

KIC 007375997

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})
007375997-01	OBS	No	0.825869	131.748953	7.2	9.106	7.6	8.1	3.02	8617	0.82	95407.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007375997-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—CENT_FEW_DIFFS

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

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

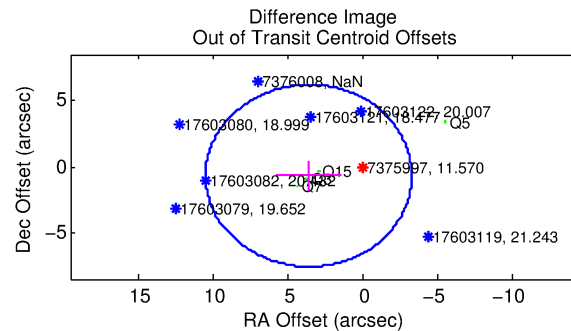
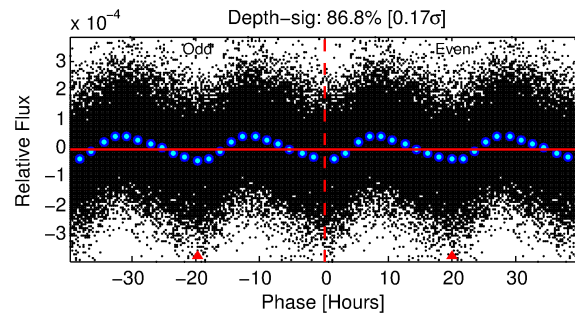
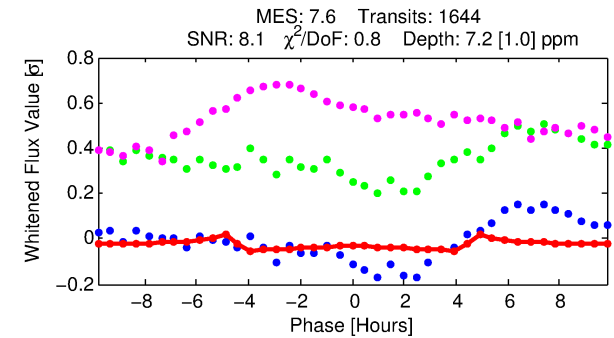
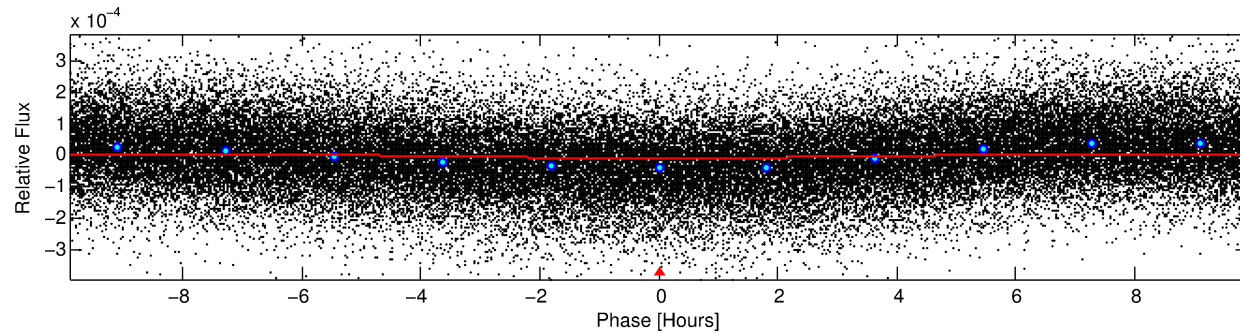
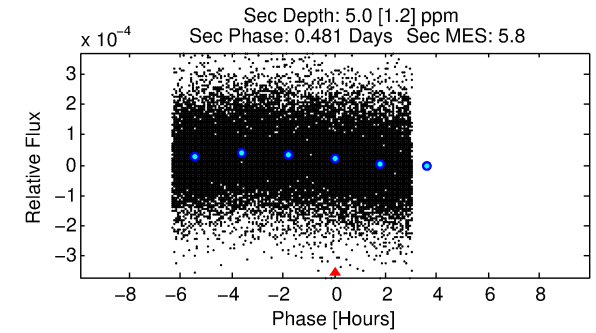
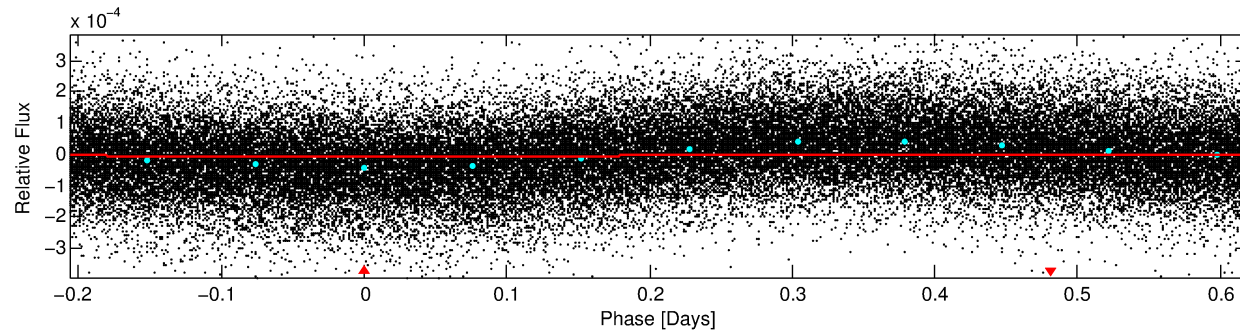
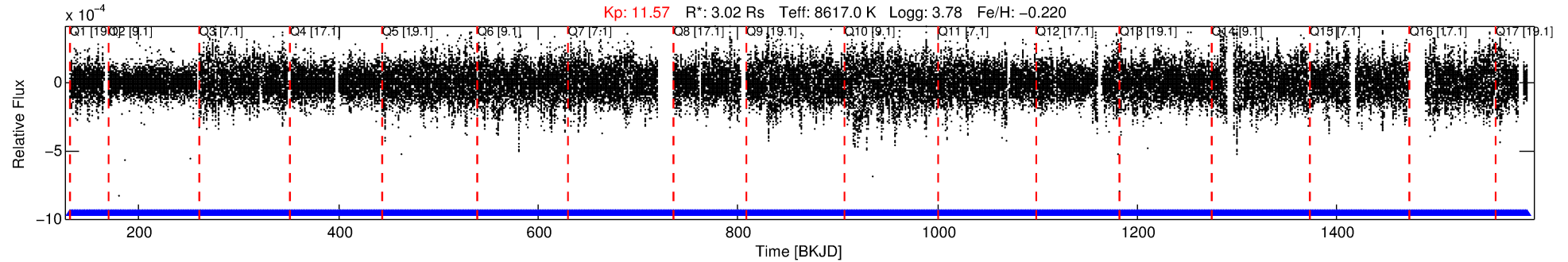
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007375997-01

No Significant Match Found

DV One-Page Summary

KIC: 7375997 Candidate: 1 of 1 Period: 0.826 d



DV Fit Results:

Period = 0.82587 [0.00002] d
Epoch = 131.7490 [0.0048] BKJD
Rp/R* = 0.0025 [0.0012]
a/R* = 1.01 [0.06]
b = 0.09 [33.16]
Seff = 95407.61 [64314.86]
Teq = 4481 [755] K
Rp = 0.82 [0.54] Re
a = 0.0217 [0.0090] AU
Ag = 1.91 [2.26] [0.40σ]
Teffp = 8144 [2040] K [1.68σ]

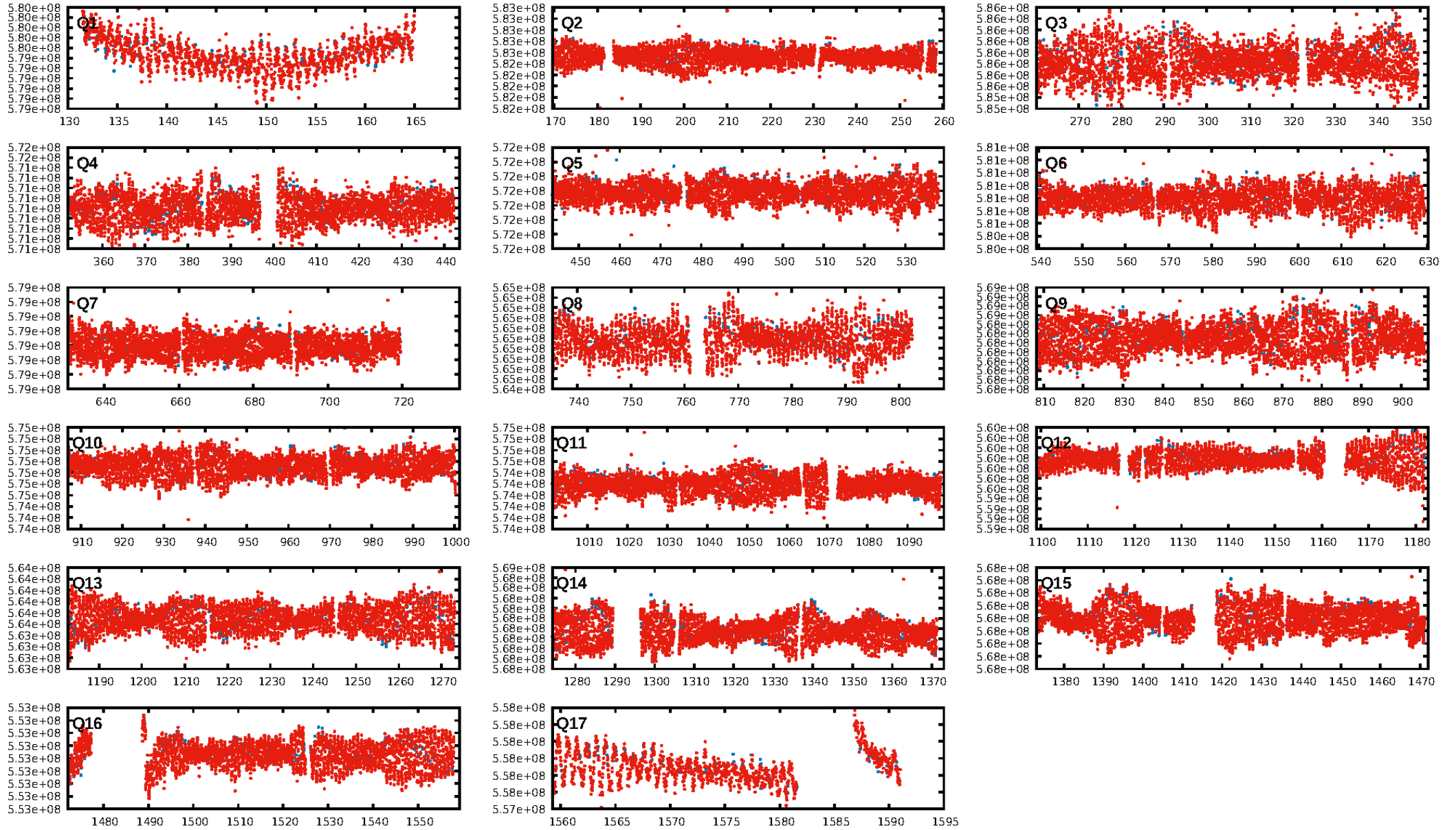
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1570/1570]
GhostDiagnostic-chr: 11.94
Centroid-sig: 5.0%
Centroid-so: 0.850 arcsec [1.30σ]
OotOffset-rm: 3.630 arcsec [1.58σ]
OotOffset-st: 0/3/0/1 [4]
KicOffset-rm: 3.483 arcsec [1.17σ]
KicOffset-st: 0/3/0/1 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 1.00 [17/17]

