

KIC 008415752

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})
008415752-01	OBS	No	0.619254	132.035548	10.3	4.732	12.9	10.0	2.33	8026	0.76	66045.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008415752-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—CENT_SATURATED

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

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

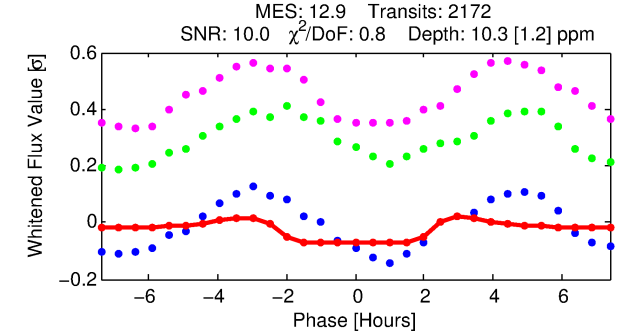
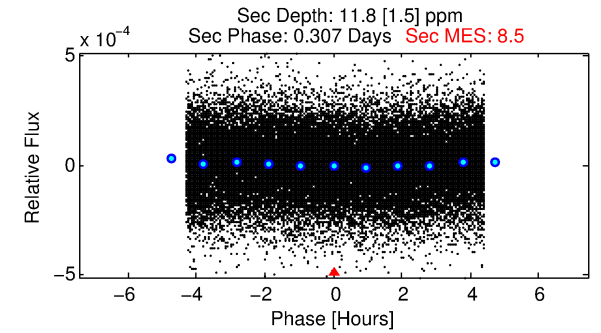
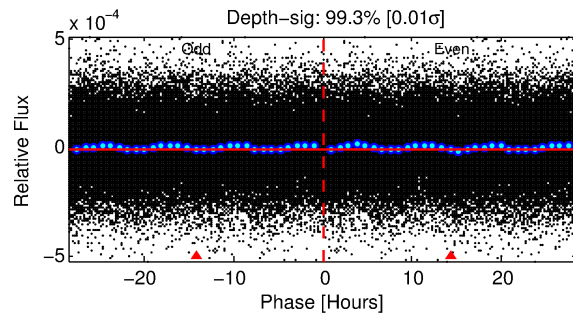
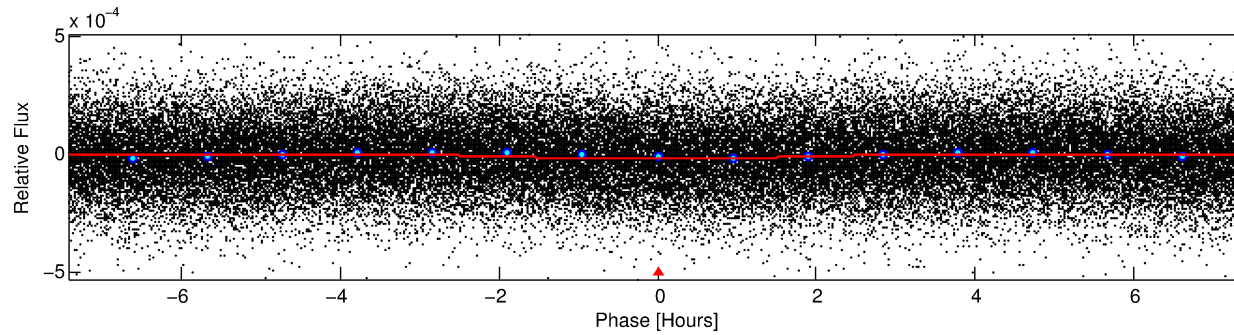
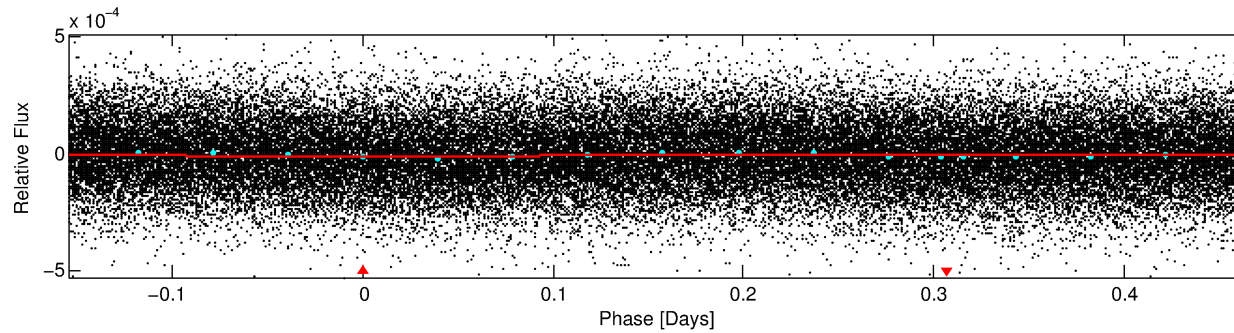
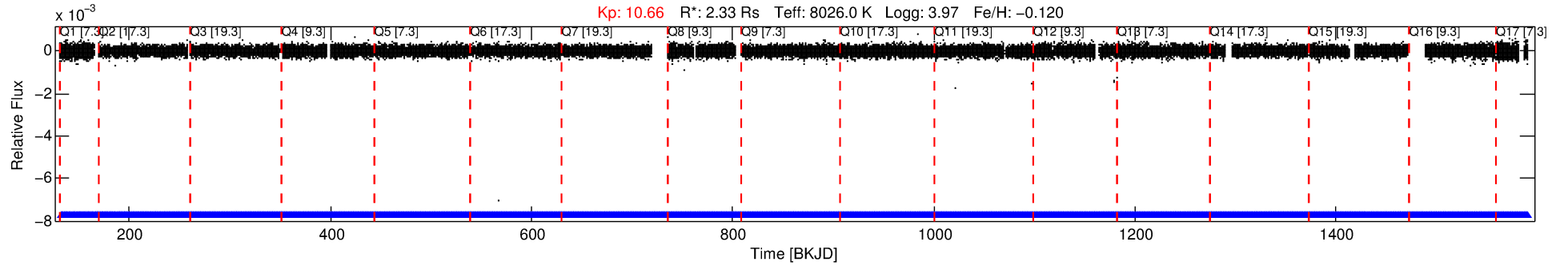
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008415752-01

No Significant Match Found

DV One-Page Summary

KIC: 8415752 Candidate: 1 of 1 Period: 0.619 d



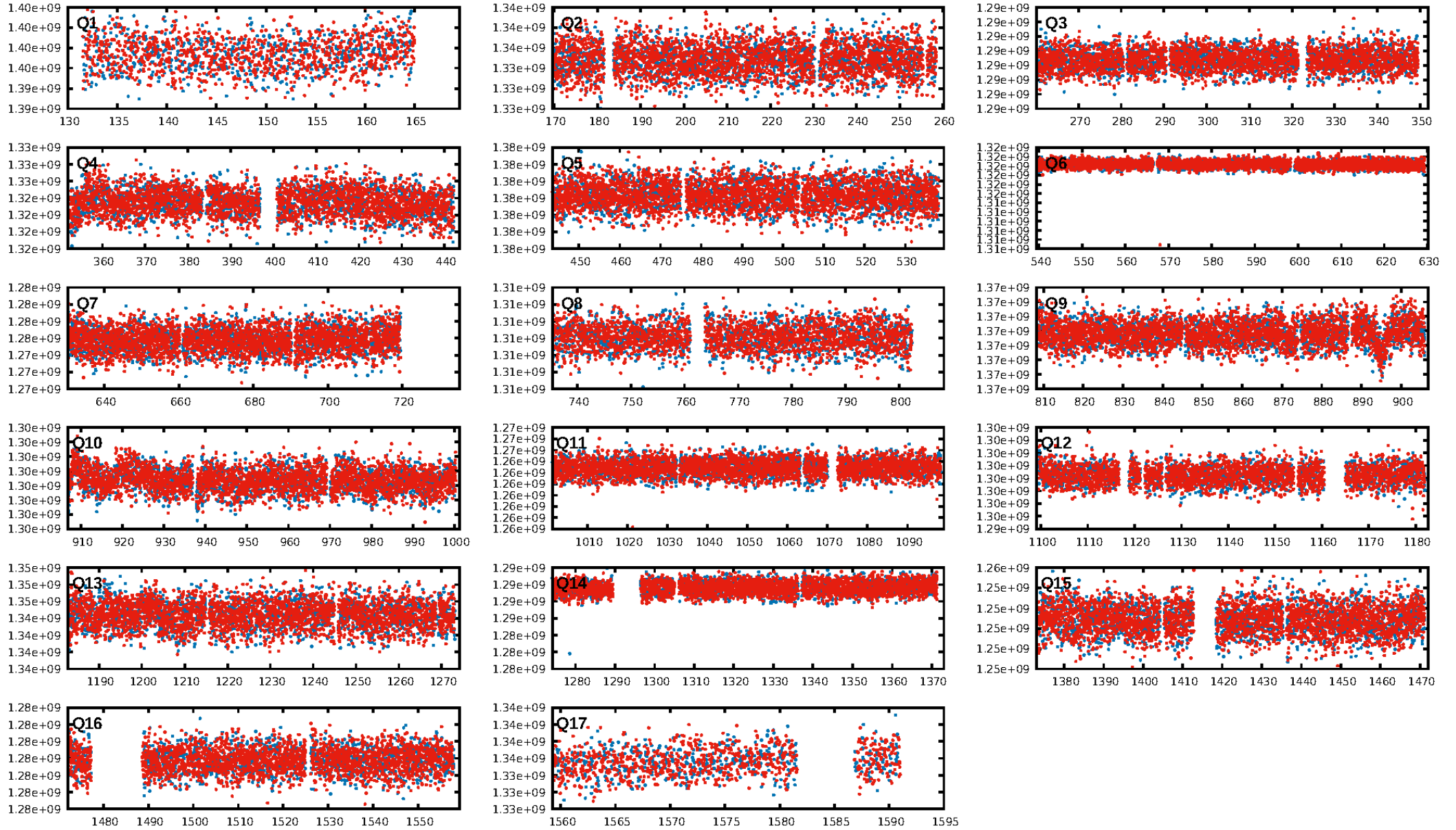
DV Fit Results:

Period = 0.61925 [0.00001] d
Epoch = 132.0355 [0.0045] BKJD
 $R_p/R^* = 0.0030$ [0.0027]
 $a/R^* = 1.18$ [1.70]
 $b = 0.31$ [15.67]
 $\text{Seff} = 66045.90$ [29666.28]
 $T_{\text{eq}} = 4088$ [459] K
 $R_p = 0.76$ [0.74] R_{e}
 $a = 0.0175$ [0.0049] AU
 $A_g = 3.39$ [6.35] [0.38 σ]
 $T_{\text{eff}} = 8579$ [3929] K [1.14 σ]

