

KIC 010222585

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})
010222585-01	OBS	No	284.420651	241.788603	222.4	16.844	7.1	7.2	0.76	5541	1.21	0.77

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010222585-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—INCONSISTENT_TRANS—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.

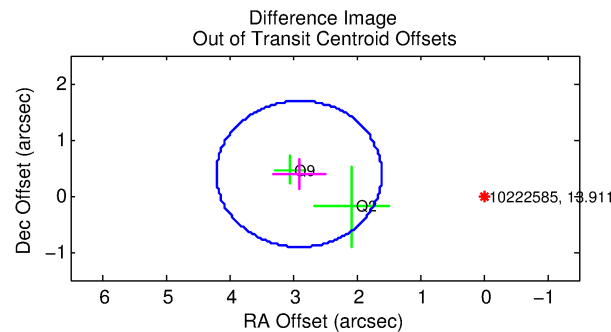
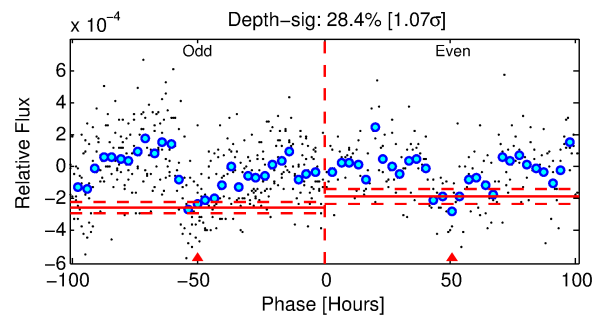
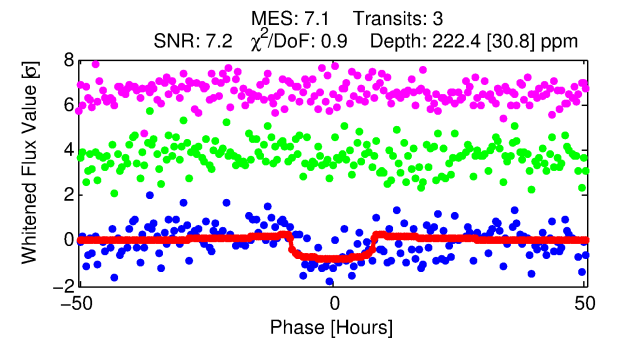
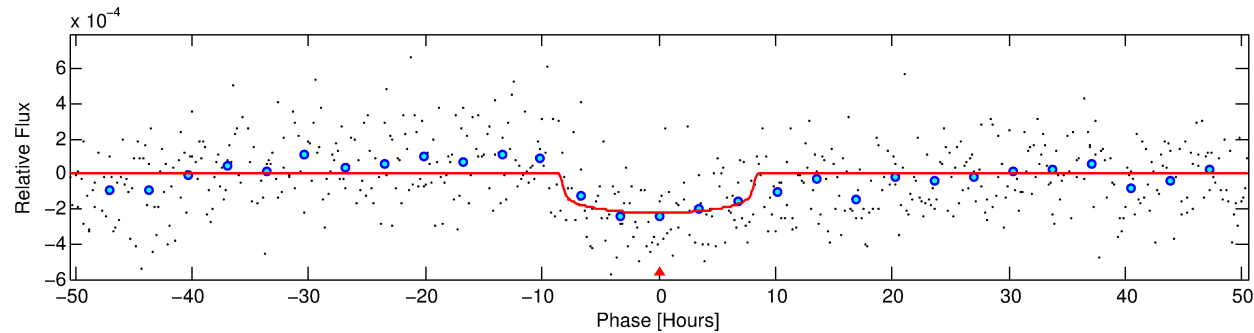
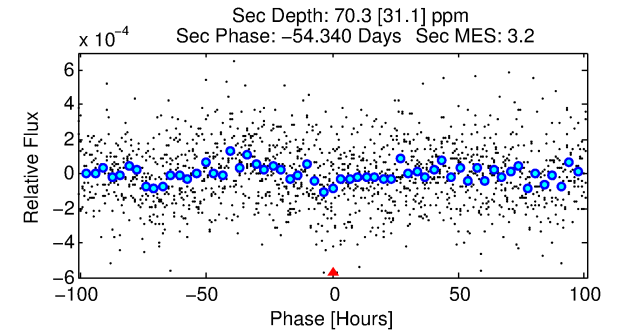
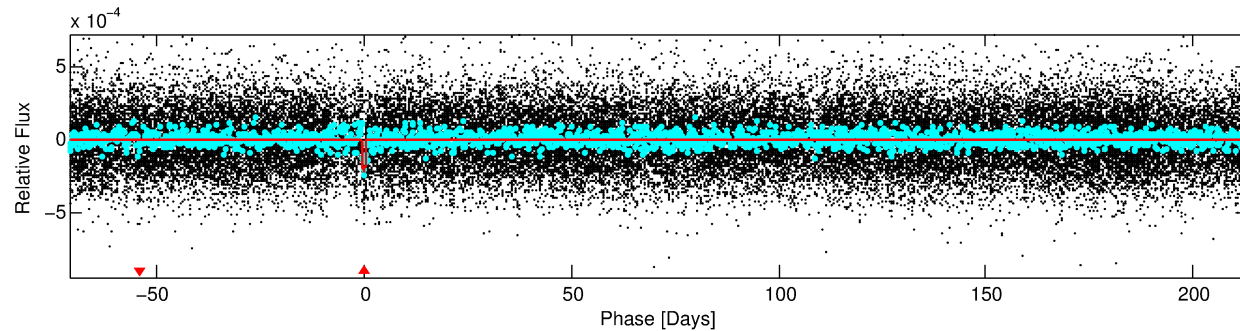
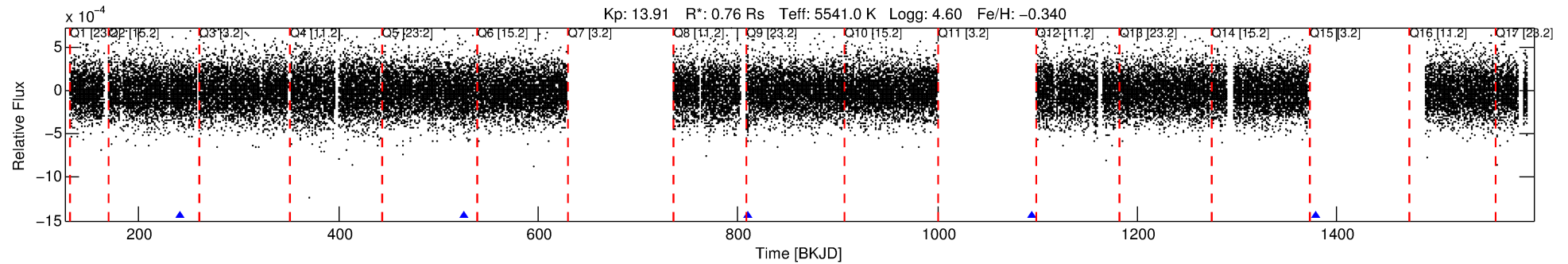
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010222585-01

No Significant Match Found

DV One-Page Summary

KIC: 10222585 Candidate: 1 of 1 Period: 284.421 d



DV Fit Results:

Period = 284.42065 [0.01607] d
Epoch = 241.7886 [0.0225] BKJD
Rp/R* = 0.0145 [0.0070]
a/R* = 95.75 [200.29]
b = 0.69 [1.59]
Seff = 0.77 [0.19]
Teq = 239 [15] K
Rp = 1.21 [0.63] Re
a = 0.7985 [0.1219] AU
Ag = 16908.27 [18391.77] [0.92σ]
Teffp = 4207 [1126] K [3.52σ]

