

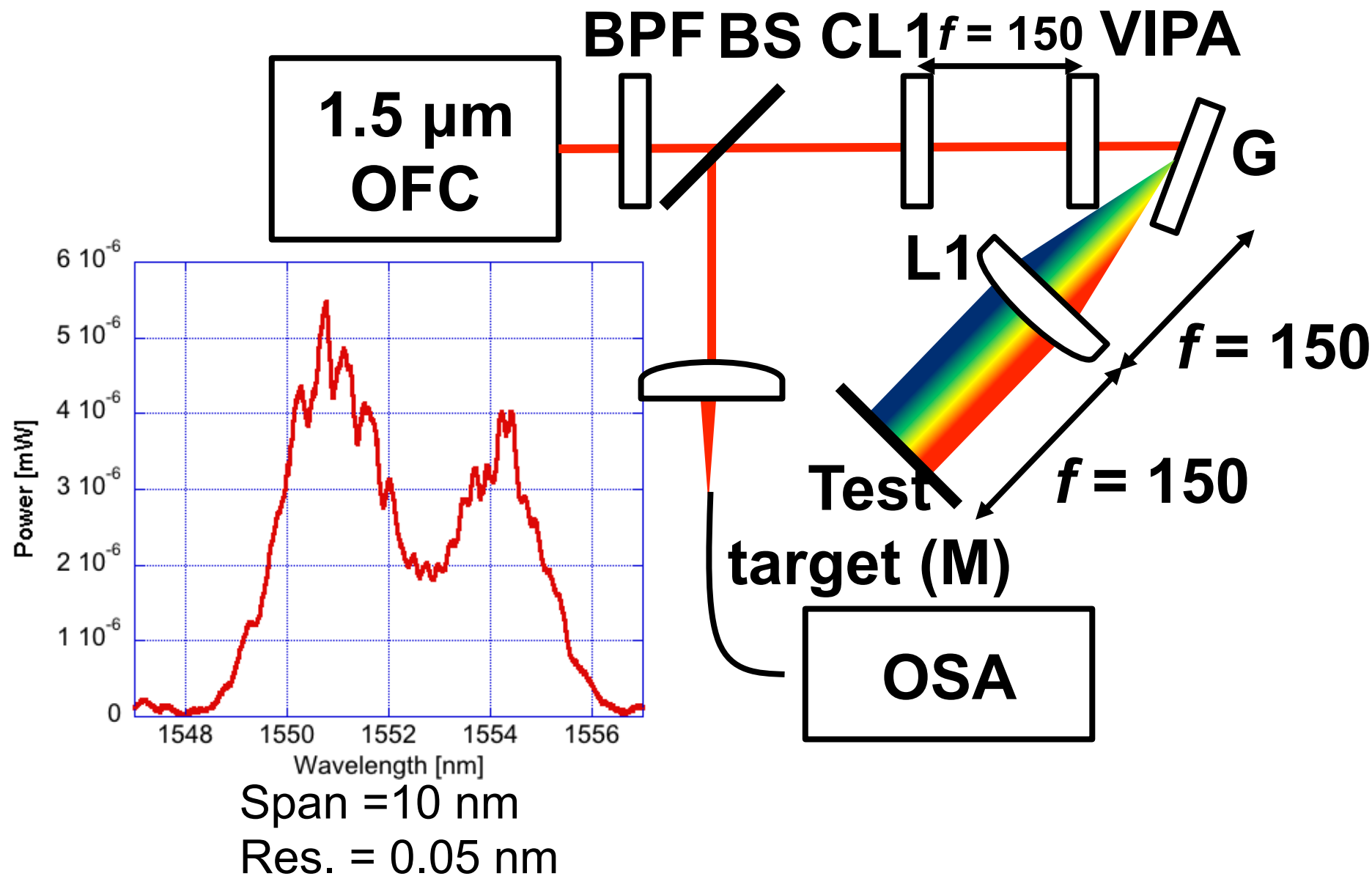
デュアル光コム共焦点顕微鏡

実験進捗状況

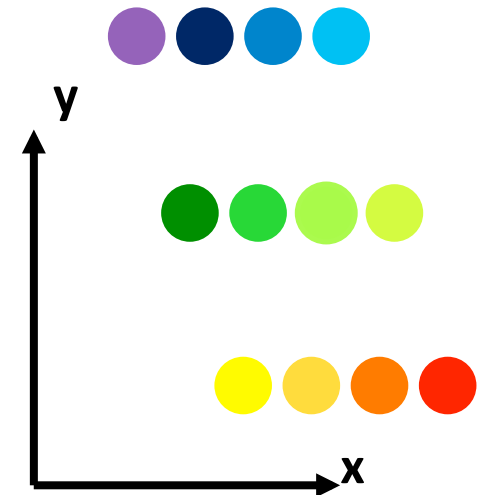
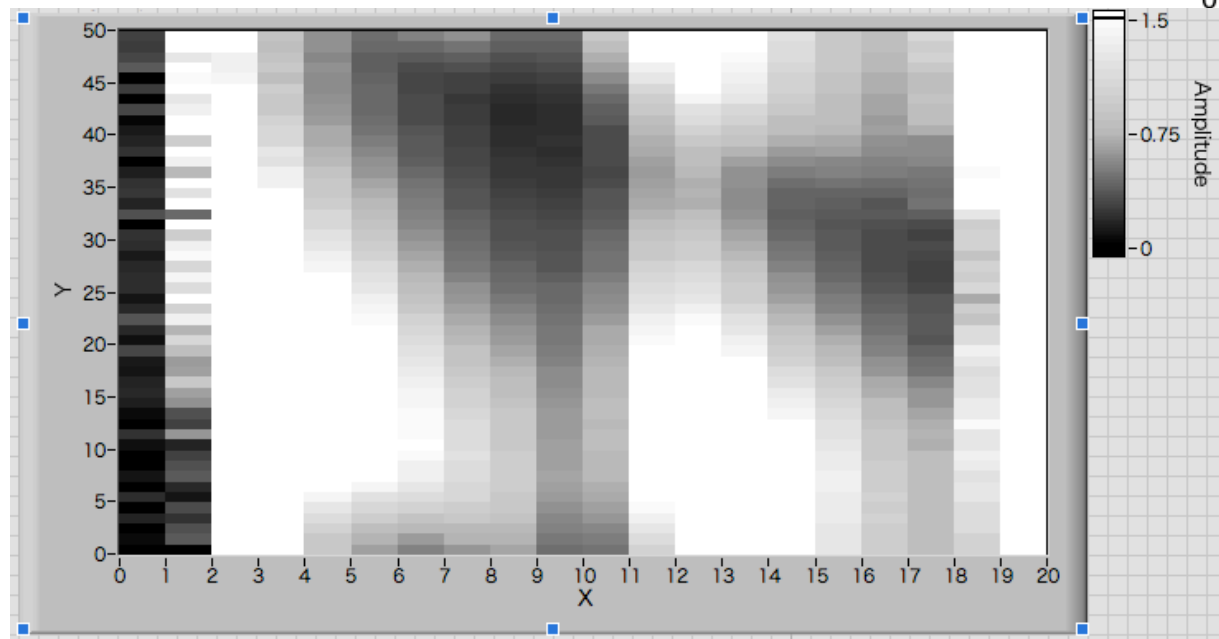
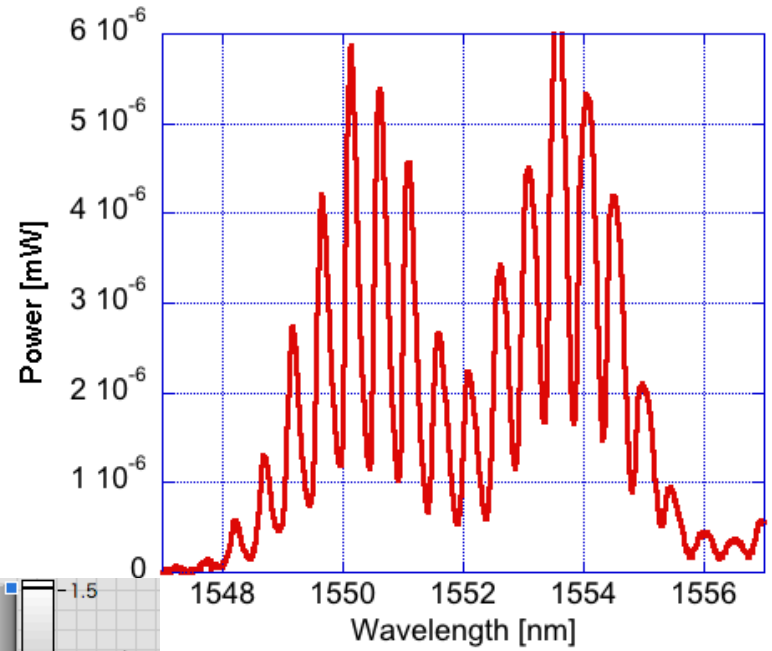
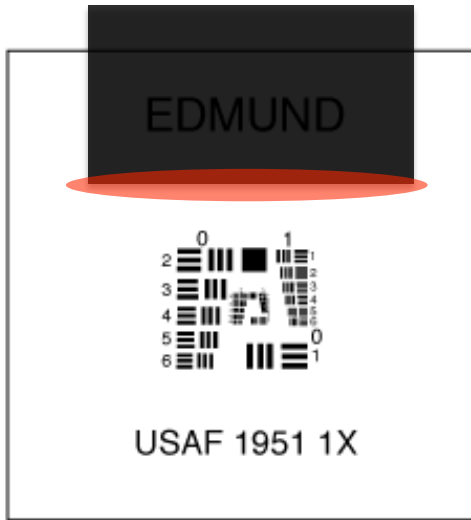
2015/10/9 ERATOミーティング

