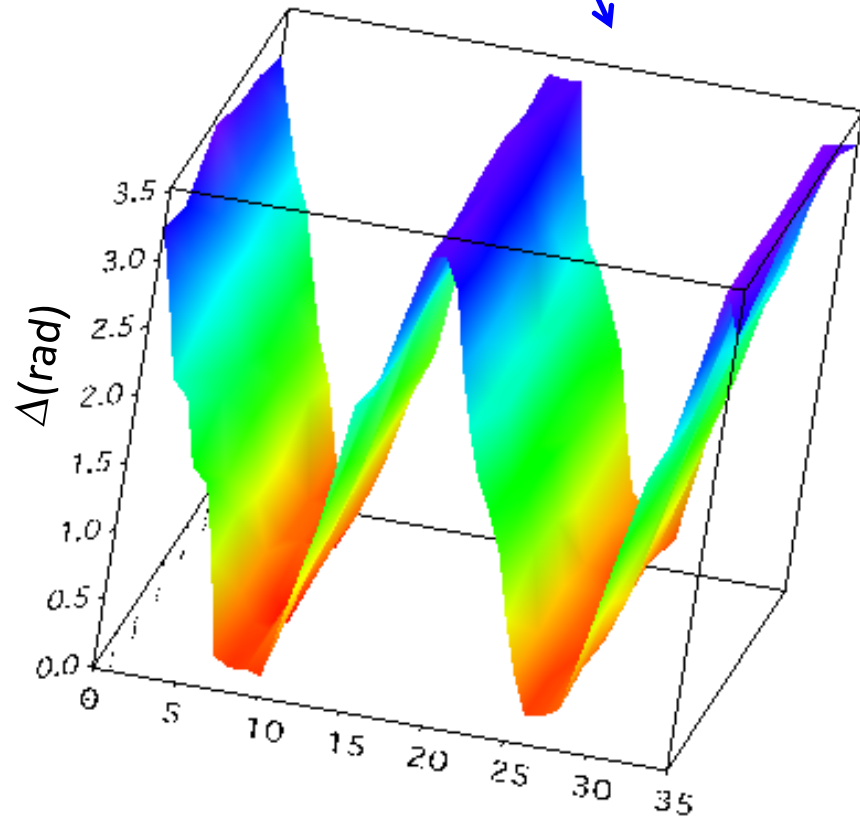
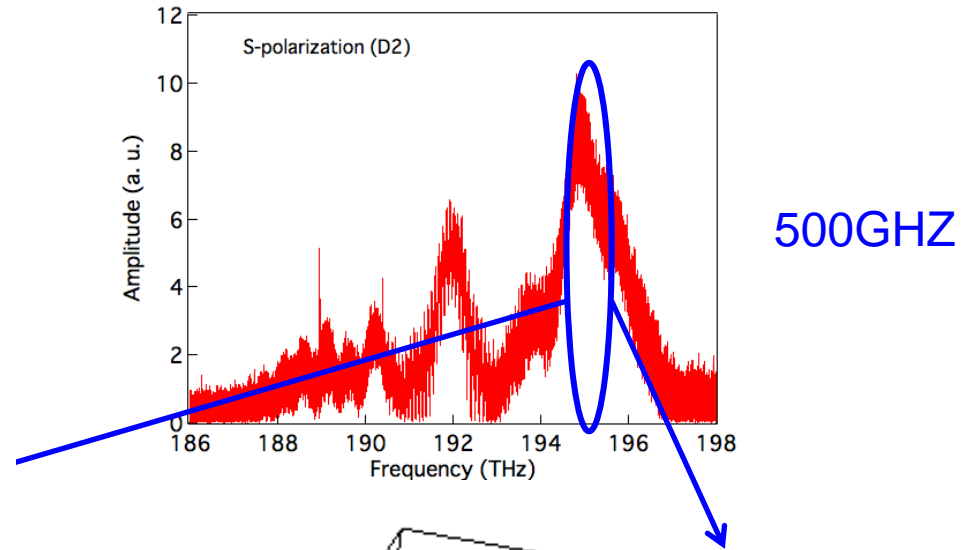
