

KIC 010676126

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})
010676126-01	OBS	No	0.704407	131.719341	45.4	1.636	7.9	5.4	0.40	3609	0.32	181.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010676126-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

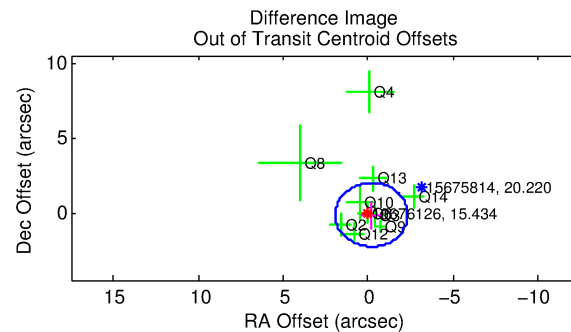
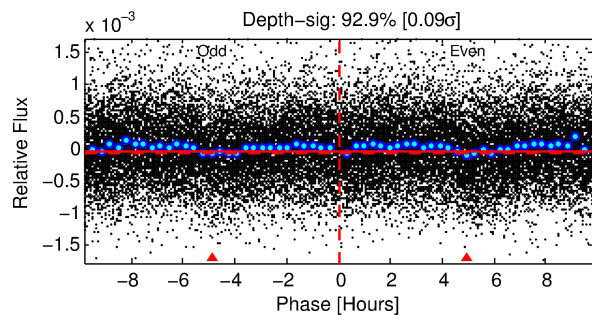
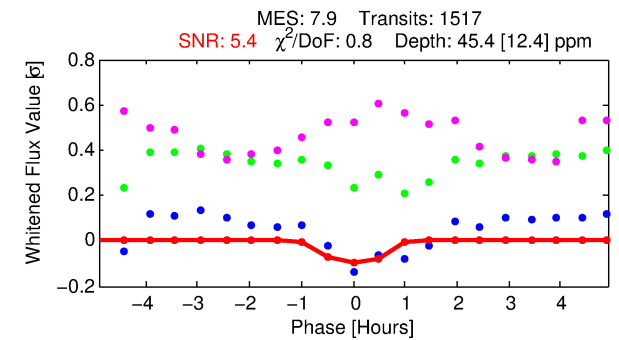
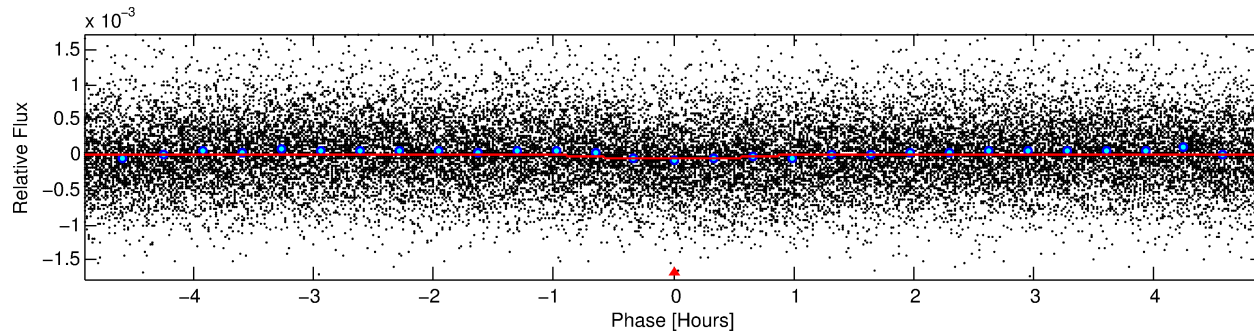
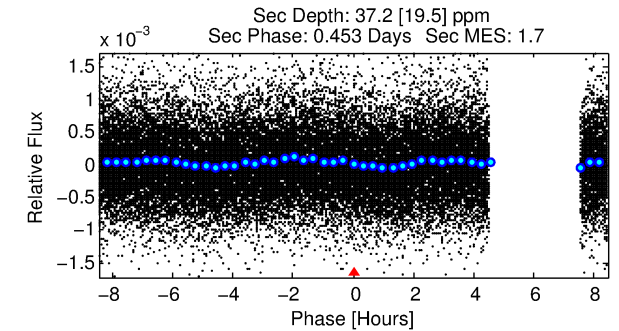
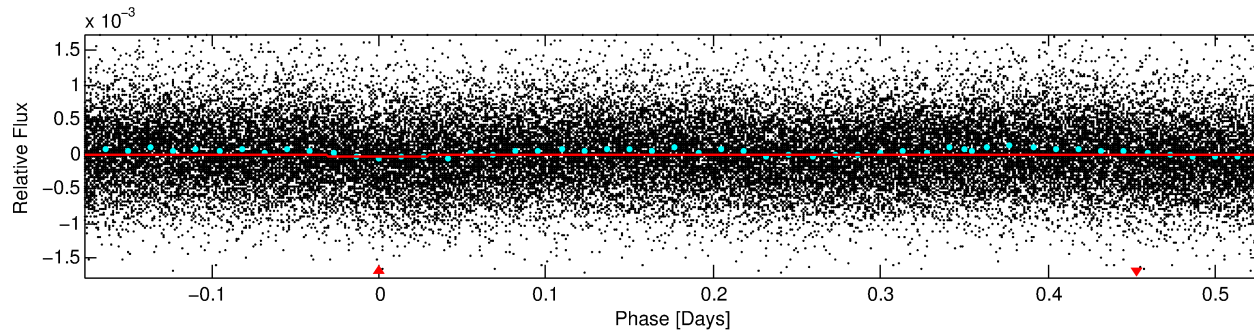
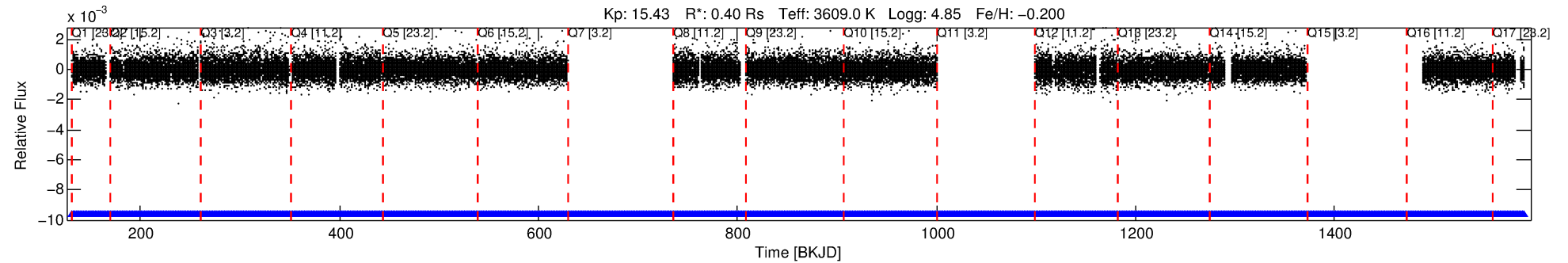
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010676126-01

No Significant Match Found

DV One-Page Summary

KIC: 10676126 Candidate: 1 of 1 Period: 0.704 d



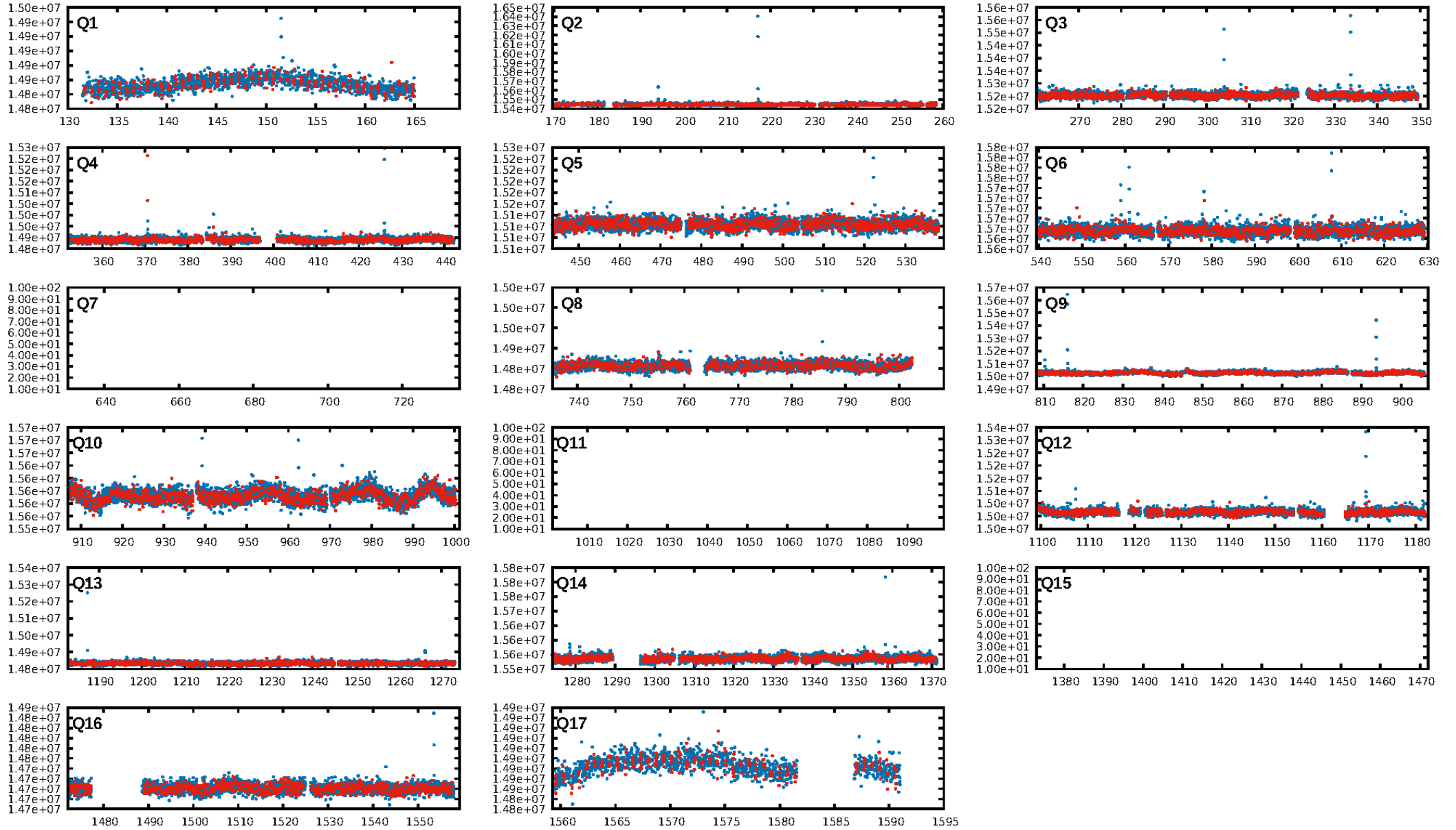
DV Fit Results:

Period = 0.70441 [0.00002] d
Epoch = 131.7193 [0.0045] BKJD
Rp/R* = 0.0073 [0.0098]
a/R* = 1.78 [7.60]
b = 0.90 [1.39]
Seff = 181.43 [18.67]
Teq = 936 [24] K
Rp = 0.32 [0.43] Re
a = 0.0116 [0.0008] AU
Ag = 27.00 [73.95] [0.35σ]
Teffp = 3298 [2258] K [1.05σ]

