

Frank: I just bite mine
Doos: hi all
Frank: Hi doos
Doos: heh
Doos: hi frank
Frank: Oh your taking all the fun out of things
MoDo: Yeh, Frank and I were having a nice discussion
Doos: bummer
Frank: about how nervous you make her
MoDo: lol
Doos: yeah I have that effect on women,
Frank: She had her hair done before she came
Doos: lol
MoDo: It's those broad shoulders that make all the women swoon!
Frank: They're padded
MoDo: ROFL
Frank: His cod piece is real though
Doos: I wonder if we have a mystery guest today
MoDo: How odd that you would know that!
Frank: real cod I mean
MoDo: They still have a few minutes to show up
MoDo: Doos: Should I hide if Annie shows up?
Doos: mystery guests can show up at any time
Doos: nah
Frank: she'll be glad to see you too
MoDo: If she flirts with you I'll have to scratch her eyes out!
Doos: probably
MoDo: So, Frank, tell us about yourself
Frank: I'm Scottish, live in France, Two kids,
Frank: Meant to study gems for at least the last fifteen years
MoDo: Okay, get to the good stuff!
Frank: got the time now so going for it
Frank: Ginger hair and beard
Frank: Scottish accent
MoDo: Ooooo
Frank: that make merry kins say
Frank: gee say that again
MoDo: Ooooo
Frank: smoke roll ups
ars entered the room.
Doos: hi ars
Frank: Hey Ars
MoDo: Hi ars
ars: greetings
ars: Am I late?
MoDo: We'll talk later Frank
Frank: yes
Doos: no ars
Doos: we haven't started yet
Frank: watch doos doesn't scratch your eyes out lol
Frank: 1 minute to go Ars
MoDo: We're just shooting the breeze
ars: That's OK, I'll get used to it
Frank: She's shooting....me I'm shot
ars: So.. is everyone ready for my next quiz?

MoDo: Ready, willing, but not sure if able!
Doos: I hope I win something
ars: Well, as a bonus for being in the chat, I'll drop a few clues to everyone here
MoDo: Cool
Frank: oh good...I like a good cheat
MoDo: Hmmm
ars: The faceted stone with rough gets it's name from a city in the state with a Husky mascot
ars: By the way, I probably will post the quiz Sunday morning
Frank: Shall we begin Doos? Dunno if Annie's coming...she's been quiet all week
Doos: I hope she'll make it
Frank: me too
Doos: let me get some tea and we'll begin
Frank: ok
Frank: So Ars you a Canuck
ars: Yup, Vancouver BC area
Frank: cold?
ars: Beautiful today, sunny and 10 C
MoDo: May we assume you mean the U.S. state with a Husky mascot?
Frank: nice
ars: Yes
ars: and no
MoDo: Gee, thanks
Frank: you always on the job MoDo?
MoDo: Got nothing else to do
ars: The university has a husky mascot, not the state
MoDo: Okay, thanks
Frank: lol....poor bored MoDo
MoDo: Hey, I could be having my nails done!
Frank: bet they're already immaculate
Doos: I'm ready
MoDo: I need a polish change. Got a date next week
Frank: lol
Doos: shall we begin?
Frank: Ok let's get to it
MoDo: What's the subject, Doos?
Doos: crystallography?
MoDo: Good
Frank: Ars have you made notes or shall we just start in with questions?
ars: I'm not a note kind of guy, fire away and I'll do my best
MoDo: Frank: will you take notes and e-mail them to me
Frank: lol Ok lets start with say tetragonal....Zircon....you got a rough crystal
Annie entered the room.
ars: OK
Frank: how do you decide where to make the first cut
Annie: Hi
MoDo: Hi, Annie
Frank: Hi Annie
Doos: hey annie, thank god that you made it
Annie: Hi everyone,
ars: Hi
Doos: we just started a minute ago

