



# CF Tasks FY'04



NLC

## LC CF TASKS

- 1. USLCSG/ MAC/ ISG - Meetings & Support as Appropriate
- 2. Klystron 8-Pack Phase II w/SLED - Elect./Mech./Struct.
- 3. Klystron 2-Pack - Elect./Mech./Struct.
- 4. NLCTA Aux. Systems: Seismic, Fire, ESH, - Elect./Mech./Struct.
- 5. Vibration R&D - Elect./Mech./Struct./Geo
- 6. Hydrology R&D - Geo./Civil
- 7. E166 Polarized Positron Undulator & Target - Elect./Mech./Struct

## COMPLEMENTARY LC TASKS

- ↕ 8. E163 Photo Injector - Elect./Mech./Struct, NLCTA Coordination
- ↕ 9. Linac Coherent Light Source - CF Consult & Review A&E
- ↕ 10. SU Enriched Xenon Deep Tunnel Clean Room - Consult & Inspect



Documents



Lab R&D



Studies & Lab R&D



Studies



Symbiotic to LC



## Presentation Scope

### Tasks with Others & not "Repeated Here

- "1. USLCSG/ MAC/ ISG - Meetings & Support as Appropriate
- "2. Klystron 8-Pack Phase II w/SLED - Elect./Mech./Struct.
- "3. Klystron 2-Pack - Elect./Mech./Struct.
- "4. NLCTA Aux. Systems: Seismic, Fire, ESH, - Elect./Mech./Struct.
- \*5. Vibration R&D - Elect./Mech./Struct./Geo
6. Hydrology R&D - Geo./Civil
- \*7. E166 Polarized Positron Undulator & Target - Elect./Mech./Struct
8. E163 Photo Injector - Elect./Mech./Struct, NLCTA Coordination
9. Linac Coherent Light Source - CF Consult & Review A&E
10. SU Enriched Xenon Deep Tunnel Clean Room - Consult & Inspect

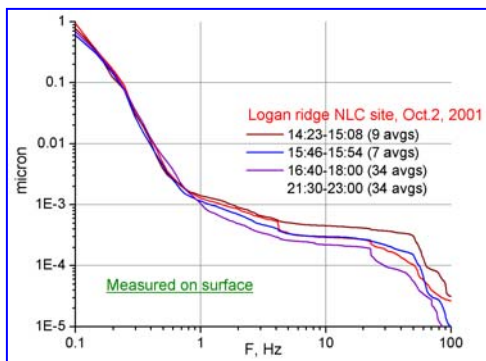
### Tasks Covered in More Detail by Others & not Fully\* Repeated Here



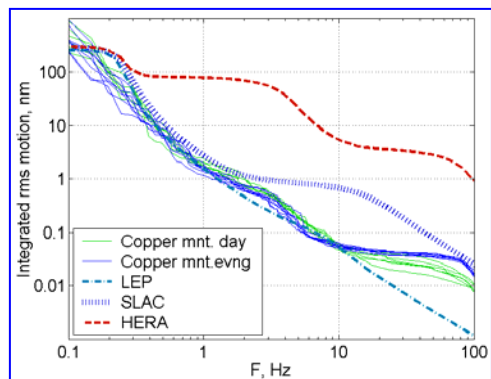
NLC

## \*Surface IP Vibration Characterization

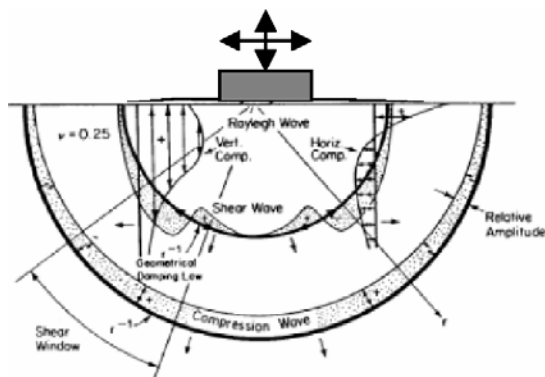
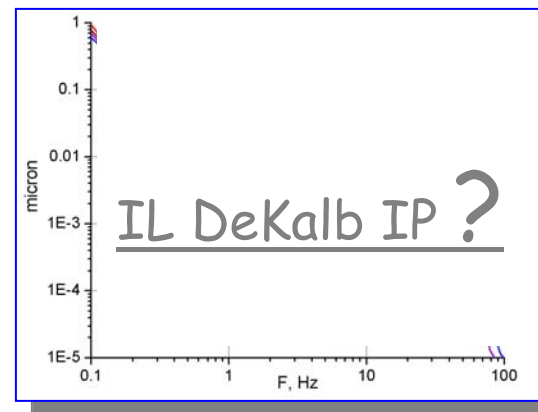
### CA Copper Mtn IP

