

KIC 007047151

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})
007047151-01	OBS	No	2.948712	133.681677	27.0	22.004	8.6	9.0	0.84	5505	0.57	371.20

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007047151-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET

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

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

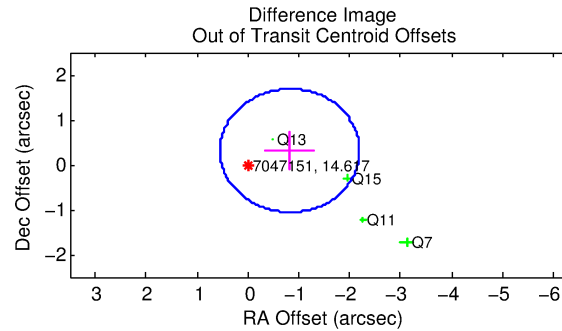
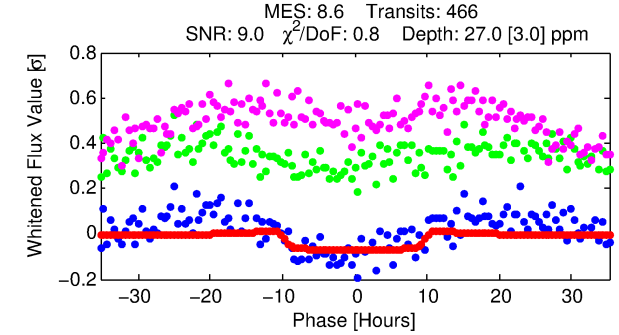
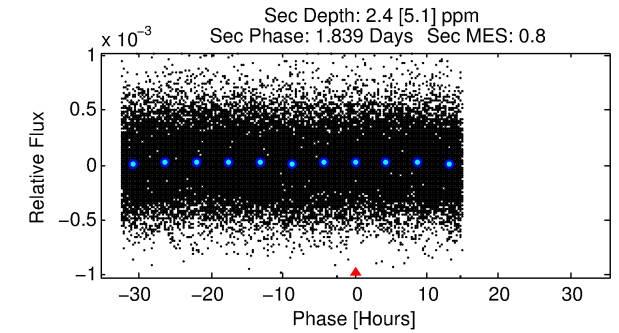
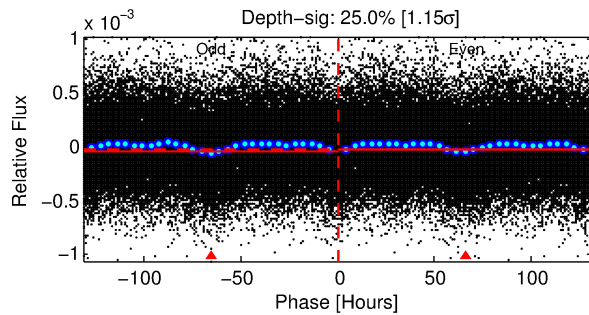
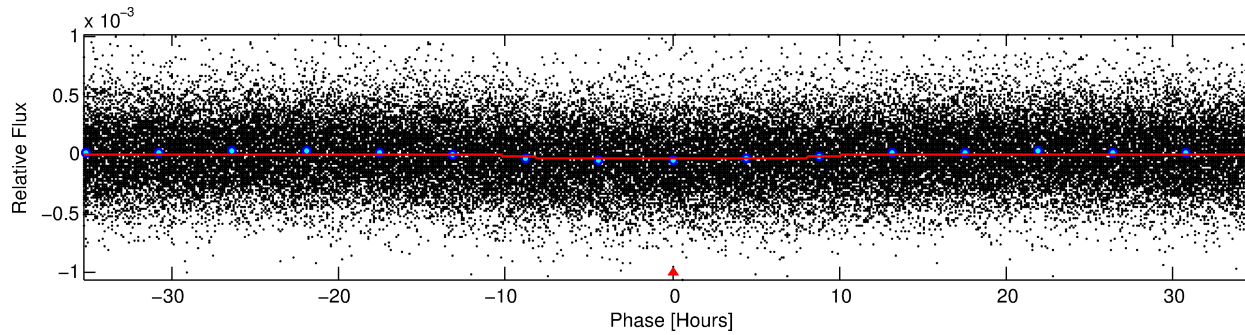
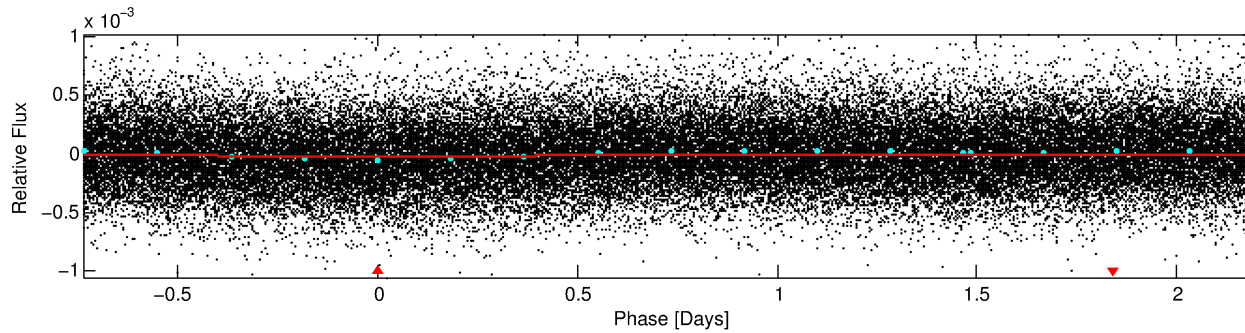
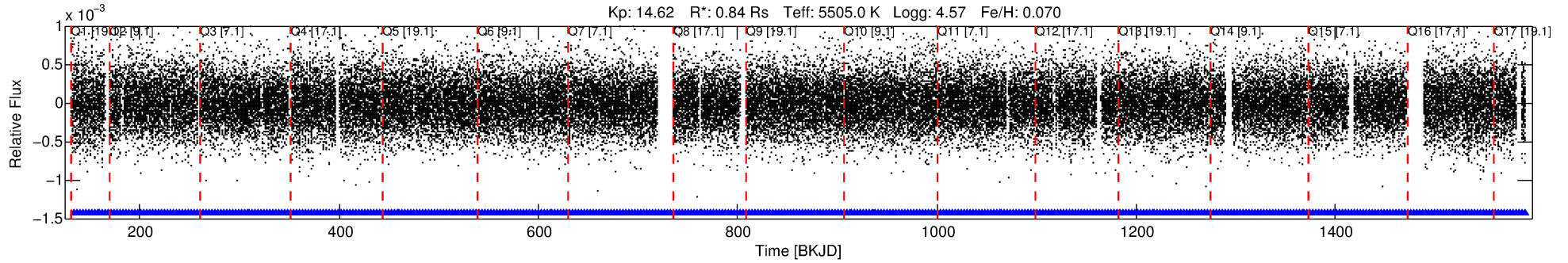
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007047151-01

No Significant Match Found

DV One-Page Summary

KIC: 7047151 Candidate: 1 of 1 Period: 2.949 d



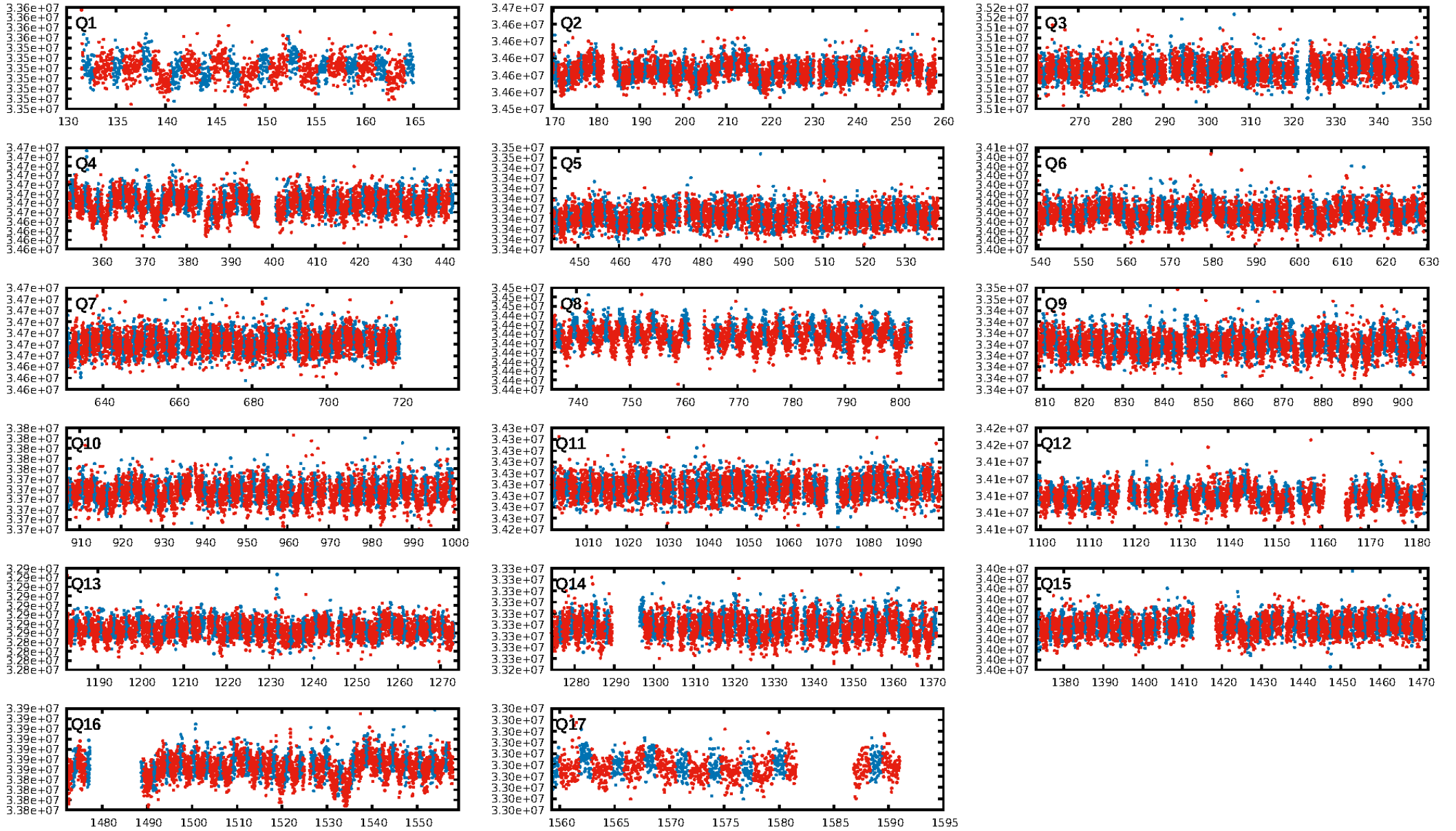
DV Fit Results:

Period = 2.94871 [0.00013] d
Epoch = 133.6817 [0.0345] BKJD
Rp/R* = 0.0063 [0.0008]
a/R* = 1.03 [0.03]
b = 0.96 [0.05]
Seff = 371.20 [127.77]
Teq = 1119 [96] K
Rp = 0.57 [0.16] Re
a = 0.0396 [0.0086] AU
Ag = 6.35 [13.54] [0.40 σ]
Teffp = 2747 [1450] K [1.12 σ]

