

KIC 004386947

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})
004386947-01	OBS	No	0.641478	131.963085	133.4	2.155	9.2	6.2	0.94	5681	1.30	4061.55

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004386947-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT

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

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

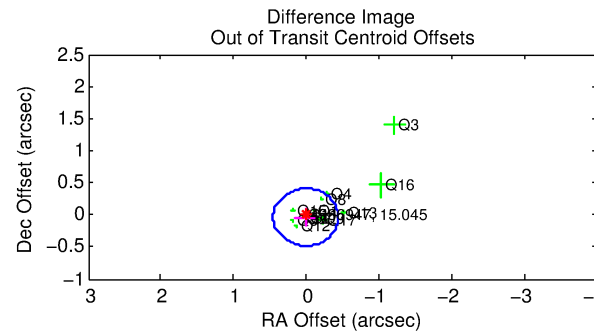
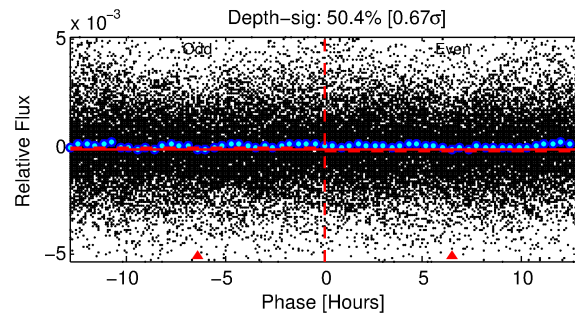
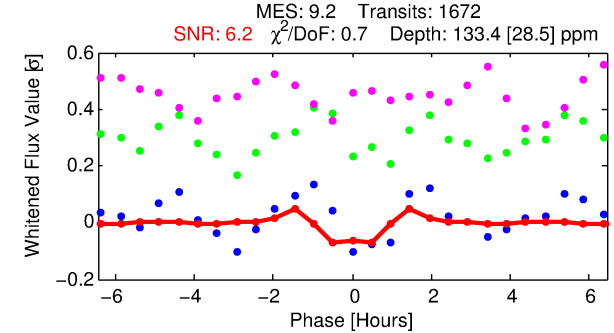
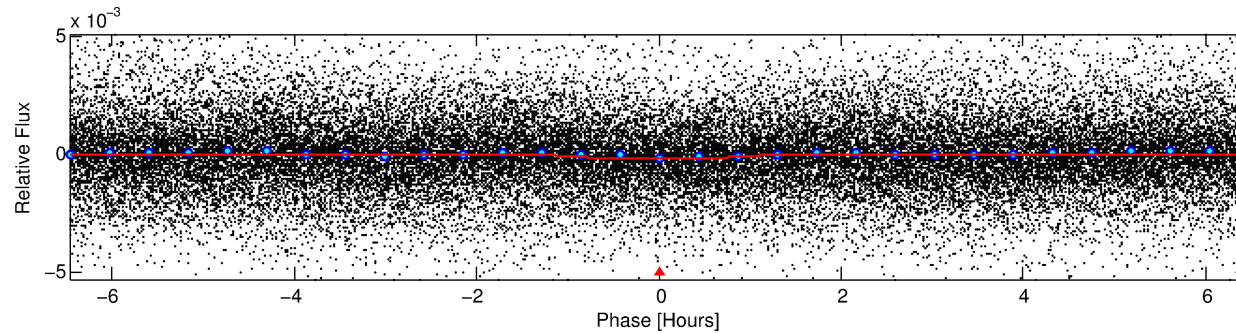
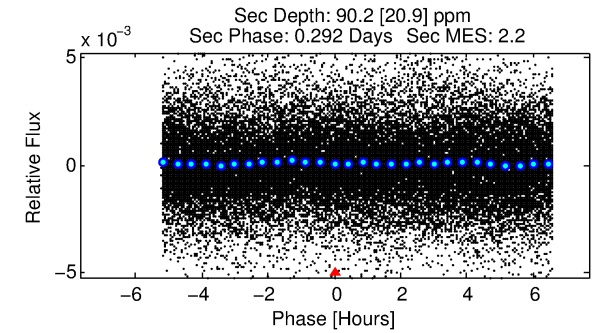
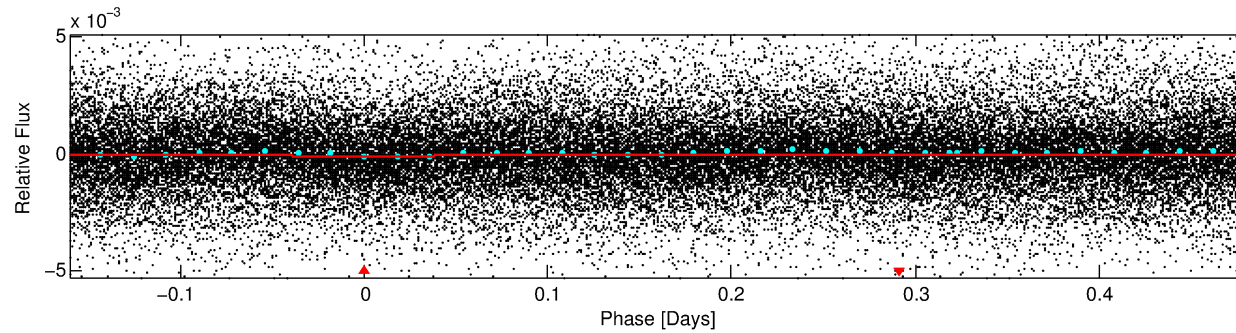
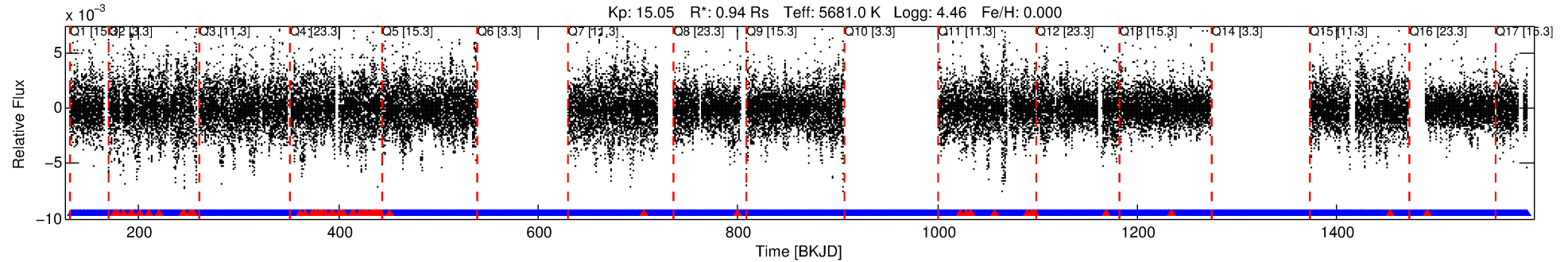
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004386947-01

No Significant Match Found

DV One-Page Summary

KIC: 4386947 Candidate: 1 of 1 Period: 0.641 d



DV Fit Results:

Period = 0.64148 [0.00002] d
Epoch = 131.9631 [0.0023] BKJD
Rp/R* = 0.0126 [0.0071]
a/R* = 1.42 [1.84]
b = 0.90 [0.57]
Seff = 4061.55 [1467.66]
Teq = 2036 [184] K
Rp = 1.30 [0.81] Re
a = 0.0143 [0.0033] AU
Ag = 6.03 [7.24] [0.69σ]
Teffp = 4933 [1427] K [2.01σ]

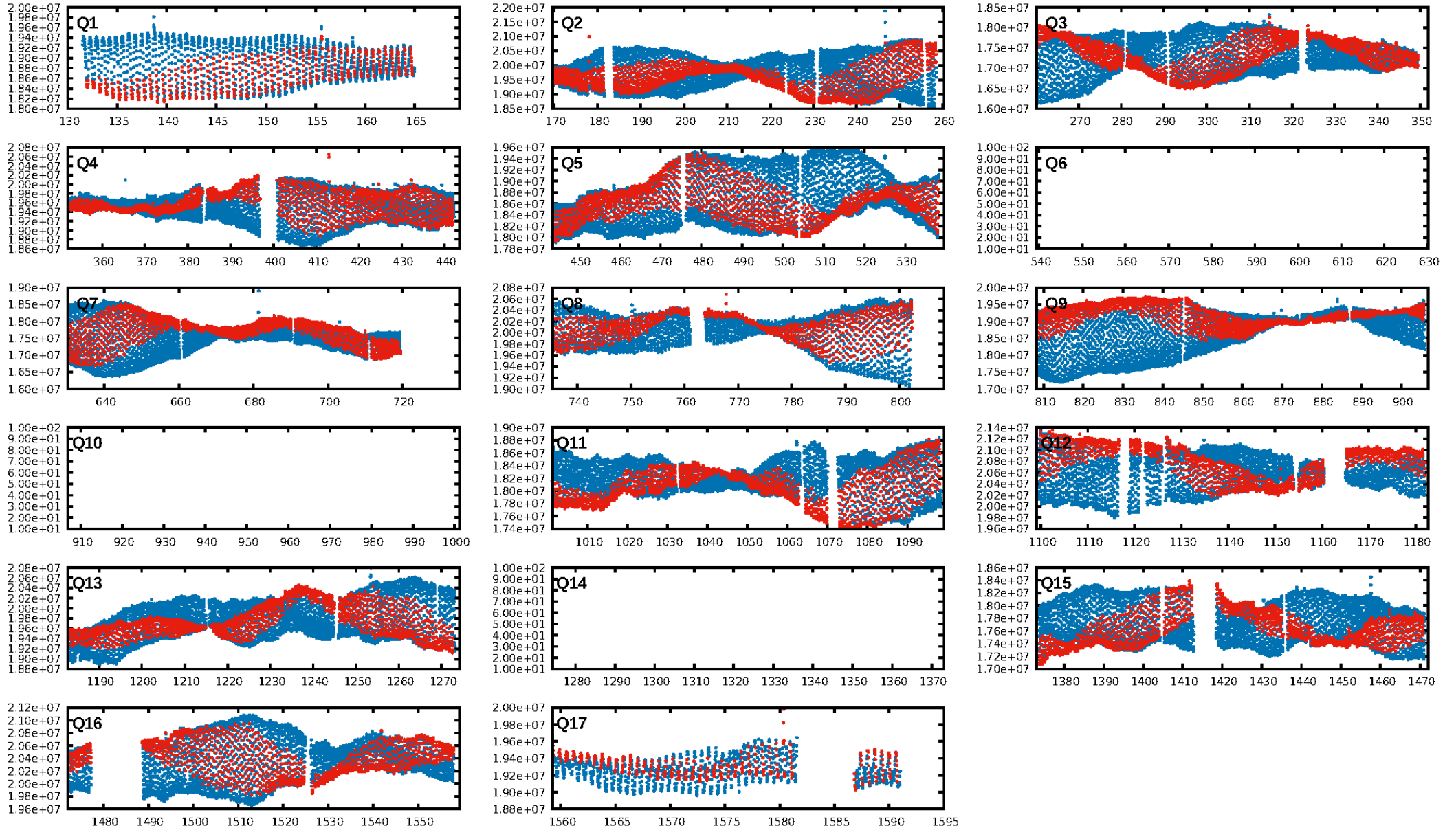
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: 1.38e-19
RollingBand-fgt: 0.95 [1505/1578]
GhostDiagnostic-chr: 0.7836
Centroid-sig: 6.7%
Centroid-so: 1.242 arcsec [1.66σ]
OotOffset-rm: 0.039 arcsec [0.26σ]
KicOffset-rm: 0.077 arcsec [0.95σ]
OotOffset-st: 1/4/4/5 [14]
KicOffset-st: 1/4/4/5 [14]
DiffImageQuality-fgm: 0.50 [7/14]
DiffImageOverlap-fno: 1.00 [14/14]

