

KIC 007281644

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})
007281644-01	OBS	No	0.566759	131.857524	41.0	3.731	12.3	7.0	0.92	5739	0.64	4531.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007281644-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_UNRESOLVED_OFFSET—EPHEM_MATCH

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.

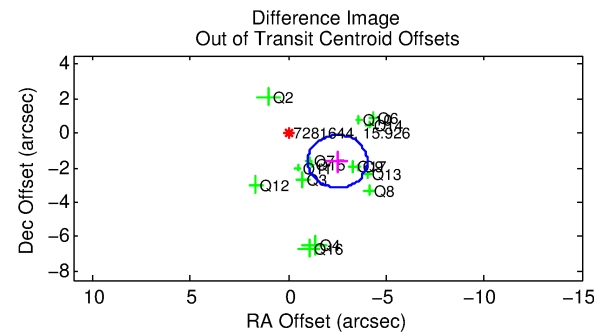
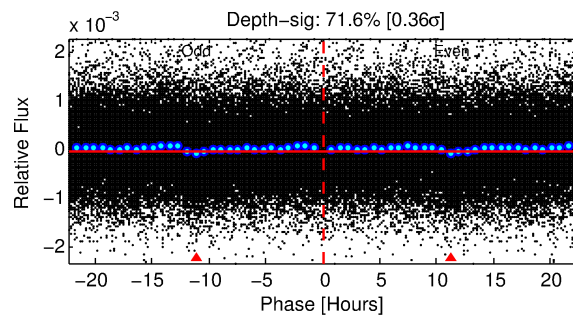
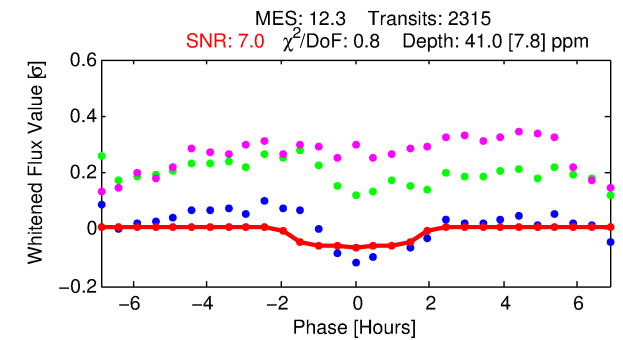
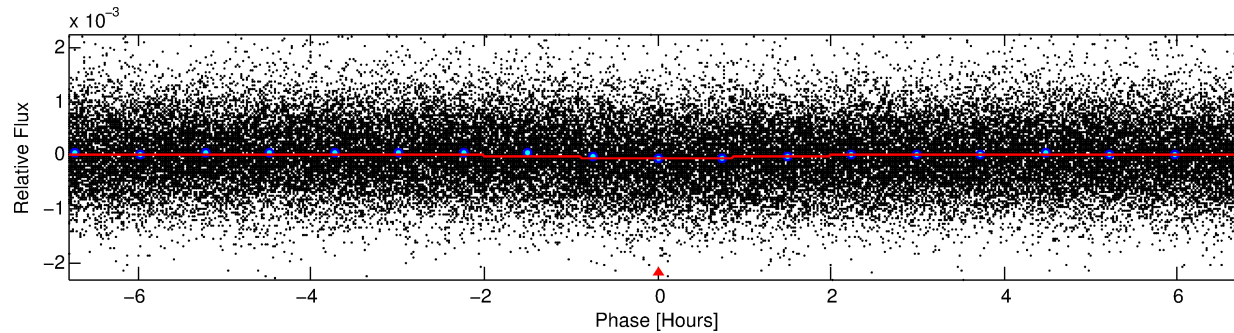
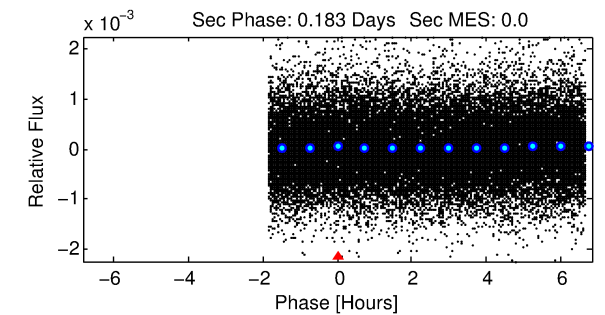
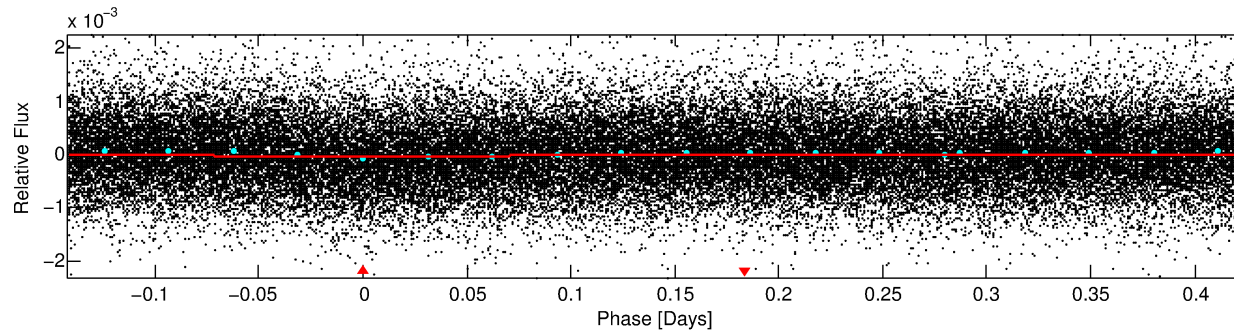
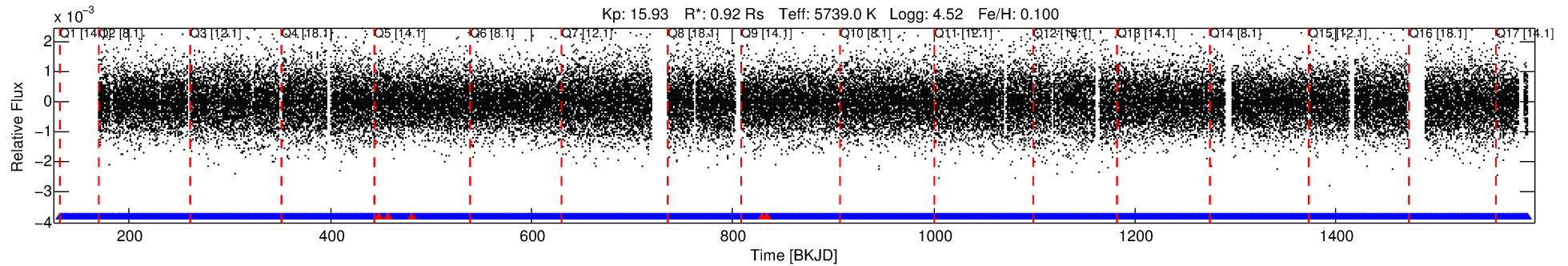
Ephemeris Match Information For 007281644-01

TCE (1)	KIC	Parent (2)	Parent KIC	P ₁ :P ₂	Dist ($''$)	Δ Row	Δ Col	m ₂	m ₁	D ₂ /D ₁	Mechanism	Flag	σ_P	σ_T
007281644-01	7281644	RR-Lyr-pri	7198959	1:1	814.2	53	197	7.86	15.92	15202.00	Direct-PRF	0	2.28	22.60

Notes: P₁:P₂ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m₂ and m₁ are the magnitudes of the parent and child. D₂/D₁ is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7281644 Candidate: 1 of 1 Period: 0.567 d



DV Fit Results:

Period = 0.56676 [0.00001] d
Epoch = 131.8575 [0.0060] BKJD
Rp/R* = 0.0064 [0.0090]
a/R* = 1.16 [1.86]
b = 0.74 [3.84]
Seff = 4531.01 [1724.76]
Teq = 2092 [199] K
Rp = 0.64 [0.92] Re
a = 0.0135 [0.0033] AU
Ag = N/A
Teffp = N/A

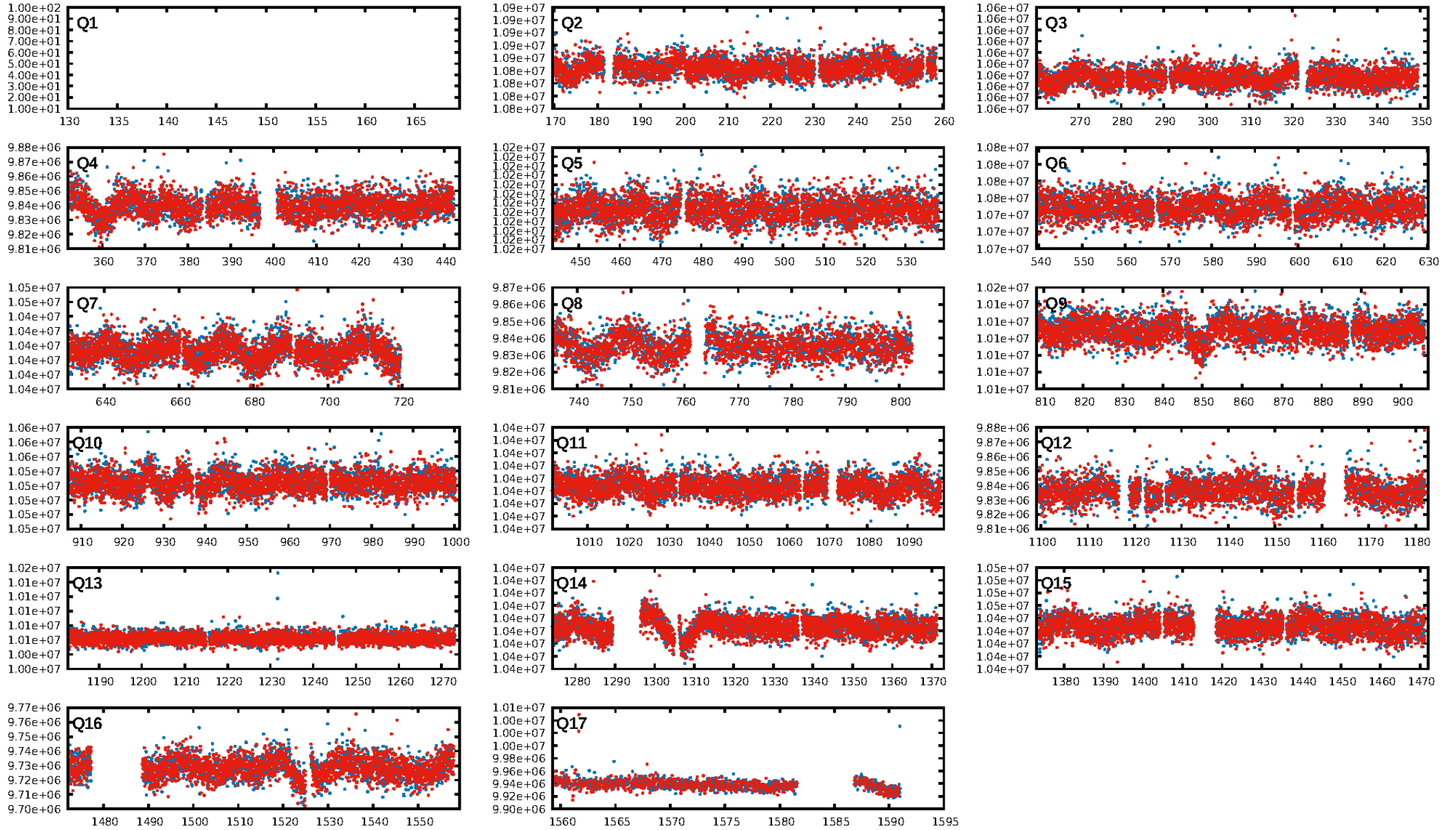
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.26e-20
RollingBand-fgt: 1.00 [2263/2268]
GhostDiagnostic-chr: 0.3124
Centroid-sig: 31.0%
Centroid-so: 2.241 arcsec [1.08σ]
OotOffset-rm: 2.992 arcsec [5.89σ]
KicOffset-rm: 3.058 arcsec [6.41σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.00 [0/15]
DiffImageOverlap-fno: 1.00 [16/16]