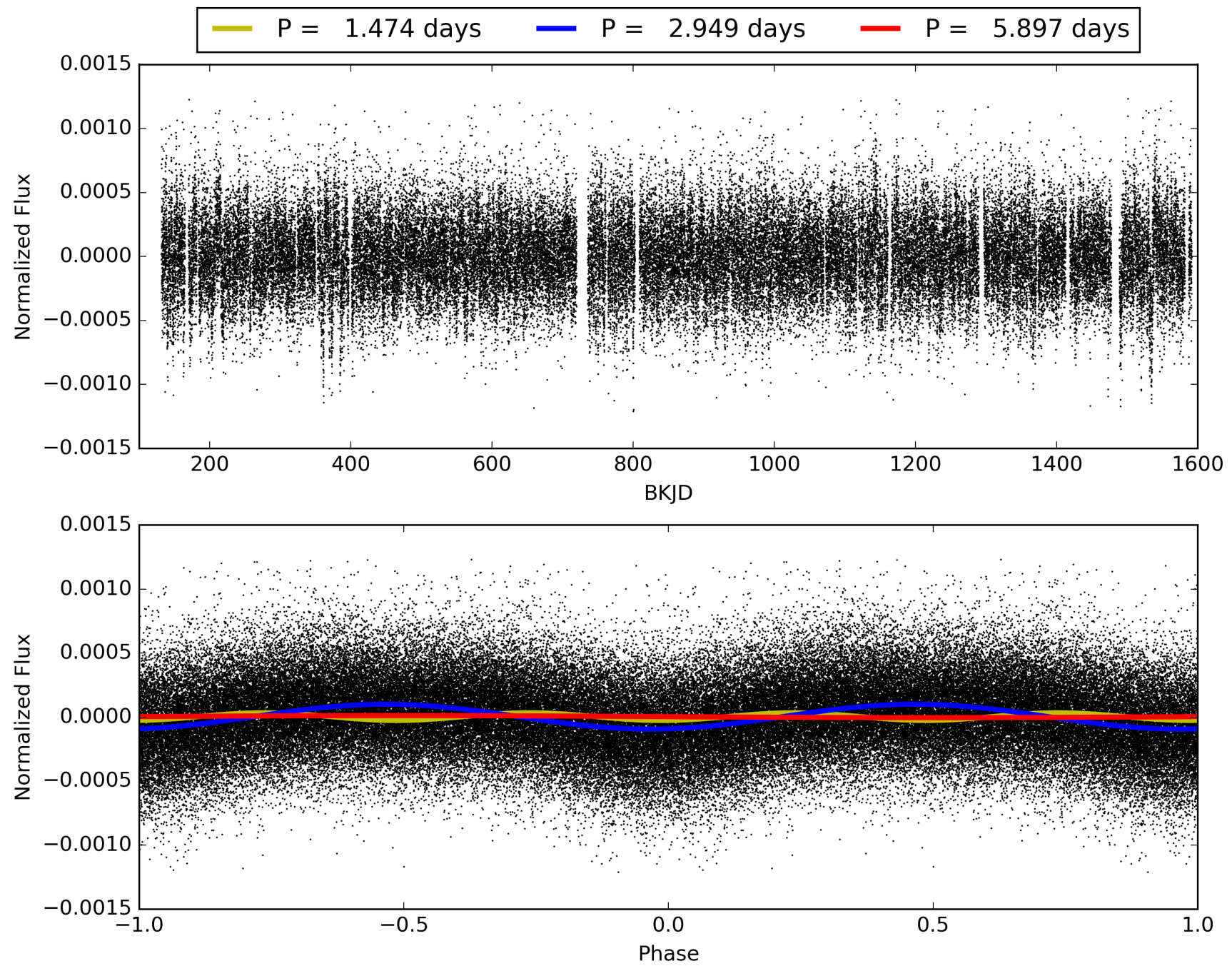
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [445/445]
GhostDiagnostic-chr: -1.263
Centroid-sig: 0.0%
Centroid-so: 22.886 arcsec [12.05 σ]
OotOffset-rm: 0.878 arcsec [1.92 σ]
OotOffset-st: 0/3/0/1 [4]
KicOffset-rm: 6.631 arcsec [5.44 σ]
KicOffset-st: 0/3/0/1 [4]
DiffImageQuality-fgm: 1.00 [4/4]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 007047151-01, PDC Light Curves