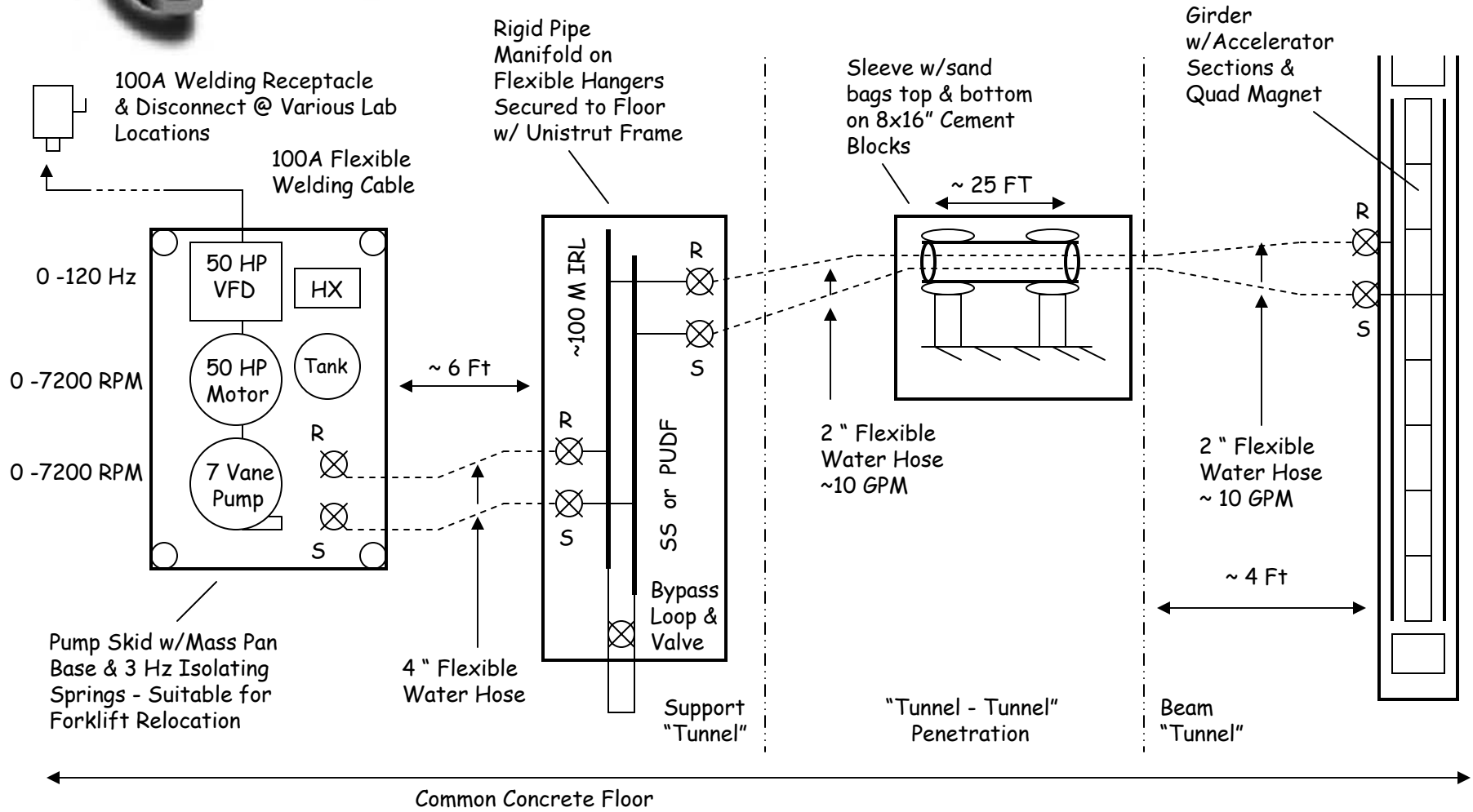


### CA Logan Ridge IP



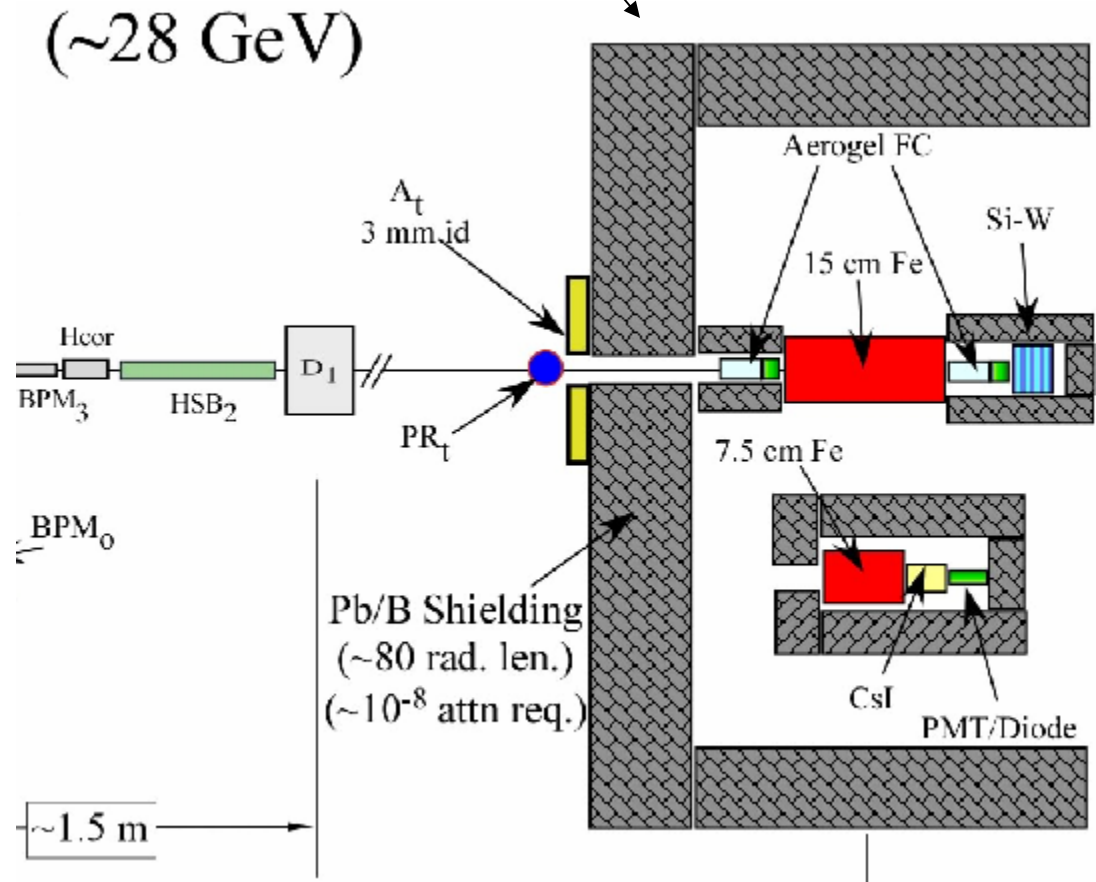
?





\*Draft Pump Skid Schematic Layout for Girder Tests

## \*E166 One-half meter of Lead Shielding & Device Table(s)





Surface Hydrology

Watershed (Drain Basin)

Region Water Balance (in - out =  $\Delta$  storage)

Precipitation, Infiltration, Evapotranspiration, Runoff

Stream Peak & Base Flow

Beneficial Use

Water Quality Control Board Basin Plan

Water Quality

Background level for natural & anthropogenic impurities-  
contamination

Hydrogeology

Groundwater

Static Groundwater Contour Map

Aquifer Permeability, Hydraulic Conductivity

Basin Boundary, Storage Capacity, Long Term Pumping

Sustainability & Degradation, Overdraft & Safe Yield

Current Demand/Use: Agricultural, Industrial, Municipal



Watershed Laws, Plans, Authorities & Data

CA Water Plan Update Bulletin

CA Water Quality Control Board's Basin Plan

CA Groundwater Report Bulletin

Streambed Alteration Agreements

Endangered Species Act

Migratory Bird Treaty Act

Fish & Wildlife Coordination Act

National Wilderness Act

Water Recycling Act

County of Origin Statutes

CA Central Valley Water Year Data 2002

Prescriptive & Prior Appropriations

Adjudicated Basins

CA Water Project Central Valley Plan

NEPA, CA EPA, Safe Drinking Water Act



## Complementary CF Tasks

- 8) E163 Photo Injector - Elect./Mech./Struct, NLCTA Coordination

Currently, racks & klystron-modulator power/cooling are being added. We share ESB utilities, life-safety systems & occupancies.

- 9) Linac Coherent Light Source - CF Consult & Review A&E

New beam housings are to be flat & vibration free with new underground tunnel construction in CA surface rock. Currently the A&E design is out for bid.

- 10) SU Enriched Xenon Deep Tunnel Clean Room - Consult & Inspect

Deep tunnel environment with related challenges & risks. Current clean room design is complete, fabrication to begin.



CF Tasks FY'04  
End