

KIC 010014548

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})
010014548-01	OBS	No	0.613879	131.853606	56.0	7.367	10.5	14.7	2.57	7392	1.96	56105.83

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010014548-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

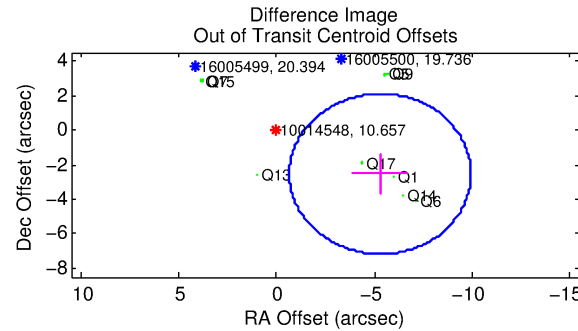
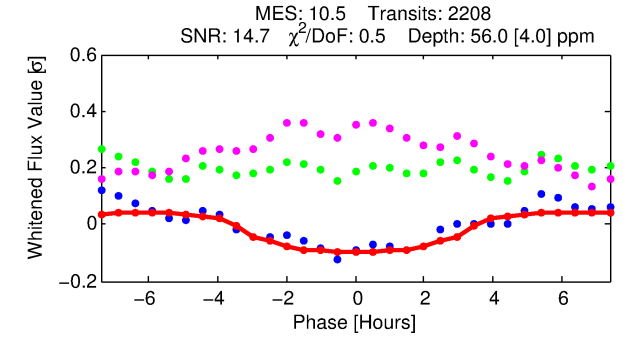
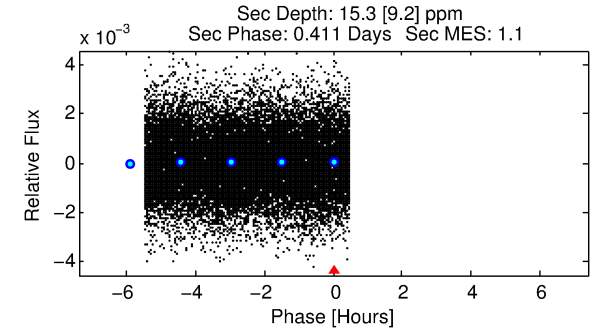
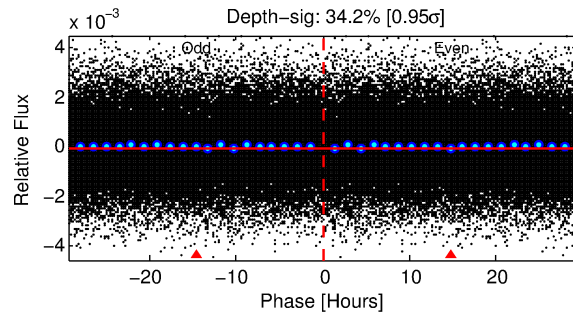
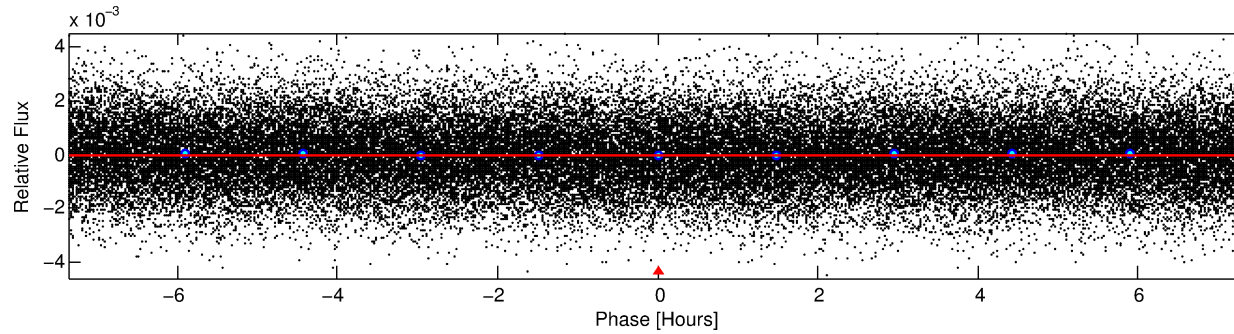
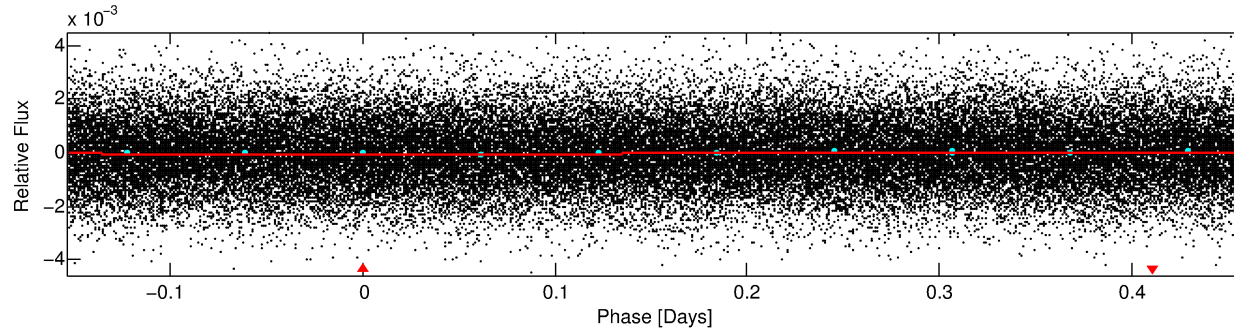
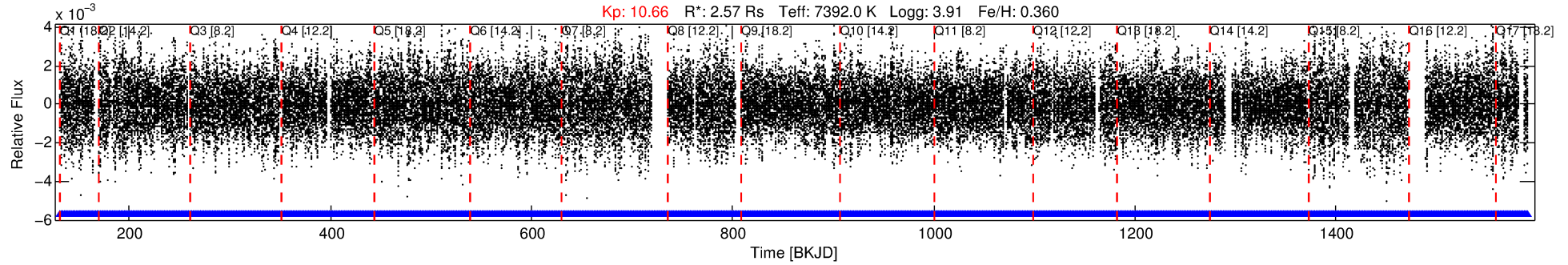
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010014548-01

