

KIC 006429149

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})
006429149-01	OBS	No	296.434401	376.952386	367.7	6.088	7.3	7.0	0.78	5170	1.65	0.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006429149-01	OBS	FP	0.01	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_FEW_MEAS

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

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

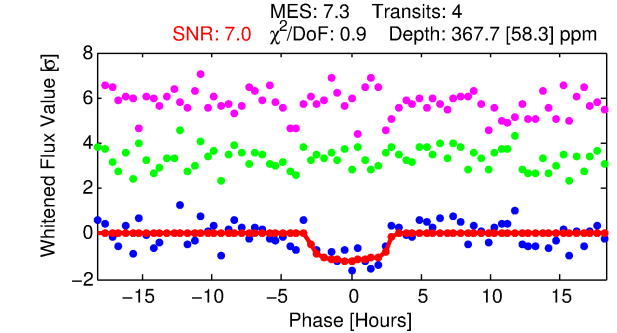
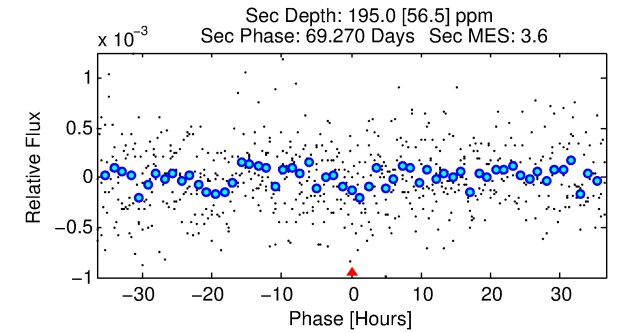
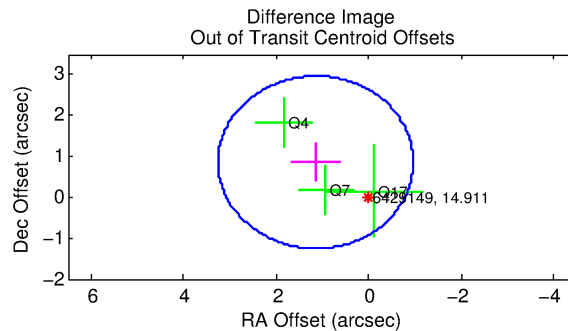
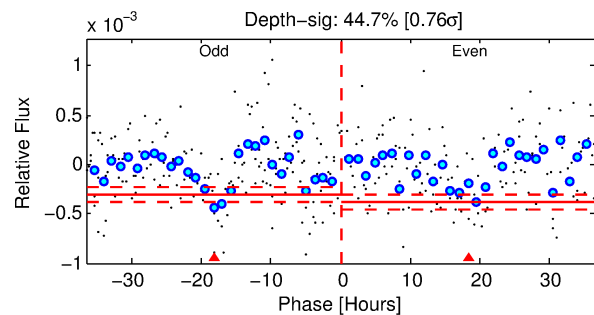
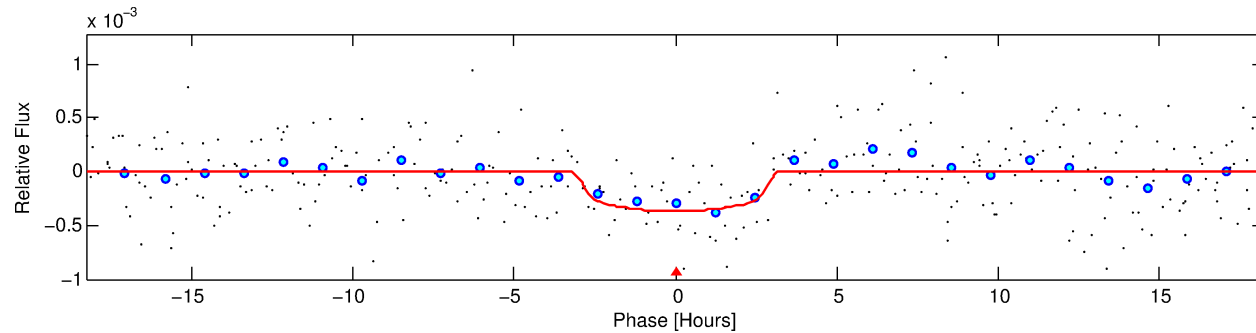
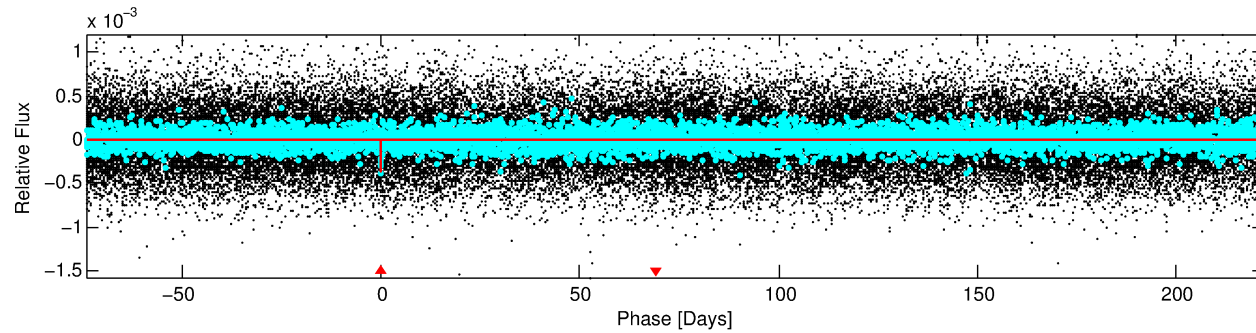
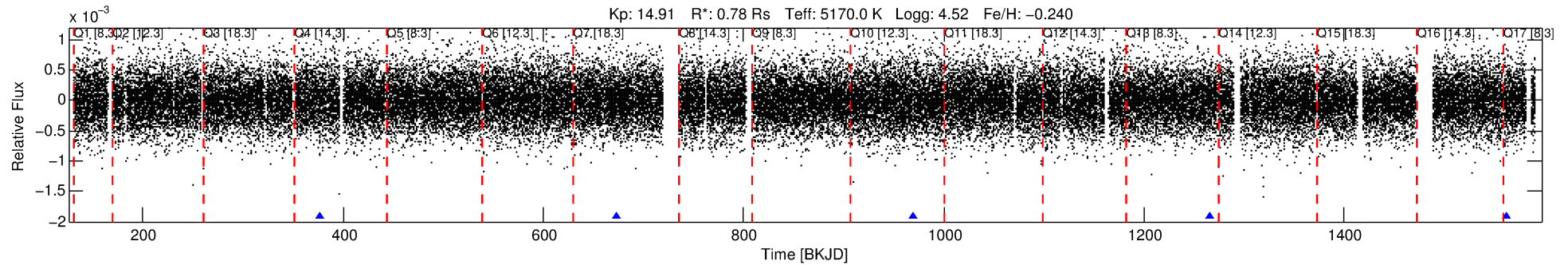
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006429149-01

