

KIC 007282281

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})
007282281-01	OBS	No	484.769613	253.431386	134.1	18.431	7.4	7.3	2.12	8982	2.66	10.90

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007282281-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—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.

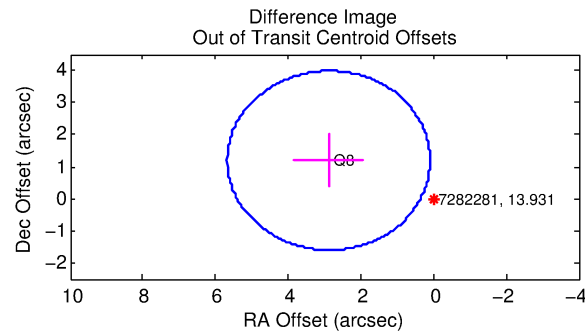
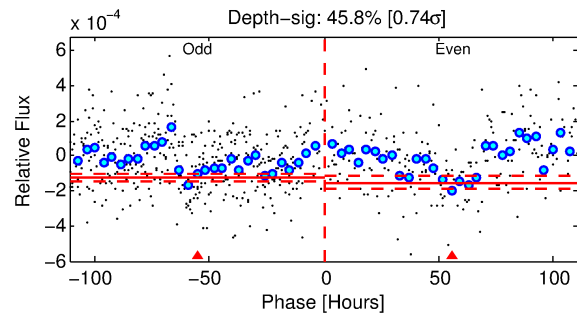
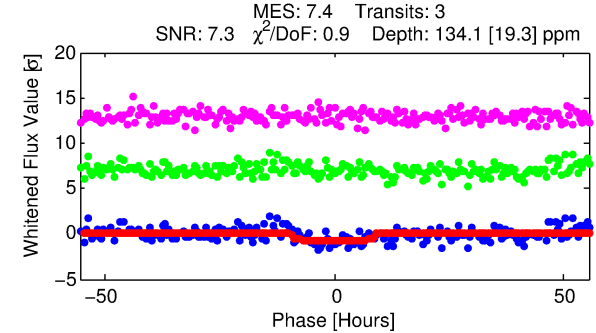
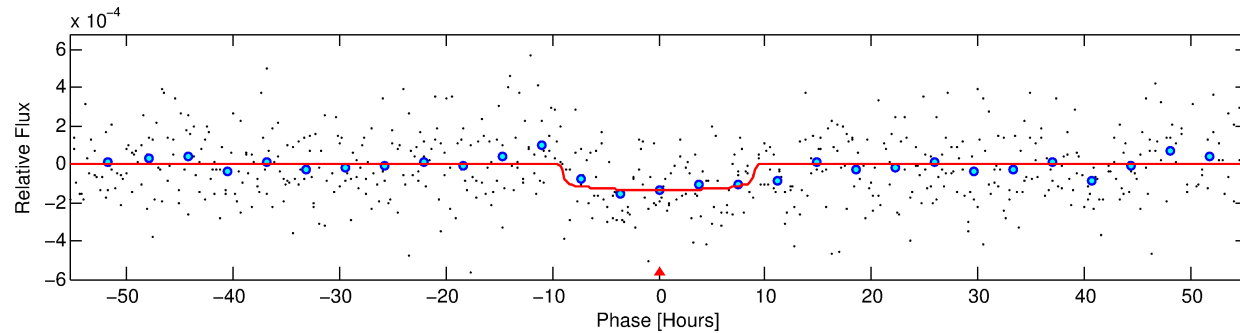
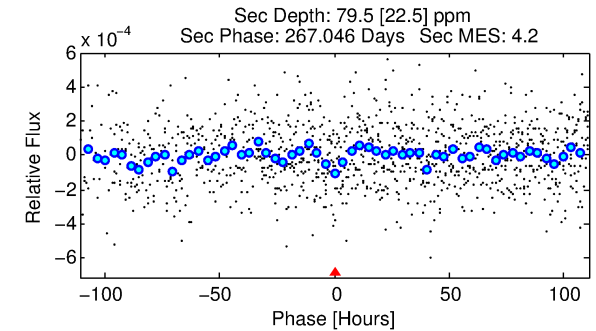
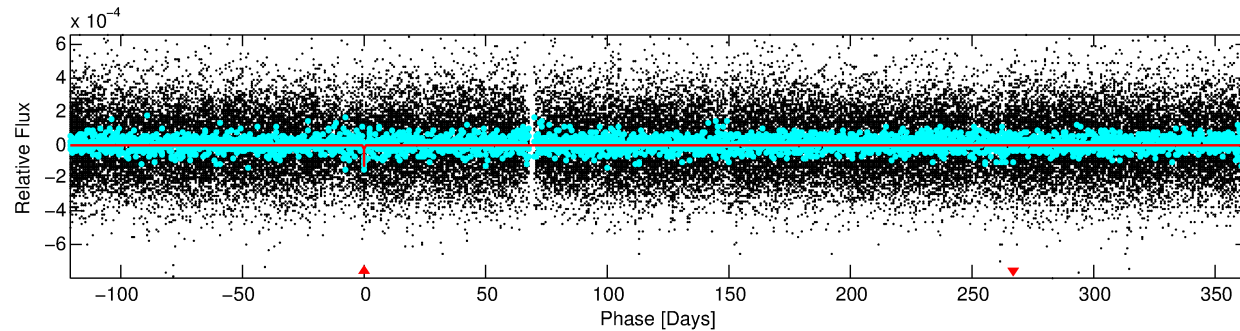
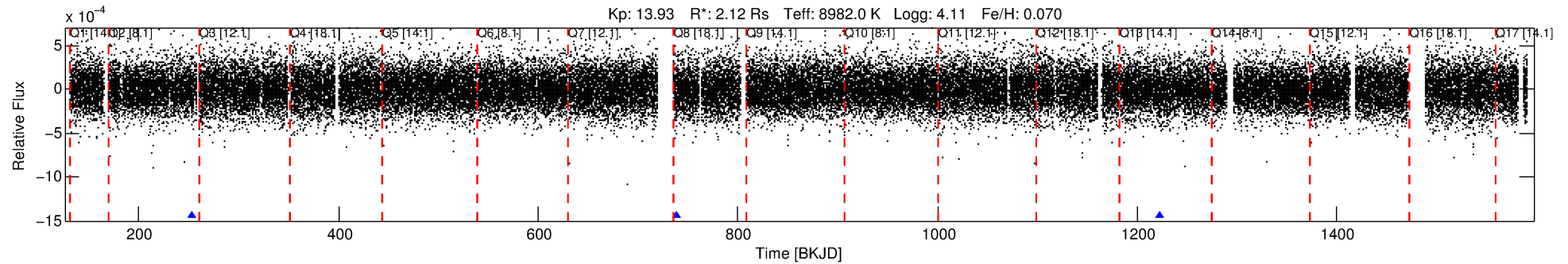
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007282281-01

No Significant Match Found

DV One-Page Summary

KIC: 7282281 Candidate: 1 of 1 Period: 484.770 d



DV Fit Results:

Period = 484.76961 [0.02269] d
Epoch = 253.4314 [0.0268] BKJD
Rp/R* = 0.0115 [0.0037]
a/R* = 140.29 [299.41]
b = 0.73 [1.36]
Seff = 10.91 [4.53]
Teff = 463 [48] K
Rp = 2.66 [1.28] Re
a = 1.5525 [0.4271] AU
Ag = 14932.80 [11979.83] [1.25σ]
Teffp = 7920 [1458] K [5.11σ]

