f he ag e ic la e (= t_L). The le g h i a effec-
i e di a ce e hich he c e i a ed ai ai
a i di ec i al . The ag e ic la e i a ed
ha e i i e e e i he di ec i . Whe e efe he
egi a he a c ac , e ea he i i e
(ega i e) di ec i al g he a i .

We calc la e he i acc la i d e c e
h gh a fe ag e i g he a e e h d de c ibed i
Ref. 4. We c ide he beha i f he i acc la i i
he ag e i e a e a a if ag e i a i
$\vec{M}=M\vec{r}$, he e M i he a a i ag e i a i . A

$$\vec{J}(', ') = \frac{I}{2\pi D_{,\ *}} F(')[H(' - t - t_{R})H(t + t_{R} + D_{,} - ')$$

$$- H(-t_{L} - ')H(' + t_{L} + D_{,})]$$

$$- \frac{I}{\pi_{*}^{2}} H(')H$$

i a e a gle □ ψ_0 _90 . The a el de ic he a ial
a ia i f a a eci c i e, a d he l e a el h
he e e g de i f each a e. The e e g de i E , ϕ
i calc la ed b aki g he i e a e age f he a ed ag-
iF3.01 deTBT9.978001009.978001226.714T607a i01226.7184TjETBT9.978001009.97800110191.8

di i ing fie enc

Thi n nli ea

$$\frac{1}{\pi}\int_0^{2\pi}\int_0^{1} \vec{r}(\;', \phi', t)\; ' \; ' \phi',$$

(A2)

hich e e a he ie a i f he l gi di al i ac-c la i . The al i acc la i i

$$\vec{\ }^{*} = \vec{\ }^{*}_{\perp} + (0) + (t), \quad \vec{r}_{\perp} = \vec{r} - (\vec{r}\ ), $$

(A3)

he e he l gi di al i acc la i i he f he c ib i f each i face $=0$ a d $=t$.

F a if a lied field f he f $=_{*}$ i θ_{*} c ψ_{*}, i θ_{*} i ψ_{*}, c θ_{*}, he di e i ela i f e cha ge i a e i a hi h l i

$$\omega^2 = \eta^{\ 2} + _{*} \mathrm{c}\ (\theta - \theta_{*}) - \mathrm{c}\ ^2(\theta)$$

$$\times \eta^{\ 2} + _{*} \mathrm{c}\ (\theta - \theta_{*}) - \mathrm{c}\ (2\theta), \qquad \text{(A4)}$$

he e θ i he e ilib i ag e i a i la a gle a i f i g $_{*}$ i $(\theta - \theta_{*}) - \frac{1}{2}$ i $(2\theta) = 0$.

We b ie di c he e ical e h d e ha e ed l e E . (2). The la c di a e e i a a ic la l efficie a d acc a e ch ice f c ac i la i . The di c e i a i e e i if i adi i e , a d e , g id a d if i a gle:

$$= \ (\ -1/2) \ \frac{1}{2}(\quad + \quad , t)(\ -1/2)$$

$$+ \frac{1}{2}(- \quad + \quad , t) \quad \mathrm{l}$$

$$\times \mathrm{c}\quad \mathrm{h}\ \frac{- \quad + 1/2}{\ } \quad \mathrm{c}\quad \mathrm{h}$$

$$\vec{\ }_\perp = \int_0^{2\pi}\int_0^1 \frac{a\,[\text{illegible}]\,\vec{r}\,'_\perp - a(1 + [\text{illegible}])\,\vec{r}_\perp}{[\text{illegible}]}\; [\text{illegible}]\, d\phi'$$

$$+\, a 4E[\text{illegible}]^2\, \vec{r}_\perp + \frac{a}{\ }\,\vec{r}_\perp \int_0^{2\pi}\int_0^1 \ln [\text{illegible}] \;[\text{illegible}],$$

$$\vec{r}\,'_\perp \equiv \vec{r}_\perp(\ ', \phi', \tau), \quad \vec{r}_\perp \equiv \vec{r}_\perp(\ , \phi, \tau),$$

where $4E(\ )^2 = \int_0^{2\pi}\int_0^1 \ '/[\text{illegible}]\ \ ' \ \phi'$ and E is the complete elliptic integral of the second kind.