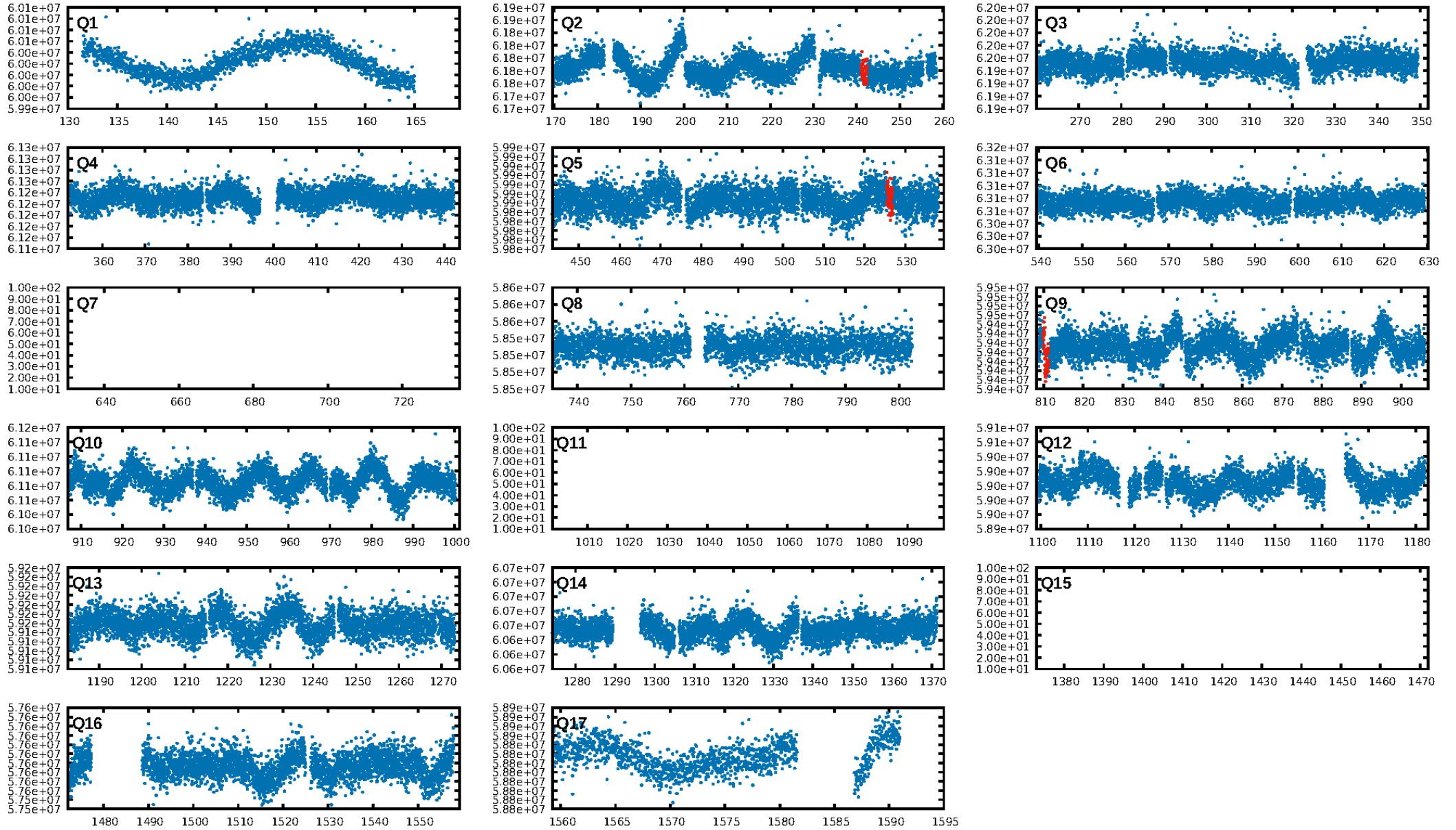
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 3.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 9.40e-15
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.49
Centroid-sig: 47.1%
Centroid-so: 1.879 arcsec [1.17σ]
OotOffset-rm: 2.928 arcsec [6.75σ]
KicOffset-rm: 2.912 arcsec [8.33σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

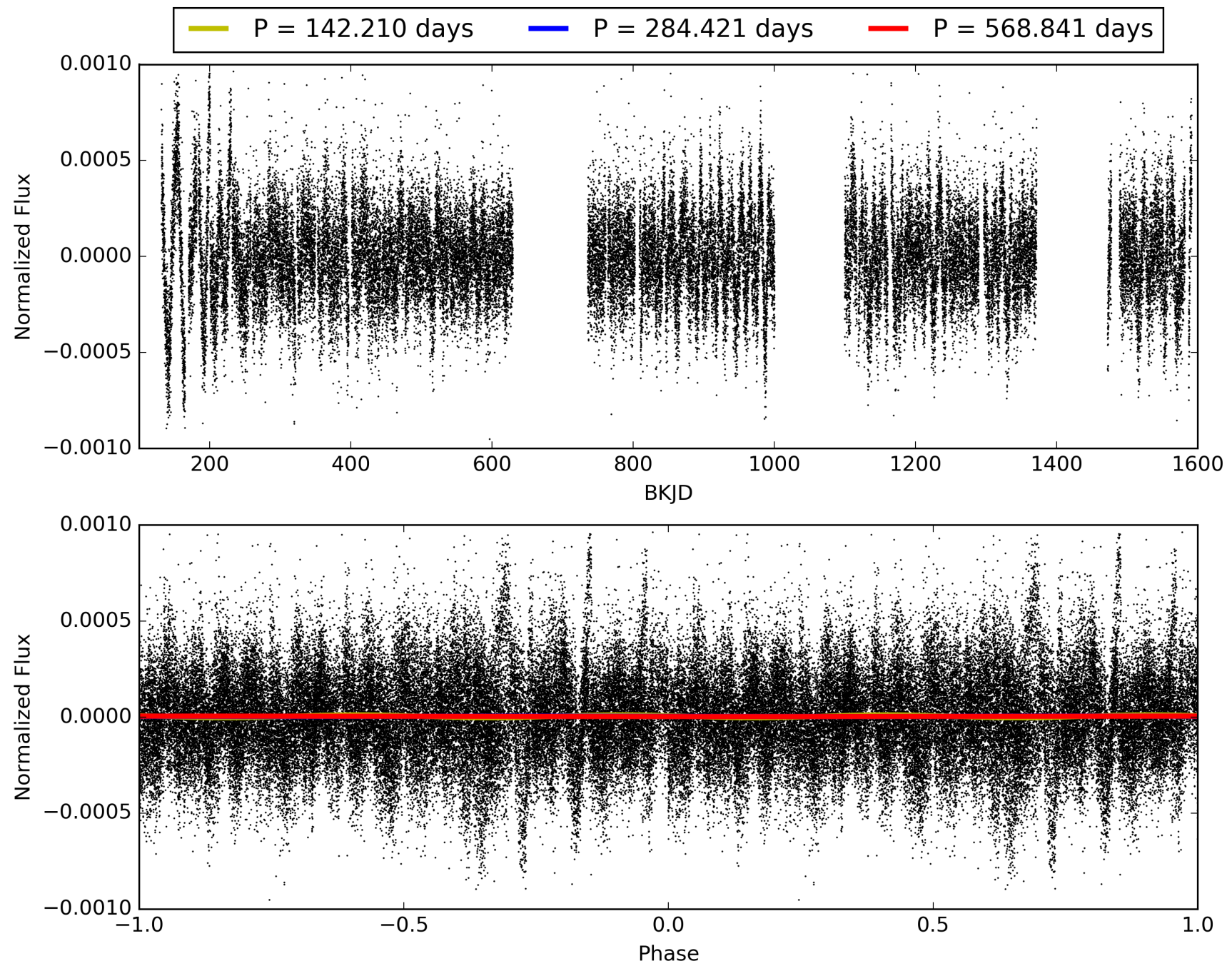
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:18:46 Z

