Background

- Actor of Eurosip (system 4) + WMO GPC/RCC
- Involved in SPECS (4 WPs)
- To be involved in Copernicus Seasonal Forecast (POC and Pre-Operational)
- System 4 to System 5 (run in parallel since May 2015)
What is new in system 5?

- T255 versus T127
- 91 vertical levels versus 31 (+ prognostic ozone and QBO parameterization)
- Sea-ice model (Gelato)
- Stochastic perturbations versus lag-average
- New soil scheme (Surfex 7)
- Computation cost x 20
## Surface temperature scores

<table>
<thead>
<tr>
<th></th>
<th>DJF S4</th>
<th>DJF S5</th>
<th>MAM S4</th>
<th>MAM S5</th>
<th>JJA S4</th>
<th>JJA S5</th>
<th>SON S4</th>
<th>SON S5</th>
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</thead>
<tbody>
<tr>
<td>90N-30N</td>
<td>0.28</td>
<td>0.32</td>
<td>0.36</td>
<td>0.39</td>
<td>0.31</td>
<td>0.32</td>
<td>0.35</td>
<td>0.41</td>
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<tr>
<td>30N-30S</td>
<td>0.52</td>
<td>0.54</td>
<td>0.49</td>
<td>0.50</td>
<td>0.52</td>
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<tr>
<td>30S-90S</td>
<td>0.32</td>
<td>0.29</td>
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<td>0.33</td>
<td>0.23</td>
<td>0.24</td>
<td>0.29</td>
<td>0.27</td>
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</table>

ACC month 2-4, 60 members, 34 years
## Precipitation scores

<table>
<thead>
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<th></th>
<th>DJF S4</th>
<th>DJF S5</th>
<th>MAM S4</th>
<th>MAM S5</th>
<th>JJA S4</th>
<th>JJA S5</th>
<th>SON S4</th>
<th>SON S5</th>
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</thead>
<tbody>
<tr>
<td>90N-30N</td>
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<td>.21</td>
<td>.17</td>
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<tr>
<td>30N-30S</td>
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<tr>
<td>30S-90S</td>
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<td>.20</td>
<td>.16</td>
<td>.18</td>
<td>.23</td>
<td>.23</td>
</tr>
</tbody>
</table>

ACC month 2-4, 60 members, 34 years
ENSO scores (Nino3.4 correlation)

Forecast lag (month) 1st Nov. start

Forecast lag (month) 1st Feb. start

Forecast lag (month) 1st May start

Forecast lag (month) 1st Aug. start
Next ENSO event

SON forecast from system 5 (start 1st Sept.)
2nd largest warming forecast since 1979 after 1997