

KIC 010485035

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})
010485035-01	OBS	No	0.512534	131.684391	22.0	1.725	8.5	8.6	2.16	7648	1.18	63604.86

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010485035-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

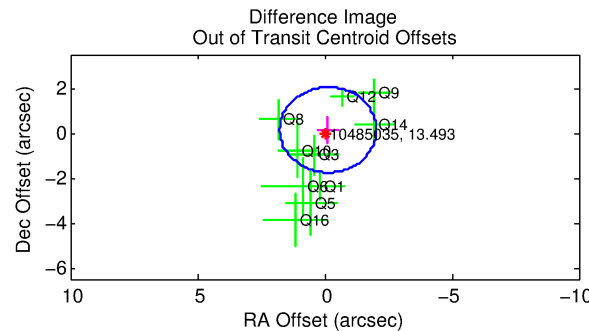
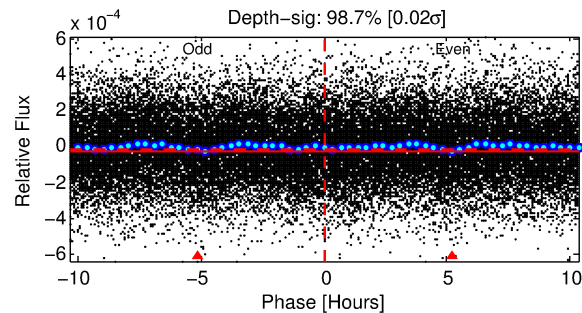
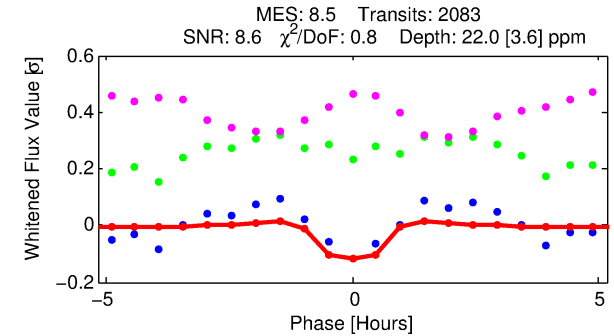
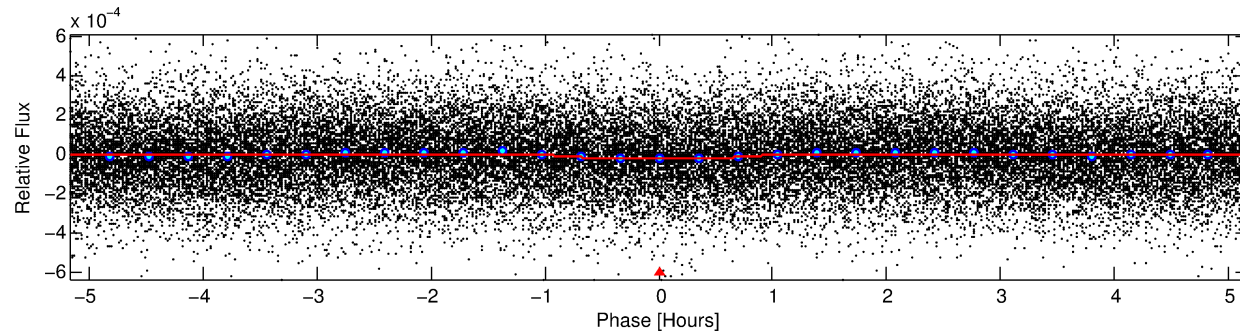
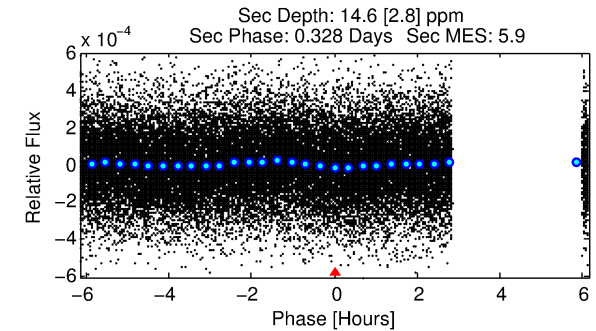
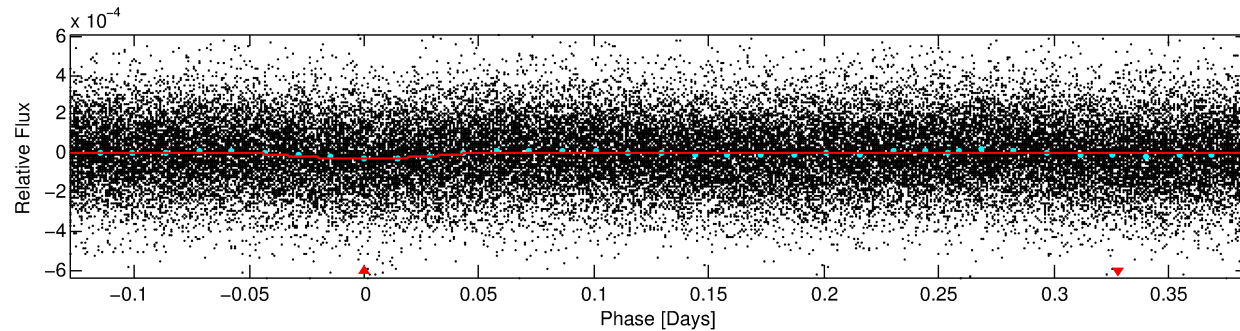
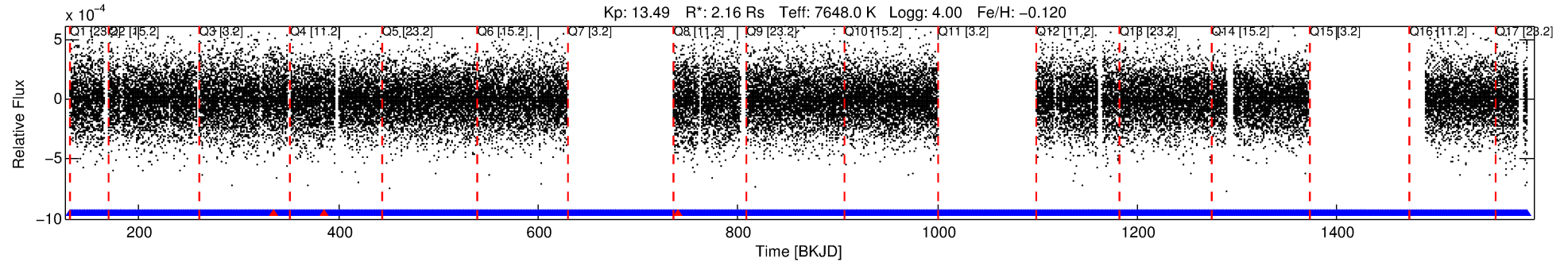
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010485035-01

No Significant Match Found

DV One-Page Summary

KIC: 10485035 Candidate: 1 of 1 Period: 0.513 d



DV Fit Results:

Period = 0.51253 [0.00001] d
Epoch = 131.6844 [0.0025] BKJD
Rp/R* = 0.0050 [0.0017]
a/R* = 1.37 [1.34]
b = 0.90 [0.43]
Seff = 63604.86 [26008.96]
Teff = 4049 [414] K
Rp = 1.18 [0.52] Re
a = 0.0150 [0.0037] AU
Ag = 1.30 [1.02] [0.29σ]
Teffp = 6680 [1191] K [2.09σ]

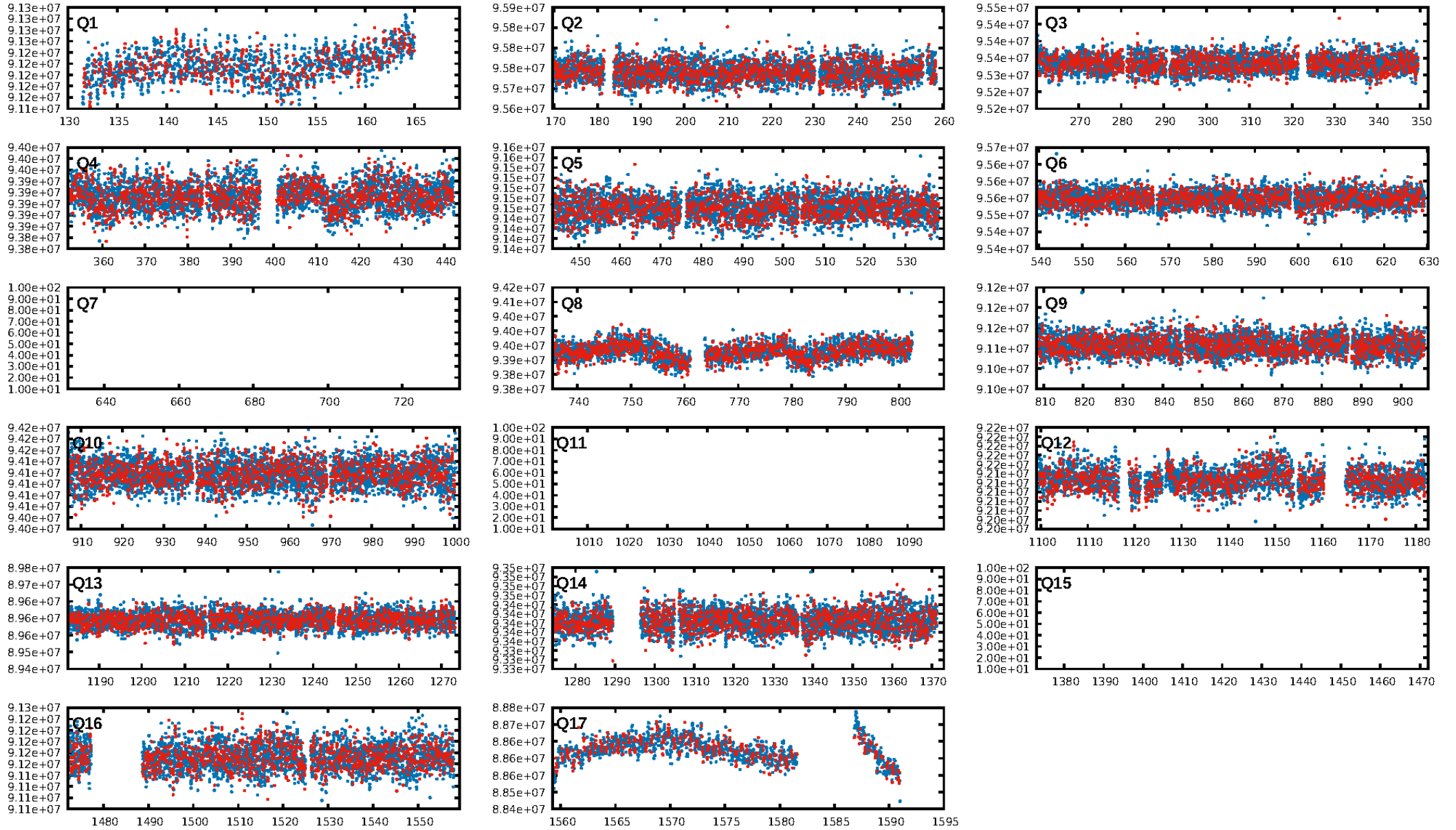
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.47e-13
RollingBand-fgt: 1.00 [1963/1966]
GhostDiagnostic-chr: -8.311
Centroid-sig: 44.3%
Centroid-so: 0.709 arcsec [0.63σ]
OotOffset-rm: 0.188 arcsec [0.30σ]
KicOffset-rm: 0.233 arcsec [0.40σ]
OotOffset-st: 3/1/3/3 [10]
KicOffset-st: 3/1/3/3 [10]
DiffImageQuality-fgm: 0.40 [4/10]
DiffImageOverlap-fno: 1.00 [14/14]