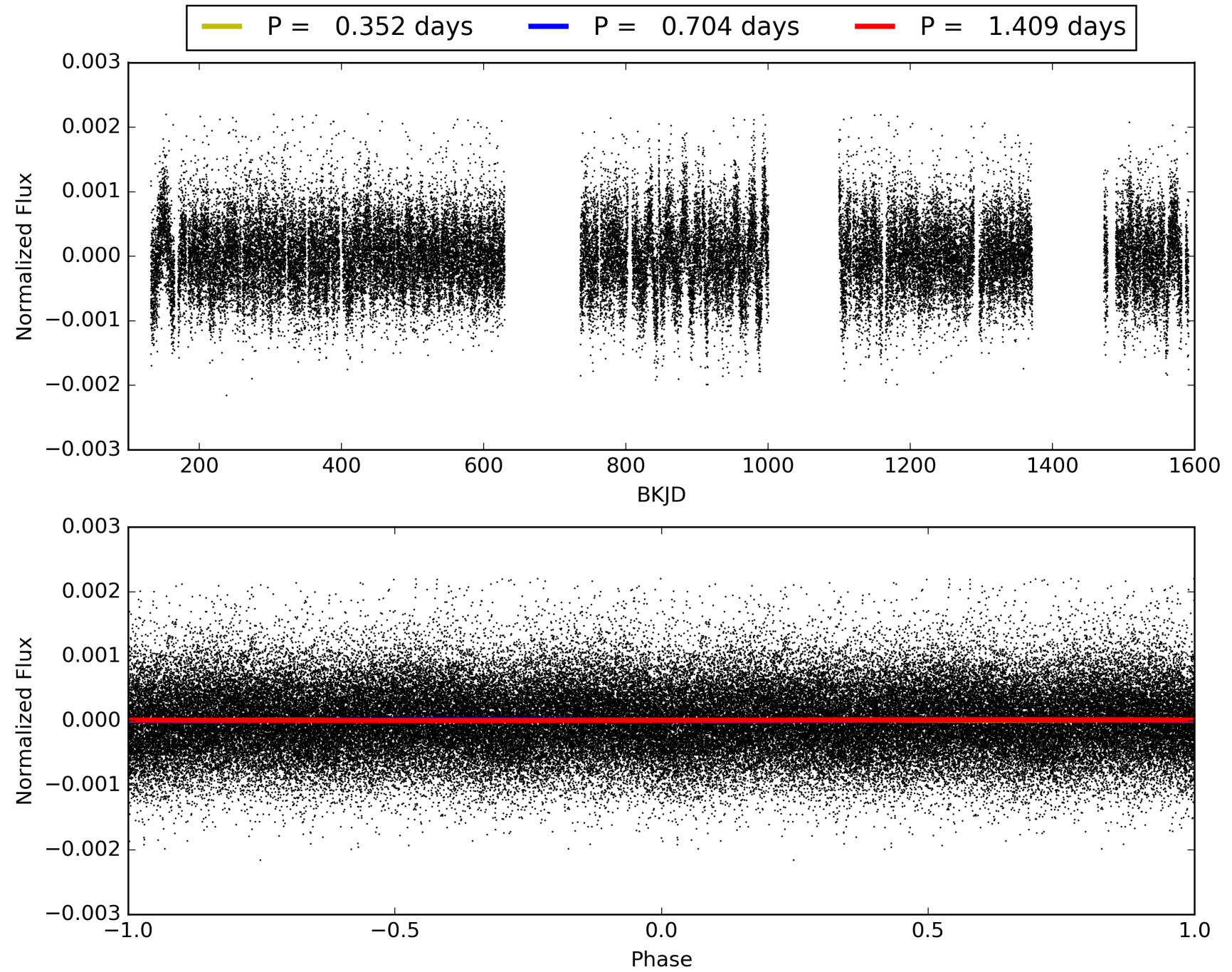
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.87e-15
RollingBand-fgt: 1.00 [1431/1431]
GhostDiagnostic-chr: -2.568
Centroid-sig: 0.7%
Centroid-so: 4.770 arcsec [1.62σ]
OotOffset-rm: 0.251 arcsec [0.35σ]
KicOffset-rm: 0.247 arcsec [0.51σ]
OotOffset-st: 4/1/3/2 [10]
KicOffset-st: 4/1/3/2 [10]
DiffImageQuality-fgm: 0.50 [5/10]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 010676126-01, PDC Light Curves

