

Title : Science Course unit 6.
 clock title: (Mass spectrometers)
 Contributors : M.J. Pentz.
 F.R. Stannard.
 R.A. Ross.

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Seq.	Time	Footage	Sequence List	Sound Cue
1.	59"		M.J. Pentz introduces the unit. He discusses the importance of the Milliken oil drop experiment and gives a definition of elementary particles.	Stannard to do it.
2.	2'47"		F.R. Stannard with a model of the apparatus for performing the Milliken oil drop experiment. He uses the model to show how the apparatus works. The experiment is demonstrated on the model.	Before actually
	4'28"		Stannard with the actual apparatus points out the individual parts and explains their function.	
	9'45"		Reconstructed film of the experiment being performed. Camera is put to the microscope so the action of the droplet can be seen.	
	10'04"		Stannard asks students to use the readings obtained during the experiment to determine whether or not the charges have elementary character.	
3.	12'00"		M.J. Pentz with a beam ^{tuner} turner. The electron beam is seen on a screen. With a bar magnet, Pentz deflects the beam. He demonstrates further by holding a magnet to a T.V. screen. The picture is distorted.	In just one moment
	13'30"		R.A. Ross with an analog of a mass spectrometer. He rolls ball bearings of a different mass down a slope where they are deflected at different angles by a magnet.	here is Dr. Ross
	15'01"		Ross, with the aid of a large movable diagram, explains how a mass spectrometer works.	
			Ross with a small Edwards mass spectrometer. He points out and explains the functions of the various components.	