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

TCE 010222585-01, PDC Light Curves

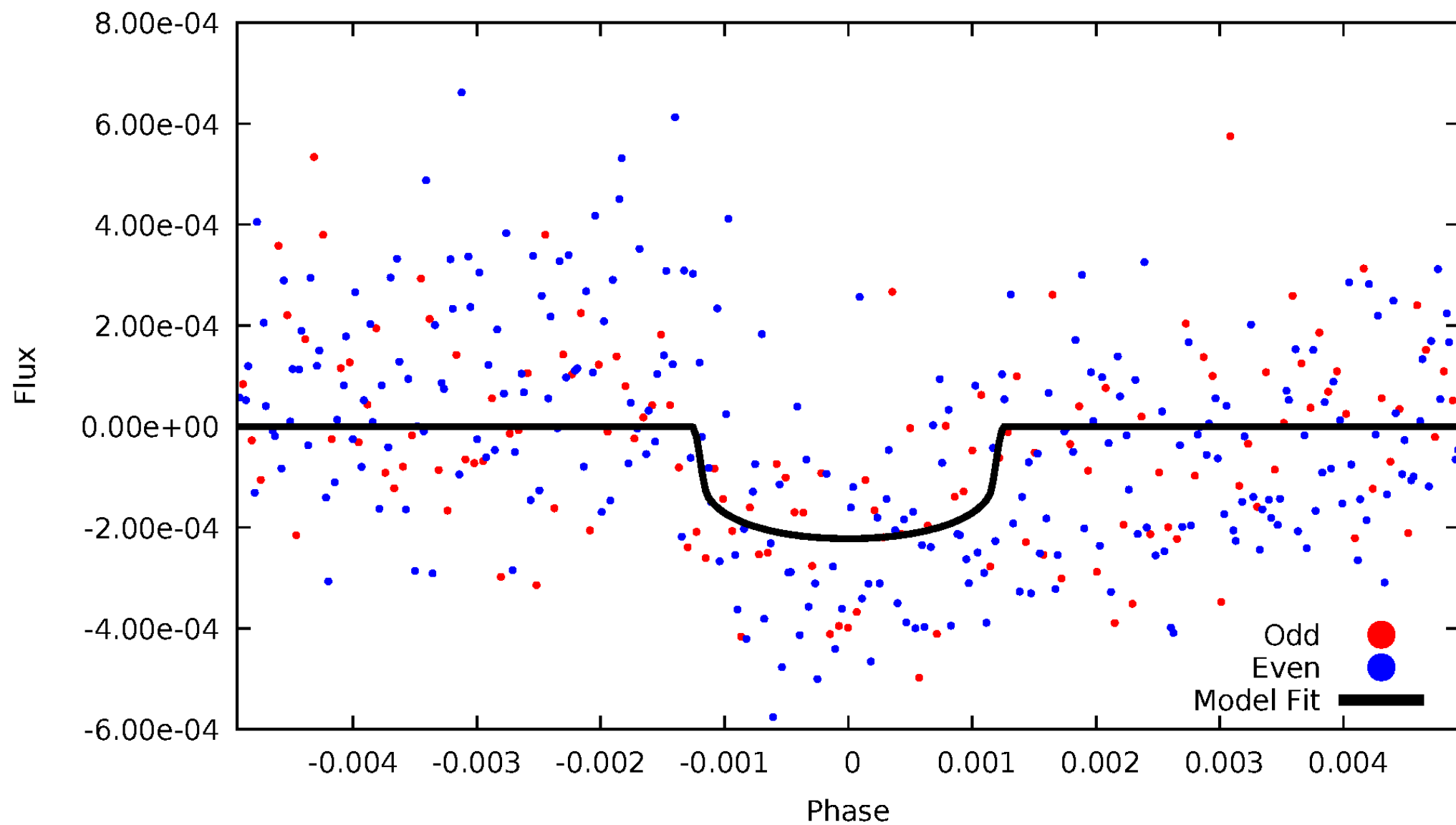


TCE 010222585-01



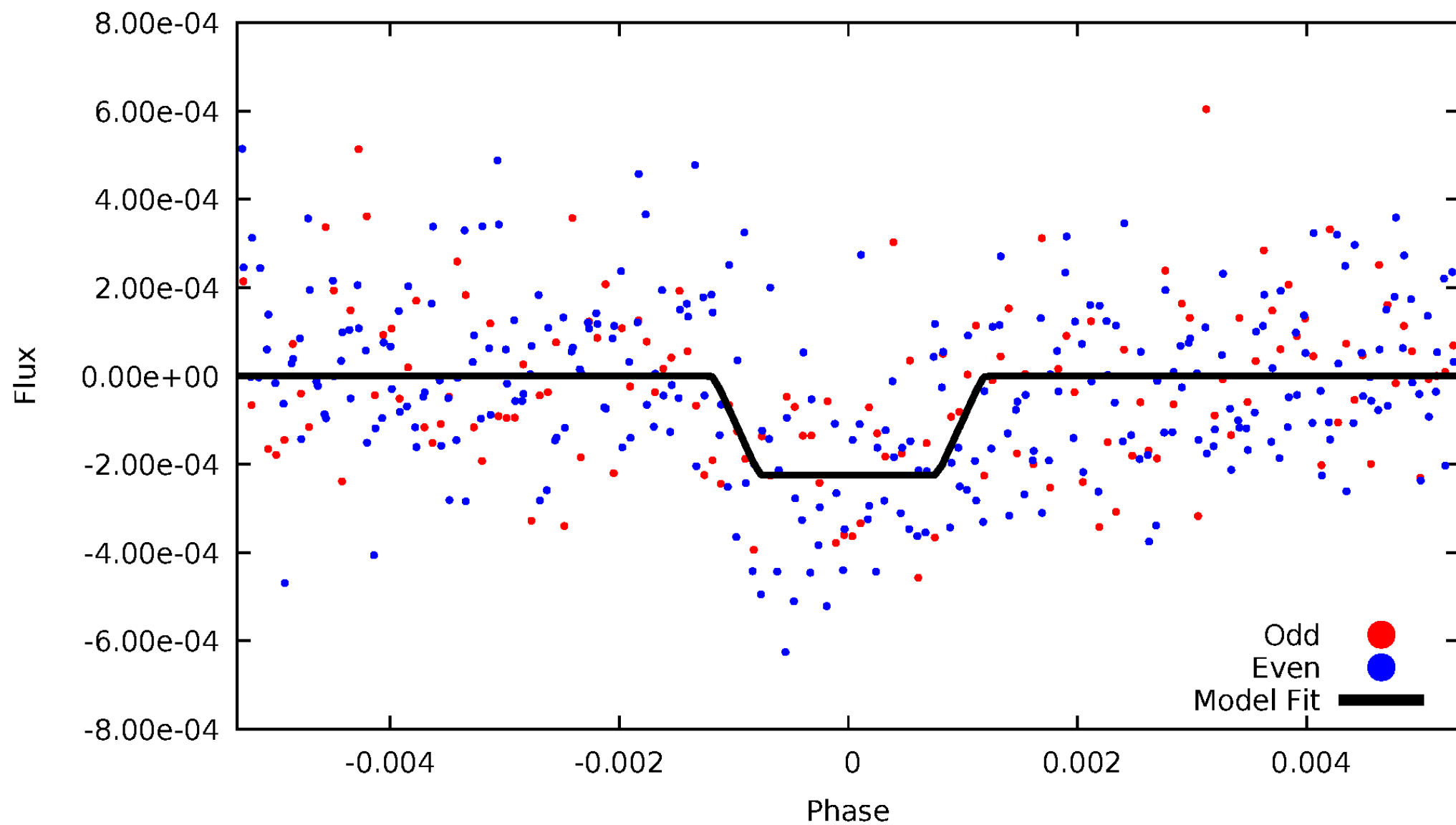
DV Odd/Even

TCE 010222585-01

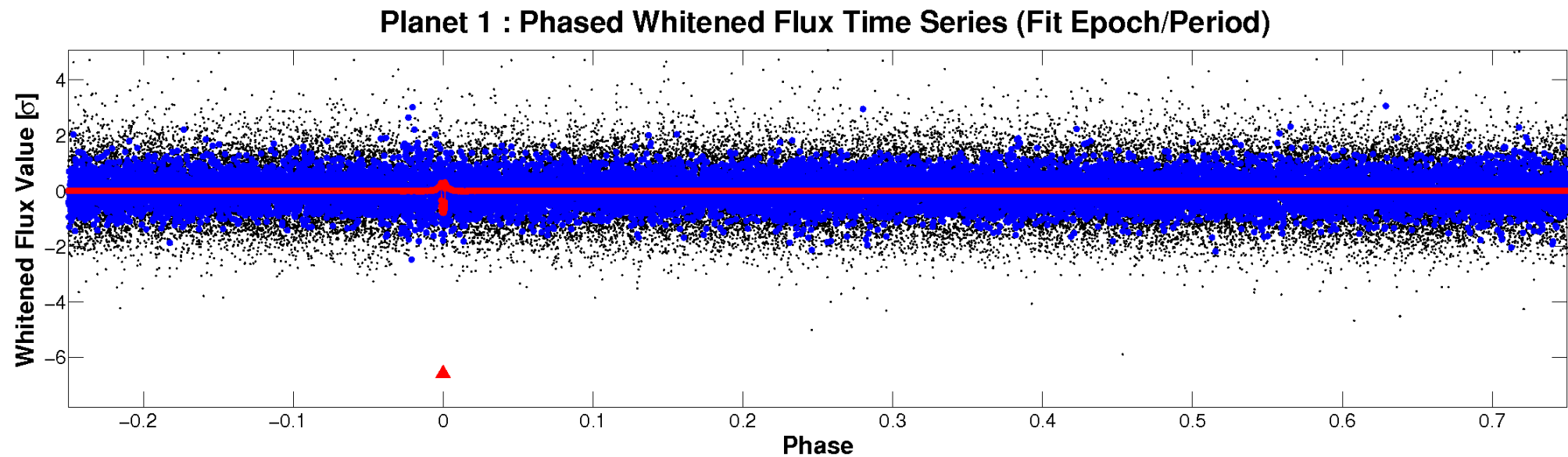
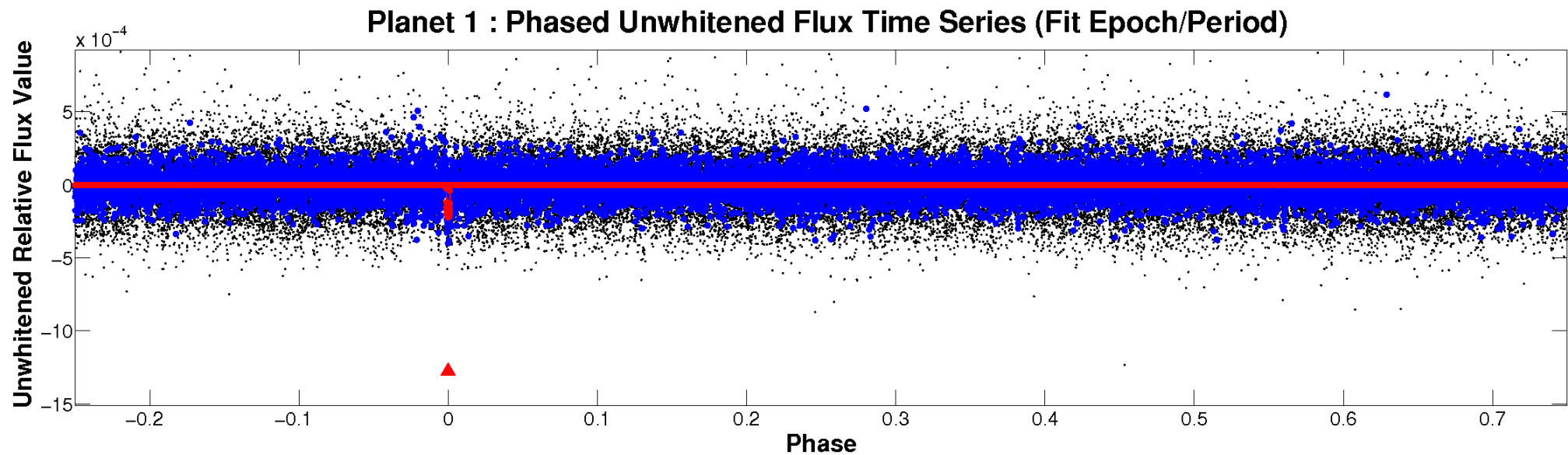