No Significant Match Found

DV One-Page Summary

KIC: 6429149 Candidate: 1 of 1 Period: 296.434 d



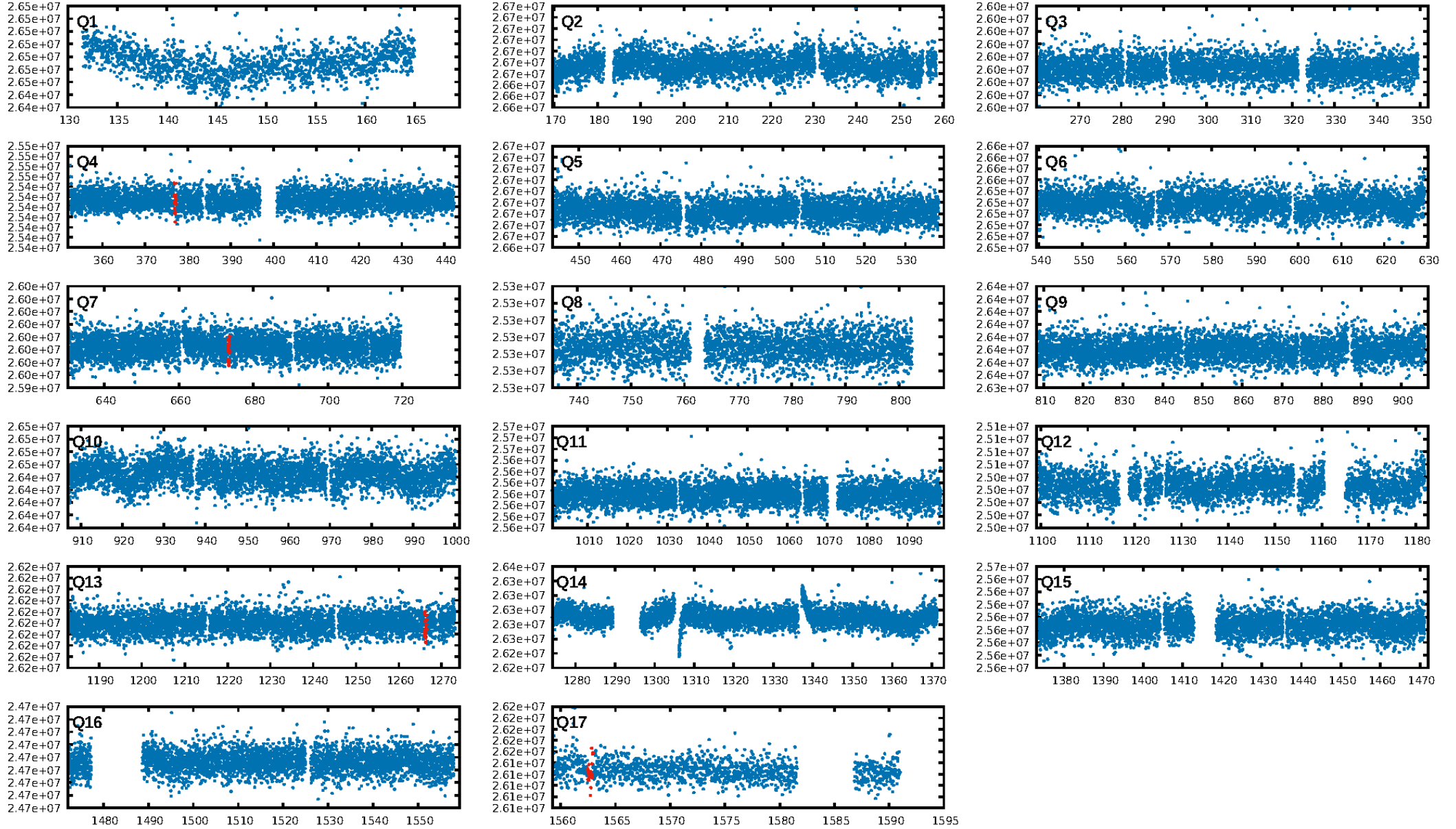
DV Fit Results:

Period = 296.43440 [0.00613] d
Epoch = 376.9524 [0.0149] BKJD
Rp/R* = 0.0194 [0.0257]
a/R* = 245.02 [1256.12]
b = 0.78 [2.65]
Seff = 0.63 [0.13]
Teff = 227 [12] K
Rp = 1.65 [2.20] Re
a = 0.7847 [0.0858] AU
Ag = 24285.38 [64939.47] [0.37 σ]
Teffp = 4389 [2931] K [1.42 σ]

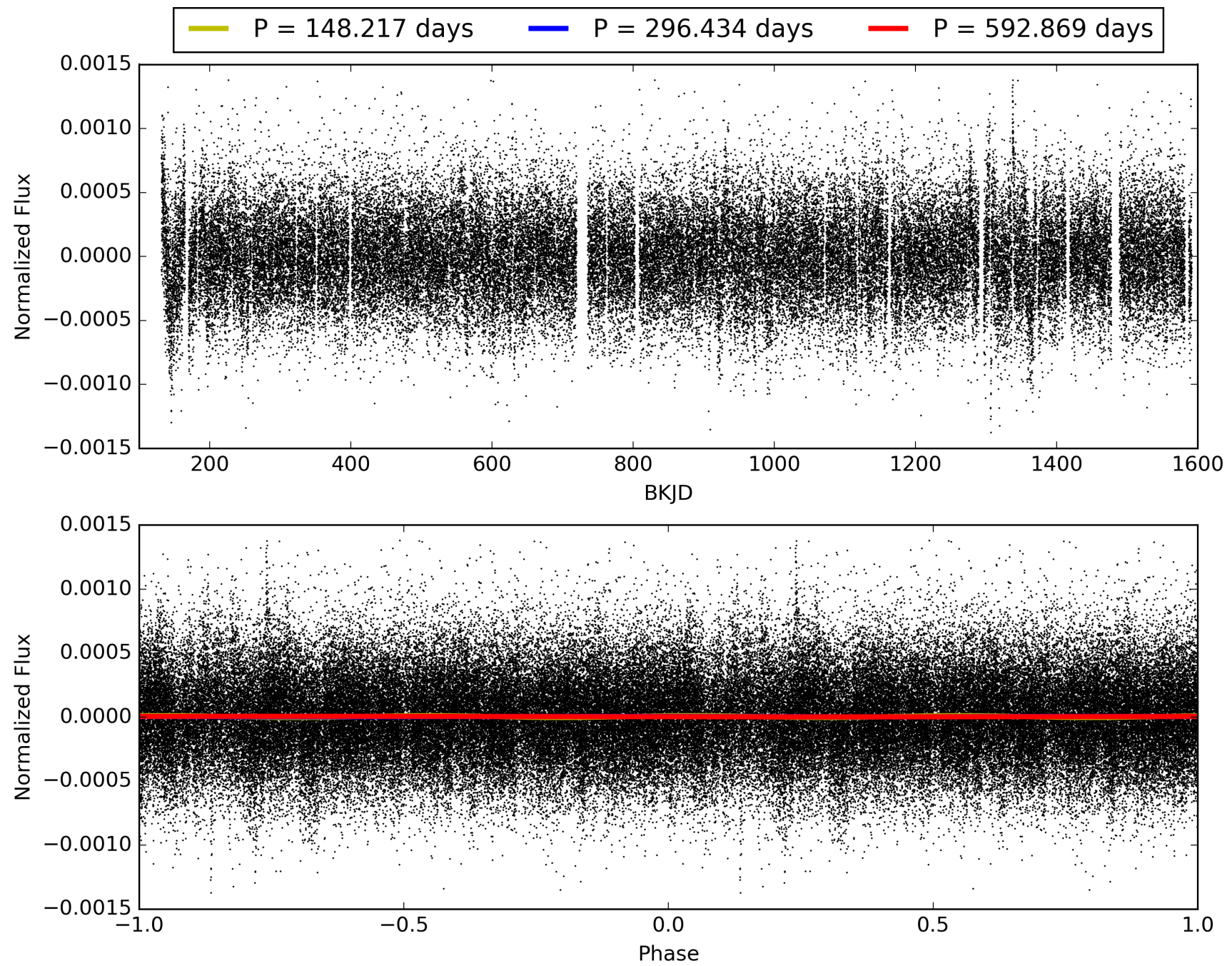
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 94.1%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 1.36e-12
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 11.05
Centroid-sig: 1.7%
Centroid-so: 3.045 arcsec [1.70 σ]
OotOffset-rm: 1.432 arcsec [2.03 σ]
KicOffset-rm: 1.402 arcsec [2.14 σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [4/4]