No Significant Match Found

DV One-Page Summary

KIC: 10014548 Candidate: 1 of 1 Period: 0.614 d



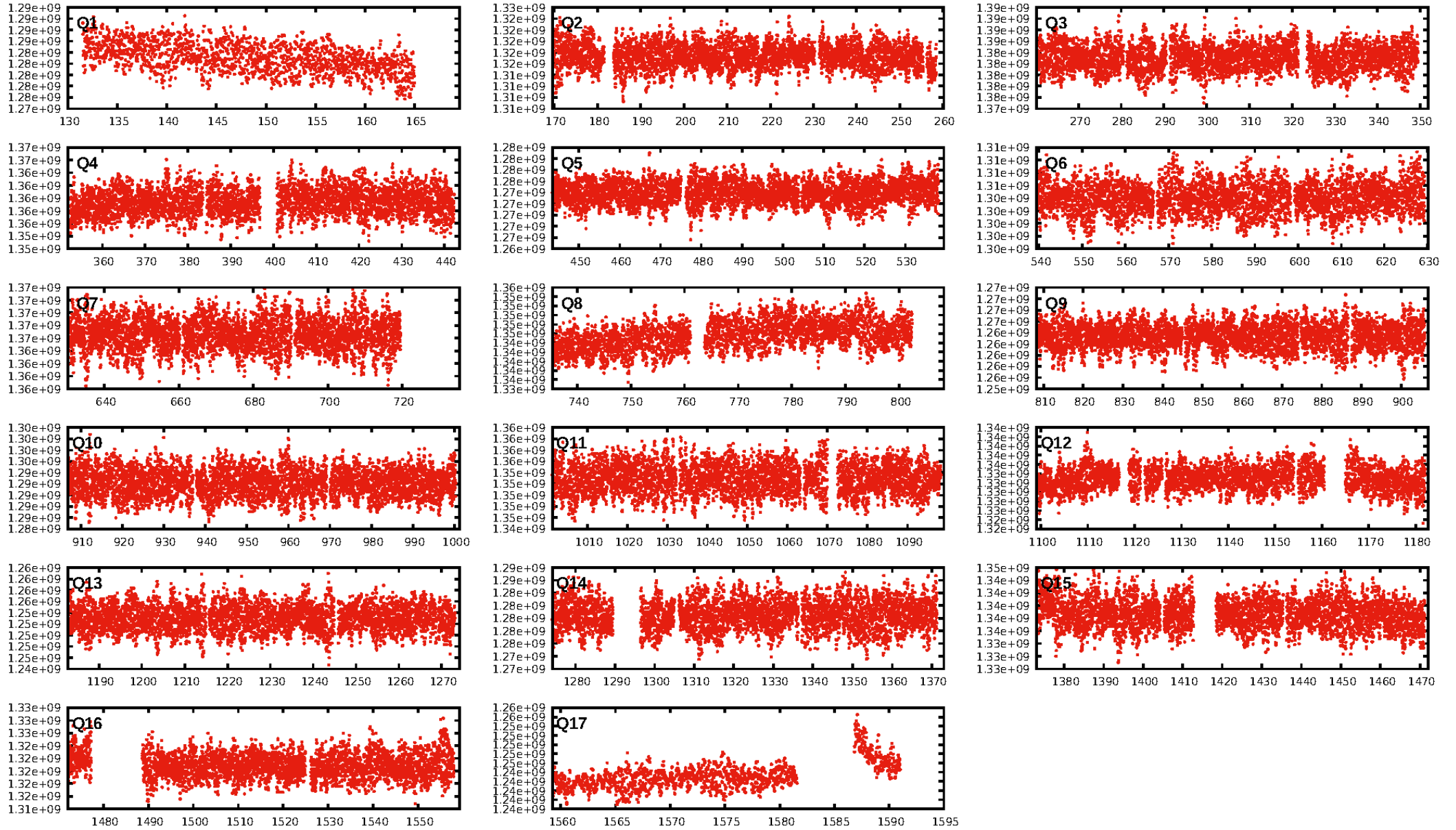
DV Fit Results:

Period = 0.61388 [0.00001] d
Epoch = 131.8536 [0.0048] BKJD
Rp/R* = 0.0070 [0.0019]
a/R* = 1.00 [0.01]
b = 0.28 [5.35]
Seff = 56105.83 [24889.99]
Teq = 3924 [435] K
Rp = 1.96 [0.82] Re
a = 0.0177 [0.0048] AU
Ag = 0.69 [0.63] [-0.50 σ]
Teffp = 5528 [1157] K [1.30 σ]

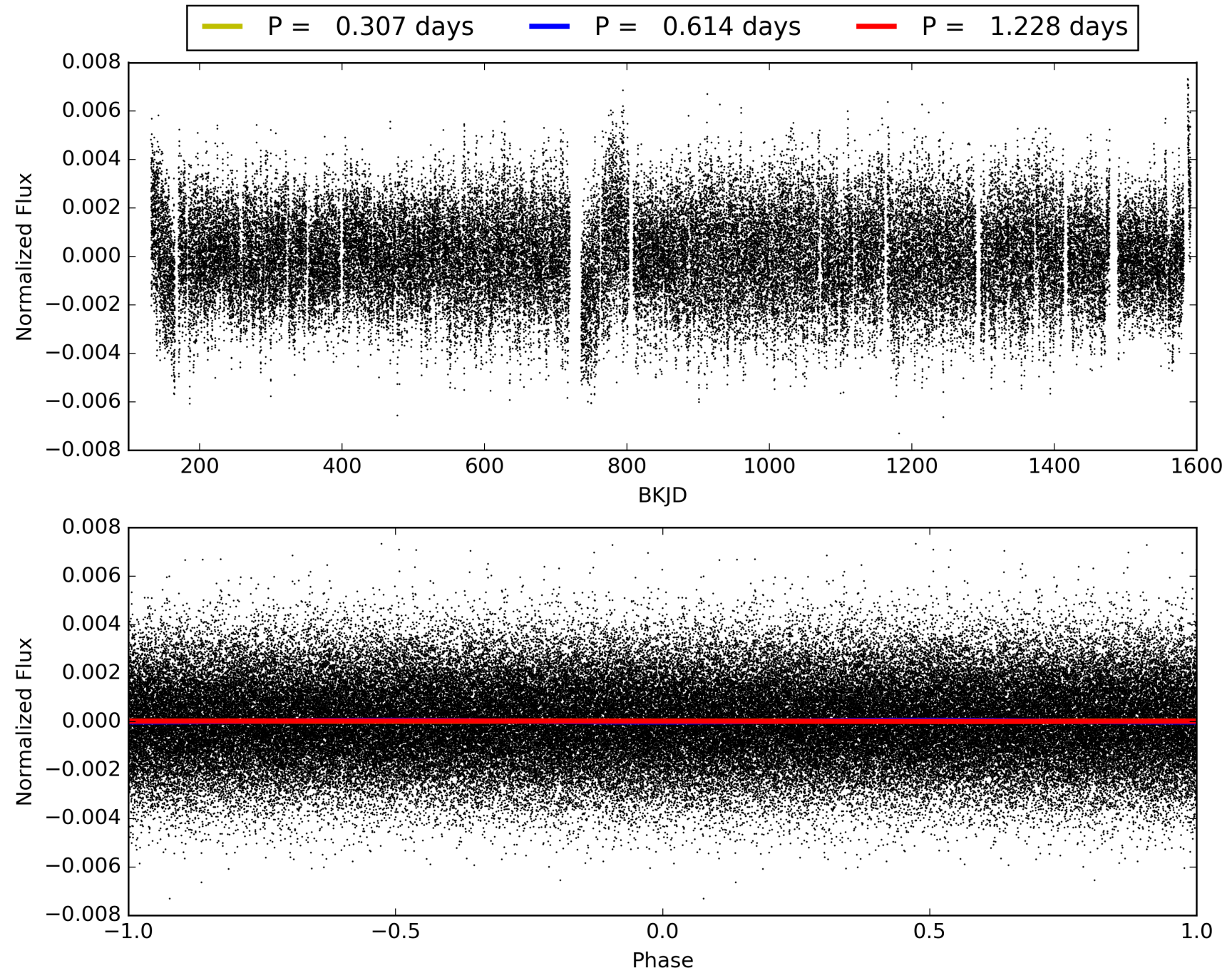
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2108/2108]
GhostDiagnostic-chr: 3.116
Centroid-sig: 0.0%
Centroid-so: 0.446 arcsec [2.14 σ]
OotOffset-rm: 5.868 arcsec [3.80 σ]
KicOffset-rm: 5.331 arcsec [3.79 σ]
OotOffset-st: 2/2/0/5 [9]
KicOffset-st: 2/2/0/5 [9]
DiffImageQuality-fgm: 0.33 [3/9]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 010014548-01, PDC Light Curves