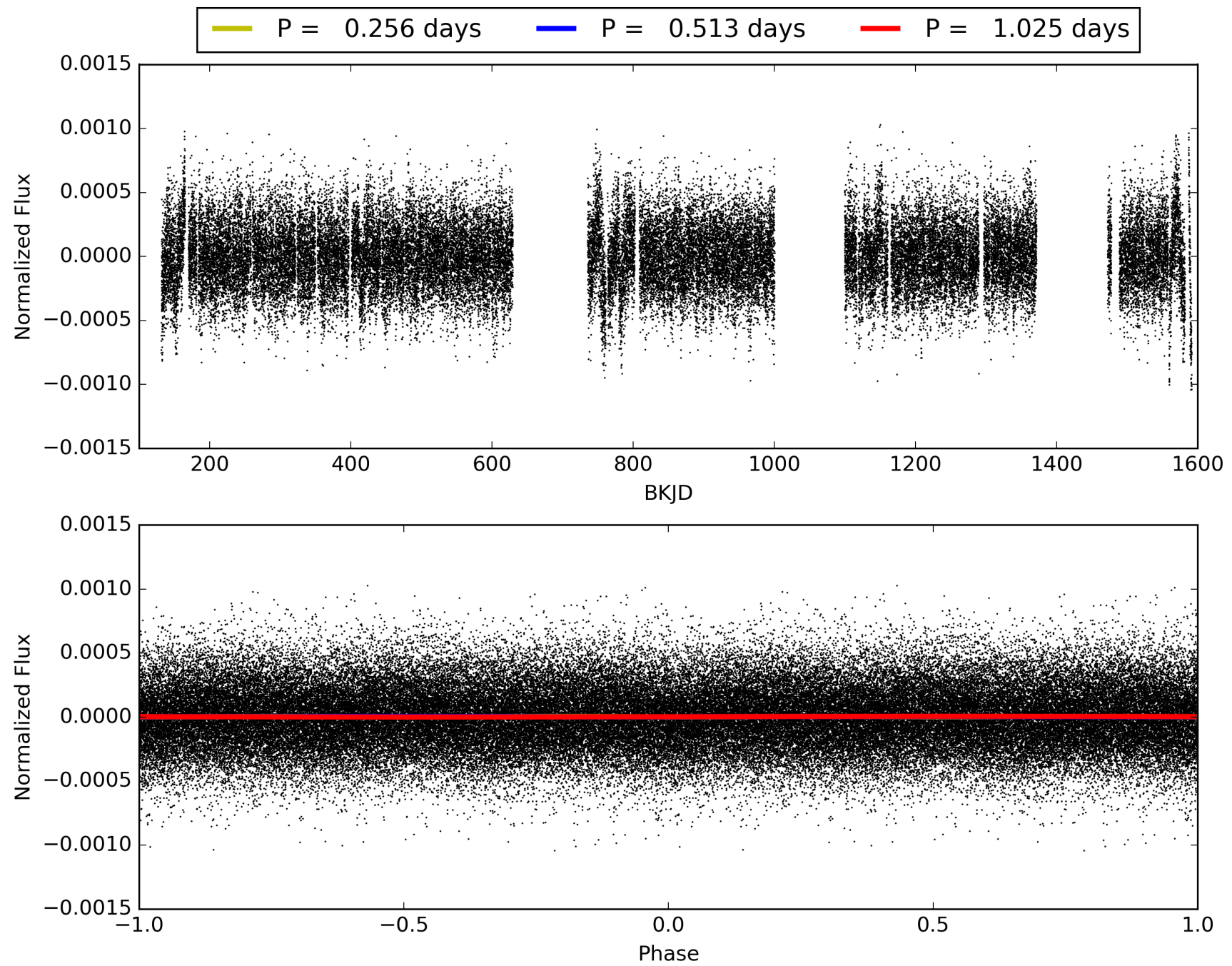
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:40:11 Z

