SAO Explorer

Advanced topics

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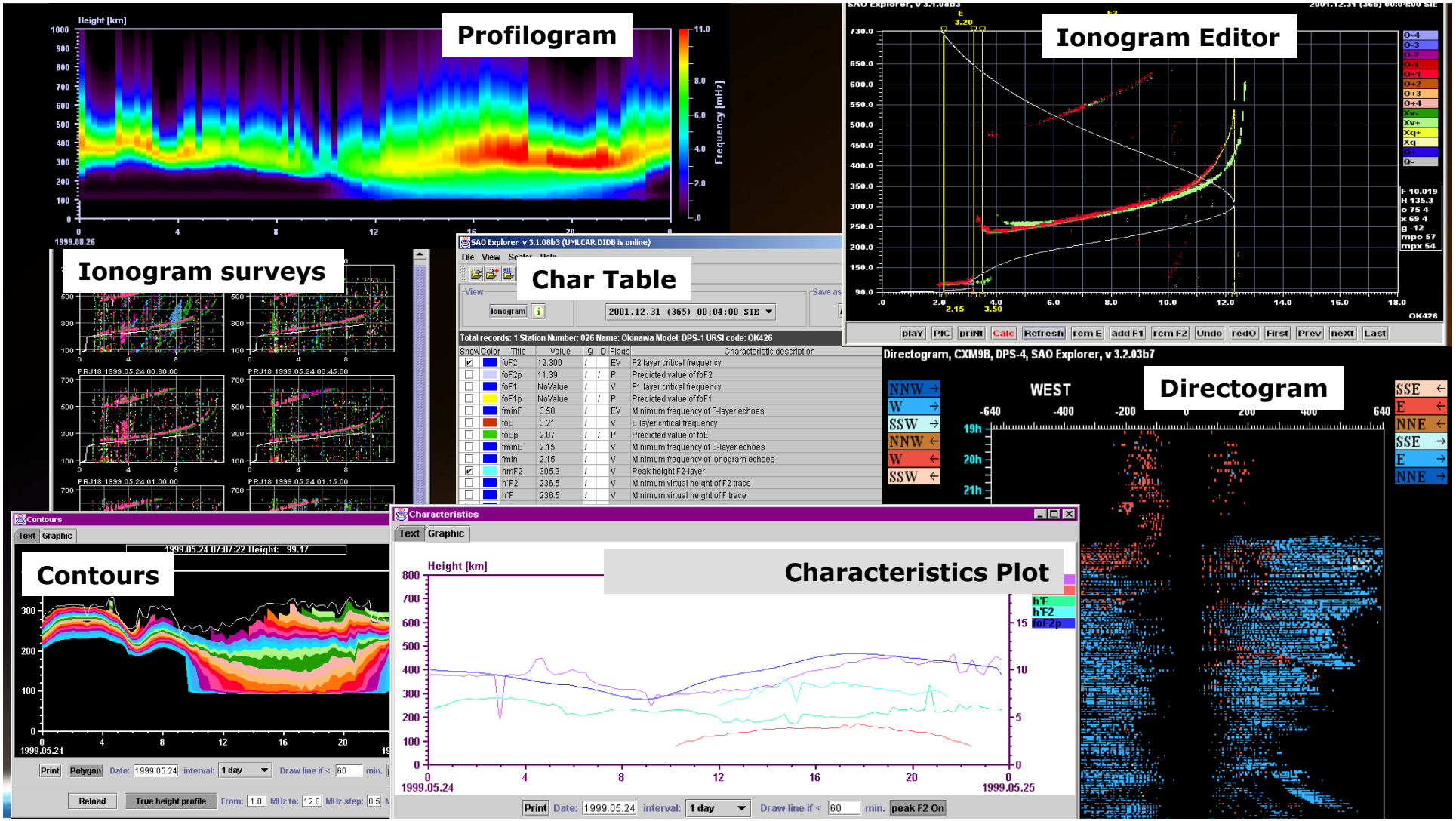
Profilogram
Ionogram Editor
Ionogram surveys
Char Table
Directogram
Contours
Characteristics Plot
Height [km]
Frequency [mHz]
SAO Explorer v 3.1.08b3 (UMLCAR DIDB is online)
Total records: 1 Station Number: 026 Name: Okinawa Model: DPS-1 URSI code: OK426
Directogram, CXM9B, DPS-4, SAO Explorer, v 3.2.03b7
WEST
Contours
Characteristics
Text
Graphic
Print
Polygon
Reload
True height profile
peak F2 On

