

KIC 007021534

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})
007021534-01	OBS	2267.01	9.065578	135.149789	254.3	2.003	21.2	24.3	0.92	6075	1.96	142.28

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007021534-01	OBS	FP	0.00	0	0	1	0	CENT_UNRESOLVED_OFFSET

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.

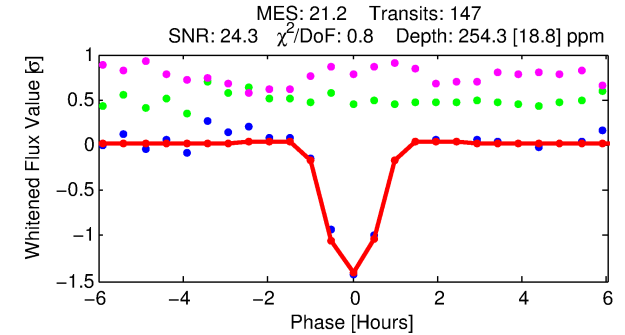
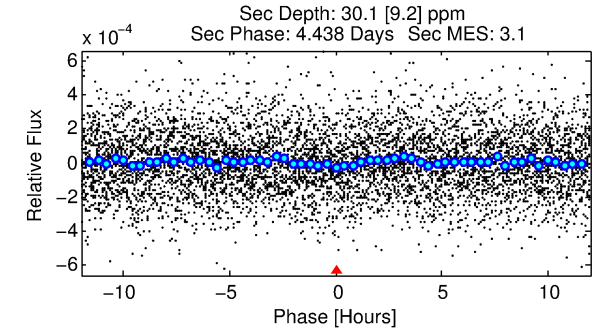
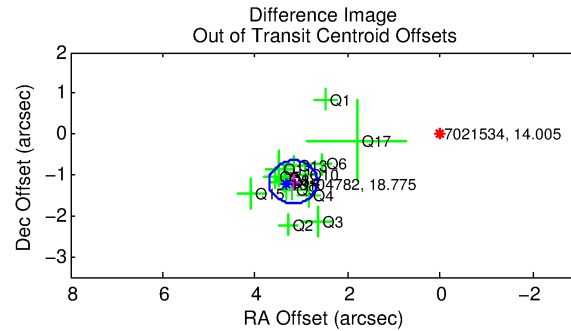
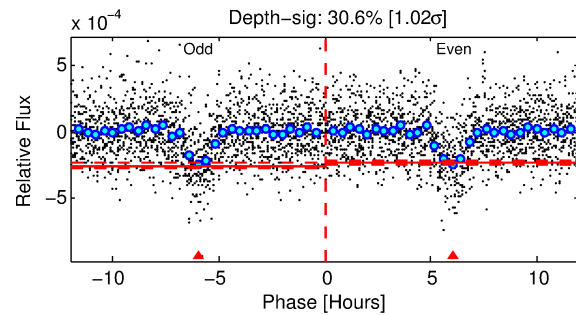
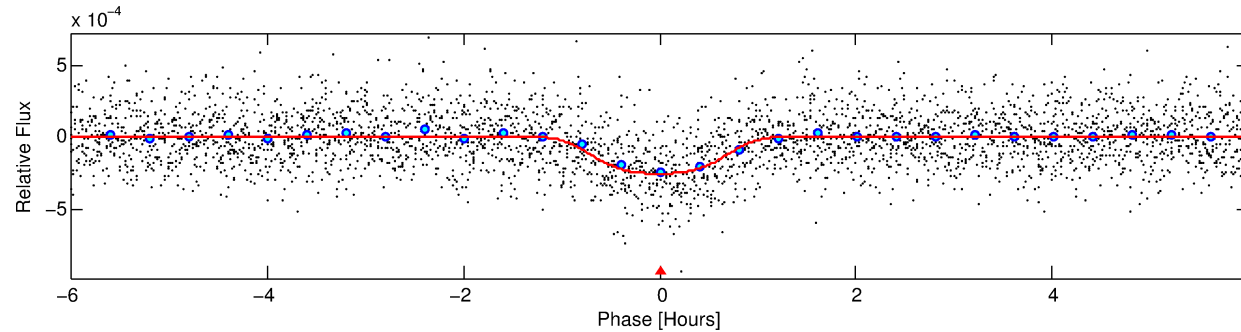
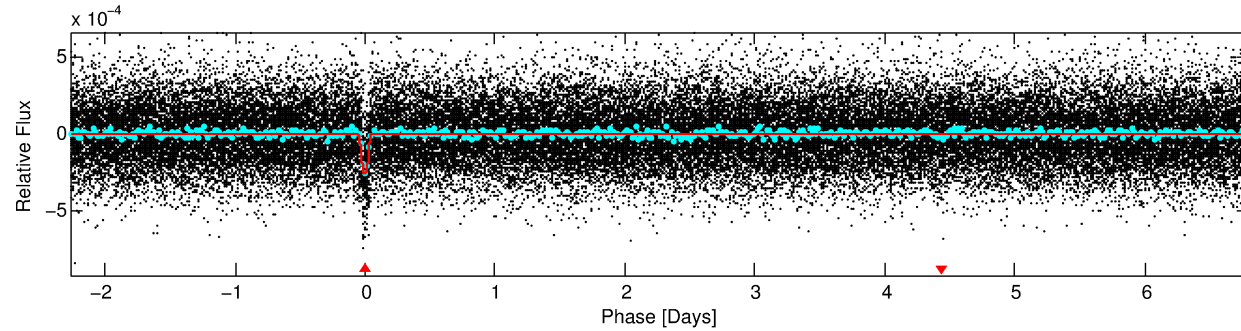
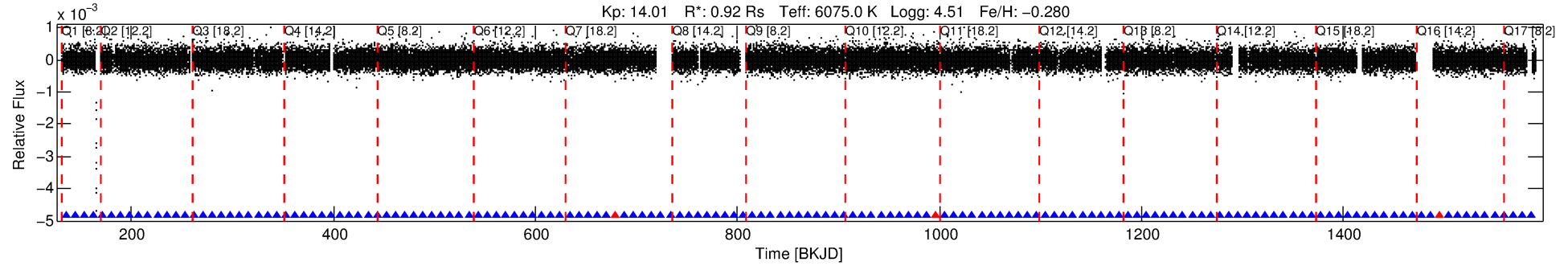
Ephemeris Match Information For 007021534-01

No Significant Match Found

DV One-Page Summary

KIC: 7021534 Candidate: 1 of 1 Period: 9.066 d

KOI: K02267.01 Corr: 0.902



DV Fit Results:

Period = 9.06558 [0.00002] d
Epoch = 135.1498 [0.0019] BKJD
Rp/R* = 0.0196 [0.0012]
a/R* = 10.07 [1.55]
b = 0.98 [0.01]
Seff = 142.28 [54.12]
Teq = 881 [84] K
Rp = 1.96 [0.57] Re
a = 0.0848 [0.0207] AU
Ag = 31.10 [15.21] [1.98 σ]
Teff = 3215 [282] K [7.93 σ]

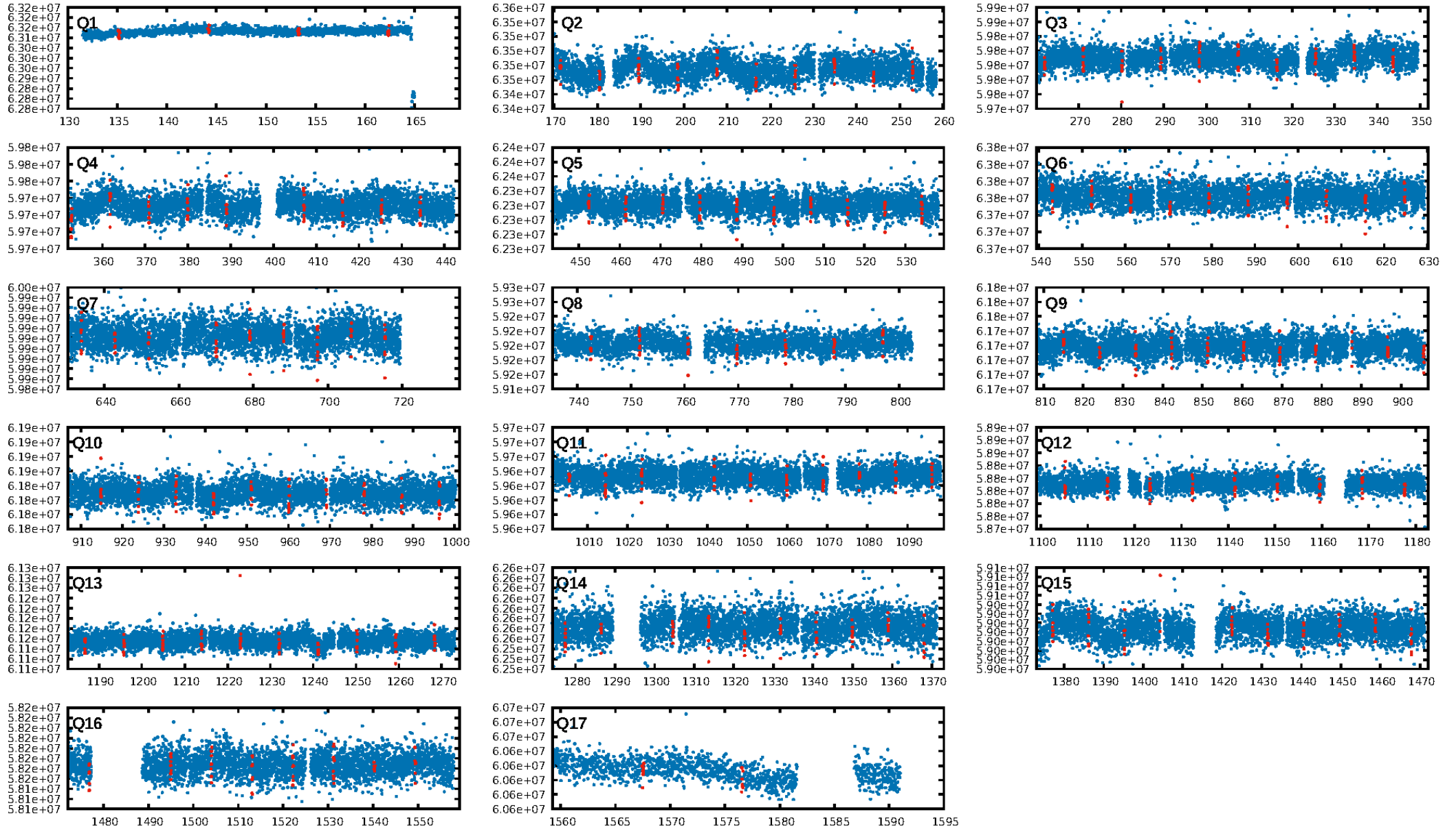
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 100.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.38e-96
RollingBand-fgt: 0.98 [138/141]
GhostDiagnostic-chr: 2
Centroid-sig: 0.0%
Centroid-so: 4.343 arcsec [7.67 σ]
OotOffset-rm: 3.391 arcsec [19.43 σ]
KicOffset-rm: 3.369 arcsec [19.46 σ]
OotOffset-st: 4/3/3/5 [15]
KicOffset-st: 4/3/3/5 [15]
DiffImageQuality-fgm: 1.00 [15/15]
DiffImageOverlap-fno: 1.00 [17/17]

