

KIC 011570749

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})
011570749-01	OBS	1856.01	46.300490	155.798502	811.4	7.342	34.5	35.4	1.51	5396	6.76	29.09

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011570749-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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

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

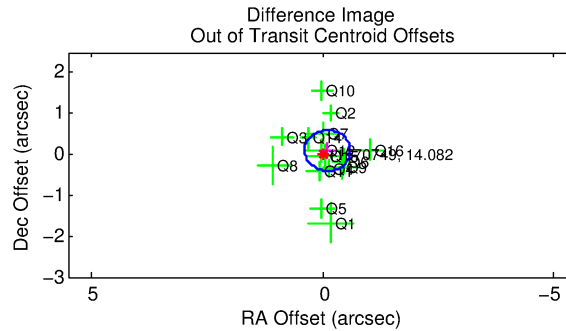
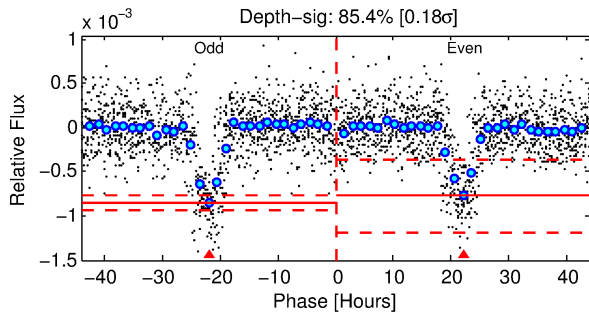
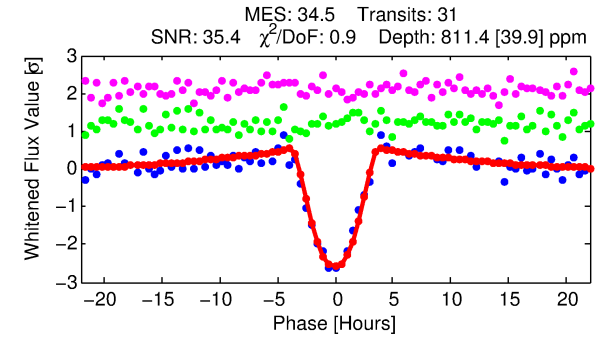
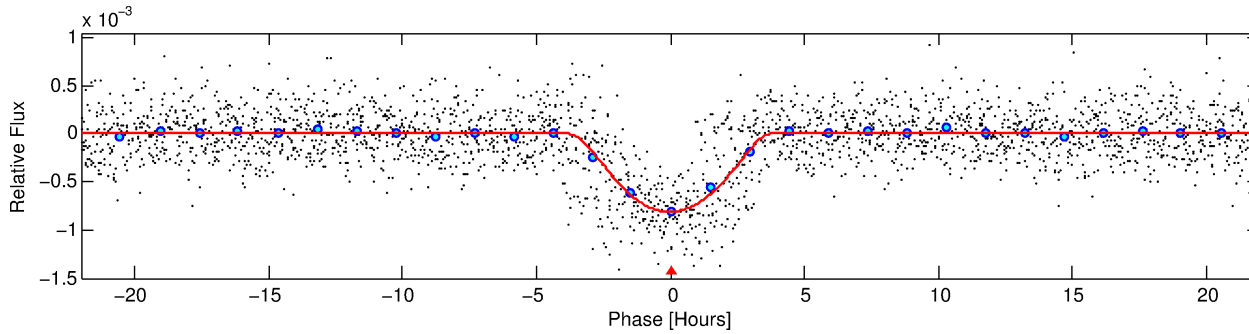
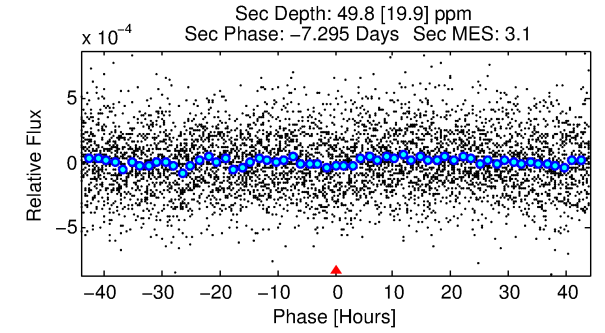
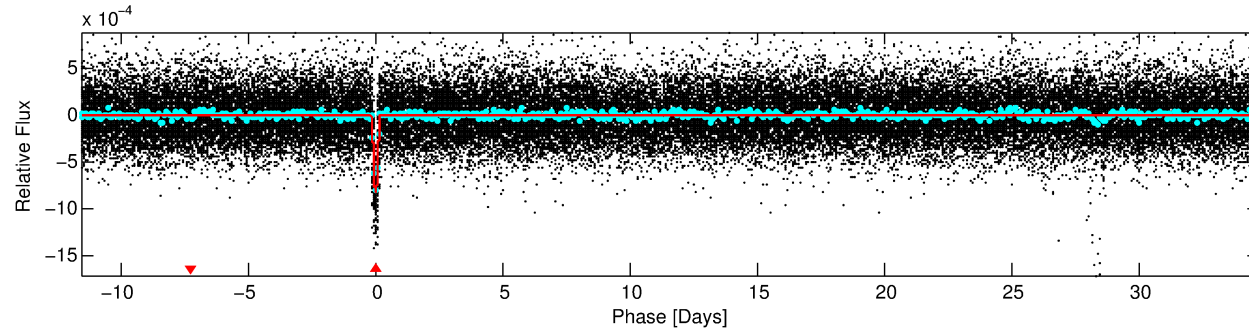
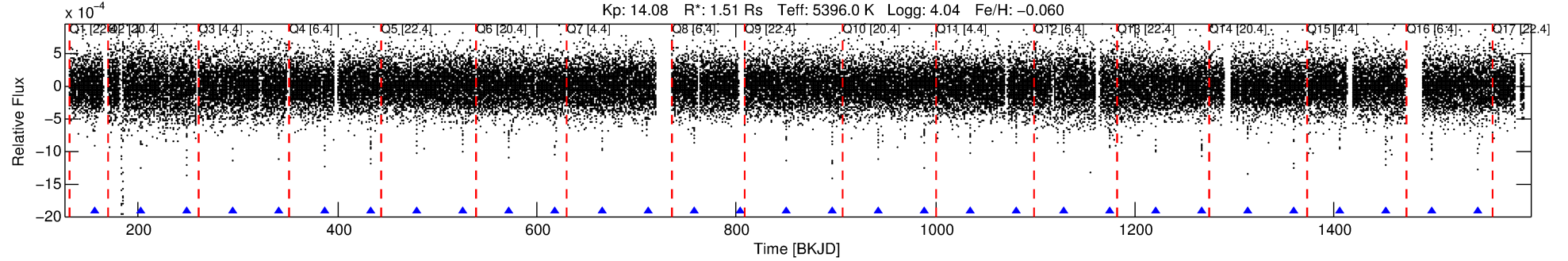
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011570749-01

No Significant Match Found

DV One-Page Summary

KIC: 11570749 Candidate: 1 of 1 Period: 46.300 d
KOI: K01856.01 Corr: 0.849



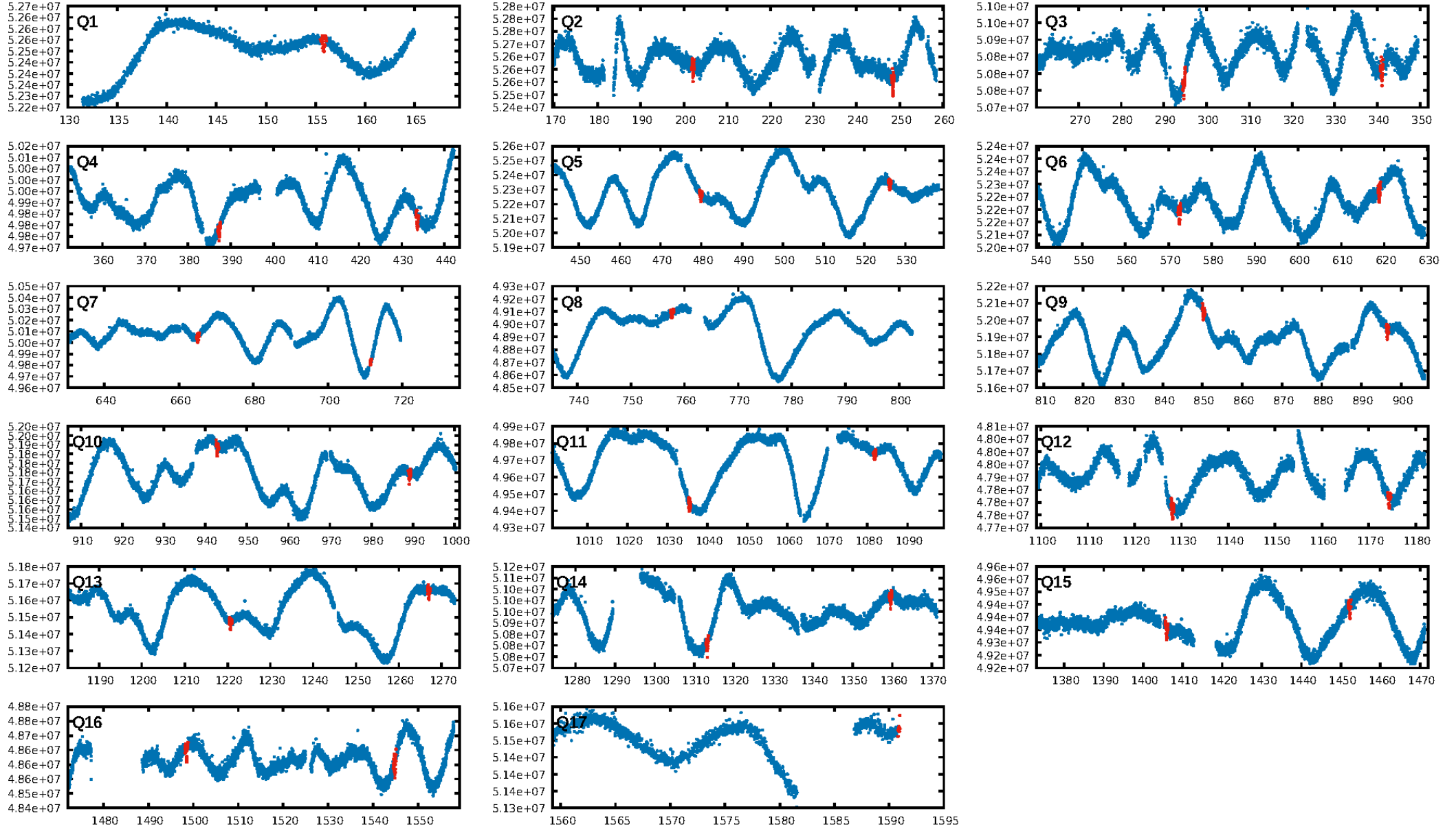
DV Fit Results:

Period = 46.30049 [0.00025] d
Epoch = 155.7985 [0.0044] BKJD
Rp/R* = 0.0411 [0.0140]
a/R* = 16.76 [2.21]
b = 0.98 [0.03]
Seff = 29.09 [24.38]
Teff = 592 [124] K
Rp = 6.77 [3.81] Re
a = 0.2435 [0.1191] AU
Ag = 35.49 [40.61] [0.85σ]
Teffp = 2235 [445] K [3.55σ]

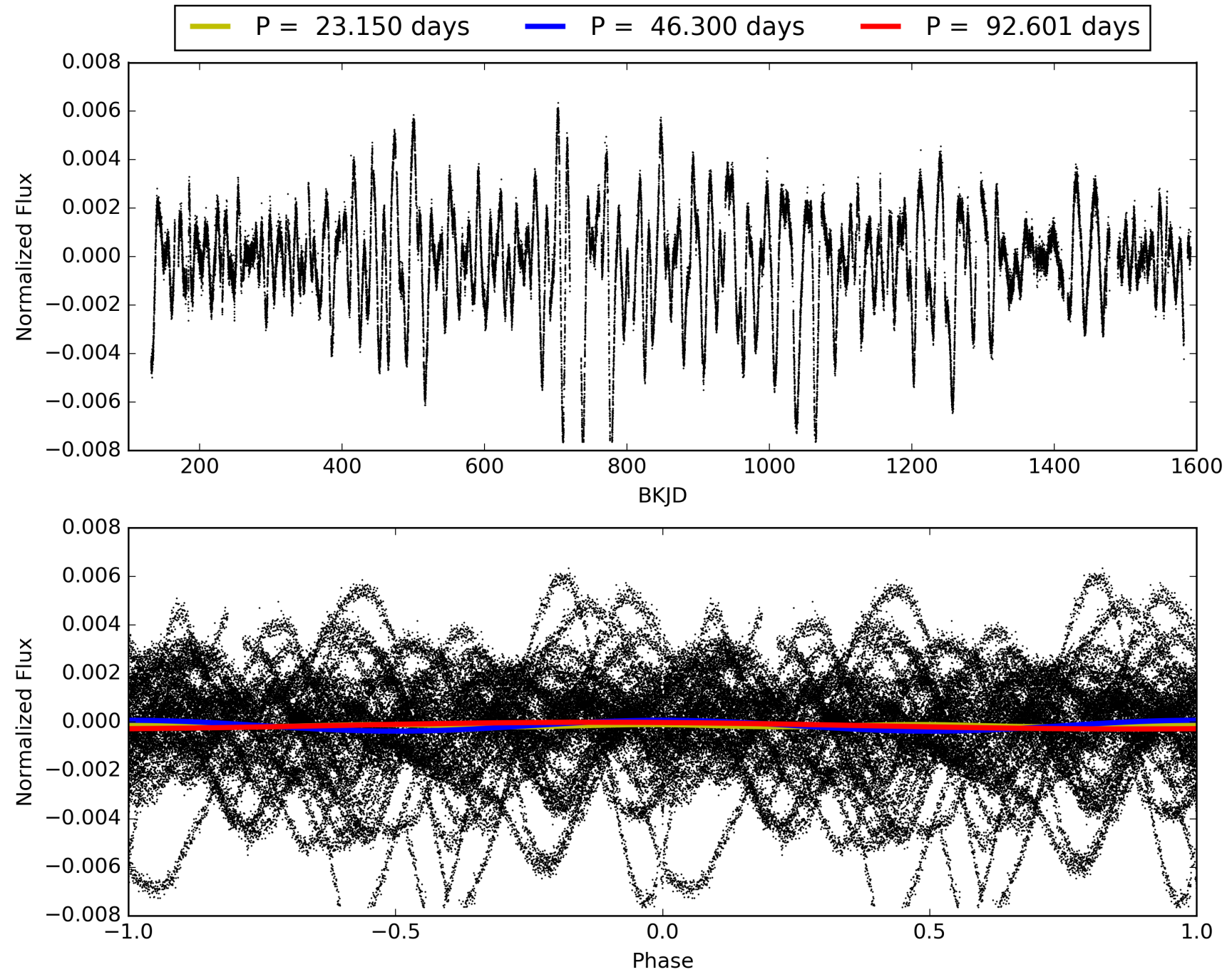
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 10.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 2.22e-232
RollingBand-fgt: 1.00 [29/29]
GhostDiagnostic-chr: 3.215
Centroid-sig: 71.7%
Centroid-so: 0.393 arcsec [1.27σ]
OotOffset-rm: 0.143 arcsec [0.87σ]
KicOffset-rm: 0.179 arcsec [0.87σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 1.00 [15/15]
DiffImageOverlap-fno: 1.00 [15/15]

