

KIC 012885505

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})
012885505-01	OBS	No	282.562268	145.729276	204.7	9.744	8.3	6.7	0.83	5726	1.30	0.99

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012885505-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—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.

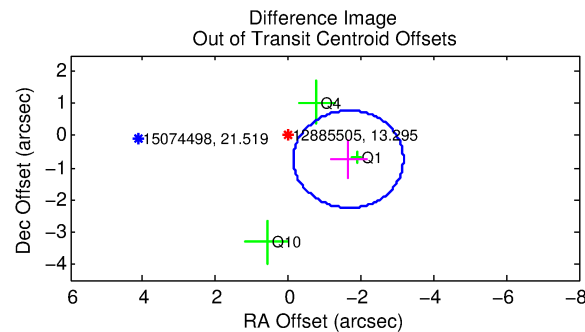
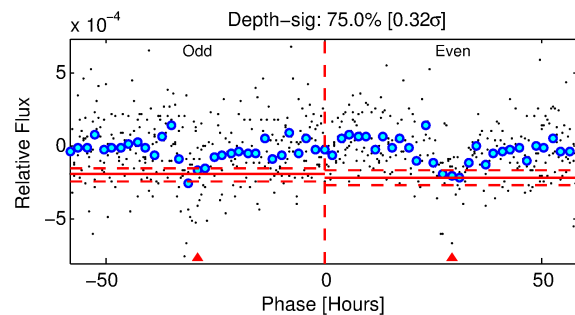
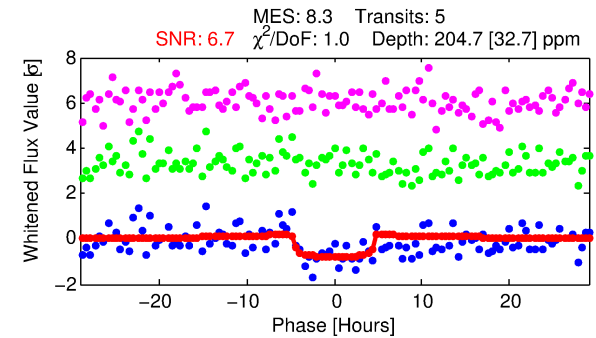
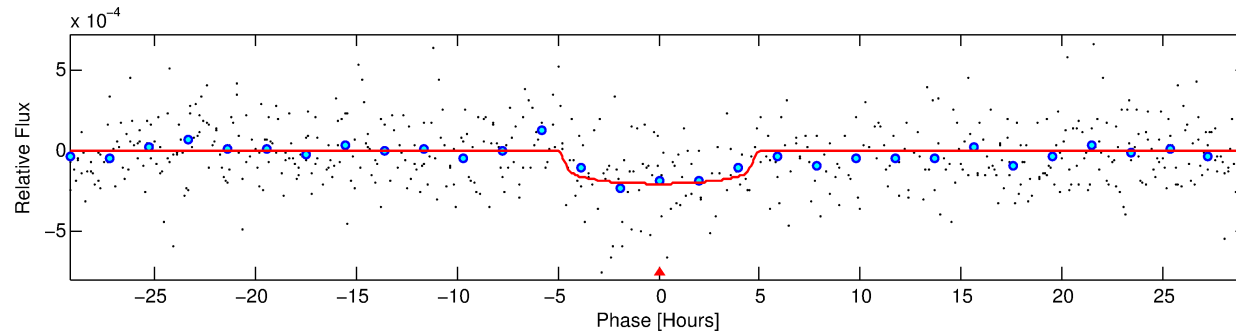
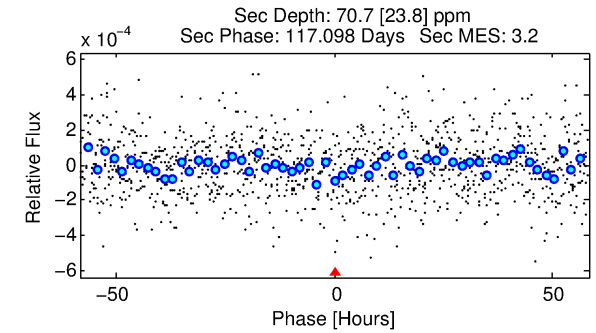
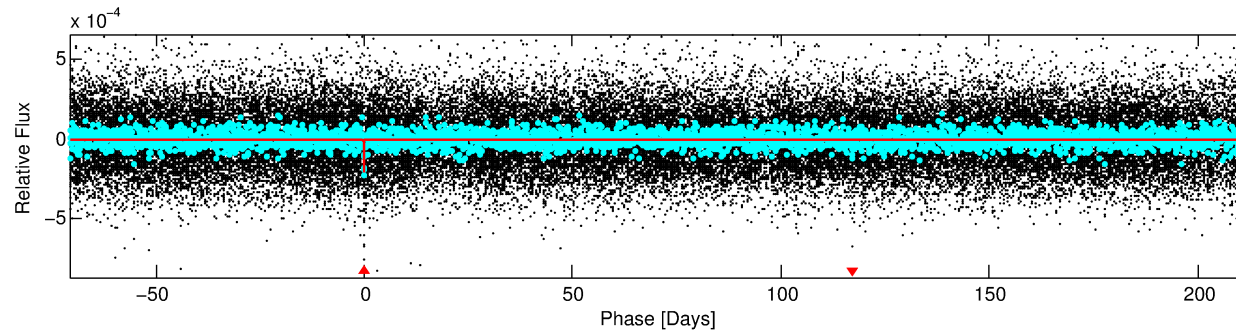
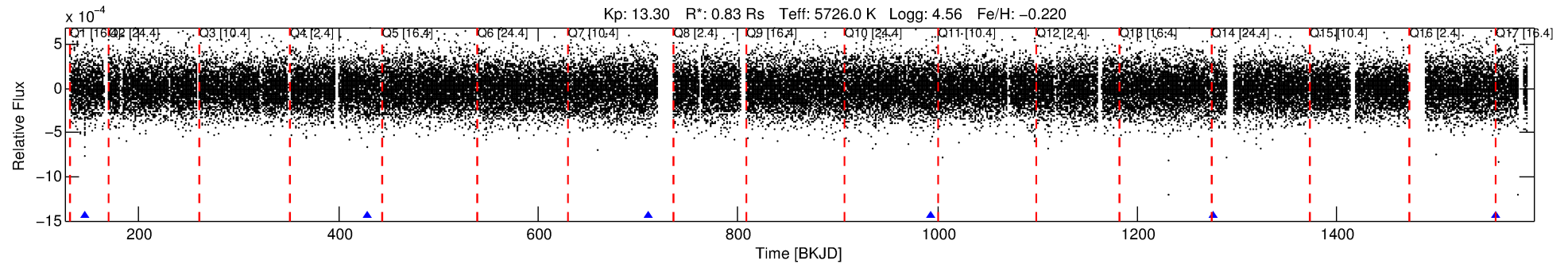
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 012885505-01

No Significant Match Found

DV One-Page Summary

KIC: 12885505 Candidate: 1 of 1 Period: 282.562 d



DV Fit Results:

Period = 282.56227 [0.00802] d
Epoch = 145.7293 [0.0193] BKJD
Rp/R* = 0.0144 [0.0093]
a/R* = 143.17 [420.08]
b = 0.78 [1.47]
Seff = 0.99 [0.29]
Teq = 254 [19] K
Rp = 1.30 [0.89] Re
a = 0.8194 [0.1559] AU
Ag = 15346.15 [20960.91] [0.73σ]
Teffp = 4372 [1467] K [2.81σ]