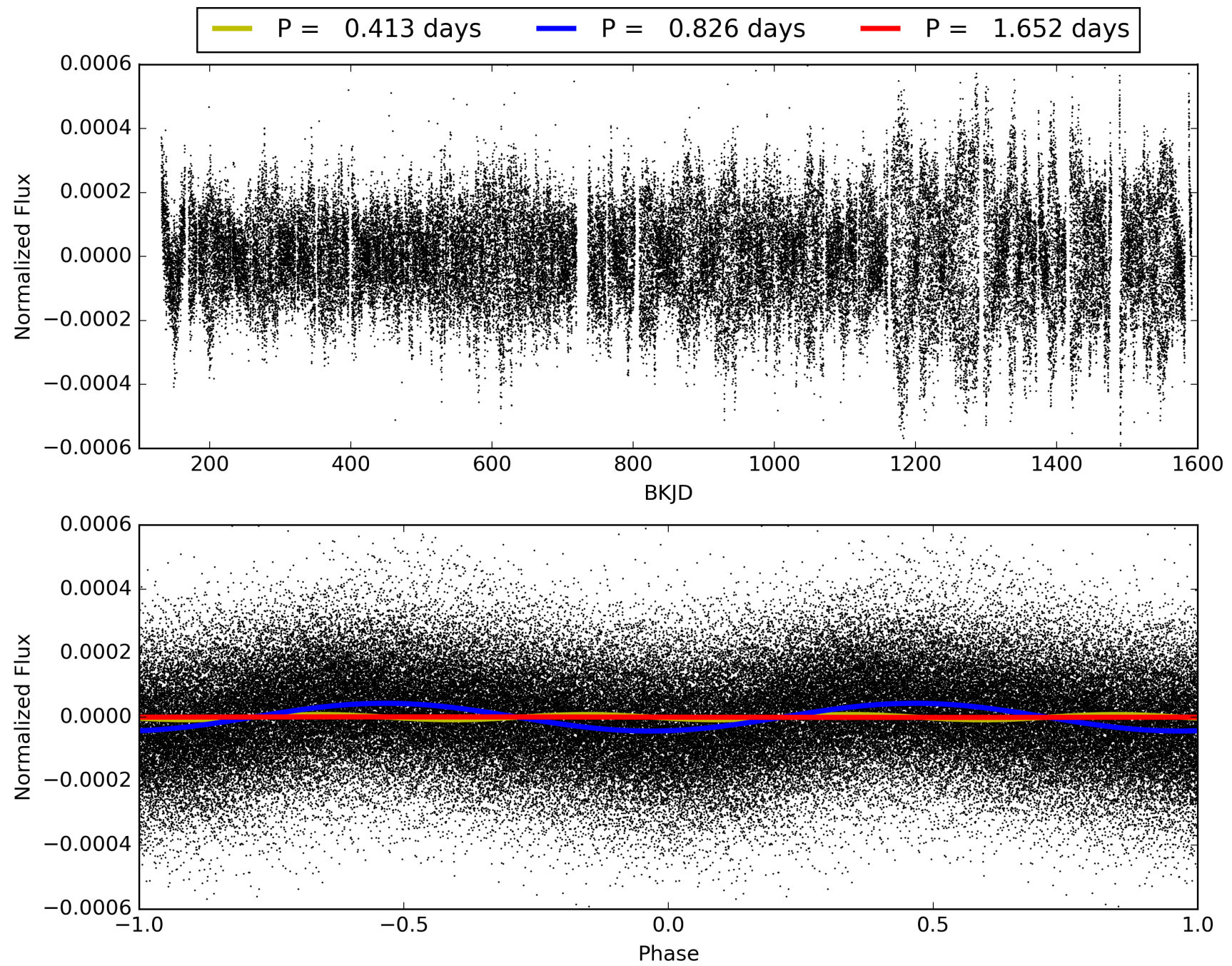
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 18:47:48 Z

