

KIC 003557560

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})
003557560-01	OBS	4456.01	7.429648	138.798792	221.2	3.951	9.5	9.9	1.25	5635	3.05	259.96

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
003557560-01	OBS	PC	0.96	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.

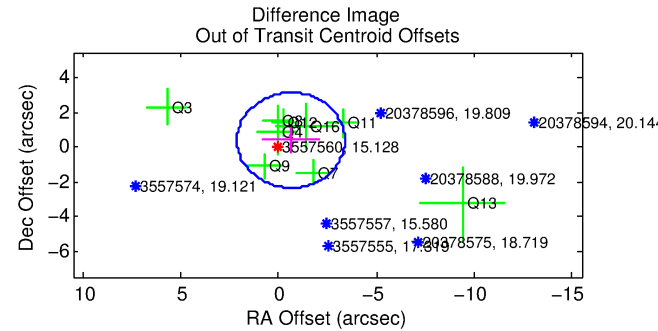
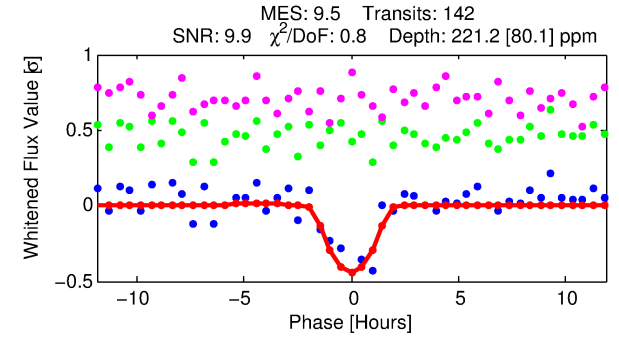
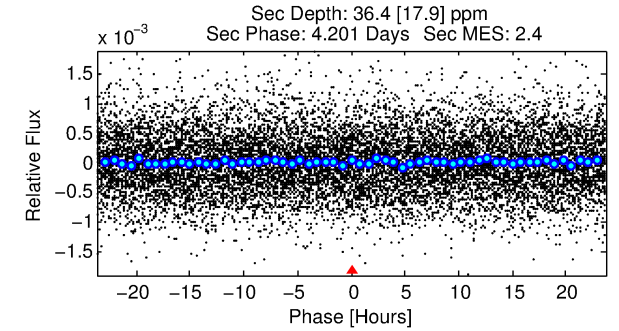
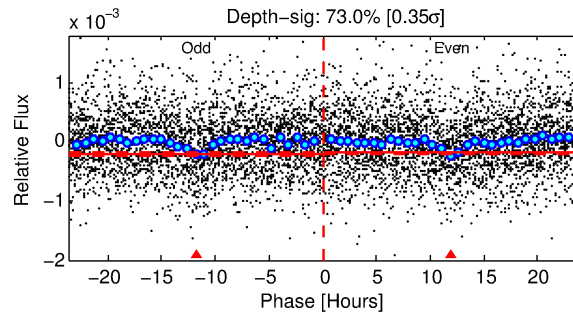
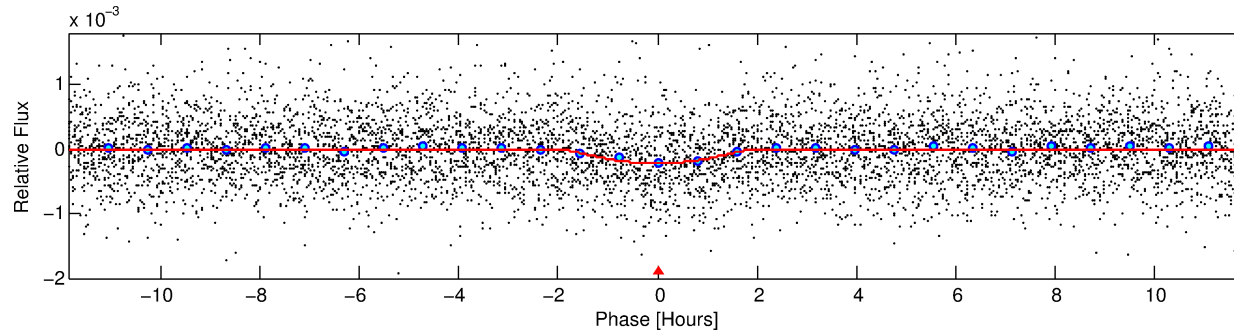
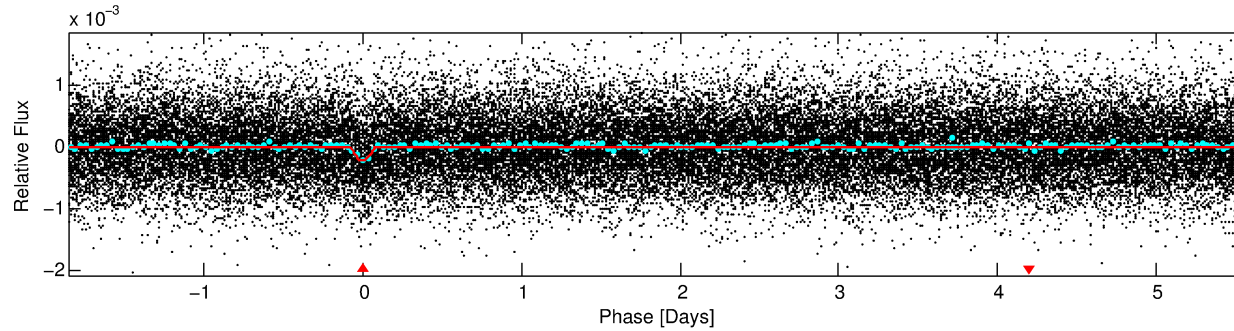
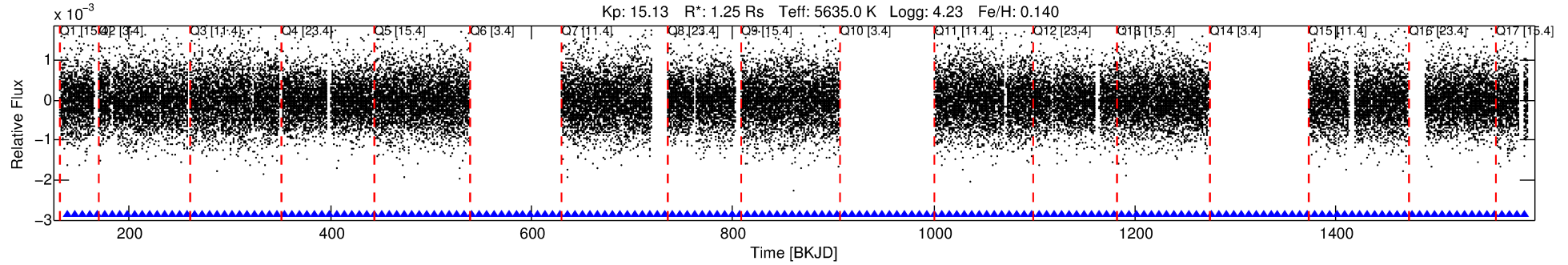
Ephemeris Match Information For 003557560-01

No Significant Match Found

DV One-Page Summary

KIC: 3557560 Candidate: 1 of 1 Period: 7.430 d
KOI: K04456.01 Corr: 0.919

Kp: 15.13 R*: 1.25 Rs Teff: 5635.0 K Logg: 4.23 Fe/H: 0.140



DV Fit Results:

Period = 7.42965 [0.00008] d
Epoch = 138.7988 [0.0089] BKJD
Rp/R* = 0.0223 [0.0330]
a/R* = 3.81 [2.20]
b = 0.99 [0.06]
Seff = 259.97 [75.71]
Teq = 1024 [75] K
Rp = 3.05 [4.55] Re
a = 0.0738 [0.0132] AU
Ag = 11.69 [35.19] [0.30σ]
Teffp = 2927 [2193] K [0.87σ]

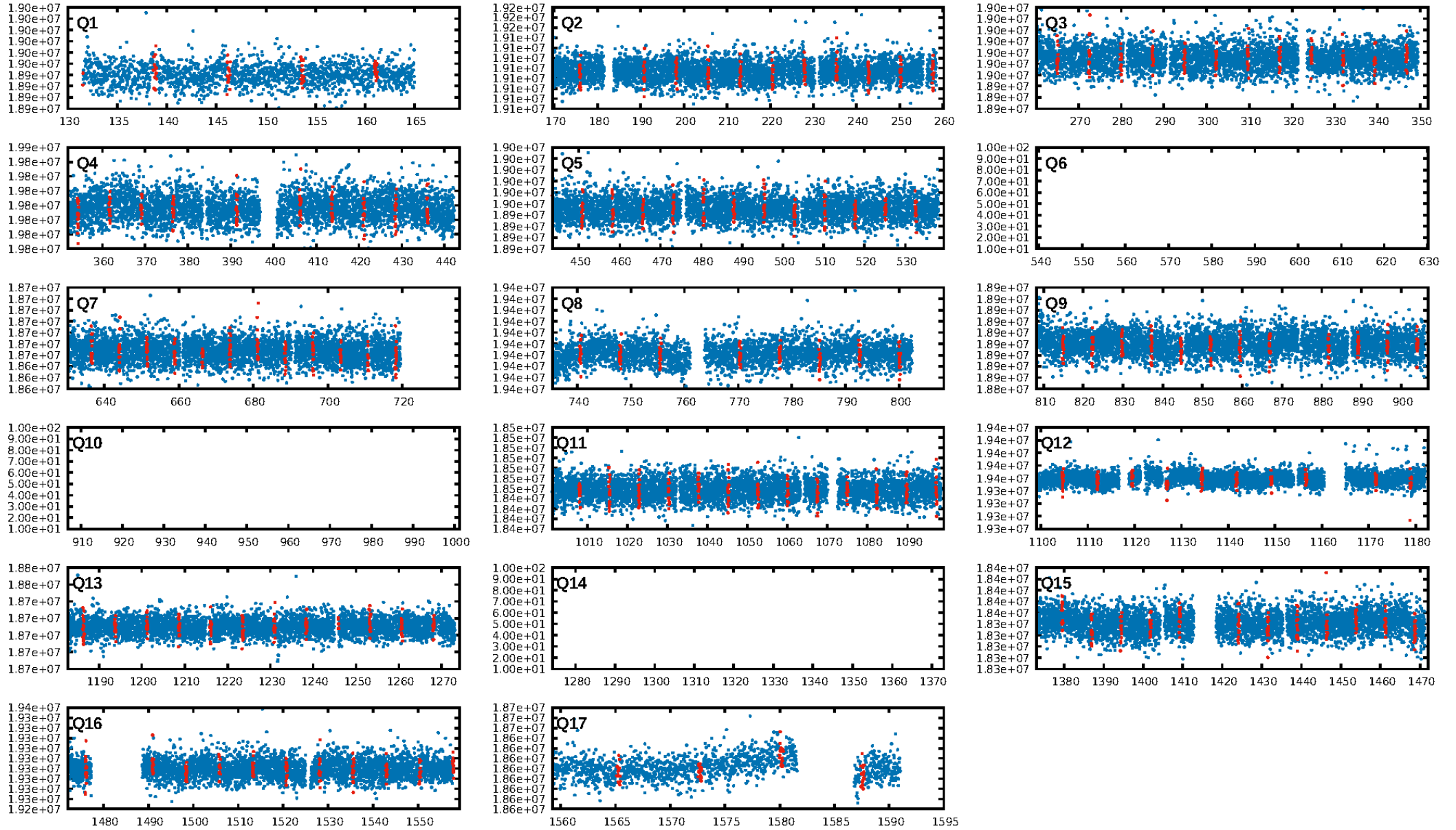
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.47e-21
RollingBand-fgt: 1.00 [134/134]
GhostDiagnostic-chr: 0.8464
Centroid-sig: 24.8%
Centroid-so: 1.124 arcsec [0.80σ]
OotOffset-rm: 0.752 arcsec [0.82σ]
KicOffset-rm: 0.763 arcsec [0.66σ]
OotOffset-st: 0/3/4/2 [9]
KicOffset-st: 0/3/4/2 [9]
DiffImageQuality-fgm: 0.33 [3/9]
DiffImageOverlap-fno: 1.00 [14/14]

