

KIC 005034393

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})
005034393-01	OBS	No	409.120411	417.351013	103.2	13.803	7.5	6.9	1.87	6407	2.13	3.61

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005034393-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—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.

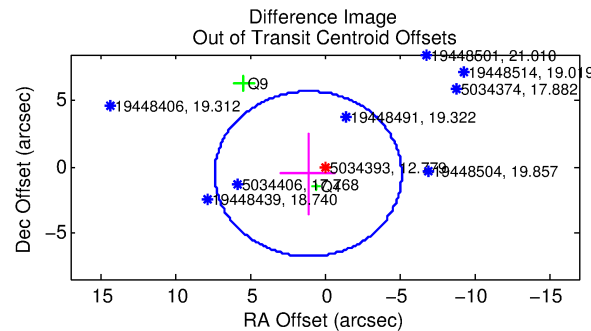
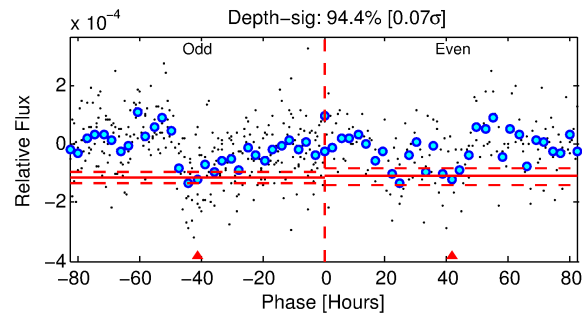
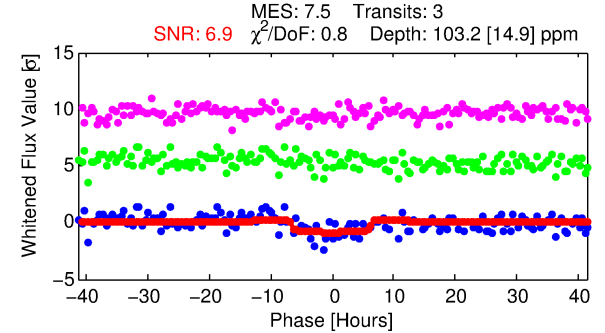
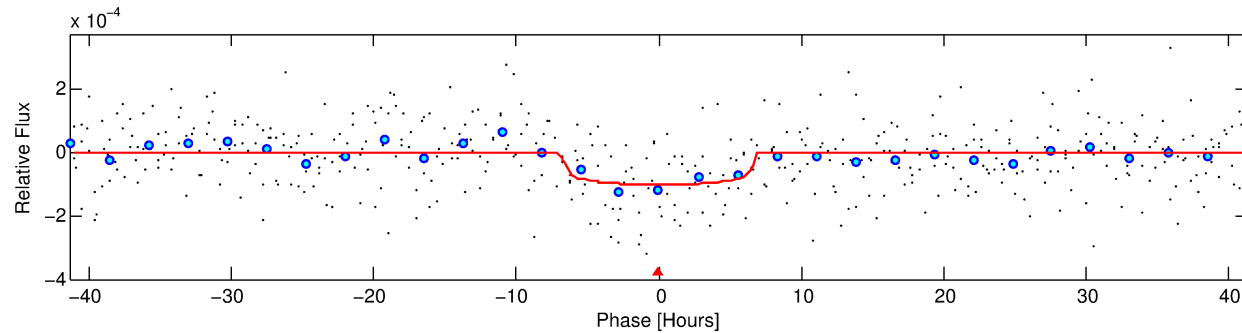
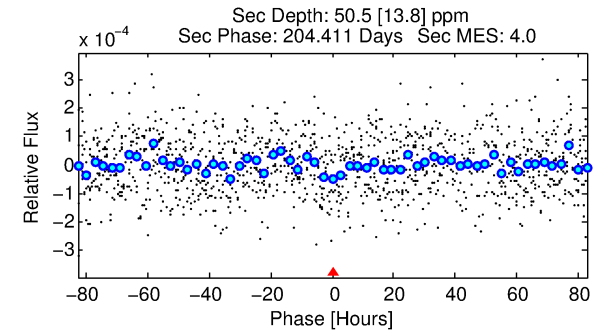
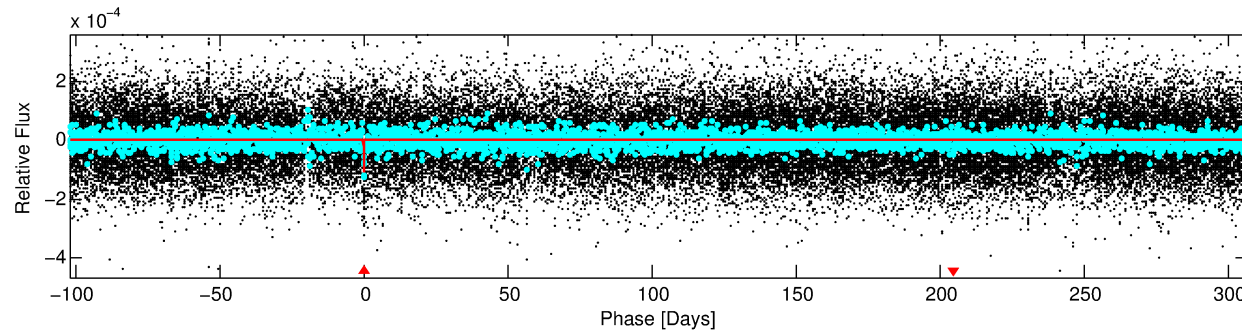
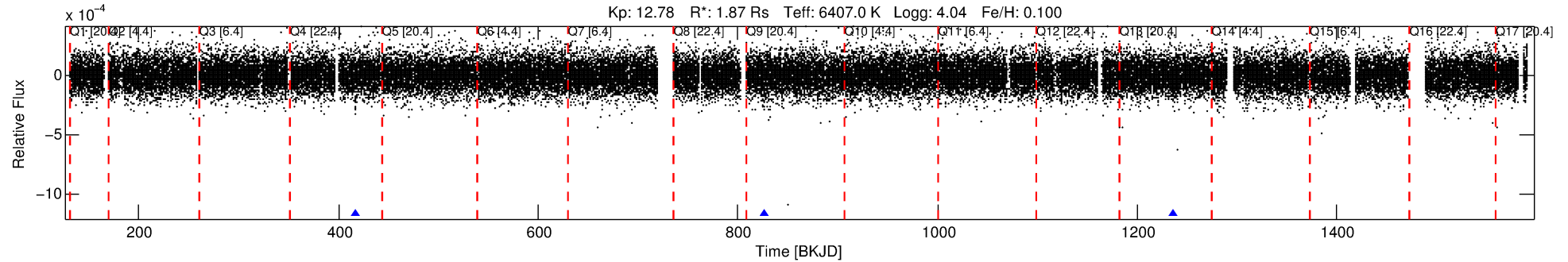
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005034393-01

No Significant Match Found

DV One-Page Summary

KIC: 5034393 Candidate: 1 of 1 Period: 409.120 d



DV Fit Results:

Period = 409.12041 [0.01993] d
Epoch = 417.3510 [0.0230] BKJD
Rp/R* = 0.0105 [0.0044]
a/R* = 128.60 [288.51]
b = 0.84 [0.82]
Seff = 3.61 [1.87]
Teq = 352 [46] K
Rp = 2.13 [1.15] Re
a = 1.2065 [0.3812] AU
Ag = 8926.82 [9041.20] [0.99σ]
Teffp = 5283 [1185] K [4.16σ]