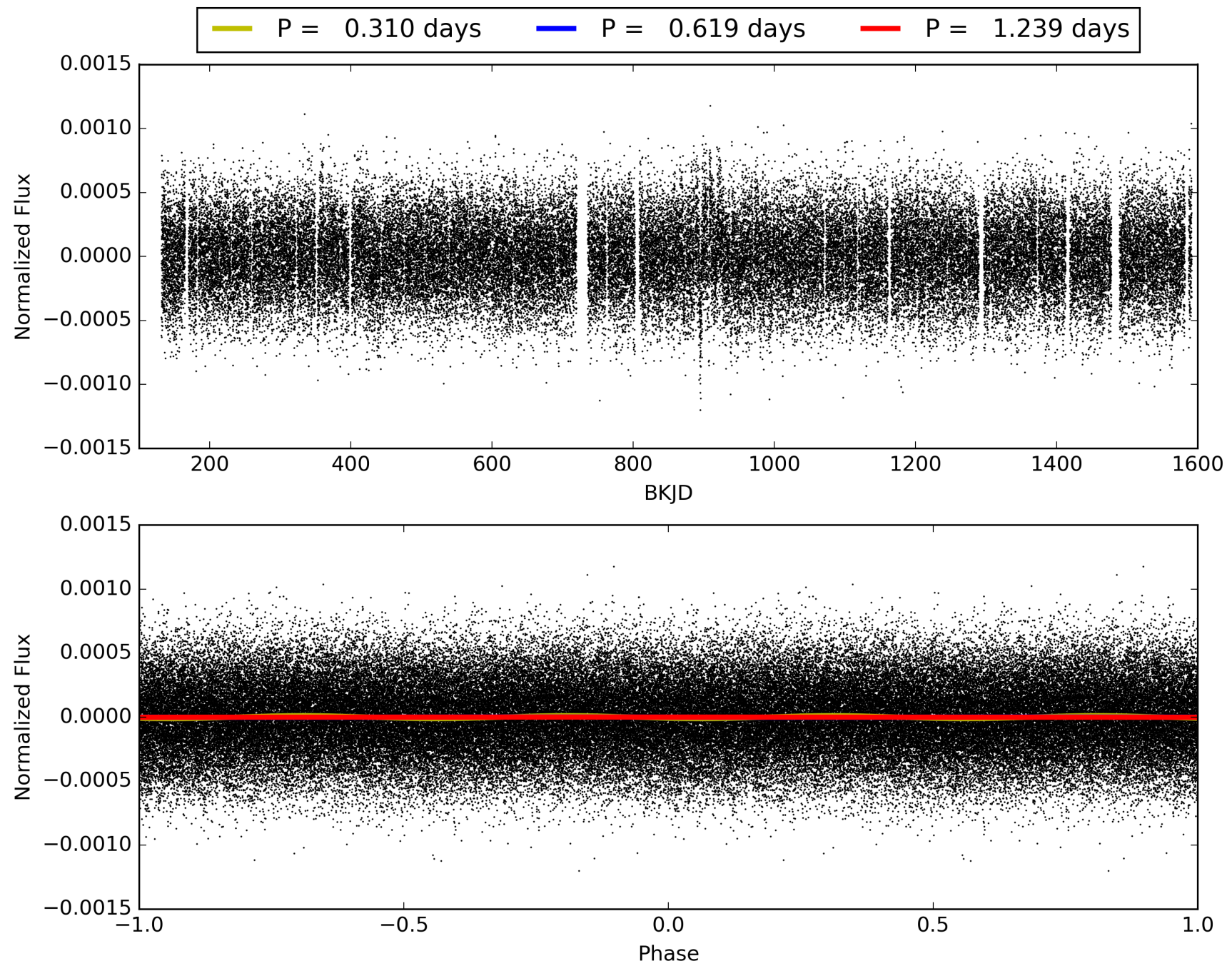
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.73e-16
RollingBand-fgt: 1.00 [2074/2074]
 $\text{GhostDiagnostic-chr}: 0.8027$
Centroid-sig: 0.0%
Centroid-so: 1.504 arcsec [2.69 σ]
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 008415752-01, PDC Light Curves

