

Atlas 25⁺ - Long Term Durability Test for PV Modules

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Kurt P. Scott, Director of Renewable Energy Business Development

Allen Zielnik, Senior Consultant, Solar Energy Competence Center



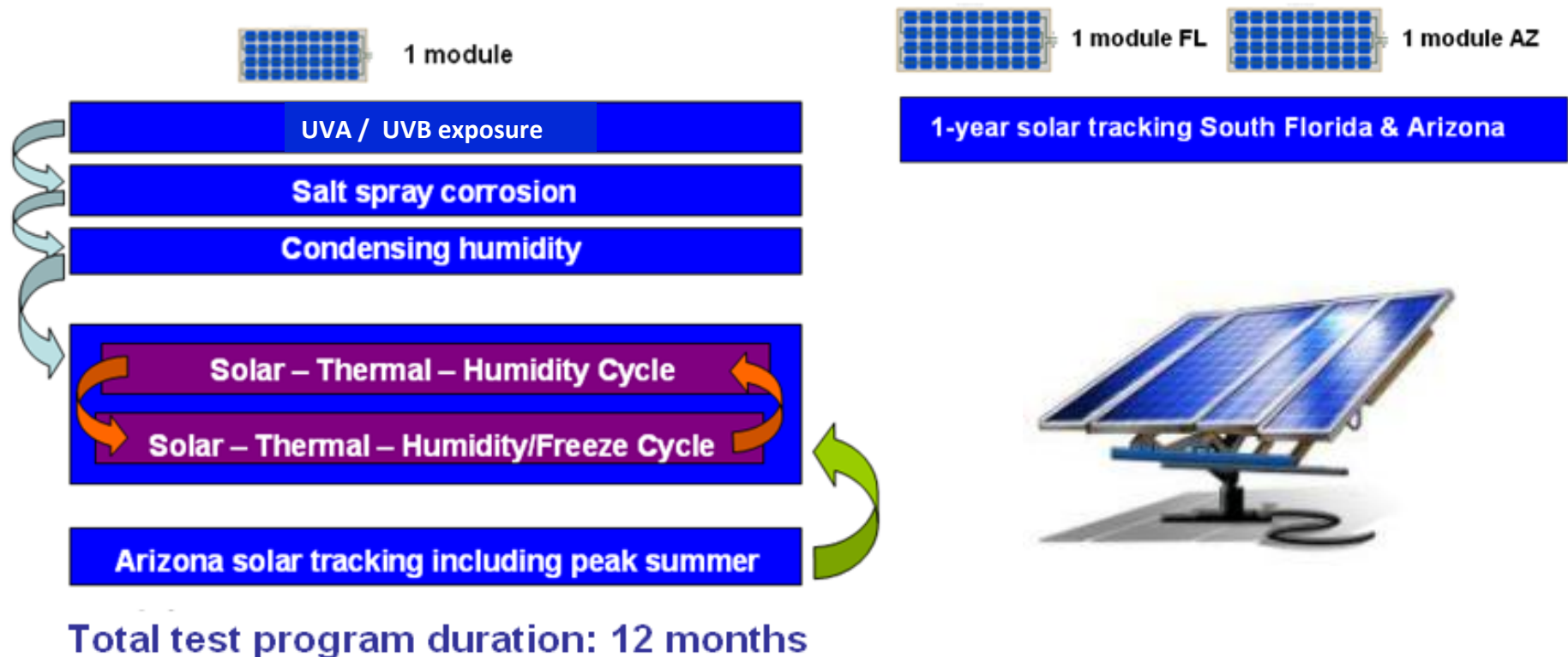
Atlas 25+ *Unique features*

- Atlas 25+ “First principles” of weathering
- **Heat, Solar Radiation and Moisture act in synergy producing effects they don’t alone.**
- Heat, Solar Radiation and Moisture are delivered in both short term (daily) and longer term (seasonal) cycles, not in steady-state conditions
- Nature doesn’t alter weather and climate delivery based on your product. Neither should weathering tests
- The empirical view is not entirely from the perspective of the module, but rather from the way that nature delivers the stresses. The product is treated somewhat as a “black box”
- **Atlas’ “semi- empirical approach” . .**
- Fundamental weathering testing
- Experience of other industries – **critical to have laboratory & outdoor testing**
- Does incorporate “realistic” elements known to be important to PV degradation – MPP load , tracking, thermal & freeze\thaw cycling, analysis,
- Takes advantage of technology from weathering and reliability testing
- Acknowledges basic limitations & constraints
- Complements IEC-type qual testing
- An accelerated weather aging protocol, not a service life predictor

Weathering cycle

Modules electrically operated under resistive load at MPP whenever exposed to Solar – natural or simulated

Atlas 25^{Plus} “global composite” environmental test cycle
(other climates available)



Four different test tracks

Identify & incorporate PV service conditions for each...

