

C U R R I C U L U M V I T A E

NIKOLAI GORELENKOV

Present Affiliation: Princeton Plasma Physics Laboratory,
Princeton University

Scientific degree: PhD, 30 March, 1993,
Russian scientific center “Kurchatov Institute”.
Thesis: “Neoclassical Alpha Particle Distribution
Function and Instabilities of Alfvén Eigenmodes
in Tokamak Plasmas”.
Adviser: Dr. Putvinski S.V.

Education:

1990 to 1993: Post-graduate student at Russian Scientific Center
“Kurchatov Institute”;
1982 to 1988: Undergraduate student at Moscow State University,
Physics Department.

Employment:

09/1999 up to now Research Staff (II) at Princeton Plasma
Physics Laboratory
**09/1993 to 06/1994,
& 02/1995 to 09/1999** Visiting Research Scholar at PPPL under
US/Russia exchange program
1988 to 1999: Research Fellow, TRINITI, Troitsk Institute
for Innovative and Fusion Research, Troitsk
Moscow region, Russia, 142092

Scientific interests:

2001 to 2002	New CAE theory and its application to high frequency instabilities in NSTX. Stochastic multi CAE mode heating of thermal ions. HINST and NOVA application to burning plasma experiments to compute the most unstable modes and the number of unstable modes to evaluate the effect of the “sea“ of Alfvén mode. Collaboration with JET, DIII-D, and JT-60U on TAE excitation and induced fast particle transport.
2000 to 2001	Application of NOVA-K, HINST to major international tokamaks,such as TFTR, JET, JT60-U, DIII-D in the area of fast particle physics and its effects on plasma stability. Particle transport during the internal reconnection events in tokamaks. Sub-ion cyclotron oscillations in NSTX.
1995 to 1999:	Study of fusion product behavior in TFTR DT experiments such as trapped particle confinement measurements by PCX diagnostic, Alfvén instability excitation, sawtooth alpha particle redistribution. PPPL - JET Collaboration on $n = 1$ stability and NPA effects on fast particles. Kinetic extension of NOVA code.
1993 to 1994:	Ion cyclotron emission from tokamaks as a collective instability and application to tritium experiments in Tokamak Fusion Test Reactor (TFTR).
1988 to 1993:	Theoretical study of fast particle physics in tokamak plasmas including neoclassical distribution function of fusion products and their drive of various collective instabilities;
Computer Skills:	experience in MS-DOS, Windows, UNIX, X Windows; FORTRAN, C programming languages;
Honors received:	1988 Graduated within the top 10% “red Diploma“ (cum laude) from Moscow state university. 1997 Russian State scientific excellence stipend 1993 ISF personal grant award.

SERVICES

Member of :

Programm committee of the International Sherwood Fusion Theory Conference held in Rochester (**2002**)

Programm committee of the IAEA technical meeting on fast ion in fusion research (**2003**)

LIST OF PUBLICATIONS AND PRESENTATIONS BY N.N.GORELENKOV

1 Journal publications

1. **Gorelenkov N. N.**; Putvinskii SV
Neoclassical distribution function in tokamak T-14
Fizika plasmy, [Sov.J.Plasma Phys.], v.15, p145-150 (1989)
2. **Gorelenkov N. N.**
Evolution of alpha particles distribution function in a tokamak with adiabatic compression
Fizika plasmy, [Sov.J.Plasma Phys.], v.16, p145-150 (1990)
3. **Gorelenkov N. N.**; Krasilnikov AV
Possibilities of alpha-particle diagnostics in future tokamaks using helium and lithium beam injection
Fusion Technology Vol 19, Iss 2, pp 207-216 (1991)
4. **Gorelenkov N. N.**; Sharapov SE
On the collisional damping of TAE-modes on trapped electrons in tokamaks
Physica Scripta Vol 45, Iss 2, pp 163-166 (1992)
5. **Gorelenkov N. N.**; Konovalov SV; Mirnov SV
Simulation of fusion alpha-component in a tokamak with He-3 plasma and high-power NBI
Physica Scripta, Vol 45, Iss 2, pp 180-183 (1992)
6. **Gorelenkov N. N.**
Effects of anisotropy on the alpha particle on stability of global Alfvén waves in a tokamak
Fizika Plasmy, v.18, 555-563 (1992) [Sov. J. Plasma Phys., v.18, 289-293 (1992)]
7. **Gorelenkov N. N.**
Thermonuclear anisotropy instability of high-n TAE modes on trapped alpha particles
Fizika Plasmy, V.19, p (1993) [Plasma Phys Rep., v.18, 404 (1993)]
8. Hosea J; Adler JH; Alling P; Ancher C; Anderson H; Anderson JL; Anderson JW; Arunasalam V; Ascione G; Ashcroft D; Barnes CW; Barnes G; Batha S; Bell MG; Bell R; Bitter M; Blanchard W; Bretz NL; Brunkhorst C; Budny R; Burgess T; Bush H; Bush CE; Camp R; Caorlin M; Carnevale H; Cauffman S; Chang Z; Cheng CZ; Chrzanowski J; Collins J; Coward G; Cropper M; Darrow DS; Daugert R; Delooper J; Duong H; Dudek L; Durst R; Efthimion PC; Ernst D; Faunce J; Fisher R; Fonck RJ; Fredd E; Fredrickson E; Fromm N; Fu GY; Furth HP; Garzotto V; Gentile C; Gettelfinger G; Gilbert J; Gioia J; Golian T; **Gorelenkov N. N.**; Grek B; Grisham LR; Hammett G; Hanson GR; Hawryluk RJ; Heidbrink W; Herrmann HW; Hill KW; Hsuan H; Janos A; Jassby DL; Jobes FC; Johnson DW; Johnson LC; Kamperschroer J; Kesner J; Kugel H; Kwon S; Labik G; Lam NT; Lamarche PH; Lawson E; Leblanc B; Leonard M; Levine J; Levinton FM; Loesser D; Long D; Loughlin MJ; Machuzak J; Mansfield DK; Marchlik M; Marmar ES; Marsala R; Martin A; Martin G; Mastrolola V; Mazzucato E; Majeski R; Mauel M; McCarthy MP; McCormack B; McCune DC; McGuire KM; Meade DM; Medley SS; Mikkelsen DR; Milora SL; Mueller D; Murakami M; Murphy JA; Nagy A; Navratil GA; Nazikian R; Newman R; Nishitani T; Norris M; OConnor T; Oldaker M; Ongena J; Osakabe M; Owens DK; Park H; Park W; Paul SF; Pavlov YI; Pearson G; Perkins F; Perry E; Persing R; Petrov M; Phillips CK; Pitcher S; Popovichev S; Pysher R; Qualls AL; Raftopoulos S; Ramakrishnan R; Ramsey A; Rasmussen DA; Redi MH; Renda G; Rewoldt G; Roberts D; Rogers J; Rossmassler R; Roquemore AL; Ruchov E; Sabbagh SA; Sasao M; Schilling G; Schivell J; Schmidt GL; Scillia R; Scott SD; Senko T; Sissingh R; Skinner C; Snipes J; Snook P; Stencel J; Stevens J; Stevenson T; Stratton BC; Strachan JD; Stodiek W; Synakowski E; Tang W; Taylor G; Terry J; Thompson ME; Timberlake JR; Towner HH; Vonhalle A; Vannoy C; Wester R; Wieland R; Wilgen JB; Williams M; Wilson JR; Winston J; Wright K; Wong D; Wong KL; Woskov P; Wurden GA; Yamada M; Yeun A; Yoshikawa S; Young KM; Zarnstorff MC; Zweber SJ
Deuterium-tritium experiments on the tokamak fusion test reactor
Fusion Technology, Vol 26, Iss 3, pp 389-398 (1994)

