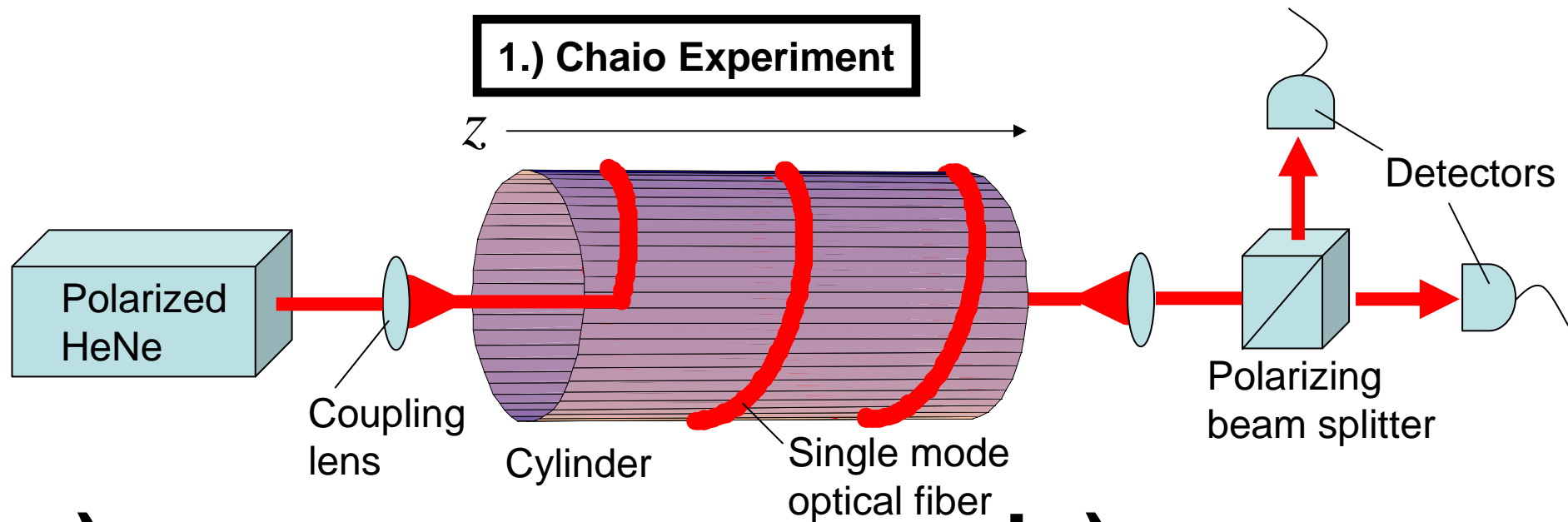
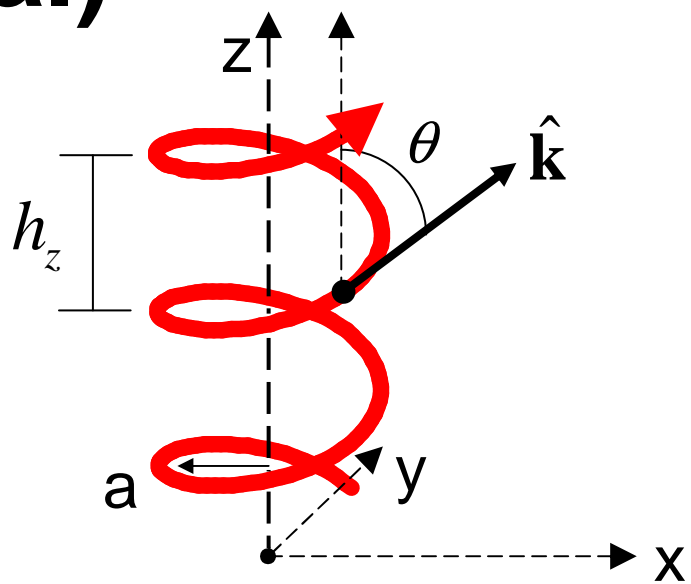


