

KIC 011649459

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})
011649459-01	OBS	No	1.376552	131.720378	20.1	4.500	8.4	7.9	1.92	7143	1.00	11935.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011649459-01	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.

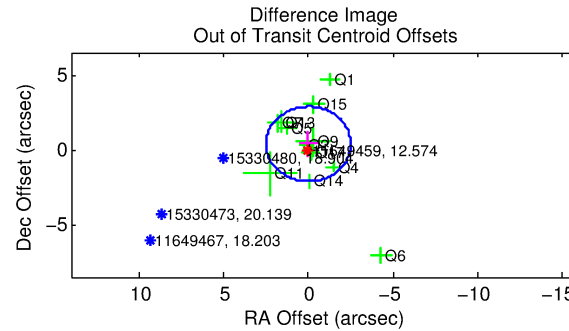
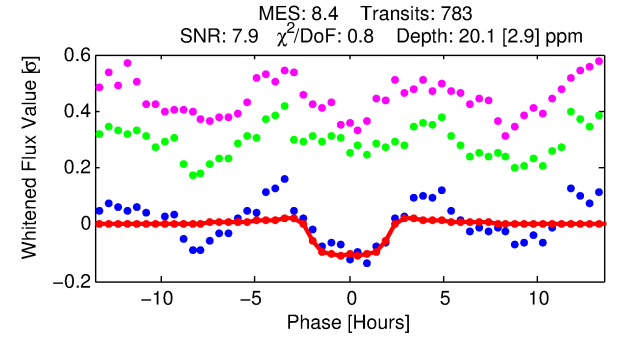
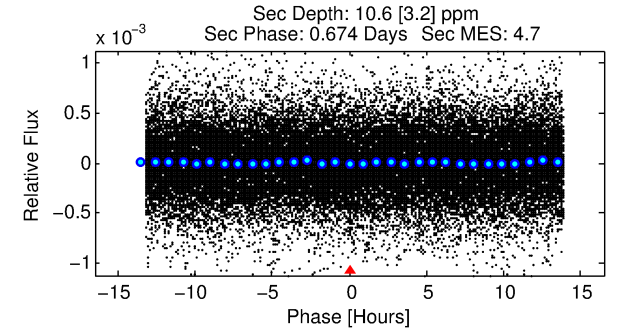
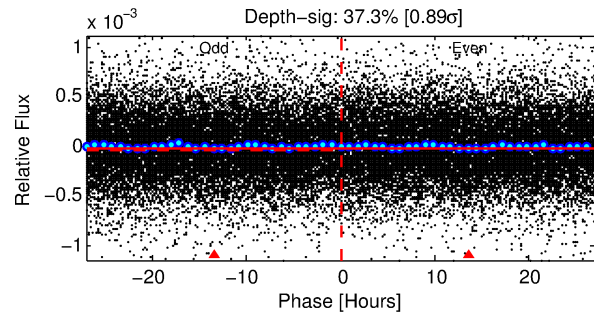
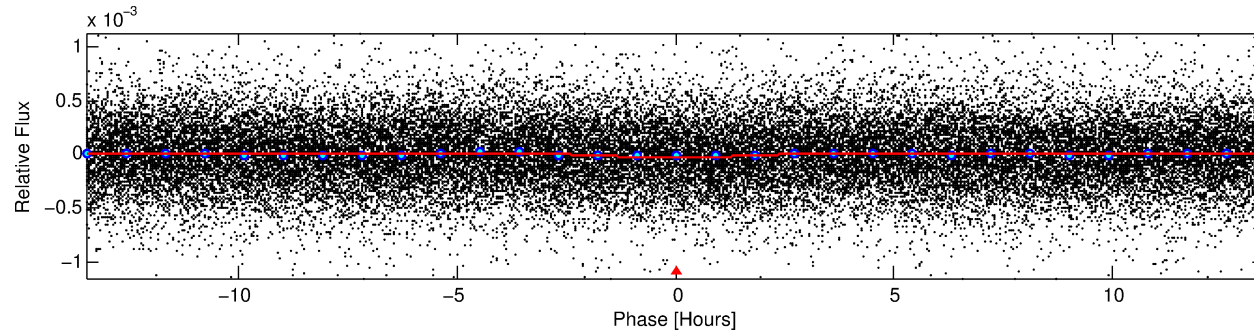
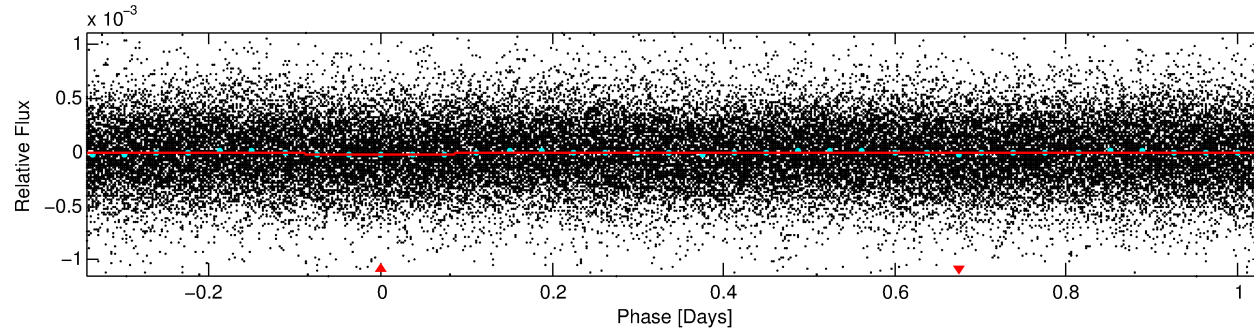
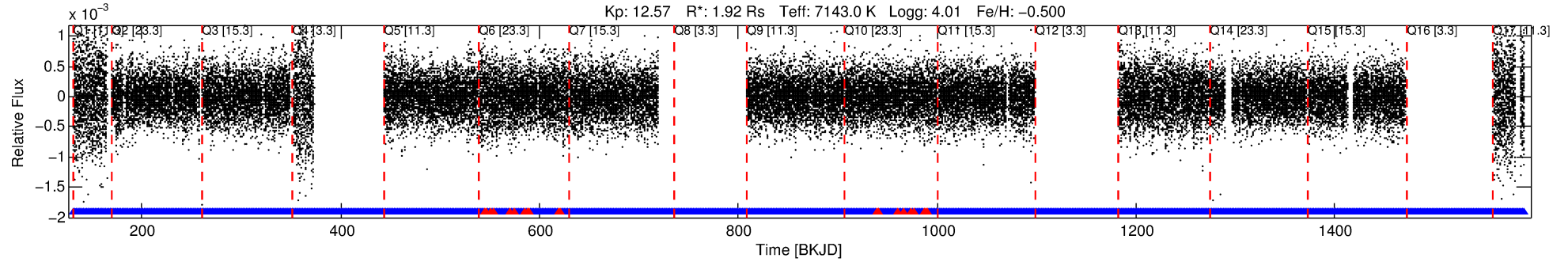
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011649459-01

No Significant Match Found

DV One-Page Summary

KIC: 11649459 Candidate: 1 of 1 Period: 1.377 d



DV Fit Results:

Period = 1.37655 [0.00002] d
Epoch = 131.7204 [0.0076] BKJD
Rp/R* = 0.0048 [0.0027]
a/R* = 1.40 [2.48]
b = 0.90 [0.77]
Seff = 11935.21 [6678.81]
Teq = 2665 [373] K
Rp = 1.00 [0.68] Re
a = 0.0269 [0.0092] AU
Ag = 4.23 [5.46] [0.59 σ]
Teffp = 5908 [1757] K [1.81 σ]

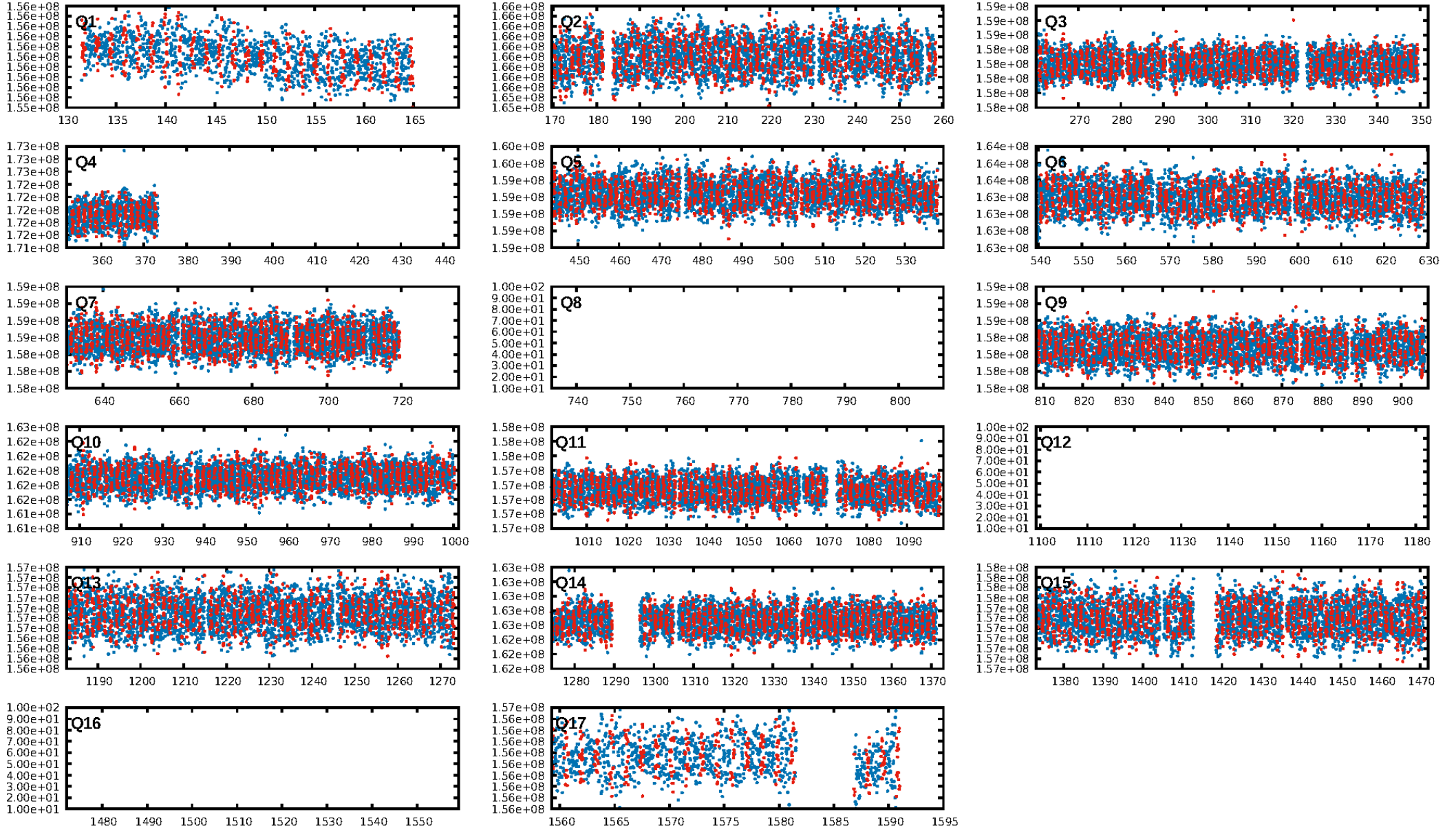
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.85e-20
RollingBand-fgt: 0.97 [702/722]
GhostDiagnostic-chr: -6.438
Centroid-sig: 29.1%
Centroid-so: 1.014 arcsec [0.81 σ]
OotOffset-rm: 0.380 arcsec [0.46 σ]
KicOffset-rm: 0.359 arcsec [0.39 σ]
OotOffset-st: 3/3/1/5 [12]
KicOffset-st: 3/3/1/5 [12]
DiffImageQuality-fgm: 0.42 [5/12]
DiffImageOverlap-fno: 1.00 [14/14]

