



Welcome to DPW-8/AePW-4



Presentations & Agenda

<https://dpw.larc.nasa.gov/DPW8/Presentations>

Today's Teams Link

<https://tinyurl.com/WorkshopSunday>



DPW-8/AePW-4

Sunday's Opening Remarks

Brent Pomeroy

Configuration Aerodynamics Branch
NASA Langley Research Center
Emeritus Langley Associate
Co-Chair, DPW Organizing Committee

Pawel Chwalowski

Aeroelasticity Branch
NASA Langley Research Center
Co-Chair, AePW Organizing Committee

Ben Rider

High-Speed Aerodynamics
Boeing Commercial Airplanes
Co-Chair, DPW Organizing Committee

Bret Stanford

Aeroelasticity Branch
NASA Langley Research Center
Co-chair, AePW Organizing Committee



- Presentations available on the DPW website
<https://www.aiaa-dpw.org>
- Teams meeting link
<https://tinyurl.com/WorkshopSunday>

- **DPW-8/AePW-4**
 - “A Collaborative Approach to Multidisciplinary Drag & Aeroelasticity”
 - Joint workshop
 - Co-sponsored by Applied Aerodynamics Technical Committee and Structural Dynamics Technical Committee

Presentations available online
aiaa-dpw.org

What Happened Yesterday?

- **DPW**
- **Source of Scatter Working Group**
 - Drove scatter to < 0.01 counts for a certain test case
 - Scatter about 1-1.5 counts for CRM
 - Significant success
- **Test Environment Working Group**
 - Simulating CRM in the NTF
 - Good progress so far
 - Comparisons to mounting hardware and hardware/tunnel show reduced spread
- **AePW**
- **High Speed Working Group**
 - AFRL's RC19 test case: Mach-2 flow over a flexible panel w/ or w/o shock impingement
 - Large code-to-code and code-to-test variations in static and dynamic aeroelastic response
- **High Angle Working Group**
 - NASA LaRC's Benchmark Supercritical Wing, tested in the TDT
 - Large number of submitted results, with good agreement in transonic flutter results at low AoA, worse at high AoA

Workshop Leadership Global Presence



Source: OpenStreetMap
Open source, subject to Open Database License

Workshop Participants (Submitted Data)



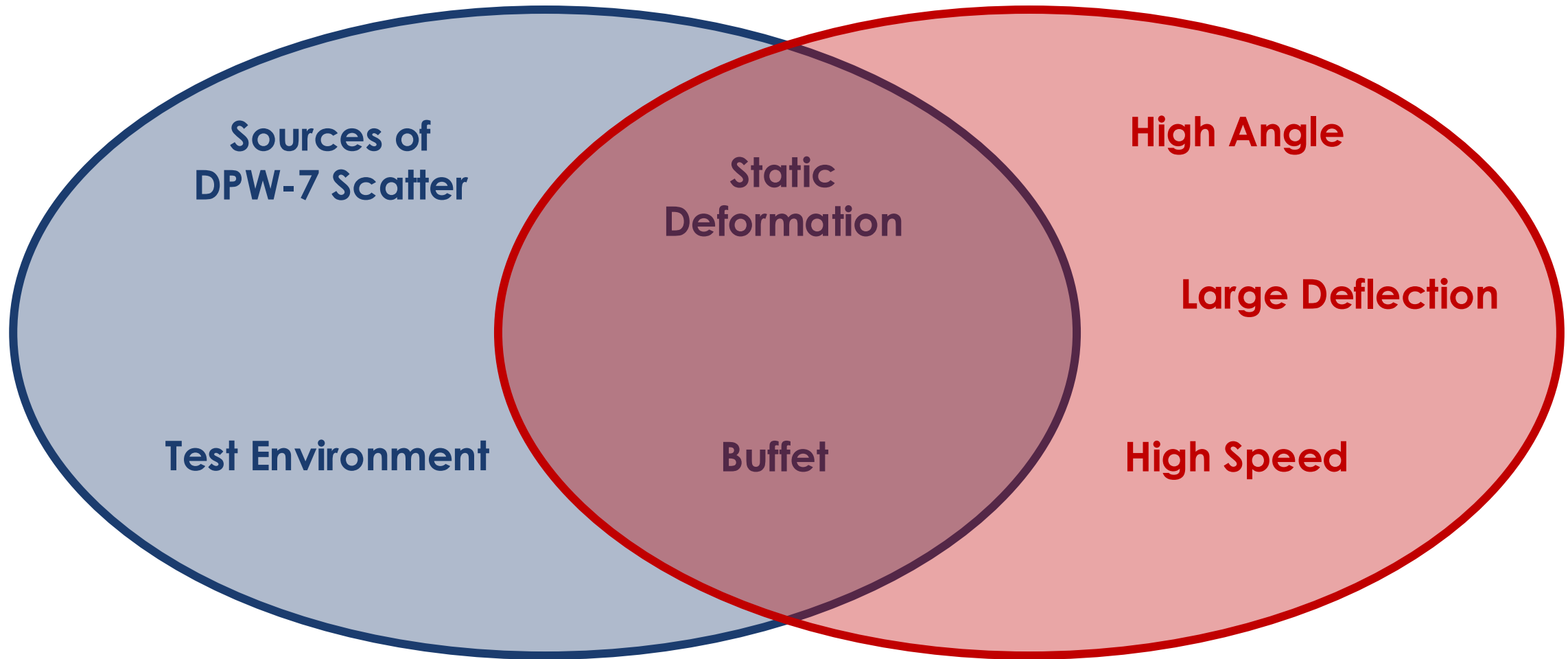
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Workshop Goals

- Co-host a workshop including both DPW and AePW
- Build upon the rich history of DPW and AePW
- Advance the state of the art within each individual community
- Mature understanding of coupled fluid-structure interaction
- Identify strengths and weaknesses of tools
- Develop and establish a model for interdisciplinary workshops
- Engage student participation

DPW

AePW



- **Sunday Morning**

- Committee-Supplied Grids
- Static Deformation Participant Presentations
- Static Deformation Committee Review Presentation
- Buffet Participant Presentations

- **Sunday Afternoon**

- Buffet Working Group
- Participant Presentations
- Committee Review Presentation
- Open Discussion

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