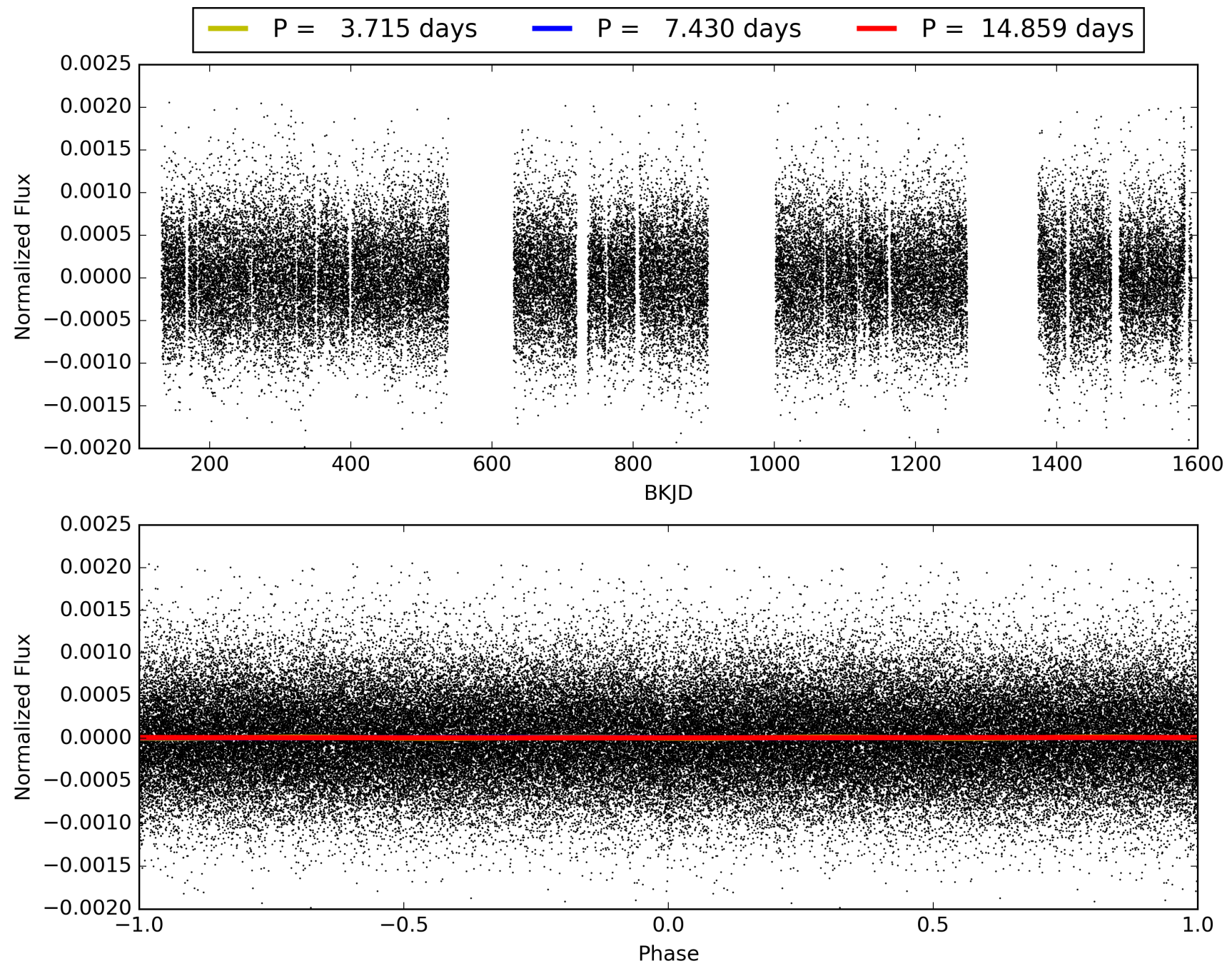
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:28:26 Z

