

KIC 006781047

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})
006781047-01	OBS	6768.01	7.043183	136.188797	17.6	24.601	9.0	9.5	1.54	6183	0.72	568.98

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006781047-01	OBS	FP	0.00	1	0	0	0	LPP_DV

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

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

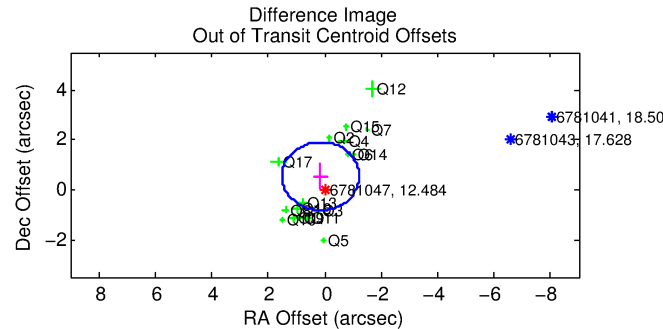
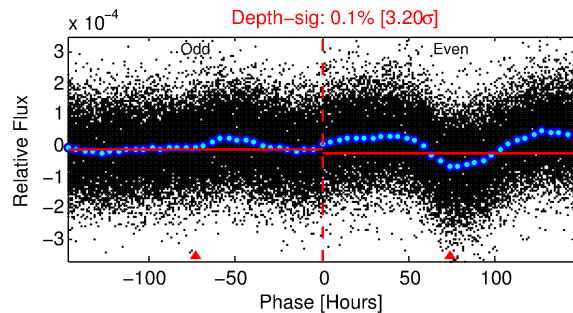
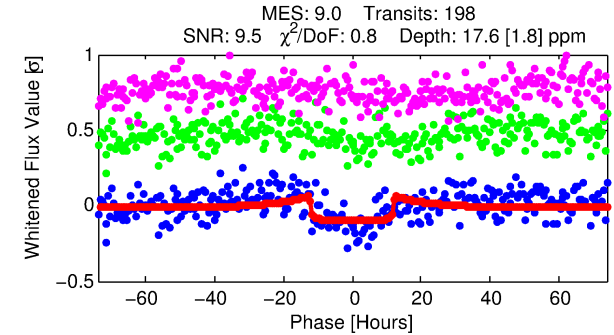
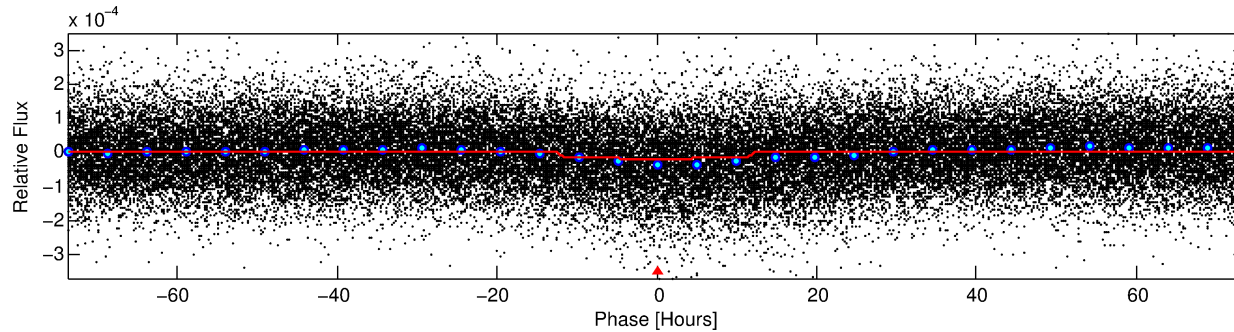
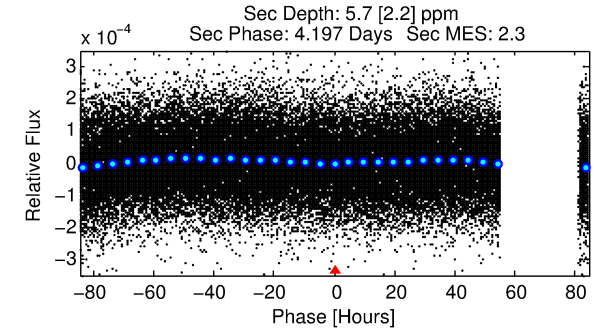
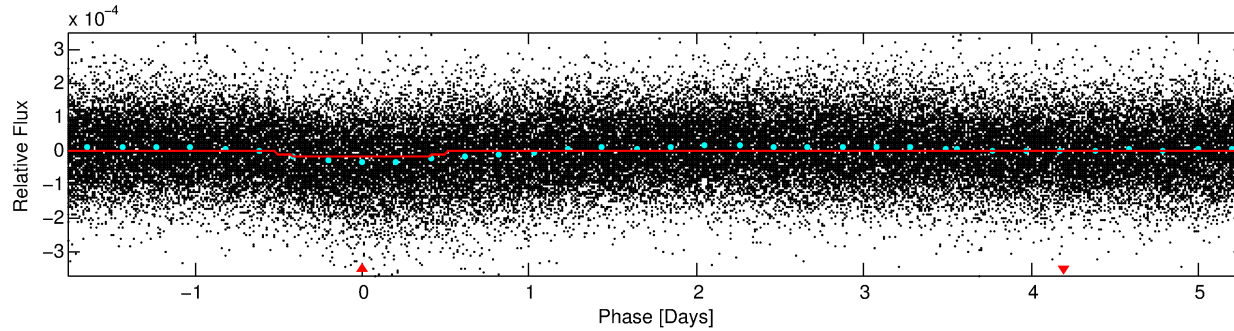
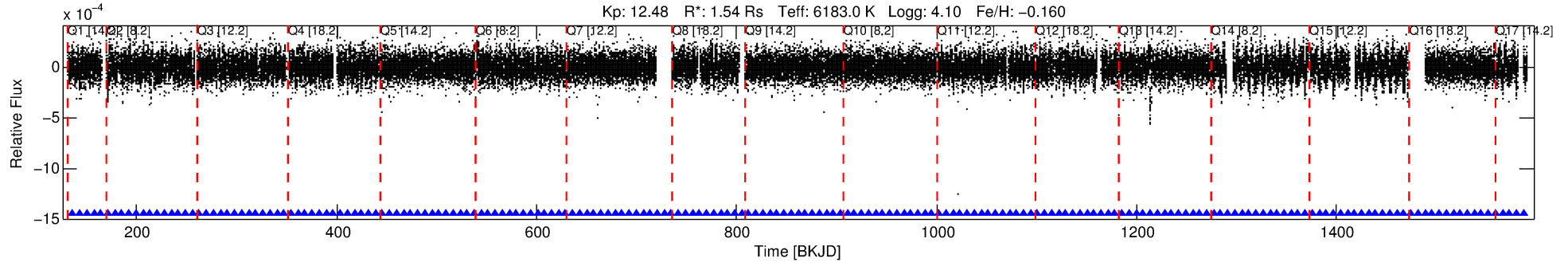
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006781047-01

No Significant Match Found

DV One-Page Summary

KIC: 6781047 Candidate: 1 of 1 Period: 7.043 d
KOI: K06768.01 Corr: 0.789



DV Fit Results:

Period = 7.04318 [0.00014] d
Epoch = 136.1888 [0.0147] BKJD
Rp/R* = 0.0043 [0.0006]
a/R* = 1.59 [0.67]
b = 0.80 [0.31]
Seff = 568.98 [292.69]
Teq = 1245 [160] K
Rp = 0.72 [0.24] Re
a = 0.0741 [0.0225] AU
Ag = 33.34 [22.98] [1.41σ]
Teffp = 4627 [580] K [5.62σ]

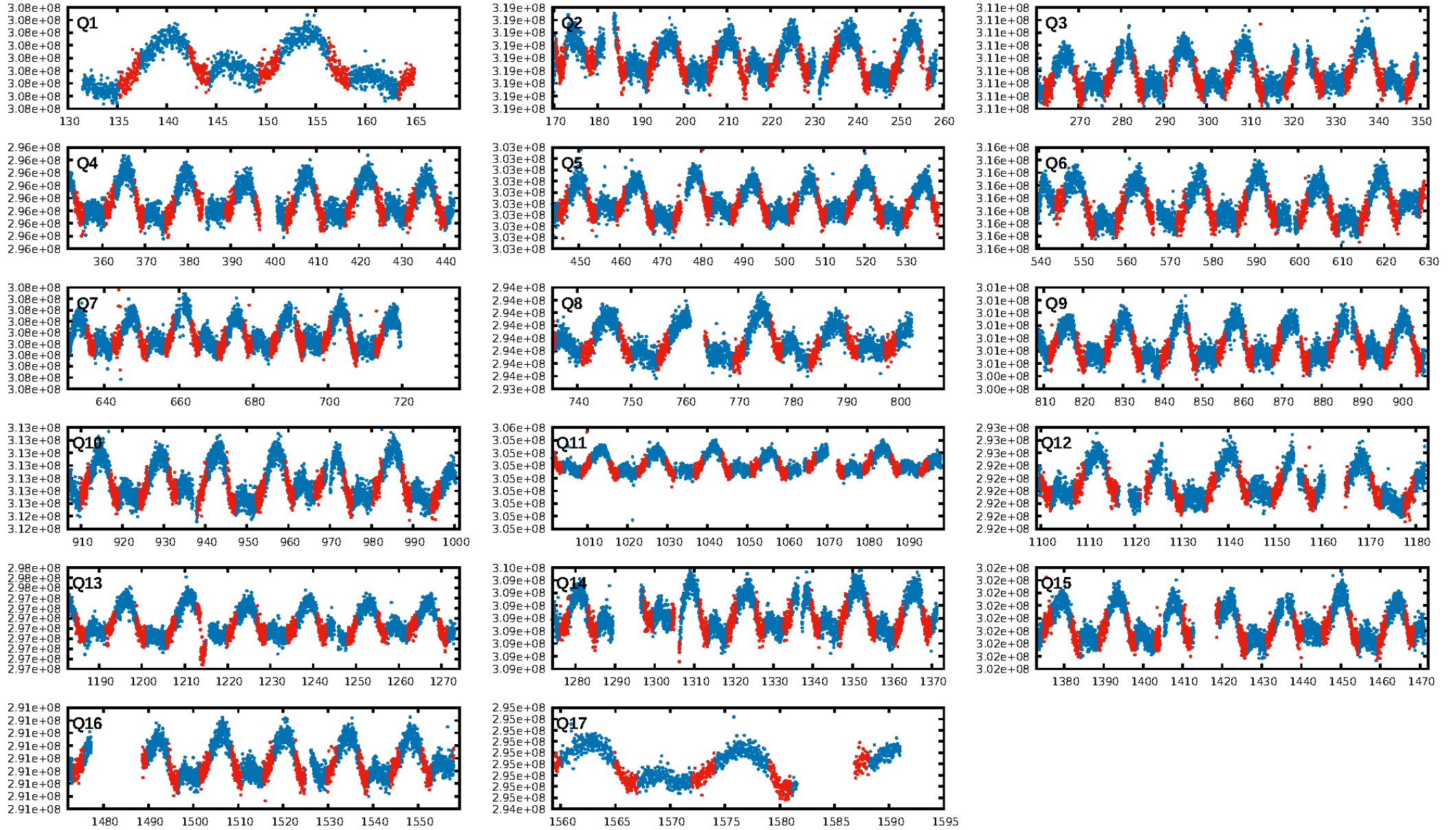
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.36e-19
RollingBand-fgt: 1.00 [188/188]
GhostDiagnostic-chr: 0.855
Centroid-sig: 1.3%
Centroid-so: 1.724 arcsec [1.87σ]
OotOffset-rm: 0.556 arcsec [1.22σ]
KicOffset-rm: 0.609 arcsec [1.34σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.82 [14/17]
DiffImageOverlap-fno: 1.00 [17/17]

