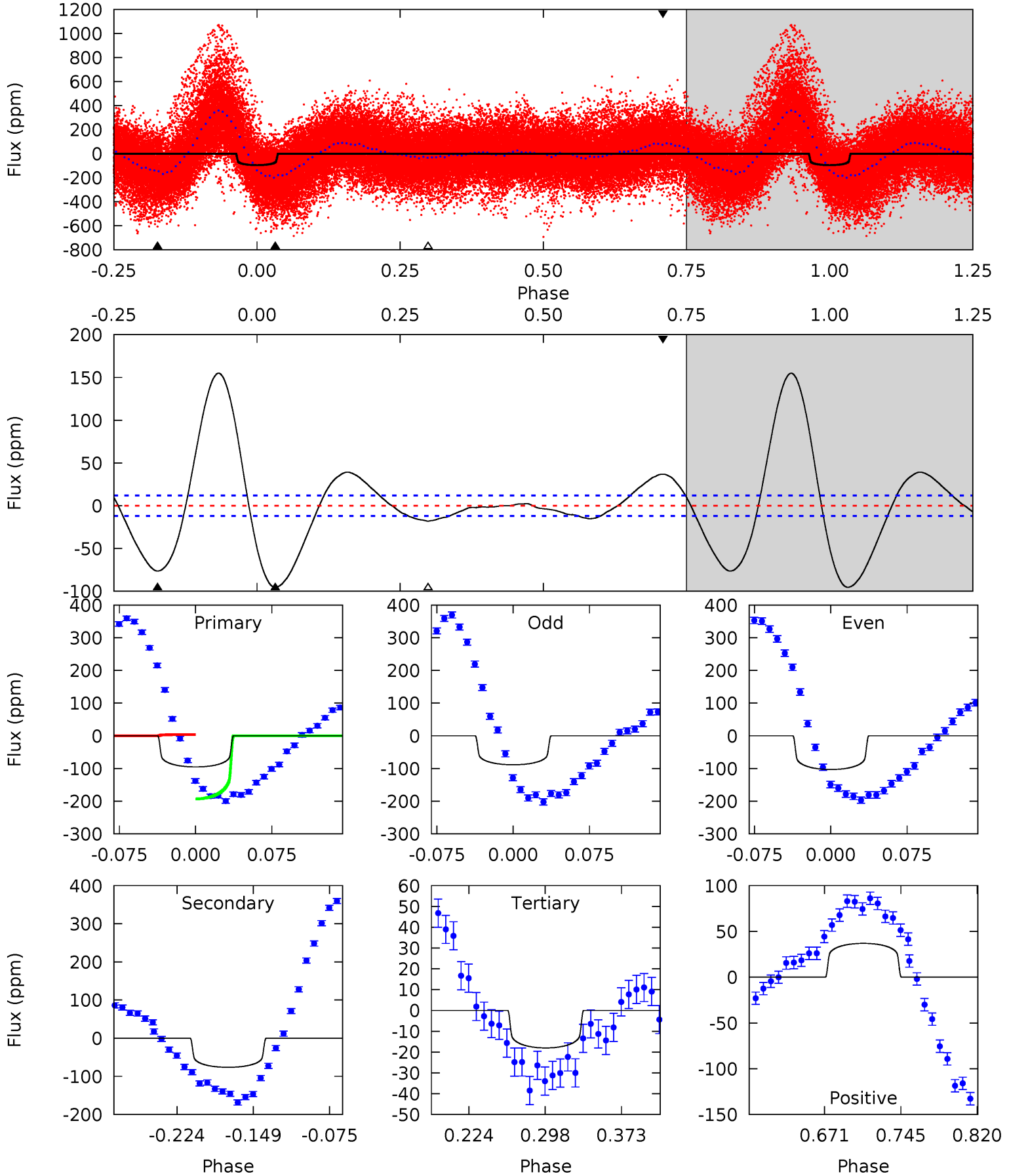
TCE 007101067-01 P= 13.979470 Days $T_0=137.630575$ (BKJD)



