

KIC 011515679

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})
011515679-01	OBS	No	4.264325	135.635463	139.6	22.168	8.5	9.5	0.96	5889	1.26	377.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011515679-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—CENT_KIC_POS

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

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

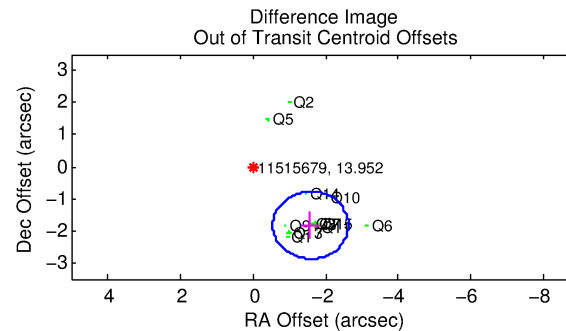
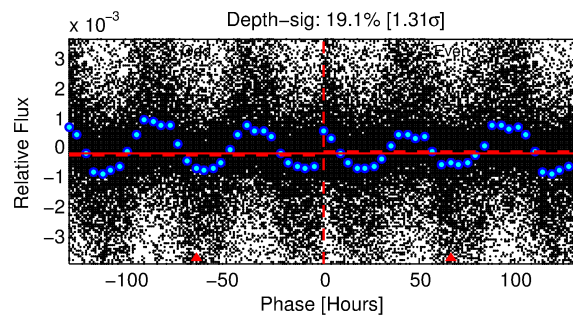
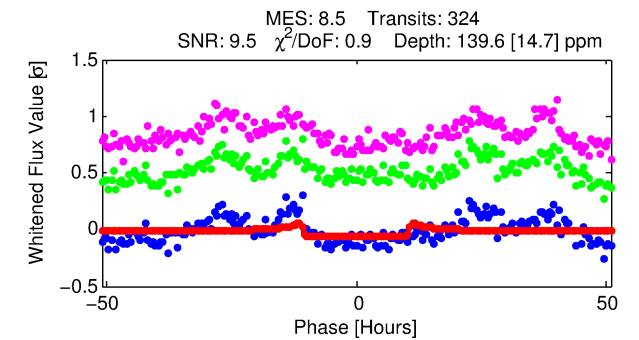
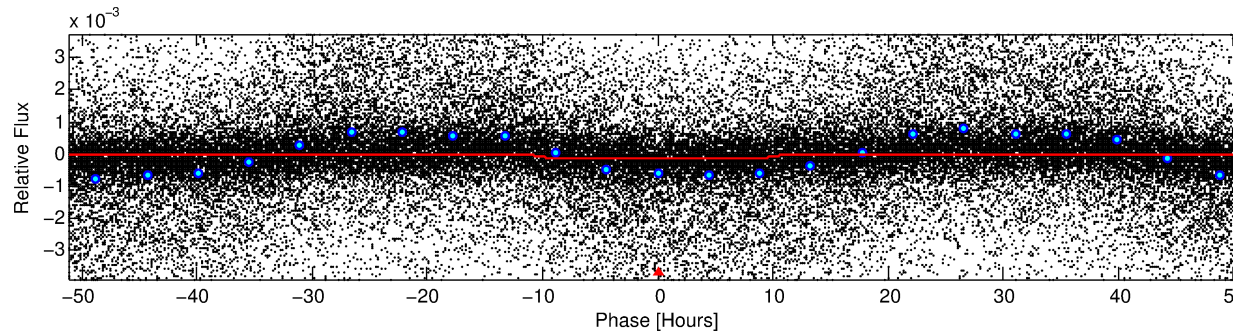
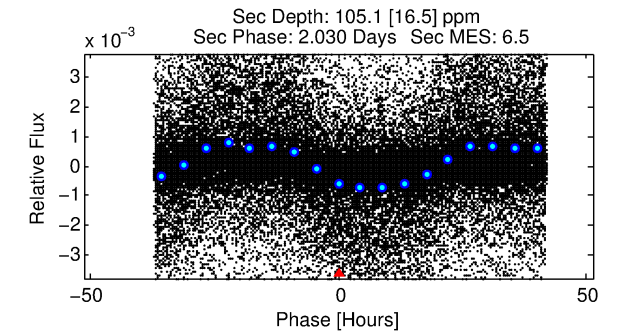
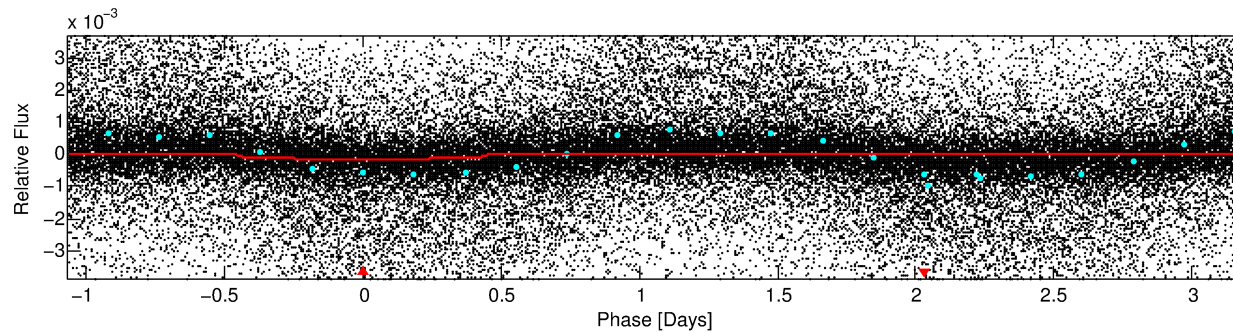
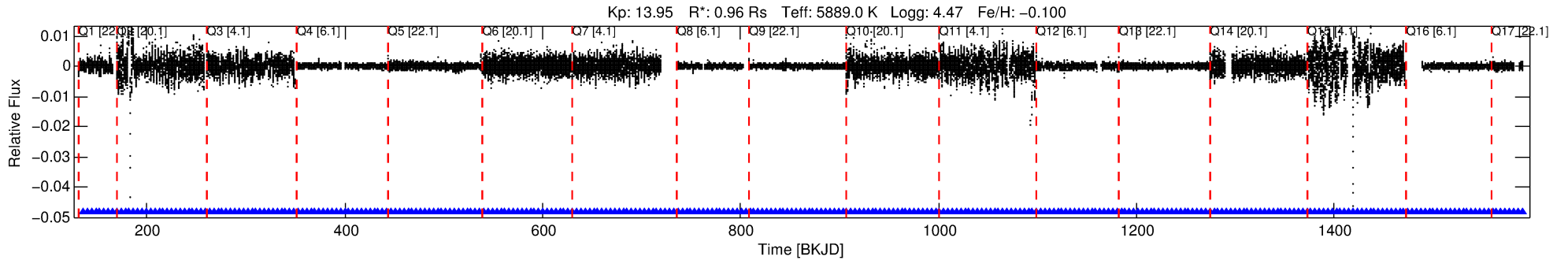
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011515679-01

No Significant Match Found

DV One-Page Summary

KIC: 11515679 Candidate: 1 of 1 Period: 4.264 d



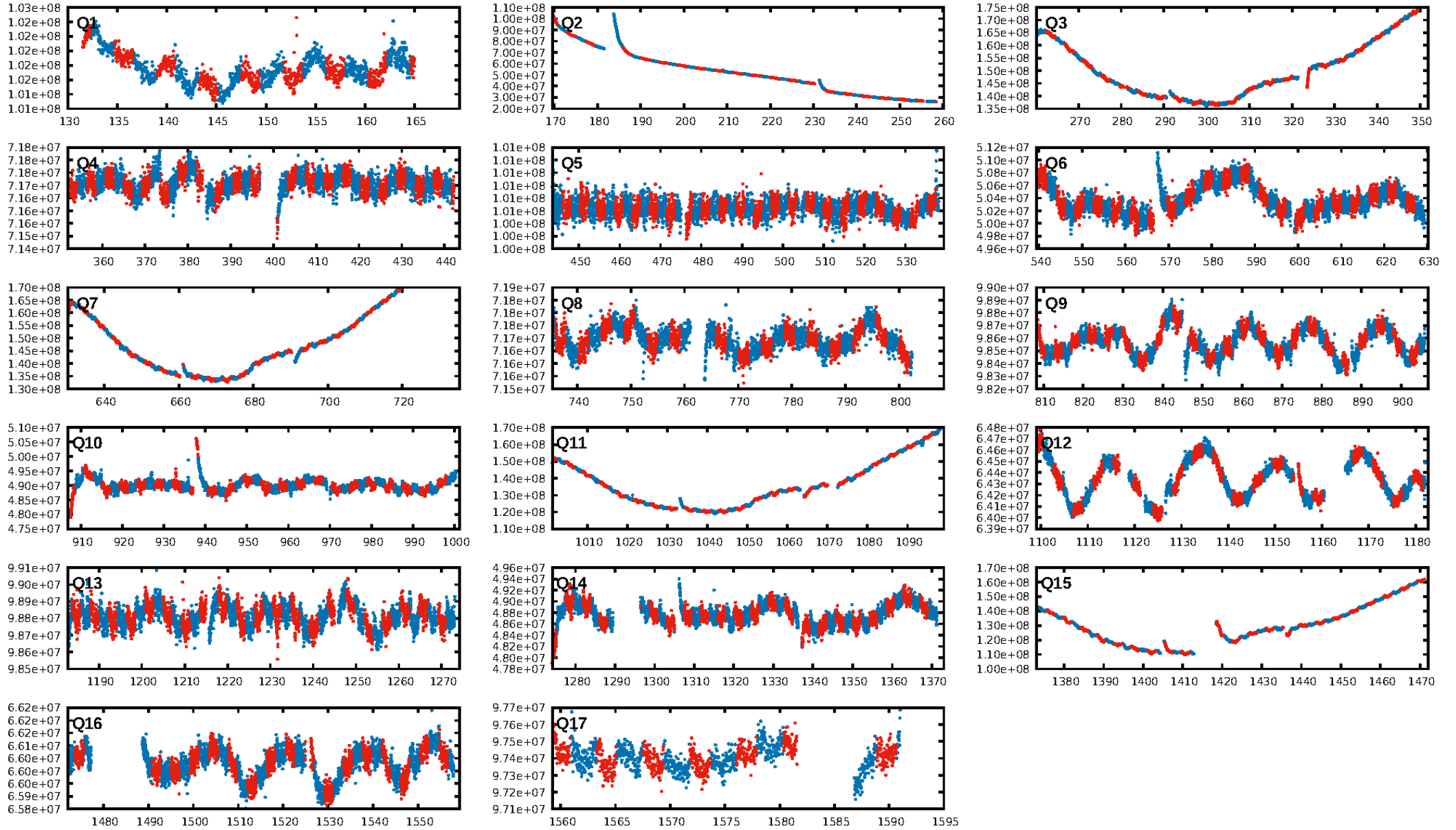
DV Fit Results:

Period = 4.26432 [0.00007] d
Epoch = 135.6355 [0.0125] BKJD
Rp/R* = 0.0120 [0.0014]
a/R* = 1.26 [0.24]
b = 0.81 [0.23]
Seff = 377.17 [151.25]
Teff = 1124 [113] K
Rp = 1.26 [0.41] Re
a = 0.0512 [0.0131] AU
Ag = 95.81 [44.91] [2.11 σ]
Teffp = 5436 [442] K [9.44 σ]

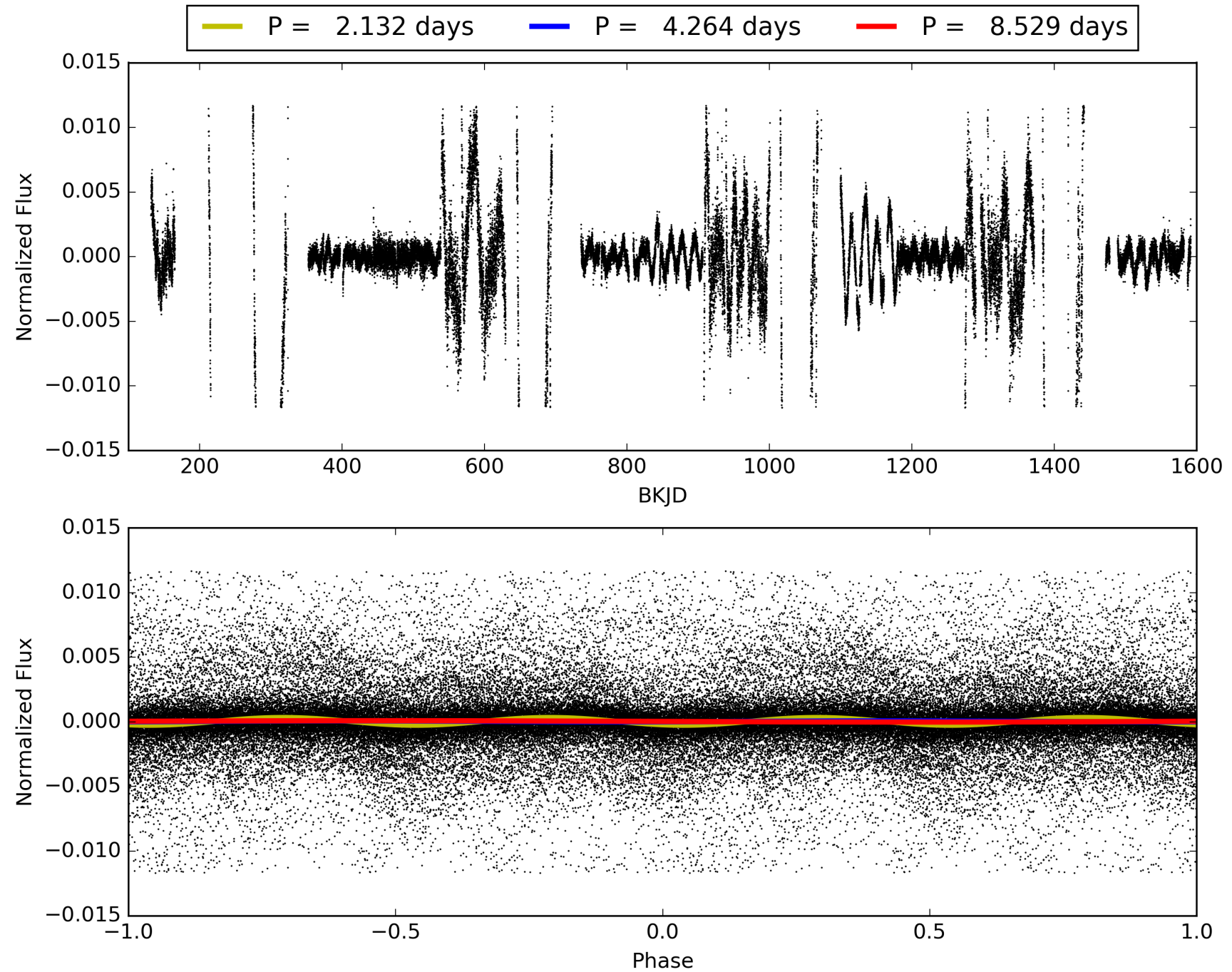
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.38e-18
RollingBand-fgt: 1.00 [309/309]
GhostDiagnostic-chr: -2
Centroid-sig: 0.3%
Centroid-so: 2.431 arcsec [17.39 σ]
OotOffset-rm: 2.420 arcsec [6.95 σ]
KicOffset-rm: 2.070 arcsec [6.54 σ]
OotOffset-st: 4/4/0/5 [13]
KicOffset-st: 4/4/1/5 [14]
DiffImageQuality-fgm: 0.86 [12/14]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011515679-01, PDC Light Curves

