

Effective maximum engine speed in ASEP measurements

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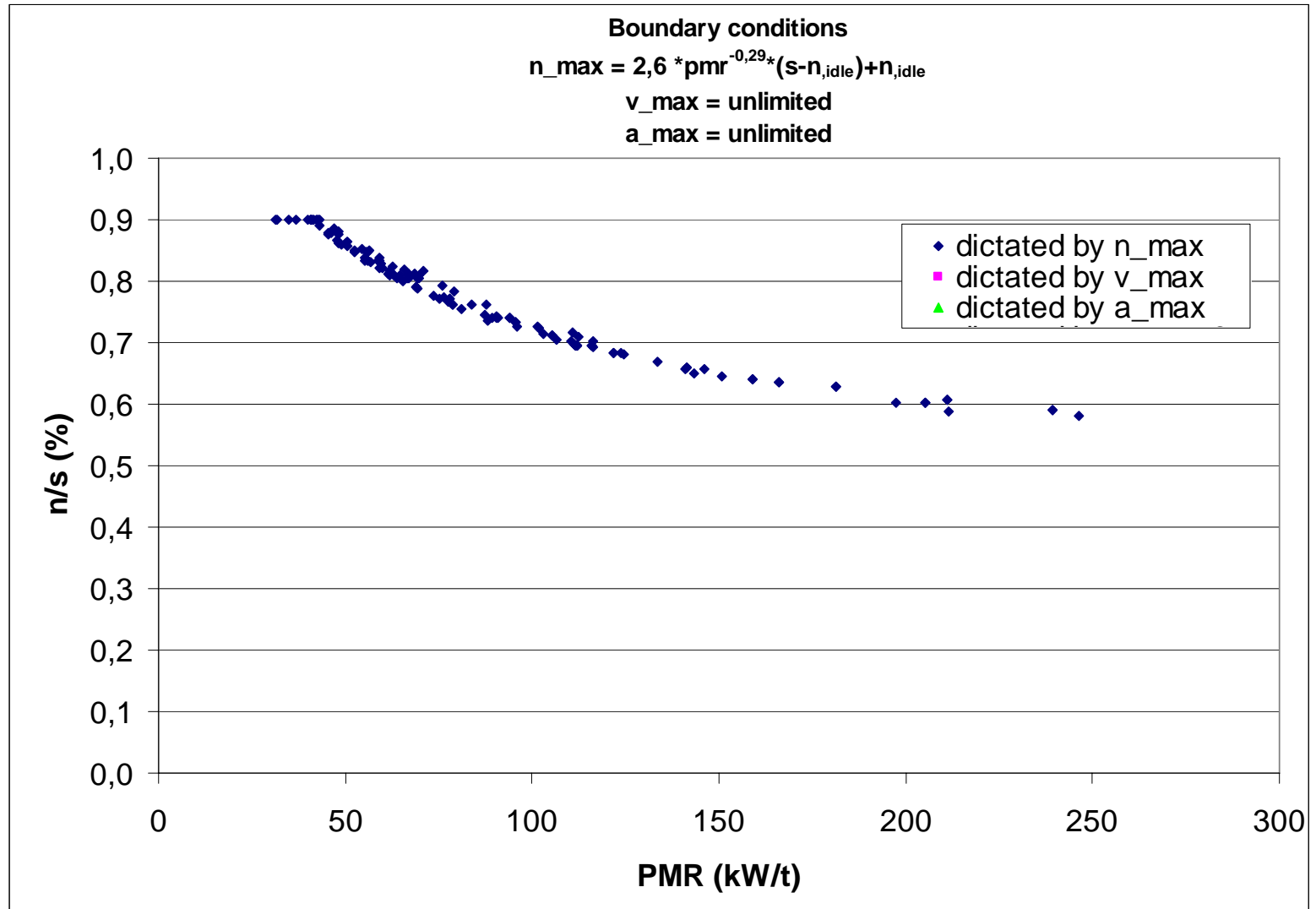
Goal of this analysis

- Terms of reference
 - The complementary test method shall cover the noise emission under higher engine speeds and loads than the proposed procedure in TRANS/WP29/GRB/2005/5.
- Question
 - What is the effective maximum engine speed in ASEP?