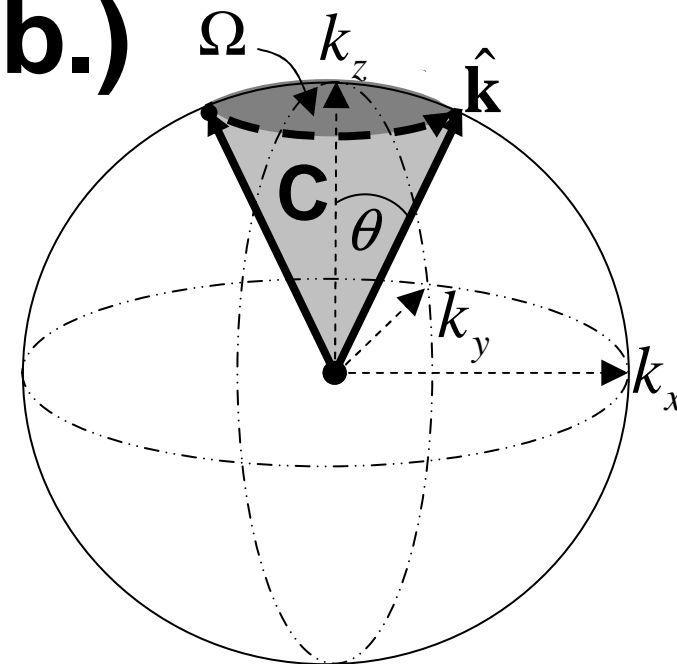
# 1.) Chaio Experiment



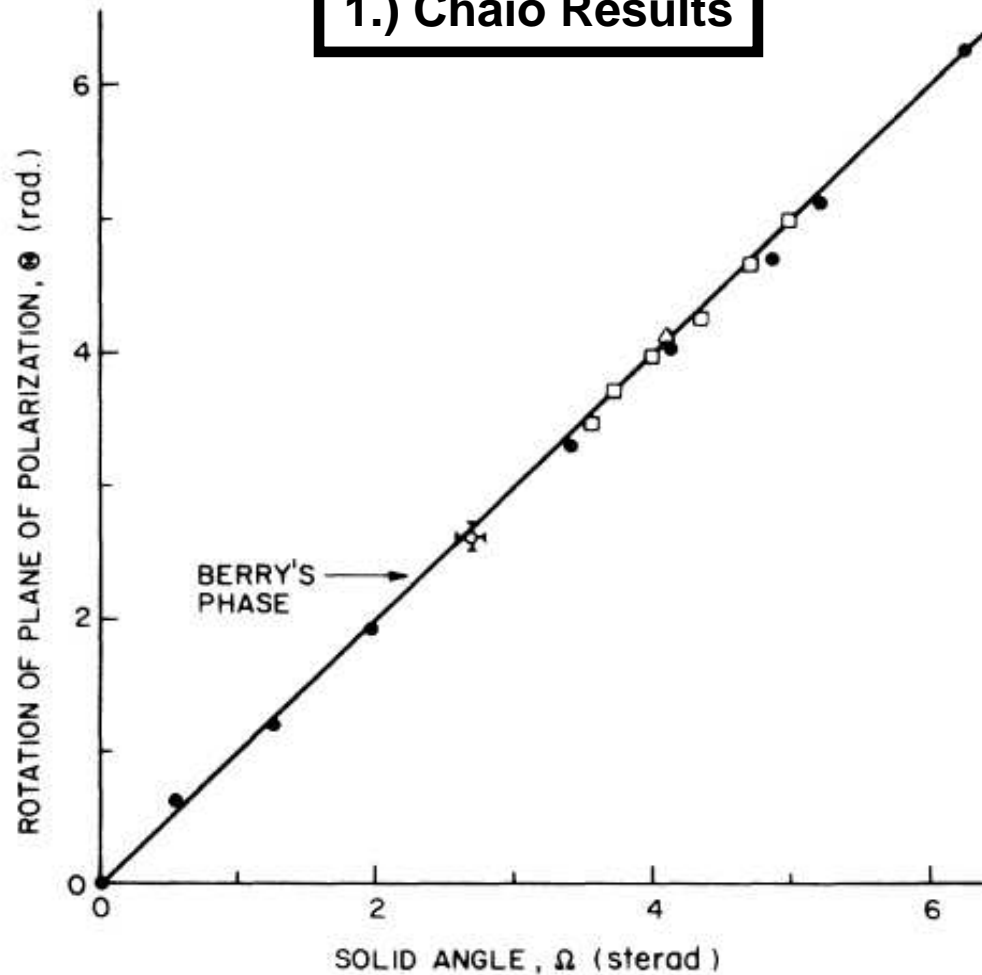
a.)



b.)



