Segodnia ja obdumyval formulu (2), ja nakonets to ejo smog vyvesti i dazhe ponial shto levaja chastj v (1) eto reshenije uravnenija Shrodingera dlia svobodnoj chastitsy. (esli zamenitj ν n t) Sasha eto vsjo ja obdumyval s 10 utra do 11 utra kogda shol peshkom v tserkovj na prazdnik Armianskogo rozhdestva. , potom nachalasj sluzhba, torzhestvennyj obed. Vecherom ja prishjol domoj, i my reshili s Gajej poprobovatj pojekhatj zavtra, tak shto u menia dazhe net vremeni sejchas tolkom vsjo eto proveritj Izvini pishu na letu...

Posmotri,

esli vsjo budet v poriadke, to do piatnitsy.....

Geometry of diff.equations and Monge cone

Sasha yesterday I asked you a question about the interpretation of your so called model formula

$$\pm \left(\frac{(-2\pi)^n}{\det h} \right)^{\frac{1}{2}} \exp[\nu\Delta] f \big|_{x=0} = \int_{\mathbf{R}^n} \exp\left[\frac{1}{2\nu} h_{ij} x^i x^j \right] f dx^1 \dots dx^j \tag{1}$$

Consider the following operator

$$f(x,t) = e^{t\Delta} f(x,0) = \frac{1}{\sqrt{t}} \int e^{-\frac{(x-y)^2}{t}} f(y) dy \tag{2}$$

To shto tut napisano eto reshenije uravnenija teploprovodnosti, i pod integralom funkctija Grina:

$$G(t,x,y) = \frac{1}{\sqrt{t}} e^{-\frac{(x-y)^2}{t}}$$

and $\Delta G = \delta(x-y)$.

"Fizik" by skazal shto eta funktsija poluhaetjsa iz continualjnogo integrala, no dlia svobodnoj chastitsy eto prosto krasivyje slova, tak kak continualjnyj integral sovpadaet s (tochnostju do amplitudy) s eksponentoj kalssicheskogo dejstvija:

$$S_{\text{class}}(t,x,y) = \frac{(x-y)^2}{2t}$$

and

$$G(t,x,y) = N \int e^{i \int_0^t \frac{\dot{q}^2}{2} dt} \mathcal{D}q(t) = \frac{1}{\sqrt{t}} e^{iS_{class}}$$

Sasha, ja utverzhdaju, shto formula (2) eto tvoja modeljnaja formula v odnomerii (zameni ν v (1) na t i poluchish formulu (2))

Konechno eto trivialjnostj, no