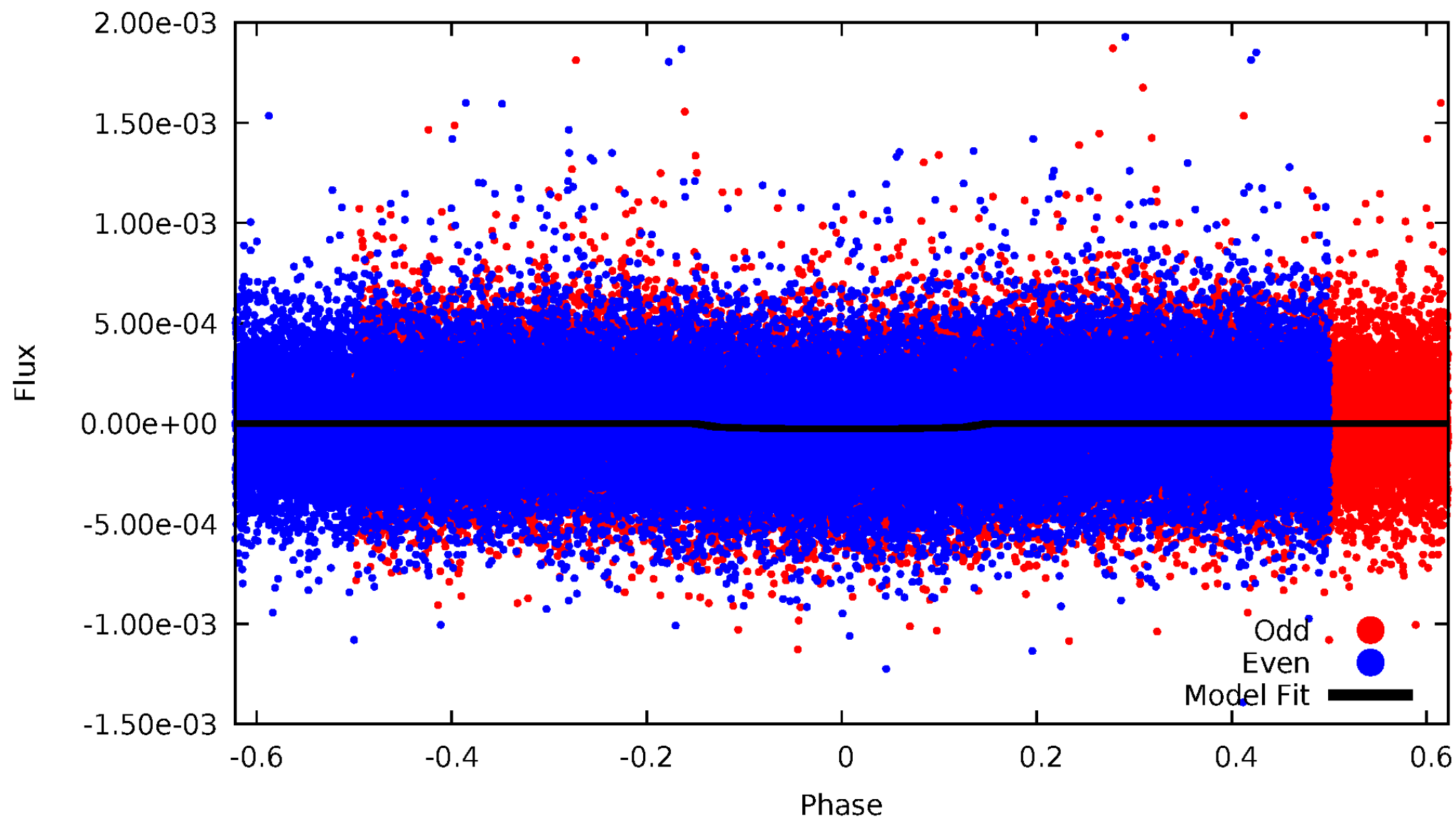


TCE 007047151-01



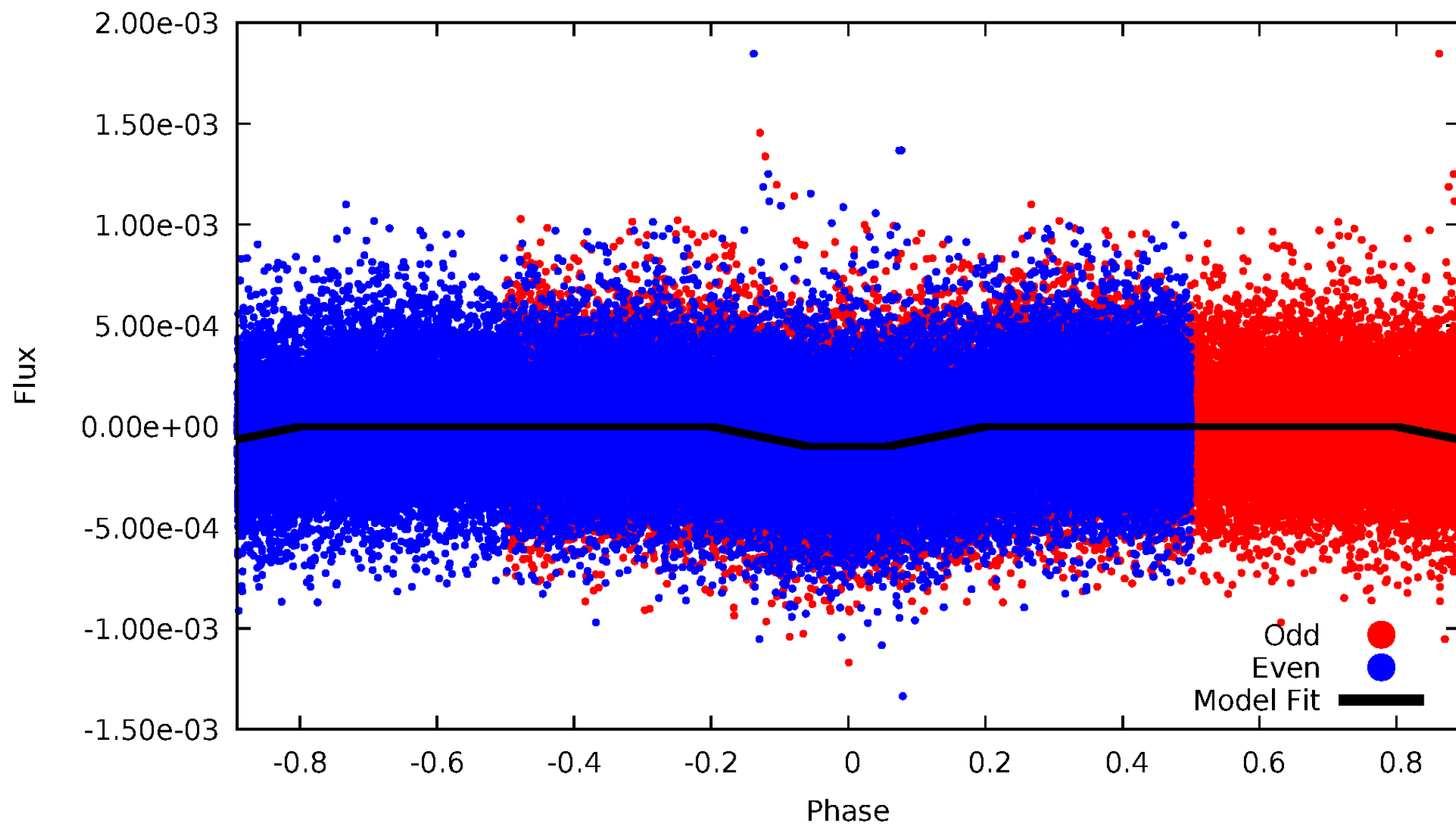
DV Odd/Even

TCE 007047151-01



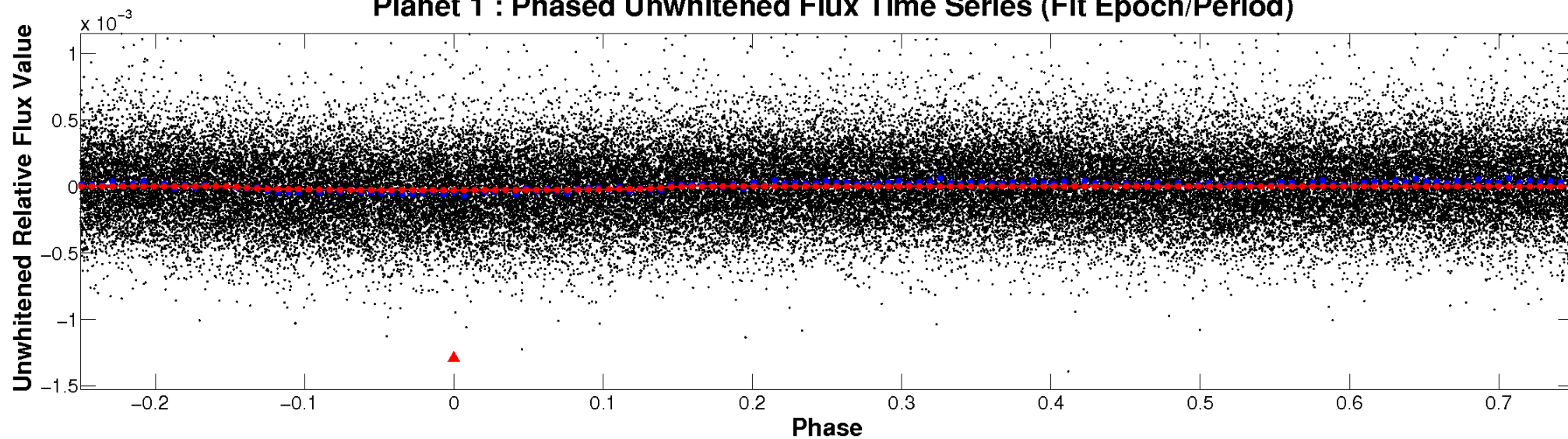
ALT Odd/Even

TCE 007047151-01

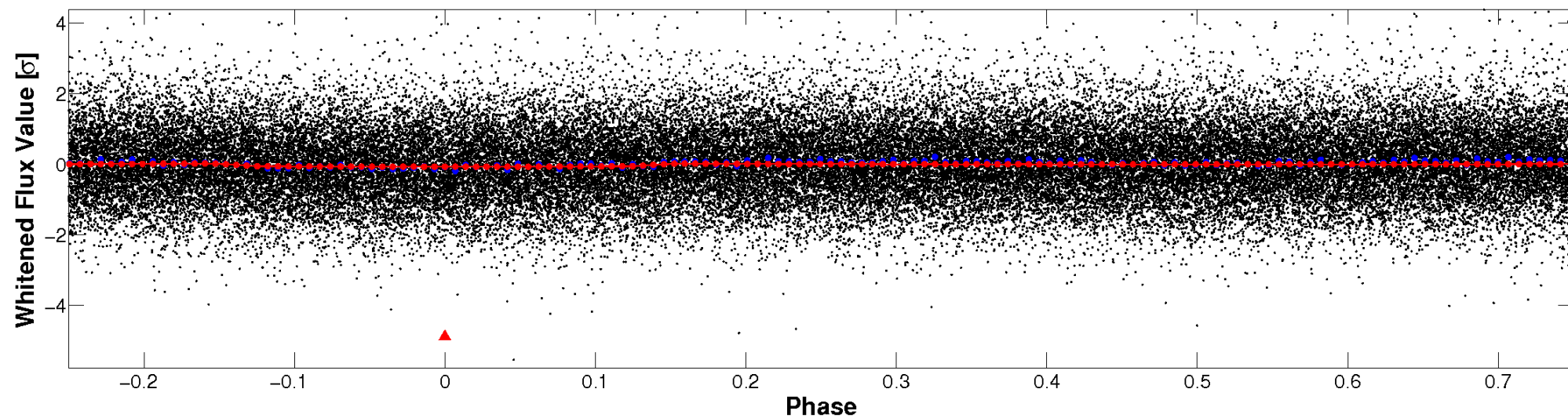


Non-Whitened Vs. Whitened Light Curve

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

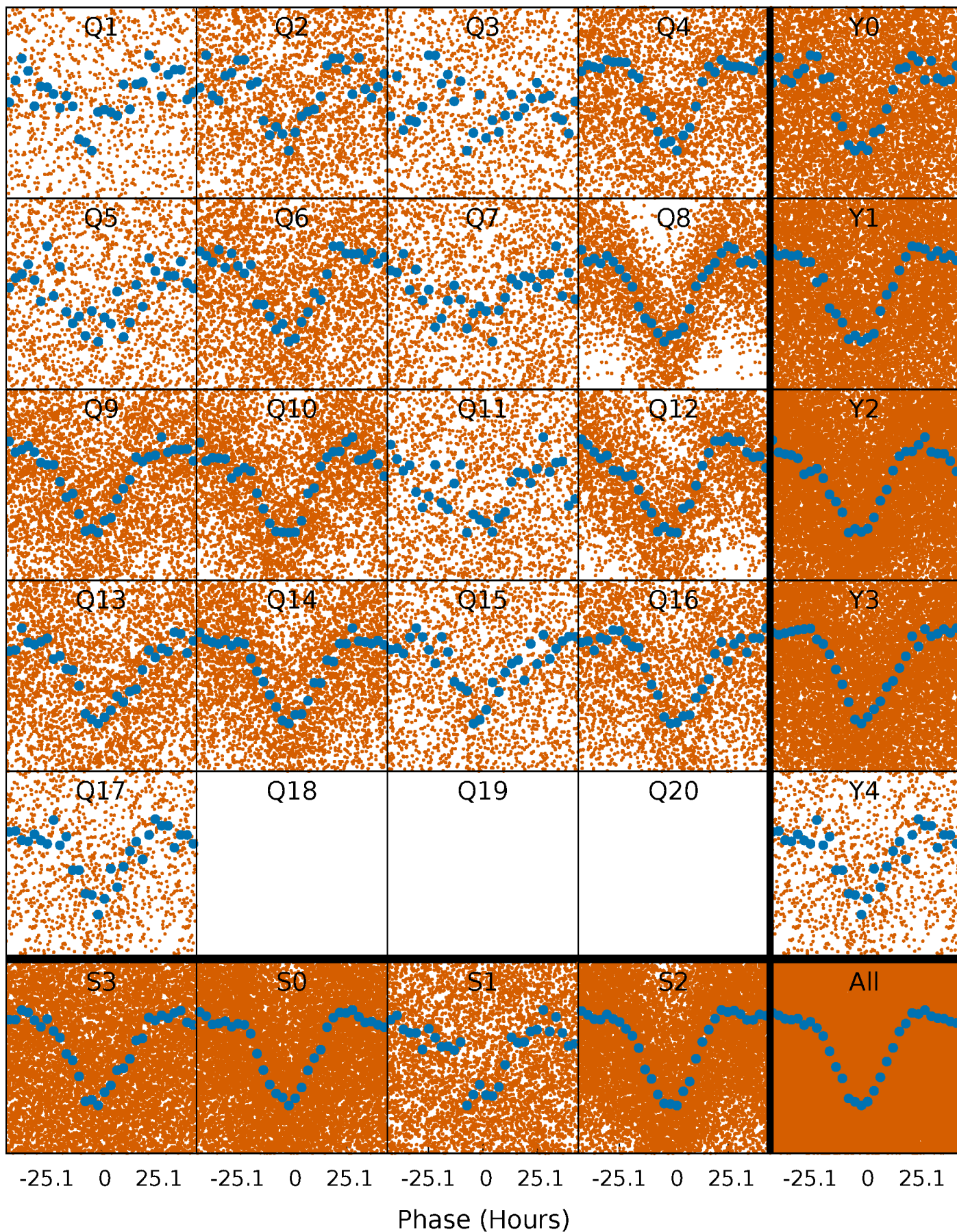


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



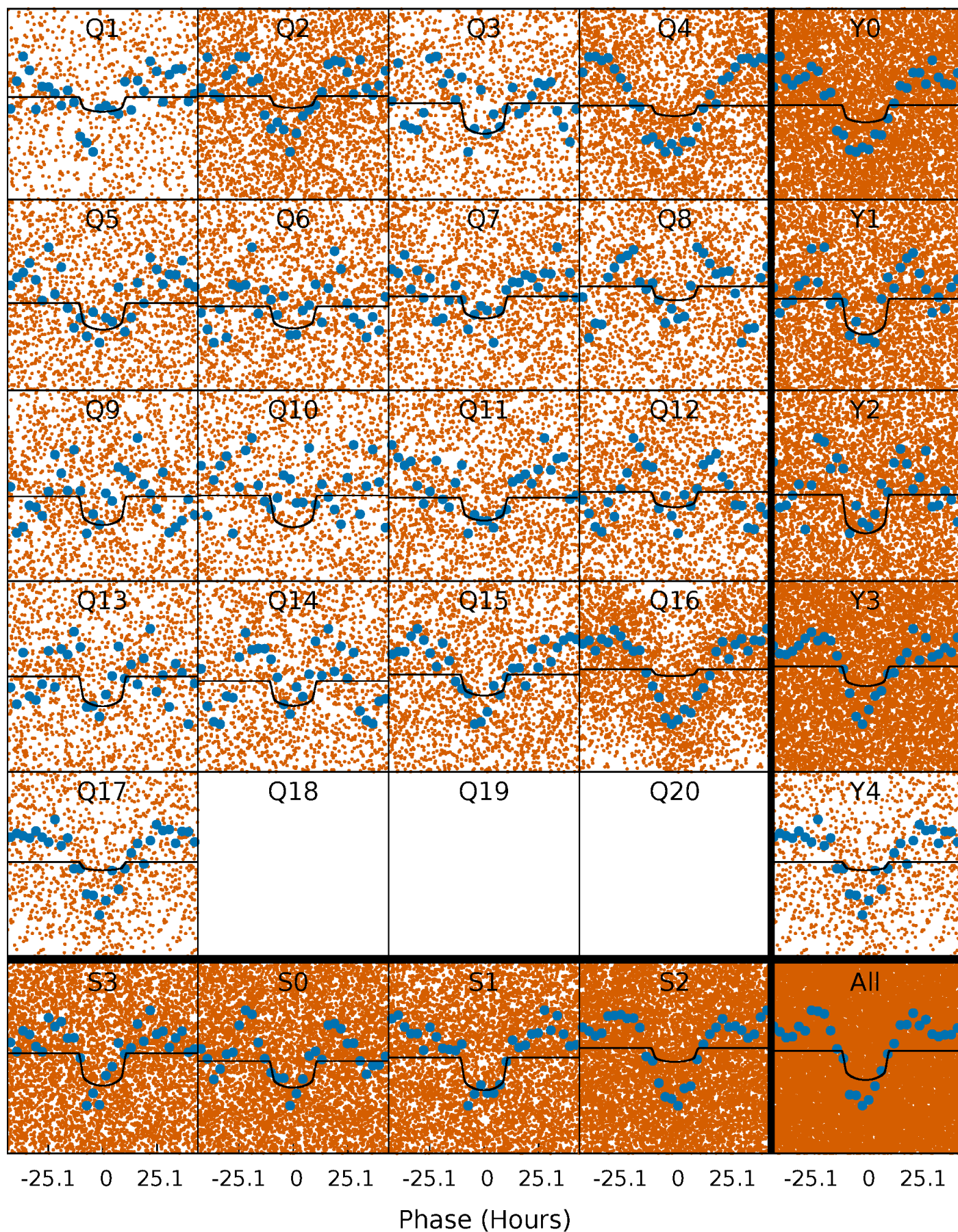
PDC Quarter-Phased Transit Curves

TCE 007047151-01 P= 2.948712 Days $T_0=133.681677$ (BKJD)