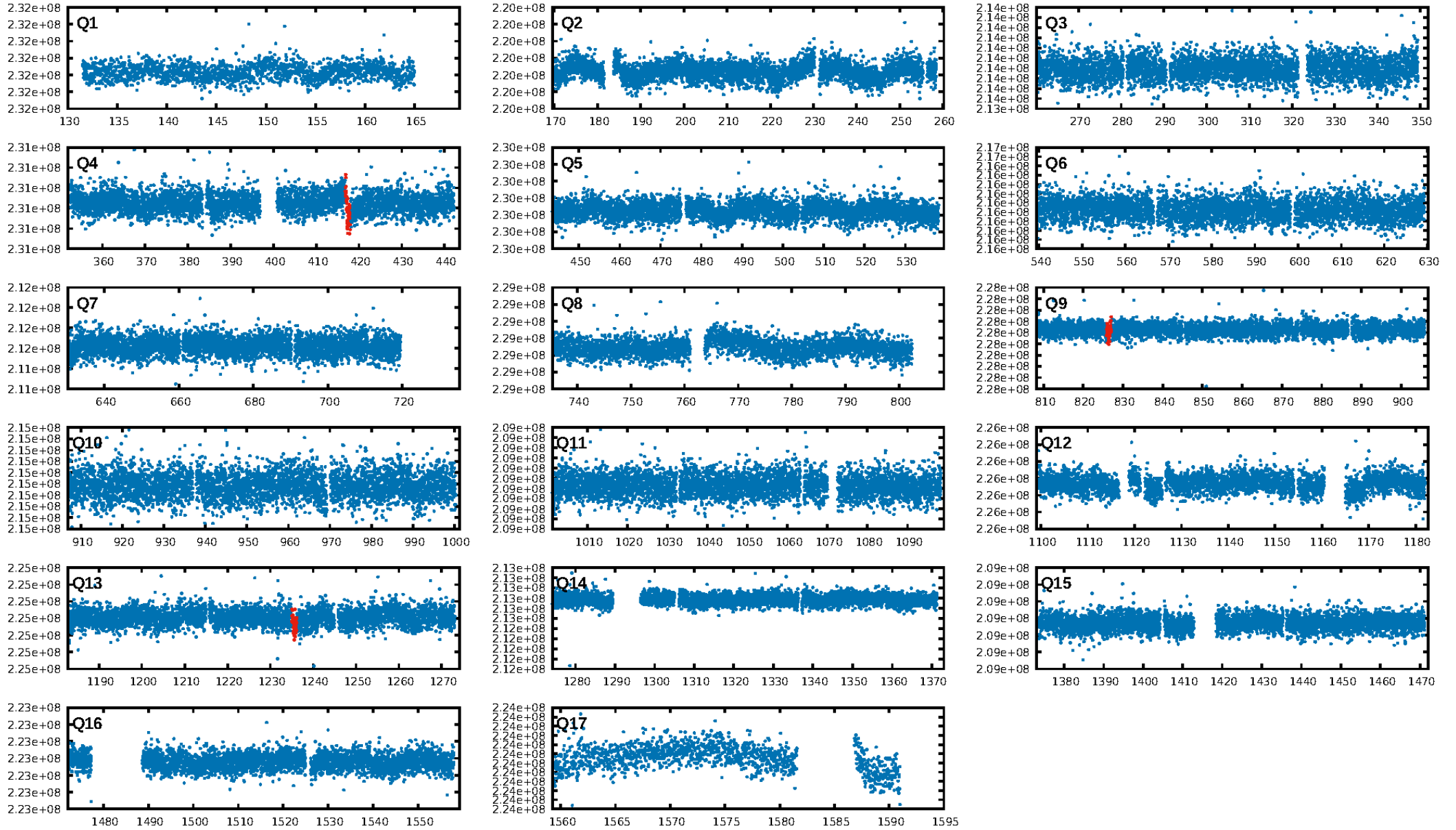
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 26.3%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: 6.44e-14
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -3.986
Centroid-sig: 7.8%
Centroid-so: 3.655 arcsec [1.51σ]
OotOffset-rm: 1.227 arcsec [0.59σ]
KicOffset-rm: 1.355 arcsec [0.68σ]
OotOffset-st: 0/0/1/1 [2]
KicOffset-st: 0/0/1/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

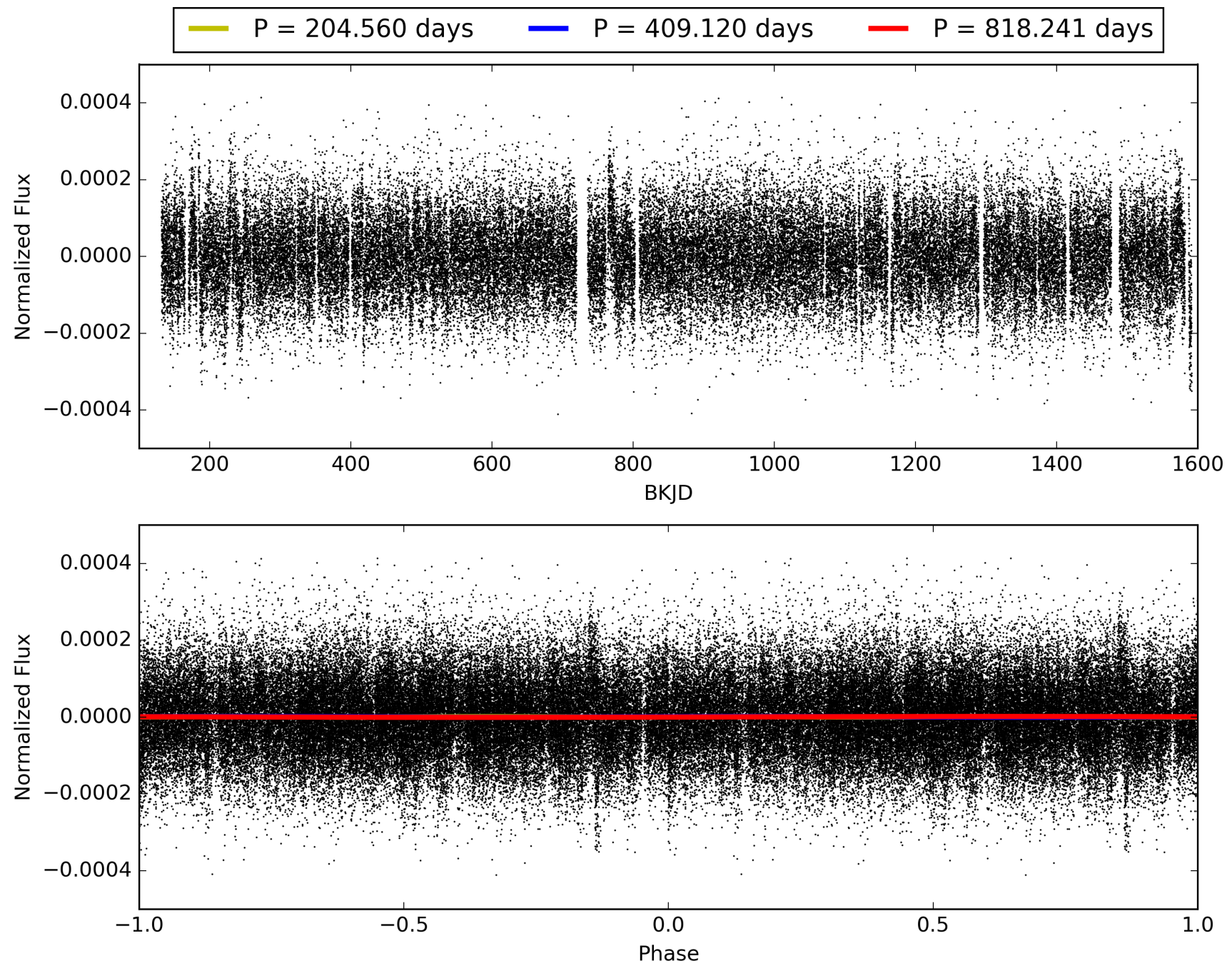
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 06:33:05 Z