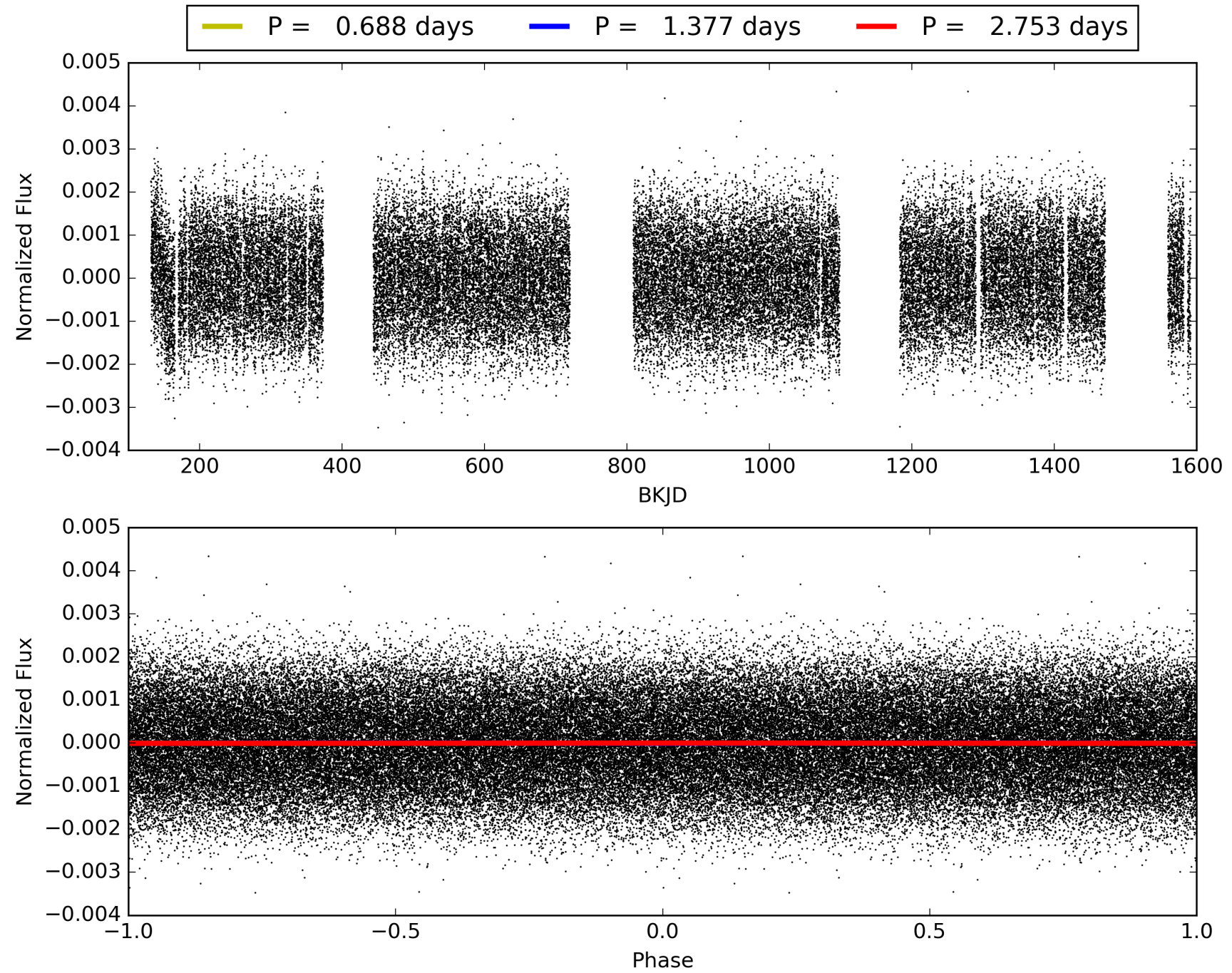
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 22:17:23 Z