ALT Odd/Even

TCE 010222585-01



Non-Whitened Vs. Whitened Light Curve



PDC Quarter-Phased Transit Curves

TCE 010222585-01 $P=284.420651$ Days $T_0=241.788603$ (BKJD)



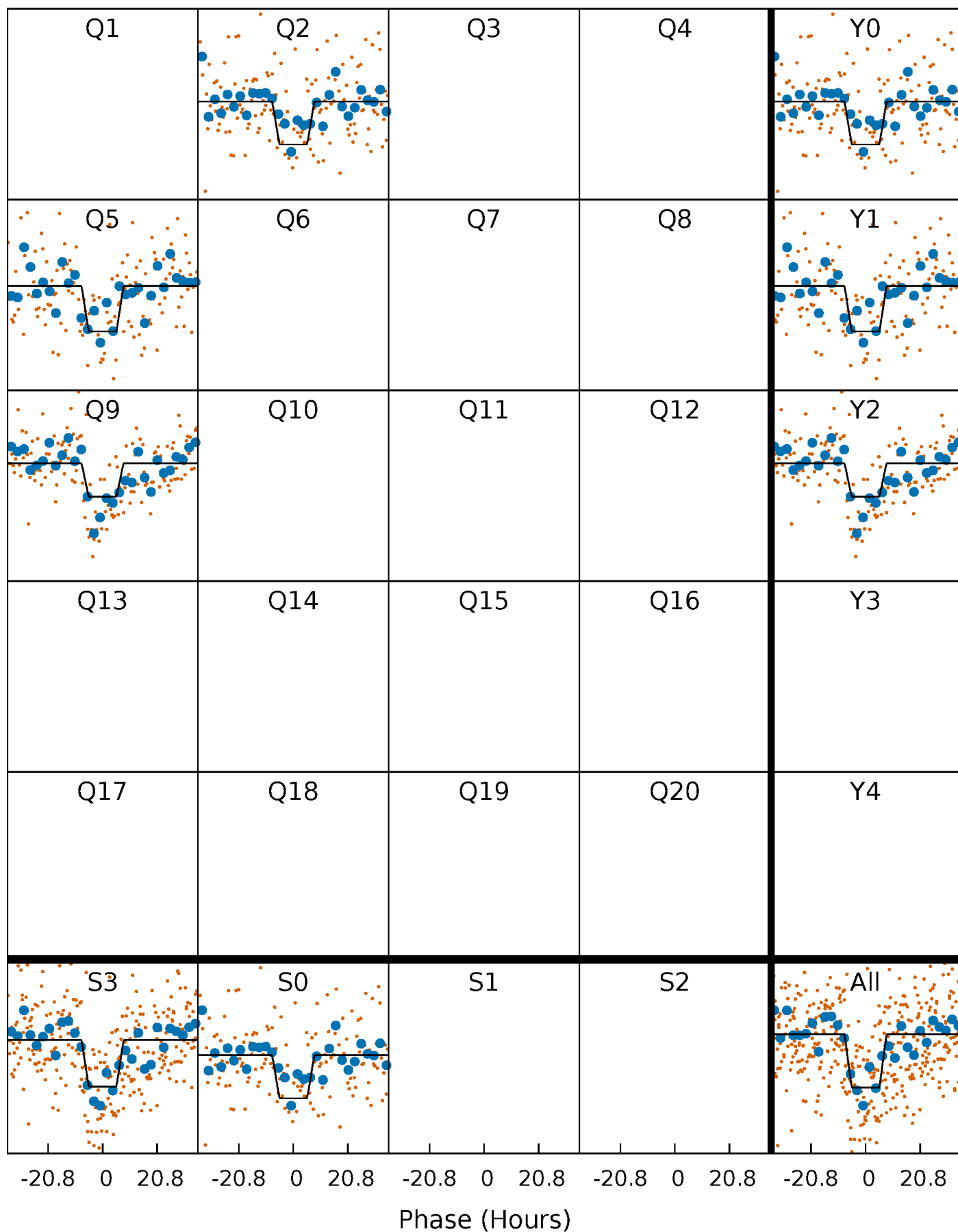
DV Quarter-Phased Transit Curves

TCE 010222585-01 P=284.420651 Days $T_0=241.788603$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

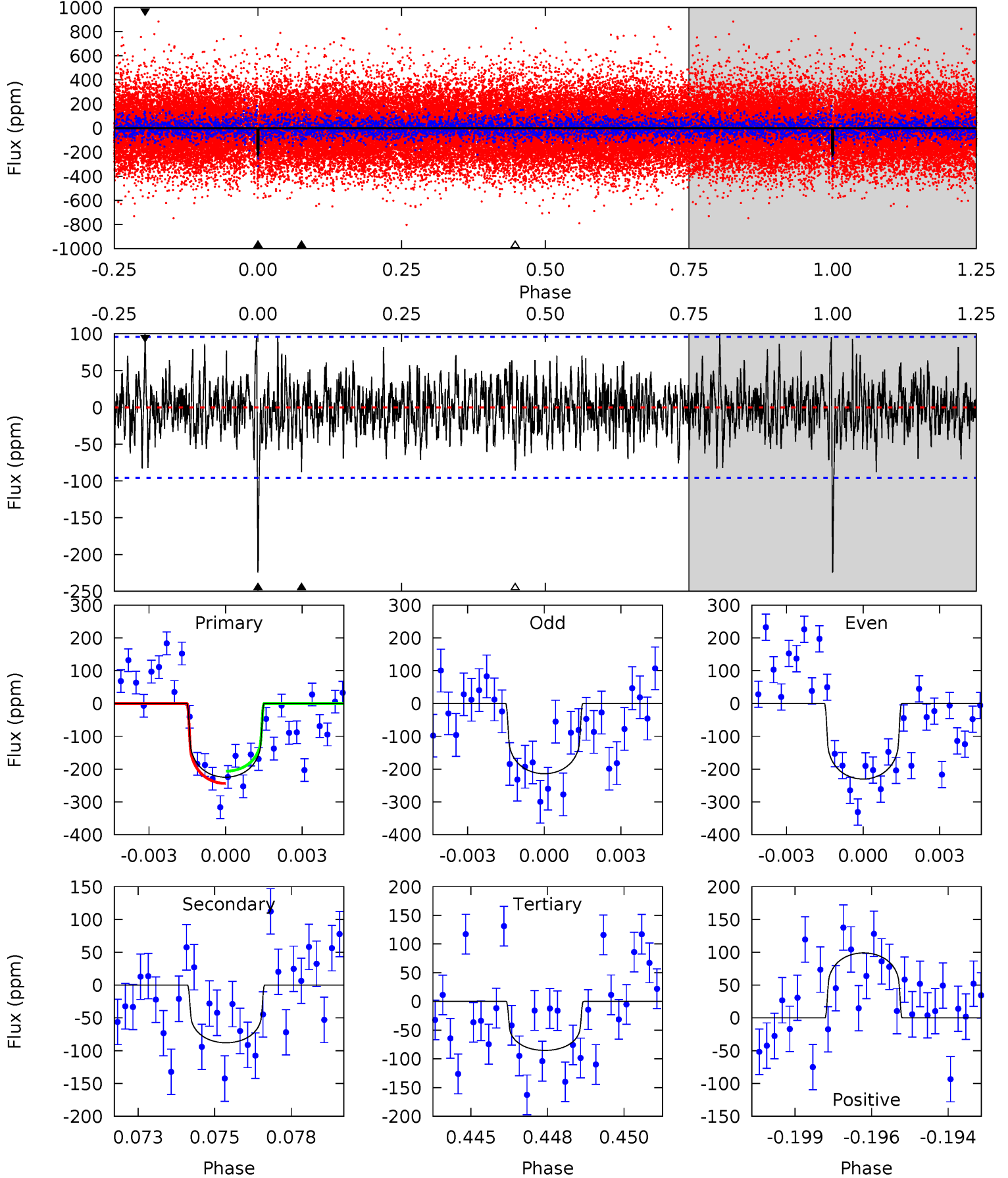
TCE 010222585-01 P=284.414722 Days $T_0=241.783309$ (BKJD)



