

KIC 007816065

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})
007816065-01	OBS	No	413.278575	534.848314	210.1	17.237	8.3	10.2	1.52	6181	2.39	2.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007816065-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—INCONSISTENT_TRANS

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

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

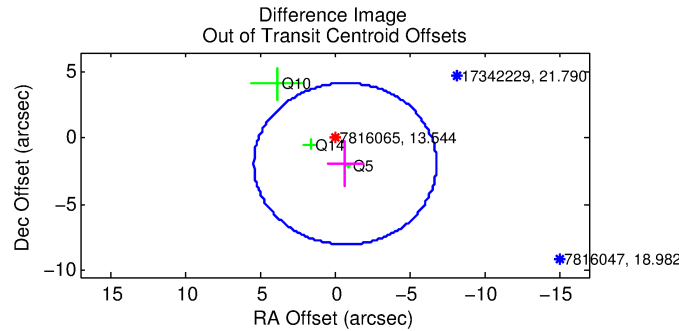
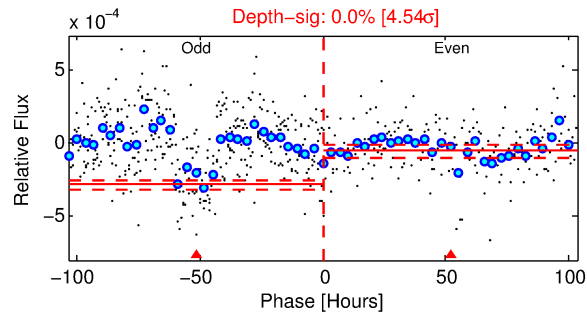
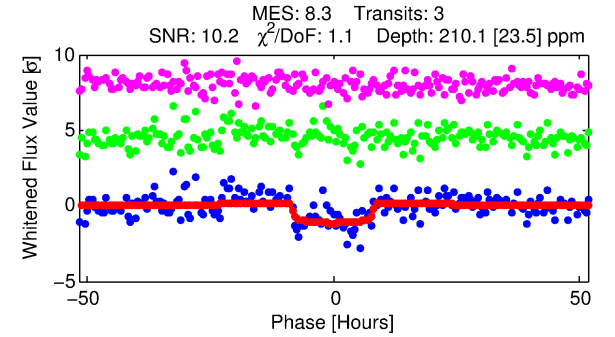
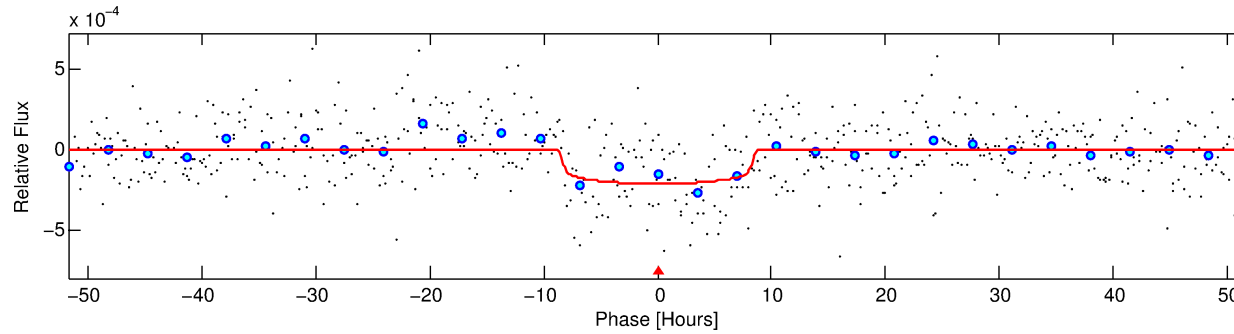
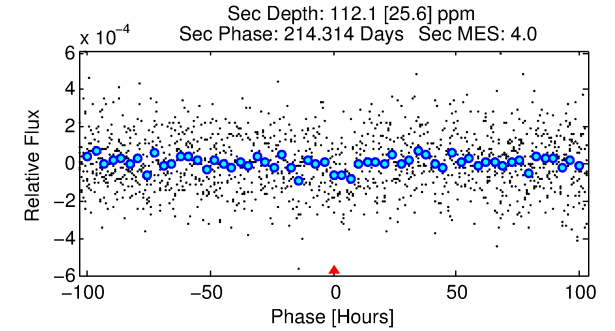
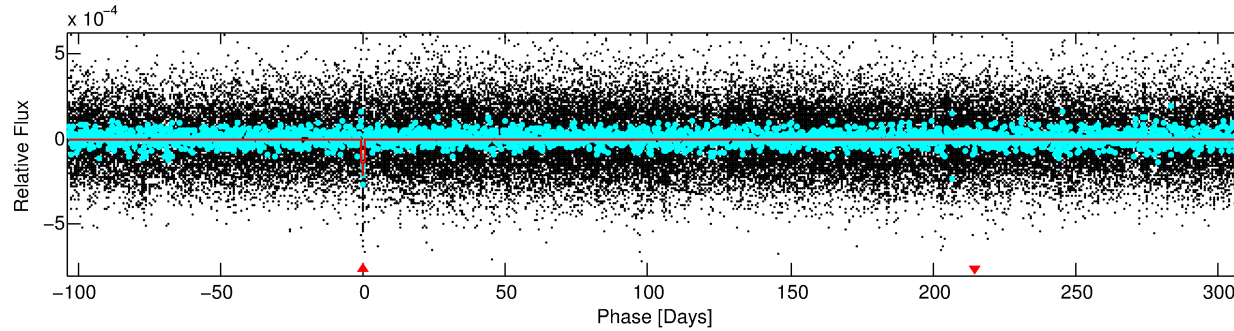
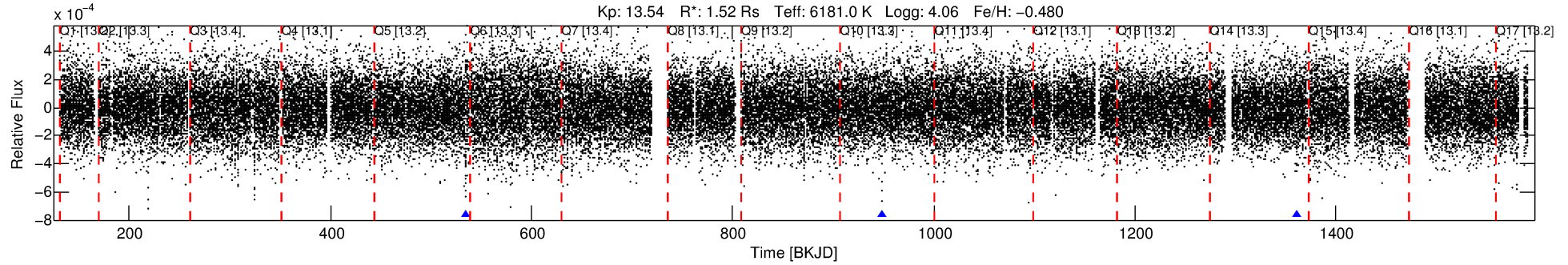
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007816065-01

No Significant Match Found

DV One-Page Summary

KIC: 7816065 Candidate: 1 of 1 Period: 413.279 d



DV Fit Results:

Period = 413.27857 [0.01648] d
Epoch = 534.8483 [0.0214] BKJD
Rp/R* = 0.0144 [0.0042]
a/R* = 126.28 [192.79]
b = 0.74 [0.92]
Seff = 2.63 [1.64]
Teq = 325 [51] K
Rp = 2.39 [1.14] Re
a = 1.0744 [0.4023] AU
Ag = 12433.44 [10914.88] [1.14σ]
Teffp = 5302 [850] K [5.85σ]

