<u>Transport and Injection of 8 GeV H^- Ions</u> (Revised 09/16/04)

1. Introduction (*Chou*)
2. Basic physics of H^- ions (*Bryant*)
3. Technical challenges for 8 GeV H^- ions
    1) Magnetic field stripping (*Bryant, Chou*)
    2) Blackbody radiation stripping (*Bryant*)
    3) Residual gas stripping (*Chou*)
    4) Stripping efficiency of the foil (*Chou, Lackey, Burgdoefer*)
    5) Multiple Coulomb scattering (*Chou*)
    6) Large angle Coulomb scattering (*Macek*)
    7) Lifetime of H^0 excited states (*Drozhdin*)
    8) Population of H^0 excited states (*?*)
    9) Energy deposition on the foil (*Kostin*)
    10) Foil heating and stress analysis (*Tang*)
    11) Radiation dose (*Kostin*)
    12) Summary (*Chou*)

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4. Beam transport line
    1) Layout and optics (*Drozhdin, Bogert*)
    2) Collimation (*Drozhdin*)
    3) Energy jitter correction (*MacLachlan, Raparia*)
    4) Energy spreader (*MacLachlan*)
    5) Magnets and power supplies (*Harding, Wolff, Jach*)
    6) RF (*Wildman, Reid*)
    7) Beam dump (*Kostin*)
5. Injection
    1) System layout and optics (*Drozhdin, Bogert*)
    2) Beam dynamics (*MacLachlan, Ostiguy, Lucas, Yoon, Chou*)
    3) Painting (*Drozhdin, MacLachlan, Lucas*)
    4) Laser chopping (*Tomlin*)
    5) Barrier RF (*Wildman, Chou*)
    6) Septum and kicker magnets and power supplies (*Lackey*)
    7) H^0 and electron beam dump (*Bogert, Drozhdin, Chou*)
6. Discussions (*Chou*)