DV Model-Shift Uniqueness Test

010222585-01, P = 284.420651 Days, E = 241.788603 Days

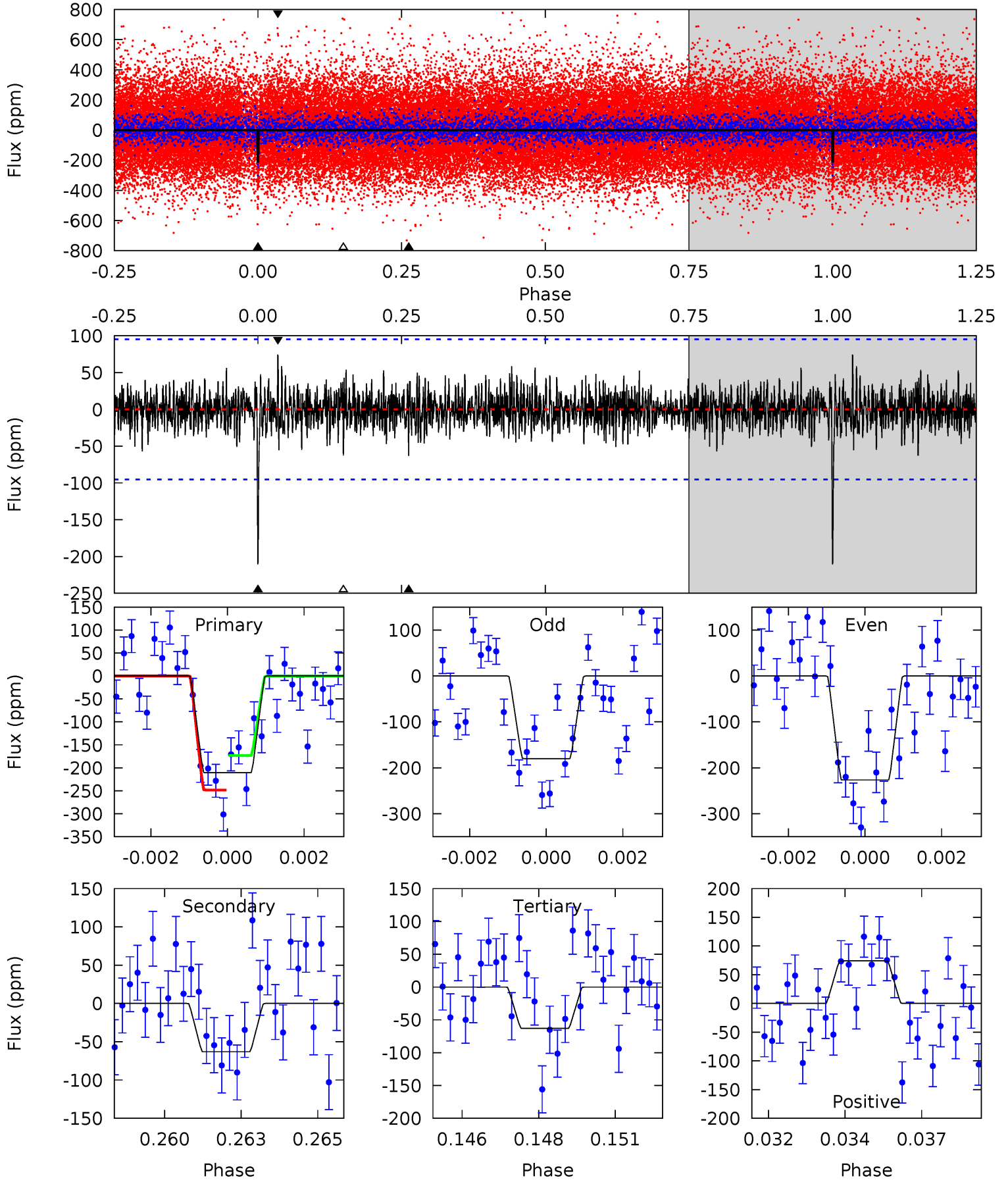
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.4	4.84	4.70	5.45	5.28	3.02	1.50	7.68	6.93	0.15	-0.61	0.42	1.05	0.31	1.03



Alt Model-Shift Uniqueness Test

010222585-01, P = 284.414722 Days, E = 241.783309 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	3.50	3.49	4.13	5.29	3.03	1.00	8.20	7.56	0.01	-0.62	1.22	1.17	0.26	2.08



Stellar Parameters For KIC 010222585

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5541^{+150}_{-150}	$4.599^{+0.040}_{-0.120}$	$-0.340^{+0.300}_{-0.300}$	$0.761^{+0.139}_{-0.064}$	$0.851^{+0.082}_{-0.098}$	$2.722^{+0.459}_{-1.017}$
	+3%/-3%	+1%/-3%	+88%/-88%	+18%/-8%	+10%/-12%	+17%/-37%
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 010222585-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-88 ± 18	$1.26^{+0.56}_{-0.56}$	339^{+15}_{-13}	4567^{+1223}_{-592}	18996^{+38800}_{-9989}
Alt.	-63 ± 18	$1.34^{+0.58}_{-0.61}$	339^{+16}_{-13}	4200^{+1204}_{-550}	12354^{+30171}_{-6938}

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

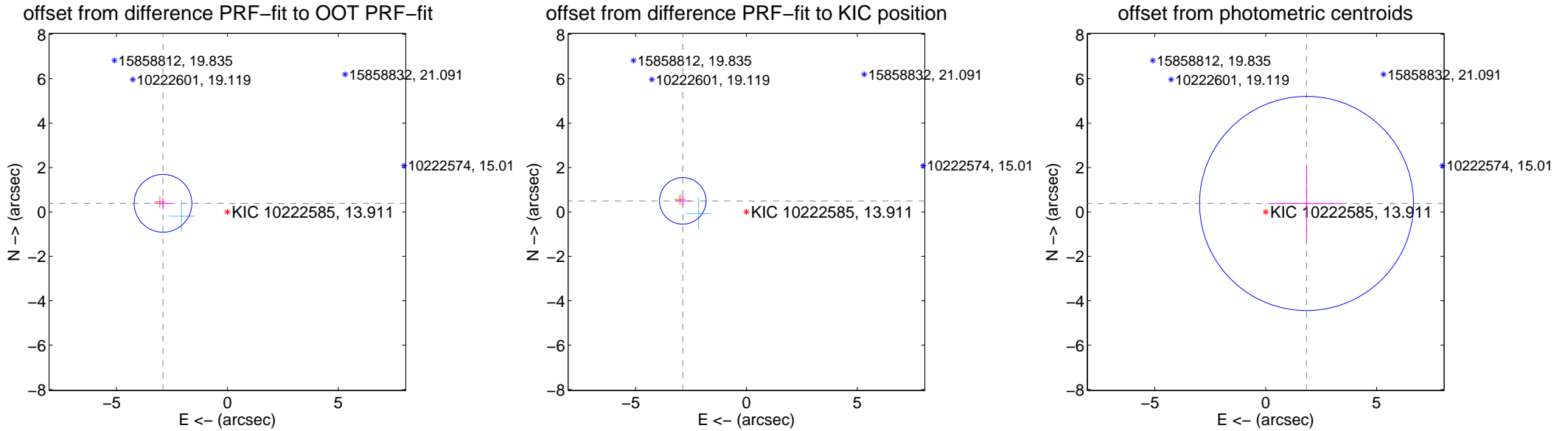
DV Centroid Data

Supplemental centroid analysis for 010222585-01. Kepler magnitude: 13.91. Transit SNR 7.17

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

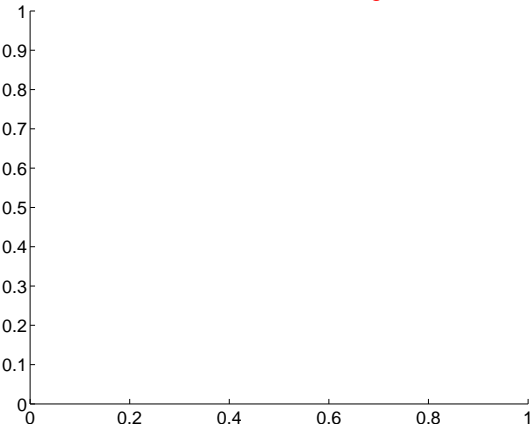
	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.928 \pm 0.434	6.75	2.902 \pm 0.402	0.388 \pm 0.274
PRF-fit source offset from KIC position	2.912 \pm 0.350	8.33	2.870 \pm 0.353	0.498 \pm 0.240
photometric centroid source offset	1.88 \pm 1.61	1.17	-1.84 \pm 1.60	0.38 \pm 1.73