Annie: nice to see you all Frank, Modo, Ars, and of course you Doos
ars: I do a bit of research first
Frank: Say if your cutting for size, colour, clarity etc if your choice would change
Frank: what do you research?
ars: I usually cut for beauty, not size
ars: And I have a lot of books and websites that I research
Frank: thats nice...whats gems are about
ars: My favourite is webmineral.com
Doos: how would you orientate the zircon?
Trax entered the room.
Frank: what are you looking for in this research?
Doos: hi trax
MoDo: Hi, Trax
Trax: Evening all..
Frank: Hi Trax
Annie: Hi Trax
Doos: webmineral is great, nice java applets with crystals
ars: Webmineral gives cleavage, miller indices, etc and shows crystal forms
Trax: Doos..Frank..MoDo..Ars..and of course Annie
Frank: ah...havent found that one yet....make a note
Annie: thank you welcome Trax, glad you can make it\
Frank: so how do you orient it...
ars: back to the zircon, I can see it has poor cleavage, so i would orient for best colour
Trax: So is it Orthorhombic tonight or do we take it frank knows it all now...
ars: also, i would pick or design a pattern to suit the shape of the rough
Doos: trax, ars is doing a bit on cutting (zircon in this case)
Trax: great..thanks ars
ars: no problem
Frank: is colour better on a particular axis?
ars: Not for zircon, but for things like sapphire, kunzite and several others it a must
ars: Usually it's best down the C axis
Doos: can you go into that a bit?
ars: We all (maybe all) learned the C axis is best for sapphire
Annie: kunzite would always be cut on certain directions - isn;t it
ars: Not necessarily, 110 and 100 are good cleavage
Annie: because of its directional hardnesses, Trax
Doos: so along the hexagonal faces
ars: But I have cut it in different directions to bring out different colours, but usually "near" down the C axis
Frank: kunzites special....lets do one at a time...tetragonal for now
Annie: sure, we are on zircon, right
Frank: You mean the table is on/near the c-axis
ars: Yes
Frank: yes Annie
Trax: yes Annie...I was under the impression..one would cut at a slight angle to the axix...to stop polishing out more off the cleavage...
Frank: do you cut the table first?
Annie: so, the table will be placed 90 degree to c axis
ars: I usually do what's called meet point, so i cut the culet first
Doos: what is the idea behind that?

ars: Most faceting diagrams start with the culet, diamonds are the opposite, I think it's just easier
Annie: diamonds would start with table
Frank: do you use a machine for the angles?
Annie: please go on Ars, that is so fascinating
ars: Yes, I use a machine and there are several, but they all work the same
ars: I can recommend websites that describe it in detail
ars: One of the reasons I like cutting the culet first is that I can resize the rest of the stone to fit the rough
Annie: so, once you meet the point of culet, do you go from pavilion up and the crown last, Ars
ars: Yes, it's like cutting a pyramid, then you decide where to put the base so you have enough left for the crown
Frank: From rough to culet.is it all polished (ground off) or do you cleave/chisel some?
Annie: ok, so that would take some calculations
ars: Usually, I grind and polish but I do have a small diamond blade to nip off odd pieces
ars: Annie, there's a good program for facet designs called Gemcad and it helps immensely
Trax: Ars...cutting the culet first...would that not limit the symmetry..e.g. 4 or 8 or 10 fold symmetry that you can 'fit' around the culet and into the rough piece..?
Annie: or yes, the gemcad would calculate the angles, wouldn't it
ars: Trax, yes, the diagram you start with usually gives symmetry
ars: That's why I like to pick a diagram to fit the rough
Frank: Do you do each facet bit by bit continually turning it ...or grind down to near finished on each?
Trax: So there may be times when the rough and Pavilion angles would dictate the final cut then..
Annie: Ars, you said you cut for beauty,
ars: Frank, I like to cut continually turning
Frank: ok
Annie: so even if you could not get a nice round one, would the program dictate that it might be better to cut in oval
ars: Annie, I don't cut a lot of ovals, they're tougher than they look to get nice ones
ars: But, having said that, I will try to get the best yield from a piece
Annie: yes,
Annie: yes of course, whatever max yield from the piece is more important
ars: I tend to do squares and rectangles ,etc because you can get rounds anywhere
Frank: do you put the crystals physical dimensions into the gemcad program?
ars: And when I say I cut for beauty, I mean you'll never see a window in my stones
Doos: full blasting colours?
ars: Frank, No gemcad only puts out a finished design
Annie: yes, that's what I thought you would do
Frank: window being clear colourless portions?
Annie: some stones I see are shocking and leak light
ars: I have to decide how big the design will be from my rough
Doos: yes frank, when cut too shallow

