

KIC 007454983

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})
007454983-01	OBS	No	499.425563	497.059858	214.0	16.338	7.9	7.2	1.01	5881	1.77	0.73

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007454983-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—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.

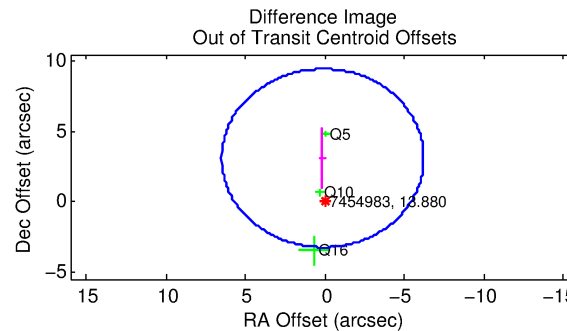
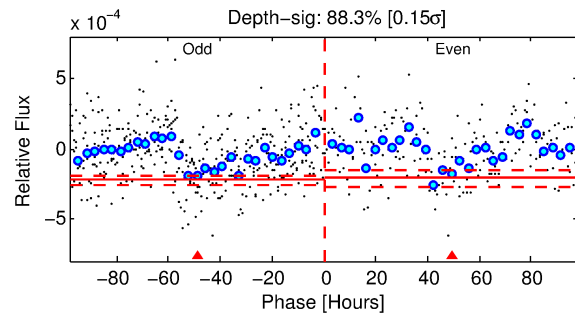
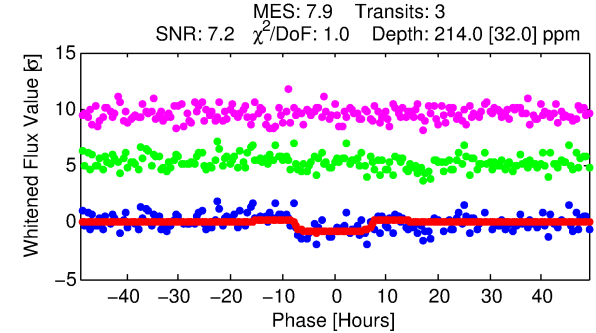
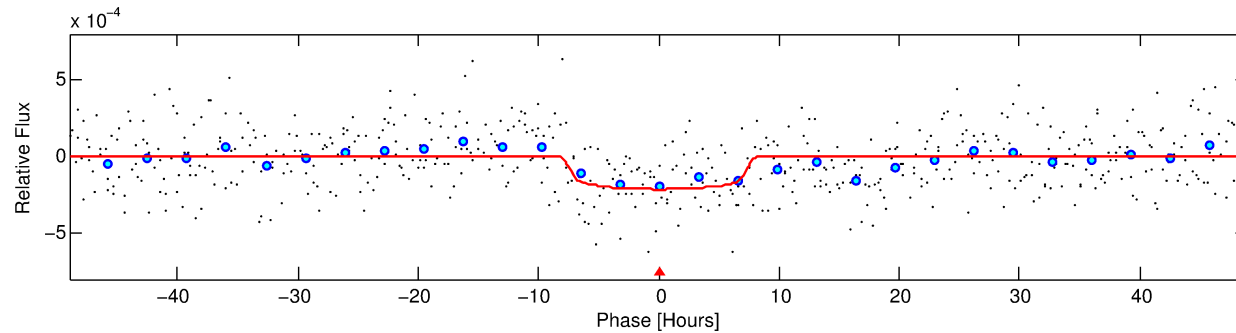
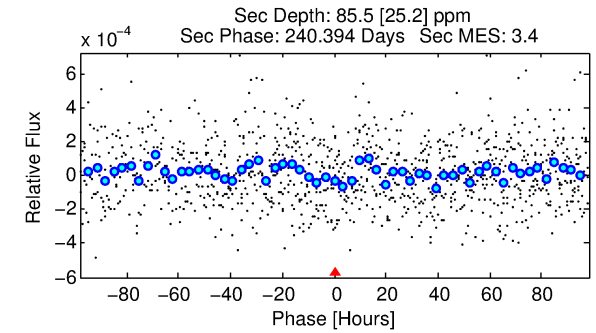
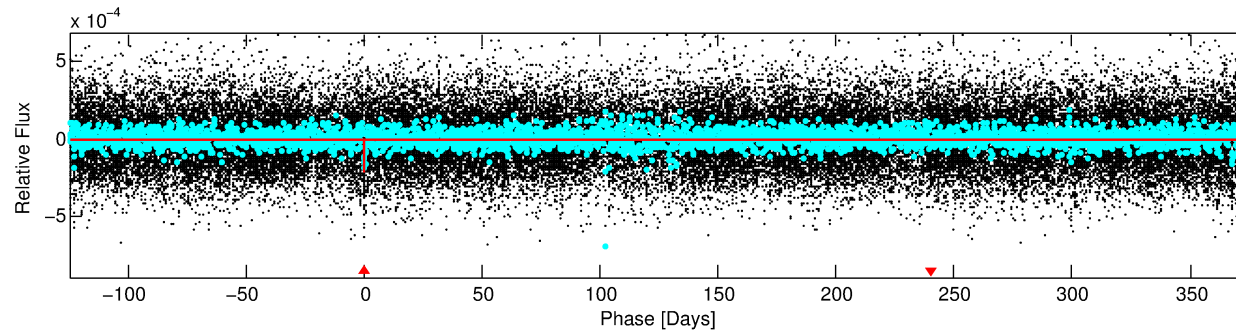
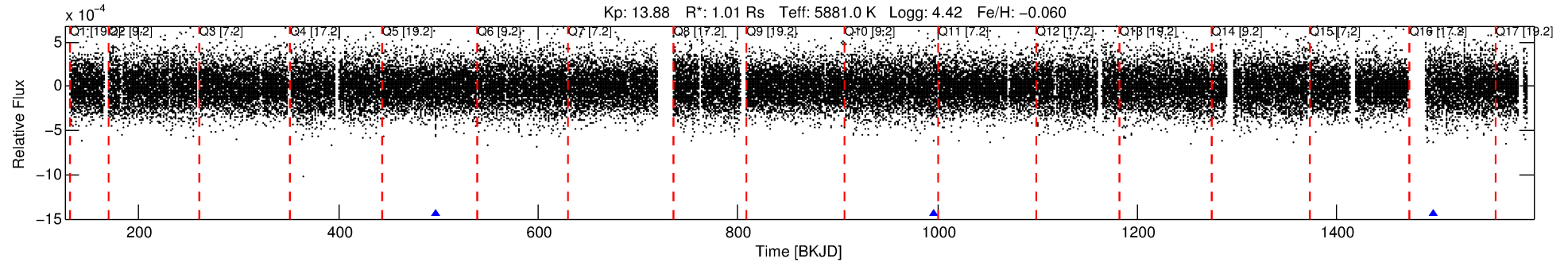
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007454983-01

No Significant Match Found

DV One-Page Summary

KIC: 7454983 Candidate: 1 of 1 Period: 499.426 d



DV Fit Results:

Period = 499.42556 [0.02159] d
Epoch = 497.0599 [0.0248] BKJD
Rp/R* = 0.0160 [0.0026]
a/R* = 105.33 [71.99]
b = 0.91 [0.13]
Seff = 0.73 [0.27]
Teq = 236 [22] K
Rp = 1.77 [0.57] Re
a = 1.2261 [0.2939] AU
Ag = 22584.66 [12688.14] [1.78σ]
Teffp = 4465 [505] K [8.37σ]