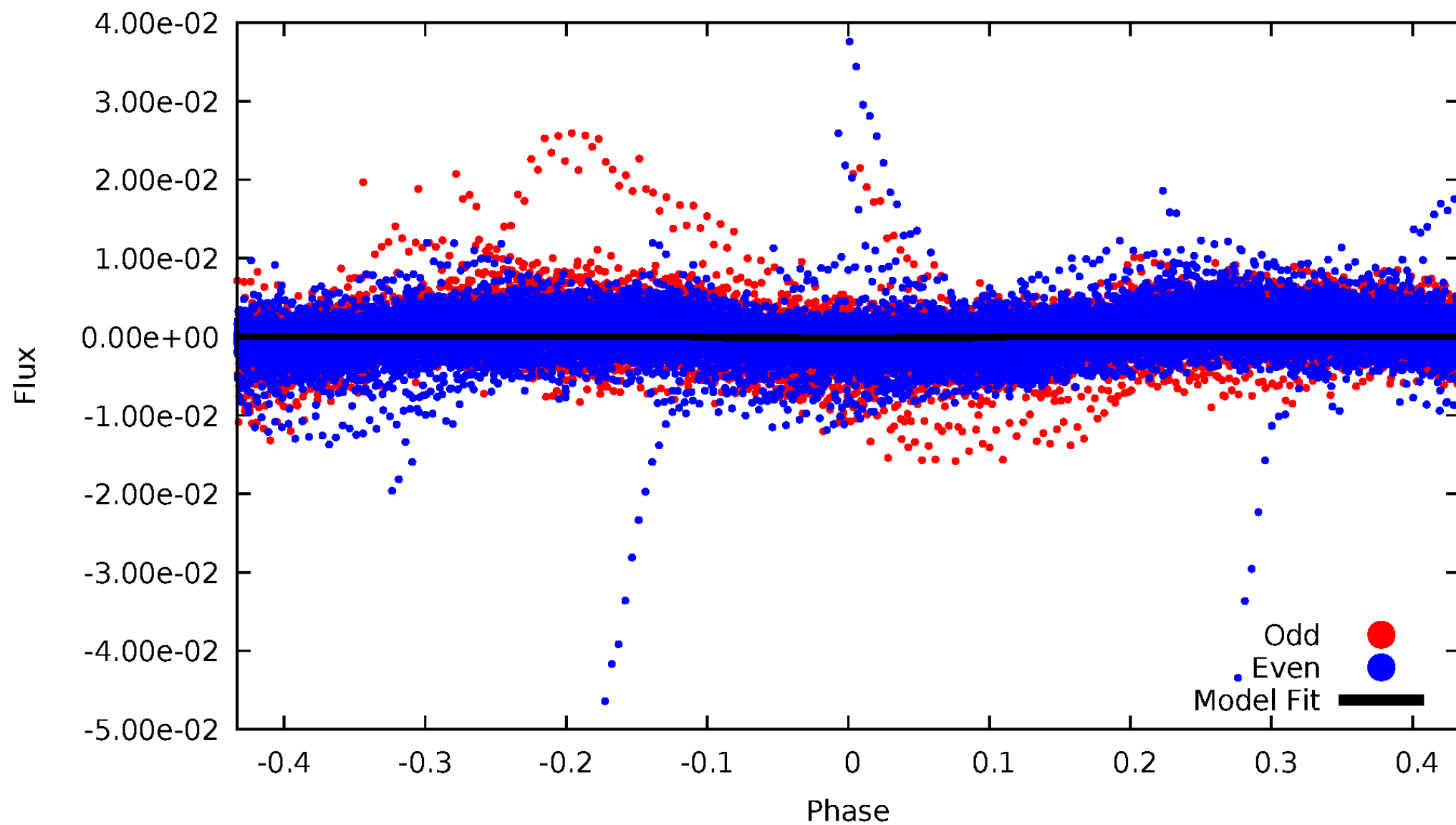


TCE 011515679-01



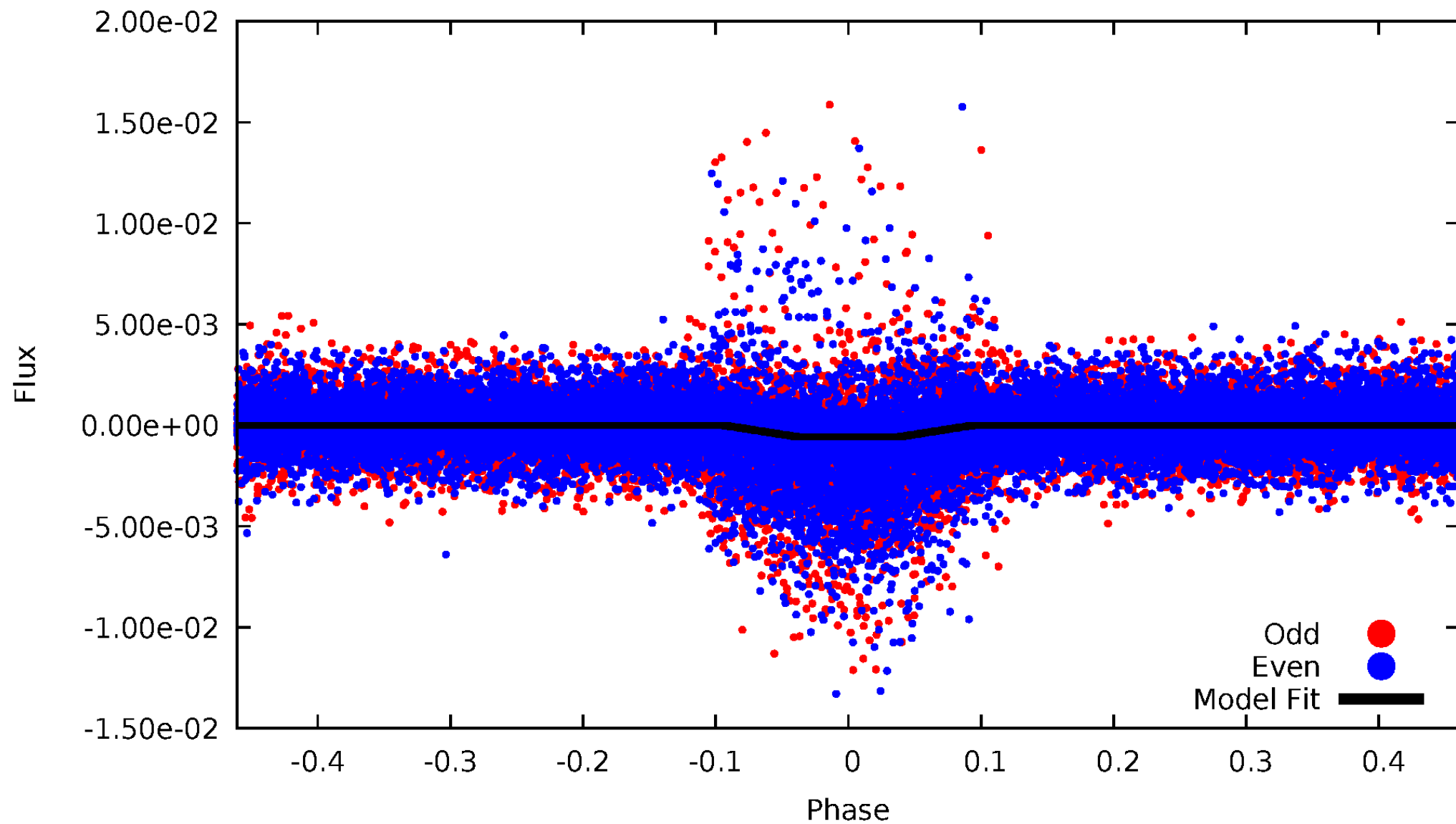
DV Odd/Even

TCE 011515679-01



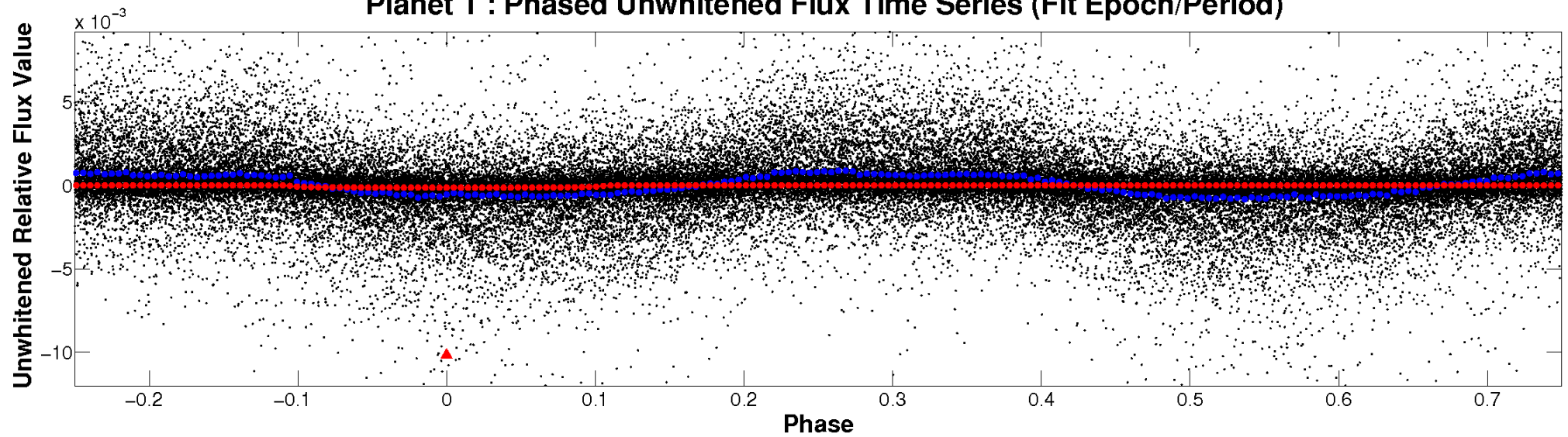
ALT Odd/Even

TCE 011515679-01

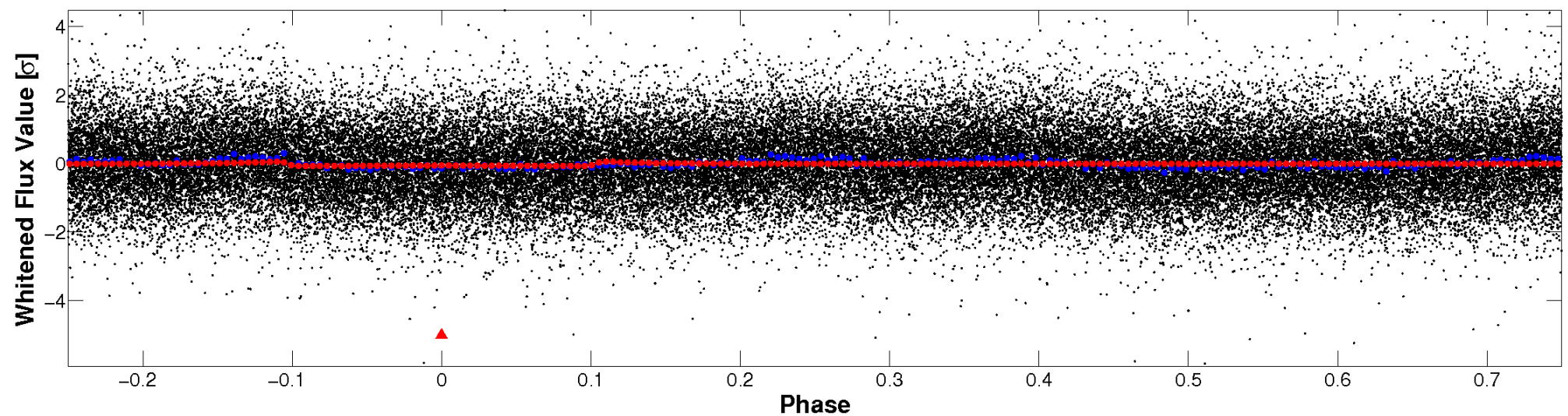


Non-Whitened Vs. Whitened Light Curve

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

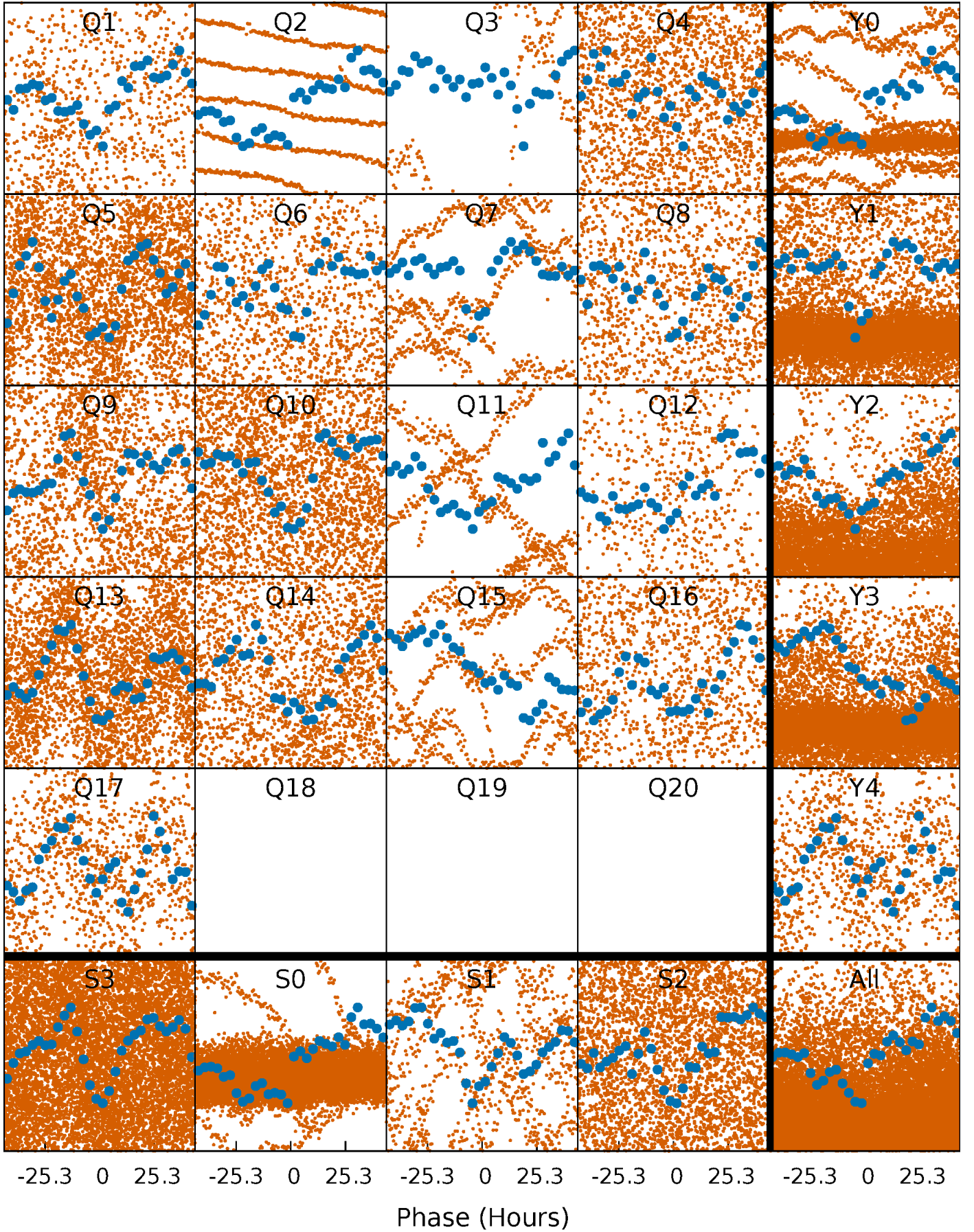


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



