

KIC 005479802

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})
005479802-01	OBS	2251.01	13.262551	136.291501	941.0	4.704	25.7	27.9	0.94	5973	3.62	81.67

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005479802-01	OBS	FP	0.00	0	0	1	0	CENT_RESOLVED_OFFSET—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 005479802-01

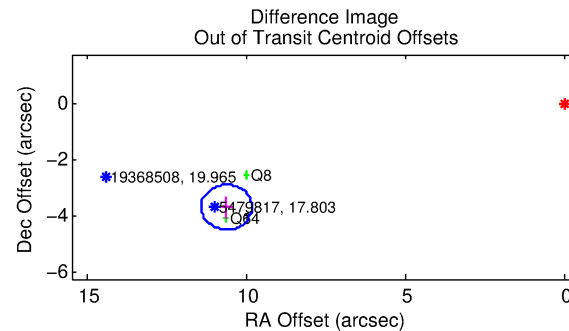
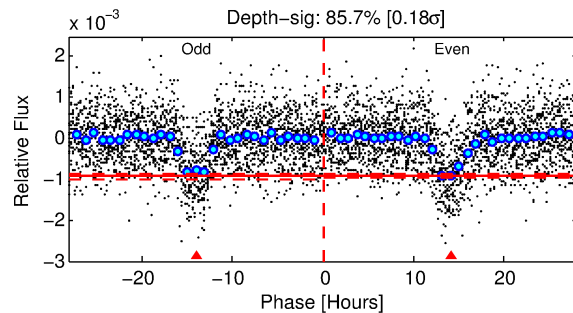
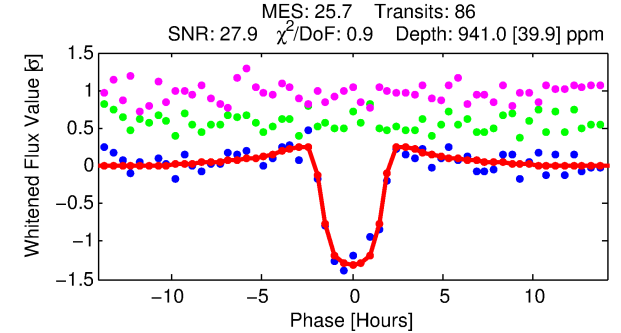
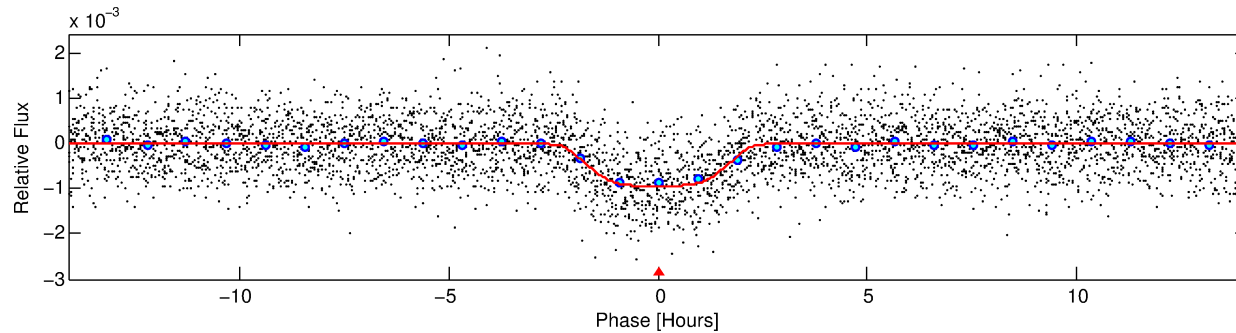
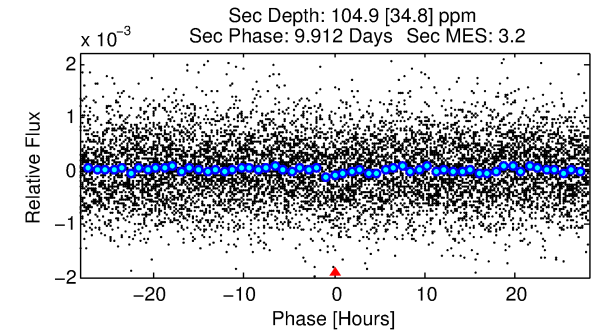
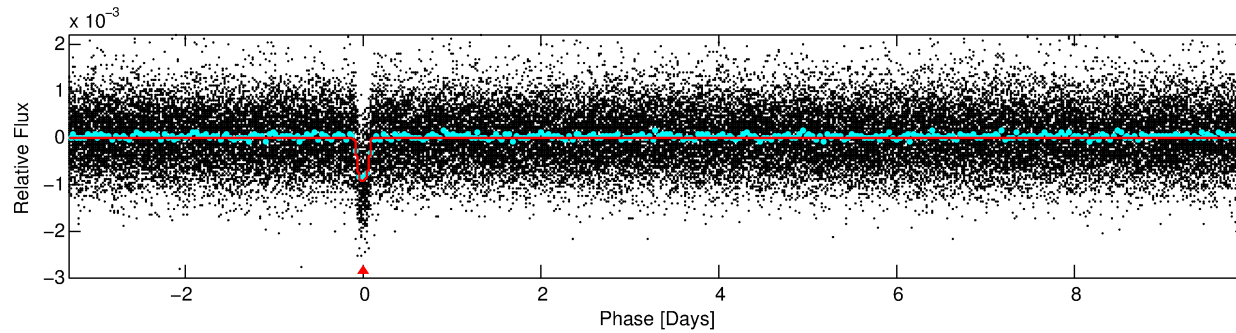
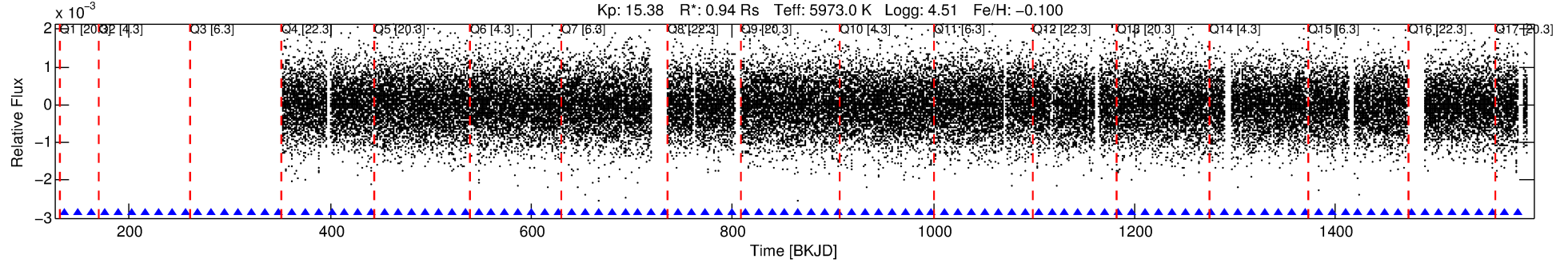
No Significant Match Found

DV One-Page Summary

KIC: 5479802 Candidate: 1 of 1 Period: 13.263 d

KOI: K02251.01 Corr: 0.985

Kp: 15.38 R*: 0.94 Rs Teff: 5973.0 K Logg: 4.51 Fe/H: -0.100



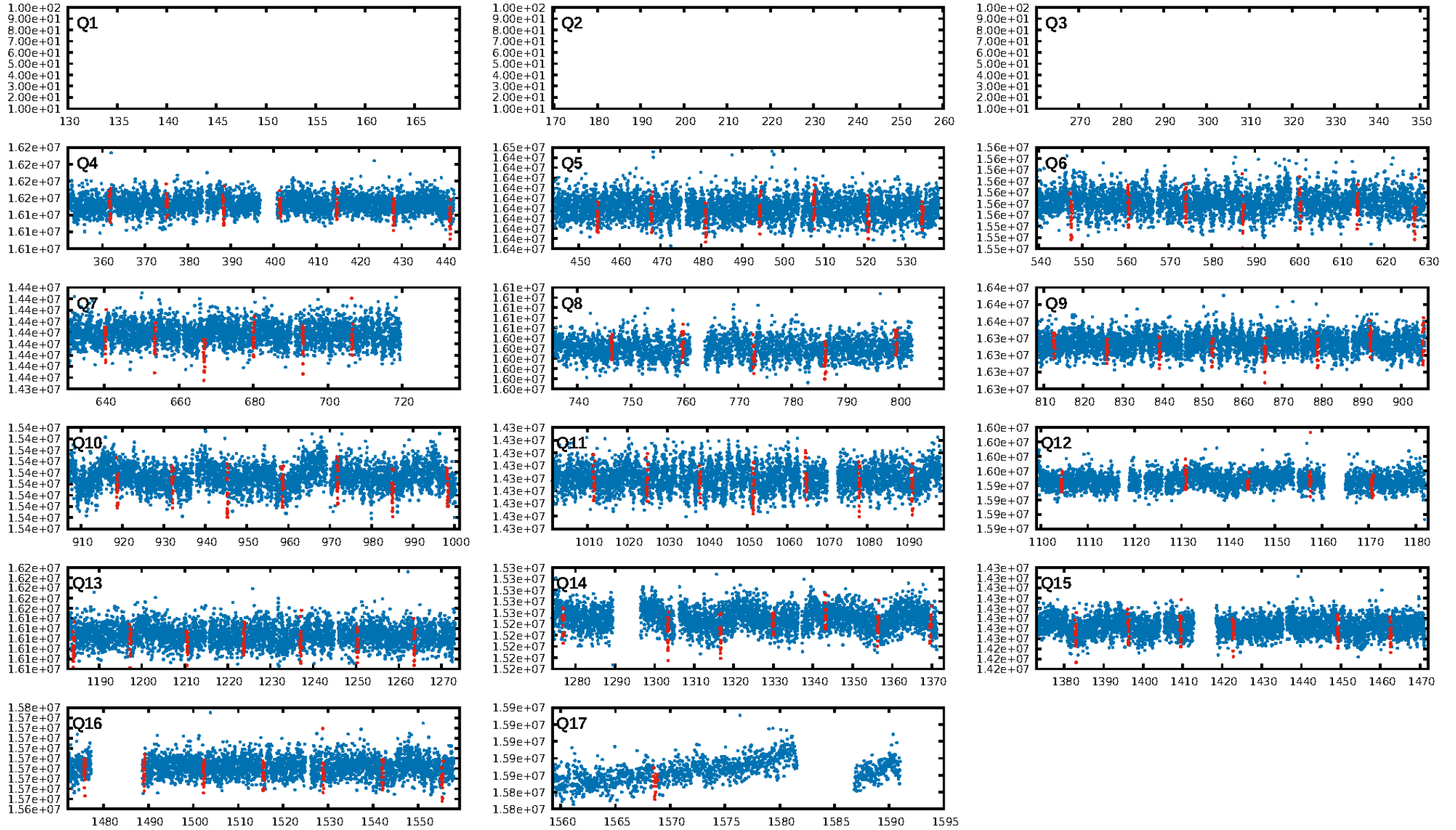
DV Fit Results:

Period = 13.26255 [0.00007] d
Epoch = 136.2915 [0.0044] BKJD
Rp/R* = 0.0355 [0.0012]
a/R* = 8.93 [0.76]
b = 0.95 [0.01]
Seff = 81.67 [32.97]
Teff = 767 [77] K
Rp = 3.62 [1.11] Re
a = 0.1105 [0.0286] AU
Ag = 53.82 [27.33] [1.93σ]
Teffp = 3210 [294] K [8.03σ]

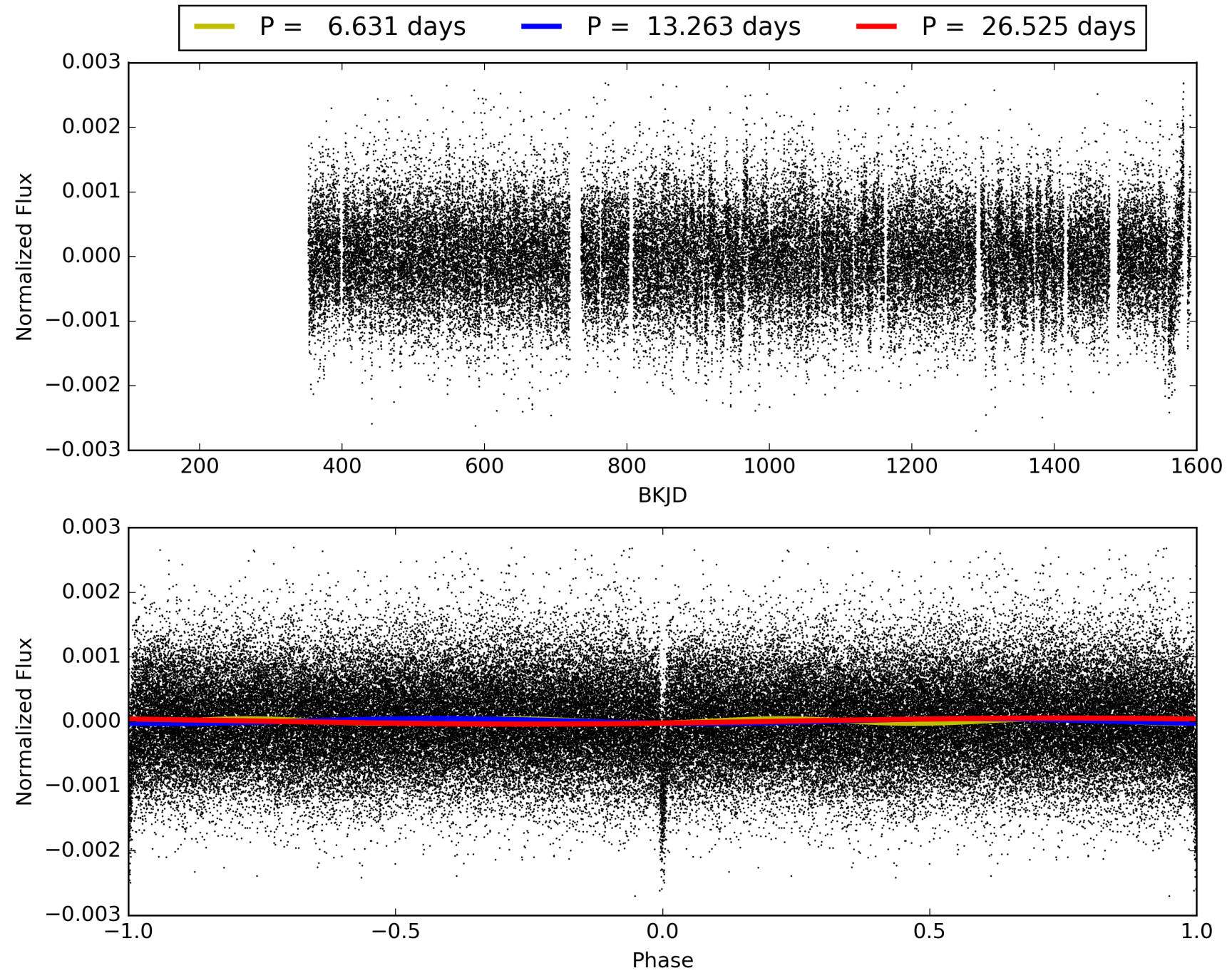
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 10.2%
ModelChiSquareGoF-sig: 100.0%
Bootstrap-pfa: 3.85e-145
RollingBand-fgt: 1.00 [85/85]
GhostDiagnostic-chr: -0.2092
Centroid-sig: 0.0%
Centroid-so: 26.318 arcsec [58.07σ]
OotOffset-rm: 11.256 arcsec [42.17σ]
KicOffset-rm: 11.271 arcsec [34.17σ]
OotOffset-st: 2/0/1/0 [3]
KicOffset-st: 2/0/1/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [14/14]