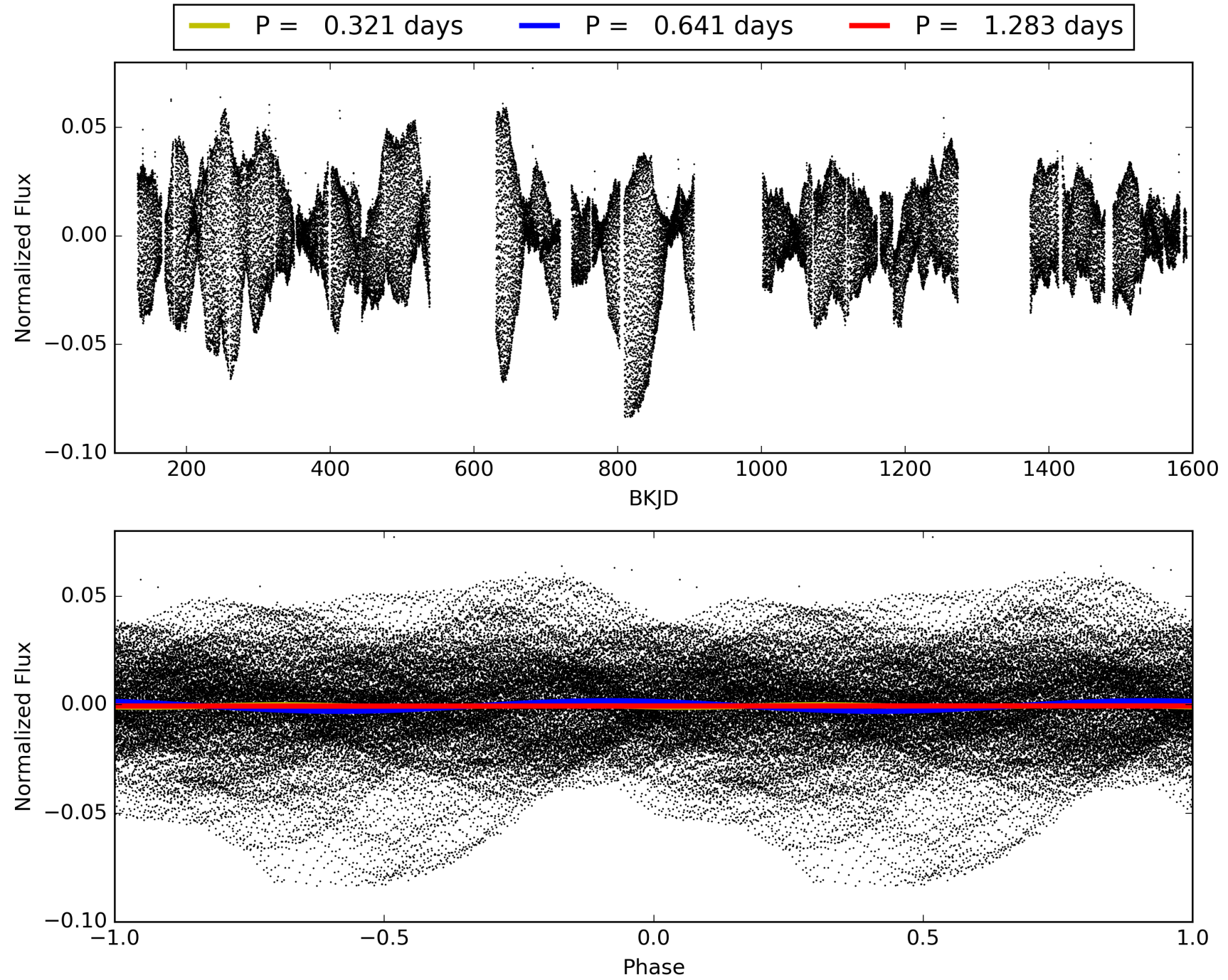
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:40:46 Z