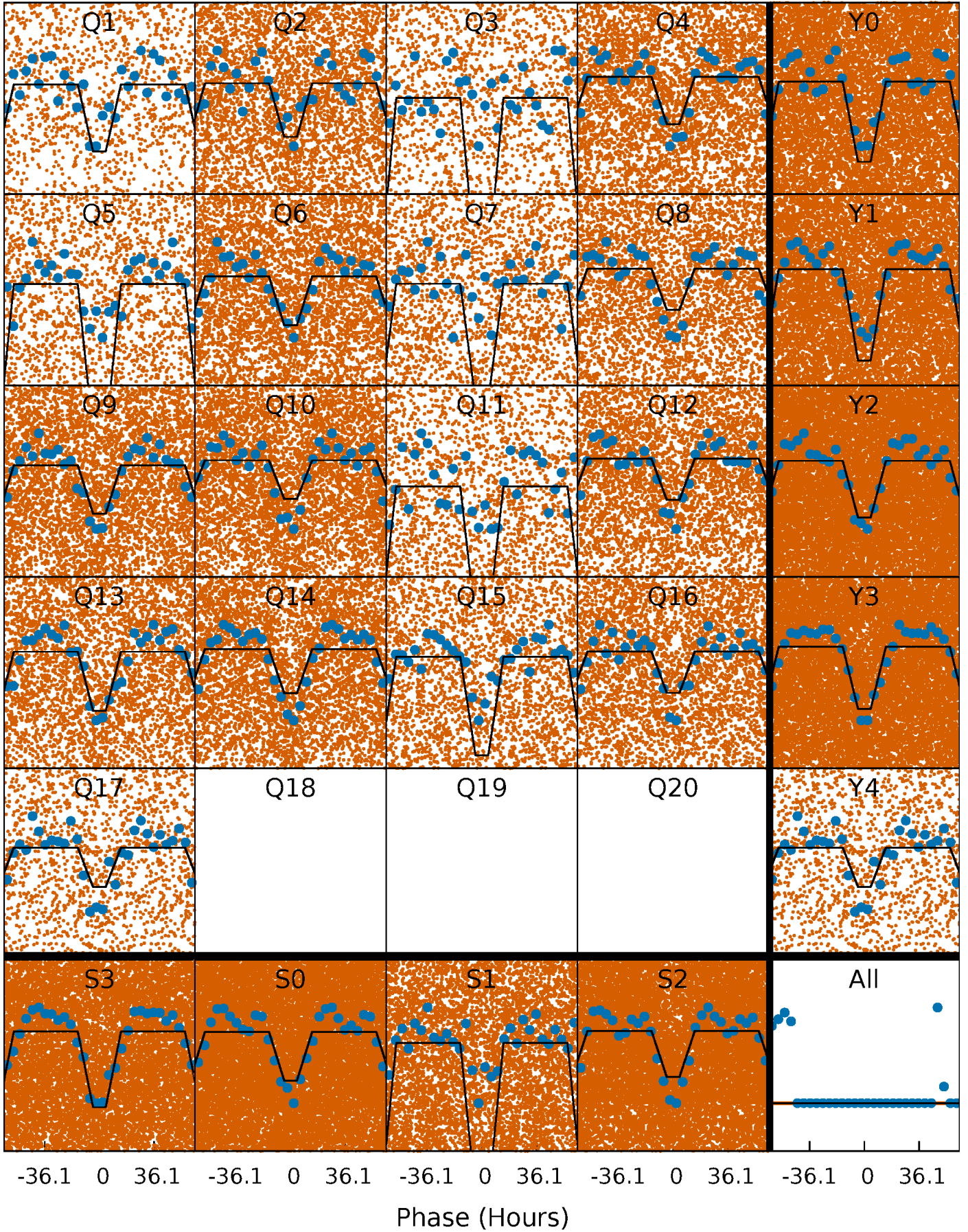
DV Quarter-Phased Transit Curves

TCE 007047151-01 P= 2.948712 Days $T_0=133.681677$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

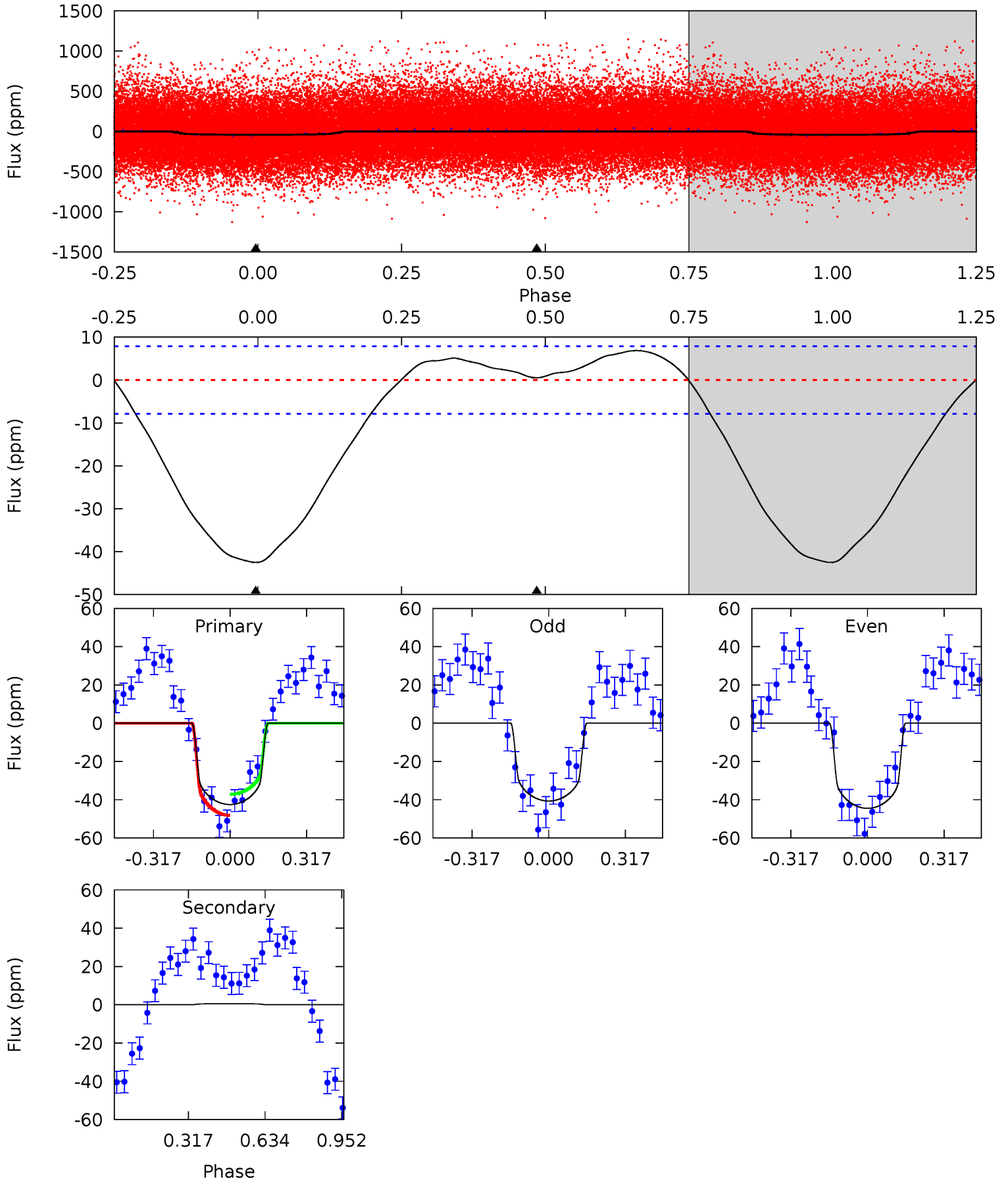
TCE 007047151-01 P= 2.948882 Days $T_0=133.546140$ (BKJD)



DV Model-Shift Uniqueness Test

007047151-01, P = 2.948712 Days, E = 130.732965 Days

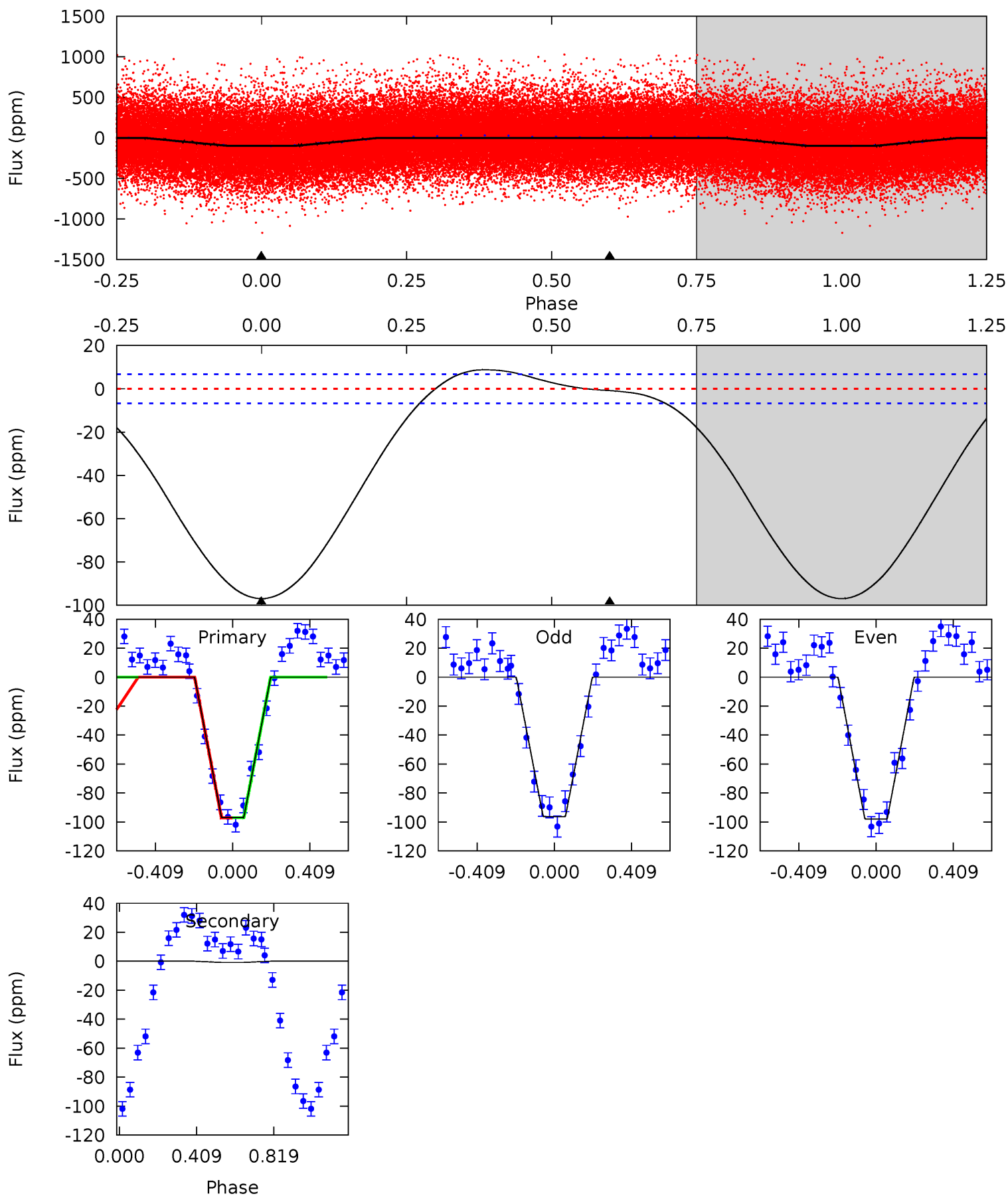
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.4	-0.29	0	0	4.32	1.00	1.40	23.4	23.4	-0.29	-0.29	1.05	1.22	0.14	3.02