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

TCE 010485035-01, PDC Light Curves

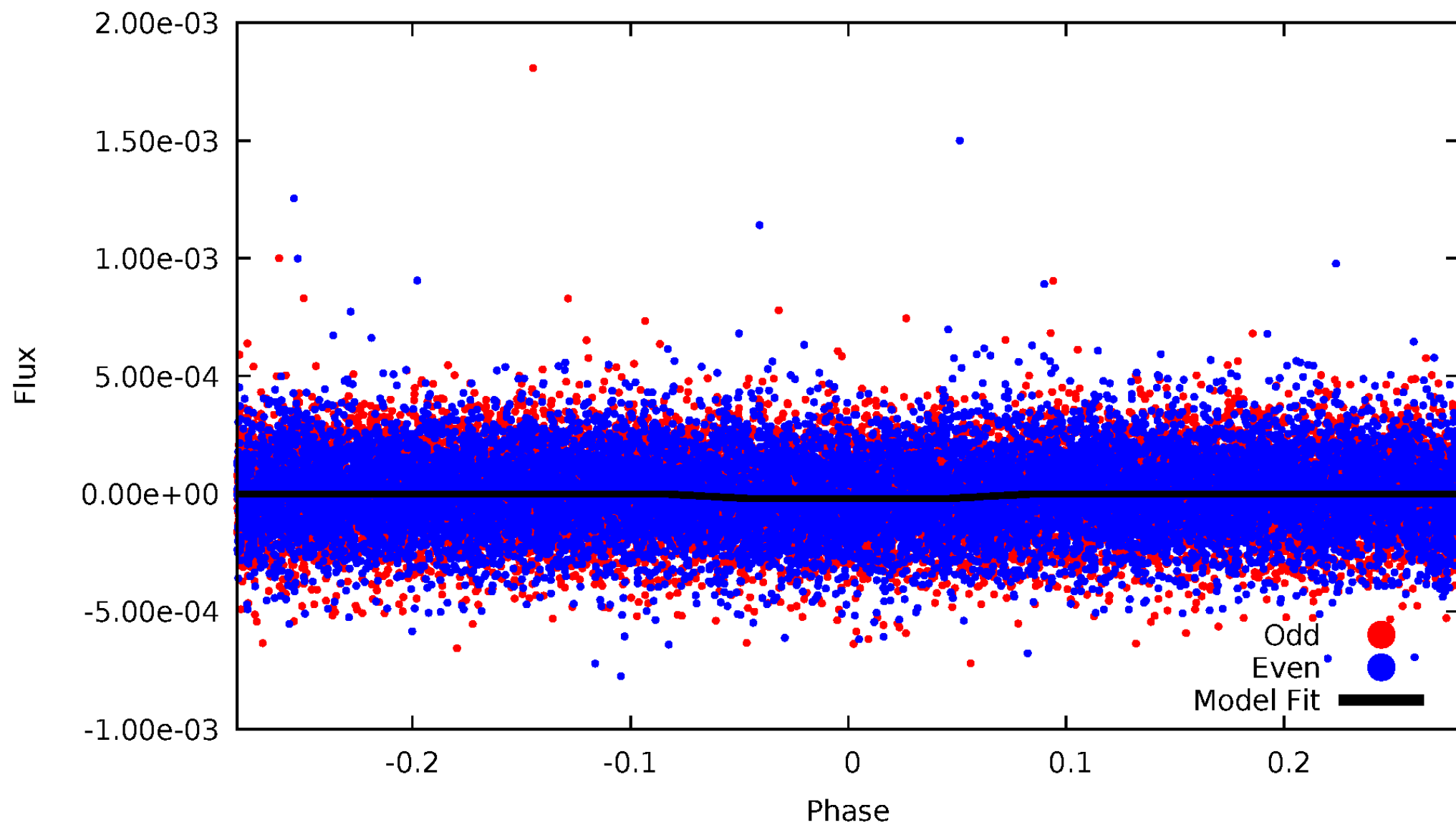


TCE 010485035-01



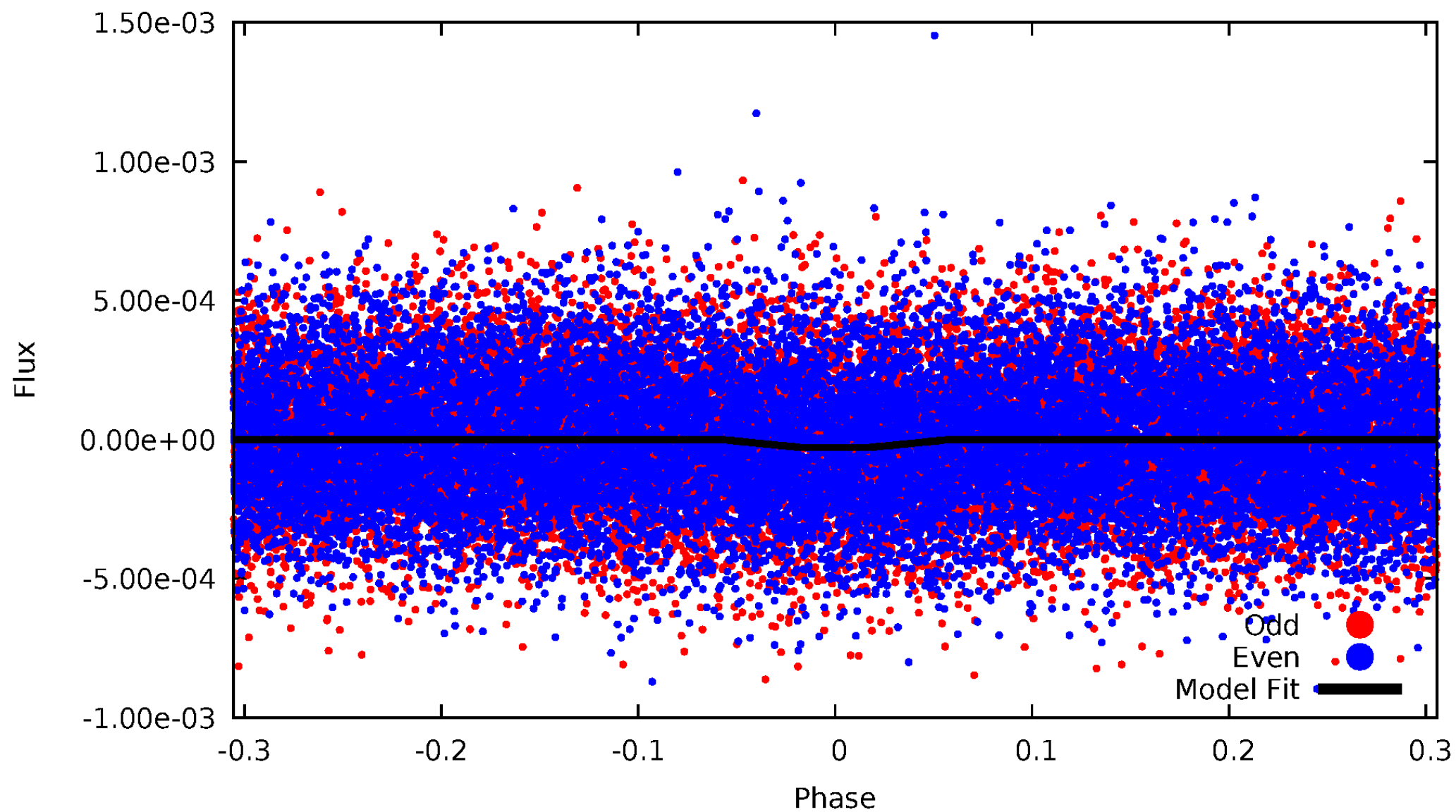
DV Odd/Even

TCE 010485035-01



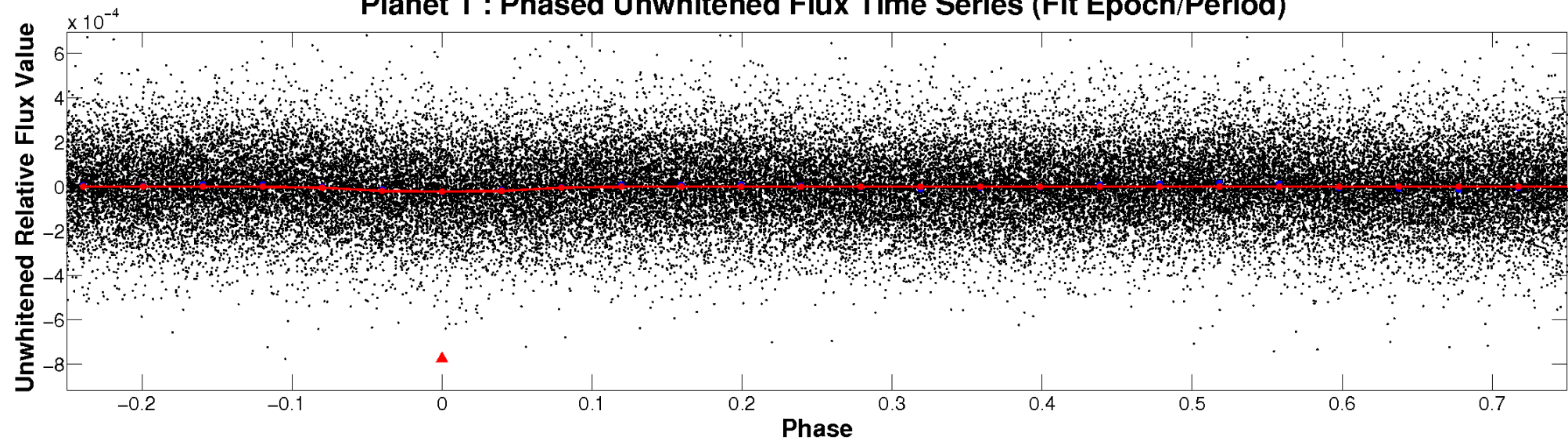
ALT Odd/Even

TCE 010485035-01

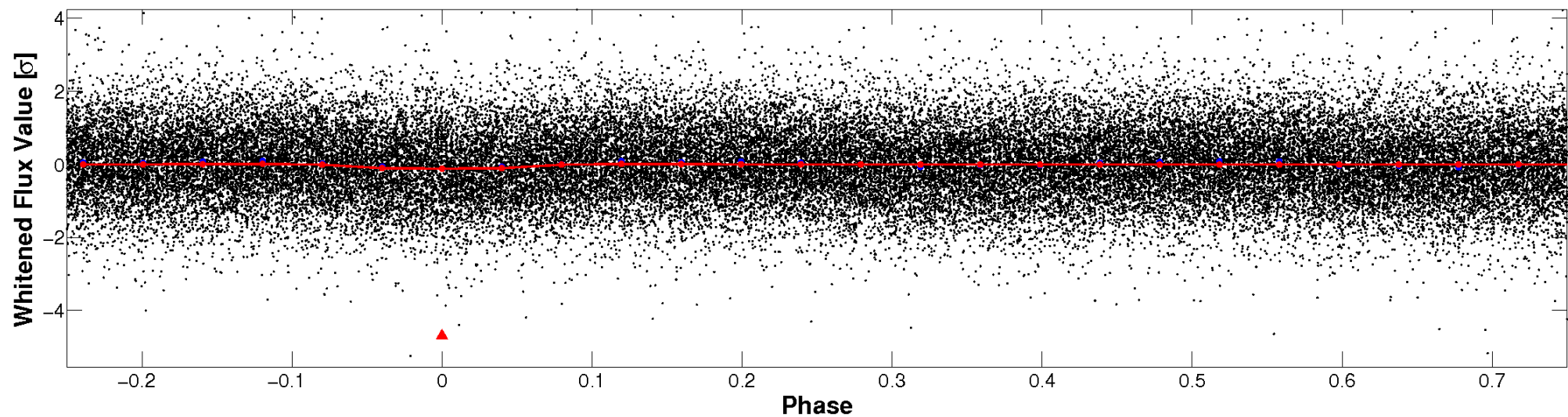


Non-Whitened Vs. Whitened Light Curve

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

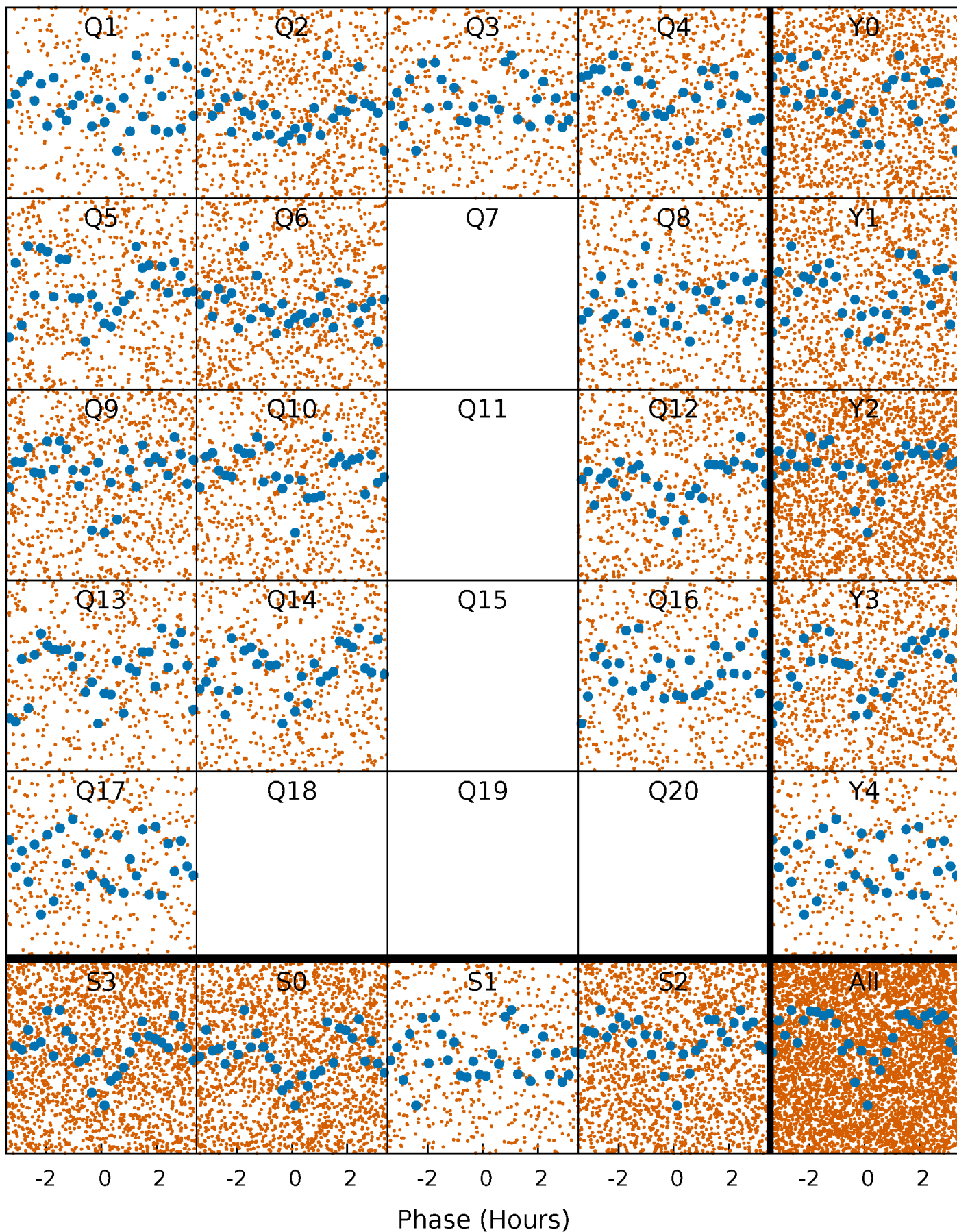


