Small Detector Tracking Cost Estimates

Silicon Drift Estimate:
Scaling from experience gained with STAR vertex detector (Bellwied)

Silicon Strip (barrel and disks) Estimate:
SDC WBS Data Book, October 1992; plus updates for inflation and to reflect current technology

Estimates attempt to include full costs of R&D, integration, management, etc.

WBS items for detector subsystems did not include electronics, which we interpreted to mean even the mechanical ‘hybrid’ structures on which the electronics resides.

Additional, ‘non-WBS’ items (electronics) are included for guidance.
For silicon $\mu$strip tracker, two poles were considered:

- Long-shaping (superior momentum resolution at low $p_\perp$)
- Short-shaping (background immunity)

L and S disk systems identical at this level of accuracy

- Each consists of 10 disks
- Total area: $6.0 \text{ m}^2$ (L) vs. $6.9 \text{ m}^2$ (S)

### BOTTOM LINE (K$)

<table>
<thead>
<tr>
<th></th>
<th>Drift</th>
<th>Long $\mu$strip</th>
<th>Short $\mu$strip</th>
<th>Disk</th>
</tr>
</thead>
<tbody>
<tr>
<td>WBS</td>
<td>19550</td>
<td>17550</td>
<td>19650</td>
<td>9050</td>
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<tr>
<td>Elec.</td>
<td>13250</td>
<td>6000</td>
<td>20250</td>
<td>7050</td>
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