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

TCE 003557560-01, PDC Light Curves

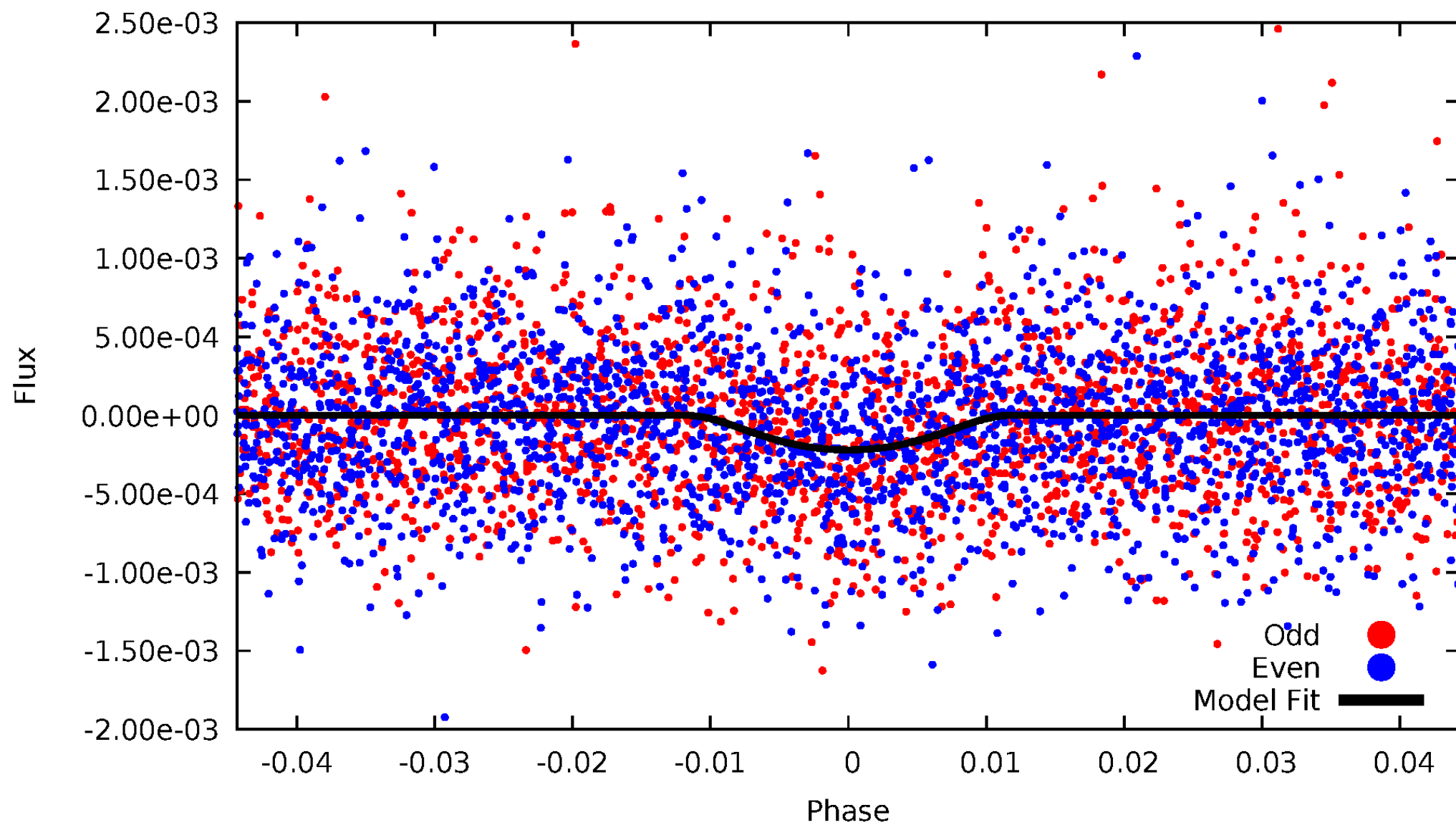


TCE 003557560-01



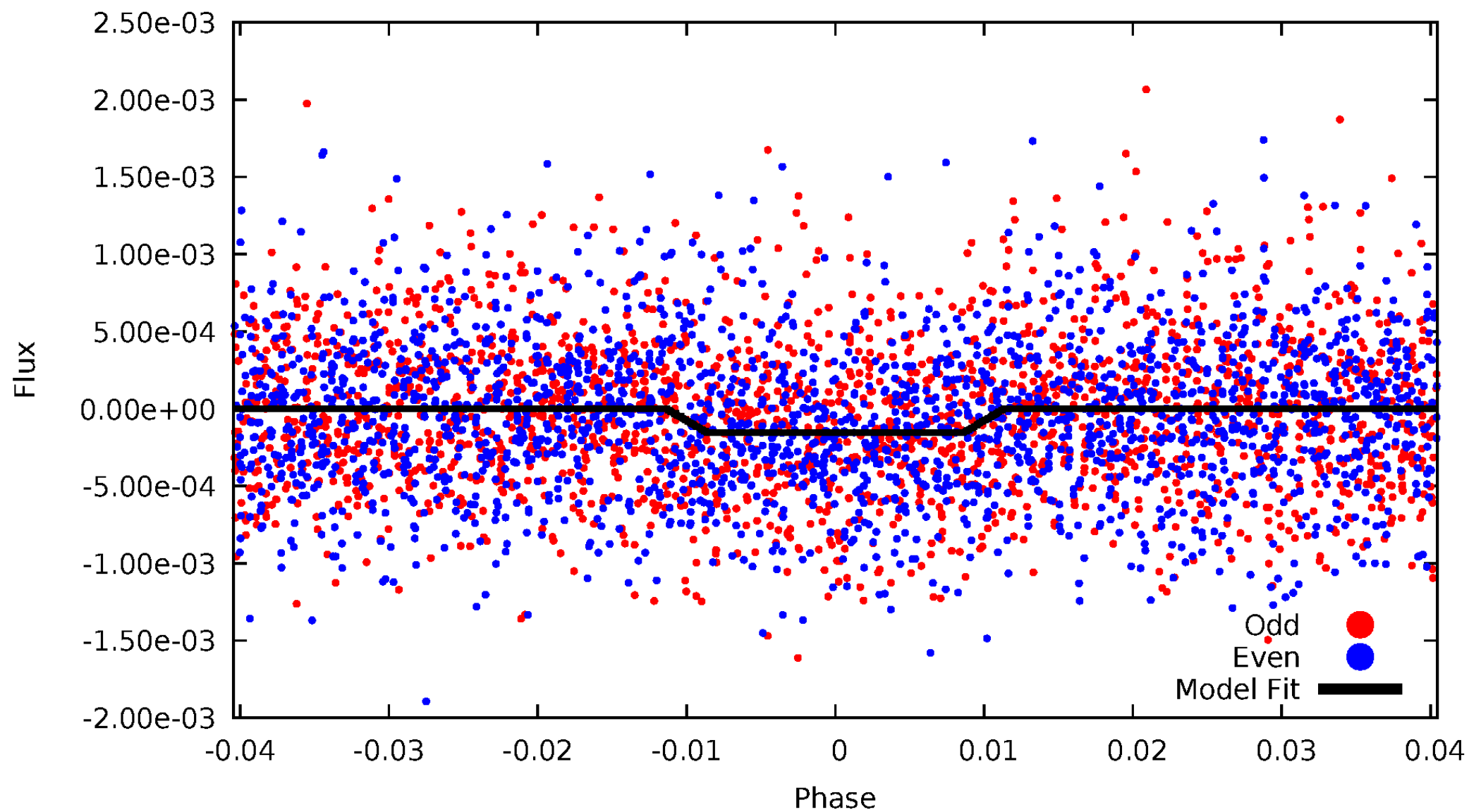
DV Odd/Even

TCE 003557560-01



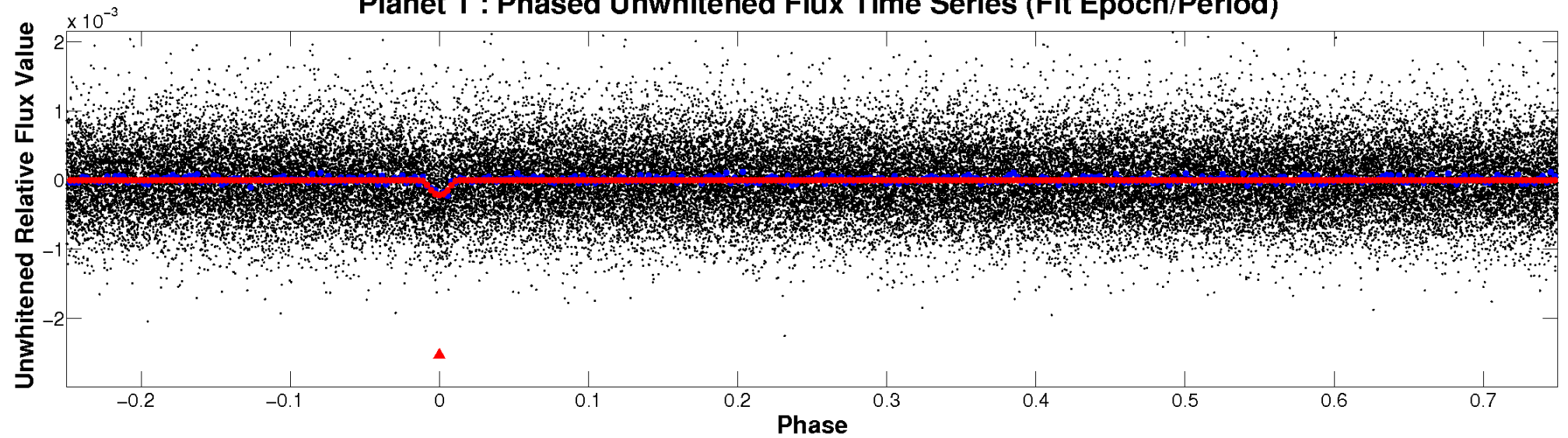
ALT Odd/Even

TCE 003557560-01

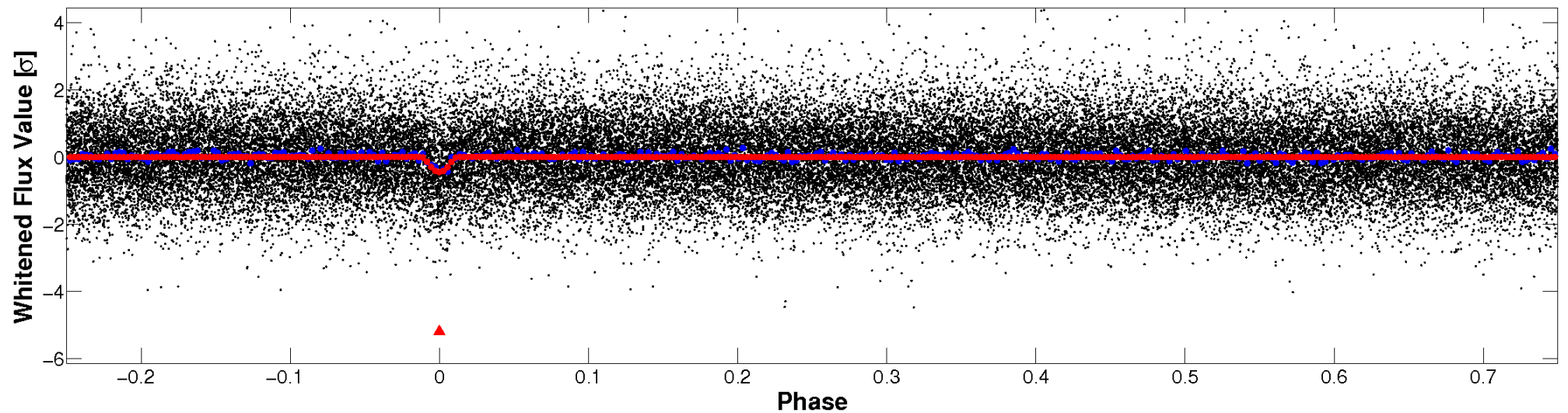


Non-Whitened Vs. Whitened Light Curve

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

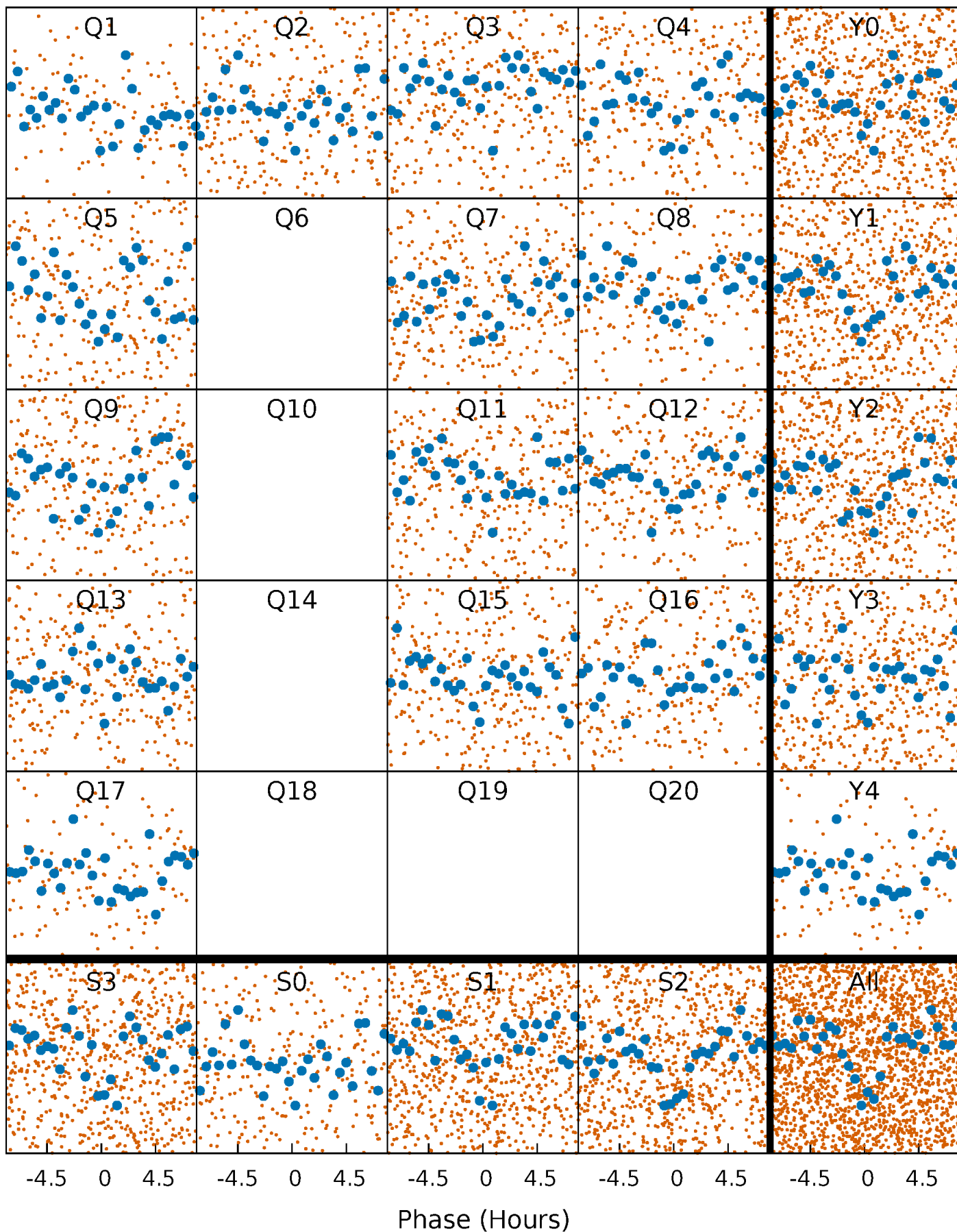