9. Strachan JD; Adler H; Alling P; Ancher C; Anderson H; Anderson JL; Ashcroft D; Barnes CW; Barnes G; Batha S; Bell MG; Bell R; Bitter M; Blanchard W; Bretz NL; Budny R; Bush CE; Camp R; Caorlin M; Cauffman S; Chang Z; Cheng CZ; Collins J; Coward G; Darrow DS; Delooper J; Duong H; Dudek L; Durst R; Efthimion PC; Ernst D; Fisher R; Fonck RJ; Frederickson E; Fromm N; Fu GY; Furth HP; Gentile C; **Gorelenkov N. N.**; Grek B; Grisham LR; Hammett G; Hanson GR; Hawryluk RJ; Heidbrink W; Herrmann HW; Hill KW; Hosea J; Hsuan H; Janos A; Jassby DL; Jobes FC; Johnson DW; Johnson LC; Kamperschroer J; Kugel H; Lam NT; Lamarche PH; Loughlin MJ; Leblanc B; Leonard M; Levinton FM; Machuzak J; Mansfield DK; Martin A; Mazzucato E; Majeski R; Marmar E; Mcchesney J; McCormack B; McCune DC; McGuire KM; McKee G; Meade DM; Medley SS; Mikkelsen DR; Mueller D; Murakami M; Nagy A; Nazikian R; Newman R; Nishitani T; Norris M; OConnor T; Oldaker M; Osakabe M; Owens DK; Park H; Park W; Paul SF; Pearson G; Perry E; Petrov M; Phillips CK; Pitcher S; Ramsey AT; Rasmussen DA; Redi MH; Roberts D; Rogers J; Rossmassler R; Roquemore AL; Ruskov E; Sabbagh SA; Sasao M; Schilling G; Schivell J; Schmidt GL; Scott SD; Tang W; Taylor G; Terry JL; Thompson ME; Tuszewski M; Vannoy C; Vonhalle A; Vongoeler S; Voorhees D; Walters RT; Wieland R; Wilgen JB; Williams M; Wilson JR; Wong KL; Wurden GA; Yamada M; Young KM; Zarnstorff MC; Zweber SJ
Fusion power production from TFTR plasmas fueled with deuterium and tritium
Physical Review Letters, Vol 72, Iss 22, pp 3526-3529 (1994)

10. Hawryluk RJ; Adler H; Alling P; Ancher C; Anderson H; Anderson JL; Ashcroft D; Barnes CW; Barnes G; Batha S; Bell MG; Bell R; Bitter M; Blanchard W; Bretz NL; Budny R; Bush CE; Camp R; Caorlin M; Cauffman S; Chang Z; Cheng CZ; Collins J; Coward G; Darrow DS; Delooper J; Duong H; Dudek L; Durst R; Efthimion PC; Ernst D; Fisher R; Flonck RJ; Frederickson E; Fromm N; Fu GY; Furth HP; Gentile C; **Gorelenkov N. N.**; Grek B; Grisham LR; Hammett G; Hanson GR; Heidbrink W; Herrmann HW; Hill KW; Hosea J; Hsuan H; Janos A; Jassby DL; Jobes FC; Johnson DW; Johnson LC; Kamperschroer J; Kugel H; Lam NT; Lamarche PH; Loughlin MJ; Leblanc B; Leonard M; Levinton FM; Machuzak J; Mansfield DK; Martin A; Mazzucato E; Majeski R; Marmar E; Mcchesney J; McCormack B; McCune DC; McGuire KM; McKee G; Meade DM; Medley SS; Mikkelsen DR; Mueller D; Murakami M; Nagy A; Nazikian R; Newman R; Nishitani T; Norris M; OConnor T; Oldaker M; Osakabe M; Owens DK; Park H; Park W; Paul SF; Pearson G; Perry E; Petrov M; Phillips CK; Pitcher S; Ramsey A; Rasmussen DA; Redi MH; Roberts D; Rogers J; Rossmassler R; Roquemore AL; Ruskov E; Sabbagh SA; Sasao M; Schilling G; Schivell J; Schmidt GL; Scott SD; Sissingsh R; Skinner CH; Snipes J; Stevens J; Stevenson T; Stratton BC; Strachan JD; Synakowski E; Tang W; Taylor G; Terry JL; Thompson ME; Tuszewski M; Vannoy C; Vonhalle A; Vongoeler S; Voorhees D; Walters RT; Wieland R; Wilgen JB; Williams M; Wilson JR; Wong KL; Wurden GA; Yamada M; Young KM; Zarnstorff MC; Zweber SJ
Confinement and heating of a deuterium-tritium plasma
Physical Review Letters, Vol 72, Iss 22, pp 3530-3533 (1994)

11. Hawryluk RJ; Adler H; Alling P; Ancher C; Anderson H; Anderson JL; Anderson JW; Arunasalam V; Ascione G; Ashcroft D; Barnes CW; Barnes G; Batchelor DB; Bateman G; Batha S; Baylor LA; Beer M; Bell MG; Biglow TS; Bitter M; Blanchard W; Bonoli P; Bretz NL; Brunkhorst C; Budny R; Burgess T; Bush H; Bush CE; Camp R; Caorlin M; Carnevale H; Chang Z; Chen L; Cheng CZ; Chrzanowski J; Collazo I; Collins J; Coward G; Cowley S; Cropper M; Darrow DS; Daugert R; Delooper J; Duong H; Dudek L; Durst R; Efthimion PC; Ernst D; Faunce J; Fonck RJ; Fredd E; Frederickson E; Fromm N; Fu GY; Furth HP; Garzotto V; Gentile C; Gettelfinger G; Gilbert J; Gioia J; Goldfinger RC; Golian T; **Gorelenkov N. N.**; Gouge MJ; Grek B; Grisham LR; Hammett G; Hanson GR; Heidbrink W; Hermann HW; Hill KW; Hirshman S; Hoffman DJ; Hosea J; Hulse RA; Hsuan H; Jaeger EF; Janos A; Jassby DL; Jobes FC; Johnson DW; Johnson LC; Kamperschroer J; Kesner J; Kugel H; Kwon S; Labik G; Lam NT; Lamarche PH; Laughlin MJ; Lawson E; Leblanc B; Leonard M; Levine J; Levinton FM; Loesser D; Long D; Machuzak J; Mansfield DE; Marchlik M; Marmar ES; Marsala R; Martin A; Martin G; Mastroccola V; Mazzucato E; McCarthy MP; Majeski R; Mauel M; McCormack B; McCune DC; McGuire KM; Meade DM; Medley SS; Mikkelsen DR; Milora SL; Monticello D; Mueller D; Murakami M; Murphy JA; Nagy A; Navratil GA; Nazikian R; Newman R; Nishitani T; Norris M; OConnor T; Oldaker M; Onsgaard J; Osakabe M; Owens DK; Park H; Park W; Paul SF; Pavlov Yi; Pearson G; Perkins F; Perry E; Persing R; Petrov M; Phillips CK; Pitcher S; Popovichev S; Qualls AL; Raftopoulos S; Ramakrishnan R; Ramsey A; Rasmussen

DA; Redi MH; Renda G; Rewoldt G; Roberts D; Rogers J; Rossmassler R; Roquemore AL; Sabbagh SA; Sasao M; Scharer J; Schilling G; Schivell J; Schmidt GL; Scillia R; Scott SD; Senko T; Sissingh R; Skinner C; Snipes J; Snook P; Stencel J; Stevens J; Stevenson T; Stratton BC; Strachan JD; Stodiek W; Swanson J; Synakowski E; Tang W; Taylor G; Terry J; Thompson ME; Timberlake JR; Towner HH; Ulrickson M; Vonhalle A; Vannoy C; Wieland R; Wilgen JB; Williams M; Wilson JR; Wright K; Wong D; Wong KL; Woskov P; Wurden GA; Yamada M; Yeun A; Yoshikawa S; Young KM; Zakharov L; Zarnstorff MC; Zweben SJ

Preparations for deuterium-tritium experiments on the tokamak fusion test reactor
Physics of Plasmas, Vol 1, Iss 5, pp 1560-1567 (1994)

12. **Gorelenkov N. N.**, Cheng CZ

Alfven cyclotron instability and ion cyclotron emission
Nuclear Fusion, Vol 35, Iss 12, pp 1743-1752 (1995)

13. **Gorelenkov N. N.**

Influence of kinetic effects on toroidicity-induced alfven eigenmodes
Plasma Physics Reports, Vol 21, Iss 6, pp 450-456 (1995)