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

TCE 011649459-01, PDC Light Curves

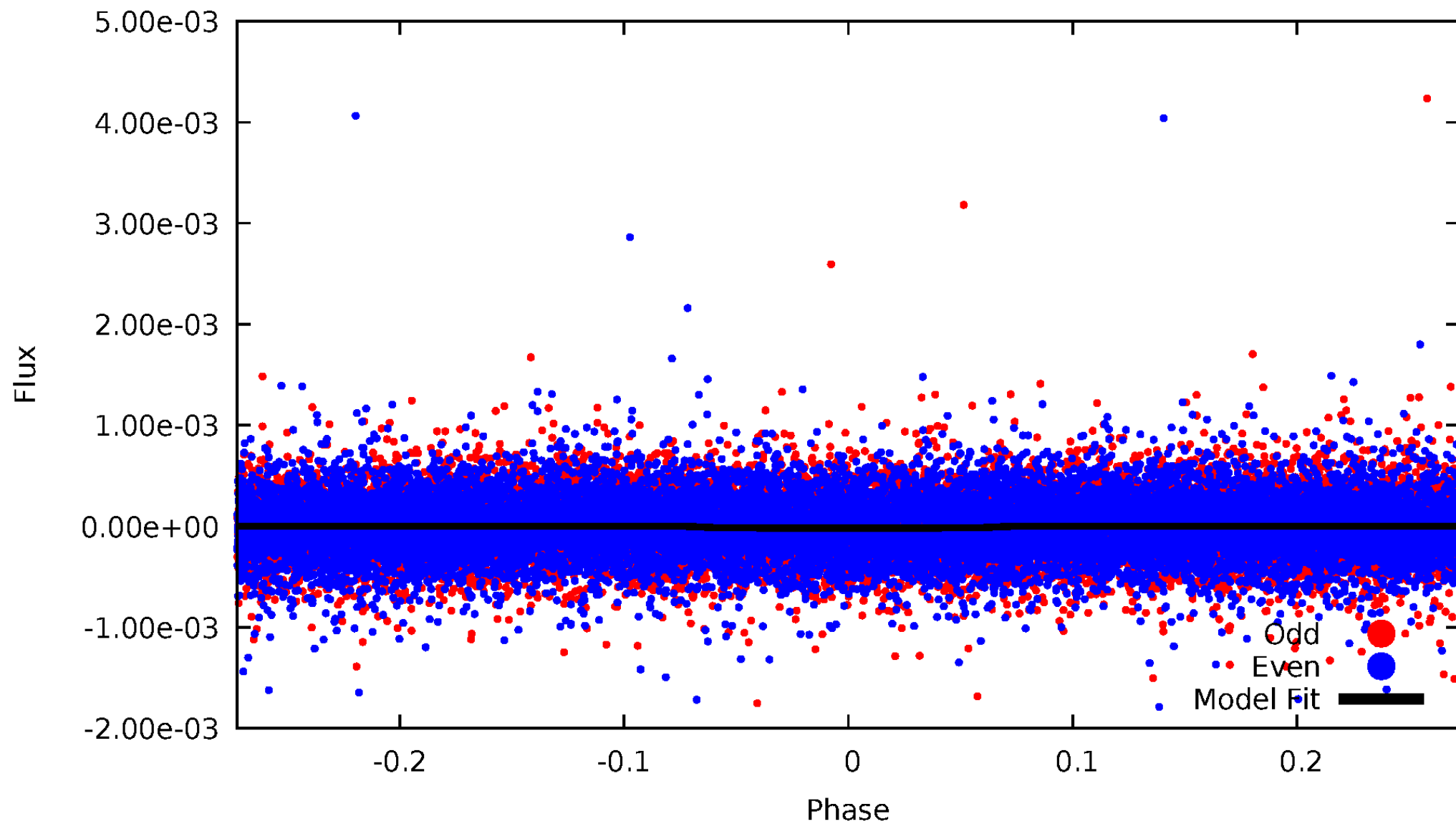


TCE 011649459-01



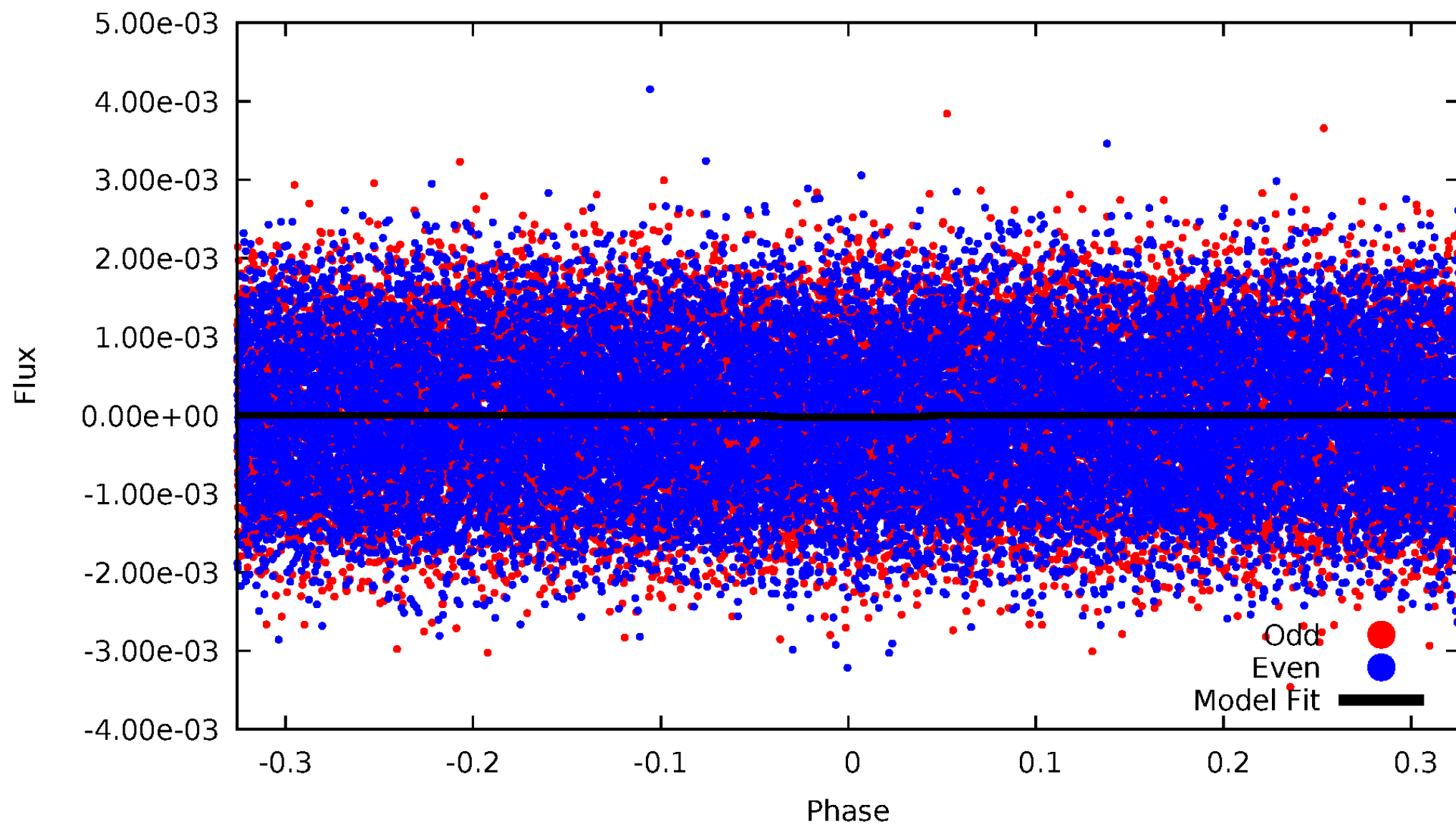
DV Odd/Even

TCE 011649459-01



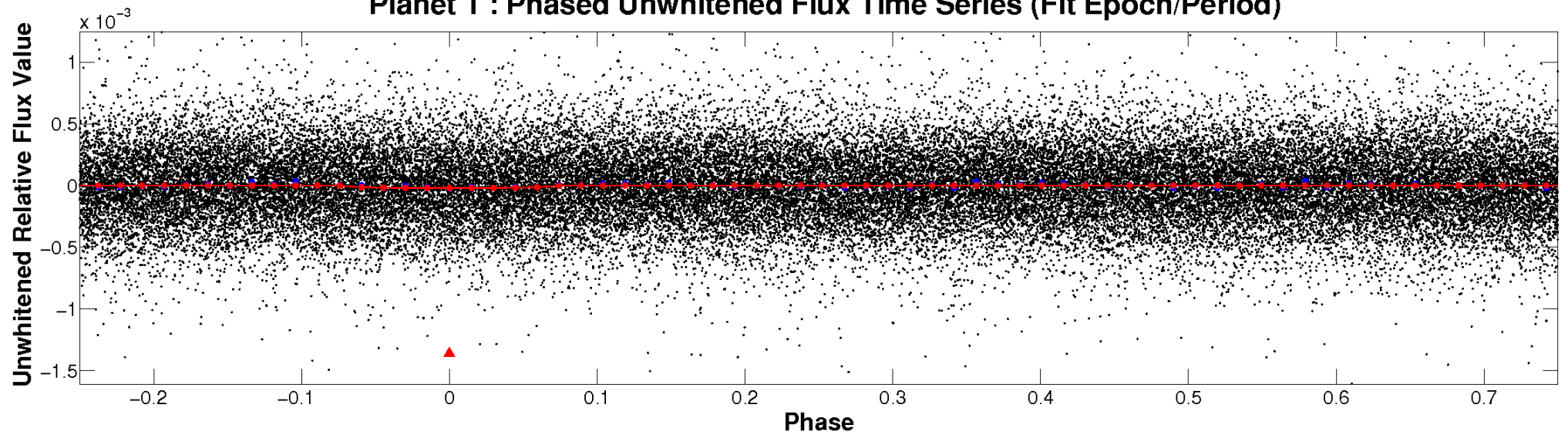
ALT Odd/Even

TCE 011649459-01

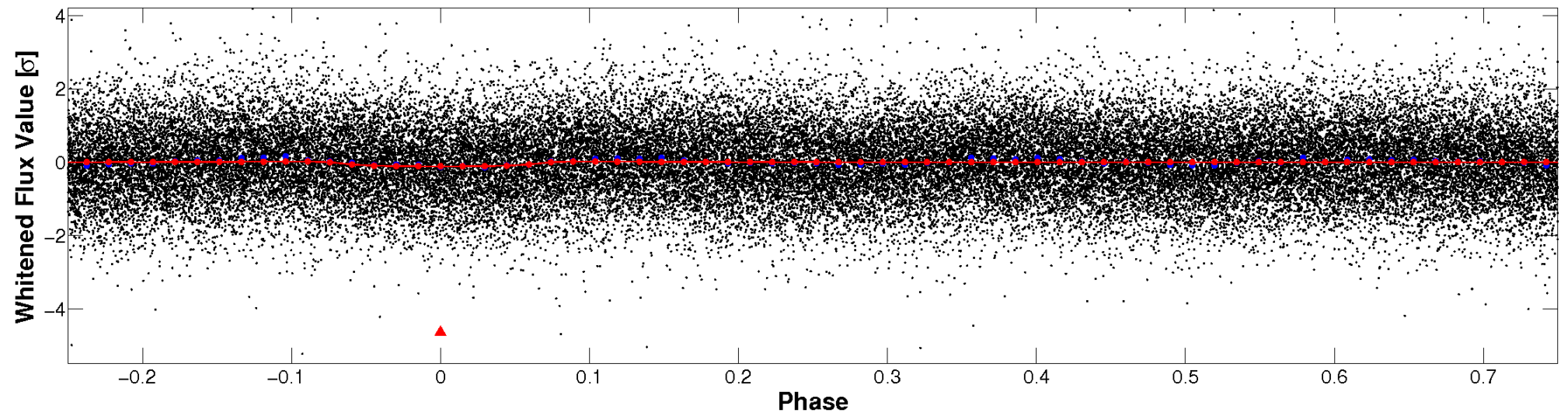


Non-Whitened Vs. Whitened Light Curve

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

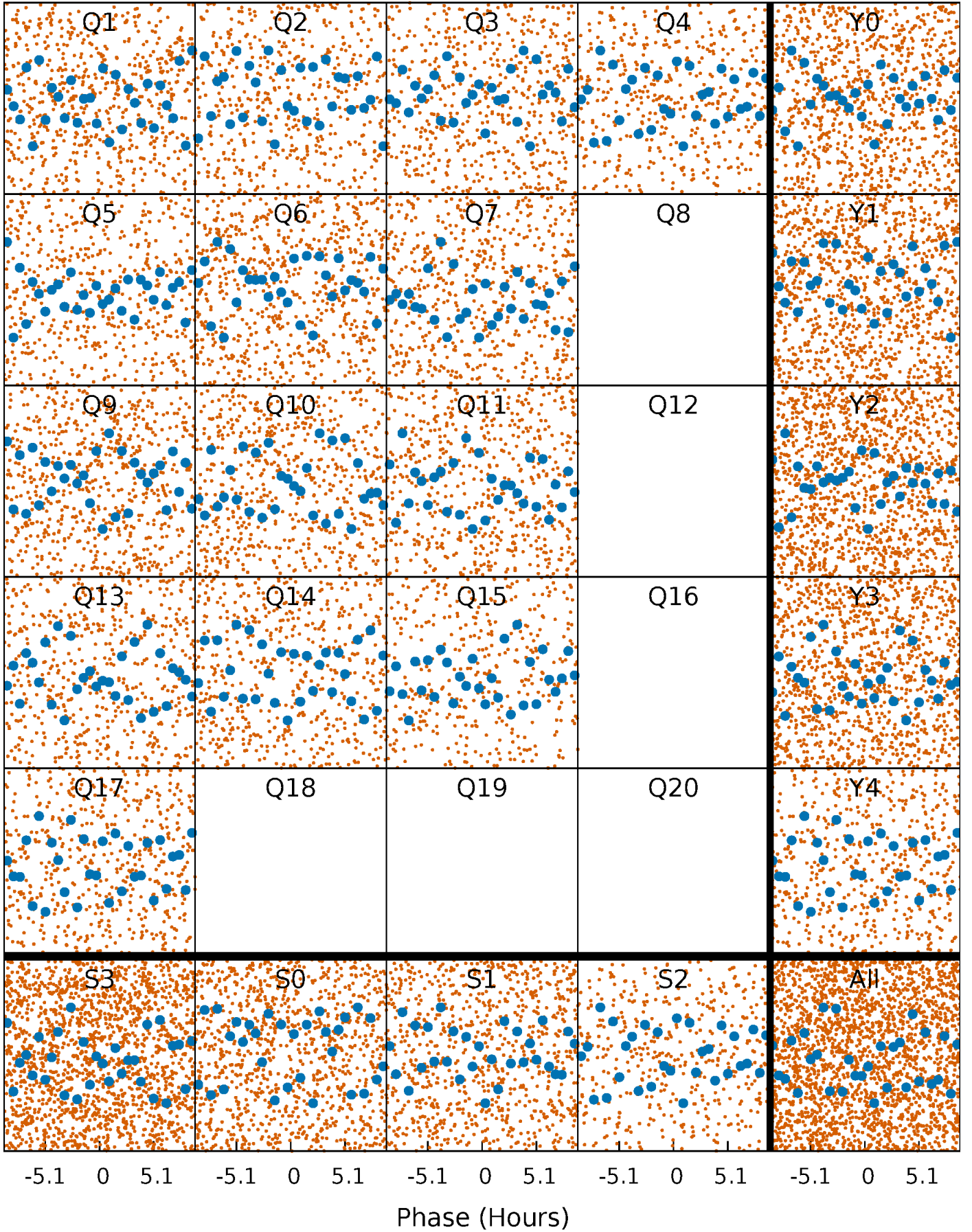