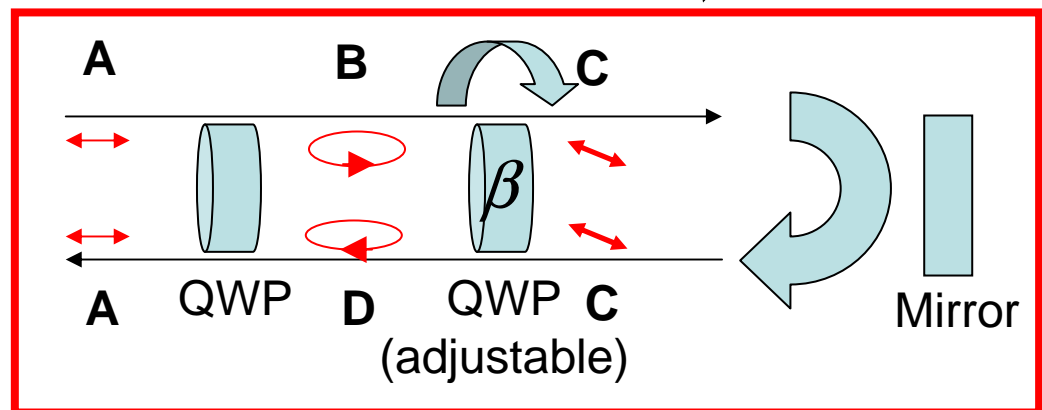
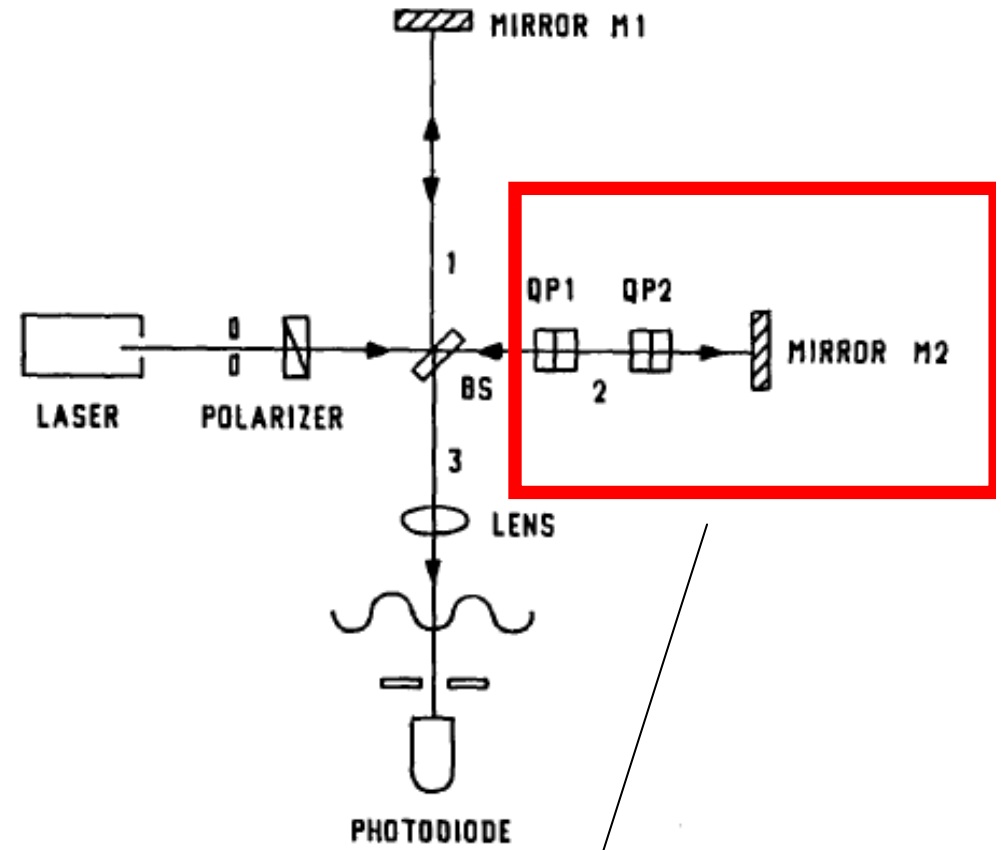