TCE 005479802-01, PDC Light Curves

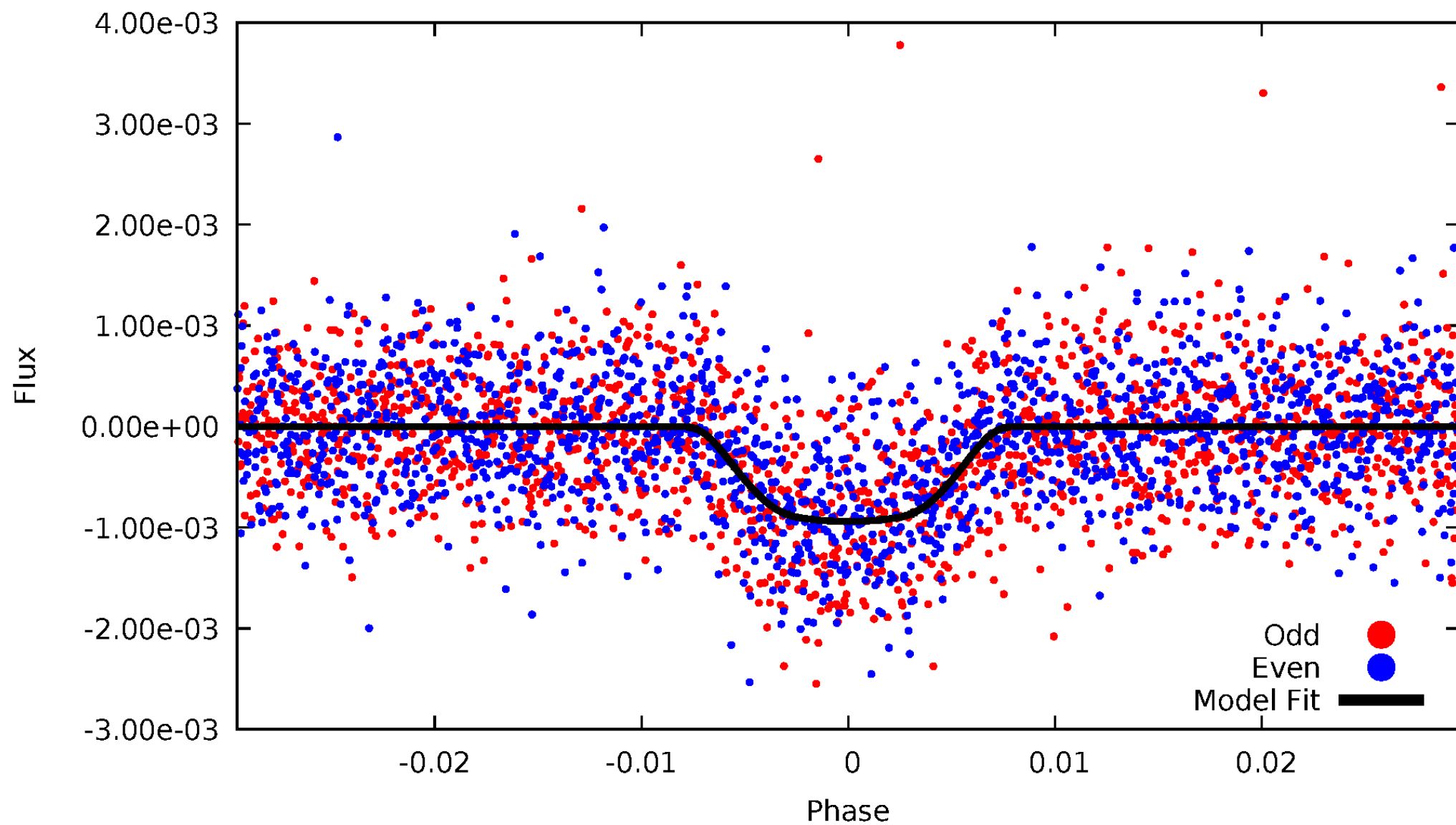


TCE 005479802-01



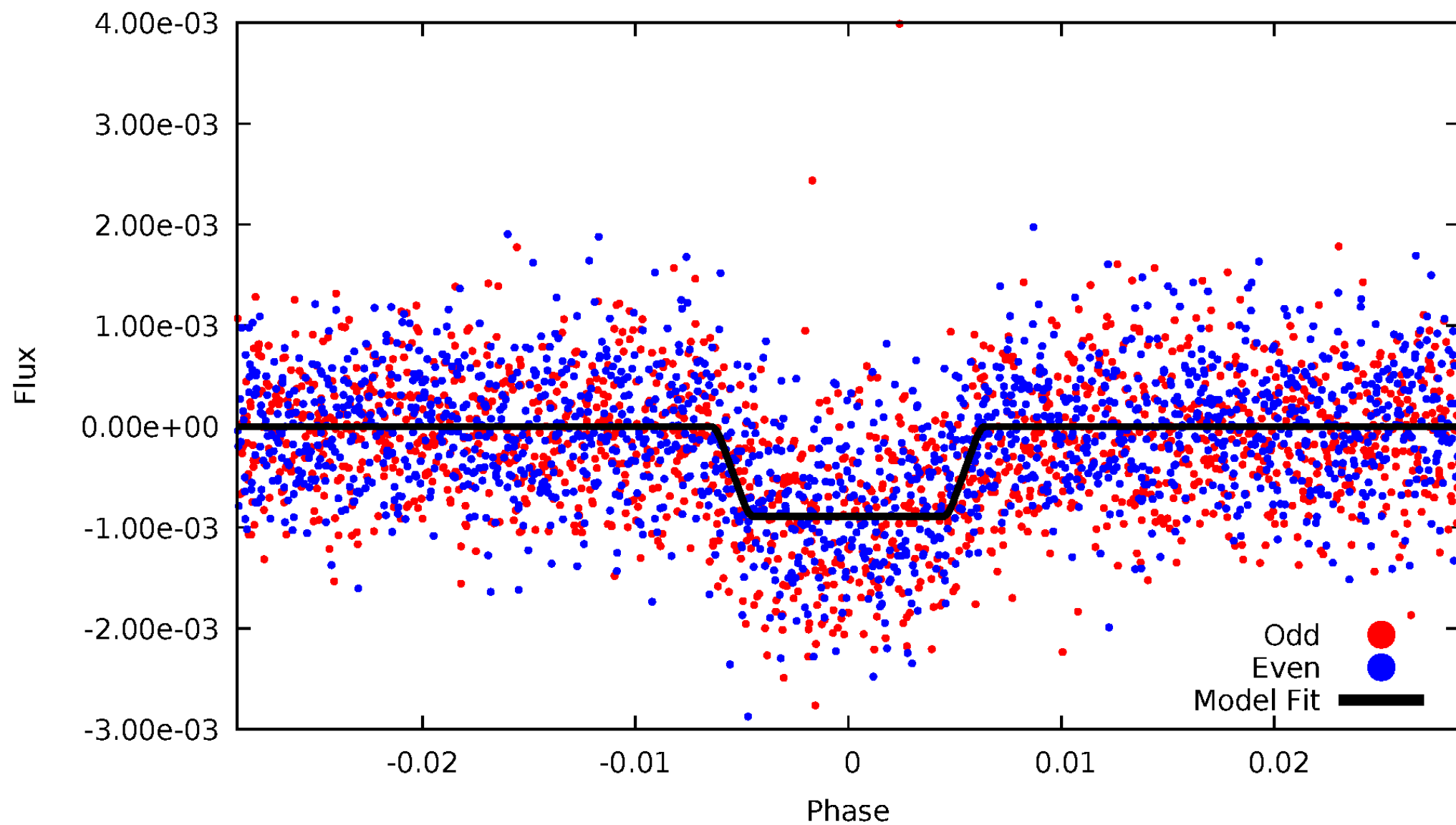
DV Odd/Even

TCE 005479802-01

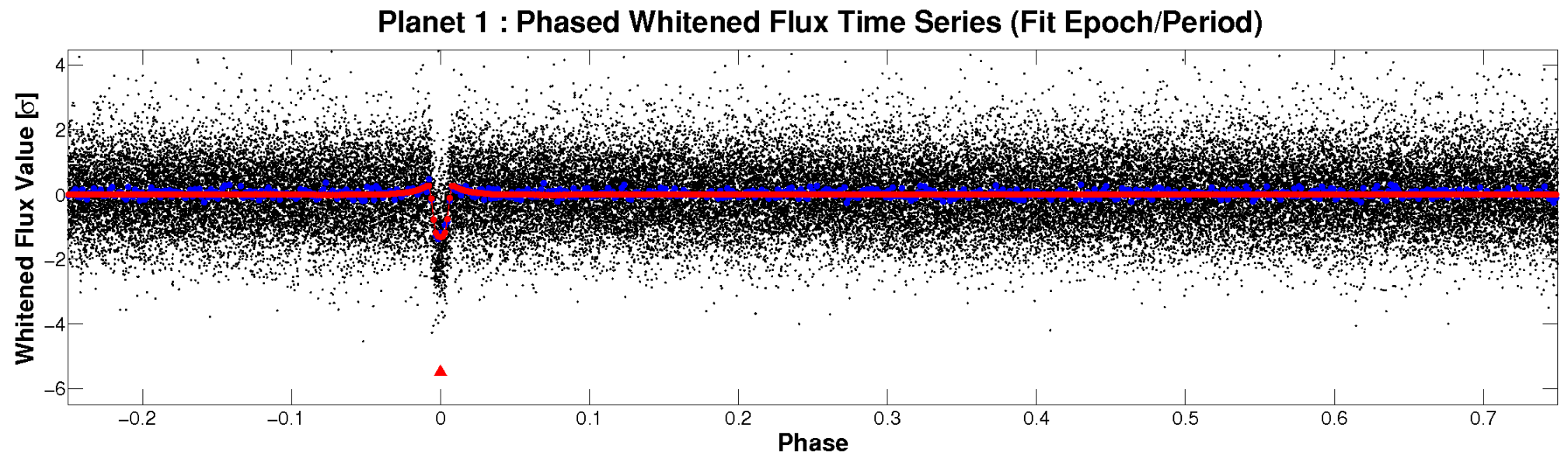
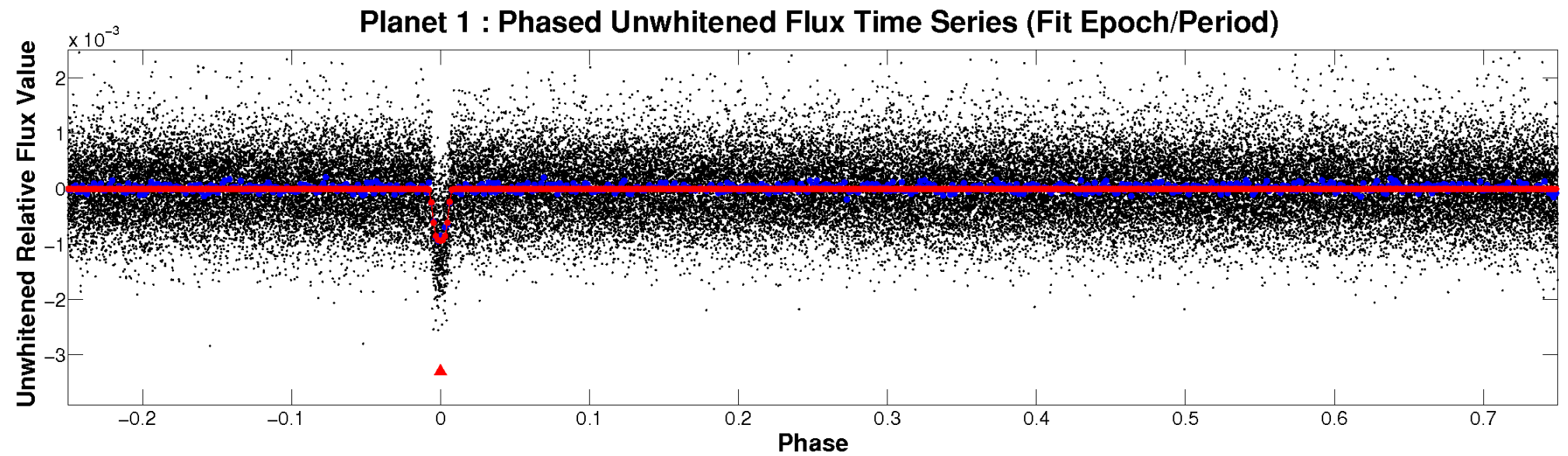