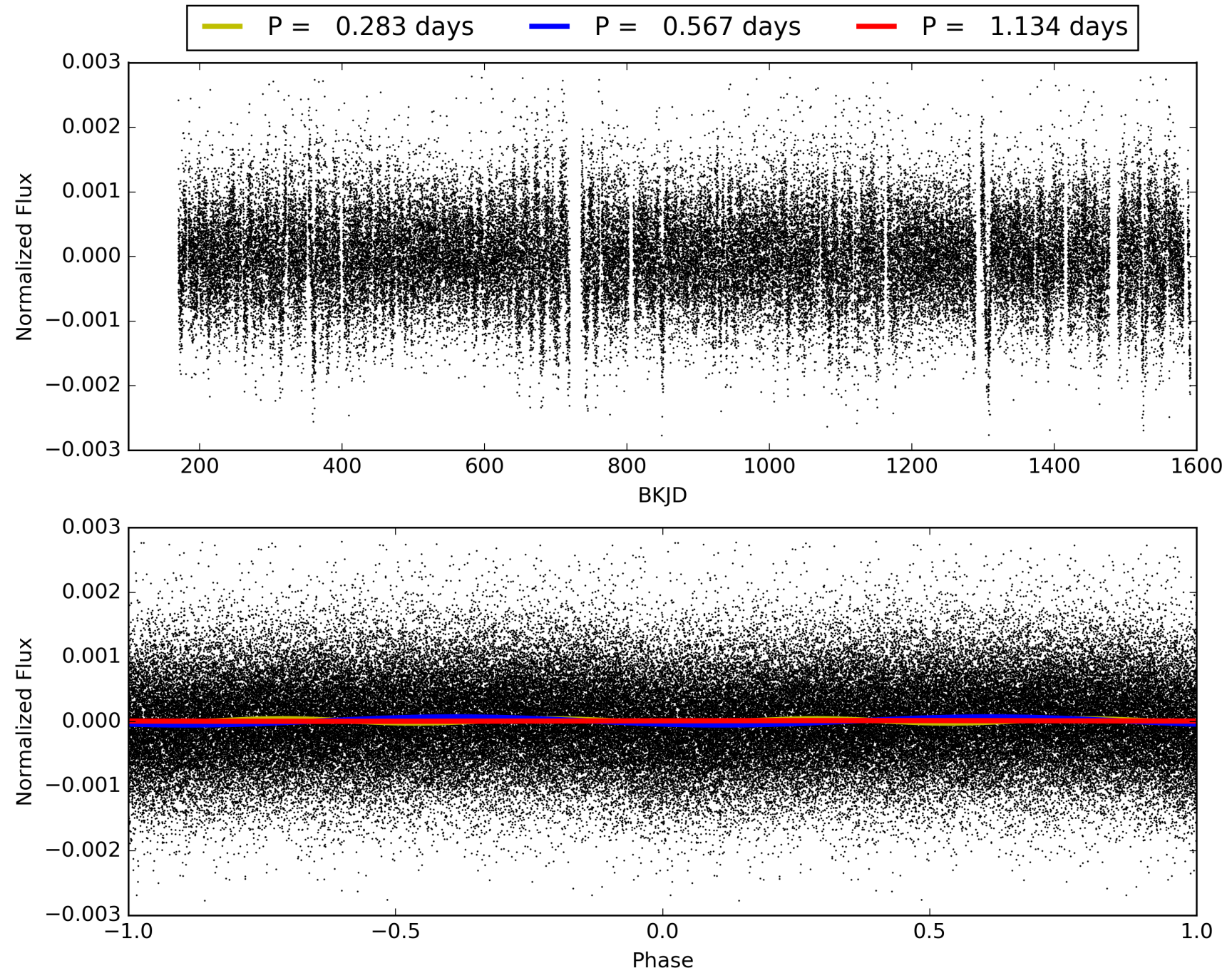
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 12:15:41 Z