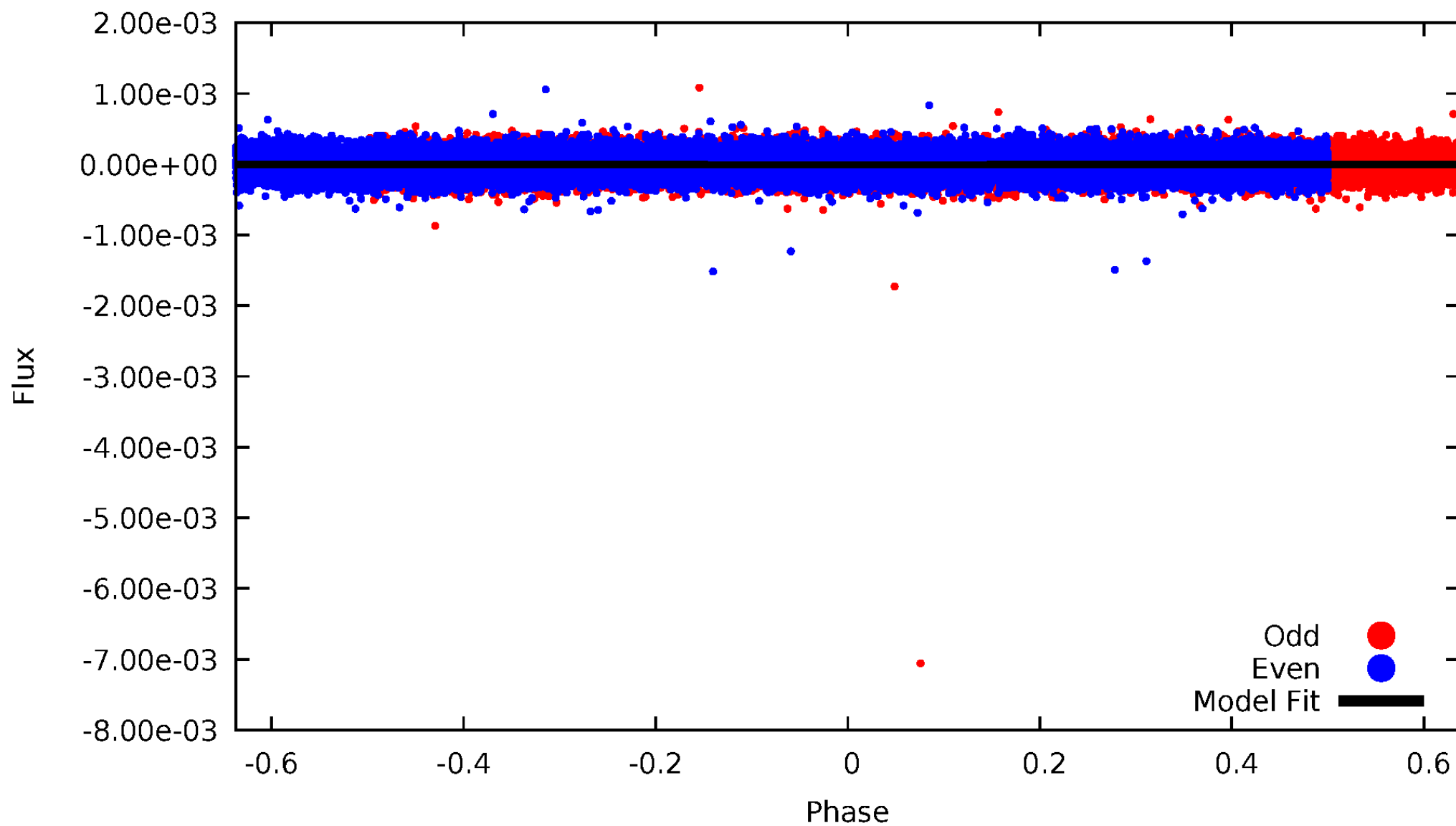


TCE 008415752-01



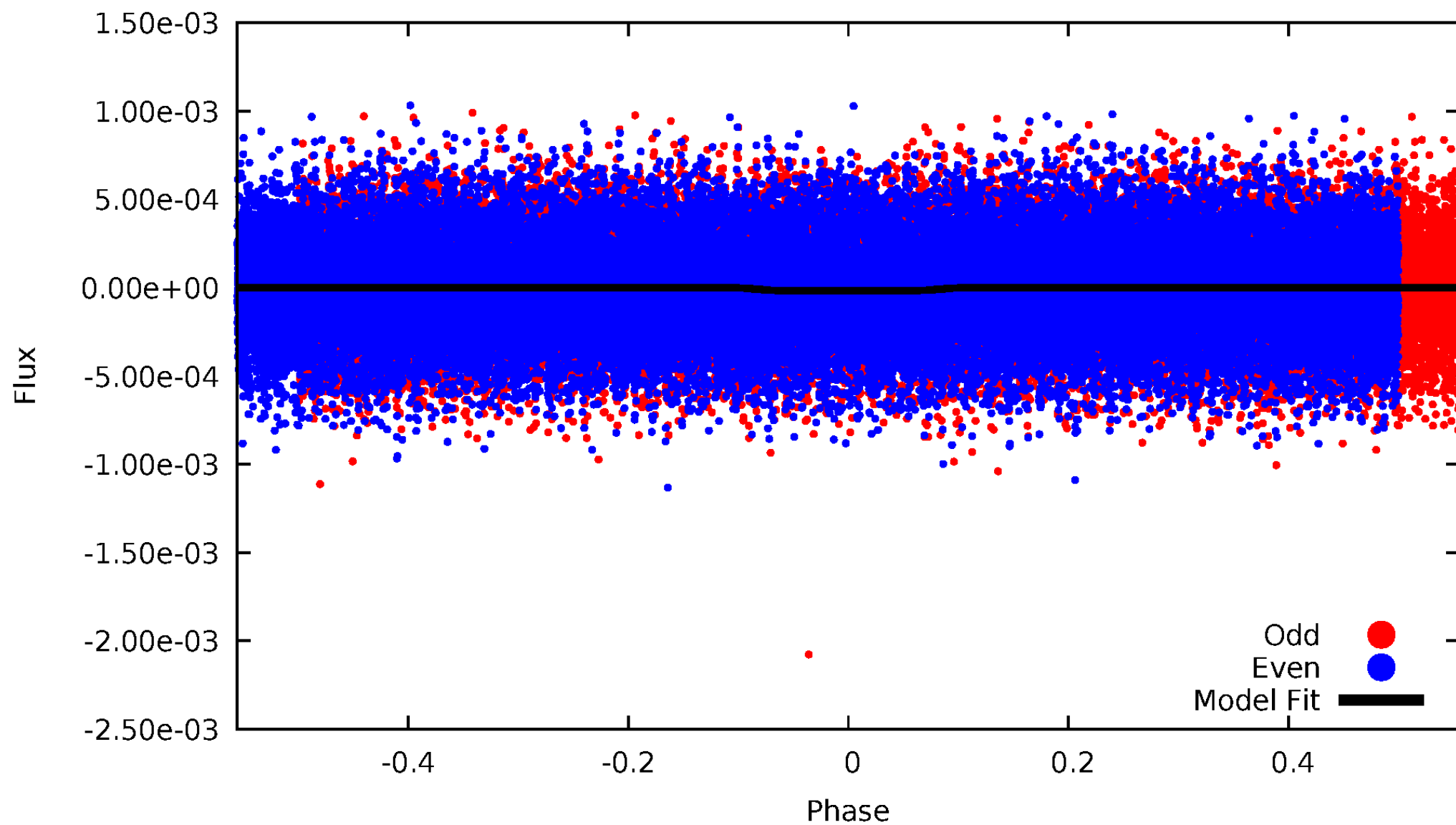
DV Odd/Even

TCE 008415752-01

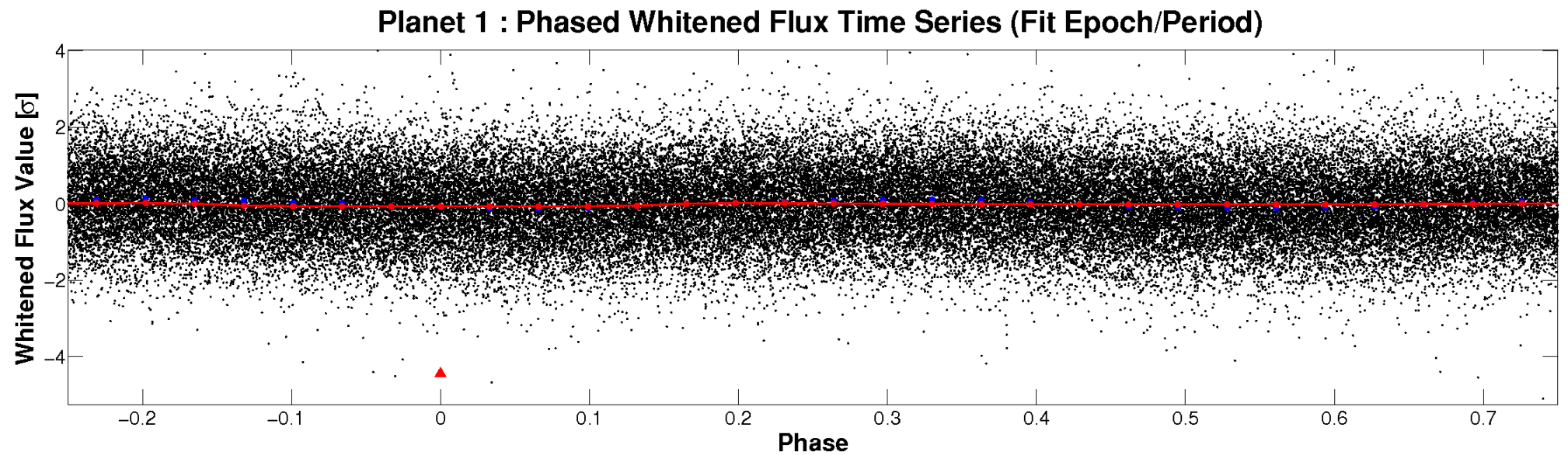
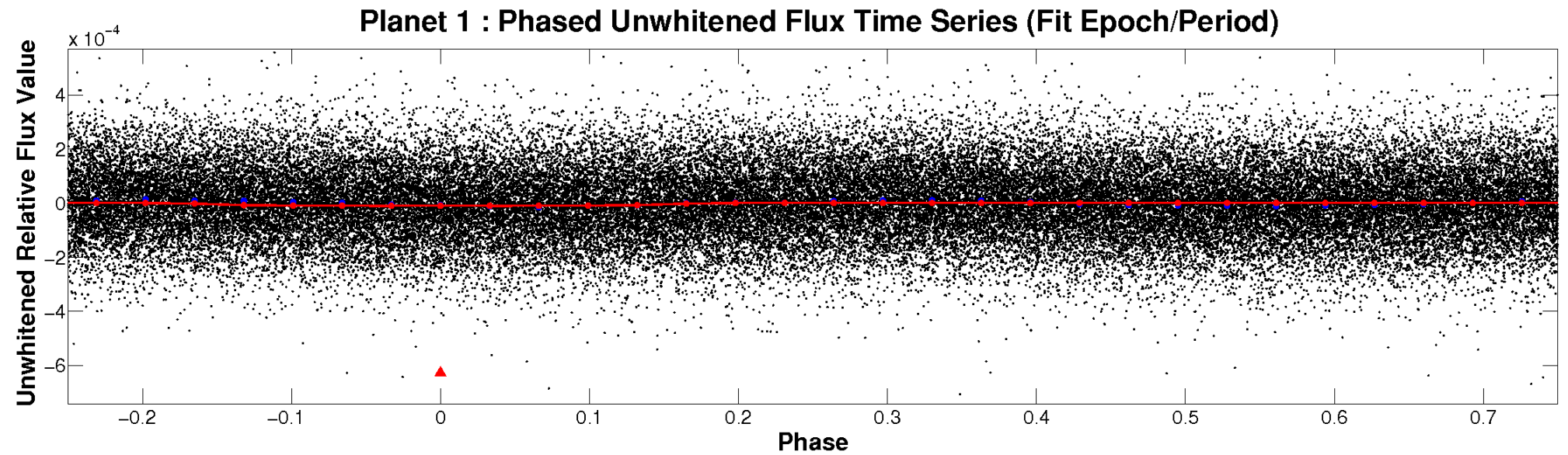


ALT Odd/Even

TCE 008415752-01

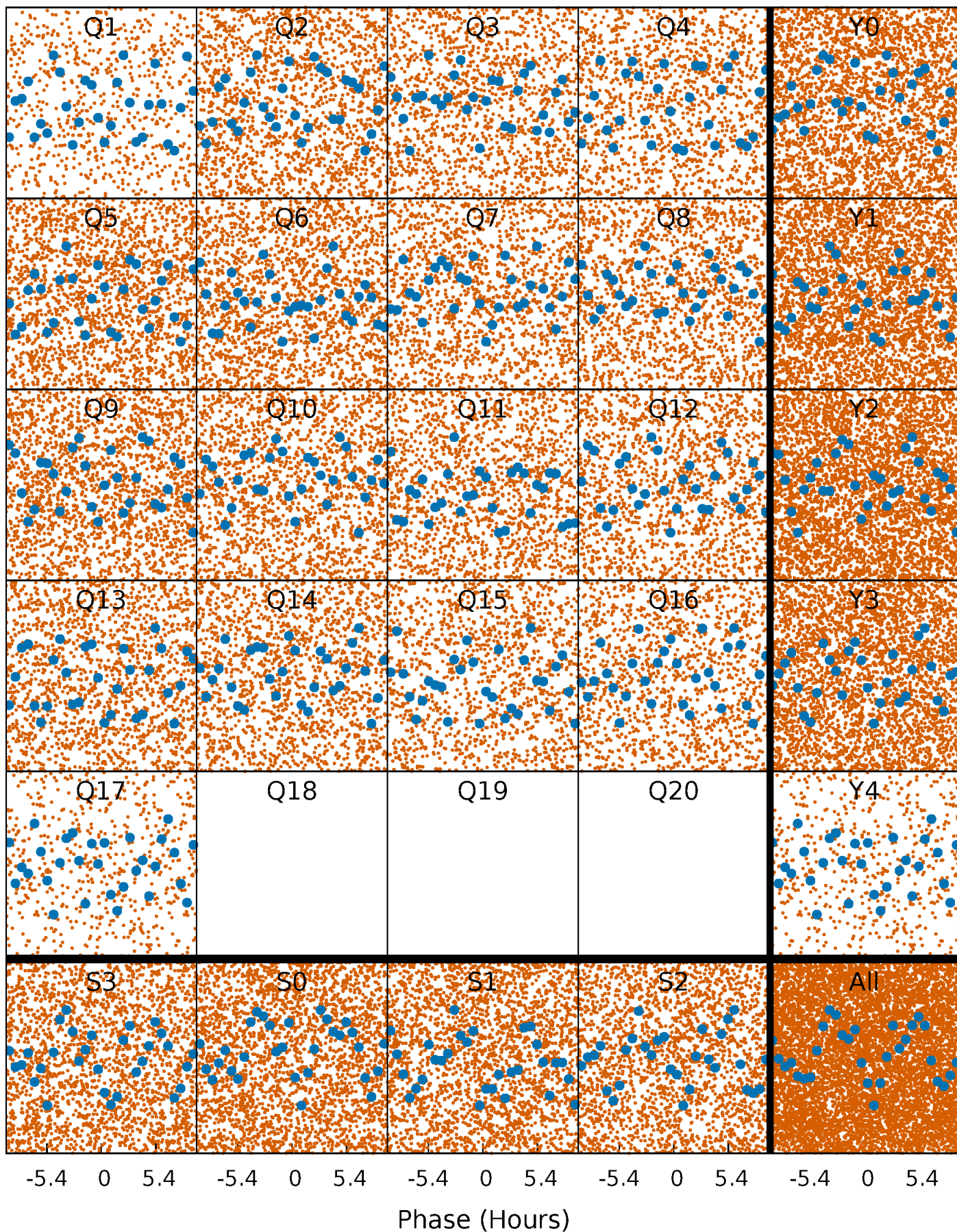


Non-Whitened Vs. Whitened Light Curve



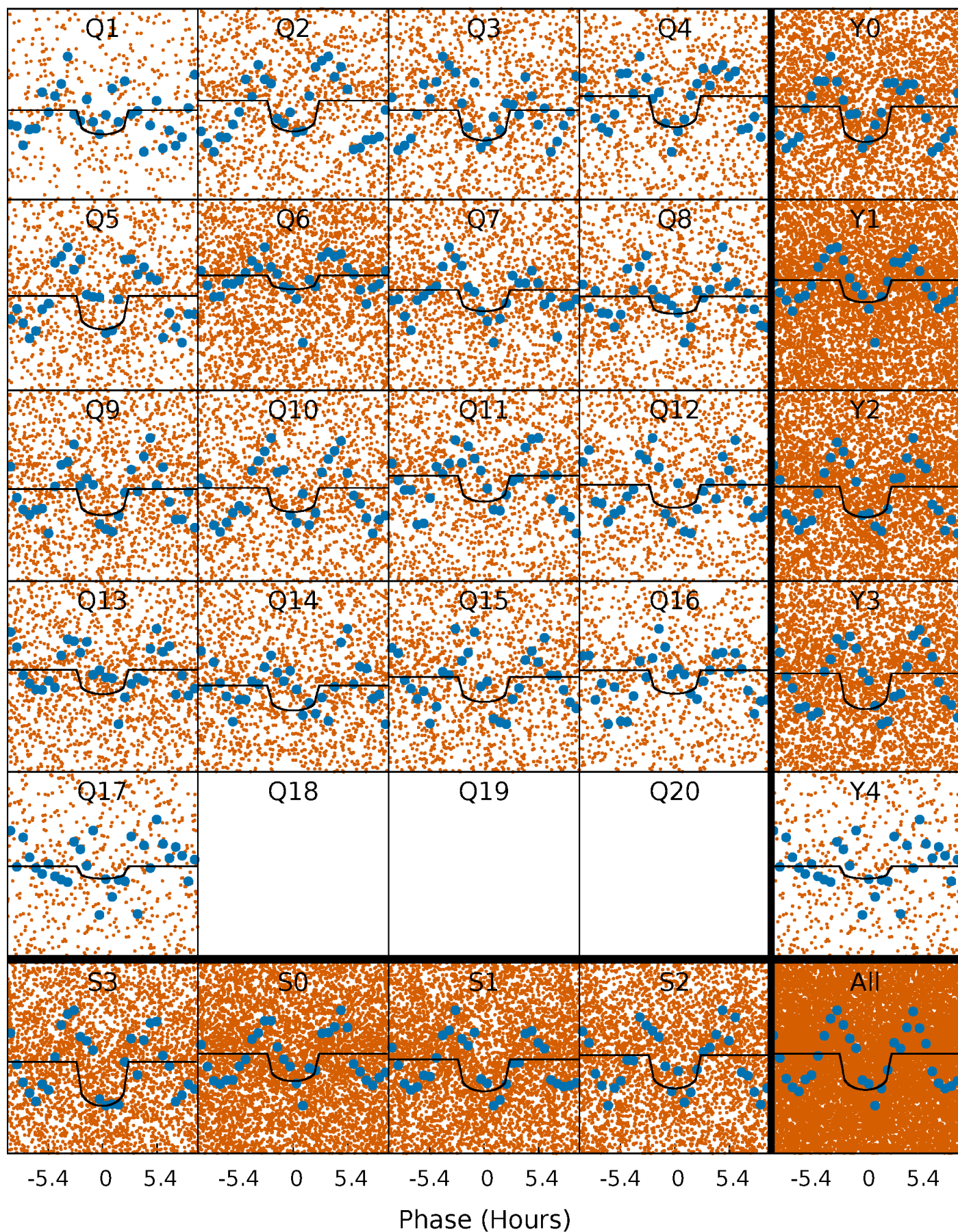
PDC Quarter-Phased Transit Curves

TCE 008415752-01 P= 0.619254 Days $T_0=132.035548$ (BKJD)



