

KIC 004077006

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})
004077006-01	OBS	No	1.082915	132.646801	75.4	12.641	9.9	12.2	1.35	6394	1.18	6126.00

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004077006-01	OBS	FP	0.00	1	0	1	0	LPP_DV—CENT_RESOLVED_OFFSET

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

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

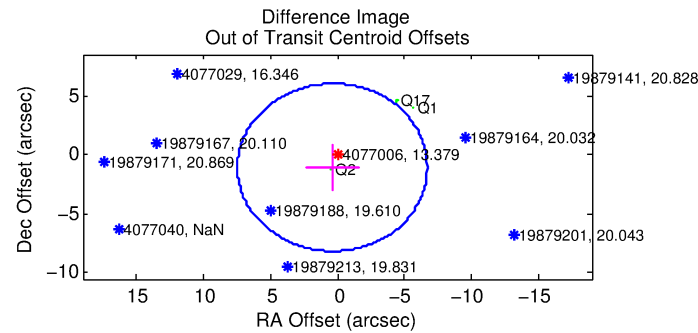
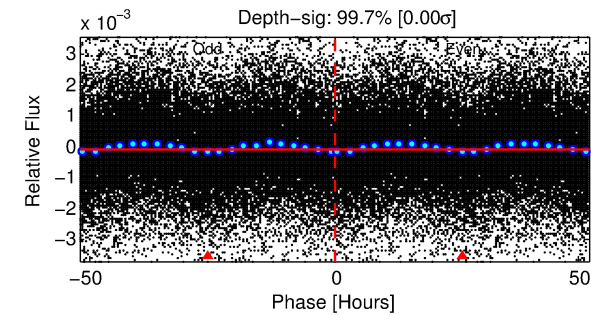
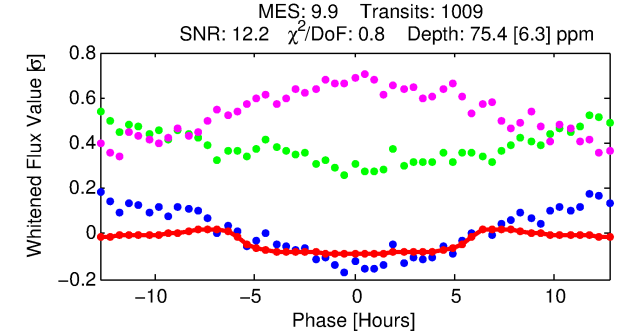
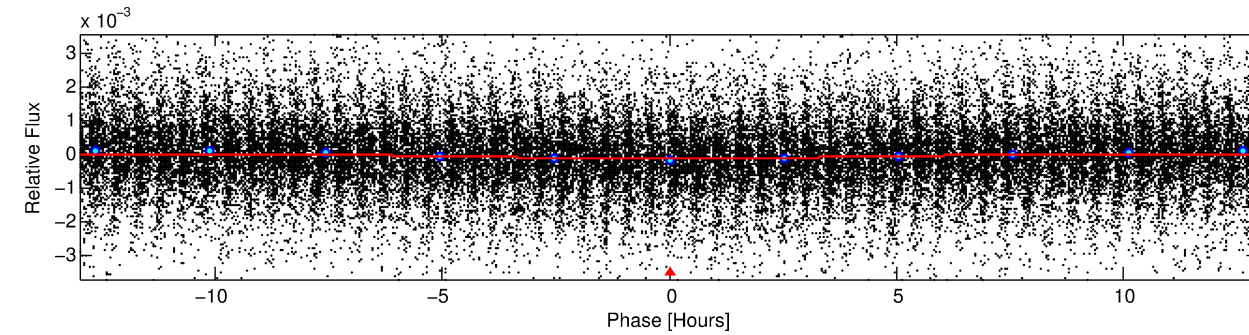
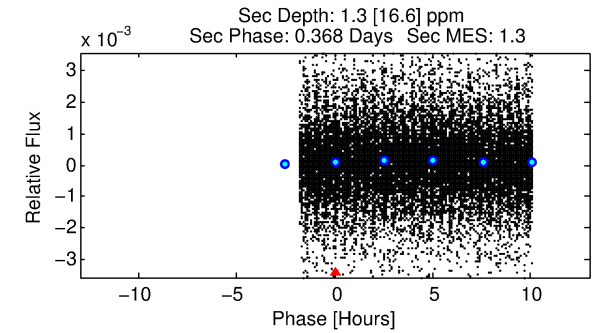
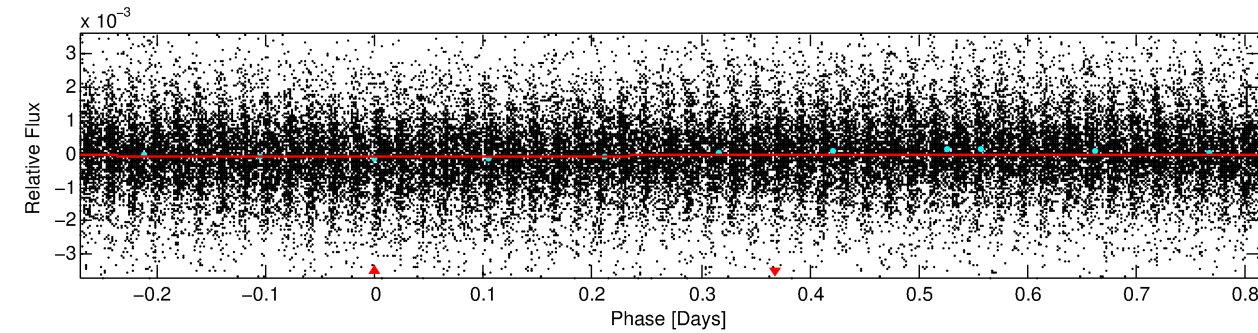
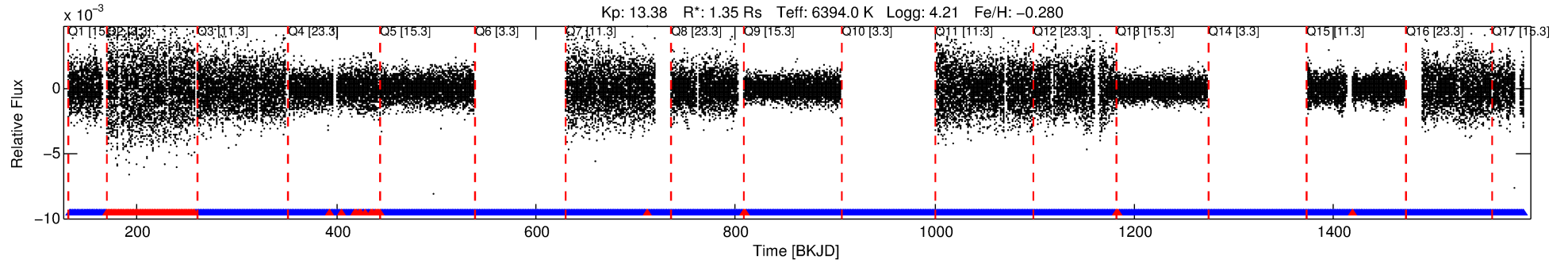
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004077006-01

No Significant Match Found

DV One-Page Summary

KIC: 4077006 Candidate: 1 of 1 Period: 1.083 d



DV Fit Results:

Period = 1.08292 [0.00002] d
Epoch = 132.6468 [0.0096] BKJD
Rp/R* = 0.0080 [0.0030]
a/R* = 1.01 [0.03]
b = 0.01 [246.22]
Seff = 6126.00 [2422.16]
Teff = 2256 [223] K
Rp = 1.18 [0.55] Re
a = 0.0211 [0.0052] AU
Ag = 0.23 [2.95] [-0.26σ]
Teffp = 2417 [7729] K [0.02σ]

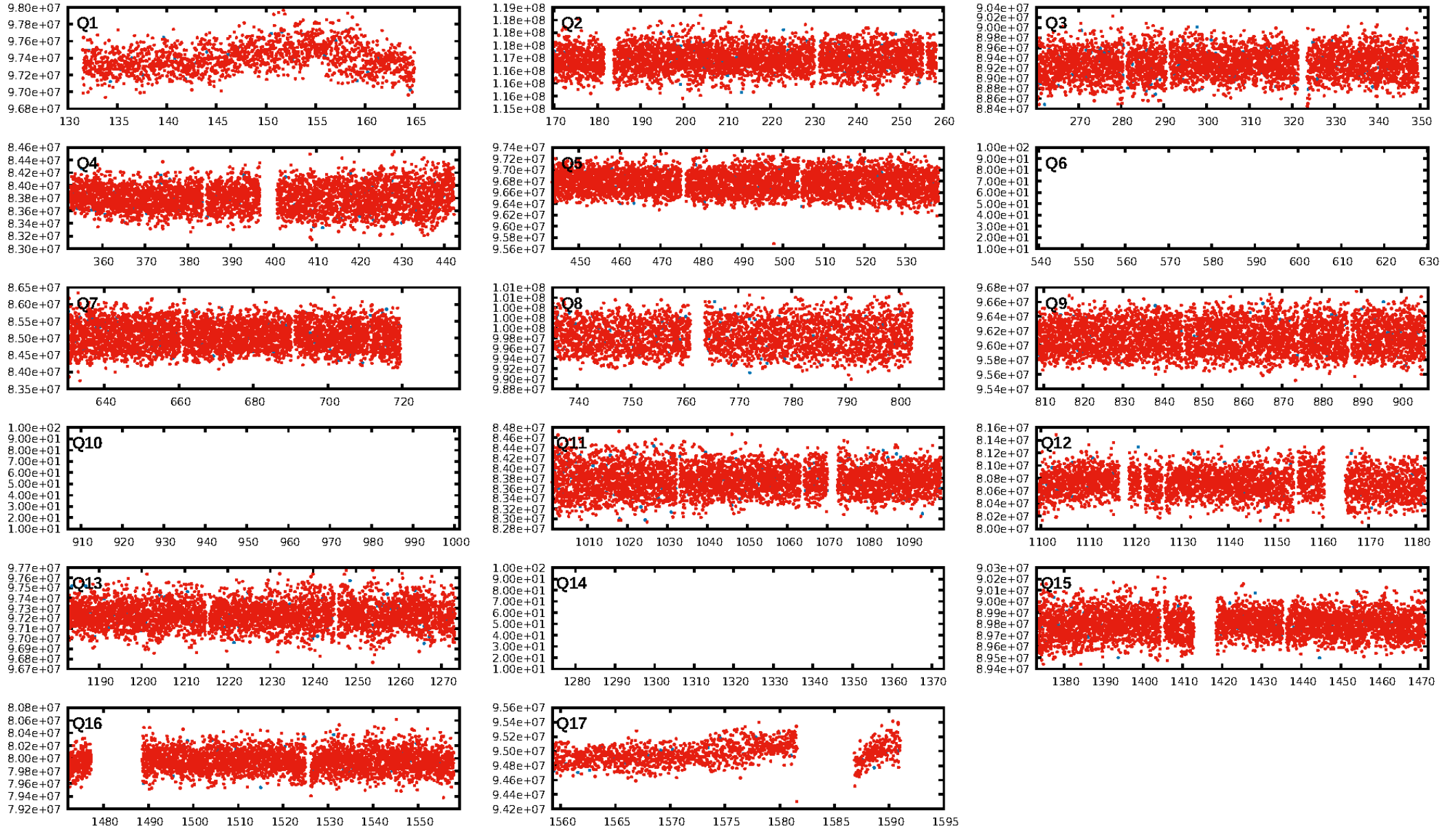
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.89 [852/952]
GhostDiagnostic-chr: -1.118
Centroid-sig: 0.0%
Centroid-so: 18.653 arcsec [14.26σ]
OotOffset-rm: 1.128 arcsec [0.48σ]
KicOffset-rm: 8.306 arcsec [2.60σ]
OotOffset-st: 1/0/0/2 [3]
KicOffset-st: 1/0/0/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [14/14]