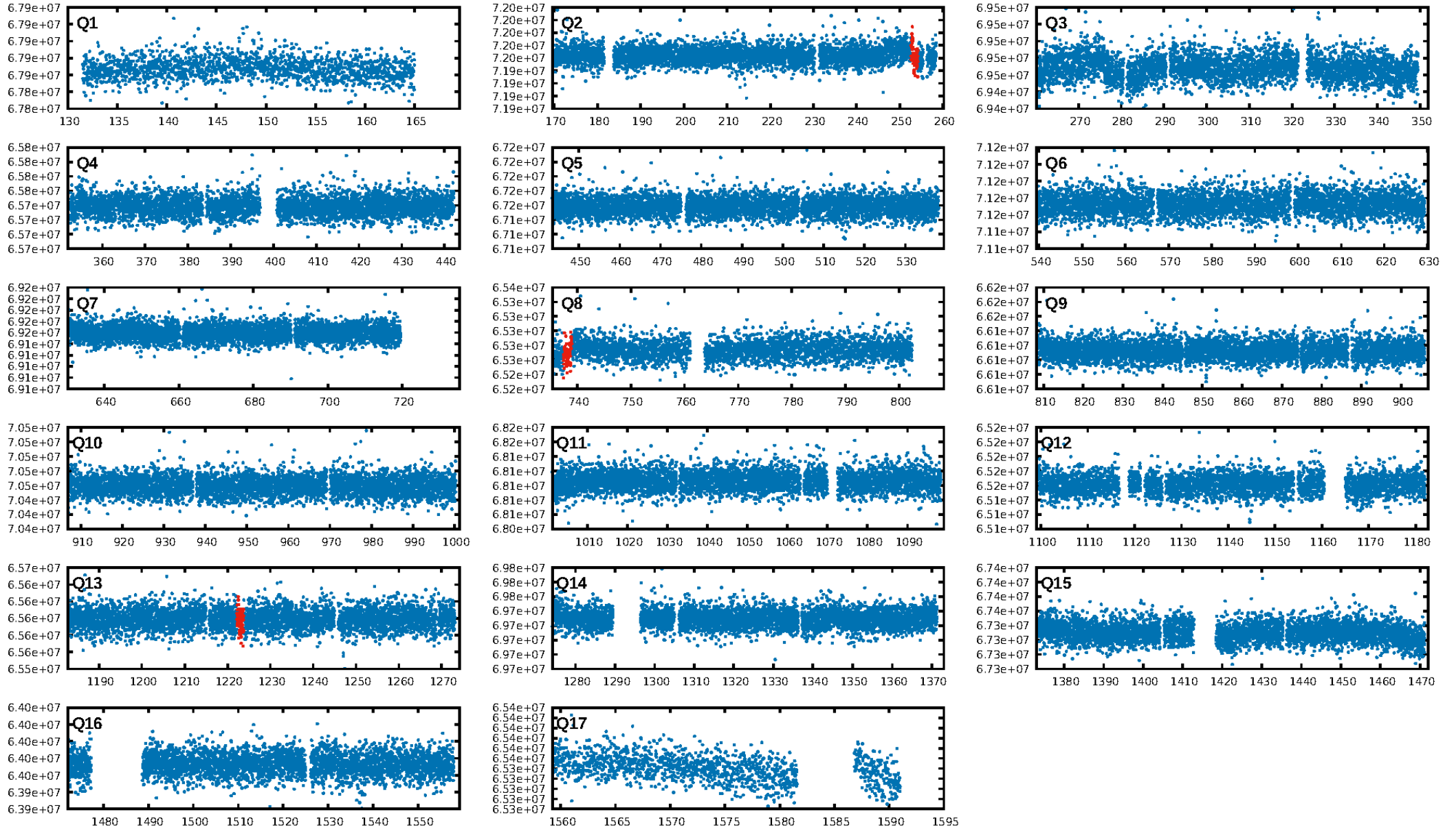
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 2.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.78e-13
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -2.021
Centroid-sig: 0.2%
Centroid-so: 4.958 arcsec [2.57σ]
OotOffset-rm: 3.123 arcsec [3.36σ]
KicOffset-rm: 3.145 arcsec [3.37σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 0.00 [0/1]
DiffImageOverlap-fno: 1.00 [3/3]

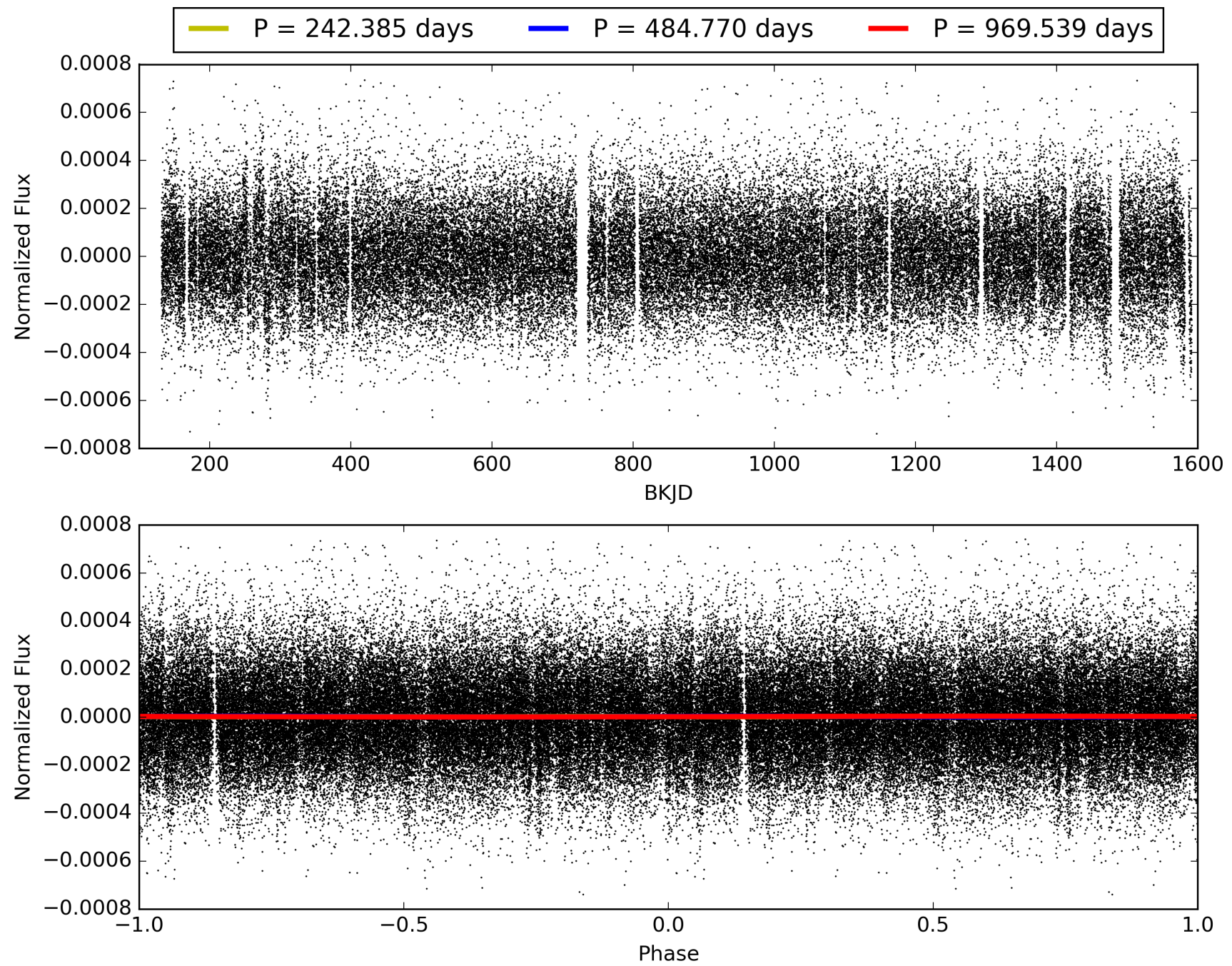
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 05:06:06 Z