TCE 011570749-01, PDC Light Curves

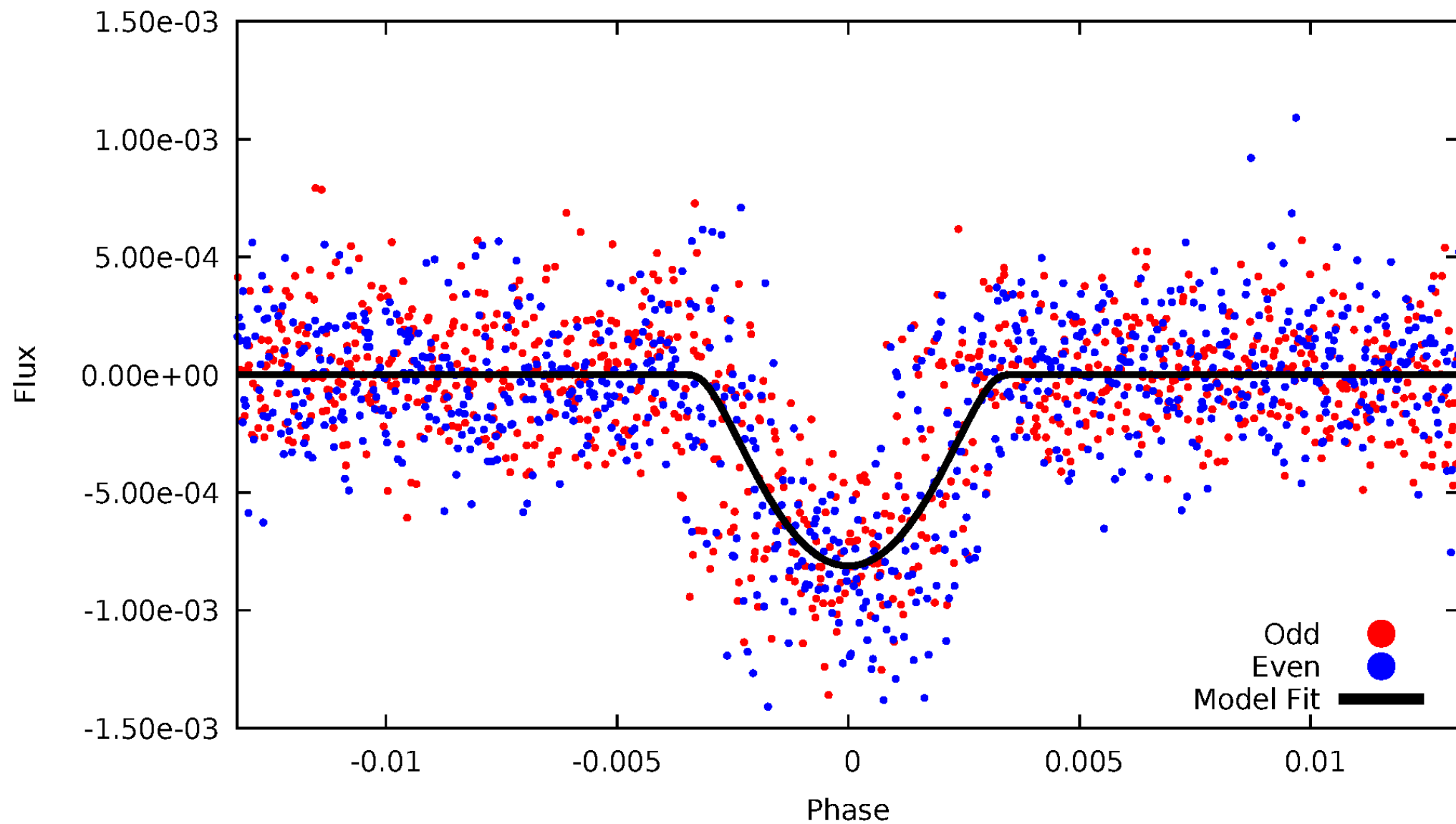


TCE 011570749-01



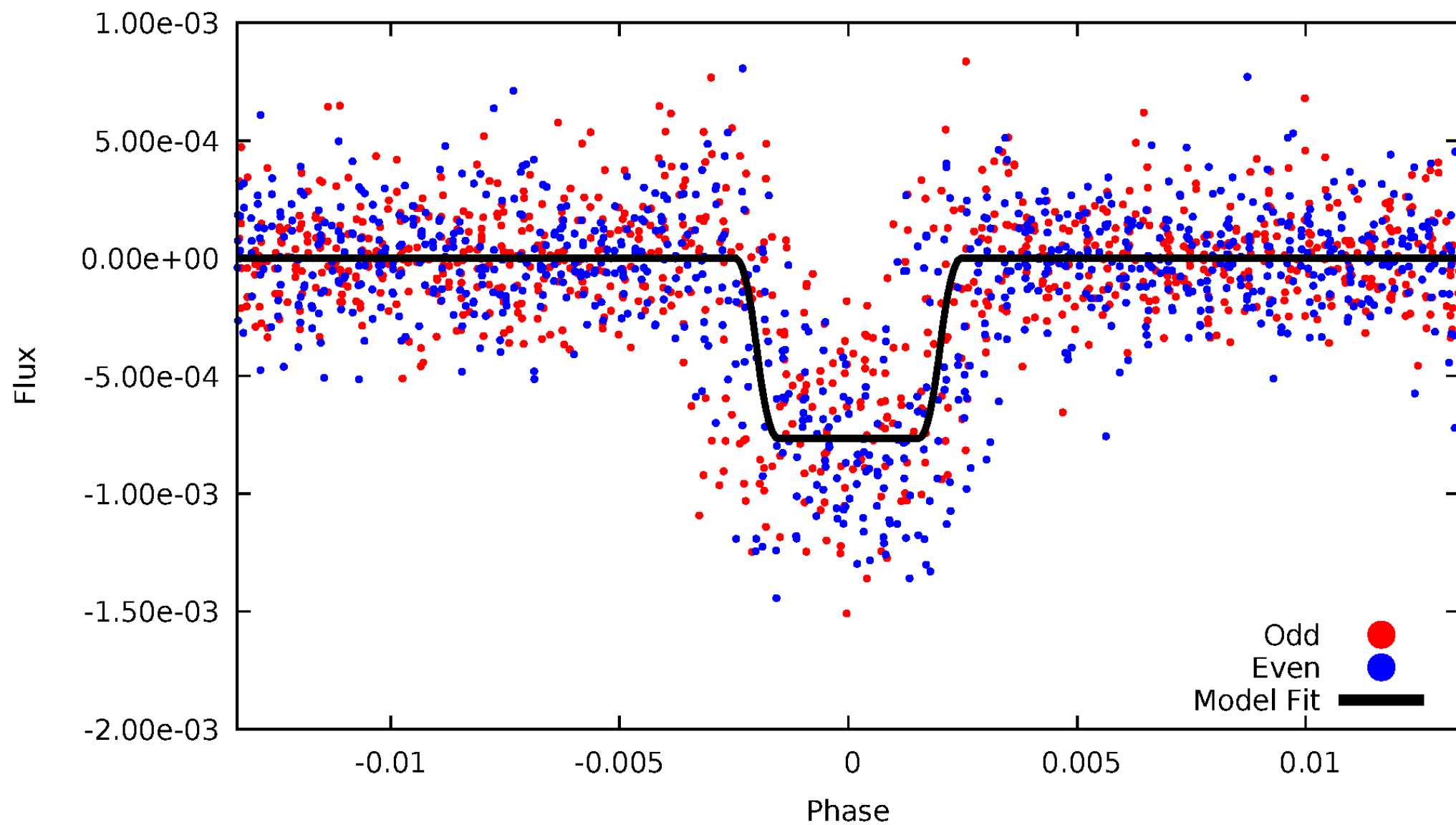
DV Odd/Even

TCE 011570749-01



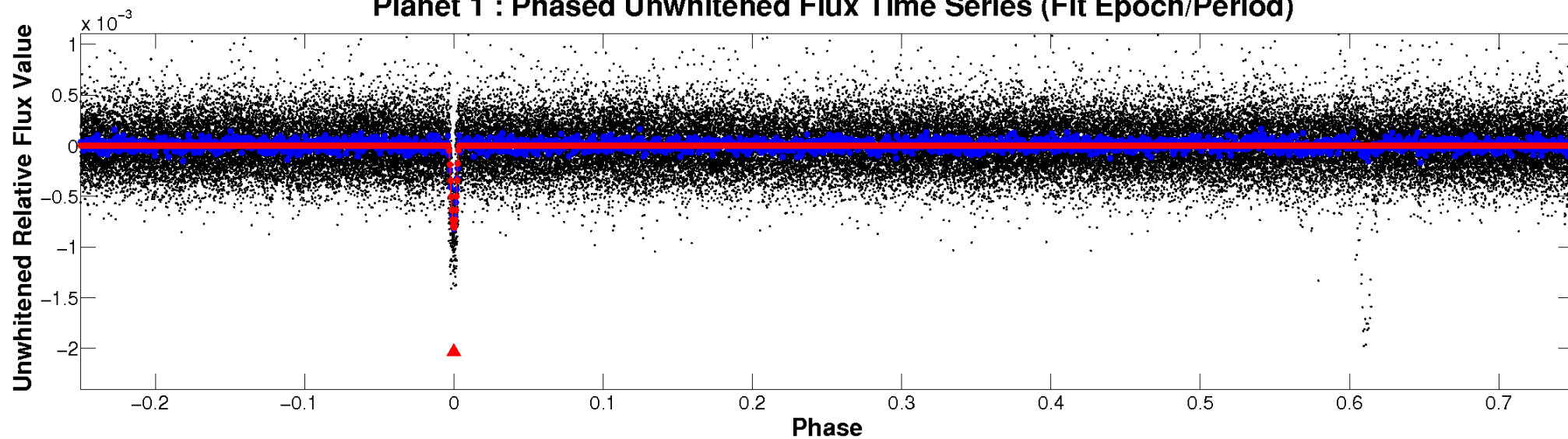
ALT Odd/Even

TCE 011570749-01

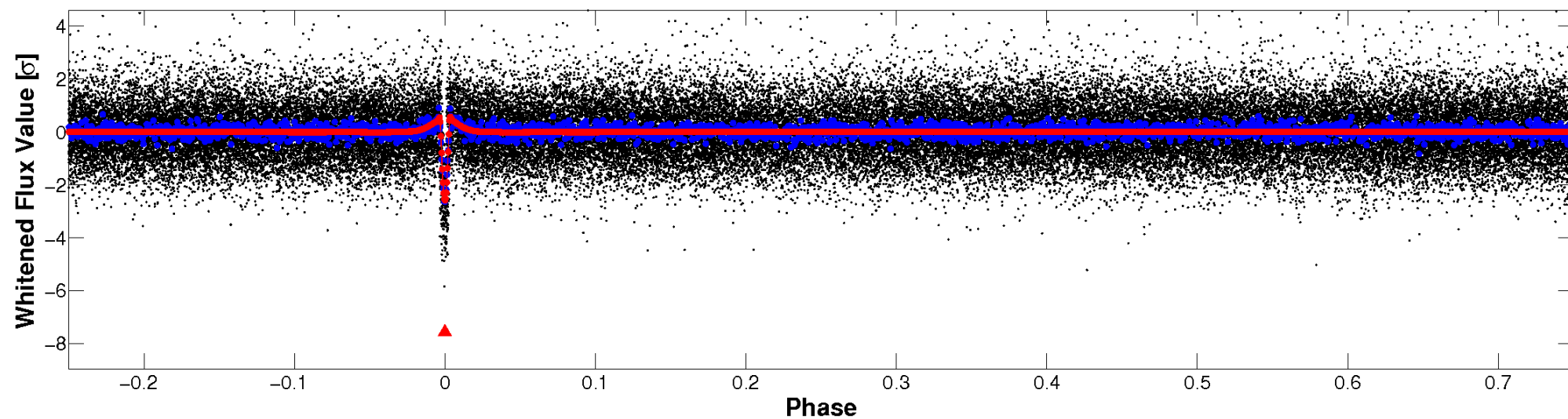


Non-Whitened Vs. Whitened Light Curve

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

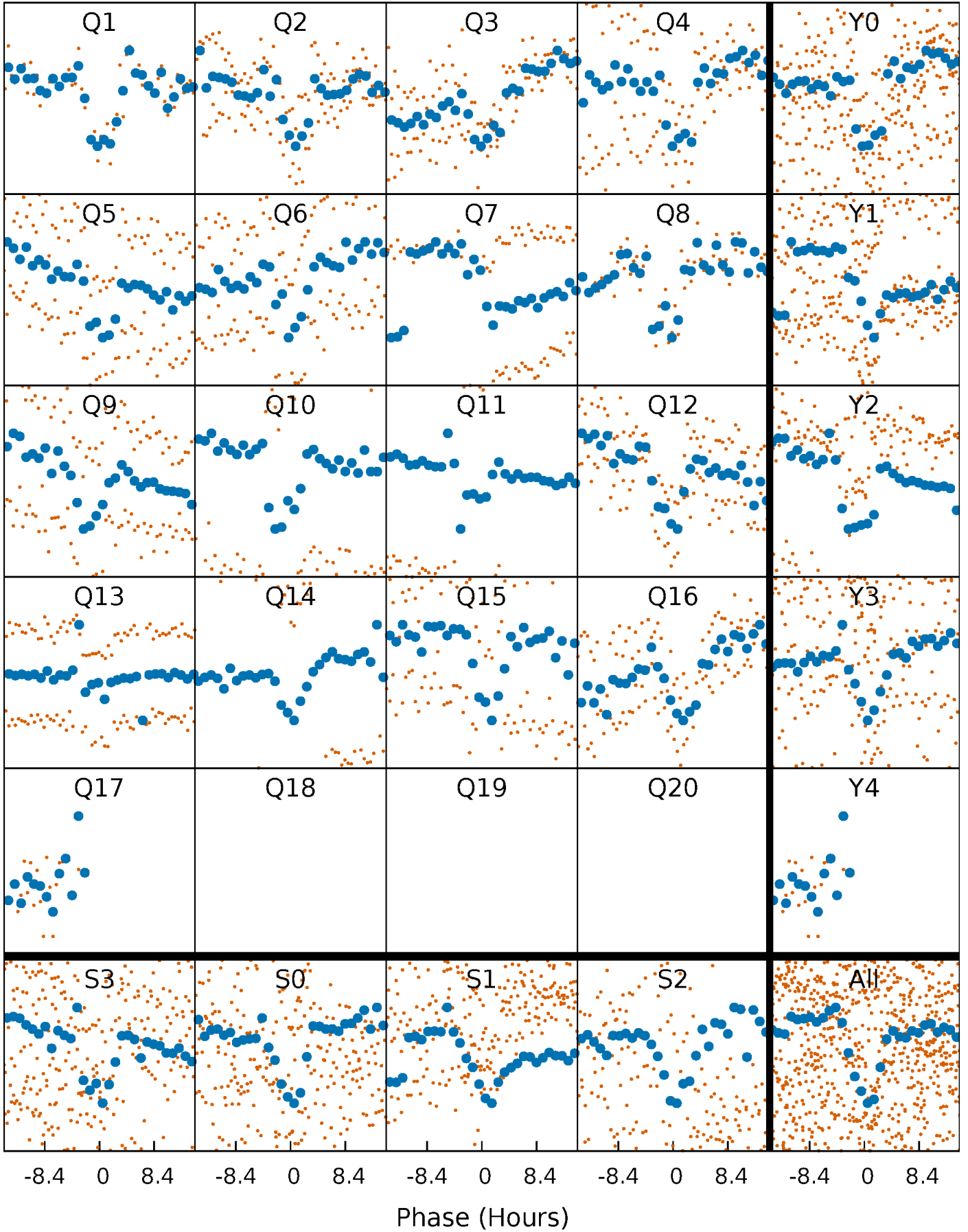


