

KIC 009282769

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})
009282769-01	OBS	3959.01	1.332546	132.061334	414.8	5.618	124.4	103.6	1.22	6388	4.84	3846.47

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009282769-01	OBS	FP	0.00	1	0	1	1	LPP_DV—MOD_NONUNIQ_ALT—CENT_KIC_POS—HALO_GHOST—EPHEM_MATCH

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.

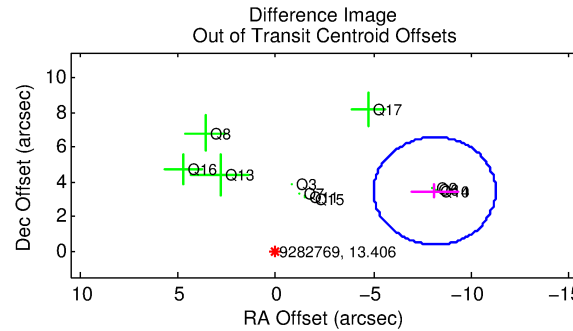
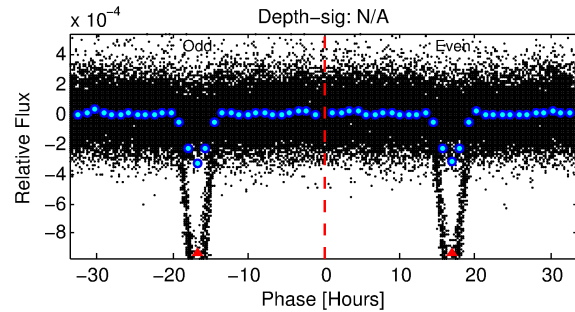
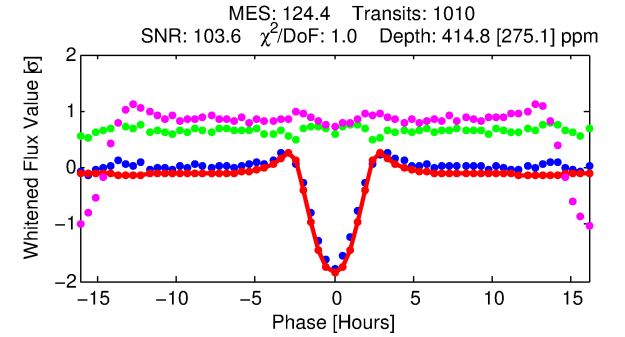
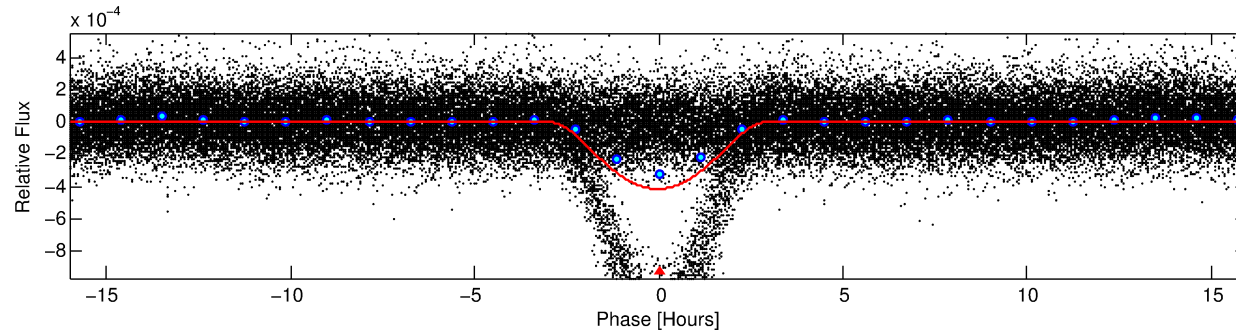
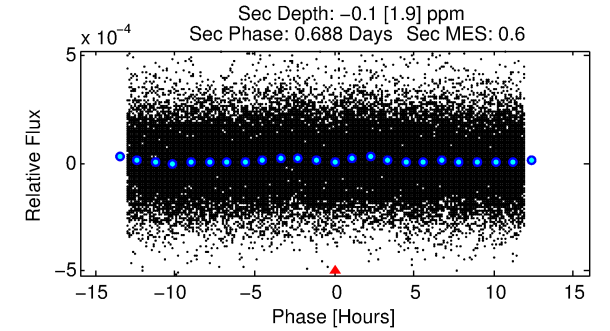
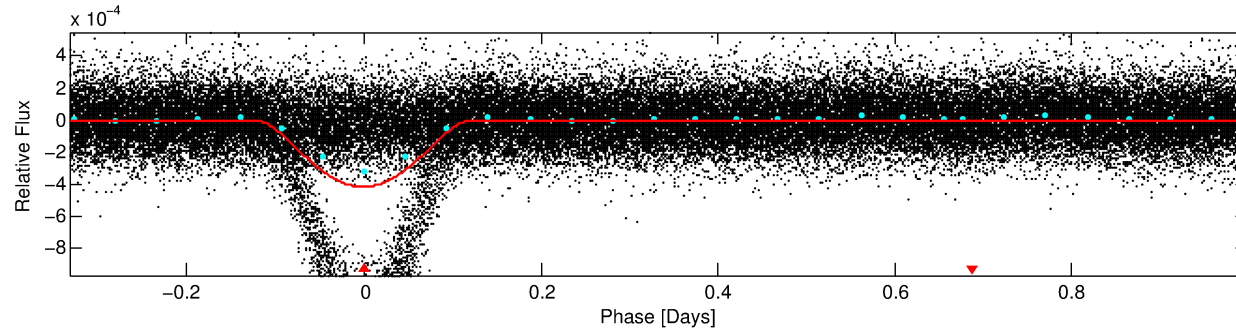
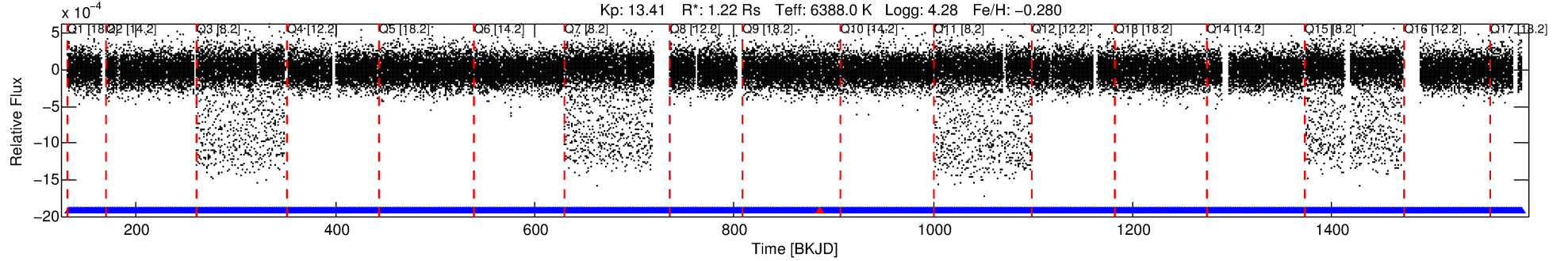
Ephemeris Match Information For 009282769-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
009282769-01	9282769	BR-Cyg-pri	9899416	1:1	7582.2	3	2	10.03	13.41	1611.70	Cross-Talk	0	1.08	0.81

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 9282769 Candidate: 1 of 1 Period: 1.333 d
KOI: K03959.01 Corr: 0.922



DV Fit Results:

Period = 1.33255 [0.00000] d
Epoch = 132.0613 [0.0007] BKJD
Rp/R* = 0.0363 [0.0080]
a/R* = 1.13 [0.00]
b = 1.00 [0.00]
Seff = 3846.47 [1409.57]
Teq = 2008 [184] K
Rp = 4.84 [1.83] Re
a = 0.0241 [0.0060] AU
Ag = N/A
Teffp = N/A

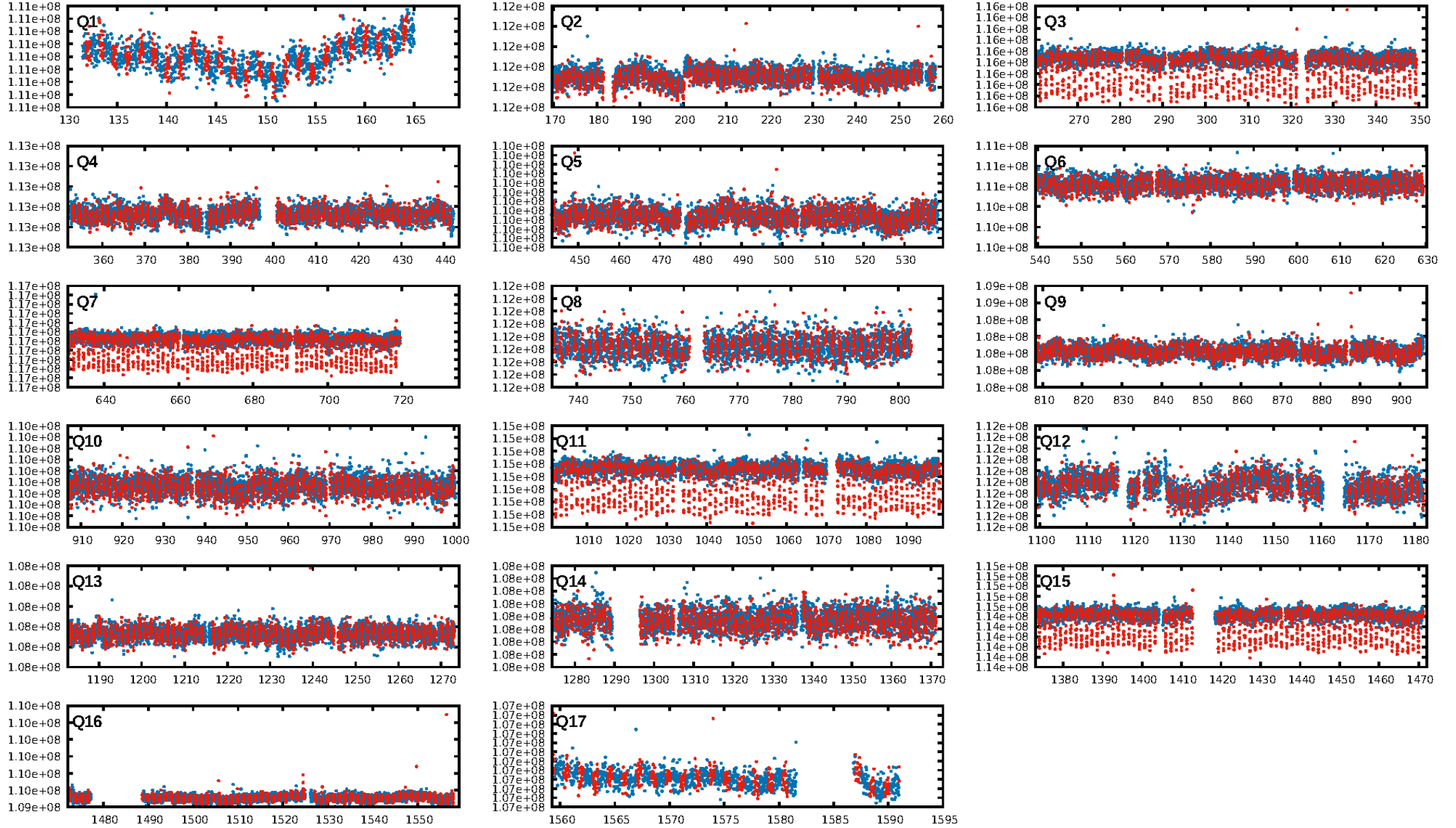
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [964/965]
GhostDiagnostic-chr: -0.01406
Centroid-sig: N/A
Centroid-so: 3.392 arcsec [47.92σ]
OotOffset-rm: 8.836 arcsec [8.52σ]
KicOffset-rm: 8.844 arcsec [7.38σ]
OotOffset-st: 4/4/2/2 [12]
KicOffset-st: 4/4/2/2 [12]
DiffImageQuality-fgm: 0.67 [8/12]
DiffImageOverlap-fno: 1.00 [17/17]

