

KIC 007672068

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})
007672068-01	OBS	No	16.828103	137.317190	214.7	54.489	11.8	23.2	1.65	6178	4.79	210.71

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007672068-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST

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

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

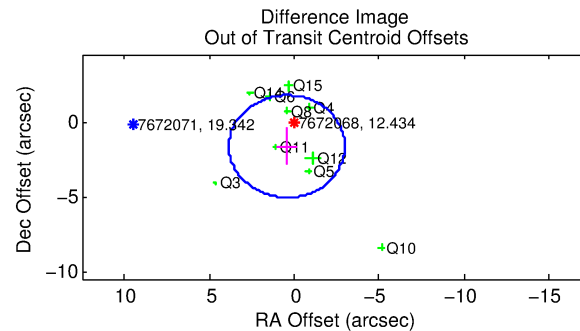
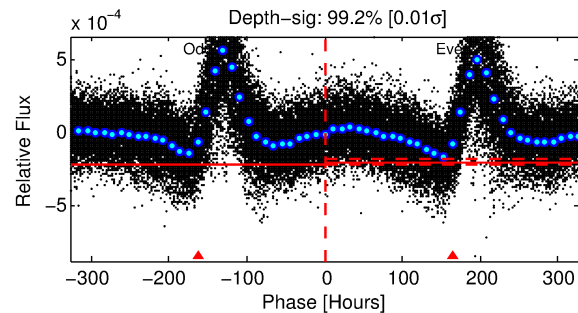
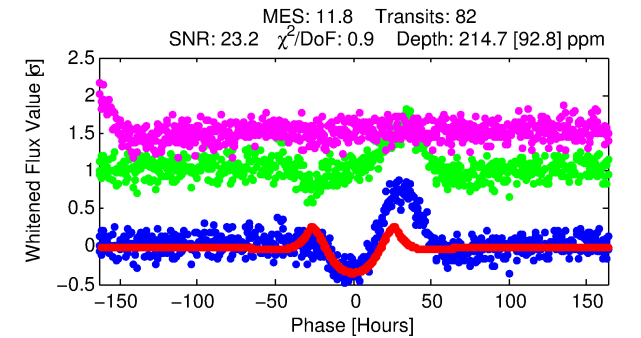
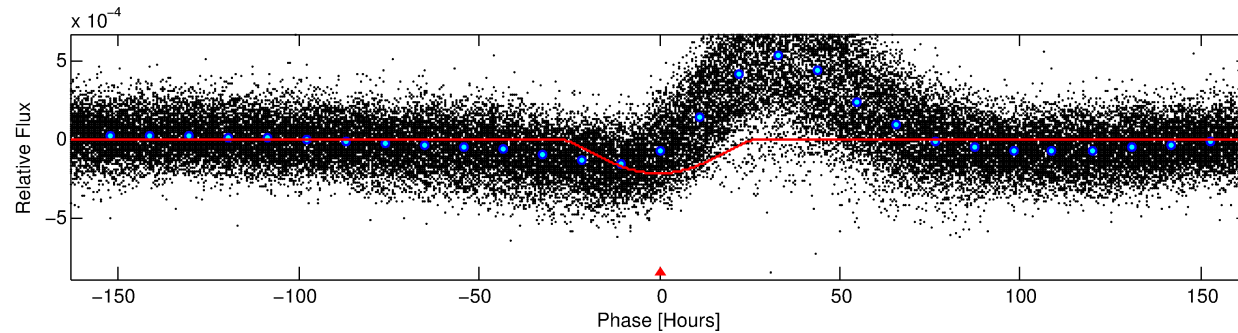
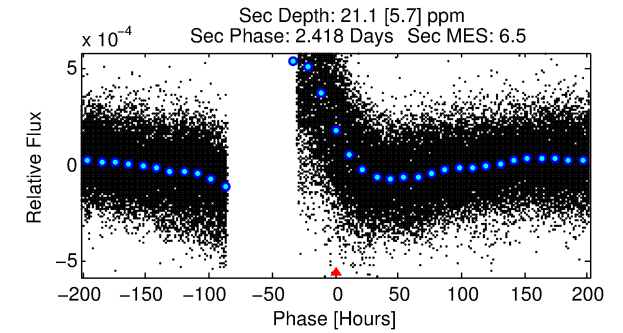
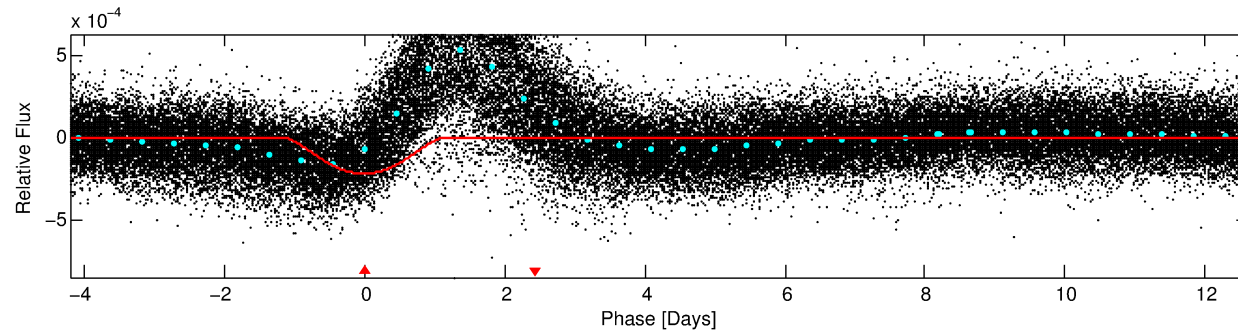
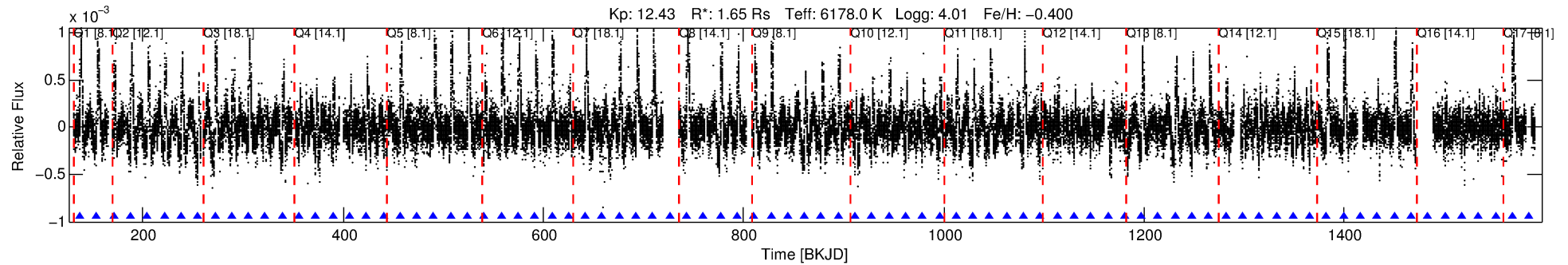
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007672068-01

No Significant Match Found

DV One-Page Summary

KIC: 7672068 Candidate: 1 of 1 Period: 16.828 d



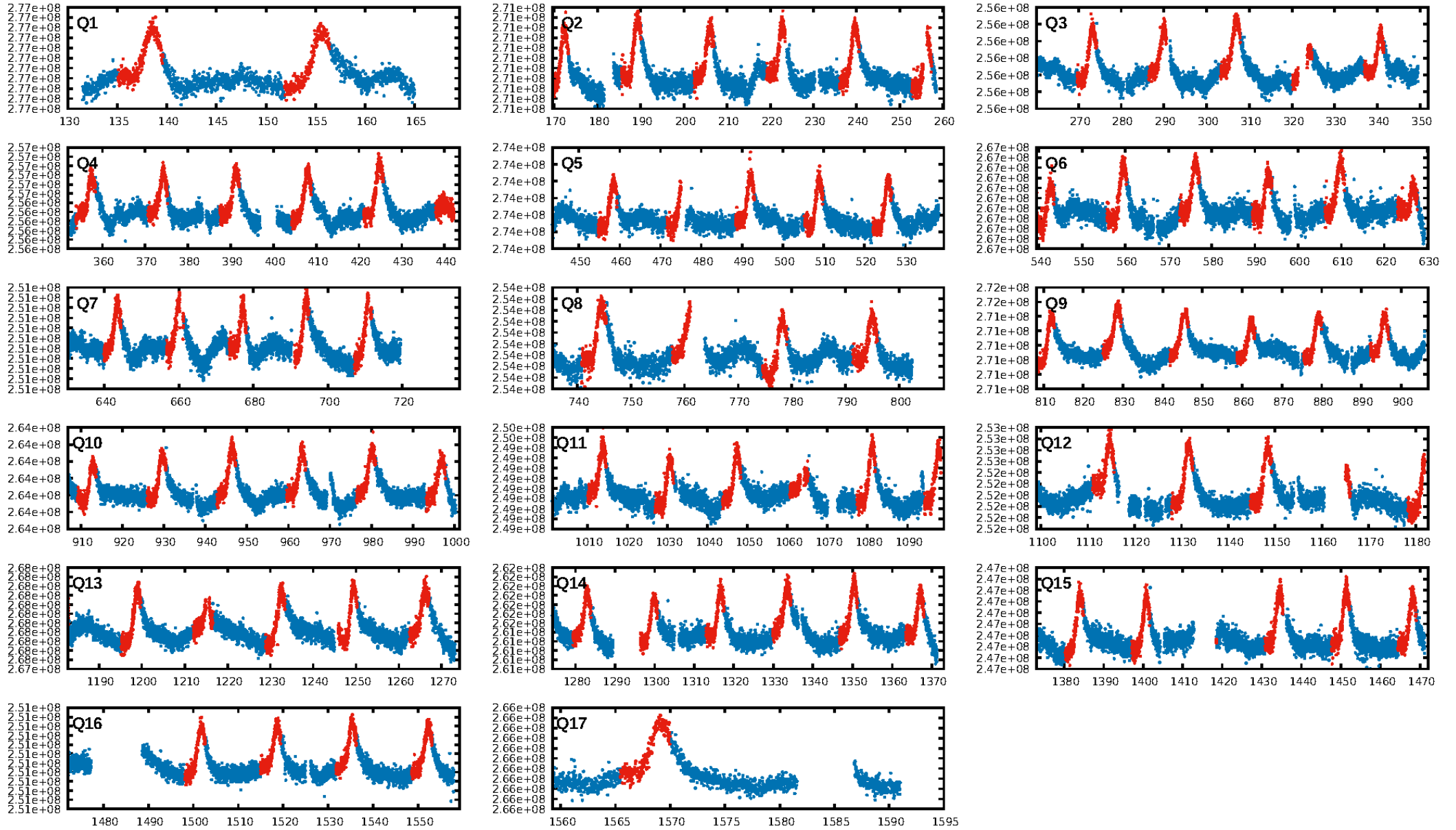
DV Fit Results:

Period = 16.82810 [0.00059] d
Epoch = 137.3172 [0.0298] BKJD
Rp/R* = 0.0267 [0.0107]
a/R* = 1.15 [0.02]
b = 1.00 [0.02]
Seff = 210.71 [103.74]
Teq = 972 [120] K
Rp = 4.79 [2.38] Re
a = 0.1295 [0.0380] AU
Ag = 8.47 [8.24] [0.91σ]
Teffp = 2563 [547] K [2.84σ]

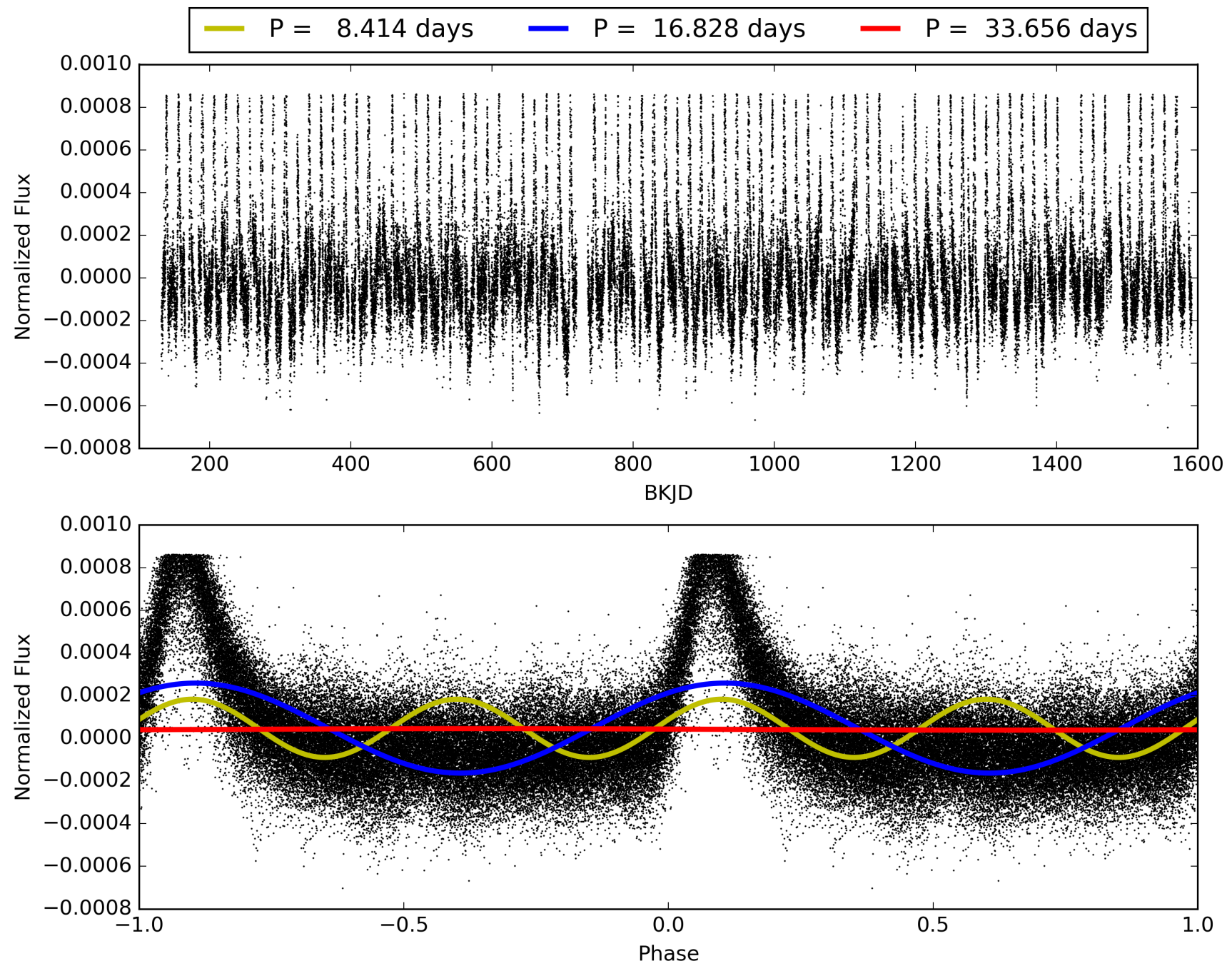
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 76.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.24e-34
RollingBand-fgt: 1.00 [79/79]
GhostDiagnostic-chr: -0.06799
Centroid-sig: 0.0%
Centroid-so: 0.443 arcsec [4.15σ]
OotOffset-rm: 1.707 arcsec [1.50σ]
KicOffset-rm: 1.755 arcsec [1.52σ]
OotOffset-st: 3/3/3/1 [10]
KicOffset-st: 3/3/3/1 [10]
DiffImageQuality-fgm: 0.30 [3/10]
DiffImageOverlap-fno: 1.00 [15/15]