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

TCE 007281644-01, PDC Light Curves

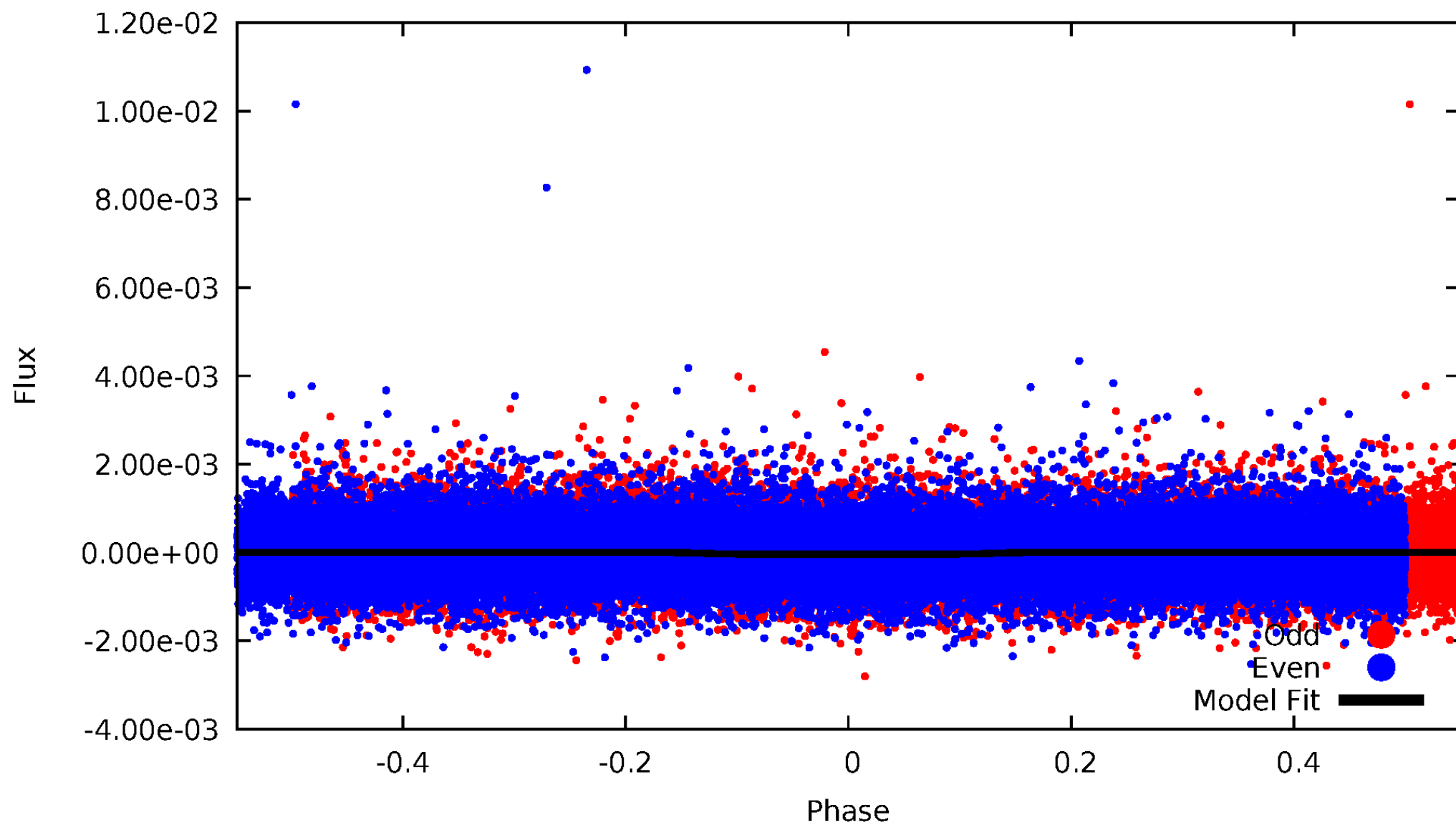


TCE 007281644-01



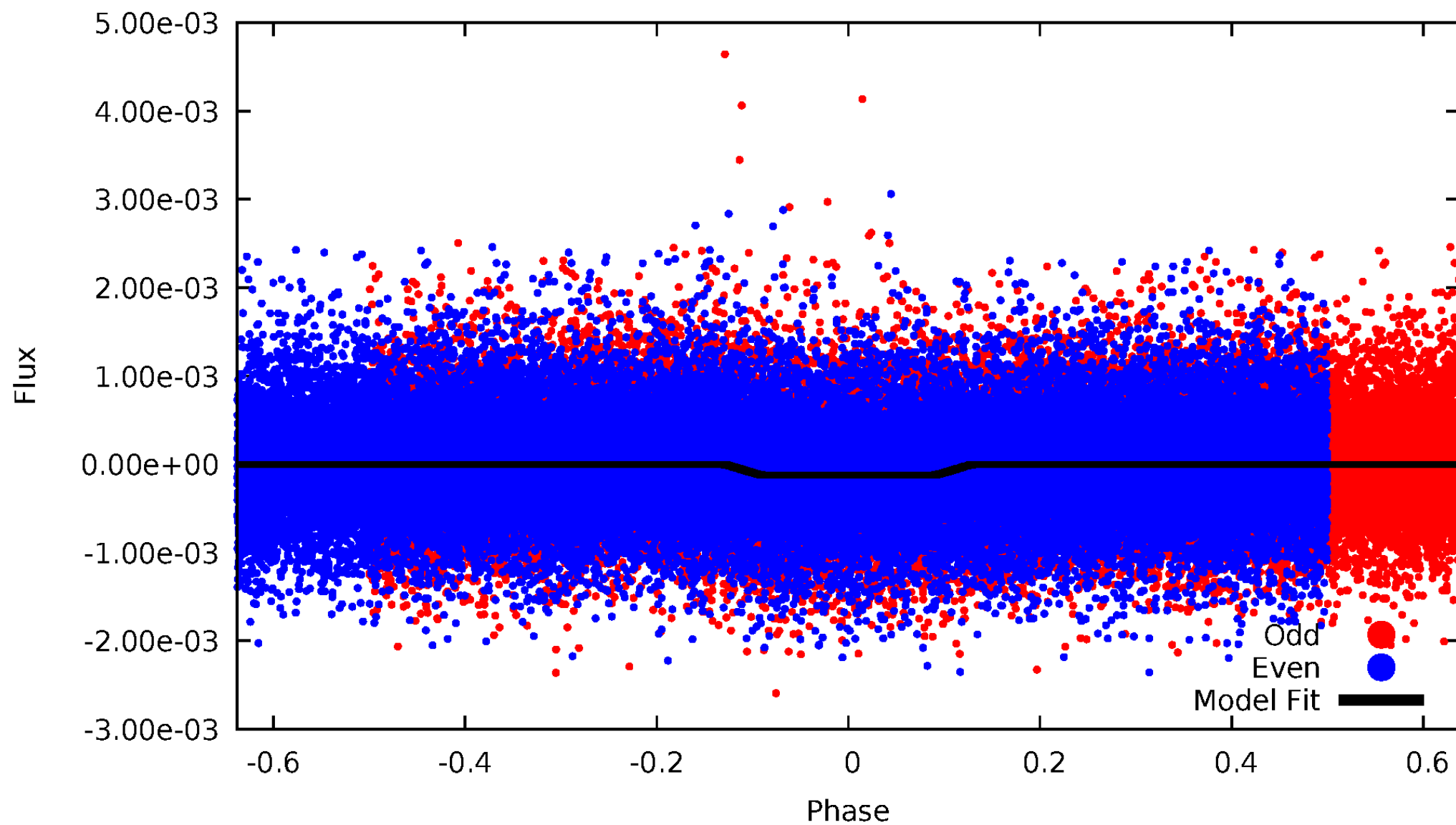
DV Odd/Even

TCE 007281644-01



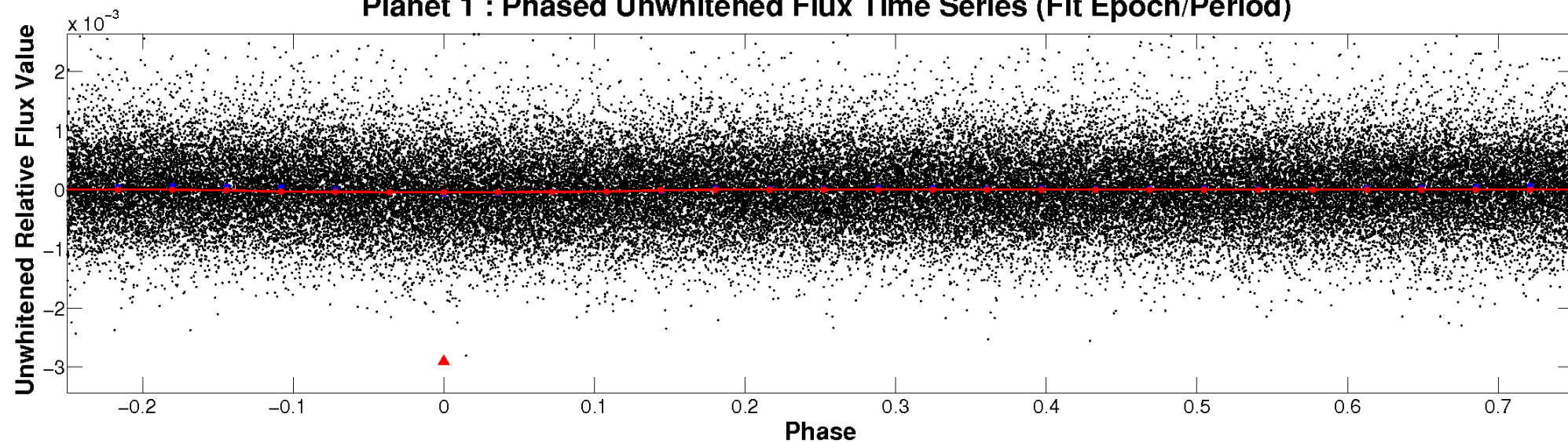
ALT Odd/Even

TCE 007281644-01

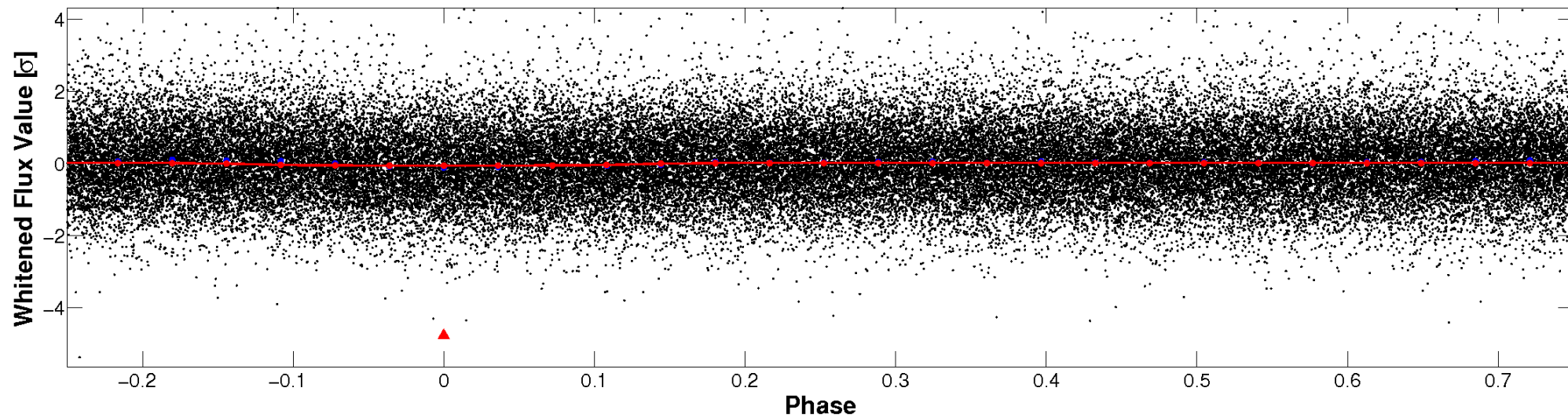


Non-Whitened Vs. Whitened Light Curve

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

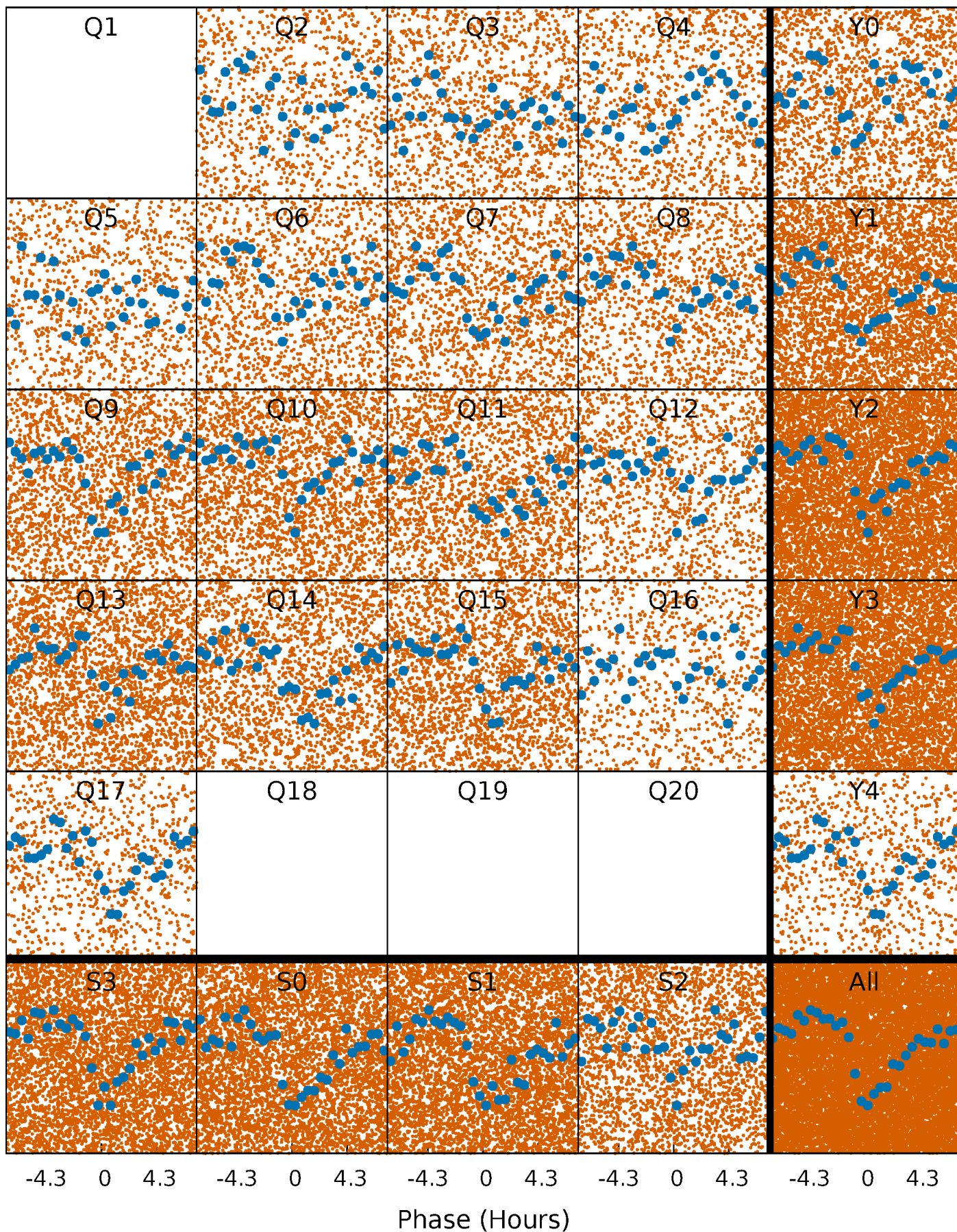