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

TCE 005034393-01, PDC Light Curves

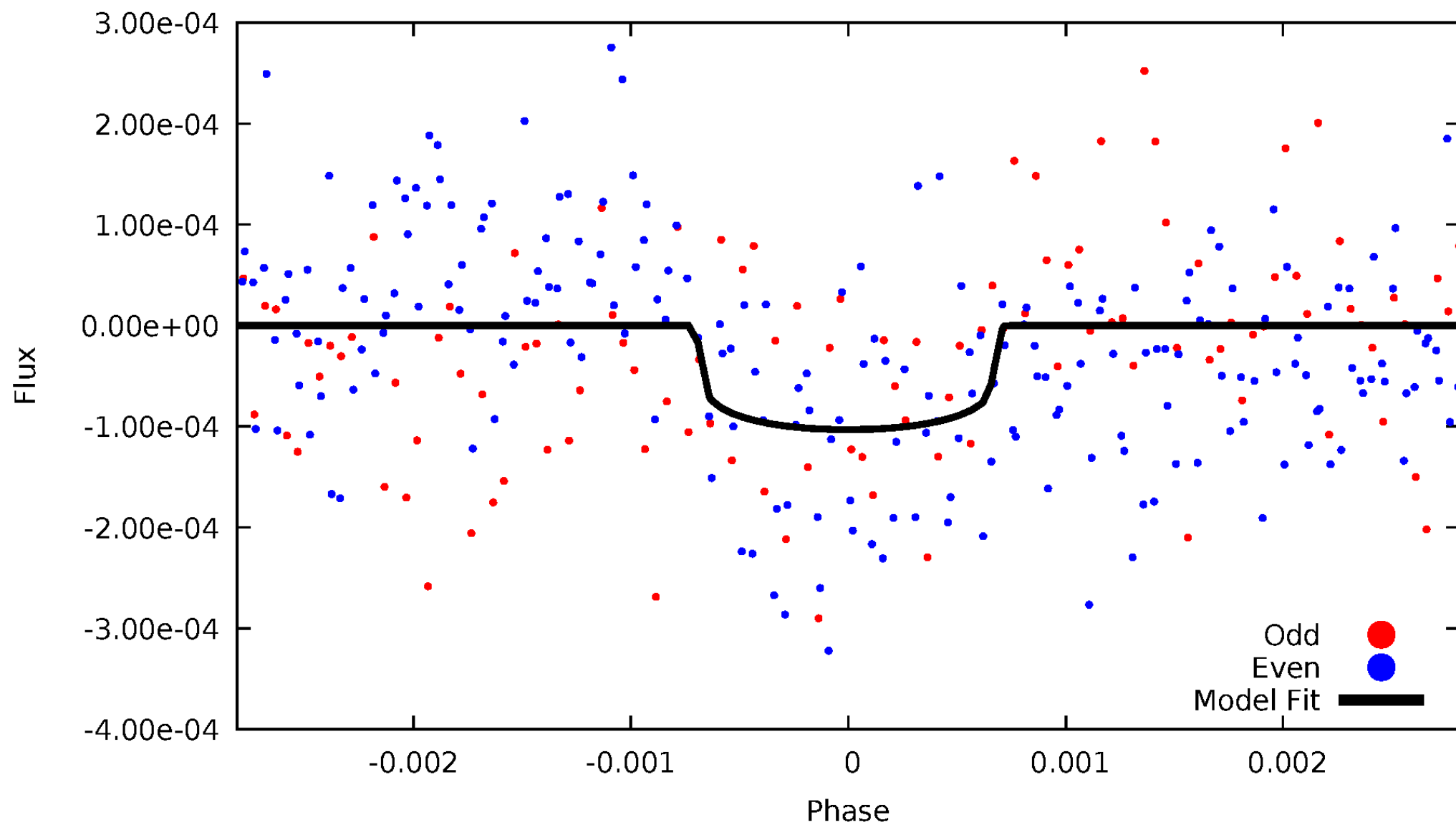


TCE 005034393-01



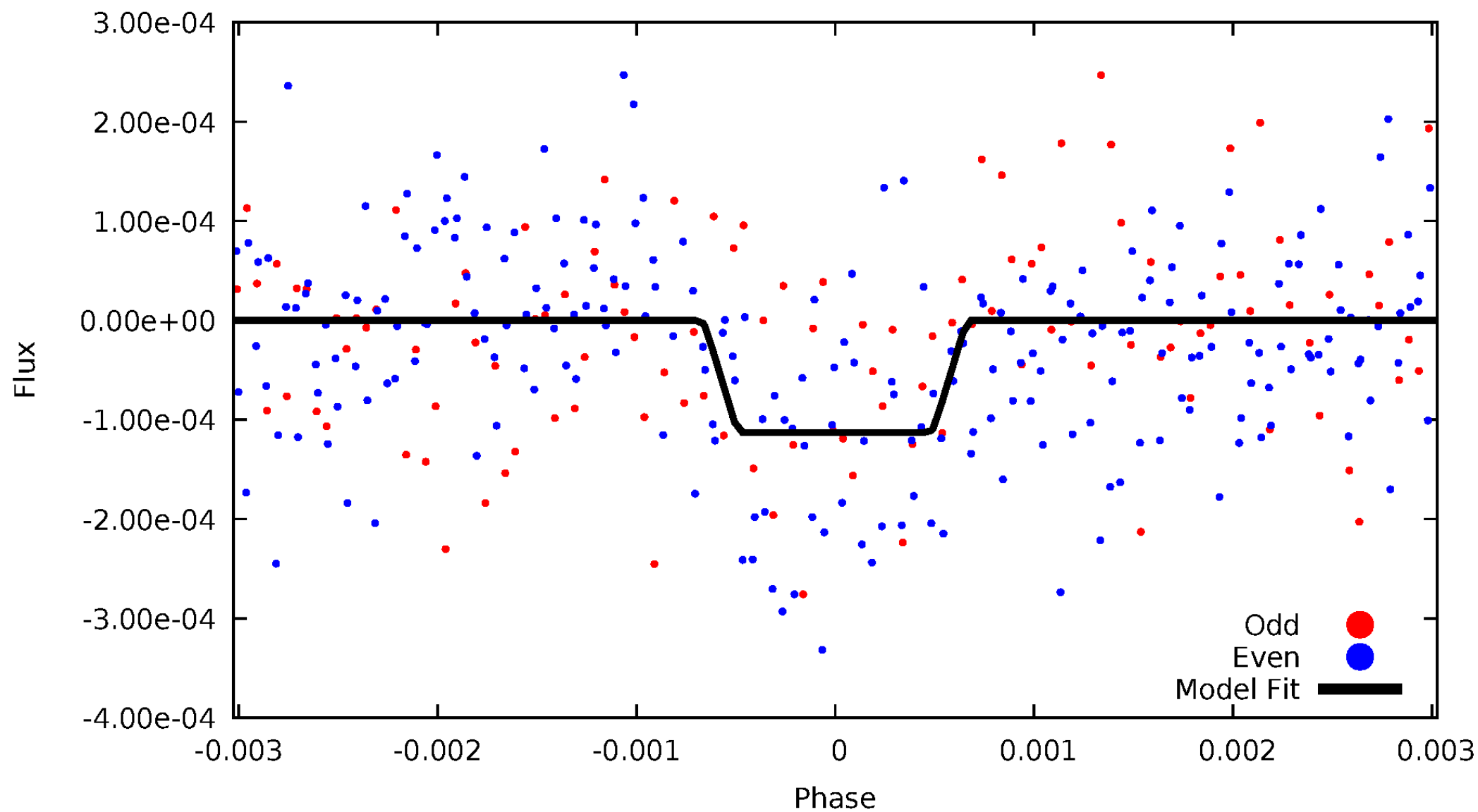
DV Odd/Even

TCE 005034393-01



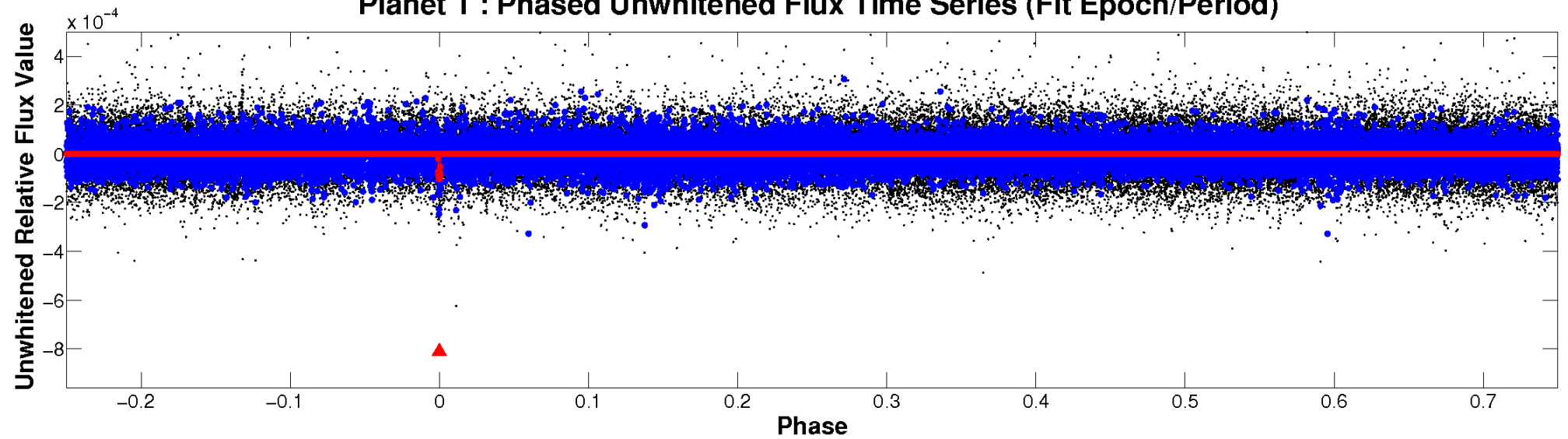
ALT Odd/Even

TCE 005034393-01

