

KIC 006047498

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})
006047498-01	OBS	1013.01	1.037453	131.596435	305.7	0.631	12.0	23.3	0.76	5572	1.64	1402.65

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006047498-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER

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.

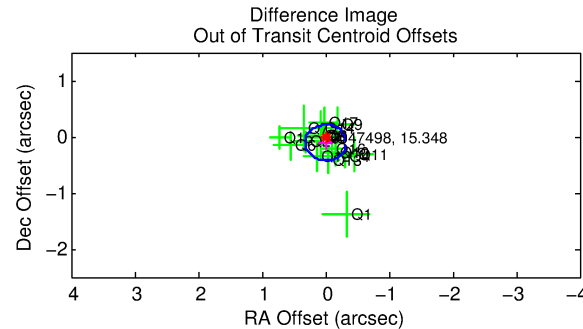
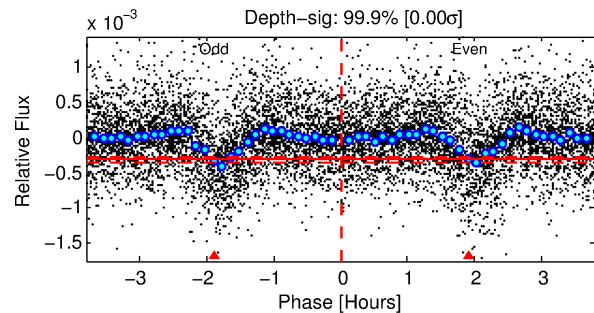
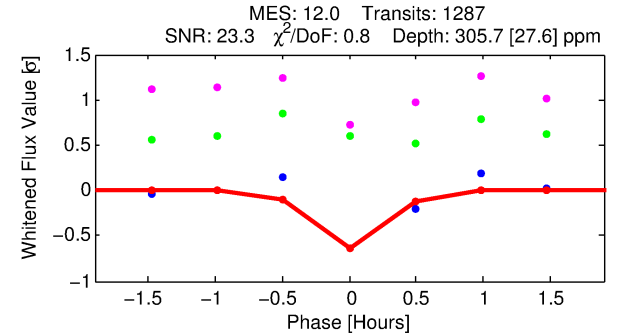
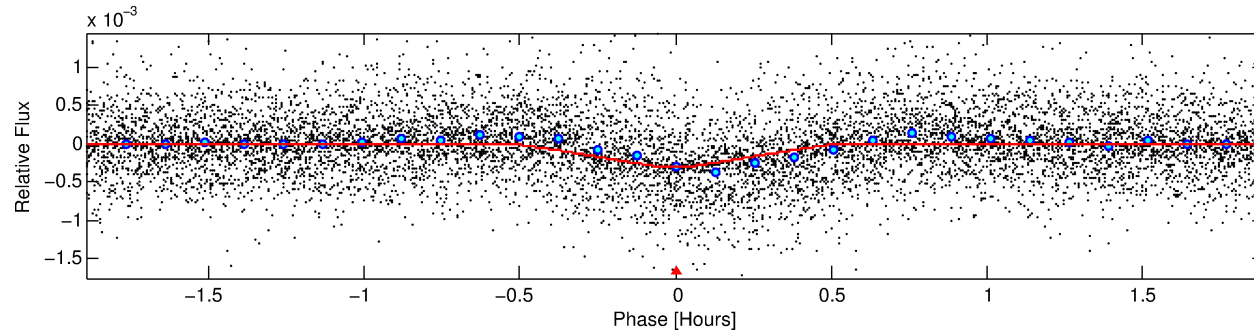
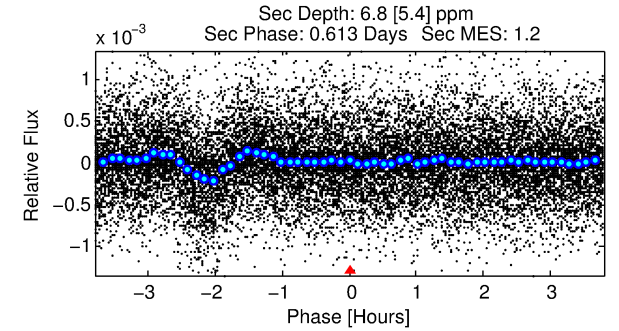
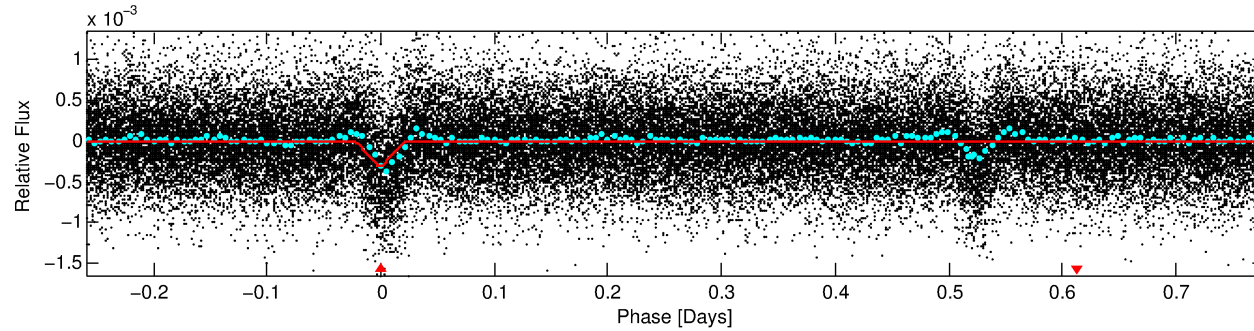
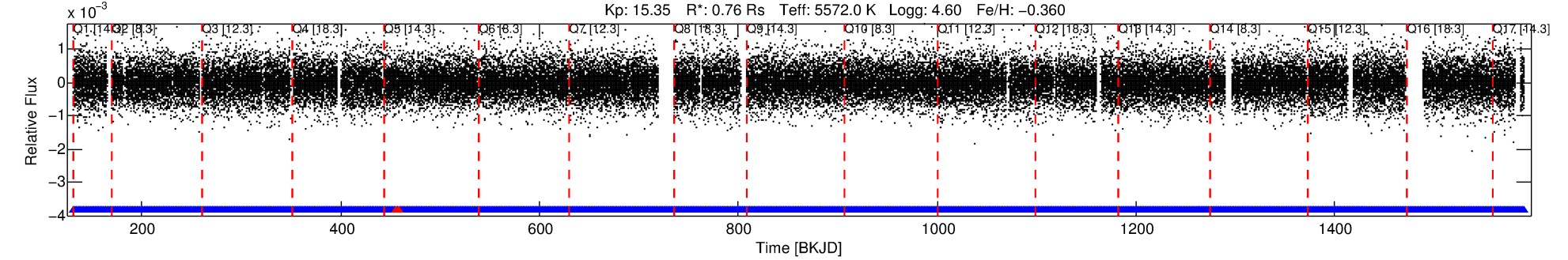
Ephemeris Match Information For 006047498-01

No Significant Match Found

DV One-Page Summary

KIC: 6047498 Candidate: 1 of 1 Period: 1.037 d

KOI: K01013 Corr: No Ephemeris Match



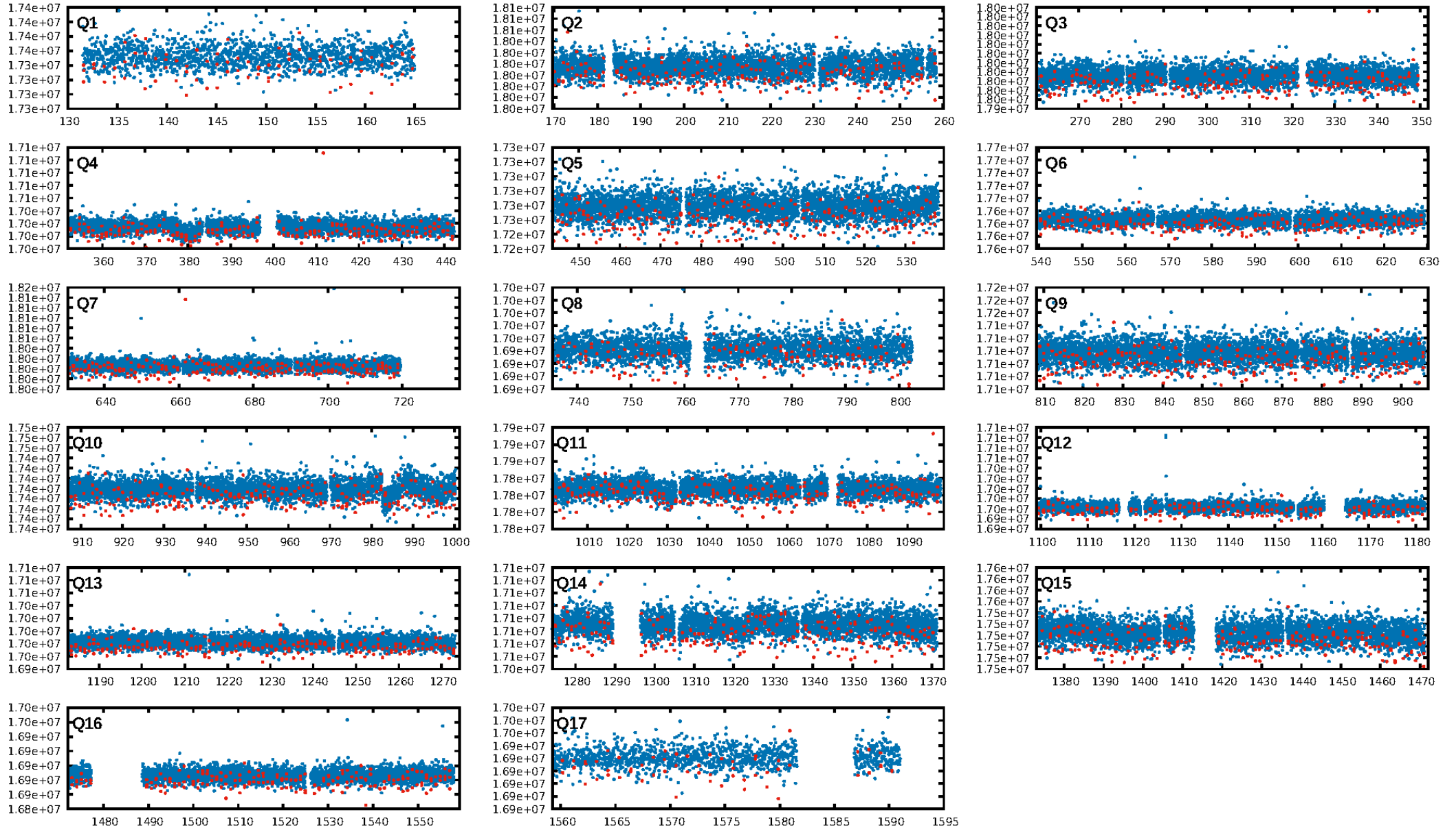
DV Fit Results:

Period = 1.03745 [0.00000] d
Epoch = 131.5964 [0.0006] BKJD
Rp/R* = 0.0197 [0.0056]
a/R* = 6.09 [7.70]
b = 0.90 [0.28]
Seff = 1402.65 [370.75]
Teq = 1561 [103] K
Rp = 1.64 [0.56] Re
a = 0.0189 [0.0031] AU
Ag = 0.50 [0.50] [-1.00σ]
Teffp = 2027 [499] K [0.92σ]