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



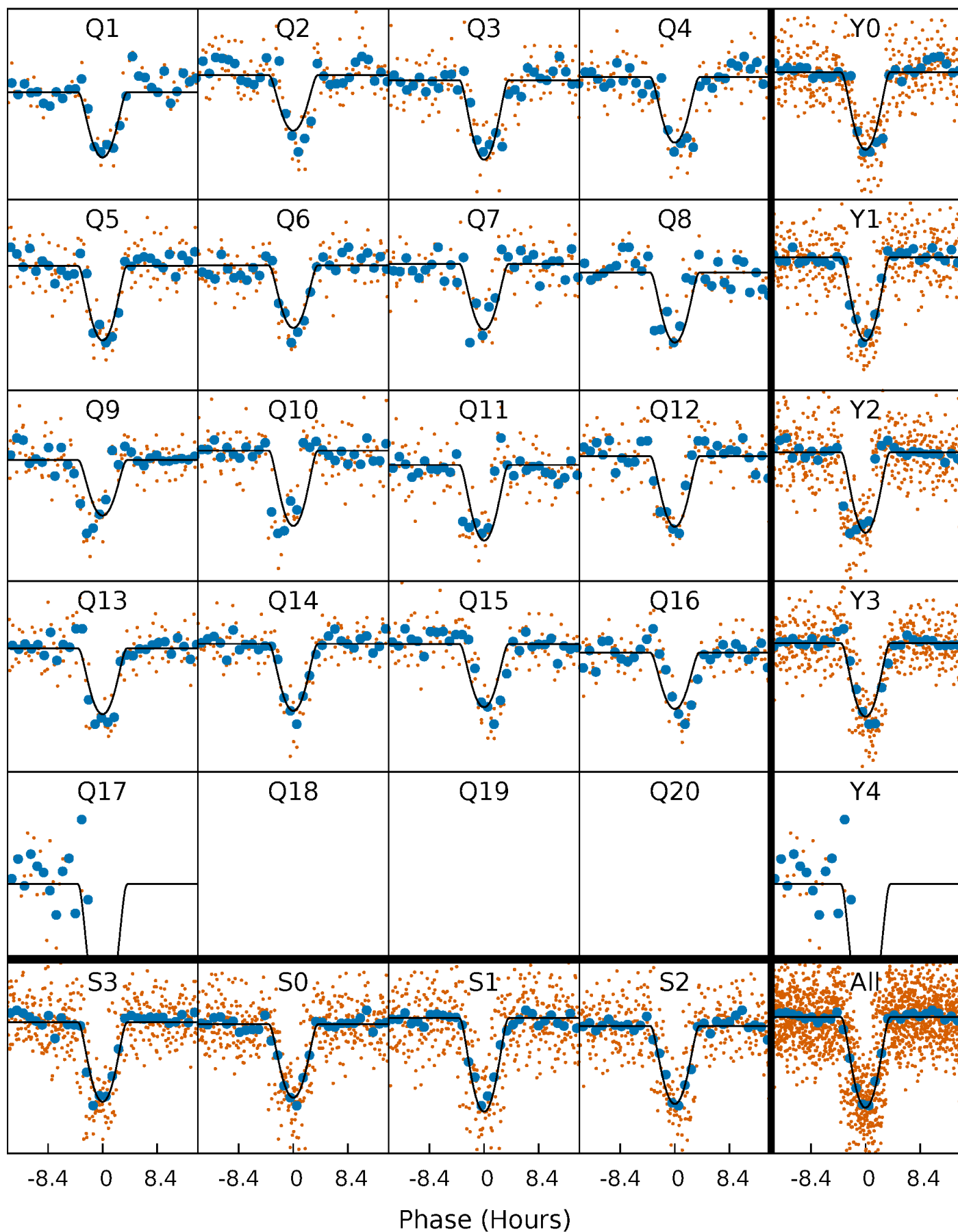
PDC Quarter-Phased Transit Curves

TCE 011570749-01 P= 46.300490 Days $T_0=155.798502$ (BKJD)



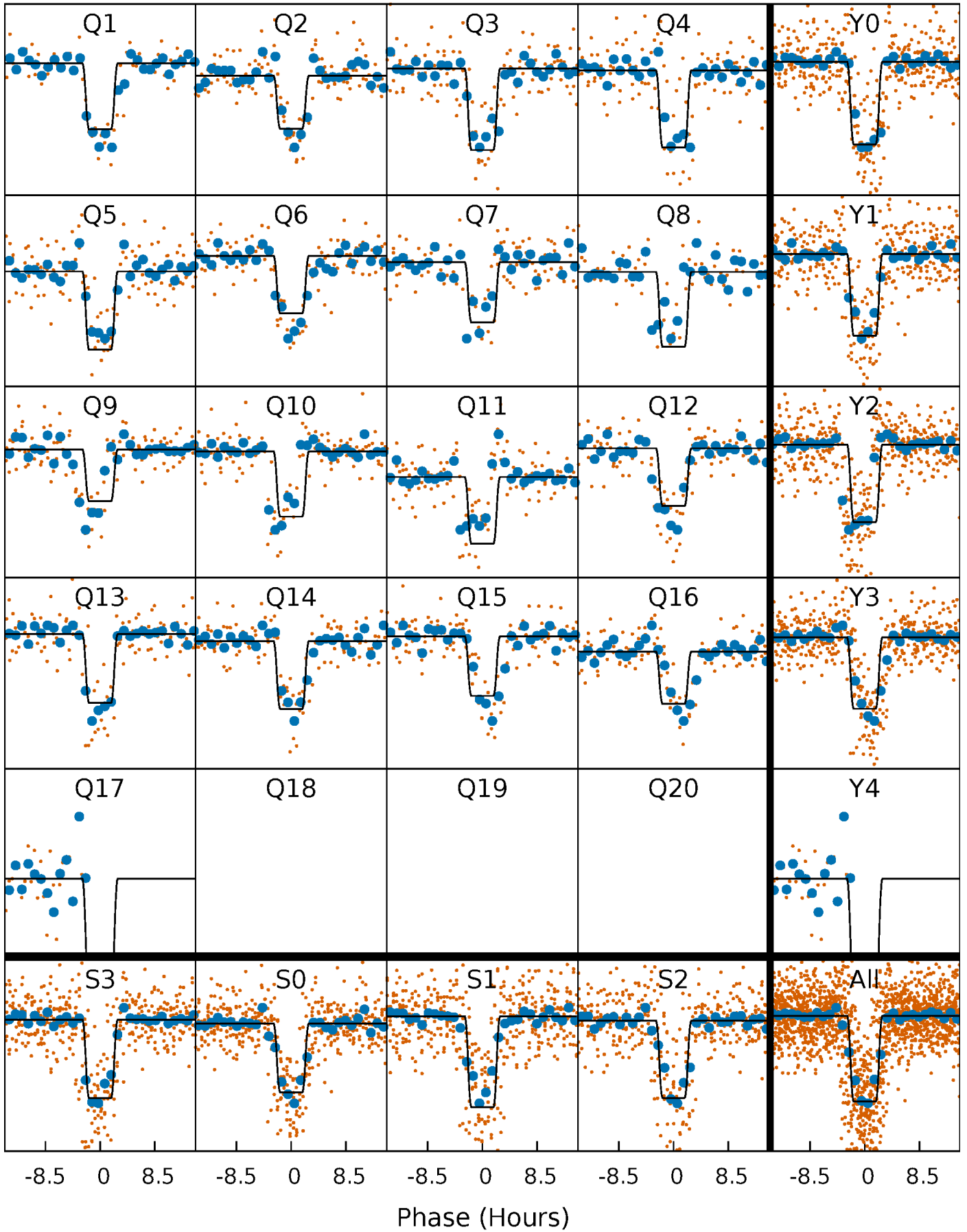
DV Quarter-Phased Transit Curves

TCE 011570749-01 P= 46.300490 Days $T_0=155.798502$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

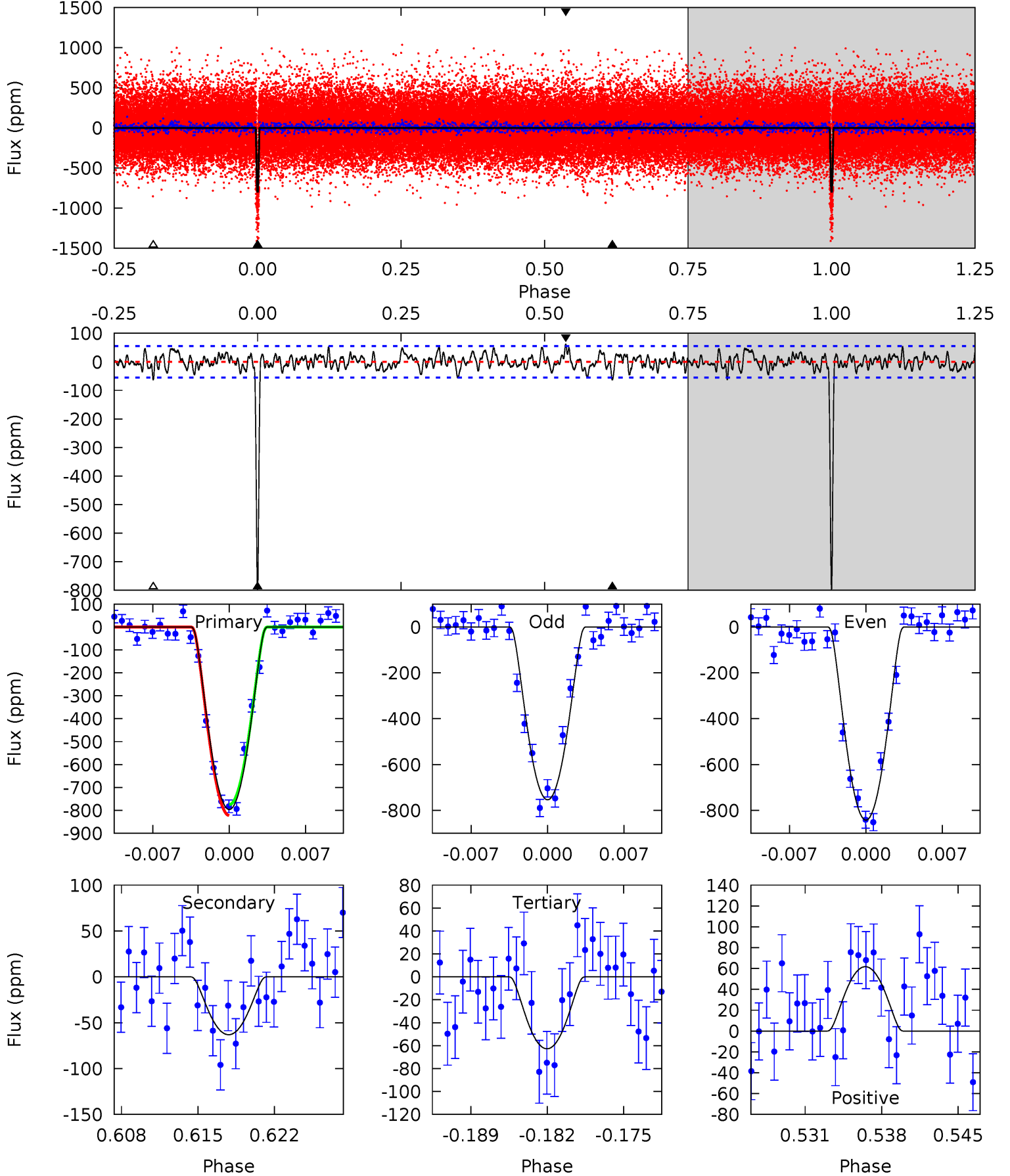
TCE 011570749-01 P= 46.300007 Days $T_0=155.798746$ (BKJD)