長谷, 宮本

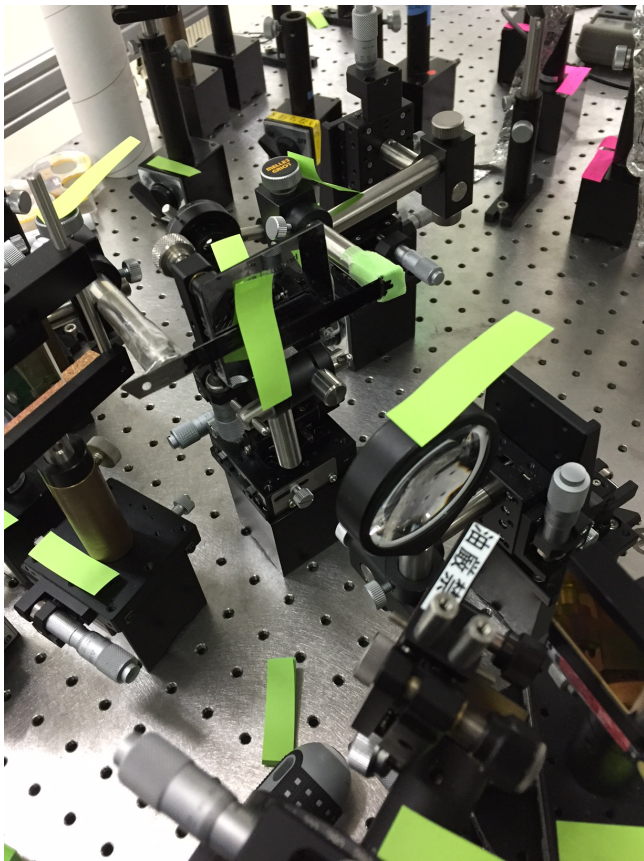
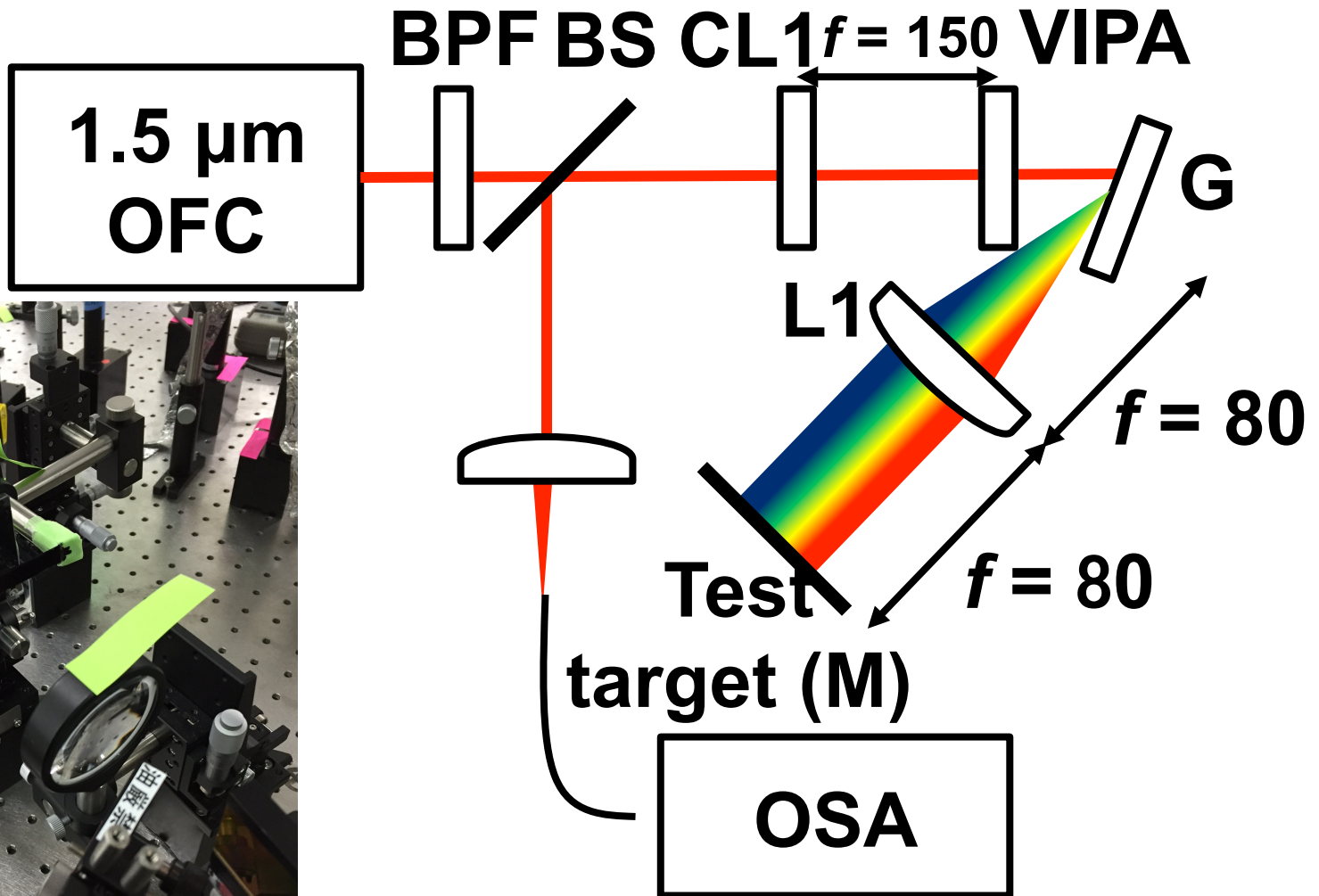
2Dスキャンレス共焦点コム顕微鏡@前回



