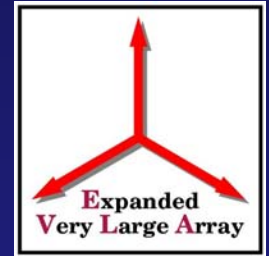


# EVLA LO/IF Racks/Bin/Modules

Michelle Jenkins, Mechanical Engineer



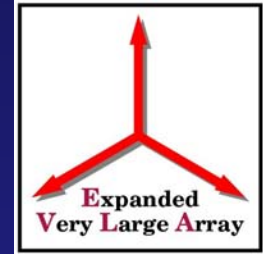
# LO/IF System



- Modules and bins common to vertex room and CEB
- CEB racks are standard 19" equipment racks
- Vertex room racks are VLA B-Racks



# LO/IF Rack

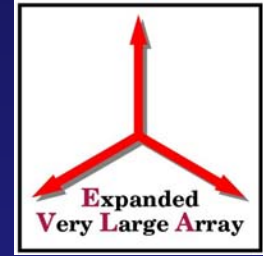


- Plascore® honeycomb panels used for RFI shielding

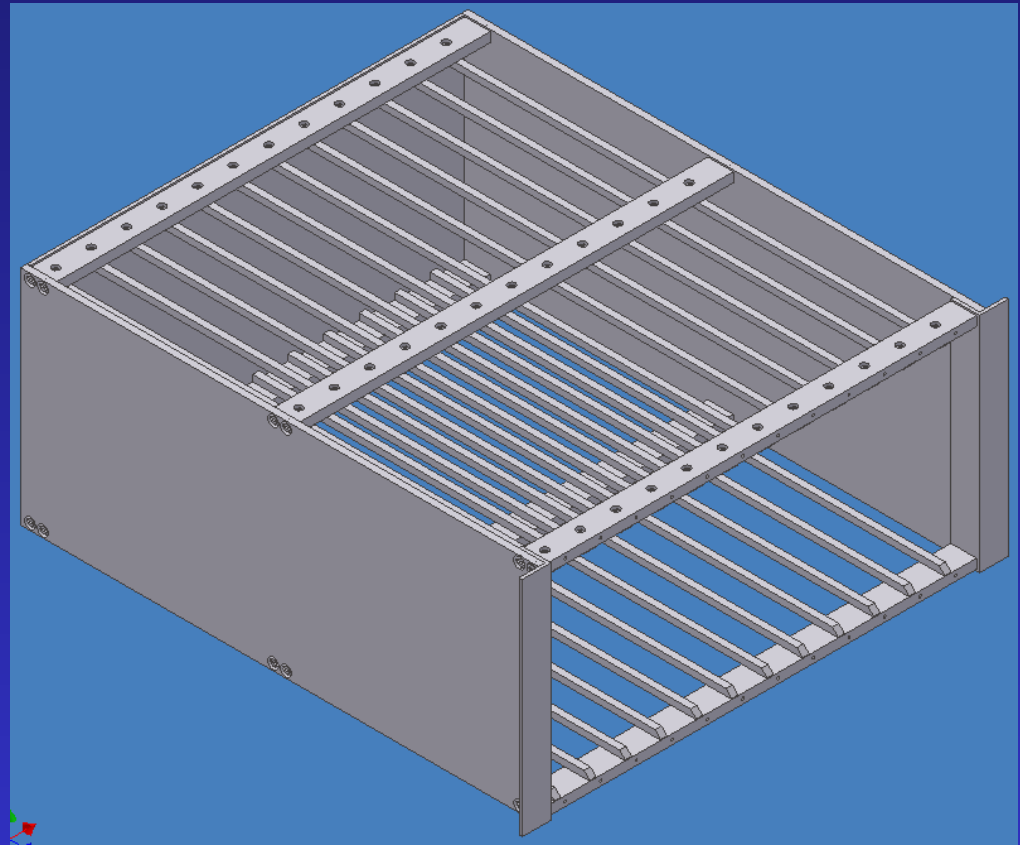




# LO/IF Bin

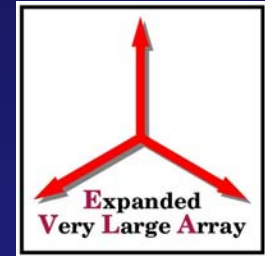


- Reusing VLA bins

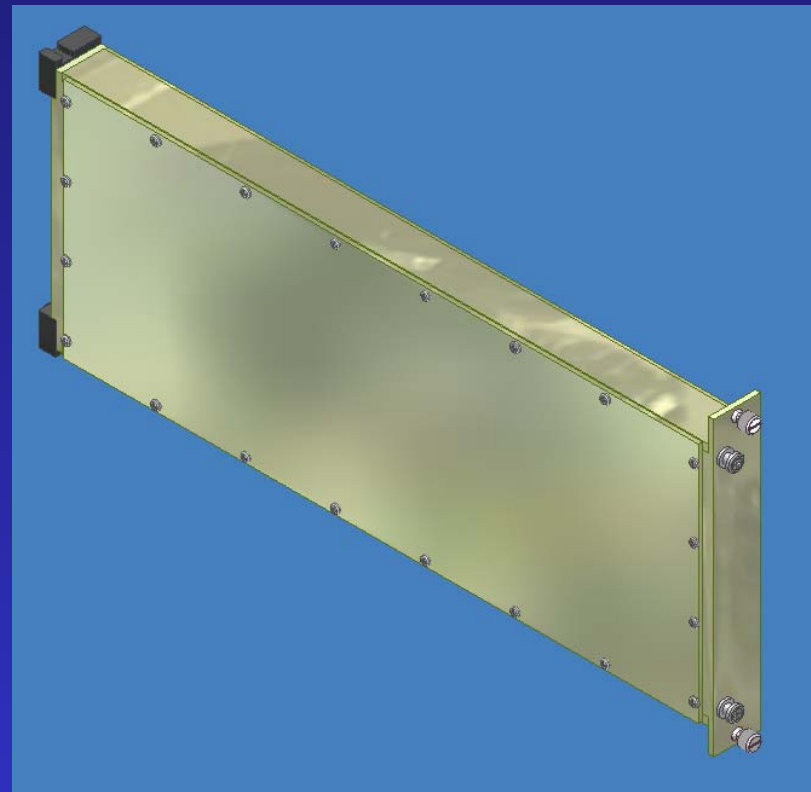




# 1 Wide Module

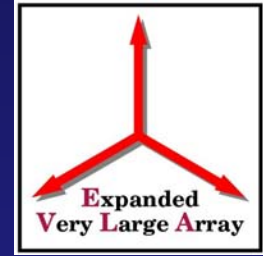


- Building on AT design using VLA Dimensions
- Extrusions & panels utilizing RFI gasketing