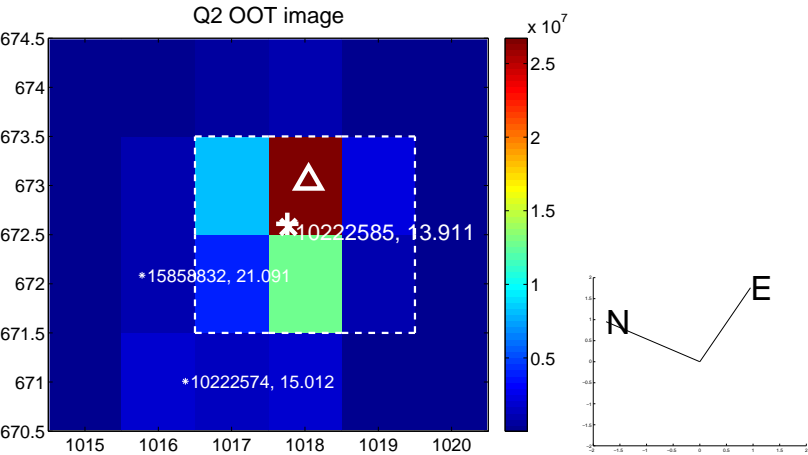
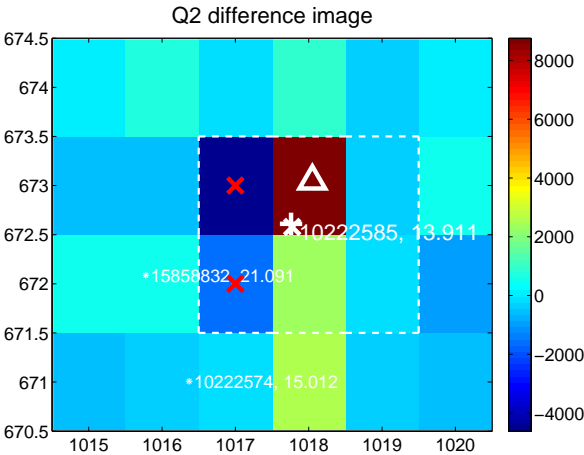
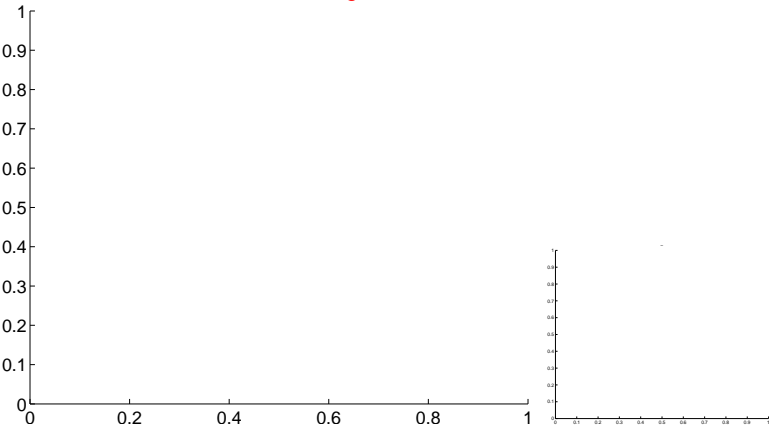
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