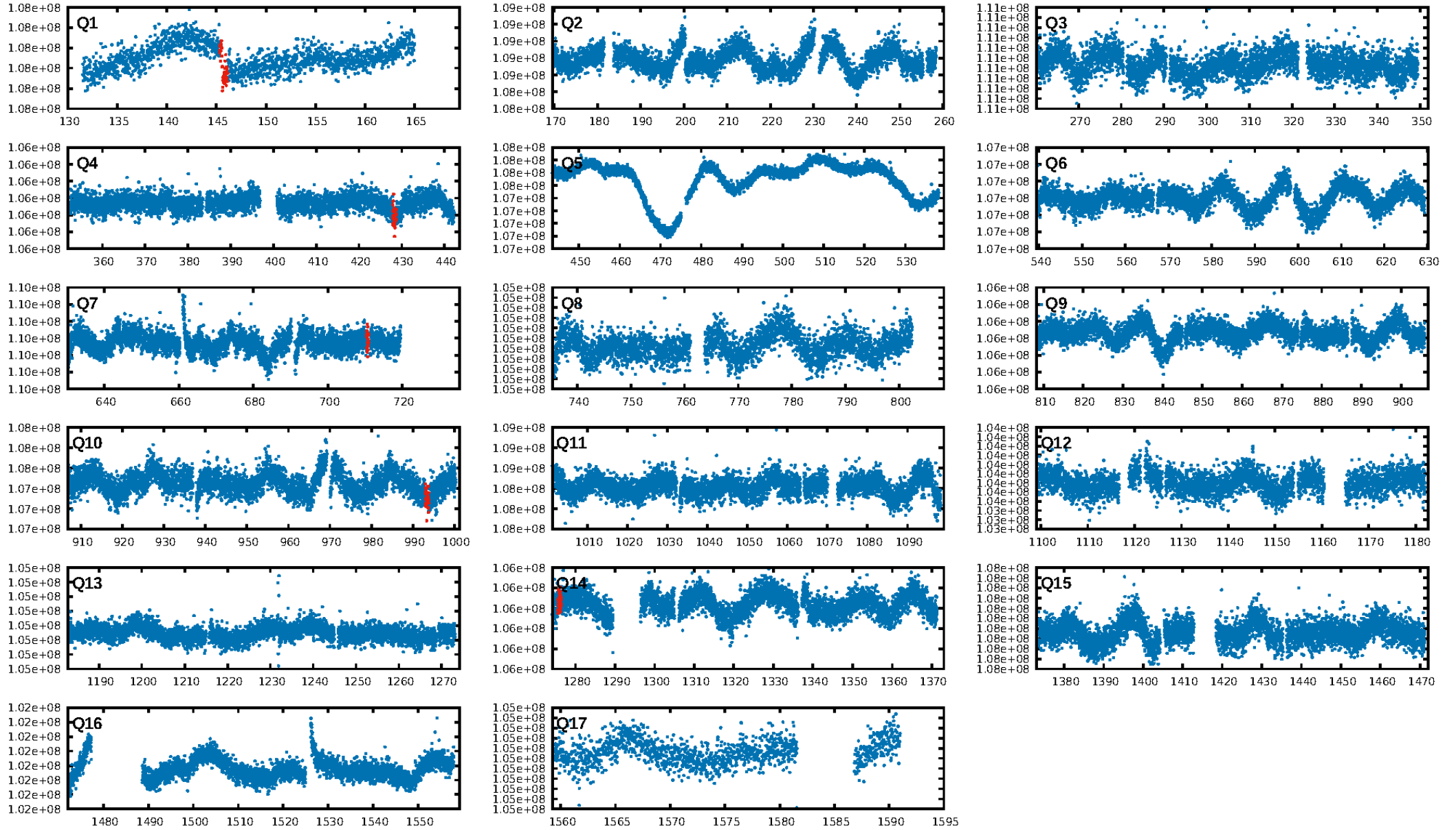
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 2.00e-15
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 38.88
Centroid-sig: 21.0%
Centroid-so: 0.735 arcsec [0.55σ]
OotOffset-rm: 1.810 arcsec [3.58σ]
KicOffset-rm: 1.821 arcsec [3.53σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [4/4]

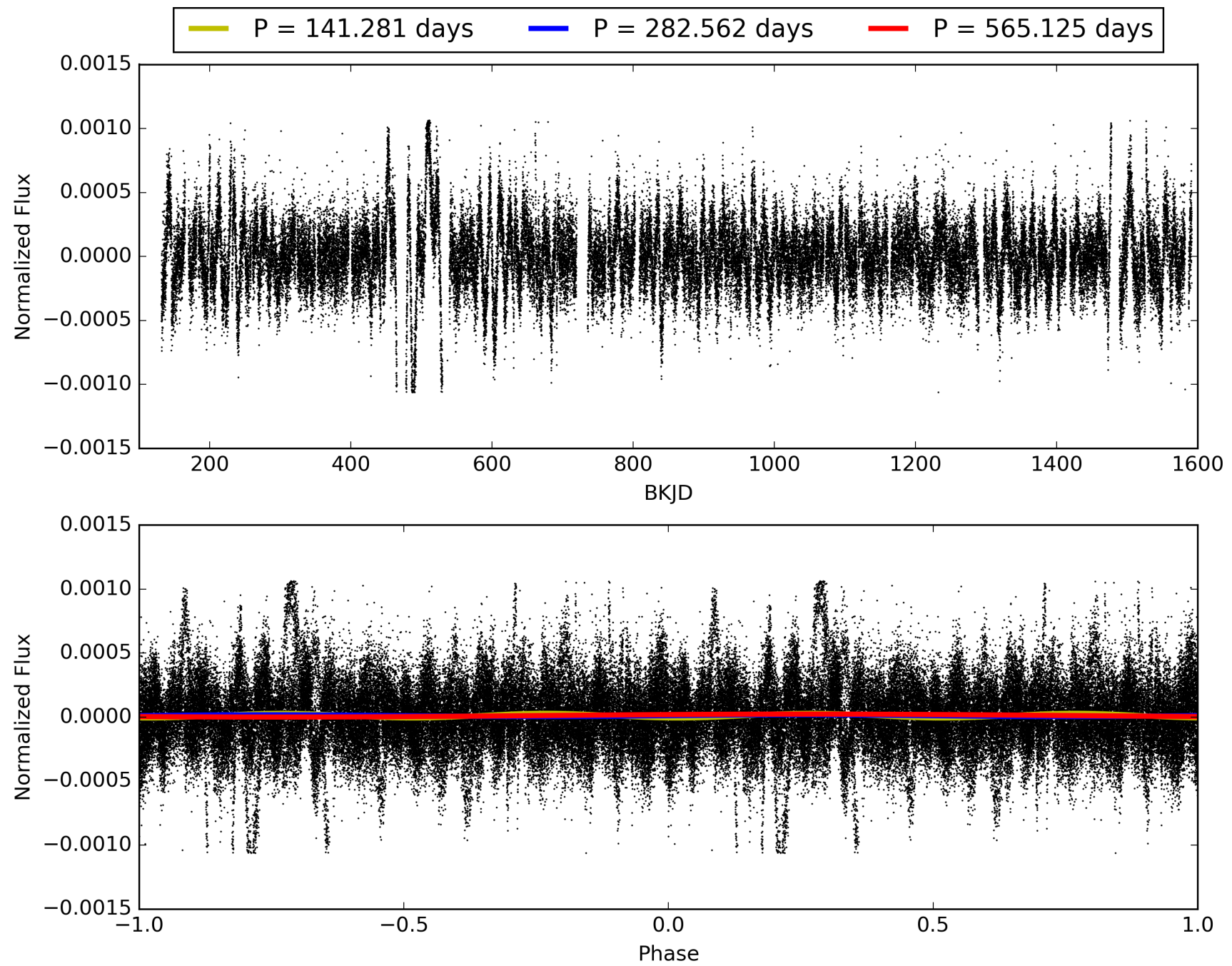
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 19:54:48 Z