ars: No, windows being areas where you can see through a stone
ars: i.e. no internal reflection
Frank: ty
Trax: Annie..that's why they invented Rhodium Plating..hehe
ars: and foil backing
Frank: and doublet pastes?
Annie: funny thing Trax, I can't get to my smilies tday, but thats great, maybe
i can give you a small one
Doos: ars: could you tell something about how you see the colour in the rough
Annie: got it now
ars: I like to use a dichroscope
Trax: Thanks Annie..a smile is a smile...no matter what size...lol
Annie: lol
ars: It's a little tricky sometimes with tourmaline but most stones can be
figured out
Doos: do you have a good impression on the colour of the facettted stone when you
see the rough?
Trax has left the room.
Frank: doeasn't tourmaline stop light on the c axis?
Trax entered the room.
ars: Doos, Sometimes, but like I said with tourmaline the colour difference is
so radical it's hard to tell
Annie: g'day
Trax: Hi again
Annie: Trax, you got kicked out again
ars: Frank, not all tourmaline stops light on the C axis
Trax: yes.Annie...it was yr smile...
ars: But usually the colour down the C axis is different
Annie:
Frank: Do you have a preference for certain stones I don't suppose many folk cut
everthing?
Annie:
Trax: only kidding Annie
ars: I like tourmaline because of the colour options and hardness
Annie: it was my wrong smily
Annie: tourmalines are always very special
ars: They are hard enough for everyday wear but soft enough to cut easily
MoDo: ars: What advice would you give to people wanting to start faceting?
ars: Research!
MoDo: More specific?
Annie: is the gemcad program very expensive
ars: There are good sites and books and if your interested I can pass them on
ars: There are many different machines and techniques
ars: Gemcad is a bargain
Frank: If you have a long tourmaline prism and you decide to orient on the c-
axis.would you saw it into
slices and cut several stones?
Annie: would one need to study the program first ?
MoDo: I have to finish my GG first. But somewhere down the road I would like to
try.
ars: Frank, yes I would
Trax: Sinkankas has a good basic book on the subject
ars: Annie, gemcad is easy to learn and there are lots of pre-made diagrams
Frank: can you please post a list of sites and books on the forum....everyone
can share it then