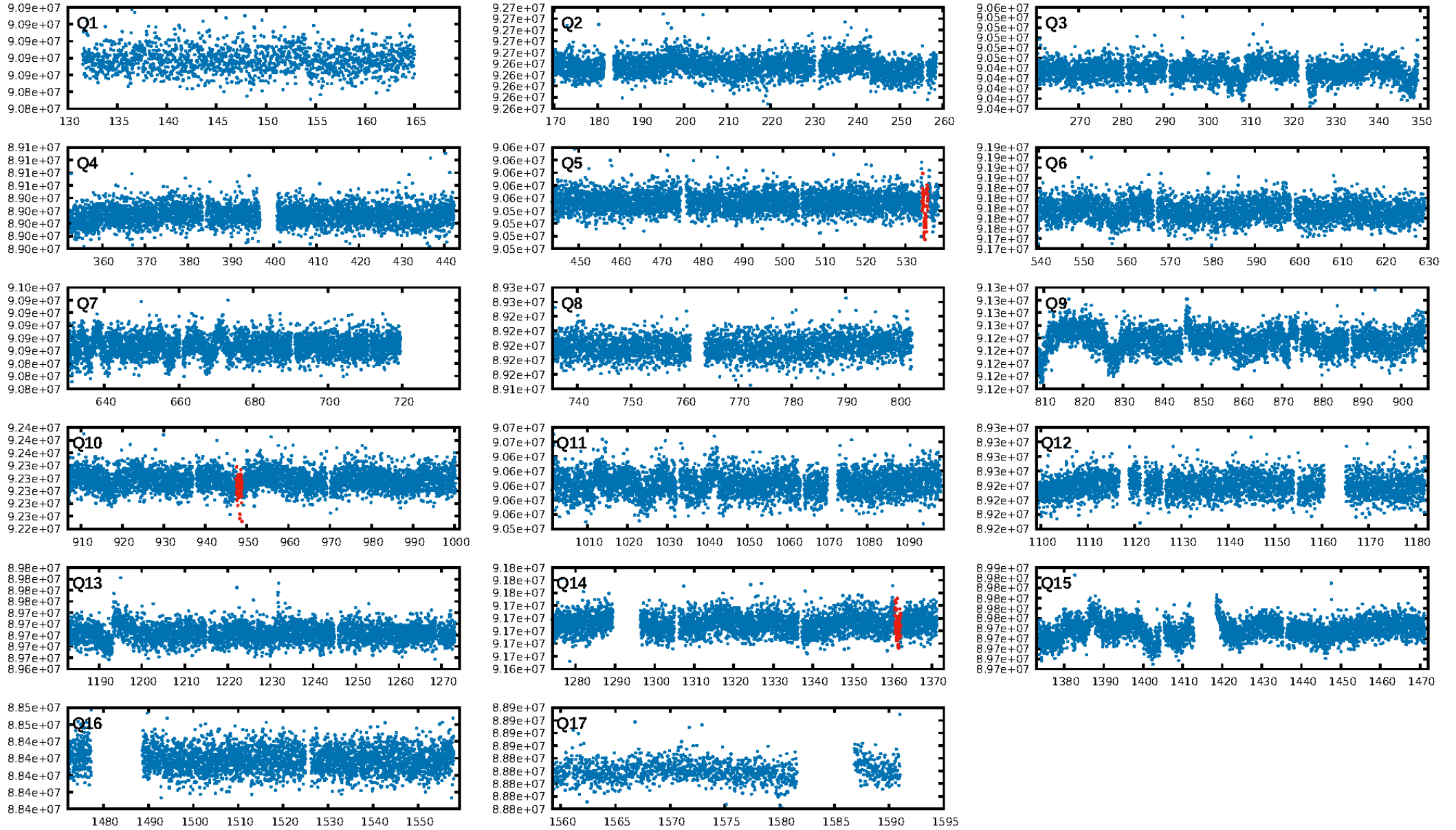
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 51.1%
Bootstrap-pfa: 1.93e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2158
Centroid-sig: 0.1%
Centroid-so: 3.992 arcsec [2.45σ]
OotOffset-rm: 2.066 arcsec [1.01σ]
KicOffset-rm: 2.161 arcsec [1.02σ]
OotOffset-st: 2/0/0/1 [3]
KicOffset-st: 2/0/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

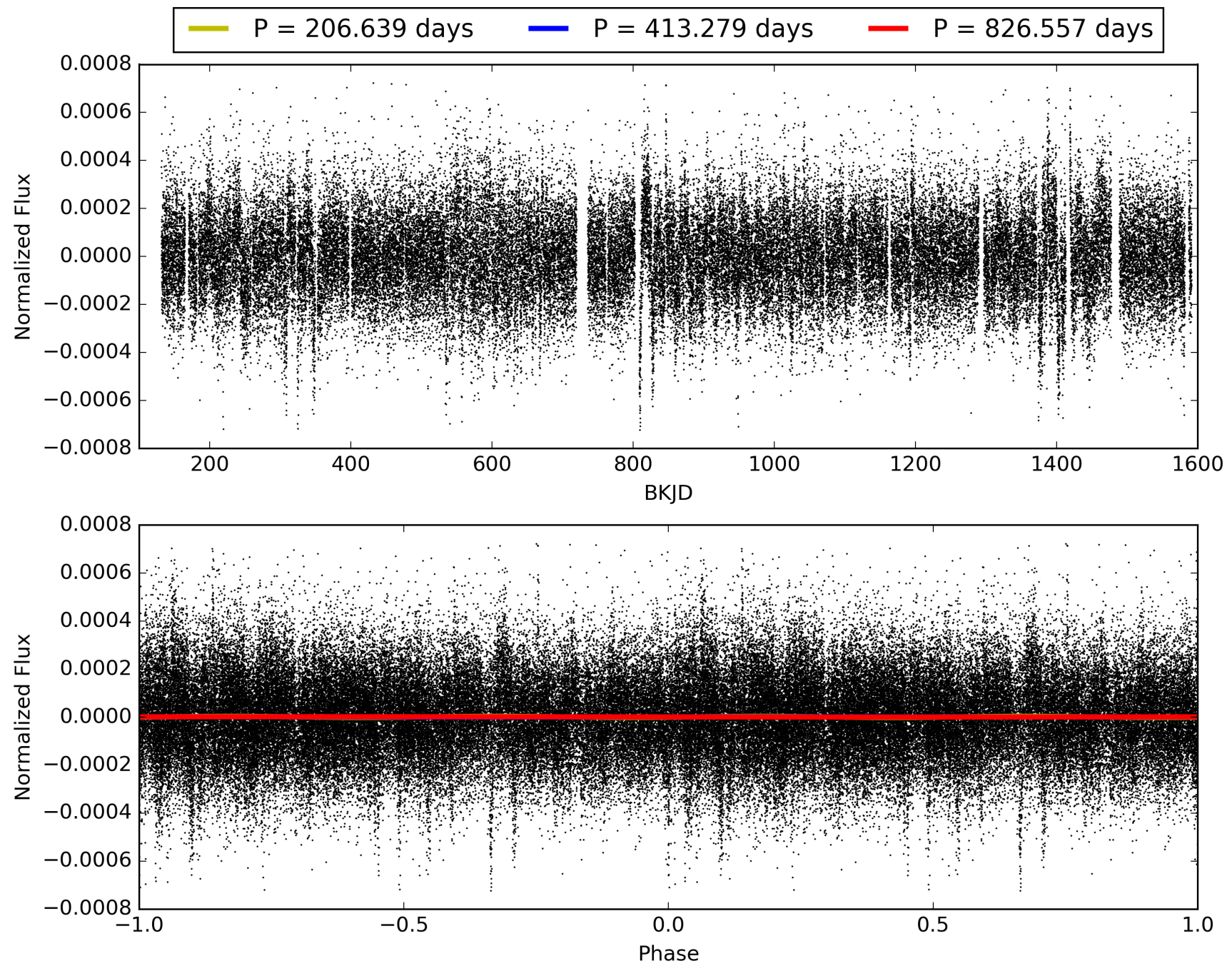
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:12:36 Z

