

KIC 005457326

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})
005457326-01	OBS	4508.01	2.499152	133.090336	168.2	2.005	10.6	12.1	0.72	4705	1.27	220.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005457326-01	OBS	PC	0.69	0	0	0	0	NO_COMMENT

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.

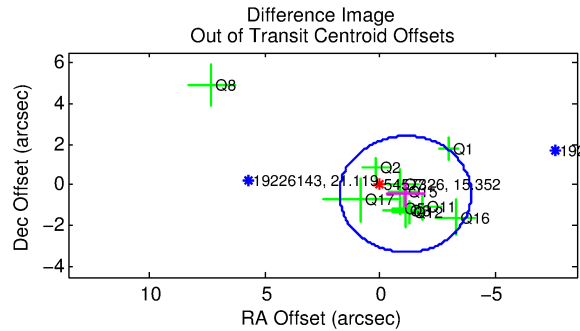
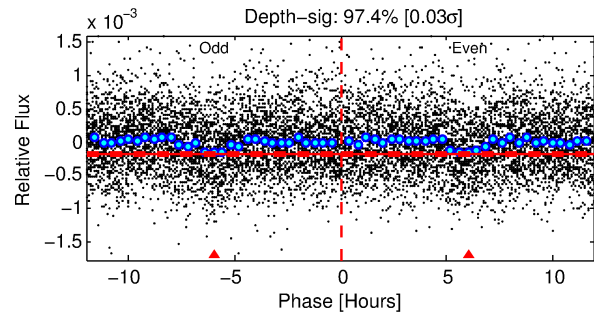
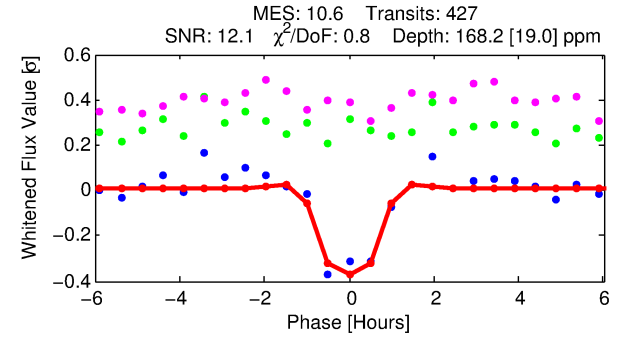
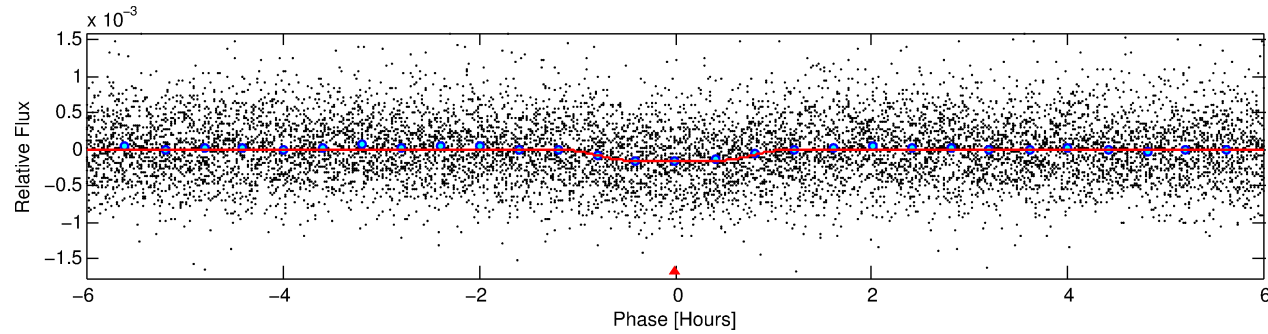
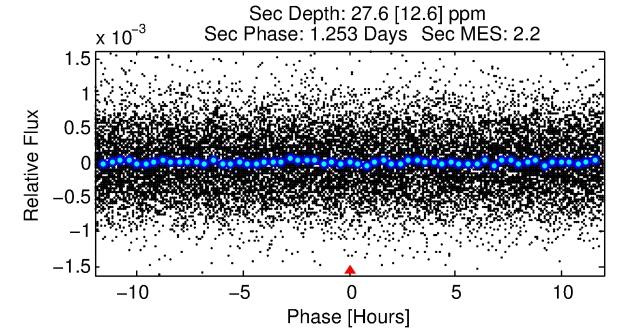
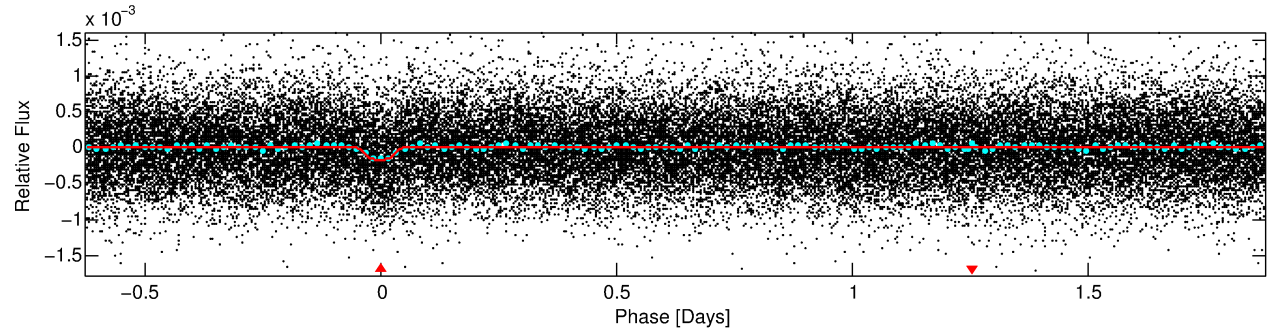
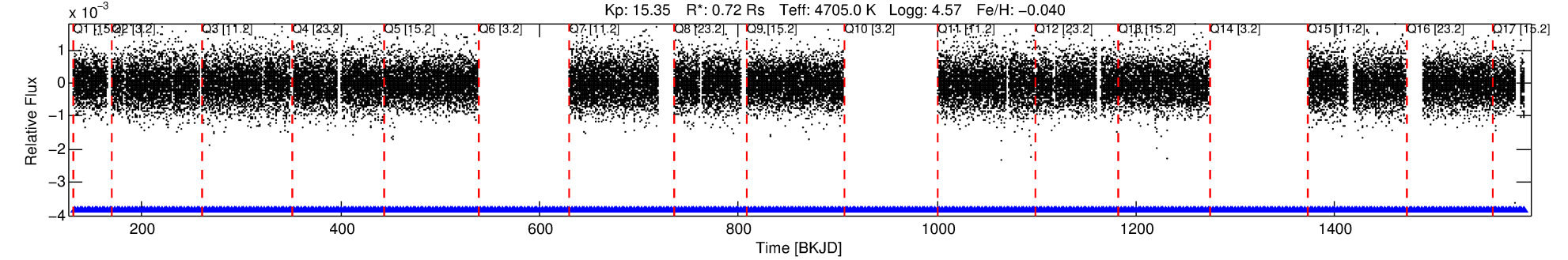
Ephemeris Match Information For 005457326-01

No Significant Match Found

DV One-Page Summary

KIC: 5457326 Candidate: 1 of 1 Period: 2.499 d

KOI: K04508.01 Corr: 0.939



DV Fit Results:

Period = 2.49915 [0.00001] d
Epoch = 133.0903 [0.0026] BKJD
Rp/R* = 0.0162 [0.0037]
a/R* = 3.38 [2.94]
b = 0.96 [0.09]
Seff = 220.95 [35.37]
Teq = 983 [39] K
Rp = 1.27 [0.32] Re
a = 0.0321 [0.0024] AU
Ag = 9.69 [6.39] [1.36σ]
Teffp = 2682 [443] K [3.82σ]

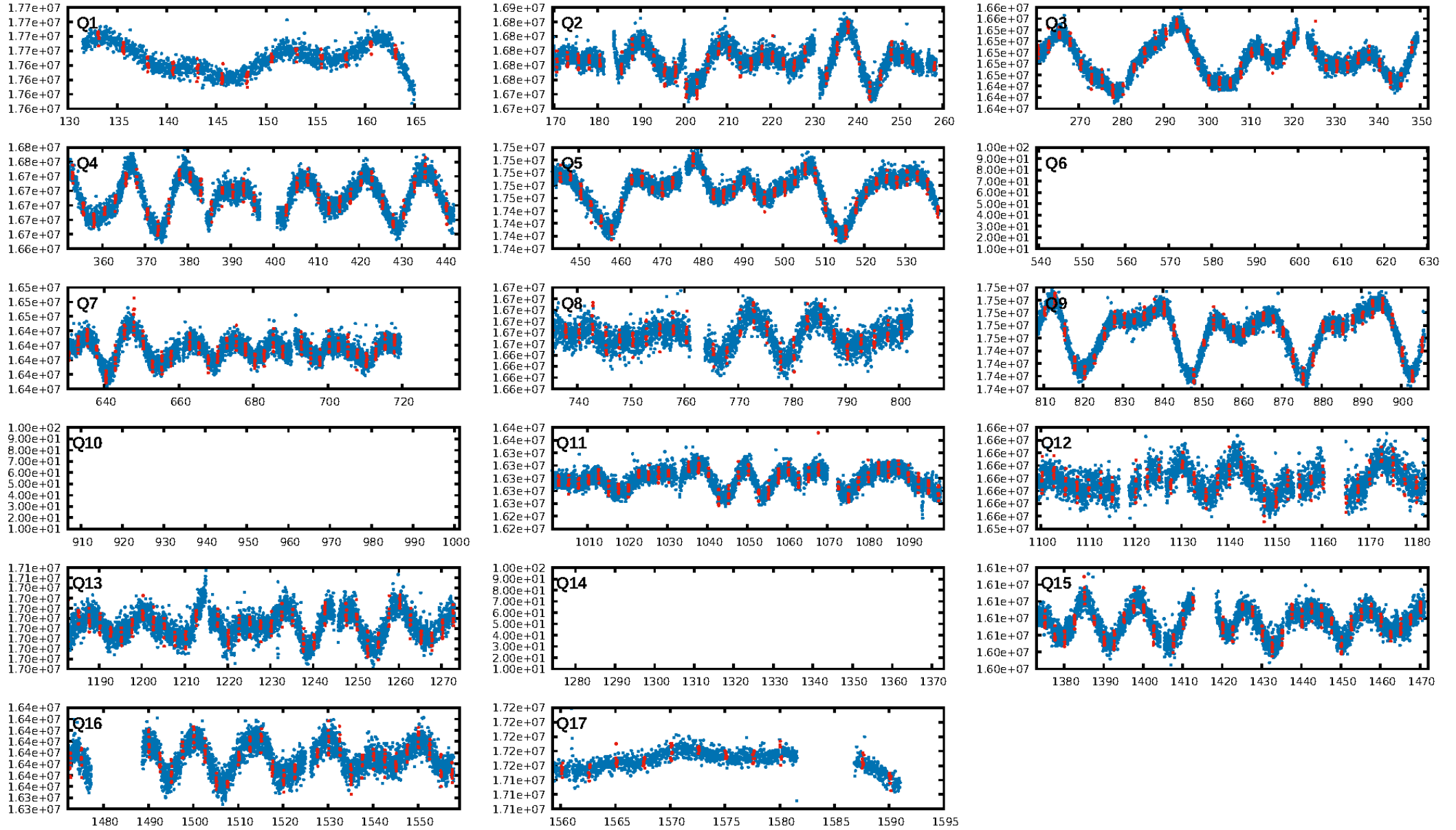
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.33e-24
RollingBand-fgt: 1.00 [403/403]
GhostDiagnostic-chr: 9.362
Centroid-sig: 19.8%
Centroid-so: 1.324 arcsec [1.20σ]
OotOffset-rm: 1.175 arcsec [1.24σ]
OotOffset-st: 1/4/3/3 [11]
KicOffset-rm: 1.059 arcsec [1.11σ]
KicOffset-st: 1/4/3/3 [11]
DiffImageQuality-fgm: 0.55 [6/11]
DiffImageOverlap-fno: 1.00 [14/14]