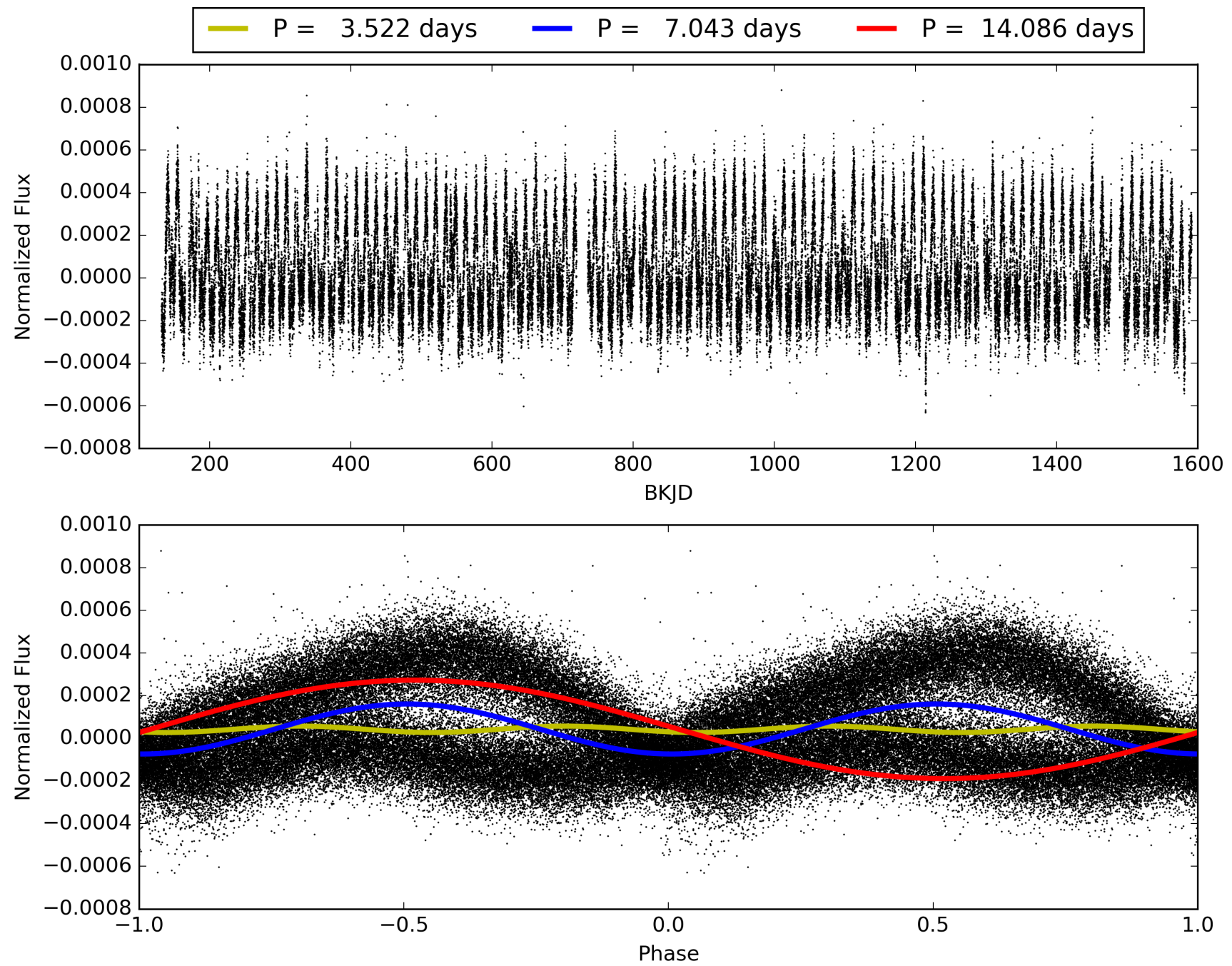
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 03:36:04 Z