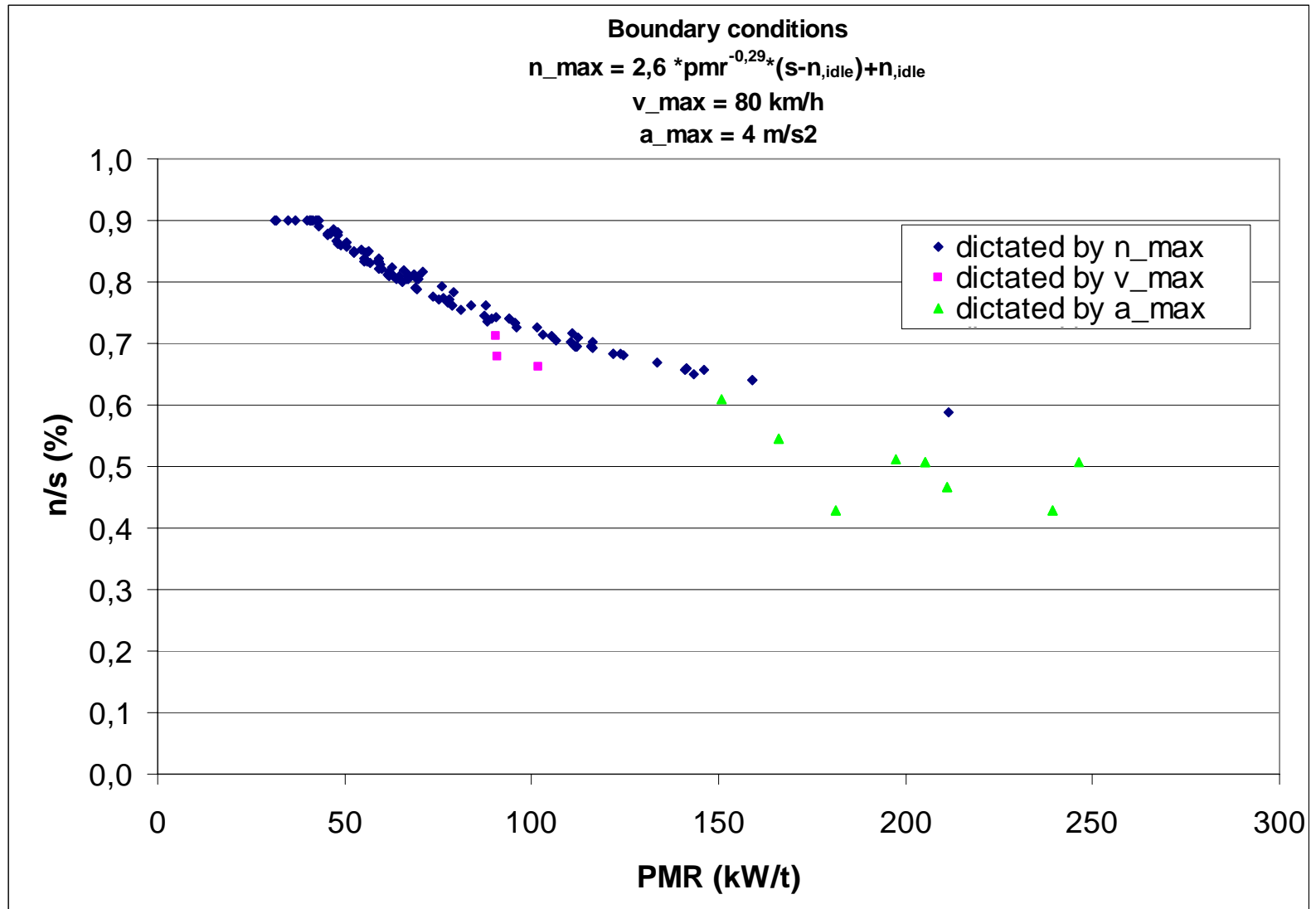
Answer

- This depends on the boundary conditions in the ASEP measurement method
- Various boundaries have been earlier place holders in []; eg:
 - $n_{\max} = 2,6 * p_{mr} - 0,29 * (s - n, idle) + n, idle$
 - $v_{\max} = 80 \text{ km/h}$
 - $a_{\max} = 4 \text{ m/s}^2$