DV Model-Shift Uniqueness Test

007101067-01, P = 13.979398 Days, E = 123.676913 Days

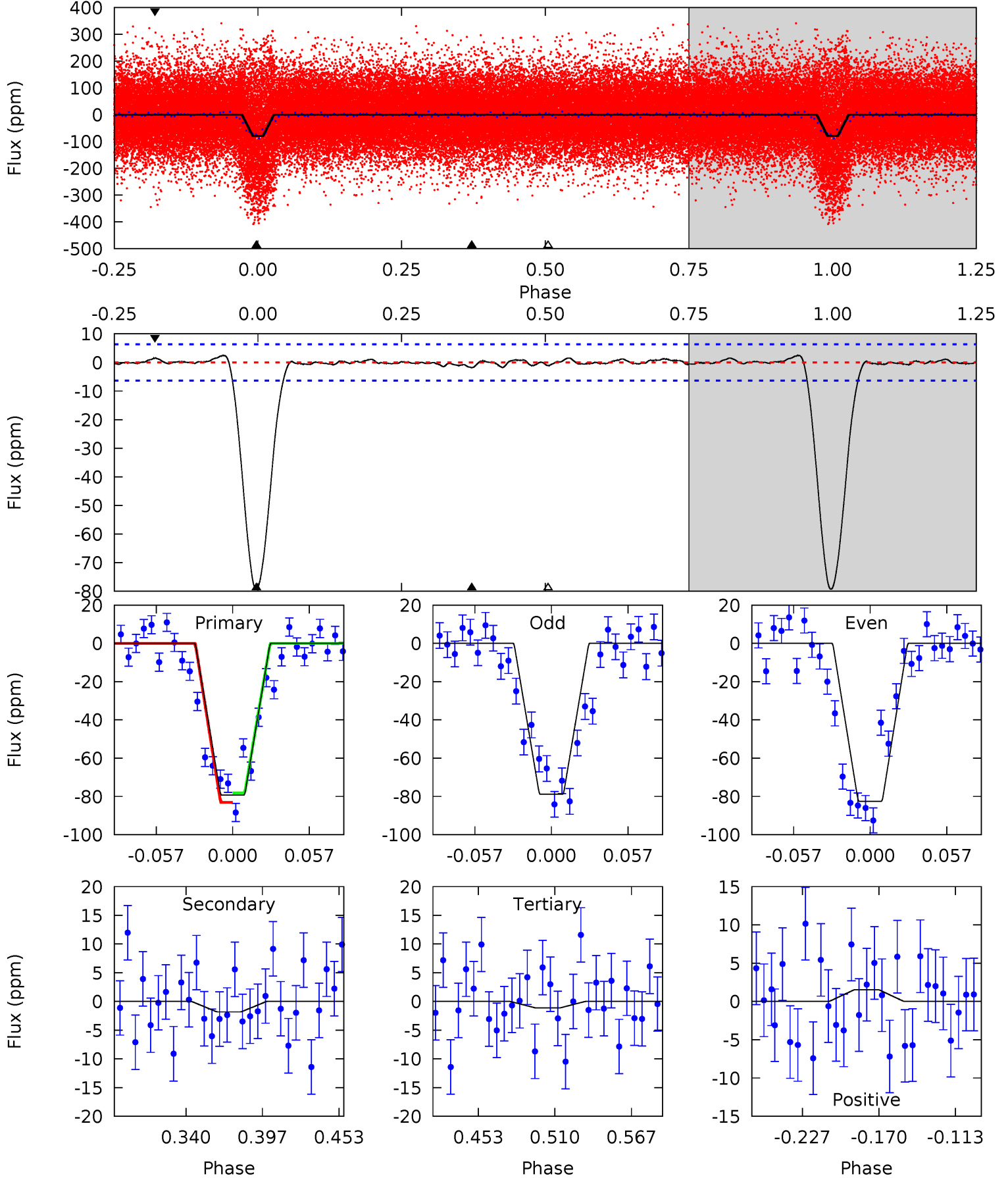
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.0	29.6	7.00	14.3	4.63	1.78	15.6	30.0	22.7	22.7	15.3	2.84	0.81	0.62	41.0



Alt Model-Shift Uniqueness Test

007101067-01, $P = 13.979470$ Days, $E = 123.651105$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
58.8	1.35	0.84	1.15	4.68	1.91	0.47	57.9	57.6	0.51	0.20	1.34	0.73	0.03	1.84



Stellar Parameters For KIC 007101067

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6419^{+162}_{-162}	$3.780^{+0.312}_{-0.078}$	$-0.280^{+0.300}_{-0.250}$	$2.478^{+0.457}_{-0.850}$	$1.350^{+0.236}_{-0.263}$	$0.125^{+0.250}_{-0.038}$
	+3%/-3%	+8%/-2%	+107%/-89%	+18%/-34%	+17%/-19%	+200%/-30%
Source	PHO1	FLK73	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 007101067-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-76 ± 3	$2.25^{+0.36}_{-0.43}$	1724^{+95}_{-155}	6454^{+304}_{-261}	134^{+60}_{-30}
Alt.	-2 ± 1	$2.52^{+0.36}_{-0.49}$	1718^{+98}_{-160}	2996^{+299}_{-741}	$2.500^{+2.565}_{-1.983}$

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

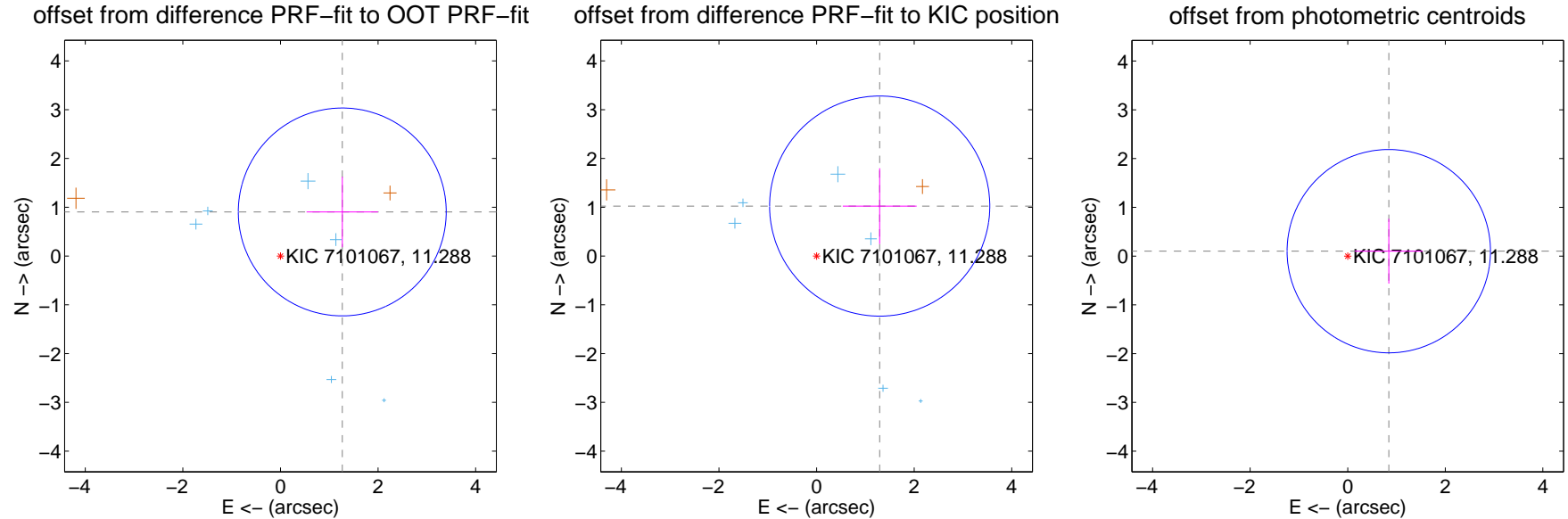
DV Centroid Data

Supplemental centroid analysis for 007101067-01. **Kepler magnitude: 11.29.** Transit SNR 8.78

