

KIC 005481148

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})
005481148-01	OBS	2701.01	22.023550	135.183666	1729.1	1.879	36.5	39.4	0.94	5860	4.82	39.52

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005481148-01	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 005481148-01

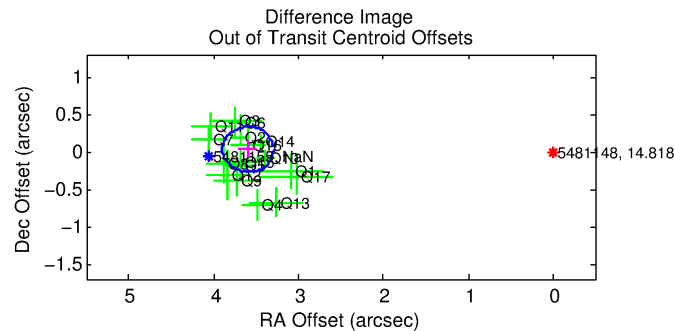
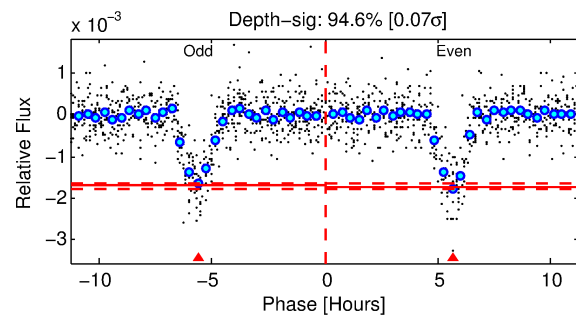
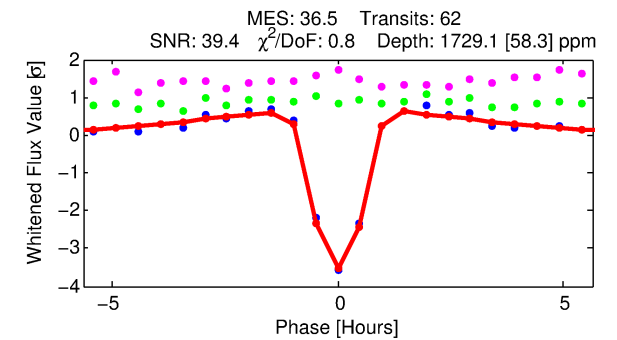
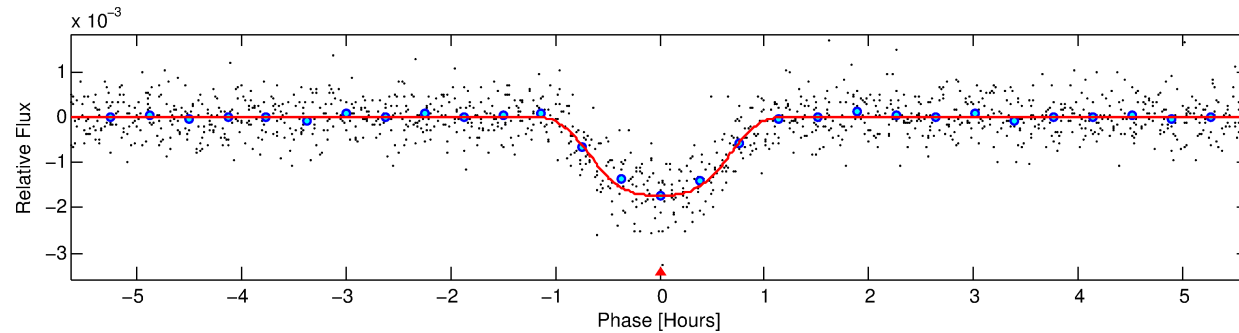
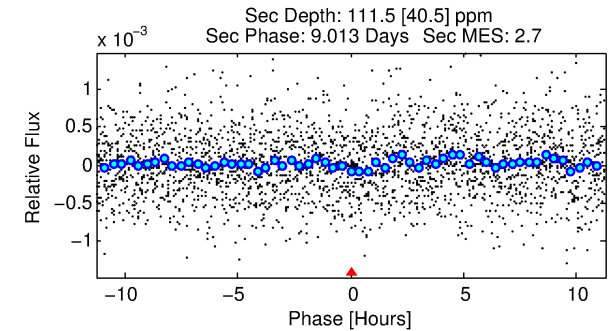
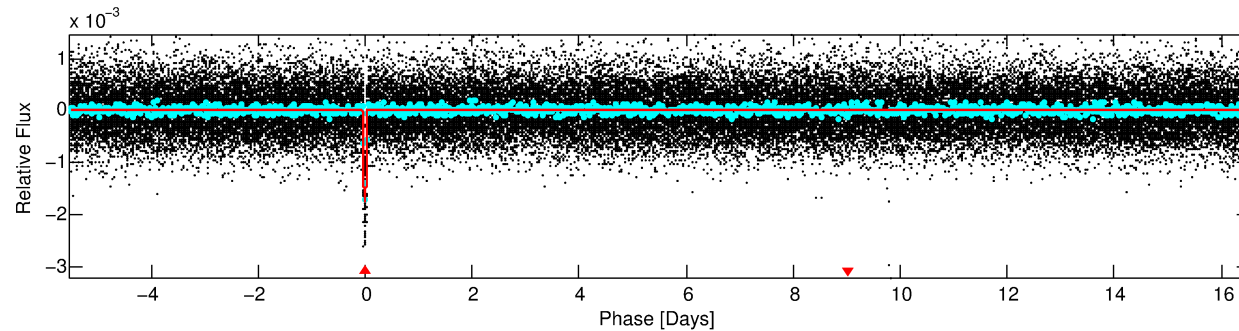
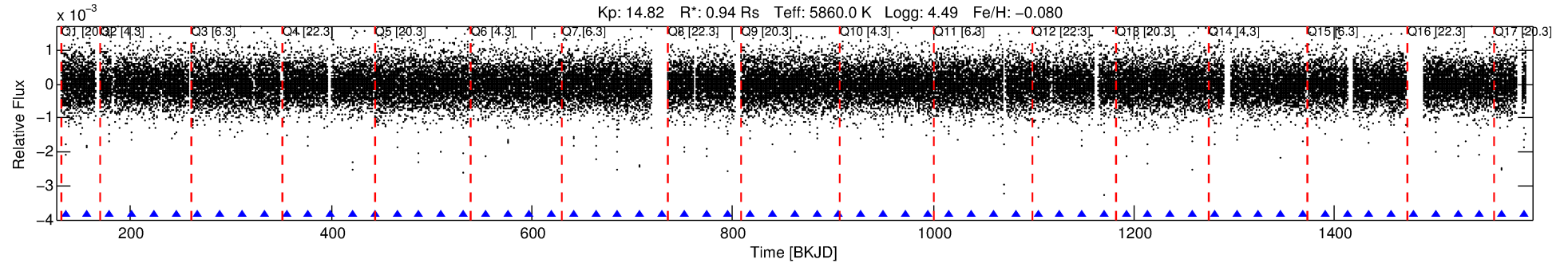
No Significant Match Found

DV One-Page Summary

KIC: 5481148 Candidate: 1 of 1 Period: 22.024 d

KOI: K02701.01 Corr: 0.960

Kp: 14.82 R*: 0.94 Rs Teff: 5860.0 K Logg: 4.49 Fe/H: -0.080



DV Fit Results:

Period = 22.02355 [0.00003] d
Epoch = 135.1837 [0.0011] BKJD
Rp/R* = 0.0472 [0.0018]
a/R* = 42.74 [5.07]
b = 0.93 [0.02]
Seff = 39.52 [15.50]
Teff = 639 [63] K
Rp = 4.82 [1.50] Re
a = 0.1530 [0.0393] AU
Ag = 61.82 [32.39] [1.88σ]
Teffp = 2772 [273] K [7.62σ]

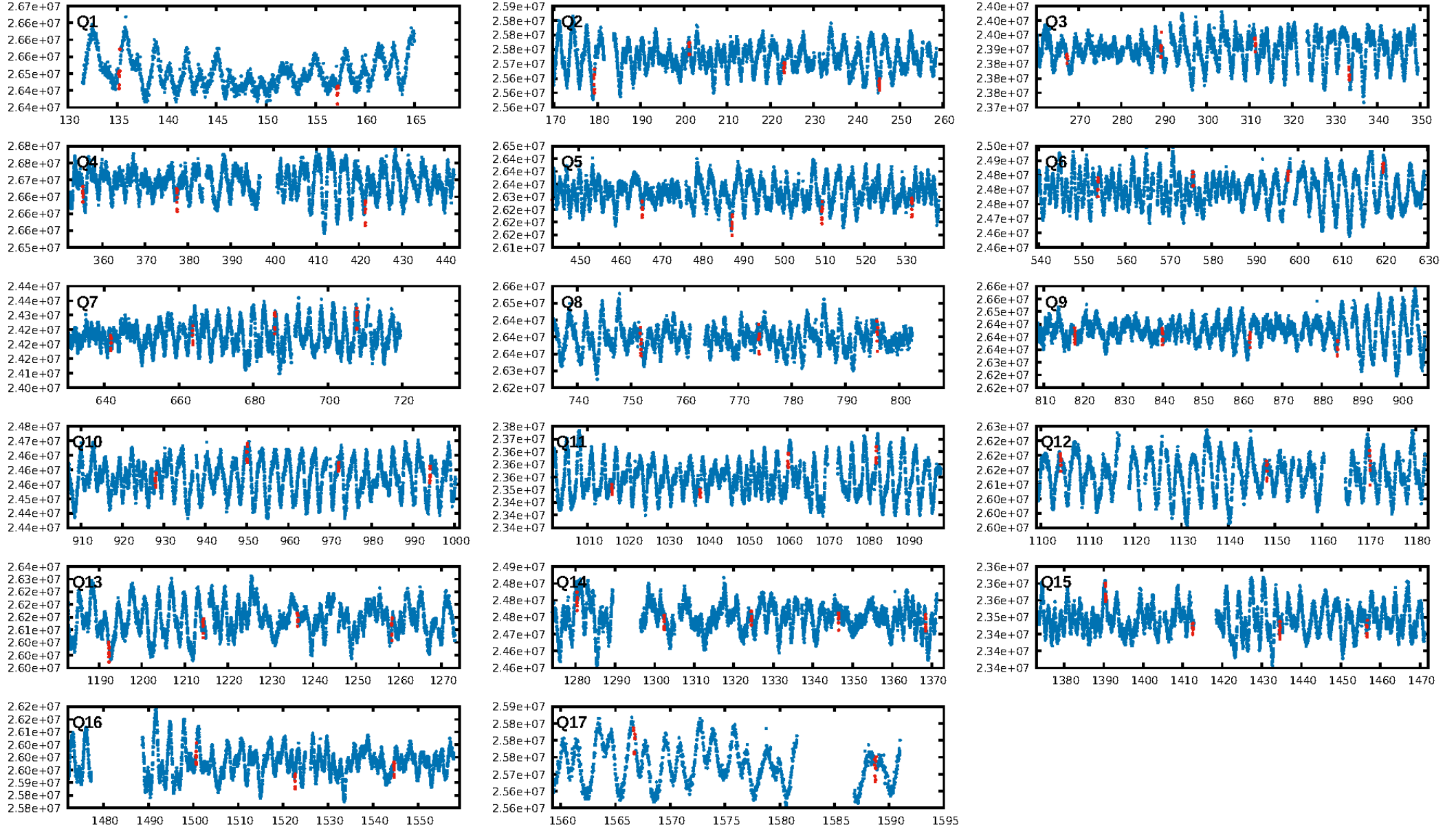
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.18e-283
RollingBand-fgt: 1.00 [58/58]
GhostDiagnostic-chr: 1.131
Centroid-sig: 0.0%
Centroid-so: 4.505 arcsec [15.86σ]
OotOffset-rm: 3.595 arcsec [35.73σ]
KicOffset-rm: 3.725 arcsec [40.17σ]
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]