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

TCE 004386947-01, PDC Light Curves

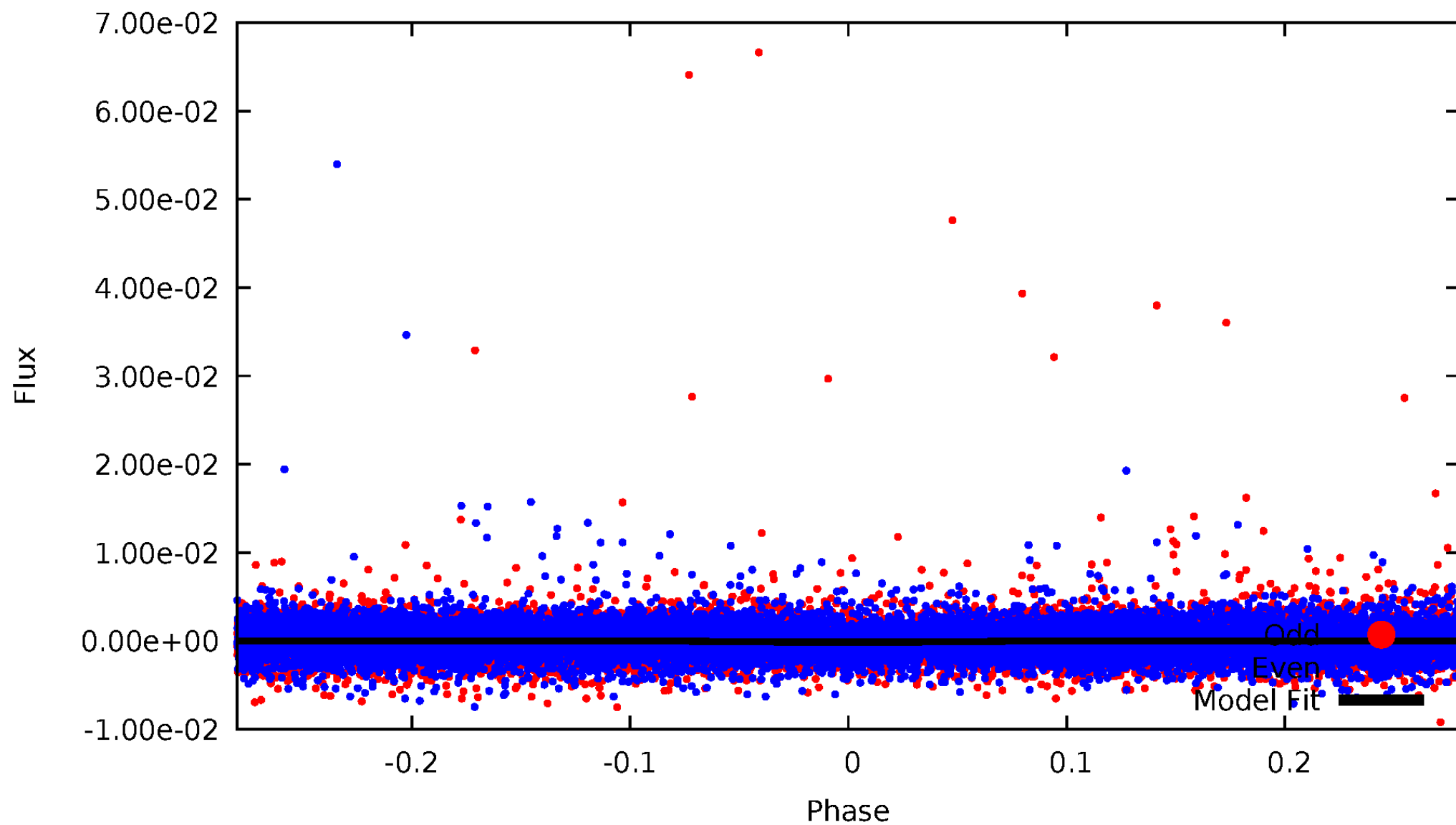


TCE 004386947-01



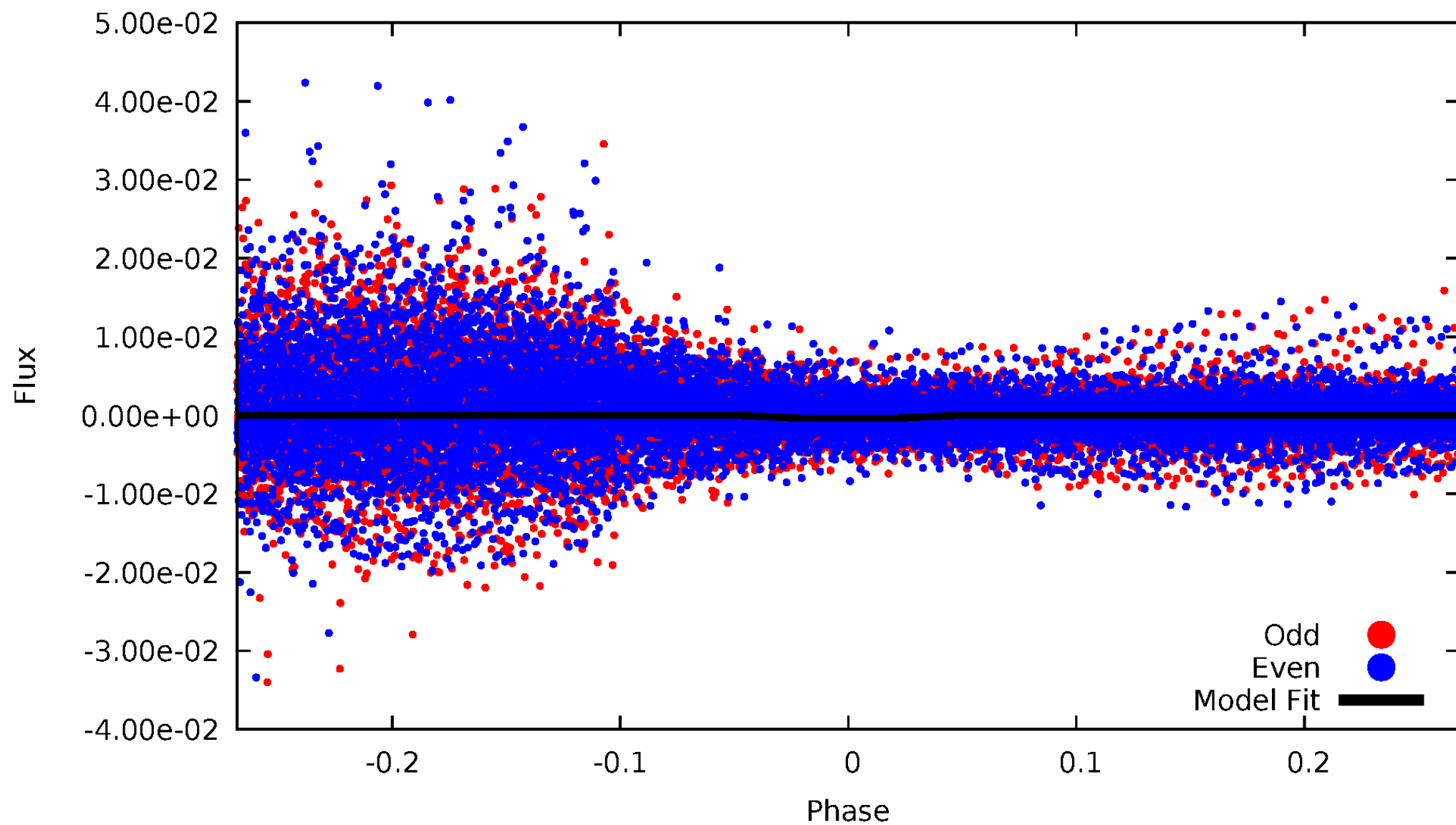
DV Odd/Even

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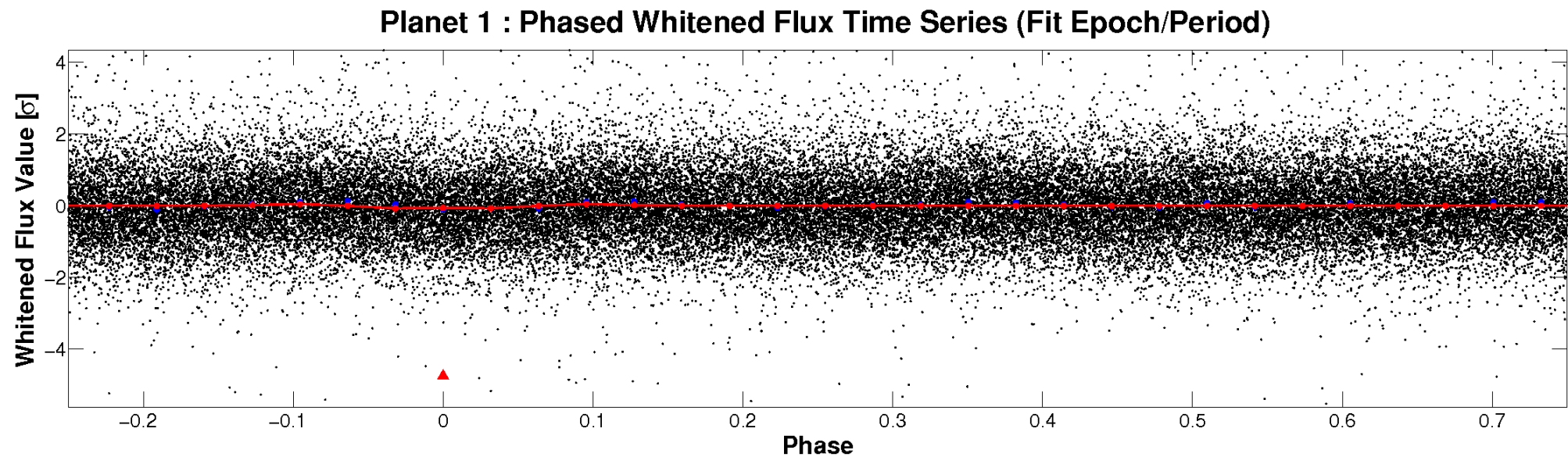
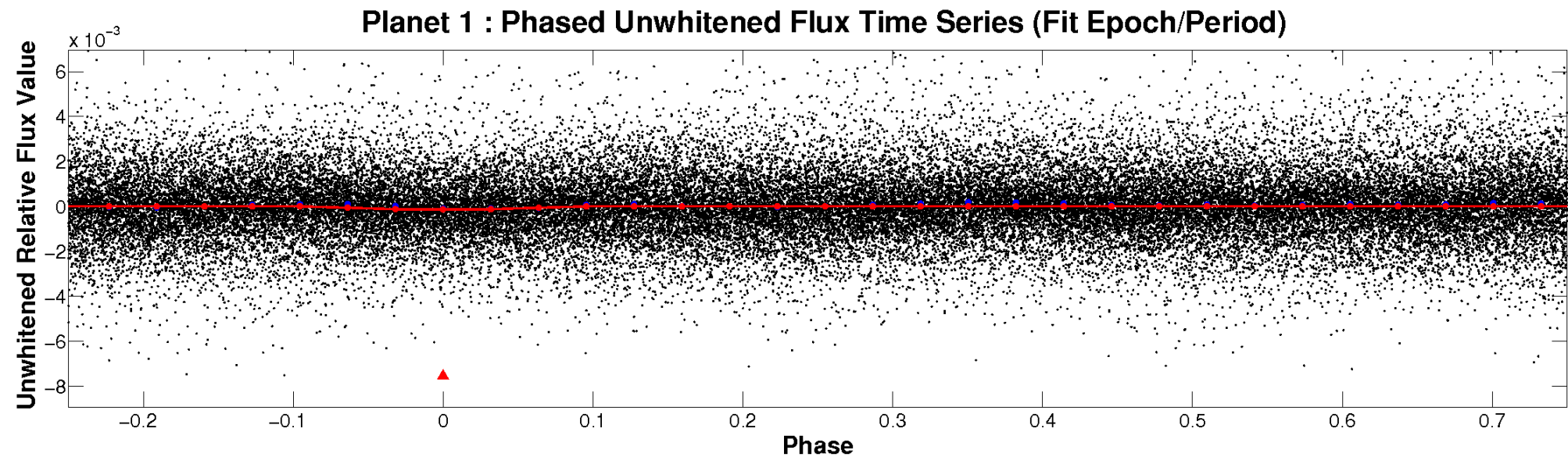