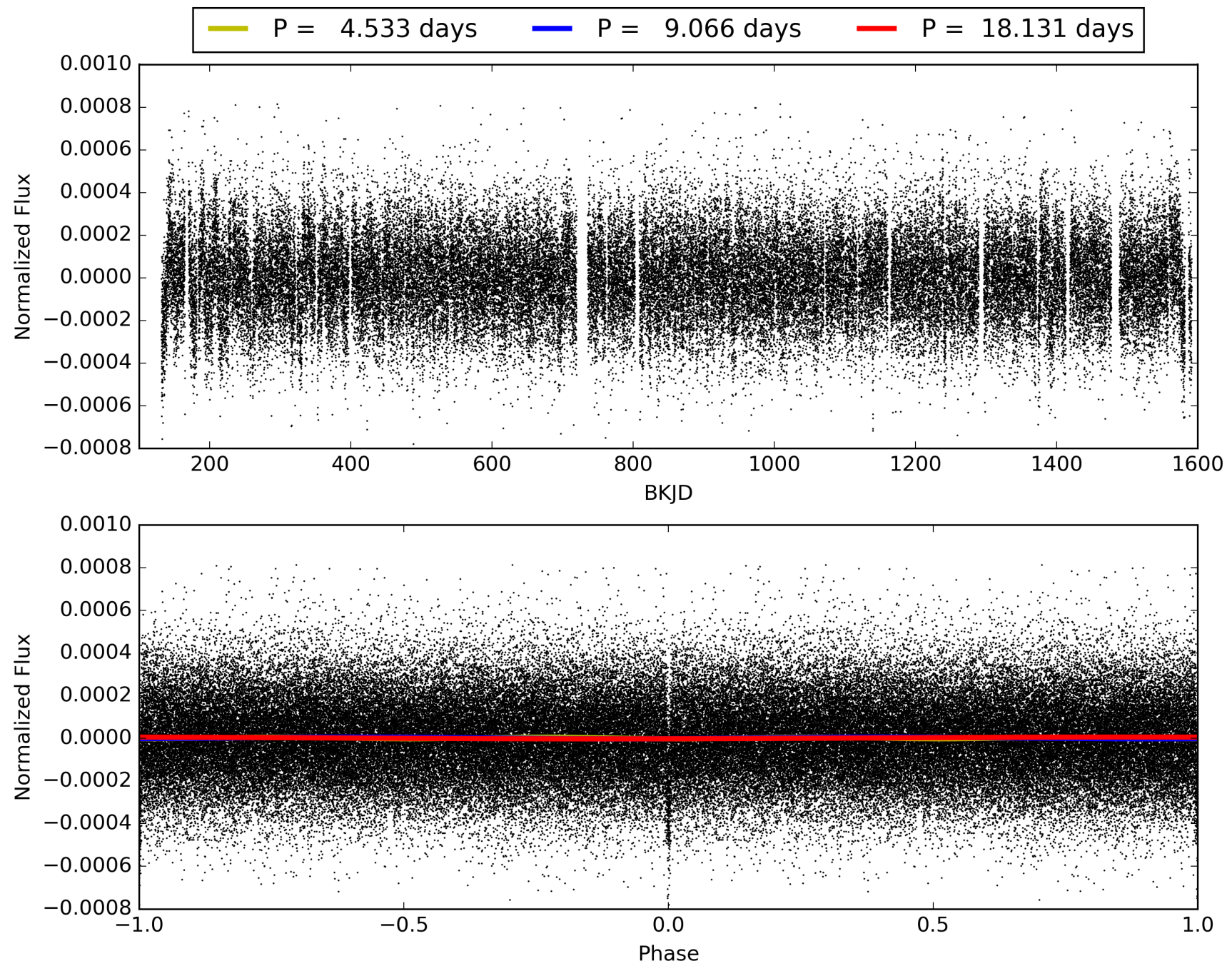
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:20:49 Z