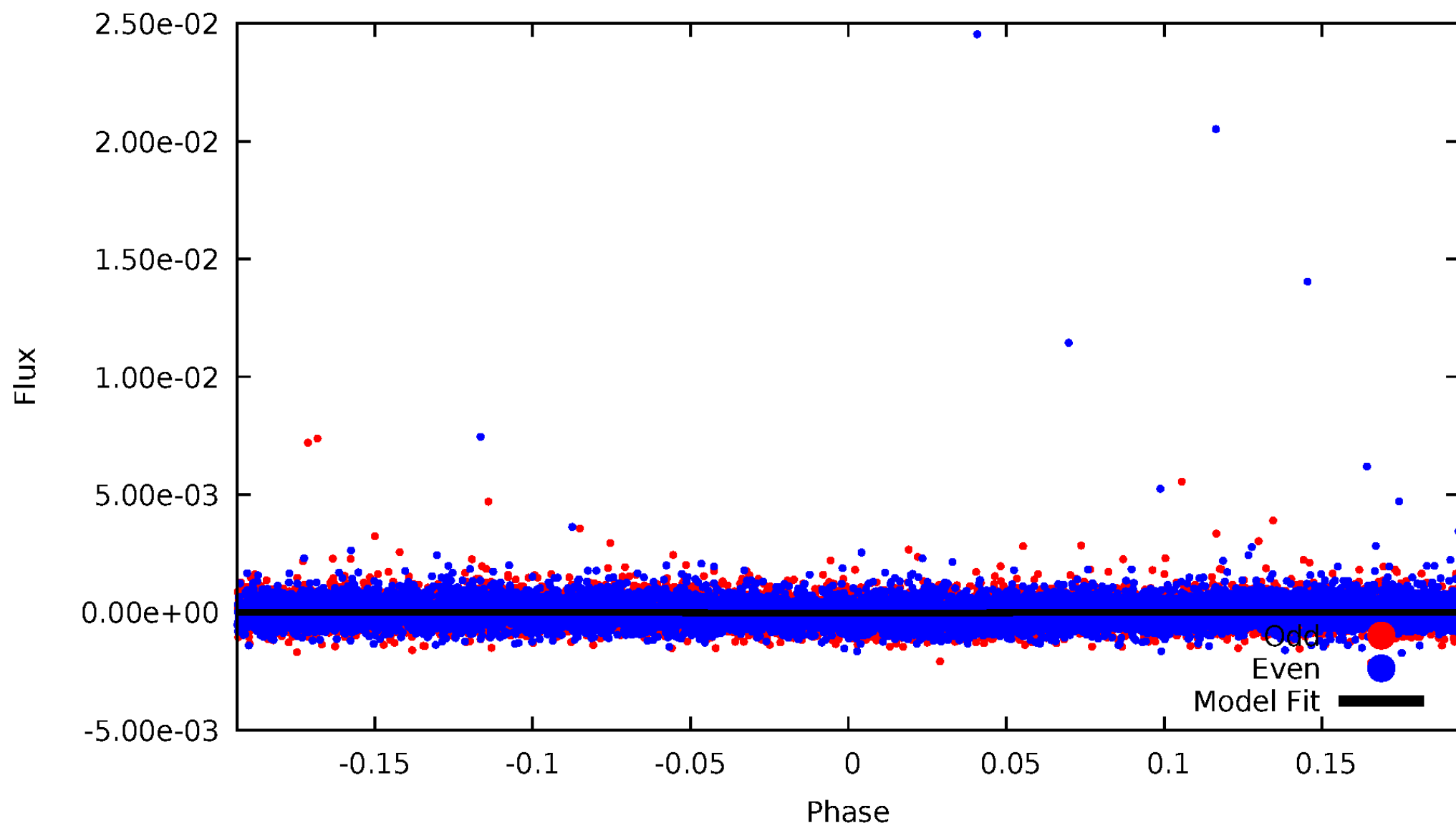


TCE 010676126-01



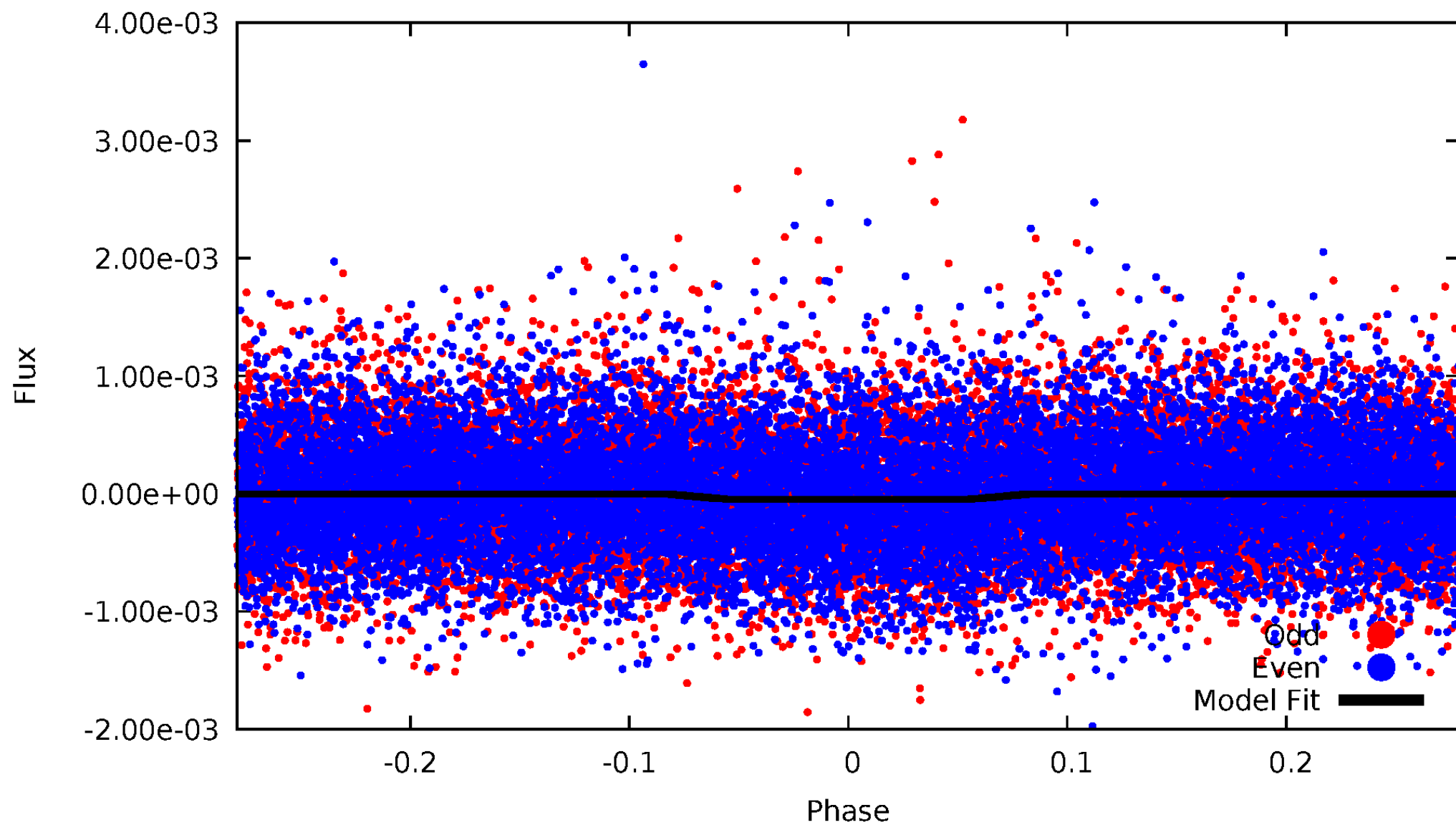
DV Odd/Even

TCE 010676126-01

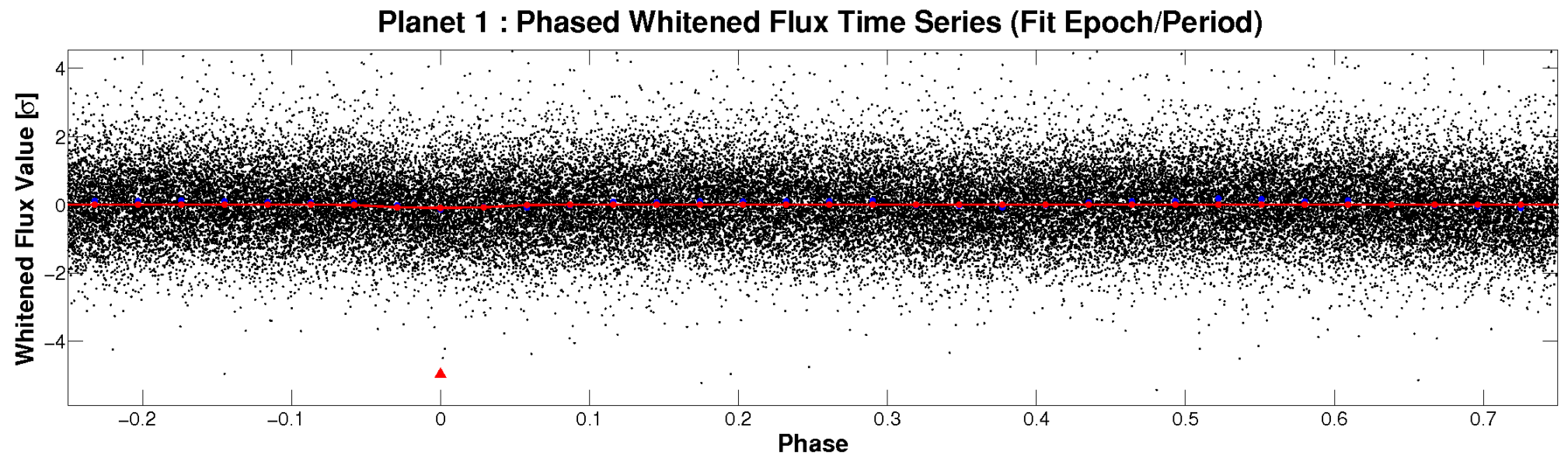
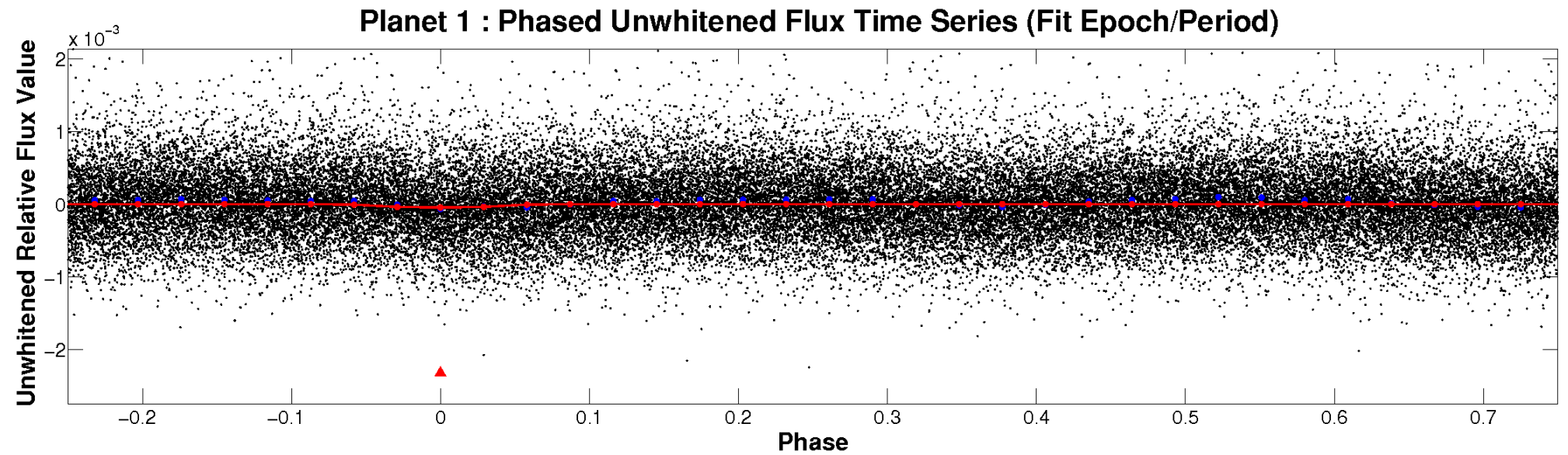


ALT Odd/Even

TCE 010676126-01

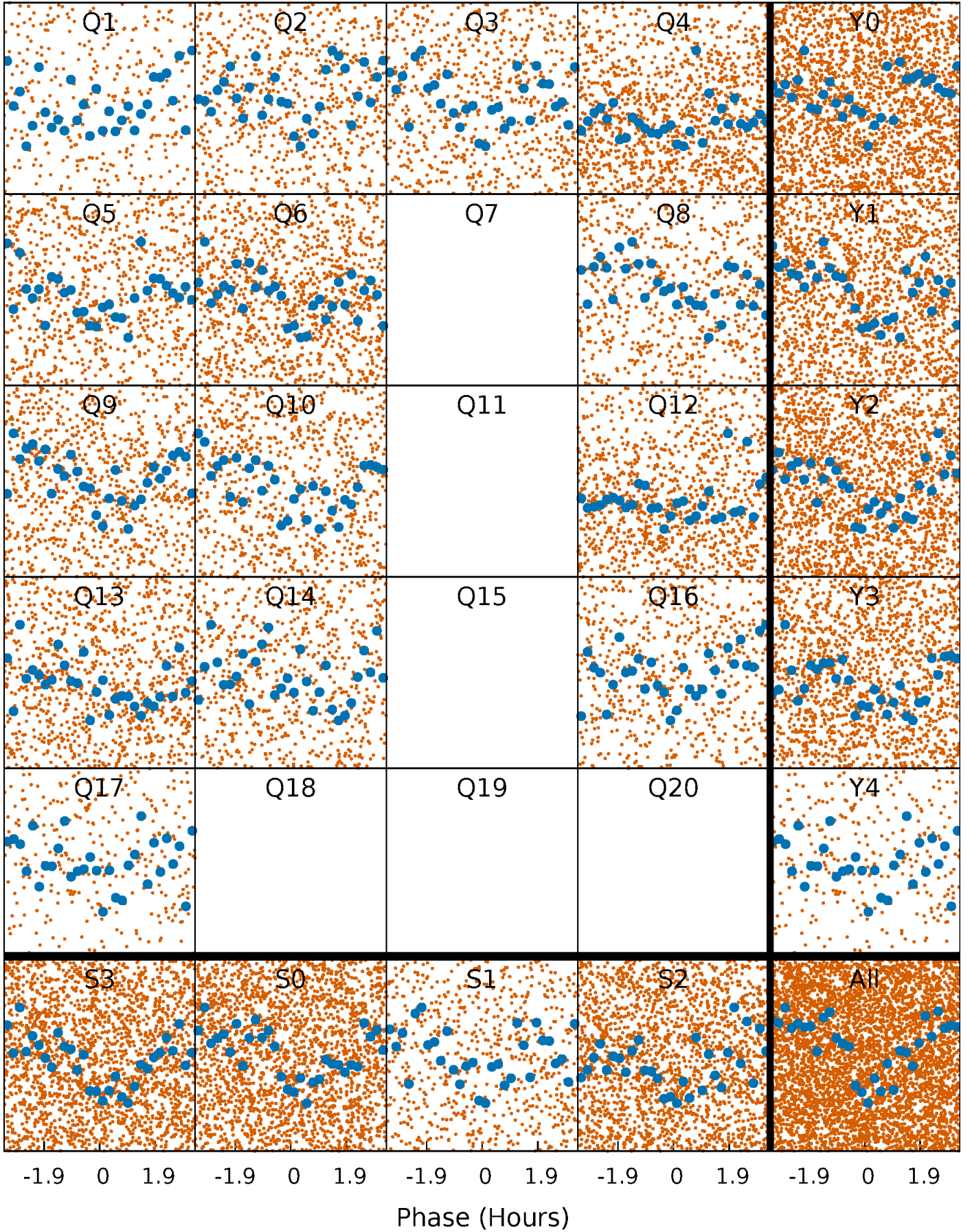


Non-Whitened Vs. Whitened Light Curve



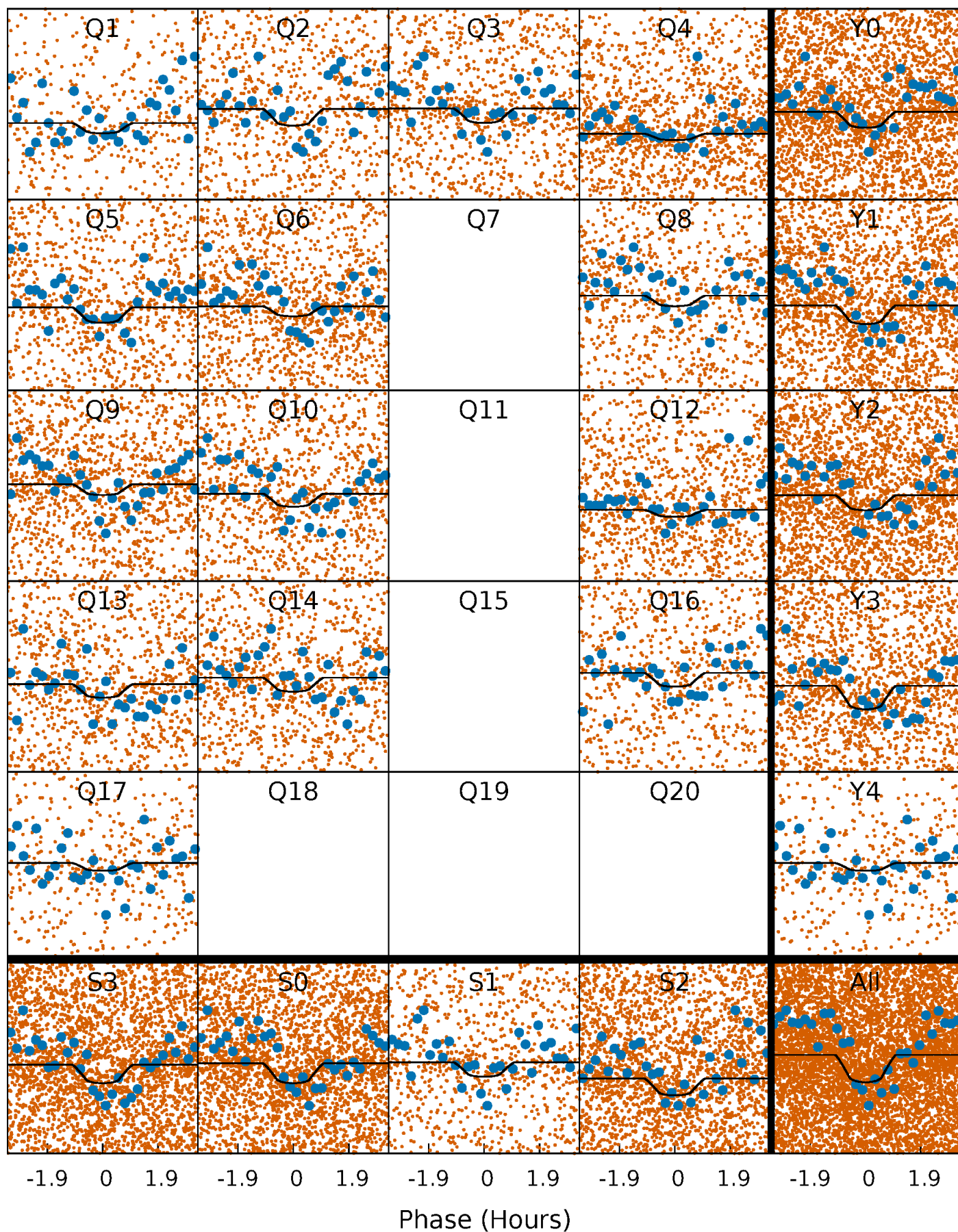
PDC Quarter-Phased Transit Curves

TCE 010676126-01 P= 0.704407 Days $T_0=131.719341$ (BKJD)