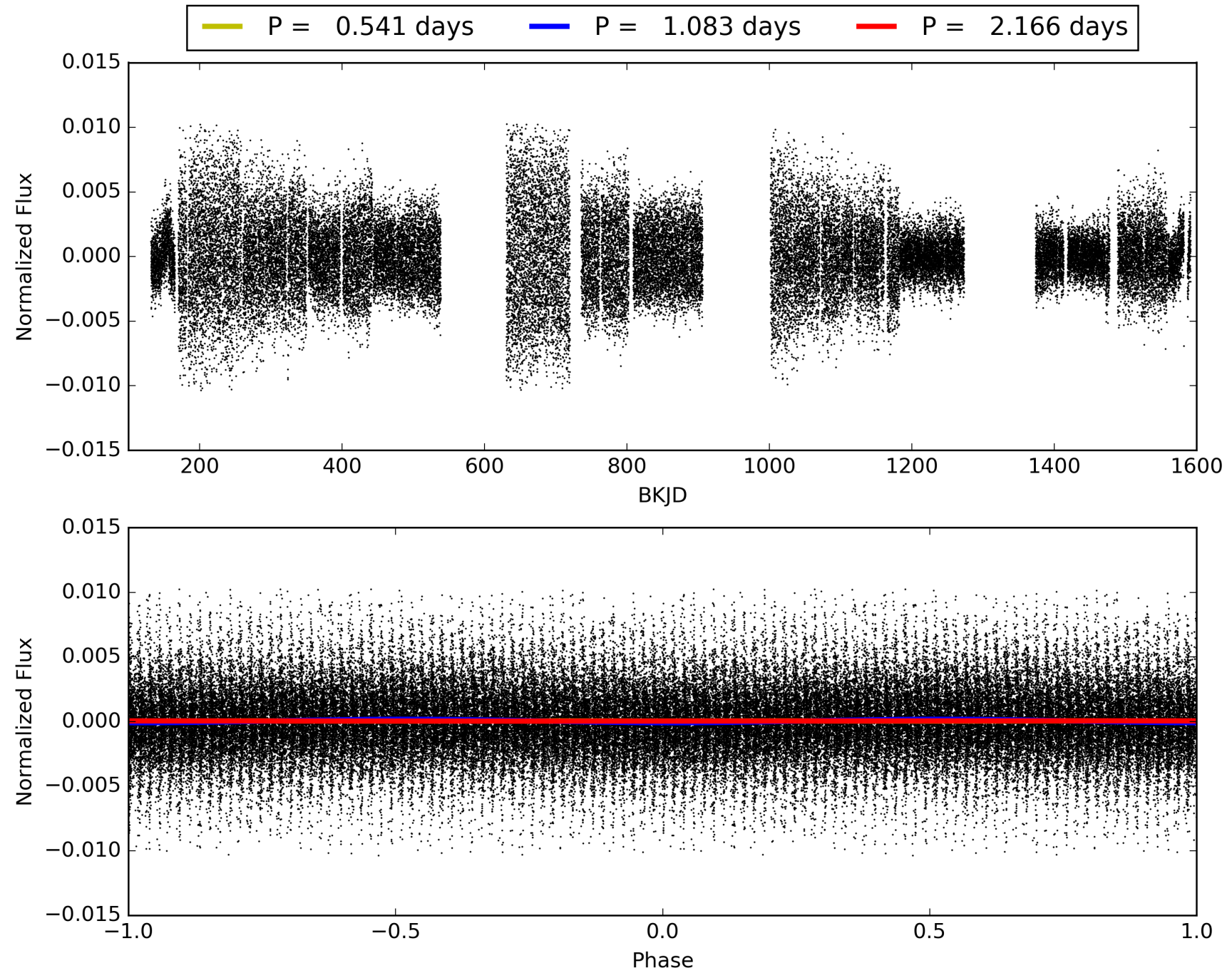
Software Revision: svn-ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 23:08:50 Z