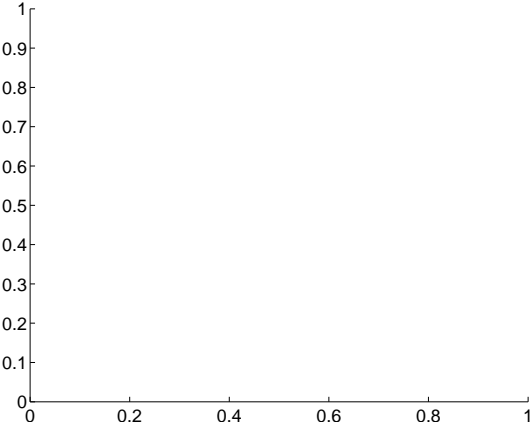
Q1 no difference image



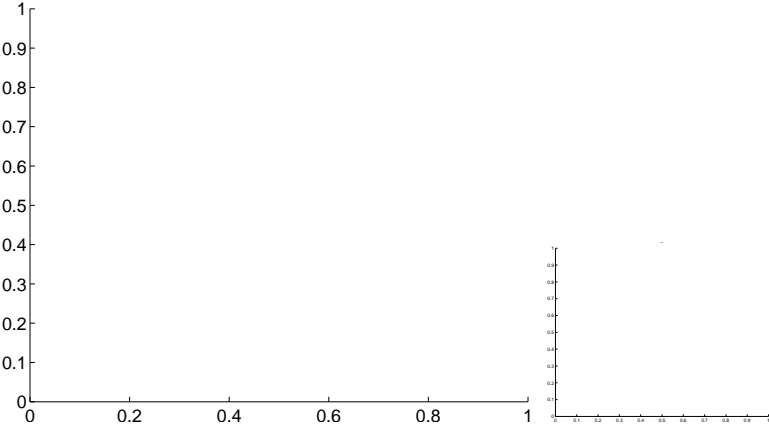
Q1 no OOT image



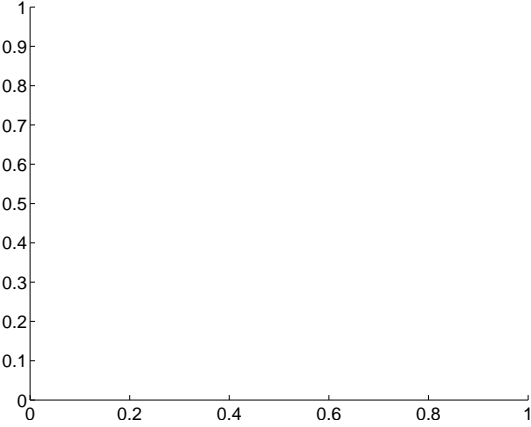
Q3 no difference image



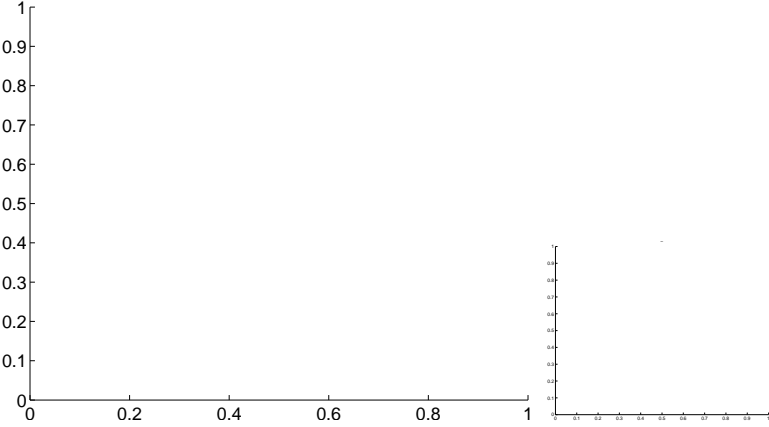
Q3 no OOT image



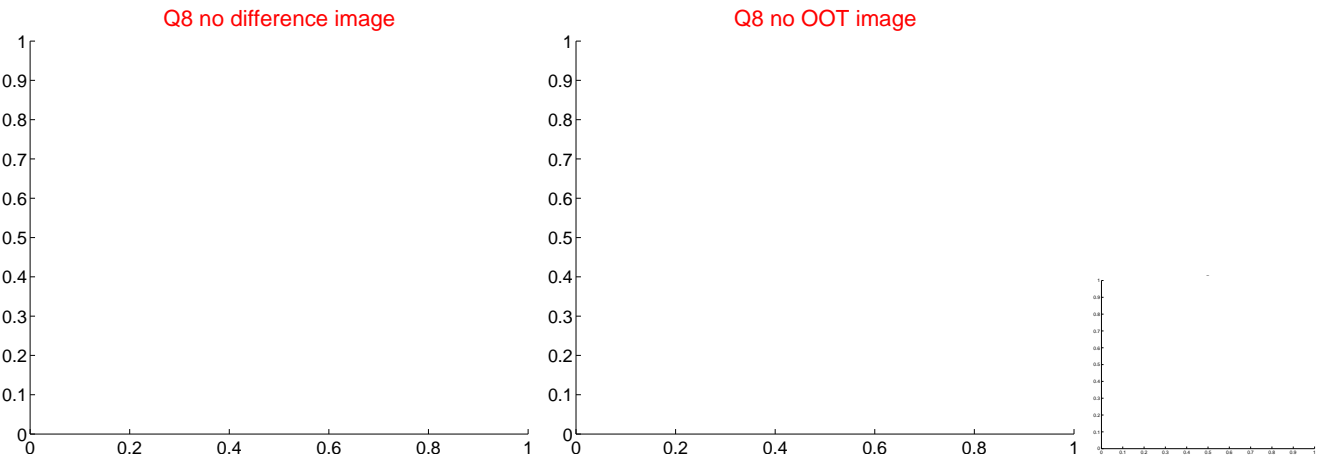
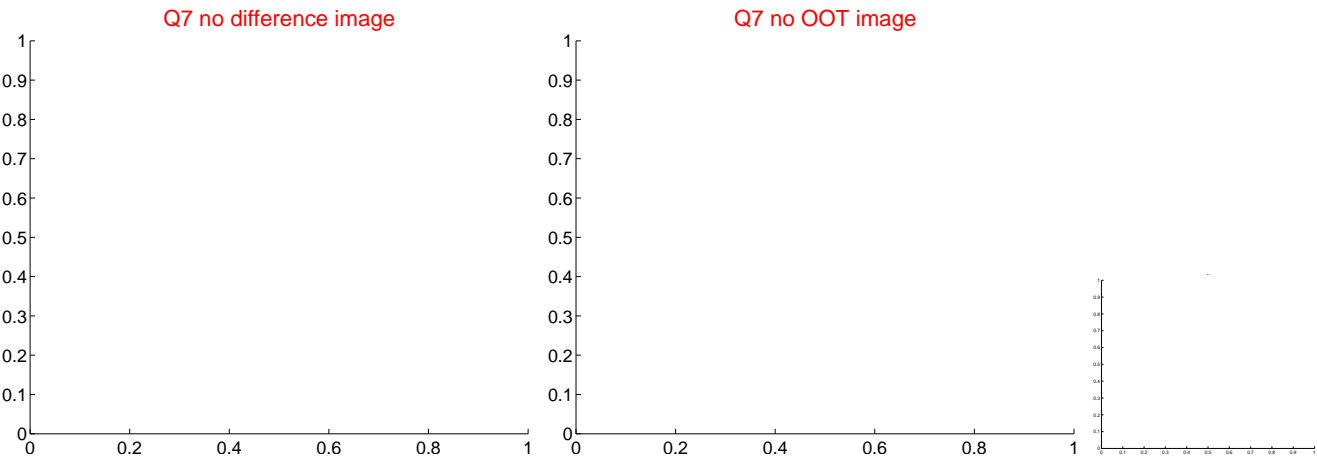
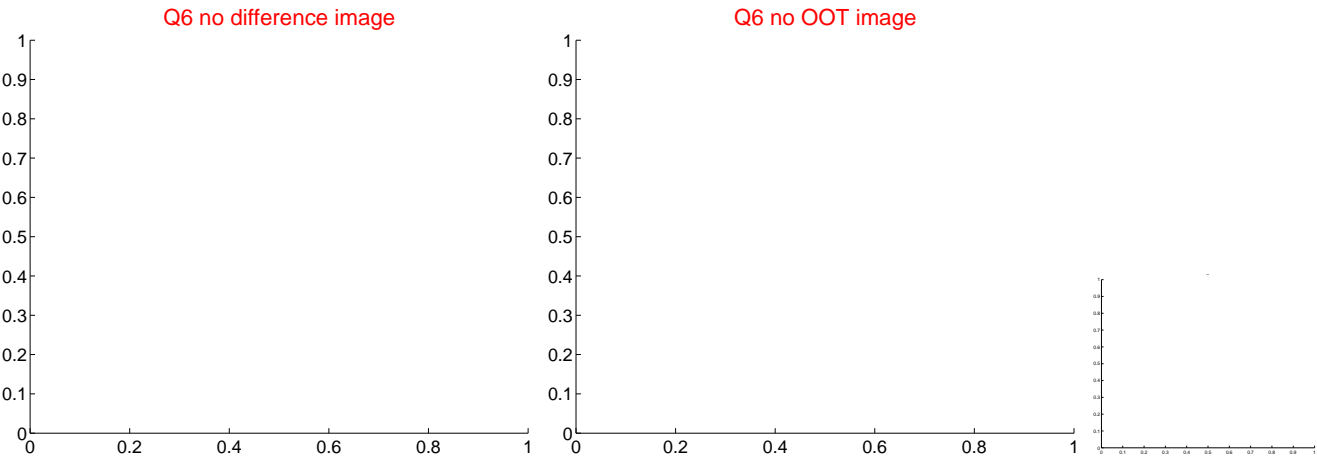
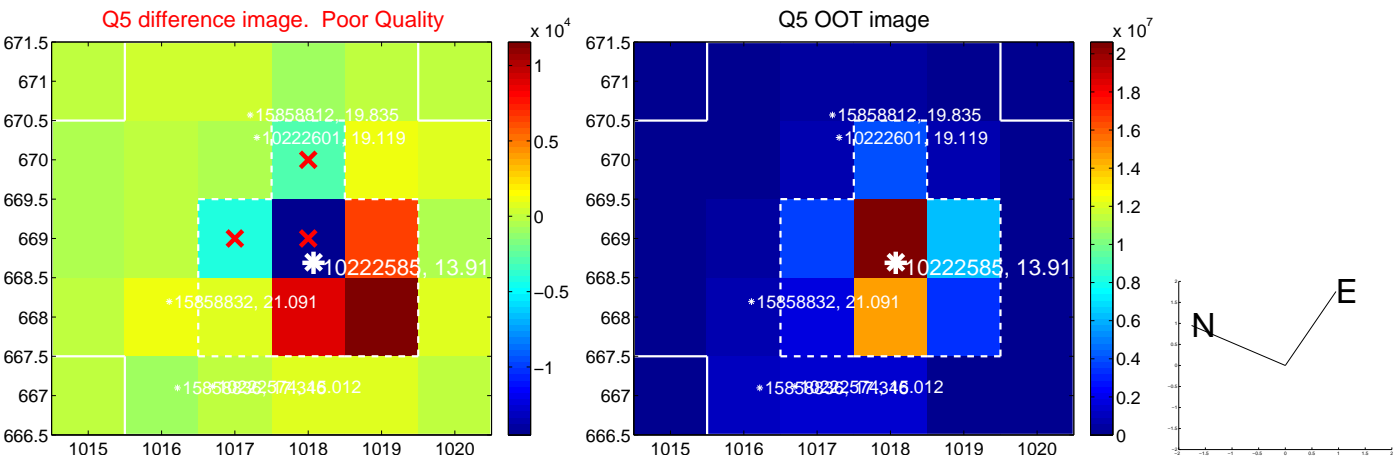
Q4 no difference image