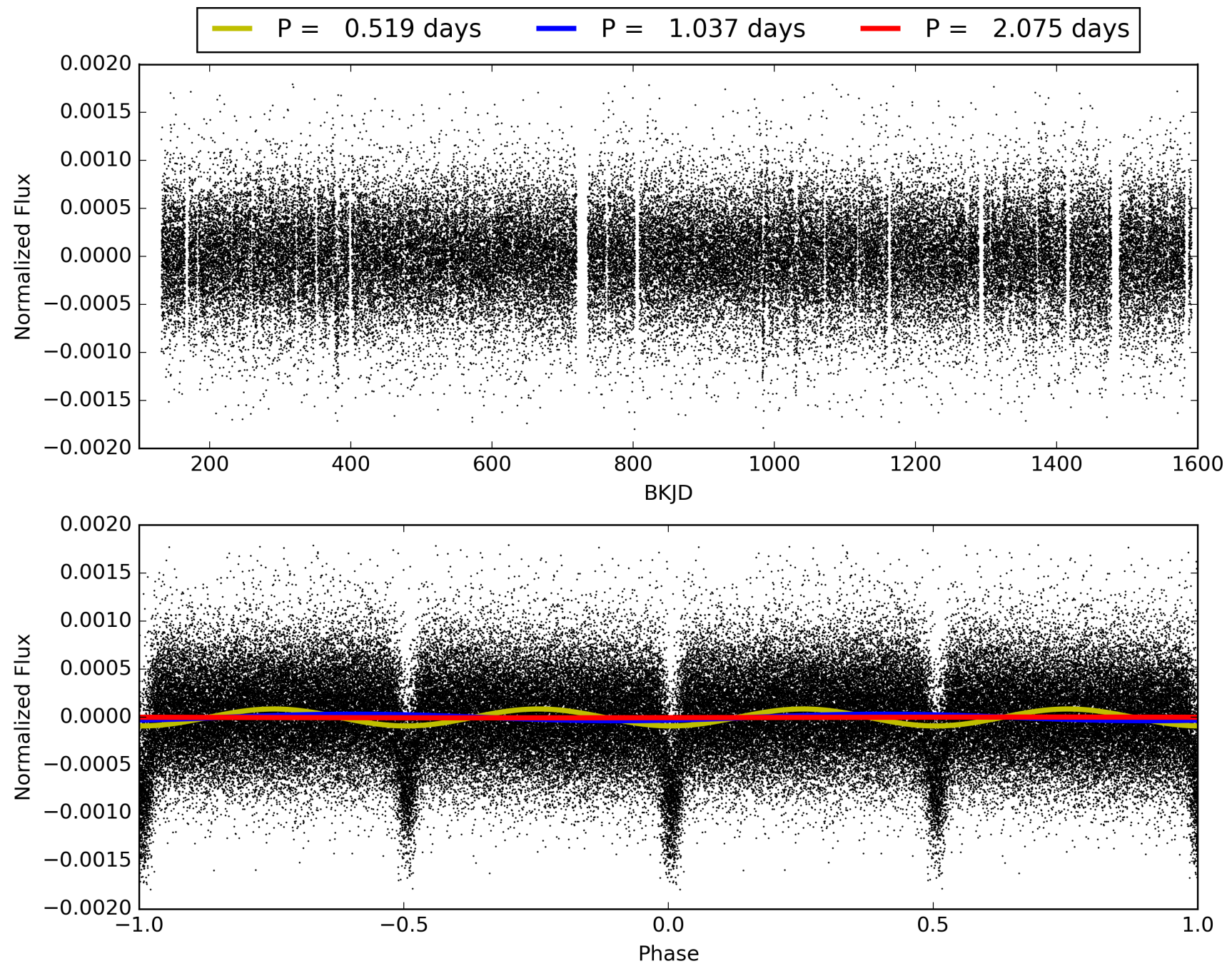
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.52e-34
RollingBand-fgt: 1.00 [1227/1229]
GhostDiagnostic-chr: 2.584
Centroid-sig: 9.9%
Centroid-so: 0.692 arcsec [1.34σ]
OotOffset-rm: 0.109 arcsec [1.02σ]
KicOffset-rm: 0.105 arcsec [0.98σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006047498-01, PDC Light Curves