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



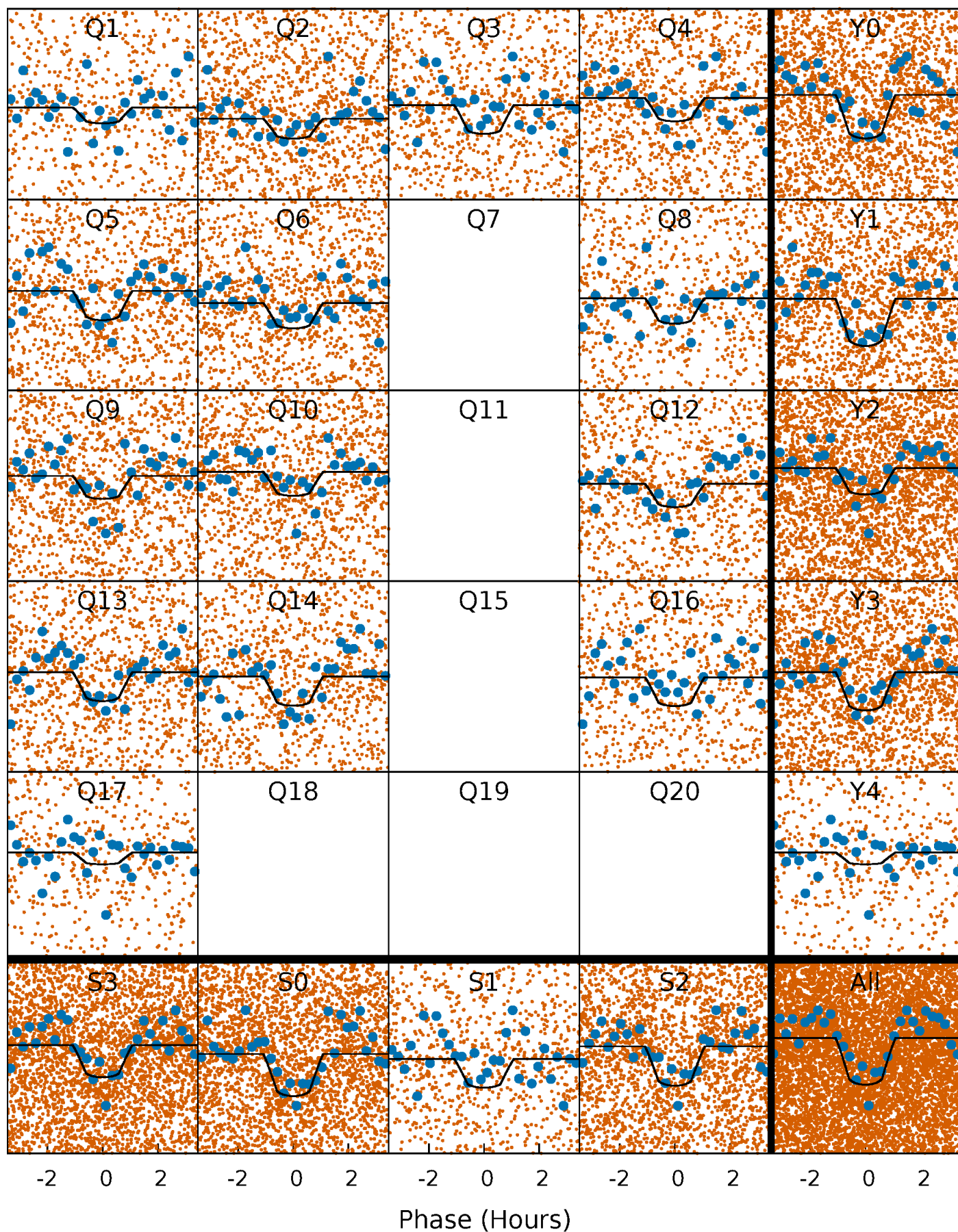
PDC Quarter-Phased Transit Curves

TCE 010485035-01 P= 0.512534 Days $T_0=131.684392$ (BKJD)



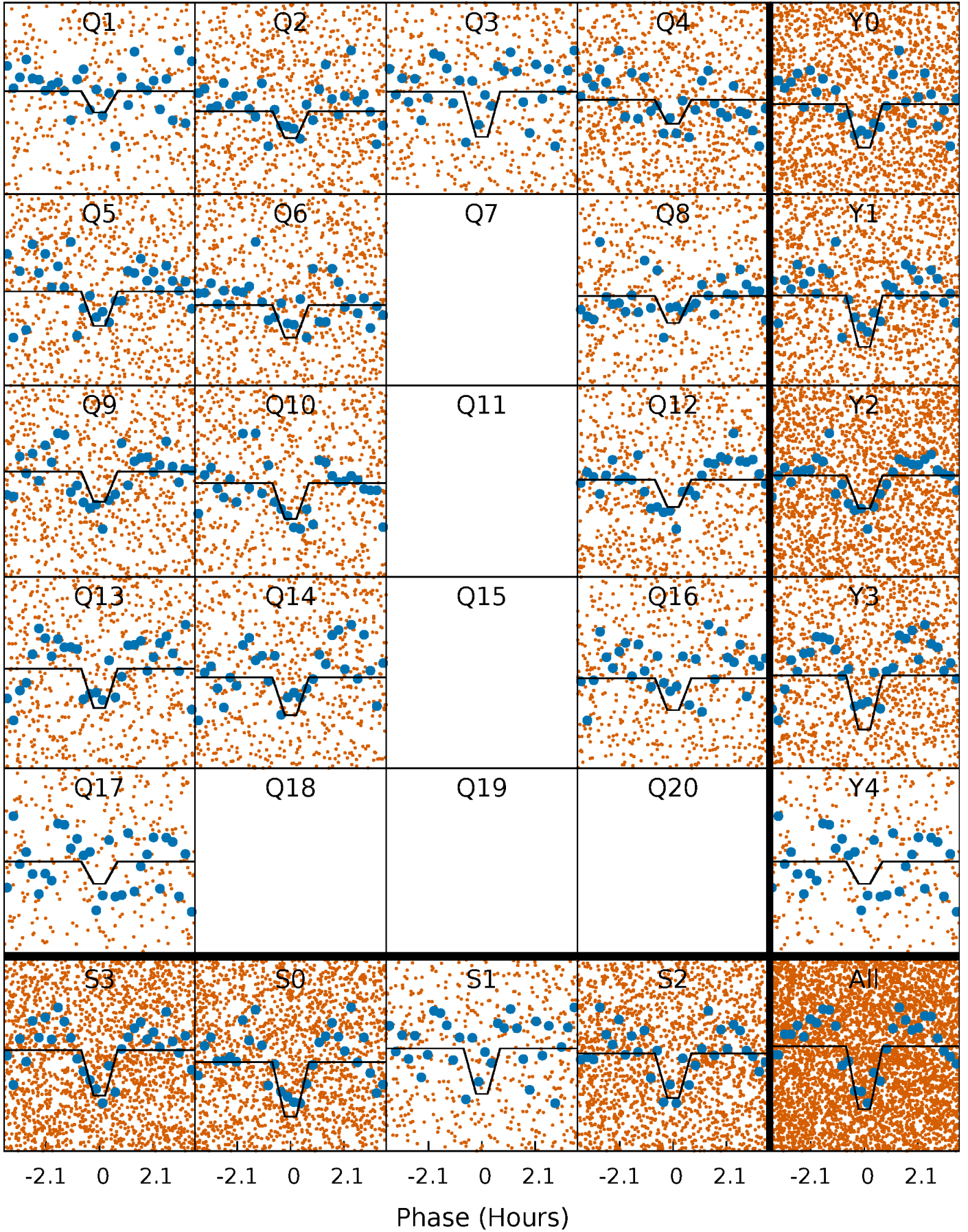
DV Quarter-Phased Transit Curves

TCE 010485035-01 P= 0.512534 Days $T_0=131.684392$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

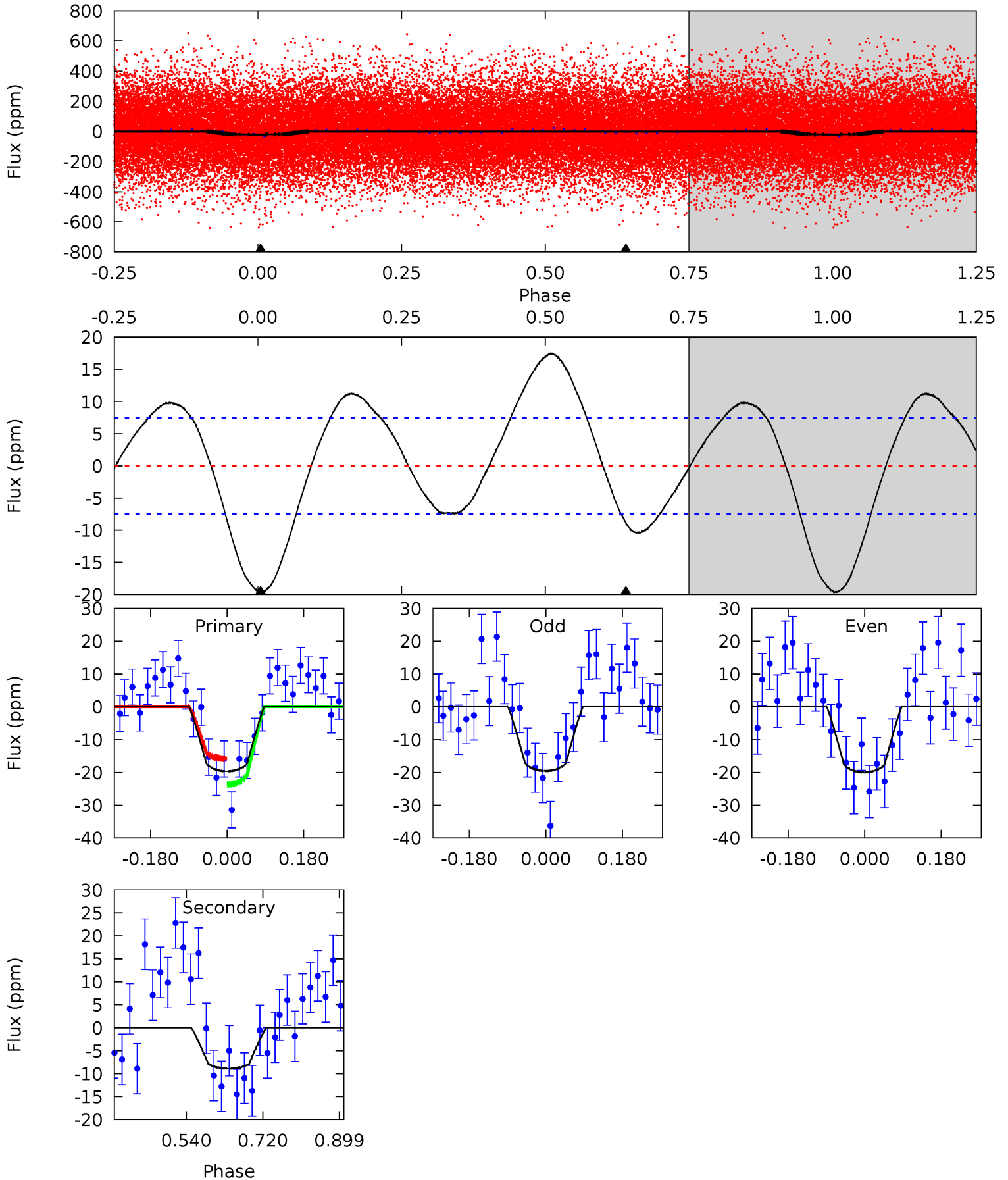
TCE 010485035-01 P= 0.512537 Days $T_0=131.683595$ (BKJD)



