Background
Organizations have transitioned to rely increasingly on work teams. Understanding teamwork and how team processes lead to effective team performance is critical. Teamwork (Lepine et al., 2008) and shared cognitive states (DeChurch & Mesmer-Magnus, 2010) influence team effectiveness. According to Salas, et al. (2009), cognitive states are the basis for teamwork.

Purpose
The current study examined the relationship between cognitive states, teamwork, and team performance.

Process
Participants: 40 10-person teams composed of senior aerospace students.

Procedure: Teams participated in high-fidelity simulations of airline operations and responded to problem situations (triggers).

Materials: Materials included various measures of emergent cognitive states, teamwork, and performance

Results

Table 1
Pearson Correlations Between Predictors and Team Performance

<table>
<thead>
<tr>
<th>Emergent Cognitive States</th>
<th>Delay Loss</th>
<th>Trigger Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goal Interdependence</td>
<td>.06</td>
<td>.44</td>
</tr>
<tr>
<td>Task Interdependence</td>
<td>.14</td>
<td>.02</td>
</tr>
<tr>
<td>Collective Efficacy</td>
<td>.10</td>
<td>.07</td>
</tr>
<tr>
<td>Transactive Memory</td>
<td>.08</td>
<td>.45</td>
</tr>
<tr>
<td>Communication Frequency (FOC)</td>
<td>.18</td>
<td>.76</td>
</tr>
<tr>
<td>Communication Importance (FOC)</td>
<td>.20</td>
<td>.43</td>
</tr>
<tr>
<td>Teamwork</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Observer-Rated Teamwork</td>
<td>-.51*</td>
<td>.66*</td>
</tr>
<tr>
<td>Self-Rated Teamwork</td>
<td>-.14</td>
<td>.48*</td>
</tr>
</tbody>
</table>

*p<.05

Figure 1
Significant Results for Regression Models Regressing all Predictors on Each Performance Variable

Self-Rated Teamwork

Delay Loss

Observer-Rated Teamwork

Trigger Effectiveness

Conclusion
Observer-rated teamwork was significantly negatively correlated to delay loss. When controlling for other predictors, self-rated teamwork significantly predicted delay loss.

Transactive memory, observer-rated teamwork, self-rated teamwork and communication importance were significantly correlated with trigger effectiveness. When controlling for other predictors, observer-rated teamwork significantly predicted trigger effectiveness.

Overall, measures of teamwork were better predictors of team performance than cognitive states.

Acknowledgements
We would like to thank Paul Craig and the rest of the FOCUS lab faculty and staff for their help with the lab and support of the data collection process.

References
