

KIC 009845907

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})
009845907-01	OBS	No	0.568907	131.997865	221.3	6.827	10.1	16.0	2.28	8148	3.95	72653.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009845907-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT

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.

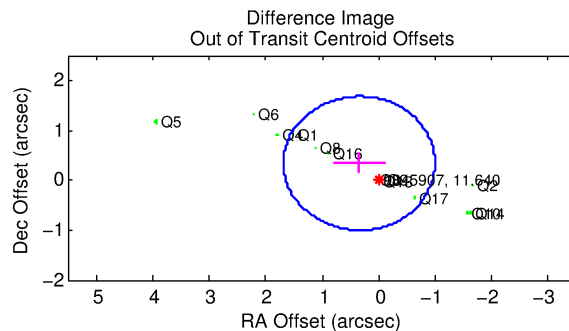
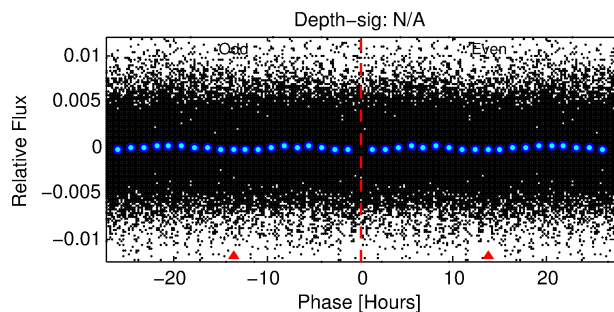
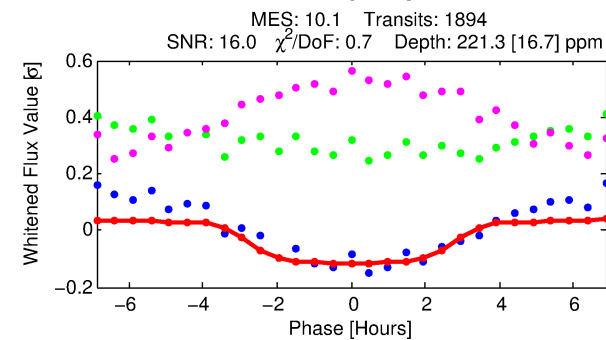
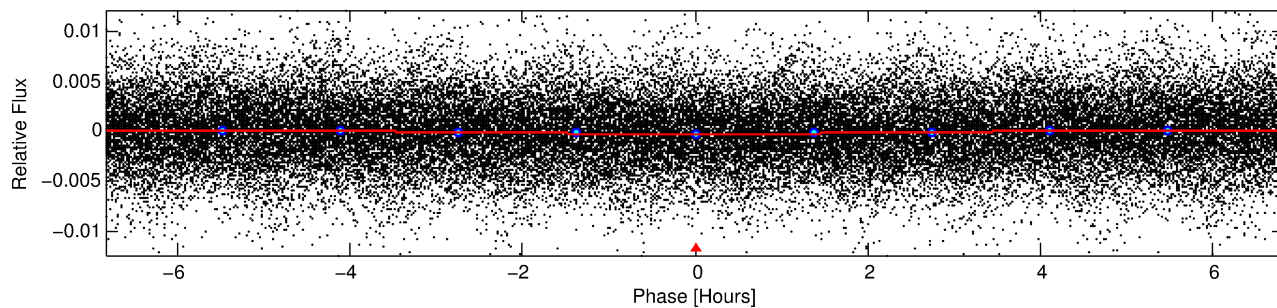
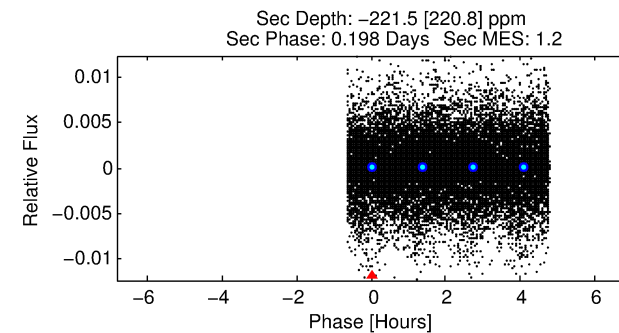
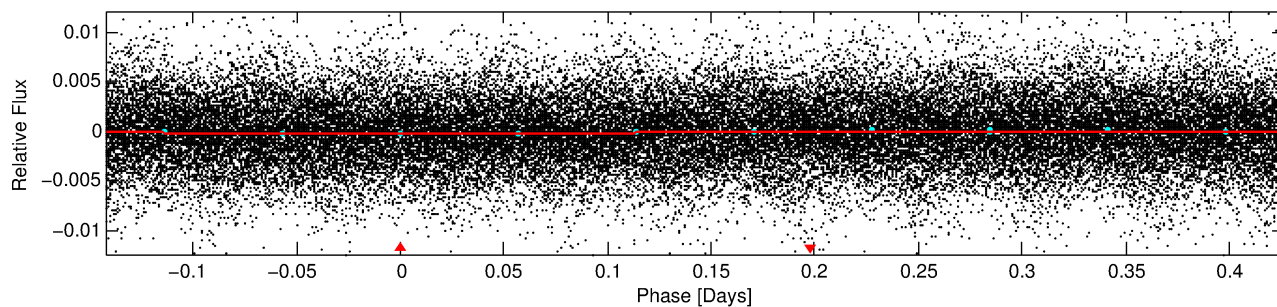
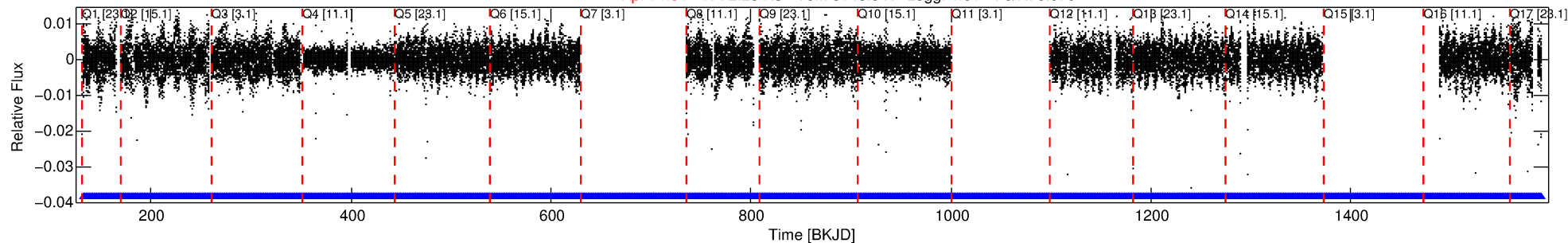
Ephemeris Match Information For 009845907-01

No Significant Match Found

DV One-Page Summary

KIC: 9845907 Candidate: 1 of 1 Period: 0.569 d

Kp: 11.64 R*: 2.28 Rs Teff: 8148.0 K Logg: 4.01 Fe/H: 0.070



DV Fit Results:

Period = 0.56891 [0.00001] d
Epoch = 131.9979 [0.0050] BKJD
Rp/R* = 0.0158 [0.0015]
a/R* = 1.00 [0.01]
b = 0.90 [0.11]
Seff = 72653.08 [28253.55]
Teff = 4186 [407] K
Rp = 3.95 [1.19] Re
a = 0.0168 [0.0041] AU
Ag = N/A
Teffp = N/A

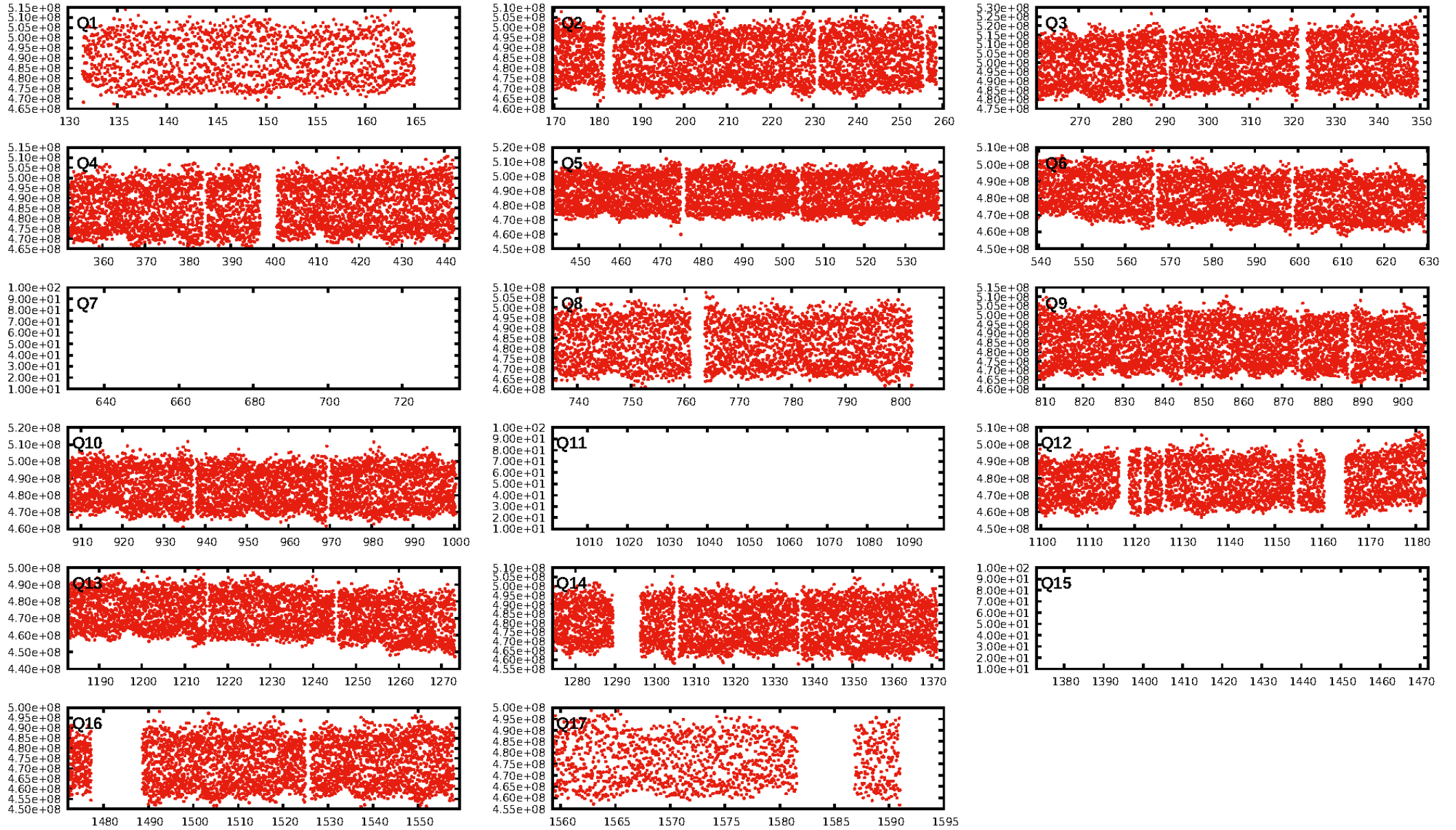
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1786/1786]
GhostDiagnostic-chr: 1.041
Centroid-sig: 2.4%
Centroid-so: 0.131 arcsec [4.66σ]
OotOffset-rm: 0.482 arcsec [1.08σ]
KicOffset-rm: 0.501 arcsec [1.07σ]
OotOffset-st: 4/1/3/5 [13]
KicOffset-st: 4/1/3/5 [13]
DiffImageQuality-fgm: 0.69 [9/13]
DiffImageOverlap-fno: 1.00 [14/14]

