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"Physics of neutron star interiors and cooling of neutron stars"

Lecture 1.

- historical remarks;
- relevant information about neutron stars;
- nucleon Fermi liquid:
- nucleon-nucleon interaction, pion softening,
- pion condensation;
- other possible phase transitions

Lecture 2.

- neutron star cooling:
- "Standard" scenario, "Standard+exotics" scenario,
- "Nuclear medium cooling" scenario;
- general radiation problem;
- comparison with data