14. **Gorelenkov N. N.**, Cheng CZ

Excitation of alfven cyclotron instability by charged fusion products in tokamaks
Physics of Plasmas, Vol 2, Iss 6, pp 1961-1971 (1995)

15. Bell MG; McGuire KM; Arunasalam V; Barnes CW; Batha SH; Bateman G; Beer MA; Bell RE; Bitter M; Bretz NL; Budny RV; Bush CE; Cauffman SR; Chang Z; Chang CS; Cheng CZ; Darrow DS; Dendy RO; Dorland W; Duong HH; Durst RD; Efthimion PC; Ernst D; Evenson H; Fisch NJ; Fisher RK; Fonck RJ; Fredrickson ED; Fu GY; Furth HP; **Gorelenkov N. N.**; Grek B; Grisham LR; Hammett GW; Hanson GR; Hawryluk RJ; Heidbrink WW; Herrmann HW; Hill KW; Hosea JC; Hsuan H; Hughes MH; Hulse RA; Janos AC; Jassby DL; Jobes FC; Johnson DW; Johnson LC; Kesner J; Kugel HW; Lam NT; Leblanc B; Levinton FM; Machuzak J; Majeski R; Mansfield DK; Mazzucato E; Mauel ME; McChesney JM; McCune DC; McKee G; Meade DM; Medley SS; Mikkelsen DR; Mirnov SV; Mueller D; Navratil GA; Nazikian R; Owens DK; Park HK; Park W; Parks PB; Paul SF; Petrov MP; Phillips CK; Phillips MW; Pitcher CS; Ramsey AT; Redi MH; Rewoldt G; Roberts DR; Rogers JH; Ruskov E; Sabbagh SA; Sasao M; Schilling G; Schivell JF; Schmidt GL; Scott SD; Semenov I; Sesnic S; Skinner CH; Stratton BC; Strachan JD; Stodiek W; Synakowski EJ; Takahashi H; Tang WM; Taylor G; Terry JL; Thompson ME; Tighe W; vonGoeler S; White RB; Wieland RM; Wilson JR; Wong KL; Woskov P; Wurden GA; Yamada M; Young KM; Zarnstorff MC; Zweben SJ

Overview of DT results from TFTR

Nuclear Fusion, Vol 35, Iss 12, pp 1429-1436 (1995)

16. Petrov MP; Budny RV; Duong HH; Fisher RK; **Gorelenkov N. N.**; McChesney JM; Mansfield DK; Medley SS; Parks PB; Redi MH; Roquemore AL

Studies of energetic confined alphas using the pellet charge exchange diagnostic on TFTR

Nuclear Fusion, Vol 35, Iss 12, pp 1437-1443 (1995)

17. Cheng CZ; **Gorelenkov N. N.**; Hsu CT

Fast particle destabilization of toroidal Alfven eigenmodes

Nuclear Fusion, Vol 35, Iss 12, pp 1639-1650 (1995)

18. Johnson DW; Arunasalam V; Barnes CW; Batha SH; Bateman G; Beer M; Bell MG; Bell R; Bitter M; Bretz NL; Budny R; Bush CE; Cauffman S; Chang CS; Chang Z; Chang CZ; Darrow DS; Dendy R; Dorland W; Duong HH; Durst R; Efthimion PC; Ernst D; Evenson H; Fisch N; Fisher R; Fonck RJ; Fredrickson E; Fu GY; Fujita T; Furth HP; **Gorelenkov N. N.**; Grek B; Grisham LR; Hammett G; Hawryluk RJ; Heidbrink W; Herrmann HW; Hill KW; Hosea J; Hsuan H; Hughes M; Janos A; Jassby DL; Jobes FC; Johnson LC; Kamperschroer J; Kesner J; Kotschenreuther M; Kugel H; LaMarche PH; LeBlanc B; Levinton FM; Machuzak J; Majeski R; Mansfield DK; Marmar ES; Mazzucato E; Mauel M; McChesney J; McGuire KM; McKee G; Meade DM; Medley SS; Mikkelsen DR; Mirnov SV; Mueller D; Nazikian R; Owens

DK; Park H; Park W; Parks P; Paul SF; Petrov M; Phillips CK; Phillips M; Qualls AL; Ramsey A; Redi MH; Rewoldt G; Roberts D; Rogers J; Roquemore AL; Ruskov E; Sabbagh SA; Sasao M; Schilling G; Schivell J; Schmidt GL; Scott SD; Semenov I; Sesnic S; Skinner CH; Spong D; Stratton BC; Strachan JD; Stodiek W; Synakowski E; Takahashi H; Tang W; Taylor G; Terry J; vonHalle HA; vonGoeler S; White R; Wilson JR; Wong KL; Wurden GA; Young KM; Zarnstorff MC; Zweben SJ

Recent D-T results on TFTR

Plasma Physics and Controlled Fusion, Vol 37, pp A69-A85 (1995)

19. McGuire KM; Adler H; Alling P; Ancher C; Anderson H; Anderson JL; Anderson JW; Arunasalam V; Ascione G; Ashcroft D; Barnes CW; Barnes G; Batha S; Bateman G; Beer M; Bell MG; Bell R; Bitter M; Blanchard W; Bretz NL; Brunkhorst C; Budny R; Bush CE; Camp R; Caorlin M; Carnevale H; Cauffman S; Chang Z; Chang CS; Cheng CZ; Chrzanowski J; Collins J; Coward G; Cropper M; Darrow DS; Daugert R; Delooper J; Dendy R; Dorland W; Dudek L; Duong H; Durst R; Efthimion PC; Ernst D; Evenson H; Fisch N; Fisher R; Fonck RJ; Fredd E; Fredrickson E; Fromm N; Fu GY; Fujita T; Furth HP; Garzotto V; Gentile C; Gilbert J; Gioia J; **Gorelenkov N. N.**; Grek B; Grisham LR; Hammett G; Hanson GR; Hawryluk RJ; Heidbrink W; Herrmann HW; Hill KW; Hosea J; Hsuan H; Hughes M; Hulse R; Janos A; Jassby DL; Jobes FC; Johnson DW; Johnson LC; Kalish M; Kamperschroer J; Kesner J; Kugel H; Labik G; Lam NT; Lamarche PH; Lawson E; Leblanc B; Levine J; Levinton FM; Loesser D; Long D; Loughlin MJ; Machuzak J; Majeski R; Mansfield DK; Marmar ES; Marsala R; Martin A; Martin G; Mazzucato E; Mauel M; McCarthy MP; Mcchesney J; McCormack B; McCune DC; McKee G; Meade DM; Medley SS; Mikkelsen DR; Mirnov SV; Mueller D; Murakami M; Murphy JA; Nagy A; Navratil GA; Nazikian R; Newman R; Norris M; OConnor T; Oldaker M; Ongena J; Osakabe M; Owens DK; Park H; Park W; Parks P; Paul SF; Pearson G; Perry E; Persing R; Petrov M; Phillips CK; Phillips M; Pitcher S; Pysher R; Qualls AL; Raftopoulos S; Ramakrishnan S; Ramsey A; Rasmussen DA; Redi MH; Renda G; Rewoldt G; Roberts D; Rogers J; Rossmassler R; Roquemore AL; Ruskov E; Sabbagh SA; Sasao M; Schilling G; Schivell J; Schmidt GL; Scillia R; Scott SD; Semenov I; Senko T; Sesnic S; Sissingsh R; Skinner CH; Snipes J; Stencel J; Stevens J; Stevenson T; Stratton BC; Strachan JD; Stodiek W; Swanson J; Synakowski E; Takahashi H; Tang W; Taylor G; Terry J; Thompson ME; Tighe W; Timberlake JR; Tobita K; Towner HH; Tuszewski M; Vonhalle A; Vannoy C; Viola M; Vongoeler S; Voorhees D; Walters RT; Wester R; White R; Wieland R; Wilgen JB; Williams M; Wilson JR; Winston J; Wright K; Wong KL; Woskov P; Wurden GA; Yamada M; Yoshikawa S; Young KM; Zarnstorff MC; Zavereev V; Zweben SJ

Review of deuterium-tritium results from the tokamak fusion test reactor

Physics of Plasmas, Vol 2, Iss 6, pp 2176-2188 (1995)