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



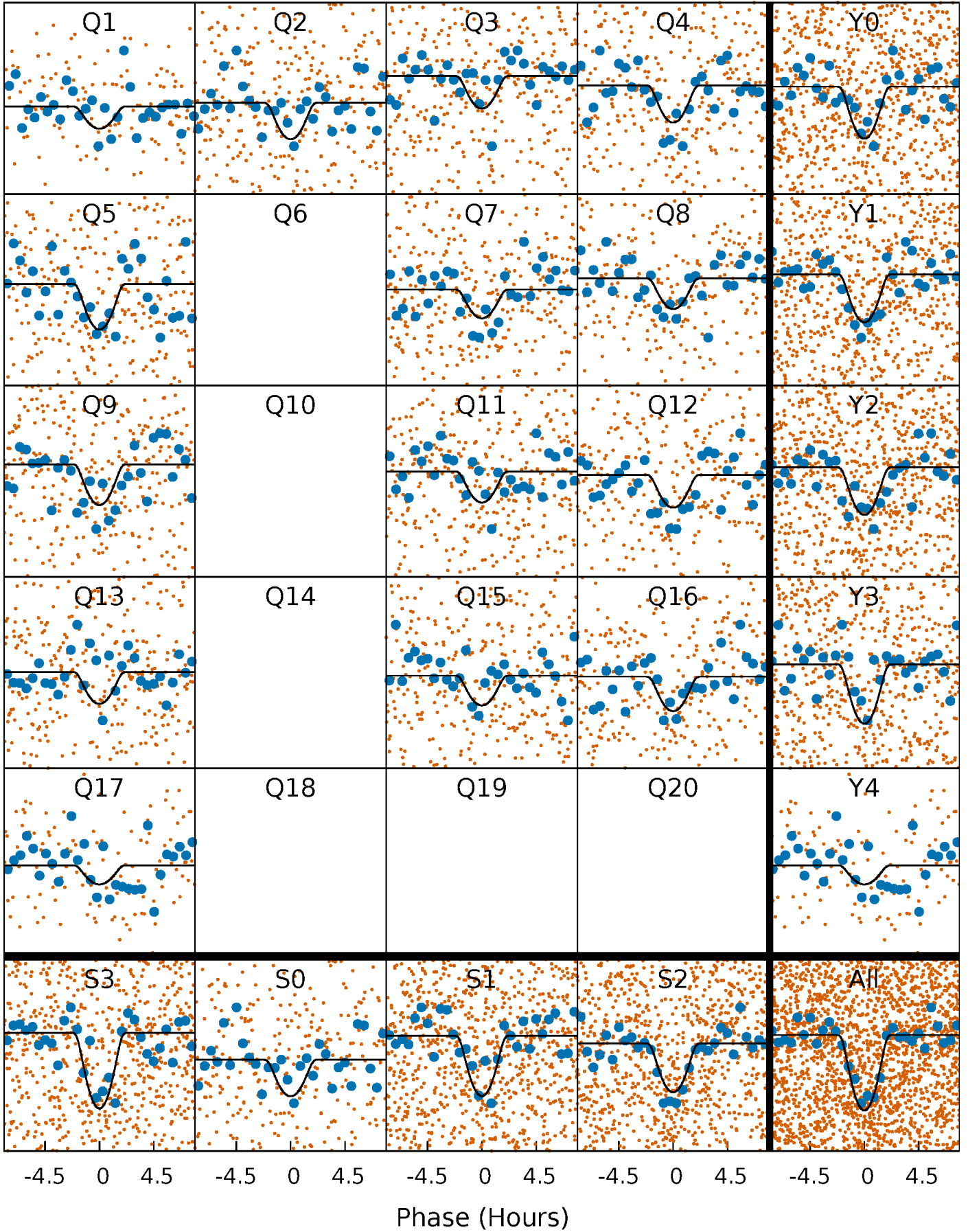
PDC Quarter-Phased Transit Curves

TCE 003557560-01 P= 7.429648 Days $T_0=138.798791$ (BKJD)



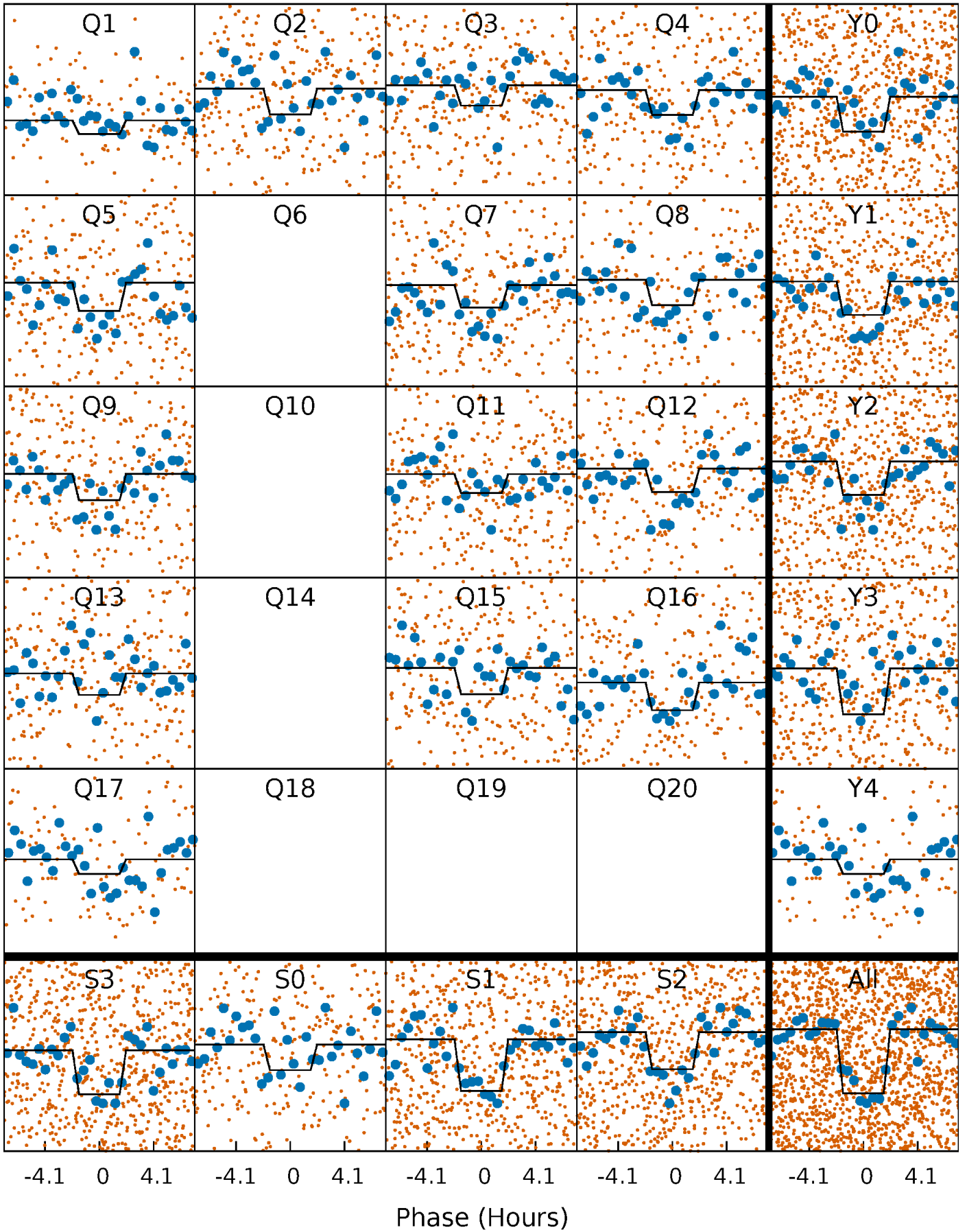
DV Quarter-Phased Transit Curves

TCE 003557560-01 P= 7.429648 Days $T_0=138.798791$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

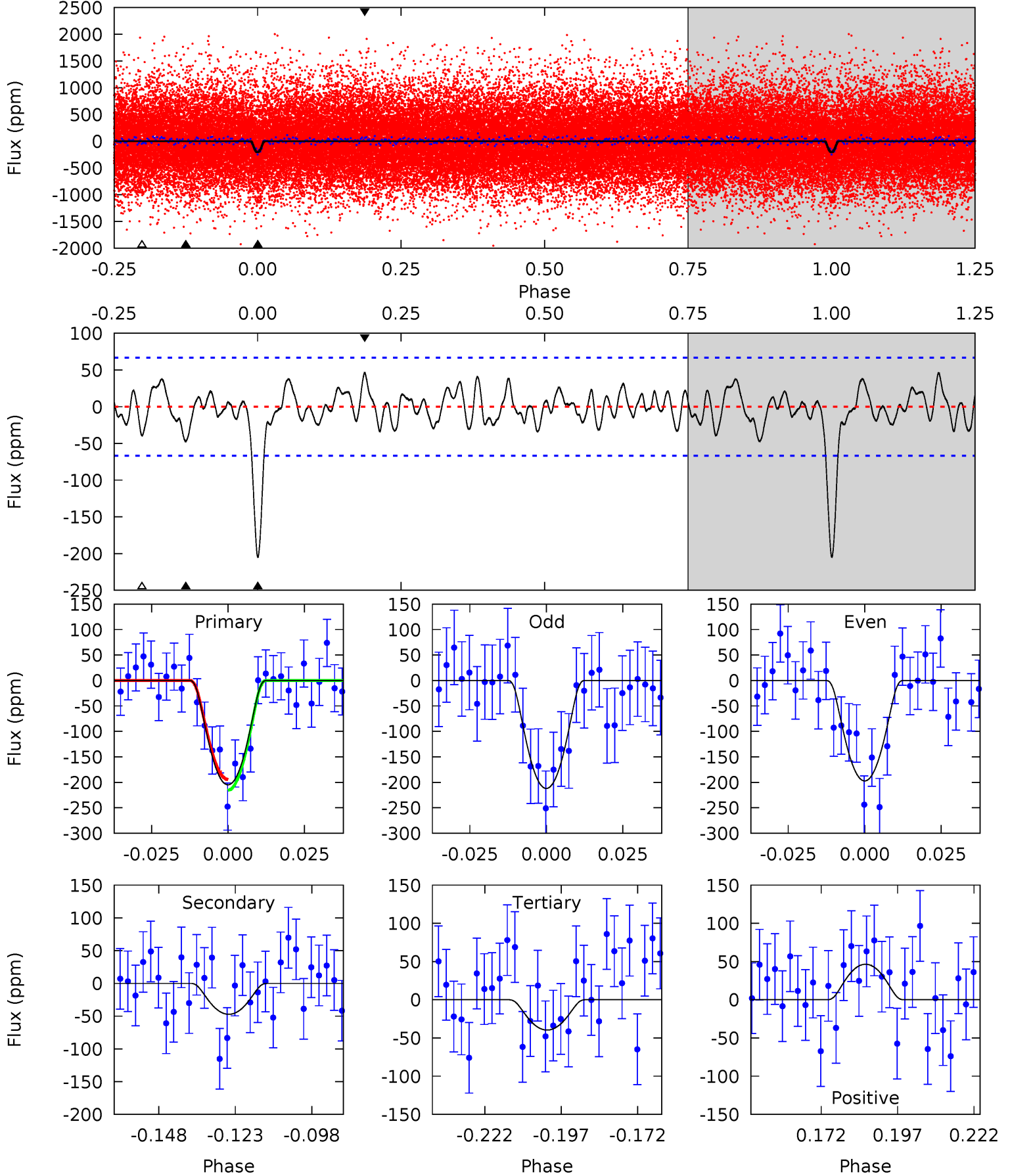
TCE 003557560-01 P= 7.429859 Days $T_0=138.776141$ (BKJD)