There are 6 quarters with good PRF difference image offsets

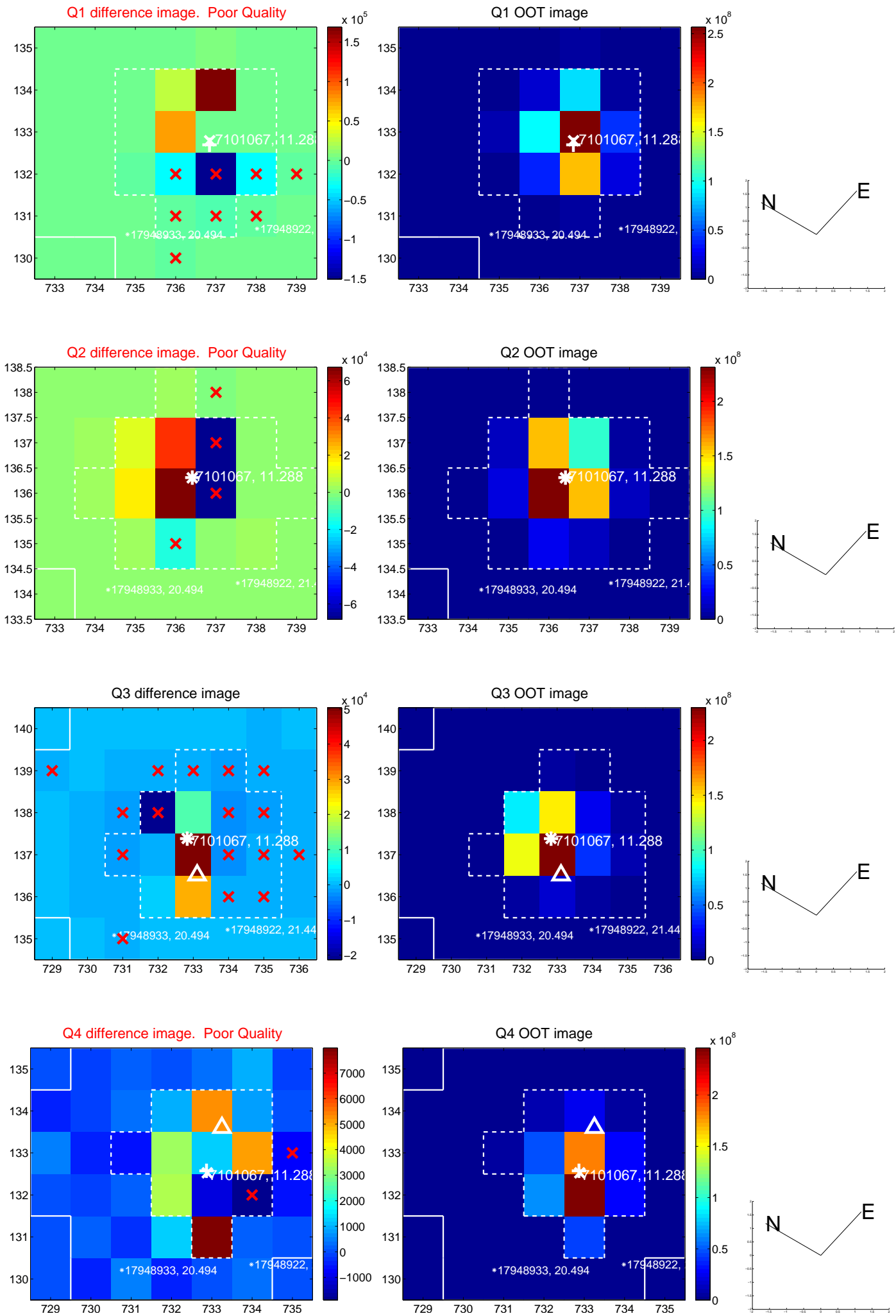
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.556 ± 0.710	2.19	-1.267 ± 0.732	0.904 ± 0.722
PRF-fit source offset from KIC position	1.650 ± 0.752	2.19	-1.293 ± 0.756	1.024 ± 0.775
photometric centroid source offset	0.85 ± 0.69	1.22	-0.84 ± 0.70	0.10 ± 0.66

