

KIC 006545986

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})
006545986-01	OBS	No	0.546322	131.543374	10.5	1.173	8.0	3.0	1.29	6394	0.42	13366.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006545986-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_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.

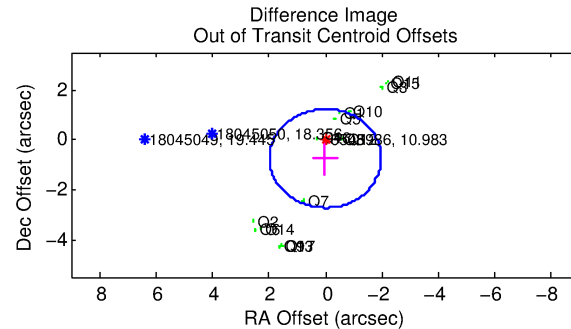
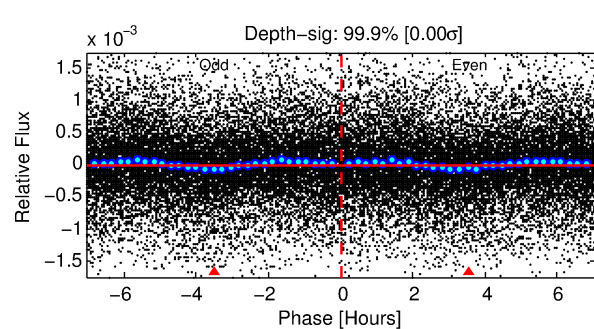
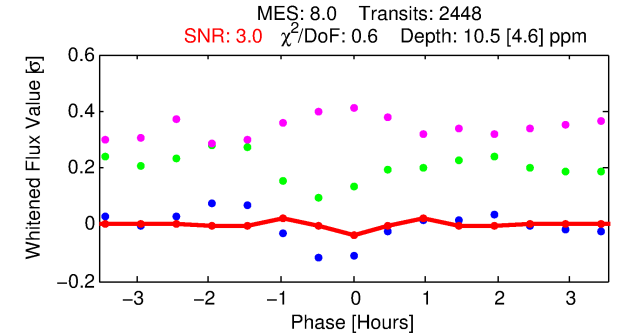
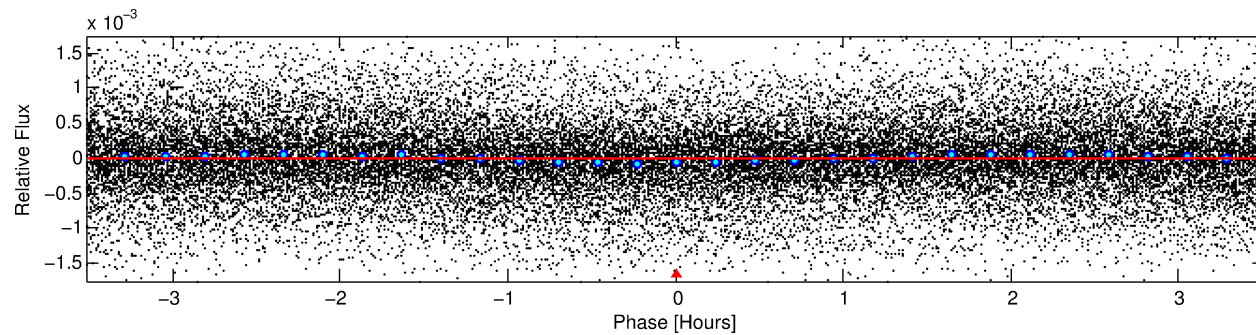
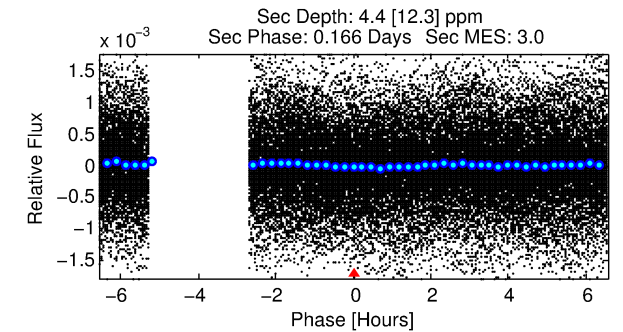
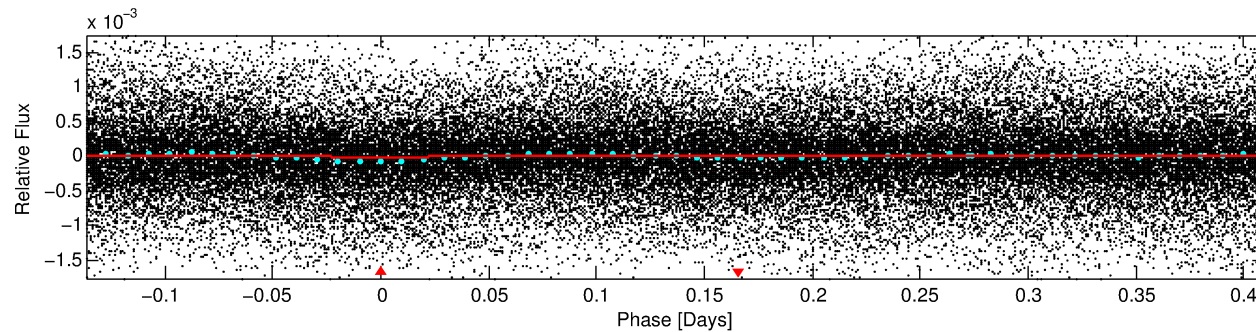
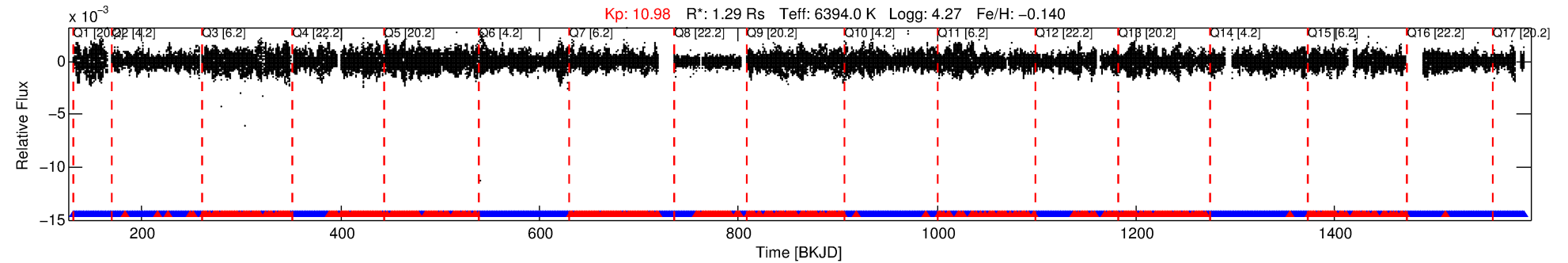
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006545986-01

No Significant Match Found

DV One-Page Summary

KIC: 6545986 Candidate: 1 of 1 Period: 0.546 d



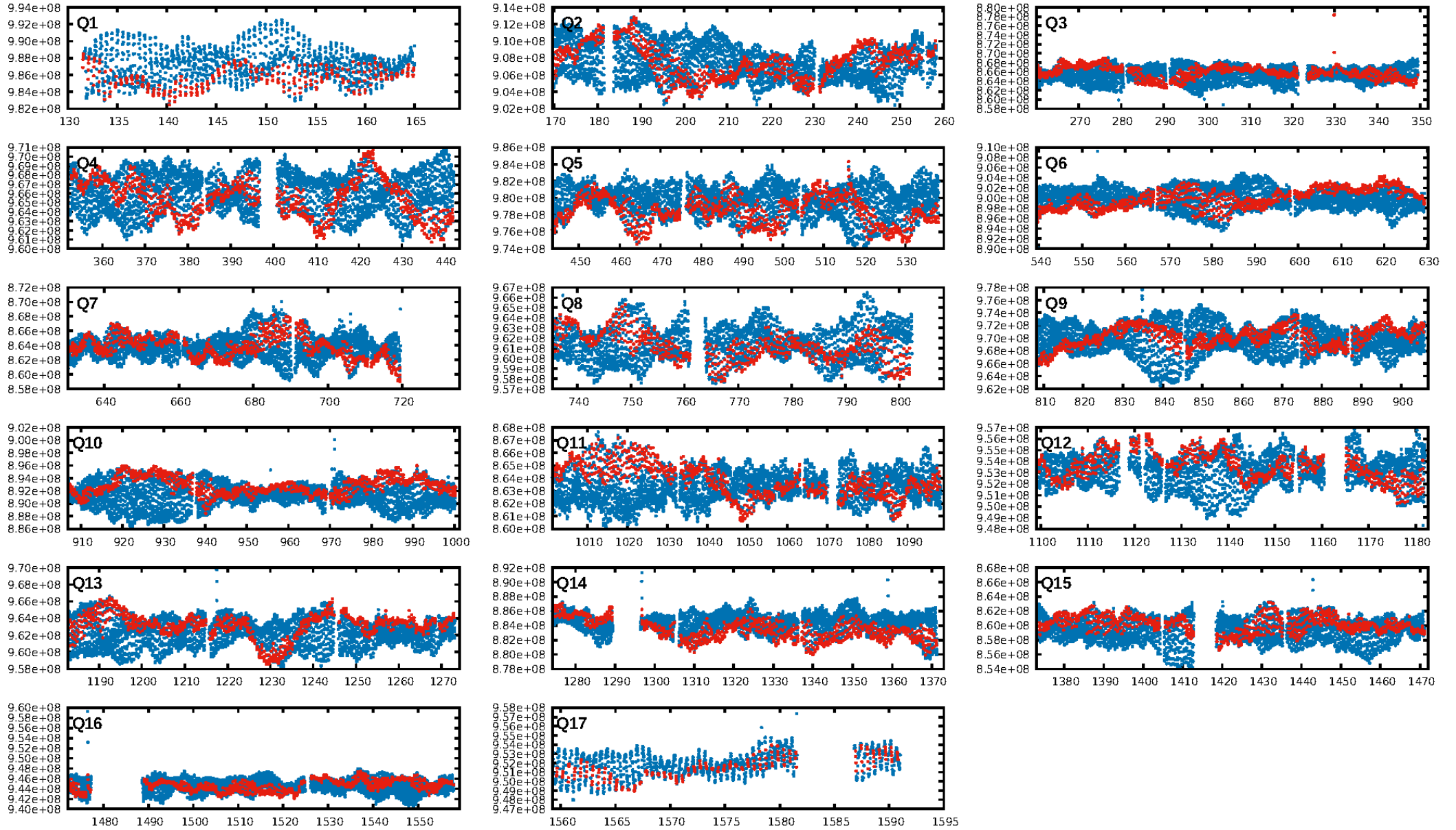
DV Fit Results:

