

KIC 009582157

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})
009582157-02	OBS	No	542.262222	199.854102	1188.7	6.322	11.9	10.9	0.63	4091	2.94	0.08

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009582157-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_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.

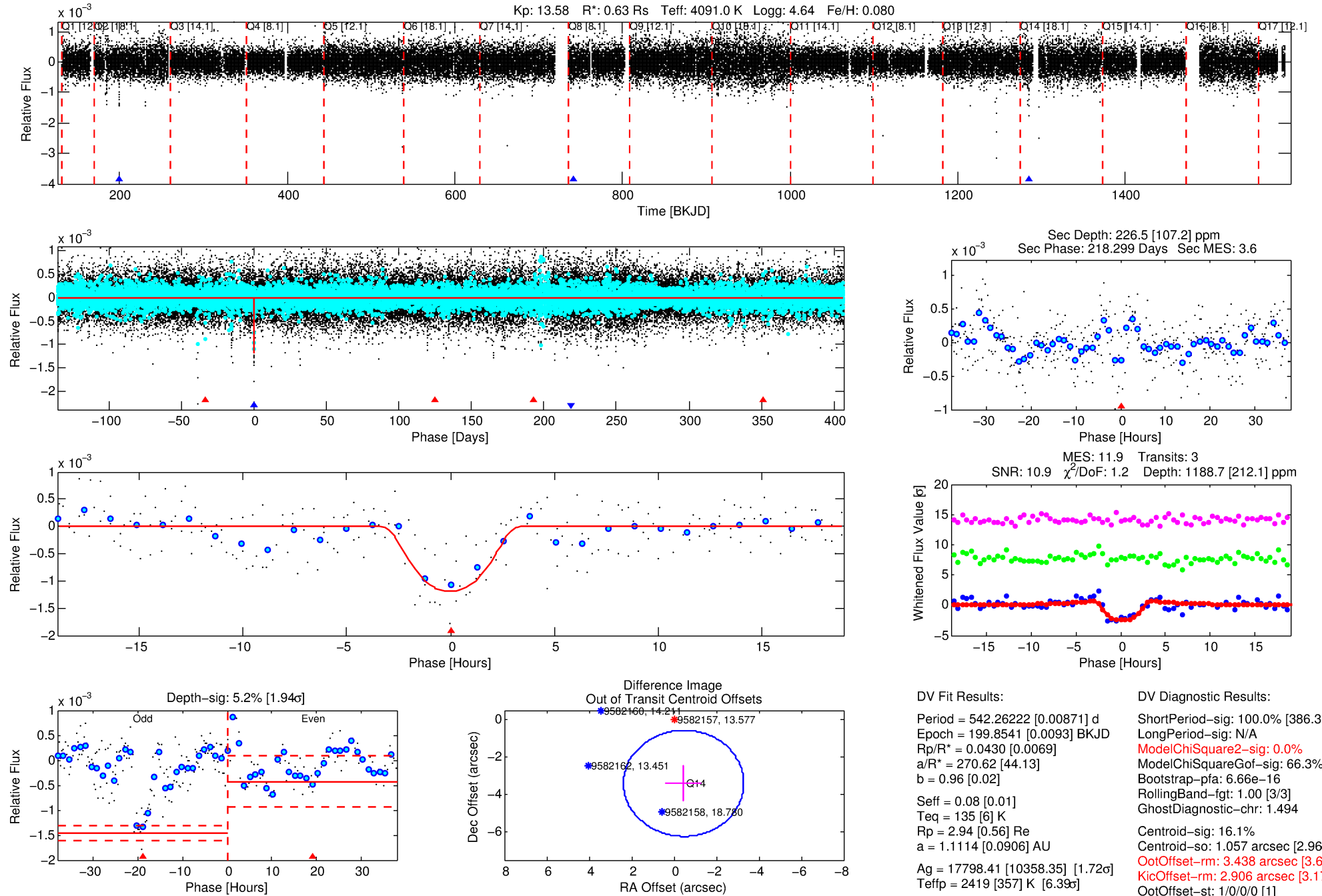
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009582157-02

No Significant Match Found

DV One-Page Summary

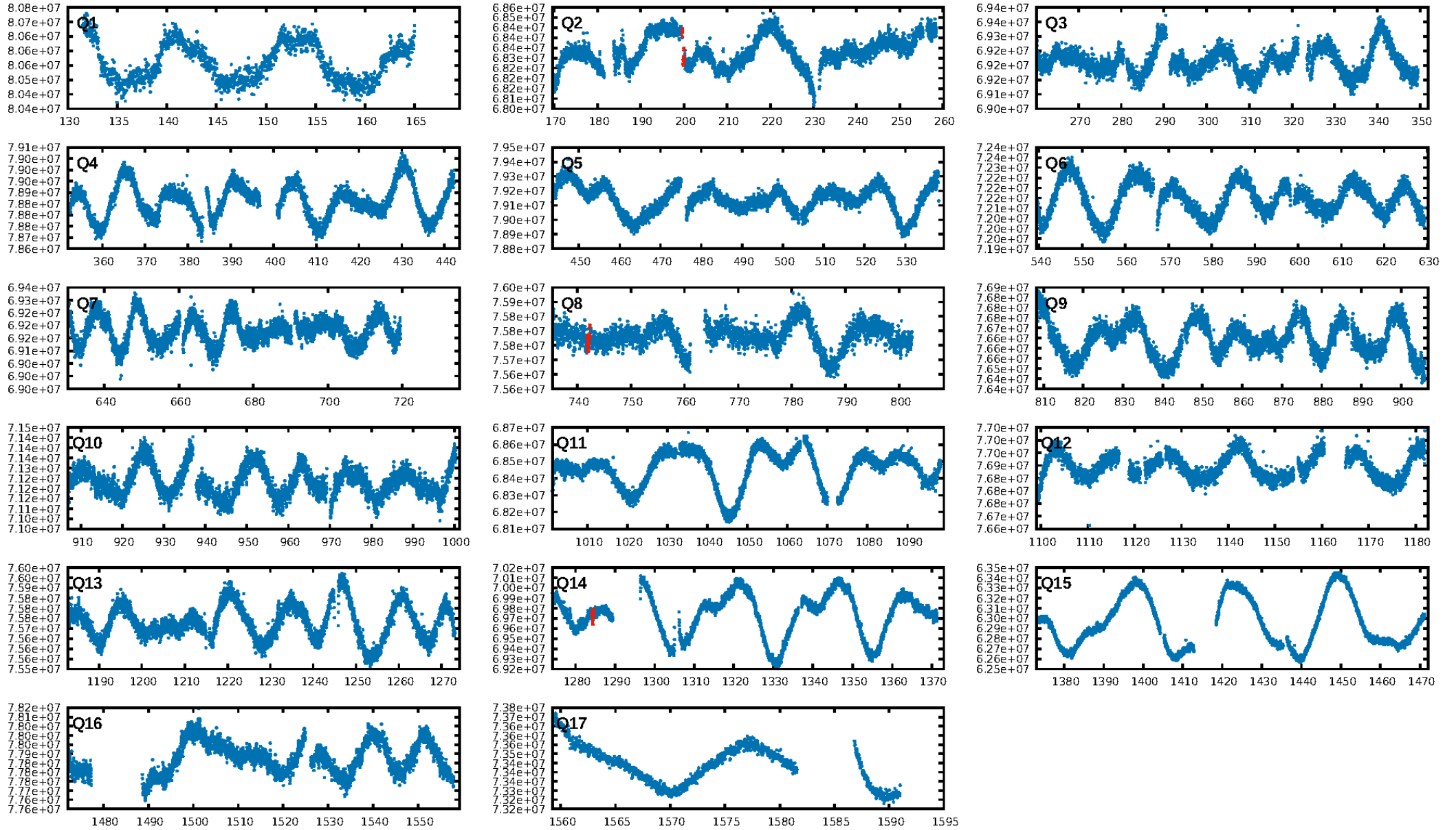
KIC: 9582157 Candidate: 2 of 2 Period: 542.262 d