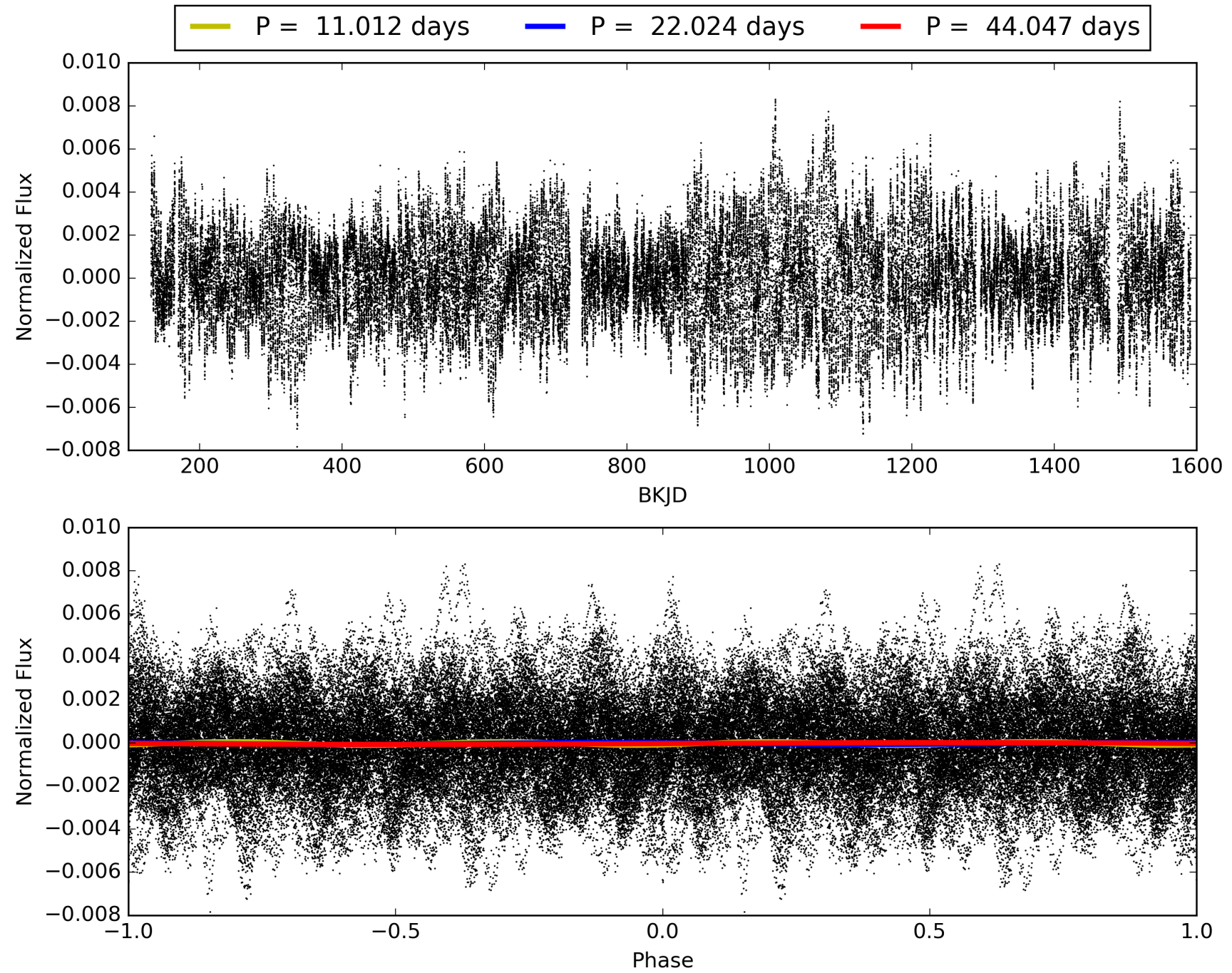
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 07:03:19 Z