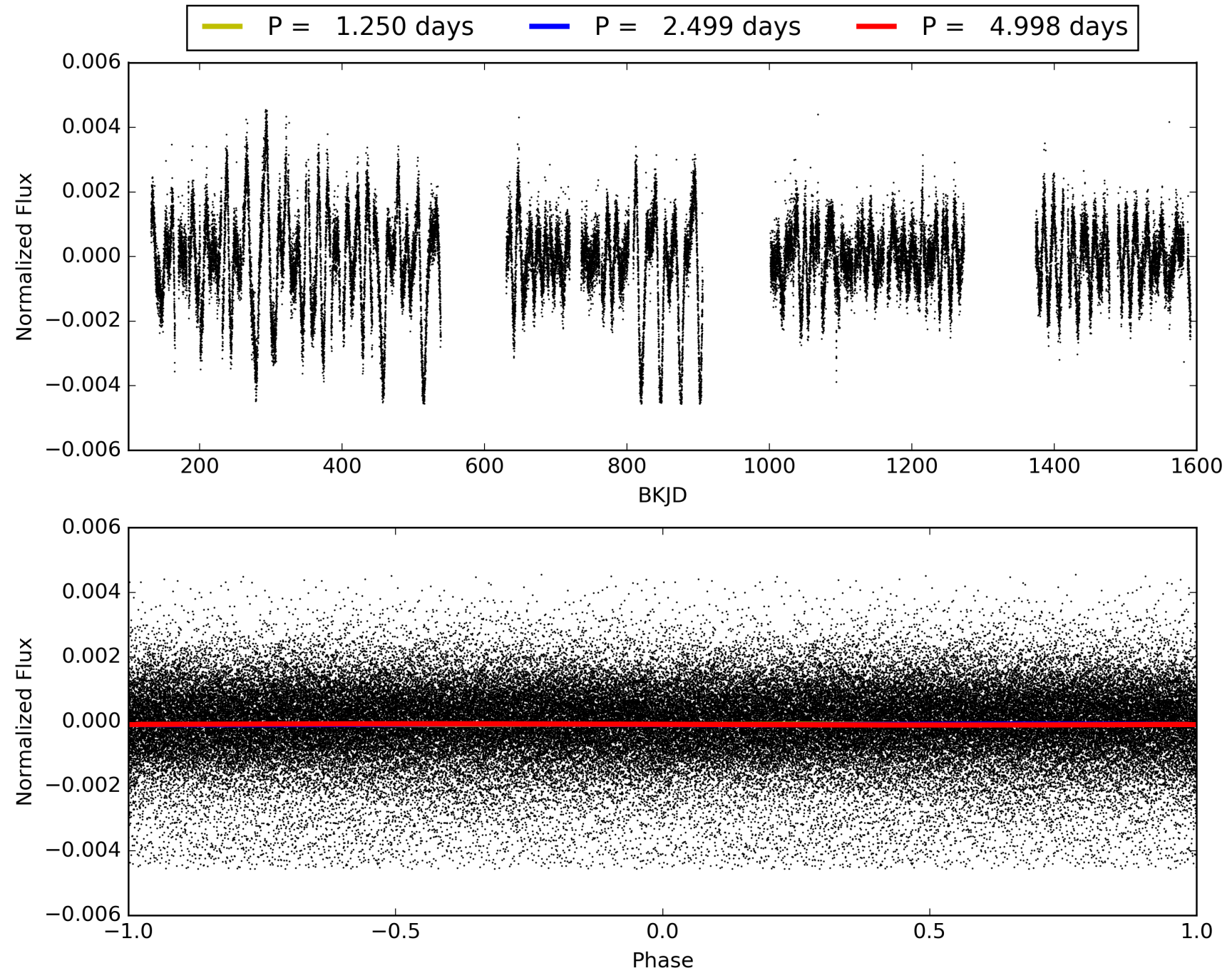
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:49:51 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005457326-01, PDC Light Curves