ALT Odd/Even

TCE 004386947-01

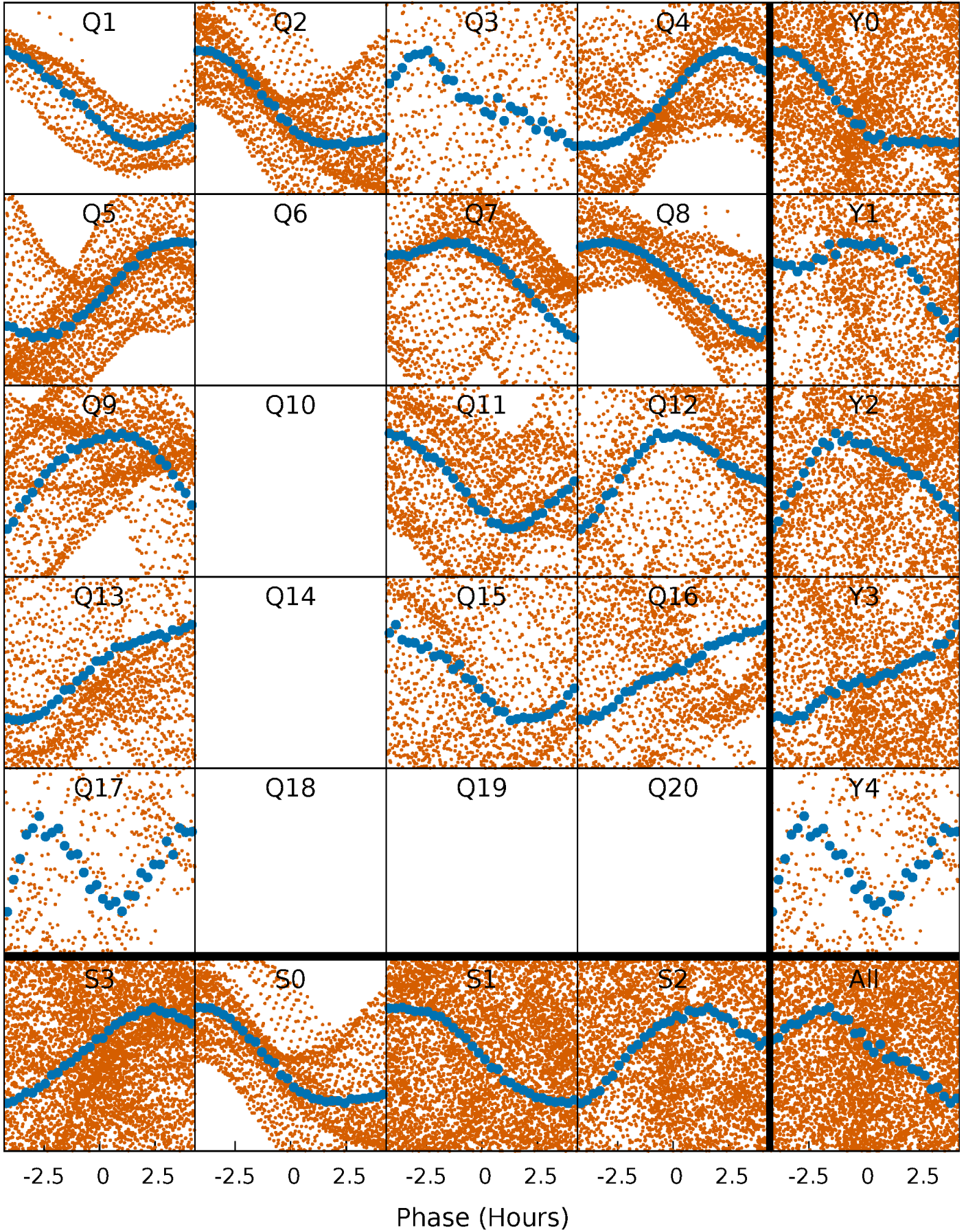


Non-Whitened Vs. Whitened Light Curve



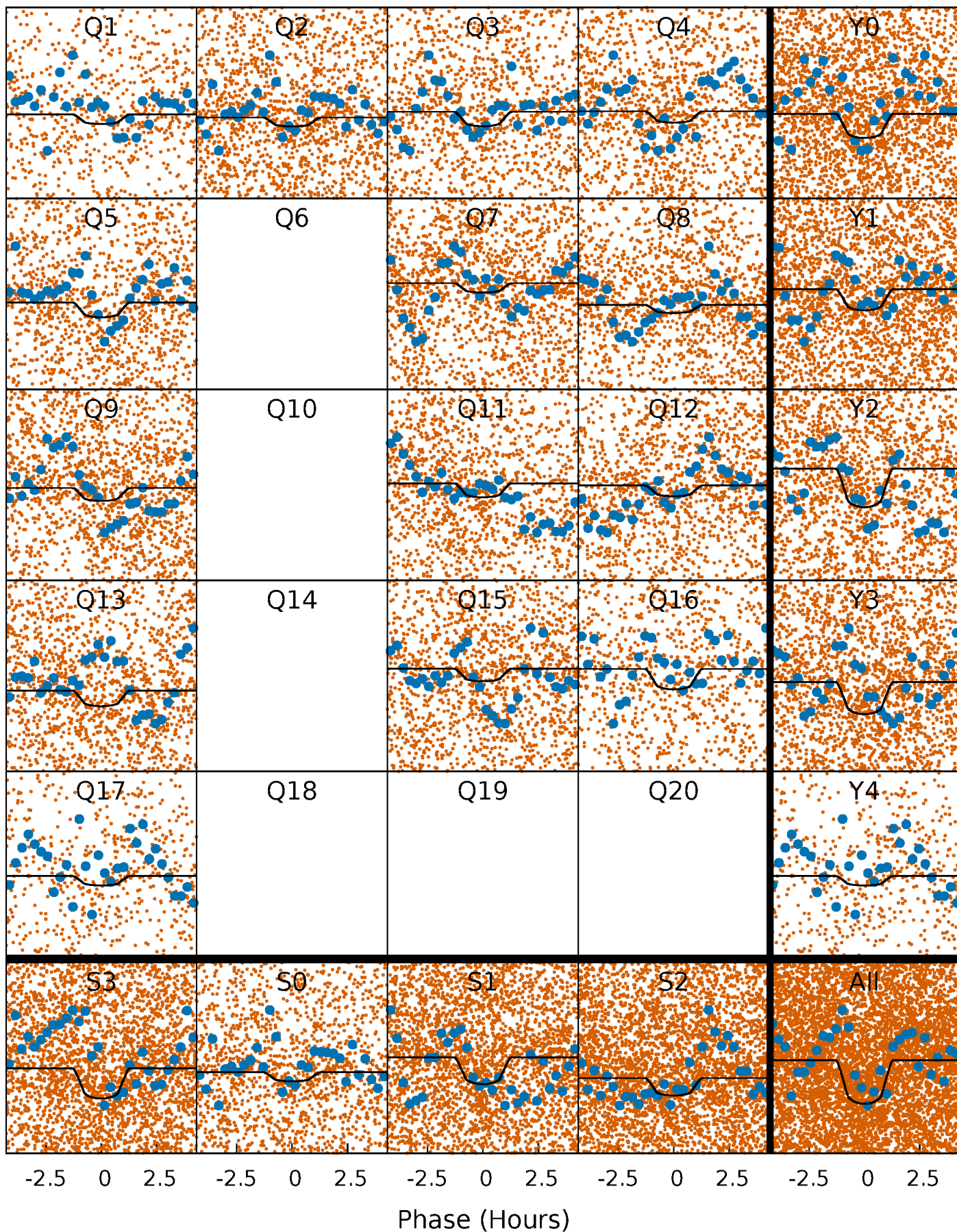
PDC Quarter-Phased Transit Curves

TCE 004386947-01 P= 0.641478 Days $T_0=131.963085$ (BKJD)



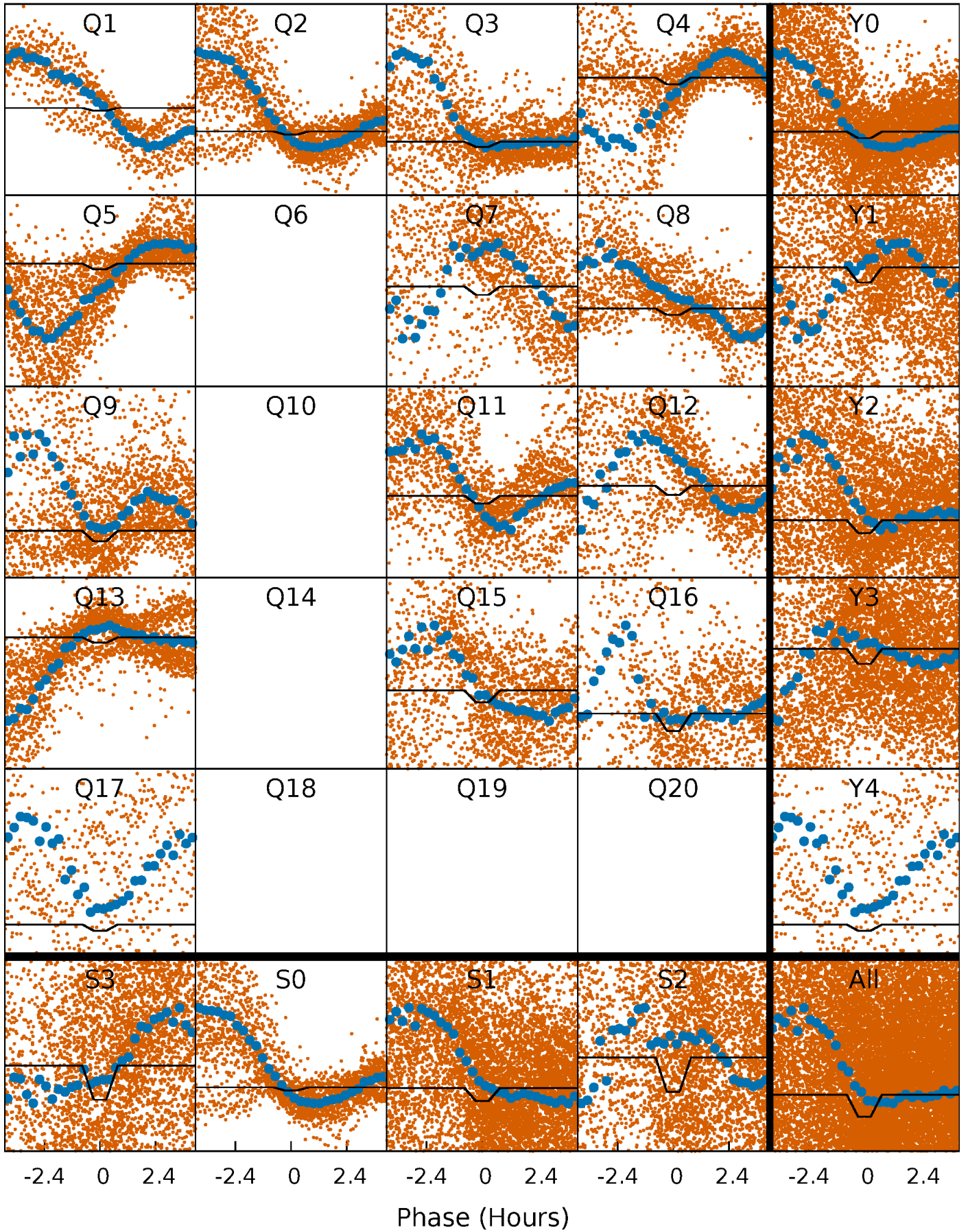
DV Quarter-Phased Transit Curves

TCE 004386947-01 P= 0.641478 Days $T_0=131.963085$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

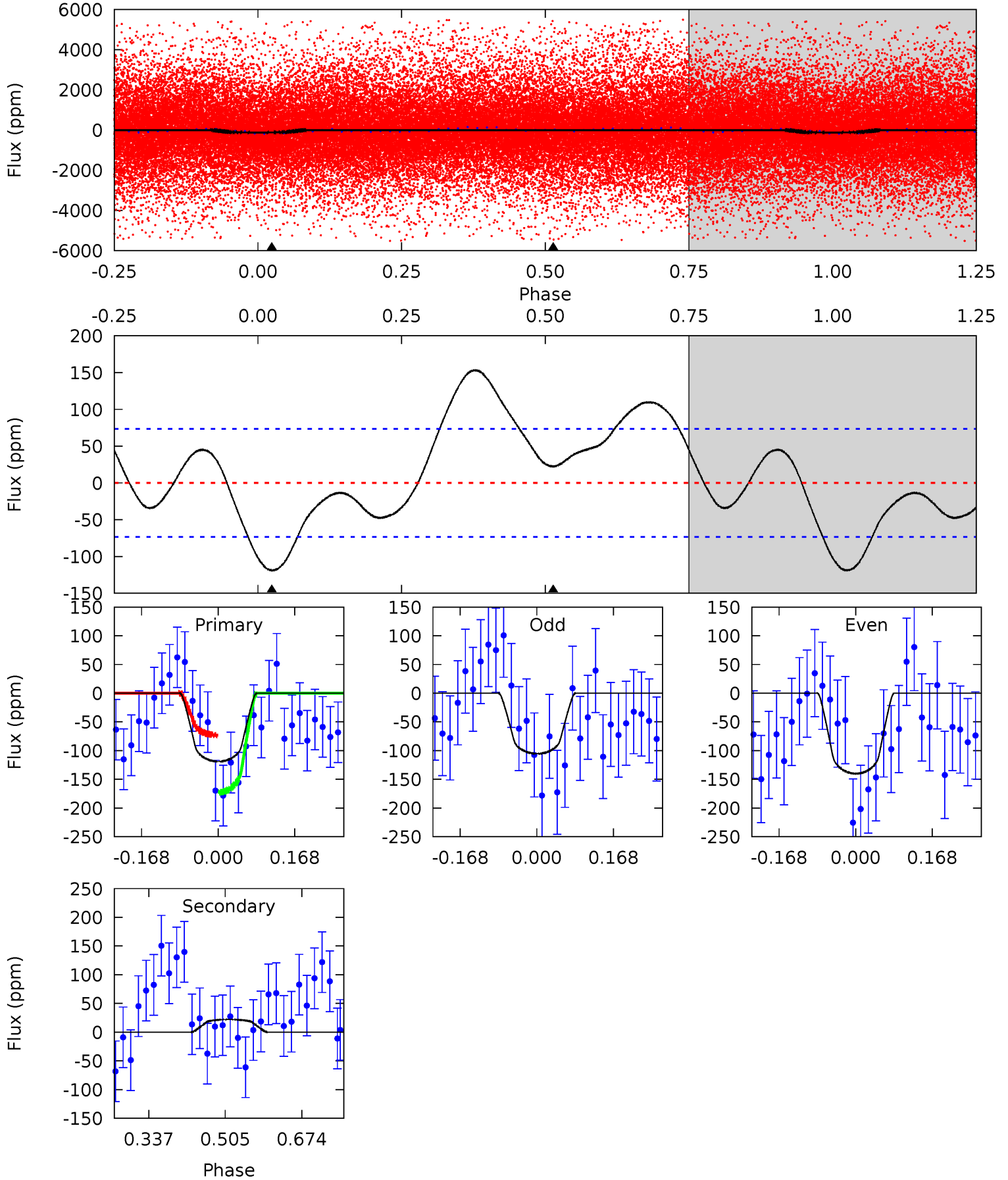
TCE 004386947-01 P= 0.641496 Days $T_0=131.946328$ (BKJD)



