

KIC 008573168

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})
008573168-01	OBS	4610.01	0.896284	131.552029	76.2	1.327	10.3	11.4	0.82	5561	0.85	1842.53

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008573168-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET

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.

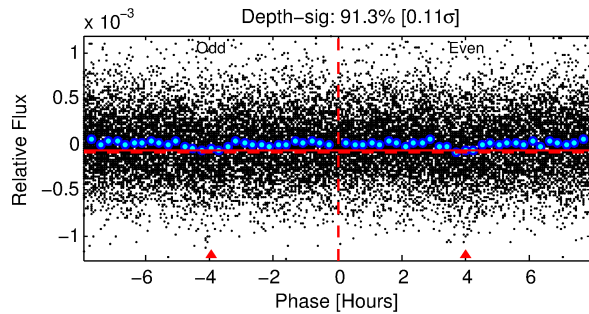
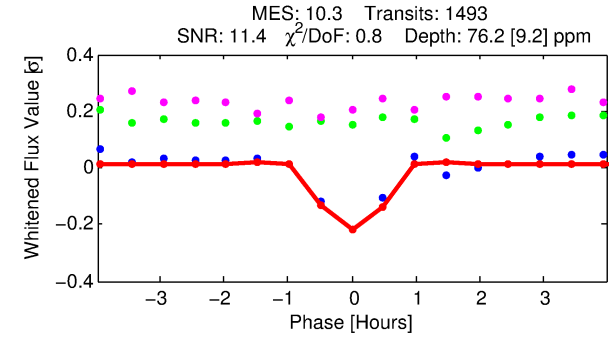
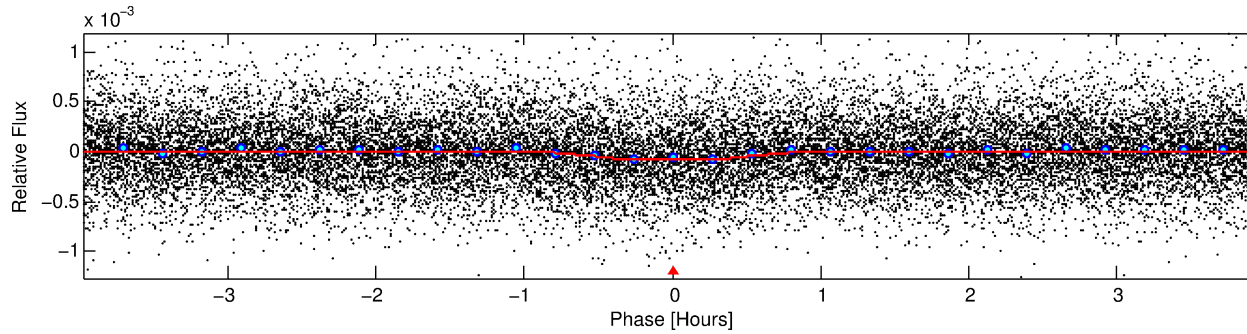
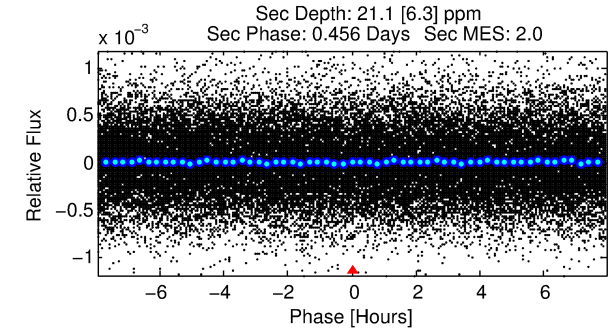
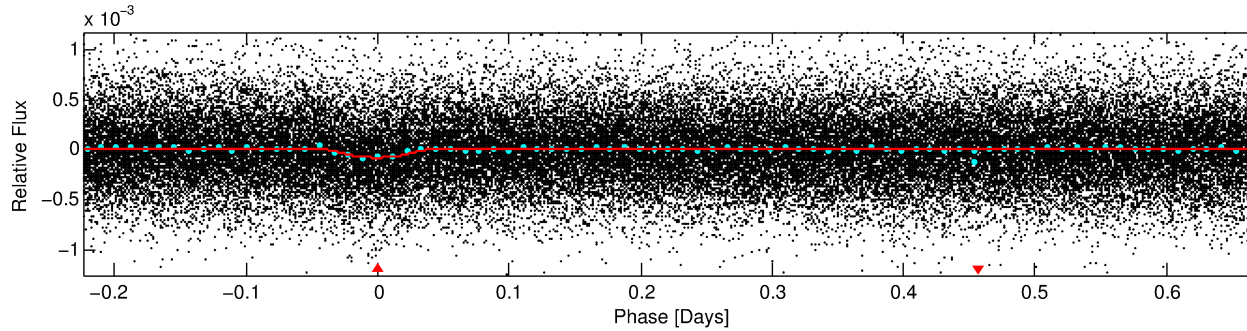
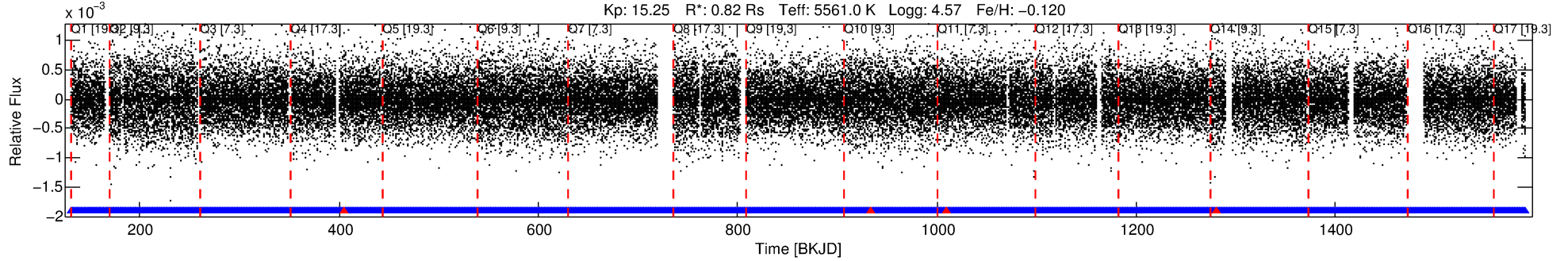
Ephemeris Match Information For 008573168-01

No Significant Match Found

DV One-Page Summary

KIC: 8573168 Candidate: 1 of 1 Period: 0.896 d
KOI: K04610.01 Corr: 0.927

Kp: 15.25 R*: 0.82 Rs Teff: 5561.0 K Logg: 4.57 Fe/H: -0.120



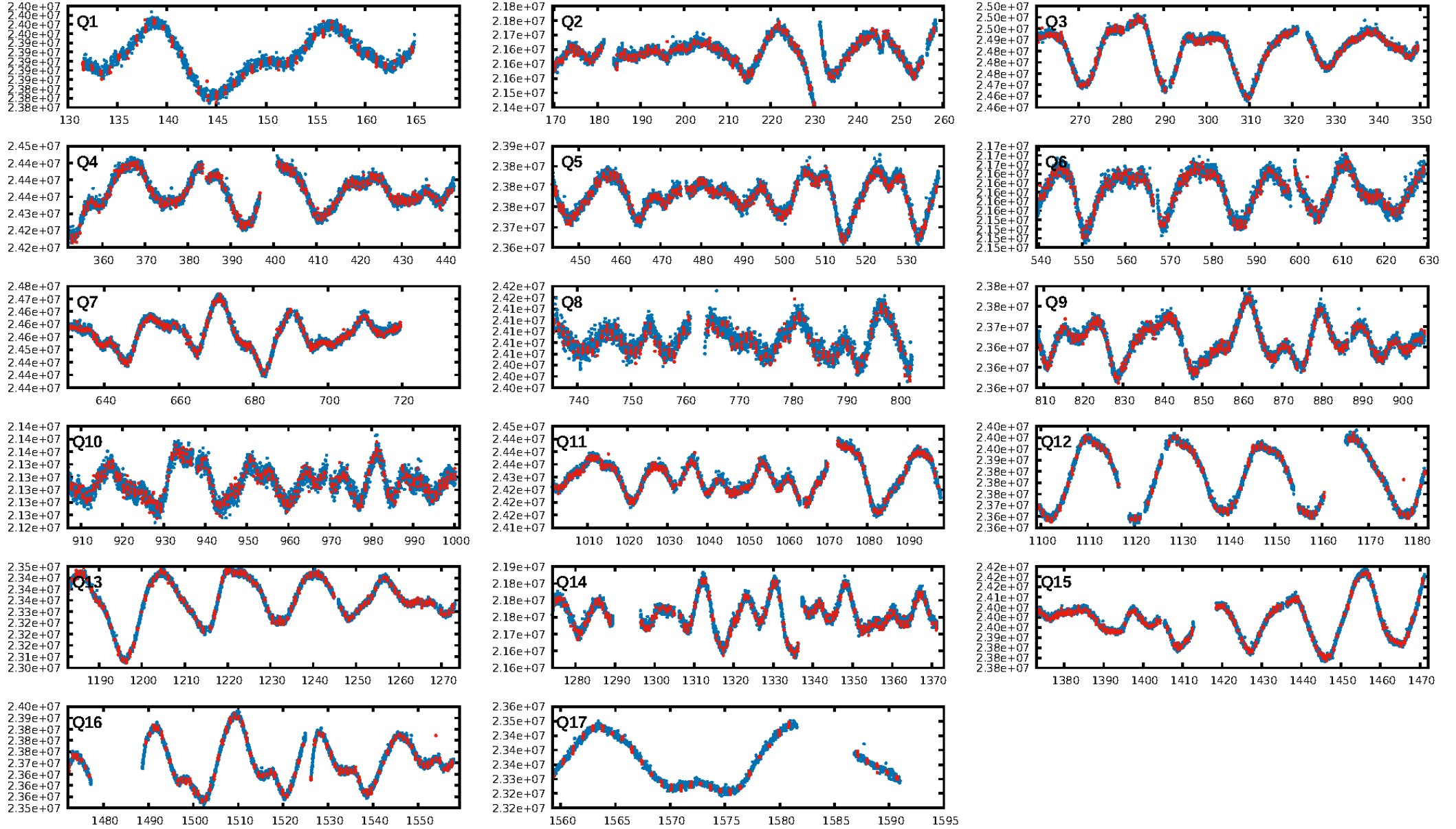
DV Fit Results:

Period = 0.89628 [0.00001] d
Epoch = 131.5520 [0.0017] BKJD
Rp/R* = 0.0095 [0.0057]
a/R* = 2.65 [6.21]
b = 0.89 [0.67]
Seff = 1842.53 [632.90]
Teq = 1671 [143] K
Rp = 0.85 [0.56] Re
a = 0.0176 [0.0038] AU
Ag = 5.04 [6.47] [0.62σ]
Teffp = 3870 [1212] K [1.80σ]