ars: I can
Annie: Faceting is intriguing one would want to learn it through the program first
ars: Sinkankas' book is one I have
MoDo: That would be great, thanks.
ars: The nice thing about gemcad is that it works exactly like cutting a real stone
Doos: ars: when you say "orient on the c-axis" do you mean the table perpendicular to the c-axis?
ars: Yes I do
Annie: so with the windowng, the gemcad program illustrate how to do
Frank: this is fab....sorry to bambard you like tis Ars...if you need a cuppa or something then say and we'll give you a rest for a bit
ars: Annie, yes gemcad will trace a ray of light to check for windowing
Annie: ok, thats great, i could not work out
Annie: sometimes when i need to go through stones, majority have windows
ars: Yeah, it's because they're cutting for yield and not beauty
MoDo: and extinction.
Annie: Well, we'll buy from you then
Frank: If you slice the crystal into several slices...would they cut into identical / matching stones?
ars: I don't usually sell but I do gift
Trax: ars..would the gemcad take into consideration...the RI of the materials and the various angles for faceting?
ars: Trax, yes you can adjust RI
ars: Frank, yes that's the best way to get a matching pair
Frank: oh start selling Ars.....were all to embarassed to scrounge gifts
Frank:
Doos: I'm not
ars: My next quiz will have one of my cut stones
Trax: hush frank...lol
Frank: Dutch.hmph
Doos: heh
Annie: double dutch, oh we would have to study up
Frank: one of hims enough Annie
ars: The issue of windowing leads to some error in the gemmolgy texts
Doos: ars: do you select well formed crystals or doesn't that really matter?
Annie: yeah, but we have to get it right, the first time, othrwise no prize
ars: I like crystals, so I try not to kill good ones, It doesn't usually matter
Frank: So what would be a good stone to start with Ars...Are cubic stones easier?
ars: absolutely
ars: garnets are good
Annie: yes, like spinls
Annie: spinels and garnets i mean
ars: I can't afford good spinels
Trax: Frank...cheap stones to start with...lol
Annie: they would be easy
MoDo: How about quatz
Frank: yes I see that
MoDo: *quartz
ars: quartz is good but I have found quartz hard to judge
ars: sometimes it seems to be as hard as sapphire

MoDo: Just for practice
Frank: also I like crystals and in some ways making them into gems is like killing them
MoDo: Hard to wear crystals in a ring
ars: Nice spinel crystals look good in jewellery
Frank: but with tumbled rough wouldn't it be harder to judge which axis is which?
Doos: ars: if you can't really make out the crystal system from the rough, how do you figure out the axes?
Trax: First stone i cut was amethyst..turned out great..off the culet was way off centre..but hey who's gonna look there..lol
ars: Frankes it would, that's where a polariscope and dichroscope come in
Annie: Modo, there are ways it can be set if its been a bodgy job, like the setter will set upside down and it will look like a crystal with the culet or point sticking out
MoDo: Like a rose cut?
Annie: like a offset rose
Frank: on uniaxial stone can you still figure the Axis.(only two colours of dichroism)
ars: Uniaxial are usually the easiest to figure out
MoDo: Would it be wrong to practice faceting first, then worry about color placement?
Frank: is max dichroism between a + b axes then?
ars: With the polariscope you'll only see one colour down the axis
Frank: ah.ty
ars: I think just starting is best
ars: Worry about the details after
MoDo: Do you give lessons
Frank: how long to cut a nice gem....on average?
ars: No, I don't think I'm good enough to teach but there are books and sites
MoDo:
ars: Frank, I was at a local show and the guy said 14 hours
ars: Some can do them in 1-2
ars: I'm about 3, depending on the size
Frank: wow.labour intensive then.explains the prices for stones cut in the west
Annie: yes, i met a someone that said he could cut competition stones in 1 hour.
ars: Yes, but not overseas
Annie: i didn't believe him
ars: Annie, those competition guys can spend days
Annie: it turned out to be the bodgiest of all stones gut
Doos: ars: from rough to wholesale, do you have an inside how much the markup is for well cut stones?
Frank: lol
Frank: true claim though
ars: Hard to say
Annie: yes, i would imagine they would spend more
ars: Sometimes you can get cut stones for cheaper than rough
Annie: time to get it right
ars: Usually markup is about 2-10 times
Doos: yes, i had 10 in mind
Frank: cut in the third world maybe 10
Annie: yes, i assume that would be 10 hours at least
ars: Keep in mind, recovery from rough averages about 20%
Doos: not 50%?