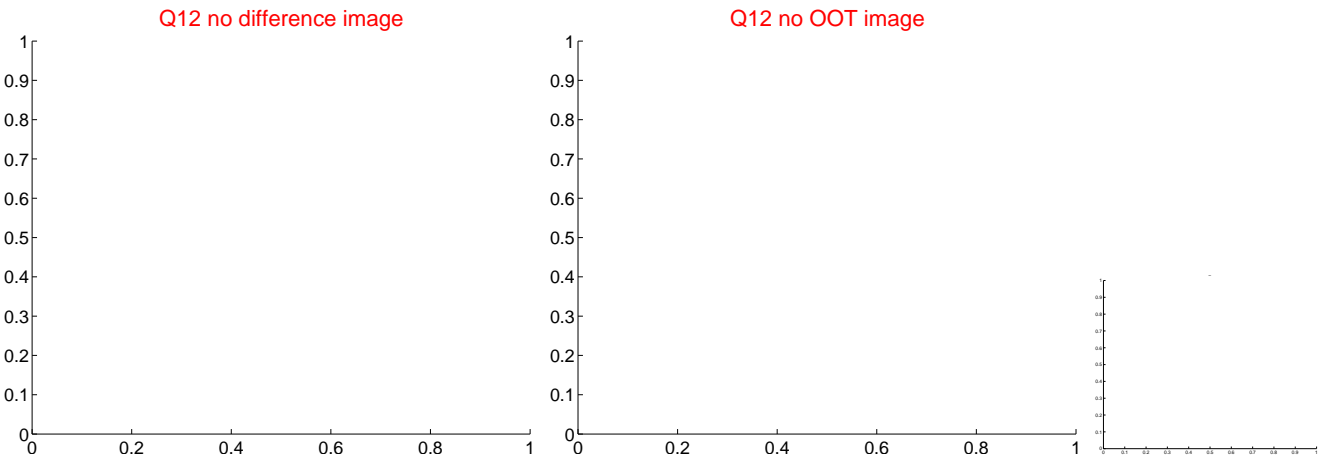
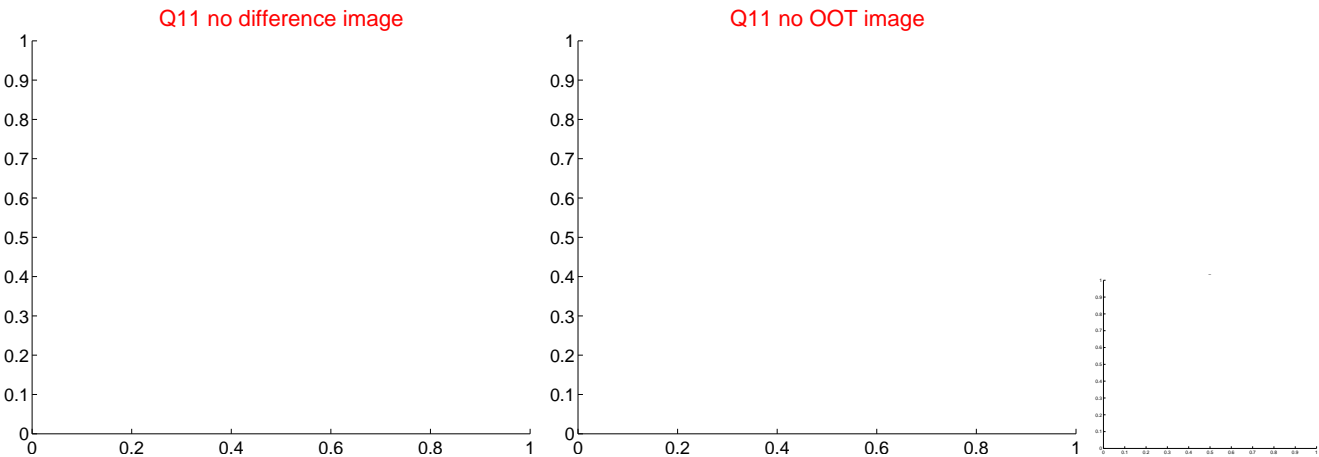
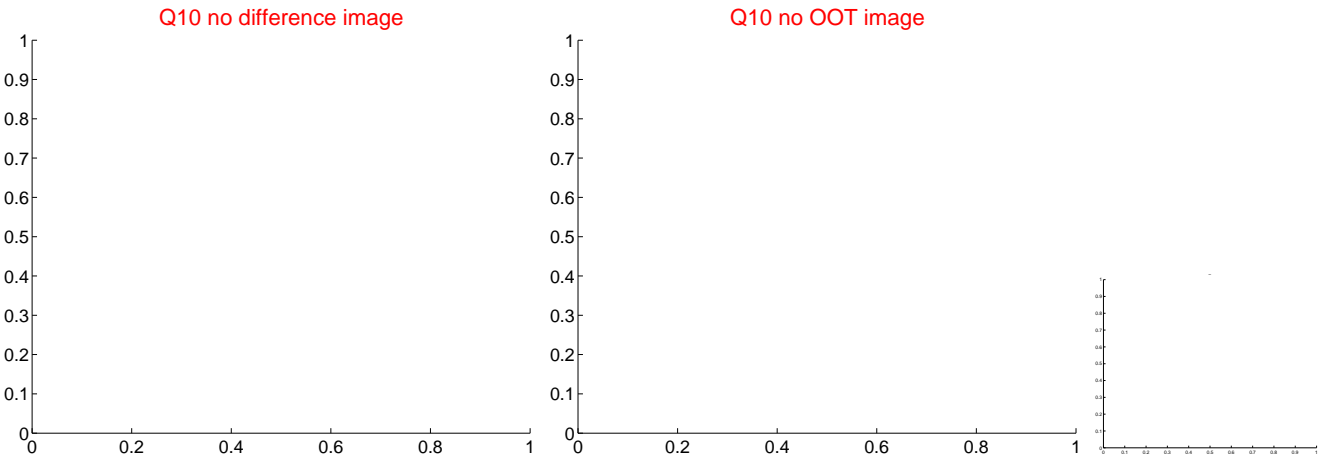
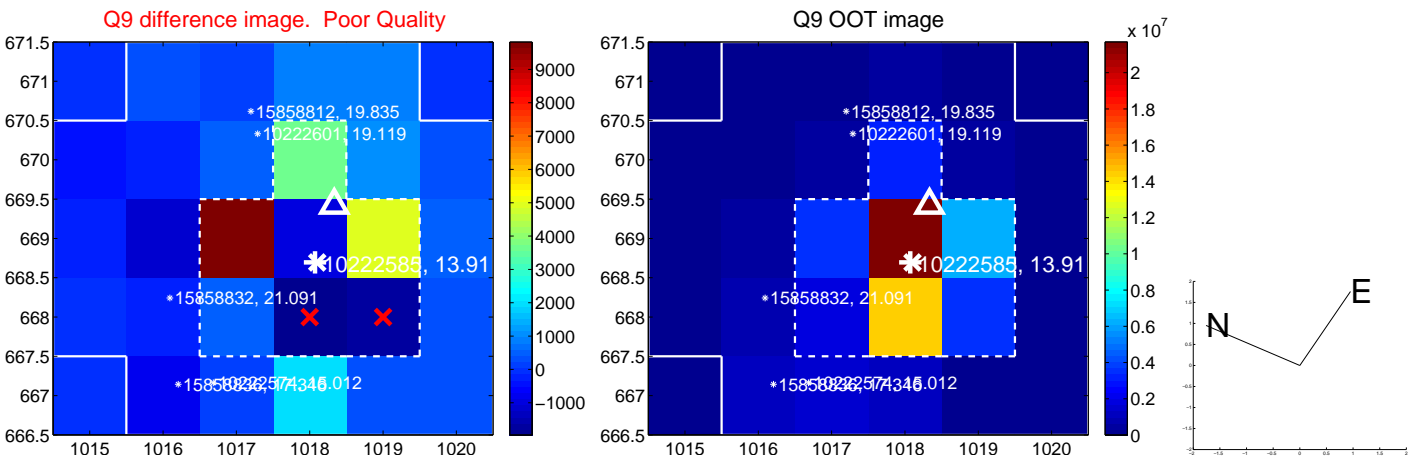
Q4 no OOT image



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



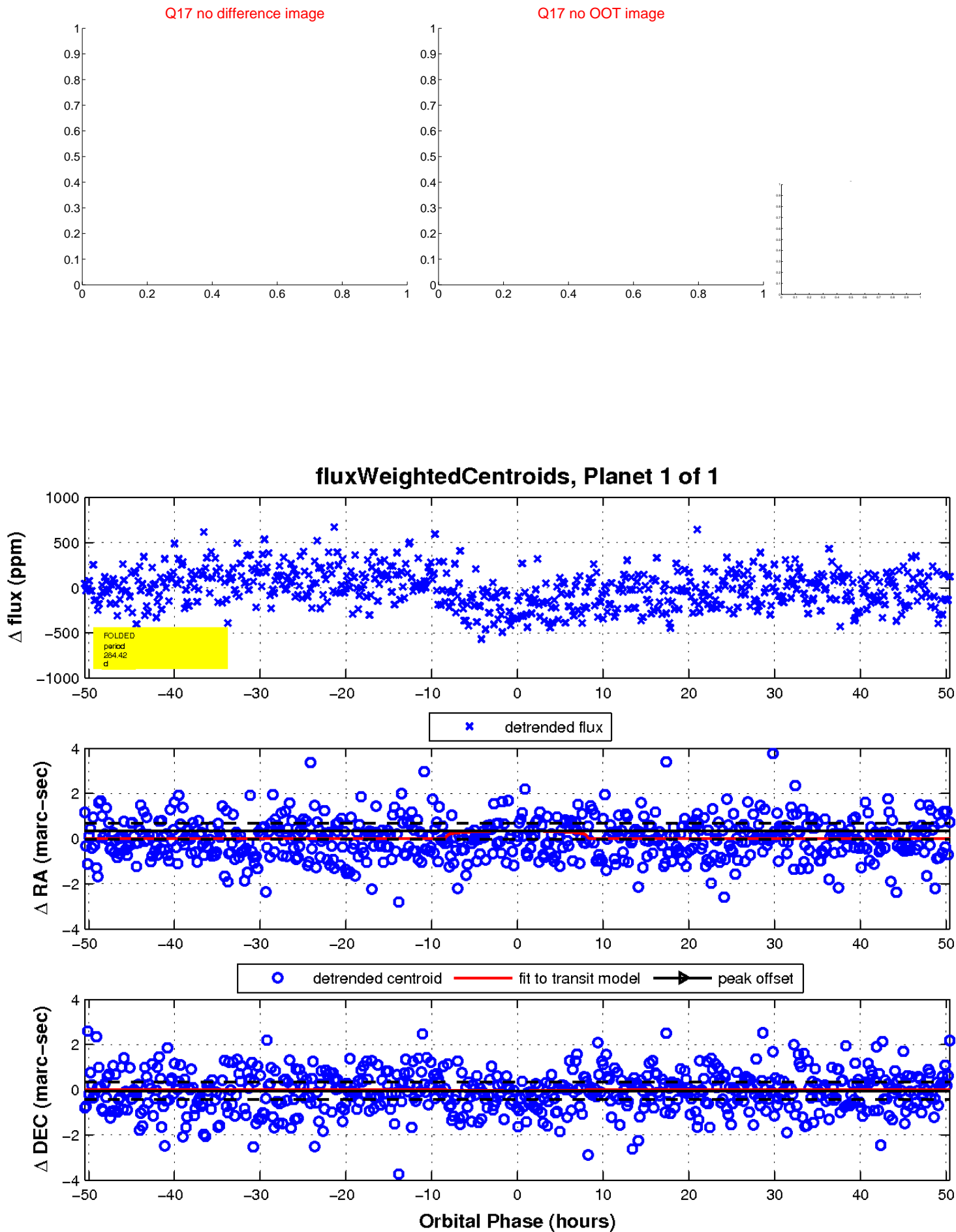
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