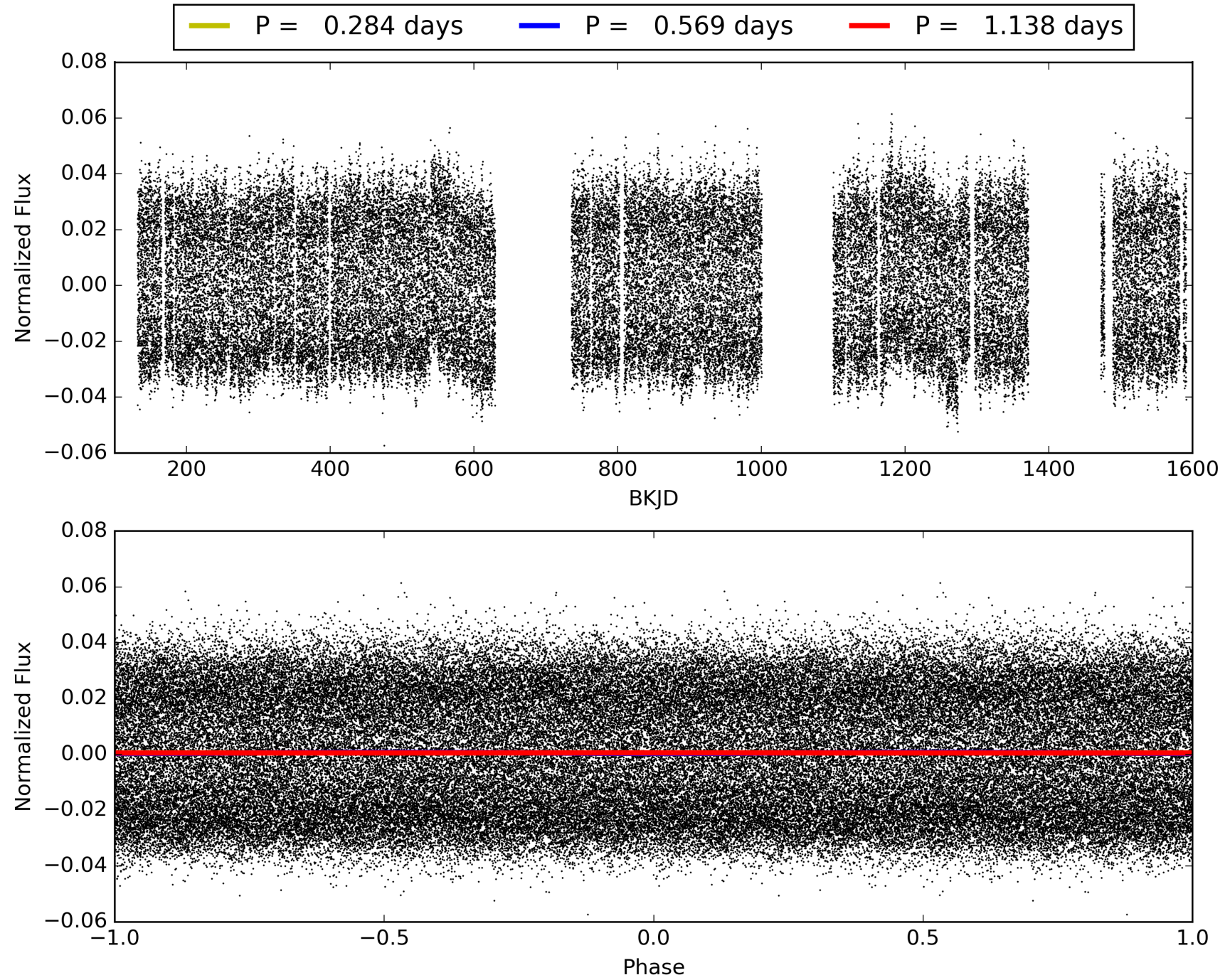
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 01-Feb-2016 17:32:34 Z