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

TCE 005481148-01, PDC Light Curves

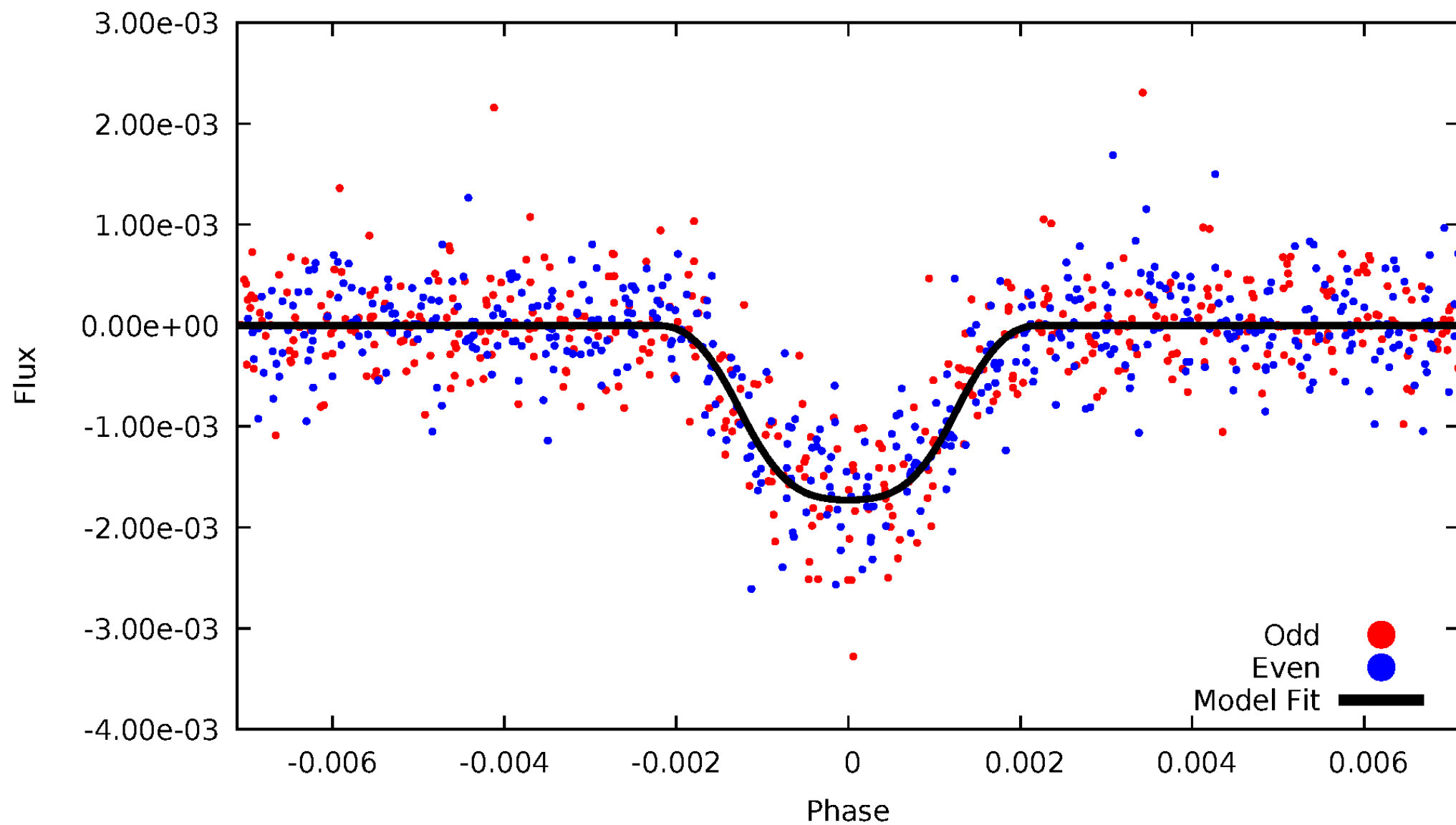


TCE 005481148-01



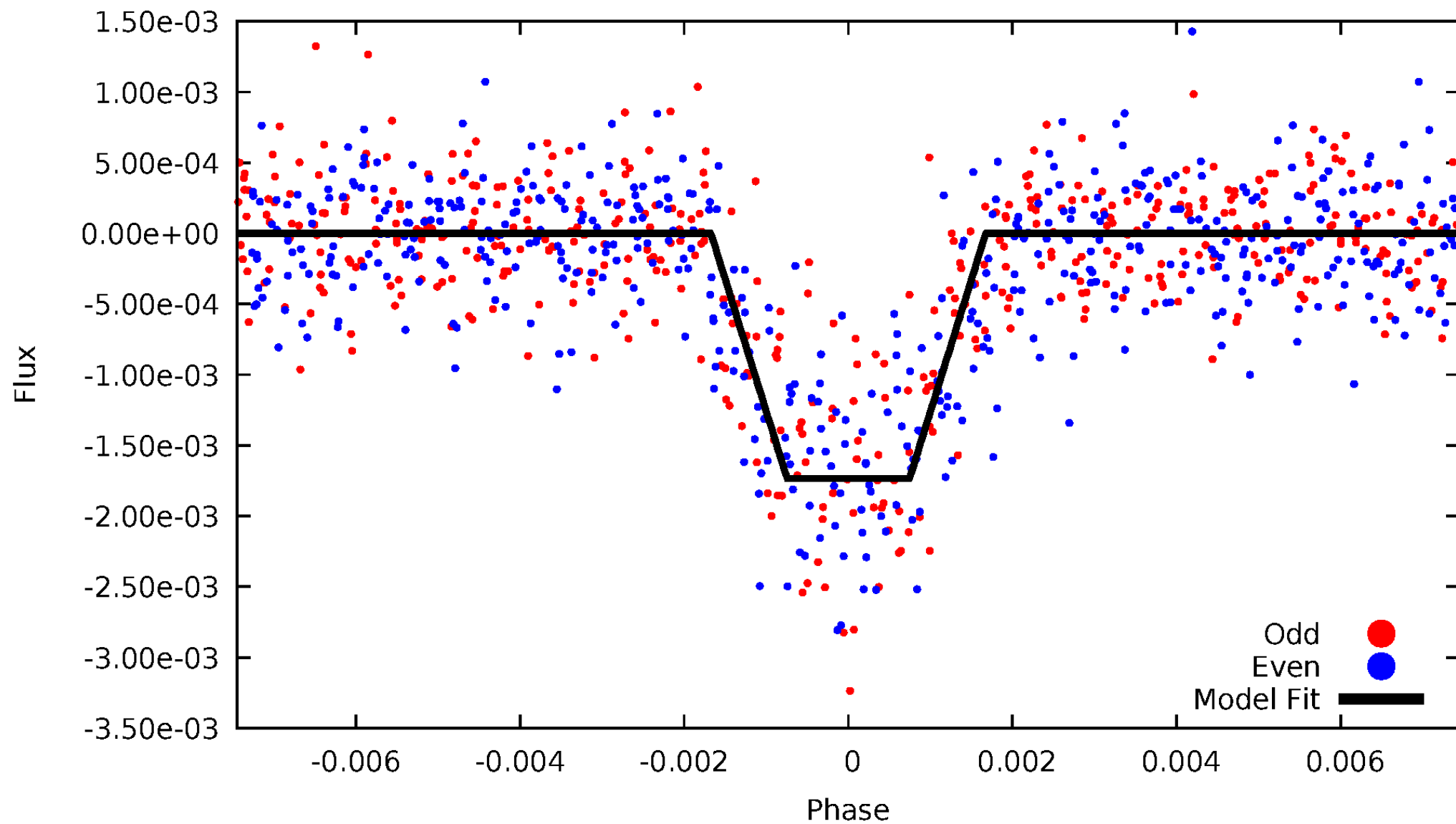
DV Odd/Even

TCE 005481148-01



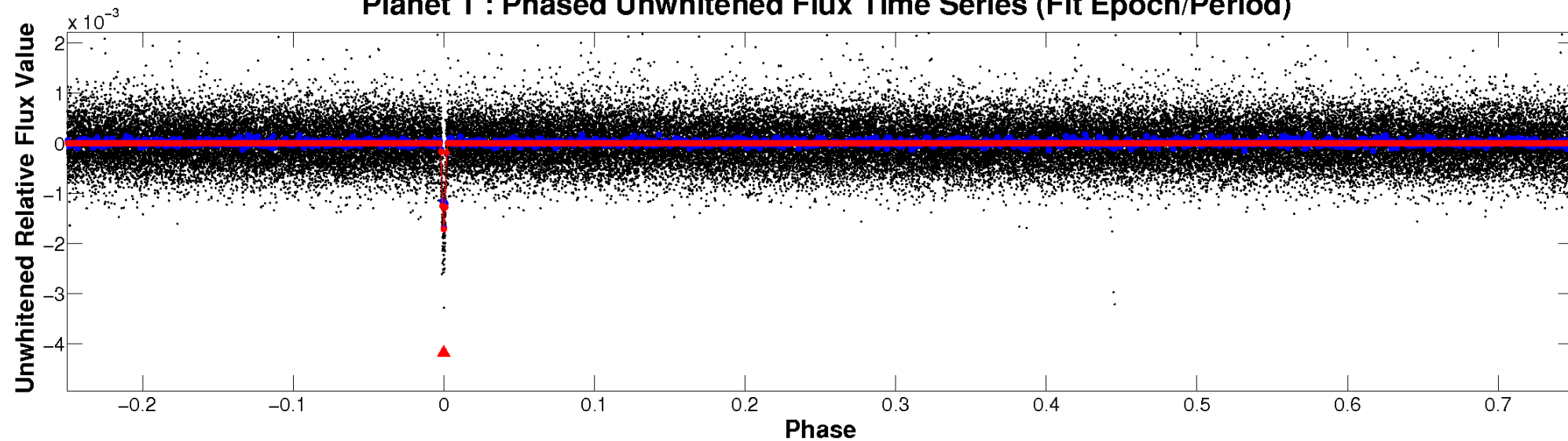
ALT Odd/Even

TCE 005481148-01

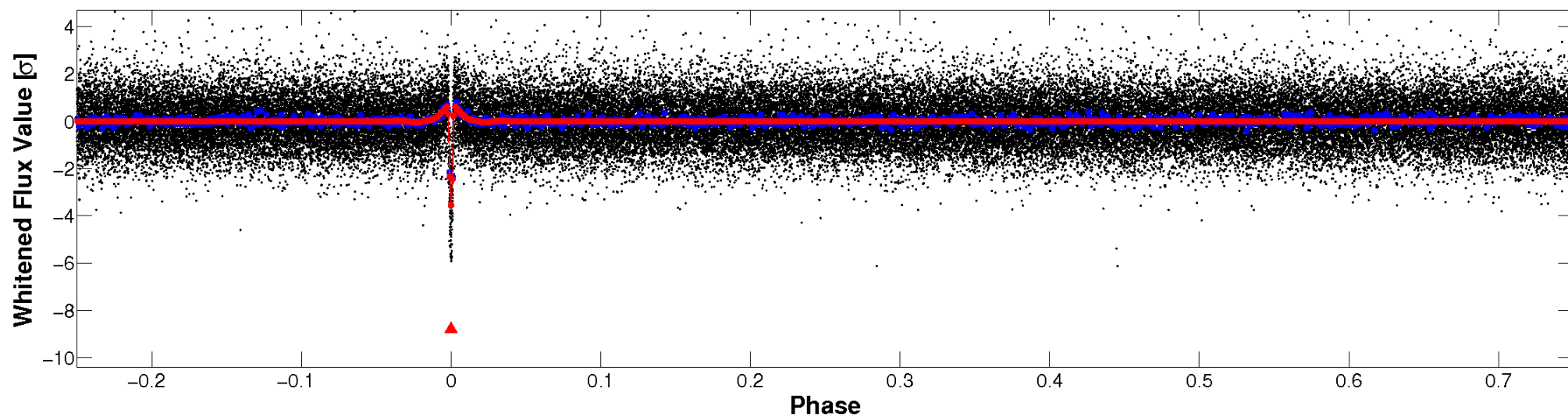


Non-Whitened Vs. Whitened Light Curve

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