DV Model-Shift Uniqueness Test

004386947-01, $P = 0.641478$ Days, $E = 131.321607$ Days

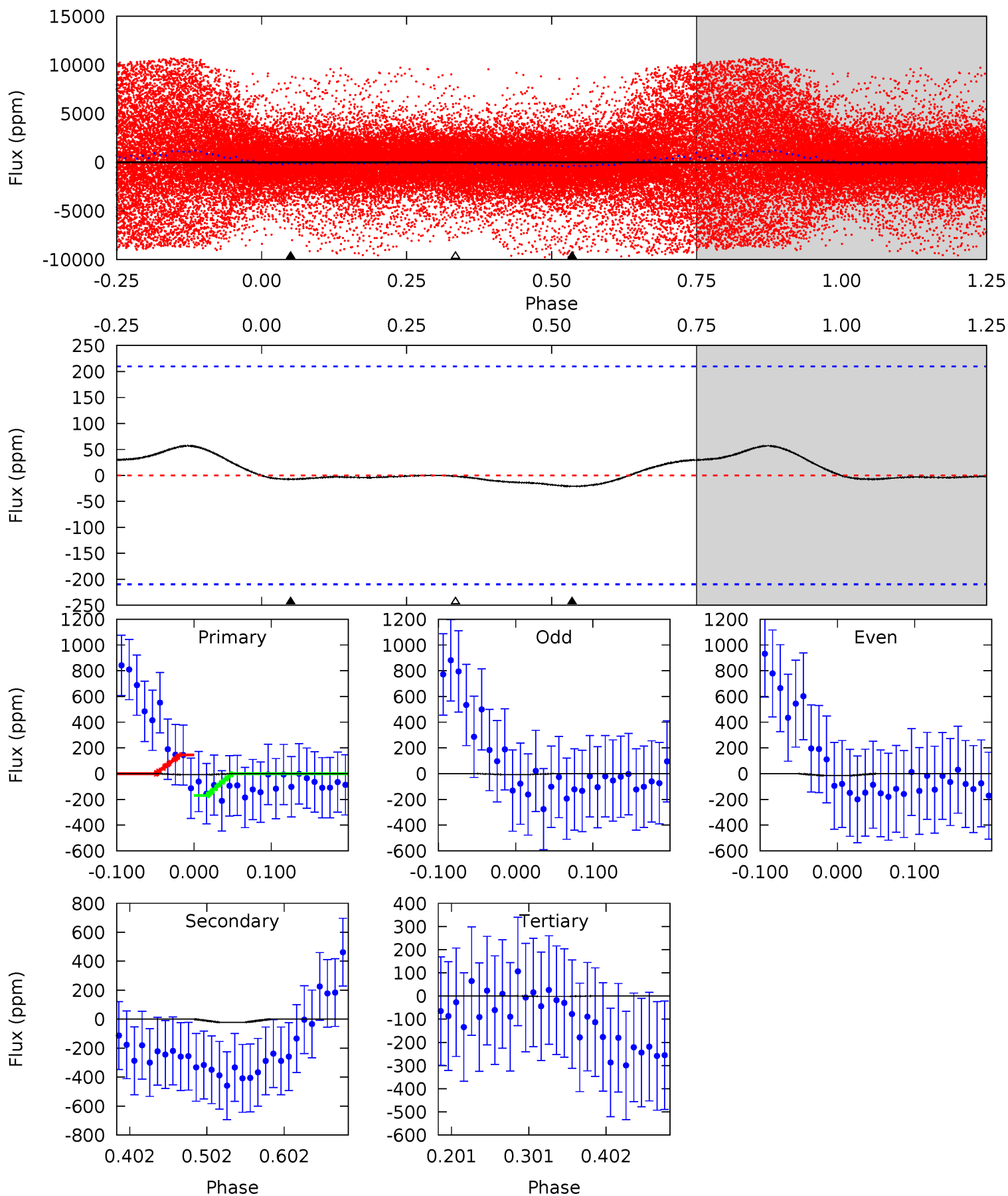
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.22	-1.34	0	0	4.45	1.38	3.33	7.22	7.22	-1.34	-1.34	1.06	0.35	0.56	3.07



Alt Model-Shift Uniqueness Test

004386947-01, P = 0.641496 Days, E = 131.304832 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.16	0.46	0.04	0	4.56	1.64	0.47	0.12	0.16	0.42	0.46	0.09	0.06	0.73	0.31



Stellar Parameters For KIC 004386947

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5681^{+169}_{-169}	$4.465^{+0.067}_{-0.189}$	$0.000^{+0.250}_{-0.300}$	$0.943^{+0.254}_{-0.109}$	$0.946^{+0.114}_{-0.102}$	$1.591^{+0.532}_{-0.777}$
	+3%/-3%	+2%/-4%	+inf%/-inf%	+27%/-12%	+12%/-11%	+33%/-49%
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 004386947-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	22 ± 16	$1.36^{+0.77}_{-0.66}$	2895^{+197}_{-143}	-3864^{+590}_{-983}	$-1.140^{+0.935}_{-3.390}$
Alt.	-21 ± 46	$2.19^{+0.78}_{-0.83}$	2885^{+182}_{-134}	2830^{+1196}_{-6406}	$0.492^{+1.664}_{-1.123}$

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 $A_{obs} \gg 1.0$

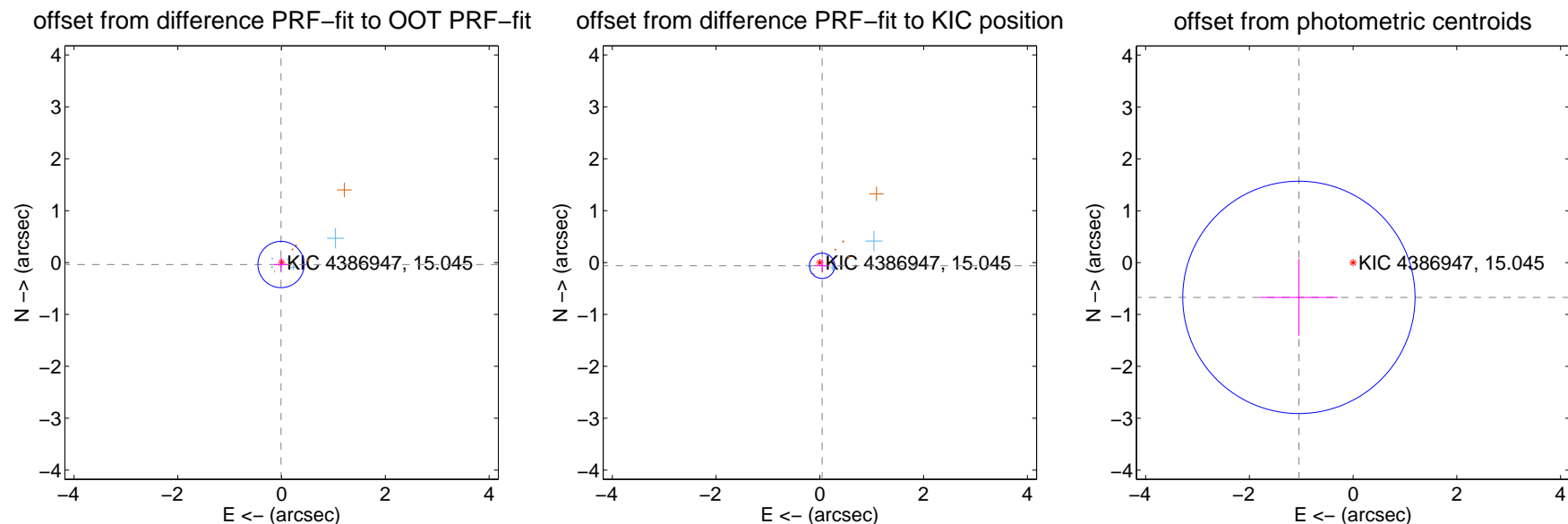
DV Centroid Data

Supplemental centroid analysis for 004386947-01. Kepler magnitude: 15.04. Transit SNR 6.17