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

TCE 007816065-01, PDC Light Curves

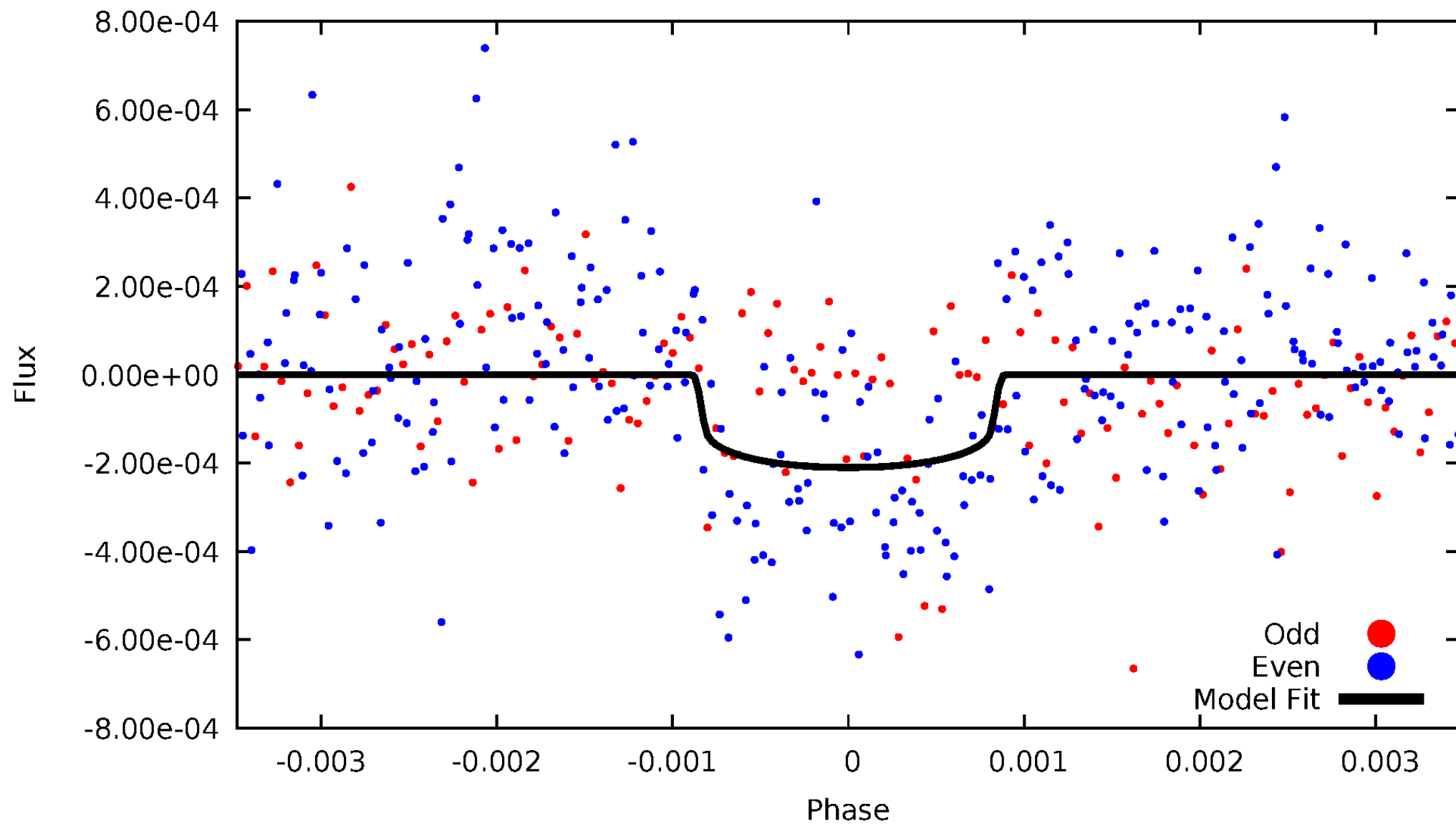


TCE 007816065-01



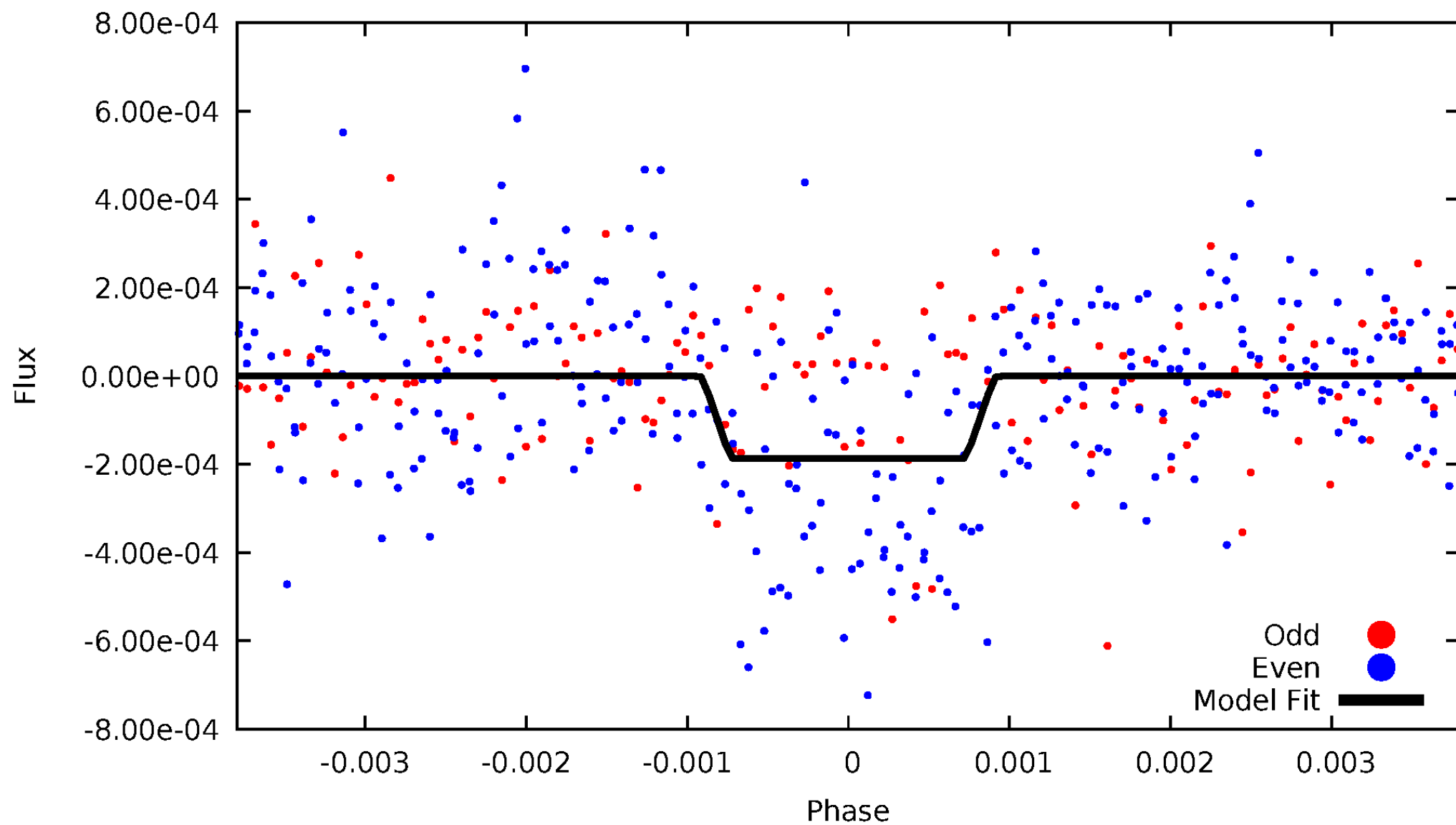
DV Odd/Even

TCE 007816065-01

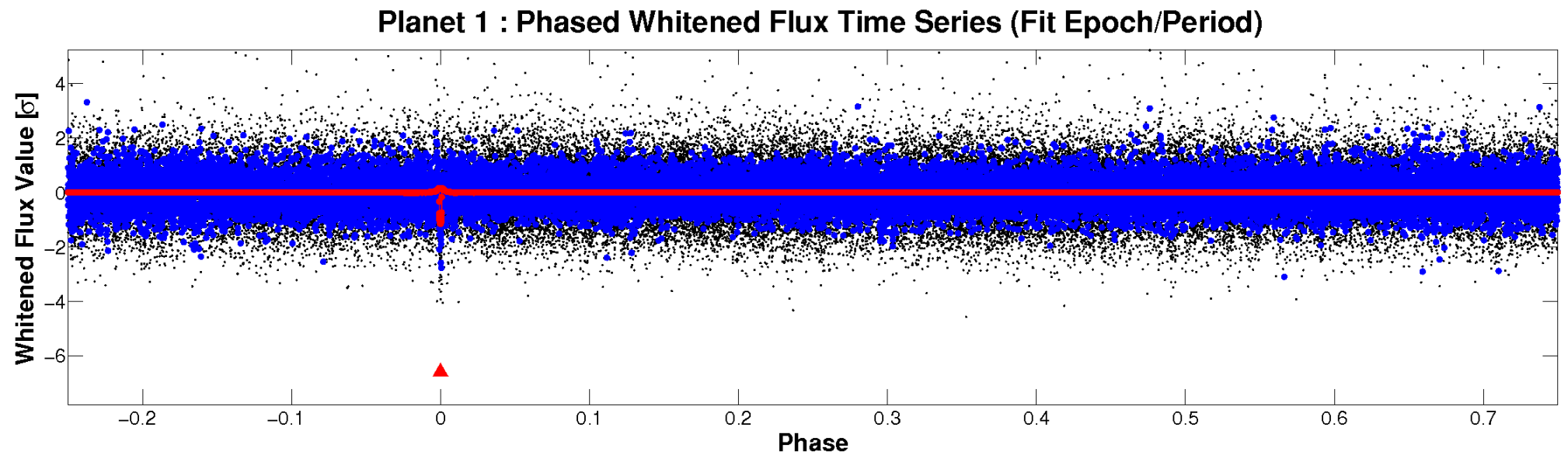
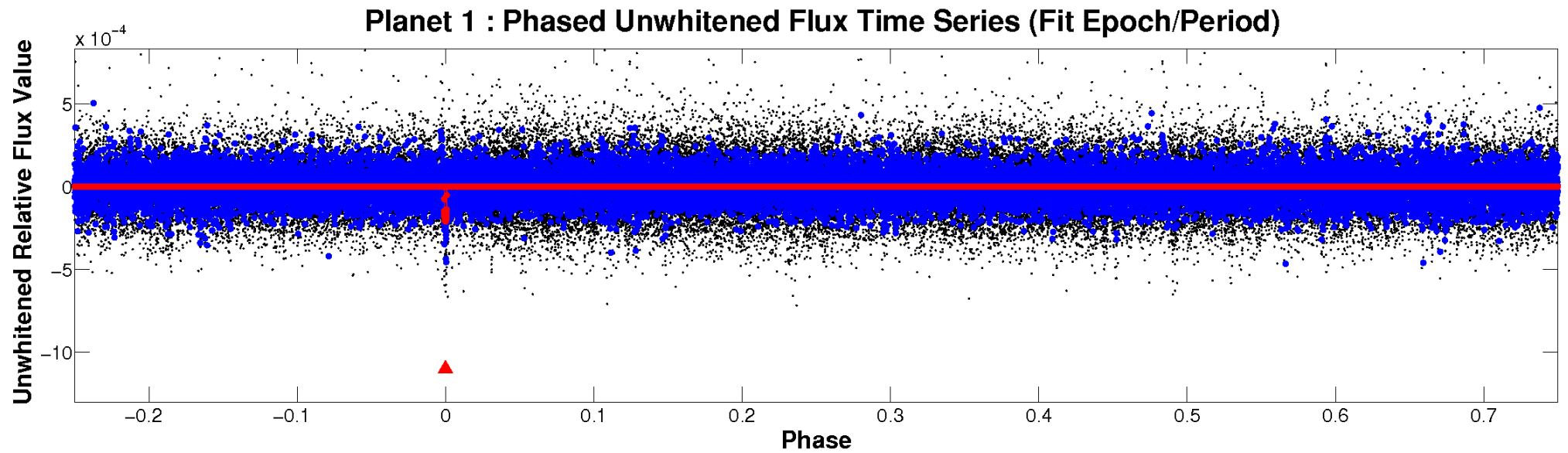