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

TCE 007282281-01, PDC Light Curves

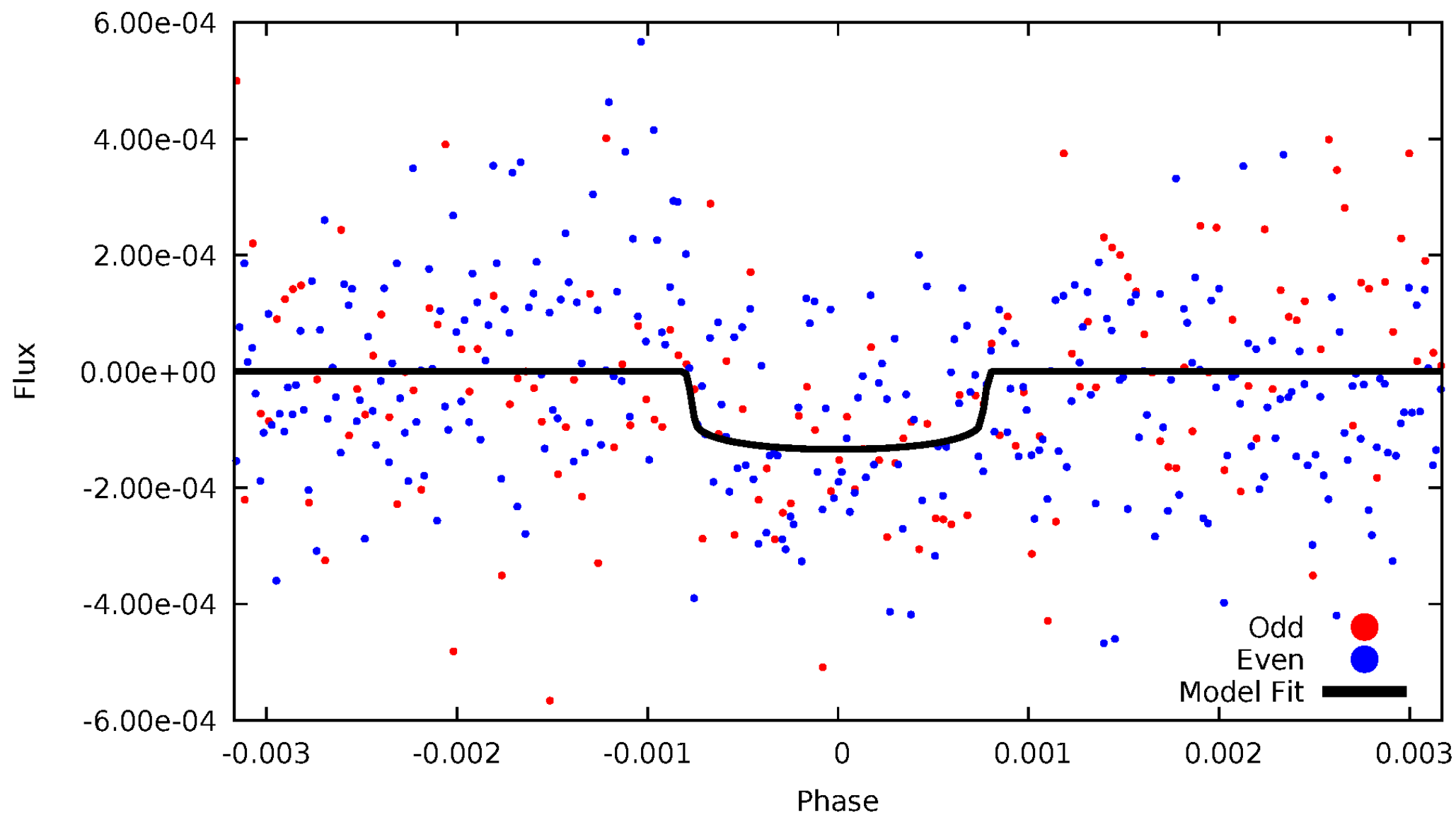


TCE 007282281-01



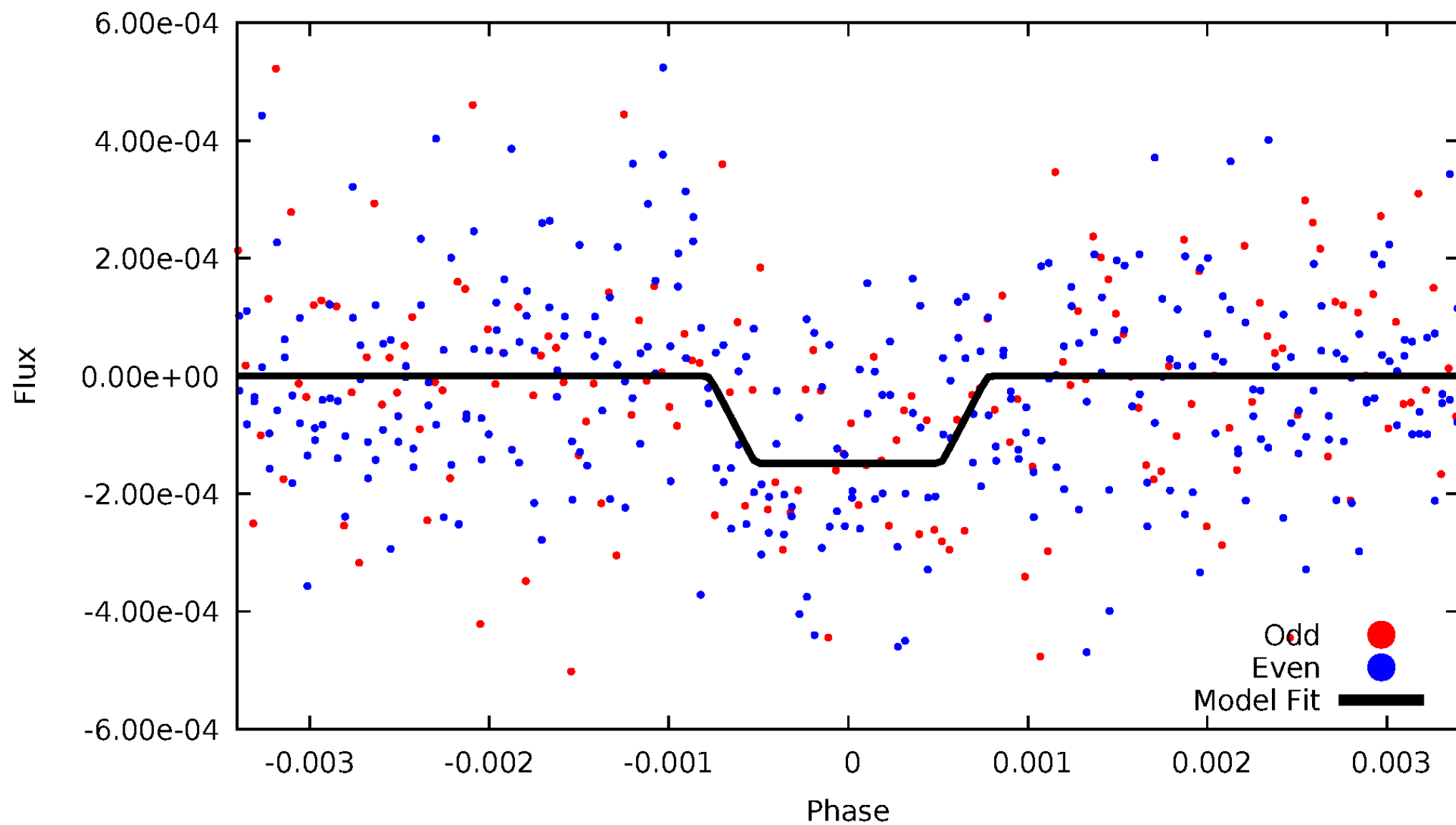
DV Odd/Even

TCE 007282281-01

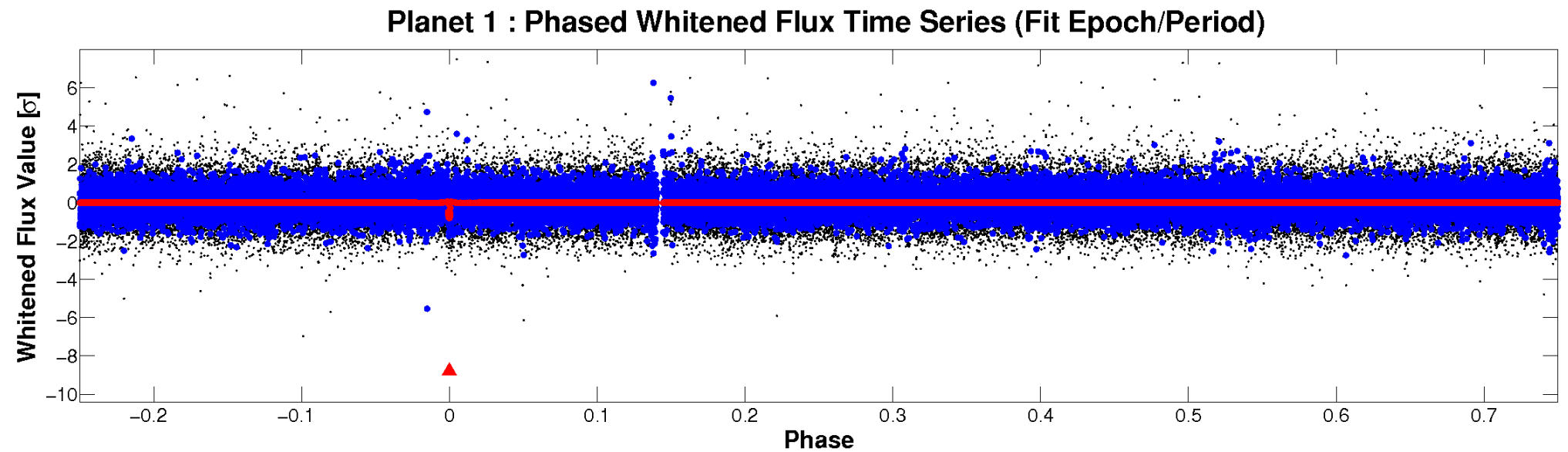