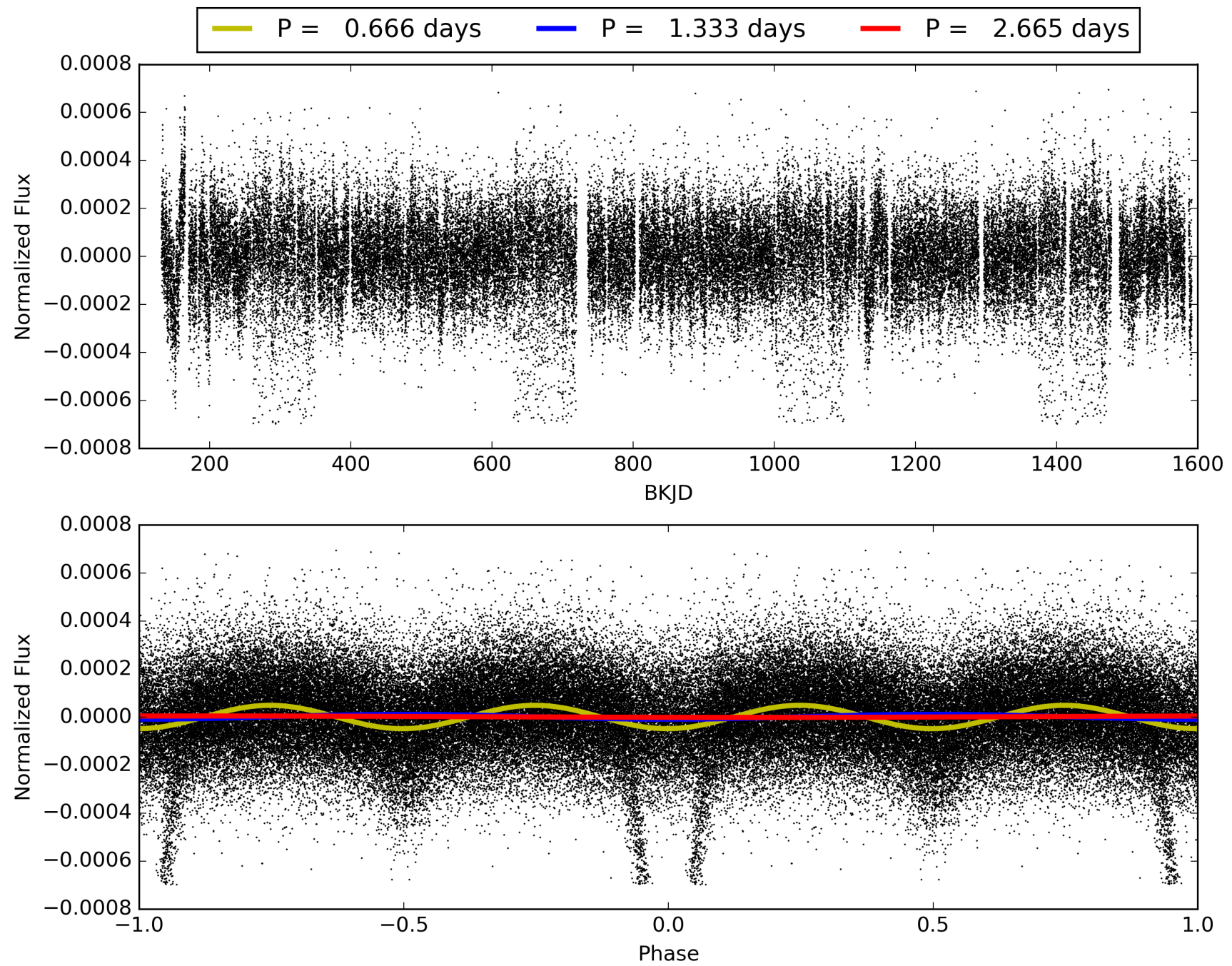
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 22:00:15 Z