ALT Odd/Even

TCE 007816065-01

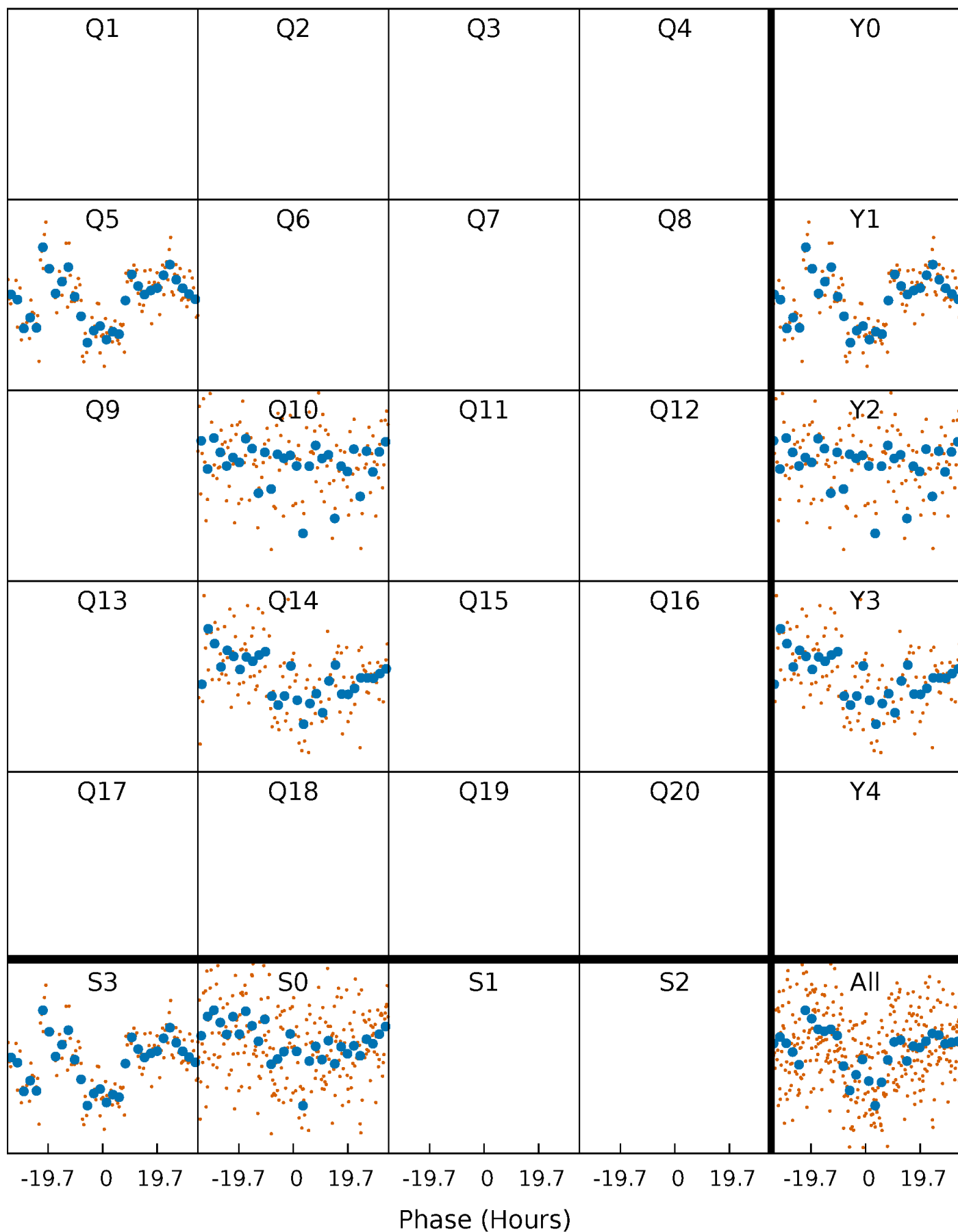


Non-Whitened Vs. Whitened Light Curve



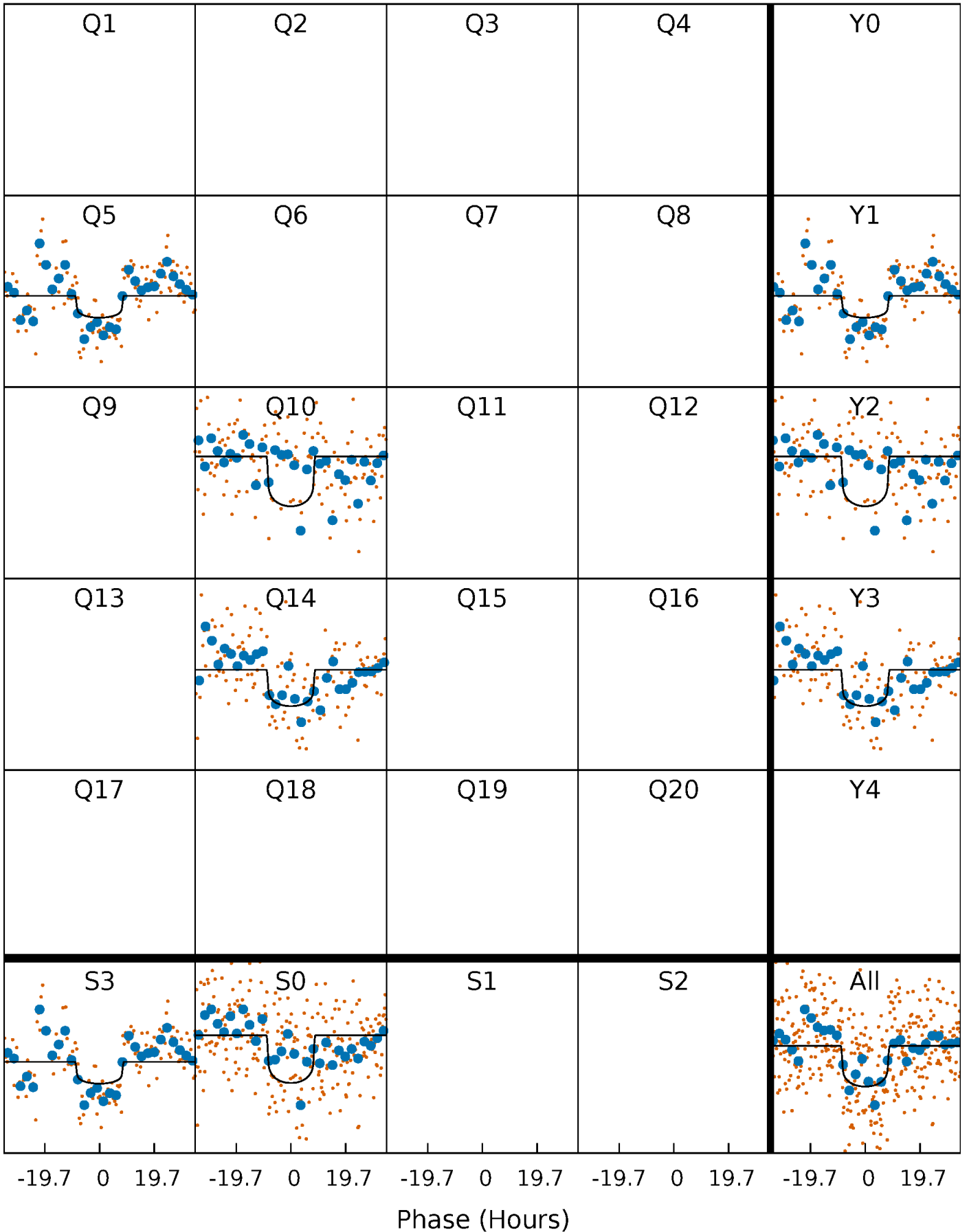
PDC Quarter-Phased Transit Curves

TCE 007816065-01 P=413.278574 Days $T_0=534.848314$ (BKJD)