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



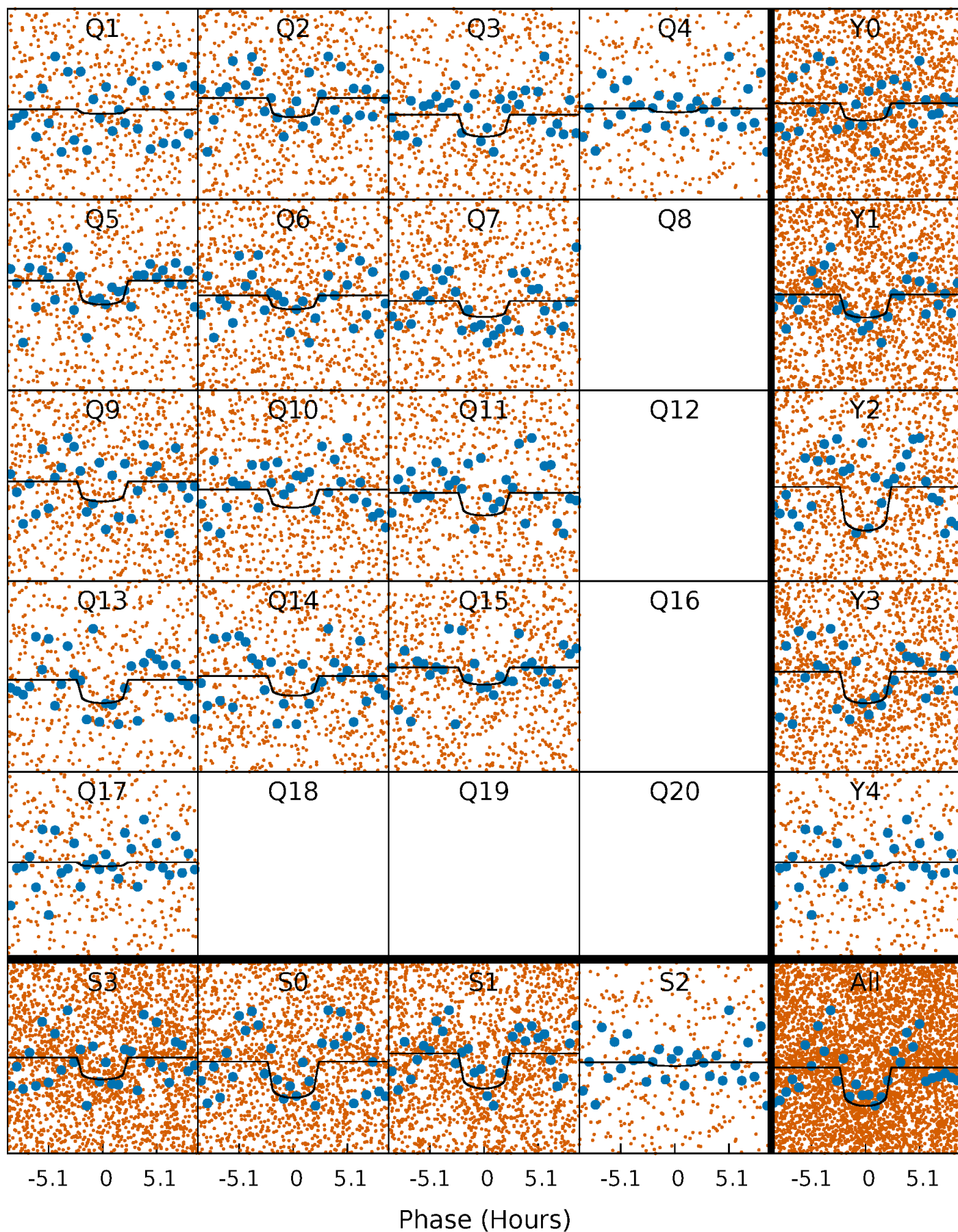
PDC Quarter-Phased Transit Curves

TCE 011649459-01 P= 1.376552 Days $T_0=131.720378$ (BKJD)



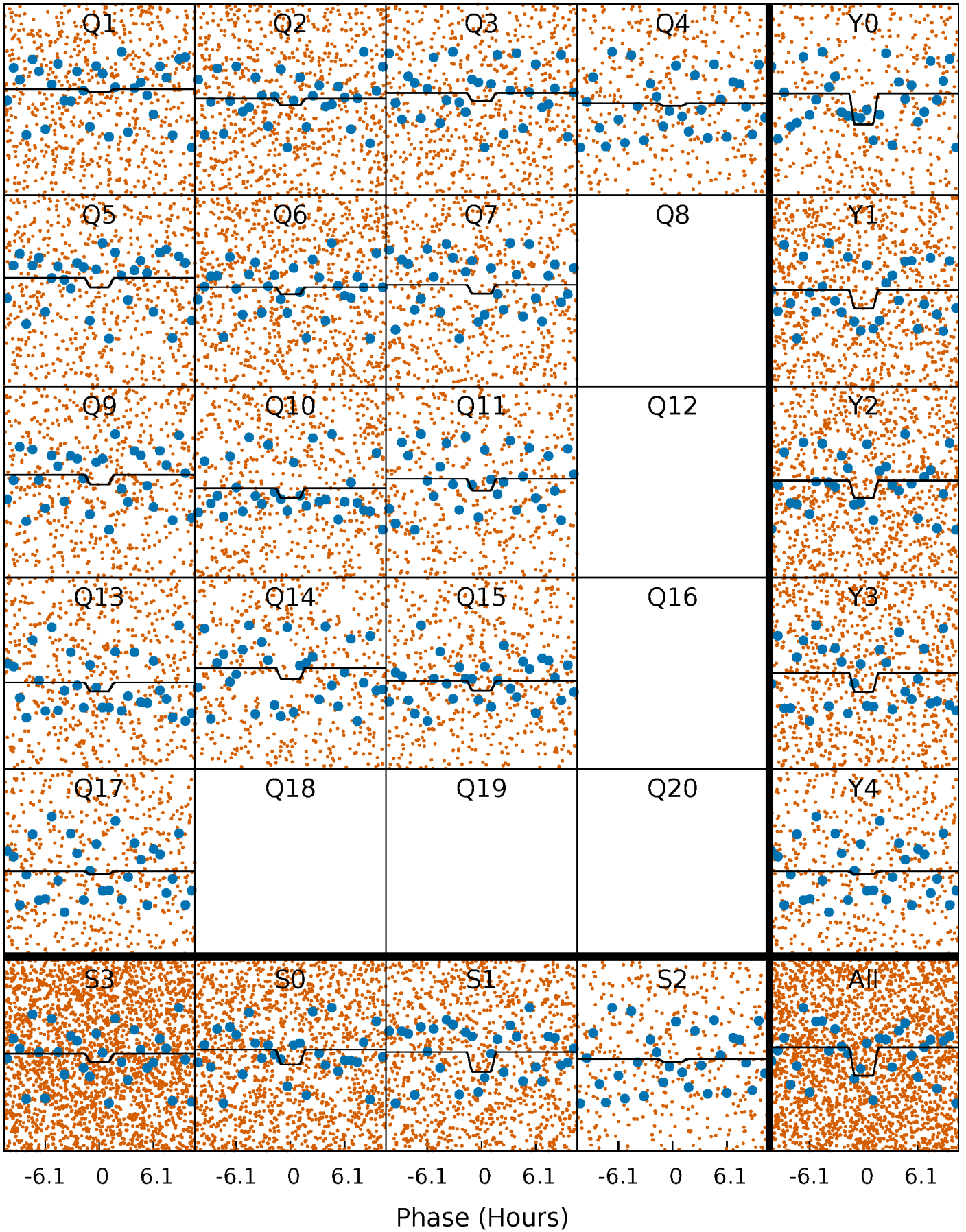
DV Quarter-Phased Transit Curves

TCE 011649459-01 P= 1.376552 Days $T_0=131.720378$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

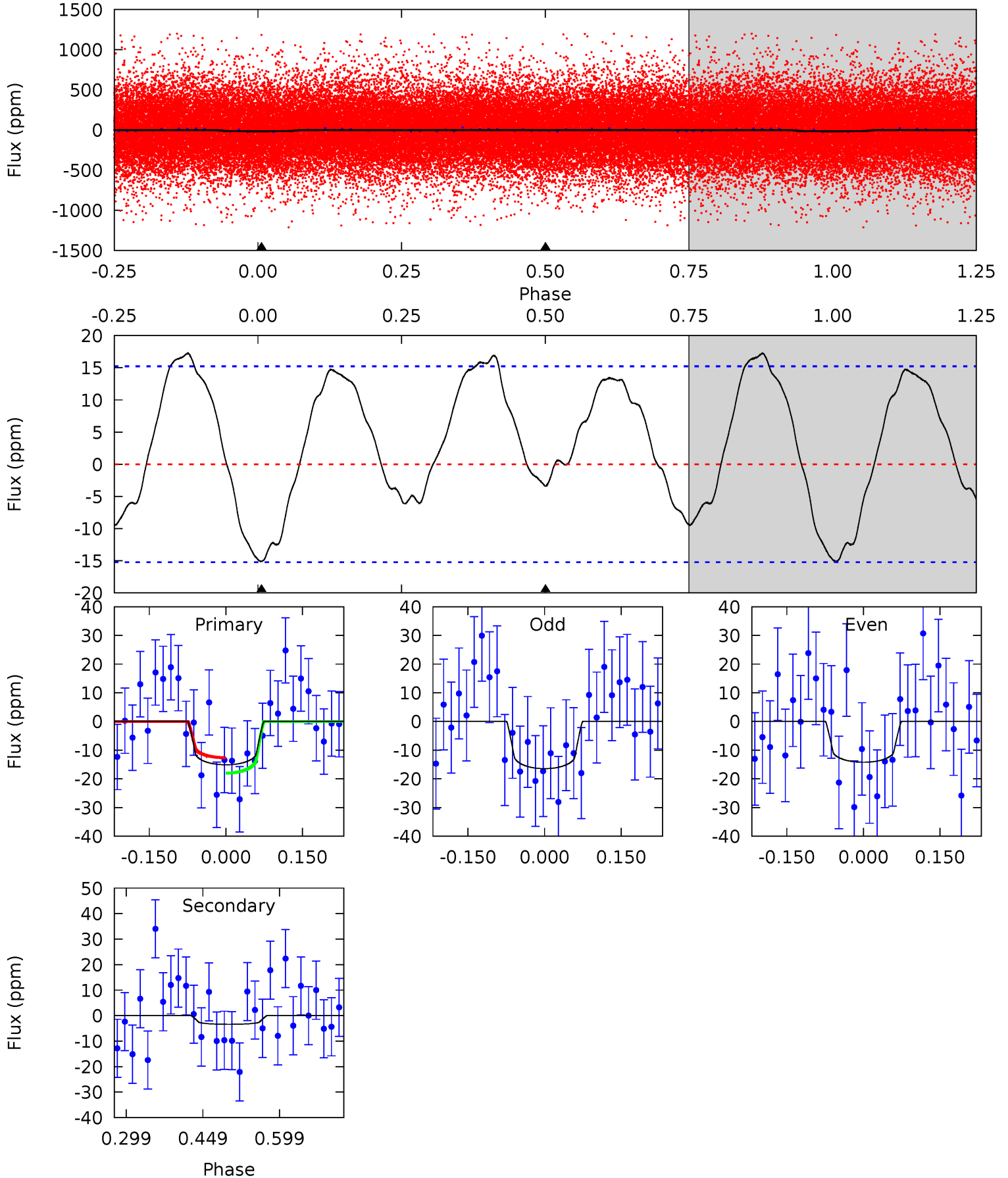
TCE 011649459-01 P= 1.376585 Days $T_0=131.714337$ (BKJD)



