

KIC 001026957

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})
001026957-01	OBS	0958.01	21.761302	144.778947	1268.9	1.333	96.2	97.1	0.72	4859	2.94	13.19

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
001026957-01	OBS	PC	1.00	0	0	0	0	CENT_KIC_POS

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

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

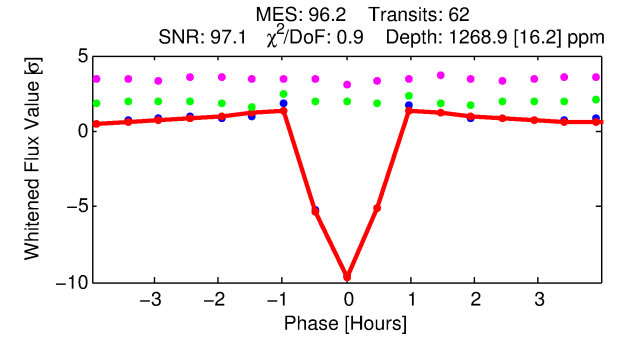
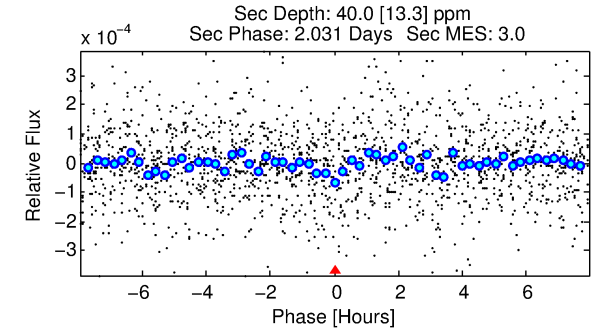
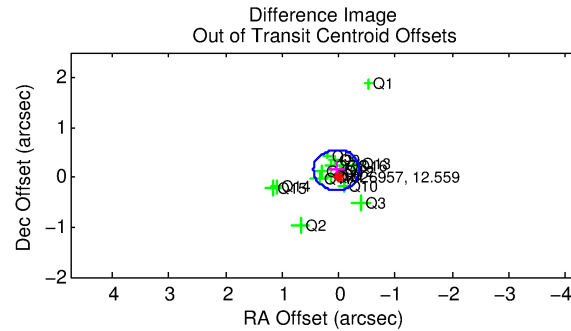
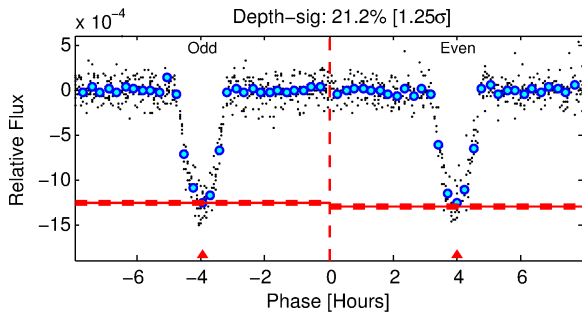
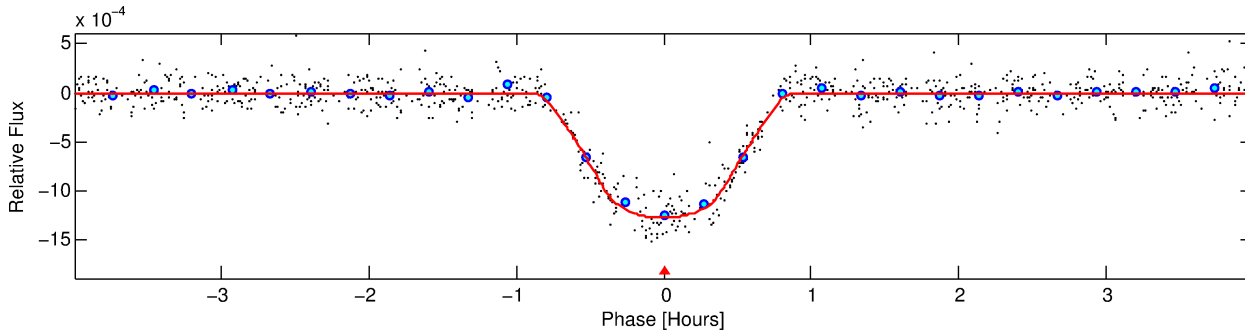
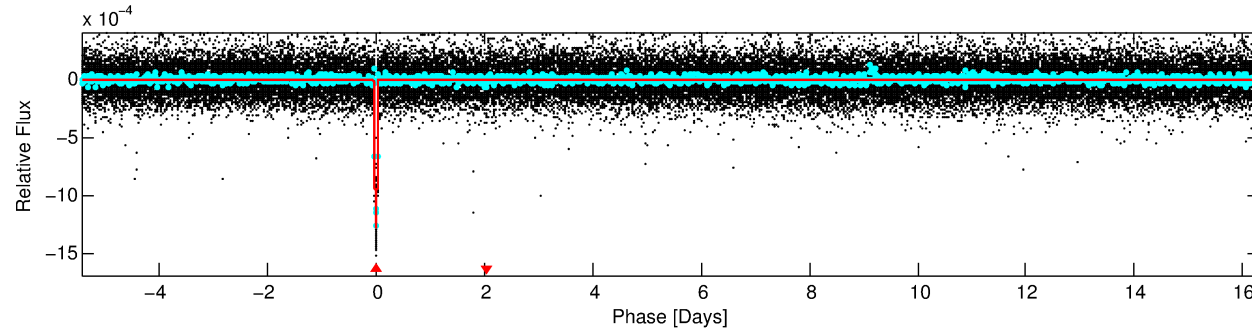
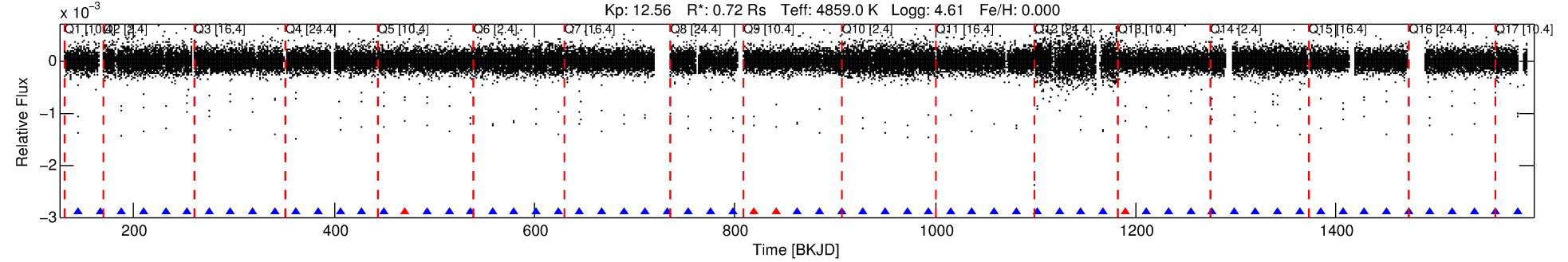
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 001026957-01

No Significant Match Found

DV One-Page Summary

KIC: 1026957 Candidate: 1 of 1 Period: 21.761 d
KOI: K00958.01 Corr: 0.980



DV Fit Results:

Period = 21.76130 [0.00001] d
Epoch = 144.7789 [0.0004] BKJD
Rp/R* = 0.0375 [0.0045]
a/R* = 78.99 [32.19]
b = 0.82 [0.17]
Seff = 13.19 [1.51]
Teq = 486 [14] K
Rp = 2.94 [0.40] Re
a = 0.1401 [0.0078] AU
Ag = 49.79 [20.89] [2.34 σ]
Teffp = 1996 [209] K [7.20 σ]