Period = 0.54632 [0.00003] d
Epoch = 131.5434 [0.0030] BKJD
Rp/R* = 0.0030 [0.0029]
a/R* = 3.55 [15.54]
b = 0.20 [22.77]
Seff = 13366.08 [4985.63]
Teq = 2742 [256] K
Rp = 0.42 [0.42] Re
a = 0.0137 [0.0034] AU
Ag = 2.55 [8.63] [0.18σ]
Teffp = 5359 [4502] K [0.58σ]

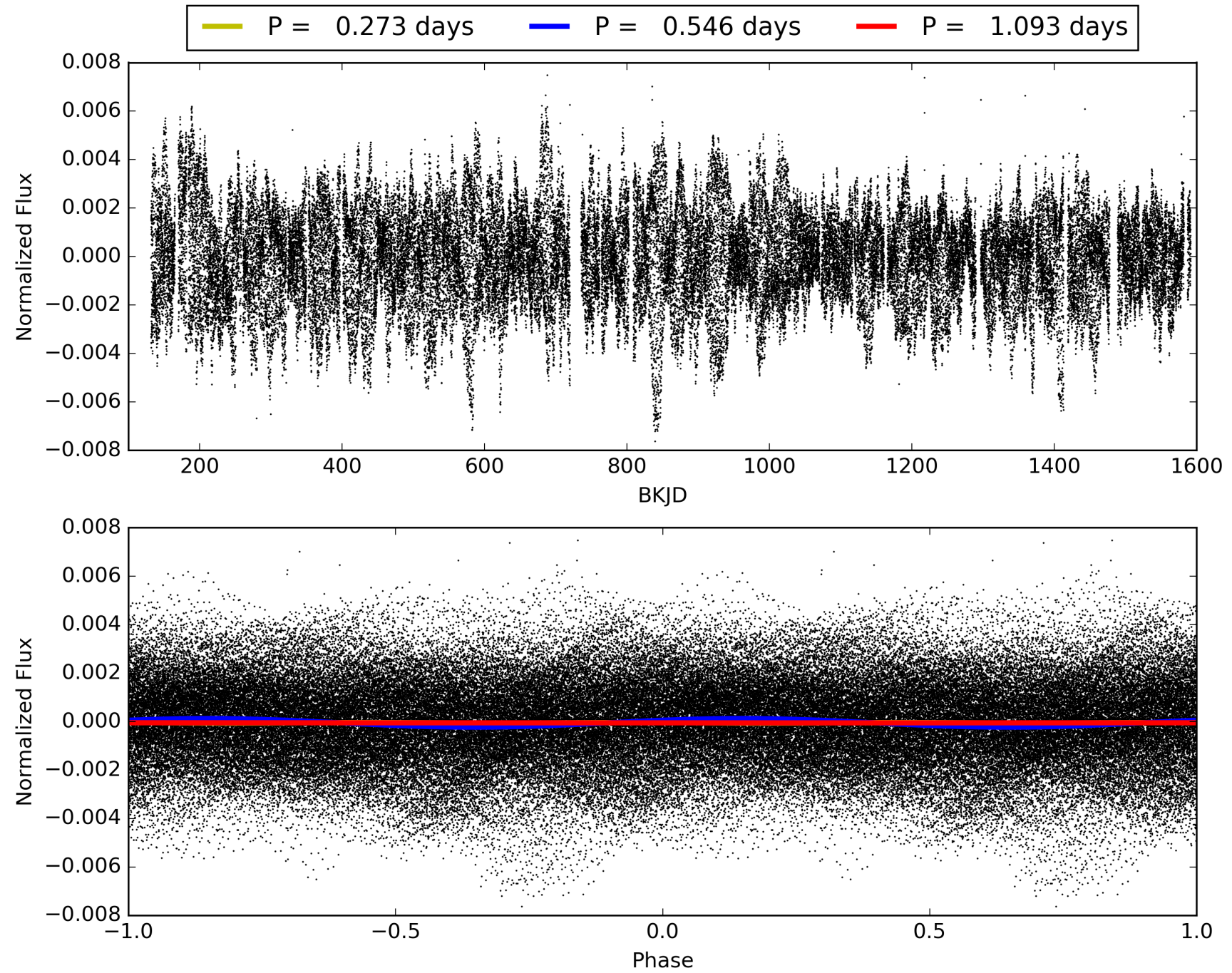
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 6.88e-295
RollingBand-fgt: 0.74 [1736/2337]
GhostDiagnostic-chr: 5.607
Centroid-sig: 53.2%
Centroid-so: 1.288 arcsec [0.83σ]
OotOffset-rm: 0.751 arcsec [1.14σ]
KicOffset-rm: 0.309 arcsec [0.50σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.41 [7/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 006545986-01, PDC Light Curves