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

TCE 009845907-01, PDC Light Curves

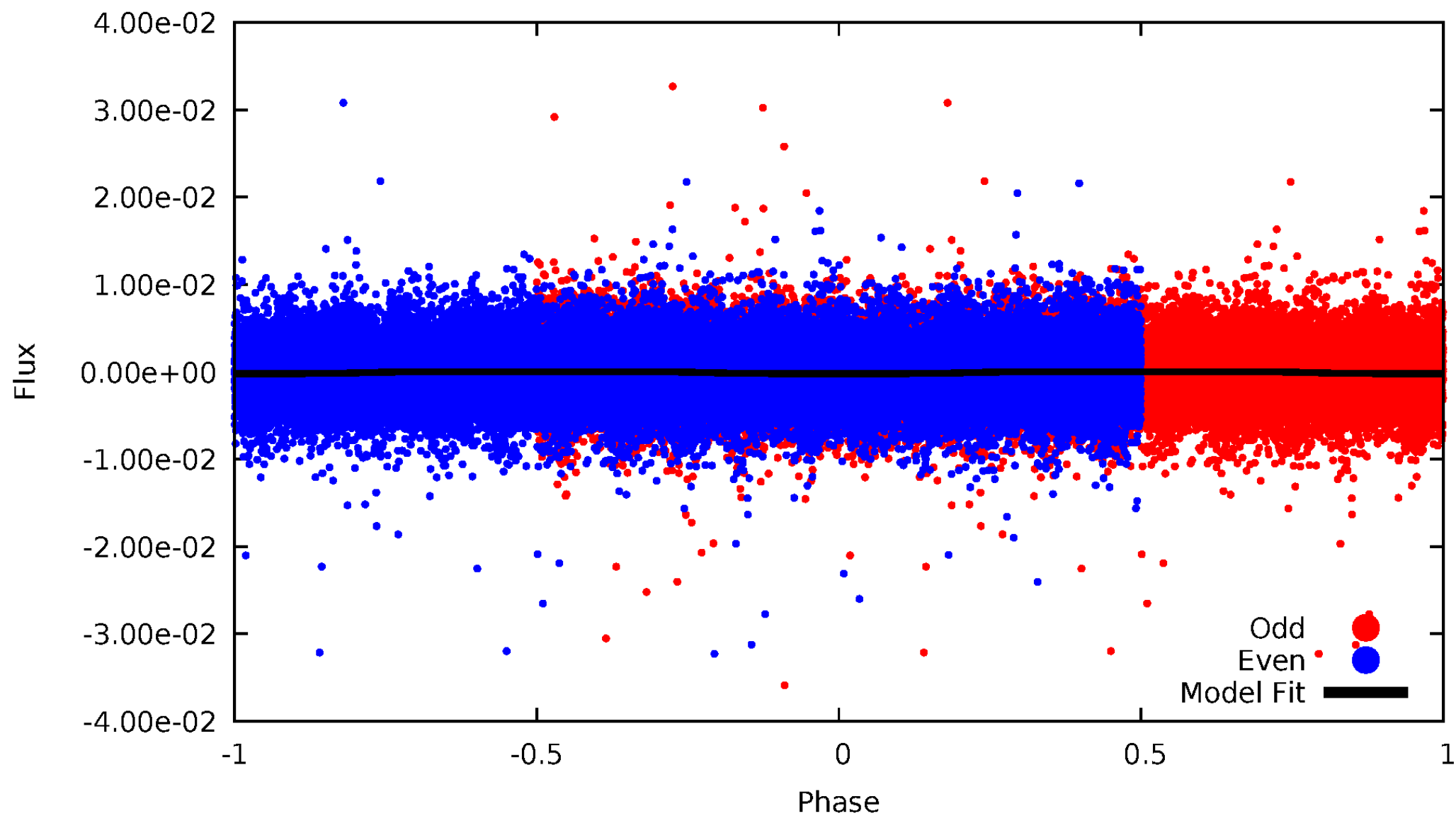


TCE 009845907-01



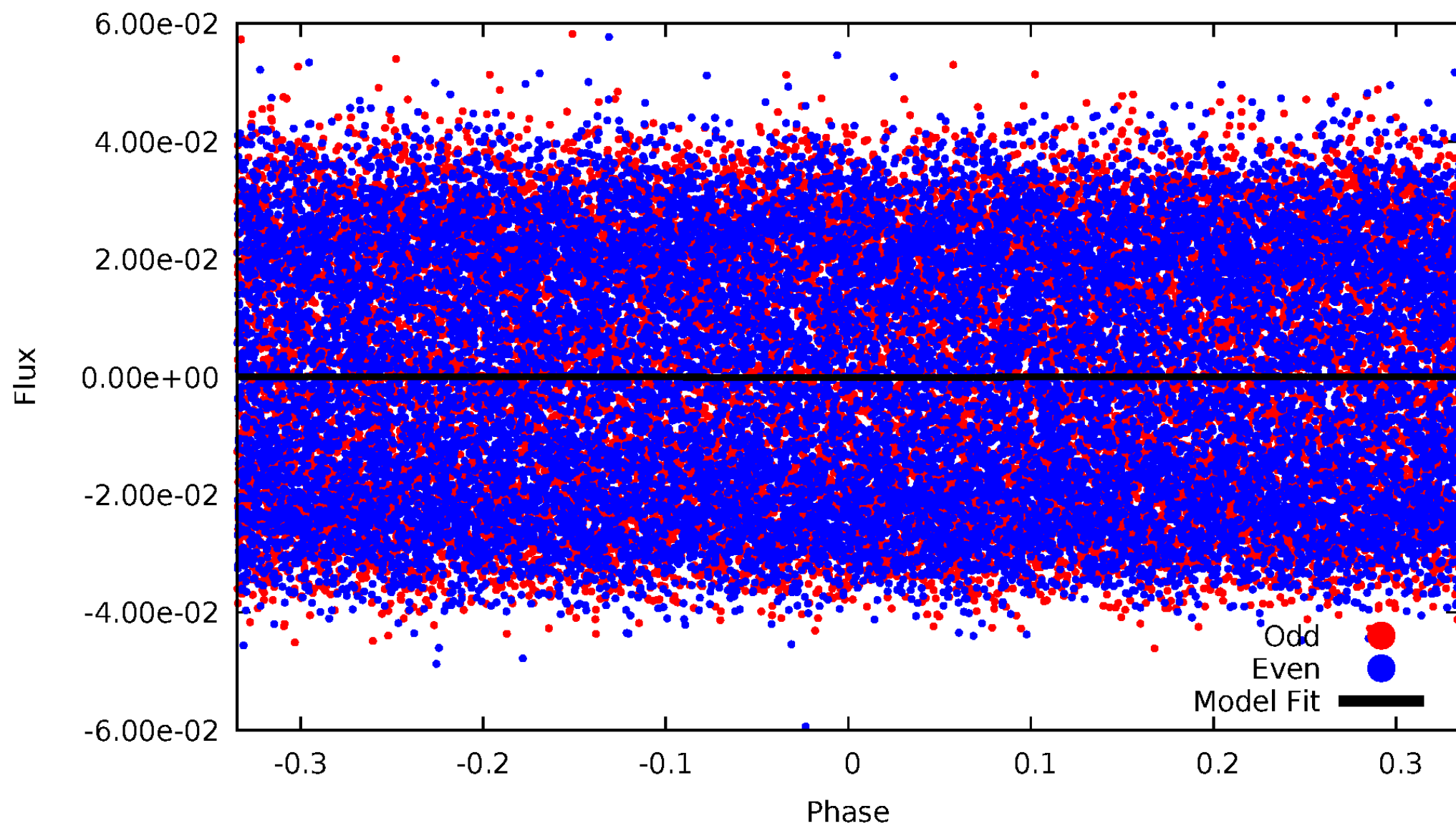
DV Odd/Even

TCE 009845907-01



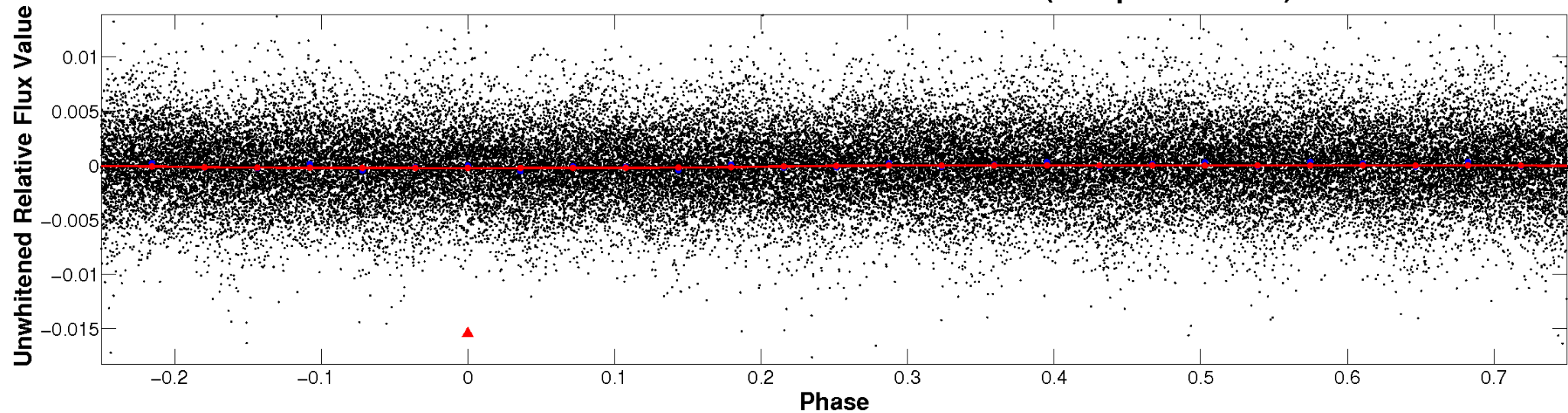
ALT Odd/Even

TCE 009845907-01

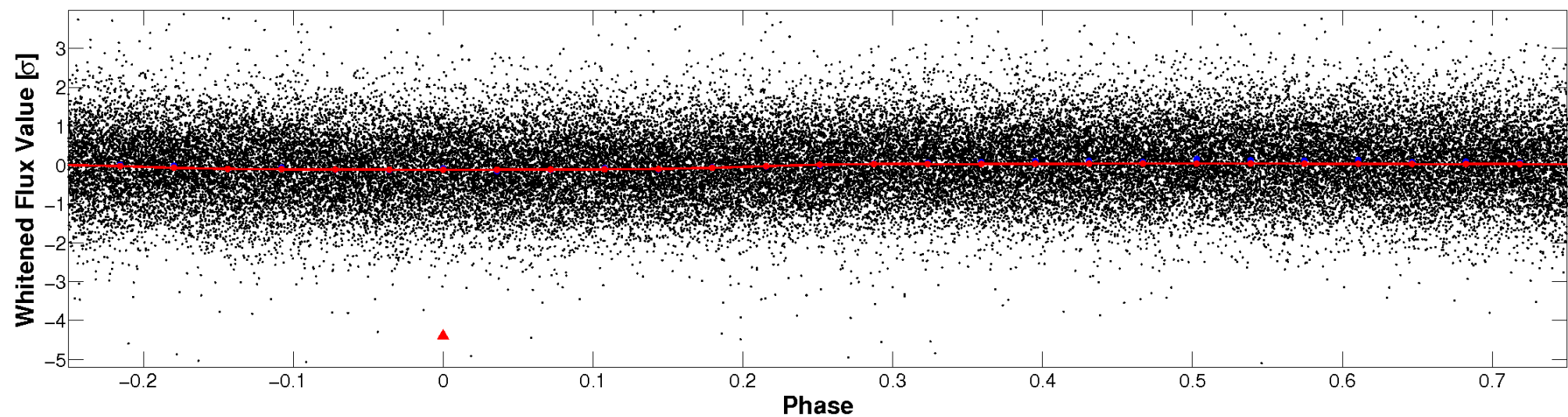


Non-Whitened Vs. Whitened Light Curve

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