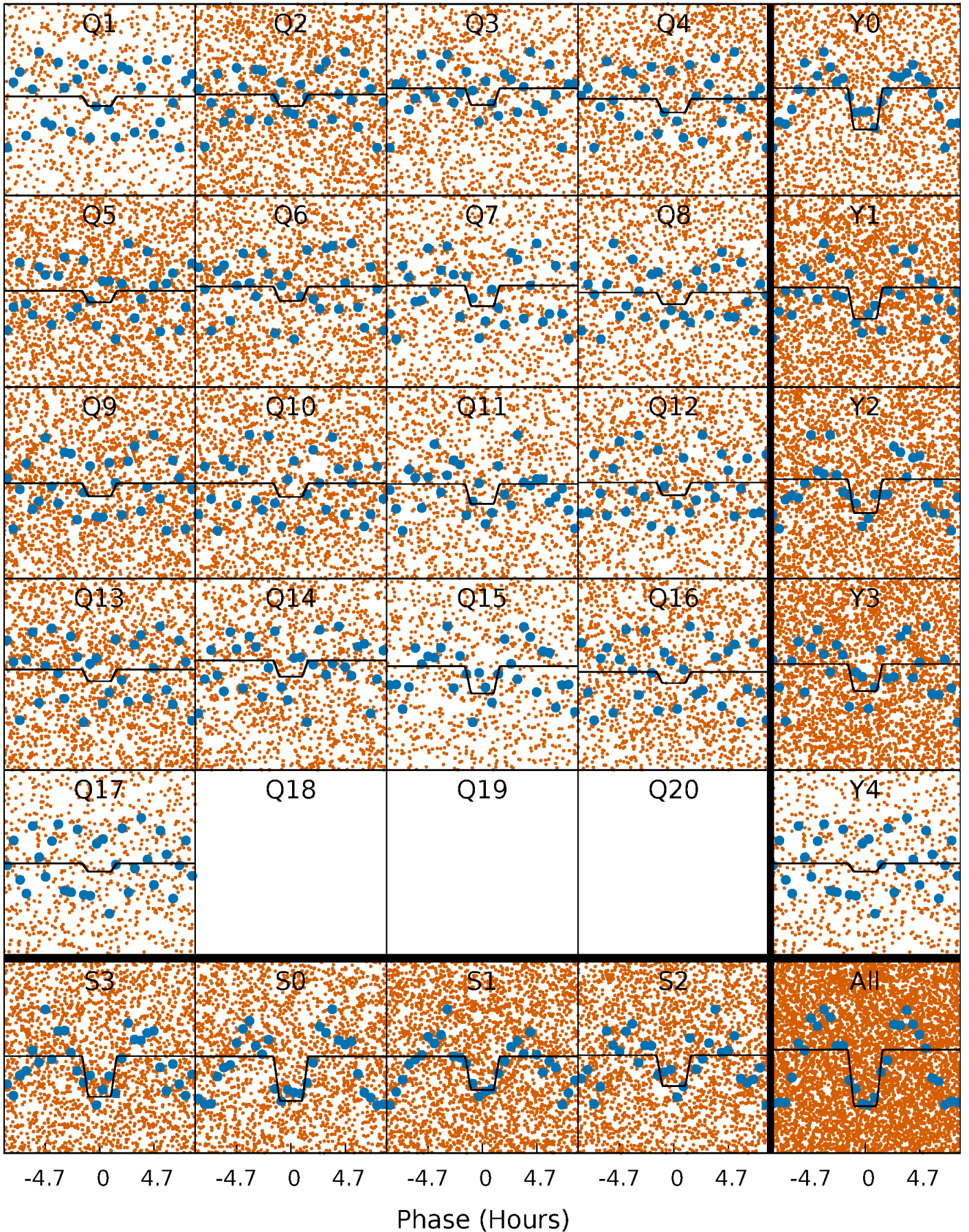
DV Quarter-Phased Transit Curves

TCE 008415752-01 P= 0.619254 Days $T_0=132.035548$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

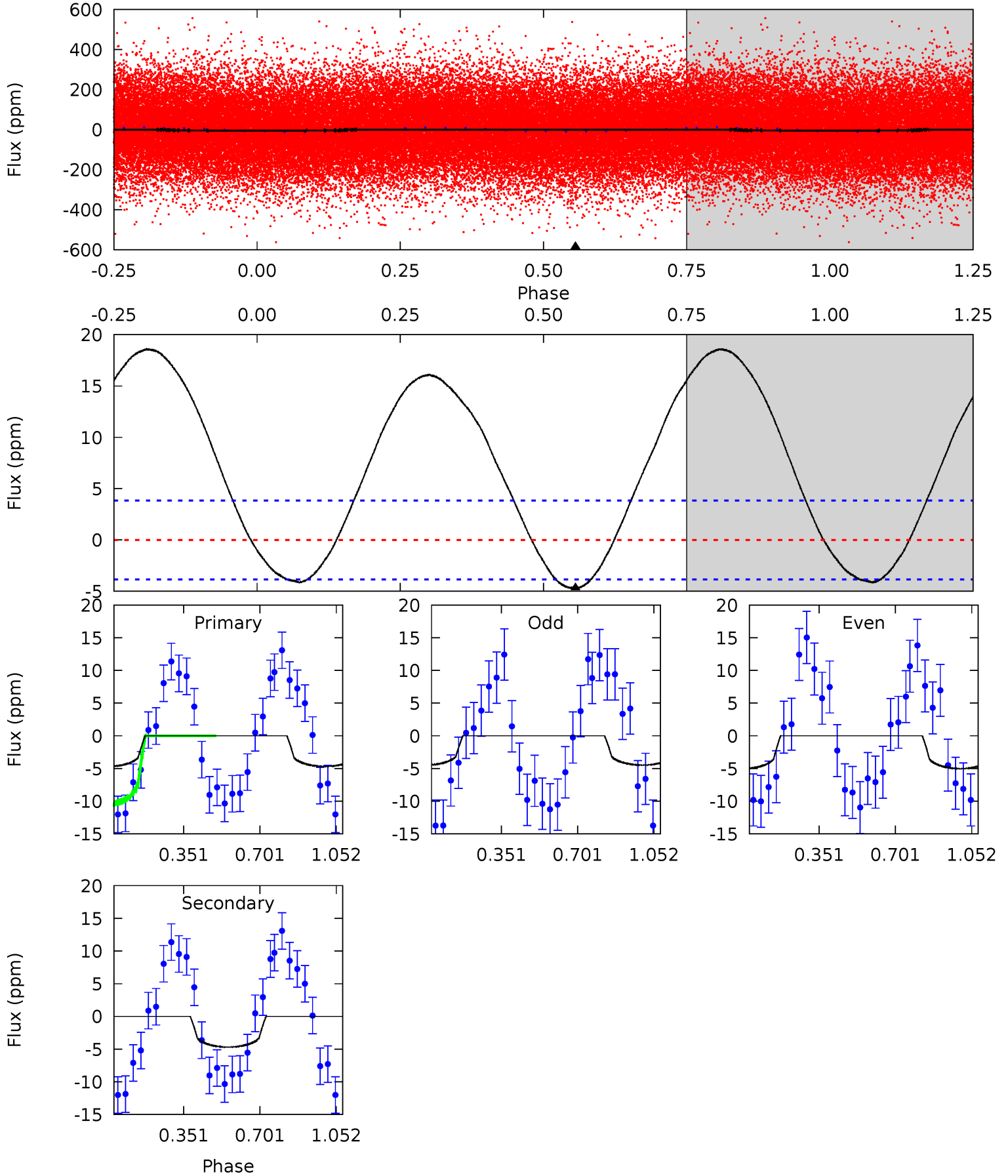
TCE 008415752-01 P= 0.619302 Days $T_0=132.018535$ (BKJD)