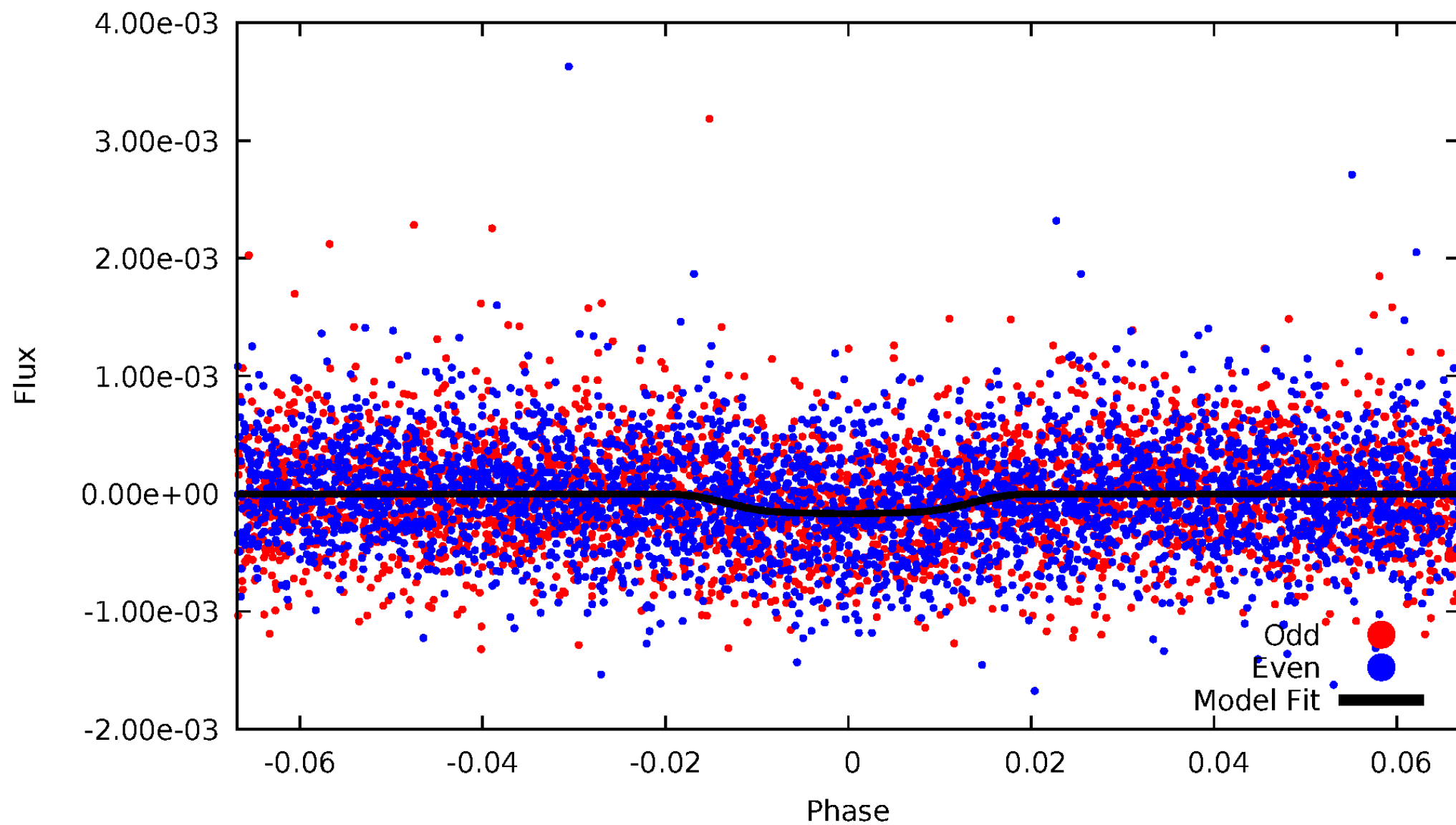


TCE 005457326-01



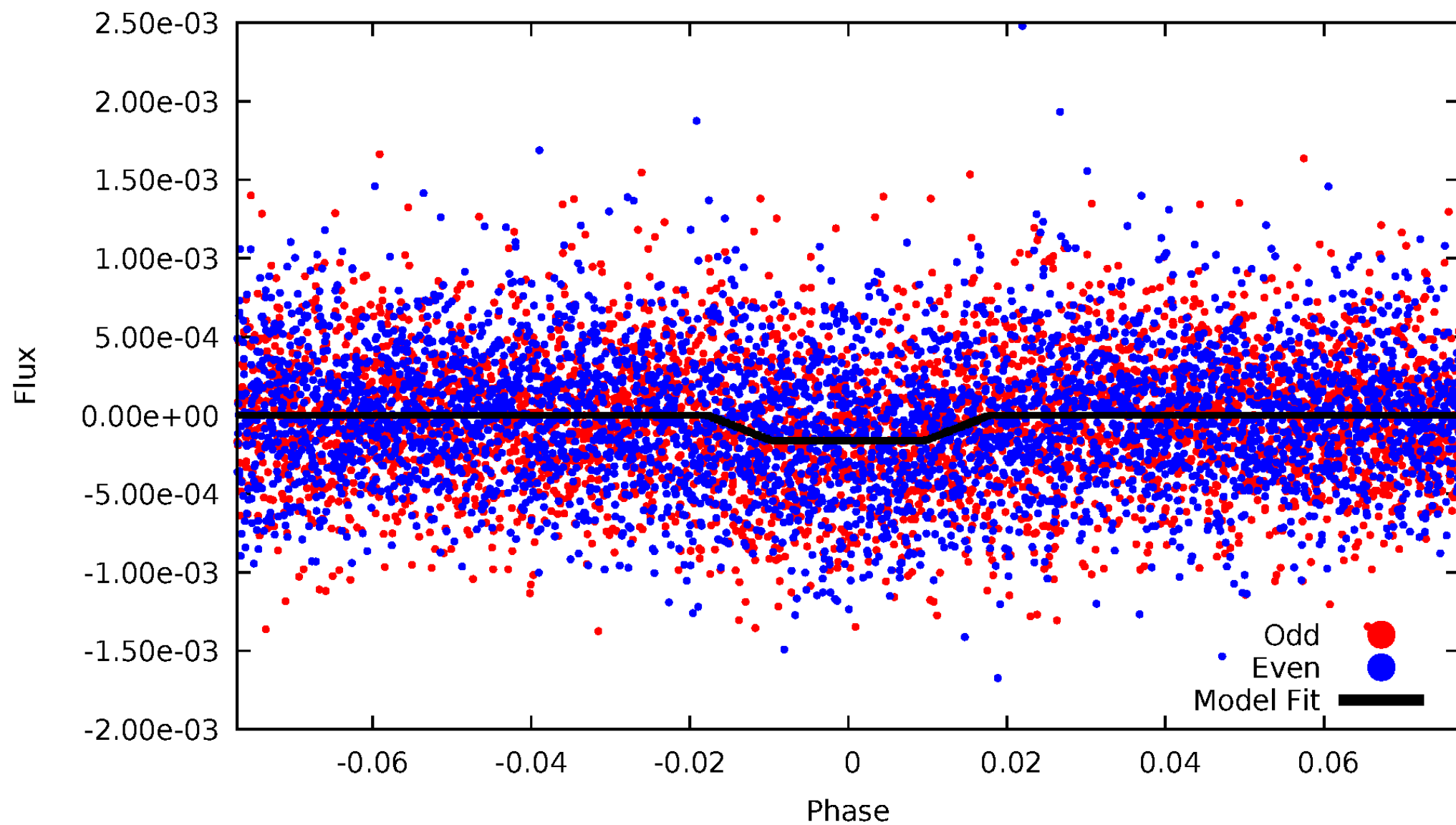
DV Odd/Even

TCE 005457326-01



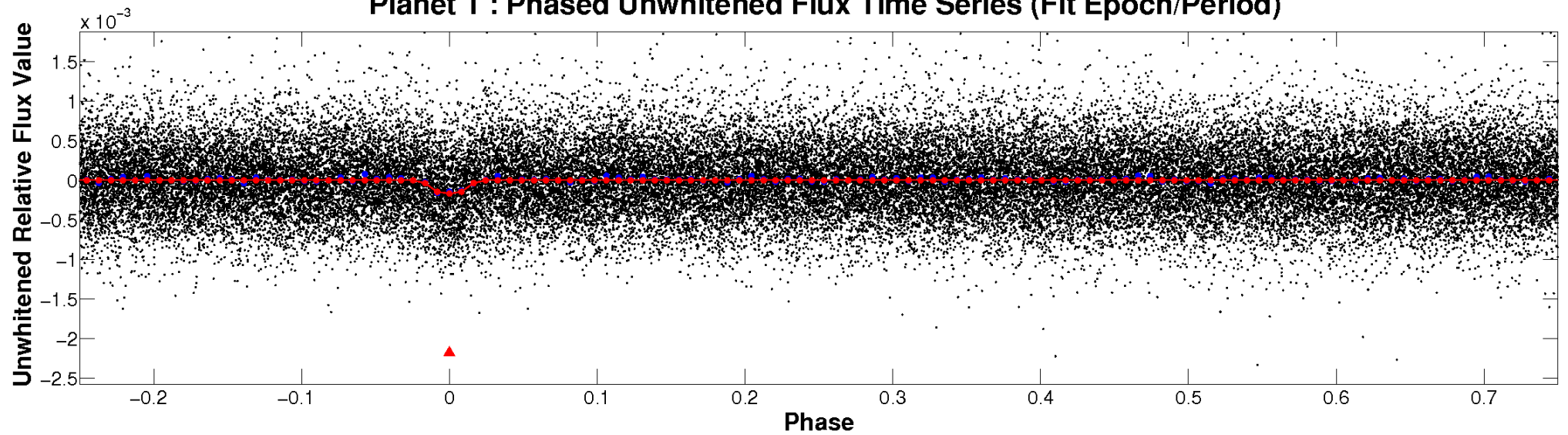
ALT Odd/Even

TCE 005457326-01

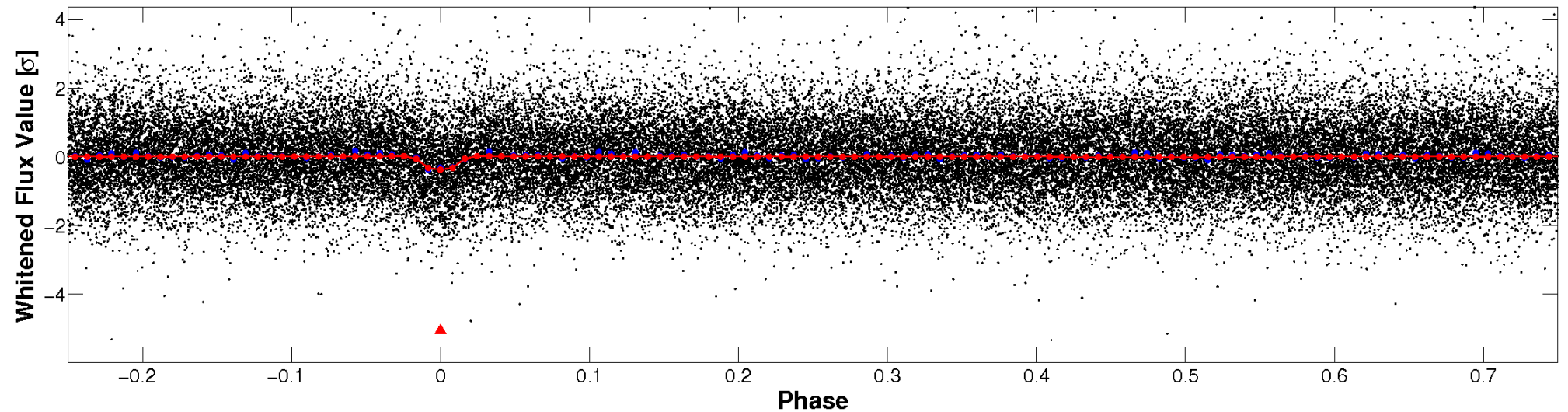


Non-Whitened Vs. Whitened Light Curve

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

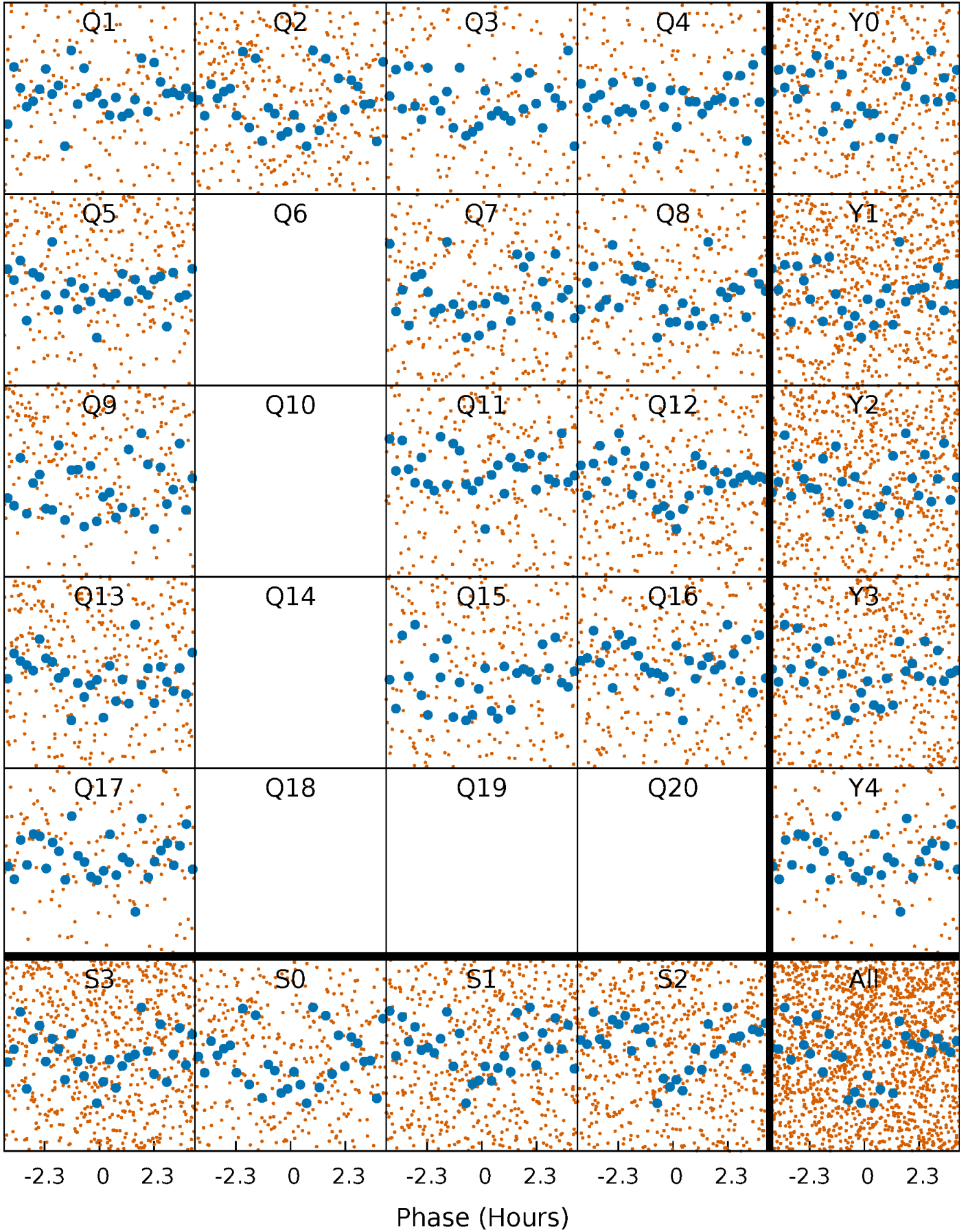


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