There are 7 quarters with good PRF difference image offsets

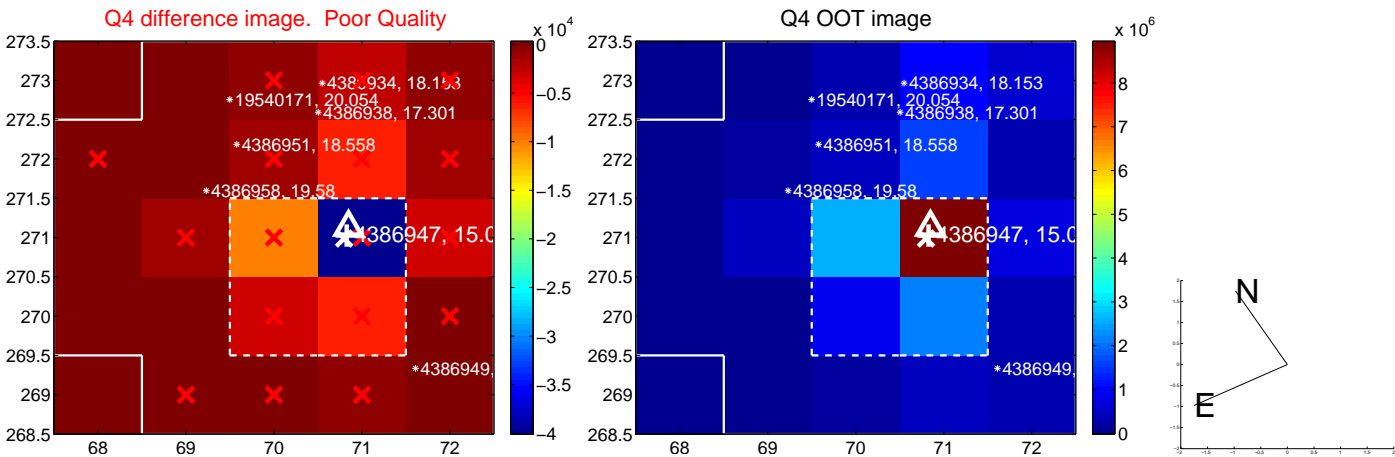
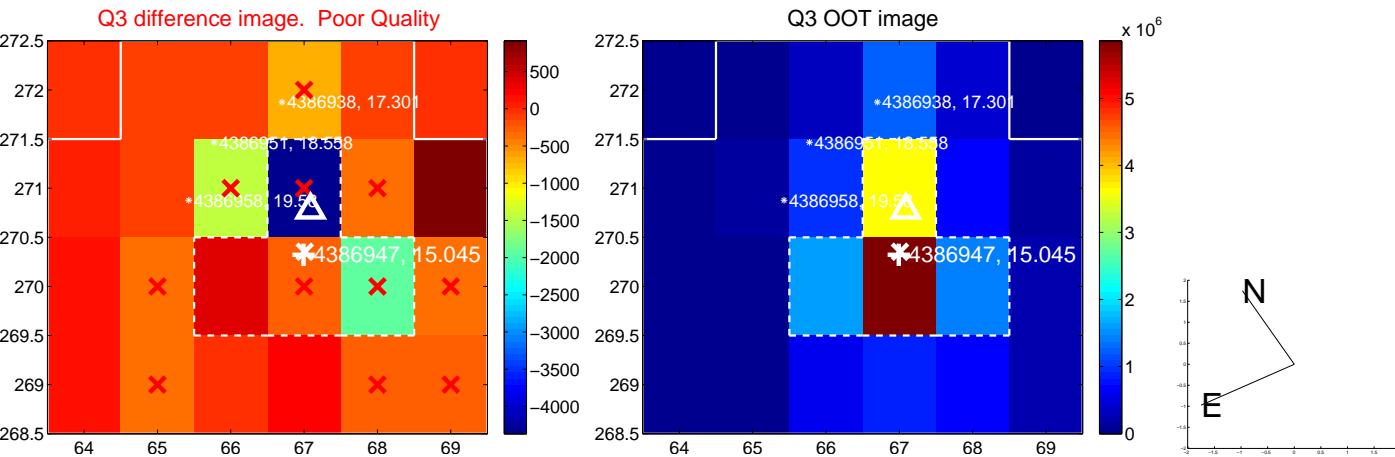
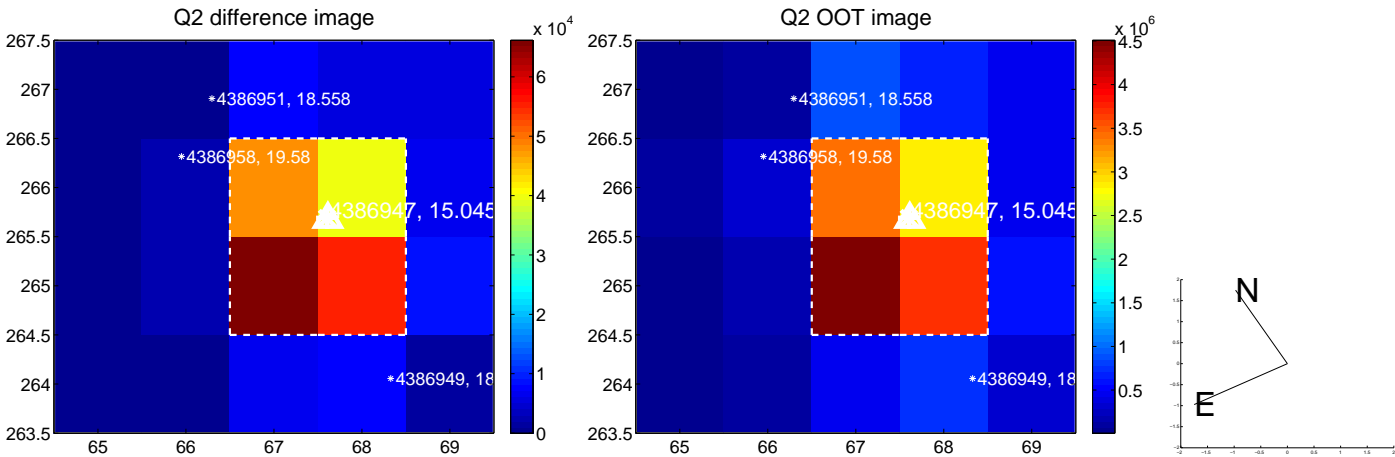
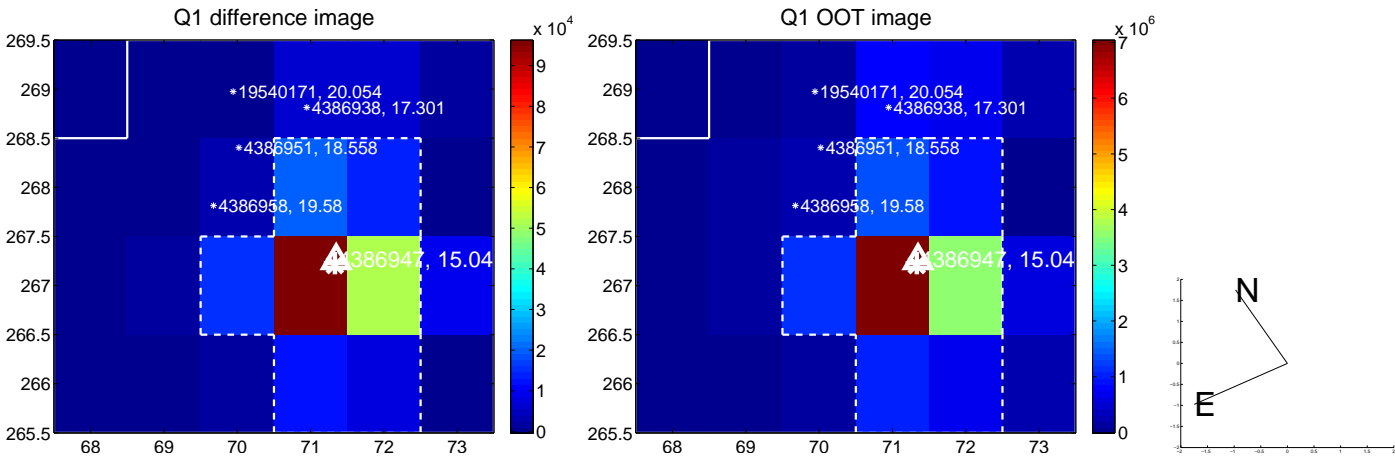
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.039 ± 0.149	0.26	0.010 ± 0.134	-0.038 ± 0.129
PRF-fit source offset from KIC position	0.077 ± 0.081	0.95	-0.044 ± 0.140	-0.063 ± 0.129
photometric centroid source offset	1.24 ± 0.75	1.66	1.05 ± 0.75	-0.67 ± 0.74

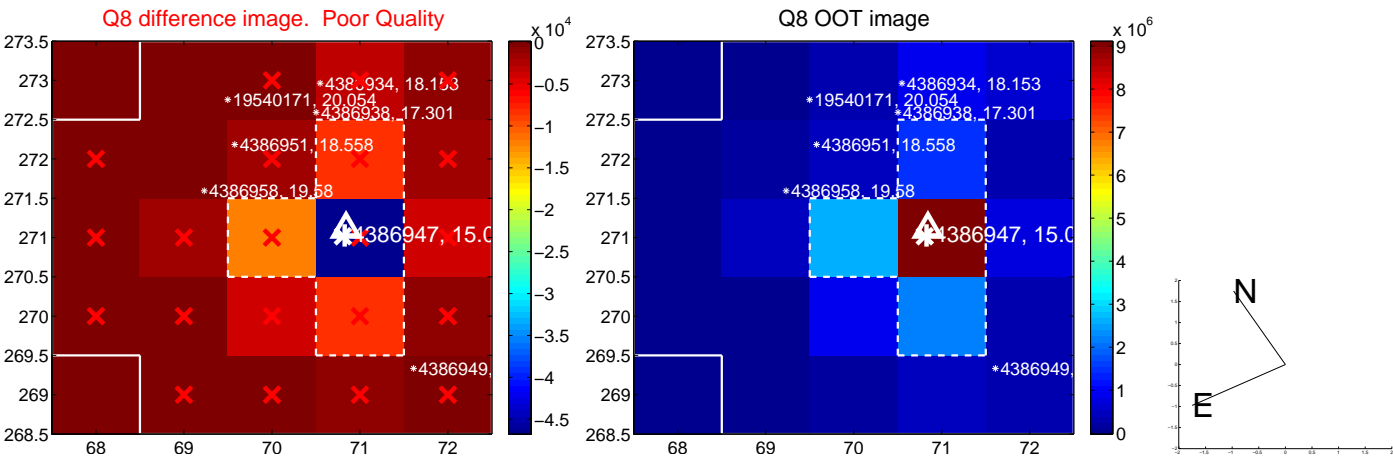
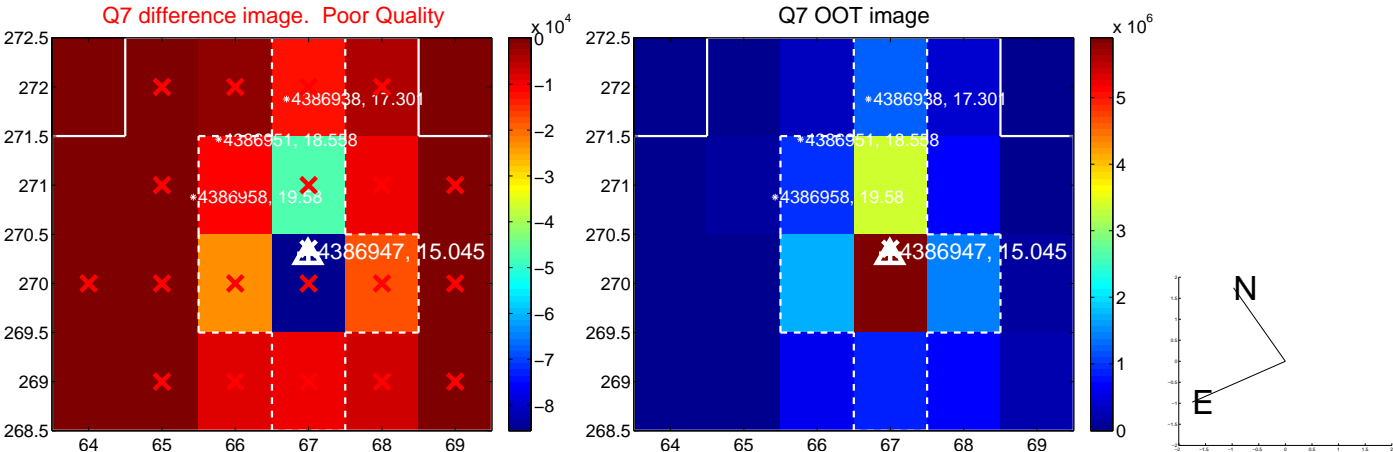
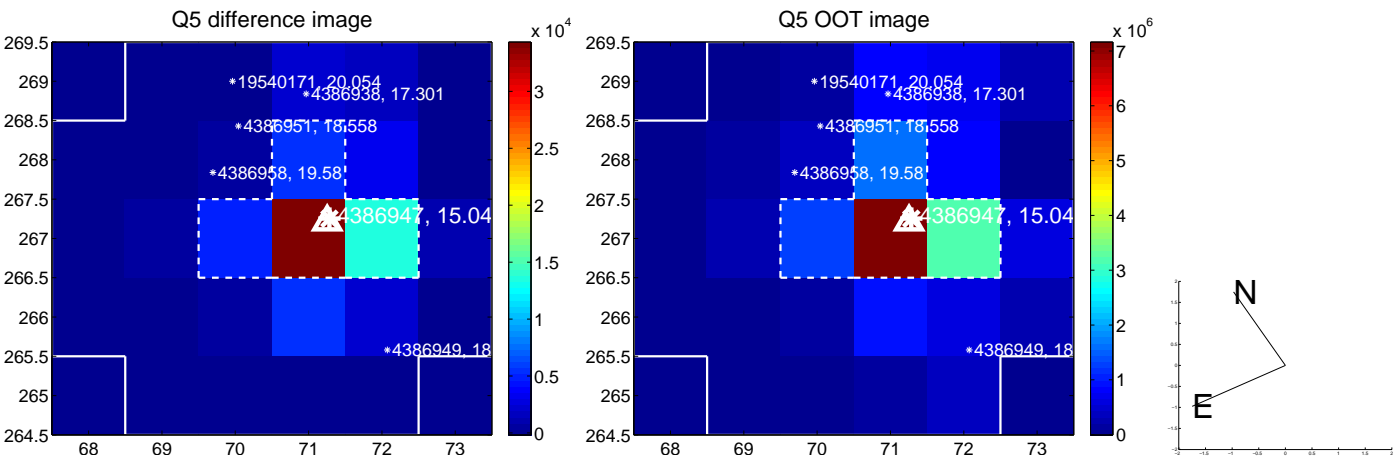