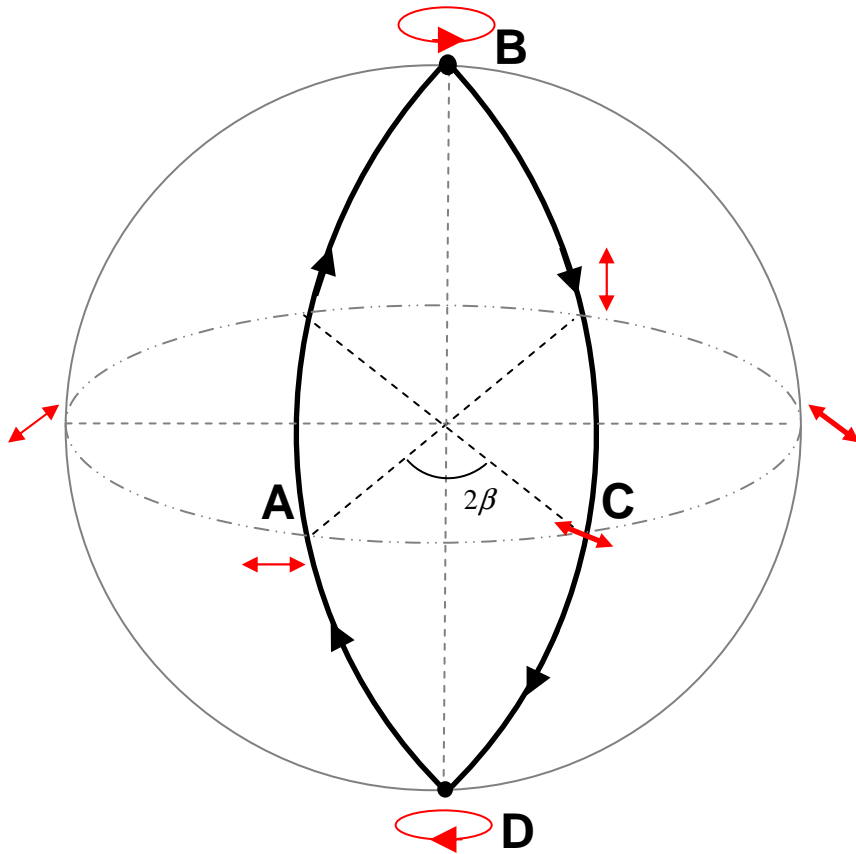
## 1.) Chao Results