ALT Odd/Even

TCE 005479802-01

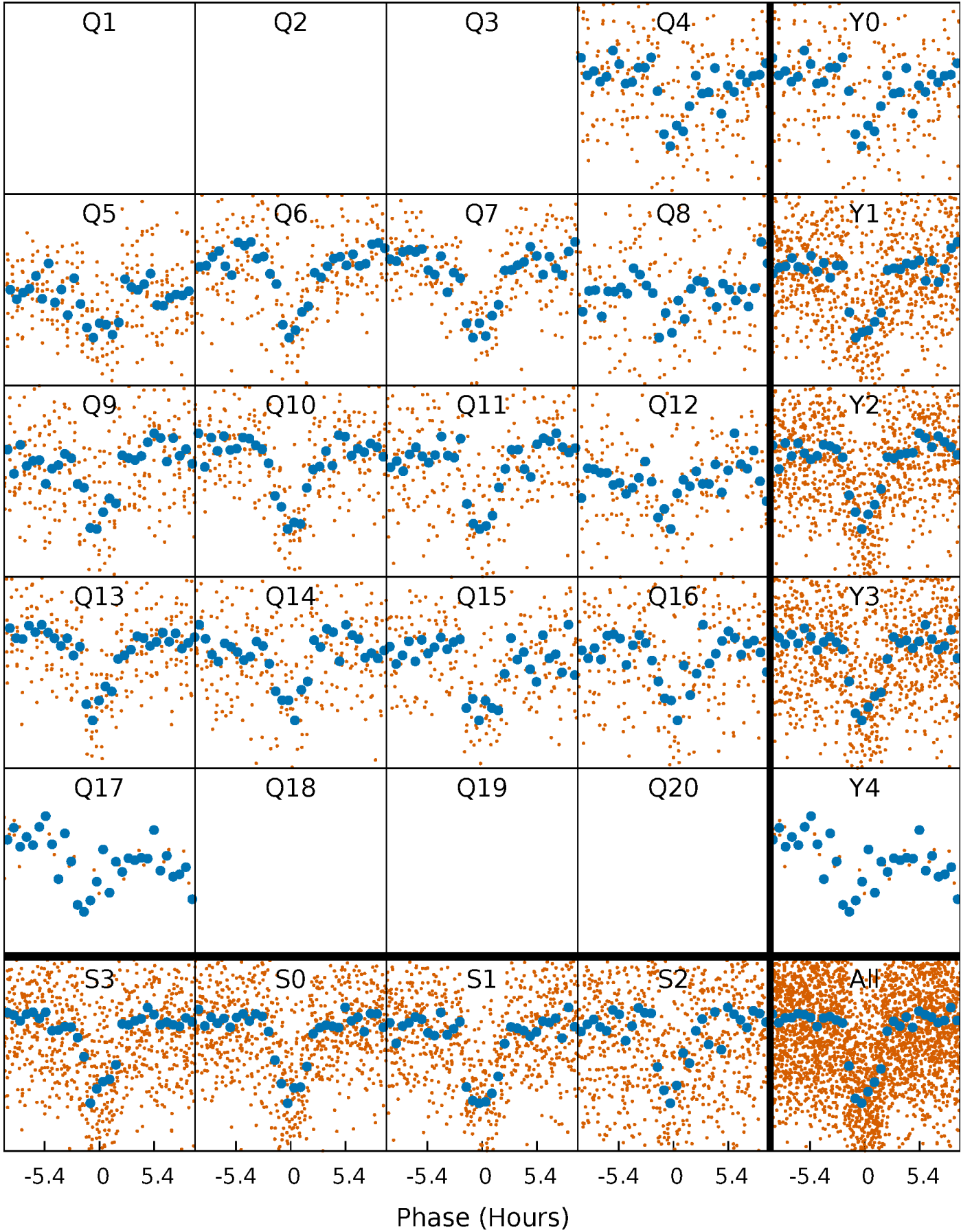


Non-Whitened Vs. Whitened Light Curve



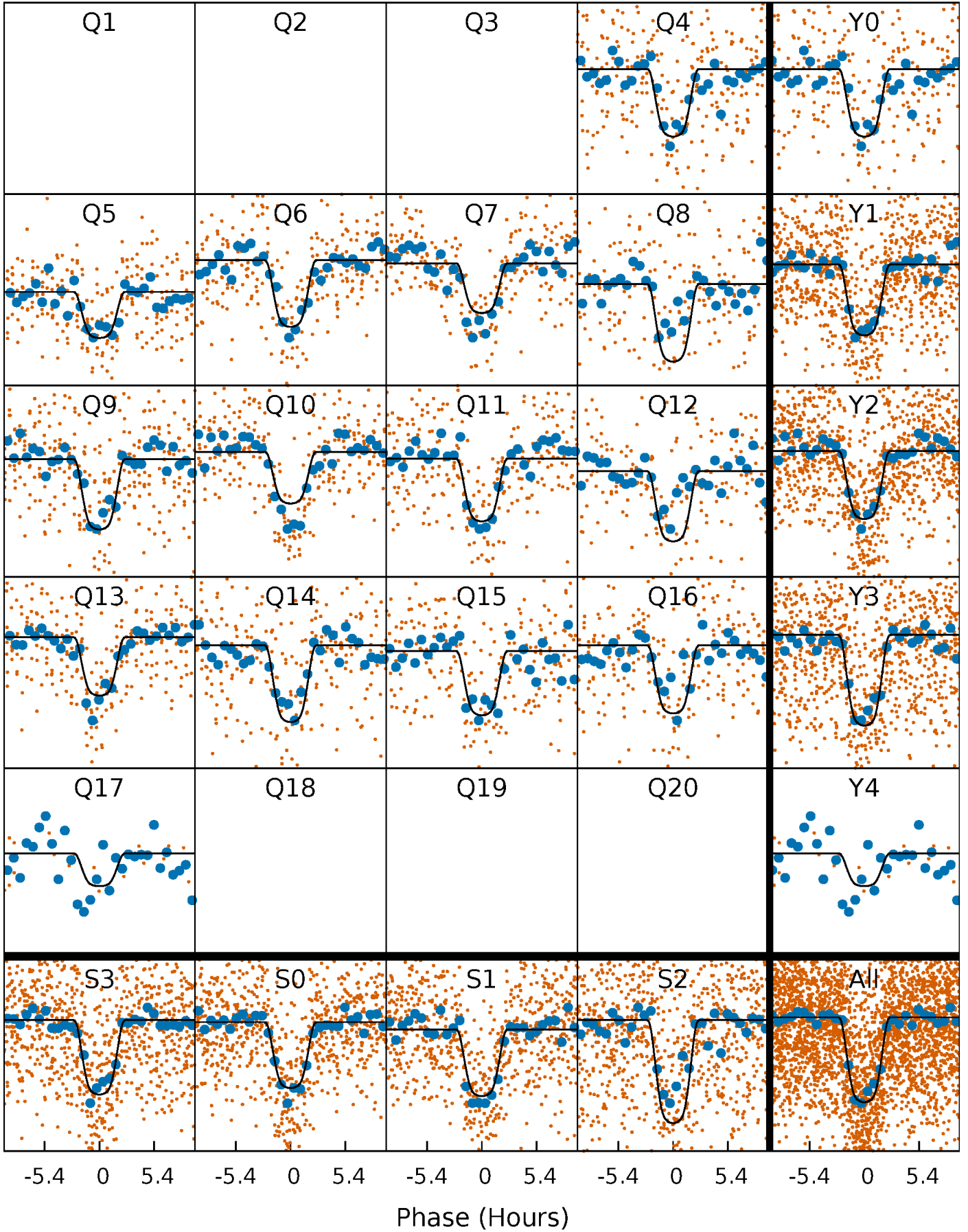
PDC Quarter-Phased Transit Curves

TCE 005479802-01 P= 13.262551 Days $T_0=136.291501$ (BKJD)



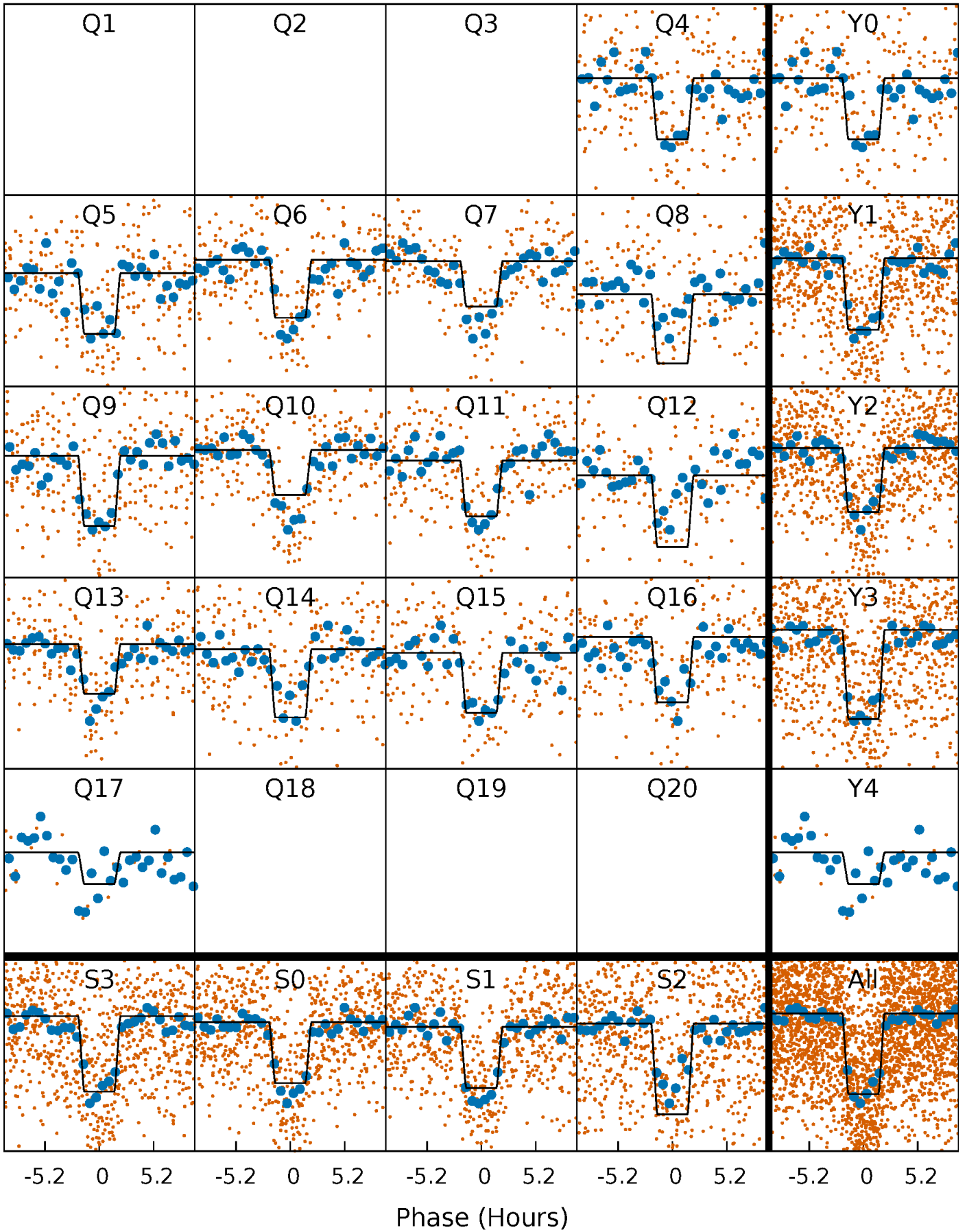
DV Quarter-Phased Transit Curves

TCE 005479802-01 P= 13.262551 Days $T_0=136.291501$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

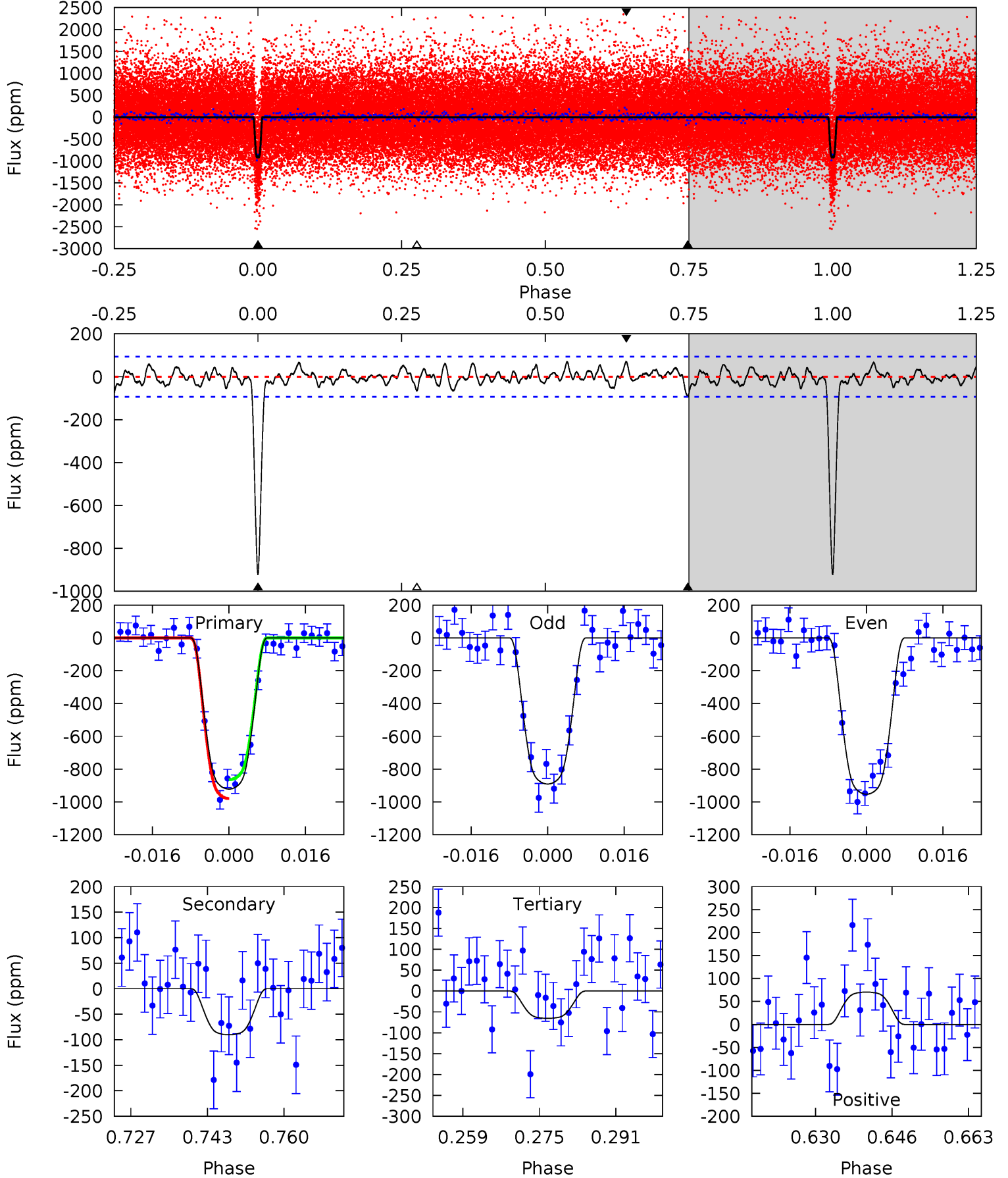
TCE 005479802-01 P= 13.262614 Days $T_0=136.287951$ (BKJD)