DV Model-Shift Uniqueness Test

010485035-01, P = 0.512534 Days, E = 131.171858 Days

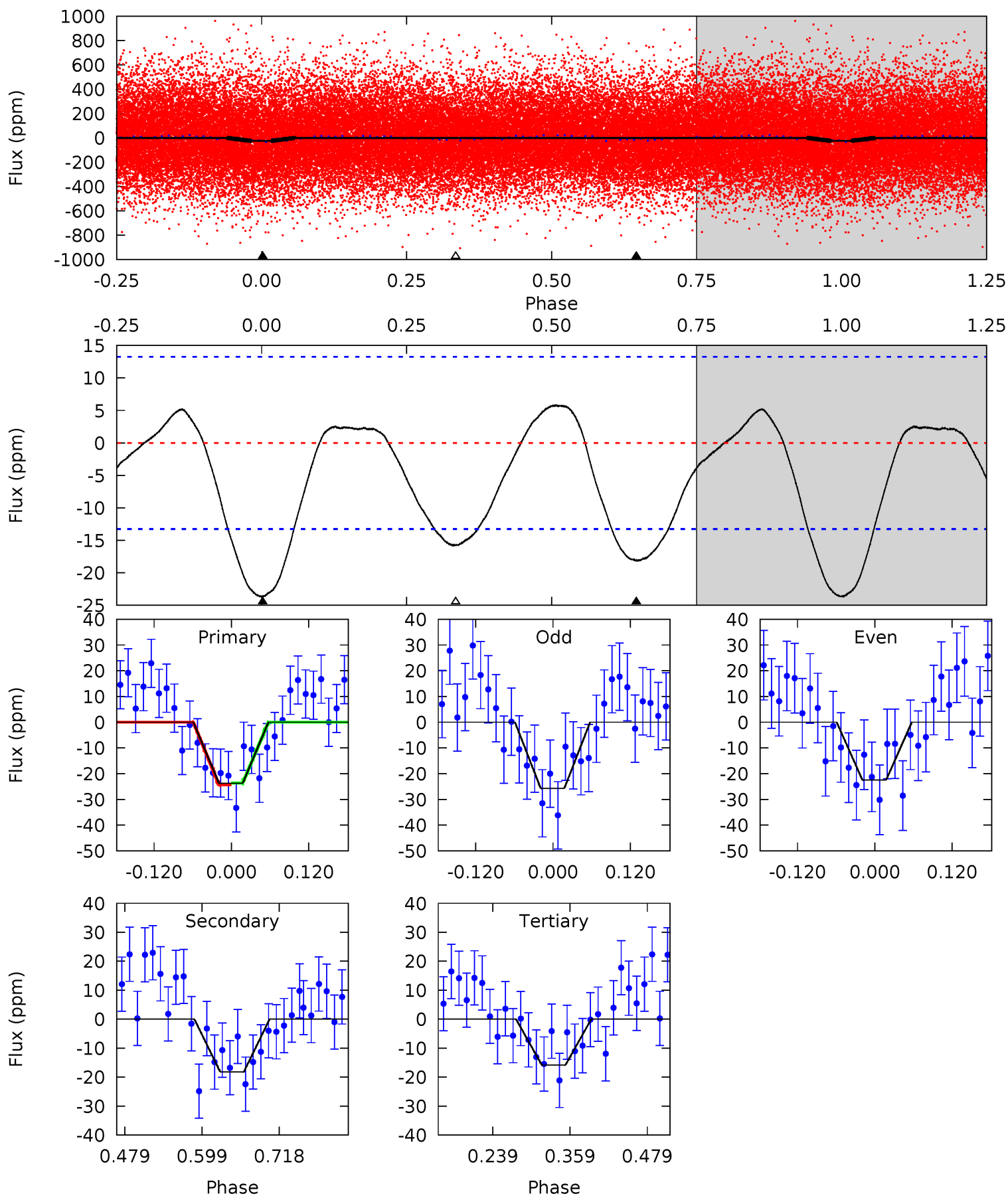
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	5.31	0	0	4.44	1.34	3.63	11.7	11.7	5.31	5.31	0.12	1.02	0.47	2.34



Alt Model-Shift Uniqueness Test

010485035-01, P = 0.512537 Days, E = 131.171058 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.10	6.22	5.41	0	4.53	1.56	2.38	2.69	8.10	0.81	6.22	0.55	0.89	0.20	0.12



Stellar Parameters For KIC 010485035

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7648^{+237}_{-316}	$4.002^{+0.210}_{-0.158}$	$-0.120^{+0.200}_{-0.300}$	$2.158^{+0.502}_{-0.614}$	$1.705^{+0.198}_{-0.298}$	$0.239^{+0.289}_{-0.097}$
	+3%/-4%	+5%/-4%	+167%/-250%	+23%/-28%	+12%/-17%	+121%/-41%
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 010485035-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-9 ± 2	$1.15^{+0.47}_{-0.40}$	5632^{+447}_{-438}	5146^{+1695}_{-1347}	$0.804^{+1.164}_{-0.408}$
Alt.	-18 ± 3	$1.23^{+0.44}_{-0.43}$	5638^{+408}_{-401}	6279^{+2113}_{-1087}	$1.455^{+1.948}_{-0.654}$

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

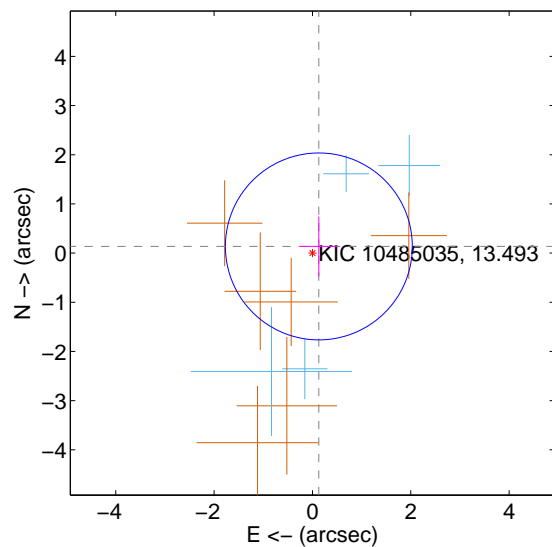
Supplemental centroid analysis for 010485035-01. Kepler magnitude: 13.49. Transit SNR 8.63

There are 4 quarters with good PRF difference image offsets

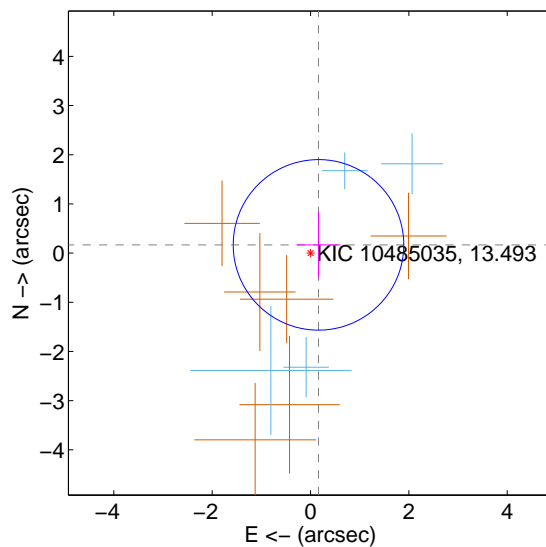
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.188 ± 0.633	0.30	-0.130 ± 0.392	0.136 ± 0.609
PRF-fit source offset from KIC position	0.233 ± 0.578	0.40	-0.162 ± 0.447	0.167 ± 0.678
photometric centroid source offset	0.71 ± 1.13	0.63	-0.44 ± 1.08	-0.56 ± 1.16

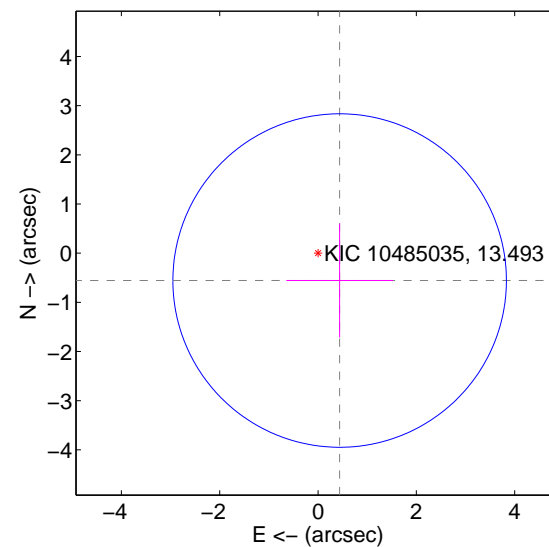
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