TCE 007672068-01, PDC Light Curves

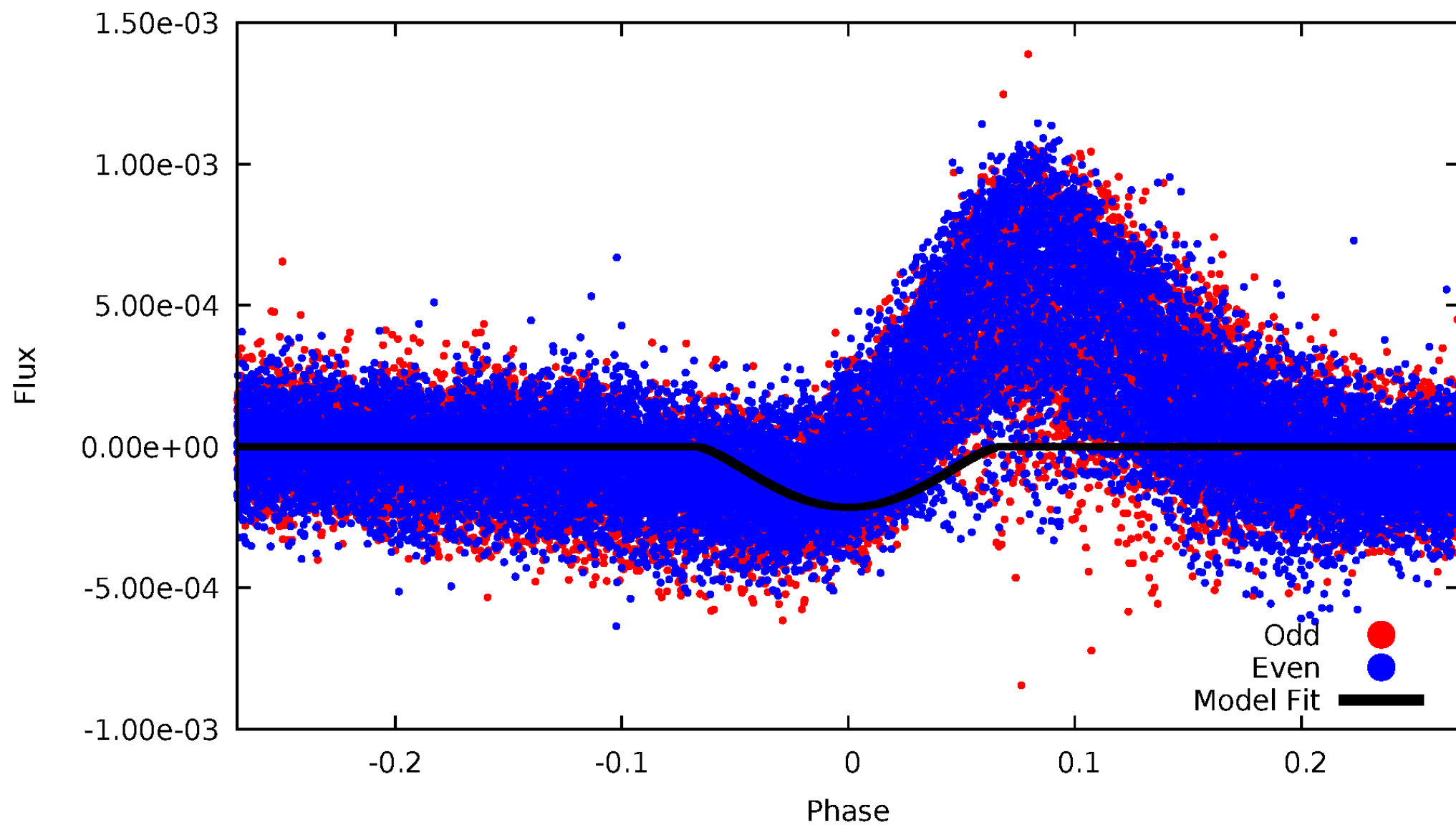


TCE 007672068-01



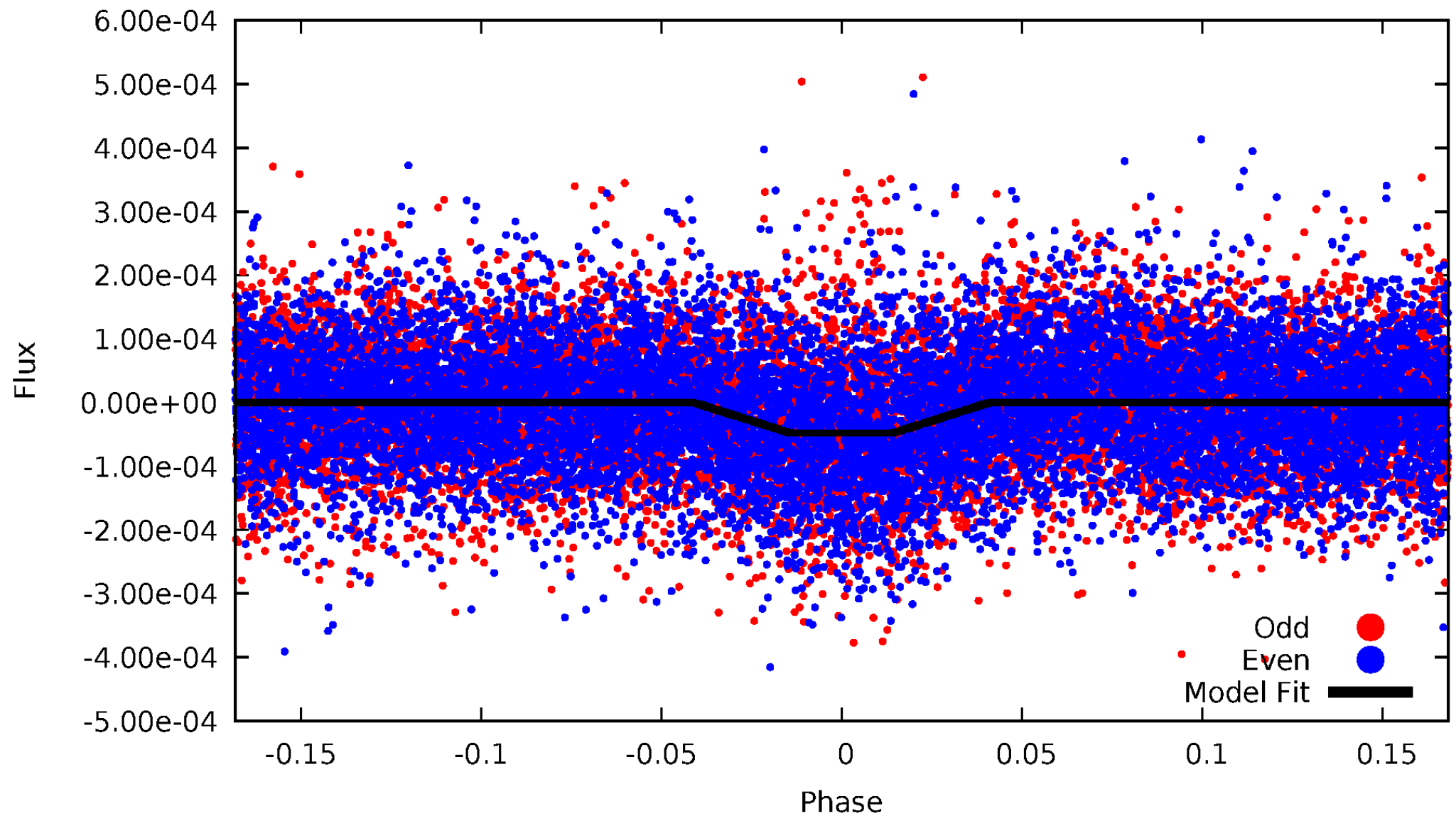
DV Odd/Even

TCE 007672068-01



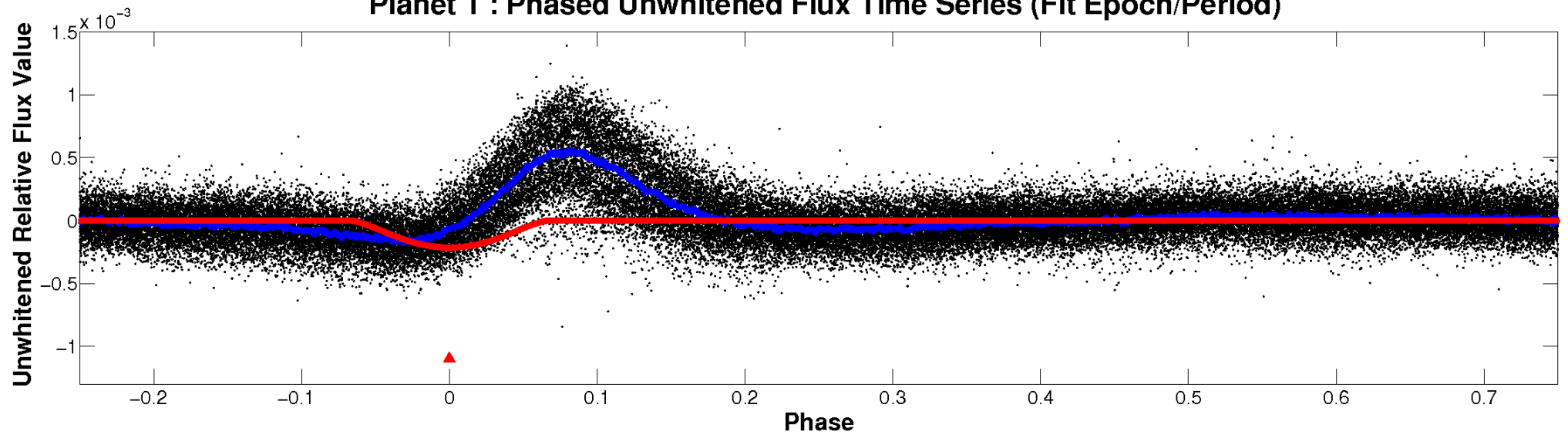
ALT Odd/Even

TCE 007672068-01

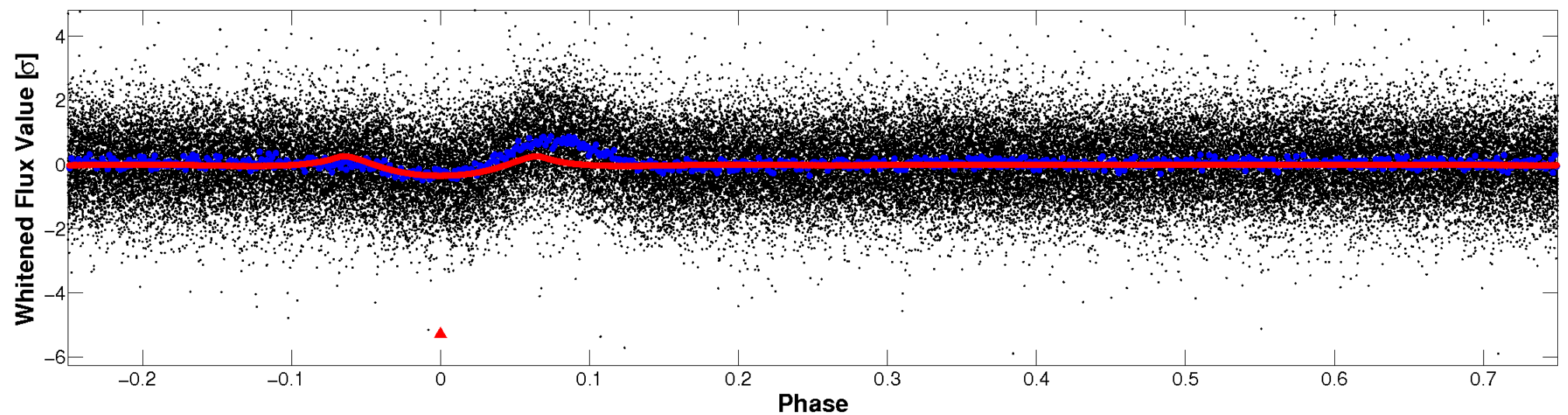


Non-Whitened Vs. Whitened Light Curve

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