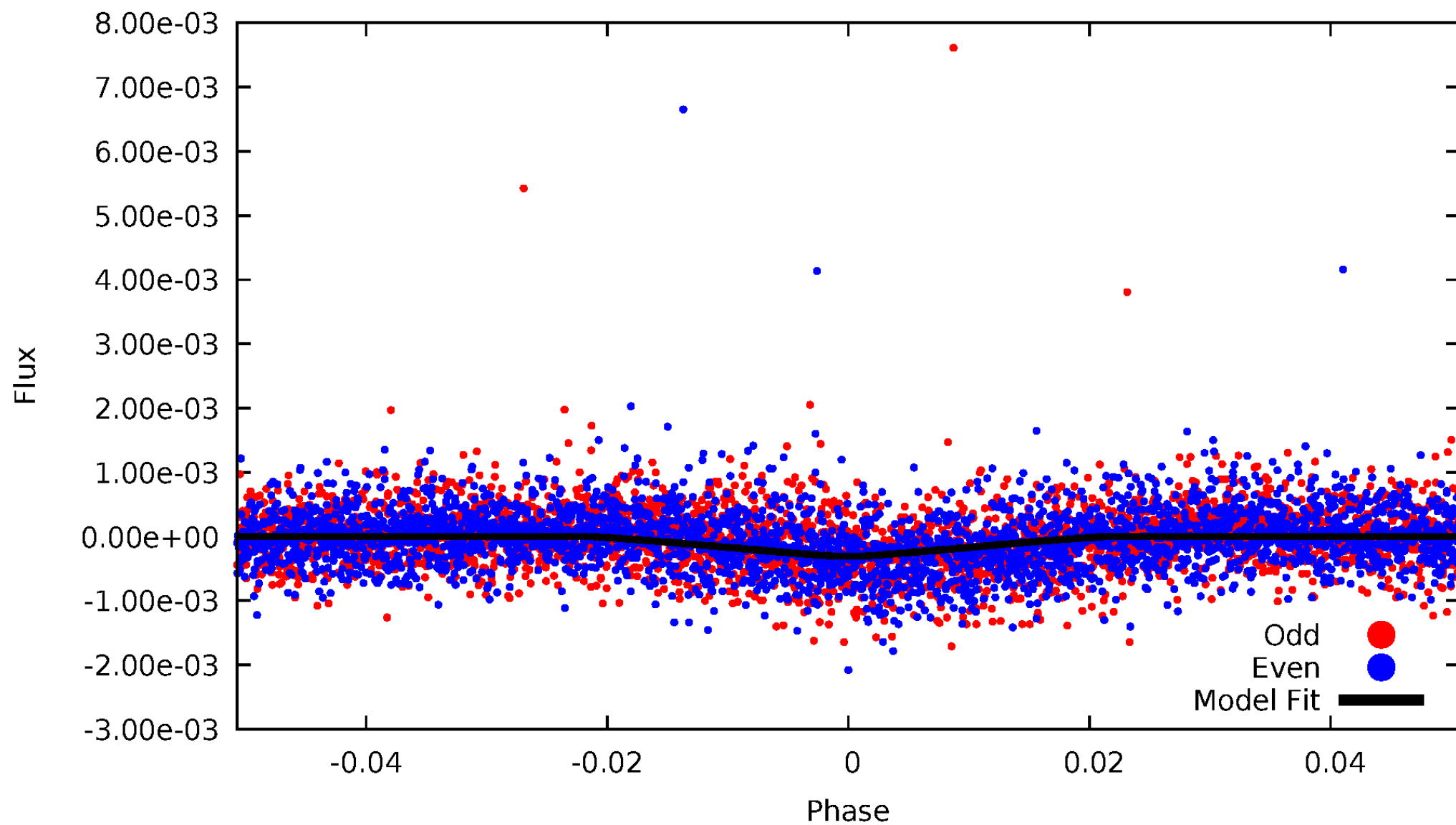


TCE 006047498-01



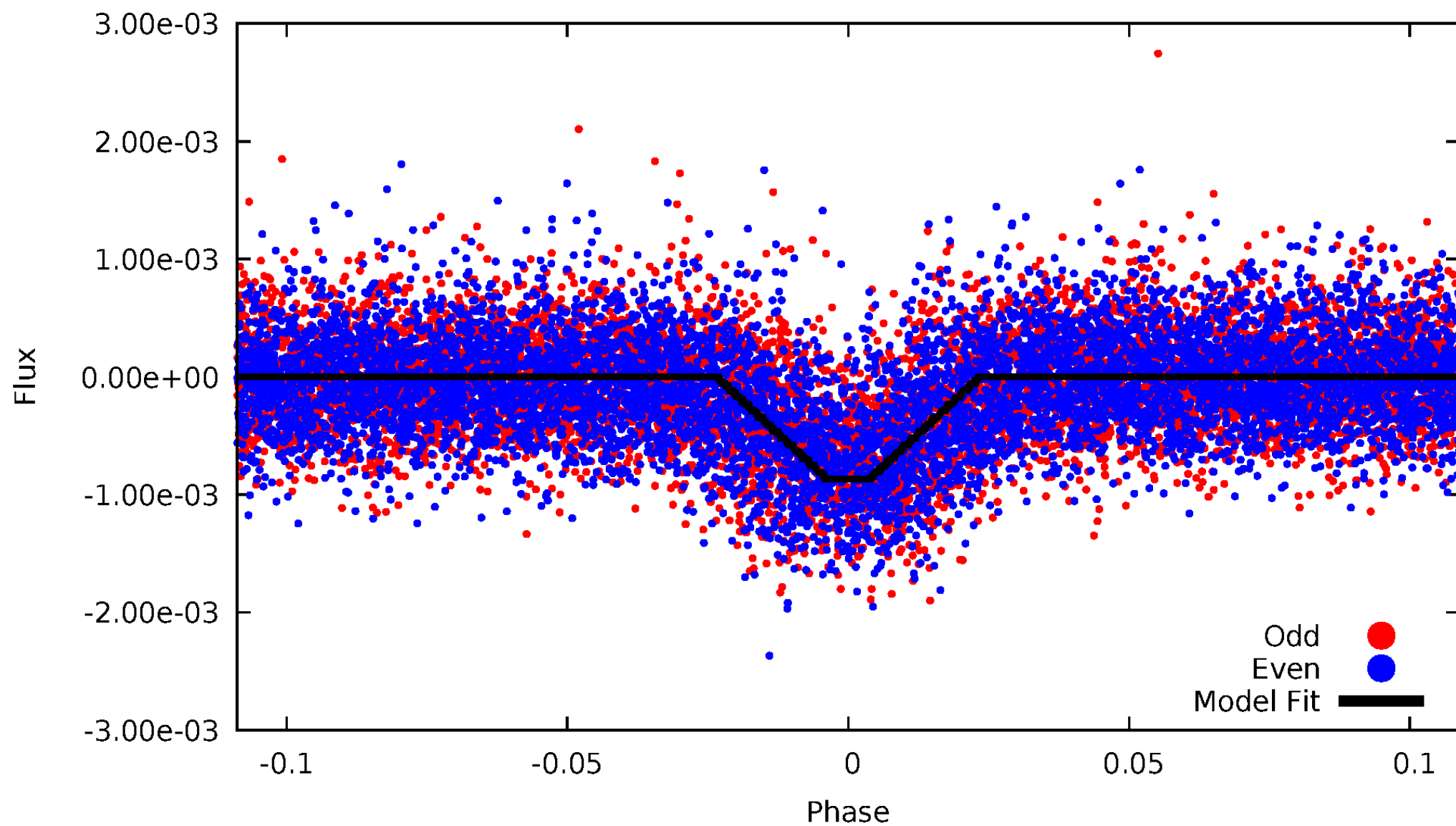
DV Odd/Even

TCE 006047498-01



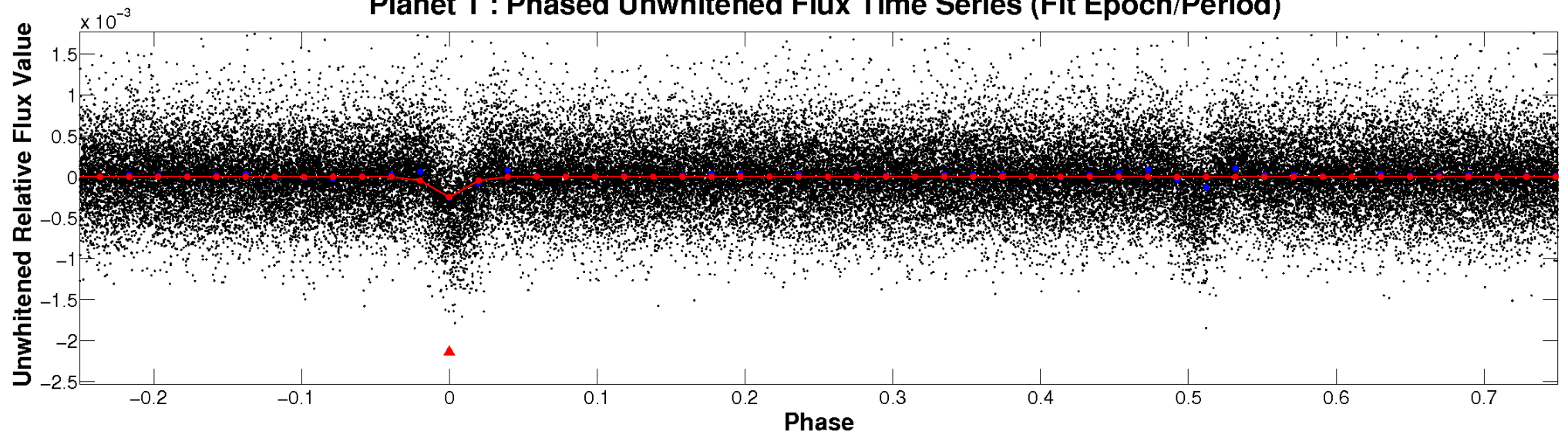
ALT Odd/Even

TCE 006047498-01

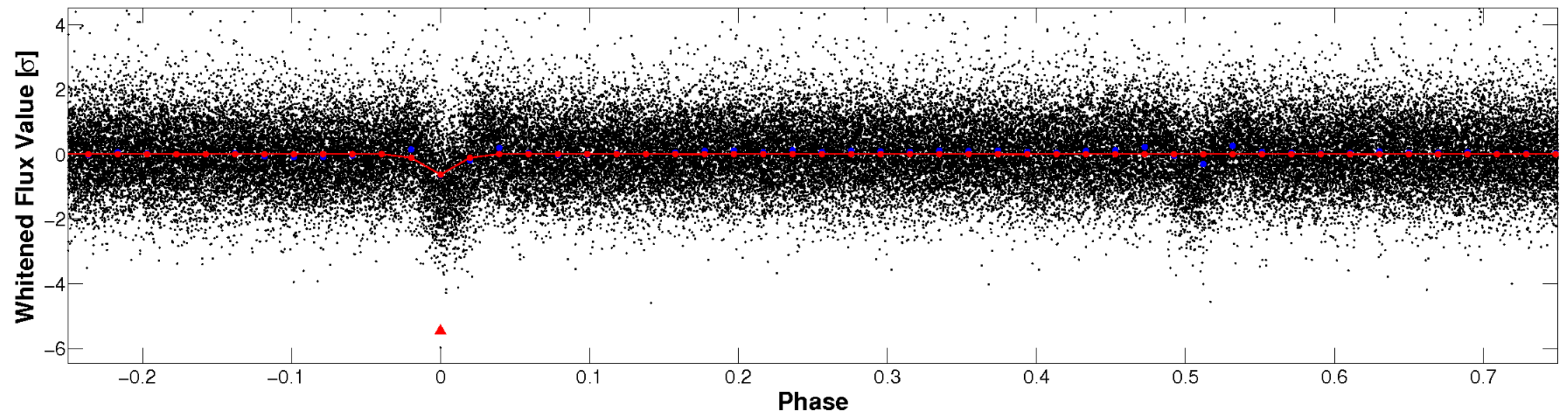


Non-Whitened Vs. Whitened Light Curve

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

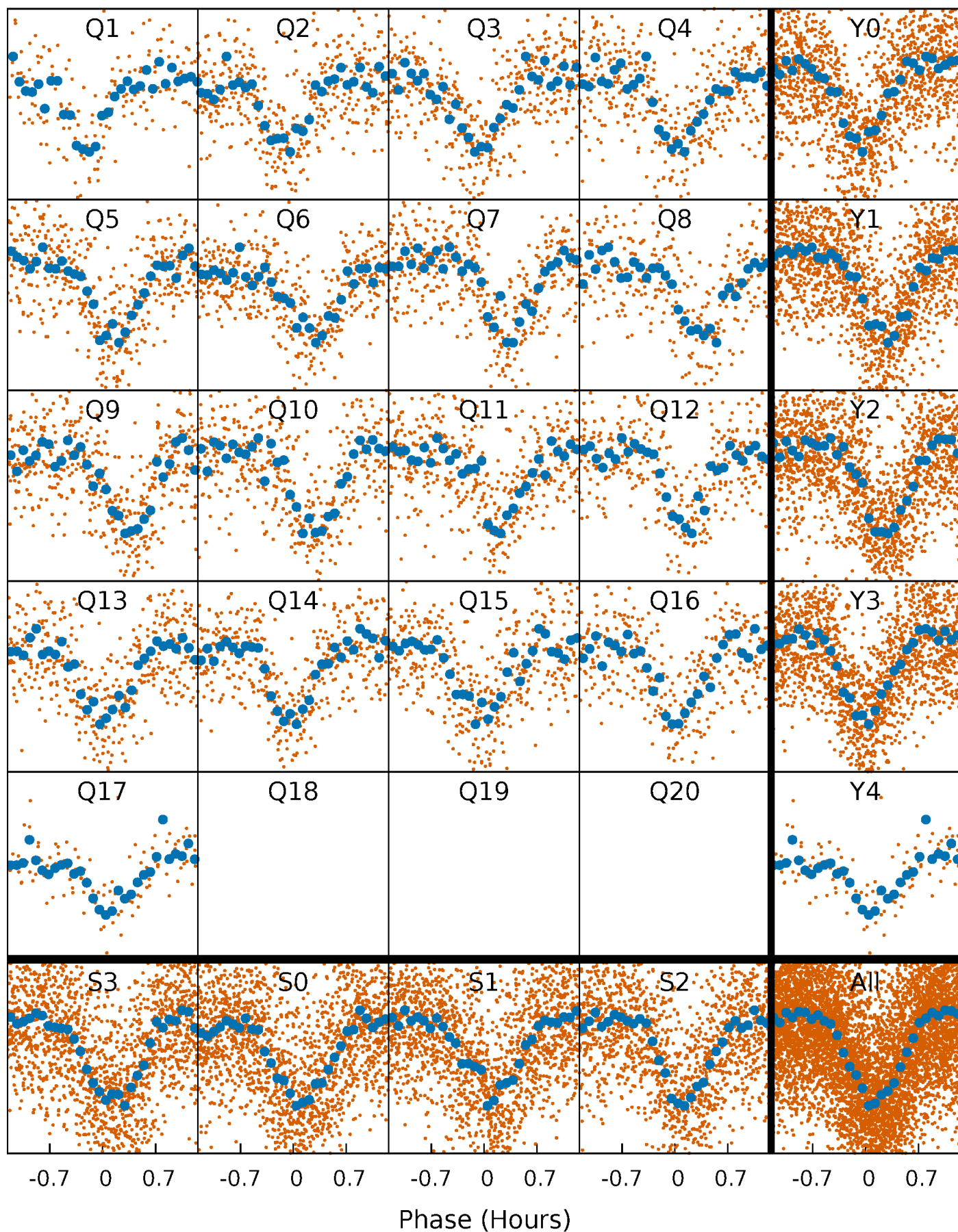


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



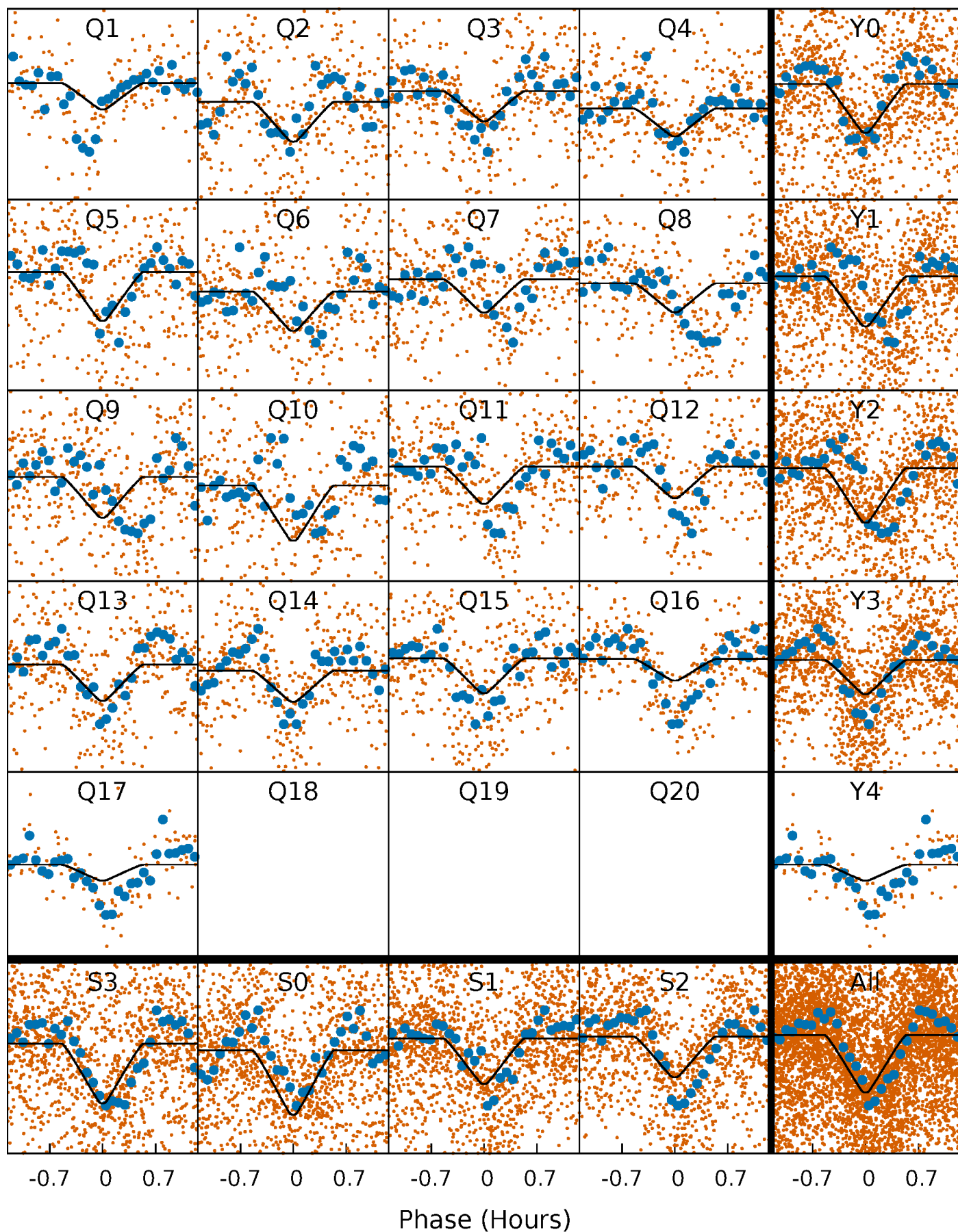
PDC Quarter-Phased Transit Curves

TCE 006047498-01 P= 1.037453 Days $T_0=131.596435$ (BKJD)