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

TCE 007375997-01, PDC Light Curves

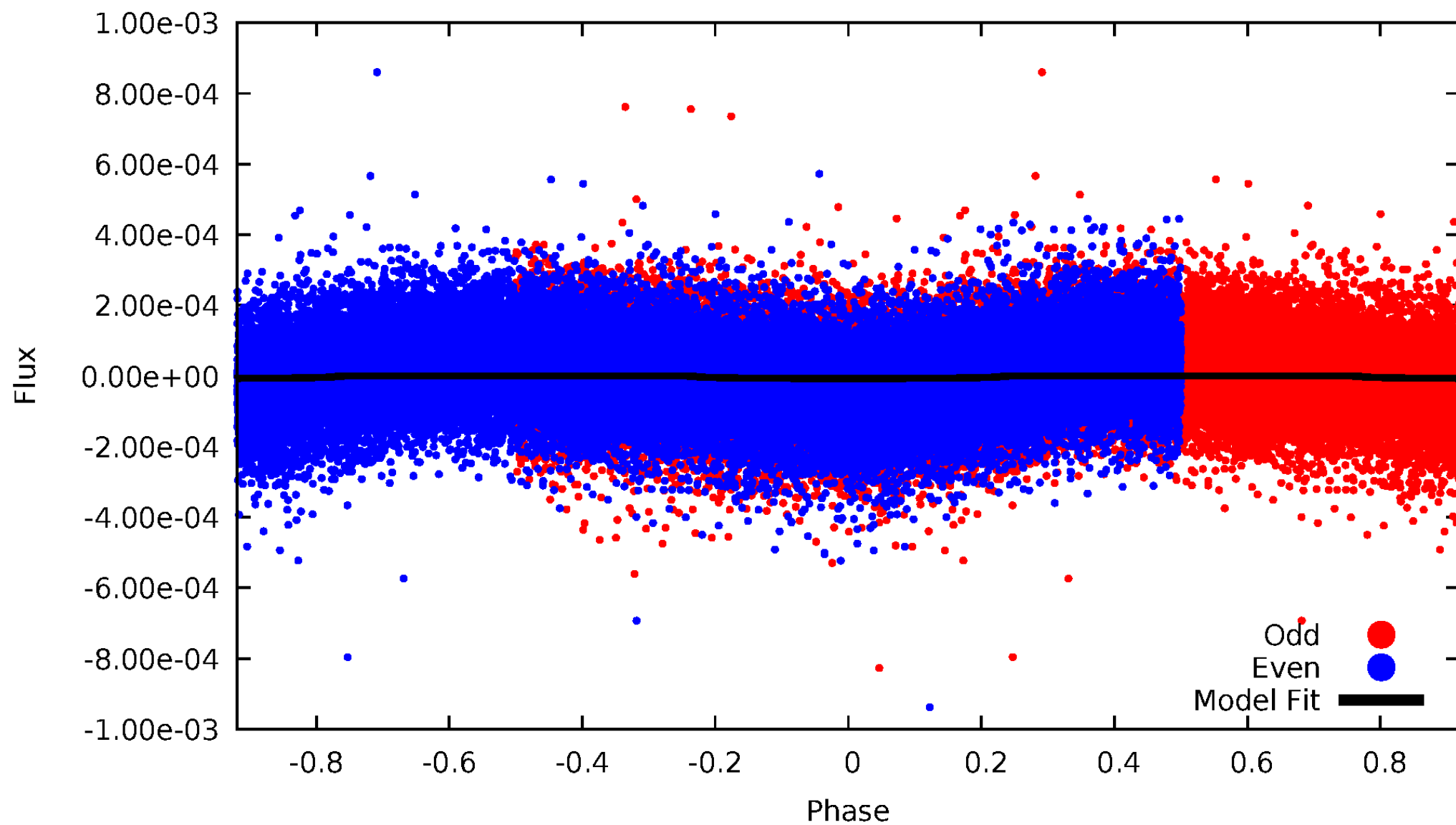


TCE 007375997-01



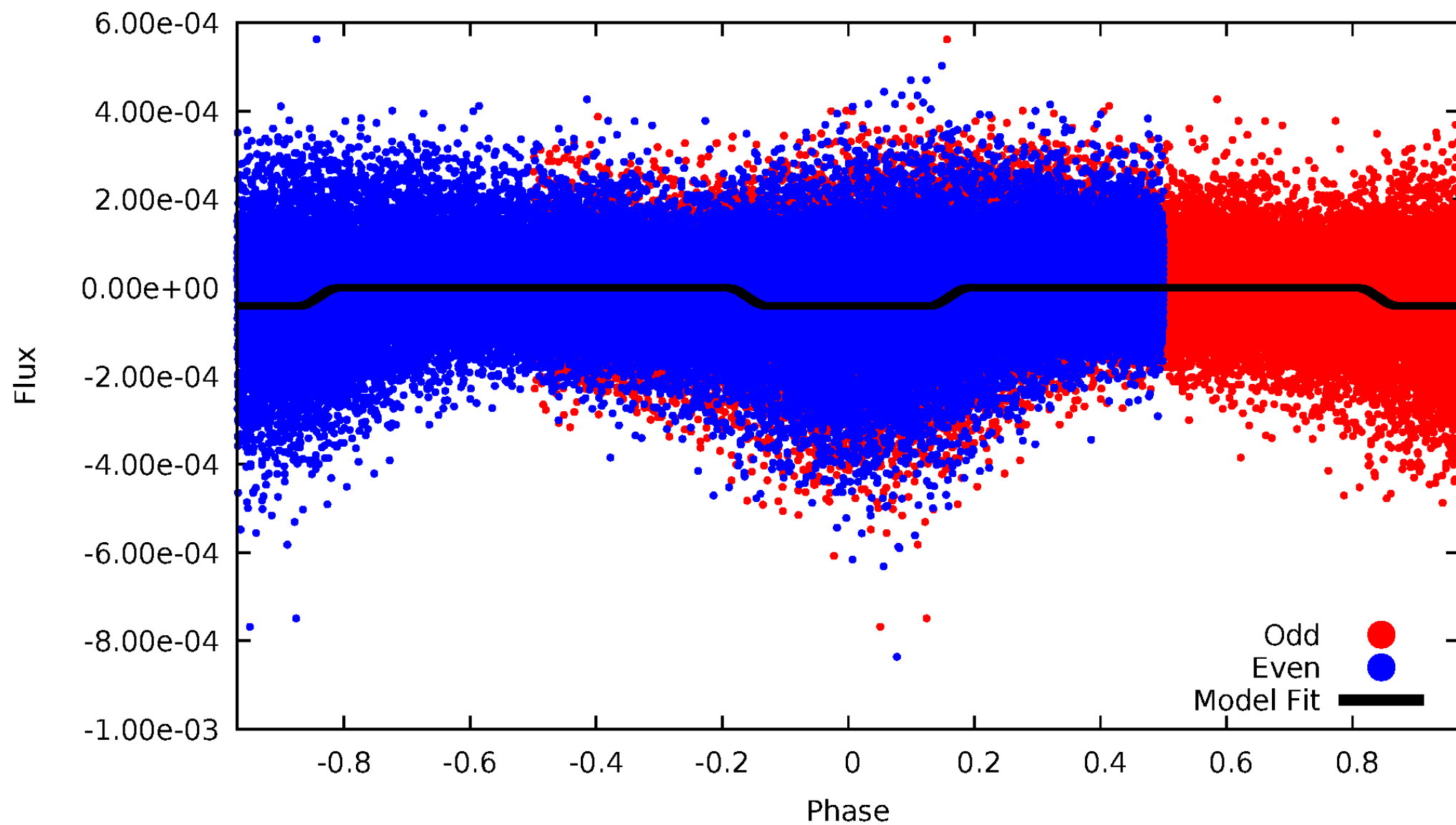
DV Odd/Even

TCE 007375997-01



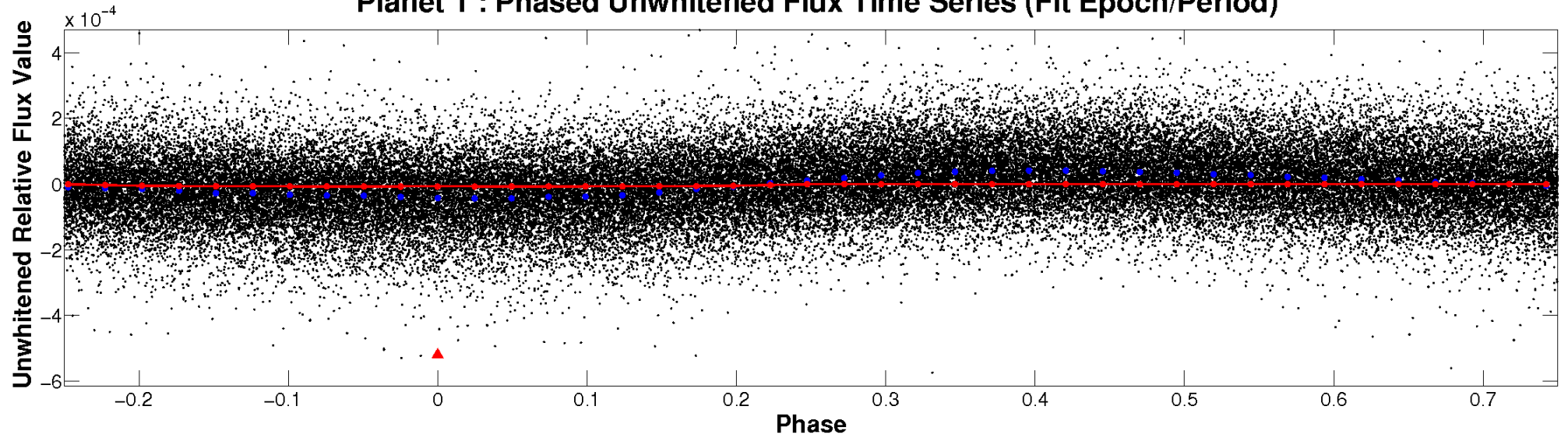
ALT Odd/Even

TCE 007375997-01

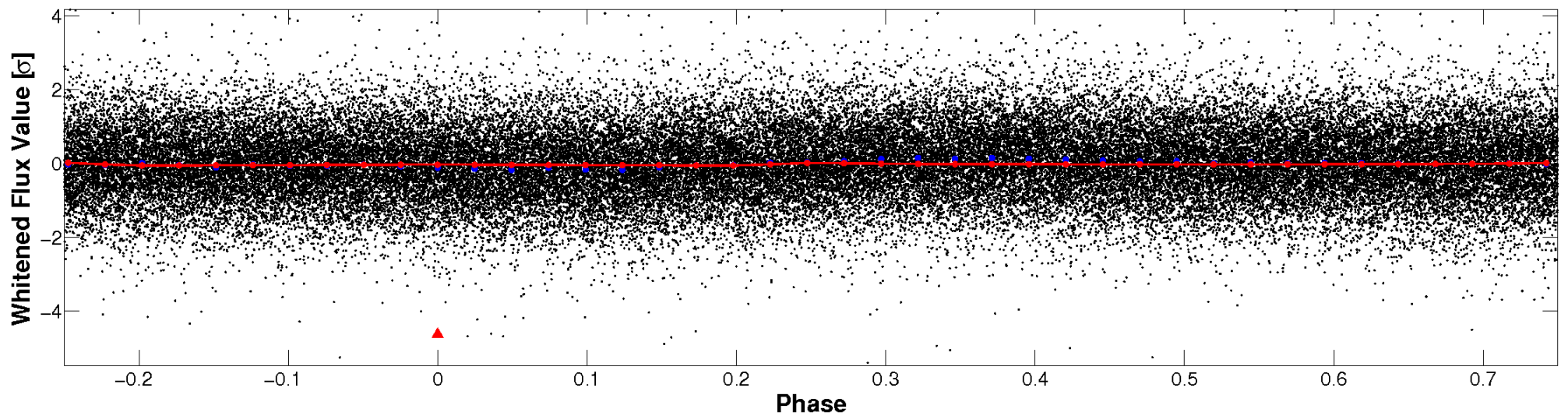


Non-Whitened Vs. Whitened Light Curve

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