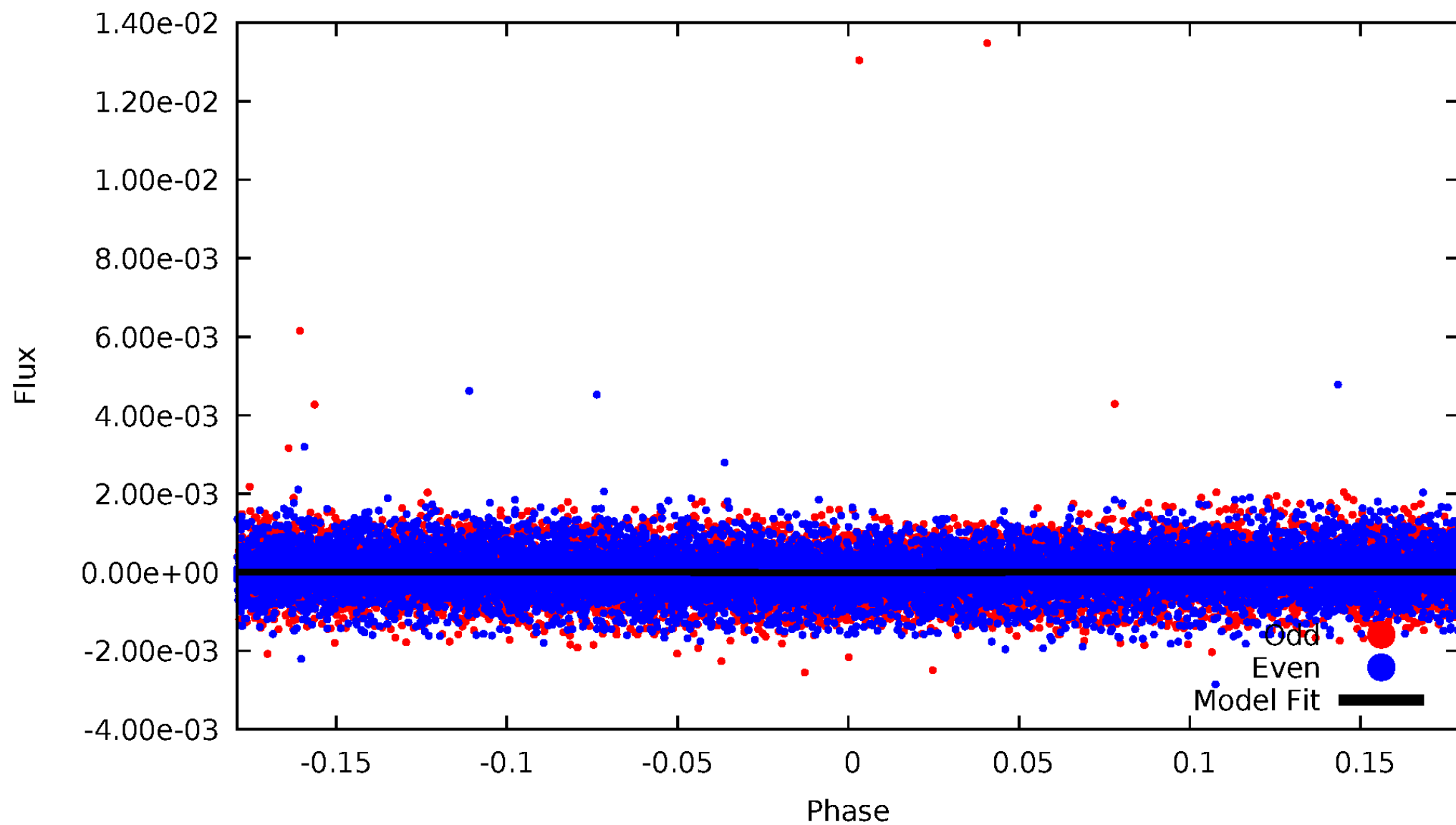


TCE 006545986-01



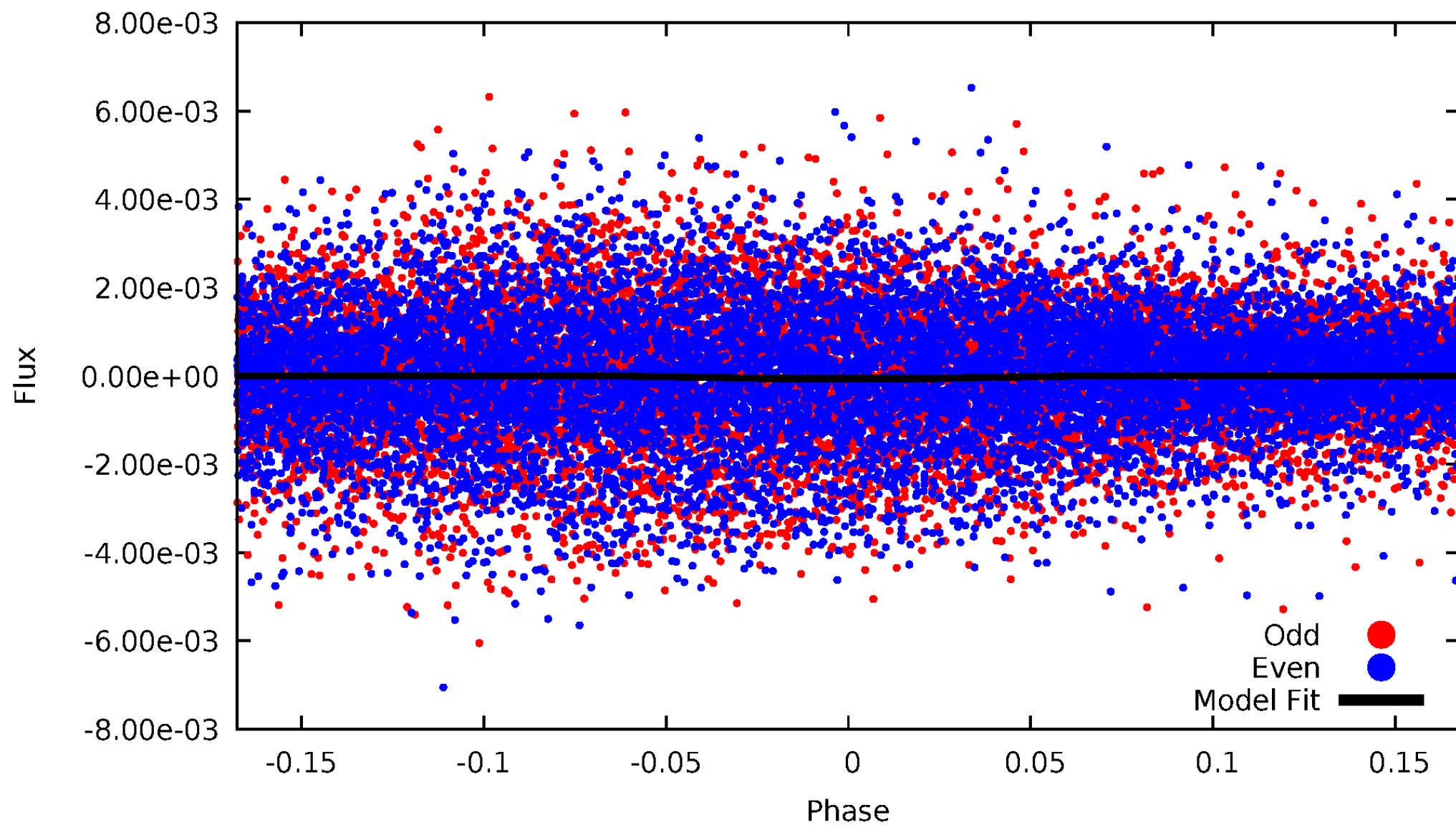
DV Odd/Even

TCE 006545986-01



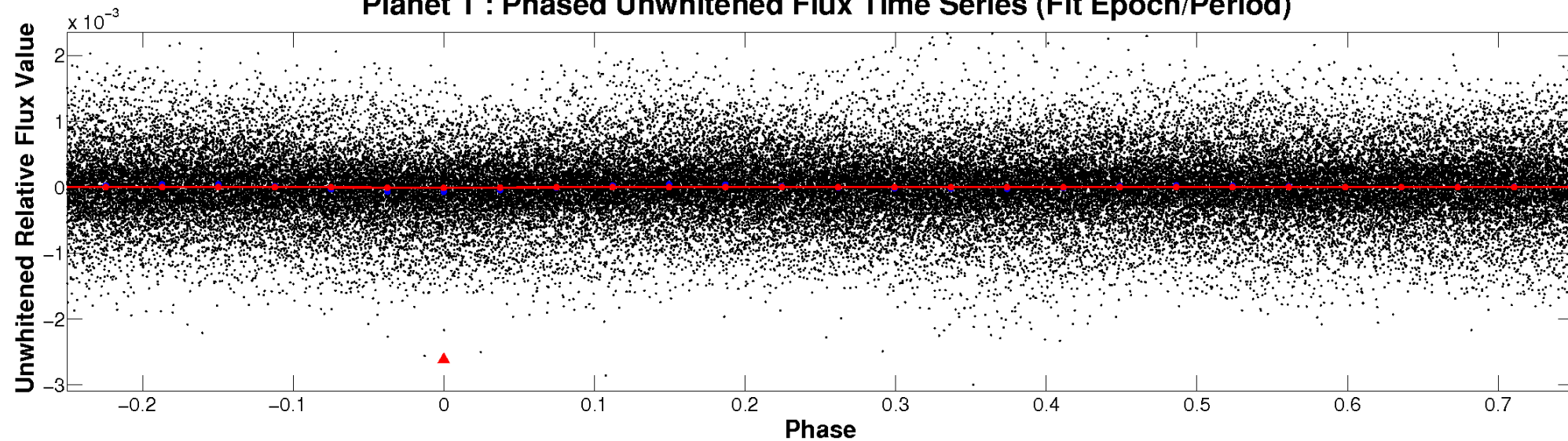
ALT Odd/Even

TCE 006545986-01

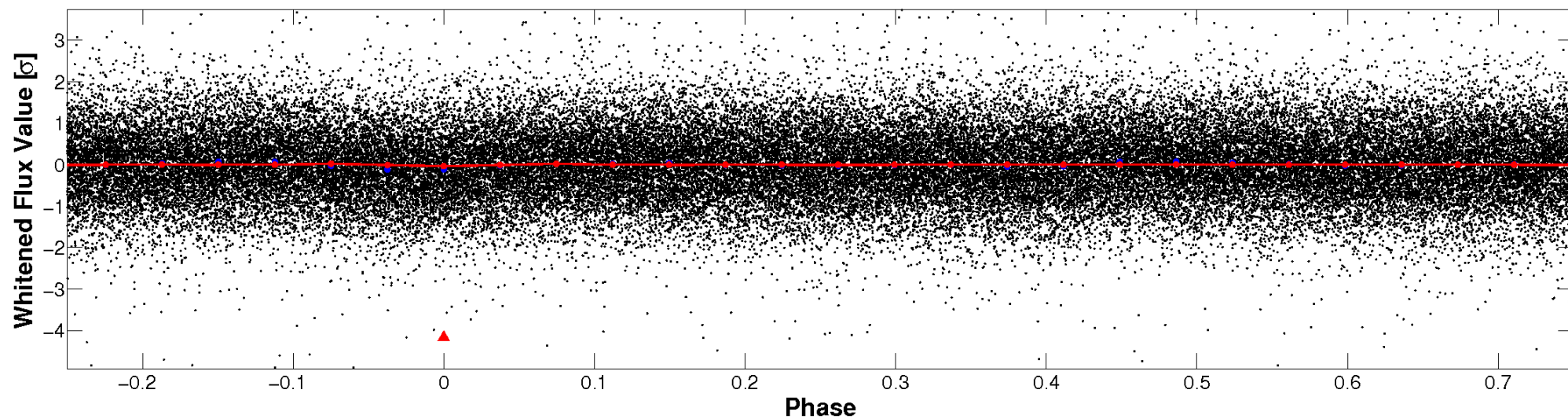


Non-Whitened Vs. Whitened Light Curve

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

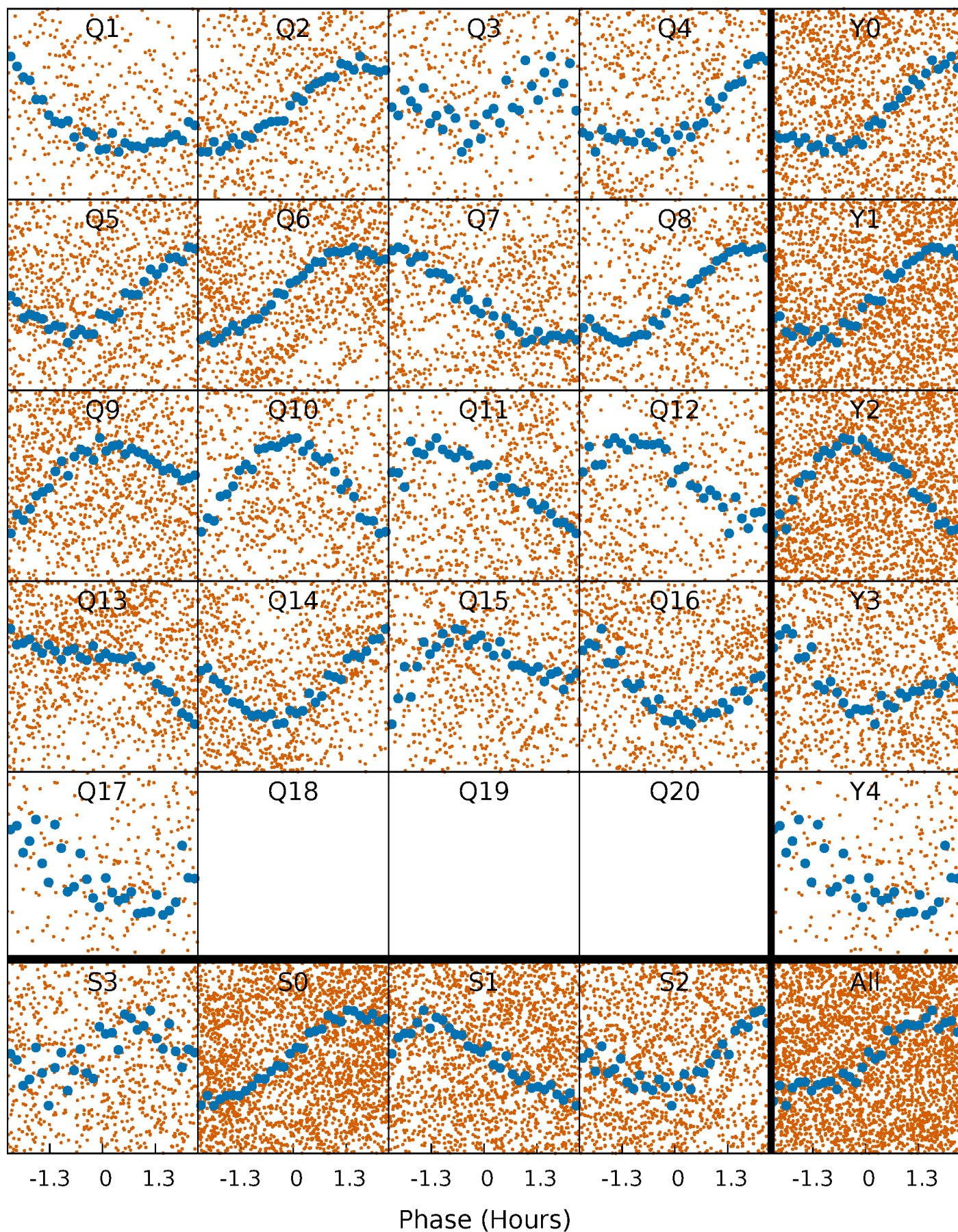


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