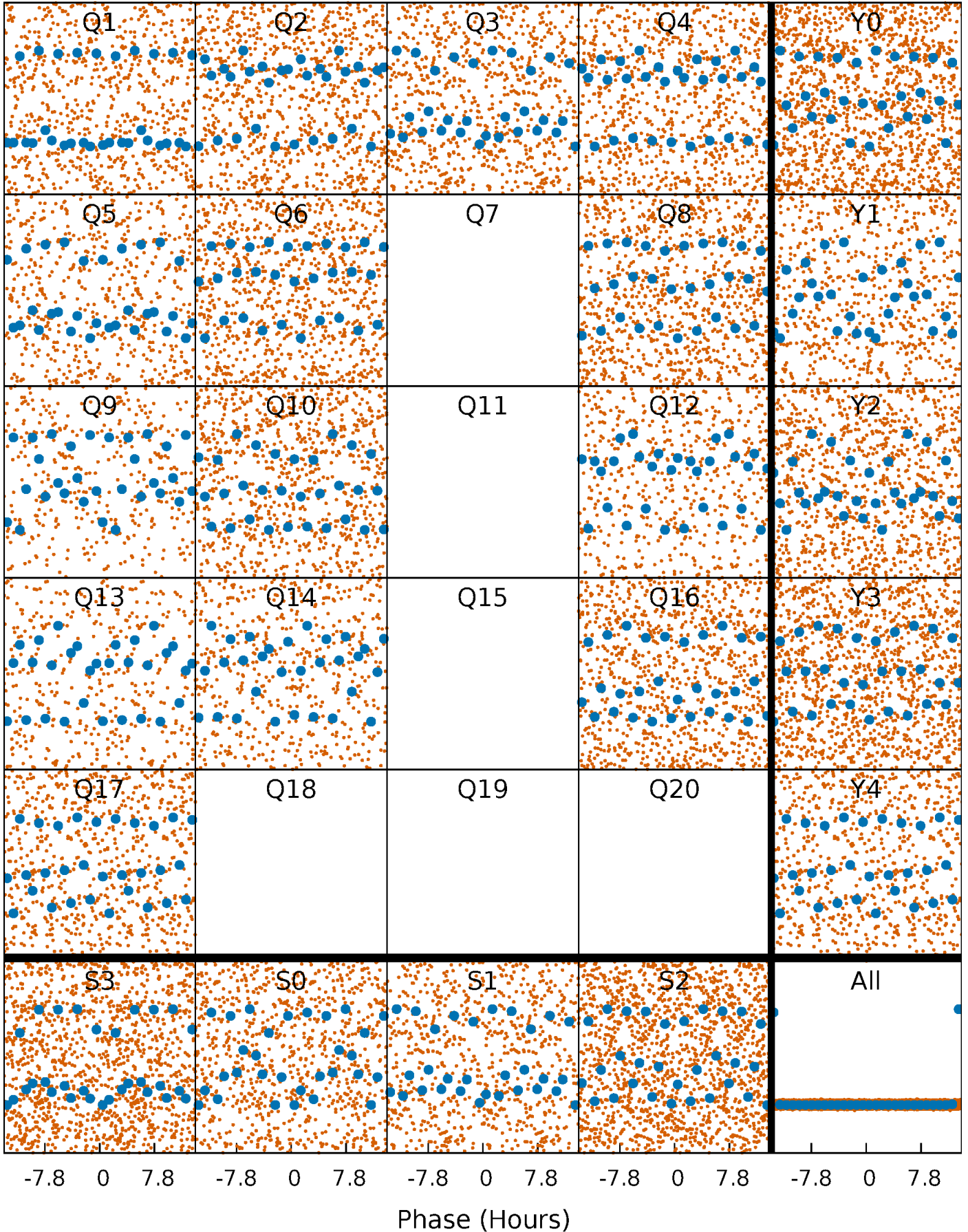


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



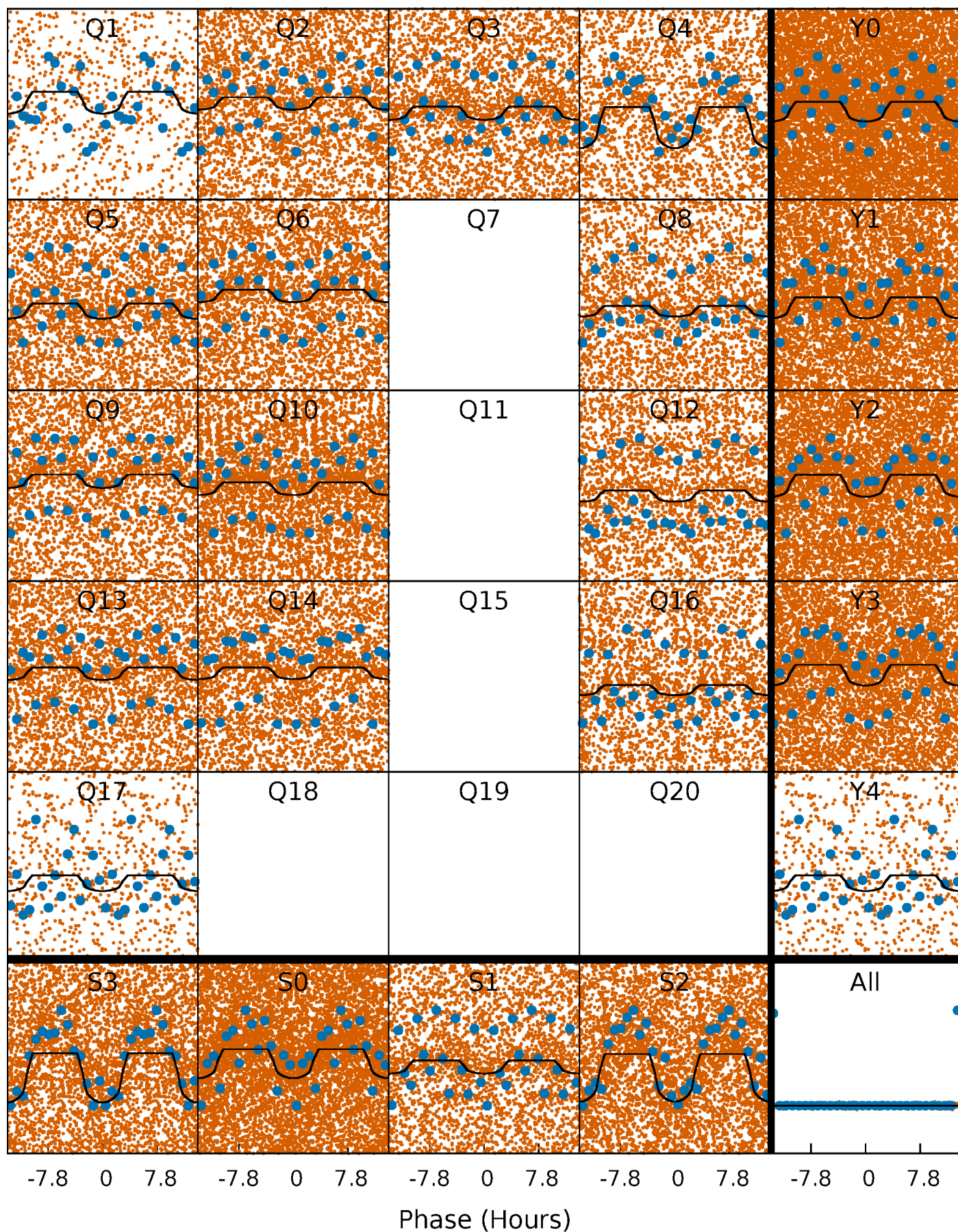
PDC Quarter-Phased Transit Curves

TCE 009845907-01 P= 0.568907 Days $T_0=131.997865$ (BKJD)



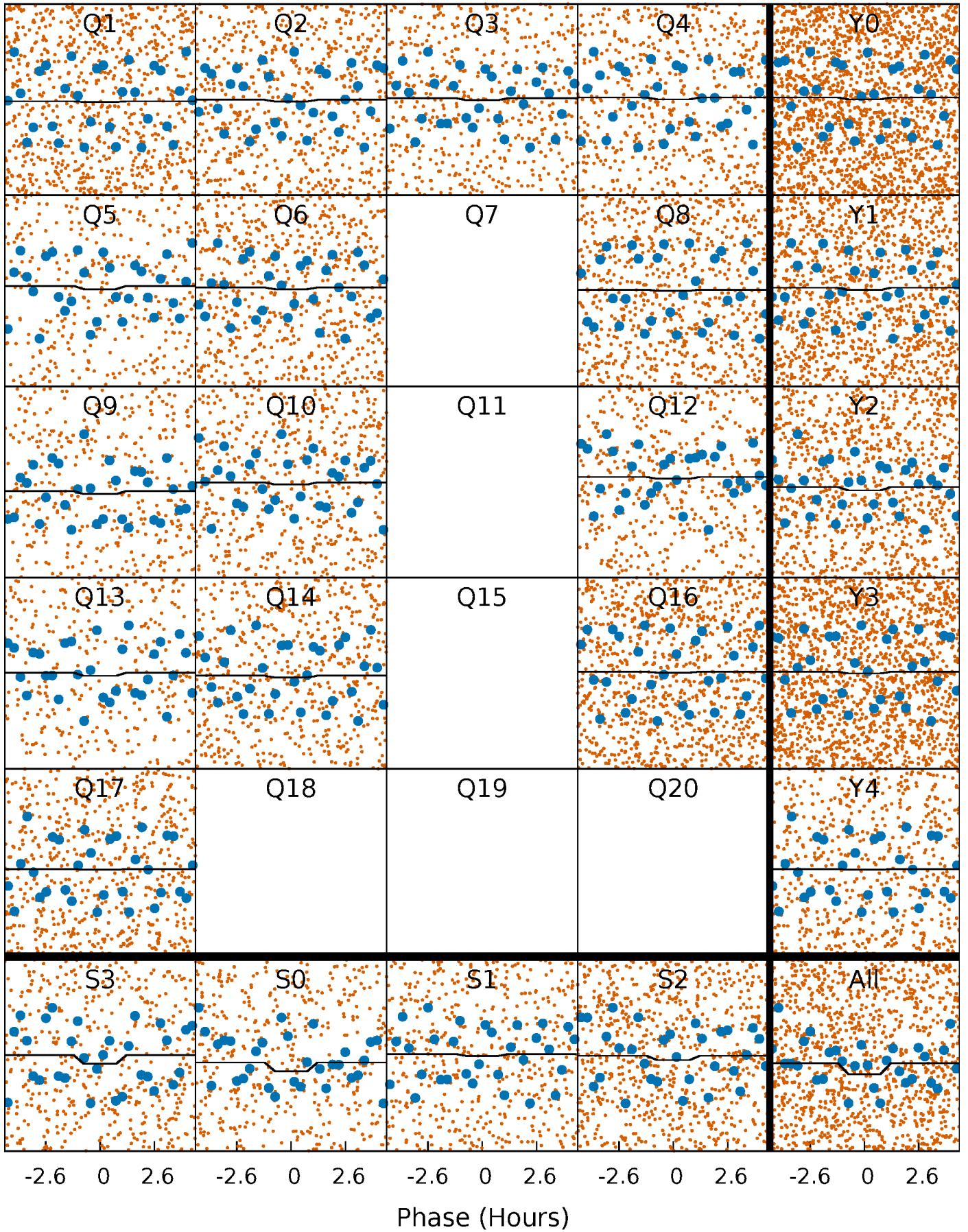
DV Quarter-Phased Transit Curves

TCE 009845907-01 P= 0.568907 Days $T_0=131.997865$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

