

KIC 004071949

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})
004071949-01	OBS	No	0.741399	132.137820	76.2	2.495	8.9	7.0	1.69	7076	1.72	19382.31

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004071949-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_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.

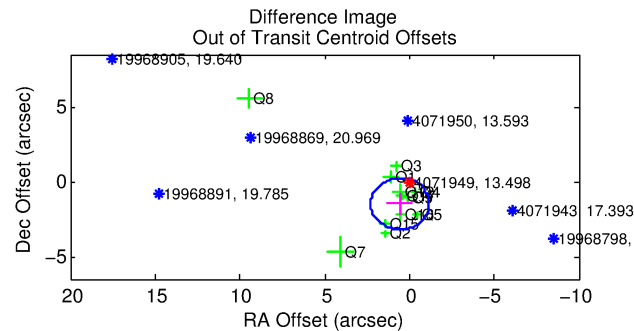
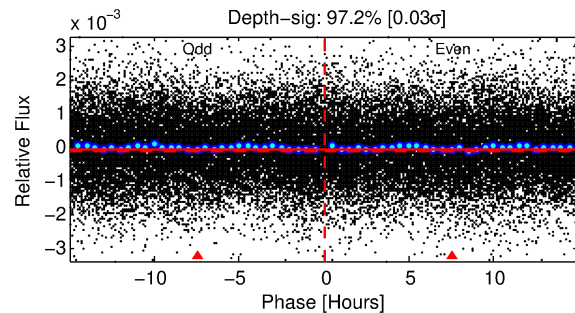
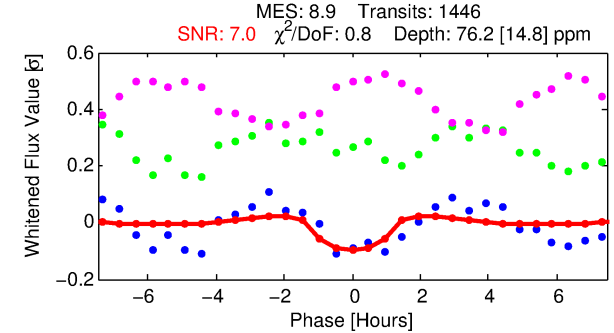
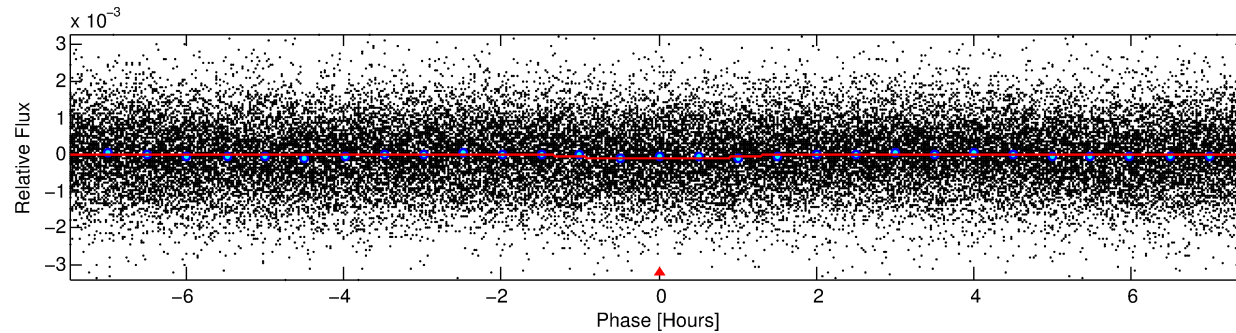
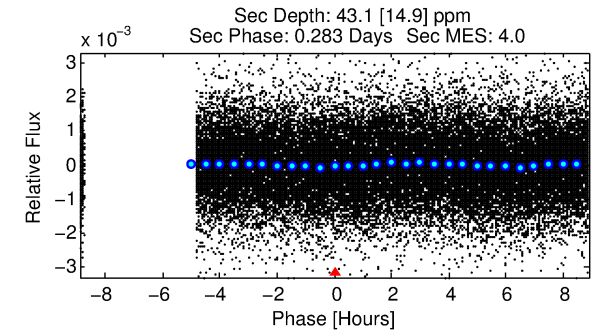
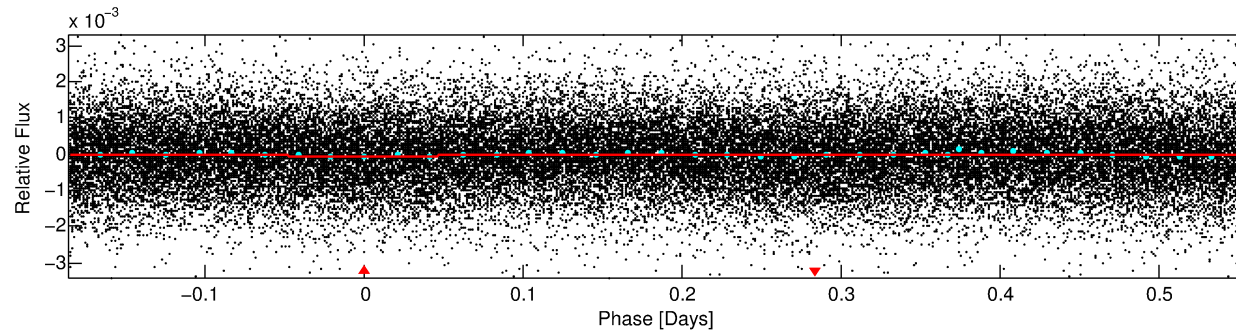
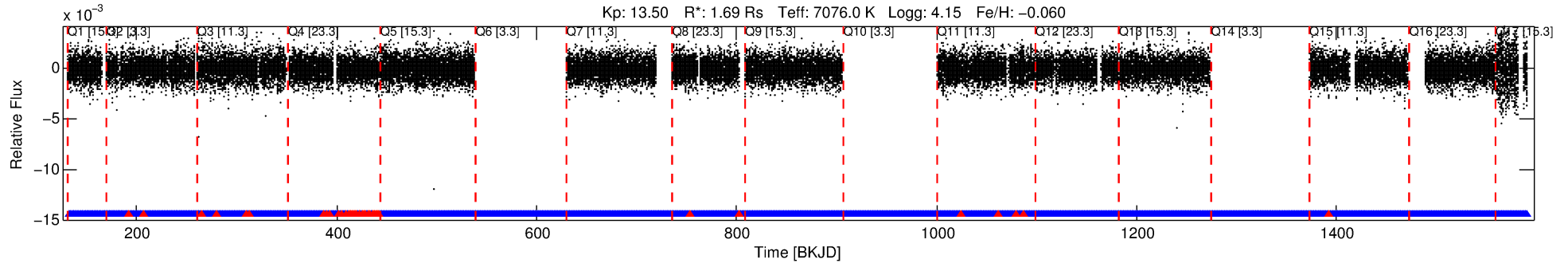
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004071949-01

No Significant Match Found

DV One-Page Summary

KIC: 4071949 Candidate: 1 of 1 Period: 0.741 d



DV Fit Results:

Period = 0.74140 [0.00001] d
Epoch = 132.1378 [0.0043] BKJD
Rp/R* = 0.0093 [0.0080]
a/R* = 1.40 [3.66]
b = 0.90 [1.15]
Seff = 19382.31 [8223.38]
Teq = 3009 [319] K
Rp = 1.72 [1.58] Re
a = 0.0182 [0.0047] AU
Ag = 2.67 [4.81] [0.35σ]
Teffp = 5946 [2636] K [1.11σ]

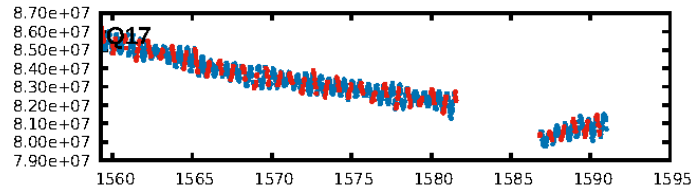
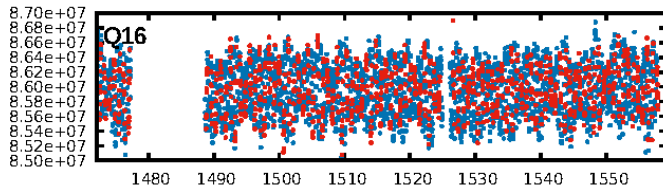
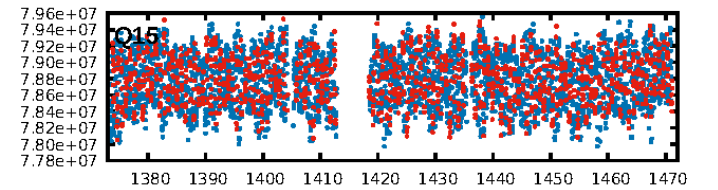
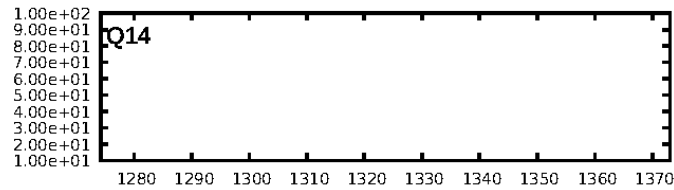
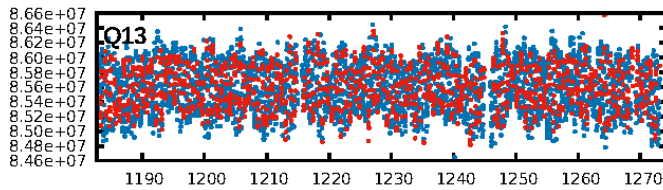
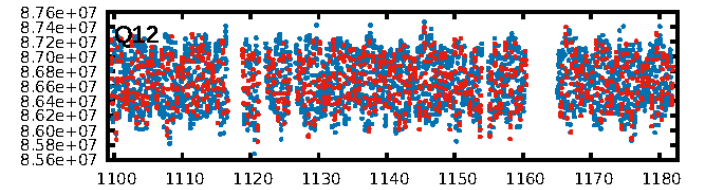
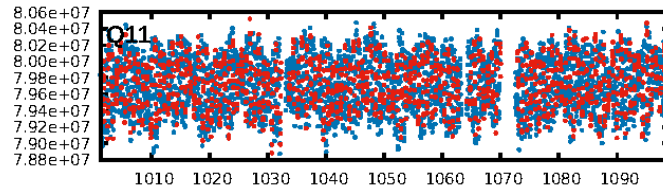
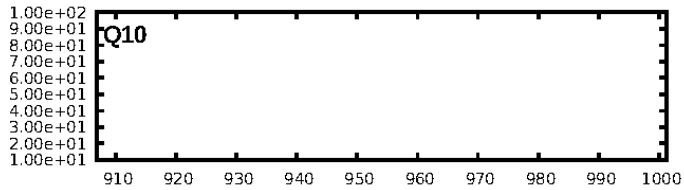
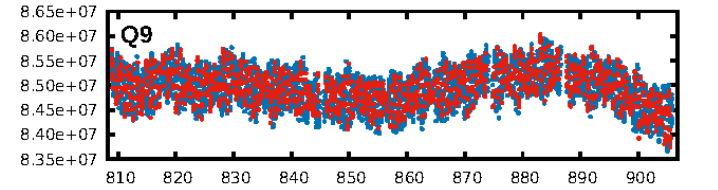
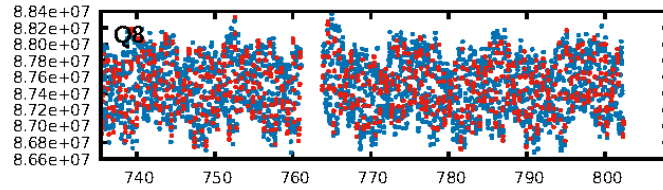
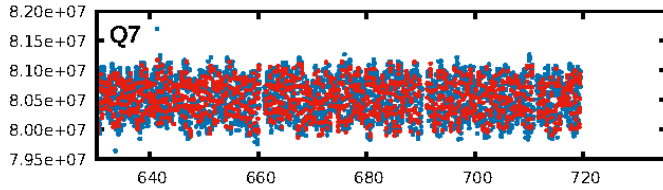
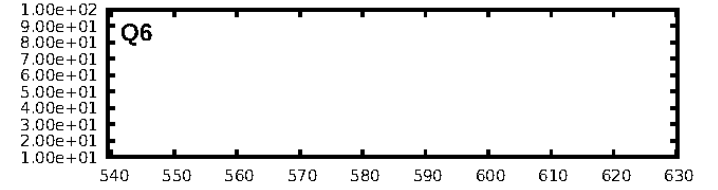
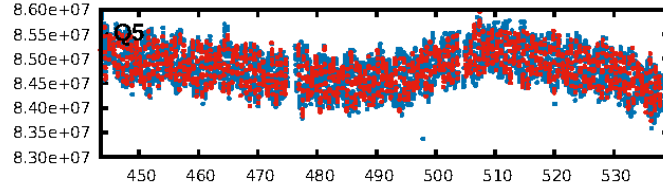
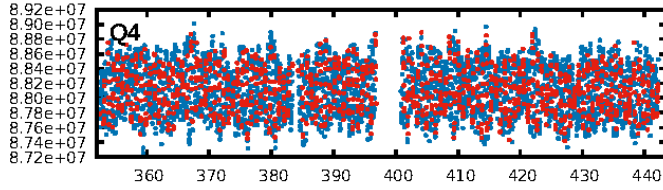
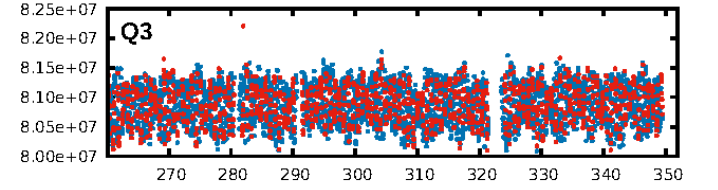
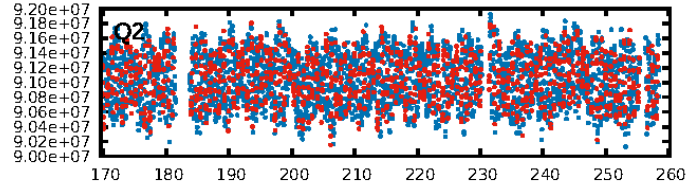
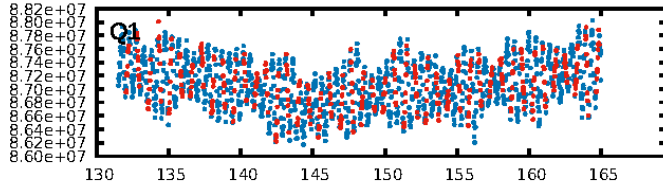
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 8.79e-18
RollingBand-fgt: 0.97 [1323/1365]
GhostDiagnostic-chr: 1.181
Centroid-sig: 34.5%
Centroid-so: 1.316 arcsec [2.41σ]
OotOffset-rm: 1.580 arcsec [2.75σ]
OotOffset-st: 1/3/4/4 [12]
KicOffset-rm: 0.610 arcsec [0.80σ]
KicOffset-st: 1/3/4/4 [12]
DiffImageQuality-fgm: 0.75 [9/12]
DiffImageOverlap-fno: 1.00 [14/14]