DV Model-Shift Uniqueness Test

011570749-01, $P = 46.300490$ Days, $E = 109.498012$ Days

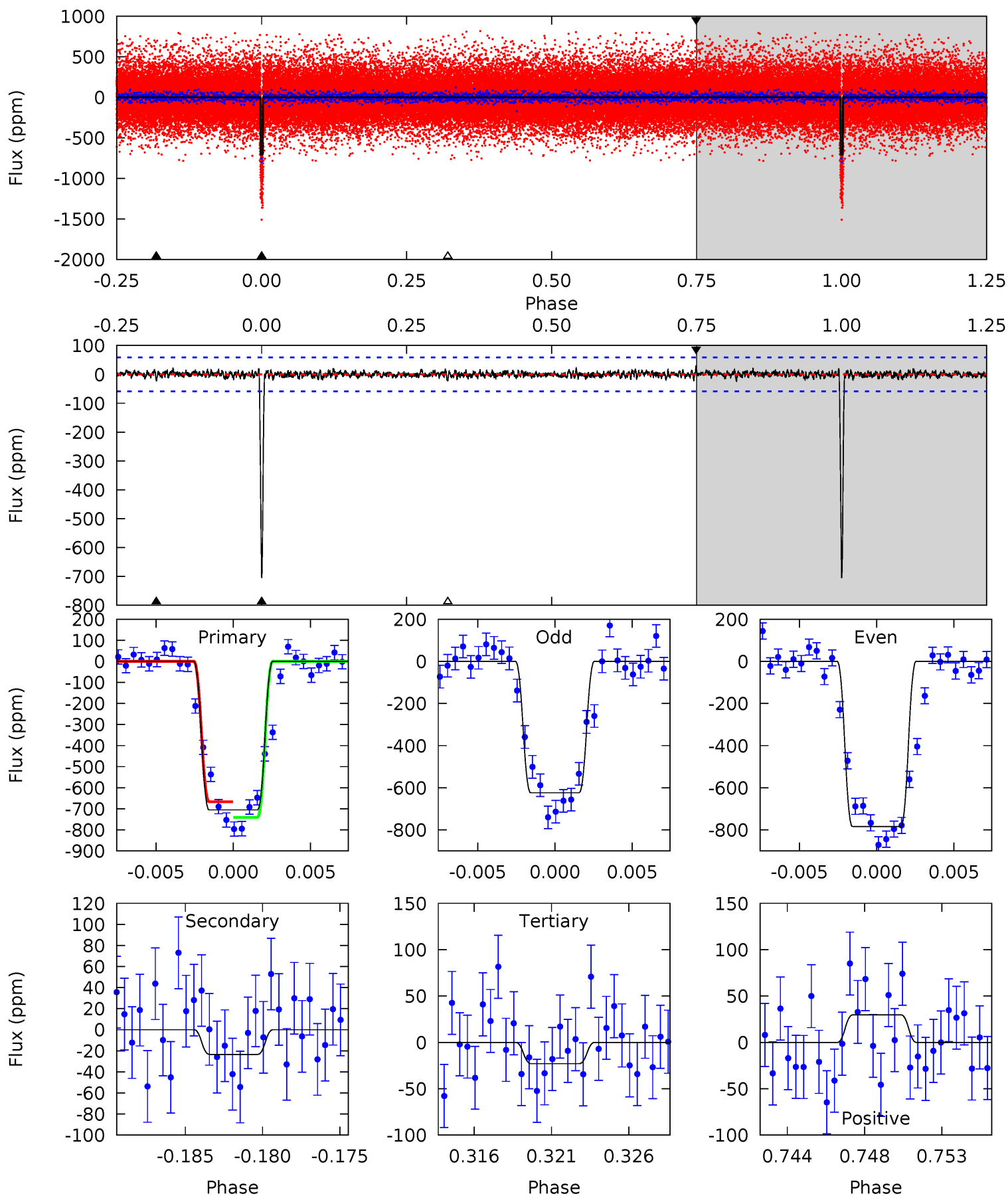
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
73.3	5.81	5.78	5.69	5.09	2.70	1.86	67.6	67.7	0.03	0.13	4.08	0.95	0.07	2.17



Alt Model-Shift Uniqueness Test

011570749-01, P = 46.300007 Days, E = 109.498739 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
61.8	2.05	2.01	2.60	5.16	2.82	0.58	59.8	59.2	0.04	-0.55	6.98	0.97	0.04	3.26



Stellar Parameters For KIC 011570749

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5396^{+160}_{-144}	$4.035^{+0.504}_{-0.216}$	$-0.060^{+0.300}_{-0.250}$	$1.507^{+0.553}_{-0.676}$	$0.898^{+0.088}_{-0.097}$	$0.370^{+1.675}_{-0.210}$
	+3%/-3%	+12%/-5%	+500%/-417%	+37%/-45%	+10%/-11%	+453%/-57%
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 011570749-01 / KOI 1856.01

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-63 ± 11	$6.52^{+2.74}_{-2.57}$	818^{+90}_{-110}	3005^{+401}_{-240}	48^{+84}_{-24}
Alt.	-23 ± 11	$4.26^{+2.78}_{-2.13}$	818^{+84}_{-108}	2909^{+634}_{-410}	38^{+132}_{-27}

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

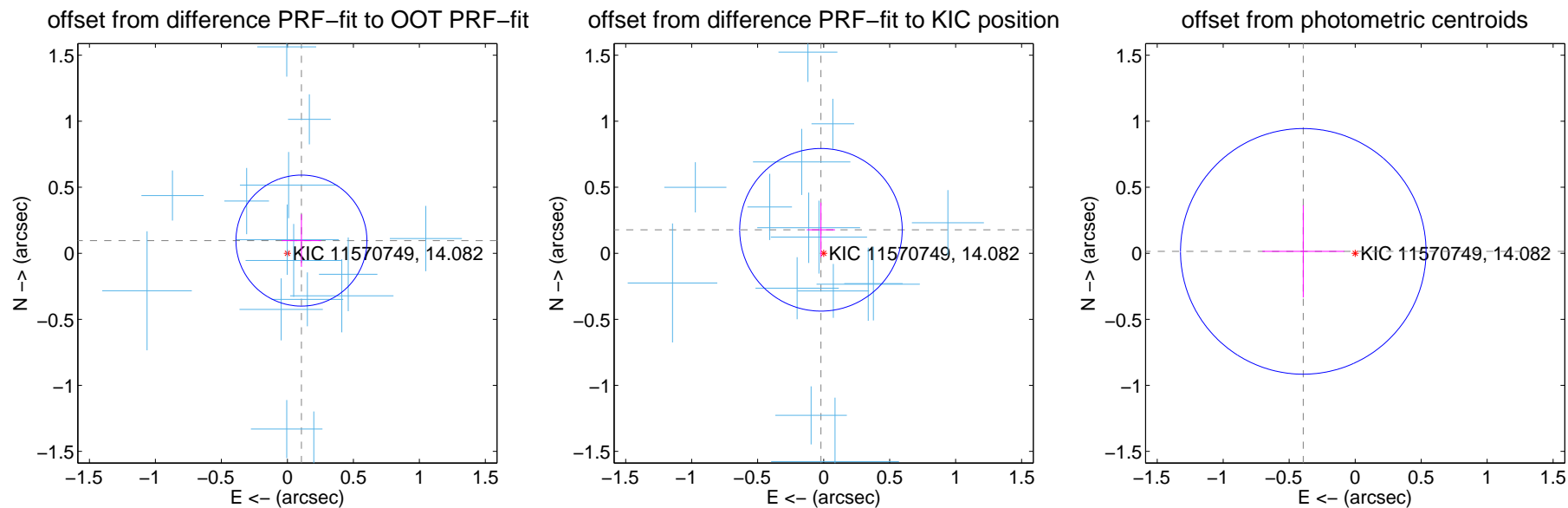
DV Centroid Data

Supplemental centroid analysis for 011570749-01. Kepler magnitude: 14.08. Transit SNR 35.41