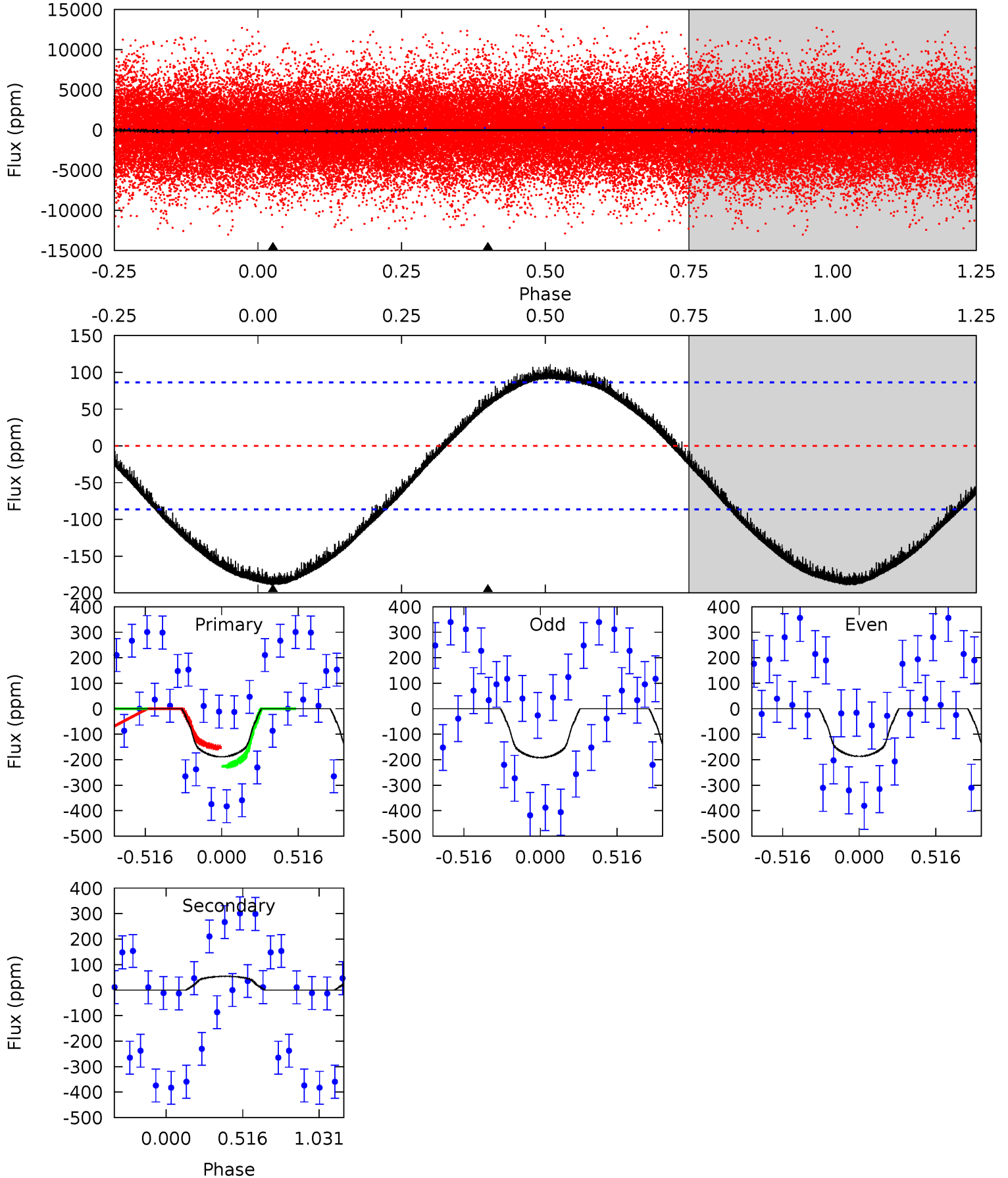
TCE 009845907-01 P= 0.568941 Days $T_0=131.921116$ (BKJD)



DV Model-Shift Uniqueness Test

009845907-01, P = 0.568907 Days, E = 131.428958 Days

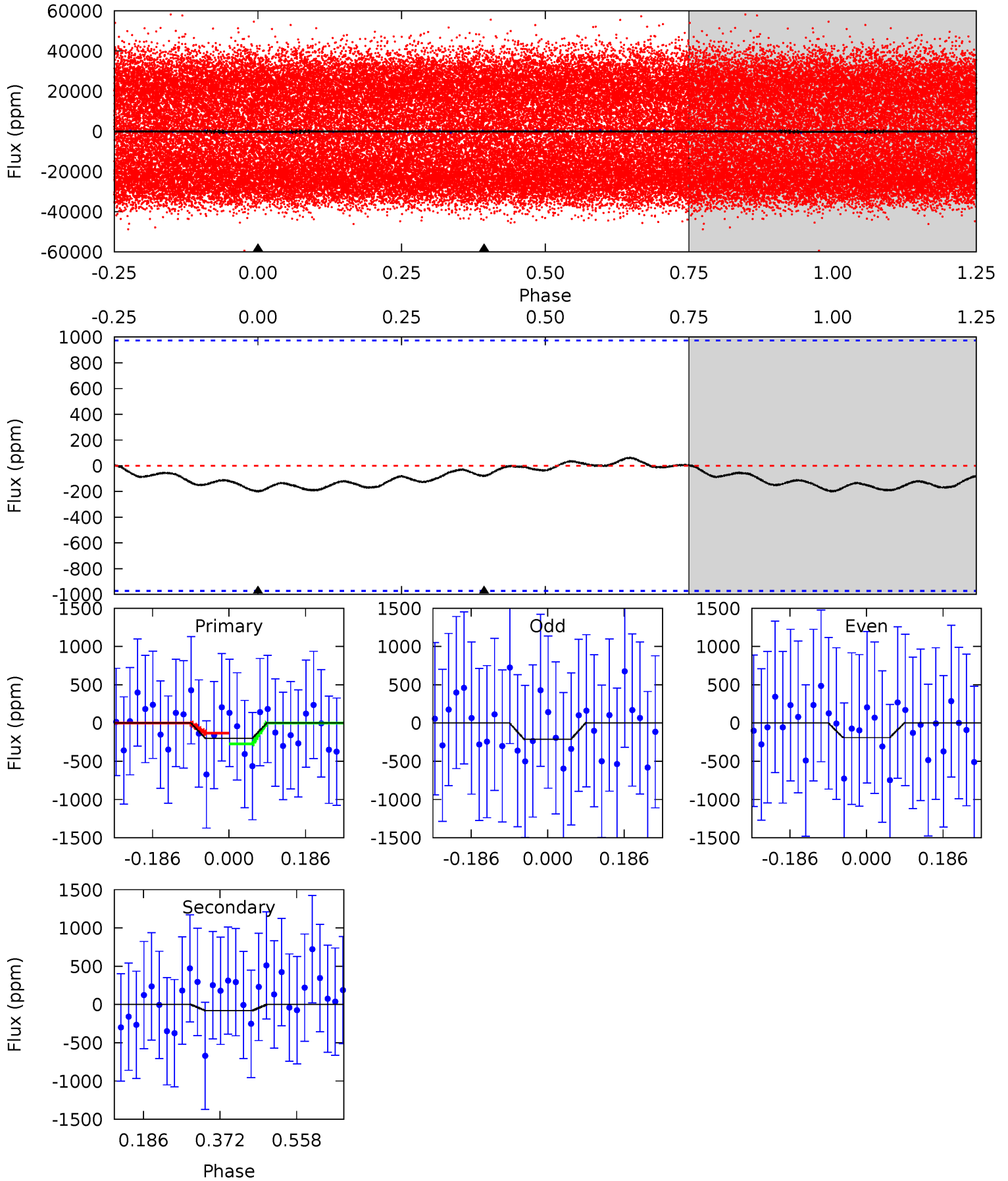
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.18	-2.64	0	0	4.21	0.65	1.21	9.18	9.18	-2.64	-2.64	0.13	1.14	0.37	1.85



Alt Model-Shift Uniqueness Test

009845907-01, P = 0.568941 Days, E = 131.352175 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.92	0.37	0	0	4.43	1.32	0.27	0.92	0.92	0.37	0.37	0.05	1.30	0.24	0.32



Stellar Parameters For KIC 009845907

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8148^{+226}_{-340}	$4.014^{+0.192}_{-0.128}$	$0.070^{+0.250}_{-0.500}$	$2.282^{+0.436}_{-0.654}$	$1.960^{+0.295}_{-0.442}$	$0.232^{+0.289}_{-0.081}$
	+3%/-4%	+5%/-3%	+357%/-714%	+19%/-29%	+15%/-23%	+124%/-35%
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 009845907-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	54 ± 21	$3.91^{+0.65}_{-0.65}$	5816^{+384}_{-433}	-5980^{+461}_{-479}	$-0.543^{+0.244}_{-0.333}$
Alt.	-81 ± 219	$3.04^{+0.60}_{-0.54}$	5802^{+408}_{-466}	6201^{+3882}_{-14145}	$1.272^{+3.807}_{-3.439}$

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 $A_{obs} \gg 1.0$

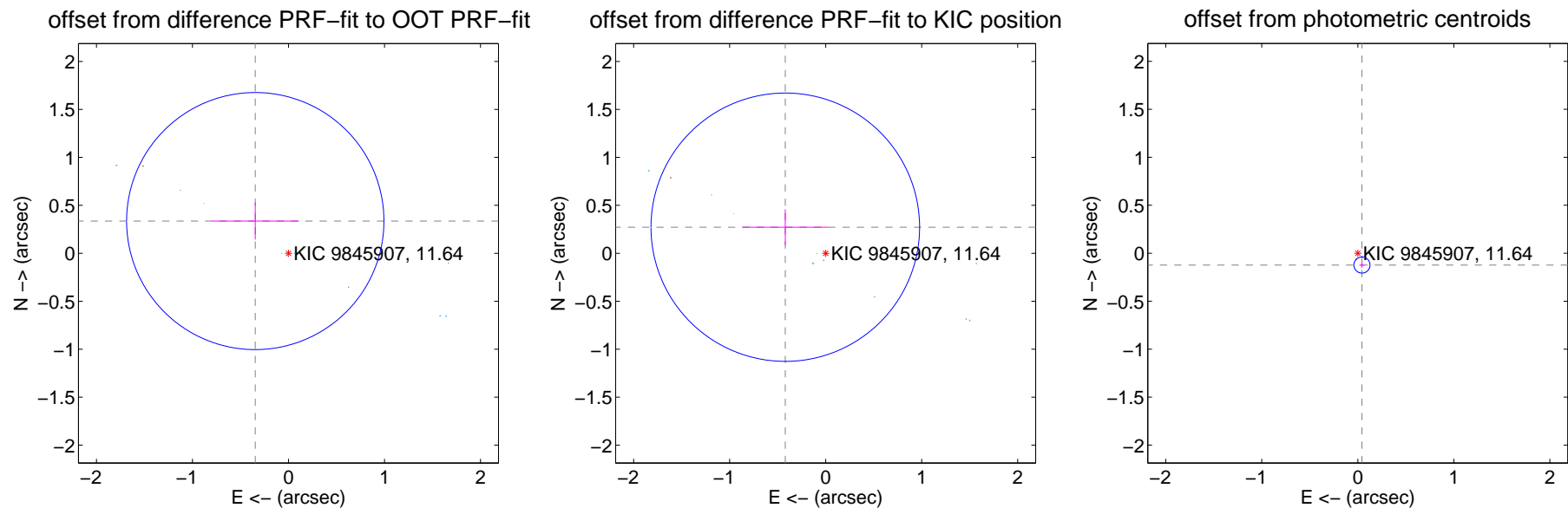
DV Centroid Data

Supplemental centroid analysis for 009845907-01. **Kepler magnitude: 11.64.** Transit SNR 15.97