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

TCE 006781047-01, PDC Light Curves

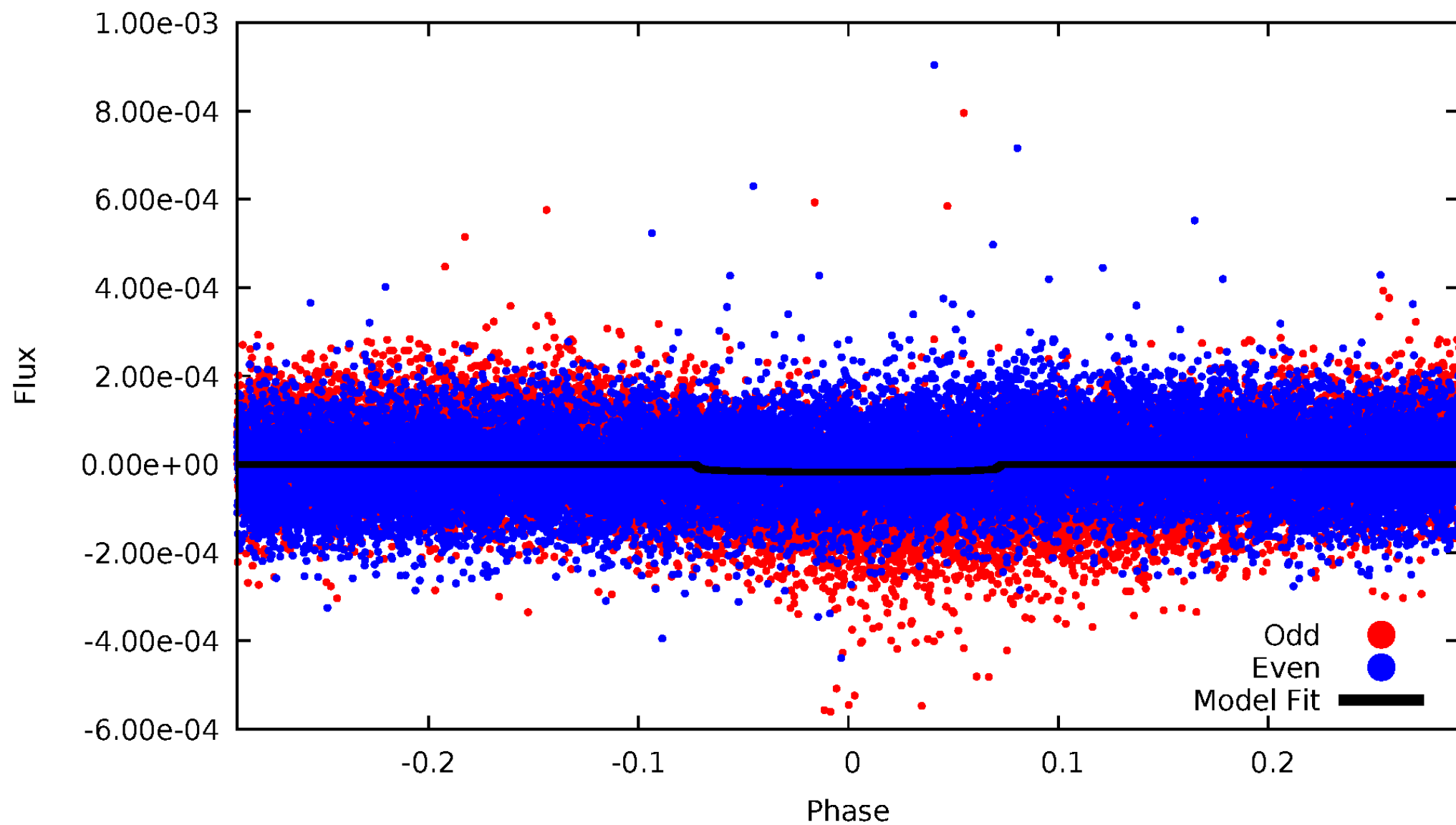


TCE 006781047-01



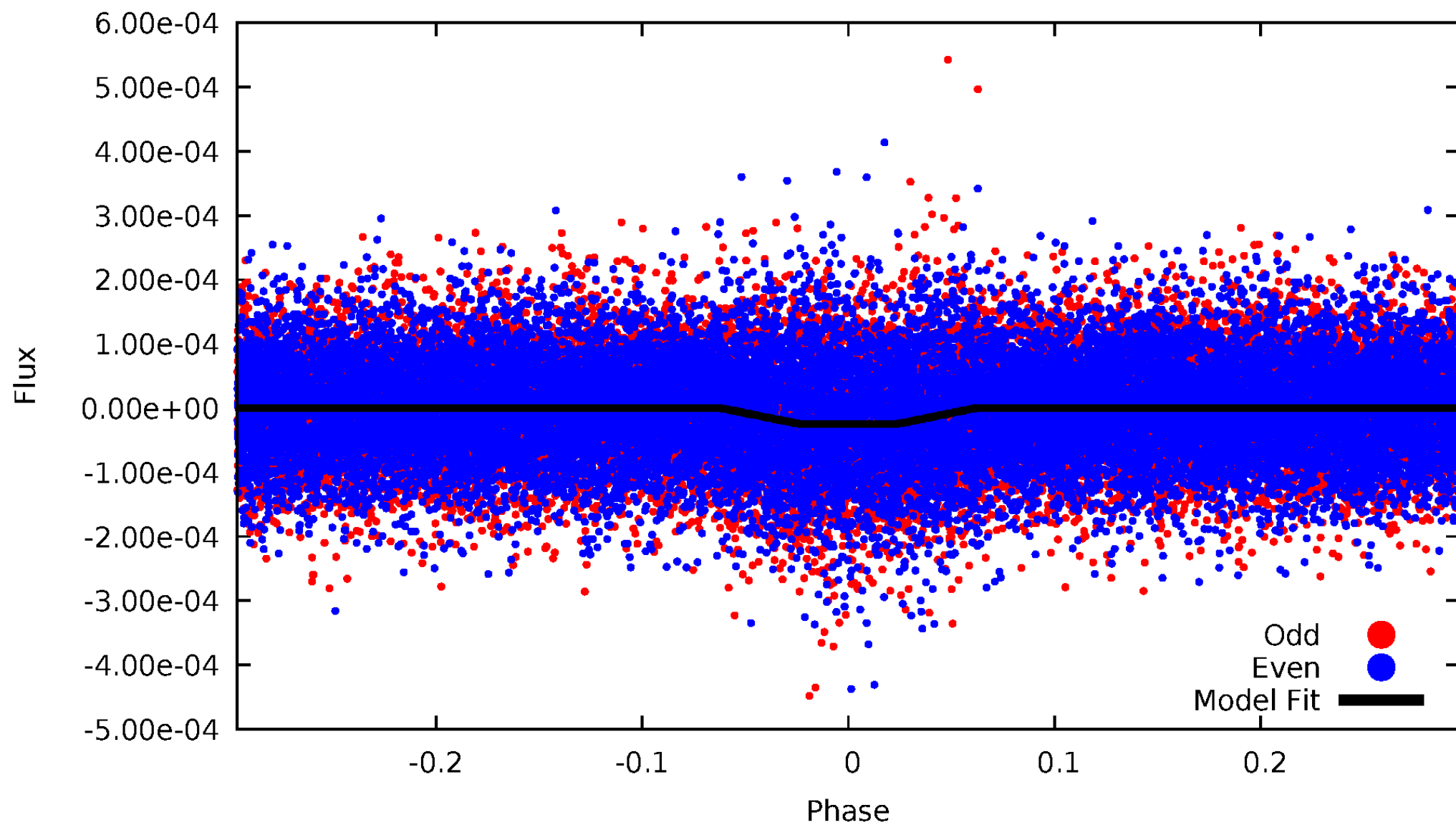
DV Odd/Even

TCE 006781047-01

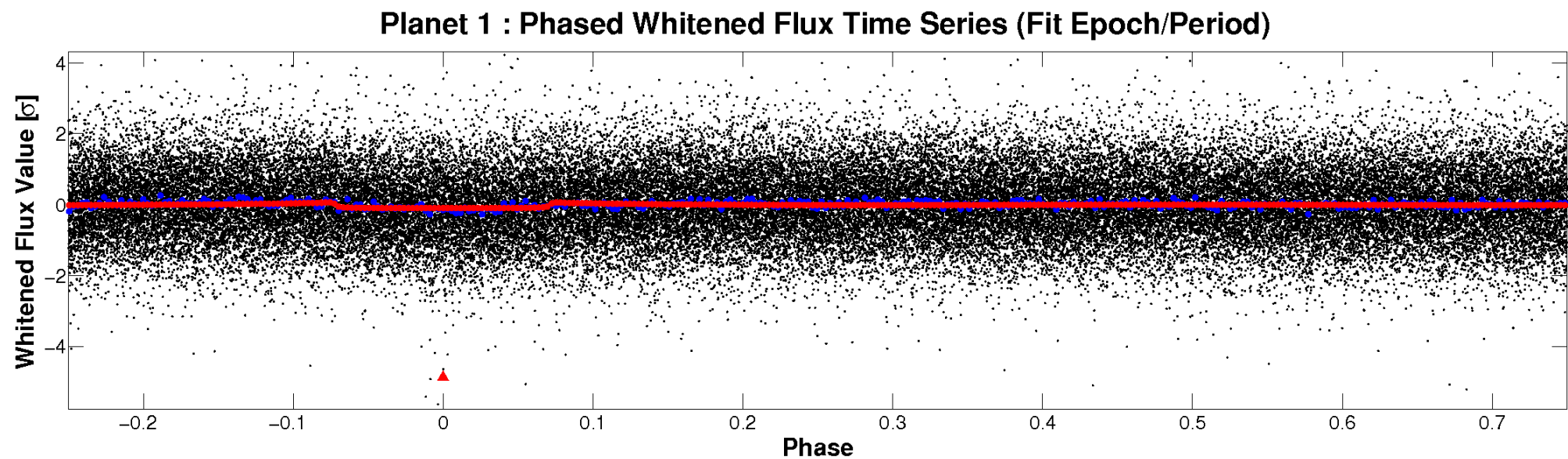
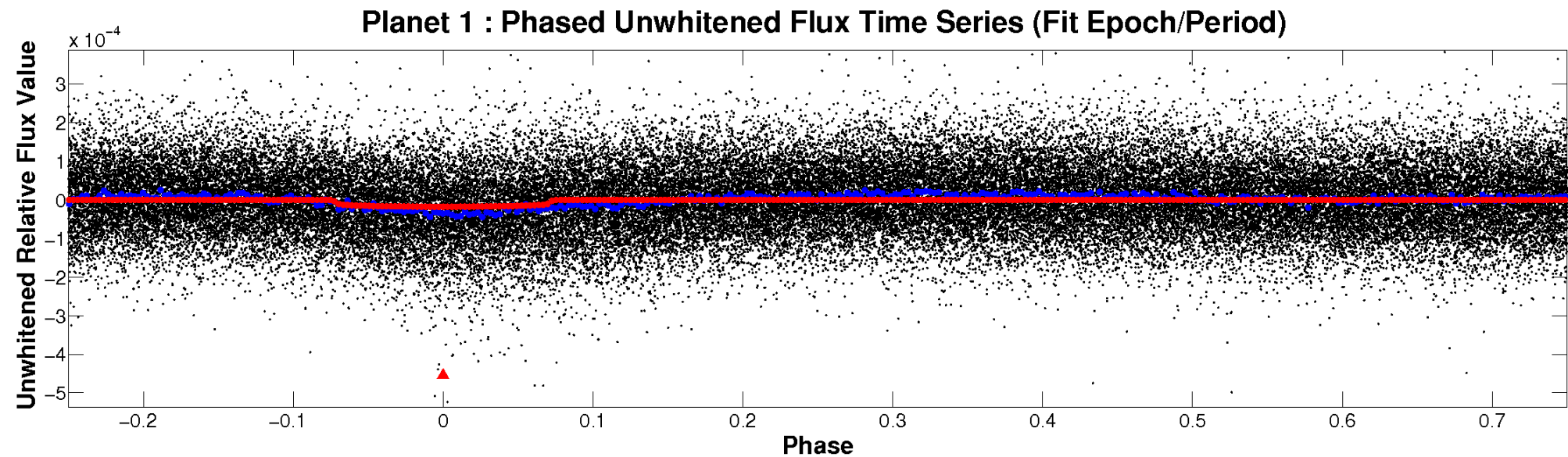


ALT Odd/Even

TCE 006781047-01

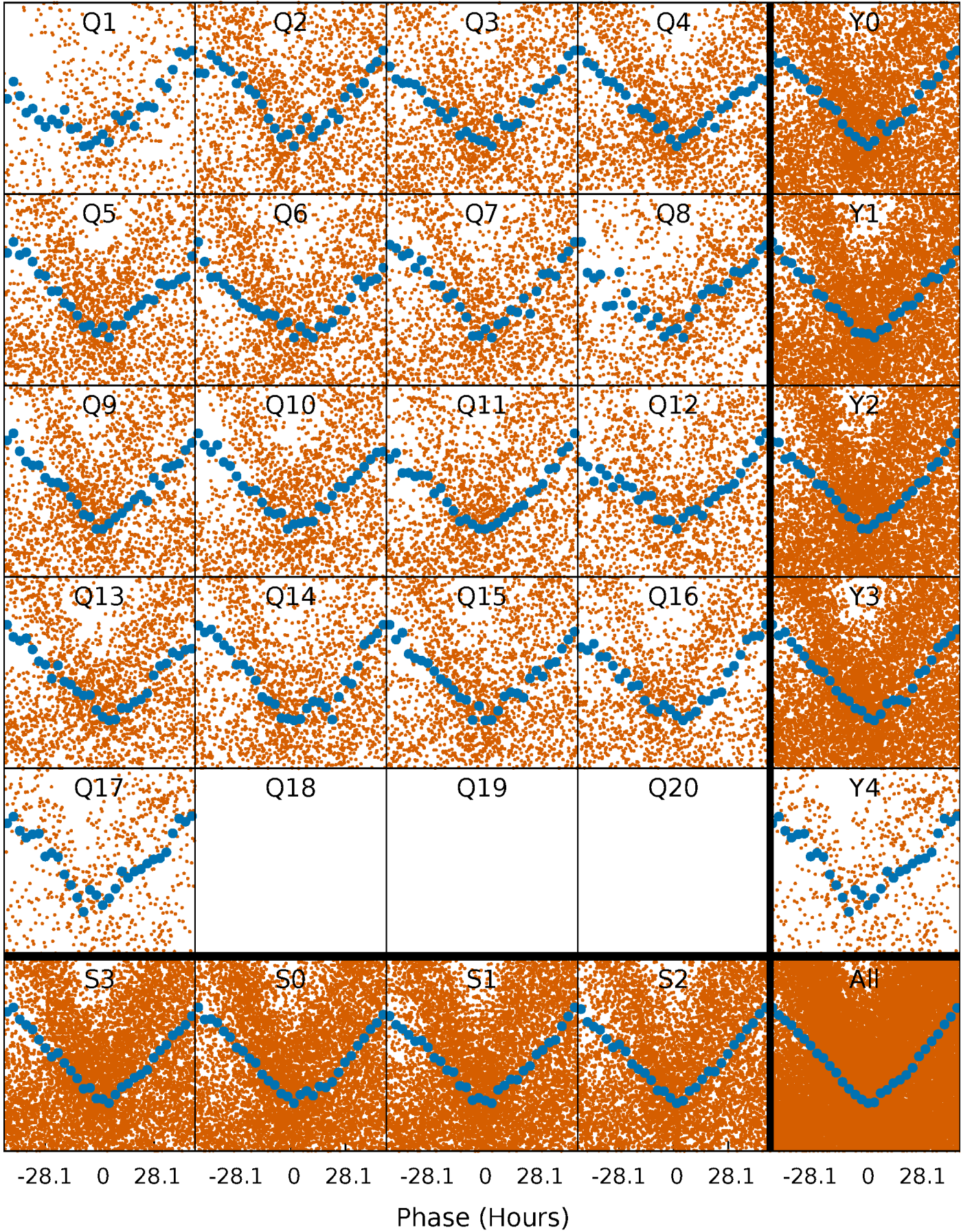


Non-Whitened Vs. Whitened Light Curve



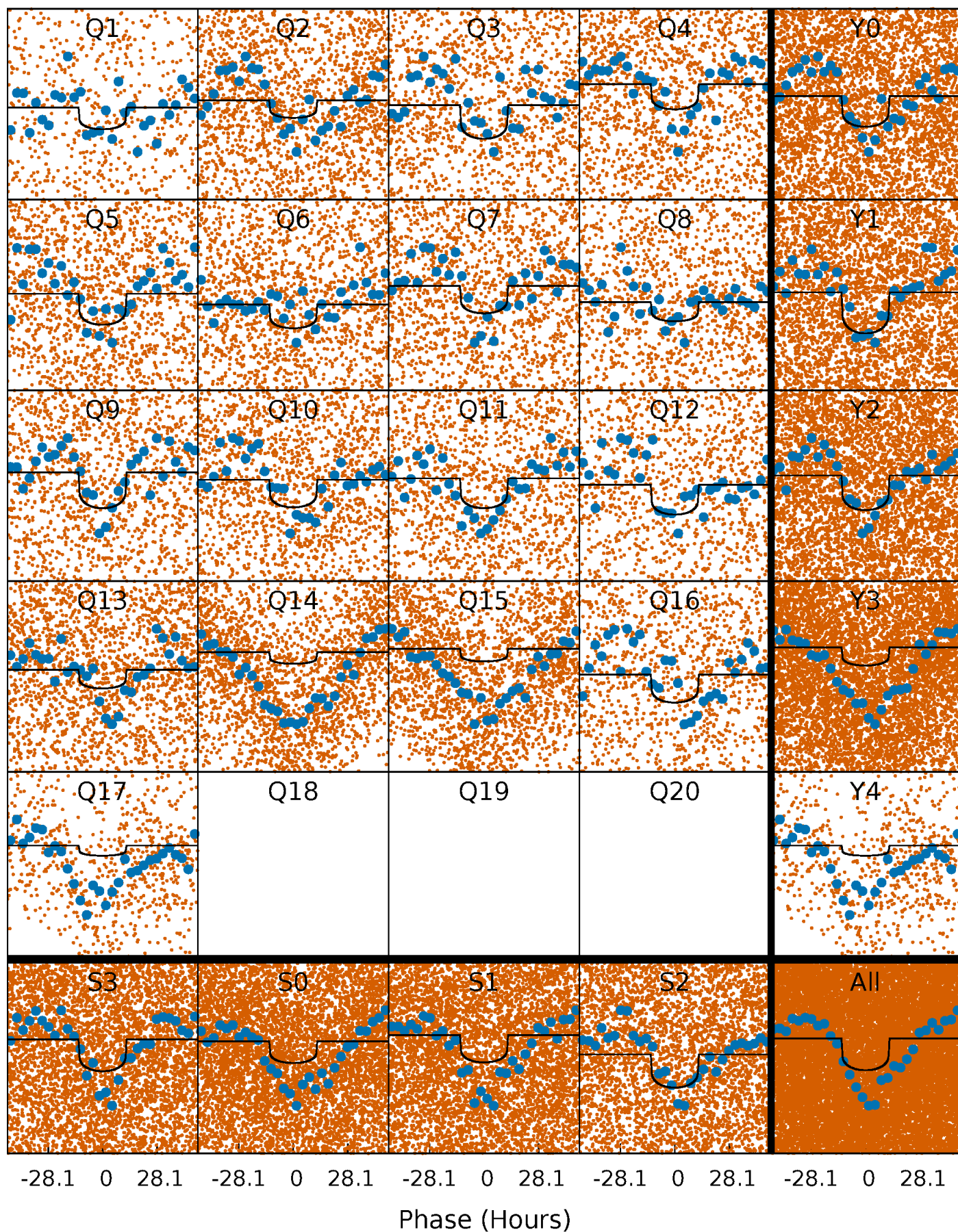
PDC Quarter-Phased Transit Curves

TCE 006781047-01 P= 7.043183 Days $T_0=136.188797$ (BKJD)



