f... he ...ag...e ic la e... ... = ...t_L.... The le...g h ... i a... effec-
i e di ta...ce ... e... hich he c...e... i a ...ed ...ai...ai...
a i ...idi...ec i ...al ... . The ...ag...e ic la e... i a ...ed
ha e 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 ...e 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

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

$$- H\square - t_{L} - '\square H\square\ ' + t_{L} + D_{,}\square\square$$

$$- \frac{I}{\pi\ {}^{2}_{*}} H\square\ '\square H$$

i a e angle ψ_0 90 . The a el de ic he a ial
a ia i f a a ecific i e, and 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 aking he i e a e age f he a ed ag-
iF3.01 deTBT9.978001009.978001226.714T607a i01226.7184TjETBT9.978001009.97800110191.8

d i ing f e enc

Thi [illegible]

$$, \quad \frac{\vec{\prime}}{|\vec{\prime}|}, \quad \vec{\prime} \quad \frac{1}{\pi}\int_0^{2\pi}\int_0^1 \vec{\prime}(\,',\phi',\,,t)\,'\,'\,\phi',$$

(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

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

(A3)

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

F a if a lied held f he f $\vec{}_{*}$ $= {}_{*}(\ \mathrm{i}\,\theta_{*}\,\mathrm{c}\ \psi_{*},\ \mathrm{i}\,\theta_{*}\ \mathrm{i}\,\psi_{*},\mathrm{c}\ \theta_{*})$, he di e i elai 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 iza i la angle a i f ing ${}_{*}$ $\mathrm{i}(\theta - \theta_{*}) - \frac{1}{2}\ \mathrm{i}(2\theta) = 0$.

We b iefl 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 a c ac i la i . The di c e iza i e e i a if i adi (i e , a d e , g id) a d a if i a gle:

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

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

$$\times\left[\mathrm{c}\ \ \mathrm{h}\left(\frac{-\ \ +1/2}{}\right)\right]\left[\mathrm{c}\ \ \mathrm{h}\right]$$

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

$$+\, a4E([illegible])^2\,\vec{r}_\perp + \frac{a}{-}\vec{r}_\perp \int_0^{2\pi}\int_0^1 \ln([illegible])\;{}'\;{}',$$

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

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