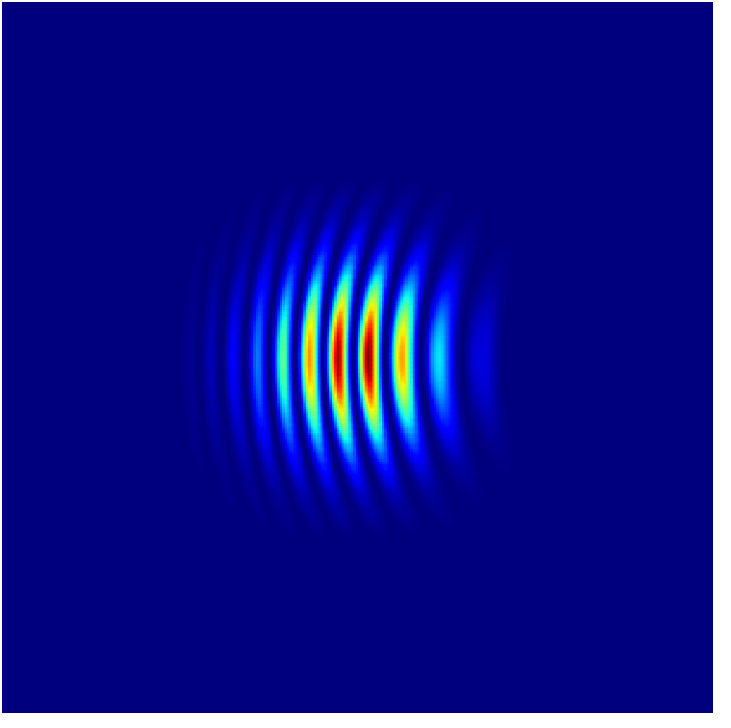intensity pattern