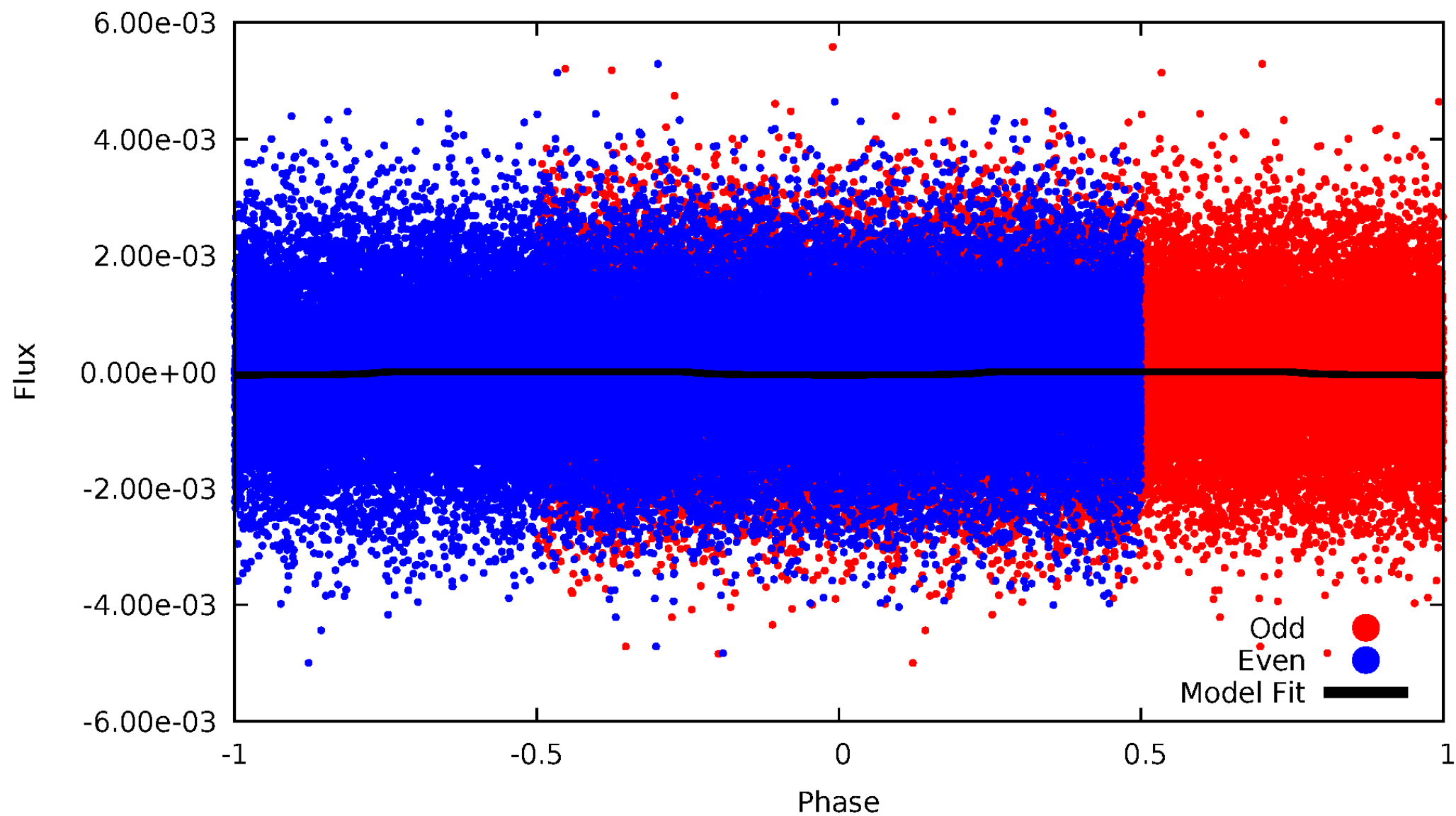


TCE 010014548-01



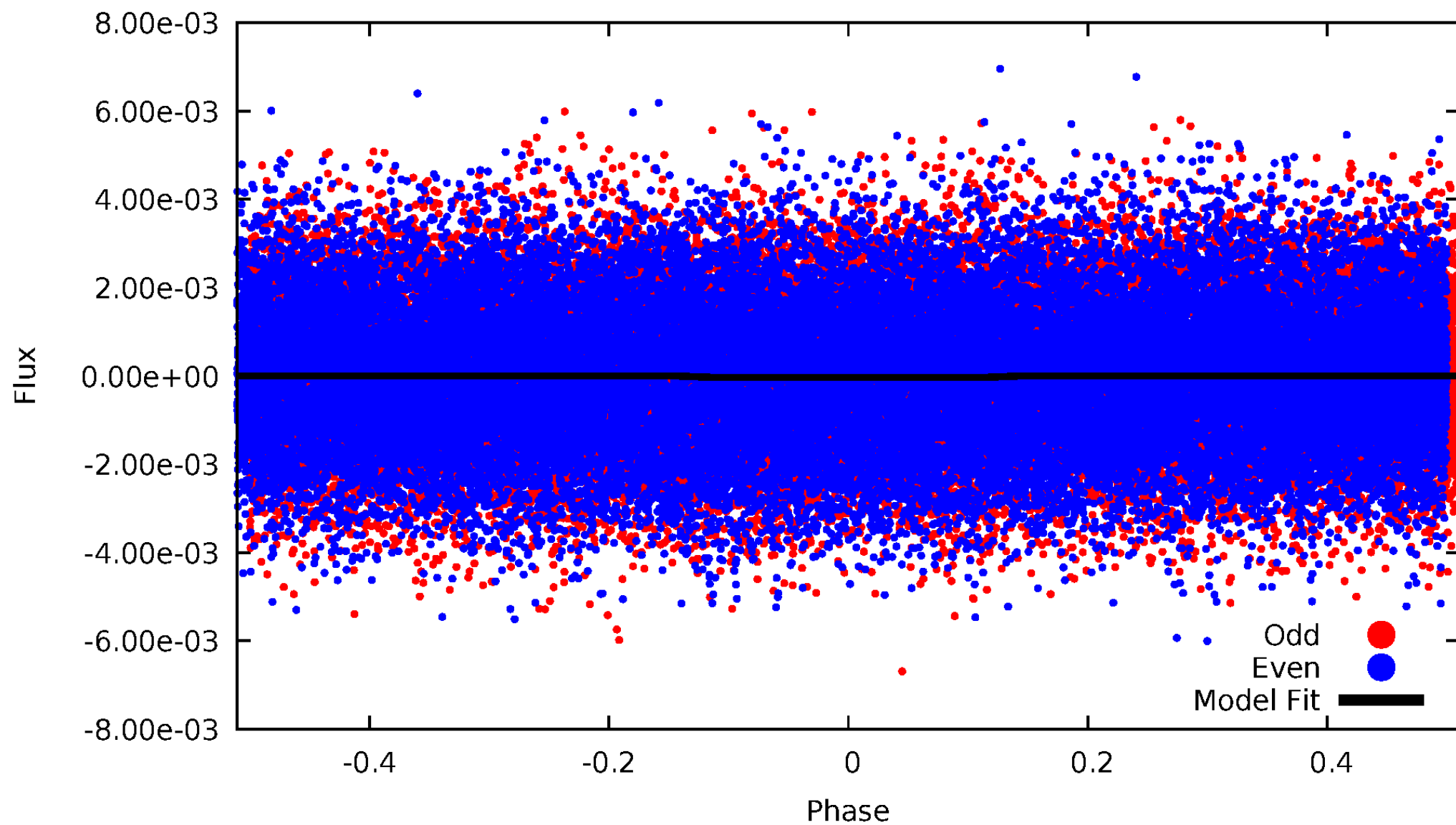