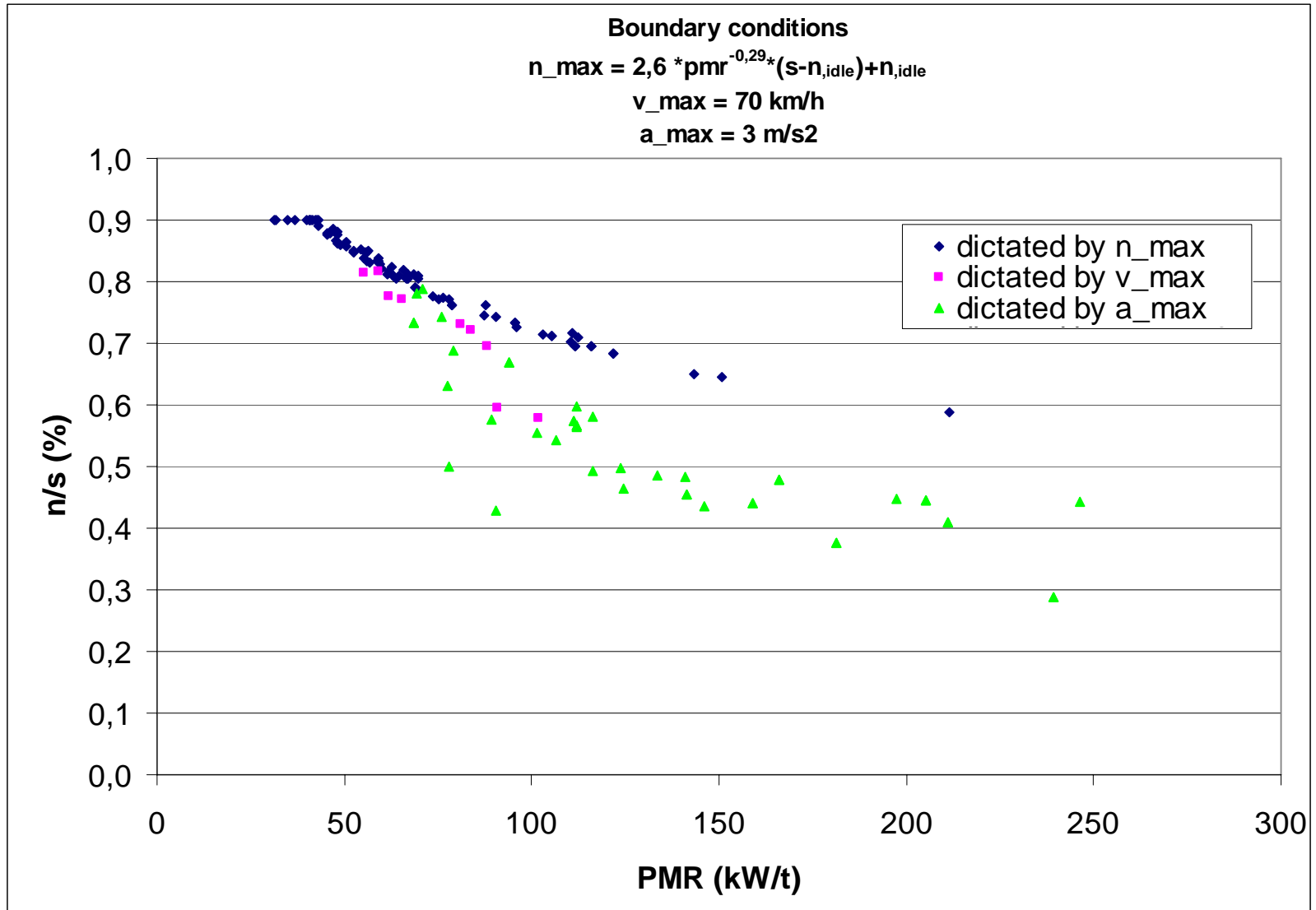
Effect of boundary conditions on Effective maximum engine speed



