

305th Medical Group



MC- and AC-130 Health Effects

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Medics! Can Do...Will Do!



Agenda



- **Background & Thought Process**
- **Studies Conducted**
- **Challenges**
- **Road Ahead**

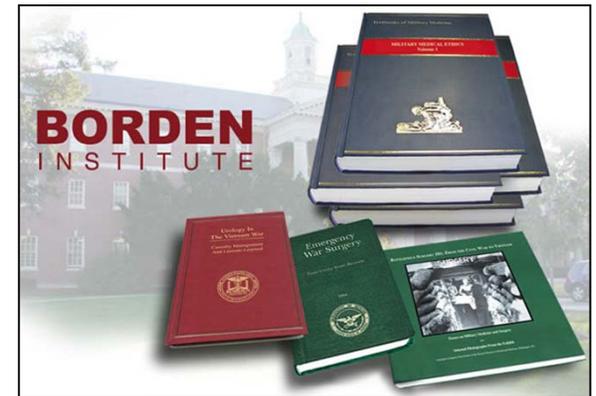
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Background & Thought Process



- Reference: *Textbook of Military Medicine, Occupational Health: The Soldier and the Industrial Base*



- 1967 Arab-Israeli War
- “Army field exposures commonly occur in tanks...”

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The MC- & AC-130s



- MC-130 Mission: low-level clandestine operations
- Multiple take offs and landings per sortie
- AC-130 Mission: close air support, interdiction
- Weapons:
 - 20 mm Vulcan
 - 40 mm Bofors
 - 105 mm Howitzer



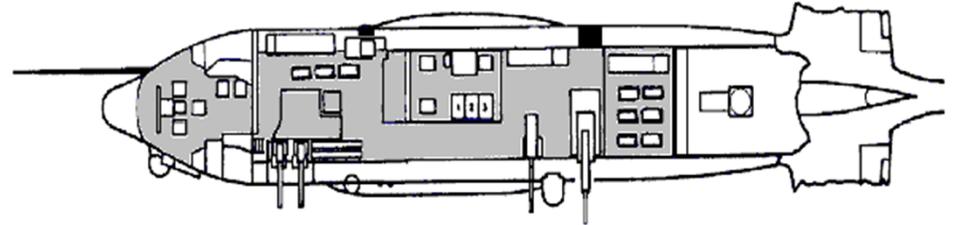
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Weapon System Concerns



- MC-130 Concerns: heat stress
- AC-130 Concerns:
 - Heat stress
 - Combustion and propellant
 - Lead
 - Noise
 - Ergonomics



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Sources of Concern



Sources of Concern





Sampling in Theatre



- **Method:**
 - BEEs not allowed to fly -- lacked Survival, Evasion, Resistance, and Escape (SERE) training
 - Flight Surgeon conducted monitoring
- **Sampling Conducted: WBGT on MC- & AC-130 sorties**
 - Aviator/maintainer feedback overwhelmingly positive
- **Flying Squadron Commander limited chemical/noise sampling in theatre**
 - “What if you find something? Are you going to shut us down?”
 - But...Invited BEEs unlimited access/flying at home station

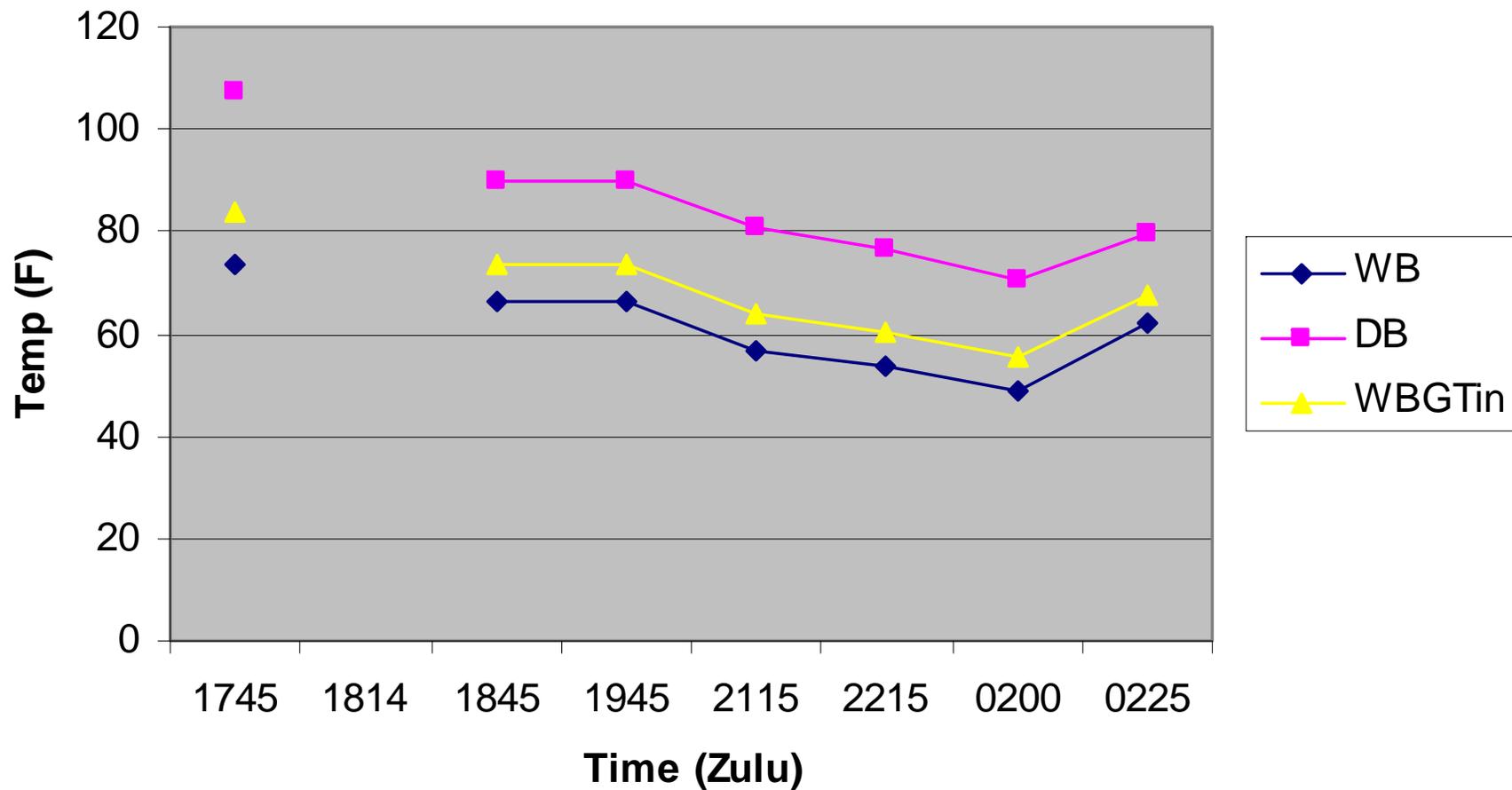
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WBGT Results