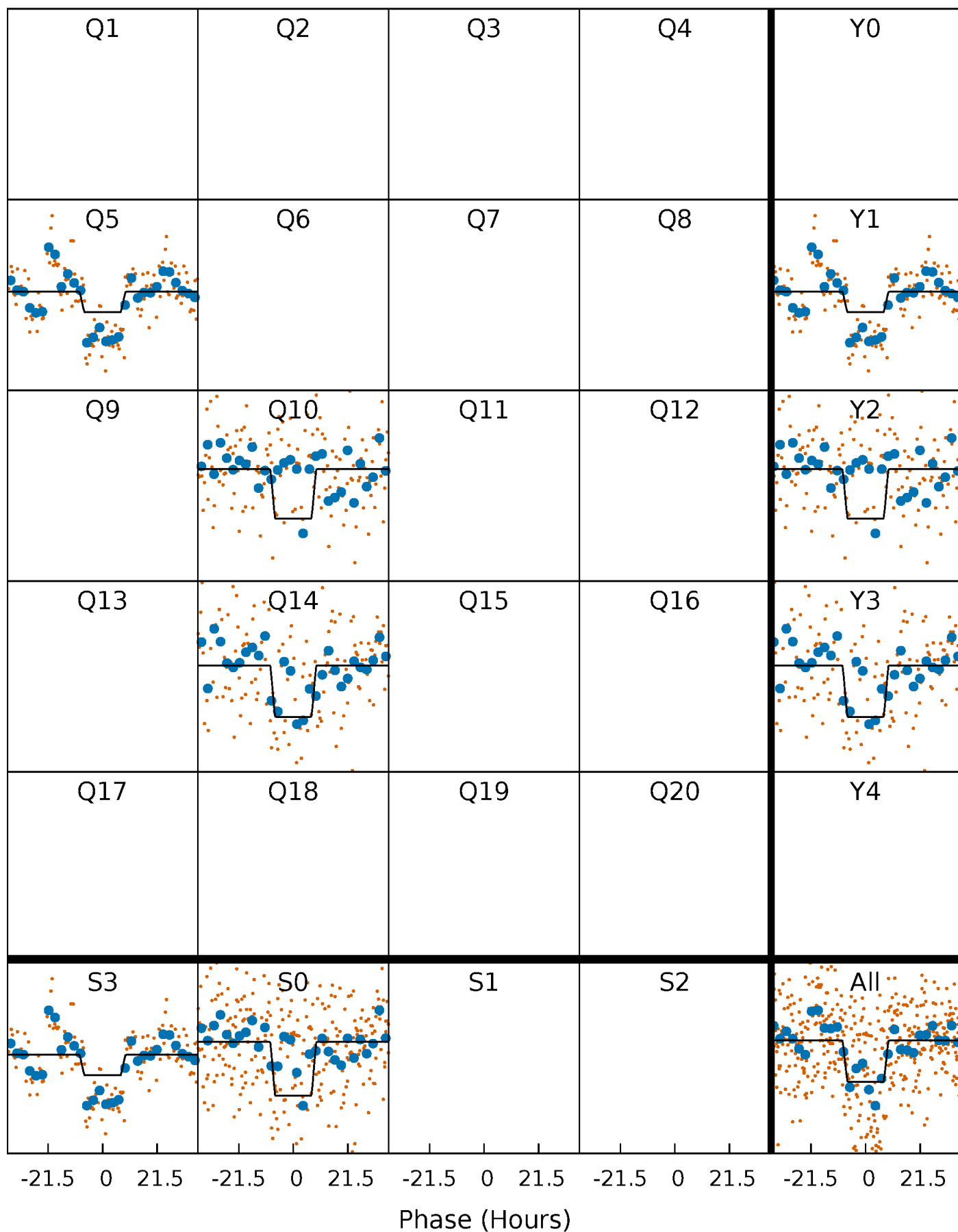
DV Quarter-Phased Transit Curves

TCE 007816065-01 P=413.278574 Days $T_0=534.848314$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

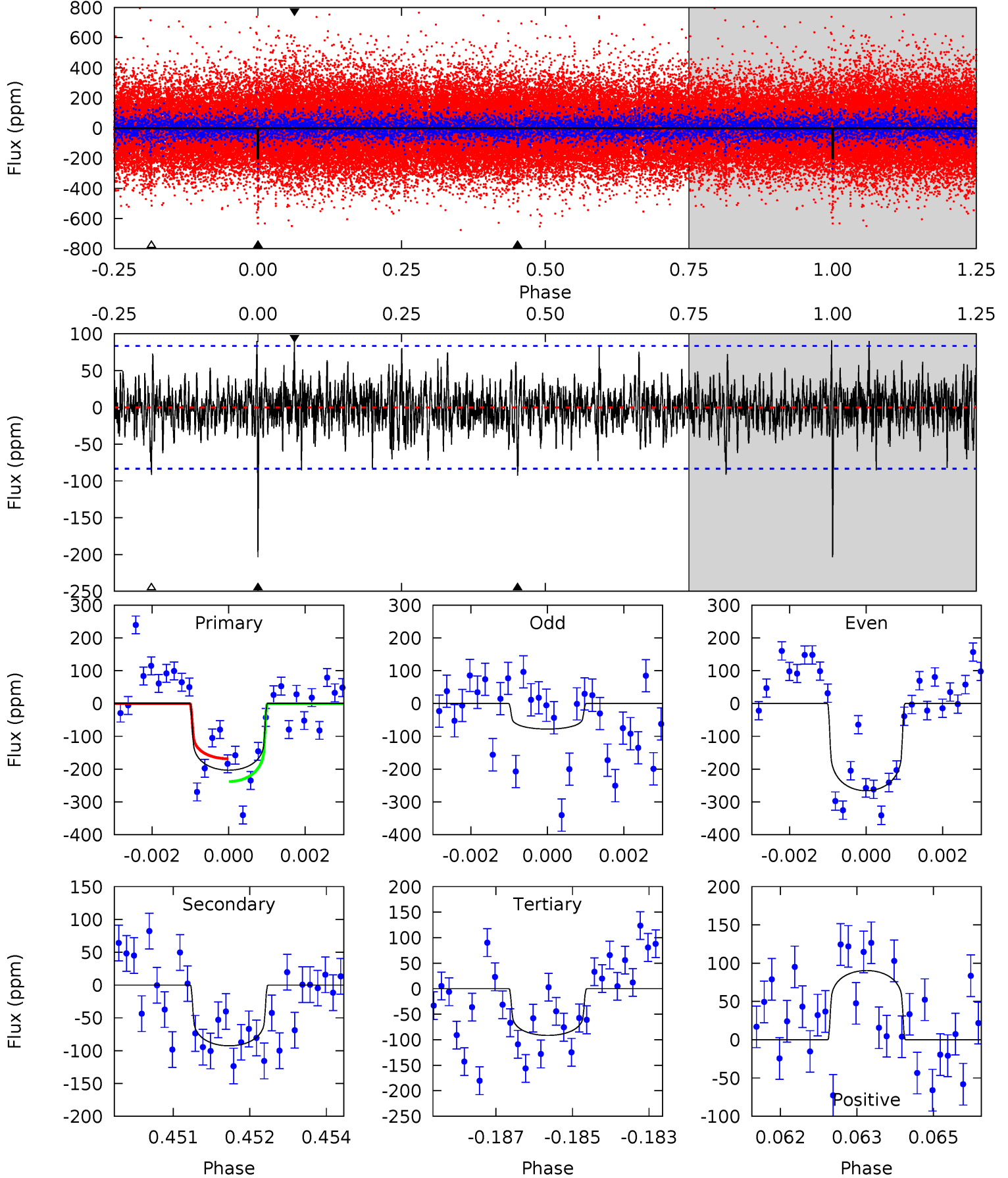
TCE 007816065-01 P=413.309618 Days $T_0=534.822831$ (BKJD)



DV Model-Shift Uniqueness Test

007816065-01, P = 413.278574 Days, E = 121.569740 Days

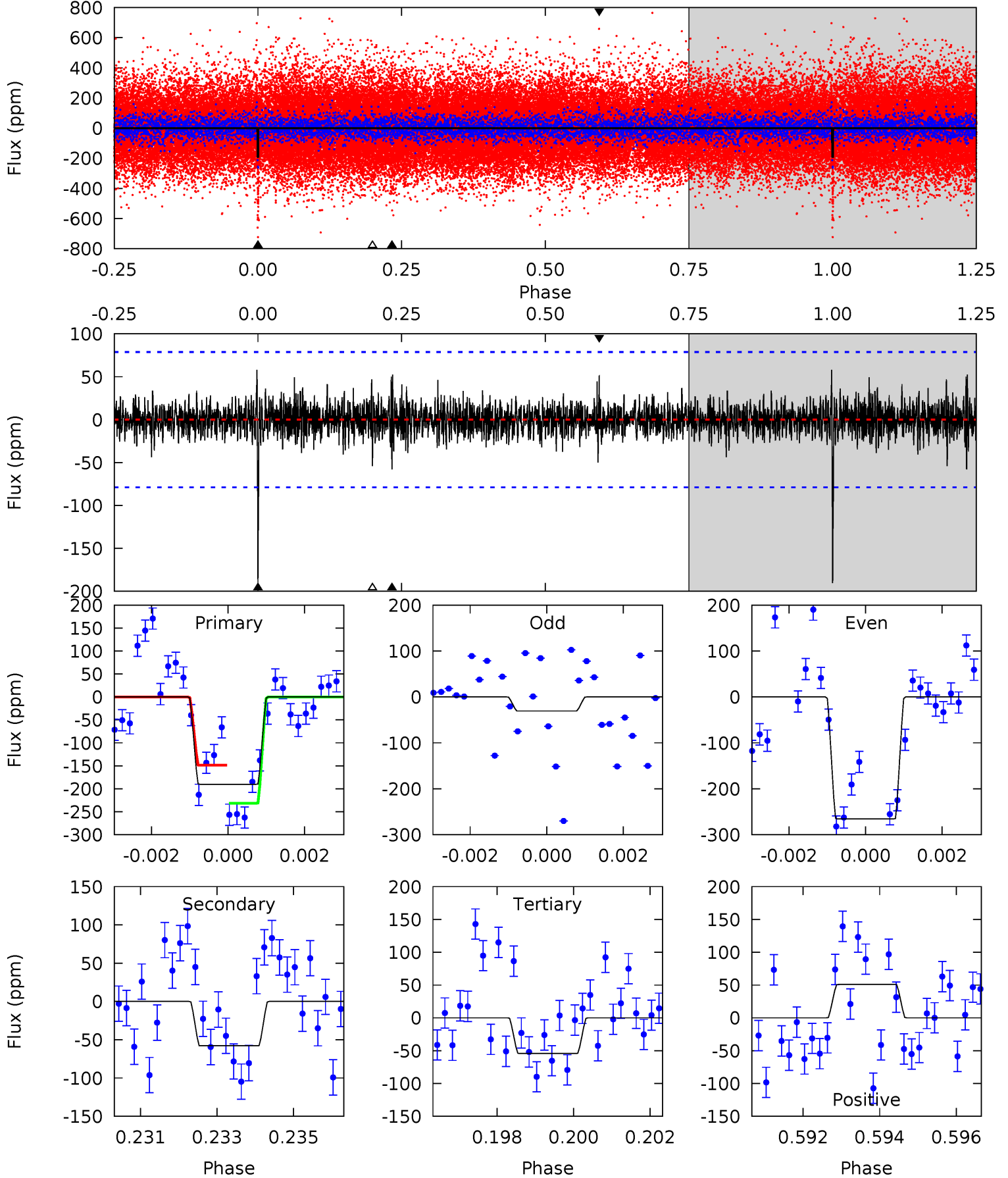
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.0	5.94	5.87	5.79	5.35	3.13	1.47	7.17	7.24	0.07	0.14	5.72	1.12	0.31	2.24