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

TCE 004077006-01, PDC Light Curves

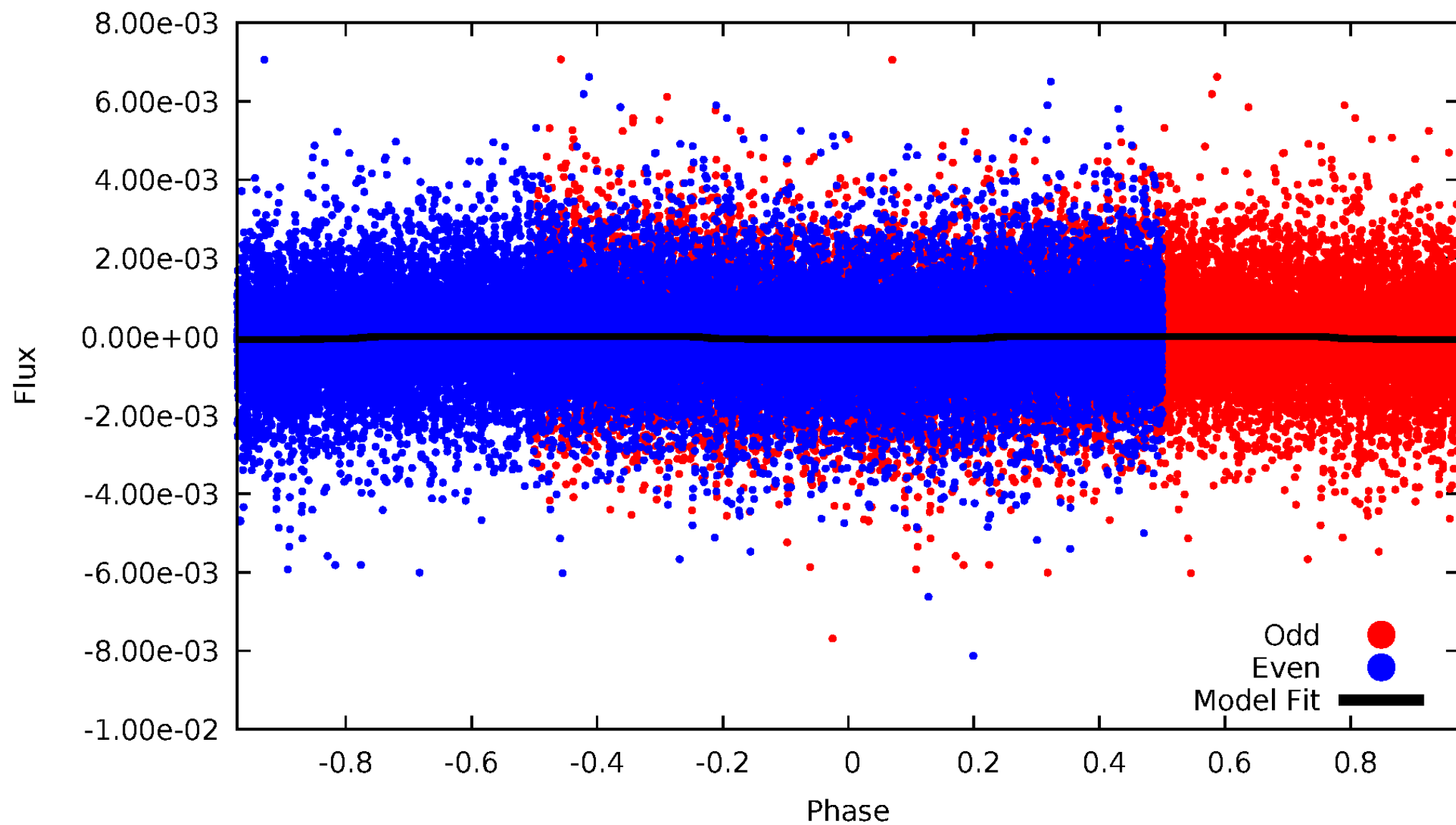


TCE 004077006-01



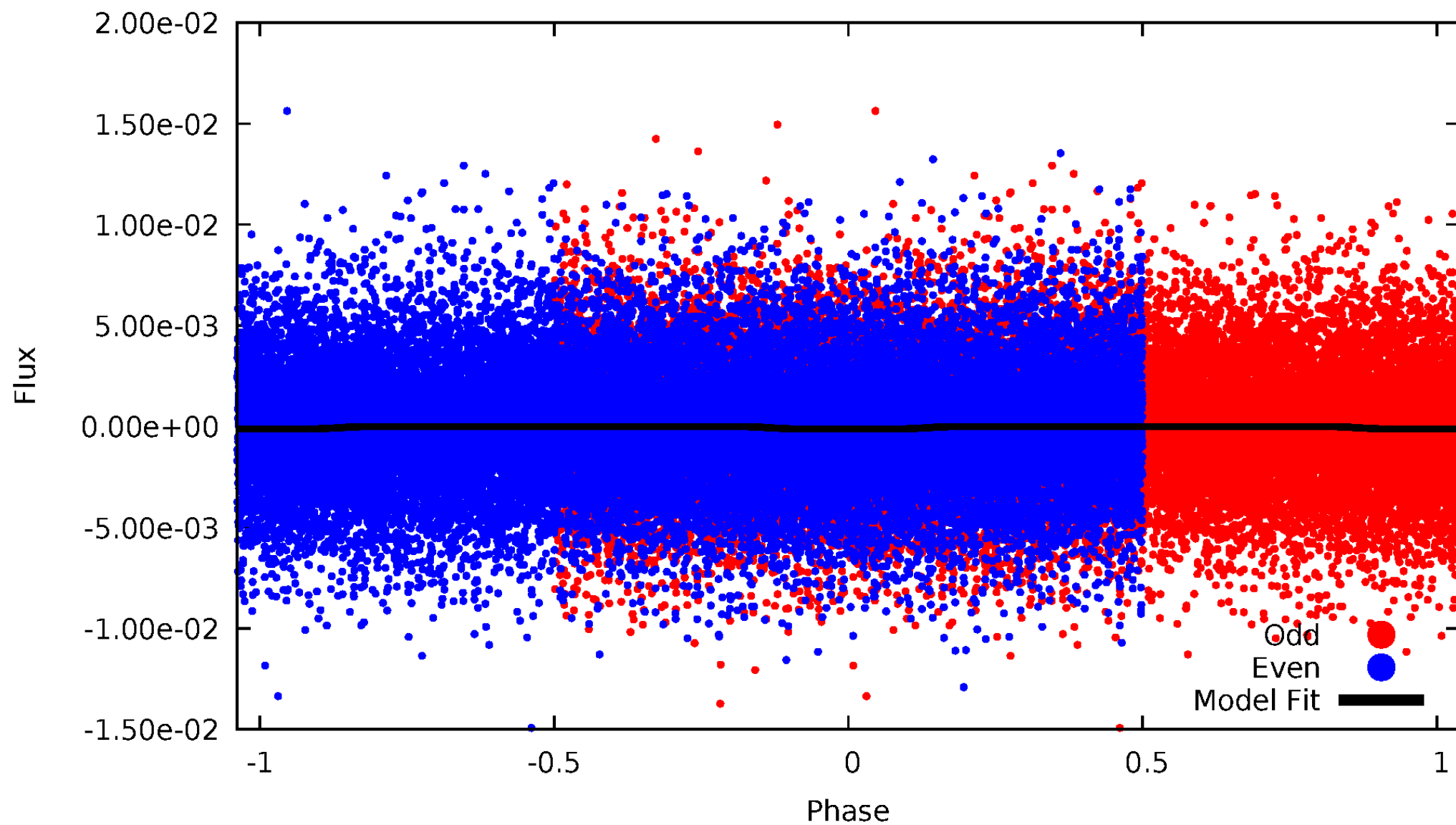
DV Odd/Even

TCE 004077006-01



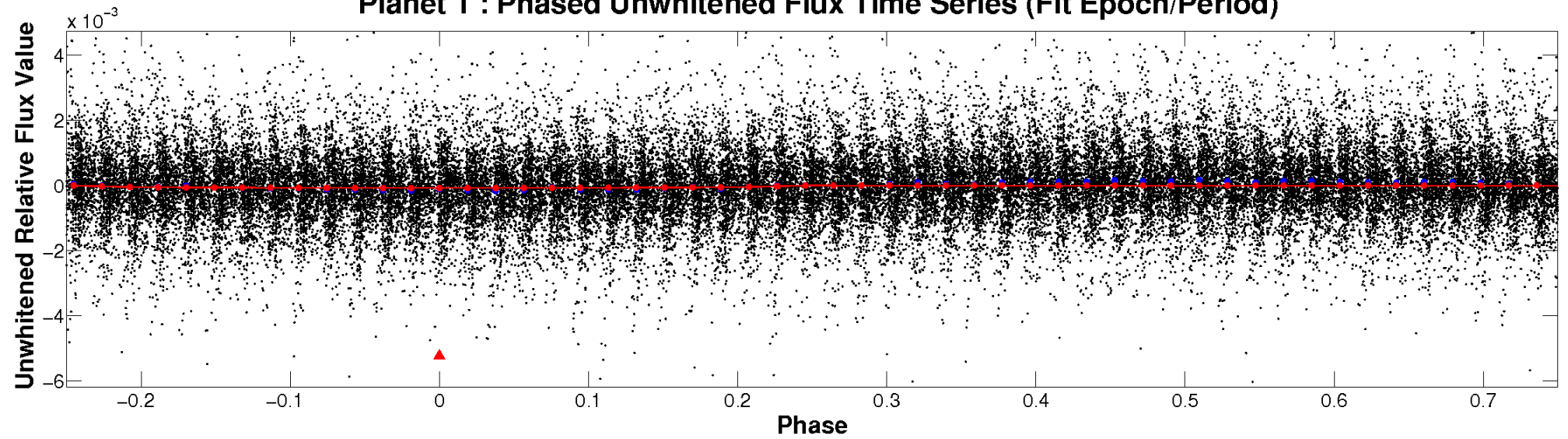
ALT Odd/Even

TCE 004077006-01

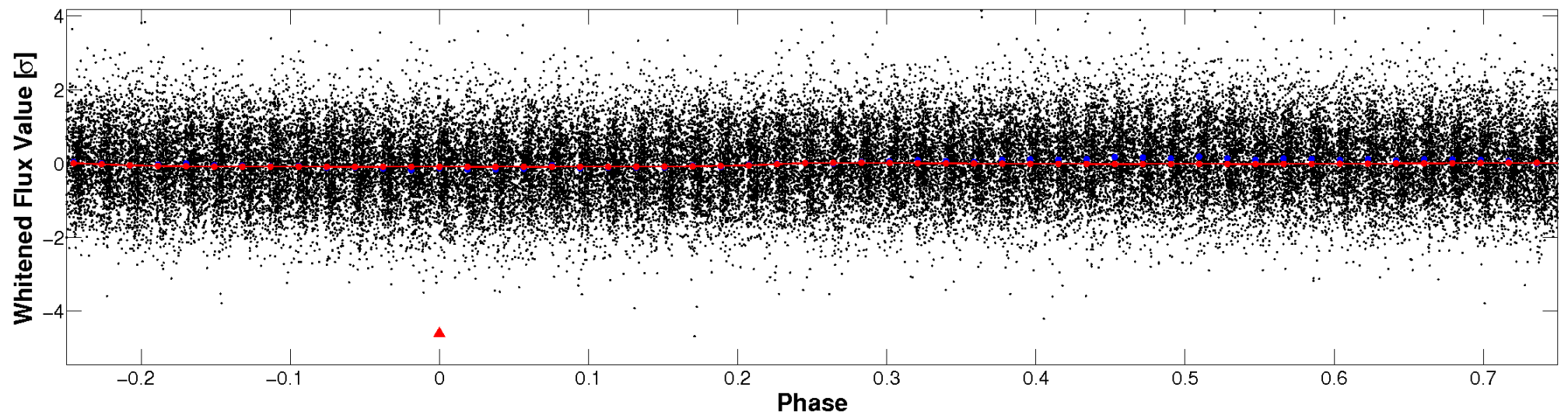


Non-Whitened Vs. Whitened Light Curve

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