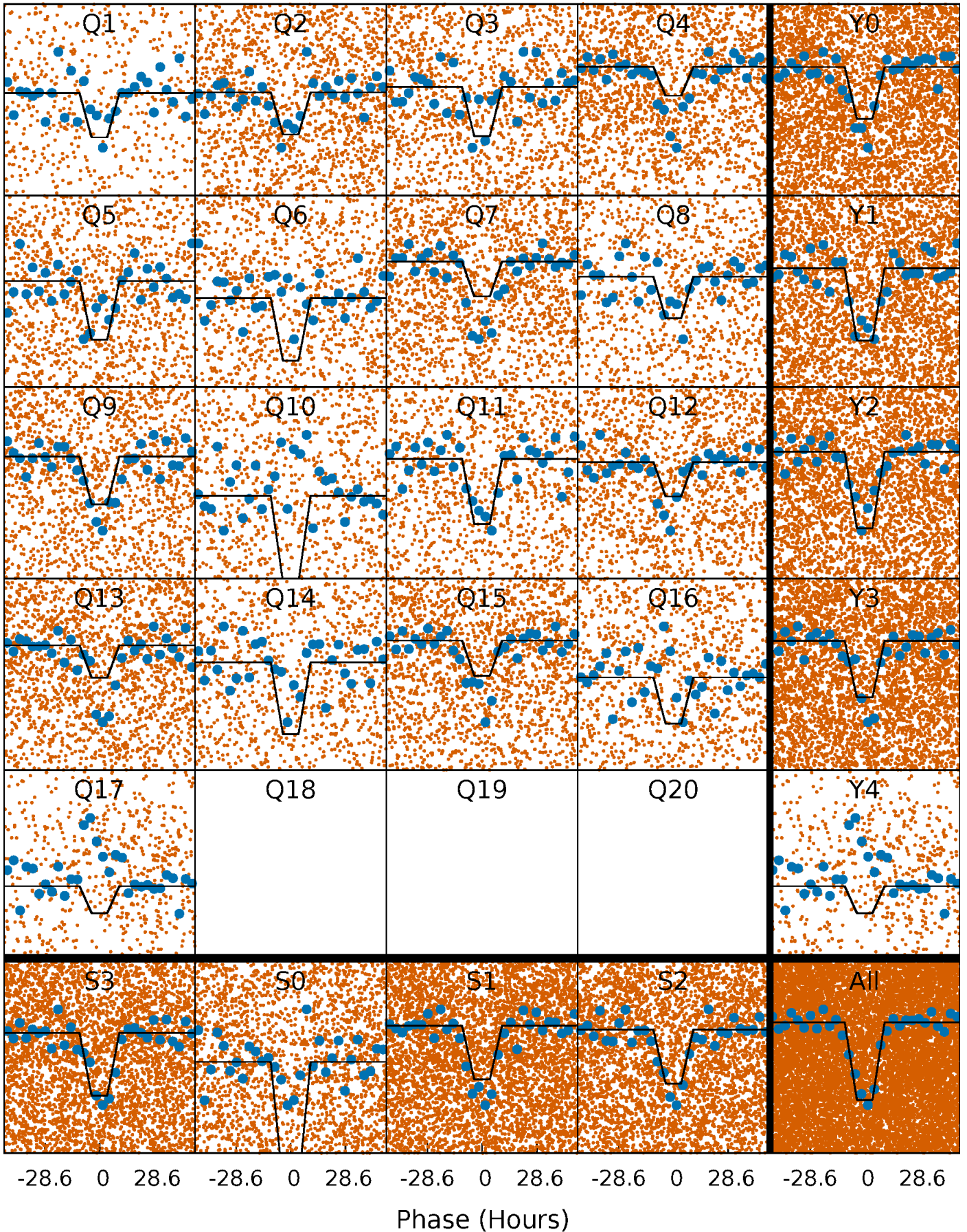
DV Quarter-Phased Transit Curves

TCE 006781047-01 P= 7.043183 Days $T_0=136.188797$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

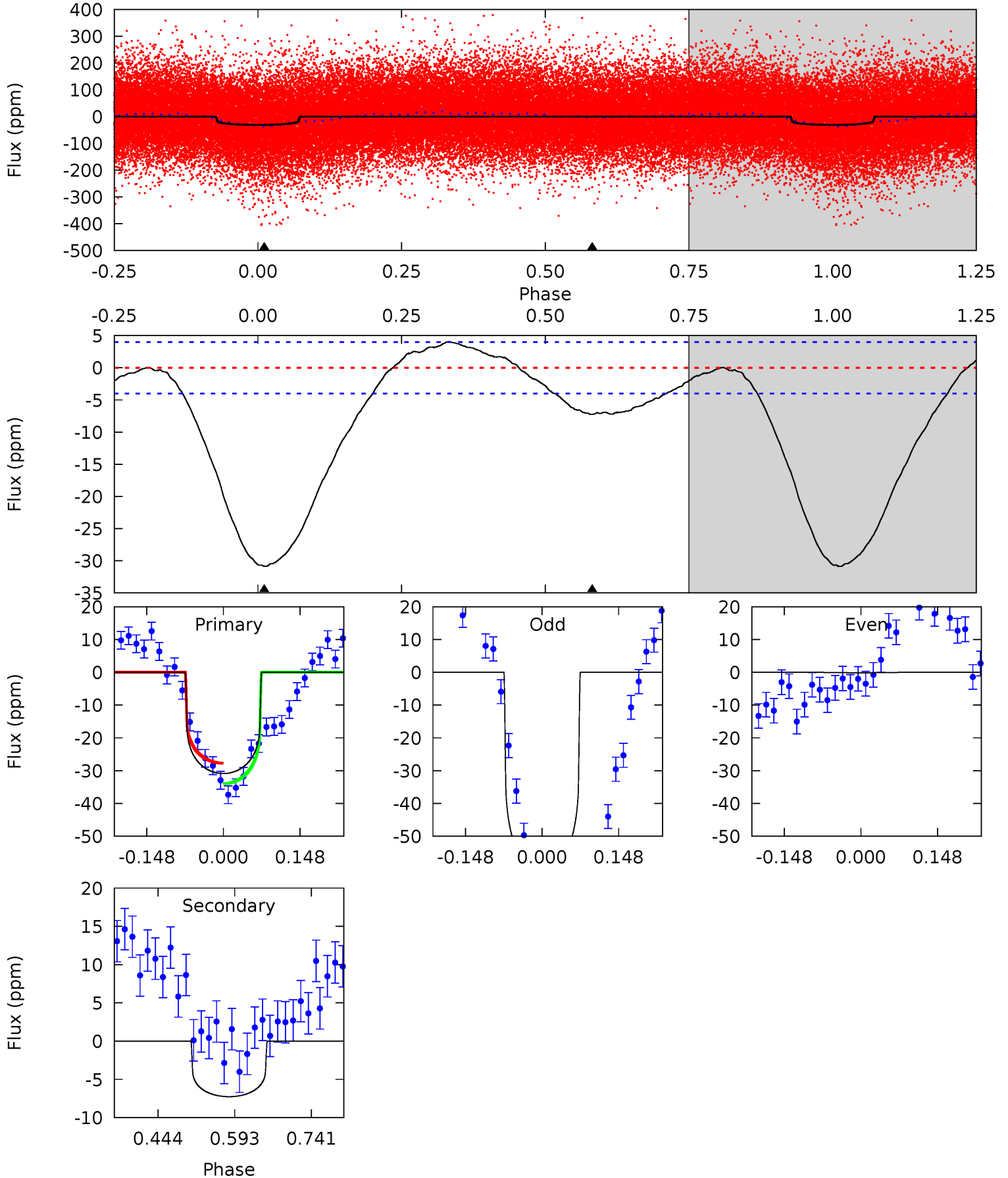
TCE 006781047-01 P= 7.043980 Days $T_0=136.119299$ (BKJD)



DV Model-Shift Uniqueness Test

006781047-01, P = 7.043183 Days, E = 129.145614 Days

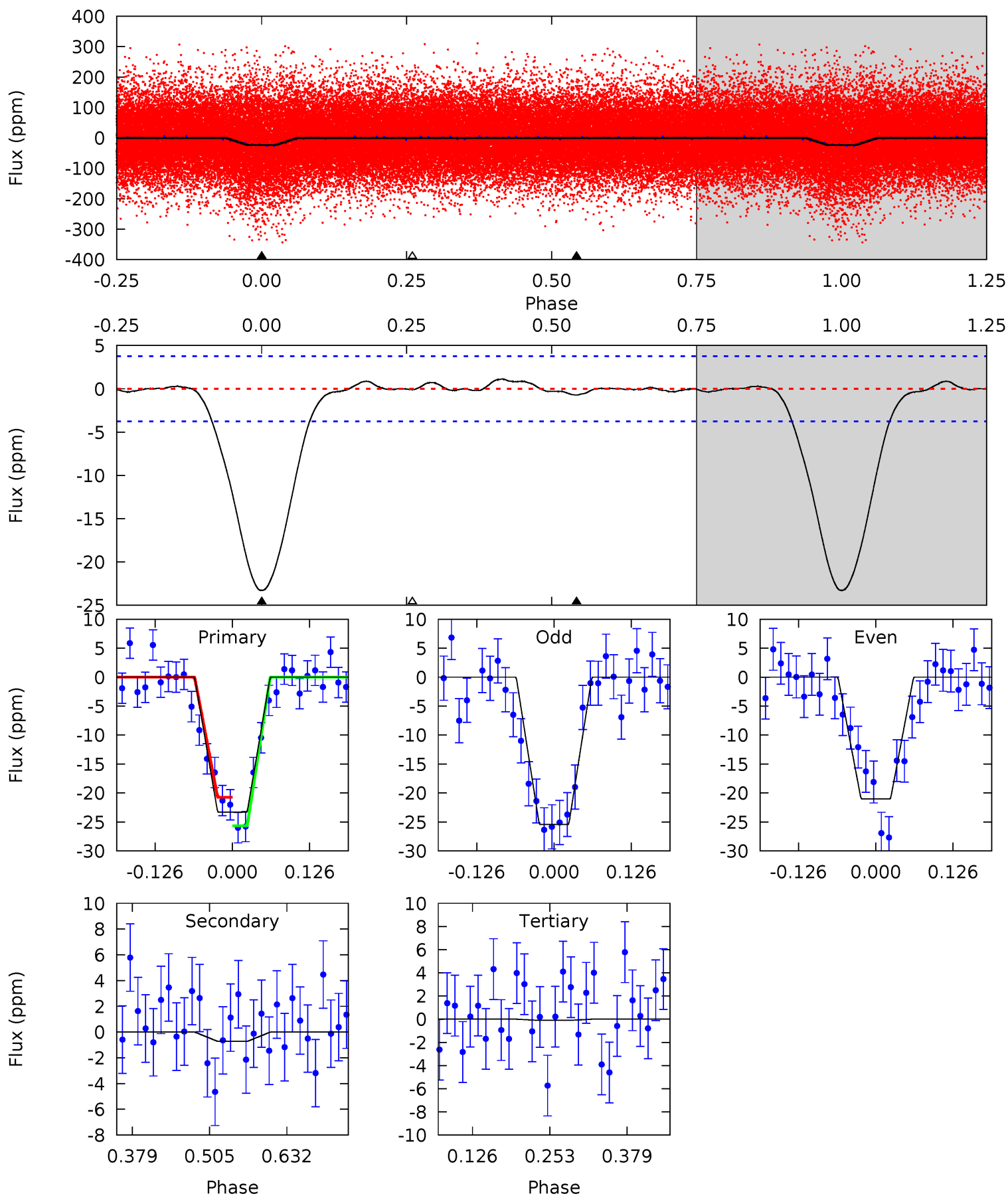
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
34.6	8.13	0	0	4.48	1.45	3.46	34.6	34.6	8.13	8.13	34.0	1.19	0.12	3.51