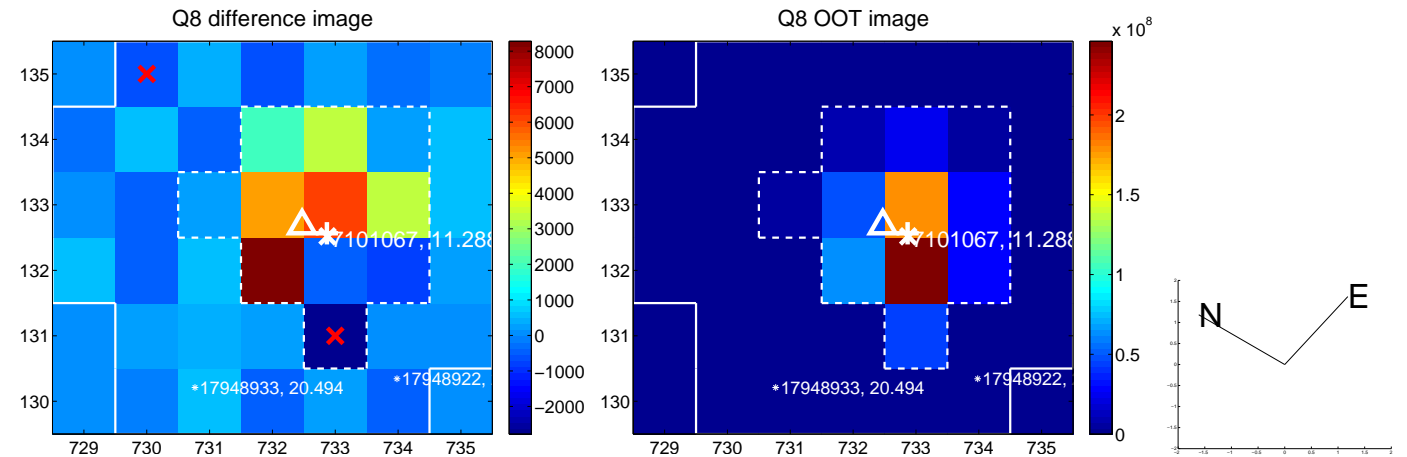
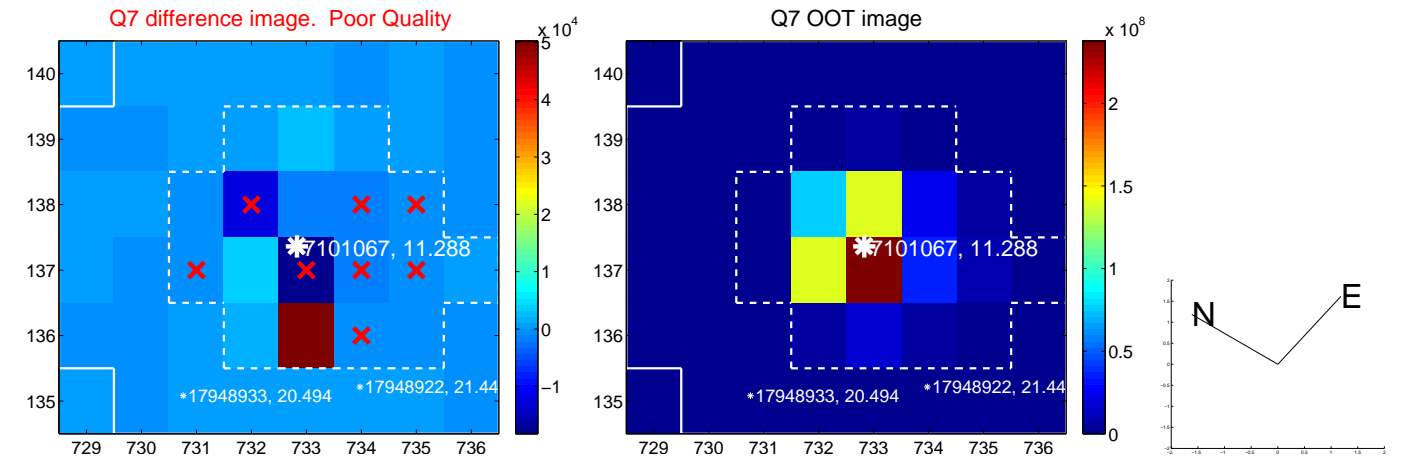