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



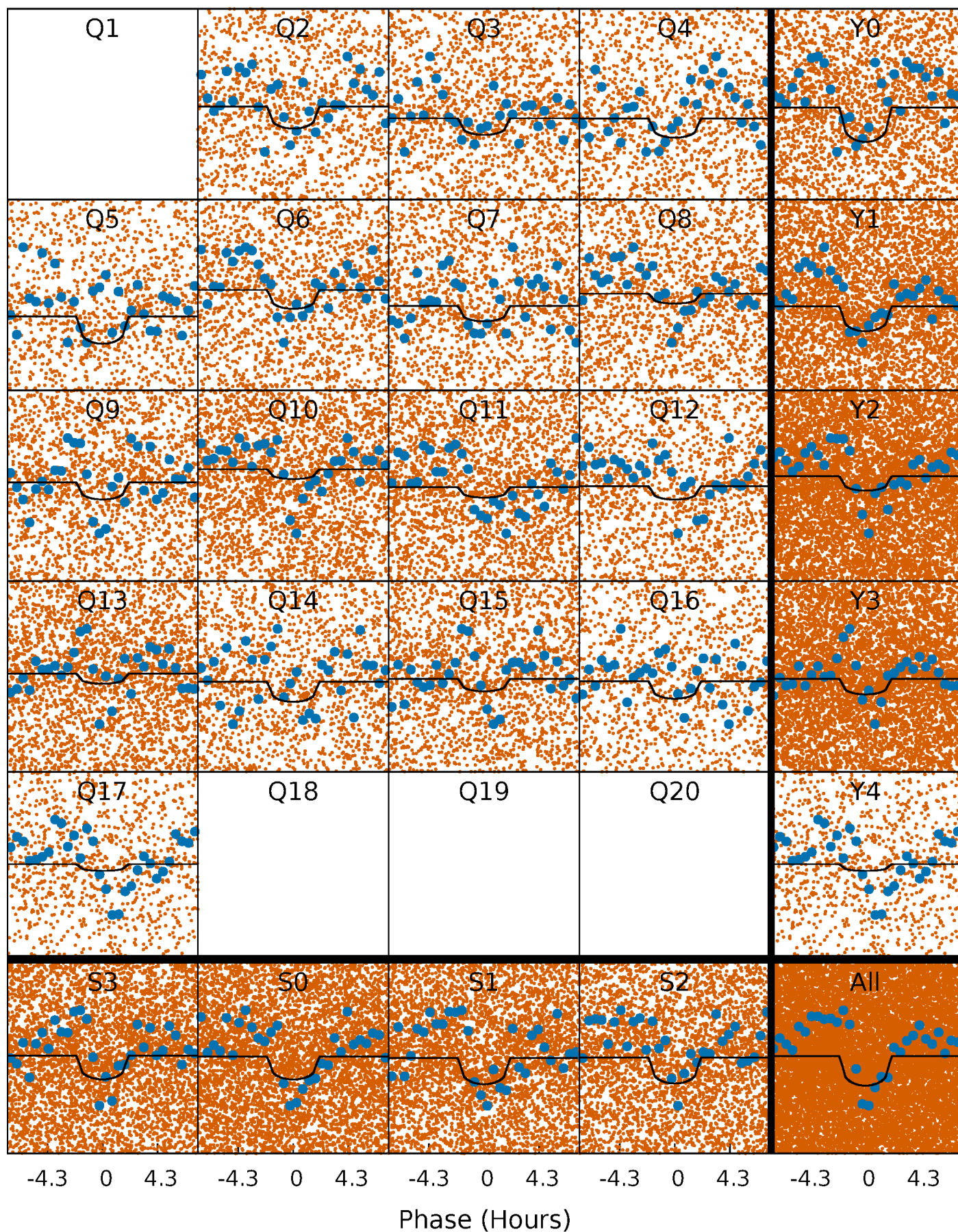
PDC Quarter-Phased Transit Curves

TCE 007281644-01 P= 0.566759 Days $T_0=131.857524$ (BKJD)



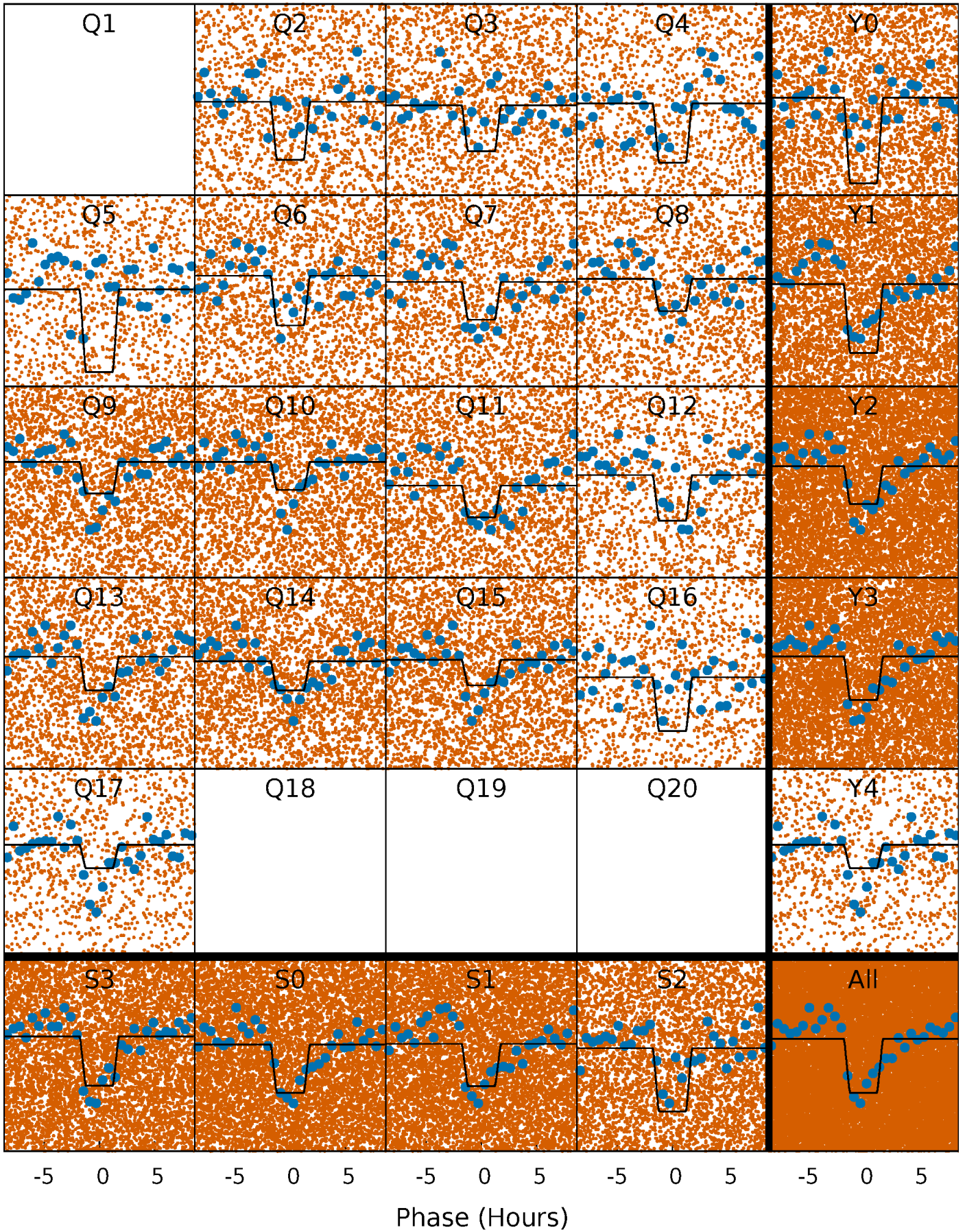
DV Quarter-Phased Transit Curves

TCE 007281644-01 P= 0.566759 Days $T_0=131.857524$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

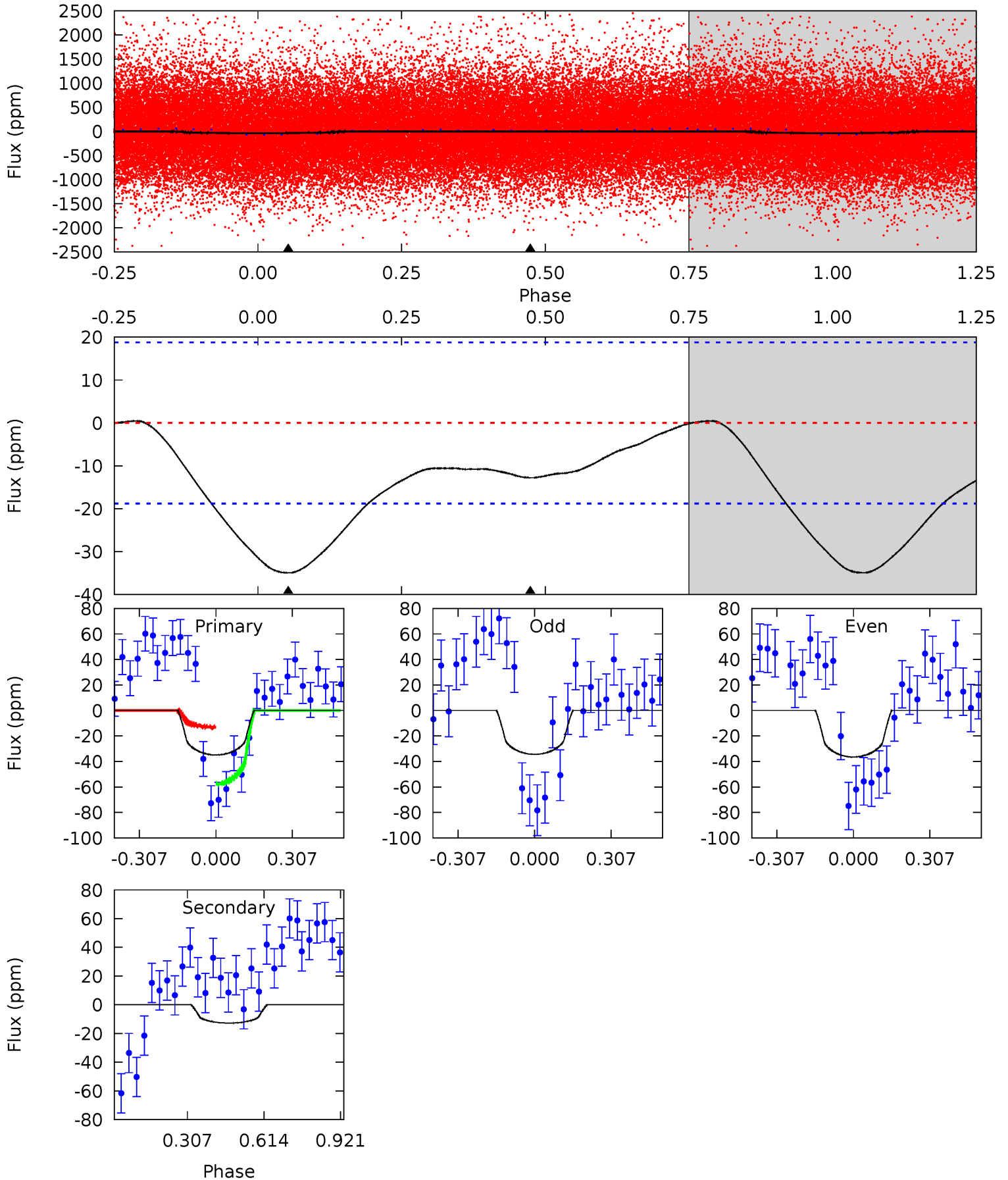
TCE 007281644-01 P= 0.566795 Days $T_0=131.829397$ (BKJD)