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

TCE 007021534-01, PDC Light Curves

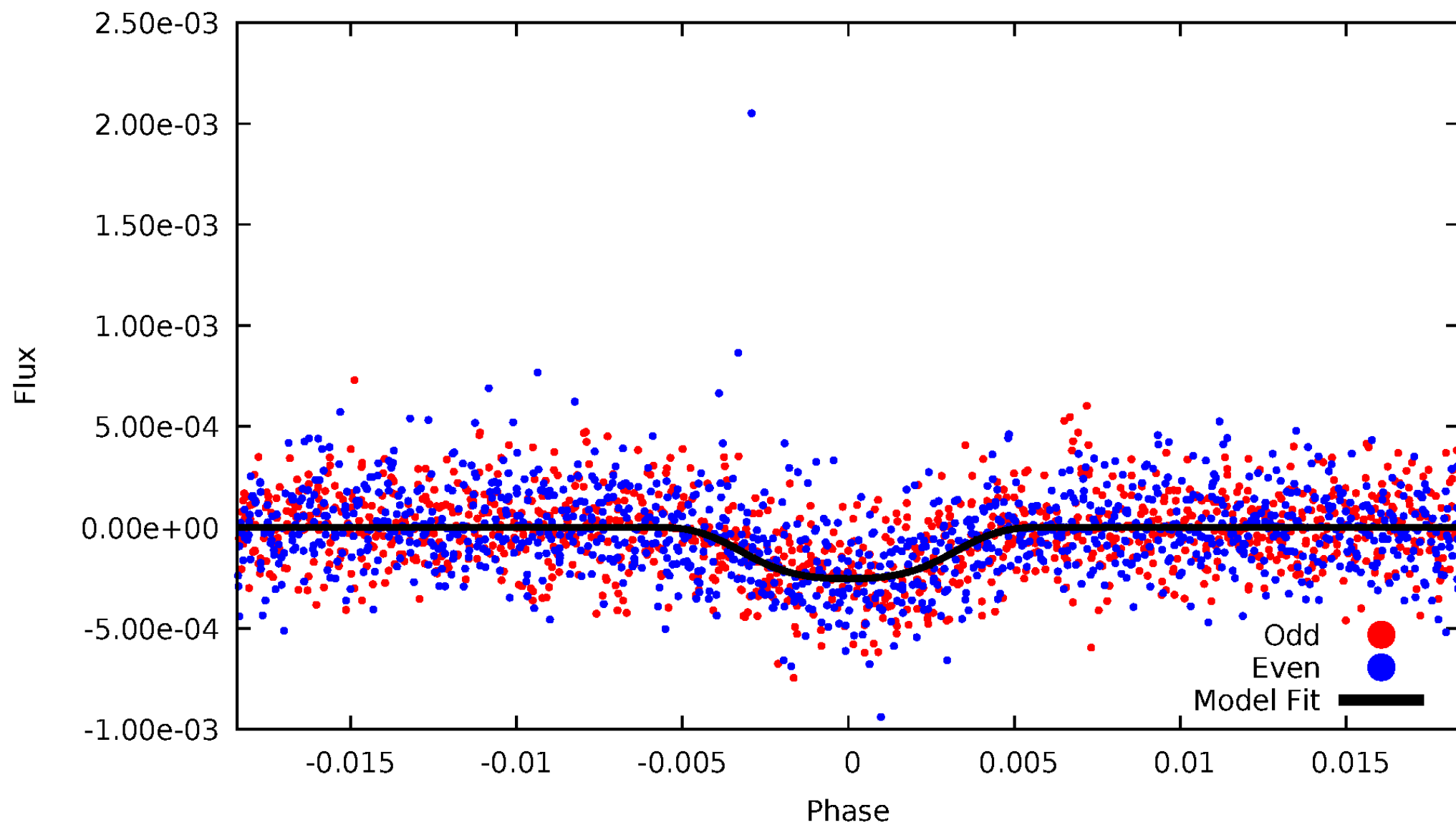


TCE 007021534-01



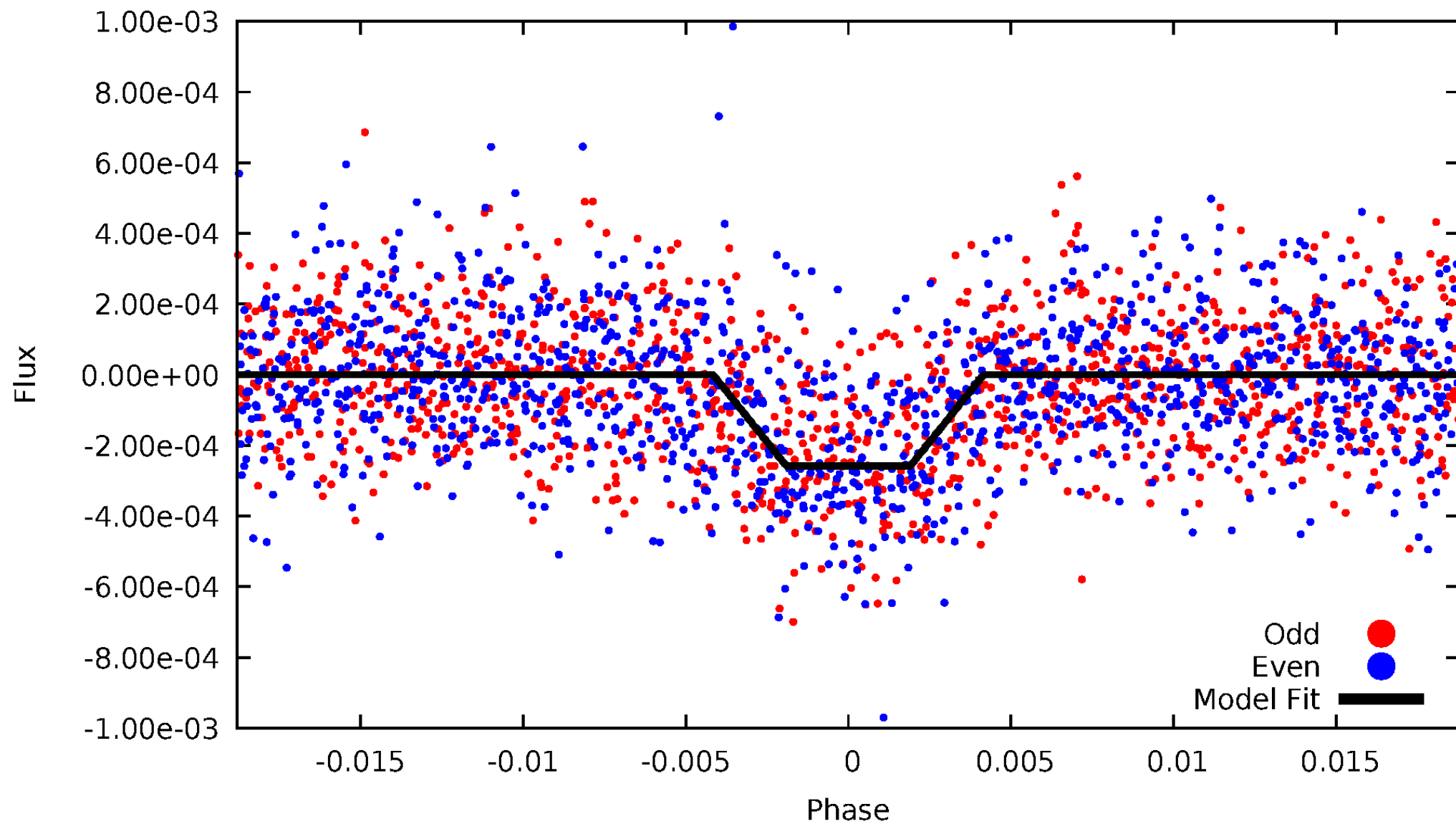
DV Odd/Even

TCE 007021534-01



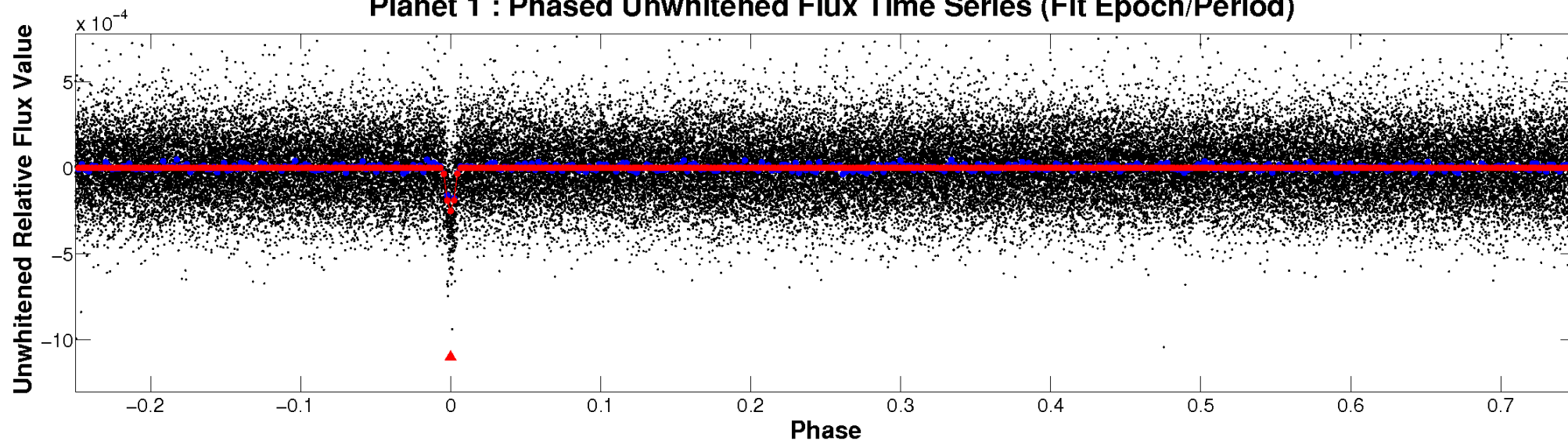
ALT Odd/Even

TCE 007021534-01

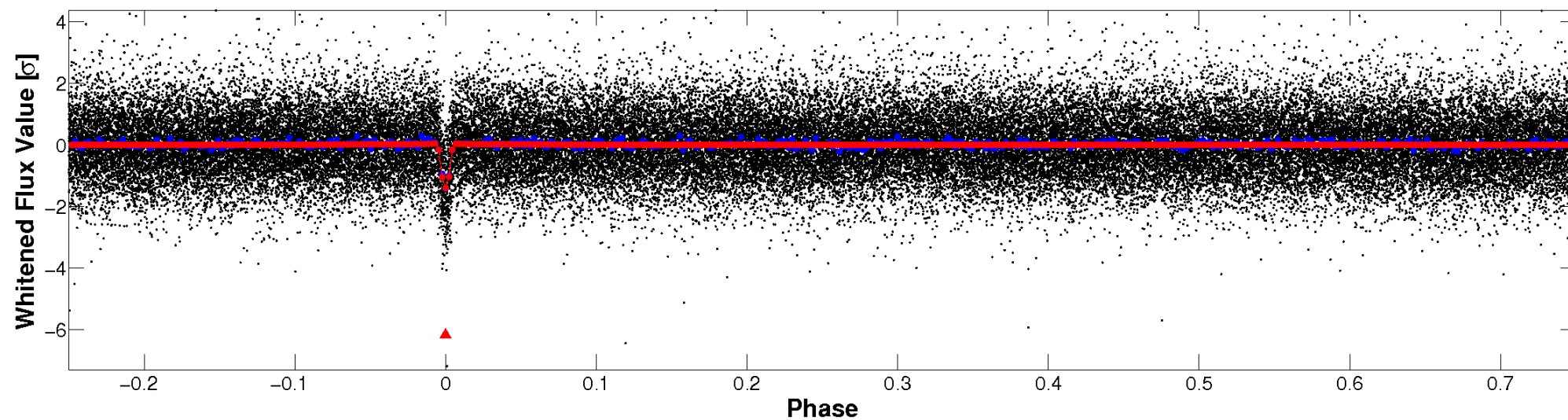


Non-Whitened Vs. Whitened Light Curve

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

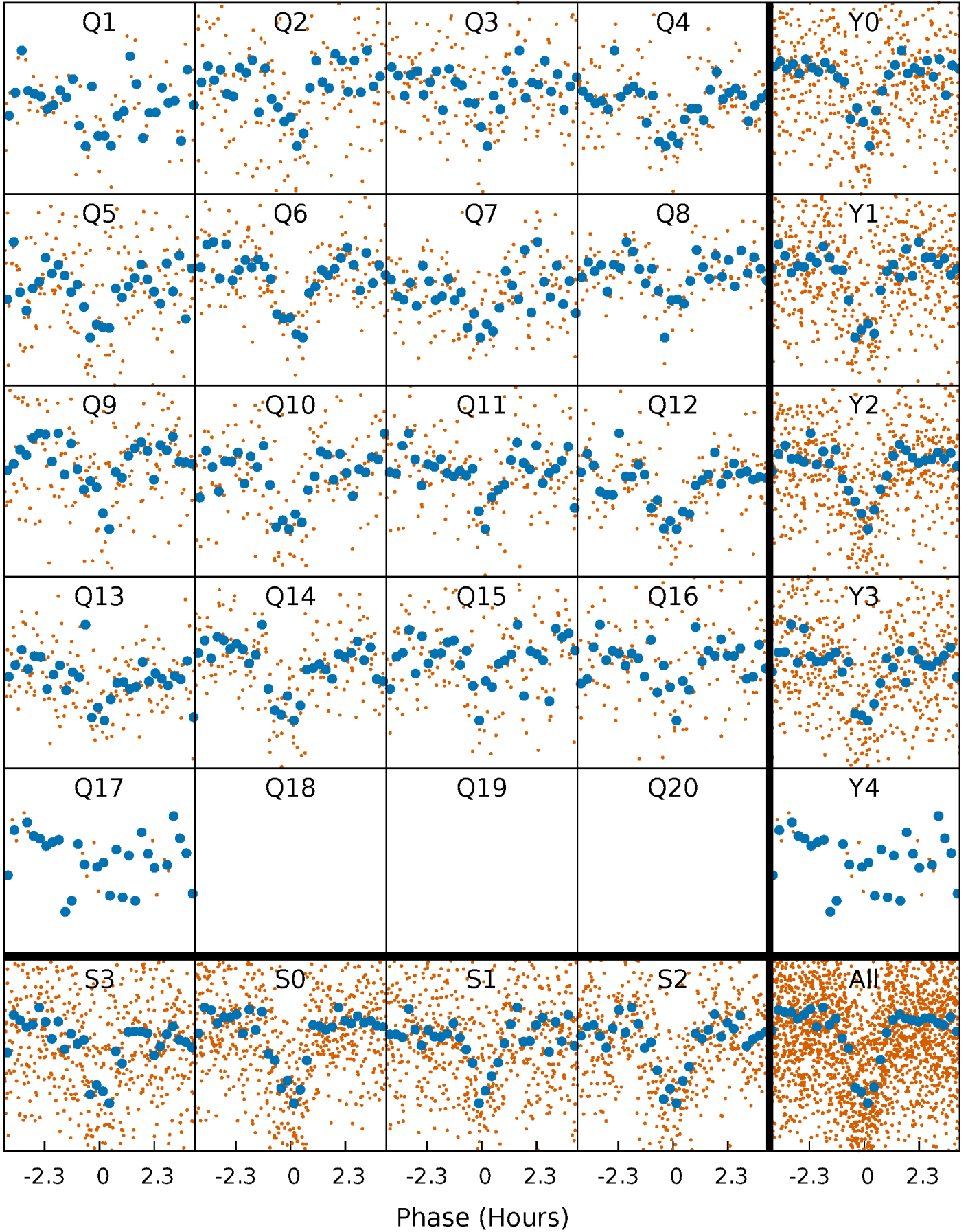