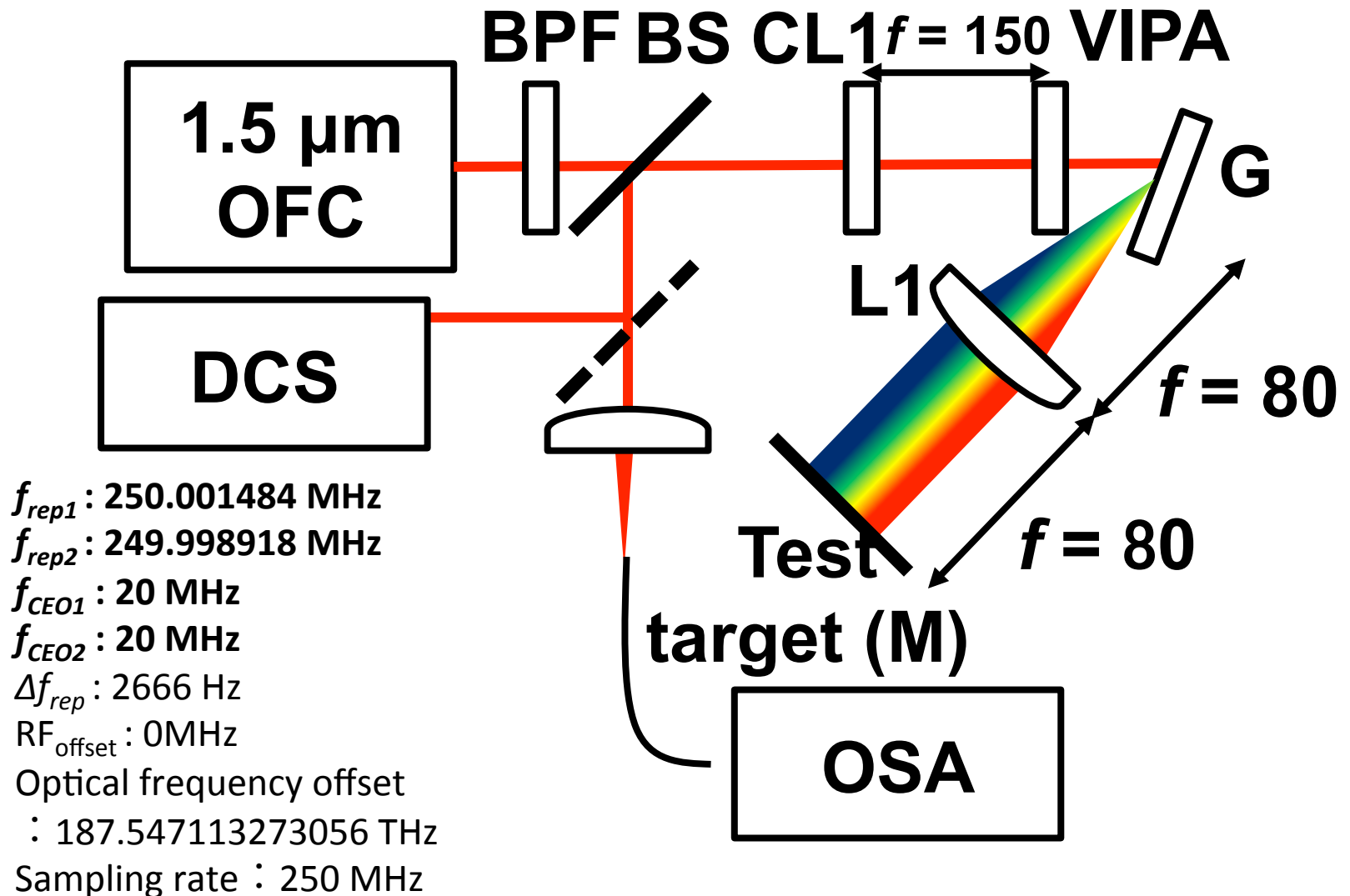
実験結果②@前回



2Dスキャンレス共焦点コム顕微鏡



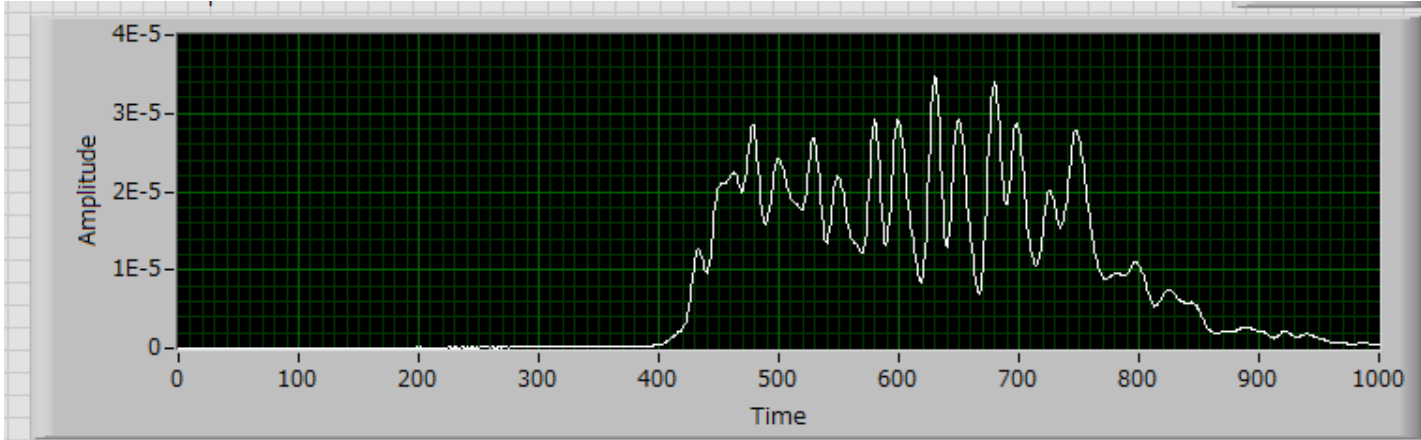
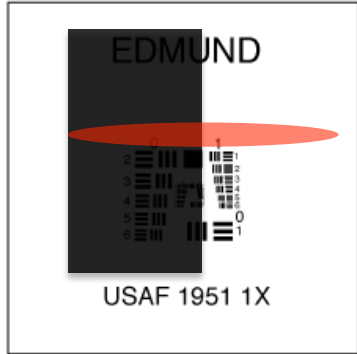
2Dスキャンレス共焦点コム顕微鏡



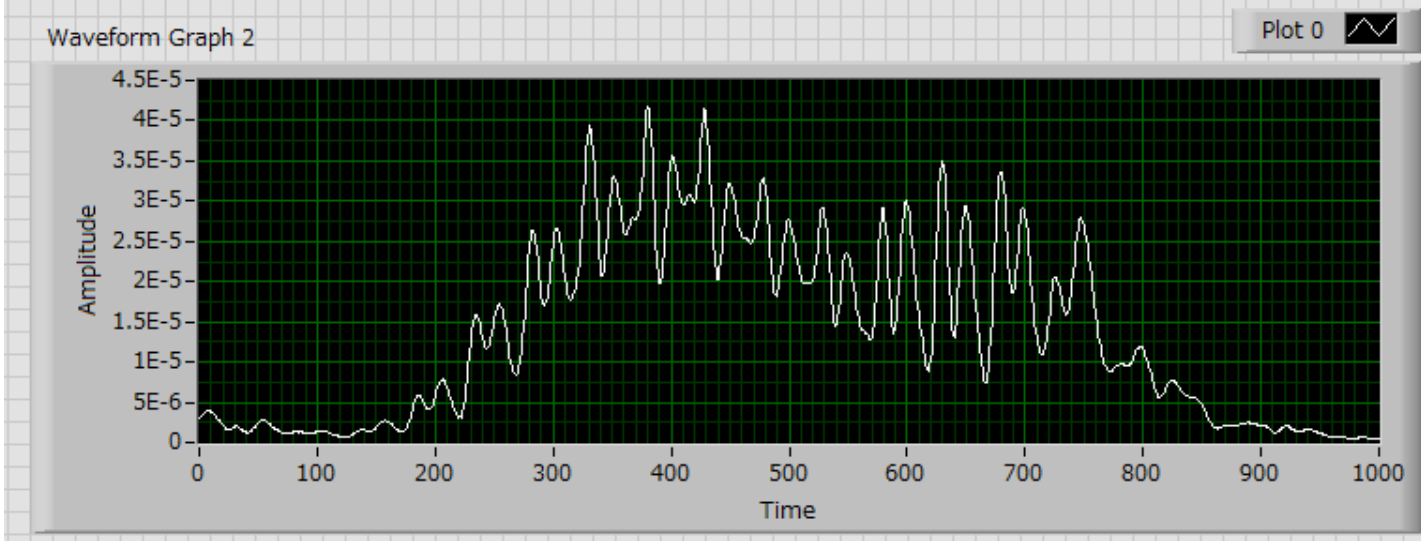
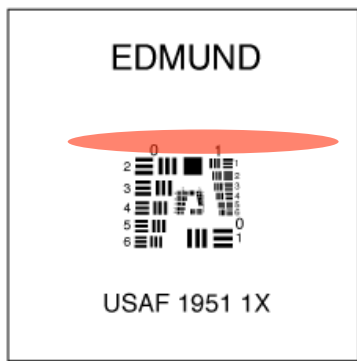
実験結果 : OSAスペクトル