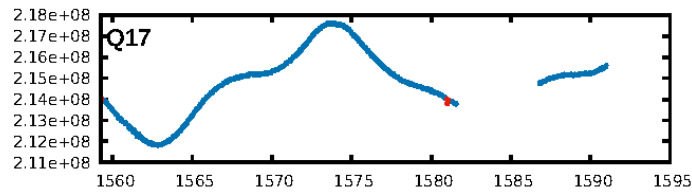
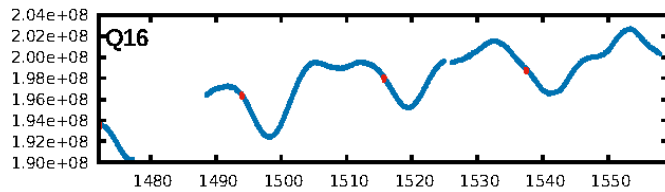
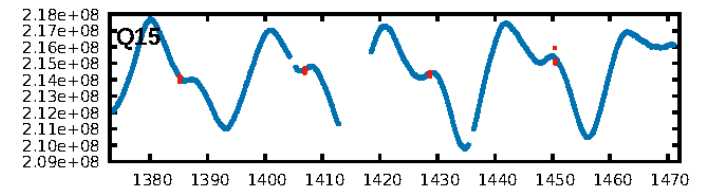
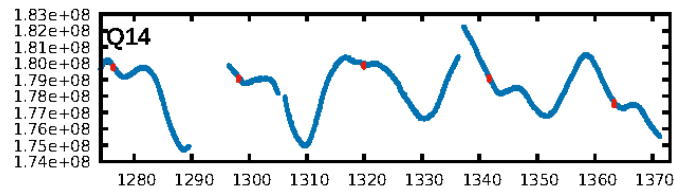
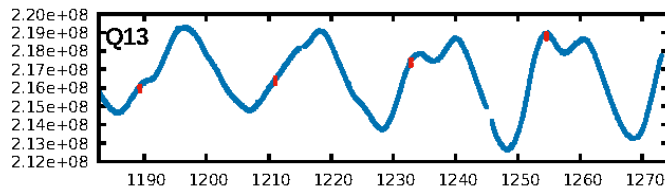
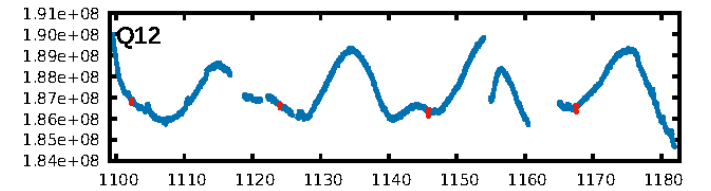
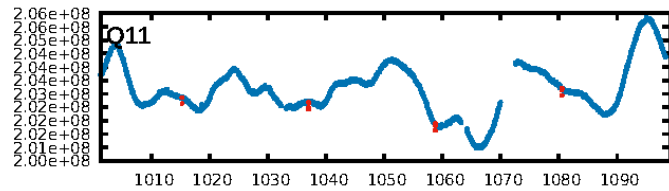
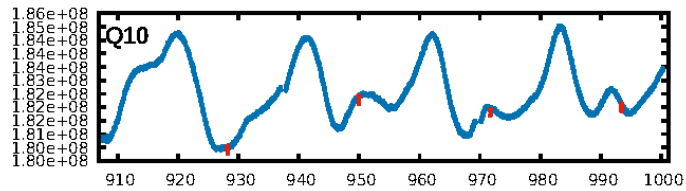
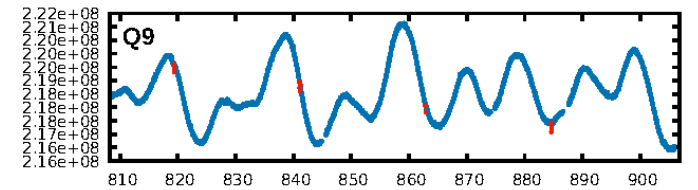
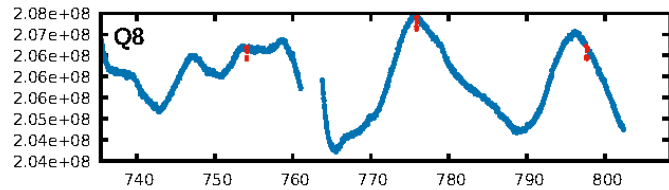
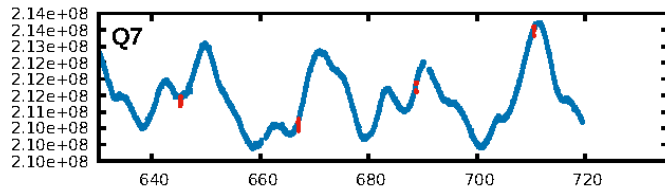
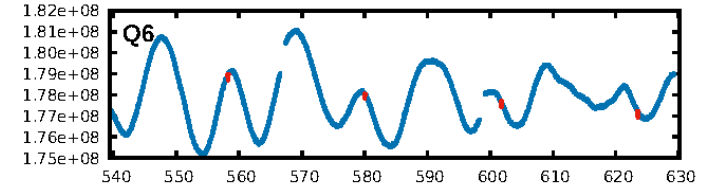
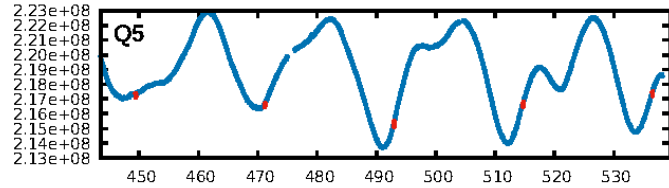
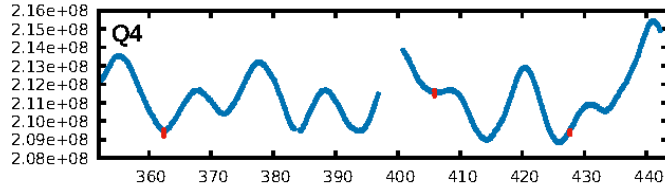
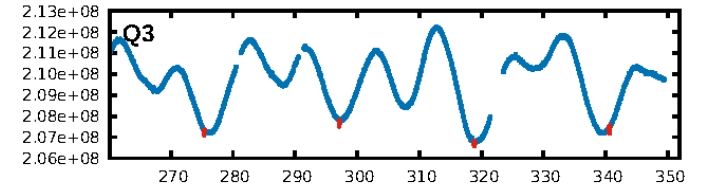
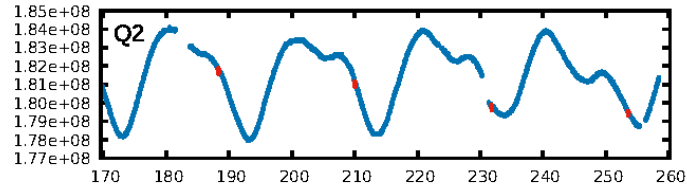
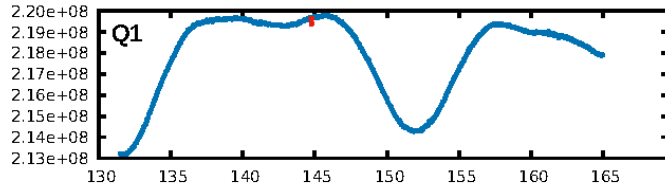
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 78.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 0.93 [55/59]
GhostDiagnostic-chr: 2.121
Centroid-sig: 60.8%
Centroid-so: 0.847 arcsec [6.05 σ]
OotOffset-rm: 0.150 arcsec [1.10 σ]
KicOffset-rm: 0.305 arcsec [2.14 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

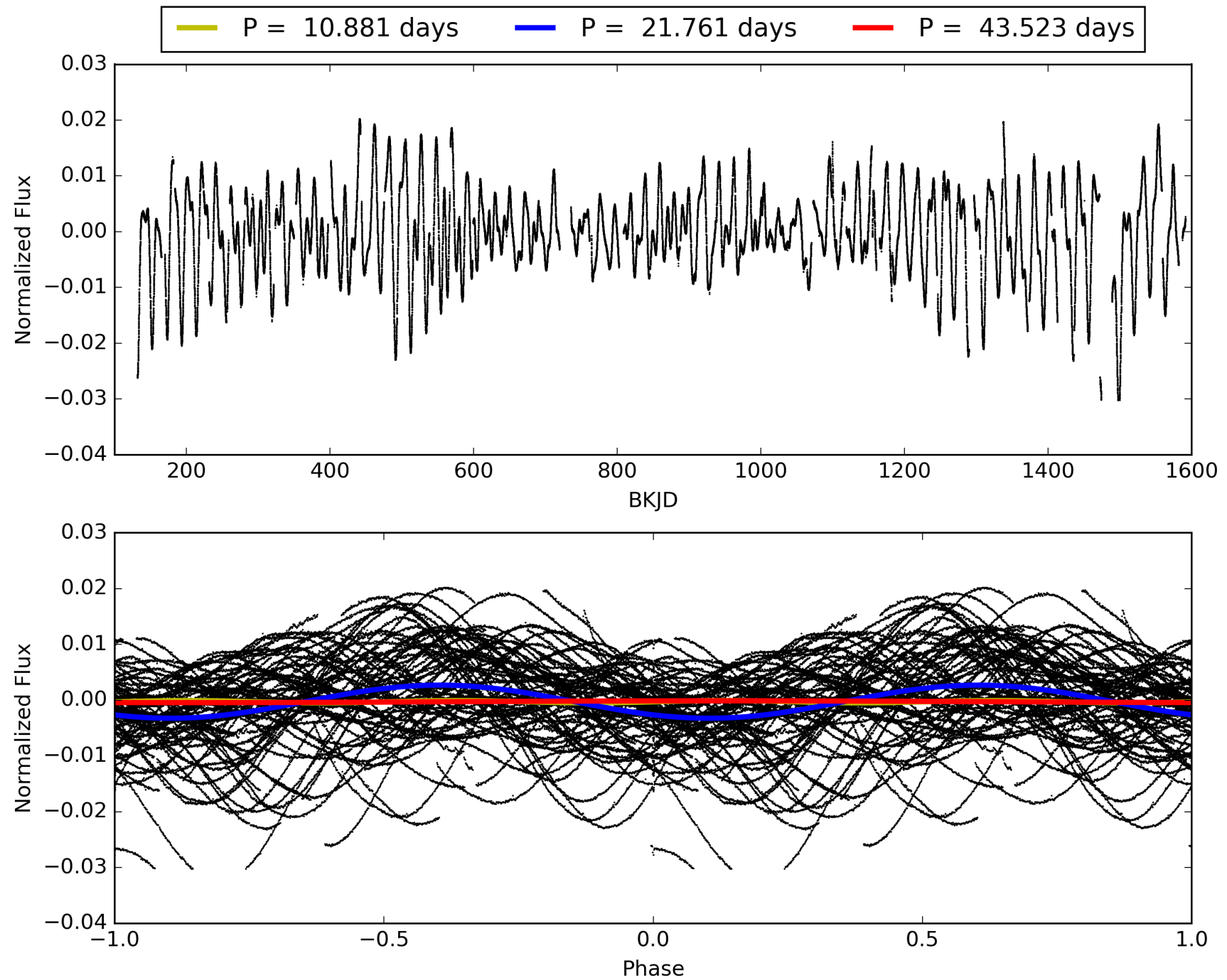
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:03:07 Z