There are 15 quarters with good PRF difference image offsets

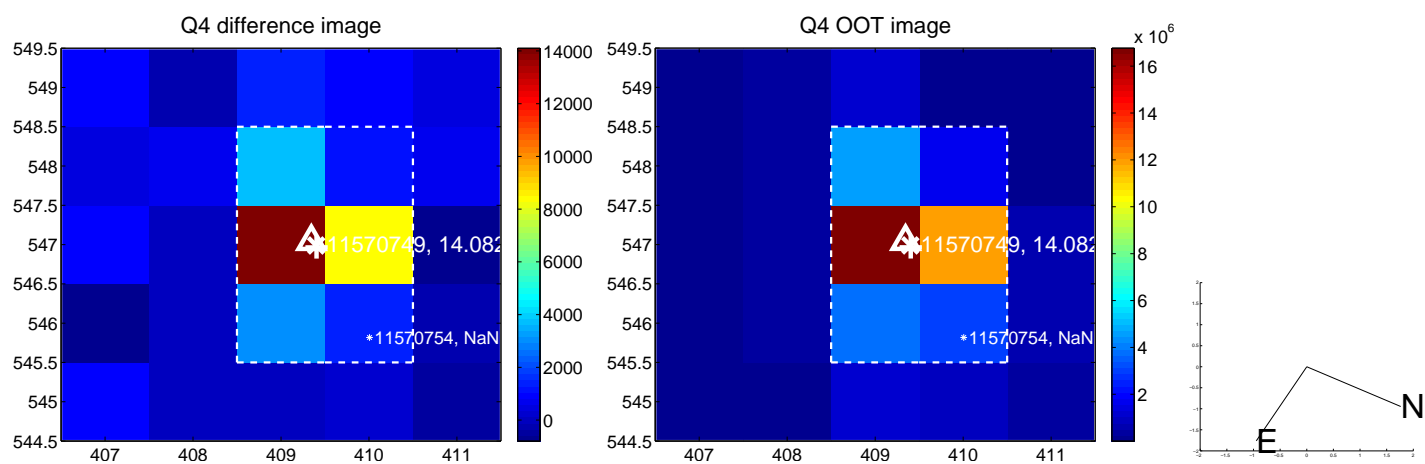
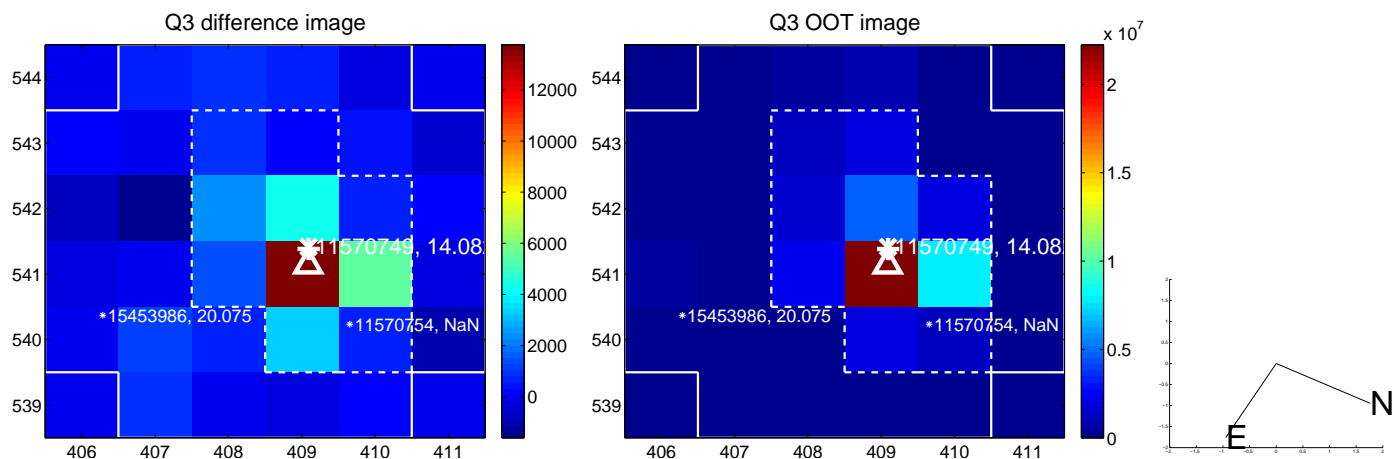
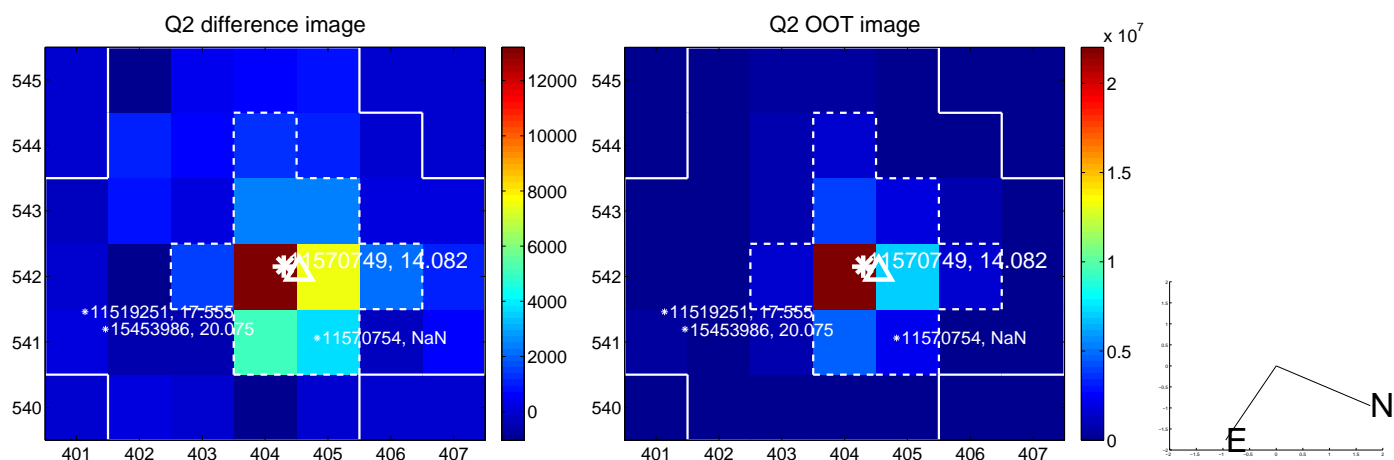
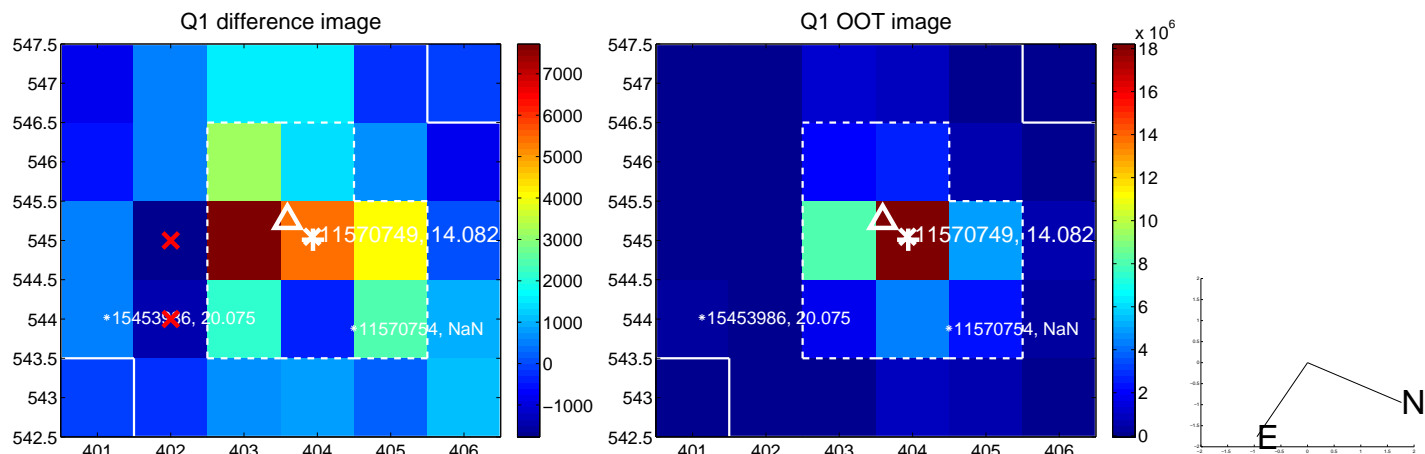
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.143 ± 0.165	0.87	-0.107 ± 0.149	0.096 ± 0.199
PRF-fit source offset from KIC position	0.179 ± 0.205	0.87	0.020 ± 0.107	0.178 ± 0.206
photometric centroid source offset	0.39 ± 0.31	1.27	0.39 ± 0.31	0.01 ± 0.35