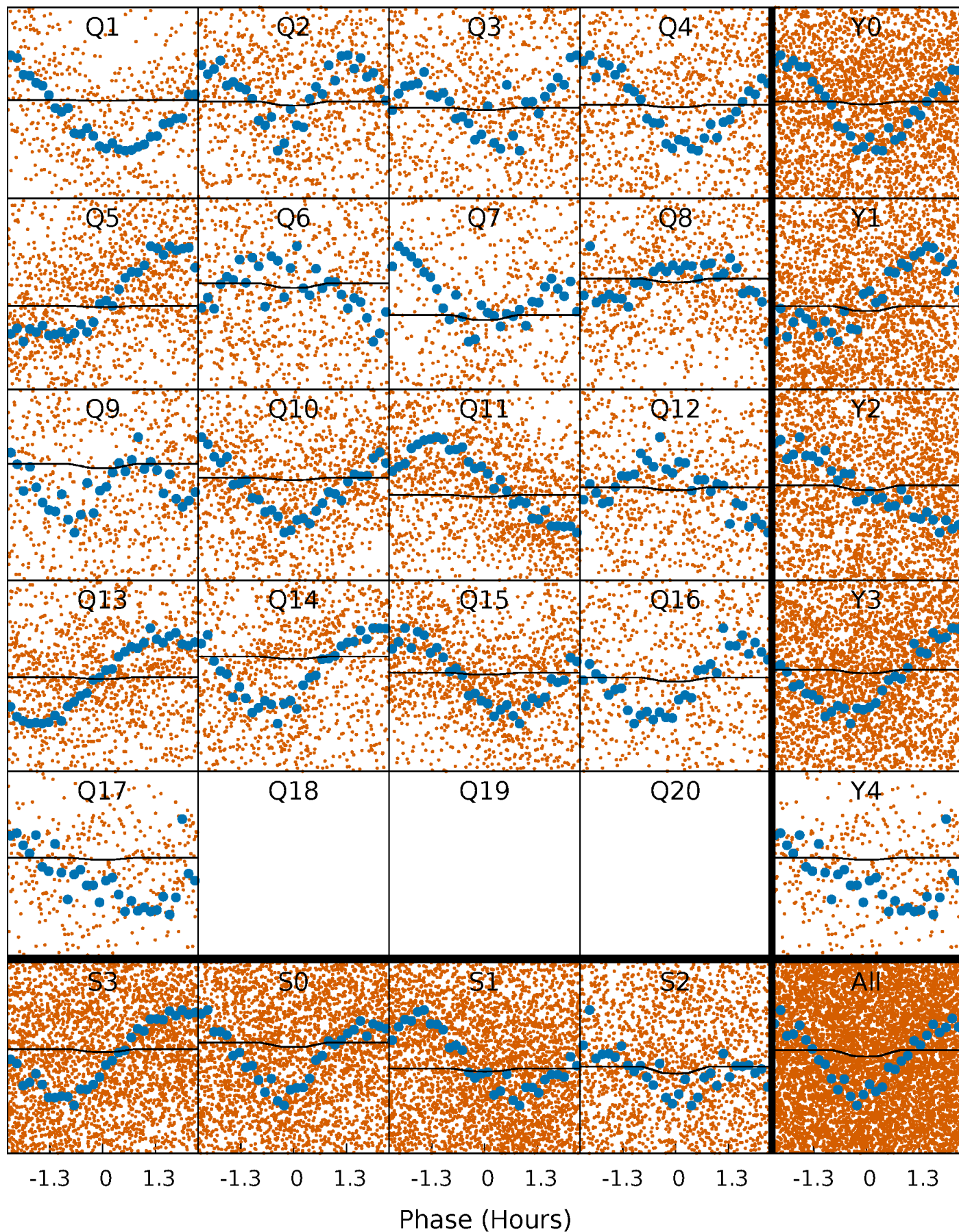
PDC Quarter-Phased Transit Curves

TCE 006545986-01 P= 0.546322 Days $T_0=131.543374$ (BKJD)



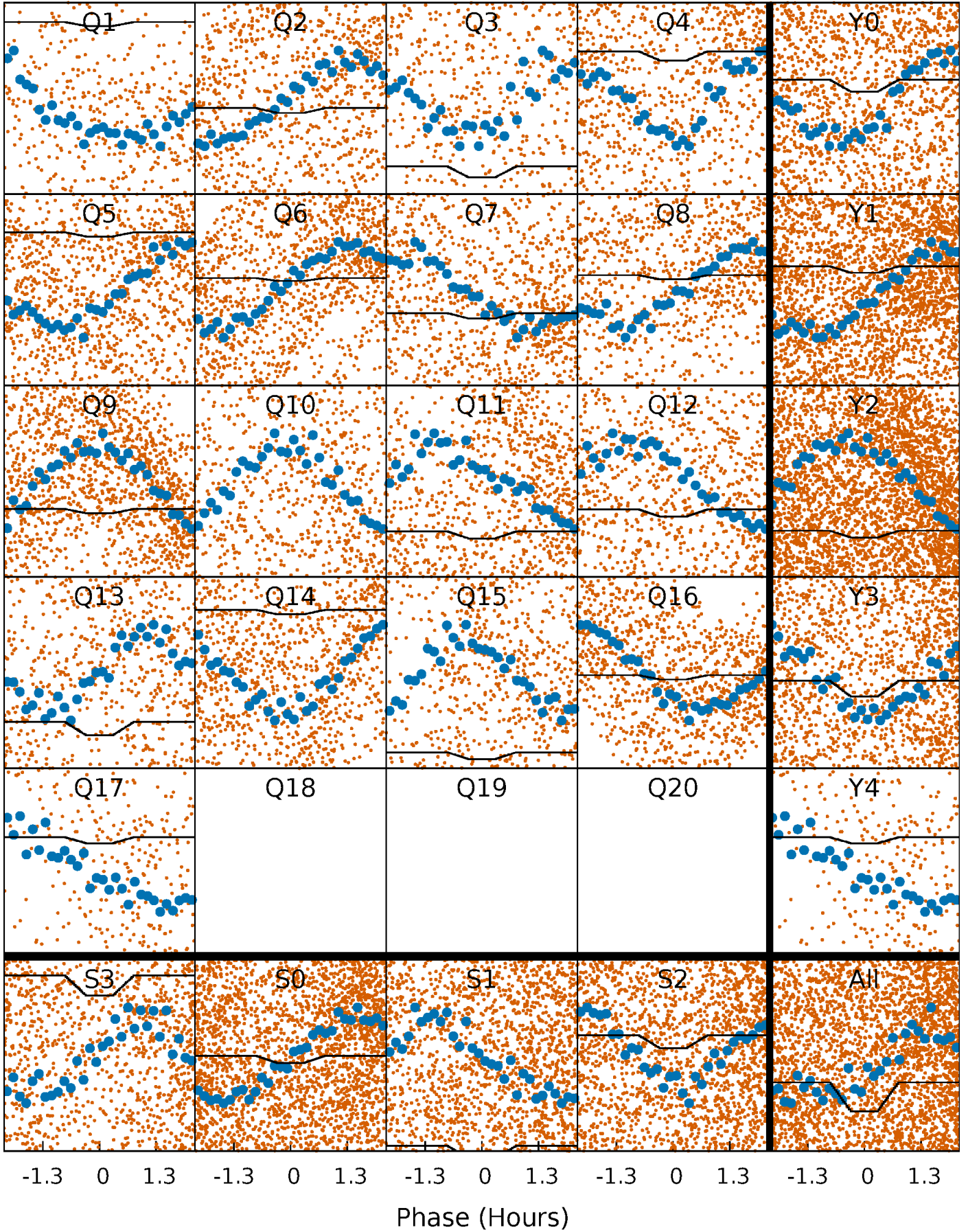
DV Quarter-Phased Transit Curves

TCE 006545986-01 P= 0.546322 Days $T_0=131.543374$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

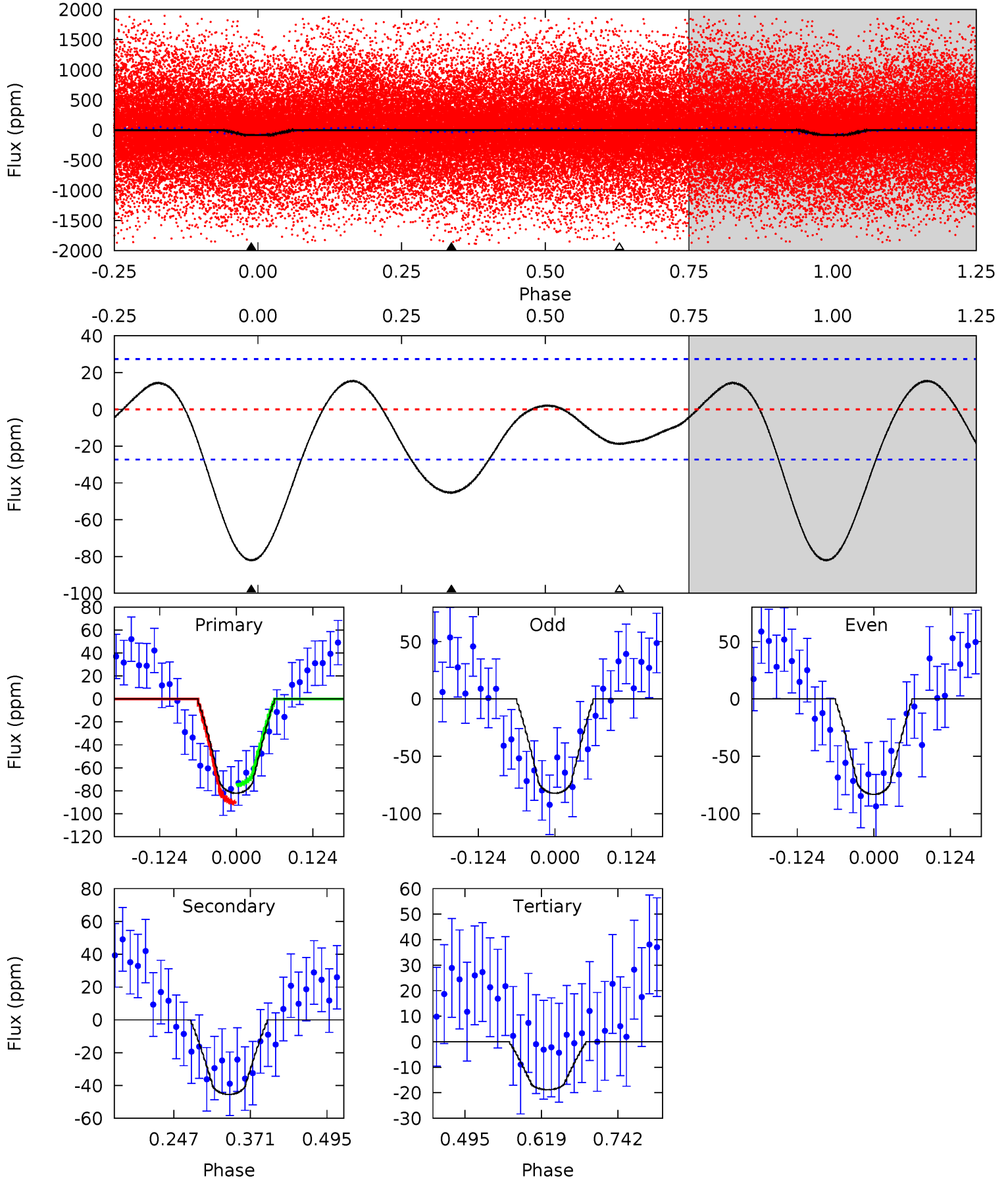
TCE 006545986-01 P= 0.546313 Days $T_0=131.550548$ (BKJD)