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

TCE 009282769-01, PDC Light Curves

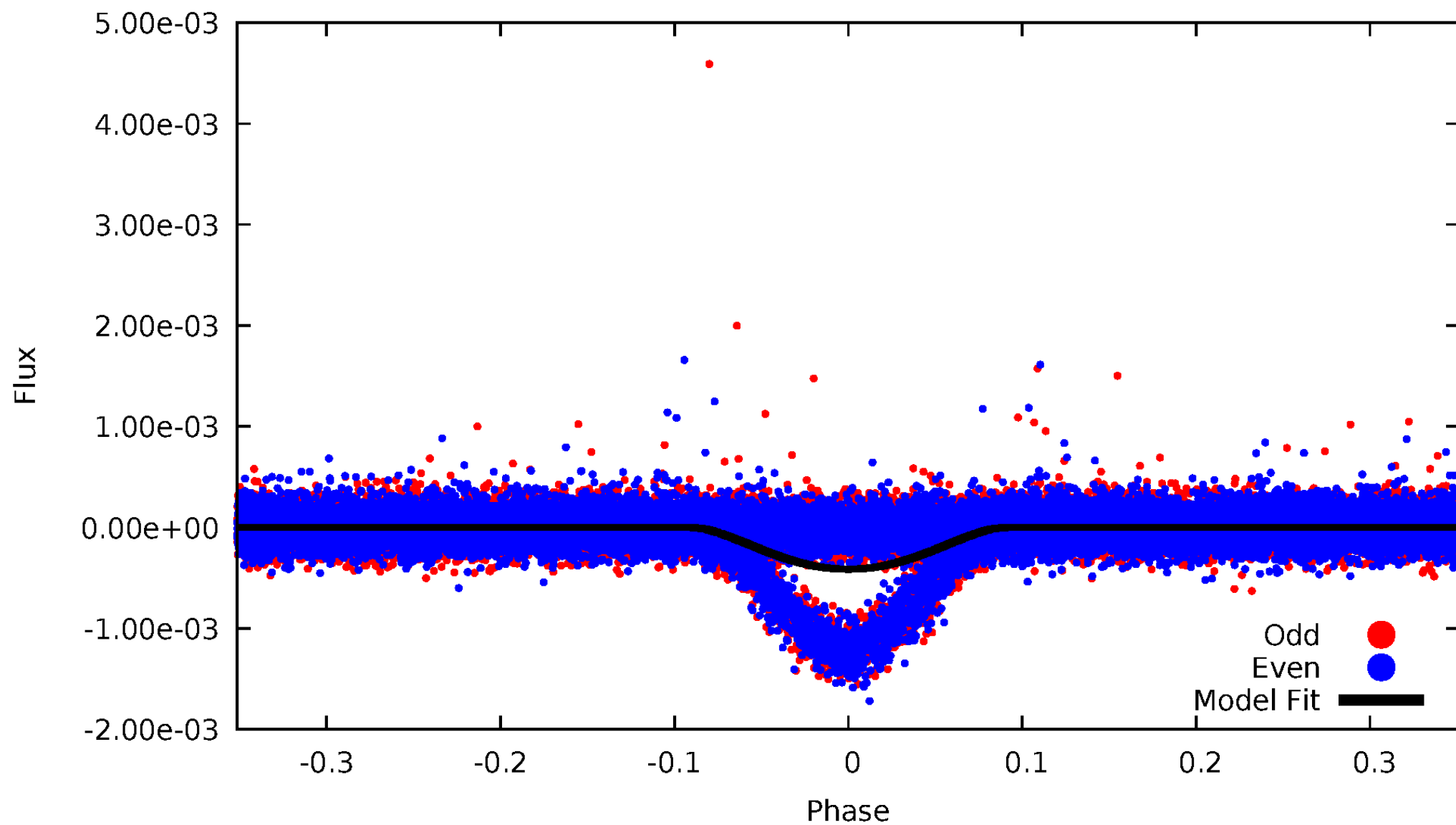


TCE 009282769-01



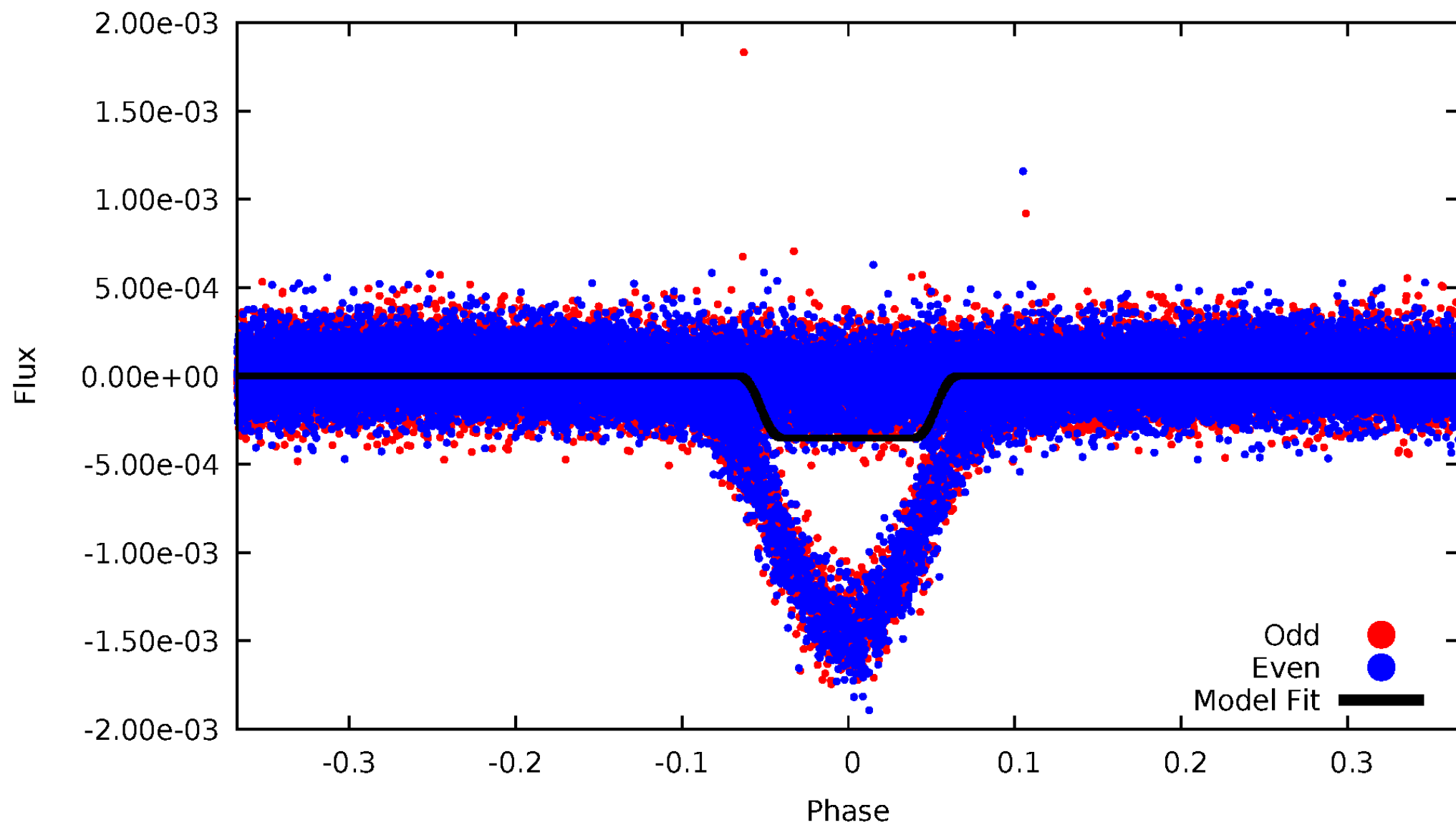
DV Odd/Even

TCE 009282769-01

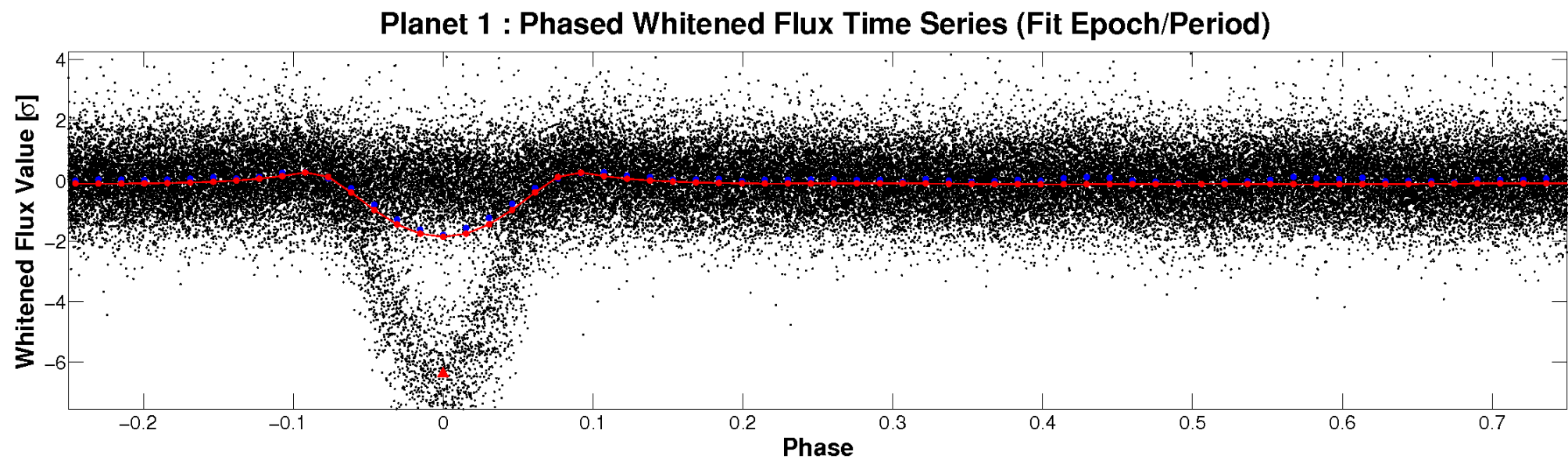
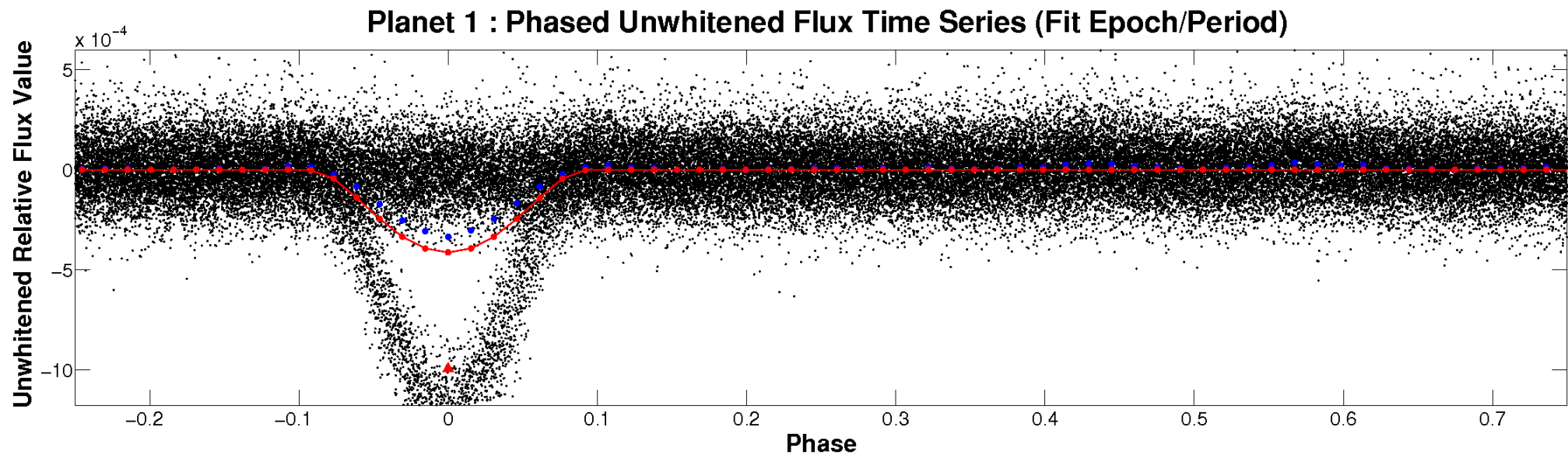