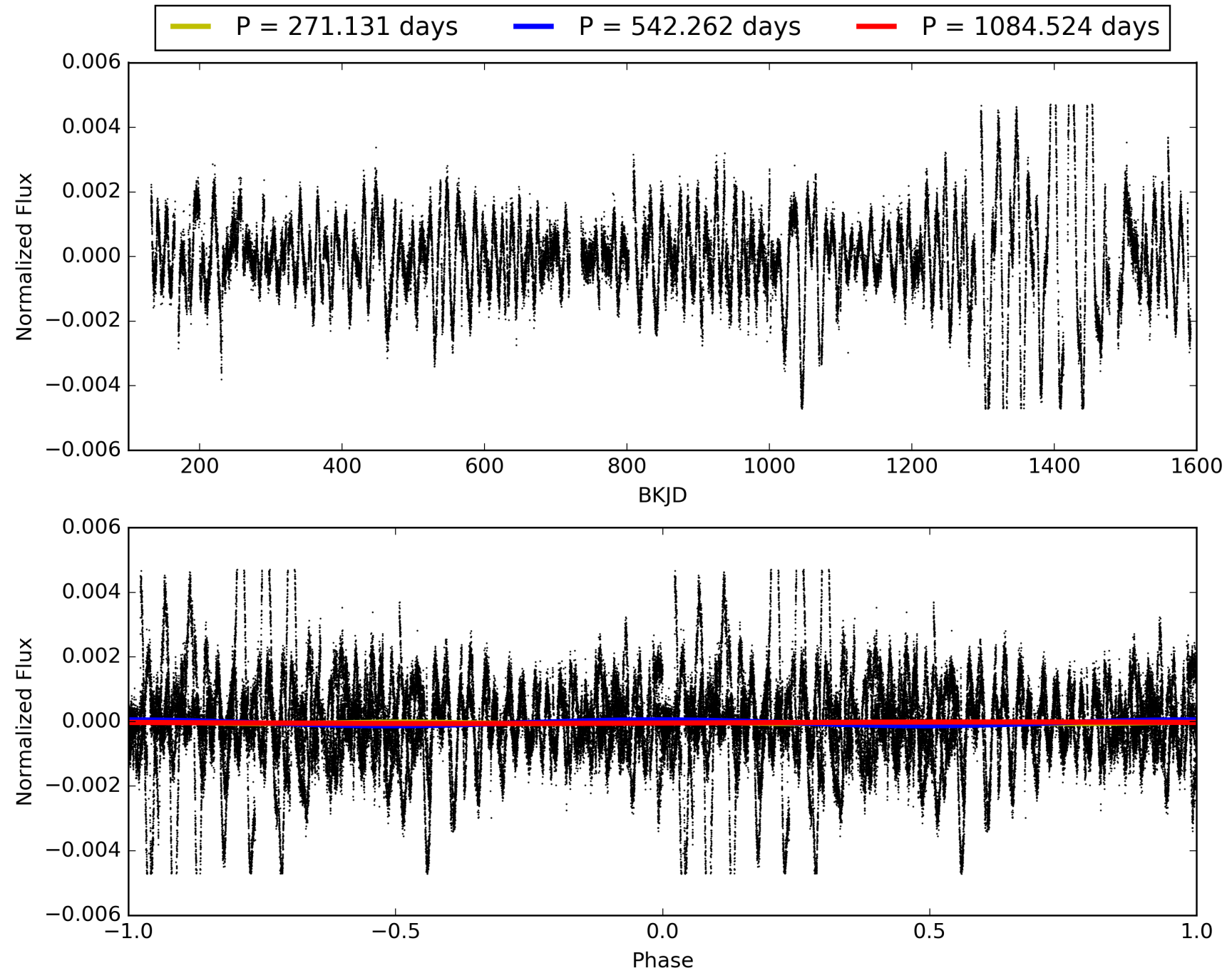
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 13:35:35 Z