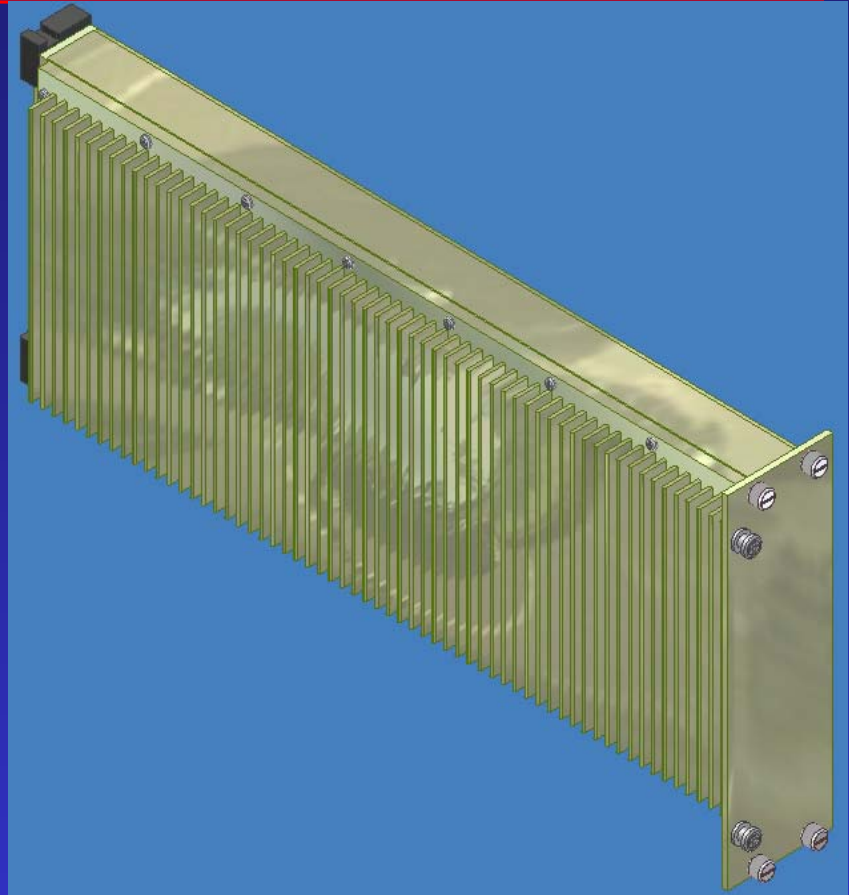




# 1 Wide Module

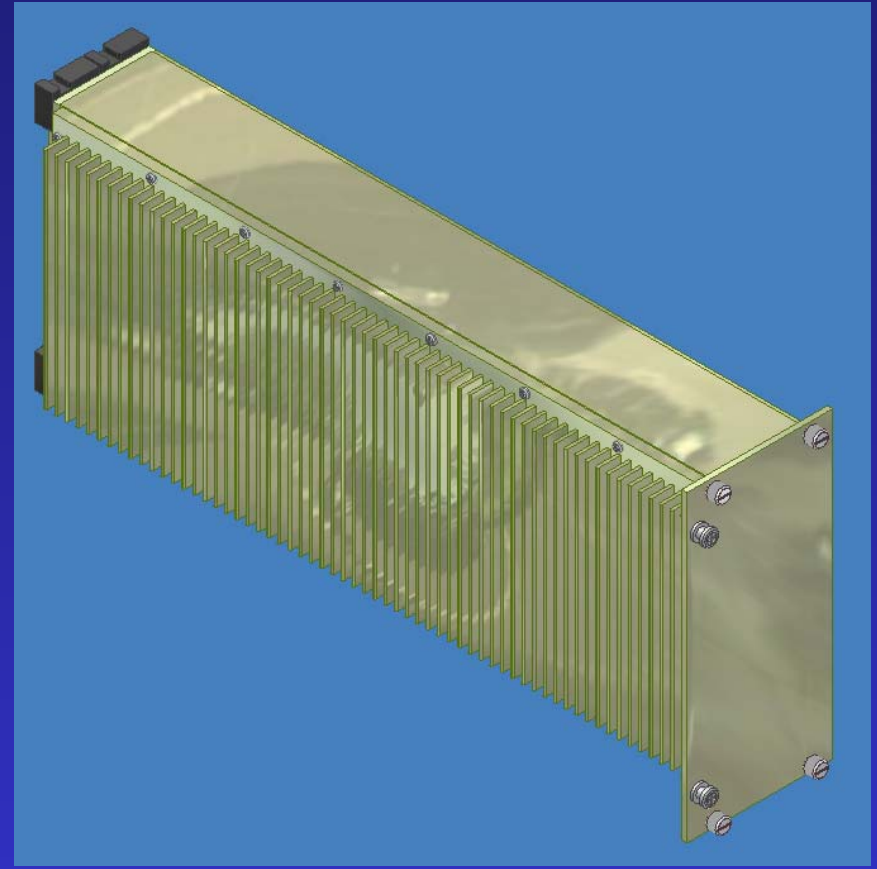