DV Model-Shift Uniqueness Test

011649459-01, P = 1.376552 Days, E = 130.343826 Days

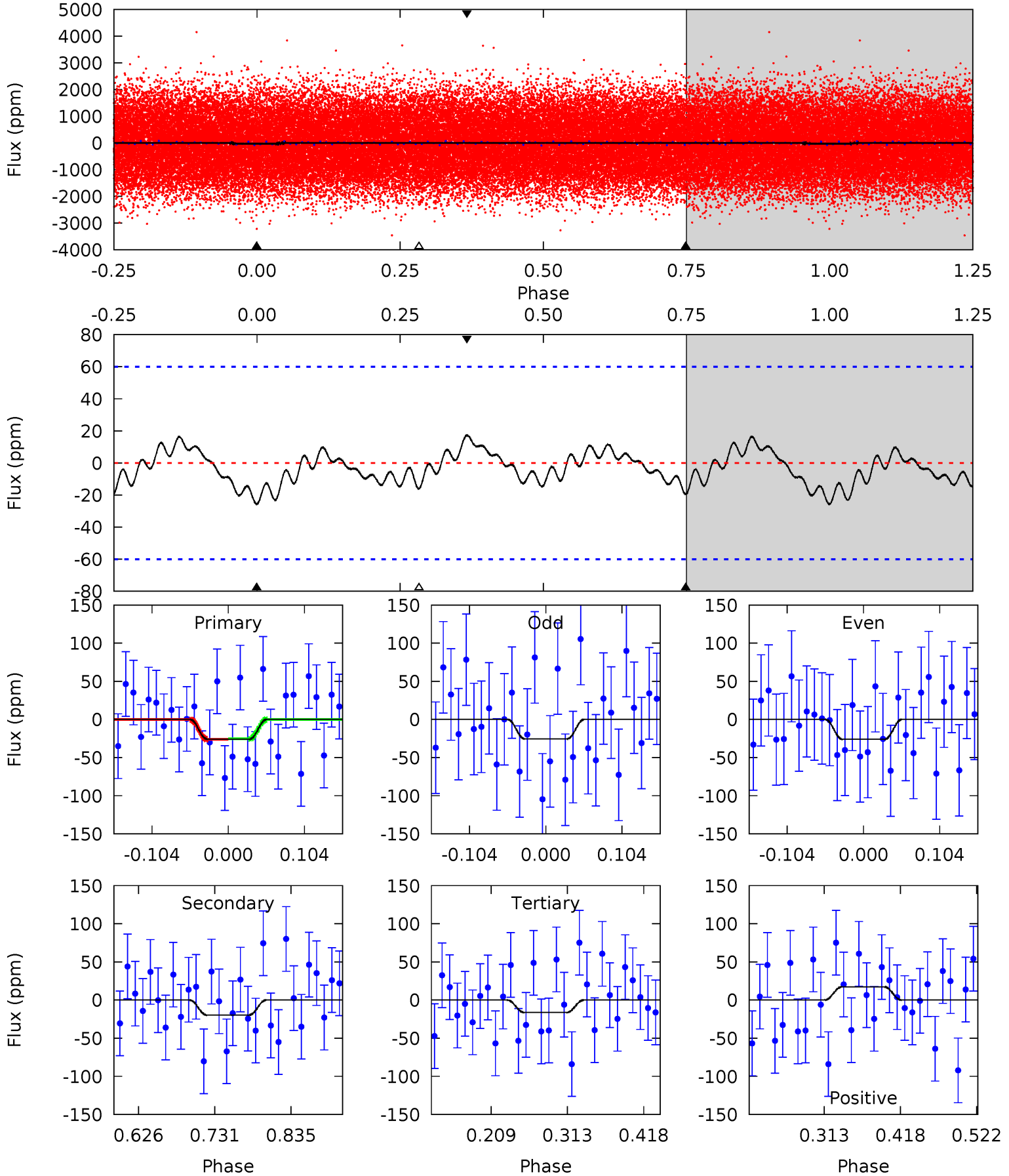
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.44	1.00	0	0	4.48	1.44	2.06	4.44	4.44	1.00	1.00	0.33	0.85	0.53	0.80



Alt Model-Shift Uniqueness Test

011649459-01, P = 1.376585 Days, E = 130.337752 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.96	1.49	1.24	1.32	4.56	1.62	0.63	0.72	0.64	0.25	0.17	0.02	1.01	0.40	0.03



Stellar Parameters For KIC 011649459

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7143^{+225}_{-300}	$4.006^{+0.308}_{-0.132}$	$-0.500^{+0.250}_{-0.300}$	$1.924^{+0.477}_{-0.715}$	$1.368^{+0.182}_{-0.251}$	$0.271^{+0.588}_{-0.104}$
	+3%/-4%	+8%/-3%	+50%/-60%	+25%/-37%	+13%/-18%	+217%/-38%
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 011649459-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-3 ± 3	$0.97^{+0.61}_{-0.50}$	3660^{+278}_{-335}	4198^{+2120}_{-7696}	$1.289^{+5.565}_{-1.321}$
Alt.	-20 ± 13	$0.99^{+0.67}_{-0.49}$	3650^{+280}_{-361}	6308^{+3742}_{-1787}	$7.132^{+25.642}_{-5.525}$

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 $A_{obs} \gg 1.0$

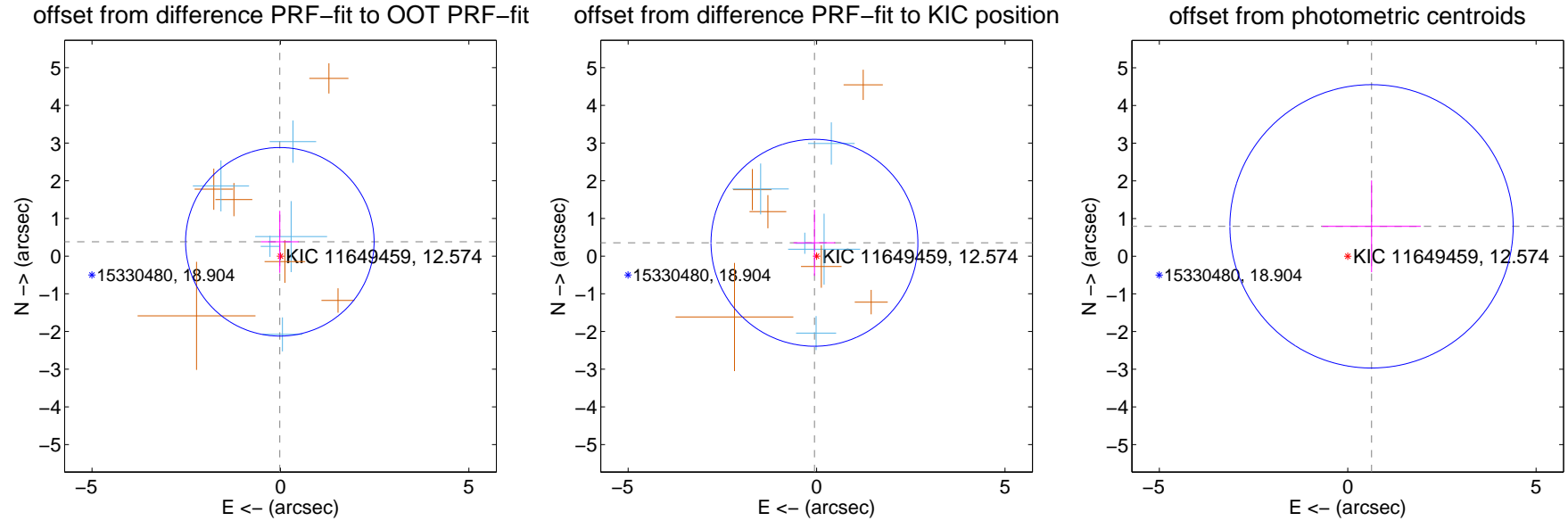
DV Centroid Data

Supplemental centroid analysis for 011649459-01. Kepler magnitude: 12.57. Transit SNR 7.88

There are 5 quarters with good PRF difference image offsets

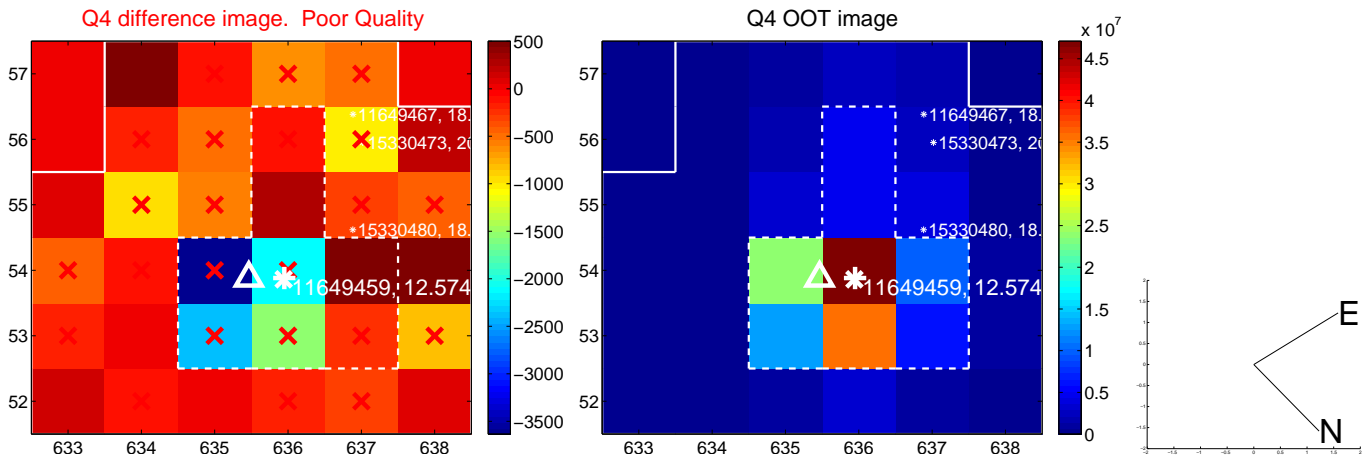
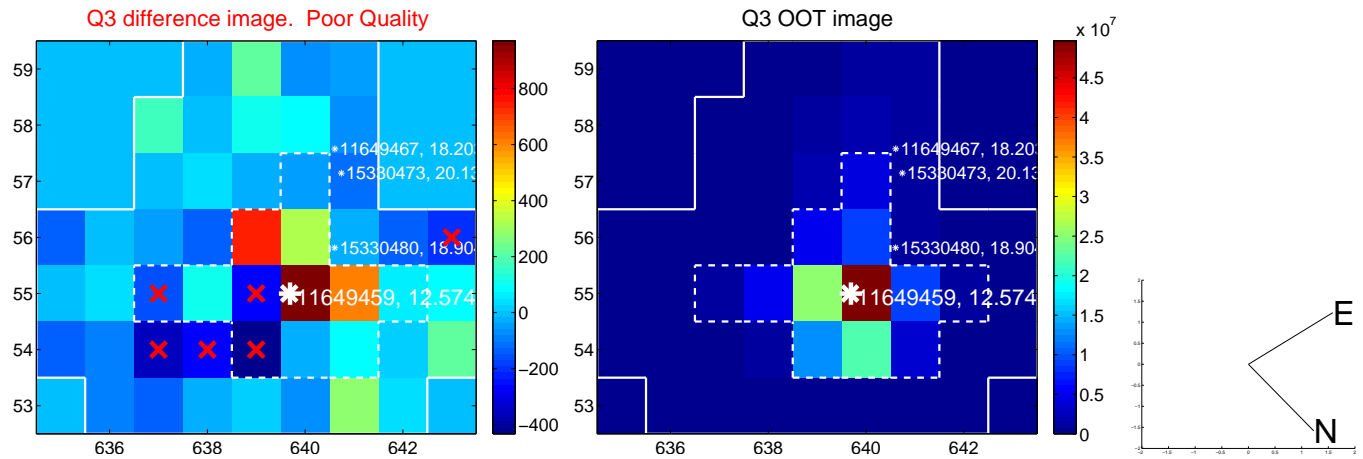
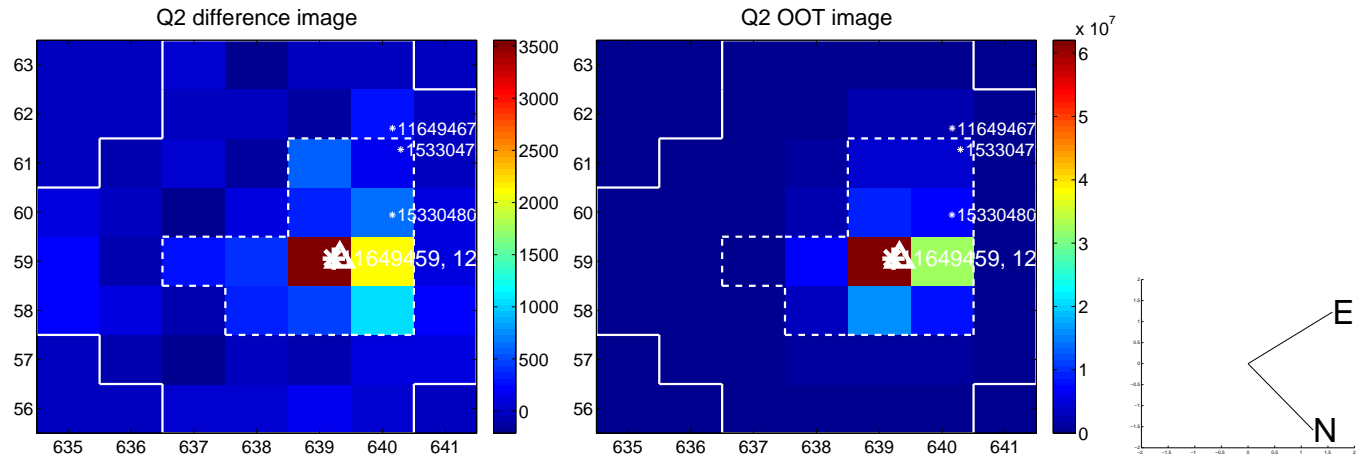
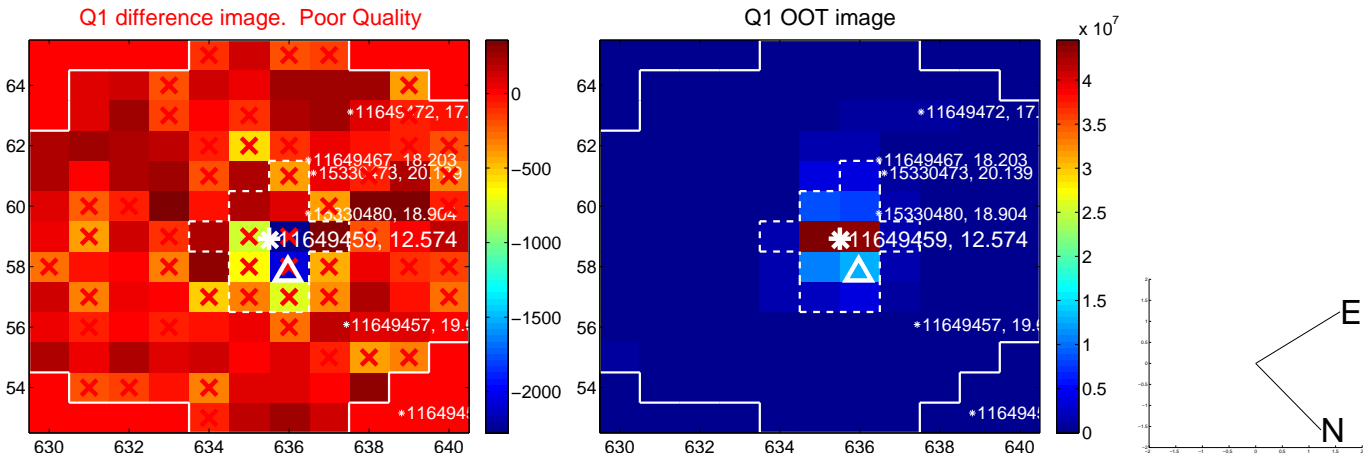
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.380 ± 0.834	0.46	0.017 ± 0.501	0.380 ± 0.823
PRF-fit source offset from KIC position	0.359 ± 0.915	0.39	0.056 ± 0.554	0.355 ± 0.875
photometric centroid source offset	1.01 ± 1.25	0.81	-0.63 ± 1.31	0.79 ± 1.22