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

TCE 009582157-02, PDC Light Curves

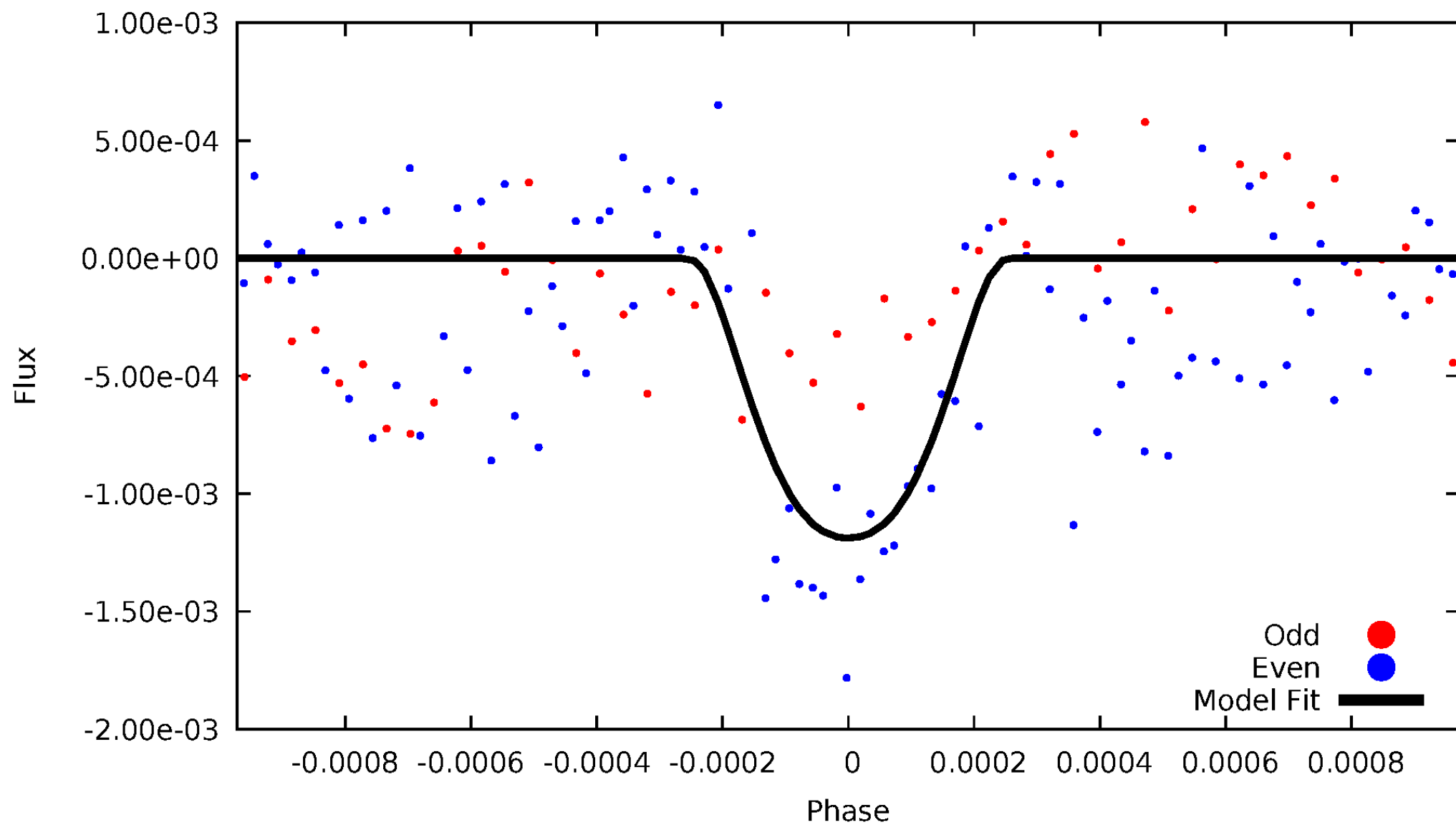


TCE 009582157-02



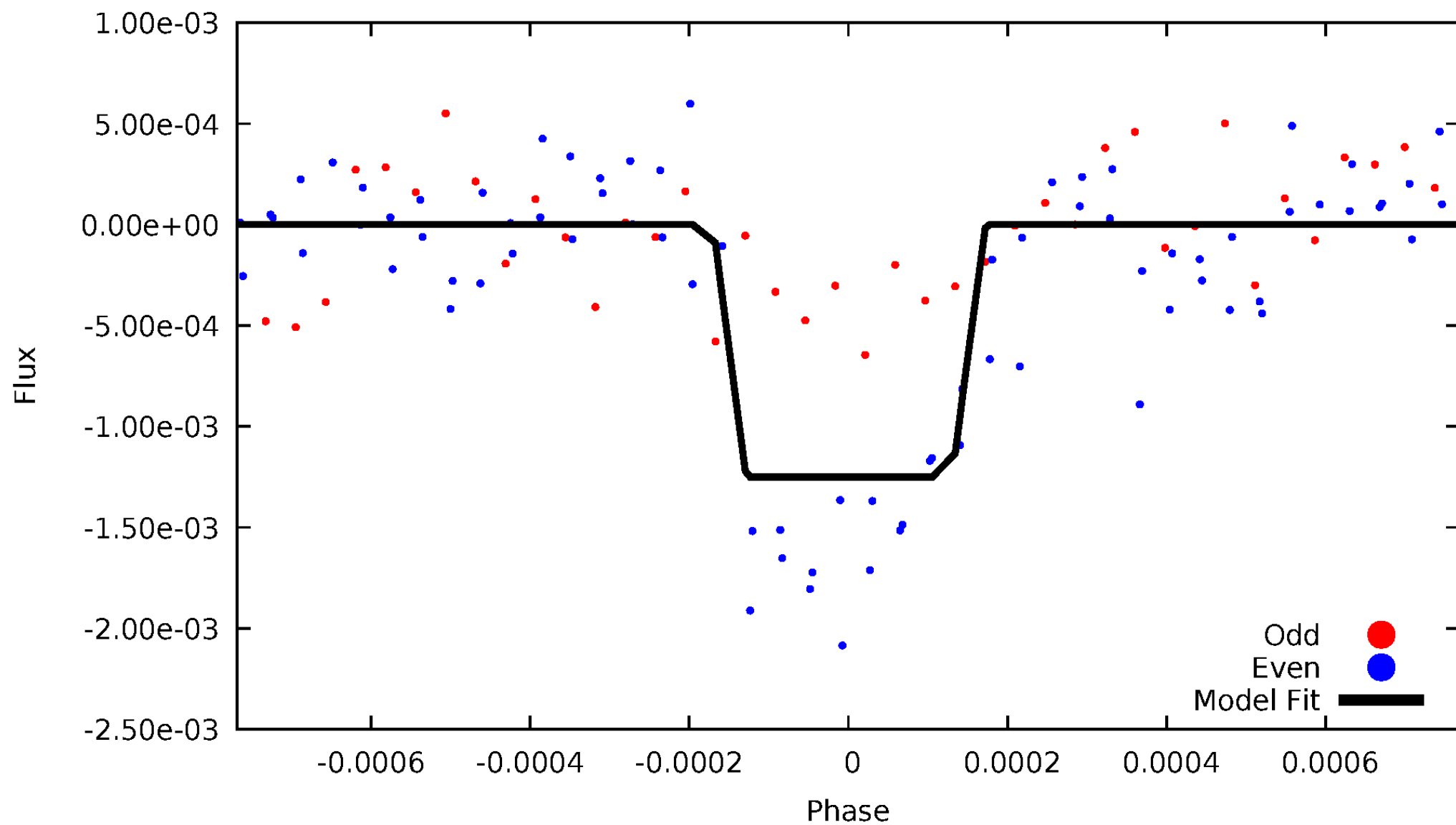
DV Odd/Even

TCE 009582157-02



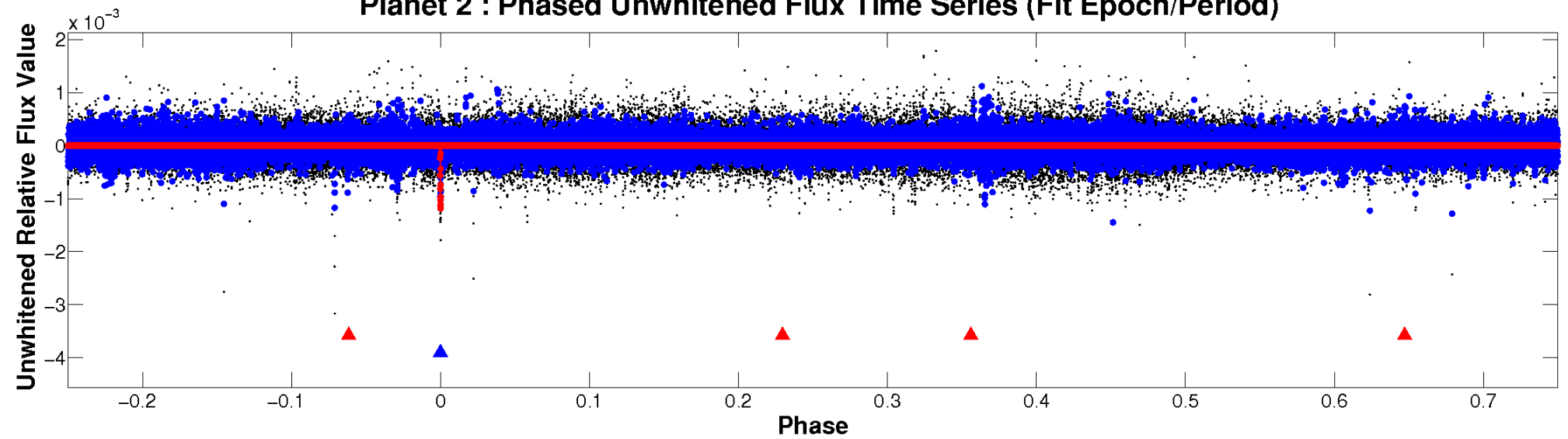
ALT Odd/Even

TCE 009582157-02