DV Model-Shift Uniqueness Test

006545986-01, P = 0.546322 Days, E = 130.997052 Days

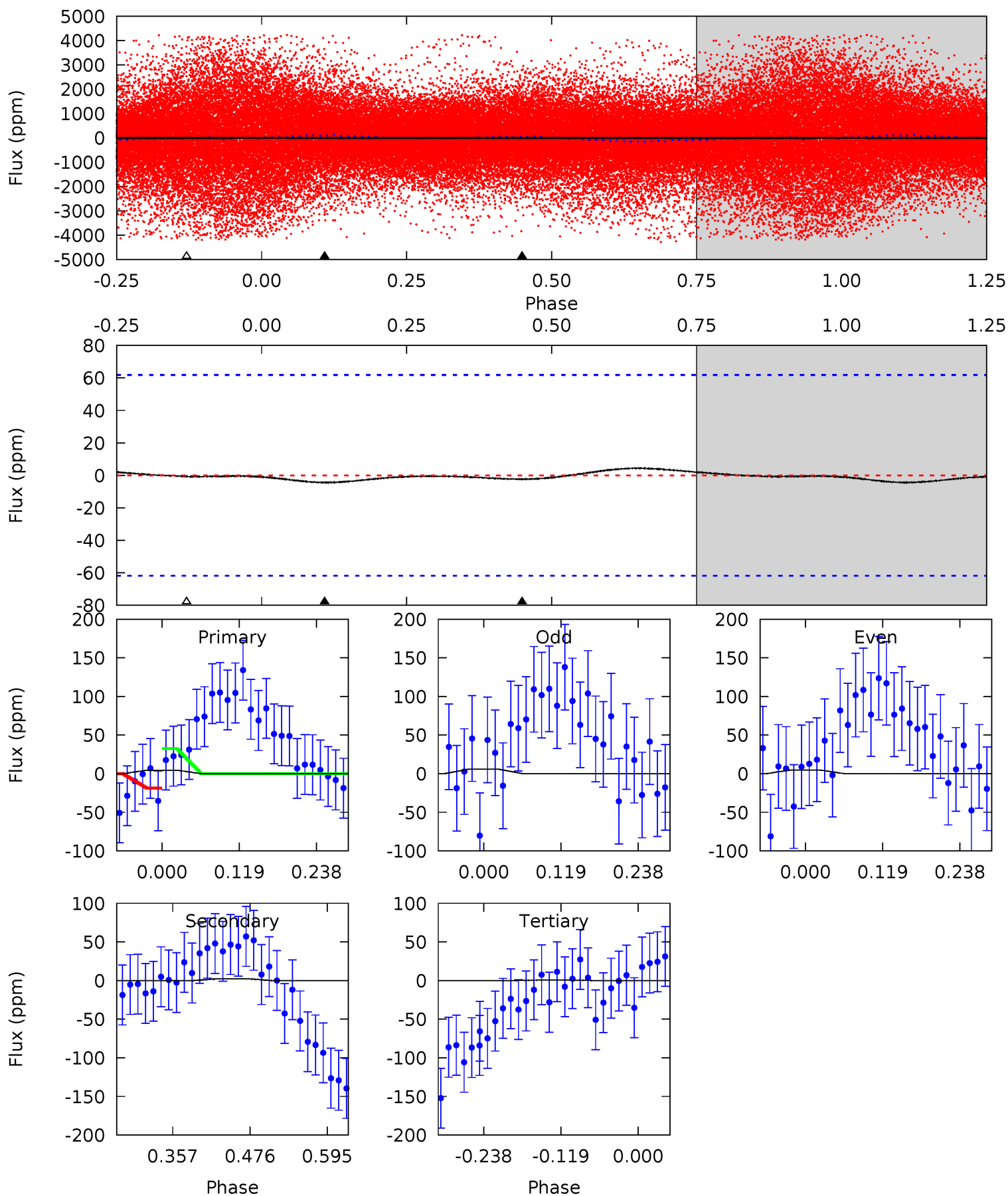
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	7.52	3.11	0	4.52	1.54	1.84	10.5	13.6	4.41	7.52	0.09	1.51	0.16	1.32



Alt Model-Shift Uniqueness Test

006545986-01, P = 0.546313 Days, E = 131.004235 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.32	0.17	0.05	0	4.53	1.56	0.14	0.28	0.32	0.13	0.17	0.04	0.22	0.50	0.50



Stellar Parameters For KIC 006545986

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6394^{+144}_{-176}	$4.273^{+0.128}_{-0.192}$	$-0.140^{+0.250}_{-0.300}$	$1.291^{+0.388}_{-0.239}$	$1.139^{+0.172}_{-0.141}$	$0.746^{+0.460}_{-0.384}$
	+2%/-3%	+3%/-4%	+179%/-214%	+30%/-19%	+15%/-12%	+62%/-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 006545986-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-45 ± 6	$0.49^{+0.40}_{-0.27}$	3849^{+278}_{-216}	9229^{+9310}_{-2631}	19^{+75}_{-13}
Alt.	-2 ± 14	$1.10^{+0.47}_{-0.39}$	3857^{+276}_{-226}	-3079^{+7818}_{-1653}	$0.199^{+1.472}_{-1.188}$

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 $A_{obs} \gg 1.0$

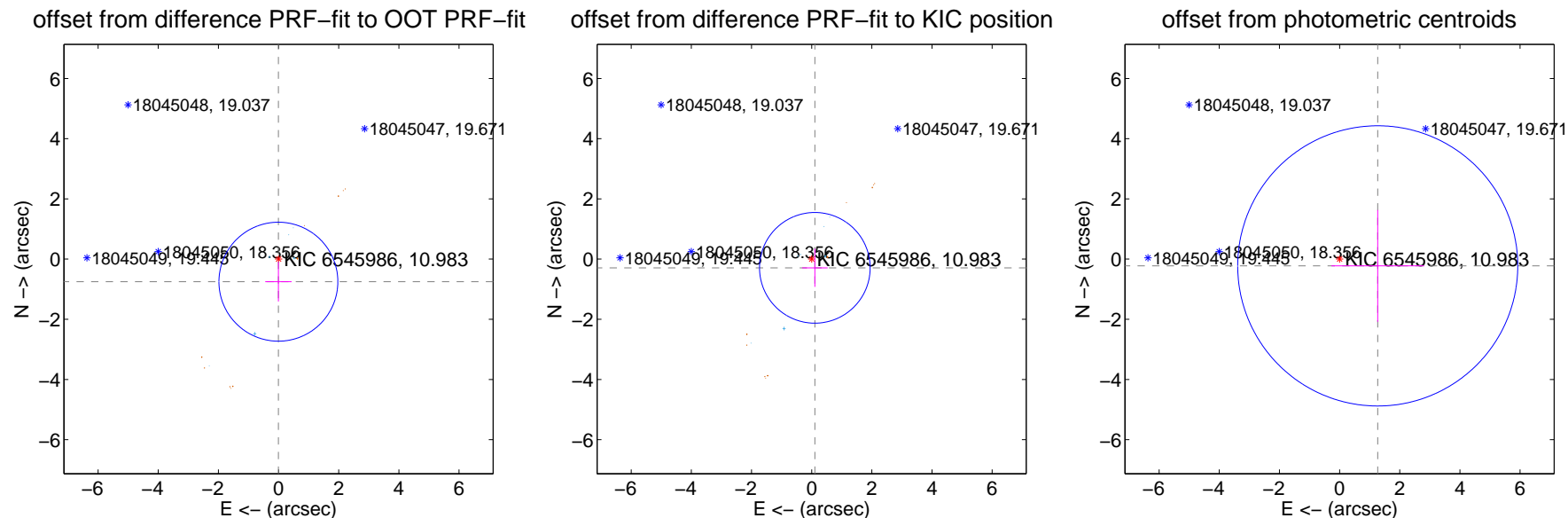
DV Centroid Data

Supplemental centroid analysis for 006545986-01. **Kepler magnitude: 10.98.** Transit SNR 3.04