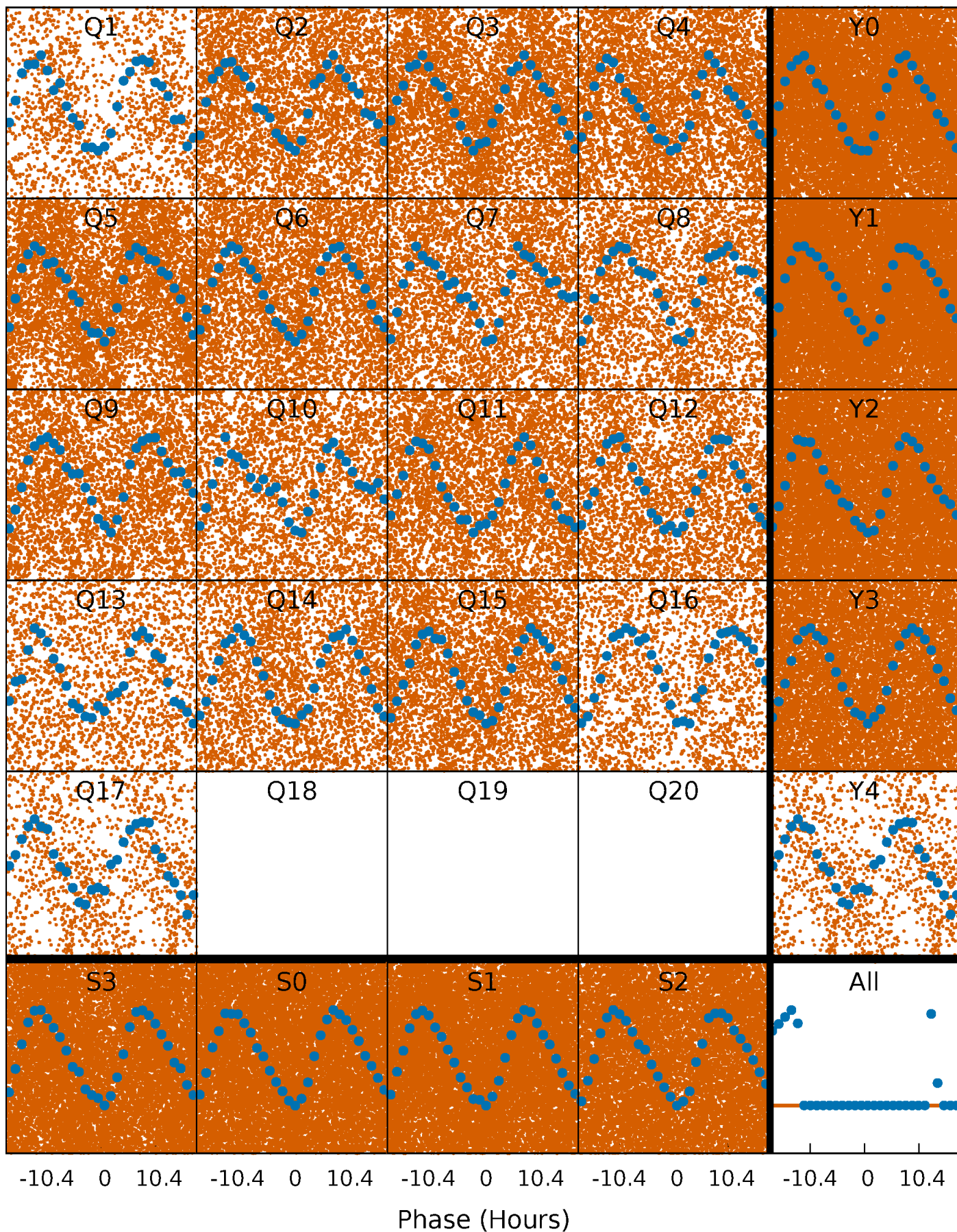


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



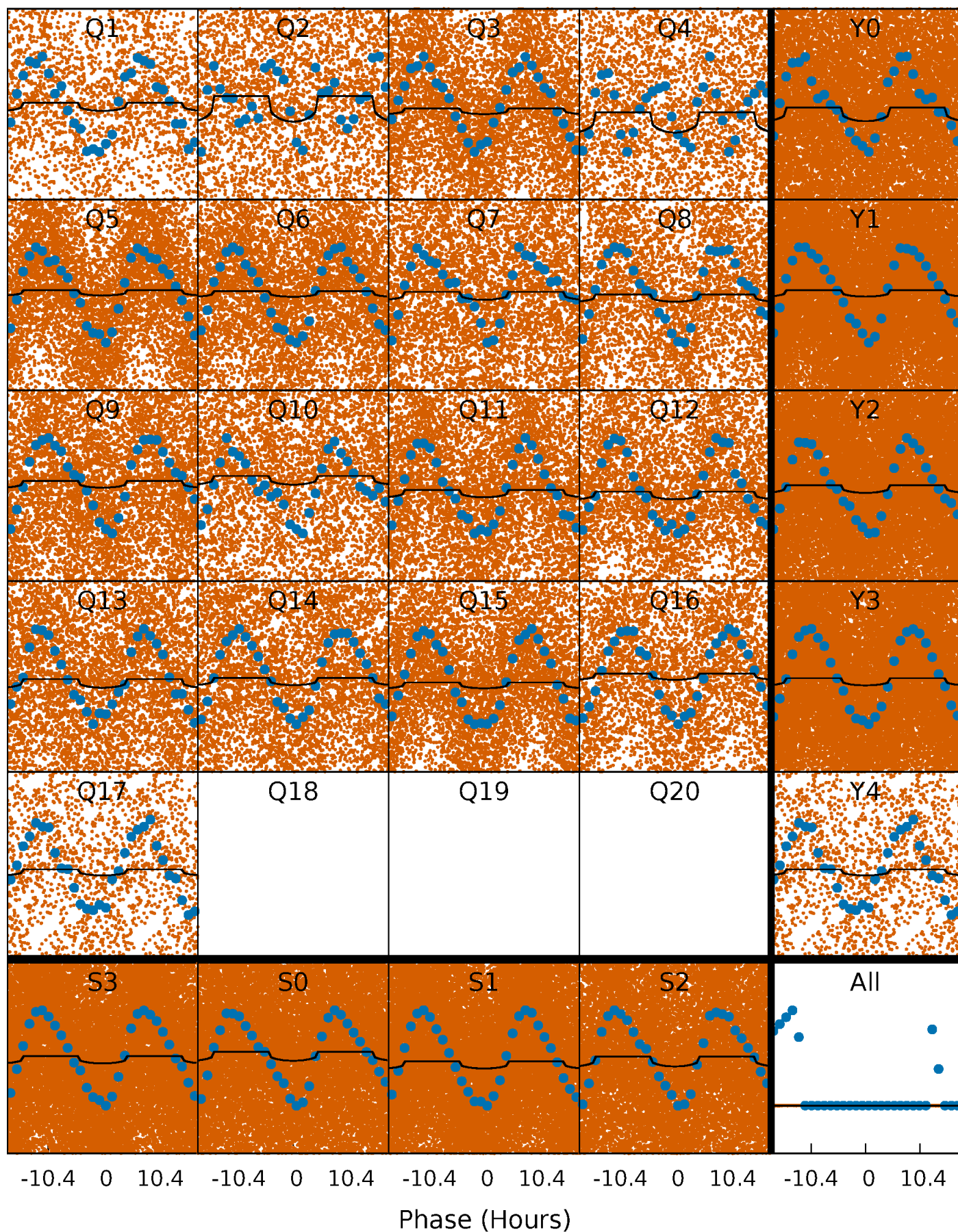
PDC Quarter-Phased Transit Curves

TCE 007375997-01 P= 0.825869 Days $T_0=131.748953$ (BKJD)



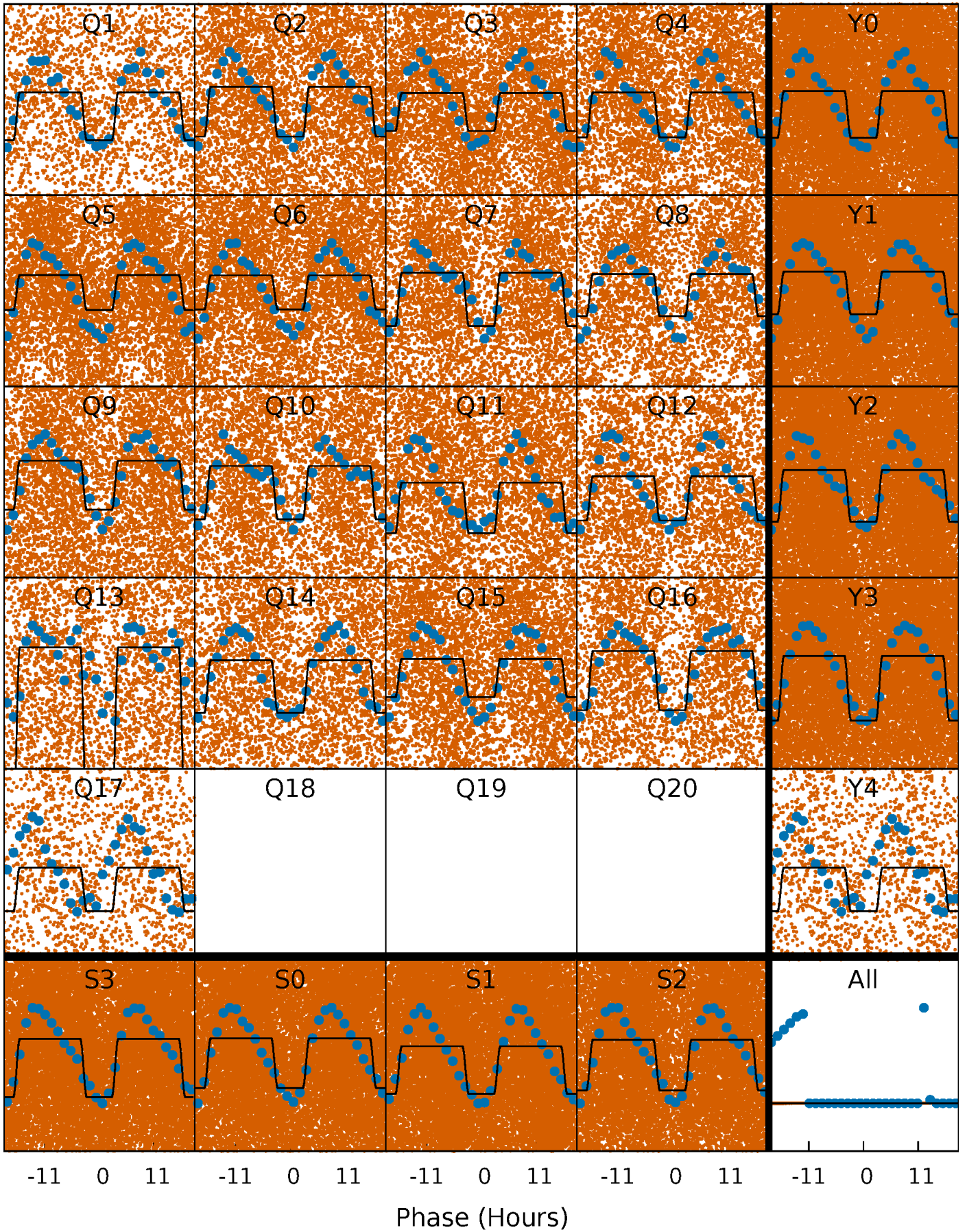
DV Quarter-Phased Transit Curves

TCE 007375997-01 P= 0.825869 Days $T_0=131.748953$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