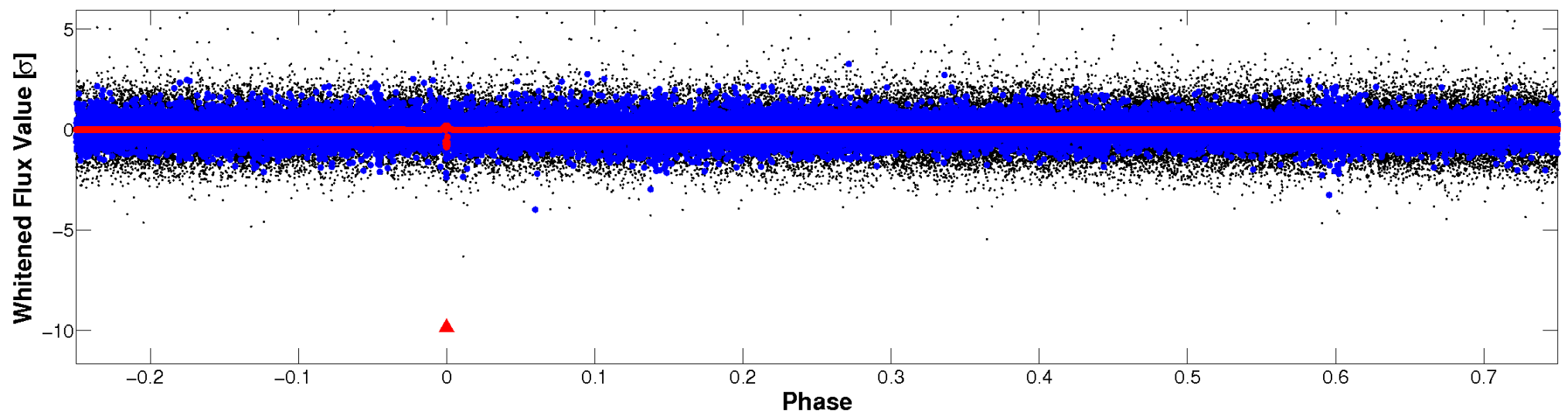


Non-Whitened Vs. Whitened Light Curve

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

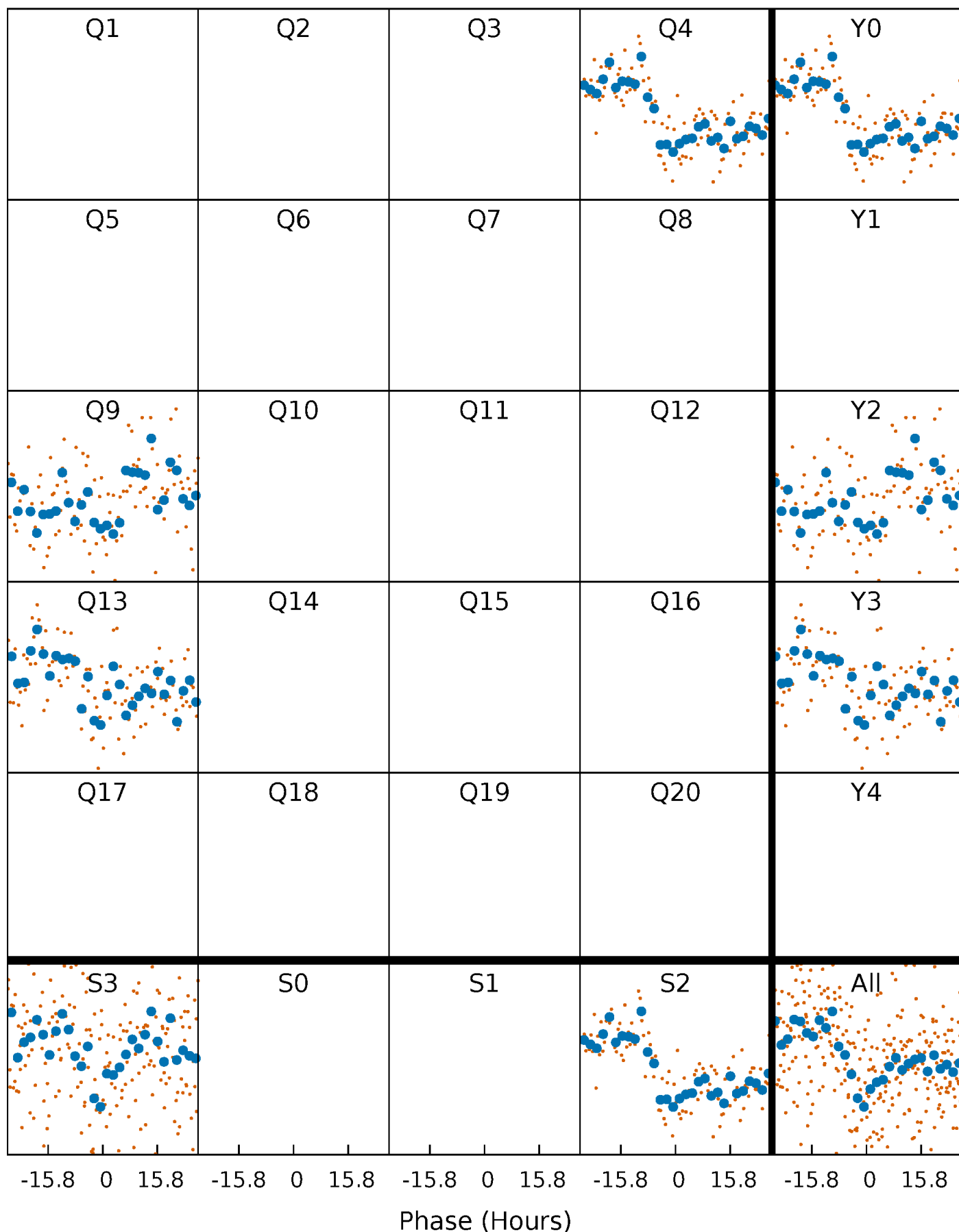


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 005034393-01 P=409.120411 Days $T_0=417.351013$ (BKJD)