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

TCE 001026957-01, PDC Light Curves

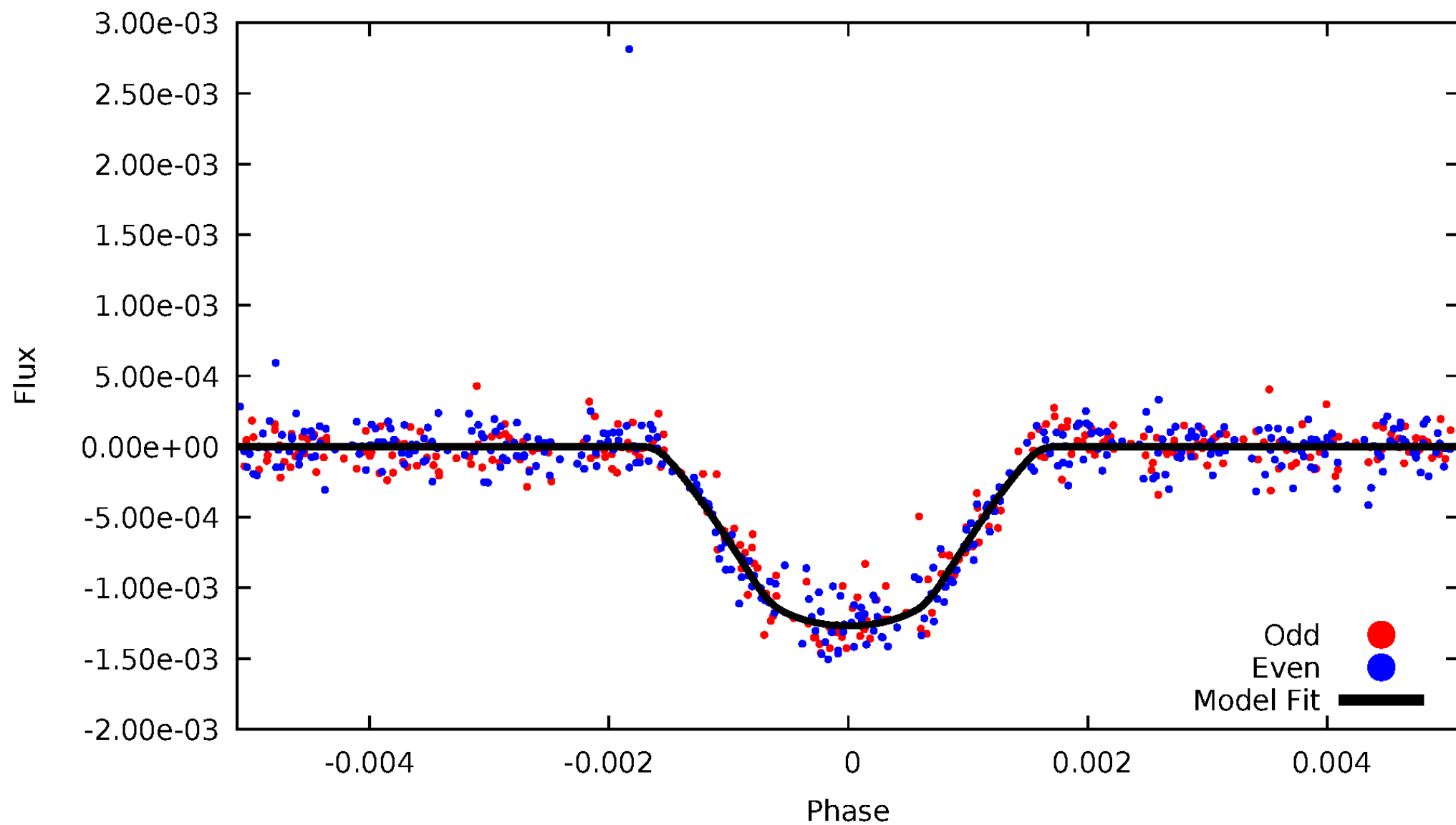


TCE 001026957-01



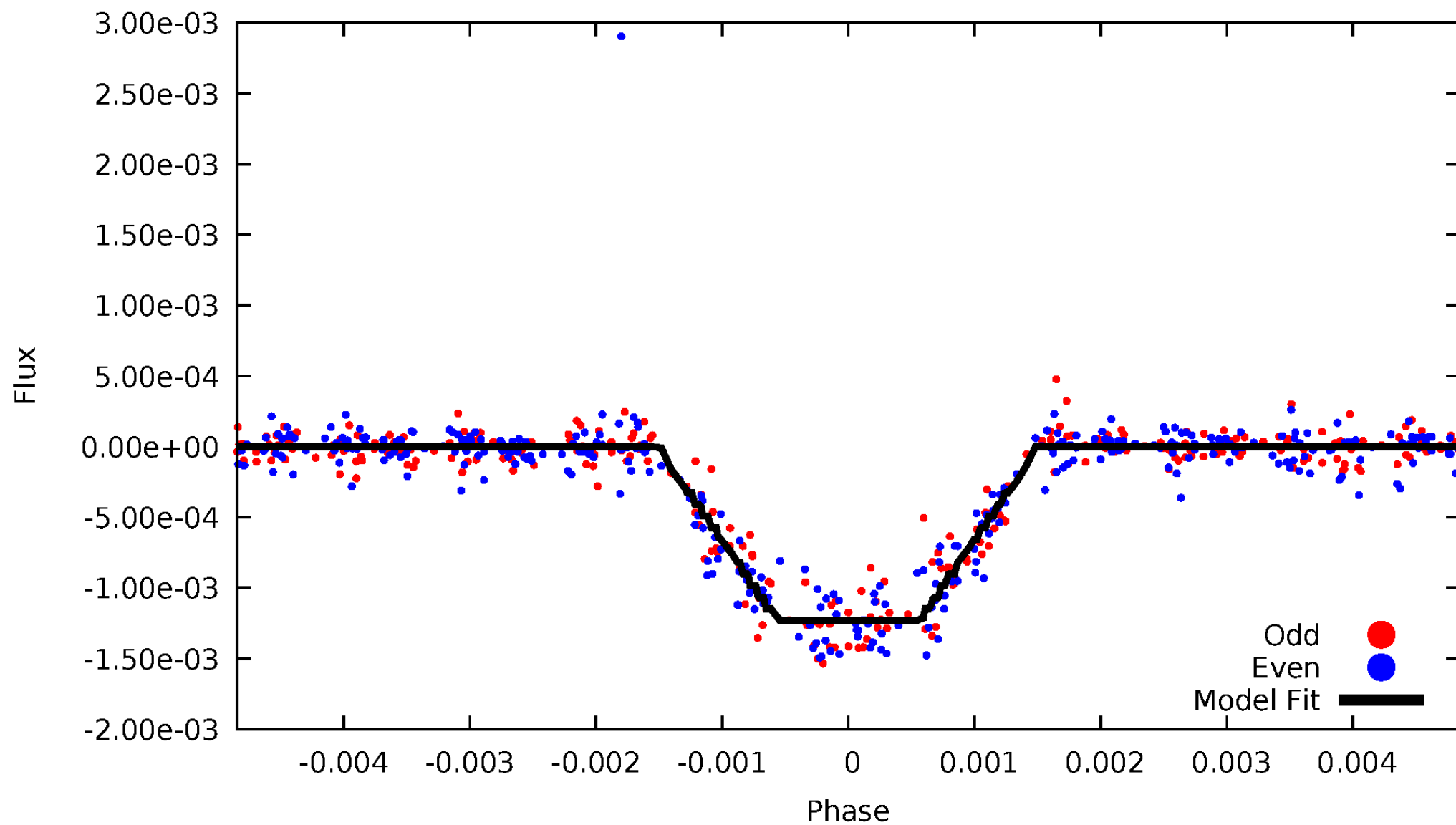
DV Odd/Even

TCE 001026957-01



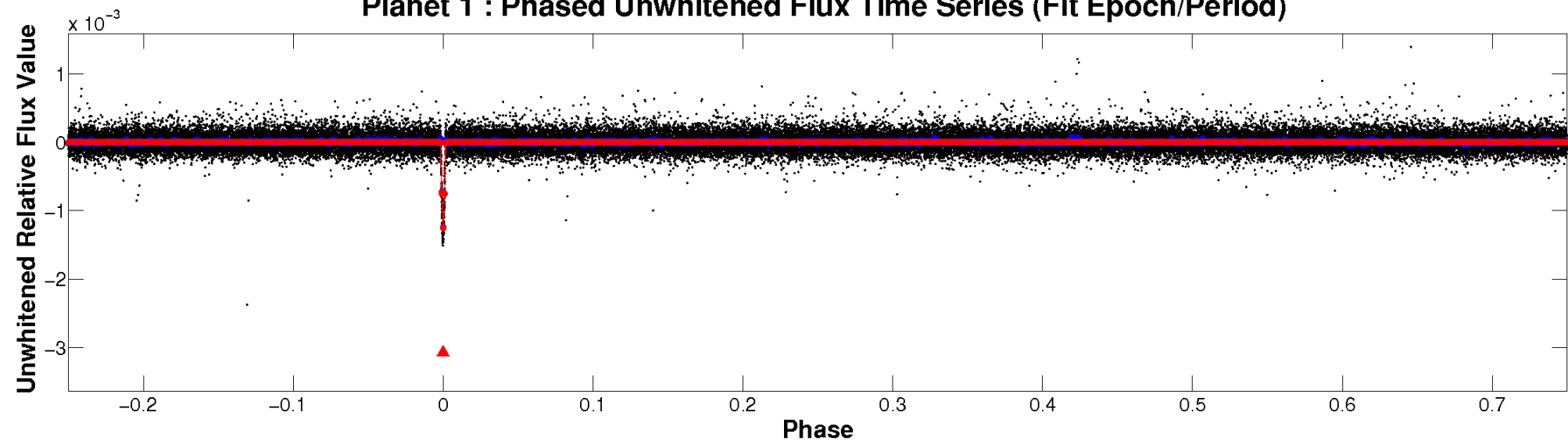
ALT Odd/Even

TCE 001026957-01

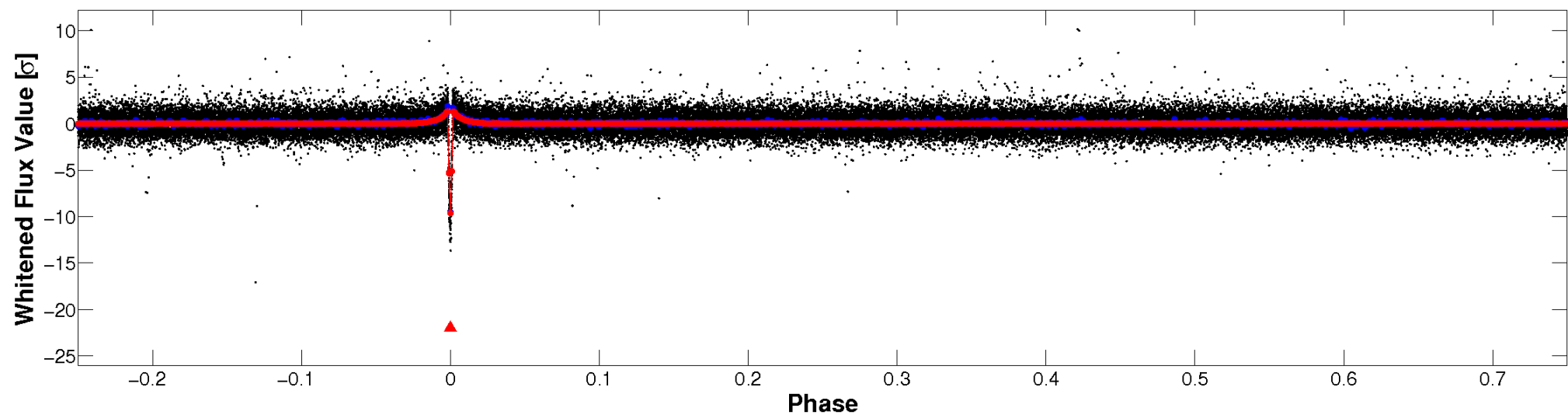


Non-Whitened Vs. Whitened Light Curve

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

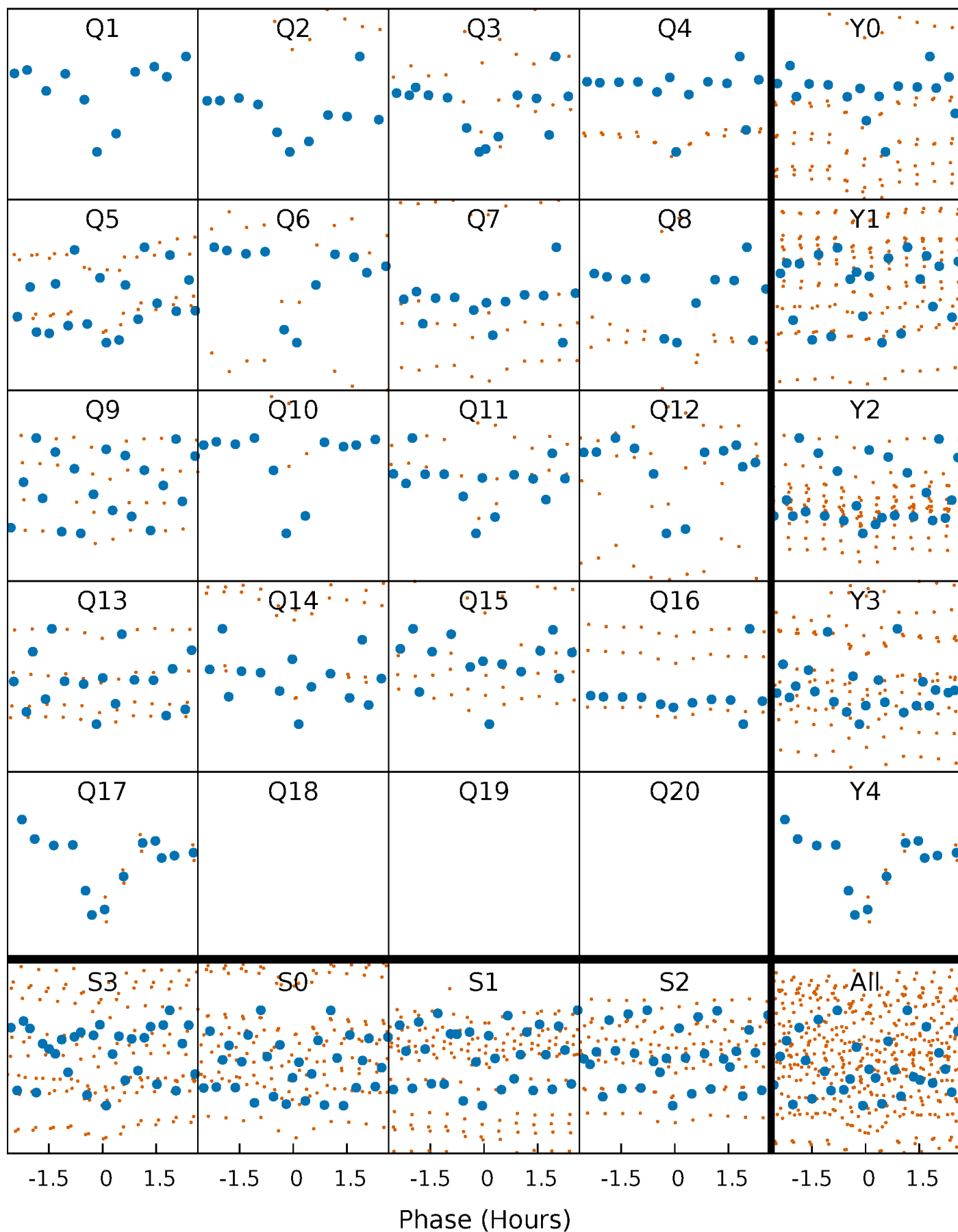


