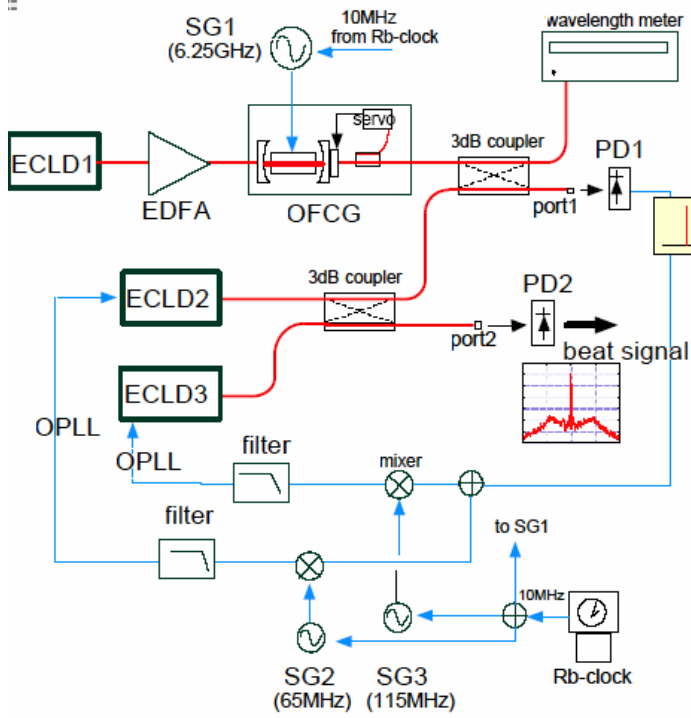


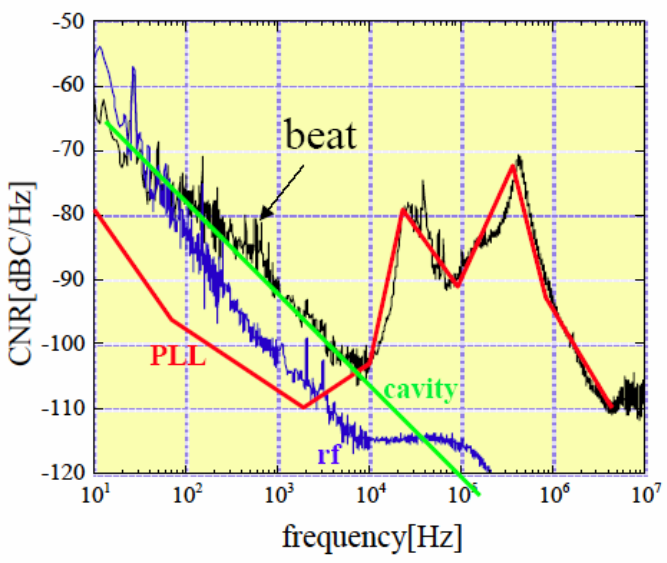
# Experimental set-up



- Light source
  - External-cavity laser diode (ECLD)
  - $P_{max} = 10mW$   $\Delta l = 100 kHz$
- PLL
  - Servo bandwidth 600 kHz
- fast PD
  - Uni-travelling-carrier PD(UTC-PD)
  - Bandwidth 500 GHz
  - developed by NTT Photonics Lab.

# Phase noise

Phase noise spectrum (6.25GHz)



- Noise source ●
- Residual phase noise form PLL-servo (constant)
- Optical freq. comb generator (proportional to beat freq.)
- rf reference (for OCG)
- Cavity fluctuation

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