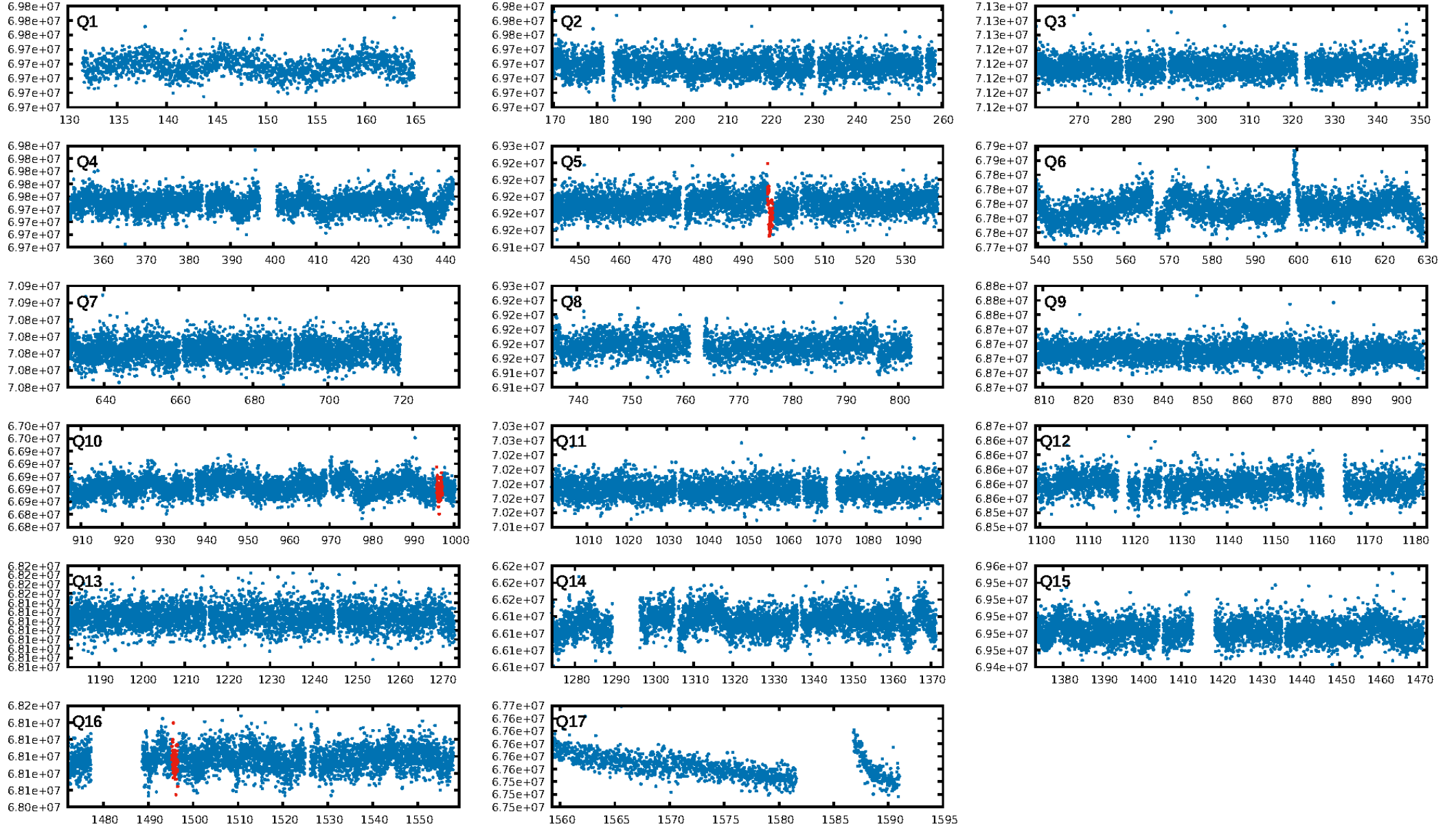
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 32.0%
ModelChiSquareGof-sig: 99.3%
Bootstrap-pfa: 1.52e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -463.5
Centroid-sig: 11.4%
Centroid-so: 2.359 arcsec [1.30σ]
OotOffset-rm: 3.107 arcsec [1.47σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-rm: 3.217 arcsec [1.79σ]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

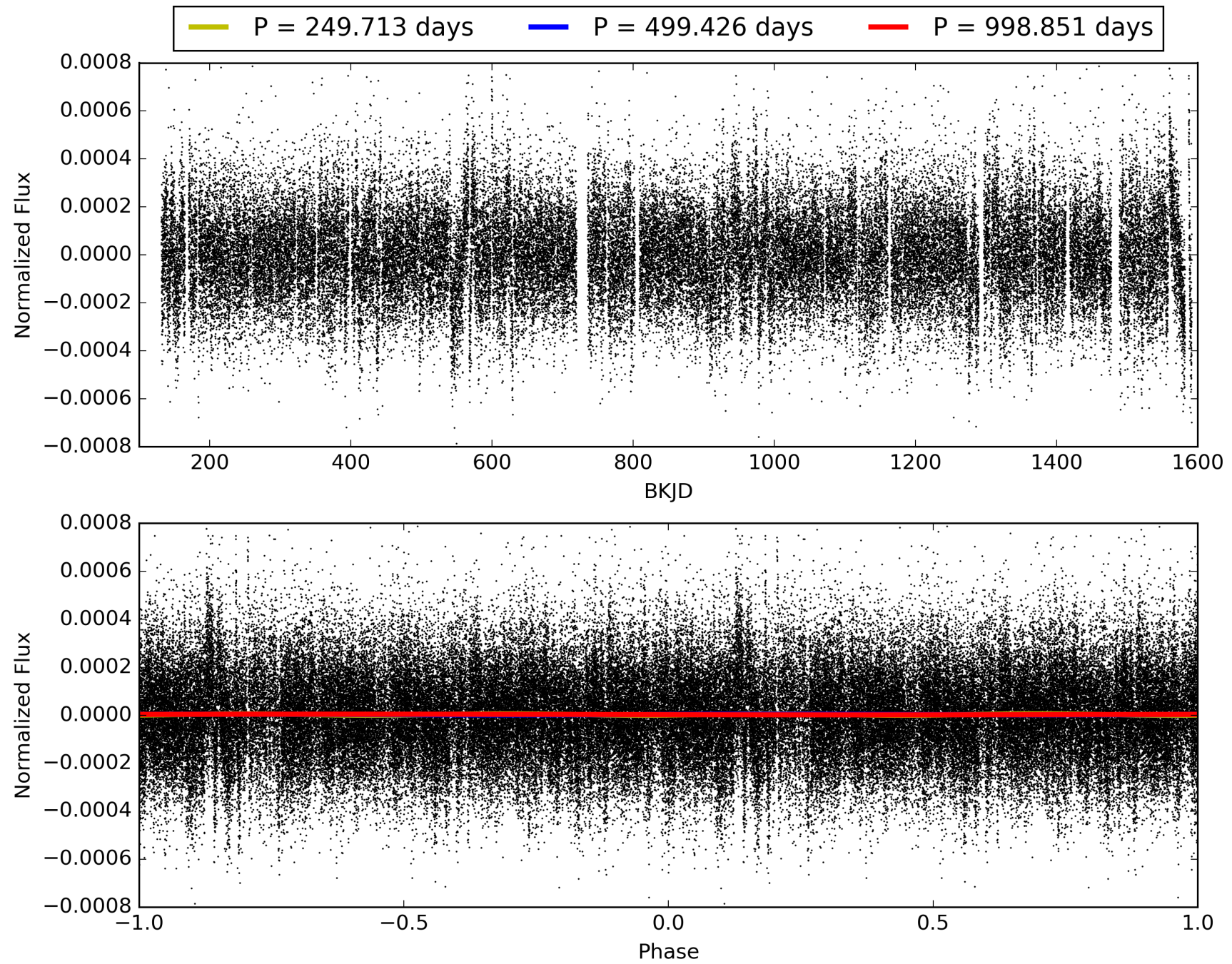
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:32:25 Z