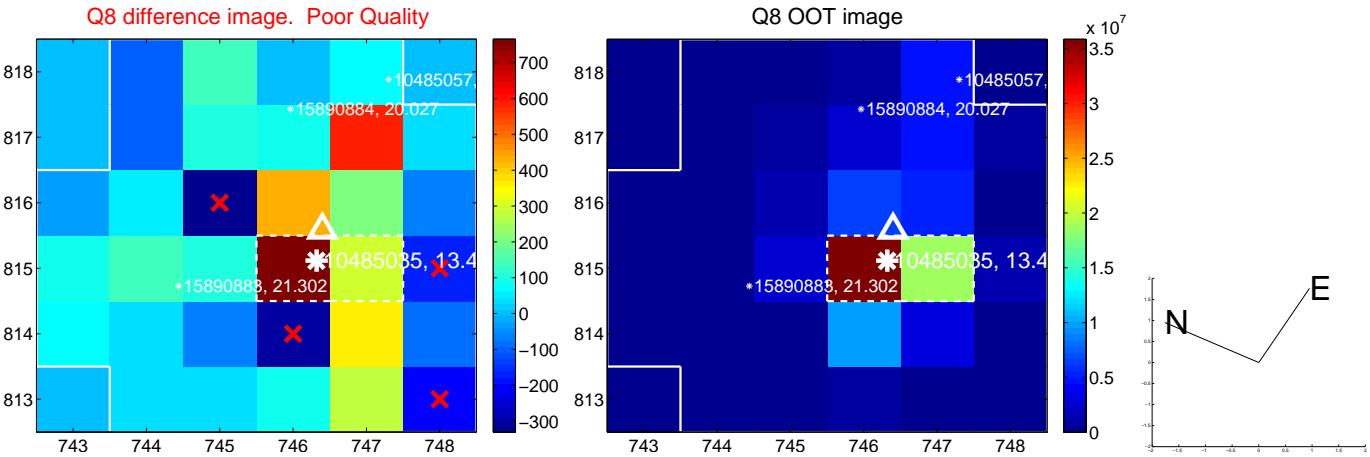
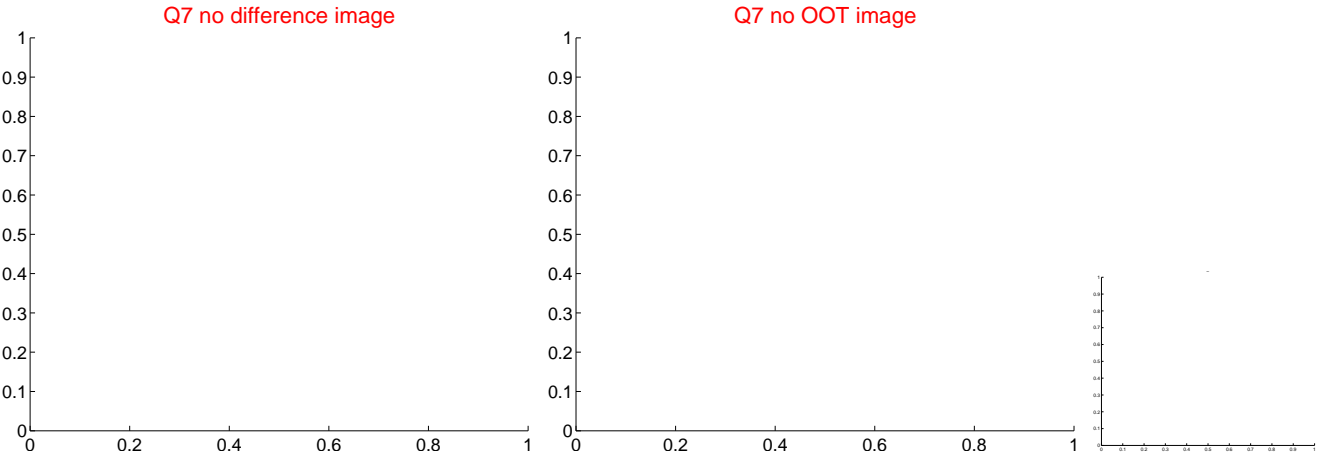
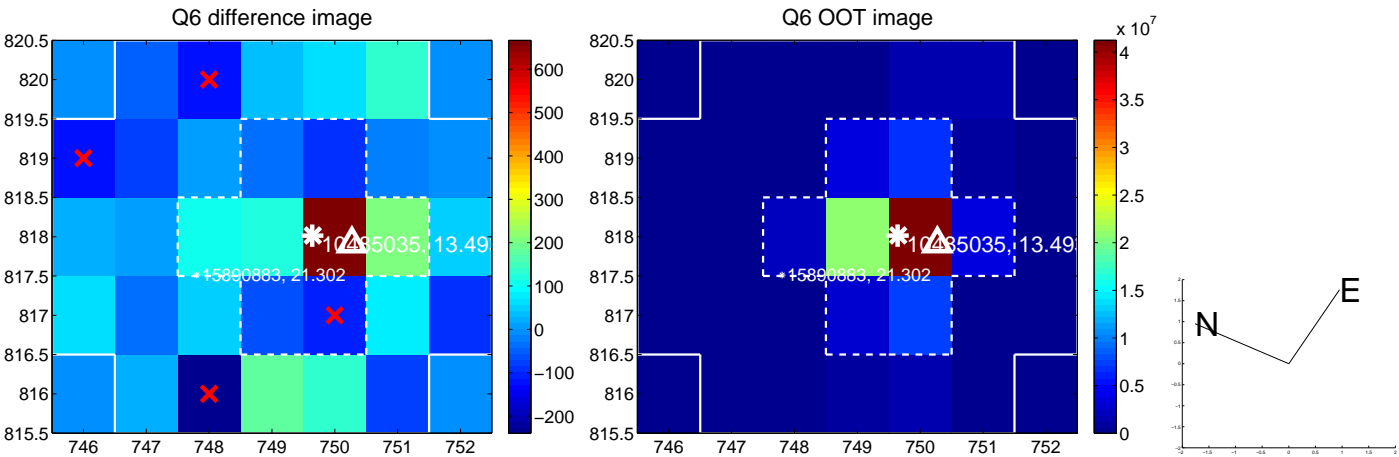
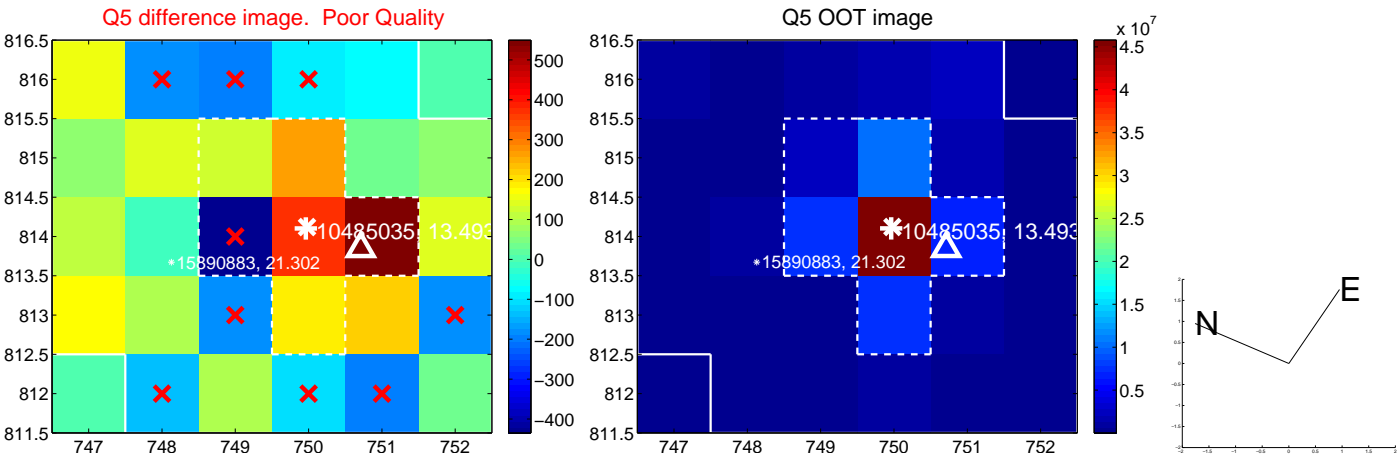