DV Odd/Even

TCE 010014548-01

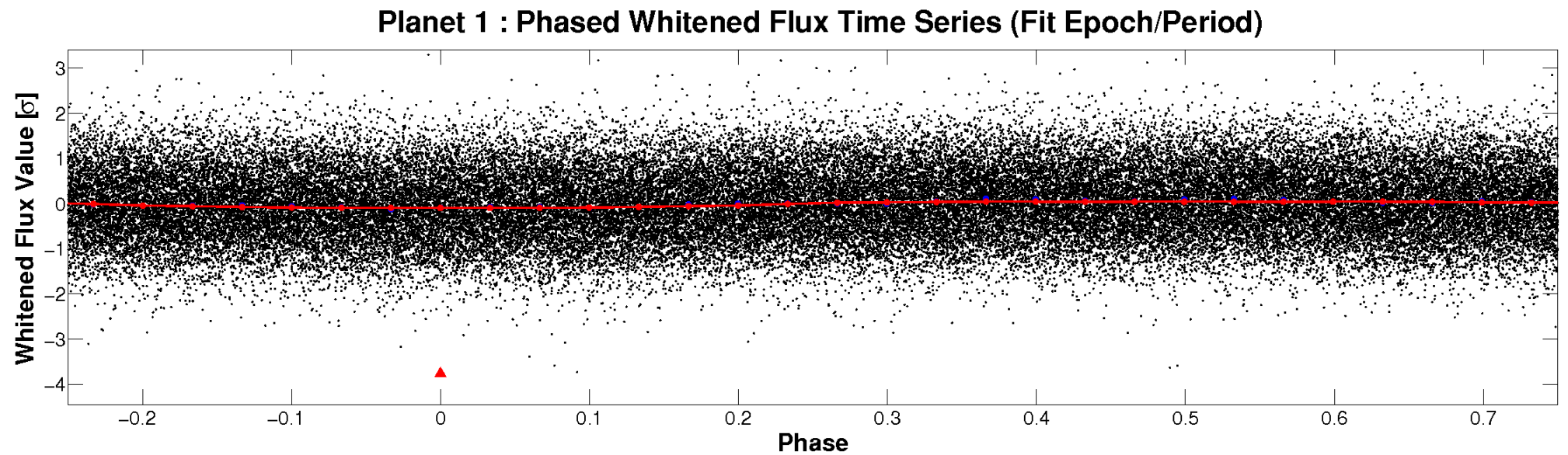
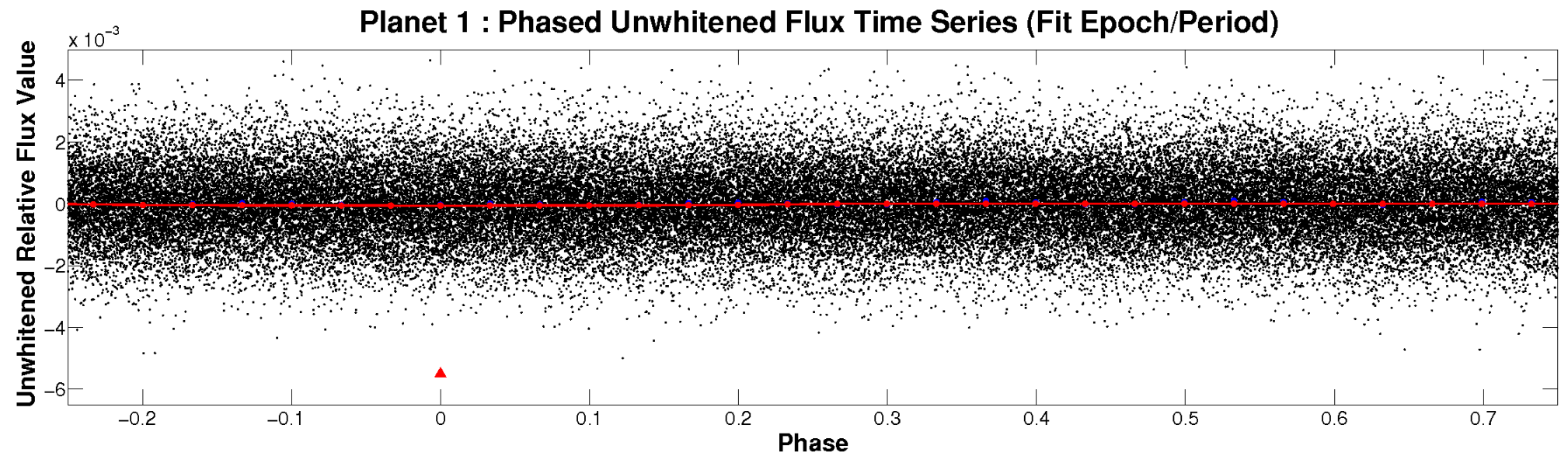