$\lambda_c = 1550$
Span = 10 nm
Res. = 0.05 nm

サンプルスペクトル



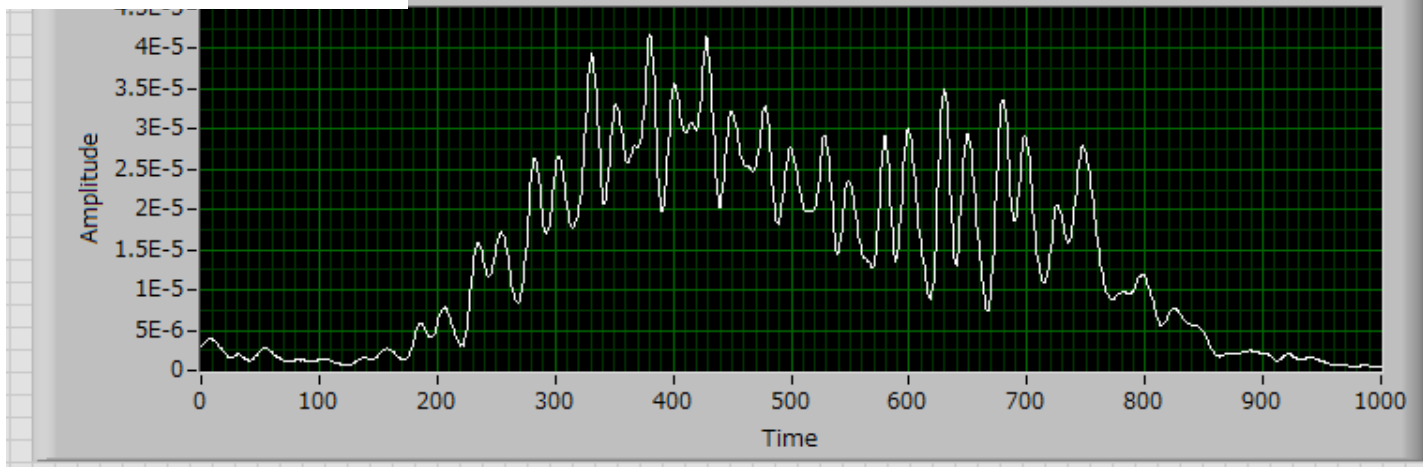
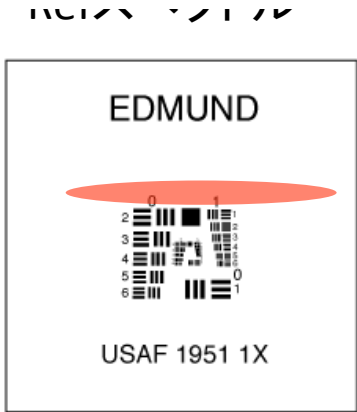
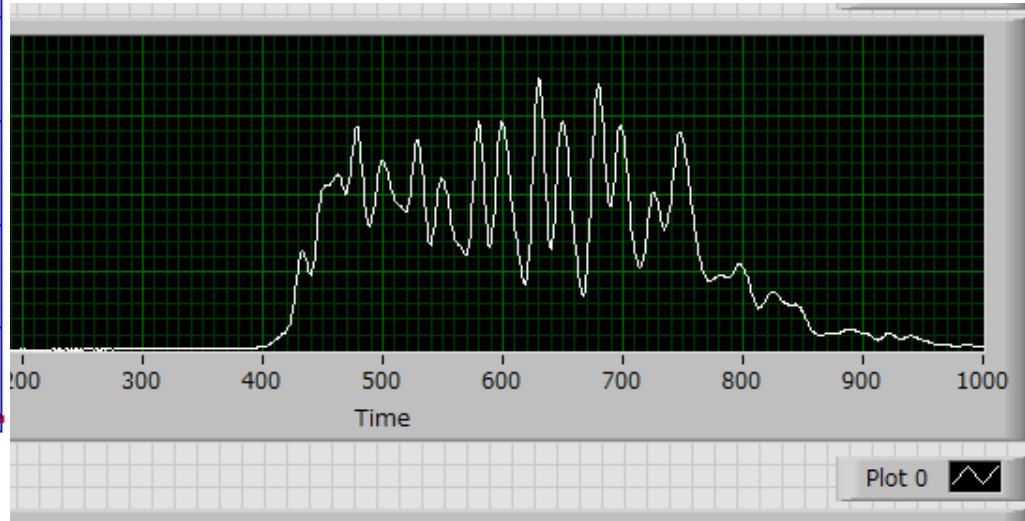
Refスペクトル