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



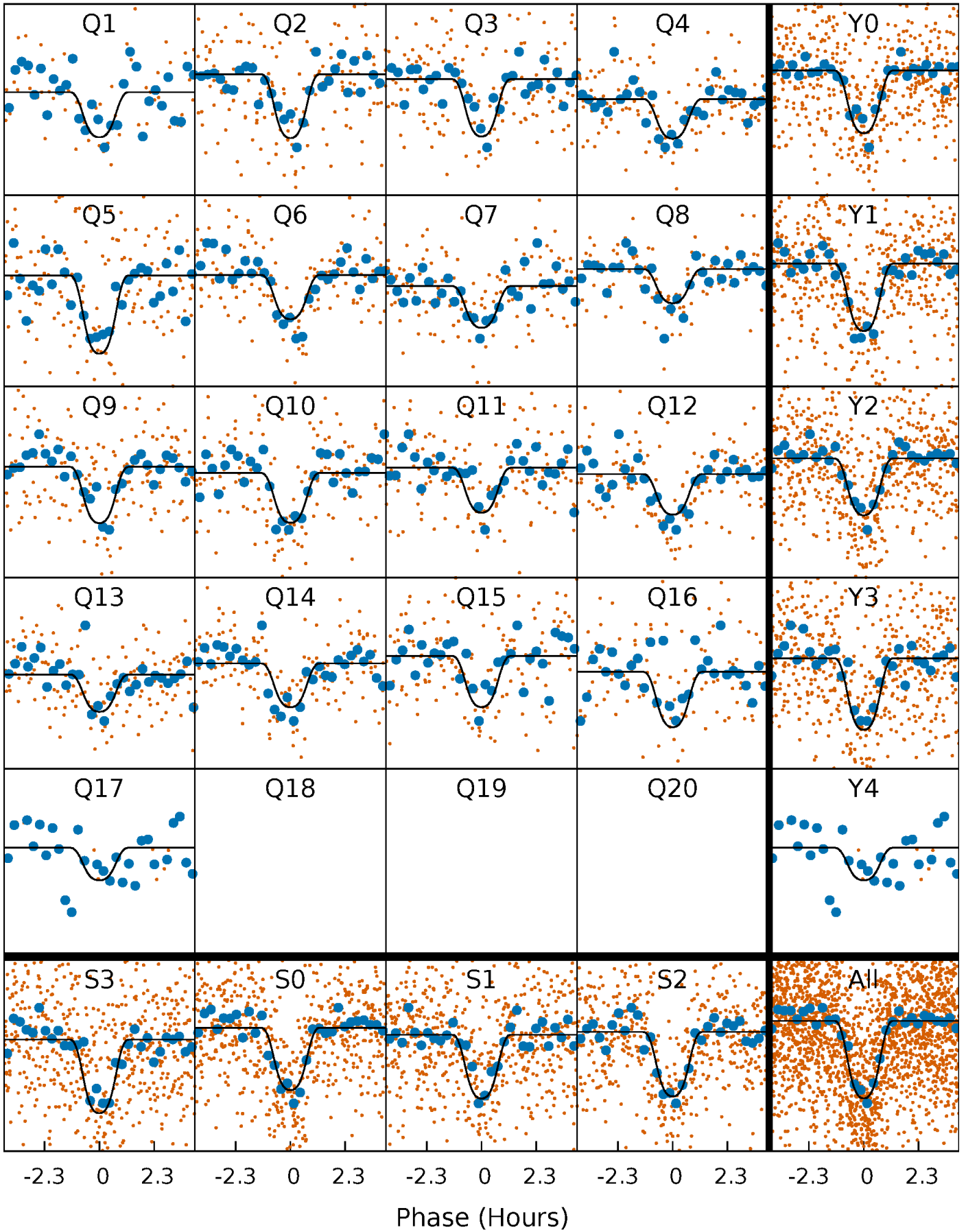
PDC Quarter-Phased Transit Curves

TCE 007021534-01 P= 9.065578 Days $T_0=135.149789$ (BKJD)



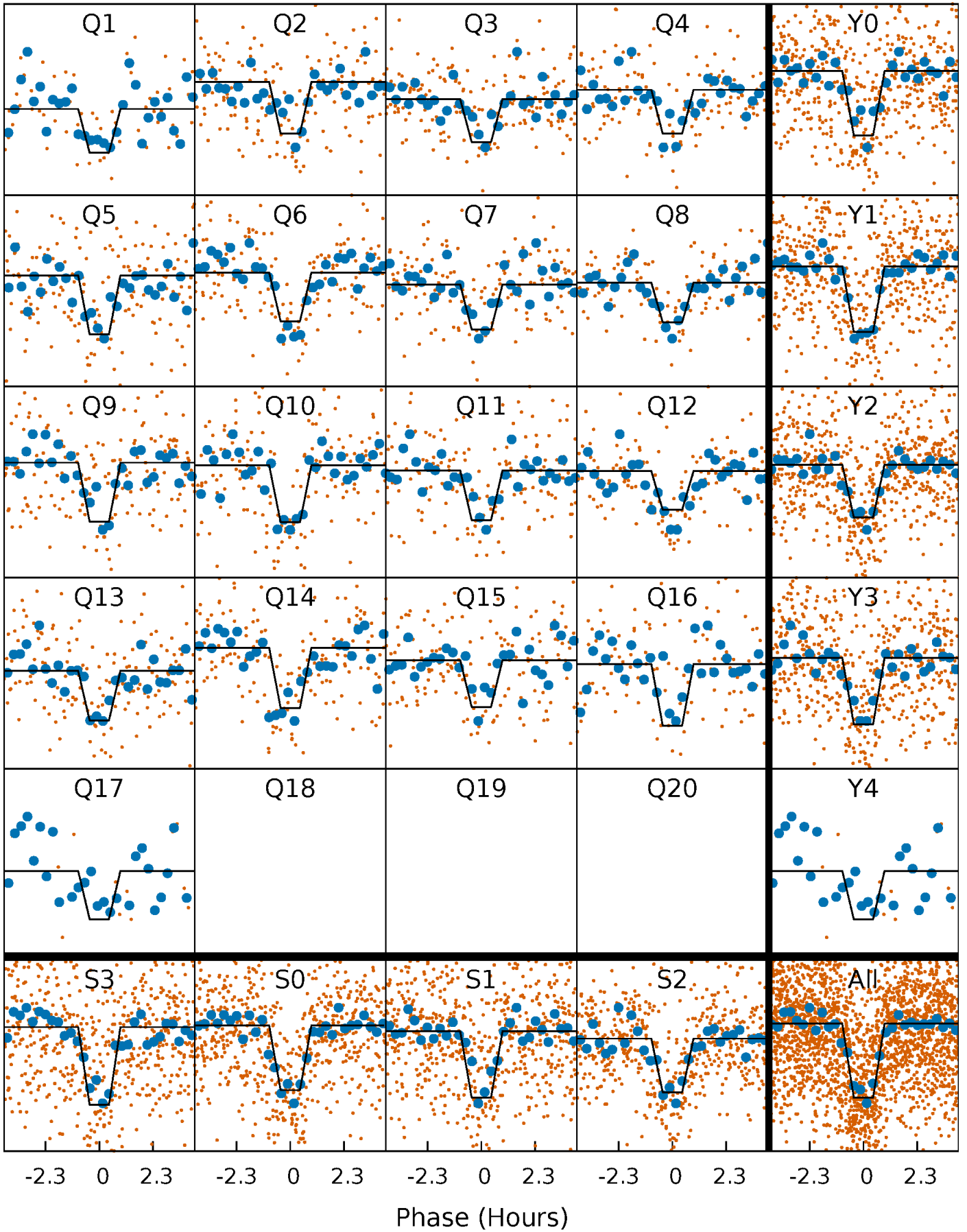
DV Quarter-Phased Transit Curves

TCE 007021534-01 P= 9.065578 Days $T_0=135.149789$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

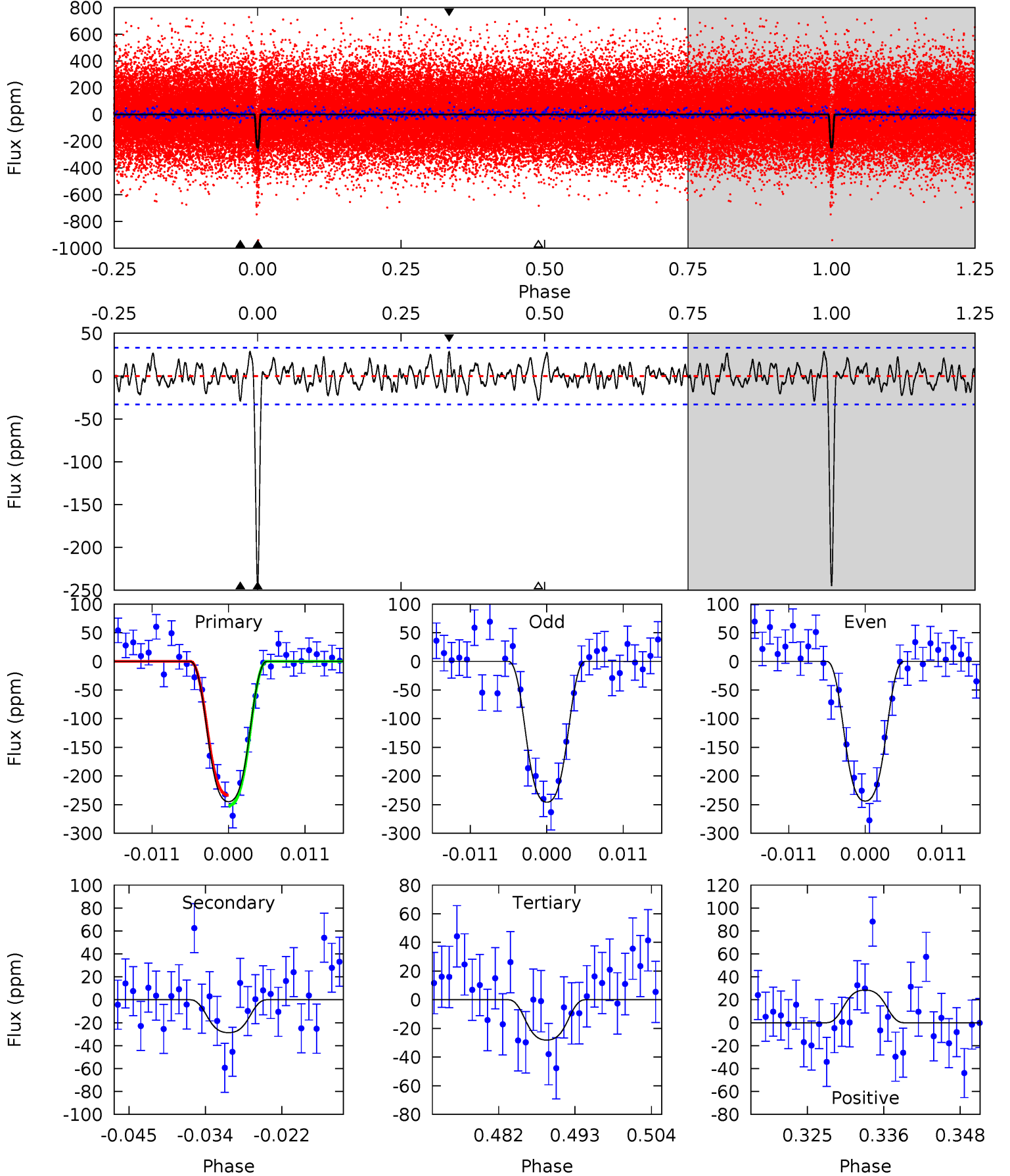
TCE 007021534-01 P= 9.065603 Days $T_0=135.148459$ (BKJD)