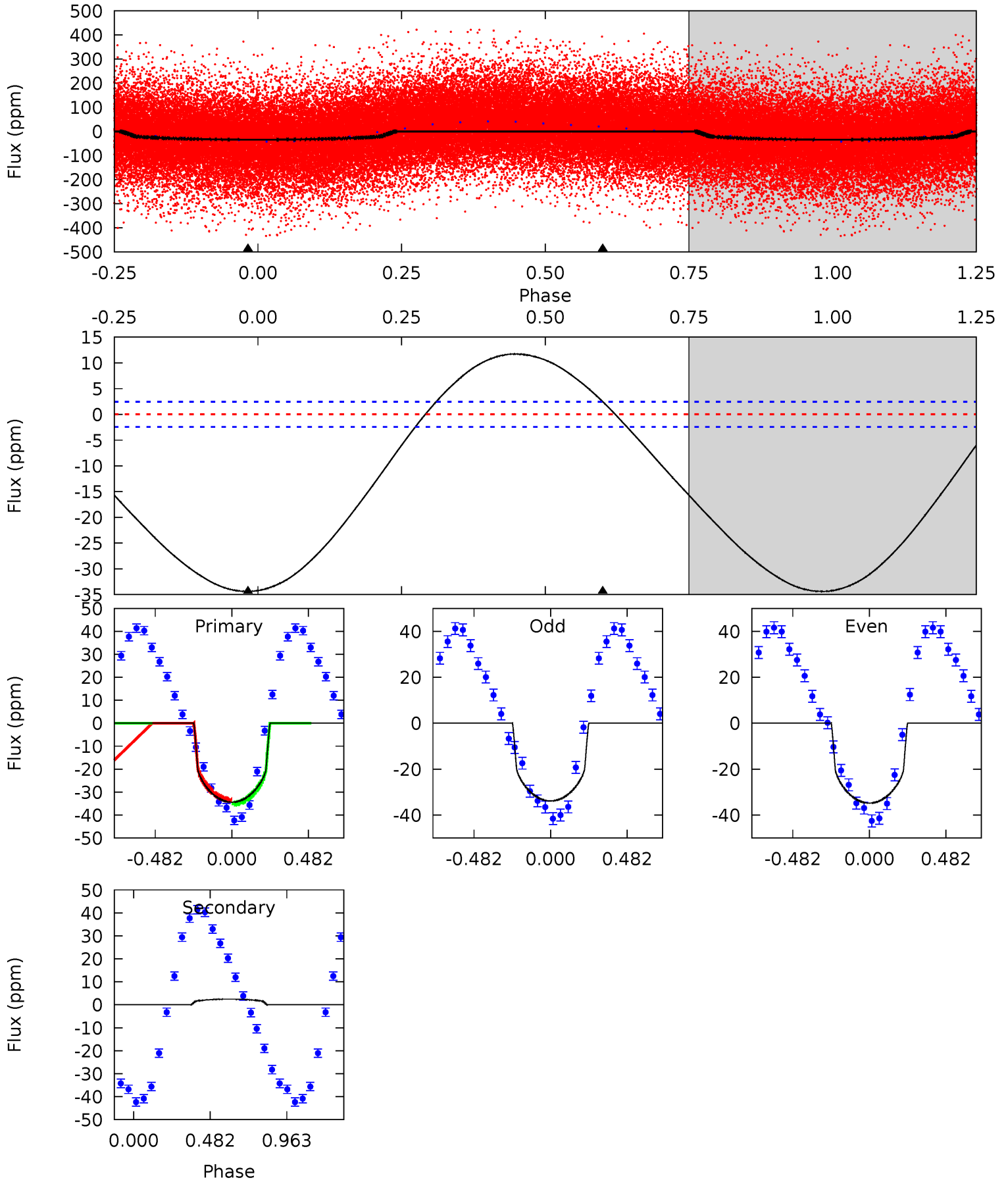
TCE 007375997-01 P= 0.825906 Days $T_0=131.743374$ (BKJD)



DV Model-Shift Uniqueness Test

007375997-01, $P = 0.825869$ Days, $E = 130.923084$ Days

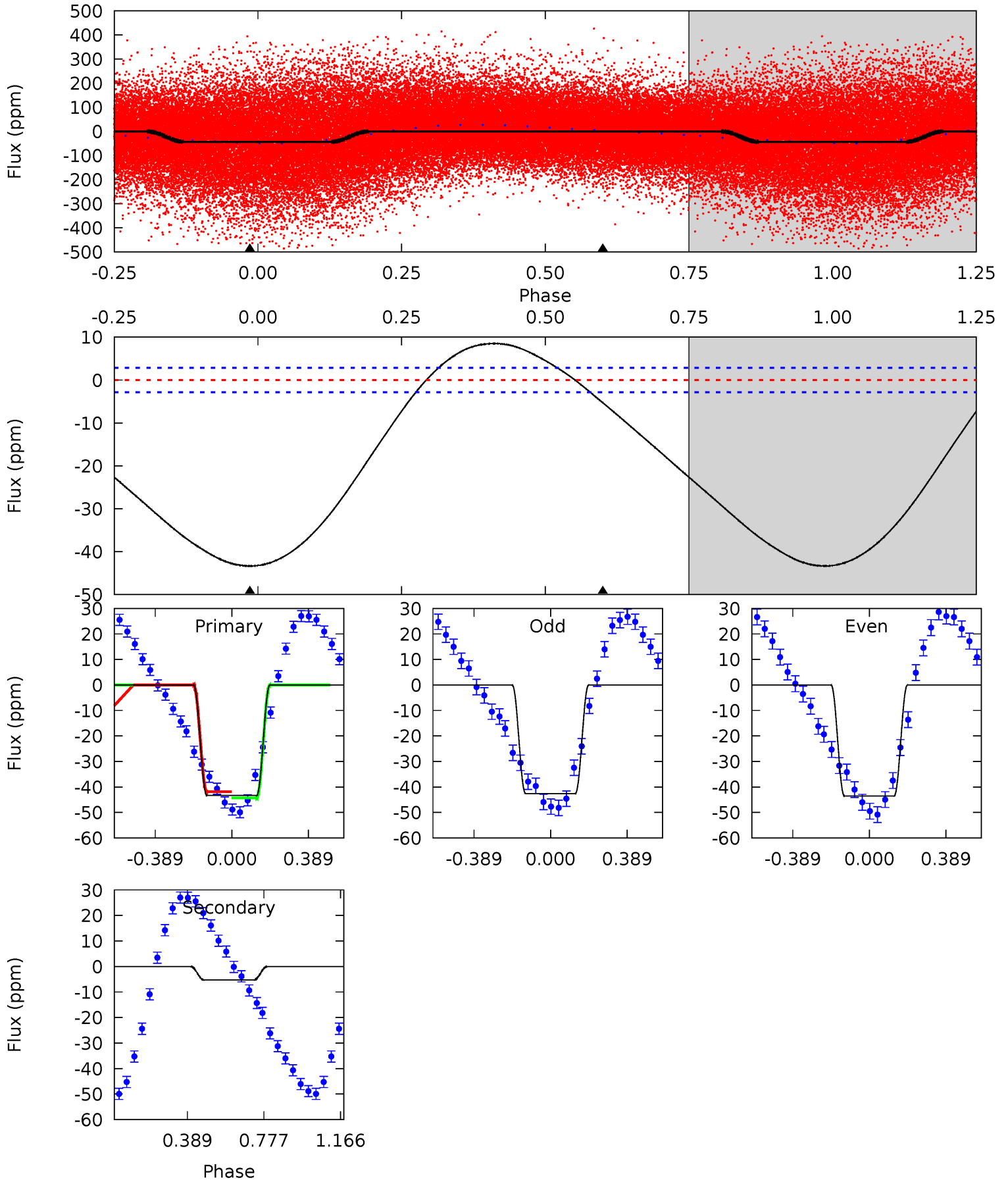
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
59.5	-4.26	0	0	4.22	0.70	6.84	59.5	59.5	-4.26	-4.26	0.81	1.25	0.25	1.44



Alt Model-Shift Uniqueness Test

007375997-01, P = 0.825906 Days, E = 130.917468 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
65.0	7.92	0	0	4.27	0.86	6.37	65.0	65.0	7.92	7.92	0.72	1.05	0.16	1.92



Stellar Parameters For KIC 007375997

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	ρ_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	8617^{+237}_{-373}	$3.780^{+0.378}_{-0.135}$	$-0.220^{+0.400}_{-0.350}$	$3.018^{+1.006}_{-1.341}$	$2.002^{+0.438}_{-0.438}$	$0.102^{+0.349}_{-0.049}$
	+3%/-4%	+10%/-4%	+182%/-159%	+33%/-44%	+22%/-22%	+340%/-48%
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 007375997-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	2 ± 1	$0.74^{+0.45}_{-0.33}$	6086^{+520}_{-667}	-6953^{+1017}_{-2984}	$-1.116^{+0.685}_{-2.752}$
Alt.	-5 ± 1	$1.99^{+0.55}_{-0.55}$	6025^{+549}_{-607}	3566^{+1090}_{-7520}	$0.357^{+0.294}_{-0.139}$

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 $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

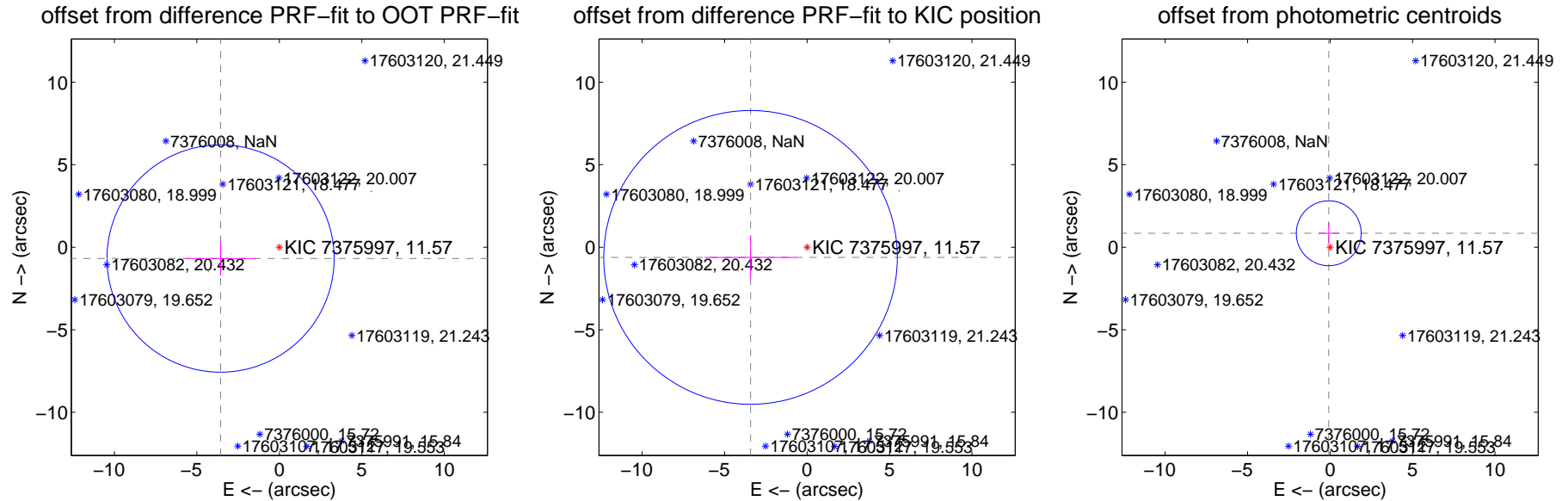
DV Centroid Data

Supplemental centroid analysis for 007375997-01. **Kepler magnitude: 11.57.** Transit SNR 8.14