DV Model-Shift Uniqueness Test

008415752-01, P = 0.619254 Days, E = 131.416294 Days

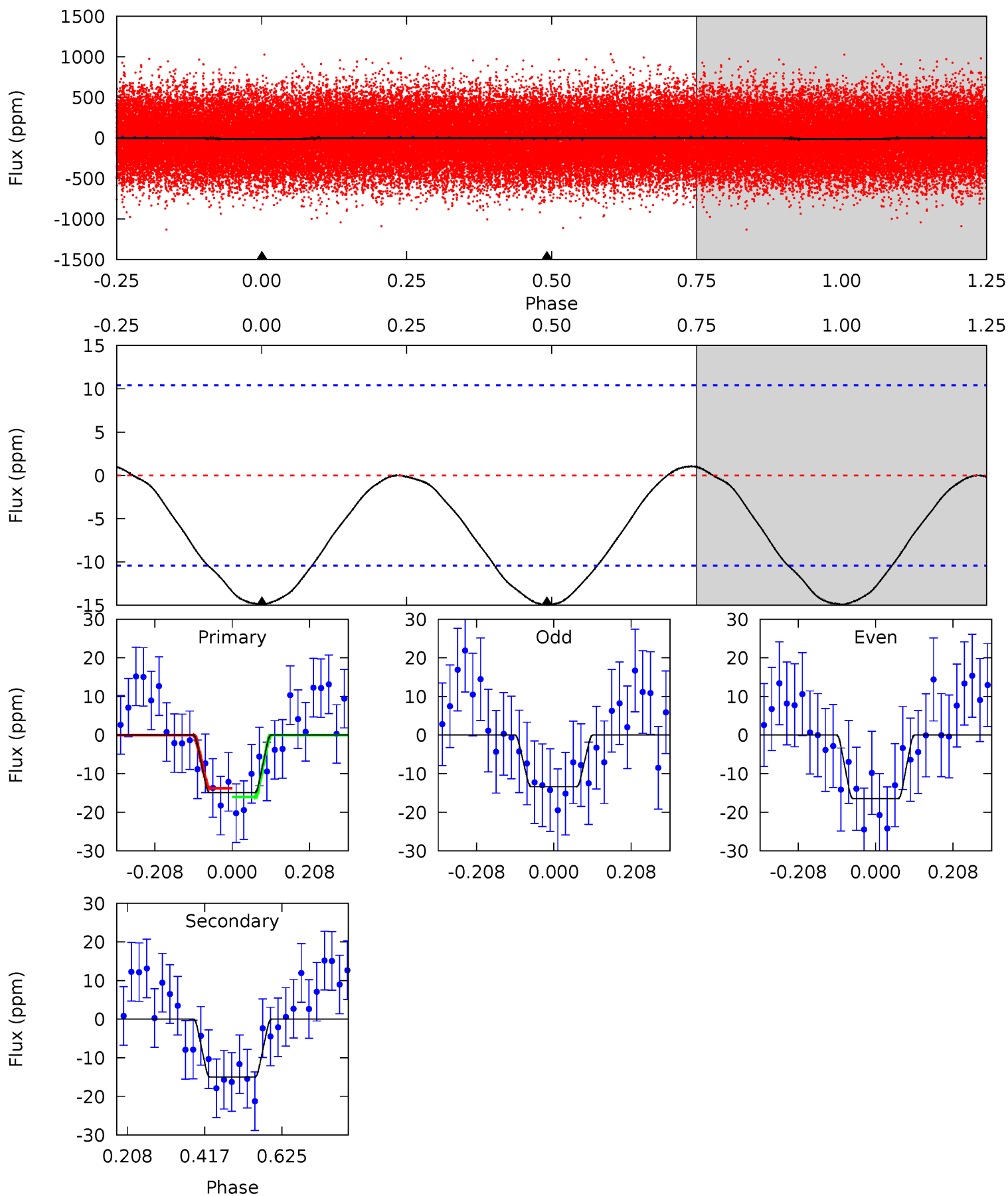
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.25	5.25	0	0	4.29	0.93	4.95	5.25	5.25	5.25	5.25	0.30	1.16	0.80	5.40



Alt Model-Shift Uniqueness Test

008415752-01, P = 0.619302 Days, E = 131.399233 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.31	6.32	0	0	4.41	1.26	0.24	6.31	6.31	6.32	6.32	0.65	1.30	0.07	0.48



Stellar Parameters For KIC 008415752

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8026^{+221}_{-332}	$3.972^{+0.234}_{-0.126}$	$-0.120^{+0.200}_{-0.350}$	$2.329^{+0.401}_{-0.744}$	$1.854^{+0.097}_{-0.411}$	$0.207^{+0.341}_{-0.080}$
	+3%/-4%	+6%/-3%	+167%/-292%	+17%/-32%	+5%/-22%	+165%/-39%
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 008415752-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5 ± 1	$0.83^{+0.67}_{-0.52}$	5646^{+371}_{-446}	5698^{+5683}_{-2675}	$1.131^{+6.995}_{-0.806}$
Alt.	-15 ± 2	$1.04^{+0.69}_{-0.55}$	5656^{+369}_{-442}	7157^{+5665}_{-1855}	$2.275^{+8.340}_{-1.434}$

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 $A_{obs} \gg 1.0$

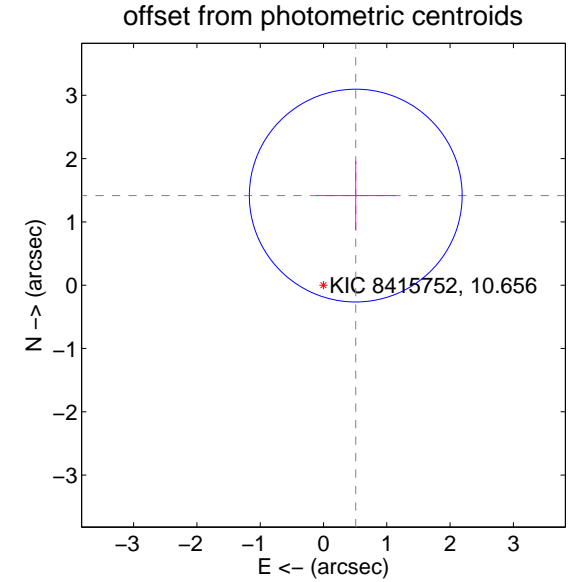
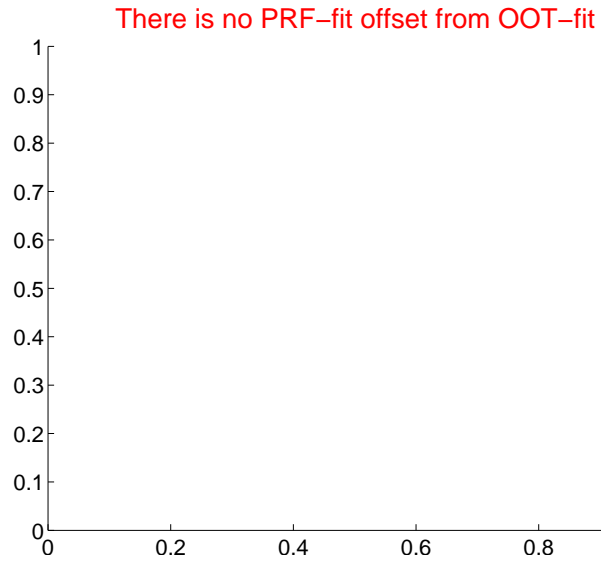
DV Centroid Data

Supplemental centroid analysis for 008415752-01. **Kepler magnitude: 10.66.** Transit SNR 9.97

There are 0 quarters with good PRF difference image offsets

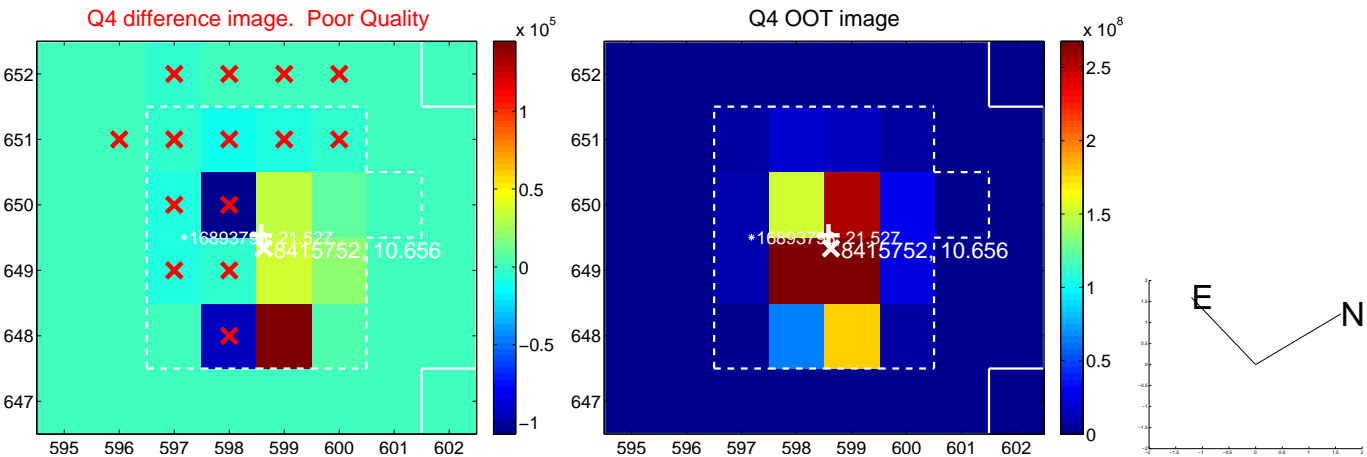
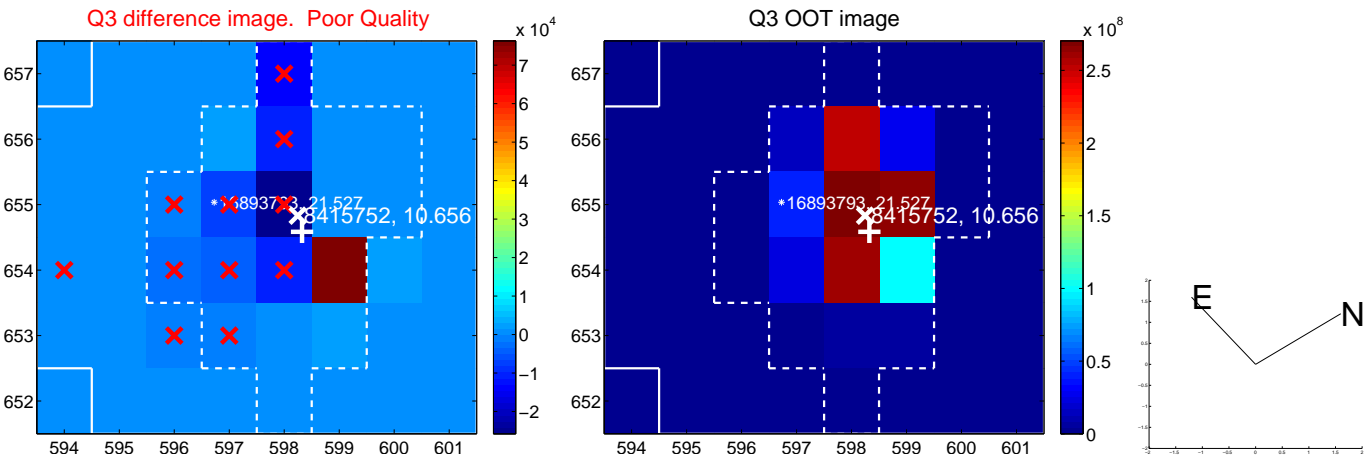
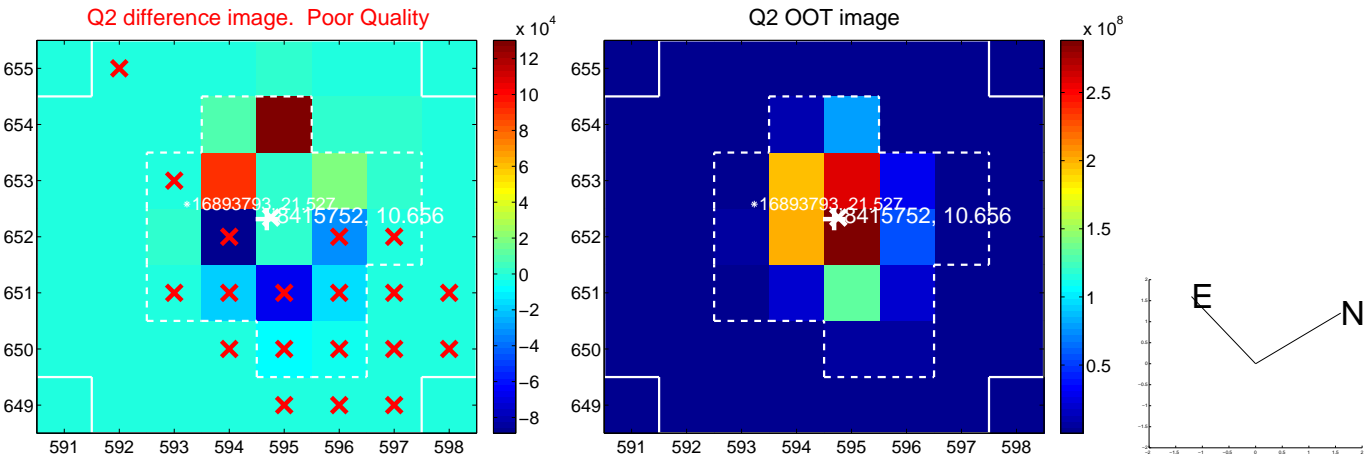
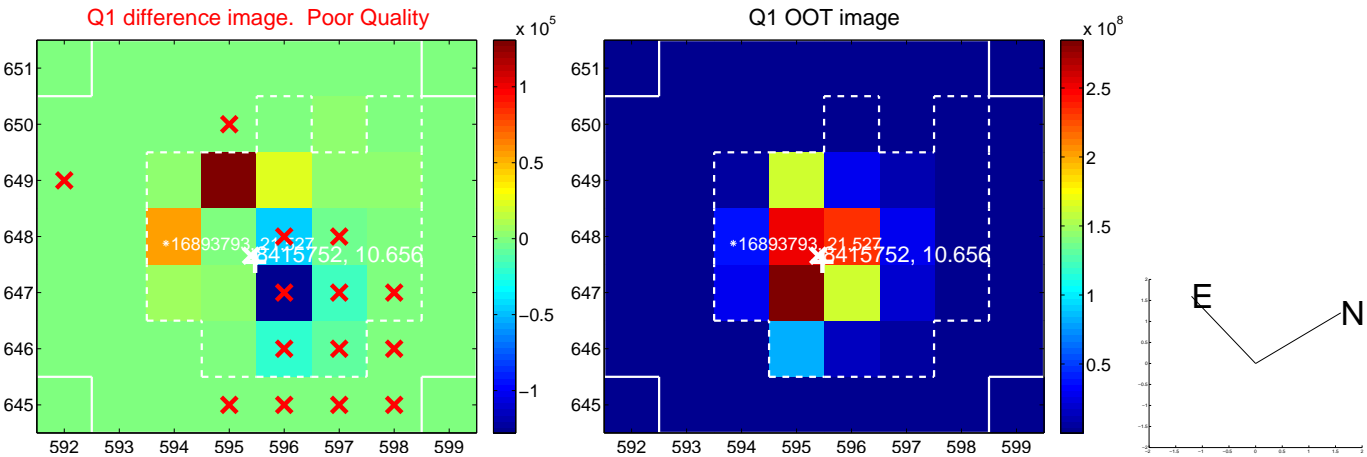
The direct PRF centroid is offset from the target star catalog position by about NaN arcsec