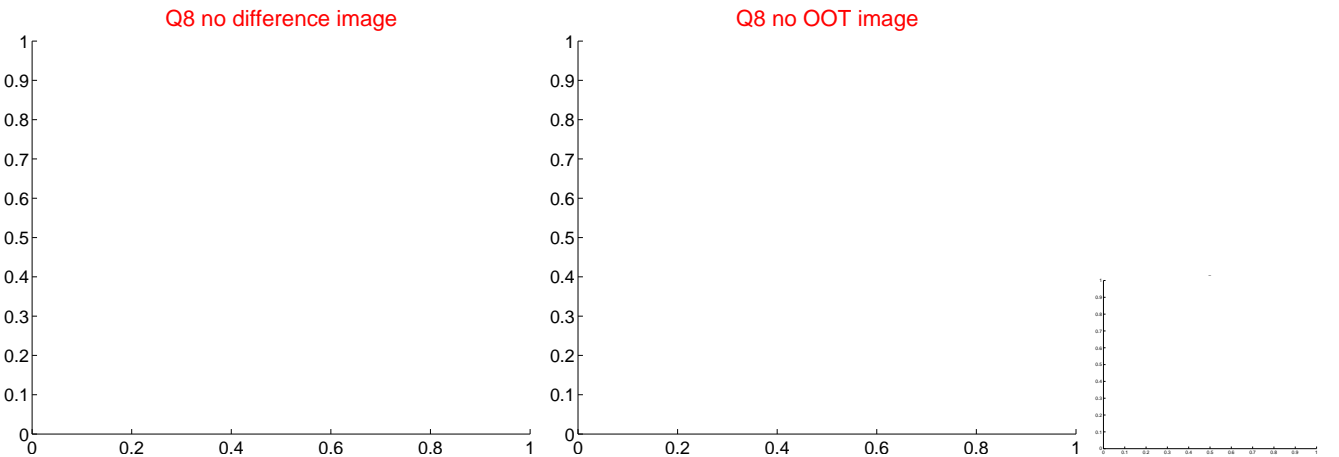
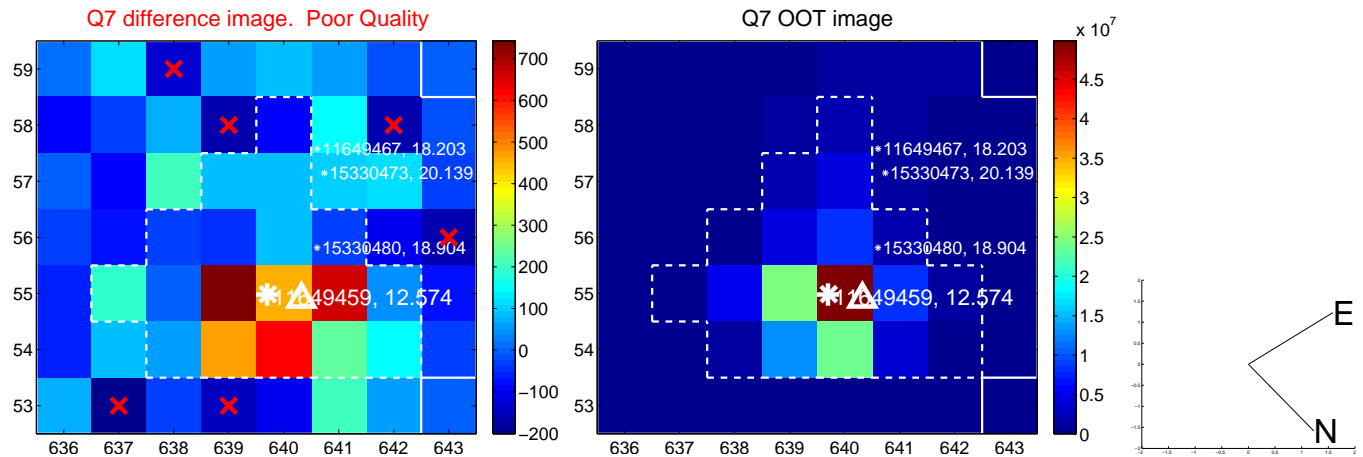
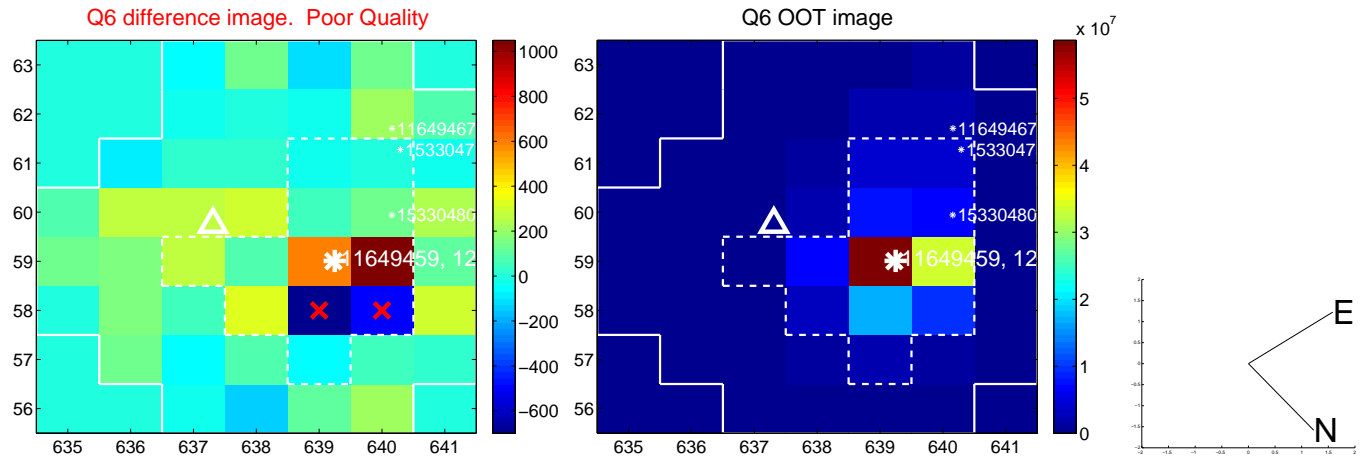
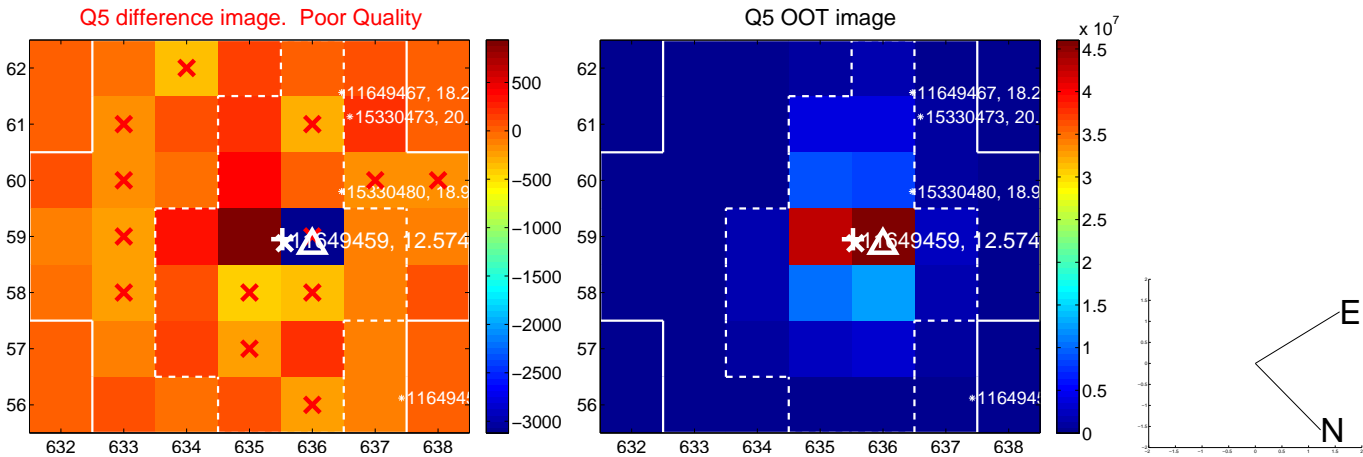