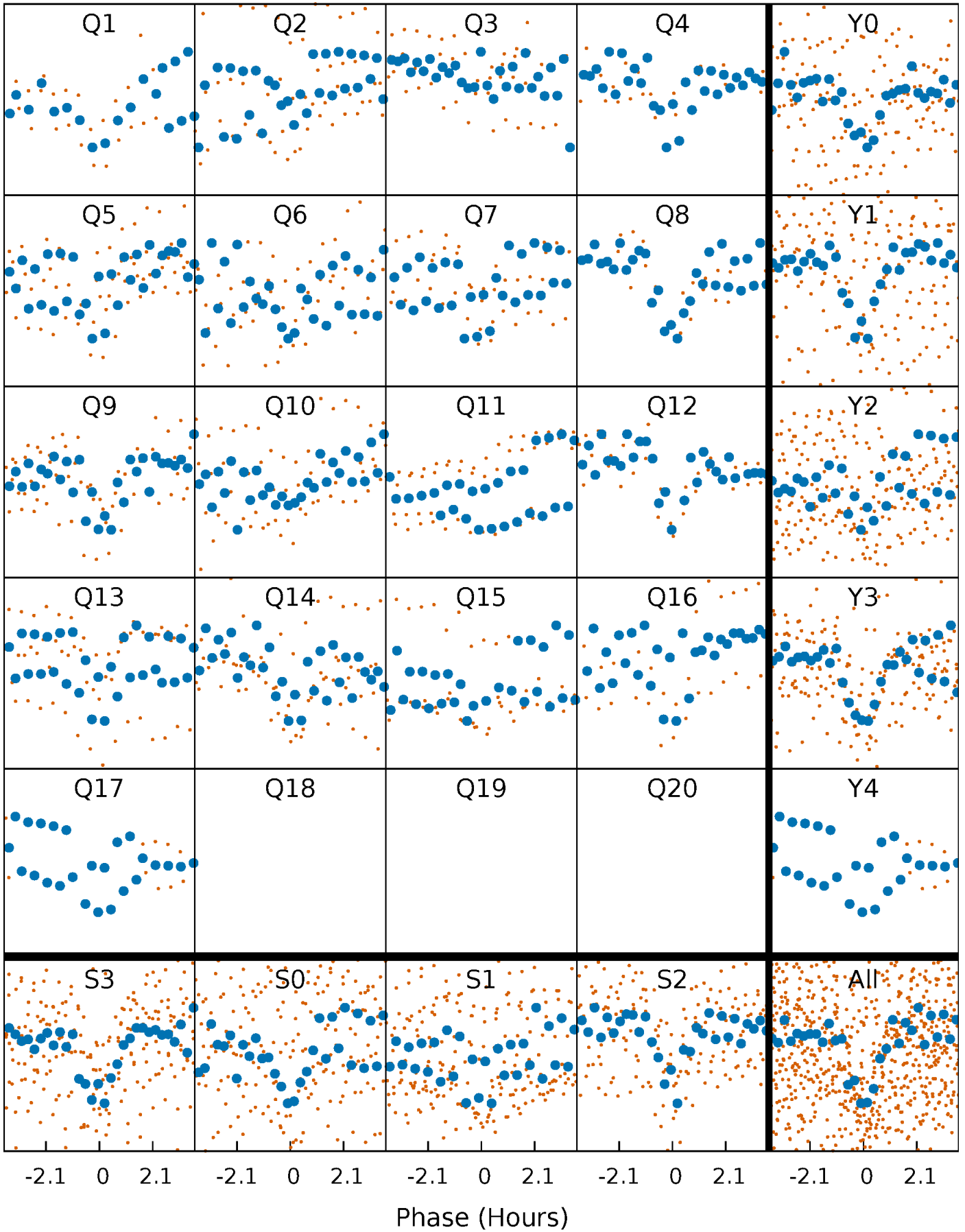


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



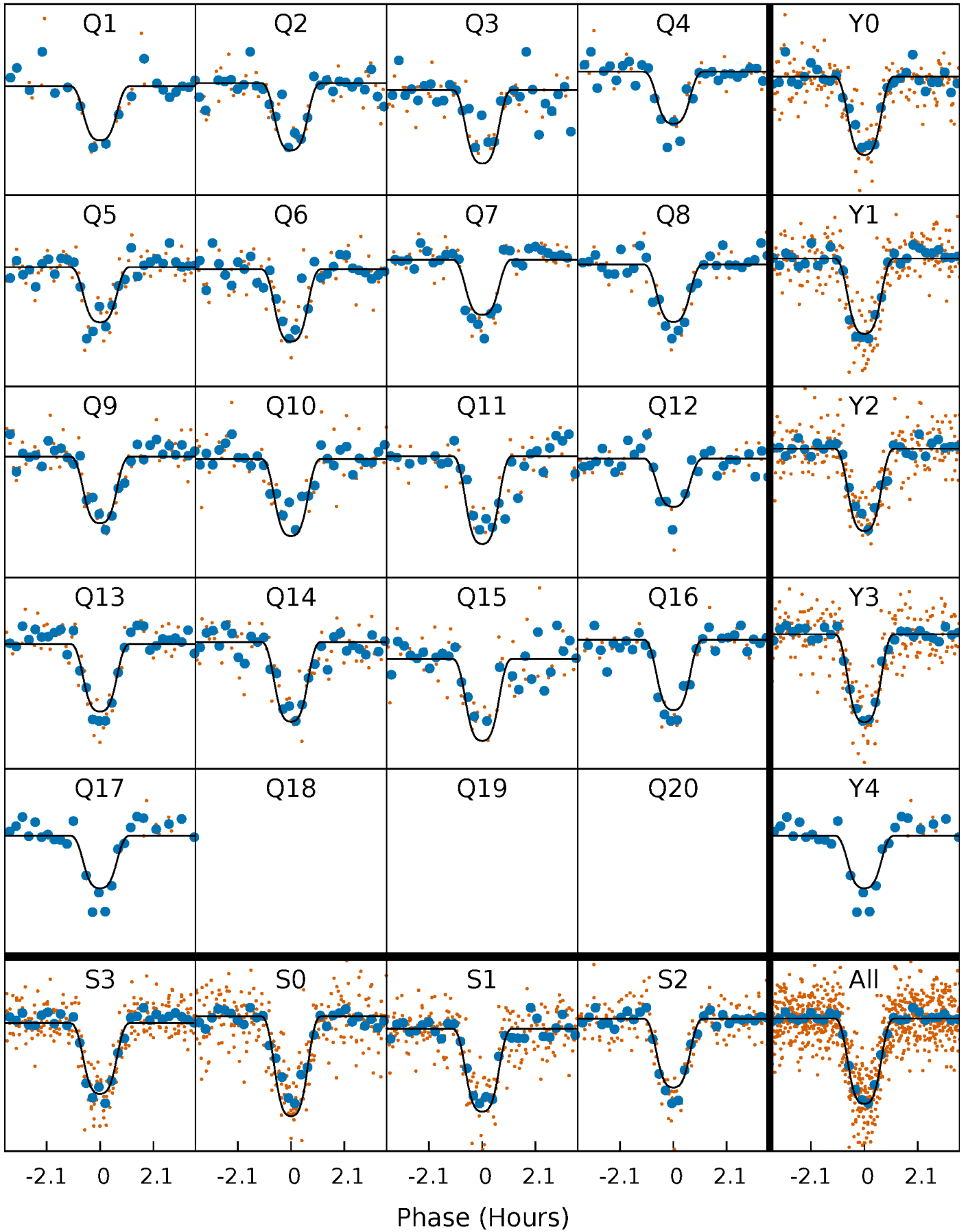
PDC Quarter-Phased Transit Curves

TCE 005481148-01 P= 22.023550 Days $T_0=135.183666$ (BKJD)



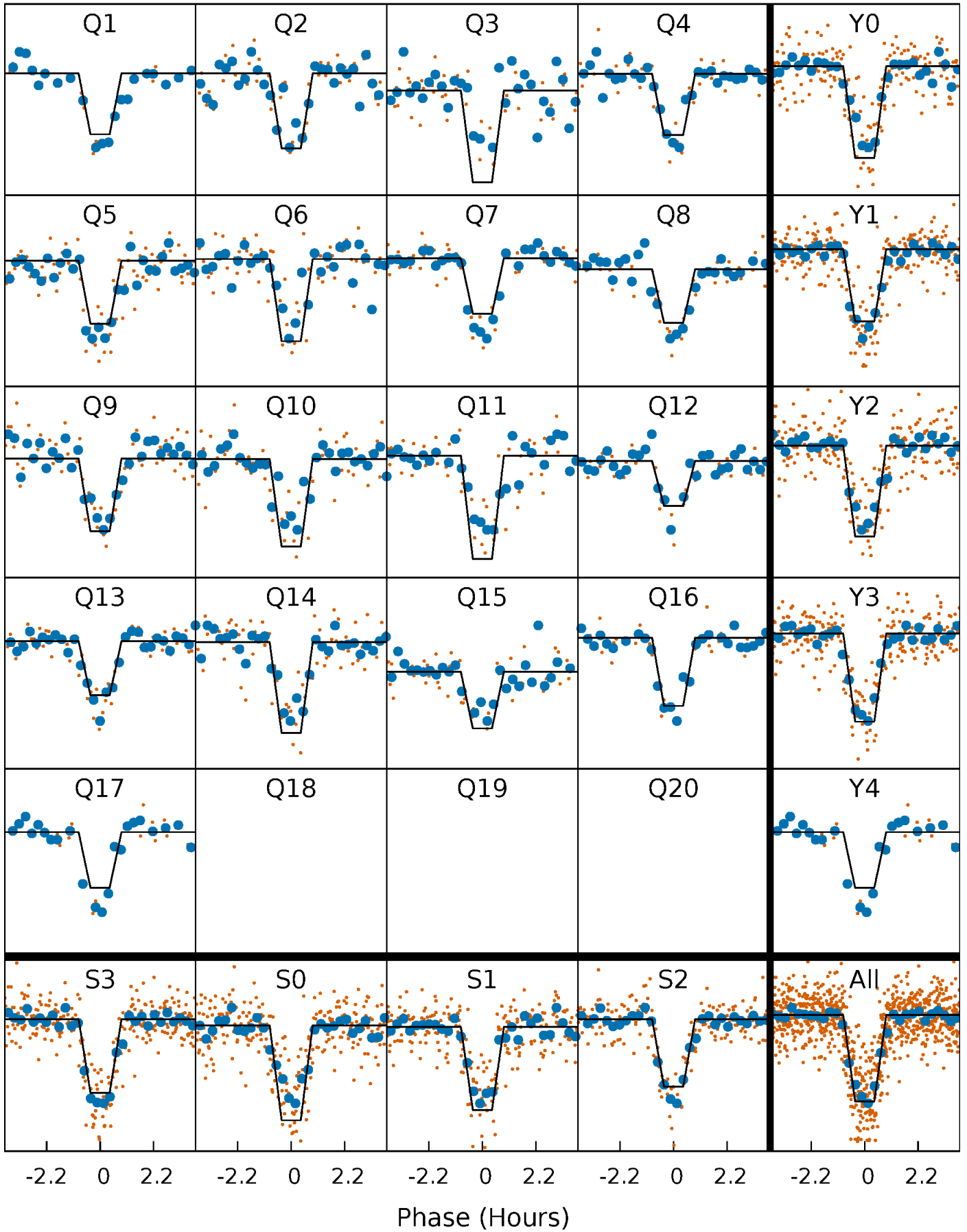
DV Quarter-Phased Transit Curves

TCE 005481148-01 P= 22.023550 Days $T_0=135.183666$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