TCE 006429149-01, PDC Light Curves

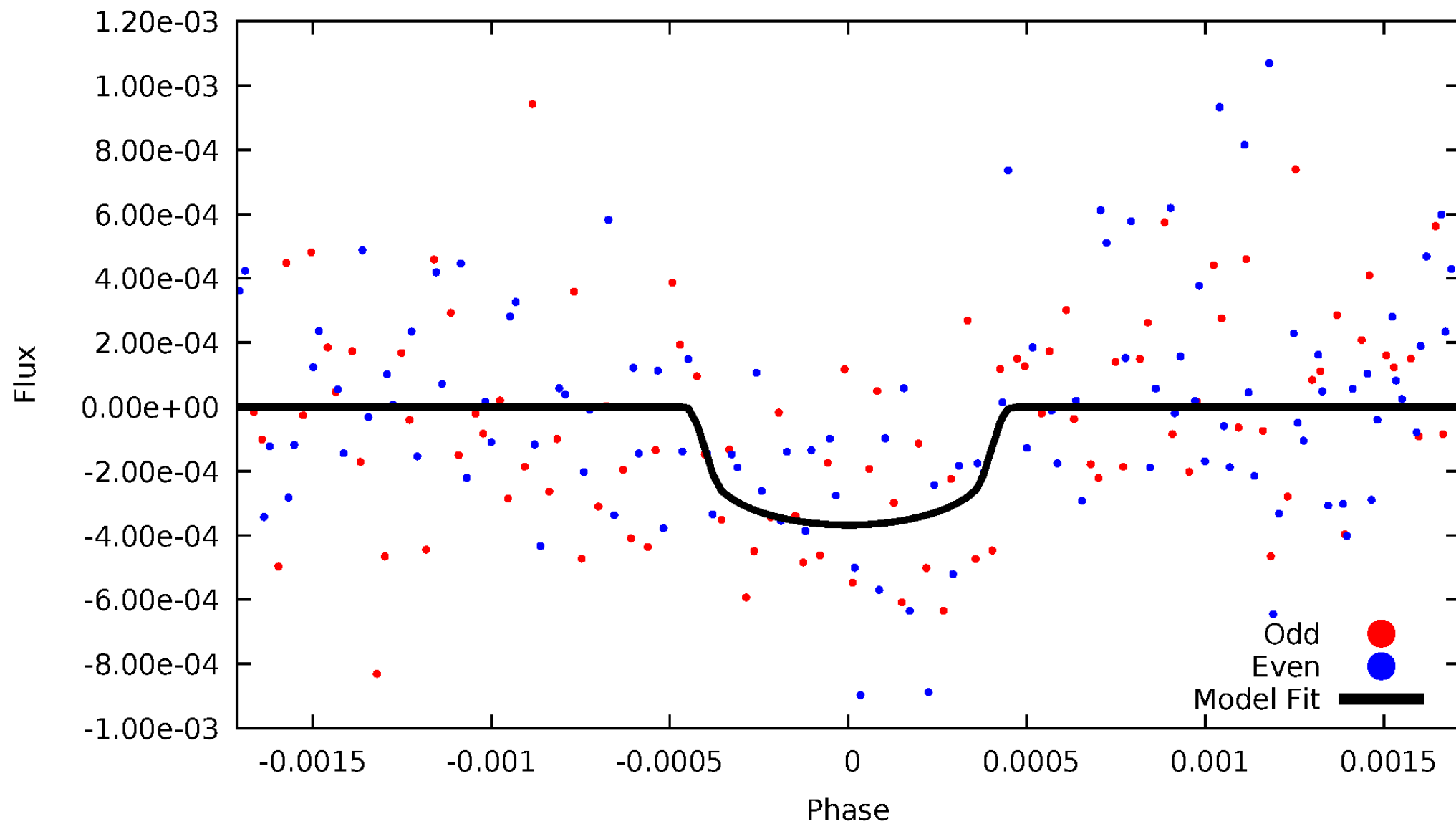


TCE 006429149-01



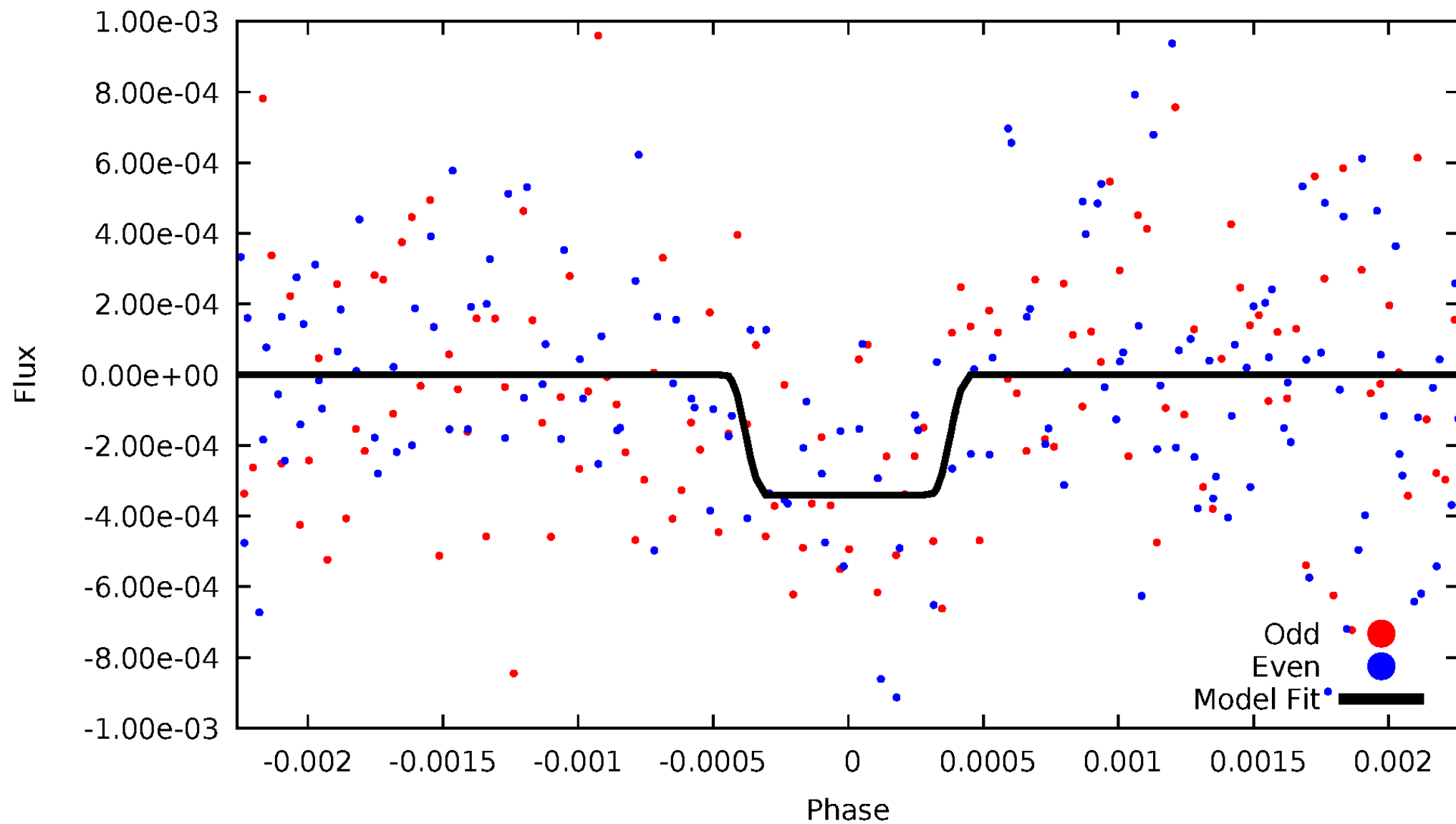
DV Odd/Even

TCE 006429149-01



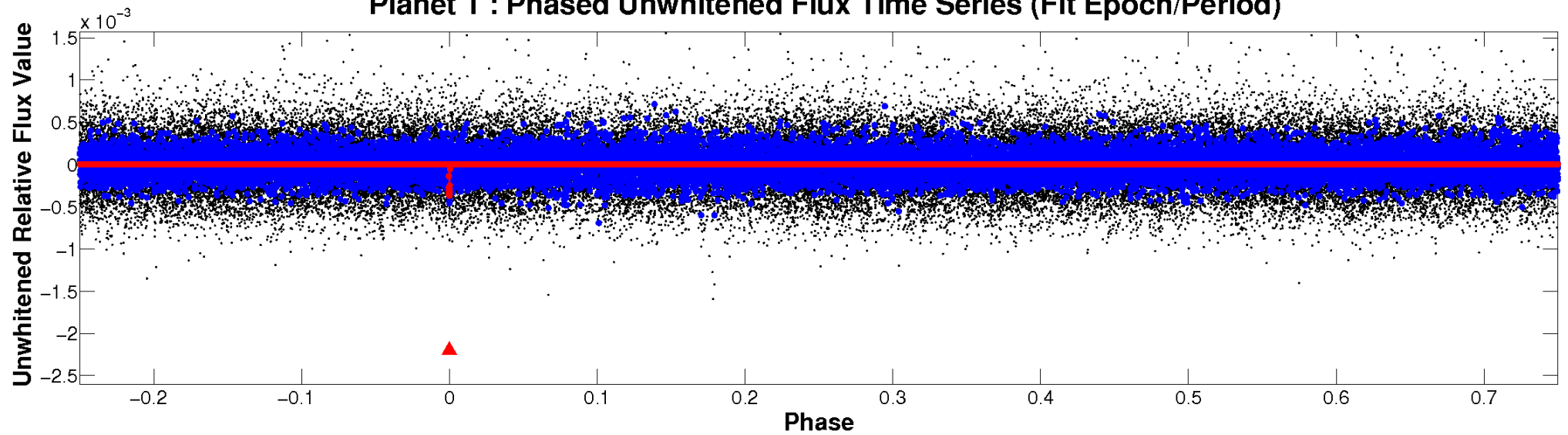
ALT Odd/Even

TCE 006429149-01