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

TCE 007454983-01, PDC Light Curves

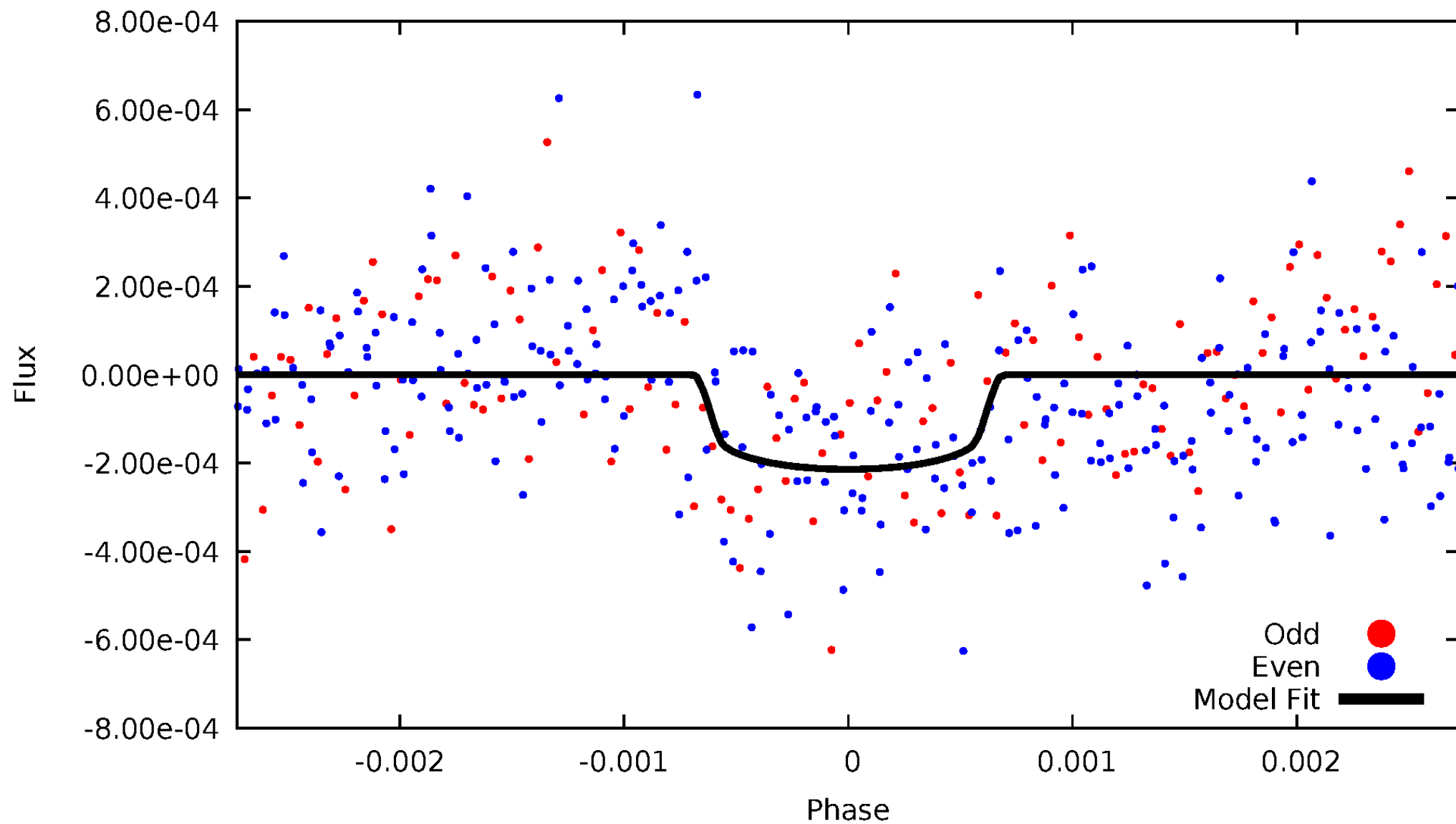


TCE 007454983-01



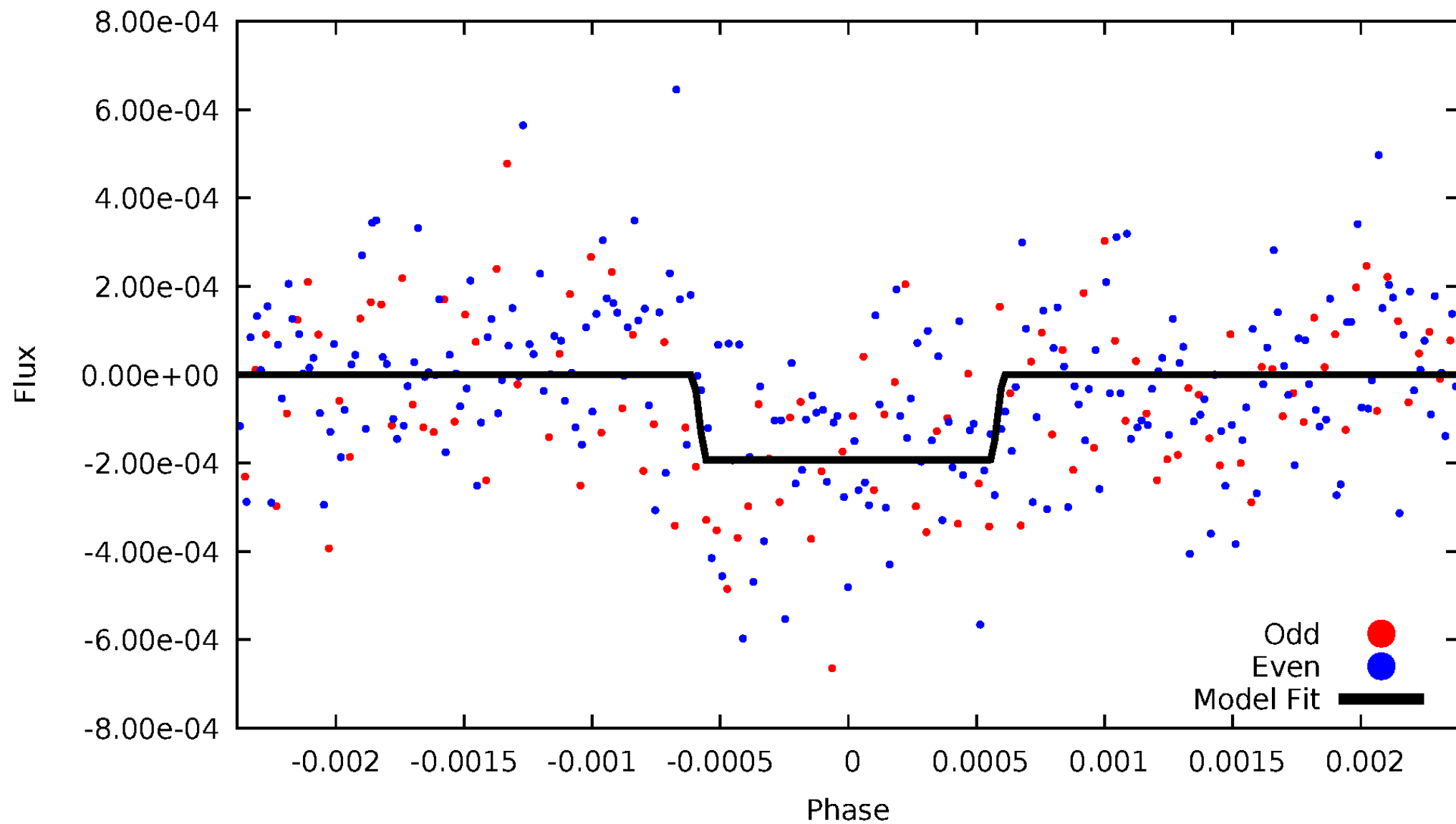
DV Odd/Even

TCE 007454983-01



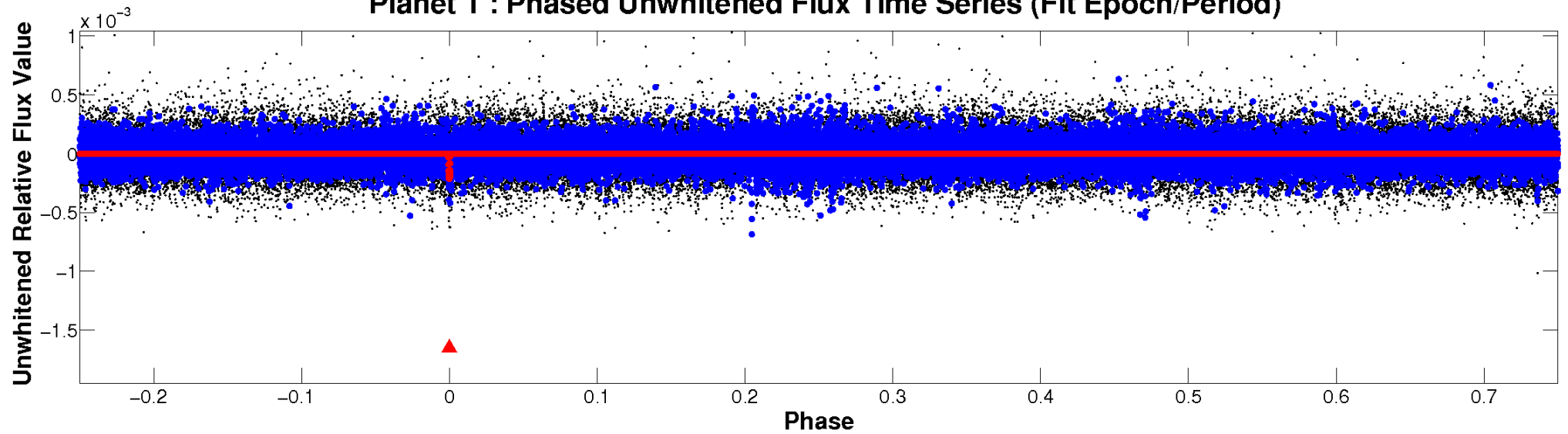
ALT Odd/Even

TCE 007454983-01