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



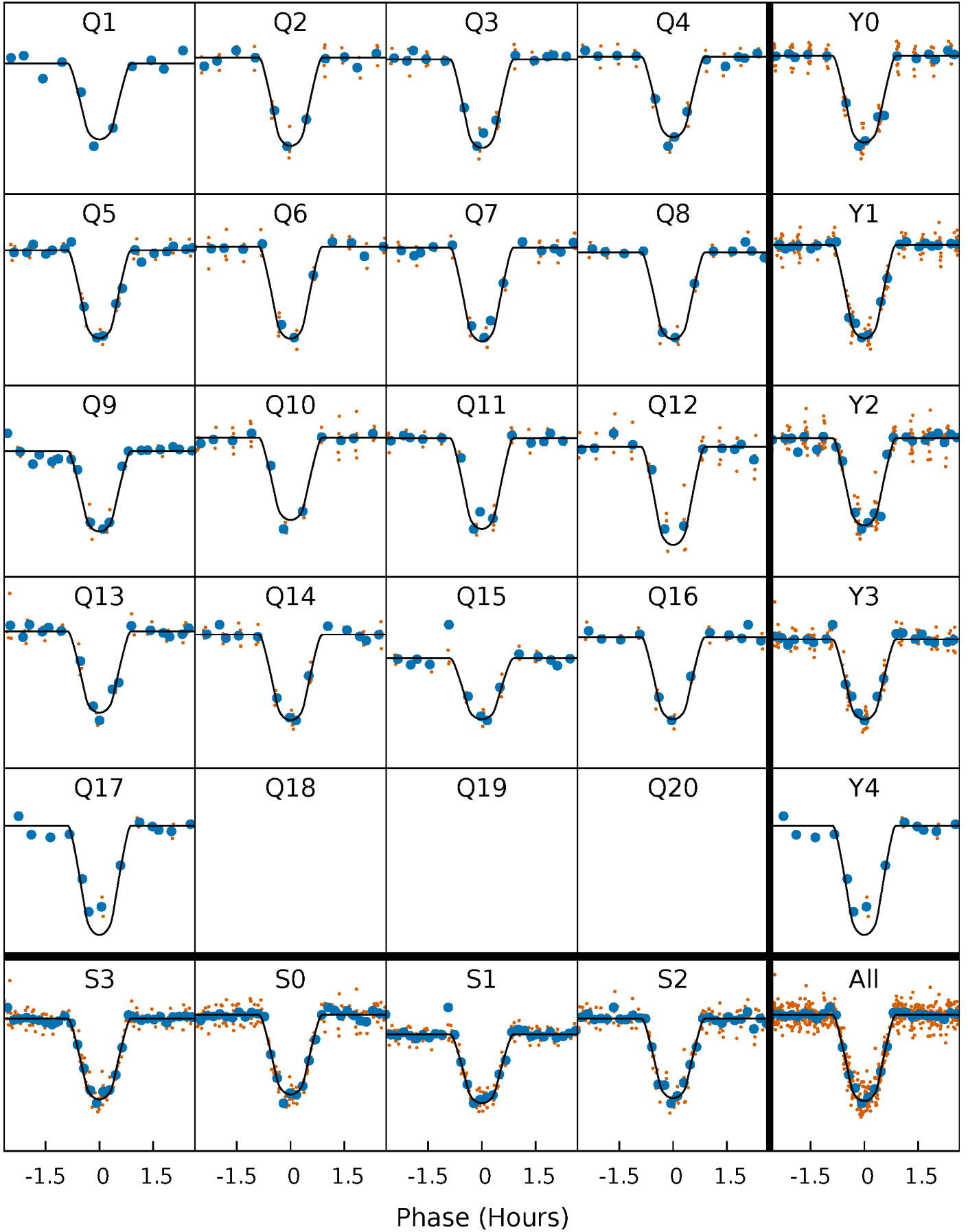
PDC Quarter-Phased Transit Curves

TCE 001026957-01 P= 21.761302 Days $T_0=144.778947$ (BKJD)



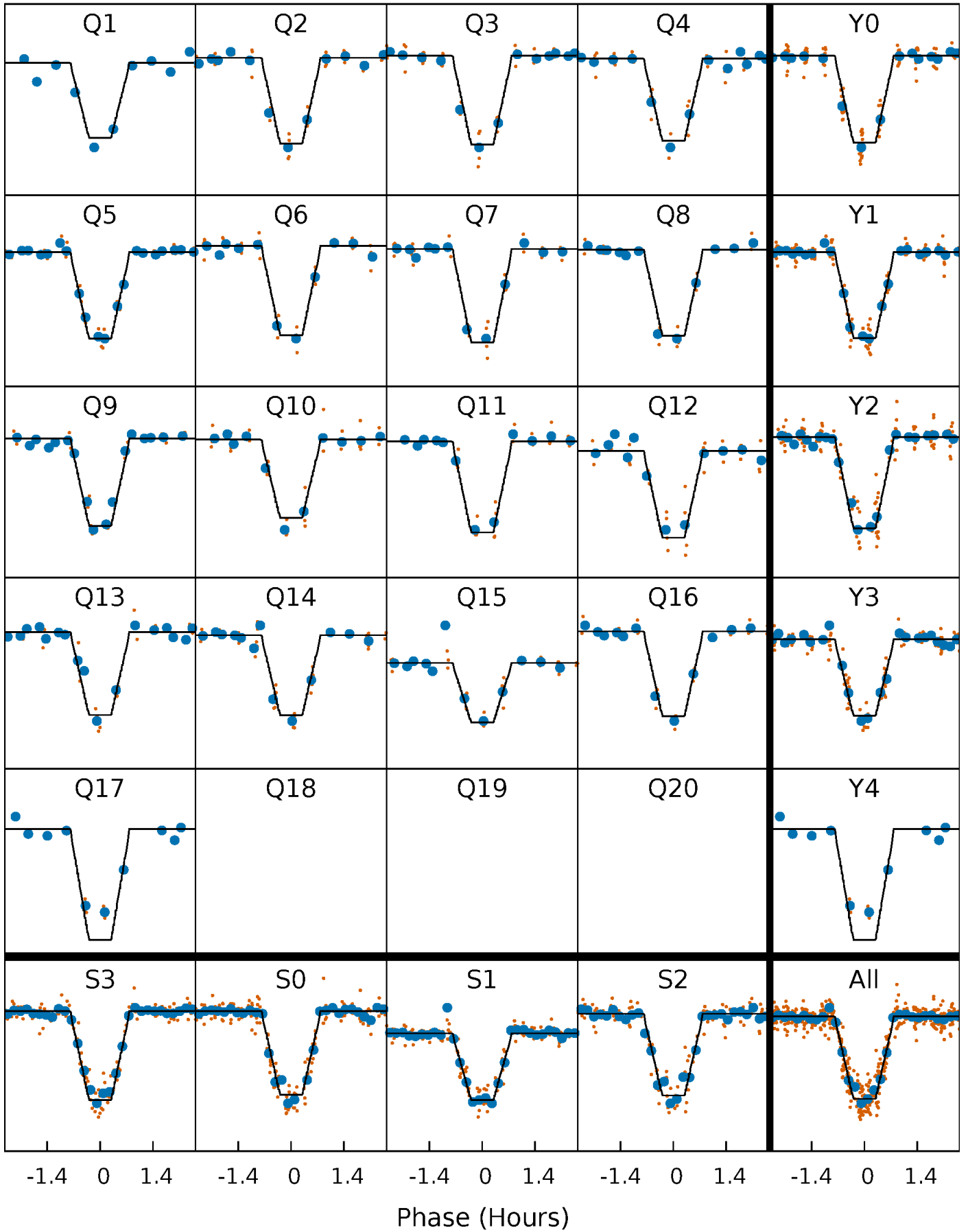
DV Quarter-Phased Transit Curves

TCE 001026957-01 P= 21.761302 Days $T_0=144.778947$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

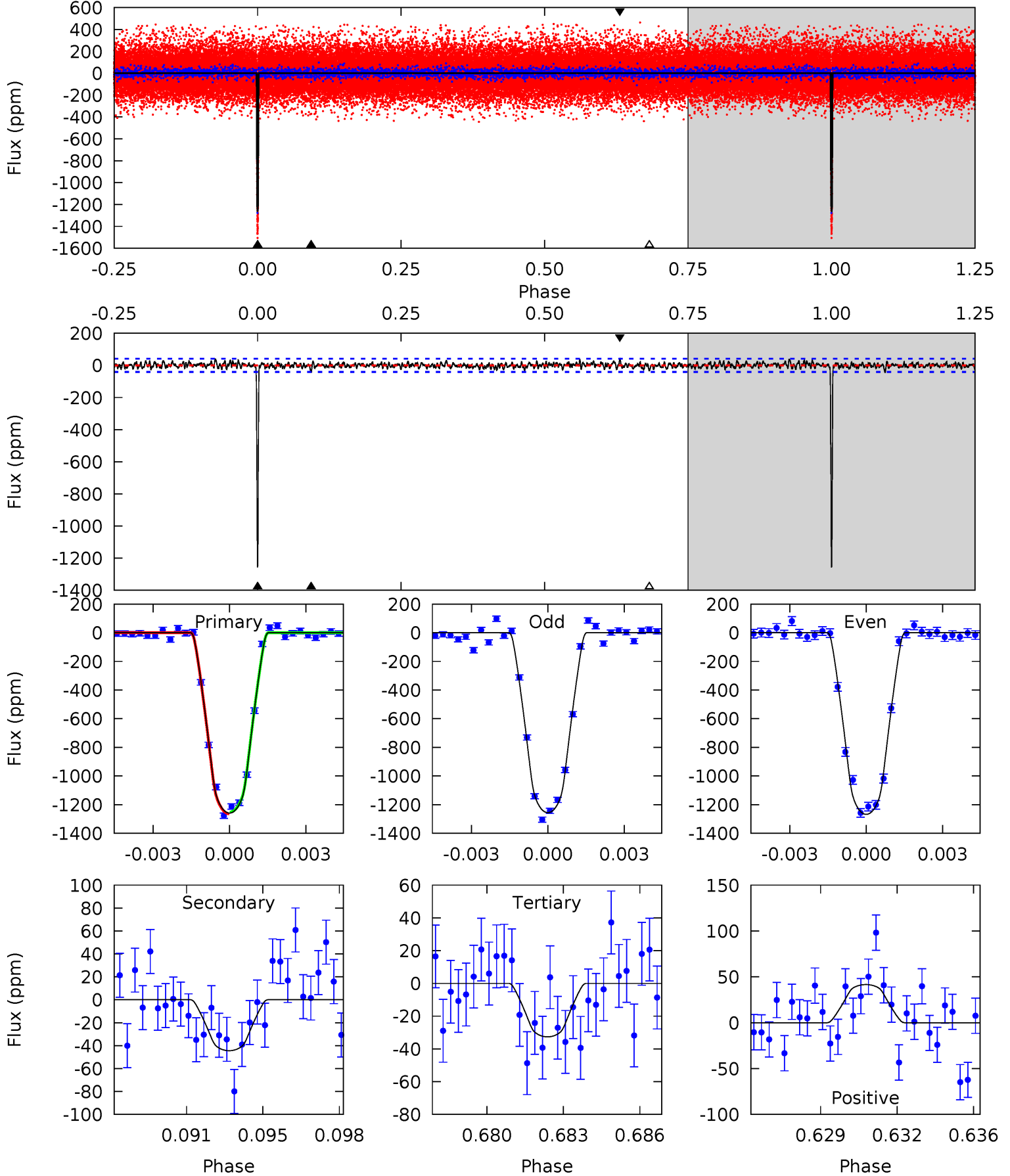
TCE 001026957-01 P= 21.761269 Days $T_0=144.780236$ (BKJD)