DV Model-Shift Uniqueness Test

007021534-01, P = 9.065578 Days, E = 126.084211 Days

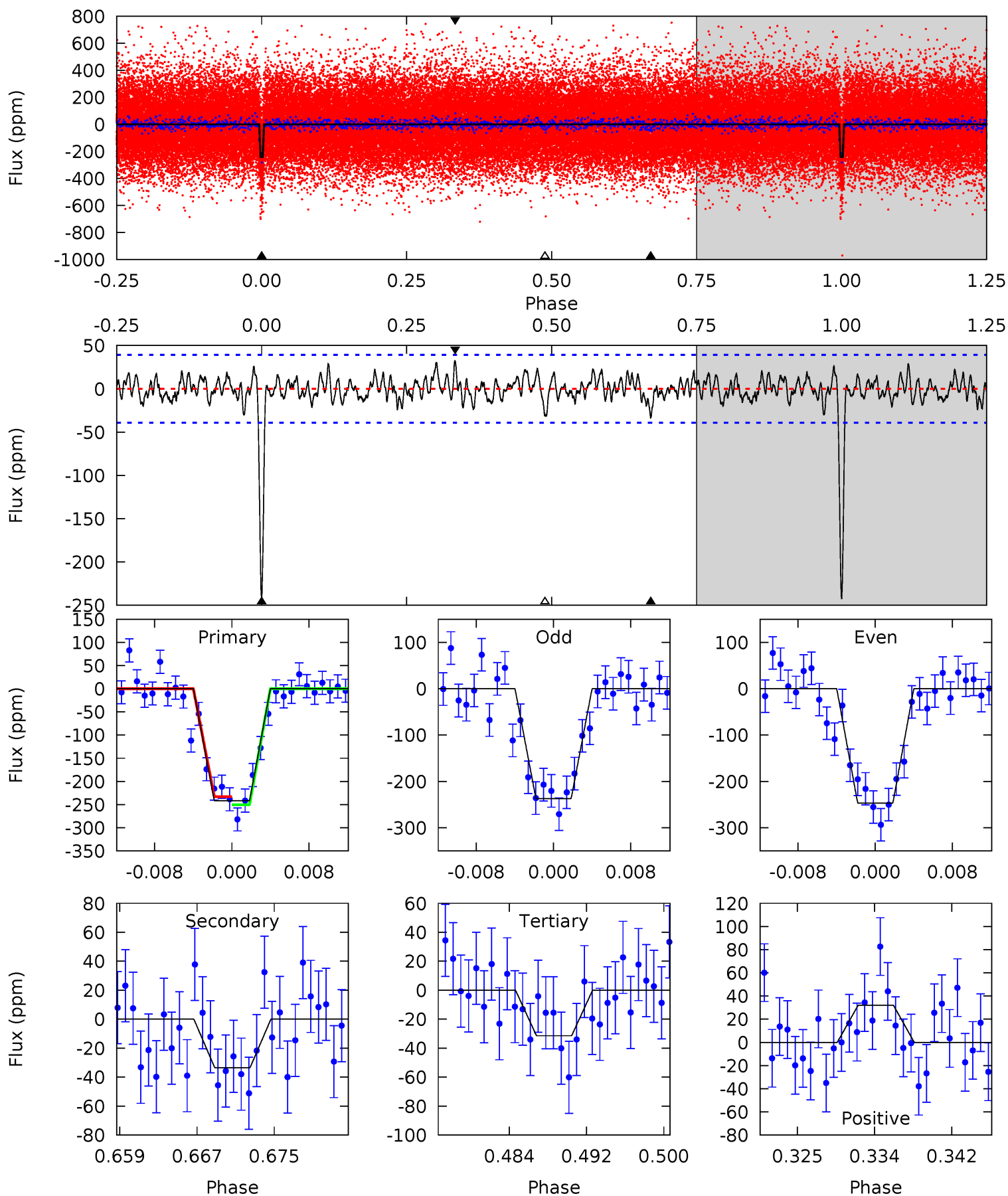
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
37.0	4.33	4.24	4.29	5.00	2.54	1.49	32.7	32.7	0.08	0.03	0.15	0.96	0.10	1.36



Alt Model-Shift Uniqueness Test

007021534-01, P = 9.065603 Days, E = 126.082856 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
31.2	4.33	4.05	4.14	5.06	2.64	1.35	27.2	27.1	0.28	0.19	0.62	1.03	0.12	1.13



Stellar Parameters For KIC 007021534

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6075^{+164}_{-182}	$4.510^{+0.050}_{-0.200}$	$-0.280^{+0.300}_{-0.300}$	$0.916^{+0.261}_{-0.087}$	$0.991^{+0.116}_{-0.129}$	$1.818^{+0.474}_{-0.955}$
	+3%/-3%	+1%/-4%	+107%/-107%	+28%/-9%	+12%/-13%	+26%/-53%
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 007021534-01 / KOI 2267.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-29 ± 7	$2.02^{+0.33}_{-0.20}$	1255^{+85}_{-56}	3605^{+162}_{-172}	27^{+9}_{-8}
Alt.	-34 ± 8	$1.66^{+0.27}_{-0.19}$	1257^{+87}_{-57}	3953^{+234}_{-199}	45^{+17}_{-14}

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

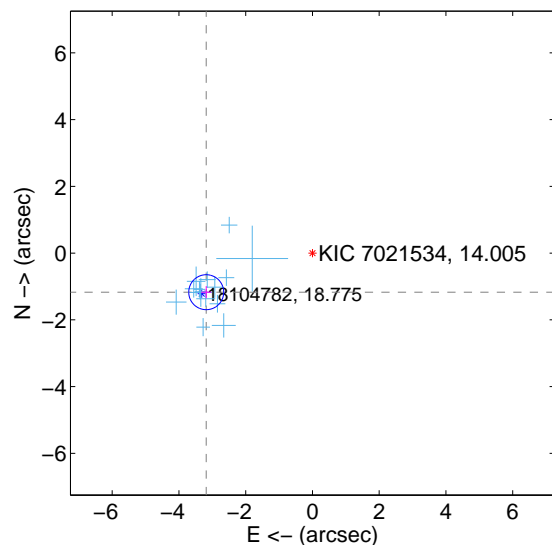
Supplemental centroid analysis for 007021534-01. Kepler magnitude: 14.01. Transit SNR 24.27

There are 15 quarters with good PRF difference image offsets

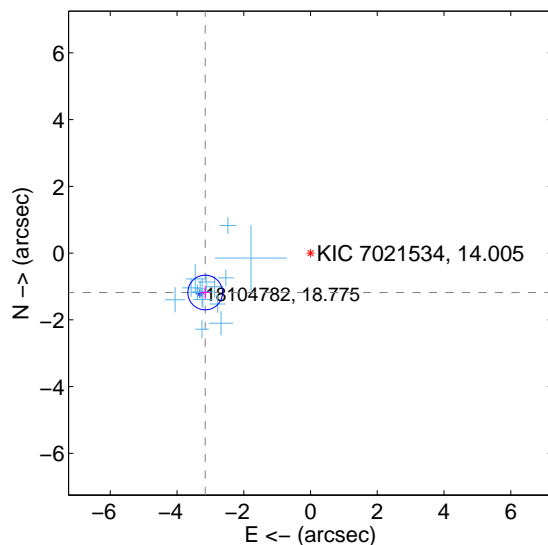
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.391 ± 0.175	19.43	3.182 ± 0.150	-1.171 ± 0.182
PRF-fit source offset from KIC position	3.369 ± 0.173	19.46	3.155 ± 0.143	-1.181 ± 0.193
photometric centroid source offset	4.34 ± 0.57	7.67	4.16 ± 0.56	-1.24 ± 0.60

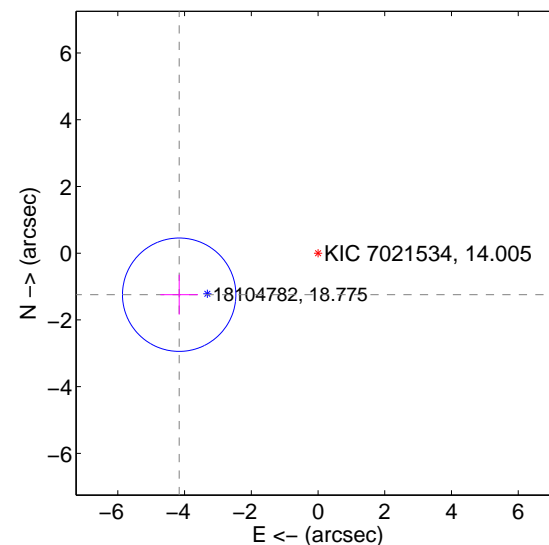
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