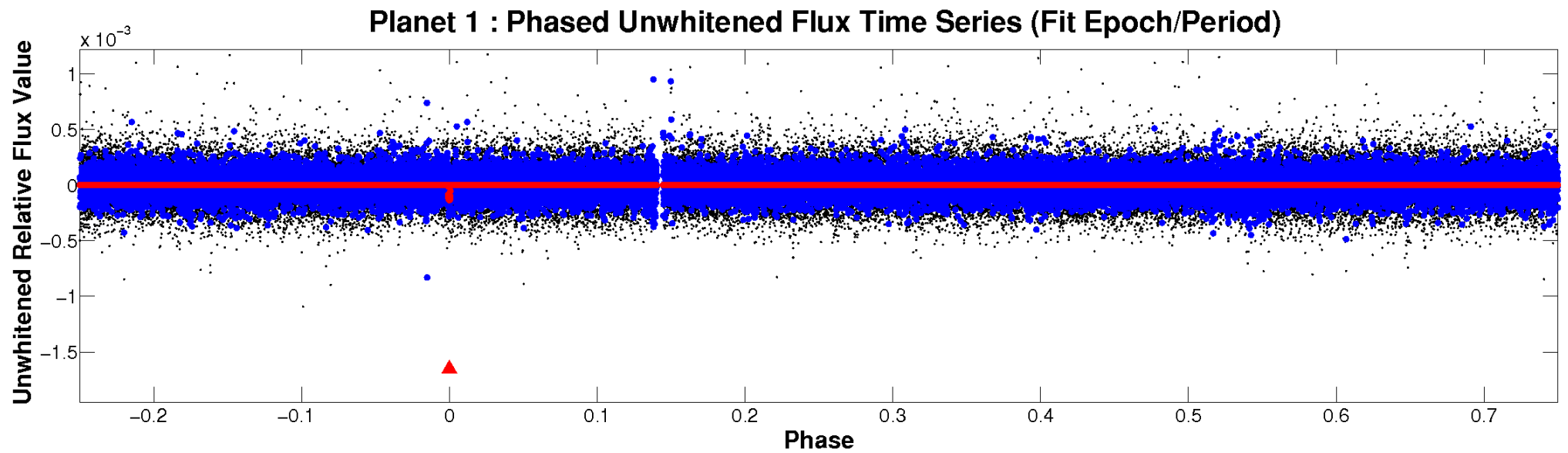


ALT Odd/Even

TCE 007282281-01



Non-Whitened Vs. Whitened Light Curve



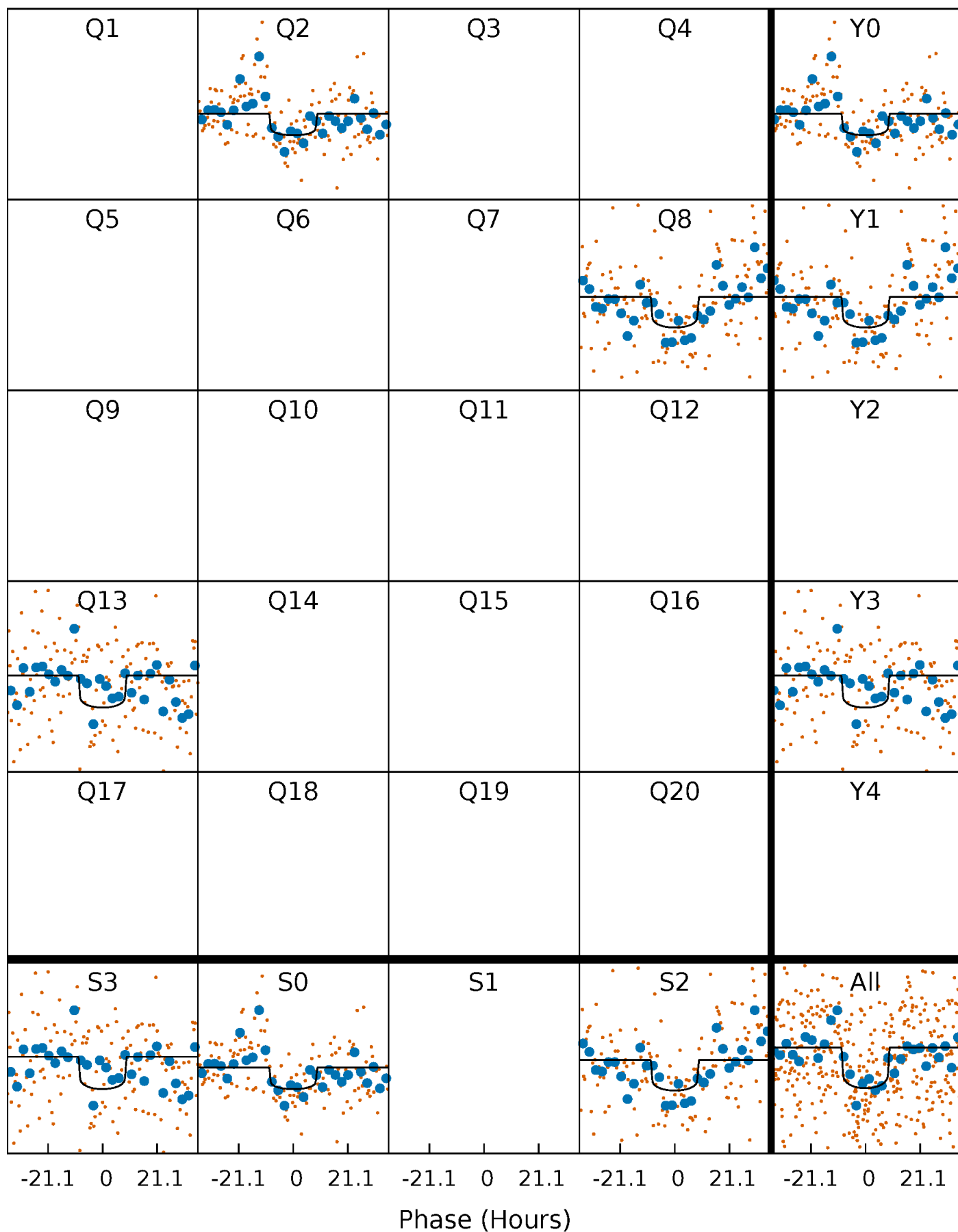
PDC Quarter-Phased Transit Curves

TCE 007282281-01 P=484.769613 Days $T_0=253.431386$ (BKJD)



