**Hall Probe Output vs. Kugler Bench Carriage Speed.**

We have made measurements with Sentron probe #463 and Senis probe #118-14 moved along the magnetic axis of HXU-32 variable gap undulator. The measurements are done with 4 different carriage speeds and 2 different field magnitudes. Also a few measurements are done with the Senis probe shifted horizontally from the undulator magnetic axis. Results are in the table below.

|  |  |
| --- | --- |
| **Sentron #463** | **Senis # 118-14** |
| **speed(cm/sec)** | **Bpeak** | **B/Bavrg** | **speed(cm/sec)** | **Bpeak** | **B/Bmax** |
| 8 | 1.337203 | -3.7E-07 | 8 | 1.327152 | -6.3E-03 |
| 4 | 1.337213 | 7.1E-06 | 4 | 1.333417 | -1.6E-03 |
| 2 | 1.337196 | -5.6E-06 | 2 | 1.335148 | -3.2E-04 |
| 1 | 1.337202 | -1.1E-06 | 1 | 1.335581 | 0.0E+00 |
| Avrg. | 1.3372035 |  |  |  |  |
|  |  |  |  |  |  |
| 8 | 0.687748 | 7.3E-07 | 8 | 0.685595 | -1.9E-03 |
| 4 | 0.687746 | -2.2E-06 | 4 | 0.686556 | -5.2E-04 |
| 2 | 0.687751 | 5.1E-06 | 2 | 0.686854 | -9.0E-05 |
| 1 | 0.687745 | -3.6E-06 | 1 | 0.686916 | 0.0E+00 |
| Avrg. | 0.6877475 |  |  |  |  |
|  |  |  |  |  |  |
|  | **x=-15mm** |  |  | **x=-15mm** |  |
| 8 | 1.2276 | 9.8E-06 | 8 | 1.222554 | -5.6E-03 |
| 1 | 1.227588 |  | 1 | 1.229475 |  |
|  |  |  |  |  |  |
|  |  |  |  | **x=-20mm** |  |
|  |  |  | 8 | 0.772905 | -1.8E-03 |
|  |  |  | 1 | 0.774272 |  |
|  |  |  |  |  |  |
|  |  |  | **Next day** | **x=0mm** |  |
|  |  |  | 8 | 1.327166 | 1.1E-05 |

The Sentron probe does not have any speed dependence both for 1.3T field and 0.7T field.

The Senis probe has the output signal dependence on both the speed and the signal magnitude.