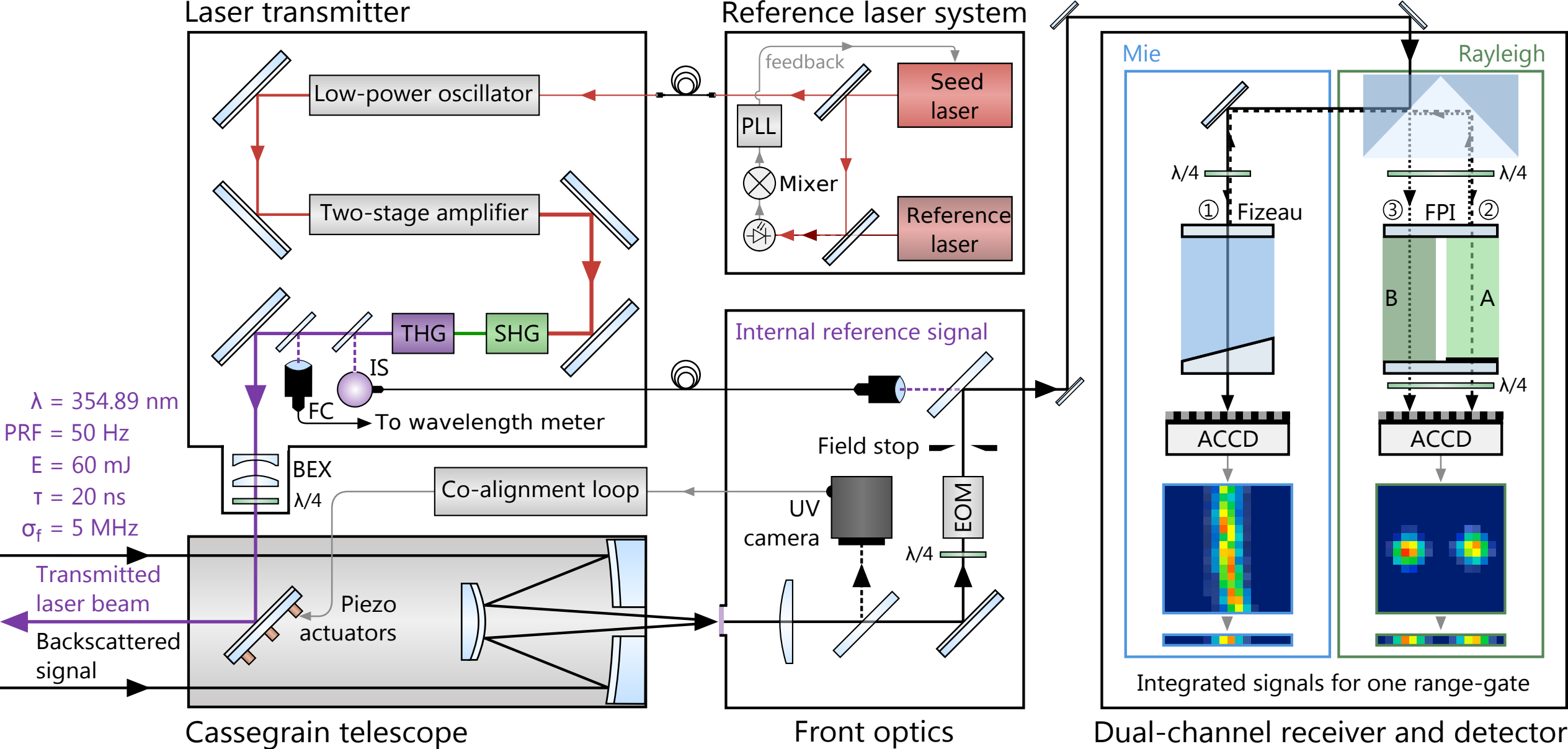
Laser transmitter
Reference laser system
Low-power oscillator
Two-stage amplifier
THG
SHG
IS
FC
To wavelength meter
feedback
Seed laser
PLL
Mixer
Reference laser
Internal reference signal
Field stop
UV camera
EOM
λ/4
Co-alignment loop
BEX
λ/4
λ = 354.89 nm
PRF = 50 Hz
E = 60 mJ
τ = 20 ns
σf = 5 MHz
Transmitted laser beam
Backscattered signal
Piezo actuators
Mie
Rayleigh
λ/4
① Fizeau
③ FPI ②
B
A
ACCD
ACCD
Integrated signals for one range-gate
Cassegrain telescope
Front optics
Dual-channel receiver and detector