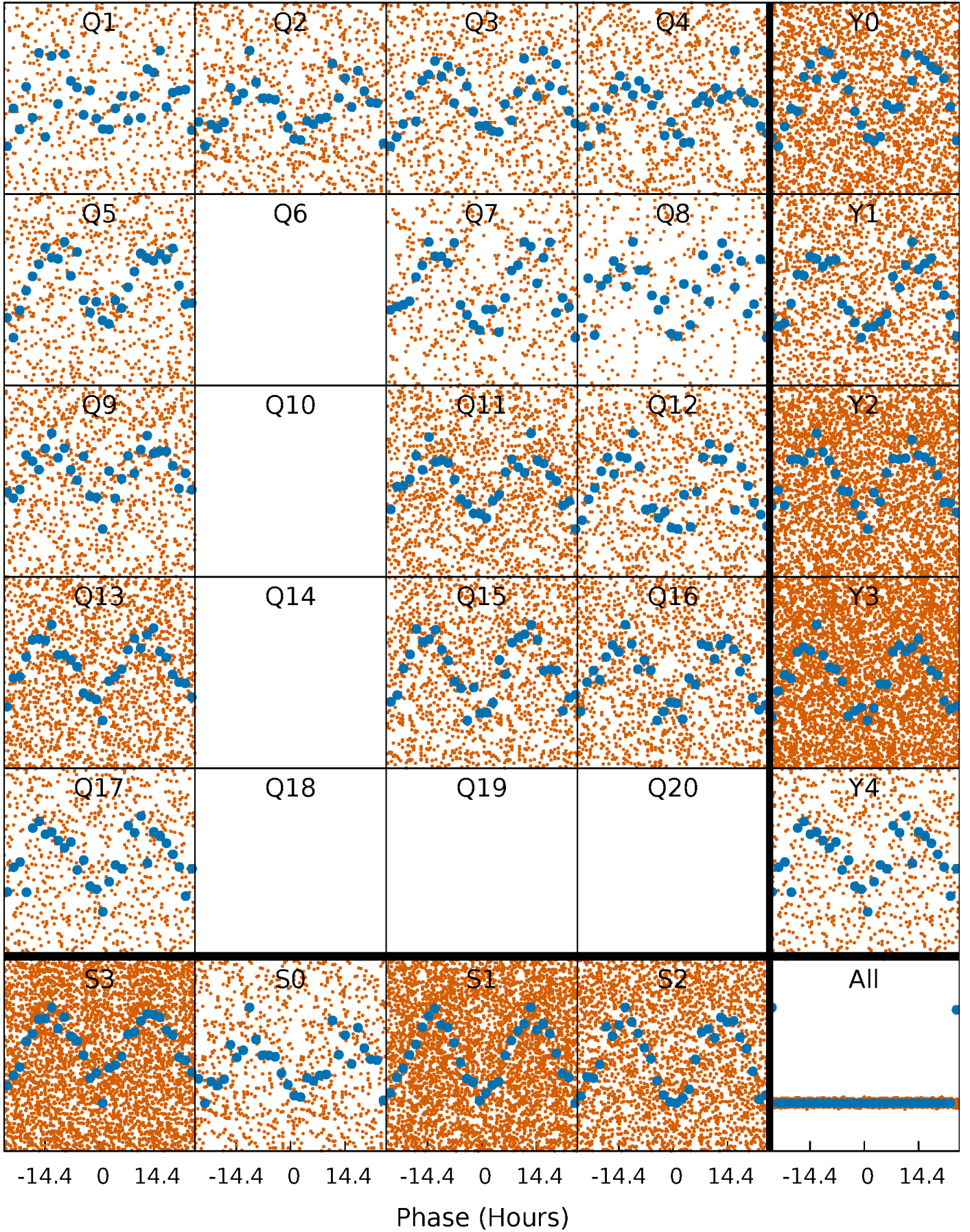


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



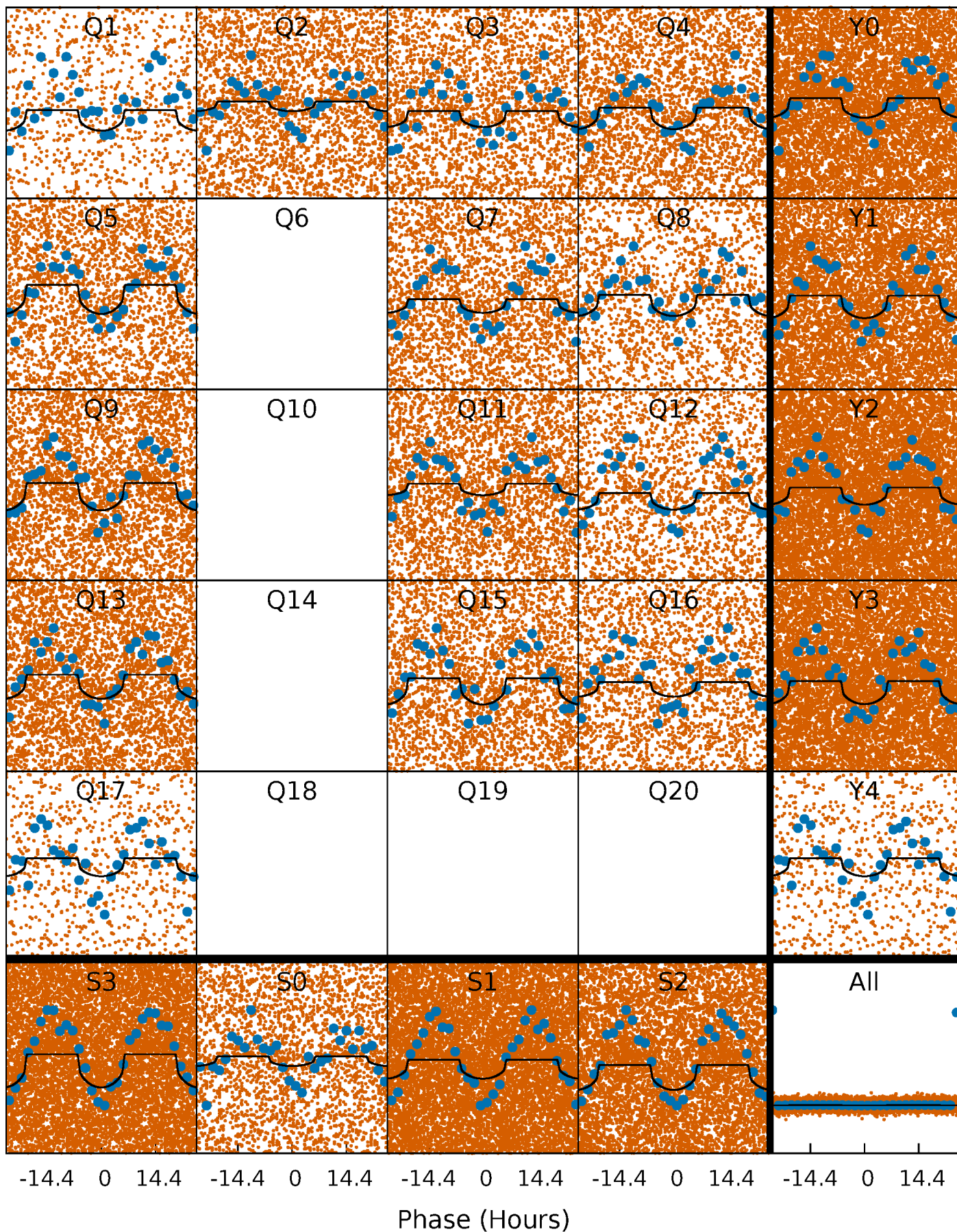
PDC Quarter-Phased Transit Curves

TCE 004077006-01 P= 1.082915 Days $T_0=132.646801$ (BKJD)



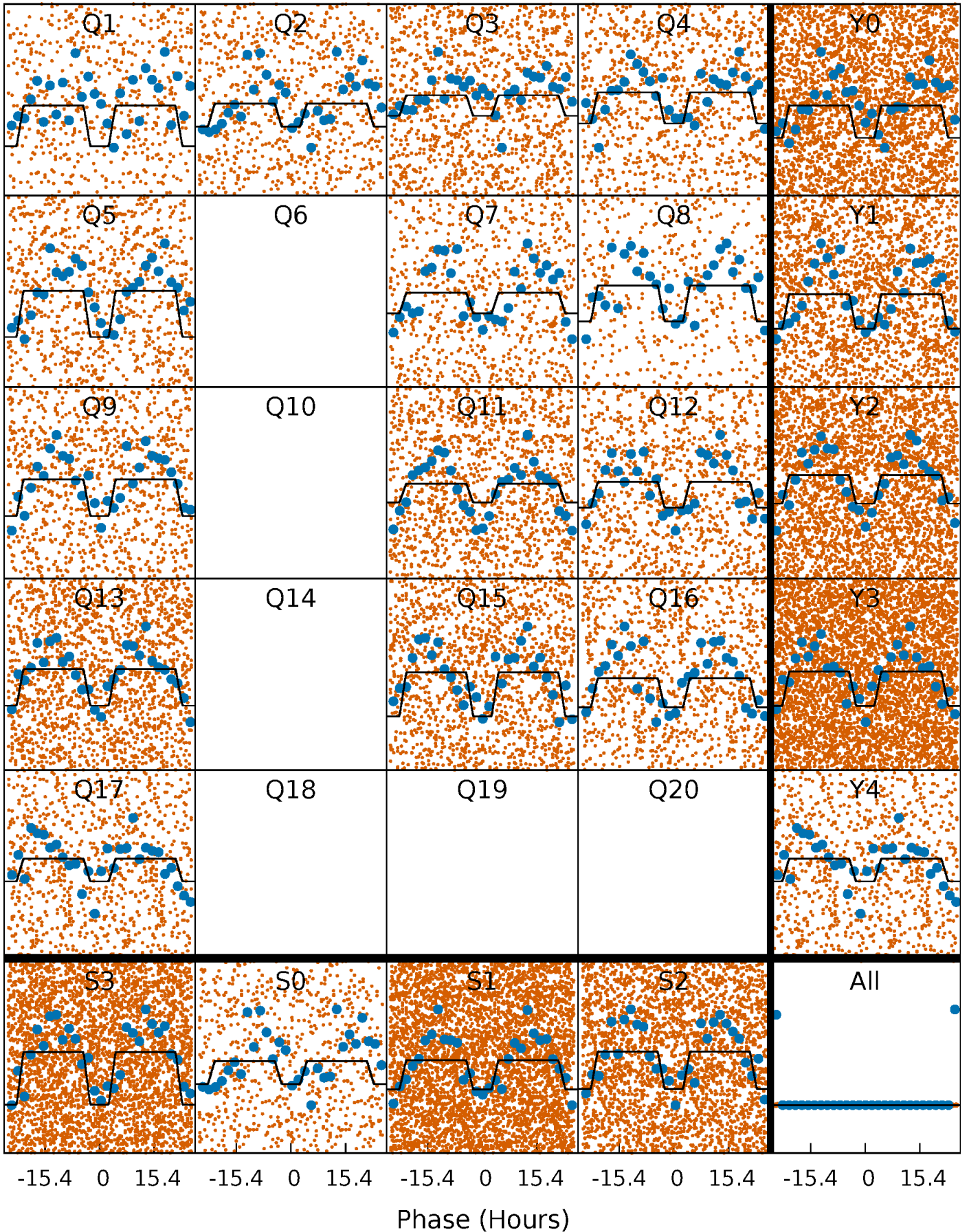
DV Quarter-Phased Transit Curves

TCE 004077006-01 P= 1.082915 Days $T_0=132.646801$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