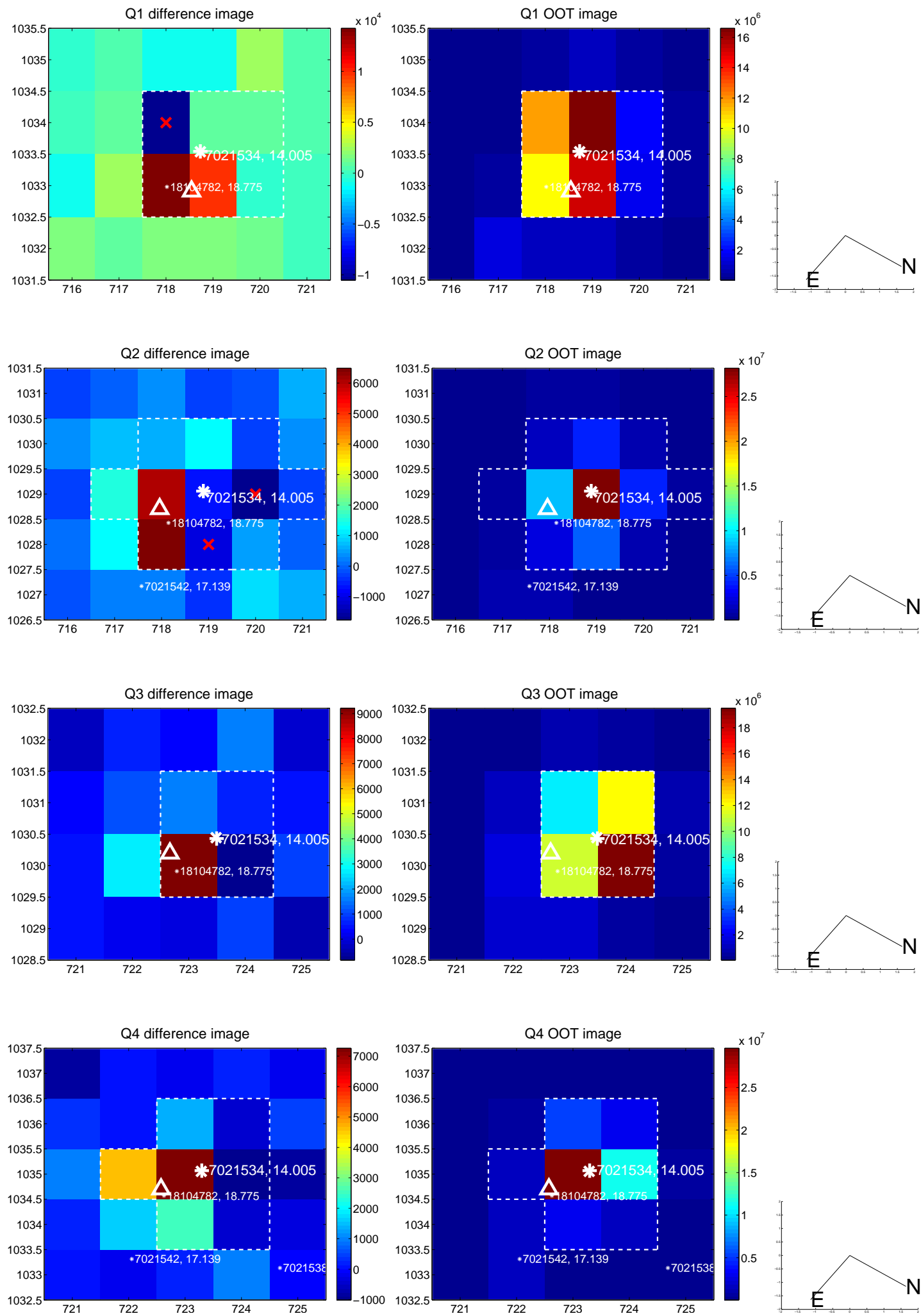


offset from photometric centroids

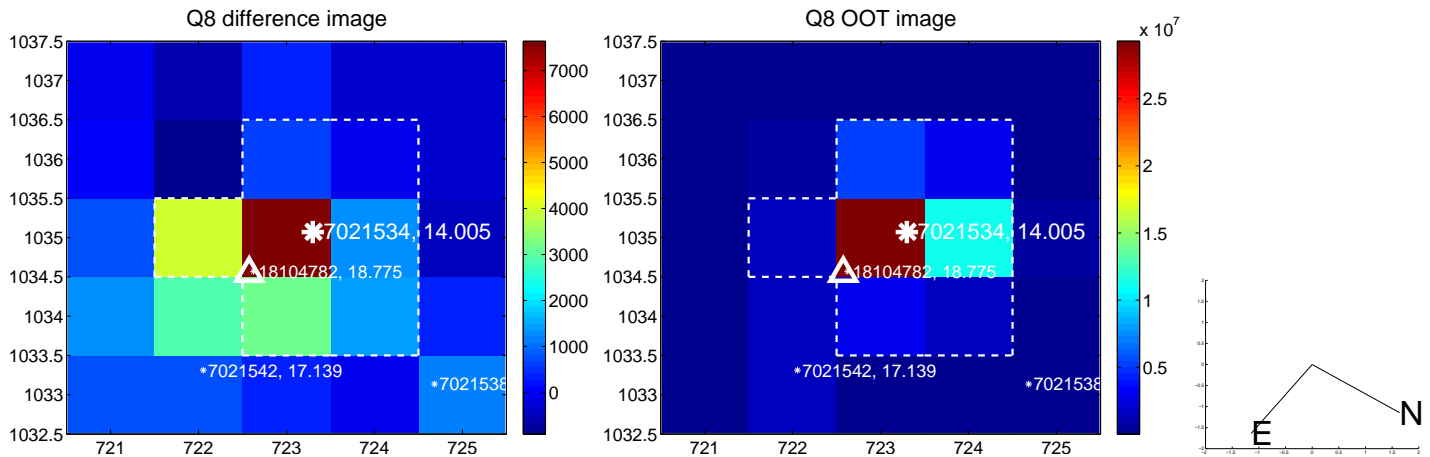
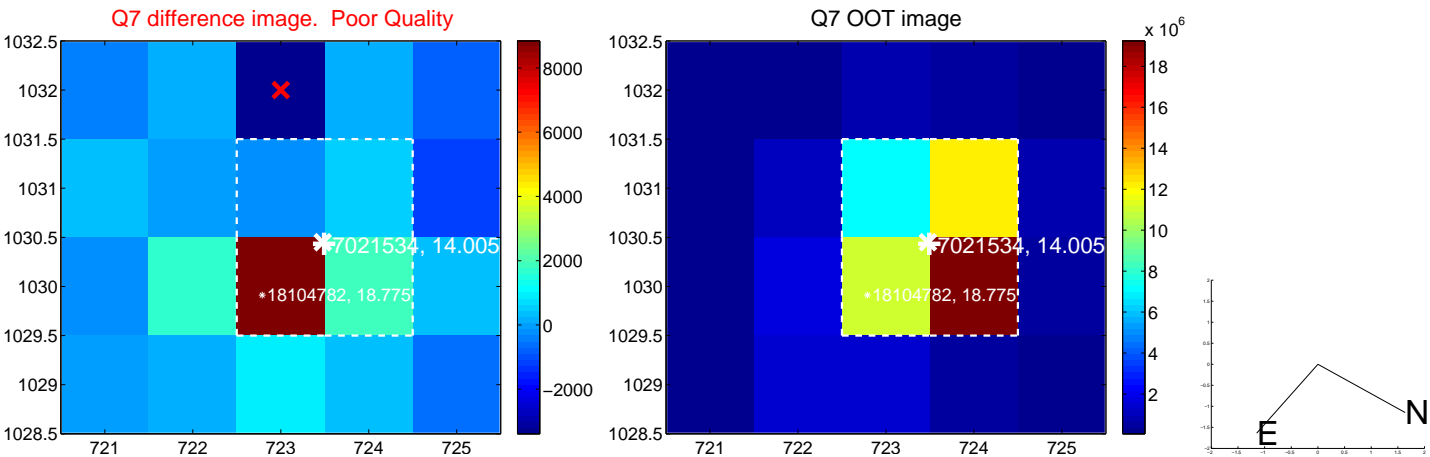
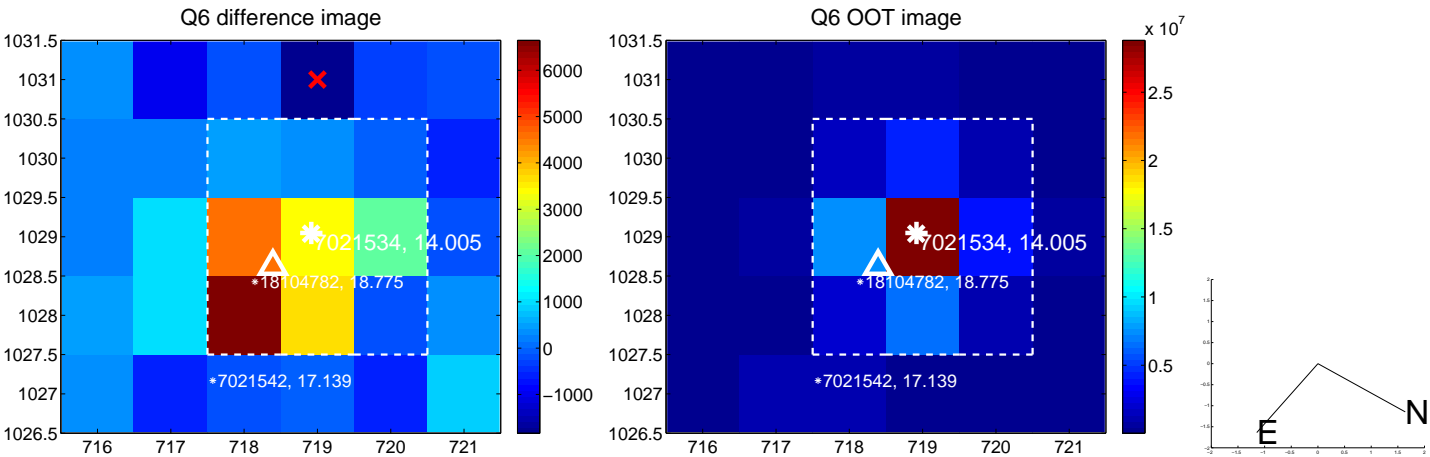
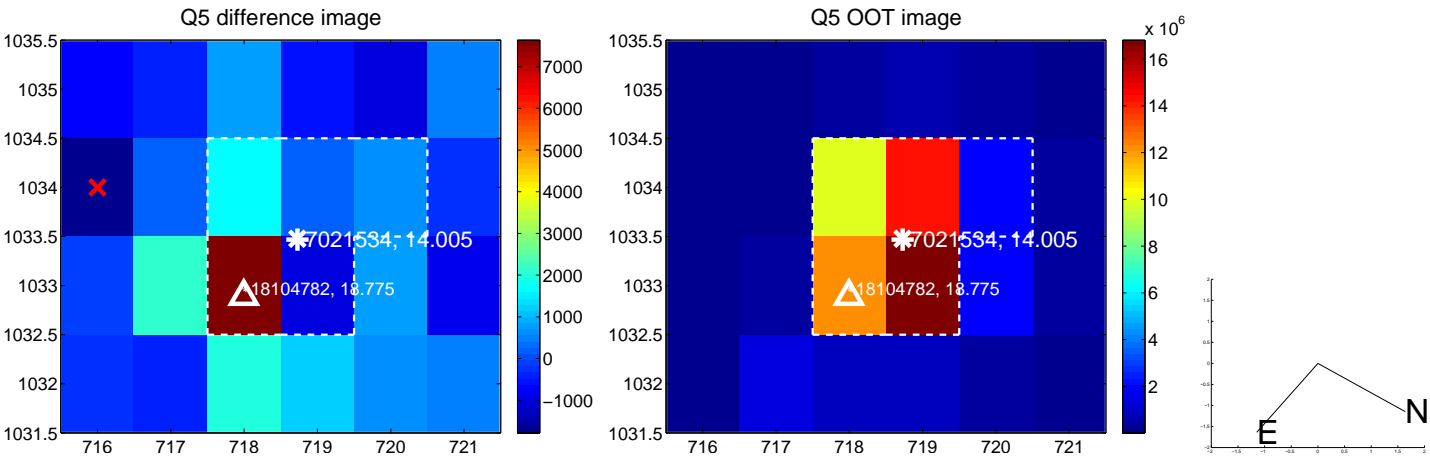