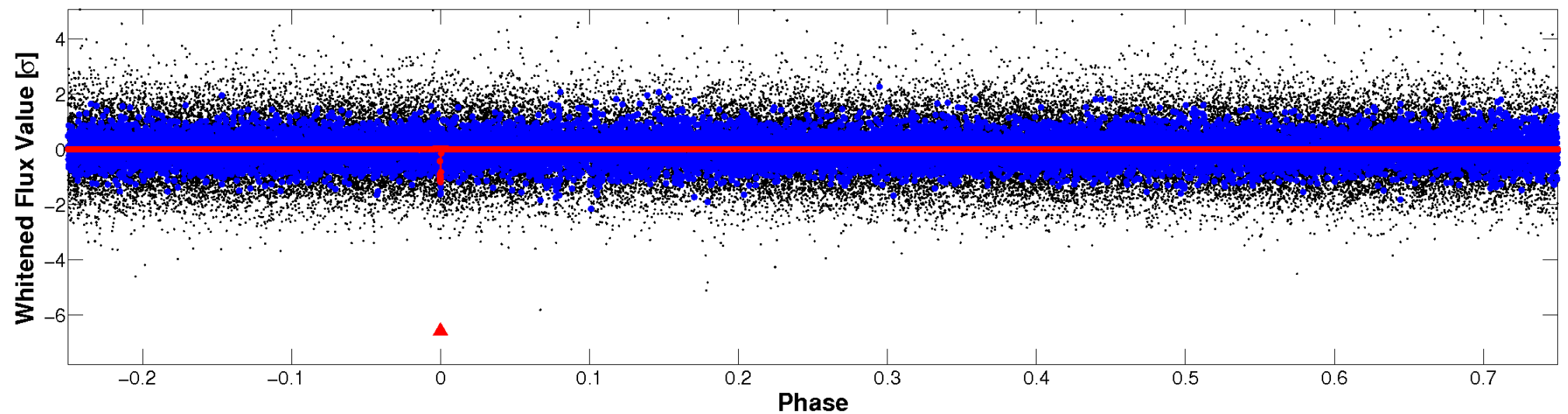


Non-Whitened Vs. Whitened Light Curve

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

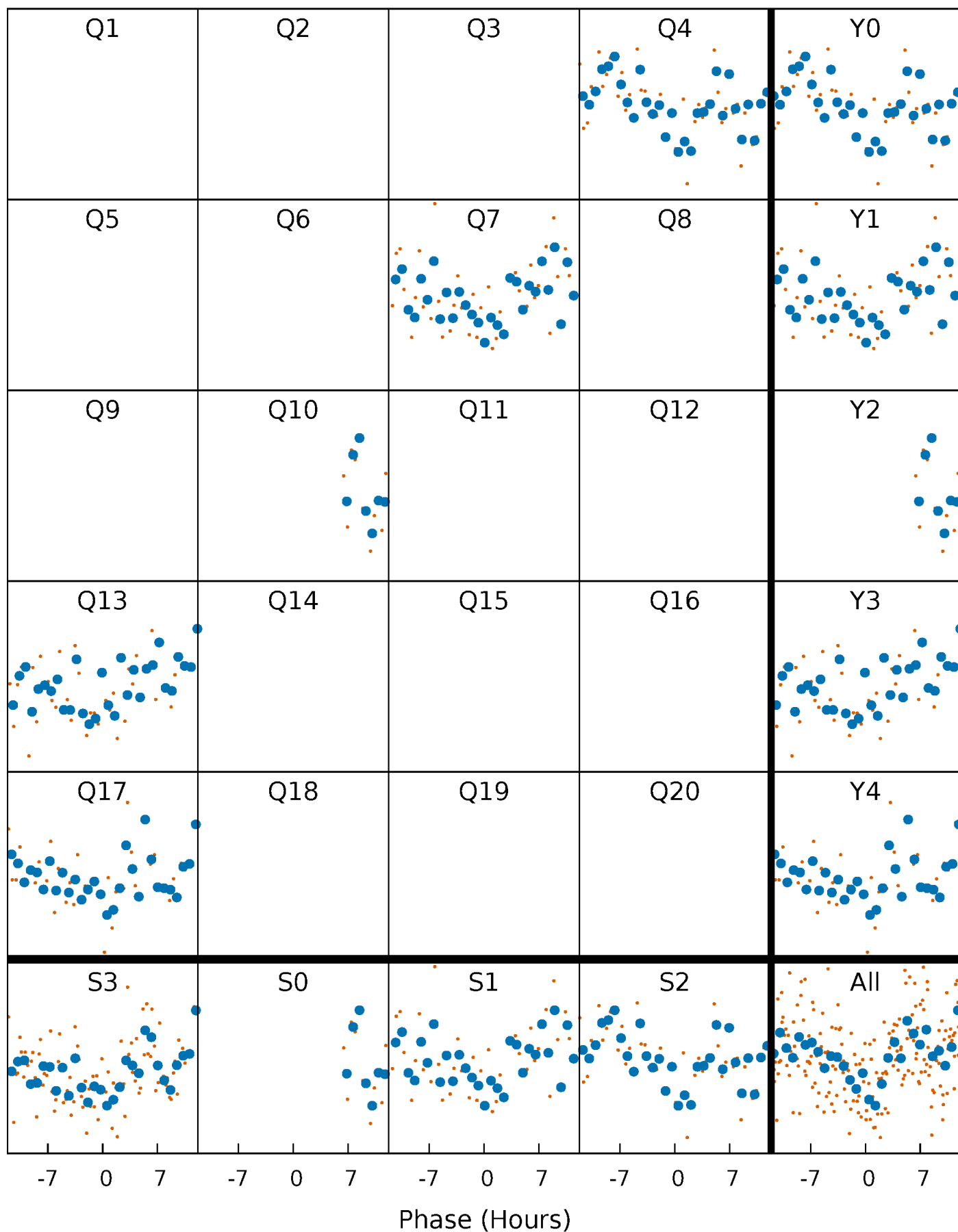


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



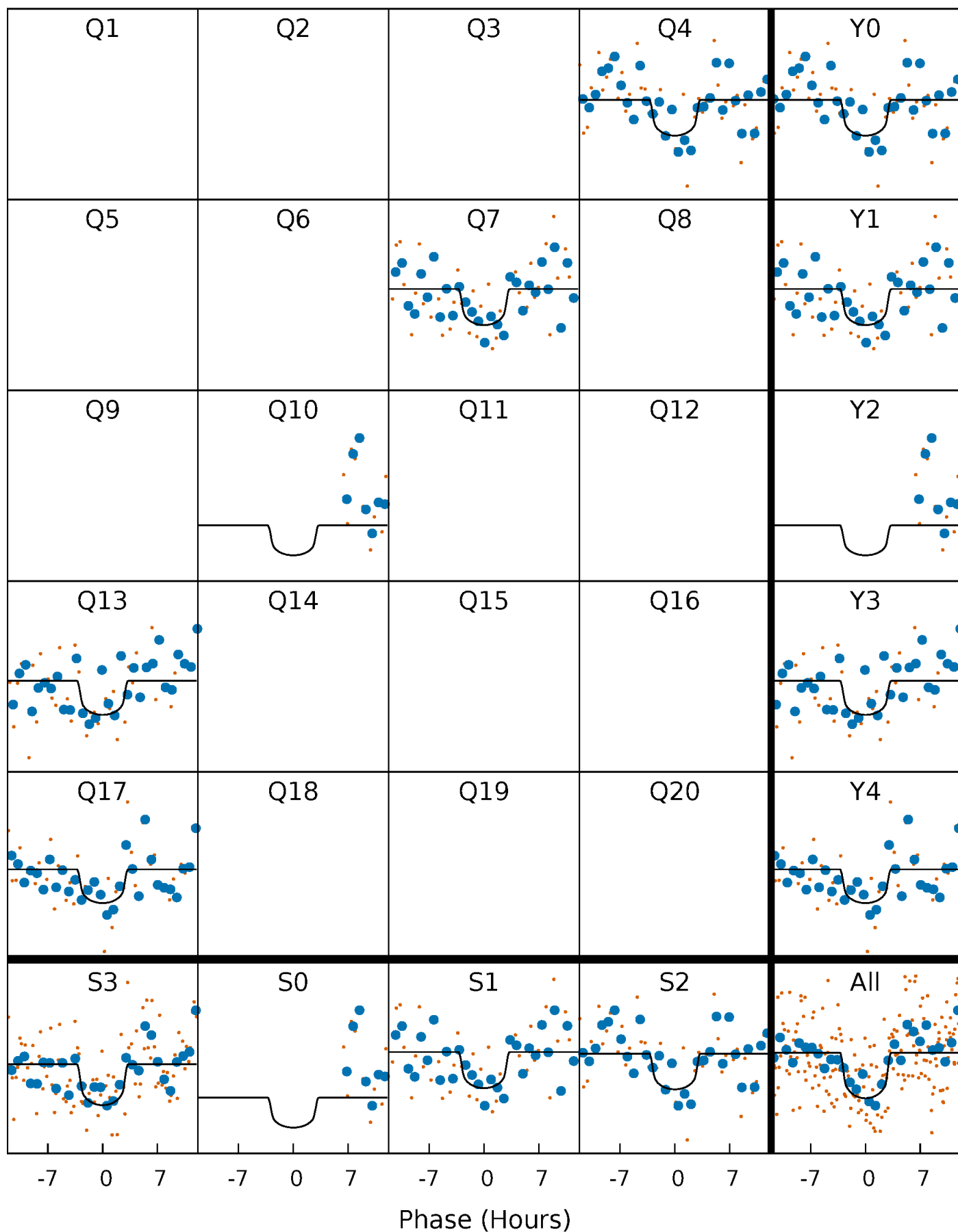