Alt Model-Shift Uniqueness Test

006781047-01, P = 7.043980 Days, E = 129.075319 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.0	0.87	0.12	0	4.52	1.53	0.42	27.9	28.0	0.75	0.87	2.67	0.18	0.05	2.97



Stellar Parameters For KIC 006781047

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6183^{+221}_{-221}	$4.099^{+0.293}_{-0.158}$	$-0.160^{+0.300}_{-0.300}$	$1.544^{+0.427}_{-0.474}$	$1.091^{+0.181}_{-0.148}$	$0.418^{+0.783}_{-0.178}$
	+4%/-4%	+7%/-4%	+188%/-188%	+28%/-31%	+17%/-14%	+187%/-43%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 006781047-01 / KOI 6768.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-7 ± 1	$0.69^{+0.15}_{-0.14}$	1716^{+141}_{-149}	5017^{+447}_{-316}	47^{+28}_{-15}
Alt.	-1 ± 1	$0.81^{+0.17}_{-0.16}$	1718^{+148}_{-150}	3127^{+438}_{-5799}	$3.301^{+4.537}_{-4.037}$

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 $A_{obs} \gg 1.0$

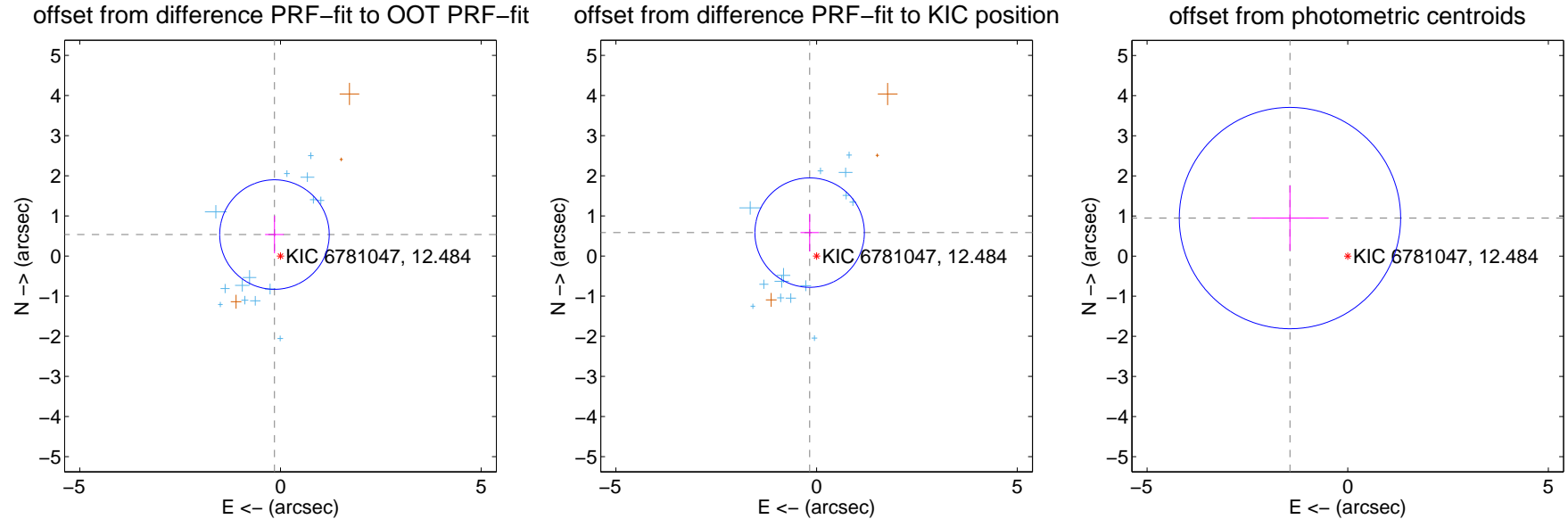
DV Centroid Data

Supplemental centroid analysis for 006781047-01. Kepler magnitude: 12.48. Transit SNR 9.46

There are 14 quarters with good PRF difference image offsets

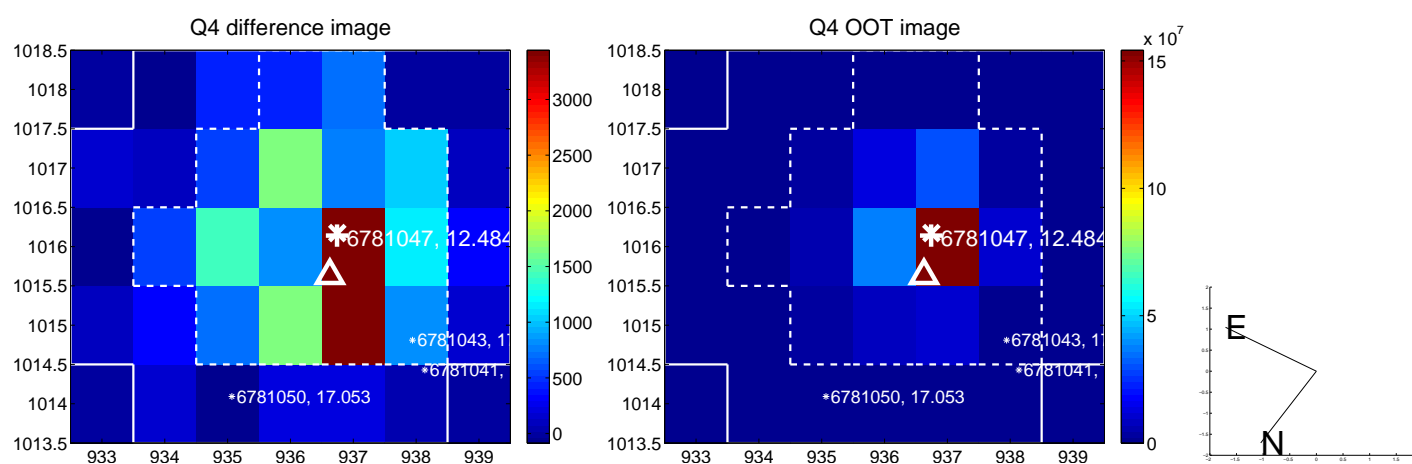
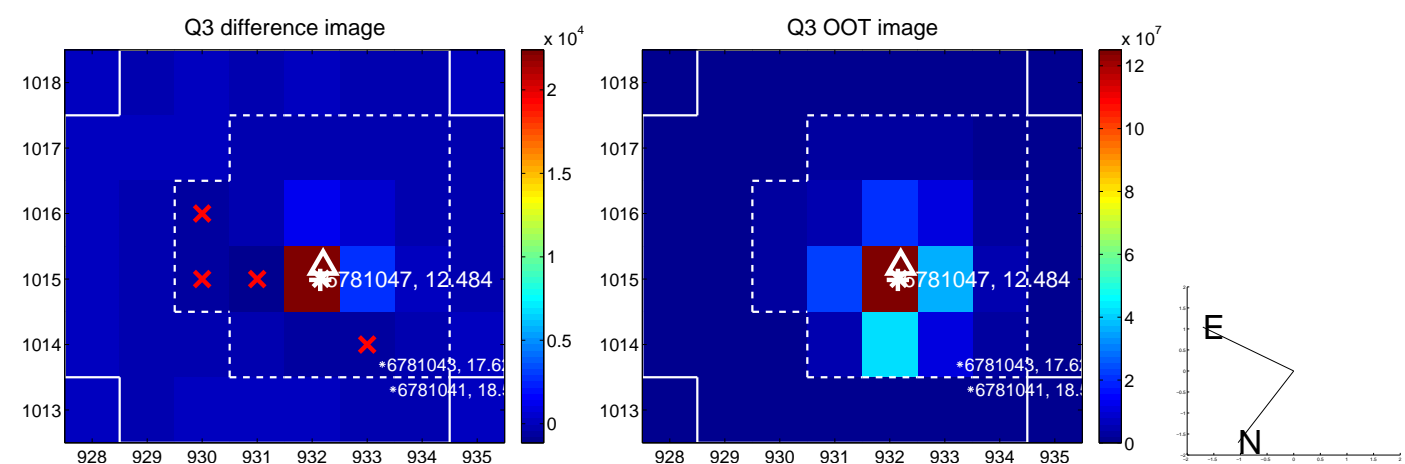
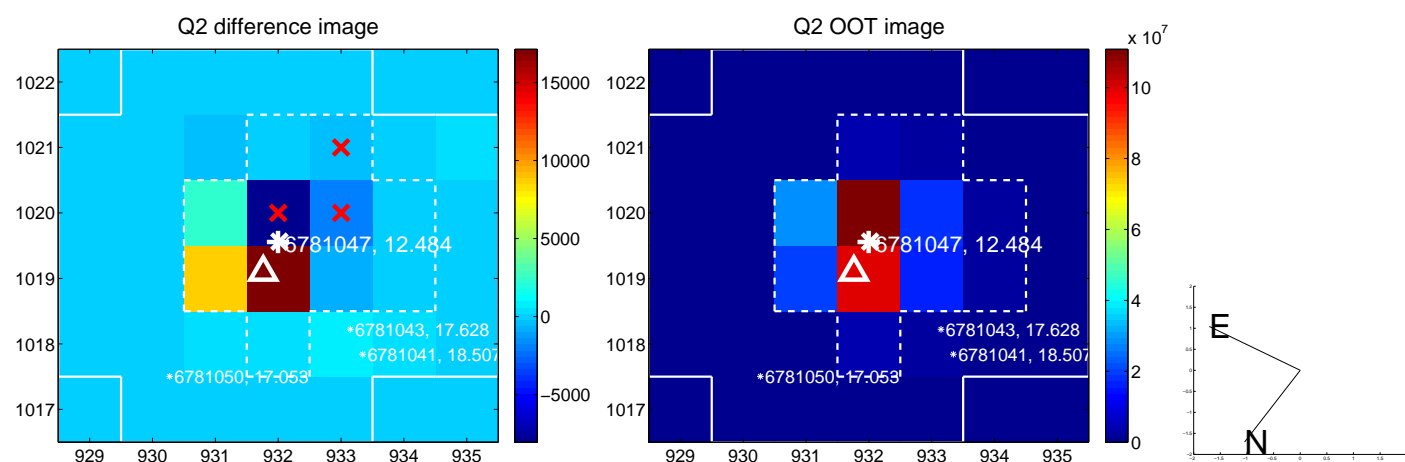
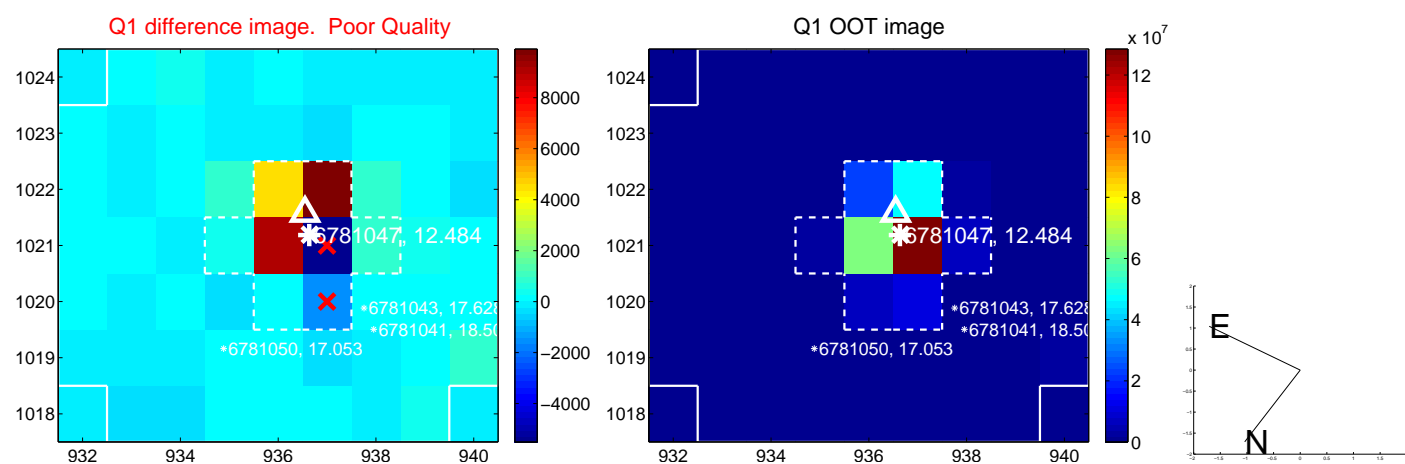
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.556 ± 0.455	1.22	0.149 ± 0.233	0.535 ± 0.468
PRF-fit source offset from KIC position	0.609 ± 0.455	1.34	0.173 ± 0.229	0.584 ± 0.469
photometric centroid source offset	1.72 ± 0.92	1.87	1.44 ± 0.96	0.95 ± 0.81

