

RICH Refractive Index

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Current Status

New RunInfo Class RIRich

- Very similar to RIBCkov
- Calculate ref. index based on 3 points at different wavelgengths and 1 atm, 20 C
- Get RICH pressure, temperature from Slowmon database
- Calculate RICH density and scale ref. Index
- Estimate uncertainty
- If no database entries available for run, use value at 1 atm, 20 C

Additional data at STP from a paper by Bideau-Mehu et.al. in Optics Communications

Still To Do

Include more data points over relevant range

-- 160 to 650 nm, peak response at 420 nm according to Hamamatsu

Come up with a way to weight data points rather than simply averaging

Include correction due to oxygen impurity