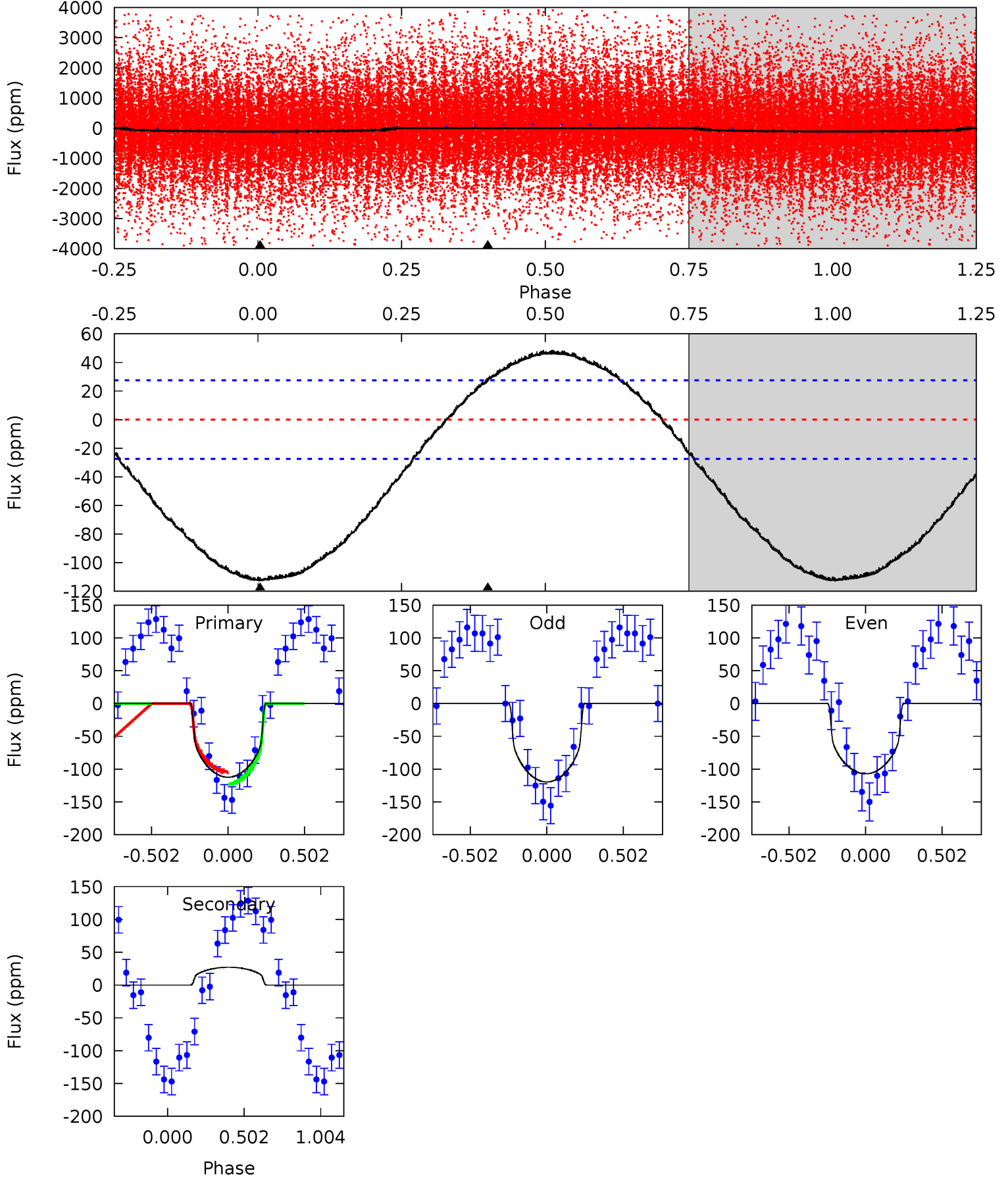
TCE 004077006-01 P= 1.083039 Days $T_0=132.540409$ (BKJD)



DV Model-Shift Uniqueness Test

004077006-01, P = 1.082915 Days, E = 130.480971 Days

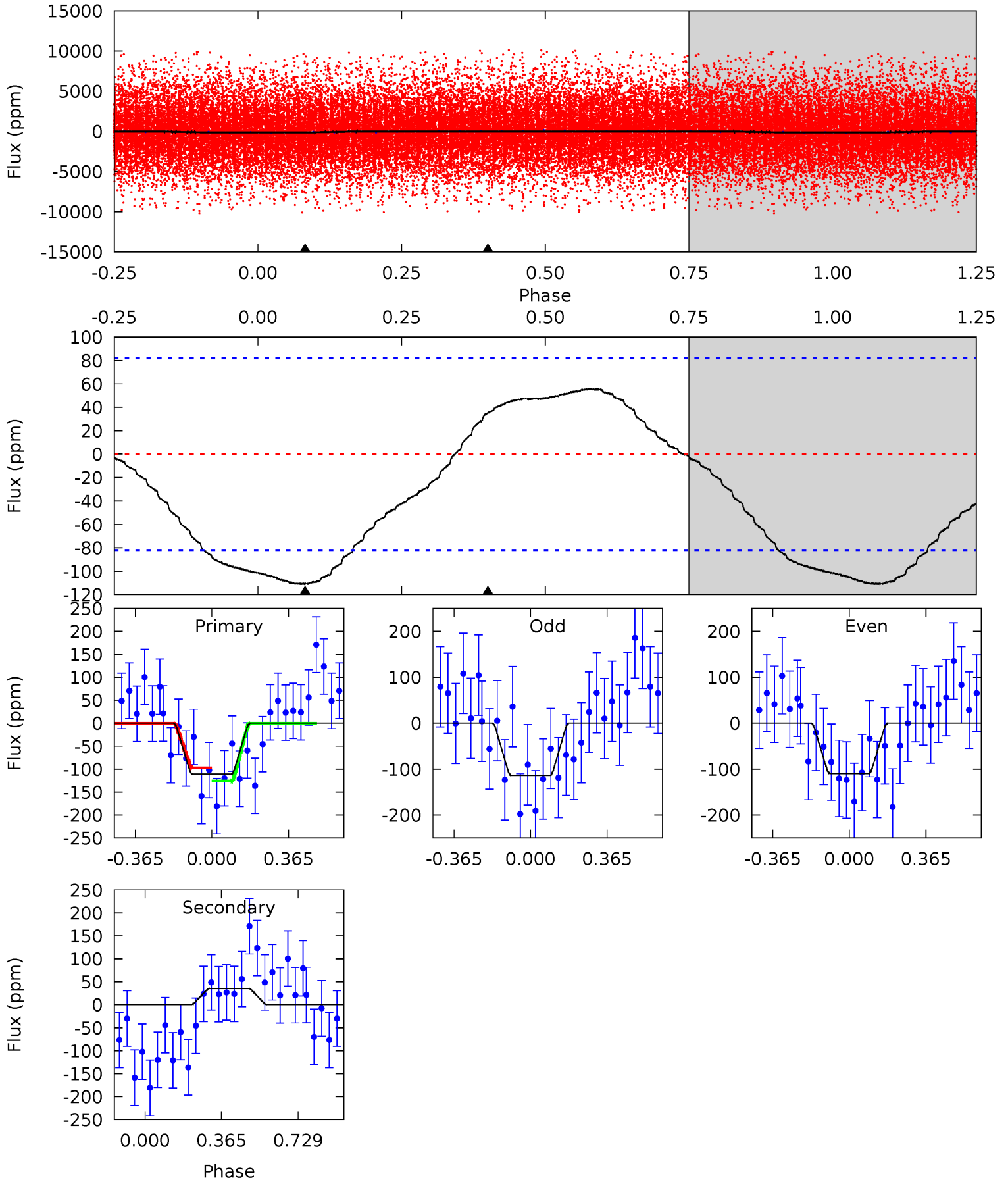
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	-4.17	0	0	4.21	0.67	2.09	17.2	17.2	-4.17	-4.17	0.96	1.11	0.30	1.45



Alt Model-Shift Uniqueness Test

004077006-01, P = 1.083039 Days, E = 131.457370 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.80	-1.84	0	0	4.29	0.91	0.51	5.80	5.80	-1.84	-1.84	0.11	1.24	0.33	0.75



Stellar Parameters For KIC 004077006

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6394^{+155}_{-214}	$4.207^{+0.209}_{-0.171}$	$-0.280^{+0.250}_{-0.300}$	$1.352^{+0.382}_{-0.313}$	$1.070^{+0.177}_{-0.129}$	$0.611^{+0.604}_{-0.306}$
	+2%/-3%	+5%/-4%	+89%/-107%	+28%/-23%	+17%/-12%	+99%/-50%
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 004077006-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	27 ± 7	$1.16^{+0.47}_{-0.47}$	3137^{+231}_{-232}	-5253^{+647}_{-1589}	$-4.696^{+2.303}_{-10.366}$
Alt.	35 ± 19	$1.58^{+0.55}_{-0.45}$	3115^{+236}_{-228}	-4881^{+699}_{-863}	$-3.307^{+2.011}_{-4.276}$

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 $A_{\text{obs}} \gg 1.0$

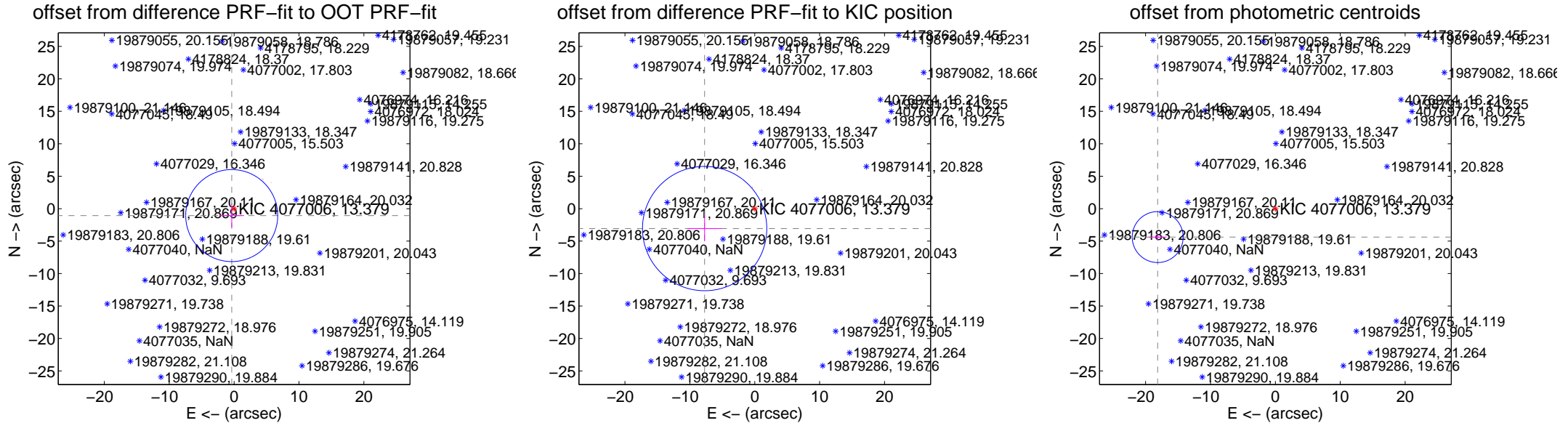
DV Centroid Data

Supplemental centroid analysis for 004077006-01. Kepler magnitude: 13.38. Transit SNR 12.22