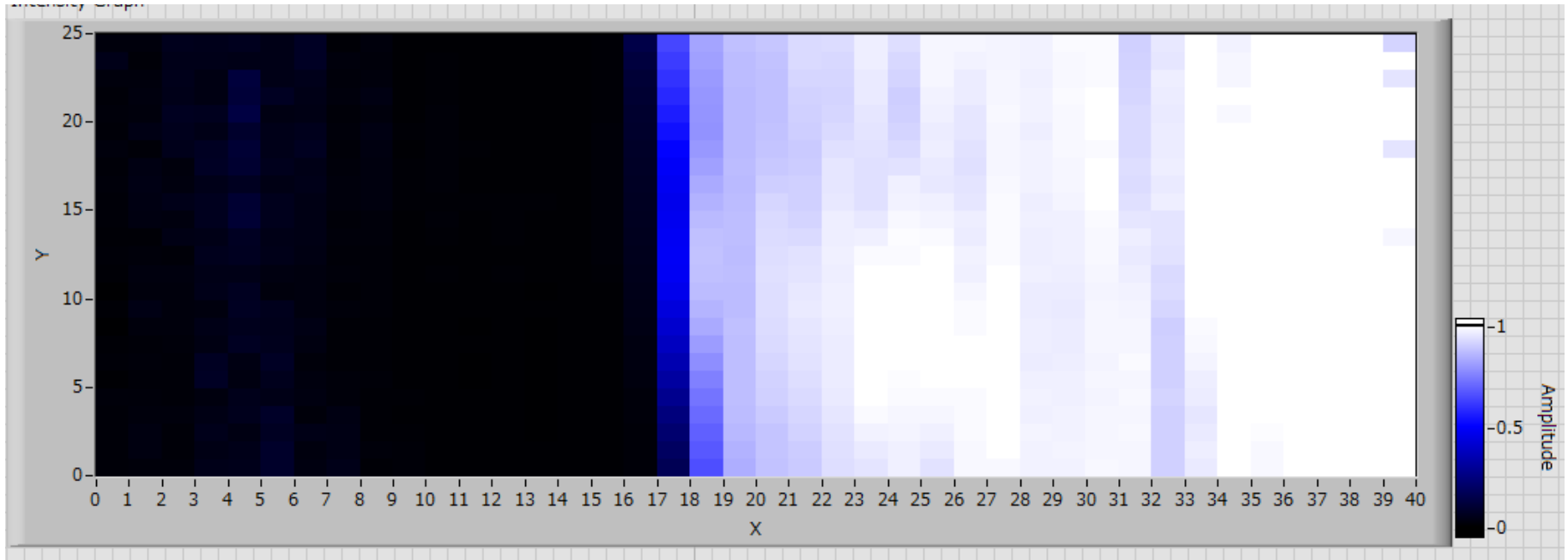
OSAスペクトル

前回のRefスペクトル

→スペクトル成分が抜け落ちていない

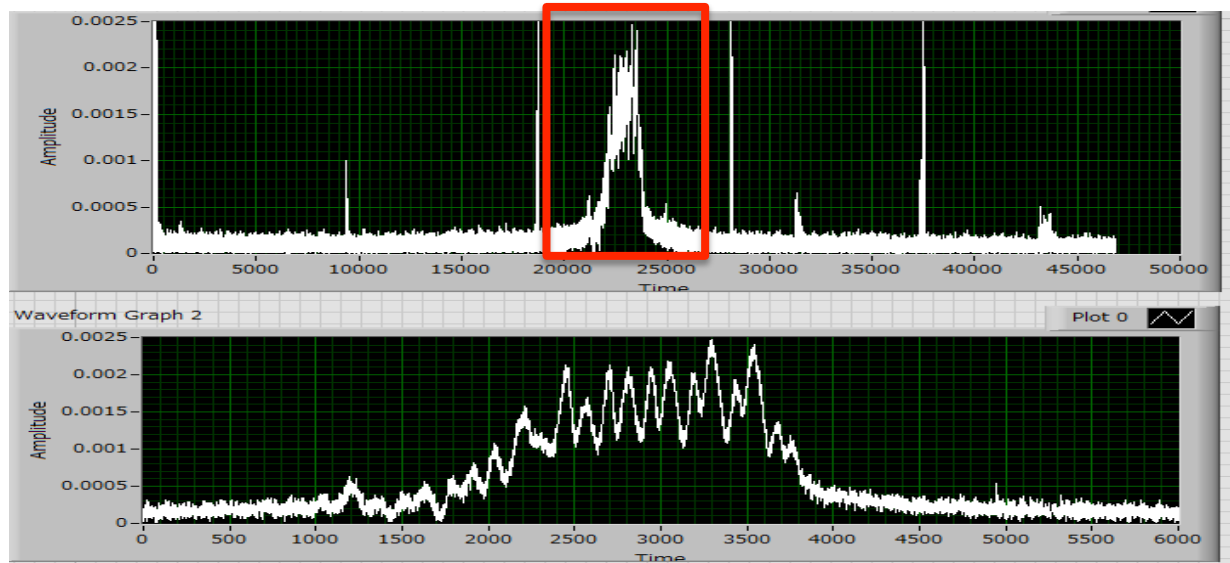
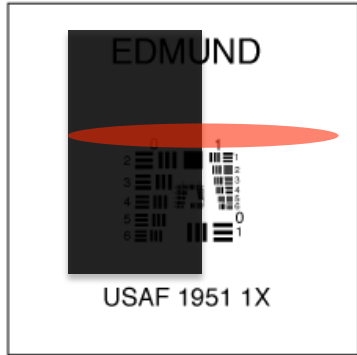