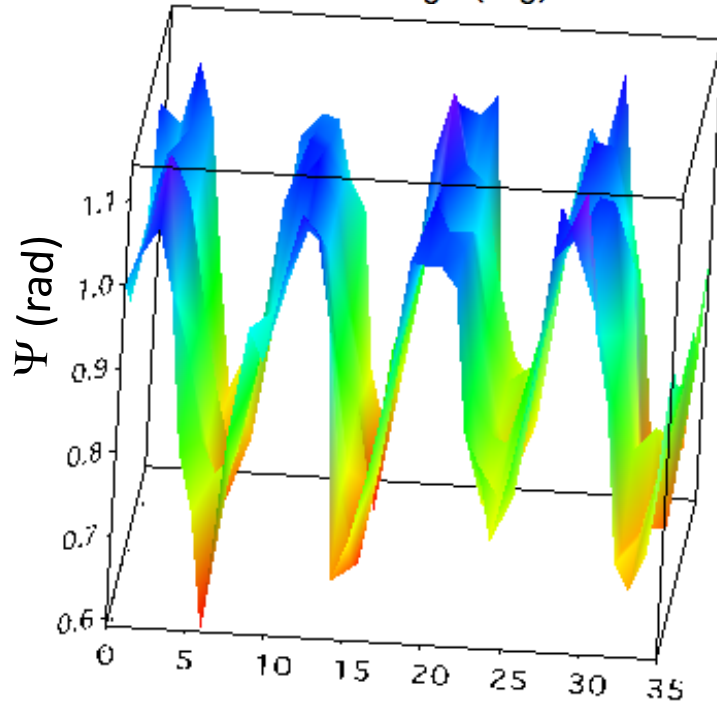
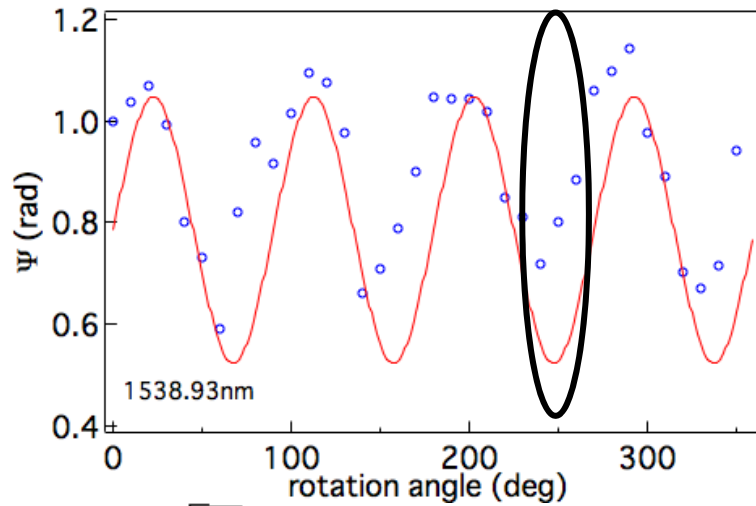