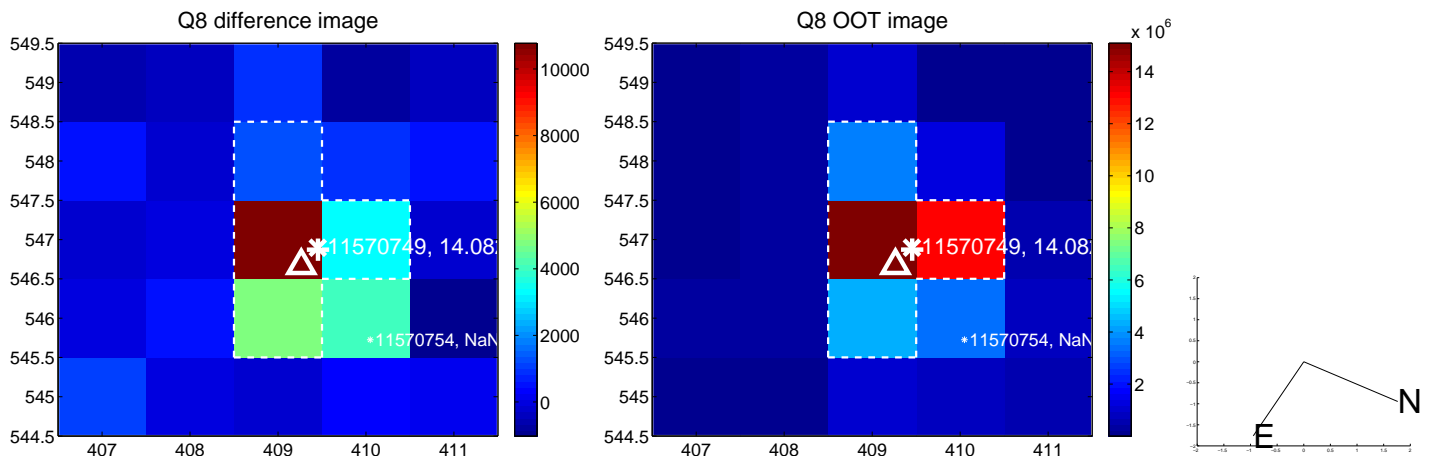
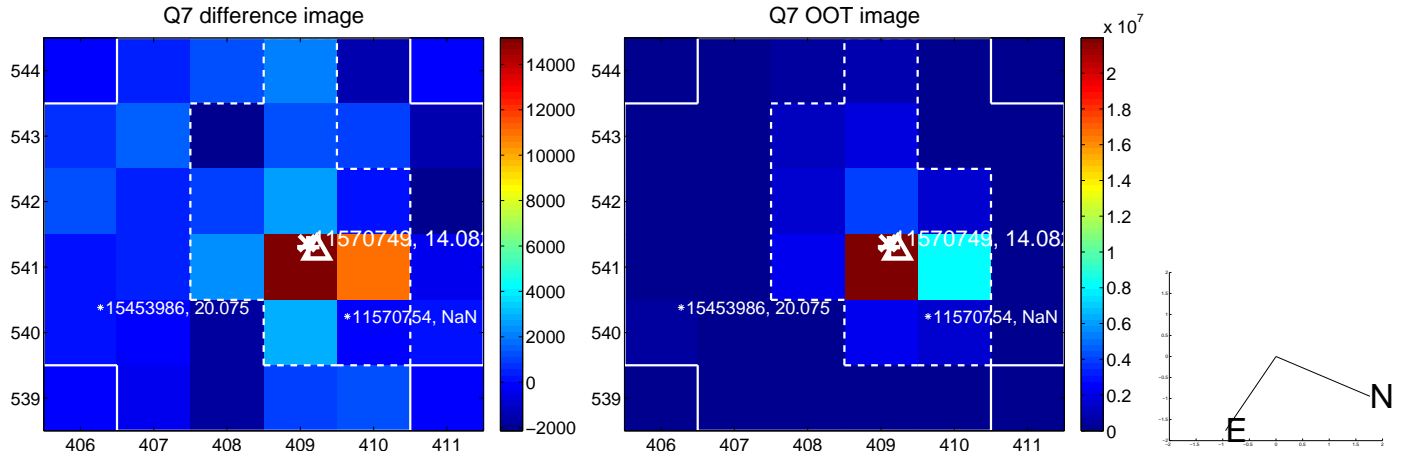
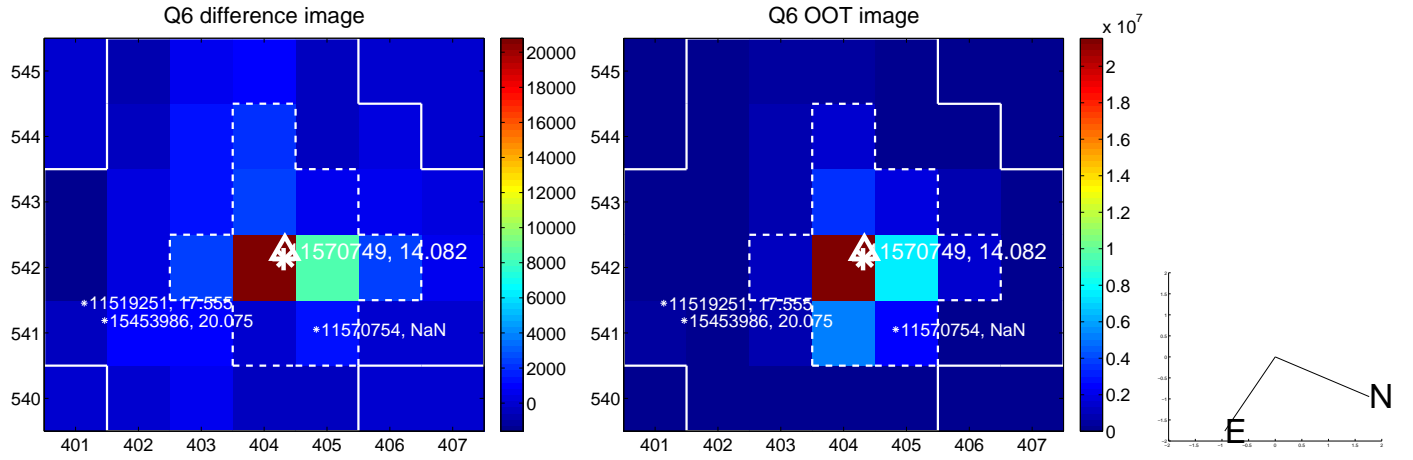
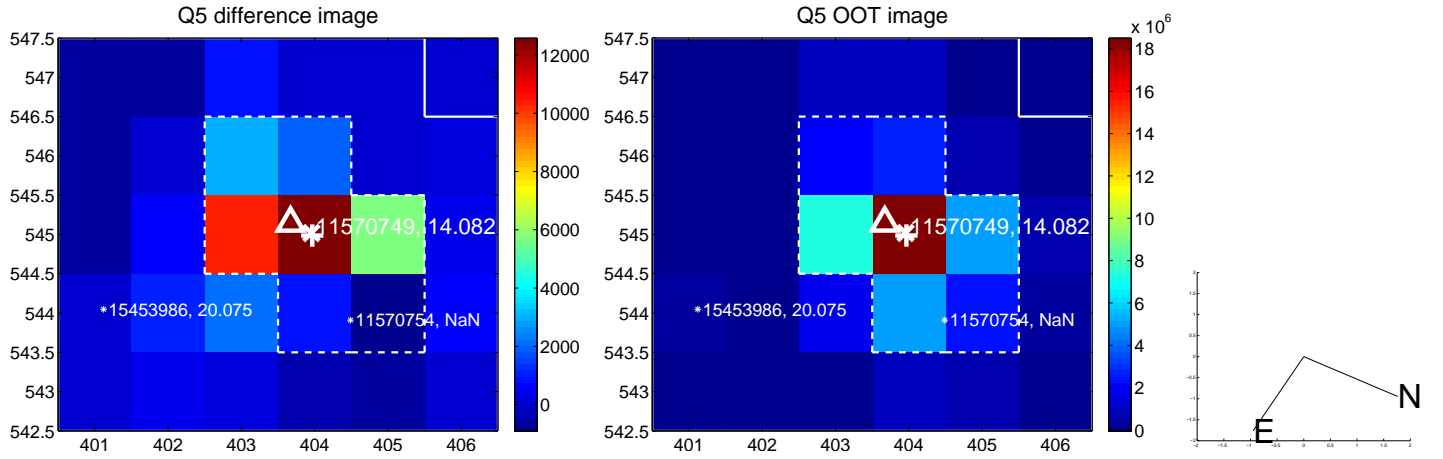


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

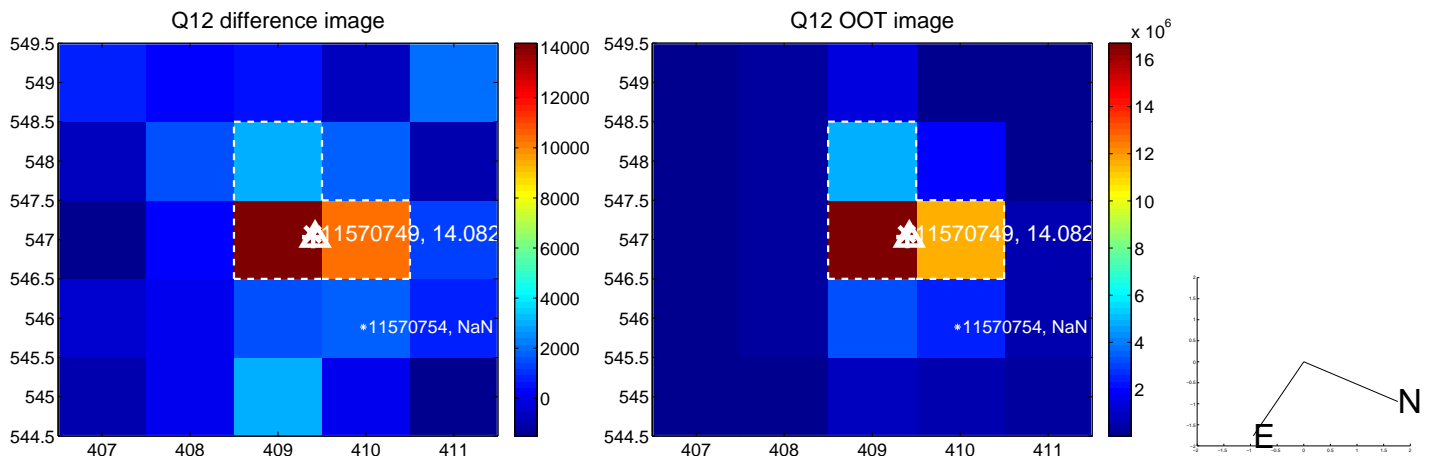
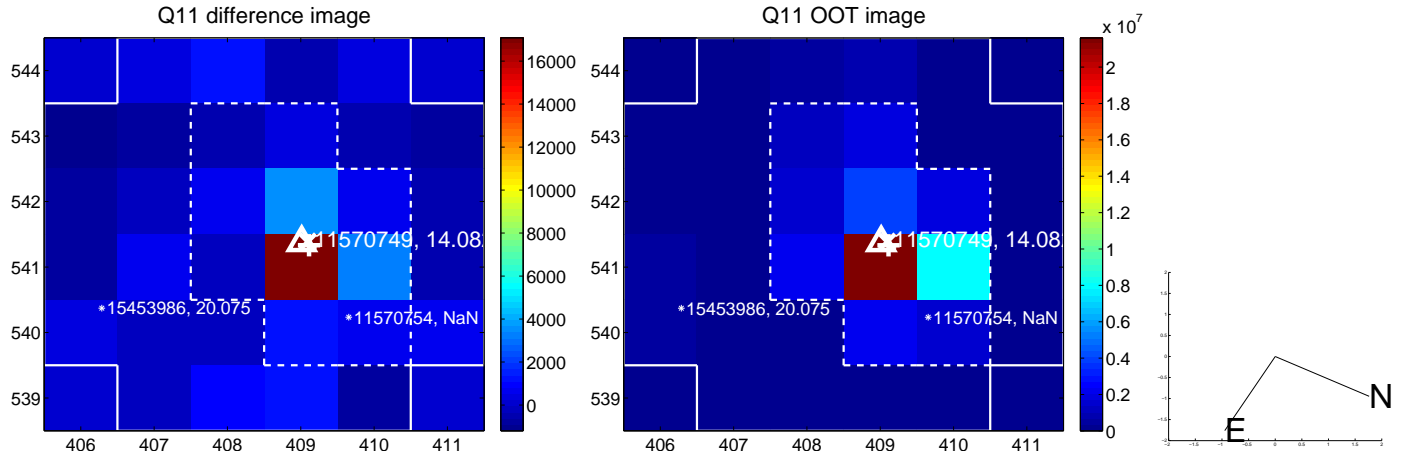
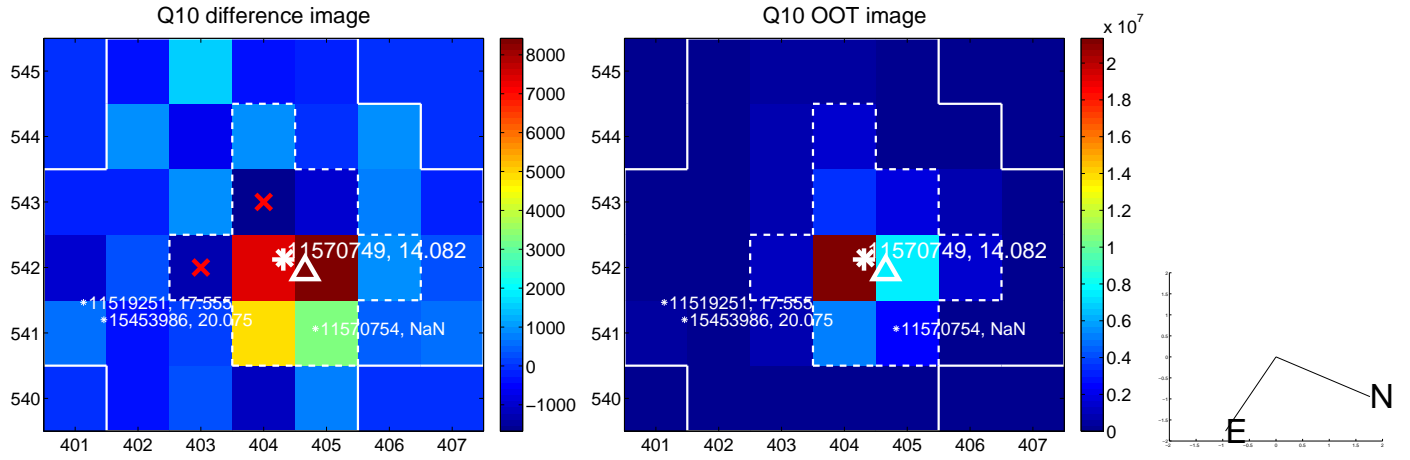
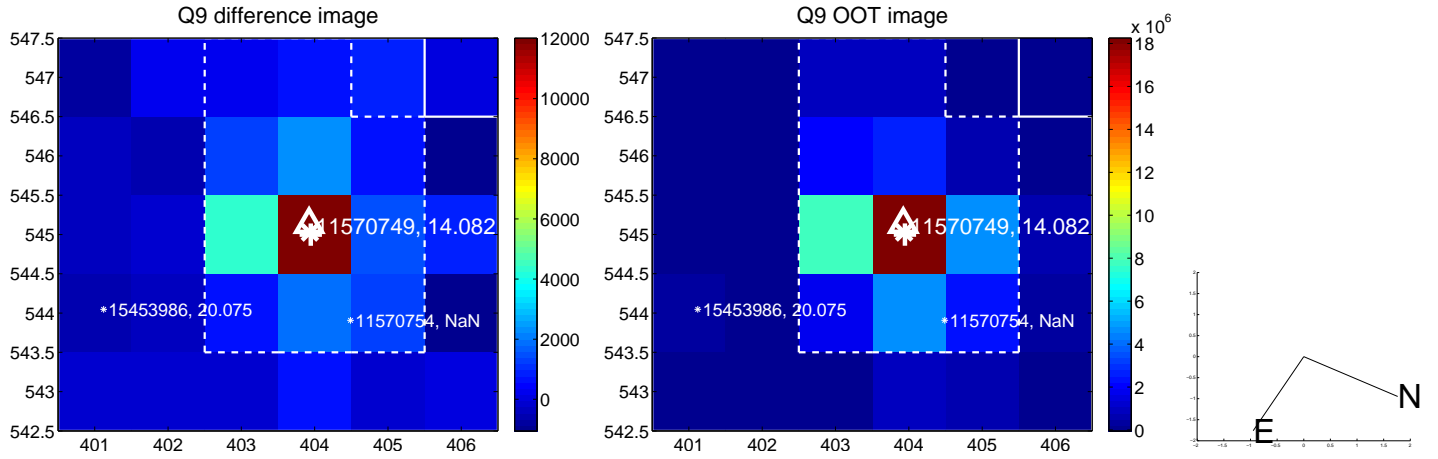
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