There are 9 quarters with good PRF difference image offsets

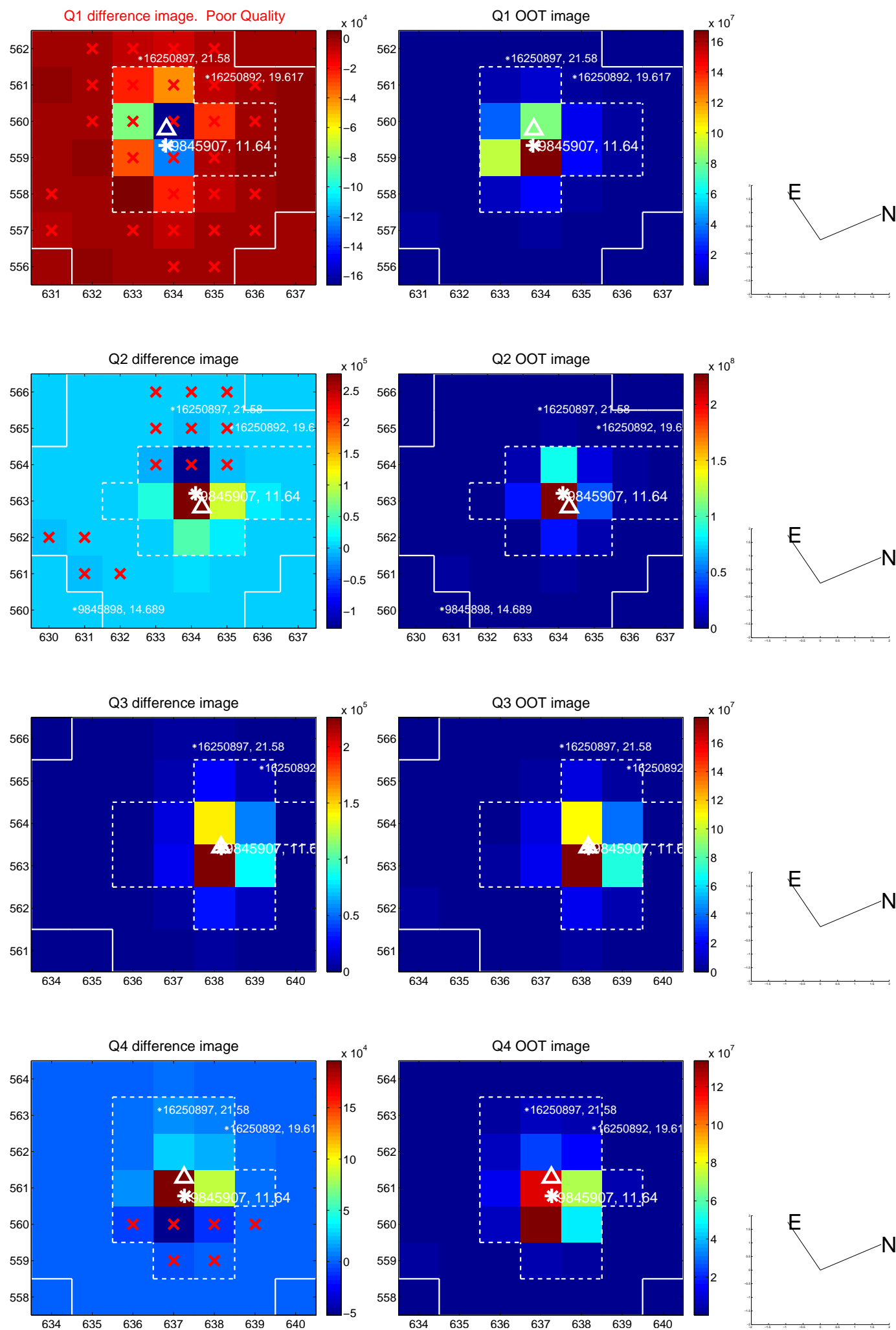
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.482 ± 0.447	1.08	0.346 ± 0.453	0.336 ± 0.193
PRF-fit source offset from KIC position	0.501 ± 0.466	1.07	0.421 ± 0.449	0.272 ± 0.186
photometric centroid source offset	0.13 ± 0.03	4.66	-0.04 ± 0.03	-0.12 ± 0.03

