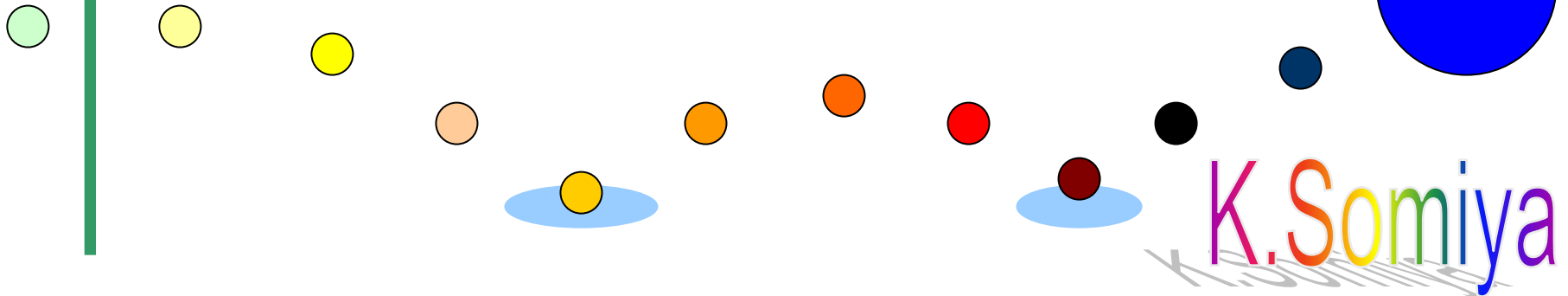# Current Status of simulation-related research at AEI Potsdam

K.Somiya

LSC Meeting @ Hannover
2007.10.25

New interesting configurations

1. Local readout scheme
    > slm measurement below opt spring freq in aLIGO
    > broader sensitivity
    > but high-power SB (or sub-Ca) is required
    > see PRD 76 062002 (2007)

2. Double optical spring
    > broader sensitivity by the similar reason
    > sub-Ca power is not high
    > stable spring can be achieved
    > see H.Rehbein's talk tomorrow

    • Two beams, two vacuum fields
    • Optimal combination of two outputs

Thermal noise calculations

1. M.Bondarescu and Y.Chen have developed a new type of beam for AdLIGO.
    > parametric instability calculations
    > see the talk tomorrow

2. Optimization of the parameters of 10m prototype will be done soon.
    > Mostly about thermal noise
    > FEM

3. Also works for the tilt interferometer
    > FEM