ALT Odd/Even

TCE 010014548-01

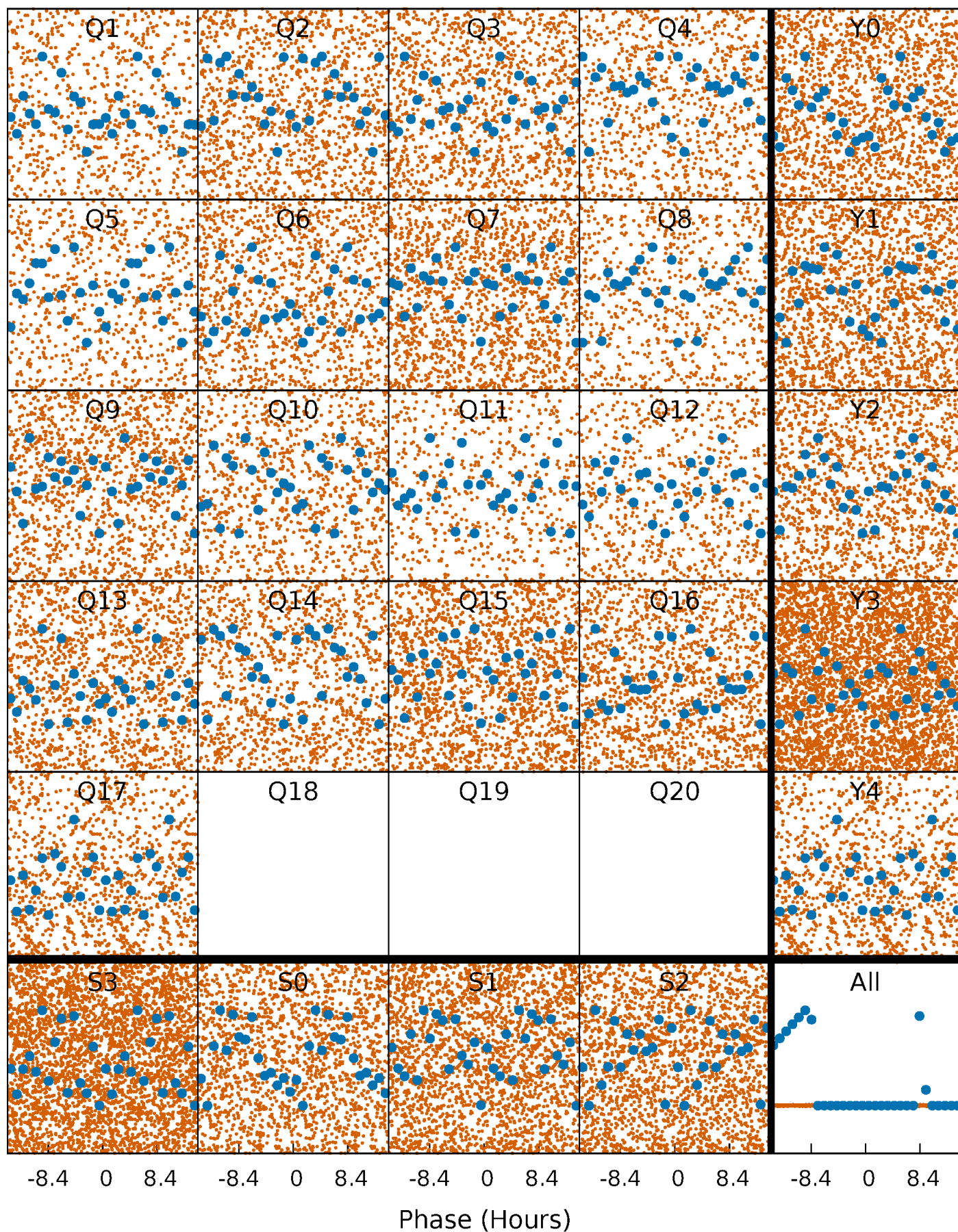


Non-Whitened Vs. Whitened Light Curve



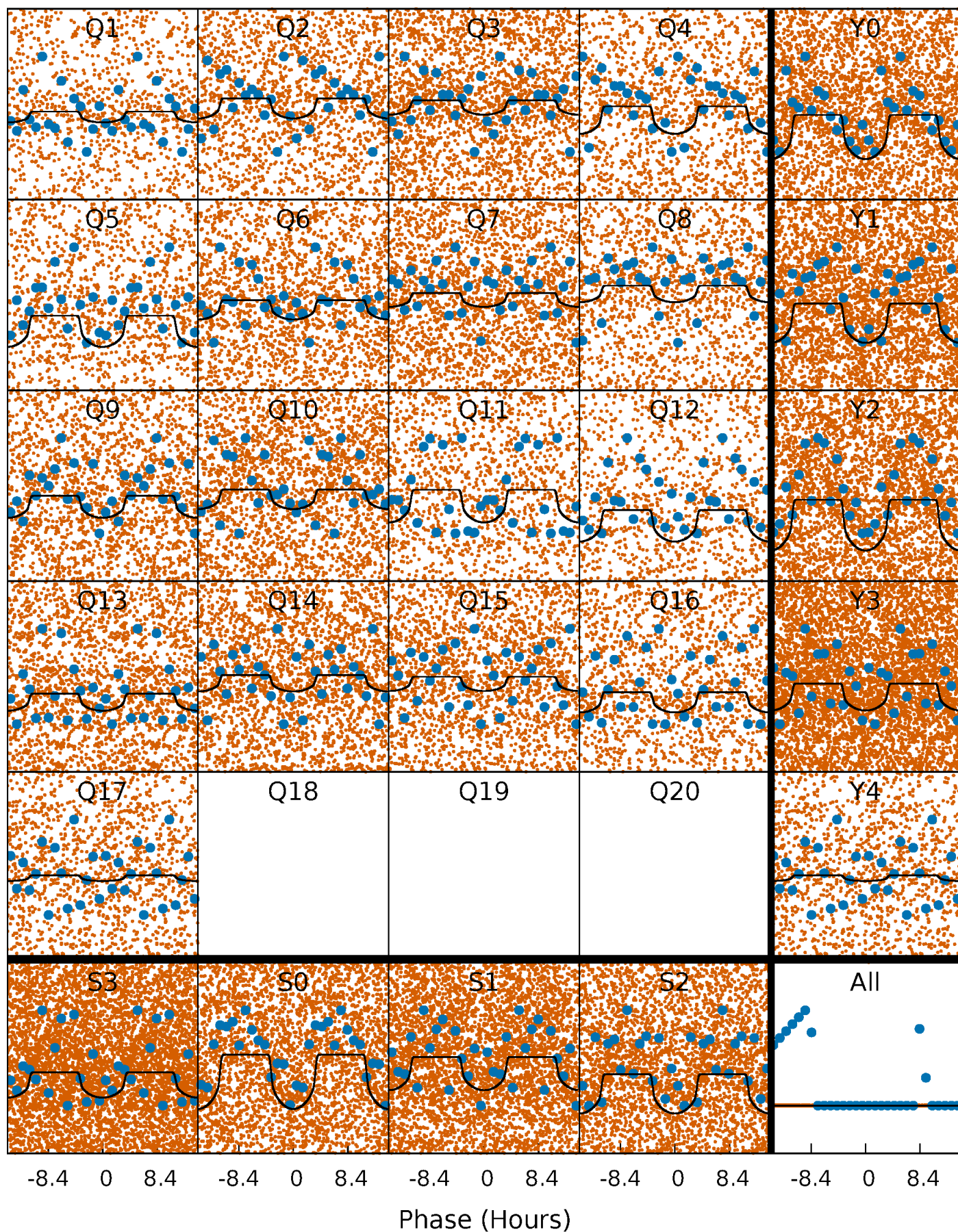
PDC Quarter-Phased Transit Curves

TCE 010014548-01 P= 0.613879 Days $T_0=131.853606$ (BKJD)