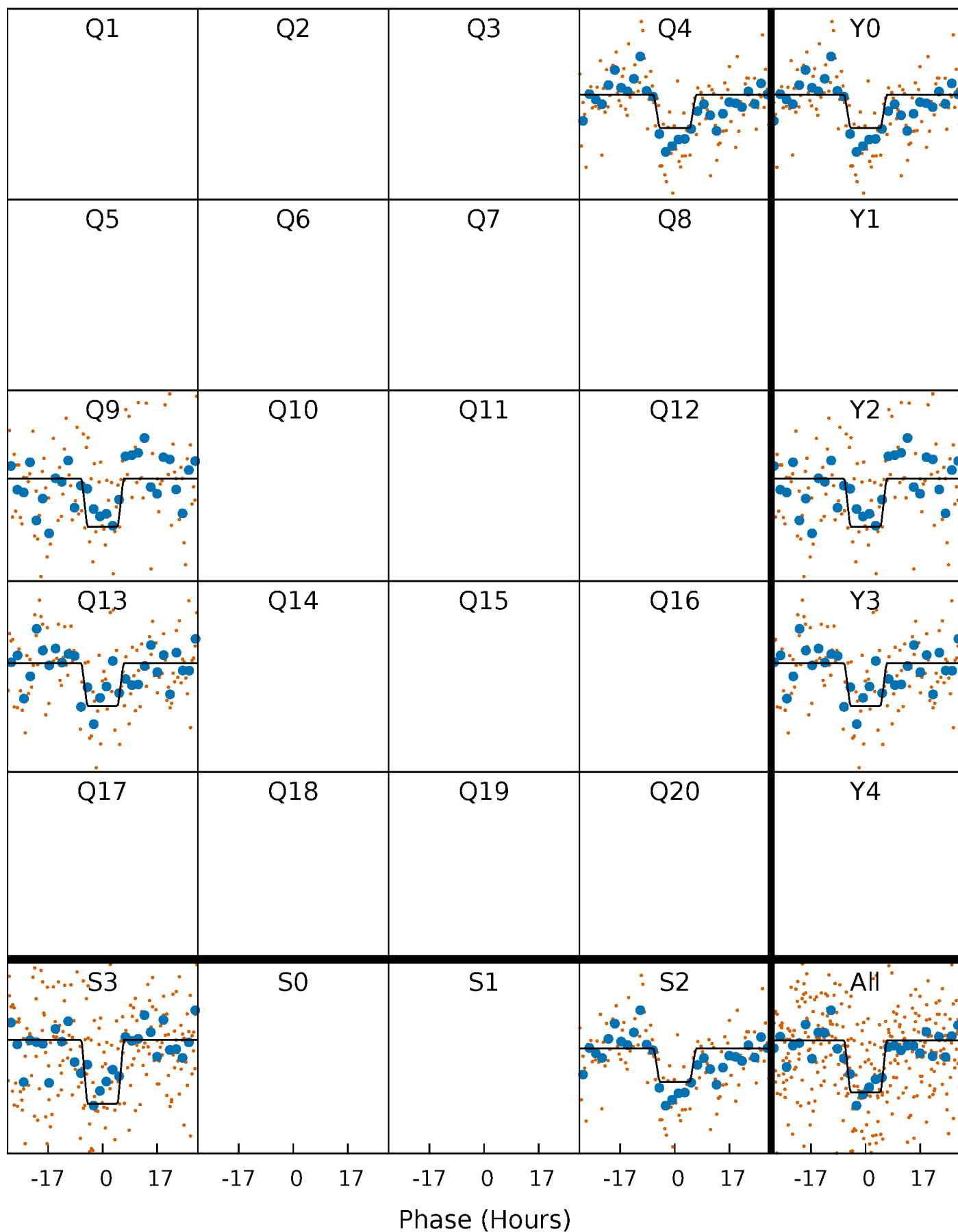
DV Quarter-Phased Transit Curves

TCE 005034393-01 P=409.120411 Days $T_0=417.351013$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

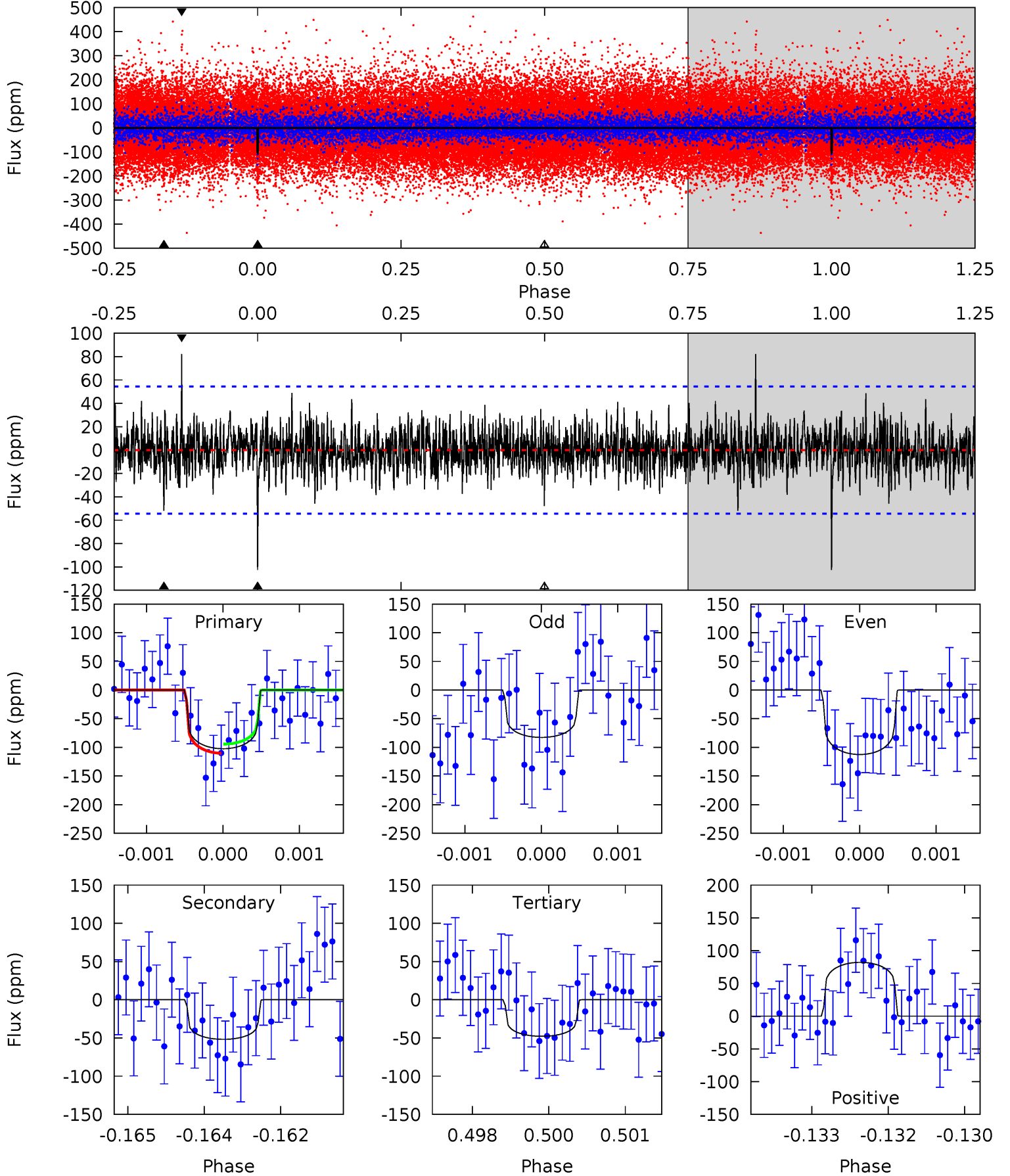
TCE 005034393-01 P=409.141172 Days $T_0=417.340548$ (BKJD)



DV Model-Shift Uniqueness Test

005034393-01, P = 409.120411 Days, E = 8.230602 Days

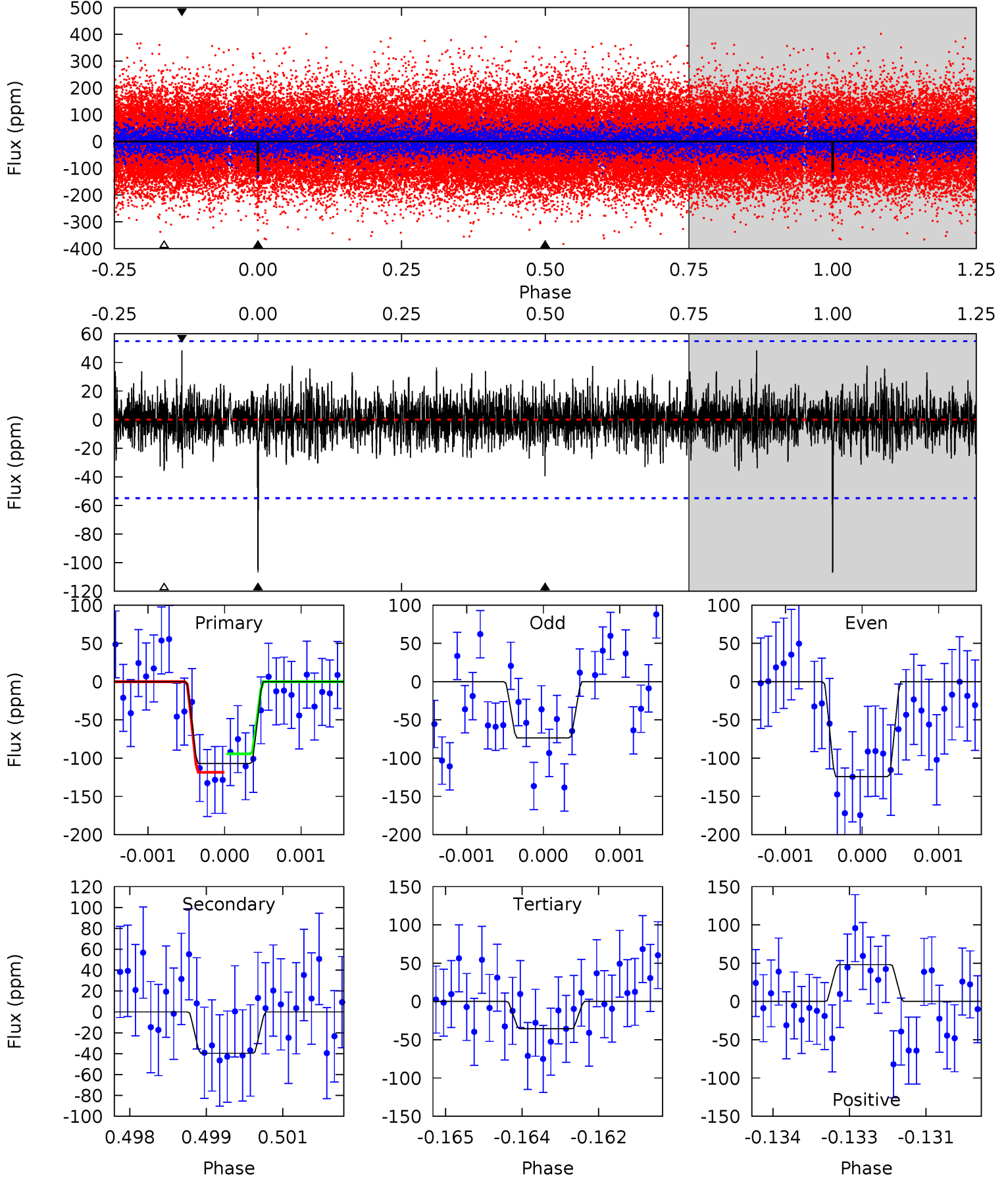
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	5.12	4.73	8.13	5.39	3.18	1.30	5.41	2.01	0.40	-3.00	1.41	1.23	0.44	0.79