実験結果：OSAからの画像再構成

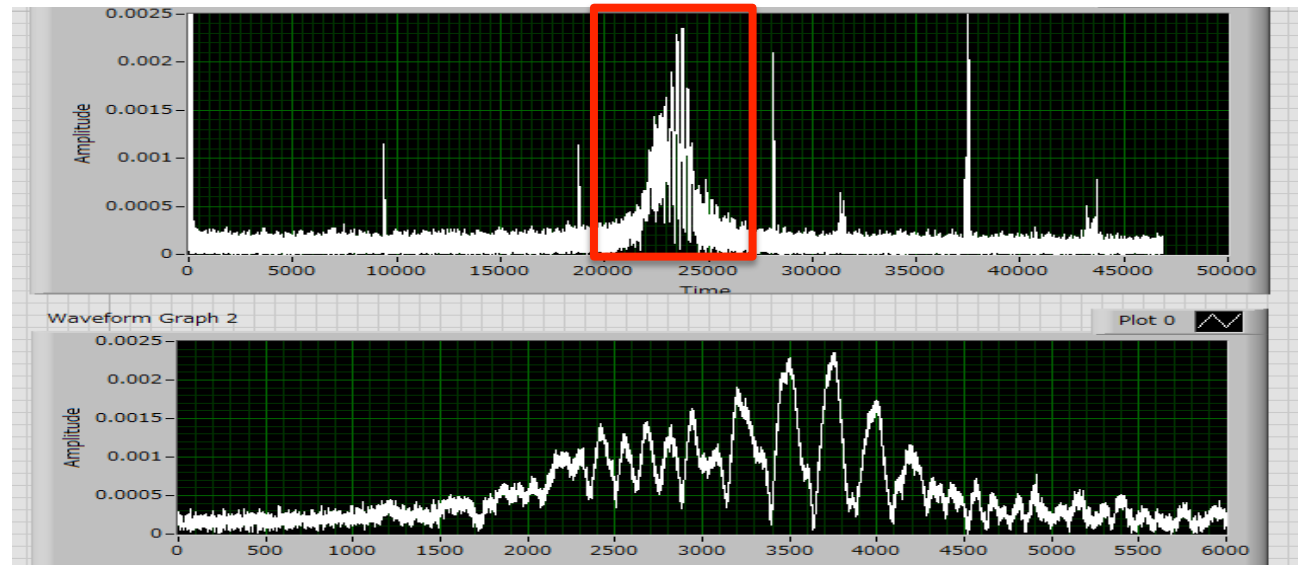
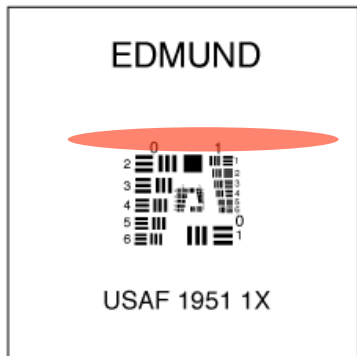