研究の進捗状況

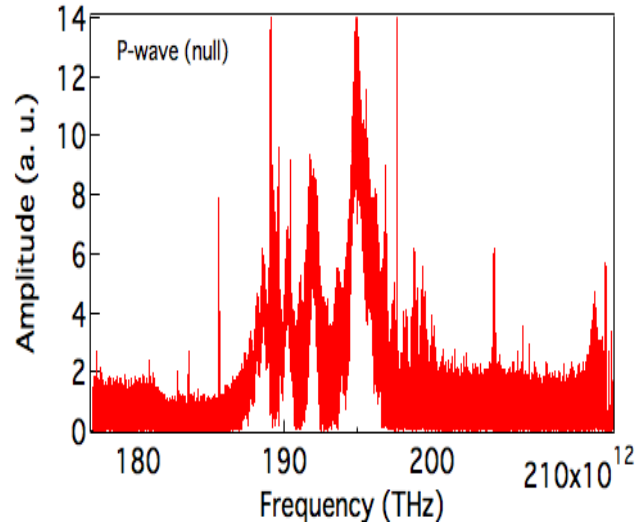
謝 宜達

- Multi-wavelength:

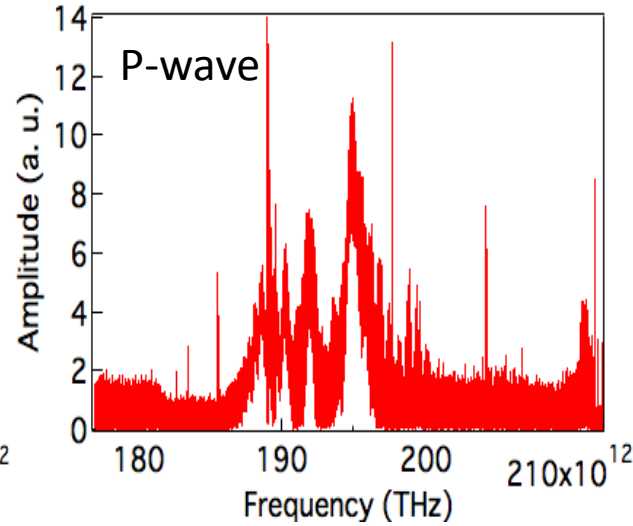


- Amplitude spectrum

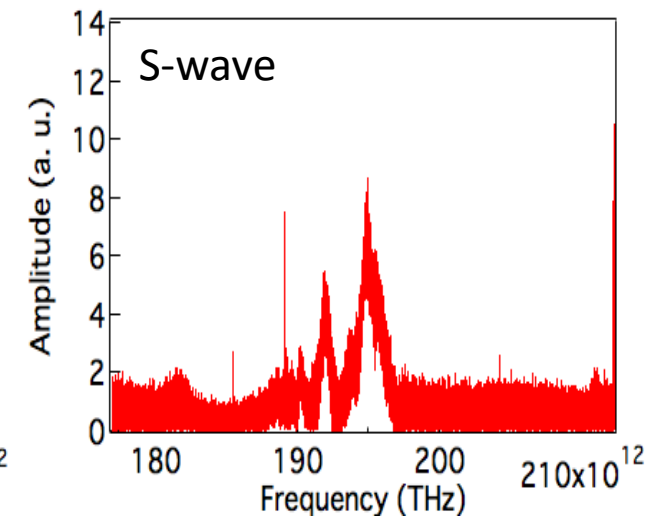
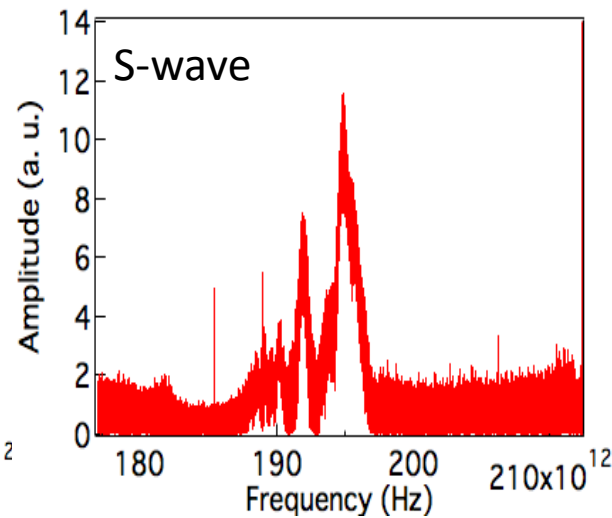
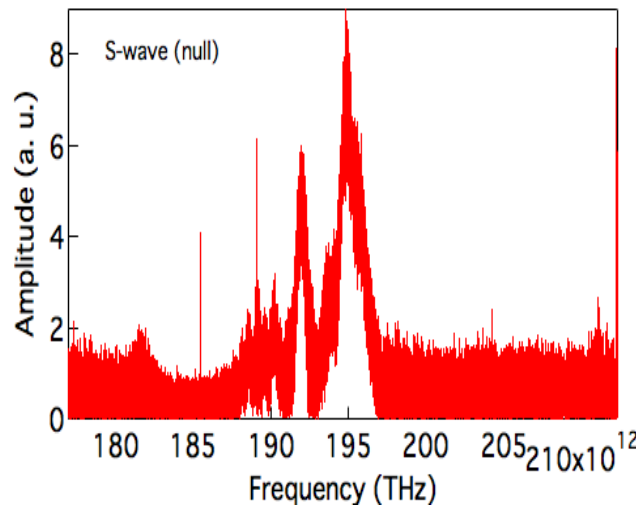
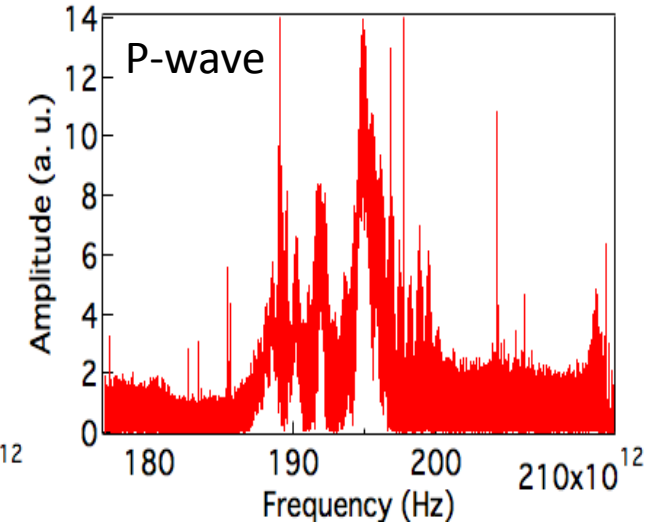
Null:



QWP (150°):



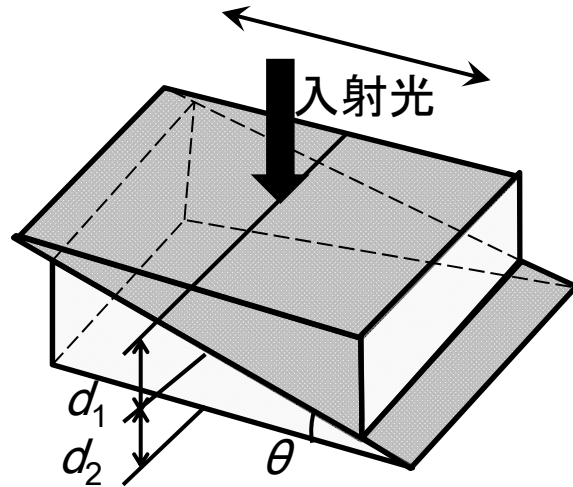
QWP (300°):



Soleil-Babinet Compensators

機械的シフト量 ($x=0 \sim 180\mu\text{m}$)

複屈折位相差 δ



$$\delta = \frac{2\pi}{\lambda} (d_1 - d_2) |n_e - n_o|$$

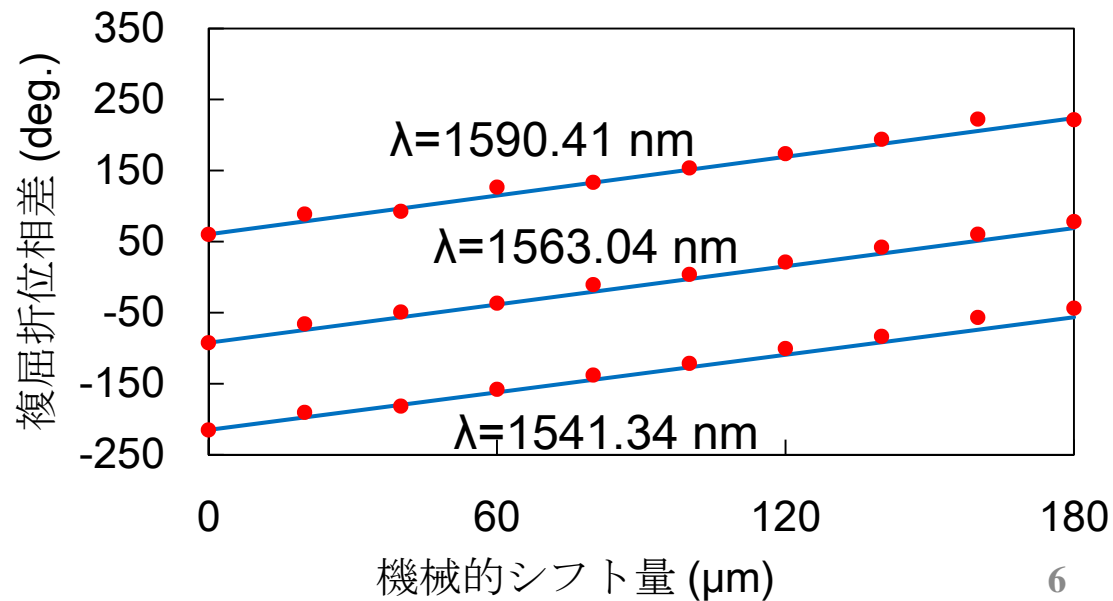
$$= \frac{2\pi}{\lambda} (x \tan \theta) |n_e - n_o| + \delta_0$$

δ_0 は初期の位相差

複屈折 ($|n_e - n_o| = 0.00835$)

