

```
> restart;with(Riemann):with(TensorPack): CDF(0): CDS(index):
```

Chapter XX

Tensor analysis using indices - Senovilla et al. - Shearfree for acceleration parallel to vorticity

if $\sigma_{ab}=0 \Rightarrow \omega_{\Theta}=0$
Author: Peter Huf
file 2d:eqs 52

In this file we continue to follow the equations outlined by Senovilla et al. (2007) with the assumptions for acceleration parallel to vorticity
i.e

```
> read "EFE" : read "SFE" :read "fids" :read "Seneqs29" :
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Equation 52 - this is the assumption of this part of the theorem
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```
> eq[52] := du = psi·omega : T(%);
```

$$du = \psi \omega \tag{1.1}$$

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Equation 53 - defn of p'
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```
> eq[53] := p'' =  $\frac{dp}{d\mu}$  : T(%);
```

$$p' = \frac{dp}{d\mu} \tag{1.2}$$

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```
> save eq, "Seneqs52" :
```

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> #read "Senegs31":

> PrintSubArray (eq, 52, 53, y);

$$52, du = \psi \omega$$

$$53, p' = \frac{dp}{d\mu}$$

(1.3)

>

>