DV Model-Shift Uniqueness Test

007281644-01, P = 0.566759 Days, E = 131.857524 Days

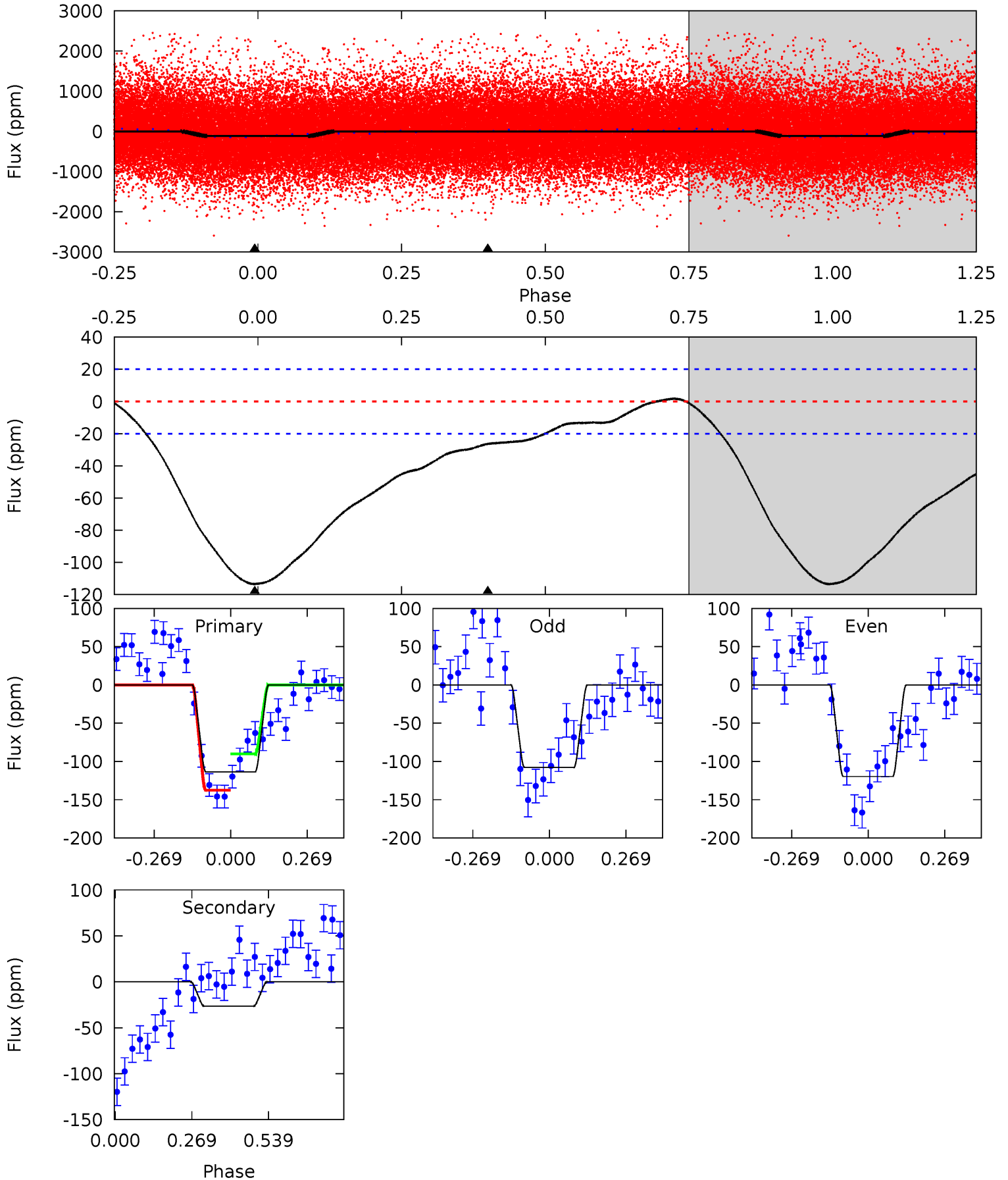
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.05	2.94	0	0	4.32	1.02	0.15	8.05	8.05	2.94	2.94	0.24	1.07	0.01	5.14



Alt Model-Shift Uniqueness Test

007281644-01, P = 0.566795 Days, E = 131.829397 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.6	5.73	0	0	4.35	1.10	0.51	24.6	24.6	5.73	5.73	1.27	0.98	0.02	5.08



Stellar Parameters For KIC 007281644

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5739^{+154}_{-171}	$4.518^{+0.038}_{-0.200}$	$0.100^{+0.250}_{-0.300}$	$0.922^{+0.264}_{-0.088}$	$1.021^{+0.100}_{-0.122}$	$1.834^{+0.367}_{-0.945}$
	+3%/-3%	+1%/-4%	+250%/-300%	+29%/-10%	+10%/-12%	+20%/-52%
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 007281644-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-13 ± 4	$0.95^{+0.78}_{-0.65}$	2980^{+217}_{-126}	3784^{+2406}_{-1242}	$1.367^{+12.272}_{-0.999}$
Alt.	-26 ± 5	$1.32^{+0.88}_{-0.75}$	2986^{+229}_{-130}	3835^{+1864}_{-887}	$1.458^{+7.276}_{-0.940}$

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 $A_{obs} \gg 1.0$

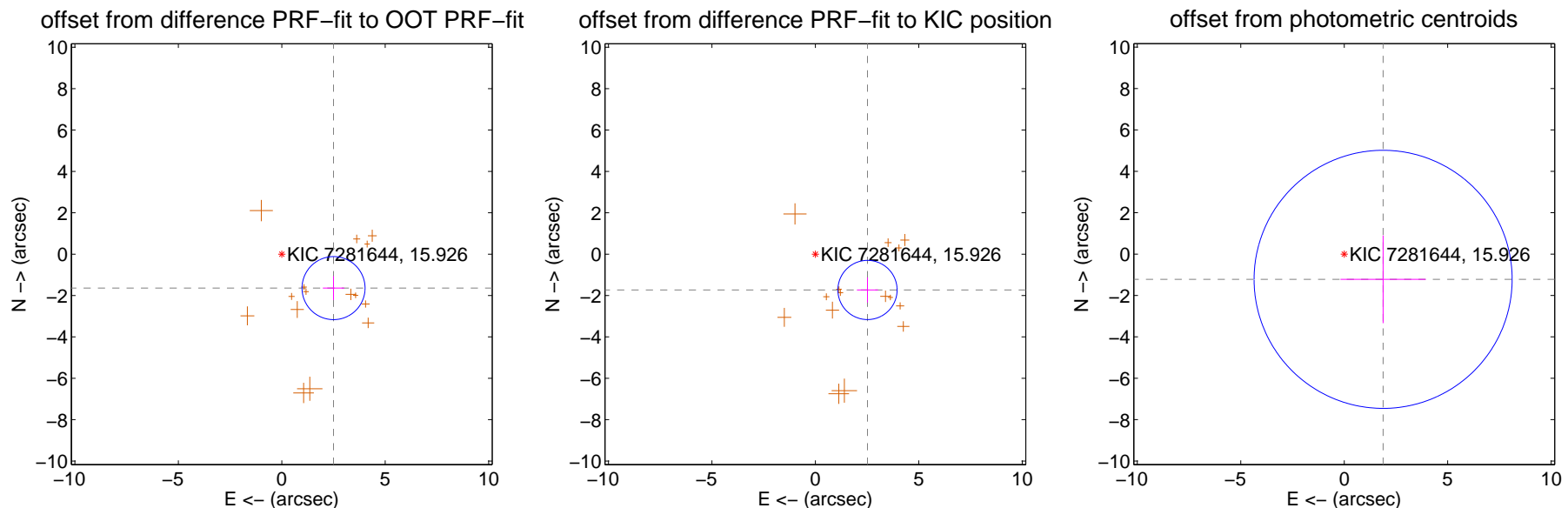
DV Centroid Data

Supplemental centroid analysis for 007281644-01. Kepler magnitude: 15.93. Transit SNR 6.96