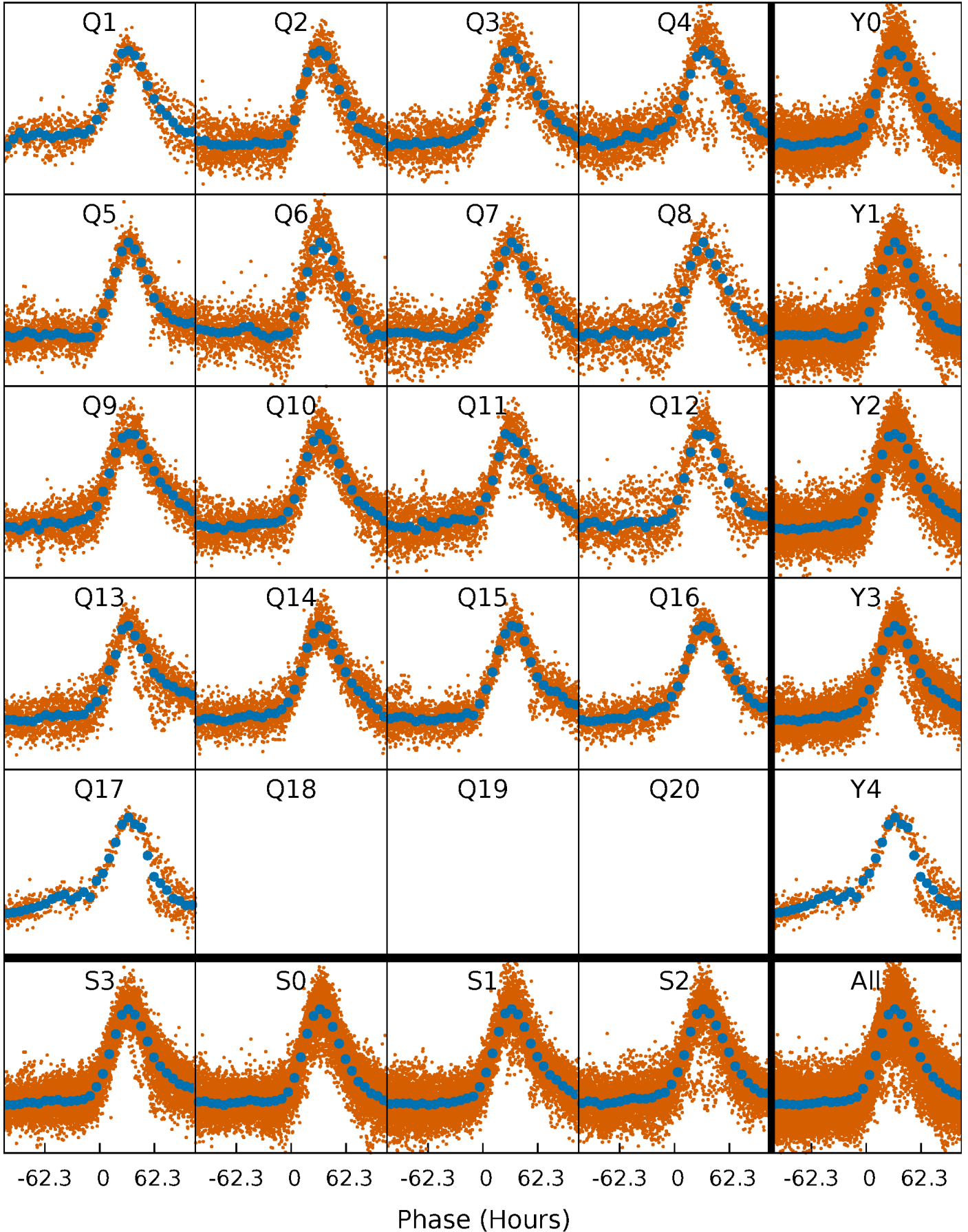


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



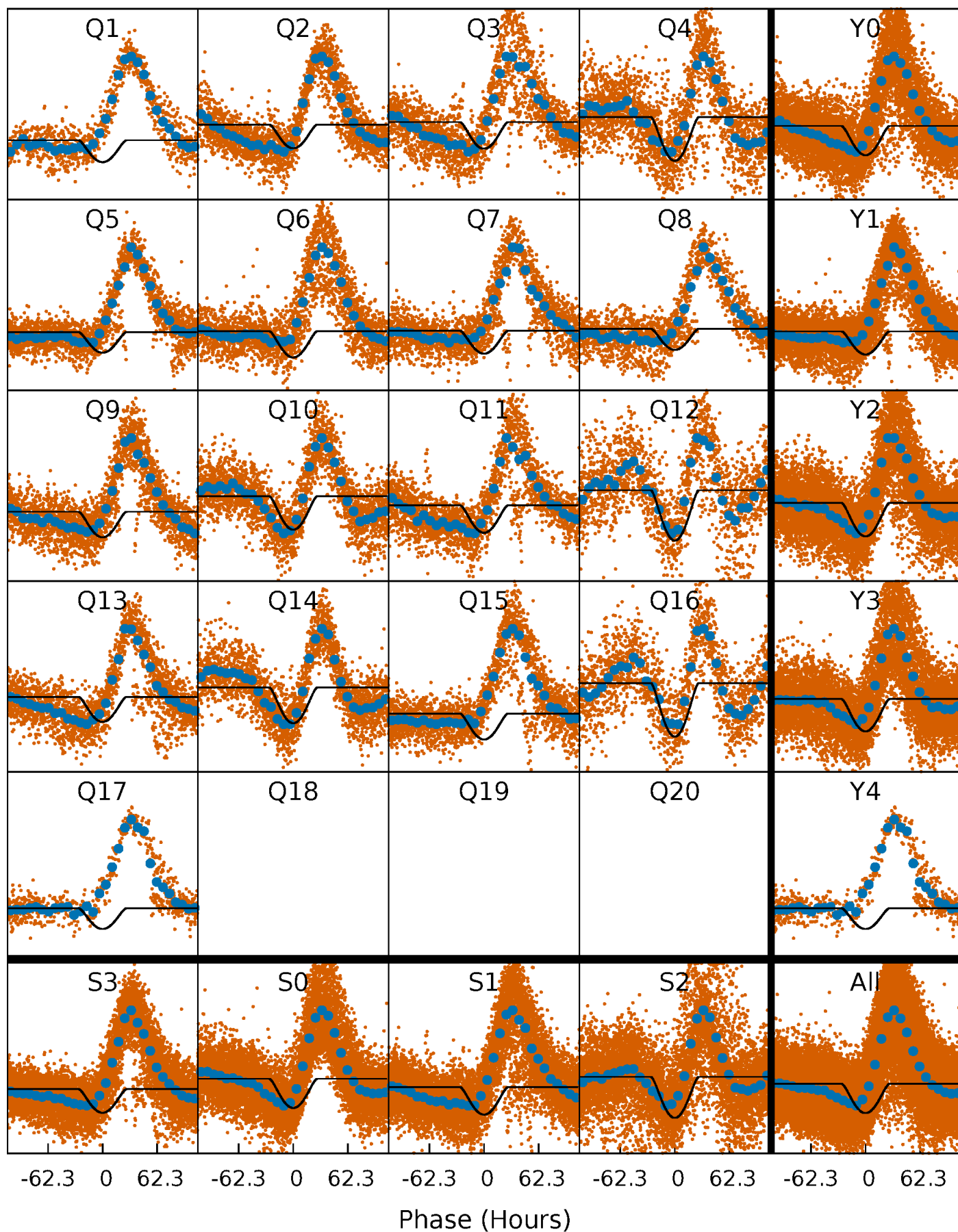
PDC Quarter-Phased Transit Curves

TCE 007672068-01 P= 16.828103 Days $T_0=137.317190$ (BKJD)



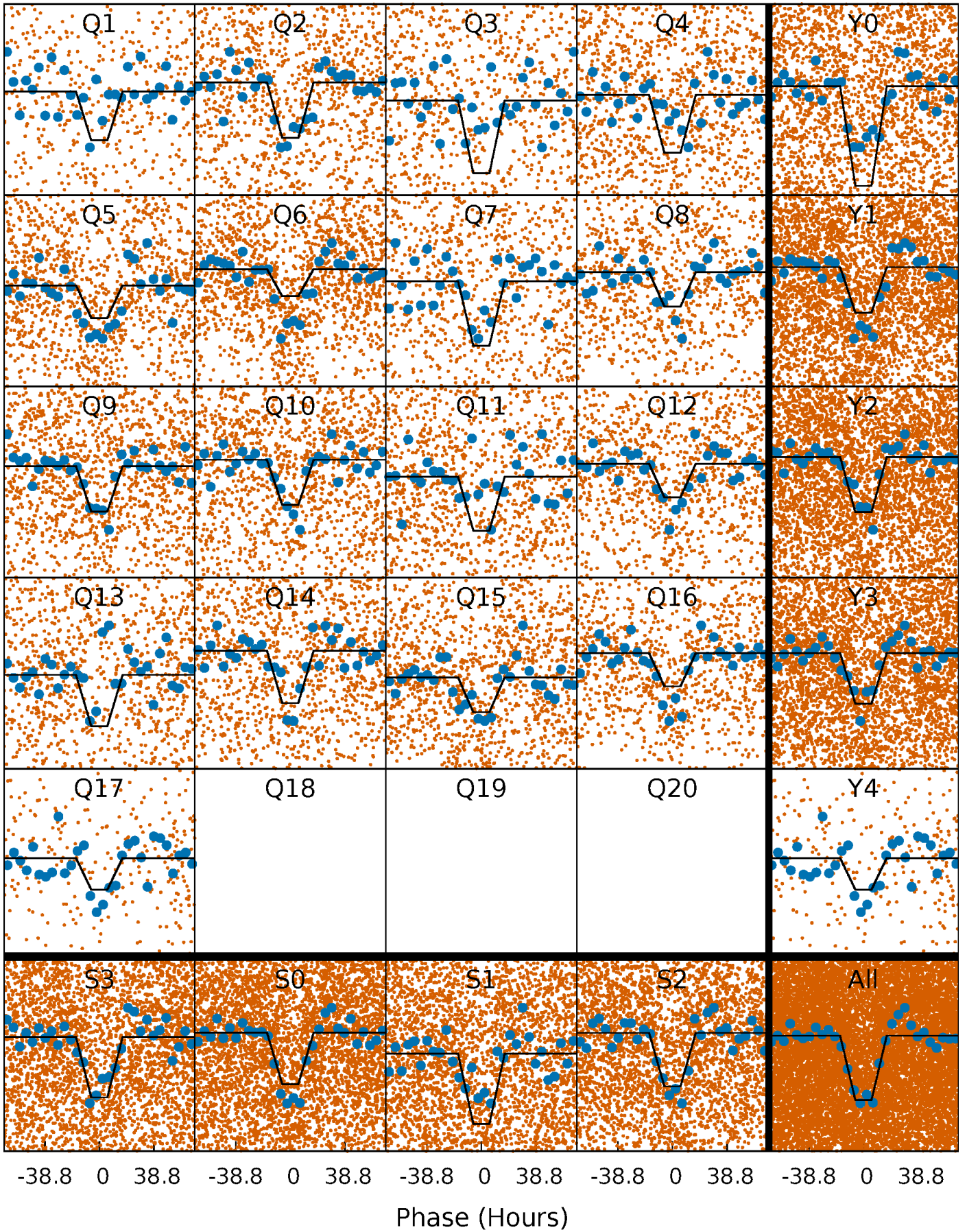
DV Quarter-Phased Transit Curves

TCE 007672068-01 P= 16.828103 Days $T_0=137.317190$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