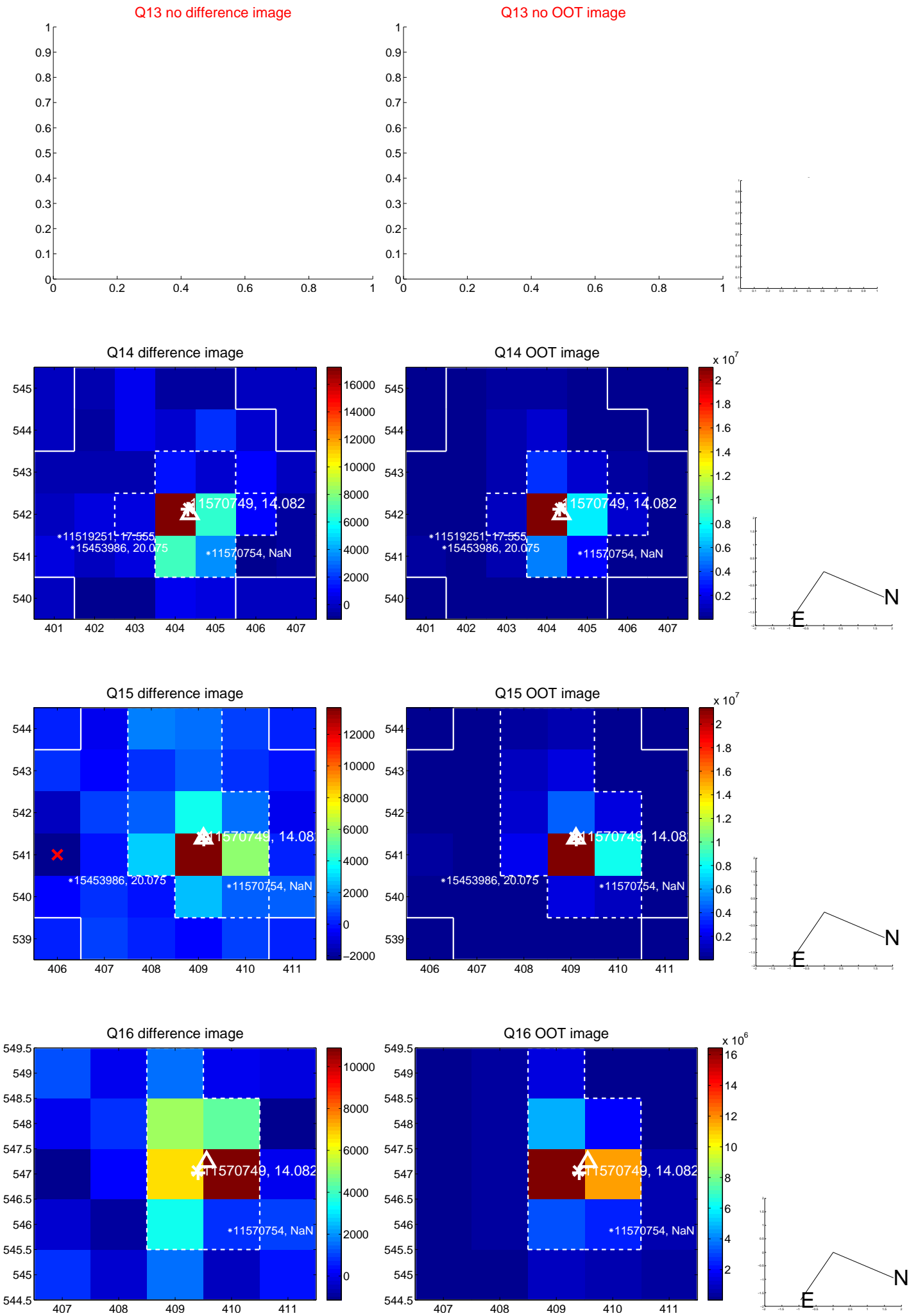
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



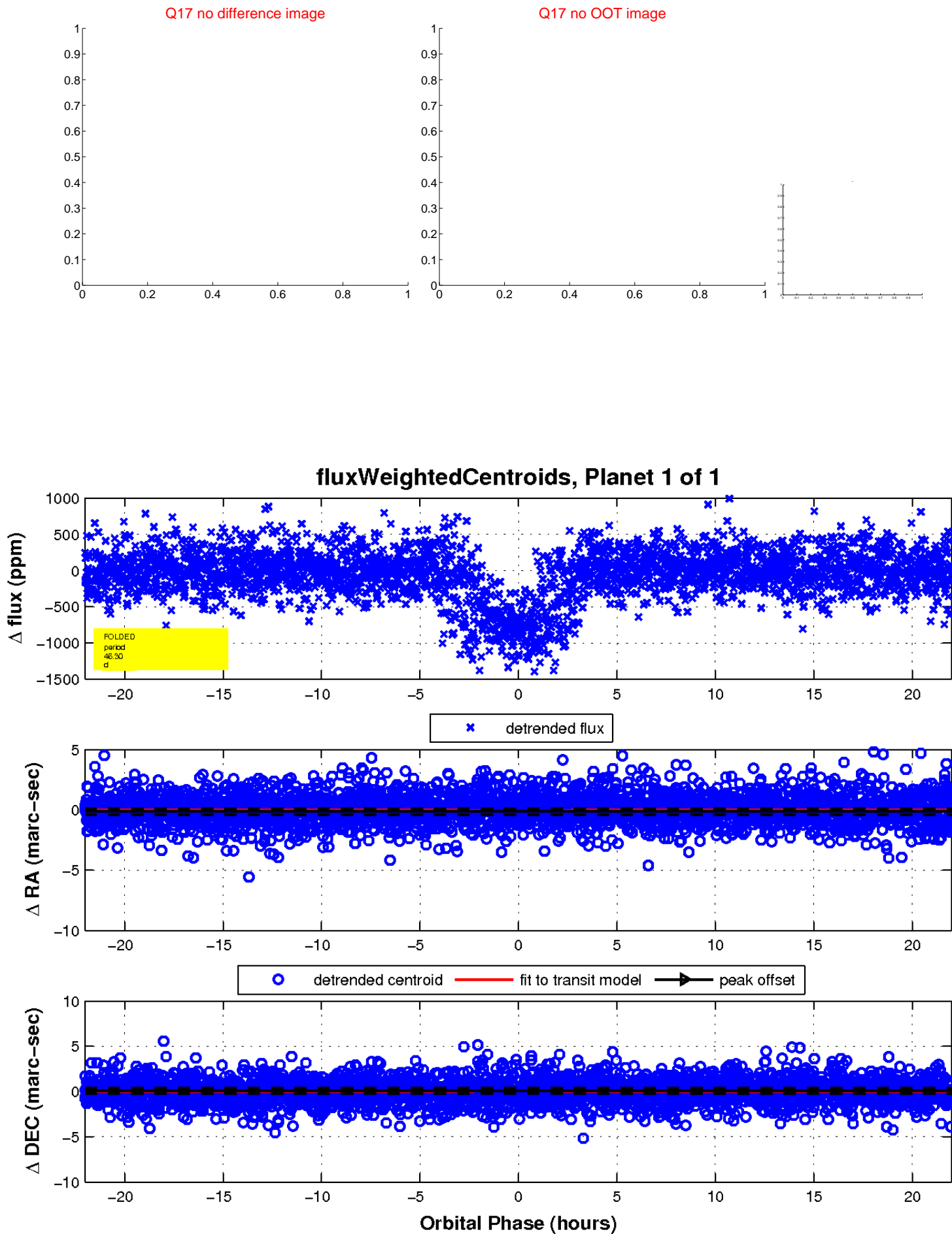
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.



UKIRT Image

Declination