ALT Odd/Even

TCE 009282769-01

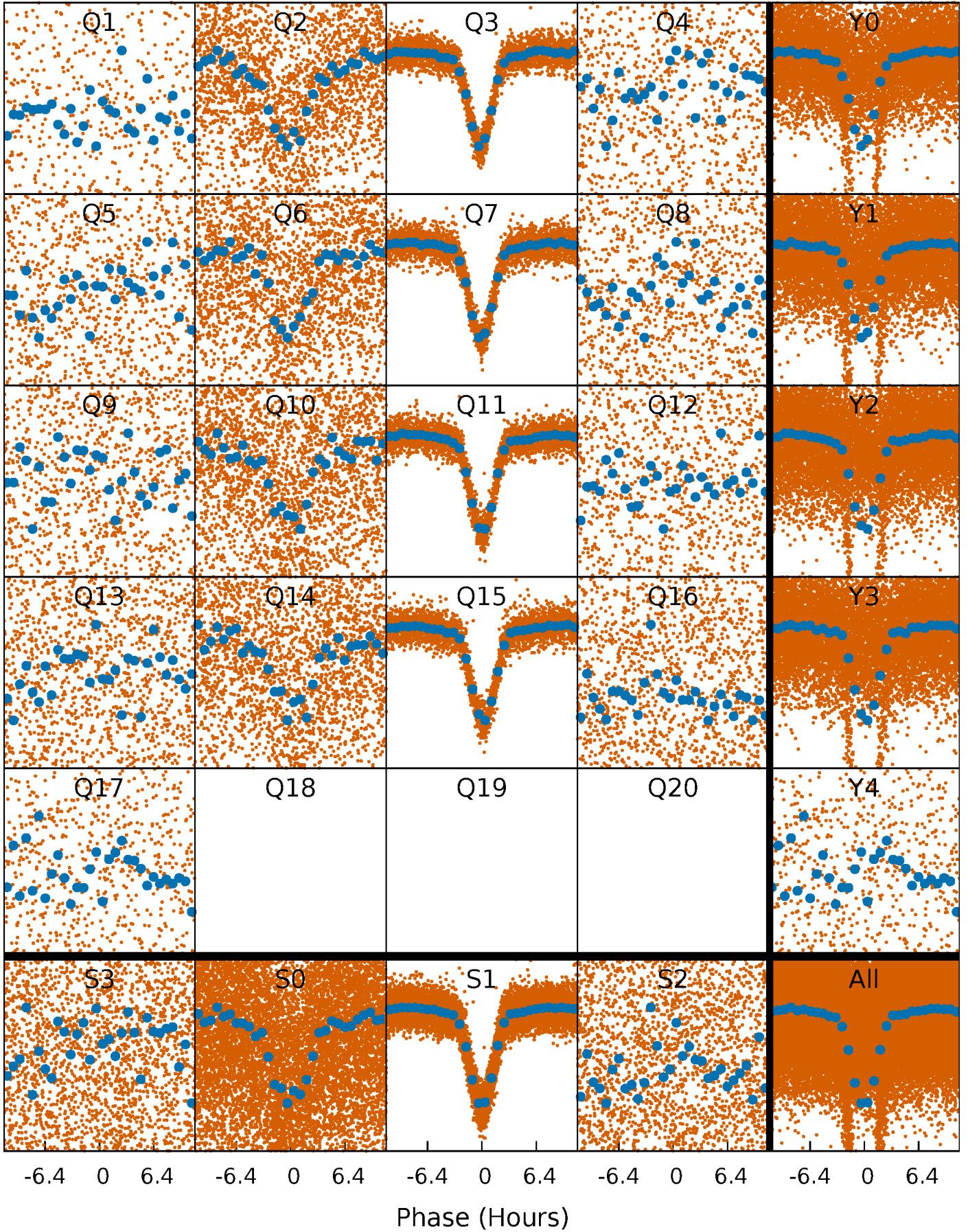


Non-Whitened Vs. Whitened Light Curve



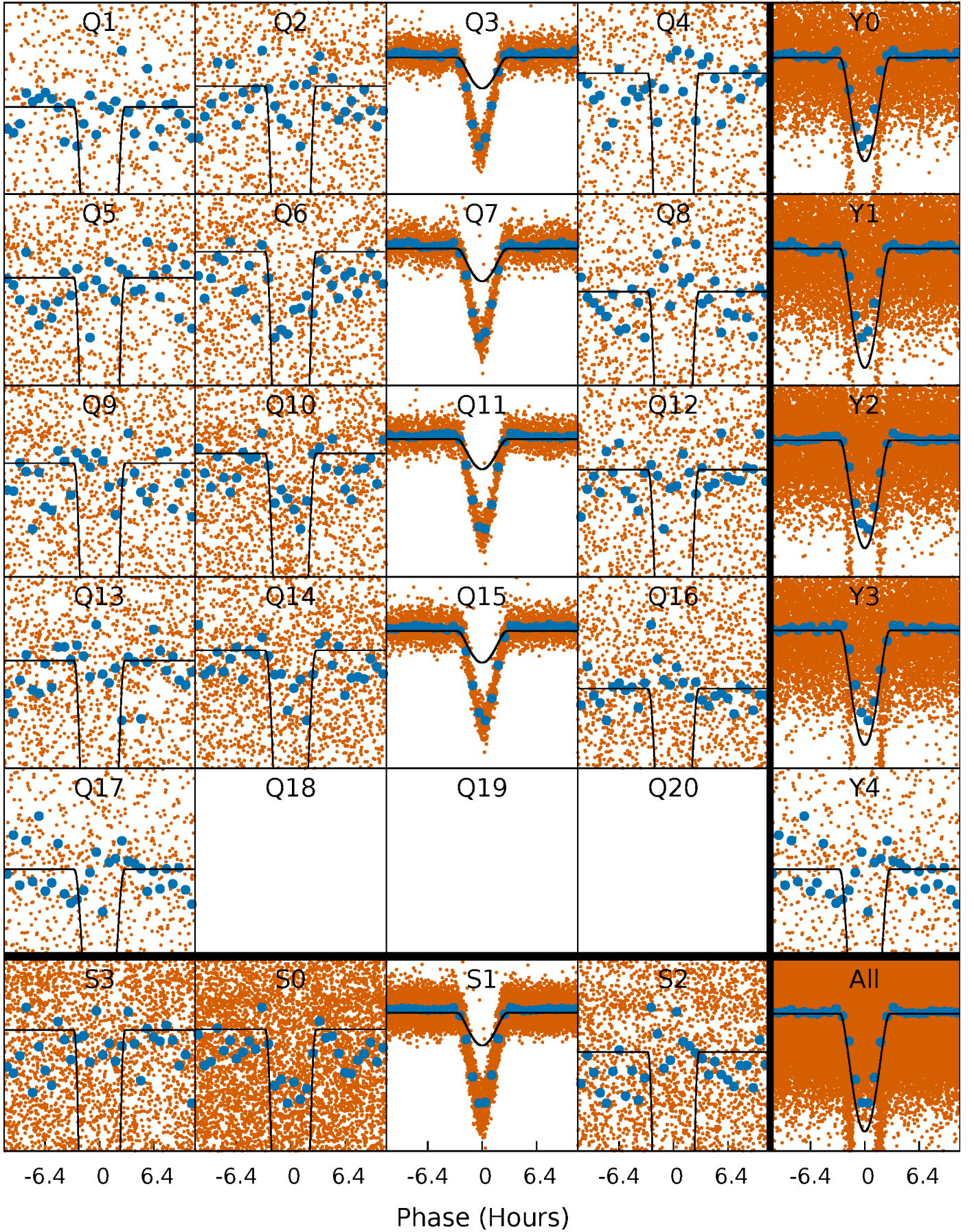
PDC Quarter-Phased Transit Curves

TCE 009282769-01 P= 1.332546 Days $T_0=132.061334$ (BKJD)



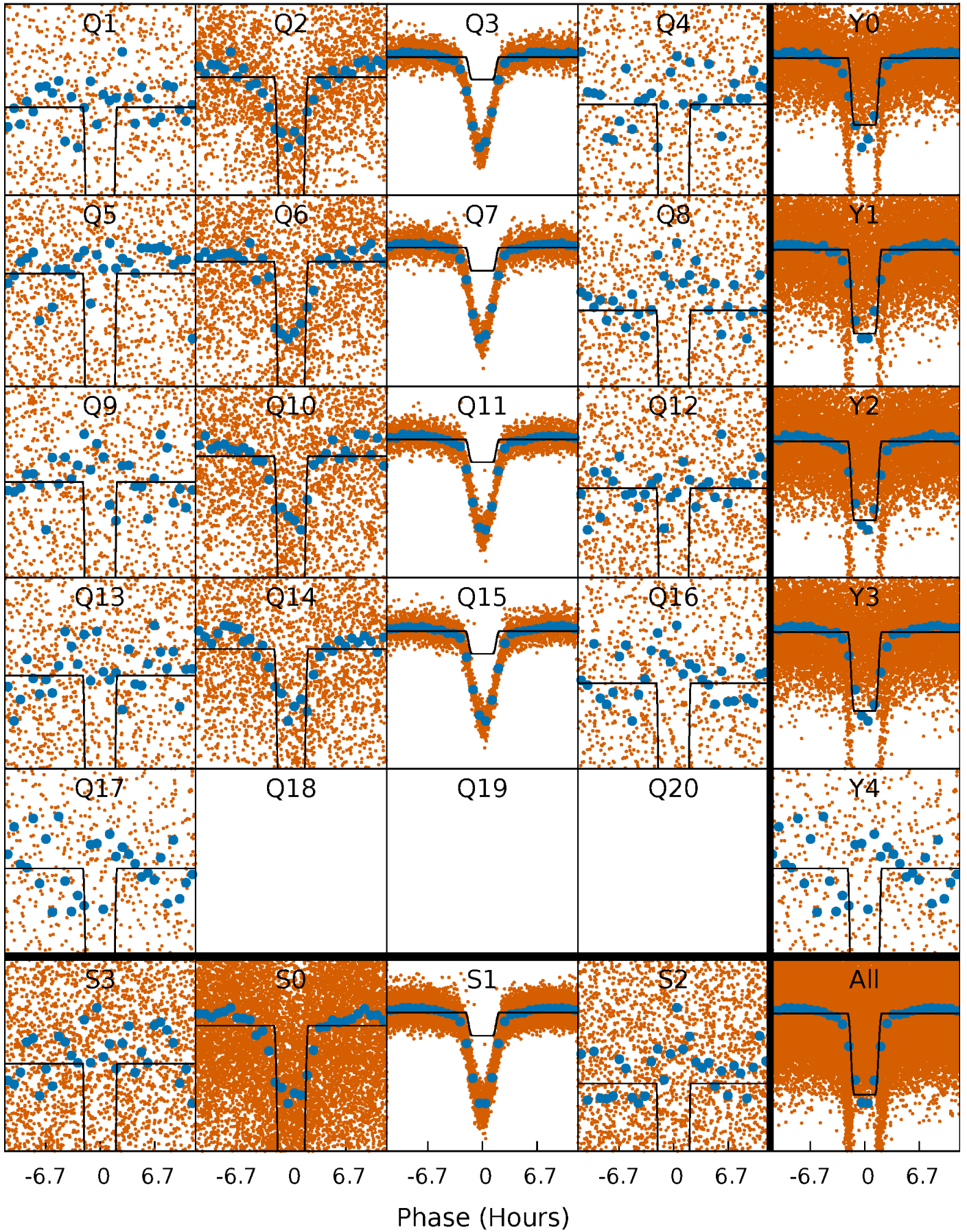
DV Quarter-Phased Transit Curves

TCE 009282769-01 P= 1.332546 Days $T_0=132.061334$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