Alt Model-Shift Uniqueness Test

007816065-01, P = 413.309618 Days, E = 121.513213 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	3.93	3.67	3.45	5.34	3.12	0.85	9.22	9.44	0.25	0.48	7.48	1.60	0.23	2.81



Stellar Parameters For KIC 007816065

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6181^{+188}_{-188}	$4.058^{+0.364}_{-0.156}$	$-0.480^{+0.300}_{-0.300}$	$1.524^{+0.380}_{-0.570}$	$0.968^{+0.147}_{-0.120}$	$0.385^{+1.035}_{-0.163}$
	+3%/-3%	+9%/-4%	+62%/-62%	+25%/-37%	+15%/-12%	+269%/-42%
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 007816065-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-93 ± 16	$2.24^{+0.88}_{-0.74}$	448^{+38}_{-49}	5132^{+960}_{-557}	11787^{+13646}_{-5799}
Alt.	-58 ± 15	$2.16^{+0.85}_{-0.67}$	448^{+35}_{-45}	4701^{+797}_{-519}	7628^{+9649}_{-3946}

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 $A_{obs} \gg 1.0$

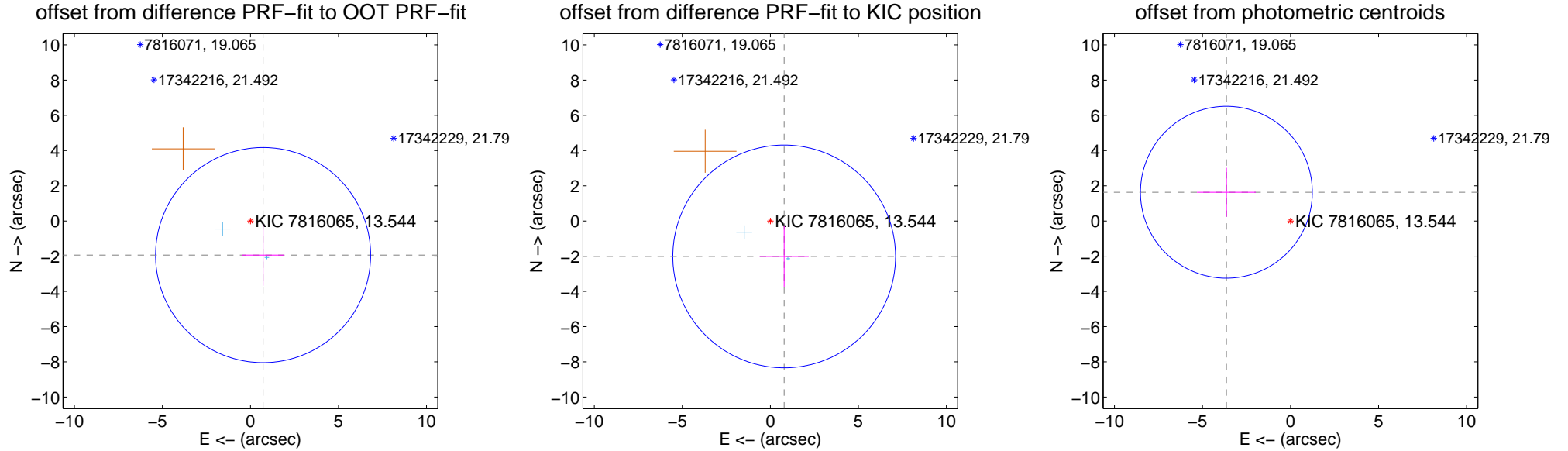
DV Centroid Data

Supplemental centroid analysis for 007816065-01. Kepler magnitude: 13.54. Transit SNR 10.24

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.066 ± 2.036	1.01	-0.719 ± 1.210	-1.937 ± 1.737
PRF-fit source offset from KIC position	2.161 ± 2.109	1.02	-0.785 ± 1.393	-2.014 ± 1.734
photometric centroid source offset	3.99 ± 1.63	2.45	3.64 ± 1.67	1.63 ± 1.39

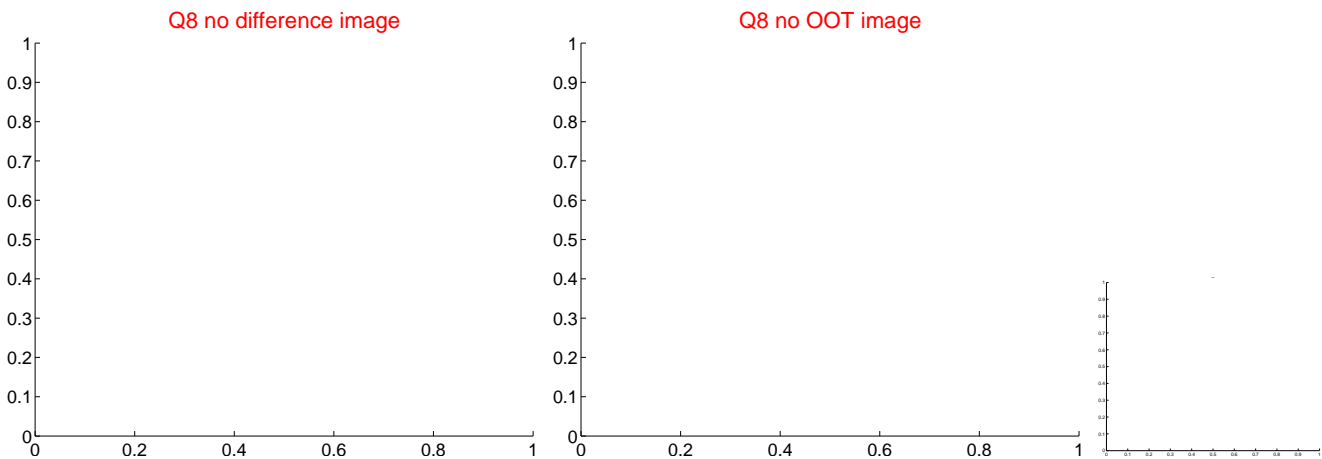
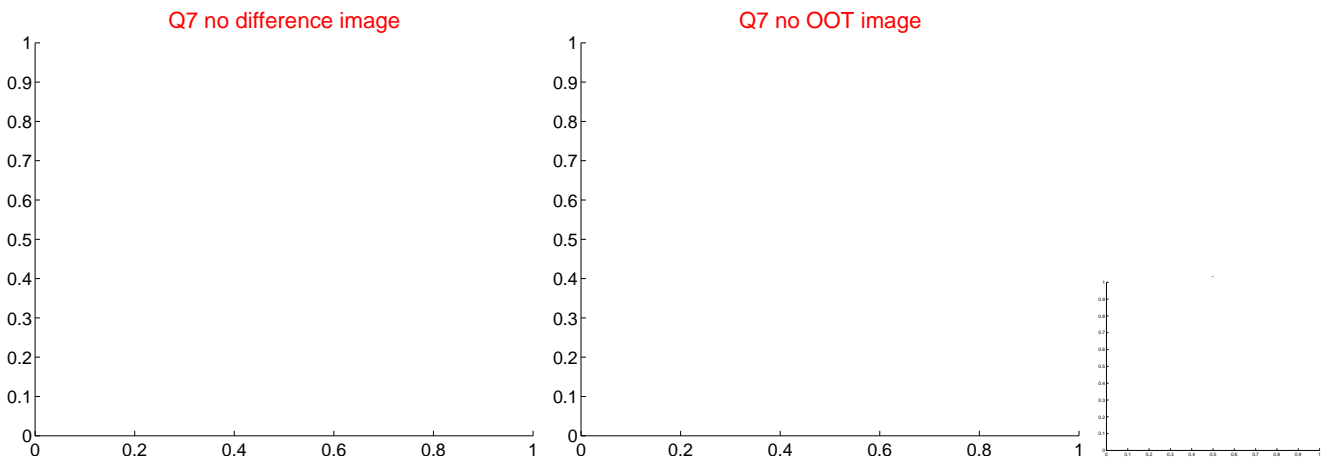
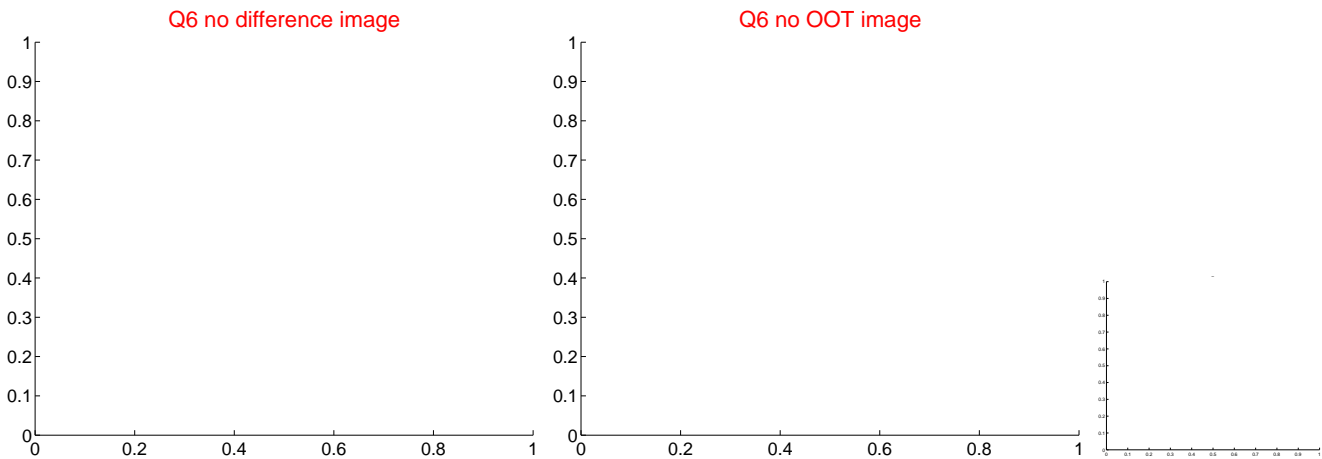
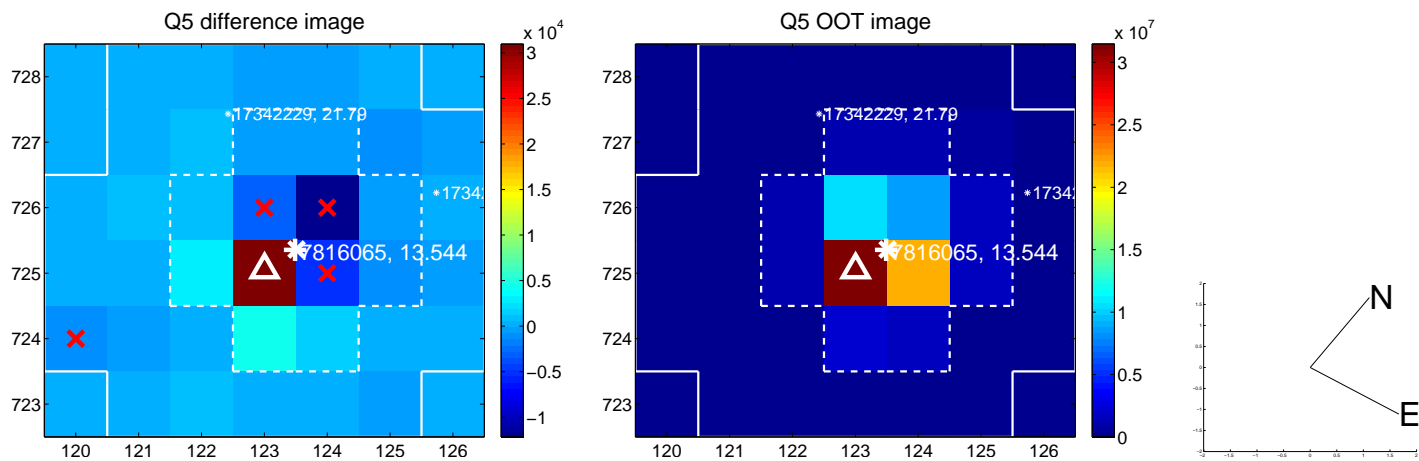