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

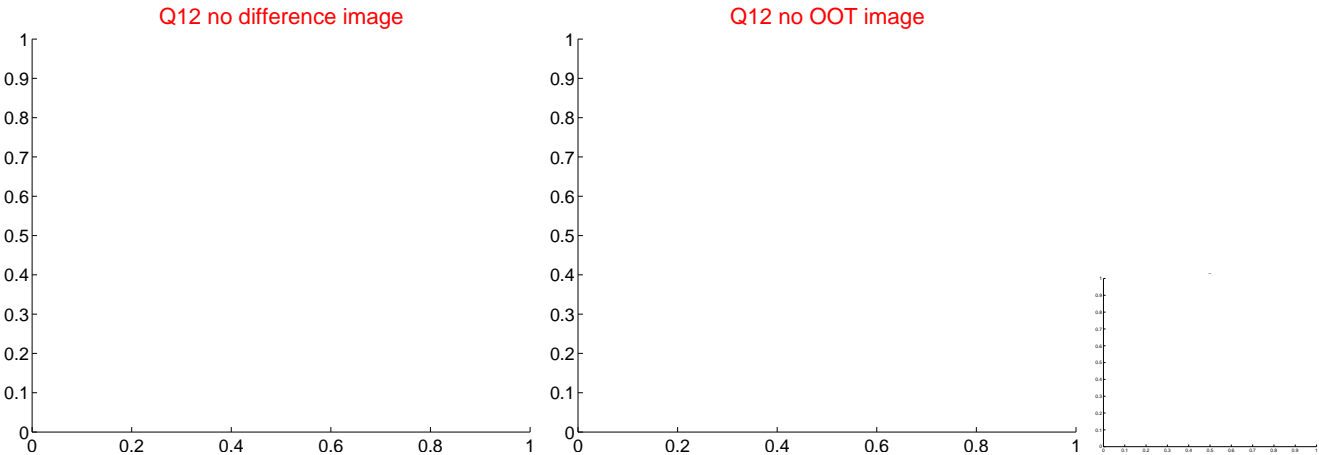
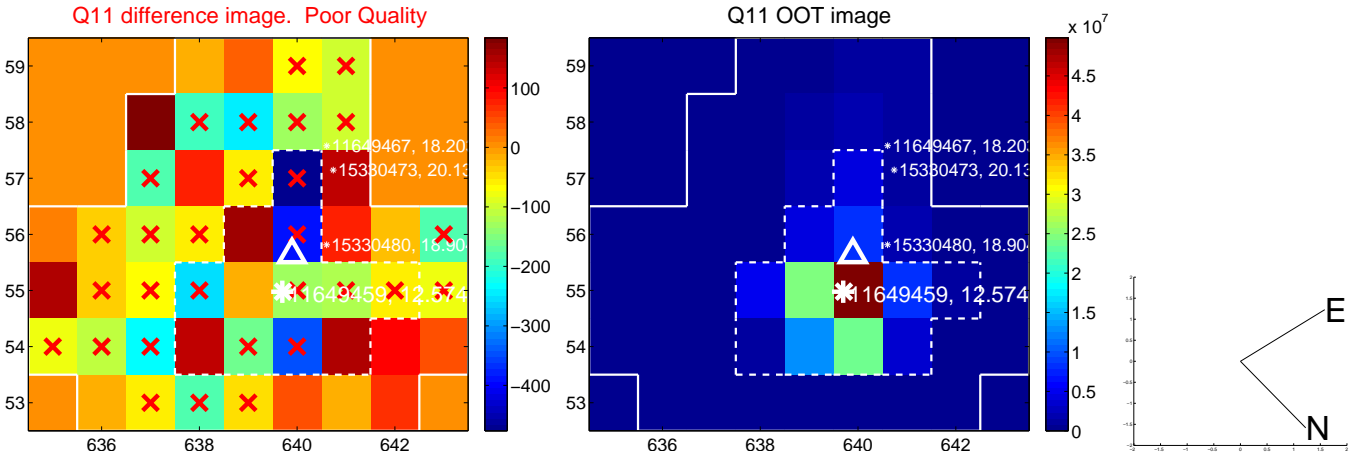
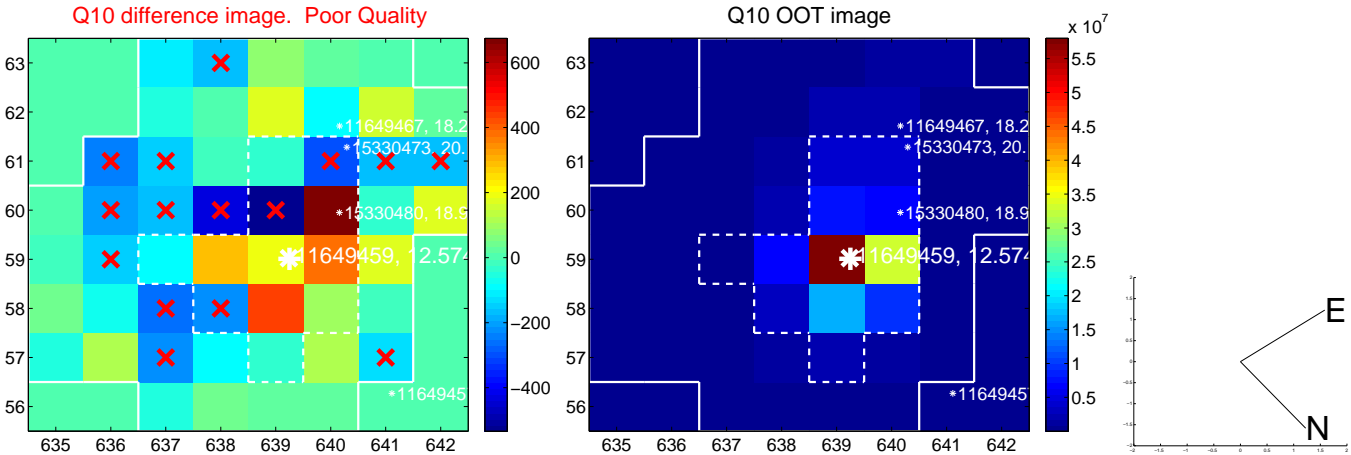
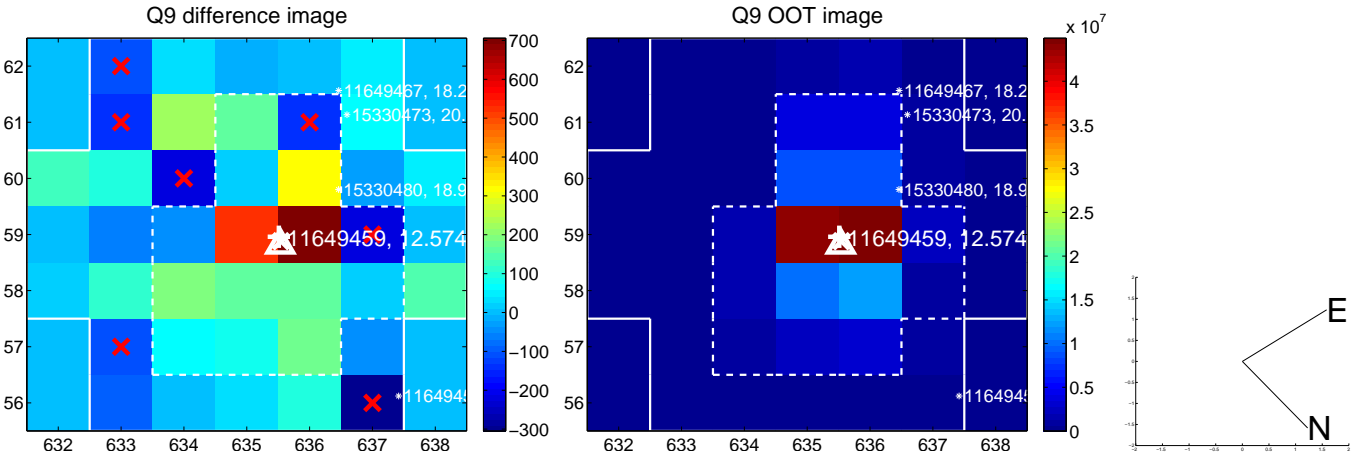
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