AC-130 Gunner's Position

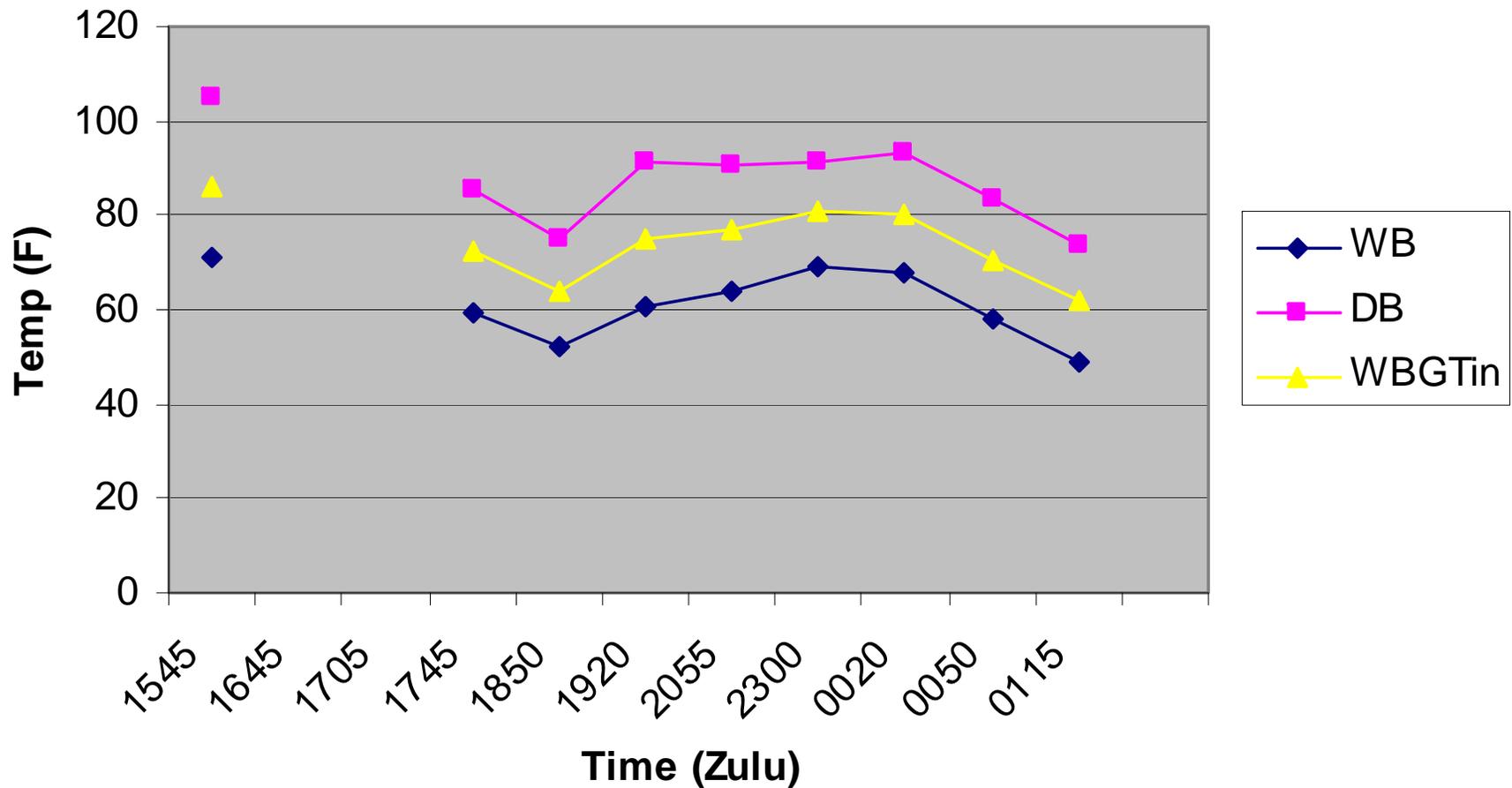




WBGT Results



MC-130 Loadmaster's Position





Road Ahead



■ Surveillance at home station

- **Swipe sampling:**
 - ◆ Aircraft interior
 - ◆ Skin of flyers & maintainers
- **Air sampling**
 - ◆ CO, Pb, other propellants and combustion products
 - ◆ Chemicals with STELs
- **Noise**
- **Ergonomics**

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