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

TCE 012885505-01, PDC Light Curves

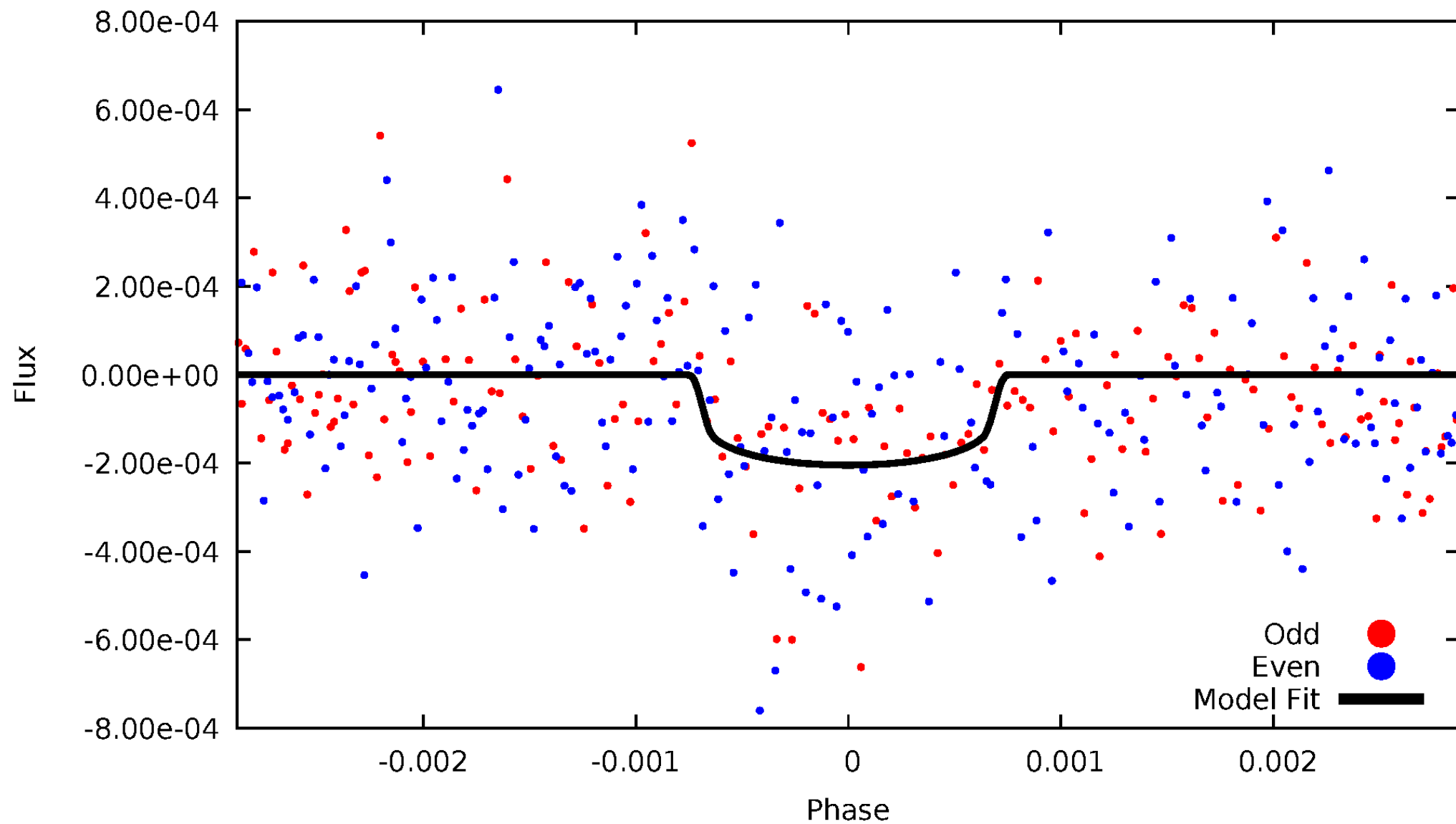


TCE 012885505-01



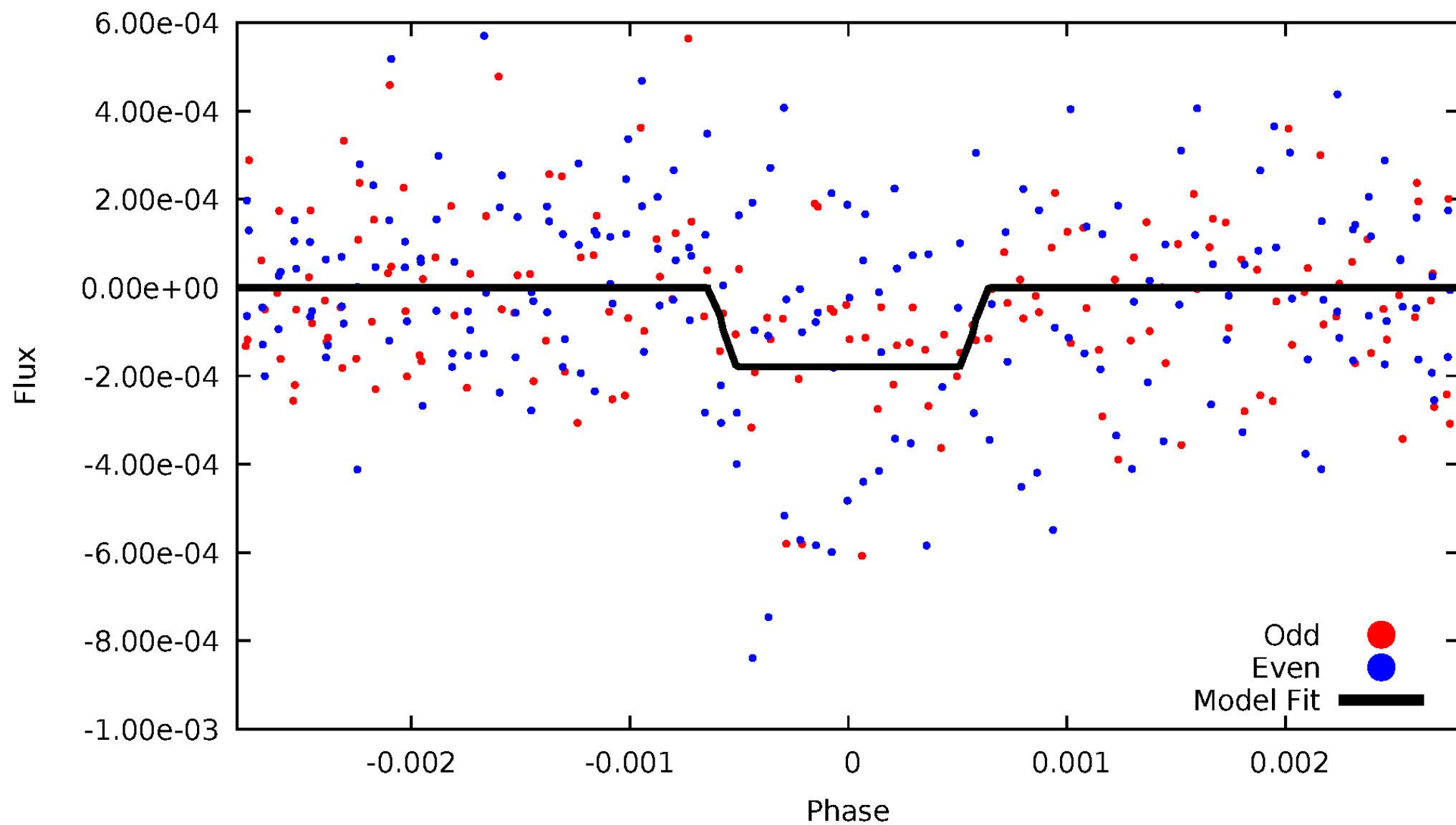
DV Odd/Even

TCE 012885505-01

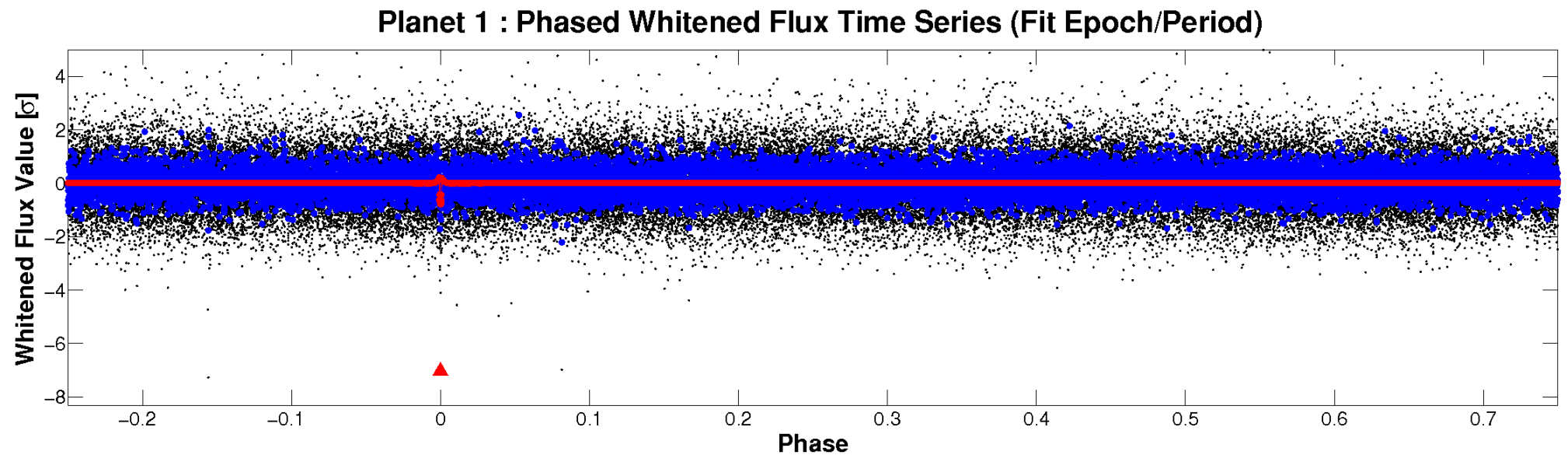