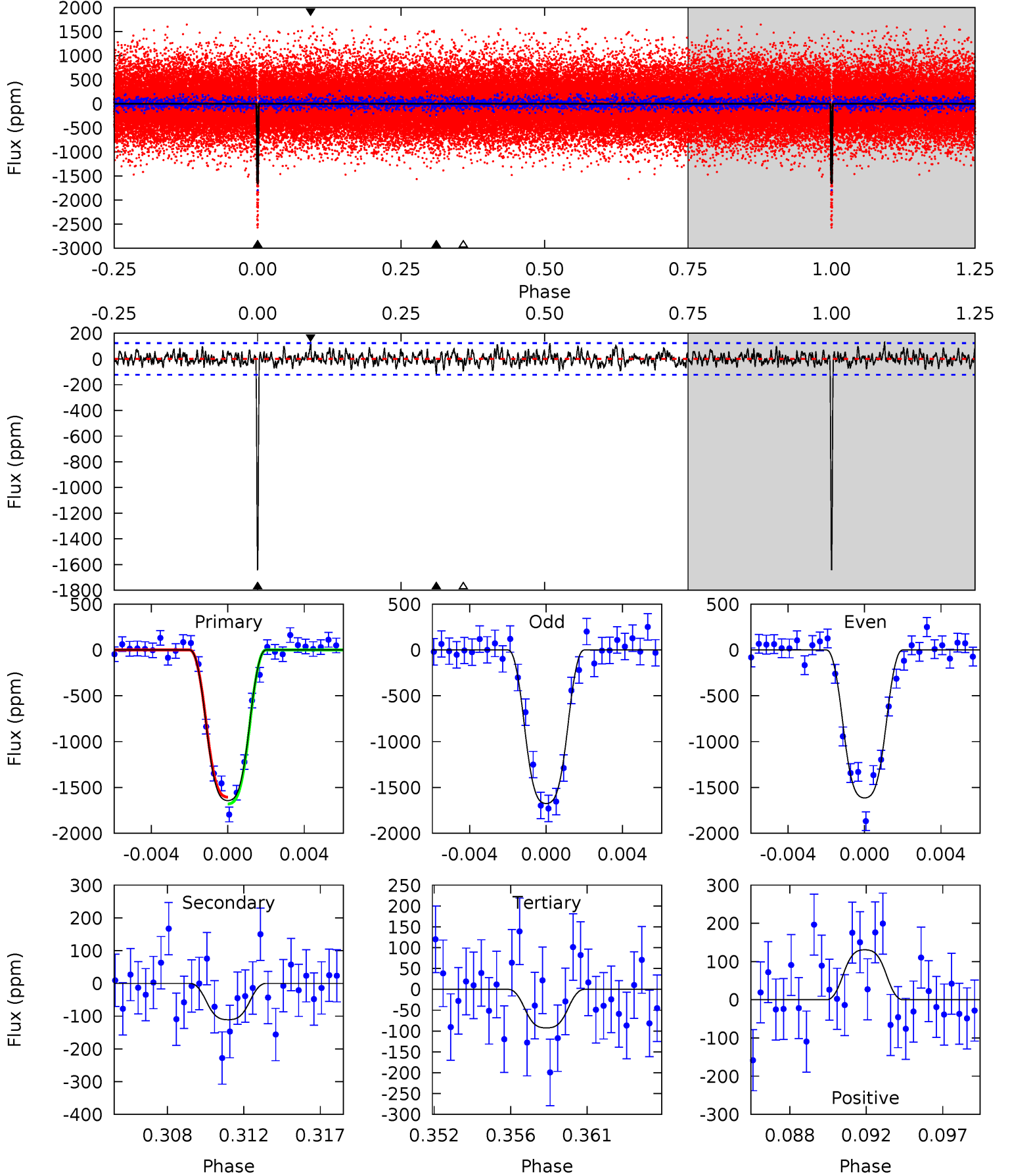
TCE 005481148-01 P= 22.023618 Days $T_0=135.181338$ (BKJD)



DV Model-Shift Uniqueness Test

005481148-01, P = 22.023550 Days, E = 113.160116 Days

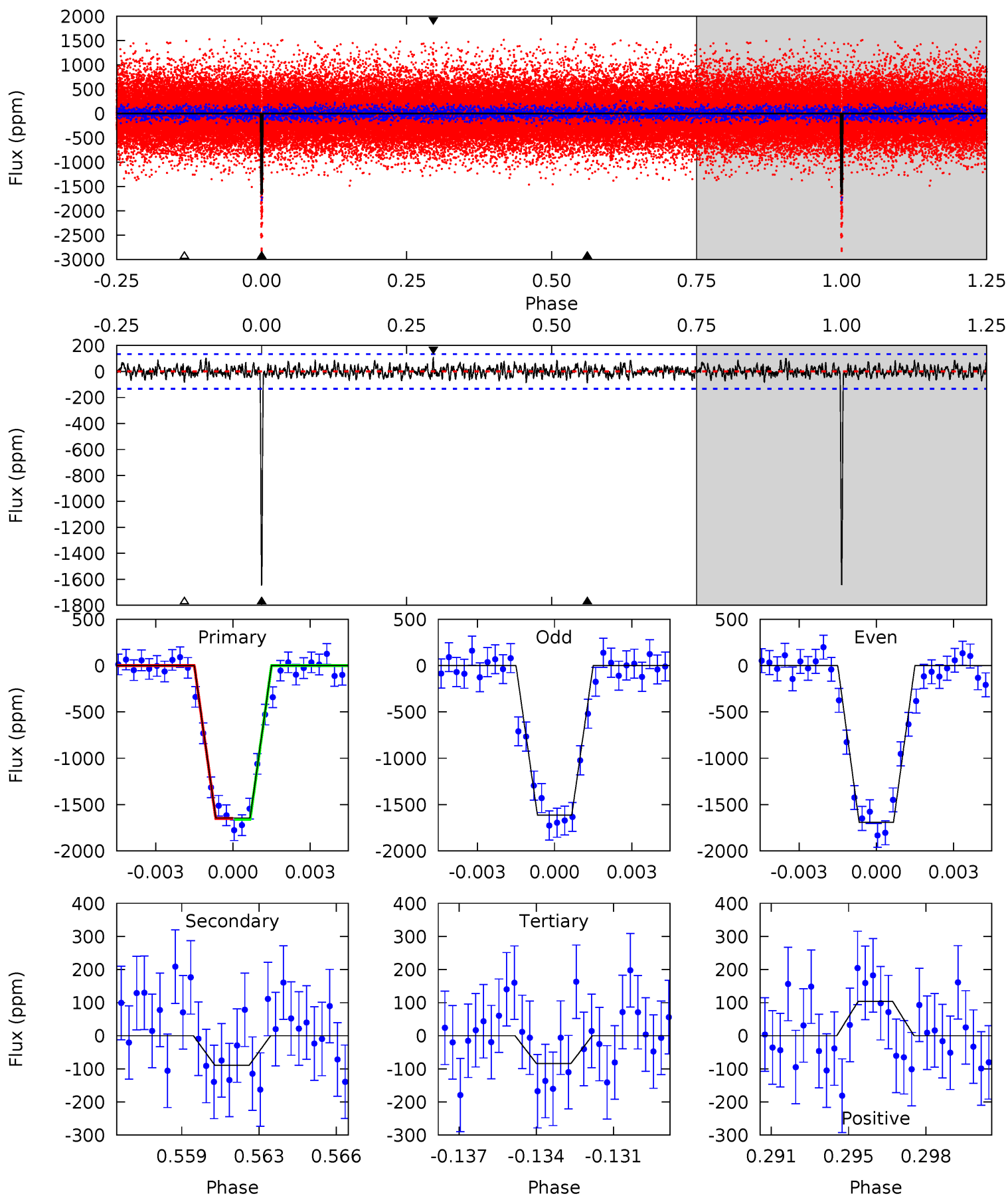
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
69.4	4.68	3.91	5.52	5.18	2.85	1.49	65.5	63.9	0.77	-0.84	1.29	1.03	0.07	1.56



Alt Model-Shift Uniqueness Test

005481148-01, P = 22.023618 Days, E = 113.157720 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
64.4	3.49	3.29	4.07	5.23	2.93	1.15	61.1	60.3	0.20	-0.58	1.56	1.03	0.06	0.20



Stellar Parameters For KIC 005481148

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5860^{+157}_{-192}	$4.489^{+0.062}_{-0.200}$	$-0.080^{+0.250}_{-0.300}$	$0.936^{+0.289}_{-0.096}$	$0.986^{+0.126}_{-0.113}$	$1.693^{+0.467}_{-0.881}$
	+3%/-3%	+1%/-4%	+312%/-375%	+31%/-10%	+13%/-11%	+28%/-52%
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 005481148-01 / KOI 2701.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-111 ± 24	$4.95^{+0.77}_{-0.46}$	907^{+63}_{-45}	3306^{+123}_{-145}	55^{+19}_{-15}
Alt.	-89 ± 26	$4.34^{+0.77}_{-0.37}$	908^{+60}_{-43}	3323^{+150}_{-161}	58^{+21}_{-19}

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

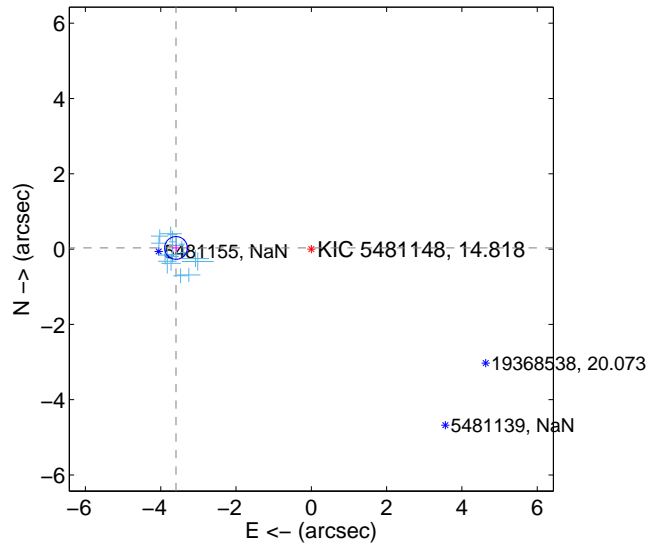
Supplemental centroid analysis for 005481148-01. Kepler magnitude: 14.82. Transit SNR 39.40

There are 17 quarters with good PRF difference image offsets

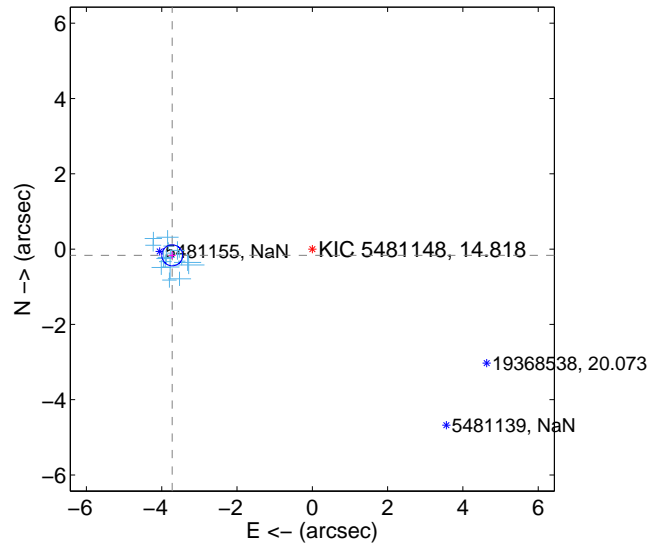
The direct PRF centroid is offset from the target star catalog position by about 0.28 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.595 ± 0.101	35.73	3.595 ± 0.100	0.031 ± 0.105
PRF-fit source offset from KIC position	3.725 ± 0.093	40.17	3.721 ± 0.094	-0.165 ± 0.100
photometric centroid source offset	4.50 ± 0.28	15.86	4.50 ± 0.28	-0.13 ± 0.25