Alt Model-Shift Uniqueness Test

007047151-01, P = 2.948882 Days, E = 130.597258 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
61.5	0.53	0	0	4.26	0.82	4.02	61.5	61.5	0.53	0.53	0.58	0.96	0.08	0.04



Stellar Parameters For KIC 007047151

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5505^{+147}_{-164}	$4.567^{+0.032}_{-0.179}$	$0.070^{+0.250}_{-0.300}$	$0.841^{+0.214}_{-0.071}$	$0.953^{+0.074}_{-0.110}$	$2.253^{+0.370}_{-1.027}$
	+3%/-3%	+1%/-4%	+357%/-429%	+25%/-8%	+8%/-12%	+16%/-46%
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 007047151-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	1 ± 2	$0.60^{+0.11}_{-0.09}$	1599^{+96}_{-77}	-2757^{+5728}_{-539}	$-1.333^{+4.337}_{-4.037}$
Alt.	-1 ± 2	$0.95^{+0.14}_{-0.10}$	1597^{+97}_{-65}	2351^{+450}_{-4948}	$0.737^{+1.406}_{-1.419}$

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

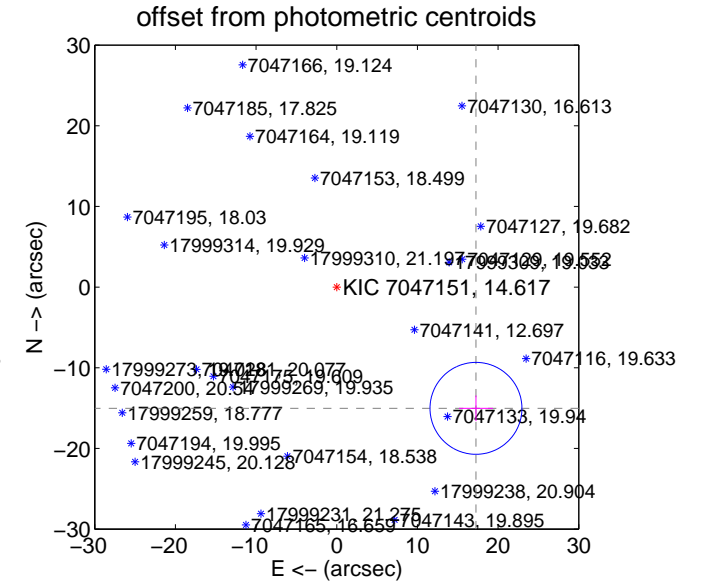
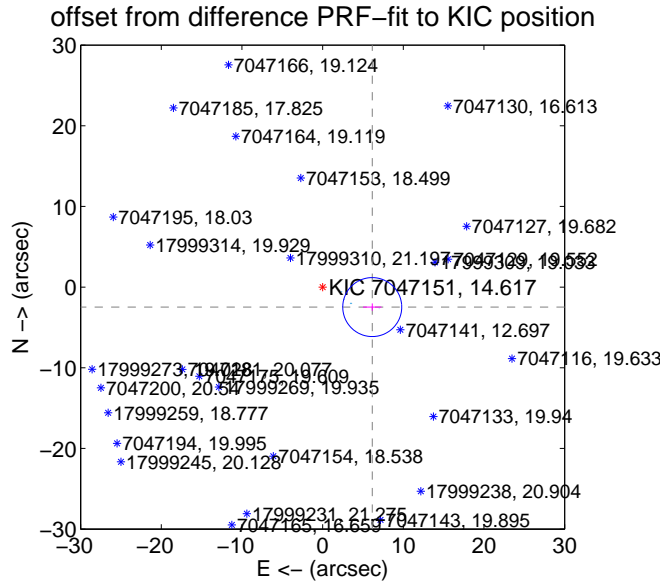
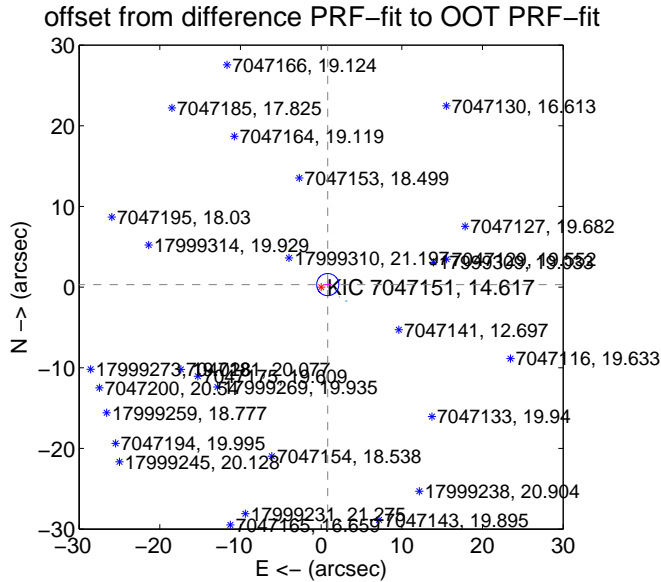
DV Centroid Data

Supplemental centroid analysis for 007047151-01. Kepler magnitude: 14.62. Transit SNR 9.05

There are 4 quarters with good PRF difference image offsets

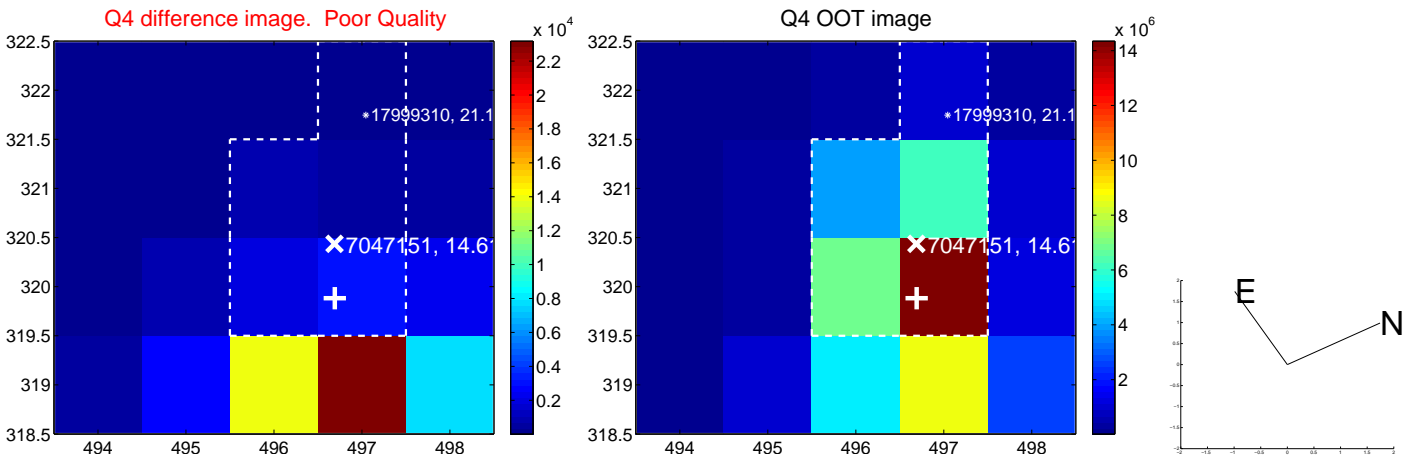
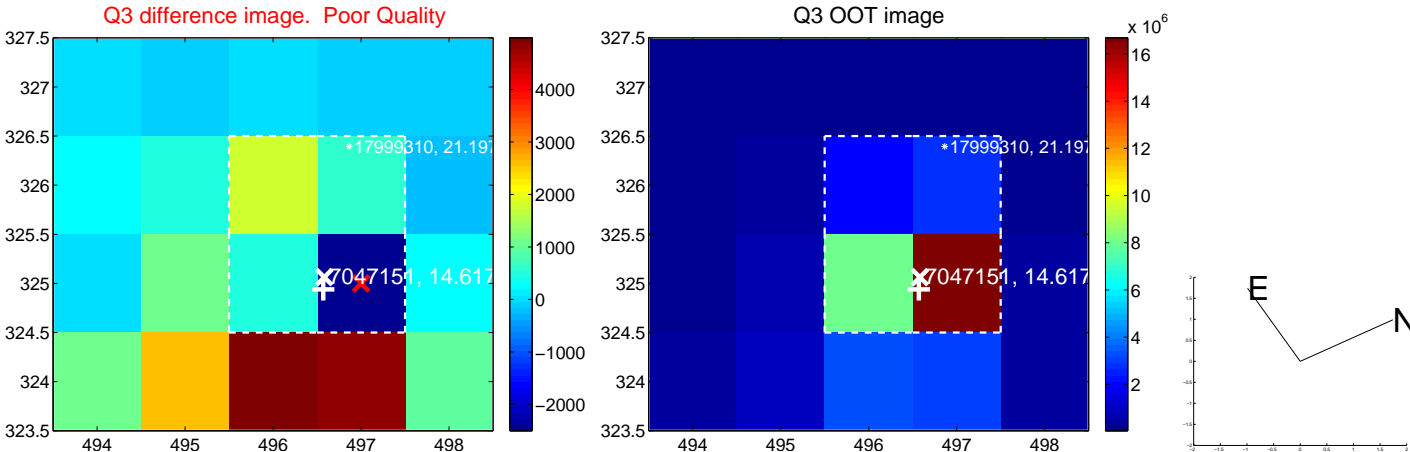
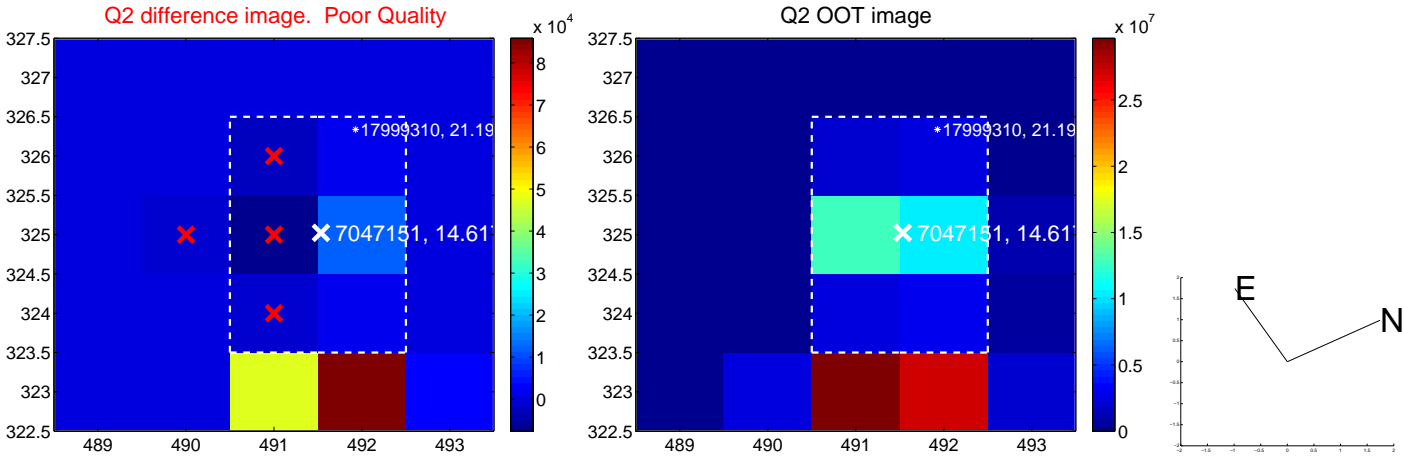
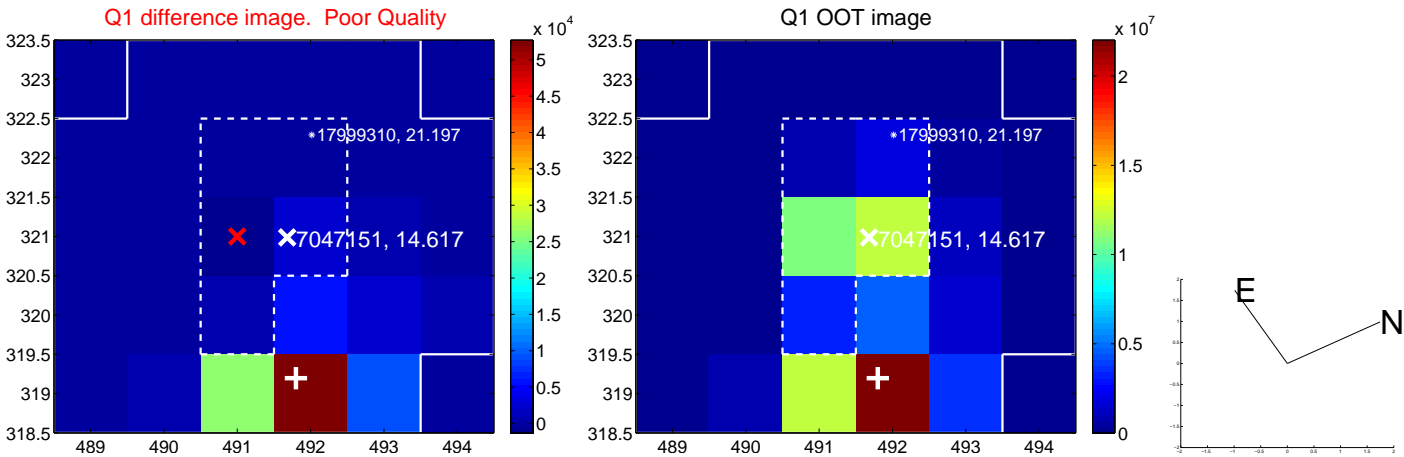
The direct PRF centroid is offset from the target star catalog position by about 0.49 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.878 ± 0.457	1.92	-0.821 ± 0.465	0.311 ± 0.401
PRF-fit source offset from KIC position	6.631 ± 1.218	5.44	-6.151 ± 1.142	-2.477 ± 0.460
photometric centroid source offset	22.89 ± 1.90	12.05	-17.26 ± 2.11	-15.03 ± 1.59