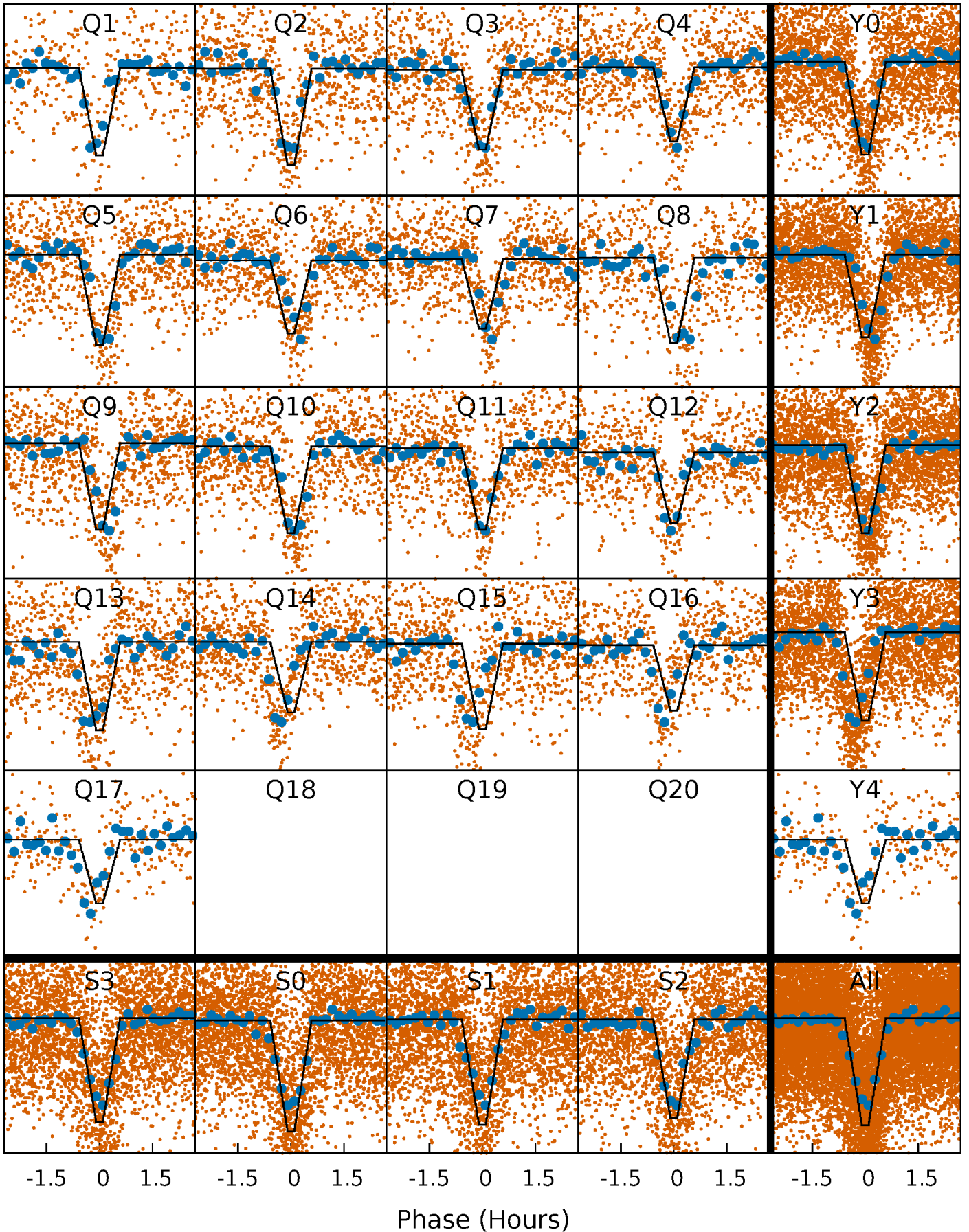
DV Quarter-Phased Transit Curves

TCE 006047498-01 P= 1.037453 Days $T_0=131.596435$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

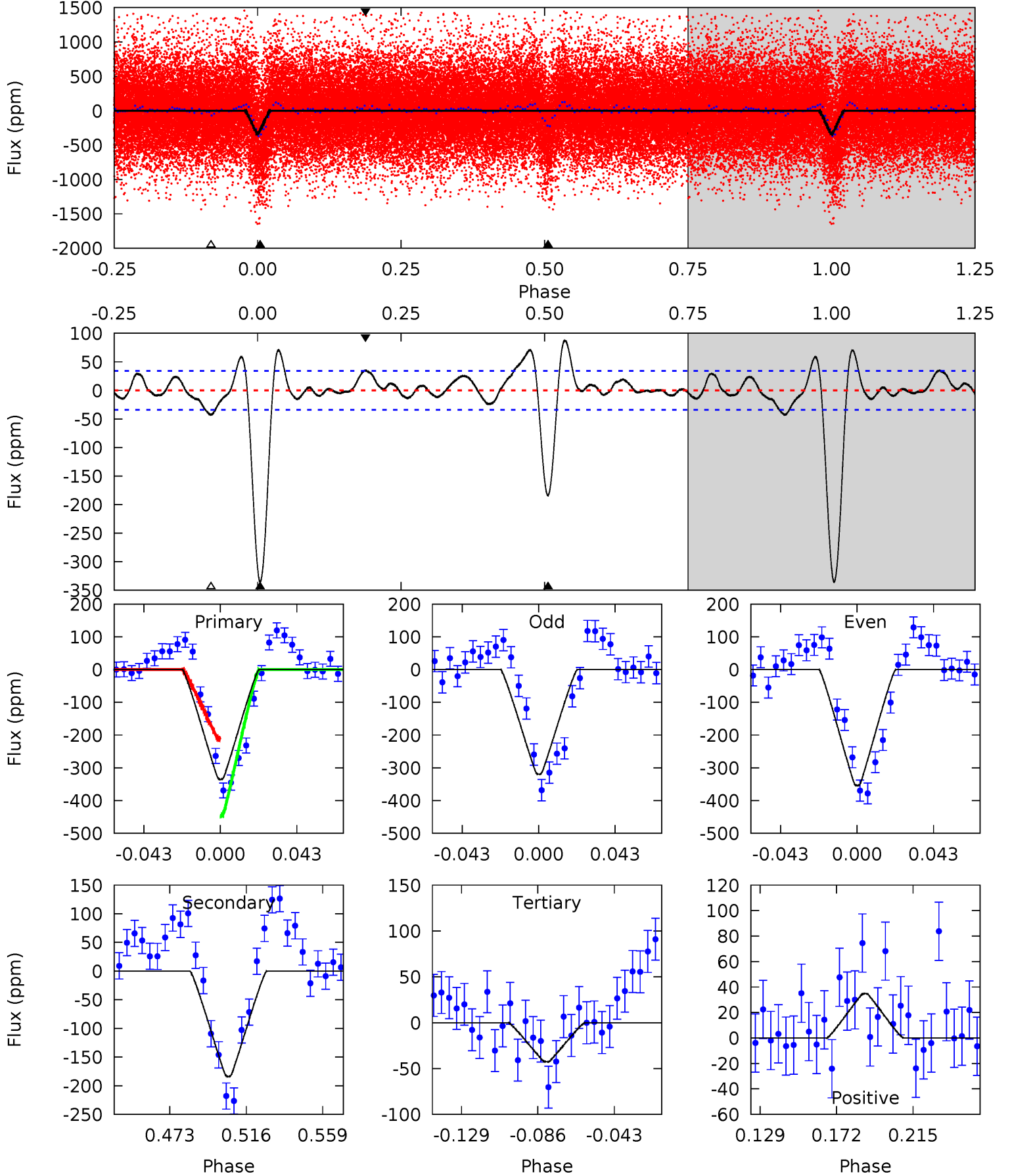
TCE 006047498-01 P= 1.037467 Days $T_0=131.592741$ (BKJD)



DV Model-Shift Uniqueness Test

006047498-01, P = 1.037453 Days, E = 130.558982 Days

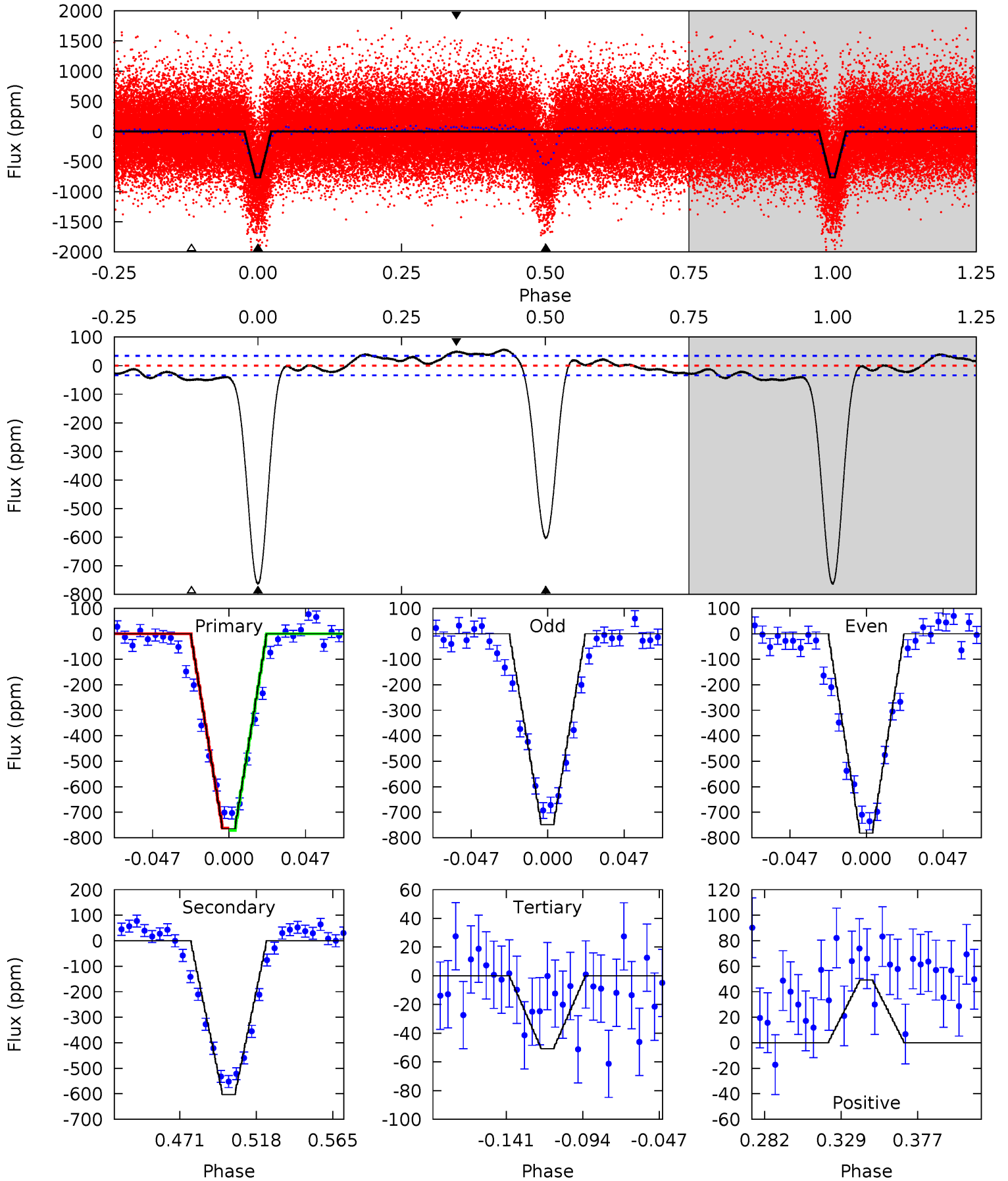
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
46.6	25.6	5.93	4.83	4.74	2.02	2.15	40.7	41.8	19.6	20.7	2.39	0.97	0.21	16.2