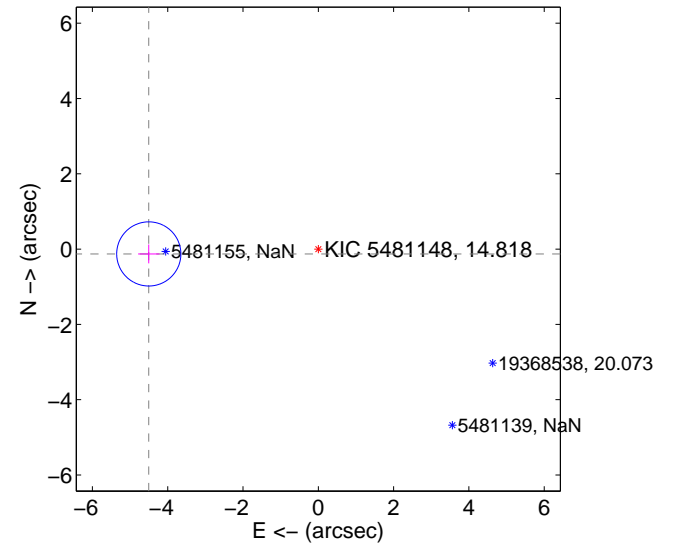
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

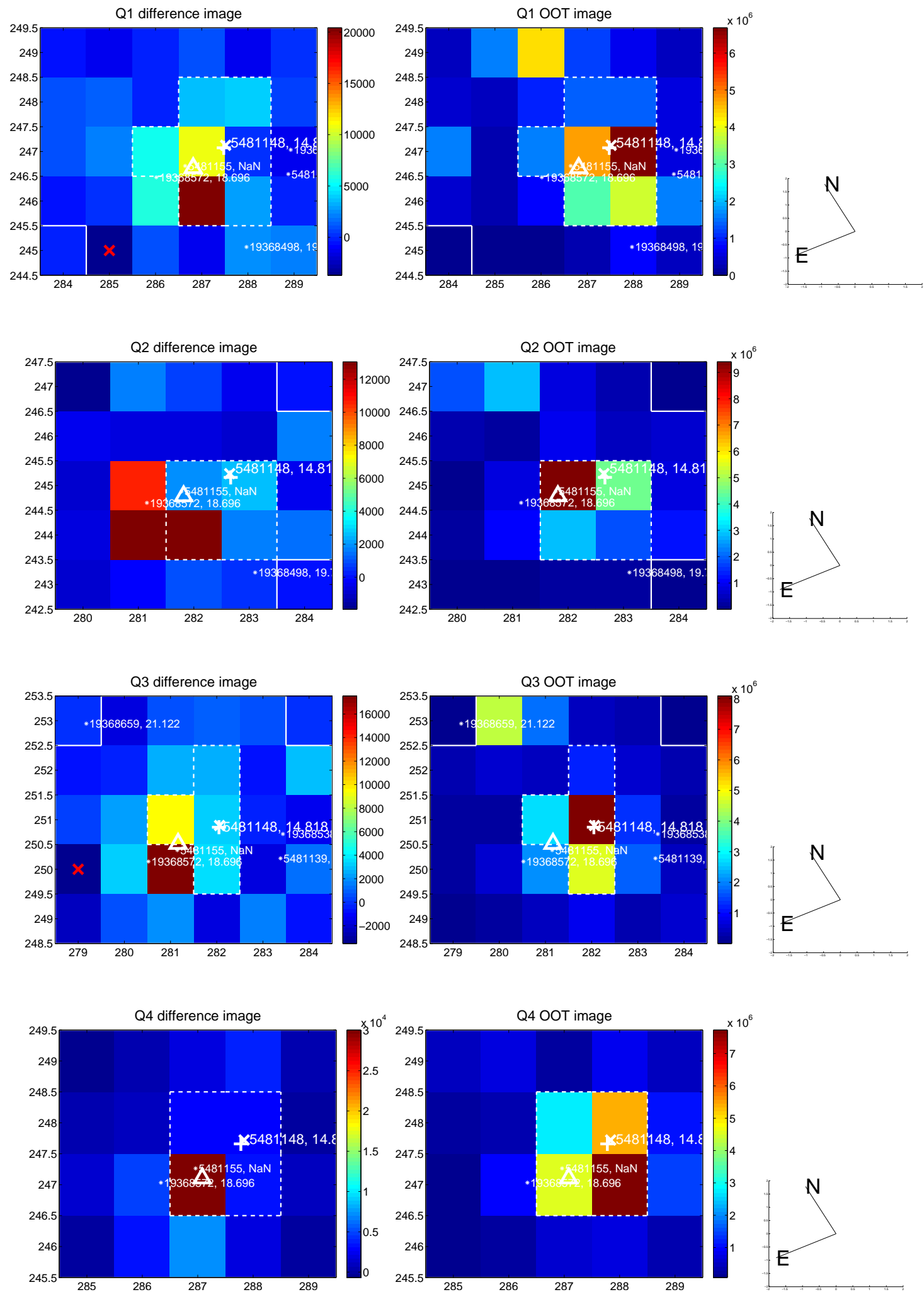


offset from photometric centroids

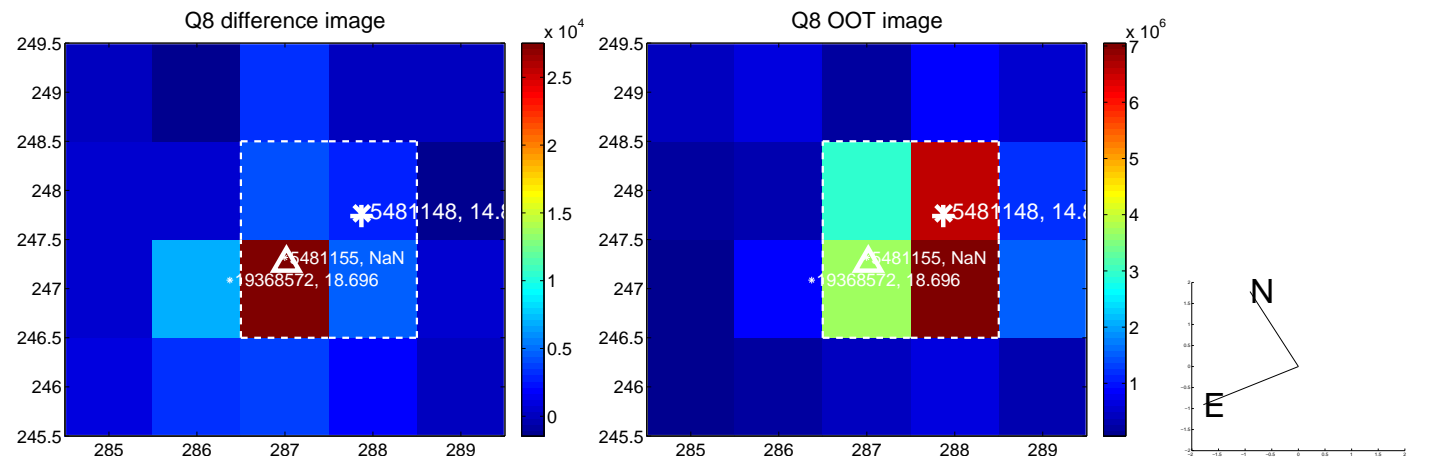
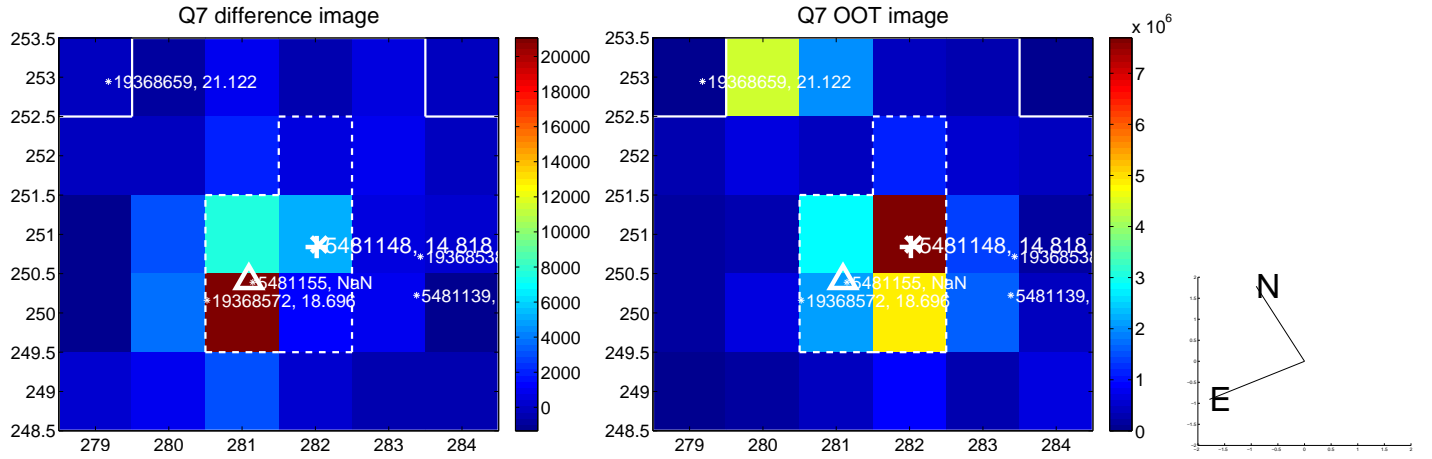
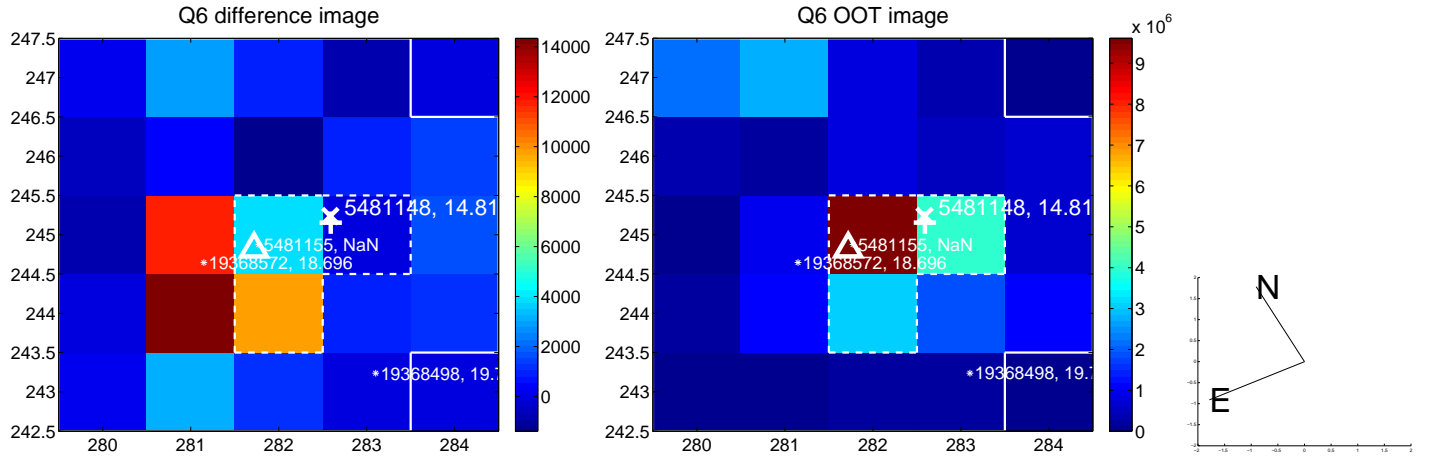
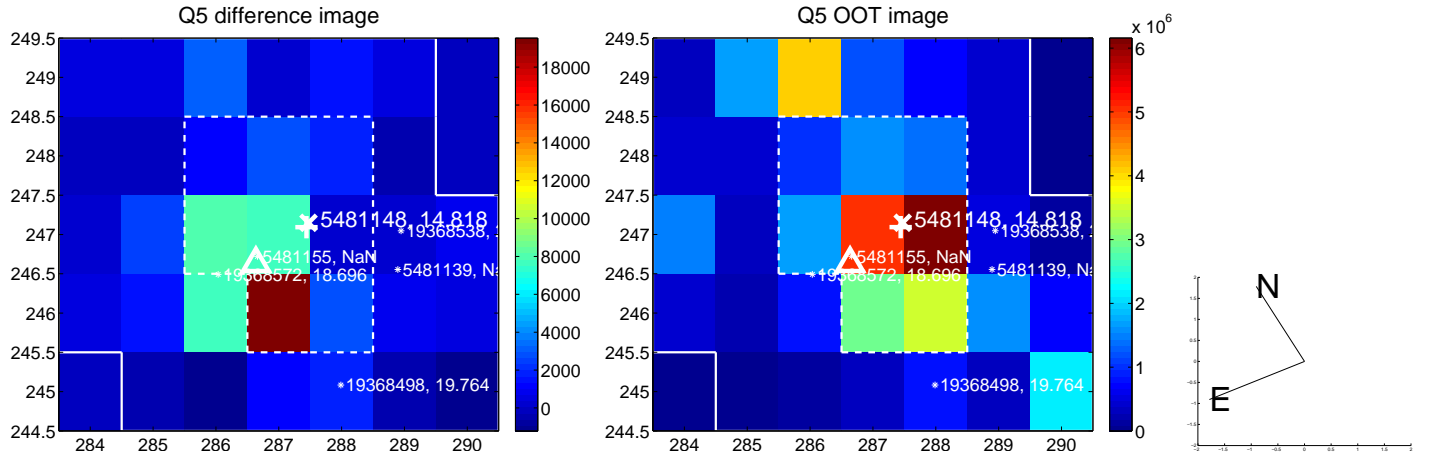