SAO Explorer Workgroups

- Sign up for hands-on SAO-X sessions with Sasha or Ivan
- This “tips and tricks” presentation will review some of the less known features

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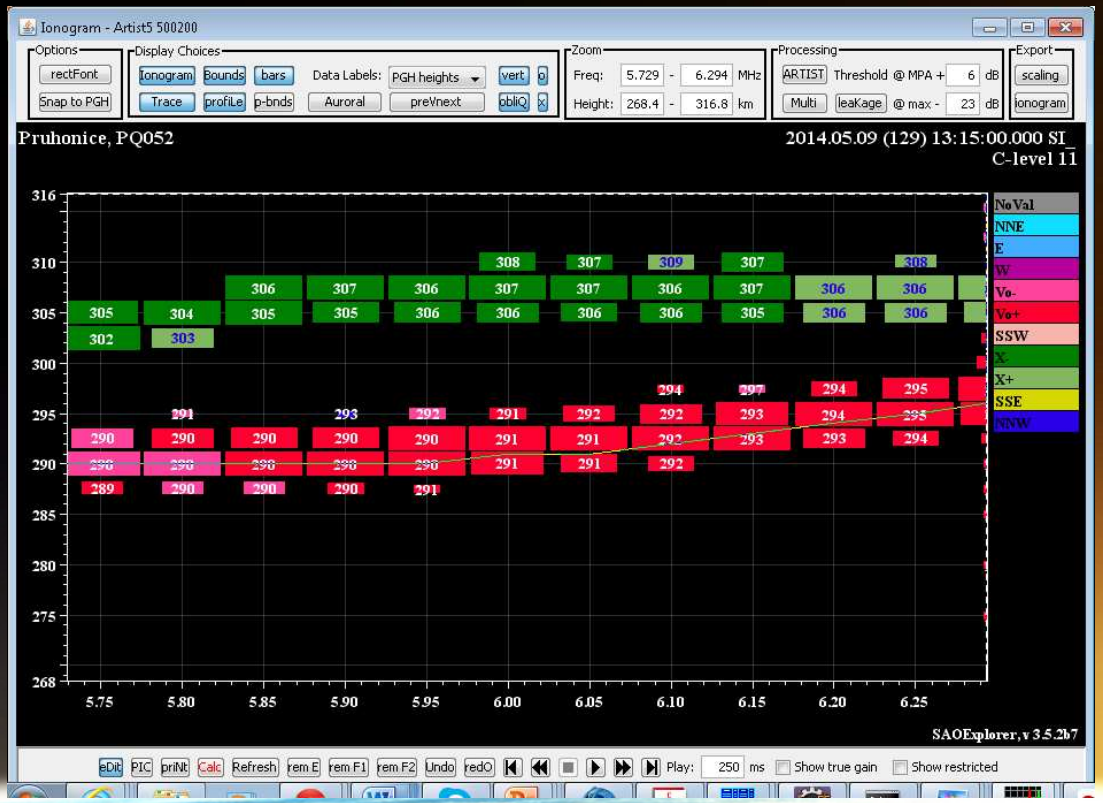
New Features