20. Owens DK; Adler H; Alling P; Ancher C; Anderson H; Anderson JL; Ashcroft D; Barnes CW; Barnes G; Batha S; Bell MG; Bell R; Bitter M; Blanchard W; Bretz NL; Rudny R; Bush CE; Camp R; Caorlin M; Cauffman S; Chang Z; Cheng CZ; Collins J; Coward G; Darrow DS; Delooper J; Duong H; Dudek L; Durst R; Efthimion PC; Ernst D; Fisher R; Fonck RJ; Fredrickson E; Fromm N; Fu GY; Furth HP; Gentile C; **Gorelenkov N. N.**; Grek B; Grisham LR; Hammett G; Hanson GR; Hawryluk RJ; Heidbrink W; Hermann HW; Hill KW; Hosea J; Hsuan H; Janos A; Jassby DL; Jobes FC; Johnson DW; Johnson LC; Kamperschroer J; Kugel H; Lam NT; Lamarche PH; Loughlin MJ; Leblanc B; Leonard M; Levinton FM; Machuzak J; Mansfield DK; Martin A; Mazzucato E; Majeski R; Marmar E; Mcchesney J; McCormack B; McCune DC; McGuire KM; McKee G; Meade DM; Medley SS; Mikkelsen DR; Mueller D; Murakami M; Nagy A; Nazikian R; Newman R; Nishitani T; Norris M; OConnor T; Oldaker M; Osakabe M; Park H; Park W; Paul SF; Pearson G; Perry E; Petrov M; Phillips CK; Pitcher S; Raftopoulos S; Ramsey A; Rasmussen DA; Redi MH; Roberts D; Rogers J; Rossmassler R; Roquemore AL; Ruskov E; Sabbagh SA; Sasao M; Schilling G; Schivell J; Schmidt GL; Scott SD; Sissingsh R; Skinner CH; Snipes J; Stevens J; Stevenson T; Stratton BC; Strachan JD; Synakowski E; Tang W; Taylor G; Terry JL; Thompson ME; Tuszewski M; Vannoy C; Vonhalle A; Vongoeler S; Voorhees D; Walters RT; Wieland R; Wilgen JB; Williams M; Wilson JR; Wong KL; Wurden GA; Yamada M; Young KM; Zarnstorff MC; Zweben SJ

Plasma-surface interactions in TFTR DT experiments

Journal of Nuclear Materials, Vol 222, pp 62-72 (1995)

21. **Gorelenkov N. N.**; Budny RV; Chang Z; Gorelenkova MV; Zakharov LE

A threshold for excitation of neoclassical tearing modes
Physics of Plasmas, Vol 3, Iss 9, pp 3379-3385 (1996)

22. Hawryluk RJ; Barnes CW; Batha S; Beer M; Bell MG; Bell R; Berk H; Bitter M; Bretz NL; Budny R; Bush CE; Cauffman S; Chang CS; Chang Z; Cheng CZ; Darrow DS; Dendy R; Dorland W; Dudek L; Duong H; Durst R; Efthimion PC; Evenson H; Fisch N; Fisher R; Fonck RJ; Forrest C; Fredrickson E; Fu GY; Furth HP; **Gorelenkov N. N.**; Grek B; Grisham LR; Hammett G; Heidbrink W; Herrmann HW; Herrmann M; Hill KW; Hooper B; Hosea J; Houlberg WA; Hughes M; Jassby DL; Jobes FC; Johnson DW; Kaita R; Kamperschroer J; Kesner J; Krasilnikov A; Kugel H; Kumar A; LaMarche PH; LeBlanc B; Levine J; Levinton FM; Lin Z; Machuzak J; Majeski R; Mansfield DK; Mazzucato E; Mauel M; McChesney J; McGuire KM; McKee G; Meade DM; Medley SS; Mikkelsen DR; Mirnov SV; Mueller D; Navratil G; Nazikian R; Nevins B; Okabayashi M; Osakabe M; Owens DK; Park H; Park W; Paul SF; Petrov M; Phillips CK; Phillips M; Phillips P; Ramsey A; Redi MH; Rewoldt G; Rice B; Rogers J; Roquemore AL; Rusakov E; Sabbagh SA; Sasao M; Schilling G; Schmidt GL; Scott SD; Semenov I; Skinner CH; Spong D; Strachan JD; Strait EJ; Stratton BC; Synakowski E; Takahashi H; Tang W; Taylor G; von Goeler S; von Halle A; White RB; Williams MD; Wilson JR; Wong KL; Wurden GA; Young KM; Zarnstorff MC; Zweben SJ
Review of D-T results from TFTR
Fusion Technology, Vol 30, Iss 3, pp 648-659 (1996)
23. Medley SS; Budny RV; Mansfield DK; Redi MH; Roquemore AL; Fisher RK; Duong HH; McChesney JM; Parks PB; Petrov MP; **Gorelenkov N. N.**
Measurements of confined alphas and tritons in the MHD quiescent core of TFTR plasmas using the pellet charge exchange diagnostic
Plasma Physics and Controlled Fusion, Vol 38, Iss 10, pp 1779-1789 (1996)
24. Medley SS; Mansfield DK; Roquemore AL; Fisher RK; Duong HH; McChesney JM; Parks PB; Petrov MP; Khudoleev AV; **Gorelenkov N. N.**
Design and operation of the pellet charge exchange diagnostic for measurement of energetic confined alpha particles and tritons on the Tokamak Fusion Test Reactor
Review of Scientific Instruments, Vol 67, Iss 9, pp 3122-3135 (1996)
25. **Gorelenkov N. N.**; Budny RV; Duong HH; Fisher RK; Medley SS; Petrov MP; Redi MH
Modeling of alpha particle slowing down, confinement and redistribution by sawteeth in TFTR using the FPPT code
Nuclear Fusion, Vol 37, Iss 8, pp 1053-1066 (1997)
26. Strachan JD; Batha S; Beer M; Bell MG; Bell RE; Belov A; Berk H; Bernabei S; Bitter M; Breizman B; Bretz NL; Budny R; Bush CE; Callen J; Cauffman S; Chang CS; Chang Z; Cheng CZ; Darrow DS; Dendy RO; Dorland W; Duong H; Efthimion PC; Ernst D; Evenson H; Fisch NJ; Fisher R; Fonck RJ; Fredrickson ED; Fu GY; Furth HP; **Gorelenkov N. N.**; Goloborod'ko VY; Grek B; Grisham LR; Hammett GW; Hawryluk RJ; Heidbrink W; Herrmann HW; Herrmann MC; Hill KW; Hogan J; Hooper B; Hosea JC; Houlberg WA; Hughes M; Jassby DL; Jobes FC; Johnson DW; Kaita R; Kaye S; Kesner J; Kim JS; Kissick M; Krasilnikov AV; Kugel H; Kumar A; Lam NT; LaMarche P; LeBlanc B; Levinton FM; Ludescher C; Machuzak J; Majeski RP; Manickam J; Mansfield DK; Mauel M; Mazzucato E; McChesney J; McCune DC; McGuire KM; Meade DM; Medley SS; Mikkelsen DR; Mirnov SV; Mueller D; Nagayama Y; Navratil GA; Nazikian R; Okabayashi M; Osakabe M; Owens DK; Park HK; Park W; Paul SF; Petrov MP; Phillips M; Phillips P; Ramsey AT; Rice B; Redi MH; Rewoldt G; Reznik S; Roquemore AL; Rogers J; Rusakov E; Sabbagh SA; Sasao M; Schilling G; Schmidt GL; Scott SD; Semenov I; Senko T; Skinner CH; Stevenson T; Strait EJ; Stratton BC; Stodiek W; Synakowski E; Takahashi H; Tang W; Taylor G; Thompson ME; von Goeler S; von Halle A; Walters RT; Wang S; White R; Wieland RM; Williams M; Wilson JR; Wong KL; Wurden GA; Yamada M; Yavorski V; Young KM; Zakharov L; Zarnstorff MC; Zweben SJ
TFTR DT experiments
Plasma Physics and Controlled Fusion, Vol 39, pp B103-B114 (1997)
27. Duong HH; Fisher RK; Medley SS; Petrov MP; **Gorelenkov N. N.**; Budny RV; Mansfield DK; McChesney JM; Parks PB; Roquemore AL; White RB; Zweben SJ