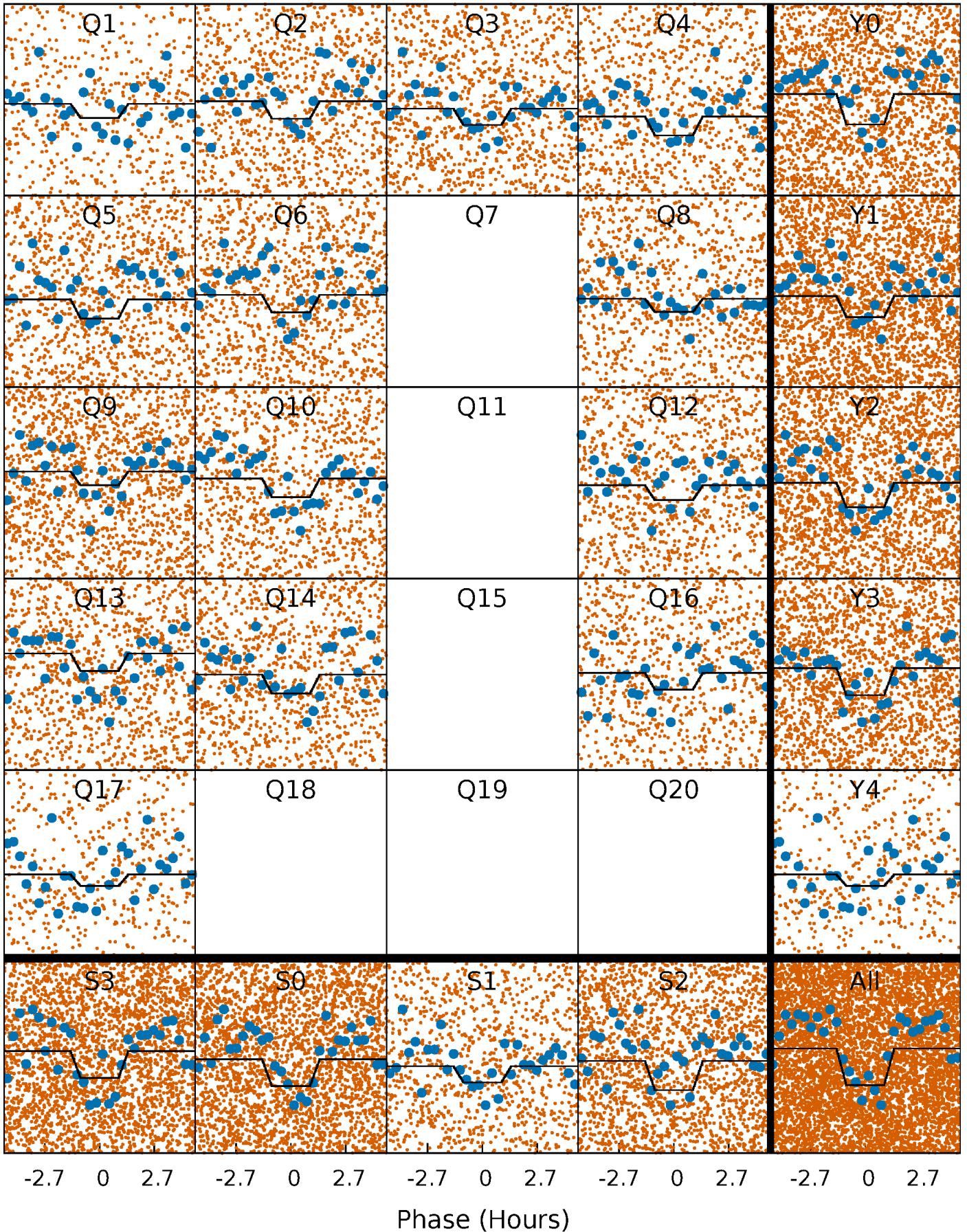
DV Quarter-Phased Transit Curves

TCE 010676126-01 P= 0.704407 Days $T_0=131.719341$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

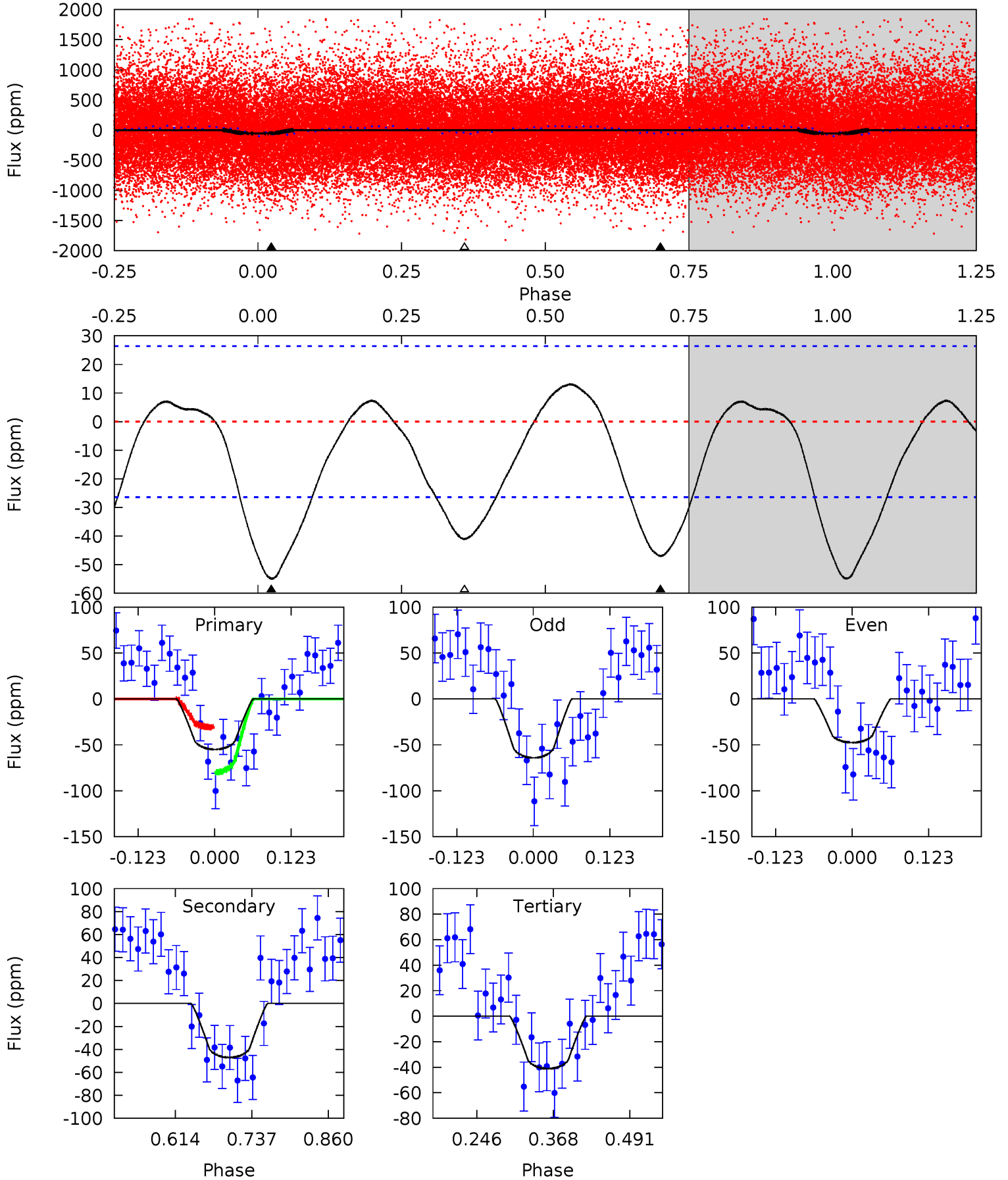
TCE 010676126-01 P= 0.704432 Days $T_0=131.714922$ (BKJD)



DV Model-Shift Uniqueness Test

010676126-01, P = 0.704407 Days, E = 131.014934 Days

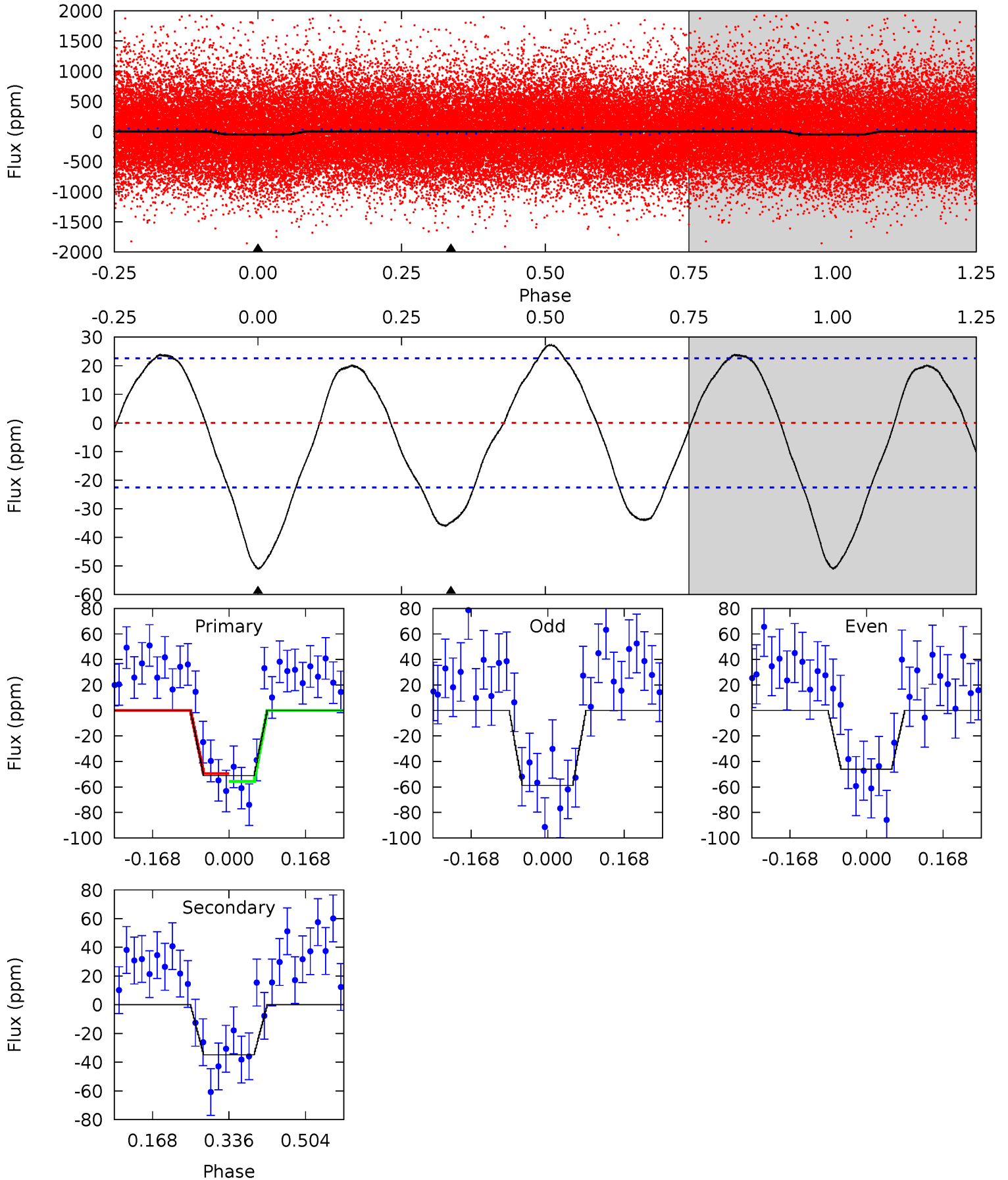
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.42	8.07	7.04	0	4.52	1.54	2.92	2.37	9.42	1.02	8.07	1.43	0.82	0.19	4.19