実験結果：DCSスペクトル

サンプルスペクトル



Refスペクトル

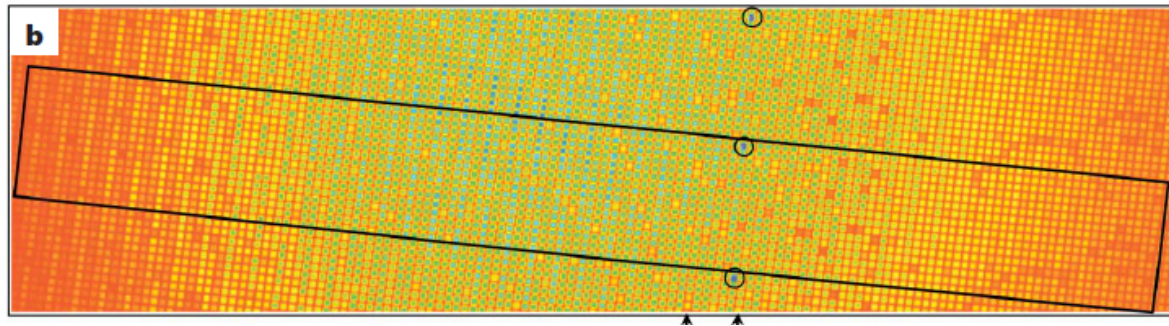


まとめ

- ビーム照射領域を縮小
- VIPA+回折格子で2Dワンショット画像取得@OSA
- 検出をOSA▶DCS

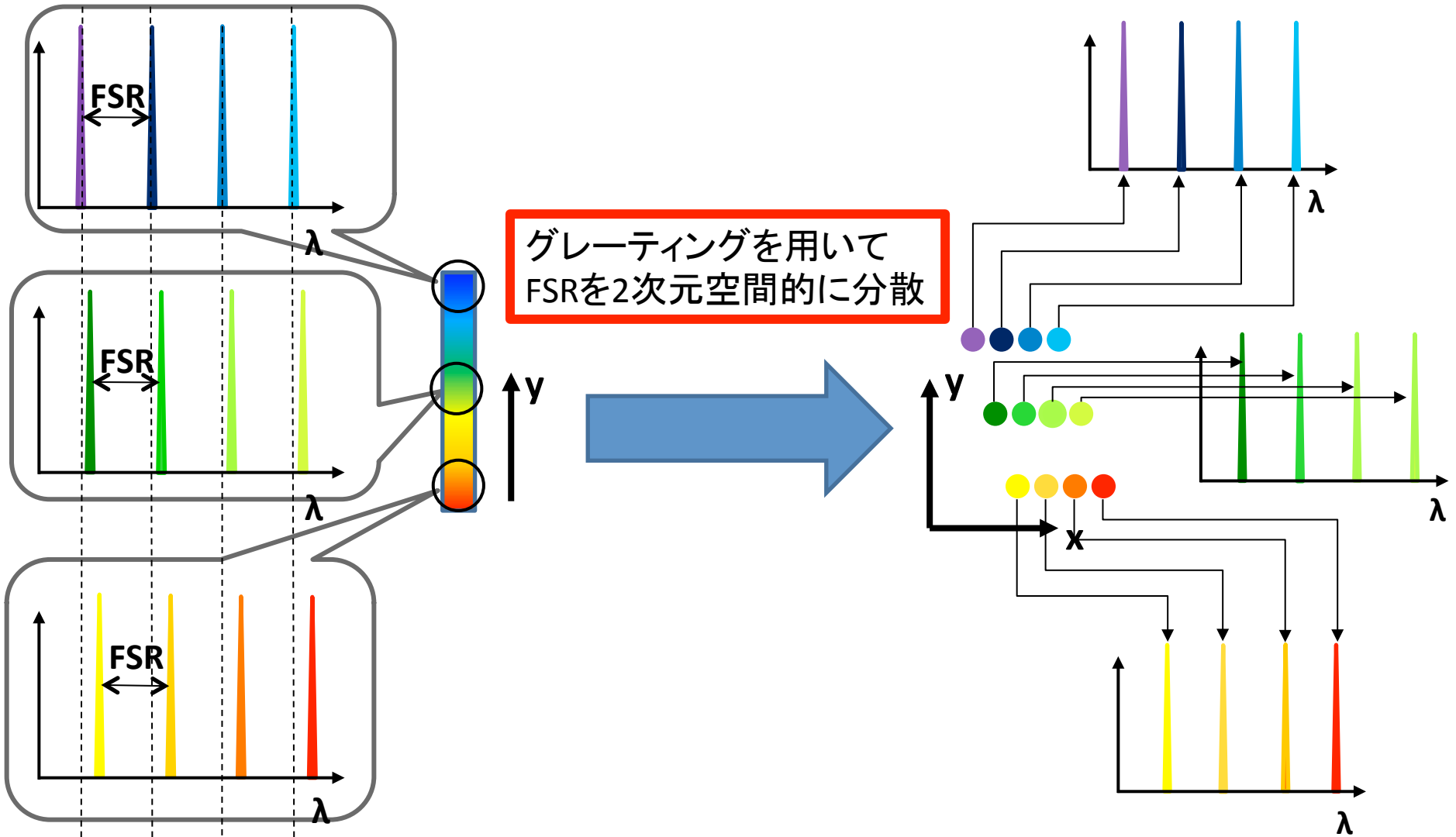
今後の予定

- 単一次数抽出の最適化(CWレーザー+カメラ)
- 縮小光学系(リレーレンズ)+共焦点系の導入