The effect of toroidal field ripple on confined alphas in TFTR DT plasmas
Nuclear Fusion, Vol 37, Iss 2, pp 271-282 (1997)

28. Zweben SJ; Arunasalam V; Batha SH; Budny RV; Bush CE; Cauffman S; Chang CS; Chang Z; Cheng CZ; Darrow DS; Dendy RO; Duong HH; Fisch NJ; Fredrickson ED; Fisher RK; Fonck RJ; Fu GY; Goloborodko V; **Gorelenkov N. N.**; Hawryluk RJ; Heeter R; Heidbrink WW; Herrmann HW; Herrmann M; Johnson DW; Machuzak J; Majeski R; McGuire KM; McKee G; Medley SS; Mynick HE; Nazikian R; Petrov MP; Redi MH; Reznik S; Rogers J; Schilling G; Spong DA; Strachan JD; Stratton BC; Synakowski E; Taylor G; Wang S; White RB; Wong KL; Yavorski V
Alpha-particle physics in the tokamak fusion test reactor DT experiment
Plasma Physics and Controlled Fusion, Vol 39, Iss 5A, pp 275-283 (1997)
29. Bell MG; Batha S; Beer M; Bell RE; Belov A; Berk H; Bemabei S; Bitter M; Breizman B; Bretz NL; Budny R; Bush CE; Callen J; Cauffman S; Chang CS; Chang Z; Cheng CZ; Darrow DS; Dendy RO; Dorland W; Duong H; Eftimion PC; Ernst D; Evenson H; Fisch NJ; Fisher R; Fonck RJ; Fredrickson ED; Fu GY; Furth HP; **Gorelenkov N. N.**; Goloborodko VY; Grek B; Grisham LR; Hammett GW; Hawryluk RJ; Heidbrink W; Herrmann HW; Hermann MC; Hill KW; Hogan J; Hooper B; Hosea JC; Houlberg WA; Hughes M; Jassby DL; Jobes FC; Johnson DW; Kaita R; Kaye S; Kesner J; Kim JS; Kissick M; Krasilnikov AV; Kugel H; Kumar A; Lam NT; Lamarche P; LeBlanc B; Levinton FM; Ludescher C; Machuzak J; Majeski RP; Manickam J; Mansfield DK; Mauel M; Mazzucato E; McChesney J; McCune DC; McKee G; McGuire KM; Meade DM; Medley SS; Mikkelsen DR; Mirnov SV; Mueller D; Nagayama Y; Navratil GA; Nazikian R; Okabayashi M; Osakabe M; Owens DK; Park HK; Park W; Paul SF; Petrov MP; Phillips CK; Phillips M; Phillips P; Ramsey AT; Rice B; Redi MH; Rewoldt G; Reznik S; Roquemore AL; Rogers J; Ruskov E; Sabbagh SA; Sasao M; Schilling G; Schmidt GL; Scott SD; Semenov I; Senko T; Skinner CH; Stevenson T; Strait EJ; Stratton BC; Strachan JD; Stodiek W; Synakowski E; Takahashi H; Tang W; Taylor G; Thompson MW; vonGoeler S; VonHalle A; Walters RT; Wang S; White R; Wieland RM; Williams M; Wilson JR; Wong KL; Wurden GA; Yamada M; Yavorski V; Young KM; Zakharov L; Zarnstorff MC; Zweben SJ
Deuterium-tritium plasmas in novel regimes in the Tokamak Fusion Test Reactor
Physics of Plasmas, Vol 4, Iss 5, pp 1714-1724 (1997)
30. Nazikian R; Fu GY; Batha SH; Bell MG; Bell RE; Budny RV; Bush CE; Chang Z; Chen Y; Cheng CZ; Darrow DS; Eftimion PC; Fredrickson ED; **Gorelenkov N. N.**; Leblanc B; Levinton FM; Majeski R; Mazzucato E; Medley SS; Park HK; Petrov MP; Spong DA; Strachan JD; Synakowski EJ; Taylor G; VonGoeler S; White RB; Wong KL; Zweben SJ
Alpha-particle-driven toroidal Alfvén eigenmodes in the tokamak fusion test reactor
Physical Review Letters, Vol 78, Iss 15, pp 2976-2979 (1997)
31. Stratton BC; Budny RV; Duong HH; Mansfield DK; Medley SS; Redi MH; Fonck RJ; McKee GR; Odbom A; Wising F; Fisher RK; McChesney JM; Parks PB; Petrov MP; **Gorelenkov N. N.**
Measurements of nonthermal confined alpha particles in Tokamak Test Fusion Reactor D-T plasmas
Review of Scientific Instruments, Vol 68, Iss 1, pp 269-274 (1997)
32. Fisher RK; Duong HH; McChesney JM; Parks PB; Medley SS; Budny RV; Mansfield DK; Roquemore AL; Petrov MP; **Gorelenkov N. N.**
Alpha diagnostics using pellet charge exchange: results on the Tokamak Fusion Test Reactor and prospects for ITER
Review of Scientific Instruments, Vol 68, Iss 1, pp 336-339 (1997)
33. **Gorelenkov N. N.**, C. Z. Cheng, and W. M. Tang,
HINST: a 2-D code for High-n TAE stability
Phys. Plasmas, 5, 3389 (1998).
34. **Gorelenkov N. N.**; Gorelenkova MV
Magnetoncic eigenmodes near the magnetic field well in a spherical torus
Phys. Plasmas, 5, 4104 (1998).

35. Gorelenkova MV; **Gorelenkov N. N.**; Azizov EA; Romannikov AN; Herrmann HW
Kinetic theory of plasma adiabatic major radius compression in tokamaks
Physics of Plasmas, Vol 5, Iss 5, pp 1345-1353 (1998)
36. Meadley S. S., Budny R. V., Duong H. H., Fisher R. K., Petrov M. P., **Gorelenkov N. N.**, Redi M. H.,
Roguemore A. L., White R. B., Nuclear Fusion, v.38, p1283-1302 (1998)
37. Hawryluk RJ; Batha S; Blanchard W; Beer M; Bell MG; Bell RE; Berk H; Bernabei S; Bitter M; Breizman
B; Bretz NL; Budny R; Bush CE; Callen J; Camp R; Cauffman S; Chang Z; Cheng CZ; Darrow DS; Dendy
RO; Dorland W; Duong H; Efthimion PC; Ernst D; Fisch NJ; Fisher R; Fonck RJ; Fredrickson ED; Fu
GY; Furth HP; **Gorelenkov N. N.**; Grek B; Grisham LR; Hammett GW; Hanson GR; Herrmann HW;
Herrmann MC; Hill KW; Hogan J; Hosea JC; Houlberg WA; Hughes M; Hulse RA; Jassby DL; Jobes
FC; Johnson DW; Kaita R; Kaye S; Kim JS; Kissick M; Krasilnikov AV; Kugel H; Kumar A; Leblanc B;
Levinton FM; Ludescher C; Majeski RP; Manickam J; Mansfield DK; Mazzucato E; McChesney J; McCune
DC; McGuire KM; Meade DM; Medley SS; Mika R; Mikkelsen DR; Mirnov SV; Mueller D; Nagy A; Navratil
GA; Nazikian R; Okabayashi M; Park HK; Park W; Paul SF; Pearson G; Petrov MP; Phillips CK; Phillips
M; Ramsey AT; Redi MH; Rewoldt G; Reznik S; Roquemore AL; Rogers J; Ruskov E; Sabbagh SA; Sasso
M; Schilling G; Schivell J; Schmidt GL; Scott SD; Semenov I; Skinner CH; Stevenson T; Stratton BC;
Strachan JD; Stodiek W; Synakowski E; Takahashi H; Tang W; Taylor G; Thompson ME; Von Goeler S;
Von Halle A; Walters RT; White R; Wieland RM; Williams M; Wilson JR; Wong KL; Wurden GA; Yamada
M; Yavorski V; Young KM; Zakharov L; Zarnstorff MC; Zweber SJ
Fusion plasma experiments on TFTR: A 20 year retrospective
Physics of Plasmas, Vol 5, Iss 5, pp 1577-1589 (1998)
38. Nazikian R; Fu GY; Chang Z; Batha SH; Berk H; Budny RV; Chen Y; Cheng CZ; Darrow DS; **Gorelenkov N. N.**; Levinton FM; Medley S; Petrov MP; Redi M; Ruskov E; Spong DA; White RB; Zweber SJ
Toroidal Alfvén eigenmodes in TFTR deuterium-tritium plasmas
Physics of Plasmas, Vol 5, Iss 5, pp 1703-1711 (1998)
39. Petrov MP; Khudoleev AV; Medley SS; Duong H; Roquemore AL; Fisher RK; McChesney GM; **Gorelenkov N. N.**
The use of pellet diagnostics for the study of thermonuclear alpha particles in the TFTR tokamak
Plasma Physics Reports, Vol 24, Iss 2, pp 154-157 (1998)
40. Adams JM, Ageladarakis P, Alper B, ..., **GORELENKOV NN**, et.al.
ICRF results in D-T plasmas in JET and TFTR and implications for ITER
Plasma Physics and Controlled Fusion **40**, A87, Suppl. 8A (1998)
41. **Gorelenkov N. N.**, C. Z. Cheng, G. Y. Fu,
Fast particle finite orbit width and larmor radius effects on low-n Toroidicity induced Alfvén Eigenmode excitaiton
Phys. Plasmas, **6**, 2802 (1999).
42. **Gorelenkov N. N.**, Y. Chen, R. B. White, H. L. Berk,
Saturation of alpha particle driven instability in Tokamak Fusion Test Reactor
Phys. Plasmas **6**, 629 (1999).
43. J. Manickam, T. Fujita, **N. N. Gorelenkov**, A. Isayama, Y. Kamada, M. Okabayashi, M. Bell, R. Bell,
R. Budny, E. Fredrickson, S. Ishida, Y. Ishii, F. Levinton, T. Ozeki, H. Shirai, S. Takeji, M. Zarnstorff,
Nuclear Fusion, **39**, 1819-1826 (1999).
44. Krasilnikov A.V., Medley S.S., **Gorelenkov N. N.**, Budny R.V., Darrow D.S., Roquemore A.L.,
Nuclear Fusion, **39**, 1111-1121 (1999).
45. Krasilnikov AV, Medley SS, **Gorelenkov NN**, Budny RV, Ignat'yev OV, Kaschuck YA, Petrov MP, Roquemore AL
Tokamak Fusion Test Reactor charge exchange atom spectrometry using a natural diamond detector
Review of Scientific Instruments, **70**, 1107 (1999)