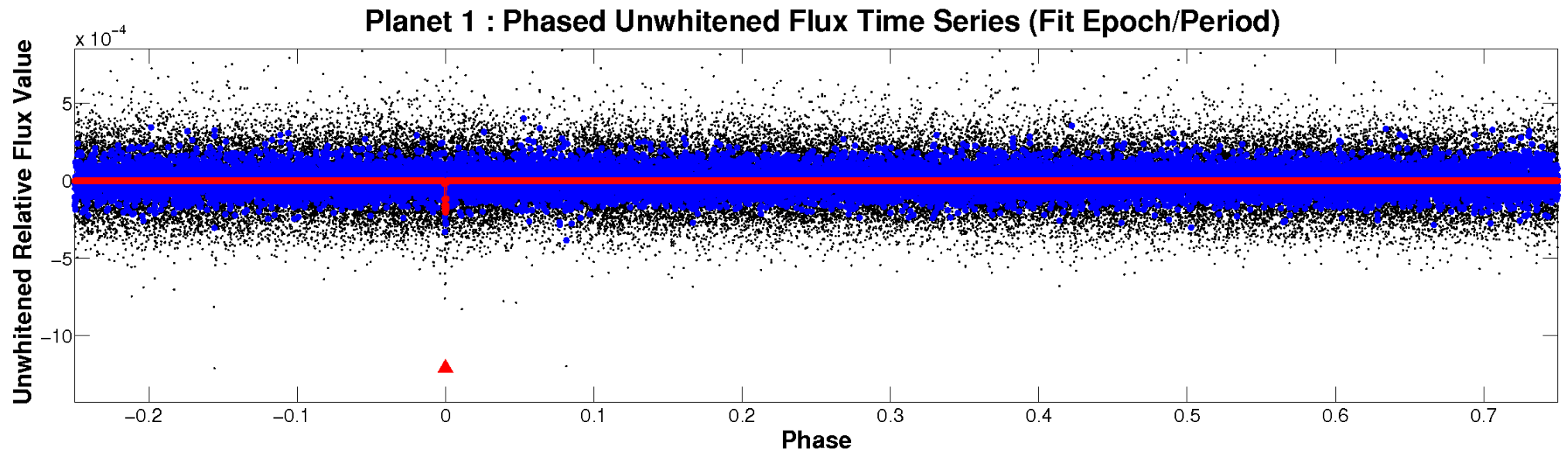


ALT Odd/Even

TCE 012885505-01



Non-Whitened Vs. Whitened Light Curve



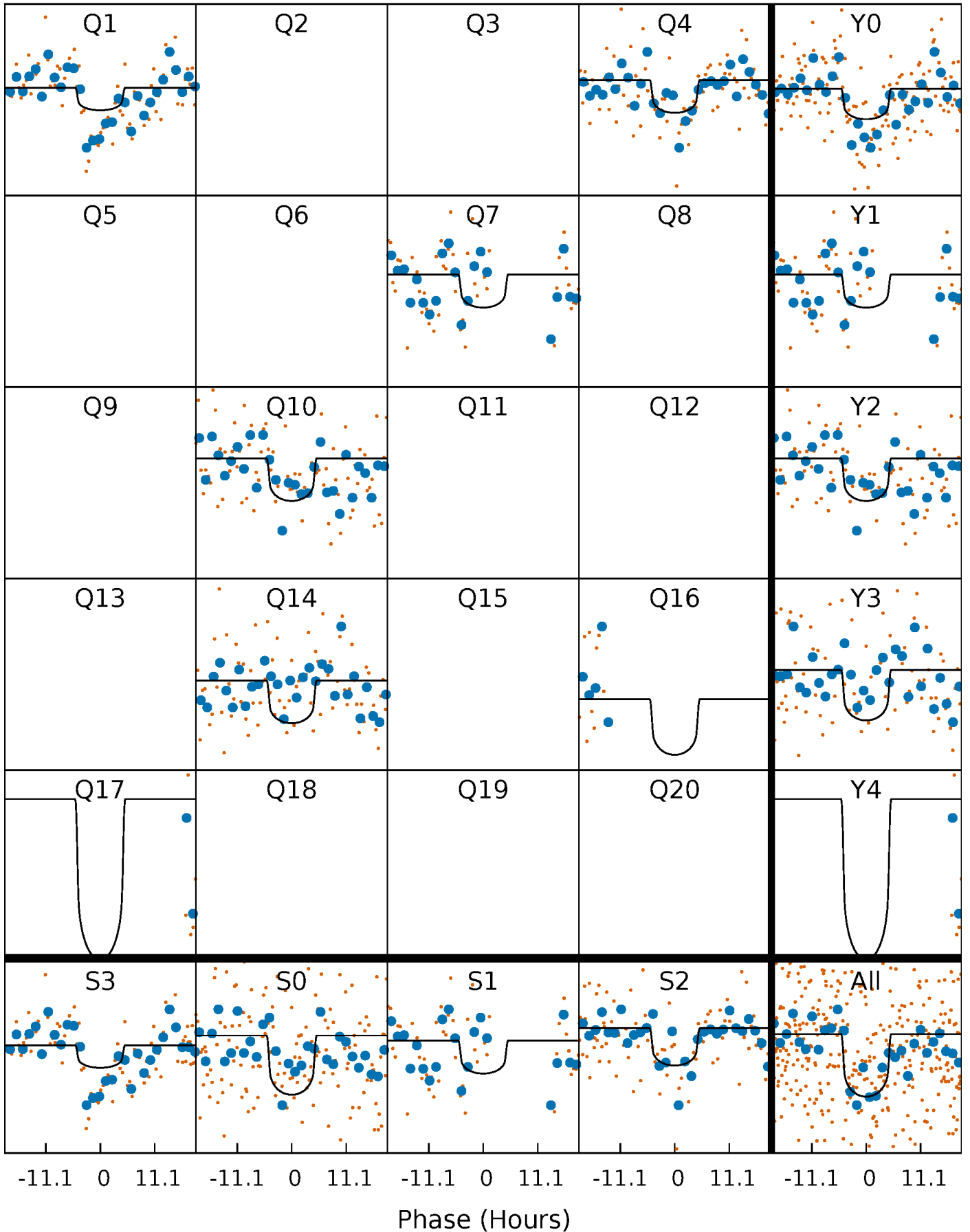
PDC Quarter-Phased Transit Curves

TCE 012885505-01 P=282.562268 Days $T_0=145.729276$ (BKJD)