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

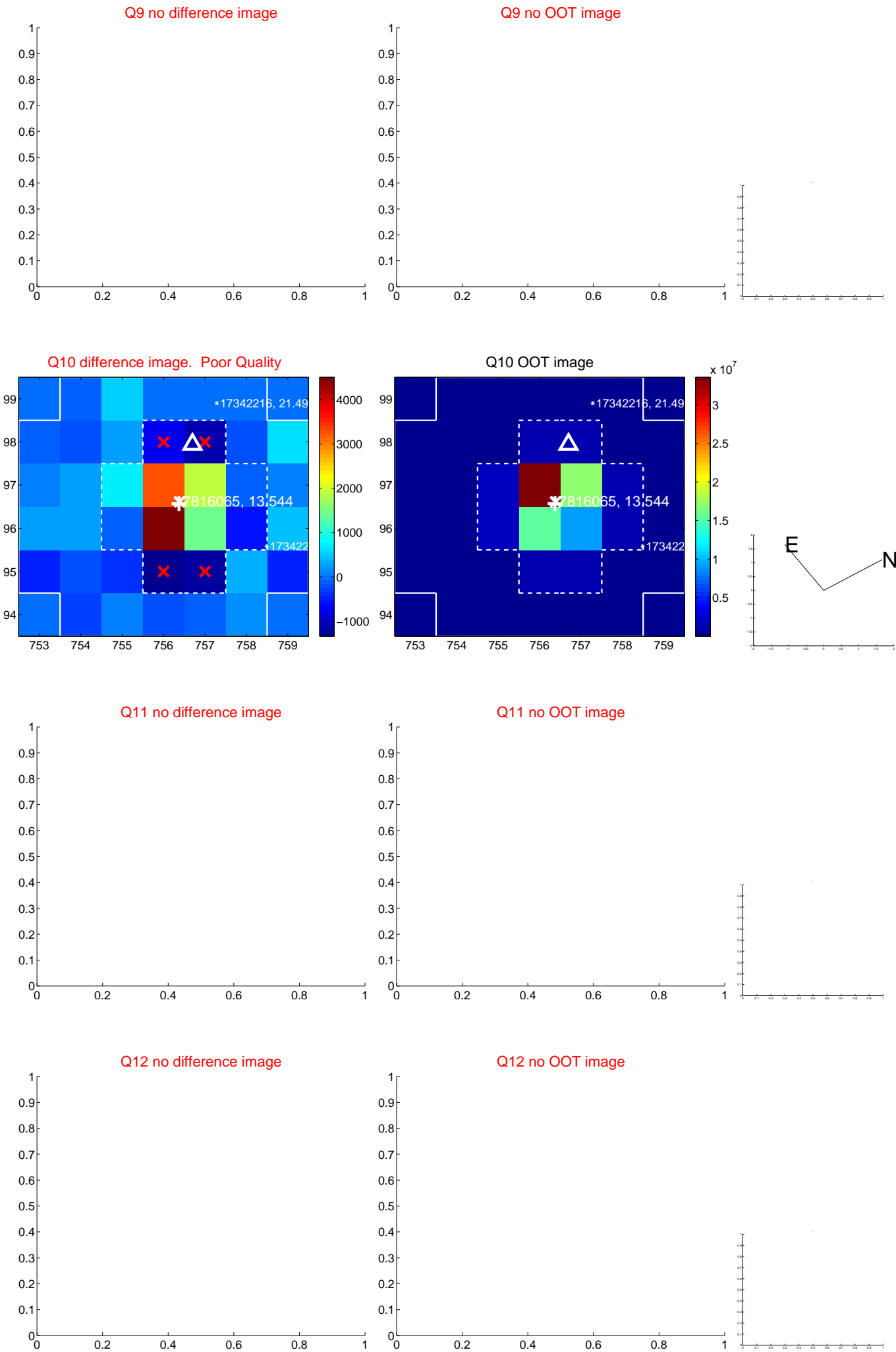
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