Alt Model-Shift Uniqueness Test

006047498-01, P = 1.037467 Days, E = 130.555274 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
106.1	83.7	7.05	6.84	4.72	1.99	4.07	99.1	99.3	76.7	76.9	2.34	0.98	0.07	0.60



Stellar Parameters For KIC 006047498

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5572^{+152}_{-169}	$4.597^{+0.040}_{-0.128}$	$-0.360^{+0.300}_{-0.300}$	$0.762^{+0.147}_{-0.063}$	$0.853^{+0.080}_{-0.097}$	$2.711^{+0.474}_{-1.040}$
	+3%/-3%	+1%/-3%	+83%/-83%	+19%/-8%	+9%/-11%	+17%/-38%
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 006047498-01 / KOI 1013.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-184 ± 7	$1.71^{+0.49}_{-0.48}$	2215^{+116}_{-96}	4695^{+786}_{-416}	12^{+12}_{-5}
Alt.	-603 ± 7	$2.55^{+0.57}_{-0.50}$	2211^{+106}_{-85}	5104^{+494}_{-385}	18^{+10}_{-6}

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

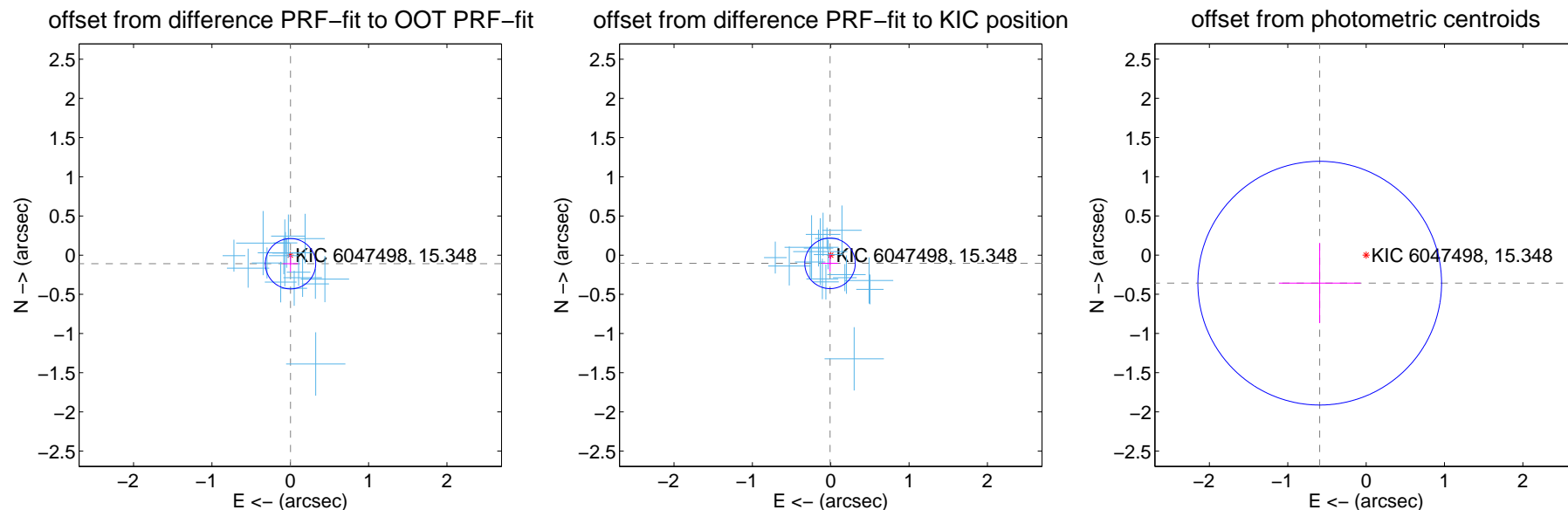
DV Centroid Data

Supplemental centroid analysis for 006047498-01. Kepler magnitude: 15.35. Transit SNR 23.32

There are 17 quarters with good PRF difference image offsets

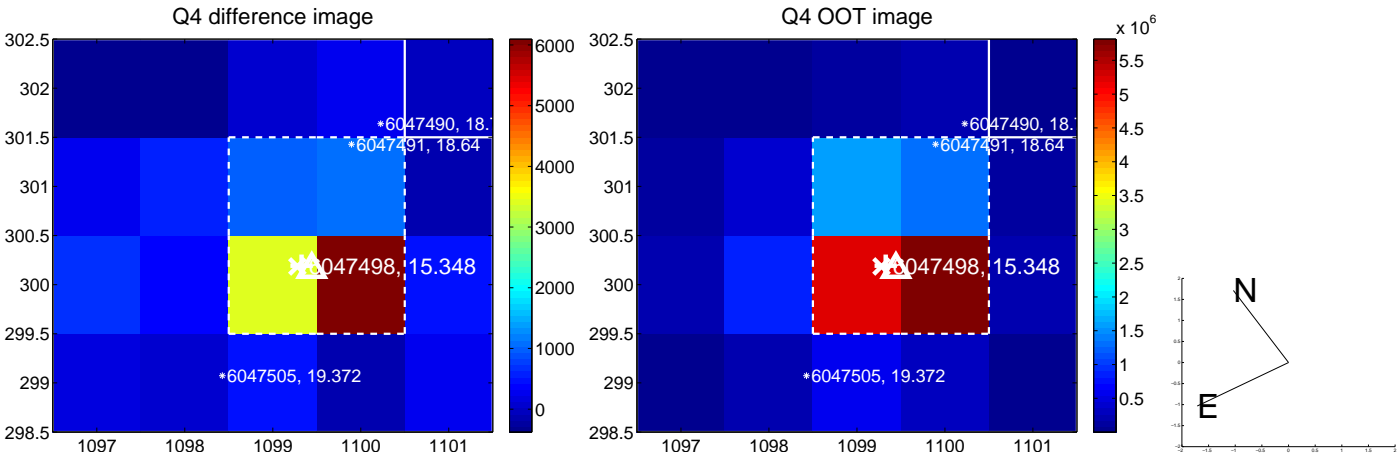
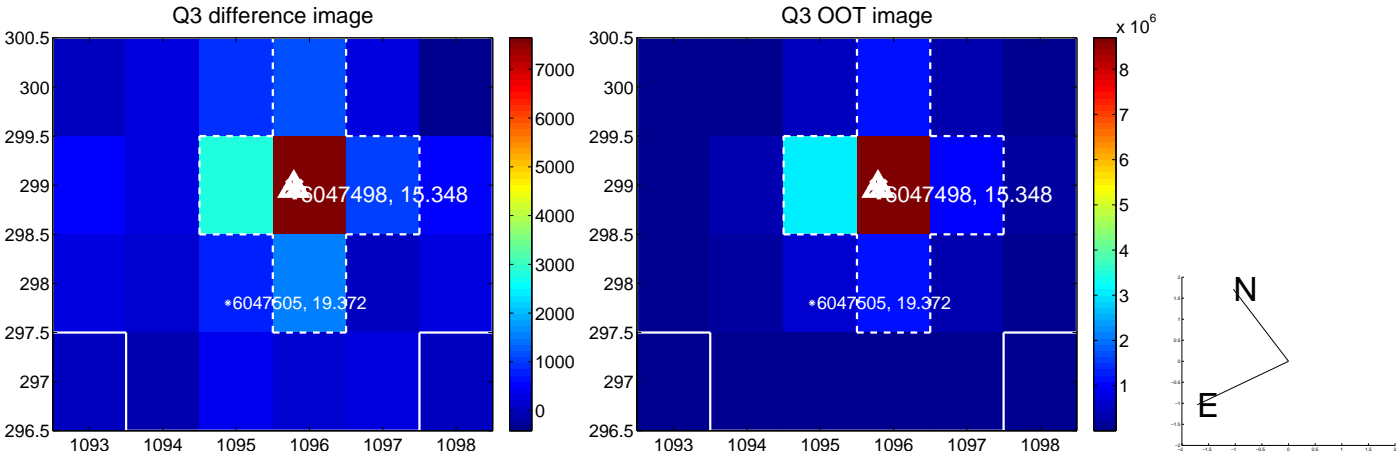
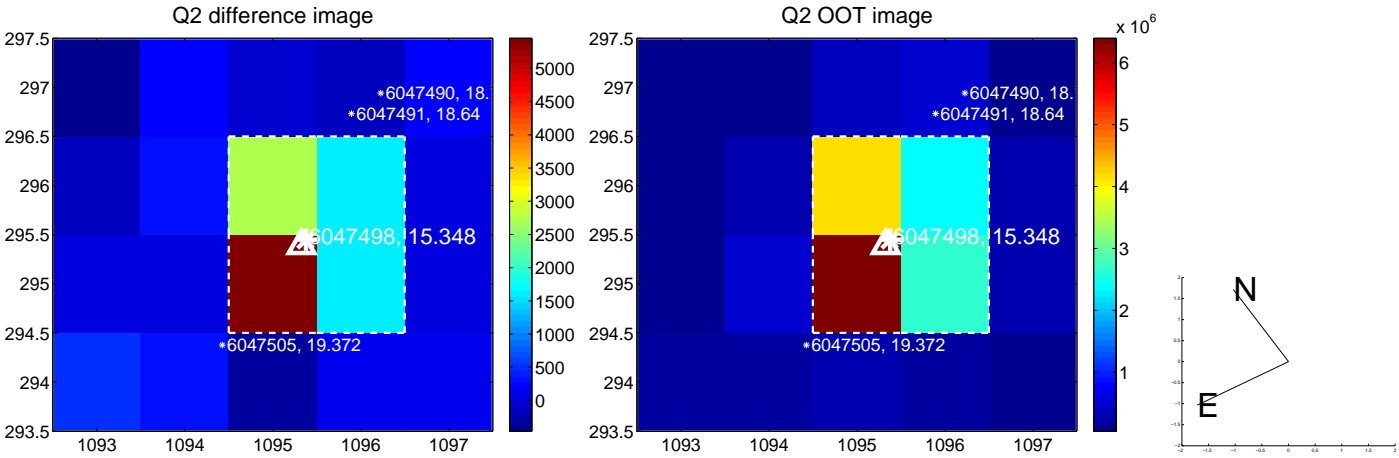
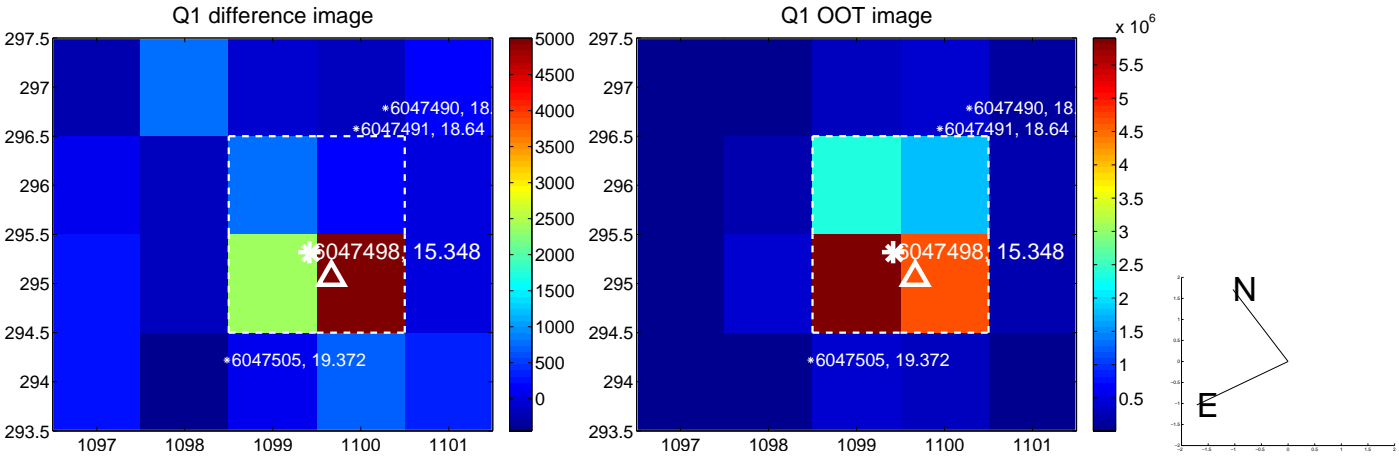
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.109 ± 0.107	1.02	-0.003 ± 0.096	-0.109 ± 0.106
PRF-fit source offset from KIC position	0.105 ± 0.107	0.98	0.009 ± 0.100	-0.105 ± 0.110
photometric centroid source offset	0.69 ± 0.52	1.34	0.59 ± 0.52	-0.36 ± 0.51