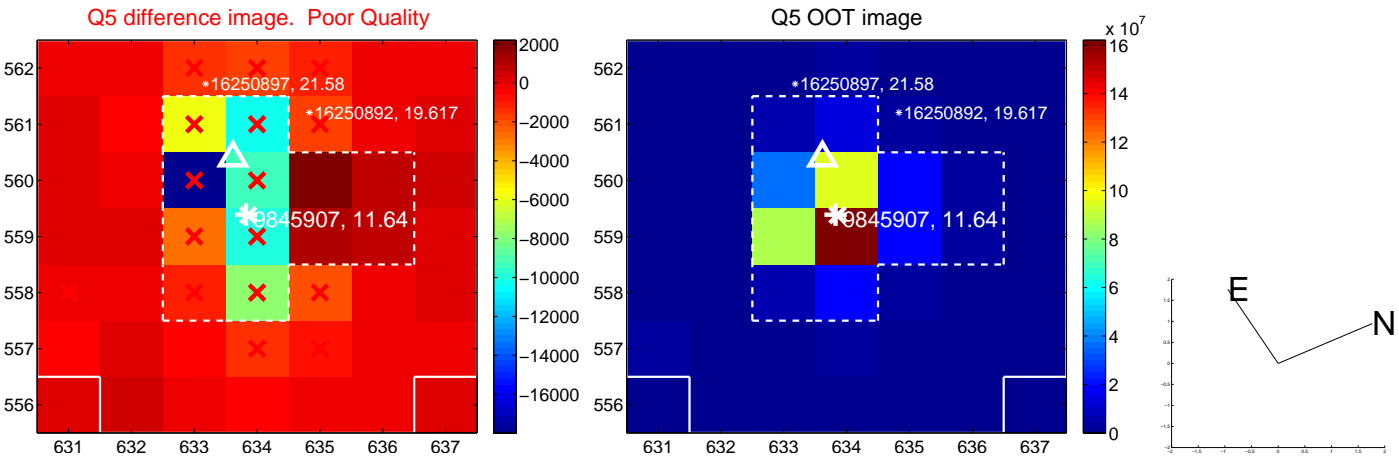


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

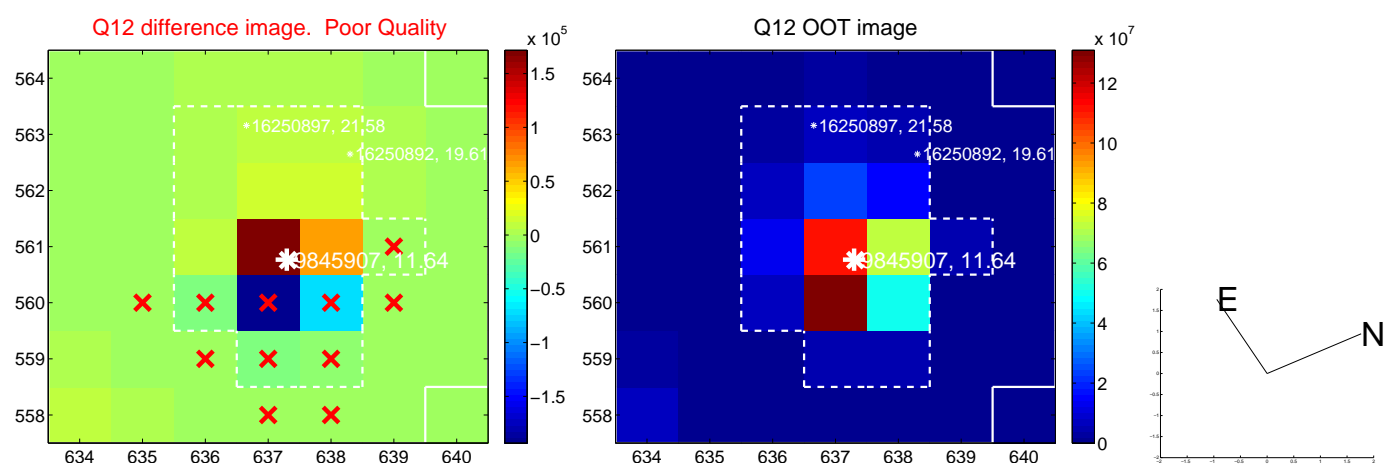
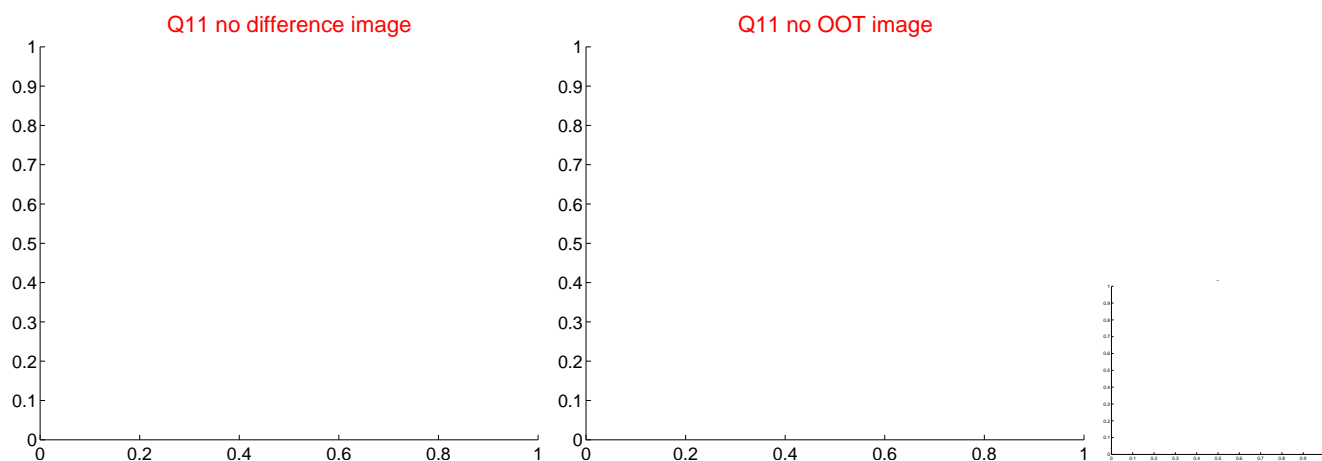
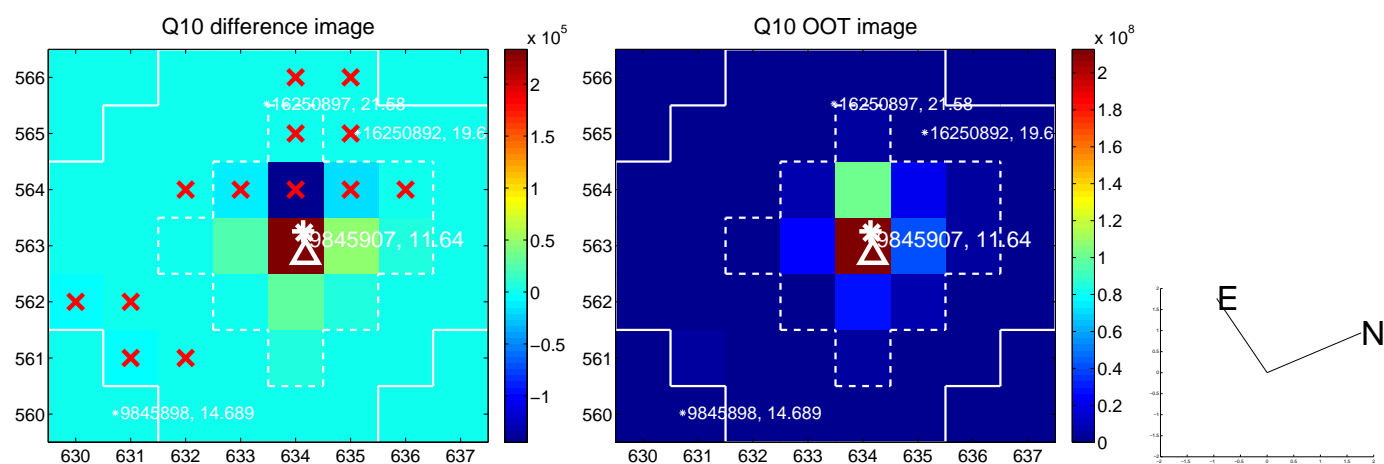
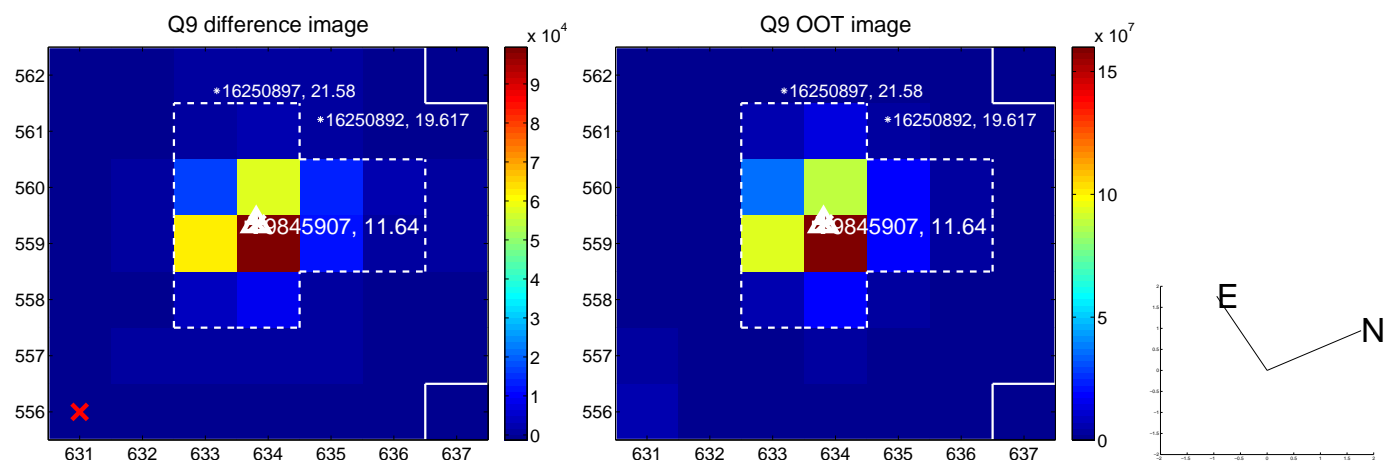
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