Alt Model-Shift Uniqueness Test

010676126-01, P = 0.704432 Days, E = 131.010490 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	6.87	0	0	4.45	1.38	4.07	10.1	10.1	6.87	6.87	1.24	0.89	0.35	0.62



Stellar Parameters For KIC 010676126

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	3609^{+48}_{-54}	$4.854^{+0.038}_{-0.031}$	$-0.200^{+0.100}_{-0.100}$	$0.400^{+0.029}_{-0.036}$	$0.418^{+0.031}_{-0.038}$	$9.178^{+1.788}_{-1.245}$
	+1%/-1%	+1%/-1%	+50%/-50%	+7%/-9%	+7%/-9%	+19%/-14%
Source	PHO2	PHO2	PHO2	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 010676126-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-47 ± 6	$0.43^{+0.39}_{-0.27}$	1305^{+26}_{-28}	3205^{+1240}_{-529}	18^{+111}_{-13}
Alt.	-35 ± 5	$0.43^{+0.36}_{-0.29}$	1306^{+27}_{-29}	3070^{+1307}_{-491}	14^{+104}_{-10}

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

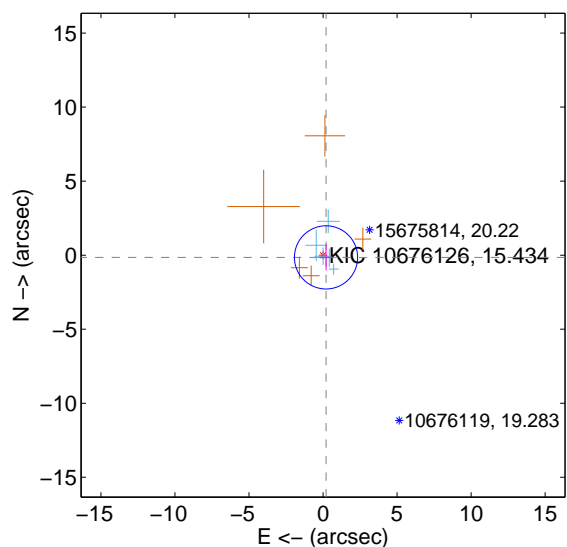
Supplemental centroid analysis for 010676126-01. Kepler magnitude: 15.43. Transit SNR 5.44

There are 5 quarters with good PRF difference image offsets

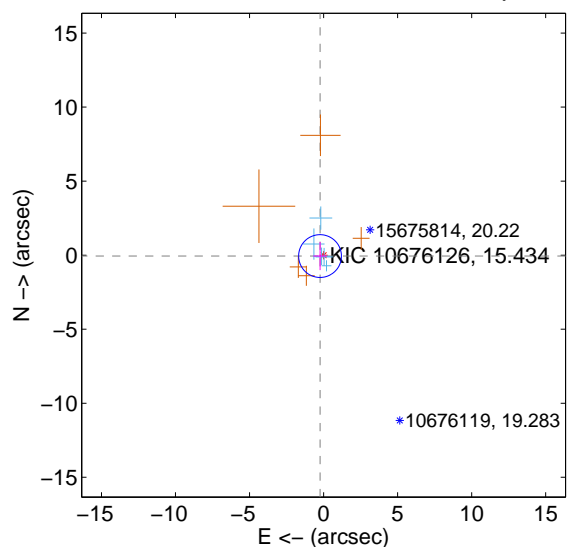
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.251 ± 0.711	0.35	-0.202 ± 0.523	-0.150 ± 0.878
PRF-fit source offset from KIC position	0.247 ± 0.482	0.51	0.240 ± 0.455	-0.060 ± 0.945
photometric centroid source offset	4.77 ± 2.95	1.62	-0.52 ± 2.50	4.74 ± 2.95

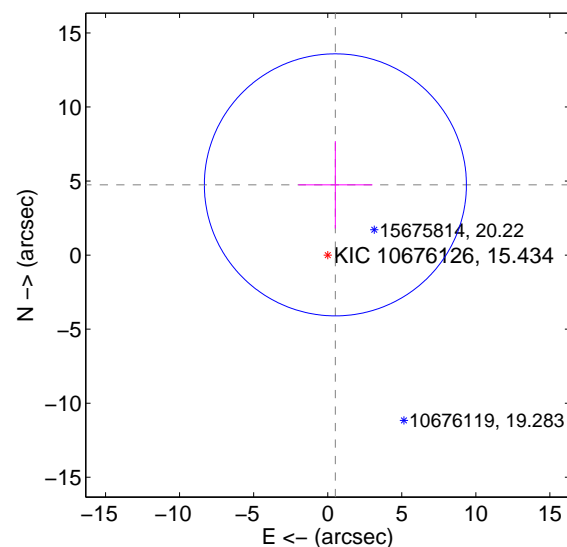
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

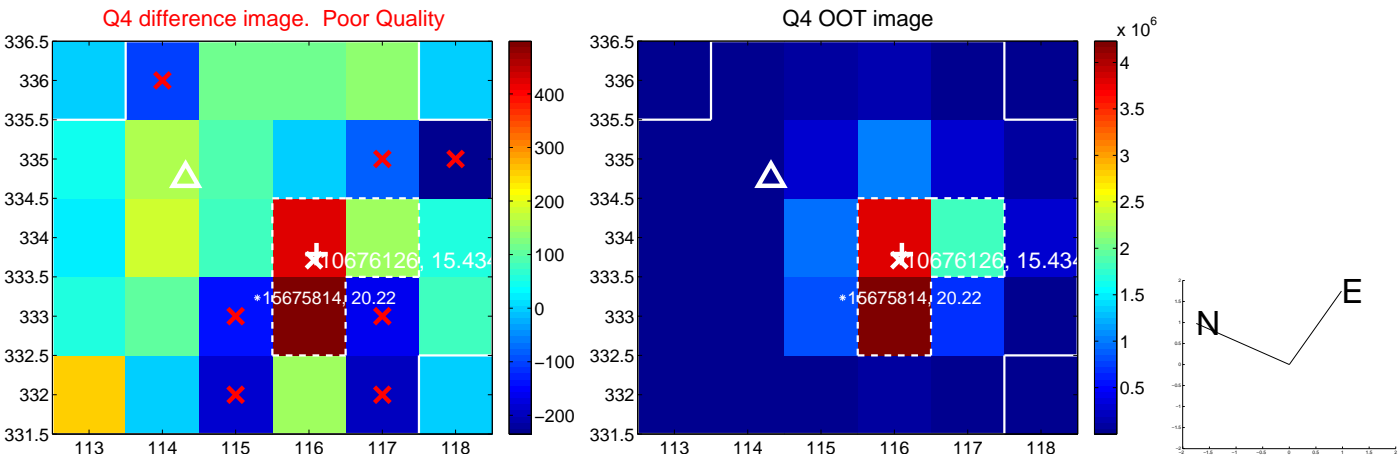
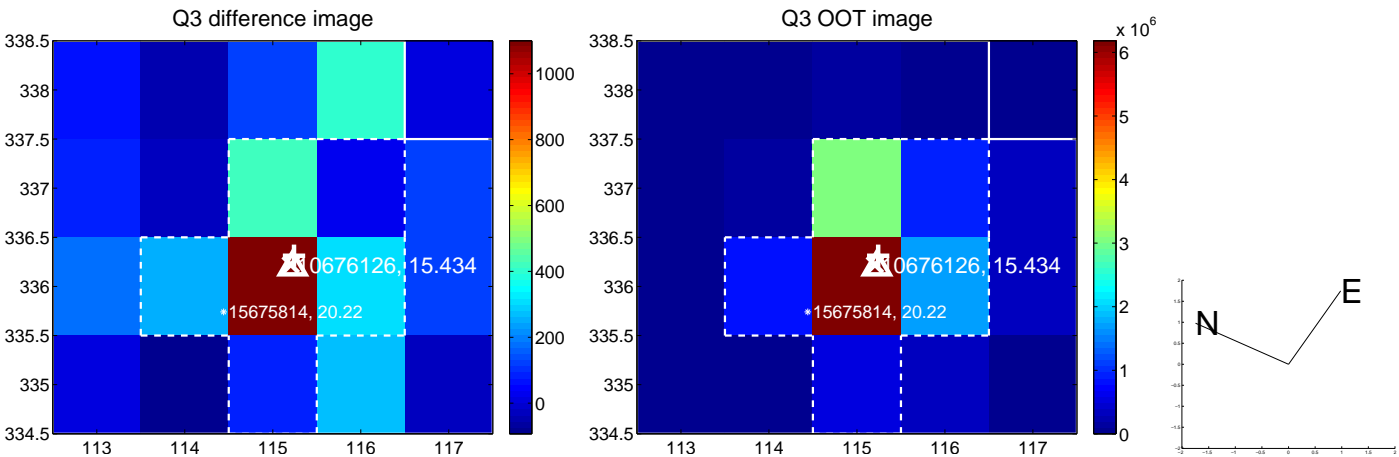
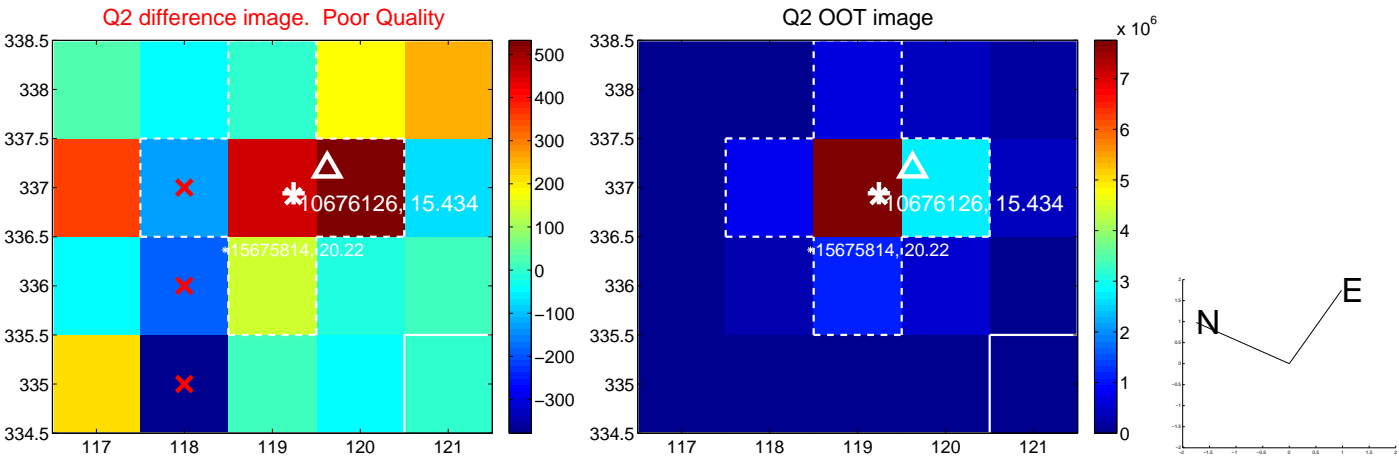
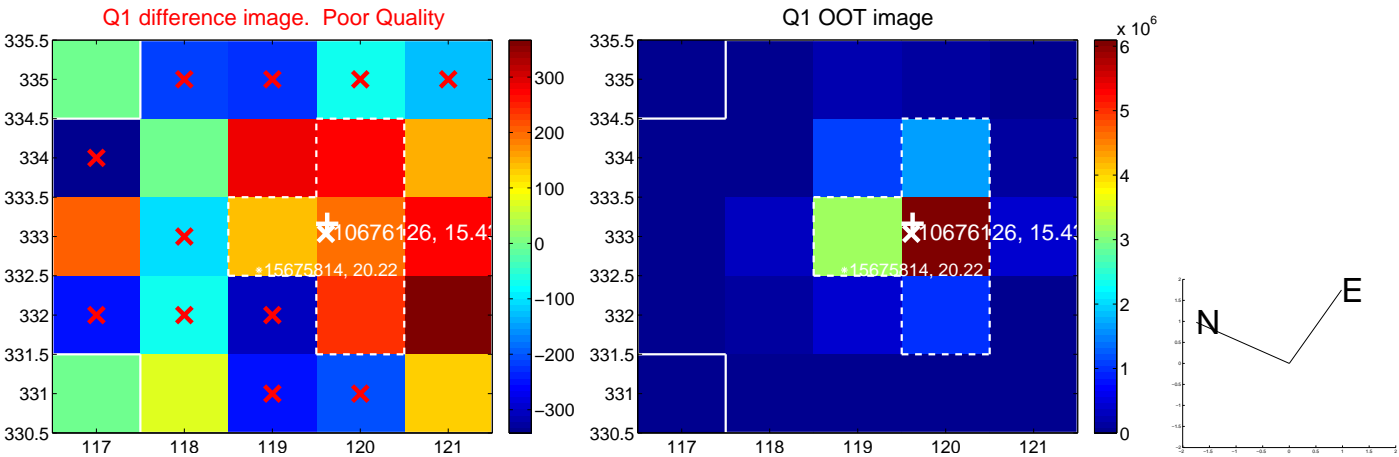