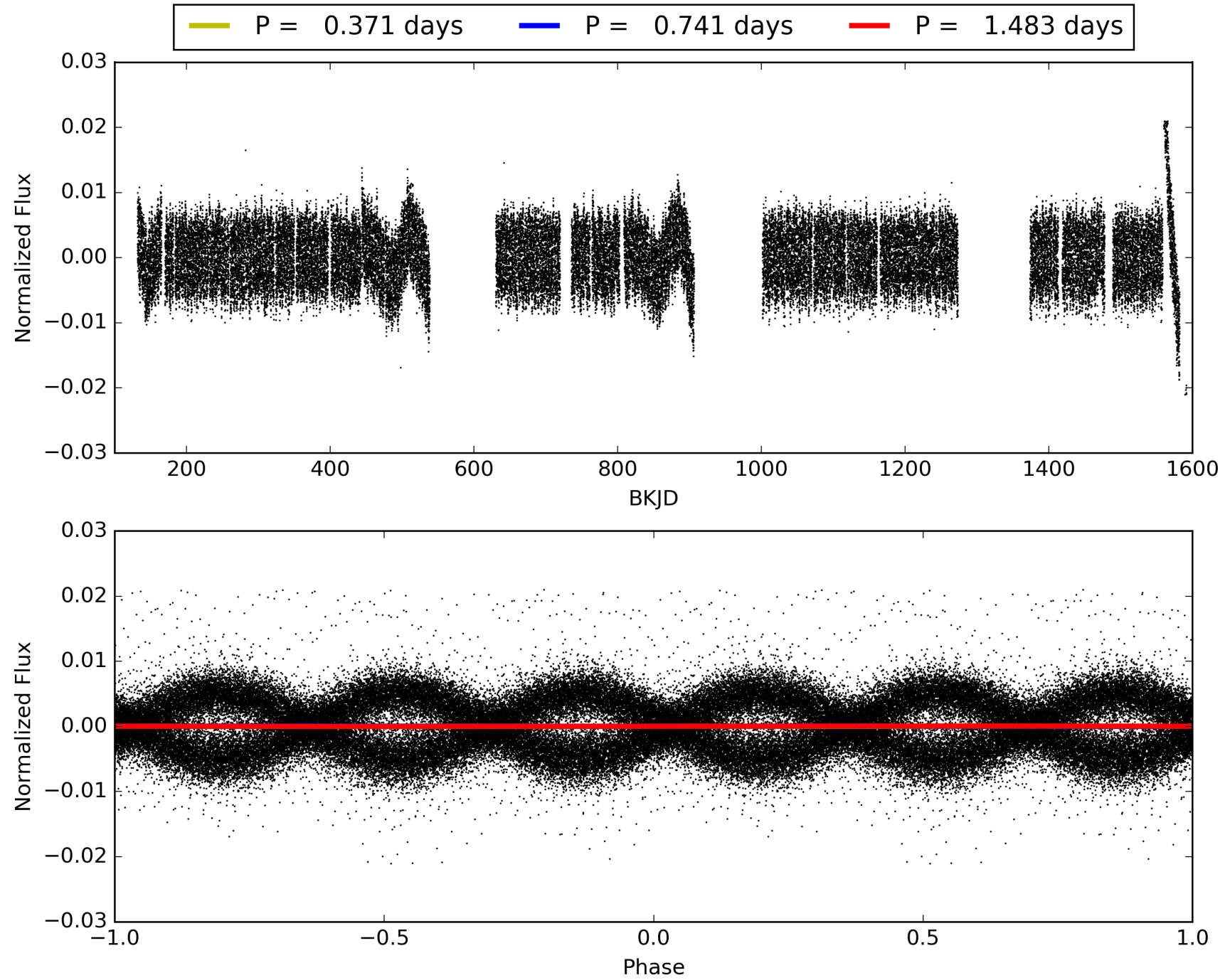
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:51:26 Z