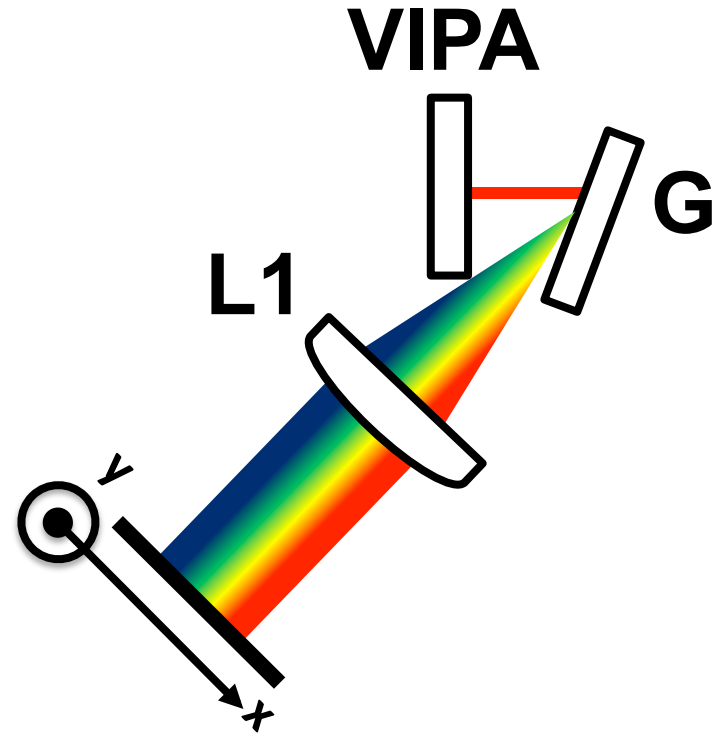
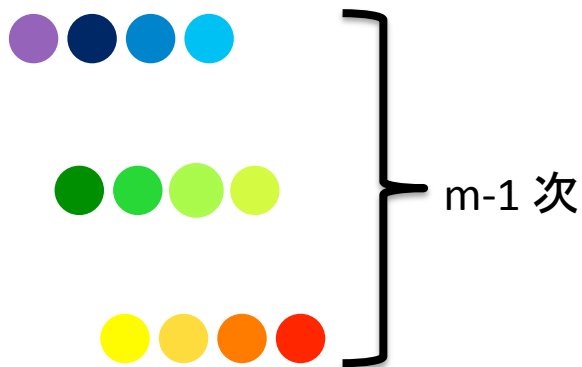
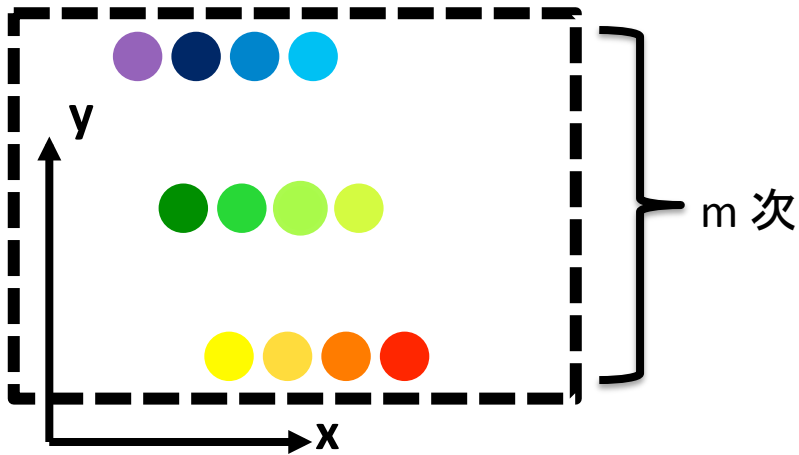
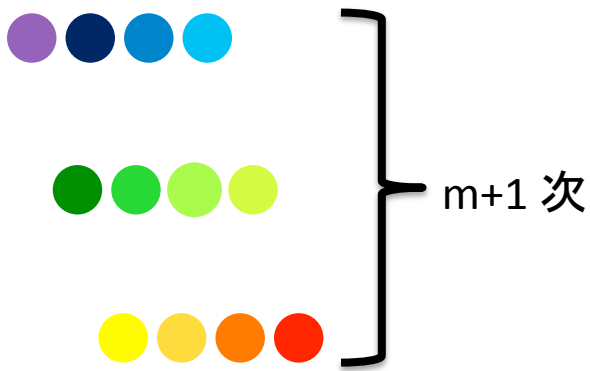
Ref) Nature **445**, 627 (2007).

VIPA + Grating



空間的に同じ場所に他の次数の異なる波長成分が重畳 = FSR

単一次数抽出の最適化



単一次数抽出の最適化