ars: Not even on a good day
Trax: mark-up also depends on the material..different for garnets..as opposed to high value rubies..
ars: Yes
ars: Good recovery from diamond is about 35-40
Frank: I charge about \$30 / hour for my labour.that means any stones I cut would be more than 100...at three hours each
ars: Unfortunately it's what the market will bear
Frank: yes always
ars: That's why US cutters only cut high value stones for resale
Frank: but cheaper stones will always be available (cut in the third world)
ars: without doubt
Trax: 35-40% if it is makable..if flat..lot less
Doos: ars: from all the commonly seen shapes, which shape is the easiest and which the hardest to facet?
Frank: so you have to become good enough to do only high value stones...if you want to do it for a living?
ars: Frank; absolutely
ars: Doos, Ovals are one of the hardest, squares are easiest
Annie: Ars, could you elaborate on the recovery of coloured stones to diamonds again please
ars: sure
Annie: say we had a 1 carat size crystal
ars: diamonds are usually found in crystals, good for orienting and have nothing to do with colour orientation
Annie: sure
ars: Coloured stones are odd shaped and must be oriented for best colour
Annie: yes
ars: When you have to work with orientation you don't always get the be size
ars: i.e. the best colour may be where the stone is flat
Trax has left the room.
Annie: yes
Annie: Trax, come back
ars: so you have to cut the stone at a slight angle or cut a smaller stone so you don't get windowing
Doos: what do you mean with "flat"?
ars: tabular
Doos: ah okay
Annie: thats fair
ars: If you can live with windowing, recovery is better, I can't
Annie: no, i can't live with that
Annie: so we would tilt it to a slight angle
ars: Yes, then some of the internal reflection would pick up colour en route and improve colour in the stone
Annie: ok
ars: and still give a larger yield
ars: Now diamonds don't have the colour issue
Frank: how much degrees is a slight angle?
Annie: yes
Trax entered the room.
Annie: ah there you are Trax
ars: I would say 15-20 degrees depending on saturation

Frank: ok
Trax: hi again
Annie: hi
ars: So diamonds can be oriented for best shape/recovery
Frank: is this true of the other cubic stones or only diamond?
ars: generally
MoDo: How do you overcome extinction in fancy shapes?
ars: You have to play with the angels a bit
ars: sometimes you have to cut to lose light
Doos: do you do that along the way?
Trax: MoDo..pardon my ignorange..I am a bit rusty...what is extinction..?
ars: I try to recalc the angles before
MoDo: Dark spots in the gem
Trax: Ok..thanks
MoDo: Opposite of window, I guess
Frank: shutter closed?
MoDo: lol
ars: There's a thing called the white paper test that people use
Annie: lol
Doos: trax, that is caused by light leaving the pavillion (cut to deep)
Trax: That I know Annie..just the terminology...lol....
MoDo: I was told all fancy shapes have it, it's just to what degree
ars: You'll see it a lot in ovals
MoDo: not very pretty
Annie: I like the extinction bit too, never knew that myself either
Annie: that was cute Modo
Frank: why cut fancy shapes then...is it only to increase the yield?
Annie: see we learn all of the time !!
ars: Sometimes, but I think rounds are boring
ars: besides, the rb was designed to prevent colour not enhance it
Frank: so squares have it themn?
ars: A well desinged cut doesn't have much
Frank: why so many coloured rb's then
MoDo: The problem is mostly getting enough color saturation without a heavy bottom
ars: It's the standard in the industry
Trax: I suspect...a cut 'out of symettery' would have them..like ones cut for wt.
Frank: ah indistry versus cragtmanship....it's seldom the craftsman wins
ars: The dollar wins
Trax: tks Annie
Frank: yes always....and unfortunately
MoDo: Most people want the bigger stone instead of the quality one
ars: Any good design won't have extinction and if you see some of Jeff Graham's stones you'll see that
Doos: is there an average depth of colored stones, I was informed 60-80% usually gives best colour
ars: I think best colour depends on RI
MoDo: Pastels are hard--think kunzite
Frank: are we speaking rb's here doos.....80% of an emerald cut is almost a box shape
Doos: any
ars: I have a kunzite that is amazing down the C but pale down the other axes and in that case orientation is key and not depth
Frank: why RI Ars....I though colour was achemical thing

ars: And axis, but if you cut a stone too deep or too shallow the colour will not be great

MoDo: ars: that's true, except where rough is cut for weight

Annie: i guess it takes years of expertise to know these things

ars: Also, in things like tourmaline, colour can be blended to get interesting results

MoDo: I'd kill for a kunzite with good proportions and color!

ars: How big MoDo?