PDC Quarter-Phased Transit Curves

TCE 006429149-01 P=296.434401 Days $T_0=376.952386$ (BKJD)



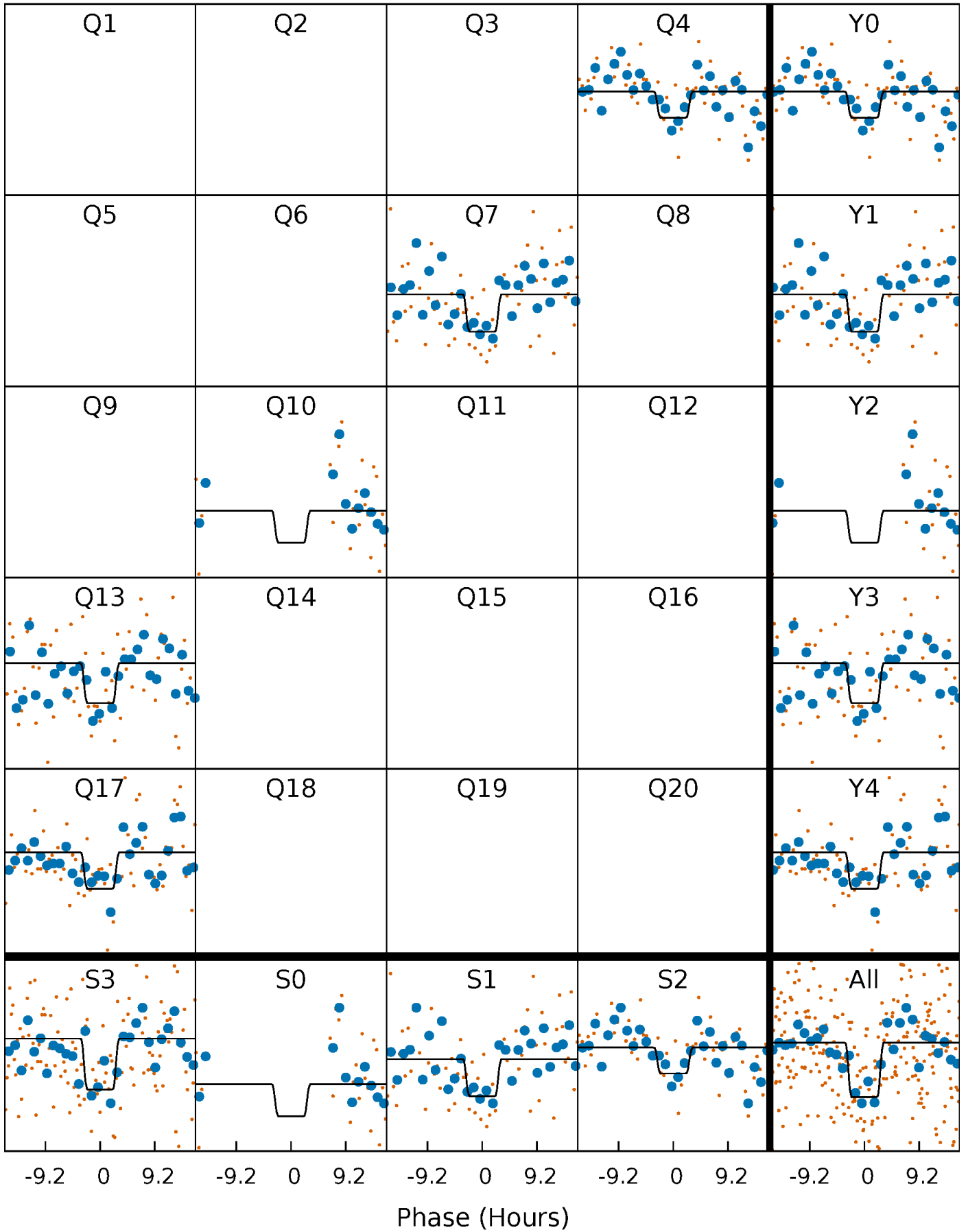
DV Quarter-Phased Transit Curves

TCE 006429149-01 P=296.434401 Days $T_0=376.952386$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