	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	1.50 ± 0.56	2.69	-0.51 ± 0.63	1.42 ± 0.55

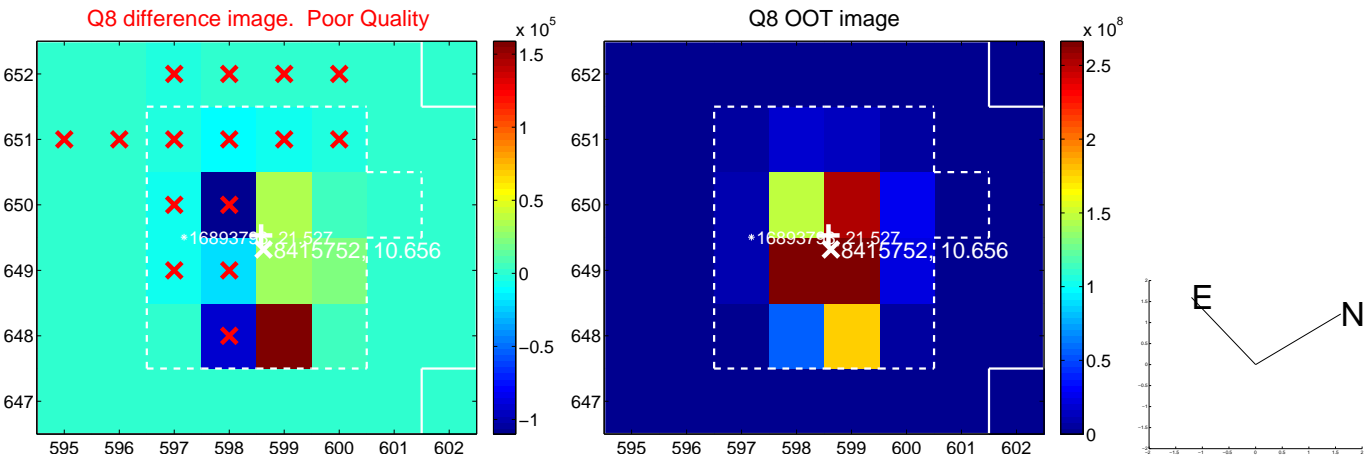
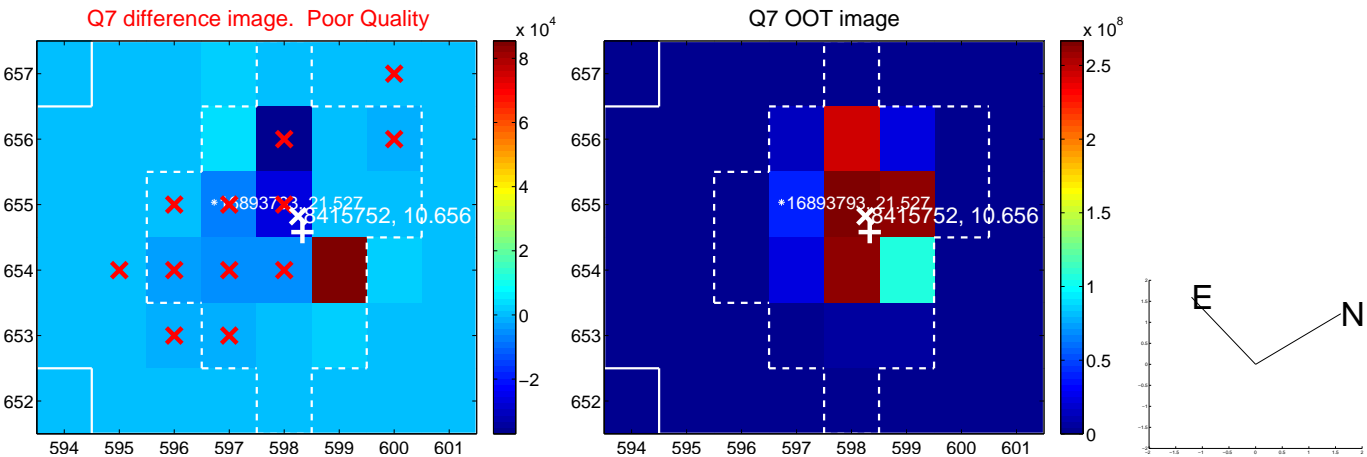
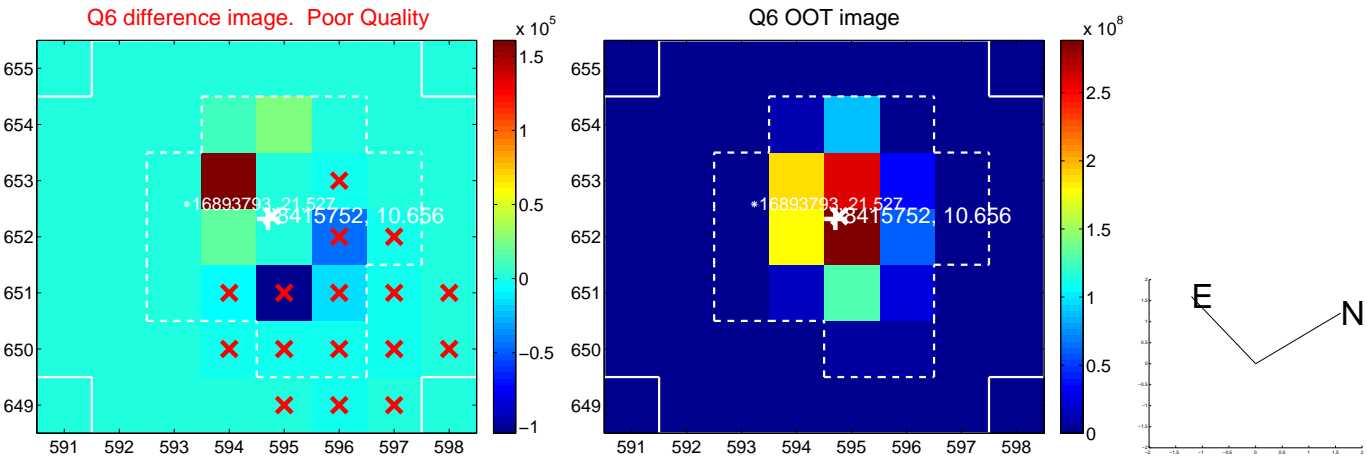
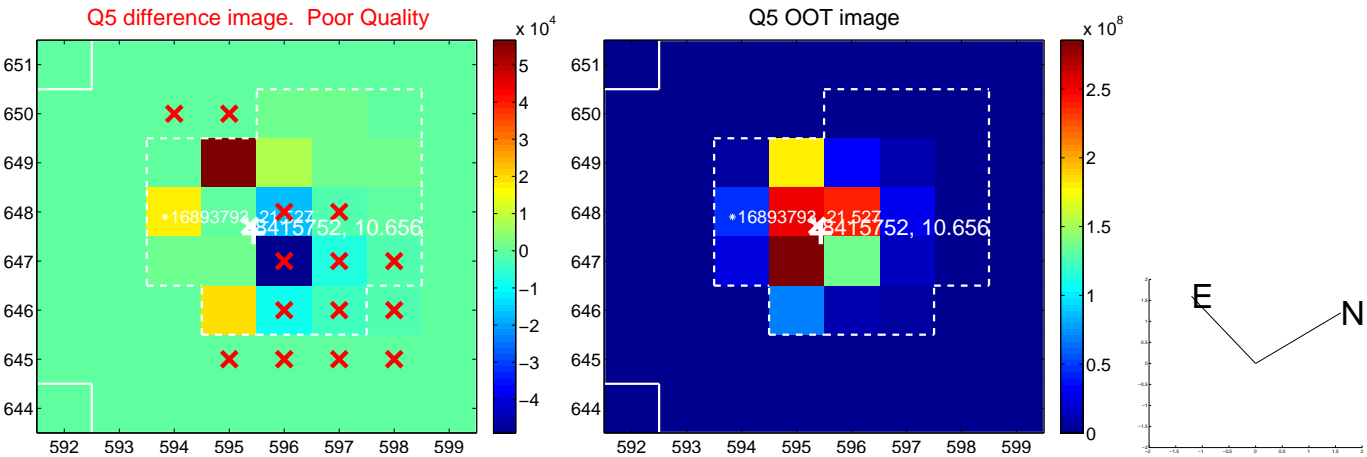