offset from photometric centroids

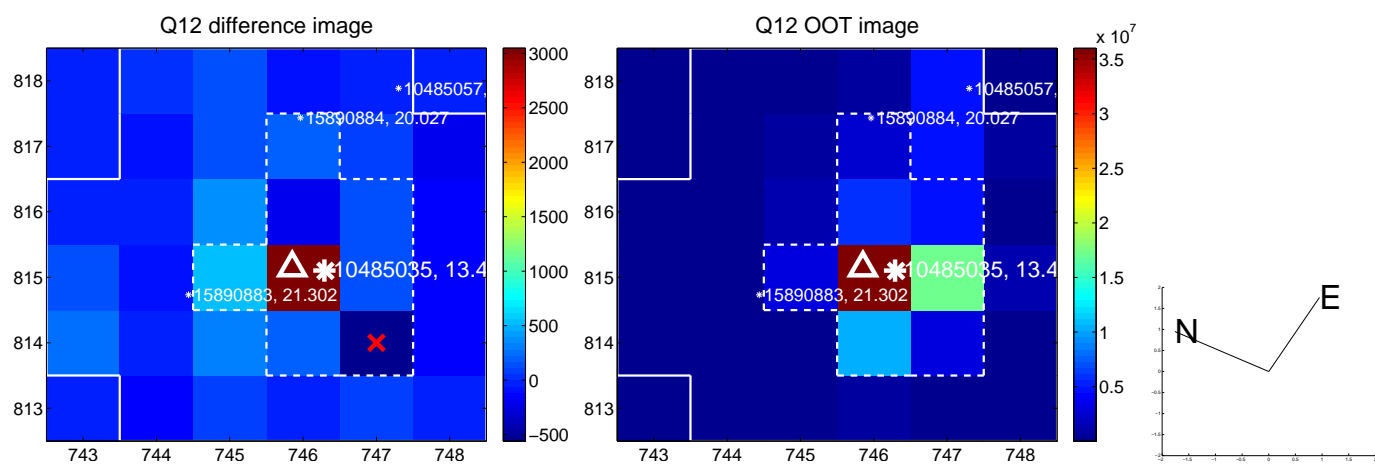
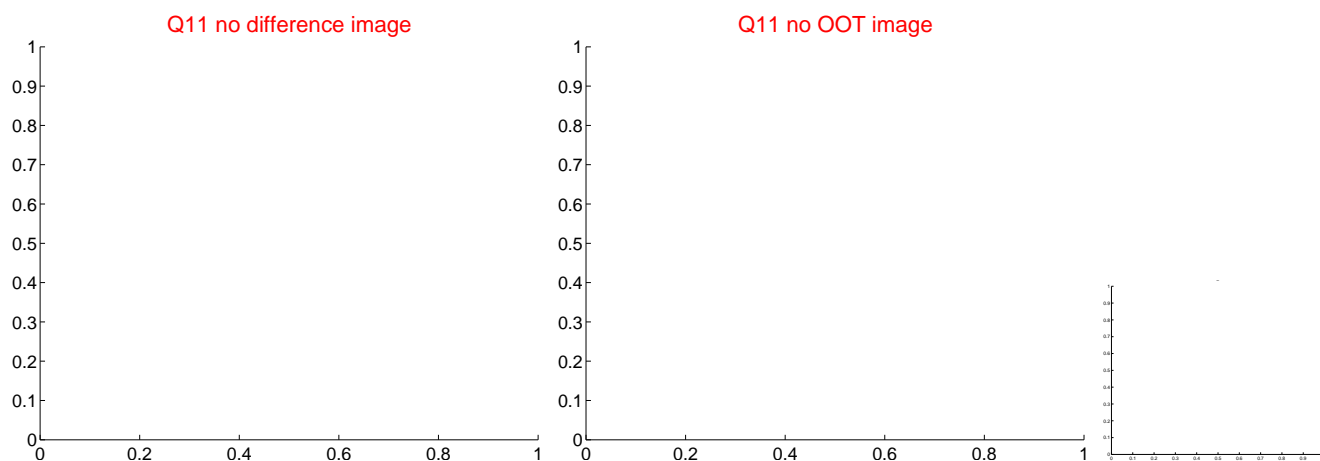
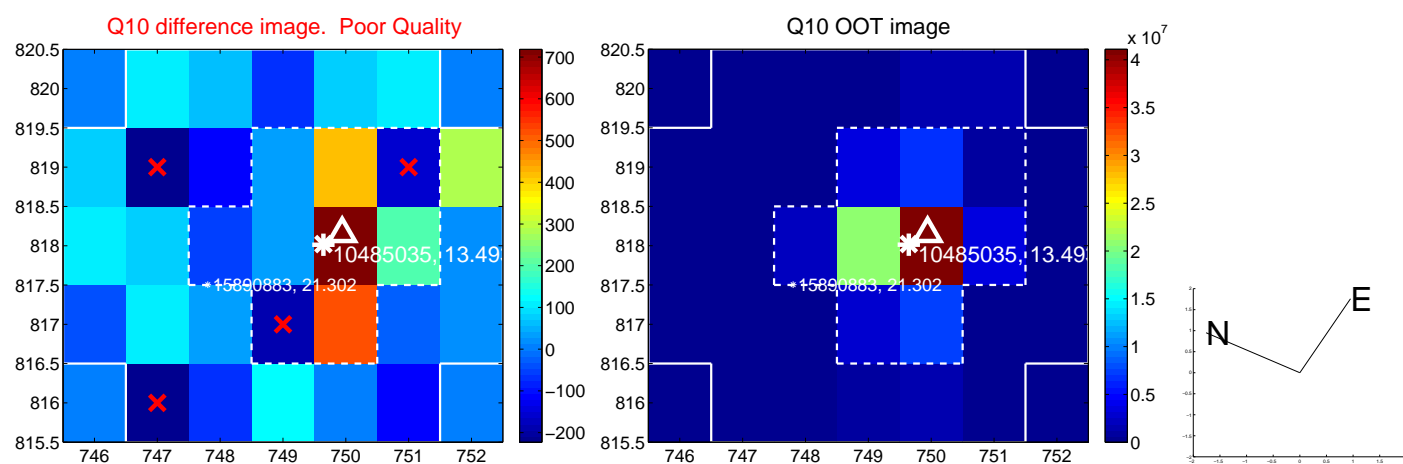
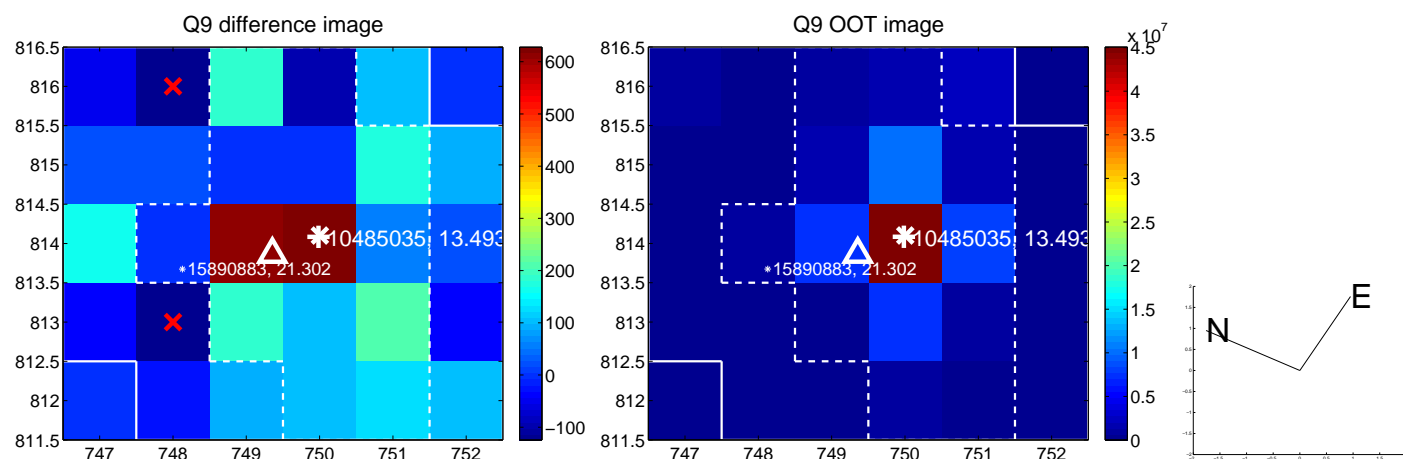