There are 7 quarters with good PRF difference image offsets

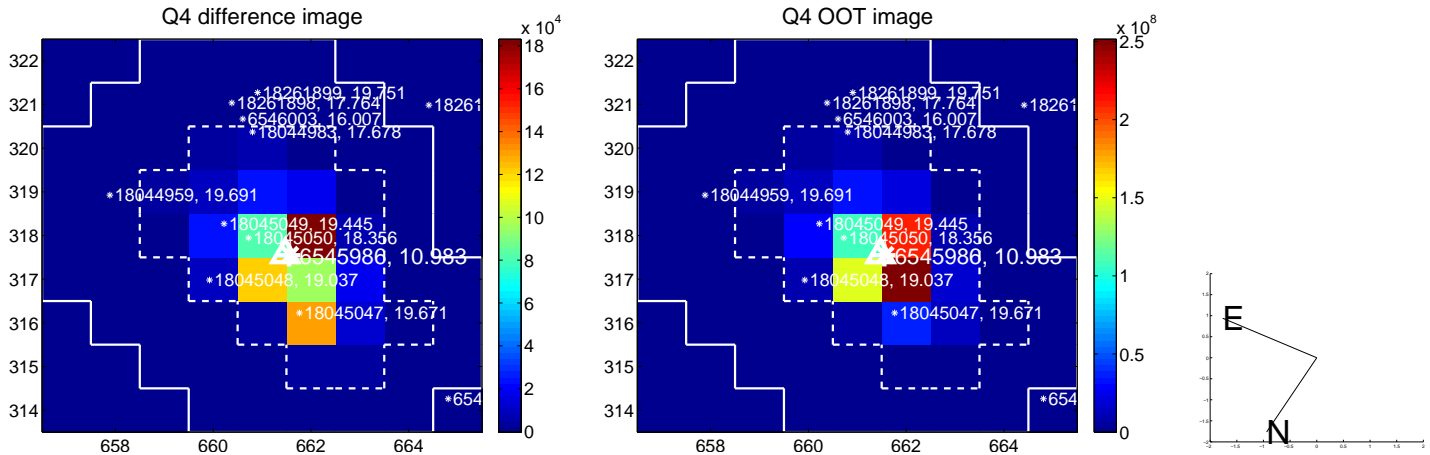
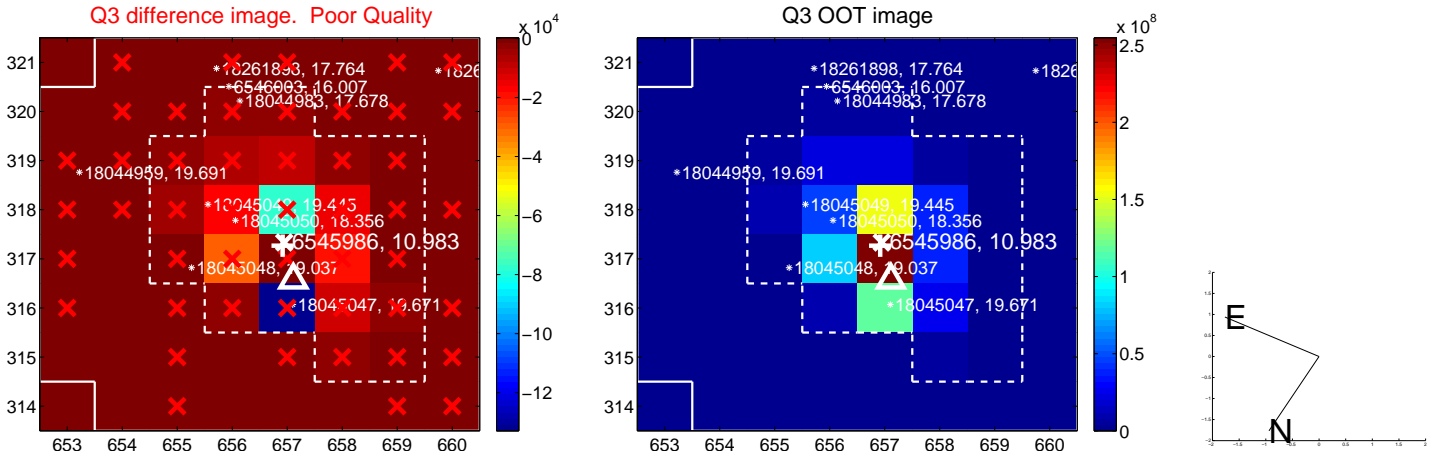
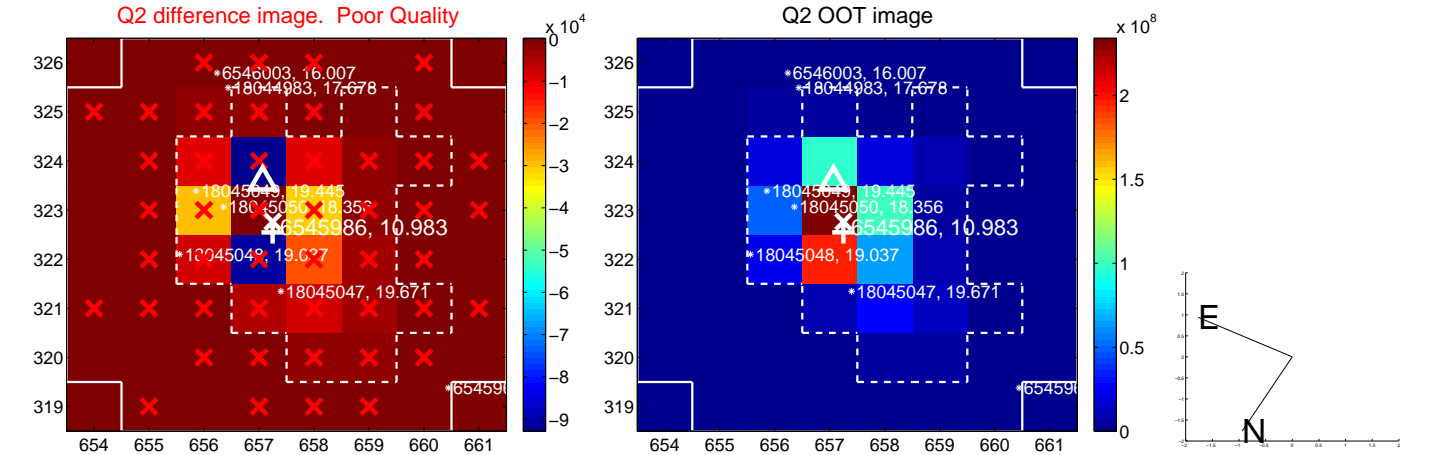
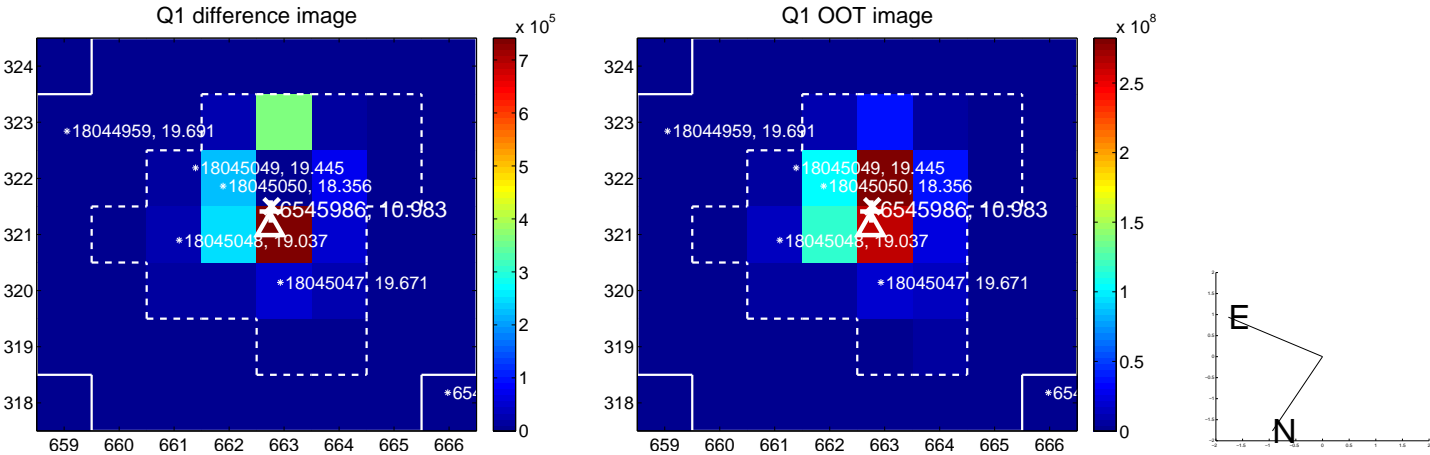
The direct PRF centroid is offset from the target star catalog position by about 0.36 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.751 ± 0.659	1.14	0.006 ± 0.438	-0.751 ± 0.659
PRF-fit source offset from KIC position	0.309 ± 0.613	0.50	-0.105 ± 0.425	-0.291 ± 0.633
photometric centroid source offset	1.29 ± 1.55	0.83	-1.27 ± 1.54	-0.23 ± 1.86

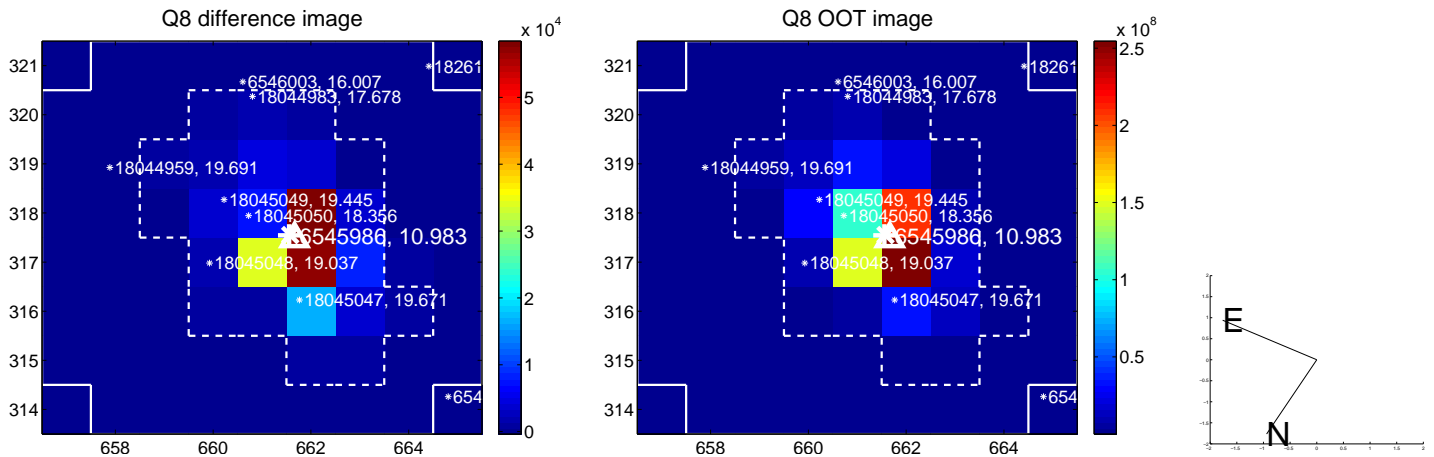
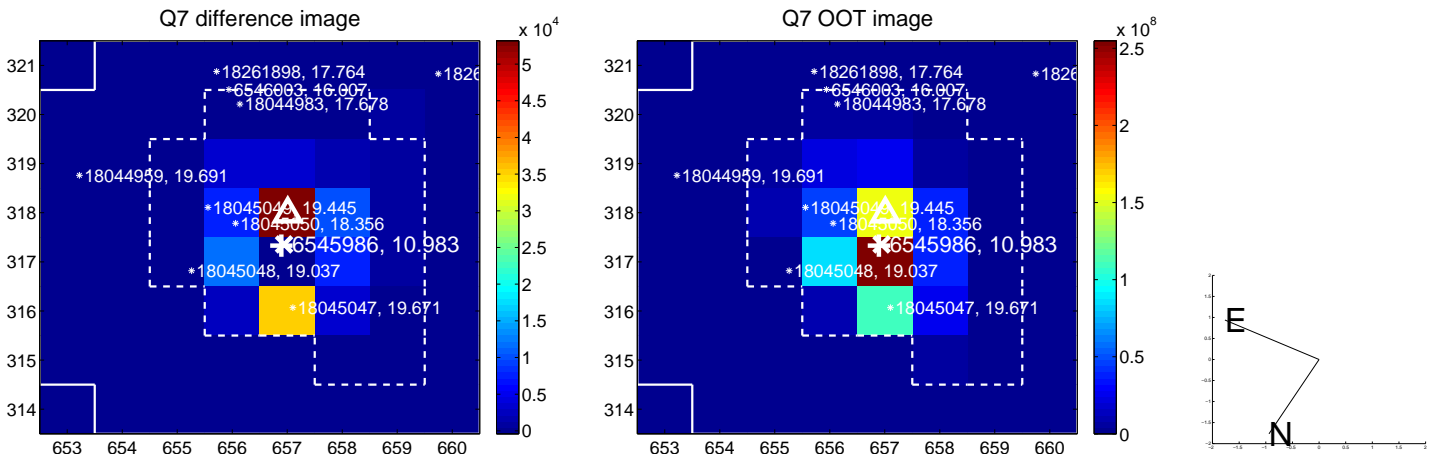
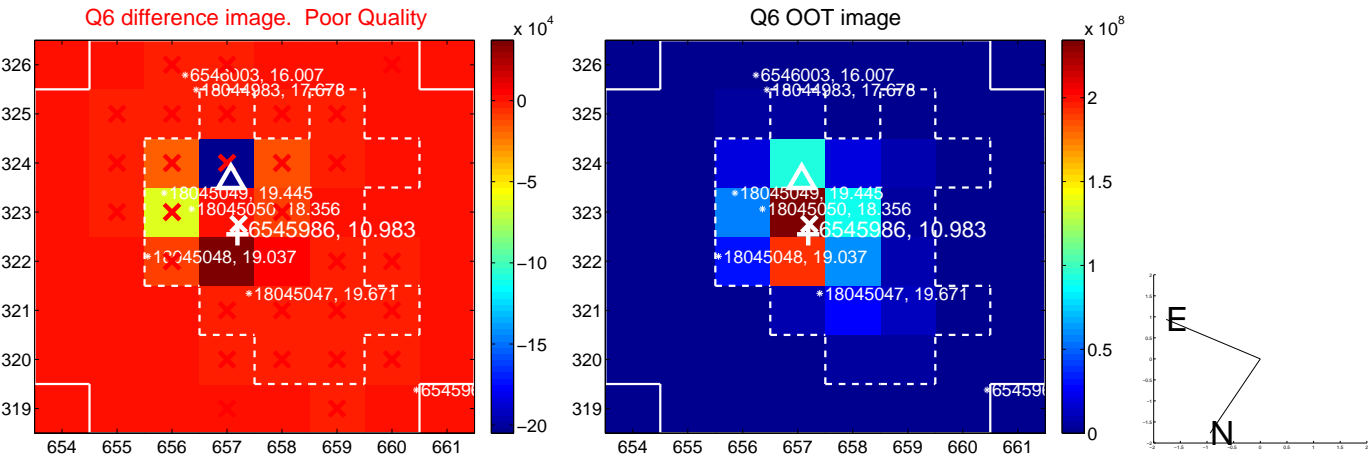
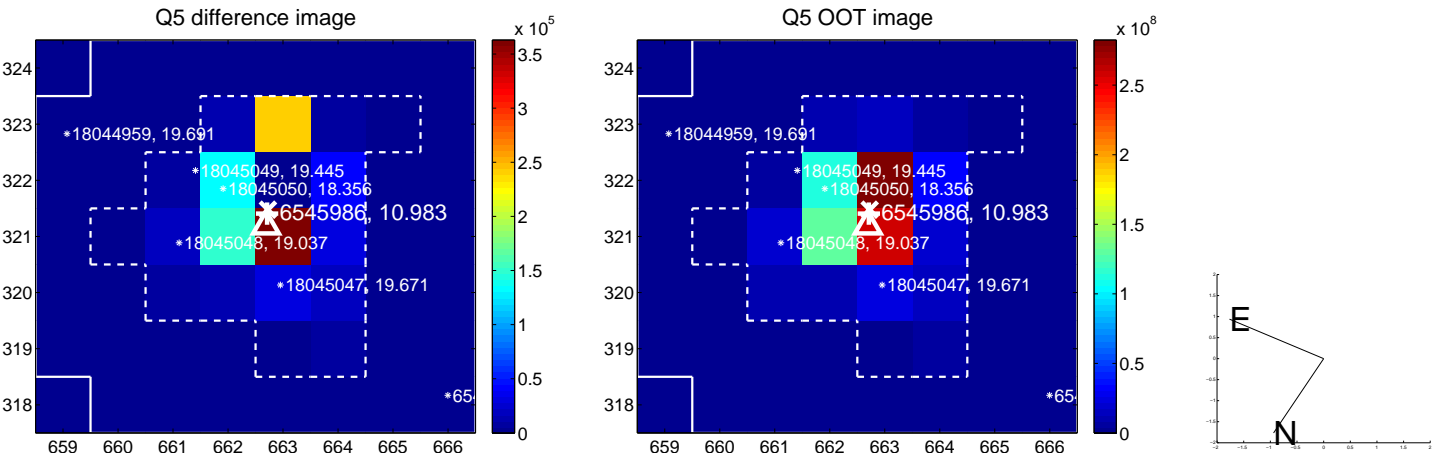


