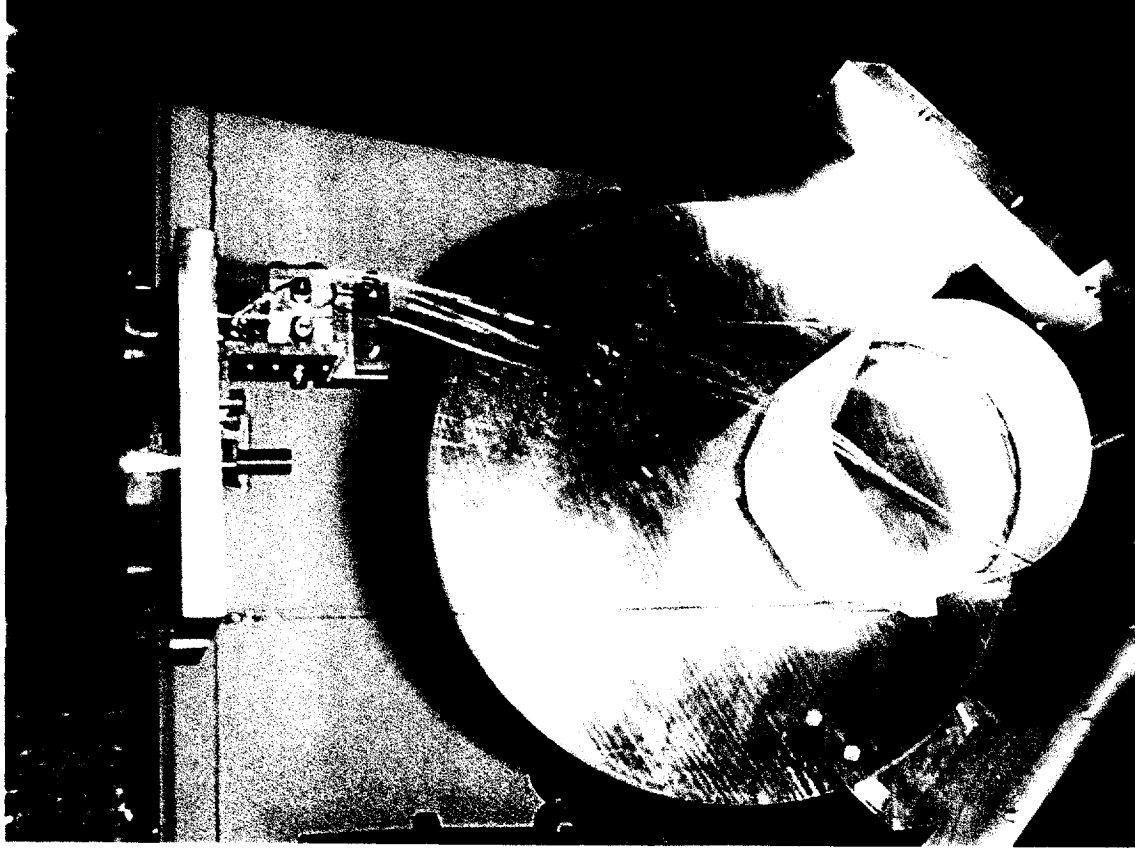
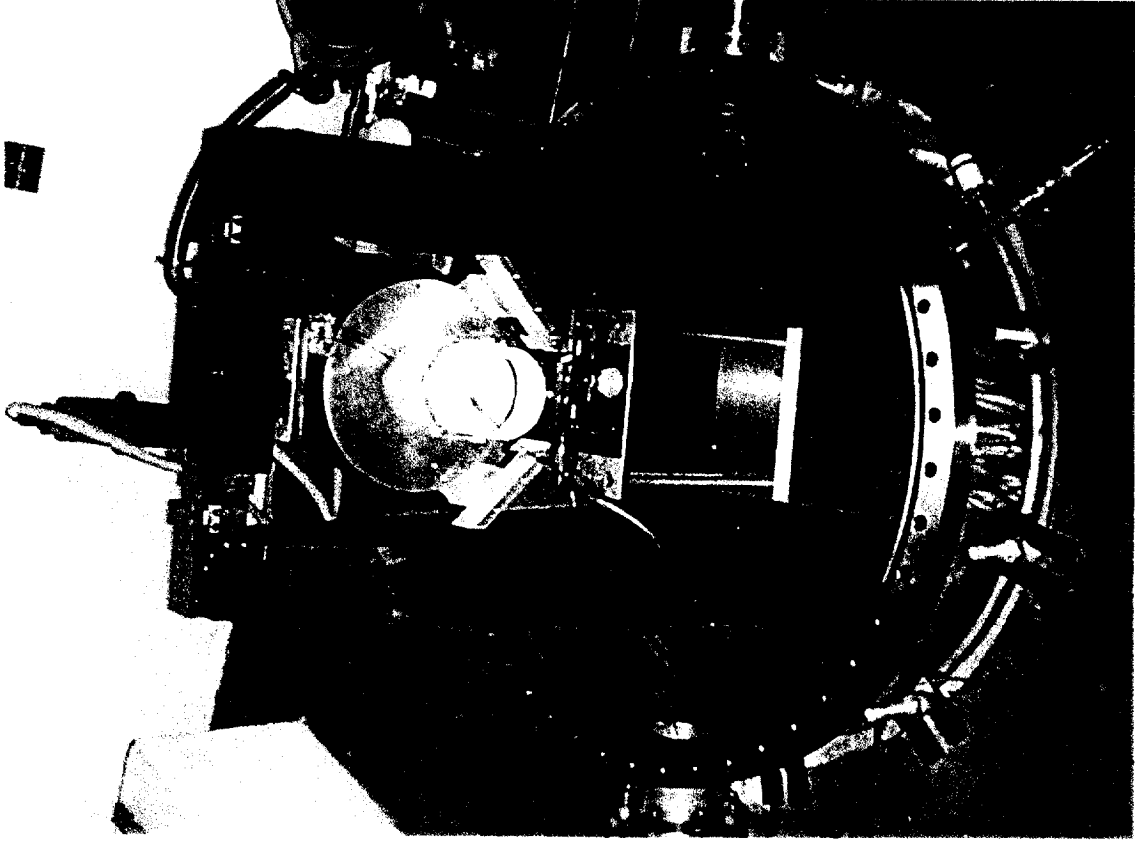