DV Model-Shift Uniqueness Test

001026957-01, P = 21.761302 Days, E = 123.017645 Days

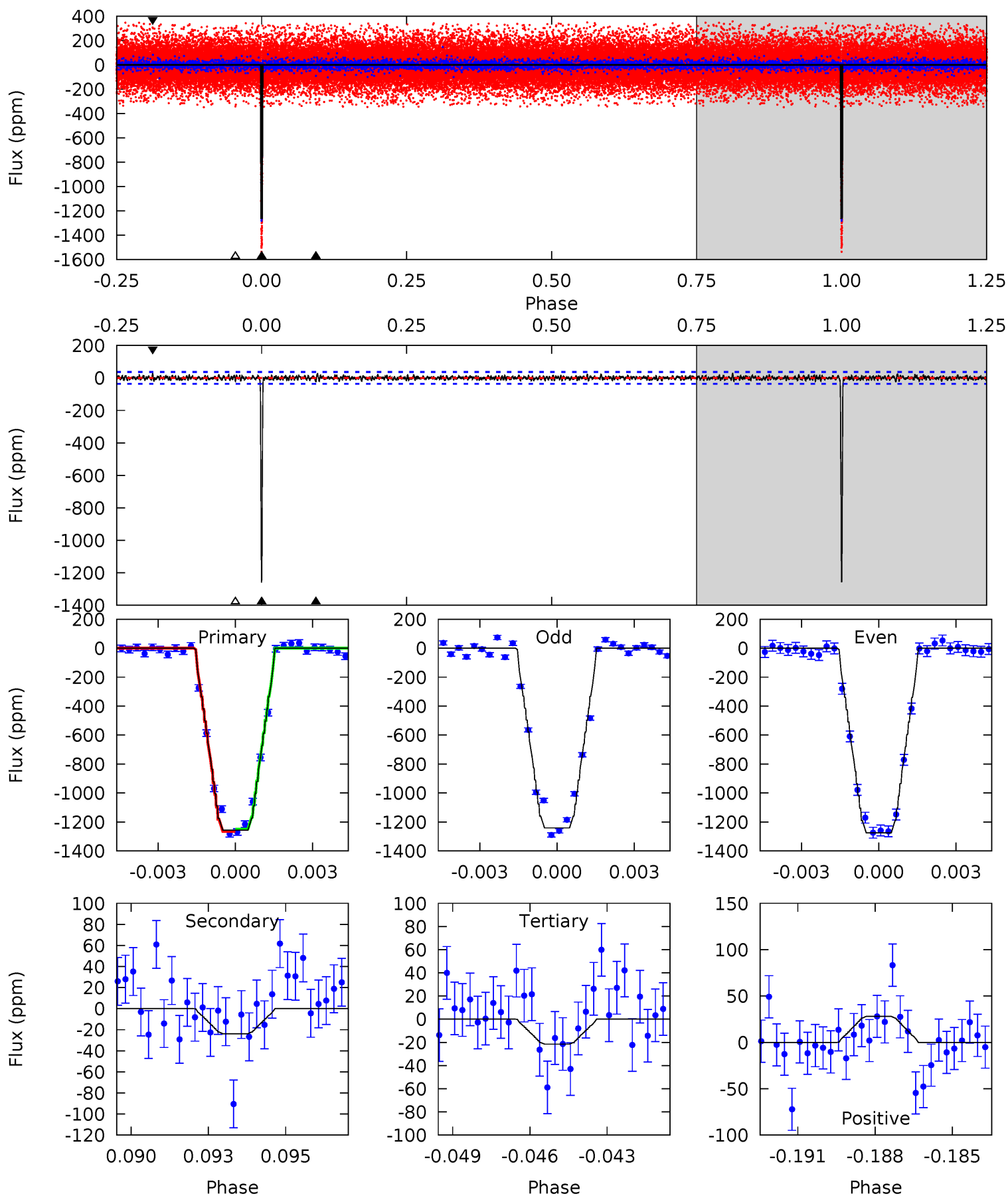
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
160.3	5.66	4.16	5.29	5.23	2.93	1.44	156.2	155.0	1.50	0.37	0.75	0.99	0.03	0.74



Alt Model-Shift Uniqueness Test

001026957-01, $P = 21.761269$ Days, $E = 123.018967$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
181.8	3.44	3.11	4.06	5.26	2.98	1.02	178.7	177.8	0.33	-0.62	2.49	0.99	0.02	1.23



Stellar Parameters For KIC 001026957

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4859^{+97}_{-97}	$4.612^{+0.015}_{-0.045}$	$0.000^{+0.150}_{-0.150}$	$0.720^{+0.047}_{-0.029}$	$0.781^{+0.034}_{-0.049}$	$2.944^{+0.234}_{-0.481}$
	+2%/-2%	+0%/-1%	+inf%/-inf%	+7%/-4%	+4%/-6%	+8%/-16%
Source	SPE57	SPE57	SPE57	DSEP		

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

Secondary Eclipse Parameters for KIC 001026957-01 / KOI 0958.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-44 ± 8	$2.97^{+0.39}_{-0.35}$	684^{+17}_{-16}	2763^{+122}_{-110}	55^{+18}_{-15}
Alt.	-24 ± 7	$2.77^{+0.39}_{-0.34}$	683^{+17}_{-16}	2591^{+136}_{-137}	33^{+15}_{-11}

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 $A_{\text{obs}} \gg 1.0$

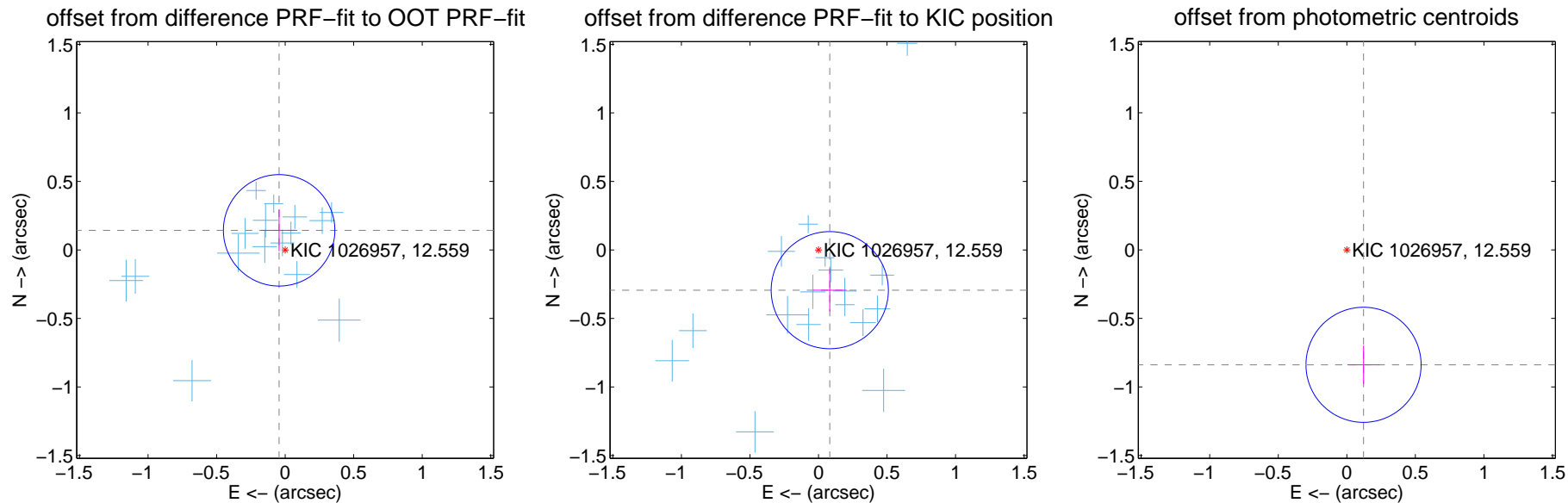
DV Centroid Data

Supplemental centroid analysis for 001026957-01. Kepler magnitude: 12.56. Transit SNR 97.07