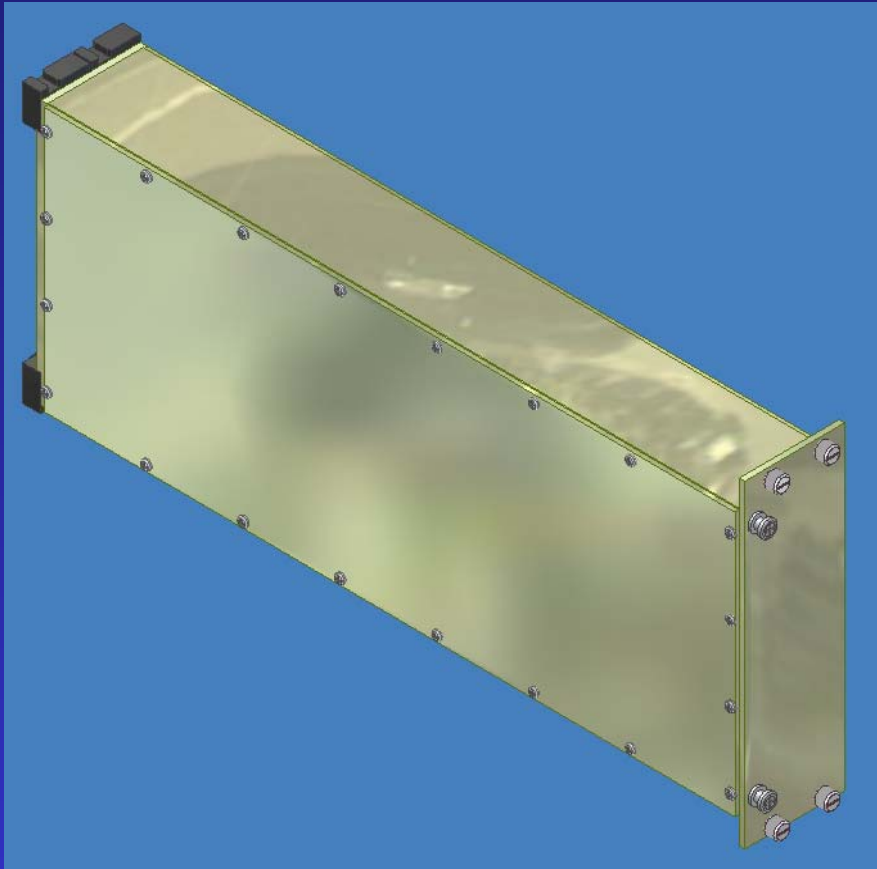
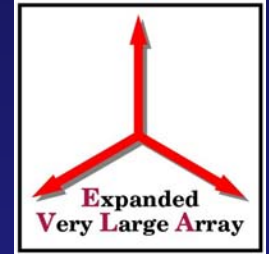


