

# Project 19 - Mechanism of Dwell Fatigue Crack Initiation in Ti-7Al Under Biaxial Tension-Tension Loads

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## Program Goal

Stress dwell periods are detrimental to fatigue life of Ti-alloys, but biaxial tension-tension failure is not predicted from uniaxial data

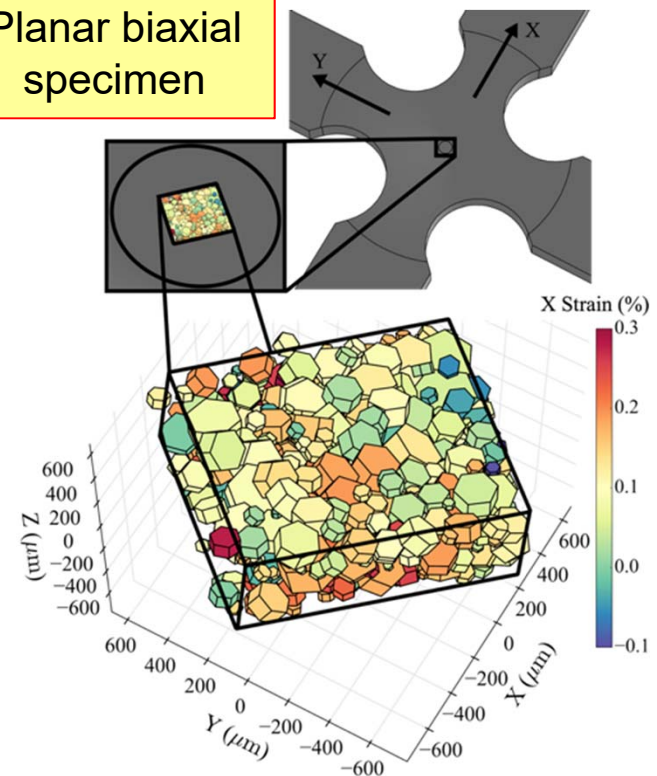
## Approach

Under biaxial tension-tension loads, determine microstructural mechanisms of dwell fatigue and define hard and soft grain orientations

## Benefits

Improved life management for biaxially loaded components

Planar biaxial specimen



3D grain reconstruction from in-situ diffraction study

## Project Duration

Sept 2015 to May 2018



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