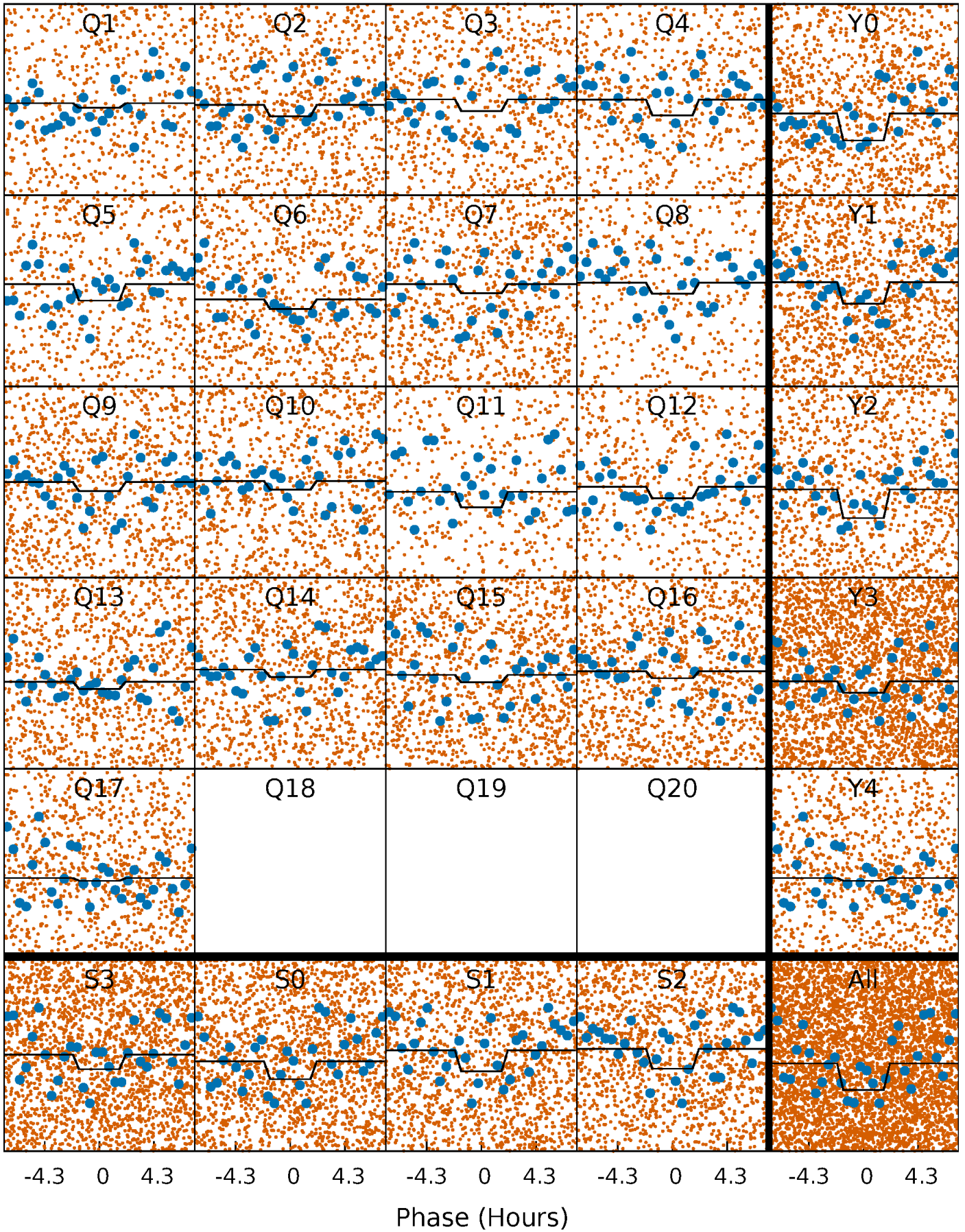
DV Quarter-Phased Transit Curves

TCE 010014548-01 P= 0.613879 Days $T_0=131.853606$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

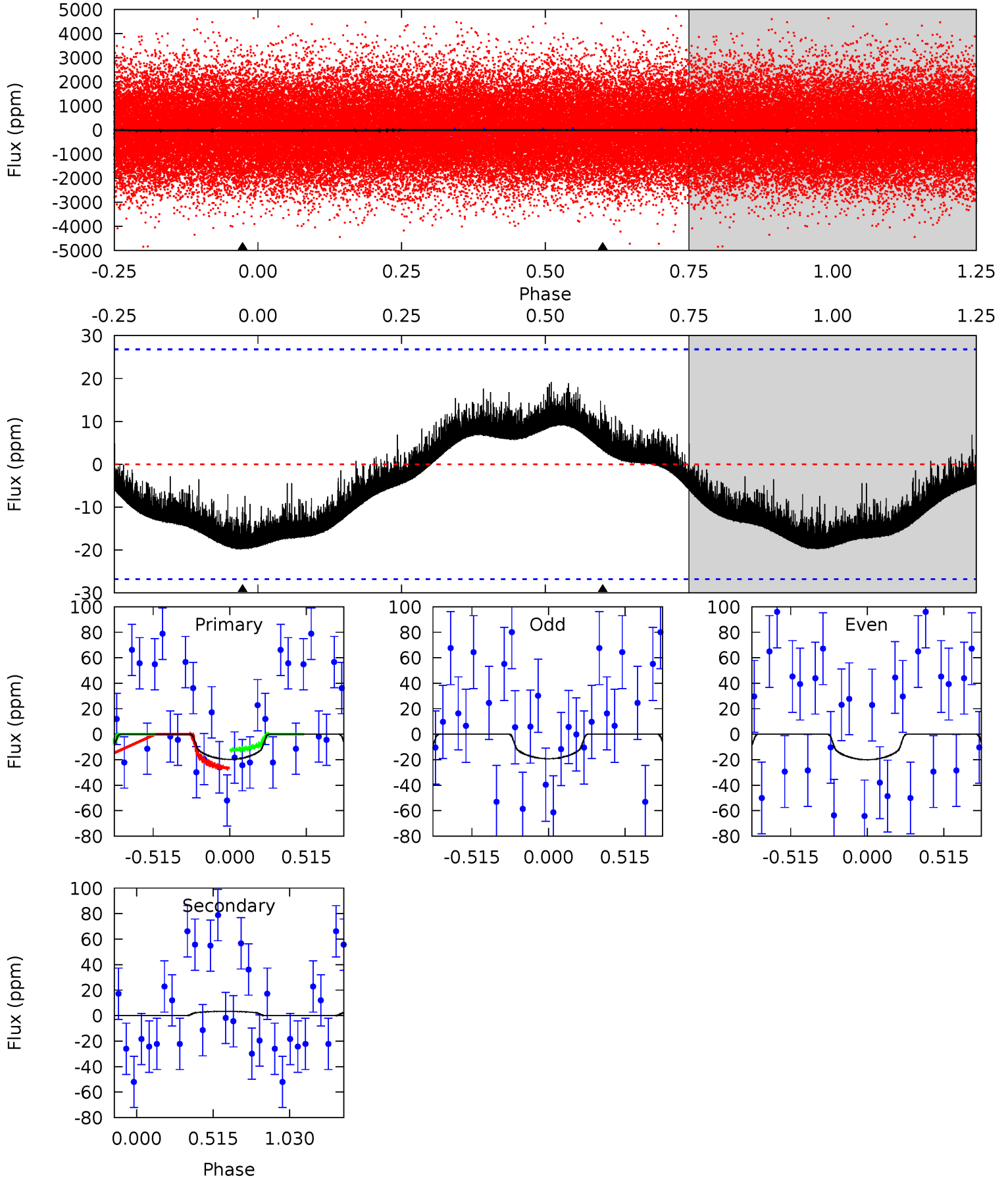
TCE 010014548-01 P= 0.613859 Days $T_0=131.906280$ (BKJD)



DV Model-Shift Uniqueness Test

010014548-01, P = 0.613879 Days, E = 131.239727 Days

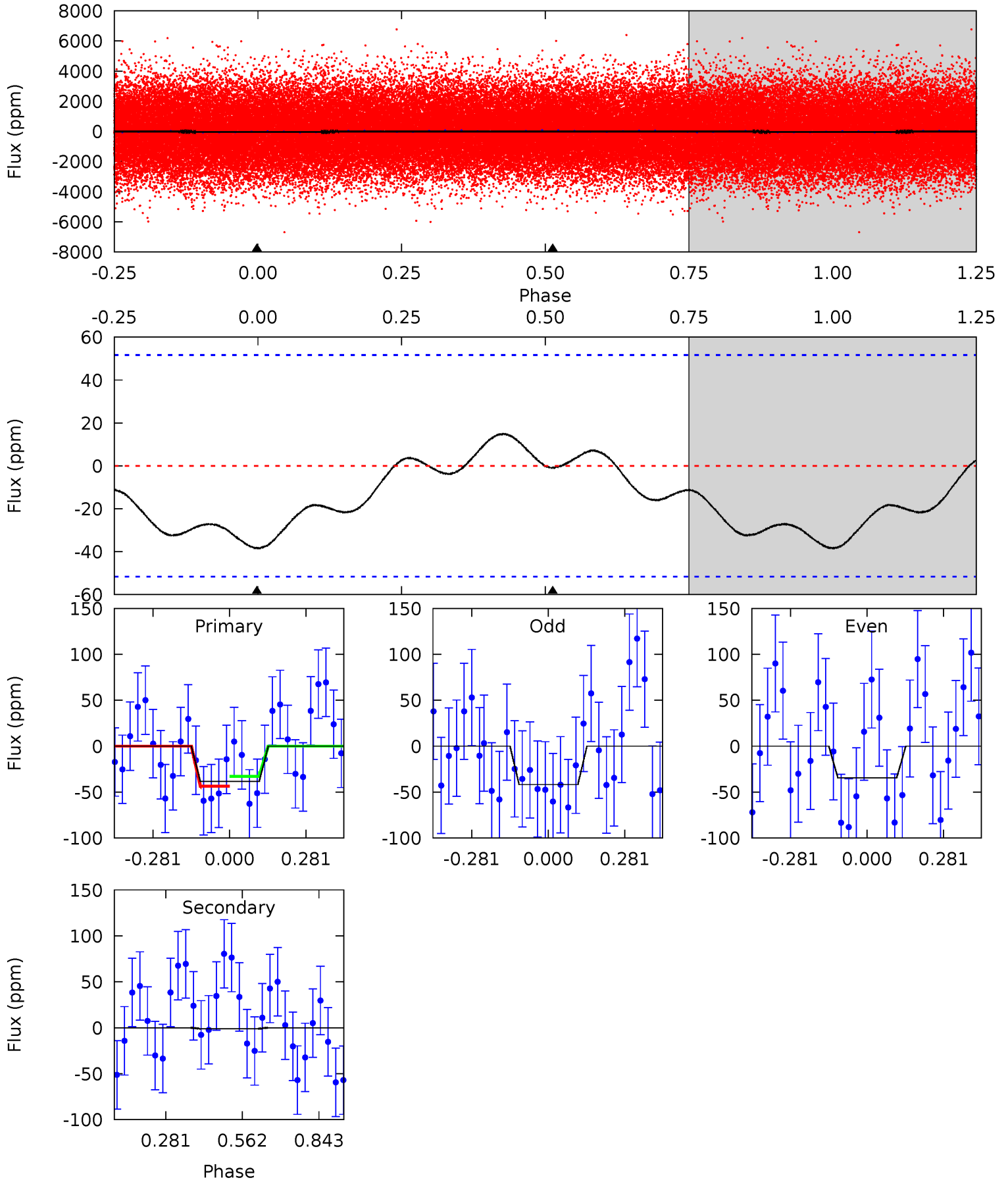
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.10	-0.53	0	0	4.21	0.65	0.51	3.10	3.10	-0.53	-0.53	0.06	1.12	0.49	1.10