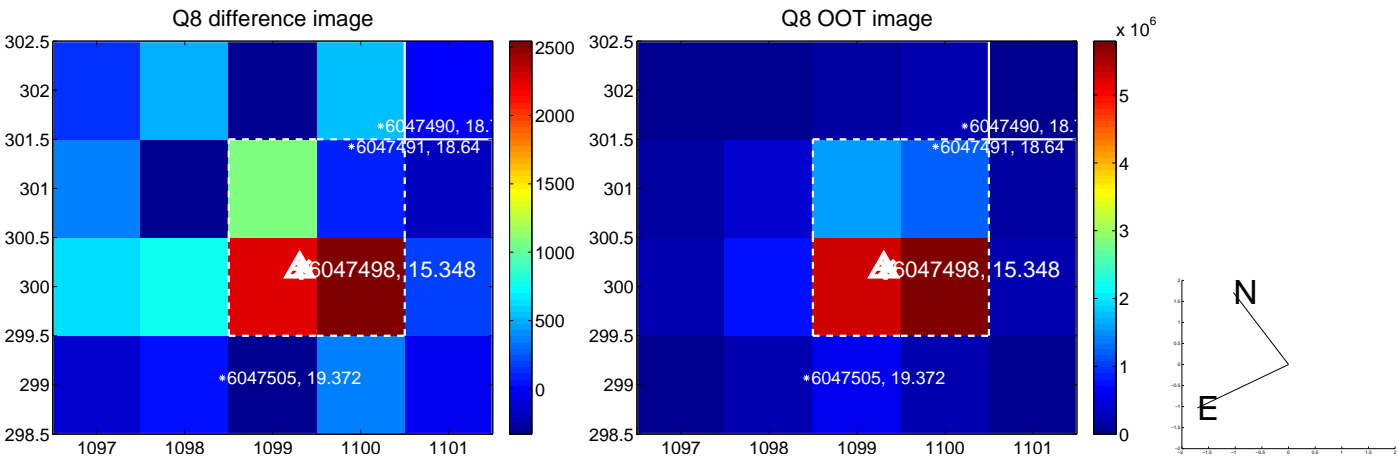
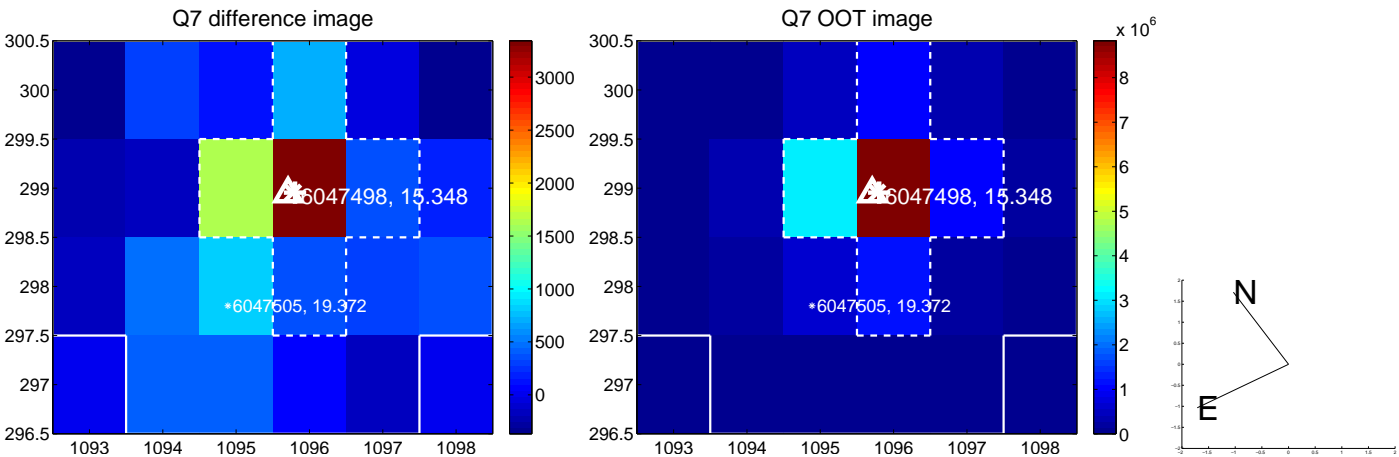
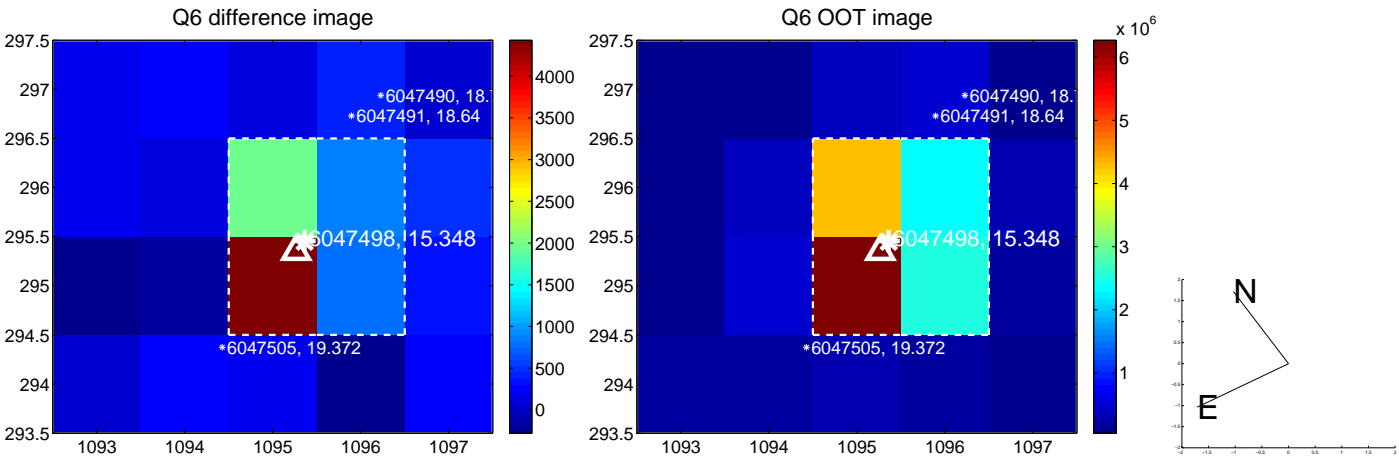
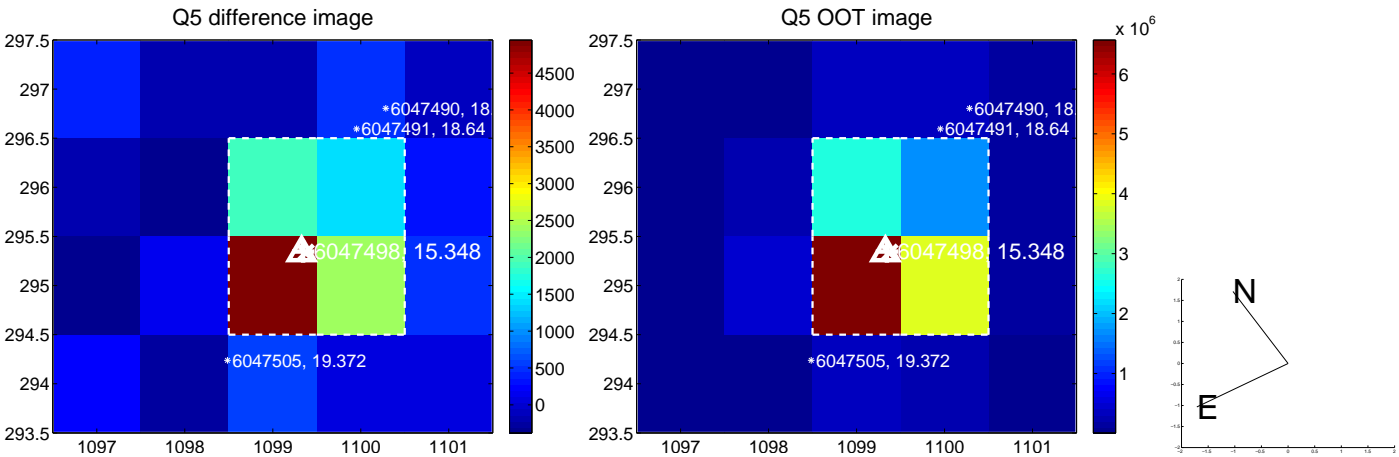