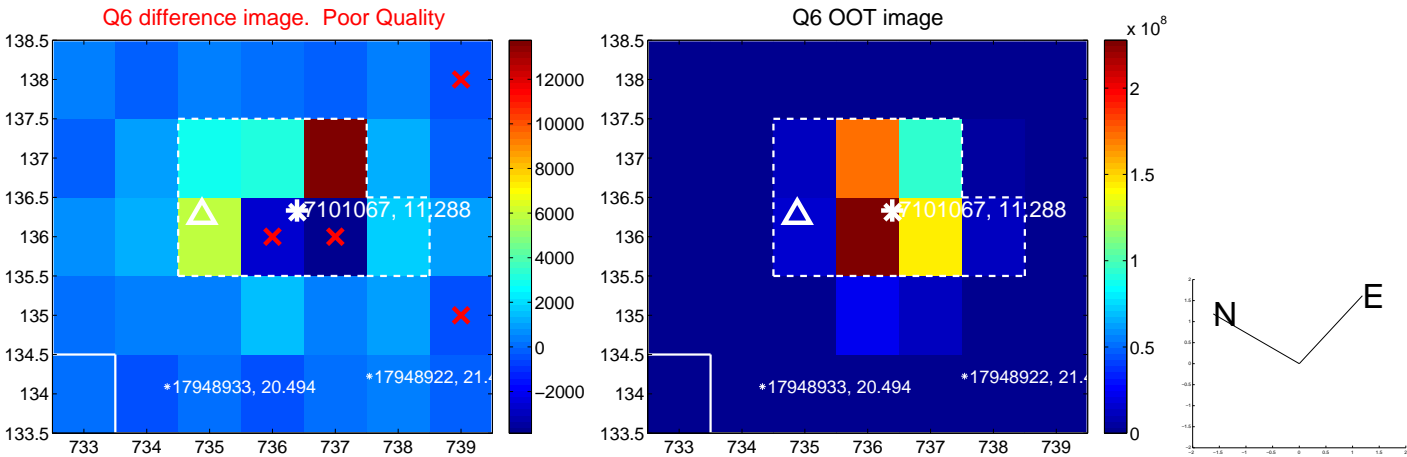
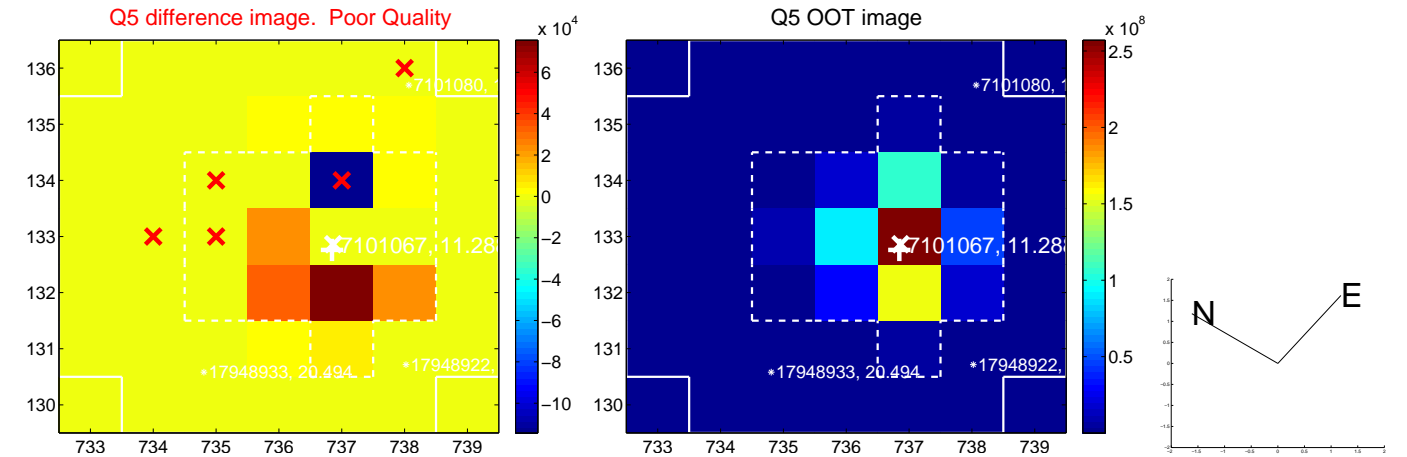