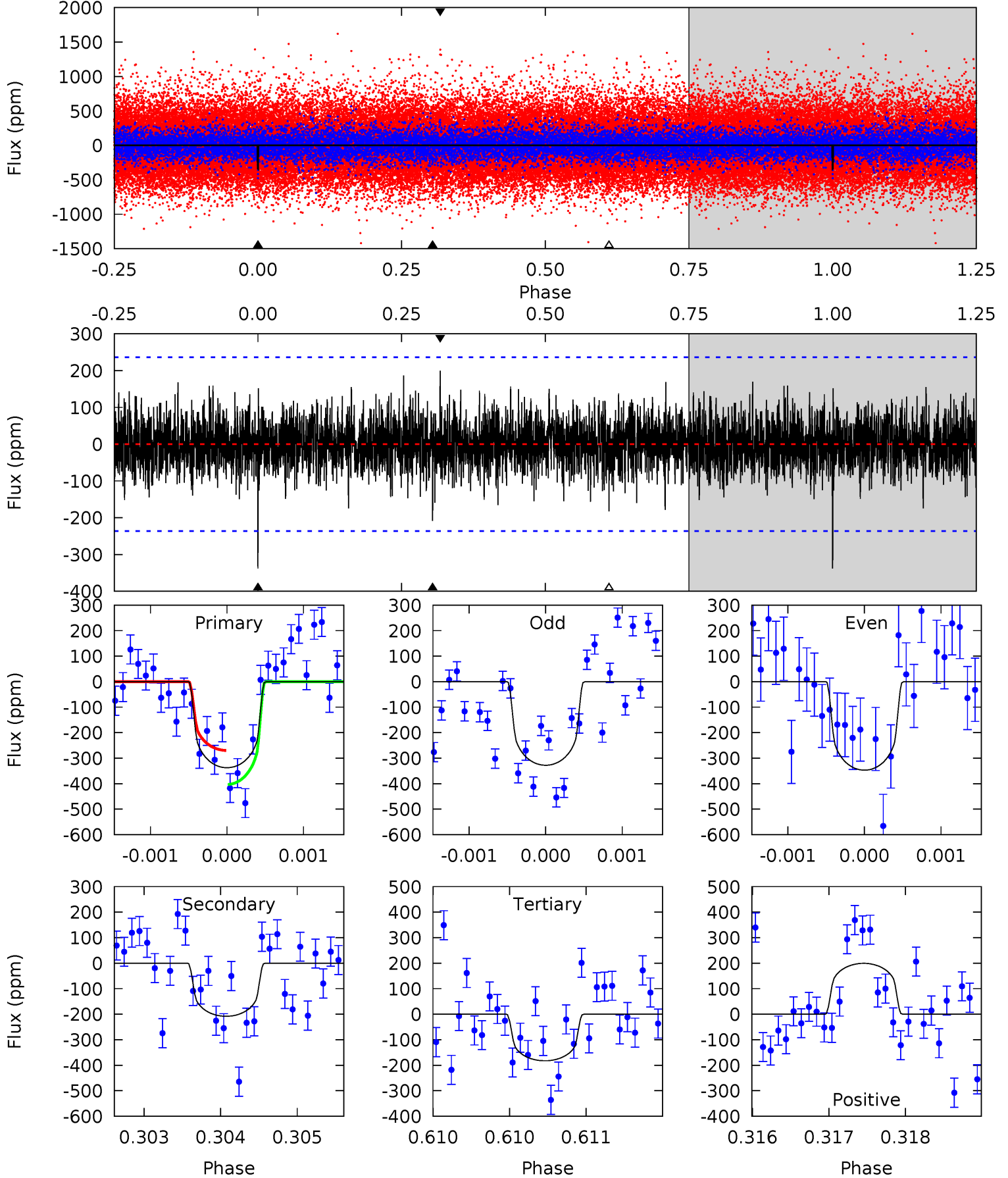
TCE 006429149-01 P=296.416032 Days $T_0=376.983175$ (BKJD)



DV Model-Shift Uniqueness Test

006429149-01, P = 296.434401 Days, E = 80.517985 Days

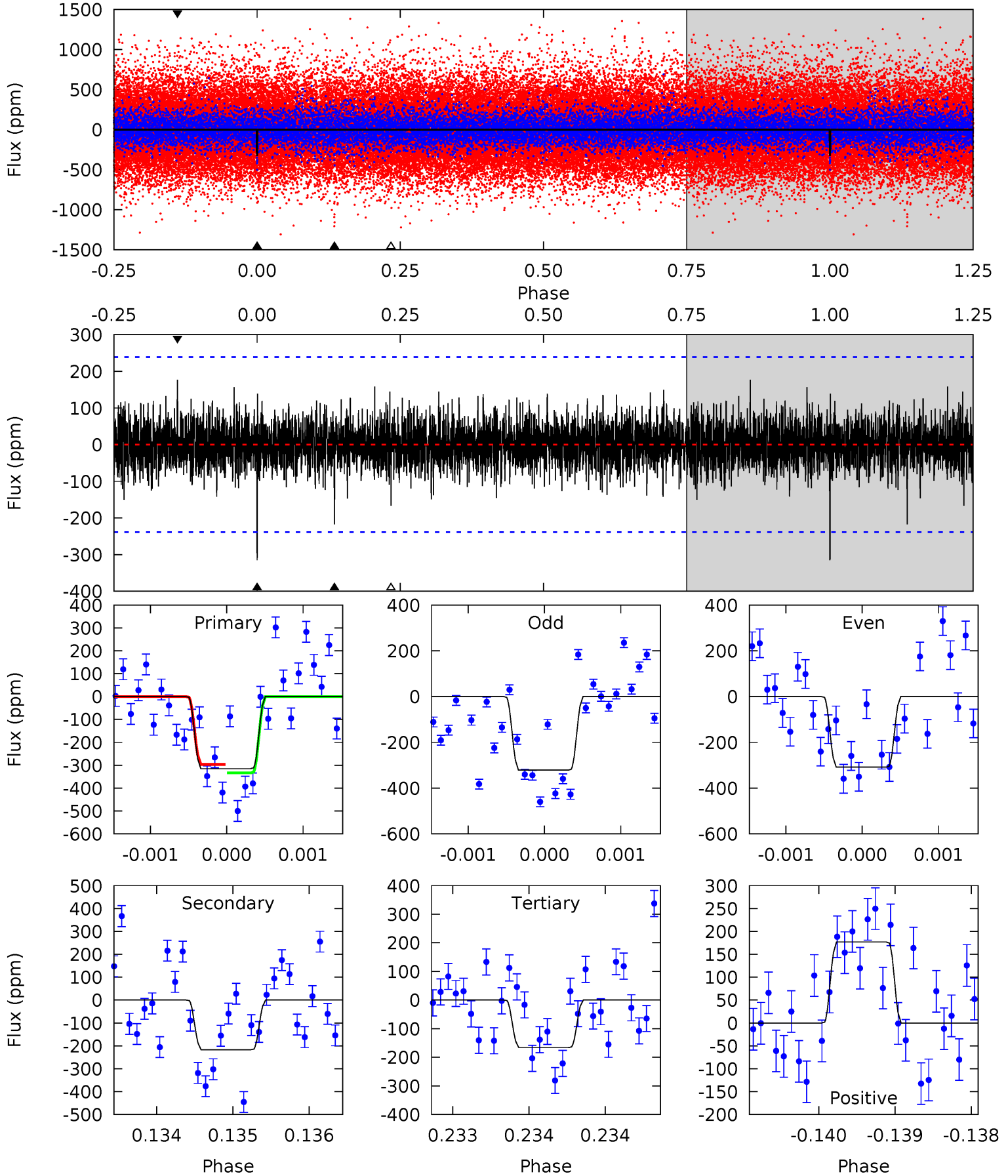
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.81	4.82	4.22	4.61	5.47	3.31	1.18	3.59	3.20	0.59	0.21	0.22	0.97	0.37	1.54