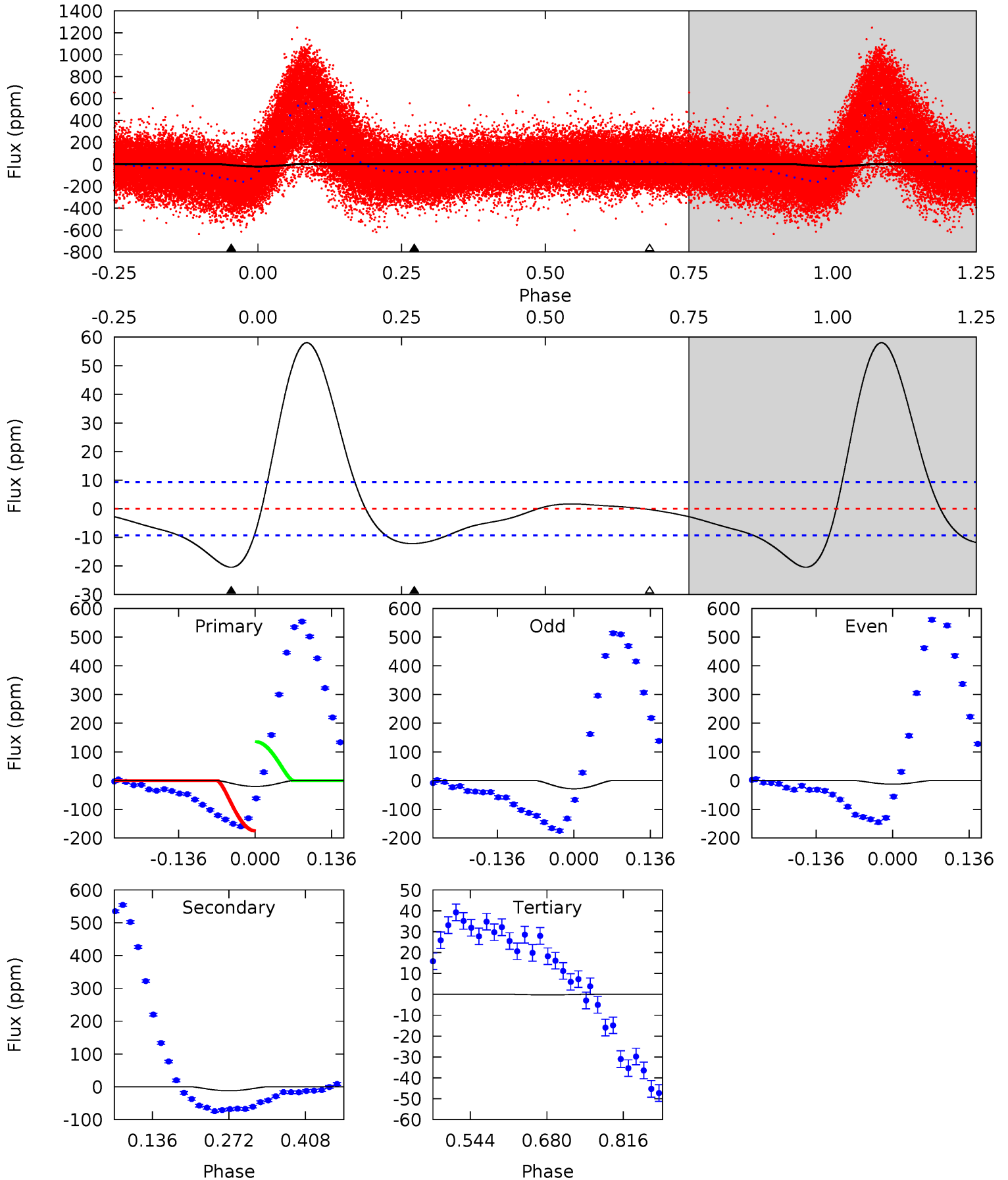
TCE 007672068-01 P= 16.832505 Days $T_0=137.285796$ (BKJD)



DV Model-Shift Uniqueness Test

007672068-01, P = 16.828103 Days, E = 120.489087 Days

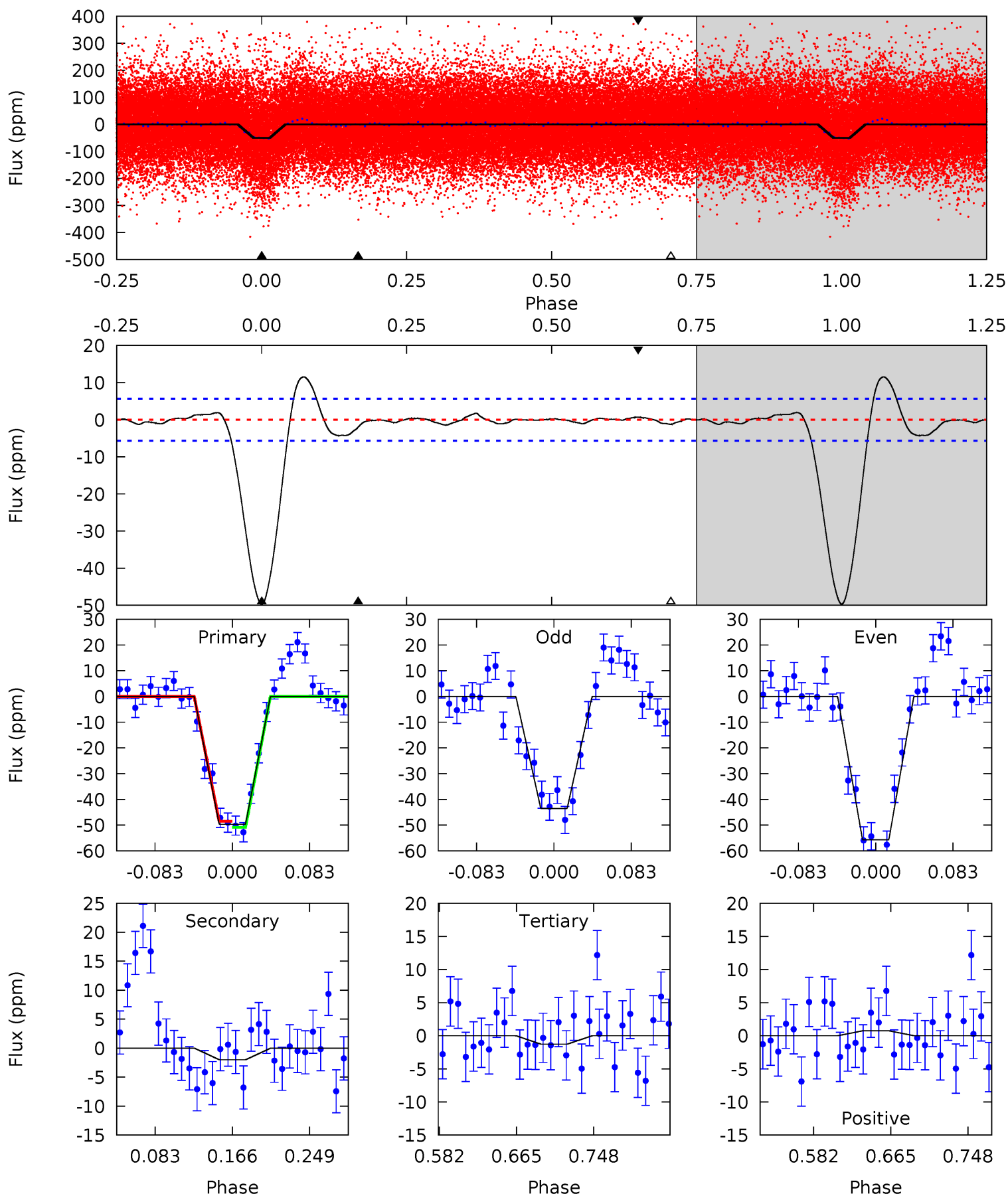
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.87	5.89	0.13	0	4.50	1.49	7.22	9.75	9.87	5.76	5.89	3.82	-0.37	0.74	13.5



Alt Model-Shift Uniqueness Test

007672068-01, P = 16.832505 Days, E = 120.453291 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.4	1.63	1.03	0.60	4.60	1.73	0.57	39.3	39.8	0.59	1.02	4.94	0.85	0.19	0.96



Stellar Parameters For KIC 007672068

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6178^{+173}_{-173}	$4.015^{+0.285}_{-0.114}$	$-0.400^{+0.350}_{-0.300}$	$1.645^{+0.322}_{-0.484}$	$1.021^{+0.179}_{-0.130}$	$0.323^{+0.552}_{-0.112}$
	+3%/-3%	+7%/-3%	+87%/-75%	+20%/-29%	+18%/-13%	+171%/-35%
Source	PHO1	FLK73	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 007672068-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-12 ± 2	$4.41^{+2.05}_{-1.81}$	1339^{+79}_{-119}	2930^{+501}_{-272}	$5.906^{+10.861}_{-3.204}$
Alt.	-2 ± 1	$1.80^{+1.70}_{-1.20}$	1340^{+82}_{-122}	2865^{+1212}_{-609}	$4.763^{+41.874}_{-3.879}$

