

## Earthquake Damage to Labs

Laboratories are particularly dangerous places to be in a significant earthquake. Also, they often contain expensive and/or home-made equipment which would be difficult to replace. Below are some pictures of quake damage that illustrate some seismic preparedness issues:



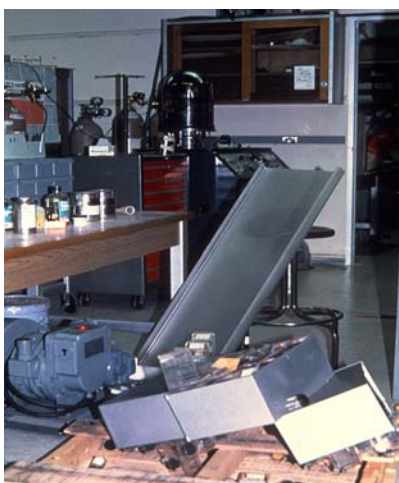
*Cal State Northridge (1994): a latching or locking mechanism on cabinet would have prevented this loss of microscopes.*



*UCSB (1978): per campus policy, tall furniture and equipment must be anchored securely to solid structural wall elements*



*UCSC (1989): gas cylinder fell to floor shearing off regulator. Fortunately, main valve was closed, thus preventing gas venting. Cylinder was inappropriately anchored to table with “C-clamp” and cloth strap restraint. Per UCSB policy, cylinders must be anchored to solid structural portion of wall with metal chain.*



*UCSC (1989): unsecured equipment fell to floor.*



*Cal State North Ridge (1994): lab gutted by fire after quake – note fume hoods on back wall. Mixing of incompatible chemicals caused fire. This may have been prevented by proper segregation of incompatibles.*