Geometric phase was inferred by measuring the polarization rotation angle

FIG. 3. Measured angle of rotation of linearly polarized light vs calculated solid angle in momentum space, Eq. (3). Open circles represent the data for uniform helices; squares and triangle represent nonuniform helices (see Fig. 2); solid circles represent arbitrary planar paths. The solid line is the theoretical prediction based on Berry's phase, Eq. (4).

## 2.) Pancharatnam Experiment (Mandel)



## 2.) Pancharatnam Results

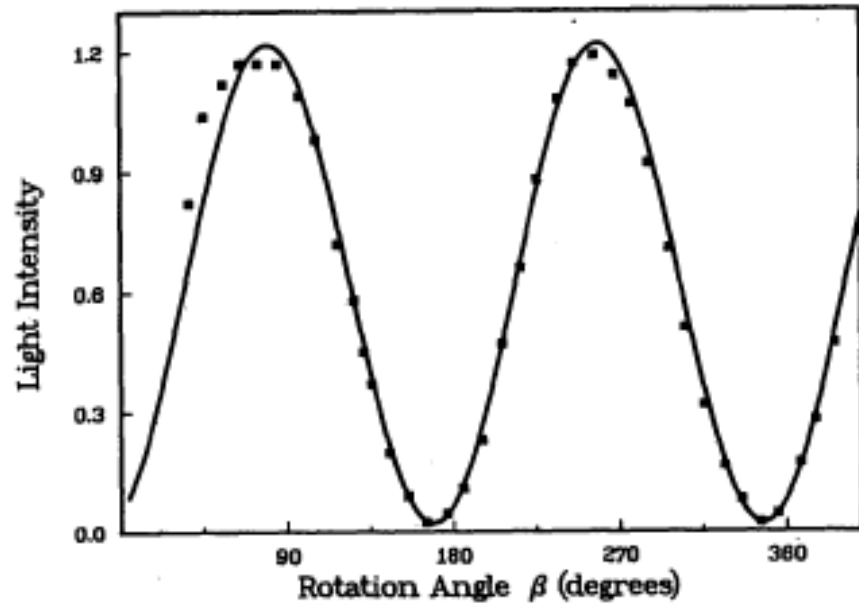


Fig. 3. Measured values of the light intensity  $I$  in arbitrary units for various rotation angles  $\beta$  of the quarter-wave plate QP2. The solid curve is described by Eq. (2).

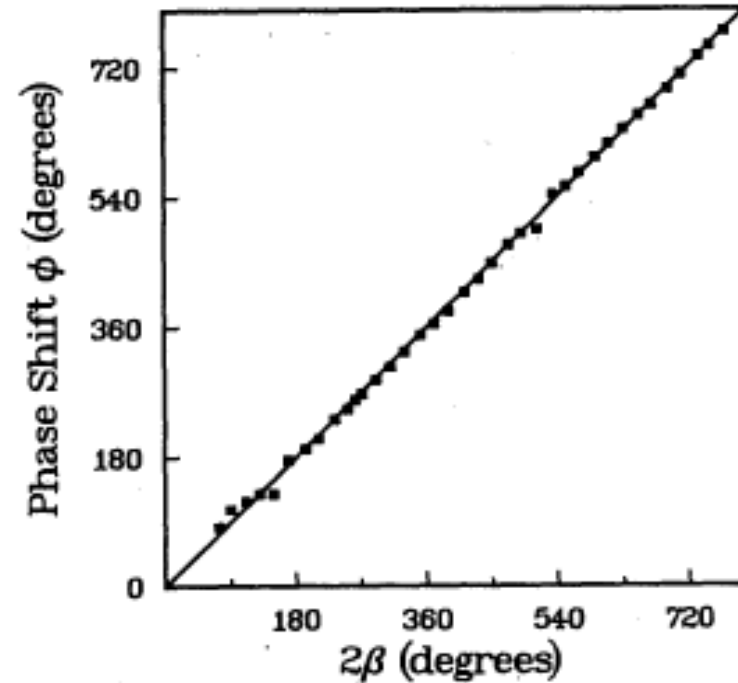
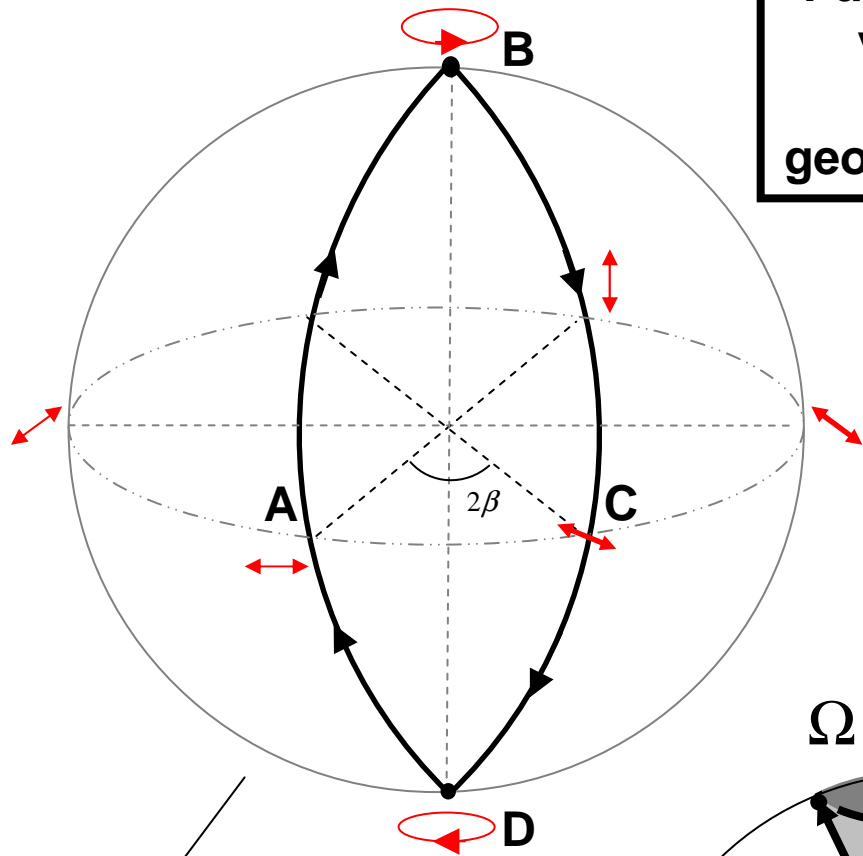