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

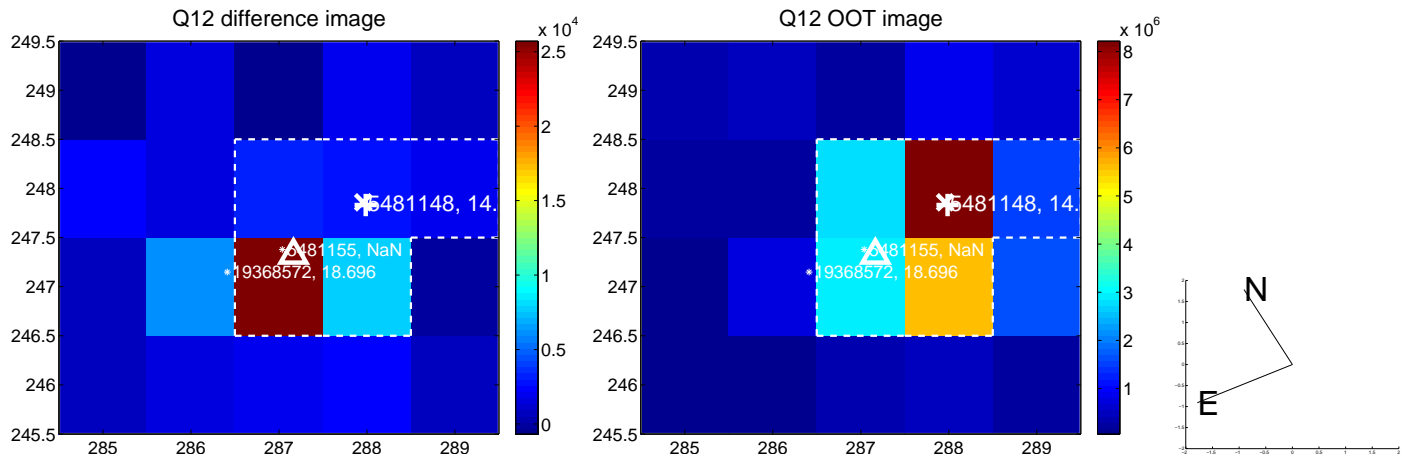
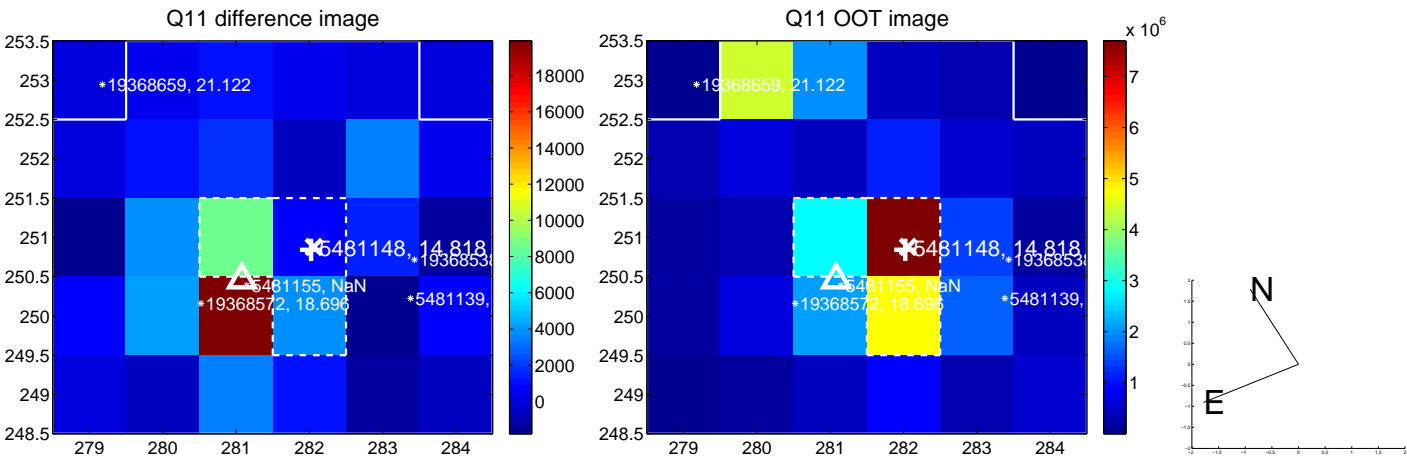
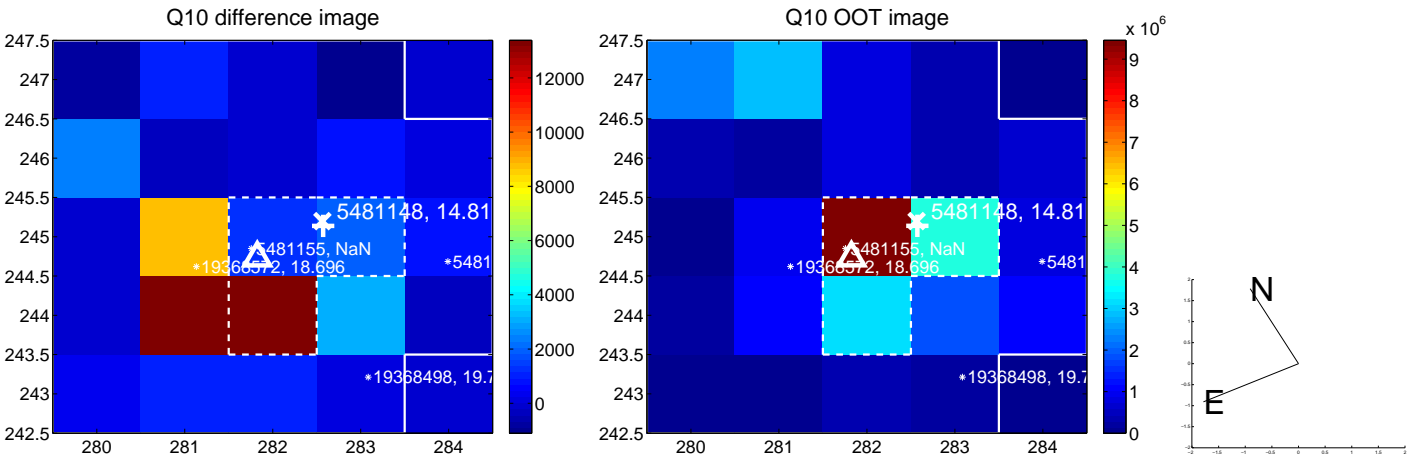
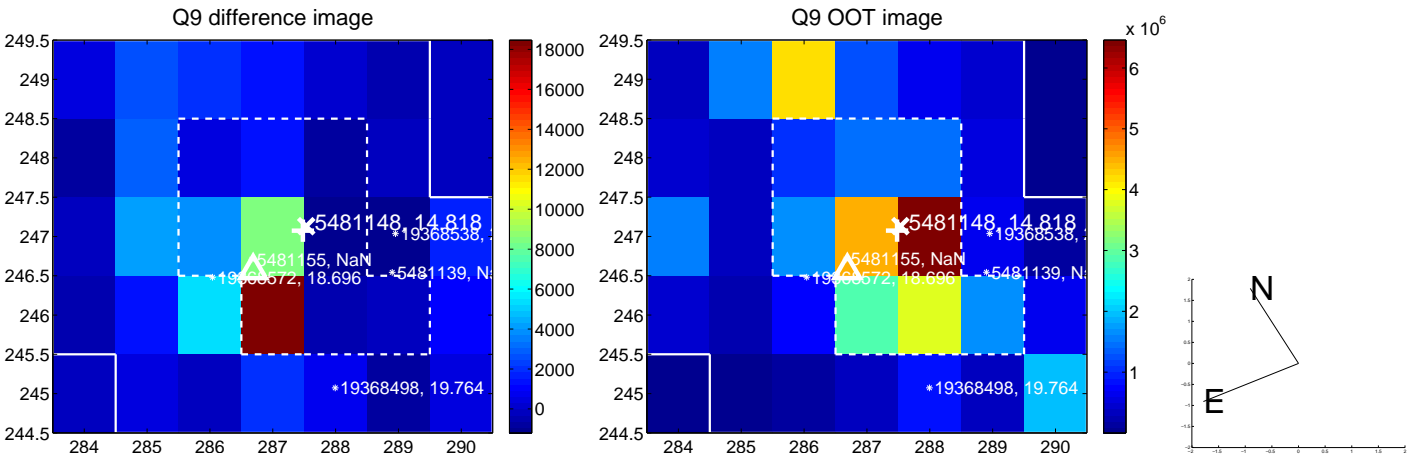
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