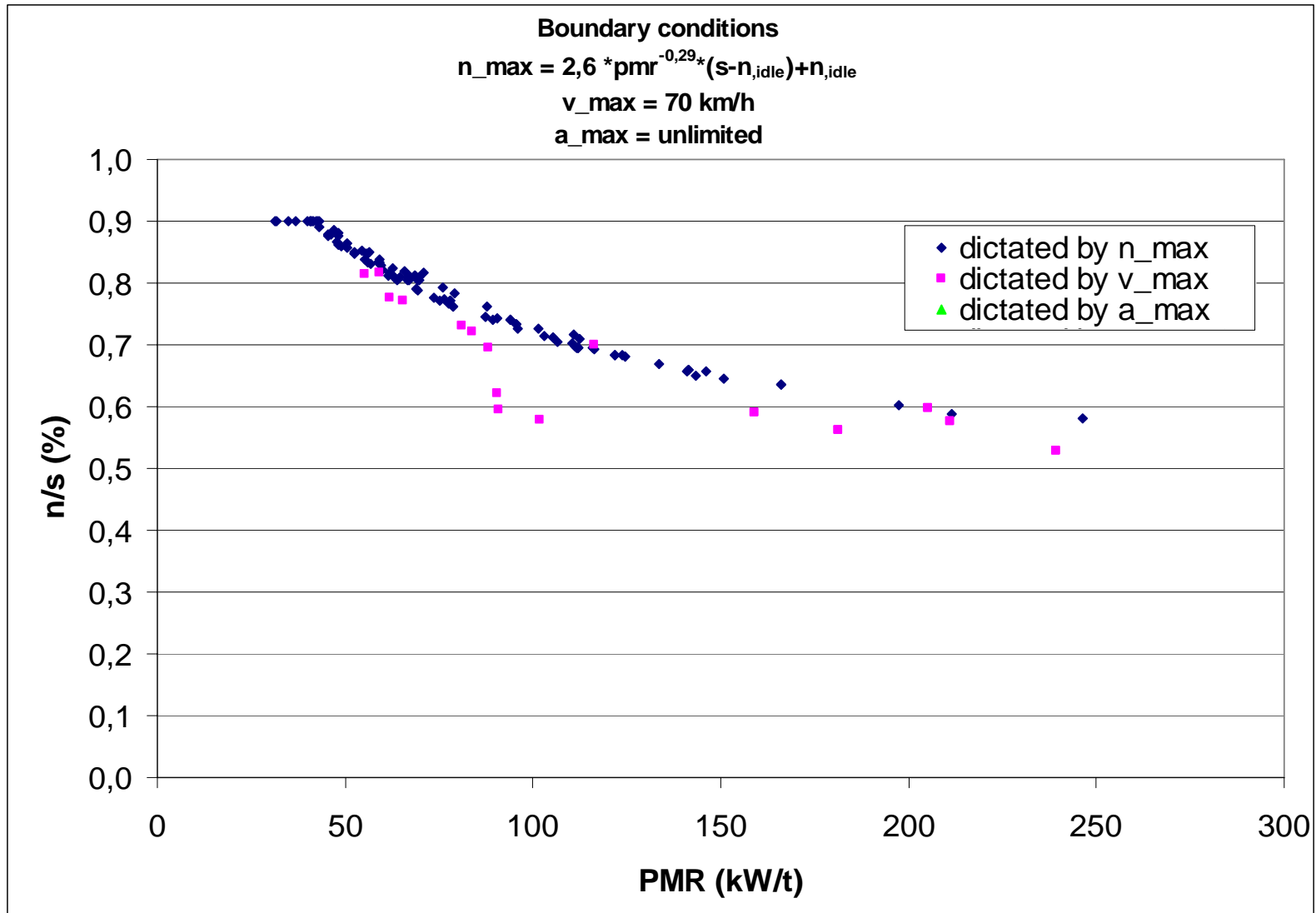
Effect of boundary conditions on Effective maximum engine speed