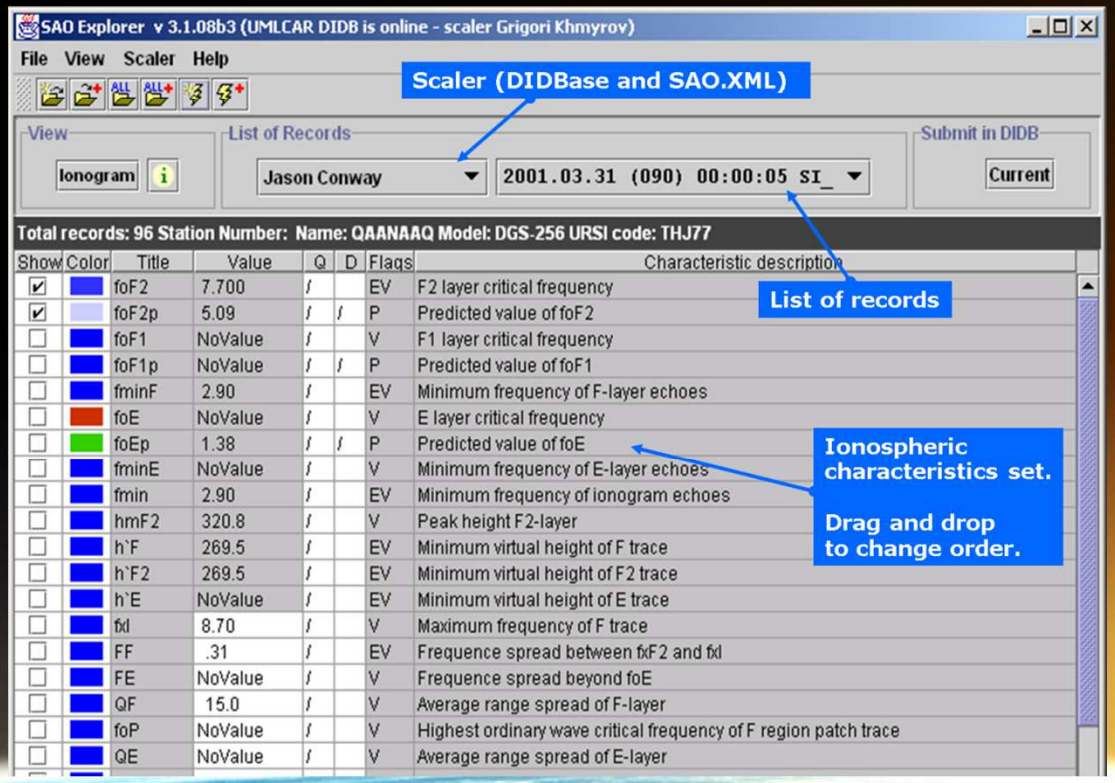
- Digisonde 4D new ionogram format “ING”
  - Will allow skymapping ionograms!!
- Dashes in electron density profile display
  - Sections of profile derived with model assumptions
- Selection of look-and-feel and fonts
- Option to show data on restricted frequencies
- User folder
  - Windows 7/8 and Linux

Tips and Tricks: Ionogram Mode



- Use shortcut keys
  - W = Run ARTIST
  - X = next
  - Z = previous
  - C = Run NHPC
  - Use tooltips
- Use Data Labels
  - PGH
- Navigate using keys
  - Arrows
  - +, - and Esc for zoom
- No need to fit “o” to move layer bounds
- Use Right button for Es

Tips and Tricks: Chars Window



Show	Color	Title	Value	Q	D	Flags	Characteristic description
✔		foF2	7.700	/		EV	F2 layer critical frequency
✔		foF2p	5.09	/	/	P	Predicted value of foF2
		foF1	NoValue	/		V	F1 layer critical frequency
		foF1p	NoValue	/	/	P	Predicted value of foF1
		fminF	2.90	/		EV	Minimum frequency of F-layer echoes
		foE	NoValue	/		V	E layer critical frequency
		foEp	1.38	/	/	P	Predicted value of foE
		fminE	NoValue	/		V	Minimum frequency of E-layer echoes
		fmin	2.90	/		EV	Minimum frequency of ionogram echoes
		hmF2	320.8	/		V	Peak height F2-layer
		h`F	269.5	/		EV	Minimum virtual height of F trace
		h`F2	269.5	/		EV	Minimum virtual height of F2 trace
		h`E	NoValue	/		EV	Minimum virtual height of E trace
		fxI	8.70	/		V	Maximum frequency of F trace
		FF	.31	/		EV	Frequence spread between fxF2 and fxI
		FE	NoValue	/		V	Frequence spread beyond foE
		QF	15.0	/		V	Average range spread of F-layer
		foP	NoValue	/		V	Highest ordinary wave critical frequency of F region patch trace
		QE	NoValue	/		V	Average range spread of E-layer