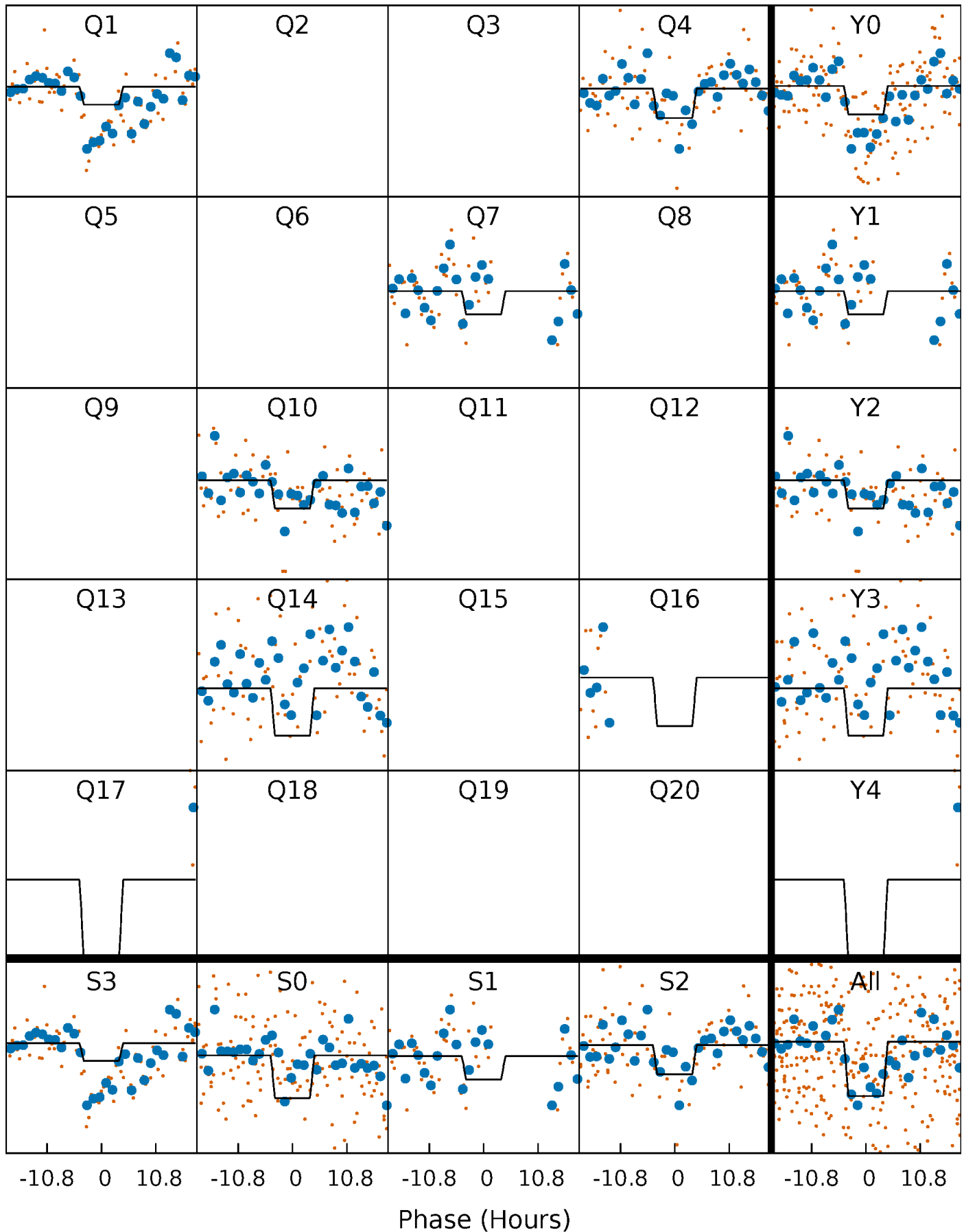
DV Quarter-Phased Transit Curves

TCE 012885505-01 P=282.562268 Days $T_0=145.729276$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

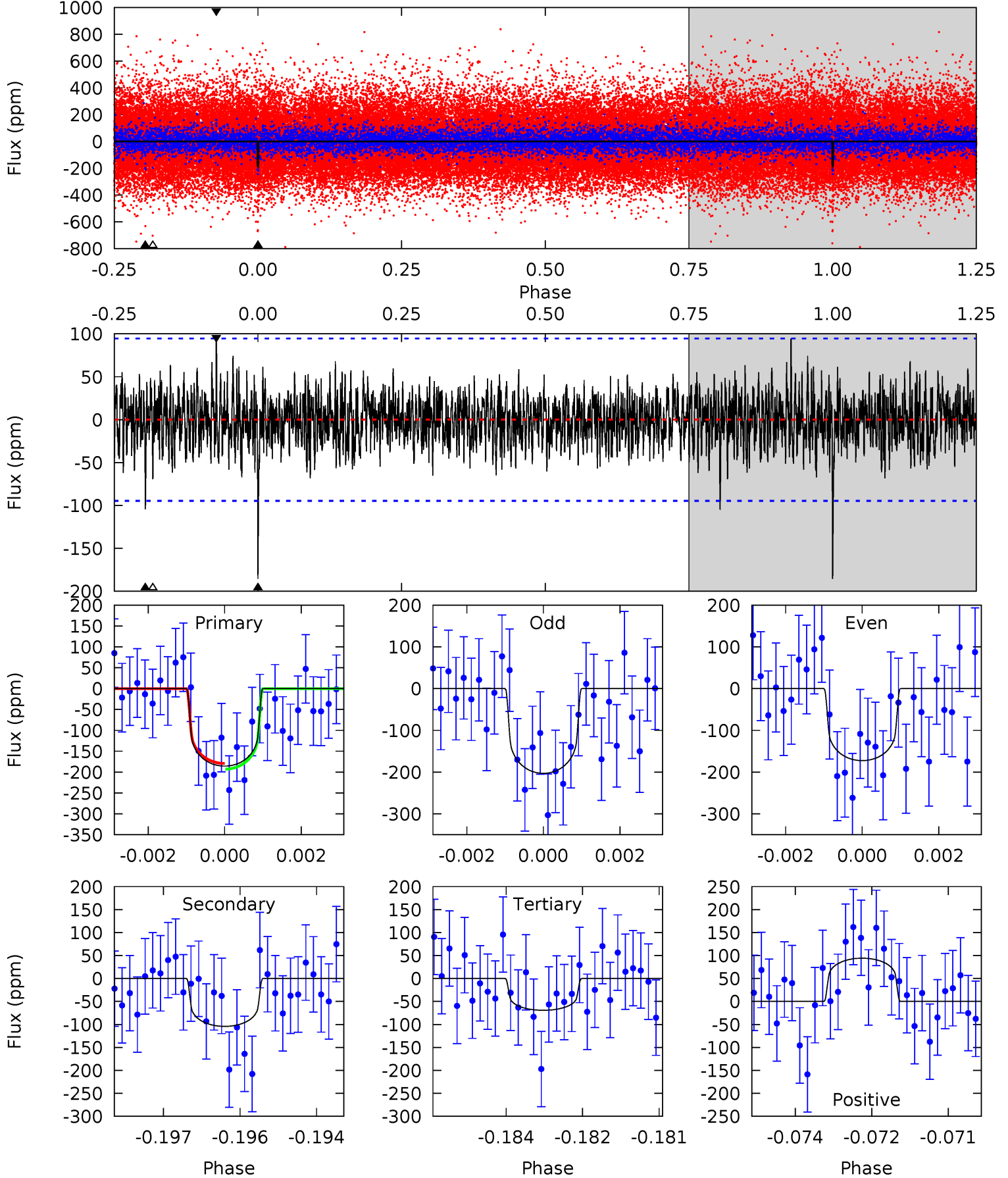
TCE 012885505-01 P=282.555268 Days $T_0=145.735209$ (BKJD)



