$$B\_r = B\_0 \cdot \left( \left( \frac{x\_0}{x} \right)^3 \cos(a)\cos(t) + \frac{x\_0}{\text{BesselJ}(x\_0, 0)} \frac{\text{BesselJ}(x, 0)}{x} \sin(a)\cos(t)\exp(\text{eta} \cdot I) \right);$$

$$B\_r = B\_0 \left( \frac{x\_0^3 \cos(a)\cos(t)}{x^3} + \frac{x\_0 \,\text{BesselJ}(x, 0)\sin(a)\cos(t)\, e^{I\eta}}{\text{BesselJ}(x\_0, 0)\, x} \right) \quad (1)$$

$$B\_theta = \frac{B\_0}{2} \left( \left( \frac{x\_0}{x} \right)^3 \cos(a)\sin(t) + \left( \frac{x\_0^2 \text{BesselJ}(x, 0)}{x\_0 \frac{d}{dx}\text{BesselJ}(x\_0, 0) + \text{BesselJ}(x\_0, 0)} + \frac{x\_0}{\text{BesselJ}(x\_0, 0)} \frac{x\frac{d}{dx}\text{BesselJ}(x, 0) + \text{BesselJ}(x, 0)}{x} \right) \sin(a)\cos(t)\exp(\text{eta}\cdot I) \right);$$

$$B\_theta = \frac{1}{2} B\_0 \left( \frac{x\_0^3 \cos(a)\sin(t)}{x^3} + \left( \frac{x\_0^2 \,\text{BesselJ}(x, 0)}{\frac{x\_0 \, d\,\text{BesselJ}(x\_0, 0)}{dx} + \text{BesselJ}(x\_0, 0)} + \frac{x\_0 \left( \frac{x\, d\,\text{BesselJ}(x, 0)}{dx} + \text{BesselJ}(x, 0) \right)}{\text{BesselJ}(x\_0, 0)\, x} \right) \sin(a)\cos(t)\, e^{I\eta} \right) \quad (2)$$