Open XAL Highlights from IPAC’15

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Topics

• Several Papers
• Moving to Java 8 with JavaFX
• Online Model
• ESS Python Integration
## Site Adoption

<table>
<thead>
<tr>
<th>Facility</th>
<th>Status</th>
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<tbody>
<tr>
<td>CSNS</td>
<td>Developing XAL applications for RCS Will migrate to Open XAL</td>
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<tr>
<td>ESS</td>
<td>Physics group chose Open XAL for beam commissioning</td>
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<tr>
<td>FRIB</td>
<td>Open XAL tested for cryomodule commissioning Open XAL as Backup plan</td>
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<tr>
<td>GANIL Spiral 2</td>
<td>Adopted Open XAL</td>
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<tr>
<td>SNS (ORNL)</td>
<td>Adopted Open XAL with XAL as a backup</td>
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<td>TRIUMF</td>
<td>Contributing to Open XAL</td>
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Java 8 Migration

• Open XAL builds without warning on Java 8
• Needs testing
• Will migrate to Java 8
• JavaFX will be supported in Application Framework and replacing Bricks GUI framework
Online Model

• Online Model has been refactored using Generics
• New Simulation engine
• Lattice Generator being modified to retain RF Cavity structure
• TTF coefficients moving from RF Cavity to RF Gap for better accuracy
• Discussed future support for GPU computing
JPype Integration

• ESS is developing JPype integration for Open XAL
• Replaces Jython for Python scripting
• Live scripting for machine studies with saving to logbook
• Plotting
• Browser integration