DV Model-Shift Uniqueness Test

012885505-01, P = 282.562268 Days, E = 145.729276 Days

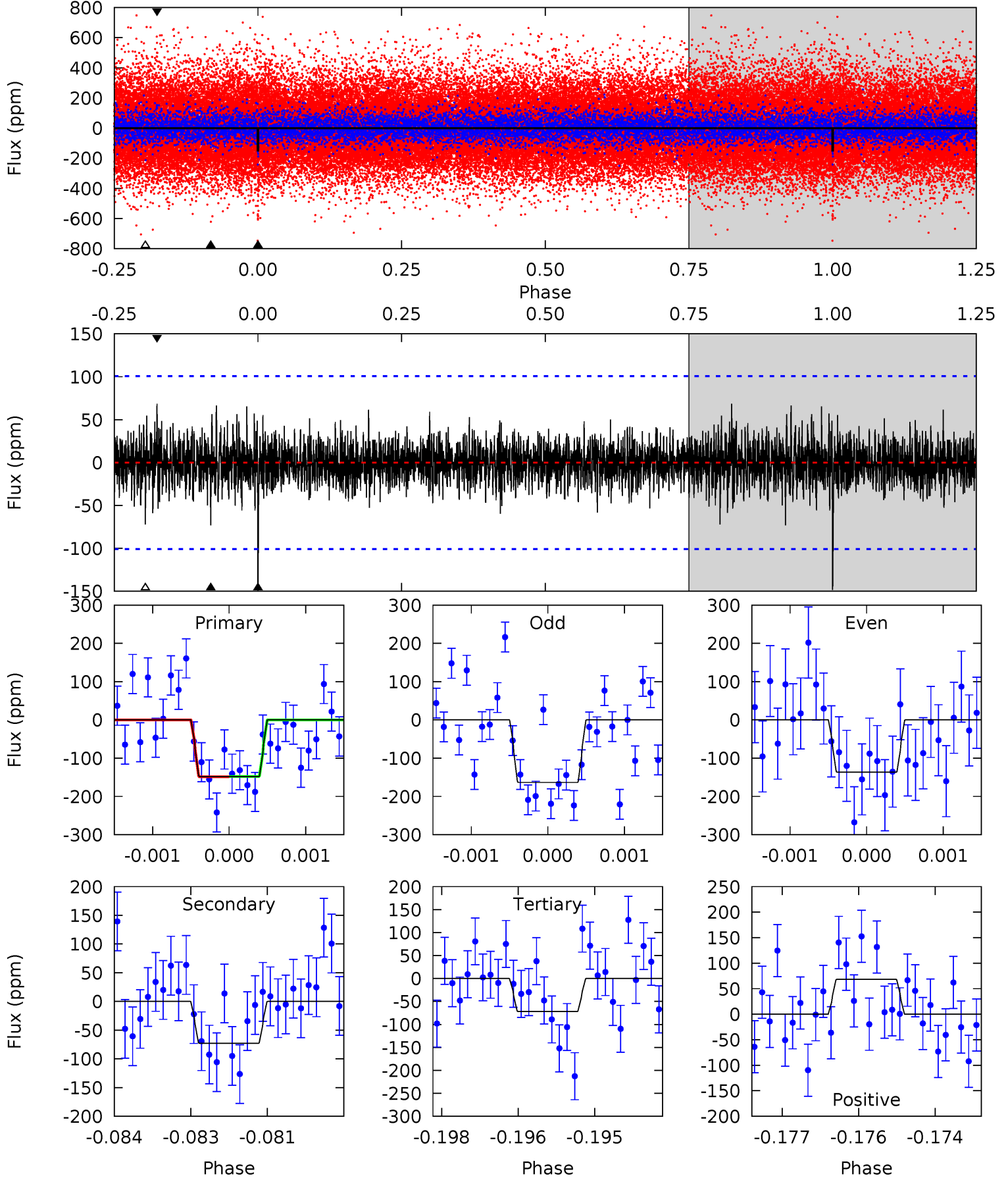
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	5.93	3.94	5.36	5.38	3.17	1.31	6.62	5.20	1.99	0.57	0.86	0.99	0.34	0.39



Alt Model-Shift Uniqueness Test

012885505-01, P = 282.555268 Days, E = 145.735209 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.96	3.91	3.86	3.67	5.41	3.22	0.93	4.10	4.29	0.05	0.24	0.72	0.94	0.32	0.03



Stellar Parameters For KIC 012885505

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5726^{+143}_{-158}	$4.564^{+0.038}_{-0.152}$	$-0.220^{+0.300}_{-0.300}$	$0.829^{+0.187}_{-0.075}$	$0.923^{+0.090}_{-0.110}$	$2.283^{+0.469}_{-0.986}$
	+2%/-3%	+1%/-3%	+136%/-136%	+23%/-9%	+10%/-12%	+21%/-43%
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 012885505-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-104±18	$1.42^{+0.94}_{-0.78}$	361^{+20}_{-14}	4795^{+2153}_{-865}	18292^{+77617}_{-11704}
Alt.	-73±19	$1.38^{+0.83}_{-0.81}$	361^{+19}_{-14}	4516^{+2140}_{-727}	13832^{+63379}_{-8694}

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 $A_{obs} \gg 1.0$

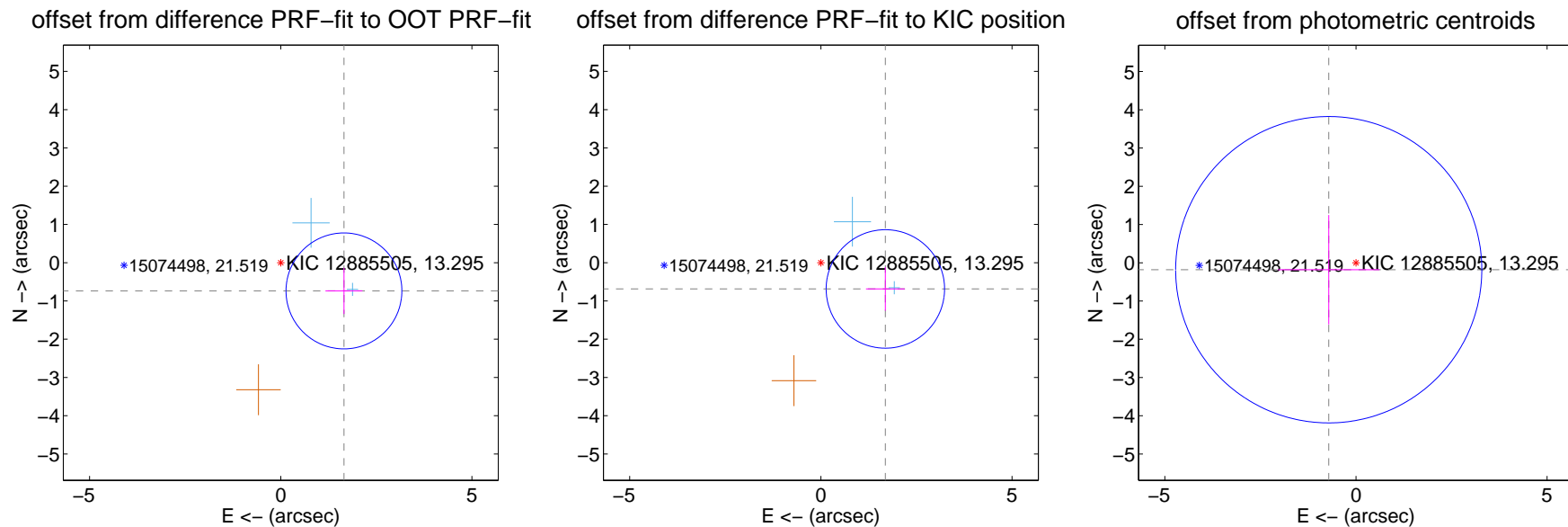
DV Centroid Data

Supplemental centroid analysis for 012885505-01. Kepler magnitude: 13.29. Transit SNR 6.71