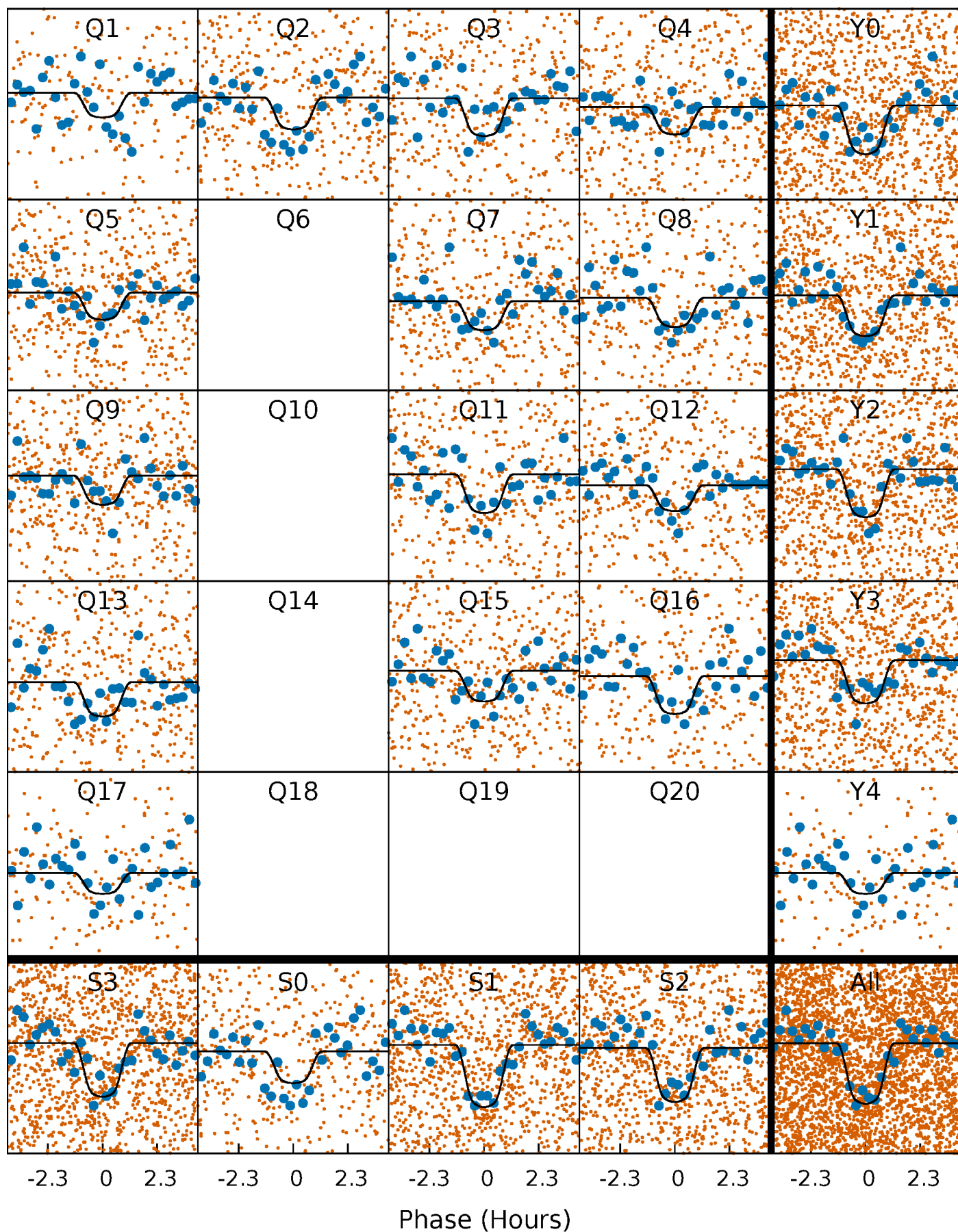
PDC Quarter-Phased Transit Curves

TCE 005457326-01 P= 2.499152 Days $T_0=133.090336$ (BKJD)



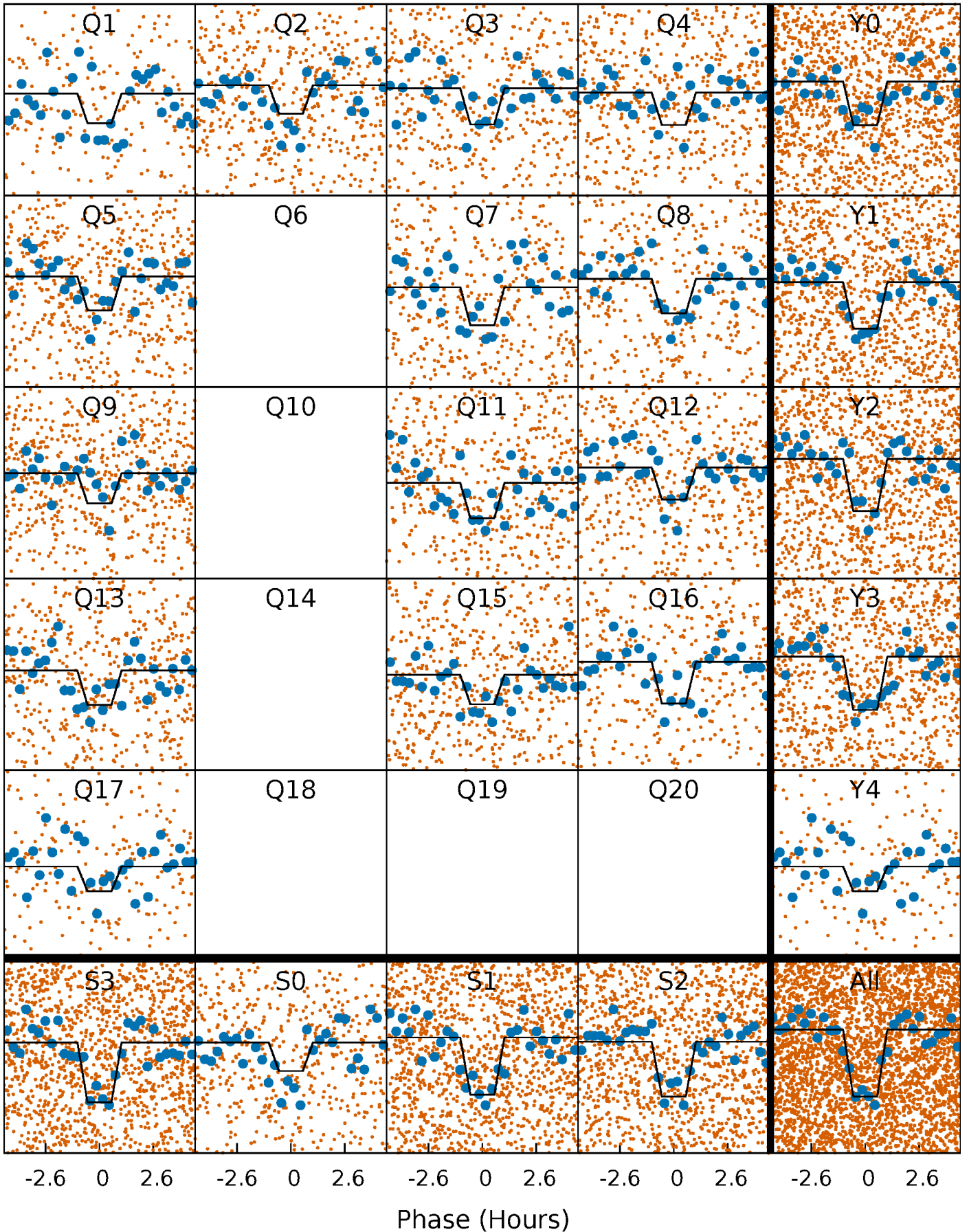
DV Quarter-Phased Transit Curves

TCE 005457326-01 P= 2.499152 Days $T_0=133.090336$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

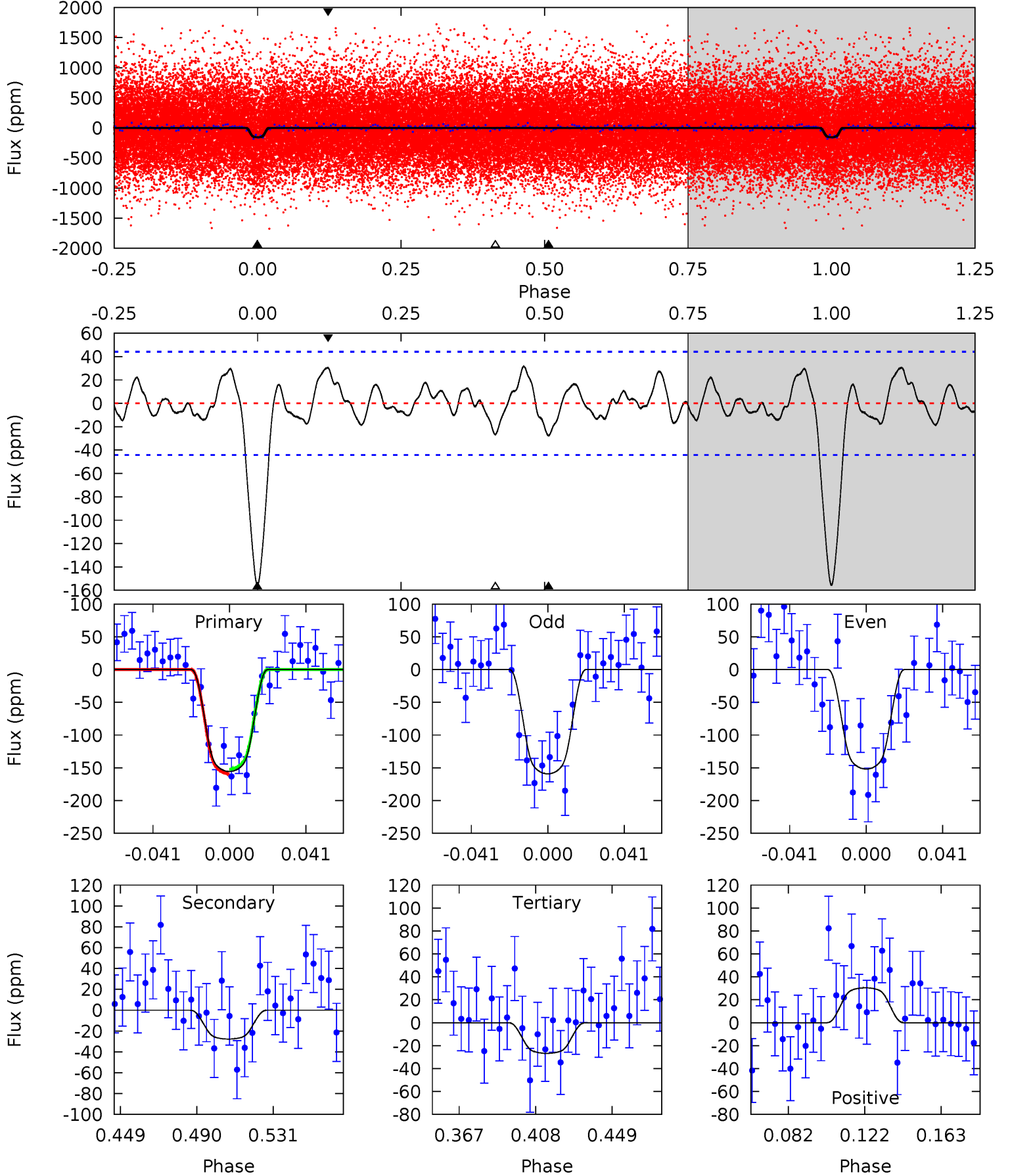
TCE 005457326-01 P= 2.499128 Days $T_0=133.097236$ (BKJD)