offset from photometric centroids

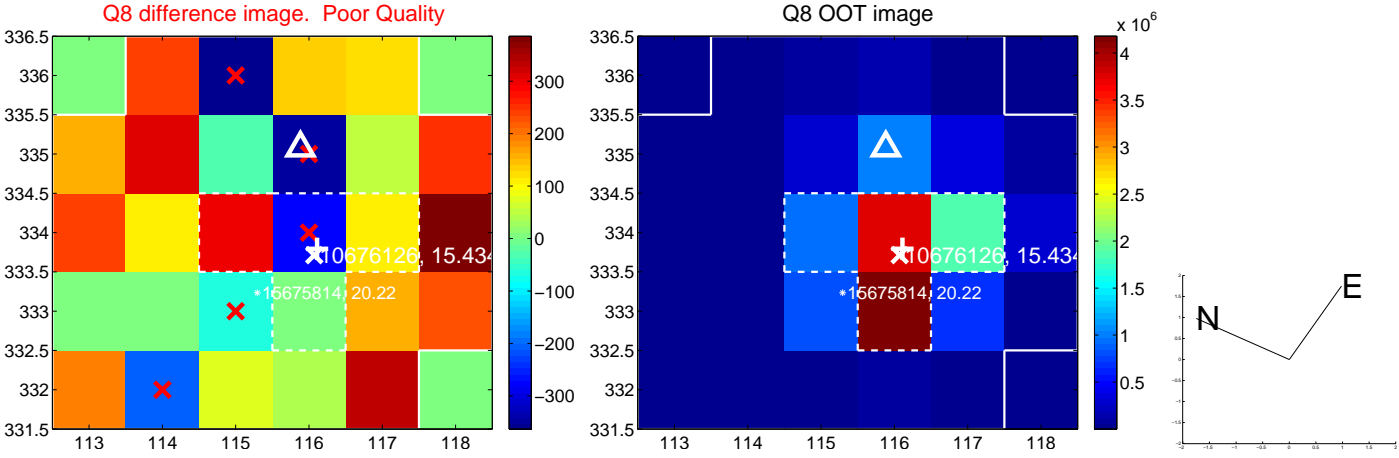
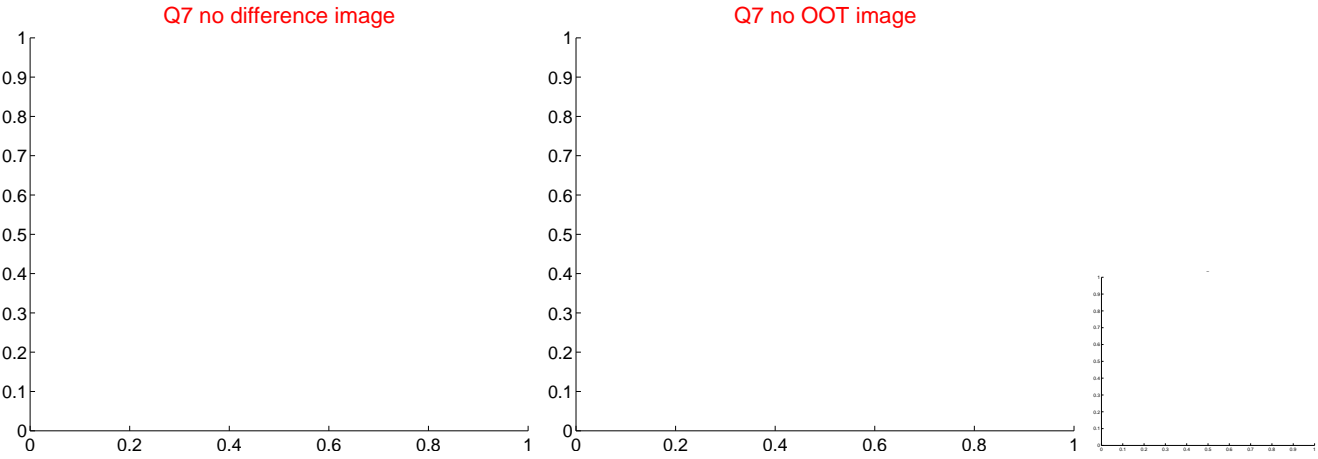
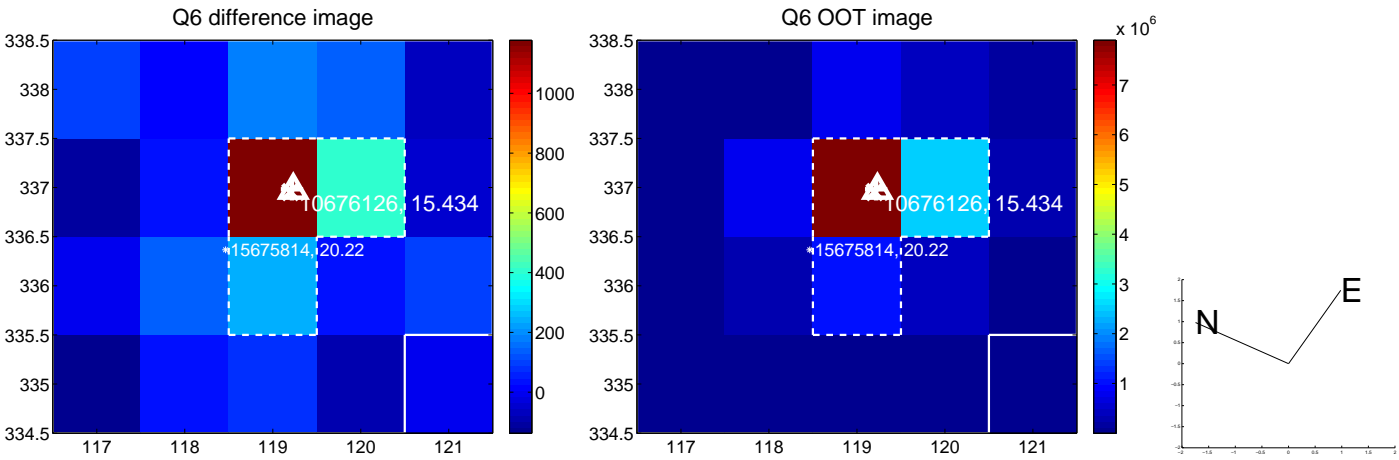
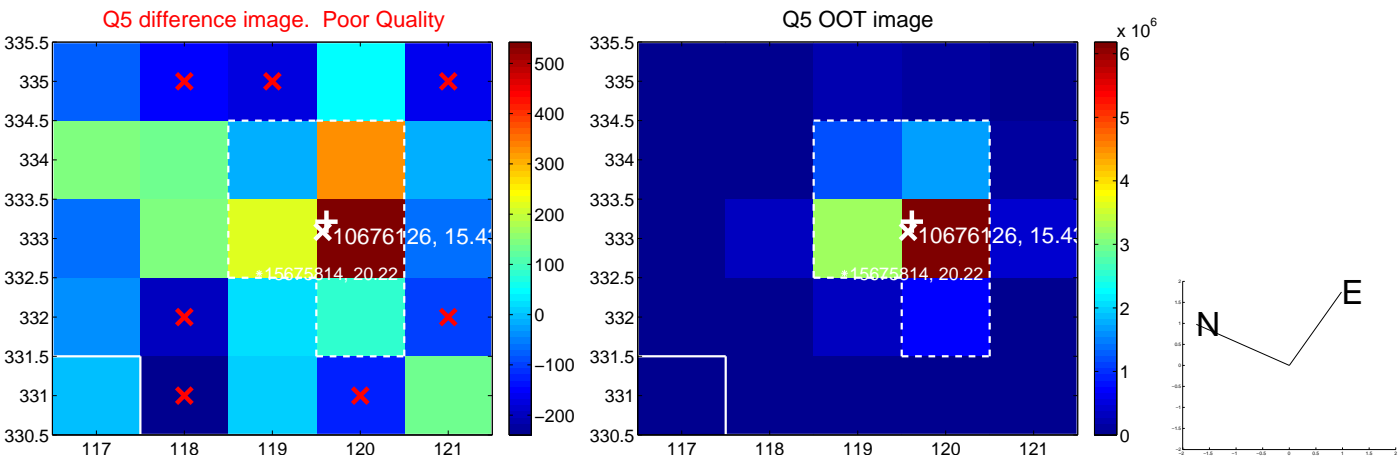