- Drag and Drop to rearrange the order of chars

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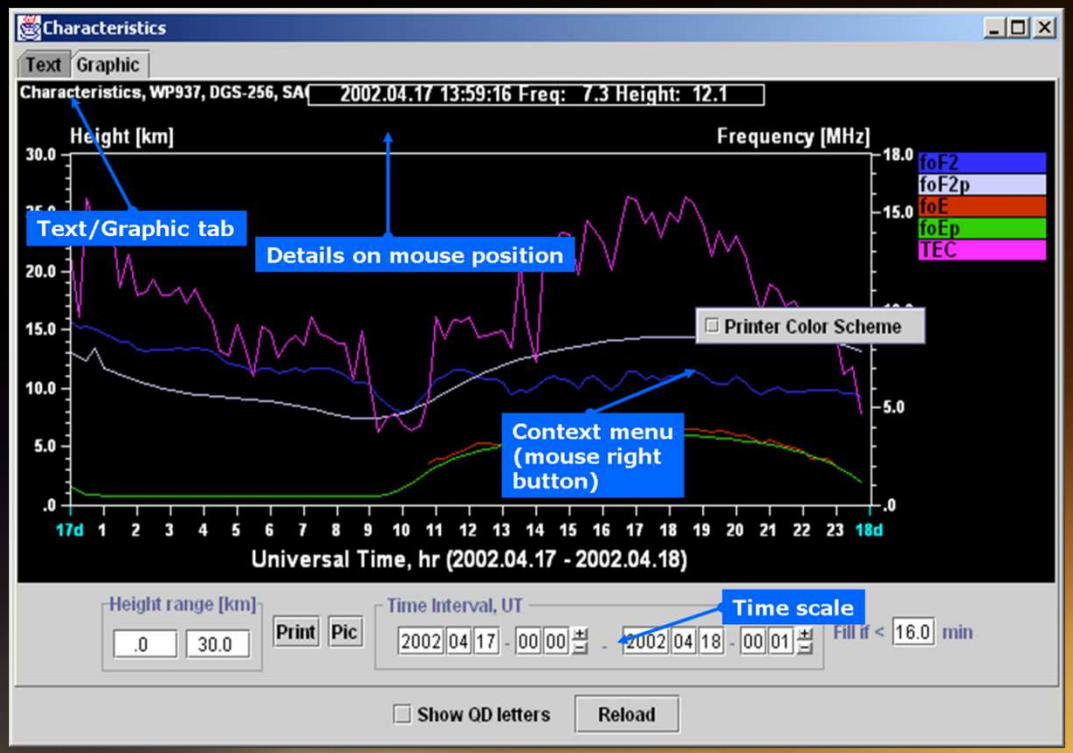
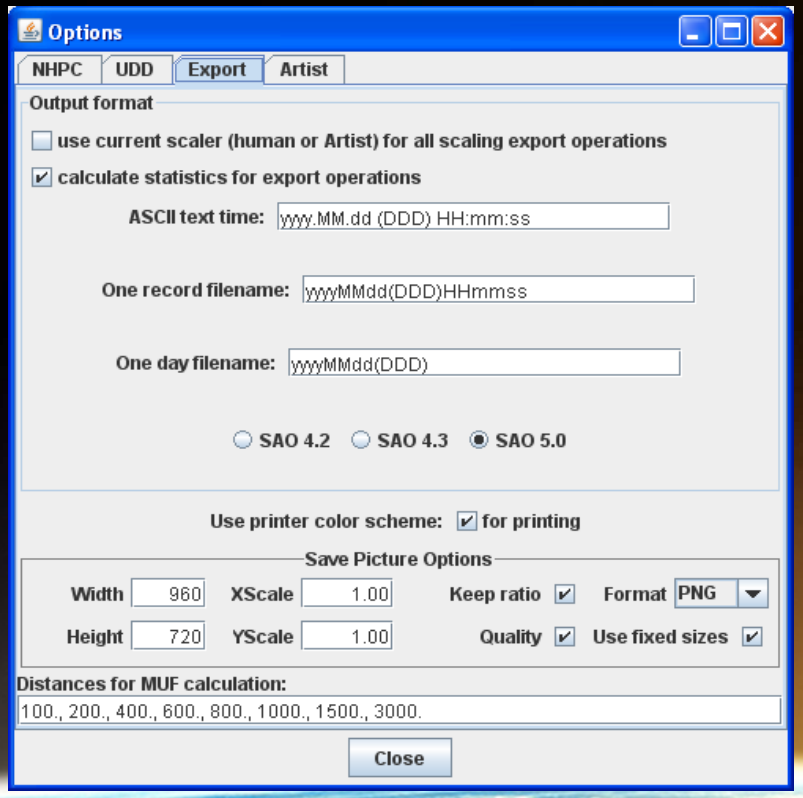
Tips and Tricks: Time Series