There are 0 quarters with good PRF difference image offsets

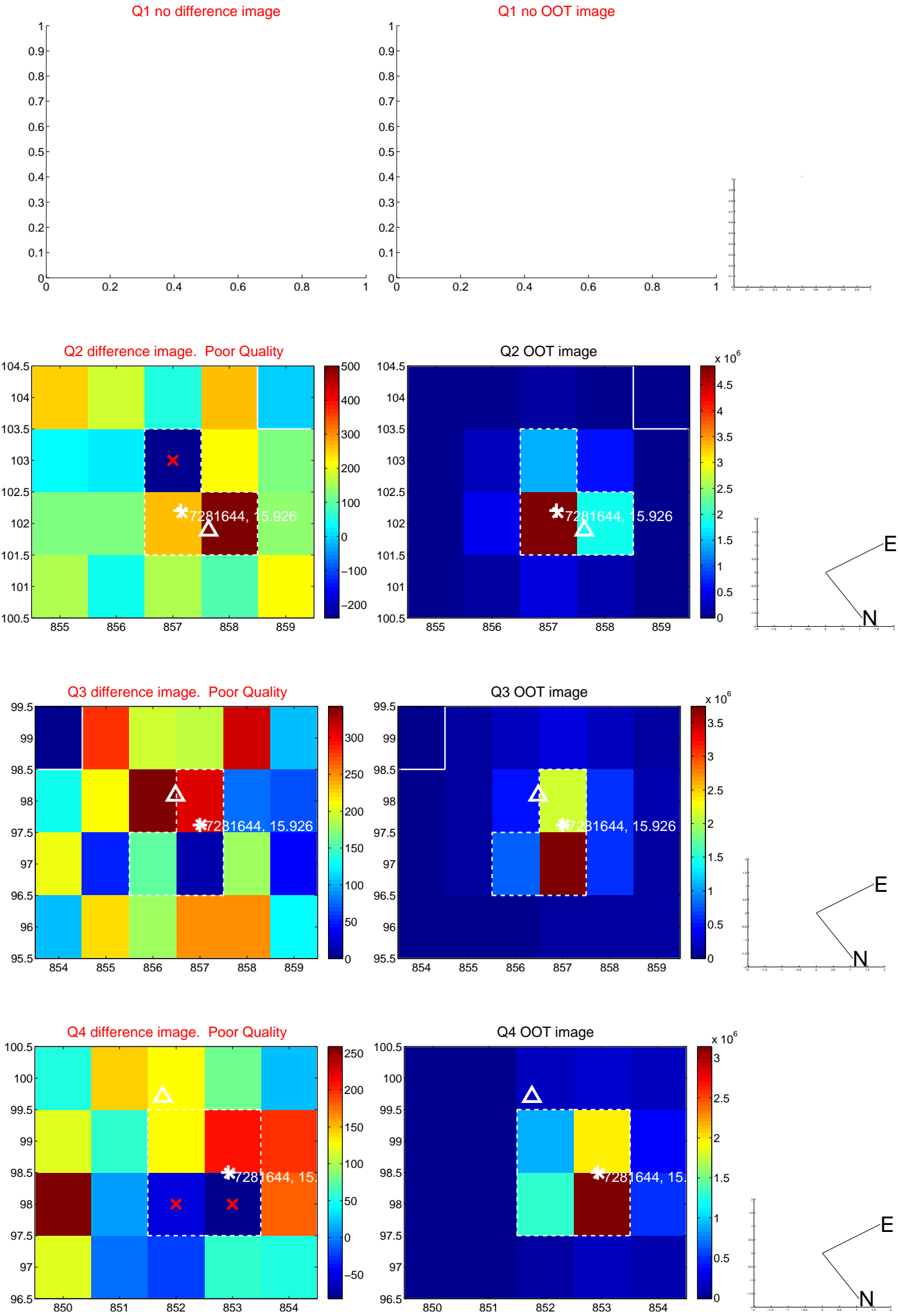
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.992 ± 0.508	5.89	-2.502 ± 0.518	-1.641 ± 0.578
PRF-fit source offset from KIC position	3.058 ± 0.477	6.41	-2.521 ± 0.511	-1.730 ± 0.605
photometric centroid source offset	2.24 ± 2.08	1.08	-1.88 ± 2.06	-1.22 ± 2.12

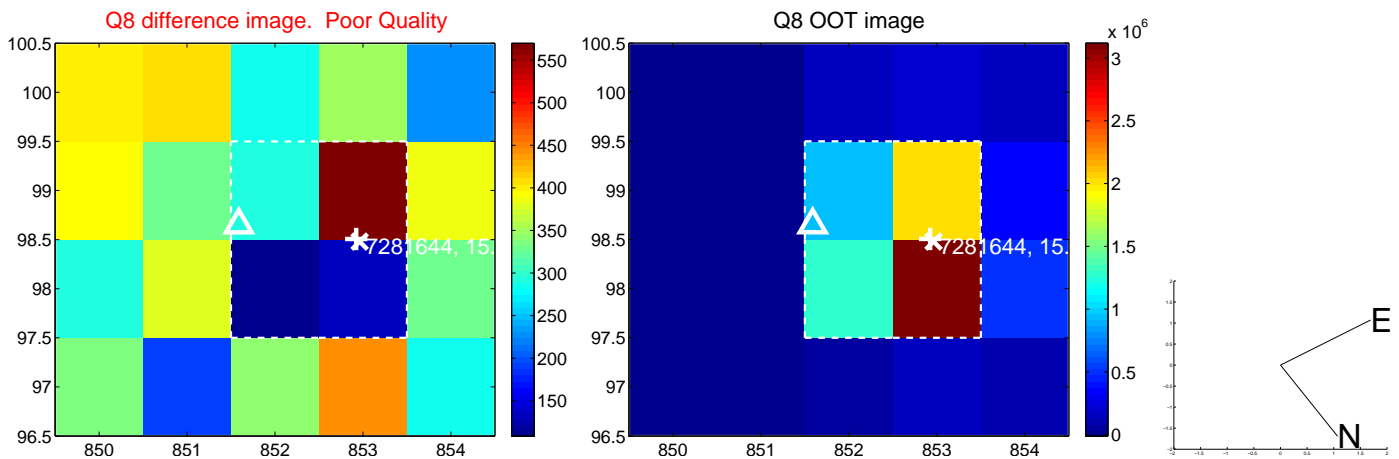
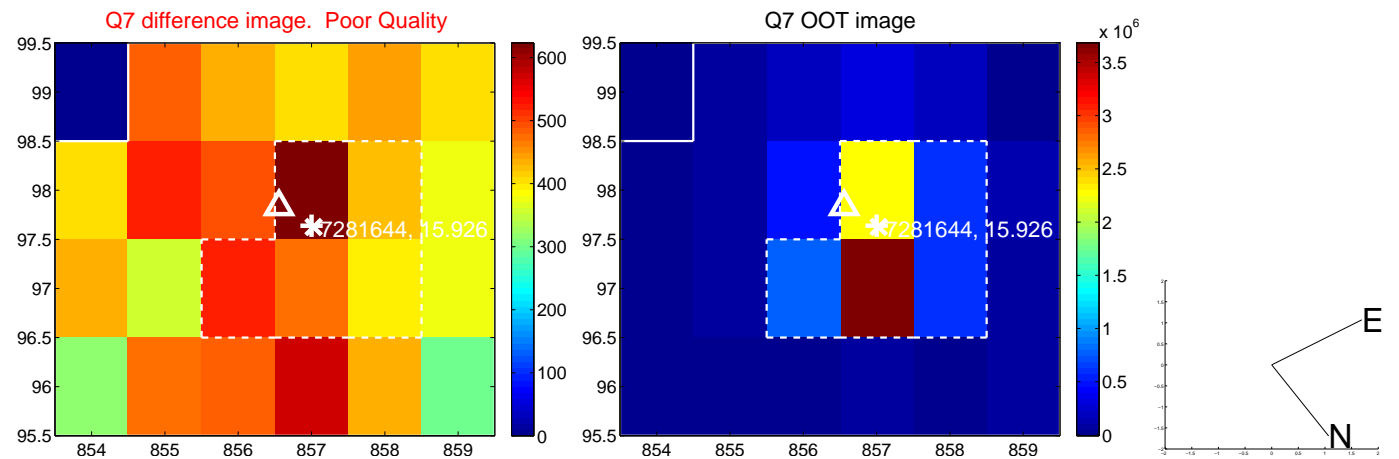
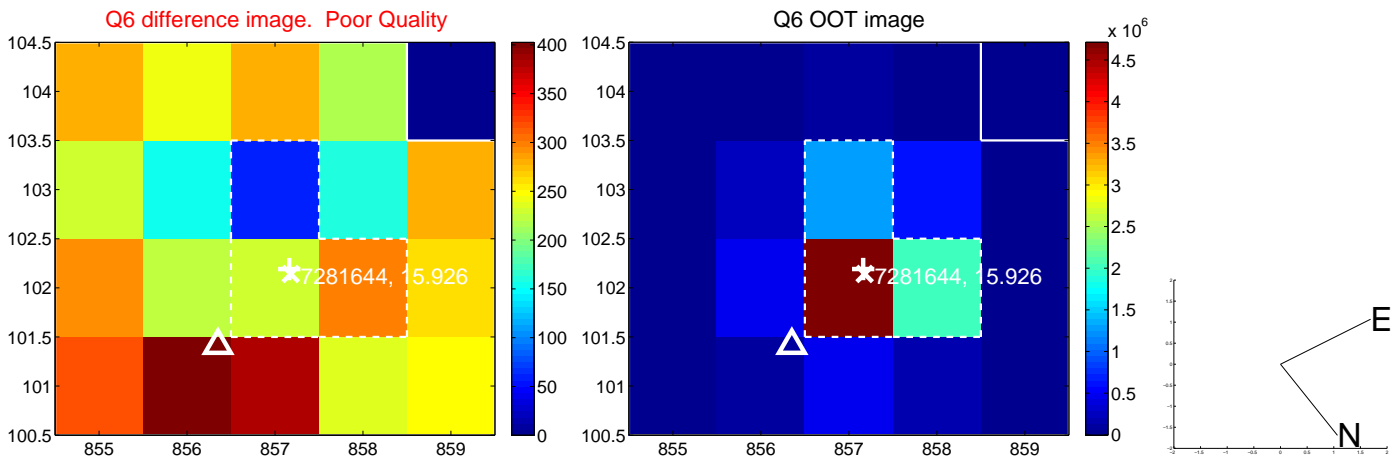
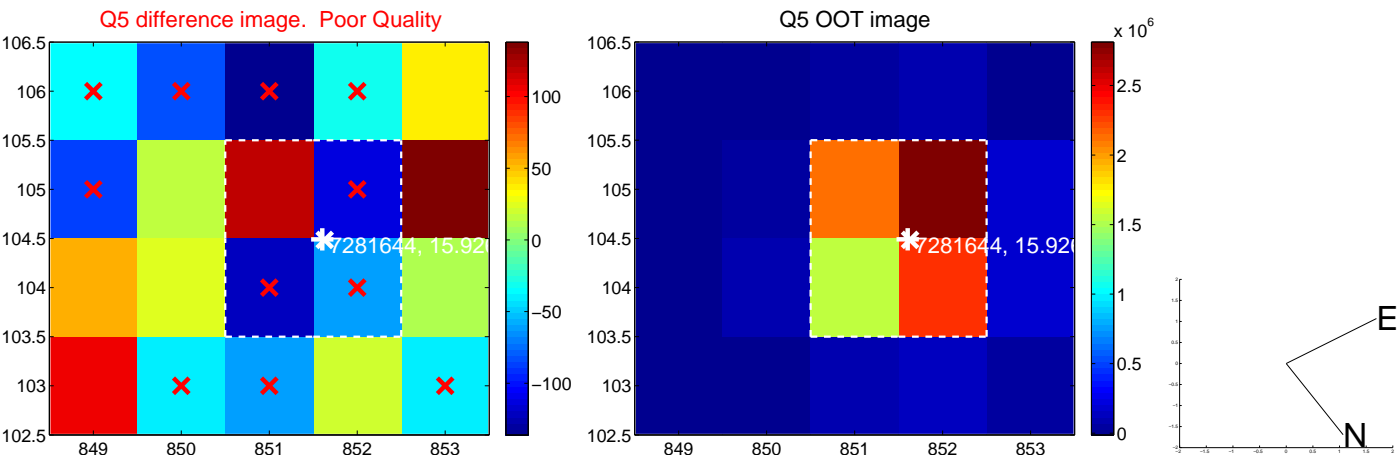


