WHOI LONG CORE  R/V KNORR
THE ‘PROBLEM’
Long Coring Concept
SYSTEM OVERVIEW

- CURRENT MAX CORE LENGTH = ~46 M
- TAPERED WALL BARREL ASSEMBLY
- VARIABLE WEIGHT HEAD = 3,000-27,500#
- ACOUSTIC MODEM RELEASE
- HI-MODULUS SYNTHETIC MAIN ROPE
- ODI M CTCU ROPE HANDLING SYSTEM
- ALLIED A-FRAME AND ‘GRAPPLE’
- STERN SHEAVE
- PROGRAMMED STARBOARD DAVITS [H/V trans]
HYBRID ROPE

- 2” DIA. 12 X 12 TORQUE BALANCED
- BREAK STRENGTH = 365,000 #
- 7.5 KM LONG
- PLASMA + VECTRAN
- FIELD REPAIRABLE
- ELONGATION w/ 30,000 # CORER @ 5,000 METERS DEPTH = ~2.0 M
FIRST 150 FOOT LONG ATTEMPT
ODP SITE 1063/GPC5  4585 METERS
Starboard Davits
GRAPPLE SWINGS CORE FROM STARBOARD TO STERN FOR RELEASE MODULE RIGGING
Latching the Release
FULLY RIGGED-GOING DOWN
Release Module Deck Unit
Recovery of the Acoustic Release
GRAPPLE ROTATION TO STARBOARD
DEPLOYMENT OF RECOVERY CLAMPS
Core extrusion
Core extrusion
Piston Core Performance
ODP 1063
Sites A, B, C, D

Keigwin, Rio, and Acton, 1998
KNR191
Piston Cores