46. Hawryluk R.J, et. al., **Gorelenkov N. N.**,
 Results from D-T experiments on TFTR and implications for achieving an ignited plasma,
Phi. Trans. R. Soc. Lond. A **357**, N.15, 443-469 (**1999**).
47. Petrov M. P., Bell R., Budny R. V., **Gorelenkov N. N.**, Meadley S. S., White R. B., and Zweber S. J.,
 Effective temperatures, sawtooth mixing, and stochastic diffusion ripple loss of fast H⁺ minority ions driven
 by ion cyclotron heating in the Tokamak Fusion Test Reactor,
Phys. Plasmas, **6**, 2430 (**1999**).
48. Bernabei S., Bell M.G., Budny R., Darrow D., Fredrickson E. D., **Gorelenkov N. N.**, Hosea J. C.,et.al.,
 Role of Alfvén instabilities in energetic transport,
Phys. Plasmas, **6**, 1880 (**1999**).
49. **Gorelenkov N. N.**, S. Bernabei, C.Z. Cheng, K.Hill, R.Nazikian, S.Kaye, Y.Kusama, G.J.Kramer,
 K.Shinohara, T.Ozeki, and M.V.Gorelenkova,
 Stability properties of Toroidal Alfvén Modes driven by fast particles
Nuclear Fusion Vol 40 Iss 7, pp 1311-1323 (**2000**)
50. **Gorelenkov N. N.**, C.Z. Cheng, G.Y. Fu, S.Kaye, R. White, and M.V.Gorelenkova,
 Fast particle destabilization of Toroidicity induced Alfvén Eigenmodes in the National Spherical Torus
 Experiment
Phys. Plasmas, **7**, 1433 (**2000**).
51. Bernabei S, Bell MG, Budny RV, Fredrickson ED, **Gorelenkov NN**, Hosea JC, Majeski R, Mazzucato E,
 Phillips CK, Schilling G, Wilson JR
 Nature of monster sawteeth and their relationship to Alfvén instabilities in tokamaks
Physical Review Letters, **84**, 1212 (**2000**)
52. K.Shinohara, Y.Kusama, G. J. Kramer, K. Tobita, T.Ozeki, S. Moriyama, N. Oyama, S. Takeji, T, Fujita,
 T. Oikawa, T. Sizuki, M. Nemoto, T. Nishitani, T. Kondoh, A. Morioka, S. Lee, M. Kuriyama, **N. N. Gorelenkov**, R. Nazikian, G.Y. Fu, C.Z. Cheng, and A. Fukuyama,
 Alfvén eigenmodes induced by high energetic ions in JT-60U.
Nucl. Fusion **41** 603 (**2001**).
53. Bernabei S., ..., **Gorelenkov NN**, *et.al*
 The combined effect of EPM and TAE modes on energetic ion confinement and sawtooth stabilization
Nucl. Fusion **41** 513 (**2001**).
54. Fredrickson, E., **Gorelenkov N. N.** *et al.*,
Phys. Rev. Lett. **87** (2001) 145001.
55. Gates, D., **Gorelenkov N. N.**, White, R.B.,
Phys. Rev. Lett. **87** (2001) 205003.
56. **Gorelenkov, N.N.**,Gondhalekar, A., Korotkov, A.A., Sharapov, S.E., Testa,D.
 Mechanism of Radial Redistribution of Energetic Trapped Ions due to m=2/n=1 Internal Reconnection in
 Joint European Torus Shear Optimized Plasmas
PPPL-3653 (2002), *Phys. Plasmas* **10** (**2003**) pp. 713-725.
57. **Gorelenkov, N.N.**, Cheng,, C. Z. , Fredrickson, E.
 Compressional Alfvén Eigenmode Dispersion in Low Aspect Ratio Plasmas.
Preprint PPPL-3663, Phys. Plasmas **9** (**2002**) pp.3483-3488.
58. **Gorelenkov, N.N.**, Cheng,, C. Z. , Fredrickson, E. Belova, E., Gates, D., Kaye, S., Kramer, G. J.,
 Nazikian, R., White, R.
 Compressional Alfvén Eigenmode Instablility in NSTX.
Preprint PPPL pending, Nucl.Fusion **42** (**2002**) pp.977-985.