There are 1 quarters with good PRF difference image offsets

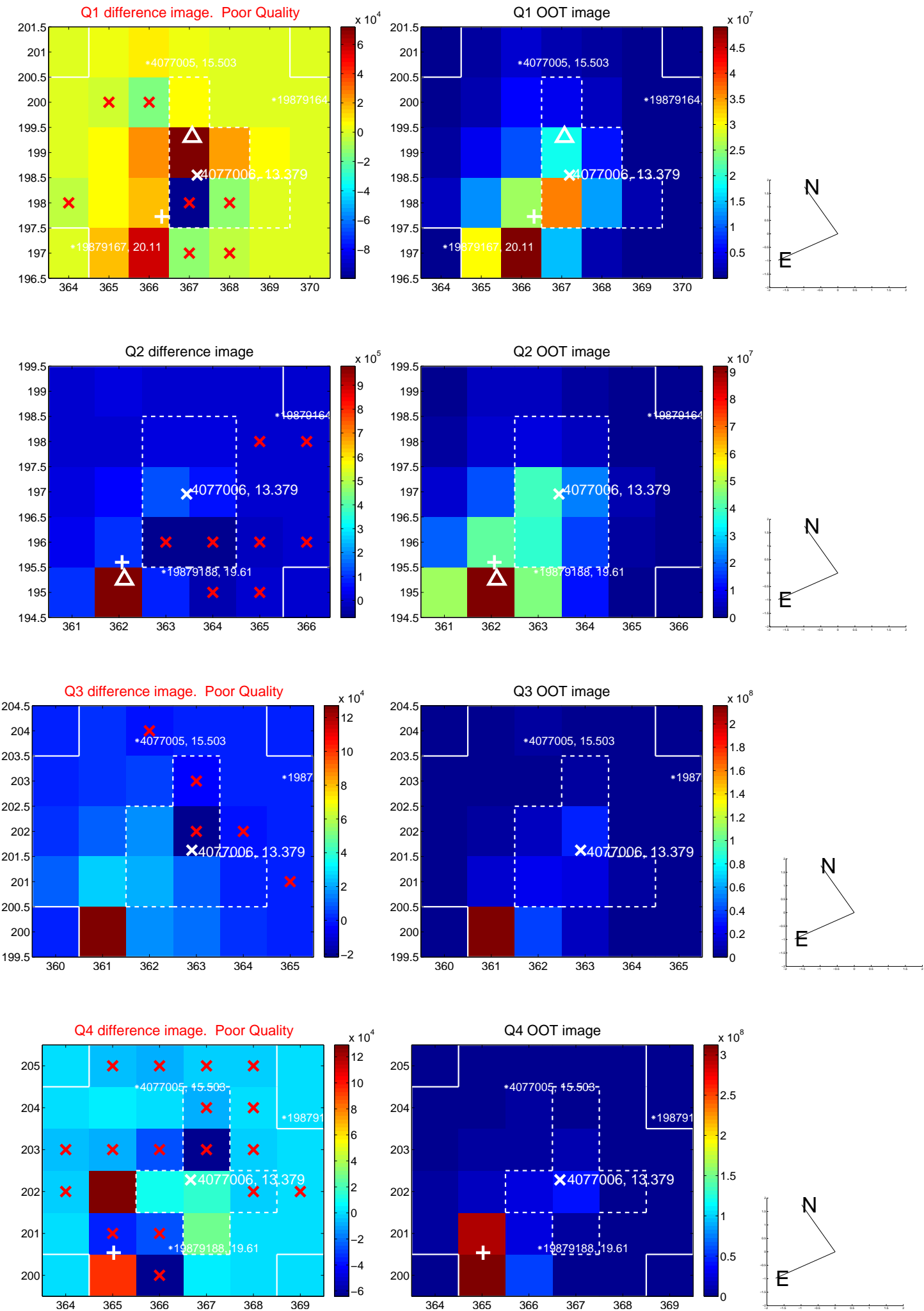
The OOT PRF centroid is offset from the target star catalog position by about 4.96 arcsec so the offset from difference PRF-fit to OOT-fit may be invalid.

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.128 ± 2.362	0.48	0.369 ± 1.919	-1.066 ± 1.841
PRF-fit source offset from KIC position	8.306 ± 3.191	2.60	7.720 ± 2.662	-3.066 ± 1.959
photometric centroid source offset	18.65 ± 1.31	14.26	18.13 ± 1.34	-4.37 ± 0.48