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 $A_{\text{obs}} \gg 1.0$

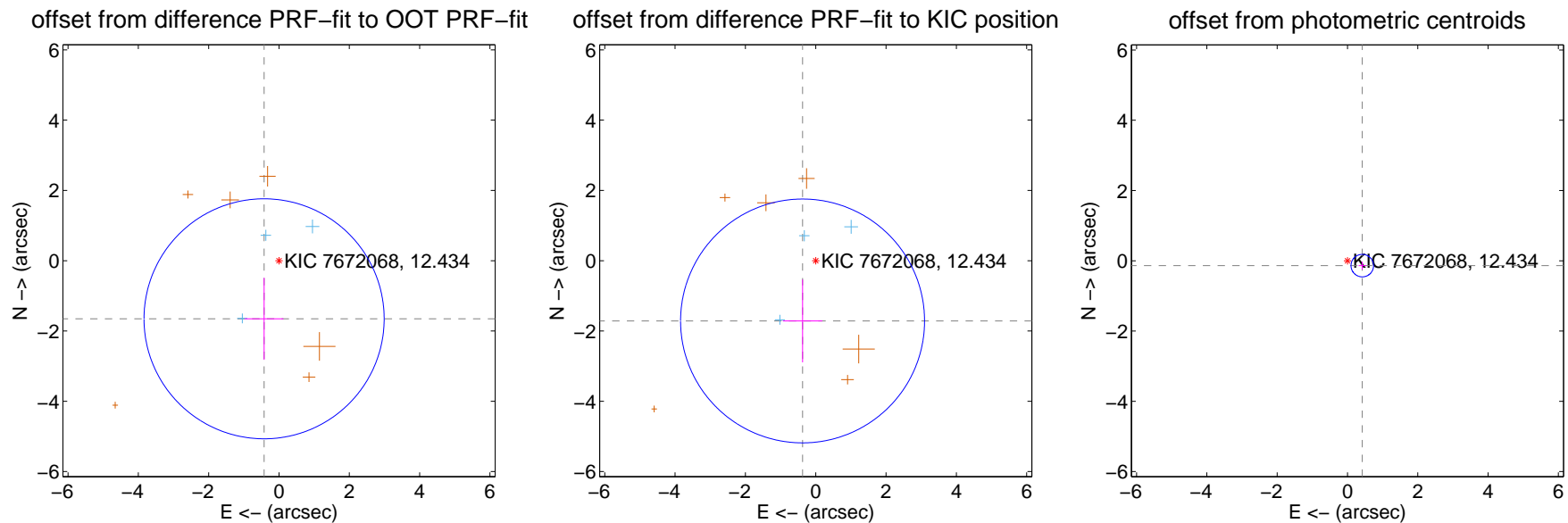
DV Centroid Data

Supplemental centroid analysis for 007672068-01. Kepler magnitude: 12.43. Transit SNR 23.20

There are 3 quarters with good PRF difference image offsets

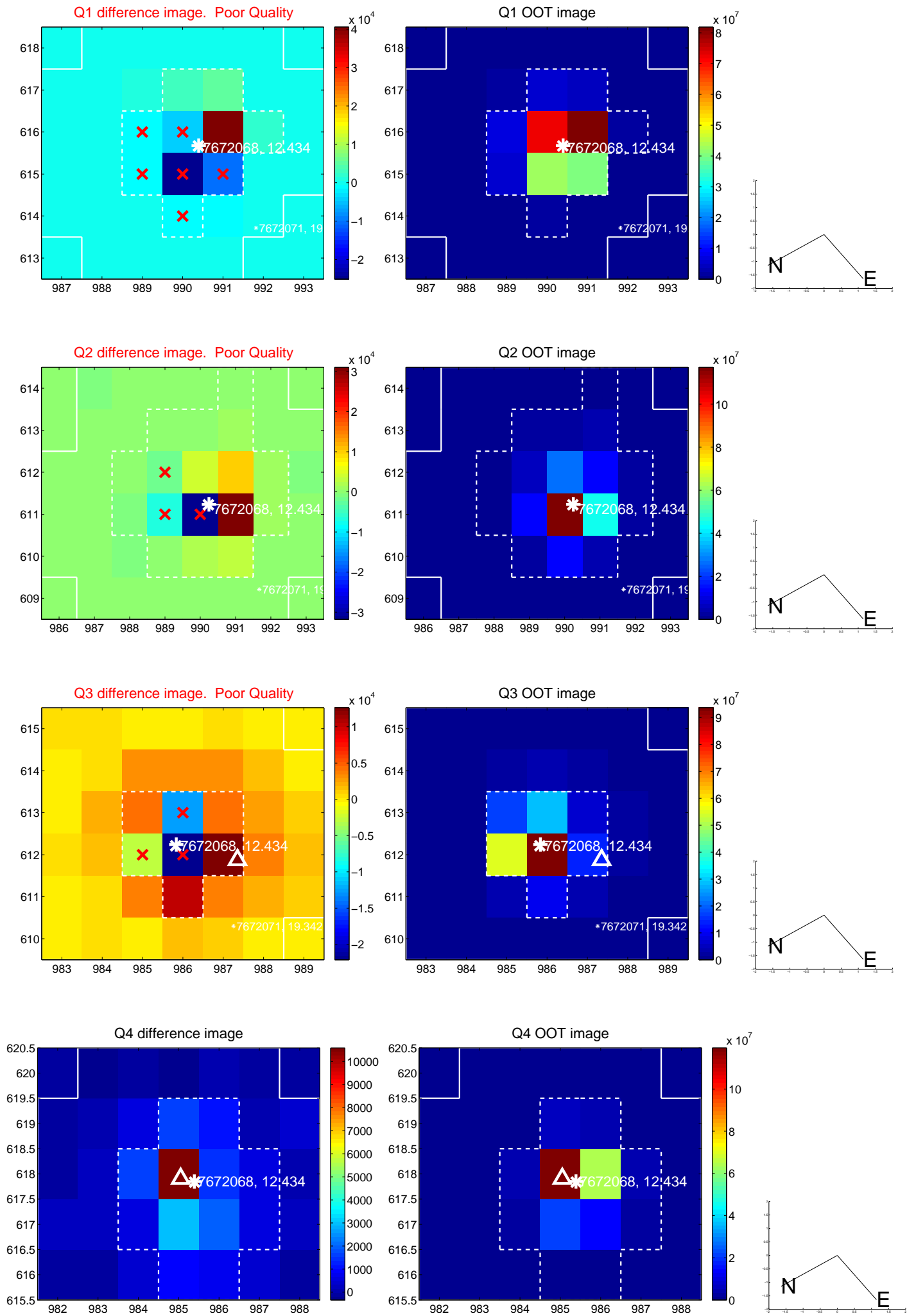
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.707 ± 1.138	1.50	0.424 ± 0.551	-1.653 ± 1.167
PRF-fit source offset from KIC position	1.755 ± 1.156	1.52	0.374 ± 0.561	-1.715 ± 1.177
photometric centroid source offset	0.44 ± 0.11	4.15	-0.42 ± 0.11	-0.14 ± 0.11