There are 17 quarters with good PRF difference image offsets

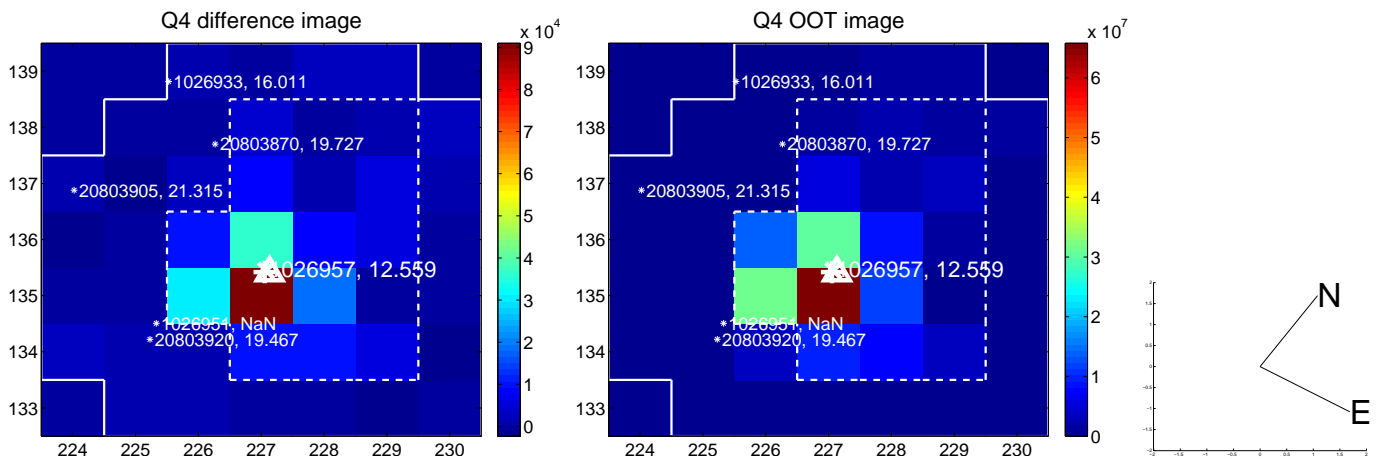
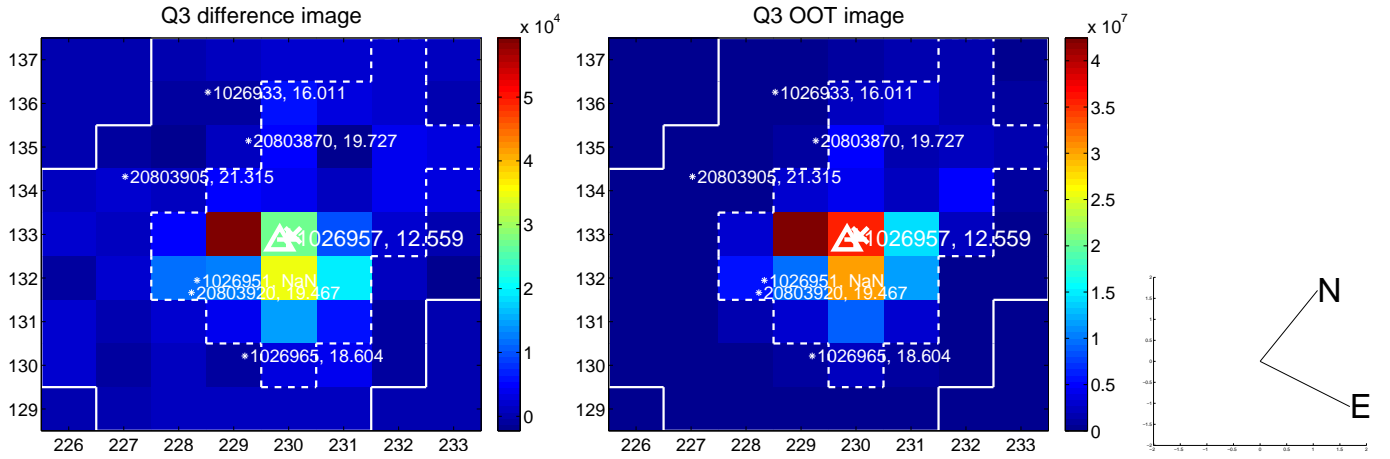
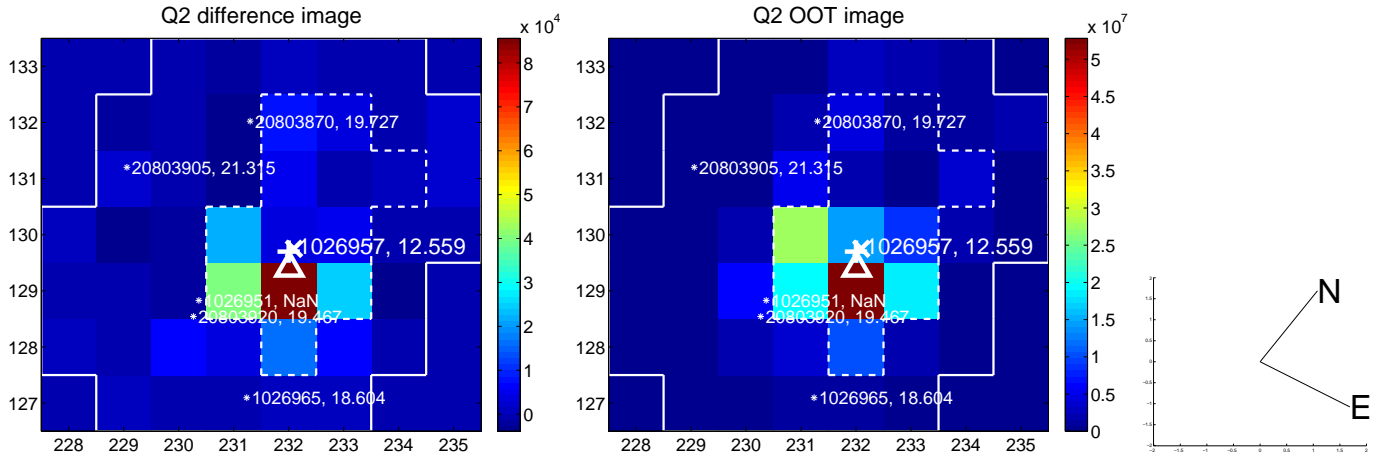
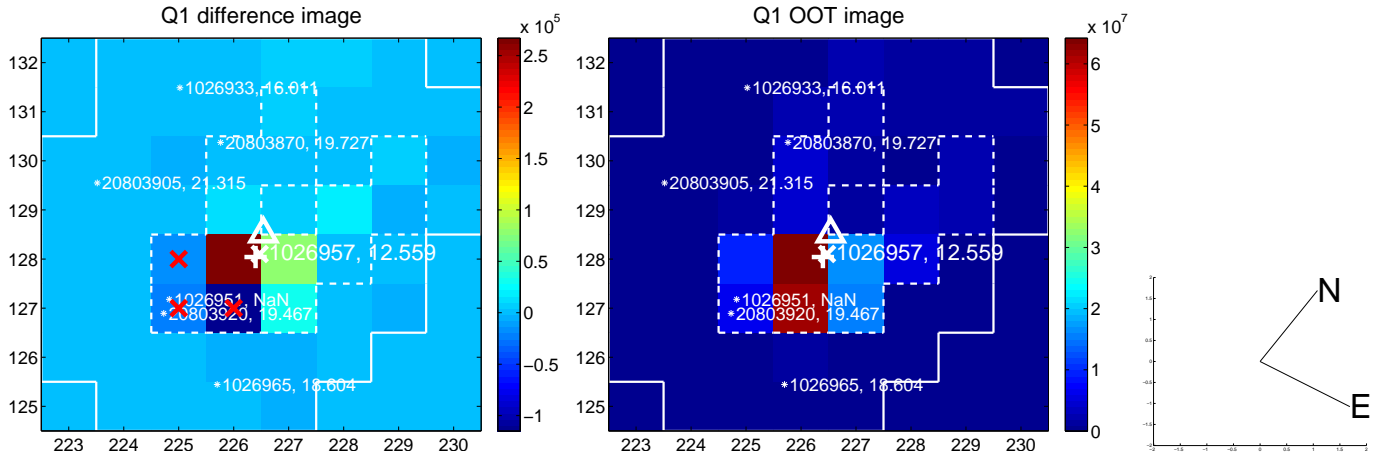
The direct PRF centroid is offset from the target star catalog position by about 0.46 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.150 ± 0.136	1.10	0.044 ± 0.132	0.143 ± 0.153
PRF-fit source offset from KIC position	0.305 ± 0.142	2.14	-0.082 ± 0.123	-0.294 ± 0.155
photometric centroid source offset	0.85 ± 0.14	6.05	-0.12 ± 0.12	-0.84 ± 0.14