- Same design with heatsink
- Requires the same bin space as a double wide



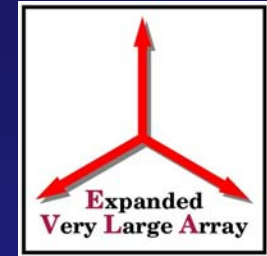


# 2 Wide Modules

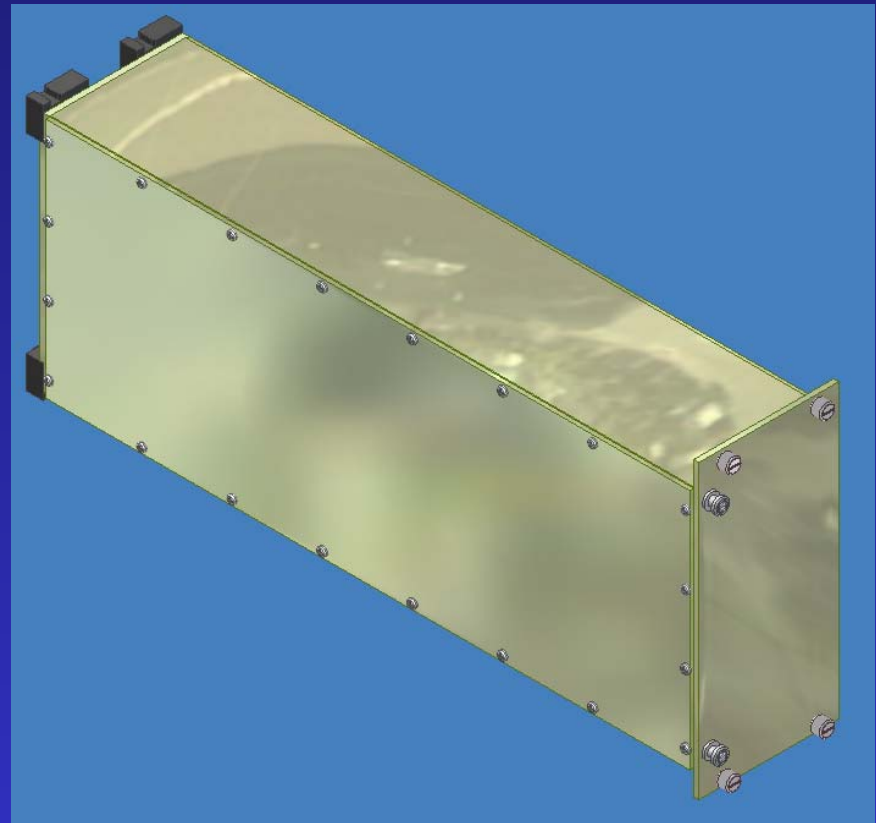




# 3 Wide Module



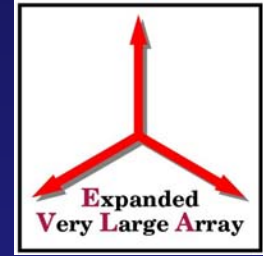
- Designed to house synthesizer
- Optional center panel for multiple layer component mounting