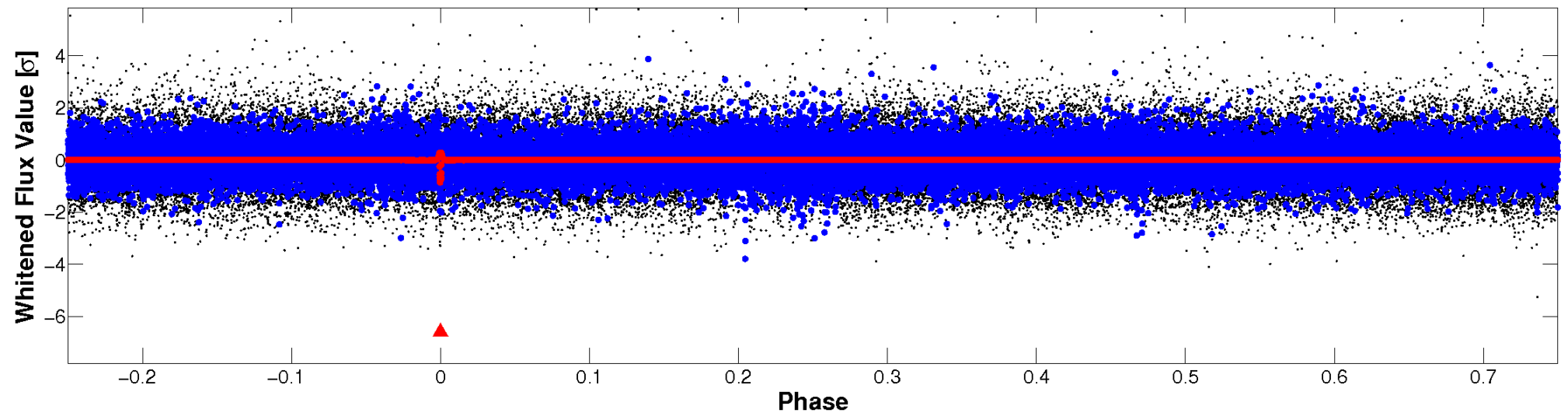


Non-Whitened Vs. Whitened Light Curve

Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)



Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



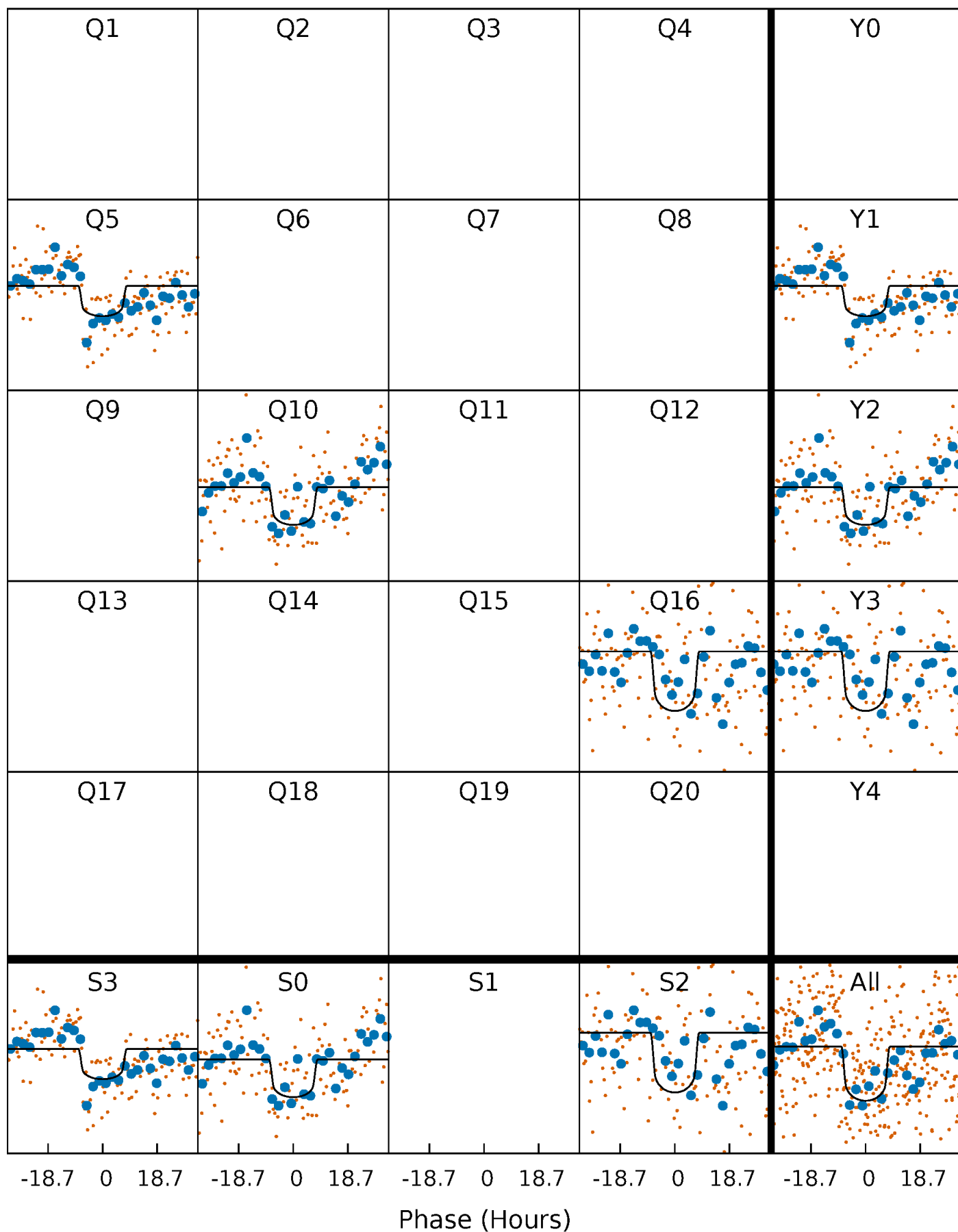
PDC Quarter-Phased Transit Curves

TCE 007454983-01 P=499.425563 Days $T_0=497.059858$ (BKJD)