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

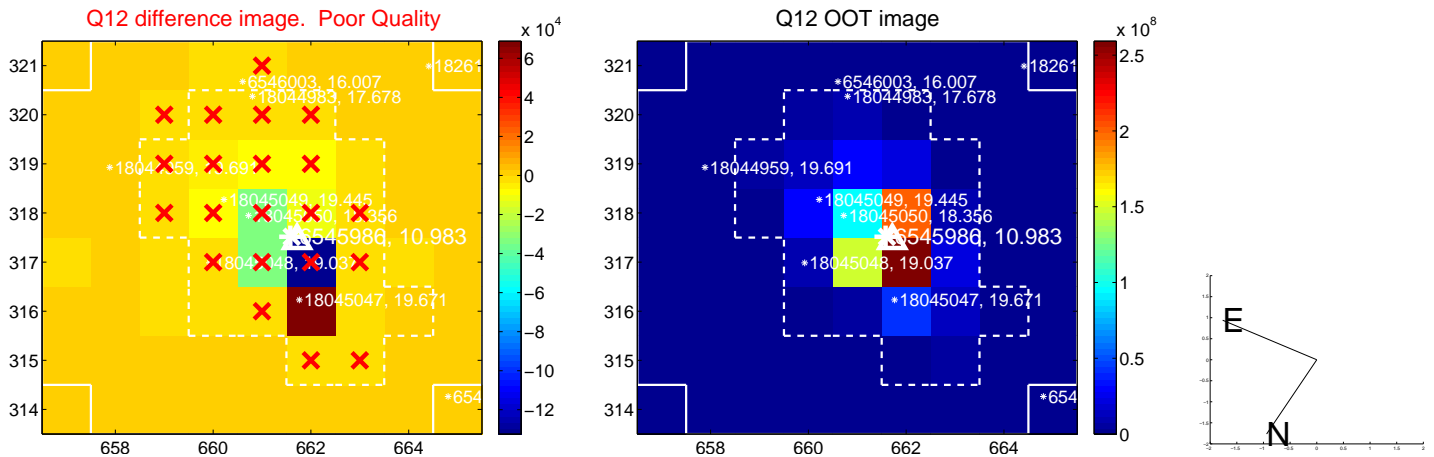
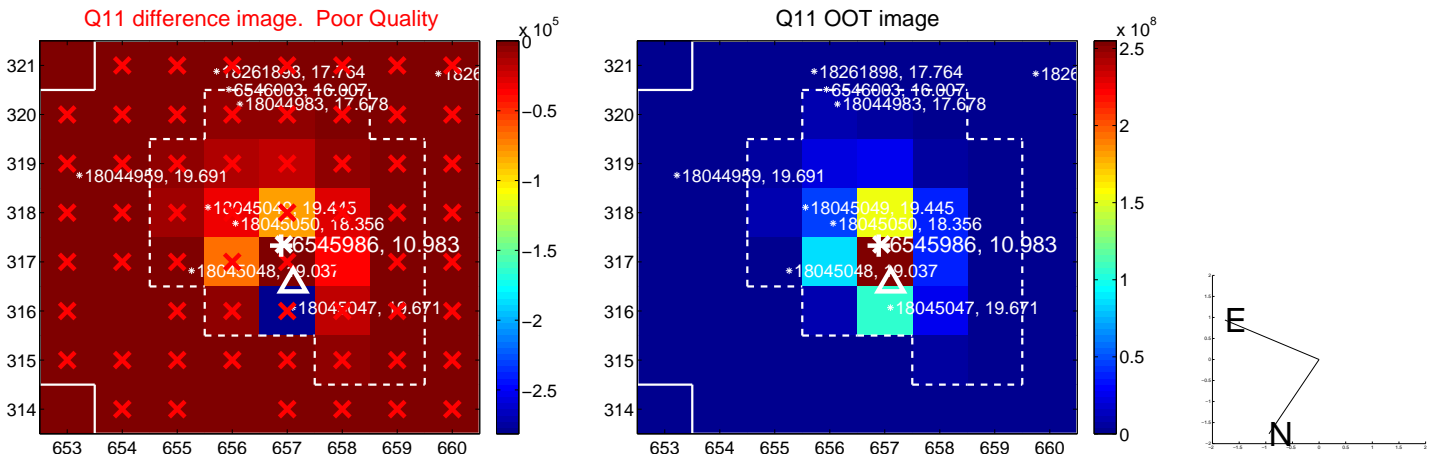
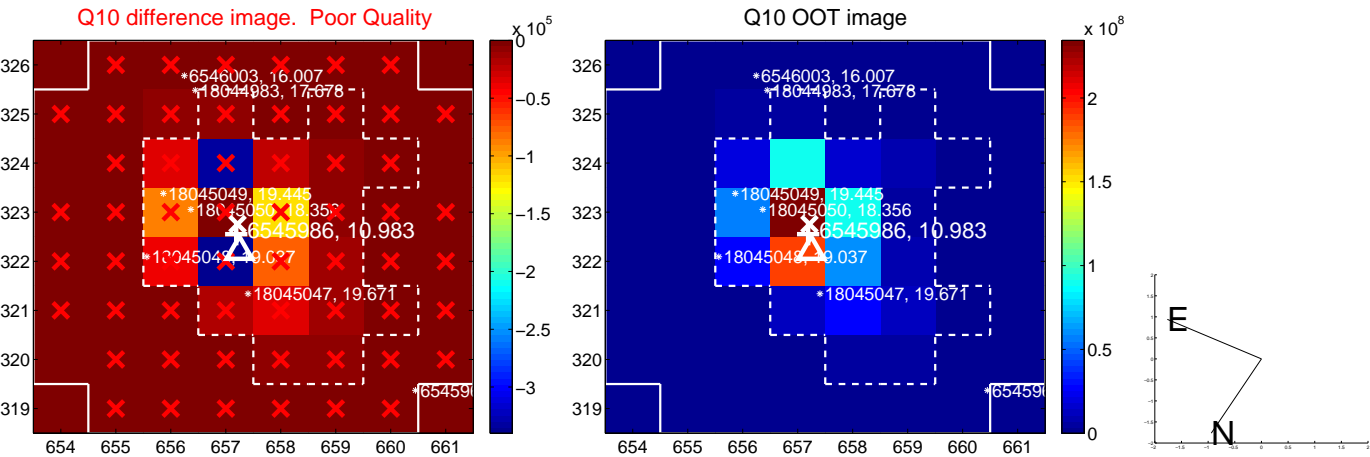
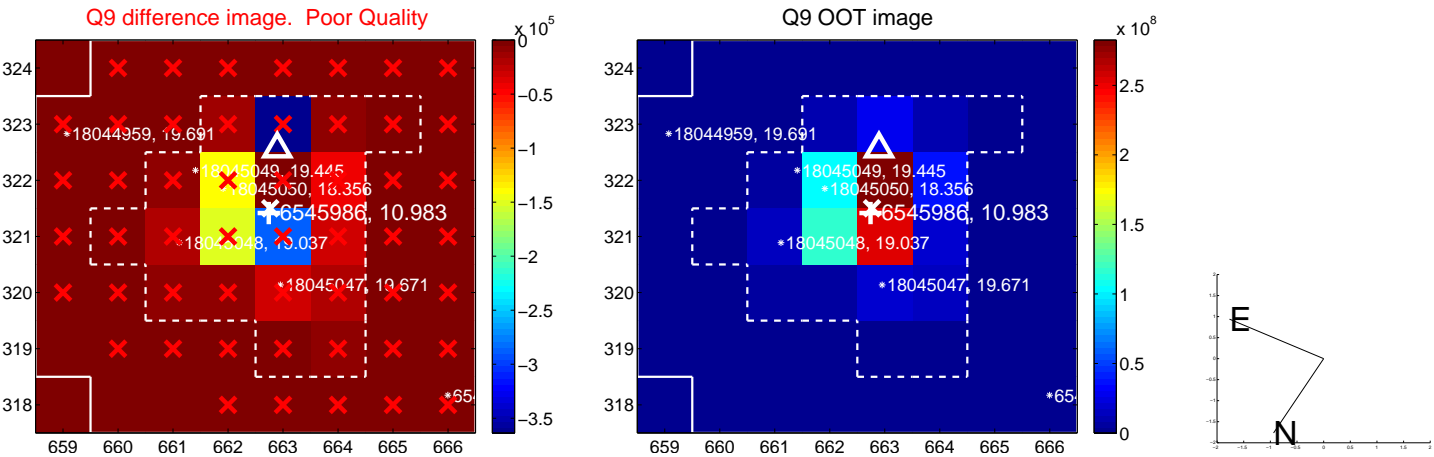
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