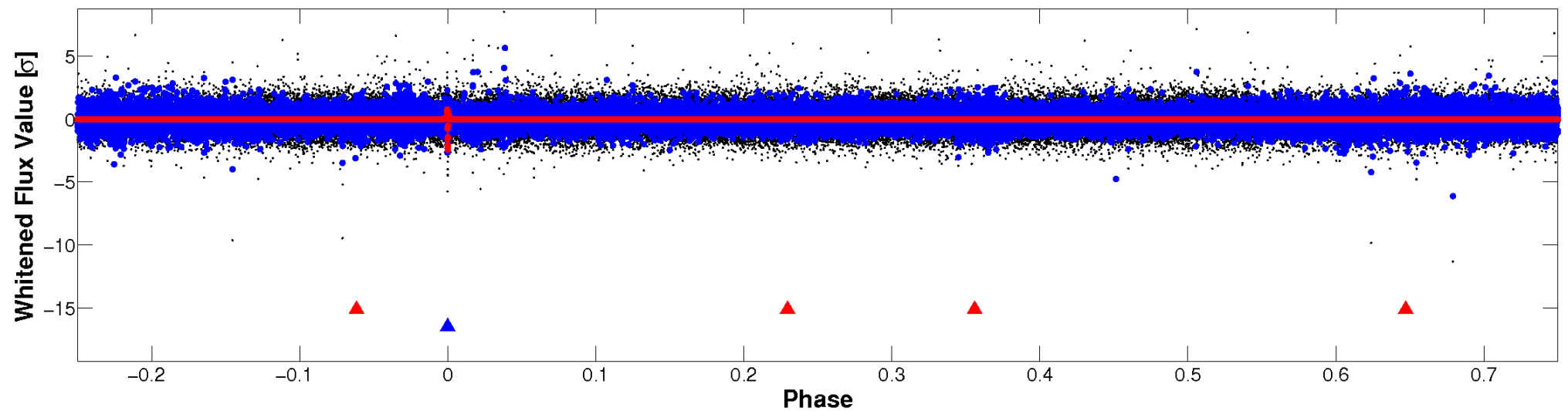


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)



Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



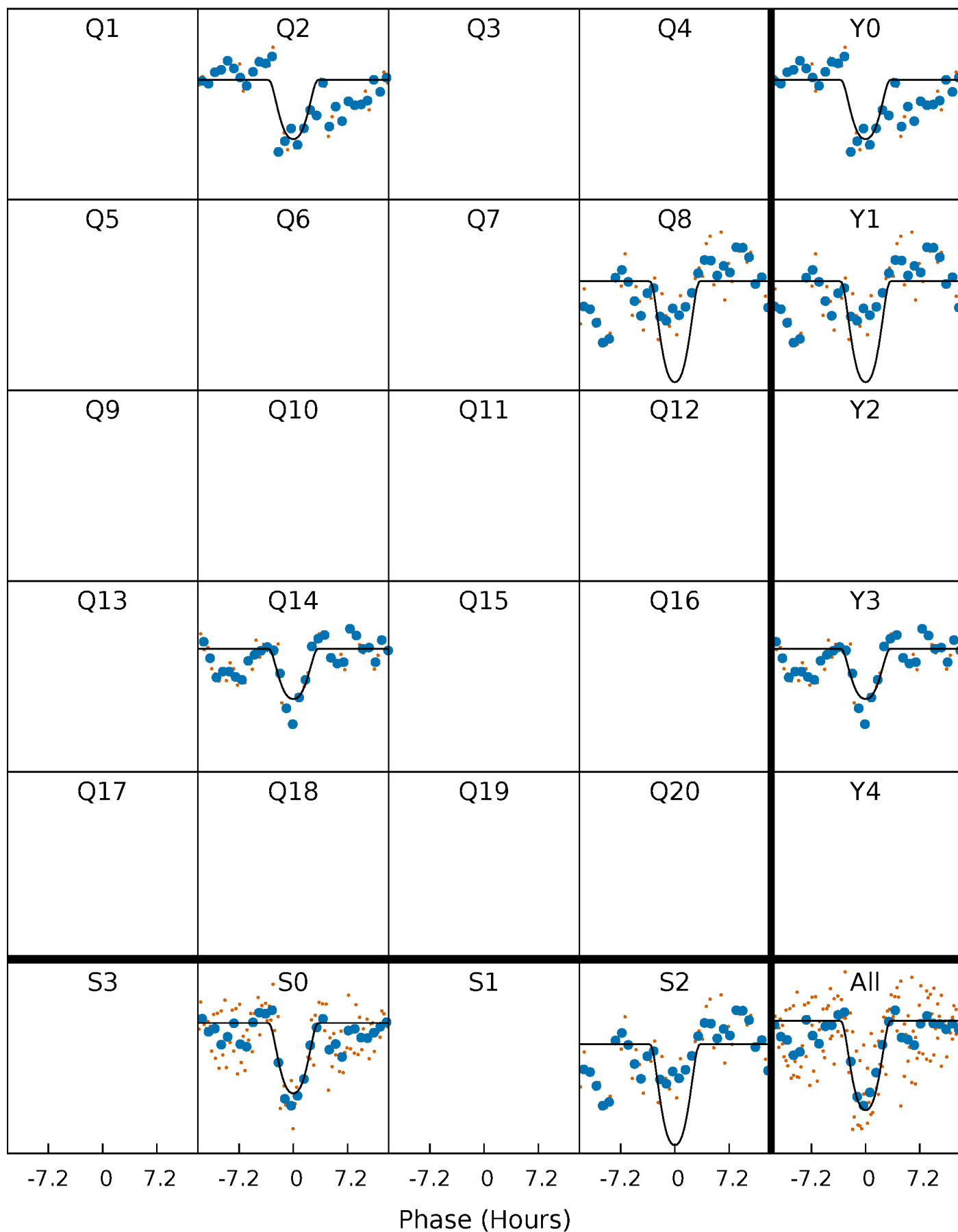
PDC Quarter-Phased Transit Curves

TCE 009582157-02 $P=542.262222$ Days $T_0=199.854102$ (BKJD)