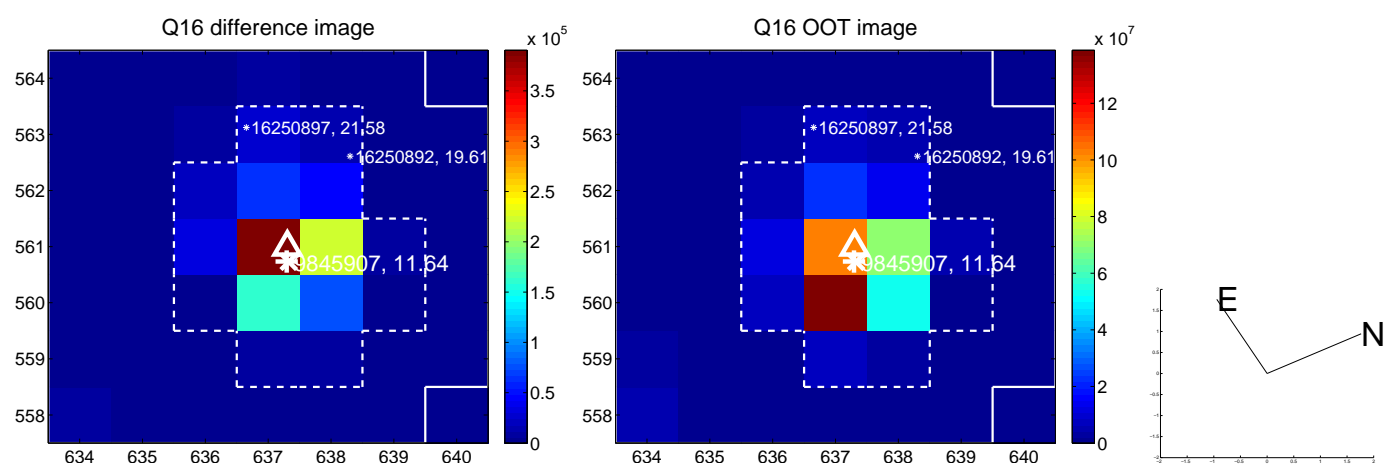
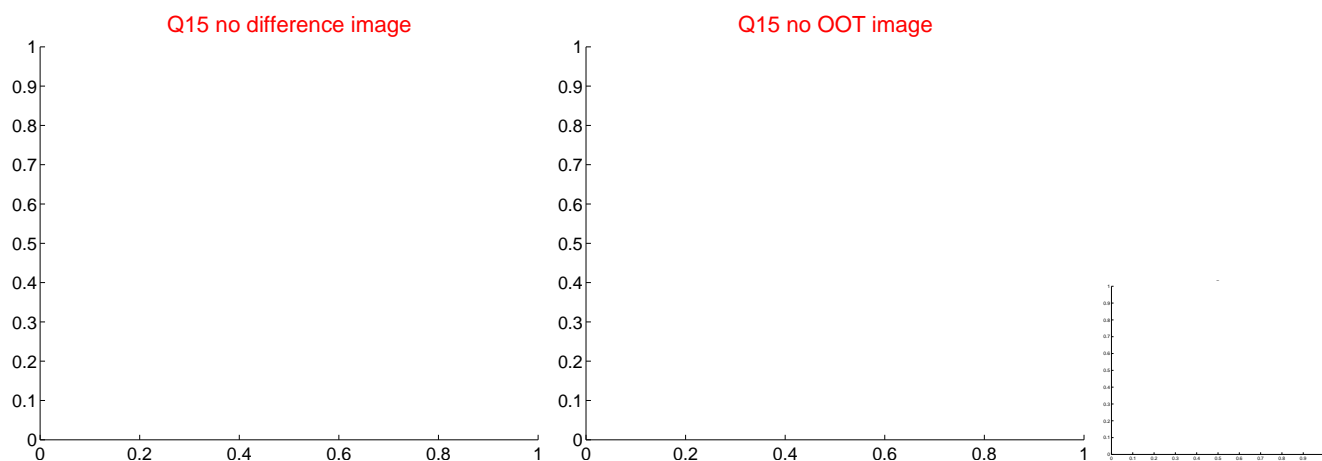
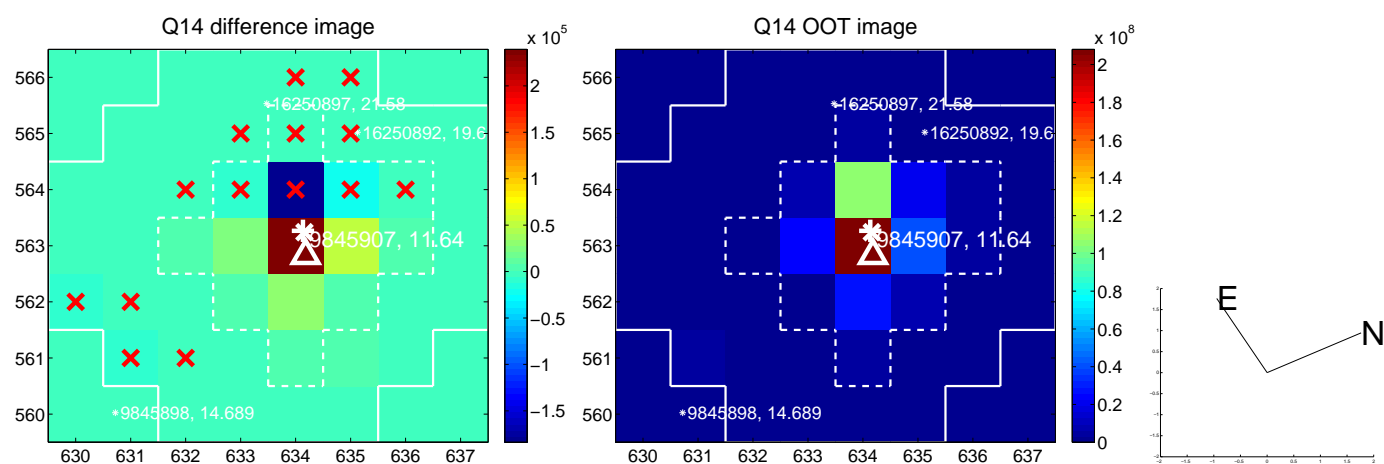
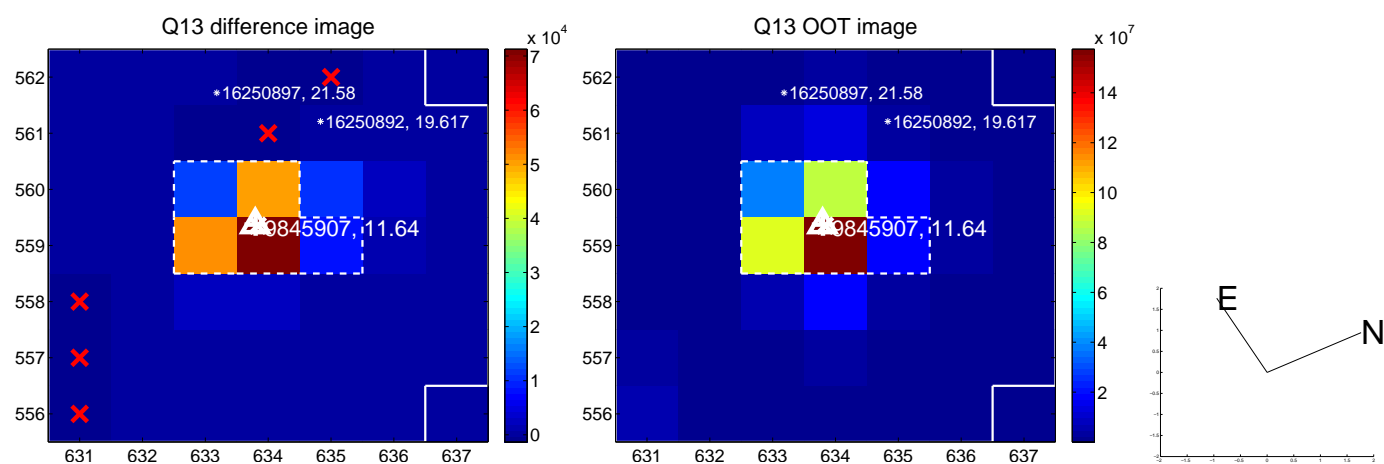
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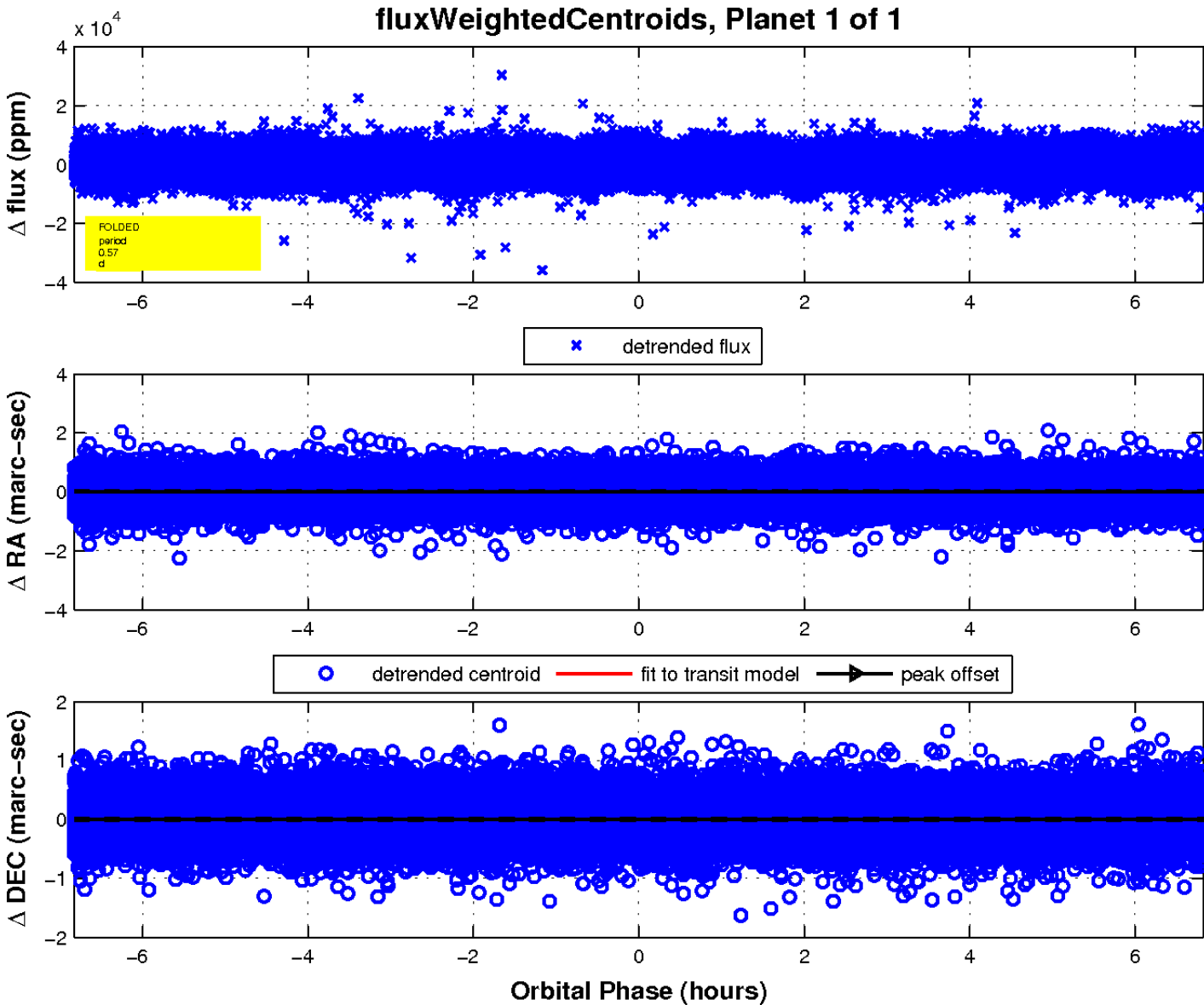
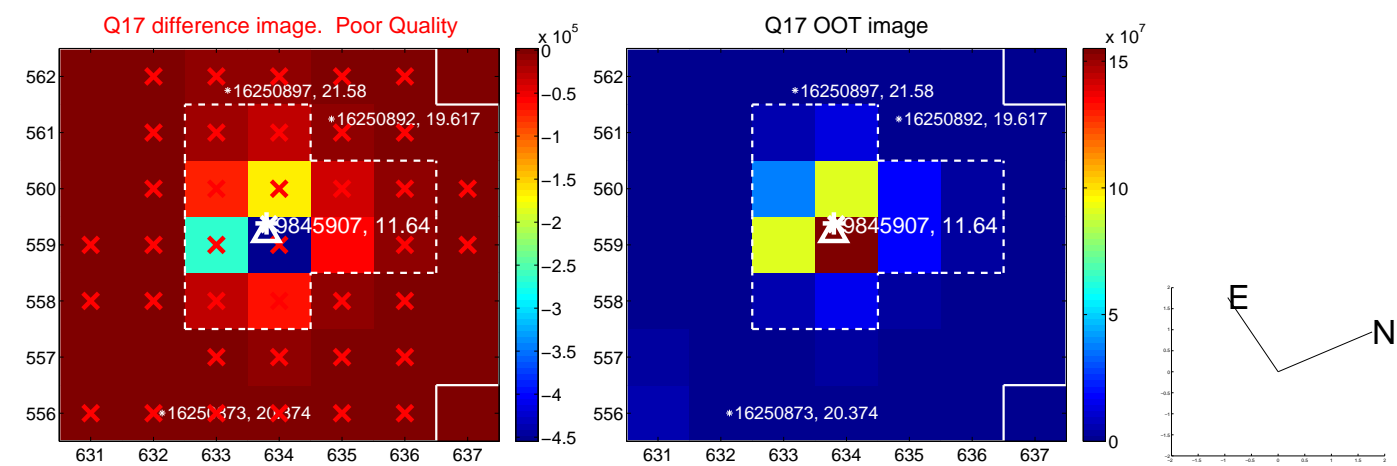
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UKIRT Image

Declination