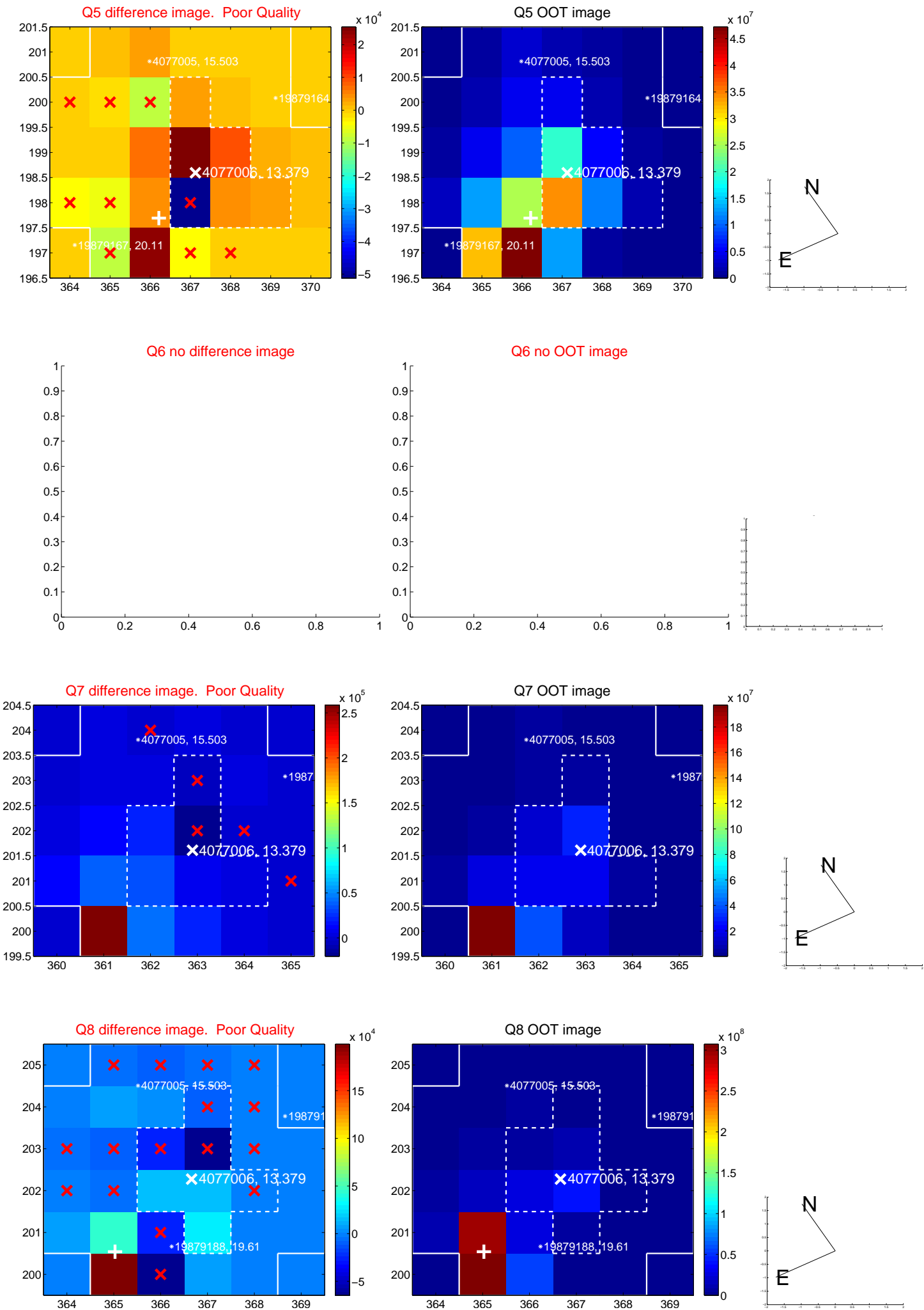


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

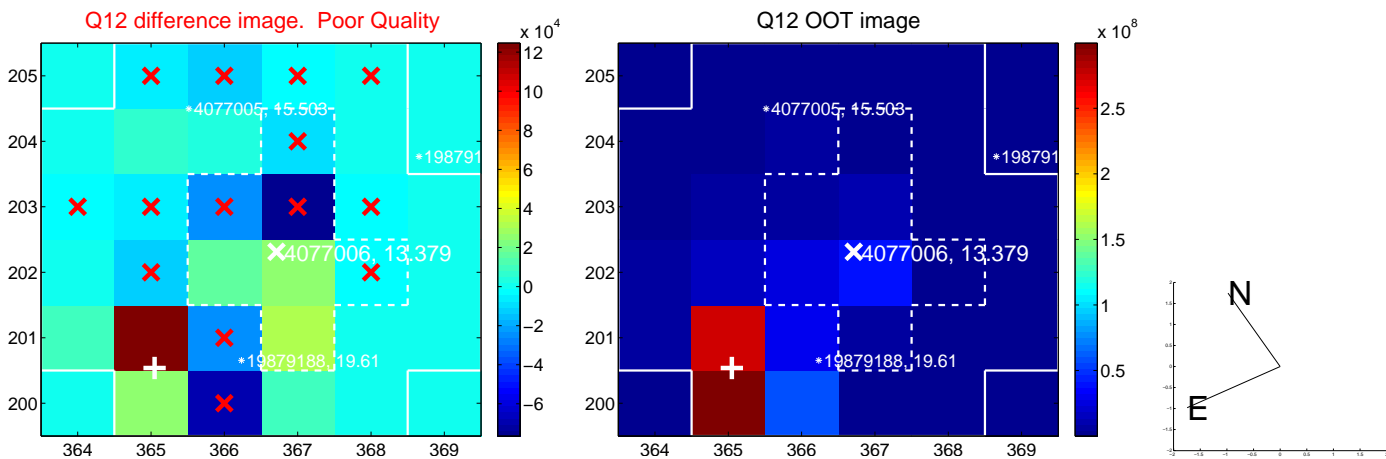
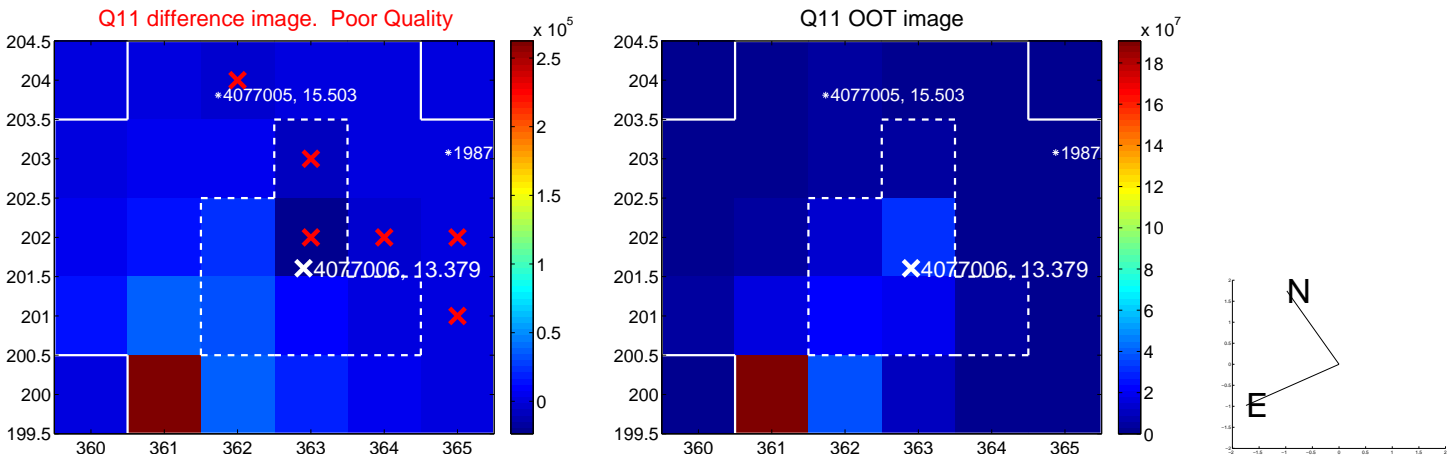
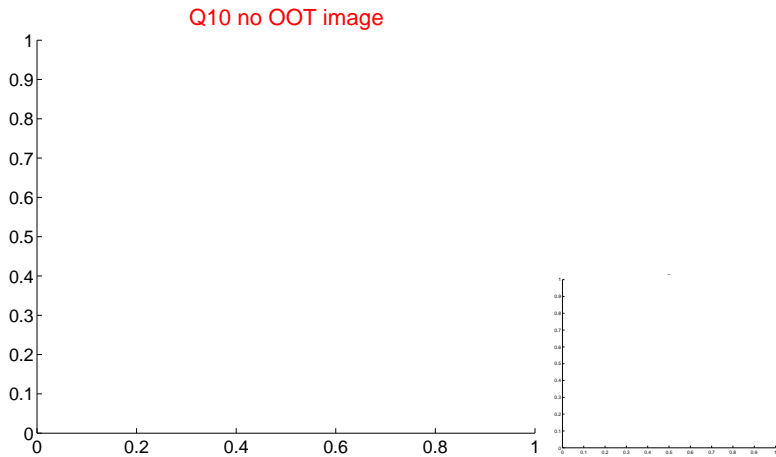
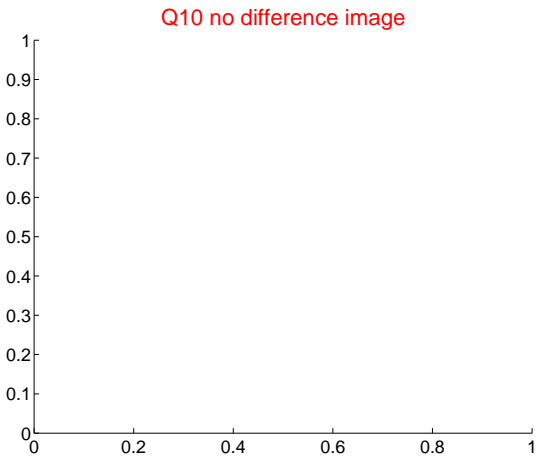
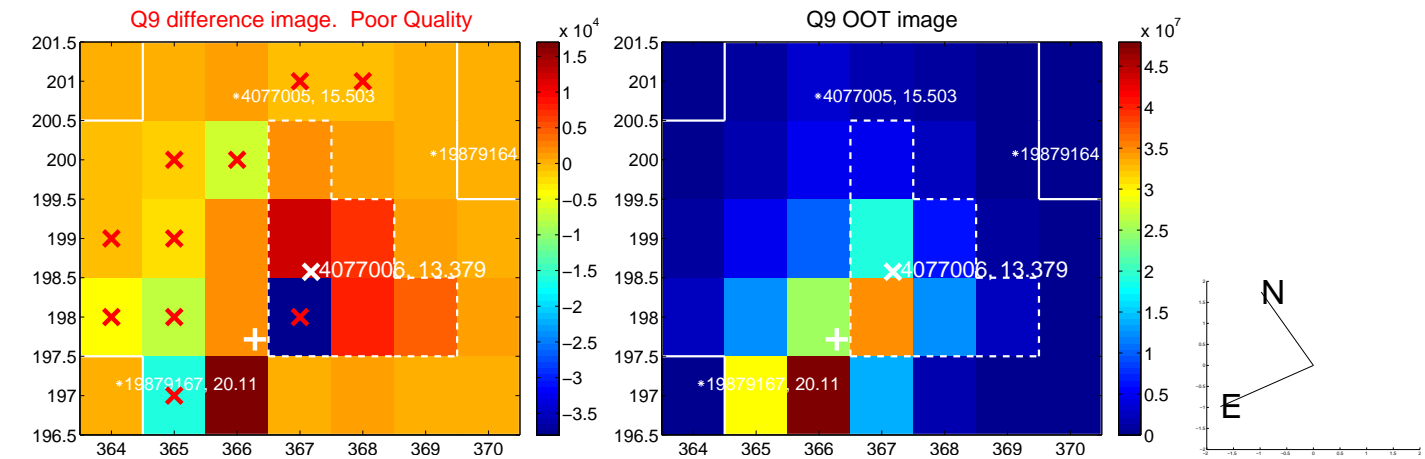
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