DV Model-Shift Uniqueness Test

003557560-01, P = 7.429648 Days, E = 131.369143 Days

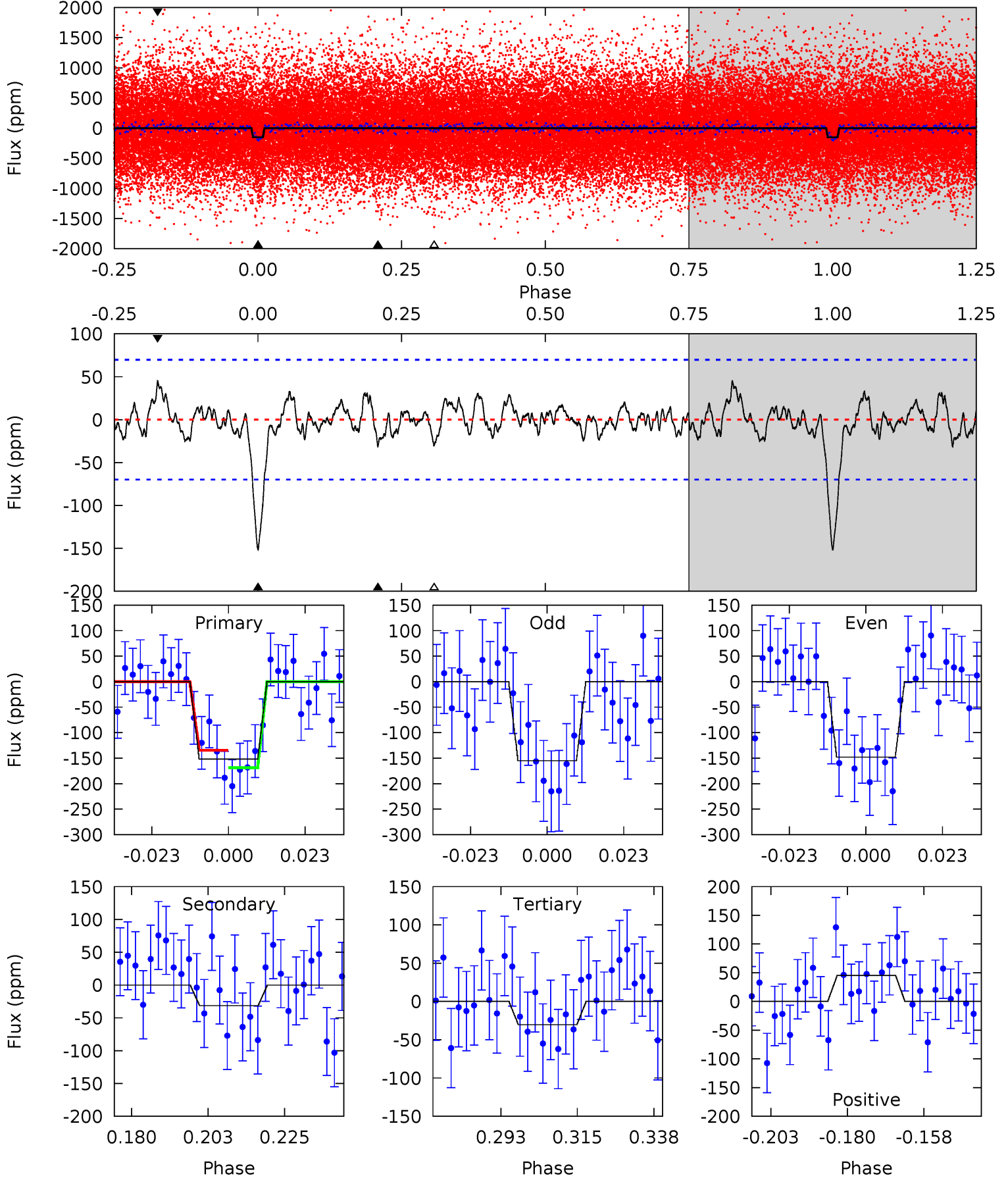
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	3.43	2.88	3.37	4.85	2.25	1.28	12.0	11.5	0.55	0.05	0.54	0.94	0.18	0.76



Alt Model-Shift Uniqueness Test

003557560-01, P = 7.429859 Days, E = 131.346282 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	2.19	2.12	3.16	4.87	2.28	0.91	8.46	7.43	0.07	-0.97	0.24	0.97	0.23	1.19



Stellar Parameters For KIC 003557560

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5635^{+76}_{-76}	$4.230^{+0.168}_{-0.112}$	$0.140^{+0.150}_{-0.150}$	$1.252^{+0.191}_{-0.233}$	$0.972^{+0.074}_{-0.054}$	$0.697^{+0.562}_{-0.227}$
	+1%/-1%	+4%/-3%	+107%/-107%	+15%/-19%	+8%/-6%	+81%/-32%
Source	SPE90	SPE90	SPE90	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 003557560-01 / KOI 4456.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-47 ± 14	$4.59^{+3.74}_{-3.04}$	1426^{+69}_{-73}	3132^{+1306}_{-550}	$6.776^{+49.871}_{-4.852}$
Alt.	-31 ± 14	$3.65^{+3.62}_{-2.64}$	1422^{+70}_{-73}	3099^{+1571}_{-589}	$6.618^{+70.906}_{-5.139}$

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 $A_{obs} \gg 1.0$

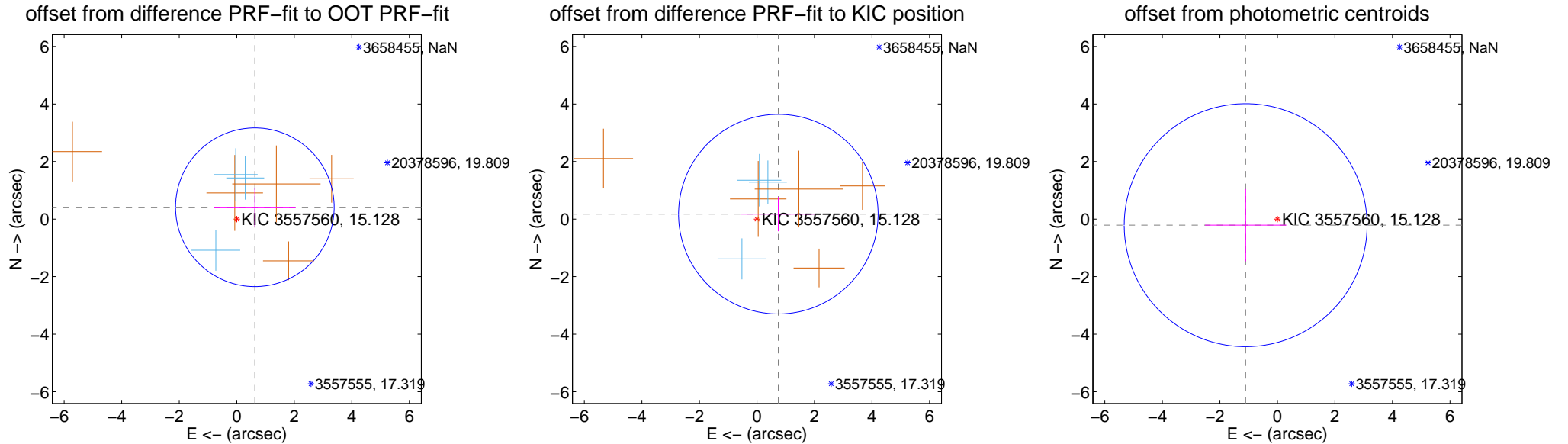
DV Centroid Data

Supplemental centroid analysis for 003557560-01. Kepler magnitude: 15.13. Transit SNR 9.86