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

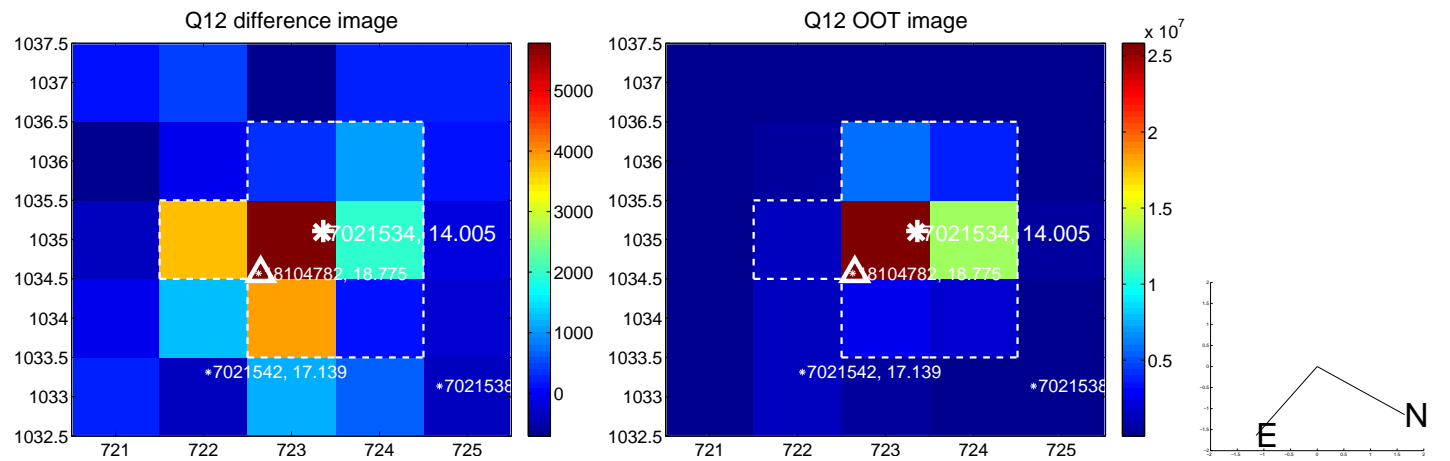
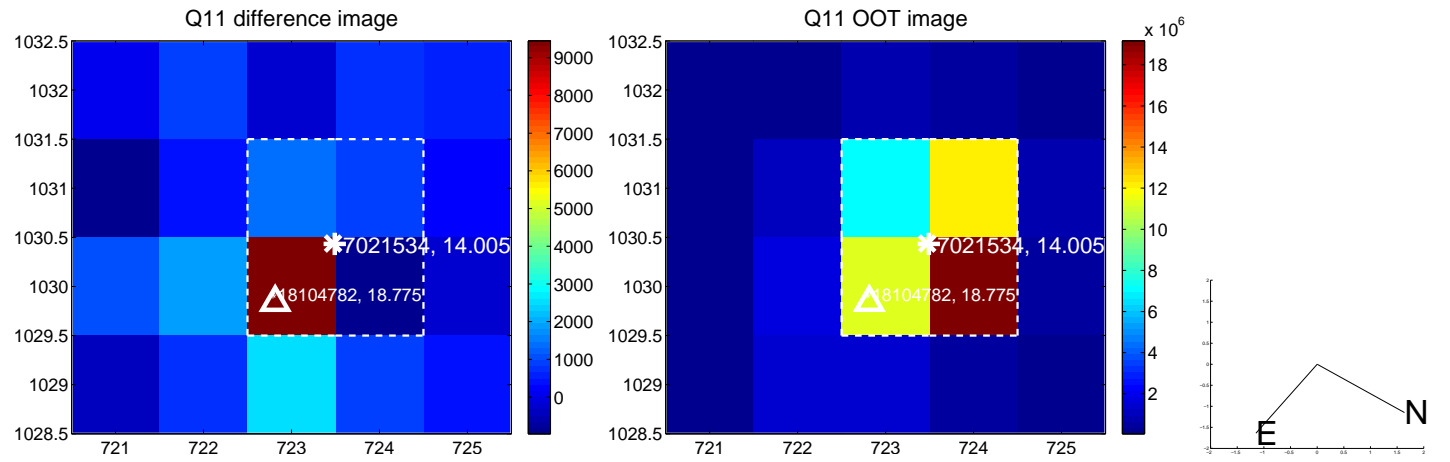
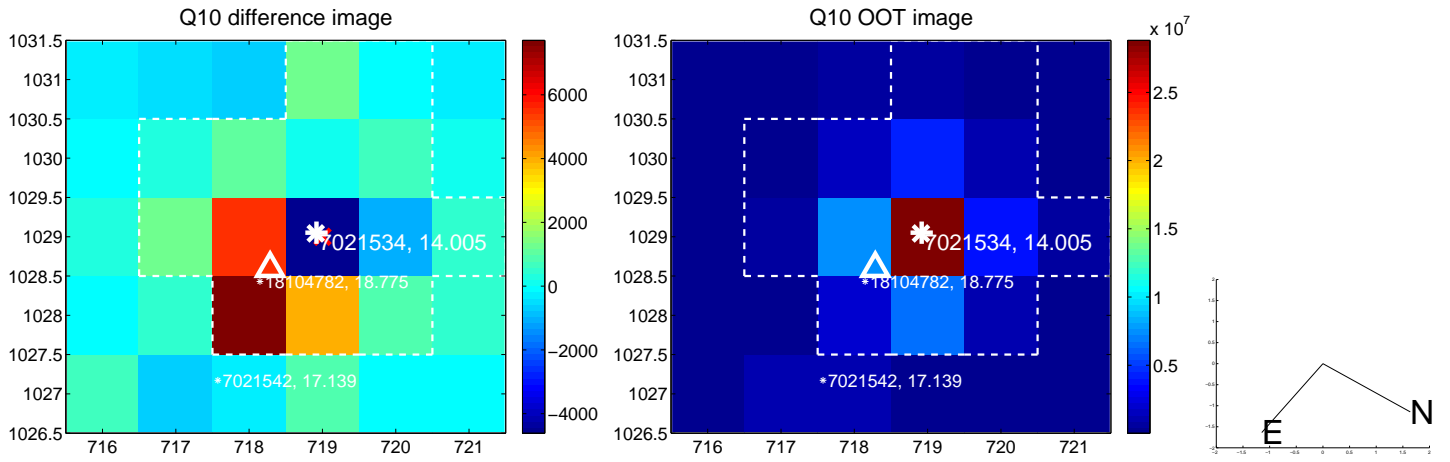
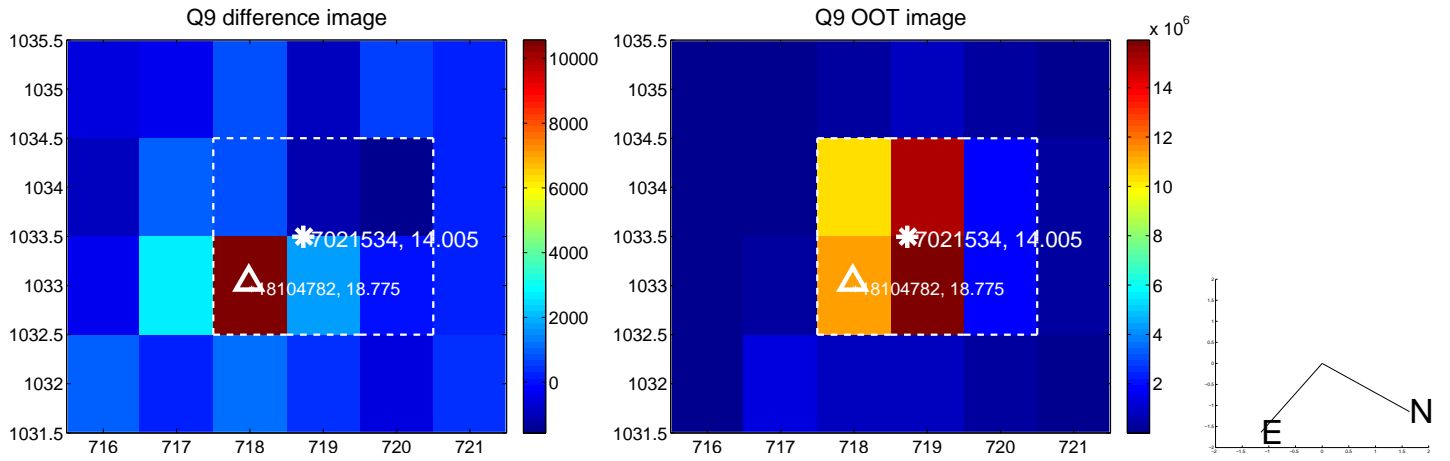
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