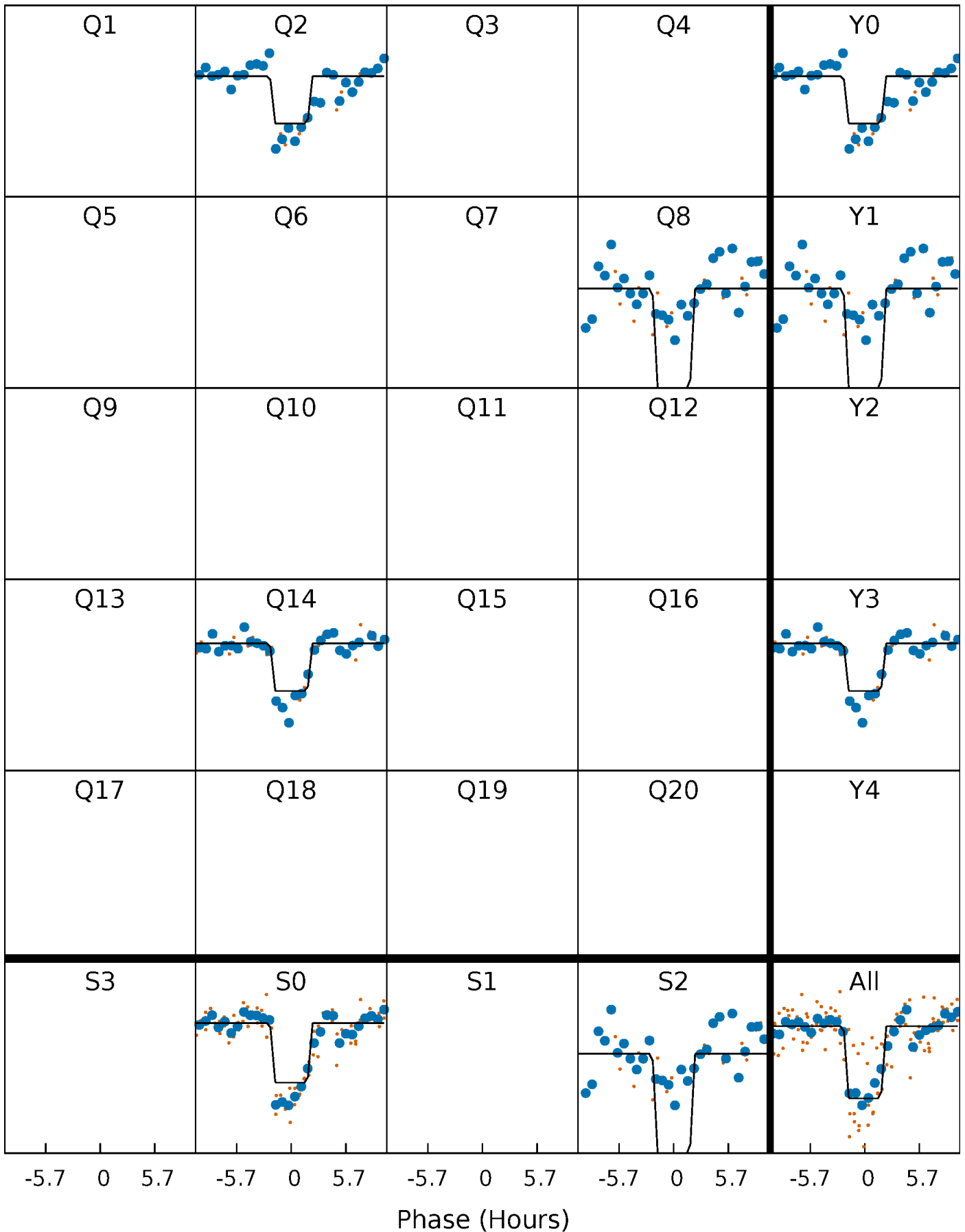
DV Quarter-Phased Transit Curves

TCE 009582157-02 P=542.262222 Days $T_0=199.854102$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