Alt Model-Shift Uniqueness Test

006429149-01, P = 296.416032 Days, E = 80.567143 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.22	4.97	3.80	4.05	5.47	3.32	1.02	3.42	3.17	1.17	0.92	0.15	1.01	0.36	0.43



Stellar Parameters For KIC 006429149

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5170^{+153}_{-153}	$4.519^{+0.093}_{-0.085}$	$-0.240^{+0.300}_{-0.300}$	$0.780^{+0.097}_{-0.088}$	$0.735^{+0.106}_{-0.057}$	$2.179^{+0.804}_{-0.538}$
	+3%/-3%	+2%/-2%	+125%/-125%	+12%/-11%	+14%/-8%	+37%/-25%
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 006429149-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-208 ± 43	$2.29^{+2.06}_{-1.41}$	317^{+14}_{-14}	4025^{+2004}_{-760}	13090^{+84050}_{-9346}
Alt.	-217 ± 44	$2.30^{+2.01}_{-1.57}$	318^{+13}_{-14}	4045^{+2568}_{-722}	$13842^{+120024}_{-9758}$

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 $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

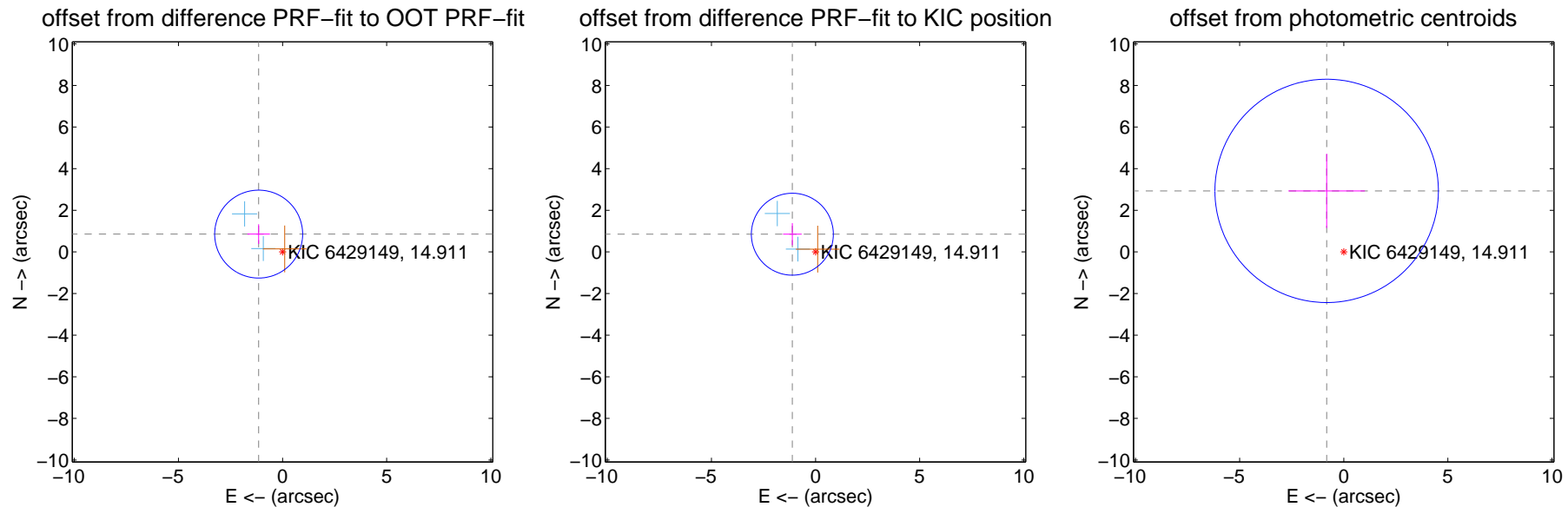
DV Centroid Data

Supplemental centroid analysis for 006429149-01. Kepler magnitude: 14.91. Transit SNR 6.99

There are 2 quarters with good PRF difference image offsets

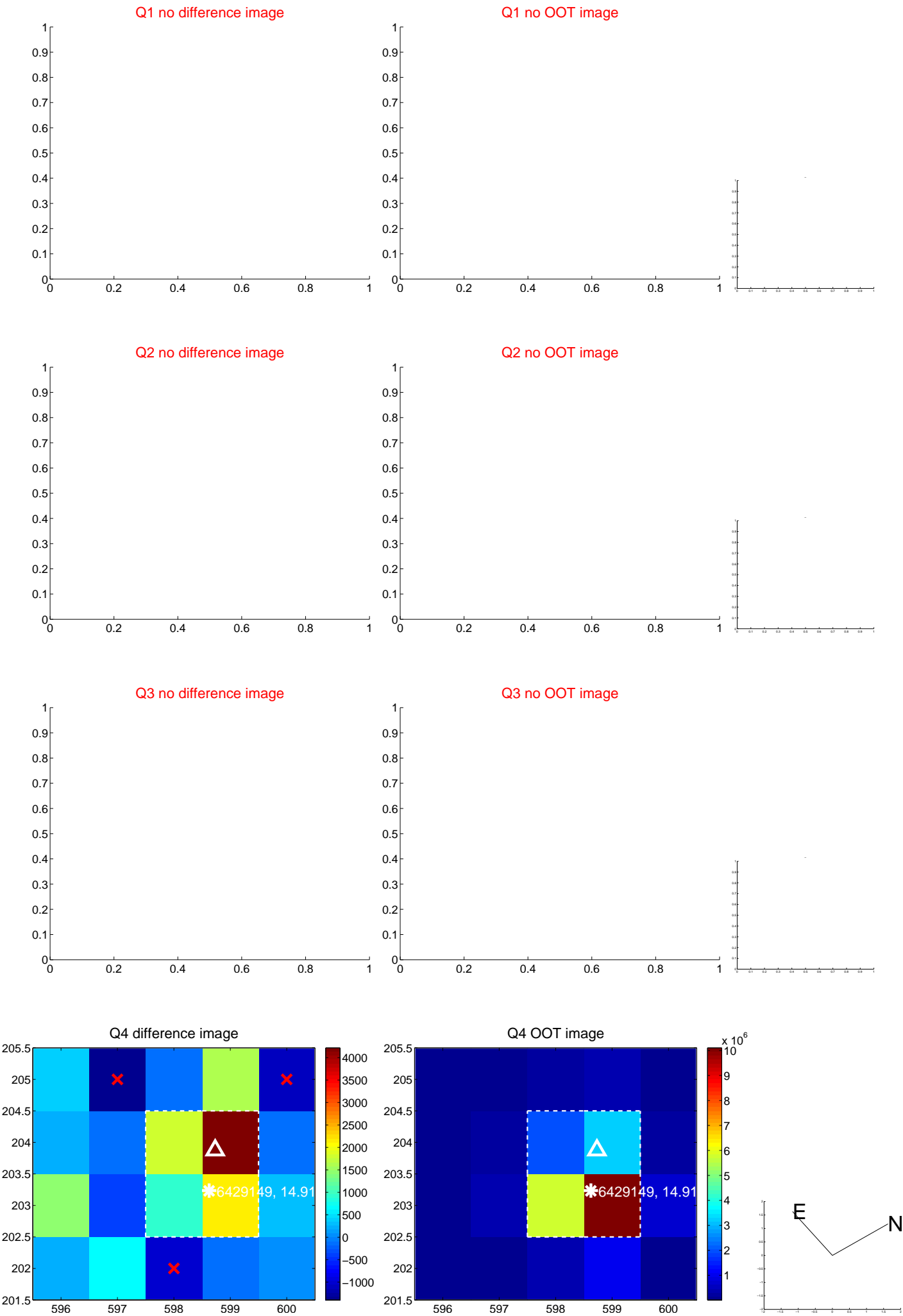
The direct PRF centroid is offset from the target star catalog position by about 0.01 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.432 ± 0.704	2.03	1.148 ± 0.538	0.856 ± 0.472
PRF-fit source offset from KIC position	1.402 ± 0.656	2.14	1.114 ± 0.447	0.851 ± 0.533
photometric centroid source offset	3.05 ± 1.79	1.70	0.82 ± 1.84	2.93 ± 1.78