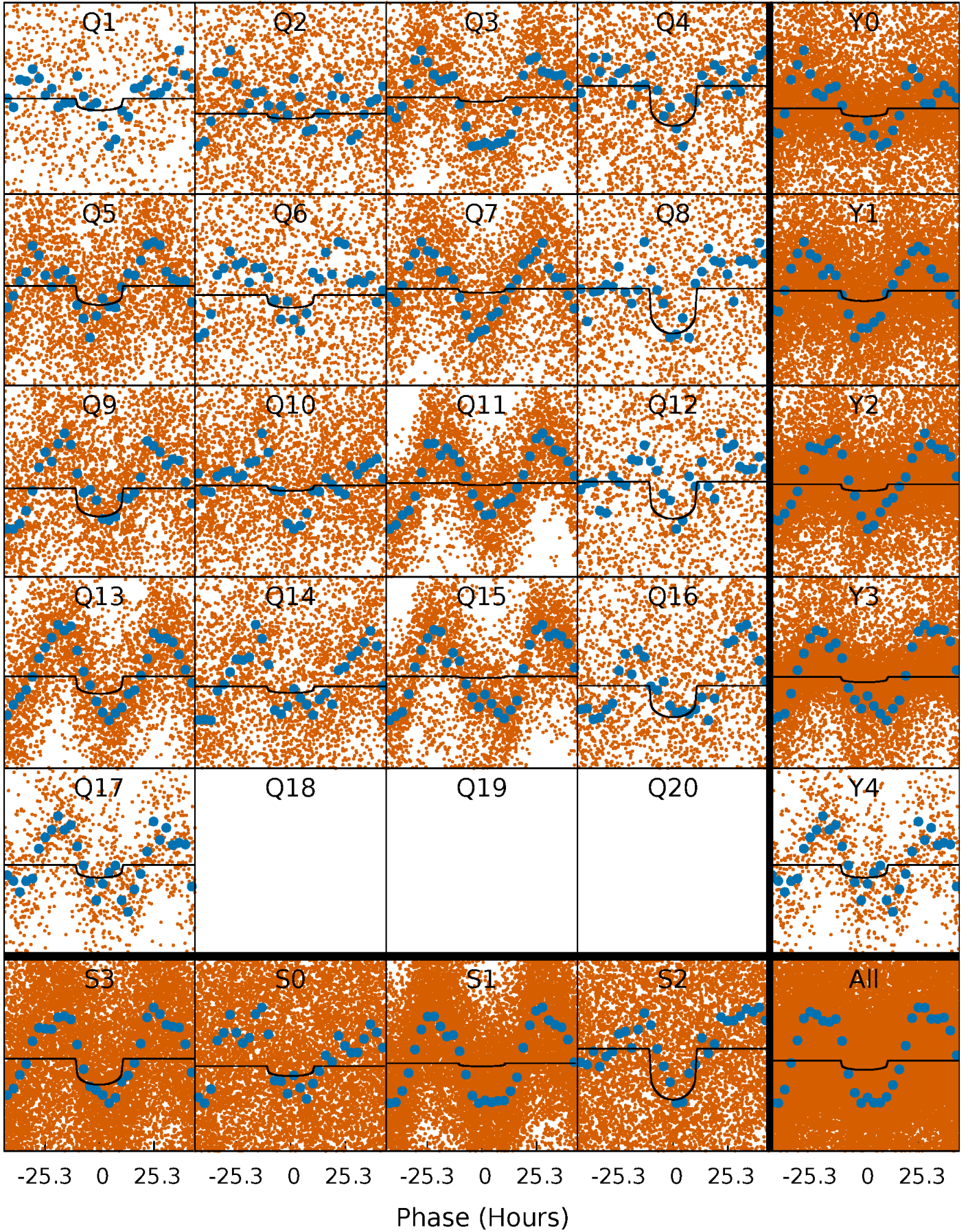
PDC Quarter-Phased Transit Curves

TCE 011515679-01 P= 4.264325 Days $T_0=135.635463$ (BKJD)



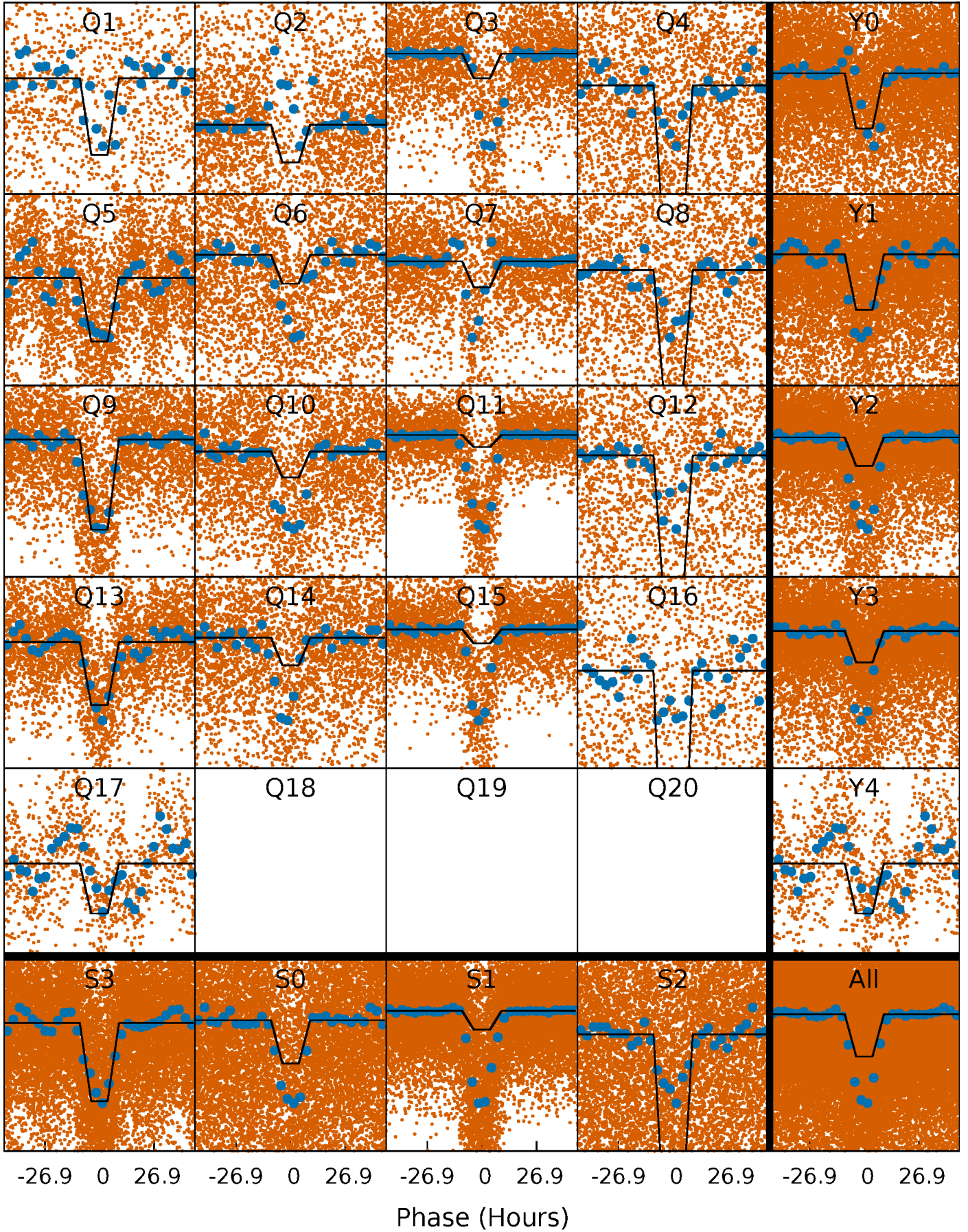
DV Quarter-Phased Transit Curves

TCE 011515679-01 P= 4.264325 Days $T_0=135.635463$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

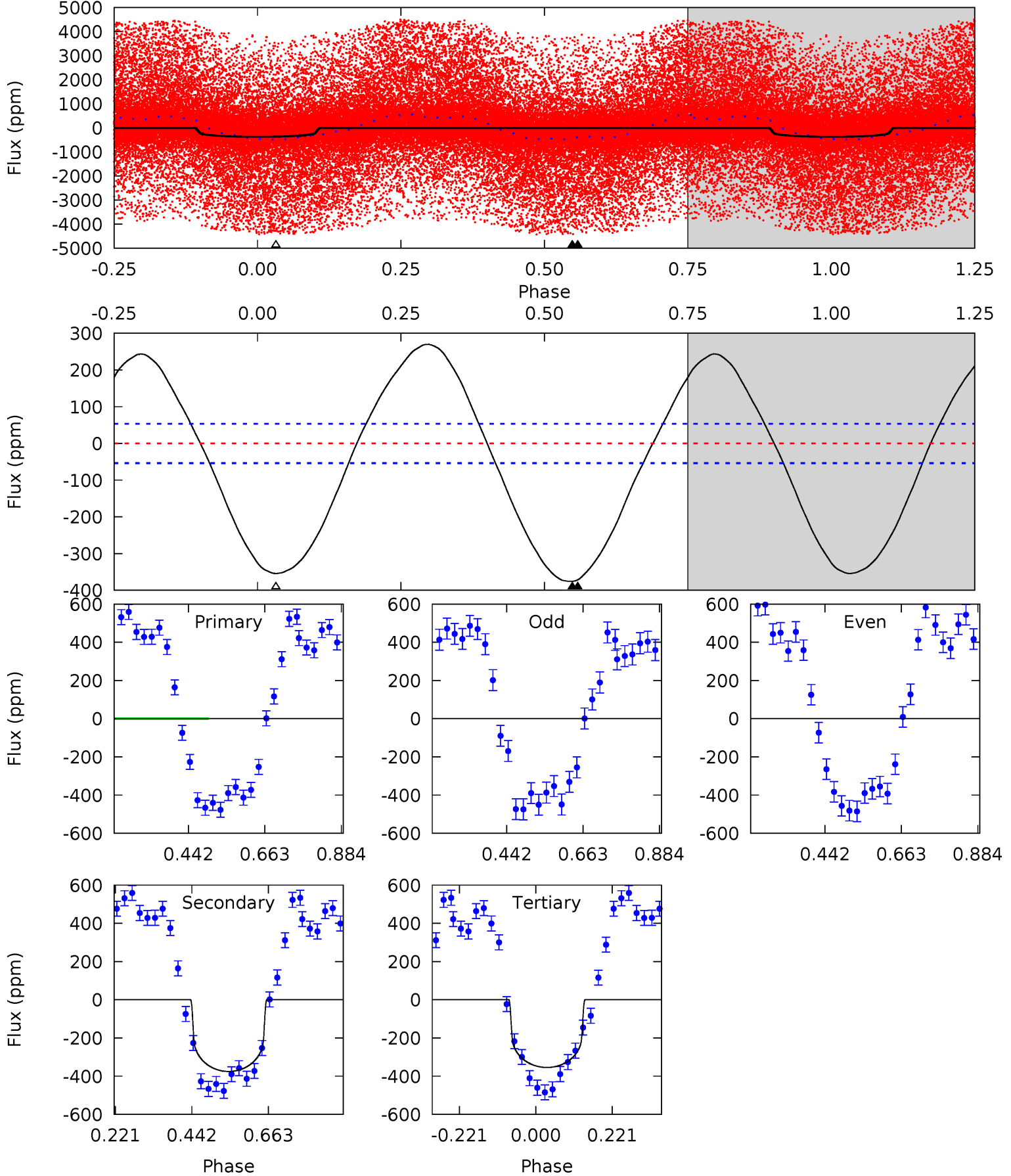
TCE 011515679-01 P= 4.263398 Days $T_0=131.538299$ (BKJD)