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

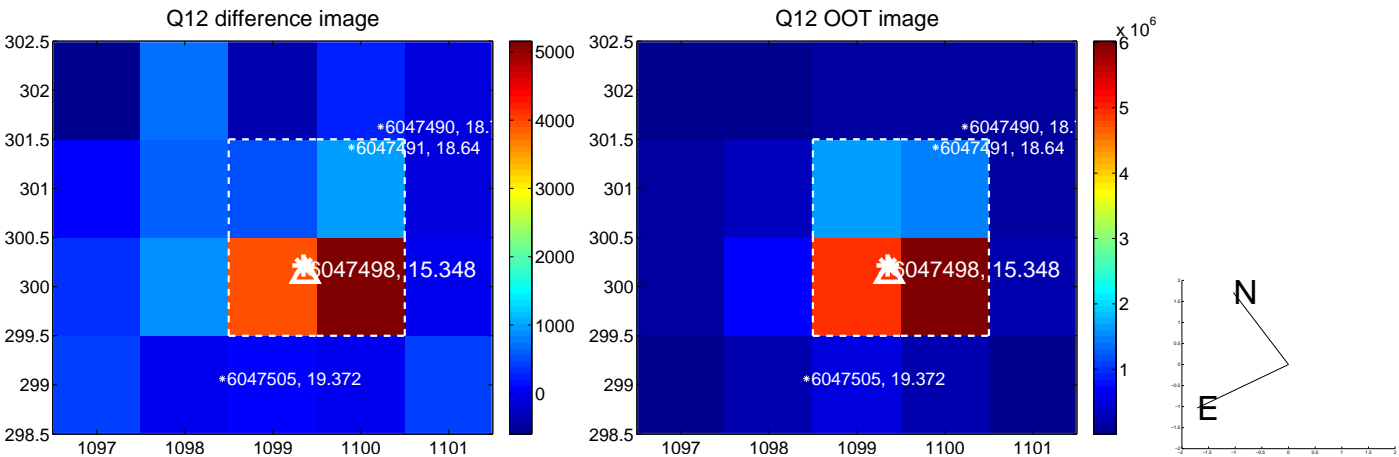
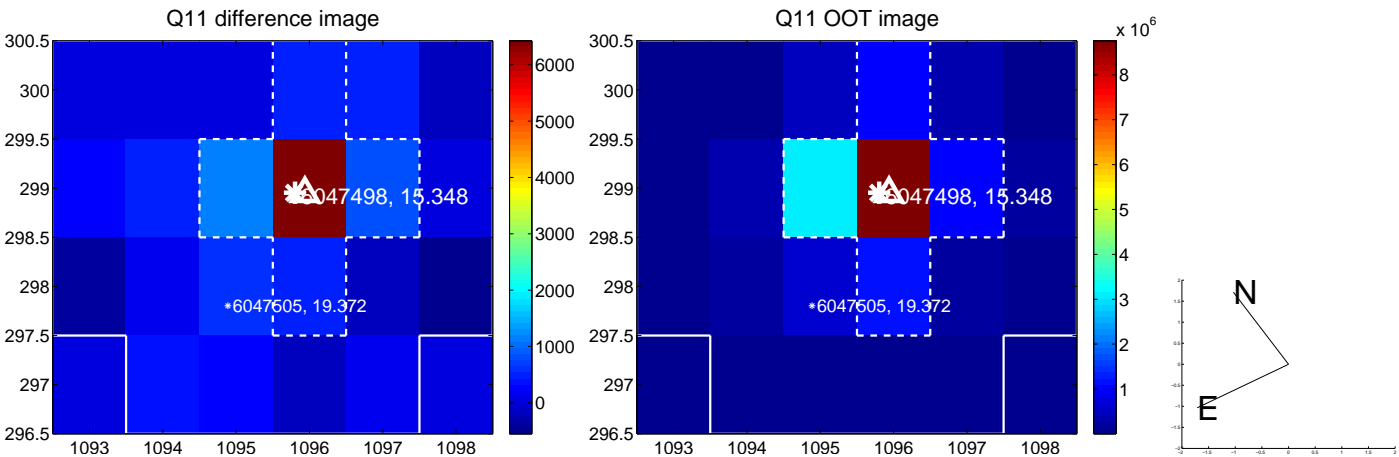
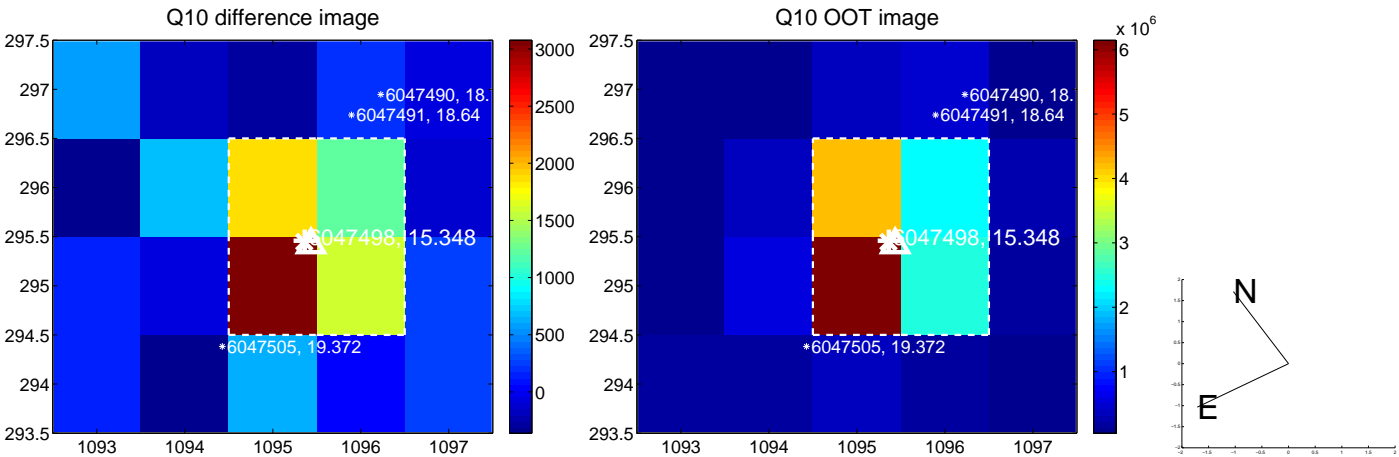
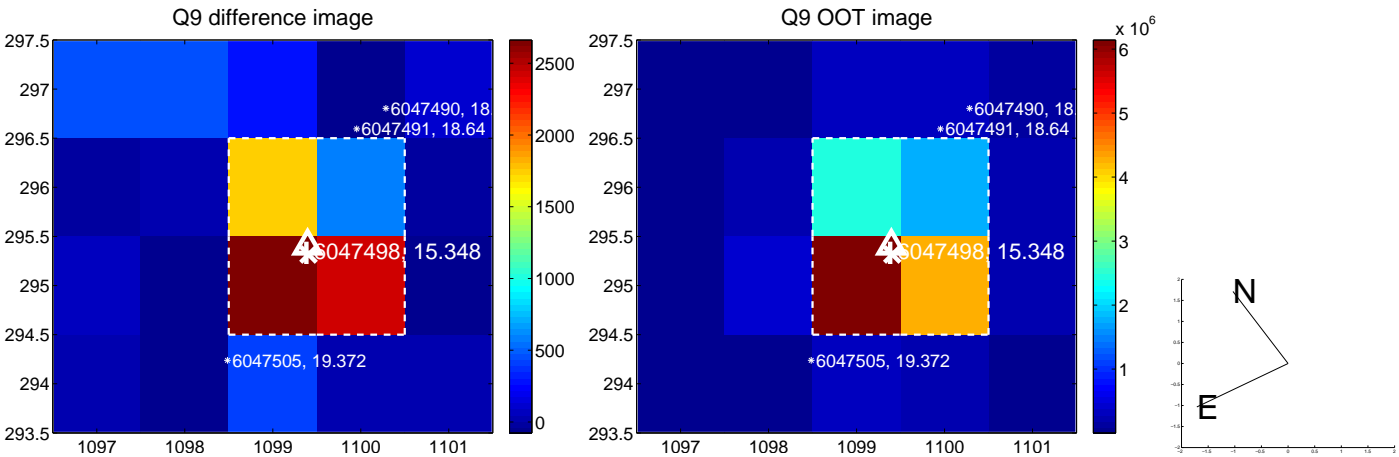
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