バビネ補償器の楔角 $\theta = 25^\circ$

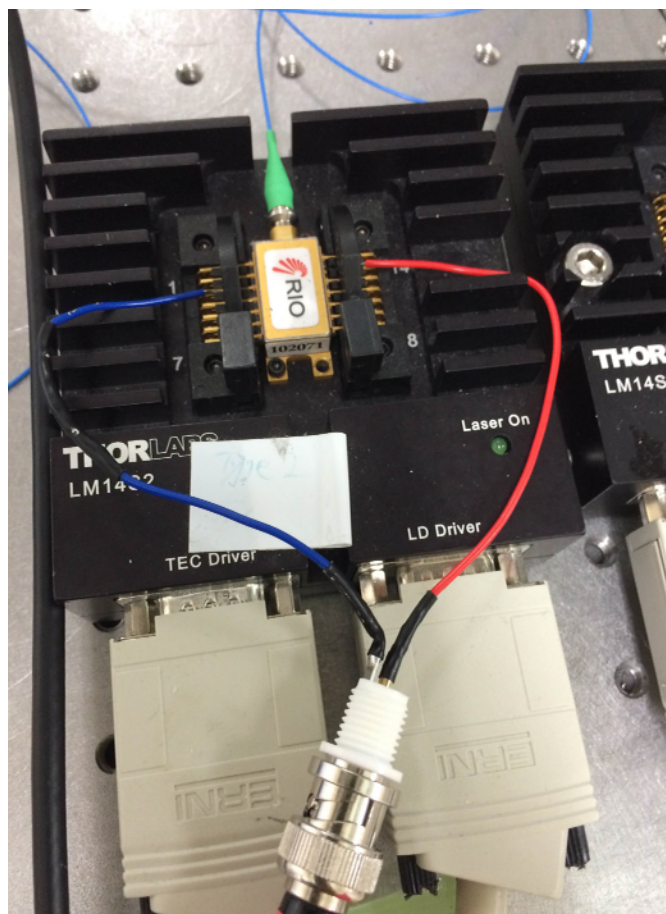
※ θ は推定値



CWレーザーの高速制御

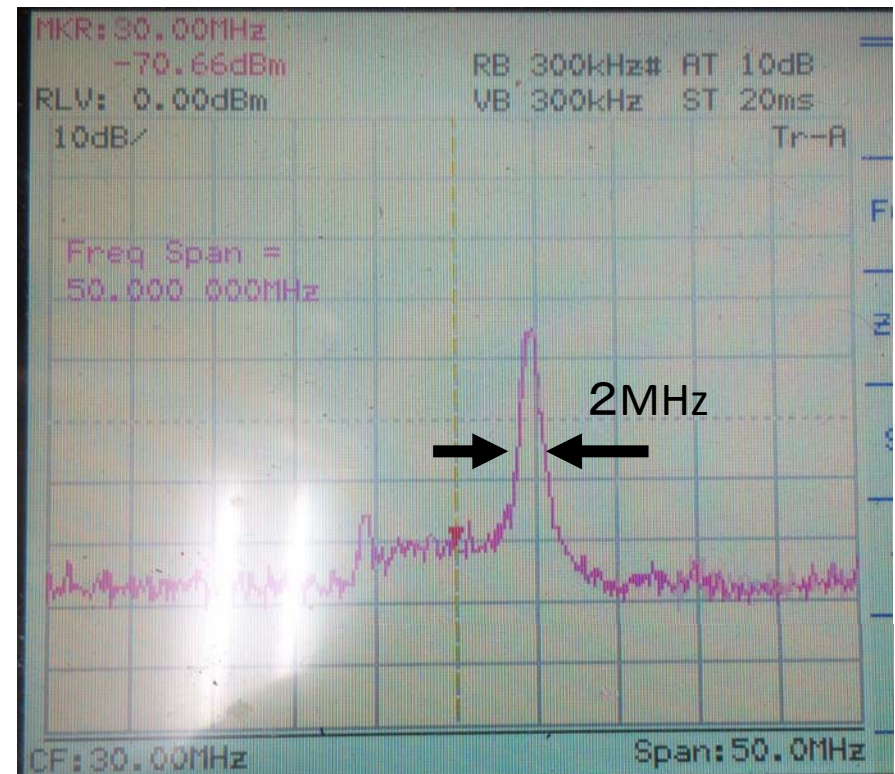
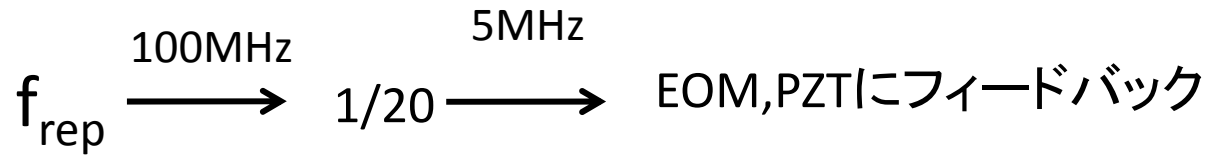
- LDに直接フィードバックする

*CWレーザー、コム:フリーランニング



CWレーザーの高速制御

- コムを安定化する



まとめ

- エリプソの位相遅延は実験値と理論値が一致しているが、振幅比角は誤差がある
- CWレーザとコムの一ビット信号が太いのため、高速安定化制御できなかった