

Title	Comparison of VNEM to Measured Data from Ringhals Unit 3 IACIP, NKS-R-2008-61
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Abstract	<p>Comparisons have been made of a LWR core simulator CYGNUS with VNEM neutronics module to the measured data obtained from Ringhals unit 3 NPP at the hot-operating condition at its beginning of cycle 1 (core average burnup = 0 through 500MWD/MT).</p> <p>The results can be summarized as:</p> <p style="text-align: center;">core eigenvalue = 0.99711 +/- 0.00067</p> <p>Excellent agreement was obtained in the comparison of the neutron detector readings as observed in Phase 1 (2008).</p> <p>The computing (CPU) time was measured to be 7.5 min. / case, which is about 1/3 of the prototype VNEM code. This is because of the sophisticated coding of VNEM module in CYGNUS and the convergence acceleration effect of the feedbacks.</p>
Key words	CYGNUS, VNEM, Ringhals, unit 3, PWR, neutron detector, keff, IACIP: NKS_R_2008_61