DV Model-Shift Uniqueness Test

005479802-01, P = 13.262551 Days, E = 136.291501 Days

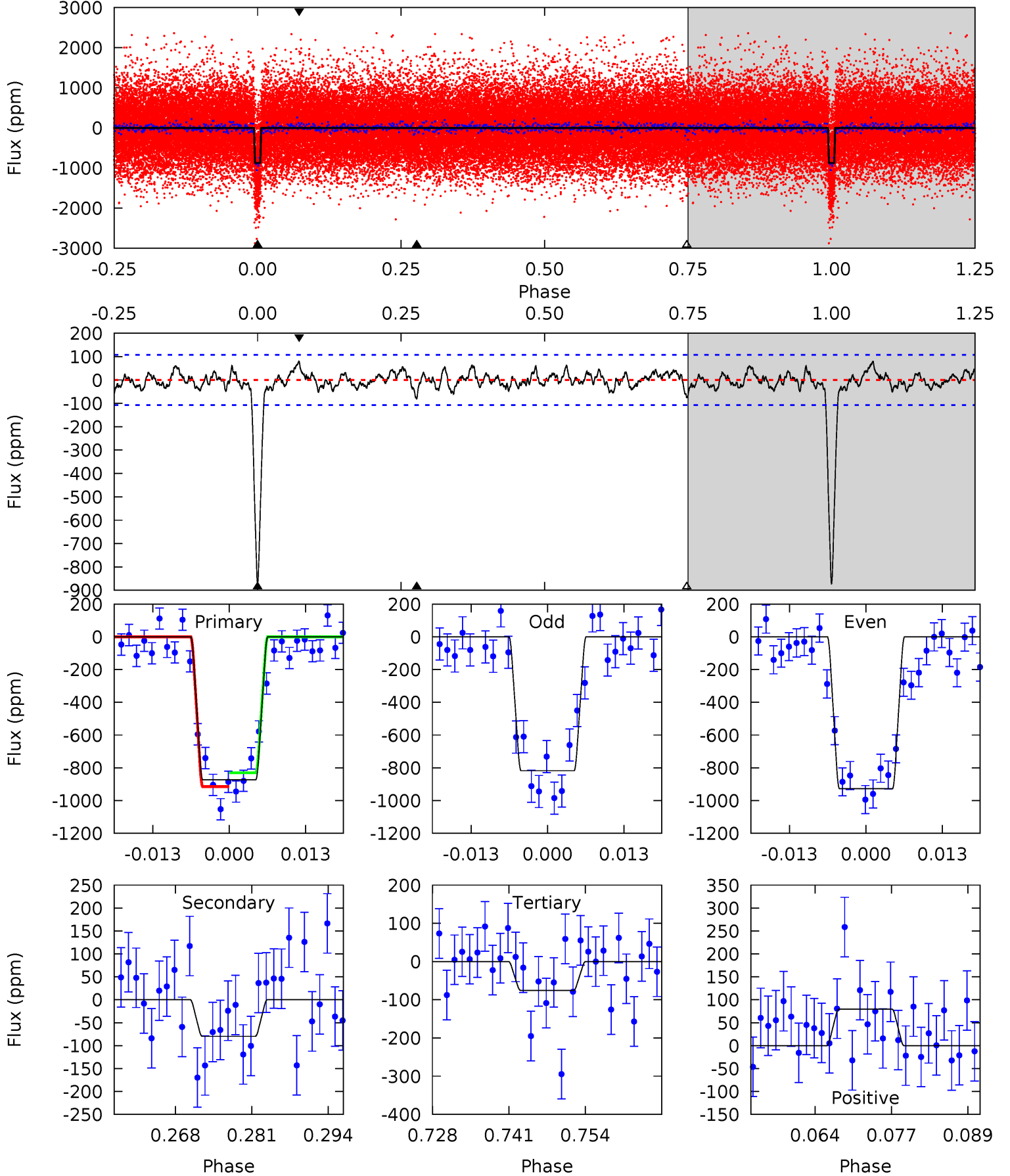
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.6	4.76	3.45	3.71	4.93	2.41	1.36	45.2	44.9	1.31	1.05	1.64	0.97	0.07	3.03



Alt Model-Shift Uniqueness Test

005479802-01, P = 13.262614 Days, E = 136.287951 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	3.69	3.49	3.69	4.98	2.49	1.22	36.9	36.7	0.20	0.00	2.54	0.95	0.08	1.94



Stellar Parameters For KIC 005479802

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5973^{+189}_{-210}	$4.506^{+0.052}_{-0.208}$	$-0.100^{+0.300}_{-0.300}$	$0.935^{+0.285}_{-0.095}$	$1.024^{+0.129}_{-0.129}$	$1.762^{+0.466}_{-0.887}$
	+3%/-4%	+1%/-5%	+300%/-300%	+30%/-10%	+13%/-13%	+26%/-50%
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 005479802-01 / KOI 2251.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-90 ± 19	$3.71^{+0.60}_{-0.32}$	1093^{+78}_{-54}	3548^{+140}_{-150}	41^{+13}_{-12}
Alt.	-80 ± 22	$3.12^{+0.52}_{-0.26}$	1096^{+73}_{-56}	3667^{+192}_{-190}	51^{+19}_{-16}

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 $A_{obs} \gg 1.0$

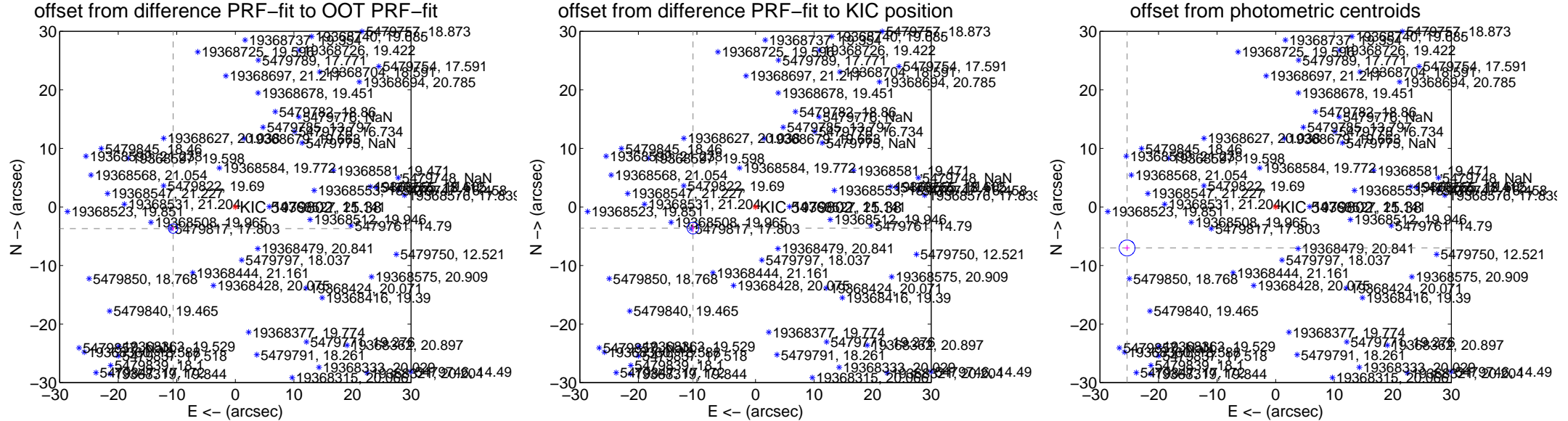
DV Centroid Data

Supplemental centroid analysis for 005479802-01. Kepler magnitude: 15.38. Transit SNR 27.91

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	11.256 \pm 0.267	42.17	10.632 \pm 0.162	-3.695 \pm 0.369
PRF-fit source offset from KIC position	11.271 \pm 0.330	34.17	10.673 \pm 0.248	-3.620 \pm 0.722
photometric centroid source offset	26.32 \pm 0.45	58.07	25.37 \pm 0.46	-7.01 \pm 0.40



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.