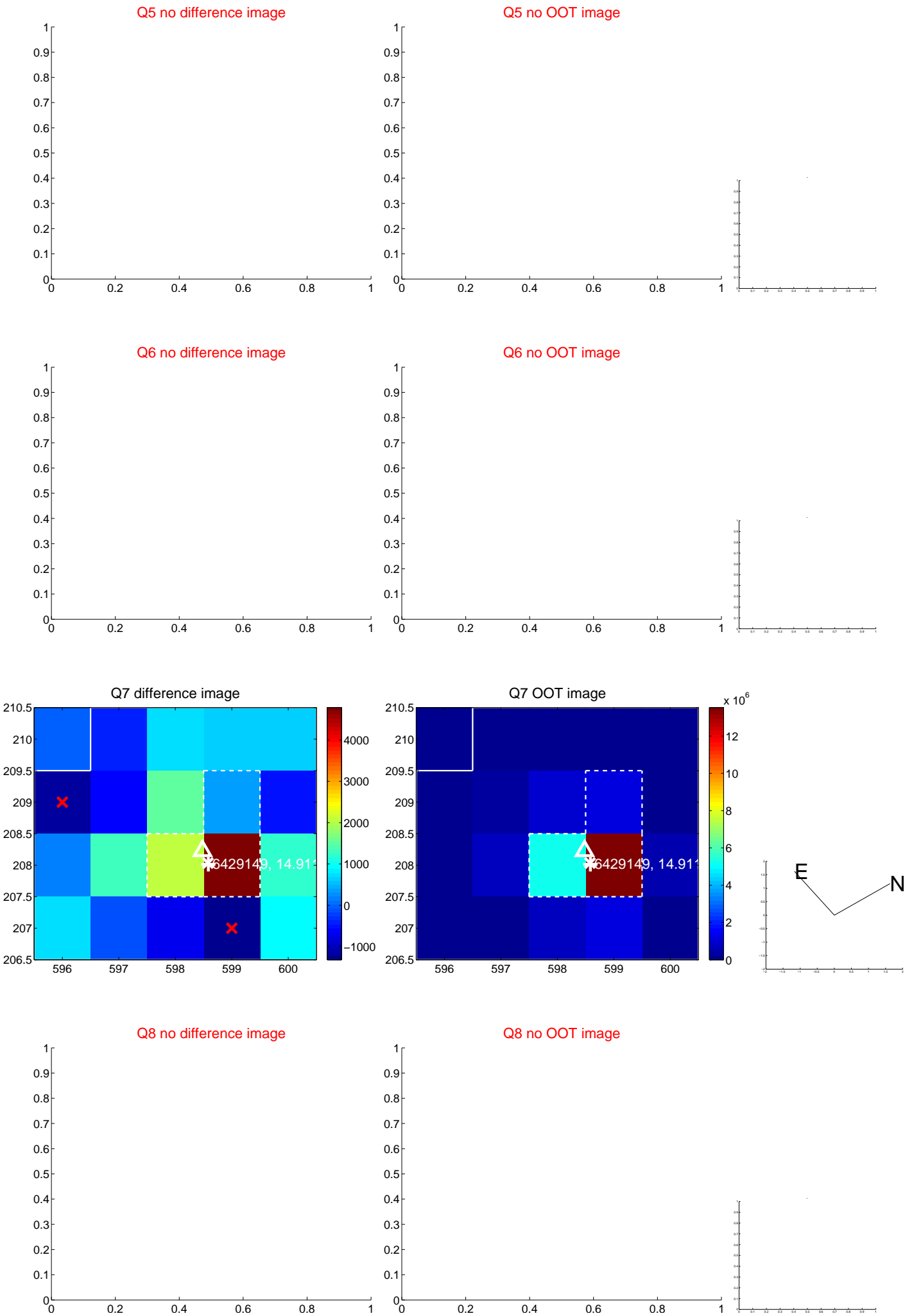


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



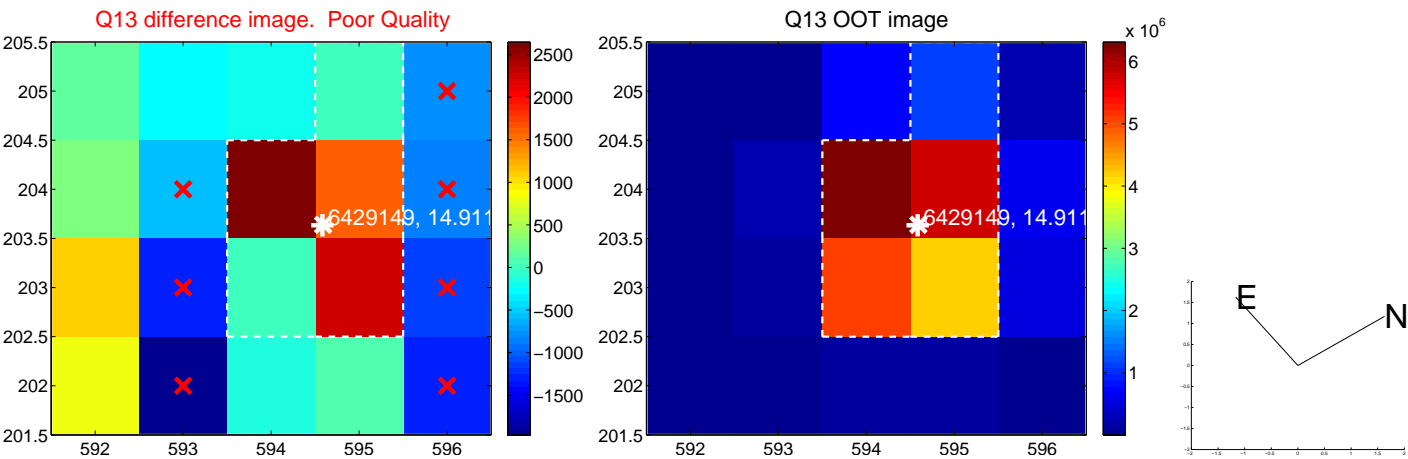
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



UKIRT Image

Declination