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

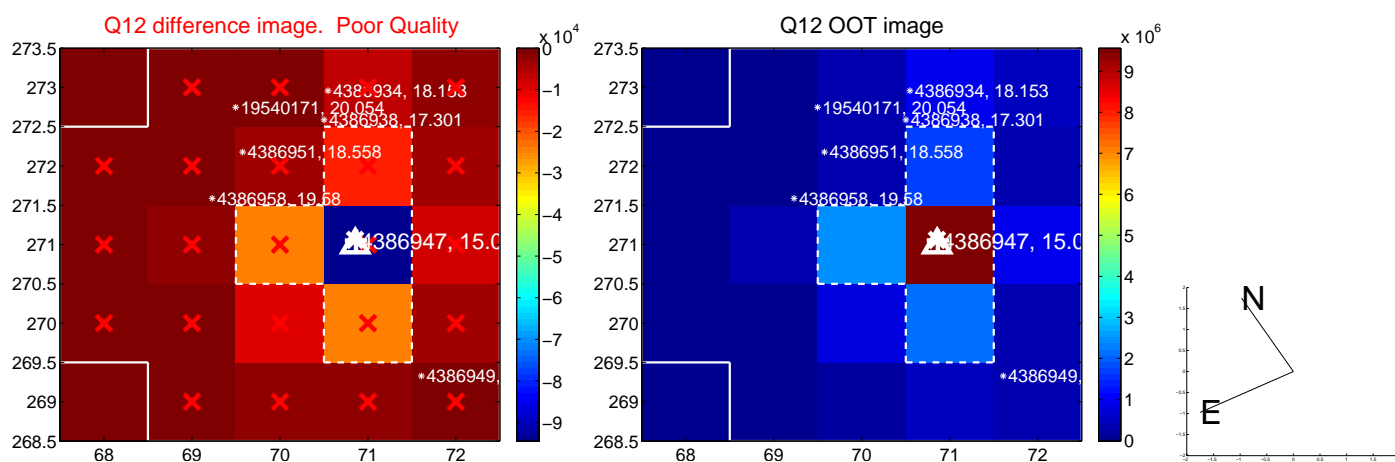
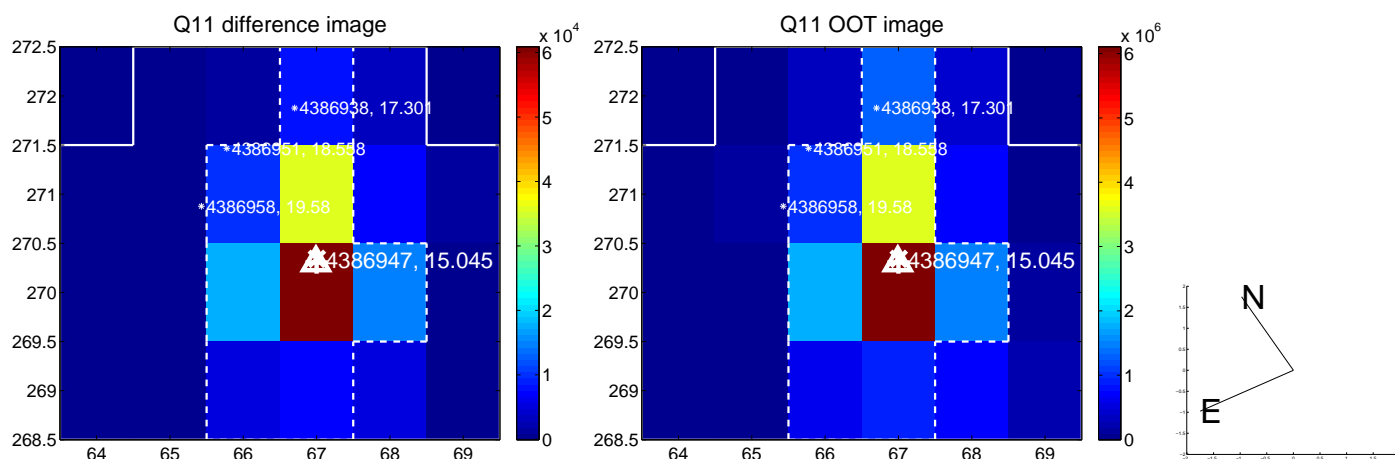
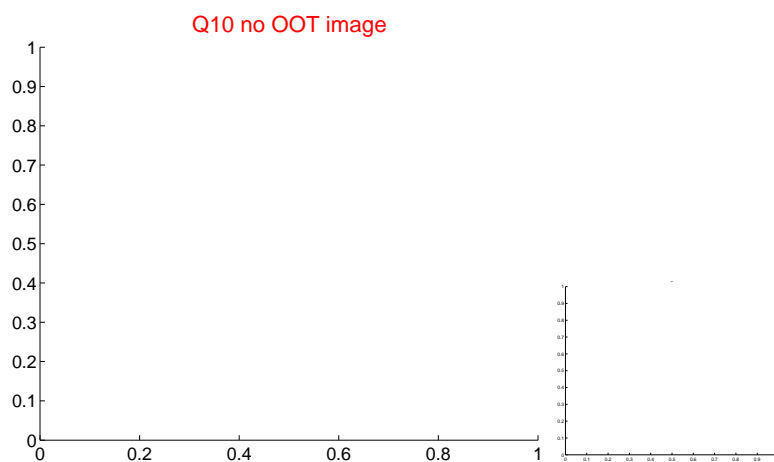
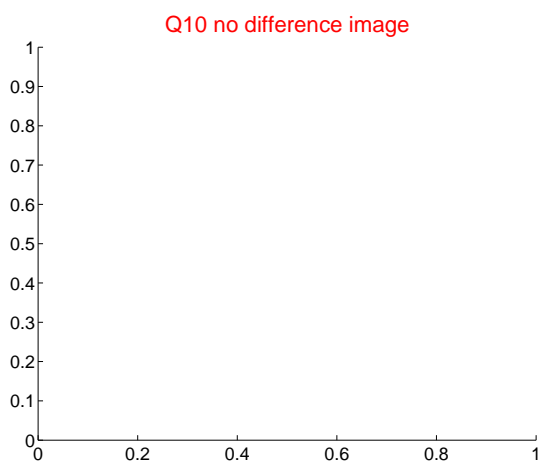
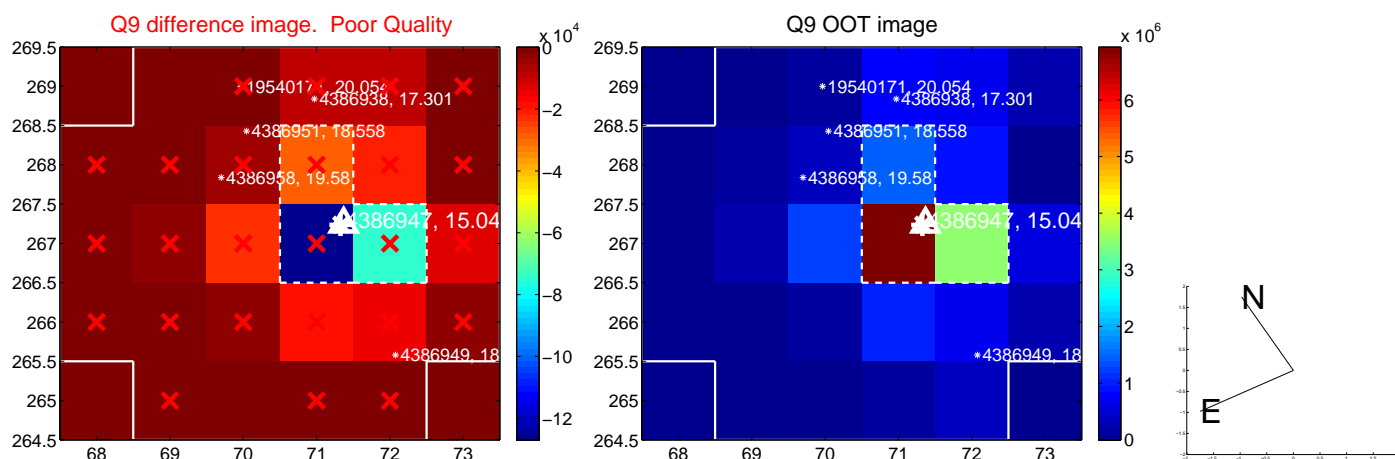
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



