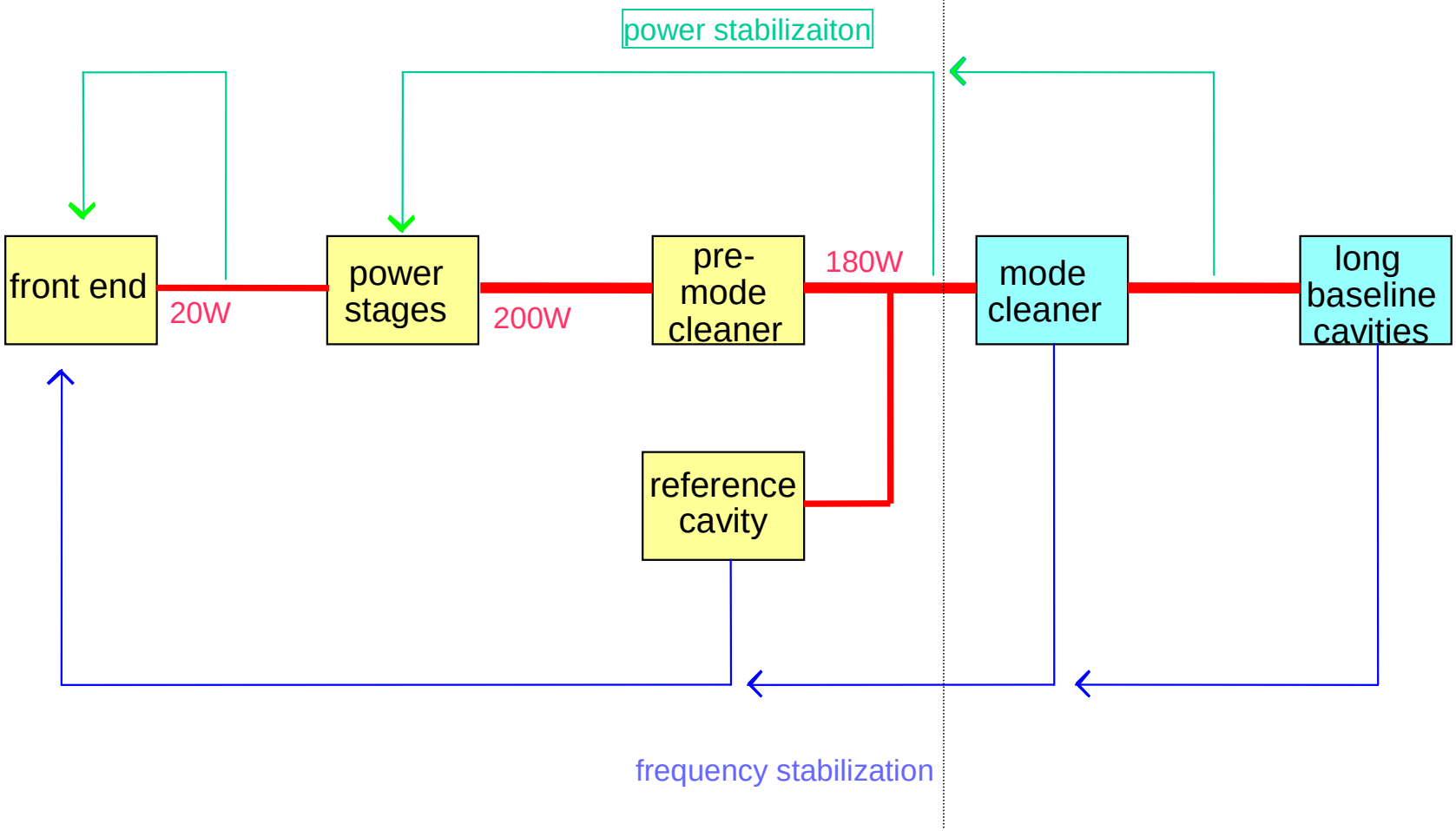
summary lasers working group

- depolarization in half wave plates
- Nd:YAG pumping with 885nm light
- status report on GEO600 and LIGO PSL
- high-power photodiode development
- adaptive optics with dielectric coatings
- 40W MOPA demonstrated
- stable-unstable oscillator: 70W
- update on development of 20W front
- design for 100W rod laser and modelling effort

LIGOII PSL – subsystem layout



LIGOII Laser – project plan

• concept phase	Jan01 - Apr02
• lab-version phase	Apr02 – Feb04
• longterm test	Feb04 – Feb 05
• final version phase	Feb04 – Jul05
• installation PSL1	Jul05 – Feb06
• fabr. & inst. PSL2&3	Feb06 –Oct06

100 W prototype

- 100W output power
- TEM_{00} power – visibility cavity
- RIN 10-10kHz
- RIN 10MHz – 40MHz, measured at 10mA
- frequency noise
- pointing – quadrant photo diode
- phasefront fluctuations
- efficiency, cost
- robustness, maintainability
- scalability