There are 3 quarters with good PRF difference image offsets

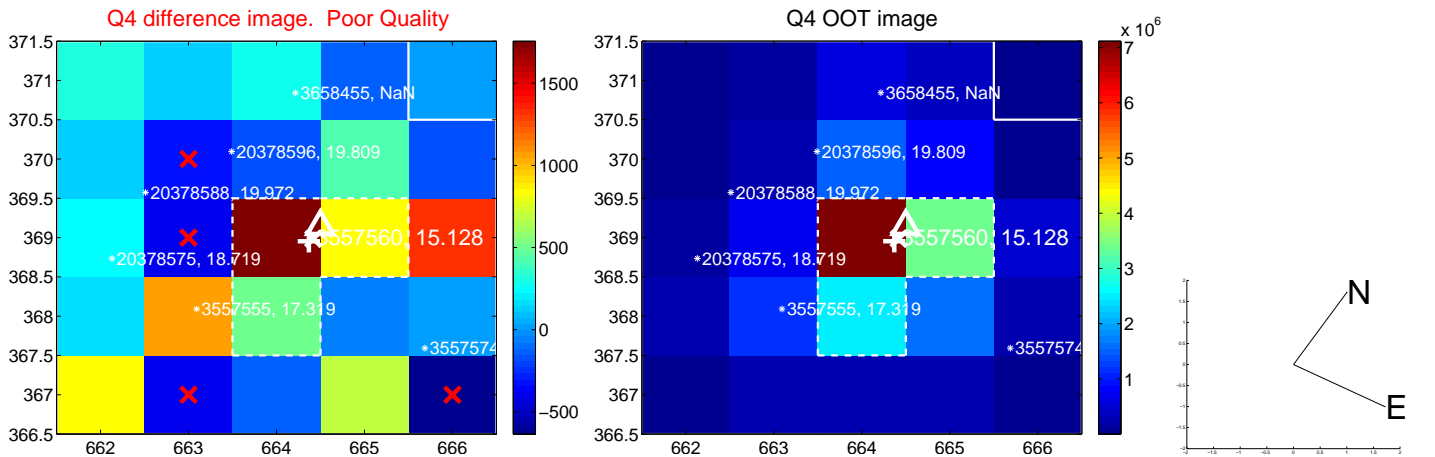
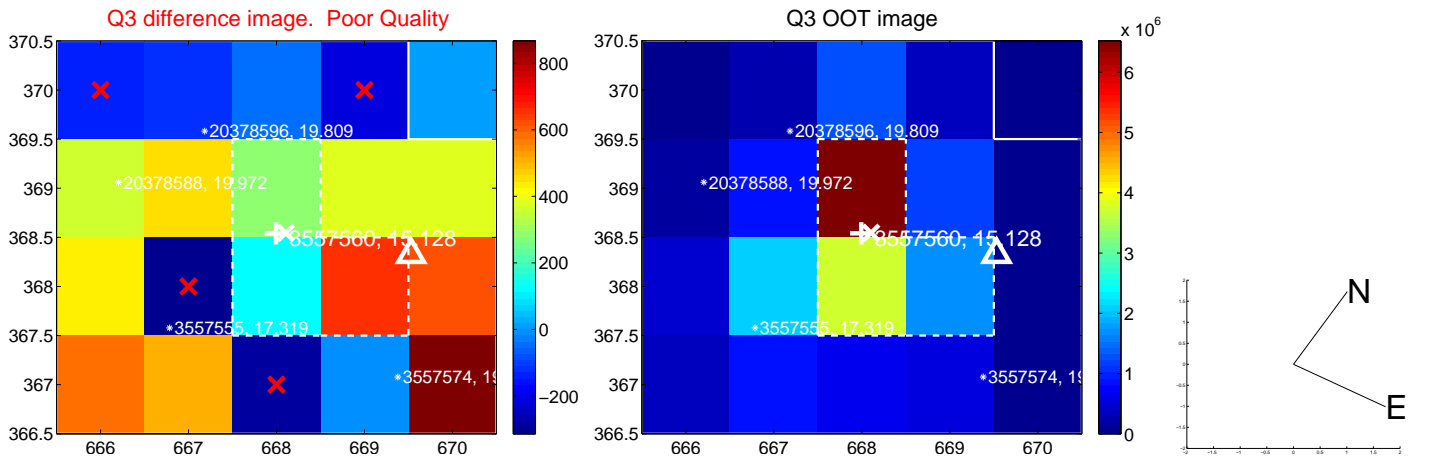
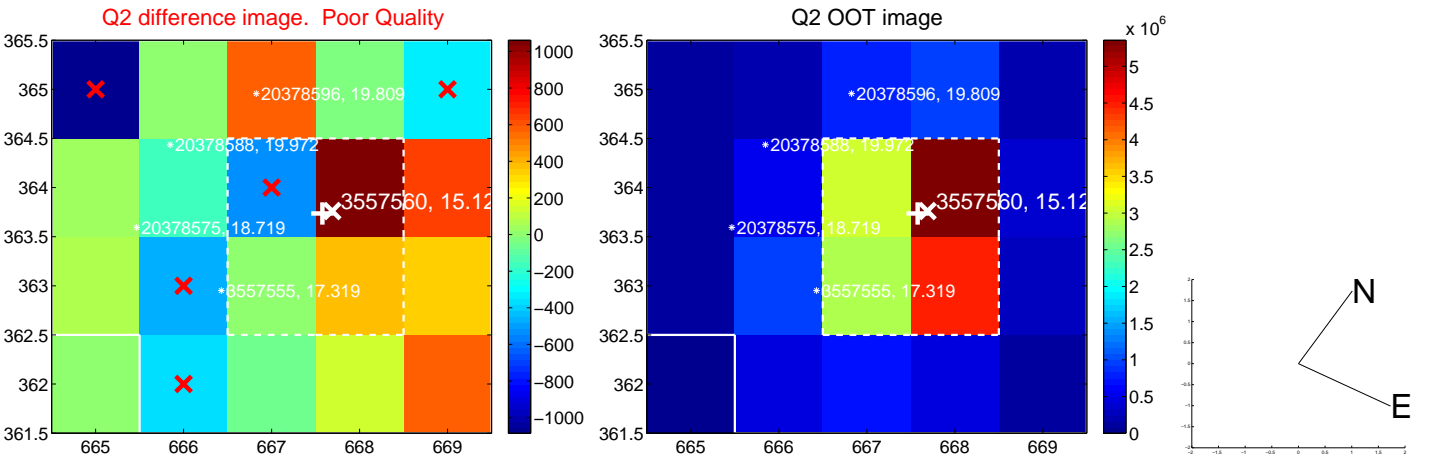
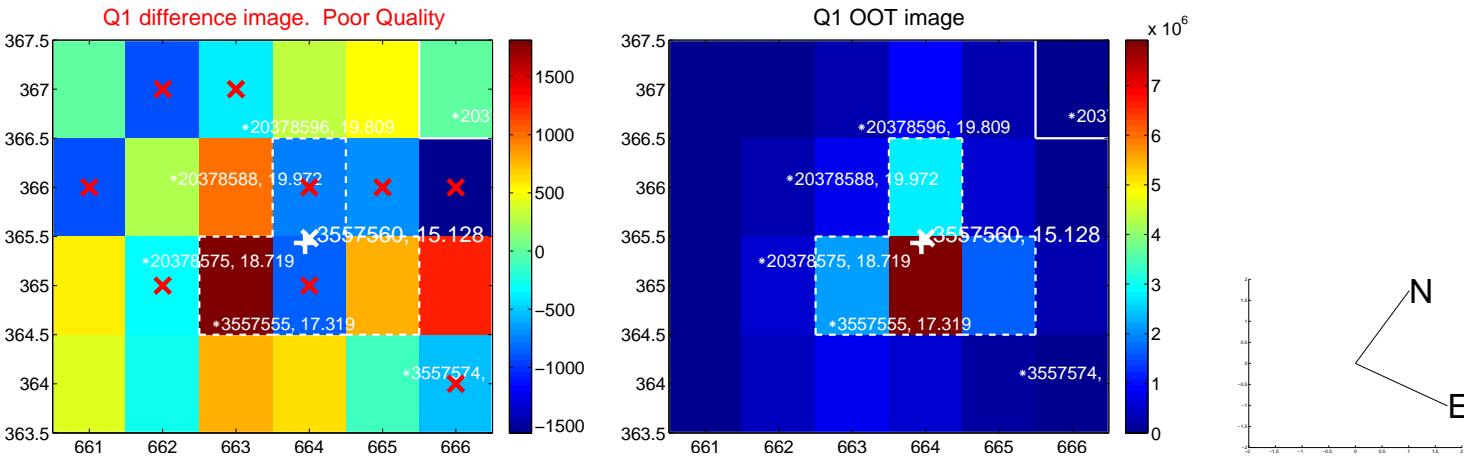
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.752 ± 0.919	0.82	-0.630 ± 1.414	0.411 ± 0.669
PRF-fit source offset from KIC position	0.763 ± 1.156	0.66	-0.744 ± 1.287	0.172 ± 0.597
photometric centroid source offset	1.12 ± 1.41	0.80	1.10 ± 1.41	-0.21 ± 1.25

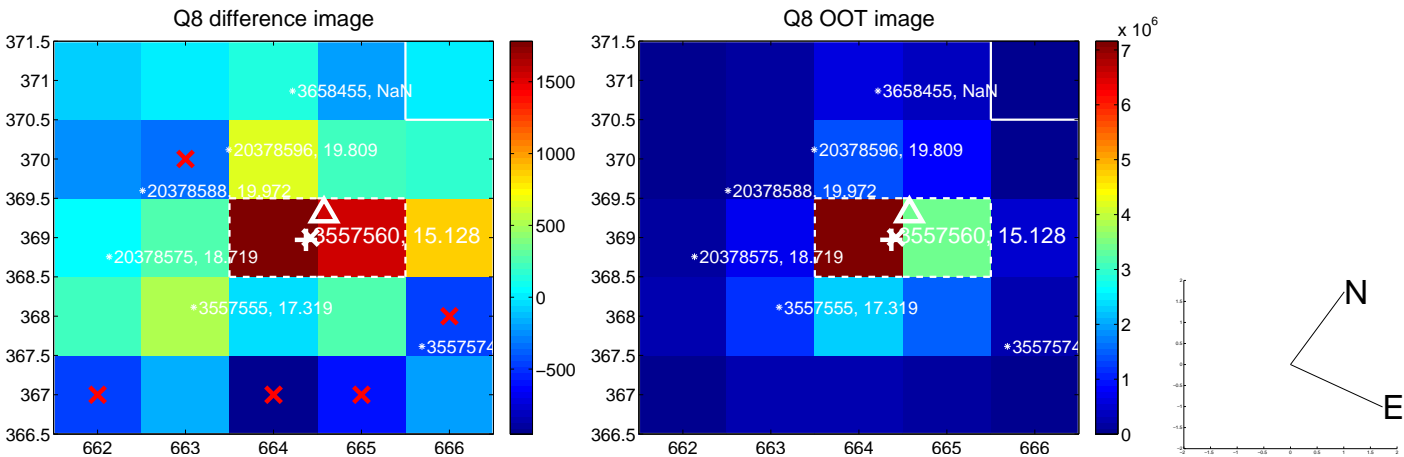
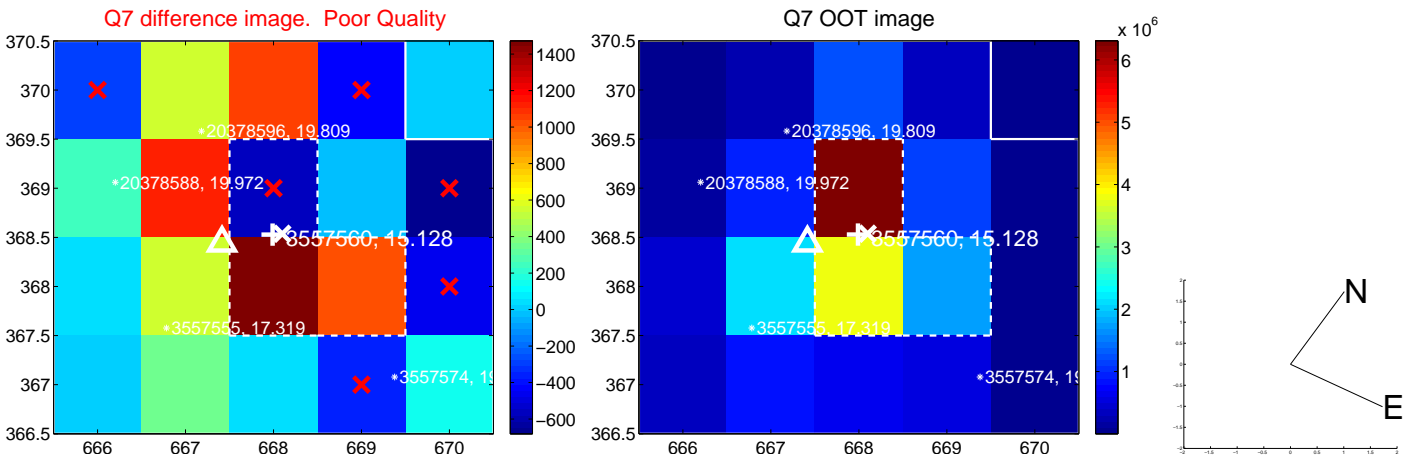
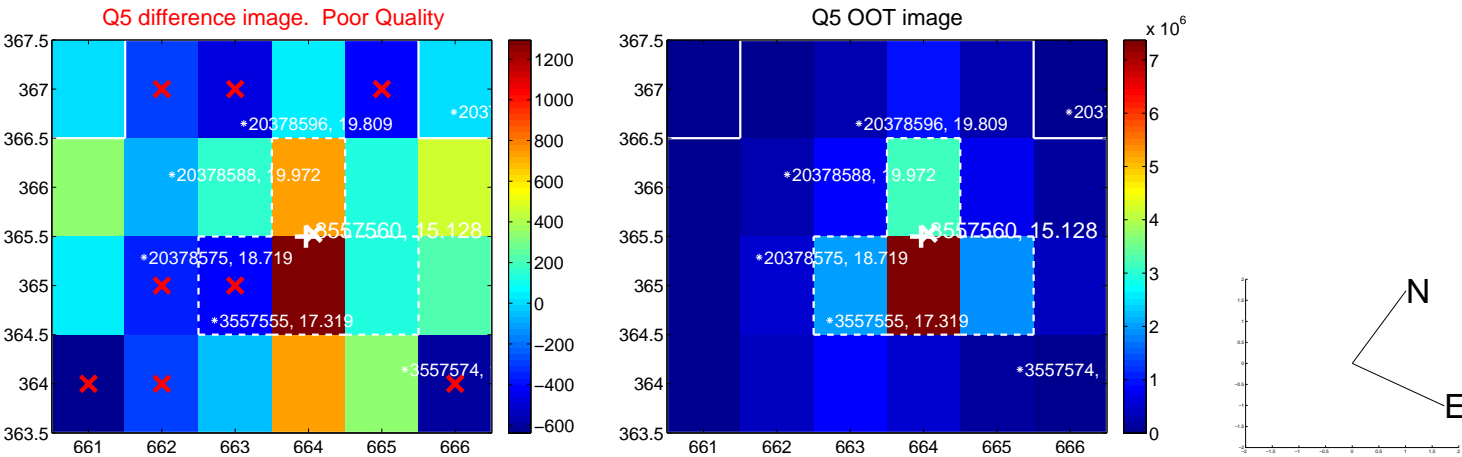