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

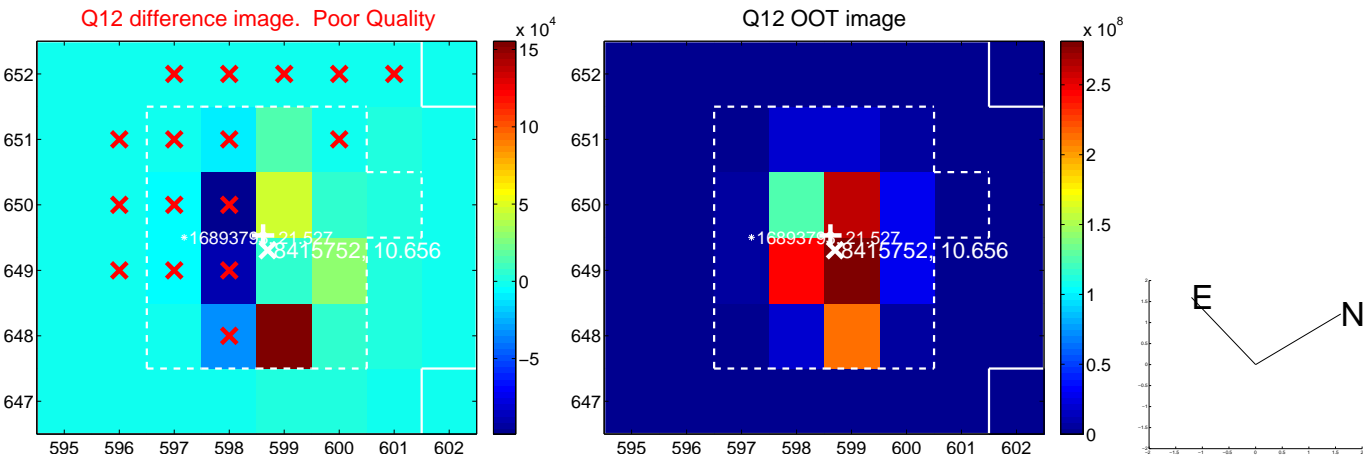
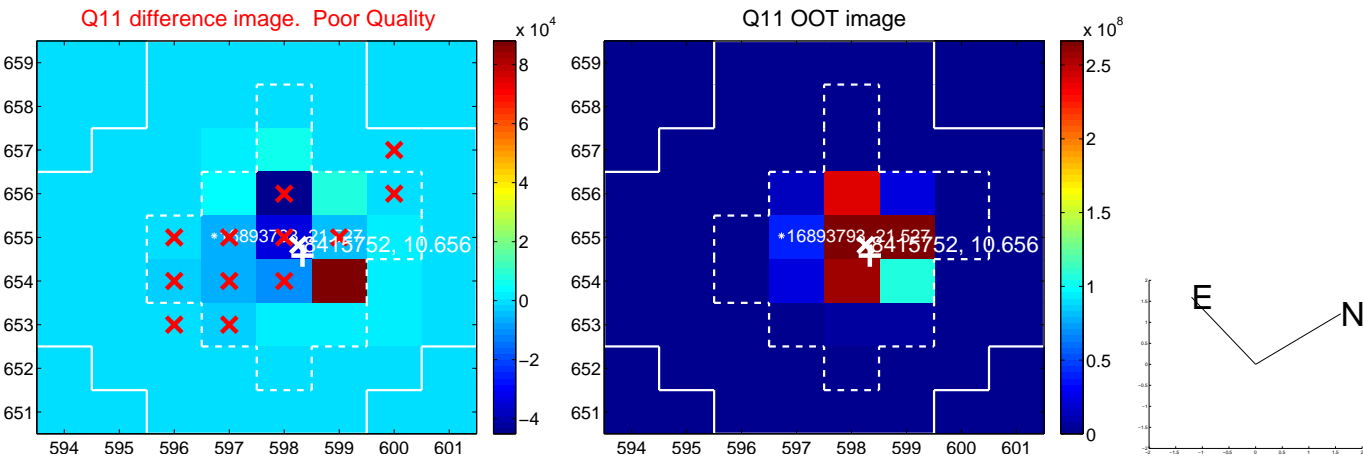
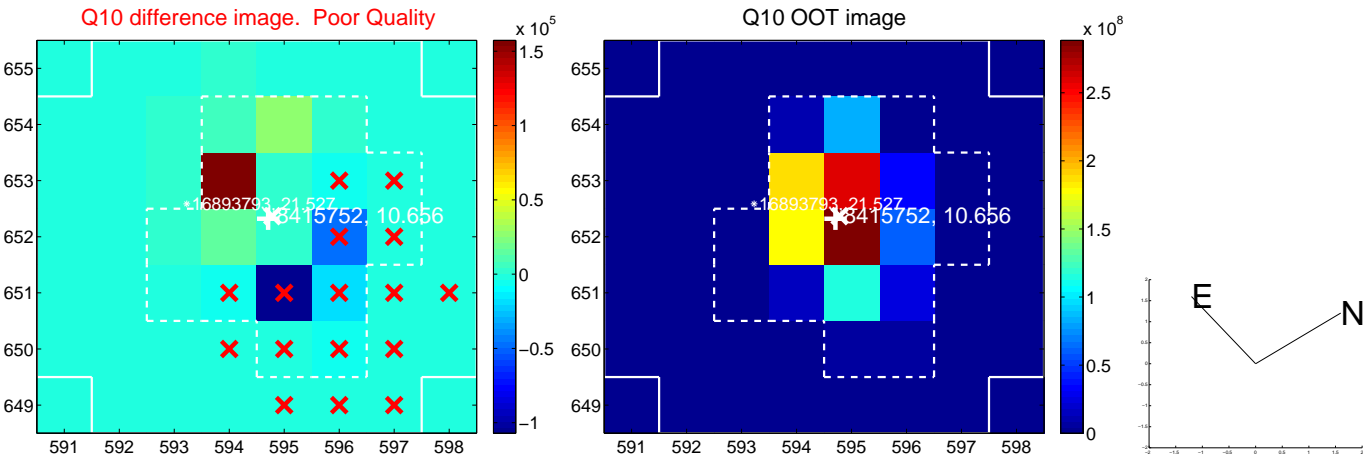
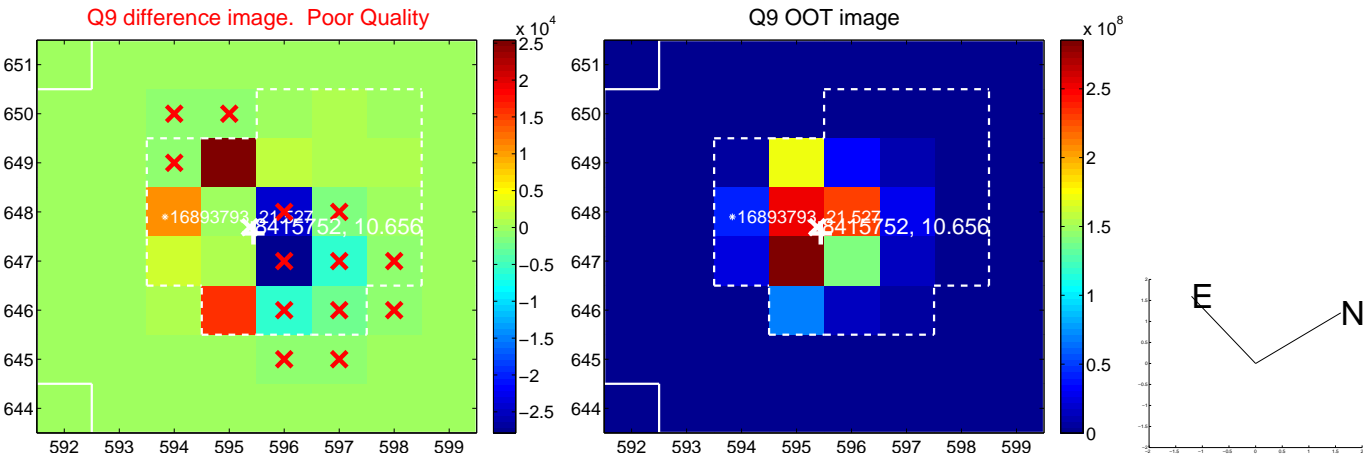
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



