$$ec{\mathbf{F}} = \langle -z, \ x+y, \ y
angle$$

 Γ is the intersection of the surface of the sphere $x^2 + y^2 + z^2 = 2$ with the plane y = x for $x \ge 0$. Calculate $\int_{\Gamma} \vec{\mathbf{F}} \bullet d\vec{\mathbf{r}}$