DV Model-Shift Uniqueness Test

005457326-01, P = 2.499152 Days, E = 130.591184 Days

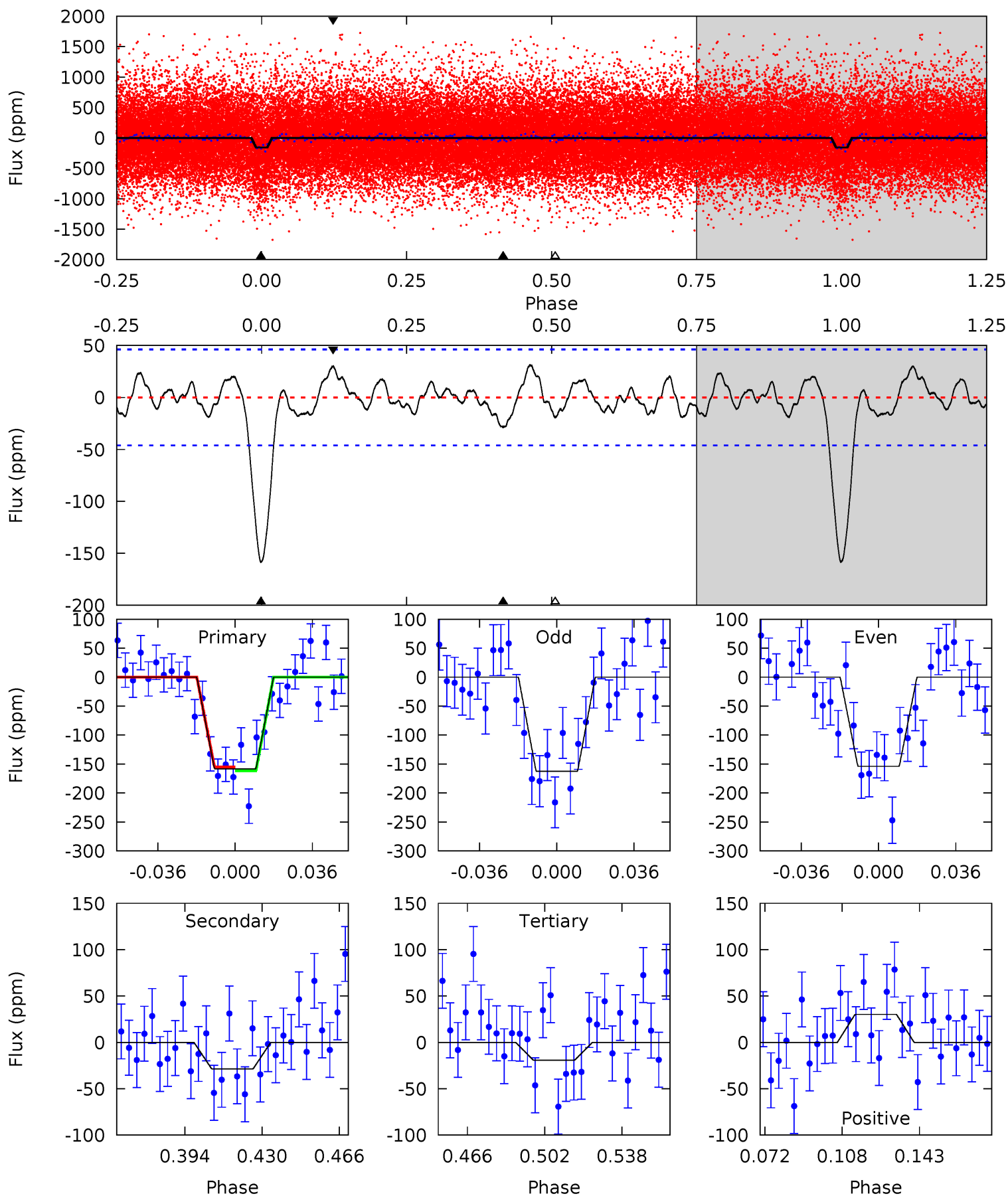
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	2.98	2.88	3.27	4.75	2.05	1.32	13.9	13.5	0.11	-0.29	0.39	0.94	0.17	0.37



Alt Model-Shift Uniqueness Test

005457326-01, P = 2.499128 Days, E = 130.598108 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.4	2.96	1.98	3.12	4.78	2.10	1.24	14.4	13.3	0.97	-0.16	0.45	0.95	0.16	0.34



Stellar Parameters For KIC 005457326

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4705^{+139}_{-139}	$4.572^{+0.058}_{-0.027}$	$-0.040^{+0.300}_{-0.300}$	$0.720^{+0.046}_{-0.066}$	$0.707^{+0.077}_{-0.051}$	$2.668^{+0.672}_{-0.304}$
	+3%/-3%	+1%/-1%	+750%/-750%	+6%/-9%	+11%/-7%	+25%/-11%
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 005457326-01 / KOI 4508.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-28 ± 9	$1.25^{+0.32}_{-0.26}$	1366^{+45}_{-51}	3188^{+297}_{-277}	10^{+8}_{-5}
Alt.	-29 ± 10	$0.99^{+0.28}_{-0.29}$	1366^{+47}_{-50}	3441^{+450}_{-322}	16^{+18}_{-7}

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 $A_{obs} \gg 1.0$

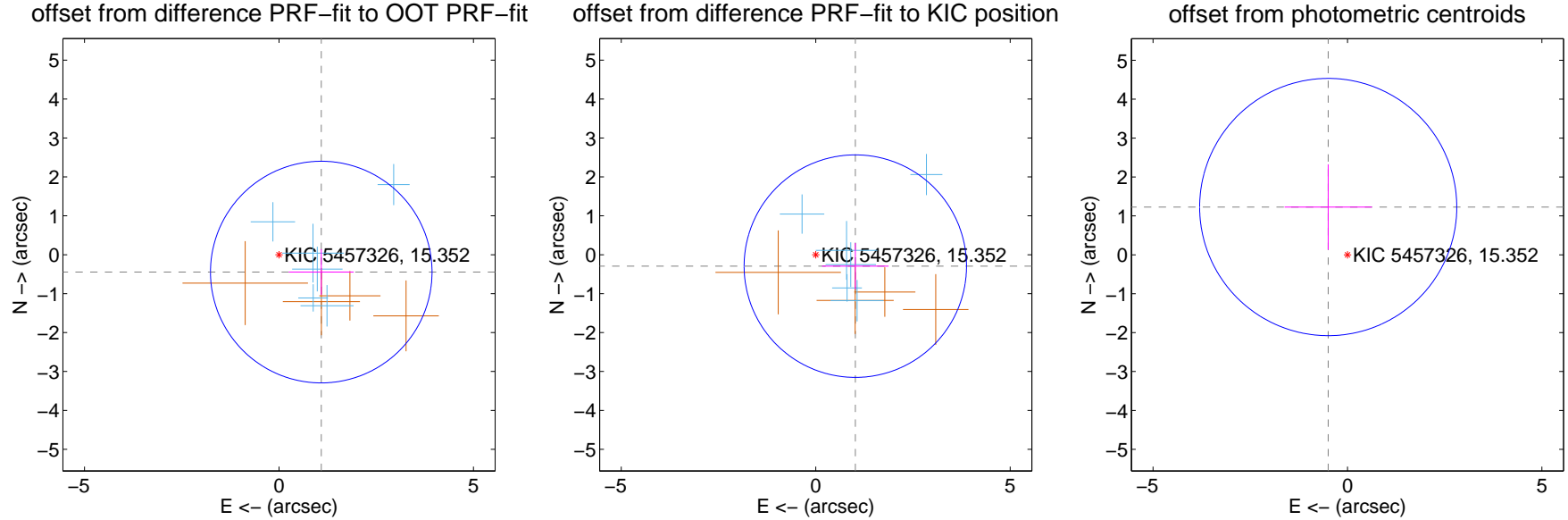
DV Centroid Data

Supplemental centroid analysis for 005457326-01. Kepler magnitude: 15.35. Transit SNR 12.11