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

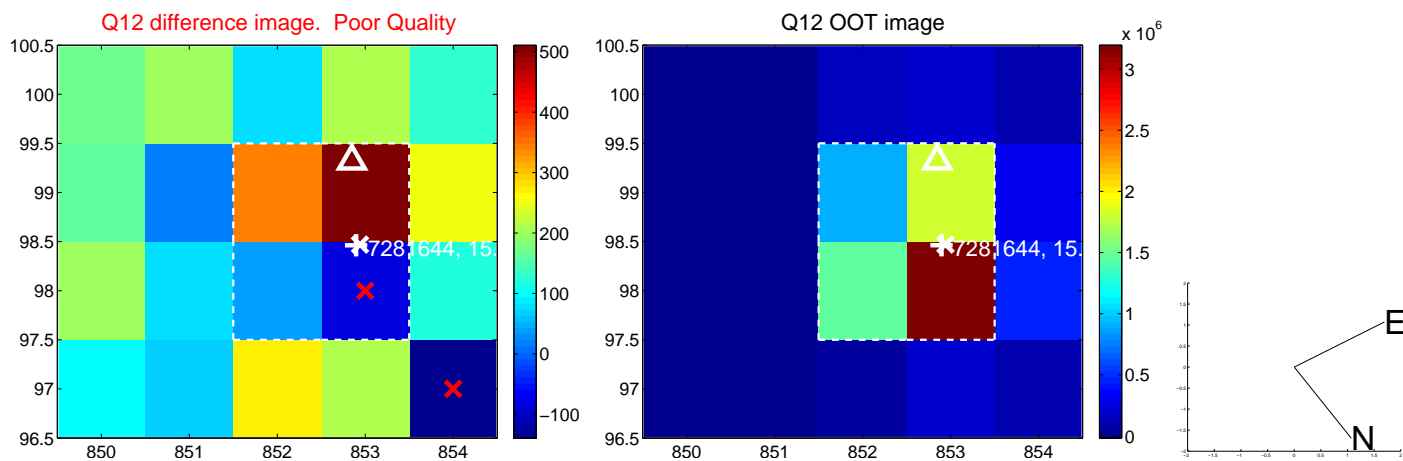
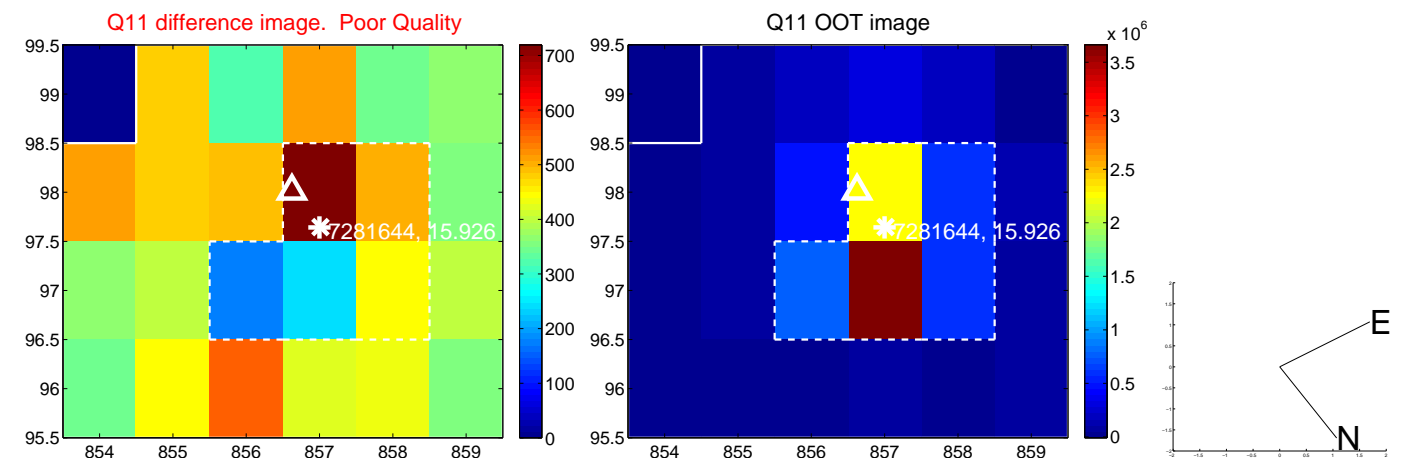
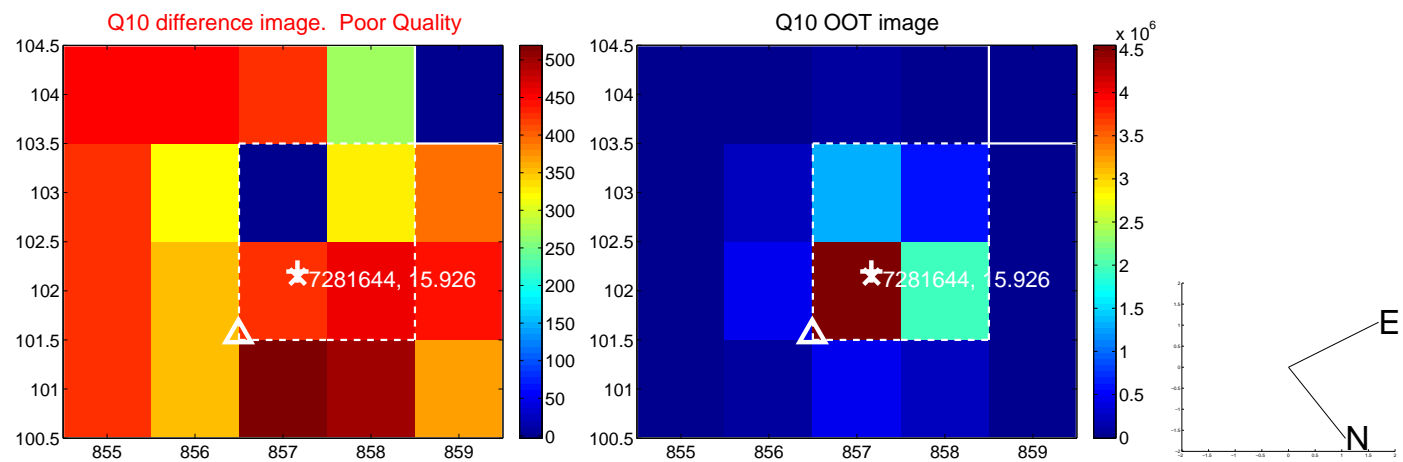
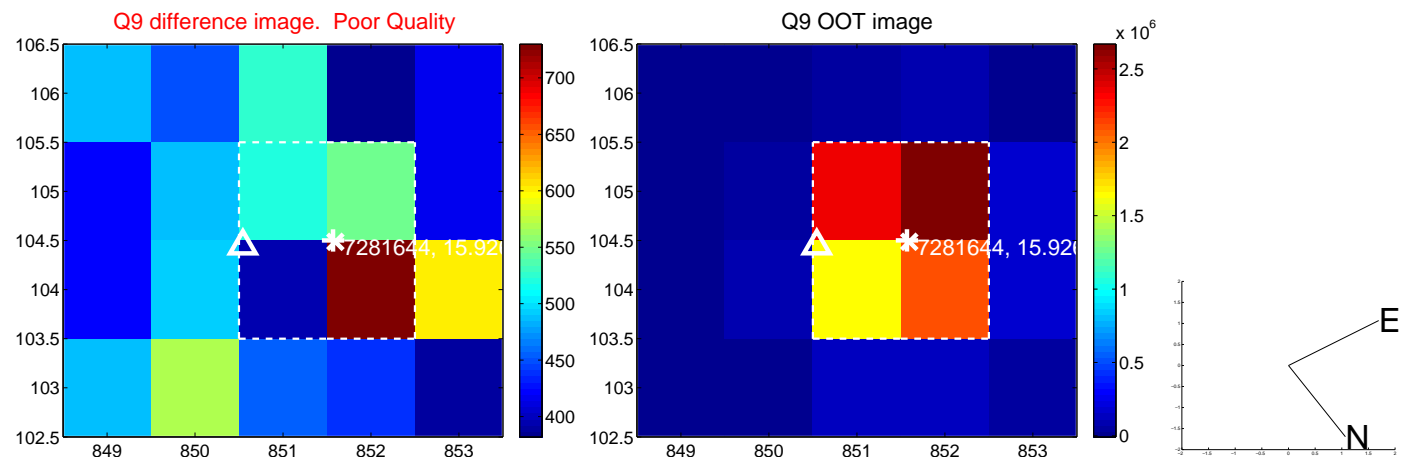
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