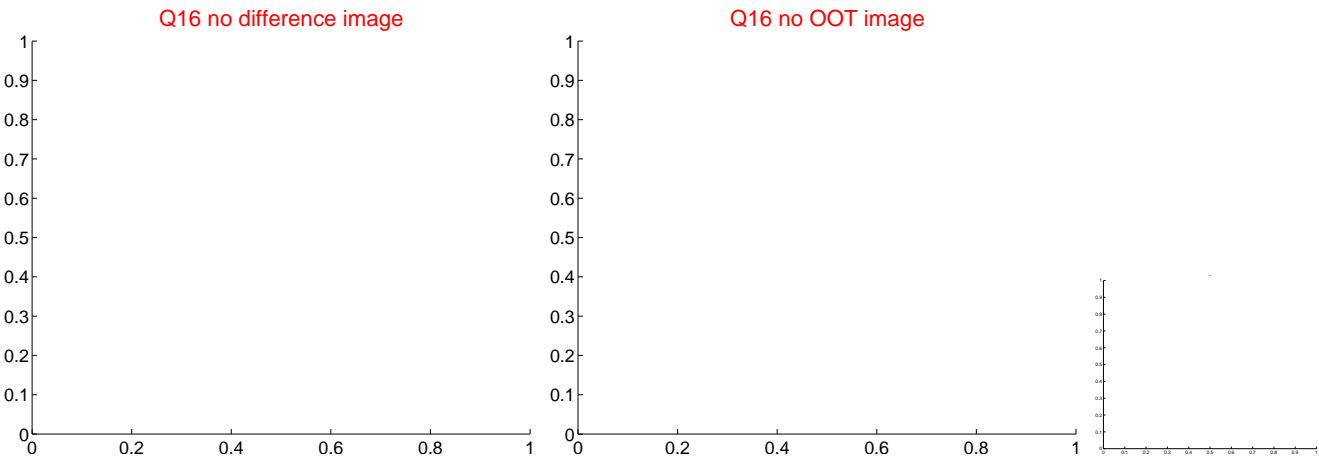
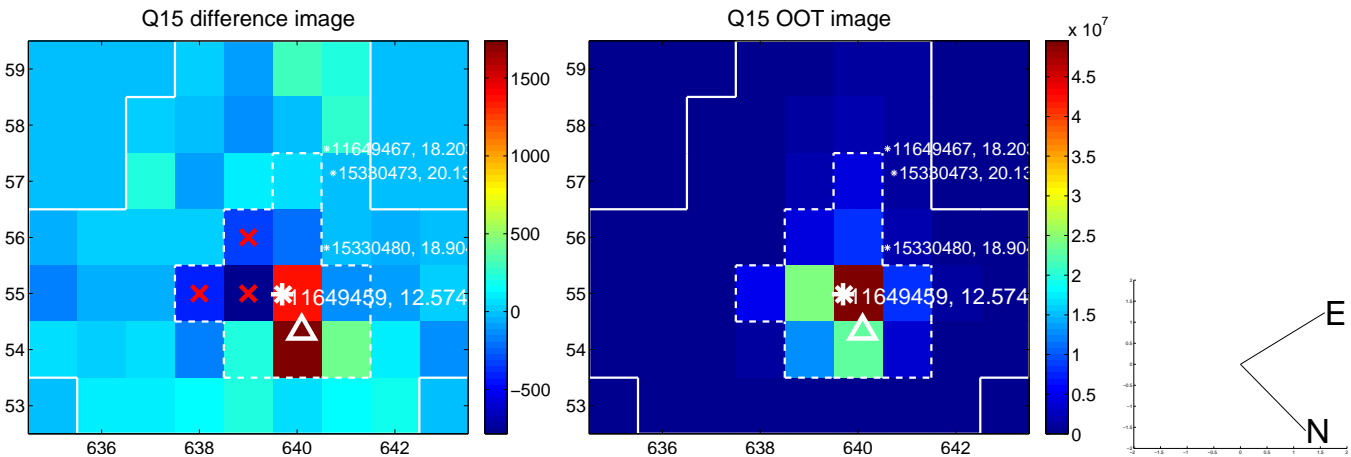
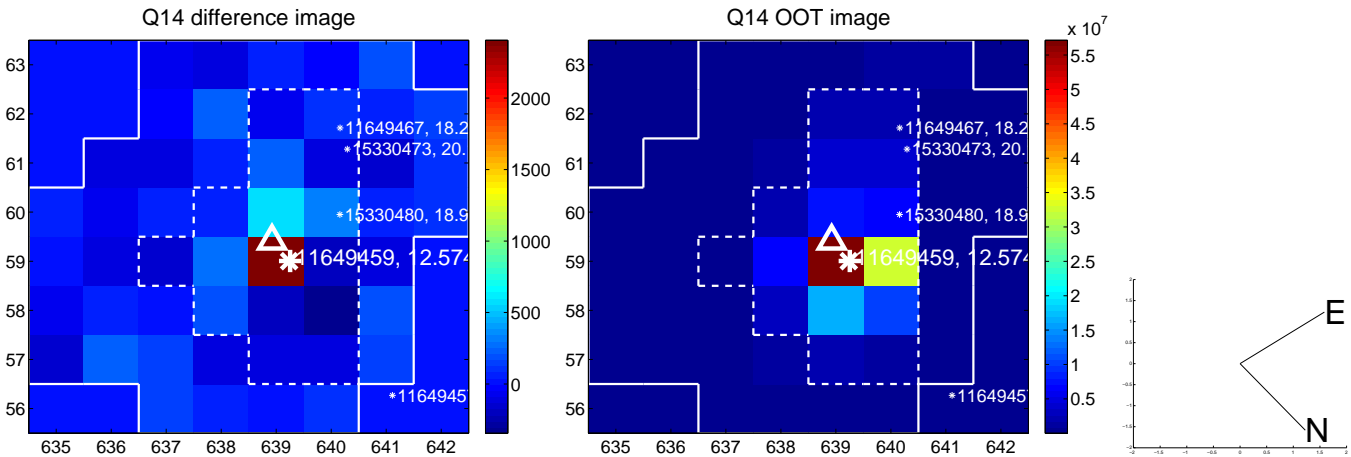
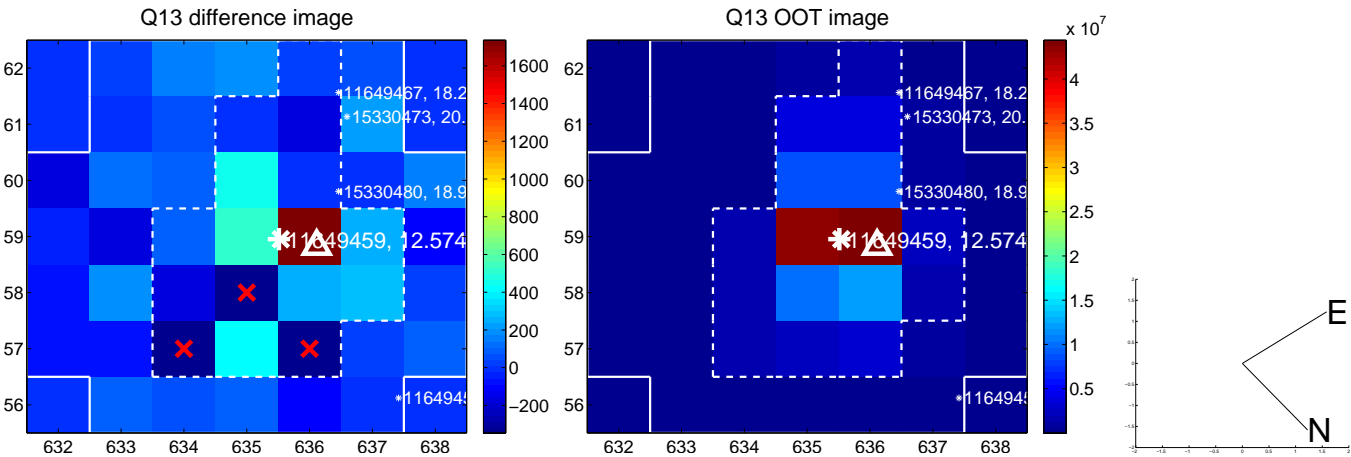
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



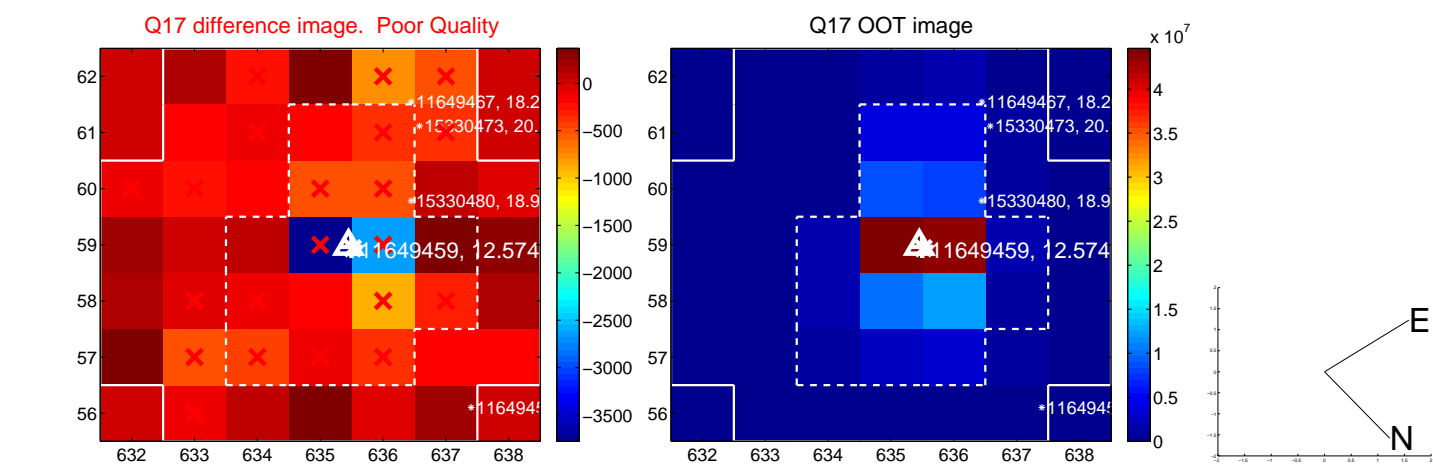
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



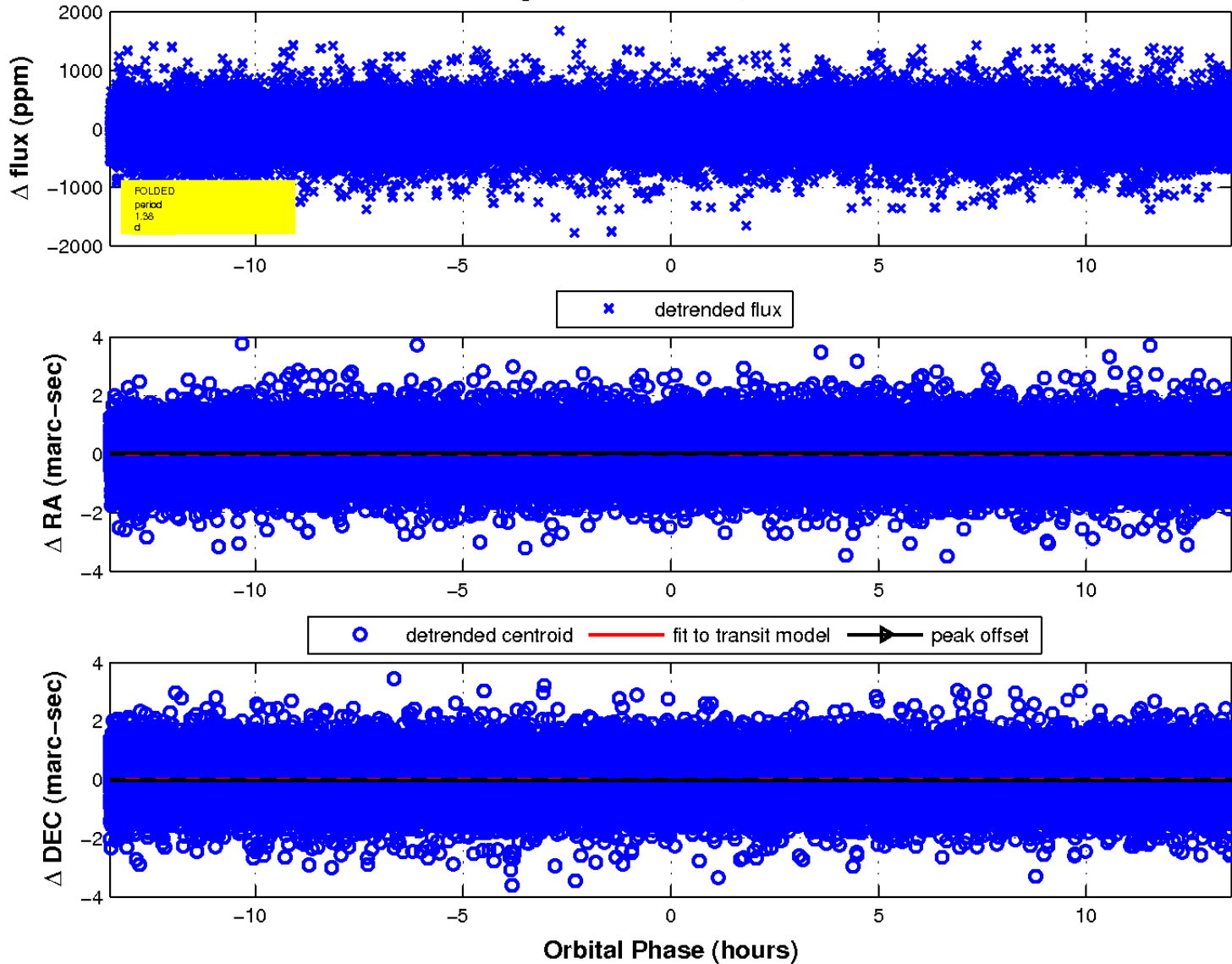
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