There are 6 quarters with good PRF difference image offsets

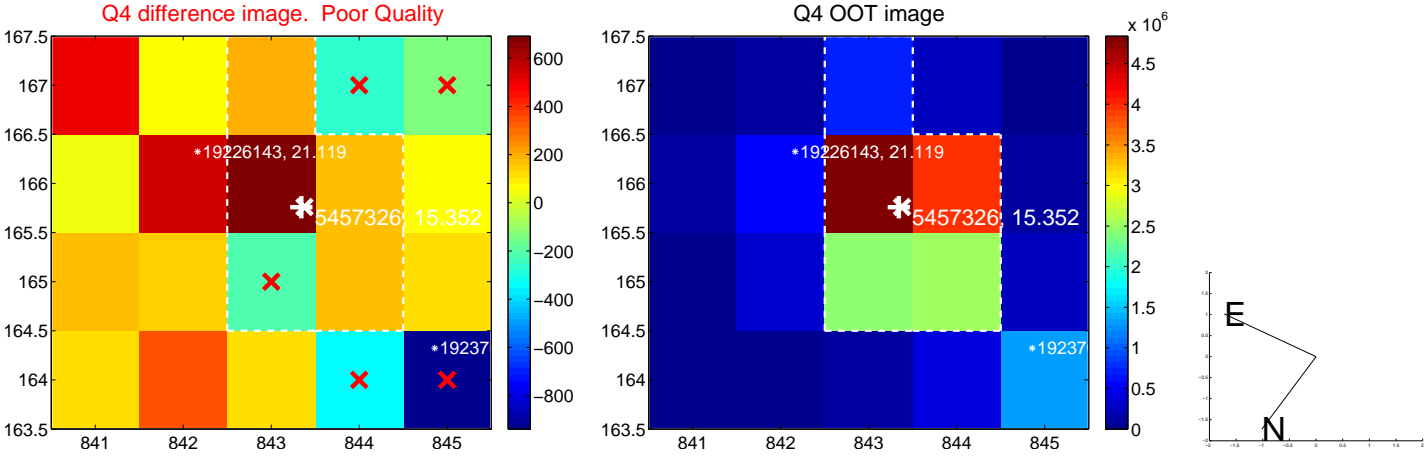
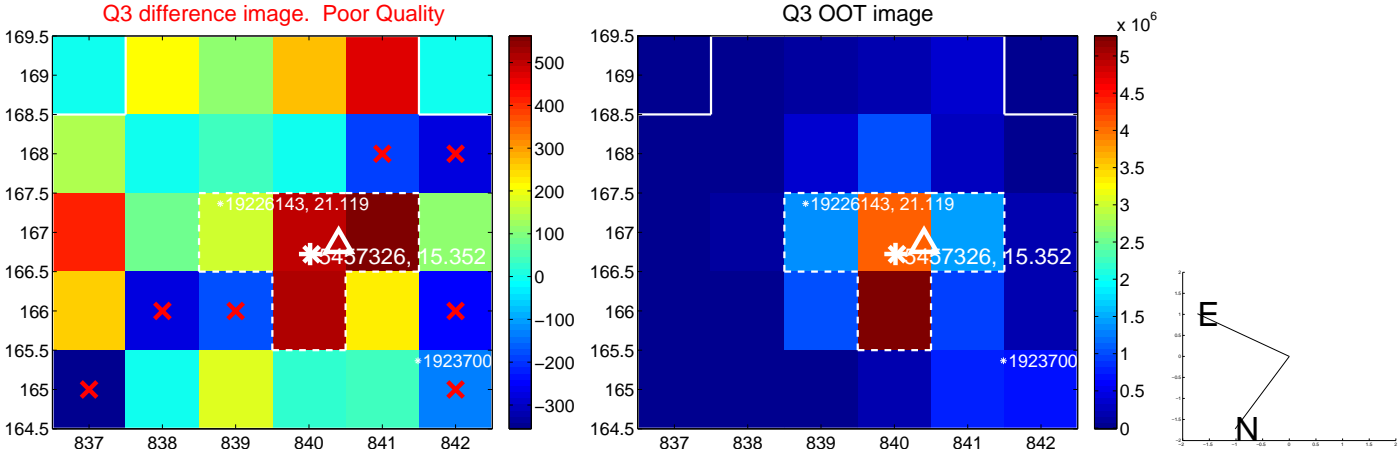
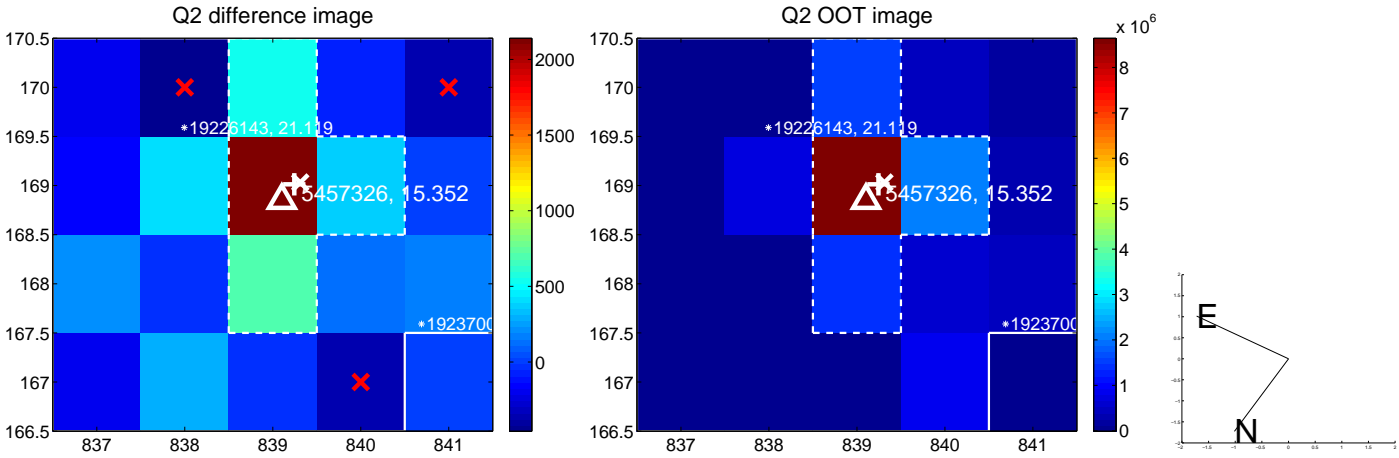
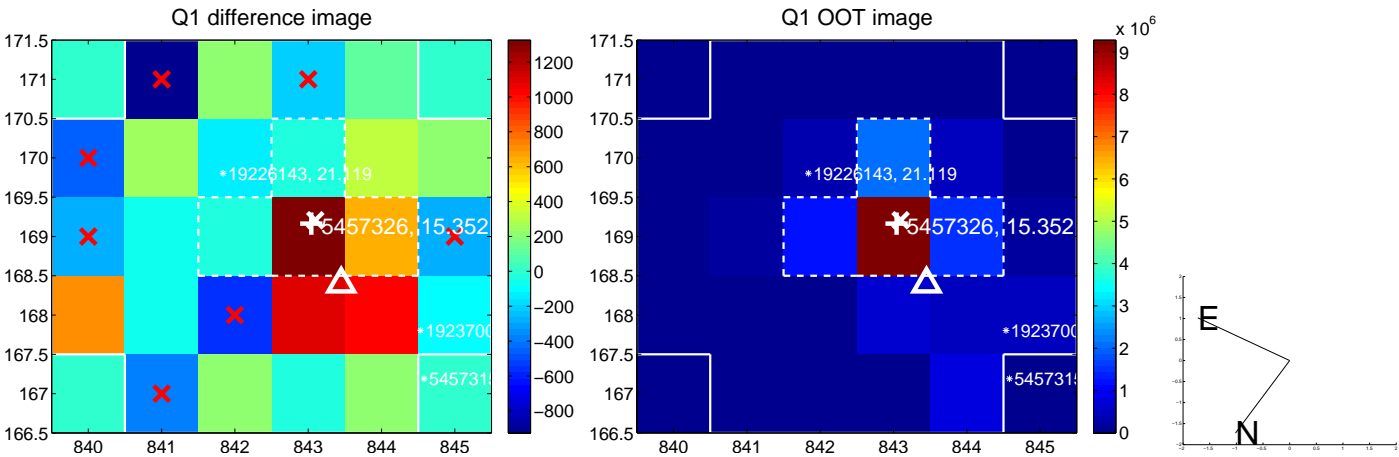
The direct PRF centroid is offset from the target star catalog position by about 0.29 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.175 ± 0.949	1.24	-1.087 ± 0.836	-0.446 ± 0.589
PRF-fit source offset from KIC position	1.059 ± 0.953	1.11	-1.018 ± 0.857	-0.293 ± 0.594
photometric centroid source offset	1.32 ± 1.10	1.20	0.50 ± 1.12	1.23 ± 1.10

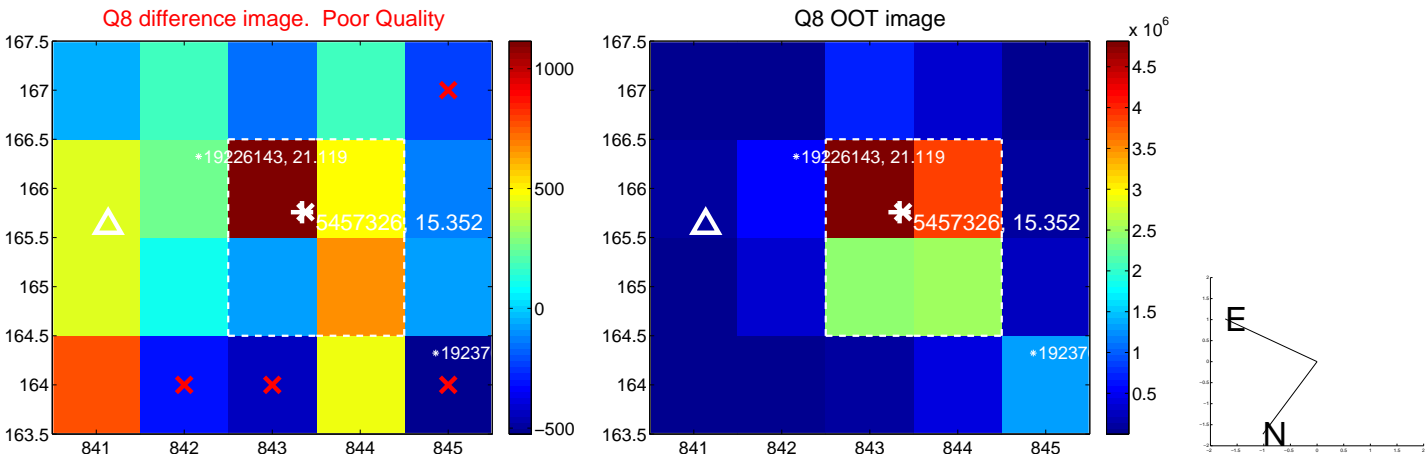
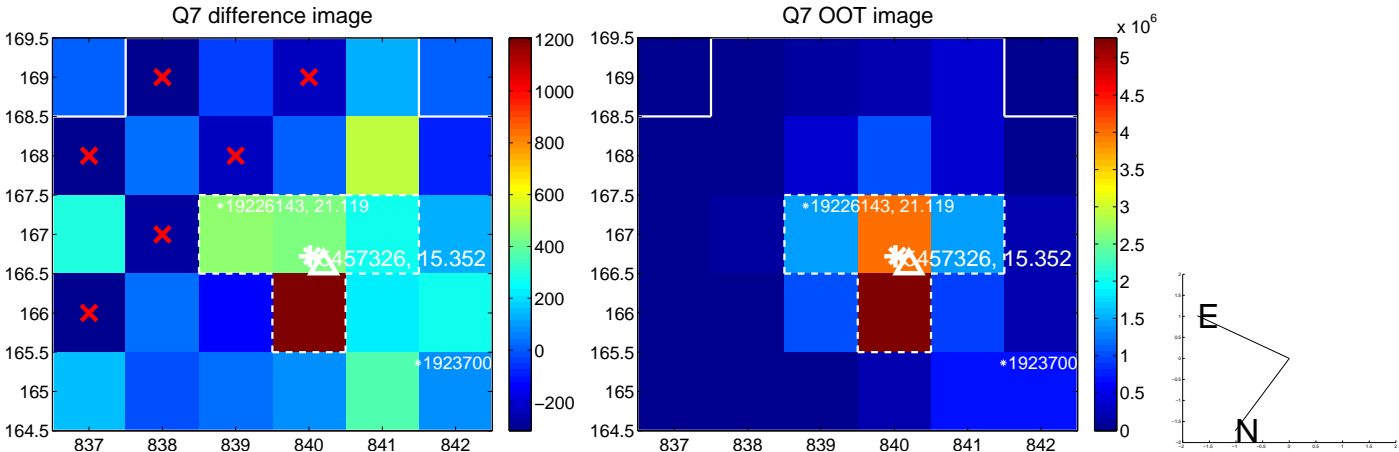
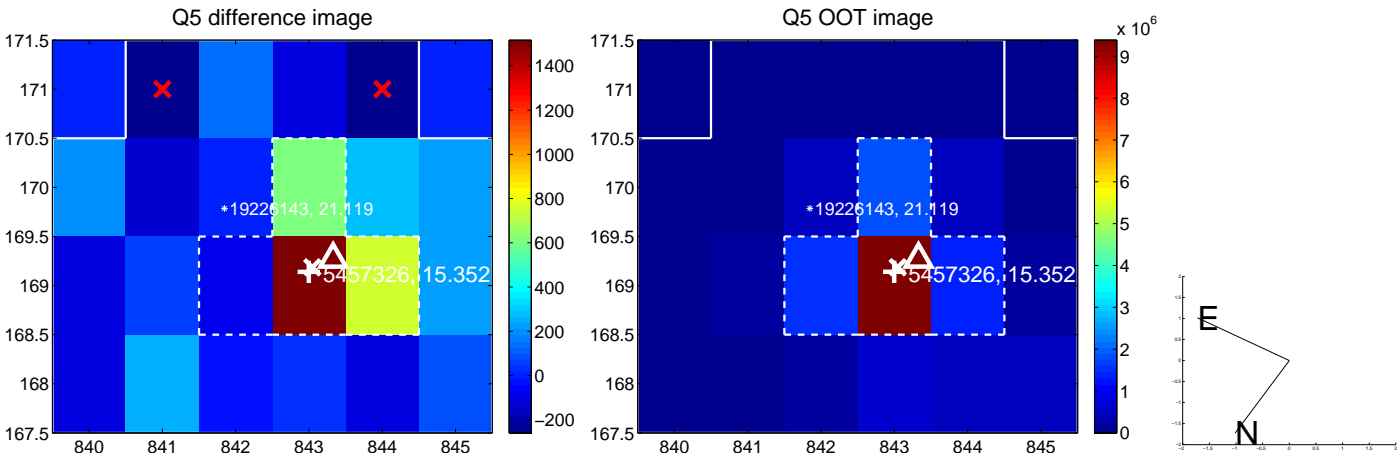