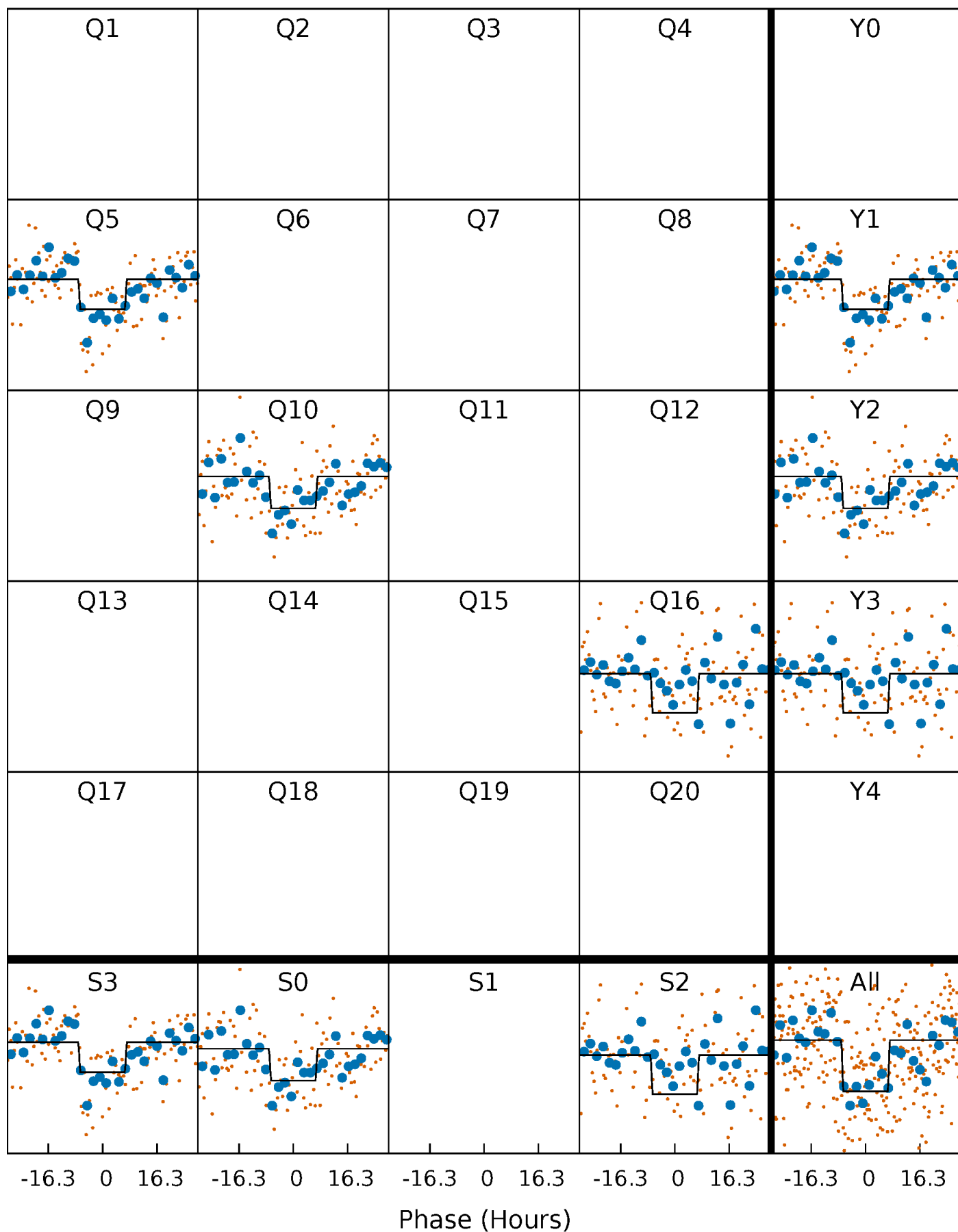
DV Quarter-Phased Transit Curves

TCE 007454983-01 P=499.425563 Days $T_0=497.059858$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

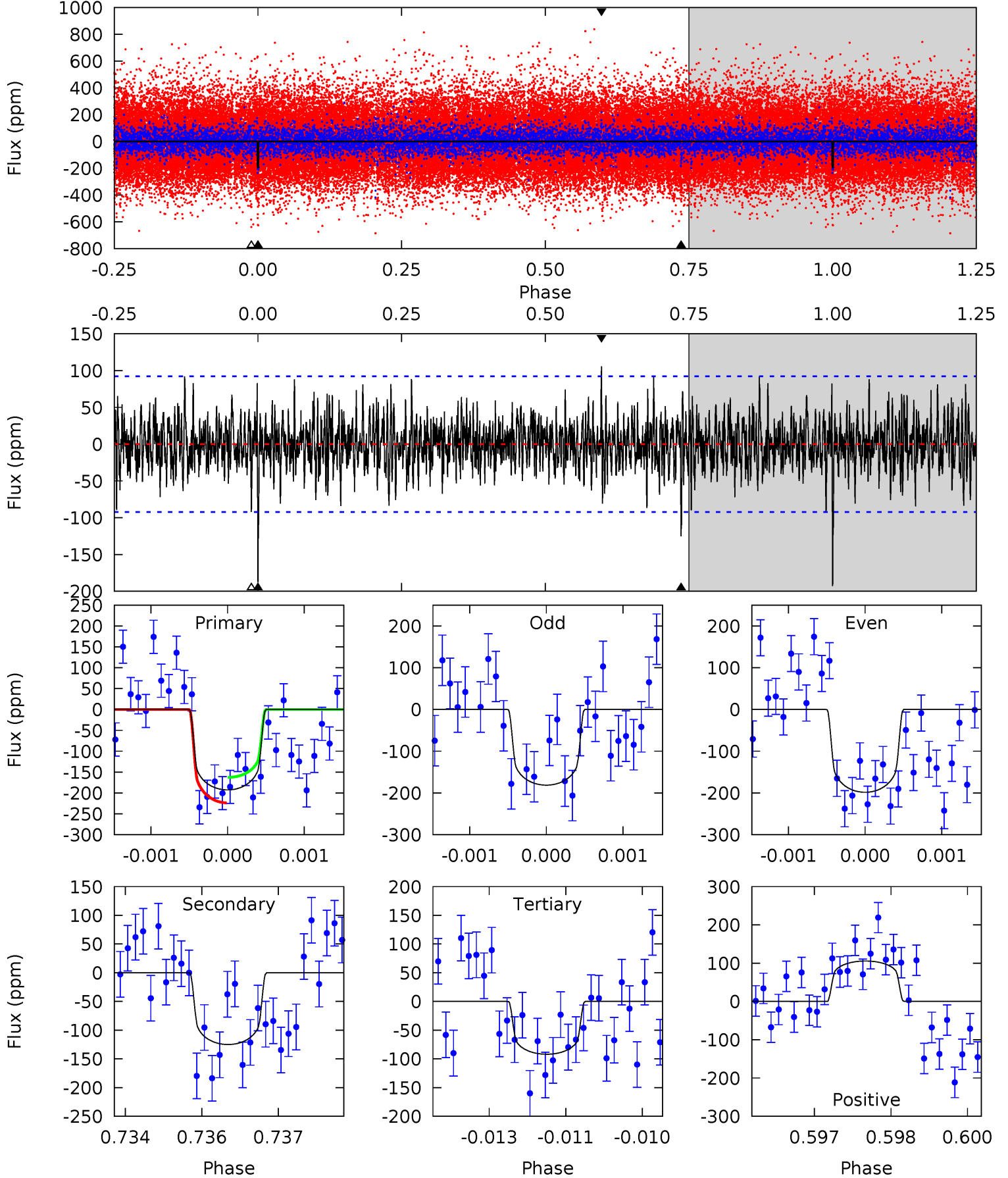
TCE 007454983-01 P=499.430262 Days $T_0=497.049396$ (BKJD)



DV Model-Shift Uniqueness Test

007454983-01, P = 499.425563 Days, E = 497.059858 Days

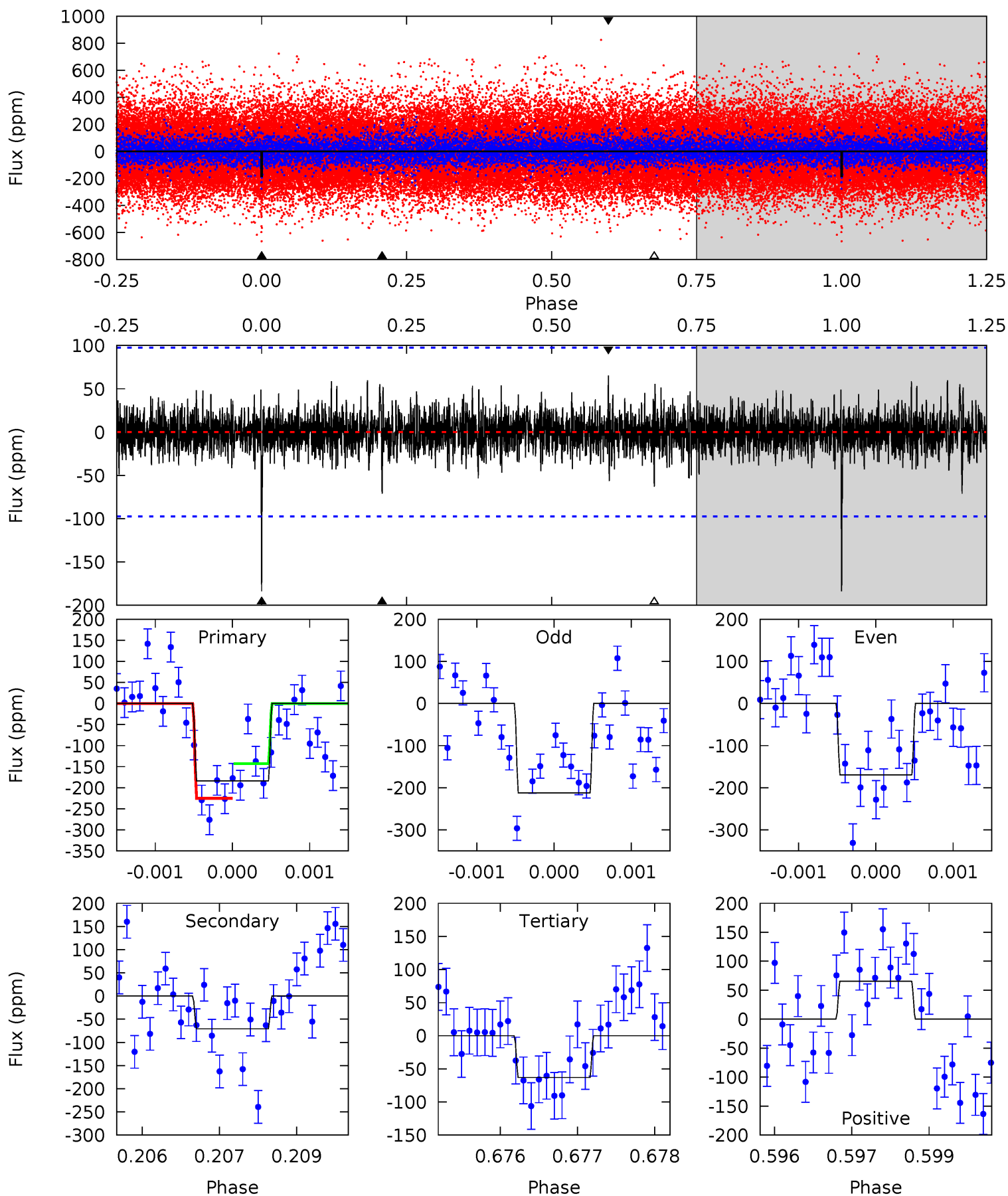
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	7.31	5.37	6.17	5.39	3.20	1.57	5.89	5.09	1.93	1.13	0.47	1.06	0.35	1.78