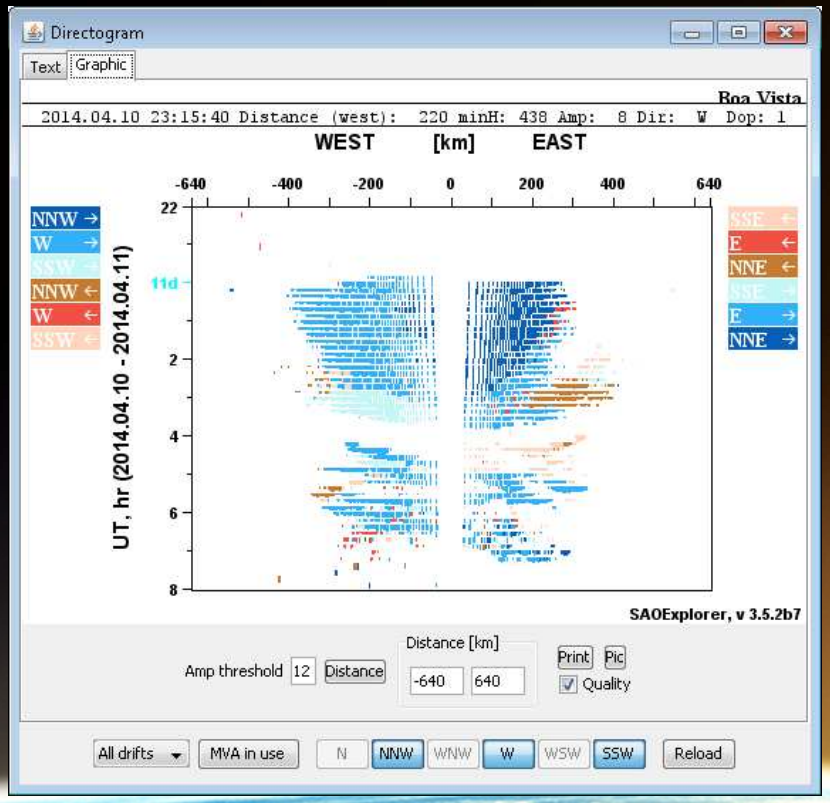
- Use Fast Chars from DIDBase for fastest access

Tools and Tricks: Figure Making



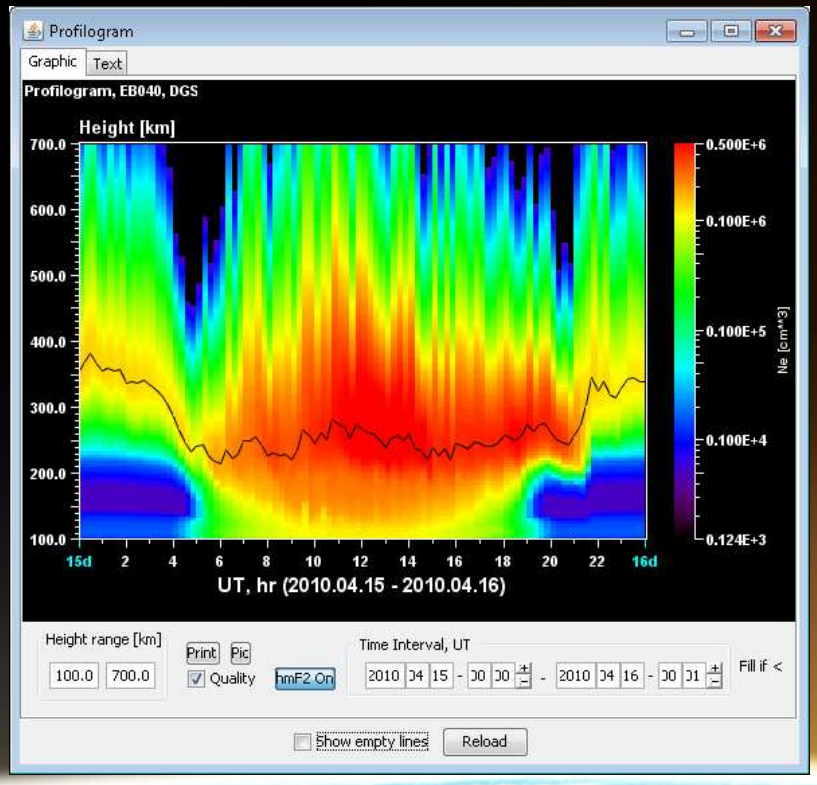
- No need to use Option window to change file format
  - Just put needed extension to the filename: .PNG, .JPG, .BMP
- EPS is best for publication quality
  - Use small window size and EPS format, edit in Illustrator
- Alternatively, use small window size, PNG format, and double the X and Y scales