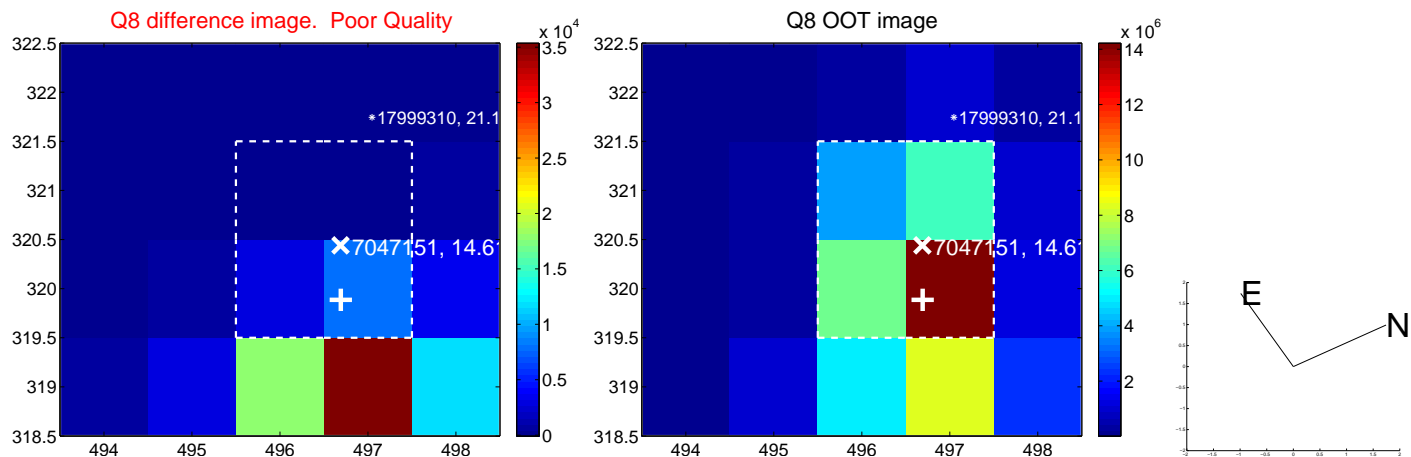
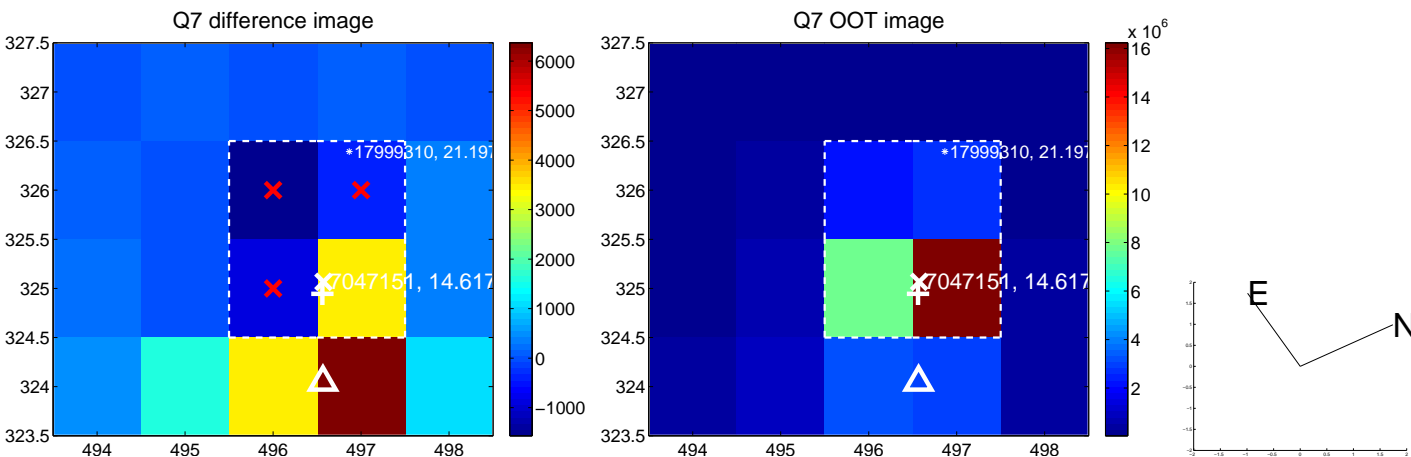
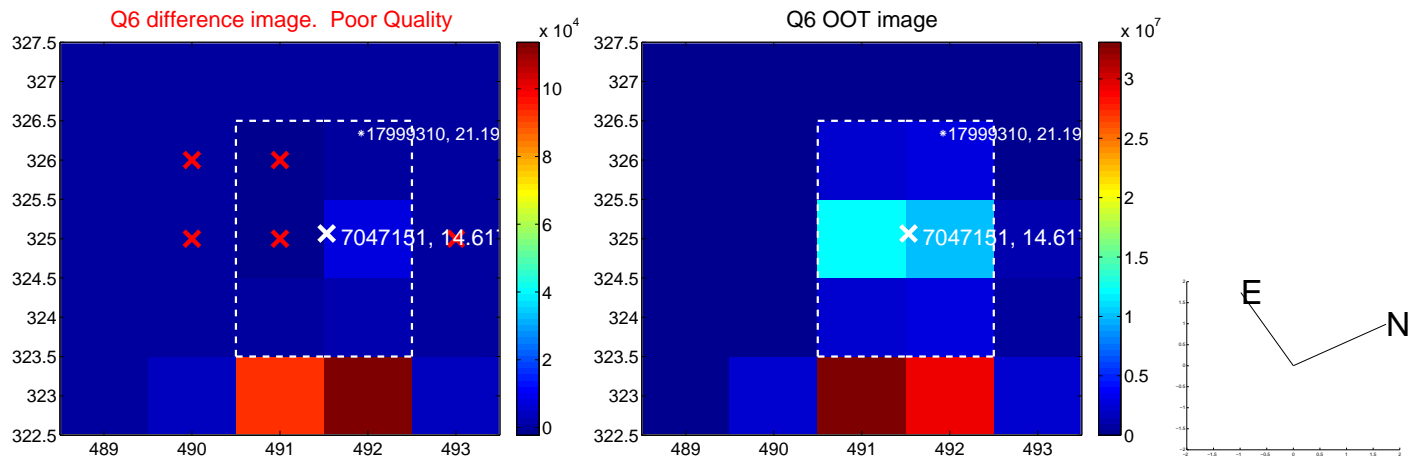
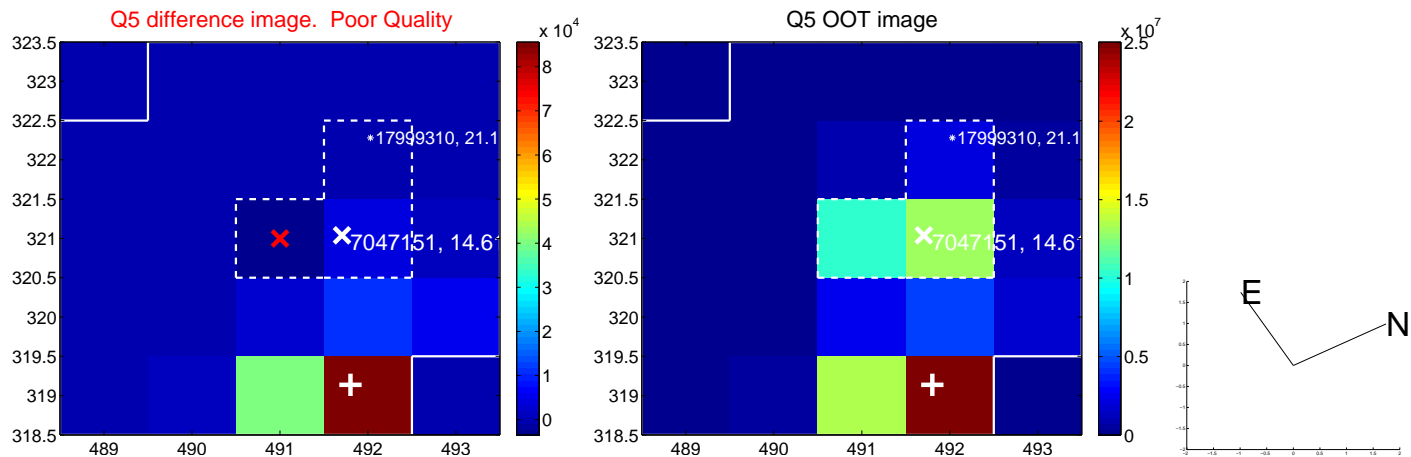


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000 are from the UKIRT catalog.