Alt Model-Shift Uniqueness Test

010014548-01, P = 0.613859 Days, E = 131.292421 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.24	0.09	0	0	4.34	1.08	0.57	3.24	3.24	0.09	0.09	0.31	1.04	0.28	0.45



Stellar Parameters For KIC 010014548

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	7392^{+206}_{-353}	$3.914^{+0.222}_{-0.148}$	$0.360^{+0.100}_{-0.400}$	$2.569^{+0.540}_{-0.810}$	$1.975^{+0.132}_{-0.421}$	$0.164^{+0.225}_{-0.073}$
	+3%/-5%	+6%/-4%	+28%/-111%	+21%/-32%	+7%/-21%	+137%/-44%
Source	KIC0	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 010014548-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	3 ± 6	$1.90^{+0.58}_{-0.62}$	5412^{+411}_{-420}	-4951^{+898}_{-776}	$-0.140^{+0.266}_{-0.412}$
Alt.	-1 ± 12	$1.73^{+0.60}_{-0.56}$	5438^{+394}_{-474}	-4349^{+9562}_{-1557}	$0.071^{+0.832}_{-0.752}$

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 $A_{obs} \gg 1.0$

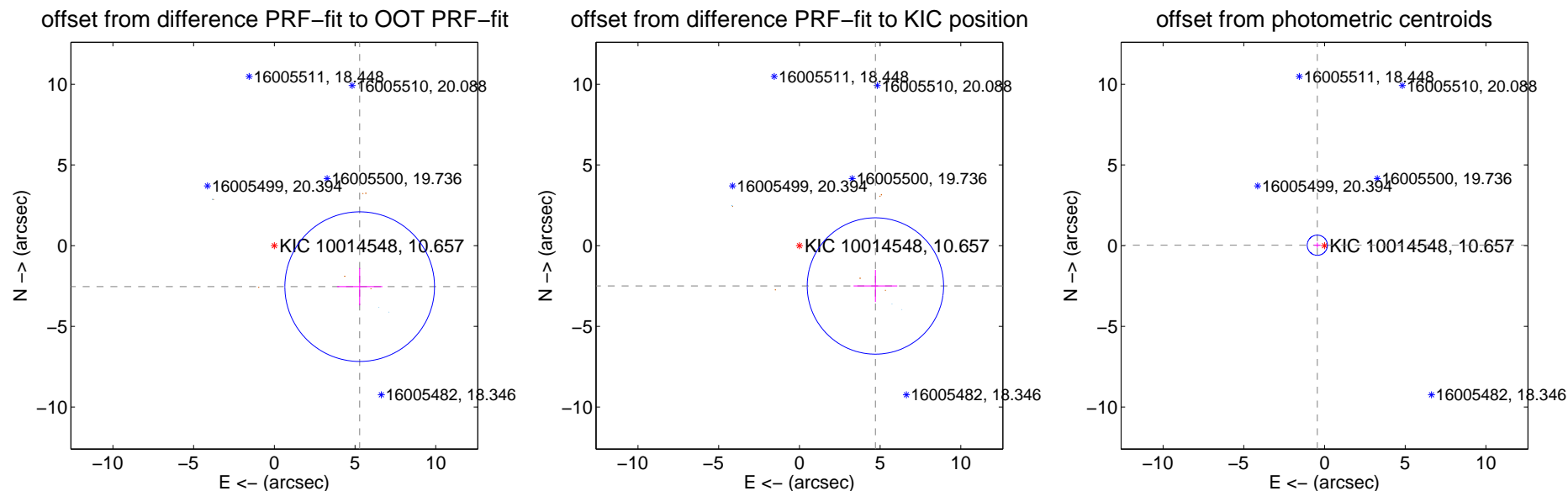
DV Centroid Data

Supplemental centroid analysis for 010014548-01. **Kepler magnitude: 10.66.** Transit SNR 14.67

There are 3 quarters with good PRF difference image offsets

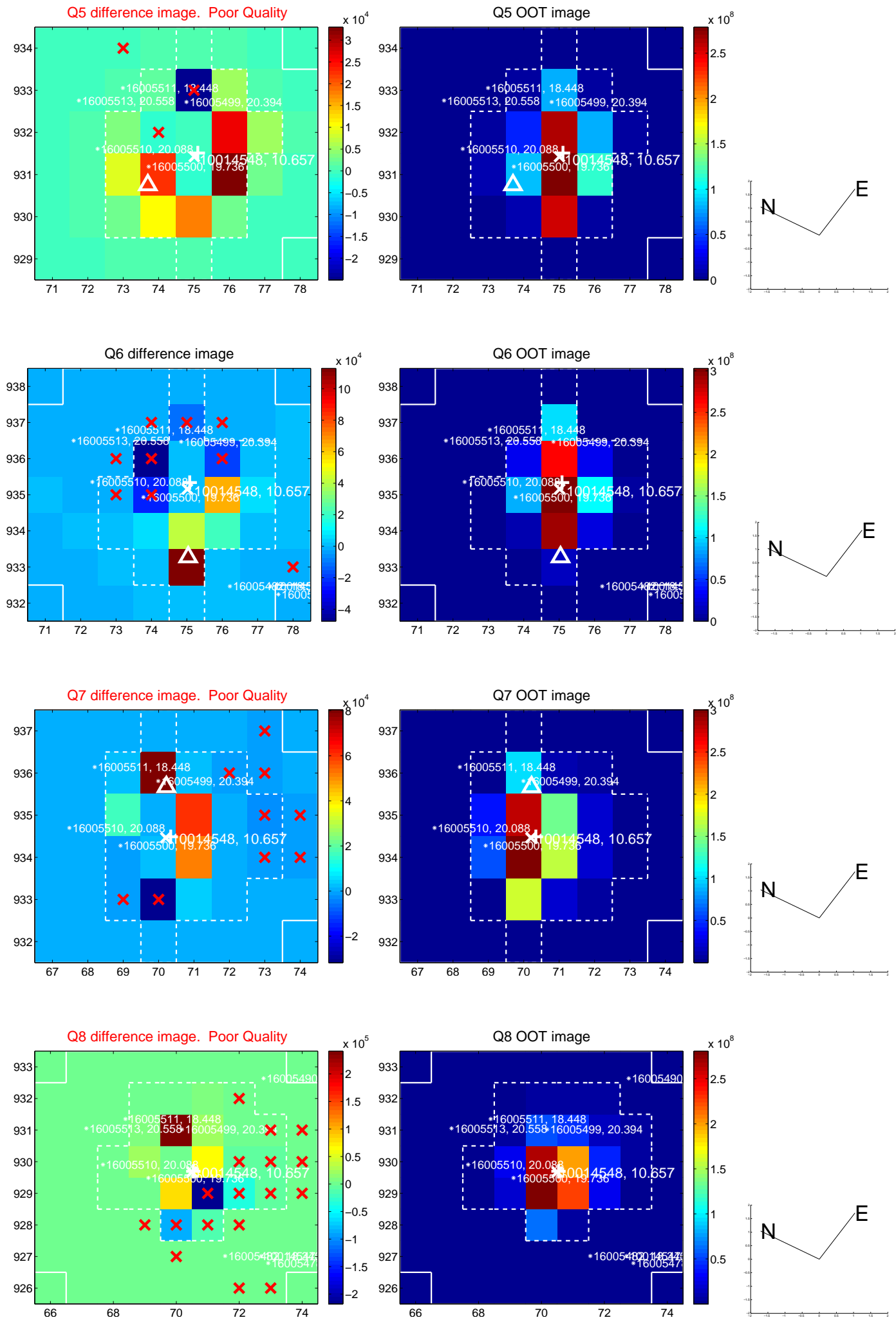
The direct PRF centroid is offset from the target star catalog position by about 0.61 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.868 ± 1.545	3.80	-5.289 ± 1.405	-2.540 ± 1.153
PRF-fit source offset from KIC position	5.331 ± 1.408	3.79	-4.709 ± 1.353	-2.499 ± 0.994
photometric centroid source offset	0.45 ± 0.21	2.14	0.44 ± 0.21	0.03 ± 0.16

