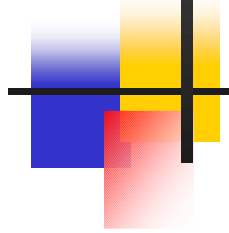


# MUON COLLABORATION

JANUARY 29-31

MECHANICAL INTEGRATION



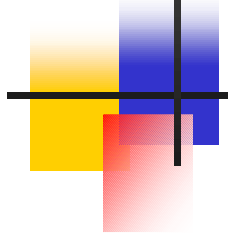
Edgar L. Black  
IIT/FNAL



# Introduction

---

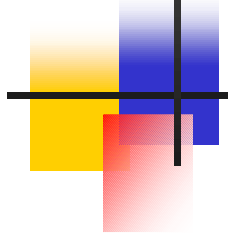
The purpose of this presentation is to highlight the integration of the cooling hardware components mechanical features, correlating to the physics design parameters.



# Topics of Discussion

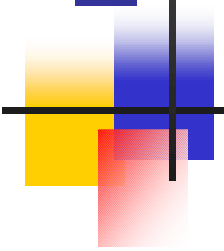
---

- The lattices discussed are described in the "PARAMETERS FOR STUDY 2 Version 2 1/16/01" Section 2.7 Cooling Lattices.
- The layouts presented here are of the cooling lattices and highlight the main mechanical requirements necessary for installation operation and maintenance of the lattices components.
- A picture is worth a thousand words



## SFOFO LATTICE 1 & 2

- Some adjustments on the dimensions of the center solenoid coils was dimmed necessary to allow the installation of the RF feeders to each cell.
- The magnetic field change effect on the cooling performance need reevaluation.
- Costs may benefit from this changes



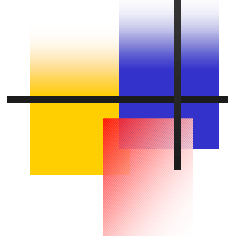
## Lattices new dimensions

- On the lattice (1) 2.75m long:

	len1	dl	rad	dr
	m	m	m	m
Previous	1.210	0.330	0.770	0.080
New	1.335	0.080	0.722	0.253

- On the lattice (2) 1.65m long:

	len1	dl	rad	dr
	m	m	m	m
Previous	0.627	0.396	0.792	0.099
New	0.776	0.099	0.722	0.324



## Other space considerations

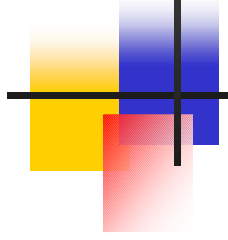
- Installation or removal of any lattice from an assembled line can only be on direction perpendicular to the line; there fore, a hardware spacer or a gap is designed for this operation.
- The thickness of the gap is 0.072m, it is essential that no component will protrude within this space.



# Real Life

---

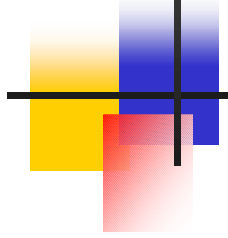
- We need to update drawings with current input A.S.A.P.
- Suggest extra meetings to complete parameters this week if possible.
- Info needed:
  - Current Magnet Design
  - Current RF Design
  - Other available information, Vacuum, Cryogenics, etc.



# What This Means

- dda a strong statement that summarizes how you feel or think about this topic
- Summarize key points you want your audience to remember





## Next Steps

---

- Summarize any actions required of your audience
- Summarize any follow up action items required of you