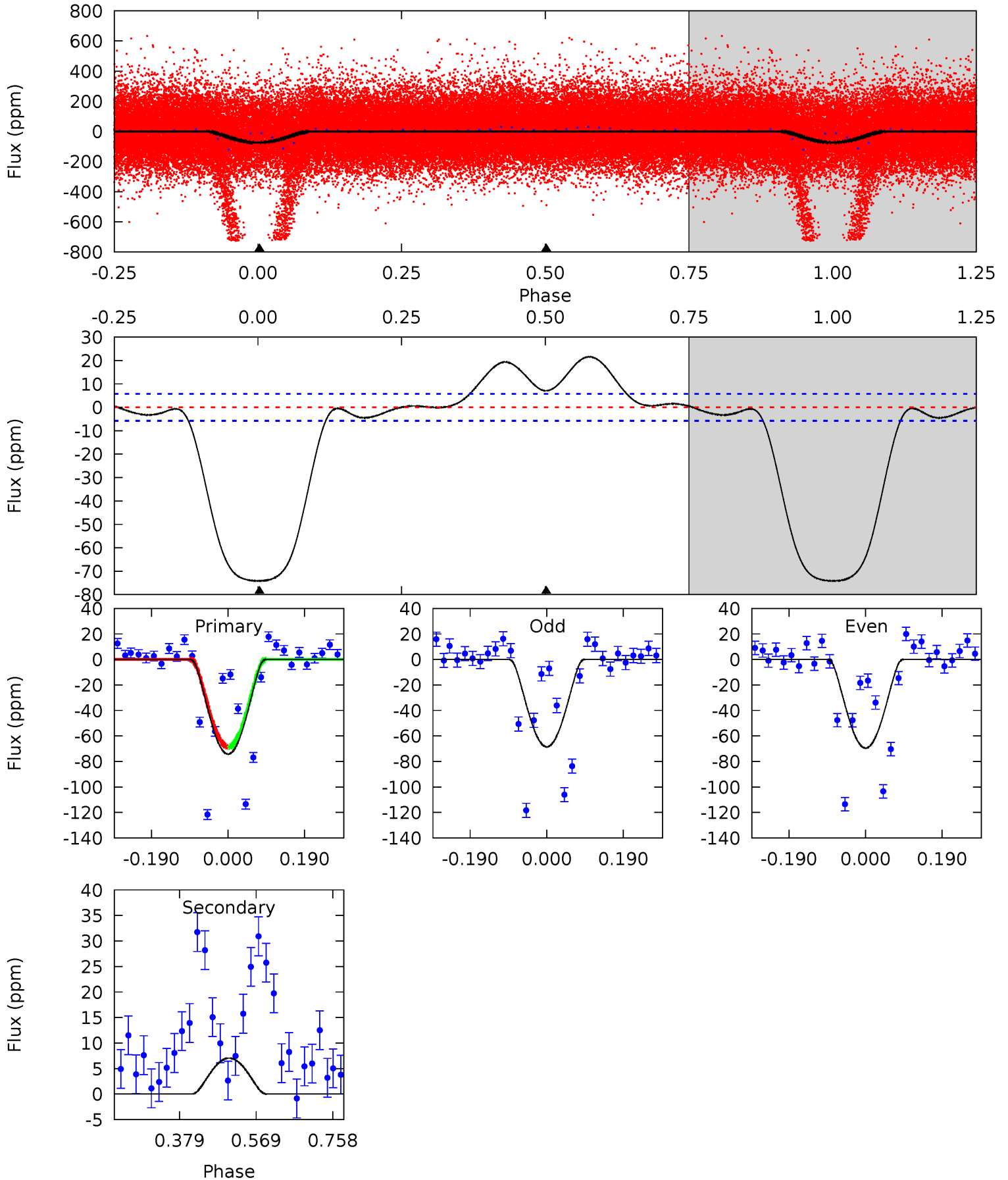
TCE 009282769-01 P= 1.332549 Days $T_0=132.059281$ (BKJD)



DV Model-Shift Uniqueness Test

009282769-01, P = 1.332546 Days, E = 130.728788 Days

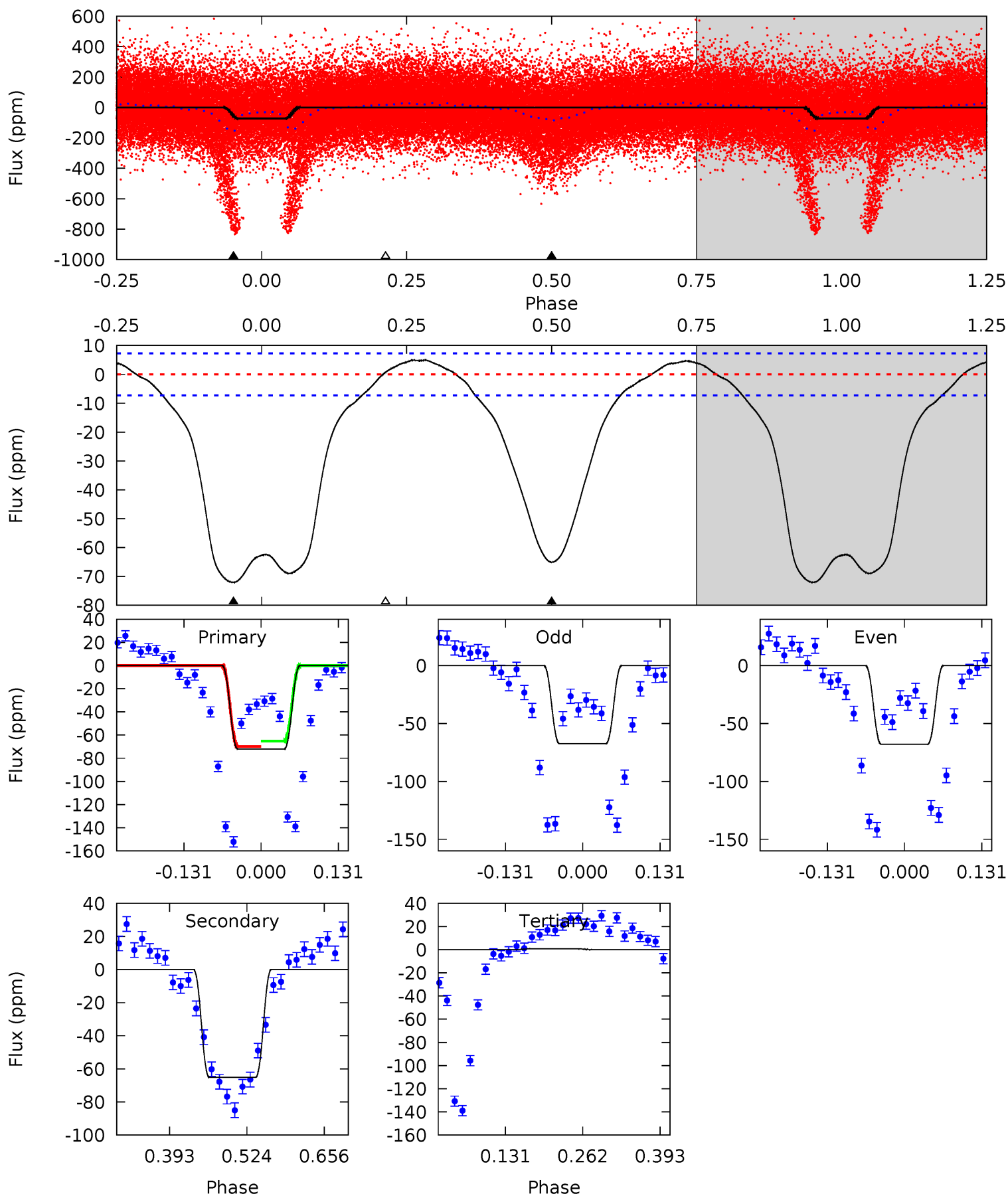
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
57.1	-5.43	0	0	4.43	1.31	1.31	57.1	57.1	-5.43	-5.43	0.37	5.77	0.23	0.16



Alt Model-Shift Uniqueness Test

009282769-01, P = 1.332549 Days, E = 130.726732 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
44.5	40.2	-0.46	0	4.51	1.51	7.57	45.0	44.5	40.7	40.2	0.15	4.58	0.06	0



Stellar Parameters For KIC 009282769

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6388^{+157}_{-189}	$4.284^{+0.149}_{-0.182}$	$-0.280^{+0.250}_{-0.300}$	$1.223^{+0.377}_{-0.203}$	$1.045^{+0.184}_{-0.107}$	$0.804^{+0.562}_{-0.379}$
	+2%/-3%	+3%/-4%	+89%/-107%	+31%/-17%	+18%/-10%	+70%/-47%
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 009282769-01 / KOI 3959.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	7 ± 1	$4.84^{+1.46}_{-1.22}$	2808^{+204}_{-156}	-3118^{+107}_{-122}	$-0.094^{+0.039}_{-0.085}$
Alt.	-65 ± 2	$2.53^{+1.27}_{-1.08}$	2813^{+200}_{-168}	4309^{+1148}_{-623}	$3.264^{+6.731}_{-1.776}$

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

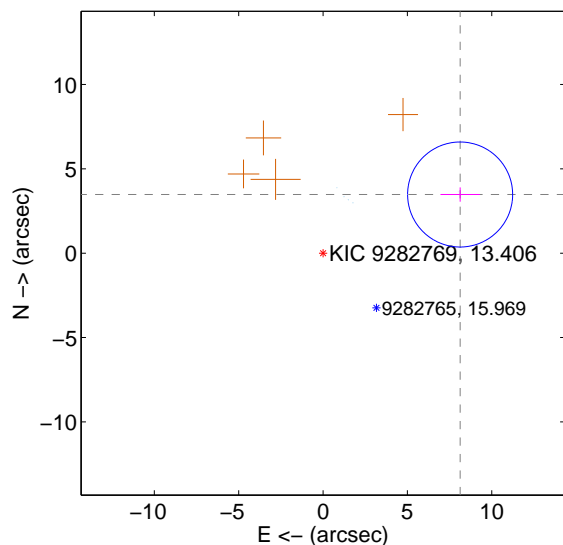
Supplemental centroid analysis for 009282769-01. Kepler magnitude: 13.41. Transit SNR 103.64

There are 8 quarters with good PRF difference image offsets

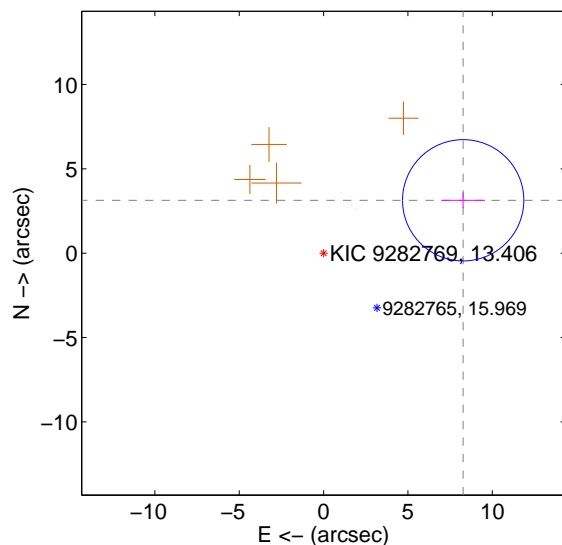
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	8.836 ± 1.037	8.52	-8.123 ± 1.168	3.476 ± 0.424
PRF-fit source offset from KIC position	8.844 ± 1.198	7.38	-8.271 ± 1.297	3.134 ± 0.475
photometric centroid source offset	3.39 ± 0.07	47.92	-3.38 ± 0.07	0.25 ± 0.07

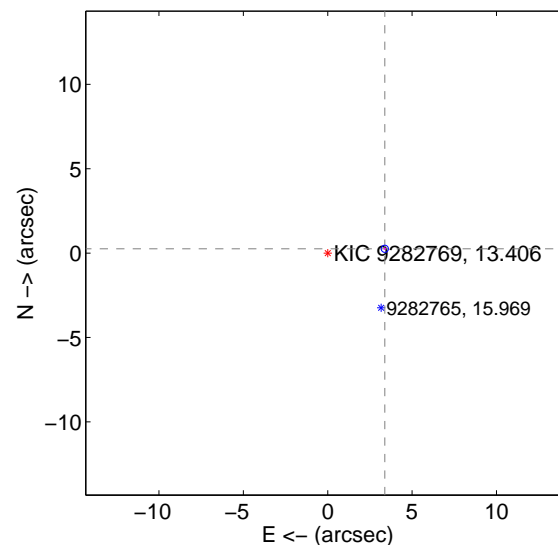
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