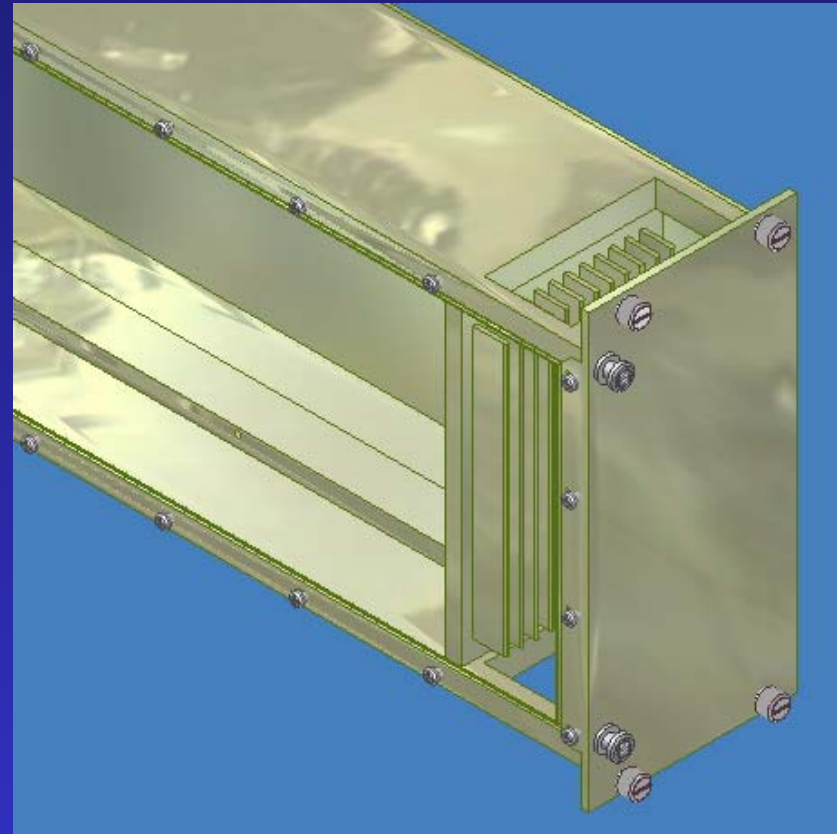




# 3 Wide Module

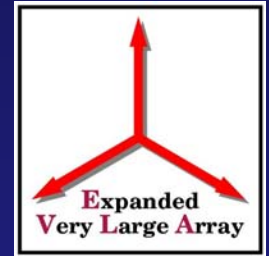


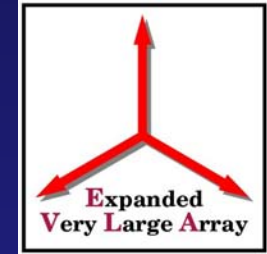
- Provisions for heatsinking Yig oscillator with hole through module for airflow over heatsink
- Heatsink gasketed to provide RFI seal