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

TCE 004071949-01, PDC Light Curves

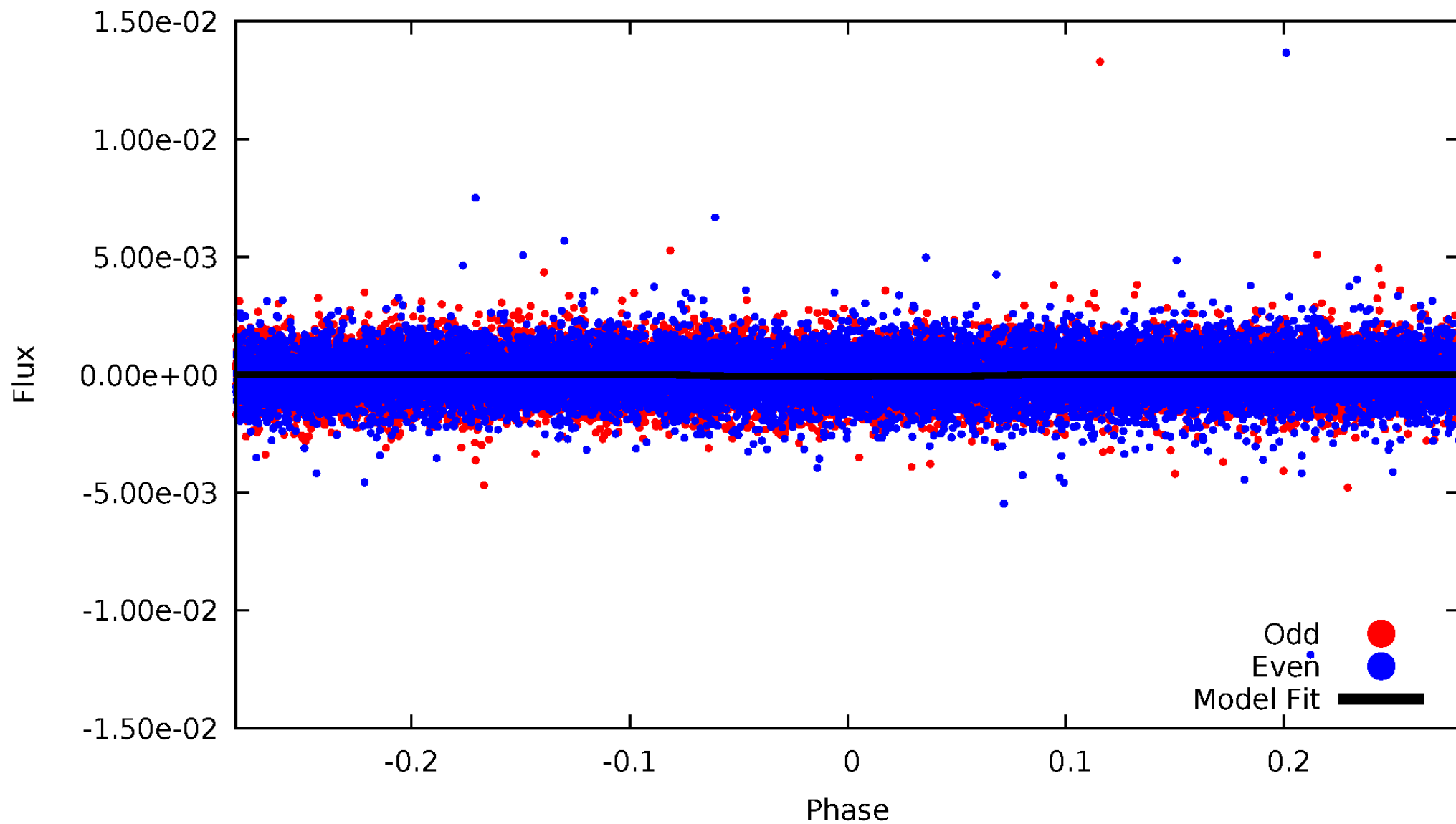


TCE 004071949-01



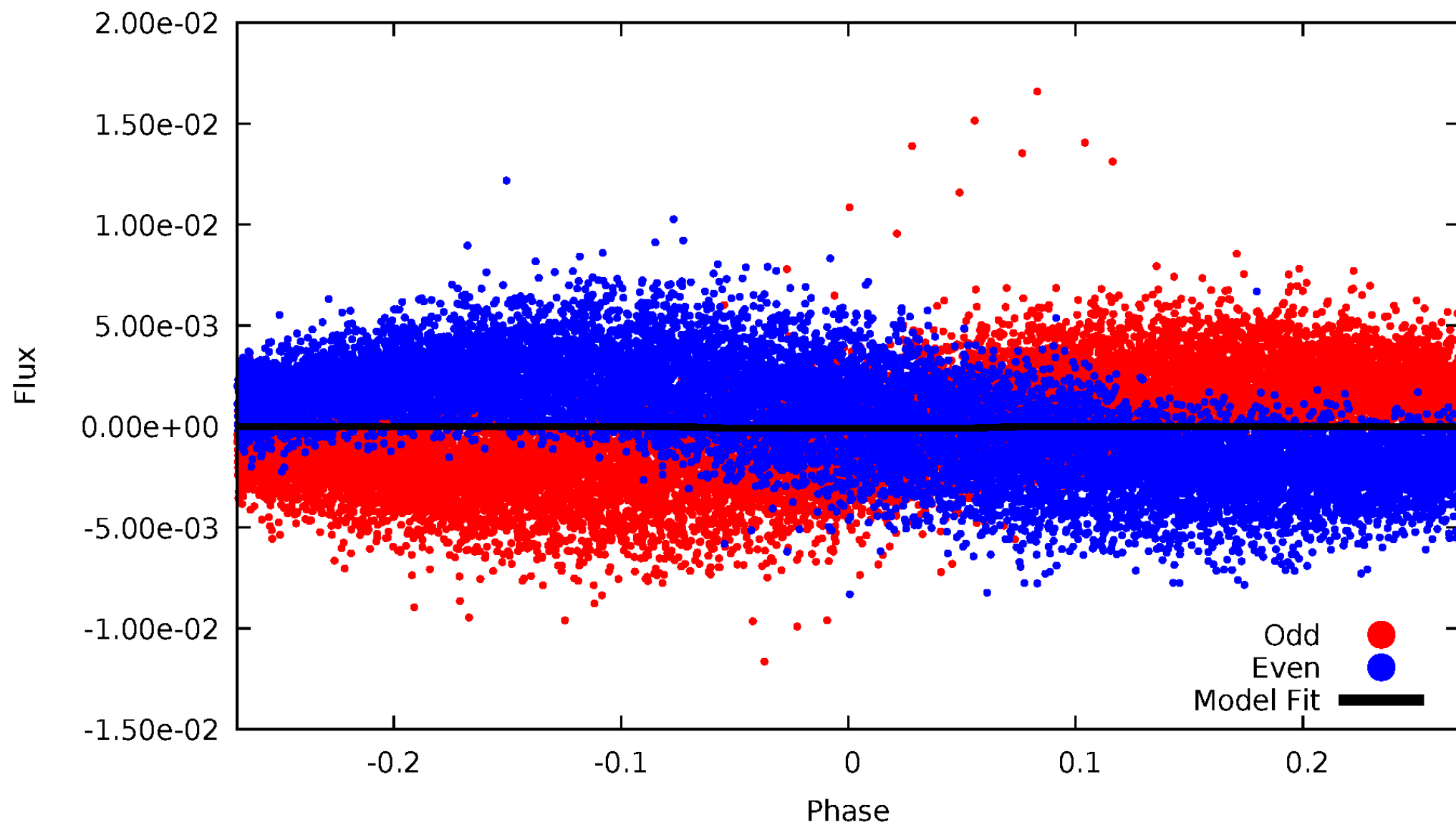
DV Odd/Even

TCE 004071949-01



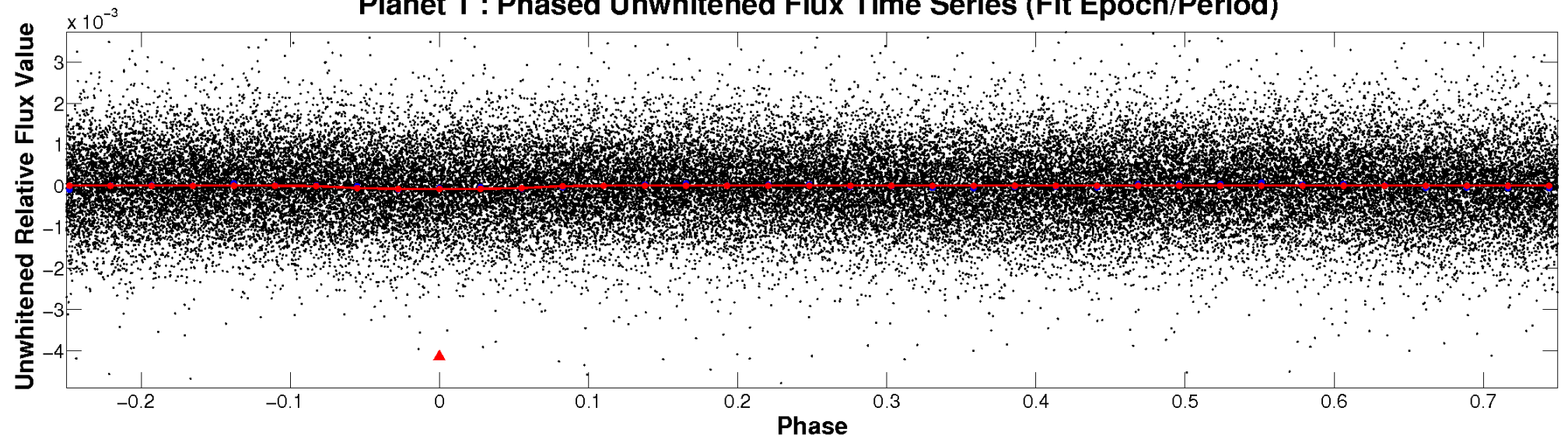
ALT Odd/Even

TCE 004071949-01

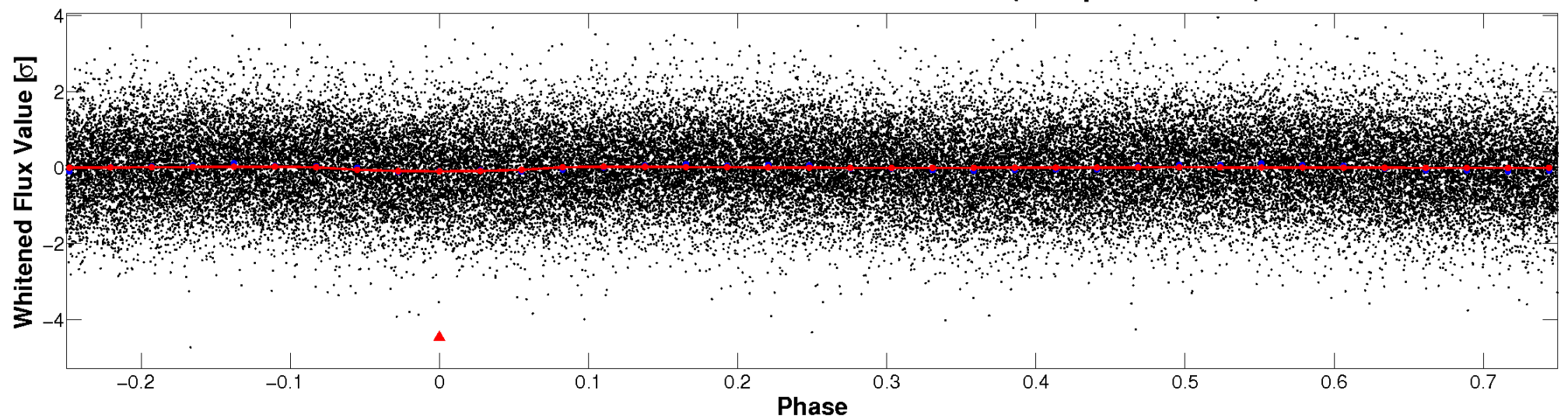


Non-Whitened Vs. Whitened Light Curve

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

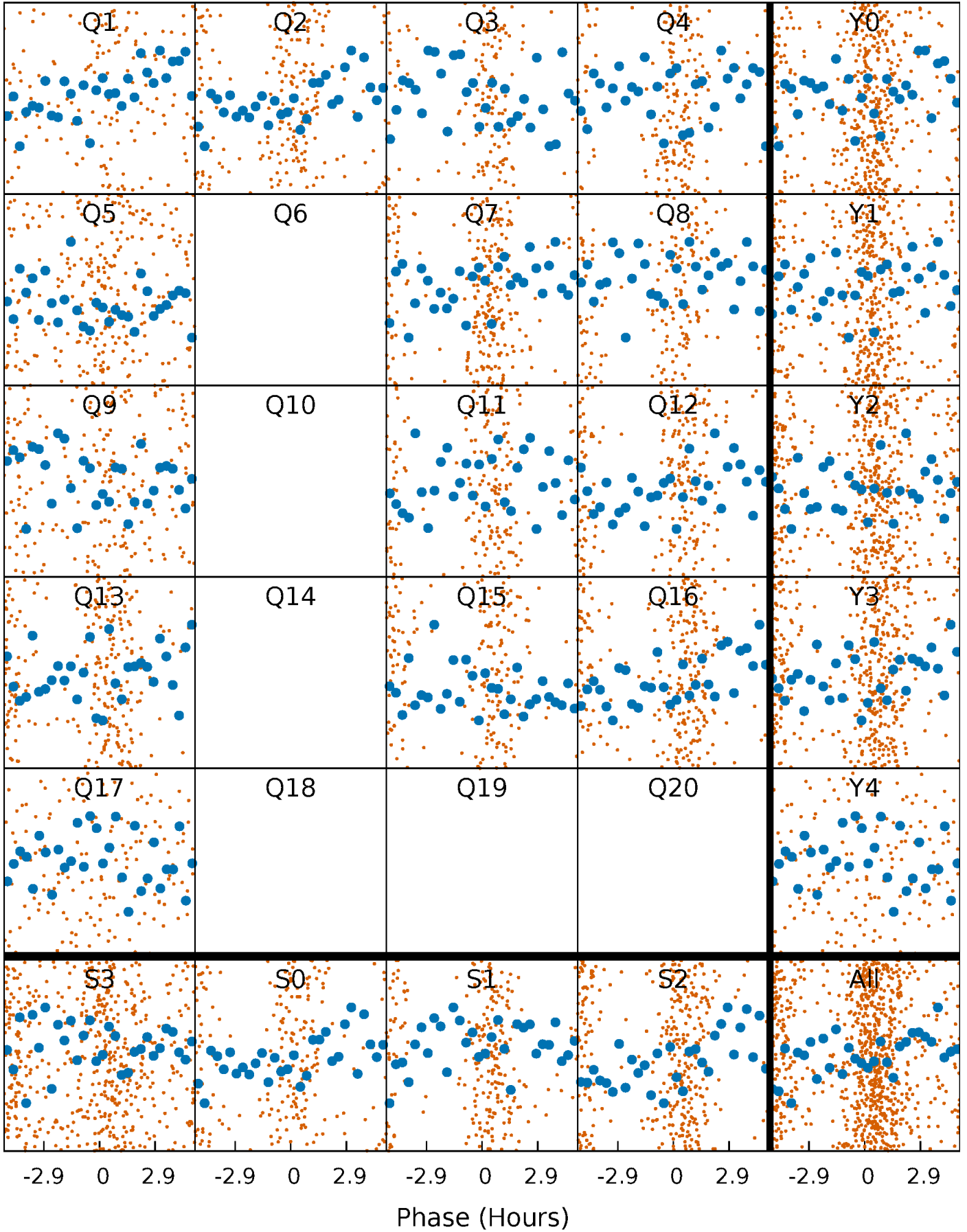