Alt Model-Shift Uniqueness Test

007454983-01, P = 499.430262 Days, E = 497.049396 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	3.94	3.51	3.64	5.42	3.24	0.87	6.72	6.59	0.43	0.30	1.14	0.86	0.26	2.29



Stellar Parameters For KIC 007454983

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5881^{+146}_{-176}	$4.422^{+0.084}_{-0.196}$	$-0.060^{+0.250}_{-0.300}$	$1.011^{+0.283}_{-0.131}$	$0.986^{+0.128}_{-0.117}$	$1.342^{+0.593}_{-0.700}$
	+2%/-3%	+2%/-4%	+417%/-500%	+28%/-13%	+13%/-12%	+44%/-52%
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 007454983-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-125 ± 17	$1.83^{+0.38}_{-0.37}$	333^{+24}_{-17}	4994^{+435}_{-377}	30504^{+17252}_{-10421}
Alt.	-71 ± 18	$1.59^{+0.36}_{-0.31}$	333^{+25}_{-16}	4687^{+471}_{-386}	22907^{+14471}_{-8850}

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

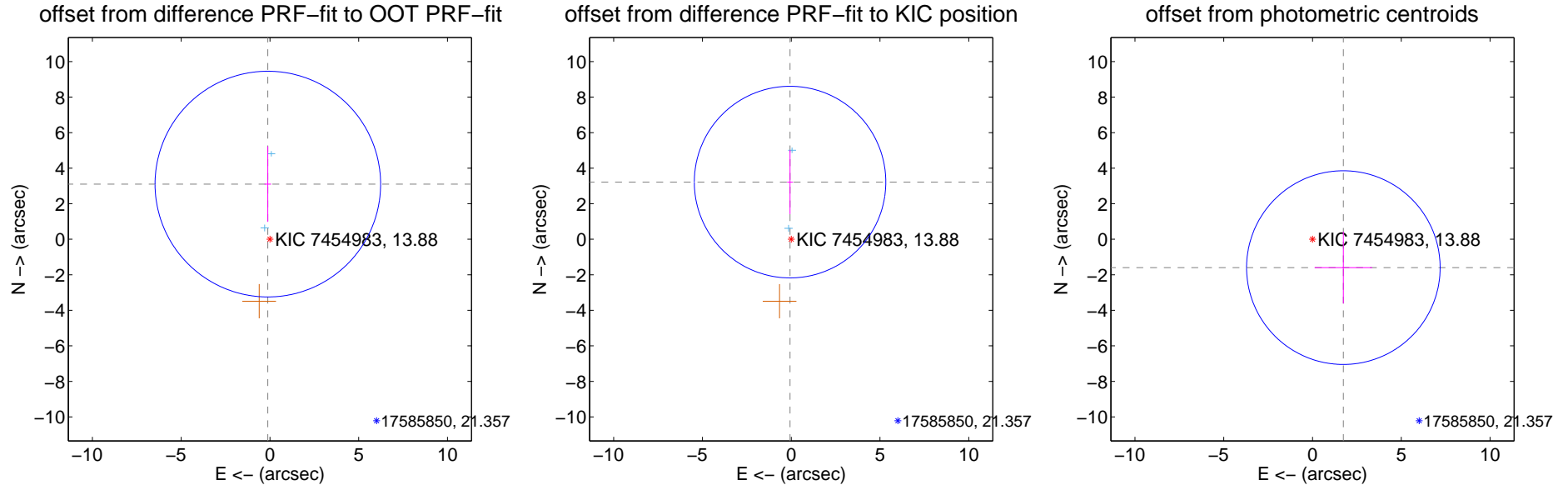
DV Centroid Data

Supplemental centroid analysis for 007454983-01. Kepler magnitude: 13.88. Transit SNR 7.21

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.107 ± 2.117	1.47	0.119 ± 0.187	3.104 ± 2.126
PRF-fit source offset from KIC position	3.217 ± 1.798	1.79	0.065 ± 0.163	3.217 ± 1.801
photometric centroid source offset	2.36 ± 1.82	1.30	-1.74 ± 1.62	-1.60 ± 2.02