There are 2 quarters with good PRF difference image offsets

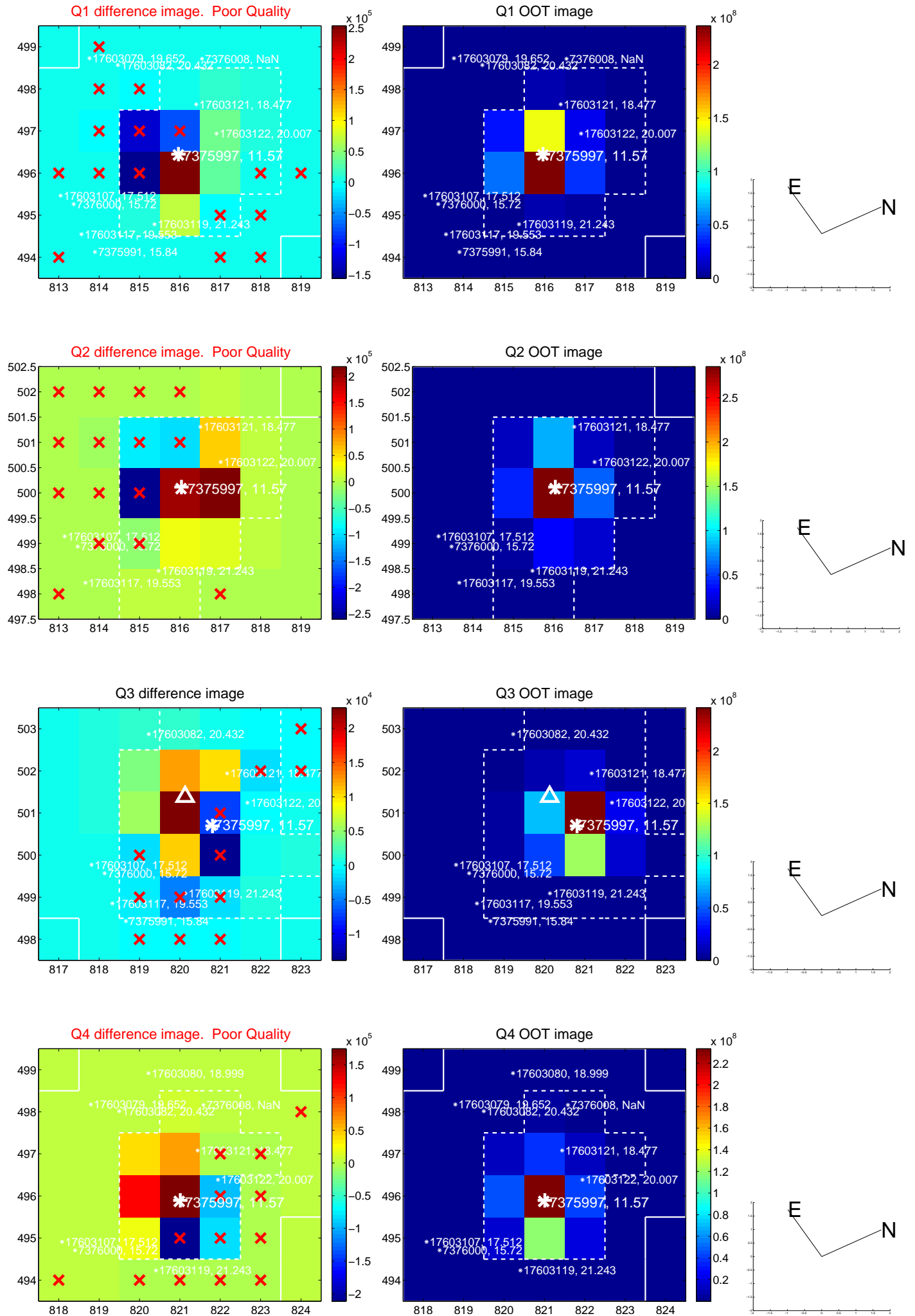
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.630 ± 2.296	1.58	3.565 ± 2.137	-0.685 ± 1.048
PRF-fit source offset from KIC position	3.483 ± 2.967	1.17	3.428 ± 2.778	-0.618 ± 1.319
photometric centroid source offset	0.85 ± 0.66	1.30	0.08 ± 0.62	0.85 ± 0.66