# Questions??



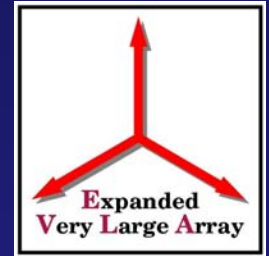


# EVLA DTS/Sampler Rack/Bin/Module

Michelle Jenkins, Mechanical Engineer



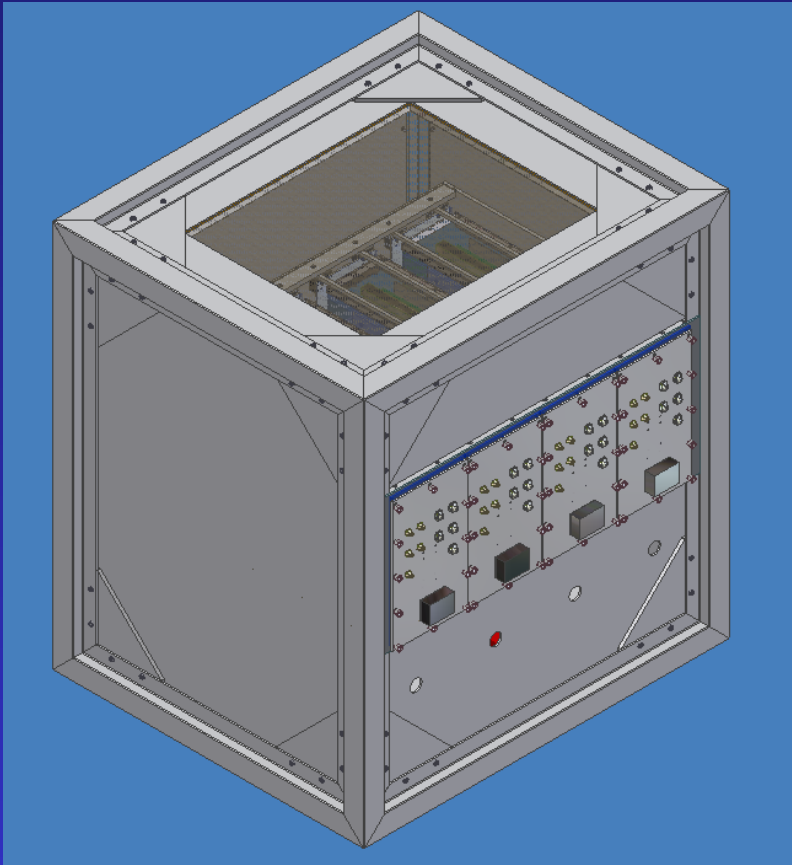
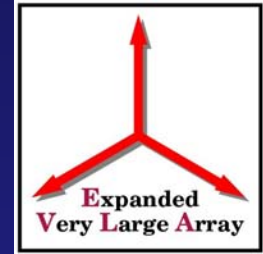
# Digitizer/ DTS



- Completely new design
  - Integrates digitizer, samplers, and IF DTS into single package
  - Designed specifically to address RFI and Thermal Issues



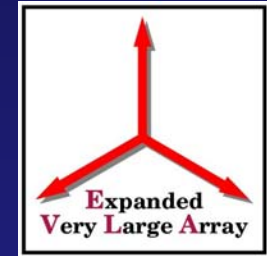
# DTS Rack



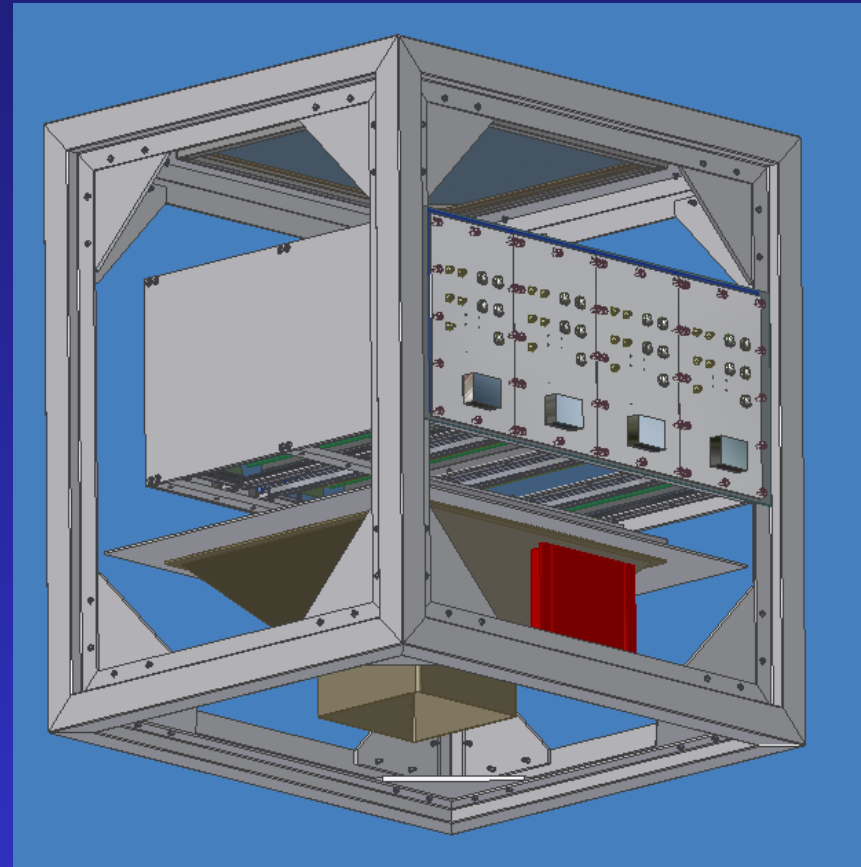
- Panels 100% welded to frame
  - Vibration stability
  - RFI
- Plexiglas door to protect fiber connections
- Dimensions
  - 32”H x 30”W x 26”D