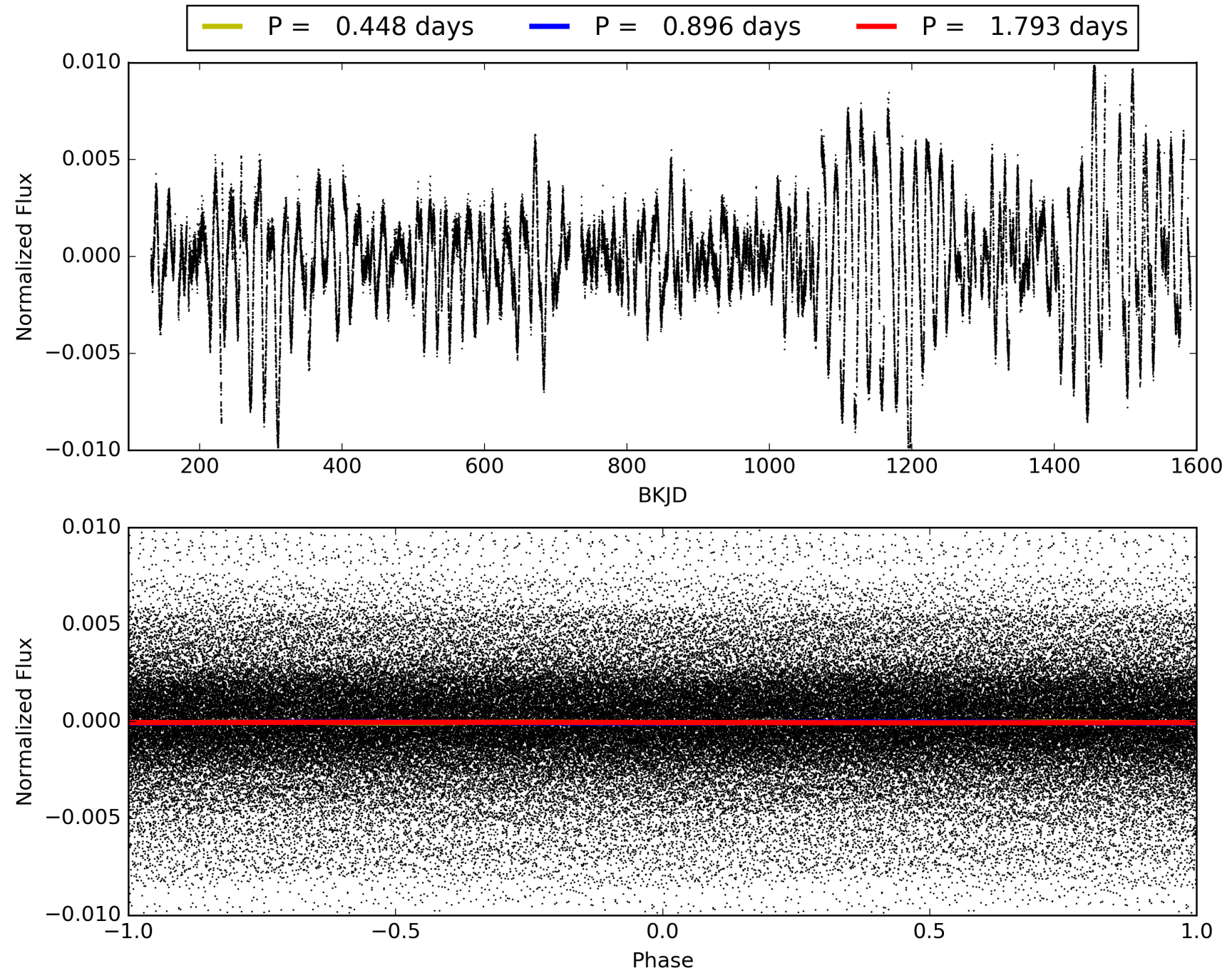
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.90e-25
RollingBand-fgt: 1.00 [1421/1425]
GhostDiagnostic-chr: -8.374
Centroid-sig: 0.0%
Centroid-so: 11.780 arcsec [13.00σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0/0 [0]
KicOffset-st: 0/0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008573168-01, PDC Light Curves