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



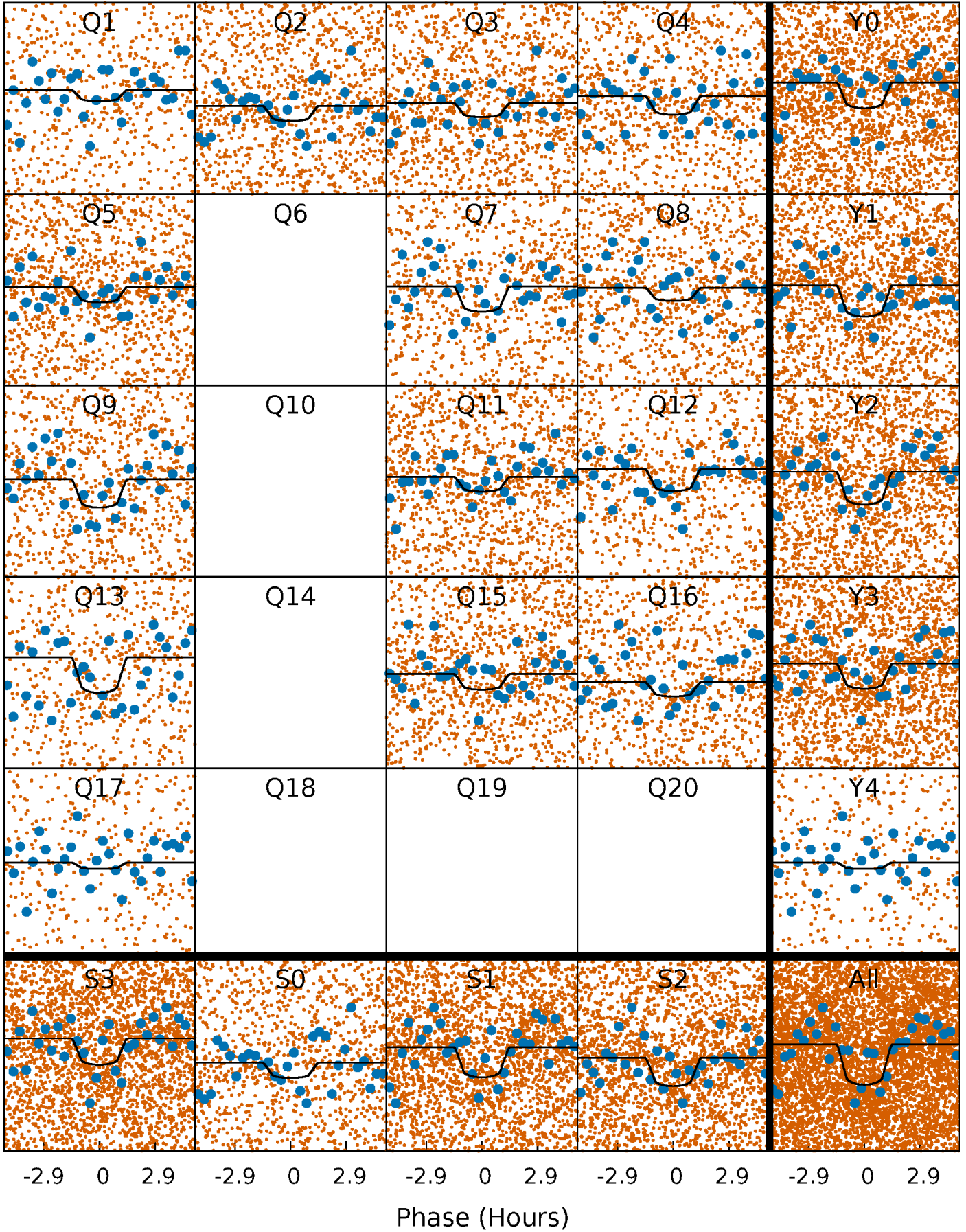
PDC Quarter-Phased Transit Curves

TCE 004071949-01 P= 0.741399 Days $T_0=132.137820$ (BKJD)



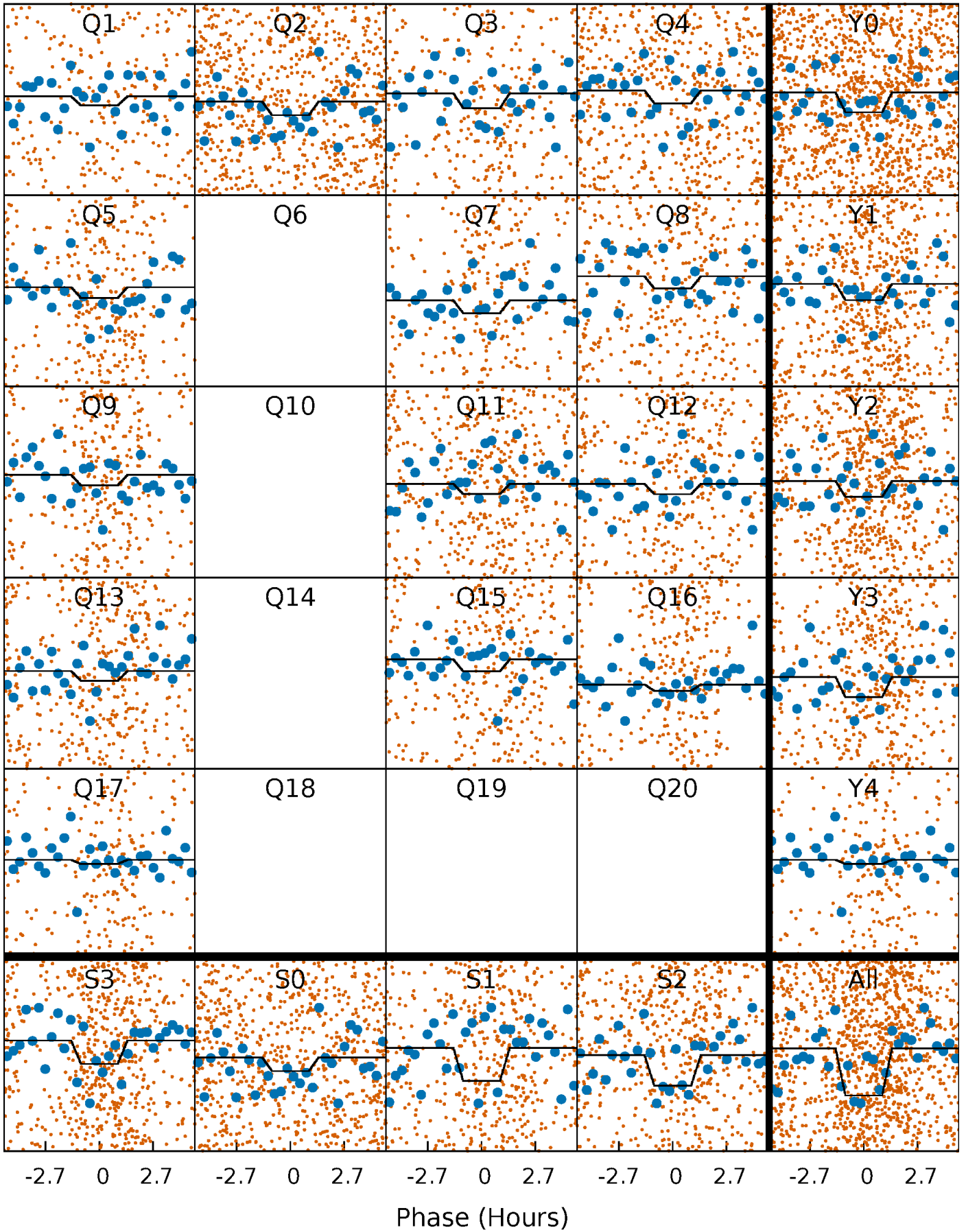
DV Quarter-Phased Transit Curves

TCE 004071949-01 P= 0.741399 Days $T_0=132.137820$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

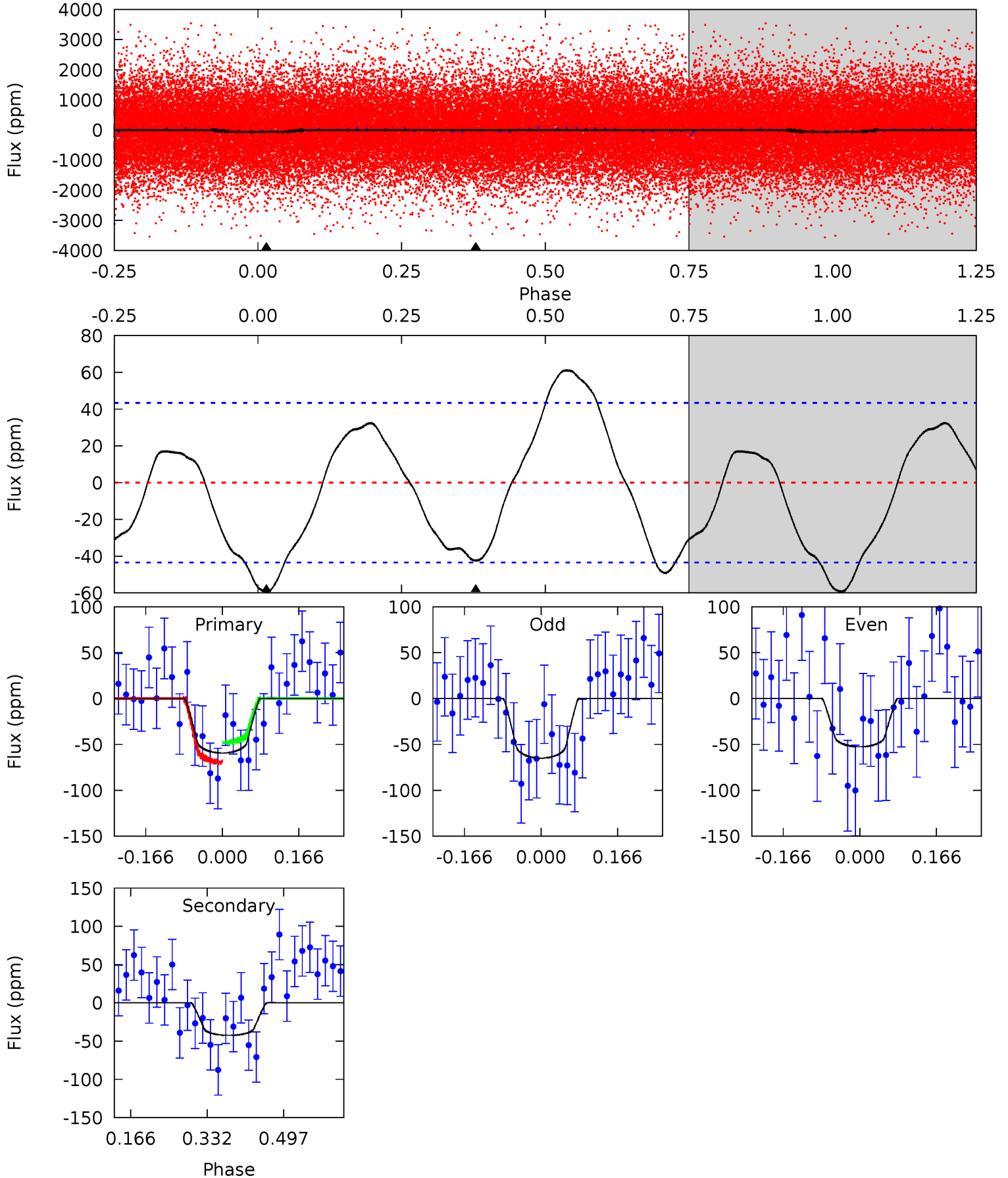
TCE 004071949-01 P= 0.741408 Days $T_0=132.135425$ (BKJD)