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

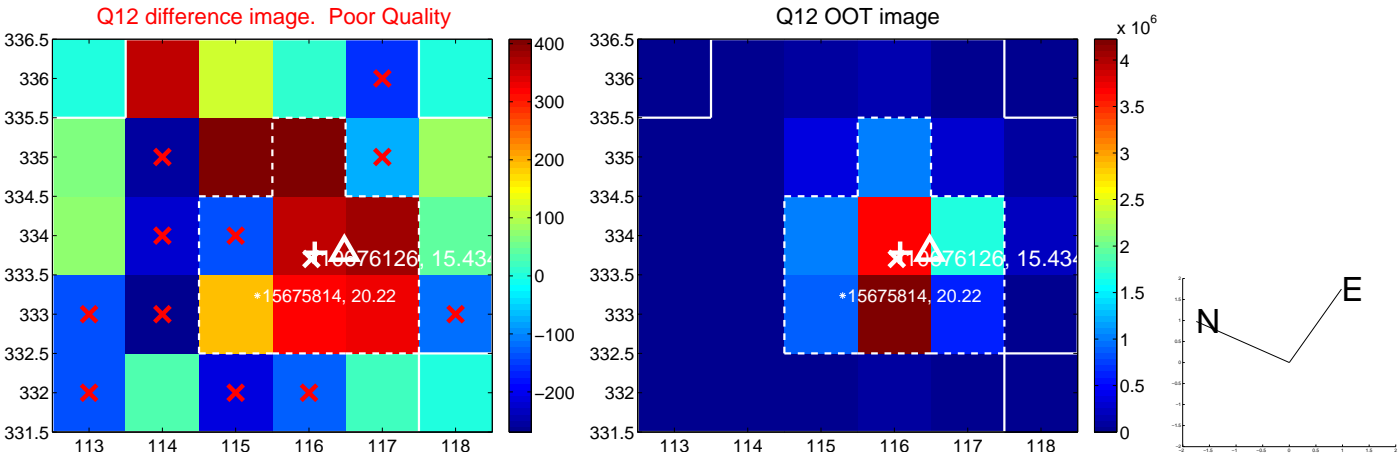
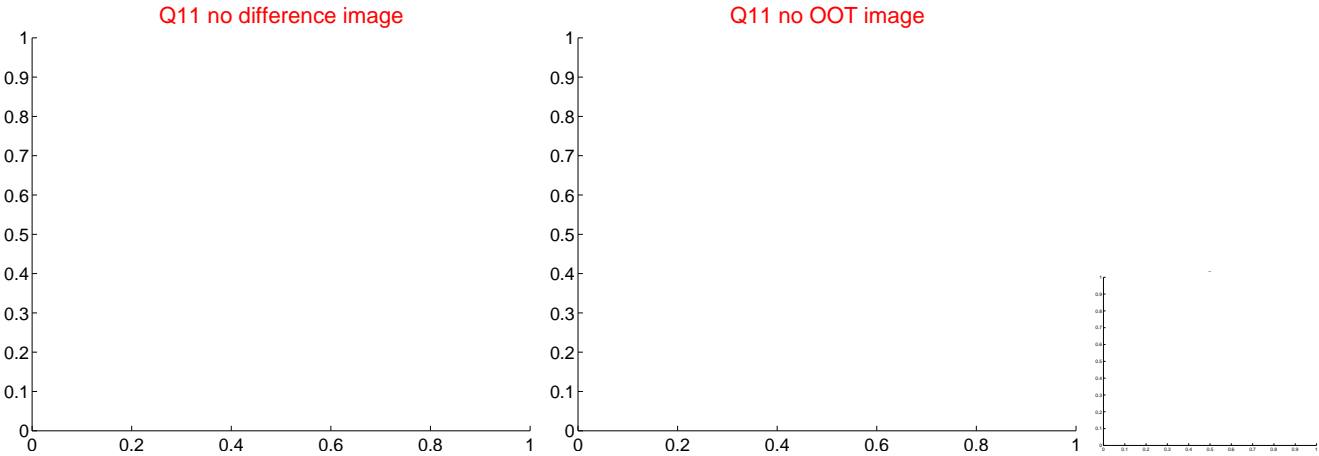
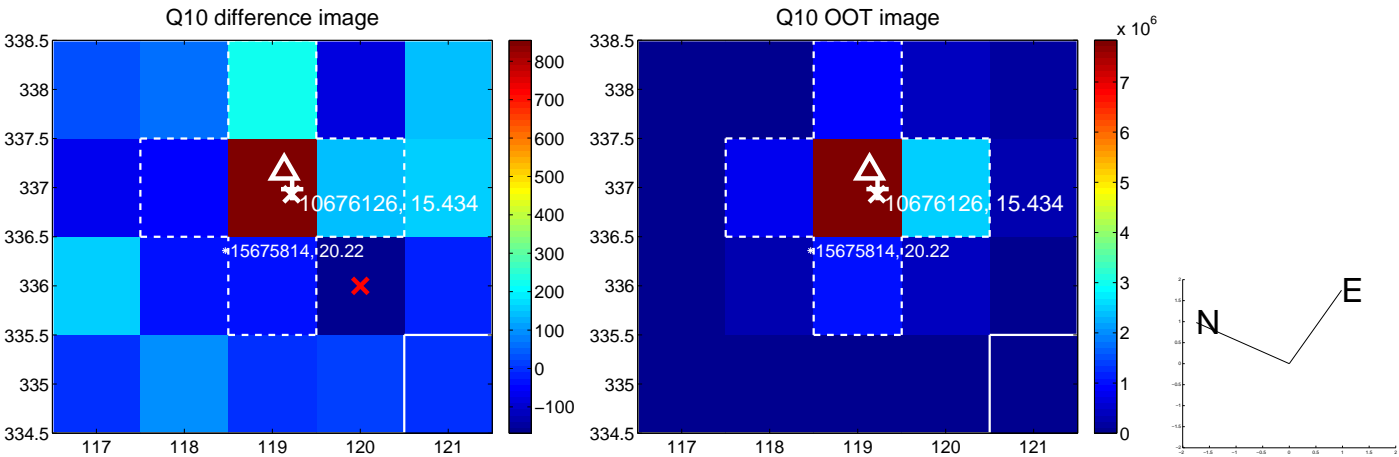
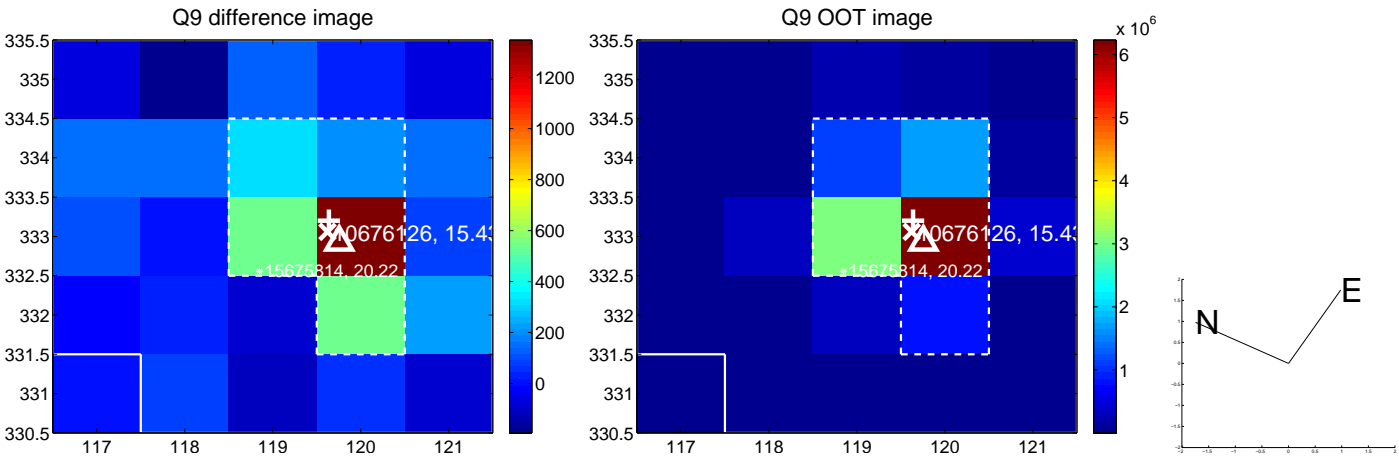
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