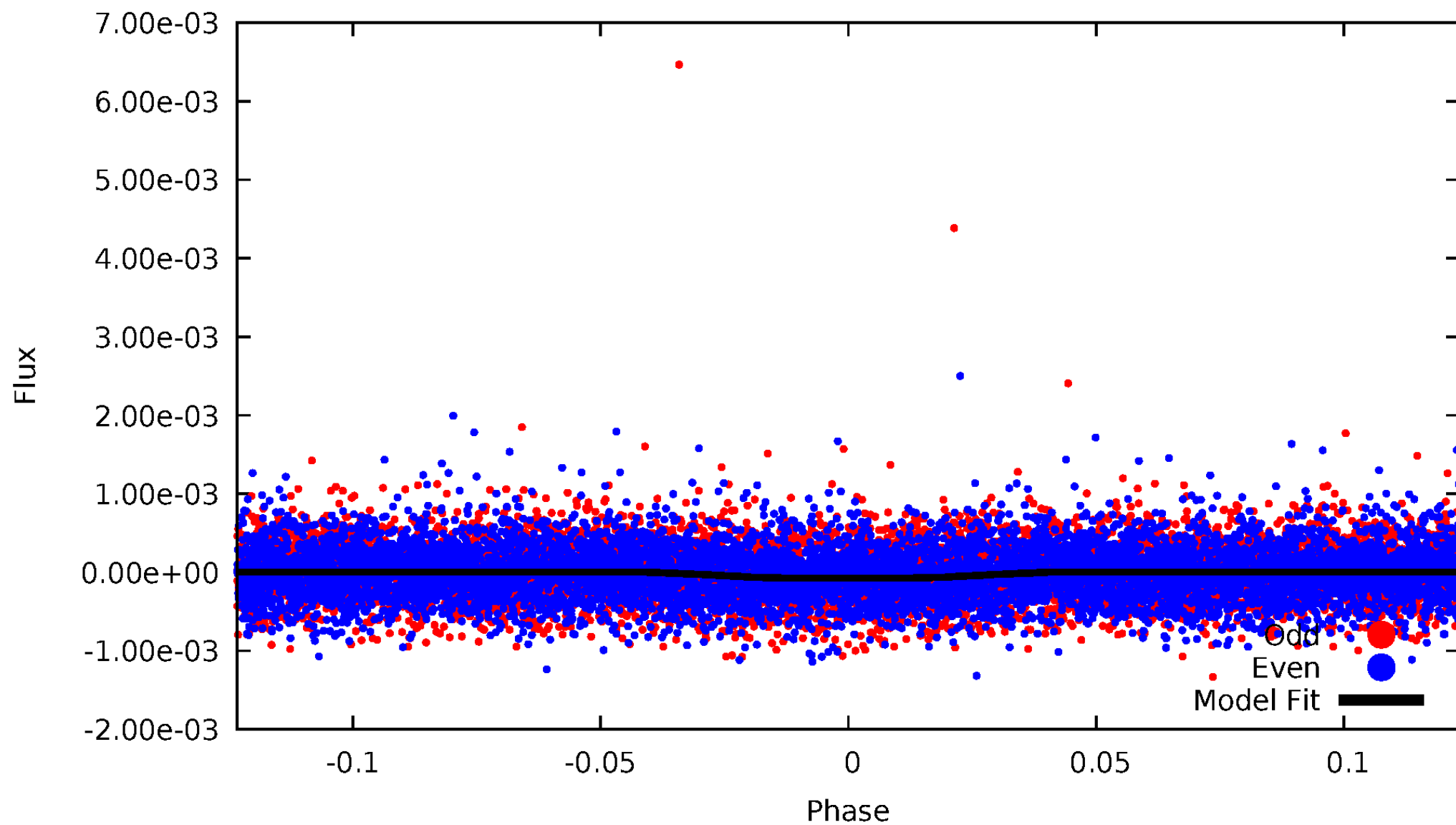


TCE 008573168-01



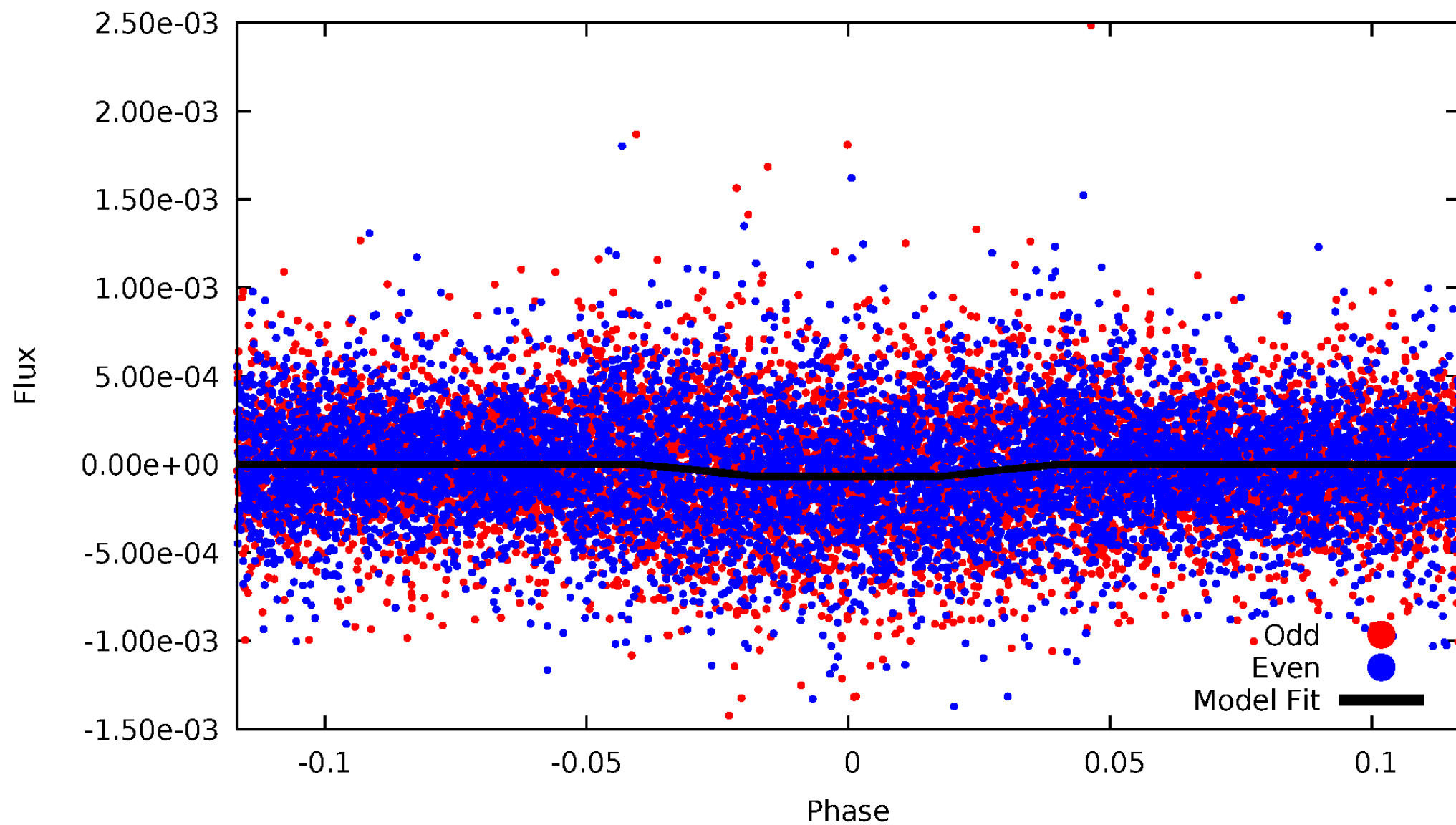
DV Odd/Even

TCE 008573168-01

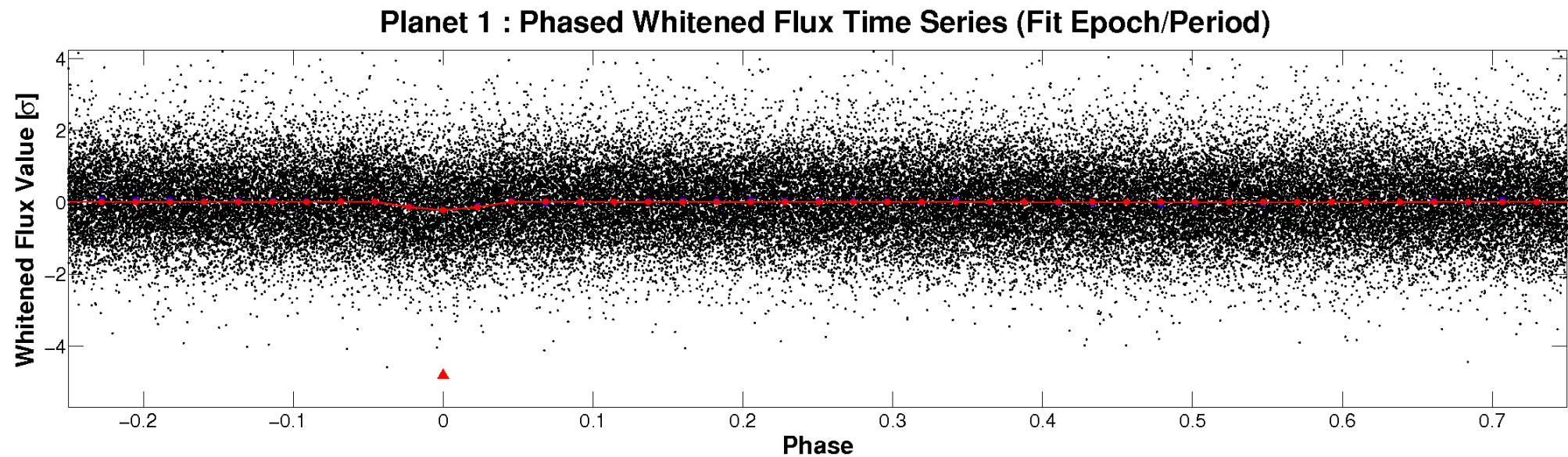
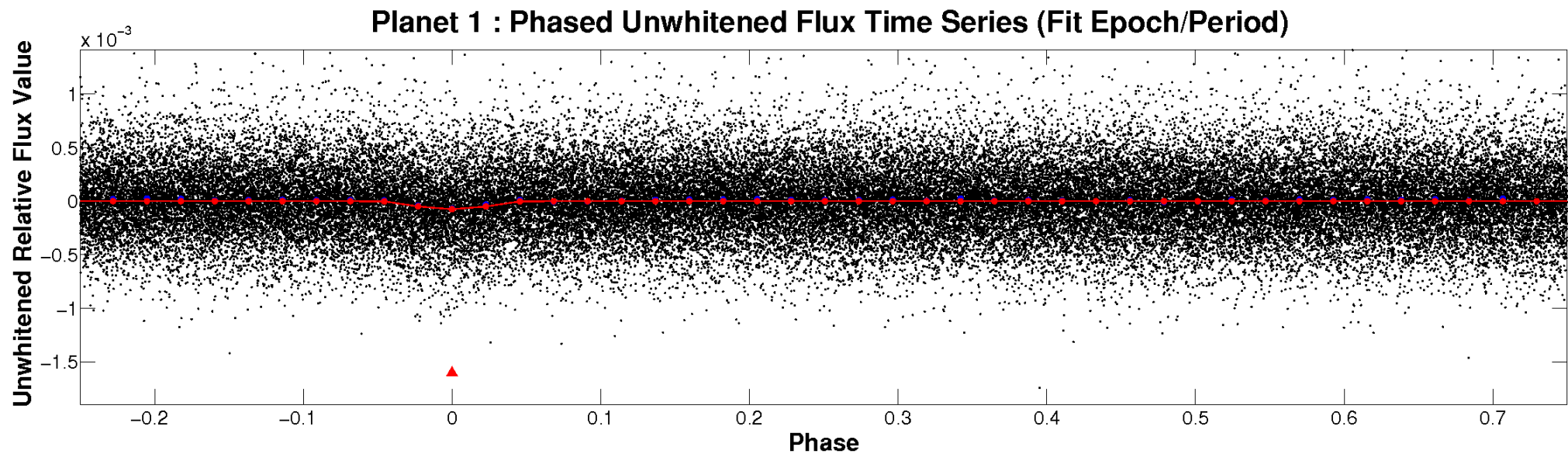


ALT Odd/Even

TCE 008573168-01

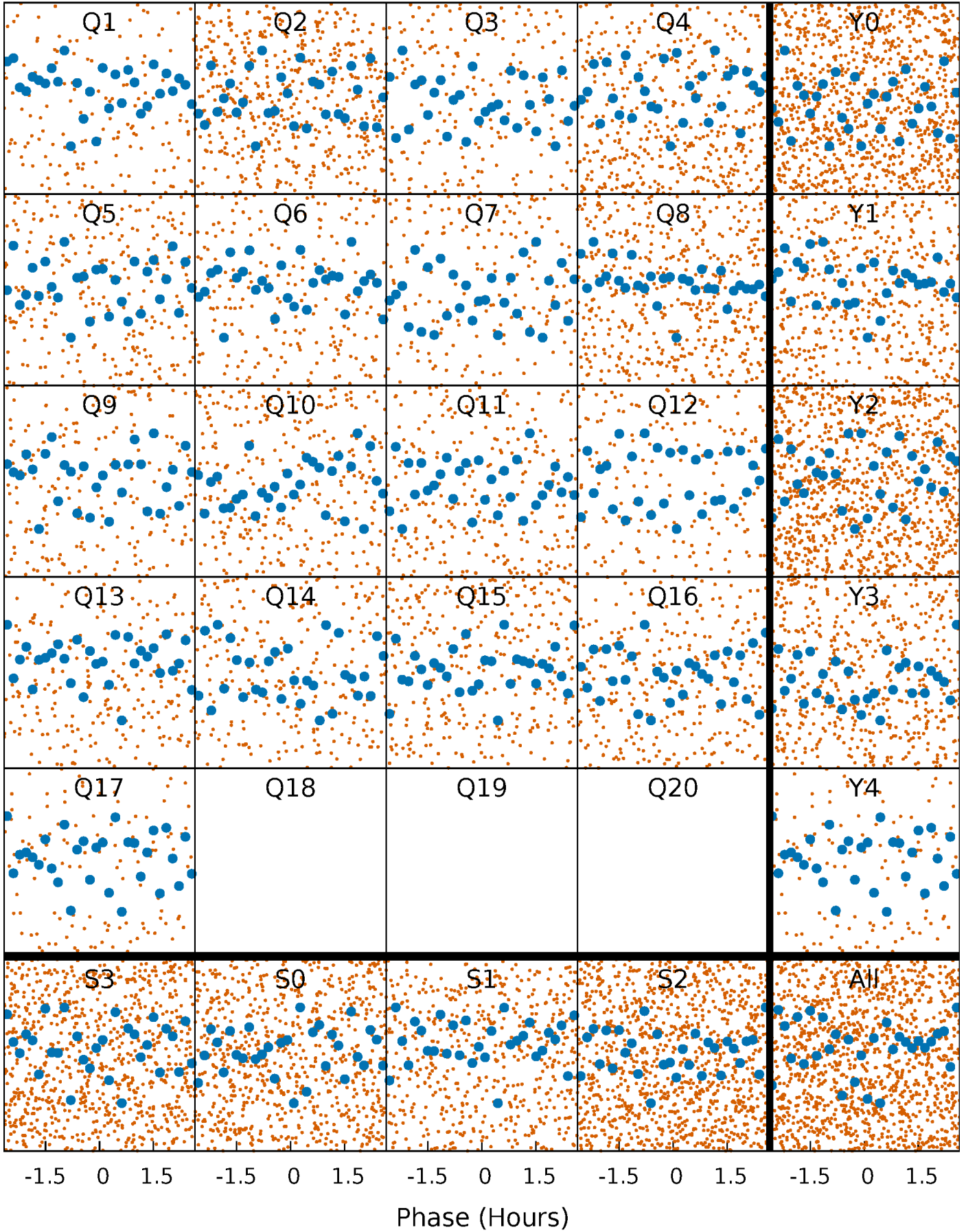


Non-Whitened Vs. Whitened Light Curve



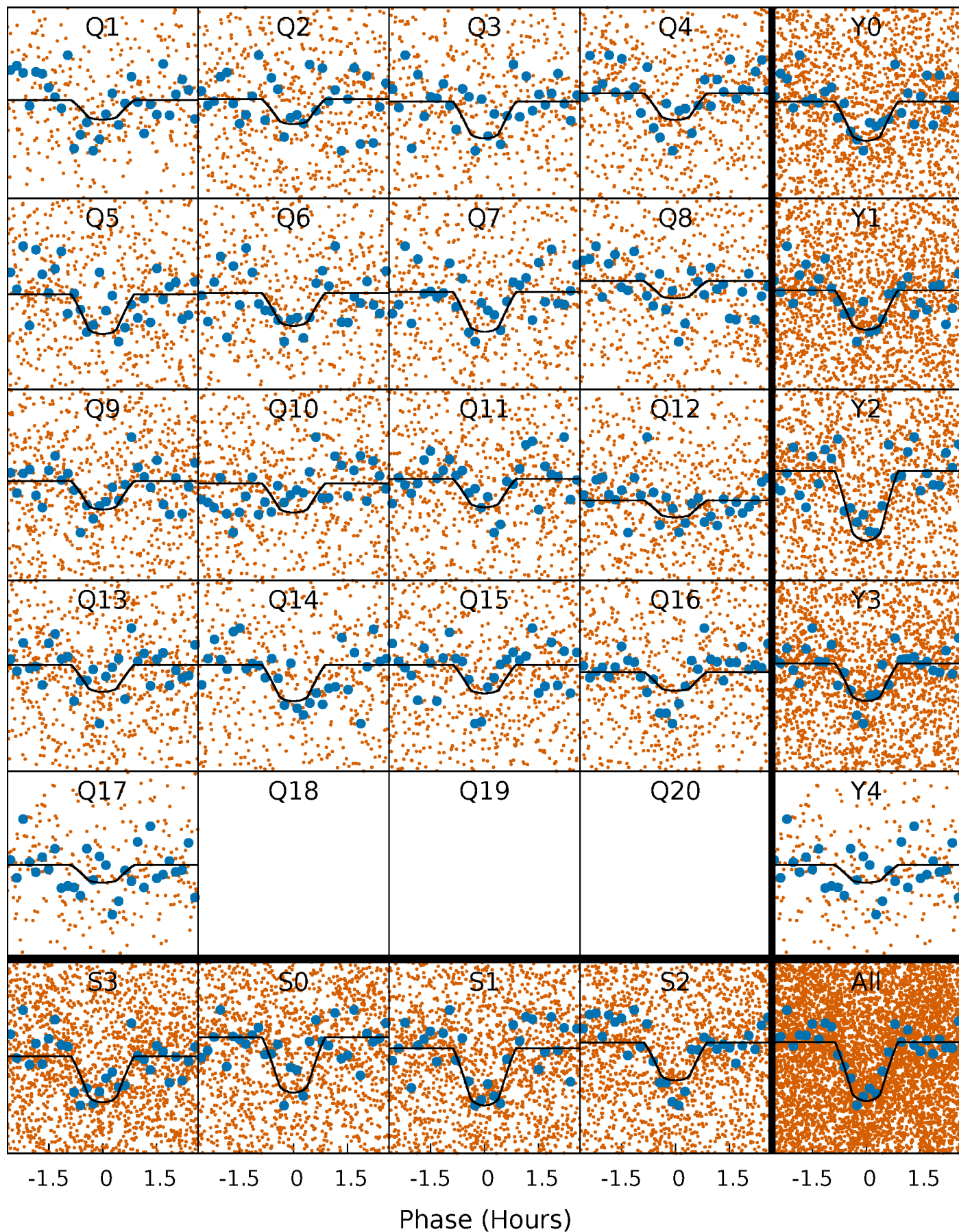
PDC Quarter-Phased Transit Curves

TCE 008573168-01 P= 0.896284 Days $T_0=131.552030$ (BKJD)