59. **Gorelenkov N. N.** and Heidbrink W. W.,
 Energetic particle effects can explain the low frequency of Alfvén modes in the DIII-D tokamak.
 Preprint PPPL-3539, Nucl.Fusion **42** (2002) p.150.
60. Angioni, C., Pochelon, A., **Gorelenkov, N.N.**, McClements, K.G., Sauter, O., Budny, R.V., de Vries, P.C., Howell, D.F., Mantsinen, M., Nave, M.F.F., Sharapov, S.E.,
 Neutral beam stabilisation of sawtooth oscillations in JET
 Preprint CRPP-LPR 705/01, Plasma Phys. Control. Fusion **44** (2002) p. 205.
61. **Gorelenkov, N.N.**, Cheng, C. Z. ,
 On Properties of Compressional Alfvén Eigenmode Instability Driven by Superalfvénic Ions
 Preprint PPPL-3667, Nucl.Fusion **42** (2002) pp. 1216-1220.
62. Fredrickson, E., **Gorelenkov N. N.**, Cheng, C. Z., Bell, R., Darrow, D., Gates, D., Johnson, D., Kaye, S., LeBlanc, B., McCune, D., Menard, J., and Roquemore, L.,
 Study of the effect of compressional Alfvén modes on thermal transport in the National Spherical Torus Experiment, Phys. Plasmas **9** (2002) 2069.
63. Nave, M.F.F., **Gorelenkov, N. N.**, McClements, K.G., Allfrey, S.J., Balet, B., Borba, D.N., Lomas, P.J., Manickam, J., Jones, T.T.C., Thomas, P.R., Fast particle effects on the sawtooth stability of JET DT discharges, Nucl.Fusion **42** (2002) 281-289.
64. **Gorelenkov, N.N.**, Zakharov, L.E., Gorelenkova, M.V.,
 Toroidal Plasma Thruster for Interplanetary and Interstellar Space Flights
 Preprint PPPL-3592, AIAA Journal **42** (May 2003) pp.774-784.
65. J.P.Graves, O. Sauter, **N. N. Gorelenkov**, "The internal kink mode in an anisotropic flowing plasma with application to modeling neutral beam injected sawtooth discharges", Phys. Plasmas **10** (2003) pp. 1034- 1047.
66. **Gorelenkov, N.N.**, H.L.Berk, Cheng, C. Z., G.-Y. Fu, W. W. Heidbrink, G.J. Kramer, D. Meade, and R. Nazikian. Study of Thermonuclear Alfvén Instabilities in Next Step Burning Plasma Experiments, PPPL-3717, Nuclear Fusion **43** (2003) pp. 594-605.
67. W.W. Heidbrink, **N. N. Gorelenkov** and Murakami M., "Beam-driven energetic particle modes in advanced tokamak plasmas", Nucl. Fusion **42** (2002) p. 972-976.
68. **N. N. Gorelenkov**, E. Fredrickson, E. Belova, C. Z. Cheng, D. Gates, S. Kaye, R. White, "Theory and Observations of High Frequency Alfvén Eigenmodes in Low Aspect Ratio Plasma", Report PPPL-3828, Nucl. Fusion **43** No 4 (April 2003) p. 228-233.
69. E. D. Fredrickson, C. Z. Cheng, D. Darrow, G.-Y. Fu, **N. N. Gorelenkov**, G. Kramer, S. S. Meadley, J. Menard, L. Roquemore, D. Stutman, R. B. White, "Wave driven fast ion loss in the National Spherical Torus Experiment", Phys. Plasmas **10** (2003) 2852.
70. W. W. Heidbrink, E. D. Fredrickson, **N. N. Gorelenkov**, A. W. Hyatt, G. Kramer, and Y. Luo, "An Alfvén eigenmode similarity experiment", Plasma Phys. Control. Fusion, **45** (2003) p. 983-997.
71. E. V. Belova, **N. N. Gorelenkov**, C. Z. Cheng, "Self-consistent equilibrium model of low aspect-ratio toroidal plasma with energetic beam ions", Phys. Plasmas **10** (2003) 3240.
72. **N. N. Gorelenkov**, M. J. Mantsinen, S. E. Sharapov, C. Z. Cheng, Modeling of ICRH H-minority driven n 1 resonant modes in JET, PPPL report 3858.
73. **N. N. Gorelenkov**, *et.al.* Sub-cyclotron Instability of Alfvén Eigenmodes due to Energetic Ions in Low Aspect Ratio Plasmas, PPPL report 3857.

74. **N.N. Gorelenkov**, E.V. Belova, H.L.Berk, C.Z. Cheng, E. Fredrickson, W.W. Heidbrink, S. Kaye, G.J. Kramer, "Beam Ion Driven Instabilities in NSTX" PPPL report 3901, submitted to Physics of Plasmas 2003.
75. G.J. Kramer, S.E. Sharapov, R. Nazikian, **N.N. Gorelenkov**, R.V. Budny, "Observation of odd Toroidal Alfvén Eigenmodes" , Phys.Rev.Let., **92** (2004) 015001-1.
76. C.Z. Cheng, **N.N. Gorelenkov**, "Trapped electron stabilization of ballooning modes in low aspect ratio toroidal plasmas", PPPL Report #3934, 2004.
77. E.D. Fredrickson, **N.N. Gorelenkov**, and J. Menard, "Phenomenology of Compressional Alfvén Eigenmodes", PPPL-3955, 2004.

2 Papers in Conference Proceedings

2.1 International Atomic Agency Energy Conference (IAEA)

1. Petrov MP, **Gorelenkov N. N.** (combined paper), Budny R. V., Chang Z., Darrow D. S., Duong H. H., Fisher R. K., Fonck R. J., Herrmann H. W., McKee G. R., Medley S. S., Odbлом A., Roquemore A. L., Stratton B. C., Wising F., White R. B., Zhao Y., Zweber S. J.,
Sawtooth mixing of alpha particles in TFTR DT plasmas
Proceedings of the 16th International Conference on Plasma Physics and Controlled Nuclear Fusion Research, Montreal, Canada, **1996** (International Atomic Energy, Vienna, Austria)
ibid. Paper IAEA-CN-64/A2-2
2. Krasilnikov AV, Roquemore A. L., **Gorelenkov N. N.**, Budny R. V.,
TFTR D-T neutron spectra using natural diamond detectors
ibid. Paper IAEA-CN-64/A2-5
3. Nazikian R., Batha S. H., Bell M. G., Bell R. E., Budny R. V., Bush C. E., Chang Z., Chen Y., Cheng C.Z., Darrow D. S., Duong H. H., Eftimion P. C., Fredrickson E. D., Fu G. Y., **Gorelenkov N. N.**, LeBlanc B., Levinton F. M., Majeski R., Mazzucato E., Medley S. S., Park H. K., Petrov M. P., Spong D. A., Synakowski E. J., Taylor G., Von Goeler S., White R. B., Wong K. L., Zweber S. J.,
Observation of alpha particle driven Toroidal Alfvén Eigenmode in TFTR DT Plasmas
ibid. Paper IAEA-CN-64/A2-4
4. Cheng C.Z., Berk H. L., Borba D., Budny R. V., Bulmer R. H., Candy J., Darrow D. S., Fasoli A., Fredrickson E. D., Fu G. Y., Goldston R. J., **Gorelenkov N. N.**, Huysmans G. T. A., Kerner W., Kimura H., Konovalov S. V., Kusama Y., Manickam J., Nazikian R., Neilson G. H., Nevins W. M., Ozeki T., Pearlstein L. D., Putvinski S., Redi M. H., Romanelli F., Rosenbluth M. N., Sharapov S. E., Spong D. A., Tobita K., VanDam J. W., Vlad G., White R. B., Wong K. L., Wong V., Zonca F., Zweber S. J.,
Energetic particle physics issues for ITER
ibid. Paper IAEA-CN-64/FP-23
5. R. O. Dendy, McClements K. G., Lashmore-Davies, Majeski R., Cauffman S., Cheng C.Z., **Gorelenkov NN**, Cottrell G. A.,
Ion cyclotron emission: a collective alpha-particle effect in deuterium-tritium plasmas in TFTR and JET
ibid. Paper IAEA-CN-64/AP1-15
6. **Gorelenkov NN**, et.al.
Linear and Nonlinear study of Alfvén instabilities in tokamaks
Proceedings of the 17th International Conference on Plasma Physics and Controlled Nuclear Fusion Research, Yokohama, Japan, Nov. **1998** (International Atomic Energy, Vienna, Austria).
Paper IAEA-F1-CN-69/THP2/21
7. Bernabei S., ..., **Gorelenkov NN**, et.al.
Alfvén instabilities during ICRF minority heating in TFTR
ibid. Paper IAEA-F1-CN-69/EXP3/08
8. Putvinski S., ..., **Gorelenkov N.N.**, et.al.
Energetic particles and runaway electrons in ITER.
ibid. Paper IAEA-ITERP1/10
9. **Gorelenkov N. N.**, Bernabei S., Cheng C.Z., Fu G.Y, Hill K., Kaye S., Kramer G. J., Kusama Y., Shinnohara K., Nazikian R., Ozeki T., and Park W.,
Fast Particle Effects on the Internal Kink, Fishbone and Alfvén Modes,
Proceedings of the 18th International Conference on Plasma Physics and Controlled Nuclear Fusion Research, Sorrento, Italy, October **2000**. (International Atomic Energy, Vienna, Austria)
Paper IAEA-CN-77/TH6/1