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

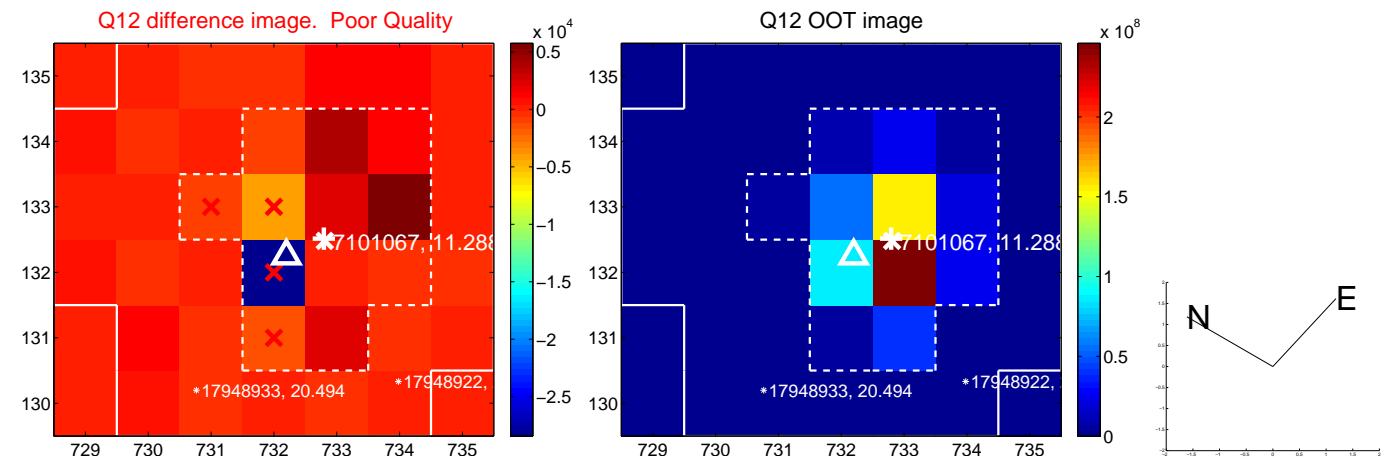
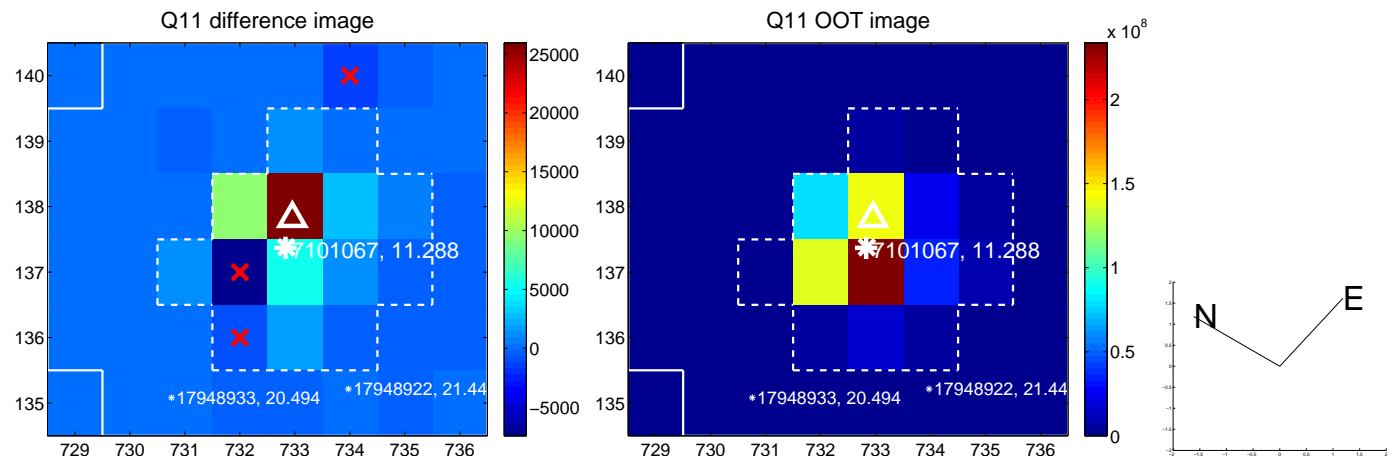
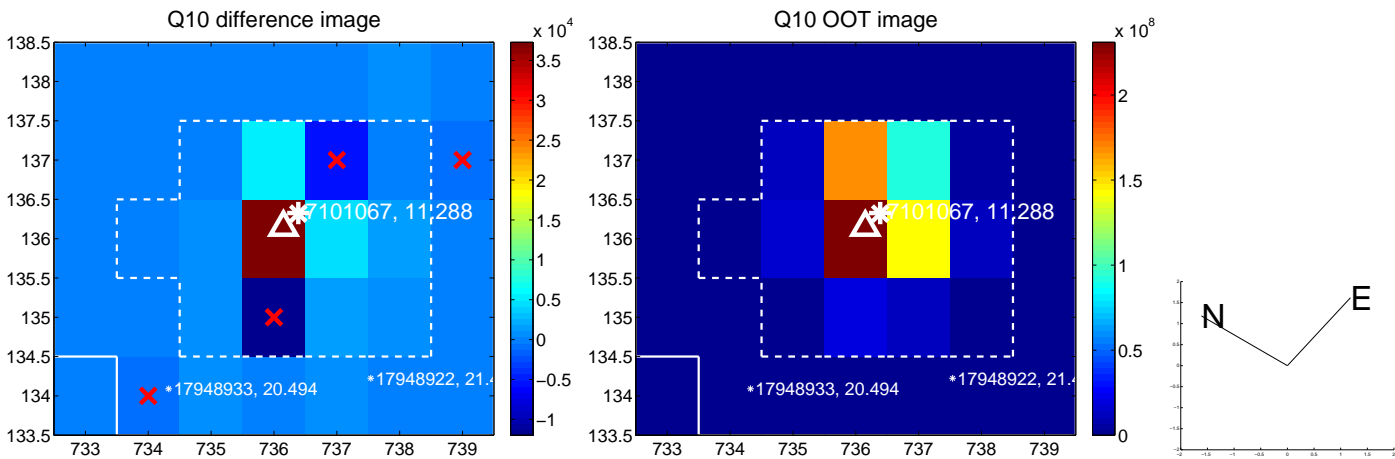
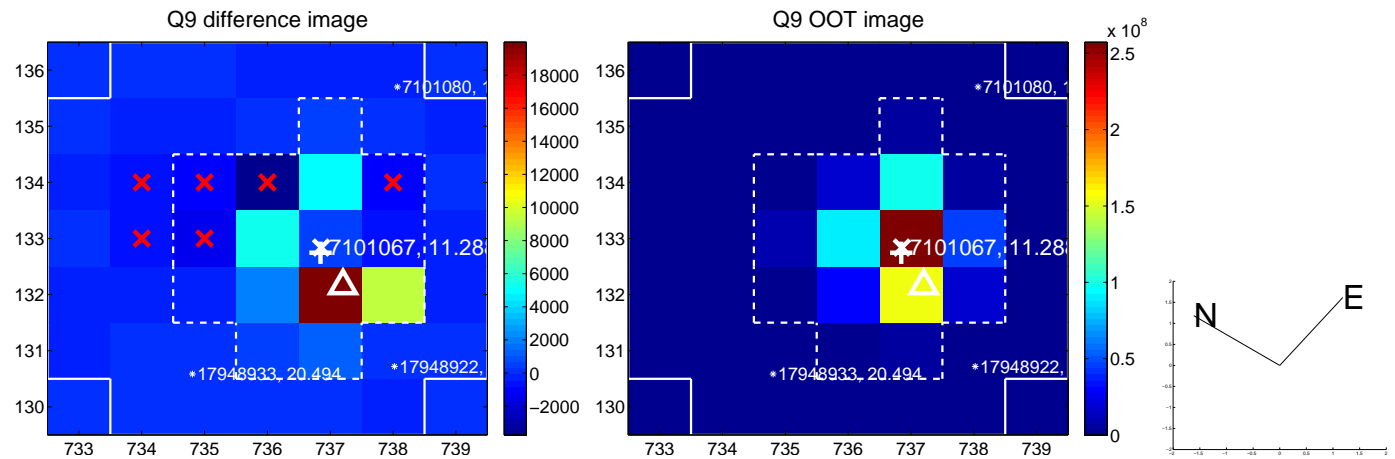
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