MoDo: Most I've seen have a HUGE pavilion

Trax: ars: Some stones..like this alexandrite I have here..over 10 cts..was cut by just looking at it...it is very very lively..no windows..beautiful...and yet not cut 'ideally'.... what accounts for this? this is true for others too..!

Annie: most i've seen were emerald cuts

MoDo: Bigger is better

Frank: your too aggressive MoDo.you should say (I'll be really nice for a month for one of those)

ars: Trax, some people with years of experience can tell.

MoDo: Hey, I'm American--capitalism reigns!

Trax: ars: but the physics / optics...tell us different..???????

Annie: lol, you also go for the best diamonds too Modo

ars: Different than what

Frank: m yes but it's not necessarily benign

MoDo: Momma taught me well

Annie: i know that america is very high on big stuff - in jewellery fashion also

Frank: Trax.10 cts Alexandrite.did you get it from Africanuck??

Trax: ars: that best reflected light is via ideal angles...yet these stones do not have ideal angles..but are extremely lively..no loss of light

ars: Trax, there's a big debate in the diamond grading industry right now over cut vs optical performance,

Annie: you mean alexandrite from alexandria, Frank

Frank: oh yes

Trax: No Frank...direct from the mines..Madagascar

Annie: lol

ars: I think the jury is still out on how to resolve it but what people want to know is performance and not proportions

Annie: just so funny

MoDo: If the stone is beautiful, I don't think anyone worries about proportions

Trax: I know of that ars....more ways to make money..they recon...all the GIAs will need recertifications....??

Frank: wow a real live 10cts .yes I thought it was a very good example of maximizing local placenames

Annie: yes, there is a saying you want to buy what you need, but will always end up buying what you want

MoDo: My mother would love to have that alexandrite!

ars: Trax, I think it started back with the cut studies in Moscow and has taken on a life of it's own.

Frank: hide it quick trax

MoDo: Hey

Trax: I am currently doing an article of Russian historical alexandrites...anyone with info.on any pieces would be much appreciated...

MoDo: Mom can get away with wearing the big stuff, I can't.

Frank: is there a lot of international interchange on this Ars....Or are we gonna get bullied by the GIA into doing what they want?

Doos: trax: palagems has a nice article on it

ars: I think the GIA is playing catch-up

Trax: MoDo..I have seen a 42 ct one...but it had almost 50% brown on the red side...that spoilt it a bit...

Annie tells you: hi Doos, how is all going

MoDo: No, she'd want next to perfect

Frank: ah...a case of the world moves on and the GIA can't believe it can happen without them

MoDo: Bad news for us GIA students

ars: Good news for the rest of the world

Frank: lol...the GIA think the rest of the world are all third world..Back to cutting....which crystal system is hardest to cut?

MoDo: I just might have to go to Mogok after all.

ars: I wouldn't pick any particular system. I think it's more related to hardness and cleavage

Frank: Merry kins can't buy from Burma....fascist yankee embargo in place

ars: I don't know if I'd ever cut a cerusite

MoDo: It's just a step or two over the border

Frank: stones with perfect cleavage being hardest?

ars: Yes

ars: With maybe the exception of topaz

Frank: Soft stones ...say less than Mohs five must be difficult too?

Frank: Why is topaz different?

ars: Yup, hard to get a good polish on a softer stone

ars: Topaz is hard (moh's) enough to polish and cleavage is easy to figure out

MoDo: Is it true imperial topaz is just about mined out?

Frank: How do you get around cleavage...cut at an angle?