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

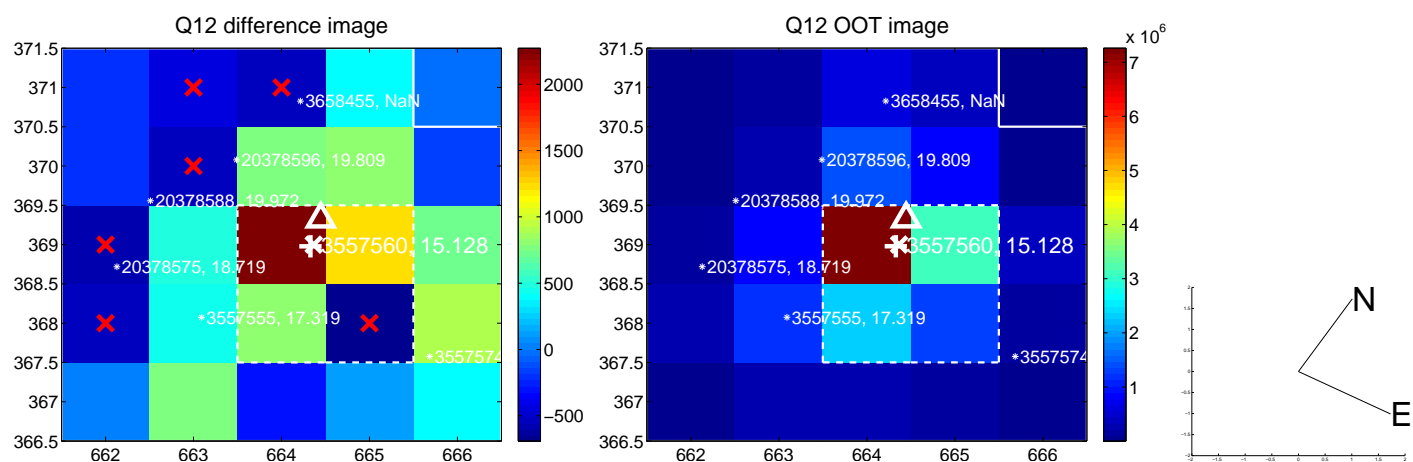
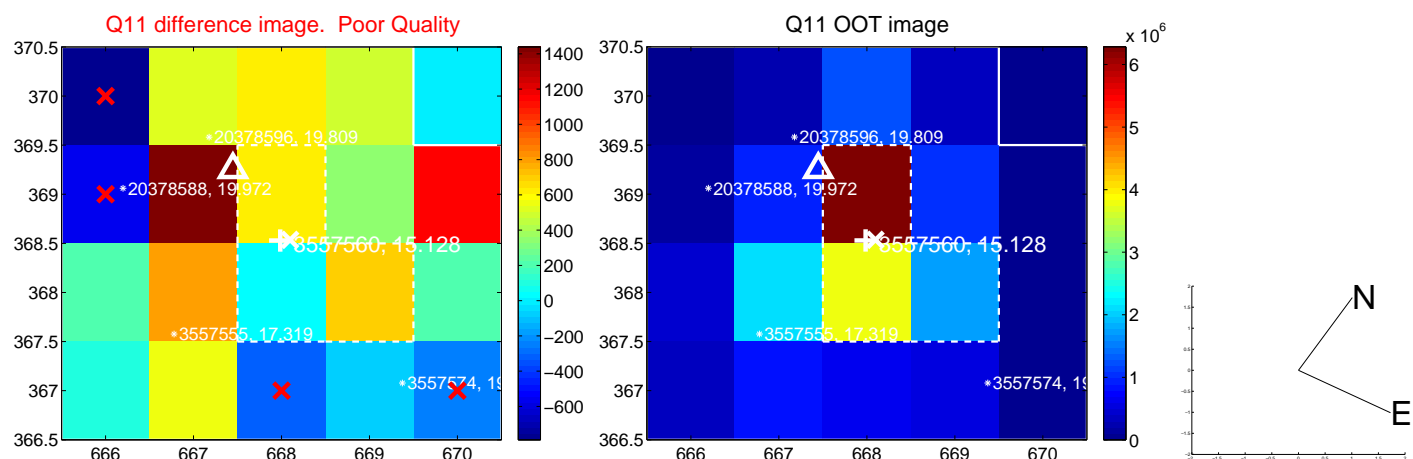
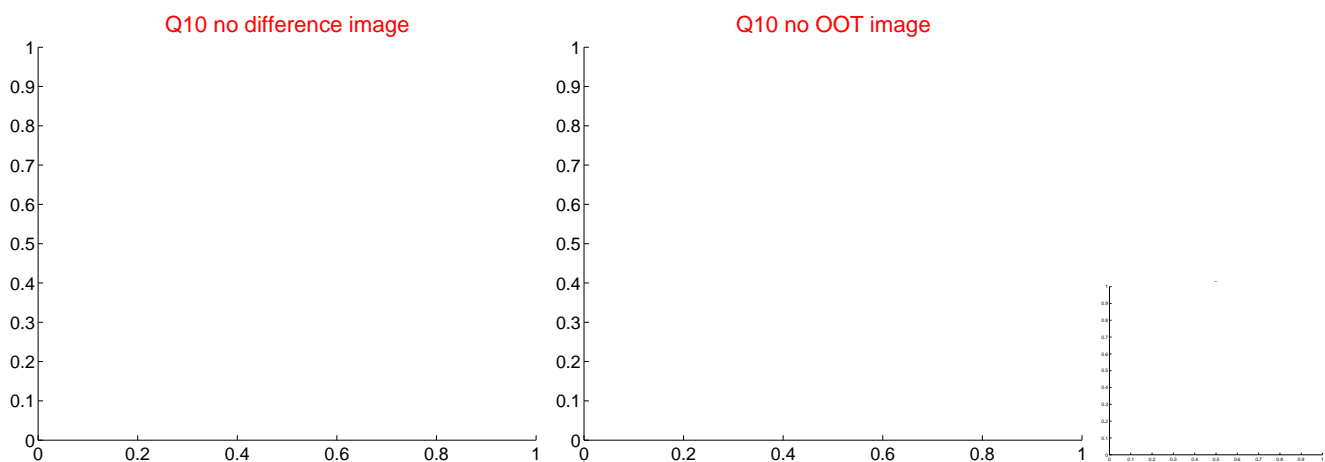
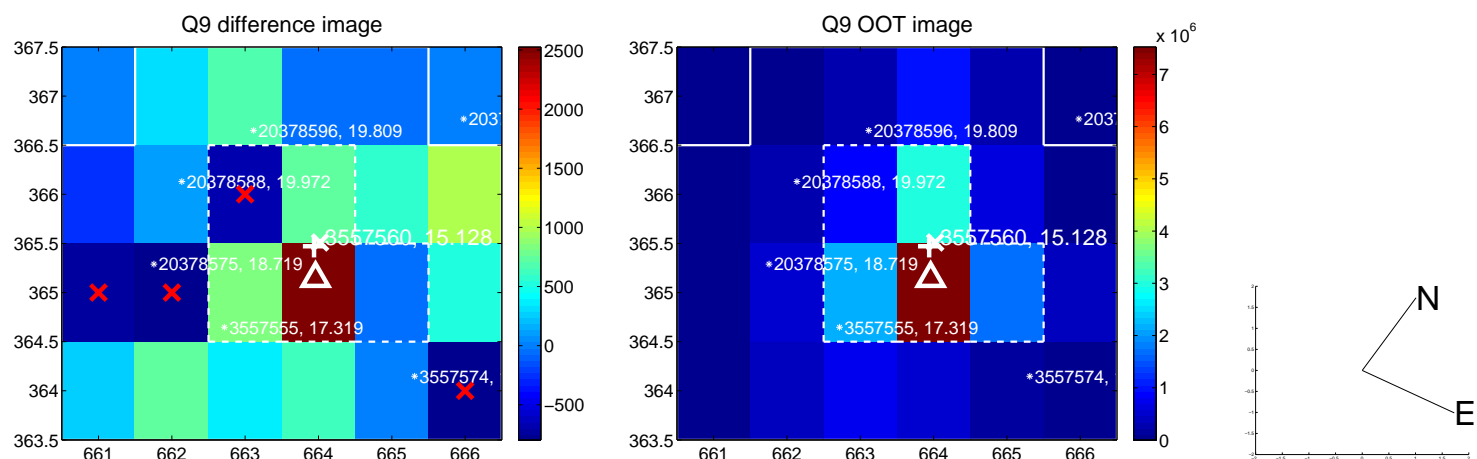
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