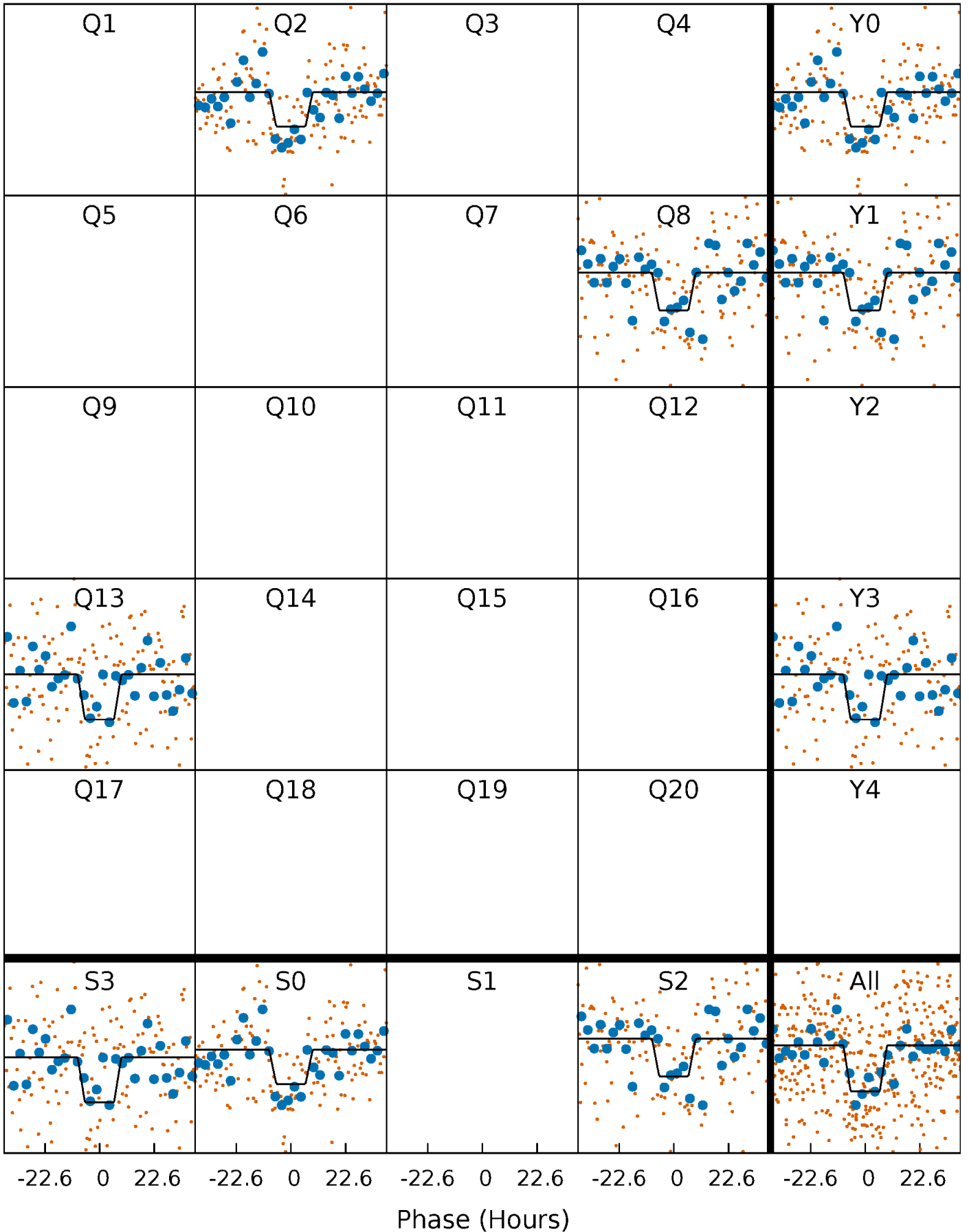
DV Quarter-Phased Transit Curves

TCE 007282281-01 P=484.769613 Days $T_0=253.431386$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

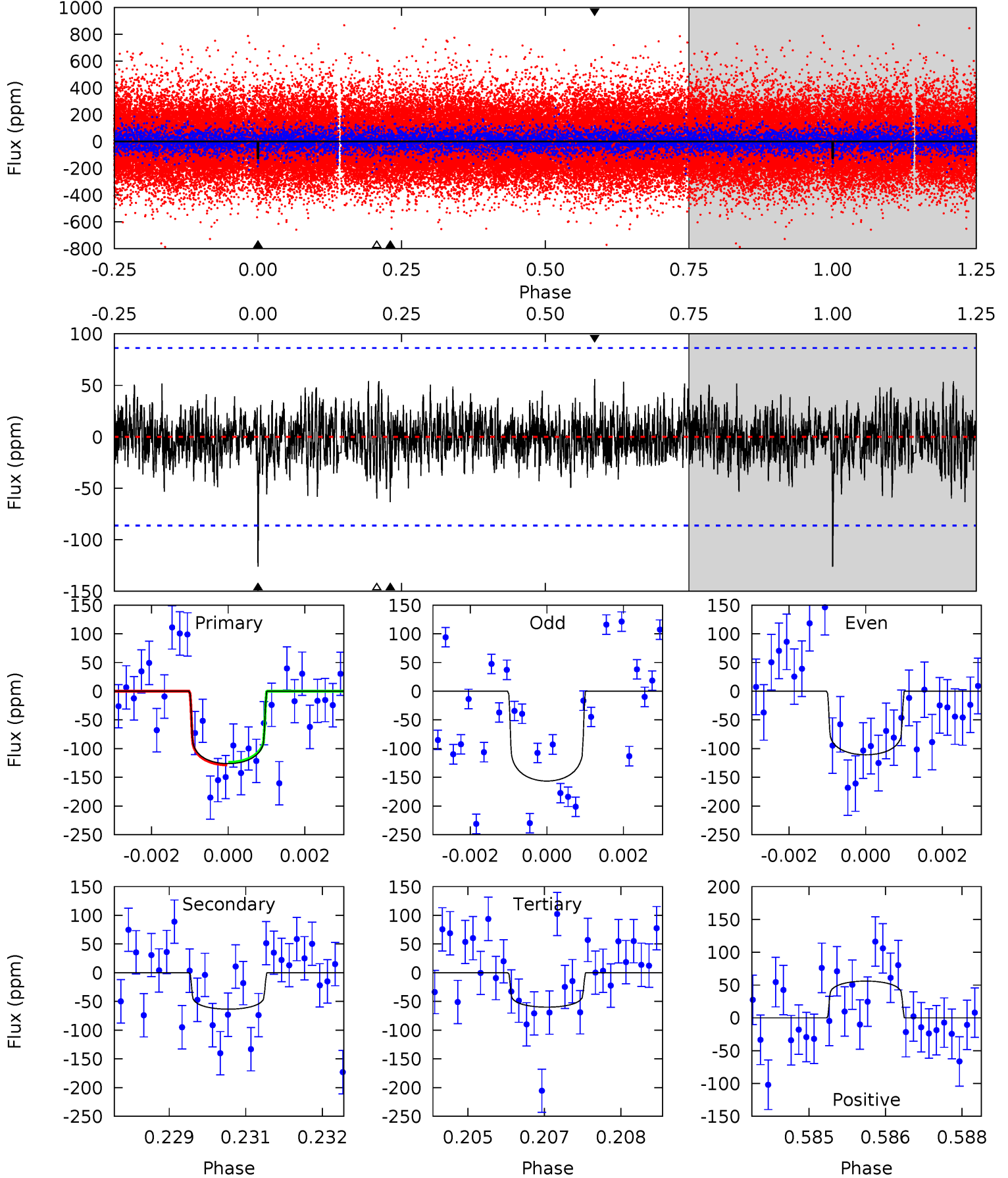
TCE 007282281-01 P=484.786211 Days $T_0=253.430423$ (BKJD)



