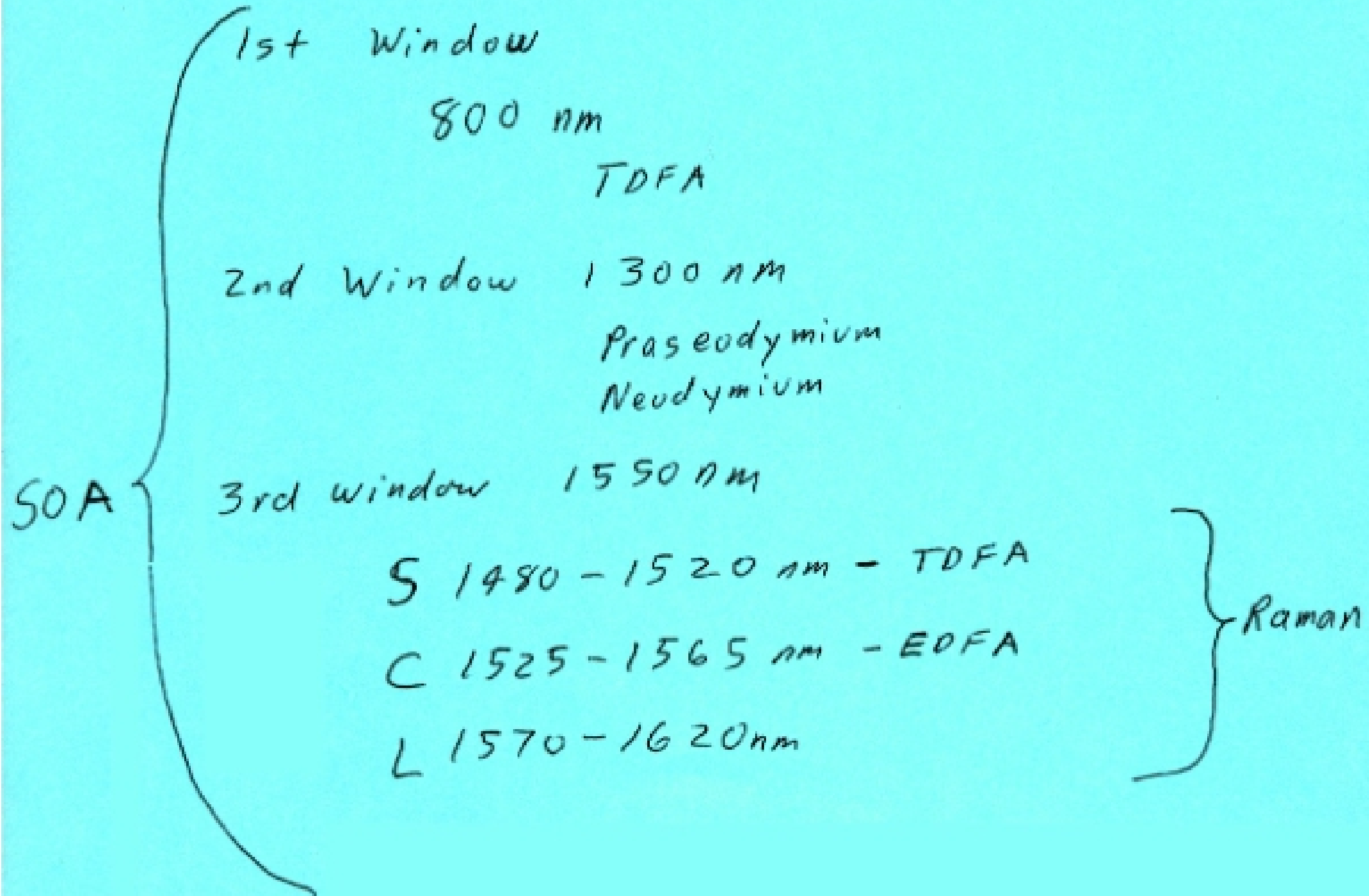
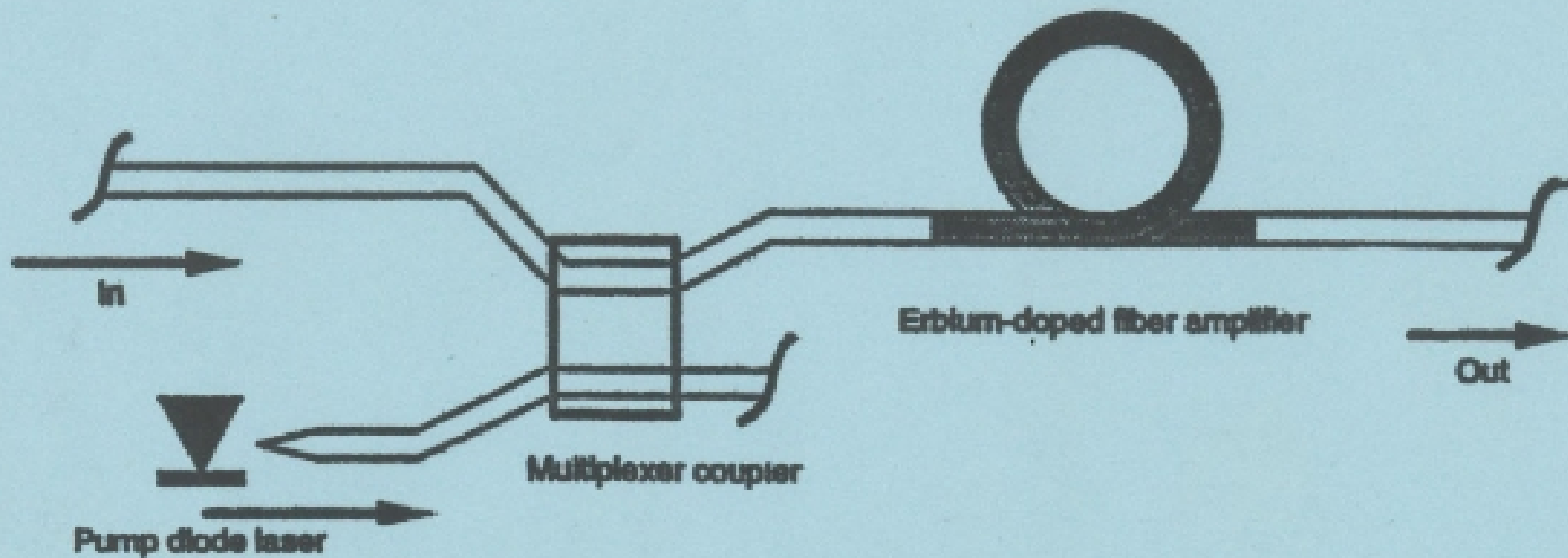


Optical Amplifiers

- Erbium Doped Fiber Amplifiers (EDFA)
(also Tellurium, Neodymium, Praseodymium)
- Semiconductor Optical Amplifiers (SOA)
 - Single Pass (Traveling Wave)
 - Fabry Perot (A LASER below threshold)
 - LASER (A LASER above threshold)
- Raman Fiber Amplifiers (RFA)

Optical Communication Bands (Windows of low loss in silica optical fibers)





Erbium-doped fiber amplifier can be inserted directly into an optical fiber communications line. A semiconductor diode laser pumps the erbium ions into an excited state and the signal is amplified by stimulated emission as it traverses the amplifier.