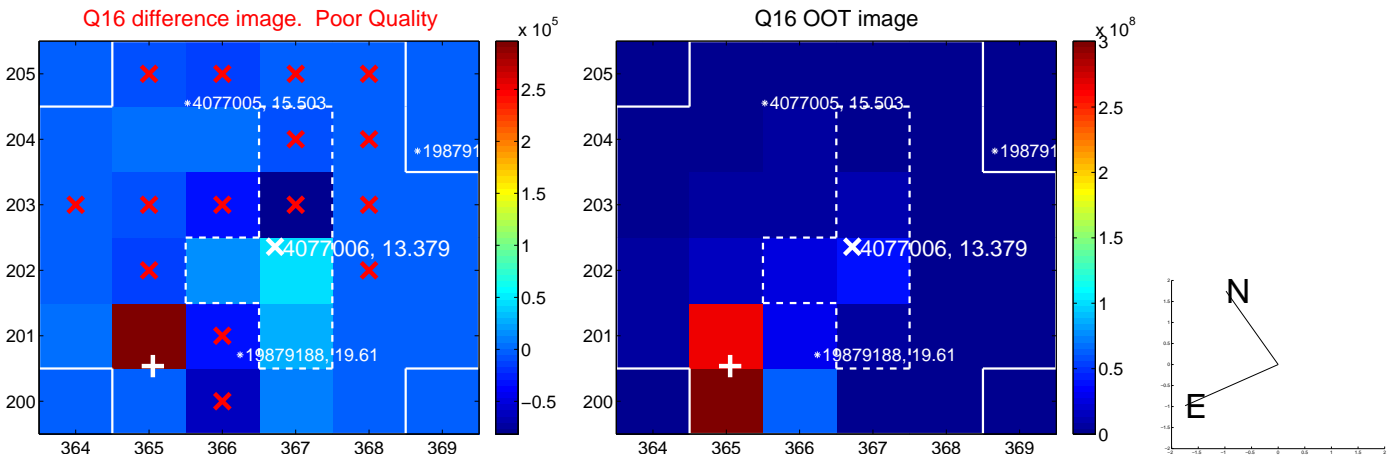
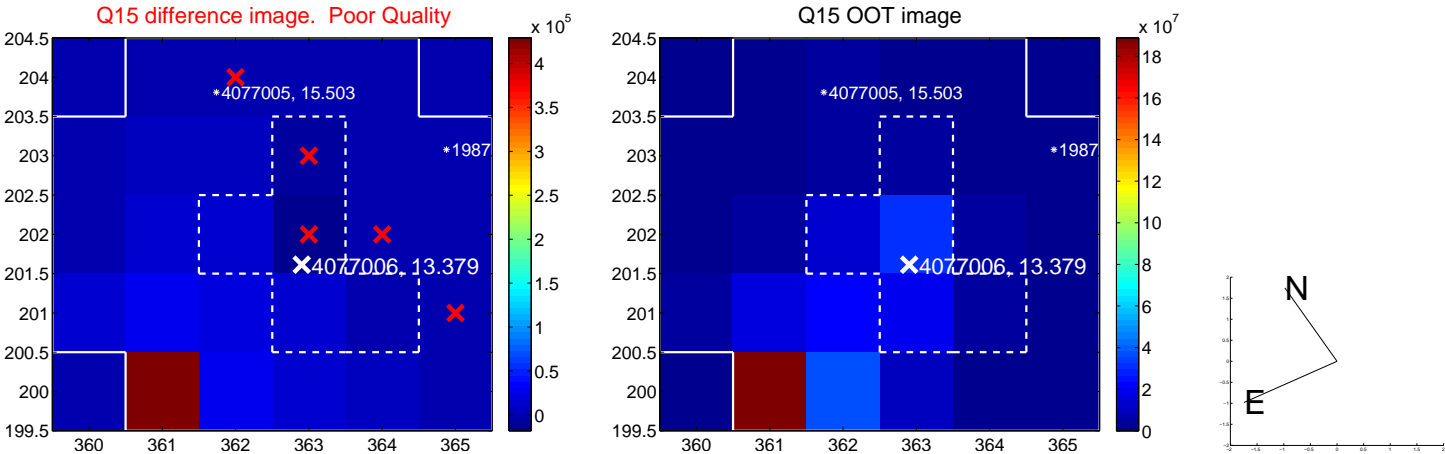
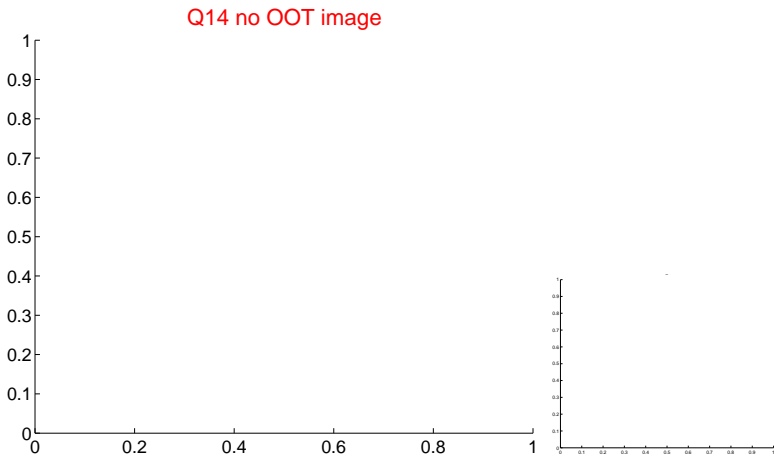
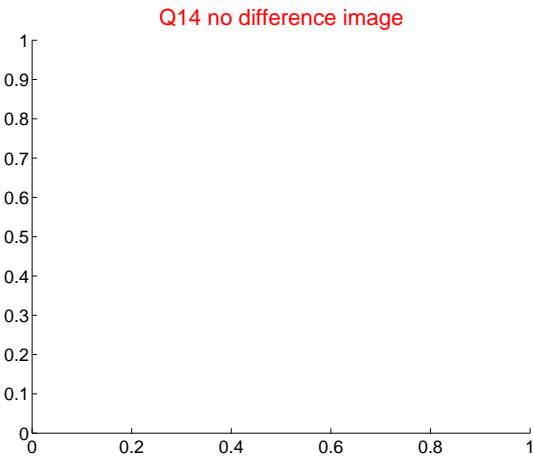
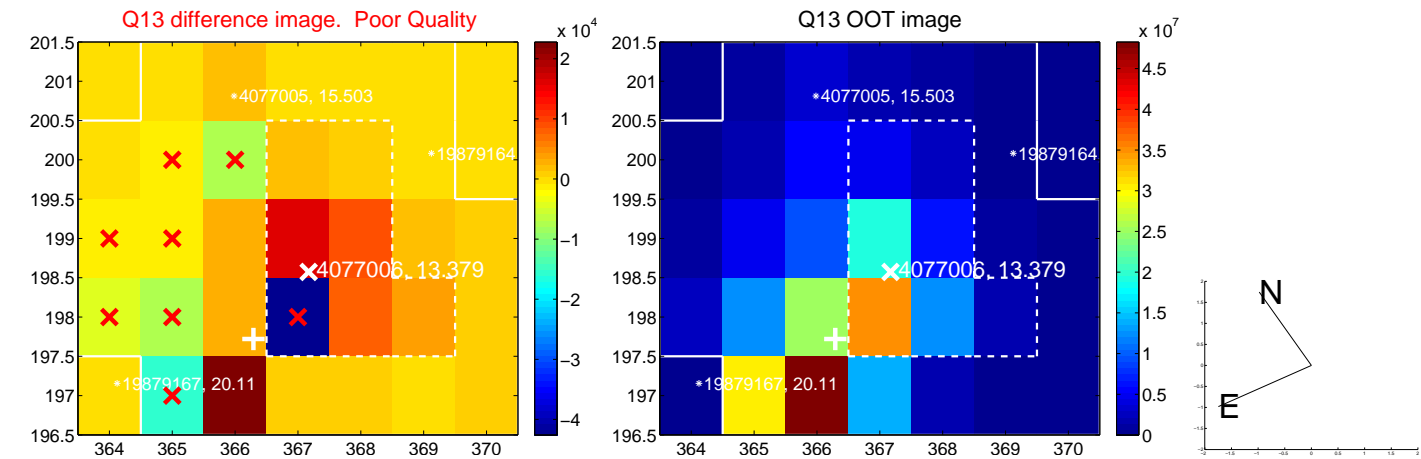
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



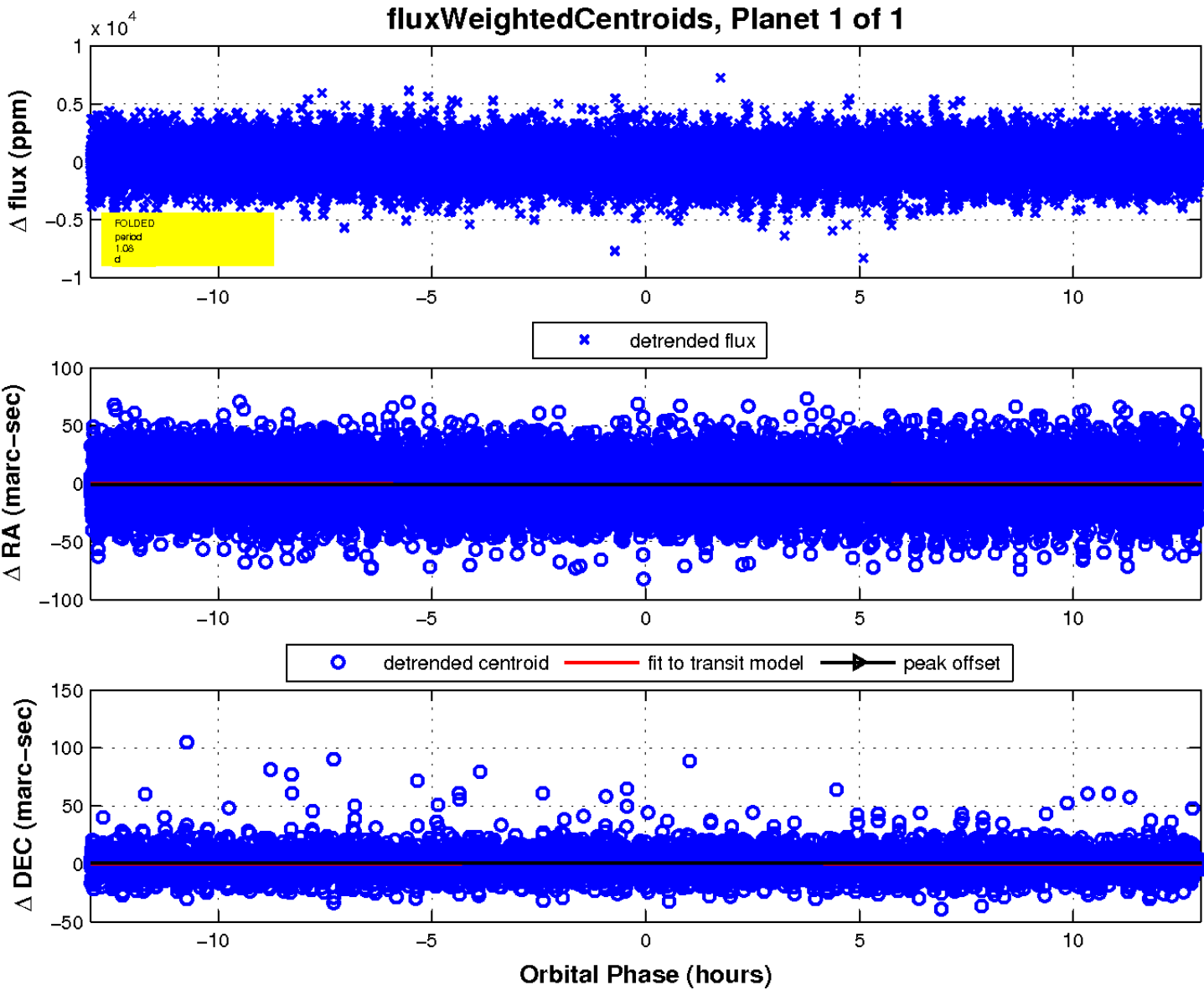
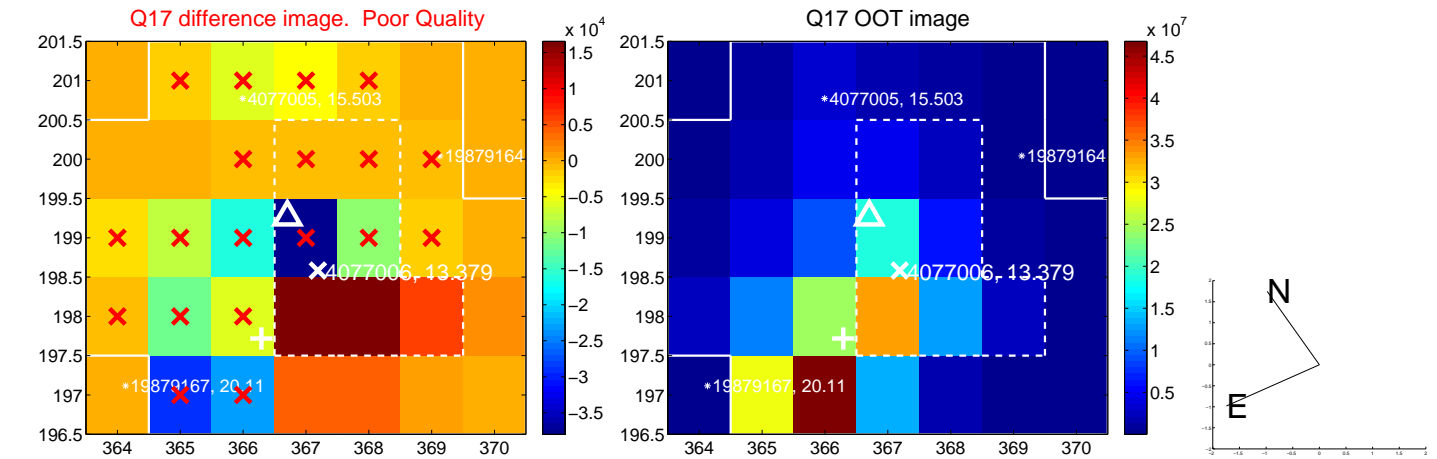
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UKIRT Image

Declination