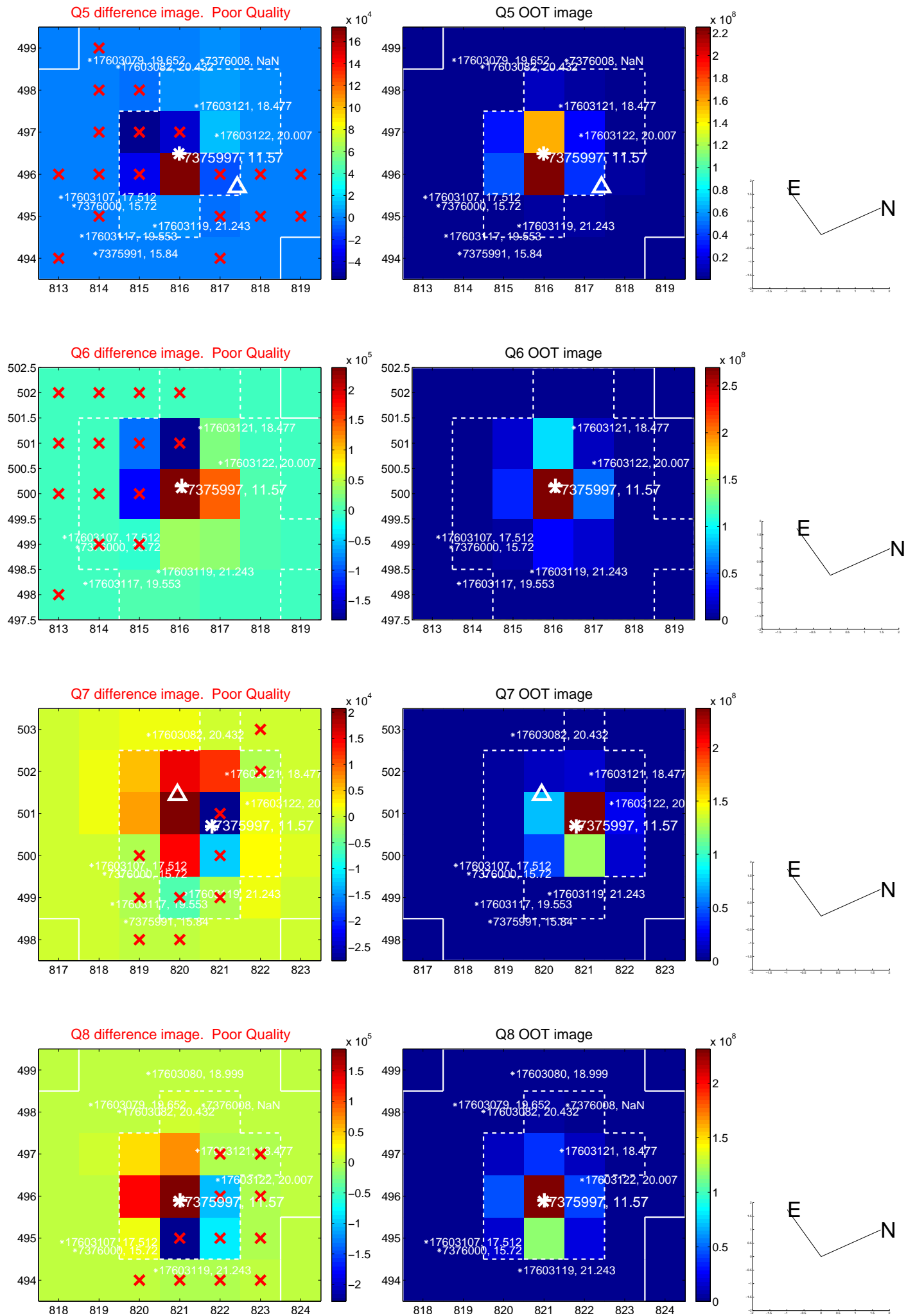


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

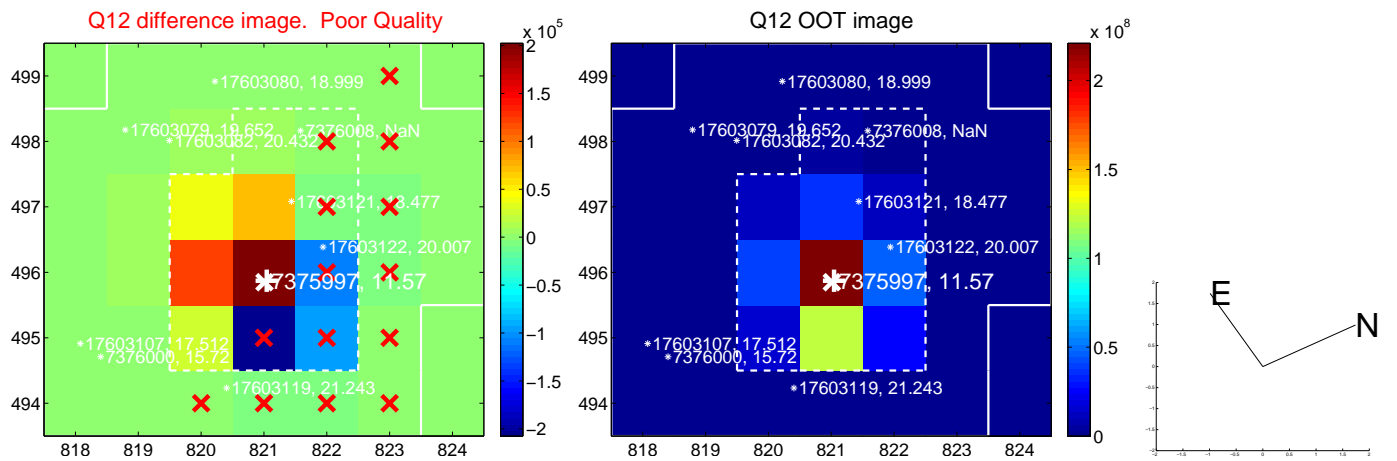
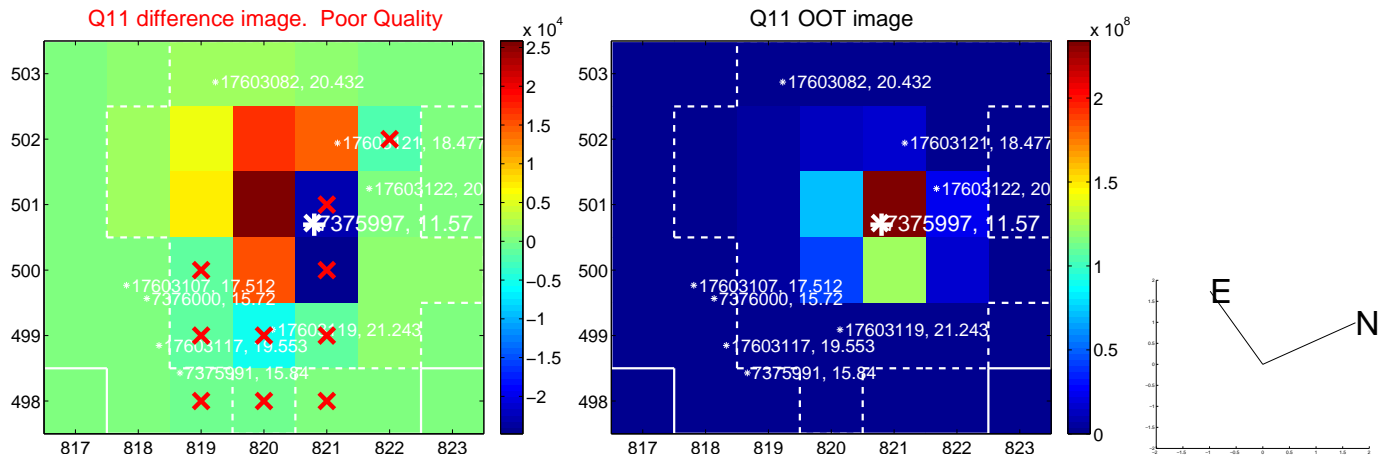
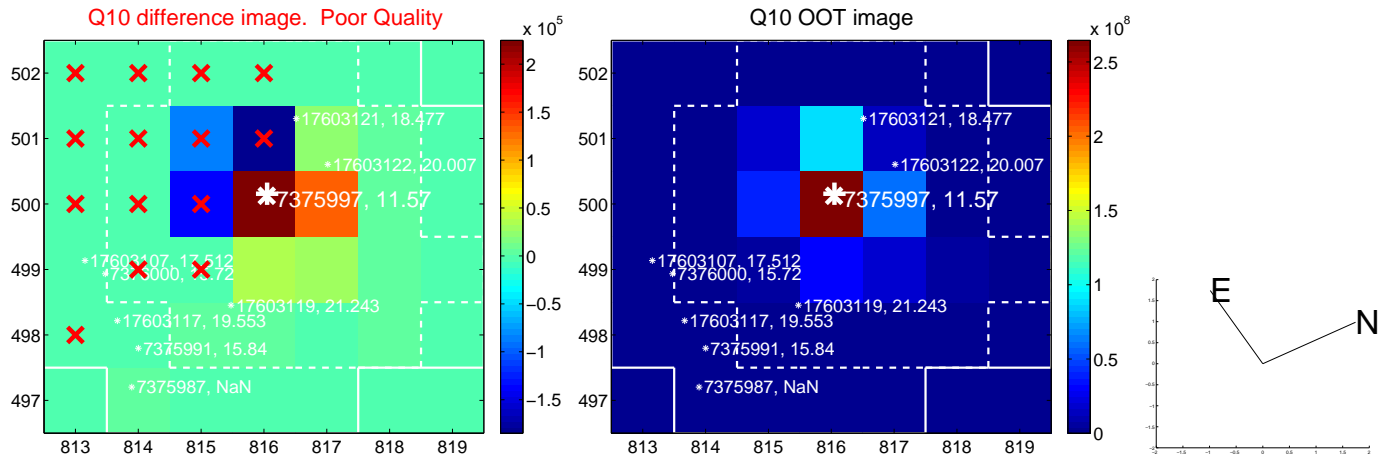
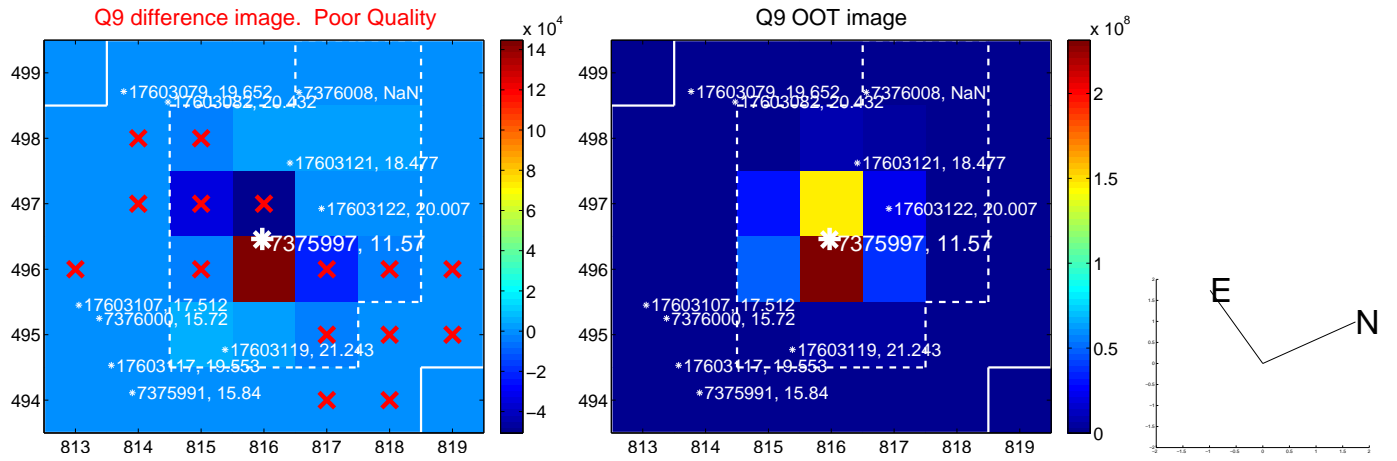
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