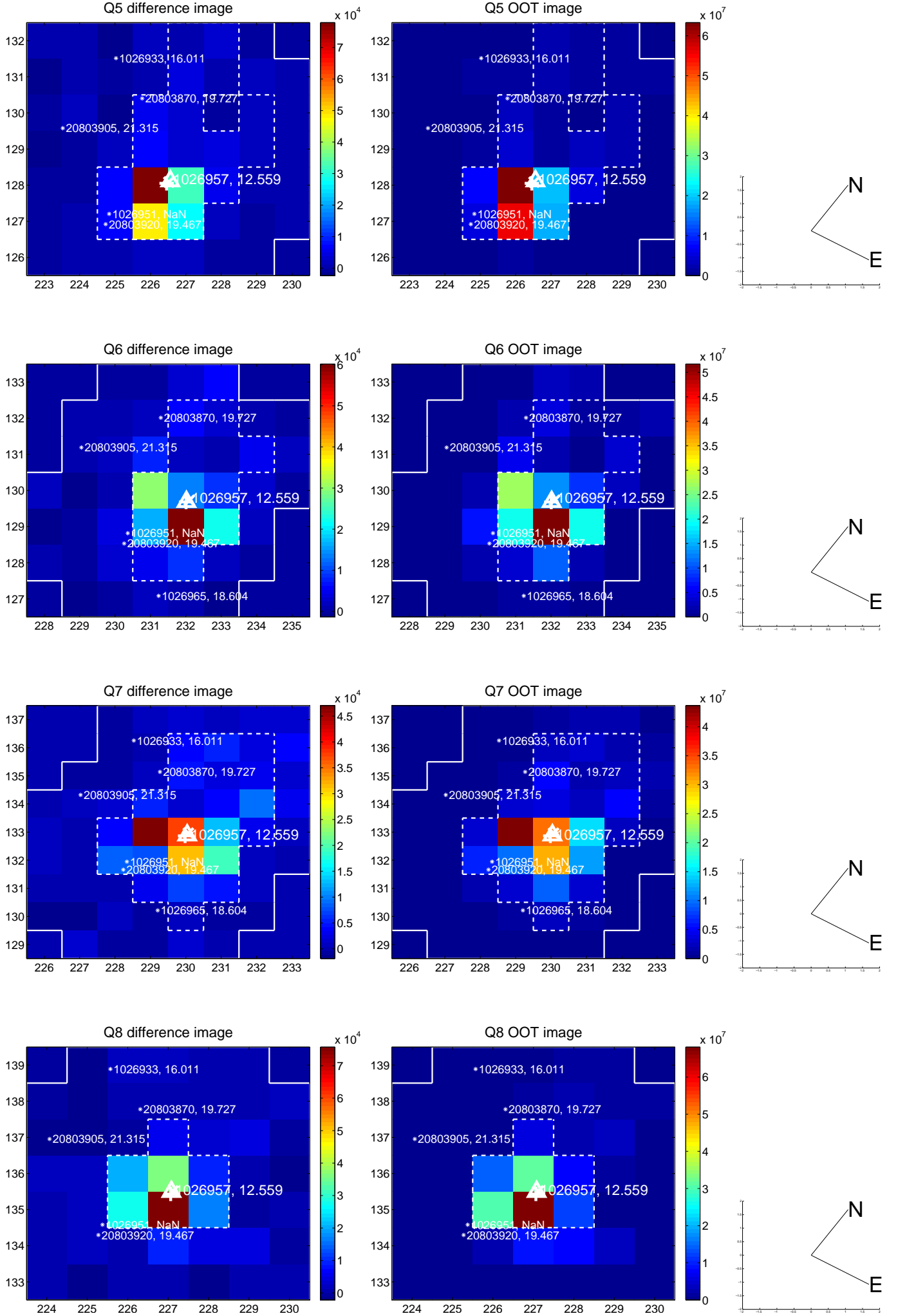


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

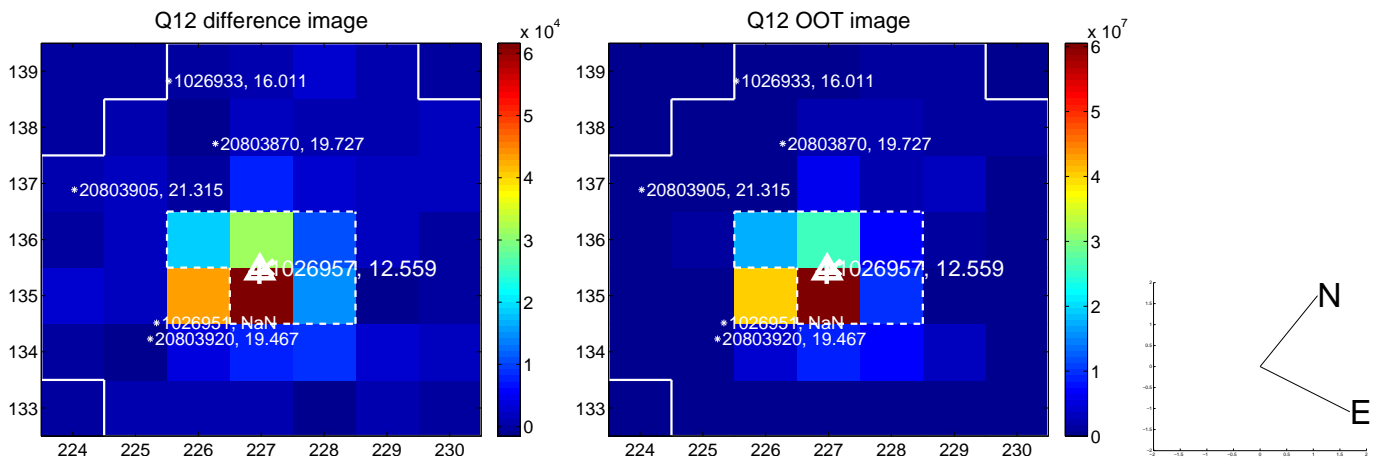
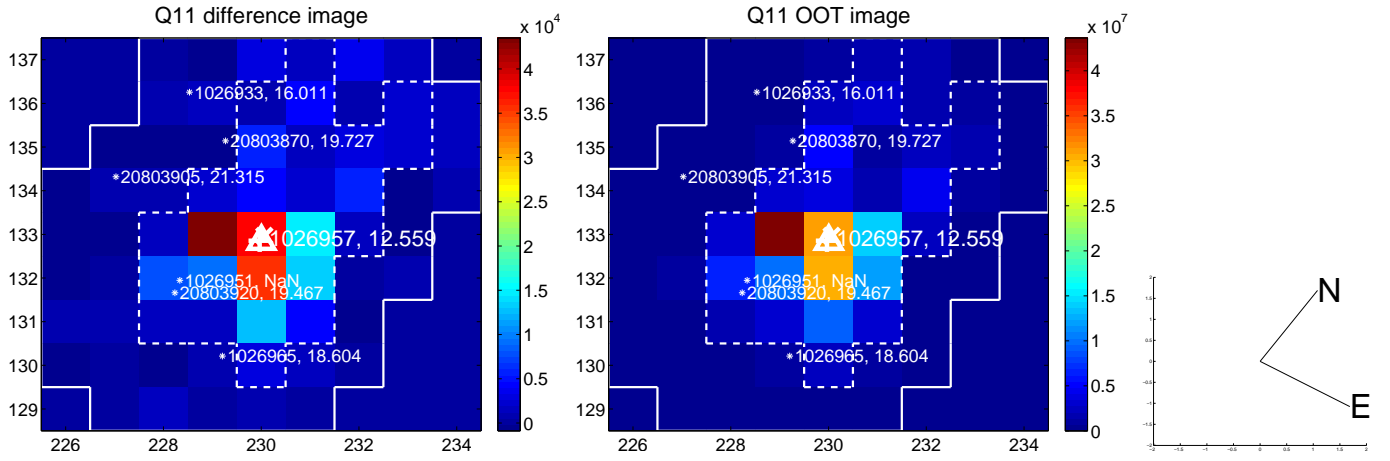
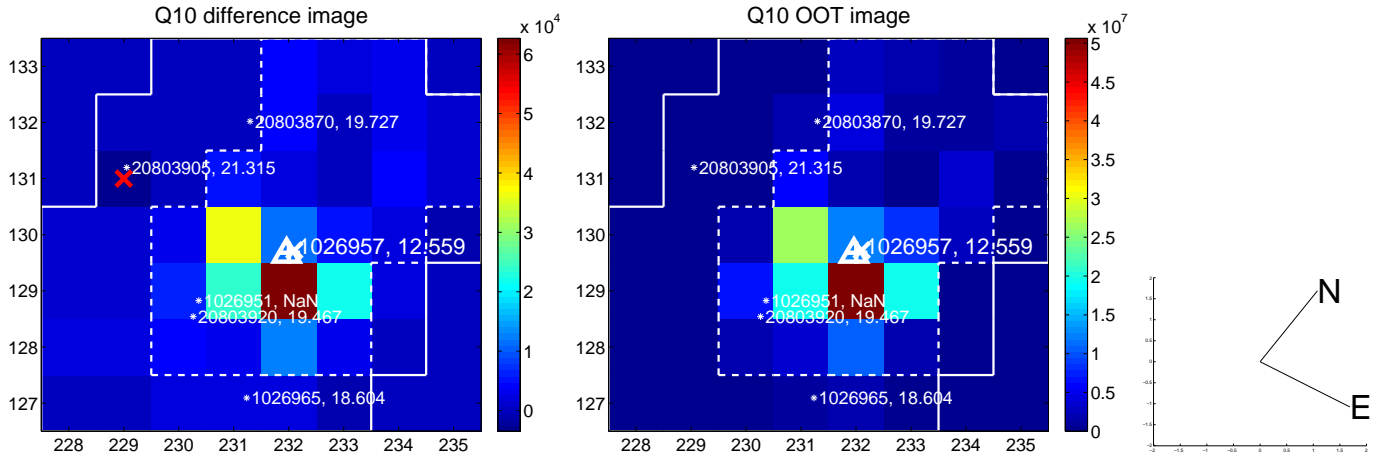
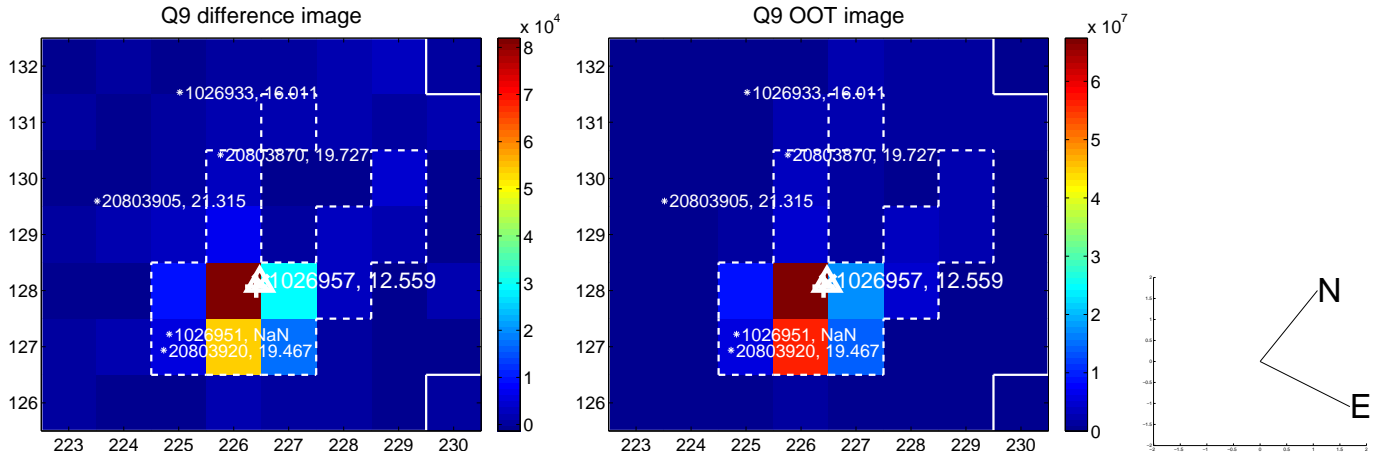
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



