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CHAMP ground-track

The german satellite mission CHAMP was launched at the epoch t_0 : 15. July 2000 at 12:59:59 CET. The initial orbital elements were:

a	6679137 m
e	0.000325
i	87.218°
Ω	229.0417°
ω	83.3546°
$M(t_0)$	276.8105°

Compute the ground track for July 2009.

$$\begin{bmatrix} \cos(GAST_1) & \cos(GAST_2) \end{bmatrix} * \begin{bmatrix} x_1 \\ x_2 \end{bmatrix} + \begin{bmatrix} \sin(GAST_1) & \sin(GAST_2) \end{bmatrix} * \begin{bmatrix} y_1 \\ y_2 \end{bmatrix}$$

$$\begin{bmatrix} \cos(GAST_1) x_1 & \cos(GAST_2) x_2 \\ \sin(GAST_1) y_1 & \sin(GAST_2) y_2 \end{bmatrix}$$