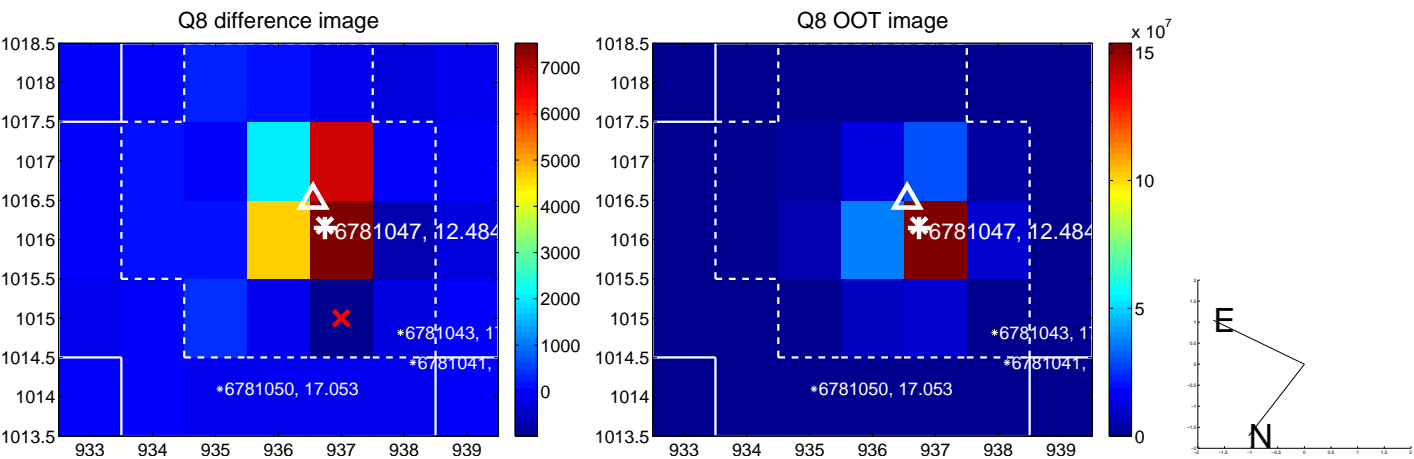
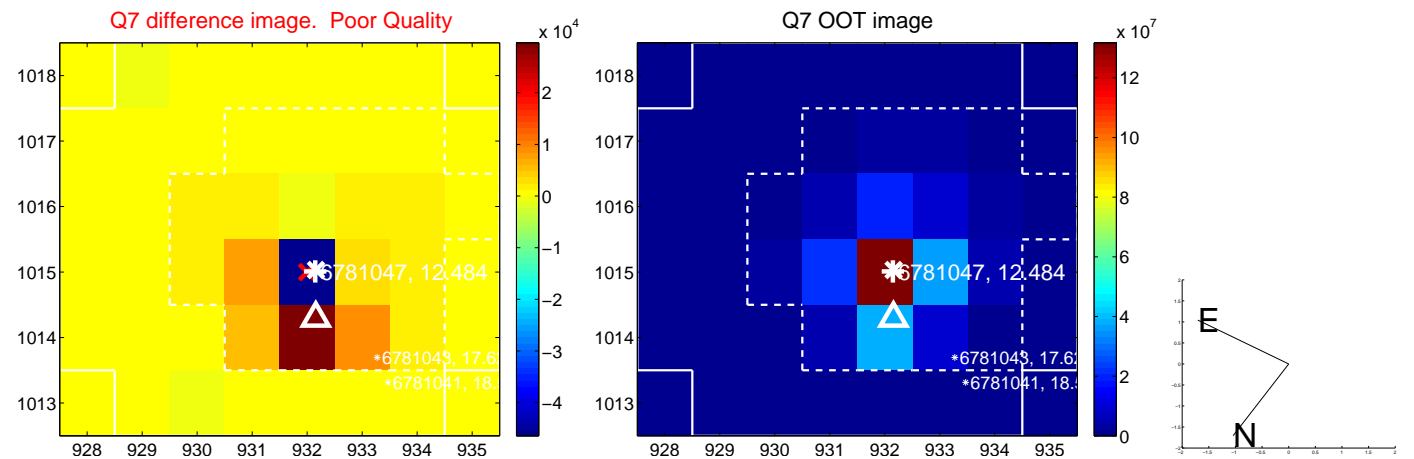
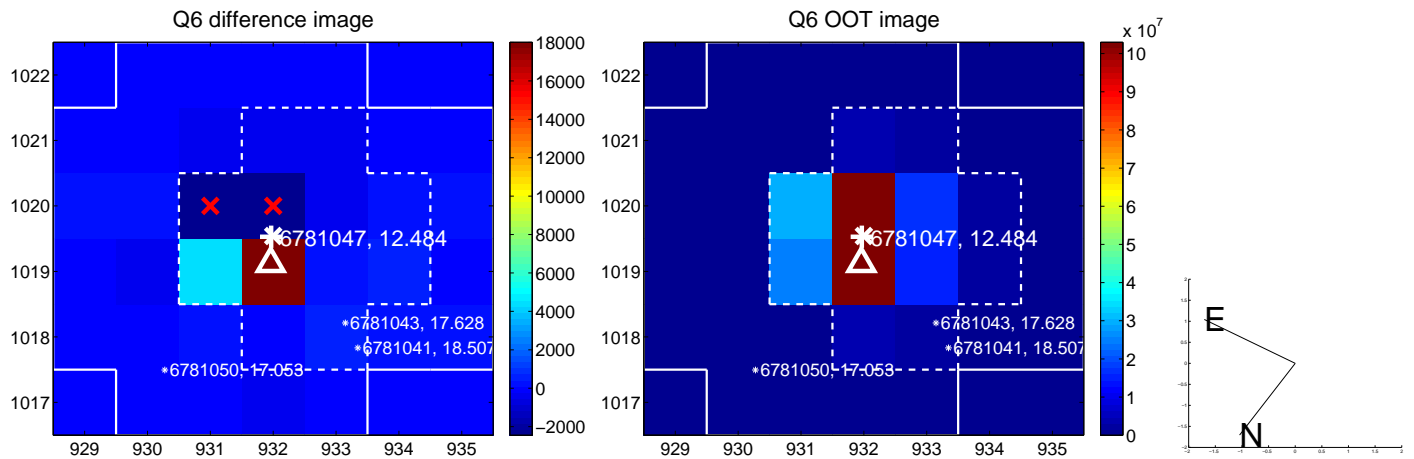
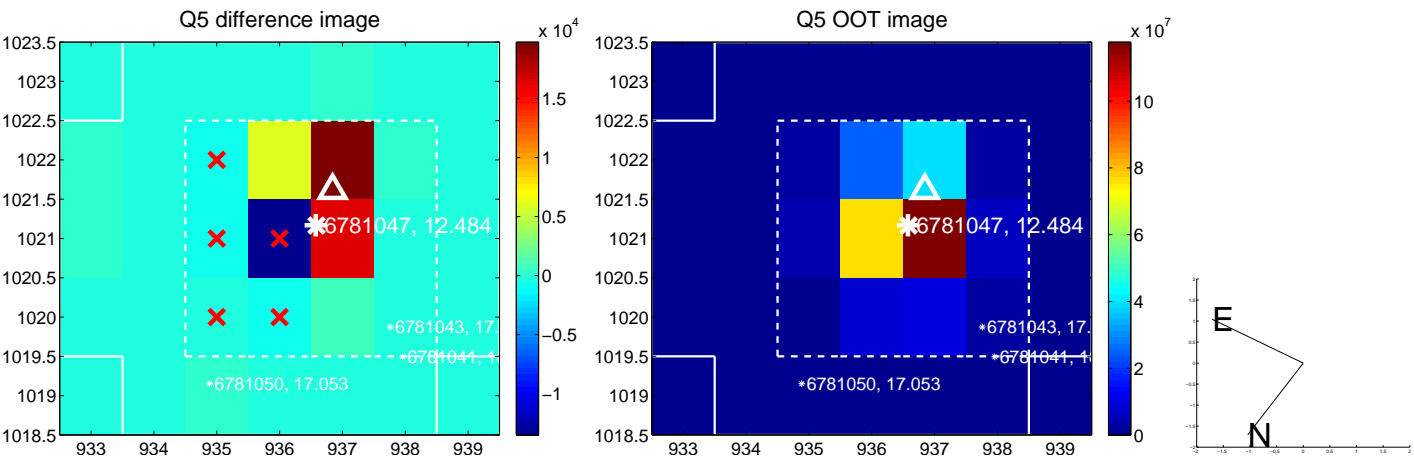