DV Model-Shift Uniqueness Test

011515679-01, P = 4.264325 Days, E = 131.371138 Days

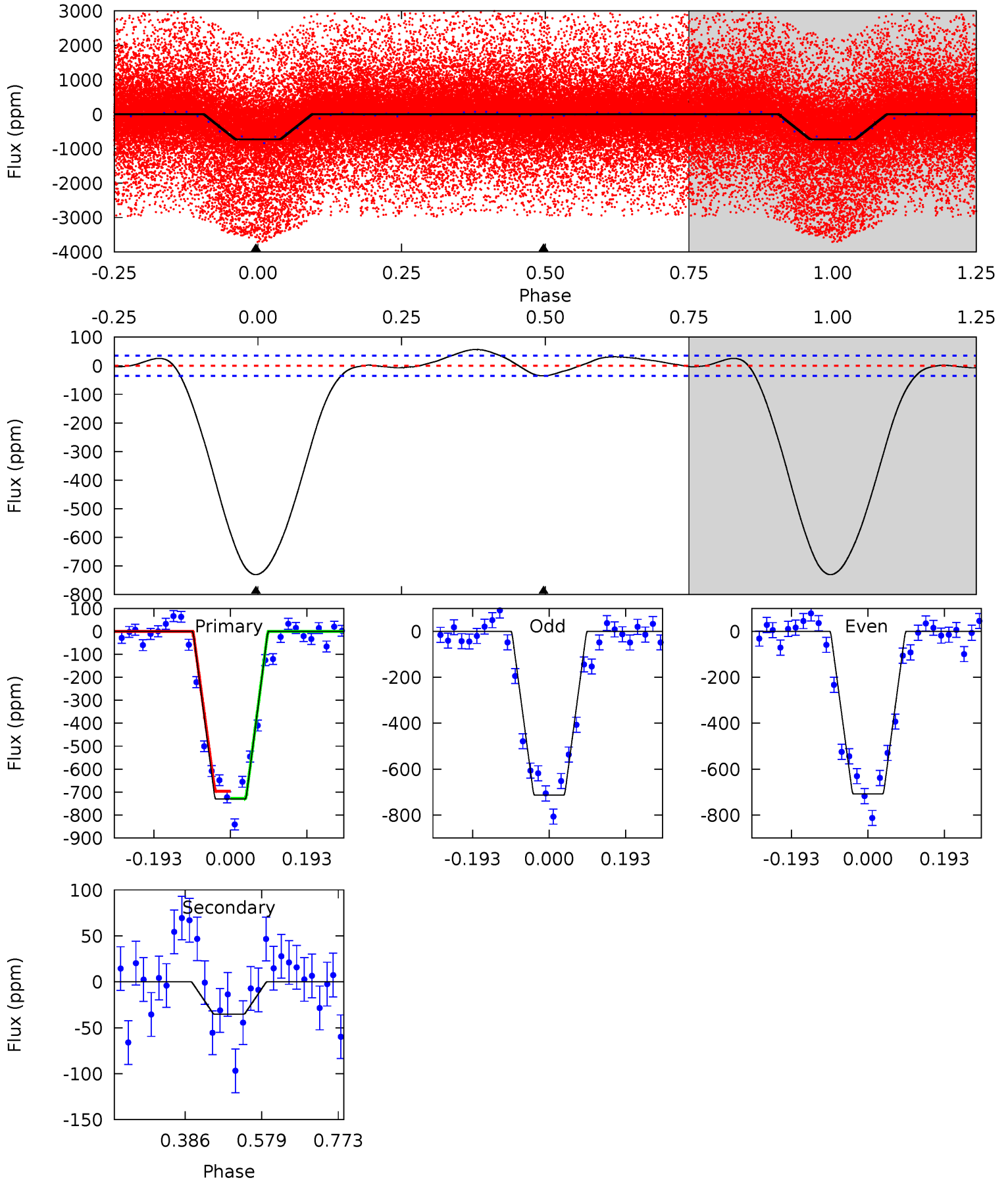
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.4	30.7	29.0	0	4.40	1.22	18.0	1.40	30.4	1.72	30.7	0.09	2.44	0.42	7.60



Alt Model-Shift Uniqueness Test

011515679-01, P = 4.263398 Days, E = 127.274901 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
90.6	4.36	0	0	4.42	1.30	0.79	90.6	90.6	4.36	4.36	0.31	0.99	0.07	1.97



Stellar Parameters For KIC 011515679

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5889^{+205}_{-226}	$4.468^{+0.067}_{-0.202}$	$-0.100^{+0.300}_{-0.300}$	$0.957^{+0.291}_{-0.125}$	$0.983^{+0.127}_{-0.127}$	$1.578^{+0.559}_{-0.799}$
	+3%/-4%	+1%/-5%	+300%/-300%	+30%/-13%	+13%/-13%	+35%/-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 011515679-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-375 ± 12	$1.31^{+0.23}_{-0.21}$	1601^{+123}_{-90}	7560^{+751}_{-583}	309^{+127}_{-85}
Alt.	-35 ± 8	$2.57^{+0.42}_{-0.28}$	1605^{+121}_{-88}	3416^{+159}_{-176}	$7.147^{+2.703}_{-1.988}$

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

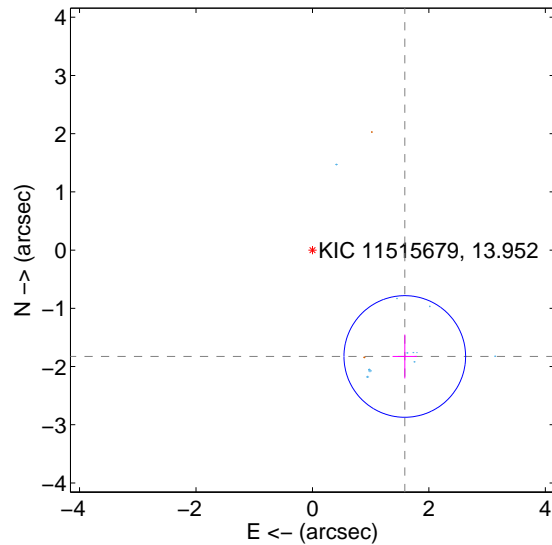
Supplemental centroid analysis for 011515679-01. Kepler magnitude: 13.95. Transit SNR 9.54

There are 12 quarters with good PRF difference image offsets

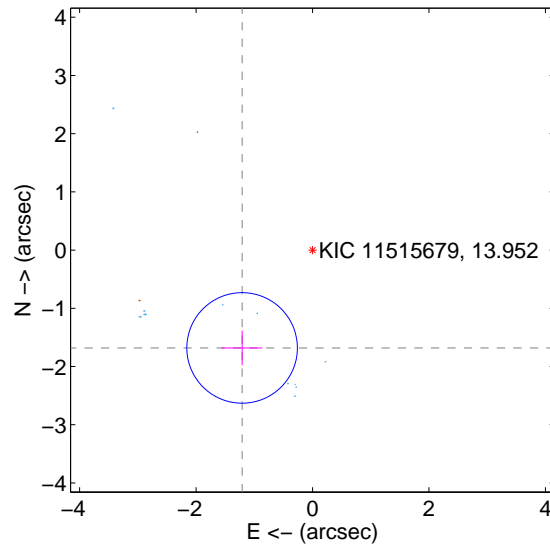
The OOT PRF centroid is offset from the target star catalog position by about 3.98 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.420 ± 0.348	6.95	-1.586 ± 0.210	-1.827 ± 0.377
PRF-fit source offset from KIC position	2.070 ± 0.316	6.54	1.210 ± 0.349	-1.680 ± 0.298
photometric centroid source offset	2.43 ± 0.14	17.39	2.42 ± 0.14	-0.24 ± 0.14

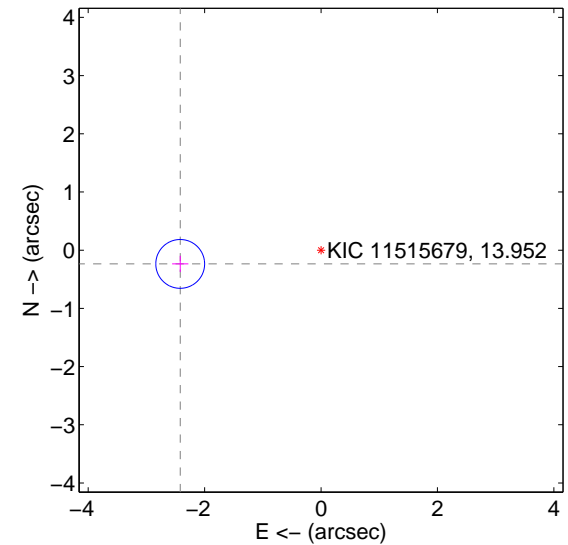
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