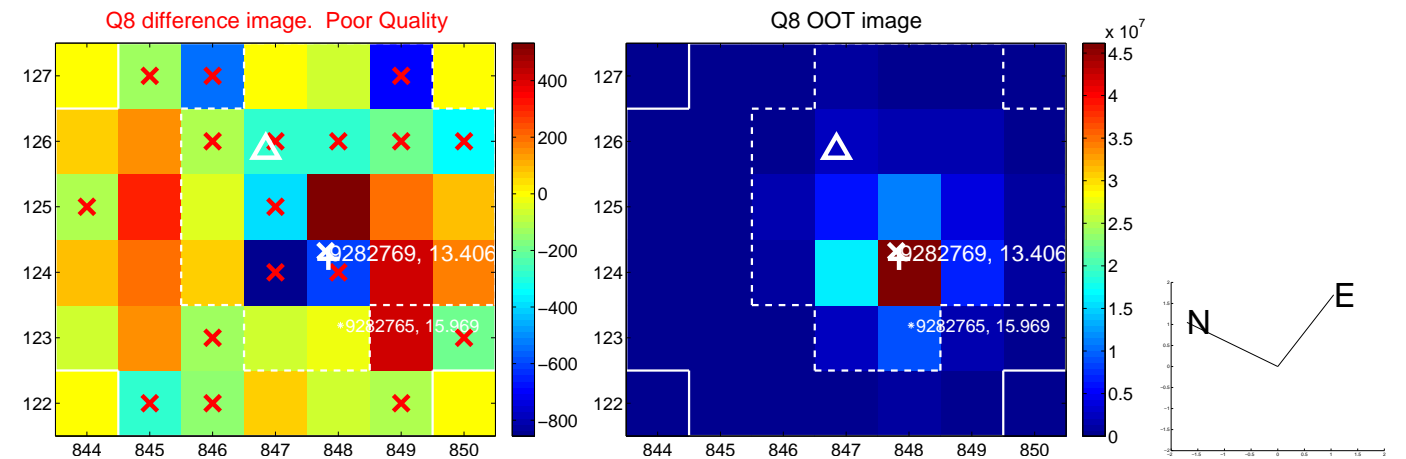
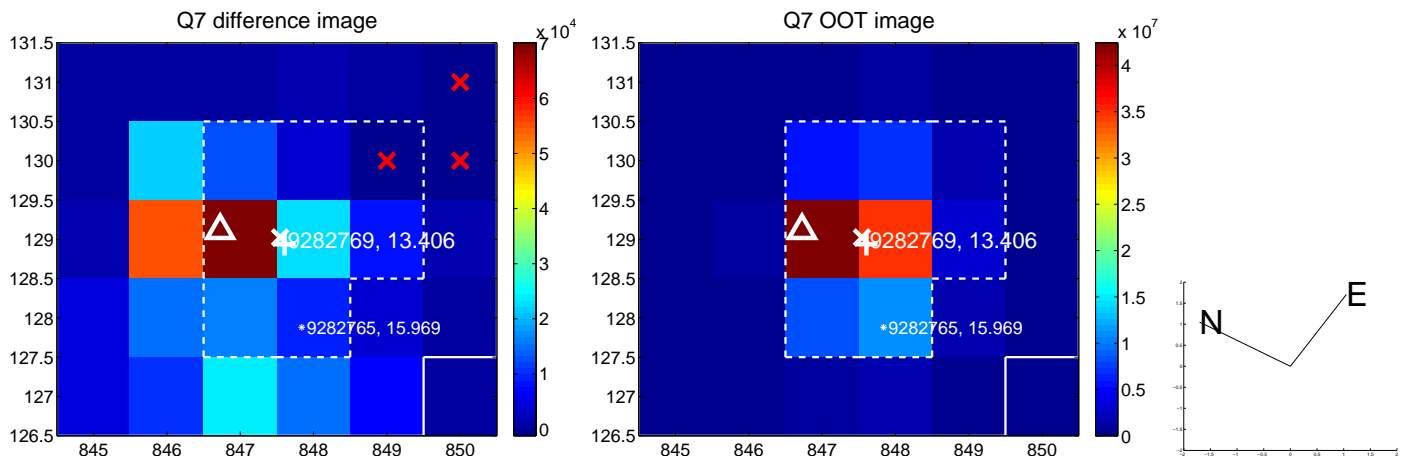
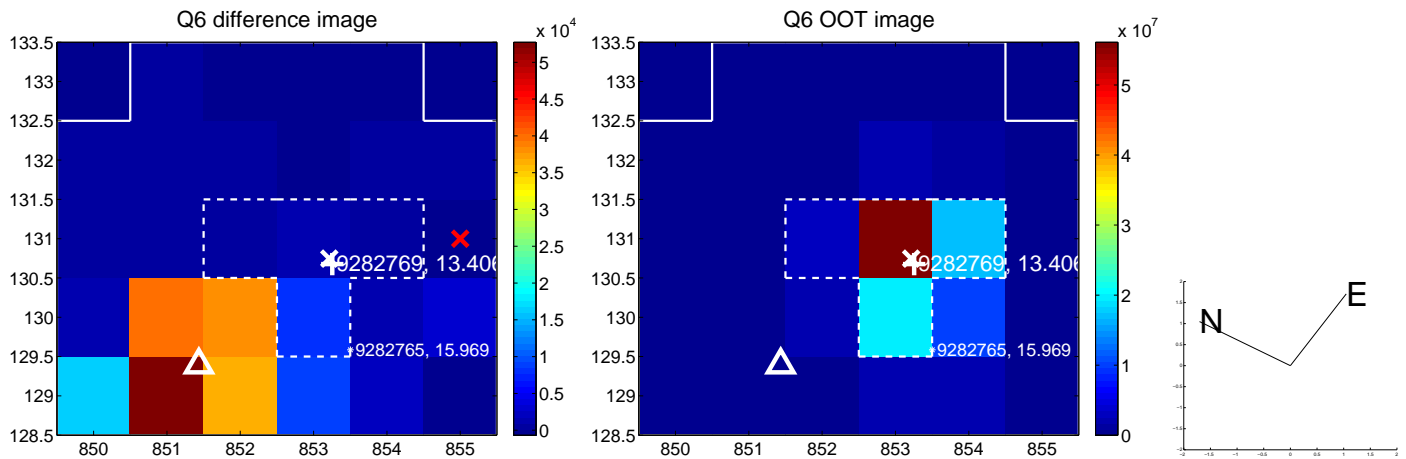
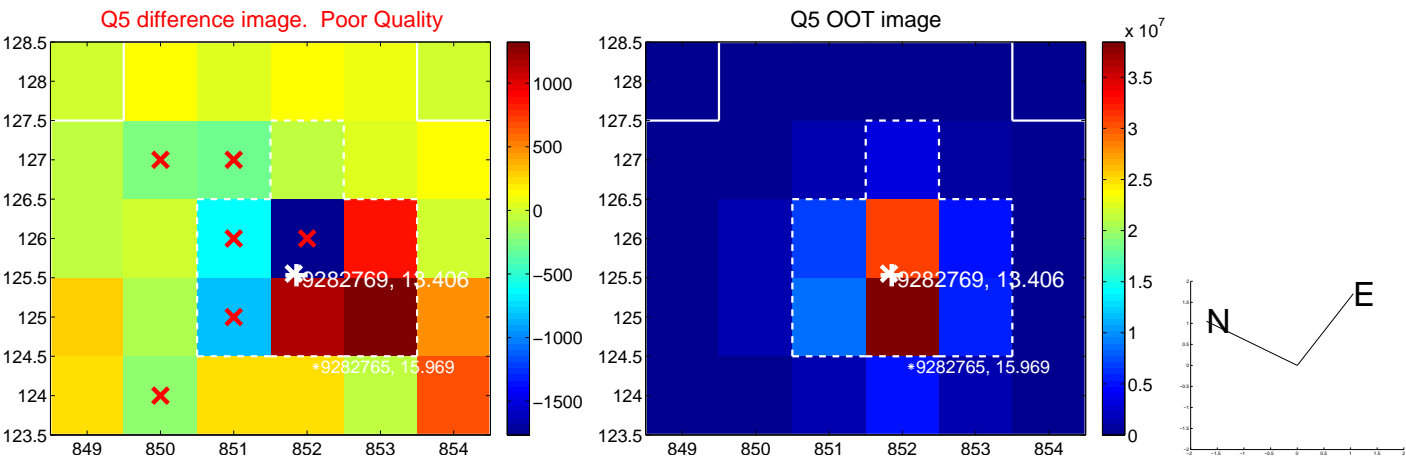