DV Model-Shift Uniqueness Test

007282281-01, P = 484.769613 Days, E = 253.431386 Days

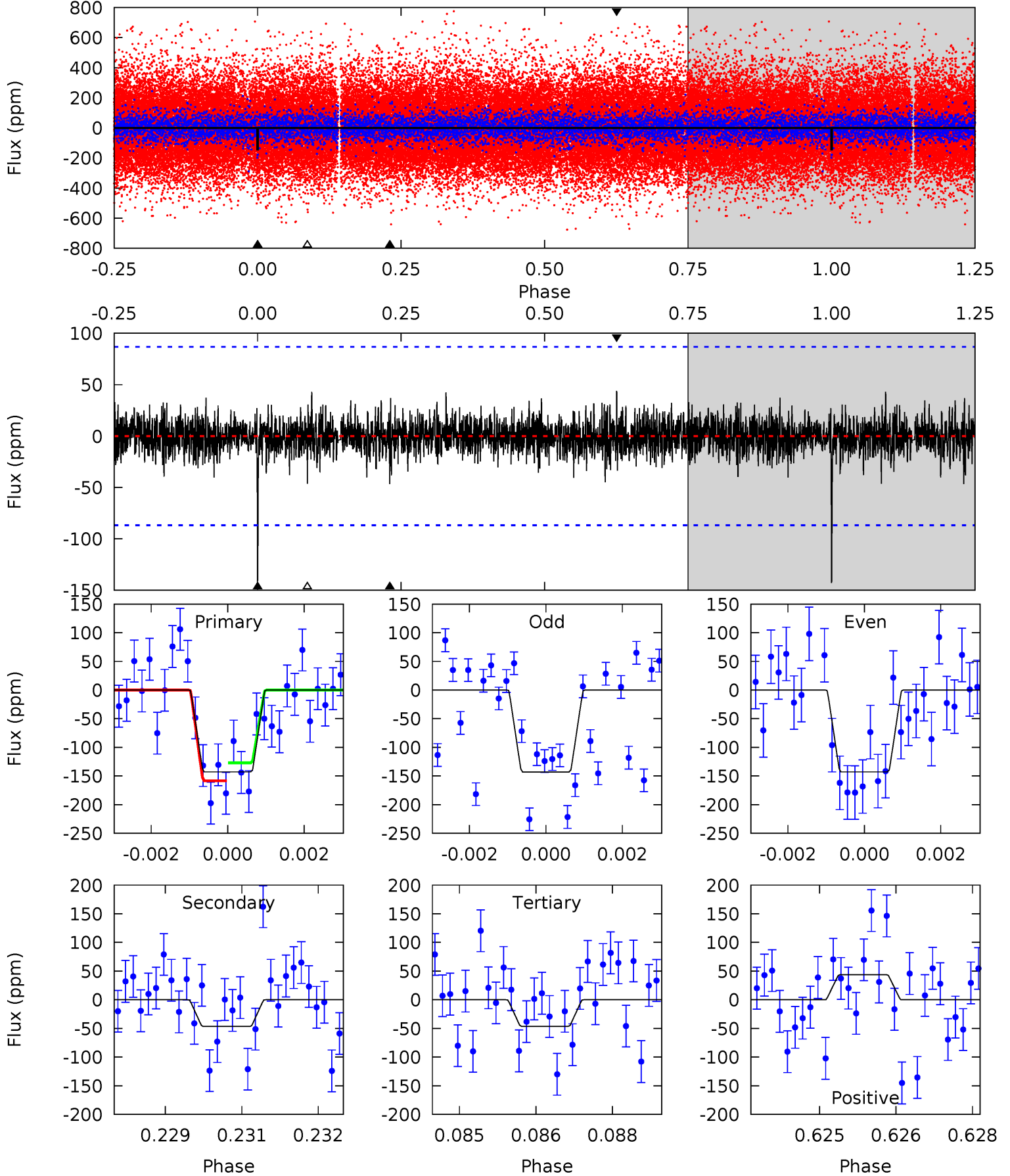
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.85	3.95	3.73	3.48	5.37	3.16	1.04	4.12	4.37	0.22	0.46	1.34	0.87	0.31	0.14



Alt Model-Shift Uniqueness Test

007282281-01, P = 484.786211 Days, E = 253.430423 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.83	2.88	2.87	2.71	5.37	3.16	0.74	5.97	6.12	0.02	0.17	0.01	1.00	0.23	0.97



Stellar Parameters For KIC 007282281

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	8982^{+283}_{-425}	$4.111^{+0.124}_{-0.186}$	$0.070^{+0.250}_{-0.600}$	$2.123^{+0.749}_{-0.437}$	$2.122^{+0.397}_{-0.486}$	$0.312^{+0.203}_{-0.166}$
	+3%/-5%	+3%/-5%	+357%/-857%	+35%/-21%	+19%/-23%	+65%/-53%
Source	KIC0	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 007282281-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-63 ± 16	$2.70^{+1.03}_{-0.93}$	649^{+49}_{-42}	6978^{+2193}_{-908}	10838^{+15322}_{-5197}
Alt.	-47 ± 16	$2.88^{+0.99}_{-0.99}$	651^{+52}_{-44}	6290^{+1716}_{-915}	6907^{+10508}_{-3338}

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

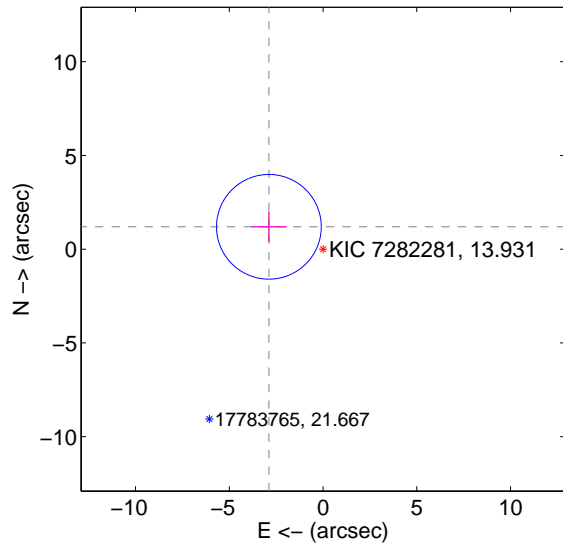
Supplemental centroid analysis for 007282281-01. Kepler magnitude: 13.93. Transit SNR 7.28

There are 0 quarters with good PRF difference image offsets

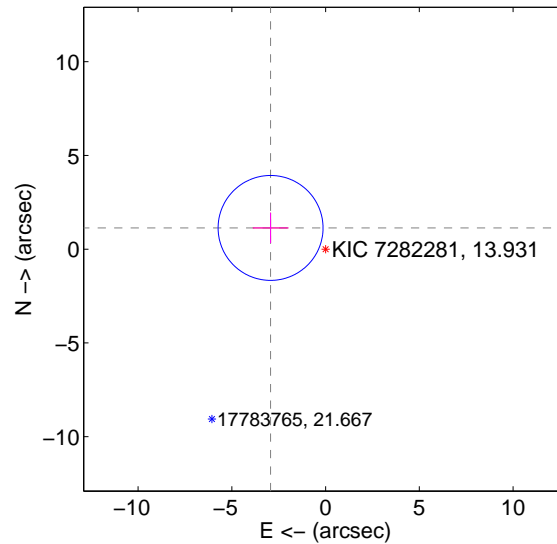
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.123 ± 0.931	3.36	2.887 ± 0.949	1.192 ± 0.812
PRF-fit source offset from KIC position	3.145 ± 0.933	3.37	2.933 ± 0.949	1.133 ± 0.812
photometric centroid source offset	4.96 ± 1.93	2.57	4.51 ± 1.95	2.05 ± 1.83

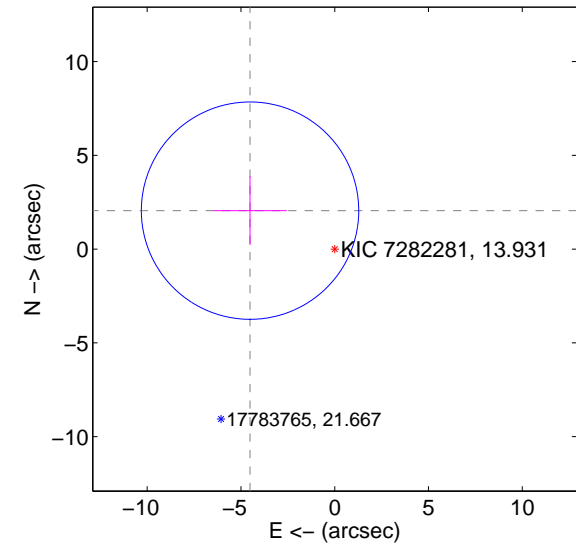
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

