Resistive bolometer

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1. Purpose / Application

Measure total value and radial profile of plasma radiation

2. Name of analysis (Kaiseki) data / module of MyView2

- bolo: Total radiated power measured by wide angle resistive bolometer at 3-O port
- bolo3o: Channel profile of radiated power measured by bolometer array at 3-O port
- bolo65l_i: Channel profile of radiated power measured by inner bolometer arrays at 6.5-L port
- bolo65l_o: Channel profile of radiated power measured by outer bolometer arrays at 6.5-L port
- bolo8o: Channel profile of radiated power measured by bolometer arrays at 8-O port

3. General Description (Port, field line, time resolution, spatial resolution, number of channels, etc.)

- Port: 3-O BC02-01, 6.5-L AD02, 6.5-L AD03, 8-O AD02-06
- Field line:
  # 3-O arrays: no collimation
  # 6.5-L arrays

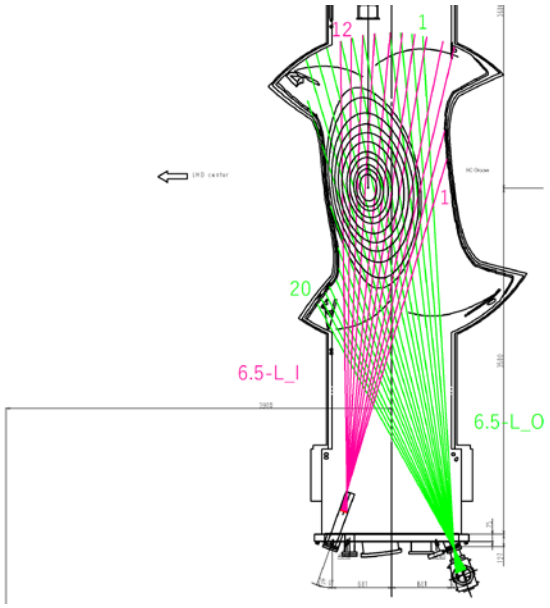

Figure 1 Field lines of 6.5-L arrays.

8-O arrays

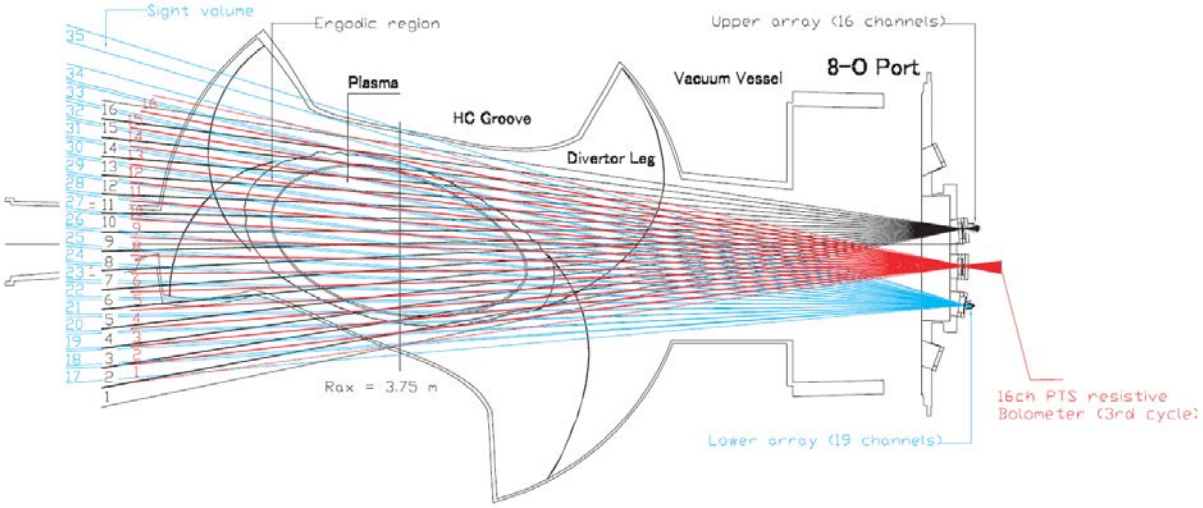

Figure 2 Field lines of 8-O arrays (red). [1]

- Time resolution: 1 ms
- Number of channels:
  # 3-O arrays: 4 ch
  # 6.5-L_I arrays: 12 ch
  # 6.5-L_O arrays: 20 ch
  # 8-O arrays: 16 ch

4. Requirement in use

- There is no requirement for usual use. The analysis (Kaiseki) data of resistive bolometer arrays are registered routinely.

5. Description of analysis (Kaiseki) data / module of MyView2

- bolo
  # Time [s]
  # Rad_PW [kW]: Total radiated power
- bolo3o, bolo65l_i, bolo65l_o, bolo8o
  # Time [s]
  # Ch number
  # Radiated power irradiated onto bolometer foil of each channel [μW]

6. Others

References

[1] B. J. Peterson *et al*., Plasma Phys. Control. Fusion **45** (2003) 1167.