# DTS Rack

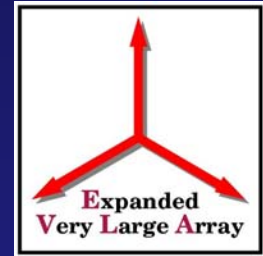


- Gasketed filters
  - UAF with internal foam barrier
  - Spira™ honeycomb
- Rack sits on base for air flow reasons
- All fiber runs to fiber mux inside the rack

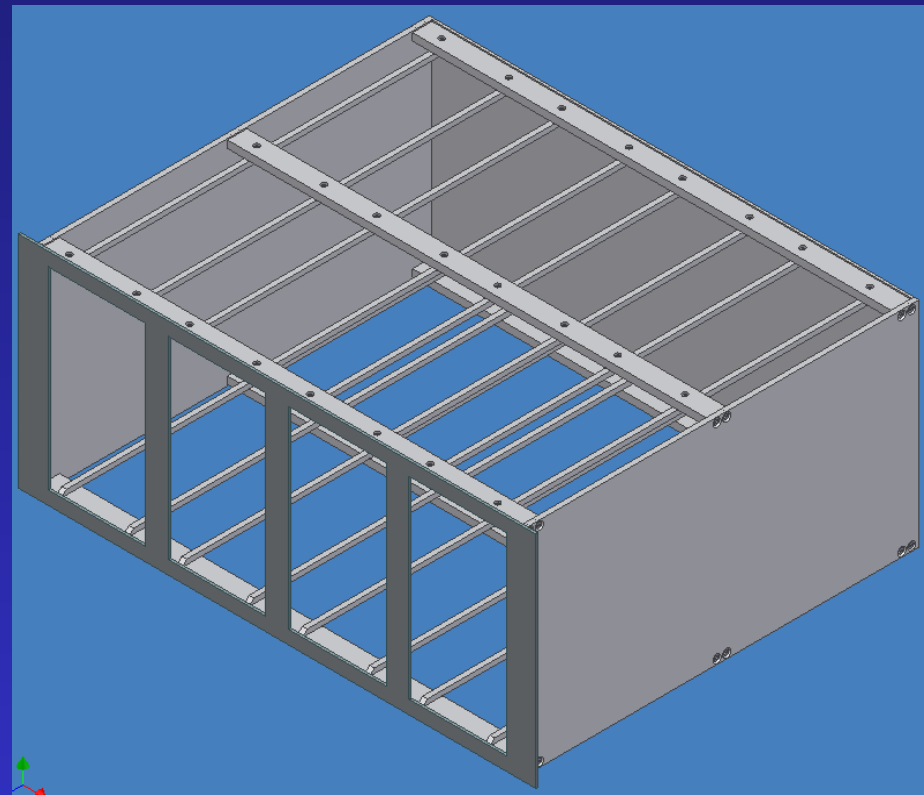




# DTS Bin

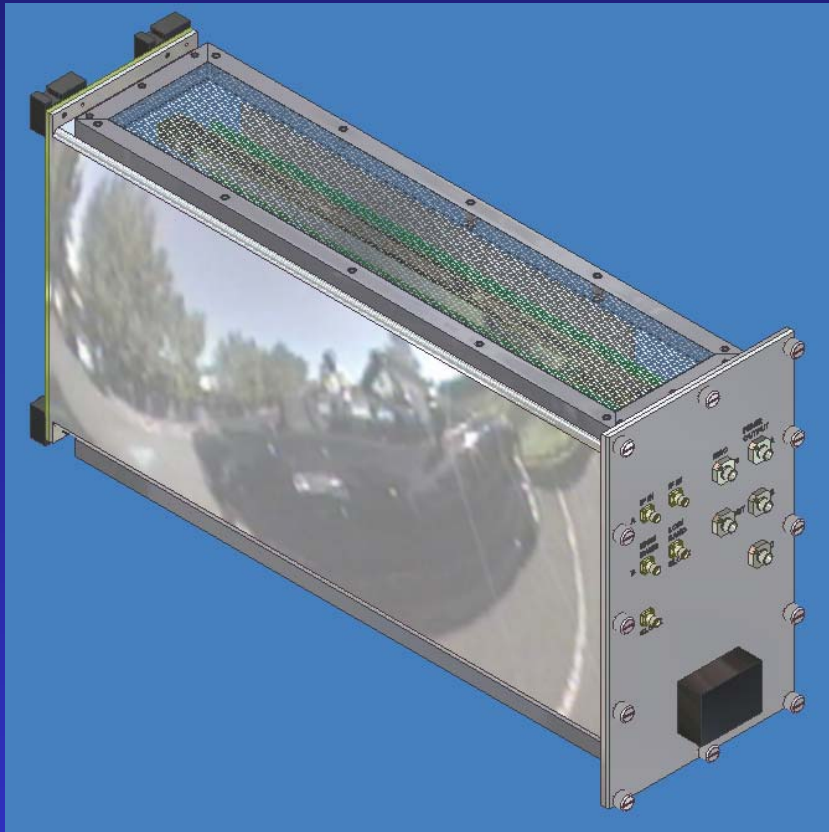
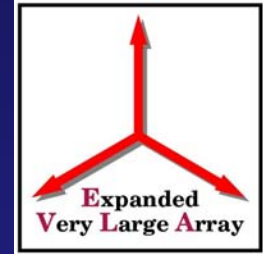