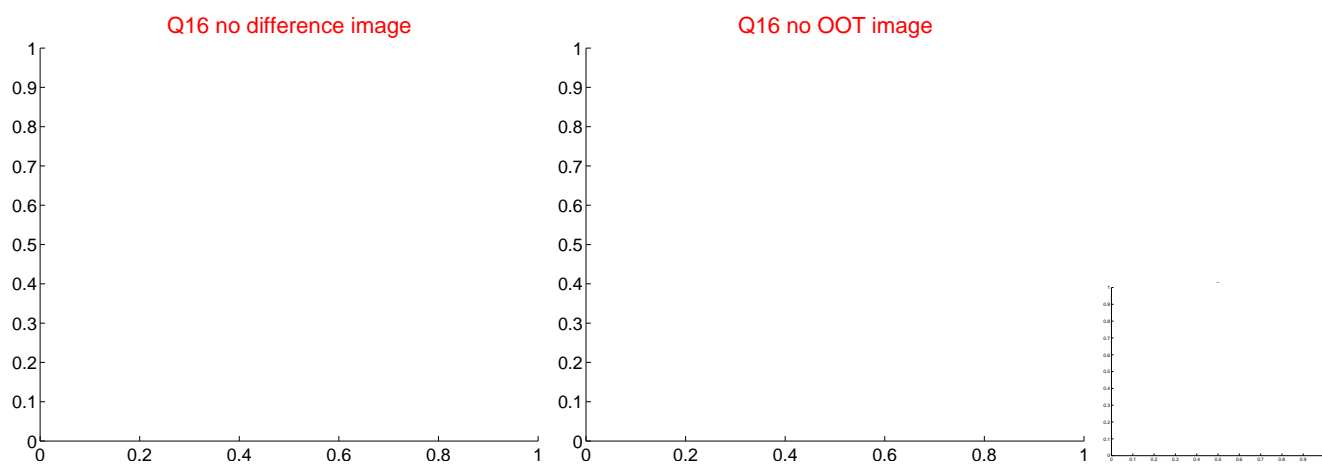
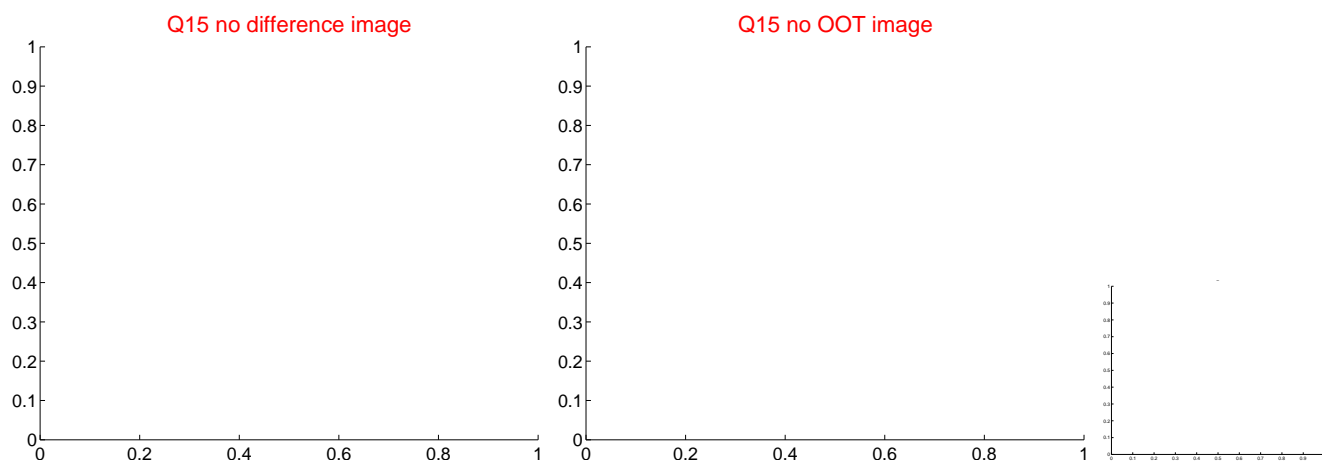
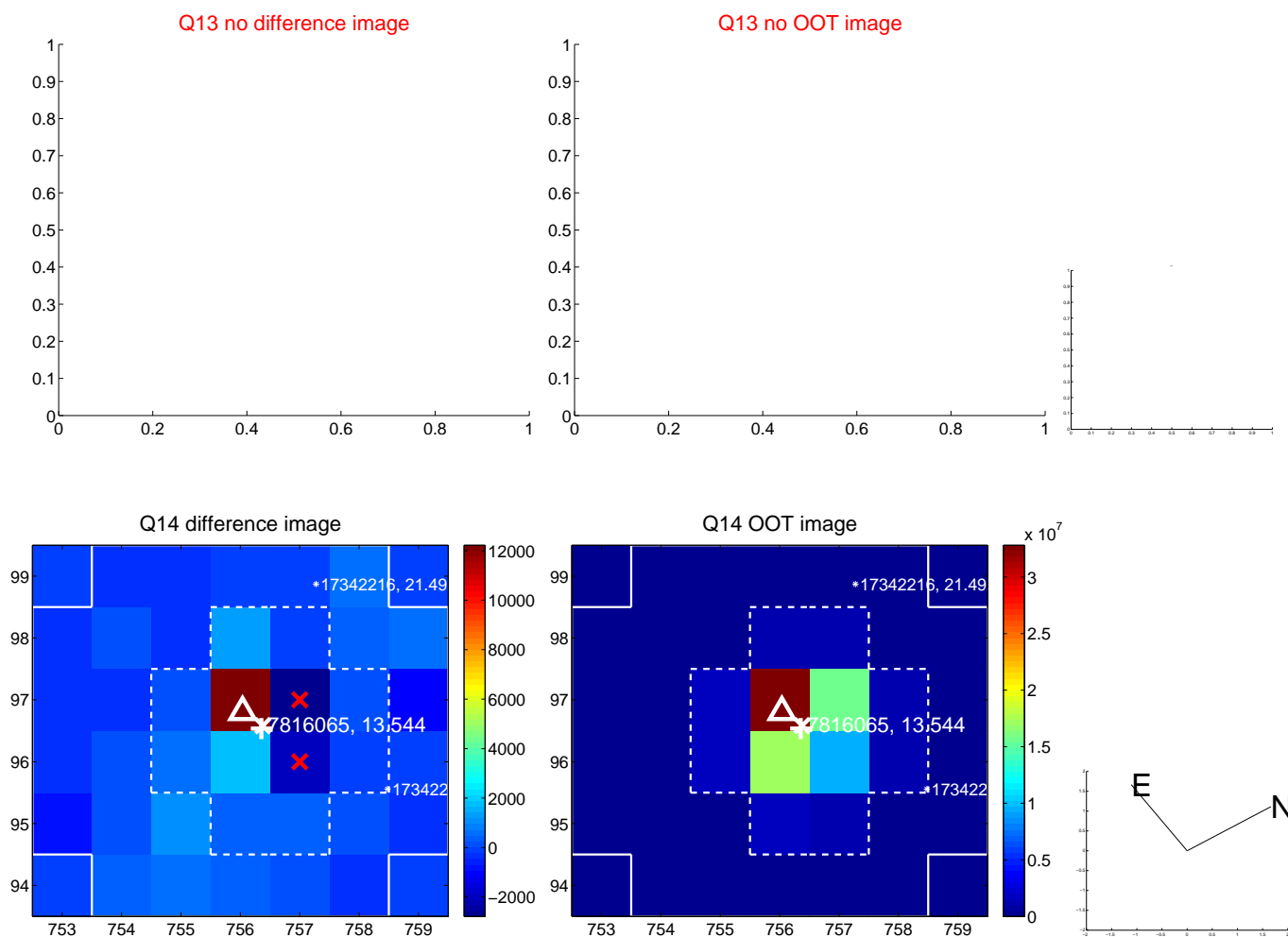
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



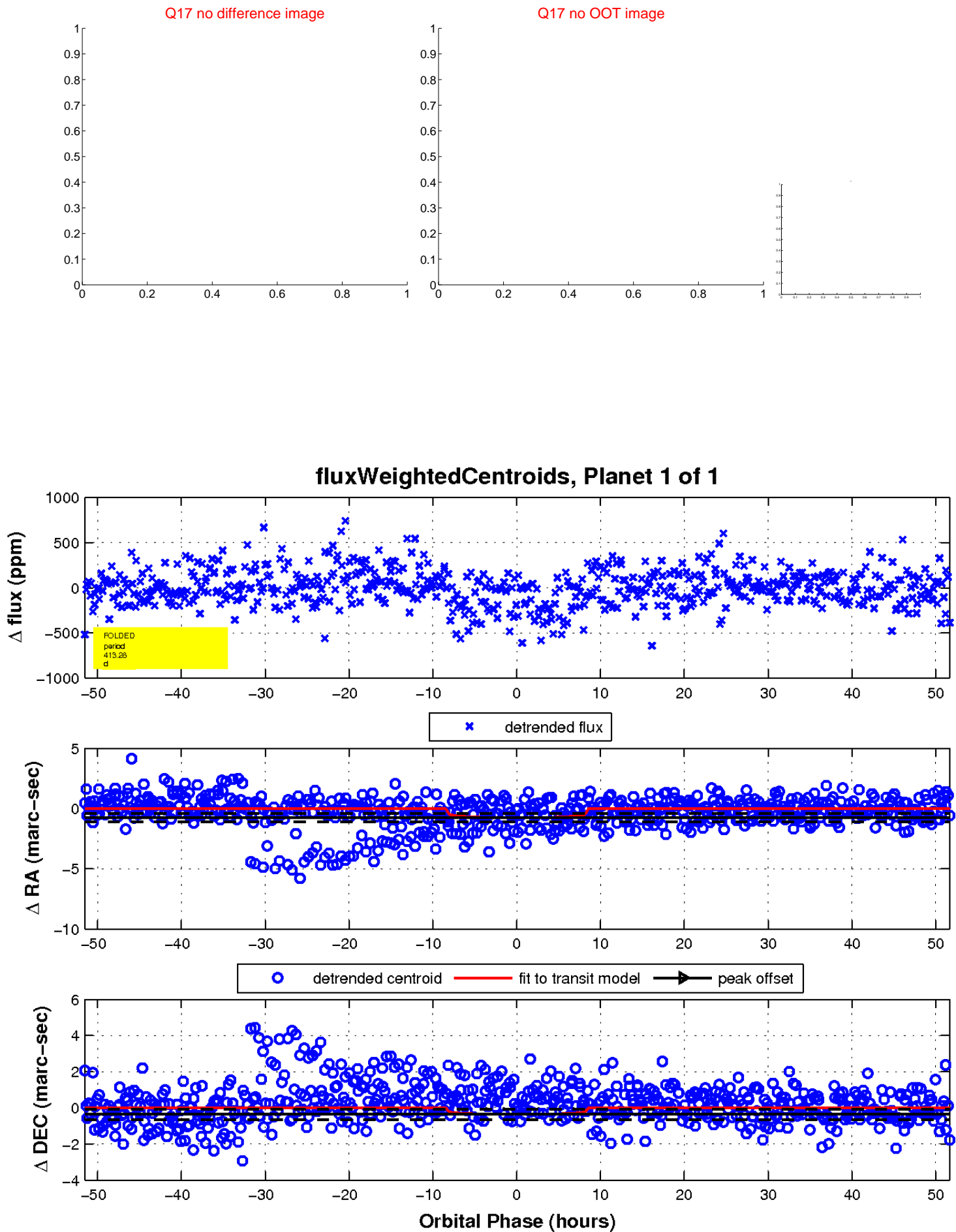
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