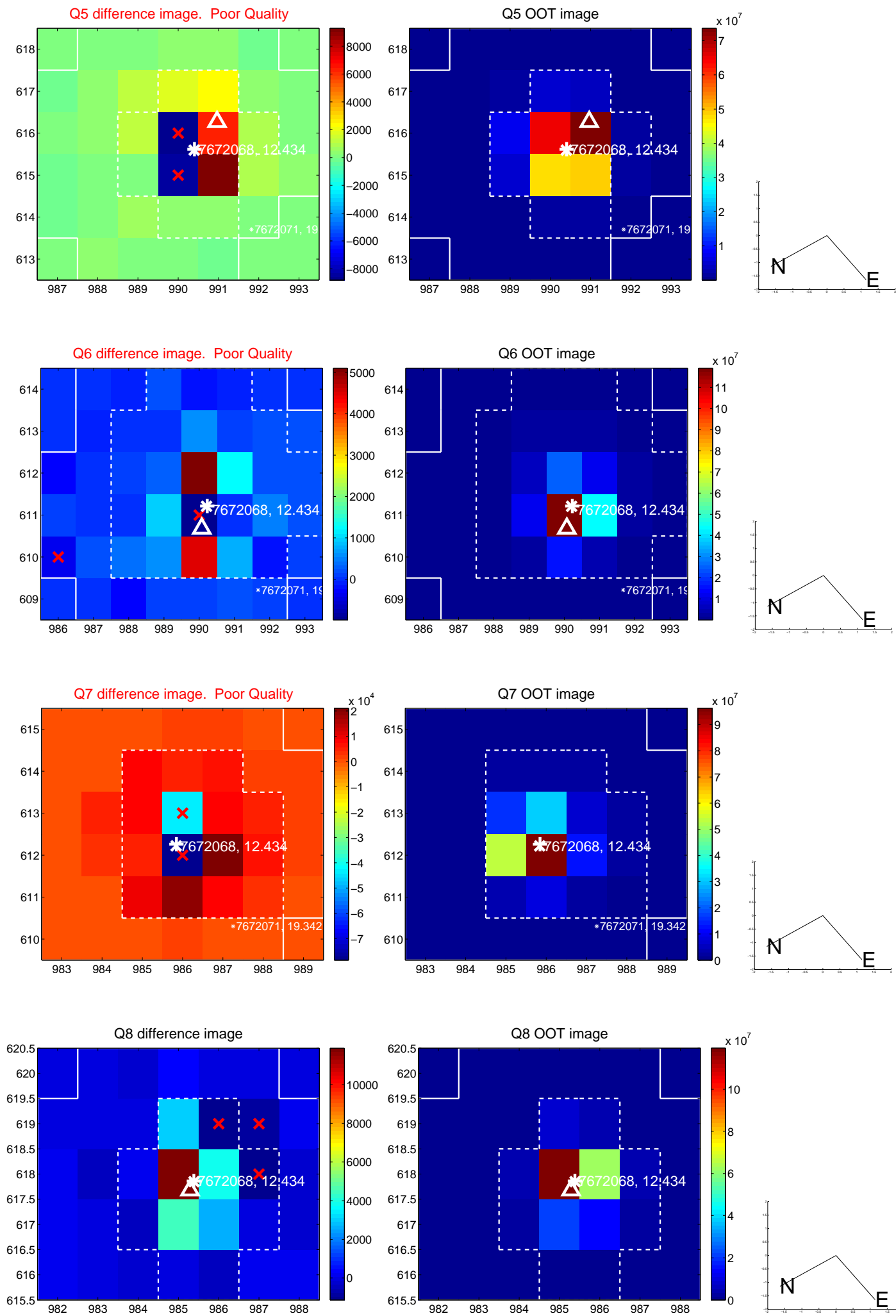


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

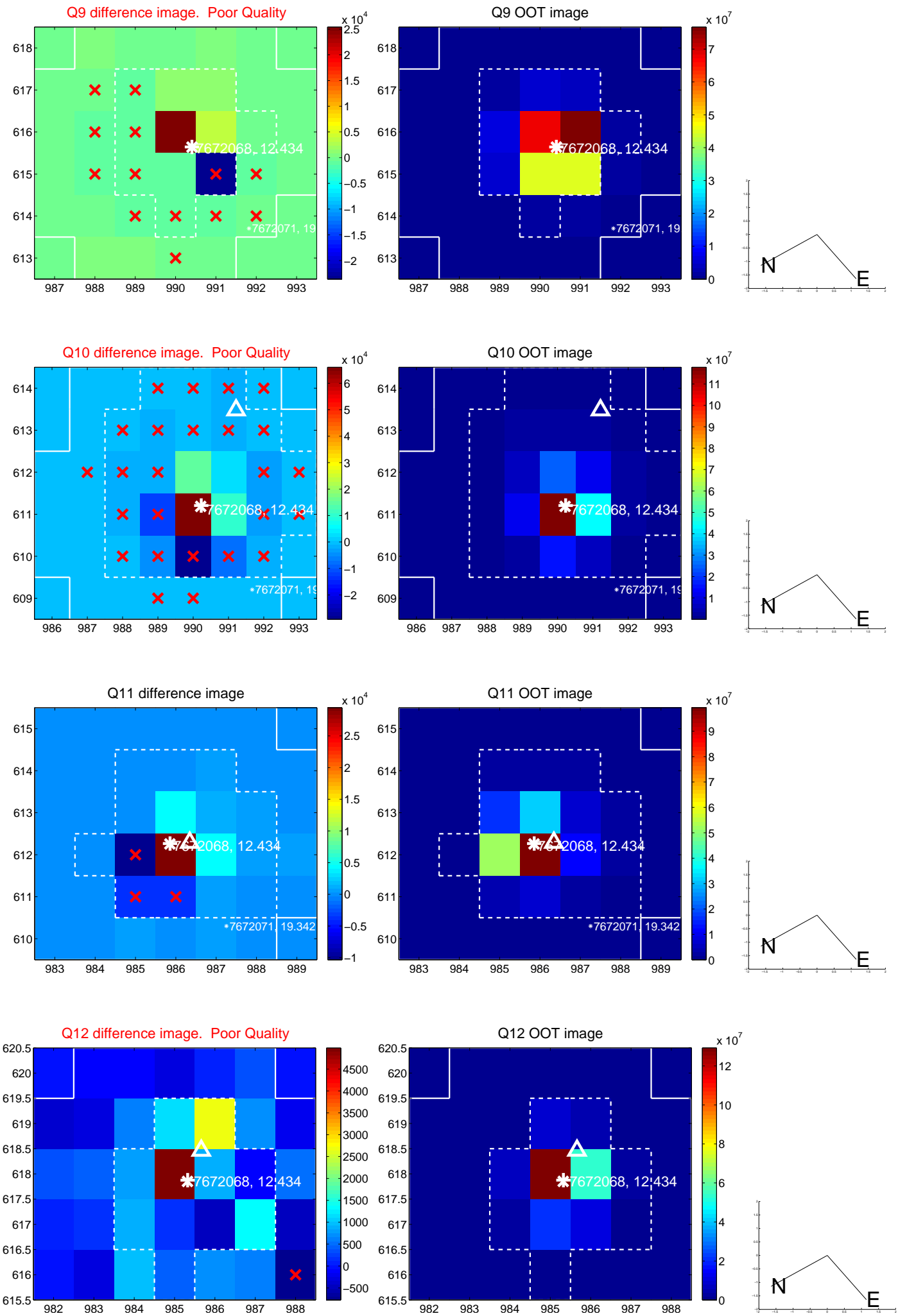
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



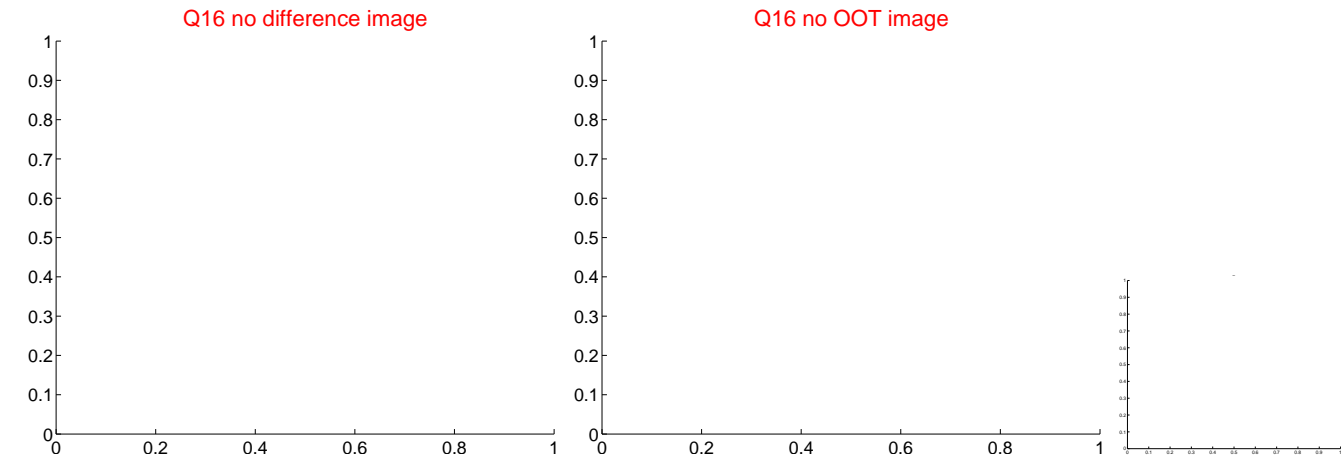
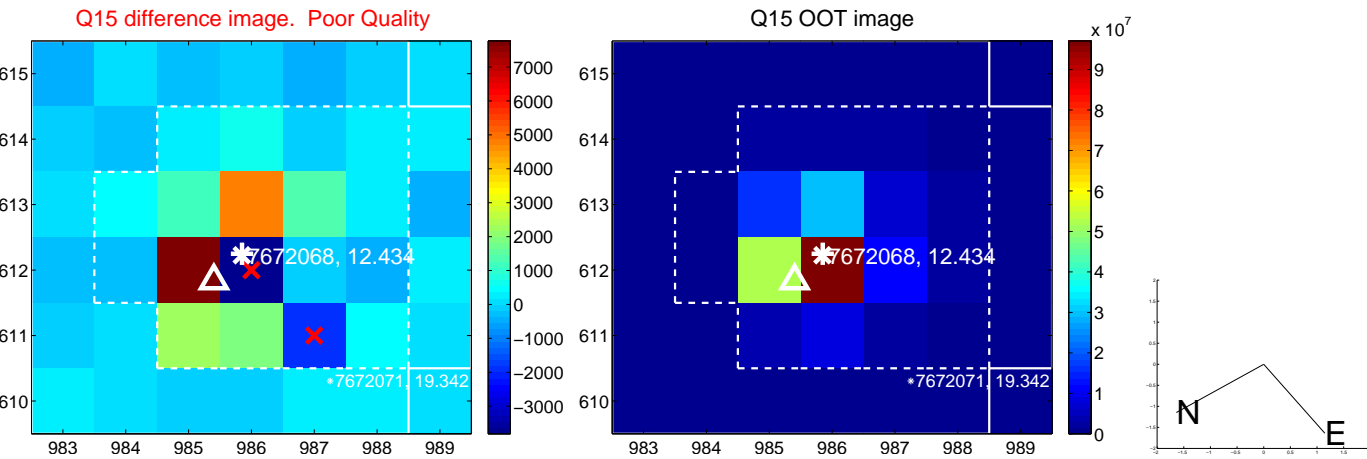
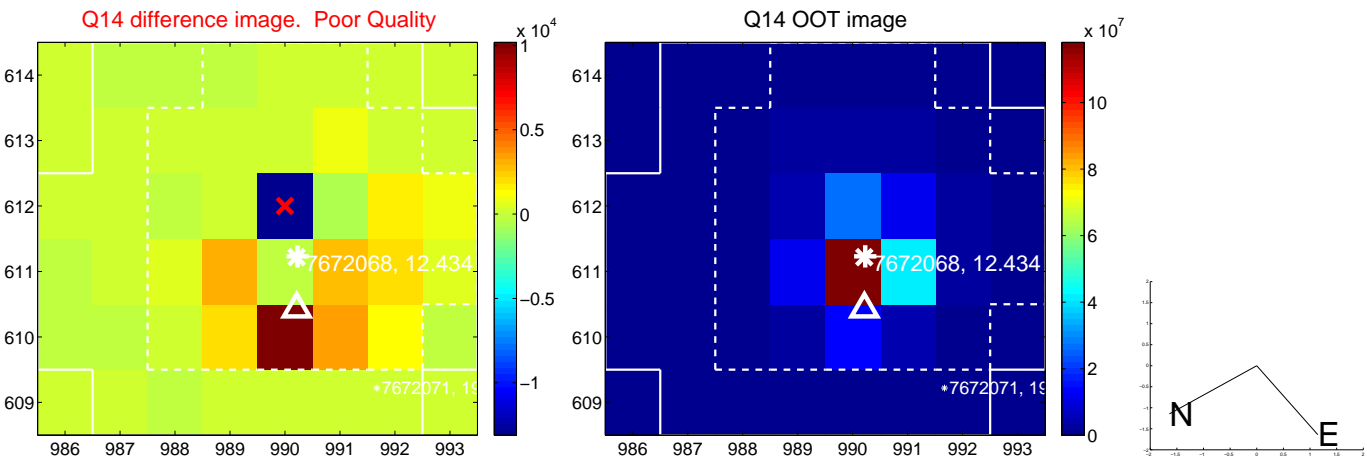
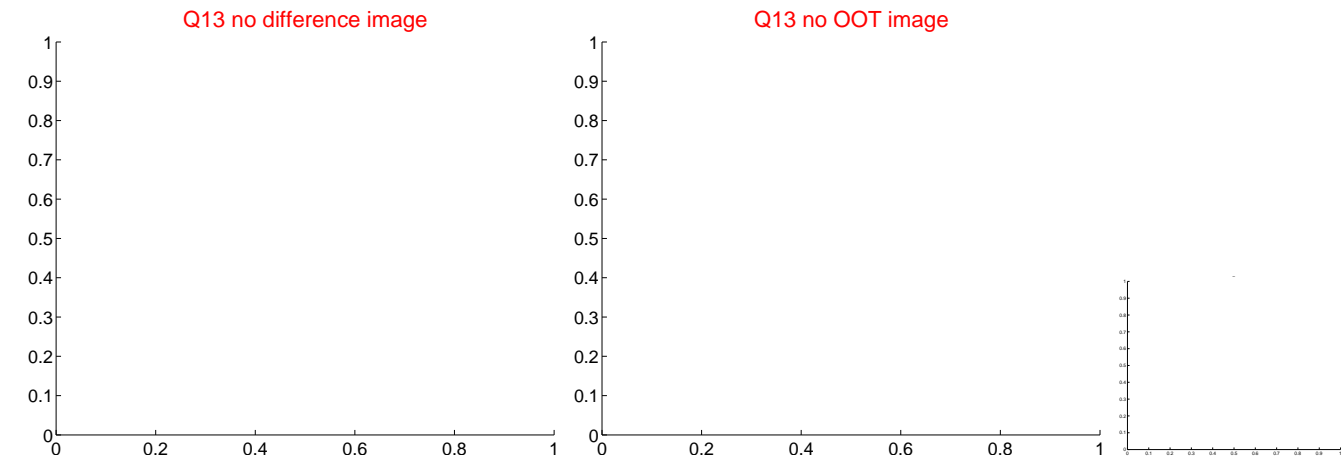
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