DV Model-Shift Uniqueness Test

004071949-01, P = 0.741399 Days, E = 131.396421 Days

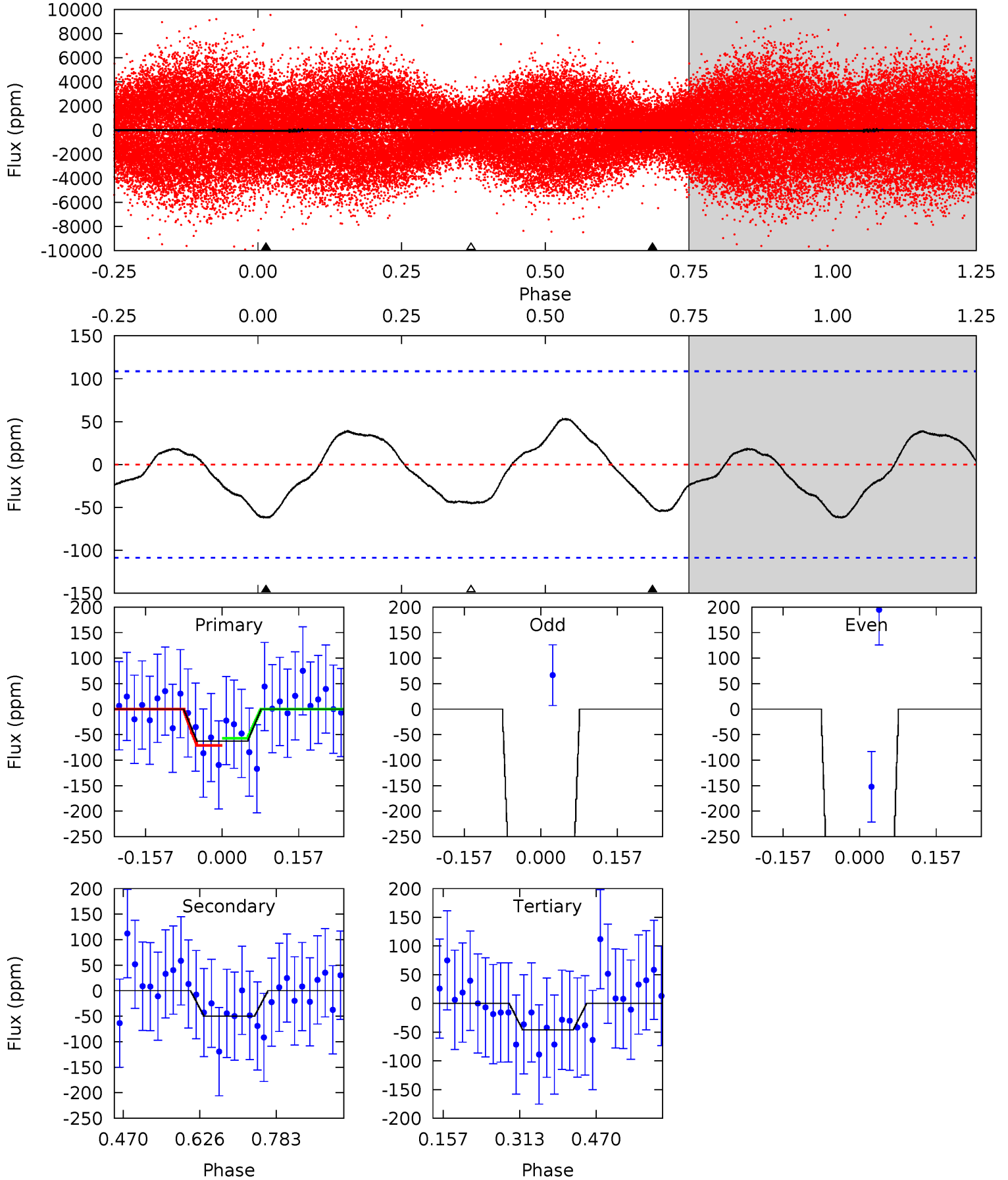
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.09	4.36	0	0	4.46	1.39	3.40	6.09	6.09	4.36	4.36	0.65	1.01	0.51	1.10



Alt Model-Shift Uniqueness Test

004071949-01, P = 0.741408 Days, E = 131.394017 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.58	2.04	1.88	0	4.47	1.42	1.25	0.69	2.58	0.16	2.04	2.41	0.87	0.46	0.26



Stellar Parameters For KIC 004071949

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7076^{+253}_{-366}	$4.147^{+0.149}_{-0.198}$	$-0.060^{+0.250}_{-0.350}$	$1.691^{+0.537}_{-0.358}$	$1.467^{+0.211}_{-0.258}$	$0.427^{+0.337}_{-0.218}$
	+4%/-5%	+4%/-5%	+417%/-583%	+32%/-21%	+14%/-18%	+79%/-51%
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 004071949-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-42 ± 10	$1.97^{+1.49}_{-1.21}$	4231^{+347}_{-321}	5275^{+4064}_{-1540}	$1.944^{+10.876}_{-1.358}$
Alt.	-50 ± 24	$1.95^{+1.48}_{-1.24}$	4236^{+343}_{-296}	5524^{+4823}_{-1821}	$2.177^{+14.258}_{-1.617}$

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

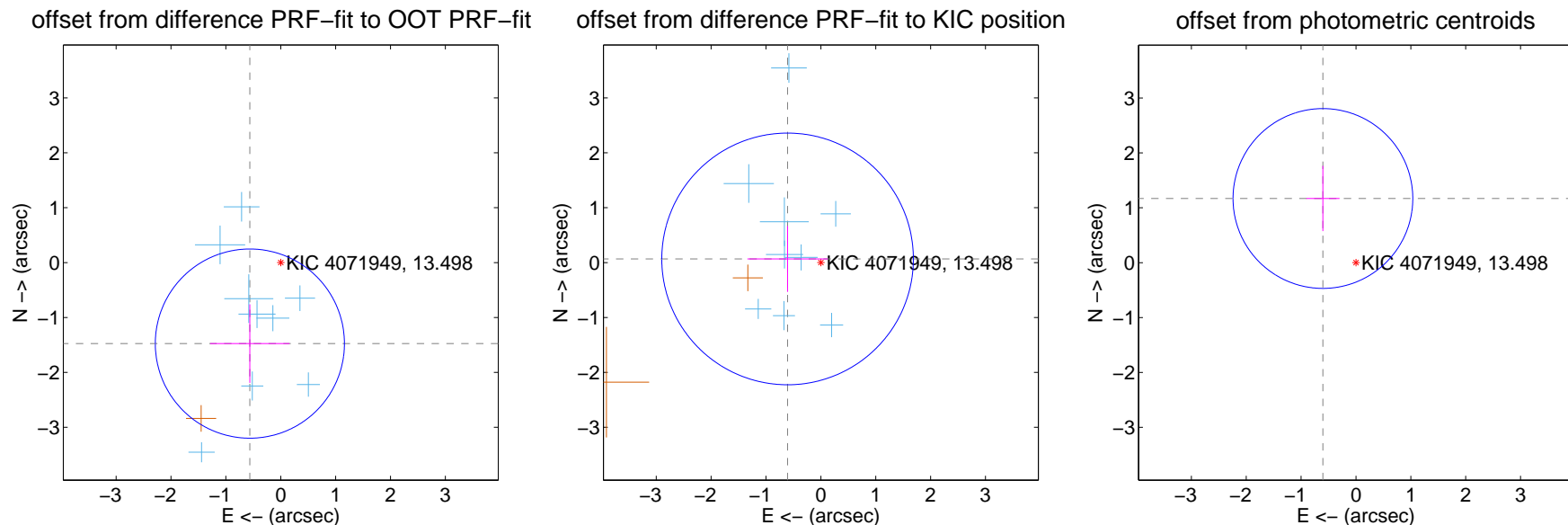
DV Centroid Data

Supplemental centroid analysis for 004071949-01. Kepler magnitude: 13.50. Transit SNR 7.02