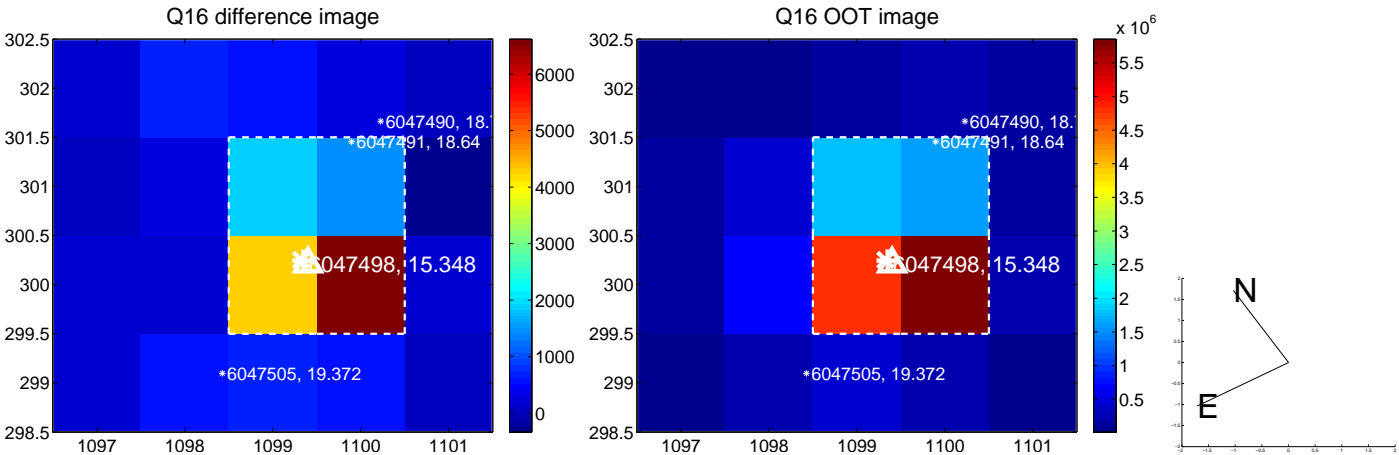
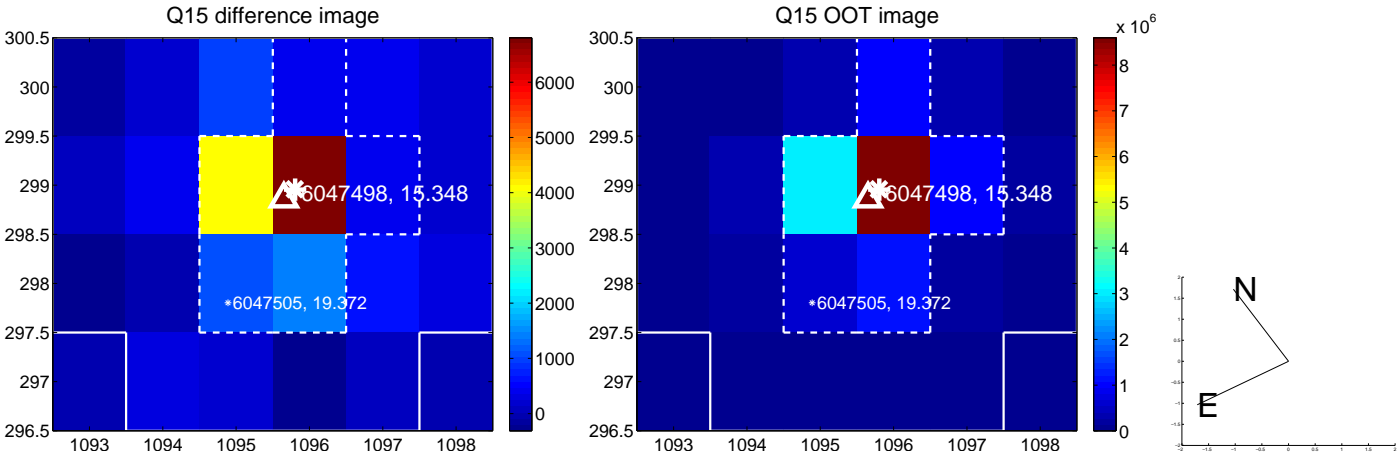
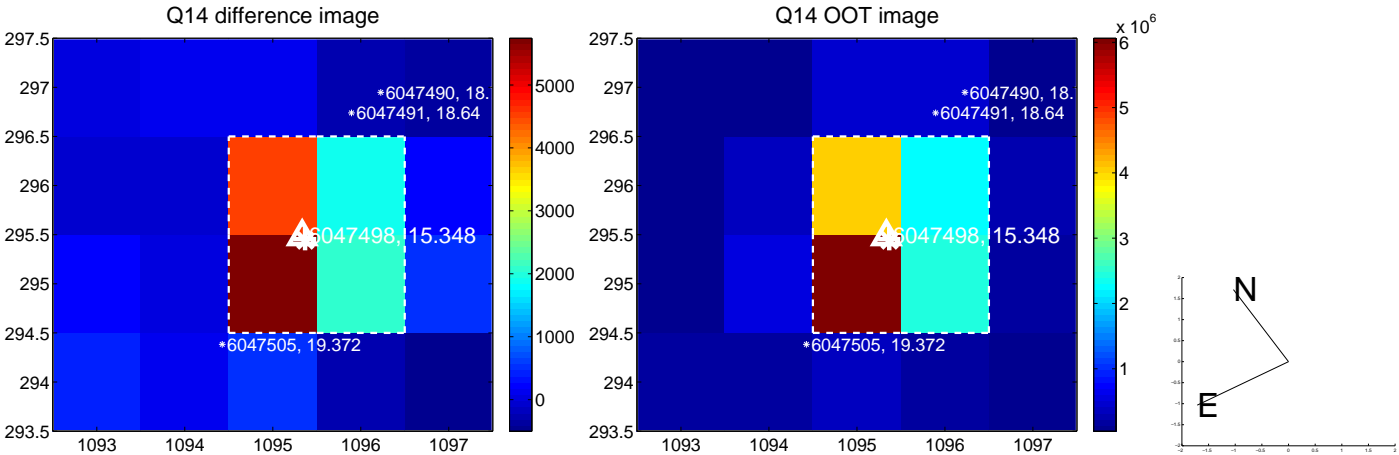
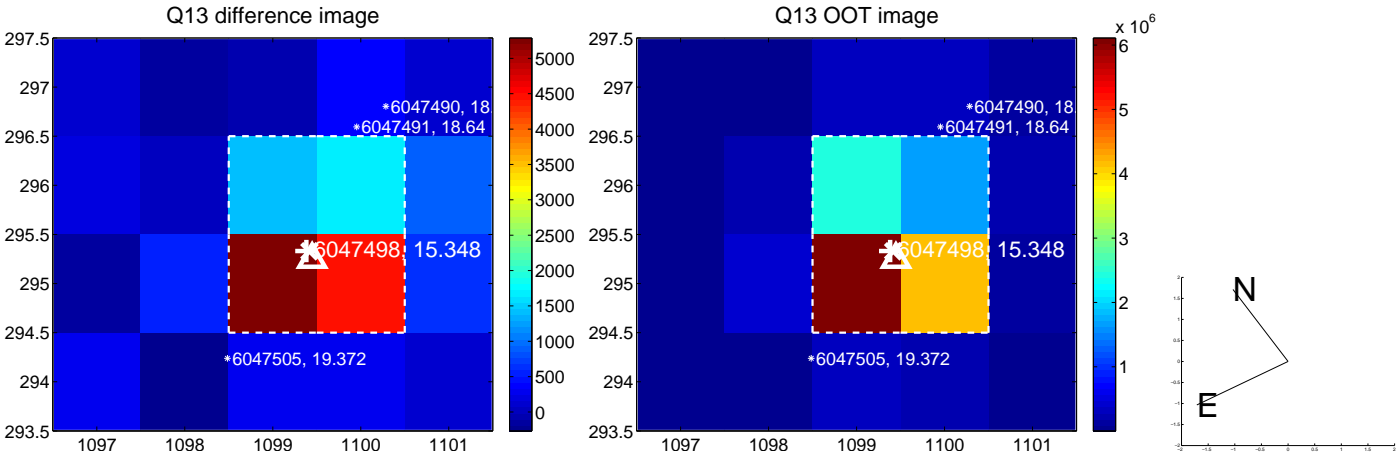
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



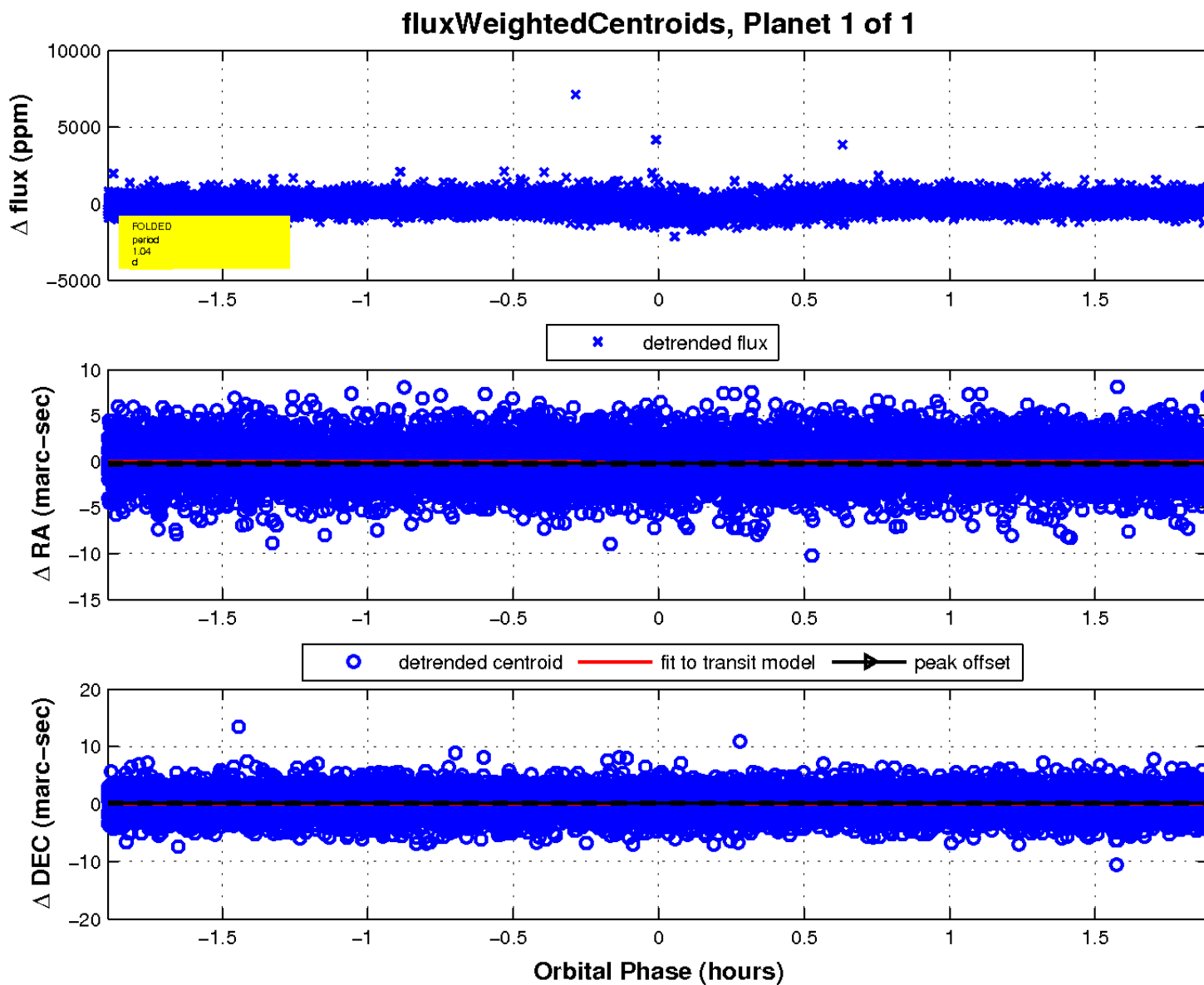
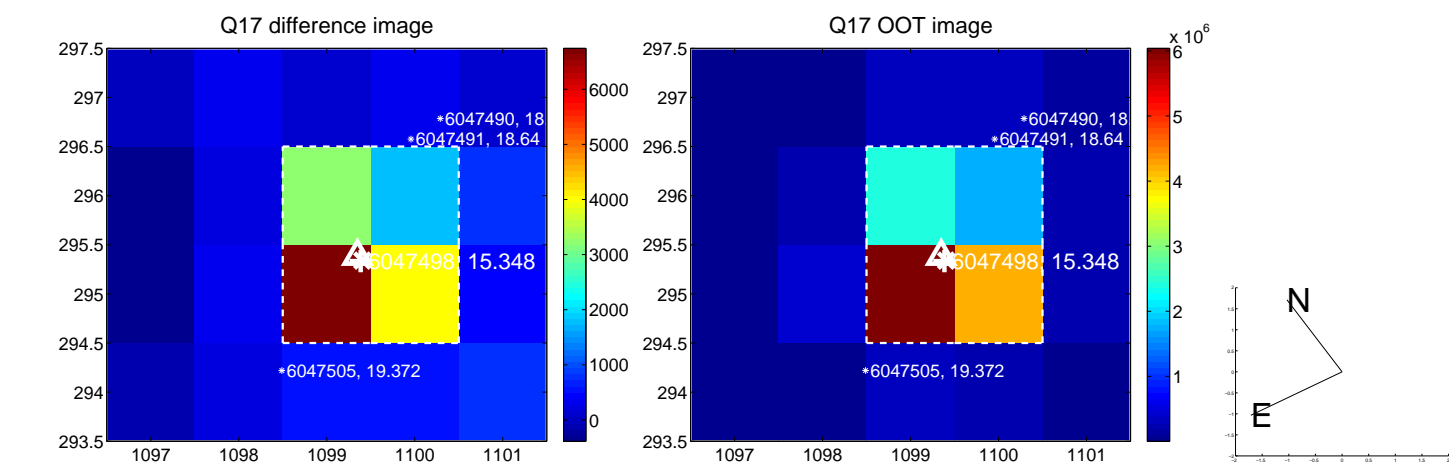
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UKIRT Image

Declination