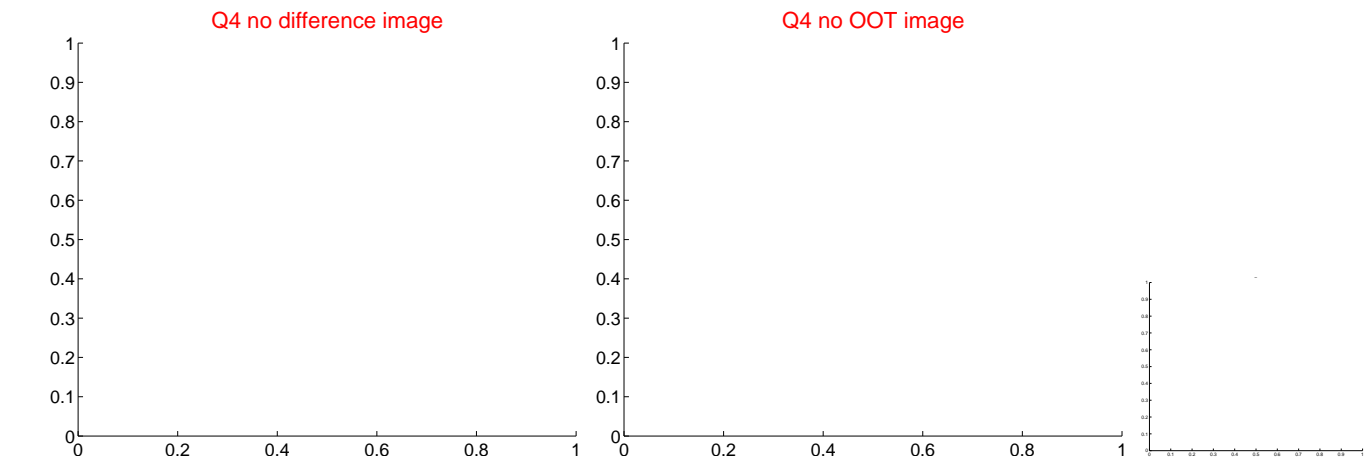
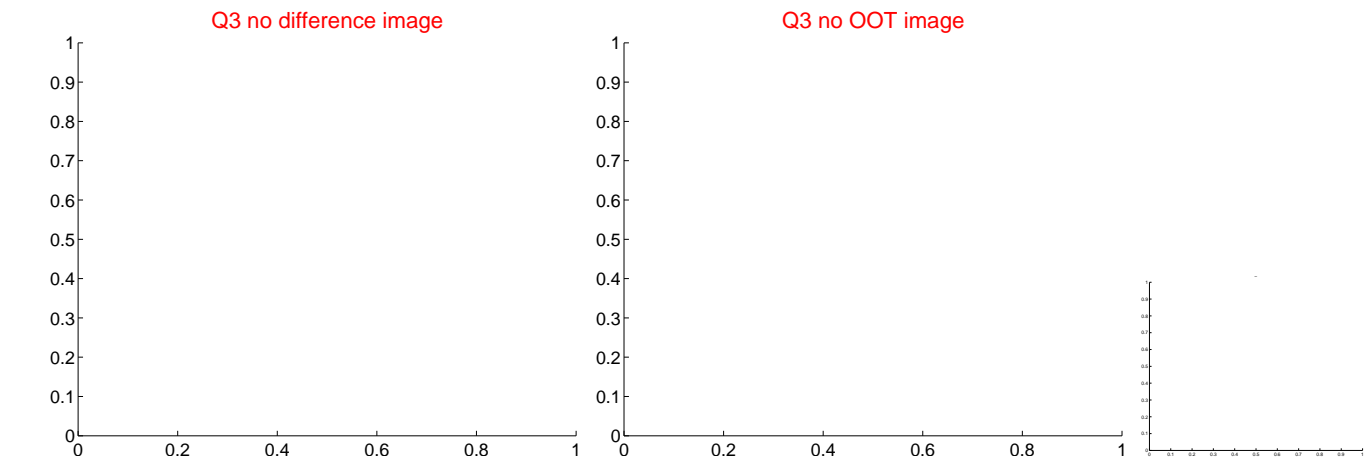
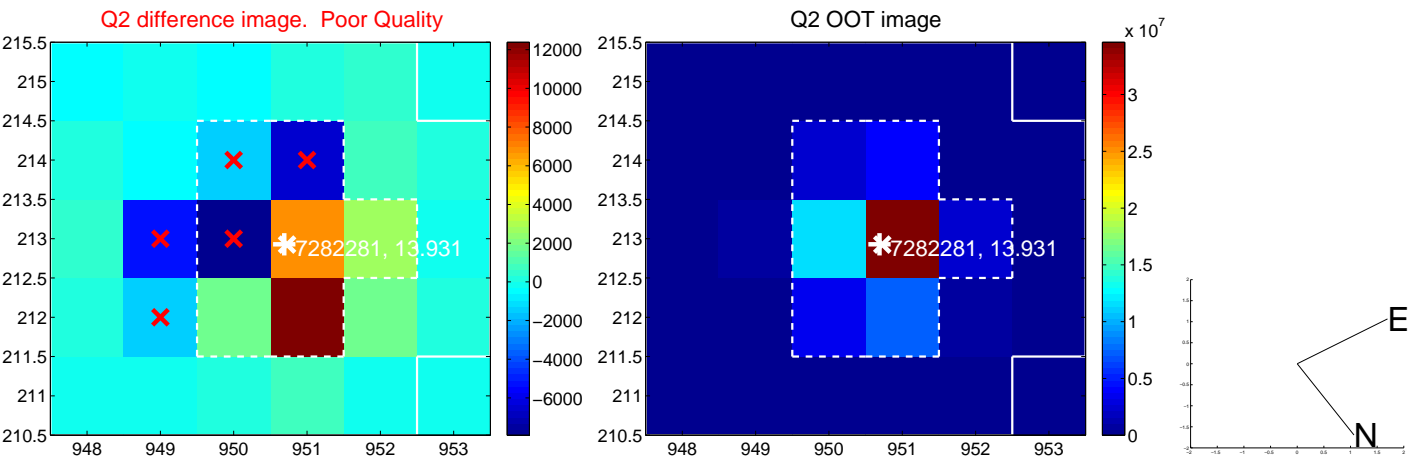
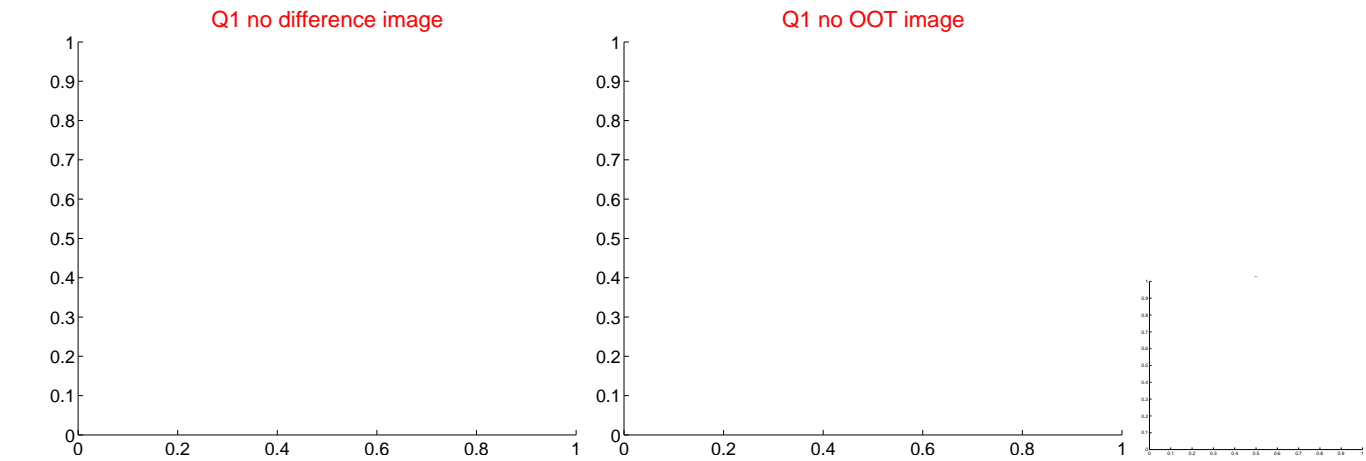