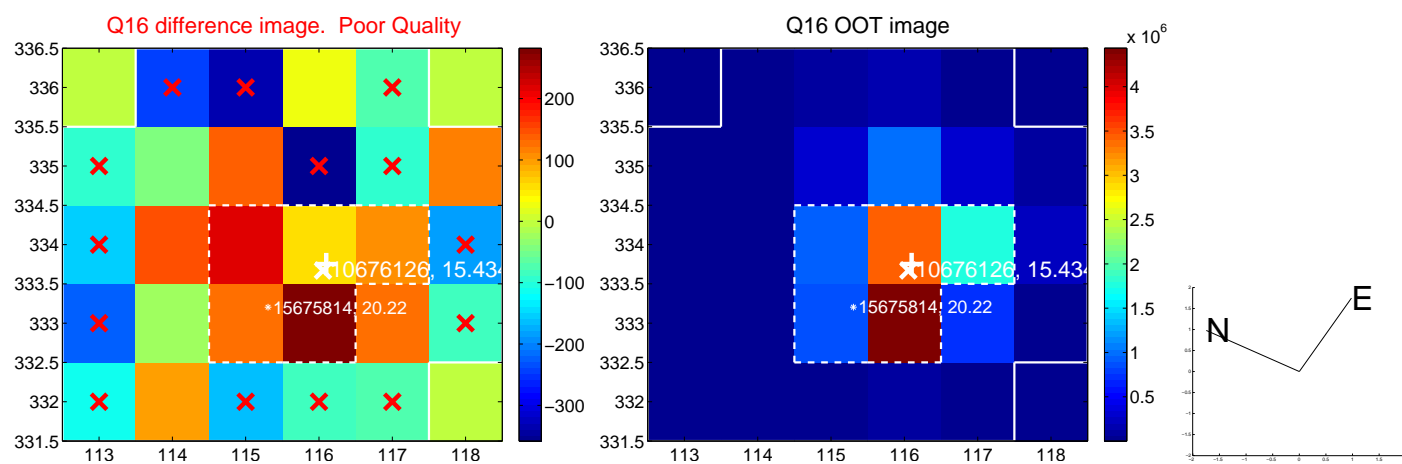
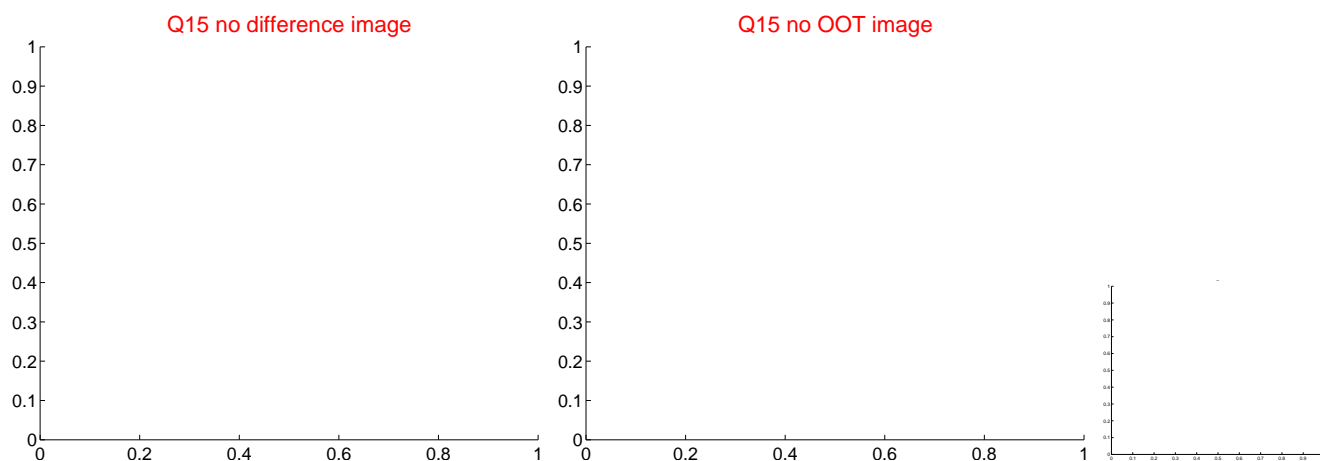
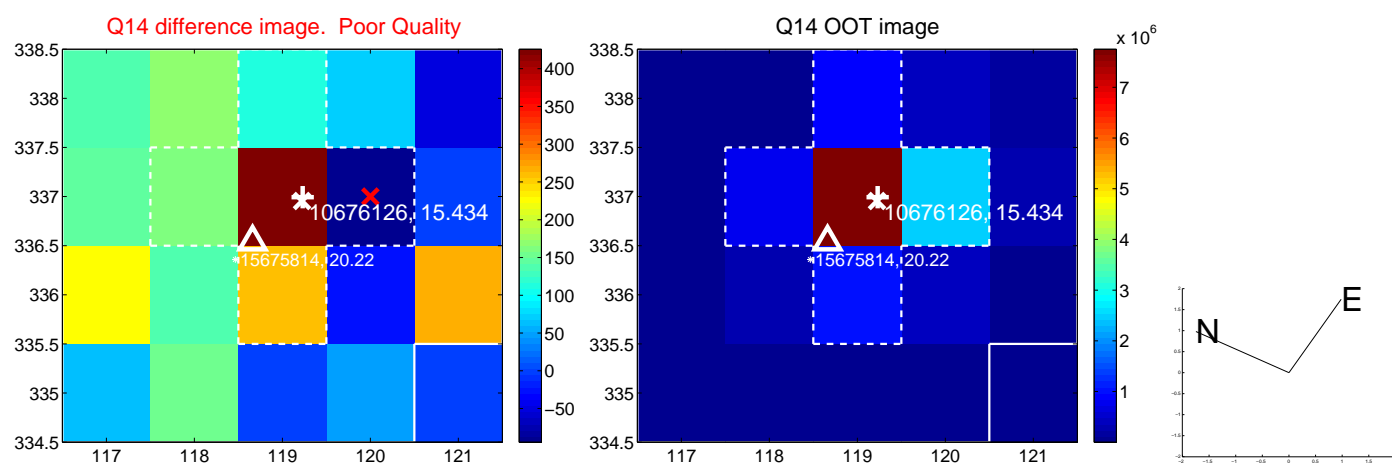
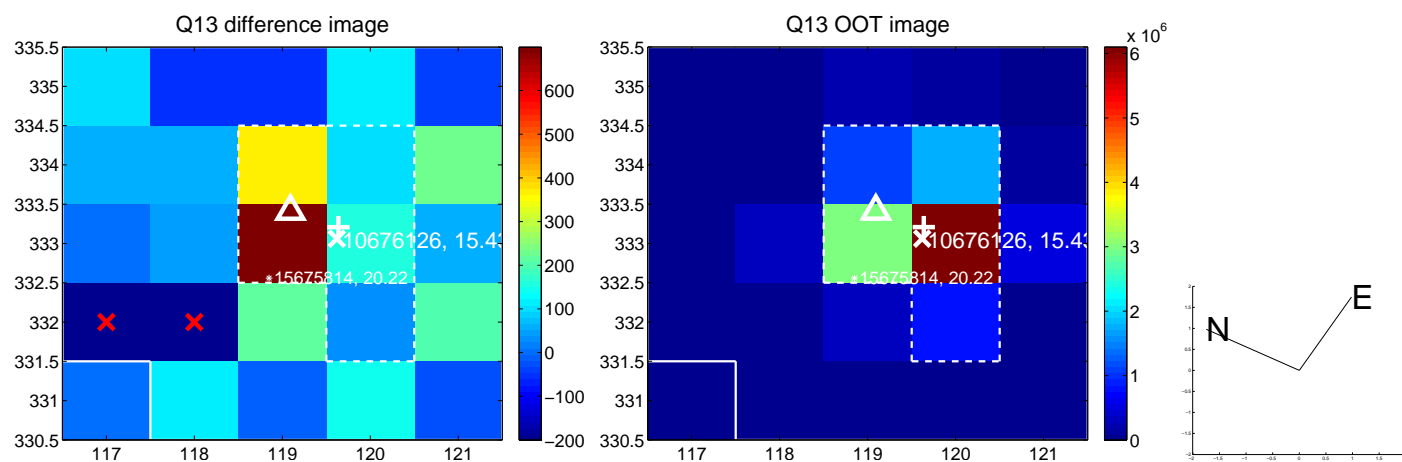
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



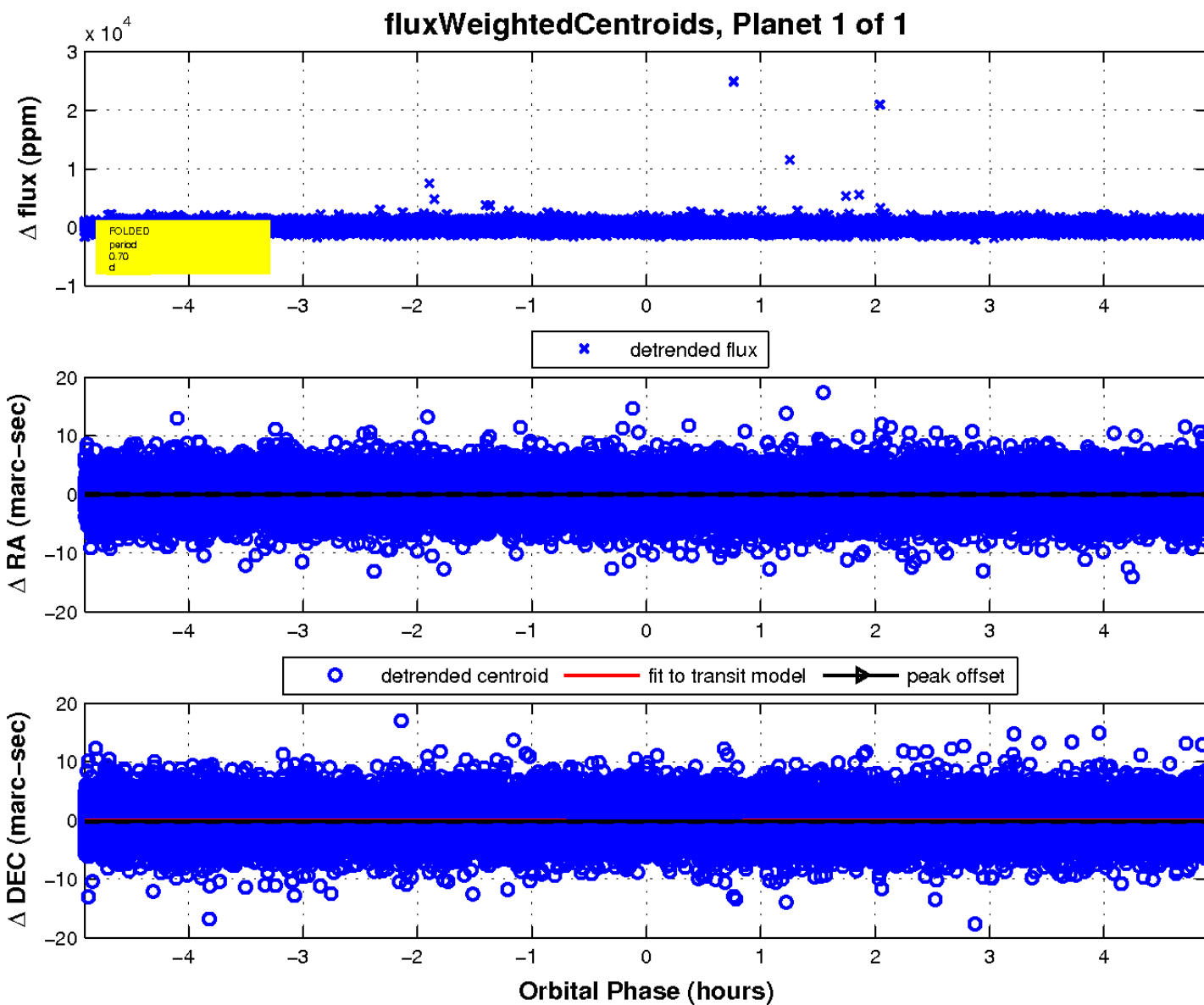
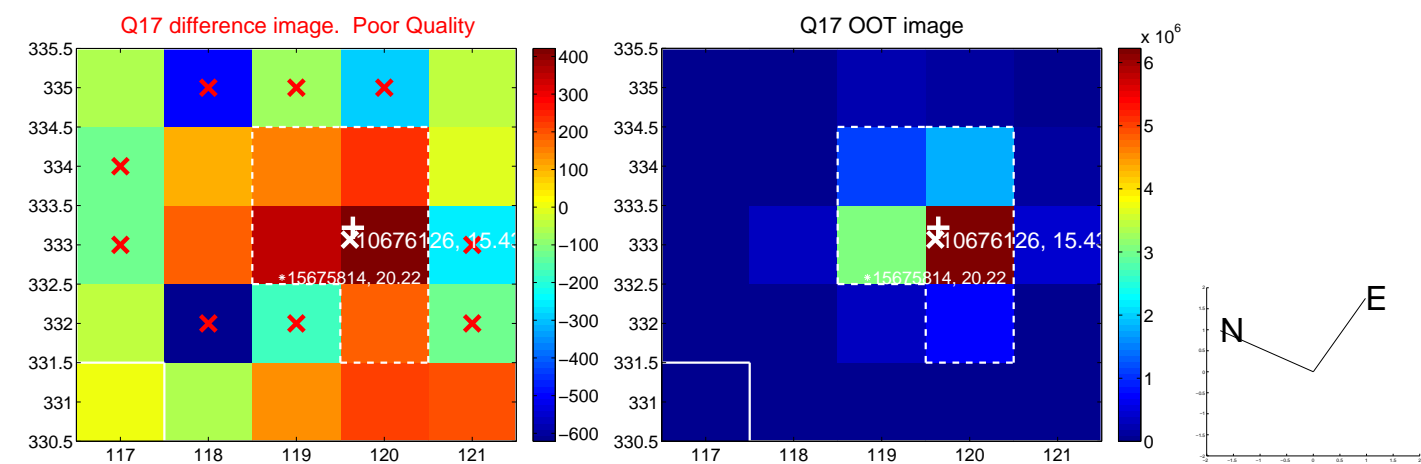
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