There are 9 quarters with good PRF difference image offsets

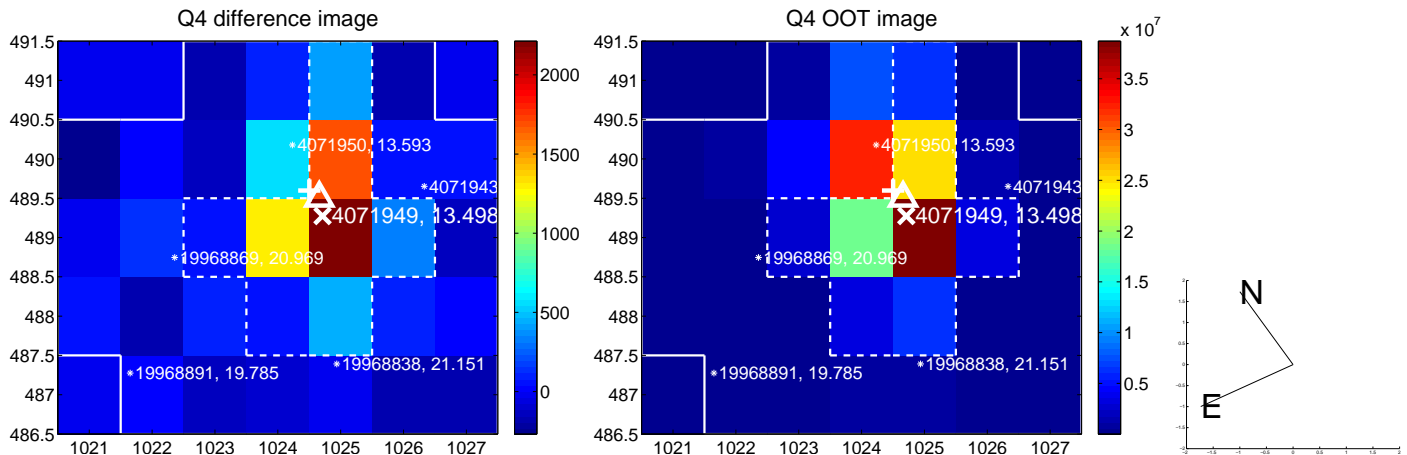
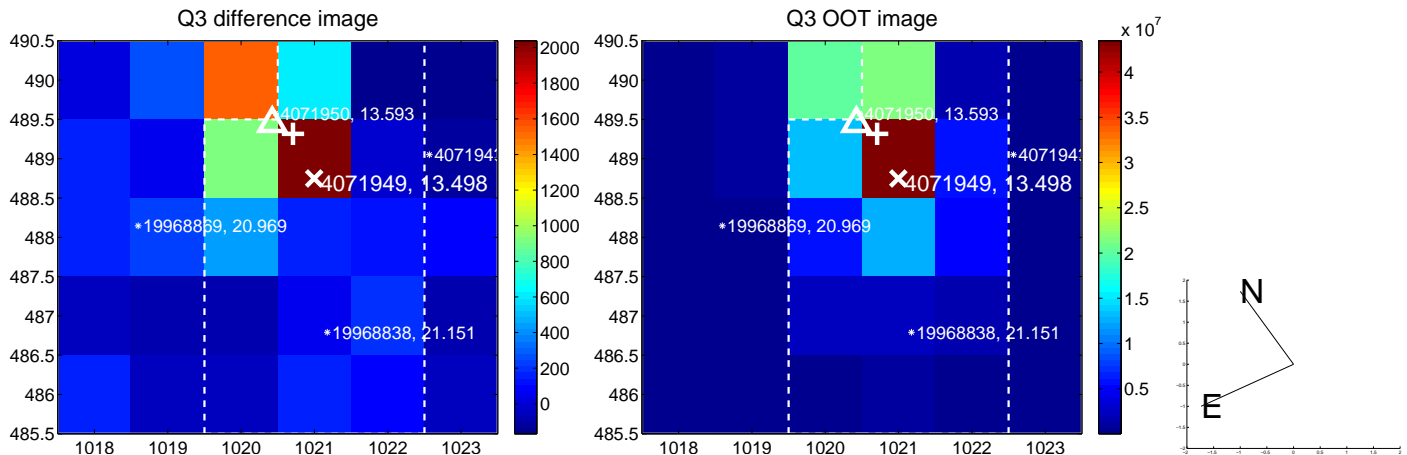
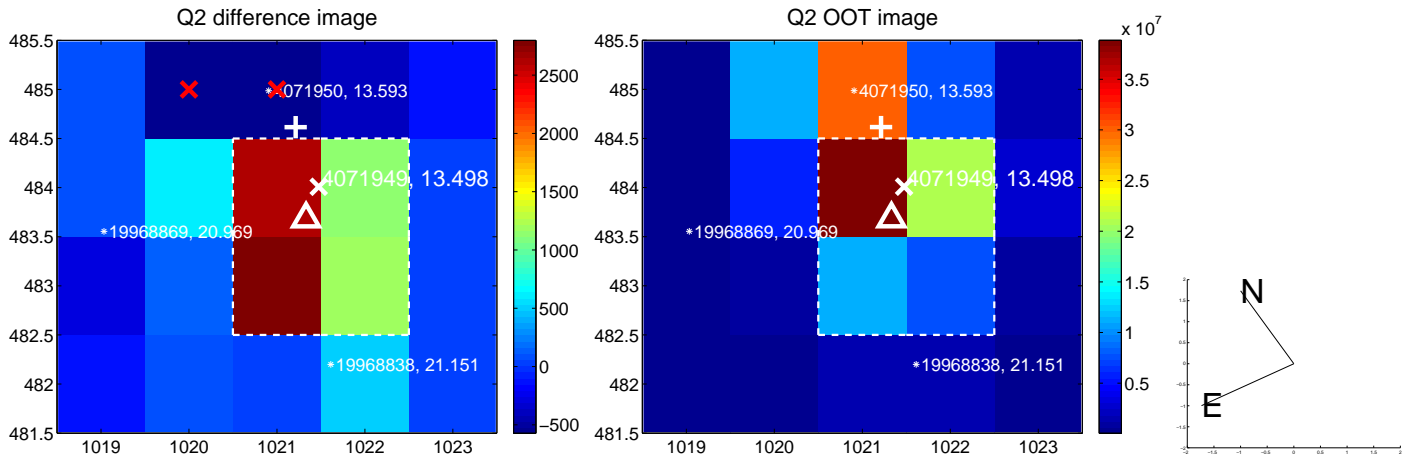
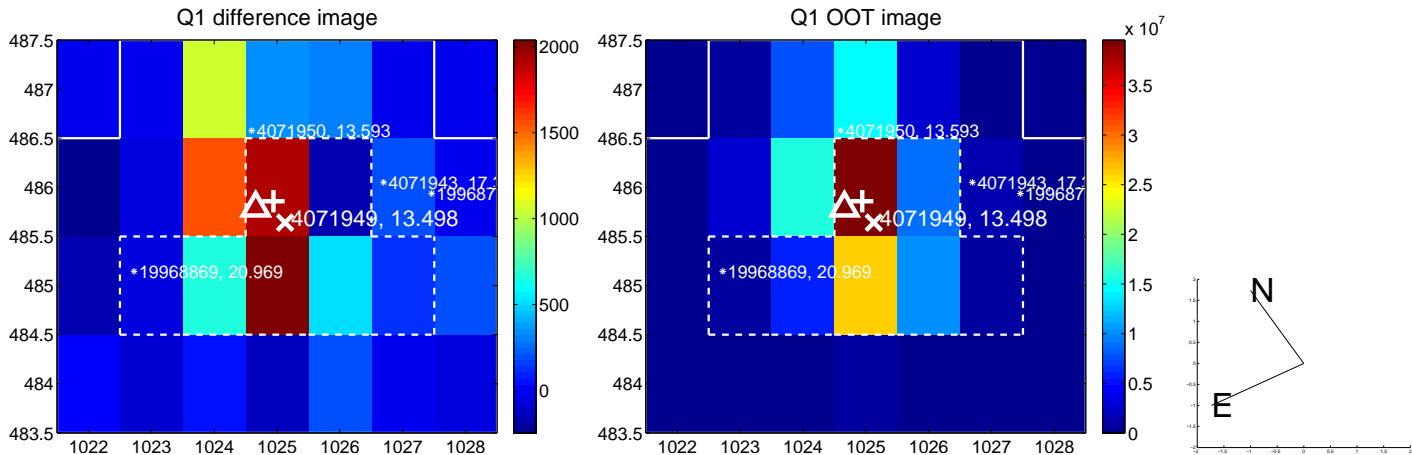
The direct PRF centroid is offset from the target star catalog position by about 1.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.580 ± 0.575	2.75	0.563 ± 0.723	-1.476 ± 0.715
PRF-fit source offset from KIC position	0.610 ± 0.764	0.80	0.607 ± 0.733	0.067 ± 0.600
photometric centroid source offset	1.32 ± 0.55	2.41	0.60 ± 0.30	1.17 ± 0.59

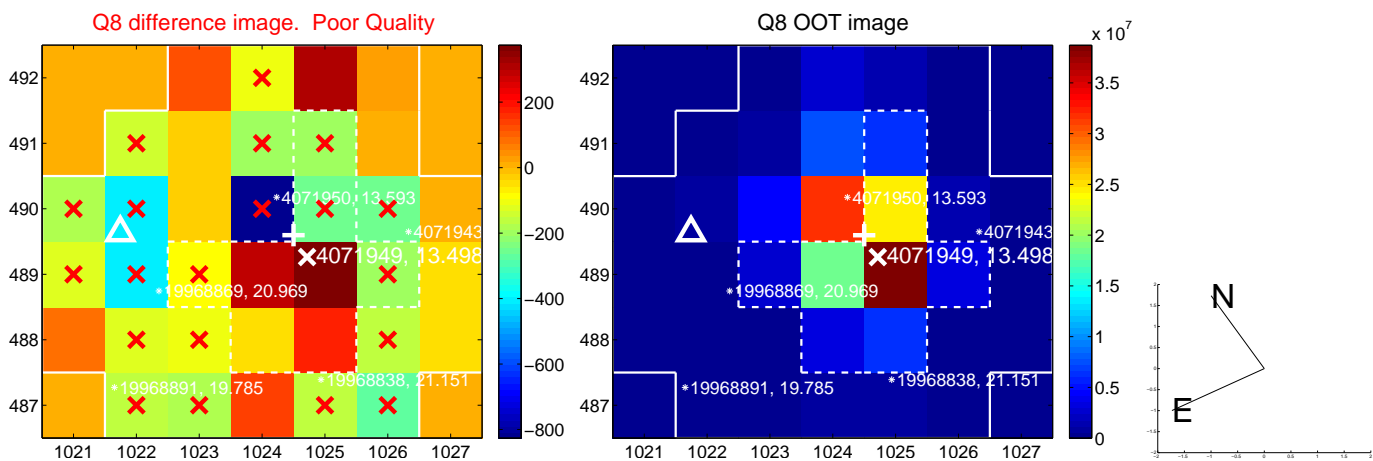
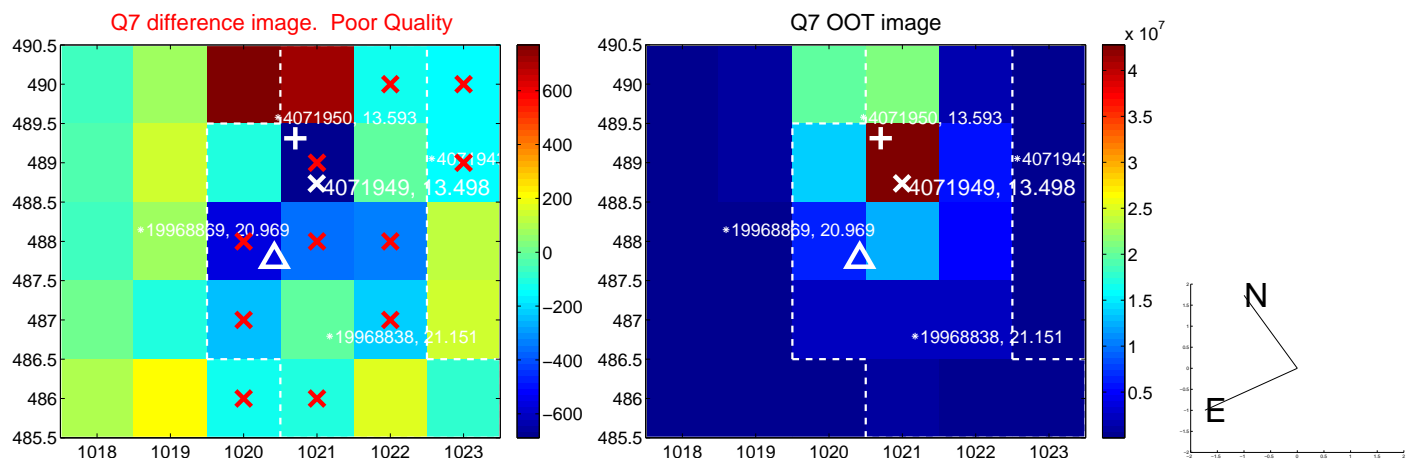
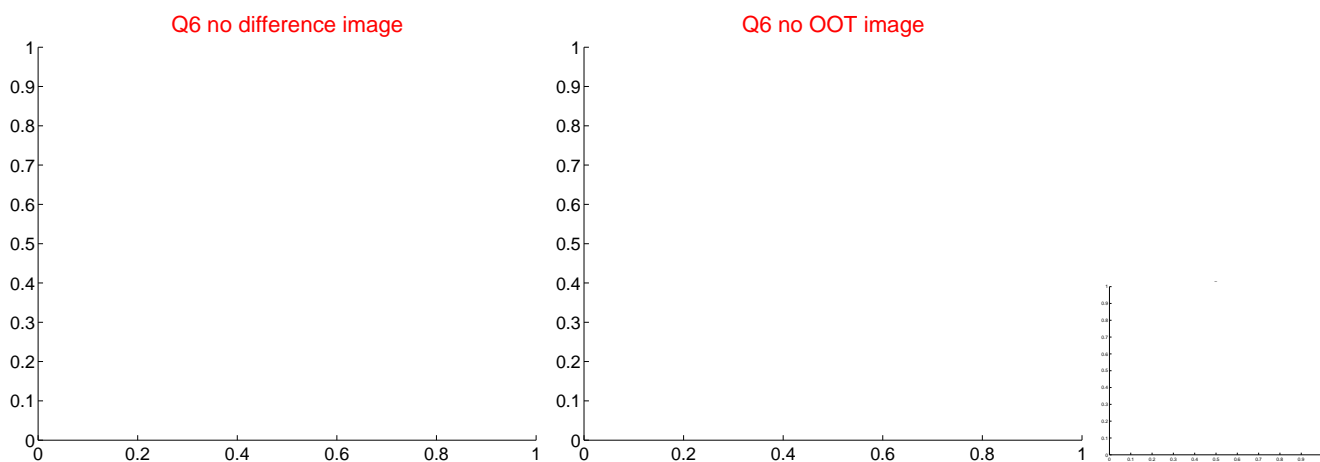
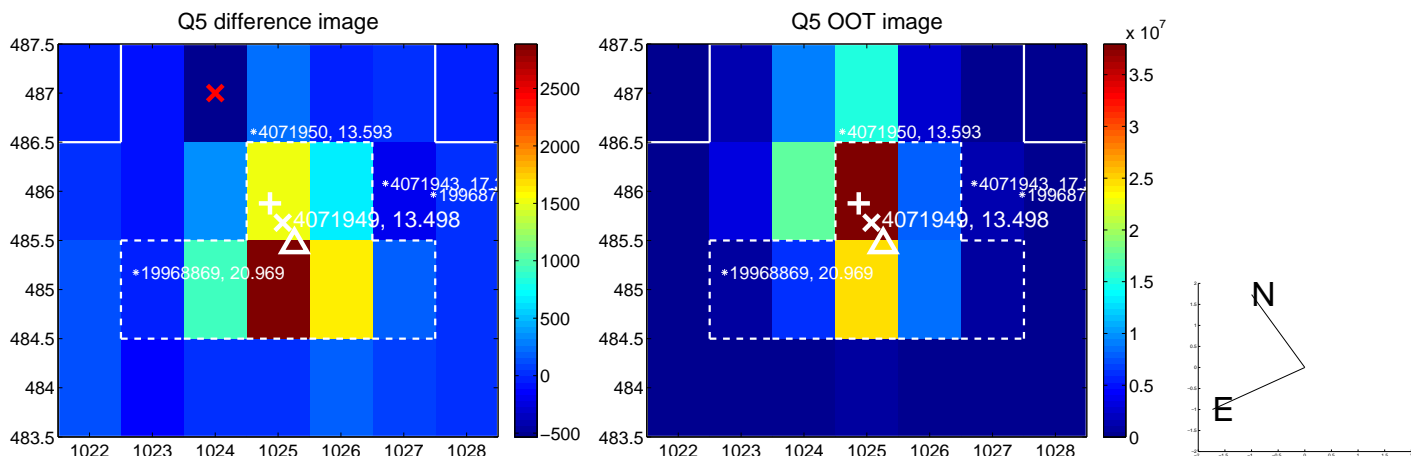