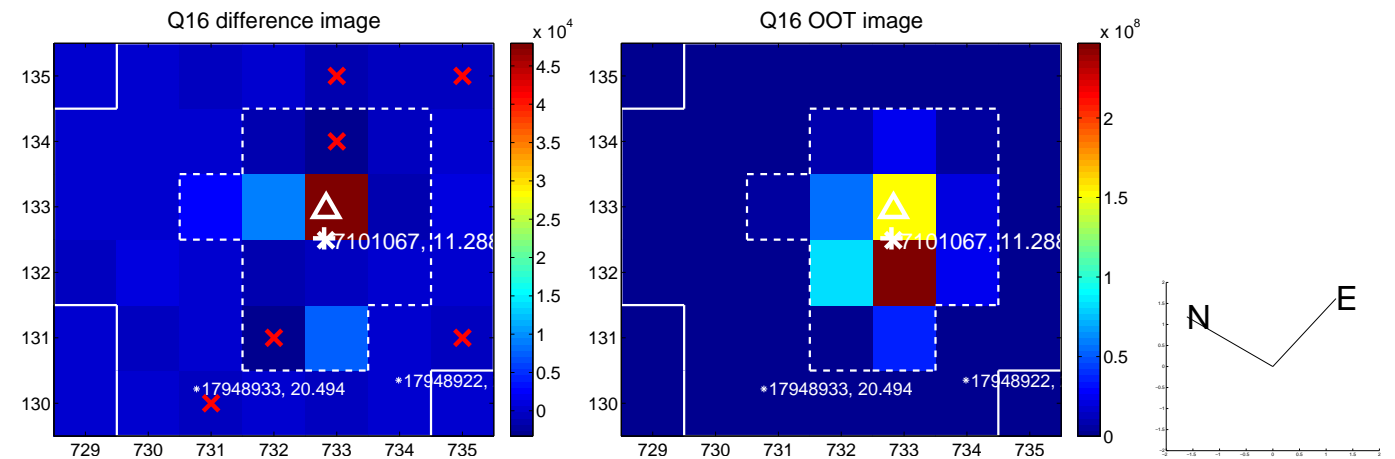
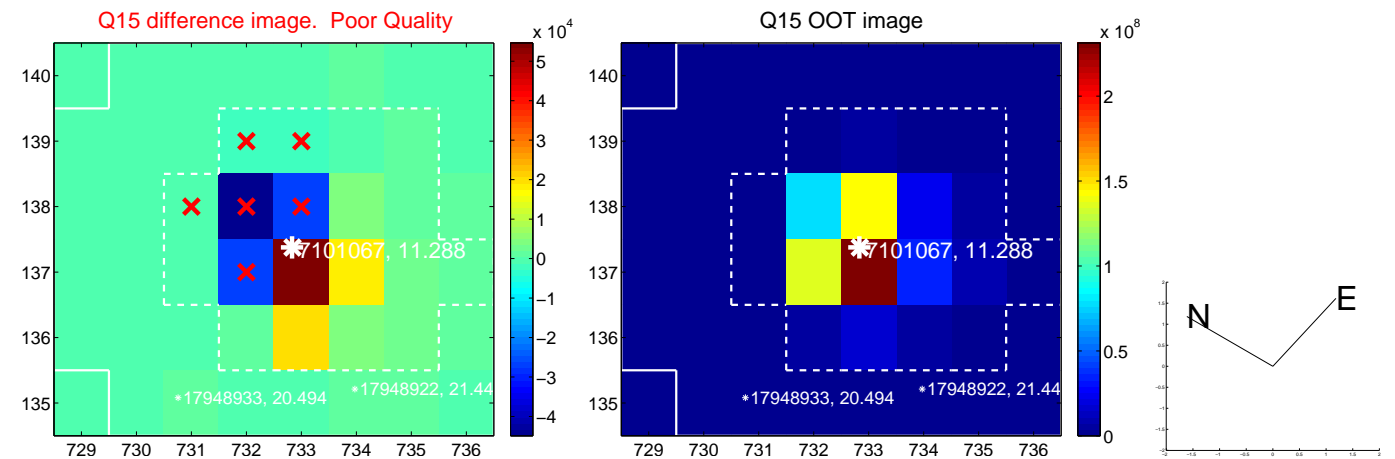
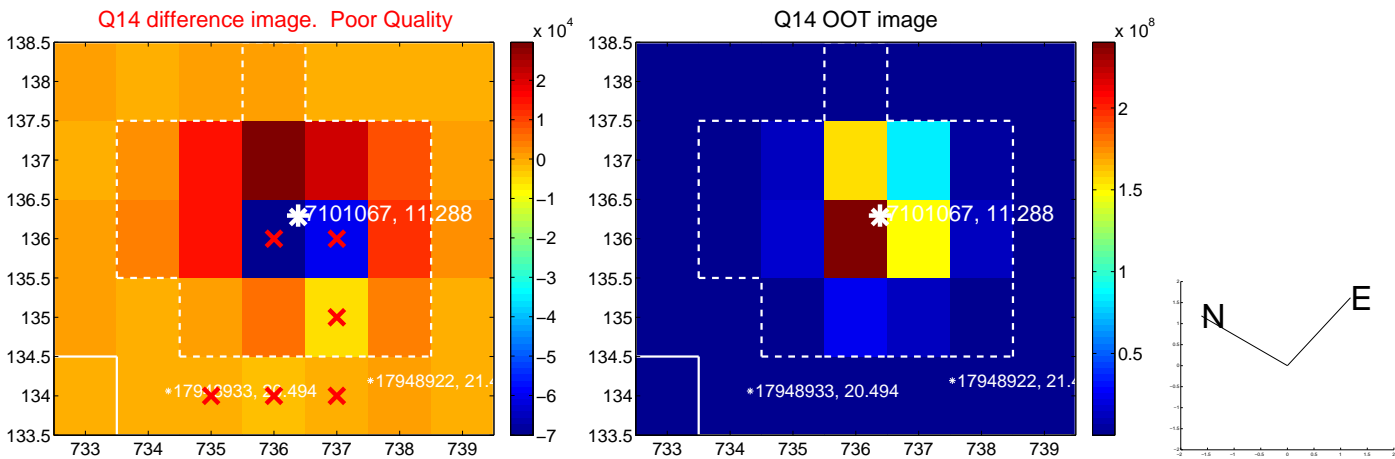
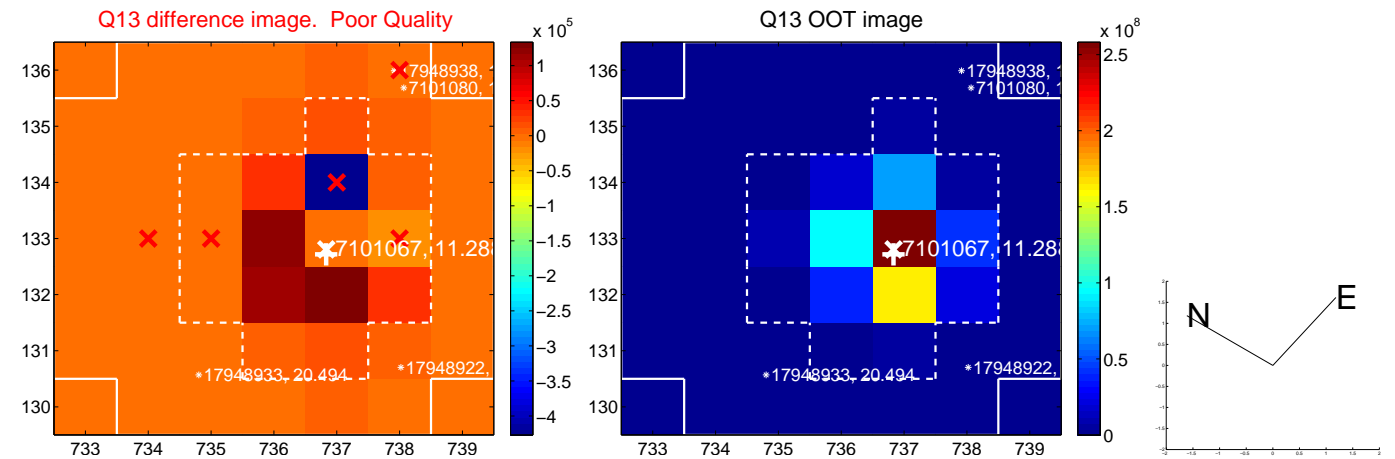
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