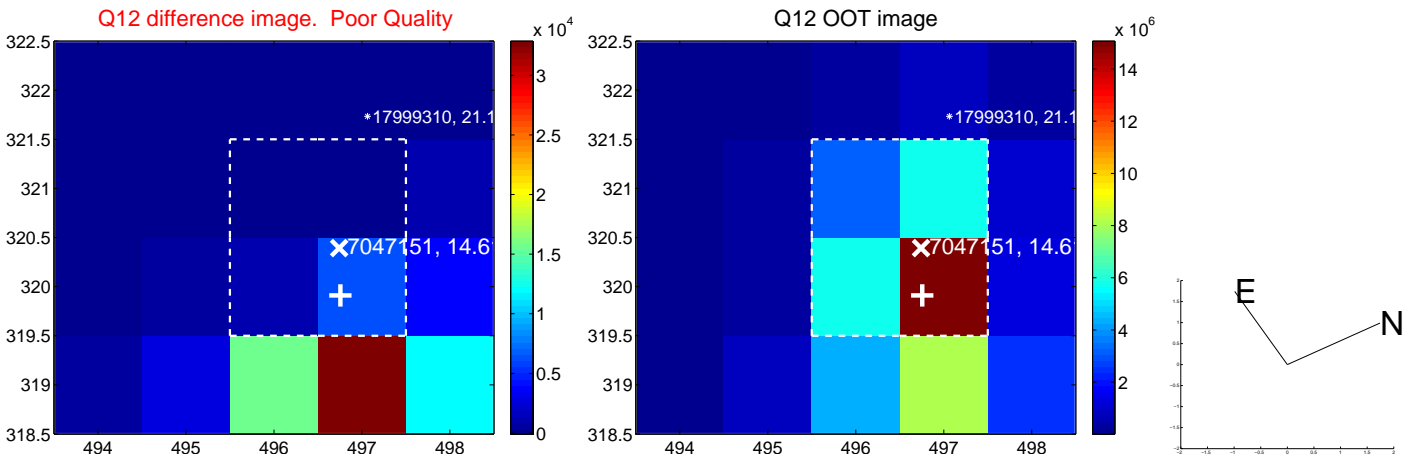
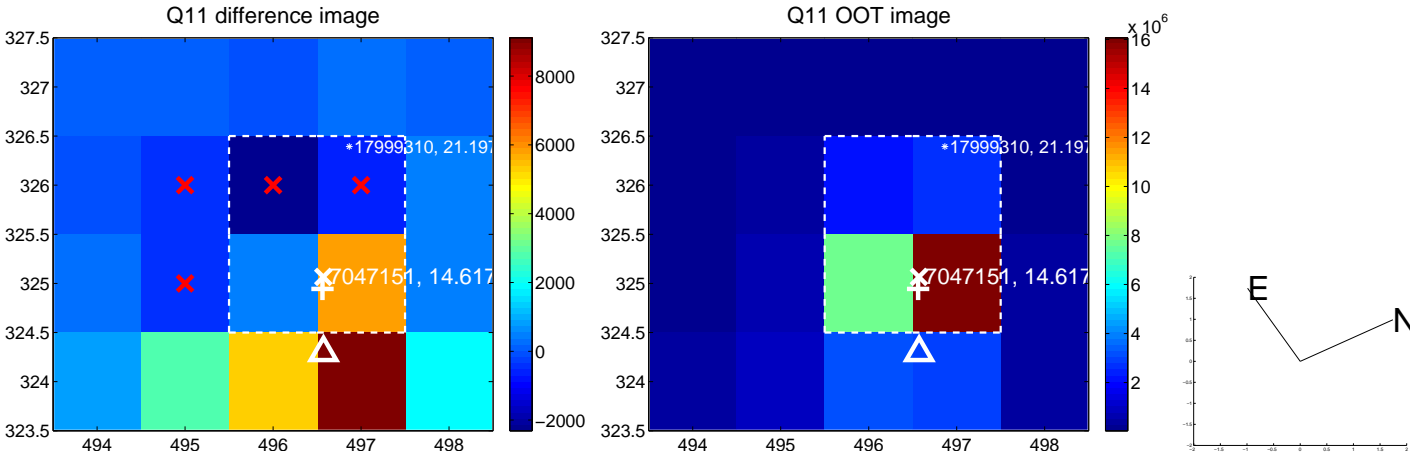
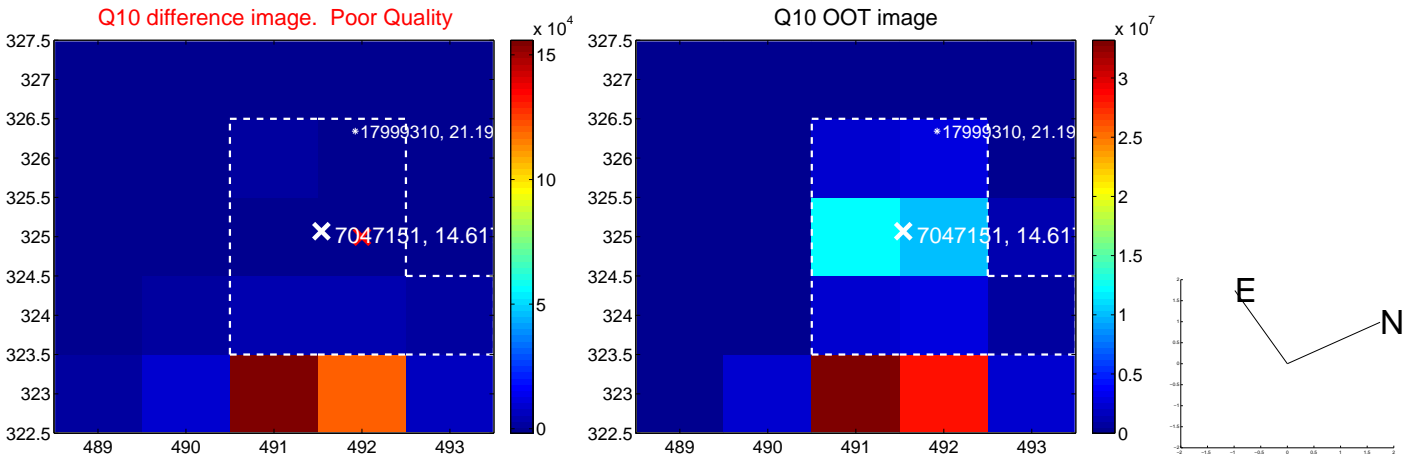
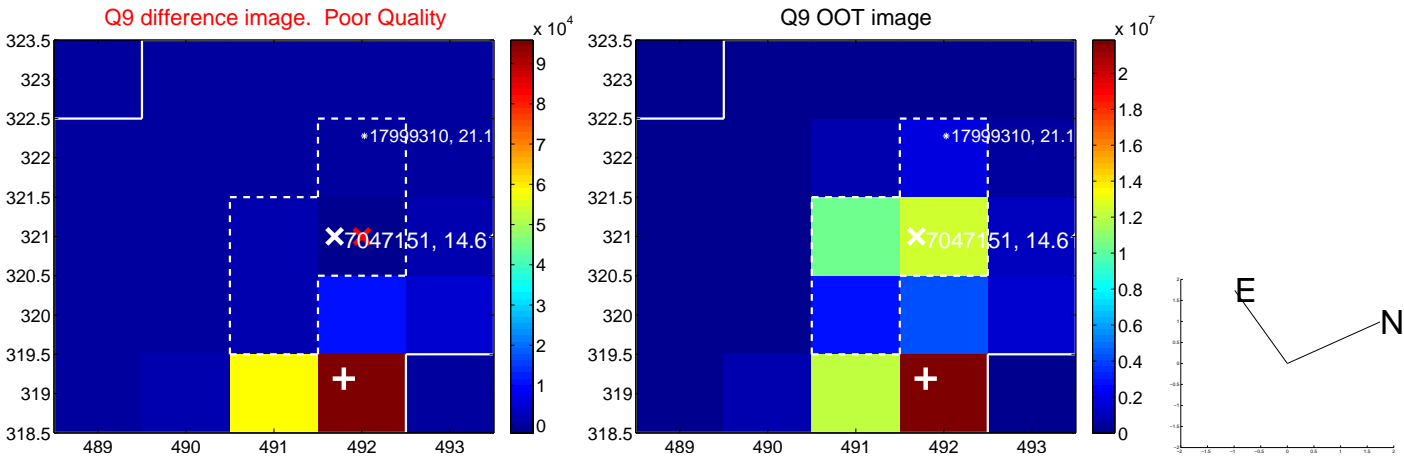
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