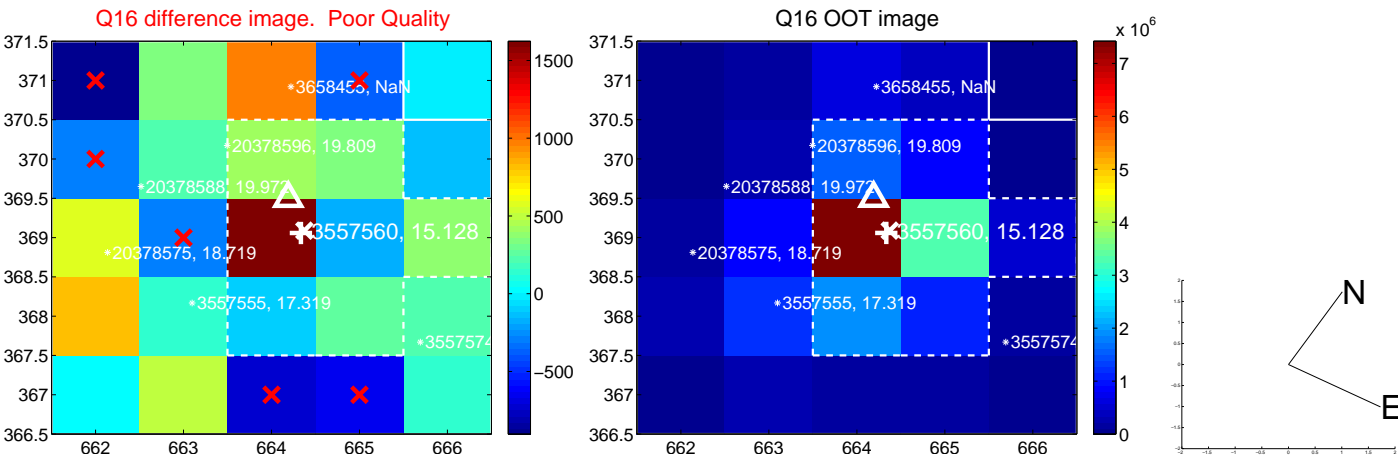
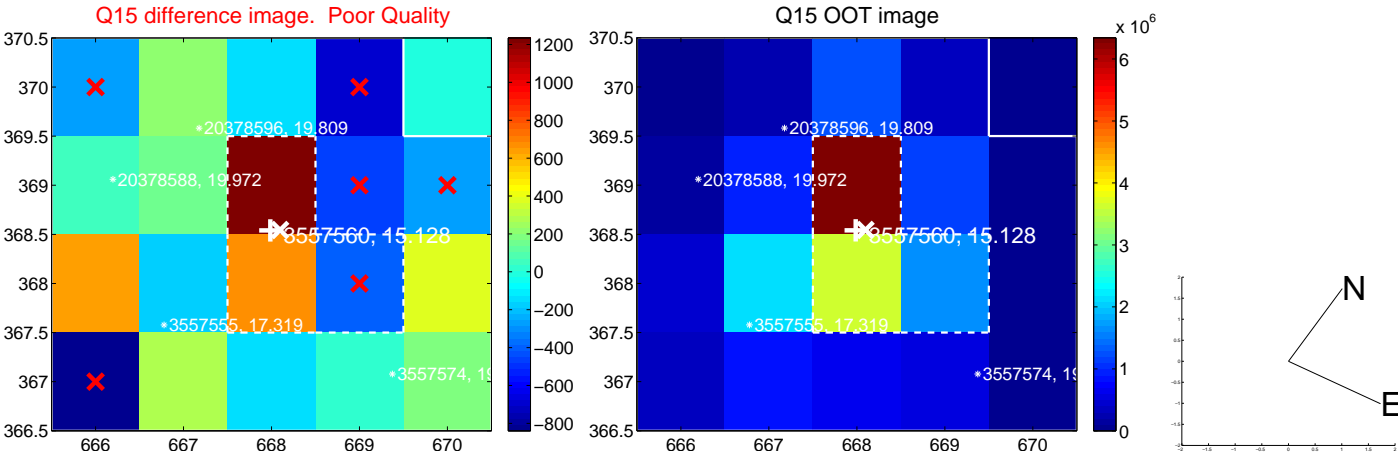
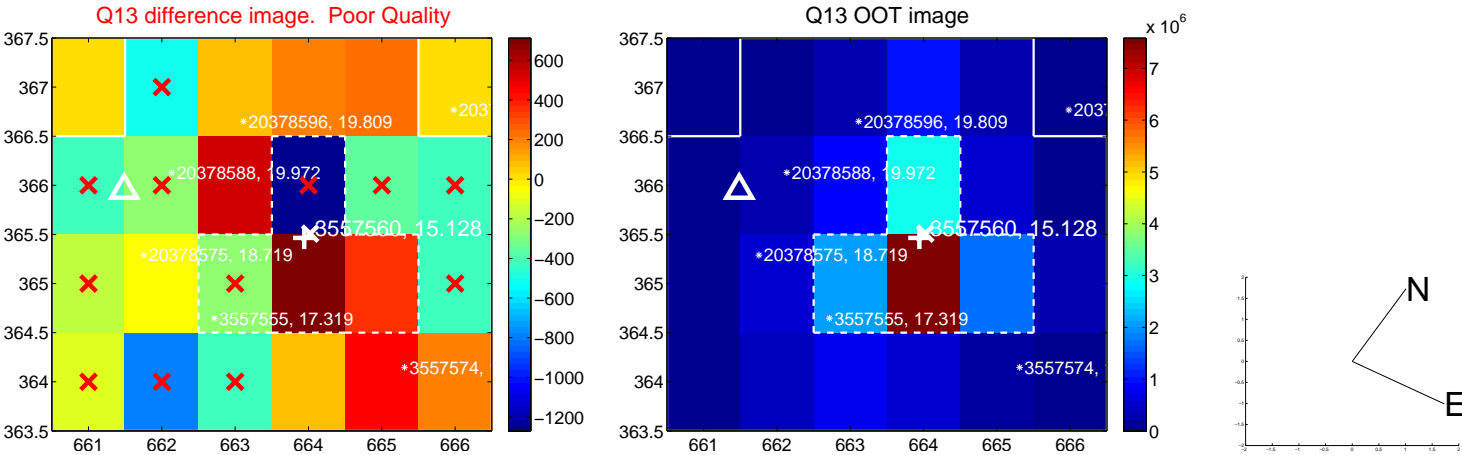
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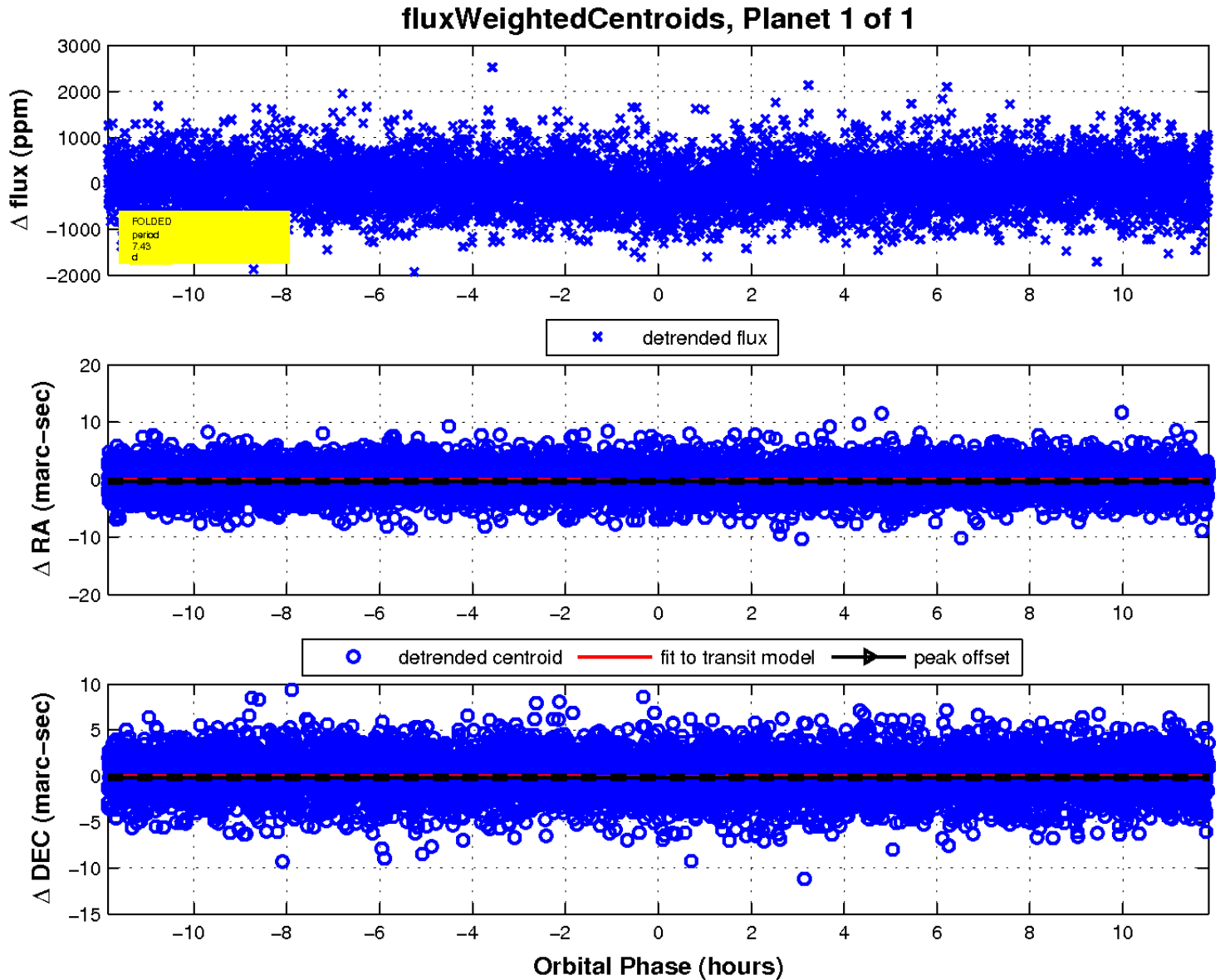
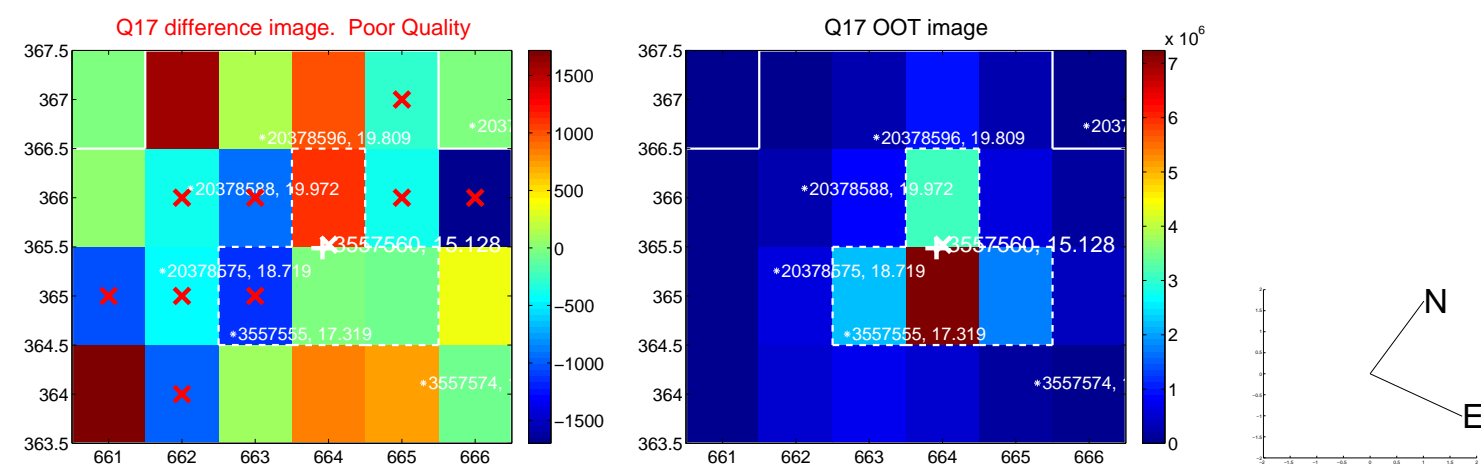
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