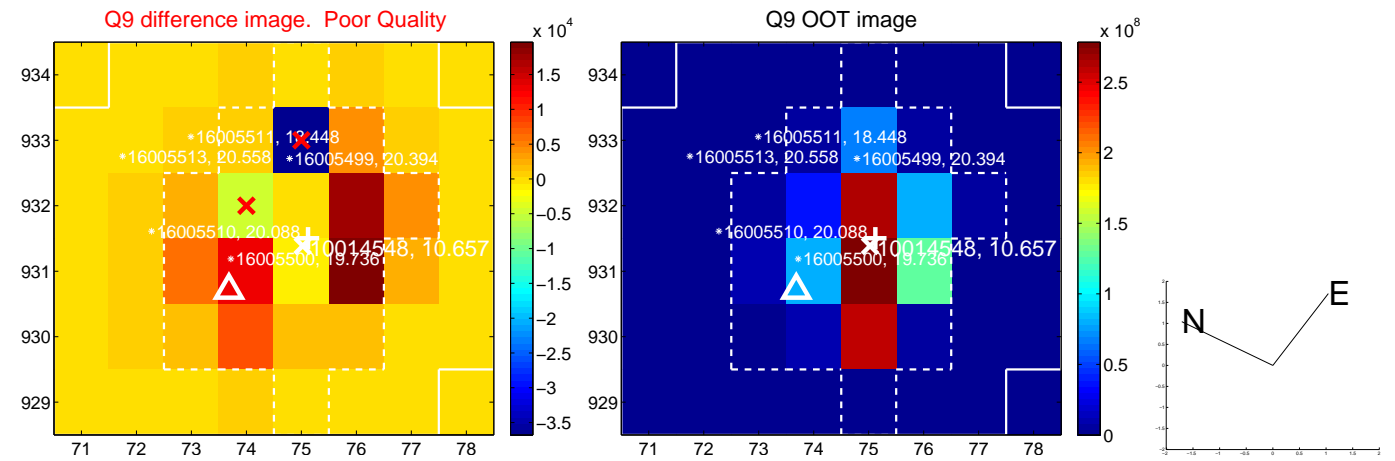


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

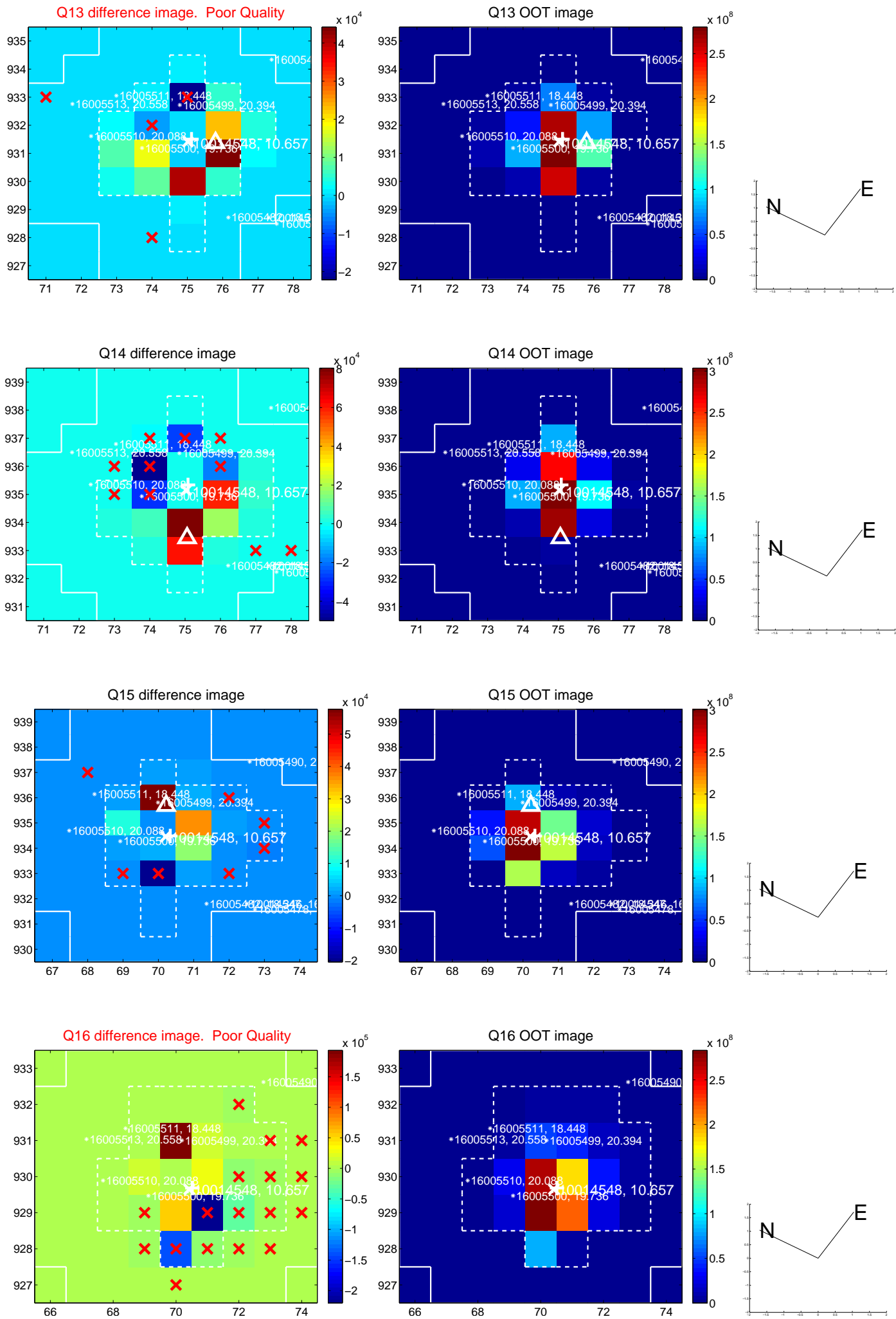
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