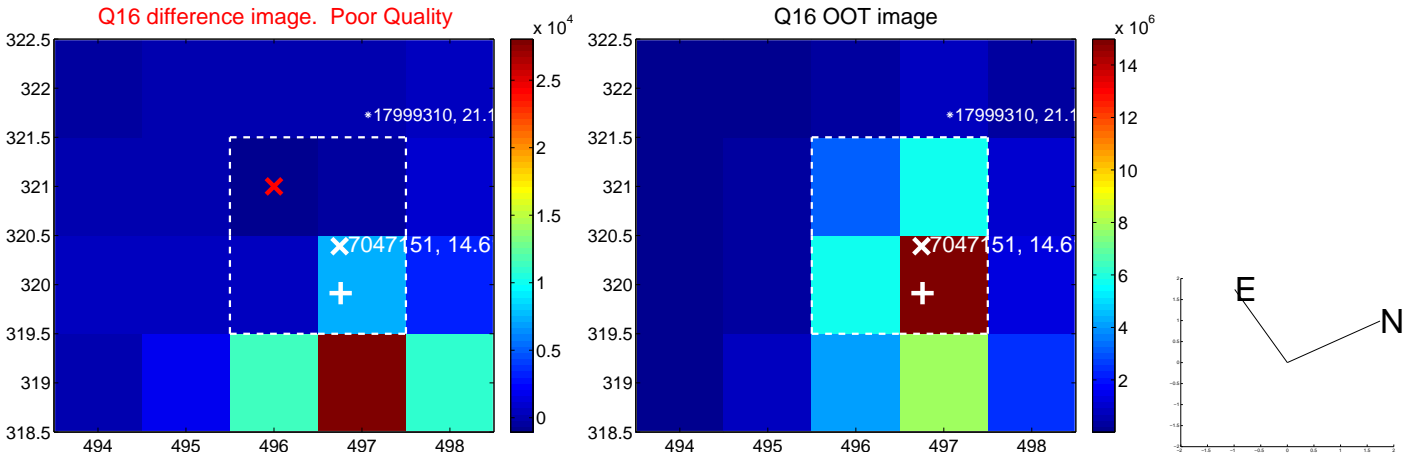
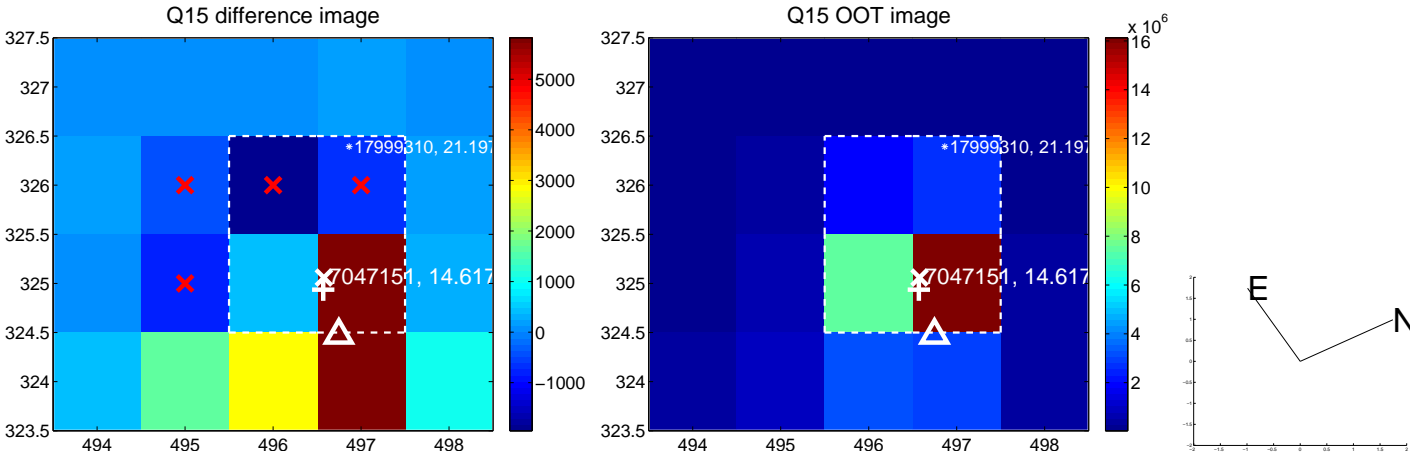
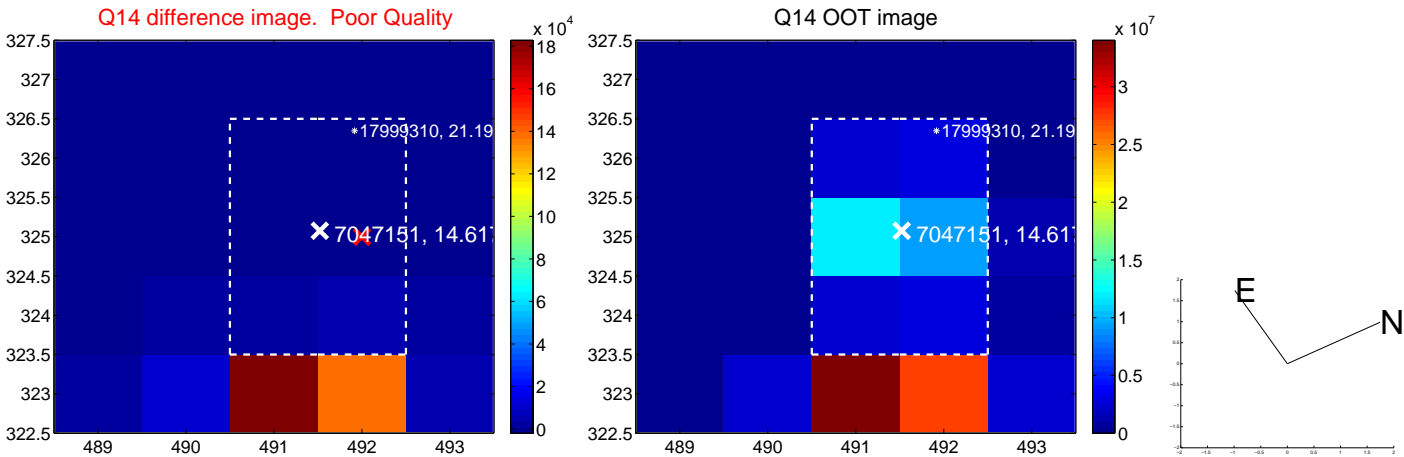
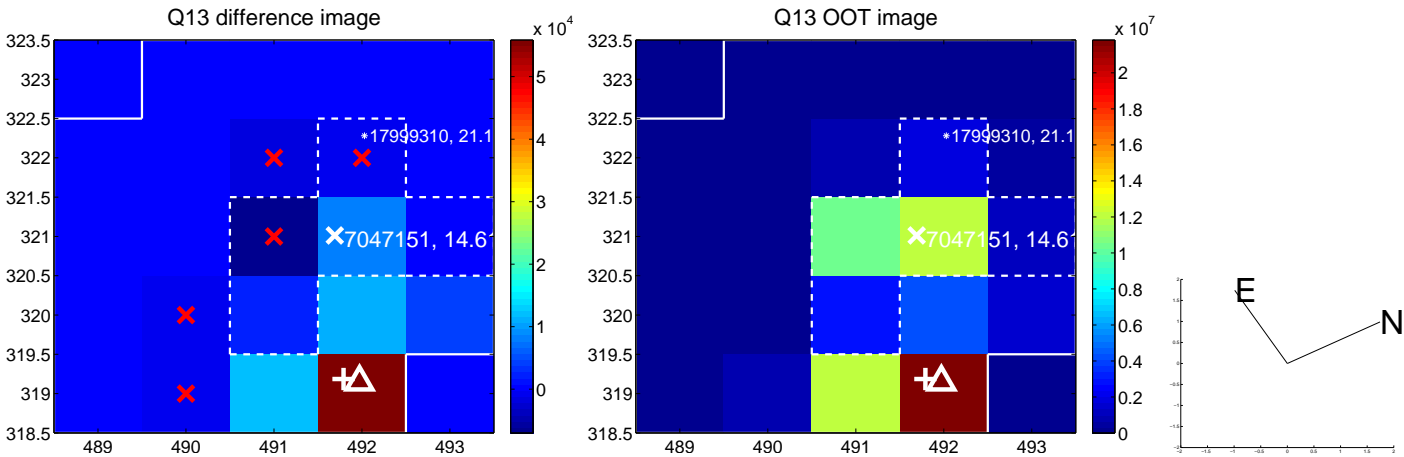
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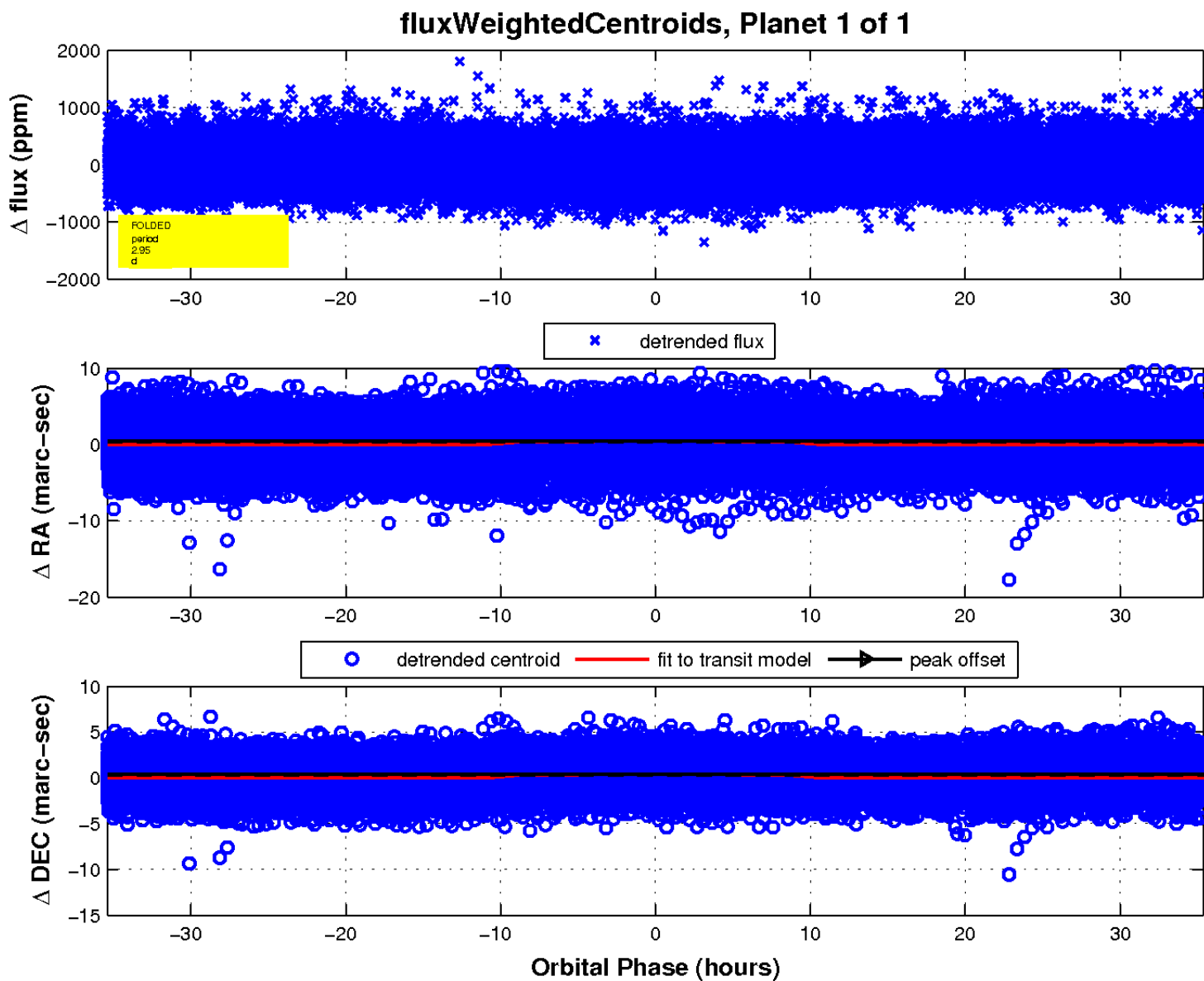
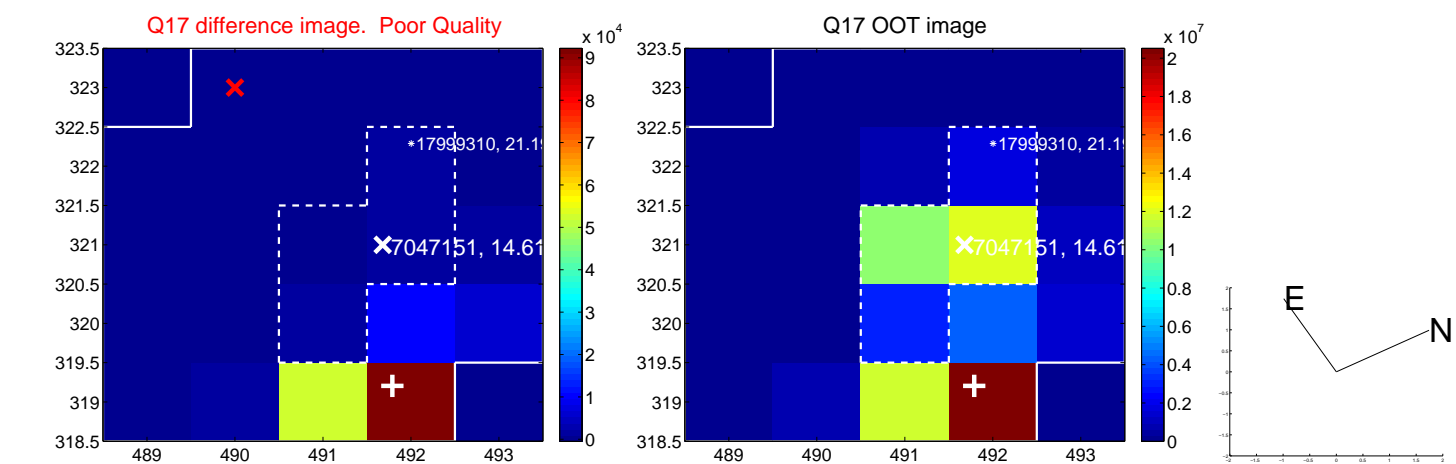
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UKIRT Image

Declination

