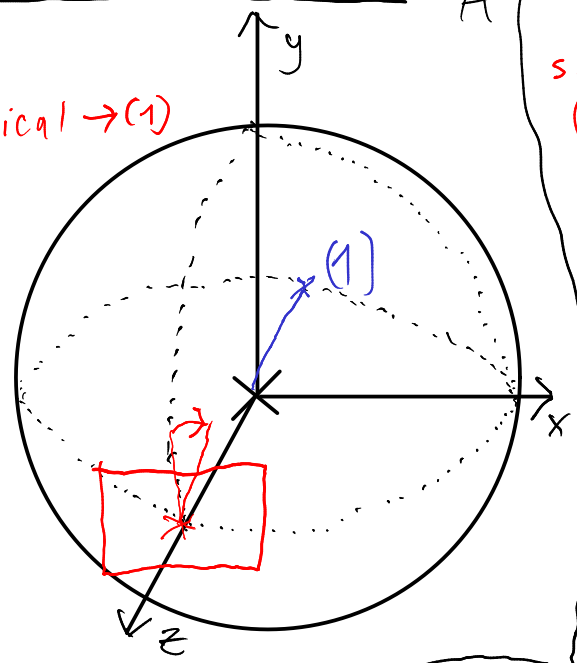
stereographical_to_sph_slow

A

size:
stereographical → (1)

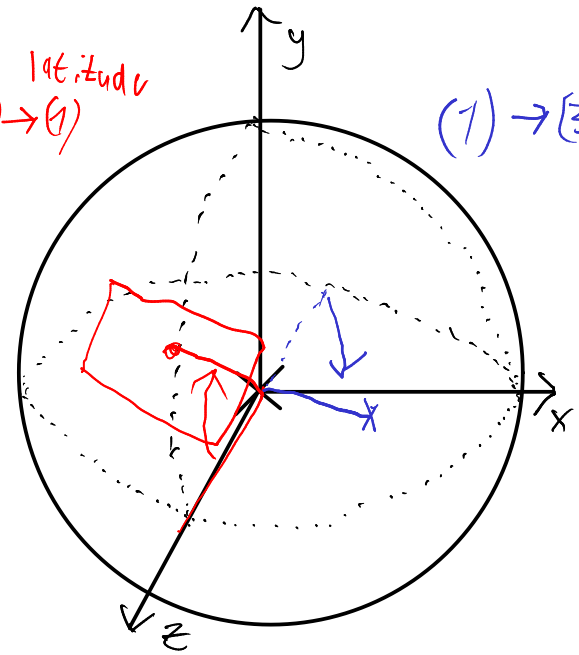
rotation:
(1) → (2)



B

set latitude
(2) → (1)

(1) → (3)

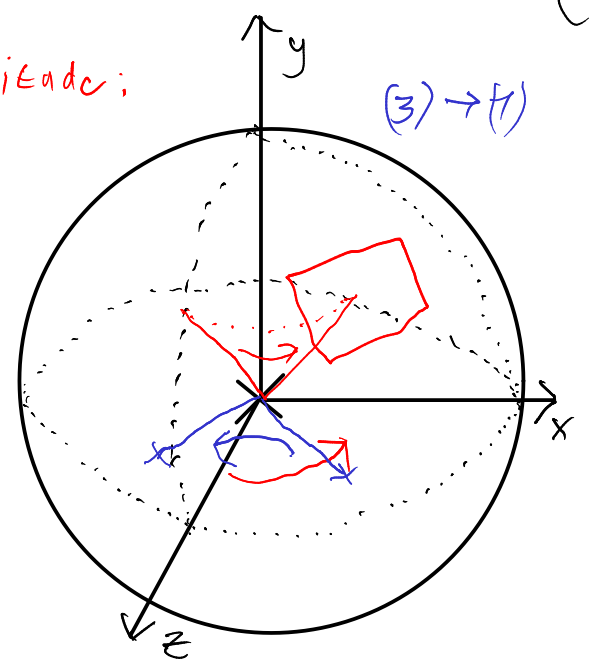


C

set longitude:

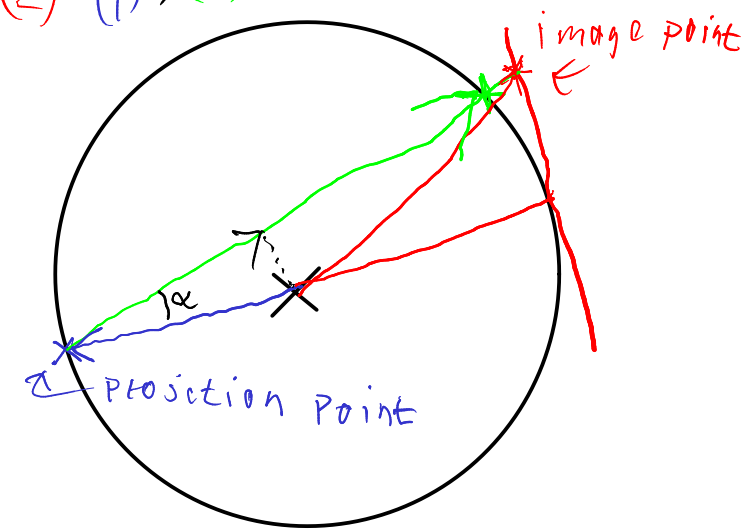
(1) → (2)

(3) → (1)



D

(2) - (1) → (2)



E

$$scal = \frac{(-1)^T (2)}{\|(2)\|}$$

(project vector (-1) to (2))

$$\begin{cases} scal = \|(-1)\| \, \|(2)\| \cdot \cos\alpha = \langle (-1), (2) \rangle \\ scal = \|(-1)\| \cdot \cos\alpha \end{cases}$$

position on sphere:

$(7) = (1) \cdot 2 \cdot scal$

calculate latitude & longitude

order in transform.c:

A B C A B C D E

(1) ... vector (x1, y1, z1)