Ken Nomoto's contribution to Japanese Science

Izumi Hachisu
Department of Earth Science and Astronomy
School of Arts and Sciences, University of Tokyo

Jun Jugaku's words

"Nomoto is the most successful astrophysicist in Japan."

He said in the annual meeting of the Astronomical Society of Japan

Citation of Nomoto's works

Jun Jugaku (former chief editor of PASJ)

has researched citations of Japanese astronomers' works and concluded that Nomoto is the most successful astrophysicist in Japan.

by ADS .... 600 papers and 12000 citations ... 700 (W7 model)
28 high impact papers cited more than 100 times

Sachiko Tsuruta's words

"Nomoto is everywhere."

Invitation from many conferences

Sachiko Tsuruta
(Japanese female astrophysicist)

attended many meetings and always found Nomoto there and was deeply impressed that Nomoto was everywhere.

Dai-ichiro Sugimoto's words

"This award is owed mainly to Nomoto-kun." He said when he and Nomoto were awarded the Japan Academy Prize.

Japan Academy Prize

Dai-ichiro Sugimoto
(former president of the Astronomical Society of Japan and Nomoto's teacher)

said "Nomoto-kun's work is so striking that the Japan Academy awarded us the Prize."

Major Sites of Astronomy in Japan

Chushiro Hayashi (Kyoto Univ.) headed the stellar evolution in Japan in 1960's.

Descendants of Chushiro Hayashi

Chushiro Hayashi

→ Daiichiro Sugimoto

→ Ken'ichi Nomoto

Chronicle of Nomoto and Astrophysics

1946 Nomoto was born in Tokyo

1955 YITP (Yukawa Institute for Theoretical Physics) meeting

Yukawa is the first Japanese Novelist (theory of mesons)

→ starting "Japanese astrophysics"
→ C. Hayashi moved to astrophysics

"Young" astrophysicists at YITP

XXXX, Hayashi, XXXX, Hayakawa
Hatanaka, XXXX, Yukawa

Chronicle (2)

1961 Hayashi-track

1962 "Bible" of stellar evolution written by Hayashi, Hoshi, and Sugimoto (HHS)

fitting in the U-V plane by hands

1964 Henyey code

automatic calculation

1965 Nomoto entered Univ. of Tokyo

Nomoto was attracted by Prof. Hatanaka (Univ. of Tokyo) but he already died in 1963

Chronicle (3)

Chronicle (3)

1969 Sugimoto developed a stable stellar evolution code (Sugimoto code)
Henyey code → Sugimoto code

1969 Nomoto entered the Graduate School, Dept. of Astronomy, Univ. of Tokyo

1970 Sugimoto moved to Univ. of Tokyo

Chronicle (4)

Chronicle (4)

1970 Nomoto joined "Sugimoto's school"

1976 Nomoto developed "Nomoto code" and succeeded in calculating a carbon-deflagration

"Sugimoto code" is for quasi-static evolution
"Nomoto code" is for both dynamical and quasi-static evolution

Chronicle (5)

1982 Pre-evolution to Type Ia supernova

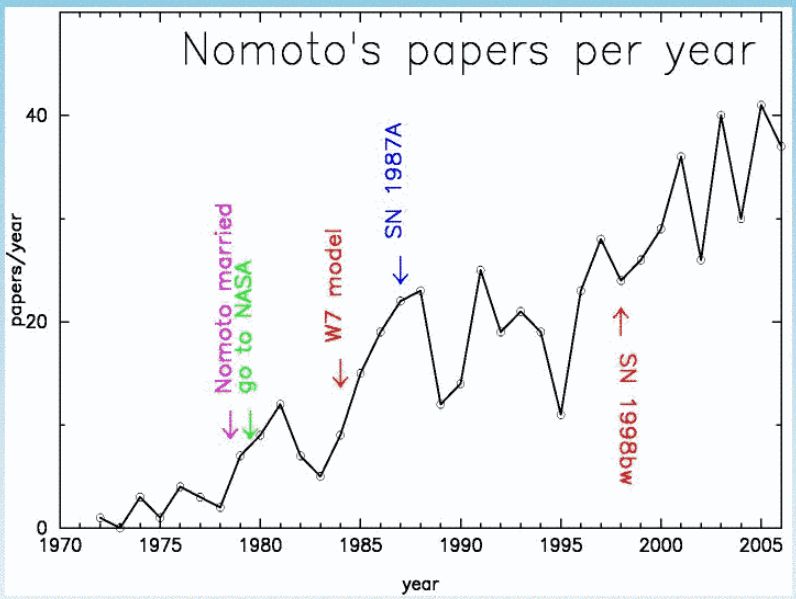
1984 Nomoto, Thielemann, and Yokoi (W7 model)

1987 SN 1987A exploded !!!

Nomoto's work also exploded !!!

1998 Hypernova-GRB 1998bw

Increasing Number of Nomoto's papers



1984 Nomoto, Thielemann, and Yokoi (W7 model)

Nomoto's positioning in Japan(1)

Nomoto's positioning in Japan(1)

○ He inherited stellar evolution in Japan

Chushiro Hayashi

→ Daiichiro Sugimoto

→ Ken'ichi Nomoto

Nomoto's positioning in Japan(2)

Nomoto's positioning in Japan(2)

○ Organizer of a large supernova group

○ Collaboration with other fields in Japan
- ←→ Planetary physics
- ←→ Nuclear physics
- ←→ High energy physics
- ←→ Laser fusion

○ greatly advanced the supernova study in Japan by collaborating with international people

More works for ever

Nomoto-san
Congratulation for your 60th birthday!

- **Coming supernovae/hypernovae need you (your idea and insight)**
- **Please don't quit at least until the nature of Type Ia SNe is clarified**