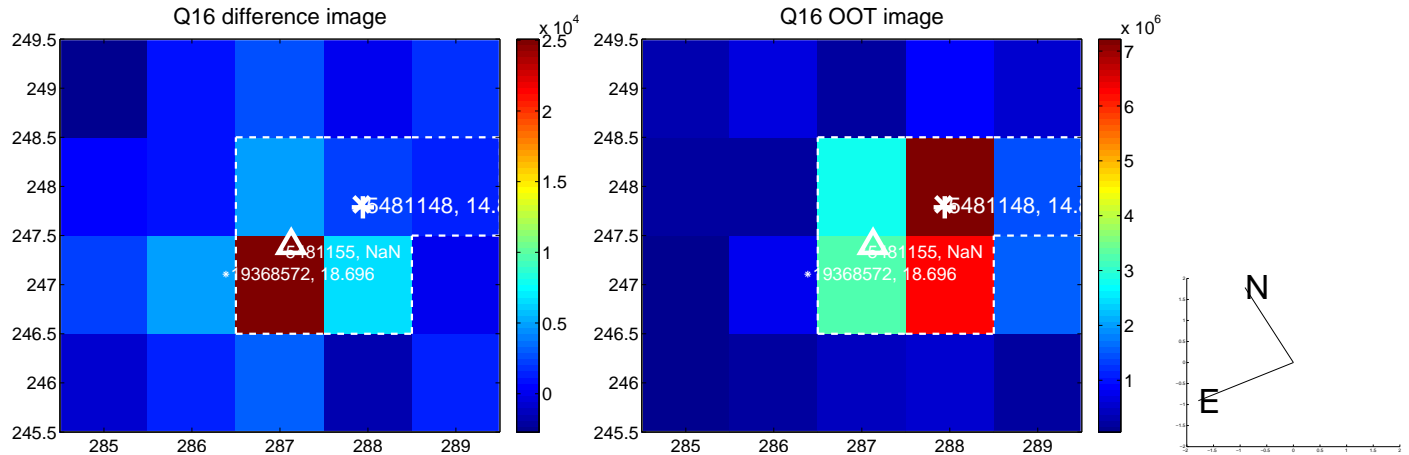
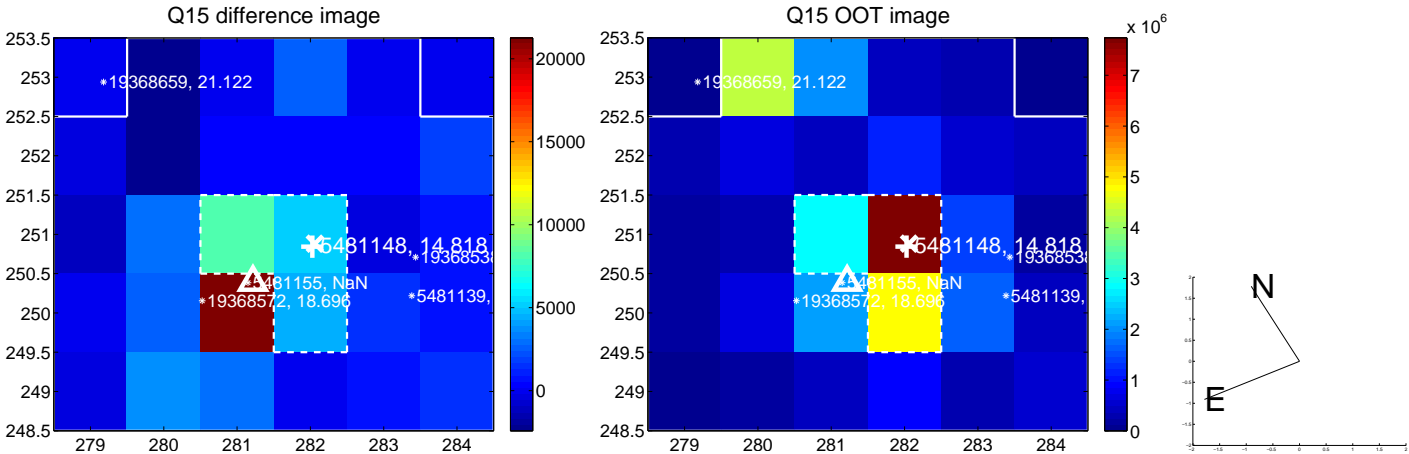
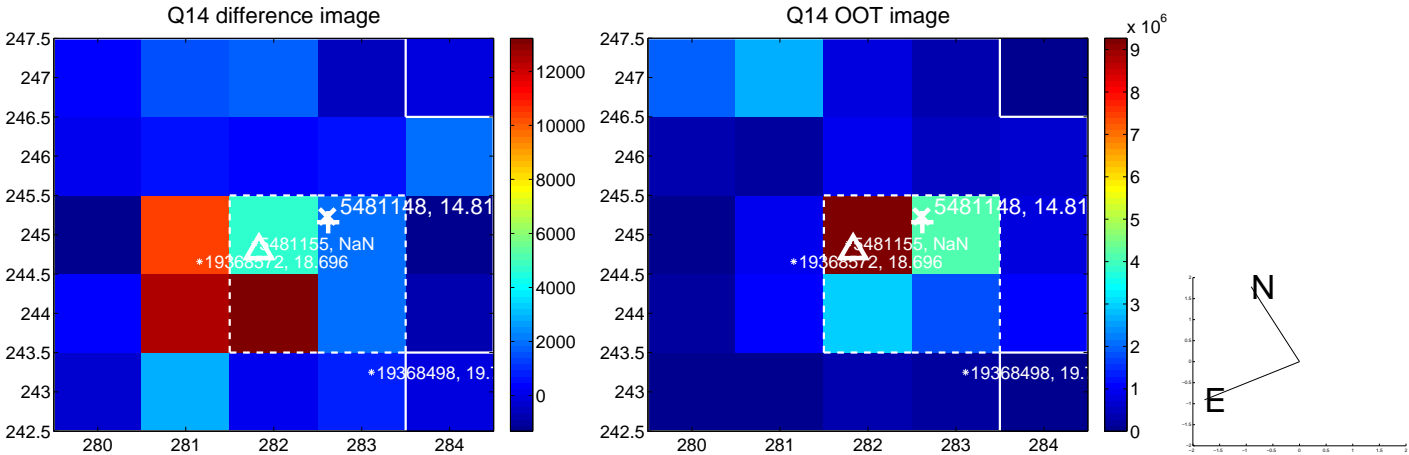
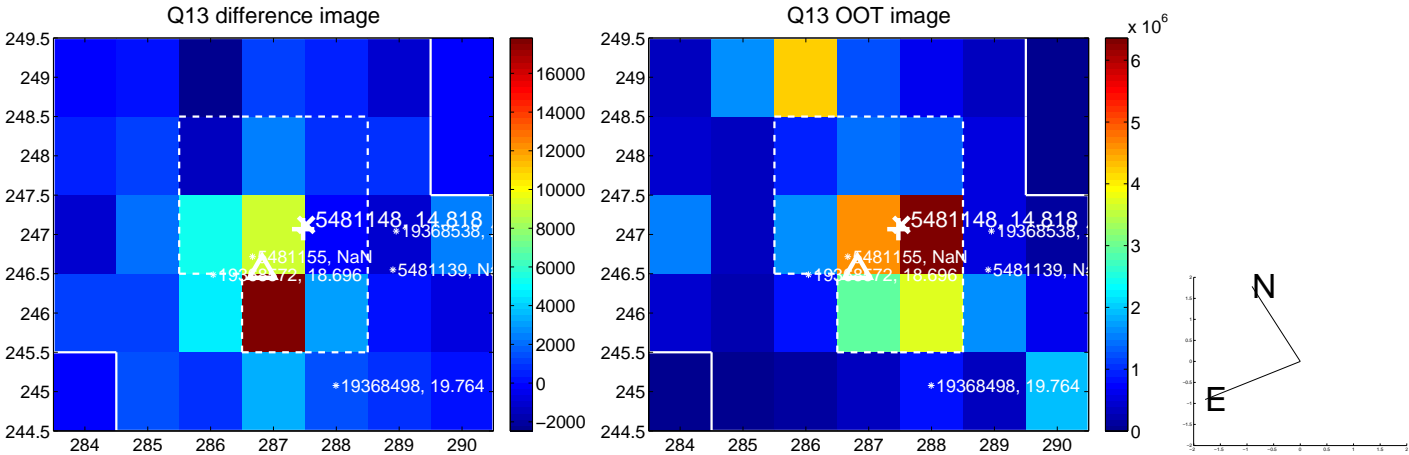
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