There are 2 quarters with good PRF difference image offsets

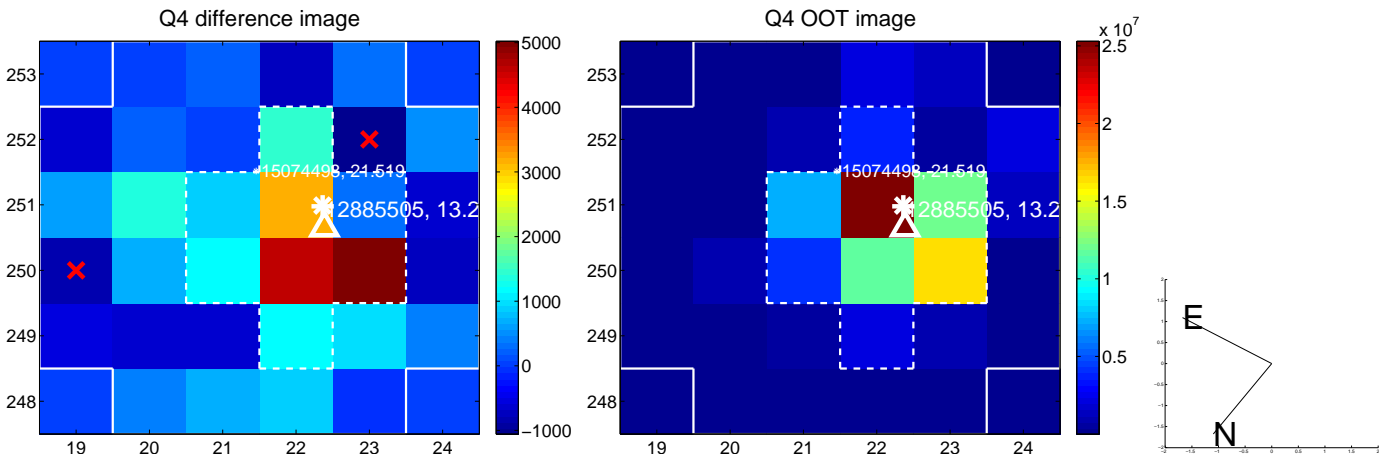
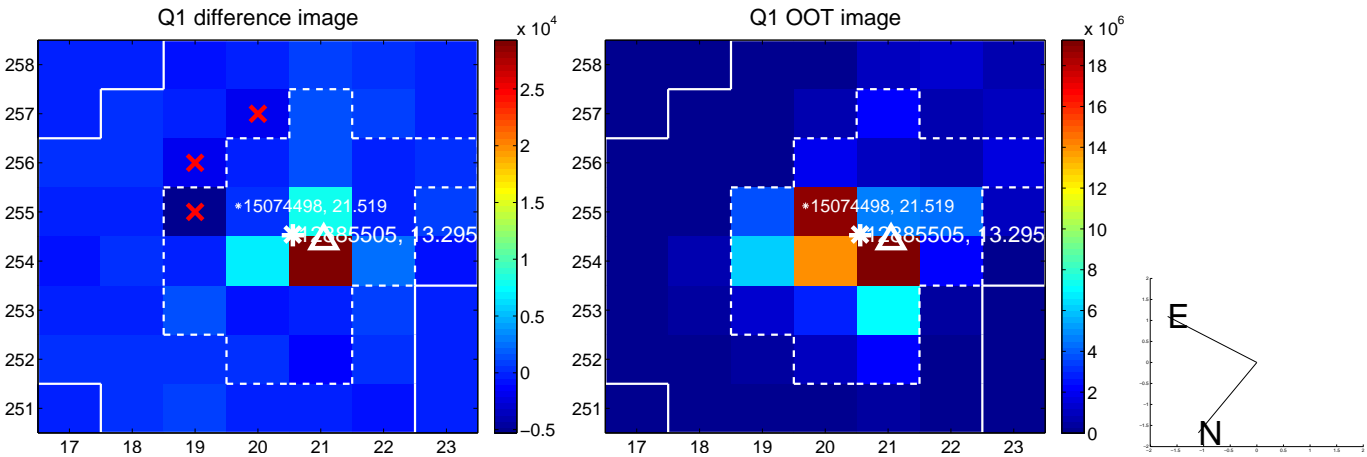
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.810 ± 0.505	3.58	-1.653 ± 0.483	-0.738 ± 0.605
PRF-fit source offset from KIC position	1.821 ± 0.516	3.53	-1.687 ± 0.507	-0.686 ± 0.570
photometric centroid source offset	0.74 ± 1.34	0.55	0.71 ± 1.33	-0.18 ± 1.43



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.

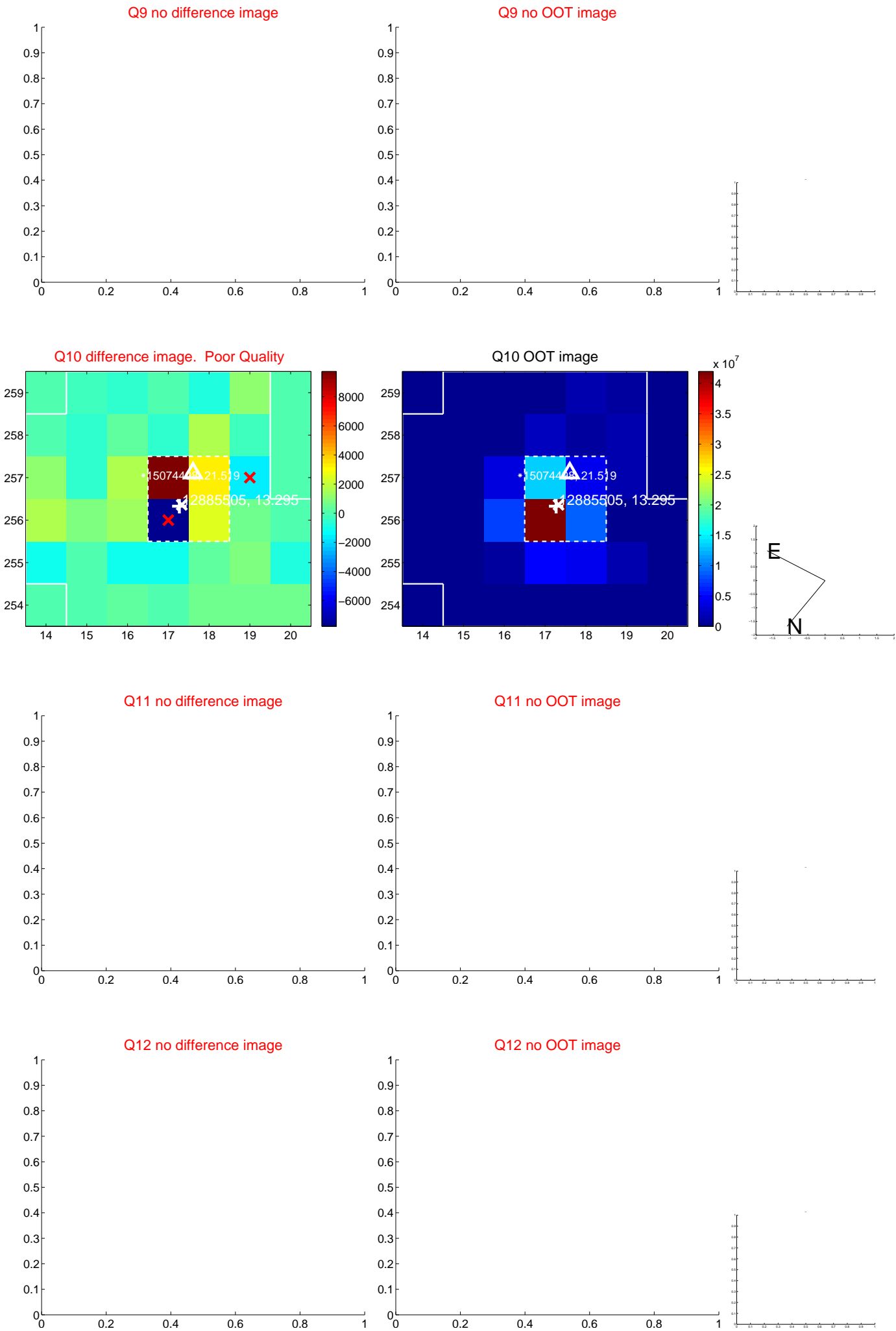
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