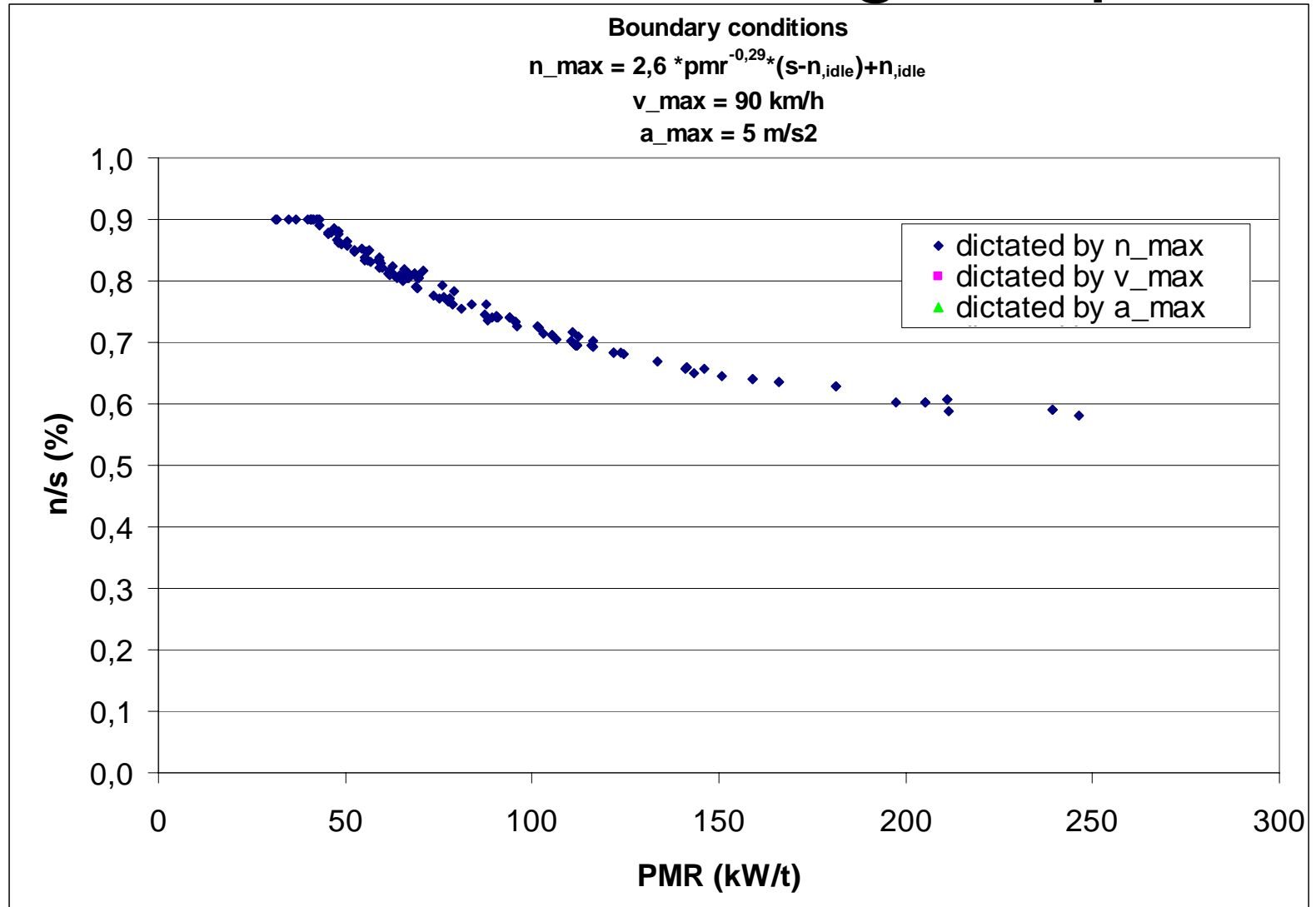
Effect of boundary conditions on Effective maximum engine speed



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Proposal

- Change boundary conditions to
 - $n_{\max} = 2,6 * p_{mr} - 0,29 * (s - n, idle) + n, idle$
 - $v_{\max} = 90 \text{ km/h}$
 - $a_{\max} = \text{unlimited}$