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

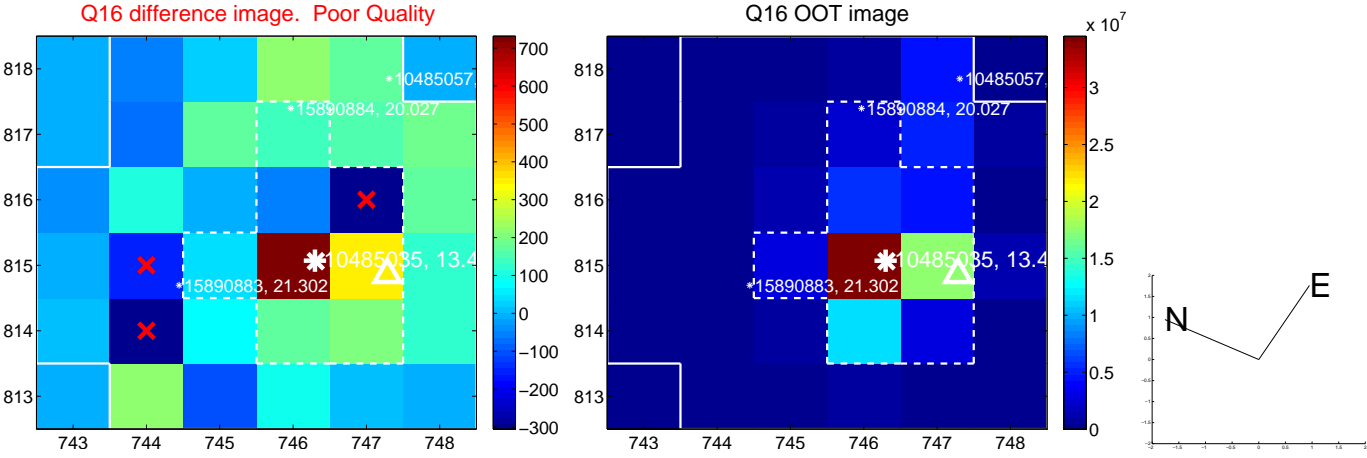
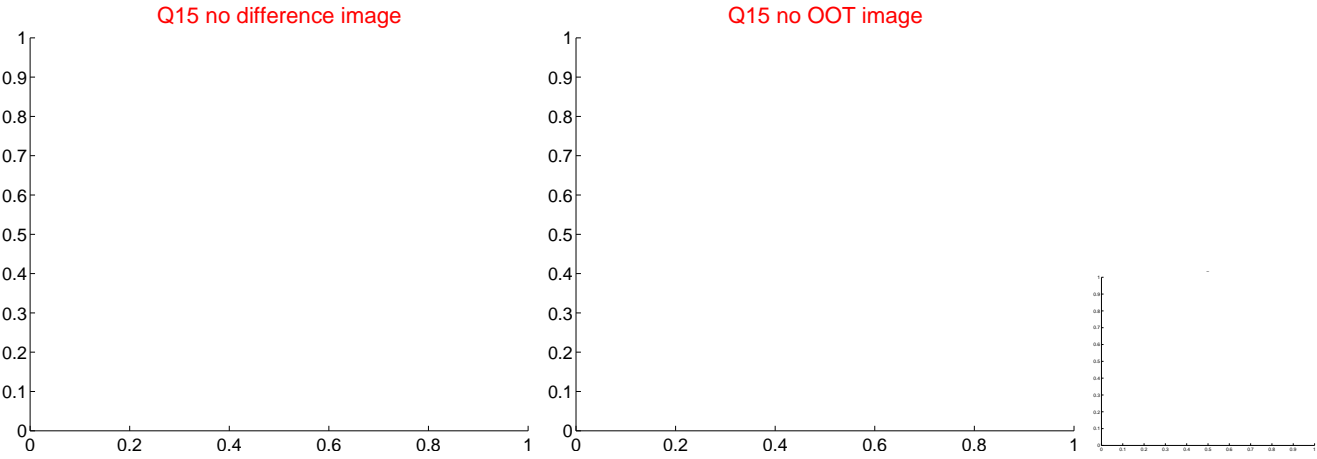
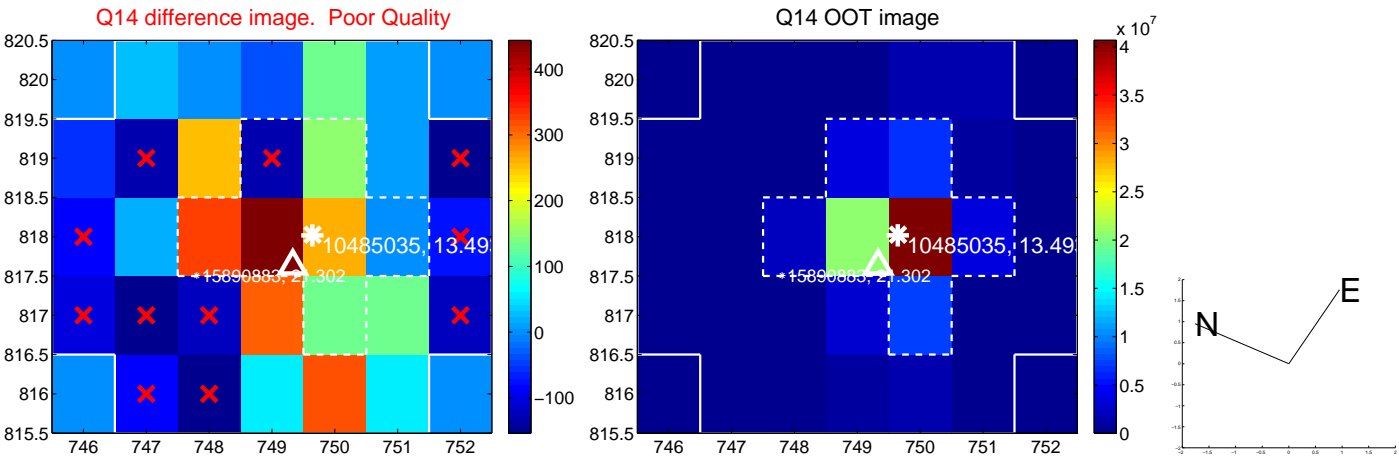
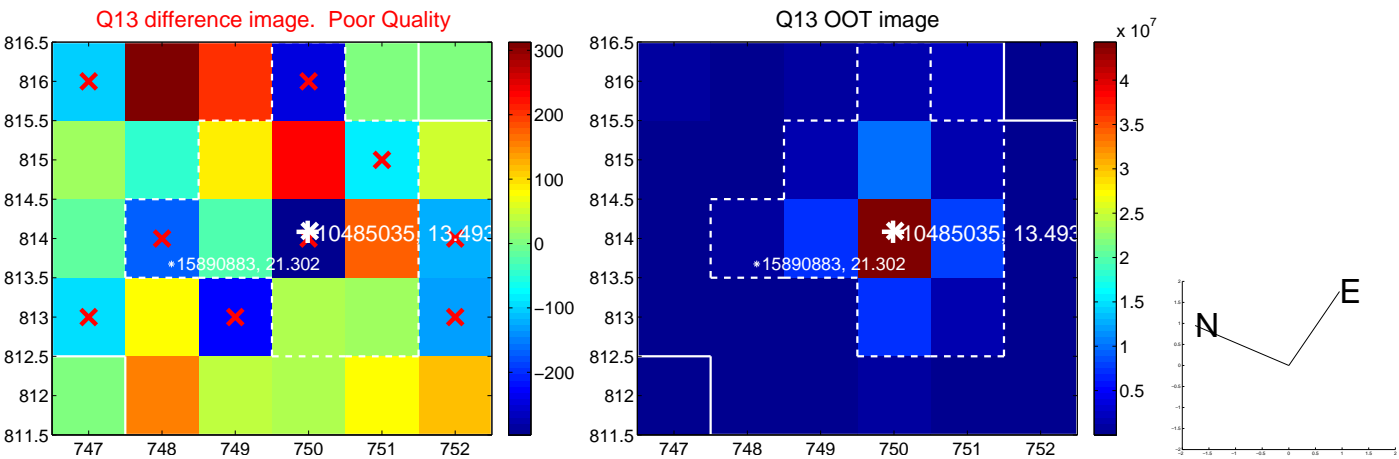
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



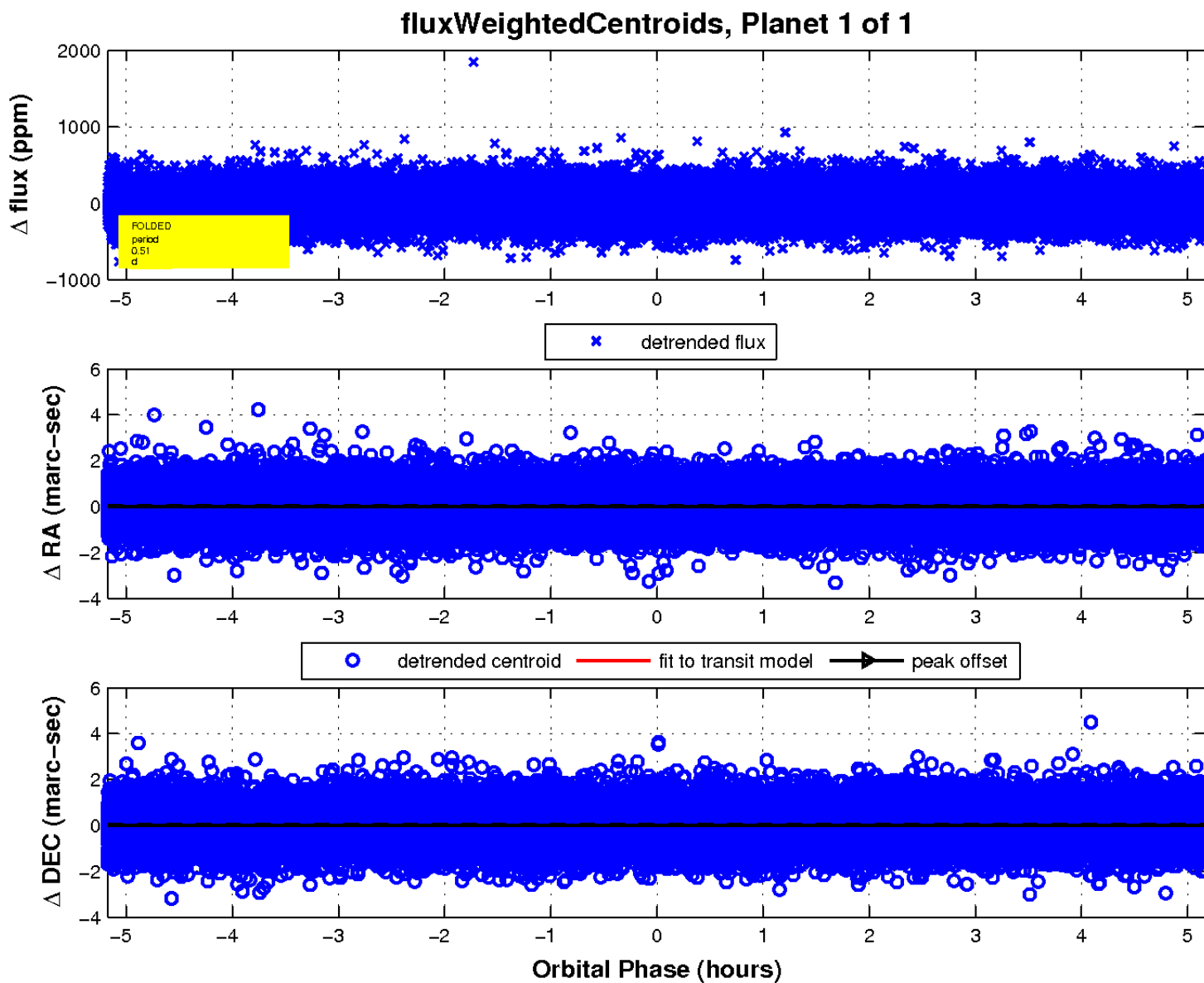
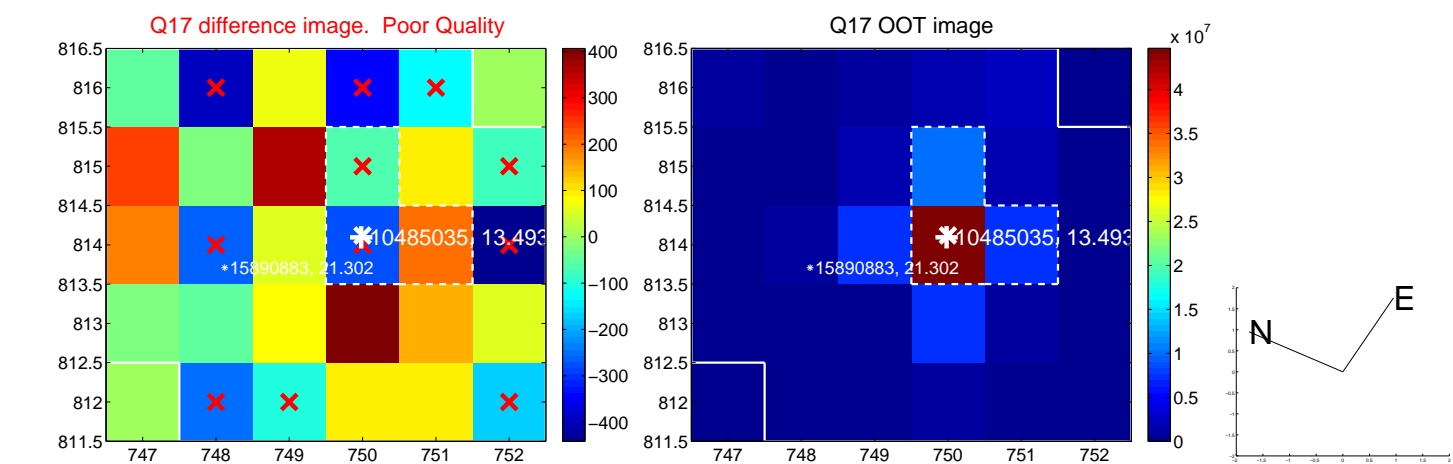
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