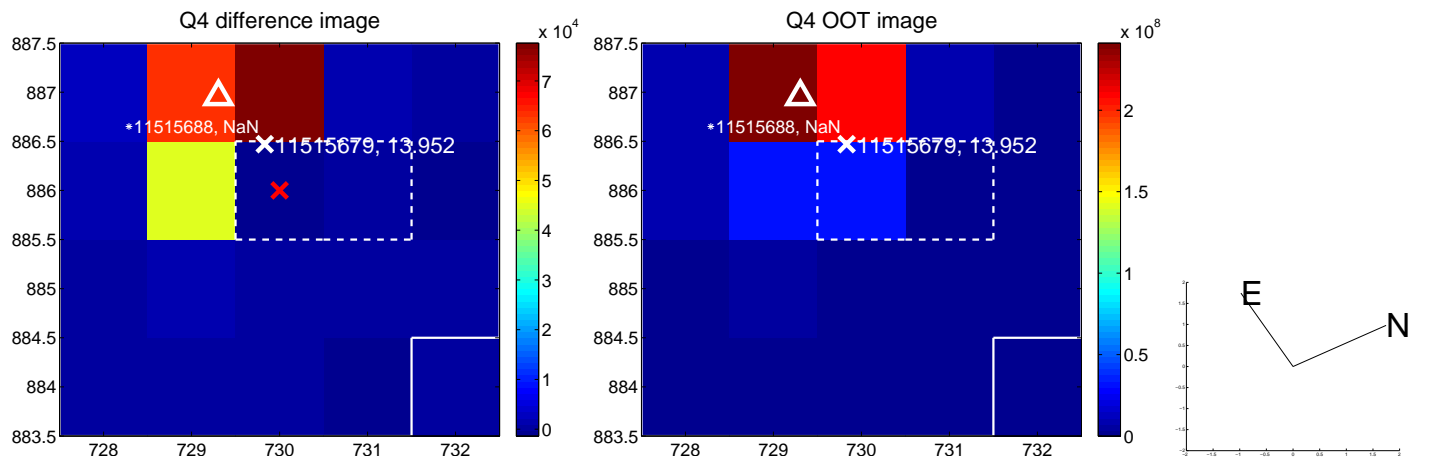
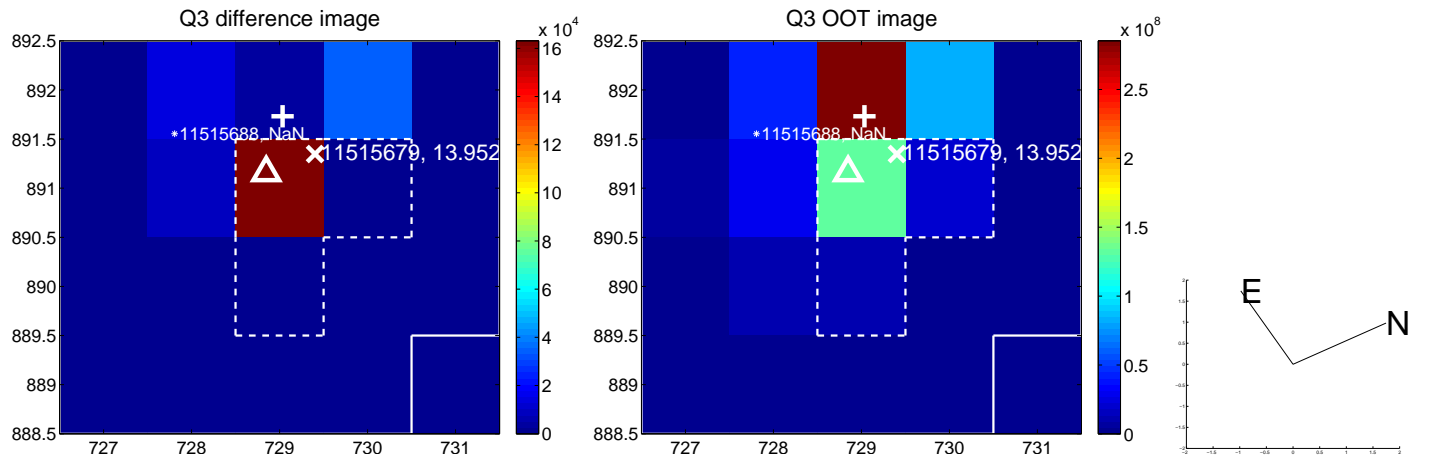
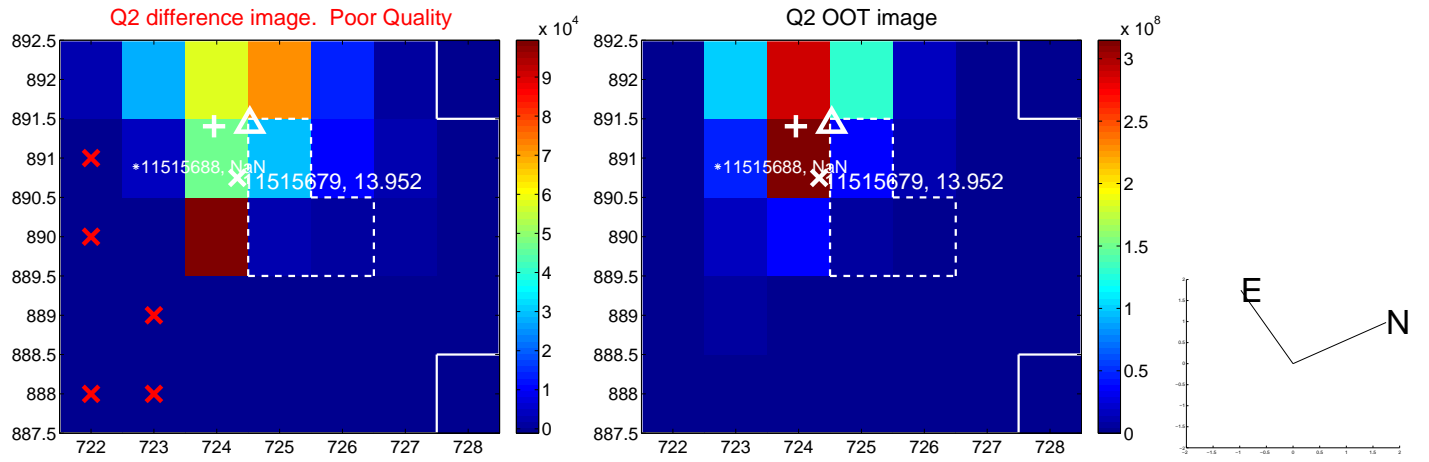
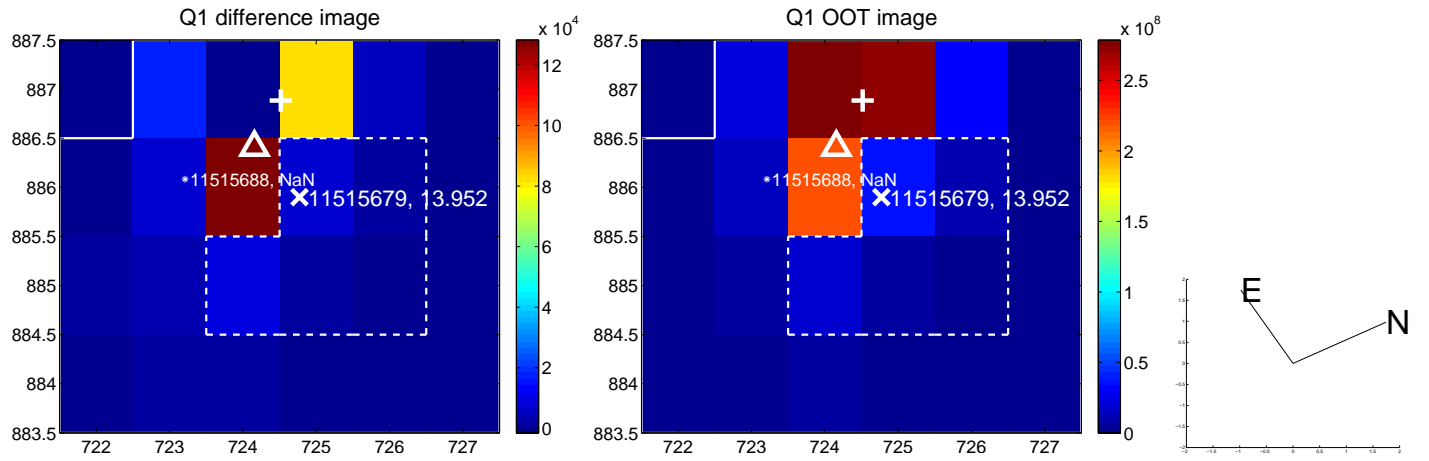