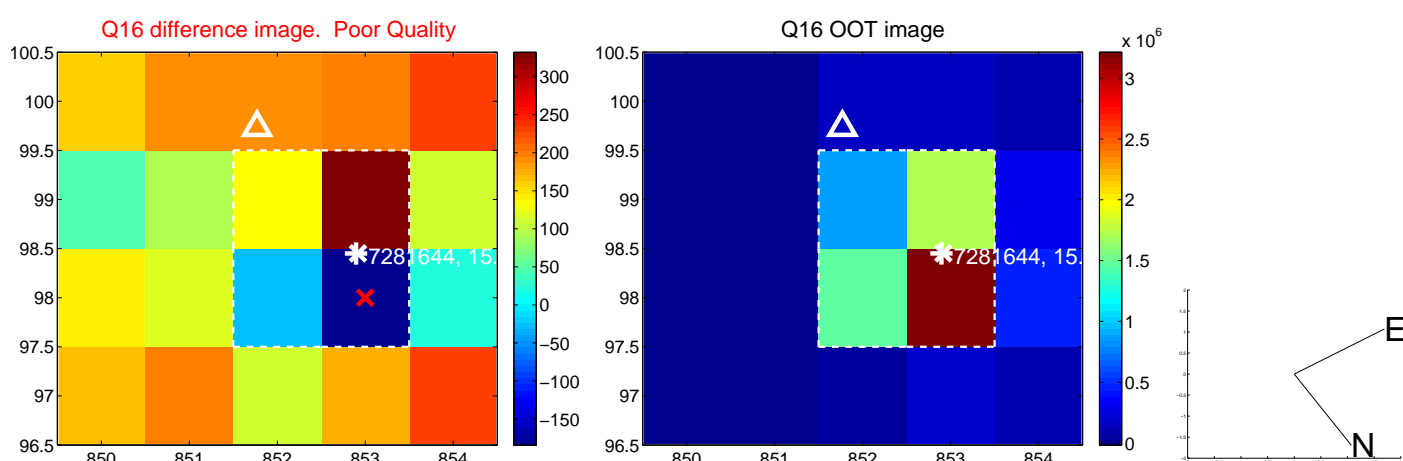
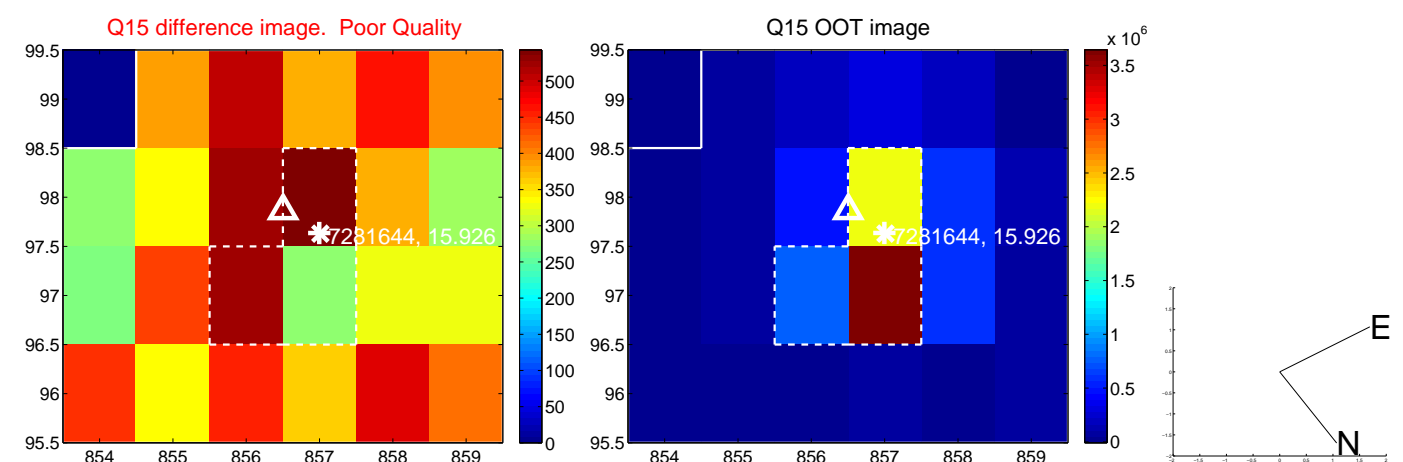
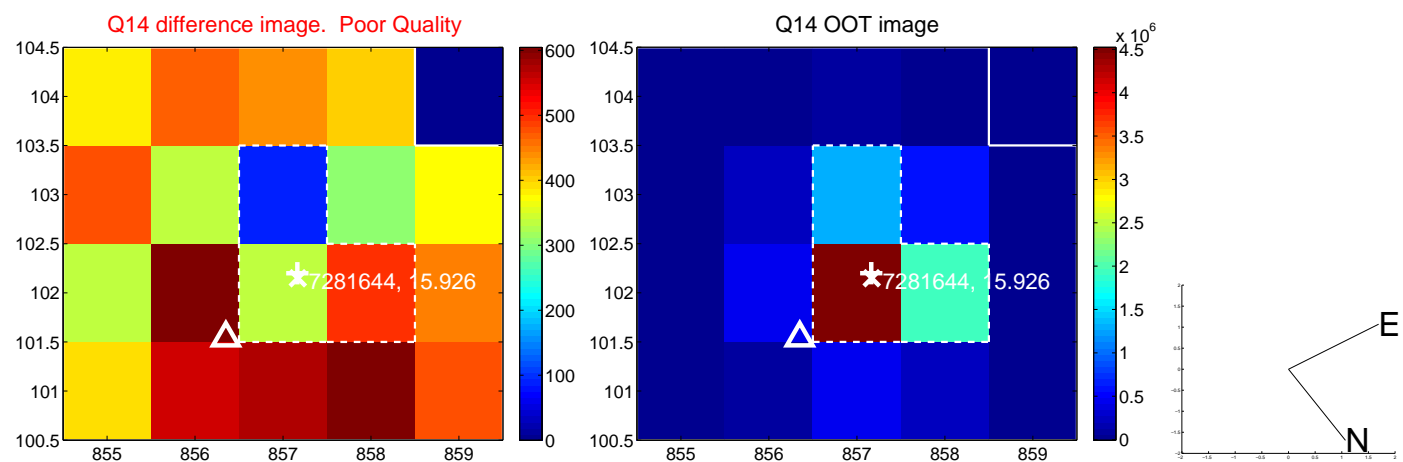
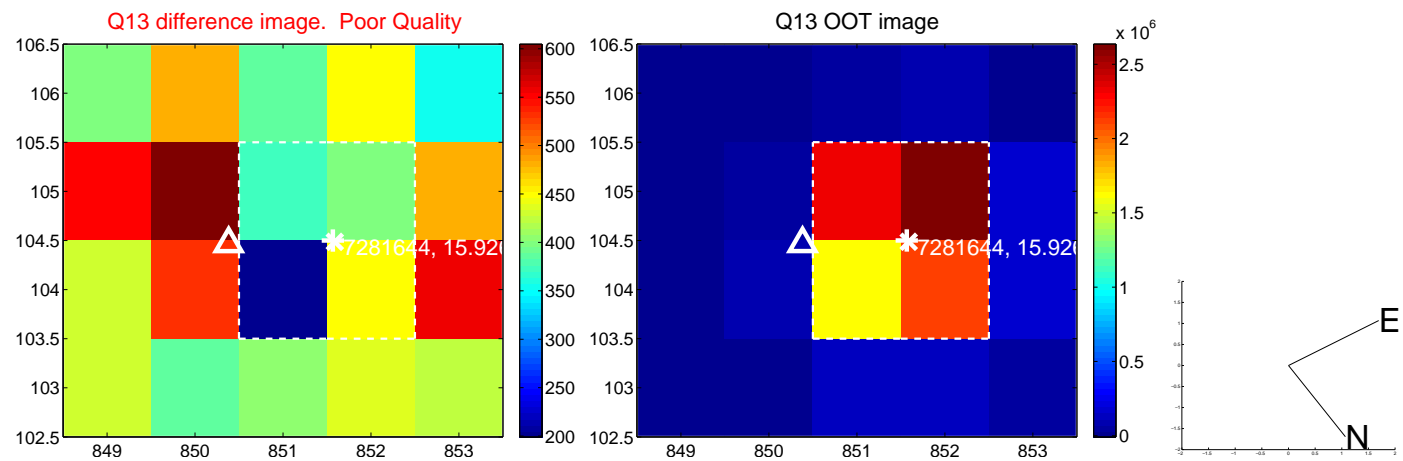
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



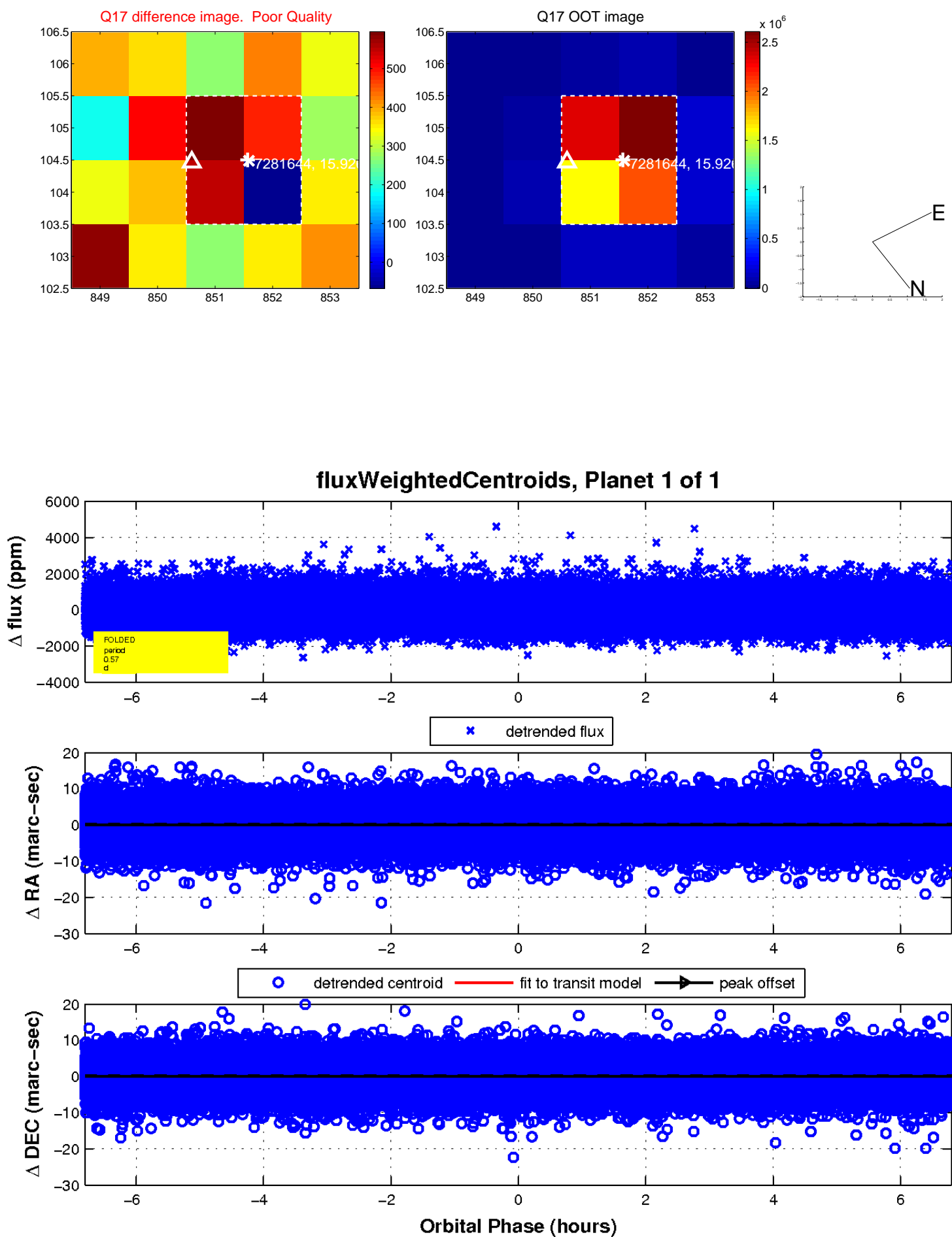
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UKIRT Image

Declination