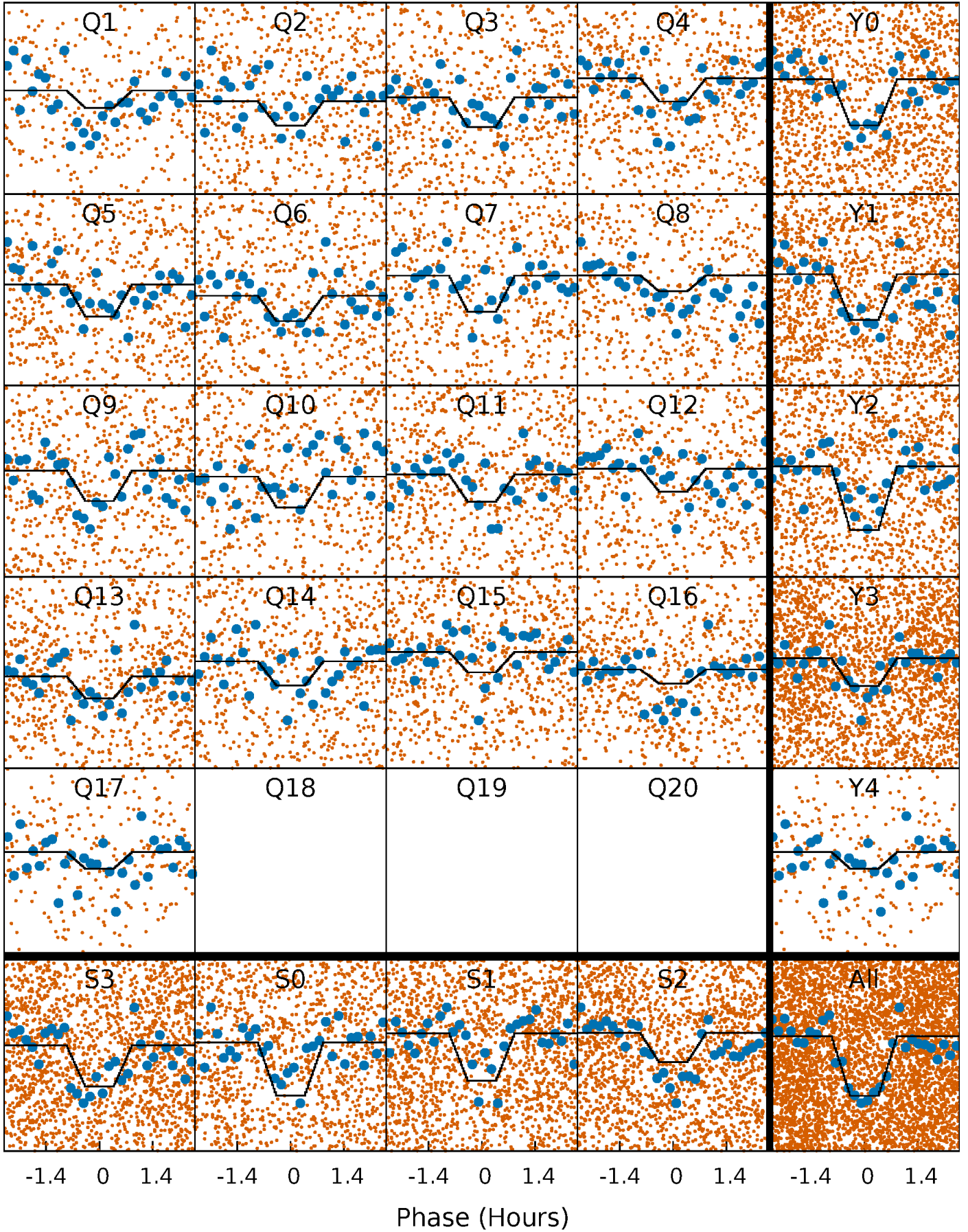
DV Quarter-Phased Transit Curves

TCE 008573168-01 P= 0.896284 Days $T_0=131.552030$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

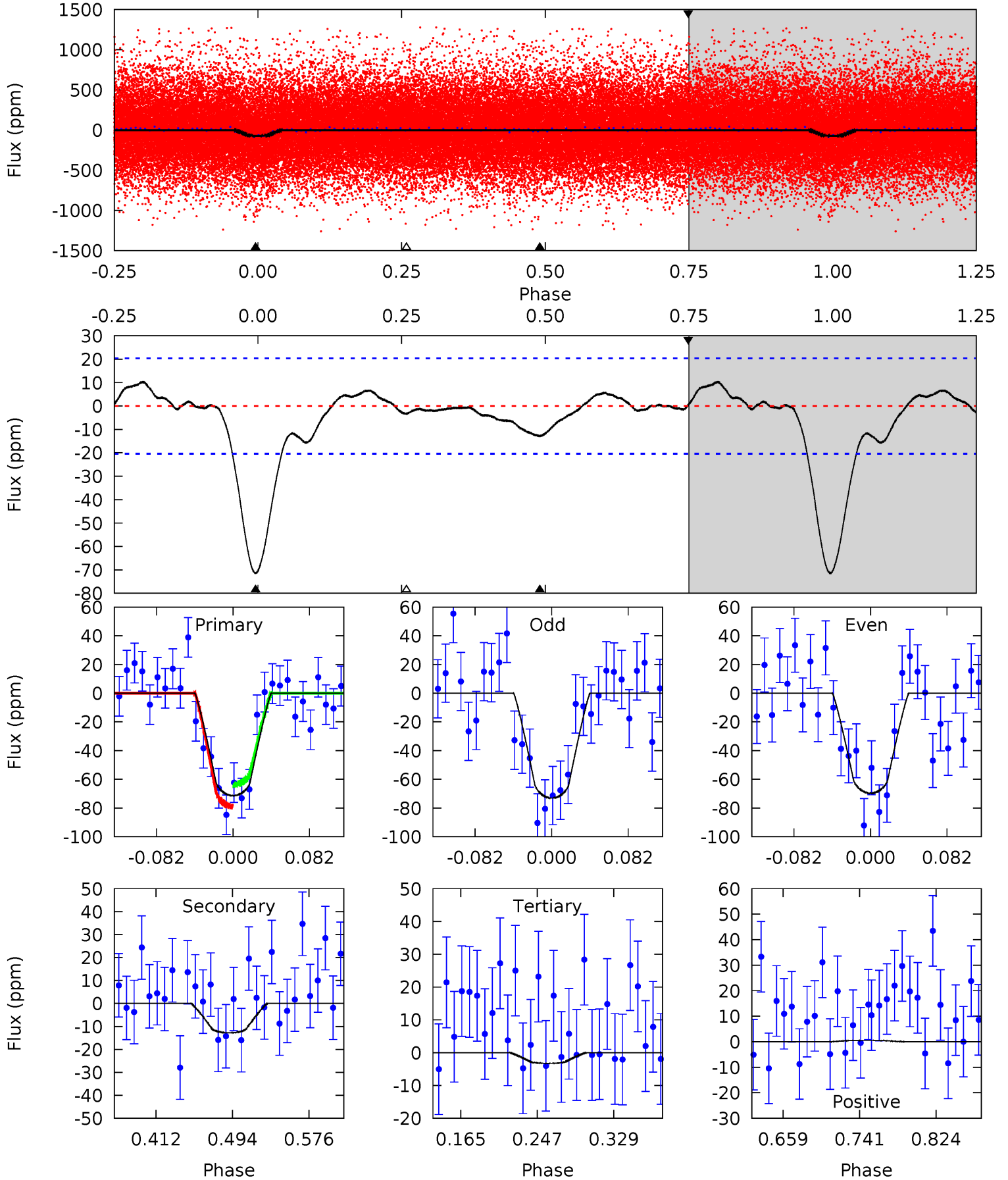
TCE 008573168-01 P= 0.896281 Days $T_0=131.551771$ (BKJD)



DV Model-Shift Uniqueness Test

008573168-01, P = 0.896284 Days, E = 130.655746 Days

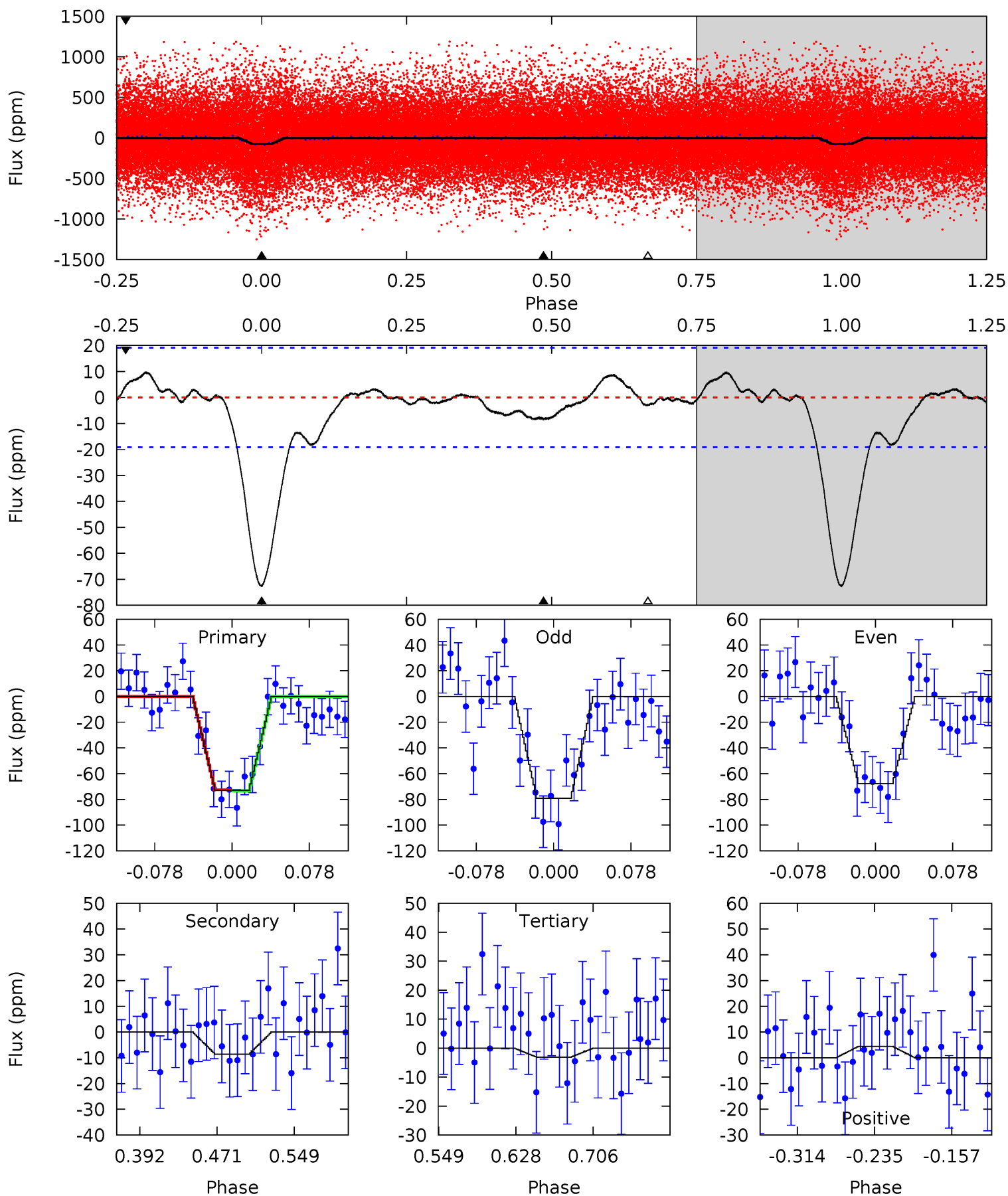
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.1	2.89	0.74	0.12	4.61	1.74	1.03	15.4	16.0	2.16	2.78	0.39	0.78	0.13	1.72