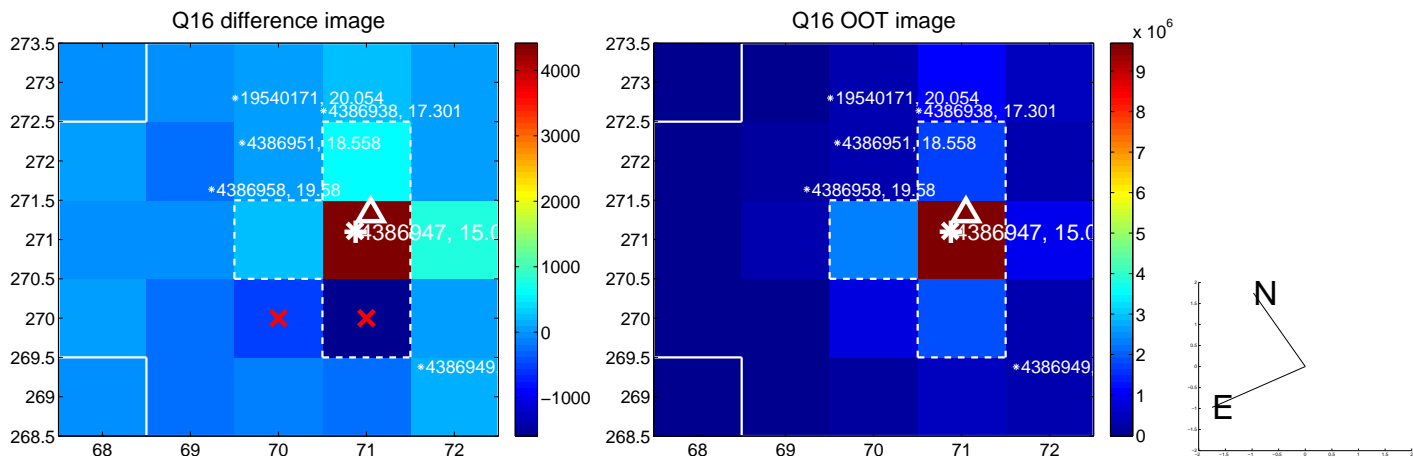
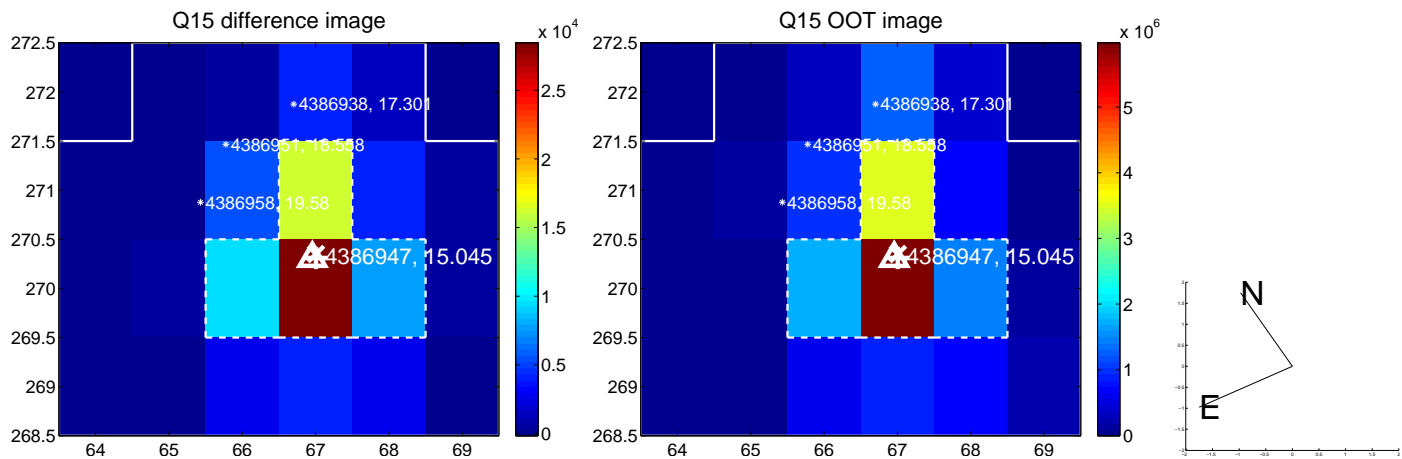
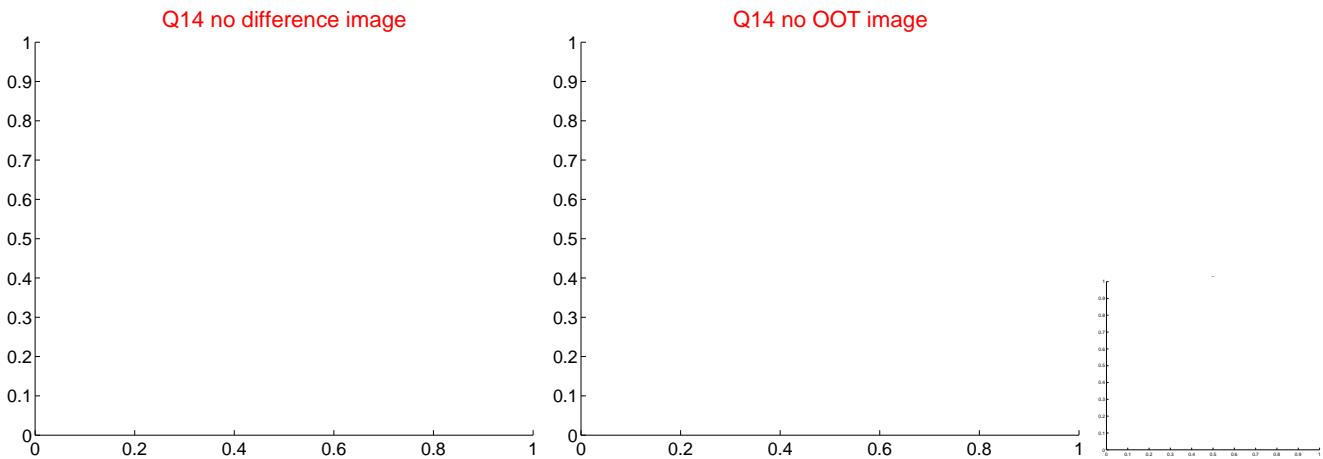
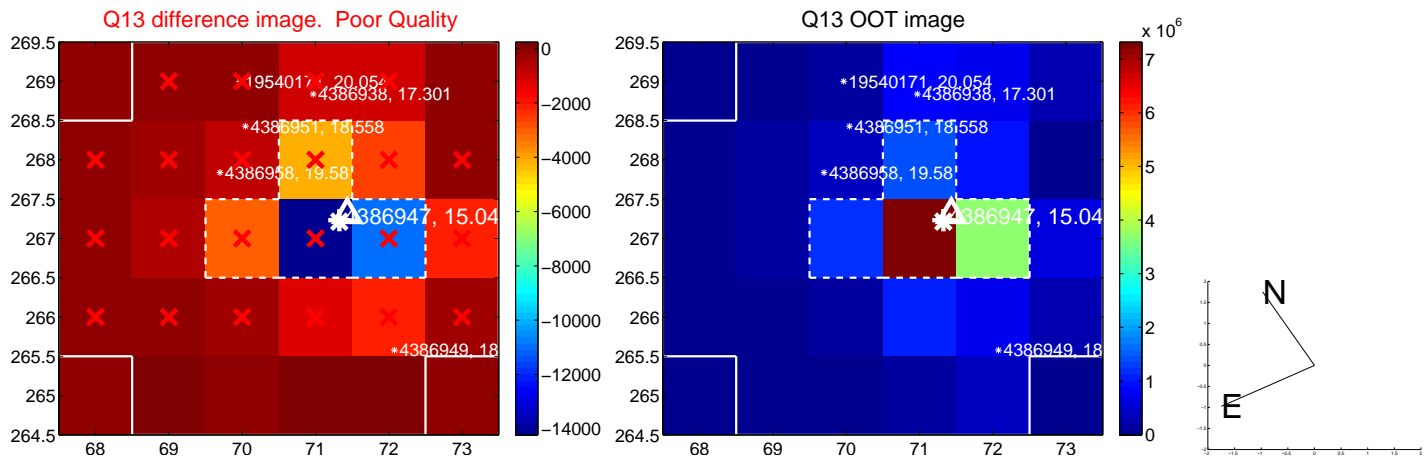
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



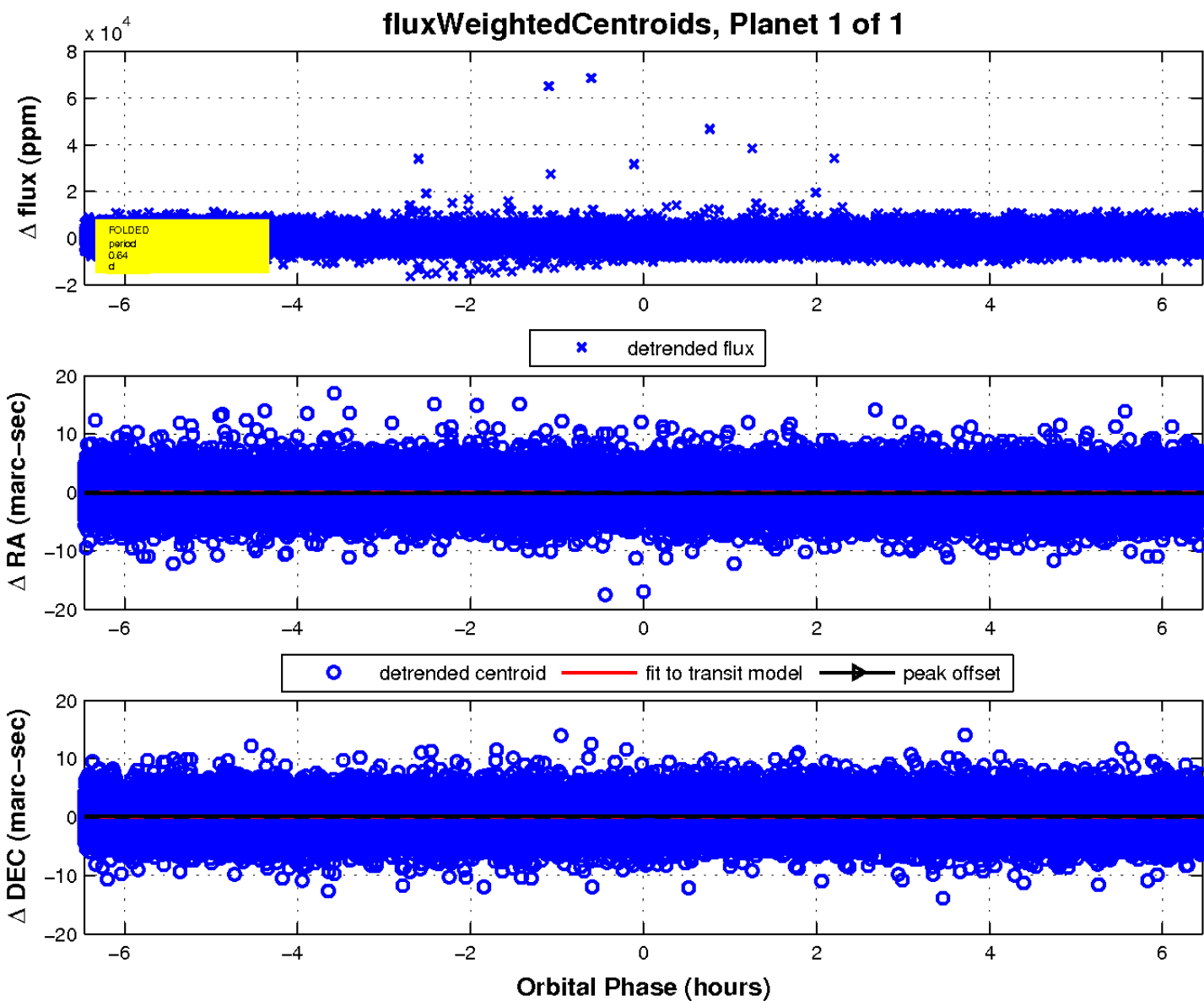
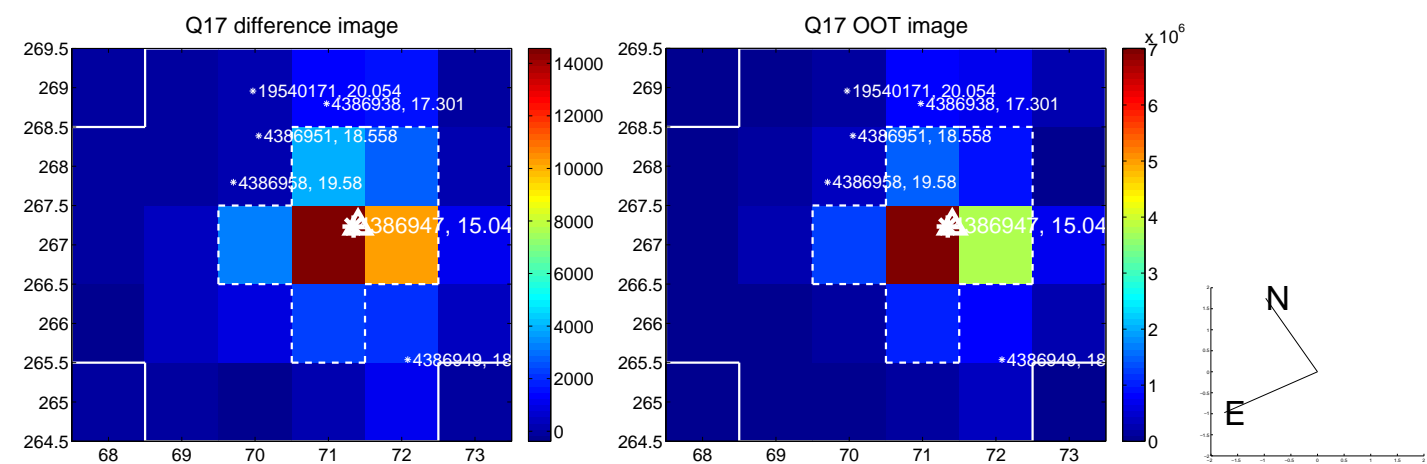
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UKIRT Image

Declination