Alt Model-Shift Uniqueness Test

005034393-01, P = 409.141172 Days, E = 8.199376 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	3.89	3.51	4.74	5.40	3.20	1.00	7.00	5.77	0.38	-0.84	2.36	1.33	0.31	1.19



Stellar Parameters For KIC 005034393

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6407^{+179}_{-247}	$4.042^{+0.286}_{-0.176}$	$0.100^{+0.250}_{-0.300}$	$1.866^{+0.521}_{-0.636}$	$1.399^{+0.186}_{-0.280}$	$0.303^{+0.547}_{-0.154}$
	+3%/-4%	+7%/-4%	+250%/-300%	+28%/-34%	+13%/-20%	+180%/-51%
Source	PHO54	PHO54	PHO54	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005034393-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-52 ± 10	$2.05^{+0.96}_{-0.89}$	486^{+39}_{-44}	5267^{+1735}_{-677}	9833^{+20086}_{-5439}
Alt.	-40 ± 10	$2.10^{+0.97}_{-0.90}$	487^{+36}_{-43}	4950^{+1398}_{-694}	6949^{+14765}_{-3957}

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 $A_{obs} \gg 1.0$

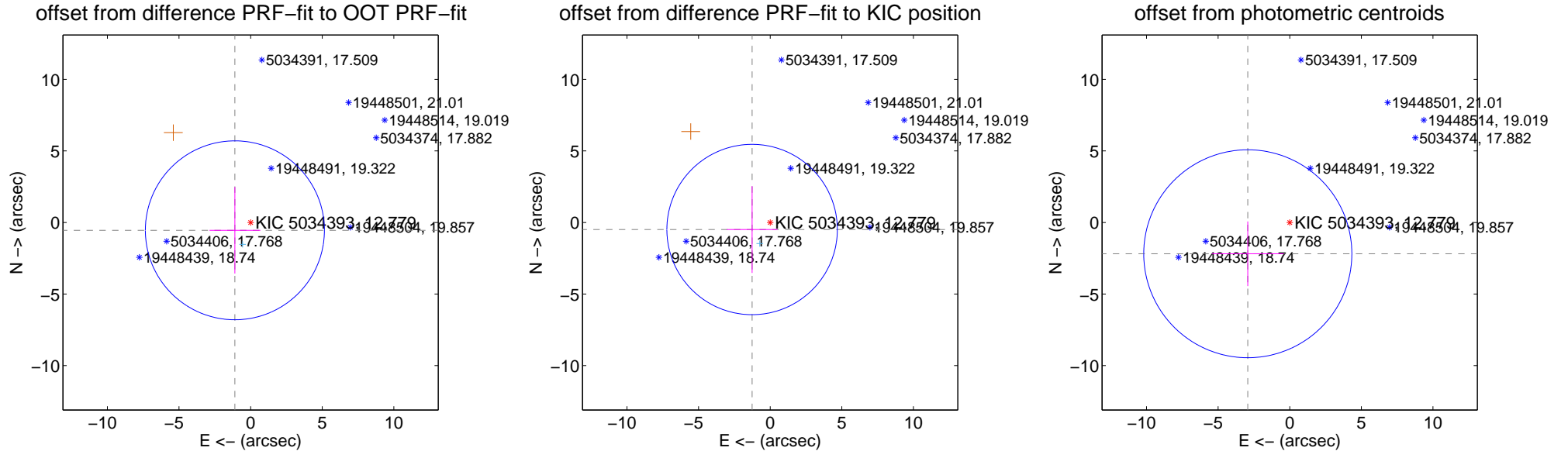
DV Centroid Data

Supplemental centroid analysis for 005034393-01. Kepler magnitude: 12.78. Transit SNR 6.88

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.227 ± 2.084	0.59	1.099 ± 1.777	-0.546 ± 3.021
PRF-fit source offset from KIC position	1.355 ± 1.984	0.68	1.263 ± 1.772	-0.491 ± 3.032
photometric centroid source offset	3.66 ± 2.42	1.51	2.93 ± 2.51	-2.19 ± 2.26



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.