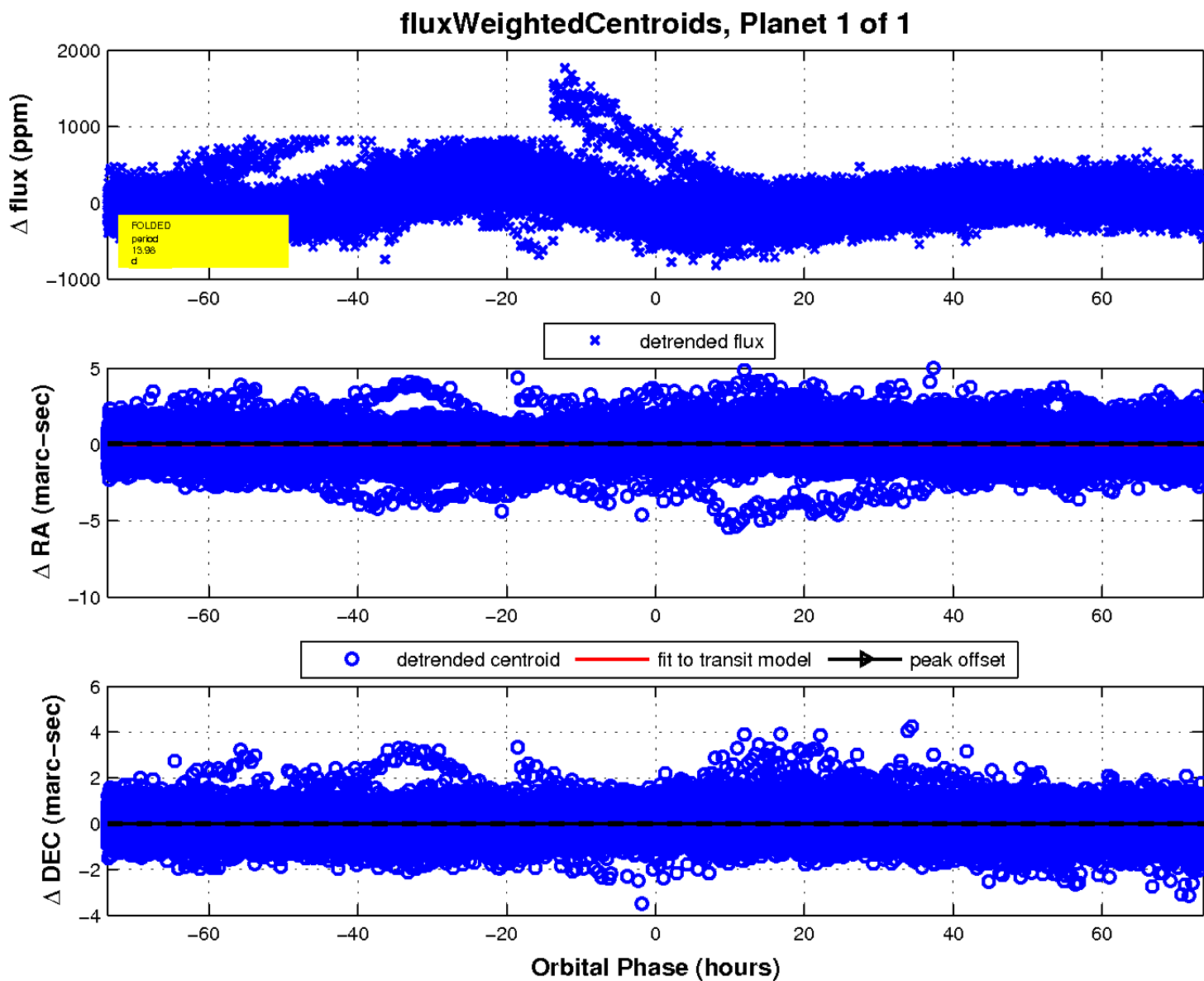
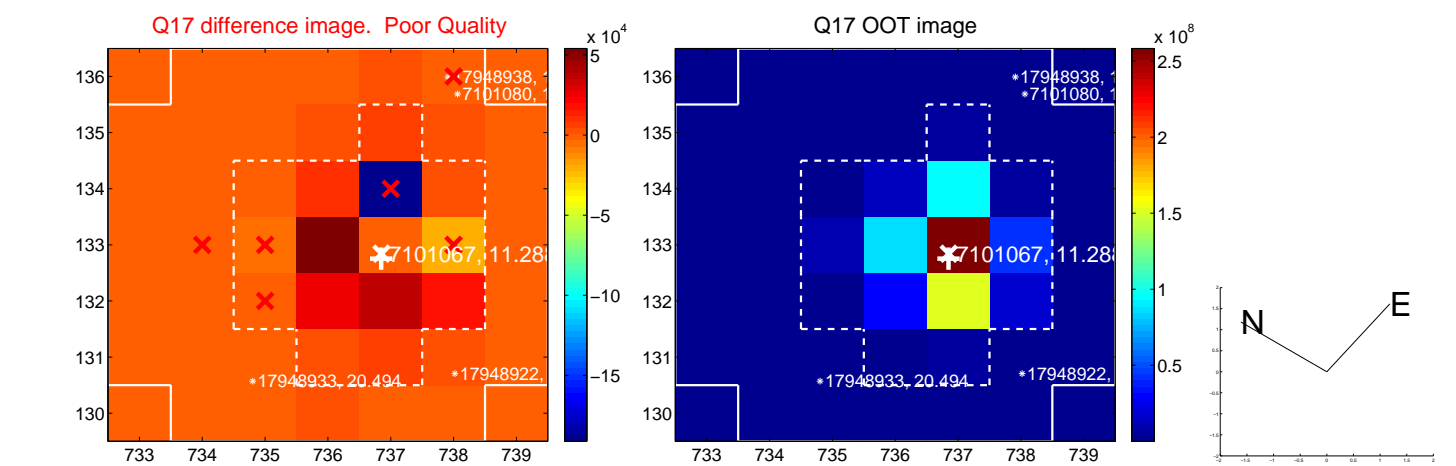
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UKIRT Image

Declination