offset from photometric centroids

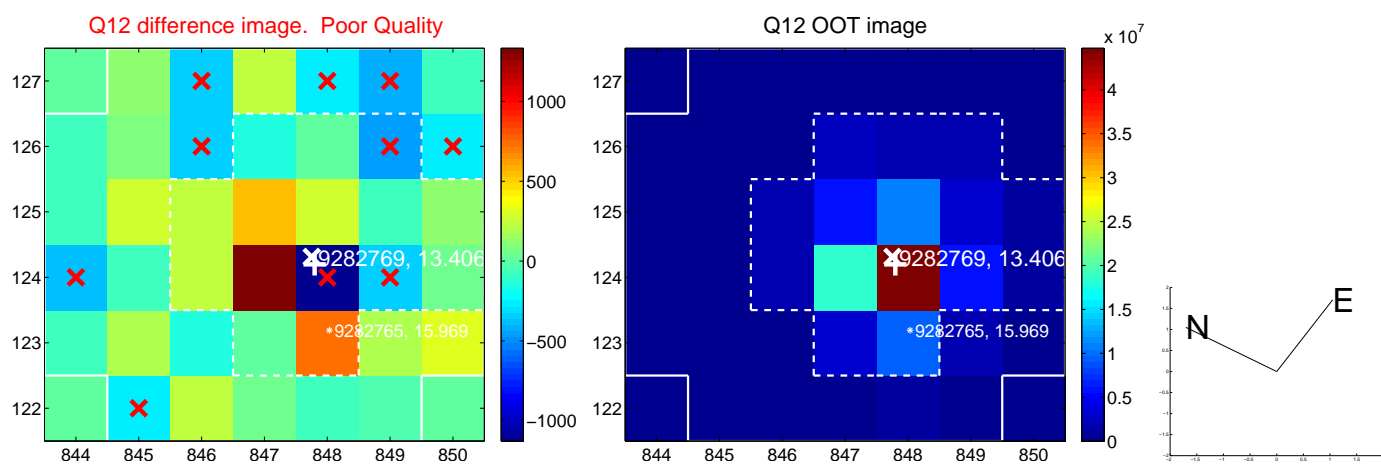
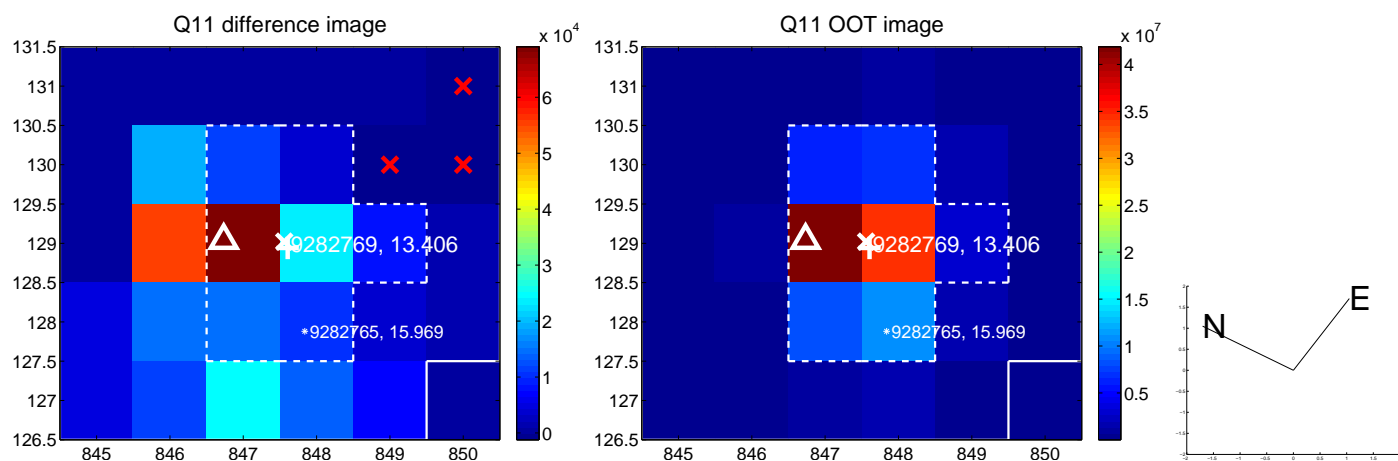
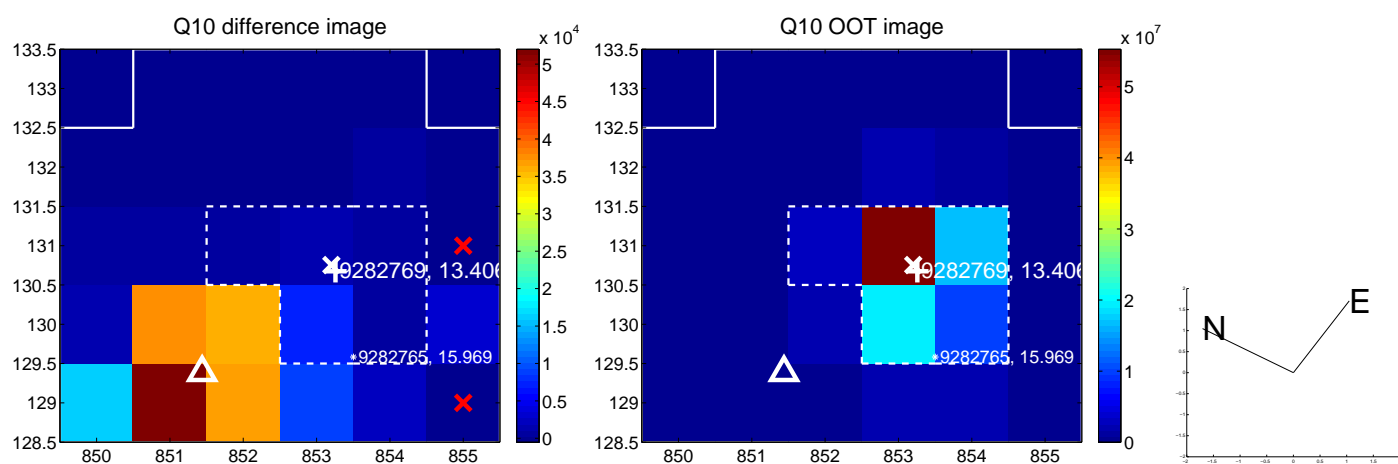
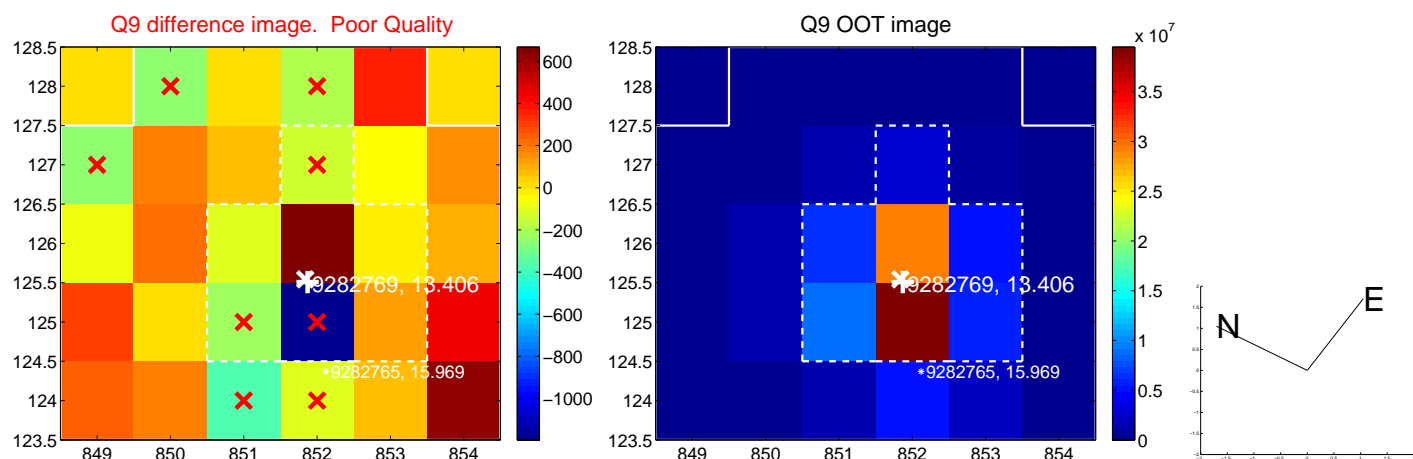