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

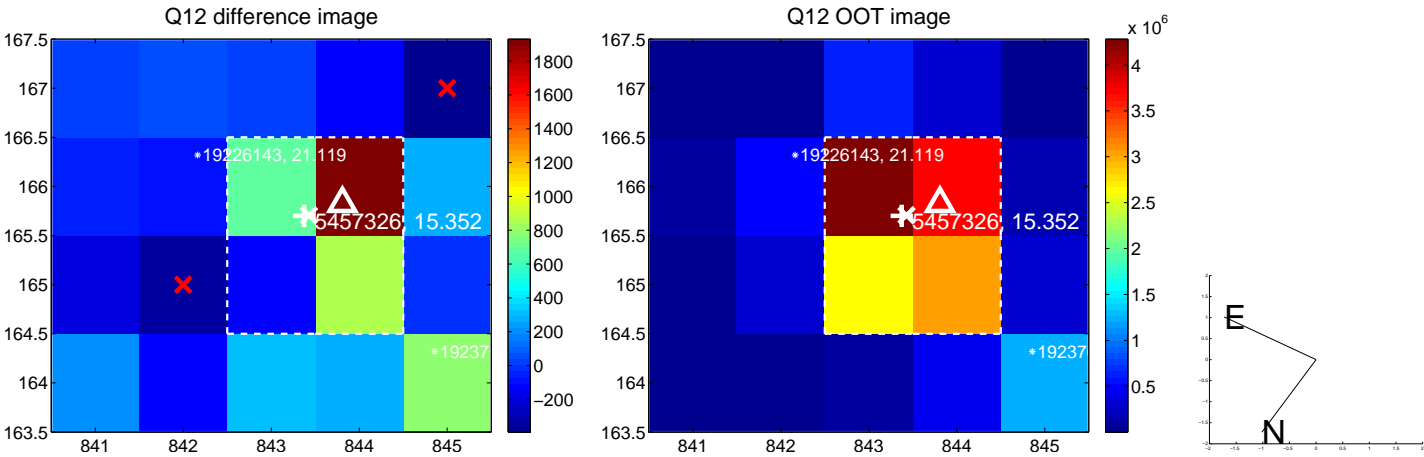
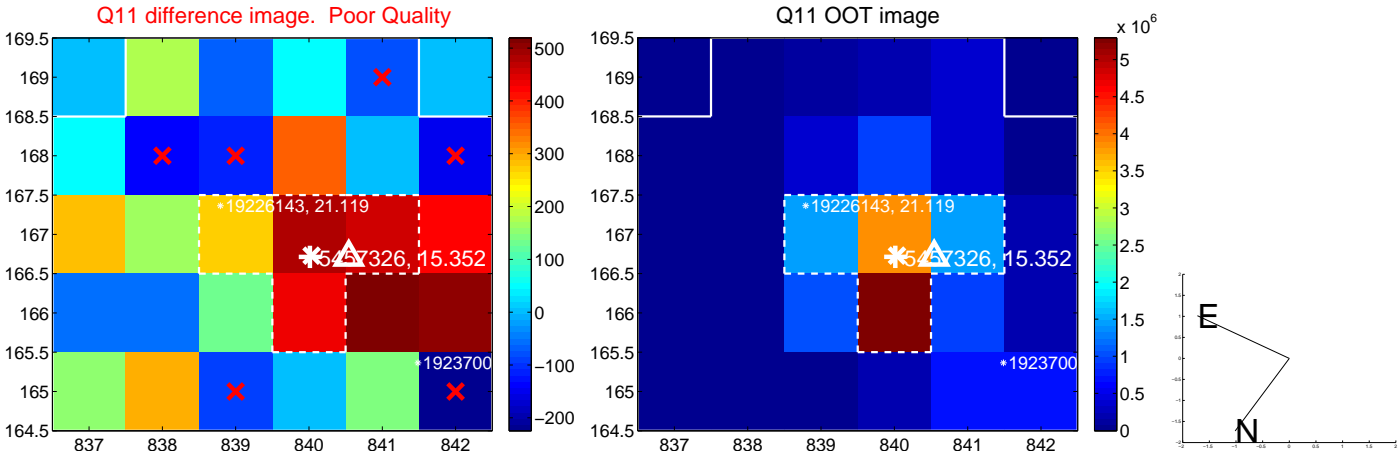
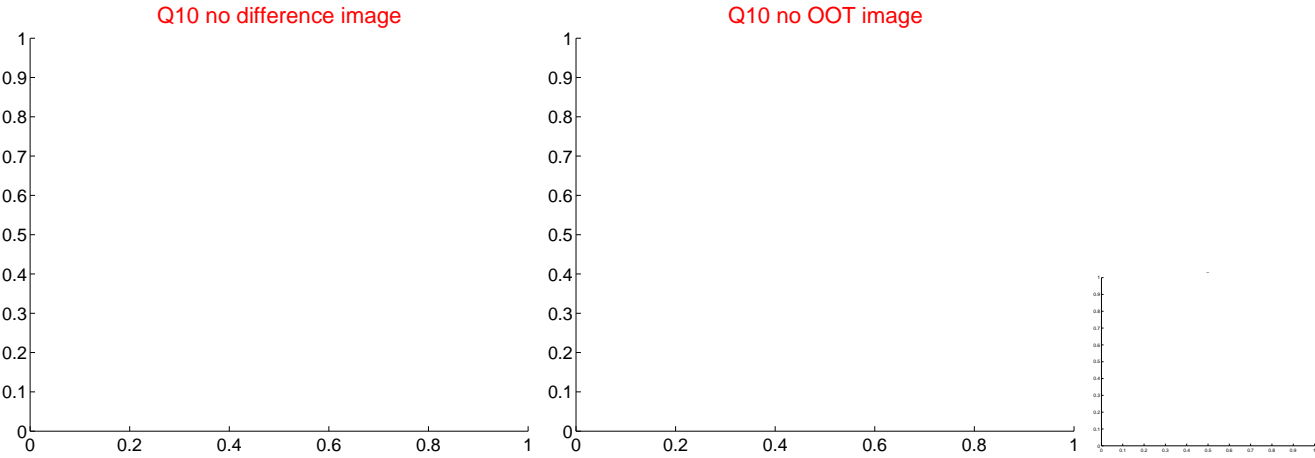
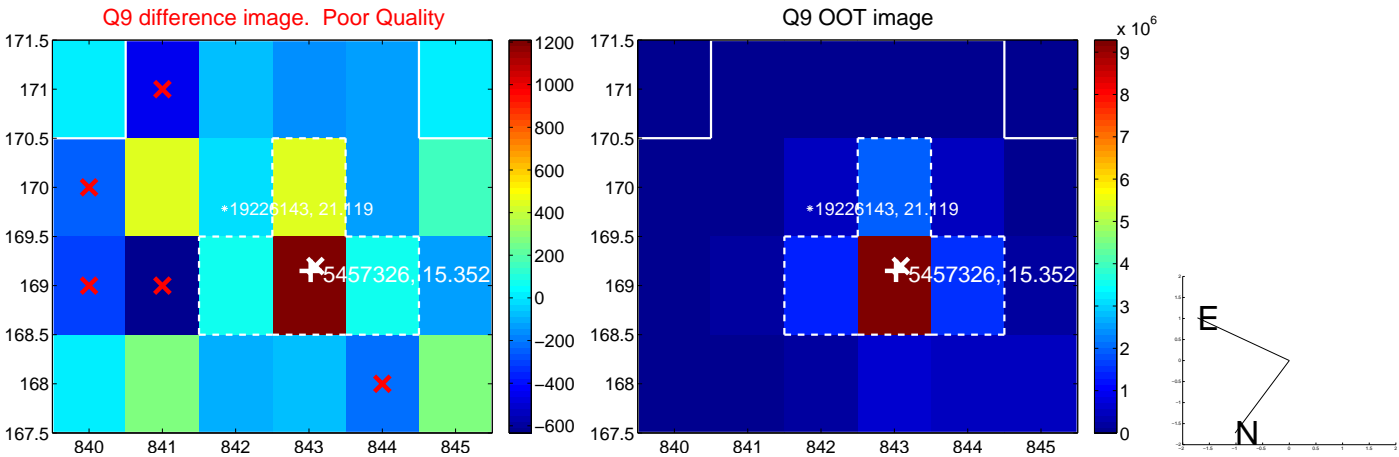
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