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

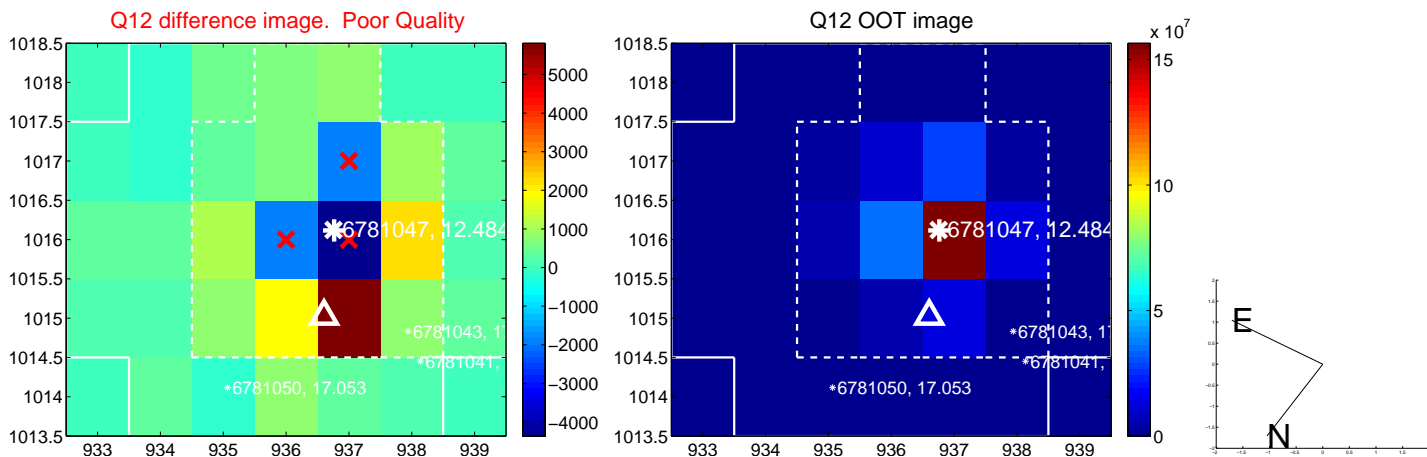
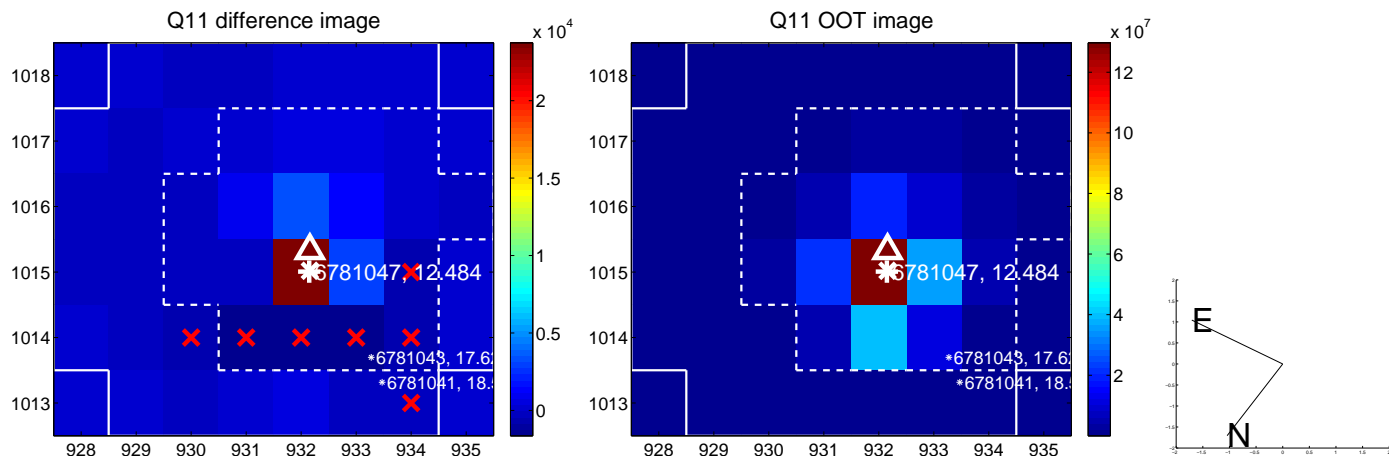
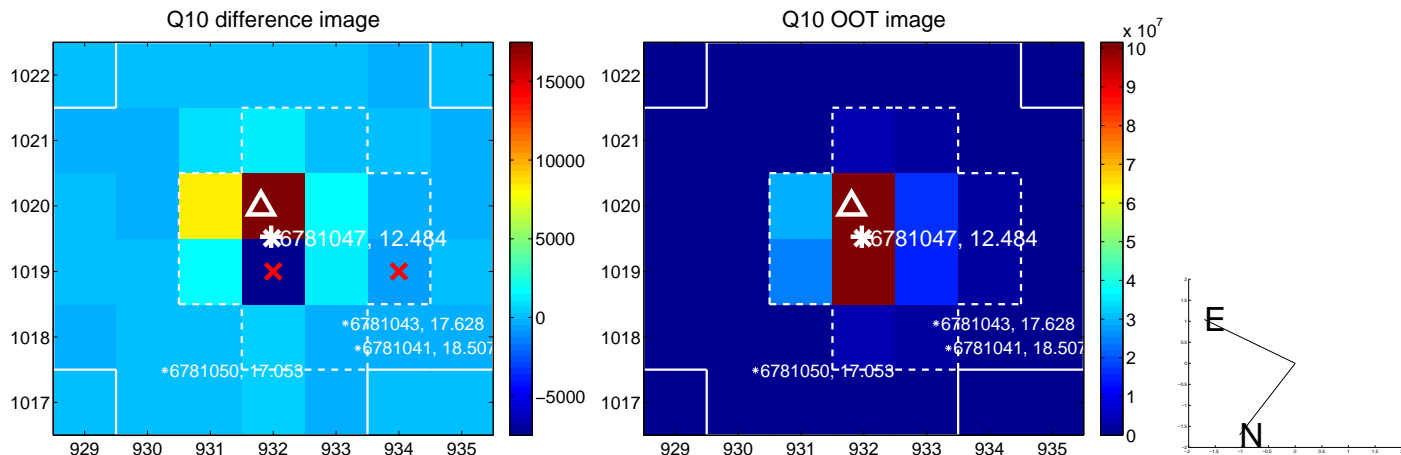
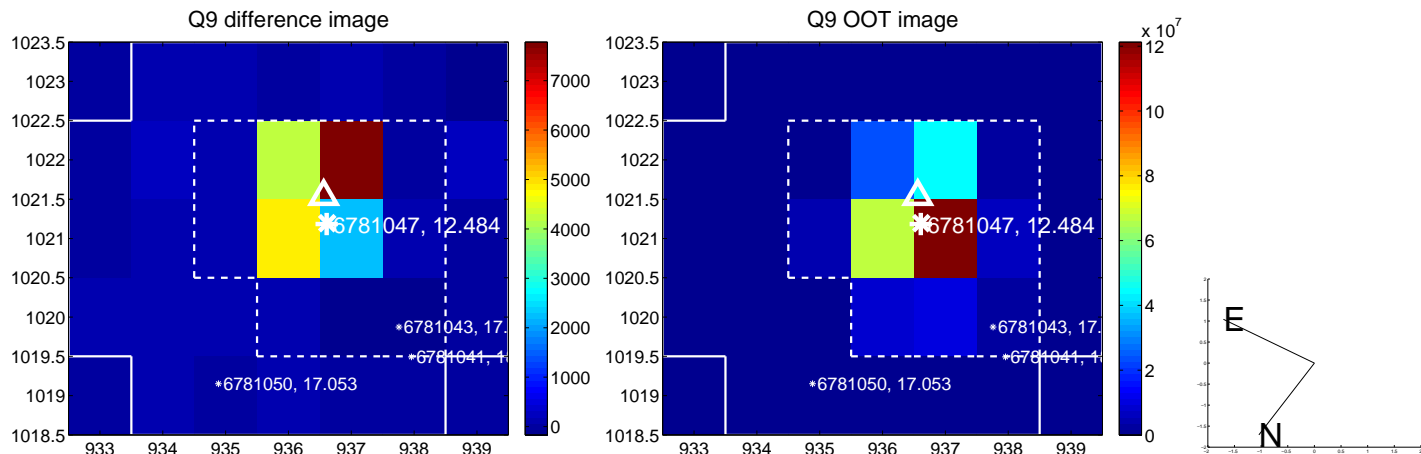
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