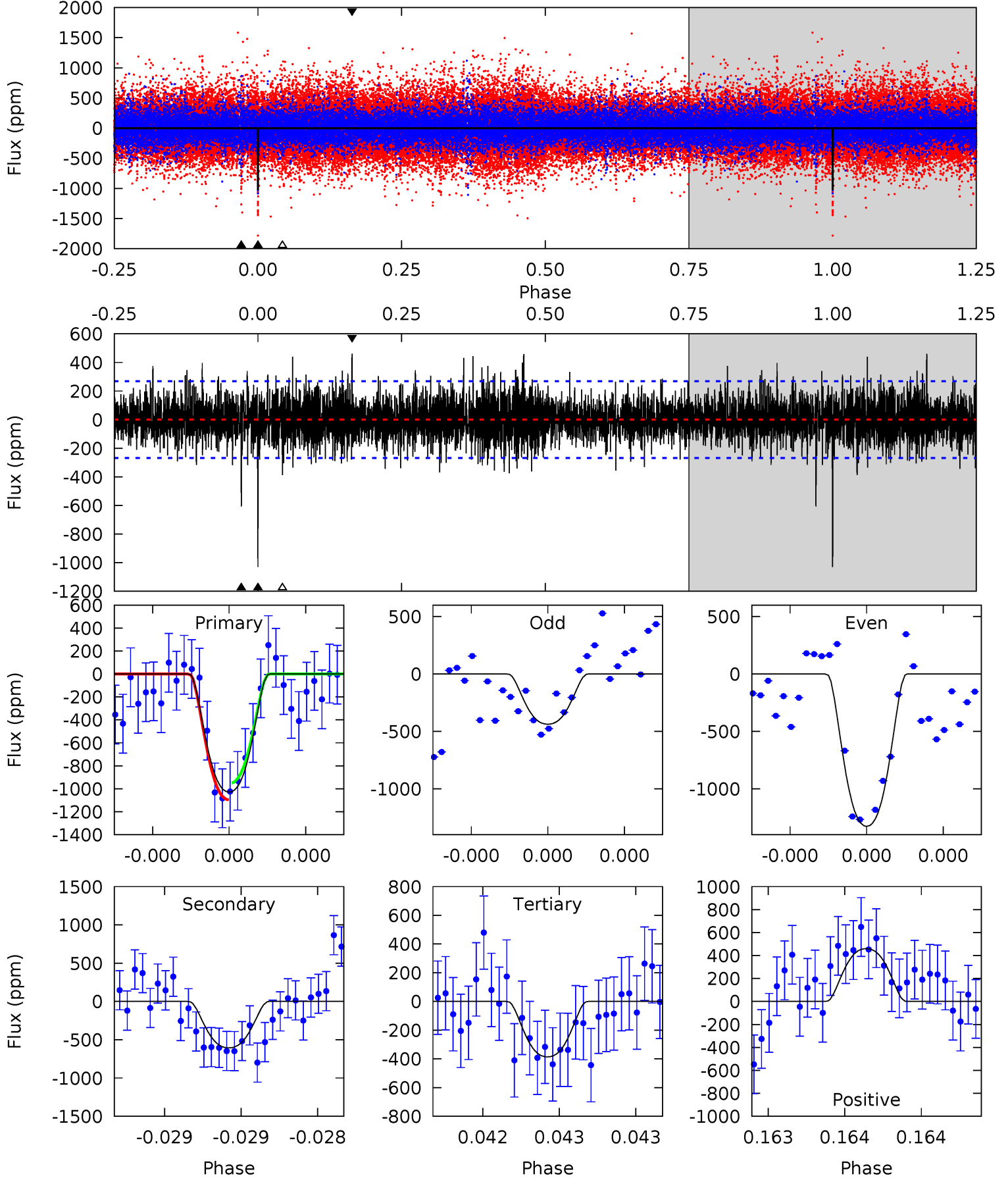
TCE 009582157-02 P=542.265815 Days $T_0=199.849594$ (BKJD)



DV Model-Shift Uniqueness Test

009582157-02, P = 542.262222 Days, E = 199.854102 Days

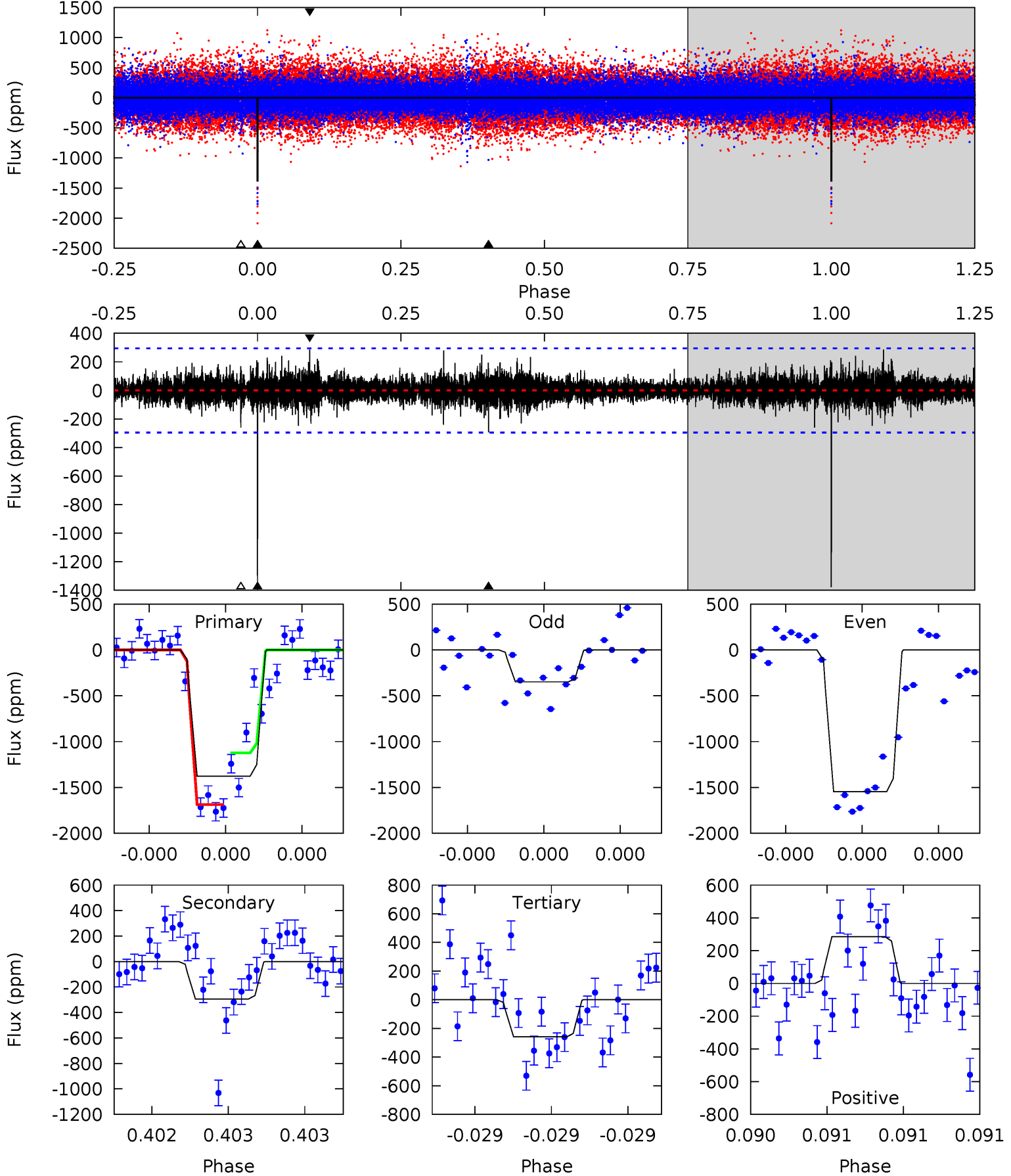
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.4	12.6	8.03	9.57	5.58	3.49	2.22	13.4	11.8	4.58	3.05	8.37	0.78	0.31	1.53



Alt Model-Shift Uniqueness Test

009582157-02, P = 542.265815 Days, E = 199.849594 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.4	5.63	4.96	5.45	5.65	3.59	0.95	21.4	20.9	0.67	0.18	11.7	0.75	0.17	5.36