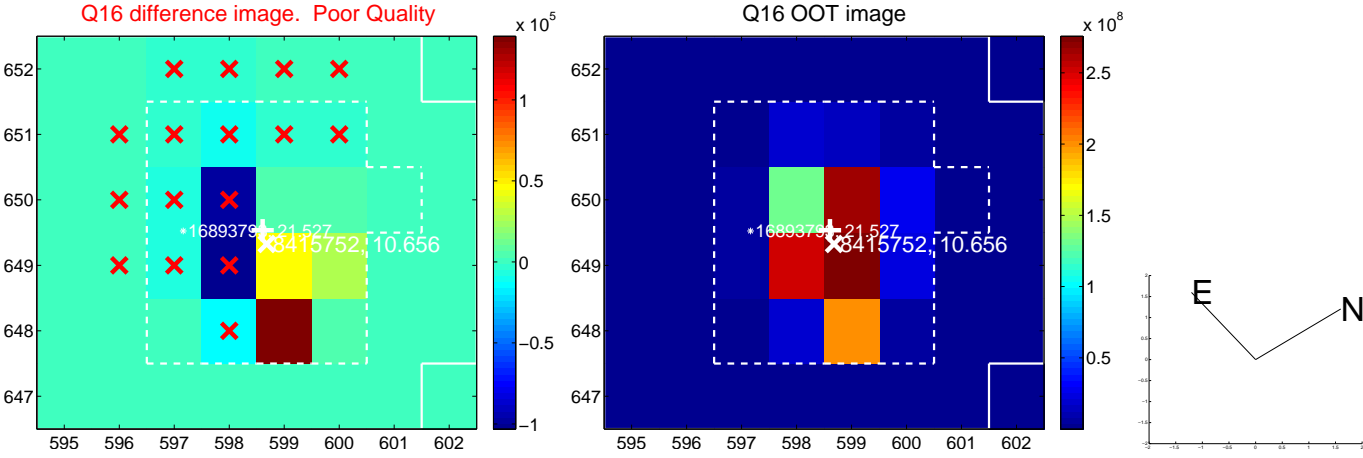
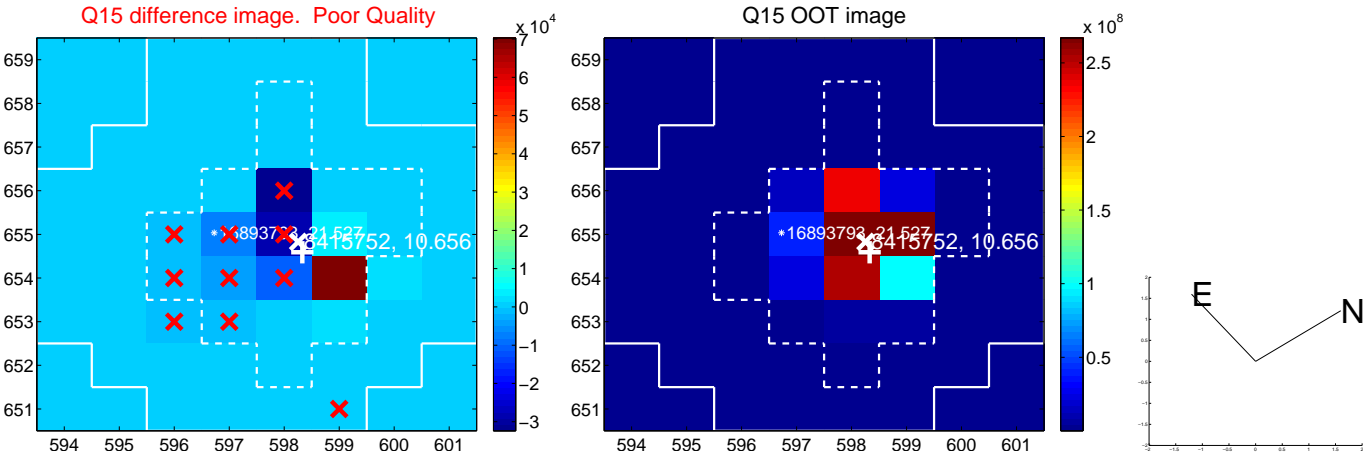
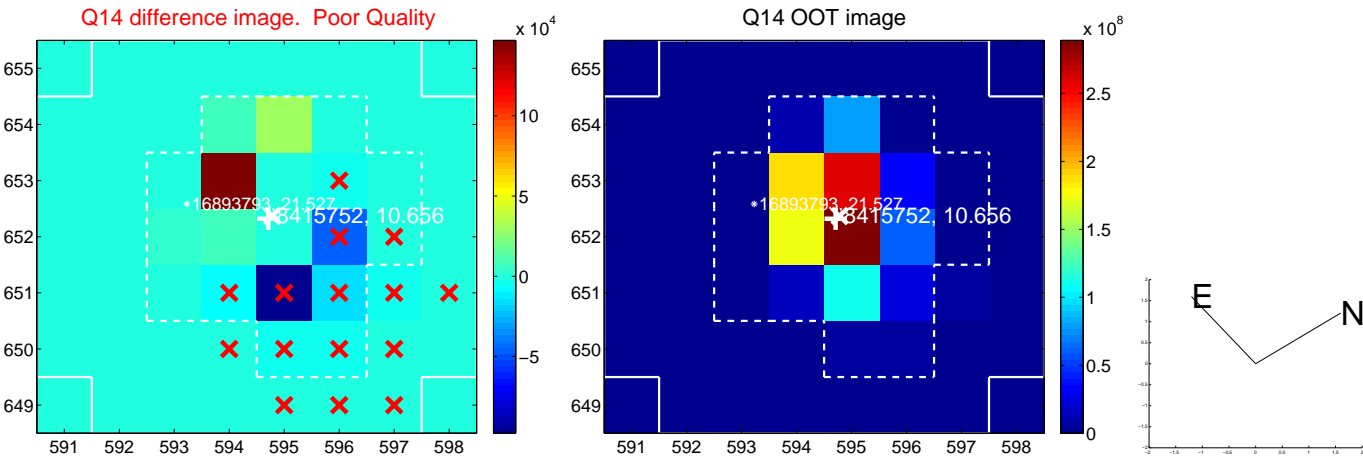
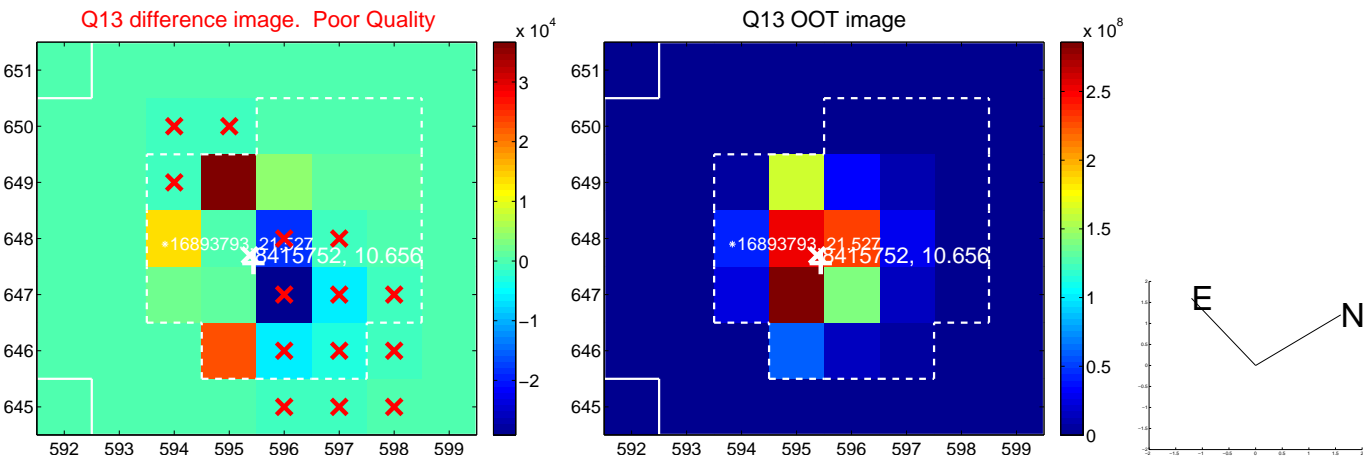
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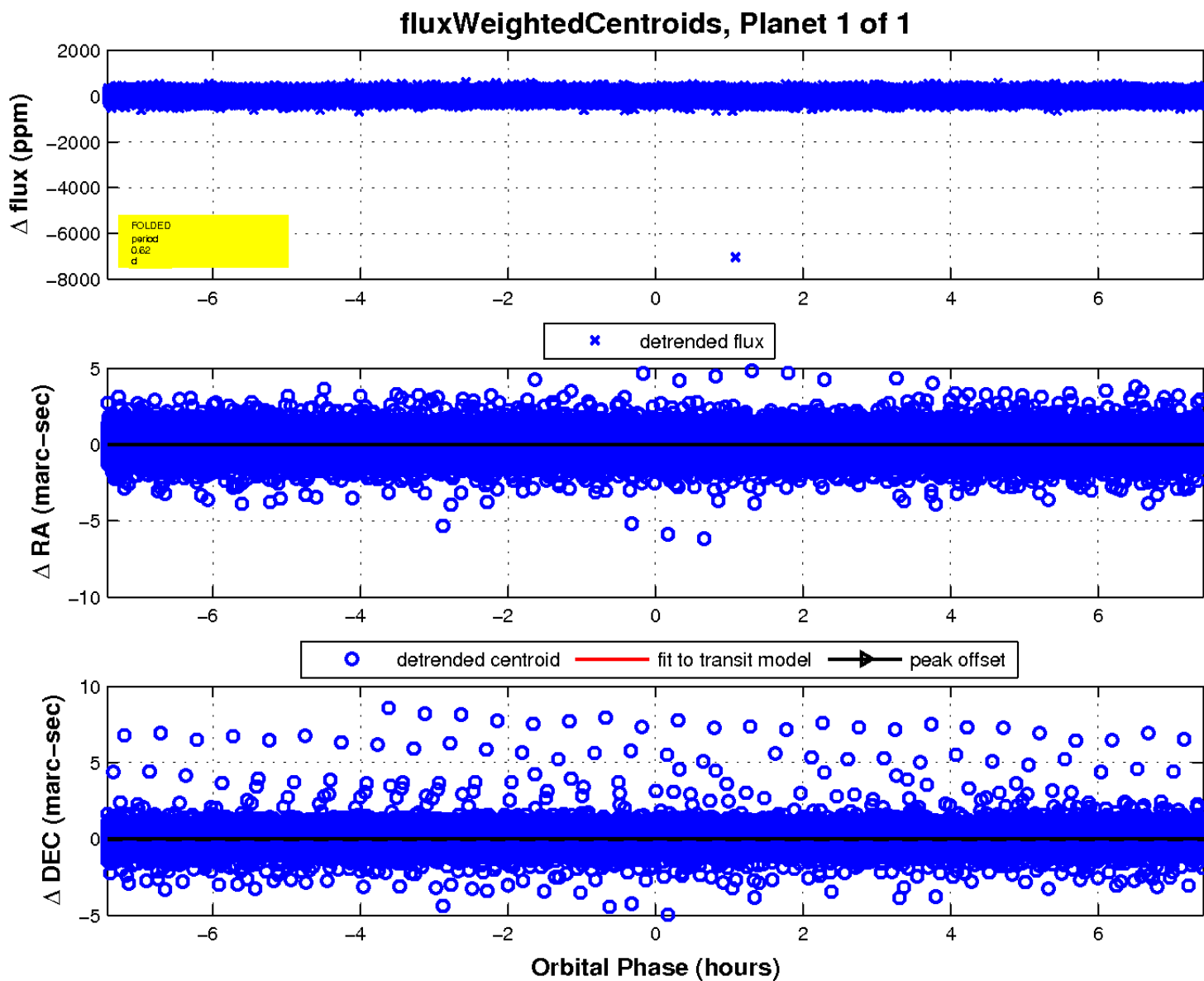
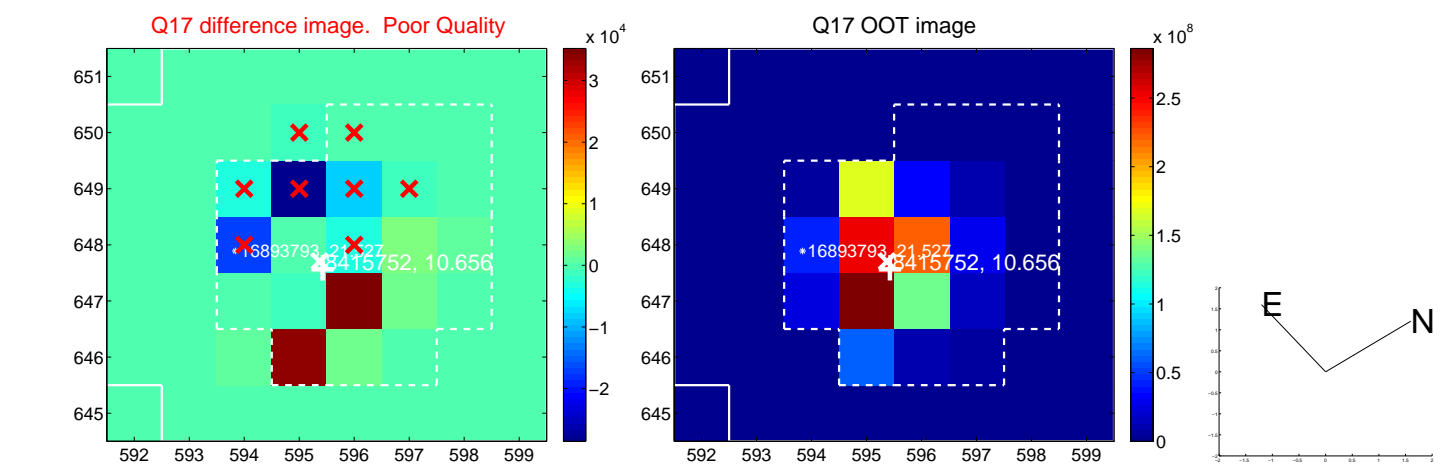
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UKIRT Image

Declination