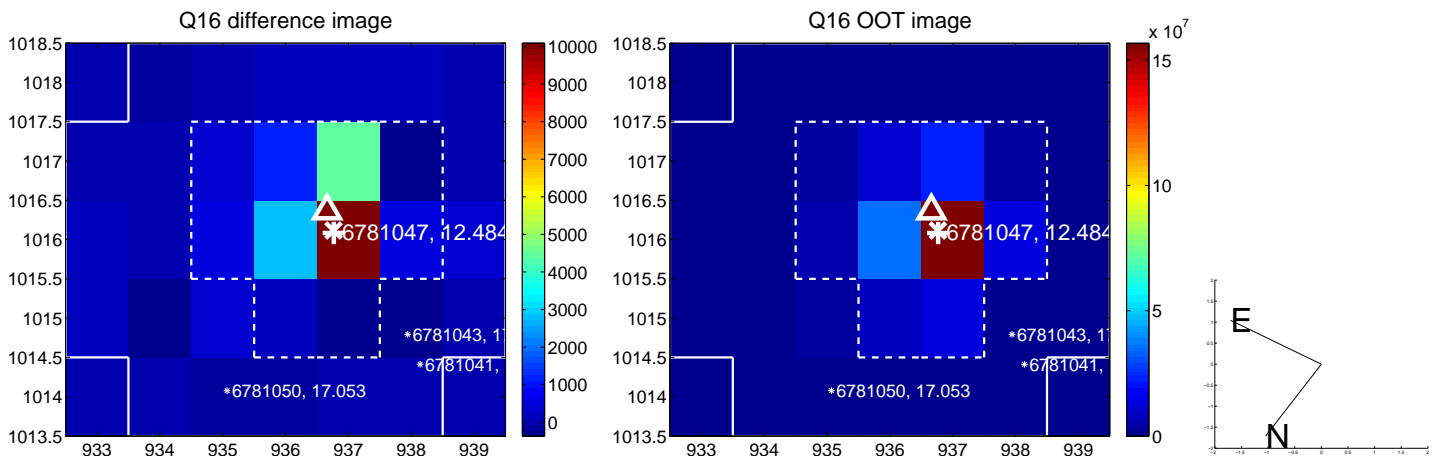
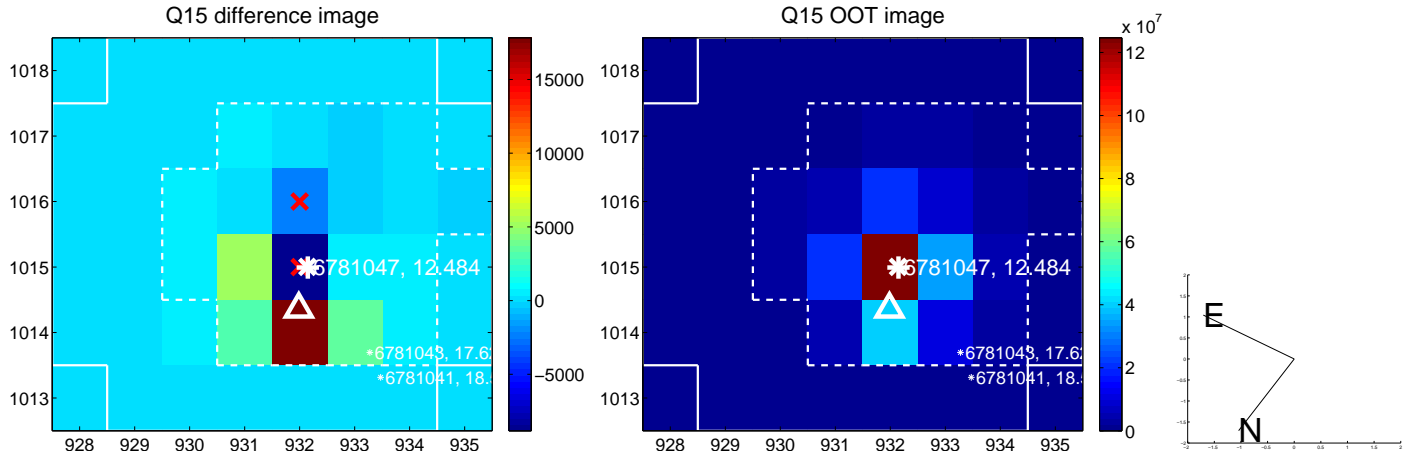
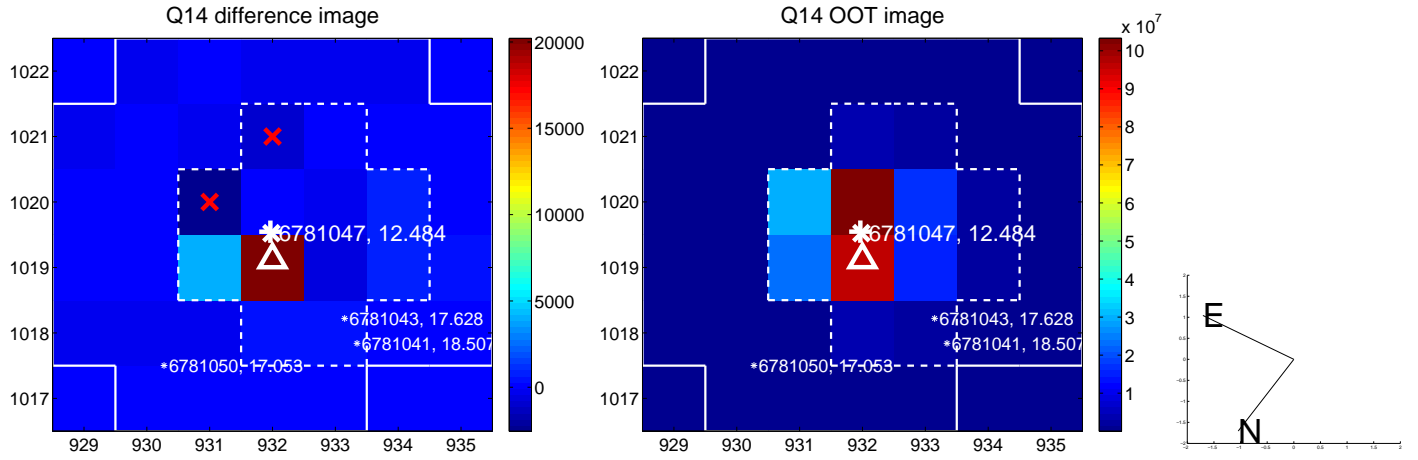
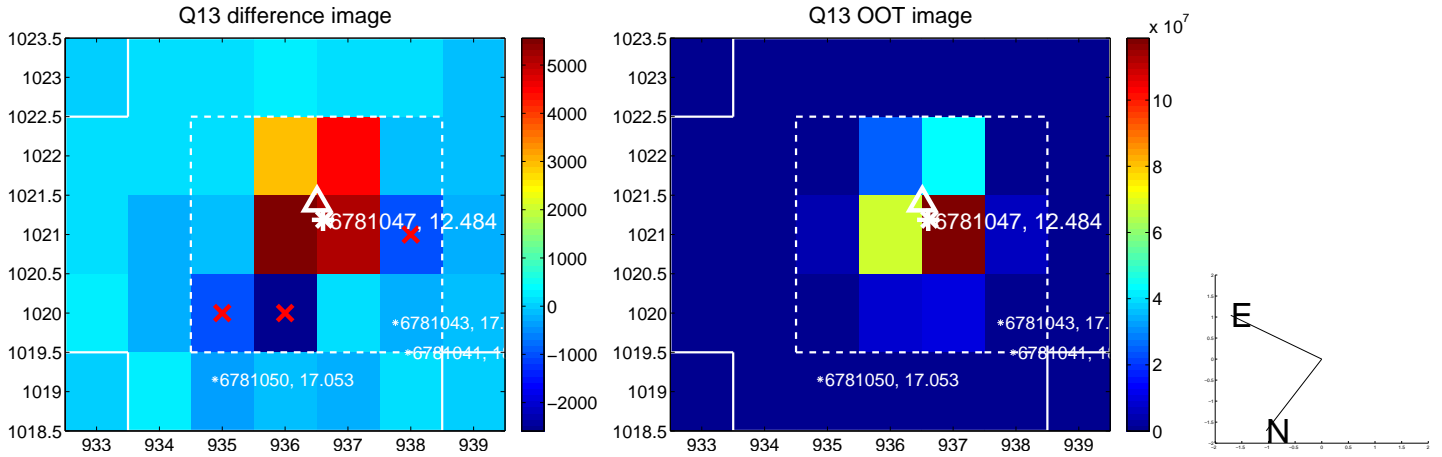
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



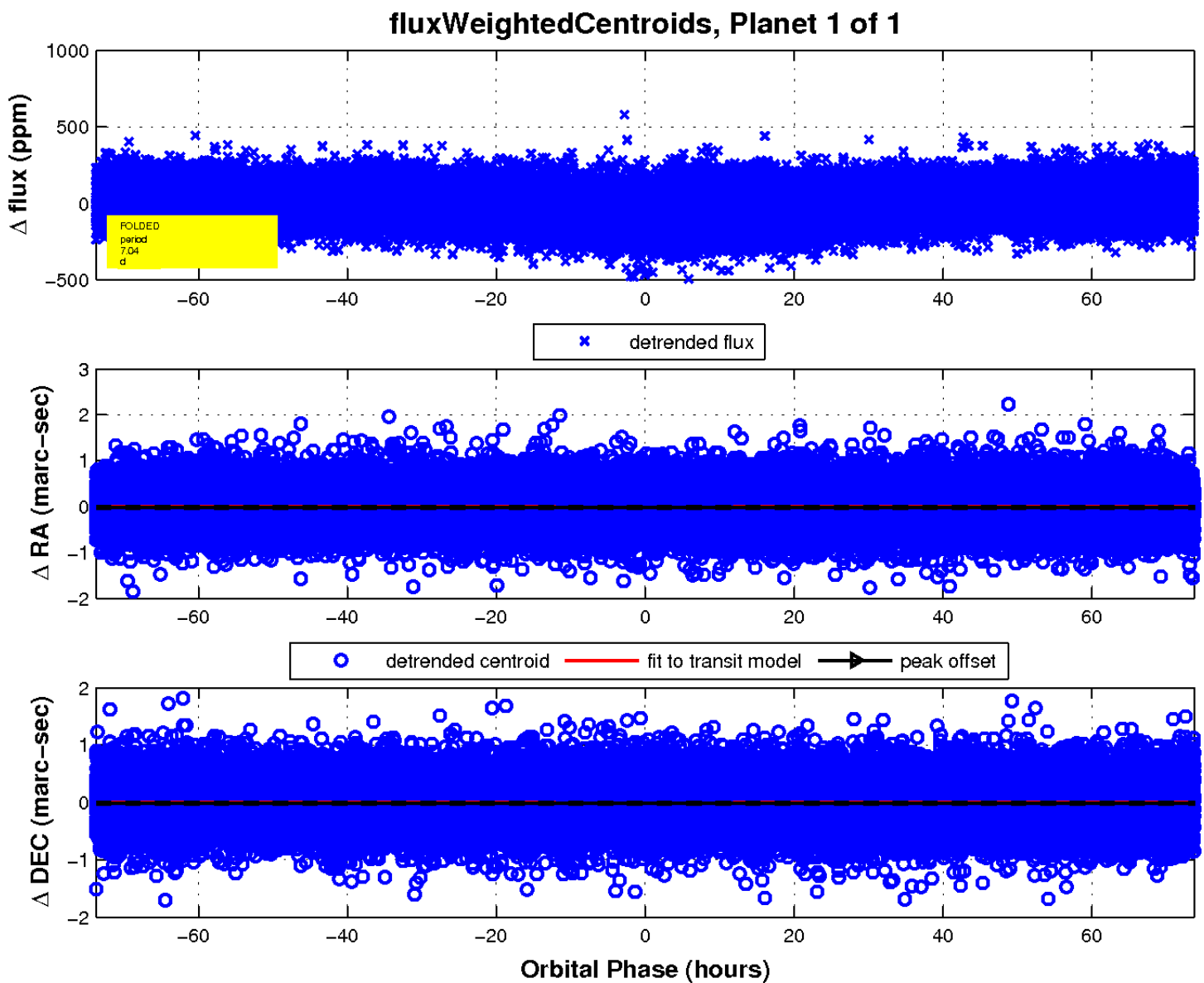
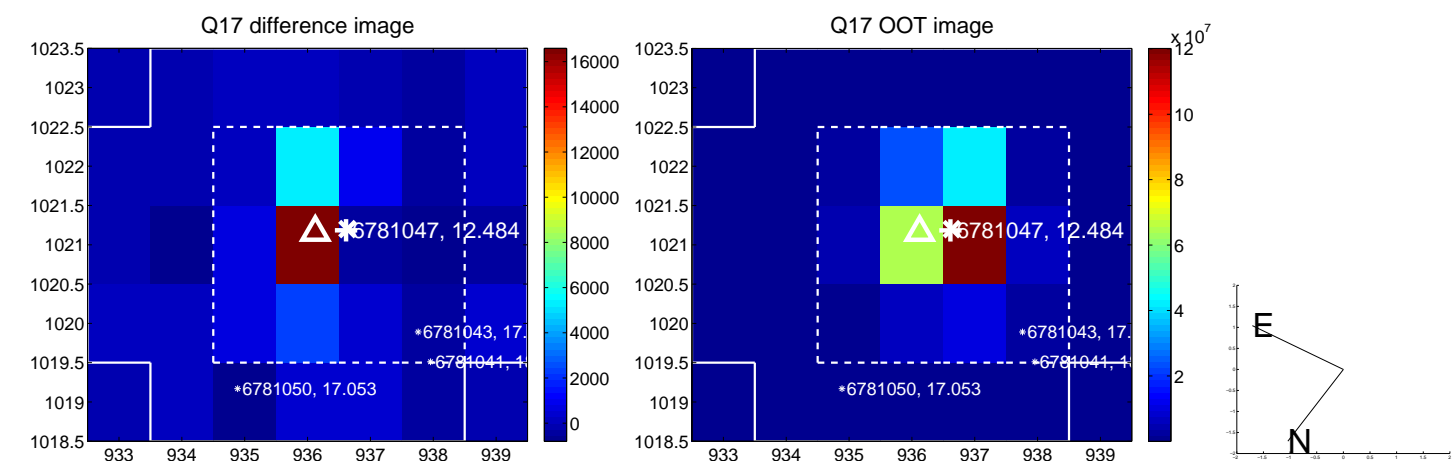
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