offset from photometric centroids

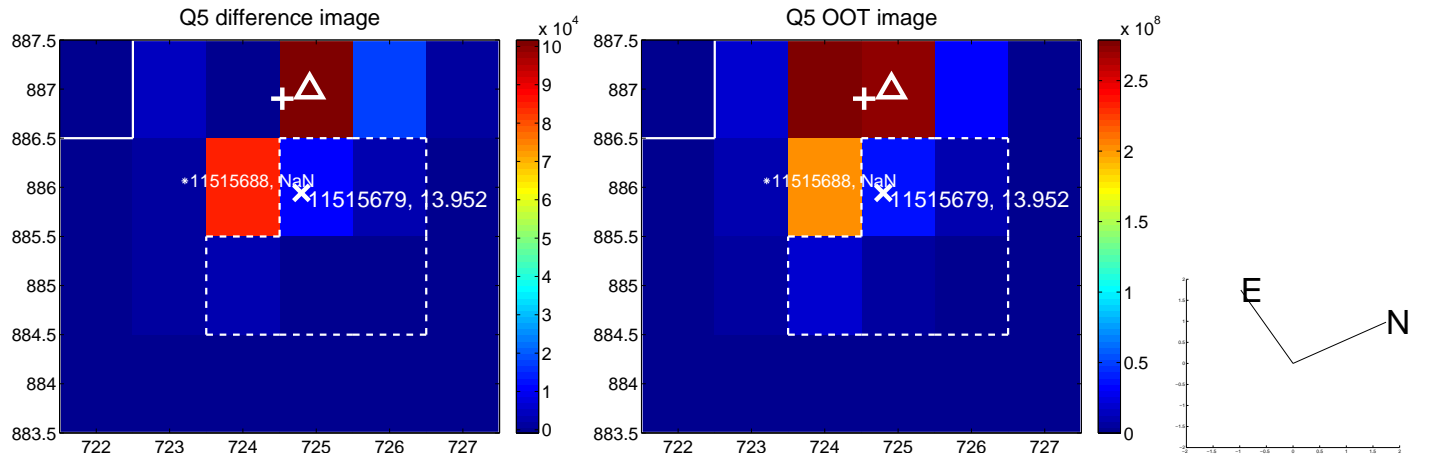


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

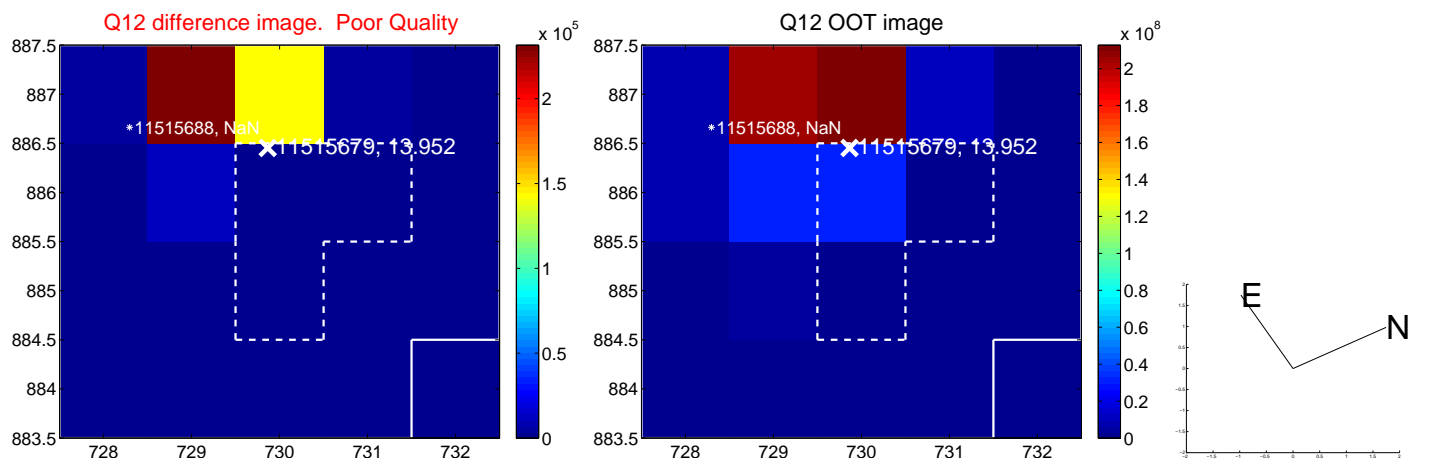
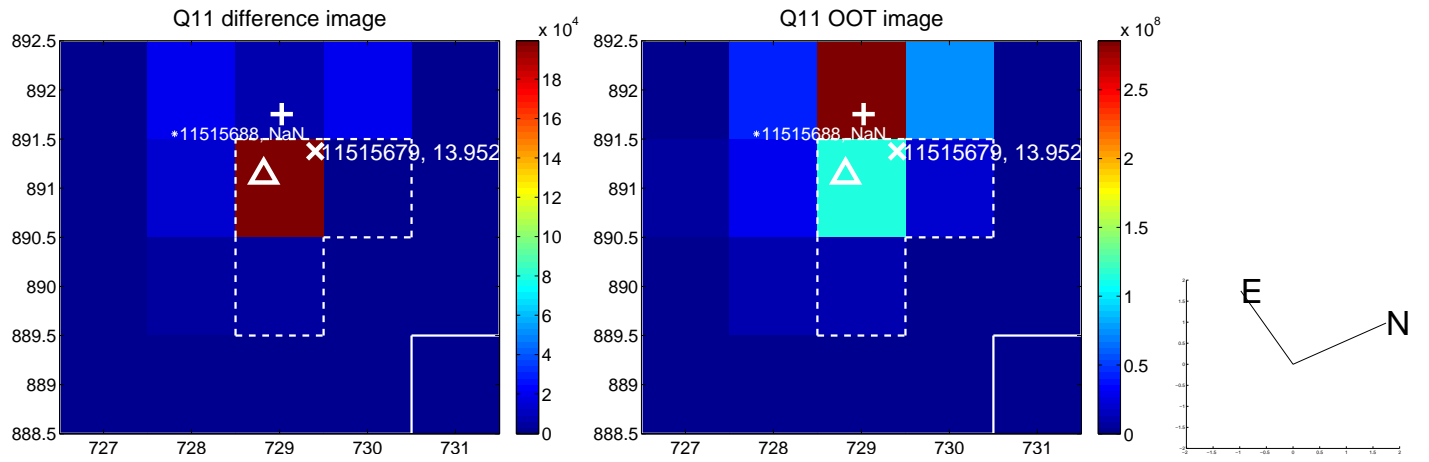
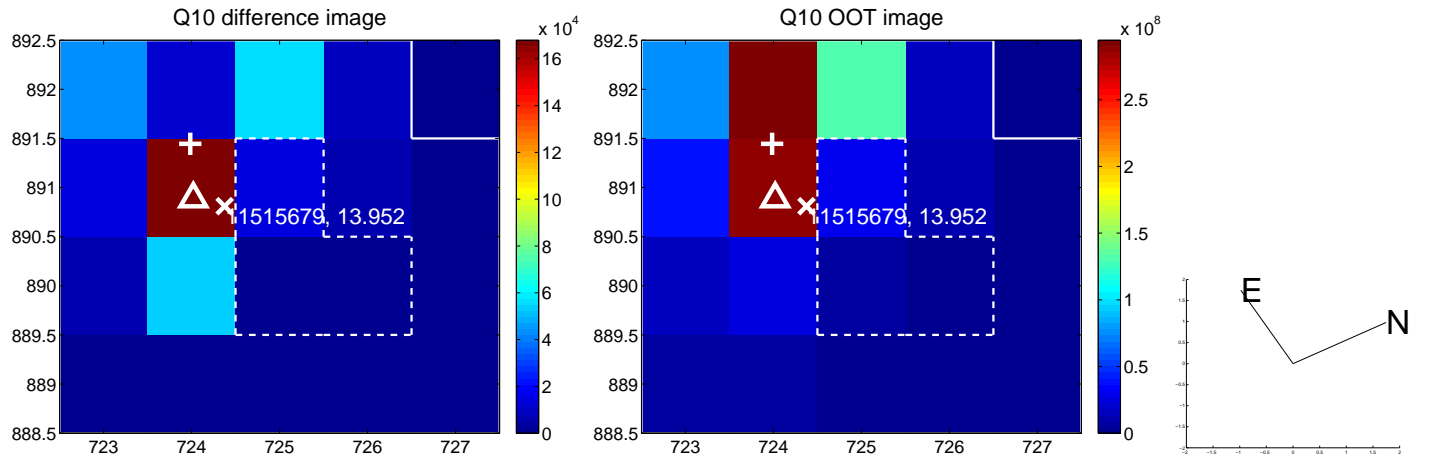
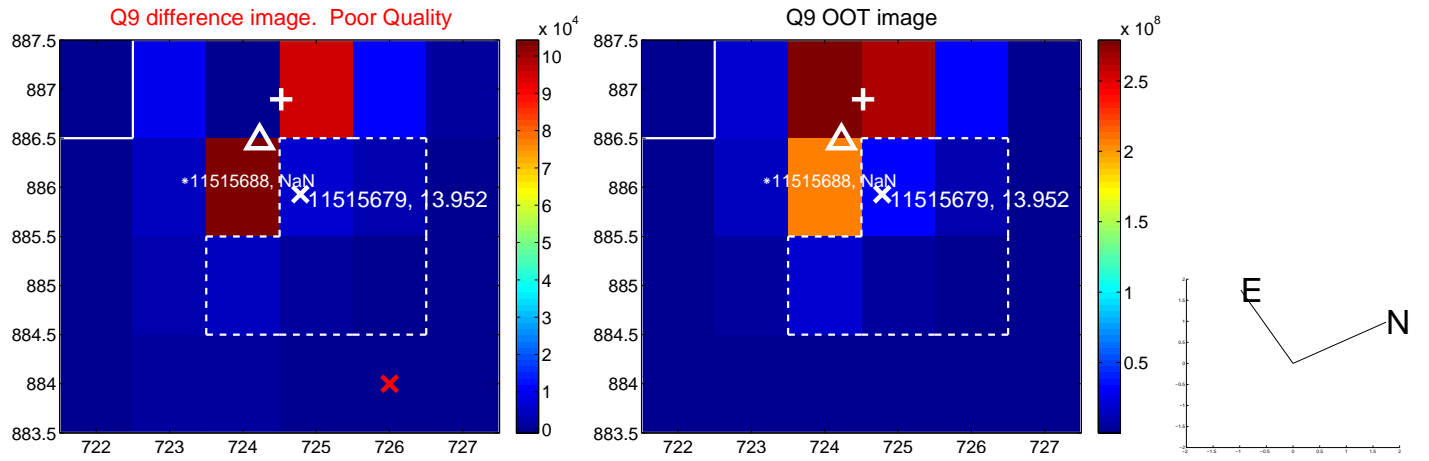
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