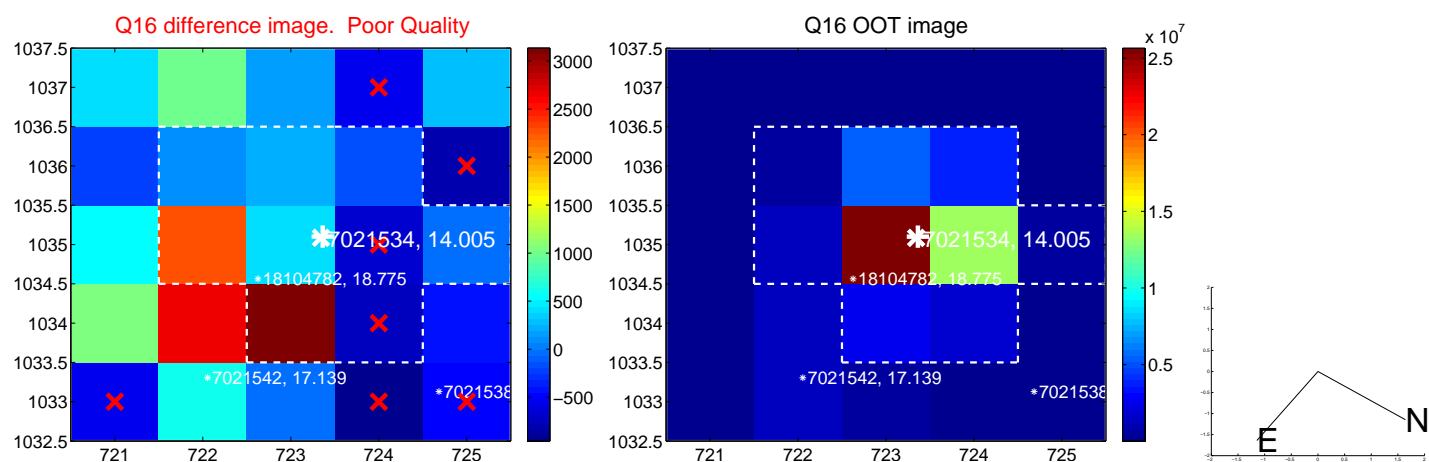
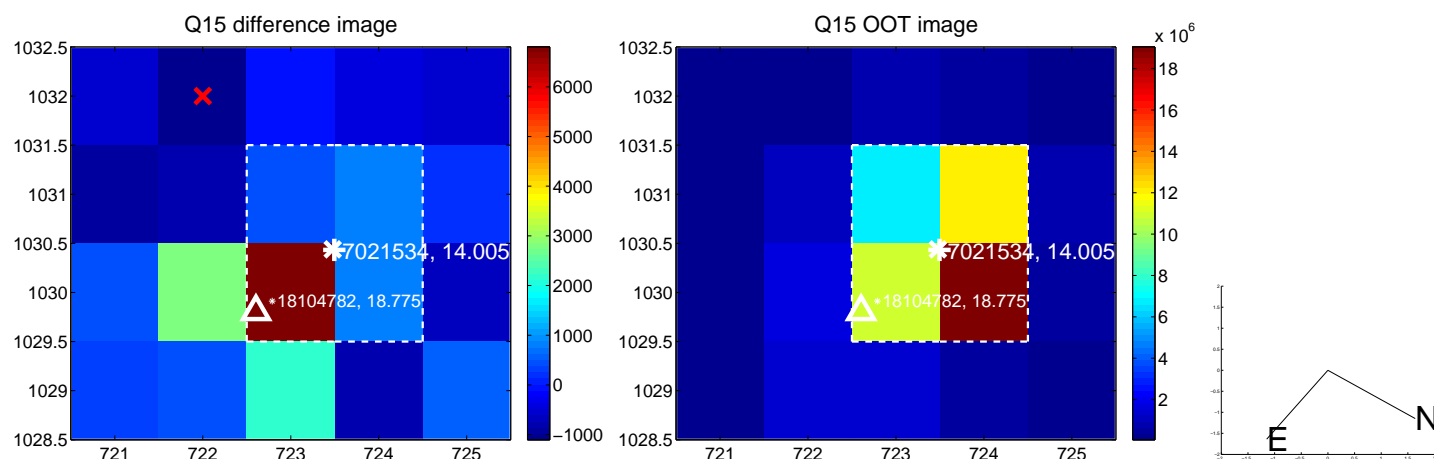
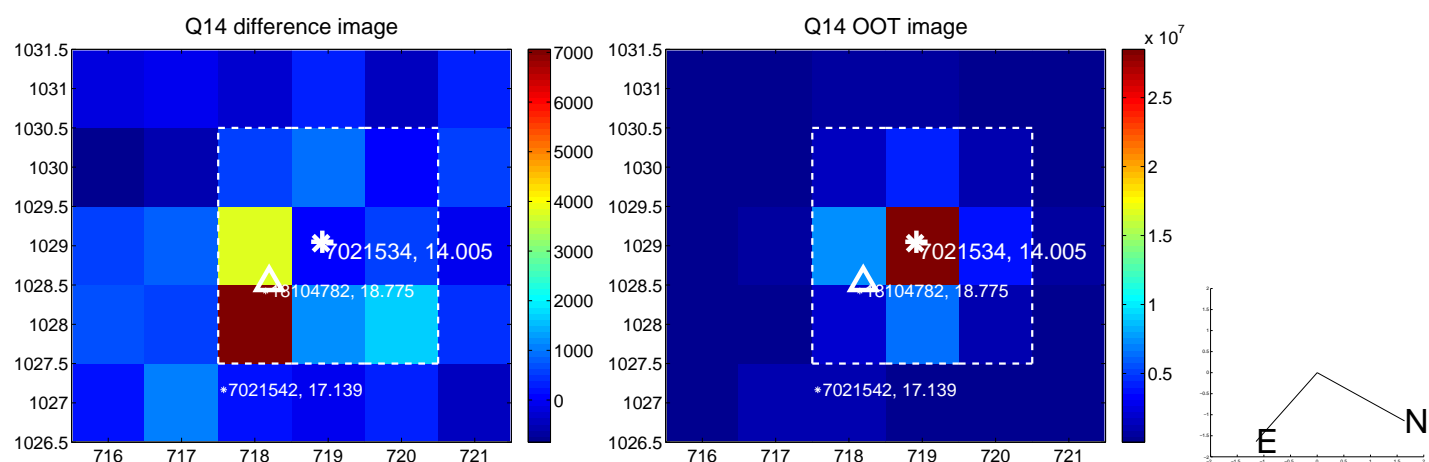
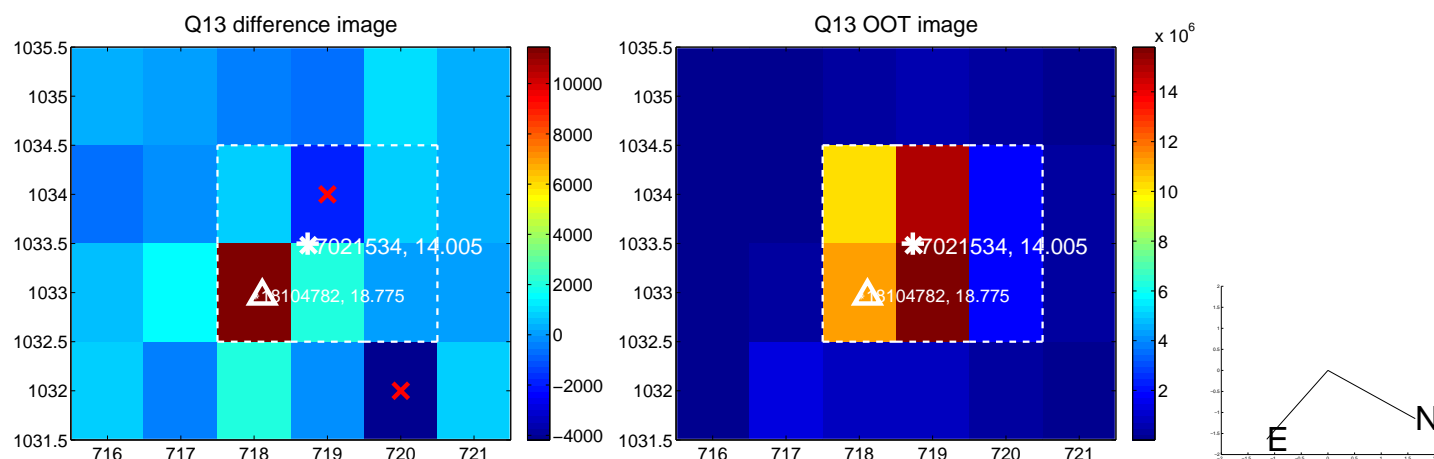
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



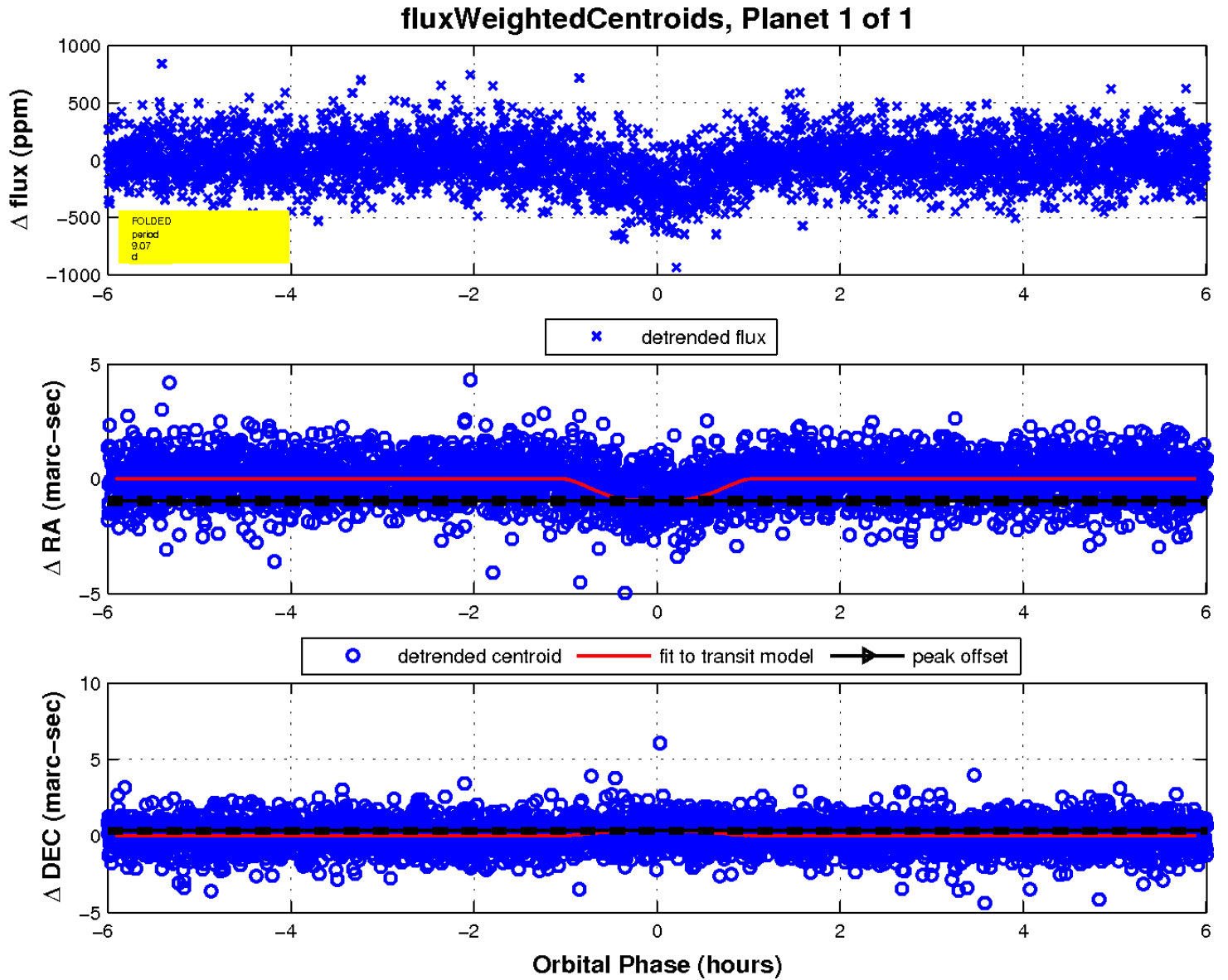
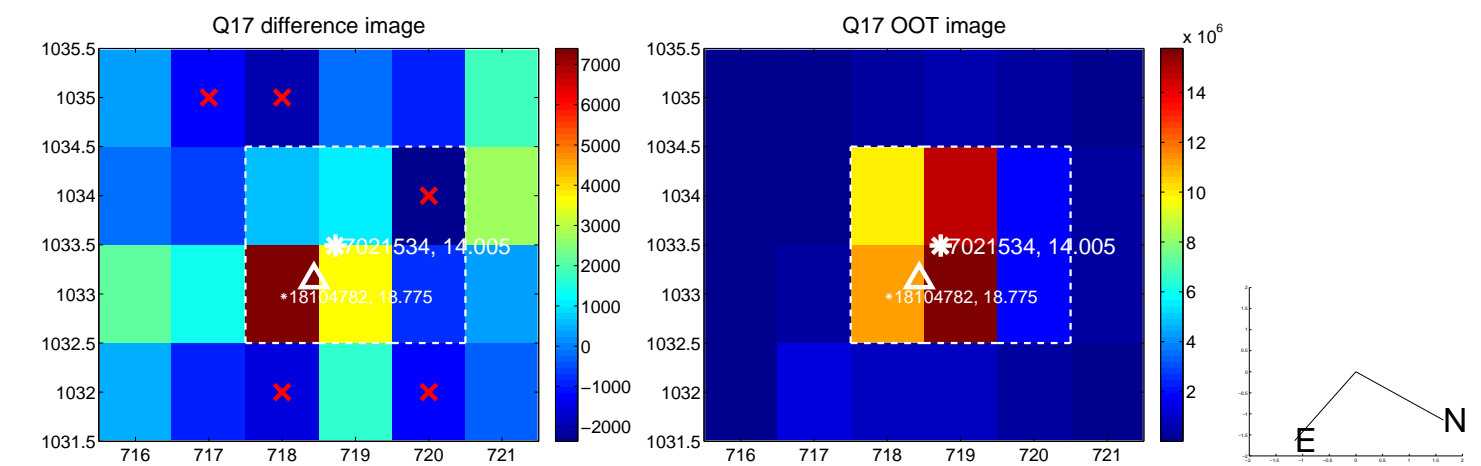
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