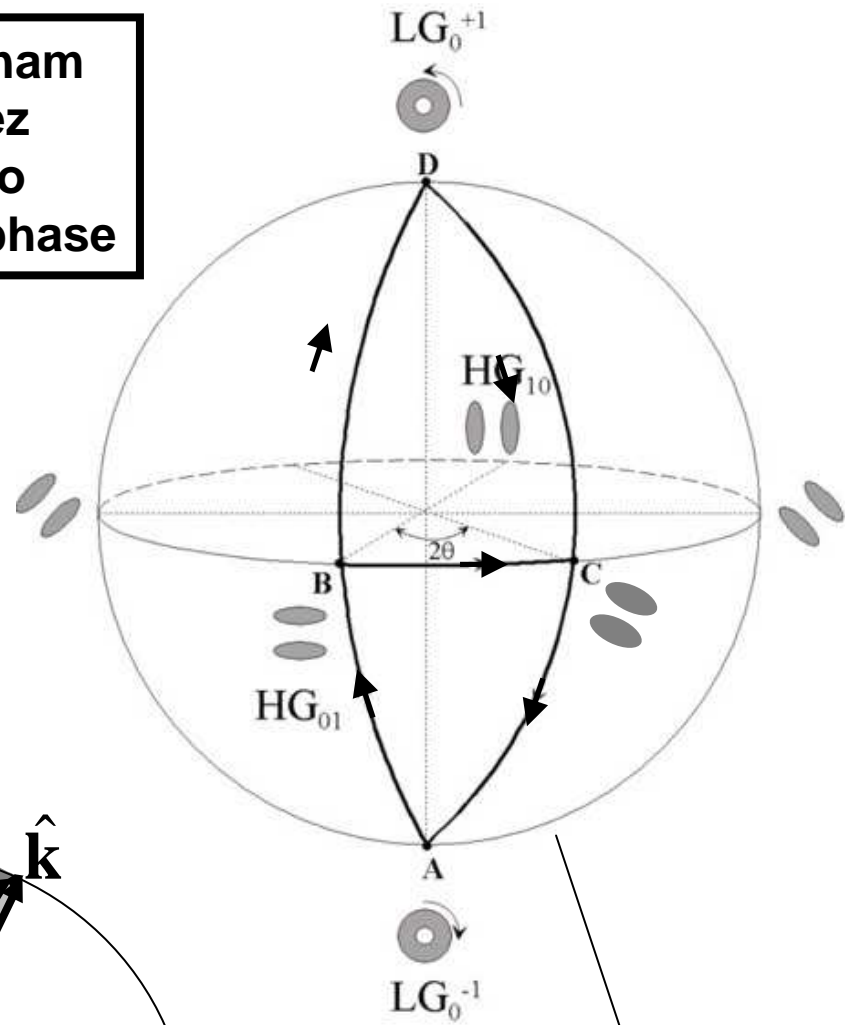
Fig. 4. Measured values of the phase shift  $\phi$  as a function of the rotation angle  $\beta$  of the quarter-wave plate QP2. The straight line corresponds to  $\phi = 2\beta$ .