Alt Model-Shift Uniqueness Test

008573168-01, P = 0.896281 Days, E = 130.655490 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.6	2.07	0.75	1.08	4.62	1.76	1.19	16.8	16.5	1.32	0.99	1.39	0.93	0.12	0.11



Stellar Parameters For KIC 008573168

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5561^{+194}_{-194}	$4.572^{+0.040}_{-0.170}$	$-0.120^{+0.300}_{-0.300}$	$0.818^{+0.214}_{-0.067}$	$0.915^{+0.091}_{-0.112}$	$2.358^{+0.405}_{-1.112}$
	+3%/-3%	+1%/-4%	+250%/-250%	+26%/-8%	+10%/-12%	+17%/-47%
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 008573168-01 / KOI 4610.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-13 ± 4	$0.91^{+0.53}_{-0.50}$	2385^{+146}_{-116}	3623^{+1245}_{-624}	$2.477^{+9.178}_{-1.593}$
Alt.	-9 ± 4	$0.80^{+0.52}_{-0.43}$	2391^{+138}_{-114}	3541^{+1271}_{-725}	$2.112^{+7.818}_{-1.441}$

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

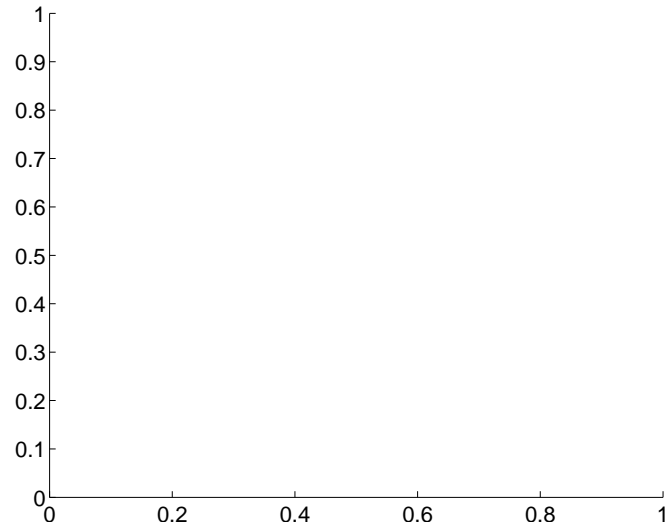
Supplemental centroid analysis for 008573168-01. Kepler magnitude: 15.25. Transit SNR 11.40

There are 0 quarters with good PRF difference image offsets

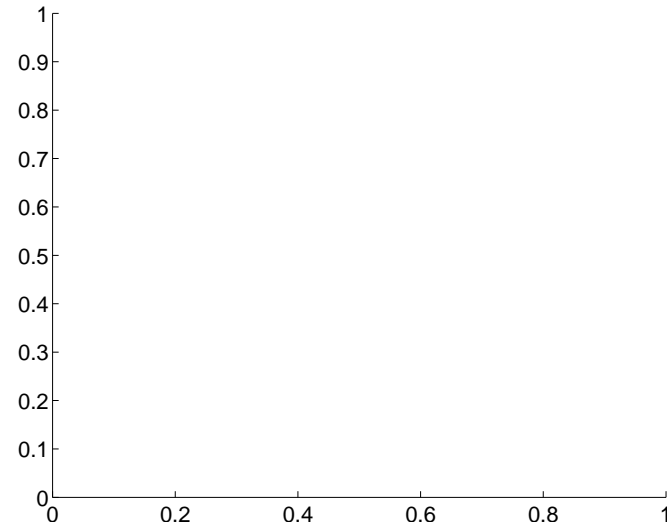
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	11.78 ± 0.91	13.00	-1.14 ± 1.01	-11.72 ± 0.91

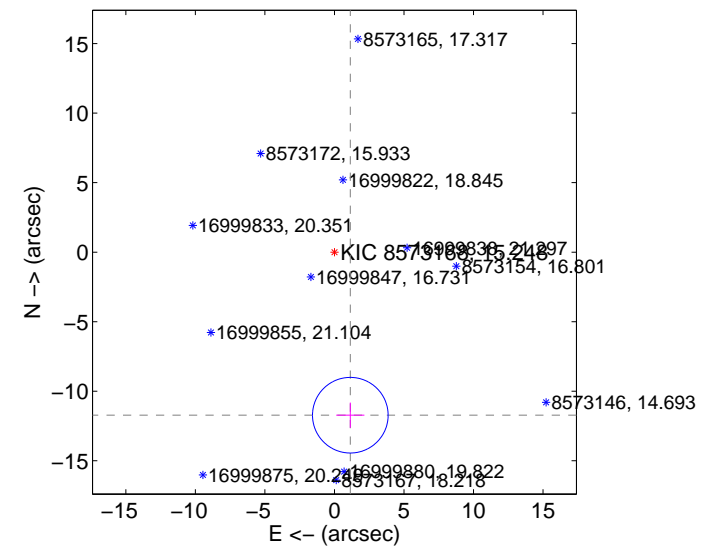
There is no PRF-fit offset from OOT-fit



There is no PRF-fit offset from KIC

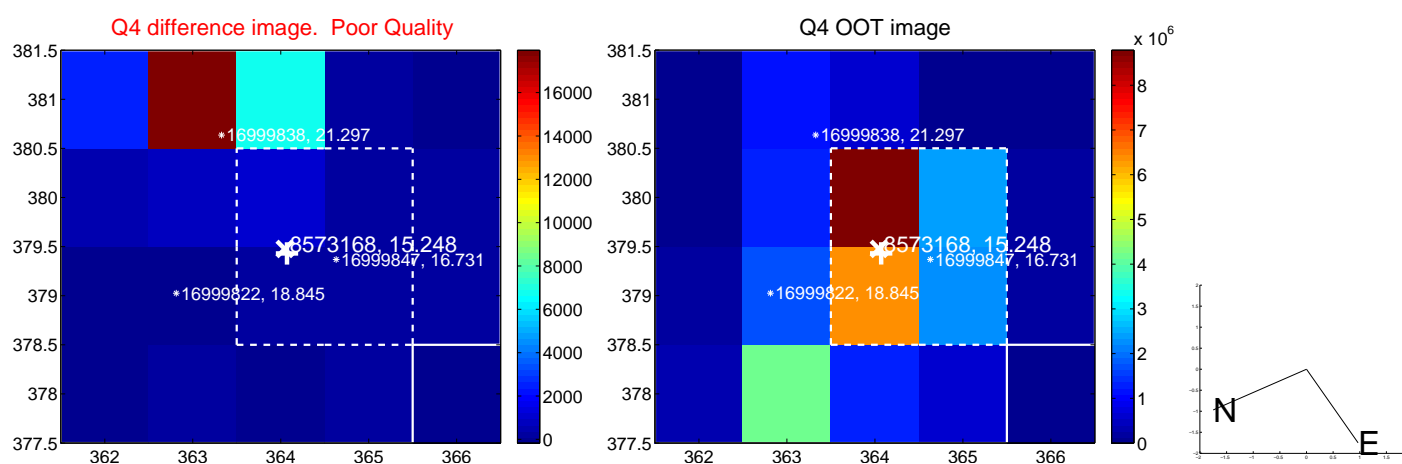
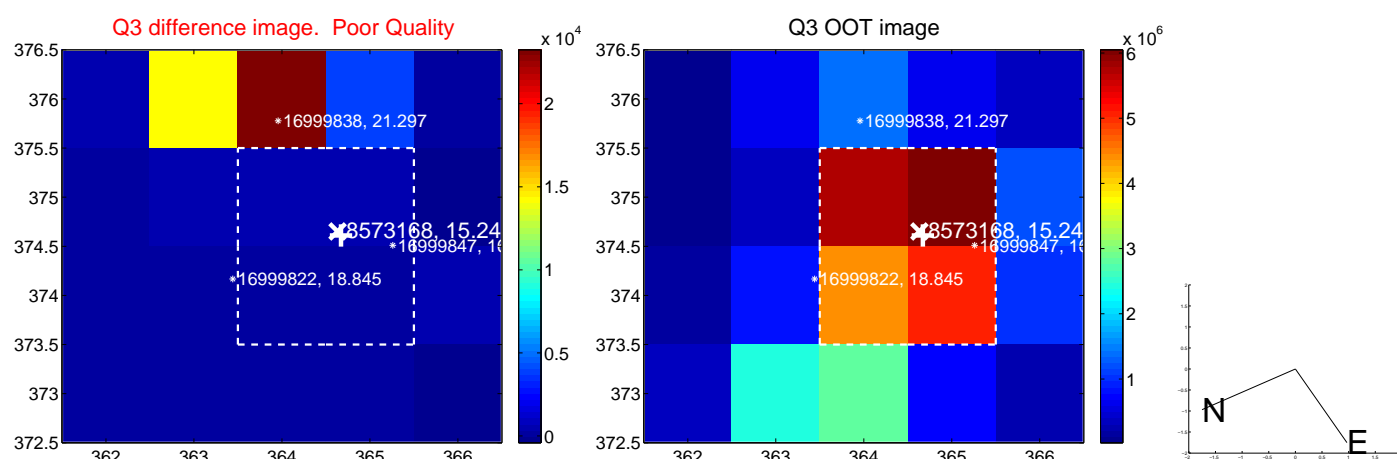
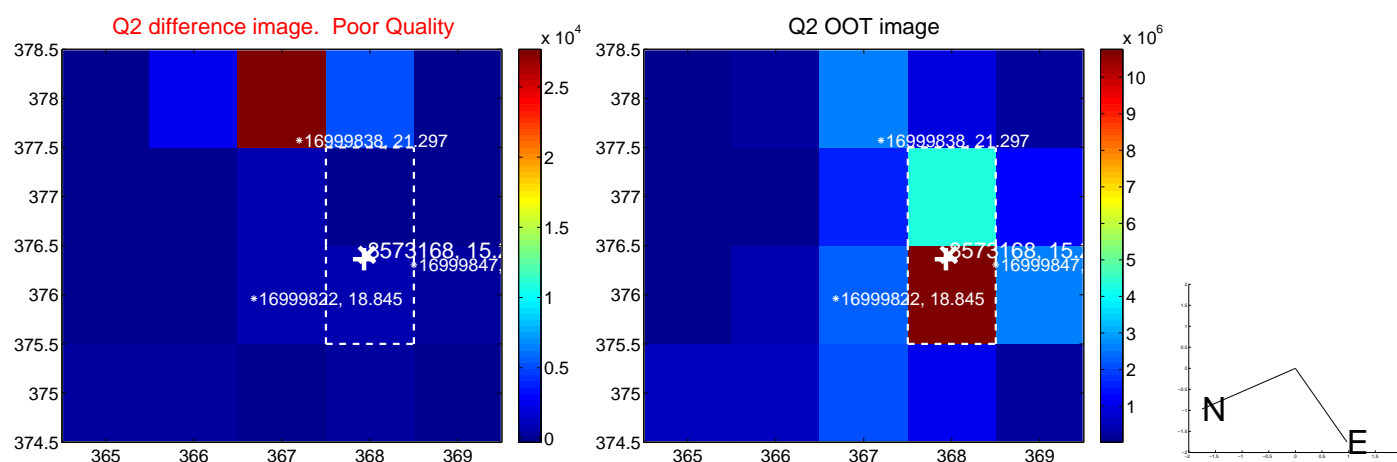
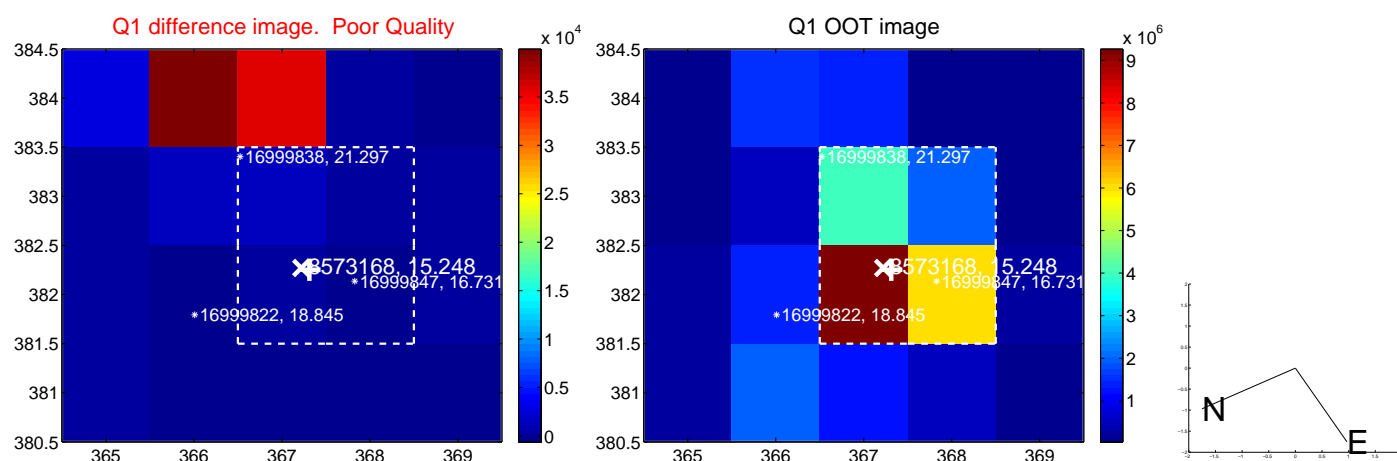