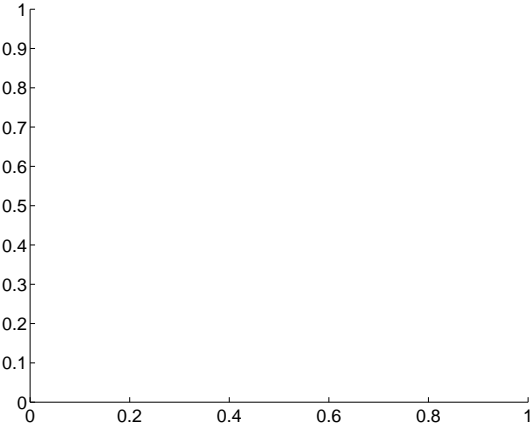
Q1 no difference image



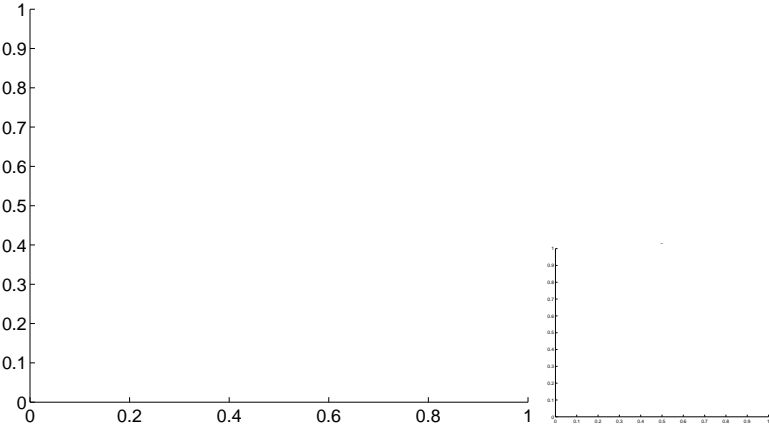
Q1 no OOT image



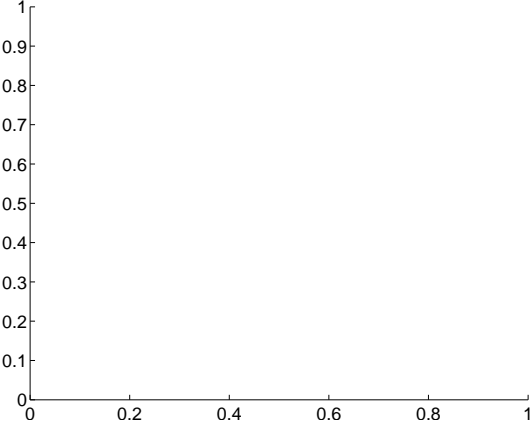
Q2 no difference image



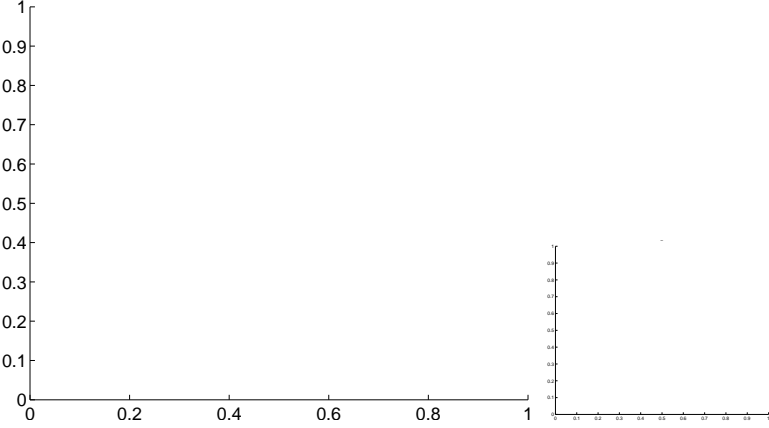
Q2 no OOT image



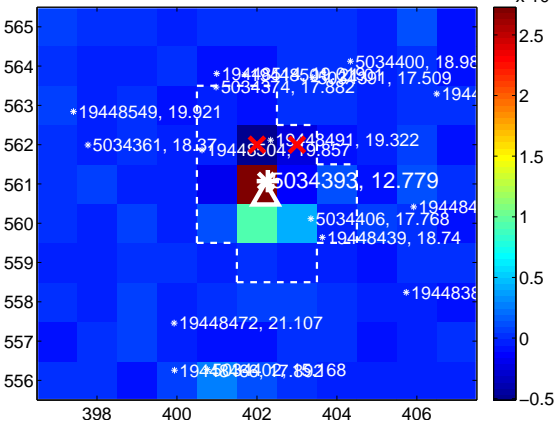
Q3 no difference image



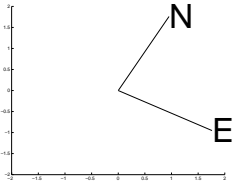
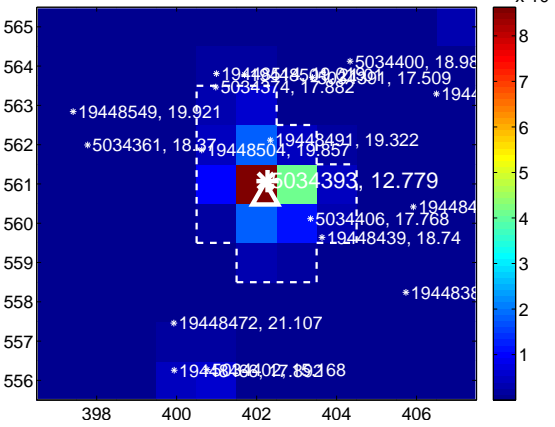
Q3 no OOT image



Q4 difference image



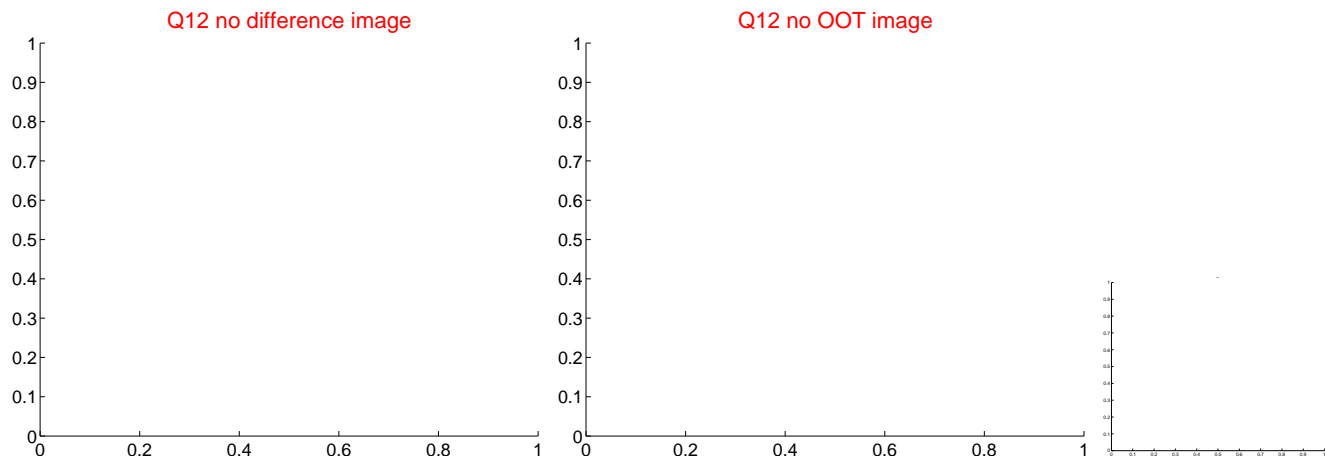
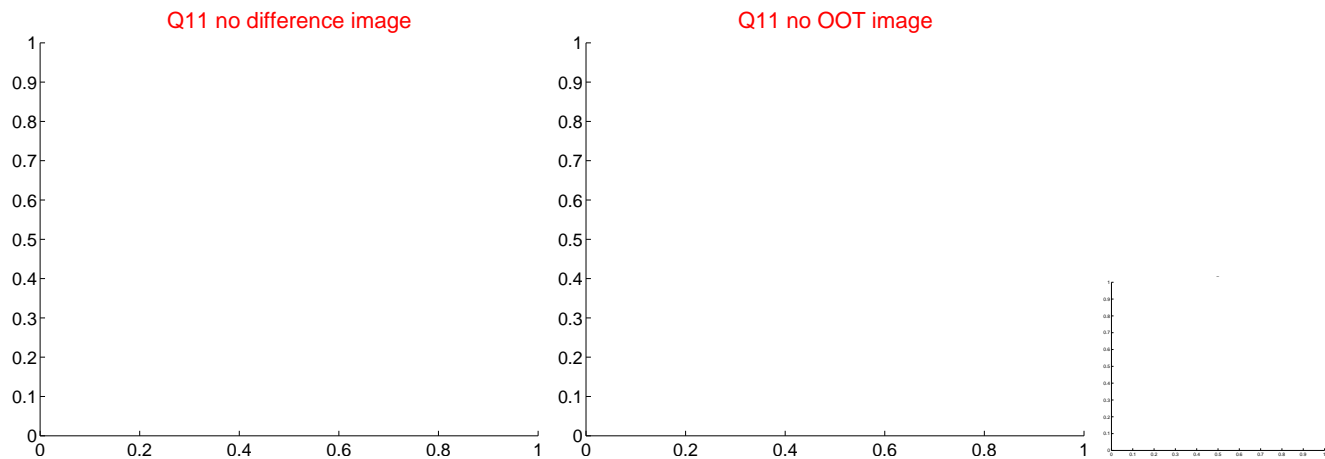
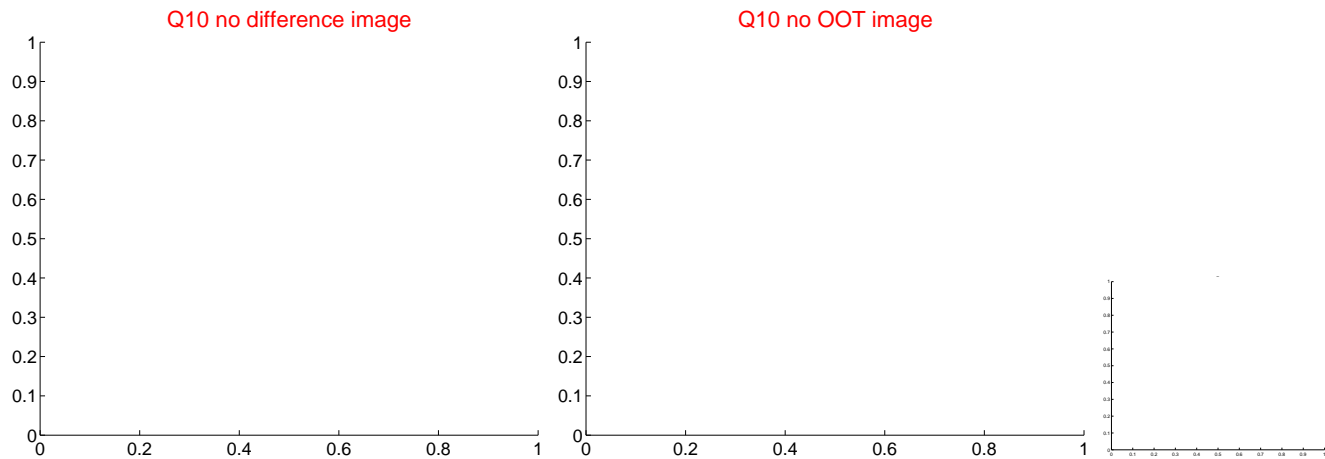
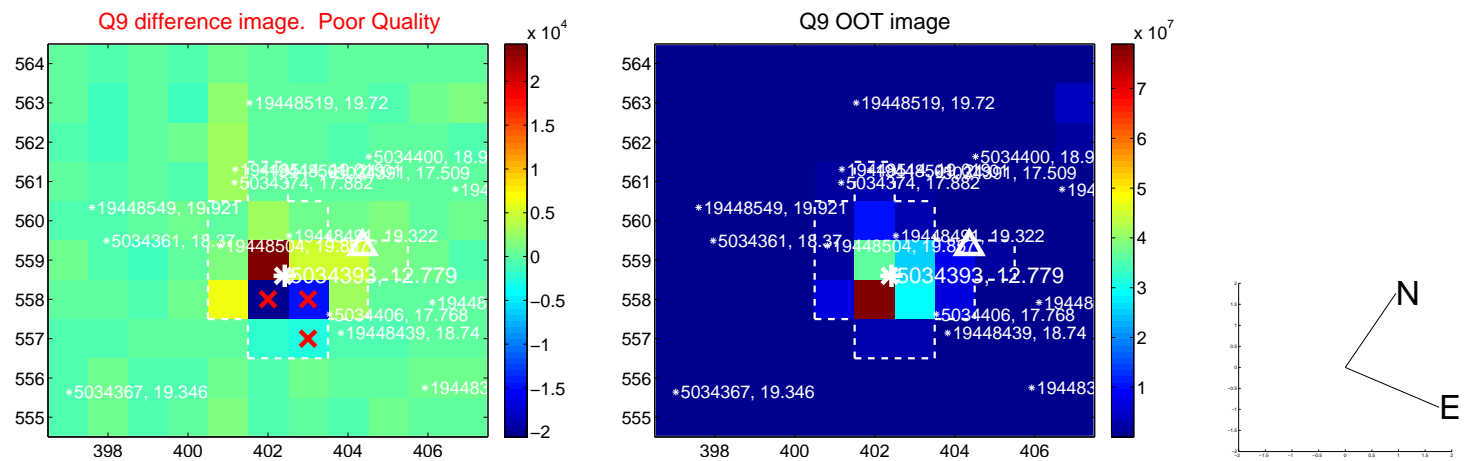
Q4 OOT image