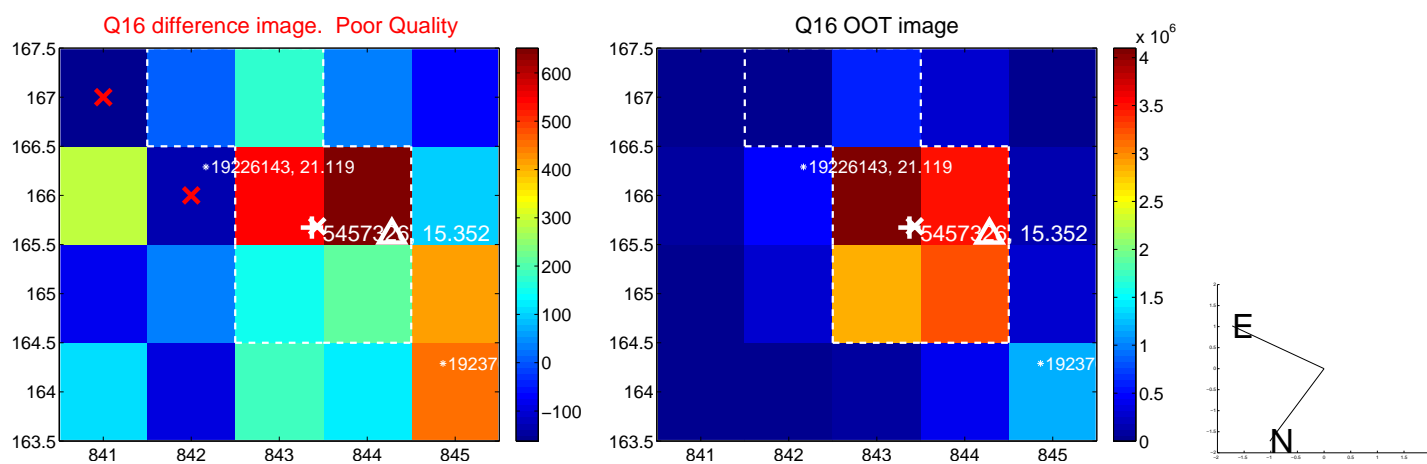
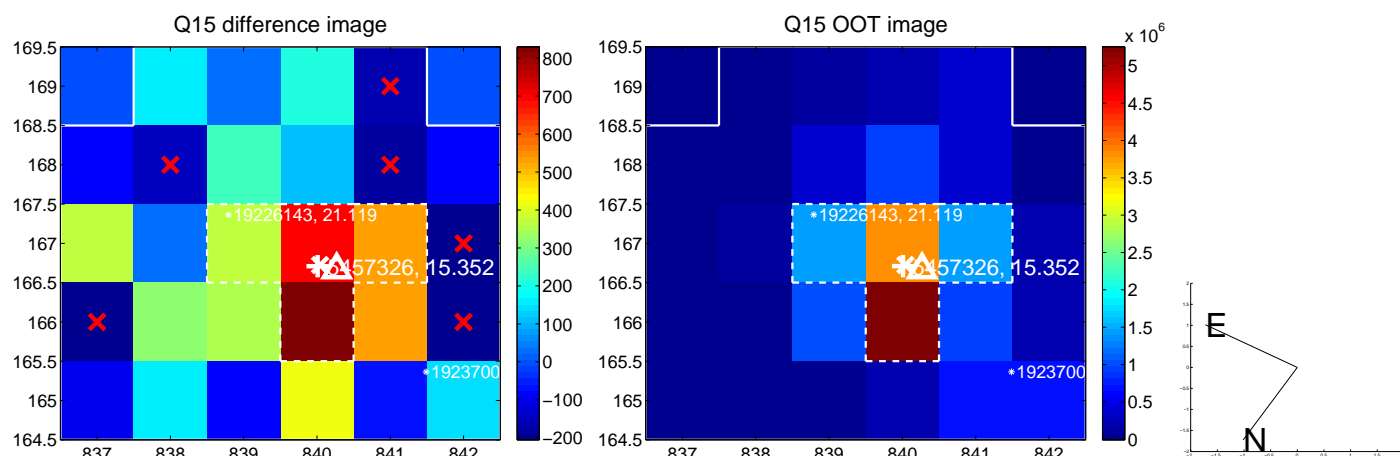
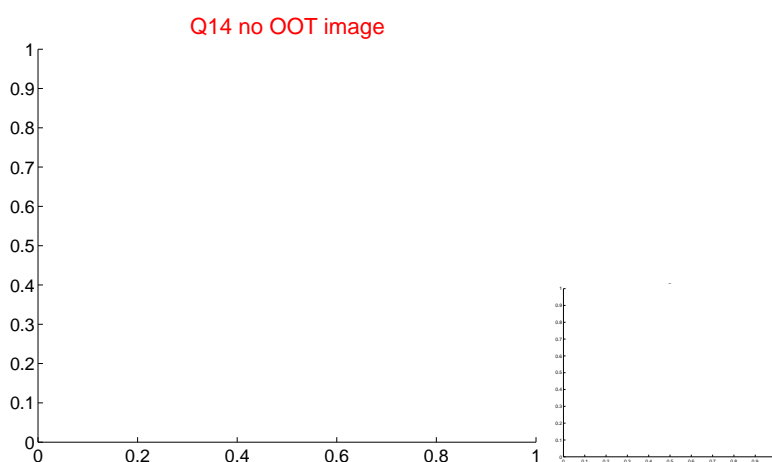
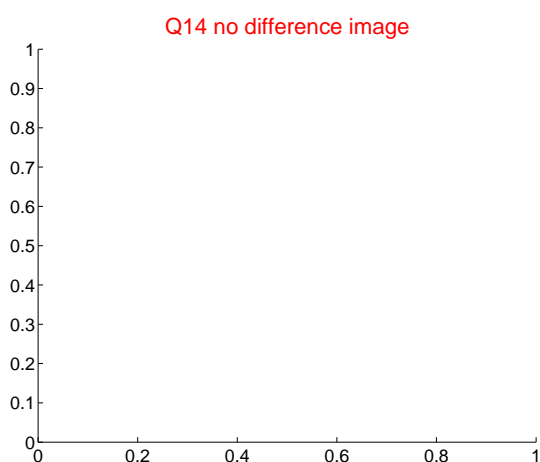
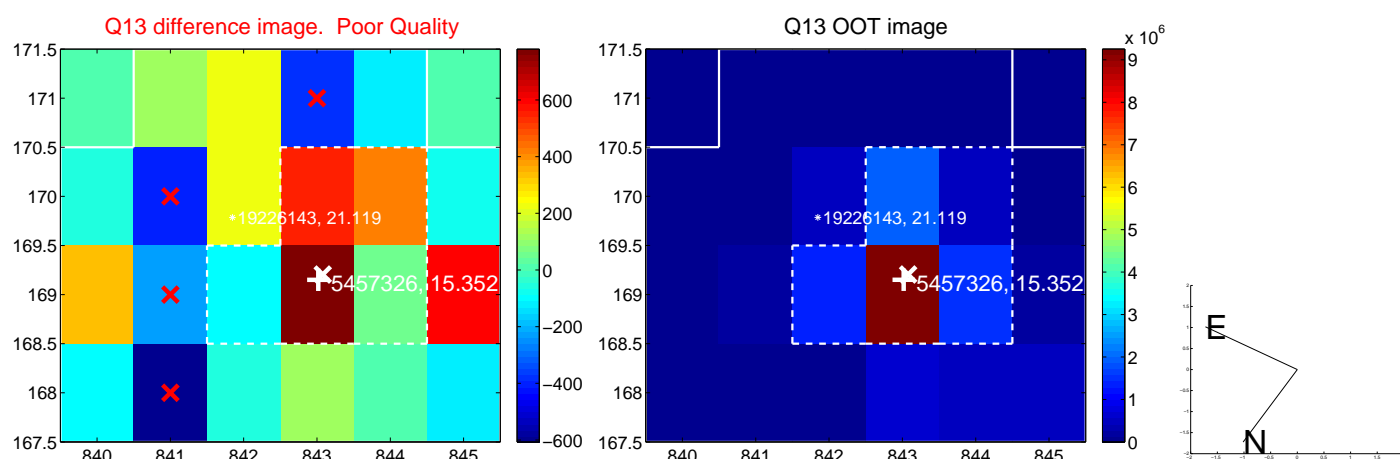
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



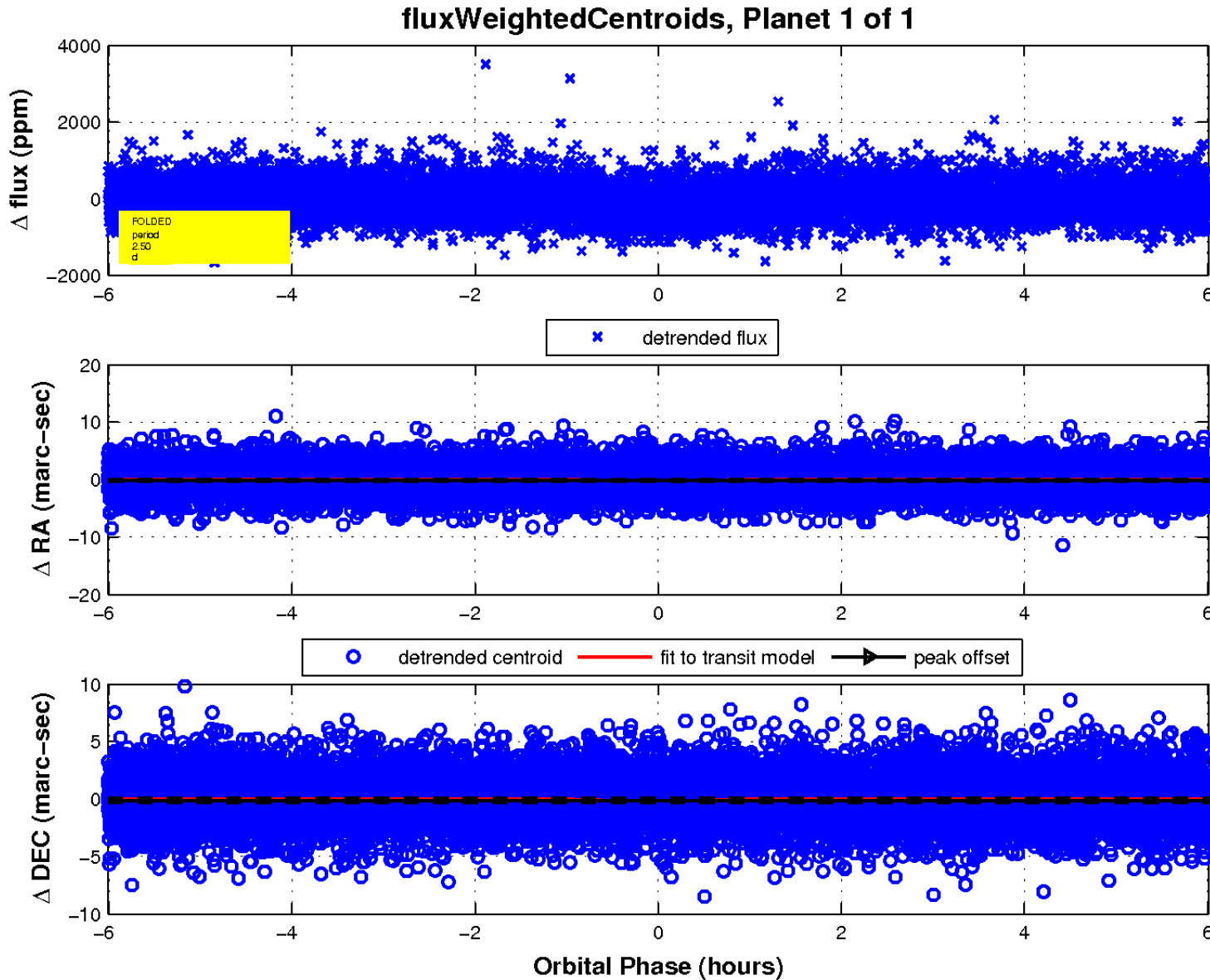
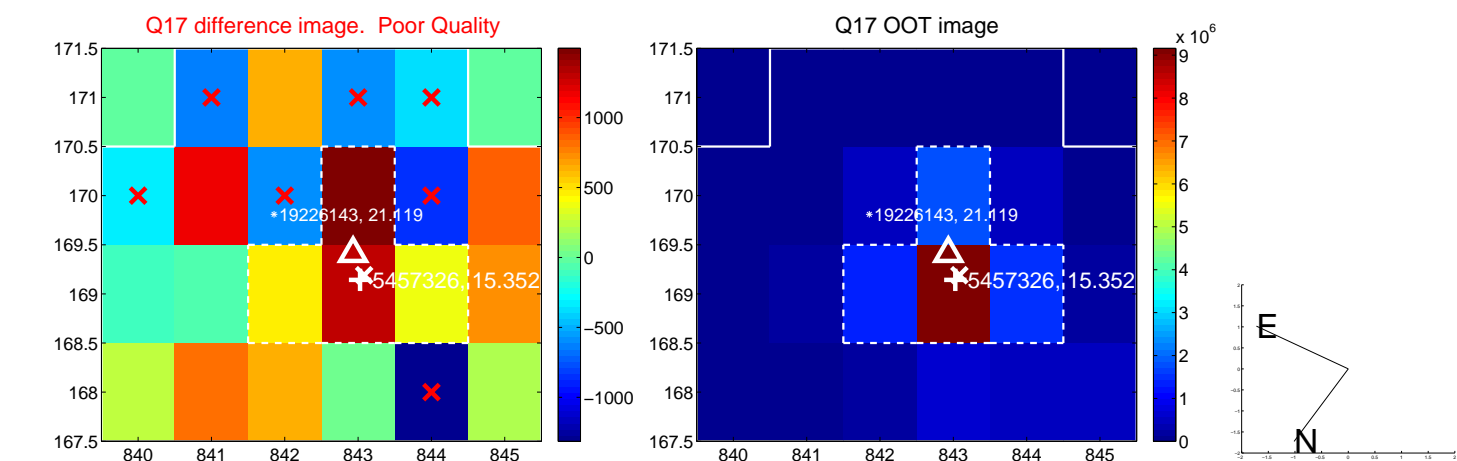
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UKIRT Image

Declination