Tips and Tricks: Directogram



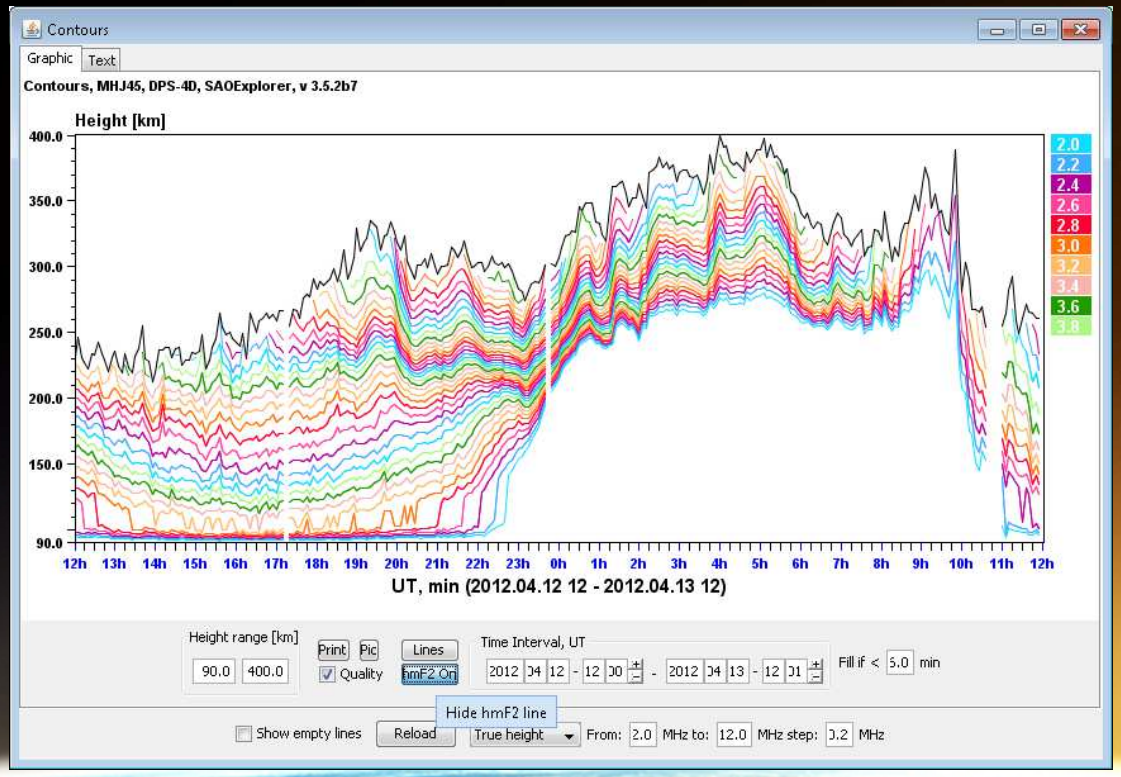
- What can be done better?
  - Select primary axis (currently only W-E)
  - Plot sunset time (currently use “i“ button)

Tips and Tricks: Profilogram



- Add hmF2 to visually separate bottomside (observed) and topside (modeled) F2 layer
- Work on ionogram scaling until perfect hmF2

Tips and Tricks: Contours



- Try virtual ranges
- Enable peak height

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Dalu
감사합니다
Gracias
Danke
Ευχαριστίες
THANK YOU
Obrigado
Köszönöm
Grazie
Спасибо
Dank
Tack
谢谢
Merci
ありがとう
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