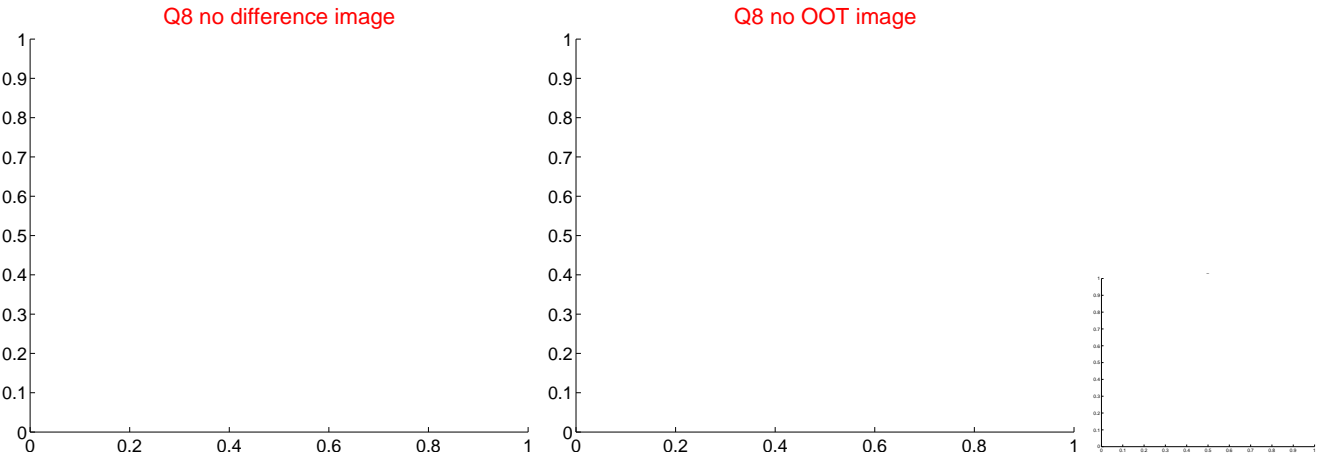
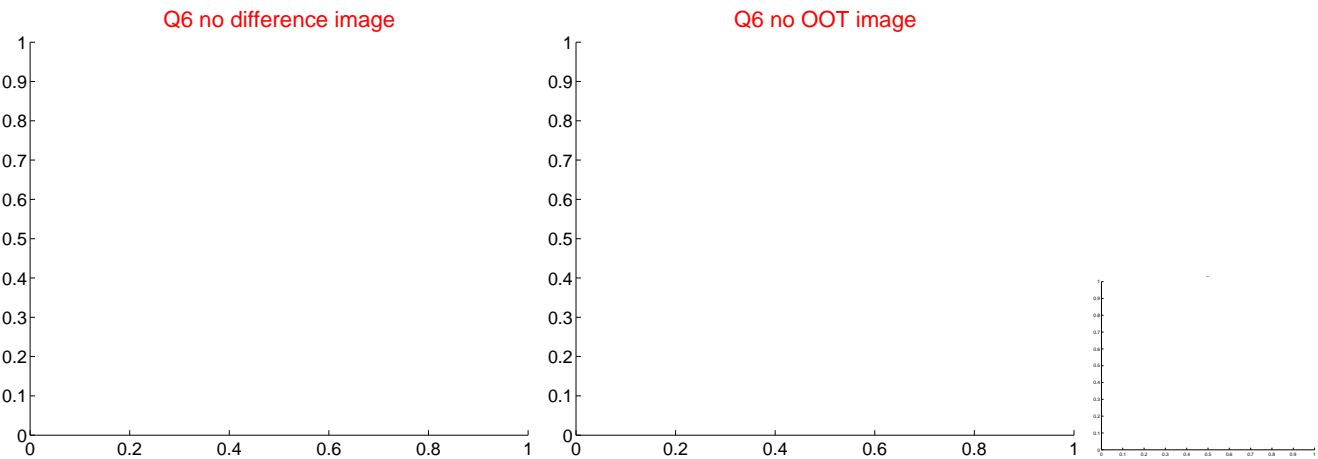
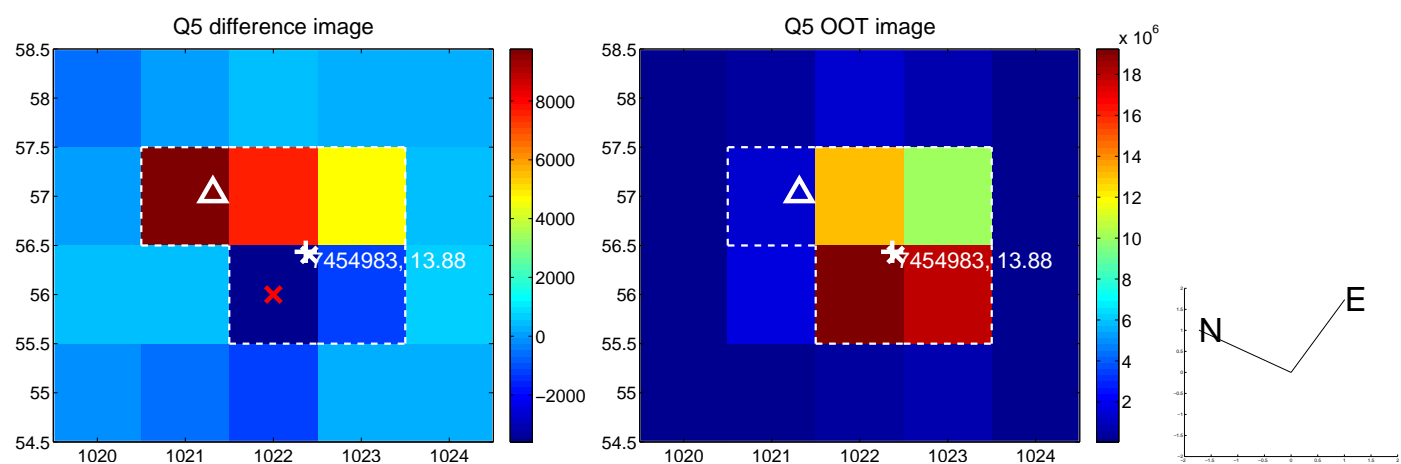


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

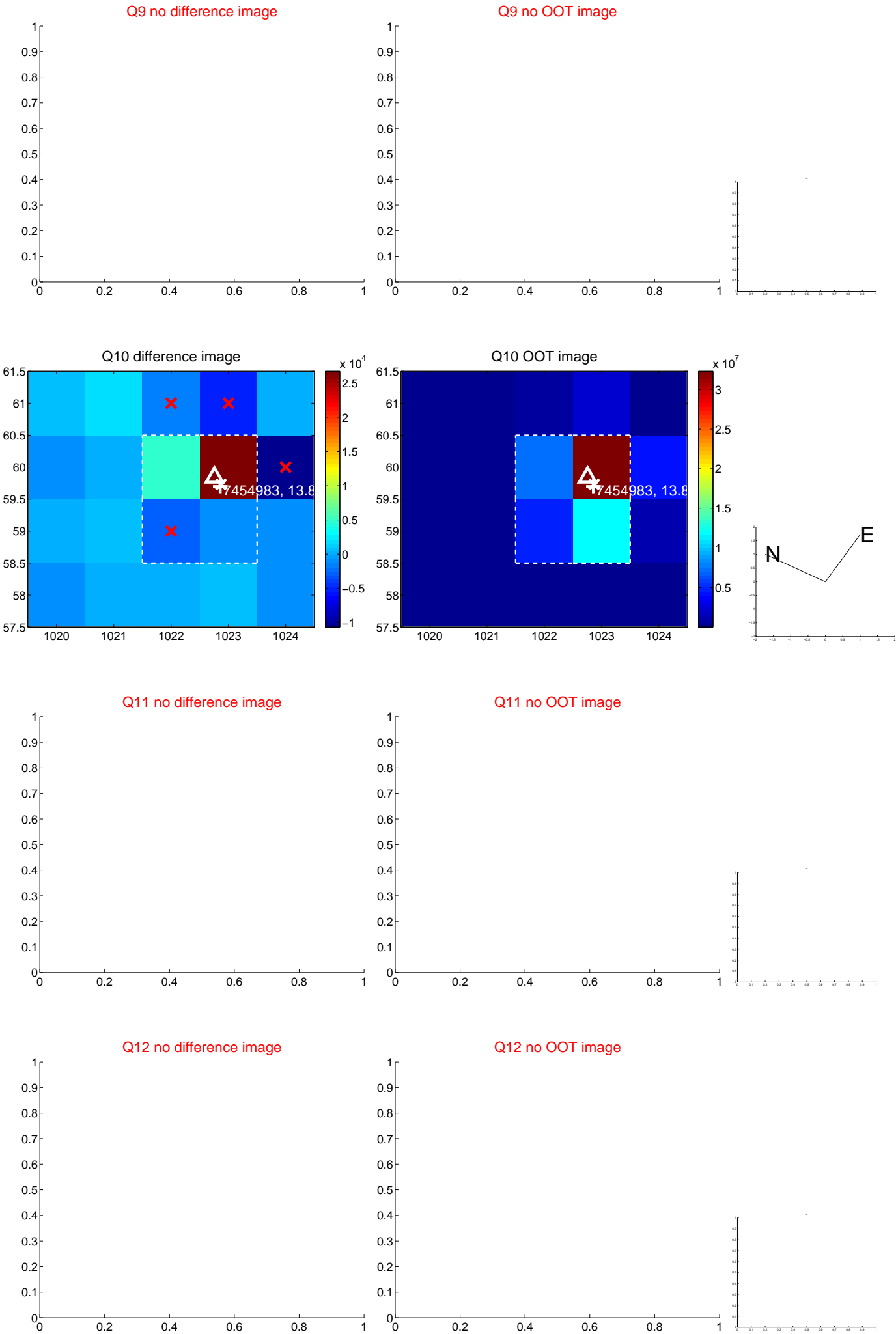
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