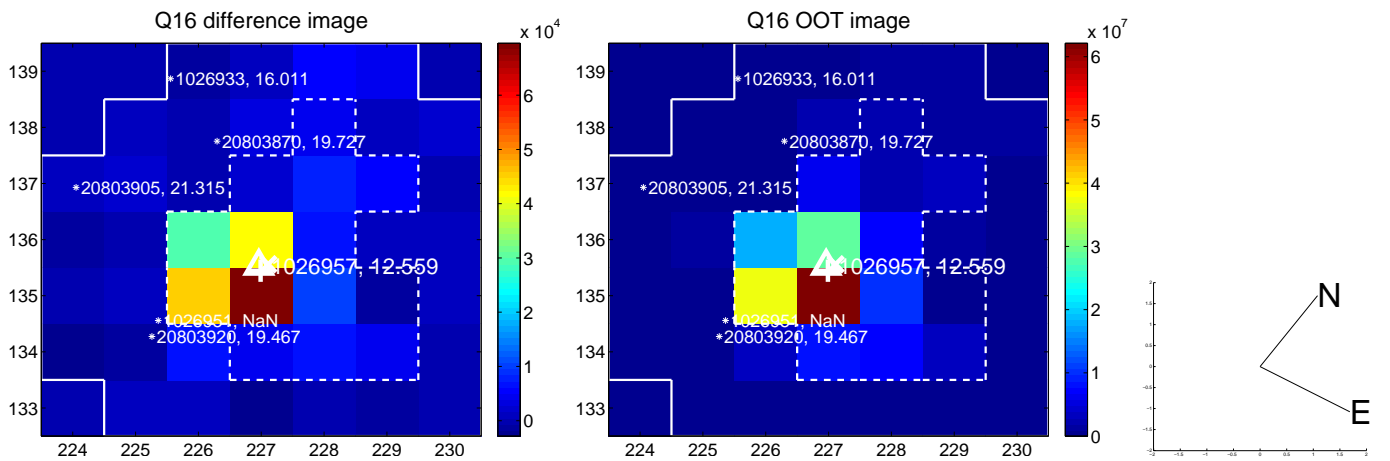
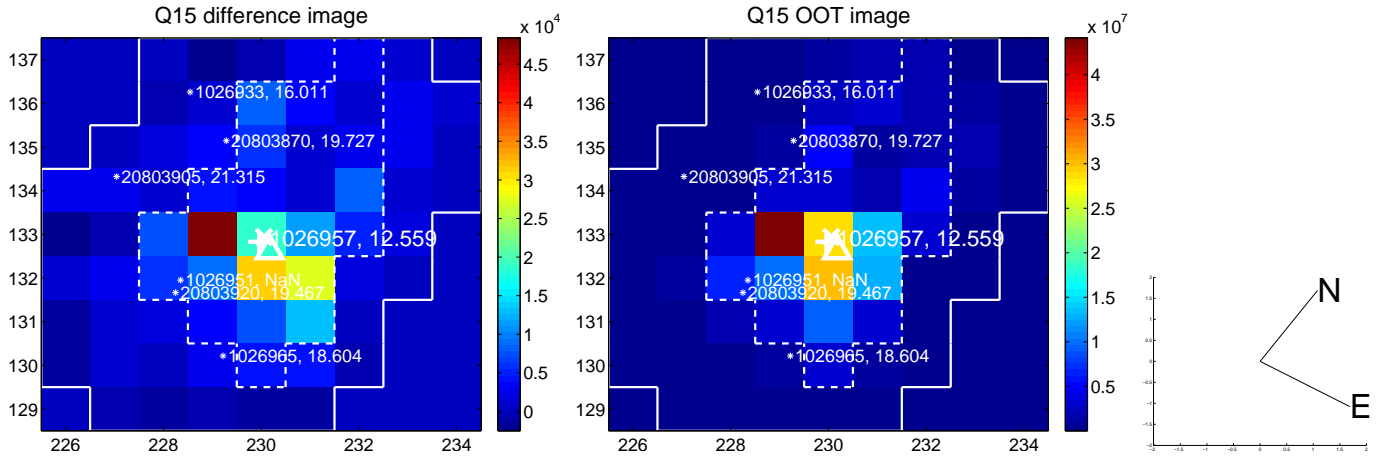
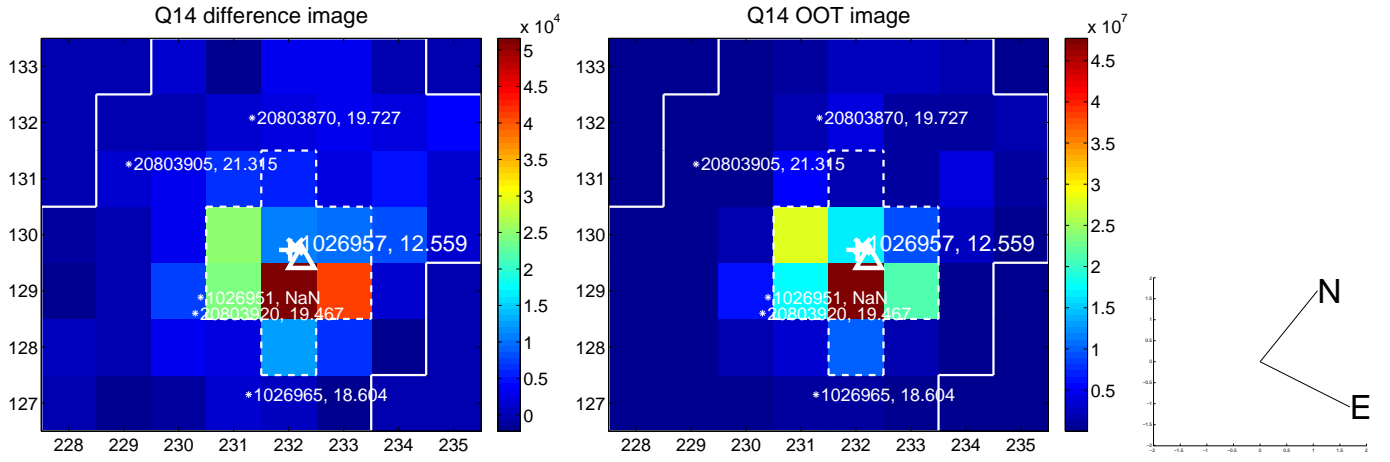
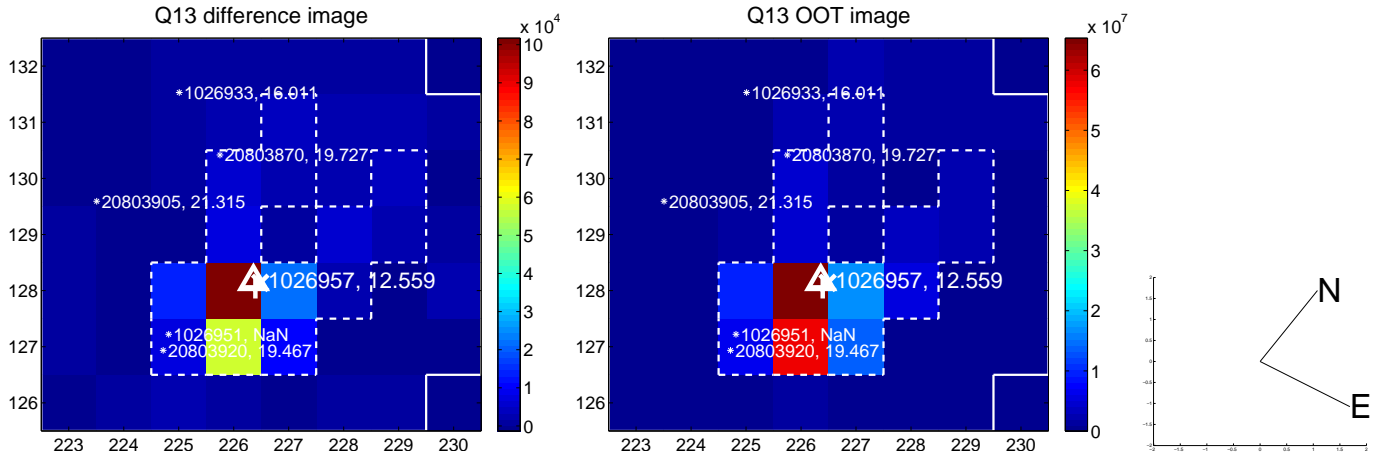
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



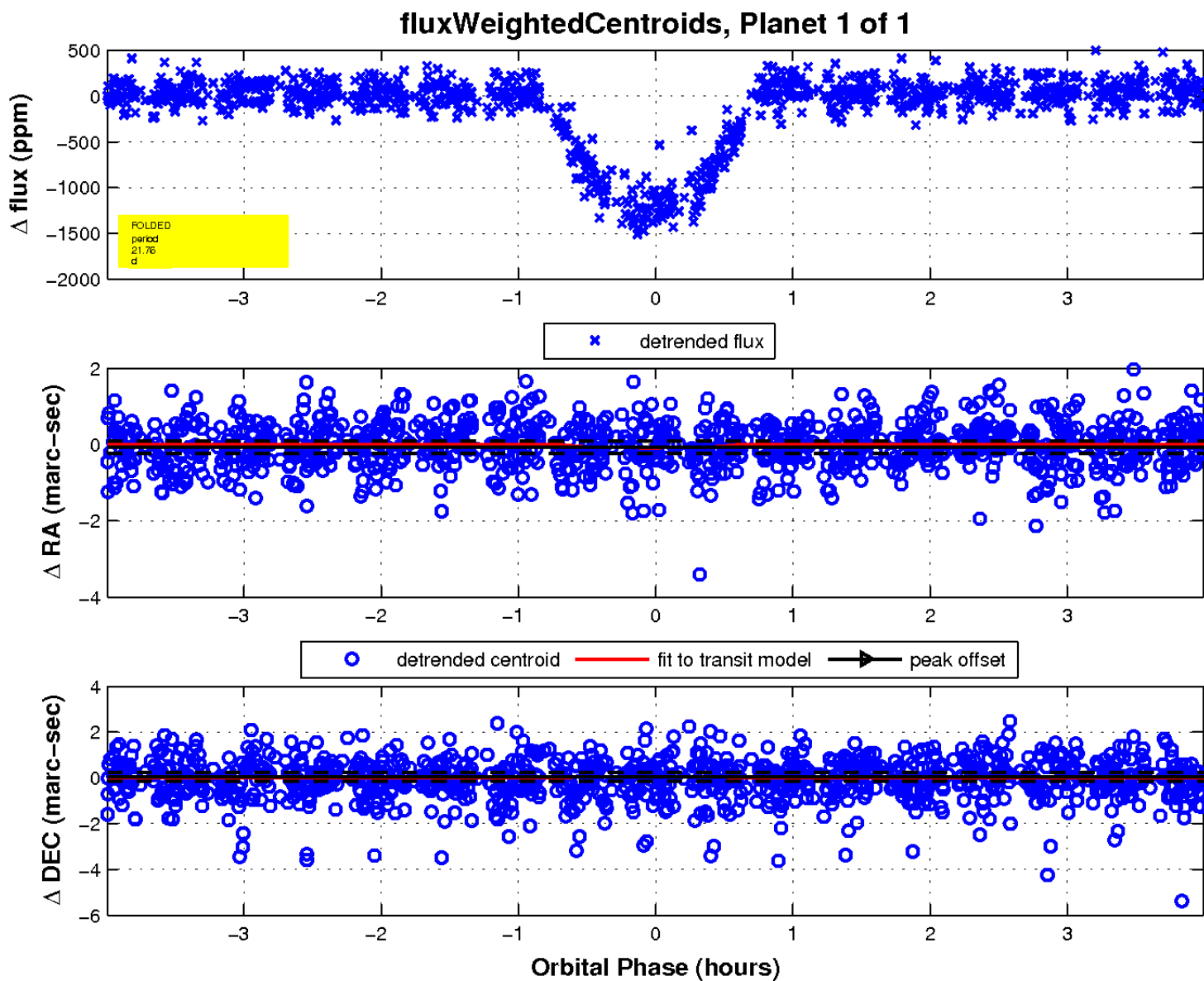
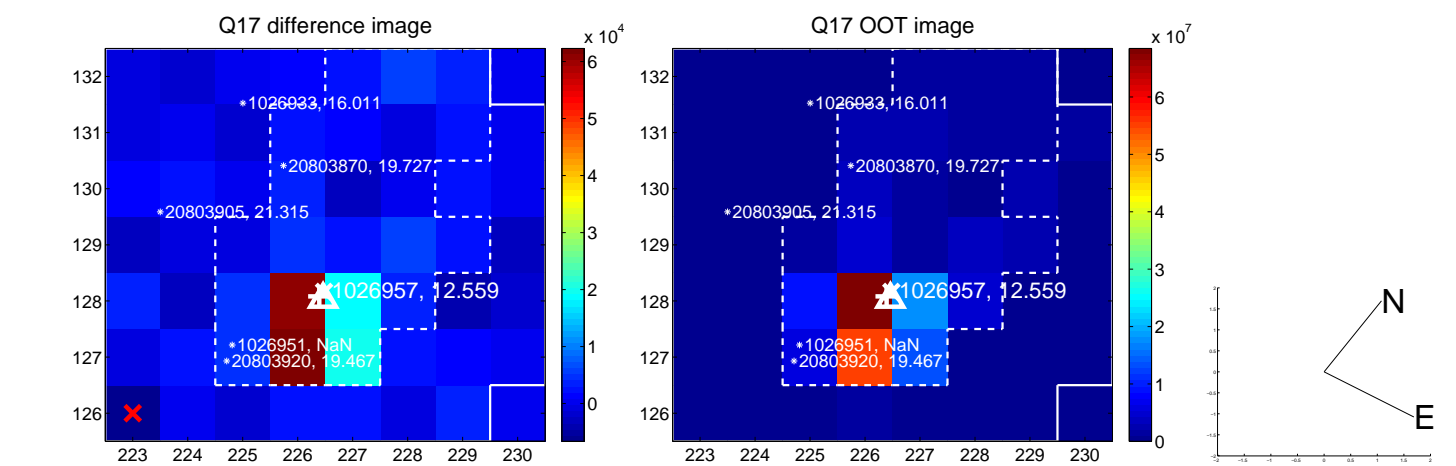
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UKIRT Image

Declination