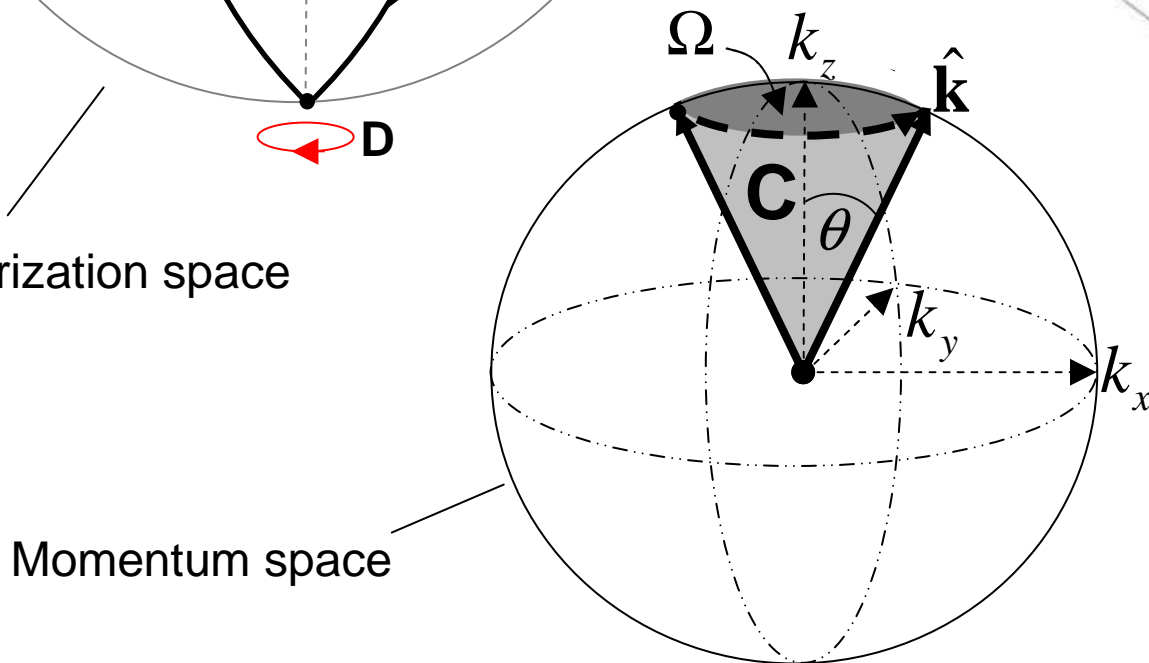
**Pancharatnam  
vs Galvez  
vs Chaio  
geometric phase**



Polarization space

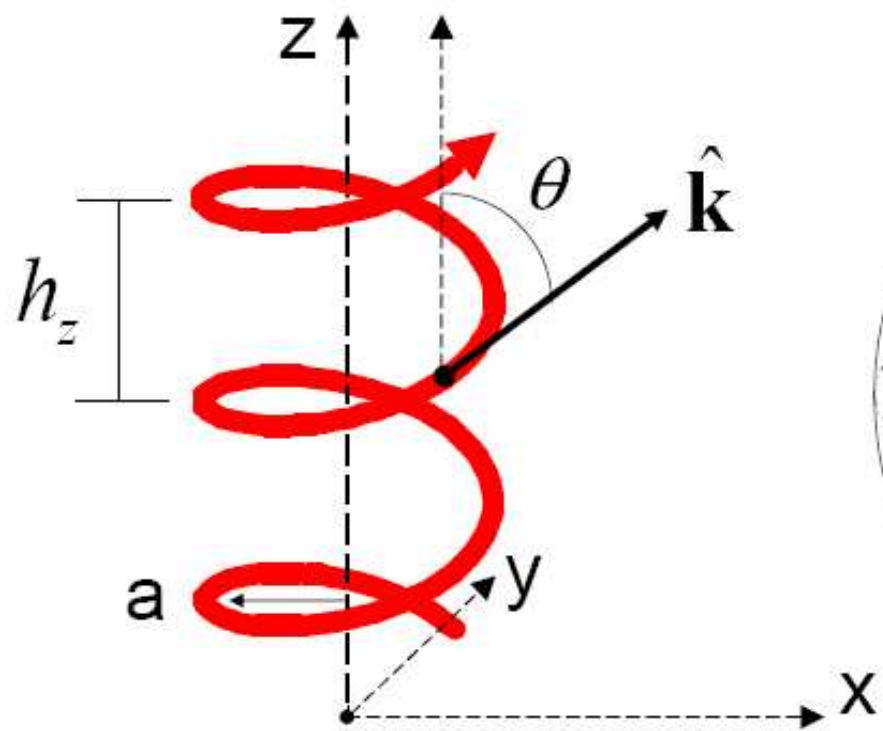


Spatial-mode space



Momentum space

a.)



b.)