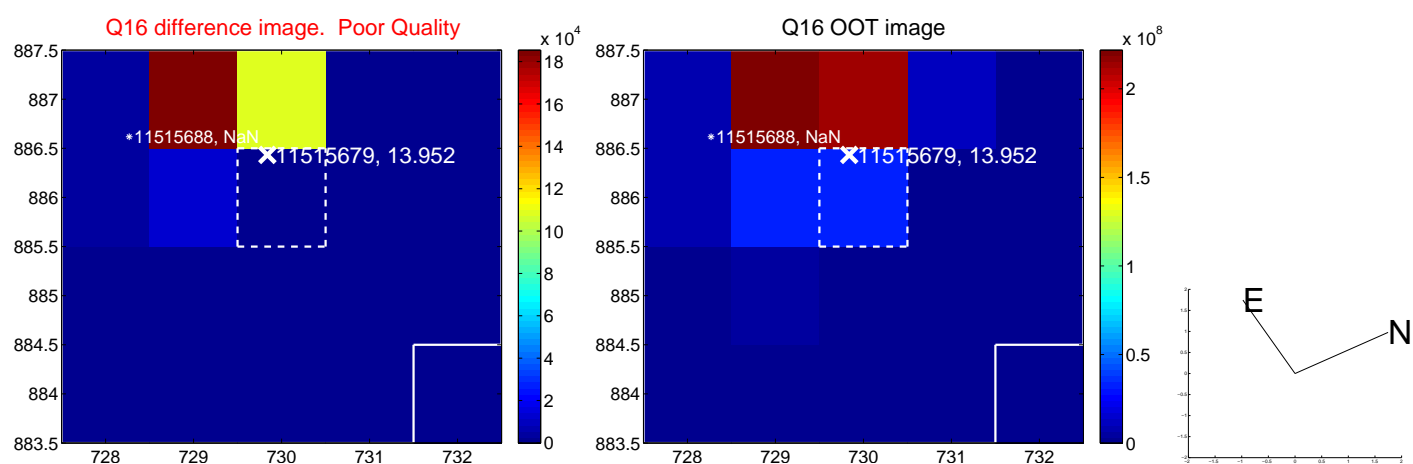
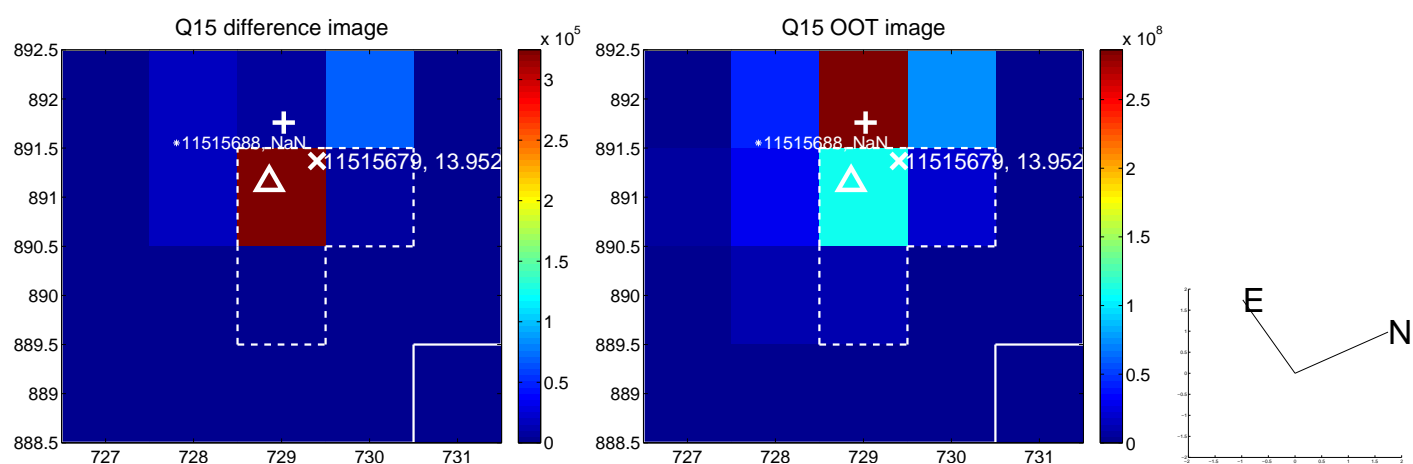
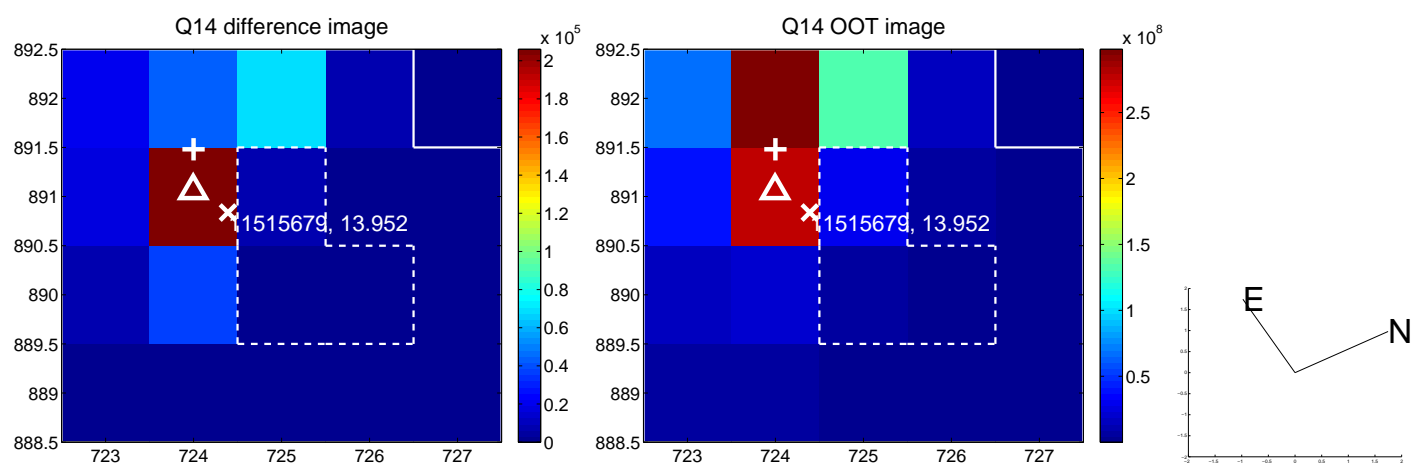
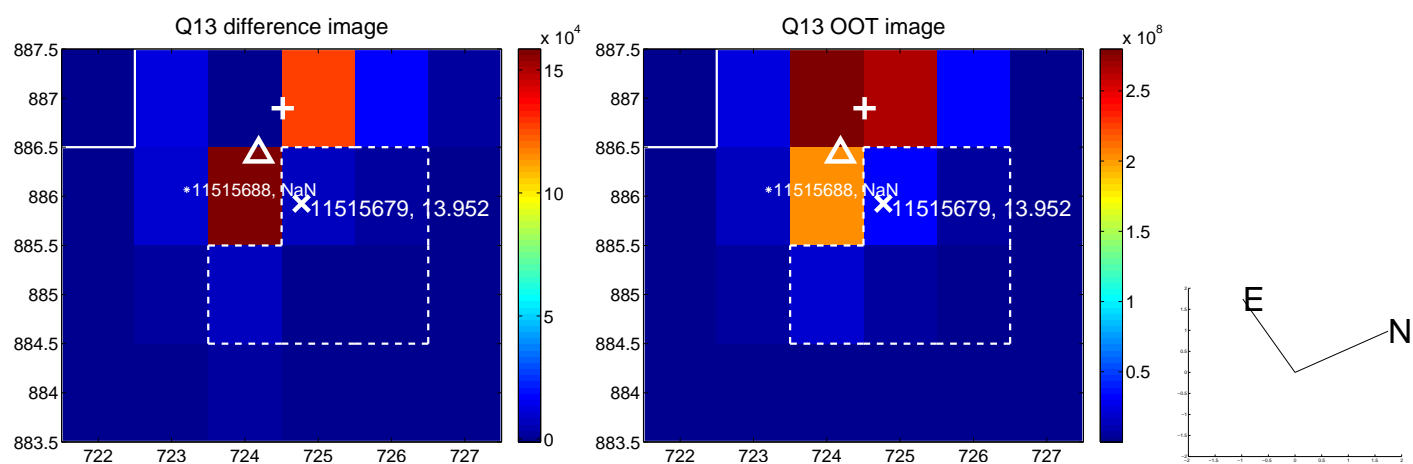
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



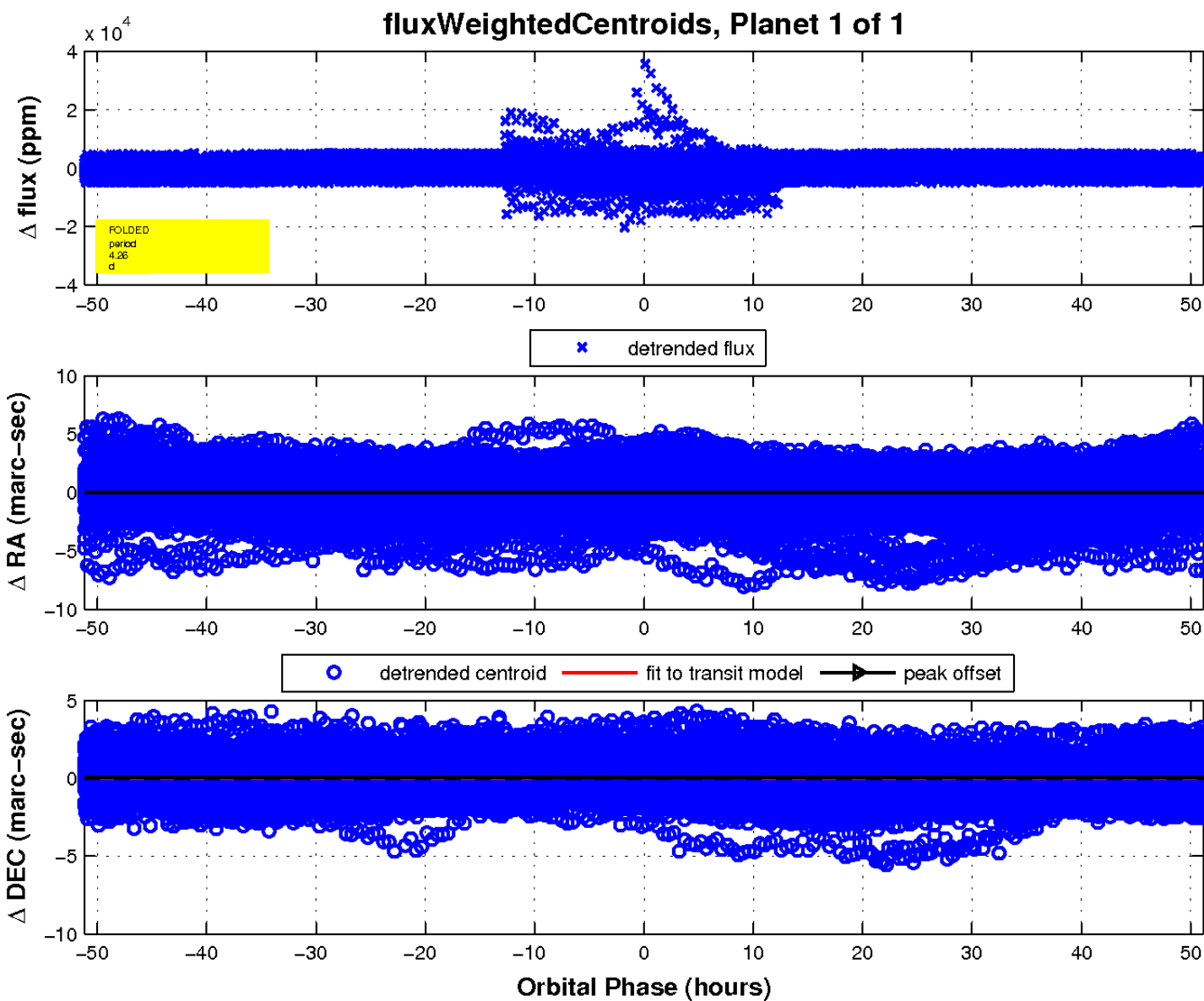
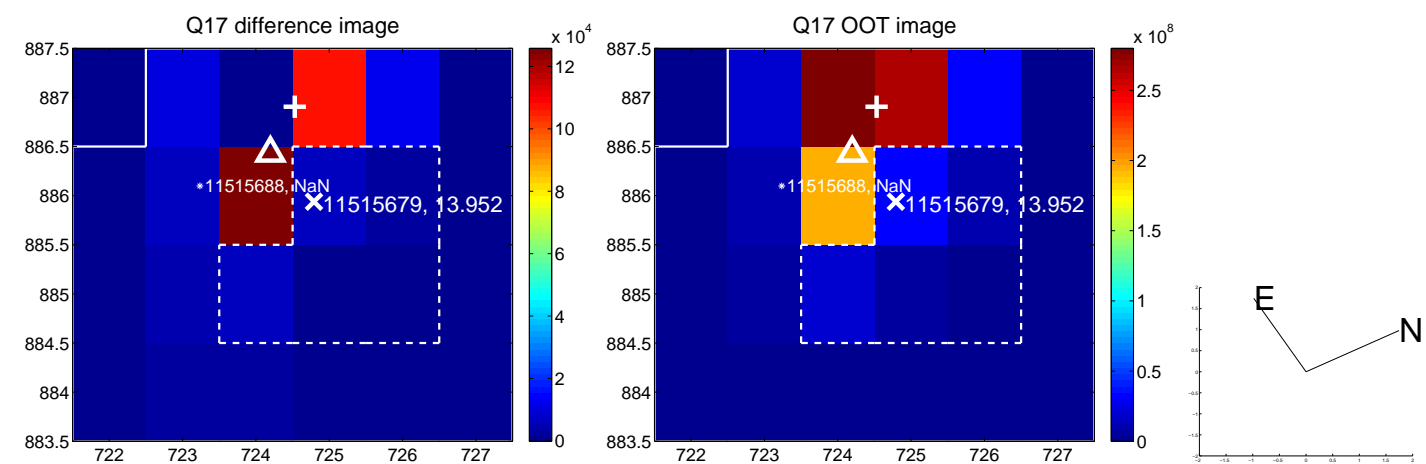
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UKIRT Image

Declination