# Progress on Fused Silica Suspensions for GEO 600

- ◆ Work continuing towards construction of all fused silica suspensions for main optics
- ◆ 3 kg all-fused- silica test pendulum hanging for 6 months in vacuum tank in Perugia (VIRGO) with:  
$$Q_{\text{pend}} \sim 2.4 \times 10^7$$
- ◆ Parts for GEO sized silica prototype (5.6 kg), currently in Glasgow, to be assembled over next two months, for evaluation and testing
- ◆ Two 14 kg masses now prepared with ears (KOH bonded) to which fibres can be welded. These ready for transfer to MIT for silica suspension studies.
- ◆ Silica fibres - effect of surface treatment on fused silica fibres being investigated (see talk by G. Cagnoli, tomorrow)
- ◆ Development of ribbon fibres with perpendicular flexures at ends, and other novel geometries.
- ◆ Active damping of violin modes - currently under investigation
- ◆ KOH bonding of ears to full sized GEO beamsplitter to be carried out this month to evaluate with General Optics feasibility of super-polishing main surfaces after bonding
- ◆ Measurement of bulk Q factors of different materials continuing (in collaboration with Stanford)



3 kg all fused silica pendulum - collaboration with Univ. Perugia

*Note 1, LIGO, 03/24/99 09:19:06 AM*  
LIGO-G990022-16-M