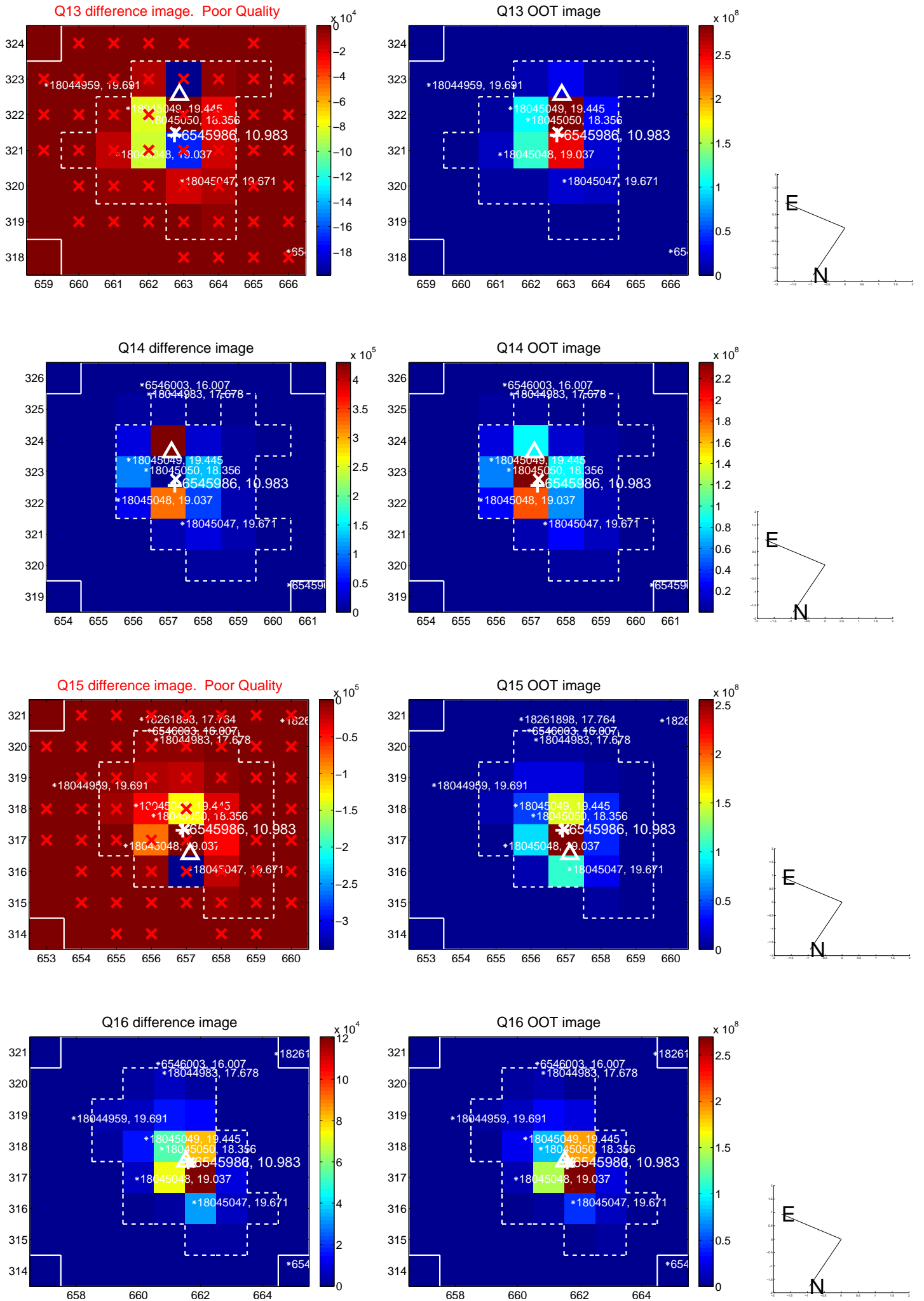
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



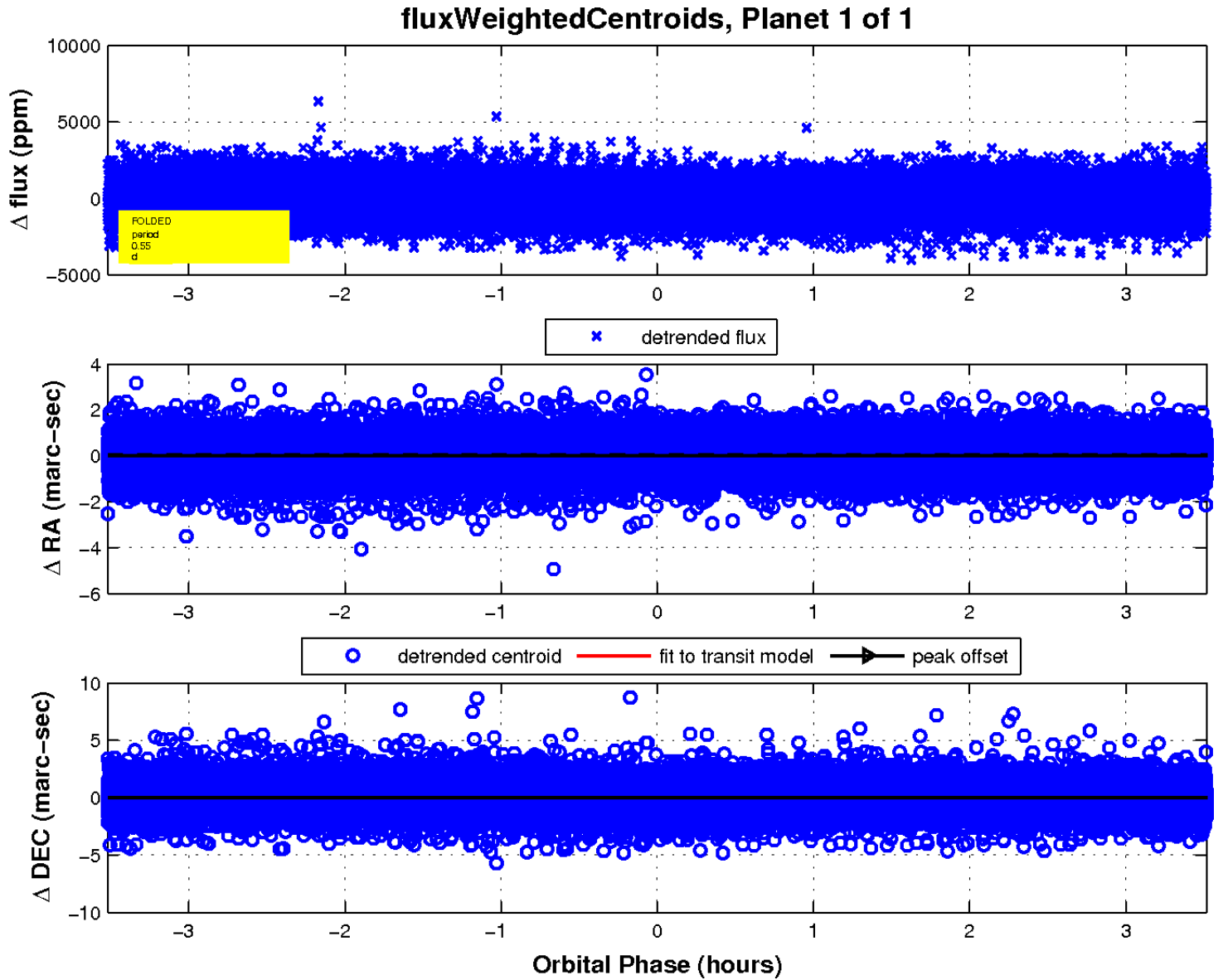
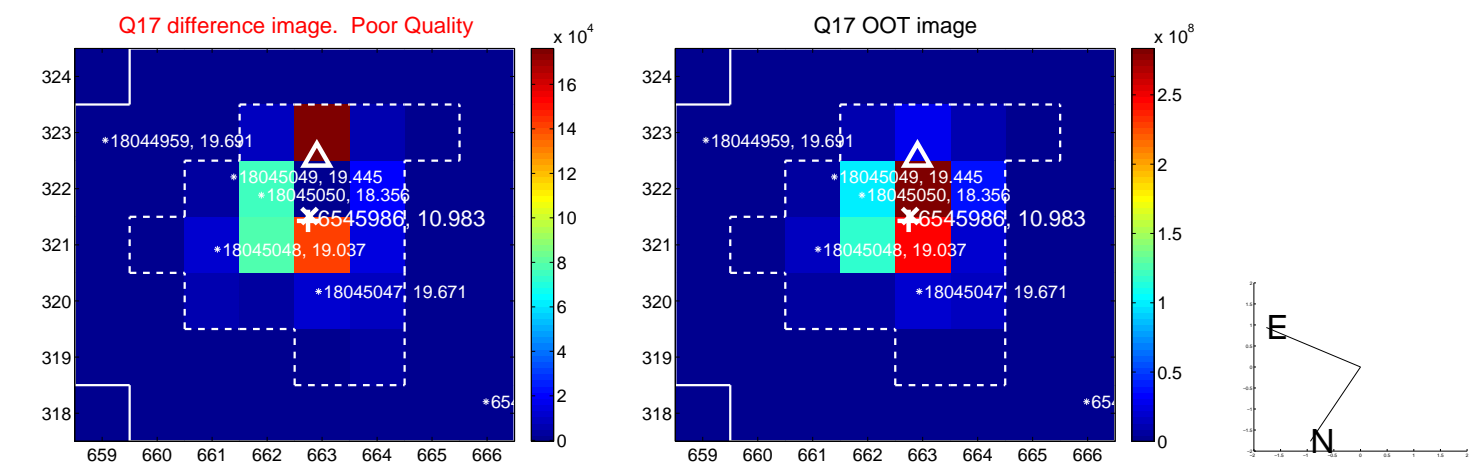
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UKIRT Image