Q1 no difference image



Q1 no OOT image



Q2 no difference image



Q2 no OOT image



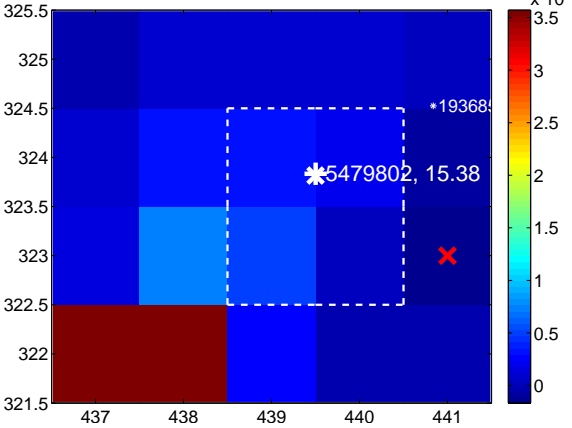
Q3 no difference image



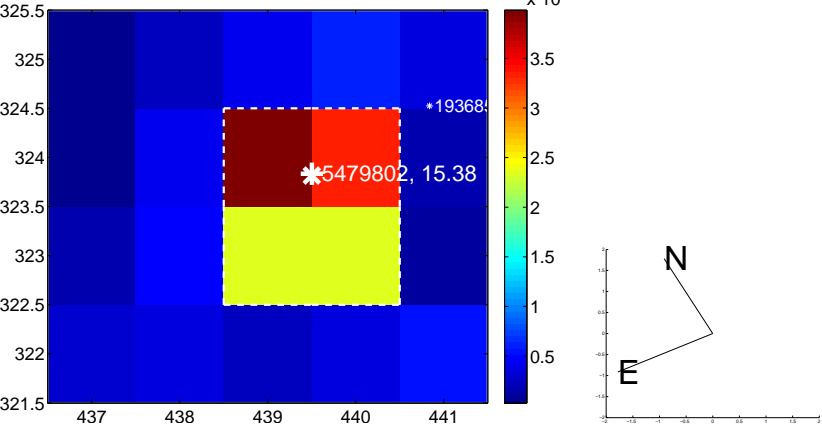
Q3 no OOT image



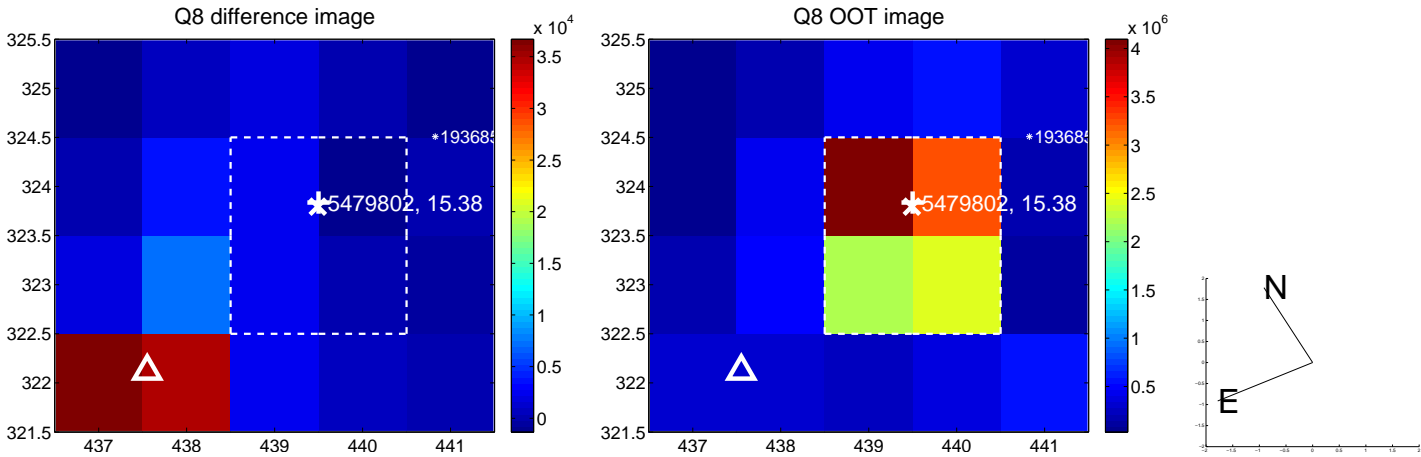
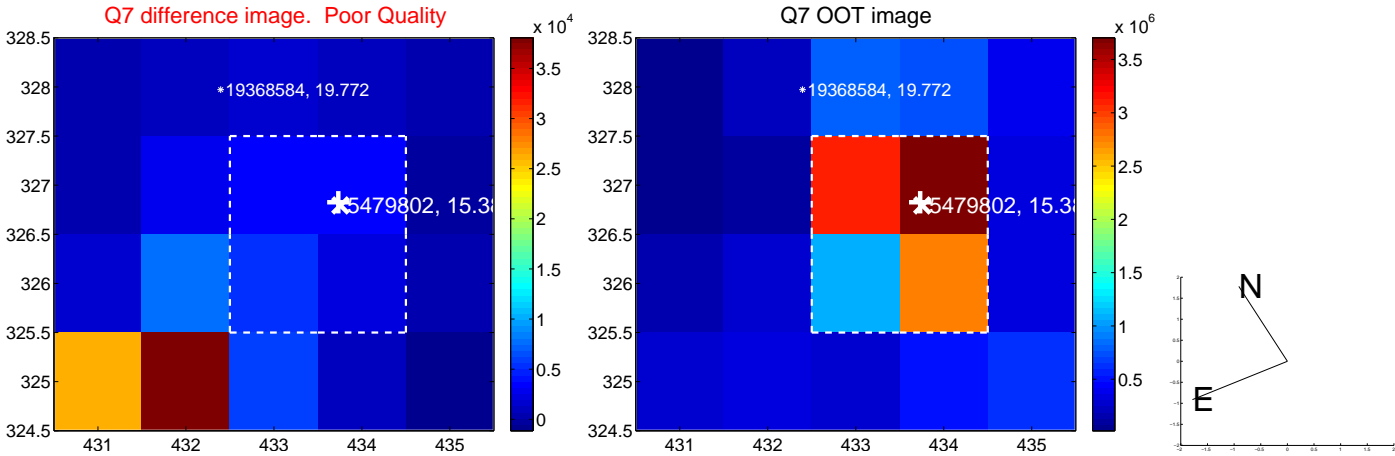
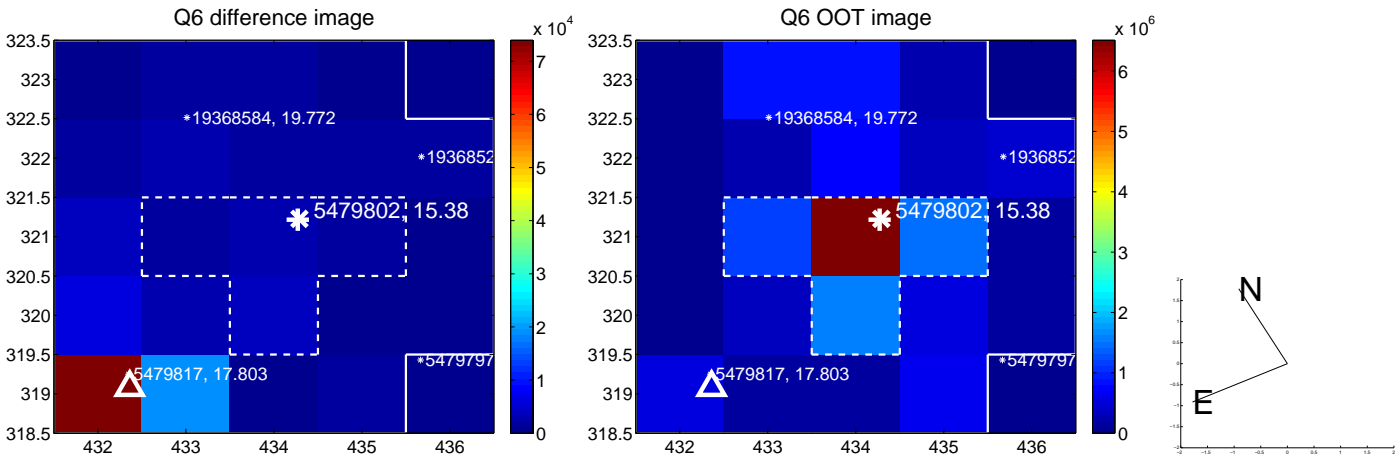
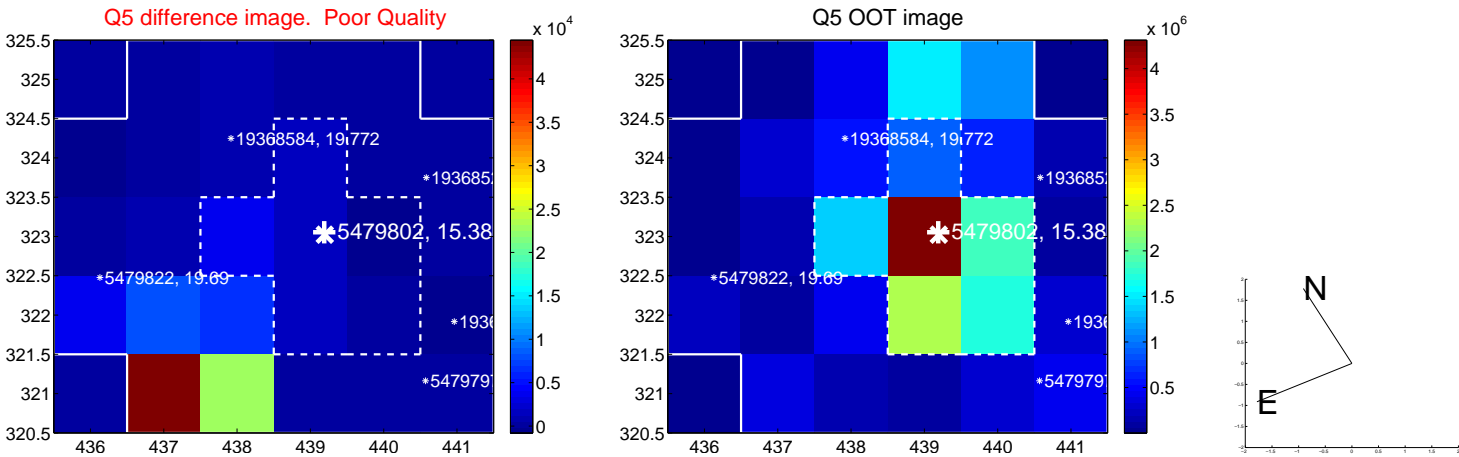
Q4 difference image. Poor Quality



