The DRACULA 2D Prototype Detector
Based on D19, but much faster

Back of Dracula Prototype

Front of Dracula Prototype
Dracula will be unique in several important ways:

- x10 faster than D20 (small samples, highpressure, chemical kinetics...)
- 2D detector (textured samples, from single crystals to polycrystals...)
- Polarized neutron option (magnetism)
- Moderately good resolution ($\Delta d/d \sim 10^{-3}$) for Rietveld refinement
- Relatively high efficiency 60% at 1Å, 85% at 2.4Å
- Very high count rate 100 MHz per channel for fast acquisition
- Very fast frame rate ~50 Hz ("Single Pulse") for chemical kinetics
Quantitative Texture Analysis
D19 using the 120° 2D-PSD

- F. Léon (CRISMAT, ILL)
- D. Chateigner (CRISMAT)
- B. Ouladdiaf (ILL)

- Texture of a Belemnite rostrum -
the fossilised calcitic part of an
ancient species of Cephalopoda
from the Cretaceous period.

- 1368 complete powder patterns
measured in as many sample
orientations, each taking 10 sec.

- Much faster with a 2D detector