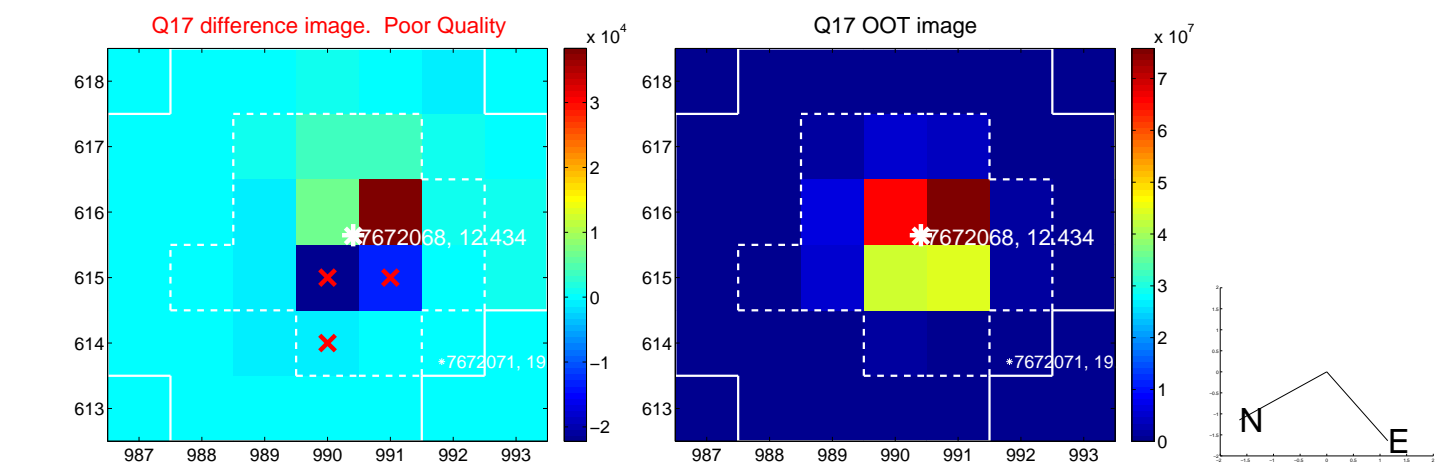
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



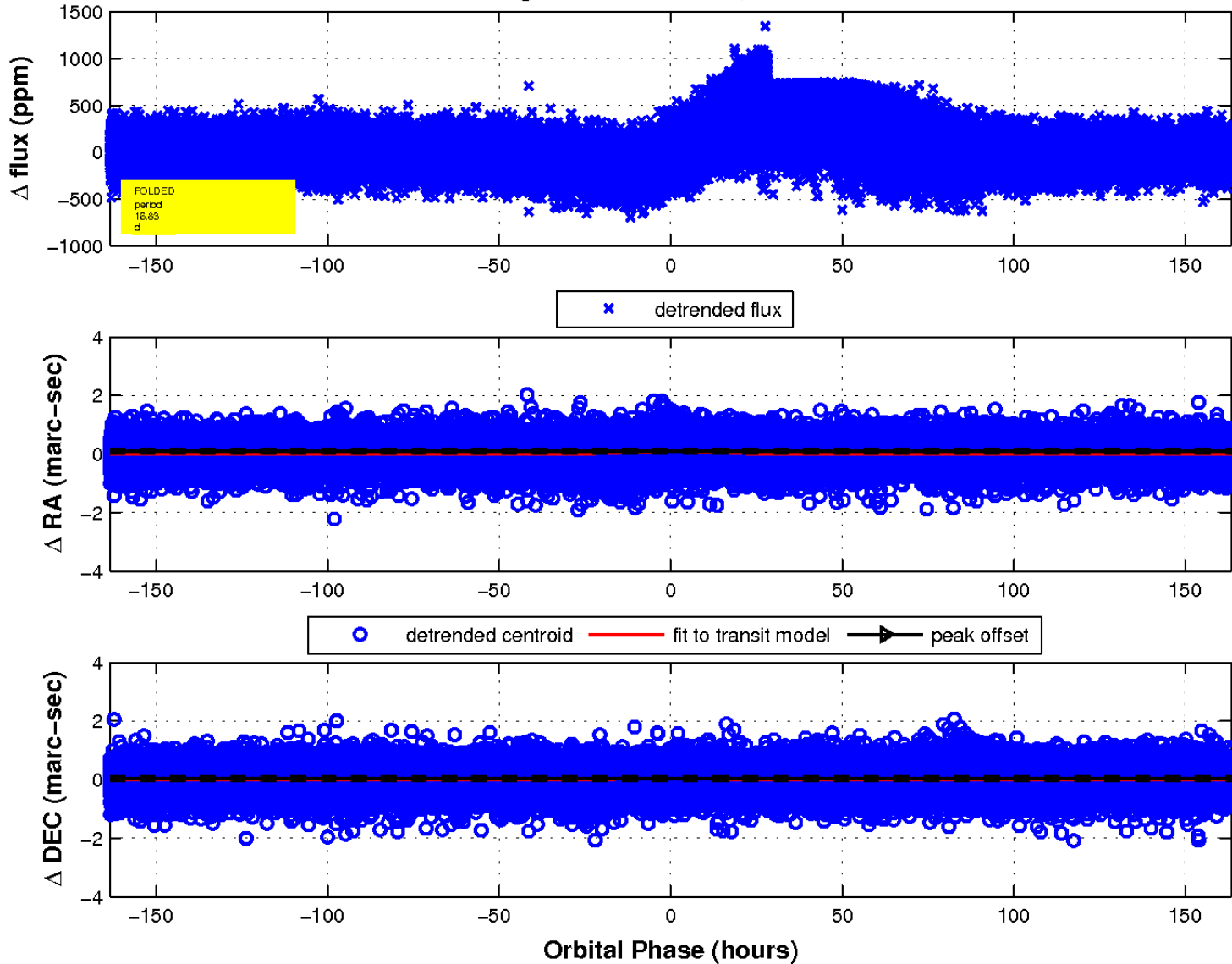
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