offset from photometric centroids

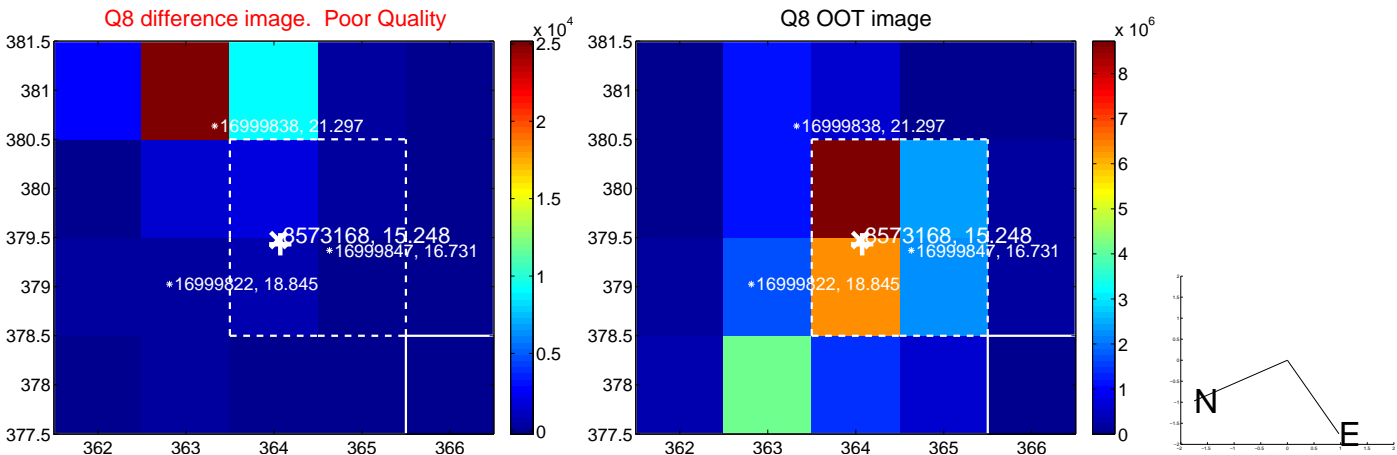
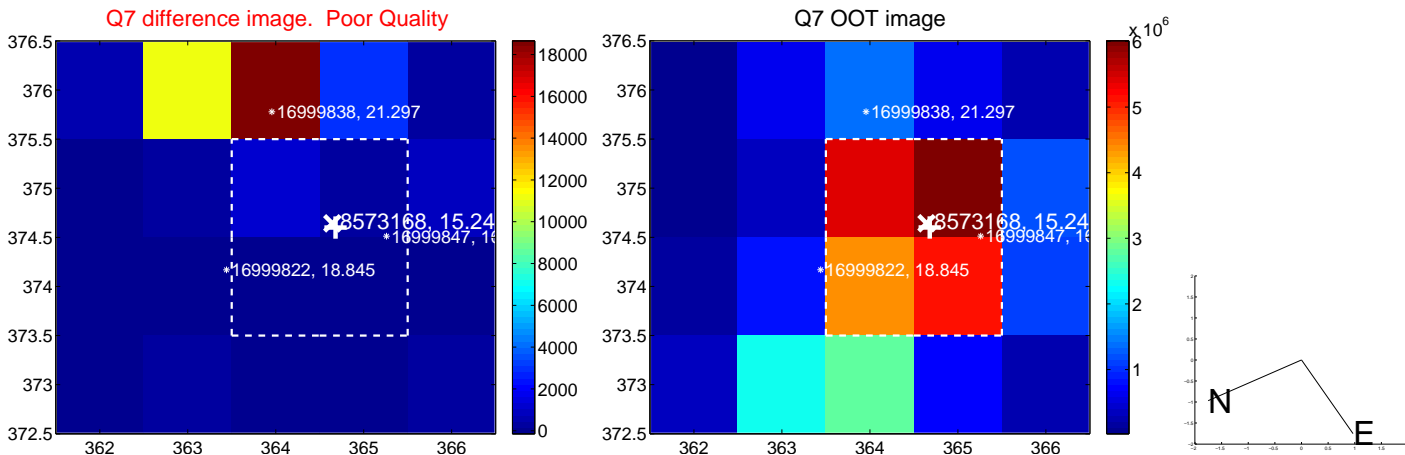
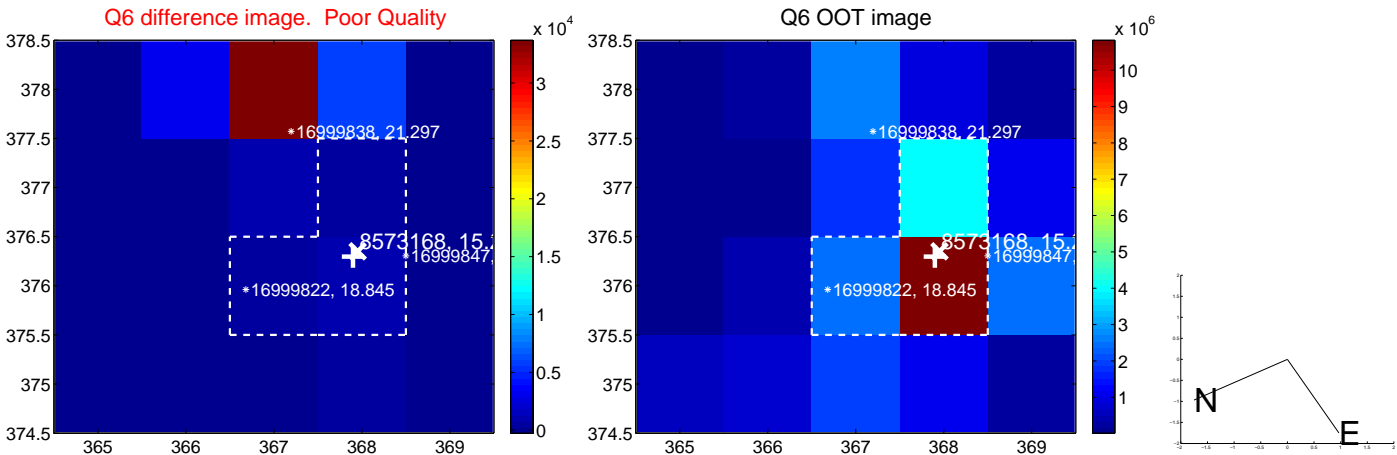
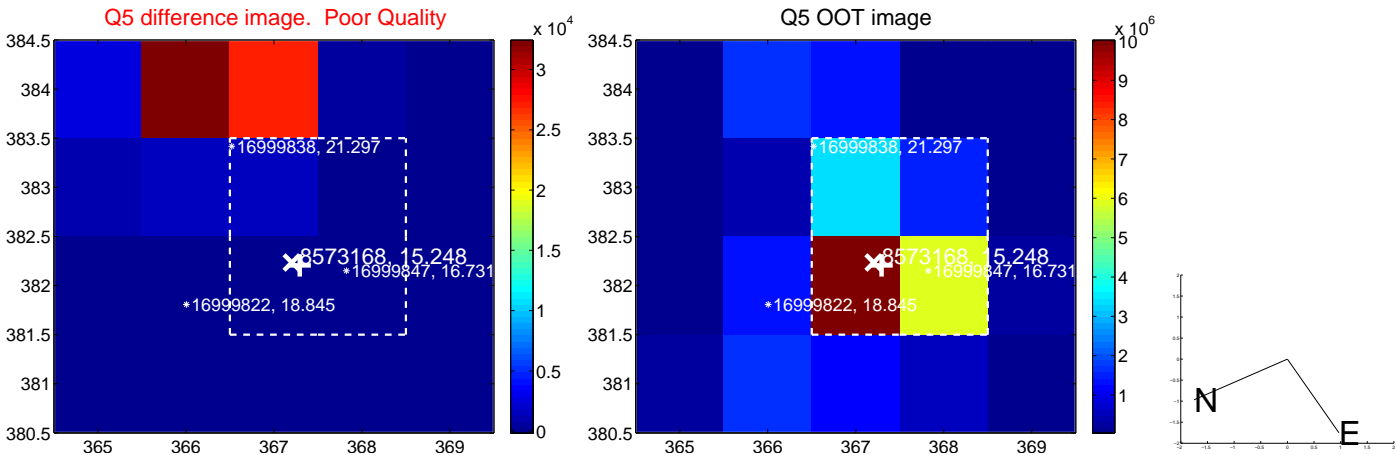