offset from photometric centroids

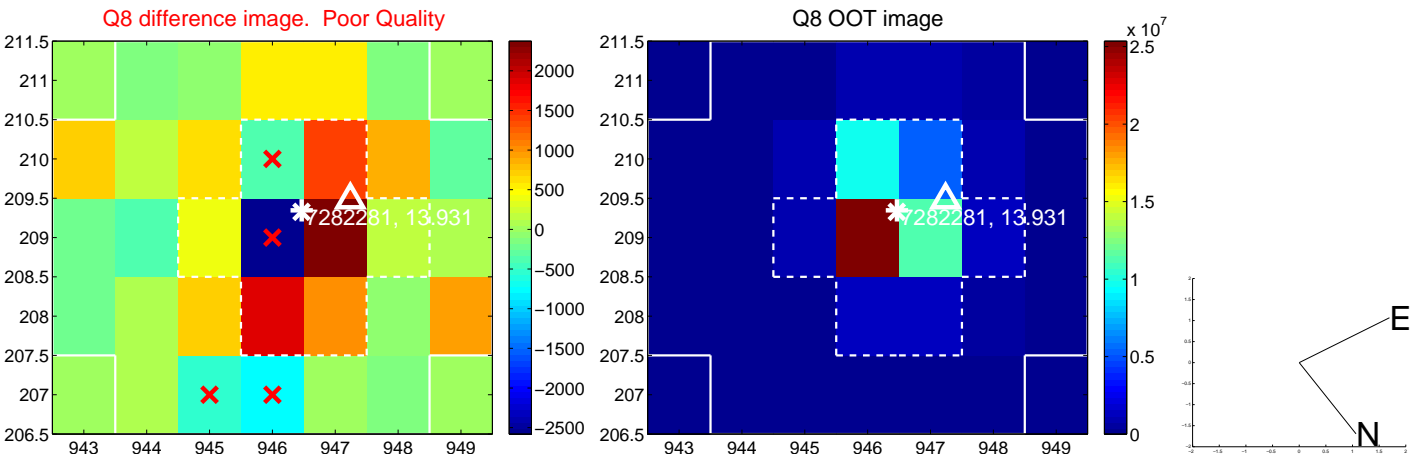


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



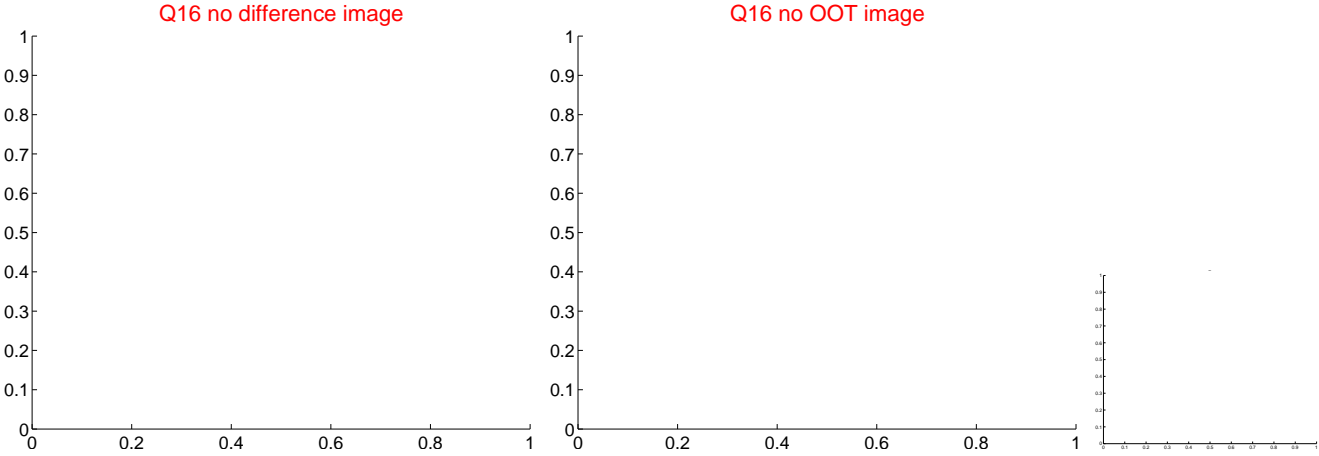
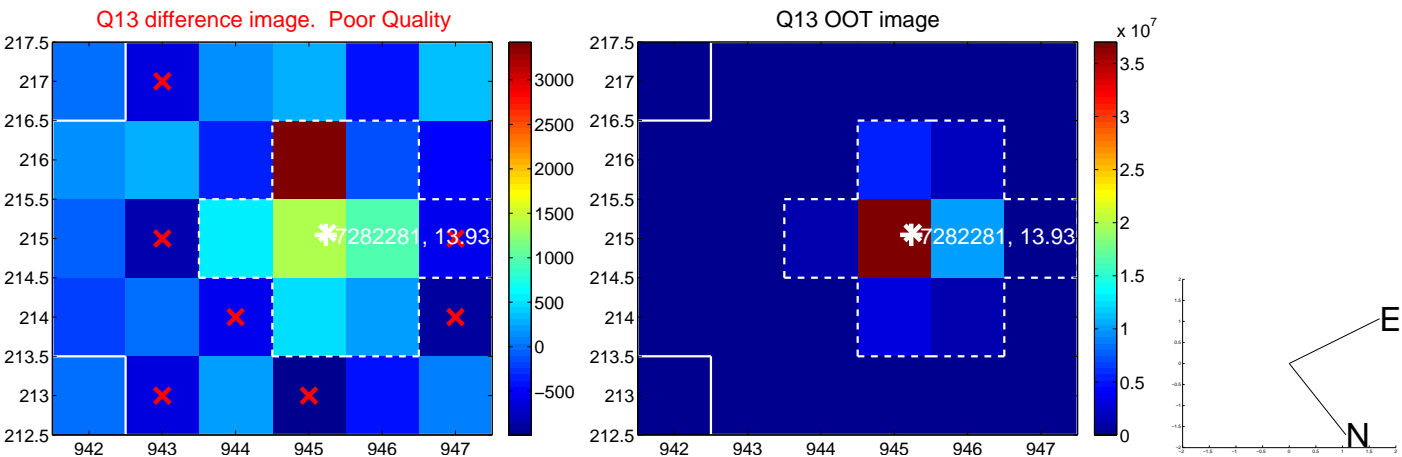
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



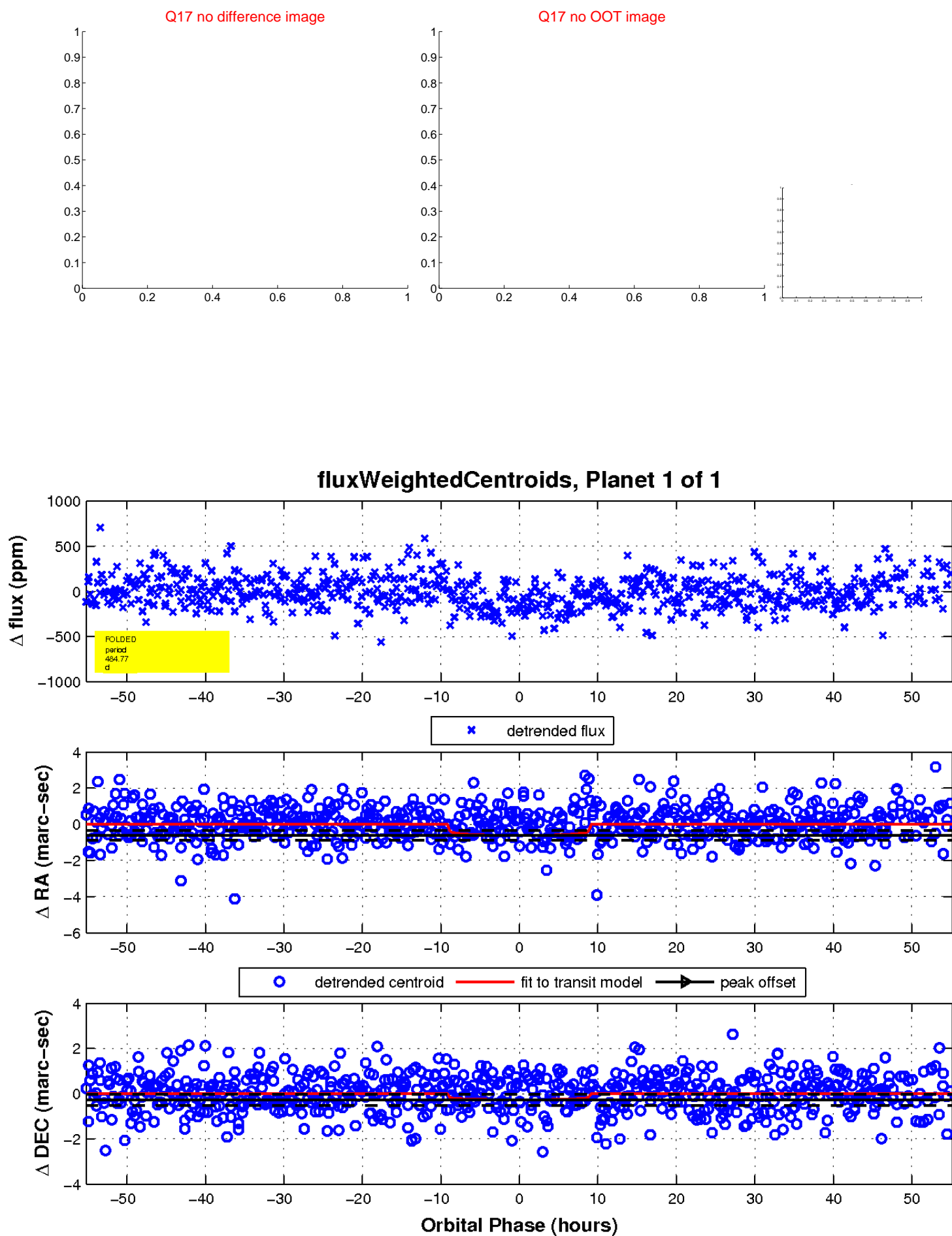
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white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