Trax has left the room.

ars: Frank, 10-15% off cleavage

ars: MoDo, hard to say. If you saw the coloured stone series on Discovery, it looks like it is.

Frank: TY...what if your doing say an octagonal square....22.5 degrees angles...do you slip the cleavage in between the angles?

Doos: they haven't broadcasted them here yet

ars: Doos, they were on over a year ago

ars: Frank, yes

MoDo: Okay, dumb question, if I may?

Frank: Third world here Doos

ars: No dumb questions

Annie: sure there are no dumb questions, shoot

ars: That's what I meant

MoDo: I've read about cleavage in the stones and am suppose to look for them. Is that where knowing the crystal systems come in? GIA doesn't seem to go into depth here.

ars: absolutely

Annie: i know you meant that also Ars,

Frank: you OK for timing to get to your party Ars?
ars: yup, I have about 20 min
Annie: yes, you need to get to a function Ars.
ars: MoDo, I would spend time on the webmineral site, you'll learn a lot
Frank: Would the striations which seem to be normal in many crystals follow the cleavage line?
MoDo: Okay
ars: Frank, You'll see striations on quartz and tourmaline and I don't think it applies to cleavage on either
Frank: ok is it related to the axes or is it just random?
MoDo: See, that's the kind of thing I mean. They'll question if you see cleavage. How do you know what cleavage looks like?
Annie: striations are caused by growth
Frank: ty Annie
Annie: cleavages are within the crystal and is a weak point
Annie: Frank,
Annie: sorry i am very slow today with my typing
MoDo: between atom cells, right?
Annie: yep
Annie: yes modo
ars: Look for the oil on water interference type colours. They're good indications of cleavage planes
Frank: weak point is almost the same as a cleavage line...ie likely to come apart along it....isn't it?
Annie: yes
MoDo: Okay, i've seen that before
Trax entered the room.
Doos: ars: in overhead lightning?
Trax: hi again..again..lol
Annie: there you are again, Trax
Doos: gone for a smoke trax?
ars: Doos, sometimes it easier to see with back lighting
Trax: no Doos..have problems with caht room..always get kicked out....not from others..?
Frank: so the rainbow colours seen with a polariscope show best along the cleavage plane?
ars: no, those are usually caused by optic axes
Annie: the rainbow colours seen with a polariscope is looking down on optic axis
Annie: thanks Ars, you had answered that
Frank: ty.so how to spot cleavage plane?
ars: Tough to say, look for interference colours, long straight cracks
Frank: in normal (without instruments) light?
ars: Sometimes you can see them in normal light, depending on how obvious they are
Annie: yes, in a crystal when that is seen in normal light
MoDo: This is where a book with some good pictures might help.
Doos: are we talking about a plane after it's cleaved?
Annie: the cleavage is picked up at that crack
ars: I think when there are stress cracks
MoDo: Looking for cleavage plane inside a gem
Annie: stress also
Frank: Annie you mentioned on the forum some stones have such perfect cleavage if you break them they make

smaller and smaller octahedrons?

Annie: yeah, they are in your diamonds and spinels,

ars: and fluorite

Annie: because they have perfect way of splitting - like in octahedrons and

Annie: fluorites also

Annie: bad spelling on my octahedrons today >> sorry

Frank: love to test that to destruction....on my list with wielding the pliers on a synthetic boule to

split it

Annie: just buy some cheap little fluorites and try out

MoDo: Take notes for us, Frank!

Doos: and pictures

Frank: yes....must be the engineer in me....I always want to know...how hard till it bursts

MoDo: No, that's just male

Annie: yes, very experimental

Frank: I'm talking my wife into a test kiln...So I can heat things up and change some colours...

MoDo: It's the broken chromosome

Frank: If it's broken....I can fix it

MoDo: Where's the duct tape, right?