Stellar Parameters For KIC 009582157

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4091^{+127}_{-155}	$4.639^{+0.056}_{-0.020}$	$0.080^{+0.250}_{-0.300}$	$0.626^{+0.033}_{-0.065}$	$0.622^{+0.052}_{-0.063}$	$3.575^{+0.976}_{-0.329}$
	+3%/-4%	+1%/-0%	+312%/-375%	+5%/-10%	+8%/-10%	+27%/-9%
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 009582157-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-606 ± 48	$2.91^{+0.48}_{-0.52}$	188^{+6}_{-7}	3395^{+227}_{-181}	48790^{+23621}_{-13254}
Alt.	-294 ± 52	$2.42^{+0.46}_{-0.49}$	188^{+6}_{-7}	3227^{+250}_{-206}	35604^{+20674}_{-13149}

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

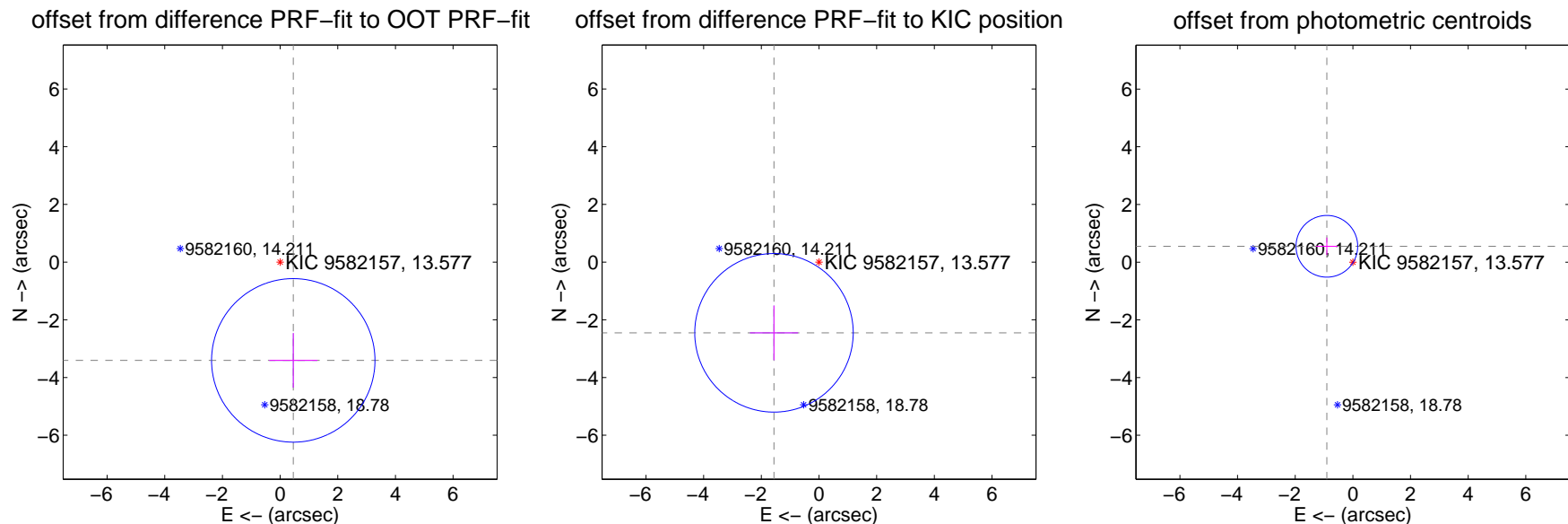
DV Centroid Data

Supplemental centroid analysis for 009582157-02. Kepler magnitude: 13.58. Transit SNR 10.91

There are 1 quarters with good PRF difference image offsets

The OOT PRF centroid is offset from the target star catalog position by about 2.23 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	3.438 ± 0.945	3.64	-0.457 ± 0.836	-3.407 ± 0.947
PRF-fit source offset from KIC position	2.906 ± 0.916	3.17	1.561 ± 0.836	-2.452 ± 0.947
photometric centroid source offset	1.06 ± 0.36	2.96	0.90 ± 0.37	0.55 ± 0.30

