

The Michell Solution

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ϕ	σ_{rr}	$\sigma_{r\theta}$	$\sigma_{\theta\theta}$	$2\mu u_\theta$	$2\mu u_r$
$\mathbf{r}^2$	2	0	2	0	$(\kappa - 1)r$
$\mathbf{r}^2 \ln(\mathbf{r})$	$2 \ln(r) + 1$	0	$2 \ln(r) + 3$	$(\kappa + 1)r\theta$	$(\kappa - 1)r \ln(r) - r$
$\ln(\mathbf{r})$	$\frac{1}{r^2}$	0	$-\frac{1}{r^2}$	0	$-\frac{1}{r}$
θ	0	$\frac{1}{r^2}$	0	$-\frac{1}{r}$	0
$\mathbf{r}\theta \sin \theta$	$\frac{2 \cos \theta}{r}$	0	0	$\frac{1}{2} \left\{ (\kappa - 1)\theta \cos \theta - \sin \theta \right.$	$\frac{1}{2} \left\{ (\kappa - 1)\theta \sin \theta \right.$
				$\left. - (\kappa + 1) \ln(r) \sin \theta \right\}$	$\left. - \cos \theta + (\kappa + 1) \ln(r) \cos \theta \right\}$
$\mathbf{r} \ln(\mathbf{r}) \cos \theta$	$\frac{\cos \theta}{r}$	$\frac{\sin \theta}{r}$	$\frac{\cos \theta}{r}$	$\frac{1}{2} \left\{ (\kappa + 1)\theta \cos \theta - \sin \theta \right.$	$\frac{1}{2} \left\{ (\kappa + 1)\theta \sin \theta \right.$
				$\left. - (\kappa - 1) \ln(r) \sin \theta \right\}$	$\left. - \cos \theta + (\kappa - 1) \ln(r) \cos \theta \right\}$
$\frac{\cos \theta}{\mathbf{r}}$	$-\frac{2 \cos \theta}{r^3}$	$-\frac{2 \sin \theta}{r^3}$	$\frac{2 \cos \theta}{r^3}$	$\frac{\sin \theta}{r^2}$	$\frac{\cos \theta}{r^2}$
$\mathbf{r}\theta \cos \theta$	$-\frac{2 \sin \theta}{r}$	0	0	$\frac{1}{2} \left\{ -(\kappa - 1)\theta \sin \theta \right.$	$\frac{1}{2} \left\{ (\kappa - 1)\theta \cos \theta \right.$
				$\left. - \cos \theta - (\kappa + 1) \ln(r) \cos \theta \right\}$	$\left. + \sin \theta - (\kappa + 1) \ln(r) \sin \theta \right\}$
$\mathbf{r} \ln(\mathbf{r}) \sin \theta$	$\frac{\sin \theta}{r}$	$-\frac{\cos \theta}{r}$	$\frac{\sin \theta}{r}$	$\frac{1}{2} \left\{ (\kappa + 1)\theta \sin \theta \right.$	$\frac{1}{2} \left\{ -(\kappa + 1)\theta \cos \theta \right.$
				$\left. + \cos \theta + (\kappa - 1) \ln(r) \cos \theta \right\}$	$\left. - \sin \theta + (\kappa - 1) \ln(r) \sin \theta \right\}$
$\frac{\sin \theta}{\mathbf{r}}$	$-\frac{2 \sin \theta}{r^3}$	$\frac{2 \cos \theta}{r^3}$	$\frac{2 \sin \theta}{r^3}$	$-\frac{\cos \theta}{r^2}$	$\frac{\sin \theta}{r^2}$
$\mathbf{r}^{n+2} \cos n\theta$	$-(n+1)(n-2)r^n \cos n\theta$	$n(n+1)r^n \sin n\theta$	$(n+1)(n+2)r^n \cos n\theta$	$(\kappa + n + 1)r^{n+1} \sin n\theta$	$(\kappa - n - 1)r^{n+1} \cos n\theta$
$\mathbf{r}^n \cos n\theta$	$-n(n-1)r^{n-2} \cos n\theta$	$n(n-1)r^{n-2} \sin n\theta$	$n(n-1)r^{n-2} \cos n\theta$	$nr^{n-1} \sin n\theta$	$-nr^{n-1} \cos n\theta$
$\mathbf{r}^{n+2} \sin n\theta$	$-(n+1)(n-2)r^n \sin n\theta$	$-n(n+1)r^n \cos n\theta$	$(n+1)(n+2)r^n \sin n\theta$	$-(\kappa + n + 1)r^{n+1} \cos n\theta$	$(\kappa - n - 1)r^{n+1} \sin n\theta$
$\mathbf{r}^n \sin n\theta$	$-n(n-1)r^{n-2} \sin n\theta$	$-n(n-1)r^{n-2} \cos n\theta$	$n(n-1)r^{n-2} \sin n\theta$	$-nr^{n-1} \cos n\theta$	$-nr^{n-1} \sin n\theta$