Trax: cyanoacrylate..superglu..lol

Frank: lol....don't you watch american war movies or startreck?? we can fix anything

Frank: Scots I mean

MoDo: Aye, that ye can!

ars: I'm taking off in a few minutes and I know we've only scratched the surface but feel free to PM me or

ask on the YG forum. I'll post a few general info sites in one of the threads, if anyone is interested.

MoDo: Yes, please do

MoDo: And let me know what kunzite you have

Annie: Ars, thank you so much for coming. We appreciate you being here

Doos: thanks ars, was very educational

Frank: will you please post us a list of your favorite sites and books?

Annie: hope you can join us again

Trax: ty very much Ars...I think we did more than scratch the surface...polished it..lol

Annie: great polish indeed

ars: Frank, I'll try to post it this weekend

Frank: Great chat Ars...Thank....come again....often

ars has left the room.

Annie: Wasn't that Great, everyone !!

Doos: nice session

MoDo: Another question

Doos: indeed

Trax: ahhhhh...that was nice of Ars...great talk..

Annie: we learn so much

Frank: Yes I really enjoyed that

Annie: sure Modo,

Annie: shoot your question

Trax: and i thought I KNEW it ALL.....

Frank: Poor Ars having a roasting from all of us...he handled it all very well though

MoDo: Would I be right to think of symmetry as the outside of the stone, and optic as the inside, as regards axes?

Frank: NO...read doos articles on his site

MoDo: I have

Frank: he hasn't finished them though....sniff

Doos: the outside is the form or the habit

MoDo: I know that, I'm trying to learn symmetry and crystal axes

Doos: the axes are all imaginary lines in/through the crystal

MoDo: Yes, I know

Frank: the symmetry axis and planes all pass inside the crystals

Frank: Optics is next lesson

Annie: symmetry related to internal and also after it has been cut

Frank: I keep putting it off for mor crystallography though

Annie: very important part,

Doos: the symmetry axes run inside the crystal and serve only for rotation and balance of shape around them

Frank: just killing it to death Anie...lol

Annie: dont you love the pictures of Doos's orthorhmbic

Annie: kill it until there is no way out

Annie: yes Frank

Frank: Yes....he's very good on computer graphics

MoDo: and the crystal is just the faces?

Doos: yes modo

MoDo: thank you

Annie: Yes Modo absolutely

Frank: but repeated all the way to the molecular level

Frank: ??? Is that right???

Doos: yes

MoDo: Wow, I'll need a strong microscope for that!

Annie: Yes, Frank, that is great

Frank: Only thanks to you two...it's you who are great

Annie: you can't see it, but in theory we know that it has to do with its structure and levels of molecules

Trax: Annie...earlier..you mentioned..symmetry..to internal and also to cut...are these not two seperate types/issues?

Frank: Think we should make hulk our marketing manager

Annie: We need a manager

Frank: Have him critisize us once a month

Annie: yes

Doos: now now, he didn't mean anything by it

Frank: then we can gently flame him

Trax: ty..just got a bit confused there..lol

Frank: and generate lots of new visitors

Frank)

Annie: I think if Hulk was in here, we would have double dutch and american fun also

MoDo: Okay, you've lost me

Annie: he is so funny too

MoDo: If HULK and Doos were in here there wouldn't be any more room, what with their egos!

Frank: Yoo Hoo MoDo....were over heeeear

Frank: lol....he's a good sport though

Annie: maybe we can ask him to appear as a mystery guest

Frank: and all our bitching at him got you along to see what the fuss is about
Doos: is the gemtalk over (so I can start logging)?
Frank: Didn't Ars do well
Annie: yeah log it Doos
Doos: yah he did great
Annie: Ars did very well indeed
Frank: ok habit and form can wait till next week
Doos: modo you have any questions left?
Frank: lol
Doos: trax?
Annie: log the bit in about Hulk,
Trax: yes doos..still here....lol
Annie: Doos, he should read about how we feel, he will be great
MoDo: Yes, but not on gems!
Doos: okay, logging now
Doos: brb