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

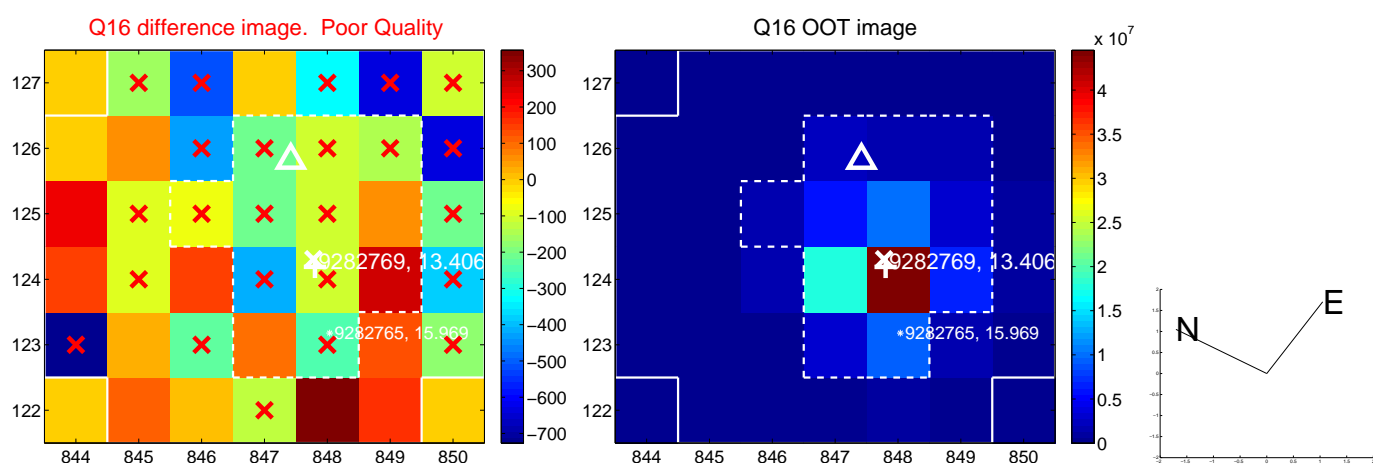
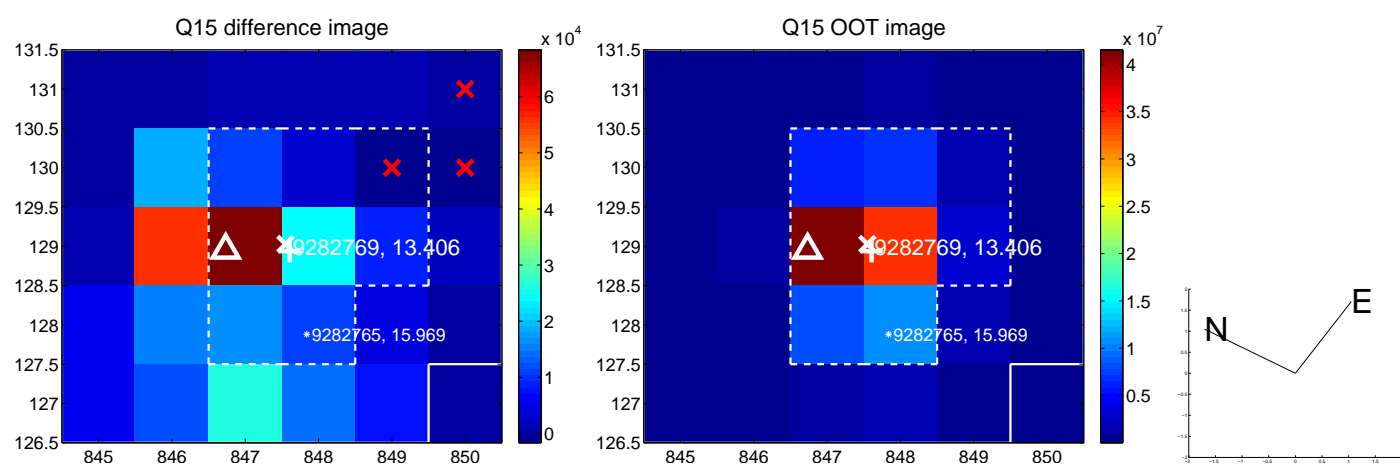
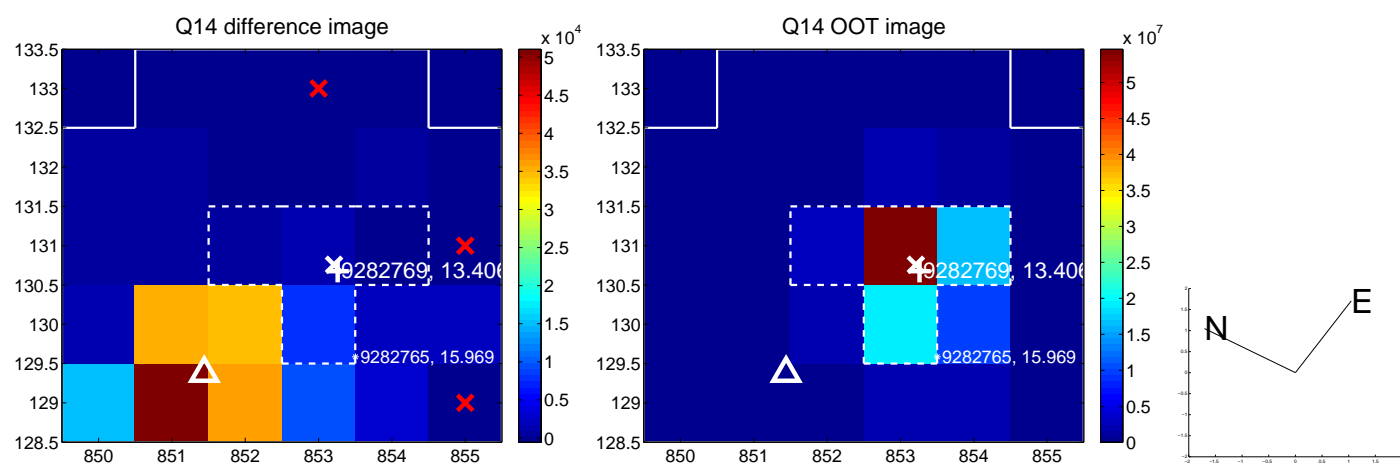
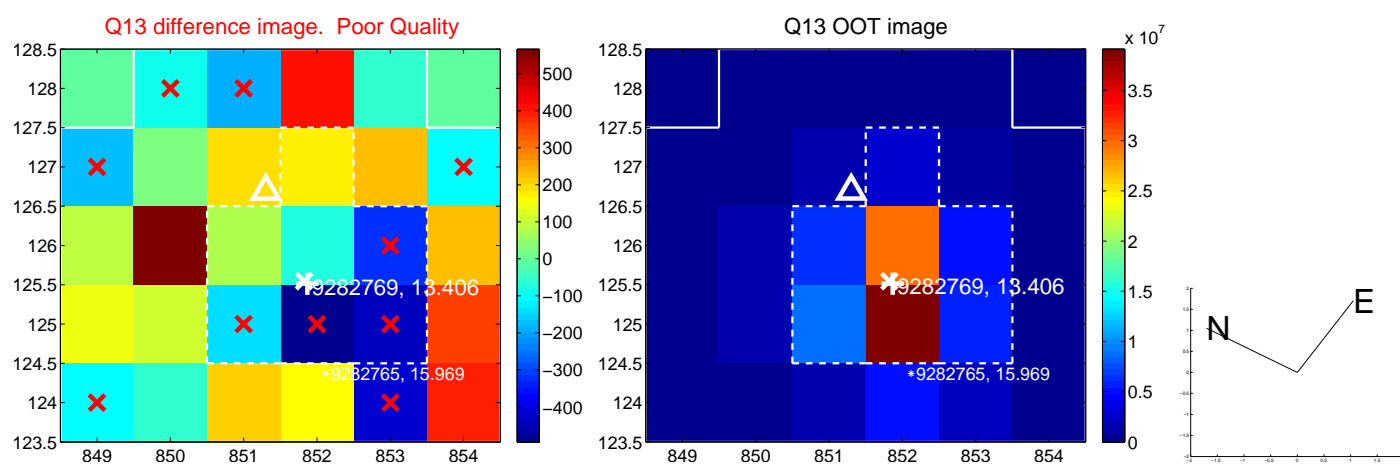
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



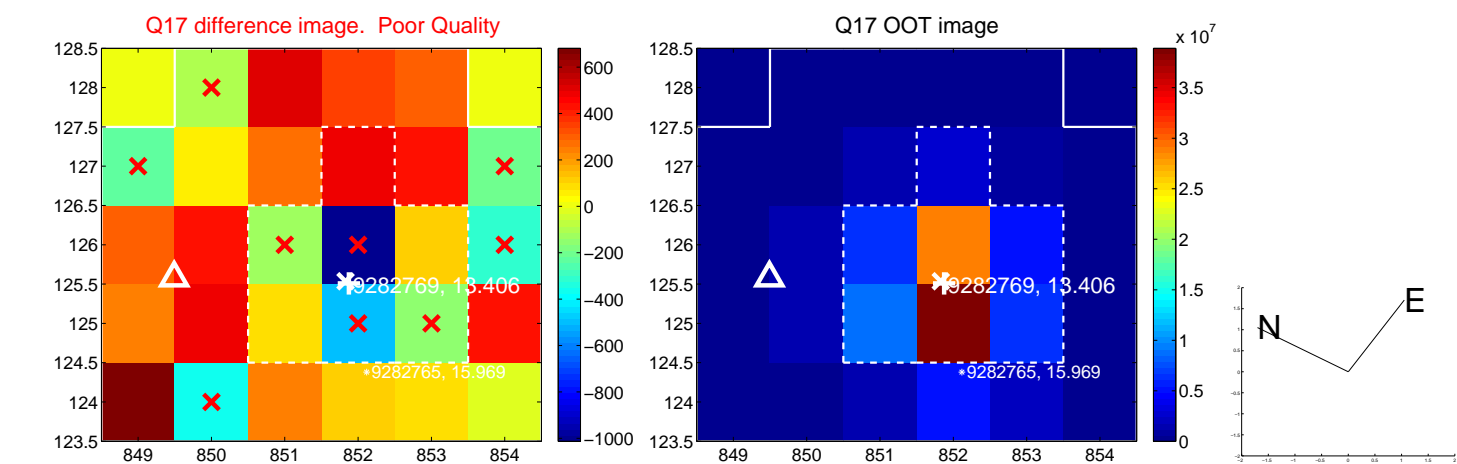
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



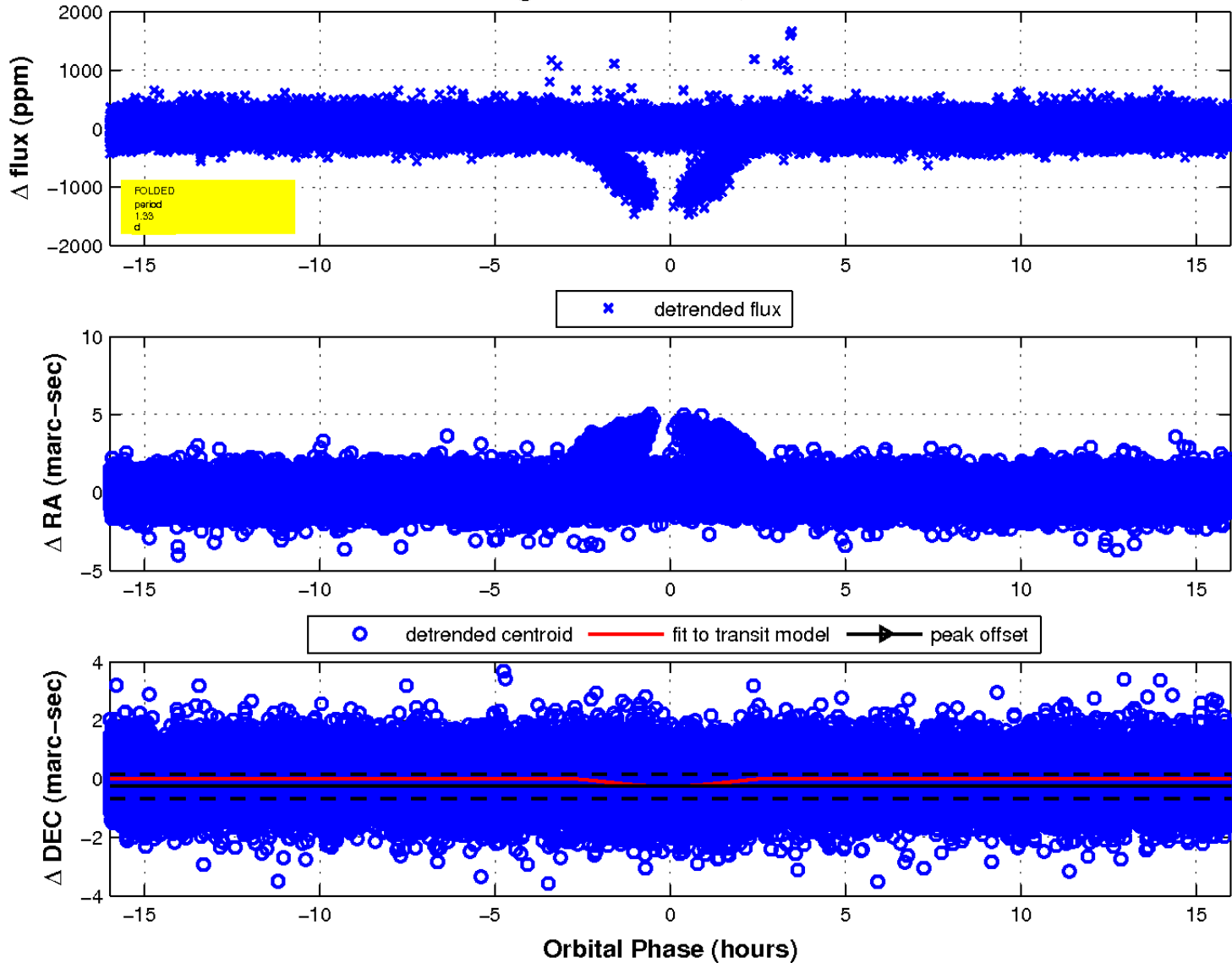
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