- Follows design of VLA bin
- Gasketed faceplate added for RFI seal
- Dimensions
  - Faceplate 11.25”H x 26.6”W x .125”D
  - Body 11”H x 25”W x 20.25”D





# DTS Module

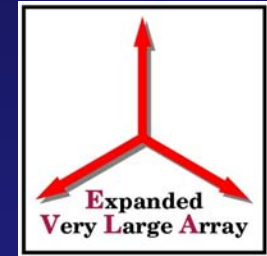


- Solid outer case
  - RFI sealed
  - Spira™ filters
- All connections on module front panel
- Dimensions
  - 10.46”H x 6.17”W x ~19.95”D

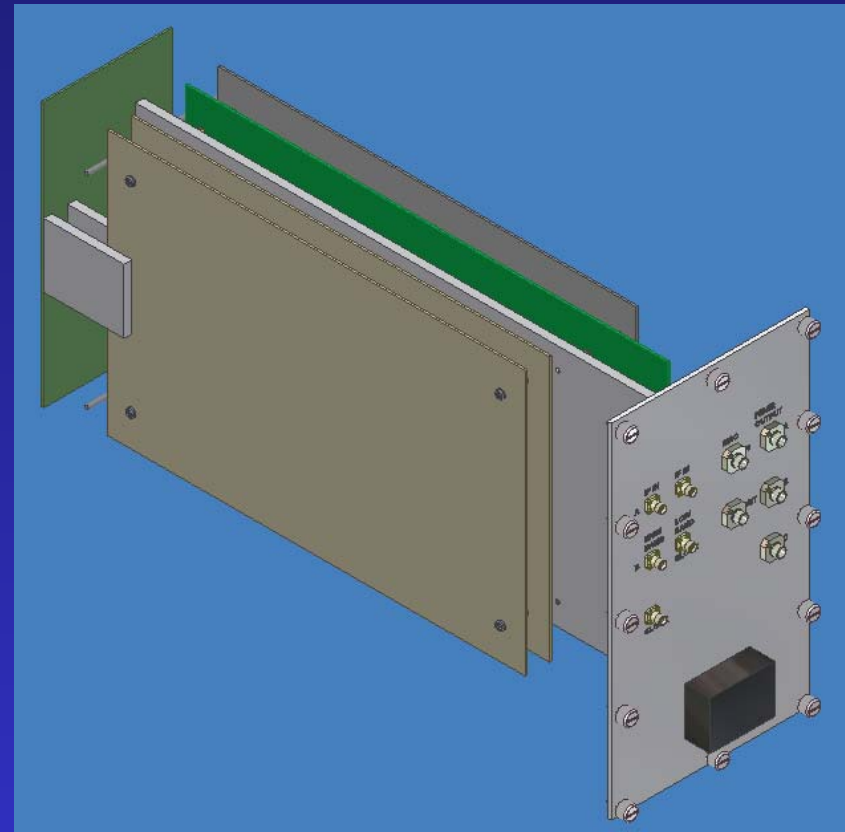




# Module Internal

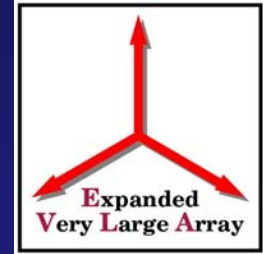


- Slides in/out of solid case
- Center plate provides module stability
- Heat-producing components mounted to center plate
- PCBs connected by internal backplane
- Stand-offs provided to support module on bench during maintenance





# Module Outer Case



- Welded single-piece construction
- VLA guide blocks
- Gasketed filters mounted top & bottom



# Questions??