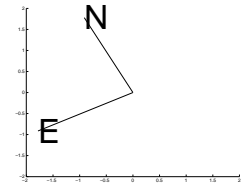
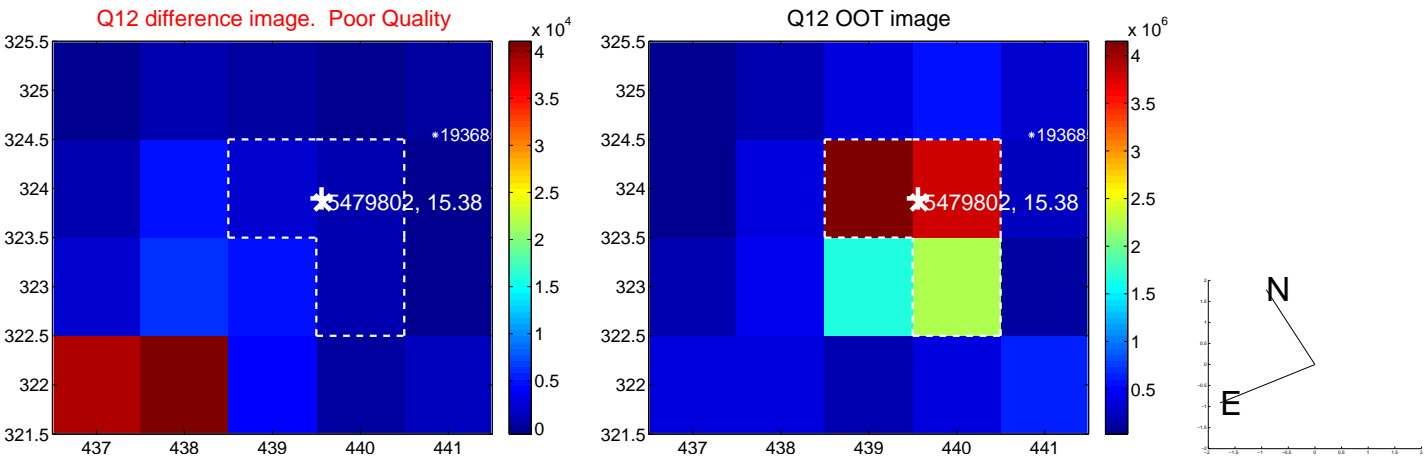
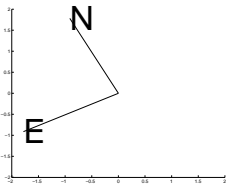
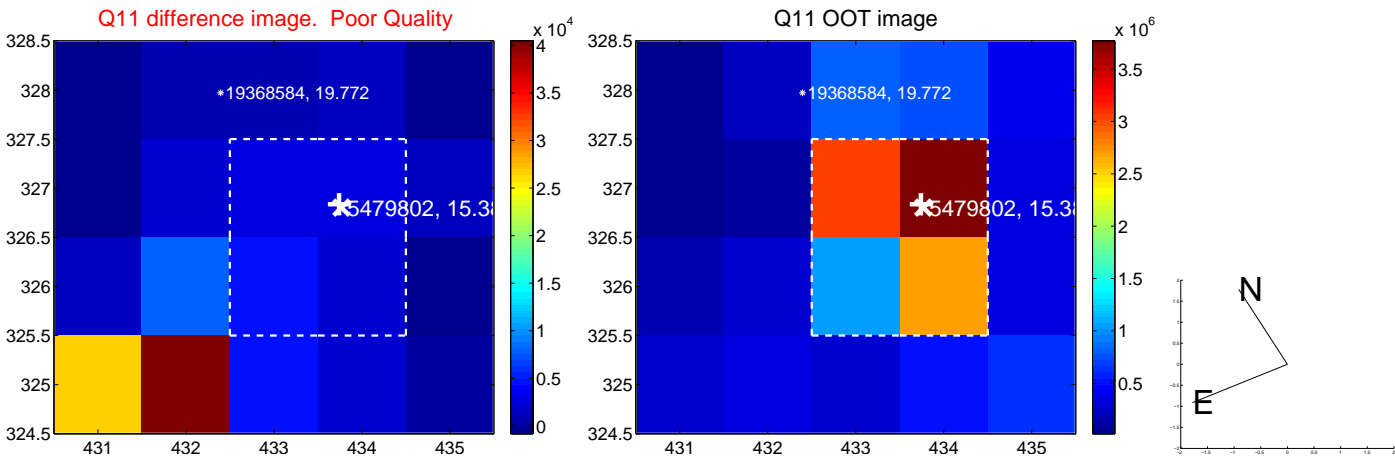
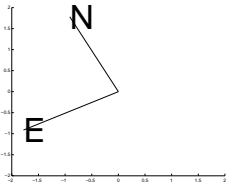
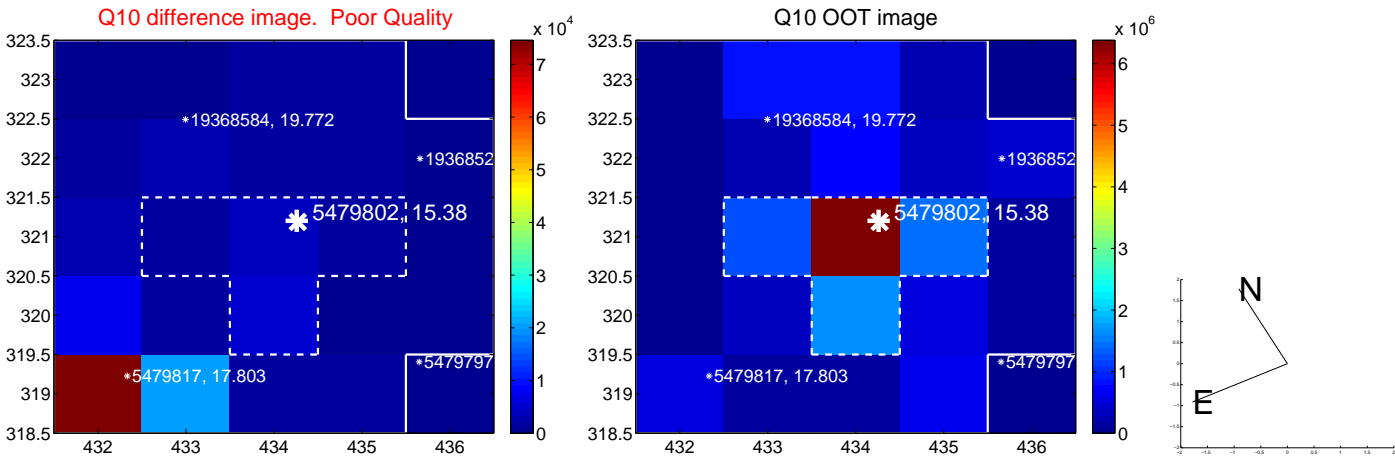
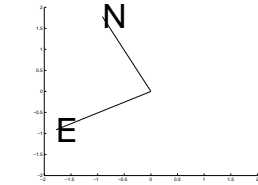
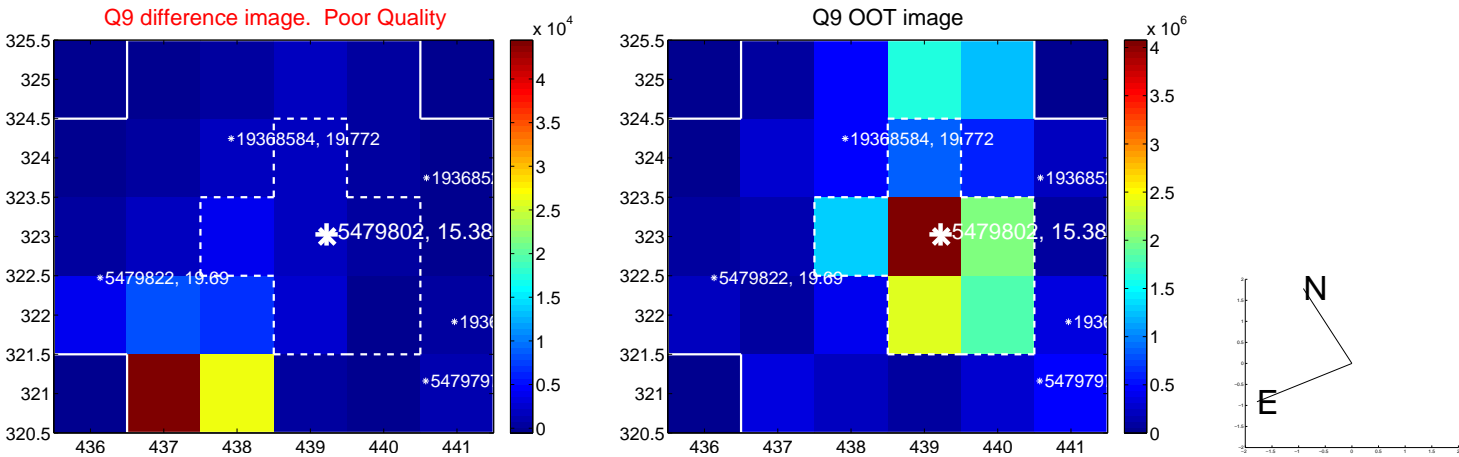
Q4 OOT image