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

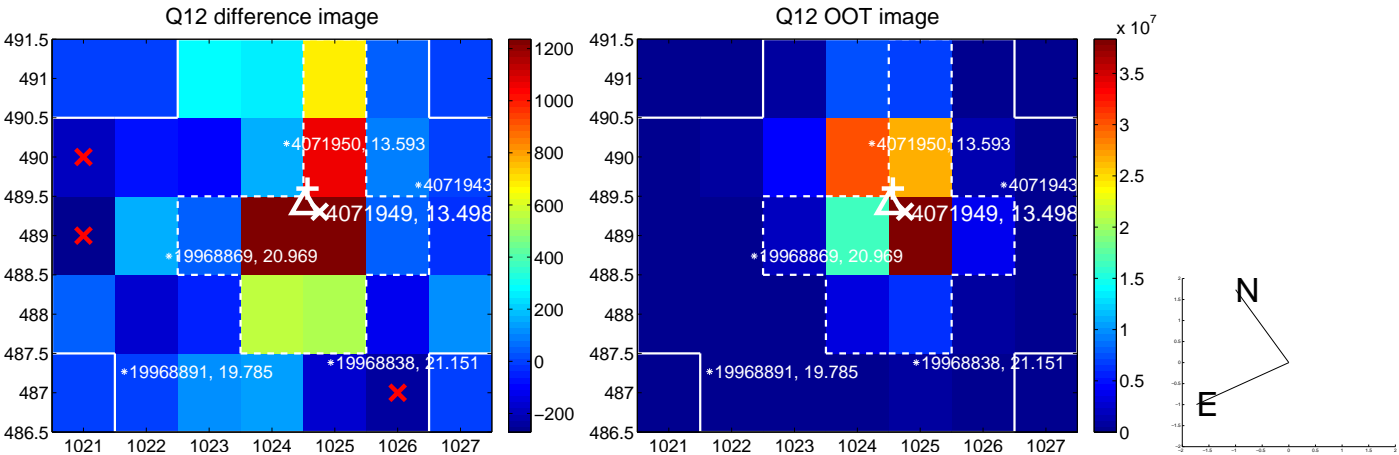
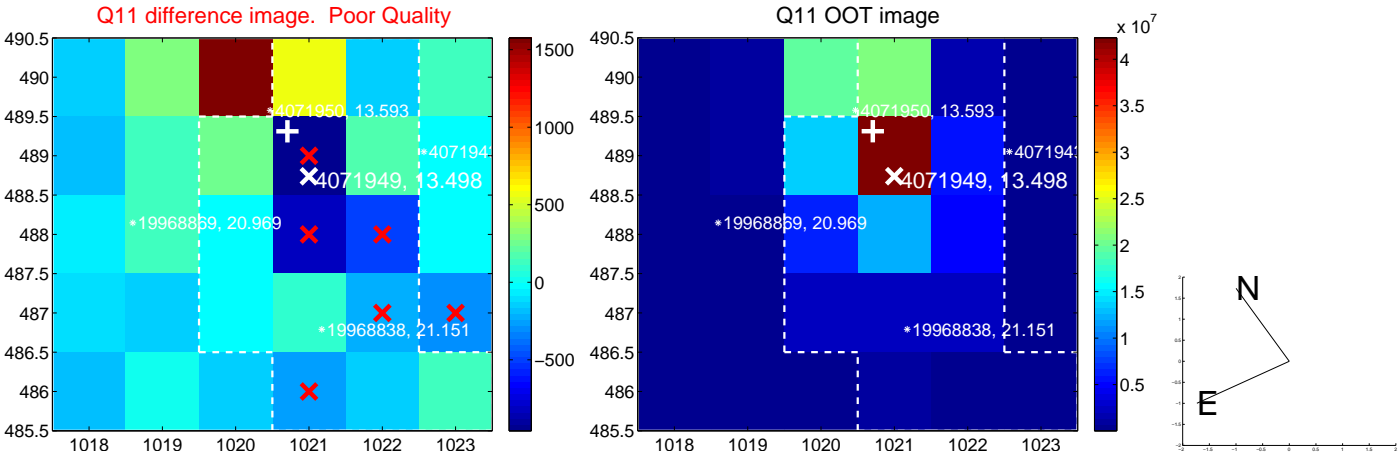
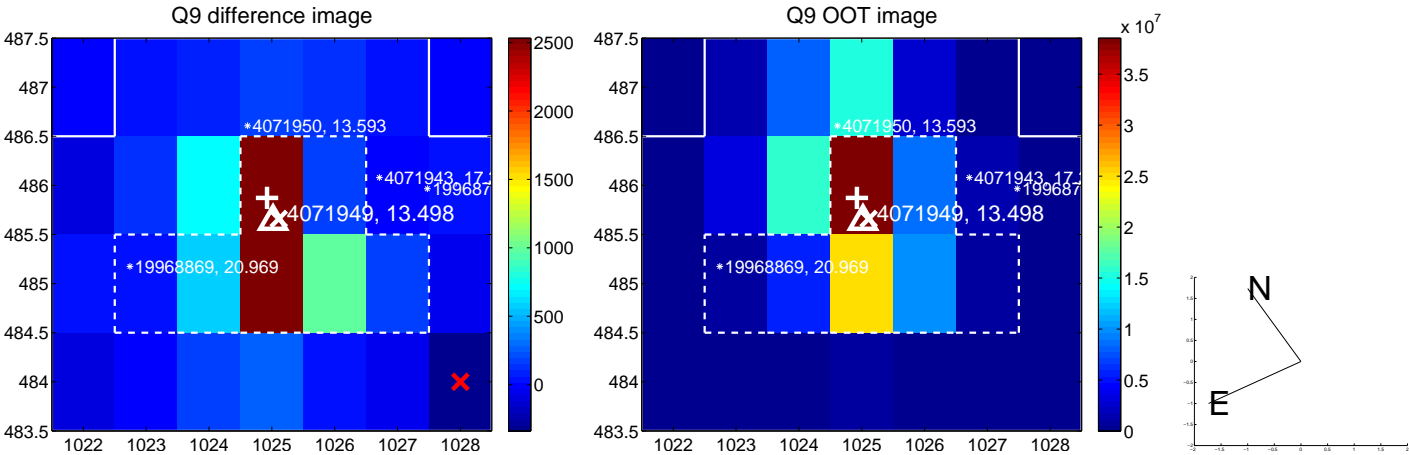
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



