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The area form on round S^2

Definition. The area form on round S^2

The area form λ_{S^2} on the 2-sphere is the *volume form* induced by the *spherical metric* $S^2 \hookrightarrow \mathbb{R}^3$.

- In complex coordinates,

$$\lambda_{S^2} = \frac{1}{(1 + |z|^2)^2} dz \wedge d\bar{z}$$

- In cylindrical polar coordinates,

$$\lambda_{S^2} = d\theta \wedge dz$$

[1]

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1. <https://math.stackexchange.com/a/1326685/1290493> ↩