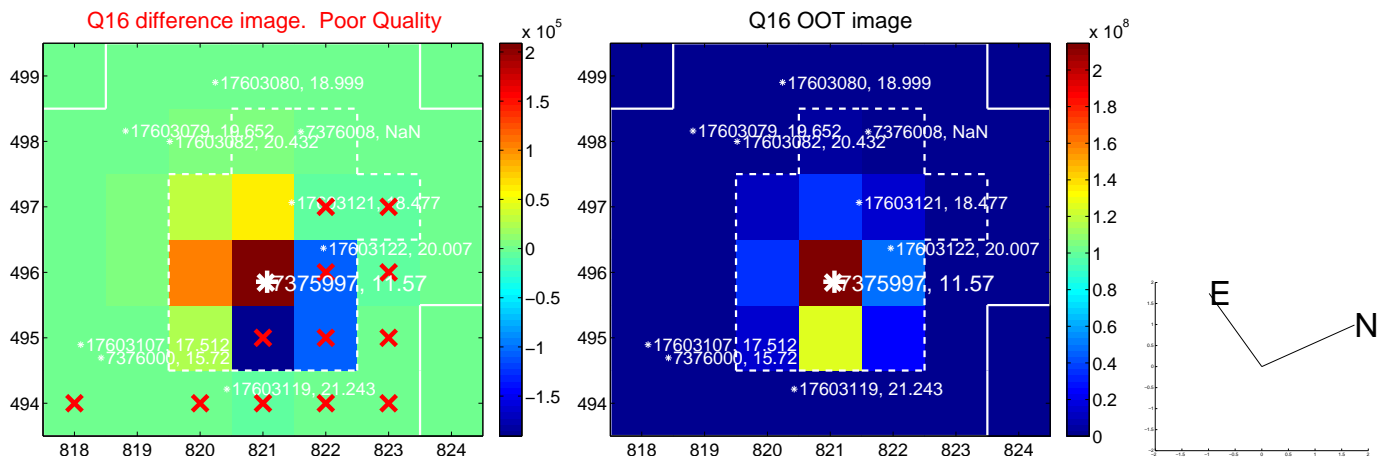
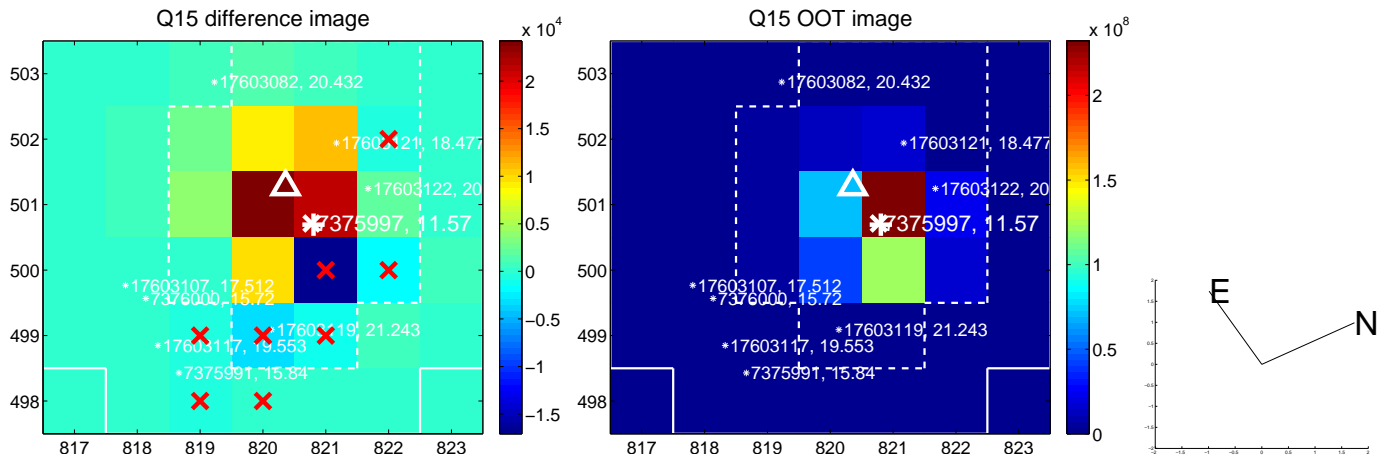
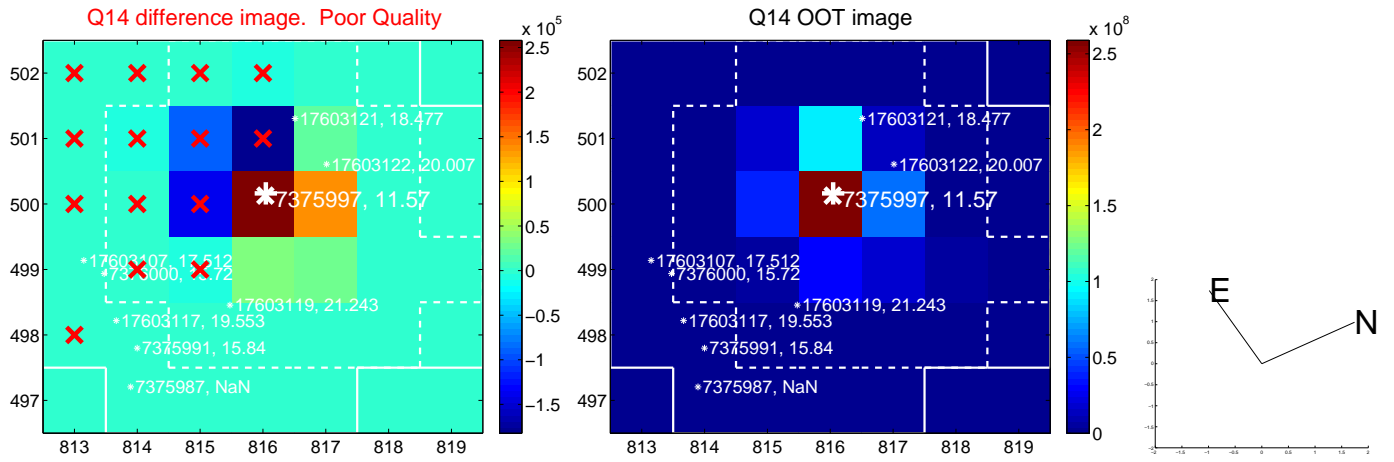
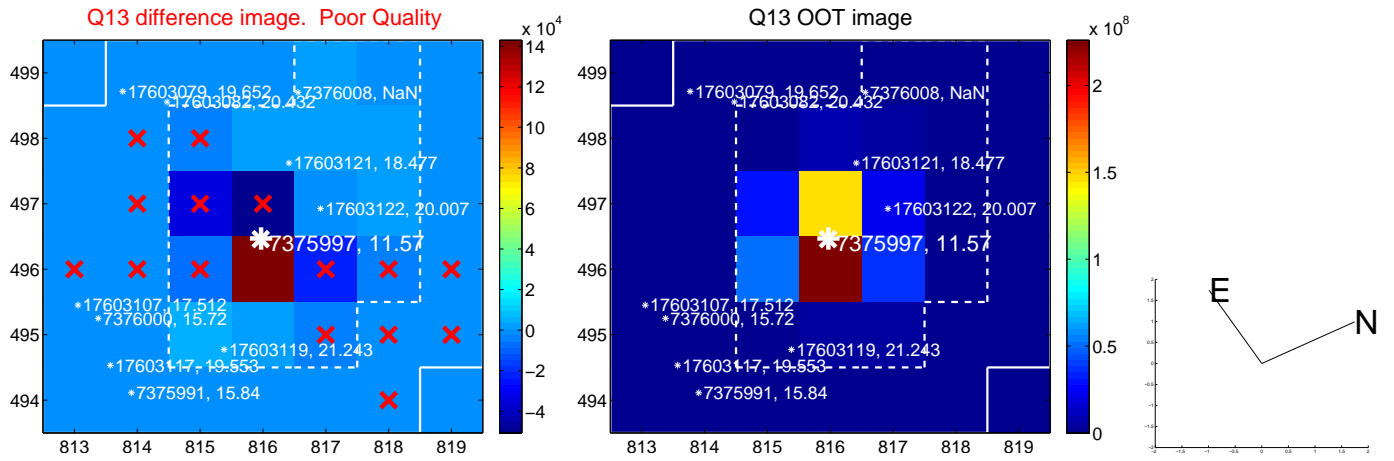
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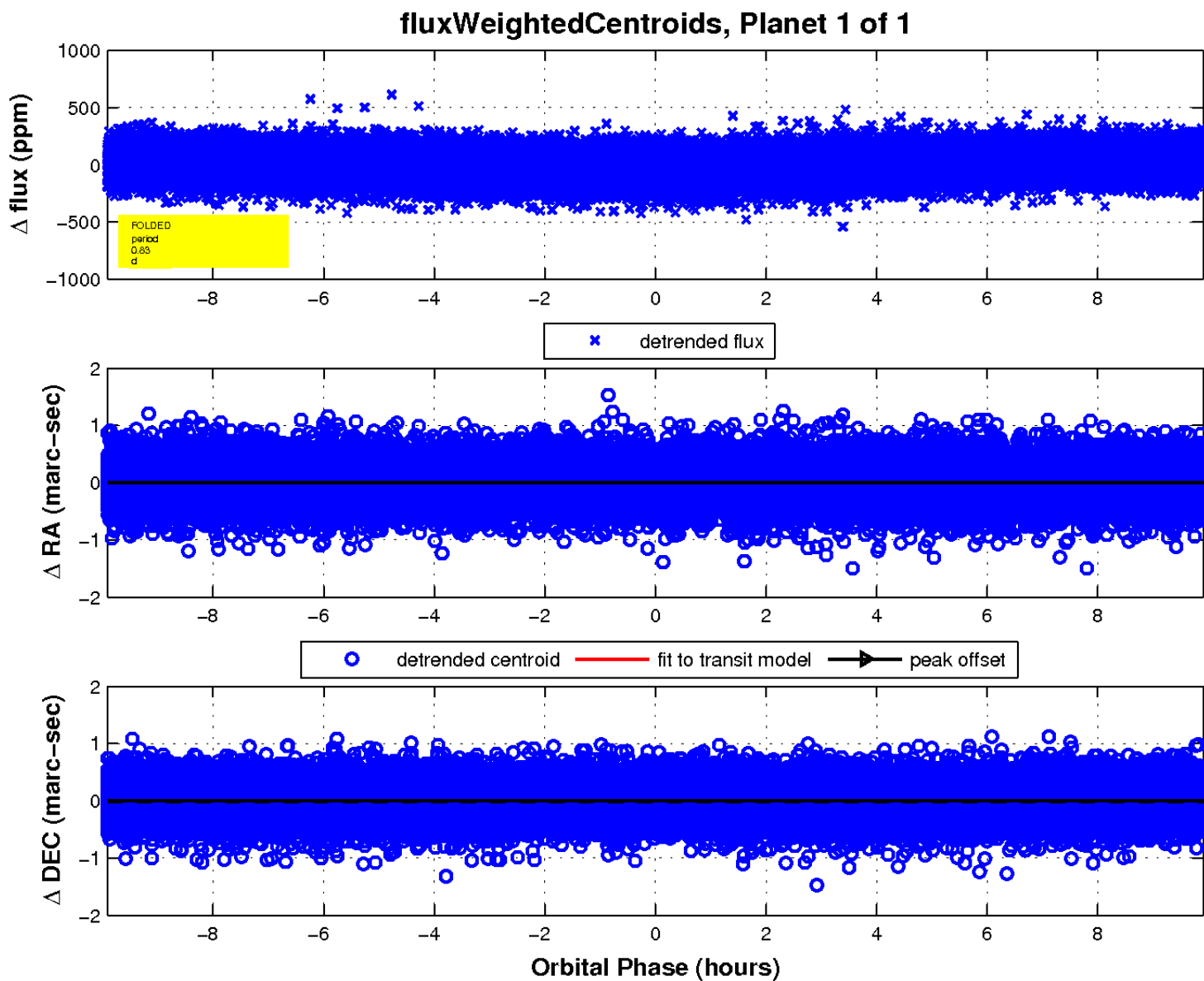
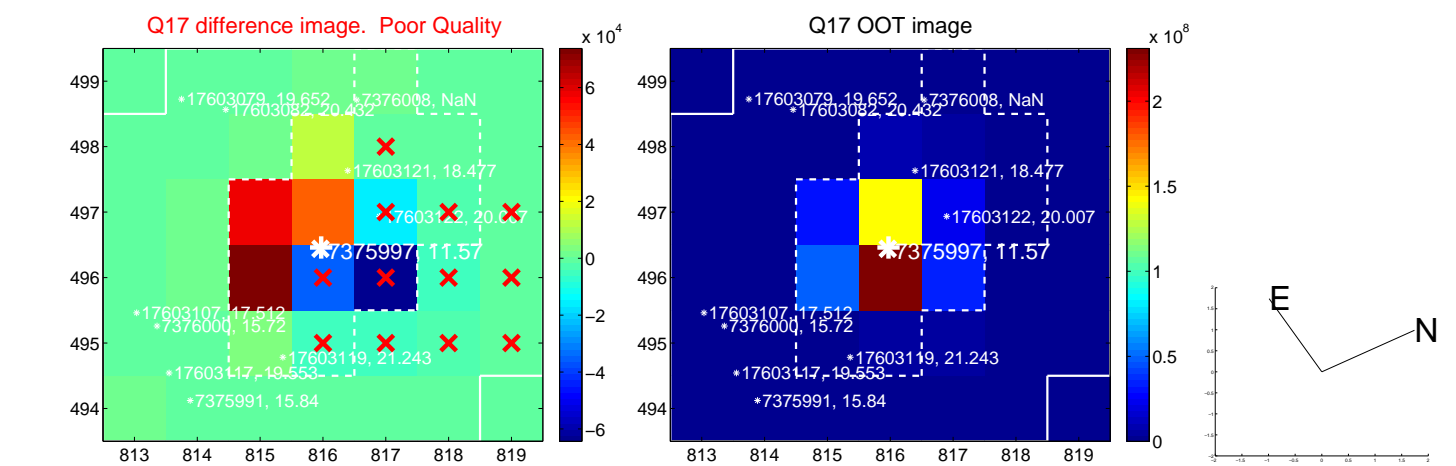
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UKIRT Image

Declination