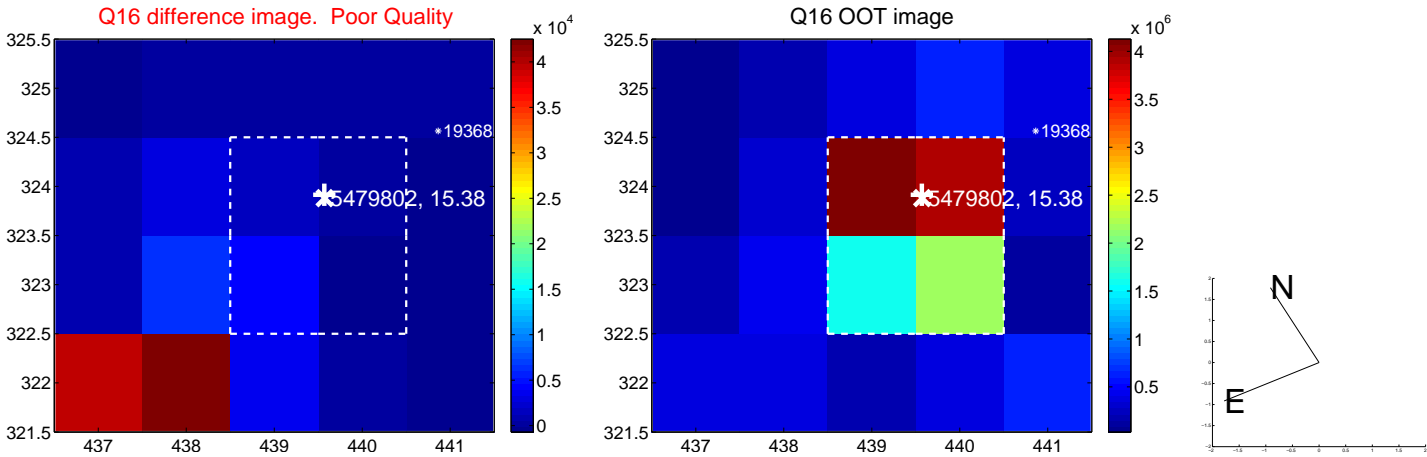
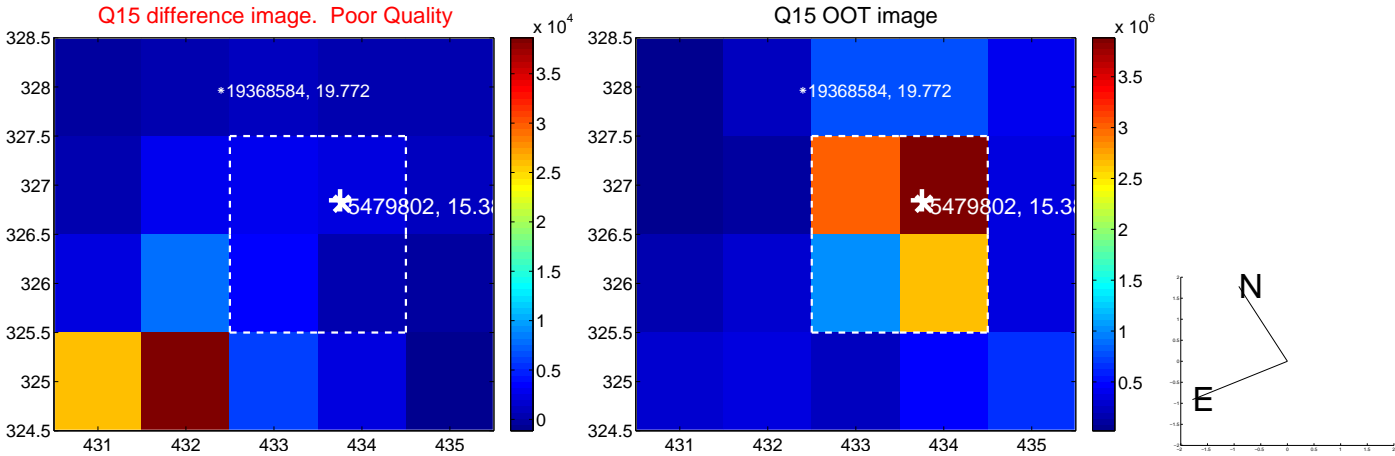
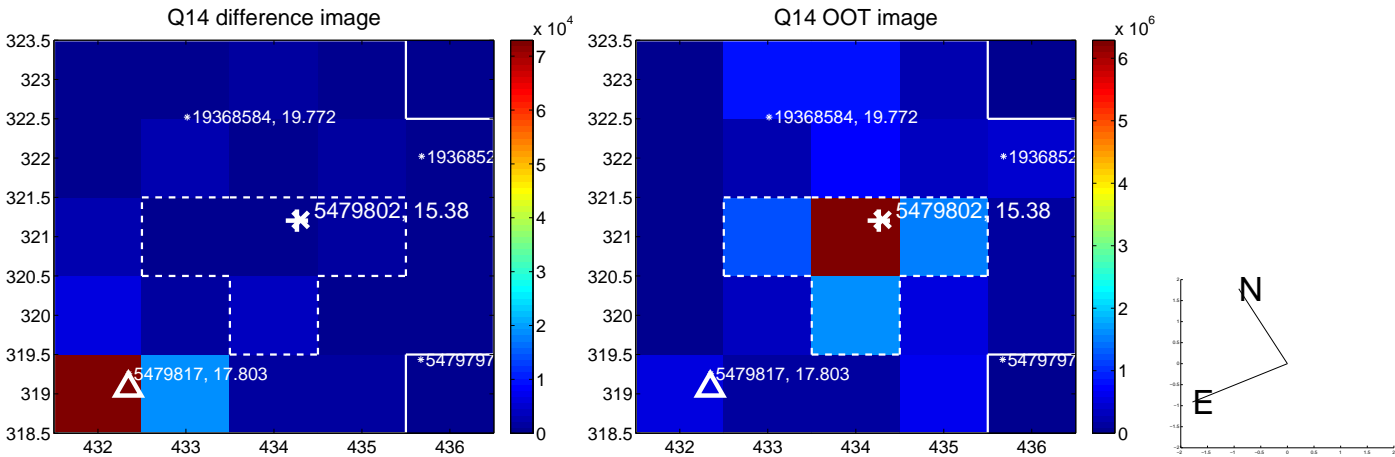
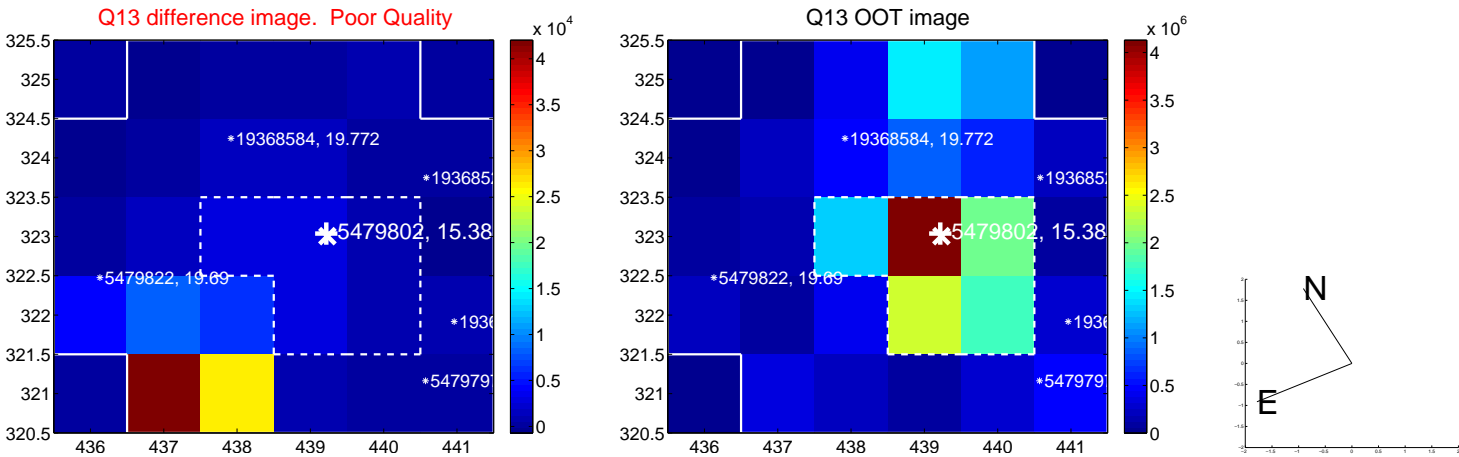
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



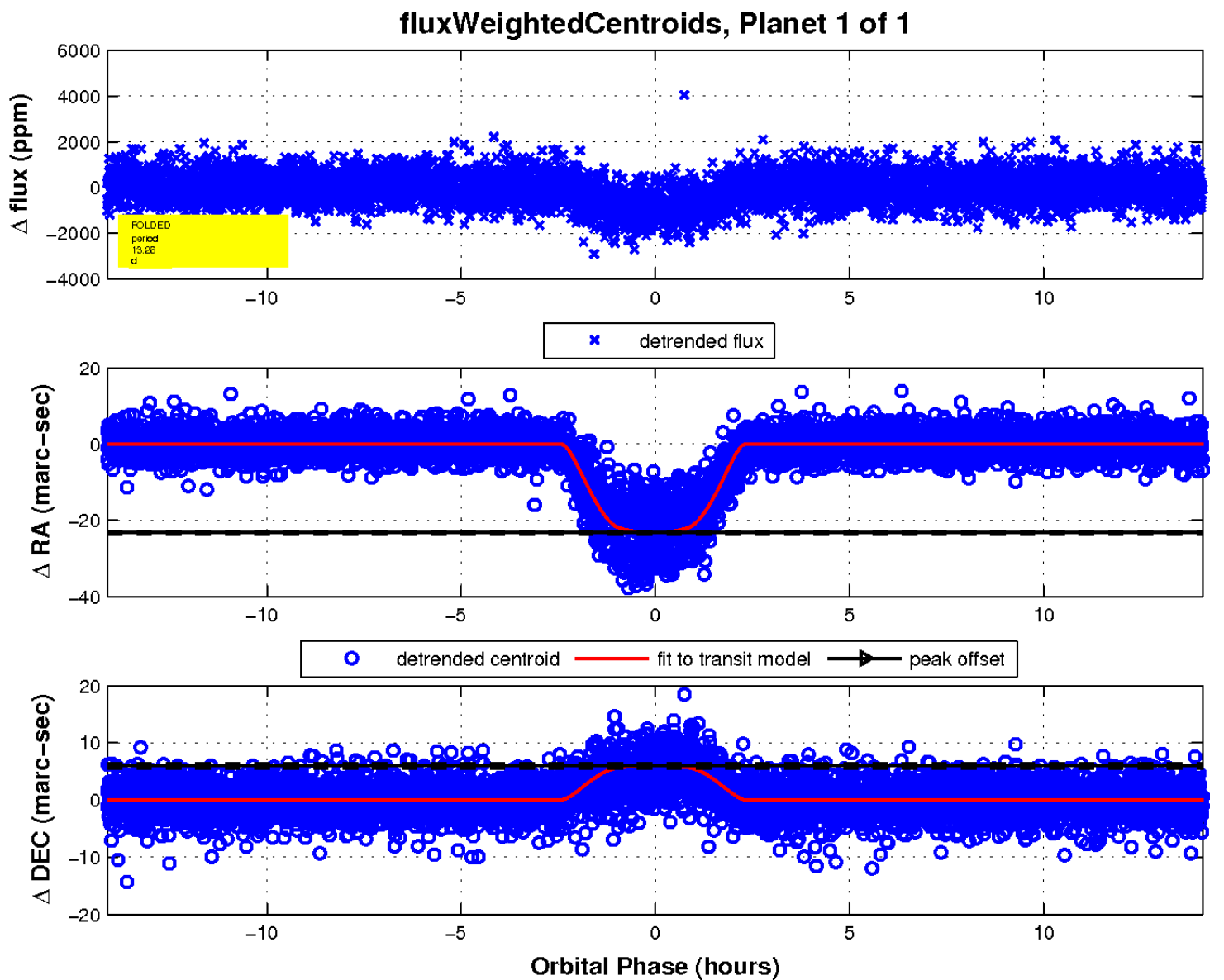
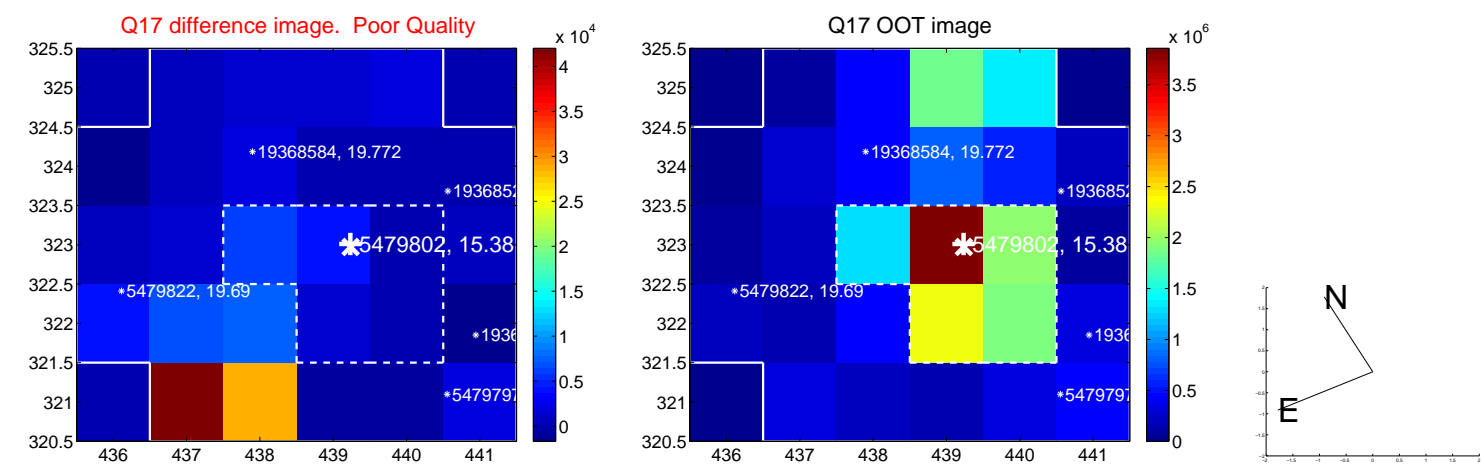
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