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

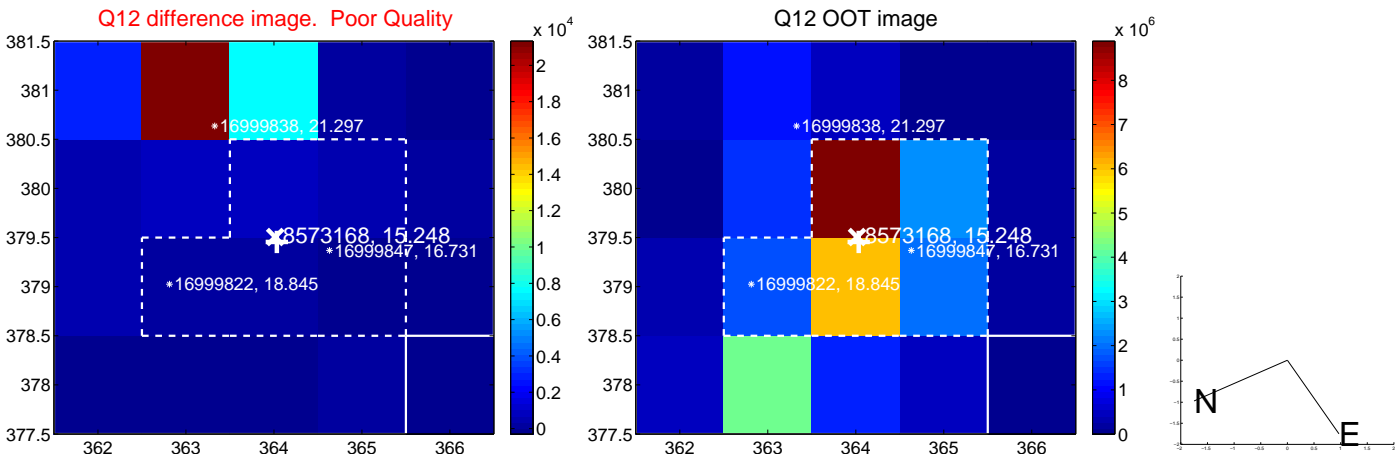
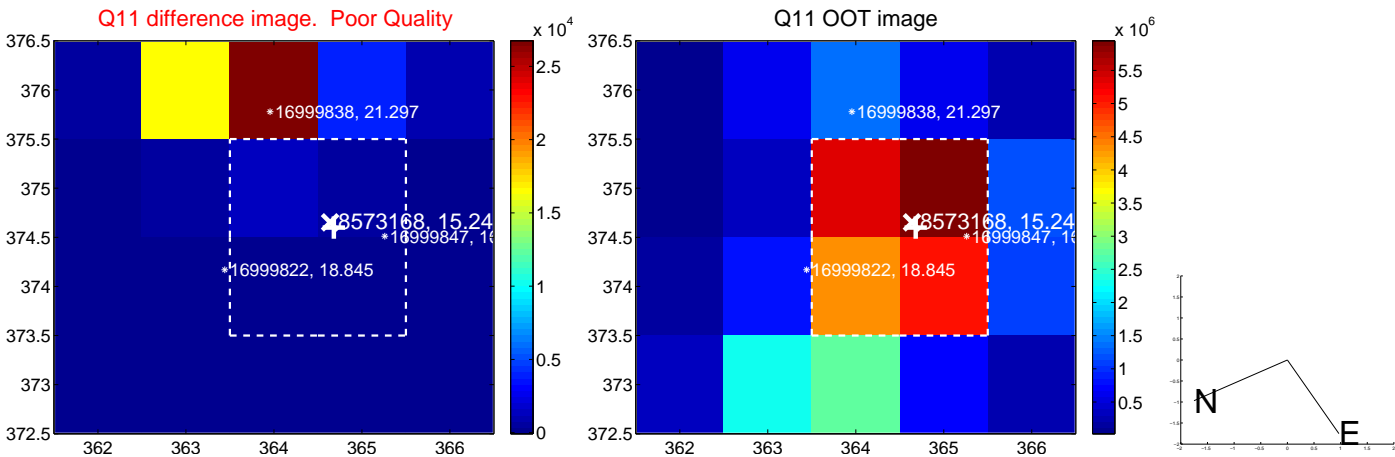
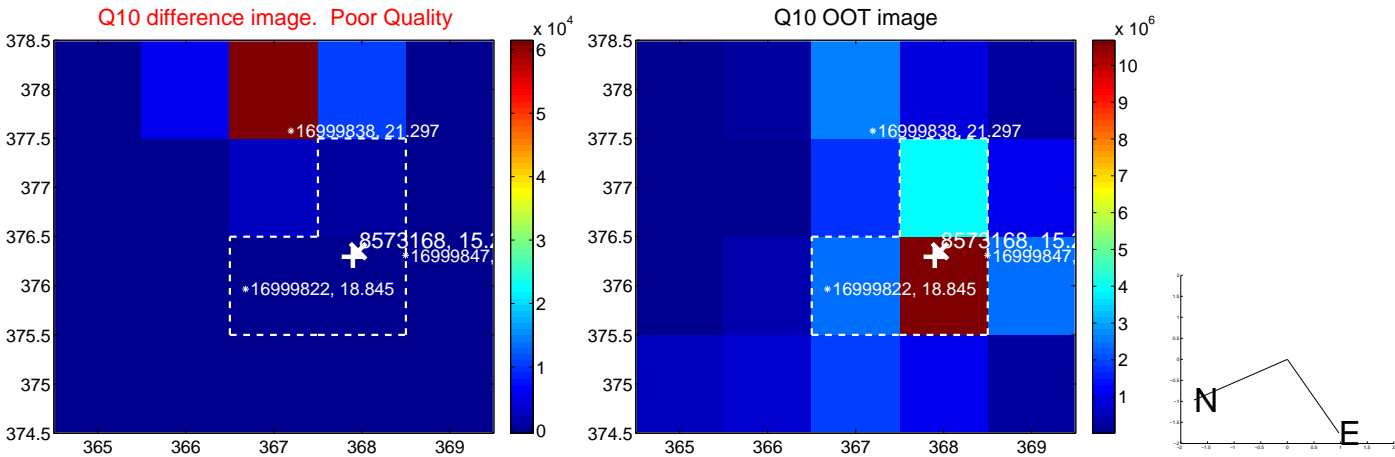
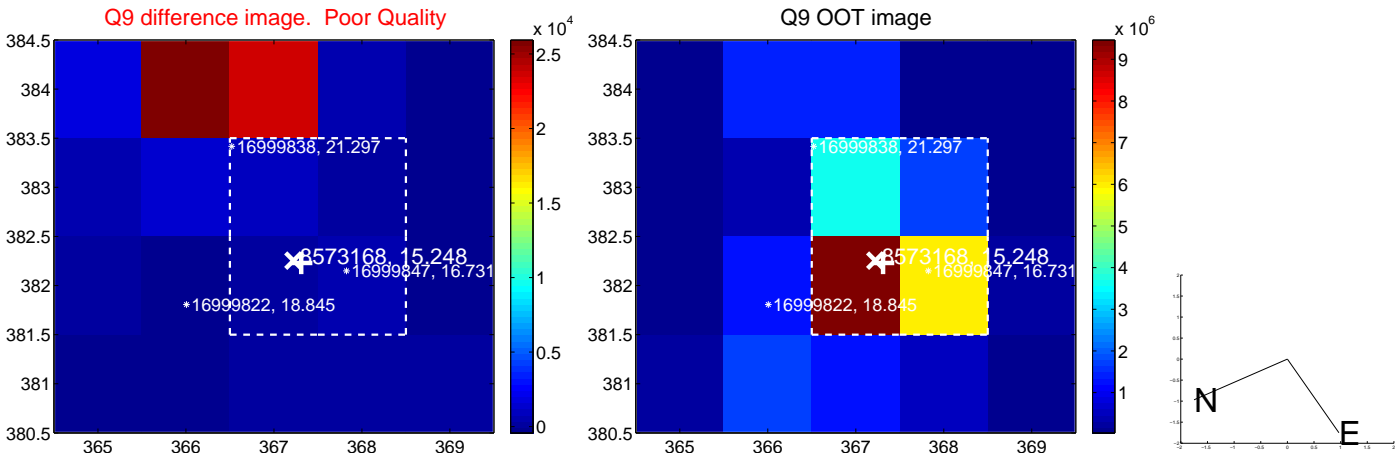
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