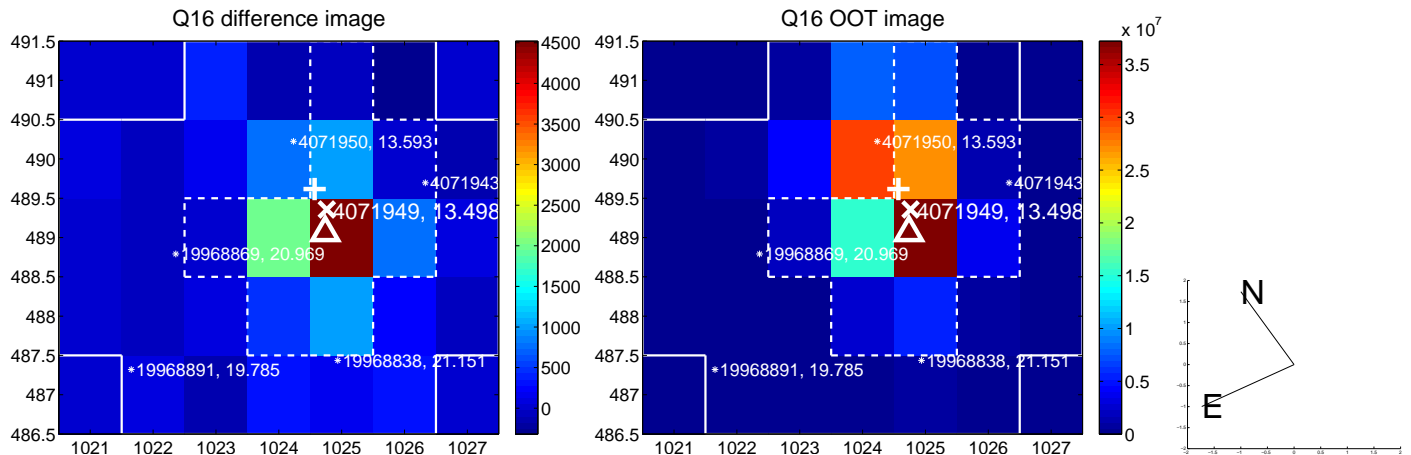
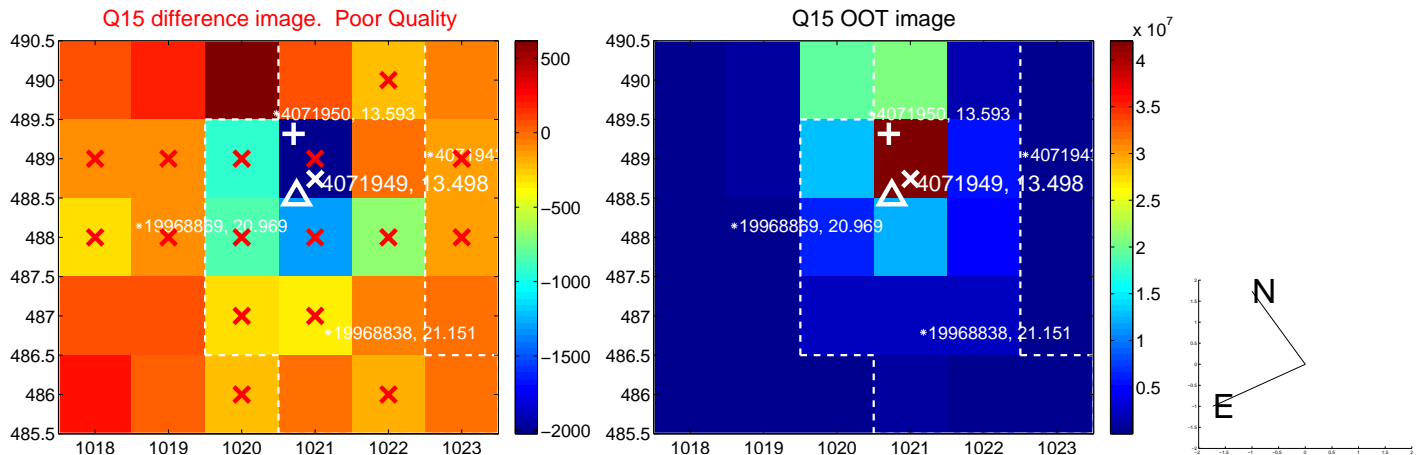
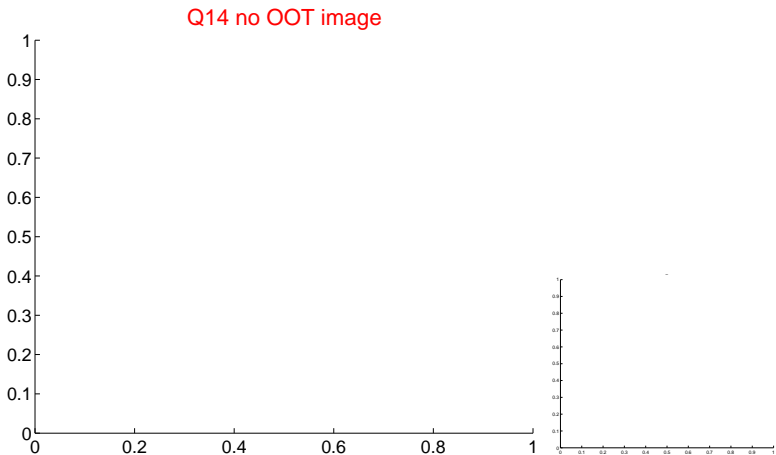
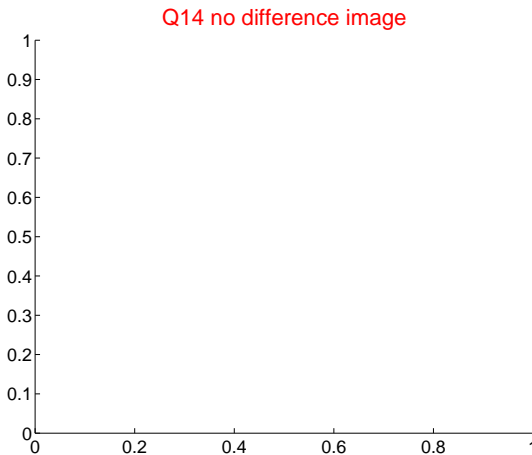
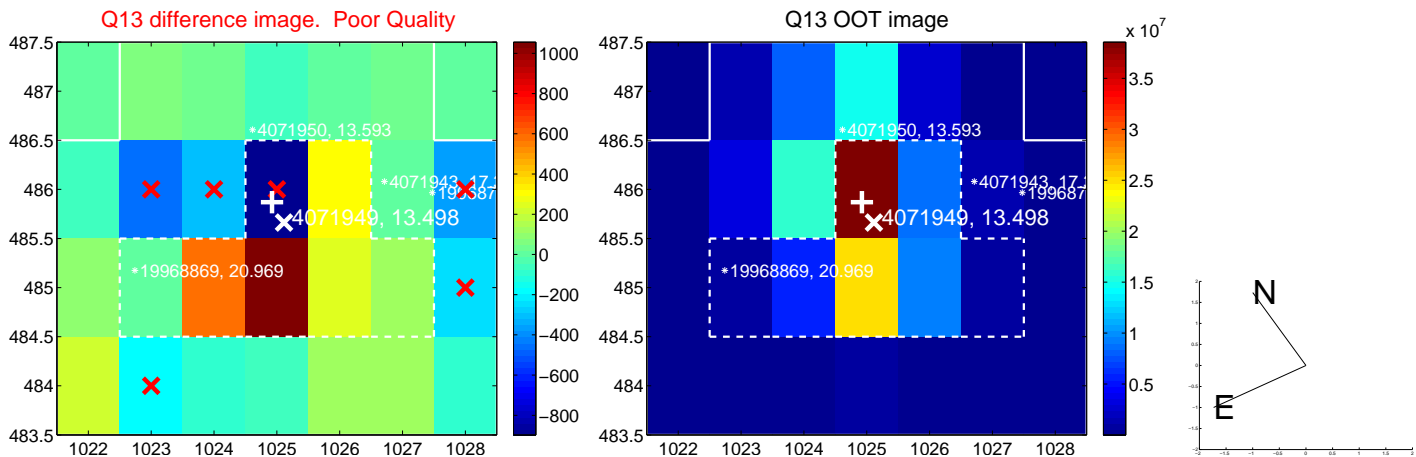
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



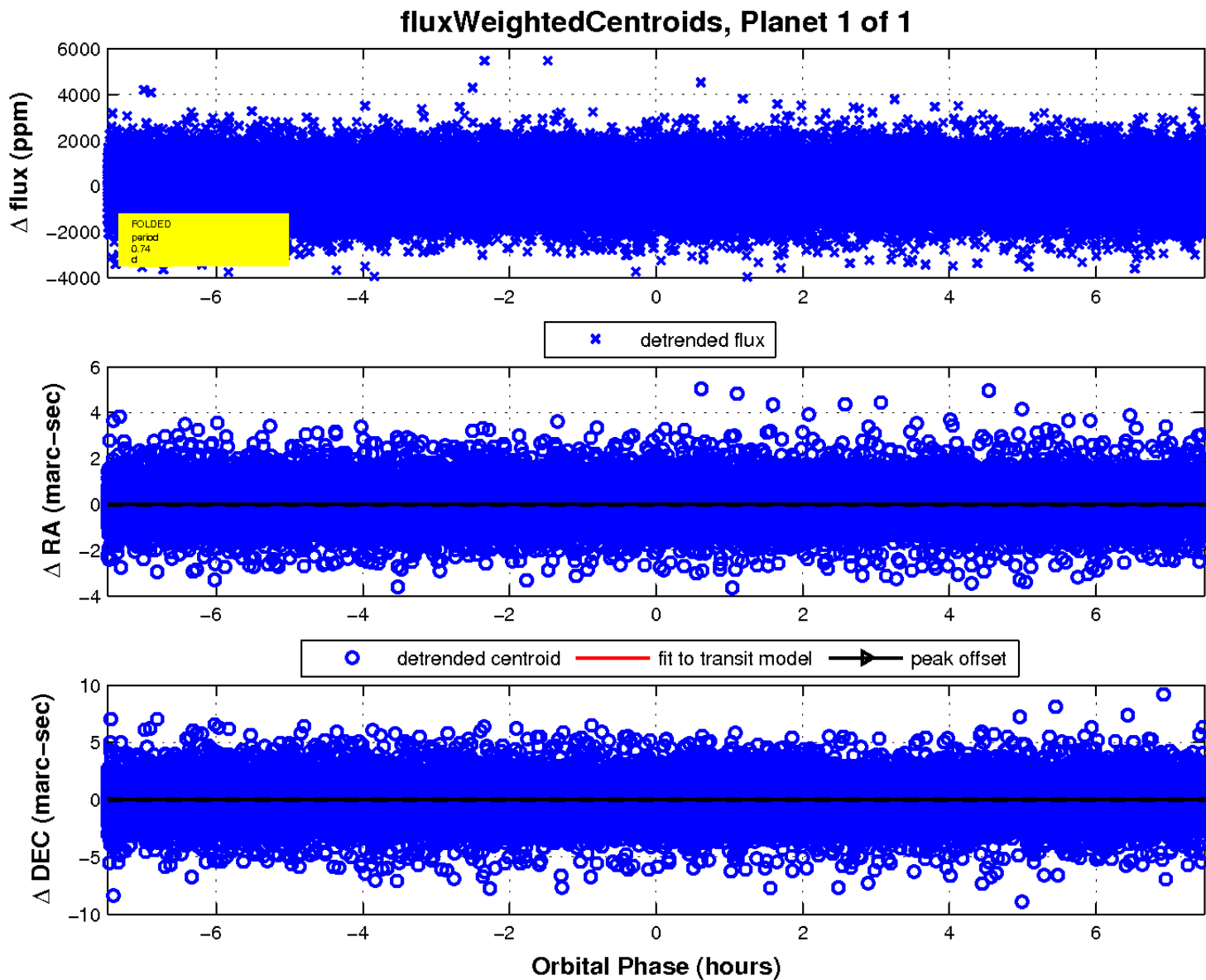
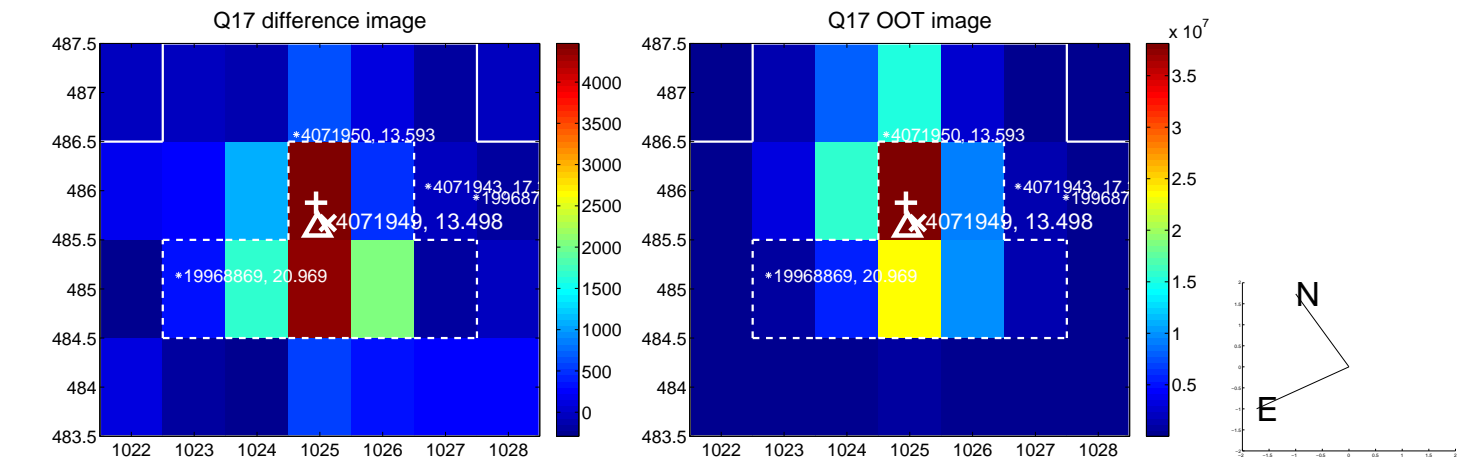
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