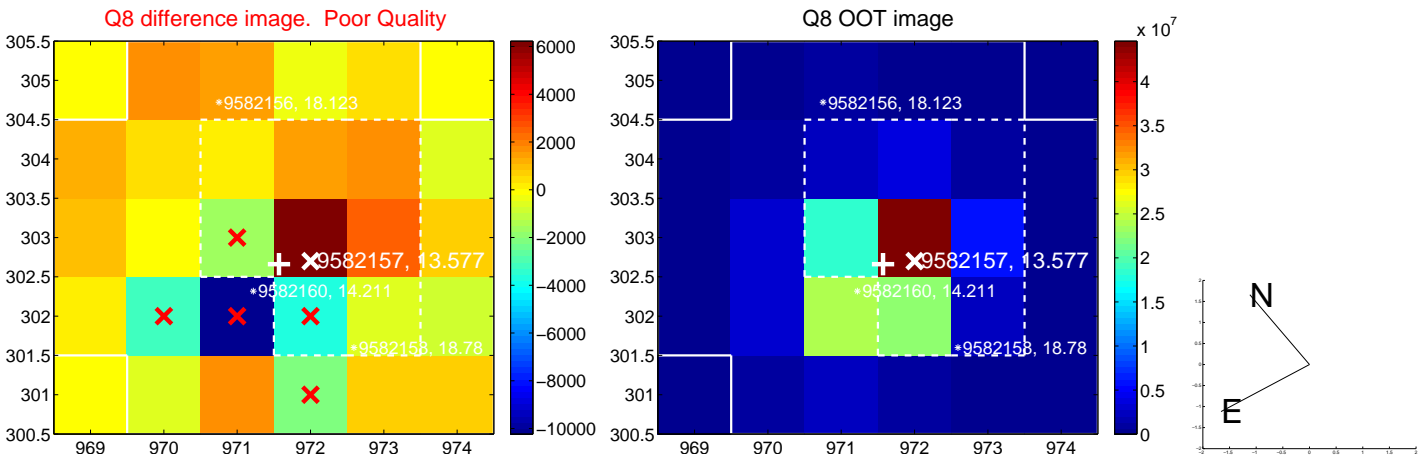


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



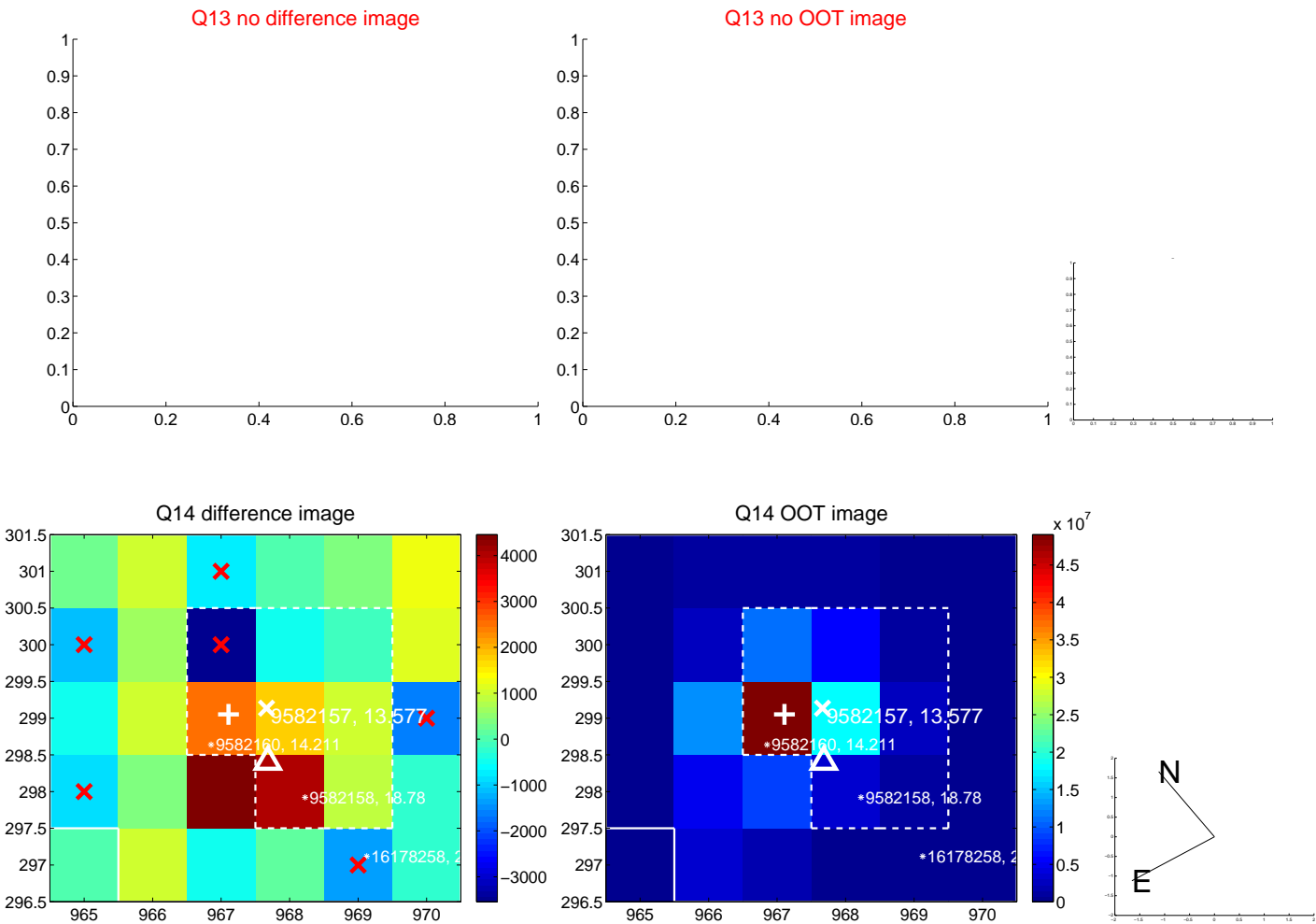
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



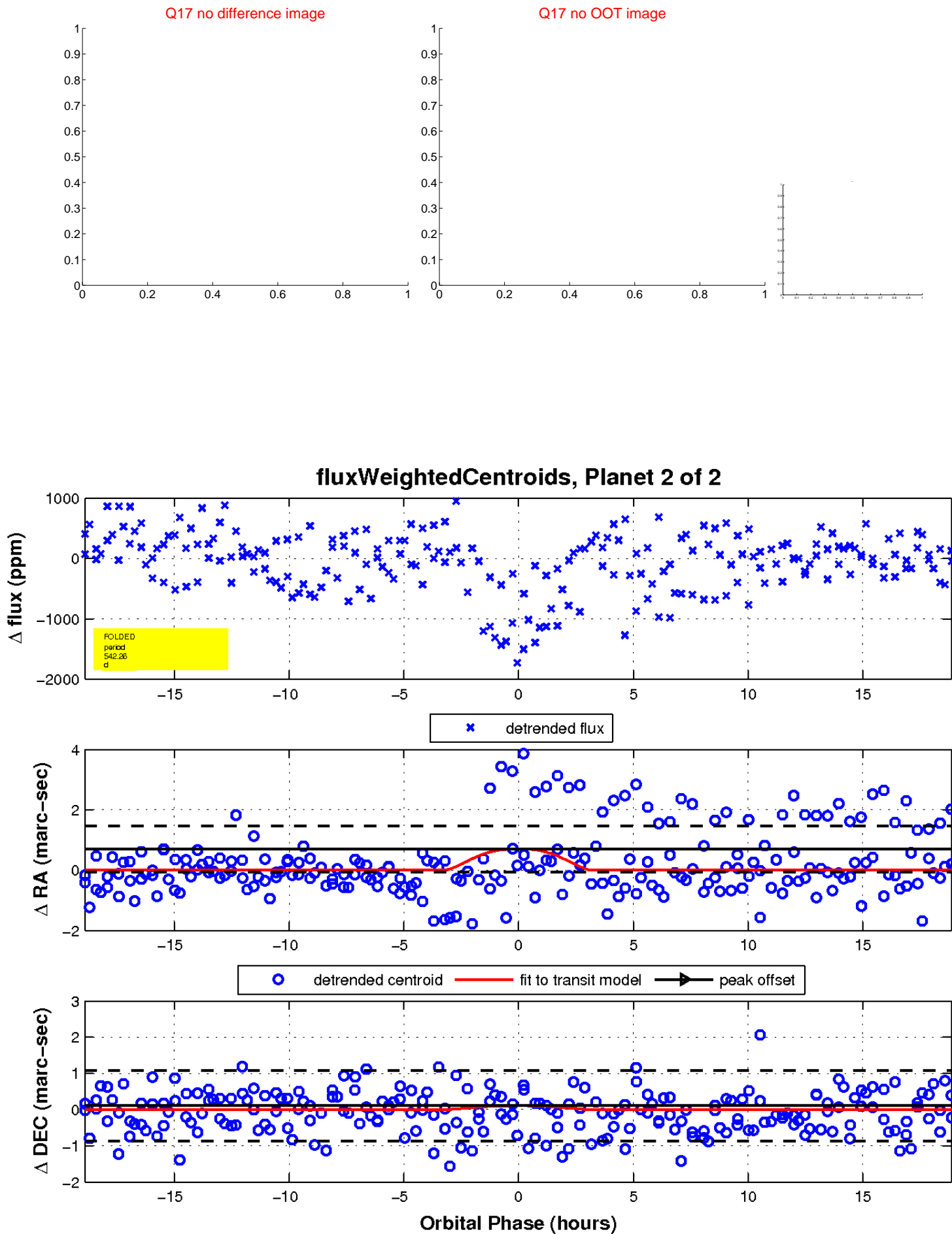
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UKIRT Image

Declination