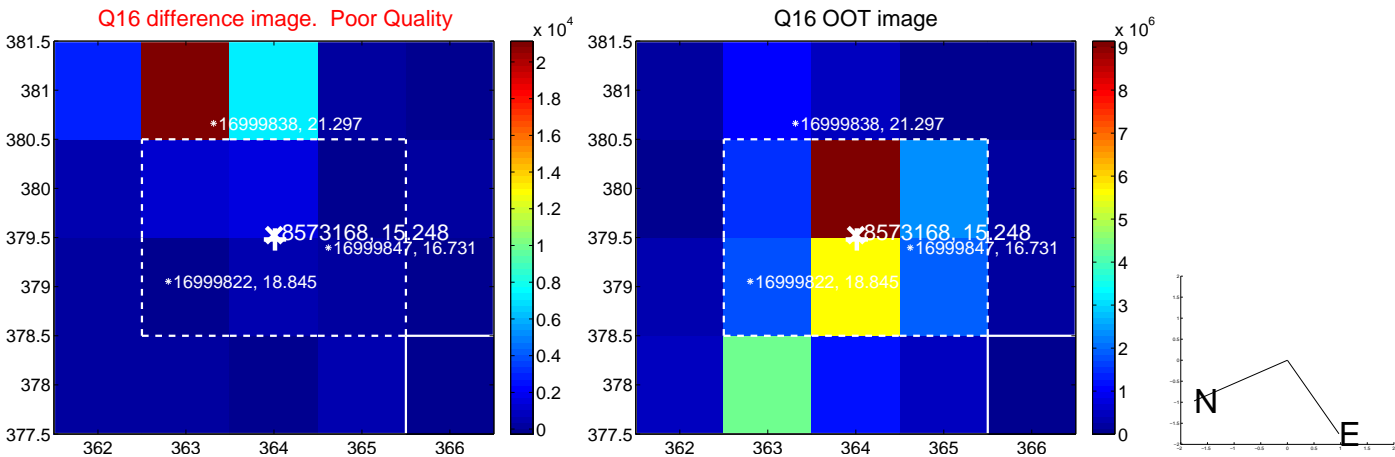
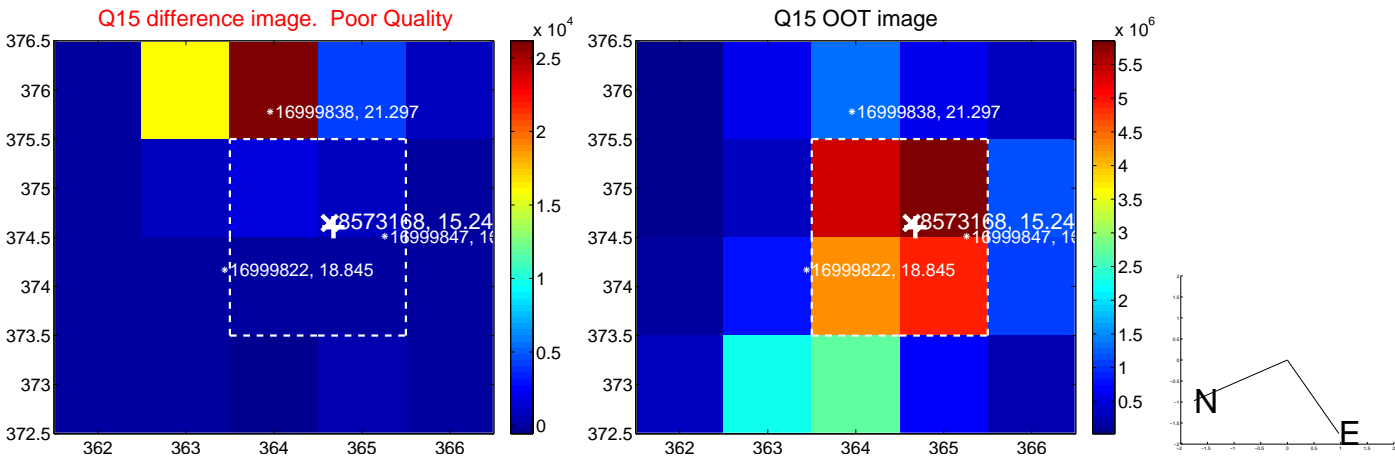
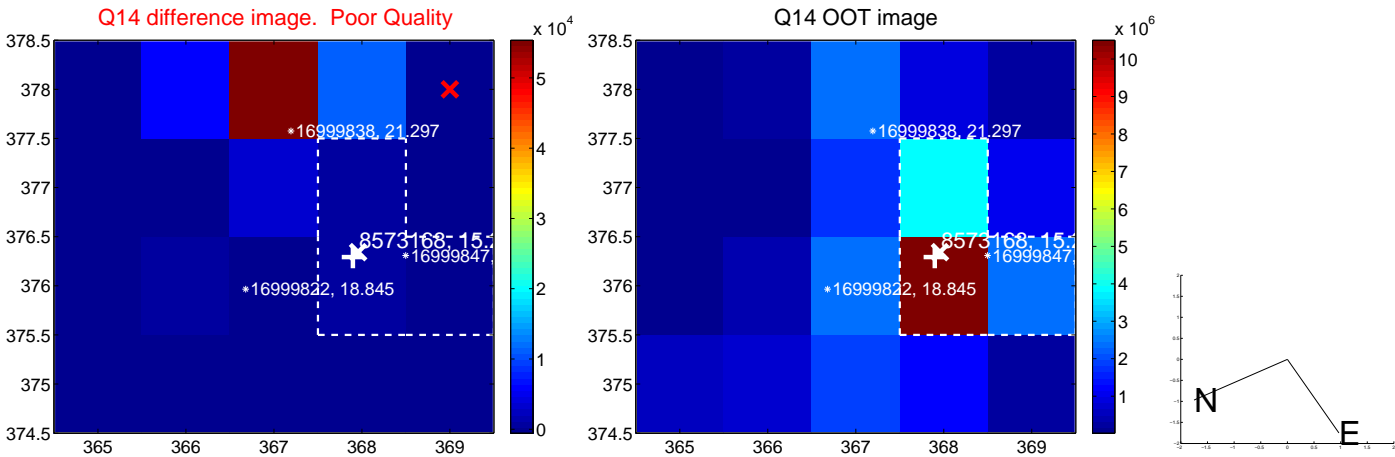
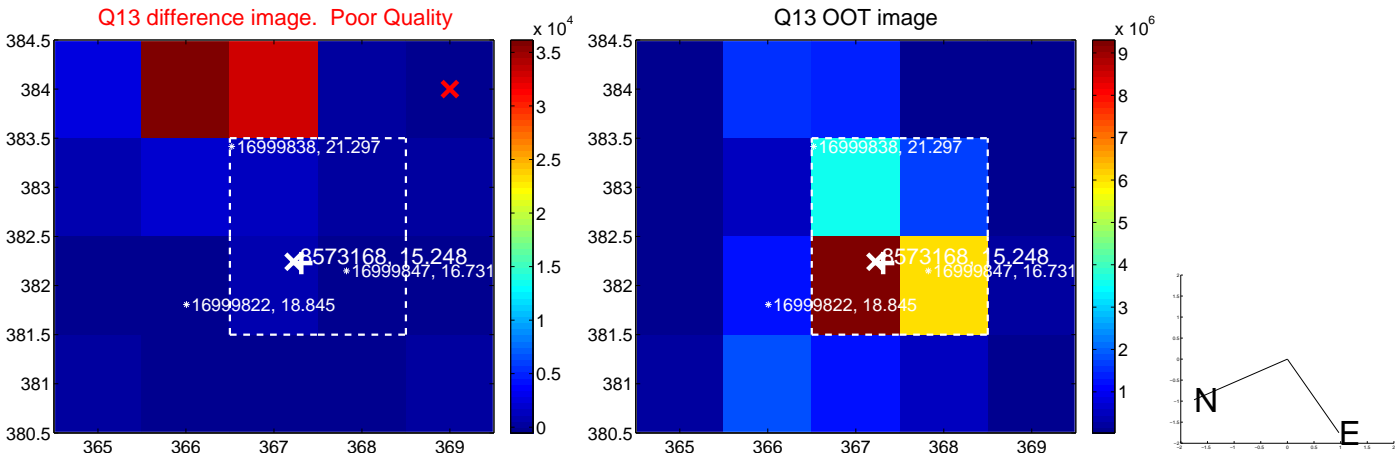
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



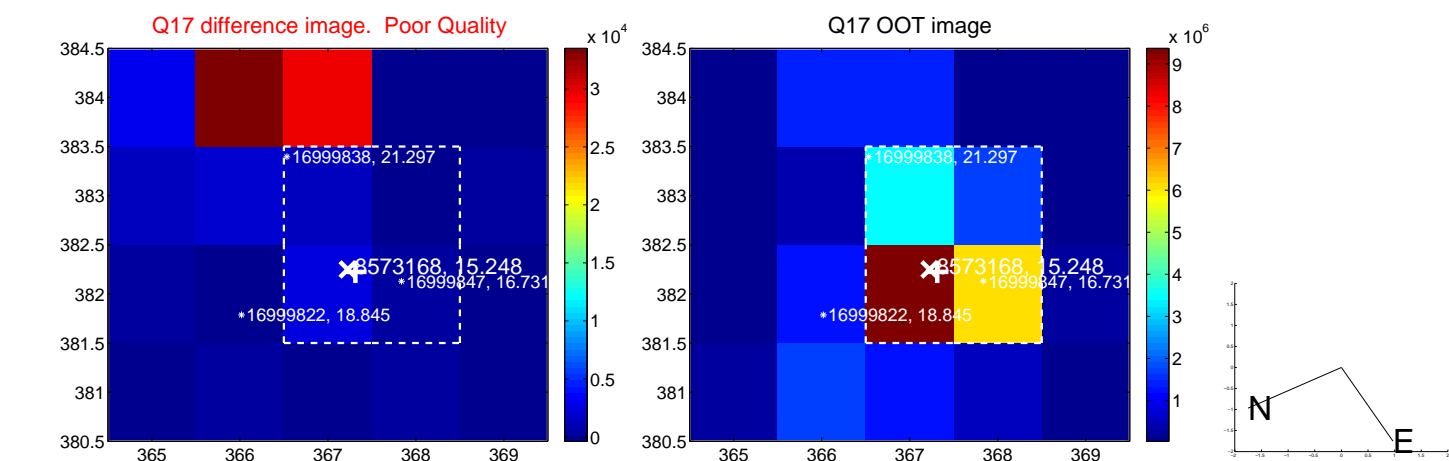
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



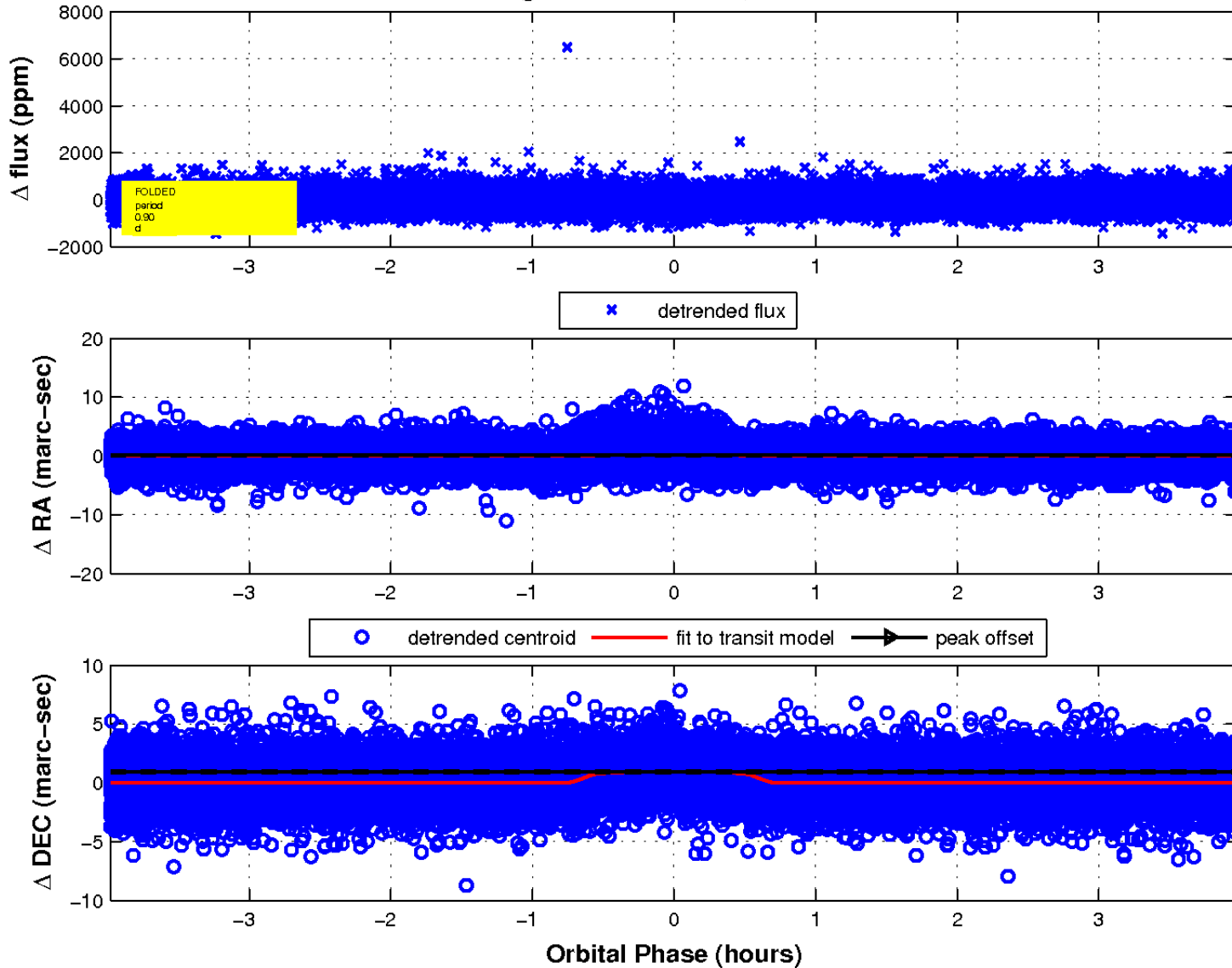
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