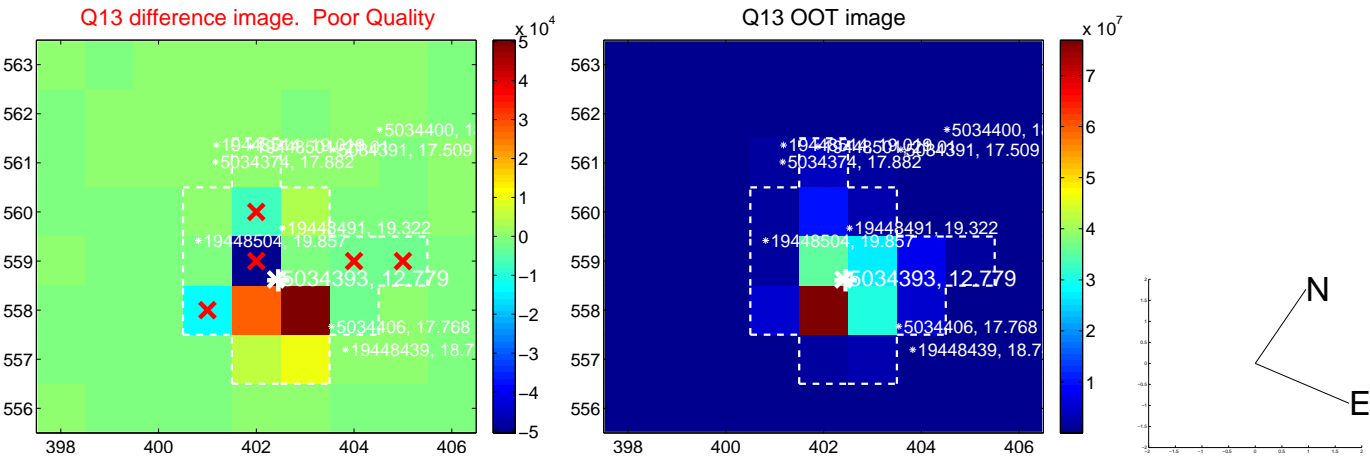
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



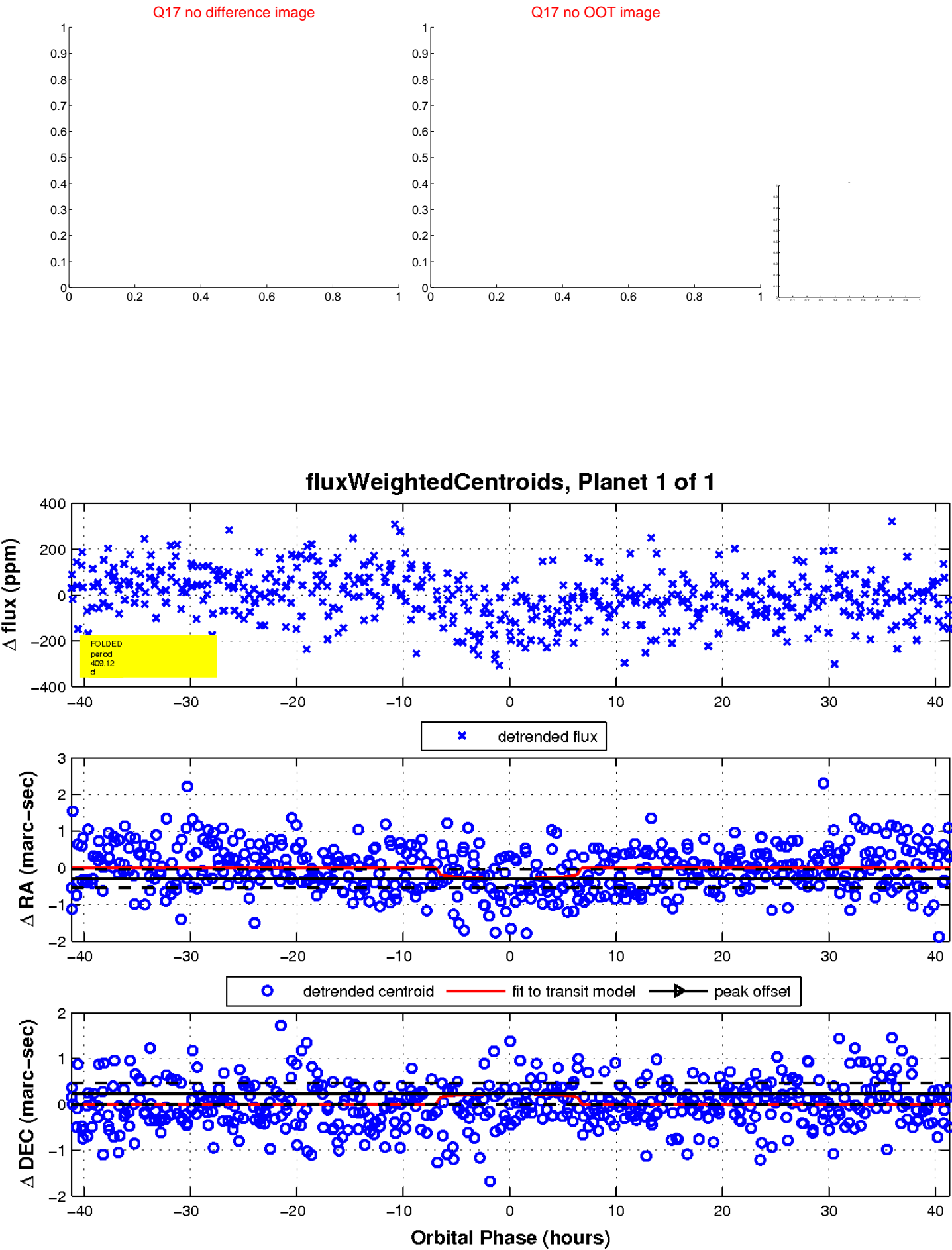
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