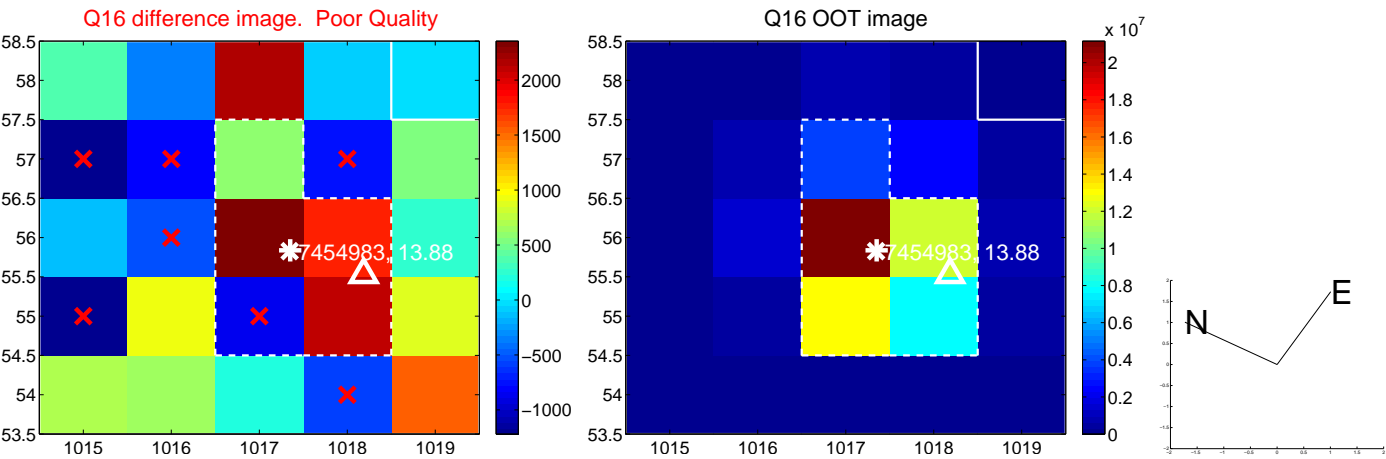
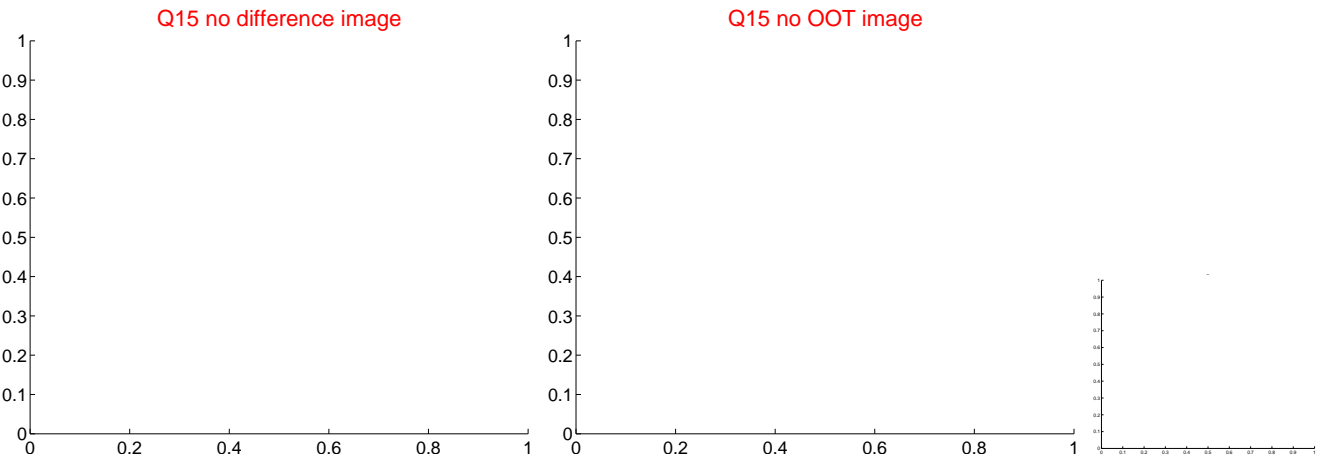
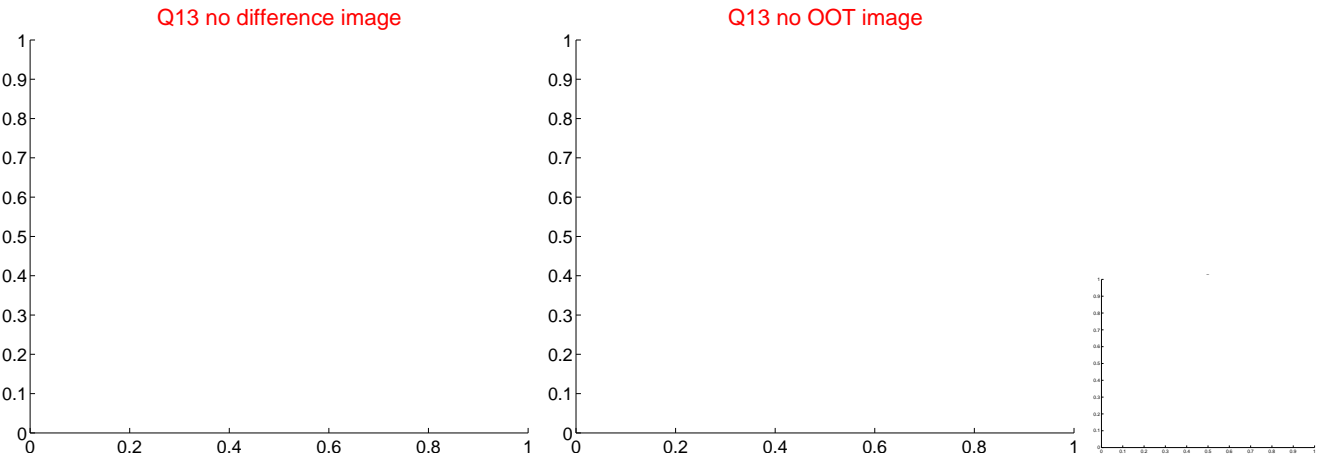
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



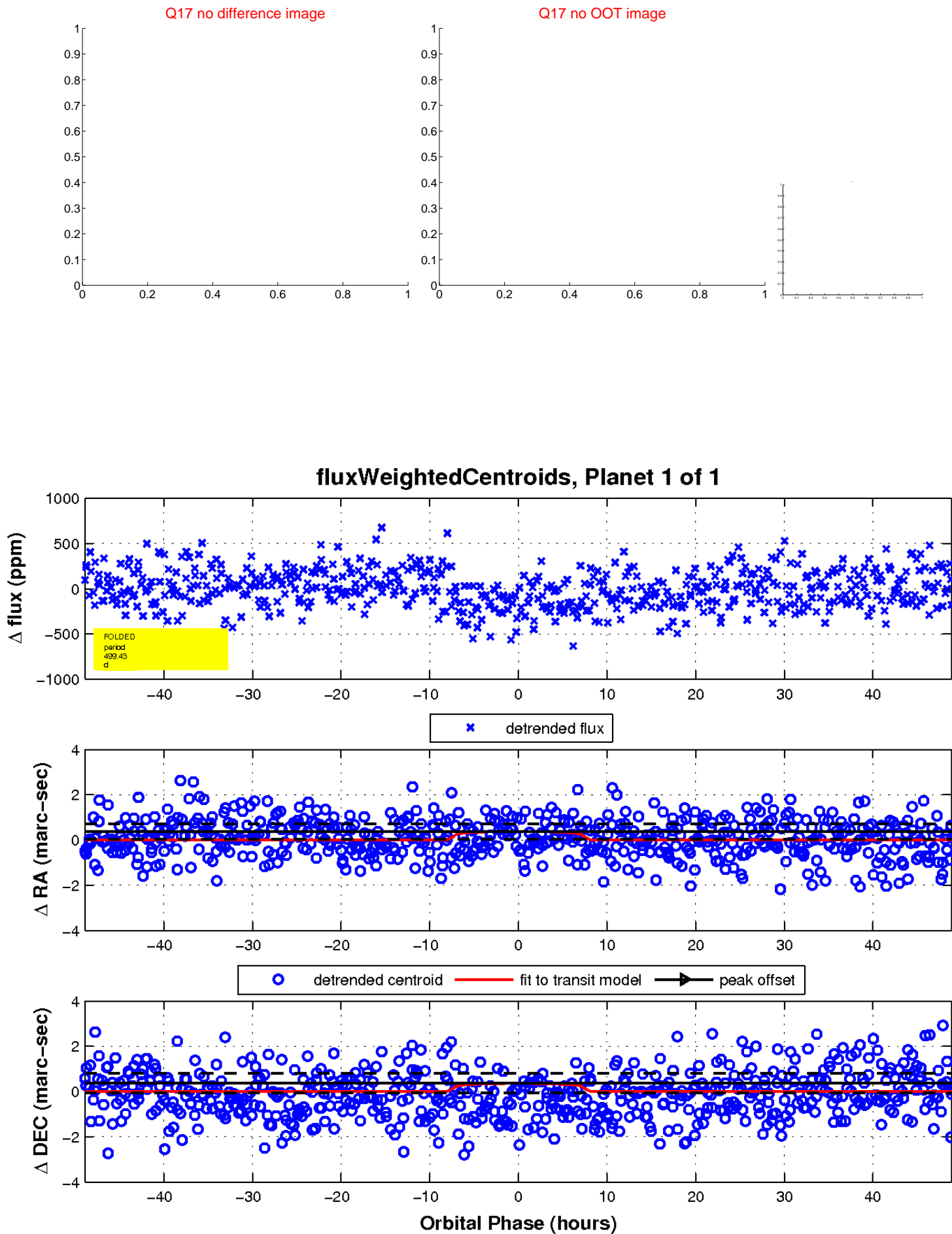
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UKIRT Image

Declination