10. Shinohara K., Kusama Y., Kramer G. J., Tobita K., Ozeki T., Moriyama S., Oyama N., Takeji S., Fujita T., Oikawa T., Suzuki T., Nemoto M., Nishitani T., Kondoh T., Morioka A., Lee S., Kuriyama M., **Gorelenkov** N. N., Nazikian R., Fu G.Y., Cheng C.Z., and Fukuyama A., Alfvén Eigenmodes Induced by High Energetic Ions in JT-60U.
ibid. Paper IAEA-CN/EXP2/05.
11. Bernabei S., .., **Gorelenkov NN**, *et.al*
The combined effect of EPM and TAE modes on energetic ion confinement and sawtooth stabilization
ibid. Paper IAEA-CN/EXP2/03
12. McClements K.G., .., **Gorelenkov NN**, *et.al*
Energetic particle physics and MHD stability in JET and START
ibid. Paper IAEA-CN/EXP2/08

2.2 European Physical Society Conference (EPS)

1. **Gorelenkov NN**, Romannikov AN
On the question of adiabatic R-contraction in a tokamak
in Controlled Fusion and Plasma Heating (Proc. 17th European Physical Society Conference Amsterdam, Netherlands, 1990), Vol. **14B**, 914 (**1990**)
2. **Gorelenkov NN**, Polevoy A. R.,
Thermonuclear Instability of FMS modes in Tokamak,
in Controlled Fusion and Plasma Physics (Proc. 20st Eur. Conf. Lisbon, Portugal, 1993), Vol. **17C**, 1355 (**1993**).
3. Petrov M. P., **Gorelenkov NN**, Budny R., Mansfield D. K., Medley S. S., Duong H. H., Fisher R. K., McChesney J. M., Parks P. B.,
Aspects of trapped confined alpha physics on TFTR
in Controlled Fusion and Plasma Physics (Proc. 23rd Eur. Conf. Kiev, 1996), Vol. **20C**, 63 (**1996**).
4. Budny RV, Fu G. Y., **Gorelenkov N. N.**, Manickam J., Petrov M. P., Redi M. H., Sabbagh S., White R. B., Zakharov L. E., Zhao Y., Zweben S. J.,
Occurrence of Sawteeth in ITER and their Effects on Alpha Particles and Stability
ibid, 55 (**1996**).
5. Nave M. F. F., McClements K. G., Balet B., Borba D. N., Budny R., Gimblet C. G., **Gorelenkov N. N.**,
Hastie J., Hender T. C., Lomas P., Manickam J., Thomas P., Smeulders P.,
Sawtooth stability in JET deuterium-tritium discharges.
in Controlled Fusion and Plasma Physics (Proc. 25th European Physical Society Conference Praha, Czech Rep., 1998), Vol. **22C**, 365 (**1998**)
6. **Gorelenkov N. N.**, Cheng C. Z., Gorelenkova M. V., Fu G. Y., and Nazikian R.,
Fast particles and TAE excitation in NSTX.
in Controlled Fusion and Plasma Physics (Proc. 26th European Physical Society Conference Maastricht, Netherlands, 1999), Vol. **23J**, 1717 (**1999**)
7. Akers R., McClements K. G., Sharapov S. E., Borba D. N., **Gorelenkov N. N.**, Gorelenkova M. V., Appel L. C., Gryaznevich M. P.,
Modelling of Toroidal Alfvén Eigenmodes and Fishbones in the START Spherical Tokamak
ibid, 117
8. **Gorelenkov N. N.**, Nave M. F. F., Budny R., Cheng C. Z., Fu G. Y., Hastie J., Manickam J., Park W.,
Effect of Plasma Rotation on Sawtooth Stabilization by Beam Ions.
in Controlled Fusion and Plasma Physics (Proc. 27th European Physical Society Conference Budapest, Hungary , 2000), Vol. **24B**, 1553 (**2000**)
9. K. McClements, Akers R., Appel L. C., Gryaznevich M. P., Gorelenkov N. N., and Gorelenkova M. V.,
Alfvén Eigenmodes in a Beam-Assisted Ohmic START Discharge.
ibid, 1509.
10. Yavorskij, V.A., Darrow, D., Goloborodko, V.Ya., Reznik, S.N., Holzmueller-Steinacker, U., **Gorelenkov N. N.**,
Schoepf, K.
Fast Ion Transport Processes In Spherical Tokamaks Induced by Non-Conservation of the Magnetic Moment
in Controlled Fusion and Plasma Physics (Proc. 28th European Physical Society Conference Madaira, Spain, 2001), P5.025.
11. Fredrickson, E.D., **Gorelenkov, N.**, Cheng, C.Z., Bell, R., Darrow, D., Johnson, D., Kaye, S., LeBlanc, B., Menard, J., Kubota, S. , Peebles, W.

Observation of Beam Driven Modes during Neutral Beam Heating on the National Spherical Torus Experiment
ibid, P3.019.

12. Pochelon, A., Angioni, C., Mantsinen, M., **Gorelenkov, N.N.**, McClements, O., Budny, de Vries, P.C., Howell, D.F., Nave, M.F.F., Sauter, O., Sharapov, S.E.,
Sawtooth Stabilisation by Neutral Beam-Injected Fast Ions in JET.
ibid, P5.009
13. E. V. Belova, **N. N. Gorelenkov**, C. Z. Cheng, R. C. Davidson, E. D.,
Fredrickson, Numerical study of instabilities driven by the energetic neutral beam ions in NSTX,
in Controlled Fusion and Plasma Physics (Proc. 30th European Physical Society Conference, St.Petersburgh,
Russia, 2003), P-3.102.
14. **N. N. Gorelenkov**, M. J. Mantsinen, S. E. Sharapov, C. Z. Cheng,
Modeling of ICRH H-minority driven n 1 resonant modes in JET
ibid, P-2.100.
15. **N. N. Gorelenkov**, E. V. Belova, C. Z. Cheng, E. Fredrickson,
Sub-cyclotron Instability of Alfvén Eigenmodes due to Energetic Ions in Low Aspect Ratio Plasmas
ibid, P-3.103.

3 Invited Talks at Major Conferences

1. **Gorelenkov N. N.**, et.al.,
CAE driven by fast particles.
Invited talk at 4th IAEA TCM on fast particles in fusion research, PPPL, Princeton, USA, April (**1995**)
2. **Gorelenkov NN**; Cheng CZ et.al
HINT-F: A 2-D high-n TAE stability code
Invited talk at IAEA TCM, Alpha particle technical committee meeting, Abingdon UK (**1997**)
3. **Gorelenkov NN**
2-D high-n analysis of toroidicity induced Alfvén eigenmodes
Invited talk at International Sherwood Fusion Theory Conference, Madison WI, 2D02 (**1997**)
4. **Gorelenkov N. N.**, et.al.,
Stability properties of Alfvén modes driven by fast particles.
Invited talk at 6th IAEA TCM on fast particles in fusion research, JAERI, Naka, Japan, October 12-14 (**1999**)
5. **Gorelenkov NN**, et.al.
Fast Particle Effects on the Internal Kink, Fishbone and Alfvén Modes.
Talk at 18th IAEA conference, Sorrento, Italy, Oct. (**2000**)
6. **Gorelenkov NN**, et.al.
Compressional Alfvén Eigenmode Instability in NSTX
Invited talk at 7th IAEA TCM, Alpha particle technical committee meeting, 2001, Sweden (**2001**)
7. **Gorelenkov NN**, et.al.
Beam ion driven instabilities in NSTX
Invited talk at 45th APS Division of Plasma Physics Meeting Albuquerque, NM (**2003**)

4 Unpublished papers

1. Gorelenkov N. N.
Thermonuclear cone instability in a tokamak
Preprint IAE-5139/6 (1990)
2. Budny RV, **Gorelenkov N. N.** *et.al.*
Occurrence of sawteeth in ITER and their effects on alpha particles and stability
Preprint PPPL-3200 (1996)
3. **Gorelenkov N. N.**, S. Bernabei, C.Z. Cheng, G.Y. Fu, K. Hill, S. Kaye, G. J. Kramer, Y.Kusama, K.Shinohara, R.Nazikian, T.Ozeki, and W. Park,
Fast particle effects on the internal kink, fishbone and Alfvén modes,
Preprint PPPL-3506 (2000)

Signature Name