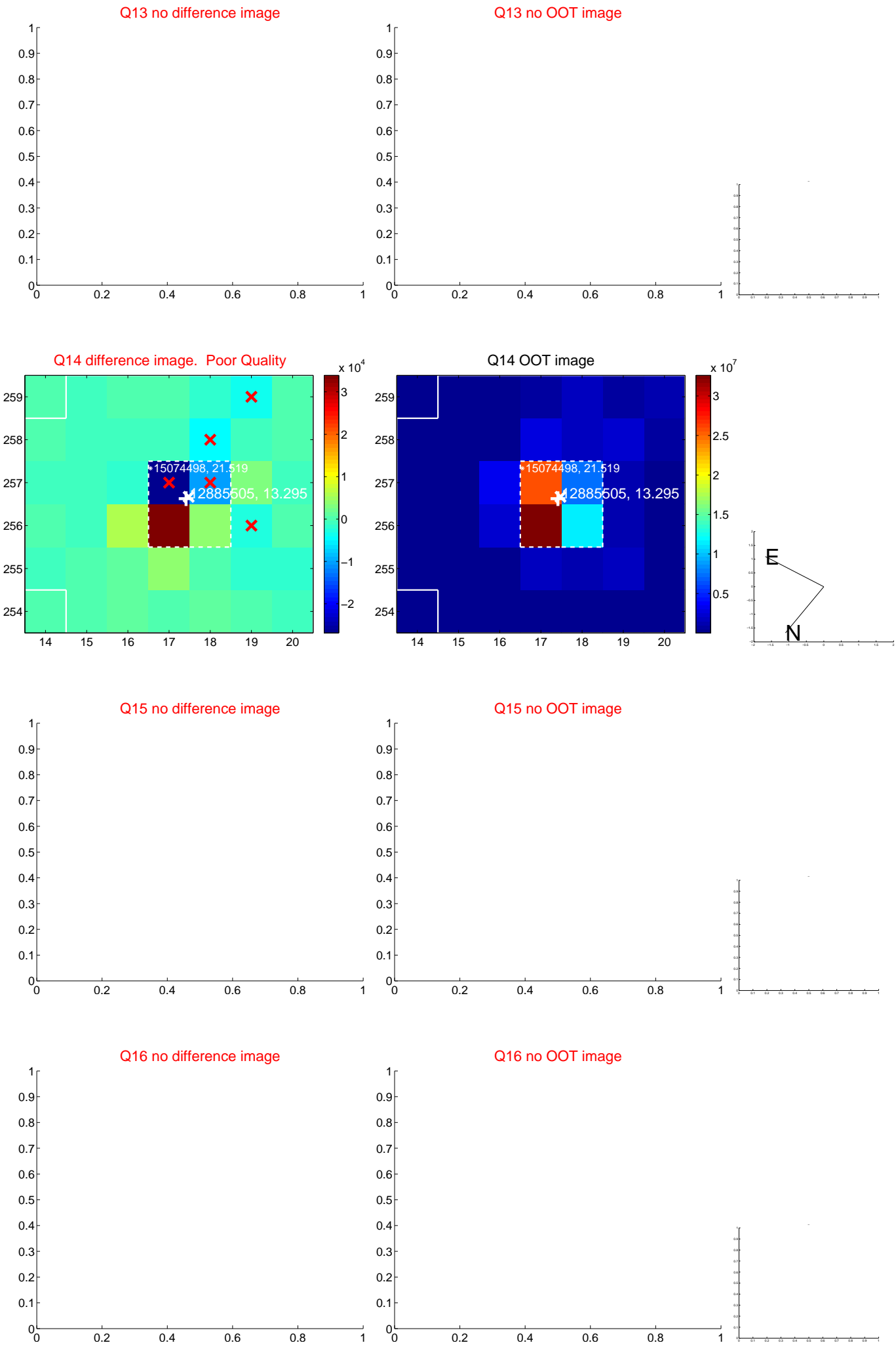
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



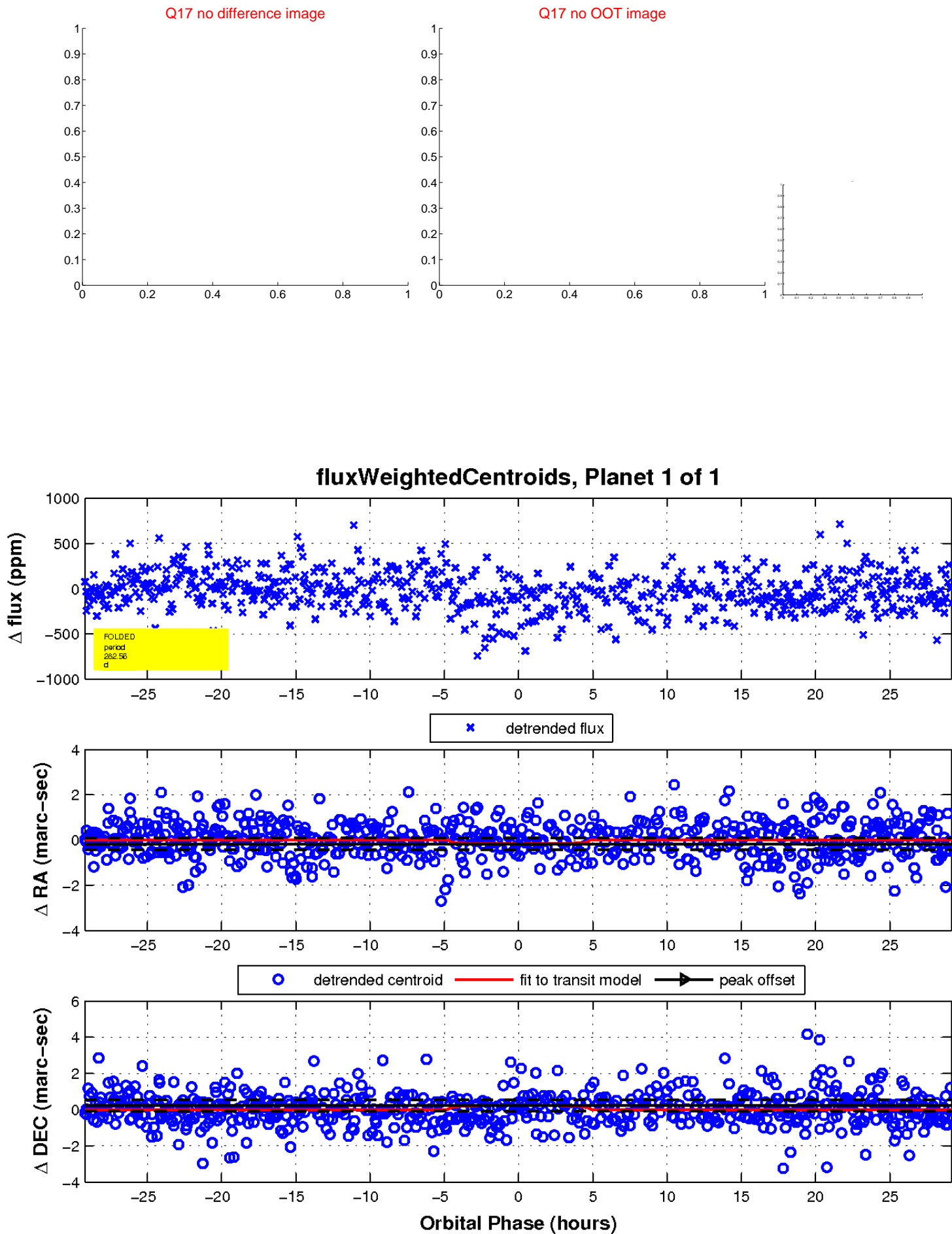
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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

